

FCC CFR47 PART 15 SUBPART C INDUSTRY CANADA RSS-210 ISSUE 7 CERTIFICATION TEST REPORT

FOR

2X2 ACCESS POINT MODEL NUMBER: A1264 FCC ID: BCGA1264

IC: 579C-A1264

REPORT NUMBER: 07U11408-1, REVISION A ISSUE DATE: FEBRUARY 14, 2008

Prepared for

APPLE, INC. 1 INFINITE LOOP CUPERTINO, CA 95014, USA

Prepared by

COMPLIANCE CERTIFICATION SERVICES
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000

FAX: (510) 661-0888



REPORT NO: 07U11408-1A DATE: FEBRUARY 14, 2008
FCC ID: BCGA1264 IC: 579C-A1264

Revision History

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Α	02/14/08	Revised MPE section.	F. Ibrahim

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FCC ID: BCGA1264 IC: 579C-A1264

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: APPLE, INC.

1 INFINITE LOOP

CUPERTINO, CA 95014, USA

EUT DESCRIPTION: 2X2 Access Point

MODEL: A1264

SERIAL NUMBER: 02077

DATE TESTED: DECEMBER 13, 2007~ JANUARY 11, 2008

APPLICABLE STANDARDS

STANDARD TEST RESULTS

CFR 47 Part 15 Subpart C and Subpart E

No Non-Compliance Noted

RSS-210 Issue 7 Annex 8 and RSS-GEN Issue 2

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:

FRANK IBRAHIM
EMC SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

TOM CHEN EMC ENGINEER

COMPLIANCE CERTIFICATION SERVICES

FCC ID: BCGA1264 IC: 579C-A1264

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 Issue 2, and RSS-210 Issue 7.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

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%.

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is an 802.11 a/b/g/n Access Point.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

2400 to 2483.5 MHz Authorized Band

Frequency Range	Mode	Total Output Power	Total Output Power	
(MHz)		(dBm)	(mW)	
2412 - 2462	802.11b	26.90	489.78	
2412 - 2462	802.11g	28.13	650.13	
2412 - 2462	802.11n HT20	28.37	687.07	
2422 - 2452	802.11n HT40	25.13	325.84	

5725 to 5850 MHz Authorized Band

Frequency Range	Mode	Total Output Power	Total Output Power	
(MHz)		(dBm)	(mW)	
5745 - 5825	802.11a	26.46	442.59	
5745 - 5825	802.11n HT20	26.31	427.56	
5755 - 5795	802.11n HT40	26.35	431.52	

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5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes the following antennas:

1) PIFA, model: 056-2545 A, with the following gain:

Frequency	Max Gain	
2440	-0.73	
5150	-0.08	
5350	1.53	
5700	2.45	
5800	3.42	

2) PIFA, model: 056-2545 B, with the following gain:

Frequency	Max Gain	
2440	-1.9	
5150	-1.18	
5350	1.44	
5700	-0.08	
5800	3.33	

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was 7.3d1 Auto20070907T0400.

The EUT driver software installed during testing was DutApiClient_UDP.exe, ver.031607.

The test utility software used during testing was m4tool.exe, rev 083107

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5.5. WORST-CASE CONFIGURATION AND MODE

The worst-case data rate for each mode is determined to be as follows, based on preliminary tests of the chipset utilized in this radio.

All final tests in the 802.11b mode were made at 11 Mb/s.

All final tests in the 802.11g mode were made at 54 Mb/s.

All final tests in the 802.11n HT20 mode were made at MCS11.

All final tests in the 802.11n HT40 mode were made at MCS15.

All final tests in the 802.11a mode were made at 9 Mb/s.

All final tests in the 802.11n HT20 mode were made at MCS0.

All final tests in the 802.11n HT40 mode were made at MCS0.

For radiated emissions below 1 GHz the worst-case configuration is determined to be the mode and channel with the highest output power.

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5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST									
Description	Description Manufacturer Model Serial Number FCC ID								
Laptop	Apple	MacBook Pro	AOU257941	DOC					
AC Adapter	Apple	A52	NA	DOC					
Mouse	Apple	A1152	KY5350QDTU3MA	DOC					

I/O CABLES

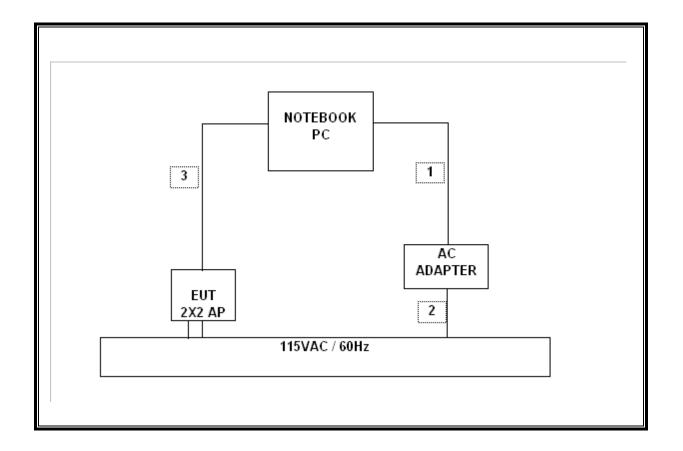
	I/O CABLE LIST								
Cable	Port	# of	Connector	Cable	Cable	Remarks			
No.		Identica	Туре	Туре	Length				
		Ports							
1	DC	1	DC	Unshielded	1.5 m	N/A			
2	AC	1	AC	Unshielded	2.0 m	N/A			
3	Ethernet	1	RJ45	Unshielded	1.5m	Connected to EUT			

TEST SETUP

The EUT is connected to a host laptop computer during the tests. Test software exercised the radio card.

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SETUP DIAGRAM FOR TESTS



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6. TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST									
Description	Description Manufacturer Model Asset Cal Date Cal Due								
Power Combiner	HP	11667B	NA	05/24/07	05/24/08				
Attenuators	Weinschel	56-10	NA	N/A	NA				
Power Meter	Agilent / HP	438A	C01068	11/29/06	09/12/08				
Antenna, Hom, 18 GHz	EMCO	3115	C00945	04/15/07	04/15/08				
Preamp, 1000MHz	Sonoma	310N	NA	01/20/07	01/20/08				
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01052	08/03/07	08/03/08				
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01016	09/28/07	09/28/08				
RF Filter Section, 2.9 GHz	Agilent / HP	85420E	C00958	02/06/07	06/12/08				
EMI Receiver, 2.9 GHz	Agilent / HP	8542E	C00957	02/06/07	06/12/08				
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01012	05/02/06	08/07/08				
Power Sensor, 18 GHz	Agilent / HP	8481A	N02784	01/12/07	04/22/08				
LISN, 30 MHz	FCC	LISN-50/250-25-2	N02625	09/15/06	09/15/08				
EMI Test Receiver, 30 MHz	R&S	ESHS 20	N02396	10/16/06	01/27/08				
Pre-amplifier	Miteq	NSP4000-SP2	C00990	10/11/07	10/11/08				
Horn Antenna	ARA	MWH-1826/B	C00980	09/29/07	09/29/08				
Horn Antenna	ARA	MWH-2640/B	C00981	04/11/07	04/11/08				

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7. ANTENNA PORT TEST RESULTS

7.1. 802.11b DUAL CHAIN LEGACY MODE IN THE 2.4 GHz BAND

7.1.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

TEST PROCEDURE

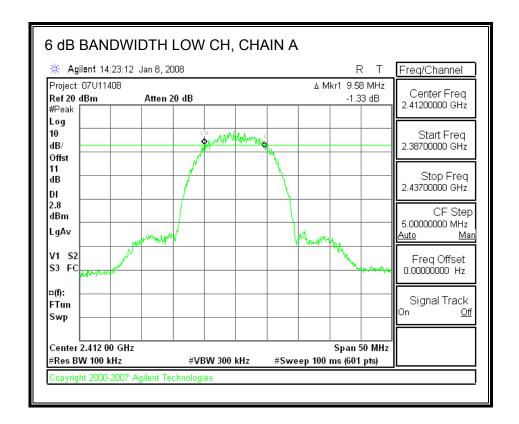
The transmitter output is connected to a spectrum analyzer. The RBW is set to 100 kHz and the VBW is set to 300 kHz. The sweep time is coupled.

RESULTS

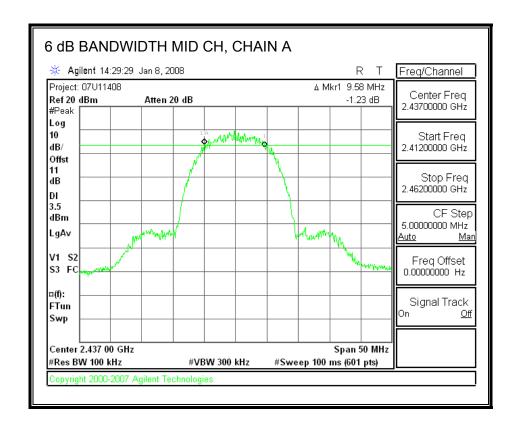
Channel	Frequency	Chain A	Chain B	Minimum Limit
		6 dB BW	6 dB BW	
	(MHz)	(MHz)	(MHz)	(MHz)
Low	2412	9.58	9.58	0.5
Middle	2437	9.58	9.58	0.5
High	2462	9.58	9.58	0.5

FCC ID: BCGA1264 IC: 579C-A1264

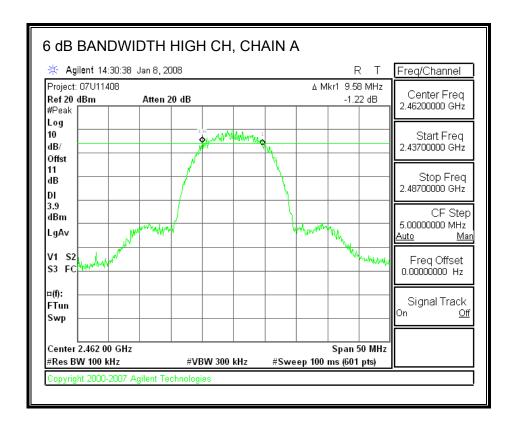
6 dB BANDWIDTH, CHAIN A



FCC ID: BCGA1264 IC: 579C-A1264

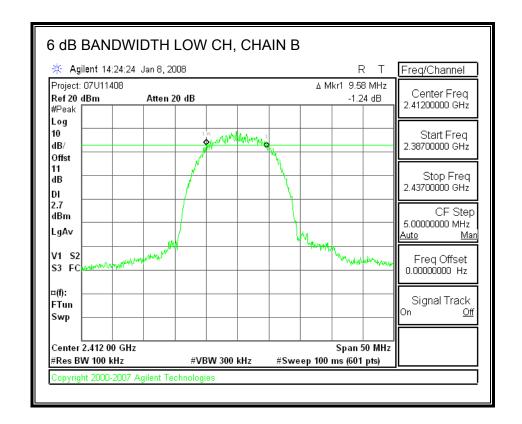


FCC ID: BCGA1264 IC: 579C-A1264

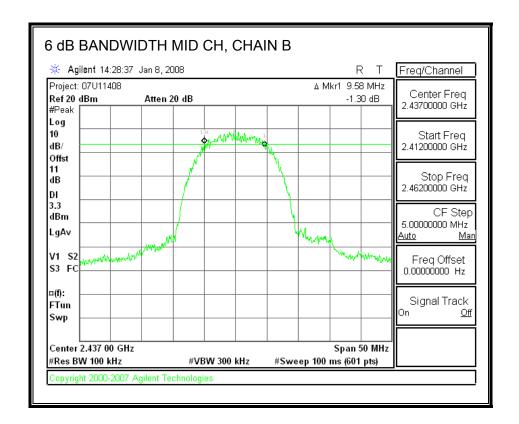


FCC ID: BCGA1264 IC: 579C-A1264

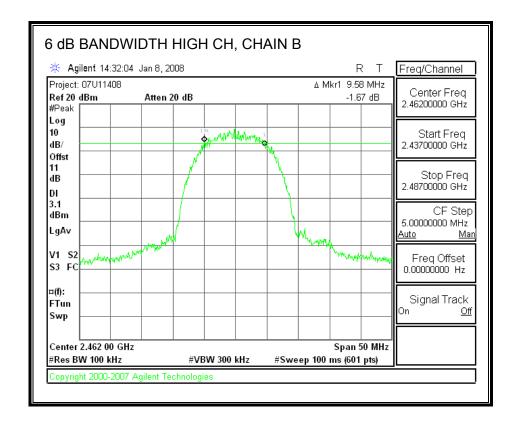
6 dB BANDWIDTH, CHAIN B



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FCC ID: BCGA1264 IC: 579C-A1264



FCC ID: BCGA1264 IC: 579C-A1264

7.1.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

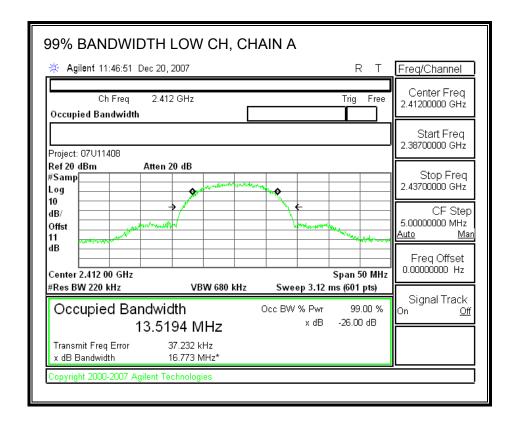
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

