Motorola Mobility, Inc.

TEST REPORT FOR

DOCSIS 3.0 Wi-Fi Gateway, SBG6580

Tested To The Following Standards:

FCC Part 15 Subpart E Sections 15.407 & RSS-210 Issue 8

Report No.: 92800-20

Date of issue: March 2, 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: REPORT PREPARED BY:

Motorola Mobility, Inc.

6450 Sequence Drive

CKC Laboratories, Inc.

San Diego, CA 92121

5046 Sierra Pines Drive

Mariposa, CA 95338

REPRESENTATIVE: Chris Fulmer Project Number: 92800

Customer Reference Number: MM1084691

DATE OF EQUIPMENT RECEIPT: February 13, 2012

DATE(S) OF TESTING: February 13 - March 1, 2012

Report Authorization

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

Steve Behm

Steve 7 Be

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

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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

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SUMMARY OF RESULTS

Standard / Specification: FCC Part 15 Subpart E and RSS-210 Issue 8

Description	Test Procedure/Method	Results
Undesirable Emission Limits (5.15 – 5.25GHz Band)	15.407(b)(1) / KDB 558074	Pass
Undesirable Emission Limits (15.209 / 15.205)	15.407(b)(6) / 15.407(b)(7) / KDB 558074	Pass
Bandedge	ITU-R 55/1 and 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

The manufacturer declares that during the testing for sections 15.407(b1)(b6) and (b7) the EUT was configured as follows:

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 fully operational with the CASA set to DS 813MHz, 819MHz, 825MHz, 831MHz, 0.0dBmV.

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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

Laptop Computer

Manuf: HP

Model: Compaq 6910p

Serial:

8 Way Splitter

Manuf: Regal Model: DS8DGV10 Serial: NA

DHCP Server

Manuf: HP

Model: Compaq 6910p

Serial: NA

Gigabit Switch

Manuf: Netgear Model: GS105v2 Serial: NA

Performance Analysis System

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

8 Way Splitter

Manuf: Regal Model: DS8DGV10 Serial: NA

Diplexer

Manuf: Eagle Comtronics Model: EDPF-65/85

Serial: NA

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Laptop Computer

Manuf: Dell

Model: Precision M70

Serial: NA

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FCC PART 15 SUBPART E

This report contains EMC emissions test results under United States Federal Communications Commission (FCC) 47 CFR 15C requirements for Unlicensed Radio Frequency Devices, Subpart E – Unlicensed National Information Infrastructure Devices.

15.407(b)(1) Undesirable Emission Limits (5.15-5.25 GHz Band)

Limit Line Calculations

Limit line calculation:

For a distance, d, of 3 meters:

EIRP[dBm] = E[dBuV/m] - 95.2

-27.0 = E[dBuV/m] - 95.2

E[dBuV/m] = 68.2

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Test Data

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

Customer: Motorola Mobility, Inc.

Specification: 15.407(b)(1) Radiated Undesirable Emissions

Work Order #: 92800 Date: 2/28/2012 Test Type: **Maximized Emissions** Time: 13:07:16

Equipment: Sequence#: 8 **DOCSIS 3.0 Wi-Fi Gateway** Tested By: S. Yamamoto

Manufacturer: Motorola Mobility, Inc. 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
	ANP05050	Cable	RG223/U	3/21/2011	3/21/2013
	AN00309	Preamp	8447D	5/7/2010	5/7/2012
	ANP05198	Cable	8268	12/21/2010	12/21/2012
	AN01995	Biconilog Antenna	CBL6111C	3/8/2010	3/8/2012
	AN00314	Loop Antenna	6502	6/30/2010	6/30/2012
	AN02672	Spectrum Analyzer	E4446A	8/9/2010	8/9/2012
T1	AN03239	Cable	32022-2-29094K-	8/30/2011	8/30/2013
			24TC		
T2	ANP06081	Cable	L1-PNMNM-48	4/28/2011	4/28/2013
Т3	ANP05421	Cable	Sucoflex 104A	2/8/2012	2/8/2014
T4	AN00786	Preamp	83017A	8/5/2010	8/5/2012
T5	AN00849	Horn Antenna	3115	4/23/2010	4/23/2012
Т6	AN02744	High Pass Filter	11SH10-	3/5/2010	3/5/2012
			3000/T10000-		
			O/O		
	ANP06153	Cable	16301	10/27/2011	10/27/2013
	AN01413	Horn Antenna-ANSI	84125-80008	12/2/2010	12/2/2012
		C63.5 Antenna			
		Factors (dB)			
	AN01413	Horn Antenna-1	84125-80008	12/2/2010	12/2/2012
		Meter Antenna			
		Factors (dB) - SAE			
	13702150	ARP 958		1/1/2010	1/1/2012
	AN03158	Active Horn Antenna	AMFW-5F- 26004000-33-8P	4/1/2010	4/1/2012
T7	AN02945	Cable	32022-2-2909K- 36TC	10/19/2011	10/19/2013

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Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
DOCSIS 3.0 Wi-Fi	Motorola Mobility, Inc.	SBG6580 P2	3556011306006510705008
Gateway*			5
AC to 12Vdc Power	Asian Power Devices, Inc.	WA-24 12FU	
Adapter			

Support Devices:

Function	Manufacturer	Model #	S/N	
Broadband Router	CASA Systems	C2200	FD3460	
Gigabit Switch	Netgear	GS105v2		
Laptop Computer	HP	Compaq 6910p		
Performance Analysis	Spirent	SMB-600B	N06012143	
System				
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: 2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.

Frequency range of EUT: 5180MHz to 5240MHz

Transmit Frequencies used for this data sheet: 5180MHz (Low), 5200MHz (Middle), and 5240MHz (High). Channels 36, 40, and 48. 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

Meas	urement Data:	Re	eading list	ted by ma	ırgin.		Τe	est Distance	e: 3 Meters		
#	Freq	Rdng	T1	T2	Т3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7						
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\mu V/m$	dB	Ant
1	1 10480.000	37.9	+0.8	+7.9	+2.7	-36.6	+0.0	52.4	68.2	-15.8	Vert
	M		+37.7	+0.4	+1.6						
	Ave										
^	10480.000	50.7	+0.8	+7.9	+2.7	-36.6	+0.0	65.2	68.2	-3.0	Vert
	M		+37.7	+0.4	+1.6						
3	9999.966M	37.1	+0.8	+7.3	+2.7	-35.9	+0.0	51.3	68.2	-16.9	Horiz
			+37.2	+0.5	+1.6						

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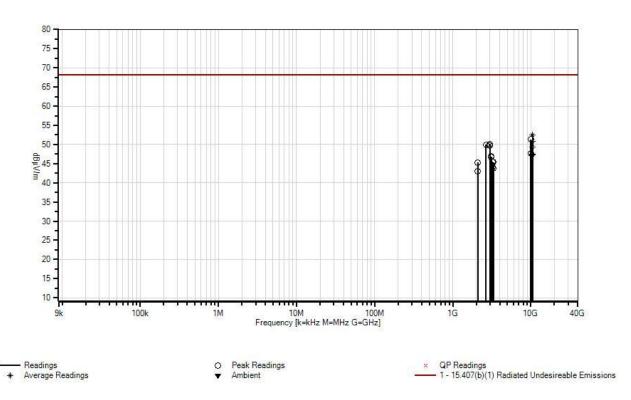
4	10399.833	36.7	+0.8	+7.8	+2.7	-36.6	+0.0	50.8	68.2	-17.4	Vert
	M		+37.6	+0.3	+1.5						
	Ave										
٨	10399.833	48.7	+0.8	+7.8	+2.7	-36.6	+0.0	62.8	68.2	-5.4	Vert
	M		+37.6	+0.3	+1.5						
6	2999.984M	50.7	+0.4	+3.6	+1.5	-37.8	+0.0	50.1	68.2	-18.1	Horiz
			+30.0	+0.9	+0.8						
7	2666.655M	53.6	+0.4	+3.4	+1.4	-37.9	+0.0	49.9	68.2	-18.3	Horiz
•			+29.0	+0.0	+0.0						
8	2999.985M	50.3	+0.4	+3.6	+1.5	-37.8	+0.0	49.7	68.2	-18.5	Vert
O	2))).)03111	30.3	+30.0	+0.9	+0.8	37.0	10.0	17.7	00.2	10.5	VOIC
Q	10359.324	35.3	+0.8	+7.7	+2.7	-36.5	+0.0	49.3	68.2	-18.9	Vert
	M	33.3	+37.6	+0.2	+1.5	-30.3	10.0	T 7.3	00.2	-10.7	VCIT
	Ave		137.0	10.2	11.5						
	10359.324	46.6	+0.8	+7.7	+2.7	-36.5	+0.0	60.6	68.2	-7.6	Vert
	M	40.0	+37.6	+0.2	+1.5	-30.3	+0.0	00.0	06.2	-7.0	VEIL
	IVI		+37.0	+0.2	+1.5						
11	0000 05034	22.4	.0.0	.7.2	. 2 7	25.0	.0.0	17.6	(0.2	20.6	N. o. d
11	9999.950M	33.4	+0.8	+7.3	+2.7	-35.9	+0.0	47.6	68.2	-20.6	Vert
10	10470 150	22.0	+37.2	+0.5	+1.6	26.6	. 0. 0	47.5	60.0	20.7	TT .
12	10479.159	33.0	+0.8	+7.9	+2.7	-36.6	+0.0	47.5	68.2	-20.7	Horiz
	M		+37.7	+0.4	+1.6						
	Ave										
^	10479.159	41.5	+0.8	+7.9	+2.7	-36.6	+0.0	56.0	68.2	-12.2	Horiz
	M		+37.7	+0.4	+1.6						
14	10359.175	33.5	+0.8	+7.7	+2.7	-36.5	+0.0	47.5	68.2	-20.7	Horiz
	M		+37.6	+0.2	+1.5						
	Ave										
^	10359.175	46.9	+0.8	+7.7	+2.7	-36.5	+0.0	60.9	68.2	-7.3	Horiz
	M		+37.6	+0.2	+1.5						
16	10399.000	33.1	+0.8	+7.8	+2.7	-36.5	+0.0	47.3	68.2	-20.9	Horiz
	M		+37.6	+0.3	+1.5						
	Ave										
^	10399.000	45.3	+0.8	+7.8	+2.7	-36.5	+0.0	59.5	68.2	-8.7	Horiz
	M		+37.6	+0.3	+1.5						
18	3099.985M	47.3	+0.4	+3.7	+1.5	-37.8	+0.0	46.8	68.2	-21.4	Vert
			+30.2	+0.7	+0.8						
19	3100.032M	47.2	+0.4	+3.7	+1.5	-37.8	+0.0	46.7	68.2	-21.5	Horiz
			+30.2	+0.7	+0.8						
20	3199.985M	45.8	+0.4	+3.8	+1.5	-37.8	+0.0	45.5	68.2	-22.7	Vert
			+30.4	+0.6	+0.8						
2.1	3299.985M	45.3	+0.4	+3.9	+1.5	-37.7	+0.0	45.4	68.2	-22.8	Vert
			+30.6	+0.6	+0.8	27.7	. 0.0				. 510
22	2099.989M	50.5	+0.4	+3.0	+1.2	-37.9	+0.0	45.3	68.2	-22.9	Horiz
22	2077.707111	50.5	+28.1	+0.0	+0.0	31.7	10.0	75.5	00.2	22.9	110112
23	3199.982M	44.5	+0.4	+3.8	+1.5	-37.8	+0.0	44.2	68.2	-24.0	Horiz
23	J177.704IVI	44.3	+30.4	+3.8 +0.6	+1.5	-57.0	+0.0	44.2	00.2	-24.0	HOHZ
24	3299.992M	43.7				27.7	+0.0	12 0	69.2	24.4	Цота
24	3299.992IVI	45./	+0.4	+3.9	+1.5	-37.7	+0.0	43.8	68.2	-24.4	Horiz
			+30.6	+0.6	+0.8						

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25 2099.991M	48.3	+0.4	+3.0	+1.2	-37.9	+0.0	43.1	68.2	-25.1	Vert
		+28.1	+0.0	+0.0						

CKC Laboratories, Inc. Date: 2/28/2012 Time: 13:07:16 Motorola Mobility, Inc. WO#: 92800 15.407(b)(1) Radiated Undesireable Emissions Test Distance: 3 Meters Sequence#: 8 Ext ATTN: 0 dB





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

Customer: Motorola Mobility, Inc.

Specification: 15.407(b)(1) Radiated Undesirable Emissions

Work Order #: 92800 Date: 2/28/2012
Test Type: Maximized Emissions Time: 13:16:41

Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 9

Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto

Model: SBG6580 P2

S/N: 35560113060065107050085

Test Equipment:

Test Equ	•				
ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02672	Spectrum Analyzer	E4446A	8/9/2010	8/9/2012
	ANP05050	Cable	RG223/U	3/21/2011	3/21/2013
	AN00309	Preamp	8447D	5/7/2010	5/7/2012
	ANP05198	Cable	8268	12/21/2010	12/21/2012
	AN01995	Biconilog Antenna	CBL6111C	3/8/2010	3/8/2012
	AN00314	Loop Antenna	6502	6/30/2010	6/30/2012
	AN02672	Spectrum Analyzer	E4446A	8/9/2010	8/9/2012
T1	AN03239	Cable	32022-2-29094K- 24TC	8/30/2011	8/30/2013
T2	ANP06081	Cable	L1-PNMNM-48	4/28/2011	4/28/2013
Т3	ANP05421	Cable	Sucoflex 104A	2/8/2012	2/8/2014
T4	AN00786	Preamp	83017A	8/5/2010	8/5/2012
T5	AN00849	Horn Antenna	3115	4/23/2010	4/23/2012
Т6	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
	AN03158	Active Horn Antenna	AMFW-5F- 26004000-33-8P	4/1/2010	4/1/2012
	AN02945	Cable	32022-2-2909K- 36TC	10/19/2011	10/19/2013

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Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
DOCSIS 3.0 Wi-Fi	Motorola Mobility, Inc.	SBG6580 P2	3556011306006510705008
Gateway*			5
AC to 12Vdc Power	Asian Power Devices, Inc.	WA-24 12FU	
Adapter			

Support Devices:

Function	Manufacturer	Model #	S/N	
Broadband Router	CASA Systems	C2200	FD3460	
Gigabit Switch	Netgear	GS105v2		
Laptop Computer	HP	Compaq 6910p		
Performance Analysis	Spirent	SMB-600B	N06012143	
System				
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: 2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.

