



**FCC CFR47 PART 15 SUBPART C
CLASS II PERMISSIVE CHANGE
INDUSTRY CANADA RSS-GEN AND RSS-210
TEST REPORT
FOR**

Broadcom 802.11g Wireless LAN PCI-E Mini Card

MODEL NUMBER: BCM94311MCG

FCC ID: QDS-BRCM1020

IC #: 4324A-BRCM1020

REPORT NUMBER: 07U11209-1B

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Prepared for

BROADCOM CORPORATION

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NVLAP LAB CODE 200065-0

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--	August 17, 2007	Initial Issue	Hsin Fu Shih
B	August 23, 2007	Replaced incorrect plot in page 22/33	Hsin Fu Shih

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: BROADCOM CORPORATION
190 MATHILDA PLACE
SUNNYVALE, CA, 94086, U.S.A.

EUT DESCRIPTION: Broadcom 802.11g Wireless LAN PCI-E Mini Card

MODEL: BCM94311MCG

SERIAL NUMBER: TWJ5370082

DATE TESTED: July 26 - 27, 2007

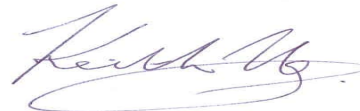

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C	NO NON-COMPLIANCE NOTED
IC RSS-210 ISSUE 7 ANNEX 8	NO NON-COMPLIANCE NOTED
IC RSS-210 ISSUE 7 ANNEX 9	NO NON-COMPLIANCE NOTED

Compliance Certification Services, Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document. No part of this report may be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any government agency.

Approved & Released For CCS By:

Tested By:



HSIN FU SHIH
ENGINEERING SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

KEITH NG
EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2003, FCC CFR 47 Part 2 FCC CFR 47 Part 15, RSS-GEN, RSS-210, RSS-212, and ANSI C63.4-200.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.4, ANSI C63.7 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Radiated Emission, 30 to 200 MHz	+/- 3.3 dB
Radiated Emission, 200 to 1000 MHz	+4.5 / -2.9 dB
Radiated Emission, 1000 to 2000 MHz	+4.5 / -2.9 dB
Power Line Conducted Emission	+/- 2.9 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is an 802.11b/g transceiver operating in the 2400-2484 MHz band. The radio utilizes a dipole antenna, with a maximum gain of 3.57dBi.

The radio module is manufactured by Broadcom Corp.

5.2. DESCRIPTION OF CLASS II PERMISSIVE CHANGE

Add additional antenna: Foxconn, dipole antenna, Peak gain: 3.57 dBi

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a Foxconn dipole antenna with a peak gain of 3.57 dBi.

5.4. SOFTWARE AND FIRMWARE

The EUT driver software installed in the host support equipment during testing was BCM94311, version. 3.100.53.0

The test utility software used during testing was wl_tools.

5.5. WORST-CASE CONFIGURATION AND MODE

The worst-case data rate for these channels are determined to be 1 Mb/s for 11b mode and 6 Mb/s for 11g mode, based on previous experience with WLAN product design architectures.

Thus all emissions tests were made in the 802.11b mode @ 1 Mb/s, and 802.11g mode @ 6 Mb/s.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	S/N	FCC ID
Laptop PC	Dell	Inspiron	CN-901006-70166-57K-01K2	DoC
AC/DC Adapter	Dell	ADP-60NH B	CN-0TD230-48661-57C-005B	N/A
Extension Card	Catalyst	384-0152-003- REV C	N/A	N/A

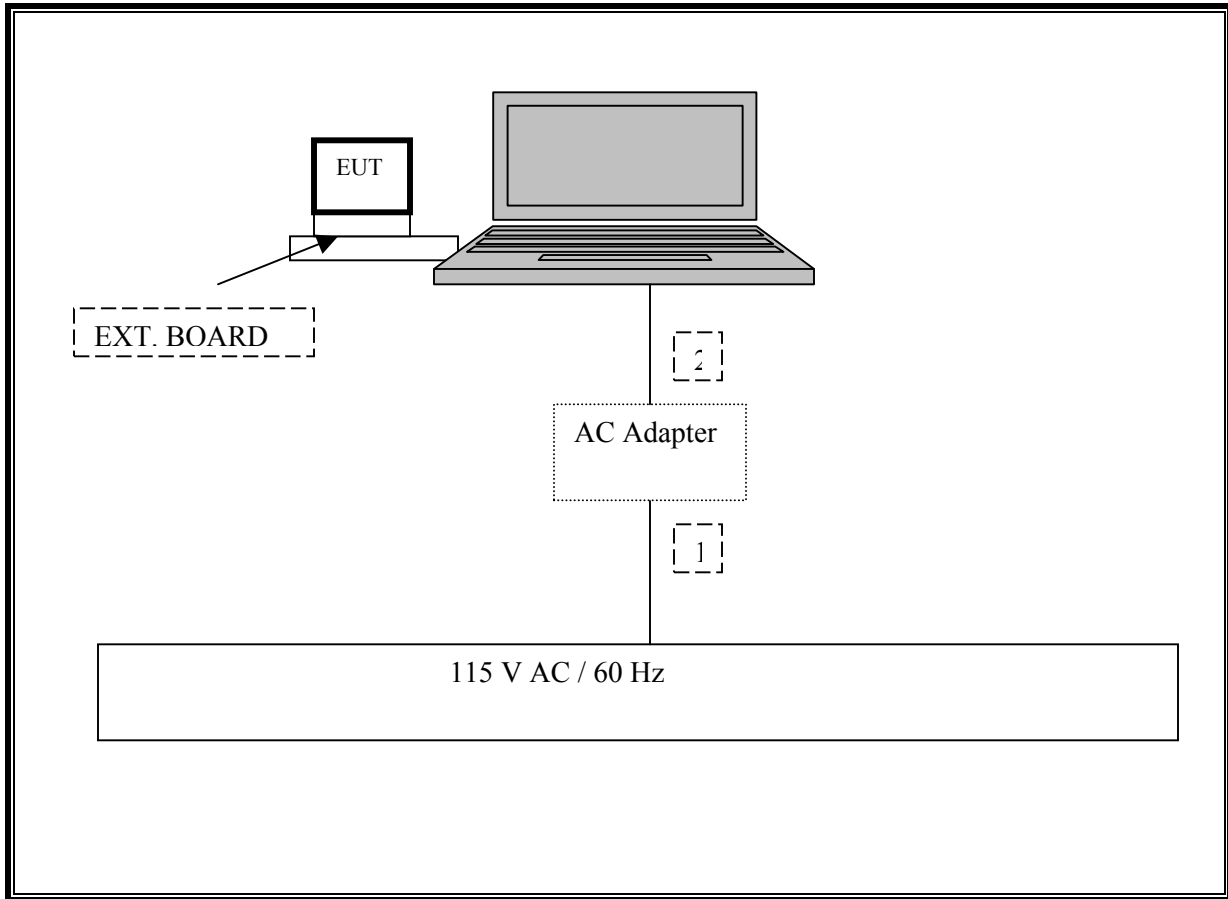
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	1	AC	Unshielded	1.8m	N/A
2	DC	1	DC	Unshielded	1.8m	N/A

TEST SETUP

The EUT is installed in a host laptop computer via an extension board during the tests. Test software exercised the radio card.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	Cal Due
EMI Test Receiver	R & S	ESHS 20	827129/006	10/22/2005
Site A Line Stabilizer / Conditioner	Tripplite	LC-1800a	A0051681	CNR
LISN, 10 kHz ~ 30 MHz	FCC	LISN-50/250-25-2	2023	8/30/2005
LISN, 10 kHz ~ 30 MHz	Solar	8012-50-R-24-BNC	8379443	10/21/2005
Spectrum Analyzer	HP	E4446A	US42510266	8/25/2005
Antenna, Horn 1 ~ 18 GHz	EMCO	3117	29310	9/12/2005
Preamplifier, 1 ~ 26.5 GHz	HP	8449B	3008A00369	8/17/2005
Temperature / Humidity Chamber	Thermotron	SE 600-10-10	29800	5/13/2005
Peak Power Meter	Agilent	E4416A	GB41291160	11/7/2004
Peak / Average Power Sensor	Agilent	E9327A	US40440755	11/7/2004
RF Filter Section	HP	85420E	3705A00256	11/21/2004
EMI Receiver, 9 kHz ~ 2.9 GHz	HP	8542E	3942A00286	11/21/2004
30MHz---- 2Ghz	Sunol Sciences	JB1 Antenna	A121003	12/22/2004
4.0 High Pass Filter	Micro Tronics	HPM13351	3	N/A

7. LIMITS AND RESULTS

7.1. RADIATED EMISSIONS

7.1.1. TRANSMITTER RADIATED SPURIOUS EMISSIONS

LIMITS

§15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41			

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

² Above 38.6

§15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

§15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

§15.209 (b) In the emission table above, the tighter limit applies at the band edges.