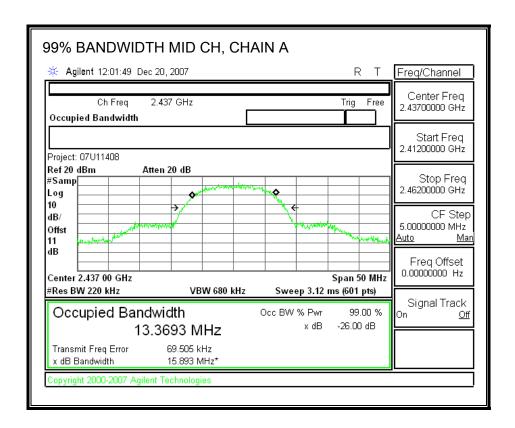
RESULTS

Channel	Frequency	Chain A	Chain B
		99% Bandwidth	99% Bandwidth
	(MHz)	(MHz)	(MHz)
Low	2412	13.5194	13.3821
Middle	2437	13.3693	13.3937
High	2462	13.2569	13.3167

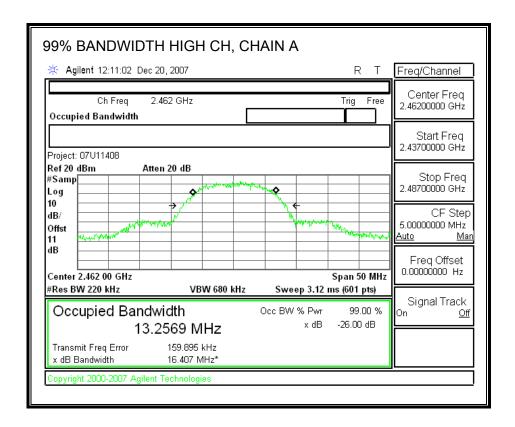
FCC ID: BCGA1264 IC: 579C-A1264

99% BANDWIDTH, CHAIN A



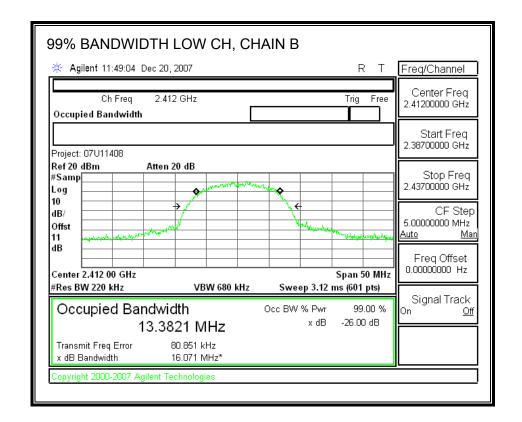


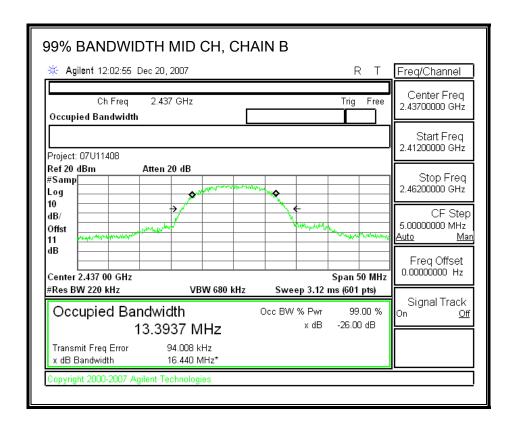
FCC ID: BCGA1264 IC: 579C-A1264

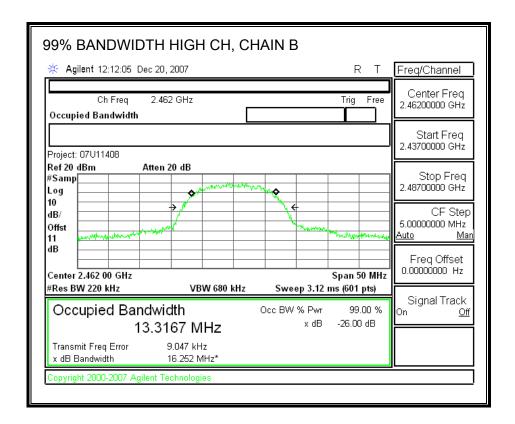


FCC ID: BCGA1264 IC: 579C-A1264

99% BANDWIDTH, CHAIN B







FCC ID: BCGA1264 IC: 579C-A1264

7.1.3. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

Antenna Gain (dBi)	10 Log (# Tx Chains) (dB)	Effective Legacy Gain (dBi)
-0.73	3.01	2.28

The maximum effective antenna gain is 2.28 dBi for other than fixed, point-to-point operations, therefore the limit is 30 dBm.

TEST PROCEDURE

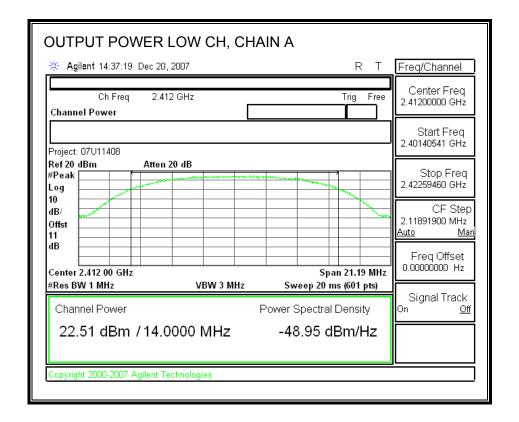
Peak power is measured using the spectrum analyzer's internal channel power integration function. Power is integrated over a bandwidth greater than or equal to the 99% bandwidth.

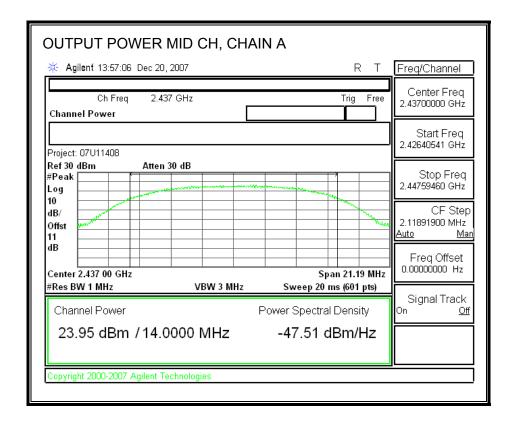
RESULTS

Channel	Frequency	Limit	Chain A	Chain B	Total	Margin
			Power	Power	Power	
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	2412	30.00	22.51	23.30	25.93	-4.07
Mid	2437	30.00	23.95	23.61	26.79	-3.21
High	2462	30.00	24.29	23.44	26.90	-3.10

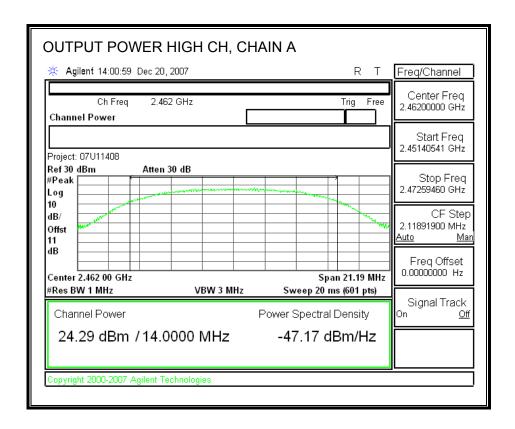
FCC ID: BCGA1264 IC: 579C-A1264

CHAIN A OUTPUT POWER



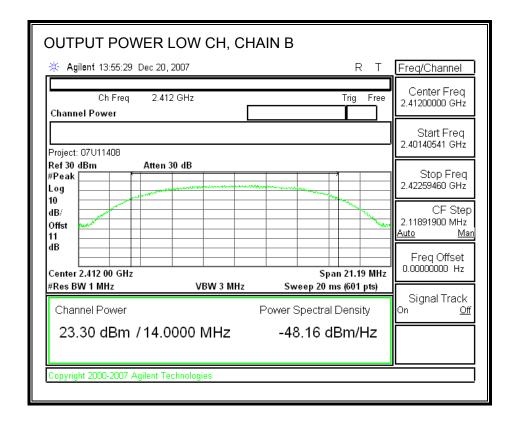


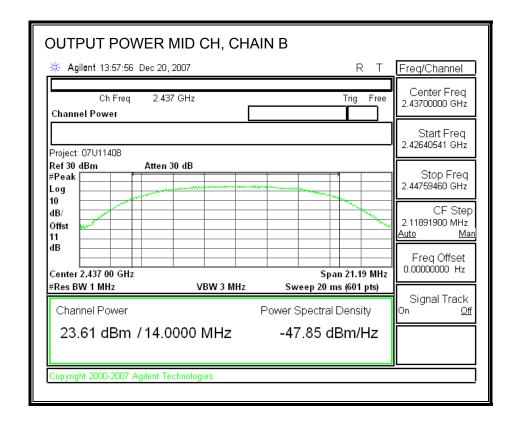
FCC ID: BCGA1264 IC: 579C-A1264

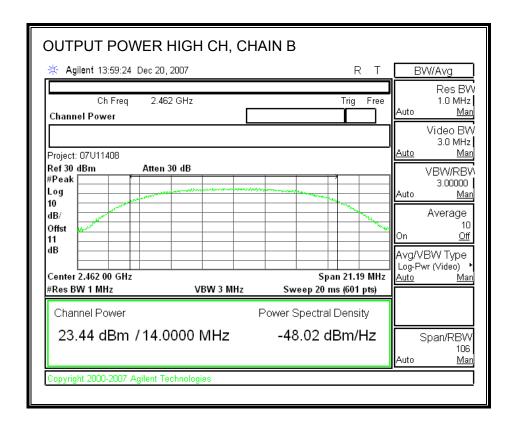


FCC ID: BCGA1264 IC: 579C-A1264

CHAIN B OUTPUT POWER







FCC ID: BCGA1264 IC: 579C-A1264

7.1.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

TEST PROCEDURE

Output power was measured based on the use of a peak measurement, therefore the power spectral density was measured using PSD Option 1 in accordance with FCC document "Measurement of Digital Transmission Systems Operating under Section 15.247", March 23, 2005.

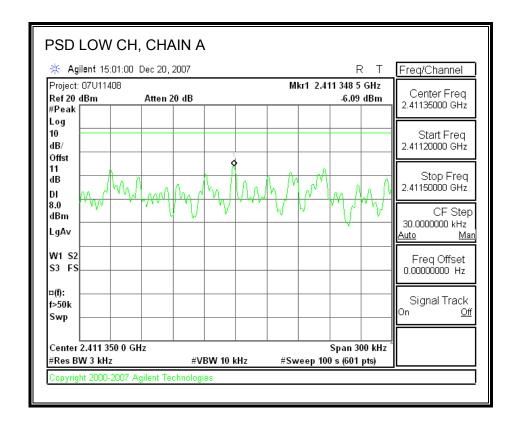
RESULTS

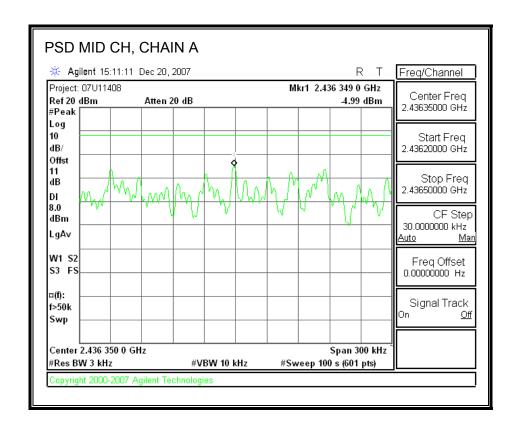
Channel	Frequency	Chain A	Chain B	Limit
		PSD	PSD	
	(MHz)	(dBm)	(dBm)	(dBm)
Low	2412	-6.09	-5.80	8
Middle	2437	-4.99	-5.15	8
High	2462	-4.49	-5.27	8

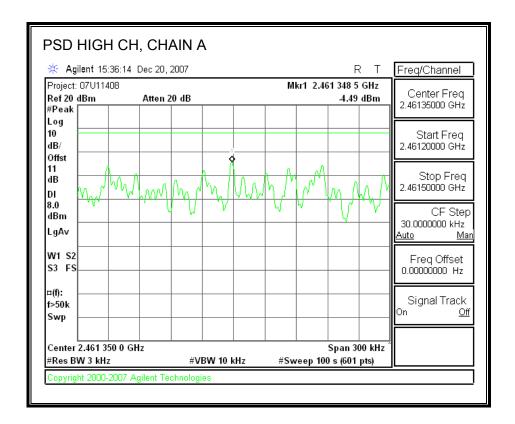
Channel	Frequency	PSD with Combiner	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dB)
Low	2412	-7.14	8	-15.14
Middle	2437	0.10	8	-7.90
High	2462	-5.17	8	-13.17