Frequency range of EUT: 5180MHz to 5240MHz

Transmit Frequencies used for this data sheet: 5180MHz (Low), 5200MHz (Middle), and 5240MHz (High). Channels 36, 40, and 48. 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

Meas	urement Data:	Re	eading list	ted by ma	ırgin.		Τe	est Distance	e: 3 Meters		
#	Freq	Rdng	T1	T2	Т3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6							
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\mu V/m$	dB	Ant
1	10481.792	37.9	+0.8	+7.9	+2.7	-36.6	+0.0	50.8	68.2	-17.4	Vert
	M		+37.7	+0.4							
	Ave										
^	10481.792	49.9	+0.8	+7.9	+2.7	-36.6	+0.0	62.8	68.2	-5.4	Vert
	M		+37.7	+0.4							
3	3 2666.655M	53.6	+0.4	+3.4	+1.4	-37.9	+0.0	49.9	68.2	-18.3	Horiz
			+29.0	+0.0							

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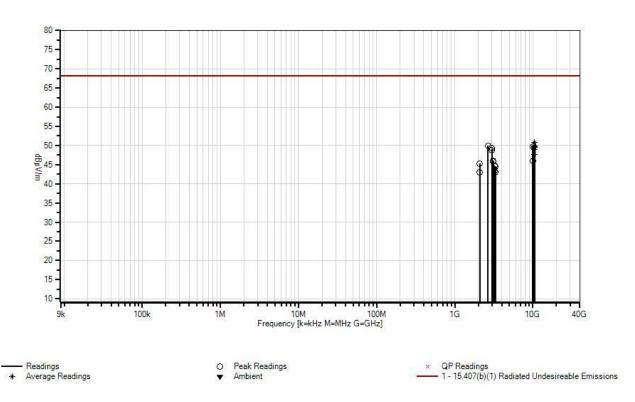
4 10360.867	37.3	+0.8	+7.7	+2.7	-36.5	+0.0	49.8	68.2	-18.4	Horiz
M		+37.6	+0.2							
Ave										
^ 10360.867	51.1	+0.8	+7.7	+2.7	-36.5	+0.0	63.6	68.2	-4.6	Horiz
M		+37.6	+0.2							
6 9999.966M	37.1	+0.8	+7.3	+2.7	-35.9	+0.0	49.7	68.2	-18.5	Horiz
		+37.2	+0.5							
7 10400.125	37.1	+0.8	+7.8	+2.7	-36.6	+0.0	49.7	68.2	-18.5	Vert
M		+37.6	+0.3	,			.,,,			
Ave										
^ 10400.125	50.7	+0.8	+7.8	+2.7	-36.6	+0.0	63.3	68.2	-4.9	Vert
M	50.7	+37.6	+0.3	12.7	50.0	10.0	03.5	00.2	1.,,	, 010
141		137.0	10.5							
9 10481.208	36.7	+0.8	+7.9	+2.7	-36.6	+0.0	49.6	68.2	-18.6	Horiz
M	30.7	+37.7	+0.4	12.7	-30.0	10.0	₹2.0	00.2	-10.0	HOHZ
Ave		⊤31.1	⊤0. 4							
^ 10481.208	50.2	+0.8	+7.9	+2.7	-36.6	+0.0	63.1	68.2	-5.1	Horiz
M	50.2	+0.8 +37.7	+7.9	+4.1	-50.0	+0.0	05.1	00.2	-3.1	HOHZ
IVI		+37.7	+0.4							
11 2999.984M	50.7	+0.4	+3.6	+1.5	-37.8	+0.0	49.3	68.2	-18.9	Цат
11 2999.984M	50.7			+1.5	-37.8	+0.0	49.3	08.2	-18.9	Horiz
10 10050 000	265	+30.0	+0.9	2.7	265	0.0	10.0	60.2	10.2	T 7 .
12 10359.333	36.5	+0.8	+7.7	+2.7	-36.5	+0.0	49.0	68.2	-19.2	Vert
M		+37.6	+0.2							
Ave										
^ 10359.333	49.7	+0.8	+7.7	+2.7	-36.5	+0.0	62.2	68.2	-6.0	Vert
M		+37.6	+0.2							
14 2999.985M	50.3	+0.4	+3.6	+1.5	-37.8	+0.0	48.9	68.2	-19.3	Vert
		+30.0	+0.9							
15 10403.708	35.1	+0.8	+7.8	+2.7	-36.6	+0.0	47.7	68.2	-20.5	Horiz
M		+37.6	+0.3							
Ave										
^ 10403.708	49.7	+0.8	+7.8	+2.7	-36.6	+0.0	62.3	68.2	-5.9	Horiz
M		+37.6	+0.3							
17 3099.985M	47.3	+0.4	+3.7	+1.5	-37.8	+0.0	46.0	68.2	-22.2	Vert
		+30.2	+0.7							
18 9999.950M	33.4	+0.8	+7.3	+2.7	-35.9	+0.0	46.0	68.2	-22.2	Vert
10 333330011	22.1	+37.2	+0.5	,	20.7	. 0.0				. 511
19 3100.032M	47.2	+0.4	+3.7	+1.5	-37.8	+0.0	45.9	68.2	-22.3	Horiz
17 5100.03211	71.2	+30.2	+0.7	11.5	31.0	10.0	73.7	00.2	22.3	110112
20 2099.989M	50.5	+0.4	+3.0	+1.2	-37.9	+0.0	45.3	68.2	-22.9	Horiz
20 2033.303IVI	50.5			+1.2	-31.7	+0.0	45.5	00.2	-22.9	110112
21 2100 00534	15 O	+28.1	+0.0	, 1 5	27.0	+ O O	117	60.2	22.5	Vent
21 3199.985M	45.8	+0.4	+3.8	+1.5	-37.8	+0.0	44.7	68.2	-23.5	Vert
22 2222 227	47.0	+30.4	+0.6		25.5	0.0	44.5	66.2	22.5	***
22 3299.985M	45.3	+0.4	+3.9	+1.5	-37.7	+0.0	44.6	68.2	-23.6	Vert
		+30.6	+0.6							
23 3199.982M	44.5	+0.4	+3.8	+1.5	-37.8	+0.0	43.4	68.2	-24.8	Horiz
		+30.4	+0.6							
24 2099.991M	48.3	+0.4	+3.0	+1.2	-37.9	+0.0	43.1	68.2	-25.1	Vert
		+28.1	+0.0							
							-			

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25 3299.992M	43.7	+0.4	+3.9	+1.5	-37.7	+0.0	43.0	68.2	-25.2	Horiz
		+30.6	+0.6							

CKC Laboratories, Inc. Date: 2/28/2012 Time: 13:16:41 Motorola Mobility, Inc. WO#: 92800 15.407(b)(1) Radiated Undesireable Emissions Test Distance: 3 Meters Sequence#: 9 Ext ATTN: 0 dB





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

Customer: Motorola Mobility, Inc.

15.407(b)(1) Radiated Undesirable Emissions Specification:

Work Order #: 92800 Date: 2/28/2012 Test Type: **Maximized Emissions** Time: 13:22:12 Sequence#: 10 Tested By: S. Yamamoto Equipment: **DOCSIS 3.0 Wi-Fi Gateway**

Manufacturer: Motorola Mobility, Inc.

Model: SBG6580 P2

S/N: 35560113060065107050085

Test Equipment:

resi Equ	•				
ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02672	Spectrum Analyzer	E4446A	8/9/2010	8/9/2012
	ANP05050	Cable	RG223/U	3/21/2011	3/21/2013
	AN00309	Preamp	8447D	5/7/2010	5/7/2012
	ANP05198	Cable	8268	12/21/2010	12/21/2012
	AN01995	Biconilog Antenna	CBL6111C	3/8/2010	3/8/2012
	AN00314	Loop Antenna	6502	6/30/2010	6/30/2012
	AN02672	Spectrum Analyzer	E4446A	8/9/2010	8/9/2012
T1	AN03239	Cable	32022-2-29094K- 24TC	8/30/2011	8/30/2013
T2	ANP06081	Cable	L1-PNMNM-48	4/28/2011	4/28/2013
Т3	ANP05421	Cable	Sucoflex 104A	2/8/2012	2/8/2014
T4	AN00786	Preamp	83017A	8/5/2010	8/5/2012
T5	AN00849	Horn Antenna	3115	4/23/2010	4/23/2012
Т6	AN02744	High Pass Filter	11SH10- 3000/T10000-	3/5/2010	3/5/2012
	ANP06153	Cable	O/O 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
	AN02945	Cable	32022-2-2909K- 36TC	10/19/2011	10/19/2013
	AN03158	Active Horn Antenna	AMFW-5F- 26004000-33-8P	4/1/2010	4/1/2012

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Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
DOCSIS 3.0 Wi-Fi	Motorola Mobility, Inc.	SBG6580 P2	3556011306006510705008
Gateway*			5
AC to 12Vdc Power	Asian Power Devices, Inc.	WA-24 12FU	
Adapter			

Support Devices:

TIP TO THE TAXABLE			
Function	Manufacturer	Model #	S/N
Broadband Router	CASA Systems	C2200	FD3460
Gigabit Switch	Netgear	GS105v2	
Laptop Computer	HP	Compaq 6910p	
Performance Analysis	Spirent	SMB-600B	N06012143
System			
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: 2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.

Frequency range of EUT: 5180MHz to 5240MHz

Transmit Frequencies used for this data sheet: 5190MHz (Low), and 5230MHz (High). Channels 40 and 48. 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

Meas	urement Data:	Reading listed by margin.			Test Distance: 3 Meters						
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6							
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\mu V/m$	dB	Ant
1	1 2666.655M	53.6	+0.4	+3.4	+1.4	-37.9	+0.0	49.9	68.2	-18.3	Horiz
			+29.0	+0.0							
2	2 9999.966M	37.1	+0.8	+7.3	+2.7	-35.9	+0.0	49.7	68.2	-18.5	Horiz
			+37.2	+0.5							
3	3 2999.984M	50.7	+0.4	+3.6	+1.5	-37.8	+0.0	49.3	68.2	-18.9	Horiz
			+30.0	+0.9							
	4 2999.985M	50.3	+0.4	+3.6	+1.5	-37.8	+0.0	48.9	68.2	-19.3	Vert
			+30.0	+0.9							

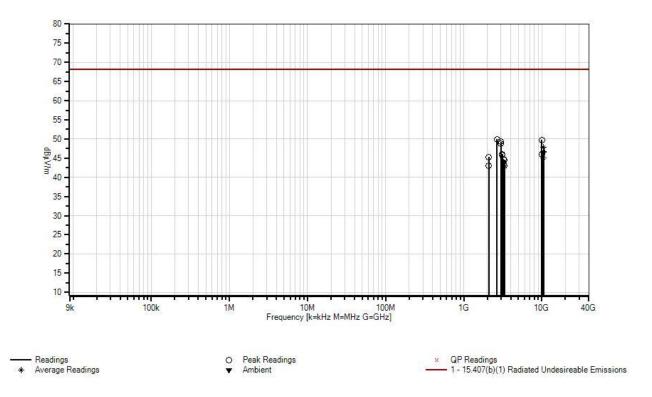
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5 10459.333	35.1	+0.8	+7.9	+2.7	-36.6	+0.0	47.9	68.2	-20.3	Vert
M	33.1	+37.7	+0.3	12.7	30.0	10.0	47.7	00.2	20.3	VCIT
Ave										
^ 10459.333	45.4	+0.8	+7.9	+2.7	-36.6	+0.0	58.2	68.2	-10.0	Vert
M		+37.7	+0.3							
7 10379.250	34.2	+0.8	+7.8	+2.7	-36.5	+0.0	46.8	68.2	-21.4	Vert
M		+37.6	+0.2							
Ave										
^ 10379.250	46.7	+0.8	+7.8	+2.7	-36.5	+0.0	59.3	68.2	-8.9	Vert
M		+37.6	+0.2							
9 10379.980	34.0	+0.8	+7.8	+2.7	-36.5	+0.0	46.6	68.2	-21.6	Horiz
M		+37.6	+0.2							
Ave										
^ 10379.980	47.0	+0.8	+7.8	+2.7	-36.5	+0.0	59.6	68.2	-8.6	Horiz
M		+37.6	+0.2							
11 3099.985M	47.3	+0.4	+3.7	+1.5	-37.8	+0.0	46.0	68.2	-22.2	Vert
12 0000 0707	22.4	+30.2	+0.7		27.0	0.0	1.5.0	50. 2		**
12 9999.950M	33.4	+0.8	+7.3	+2.7	-35.9	+0.0	46.0	68.2	-22.2	Vert
12 2100 022 6	47.0	+37.2	+0.5	1.7	27.0	0.0	45.0	60.2	22.2	TT .
13 3100.032M	47.2	+0.4	+3.7	+1.5	-37.8	+0.0	45.9	68.2	-22.3	Horiz
14 2000 00014	50.5	+30.2	+0.7	. 1.0	27.0	. 0. 0	45.0	60.2	22.0	
14 2099.989M	50.5	+0.4	+3.0	+1.2	-37.9	+0.0	45.3	68.2	-22.9	Horiz
15 10461 000	22.2	+28.1	+0.0	+2.7	26.6		45.0	60.2	22.2	IIi.
15 10461.000 M	32.2	+0.8 $+37.7$	+7.9 +0.3	+2.7	-36.6	+0.0	45.0	68.2	-23.2	Horiz
Ave		+37.7	+0.5							
^ 10461.000	42.9	+0.8	+7.9	+2.7	-36.6	+0.0	55.7	68.2	-12.5	Horiz
M	42.9	+37.7	+0.3	<i>⊤2.1</i>	-30.0	+0.0	33.1	00.2	-12.3	110112
171		131.1	10.5							
17 3199.985M	45.8	+0.4	+3.8	+1.5	-37.8	+0.0	44.7	68.2	-23.5	Vert
1, 51,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	15.0	+30.4	+0.6	. 1.5	57.0	10.0	,	55.2	23.3	, 511
18 3299.985M	45.3	+0.4	+3.9	+1.5	-37.7	+0.0	44.6	68.2	-23.6	Vert
10 3277.703141	10.0	+30.6	+0.6	11.5	37.7	10.0		00.2	23.3	, 011
19 3199.982M	44.5	+0.4	+3.8	+1.5	-37.8	+0.0	43.4	68.2	-24.8	Horiz
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		+30.4	+0.6		23					
20 2099.991M	48.3	+0.4	+3.0	+1.2	-37.9	+0.0	43.1	68.2	-25.1	Vert
		+28.1	+0.0							
21 3299.992M	43.7	+0.4	+3.9	+1.5	-37.7	+0.0	43.0	68.2	-25.2	Horiz
		+30.6	+0.6							
L										



CKC Laboratories, Inc. Date: 2/28/2012 Time: 13:22:12 Motorola Mobility, Inc. WO#: 92800 15.407(b)(1) Radiated Undesireable Emissions Test Distance: 3 Meters Sequence#: 10 Ext ATTN: 0 dB





Test Setup Photos







15.407(b)(6) & 15.407(b)(7) Undesirable Emissions Limits (15.209 / 15.205)

Test Data Sheets

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

Customer: Motorola Mobility, Inc.

Specification: 15.407(b)(6)/15.407(b)(7) Radiated Undesirable Emissions (15.209/15.205)
Work Order #: 92800 Date: 2/28/2012

 Work Order #:
 92800
 Date:
 2/28/2012

 Test Type:
 Maximized Emissions
 Time:
 14:53:43

Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 8

Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto

Model: SBG6580 P2

S/N: 35560113060065107050085

Test Equipment:

Test Equi	1	D :::	N/ 11	C 171 - 41 - D - 4	CID D
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-	8/30/2011	8/30/2013
			24TC		
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-	3/5/2010	3/5/2012
			3000/T10000-		
			O/O		
	ANP06153	Cable	16301	10/27/2011	10/27/2013
	AN01413	Horn Antenna-ANSI	84125-80008	12/2/2010	12/2/2012
		C63.5 Antenna			
		Factors (dB)			
T12	AN01413	Horn Antenna-1	84125-80008	12/2/2010	12/2/2012
		Meter Antenna			
		Factors (dB) - SAE			
		ARP 958			
	AN03158	Active Horn Antenna	AMFW-5F-	4/1/2010	4/1/2012
			26004000-33-8P		
T13	AN02945	Cable	32022-2-2909K-	10/19/2011	10/19/2013
			36TC		

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Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
DOCSIS 3.0 Wi-Fi	Motorola Mobility, Inc.	SBG6580 P2	3556011306006510705008
Gateway*			5
AC to 12Vdc Power	Asian Power Devices, Inc.	WA-24 12FU	
Adapter			

Support Devices:

Support Berteest			
Function	Manufacturer	Model #	S/N
Broadband Router	CASA Systems	C2200	FD3460
Gigabit Switch	Netgear	GS105v2	
Laptop Computer	HP	Compaq 6910p	
Performance Analysis	Spirent	SMB-600B	N06012143
System			
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: 2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.

Frequency range of EUT: 5180MHz to 5240MHz

Transmit Frequencies used for this data sheet: 5180MHz (Low), 5200MHz (Middle), and 5240MHz (High). Channels 36, 40, and 48. 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.

