

NORTHWEST EMC

Honeywell, Automation and Control Solutions

TH6320WF02

FCC 15.247:2014

Report # HNYW0120.1



NVLAP Lab Code: 200881-0

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America. This Report may only be duplicated in its entirety

CERTIFICATE OF TEST

Last Date of Test: December 11, 2014
Honeywell, Automation and Control Solutions
Model: TH6320WF02

Radio Equipment Testing

Standards

Specification	Method
FCC 15.207:2014	ANSI C63.10:2009
FCC 15.247:2014	ANSI C63.10:2009 KDB 558074 V3

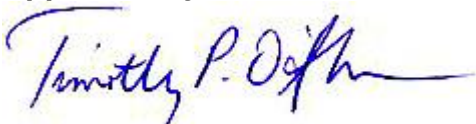
Results

Method Clause	Test Description	Applied	Results	Comments
6.2	Powerline Conducted Emissions	Yes	Pass	
6.5, 6.6	Spurious Radiated Emissions	Yes	Pass	
6.7	Spurious Conducted Emissions	Yes	Pass	
6.7	Band Edge Compliance	Yes	Pass	
6.9.1	Occupied Bandwidth	Yes	Pass	
6.10.2	Output Power	Yes	Pass	
6.11.2	Power Spectral Density	Yes	Pass	
7.5	Duty Cycle	Yes	Pass	

Deviations From Test Standards

None

Approved By:



Tim O'Shea, Operations Manager

Product compliance is the responsibility of the client; therefore, the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test.

REVISION HISTORY

Revision Number		Description	Date	Page Number
00		None		

ACCREDITATIONS AND AUTHORIZATIONS

United States

FCC - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

A2LA - Accredited by A2LA to ISO / IEC Guide 65 as a product certifier. This allows Northwest EMC to certify transmitters to FCC and IC specifications.

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

IC - Recognized by Industry Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with IC.

European Union

European Commission – Validated by the European Commission as a Conformity Assessment Body (CAB) under the EMC directive and as a Notified Body under the R&TTE Directive.

Australia/New Zealand

ACMA - Recognized by ACMA as a CAB for the acceptance of test data.

Korea

MSIP / RRA - Recognized by KCC's RRA as a CAB for the acceptance of test data.

Japan

VCCI - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

Taiwan

BSMI – Recognized by BSMI as a CAB for the acceptance of test data.

NCC - Recognized by NCC as a CAB for the acceptance of test data.

Singapore

IDA – Recognized by IDA as a CAB for the acceptance of test data.

Israel

MOC – Recognized by MOC as a CAB for the acceptance of test data.

Hong Kong

OFTA – Recognized by OFTA as a CAB for the acceptance of test data.

Vietnam

MIC – Recognized by MIC as a CAB for the acceptance of test data.

SCOPE

For details on the Scopes of our Accreditations, please visit:

<http://www.nwemc.com/accreditations/>

MEASUREMENT UNCERTAINTY

Measurement Uncertainty

When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) for each test is on each data sheet. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-2 as applicable), and are available upon request.

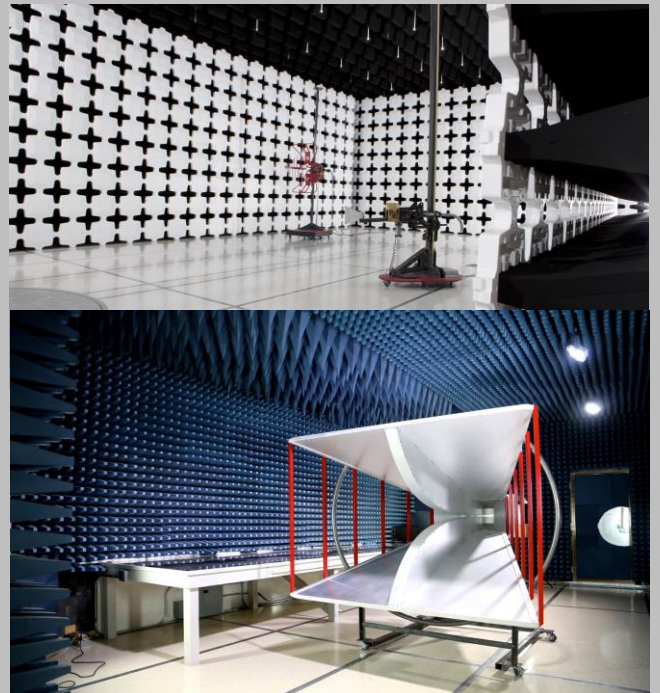
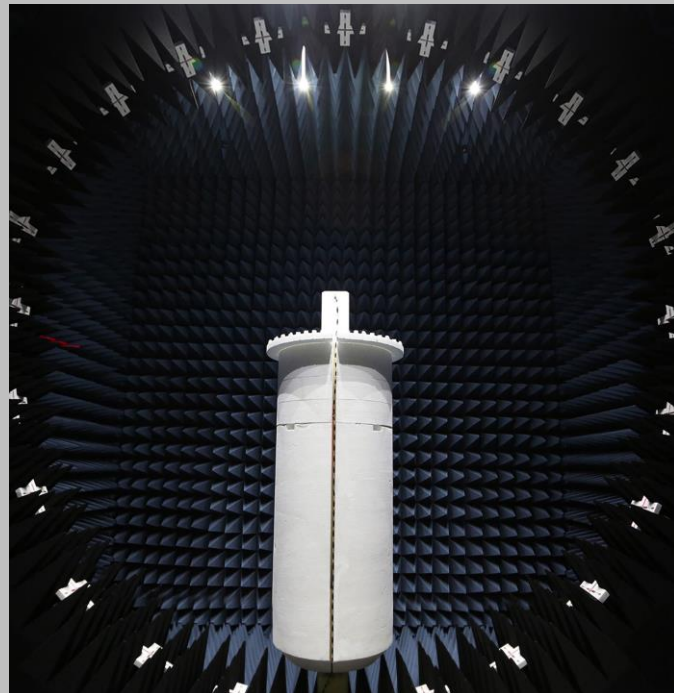
The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

Test	+ MU	- MU
Frequency Accuracy (Hz)	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	0.3 dB	-0.3 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%
Field Strength (dB)	4.7 dB	-4.7 dB
AC Powerline Conducted Emissions (dB)	2.9 dB	-2.9 dB

FACILITIES



California Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	Minnesota Labs MN01-08, MN10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	New York Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 685-0796	Oregon Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	Texas Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	Washington Labs NC01-05 19201 120 th Ave NE Bothell, WA 9801 (425)984-6600
NVLAP					
NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200630-0	NVLAP Lab Code:201049-0	NVLAP Lab Code: 200629-0
Industry Canada					
2834B-1, 2834B-3	2834E-1	N/A	2834D-1, 2834D-2	2834G-1	2834F-1
BSMI					
SL2-IN-E-1154R	SL2-IN-E-1152R	N/A	SL2-IN-E-1017	In Process	SL2-IN-E-1153R
VCCI					
A-0029	A-0109	N/A	A-0108	A-0201	A-0110



PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	Honeywell, Automation and Control Solutions
Address:	1985 Douglas Drive North
City, State, Zip:	Golden Valley, MN 55422
Test Requested By:	Dave Mulhouse
Model:	TH6320WF02
First Date of Test:	December 09, 2014
Last Date of Test:	December 11, 2014
Receipt Date of Samples:	December 09, 2014
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT:
Thermostat with an 802.11(bgn) SISO radio module and 2 antennas for diversity.
Radio Output Settings:
The radio software power settings used for the testing contained in this report are contained in the 'Operational Description' submitted to the FCC as part of the certification application package.
Testing Objective:
To demonstrate compliance of the 802.11 radio under FCC 15.247 for operation in the 2.4 GHz band.

CONFIGURATIONS

Configuration HNYW0120- 1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Thermostat	Honeywell, Automation and Control Solutions	TH6320WF02	50072214-002

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
AC Adapter	CUI Inc.	48A-24-500	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Adapter Cable	No	180cm	No	AC Adapter	Thermostat

Configuration HNYW0120- 2

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Thermostat	Honeywell, Automation and Control Solutions	TH6320WF02	71630010589274

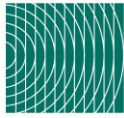
Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
AC Adapter	CUI Inc.	48A-24-500	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Adapter Cable	No	180cm	No	AC Adapter	Thermostat

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	12/9/2014	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	12/11/2014	Spurious Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	12/11/2014	Duty Cycle	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
4	12/11/2014	Occupied Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
5	12/11/2014	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
6	12/11/2014	Band Edge Compliance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
7	12/11/2014	Power Spectral Density	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.