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

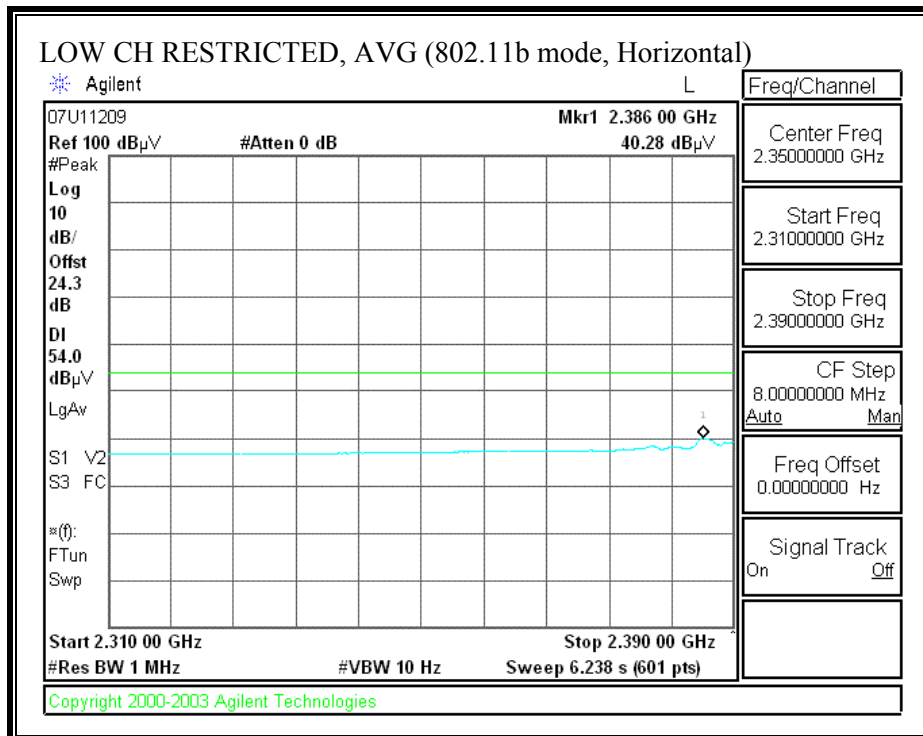
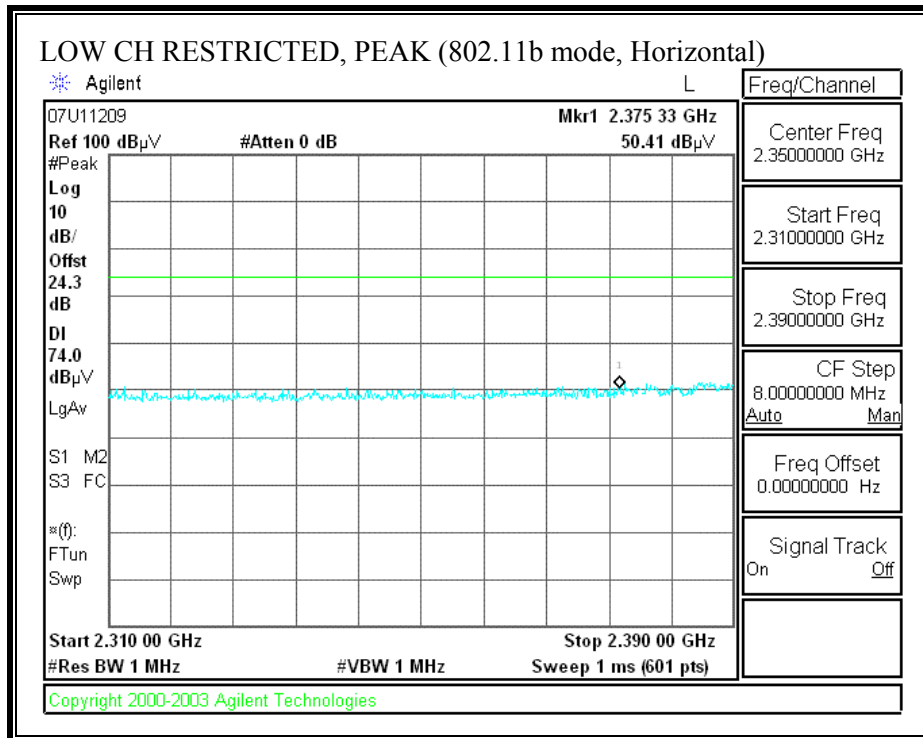
For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

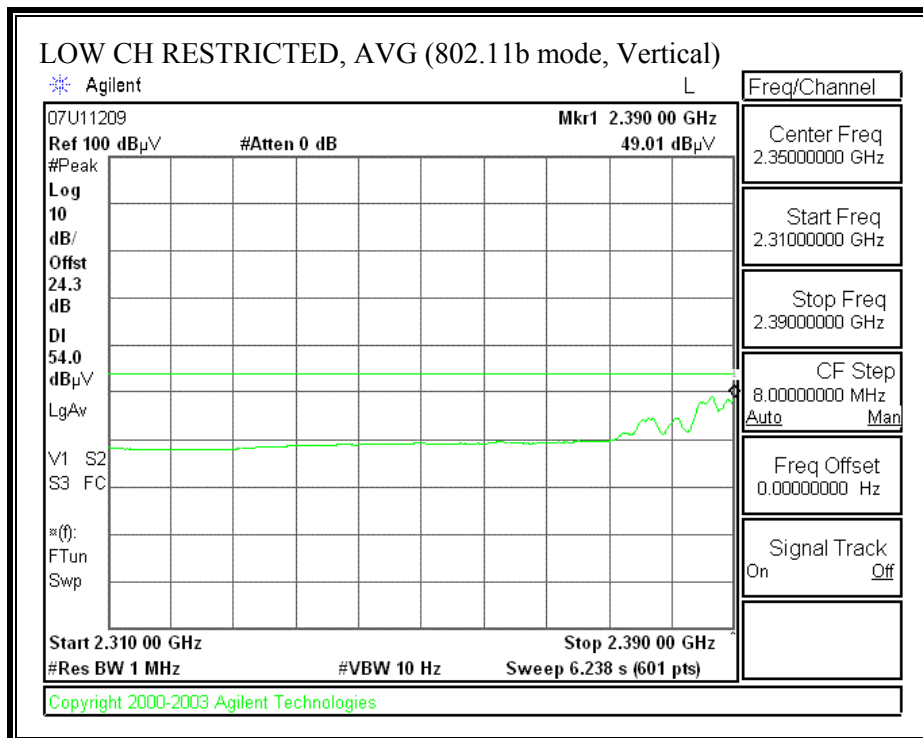
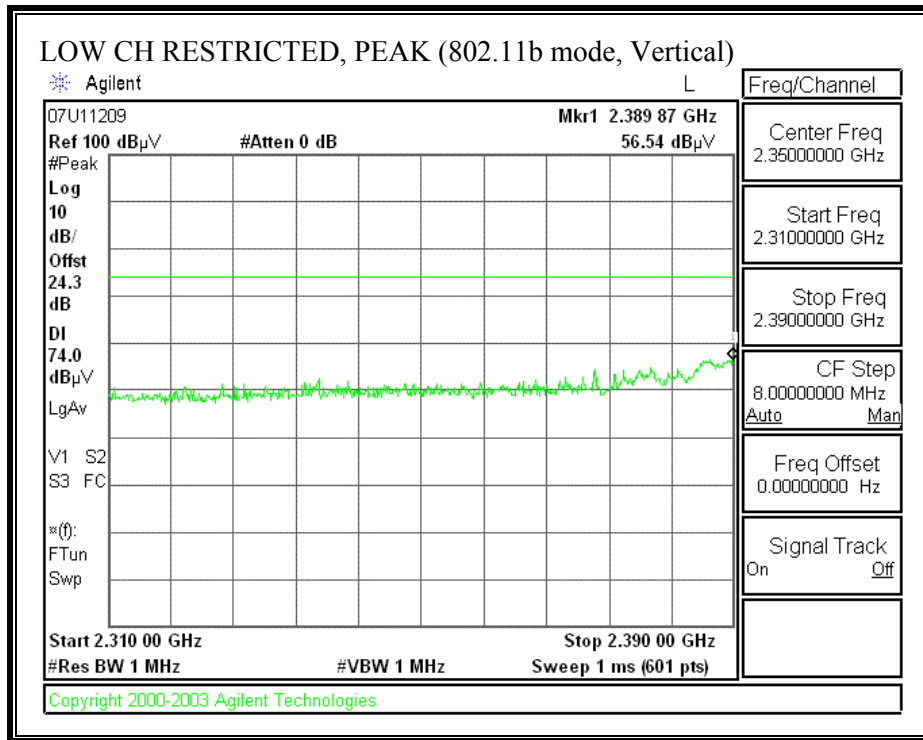
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each 5 GHz band.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