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Ext Attn: 0 dB

#	ement Data:		zaume ns	ted by ma	argin.		1 e	est Distance	e: 3 Meters		
	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	1		T5	T6	T7	Т8			r	6	
			T9	T10	T11	T12					
			T13								
	MHz	$dB\mu V$	dB	dB	dB	dB	Table	$dB\mu V/m \\$	$dB\mu V/m \\$	dB	Ant
1 1	15600.857	30.9	+0.0	+0.0	+0.0	+0.0	+0.0	51.7	54.0	-2.3	Vert
	M		+0.0	+1.0	+9.8	+3.3					
A	ve		-34.7	+41.4	+0.0	+0.0					
			+0.0								
^ 1	15600.857	41.2	+0.0	+0.0	+0.0	+0.0	+0.0	62.0	54.0	+8.0	Vert
	M		+0.0	+1.0	+9.8	+3.3					
			-34.7	+41.4	+0.0	+0.0					
			+0.0								
3 1	15719.500	30.0	+0.0	+0.0	+0.0	+0.0	+0.0	50.9	54.0	-3.1	Vert
	M		+0.0	+1.0	+9.8	+3.3					
A	ve		-34.5	+41.3	+0.0	+0.0					
			+0.0								
^ 1	15719.500	41.1	+0.0	+0.0	+0.0	+0.0	+0.0	62.0	54.0	+8.0	Vert
	M		+0.0	+1.0	+9.8	+3.3					
			-34.5	+41.3	+0.0	+0.0					
	1 7 7 10 0 5 7	20.1	+0.0	0.0	0.0	0.0	0.0	7 0.0	7.1.0		**
5 1	15540.967	30.1	+0.0	+0.0	+0.0	+0.0	+0.0	50.8	54.0	-3.2	Vert
	M		+0.0	+1.0	+9.7	+3.3					
A	ve		-34.8	+41.5	+0.0	+0.0					
^ 1	15540.067	40.2	+0.0	.00	. 0. 0	. 0. 0	. 0. 0	62.0	540	.00	X 74
, ,	15540.967	42.3	+0.0	+0.0	+0.0	+0.0	+0.0	63.0	54.0	+9.0	Vert
	M		+0.0 -34.8	+1.0 +41.5	+9.7 +0.0	+3.3 +0.0					
			+0.0	+41.3	+0.0	+0.0					
7 7	20959.850	49.5	+0.0	+0.0	+0.0	+0.0	-9.5	50.6	54.0	-3.4	Horiz
/ 2	20939.830 M	49.3	+0.0 +0.0	+0.0	+0.0	+0.0 +0.0	-9.3	30.0	34.0	-3.4	HOHZ
	IVI		-32.8	+0.0	+0.0	+39.6					
			+2.6	10.0	10.0	137.0					
8 2	20799.783	49.2	+0.0	+0.0	+0.0	+0.0	-9.5	50.3	54.0	-3.7	Vert
	M	r).4	+0.0	+1.1	+0.0	+0.0	7.5	50.5	27.0	5.1	, OI t
			-32.8	+0.0	+0.0	+39.8					
			+2.5	. 0.0	. 0.0	. 27.0					
9 2	20799.783	48.9	+0.0	+0.0	+0.0	+0.0	-9.5	50.0	54.0	-4.0	Horiz
	M		+0.0	+1.1	+0.0	+0.0	- ··	- 0.0			
			-32.8	+0.0	+0.0	+39.8					
			+2.5								
10 1	15718.784	29.1	+0.0	+0.0	+0.0	+0.0	+0.0	50.0	54.0	-4.0	Horiz
	M		+0.0	+1.0	+9.8	+3.3					
A	ve		-34.5	+41.3	+0.0	+0.0					
			+0.0								
	15718.784	39.7	+0.0	+0.0	+0.0	+0.0	+0.0	60.6	54.0	+6.6	Horiz
^ 1	10,10,,0.										
^]	M		+0.0	+1.0	+9.8	+3.3					
^]			+0.0 -34.5 +0.0	+1.0 +41.3	+9.8 +0.0	+3.3 +0.0					



12 15:	599.200	28.9	+0.0	+0.0	+0.0	+0.0	+0.0	49.7	54.0	-4.3	Horiz
	M		+0.0	+1.0	+9.8	+3.3					
Ave	,		-34.7	+41.4	+0.0	+0.0					
Λ 154	599.200	38.5	+0.0	+0.0	+0.0	+0.0	+0.0	59.3	54.0	+5.3	Horiz
15.	M	36.3	+0.0	+0.0	+9.8	+3.3	+0.0	39.3	34.0	+3.3	ПОПЕ
	1V1		-34.7	+41.4	+0.0	+0.0					
			+0.0		10.0	10.0					
14 209	959.817	48.3	+0.0	+0.0	+0.0	+0.0	-9.5	49.4	54.0	-4.6	Vert
	M		+0.0	+1.2	+0.0	+0.0					
			-32.8	+0.0	+0.0	+39.6					
			+2.6								
15 289	99.988M	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	+0.0					
			+0.0								
16 15:	541.425	28.4	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Horiz
	M		+0.0	+1.0	+9.7	+3.3					
Ave	2		-34.8	+41.5	+0.0	+0.0					
۸ 154	541.425	37.3	+0.0	+0.0	+0.0	ι Ο Ο	+0.0	50 A	540	+4.0	Homin
. 13.	M	37.3	+0.0 +0.0	+0.0	+0.0 +9.7	+0.0 +3.3	+0.0	58.0	54.0	+4.0	Horiz
	IVI		-34.8	+41.5	+9.7	+0.0					
			+0.0	171.5	10.0	10.0					
18 333	33.317M	49.7	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Horiz
Ave		12.7	+0.0	+0.4	+3.9	+1.5	10.0	17.1	5 1.0	,	110112
			-37.7	+30.7	+0.6	+0.0					
			+0.0								
^ 333	33.317M	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	+0.0					
			+0.0								
20 20	719.833	48.0	+0.0	+0.0	+0.0	+0.0	-9.5	49.1	54.0	-5.0	Vert
	M		+0.0	+1.1	+0.0	+0.0					
			-32.9	+0.0	+0.0	+39.9					
21 12	400.047	22.2	+2.5	. 0. 0	. 0. 0	.00	.0.0	40.0	510	<i>E</i> 1	TT
	499.947 M	33.3	+0.0 +0.0	$^{+0.0}_{+0.8}$	+0.0 +8.9	$+0.0 \\ +2.9$	+0.0	48.9	54.0	-5.1	Horiz
Ave	M		+0.0 -35.9	+0.8	+8.9	+2.9 +0.0					
Ave	,		+0.0	130.7	FU.2	±0.0					
^ 124	499.947	36.7	+0.0	+0.0	+0.0	+0.0	+0.0	52.3	54.0	-1.7	Horiz
12-	M	50.7	+0.0	+0.8	+8.9	+2.9	10.0	52.5	<i>5</i> 1.0	1./	HOHE
	··=		-35.9	+38.7	+0.2	+0.0					
			+0.0								
23 233	33.324M	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	+0.0					
			+0.0								
	99.977M	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	+0.0					
			+0.0								

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٨	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	+0.0	+0.0					
26	20710 717	46.0	+0.0	. 0. 0	. 0. 0	. 0. 0	0.5	40.0	710		
26	20719.717	46.9	+0.0	+0.0	+0.0	+0.0	-9.5	48.0	54.0	-6.0	Horiz
	M		+0.0 -32.9	$+1.1 \\ +0.0$	$+0.0 \\ +0.0$	+0.0 +39.9					
			+2.5	+0.0	+0.0	+39.9					
27	124.998M	50.8	+0.2	-27.8	+1.9	+12.1	+0.0	37.2	43.5	-6.3	Vert
21	124.770IVI	30.0	+0.0	+0.0	+0.0	+0.0	10.0	31.2	тэ.э	-0.5	VCIT
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
28	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	+0.0					
			+0.0								
٨	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	+0.0					
			+0.0								
30	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	+0.0					
			+0.0								
٨	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	+0.0					
22	7400.06614	20.4	+0.0	.00	.00	.00	+0.0	47.0	540	7.0	II a ni n
32	7499.966M	38.4	+0.0 +0.0	$+0.0 \\ +0.7$	+0.0 +6.5	+0.0 +2.3	+0.0	47.0	54.0	-7.0	Horiz
	Ave		-36.5	+35.5	+0.3	+2.3					
			+0.0	⊤33.3	+0.1	+0.0					
٨	7499.966M	42.6	+0.0	+0.0	+0.0	+0.0	+0.0	51.2	54.0	-2.8	Horiz
	7477.700111	42.0	+0.0	+0.7	+6.5	+2.3	10.0	31.2	54.0	2.0	HOHZ
			-36.5	+35.5	+0.1	+0.0					
			+0.0		. 0.1	. 0.0					
34	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	+0.0					
			+0.0								
35	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	+0.0					
			+0.0								
36	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					
	7 4.0007.5	-	+0.0	25.0			0.0	22 :	10.0		**
37	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					
			+0.0								

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38	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	+0.0					
20	240,0003.4	40.7	+0.0	27.0	. 2. 0	. 10.7	.0.0	27.6	16.0	0.4	X7 .
39	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					
40	2799.982M	44.5	+0.0	+0.0	+0.0	+0.0	+0.0	45.5	54.0	-8.5	Vert
40	2199.902IVI	44.3	+0.0	+0.4	+3.5	+1.4	+0.0	45.5	34.0	-0.5	VCIT
			-37.8	+29.4	+4.1	+0.0					
			+0.0	127.1		10.0					
41	73.320M	51.2	+0.1	-27.9	+1.4	+6.5	+0.0	31.3	40.0	-8.7	Vert
	73.32011	31.2	+0.0	+0.0	+0.0	+0.0	10.0	51.5	10.0	0.7	, 611
			+0.0	+0.0	+0.0	+0.0					
			+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	+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	+0.0					
			+0.0								
44	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	+0.0					
1.5	240,00014	40.0	+0.0	27.0	. 2. 0	. 10.7	. 0. 0	26.1	16.0	0.0	
45	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					
16	7499.965M	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
	Ave	33.3	+0.0	+0.0	+6.5	+2.3	+0.0	43.7	34.0	-10.1	V CI t
	AVC		-36.5	+35.5	+0.3	+0.0					
			+0.0	100.0	10.1	10.0					
٨	7499.965M	40.9	+0.0	+0.0	+0.0	+0.0	+0.0	49.5	54.0	-4.5	Vert
		10.7	+0.0	+0.7	+6.5	+2.3	. 0.0	. ,	5 1.0	1	, 010
			-36.5	+35.5	+0.1	+0.0					
			+0.0								
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	+0.0					
			+0.0								
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	+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	+0.0					
			+0.0								

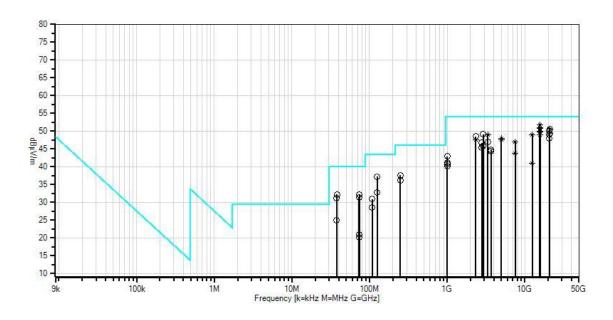
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51	1000.008M	54.2	+0.0	+0.0	+0.0	+0.0	+0.0	41.2	54.0	-12.8	Vert
			+0.0	+0.3	+2.0	+0.9					
			-40.4	+24.2	+0.0	+0.0					
			+0.0								
52	12499.972	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
	M		+0.0	+0.8	+8.9	+2.9					
	Ave		-35.9	+38.7	+0.2	+0.0					
	-		+0.0								
^	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	+0.0					
			+0.0								
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	+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	+0.0					
			+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	+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	+0.0					
			+0.0								
58	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								
59	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								
	·										



CKC Laboratories, Inc. Date: 2/28/2012 Time: 14:53:43 Motorola Mobility, Inc. WO#: 92800 15.407(b)(6)/15.407(b)(7) Radiated Undesirable Emissions (15.209/15.205) Test Distance: 3 Meters Sequence#: 8 Ext ATTN: 0 dB



Readings

× QP Readings

▼ Ambient

O Peak Readings

* Average Readings
1 - 15.407(b)(6)/15.407(b)(7) Radiated Undesirable Emissions (15.209/15.205)



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

Customer: Motorola Mobility, Inc.

Specification: 15.407(b)(6)/15.407(b)(7) Radiated Undesirable Emissions (15.209/15.205)

Work Order #: 92800 Date: 2/28/2012
Test Type: Maximized Emissions Time: 14:53:43

Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 9

Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto

Model: SBG6580 P2

S/N: 35560113060065107050085

Test Equipment:

Test Equip	meni.				
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
Т3	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-	8/30/2011	8/30/2013
			24TC		
T7	ANP06081	Cable	L1-PNMNM-48	4/28/2011	4/28/2013
Т8	ANP05421	Cable	Sucoflex 104A	2/8/2012	2/8/2014
Т9	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-	3/5/2010	3/5/2012
			3000/T10000-		
			O/O		
	ANP06153	Cable	16301	10/27/2011	10/27/2013
	AN01413	Horn Antenna-ANSI	84125-80008	12/2/2010	12/2/2012
		C63.5 Antenna			
		Factors (dB)			
T12	AN01413	Horn Antenna-1	84125-80008	12/2/2010	12/2/2012
		Meter Antenna			
		Factors (dB) - SAE			
		ARP 958			
_	AN03158	Active Horn Antenna	AMFW-5F-	4/1/2010	4/1/2012
			26004000-33-8P		
T13	AN02945	Cable	32022-2-2909K-	10/19/2011	10/19/2013
			36TC		

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Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
DOCSIS 3.0 Wi-Fi	Motorola Mobility, Inc.	SBG6580 P2	3556011306006510705008
Gateway*			5
AC to 12Vdc Power	Asian Power Devices, Inc.	WA-24 12FU	
Adapter			

Support Devices:

Support Berteest			
Function	Manufacturer	Model #	S/N
Broadband Router	CASA Systems	C2200	FD3460
Gigabit Switch	Netgear	GS105v2	
Laptop Computer	HP	Compaq 6910p	
Performance Analysis	Spirent	SMB-600B	N06012143
System			
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: 2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.

Frequency range of EUT: 5180MHz to 5240MHz

Transmit Frequencies used for this data sheet: 5180MHz (Low), 5200MHz (Middle), and 5240MHz (High). Channels 36, 40, and 48. 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.

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Ext Attn: 0 dB

Measur	leasurement Data: Reading listed by margin.					Test Distance: 3 Meters						
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar	
	•	· ·	T5	T6	T7	T8			•			
			T9	T10	T11	T12						
			T13									
	MHz	$dB\mu V$	dB	dB	dB	dB	Table	$dB\mu V/m \\$	$dB\mu V/m \\$	dB	Ant	
1	15540.583	30.1	+0.0	+0.0	+0.0	+0.0	+0.0	50.8	54.0	-3.2	Vert	
	M		+0.0	+1.0	+9.7	+3.3						
I	Ave		-34.8	+41.5	+0.0	+0.0						
			+0.0									
^	15540.583	41.7	+0.0	+0.0	+0.0	+0.0	+0.0	62.4	54.0	+8.4	Vert	
	M		+0.0	+1.0	+9.7	+3.3						
			-34.8	+41.5	+0.0	+0.0						
			+0.0									
3	20959.808	49.6	+0.0	+0.0	+0.0	+0.0	-9.5	50.7	54.0	-3.3	Horiz	
	M		+0.0	+1.2	+0.0	+0.0						
			-32.8	+0.0	+0.0	+39.6						
			+2.6									
4	15601.667	29.6	+0.0	+0.0	+0.0	+0.0	+0.0	50.4	54.0	-3.6	Vert	
	M		+0.0	+1.0	+9.8	+3.3						
A	Ave		-34.7	+41.4	+0.0	+0.0						
	45.04.55		+0.0	0.0	0.0		0.0		7.1.0		**	
^	15601.667	41.7	+0.0	+0.0	+0.0	+0.0	+0.0	62.5	54.0	+8.5	Vert	
	M		+0.0	+1.0	+9.8	+3.3						
			-34.7	+41.4	+0.0	+0.0						
	15717 750	20.4	+0.0	.00	.00	.00	.00	50.2	540	2.7	V	
0	15717.750	29.4	+0.0	+0.0	+0.0	+0.0	+0.0	50.3	54.0	-3.7	Vert	
	M		+0.0 -34.5	+1.0 +41.3	+9.8 +0.0	+3.3 +0.0						
	Ave		+0.0	+41.3	+0.0	+0.0						
^	15717.750	41.8	+0.0	+0.0	+0.0	+0.0	+0.0	62.7	54.0	+8.7	Vert	
	M	41.6	+0.0	+0.0	+9.8	+3.3	+0.0	02.7	34.0	+0.7	vert	
	IVI		-34.5	+41.3	+0.0	+0.0						
			+0.0	141.5	10.0	10.0						
8	20799.833	48.8	+0.0	+0.0	+0.0	+0.0	-9.5	49.9	54.0	-4.1	Vert	
	M	10.0	+0.0	+1.1	+0.0	+0.0	7.5	12.2	27.0	т. 1	, 011	
	111		-32.8	+0.0	+0.0	+39.8						
			+2.5	. 0.0	. 0.0	. 27.0						
9	20799.733	48.6	+0.0	+0.0	+0.0	+0.0	-9.5	49.7	54.0	-4.3	Horiz	
	M		+0.0	+1.1	+0.0	+0.0	·	1	2			
	-		-32.8	+0.0	+0.0	+39.8						
			+2.5									
10	15541.325	28.9	+0.0	+0.0	+0.0	+0.0	+0.0	49.6	54.0	-4.4	Horiz	
	M		+0.0	+1.0	+9.7	+3.3						
I	Ave		-34.8	+41.5	+0.0	+0.0						
			+0.0									
٨	15541.325	39.6	+0.0	+0.0	+0.0	+0.0	+0.0	60.3	54.0	+6.3	Horiz	
	M		+0.0	+1.0	+9.7	+3.3						
1			-34.8	+41.5	+0.0	+0.0						
1			+0.0									