OCCUPIED BANDWIDTH

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo)
MN08 Direct Connect Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	10/2/2014	12
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	4/3/2014	12
40 GHz DC Block	Fairview Microwave	SD3379	AMI	10/2/2014	12
MXG Vector Signal Generator	Agilent	N5182A	TIF	8/12/2014	36
Spectrum Analyzer	Agilent	E4440A	AAX	4/28/2014	12

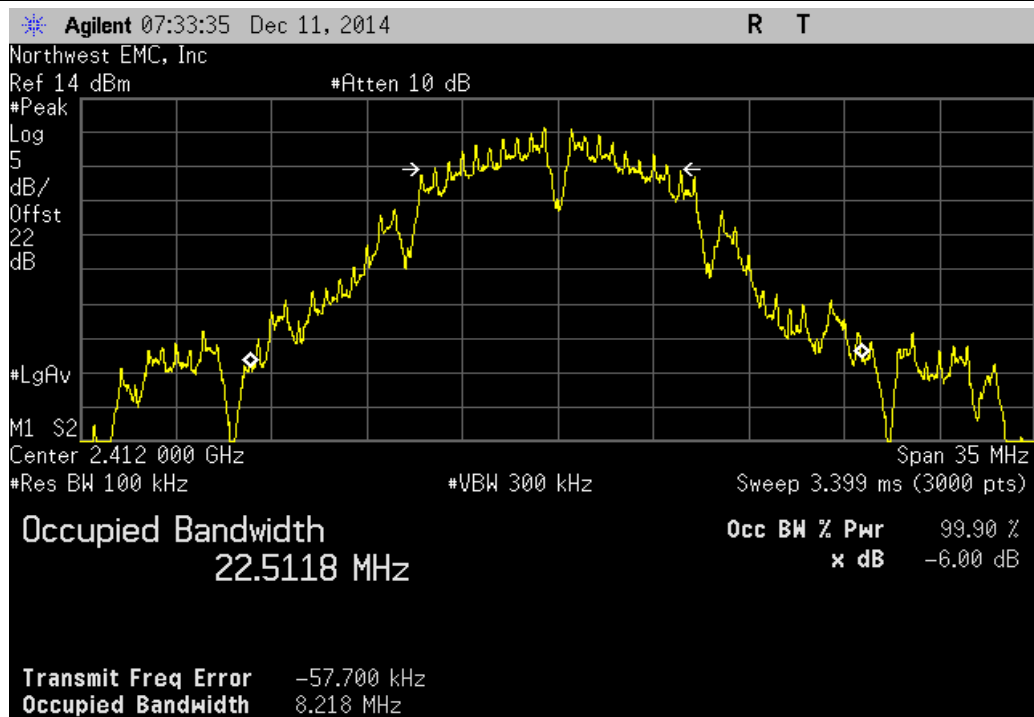
TEST DESCRIPTION

The 6dB occupied bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The 99.9% (approximate 26 dB) emission bandwidth (EBW) was also measured at the same time.

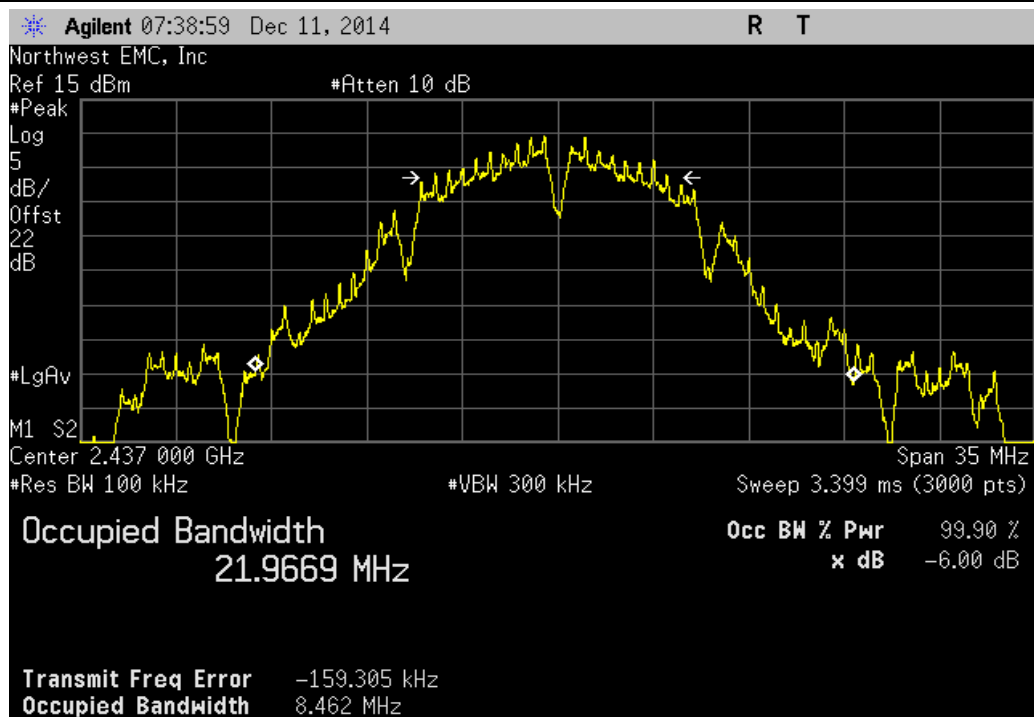
The EUT was set to low, medium and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet.

EUT: TH6320WF02		Work Order: HNYW0120	
Serial Number: 71630010589274		Date: 12/11/14	
Customer: Honeywell, Automation and Control Solutions		Temperature: 23.5°C	
Attendees: None		Humidity: 21%	
Project: None		Barometric Pres.: 1026.4	
Tested by: Trevor Buls		Power: 110VAC/60Hz	Job Site: MN08
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2014		ANSI C63.10:2009	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature <i>Trevor Buls</i>	
		Value	Limit (>) Result
Antenna 0			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz		8.218 MHz	500 kHz Pass
Mid Channel 6, 2437 MHz		8.462 MHz	500 kHz Pass
High Channel 11, 2462 MHz		8.431 MHz	500 kHz Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz		8.97 MHz	500 kHz Pass
Mid Channel 6, 2437 MHz		8.133 MHz	500 kHz Pass
High Channel 11, 2462 MHz		8.084 MHz	500 kHz Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz		14.695 MHz	500 kHz Pass
Mid Channel 6, 2437 MHz		15.372 MHz	500 kHz Pass
High Channel 11, 2462 MHz		15.257 MHz	500 kHz Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz		15.289 MHz	500 kHz Pass
Mid Channel 6, 2437 MHz		15.066 MHz	500 kHz Pass
High Channel 11, 2462 MHz		15.112 MHz	500 kHz Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz		15.38 MHz	500 kHz Pass
Mid Channel 6, 2437 MHz		15.347 MHz	500 kHz Pass
High Channel 11, 2462 MHz		15.658 MHz	500 kHz Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz		16.654 MHz	500 kHz Pass
Mid Channel 6, 2437 MHz		15.017 MHz	500 kHz Pass
High Channel 11, 2462 MHz		15.932 MHz	500 kHz Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz		15.739 MHz	500 kHz Pass
Mid Channel 6, 2437 MHz		15.441 MHz	500 kHz Pass
High Channel 11, 2462 MHz		16.049 MHz	500 kHz Pass
Antenna 1			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz		8.919 MHz	500 kHz Pass
Mid Channel 6, 2437 MHz		9.525 MHz	500 kHz Pass
High Channel 11, 2462 MHz		9.555 MHz	500 kHz Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz		8.132 MHz	500 kHz Pass
Mid Channel 6, 2437 MHz		8.513 MHz	500 kHz Pass
High Channel 11, 2462 MHz		8.656 MHz	500 kHz Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz		15.866 MHz	500 kHz Pass
Mid Channel 6, 2437 MHz		14.024 MHz	500 kHz Pass
High Channel 11, 2462 MHz		15.04 MHz	500 kHz Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz		15.596 MHz	500 kHz Pass
Mid Channel 6, 2437 MHz		15.046 MHz	500 kHz Pass
High Channel 11, 2462 MHz		15.091 MHz	500 kHz Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz		15.408 MHz	500 kHz Pass
Mid Channel 6, 2437 MHz		15.446 MHz	500 kHz Pass
High Channel 11, 2462 MHz		15.707 MHz	500 kHz Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz		15.023 MHz	500 kHz Pass
Mid Channel 6, 2437 MHz		13.972 MHz	500 kHz Pass
High Channel 11, 2462 MHz		16.171 MHz	500 kHz Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz		16.017 MHz	500 kHz Pass
Mid Channel 6, 2437 MHz		15.125 MHz	500 kHz Pass
High Channel 11, 2462 MHz		16.817 MHz	500 kHz Pass