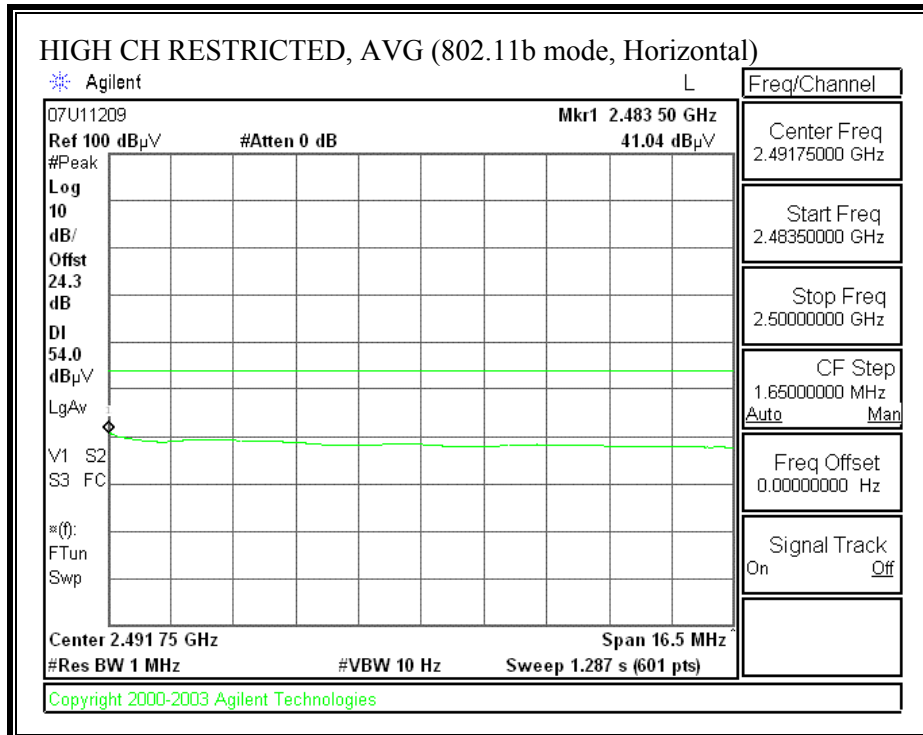
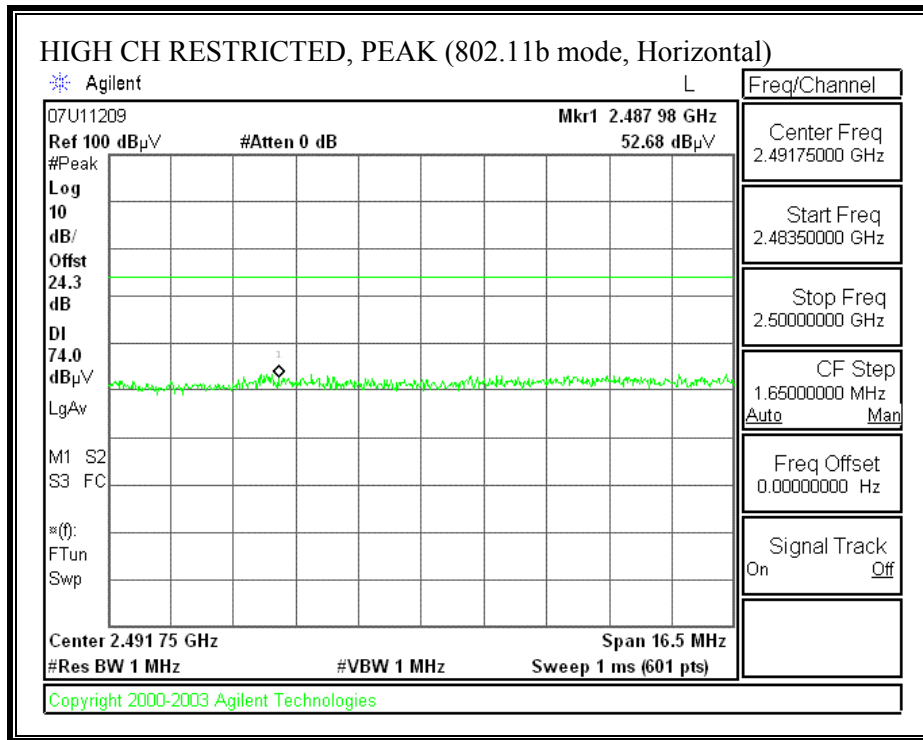
7.1.2. TRANSMITTER ABOVE 1 GHz FOR 2400 TO 2483.5 MHz BAND
RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, HORIZONTAL)



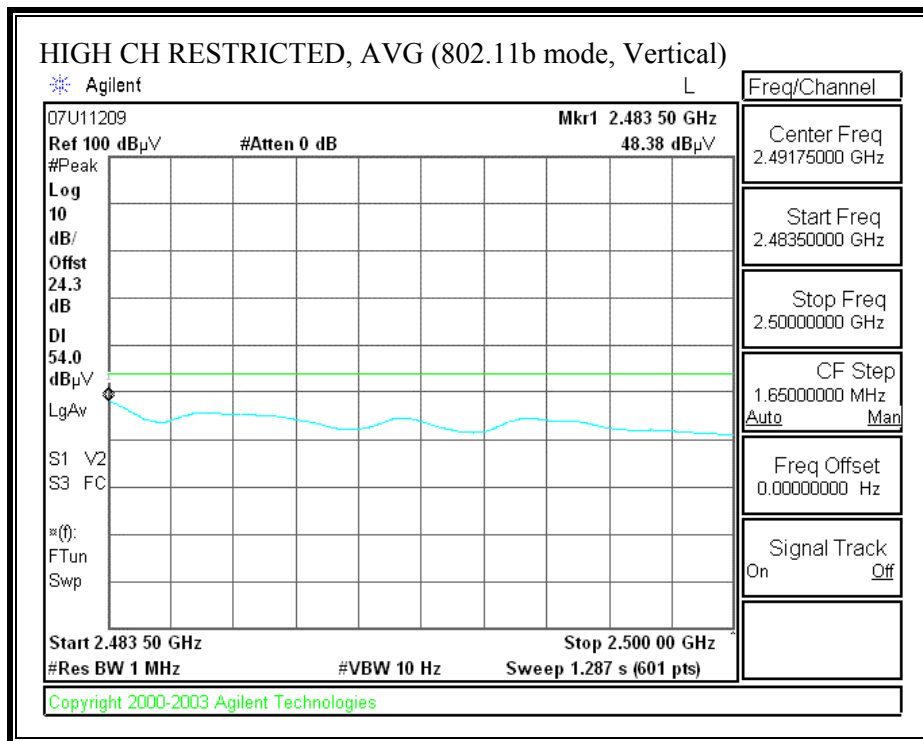
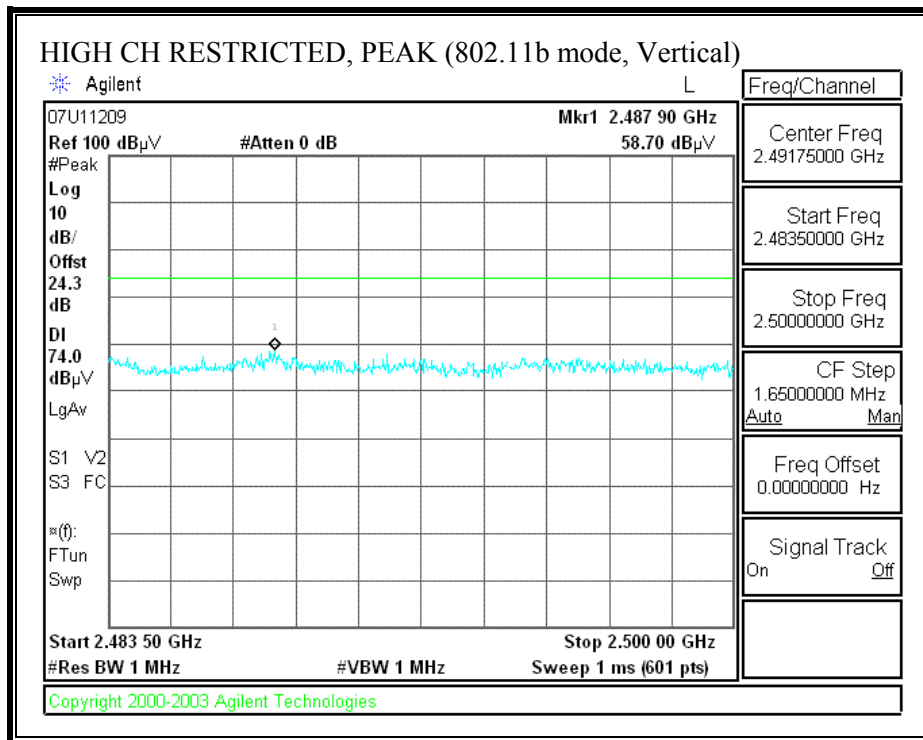
RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, VERTICAL)



HARMONICS AND SPURIOUS EMISSIONS (b MODE)

High Frequency Measurement
 Compliance Certification Services, Fremont 5m Chamber

Company: Broadcom
 Project #: 07U11209
 Date: 7/27/2007
 Test Engineer: Yobi Zhou
 Configuration: EUT with laptop
 Mode: 2.4GHz Tx b mode

Test Equipment:

Horn 1-18GHz	Pre-amplifer 1-26GHz	Pre-amplifer 26-40GHz	Horn > 18GHz	Limit
T60; S/N: 2238 @3m	T145 Agilent 3008A005C			FCC 15.205