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12 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	+0.0					
12 2222 21714	40.7	+0.0	. 0. 0	. 0. 0	.0.0	. 0. 0	40.1	540	4.0	77 .
13 3333.317M	49.7	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Horiz
Ave		+0.0 -37.7	+0.4 +30.7	+3.9	$+1.5 \\ +0.0$					
		+0.0	+30.7	+0.6	+0.0					
^ 3333.317M	53.1	+0.0	+0.0	+0.0	+0.0	+0.0	52.5	54.0	-1.5	Horiz
3333.31711	33.1	+0.0	+0.4	+3.9	+1.5	10.0	32.3	34.0	-1.5	110112
		-37.7	+30.7	+0.6	+0.0					
		+0.0								
15 20959.858	48.0	+0.0	+0.0	+0.0	+0.0	-9.5	49.1	54.0	-4.9	Vert
M		+0.0	+1.2	+0.0	+0.0	,	.,,-			
		-32.8	+0.0	+0.0	+39.6					
		+2.6								
16 12499.947	33.3	+0.0	+0.0	+0.0	+0.0	+0.0	48.9	54.0	-5.1	Horiz
M		+0.0	+0.8	+8.9	+2.9					
Ave		-35.9	+38.7	+0.2	+0.0					
		+0.0								
^ 12499.947	36.7	+0.0	+0.0	+0.0	+0.0	+0.0	52.3	54.0	-1.7	Horiz
M		+0.0	+0.8	+8.9	+2.9					
		-35.9	+38.7	+0.2	+0.0					
		+0.0								
18 15720.875	27.7	+0.0	+0.0	+0.0	+0.0	+0.0	48.6	54.0	-5.4	Horiz
M		+0.0	+1.0	+9.8	+3.3					
Ave		-34.5	+41.3	+0.0	+0.0					
^ 15720.875	41.2	+0.0	+0.0	+0.0	+0.0	+0.0	62.1	54.0	+8.1	Horiz
M	41.2	+0.0	+0.0	+9.8	+3.3	+0.0	02.1	34.0	+0.1	ПОПЕ
1V1		-34.5	+41.3	+0.0	+0.0					
		+0.0	171.3	10.0	10.0					
20 2333.324M	53.3	+0.0	+0.0	+0.0	+0.0	+0.0	48.5	54.0	-5.5	Vert
20 2333.32 1111	00.0	+0.0	+0.4	+3.2	+1.3	10.0	10.5	5 1.0	0.0	, 011
		-38.0	+28.3	+0.0	+0.0					
		+0.0								
21 15597.808	27.5	+0.0	+0.0	+0.0	+0.0	+0.0	48.3	54.0	-5.7	Horiz
M		+0.0	+1.0	+9.8	+3.3					
Ave		-34.7	+41.4	+0.0	+0.0					
		+0.0								
^ 15597.808	40.6	+0.0	+0.0	+0.0	+0.0	+0.0	61.4	54.0	+7.4	Horiz
M		+0.0	+1.0	+9.8	+3.3					
		-34.7	+41.4	+0.0	+0.0					
		+0.0								
23 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	+0.0					
A 4000 0000 5	45.0	+0.0				0.0	# 0.0	F / O		***
^ 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	+0.0	+0.0					
		+0.0								

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2.5	20710.050	46.0	0.0	0.0	0.0	0.0	0.5	40.0	7.1.0		** '
25	20719.950	46.9	+0.0 +0.0	$+0.0 \\ +1.1$	+0.0	+0.0	-9.5	48.0	54.0	-6.0	Horiz
	M		+0.0 -32.9	+1.1 +0.0	+0.0 +0.0	+0.0 +39.9					
			+2.5	+0.0	+0.0	+37.7					
26	20719.900	46.8	+0.0	+0.0	+0.0	+0.0	-9.5	47.9	54.0	-6.1	Vert
	M		+0.0	+1.1	+0.0	+0.0	,				
			-32.9	+0.0	+0.0	+39.9					
			+2.5								
27	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					
			+0.0								
	4999.978M	43.7	+0.0	+0.0	+0.0	+0.0	+0.0	47.6	54.0	-6.4	Horiz
F	Ave		+0.0	+0.5	+5.0	+1.8					
			-37.0	+33.3	+0.3	+0.0					
^	4999.978M	16.5	+0.0	+0.0	+0.0	+O O	+0.0	50.4	54.0	-3.6	Horiz
,,	4777.7 / O.WI	46.5	+0.0 +0.0	+0.0	+0.0 +5.0	$+0.0 \\ +1.8$	+0.0	30.4	34.0	-3.0	попи
			-37.0	+33.3	+0.3	$^{+1.6}$					
			+0.0	133.3	10.5	10.0					
30	2333.317M	52.4	+0.0	+0.0	+0.0	+0.0	+0.0	47.6	54.0	-6.4	Horiz
	Ave	02	+0.0	+0.4	+3.2	+1.3	. 0.0	.,.0	2	0	110112
			-38.0	+28.3	+0.0	+0.0					
			+0.0								
٨	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	+0.0					
			+0.0								
	7499.966M	38.4	+0.0	+0.0	+0.0	+0.0	+0.0	47.0	54.0	-7.0	Horiz
A	Ave		+0.0	+0.7	+6.5	+2.3					
			-36.5	+35.5	+0.1	+0.0					
^	7400.06614	12.6	+0.0	. 0. 0	.00	.00	.00	£1.0	540	2.0	II
,,	7499.966M	42.6	$+0.0 \\ +0.0$	$+0.0 \\ +0.7$	+0.0 +6.5	+0.0 +2.3	+0.0	51.2	54.0	-2.8	Horiz
			+0.0 -36.5	+35.5	+0.3	+2.5					
			+0.0	100.0	10.1	10.0					
34	3333.321M	47.6	+0.0	+0.0	+0.0	+0.0	+0.0	47.0	54.0	-7.0	Vert
51	2333.321111	. / . 0	+0.0	+0.4	+3.9	+1.5	. 0.0	.,.0	5 1.0	7.0	, 010
			-37.7	+30.7	+0.6	+0.0					
			+0.0								
35	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	+0.0					
			+0.0								
36	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					
	7 4.0007.5	7 10	+0.0	25.0			0.0	22.1	40.0	7 ^	**
37	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					
			+0.0								

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38	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	+0.0					
20	240,0003.4	40.7	+0.0	27.0	. 2. 0	. 10.7	.0.0	27.6	16.0	0.4	X7 .
39	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					
40	2799.982M	44.5	+0.0	+0.0	+0.0	+0.0	+0.0	45.5	54.0	-8.5	Vert
40	2199.902IVI	44.3	+0.0	+0.4	+3.5	+1.4	+0.0	45.5	34.0	-0.5	VCIT
			-37.8	+29.4	+4.1	+0.0					
			+0.0	127.1		10.0					
41	73.320M	51.2	+0.1	-27.9	+1.4	+6.5	+0.0	31.3	40.0	-8.7	Vert
	73.32011	31.2	+0.0	+0.0	+0.0	+0.0	10.0	51.5	10.0	0.7	, 611
			+0.0	+0.0	+0.0	+0.0					
			+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	+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	+0.0					
			+0.0								
44	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	+0.0					
1.5	240,00014	40.0	+0.0	27.0	. 2. 0	. 10.7	. 0. 0	26.1	16.0	0.0	
45	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					
16	7499.965M	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
	Ave	33.3	+0.0	+0.0	+6.5	+2.3	+0.0	43.7	34.0	-10.1	V CI t
	AVC		-36.5	+35.5	+0.3	+0.0					
			+0.0	100.0	10.1	10.0					
٨	7499.965M	40.9	+0.0	+0.0	+0.0	+0.0	+0.0	49.5	54.0	-4.5	Vert
		10.7	+0.0	+0.7	+6.5	+2.3	. 0.0	. ,	5 1.0	1	, 010
			-36.5	+35.5	+0.1	+0.0					
			+0.0								
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	+0.0					
			+0.0								
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	+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	+0.0					
			+0.0								

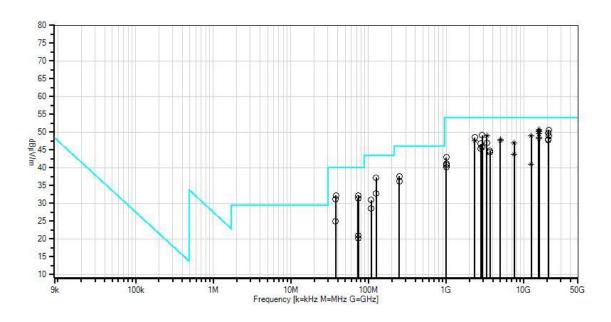
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51	1000.008M	54.2	+0.0	+0.0	+0.0	+0.0	+0.0	41.2	54.0	-12.8	Vert
			+0.0	+0.3	+2.0	+0.9					
			-40.4	+24.2	+0.0	+0.0					
			+0.0								
52	12499.972	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
	M		+0.0	+0.8	+8.9	+2.9					
	Ave		-35.9	+38.7	+0.2	+0.0					
	-		+0.0								
^	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	+0.0					
			+0.0								
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	+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	+0.0					
			+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	+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	+0.0					
			+0.0								
58	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								
59	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								
	·										



CKC Laboratories, Inc. Date: 2/28/2012 Time: 14:53:43 Motorola Mobility, Inc. WO#: 92800 15.407(b)(6)/15.407(b)(7) Radiated Undesirable Emissions (15.209/15.205) Test Distance: 3 Meters Sequence#: 9 Ext ATTN: 0 dB



Readings
× QP Readings
▼ Ambient

O Peak Readings

* Average Readings
1 - 15.407(b)(6)/15.407(b)(7) Radiated Undesirable Emissions (15.209/15.205)



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

Customer: Motorola Mobility, Inc.

15.407(b)(6)/15.407(b)(7) Radiated Undesirable Emissions (15.209/15.205) Specification:

Work Order #: 92800 Date: 2/28/2012 Test Type: **Maximized Emissions** Time: 14:53:43 Sequence#: 10 Tested By: S. Yamamoto Equipment: **DOCSIS 3.0 Wi-Fi Gateway**

Manufacturer: Motorola Mobility, Inc.

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
Т3	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-	8/30/2011	8/30/2013
			24TC		
T7	ANP06081	Cable	L1-PNMNM-48	4/28/2011	4/28/2013
Т8	ANP05421	Cable	Sucoflex 104A	2/8/2012	2/8/2014
Т9	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-	3/5/2010	3/5/2012
			3000/T10000-		
			O/O		
	ANP06153	Cable	16301	10/27/2011	10/27/2013
	AN01413	Horn Antenna-ANSI	84125-80008	12/2/2010	12/2/2012
		C63.5 Antenna			
		Factors (dB)			
T12	AN01413	Horn Antenna-1	84125-80008	12/2/2010	12/2/2012
		Meter Antenna			
		Factors (dB) - SAE			
		ARP 958			
T13	AN03158	Active Horn Antenna		4/1/2010	4/1/2012
			26004000-33-8P		
	AN02945	Cable	32022-2-2909K-	10/19/2011	10/19/2013
			36TC		

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Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
DOCSIS 3.0 Wi-Fi	Motorola Mobility, Inc.	SBG6580 P2	3556011306006510705008
Gateway*			5
AC to 12Vdc Power	Asian Power Devices, Inc.	WA-24 12FU	
Adapter			

Support Devices:

Function	Manufacturer	Model #	S/N	
Broadband Router	CASA Systems	C2200	FD3460	
Gigabit Switch	Netgear	GS105v2		
Laptop Computer	HP	Compaq 6910p		
Performance Analysis	Spirent	SMB-600B	N06012143	
System				
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: 2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.

Frequency range of EUT: 5180MHz to 5240MHz

Transmit Frequencies used for this data sheet: 5190MHz (Low), and 5230MHz (High). Channels 40 and 48. 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.

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Ext Attn: 0 dB

	rement Data:	Re	eading lis	ted by ma	argin.		Тє	est Distance	e: 3 Meters		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	•	Ü	T5	T6	T7	T8			•		
			T9	T10	T11	T12					
			T13								
	MHz	$dB\mu V$	dB	dB	dB	dB	Table	$dB\mu V/m \\$	$dB\mu V/m \\$	dB	Ant
1	15698.000	30.0	+0.0	+0.0	+0.0	+0.0	+0.0	50.9	54.0	-3.1	Vert
	M		+0.0	+1.0	+9.8	+3.3					
	Ave		-34.5	+41.3	+0.0	+0.0					
			+0.0								
٨	15698.000	37.8	+0.0	+0.0	+0.0	+0.0	+0.0	58.7	54.0	+4.7	Vert
	M		+0.0	+1.0	+9.8	+3.3					
			-34.5	+41.3	+0.0	+0.0					
			+0.0								
3		49.7	+0.0	+0.0	+0.0	+0.0	-9.5	50.9	54.0	-3.2	Horiz
	M		+0.0	+1.1	+0.0	+0.0					
			-32.8	+0.0	+0.0	+39.9					
			+2.5								
4	20919.800	49.6	+0.0	+0.0	+0.0	+0.0	-9.5	50.8	54.0	-3.2	Horiz
	M		+0.0	+1.2	+0.0	+0.0					
			-32.8	+0.0	+0.0	+39.7					
	20550 502	40.0	+2.6	0.0	0.0		0.7	70.0	7.1.0	2.0	**
5	20759.783	49.0	+0.0	+0.0	+0.0	+0.0	-9.5	50.2	54.0	-3.8	Vert
	M		+0.0	+1.1	+0.0	+0.0					
			-32.8	+0.0	+0.0	+39.9					
	20010 925	40.7	+2.5	.00	.00	.00	0.5	40.0	540	4.1	V
0	20919.825 M	48.7	+0.0	+0.0	+0.0	+0.0	-9.5	49.9	54.0	-4.1	Vert
	IVI		+0.0 -32.8	$+1.2 \\ +0.0$	+0.0 +0.0	+0.0 +39.7					
			-32.6 +2.6	+0.0	+0.0	+39.7					
7	15691.083	28.4	+0.0	+0.0	+0.0	+0.0	+0.0	49.3	54.0	-4.7	Horiz
,	13091.083 M	20.4	+0.0	+0.0	+9.8	+3.3	+0.0	49.3	34.0	-4./	HOHZ
	Ave		-34.5	+41.3	+0.0	+0.0					
	1110		+0.0	141.5	10.0	10.0					
^	15691.083	39.7	+0.0	+0.0	+0.0	+0.0	+0.0	60.6	54.0	+6.6	Horiz
	M	37.1	+0.0	+1.0	+9.8	+3.3	10.0	00.0	2 7.0	10.0	110112
	±.±		-34.5	+41.3	+0.0	+0.0					
			+0.0			. 5.0					
9	2899.988M	50.8	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Horiz
	2,2,001,1	- 0.0	+0.0	+0.4	+3.6	+1.4	. 0.0			•••	
			-37.9	+29.7	+1.1	+0.0					
			+0.0								
10	3333.317M	49.7	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Horiz
	Ave		+0.0	+0.4	+3.9	+1.5					
			-37.7	+30.7	+0.6	+0.0					
			+0.0								
٨	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					
1			-37.7	+30.7	+0.6	+0.0					
			57.7		10.0	10.0					