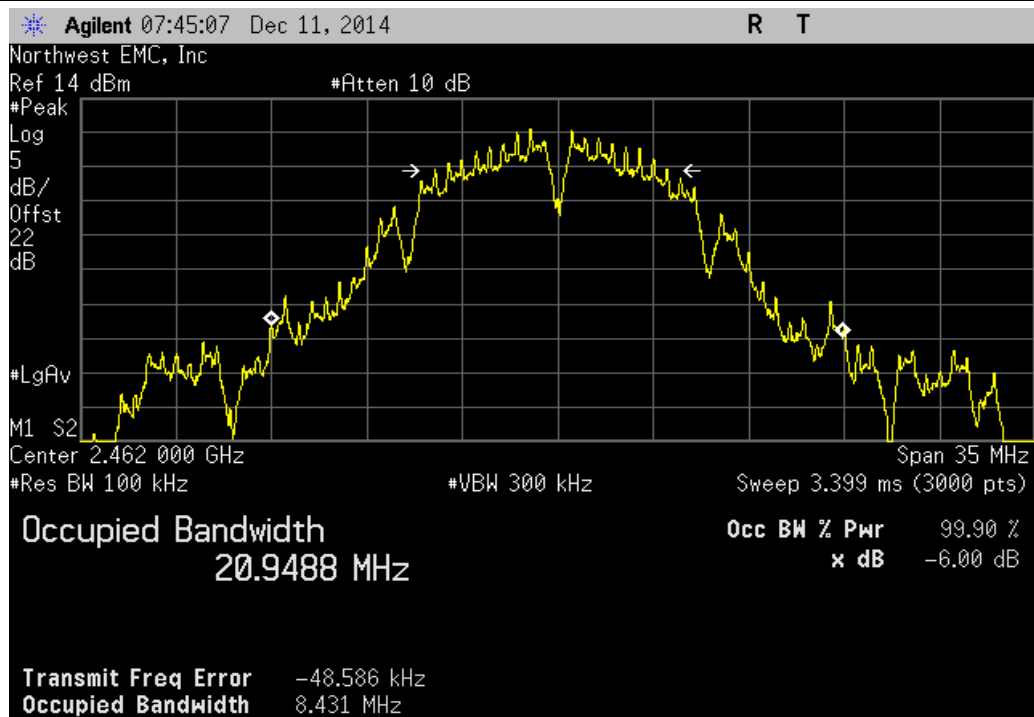
Antenna 0, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz					Limit	Result
				Value	(>)	
				8.218 MHz	500 kHz	Pass



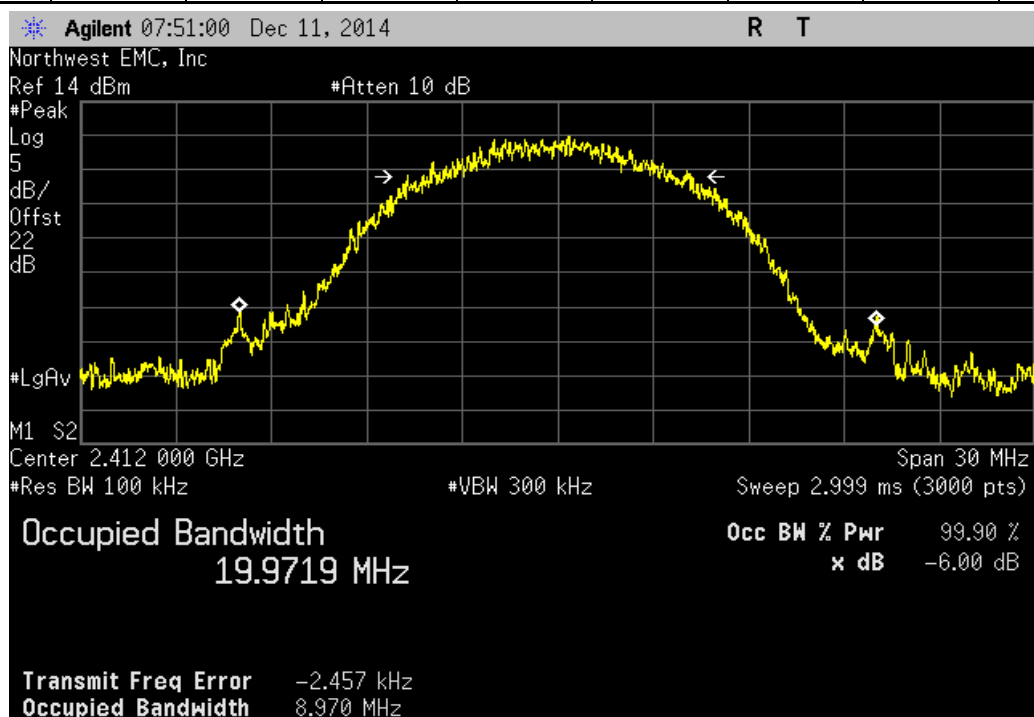
Antenna 0, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz					Limit	Result
				Value	(>)	
				8.462 MHz	500 kHz	Pass



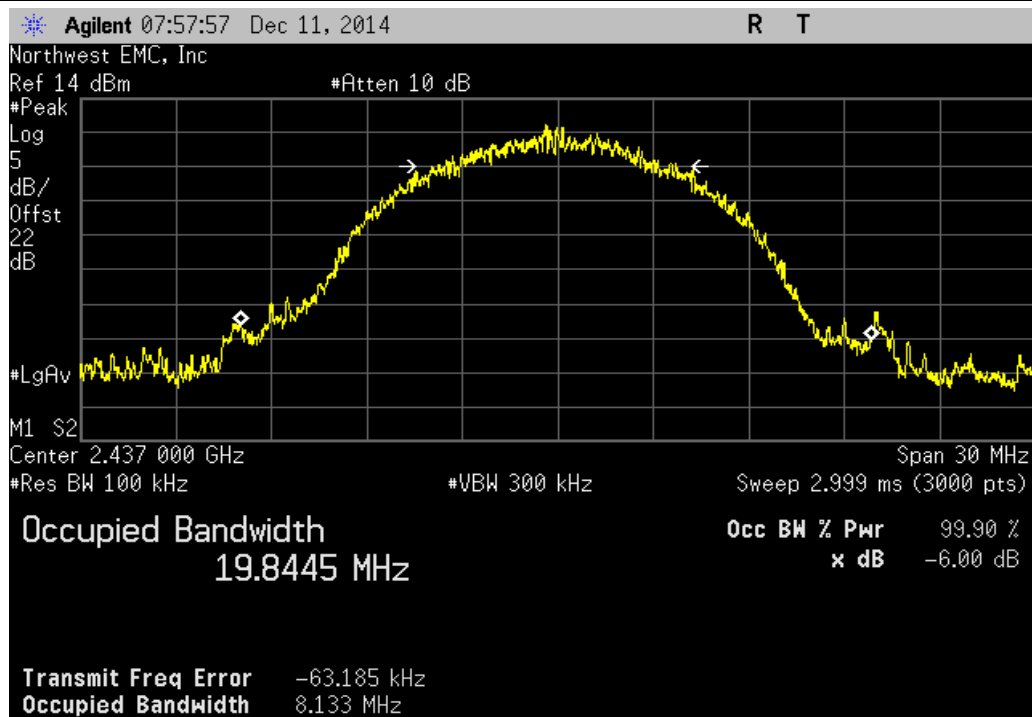
Antenna 0, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz					Limit	Result
				Value	(>)	
				8.431 MHz	500 kHz	Pass