FCC ID: BCGA1264 IC: 579C-A1264

POWER SPECTRAL DENSITY, CHAIN A

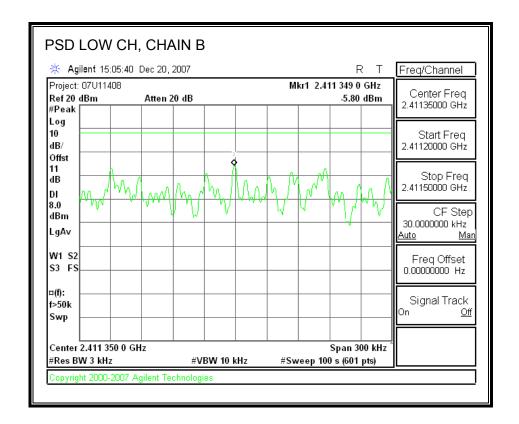


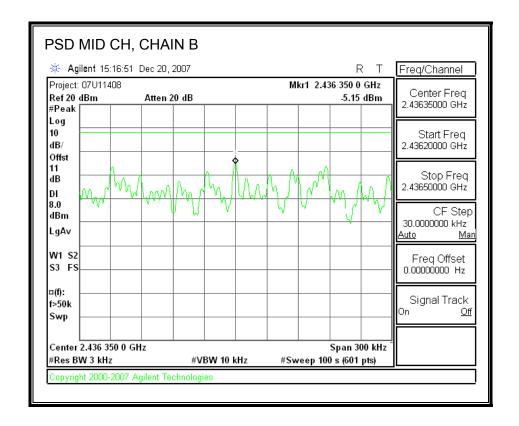


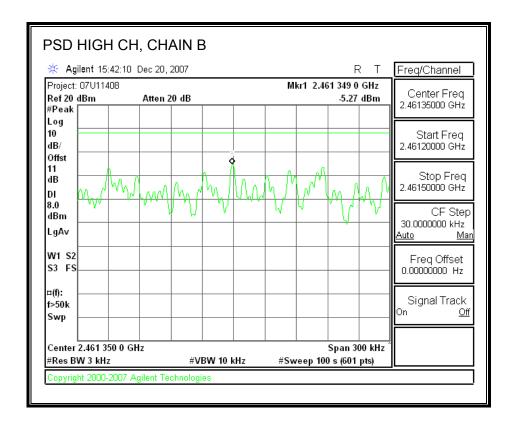


FCC ID: BCGA1264 IC: 579C-A1264

POWER SPECTRAL DENSITY, CHAIN B

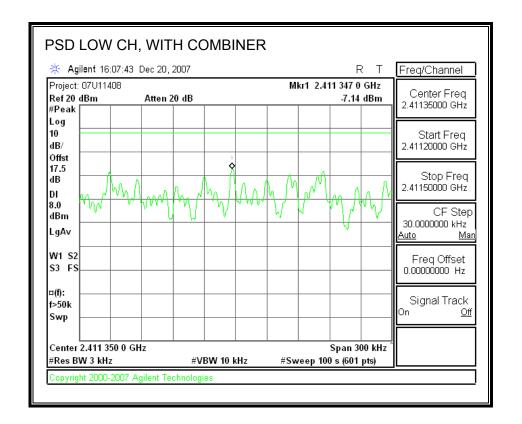


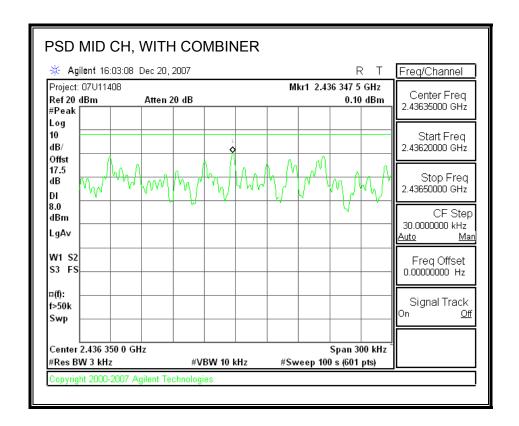


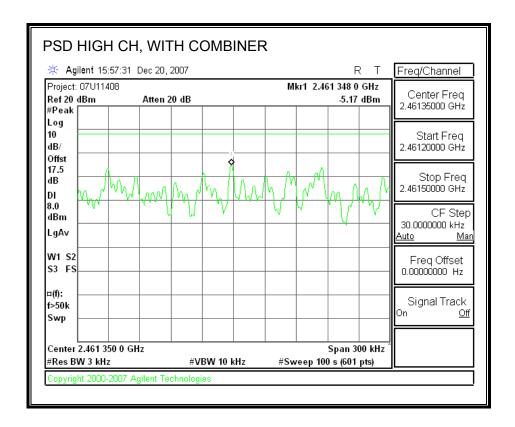


FCC ID: BCGA1264 IC: 579C-A1264

POWER SPECTRAL DENSITY, WITH COMBINER







FCC ID: BCGA1264 IC: 579C-A1264

7.1.5. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

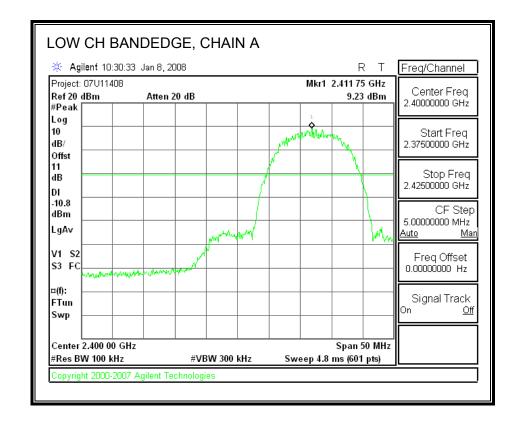
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

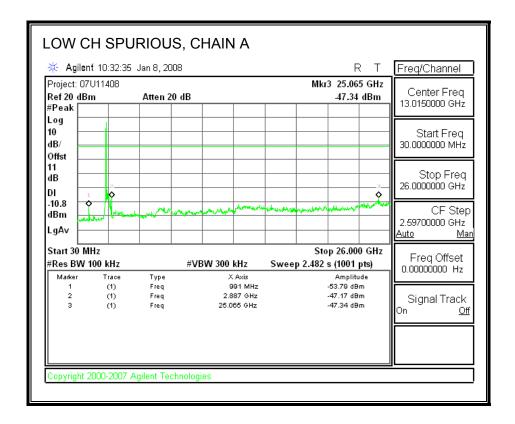
RESULTS

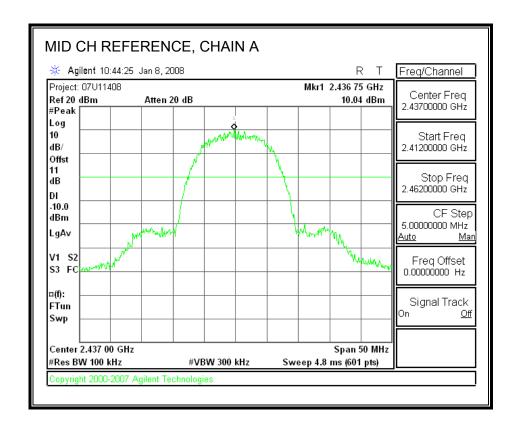
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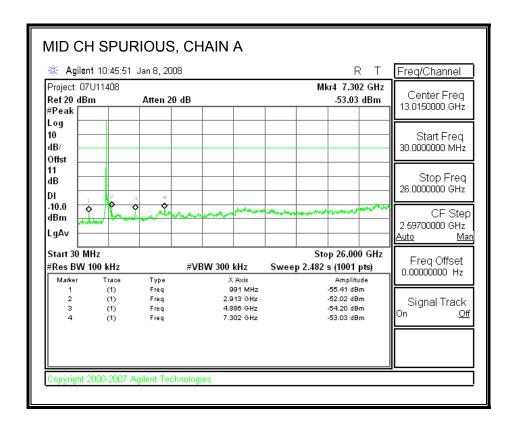
FCC ID: BCGA1264 IC: 579C-A1264