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12	12499.947	33.3	+0.0	+0.0	+0.0	+0.0	+0.0	48.9	54.0	-5.1	Horiz
	M		+0.0	+0.8	+8.9	+2.9					
	Ave		-35.9	+38.7	+0.2	+0.0					
^	12499.947	267	+0.0	+0.0	+0.0	+0.0	+0.0	52.3	540	-1.7	Homin
,	12499.947 M	36.7	+0.0 +0.0	$+0.0 \\ +0.8$	+0.0	+0.0 +2.9	+0.0	32.3	54.0	-1./	Horiz
	IVI		-35.9	+38.7	+0.2	+2.9					
			+0.0	130.7	10.2	10.0					
14	2333.324M	53.3	+0.0	+0.0	+0.0	+0.0	+0.0	48.5	54.0	-5.5	Vert
1	2000.02	00.0	+0.0	+0.4	+3.2	+1.3	. 0.0		2	0.0	, 010
			-38.0	+28.3	+0.0	+0.0					
			+0.0								
15	15570.055	27.7	+0.0	+0.0	+0.0	+0.0	+0.0	48.3	54.0	-5.7	Horiz
	M		+0.0	+1.0	+9.7	+3.3					
	Ave		-34.8	+41.4	+0.0	+0.0					
			+0.0								
٨	15570.055	39.9	+0.0	+0.0	+0.0	+0.0	+0.0	60.5	54.0	+6.5	Horiz
	M		+0.0	+1.0	+9.7	+3.3					
			-34.8	+41.4	+0.0	+0.0					
17	4999.977M	44.2	+0.0	+0.0	+0.0	+0.0	+0.0	48.1	54.0	-5.9	Vert
		44.2	+0.0 +0.0	+0.0	+0.0 +5.0	+0.0	+0.0	48.1	54.0	-3.9	vert
	Ave		-37.0	+33.3	+0.3	$^{+1.8}_{+0.0}$					
			+0.0	133.3	10.5	10.0					
٨	4999.977M	47.0	+0.0	+0.0	+0.0	+0.0	+0.0	50.9	54.0	-3.1	Vert
	1,7,7,1,7,1,11	17.0	+0.0	+0.5	+5.0	+1.8	10.0	20.7	5 1.0	3.1	, 616
			-37.0	+33.3	+0.0	+0.0					
			+0.0								
19	15573.450	27.1	+0.0	+0.0	+0.0	+0.0	+0.0	47.7	54.0	-6.3	Vert
	M		+0.0	+1.0	+9.7	+3.3					
	Ave		-34.8	+41.4	+0.0	+0.0					
			+0.0								
^	15573.450	39.7	+0.0	+0.0	+0.0	+0.0	+0.0	60.3	54.0	+6.3	Vert
	M		+0.0	+1.0	+9.7	+3.3					
			-34.8	+41.4	+0.0	+0.0					
21	124 000 4	50.0	+0.0	27.0	, 1 O	110.1	100	27.2	12 5	6.2	Vart
21	124.998M	50.8	+0.2 +0.0	-27.8 +0.0	+1.9 +0.0	$+12.1 \\ +0.0$	+0.0	37.2	43.5	-6.3	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	10.0	10.0	10.0					
2.2	4999.978M	43.7	+0.0	+0.0	+0.0	+0.0	+0.0	47.6	54.0	-6.4	Horiz
	Ave	.5.7	+0.0	+0.5	+5.0	+1.8	. 0.0	.,.0	5 1.0	5.1	110112
			-37.0	+33.3	+0.3	+0.0					
			+0.0								
٨	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	+0.0					
			+0.0								
	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	+0.0					
			+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	+0.0					
26 7400 06614	20.4	+0.0	. 0. 0	. 0. 0	. 0. 0	. 0. 0	47.0	710	7.0	
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 -36.5	+0.7 +35.5	+6.5 +0.1	$+2.3 \\ +0.0$					
		+0.0	+33.3	+0.1	+0.0					
^ 7499.966M	42.6	+0.0	+0.0	+0.0	+0.0	+0.0	51.2	54.0	-2.8	Horiz
7477.700IVI	42.0	+0.0	+0.7	+6.5	+2.3	10.0	31.2	54.0	2.0	HOHZ
		-36.5	+35.5	+0.1	+0.0					
		+0.0								
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	+0.0					
		+0.0								
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	+0.0					
20 27 0021 6		+0.0	27.0	1.0		0.0	22.2	40.0		**
30 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	+0.0					
31 74.008M	51.8	+0.0	-27.9	+1.4	+6.7	+0.0	32.1	40.0	-7.9	Vert
31 /4.006WI	31.0	+0.1	+0.0	+0.0	+0.7	+0.0	32.1	40.0	-1.5	v ert
		+0.0	+0.0	+0.0	+0.0					
		+0.0	. 0.0	. 0.0	. 0.0					
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	+0.0					
		+0.0								
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	+0.0					
24 2700 00235	44.7	+0.0	0.0	0.0	0.0	.0.0	45.5	F.4.C	0.7	17
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 +0.0	+29.4	+4.1	+0.0					
35 73.320M	51.2	+0.0	-27.9	+1.4	+6.5	+0.0	31.3	40.0	-8.7	Vert
55 / 5.52UM	31.2	+0.1	+0.0	+1.4 +0.0	+0.3 +0.0	+0.0	31.3	40.0	-0.7	v ei i
		+0.0	+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	+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	+0.0					
		+0.0								

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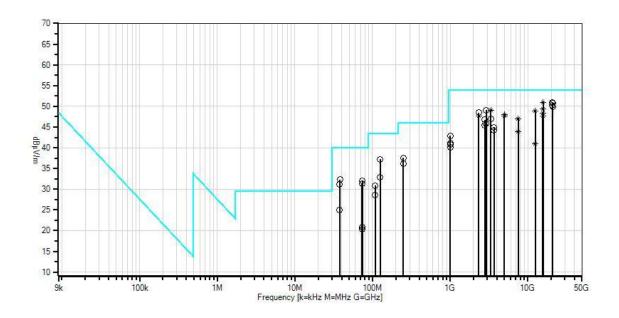


20	2666 65514	42.0	.0.0	. 0. 0	.0.0	.0.0	.0.0	44.2	7.4.0	0.7	77 '
38	3666.655M	43.8	$+0.0 \\ +0.0$	$+0.0 \\ +0.4$	+0.0 +4.2	$+0.0 \\ +1.6$	+0.0	44.3	54.0	-9.7	Horiz
			-37.4	+31.3	+0.4	+0.0					
			+0.0	131.3	10.4	10.0					
39	249.998M	48.2	+0.2	-27.8	+2.8	+12.7	+0.0	36.1	46.0	-9.9	Horiz
37	219.990111	10.2	+0.0	+0.0	+0.0	+0.0	10.0	50.1	10.0	7.7	HOHE
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
40	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	+0.0					
			+0.0								
٨	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	+0.0					
			+0.0								
42	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					
43	999.993M	38.6	+0.0	-27.3	+6.2	+24.8	+0.0	42.9	54.0	-11.1	Vert
43	999.993WI	36.0	+0.0	+0.0	+0.2	+24.8	+0.0	42.9	34.0	-11.1	vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	10.0	10.0	10.0					
44	108.799M	45.9	+0.1	-27.8	+1.8	+10.9	+0.0	30.9	43.5	-12.6	Vert
• •	100.7771.1	15.7	+0.0	+0.0	+0.0	+0.0	10.0	30.7	13.5	12.0	, 616
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
45	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	+0.0					
			+0.0								
46	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	+0.0					
	12400 072	22.5	+0.0	0.0	0.0	0.0	0.0	40.1	7.4.0	4.0	X7 .
٨	12499.972	33.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Vert
	M		+0.0 -35.9	+0.8 $+38.7$	+8.9 +0.2	+2.9 +0.0					
			+0.0	+36.7	+0.2	+0.0					
48	999.992M	36.5	+0.6	-27.3	+6.2	+24.8	+0.0	40.8	54.0	-13.2	Horiz
+0	ヲヲヲ.ヲヲ∠\VI	30.3	+0.0 +0.0	+0.0	+0.2	+24.8	+0.0	40.0	54.0	-13.2	110112
			+0.0	+0.0	+0.0	+0.0					
			+0.0	10.0	10.0	10.0					
49	1000.016M	53.1	+0.0	+0.0	+0.0	+0.0	+0.0	40.1	54.0	-13.9	Horiz
.,	_ 555.5101.1	22.1	+0.0	+0.3	+2.0	+0.9	. 0.0		2 1.0	10.7	
			-40.4	+24.2	+0.0	+0.0					
			+0.0								
50	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								



51	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								
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	+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	+0.0					
			+0.0								

CKC Laboratories, Inc. Date: 2/28/2012 Time: 14:53:43 Motorola Mobility, Inc. WO#: 92800 15.407(b)(6)/15.407(b)(7) Radiated Undesirable Emissions (15.209/15.205) Test Distance: 3 Meters Sequence#: 10 Ext ATTN: 0 dB









Test Setup Photos





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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: 5180MHz to 5240MHz

802.11a (6Mbps)

Transmit Frequencies: 5180MHz, 5200MHz, 5240MHz (Channel 36, 40, 48)

802.11n (20MHz) (7.2Mbps)

Transmit Frequencies: 5180MHz, 5200MHz, 5240MHz (Channel 36, 40, 48)

802.11n (40MHz) (15Mbps)

Transmit Frequencies: 5190MHz, 5230MHz (Channel 40, 48)

Integral Antenna Gain: 4.4 dBi max at 5GHz band

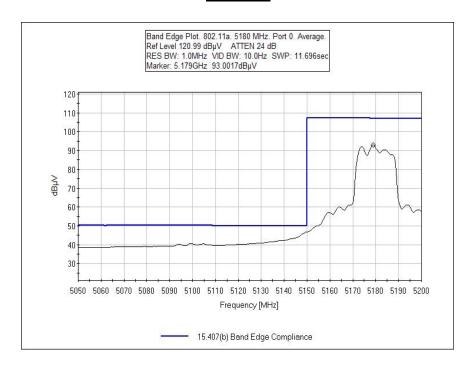
Engineer Name: S. Yamamoto

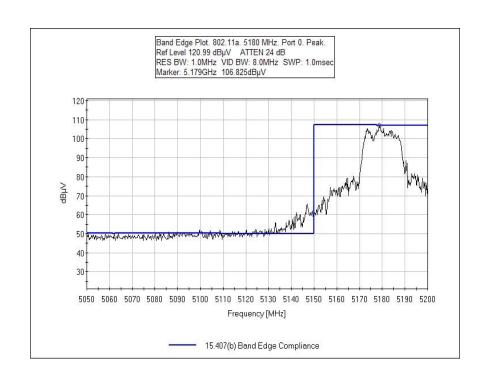
	Test Equipment									
Asset/Serial #	Description	Model	Manufacturer	Cal Date	Cal Due					
02672	Spectrum Analyzer	E4446A	Agilent	8/9/2010	8/9/2012					
01646	Horn Antenna	3115	Emco	8/18/2010	8/18/2012					
00786	Preamp	83017A	HP	8/5/2010	8/5/2012					
03239	Cable	32022-2-29094K-24TC	Astrolab	8/30/2011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

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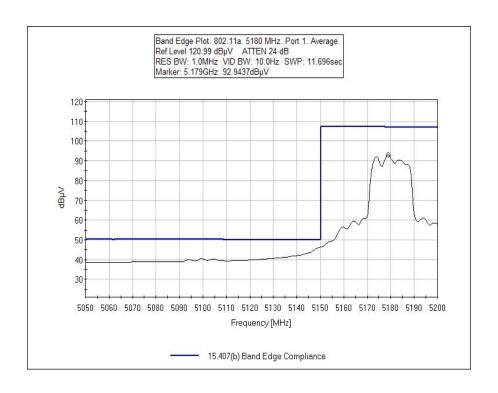