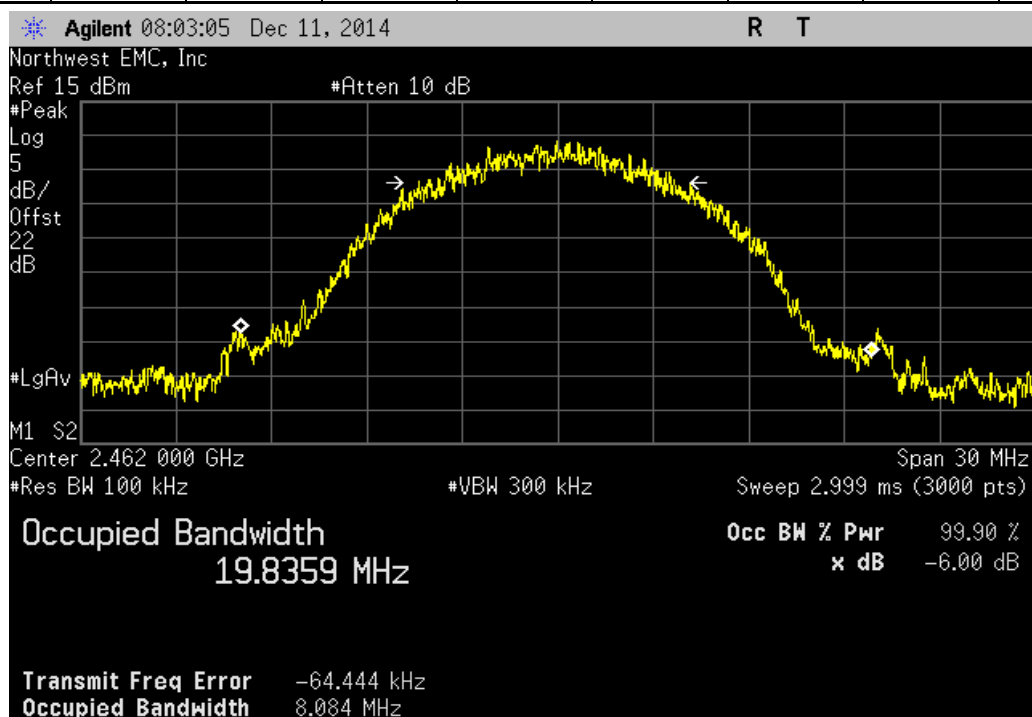
Antenna 0, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz					Limit	Result
				Value	(>)	
				8.97 MHz	500 kHz	Pass

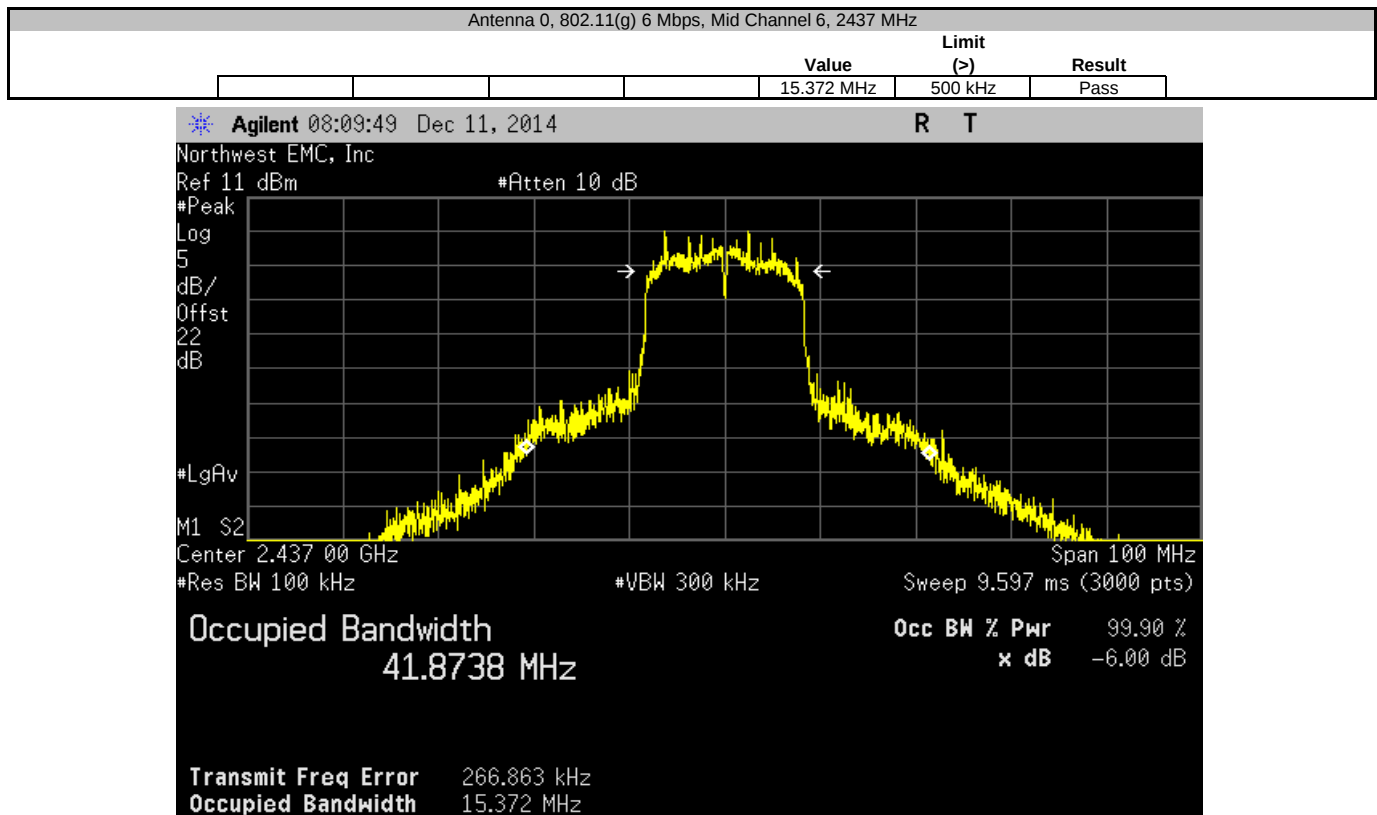
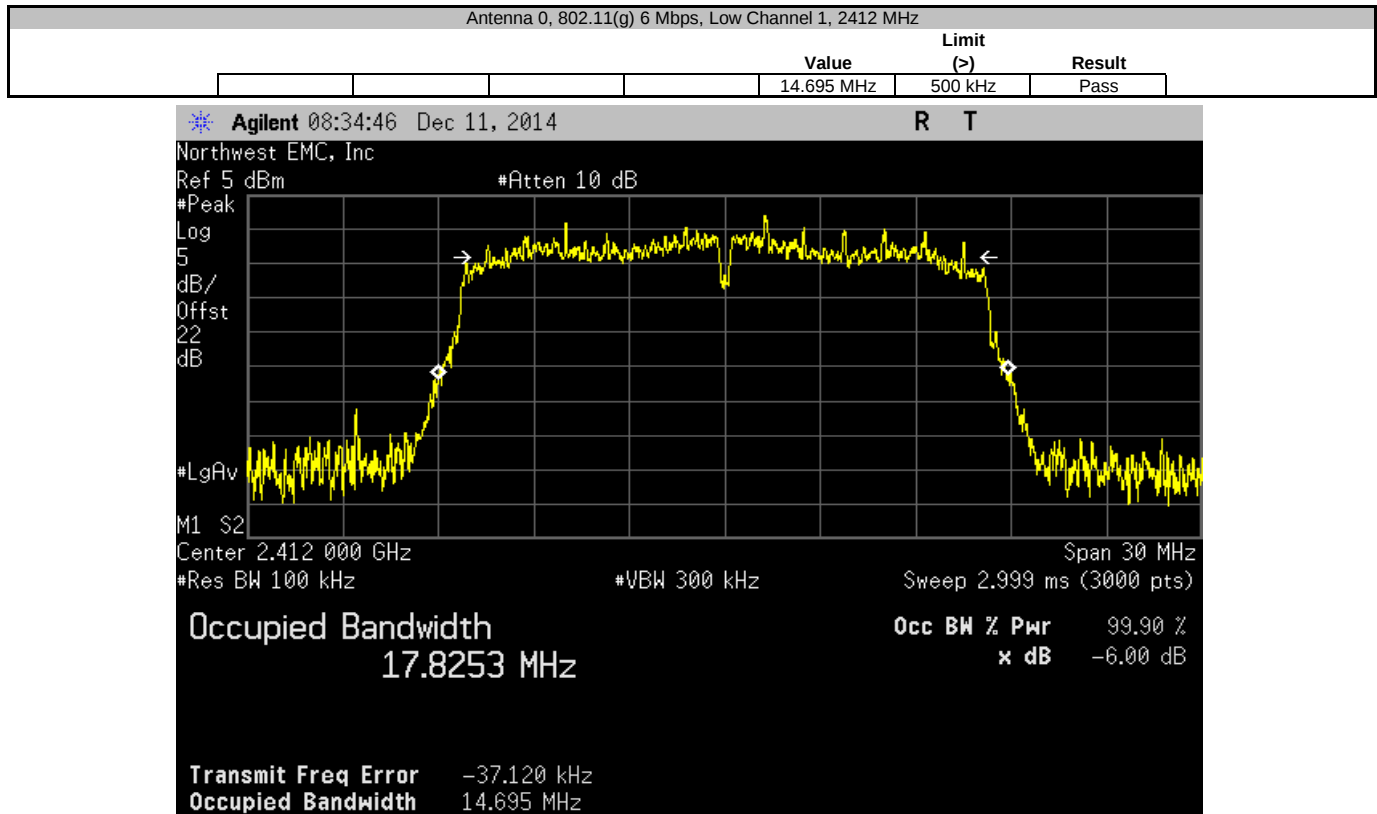