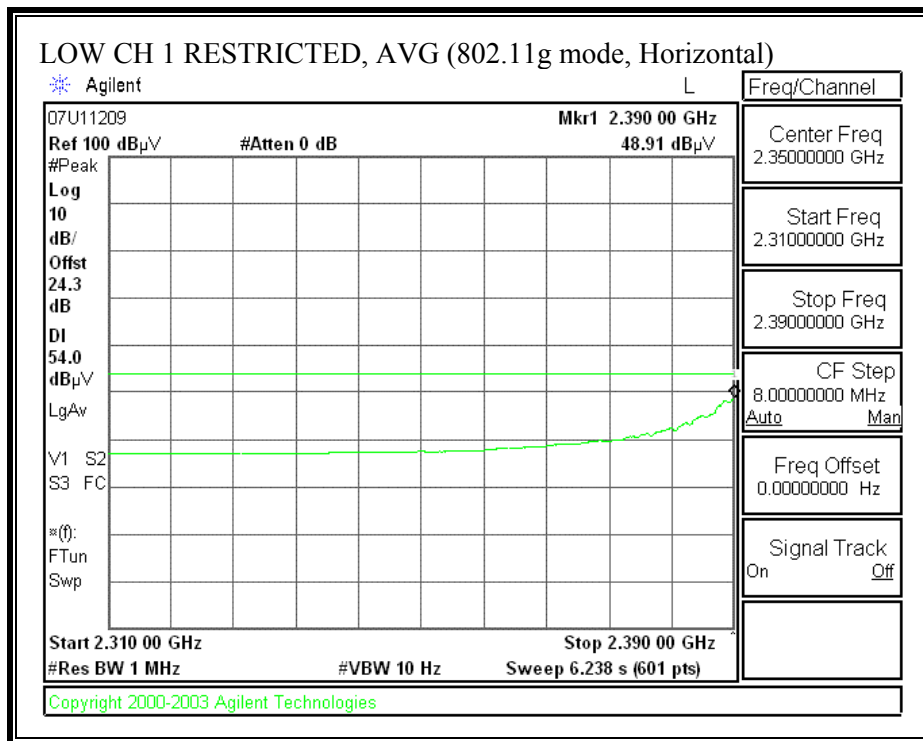
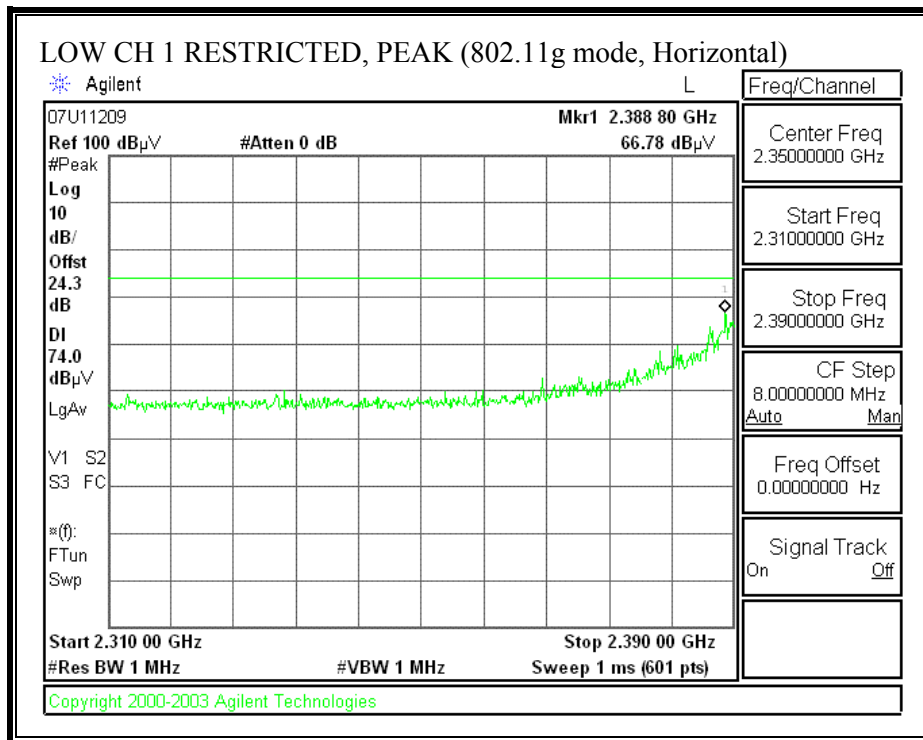
HI Frequency Cables

2 foot cable	3 foot cable	12 foot cable	HPF	Reject Filter	Peak Measurements RBW=VBW=1MHz
		A5m Chamber		R_001	Average Measurements RBW=1MHz ; VBW=10Hz

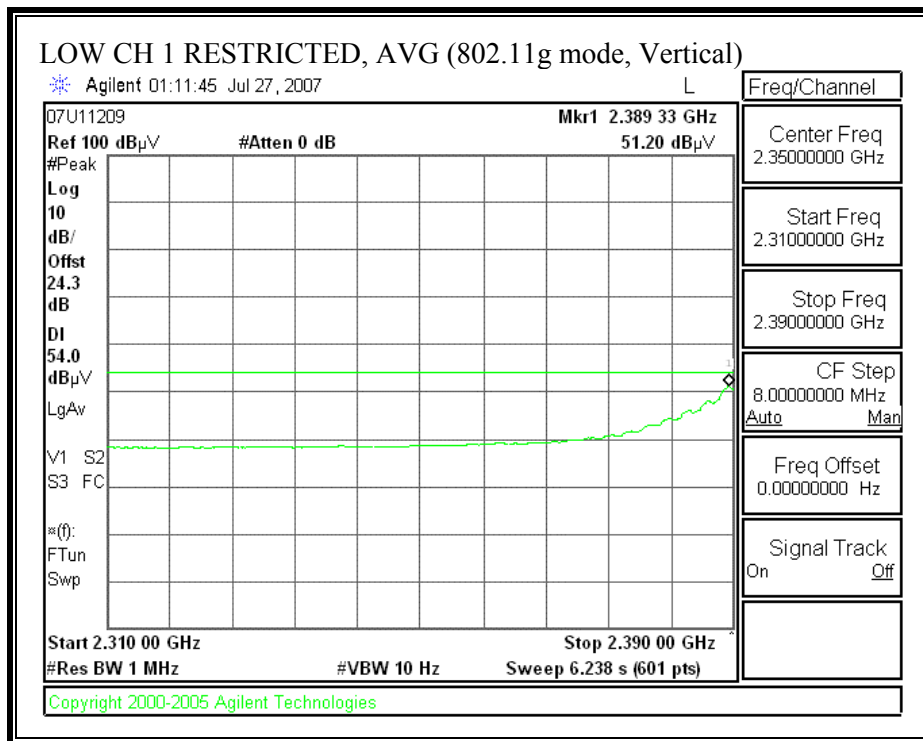
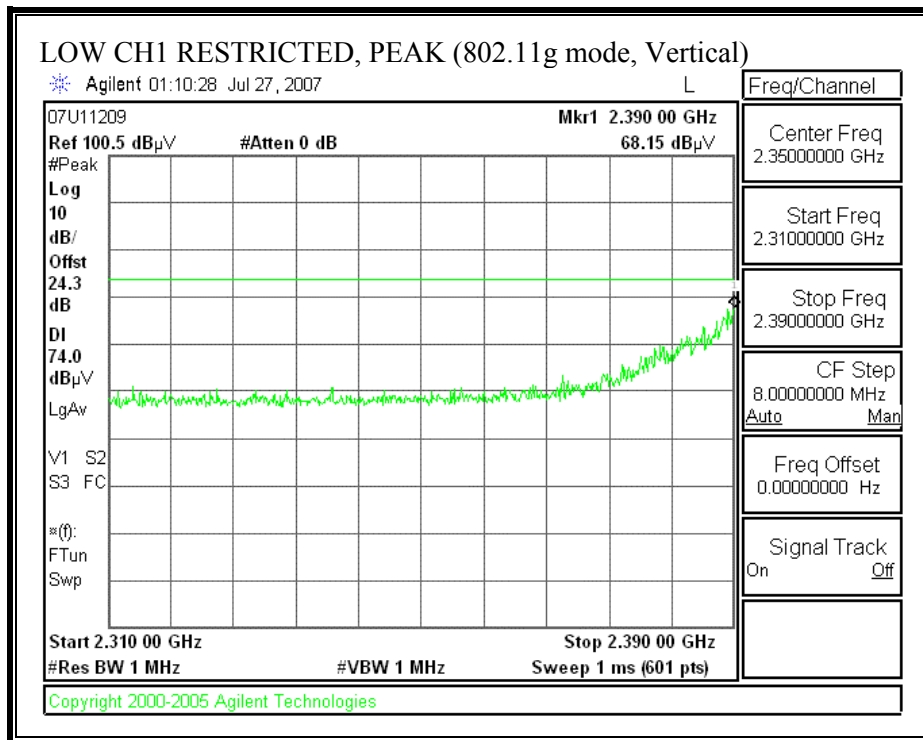
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Ftr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Low Ch(2412MHz)															
1.177	3.0	45.3	31.6	25.9	3.2	-36.0	0.0	0.0	38.4	24.7	74	54	-35.6	-29.3	V
4.824	3.0	42.0	30.8	33.0	6.9	-34.8	0.0	0.0	47.1	35.9	74	54	-26.9	-18.1	V
1.076	3.0	46.3	33.1	25.6	3.1	-36.1	0.0	0.0	38.9	25.7	74	54	-35.1	-28.3	H
4.824	3.0	42.2	31.6	33.0	6.9	-34.8	0.0	0.0	47.2	36.7	74	54	-26.8	-17.3	H
Mid Ch(2437MHz)															
1.420	3.0	48.0	30.0	26.5	3.5	-35.8	0.0	0.0	42.2	24.2	74	54	-31.8	-29.8	V
1.625	3.0	49.6	33.0	27.0	3.8	-35.7	0.0	0.0	44.8	28.2	74	54	-29.2	-25.8	V
4.874	3.0	45.8	43.2	33.1	6.9	-34.9	0.0	0.0	50.9	48.4	74	54	-23.1	-5.6	V
1.300	3.0	55.3	34.7	26.2	3.4	-35.9	0.0	0.0	48.9	28.4	74	54	-25.1	-25.6	H
4.874	3.0	42.2	29.3	33.1	6.9	-34.9	0.0	0.0	47.3	34.5	74	54	-26.7	-19.5	H
7.311	3.0	41.8	30.6	35.5	8.4	-34.7	0.0	0.0	51.1	39.8	74	54	-22.9	-14.2	H
Hi Ch (2462MHz)															
1.396	3.0	47.9	33.3	26.4	3.5	-35.9	0.0	0.0	41.9	27.4	74	54	-32.1	-26.6	V
4.924	3.0	42.2	38.2	33.1	7.0	-34.9	0.0	0.0	47.4	43.4	74	54	-26.6	-10.6	V
1.399	3.0	48.5	33.0	26.4	3.5	-35.8	0.0	0.0	42.6	27.1	74	54	-31.4	-26.9	V
4.924	3.0	42.0	29.8	33.1	7.0	-34.9	0.0	0.0	47.2	35.0	74	54	-26.8	-19.0	H
7.386	3.0	40.4	28.8	35.6	8.4	-34.6	0.0	0.0	49.8	38.1	74	54	-24.2	-15.9	H