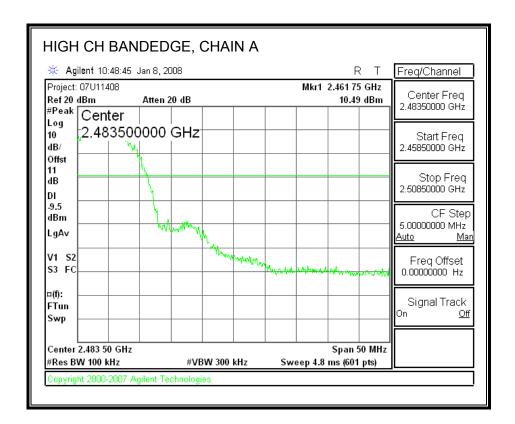
CHAIN A SPURIOUS EMISSIONS

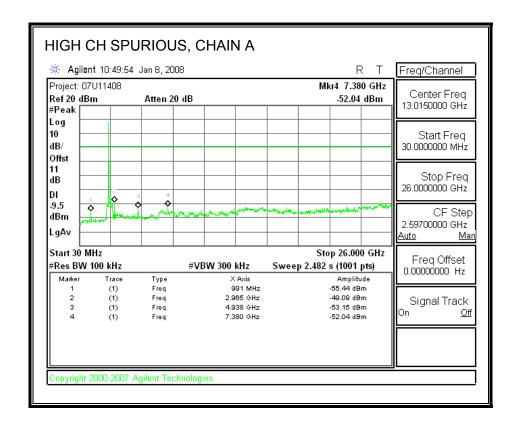






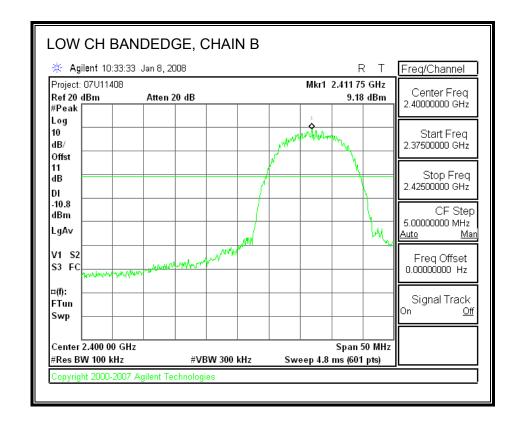


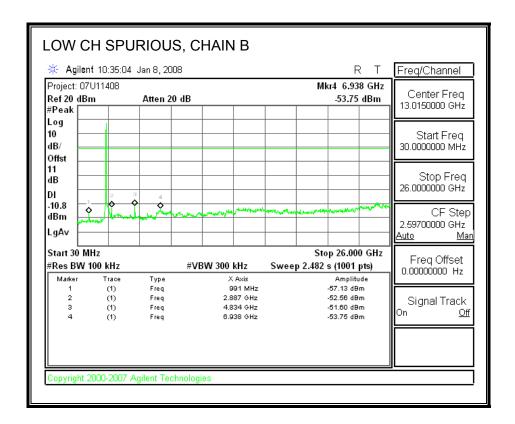


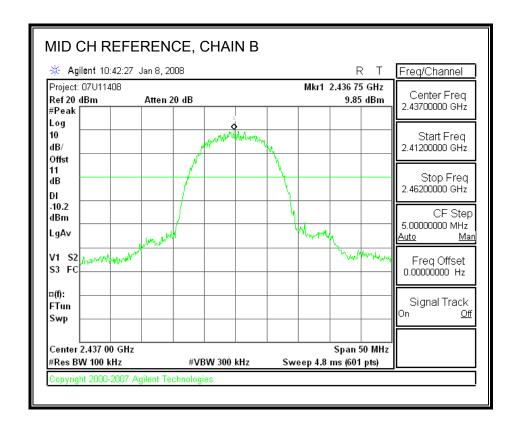


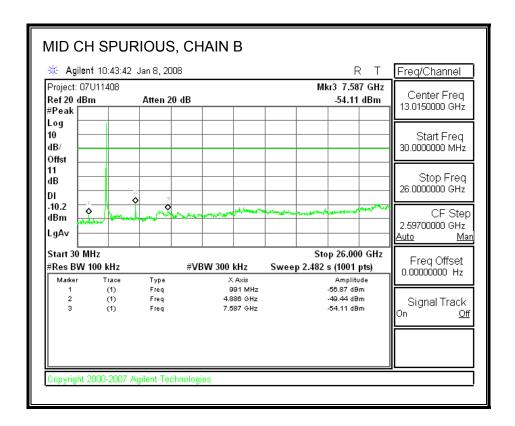
FCC ID: BCGA1264 IC: 579C-A1264

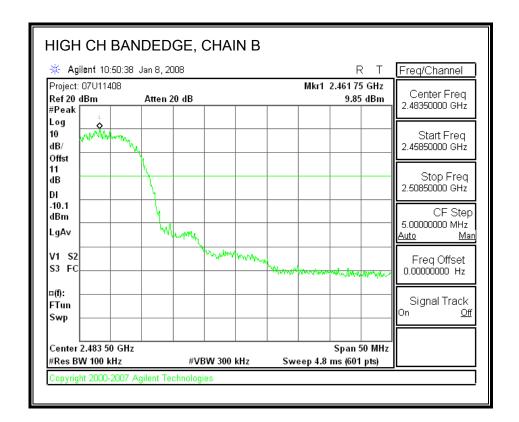
CHAIN B SPURIOUS EMISSIONS

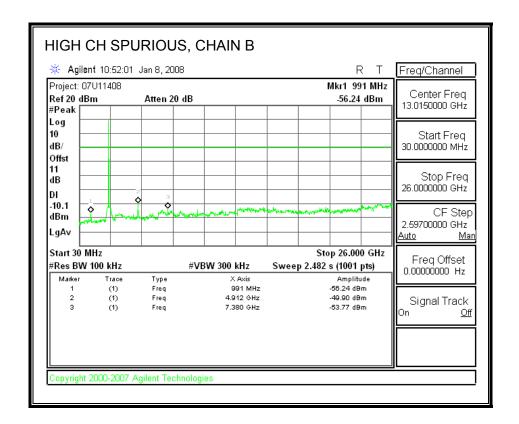






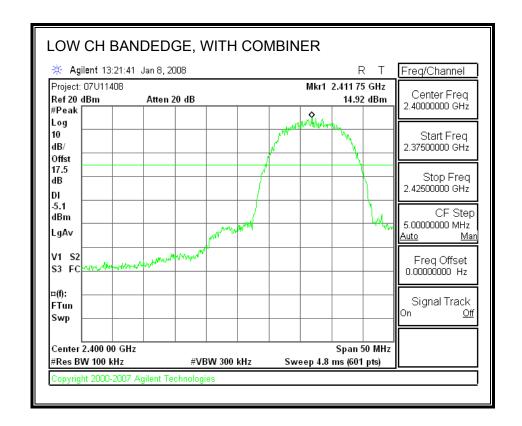


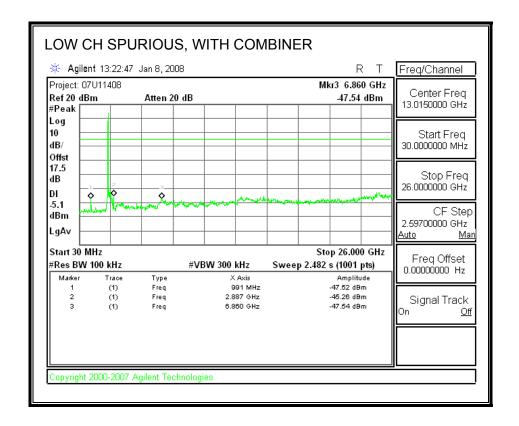


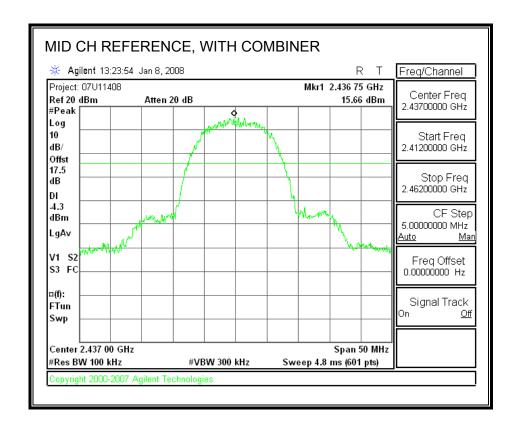


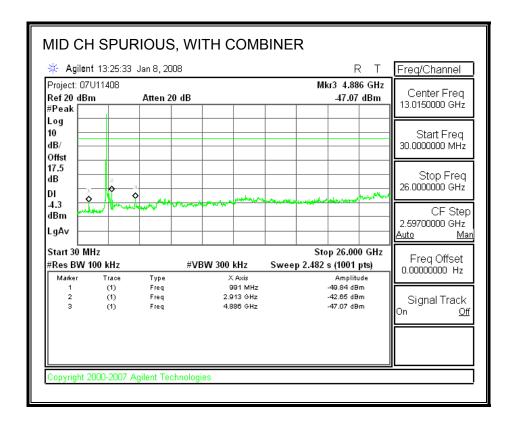
FCC ID: BCGA1264 IC: 579C-A1264

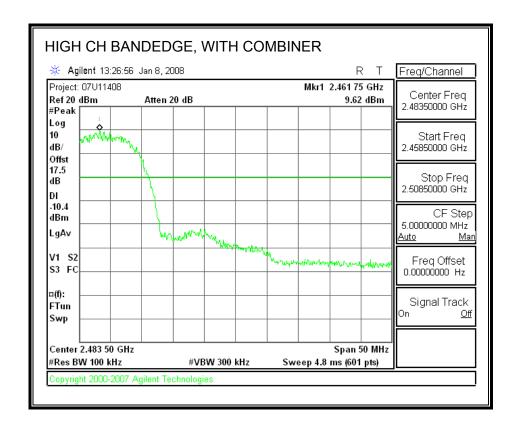
SPURIOUS EMISSIONS WITH COMBINER

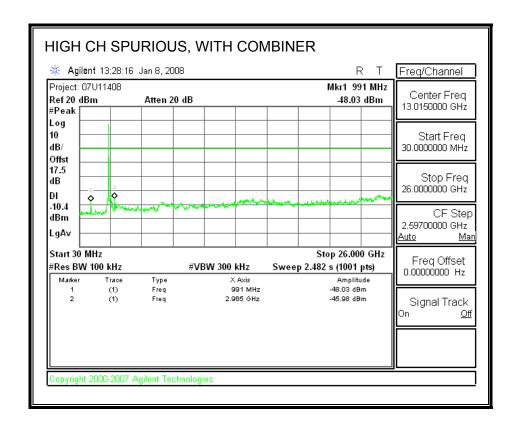












FCC ID: BCGA1264 IC: 579C-A1264

7.2. 802.11g DUAL CHAIN LEGACY MODE IN THE 2.4 GHz BAND

7.2.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

TEST PROCEDURE

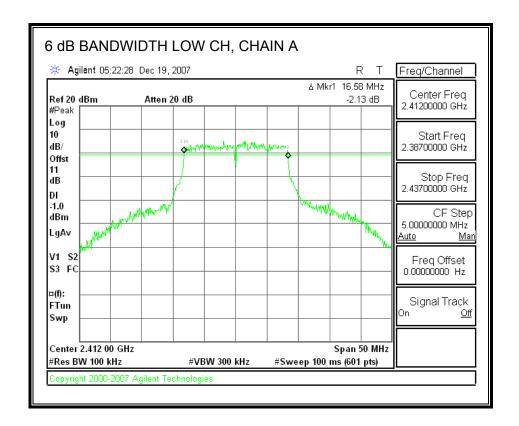
The transmitter output is connected to a spectrum analyzer. The RBW is set to 100 kHz and the VBW is set to 300 kHz. The sweep time is coupled.

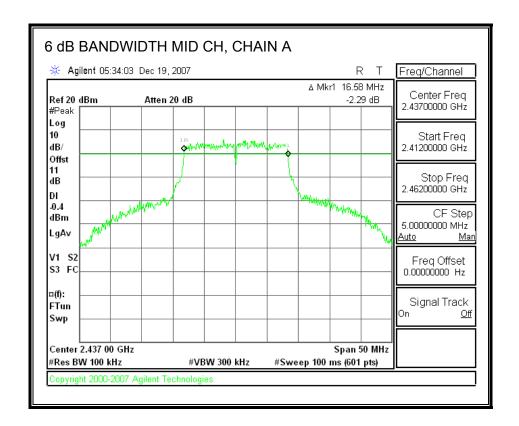
RESULTS

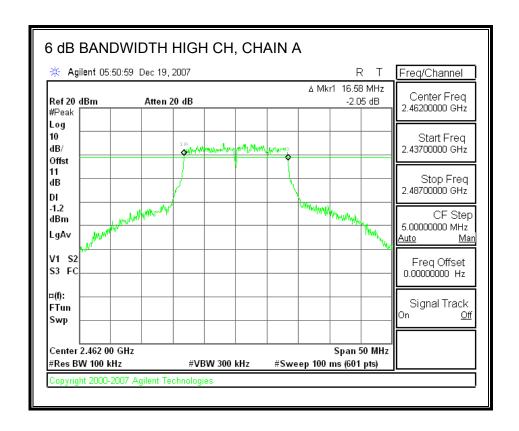
Channel	Frequency	Chain A	Chain B	Minimum Limit
		6 dB BW	6 dB BW	
	(MHz)	(MHz)	(MHz)	(MHz)
Low	2412	16.58	16.58	0.5
Middle	2437	16.58	16.58	0.5
High	2462	16.58	16.58	0.5

FCC ID: BCGA1264 IC: 579C-A1264

6 dB BANDWIDTH, CHAIN A

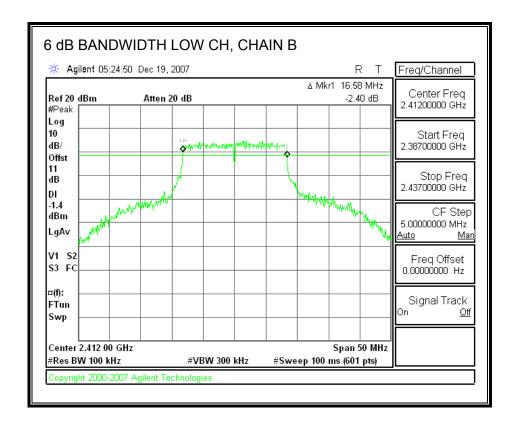


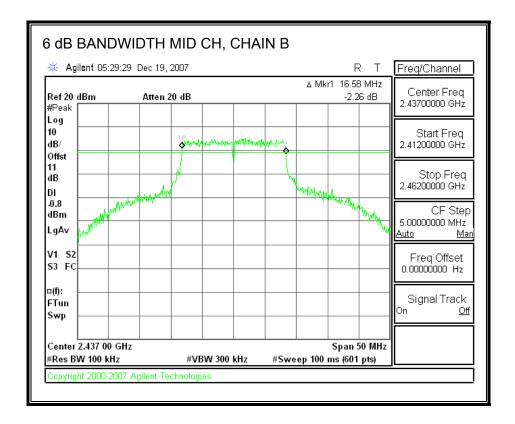


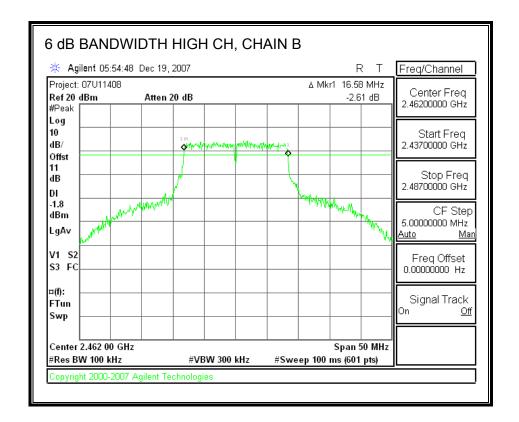


FCC ID: BCGA1264 IC: 579C-A1264

6 dB BANDWIDTH, CHAIN B







FCC ID: BCGA1264 IC: 579C-A1264

7.2.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

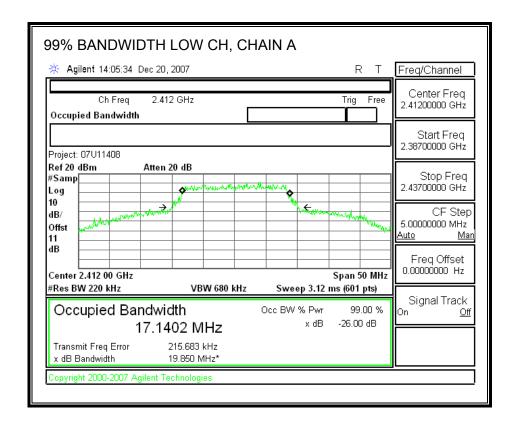
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

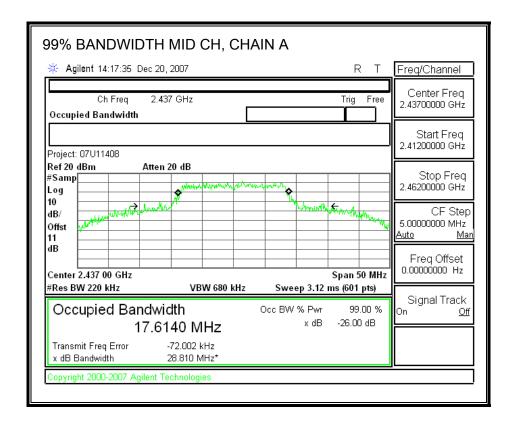
RESULTS

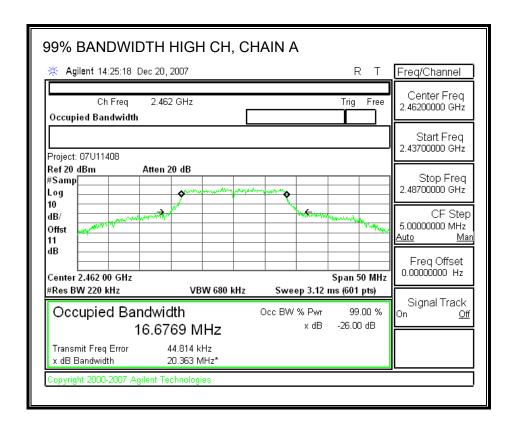
Channel	Frequency	Chain A	Chain B
		99% Bandwidth	99% Bandwidth
	(MHz)	(MHz)	(MHz)
Low	2412	17.1402	16.9891
Middle	2437	17.6140	17.7146
High	2462	16.6769	16.7772