Antenna 0, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				8.133 MHz	500 kHz	Pass

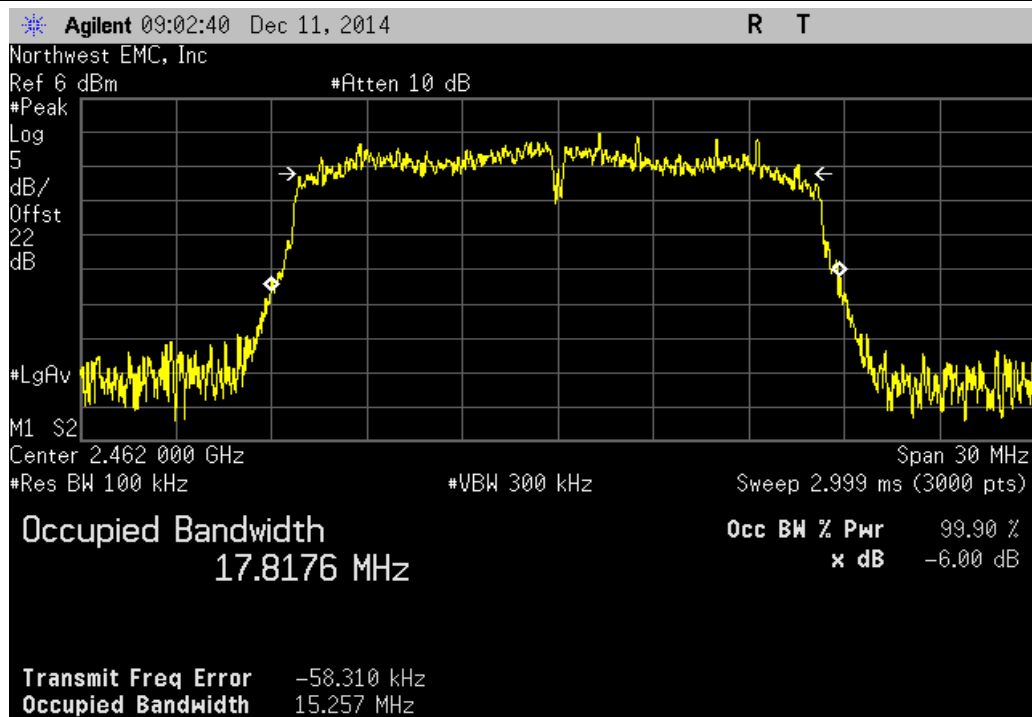


Antenna 0, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				8.084 MHz	500 kHz	Pass

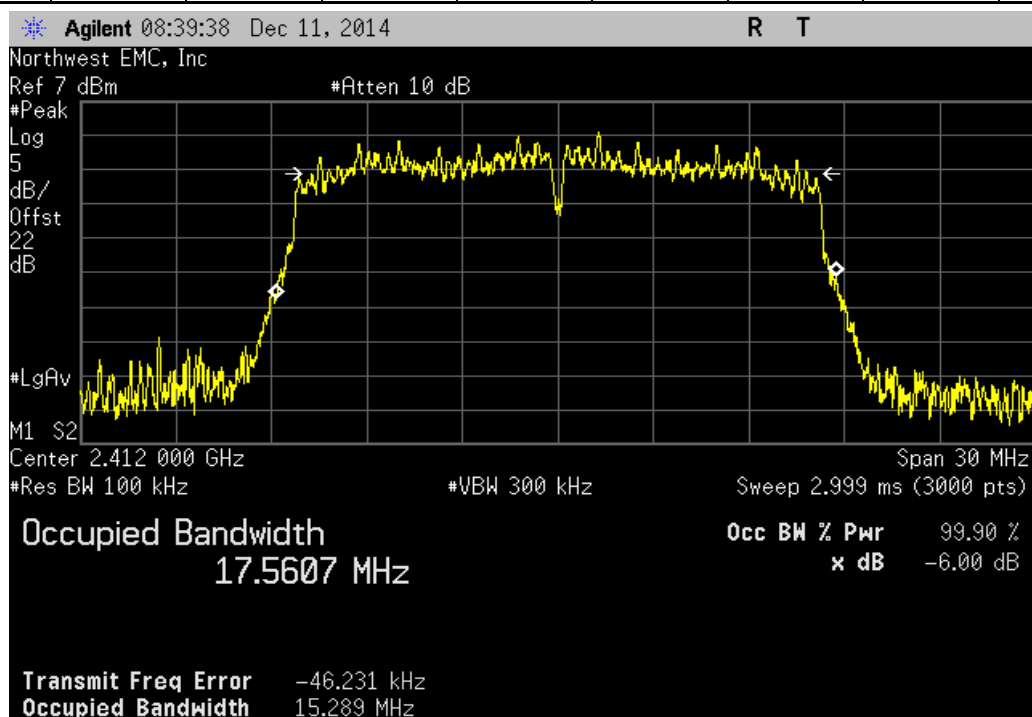




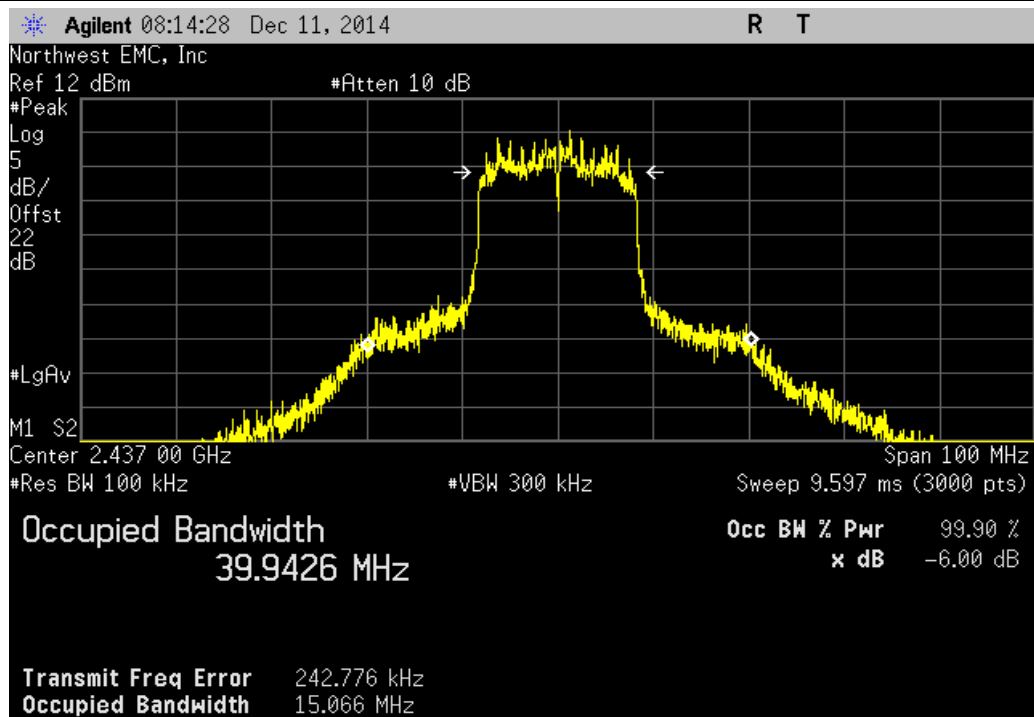
Antenna 0, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz			
	Value	Limit (>)	Result
	15.257 MHz	500 kHz	Pass