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

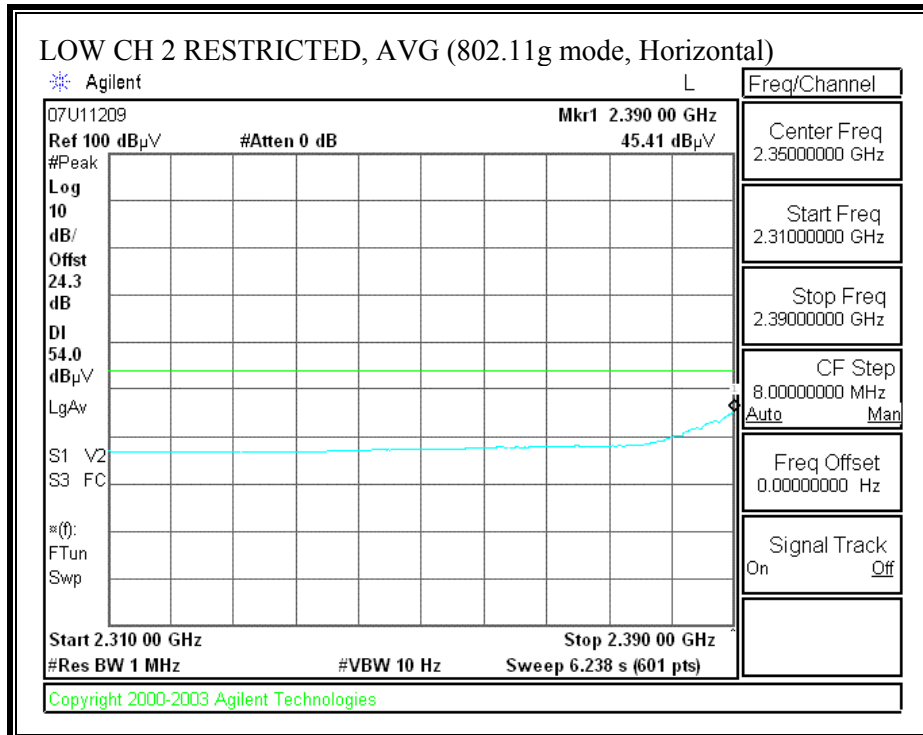
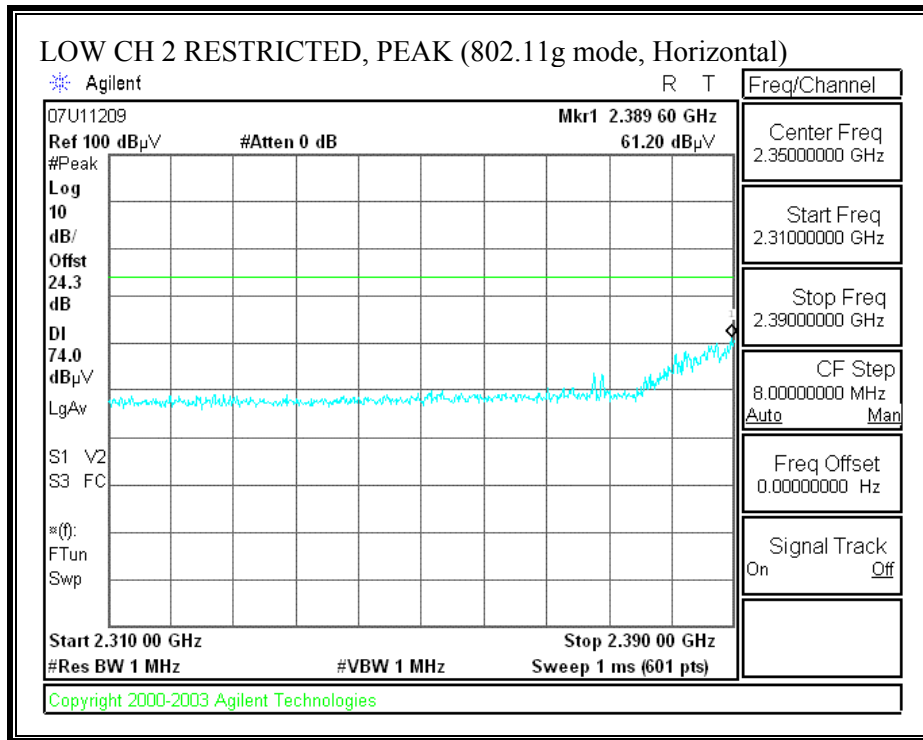
RESTRICTED BANDEDGE (g MODE, LOW CHANNEL 1, HORIZONTAL)



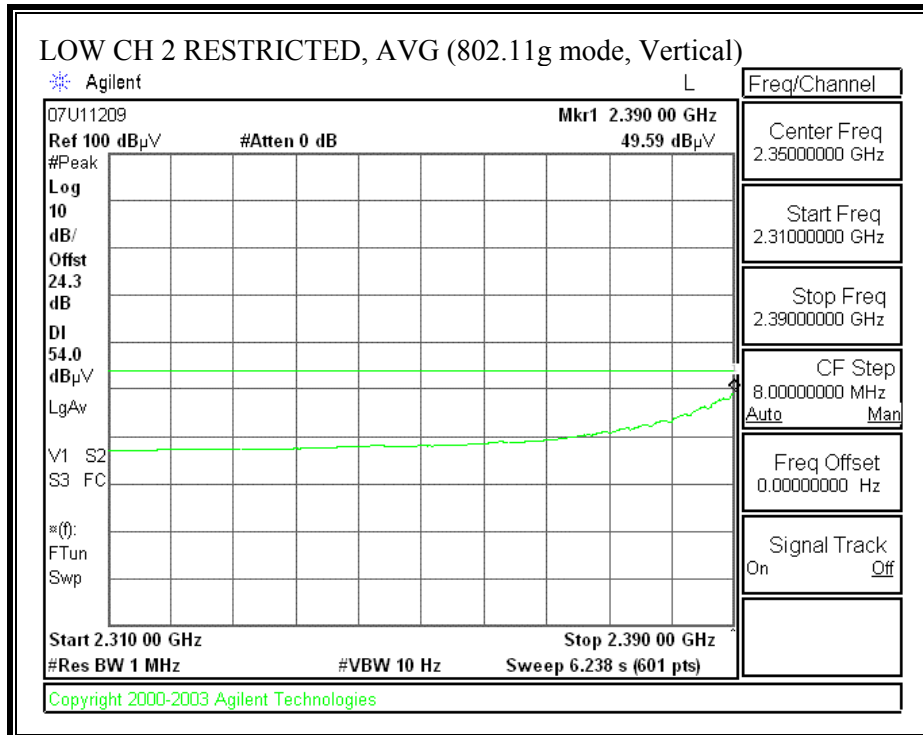
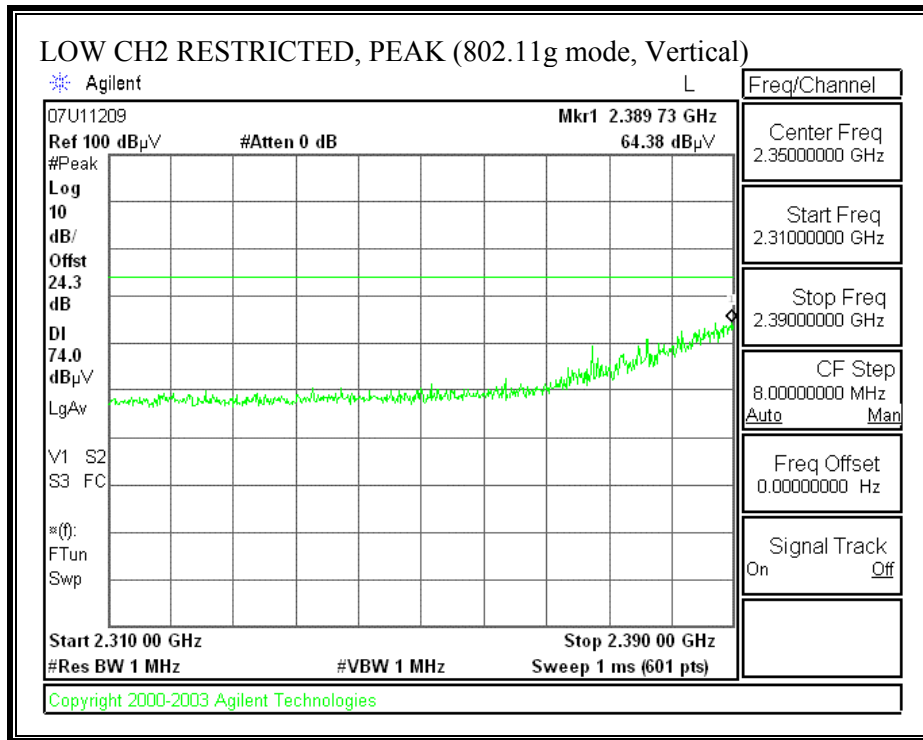
RESTRICTED BANDEDGE (g MODE, LOW CHANNEL 1, VERTICAL)