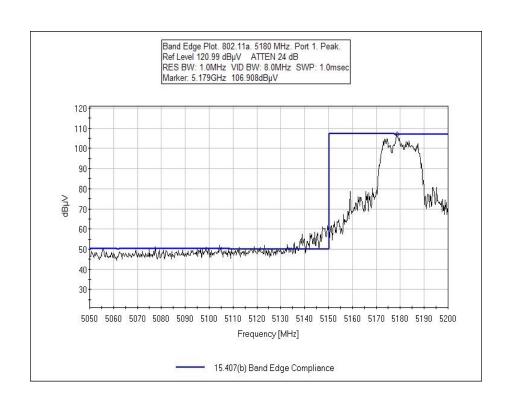
Test Plots



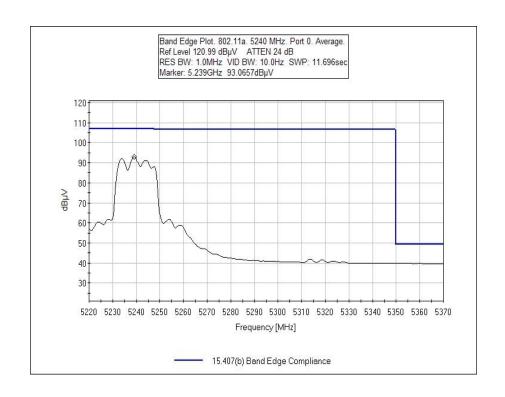


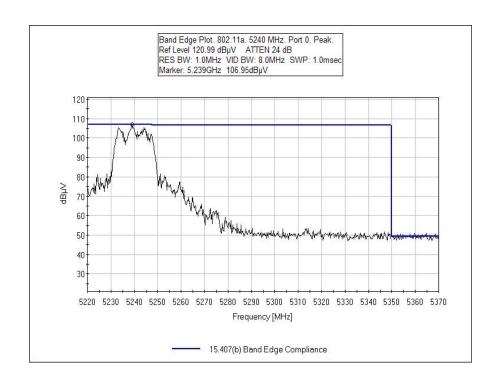




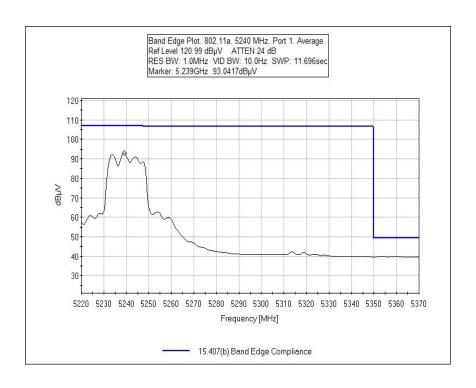


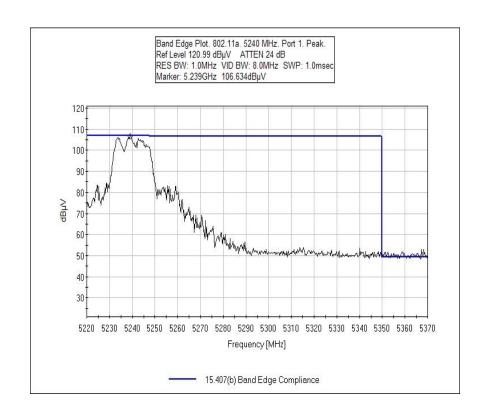




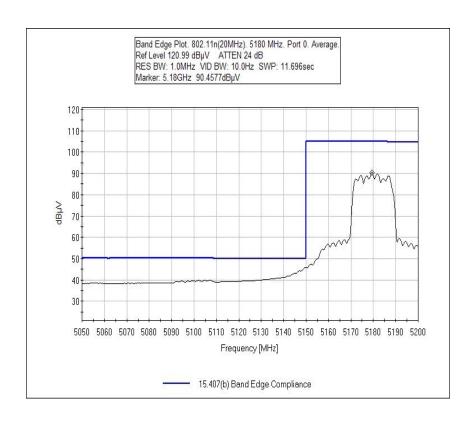


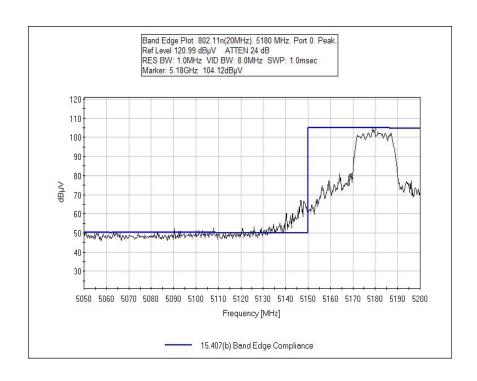




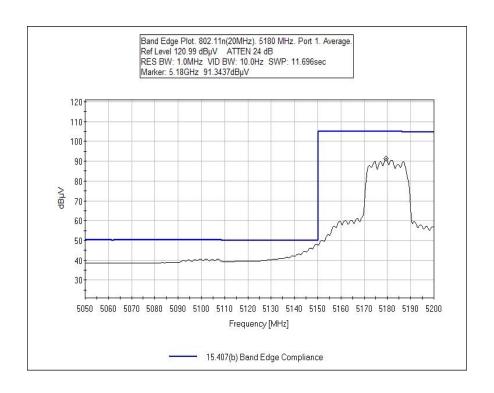


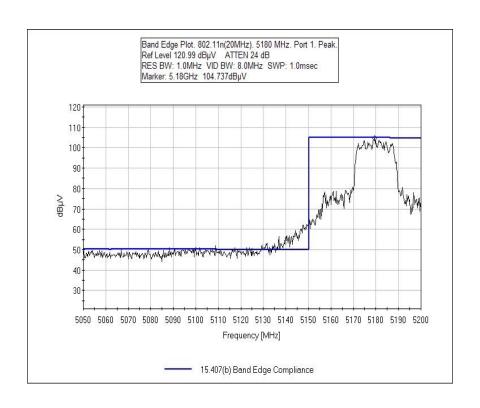




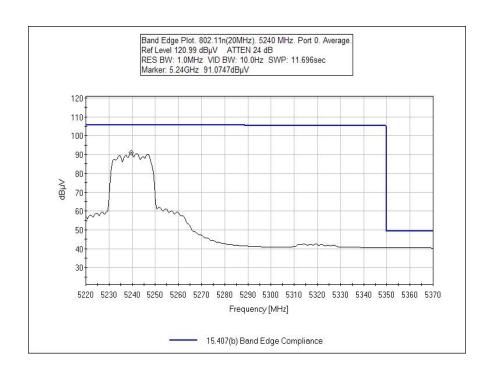


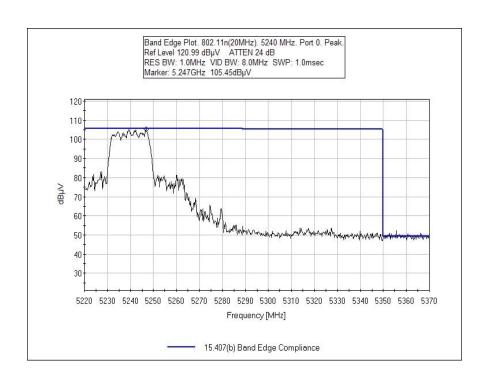




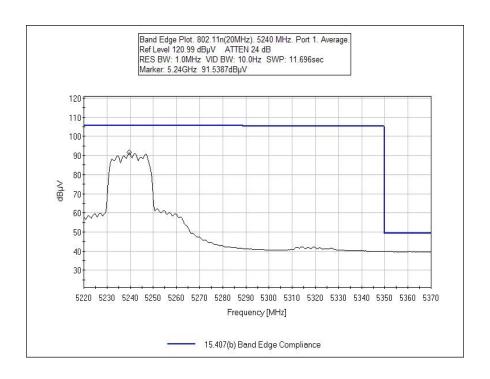


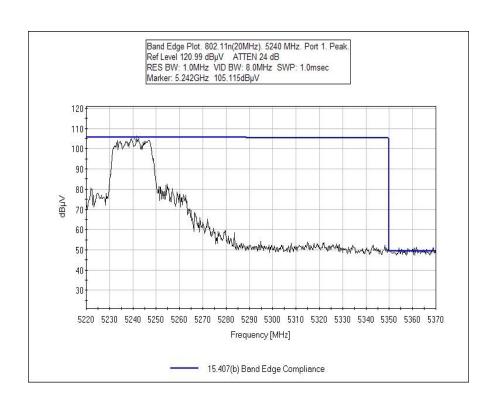




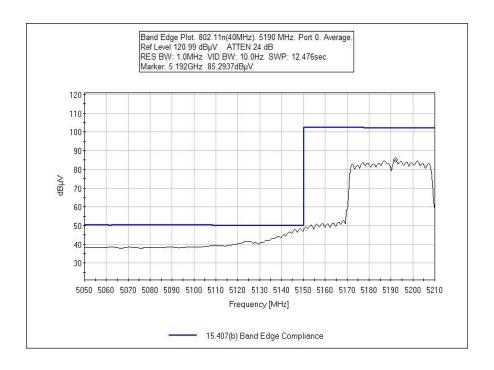


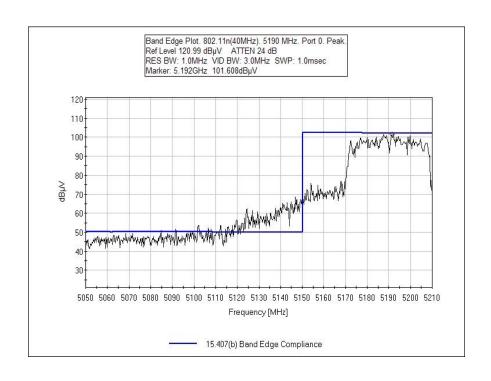




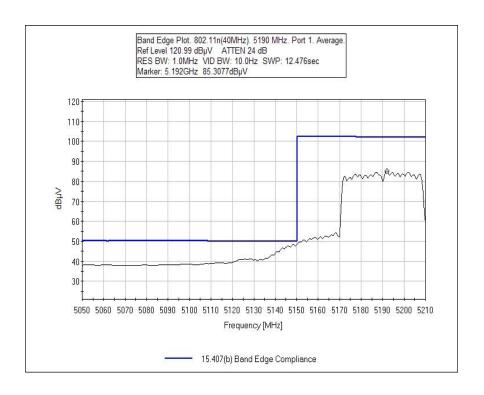


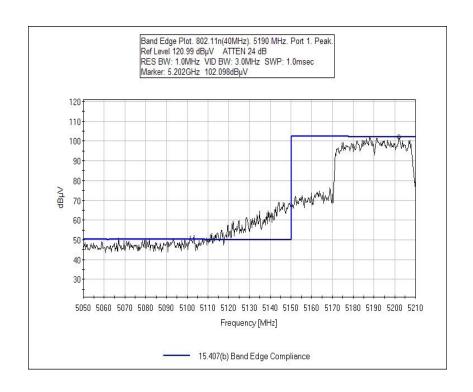




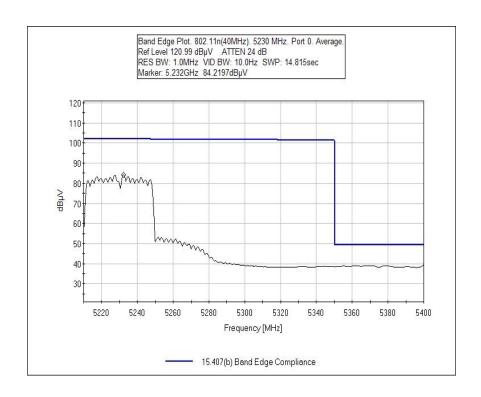


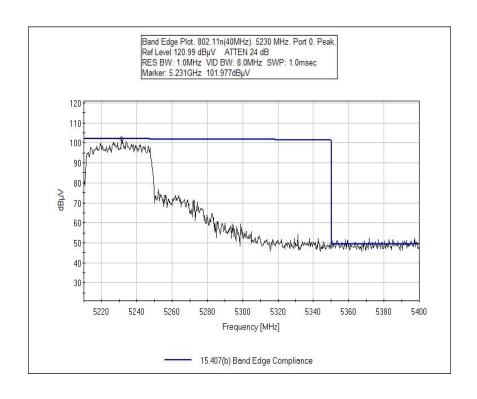




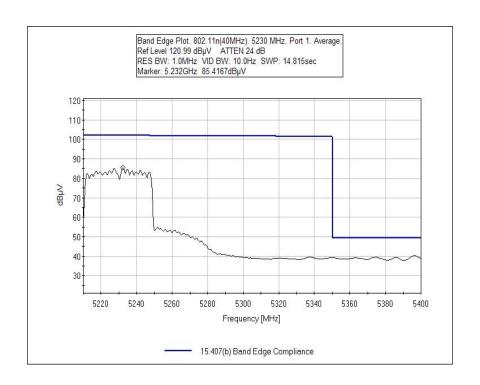


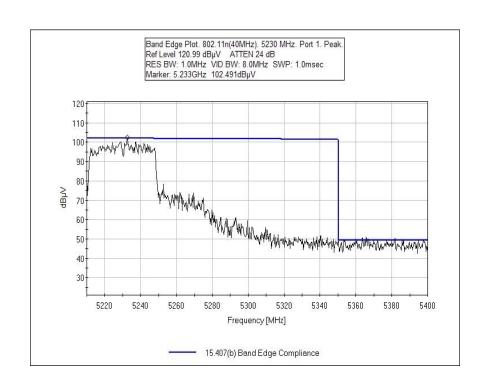














Test Setup Photos





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: 2/28/2012
Test Type: Maximized Emissions Time: 14:53:43

Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 8

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-	8/30/2011	8/30/2013
			24TC		
T7	ANP06081	Cable	L1-PNMNM-48	4/28/2011	4/28/2013
Т8	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-	3/5/2010	3/5/2012
			3000/T10000-		
			O/O		
	ANP06153	Cable	16301	10/27/2011	10/27/2013
	AN01413	Horn Antenna-ANSI	84125-80008	12/2/2010	12/2/2012
		C63.5 Antenna			
		Factors (dB)			
T12	AN01413	Horn Antenna-1	84125-80008	12/2/2010	12/2/2012
		Meter Antenna			
		Factors (dB) - SAE			
		ARP 958			
	AN03158	Active Horn Antenna		4/1/2010	4/1/2012
T1.0	13702015	G 11	26004000-33-8P	10/10/2011	10/10/2012
T13	AN02945	Cable	32022-2-2909K-	10/19/2011	10/19/2013
			36TC		

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Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
DOCSIS 3.0 Wi-Fi	Motorola Mobility, Inc.	SBG6580 P2	3556011306006510705008
Gateway*			5
AC to 12Vdc Power	Asian Power Devices, Inc.	WA-24 12FU	
Adapter			

Support Devices:

Function	Manufacturer	Model #	S/N
Broadband Router	CASA Systems	C2200	FD3460
Gigabit Switch	Netgear	GS105v2	
Laptop Computer	HP	Compaq 6910p	
Performance Analysis	Spirent	SMB-600B	N06012143
System			
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: 2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.

Frequency range of EUT: 5180MHz to 5240MHz

Transmit Frequencies used for this data sheet: 5180MHz (Low), 5200MHz (Middle), and 5240MHz (High). Channels 36, 40, and 48. 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.

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Ext Attn: 0 dB

	irement Data:	Re	eading lis	ted by ma	argin.		Тє	est Distance	e: 3 Meters				
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar		
	1	U	T5	T6	T7	T8			1	2			
			T9	T10	T11	T12							
			T13										
	MHz	$dB\mu V$	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\mu V/m$	dB	Ant		
1	15600.857	30.9	+0.0	+0.0	+0.0	+0.0	+0.0	51.7	54.0	-2.3	Vert		
	M		+0.0	+1.0	+9.8	+3.3							
	Ave		-34.7	+41.4	+0.0	+0.0							
			+0.0										
^	15600.857	41.2	+0.0	+0.0	+0.0	+0.0	+0.0	62.0	54.0	+8.0	Vert		
	M		+0.0	+1.0	+9.8	+3.3							
			-34.7	+41.4	+0.0	+0.0							
			+0.0										
3	15719.500	30.0	+0.0	+0.0	+0.0	+0.0	+0.0	50.9	54.0	-3.1	Vert		
	M		+0.0	+1.0	+9.8	+3.3							
	Ave		-34.5	+41.3	+0.0	+0.0							
			+0.0										
^	15719.500	41.1	+0.0	+0.0	+0.0	+0.0	+0.0	62.0	54.0	+8.0	Vert		
	M		+0.0	+1.0	+9.8	+3.3							
			-34.5	+41.3	+0.0	+0.0							
			+0.0										
5	15540.967	30.1	+0.0	+0.0	+0.0	+0.0	+0.0	50.8	54.0	-3.2	Vert		
	M		+0.0	+1.0	+9.7	+3.3							
	Ave		-34.8	+41.5	+0.0	+0.0							
			+0.0										
^	15540.967	42.3	+0.0	+0.0	+0.0	+0.0	+0.0	63.0	54.0	+9.0	Vert		
	M		+0.0	+1.0	+9.7	+3.3							
			-34.8	+41.5	+0.0	+0.0							
			+0.0										
7		49.5	+0.0	+0.0	+0.0	+0.0	-9.5	50.6	54.0	-3.4	Horiz		
	M		+0.0	+1.2	+0.0	+0.0							
			-32.8	+0.0	+0.0	+39.6							
			+2.6										
8	20799.783	49.2	+0.0	+0.0	+0.0	+0.0	-9.5	50.3	54.0	-3.7	Vert		
	M		+0.0	+1.1	+0.0	+0.0							
			-32.8	+0.0	+0.0	+39.8							
			+2.5										
9	20799.783	48.9	+0.0	+0.0	+0.0	+0.0	-9.5	50.0	54.0	-4.0	Horiz		
	M		+0.0	+1.1	+0.0	+0.0							
			-32.8	+0.0	+0.0	+39.8							
			+2.5										
10	15718.784	29.1	+0.0	+0.0	+0.0	+0.0	+0.0	50.0	54.0	-4.0	Horiz		
	M		+0.0	+1.0	+9.8	+3.3							
	Ave		-34.5	+41.3	+0.0	+0.0							
			+0.0										
^	13/10./01	39.7	+0.0	+0.0	+0.0	+0.0	+0.0	60.6	54.0	+6.6	Horiz		
	M		+0.0	+1.0	+9.8	+3.3							
			-34.5	+41.3	+0.0	+0.0							
			+0.0										

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12 155	599.200	28.9	+0.0	+0.0	+0.0	+0.0	+0.0	49.7	54.0	-4.3	Horiz
	M		+0.0	+1.0	+9.8	+3.3					
Ave	,		-34.7	+41.4	+0.0	+0.0					
Λ 154	599.200	38.5	+0.0	+0.0	+0.0	+0.0	+0.0	59.3	54.0	+5.3	Horiz
15.	M	36.3	+0.0	+0.0	+9.8	+3.3	+0.0	39.3	34.0	+3.3	попи
	111		-34.7	+41.4	+0.0	+0.0					
			+0.0		10.0	10.0					
14 209	959.817	48.3	+0.0	+0.0	+0.0	+0.0	-9.5	49.4	54.0	-4.6	Vert
	M		+0.0	+1.2	+0.0	+0.0					
			-32.8	+0.0	+0.0	+39.6					
			+2.6								
15 289	99.988M	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	+0.0					
			+0.0								
16 155	541.425	28.4	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Horiz
	M		+0.0	+1.0	+9.7	+3.3					
Ave)		-34.8	+41.5	+0.0	+0.0					
Λ 154	541.425	37.3	+0.0	+0.0	+0.0	ι Ο Ο	+0.0	50 N	540	+4.0	Homin
^ 15.	M	37.3	$+0.0 \\ +0.0$	+0.0	+0.0 +9.7	+0.0 +3.3	+0.0	58.0	54.0	+4.0	Horiz
	1 V1		-34.8	+41.5	+9.7	+0.0					
			+0.0	171.5	10.0	10.0					
18 333	33.317M	49.7	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Horiz
Ave		17.7	+0.0	+0.4	+3.9	+1.5	10.0	17.1	2 1.0	,	110112
			-37.7	+30.7	+0.6	+0.0					
			+0.0								
^ 333	33.317M	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	+0.0					
			+0.0								
20 20	719.833	48.0	+0.0	+0.0	+0.0	+0.0	-9.5	49.1	54.0	-5.0	Vert
	M		+0.0	+1.1	+0.0	+0.0					
			-32.9	+0.0	+0.0	+39.9					
21 12	400.047	22.2	+2.5	. 0. 0	. 0. 0	.00	.0.0	40.0	540	<i>F</i> 1	TT
	499.947 M	33.3	$+0.0 \\ +0.0$	$+0.0 \\ +0.8$	+0.0 +8.9	$+0.0 \\ +2.9$	+0.0	48.9	54.0	-5.1	Horiz
Ave	M		+0.0 -35.9	+0.8	+8.9	+2.9 +0.0					
Ave	,		+0.0	130.7	FU.2	±0.0					
^ 124	499.947	36.7	+0.0	+0.0	+0.0	+0.0	+0.0	52.3	54.0	-1.7	Horiz
12-	M	50.7	+0.0	+0.8	+8.9	+2.9	10.0	52.5	J 1.0	1./	HOHE
	··· ·		-35.9	+38.7	+0.2	+0.0					
			+0.0								
23 233	33.324M	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	+0.0					
			+0.0								
	99.977M	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	+0.0					
			+0.0								

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^	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 +0.0	+33.3	+0.0	+0.0					
26	20719.717	46.9	+0.0	+0.0	+0.0	+0.0	-9.5	48.0	54.0	-6.0	Horiz
20	M	40.7	+0.0	+0.0	+0.0	+0.0	-9.5	40.0	34.0	-0.0	110112
	171		-32.9	+0.0	+0.0	+39.9					
			+2.5	10.0	10.0	137.7					
27	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					
			+0.0								
28	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	+0.0					
	1000 0707		+0.0						# / O		** .
^	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	+0.0					
20	2333.317M	52.4	+0.0	+0.0	+0.0	+0.0	+0.0	47.6	54.0	-6.4	Horiz
		32.4	+0.0 +0.0	+0.0	+3.2	+0.0	+0.0	47.0	54.0	-0.4	нопх
	Ave		-38.0	+28.3	+0.0	+1.5 +0.0					
			+0.0	120.3	10.0	10.0					
٨	2333.317M	55.6	+0.0	+0.0	+0.0	+0.0	+0.0	50.8	54.0	-3.2	Horiz
	2000.01/111	22.0	+0.0	+0.4	+3.2	+1.3	. 0.0	20.0	5 1.0	3.2	110112
			-38.0	+28.3	+0.0	+0.0					
			+0.0								
32	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	+0.0					
			+0.0								
٨	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	+0.0					
24	2222 22134	17.6	+0.0	.00	.0.0		.0.0	47.0	540	7.0	XI c =4
34	3333.321M	47.6	+0.0	+0.0	+0.0 +3.9	+0.0	+0.0	47.0	54.0	-7.0	Vert
			+0.0 -37.7	+0.4 +30.7	+3.9 +0.6	+1.5 +0.0					
			+0.0	±30.7	+0.0	±0.0					
35	2799.984M	45.8	+0.0	+0.0	+0.0	+0.0	+0.0	46.8	54.0	-7.2	Horiz
33	2177.70+1 V1	7.0	+0.0	+0.0	+3.5	+1.4	10.0	₹0.0	J -1 .U	-1.2	110112
			-37.8	+29.4	+4.1	+0.0					
			+0.0			. 0.0					
36	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					
			+0.0								
37	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					
			+0.0								