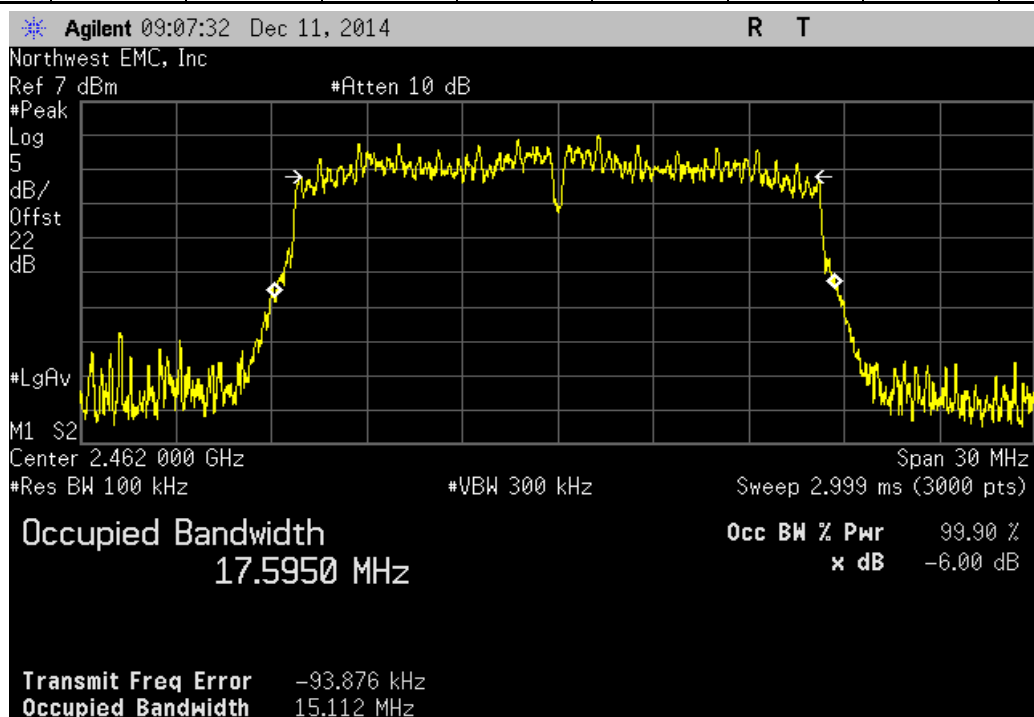
Antenna 0, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz			
	Value	Limit (>)	Result
	15.289 MHz	500 kHz	Pass



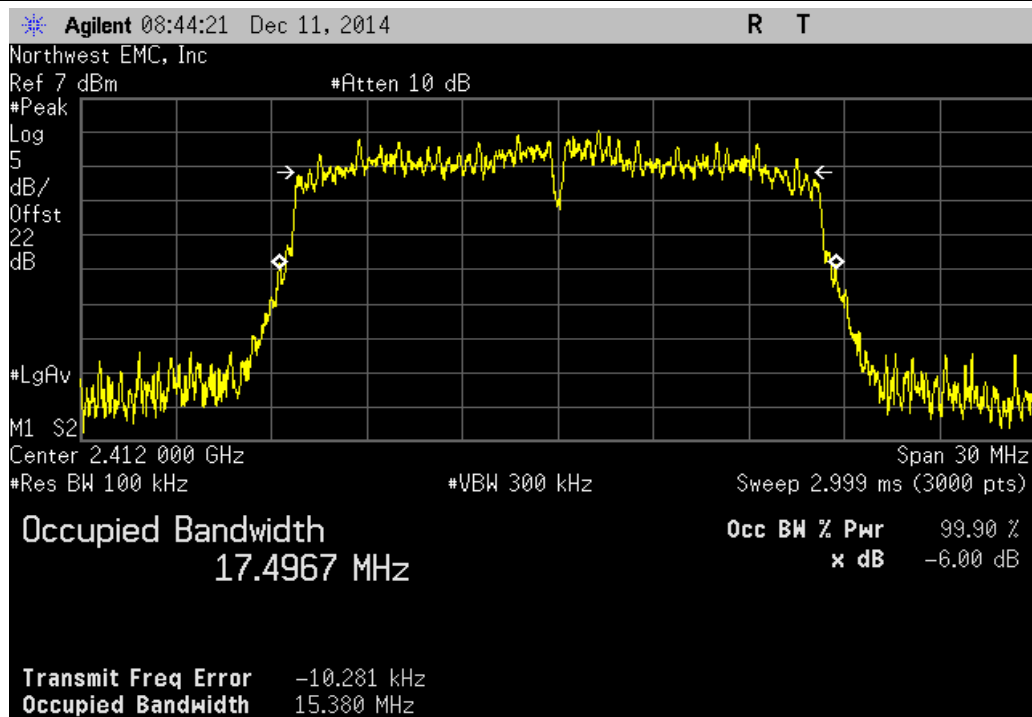
Antenna 0, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				15.066 MHz	500 kHz	Pass



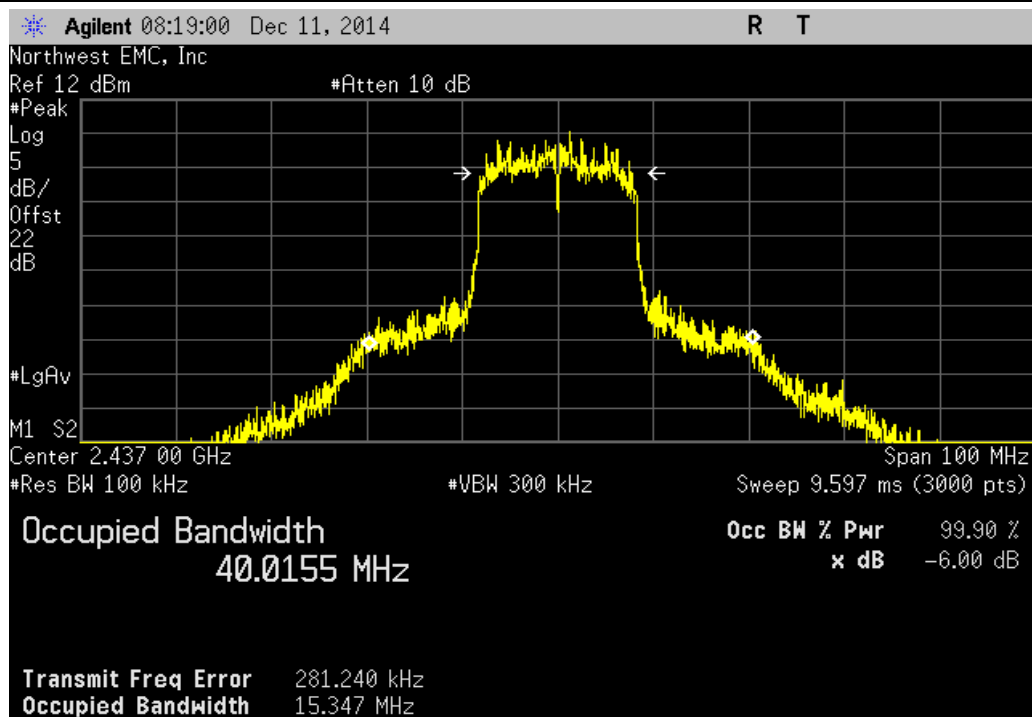
Antenna 0, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				15.112 MHz	500 kHz	Pass