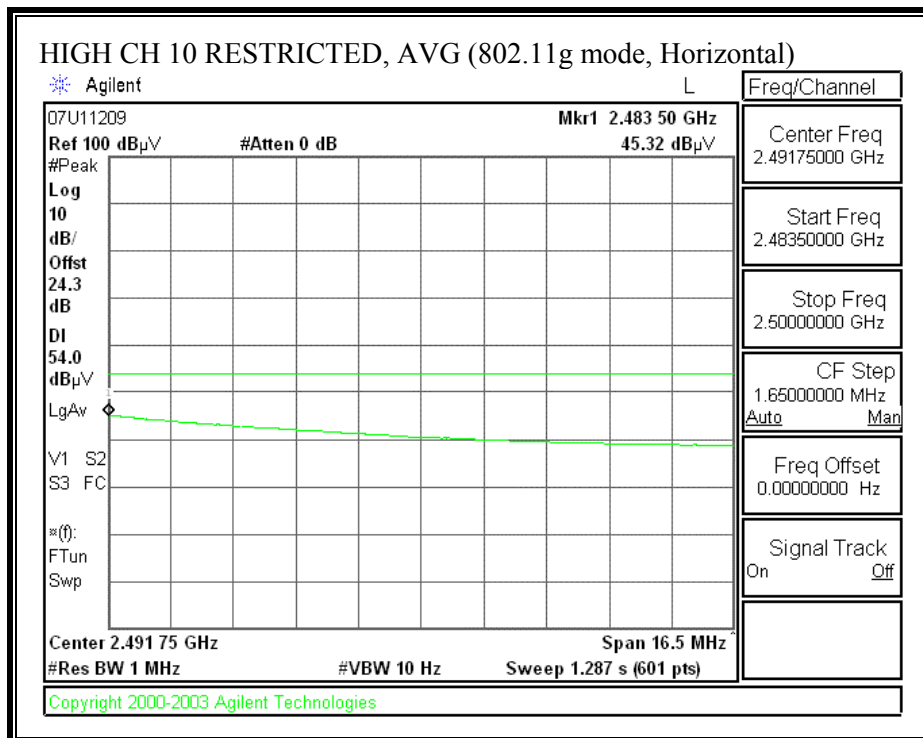
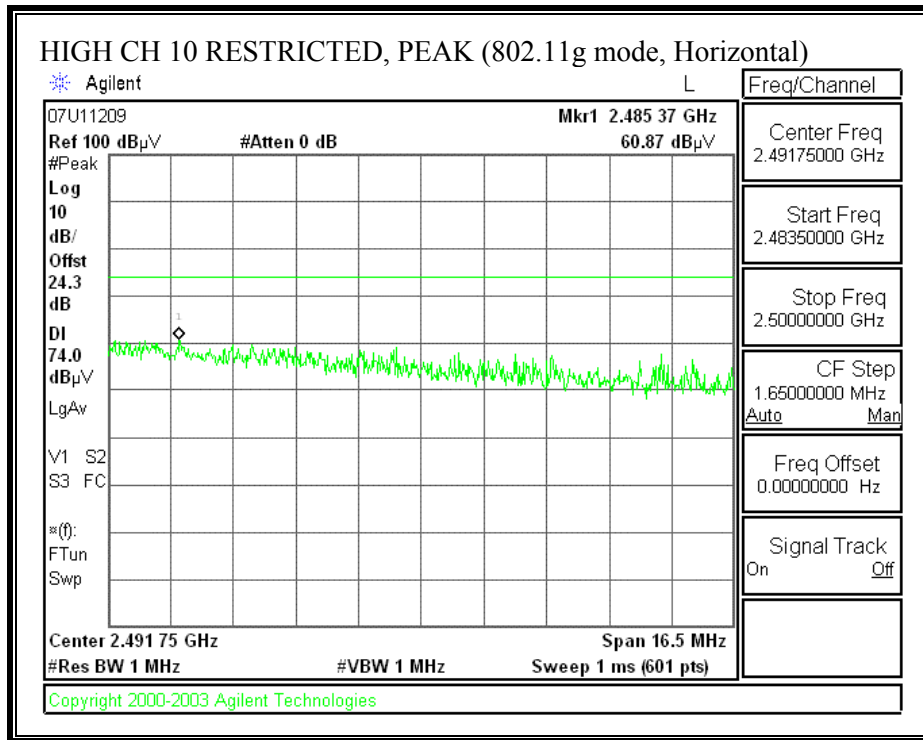
RESTRICTED BANDEDGE (g MODE, LOW CHANNEL 2, HORIZONTAL)



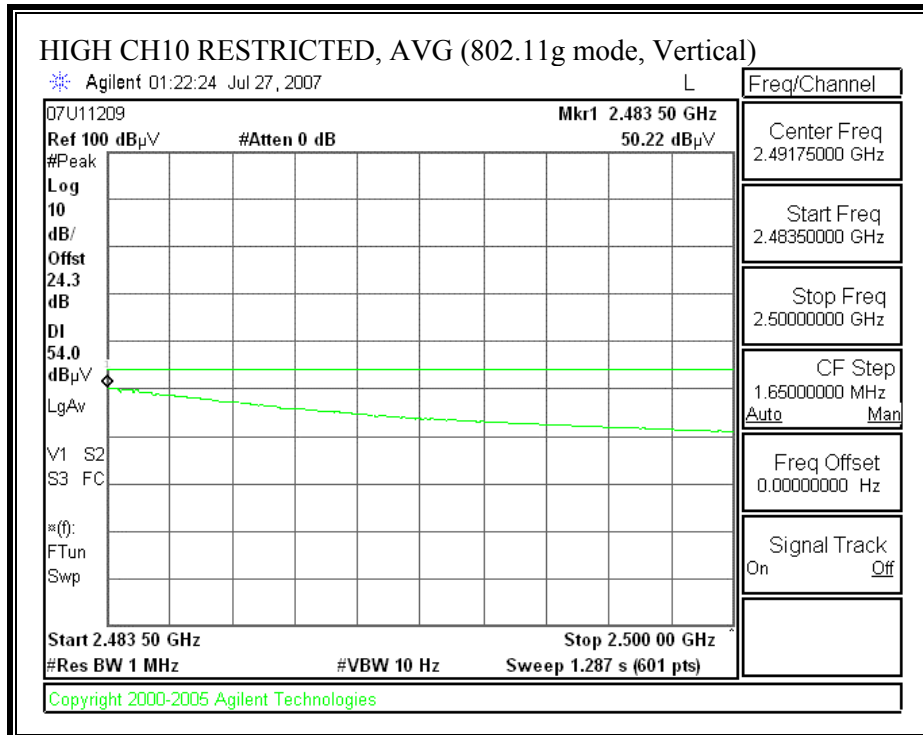
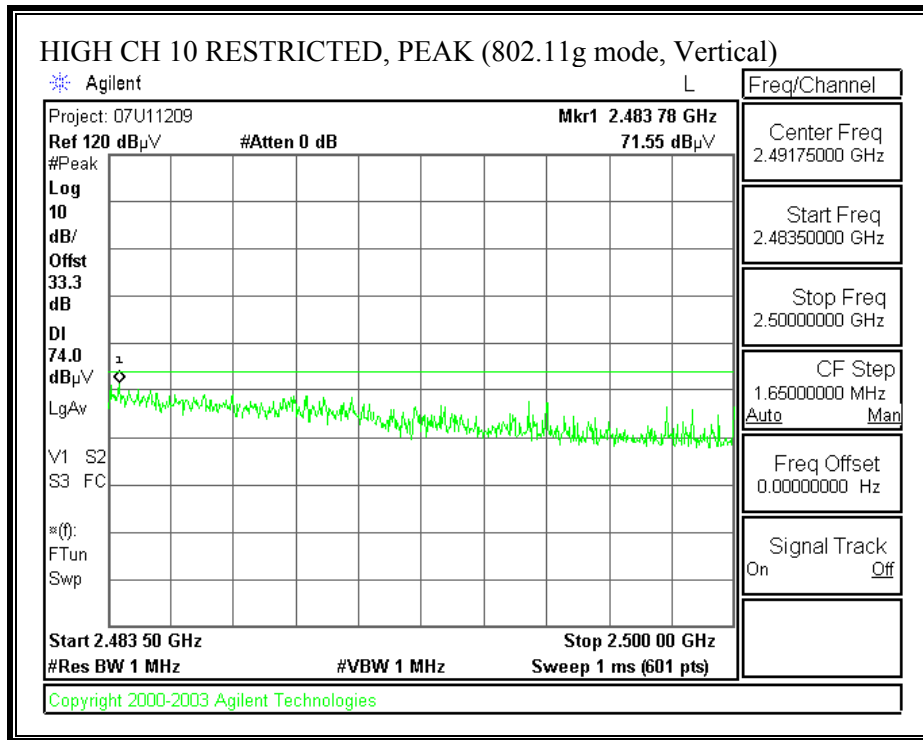
RESTRICTED BANDEDGE (g MODE, LOW CHANNEL 2, VERTICAL)