FCC ID: BCGA1264 IC: 579C-A1264

99% BANDWIDTH, CHAIN A

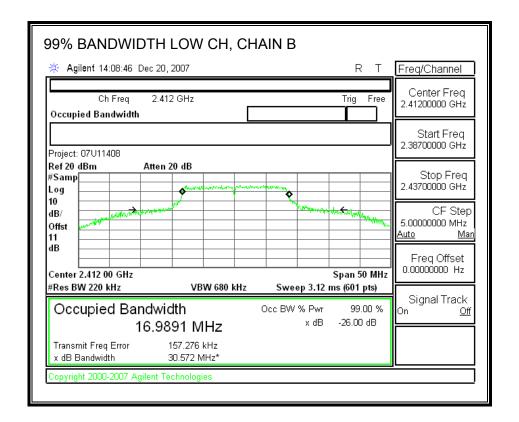


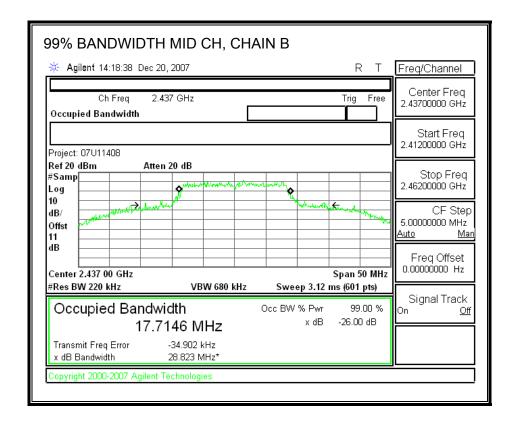


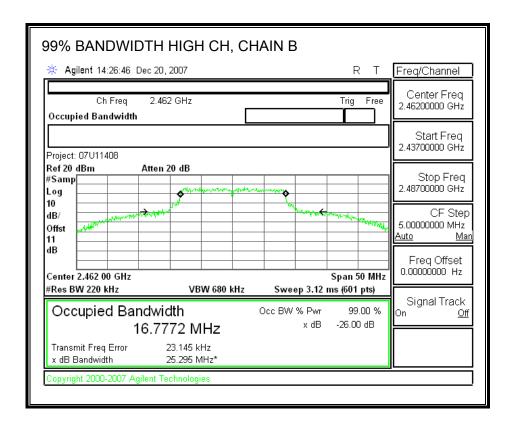


FCC ID: BCGA1264 IC: 579C-A1264

99% BANDWIDTH, CHAIN B







FCC ID: BCGA1264 IC: 579C-A1264

7.2.3. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

Antenna Gain	10 Log (# Tx Chains)	Effective Legacy Gain	
(dBi)	(dB)	(dBi)	
-0.73	3.01	2.28	

The maximum effective antenna gain is 2.28 dBi for other than fixed, point-to-point operations, therefore the limit is 30 dBm.

TEST PROCEDURE

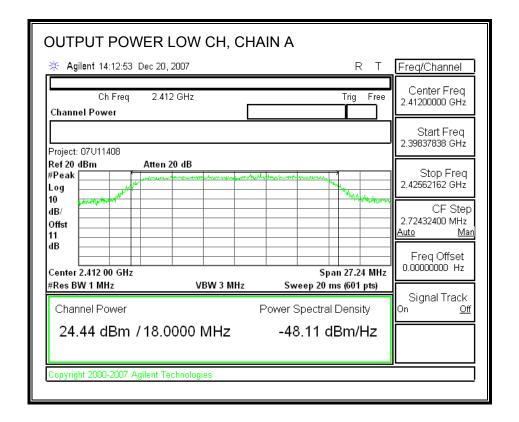
Peak power is measured using the spectrum analyzer's internal channel power integration function. Power is integrated over a bandwidth greater than or equal to the 99% bandwidth.

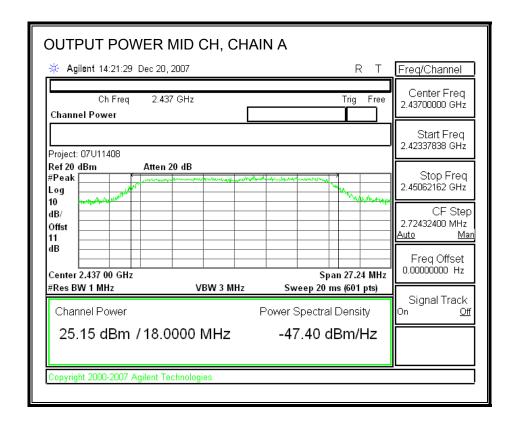
RESULTS

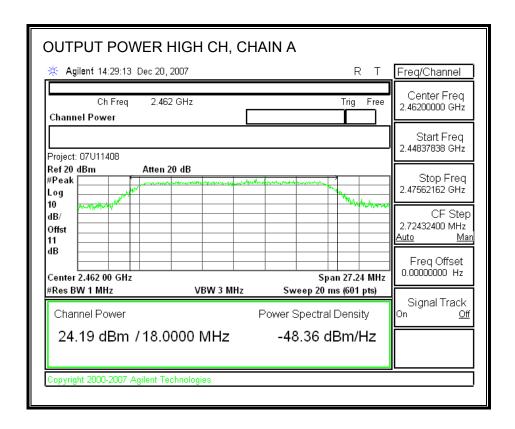
Channel	Frequency	Limit	Chain A	Chain B	Total	Margin
			Power	Power	Power	
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	2412	30.00	24.44	24.61	27.54	-2.46
Mid	2437	30.00	25.15	25.09	28.13	-1.87
High	2462	30.00	24.19	24.25	27.23	-2.77

FCC ID: BCGA1264 IC: 579C-A1264

CHAIN A OUTPUT POWER

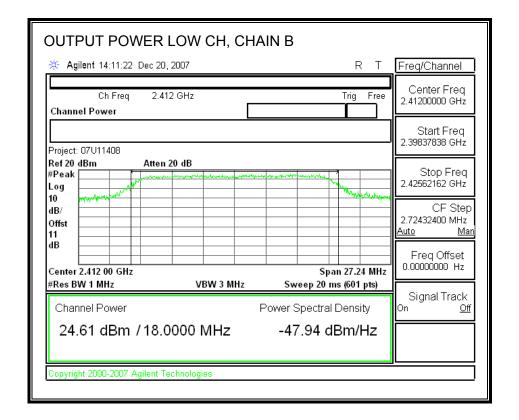


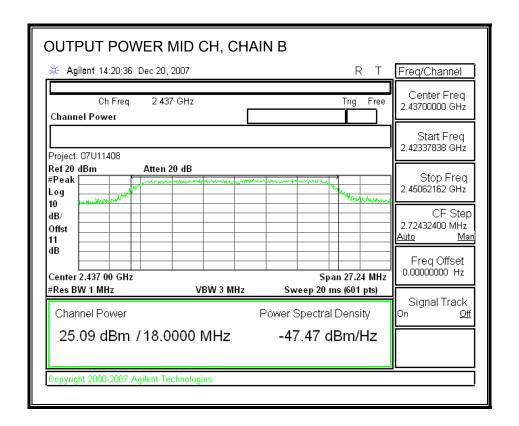


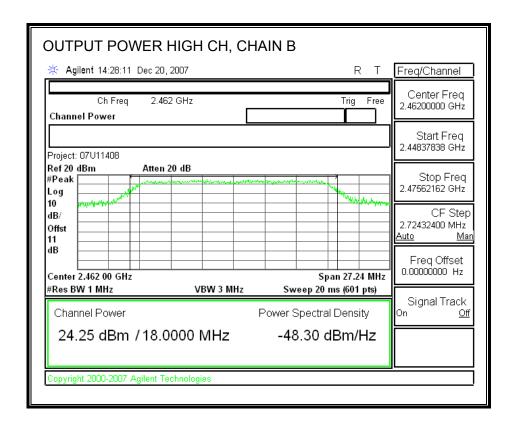


FCC ID: BCGA1264 IC: 579C-A1264

CHAIN B OUTPUT POWER







FCC ID: BCGA1264 IC: 579C-A1264

7.2.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

TEST PROCEDURE

Output power was measured based on the use of a peak measurement, therefore the power spectral density was measured using PSD Option 1 in accordance with FCC document "Measurement of Digital Transmission Systems Operating under Section 15.247", March 23, 2005.

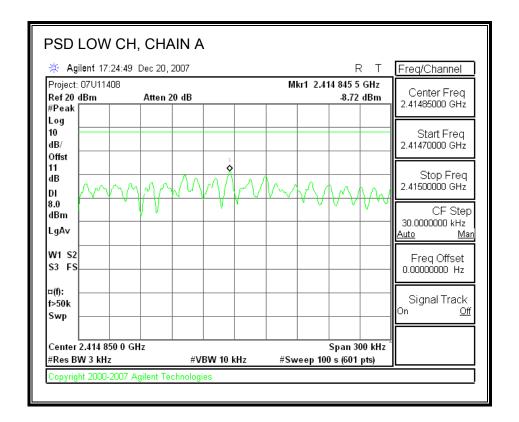
RESULTS

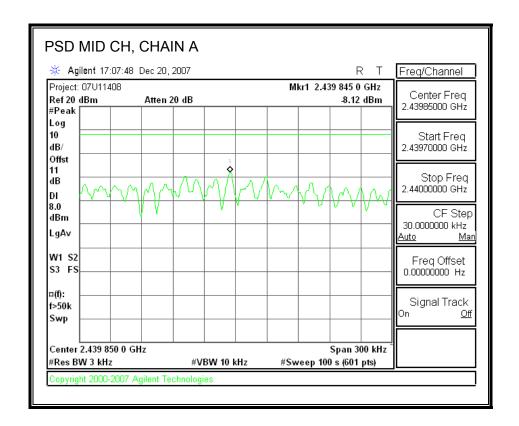
Channel	Frequency	Chain A	Chain B	Limit
		PSD	PSD	
	(MHz)	(dBm)	(dBm)	(dBm)
Low	2412	-8.72	-9.32	8
Middle	2437	-8.12	-8.59	8
High	2462	-8.79	-9.76	8

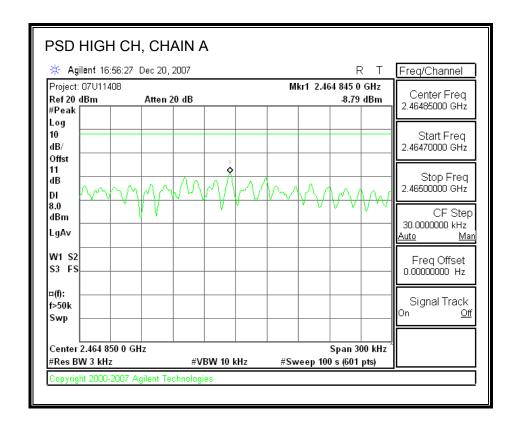
Channel	Frequency	PSD with Combiner	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dB)
Low	2412	-4.22	8	-12.22
Middle	2437	-2.71	8	-10.71
High	2462	-3.72	8	-11.72