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38	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	+0.0					
			+0.0								
39	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					
40	2700 00214	115	+0.0	. 0. 0	. 0. 0	.00	.0.0	15.5	540	0.5	X7 4
40	2799.982M	44.5	+0.0	+0.0	+0.0	+0.0	+0.0	45.5	54.0	-8.5	Vert
			+0.0 -37.8	+0.4 $+29.4$	+3.5 +4.1	$^{+1.4}_{+0.0}$					
			+0.0	+29.4	± 4. 1	+0.0					
41	73.320M	51.2	+0.0	-27.9	+1.4	+6.5	+0.0	31.3	40.0	-8.7	Vert
41	75.520W	31.2	+0.1	+0.0	+0.0	+0.5	+0.0	31.3	40.0	-0.7	VEIL
			+0.0	+0.0	+0.0	+0.0					
			+0.0	10.0	10.0	10.0					
42	37.609M	43.2	+0.1	-27.8	+1.0	+14.7	+0.0	31.2	40.0	-8.8	Vert
	2,.00711	.5.2	+0.0	+0.0	+0.0	+0.0	. 0.0		. 5.0	0.0	. 510
			+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	+0.0					
			+0.0								
44	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	+0.0					
			+0.0								
45	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					
4.5	7.400.0653.6	25.2	+0.0	0.0	0.0	0.0	0.0	12.0	7.4.0	10.1	X7 .
	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 +0.0	+35.5	+0.1	+0.0					
٨	7499.965M	40.9	+0.0	+0.0	+0.0	+0.0	+0.0	49.5	54.0	-4.5	Vert
	/ + 2 2 . 2 U J IVI	40.7	+0.0 +0.0	+0.0	+6.5	+2.3	±0.0	→ フ.J	54.0	-4.3	v C1 l
			-36.5	+35.5	+0.3	+0.0					
			+0.0	1 33.3	10.1	10.0					
48	125.007M	46.4	+0.2	-27.8	+1.9	+12.1	+0.0	32.8	43.5	-10.7	Horiz
.5	123.00/101		+0.0	+0.0	+0.0	+0.0	. 0.0	32.0	13.5	10.7	110112
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
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	+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	+0.0					
			+0.0								

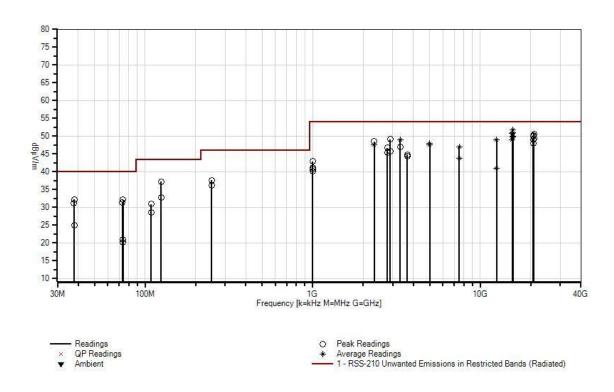
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51	1000.008M	54.2	+0.0	+0.0	+0.0	+0.0	+0.0	41.2	54.0	-12.8	Vert
			+0.0	+0.3	+2.0	+0.9					
			-40.4	+24.2	+0.0	+0.0					
			+0.0								
52	12499.972	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
	M		+0.0	+0.8	+8.9	+2.9					
	Ave		-35.9	+38.7	+0.2	+0.0					
			+0.0								
^	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	+0.0					
			+0.0								
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	+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	+0.0					
			+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	+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	+0.0					
			+0.0								
58	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								
59	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								
•											



CKC Laboratories, Inc. Date: 2/28/2012 Time: 14:53:43 Motorola Mobility, Inc. WO#: 92800 RSS-210 Unwanted Emissions in Restricted Bands (Radiated) Test Distance: 3 Meters Sequence#: 8 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 #:92800Date: 2/28/2012Test Type:Maximized EmissionsTime: 14:53:43

Equipment: **DOCSIS 3.0 Wi-Fi Gateway** Sequence#: 9

Manufacturer: Motorola Mobility, Inc. Tested By: S. Yamamoto

Model: SBG6580 P2

S/N: 35560113060065107050085

Test Equipment:

Test Equip	meni.				
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
Т3	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-	8/30/2011	8/30/2013
			24TC		
T7	ANP06081	Cable	L1-PNMNM-48	4/28/2011	4/28/2013
Т8	ANP05421	Cable	Sucoflex 104A	2/8/2012	2/8/2014
Т9	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-	3/5/2010	3/5/2012
			3000/T10000-		
			O/O		
	ANP06153	Cable	16301	10/27/2011	10/27/2013
	AN01413	Horn Antenna-ANSI	84125-80008	12/2/2010	12/2/2012
		C63.5 Antenna			
		Factors (dB)			
T12	AN01413	Horn Antenna-1	84125-80008	12/2/2010	12/2/2012
		Meter Antenna			
		Factors (dB) - SAE			
		ARP 958			
_	AN03158	Active Horn Antenna	AMFW-5F-	4/1/2010	4/1/2012
			26004000-33-8P		
T13	AN02945	Cable	32022-2-2909K-	10/19/2011	10/19/2013
			36TC		

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Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
DOCSIS 3.0 Wi-Fi	Motorola Mobility, Inc.	SBG6580 P2	3556011306006510705008
Gateway*			5
AC to 12Vdc Power	Asian Power Devices, Inc.	WA-24 12FU	
Adapter			

Support Devices:

Support Berteest			
Function	Manufacturer	Model #	S/N
Broadband Router	CASA Systems	C2200	FD3460
Gigabit Switch	Netgear	GS105v2	
Laptop Computer	HP	Compaq 6910p	
Performance Analysis	Spirent	SMB-600B	N06012143
System			
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: 2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.

Frequency range of EUT: 5180MHz to 5240MHz

Transmit Frequencies used for this data sheet: 5180MHz (Low), 5200MHz (Middle), and 5240MHz (High). Channels 36, 40, and 48. 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.

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Ext Attn: 0 dB

	irement Data:	Re	eading lis	ted by ma	argin.	Test Distance: 3 Meters					
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	1	U	T5	T6	T7	T8			1	2	
			T9	T10	T11	T12					
			T13								
	MHz	$dB\mu V$	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\mu V/m$	dB	Ant
1	15540.583	30.1	+0.0	+0.0	+0.0	+0.0	+0.0	50.8	54.0	-3.2	Vert
	M		+0.0	+1.0	+9.7	+3.3					
	Ave		-34.8	+41.5	+0.0	+0.0					
			+0.0								
^	15540.583	41.7	+0.0	+0.0	+0.0	+0.0	+0.0	62.4	54.0	+8.4	Vert
	M		+0.0	+1.0	+9.7	+3.3					
			-34.8	+41.5	+0.0	+0.0					
			+0.0								
3	20959.808	49.6	+0.0	+0.0	+0.0	+0.0	-9.5	50.7	54.0	-3.3	Horiz
	M		+0.0	+1.2	+0.0	+0.0					
			-32.8	+0.0	+0.0	+39.6					
			+2.6								
4	15601.667	29.6	+0.0	+0.0	+0.0	+0.0	+0.0	50.4	54.0	-3.6	Vert
	M		+0.0	+1.0	+9.8	+3.3					
	Ave		-34.7	+41.4	+0.0	+0.0					
	15.001.665	41.7	+0.0	0.0	0.0	0.0	0.0		540	0.7	**
٨	15001.007	41.7	+0.0	+0.0	+0.0	+0.0	+0.0	62.5	54.0	+8.5	Vert
	M		+0.0	+1.0	+9.8	+3.3					
			-34.7	+41.4	+0.0	+0.0					
-	15717.750	20.4	+0.0	+0.0	+0.0	+0.0	+0.0	50.3	54.0	-3.7	Vert
0	M	29.4	$+0.0 \\ +0.0$	+0.0	+9.8	+0.0 +3.3	+0.0	30.3	34.0	-3.7	vert
	Ave		-34.5	+41.3	+0.0	+0.0					
	Ave		+0.0	171.5	10.0	10.0					
^	15717.750	41.8	+0.0	+0.0	+0.0	+0.0	+0.0	62.7	54.0	+8.7	Vert
	M	41.0	+0.0	+1.0	+9.8	+3.3	10.0	02.7	34.0	10.7	VCIt
	111		-34.5	+41.3	+0.0	+0.0					
			+0.0		. 0.0	. 0.0					
8	20799.833	48.8	+0.0	+0.0	+0.0	+0.0	-9.5	49.9	54.0	-4.1	Vert
	M		+0.0	+1.1	+0.0	+0.0	·				
			-32.8	+0.0	+0.0	+39.8					
			+2.5			-					
9	20799.733	48.6	+0.0	+0.0	+0.0	+0.0	-9.5	49.7	54.0	-4.3	Horiz
	M		+0.0	+1.1	+0.0	+0.0					
			-32.8	+0.0	+0.0	+39.8					
			+2.5								
10	15541.325	28.9	+0.0	+0.0	+0.0	+0.0	+0.0	49.6	54.0	-4.4	Horiz
	M		+0.0	+1.0	+9.7	+3.3					
	Ave		-34.8	+41.5	+0.0	+0.0					
			+0.0								
^	15541.325	39.6	+0.0	+0.0	+0.0	+0.0	+0.0	60.3	54.0	+6.3	Horiz
	M		+0.0	+1.0	+9.7	+3.3					
			-34.8	+41.5	+0.0	+0.0					
			+0.0								

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12 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	+0.0					
12 2222 21714	40.7	+0.0	. 0. 0	. 0. 0	.0.0	. 0. 0	40.1	540	4.0	TT .
13 3333.317M	49.7	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Horiz
Ave		+0.0 -37.7	+0.4 +30.7	+3.9	$+1.5 \\ +0.0$					
		+0.0	+30.7	+0.6	+0.0					
^ 3333.317M	53.1	+0.0	+0.0	+0.0	+0.0	+0.0	52.5	54.0	-1.5	Horiz
3333.31711	33.1	+0.0	+0.4	+3.9	+1.5	10.0	32.3	34.0	-1.5	HOHZ
		-37.7	+30.7	+0.6	+0.0					
		+0.0								
15 20959.858	48.0	+0.0	+0.0	+0.0	+0.0	-9.5	49.1	54.0	-4.9	Vert
M		+0.0	+1.2	+0.0	+0.0	,	.,,-			
		-32.8	+0.0	+0.0	+39.6					
		+2.6								
16 12499.947	33.3	+0.0	+0.0	+0.0	+0.0	+0.0	48.9	54.0	-5.1	Horiz
M		+0.0	+0.8	+8.9	+2.9					
Ave		-35.9	+38.7	+0.2	+0.0					
		+0.0								
^ 12499.947	36.7	+0.0	+0.0	+0.0	+0.0	+0.0	52.3	54.0	-1.7	Horiz
M		+0.0	+0.8	+8.9	+2.9					
		-35.9	+38.7	+0.2	+0.0					
		+0.0								
18 15720.875	27.7	+0.0	+0.0	+0.0	+0.0	+0.0	48.6	54.0	-5.4	Horiz
M		+0.0	+1.0	+9.8	+3.3					
Ave		-34.5	+41.3	+0.0	+0.0					
^ 15720.875	41.2	+0.0	+0.0	+0.0	+0.0	+0.0	62.1	54.0	+8.1	Horiz
M	41.2	+0.0	+0.0	+9.8	+3.3	+0.0	02.1	34.0	+0.1	попи
1V1		-34.5	+41.3	+0.0	+0.0					
		+0.0	171.3	10.0	10.0					
20 2333.324M	53.3	+0.0	+0.0	+0.0	+0.0	+0.0	48.5	54.0	-5.5	Vert
20 2333.32 1111	00.0	+0.0	+0.4	+3.2	+1.3	10.0	10.5	5 1.0	0.0	, 011
		-38.0	+28.3	+0.0	+0.0					
		+0.0								
21 15597.808	27.5	+0.0	+0.0	+0.0	+0.0	+0.0	48.3	54.0	-5.7	Horiz
M		+0.0	+1.0	+9.8	+3.3					
Ave		-34.7	+41.4	+0.0	+0.0					
		+0.0								
^ 15597.808	40.6	+0.0	+0.0	+0.0	+0.0	+0.0	61.4	54.0	+7.4	Horiz
M		+0.0	+1.0	+9.8	+3.3					
		-34.7	+41.4	+0.0	+0.0					
		+0.0								
23 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	+0.0					
A 4000 0000	45.0	+0.0				0.0	# 0.0	F / O		***
^ 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	+0.0	+0.0					
		+0.0								

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2.5	20710.050	46.0	0.0	0.0	0.0	0.0	0.5	40.0	7.1.0		TT .
25	20719.950 M	46.9	+0.0 +0.0	$+0.0 \\ +1.1$	+0.0	+0.0	-9.5	48.0	54.0	-6.0	Horiz
	IVI		+0.0 -32.9	+1.1 +0.0	$+0.0 \\ +0.0$	+0.0 +39.9					
			+2.5	+0.0	+0.0	+37.7					
26	20719.900	46.8	+0.0	+0.0	+0.0	+0.0	-9.5	47.9	54.0	-6.1	Vert
	M		+0.0	+1.1	+0.0	+0.0	,				
			-32.9	+0.0	+0.0	+39.9					
			+2.5								
27	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					
20	4000 0503 6	10.5	+0.0	0.0	0.0	0.0	0.0	15.6	7 4 0	- 1	** .
	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	+0.0					
٨	4999.978M	46.5	+0.0	+0.0	+0.0	+0.0	+0.0	50.4	54.0	-3.6	Horiz
	4777.7/01VI	40.3	+0.0 +0.0	+0.0	+5.0	+0.0	+0.0	30.4	34.0	-3.0	попи
			-37.0	+33.3	+0.3	+0.0					
			+0.0	133.3	10.5	10.0					
30	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	+0.0					
			+0.0								
٨	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	+0.0					
			+0.0								
	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	+0.0					
^	7400.06614	10.6	+0.0	. 0. 0	.0.0	.00	.0.0	51.0	540	2.0	TT
^	7499.966M	42.6	+0.0	+0.0	+0.0	+0.0	+0.0	51.2	54.0	-2.8	Horiz
			+0.0 -36.5	+0.7 +35.5	+6.5 +0.1	$+2.3 \\ +0.0$					
			+0.0	133.3	FU.1	±0.0					
34	3333.321M	47.6	+0.0	+0.0	+0.0	+0.0	+0.0	47.0	54.0	-7.0	Vert
J- T	222.321111	17.0	+0.0	+0.4	+3.9	+1.5	10.0	17.0	5 r.0	7.0	, 011
			-37.7	+30.7	+0.6	+0.0					
			+0.0								
35	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	+0.0					
			+0.0								
36	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					
	74.0003.5	F 10	+0.0	25.0			0.0	22.1	40.0	7 ^	***
37	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					
			+0.0								

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38	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	+0.0					
20	240,0003.4	40.7	+0.0	27.0	. 2. 0	. 10.7	.0.0	27.6	16.0	0.4	X7 .
39	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					
40	2799.982M	44.5	+0.0	+0.0	+0.0	+0.0	+0.0	45.5	54.0	-8.5	Vert
40	2199.902IVI	44.3	+0.0	+0.4	+3.5	+1.4	+0.0	45.5	34.0	-0.5	VCIT
			-37.8	+29.4	+4.1	+0.0					
			+0.0	127.1		10.0					
41	73.320M	51.2	+0.1	-27.9	+1.4	+6.5	+0.0	31.3	40.0	-8.7	Vert
	73.32011	31.2	+0.0	+0.0	+0.0	+0.0	10.0	51.5	10.0	0.7	, 611
			+0.0	+0.0	+0.0	+0.0					
			+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	+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	+0.0					
			+0.0								
44	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	+0.0					
1.5	240,00014	40.0	+0.0	27.0	. 2. 0	. 10.7	. 0. 0	26.1	16.0	0.0	
45	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					
16	7499.965M	35.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-10.1	Vert
	Ave	33.3	+0.0	+0.0	+6.5	+2.3	+0.0	43.7	34.0	-10.1	V CI t
	AVC		-36.5	+35.5	+0.3	+0.0					
			+0.0	100.0	10.1	10.0					
٨	7499.965M	40.9	+0.0	+0.0	+0.0	+0.0	+0.0	49.5	54.0	-4.5	Vert
		10.7	+0.0	+0.7	+6.5	+2.3	. 0.0	. ,	5 1.0	1	, 010
			-36.5	+35.5	+0.1	+0.0					
			+0.0								
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	+0.0					
			+0.0								
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	+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	+0.0					
			+0.0								

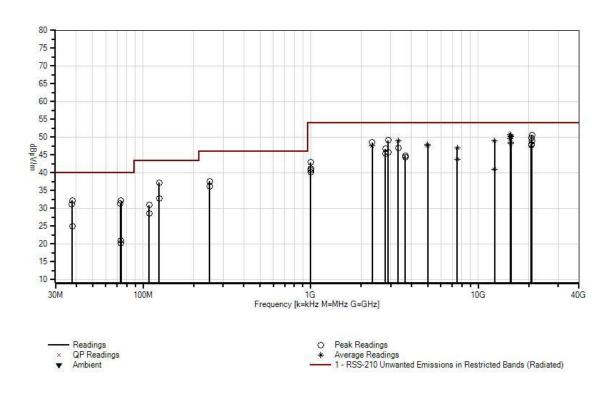
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51	1000.008M	54.2	+0.0	+0.0	+0.0	+0.0	+0.0	41.2	54.0	-12.8	Vert
			+0.0	+0.3	+2.0	+0.9					
			-40.4	+24.2	+0.0	+0.0					
			+0.0								
52	12499.972	25.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Vert
	M		+0.0	+0.8	+8.9	+2.9					
	Ave		-35.9	+38.7	+0.2	+0.0					
	-		+0.0								
^	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	+0.0					
			+0.0								
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	+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	+0.0					
			+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	+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	+0.0					
			+0.0								
58	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								
59	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								
	·										



CKC Laboratories, Inc. Date: 2/28/2012 Time: 14:53:43 Motorola Mobility, Inc. WO#: 92800 RSS-210 Unwanted Emissions in Restricted Bands (Radiated) Test Distance: 3 Meters Sequence#: 9 Ext ATTN: 0 dB





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

Customer: Motorola Mobility, Inc.