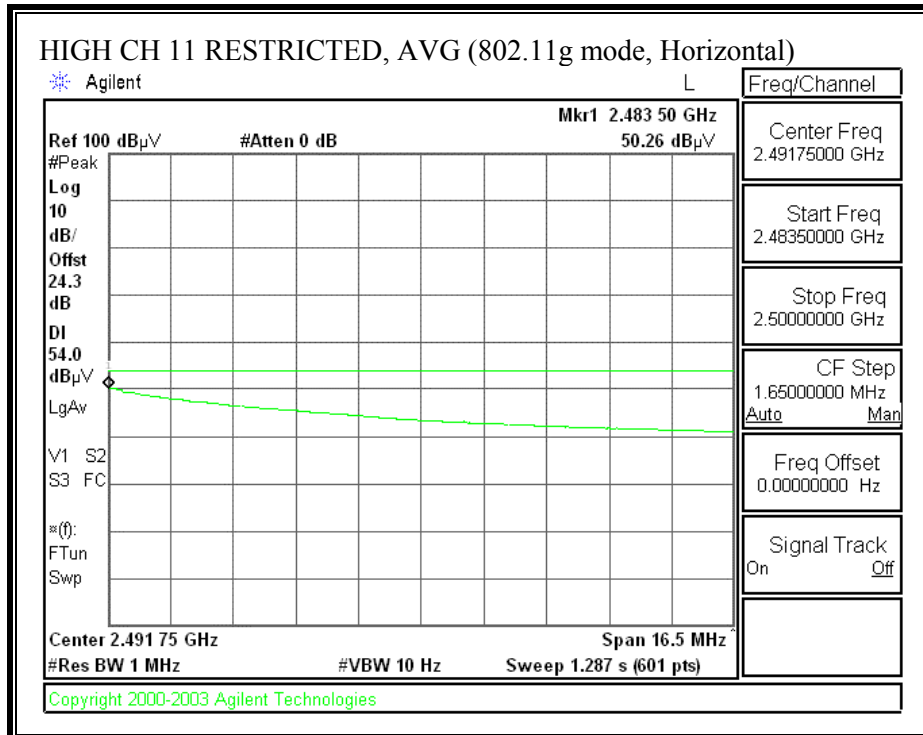
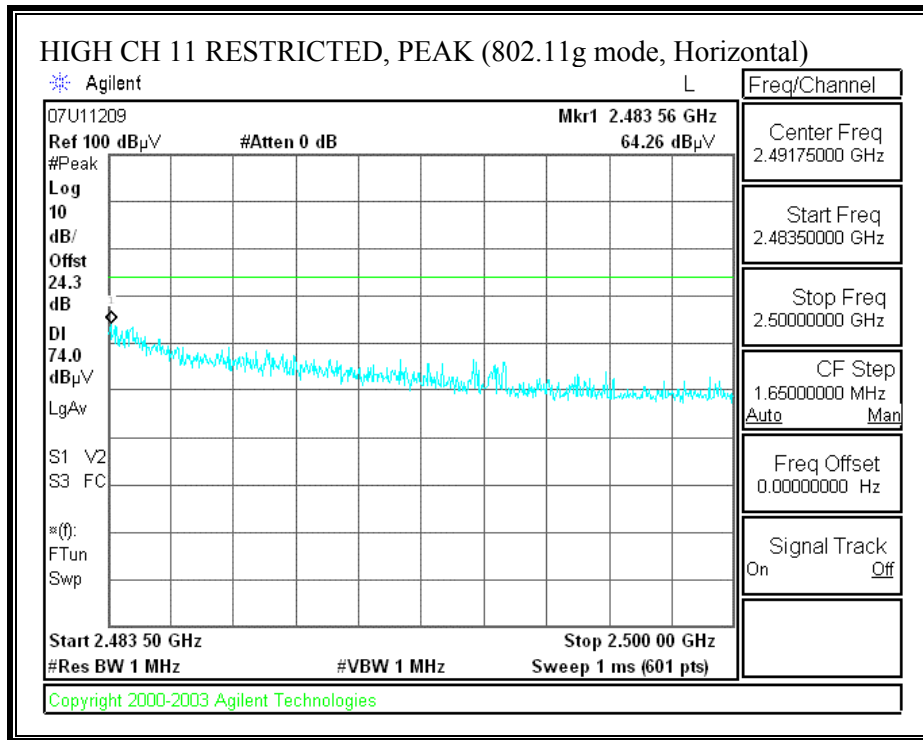
RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL 10, HORIZONTAL)



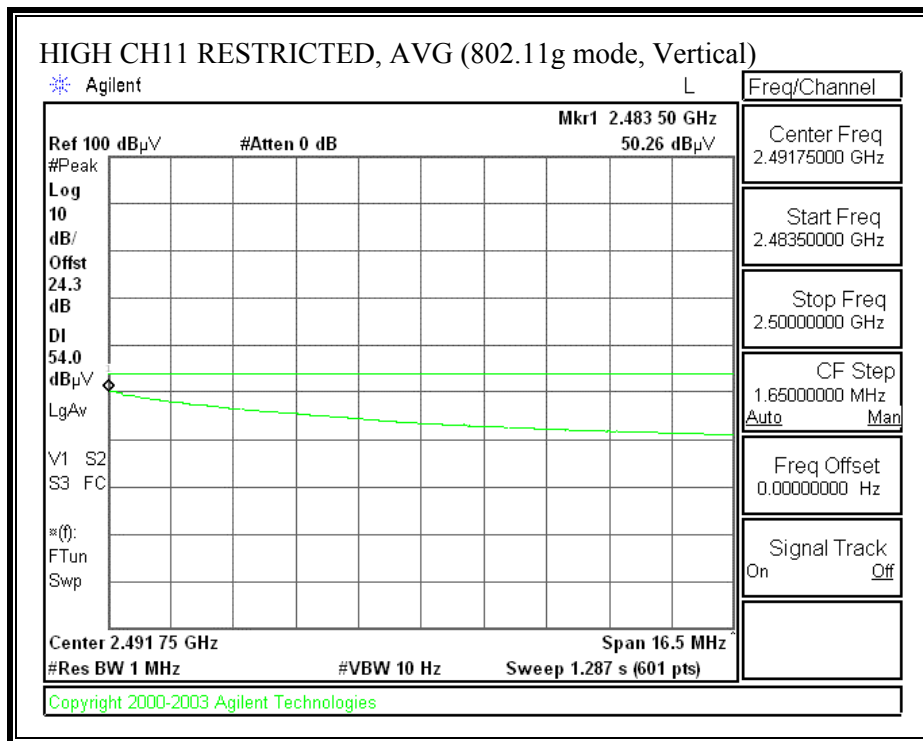
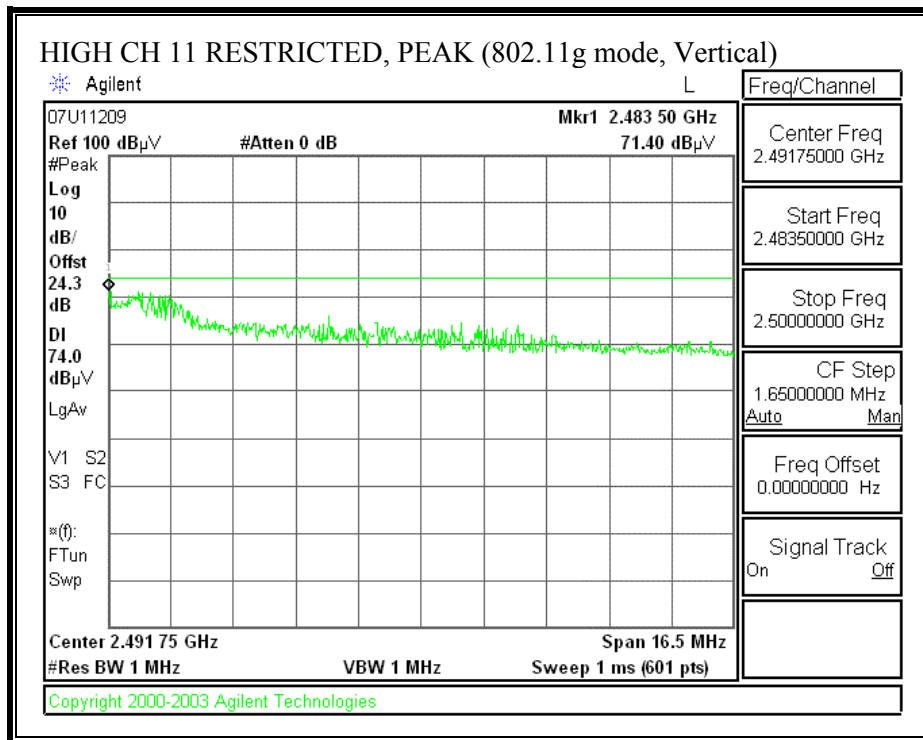
RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL10, VERTICAL)



RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL 11, HORIZONTAL)



RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL11, VERTICAL)



HARMONICS AND SPURIOUS EMISSIONS (g MODE)

High Frequency Measurement
 Compliance Certification Services, Fremont 5m Chamber

Company: Broadcom
 Project #: 07U11209
 Date: 7/27/2007
 Test Engineer: Yobi Zhou
 Configuration: EUT with laptop
 Mode: 2.4GHz Tx g mode

Test Equipment:

Horn 1-18GHz	Pre-amplifer 1-26GHz	Pre-amplifer 26-40GHz	Horn > 18GHz	Limit
T60; S/N: 2238 @3m	T145 Agilent 3008A005t			FCC 15.205

Hi Frequency Cables

2 foot cable	3 foot cable	12 foot cable	HPF	Reject Filter	Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz
		A-5m Chamber		R_001	

f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Low Ch(2412MHz)															
1.421	3.0	47.3	31.8	26.5	3.5	-35.8	0.0	0.0	41.5	26.0	74	54	-32.5	-28.0	V
1.198	3.0	47.5	33.8	25.9	3.3	-36.0	0.0	0.0	40.7	27.0	74	54	-33.3	-27.0	V
4.824	3.0	42.2	28.6	33.0	6.9	-34.8	0.0	0.0	47.3	33.7	74	54	-26.7	-20.3	V
1.203	3.0	45.4	31.6	25.9	3.3	-36.0	0.0	0.0	38.6	24.8	74	54	-35.4	-29.2	H
4.824	3.0	42.1	30.1	33.0	6.9	-34.8	0.0	0.0	47.1	35.2	74	54	-26.9	-18.8	H
Mid Ch(2437MHz)															
1.398	3.0	49.6	34.0	26.4	3.5	-35.8	0.0	0.0	43.7	28.1	74	54	-30.3	-25.9	V
4.874	3.0	38.5	27.4	33.1	6.9	-34.9	0.0	0.0	43.6	32.5	74	54	-30.4	-21.5	V
7.311	3.0	37.5	24.8	35.5	8.4	-34.7	0.0	0.0	46.7	34.1	74	54	-27.3	-19.9	V
1.695	3.0	45.6	31.0	27.2	3.9	-35.6	0.0	0.0	41.0	26.4	74	54	-33.0	-27.6	H
4.874	3.0	43.7	30.1	33.1	6.9	-34.9	0.0	0.0	48.8	35.2	74	54	-25.2	-18.8	H
7.311	3.0	41.7	29.5	35.5	8.4	-34.7	0.0	0.0	50.9	38.7	74	54	-23.1	-15.3	H
Hi Ch (2462MHz)															
1.062	3.0	50.2	36.2	25.6	3.1	-36.1	0.0	0.0	42.7	28.8	74	54	-31.3	-25.2	V
1.418	3.0	47.0	30.1	26.5	3.5	-35.8	0.0	0.0	41.2	24.3	74	54	-32.8	-29.7	V
1.692	3.0	47.6	32.4	27.2	3.9	-35.6	0.0	0.0	43.0	27.8	74	54	-31.0	-26.2	V
4.926	3.0	39.2	27.1	33.1	7.0	-34.9	0.0	0.0	44.4	32.3	74	54	-29.6	-21.7	V
1.180	3.0	46.6	32.3	25.9	3.2	-36.0	0.0	0.0	39.7	25.4	74	54	-34.3	-28.6	H
4.924	3.0	42.4	30.2	33.1	7.0	-34.9	0.0	0.0	47.6	35.5	74	54	-26.4	-18.5	H
7.386	3.0	42.3	30.8	35.6	8.4	-34.6	0.0	0.0	51.7	40.2	74	54	-22.3	-13.8	H