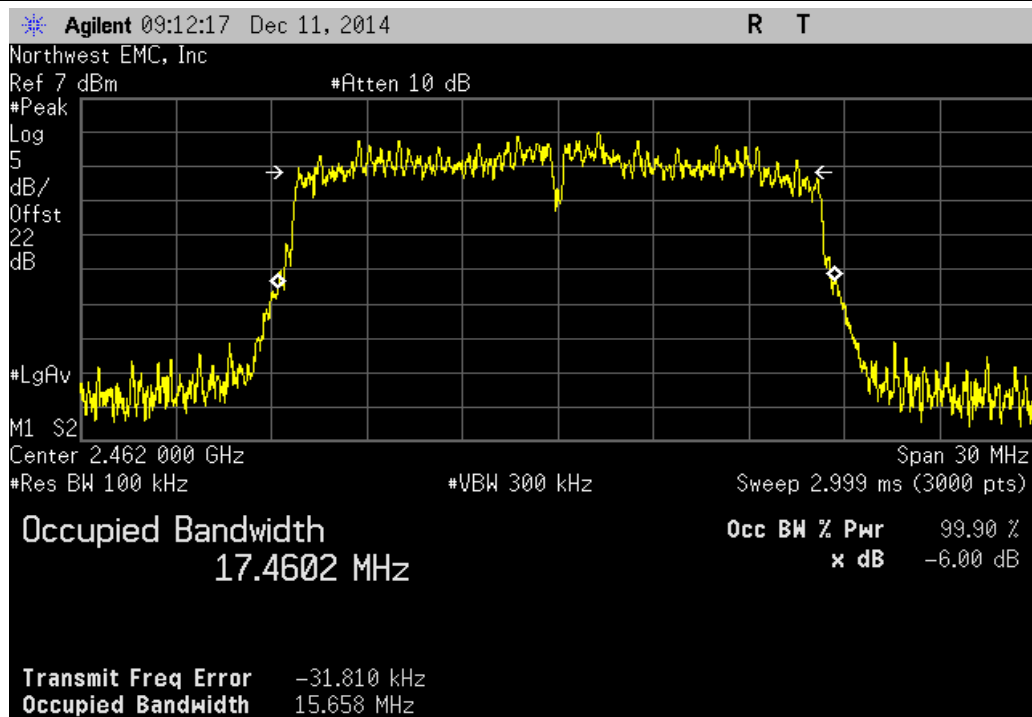
Antenna 0, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz					Limit	Result
Value					(>)	
				15.38 MHz	500 kHz	Pass



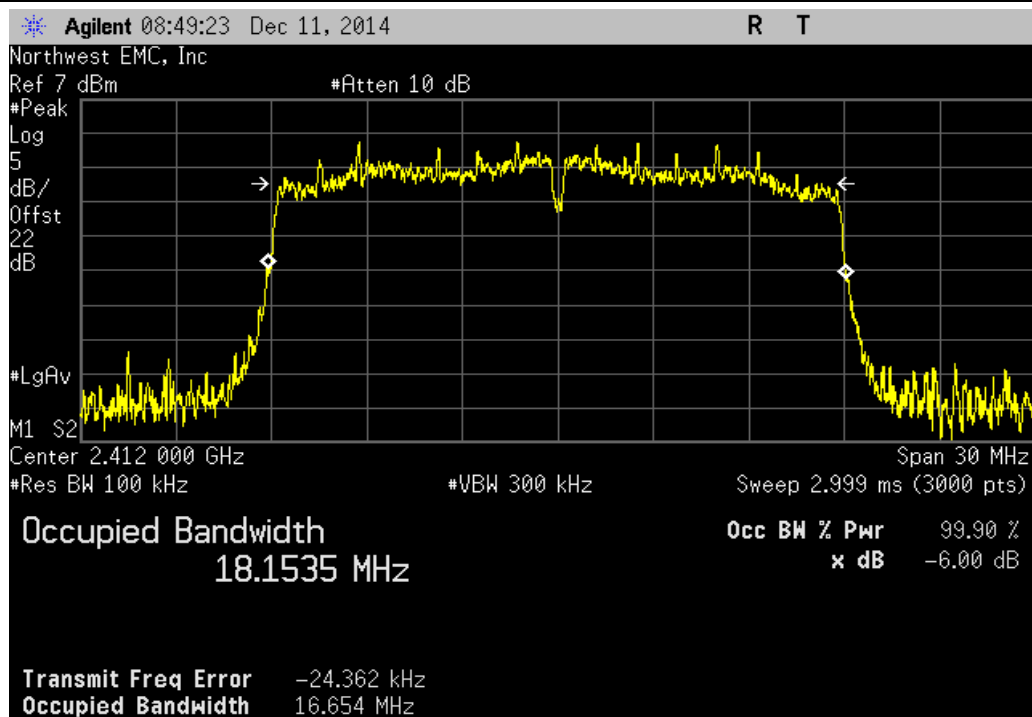
Antenna 0, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz					Limit	Result
Value					(>)	
				15.347 MHz	500 kHz	Pass



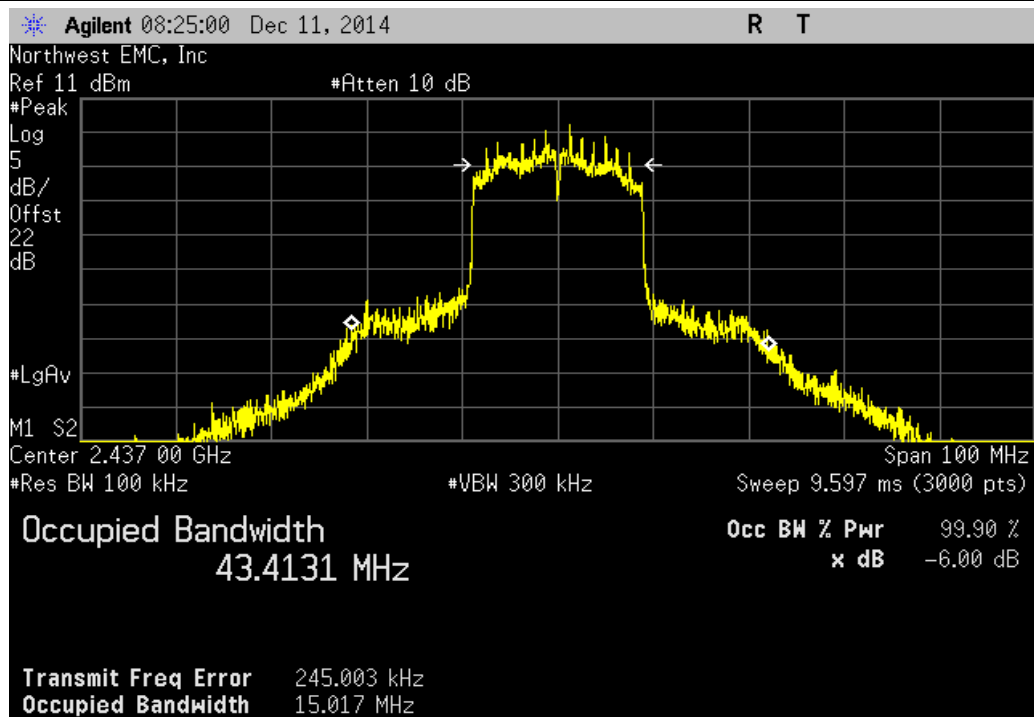
Antenna 0, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz					Limit	Result
Value					(>)	
				15.658 MHz	500 kHz	Pass



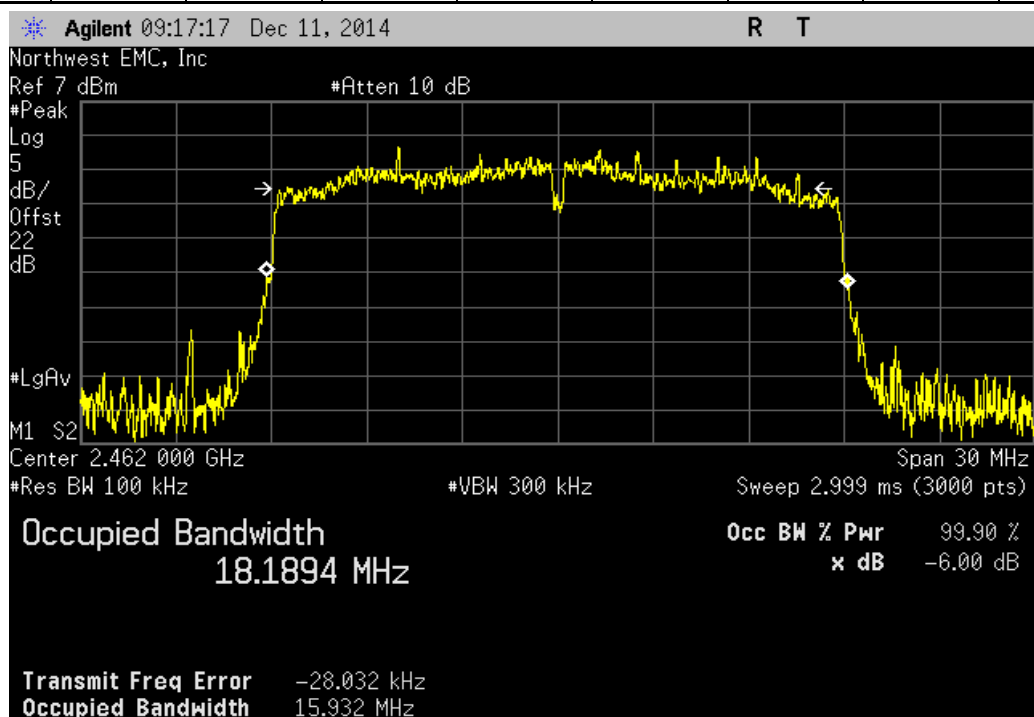
Antenna 0, 802.11(n) MCS0, Low Channel 1, 2412 MHz					Limit	Result
Value					(>)	
				16.654 MHz	500 kHz	Pass