FCC ID: BCGA1264 IC: 579C-A1264

POWER SPECTRAL DENSITY, CHAIN A

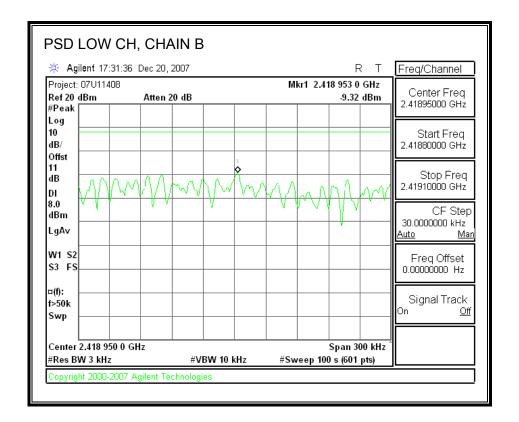


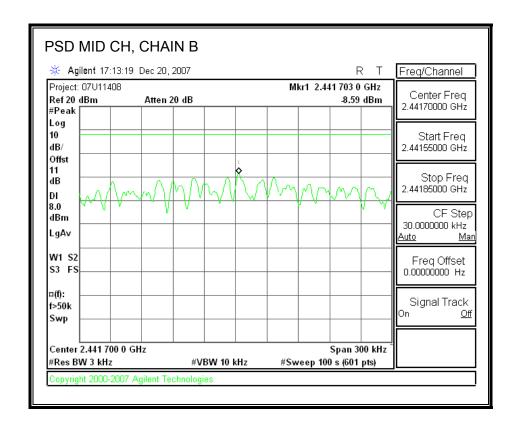


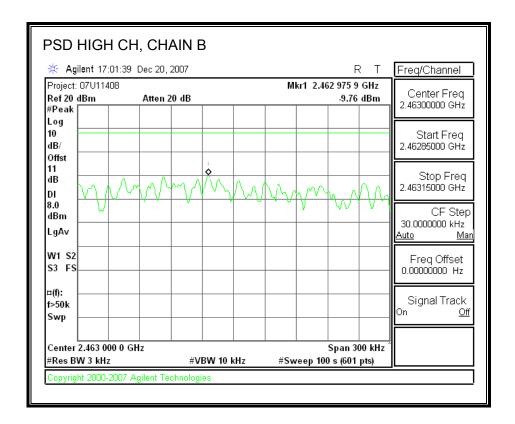


FCC ID: BCGA1264 IC: 579C-A1264

POWER SPECTRAL DENSITY, CHAIN B

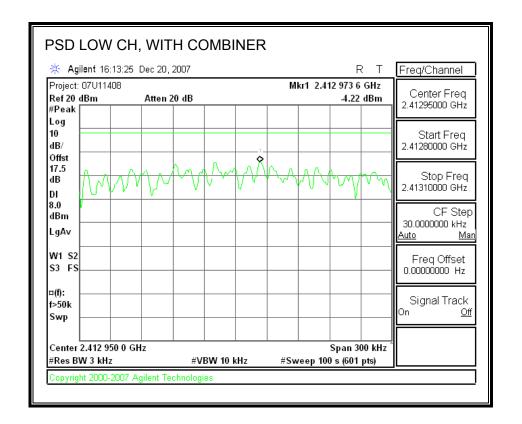


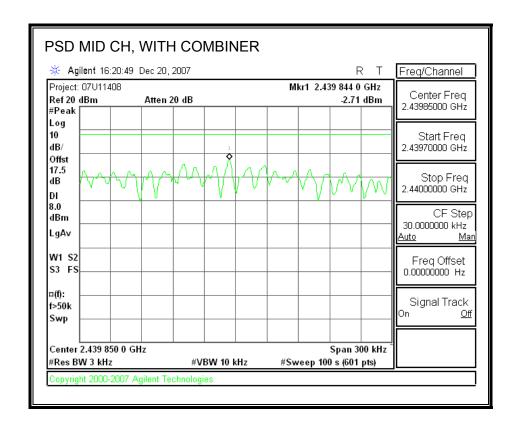


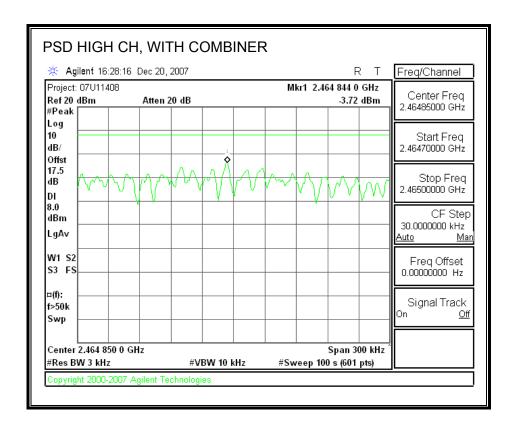


FCC ID: BCGA1264 IC: 579C-A1264

POWER SPECTRAL DENSITY, WITH COMBINER







FCC ID: BCGA1264 IC: 579C-A1264

7.2.5. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

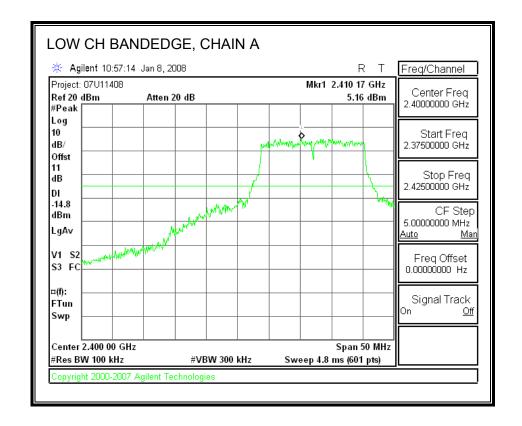
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

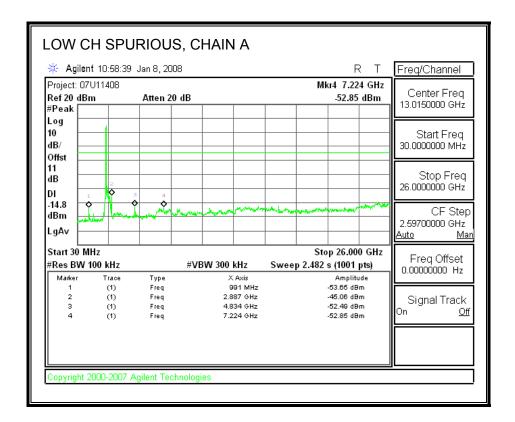
RESULTS

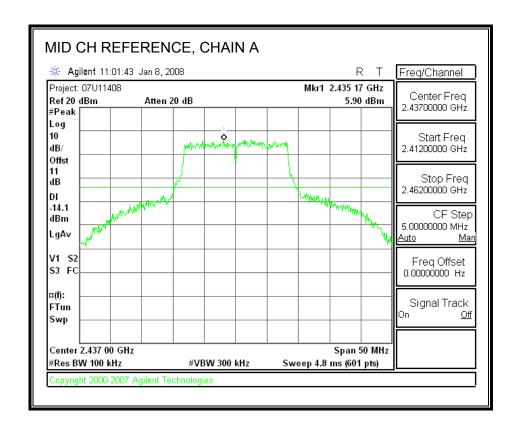
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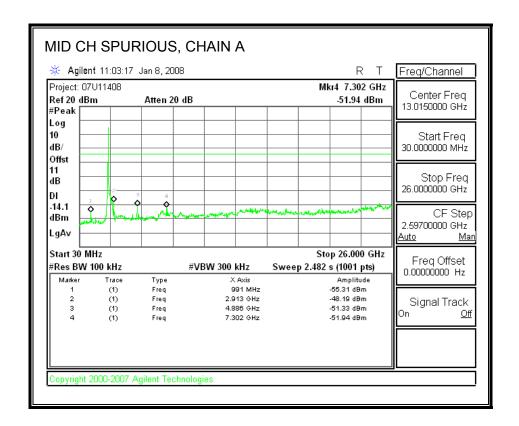
FCC ID: BCGA1264 IC: 579C-A1264