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

7.1.3. RECEIVER EMISSIONS ABOVE 1 GHZ

RESULTS

No non-compliance noted:

RECEIVER SPURIOUS EMISSIONS FOR 11b MODE

High Frequency Measurement
 Compliance Certification Services, Morgan Hill Open Field Site

Company: Brocadeom
 Project #: 07U11209
 Date: 39290
 Test Engineer: Can Ming Chung
 Configuration: EUT with laptop
 Mode: Transmi B-Mode RX, Middle Channel

Test Equipment:

Horn 1-18GHz	Pre-amplifier 1-26GHz	Pre-amplifier 26-40GHz	Horn > 18GHz	Limit
T73; S/N: 6717 @3m	T144 Miteq 3008A00931			RX RSS 210

Hi Frequency Cables

2 foot cable	3 foot cable	12 foot cable	HPF	Reject Filter
		Gordon 203134001		

Peak Measurements
 RBW=VBW=1MHz
Average Measurements
 RBW=1MHz ; VBW=10Hz

f GHz	Dist (m)	Read Pk dBuV	Read Avg dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fitr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Mid CH															
1.302	3.0	59.6	43.1	24.9	3.4	-39.1	0.0	0.0	48.8	32.4	74	54	-25.2	-21.6	H
2.516	3.0	57.7	34.9	28.6	4.9	-37.5	0.0	0.0	53.8	31.0	74	54	-20.2	-23.0	H
5.942	3.0	43.3	30.1	33.6	7.6	-36.4	0.0	0.0	48.1	35.0	74	54	-25.9	-19.0	H
1.298	3.0	58.3	42.2	24.9	3.4	-39.1	0.0	0.0	47.5	31.4	74	54	-26.5	-22.6	V
2.478	3.0	61.8	35.5	28.5	4.9	-37.5	0.0	0.0	57.7	31.4	74	54	-16.3	-22.6	V
5.740	3.0	42.5	31.1	33.7	7.5	-36.5	0.0	0.0	47.2	35.8	74	54	-26.8	-18.2	V

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

RECEIVER SPURIOUS EMISSIONS FOR 11g MODE

High Frequency Measurement
 Compliance Certification Services, Morgan Hill Open Field Site

Company: Broadcom
 Project #: 07U11209
 Date: 39290
 Test Engineer: Can Ming Chung
 Configuration: EUT with laptop
 Mode: Transmitter G-Mode RX, Middle Channel

Test Equipment:

Horn 1-18GHz	Pre-amplifier 1-26GHz	Pre-amplifier 26-40GHz	Horn > 18GHz	Limit
T73; S/N: 6717 @3m	T144 Miteq 3008A00931			RX RSS 210

Hi Frequency Cables

2 foot cable	3 foot cable	12 foot cable	HPF	Reject Filter	Peak Measurements RBW=VBW=1MHz
		Gordon 203134001			Average Measurements RBW=1MHz, VBW=10Hz

f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Ftr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Mid CH															
1.295	3.0	58.8	41.2	24.9	3.4	-39.1	0.0	0.0	48.0	30.4	74	54	-26.0	-23.6	H
2.550	3.0	56.1	34.0	28.7	4.9	-37.5	0.0	0.0	52.3	30.2	74	54	-21.7	-23.8	H
5.845	3.0	43.3	29.1	33.6	7.5	-36.5	0.0	0.0	48.0	33.8	74	54	-26.0	-20.2	H
1.300	3.0	59.3	41.3	24.9	3.4	-39.1	0.0	0.0	48.5	30.5	74	54	-25.5	-23.5	V
2.488	3.0	60.4	34.6	28.5	4.9	-37.5	0.0	0.0	56.4	30.5	74	54	-17.6	-23.5	V
5.850	3.0	41.6	30.1	33.6	7.6	-36.5	0.0	0.0	46.3	34.8	74	54	-27.7	-19.2	V

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

7.1.4. WORST-CASE RADIATED EMISSIONS BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL- b mode)

HORIZONTAL PLOT

Data#: 16 File#: 07U11209-1-revised.EMI
 Date: 08-17-2007 Time: 00:01:42

Condition: FCC CLASS-B HORIZONTAL
 Test Operator:: Can Ming Chung
 Project #: : 07U11209
 Company: : Broadcom
 Configuration:: EUT/Laptop/Antennas/Ac Adapter
 Mode : : Normal
 Target: : FCC Class B

Page: 1

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	100.810	56.38	-16.98	39.40	43.50	-4.10	QP
2	100.810	57.79	-16.98	40.81	43.50	-2.69	Peak
3	302.570	55.16	-12.21	42.95	46.00	-3.05	QP
4	302.570	56.27	-12.21	44.06	46.00	-1.94	Peak
5	373.380	50.64	-10.49	40.15	46.00	-5.85	QP
6	373.380	52.64	-10.49	42.15	46.00	-3.85	Peak
7	575.140	42.96	-5.83	37.13	46.00	-8.87	QP
8	575.140	48.15	-5.83	42.32	46.00	-3.68	Peak
9	857.410	40.15	-1.51	38.63	46.00	-7.37	Peak
10	905.910	41.81	-1.04	40.77	46.00	-5.23	QP
11	905.910	43.06	-1.04	42.01	46.00	-3.99	Peak

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL-b mode)

VERTICAL PLOT



Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538
Tel: (510) 771-1000
Fax: (510) 661-0888

Data#: 14 File#: 07U11209-1-revised.EMI
Date: 08-16-2007 Time: 23:57:16

Condition: FCC CLASS-B VERTICAL
Test Operator:: Can Ming Chung
Project #: : 07U11209
Company: : Broadcom
Configuration:: EUT/Laptop/Antennas/Ac Adapter
Mode : : Normal
Target: : FCC Class B

Page: 1

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	100.810	50.48	-16.98	33.50	43.50	-10.00	Peak
2	288.990	46.56	-12.63	33.93	46.00	-12.07	Peak
3	378.230	46.00	-10.36	35.64	46.00	-10.36	Peak
4	535.370	44.26	-6.69	37.57	46.00	-8.43	Peak
5	806.970	40.81	-2.02	38.80	46.00	-7.20	Peak
6	905.910	41.27	-1.04	40.22	46.00	-5.78	Peak

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL-g mode)

HORIZONTAL PLOT



Compliance Certification Services
 47173 Benicia Street
 Fremont, CA 94538
 Tel: (510) 771-1000
 Fax: (510) 661-0888

Data#: 21 File#: 07U11209-1-revised.EMI
 Date: 08-17-2007 Time: 00:25:22

Condition: FCC CLASS-B HORIZONTAL
 Test Operator:: Can Ming Chung
 Project #: : 07U11209
 Company: : Broadcom
 Configuration:: EUT/Laptop/Antennas/Ac Adapter
 Mode : : Normal
 Target: : FCC Class B

Page: 1

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	100.810	56.32	-16.53	39.79	43.50	-3.71	QP
2	100.810	58.70	-16.53	42.17	43.50	-1.33	Peak
3	367.560	51.36	-10.10	41.26	46.00	-4.74	Peak
4	567.380	46.60	-5.62	40.98	46.00	-5.02	QP
5	567.380	47.70	-5.62	42.08	46.00	-3.92	Peak
6	635.280	42.06	-4.22	37.84	46.00	-8.16	Peak
7	853.530	40.08	-1.08	39.00	46.00	-7.00	Peak
8	902.030	44.99	-0.69	44.30	46.00	-1.70	Peak
9	902.030	42.47	-0.69	41.78	46.00	-4.22	QP

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL -g mode)

VERTICAL PLOT



Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538
Tel: (510) 771-1000
Fax: (510) 661-0888

Data#: 18 File#: 07U11209-1-revised.EMI
Date: 08-17-2007 Time: 00:16:46

Condition: FCC CLASS-B VERTICAL
Test Operator:: Can Ming Chung
Project #: : 07U11209
Company: : Broadcom
Configuration:: EUT/Laptop/Antennas/Ac Adapter
Mode : : Normal
Target: : FCC Class B

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	Freq	Read	Read	Limit	Over	
	MHz	Level	Factor	Line	Limit	Remark
		dBuV	dB	dBuV/m	dBuV/m	dB
1	100.810	53.82	-16.53	37.29	43.50	-6.21 Peak
2	126.030	50.23	-12.54	37.69	43.50	-5.81 Peak
3	300.630	46.68	-11.73	34.95	46.00	-11.05 Peak
4	566.410	44.44	-5.63	38.81	46.00	-7.19 Peak
5	799.210	38.23	-1.47	36.76	46.00	-9.24 Peak
6	897.180	40.71	-0.78	39.93	46.00	-6.07 Peak

8. SETUP PHOTOS

RADIATED RF MEASUREMENT SETUP





END OF REPORT