RSS-210 Unwanted Emissions in Restricted Bands (Radiated) Specification: Work Order #: 92800 Date: 2/28/2012 Test Type: **Maximized Emissions** Time: 14:53:43 Sequence#: 10 Tested By: S. Yamamoto Equipment: **DOCSIS 3.0 Wi-Fi Gateway**

Manufacturer: Motorola Mobility, Inc.

Model: SBG6580 P2

S/N: 35560113060065107050085

Test Equipment:

1 est Equi	pmeni:				
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
Т3	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-	8/30/2011	8/30/2013
			24TC		
T7	ANP06081	Cable	L1-PNMNM-48	4/28/2011	4/28/2013
T8	ANP05421	Cable	Sucoflex 104A	2/8/2012	2/8/2014
Т9	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-	3/5/2010	3/5/2012
			3000/T10000-		
			O/O		
	ANP06153	Cable	16301	10/27/2011	10/27/2013
	AN01413	Horn Antenna-ANSI	84125-80008	12/2/2010	12/2/2012
		C63.5 Antenna			
		Factors (dB)			
T12	AN01413	Horn Antenna-1	84125-80008	12/2/2010	12/2/2012
		Meter Antenna			
		Factors (dB) - SAE			
		ARP 958			
T13	AN03158	Active Horn Antenna		4/1/2010	4/1/2012
			26004000-33-8P		
	AN02945	Cable	32022-2-2909K-	10/19/2011	10/19/2013
			36TC		

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Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
DOCSIS 3.0 Wi-Fi	Motorola Mobility, Inc.	SBG6580 P2	3556011306006510705008
Gateway*			5
AC to 12Vdc Power	Asian Power Devices, Inc.	WA-24 12FU	
Adapter			

Support Devices:

Tr			
Function	Manufacturer	Model #	S/N
Broadband Router	CASA Systems	C2200	FD3460
Gigabit Switch	Netgear	GS105v2	
Laptop Computer	HP	Compaq 6910p	
Performance Analysis	Spirent	SMB-600B	N06012143
System			
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: 2. Software Version: SBG6580-3.3.1.0-GA-10-065-DIAG. Site A.

Frequency range of EUT: 5180MHz to 5240MHz

Transmit Frequencies used for this data sheet: 5190MHz (Low), and 5230MHz (High). Channels 40 and 48. 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.

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Ext Attn: 0 dB

	rement Data:	Re	eading lis	ted by ma	argin.		Тє	est Distance	e: 3 Meters		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	•	Ü	T5	T6	T7	T8			•		
			T9	T10	T11	T12					
			T13								
	MHz	$dB\mu V$	dB	dB	dB	dB	Table	$dB\mu V/m \\$	$dB\mu V/m \\$	dB	Ant
1	15698.000	30.0	+0.0	+0.0	+0.0	+0.0	+0.0	50.9	54.0	-3.1	Vert
	M		+0.0	+1.0	+9.8	+3.3					
	Ave		-34.5	+41.3	+0.0	+0.0					
			+0.0								
٨	15698.000	37.8	+0.0	+0.0	+0.0	+0.0	+0.0	58.7	54.0	+4.7	Vert
	M		+0.0	+1.0	+9.8	+3.3					
			-34.5	+41.3	+0.0	+0.0					
			+0.0								
3		49.7	+0.0	+0.0	+0.0	+0.0	-9.5	50.9	54.0	-3.2	Horiz
	M		+0.0	+1.1	+0.0	+0.0					
			-32.8	+0.0	+0.0	+39.9					
			+2.5								
4	20919.800	49.6	+0.0	+0.0	+0.0	+0.0	-9.5	50.8	54.0	-3.2	Horiz
	M		+0.0	+1.2	+0.0	+0.0					
			-32.8	+0.0	+0.0	+39.7					
	20550 502	40.0	+2.6	0.0	0.0		0.7	70.0	7.1.0	2.0	**
5	20759.783	49.0	+0.0	+0.0	+0.0	+0.0	-9.5	50.2	54.0	-3.8	Vert
	M		+0.0	+1.1	+0.0	+0.0					
			-32.8	+0.0	+0.0	+39.9					
	20010 925	40.7	+2.5	.00	.00	.00	0.5	40.0	540	4.1	V
0	20919.825 M	48.7	+0.0	+0.0	+0.0	+0.0	-9.5	49.9	54.0	-4.1	Vert
	IVI		+0.0 -32.8	$+1.2 \\ +0.0$	+0.0 +0.0	+0.0 +39.7					
			-32.6 +2.6	+0.0	+0.0	+39.7					
7	15691.083	28.4	+0.0	+0.0	+0.0	+0.0	+0.0	49.3	54.0	-4.7	Horiz
,	13091.083 M	20.4	+0.0	+0.0	+9.8	+3.3	+0.0	49.3	34.0	-4./	HOHZ
	Ave		-34.5	+41.3	+0.0	+0.0					
	1110		+0.0	141.5	10.0	10.0					
^	15691.083	39.7	+0.0	+0.0	+0.0	+0.0	+0.0	60.6	54.0	+6.6	Horiz
	M	37.1	+0.0	+1.0	+9.8	+3.3	10.0	00.0	2 7.0	10.0	110112
	±.±		-34.5	+41.3	+0.0	+0.0					
			+0.0			. 5.0					
9	2899.988M	50.8	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Horiz
	2,2,001,1	- 0.0	+0.0	+0.4	+3.6	+1.4	. 0.0			•••	
			-37.9	+29.7	+1.1	+0.0					
			+0.0								
10	3333.317M	49.7	+0.0	+0.0	+0.0	+0.0	+0.0	49.1	54.0	-4.9	Horiz
	Ave		+0.0	+0.4	+3.9	+1.5					
			-37.7	+30.7	+0.6	+0.0					
			+0.0								
٨	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					
1			-37.7	+30.7	+0.6	+0.0					
			57.7		10.0	10.0					

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12	12499.947	33.3	+0.0	+0.0	+0.0	+0.0	+0.0	48.9	54.0	-5.1	Horiz
	M		+0.0	+0.8	+8.9	+2.9					
	Ave		-35.9	+38.7	+0.2	+0.0					
^	12499.947	267	+0.0	+0.0	+0.0	+0.0	+0.0	52.3	540	-1.7	Homin
,	12499.947 M	36.7	+0.0 +0.0	$+0.0 \\ +0.8$	+0.0	+0.0 +2.9	+0.0	32.3	54.0	-1./	Horiz
	IVI		-35.9	+38.7	+0.2	+2.9					
			+0.0	130.7	10.2	10.0					
14	2333.324M	53.3	+0.0	+0.0	+0.0	+0.0	+0.0	48.5	54.0	-5.5	Vert
1	2000.02	00.0	+0.0	+0.4	+3.2	+1.3	. 0.0		2	0.0	, 010
			-38.0	+28.3	+0.0	+0.0					
			+0.0								
15	15570.055	27.7	+0.0	+0.0	+0.0	+0.0	+0.0	48.3	54.0	-5.7	Horiz
	M		+0.0	+1.0	+9.7	+3.3					
	Ave		-34.8	+41.4	+0.0	+0.0					
			+0.0								
٨	15570.055	39.9	+0.0	+0.0	+0.0	+0.0	+0.0	60.5	54.0	+6.5	Horiz
	M		+0.0	+1.0	+9.7	+3.3					
			-34.8	+41.4	+0.0	+0.0					
17	4999.977M	44.2	+0.0	+0.0	+0.0	+0.0	+0.0	48.1	54.0	-5.9	Vert
		44.2	+0.0 +0.0	+0.0	+0.0 +5.0	+0.0	+0.0	48.1	54.0	-3.9	vert
	Ave		-37.0	+33.3	+0.3	$^{+1.8}_{+0.0}$					
			+0.0	133.3	10.5	10.0					
٨	4999.977M	47.0	+0.0	+0.0	+0.0	+0.0	+0.0	50.9	54.0	-3.1	Vert
	1,7,7,1,7,1,11	17.0	+0.0	+0.5	+5.0	+1.8	10.0	20.7	5 1.0	3.1	, 616
			-37.0	+33.3	+0.0	+0.0					
			+0.0								
19	15573.450	27.1	+0.0	+0.0	+0.0	+0.0	+0.0	47.7	54.0	-6.3	Vert
	M		+0.0	+1.0	+9.7	+3.3					
	Ave		-34.8	+41.4	+0.0	+0.0					
			+0.0								
^	15573.450	39.7	+0.0	+0.0	+0.0	+0.0	+0.0	60.3	54.0	+6.3	Vert
	M		+0.0	+1.0	+9.7	+3.3					
			-34.8	+41.4	+0.0	+0.0					
21	124 000 4	50.0	+0.0	27.0	, 1 O	110.1	100	27.2	12 5	6.2	Vart
21	124.998M	50.8	+0.2 +0.0	-27.8 +0.0	+1.9 +0.0	$+12.1 \\ +0.0$	+0.0	37.2	43.5	-6.3	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	10.0	10.0	10.0					
2.2	4999.978M	43.7	+0.0	+0.0	+0.0	+0.0	+0.0	47.6	54.0	-6.4	Horiz
	Ave	.5.7	+0.0	+0.5	+5.0	+1.8	. 0.0	.,.0	5 1.0	5.1	110112
			-37.0	+33.3	+0.3	+0.0					
			+0.0								
٨	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	+0.0					
			+0.0								
	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	+0.0					
			+0.0								

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							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 +0.0	+28.3	+0.0	+0.0					
26	7499.966M	38.4	+0.0	+0.0	+0.0	+0.0	+0.0	47.0	54.0	-7.0	Horiz
	Ave	30.4	+0.0	+0.7	+6.5	+2.3	+0.0	47.0	34.0	-7.0	110112
	1110		-36.5	+35.5	+0.1	+0.0					
			+0.0		. 0.1	. 0.0					
^	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	+0.0					
			+0.0								
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	+0.0					
			+0.0								
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 +0.0	+29.4	+4.1	+0.0					
30	37.902M	44.5	+0.0	-27.8	+1.0	+14.5	+0.0	32.3	40.0	-7.7	Vert
30	37.902W	44.3	+0.1	+0.0	+0.0	+0.0	+0.0	32.3	40.0	-7.7	v ert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	10.0	10.0	10.0					
31	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					
			+0.0								
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	+0.0					
			+0.0								
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	+0.0	+0.0					
21	2799.982M	44.5	+0.0	+0.0	+0.0	+0.0	+0.0	45.5	54.0	-8.5	Vert
34	∠177.70∠lVI	44.3	+0.0 +0.0	+0.0	+3.5	+0.0	+0.0	45.5	54.0	-0.5	v ei i
			-37.8	+29.4	+4.1	+0.0					
			+0.0	. 27.1		10.0					
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				J.,	
			+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	+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	+0.0					
			+0.0								

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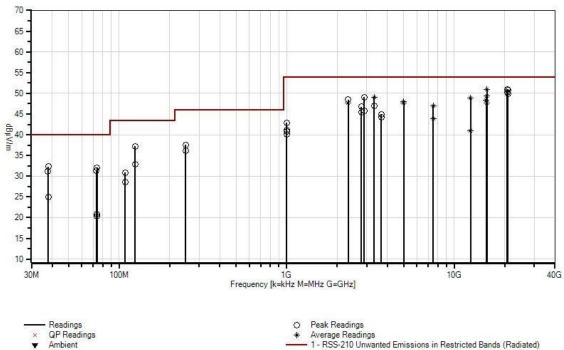


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38	3666.655M	43.8	+0.0	+0.0	+0.0	+0.0	+0.0	44.3	54.0	-9.7	Horiz
			+0.0	+0.4	+4.2	+1.6					
			-37.4	+31.3	+0.4	+0.0					
39	249.998M	48.2	+0.0	-27.8	+2.8	+12.7	+0.0	36.1	46.0	-9.9	Horiz
39	249.996IVI	46.2	+0.2	+0.0	+0.0	+12.7	+0.0	30.1	40.0	-9.9	HOHZ
			+0.0	+0.0	+0.0	+0.0					
			+0.0	10.0	10.0	10.0					
40	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	+0.0					
			+0.0								
^	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	+0.0					
L			+0.0								
42	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					
43	999.993M	38.6	+0.0	-27.3	+6.2	+24.8	+0.0	42.9	54.0	-11.1	Vert
43	999.993WI	38.0	+0.0 +0.0	+0.0	+0.2 $+0.0$	+24.8	+0.0	42.9	34.0	-11.1	vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	10.0	10.0	10.0					
44	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				-2.0	
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
45	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	+0.0					
			+0.0								
46	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	+0.0					
^	12499.972	22 5	+0.0	ι Ο Ο	+ Ο Ο	+Ω Ω	+Ω.Ω	40.1	540	-4.9	Vont
	12499.972 M	33.5	$+0.0 \\ +0.0$	$+0.0 \\ +0.8$	+0.0 +8.9	$+0.0 \\ +2.9$	+0.0	49.1	54.0	-4.9	Vert
	171		-35.9	+38.7	+0.2	+0.0					
			+0.0	130.7	10.2	10.0					
48	999.992M	36.5	+0.6	-27.3	+6.2	+24.8	+0.0	40.8	54.0	-13.2	Horiz
	//////// ///	30.3	+0.0	+0.0	+0.0	+0.0	. 0.0		21.0	13.2	110112
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
49	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	+0.0					
			+0.0								
50	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								



51	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								
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	+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	+0.0					
			+0.0								

CKC Laboratories, Inc. Date: 2/28/2012 Time: 14:53:43 Motorola Mobility, Inc. WO#: 92800 RSS-210 Unwanted Emissions in Restricted Bands (Radiated) Test Distance: 3 Meters Sequence#: 10 Ext ATTN: 0 dB



Average Readings
- 1 - RSS-210 Unwanted Emissions in Restricted Bands (Radiated)



Test Setup Photos







SUPPLEMENTAL INFORMATION

Measurement Uncertainty

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

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

Emissions Test Details

TESTING PARAMETERS

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

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

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

CORRECTION FACTORS

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

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	SAMPLE CALCULATIONS										
	Meter reading	(dBμV)									
+	Antenna Factor	(dB)									
+	Cable Loss	(dB)									
-	Distance Correction	(dB)									
-	Preamplifier Gain	(dB)									
=	Corrected Reading	(dBμV/m)									

TEST INSTRUMENTATION AND ANALYZER SETTINGS

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

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

SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

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

<u>Peak</u>

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.

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