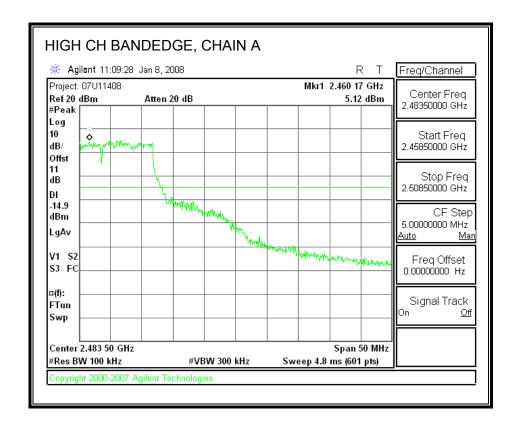
CHAIN A SPURIOUS EMISSIONS

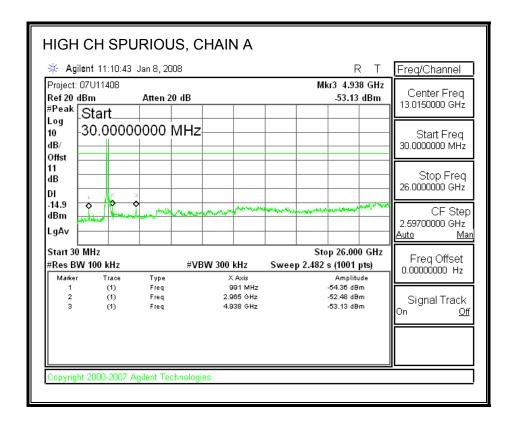






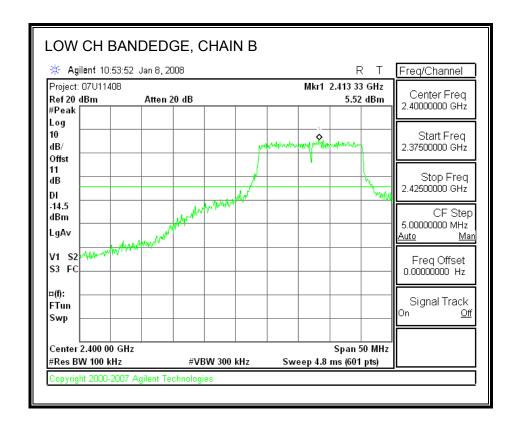


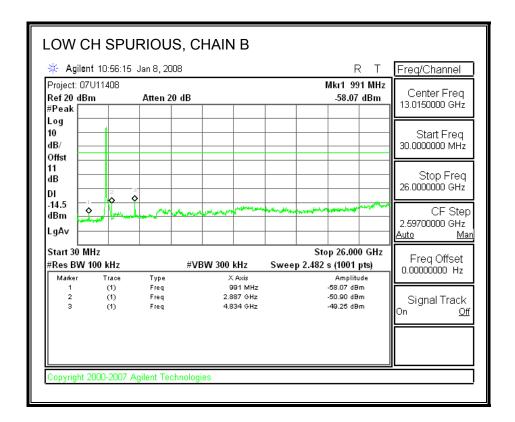


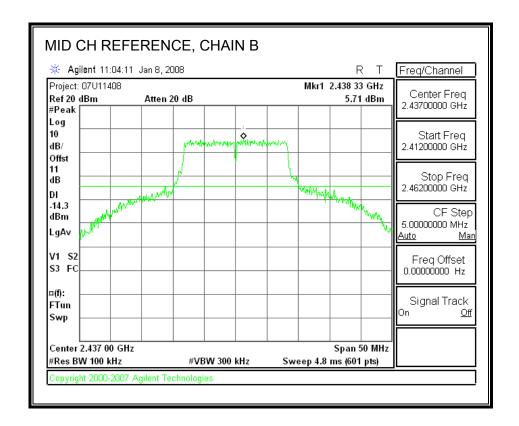


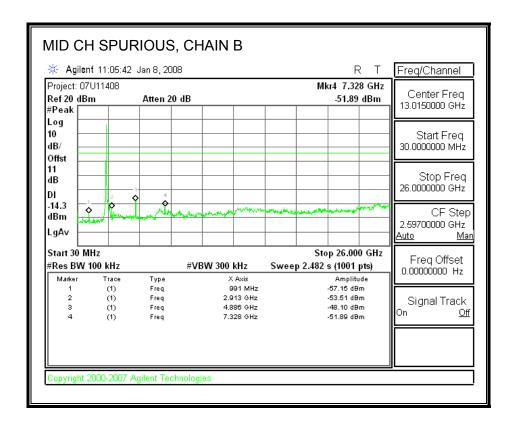
FCC ID: BCGA1264 IC: 579C-A1264

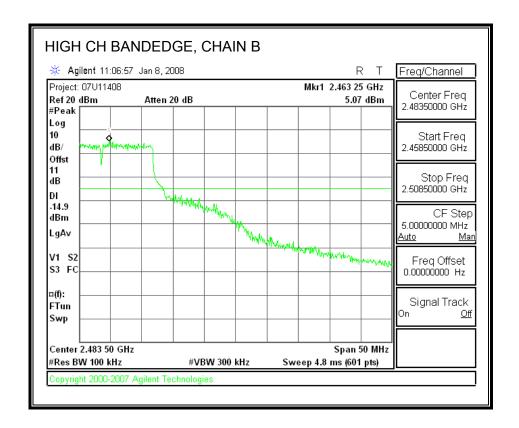
CHAIN B SPURIOUS EMISSIONS

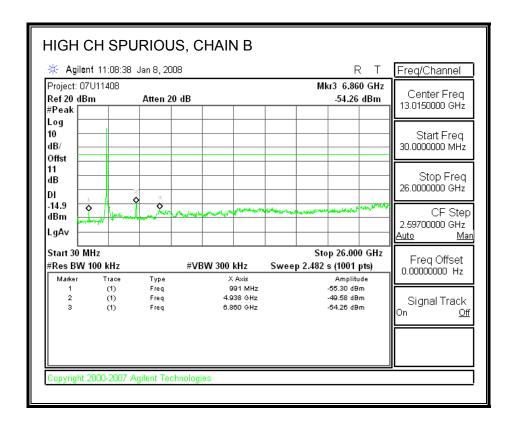






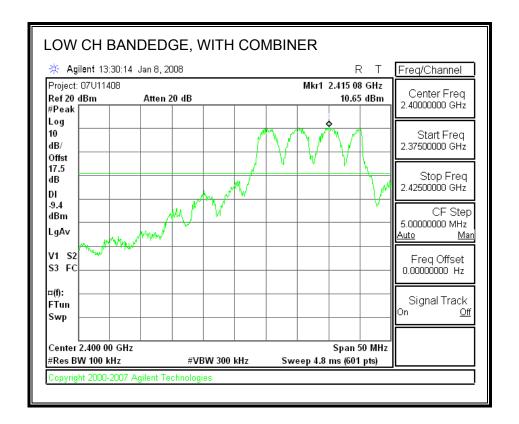


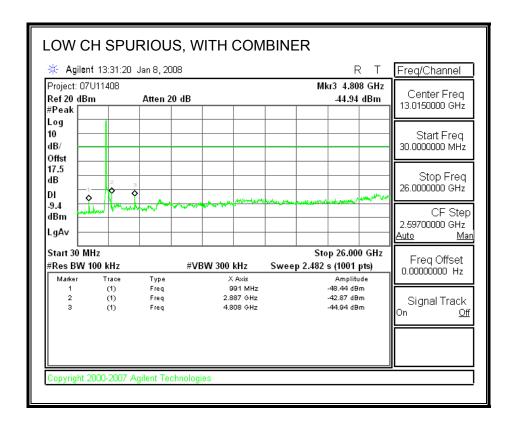


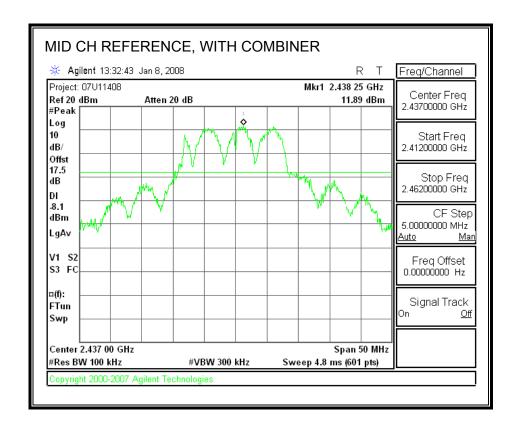


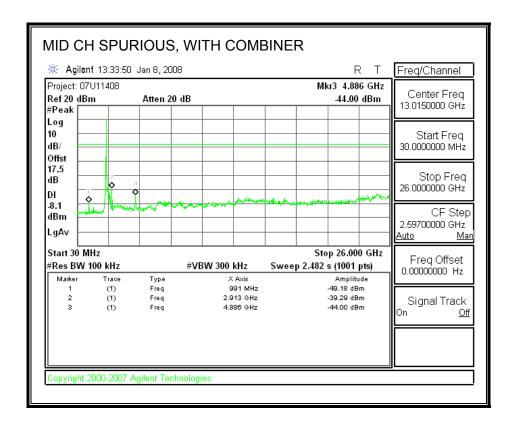
FCC ID: BCGA1264 IC: 579C-A1264

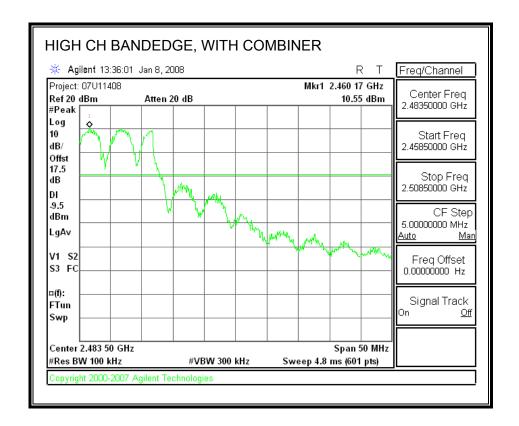
SPURIOUS EMISSIONS WITH COMBINER

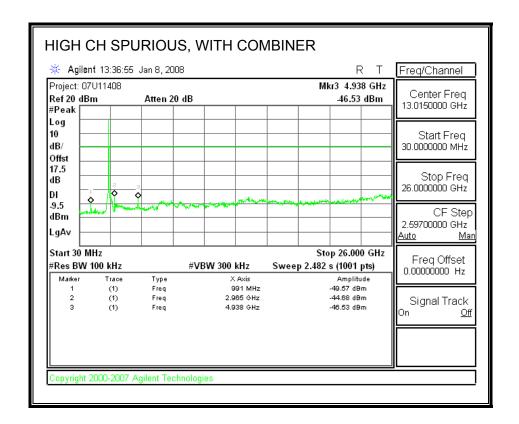












FCC ID: BCGA1264 IC: 579C-A1264

7.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

7.3.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

TEST PROCEDURE

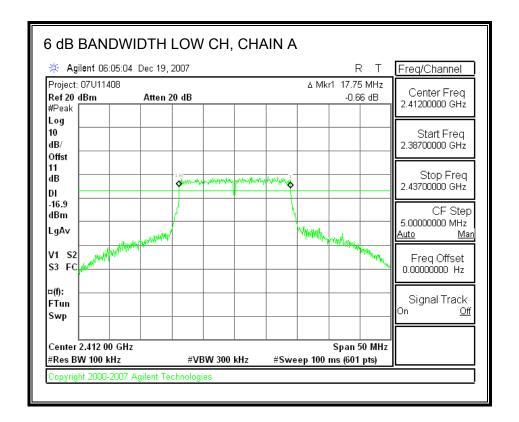
The transmitter output is connected to a spectrum analyzer. The RBW is set to 100 kHz and the VBW is set to 300 kHz. The sweep time is coupled.

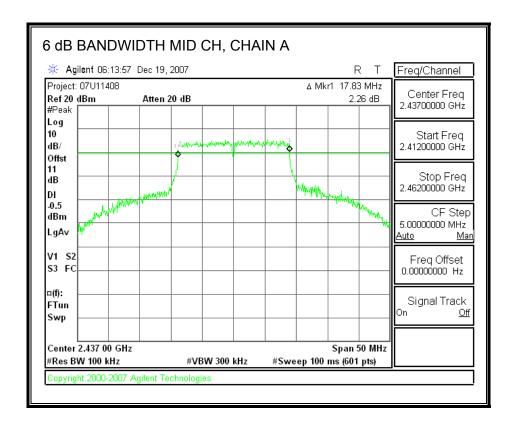
RESULTS

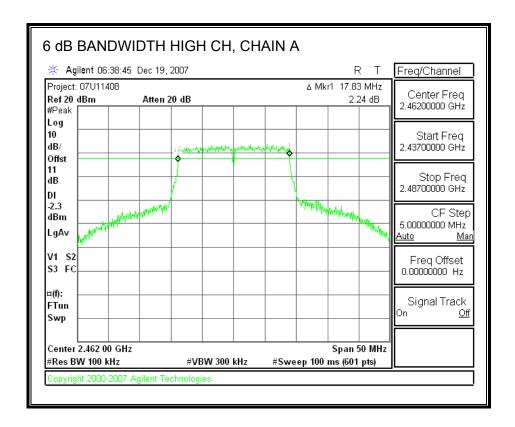
Channel	Frequency	Chain A	Chain B	Minimum Limit
		6 dB BW	6 dB BW	
	(MHz)	(MHz)	(MHz)	(MHz)
Low	2412	17.75	17.83	0.5
Middle	2437	17.83	17.83	0.5
High	2462	17.83	17.83	0.5

FCC ID: BCGA1264 IC: 579C-A1264

6 dB BANDWIDTH, CHAIN A

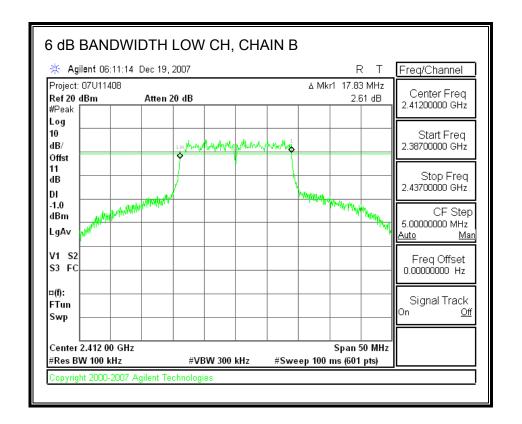


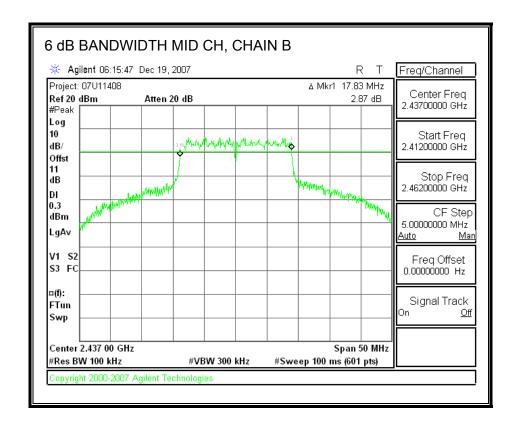


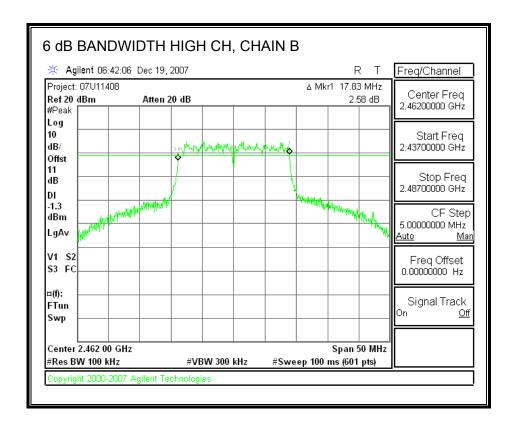


FCC ID: BCGA1264 IC: 579C-A1264

6 dB BANDWIDTH, CHAIN B







FCC ID: BCGA1264 IC: 579C-A1264

7.3.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

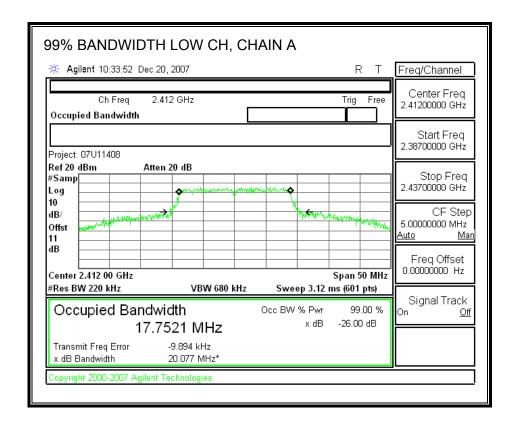
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

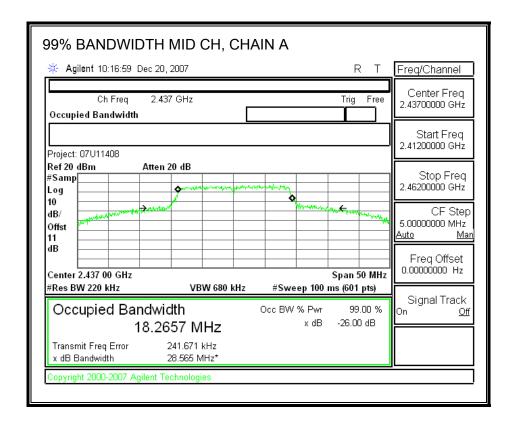
RESULTS

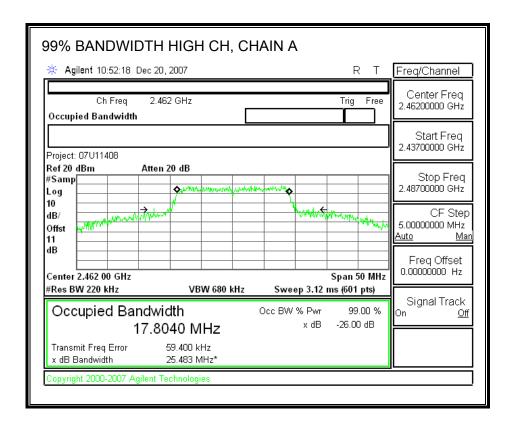
Channel	Frequency	Chain A	Chain B
		99% Bandwidth	99% Bandwidth
	(MHz)	(MHz)	(MHz)
Low	2412	17.7521	17.8262
Middle	2437	18.2657	18.7520
High	2462	17.8040	17.9610

FCC ID: BCGA1264 IC: 579C-A1264

99% BANDWIDTH, CHAIN A

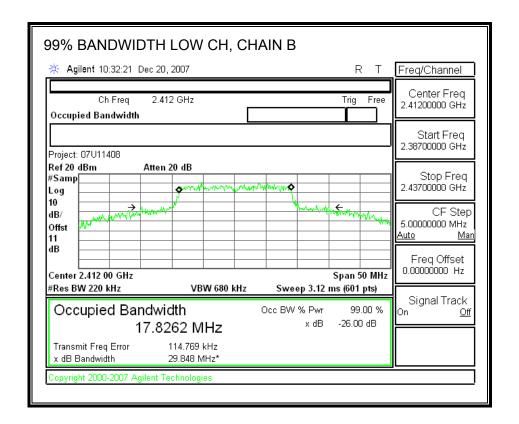


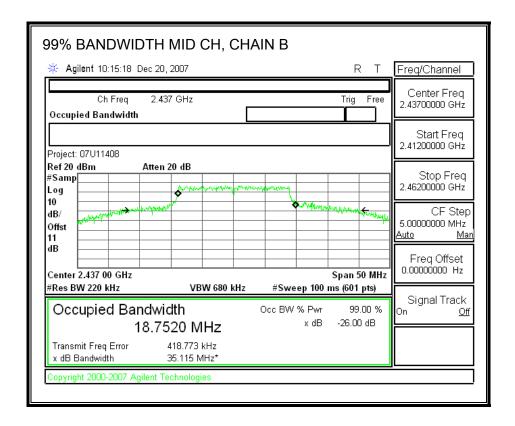


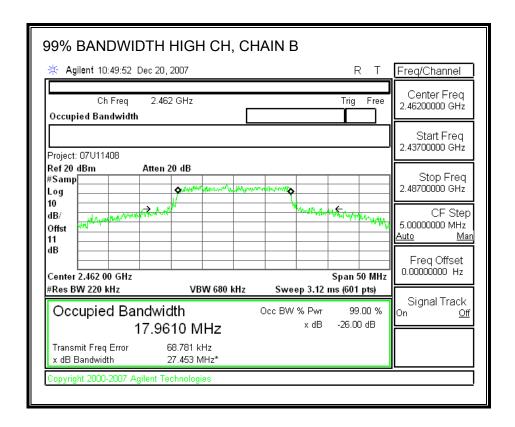


FCC ID: BCGA1264 IC: 579C-A1264

99% BANDWIDTH, CHAIN B







FCC ID: BCGA1264 IC: 579C-A1264

7.3.3. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

TEST PROCEDURE

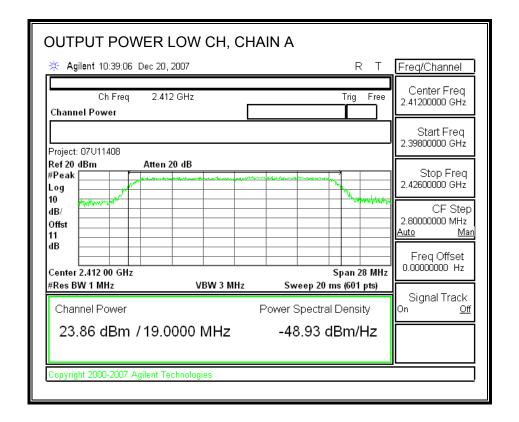
Peak power is measured using the spectrum analyzer's internal channel power integration function. Power is integrated over a bandwidth greater than or equal to the 99% bandwidth.

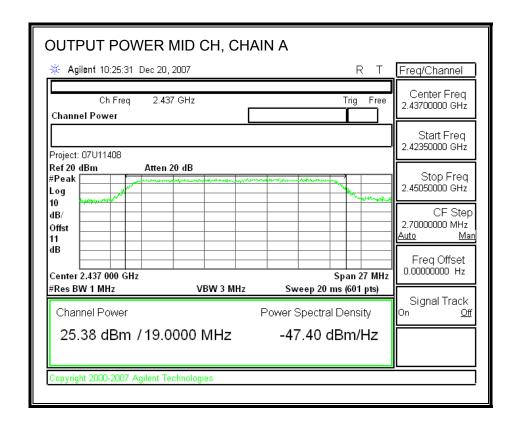
RESULTS

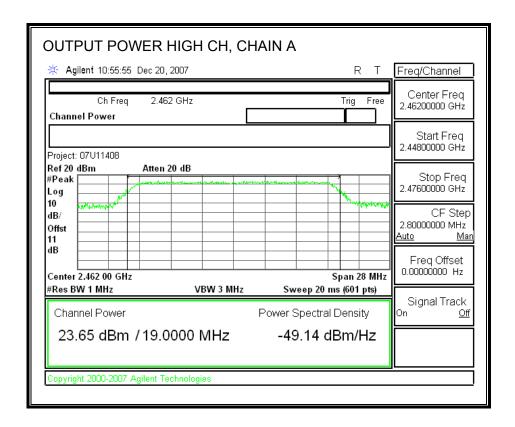
Channel	Frequency	Limit	Chain A	Chain B	Total	Margin
			Power	Power	Power	
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	2412	30.00	23.86	24.25	27.07	-2.93
Mid	2437	30.00	25.38	25.34	28.37	-1.63
High	2462	30.00	23.65	23.86	26.77	-3.23

FCC ID: BCGA1264 IC: 579C-A1264

CHAIN A OUTPUT POWER

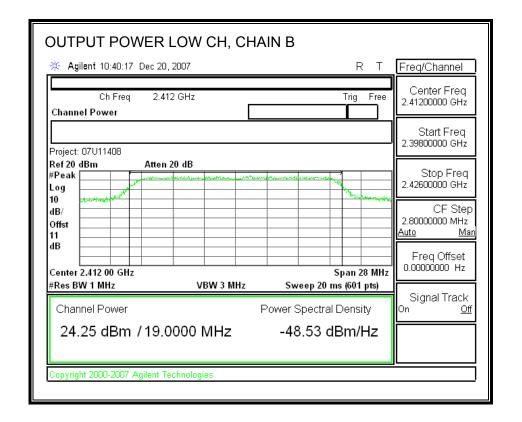


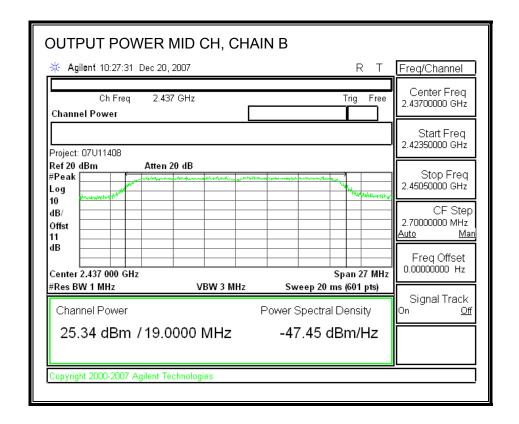


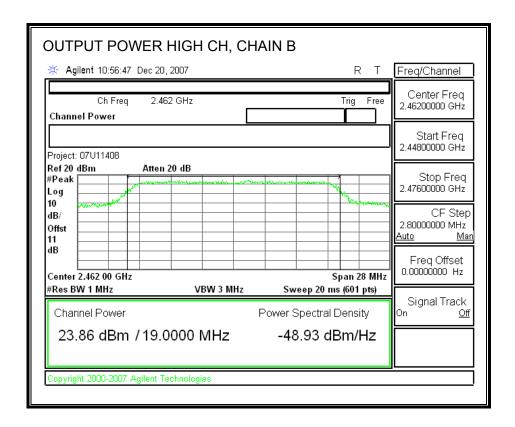


FCC ID: BCGA1264 IC: 579C-A1264

CHAIN B OUTPUT POWER







FCC ID: BCGA1264 IC: 579C-A1264

7.3.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

TEST PROCEDURE

Output power was measured based on the use of a peak measurement, therefore the power spectral density was measured using PSD Option 1 in accordance with FCC document "Measurement of Digital Transmission Systems Operating under Section 15.247", March 23, 2005.

FCC ID: BCGA1264 IC: 579C-A1264

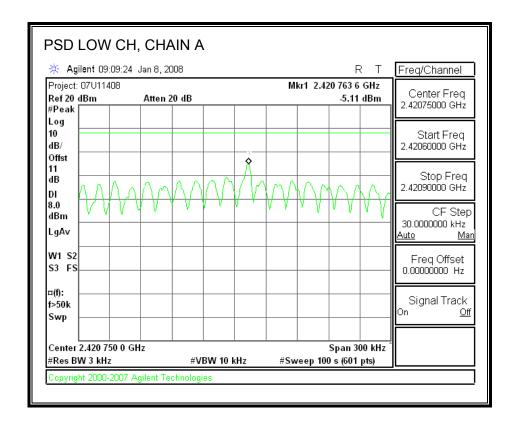
RESULTS

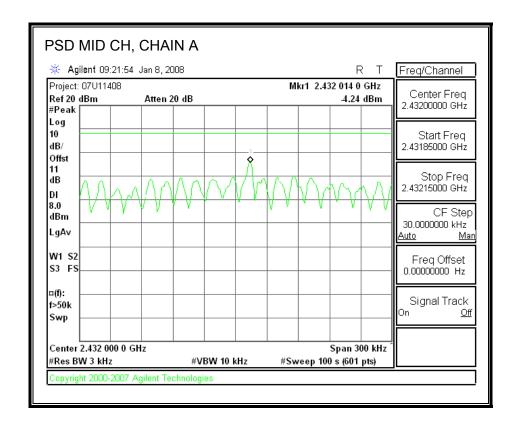
Channel	Frequency	Chain A	Chain B	Limit
		PSD	PSD	
	(MHz)	(dBm)	(dBm)	(dBm)
Low	2412	-5.11	-0.71	8
Middle	2437	-4.24	-1.09	8
High	2462	-5.92	-1.19	8

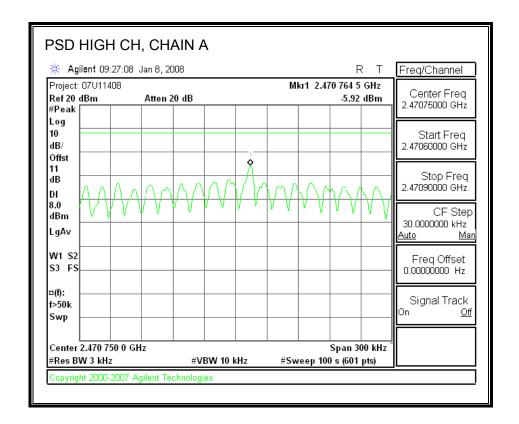
Channel	Frequency	PSD with Combiner	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dB)
Low	2412	1.55	8	-6.45
Middle	2437	2.59	8	-5.41
High	2462	1.17	8	-6.83

FCC ID: BCGA1264 IC: 579C-A1264

POWER SPECTRAL DENSITY, CHAIN A

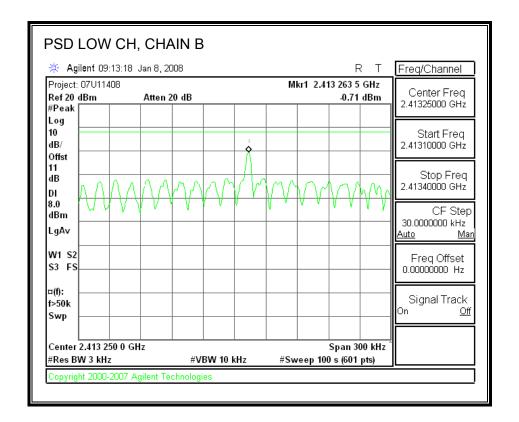


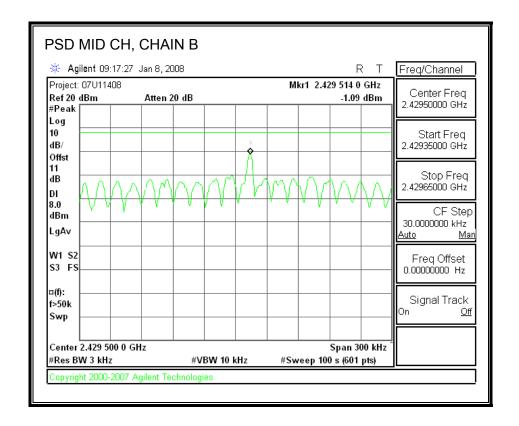


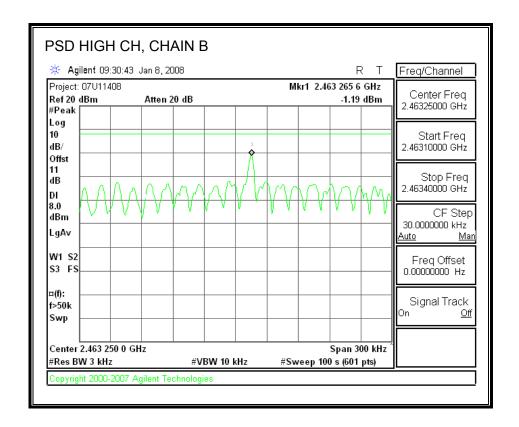


FCC ID: BCGA1264 IC: 579C-A1264

POWER SPECTRAL DENSITY, CHAIN B

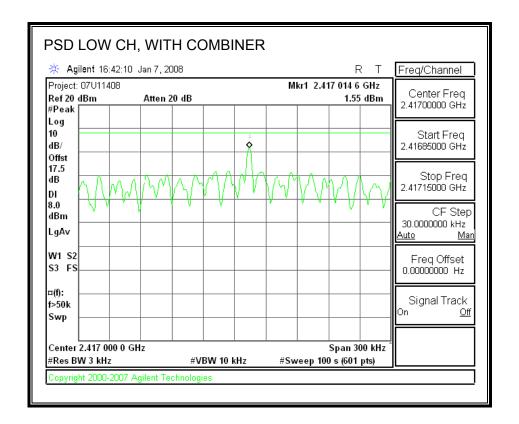


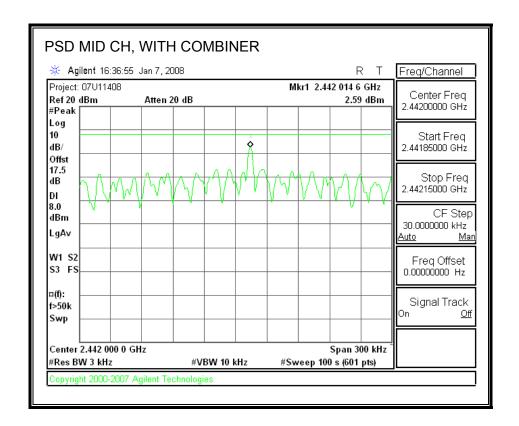


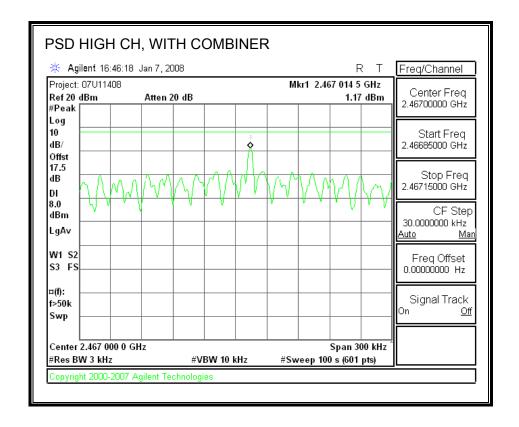


FCC ID: BCGA1264 IC: 579C-A1264

POWER SPECTRAL DENSITY, WITH COMBINER







FCC ID: BCGA1264 IC: 579C-A1264

7.3.5. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

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

RESULTS

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FCC ID: BCGA1264 IC: 579C-A1264

CHAIN A SPURIOUS EMISSIONS