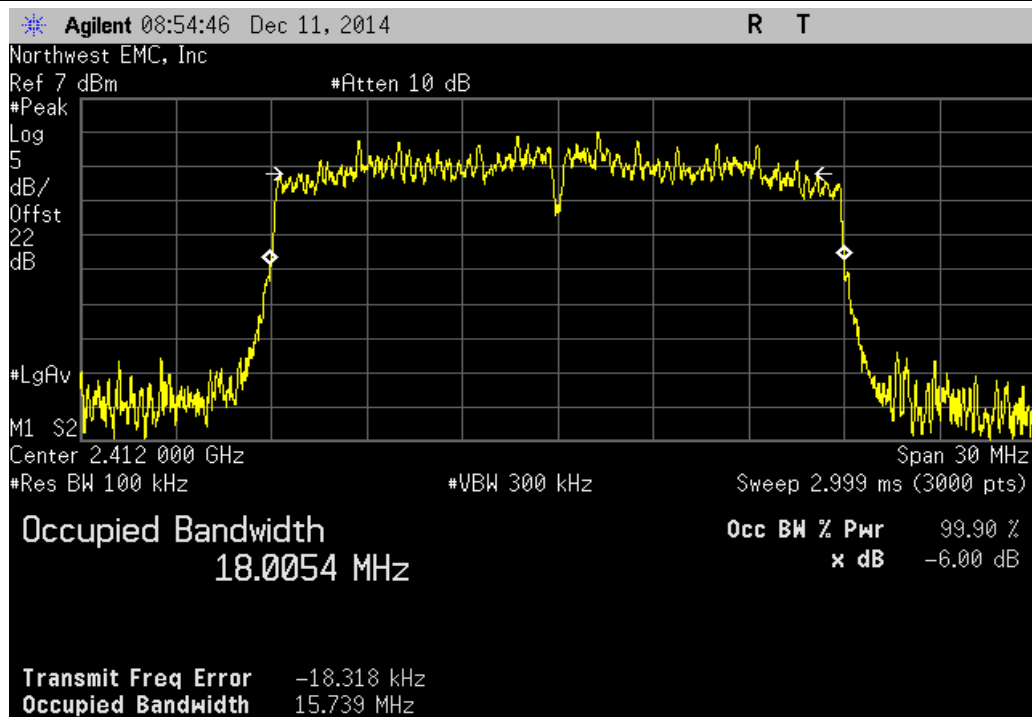
Antenna 0, 802.11(n) MCS0, Mid Channel 6, 2437 MHz					Limit	Result
				Value	(>)	
				15.017 MHz	500 kHz	Pass



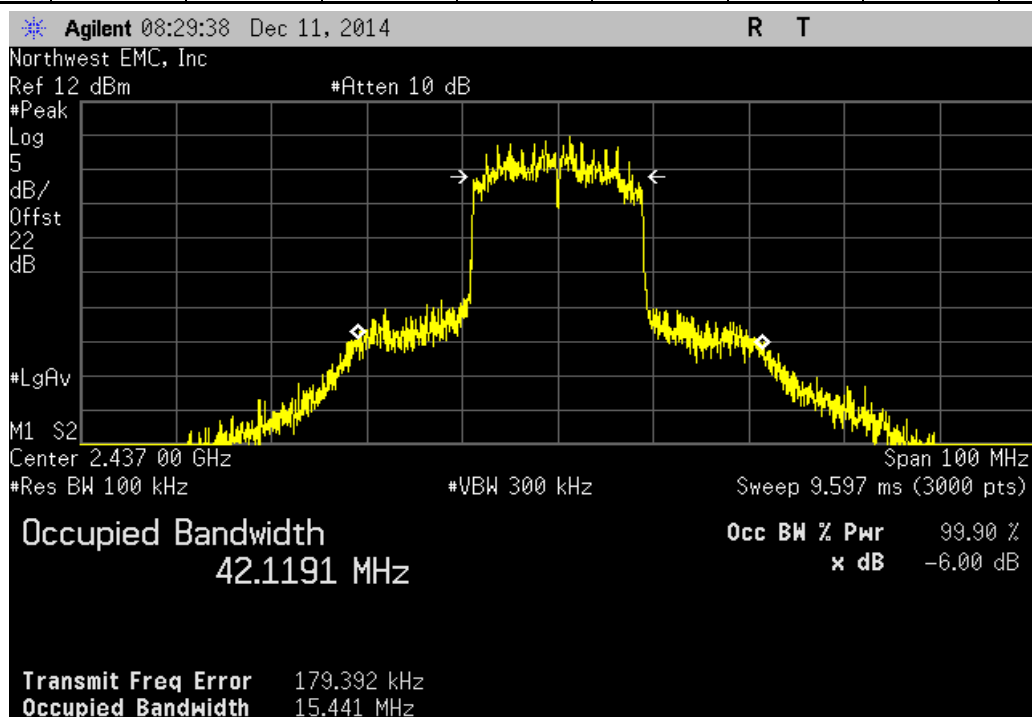
Antenna 0, 802.11(n) MCS0, High Channel 11, 2462 MHz					Limit	Result
				Value	(>)	
				15.932 MHz	500 kHz	Pass



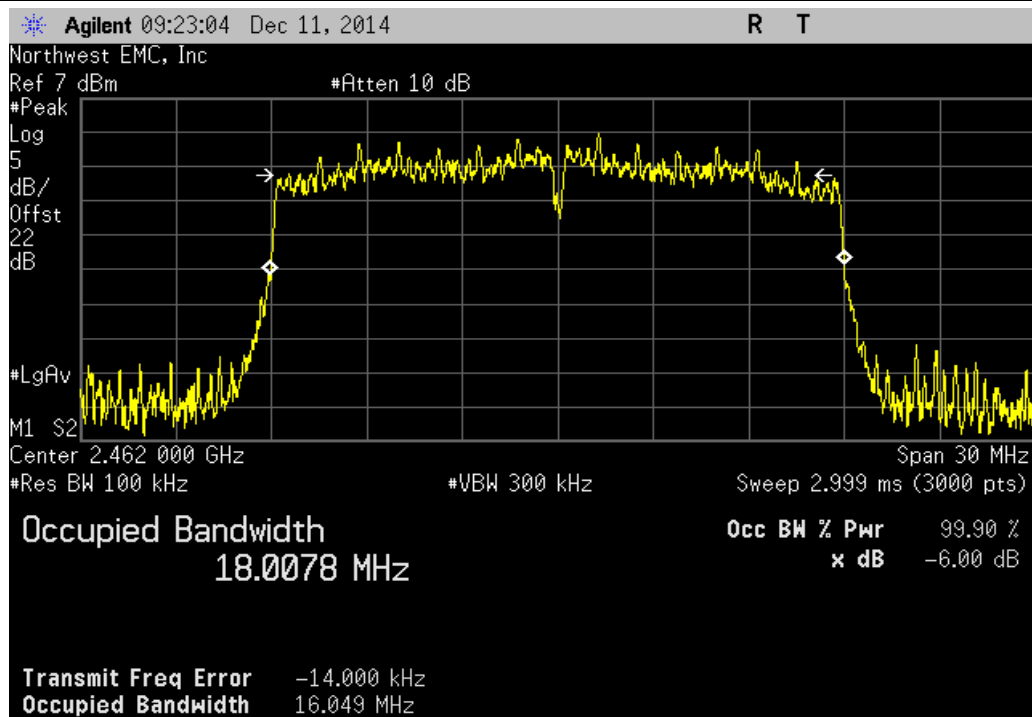
Antenna 0, 802.11(n) MCS7, Low Channel 1, 2412 MHz					Limit	Result
				Value	(>)	
				15.739 MHz	500 kHz	Pass



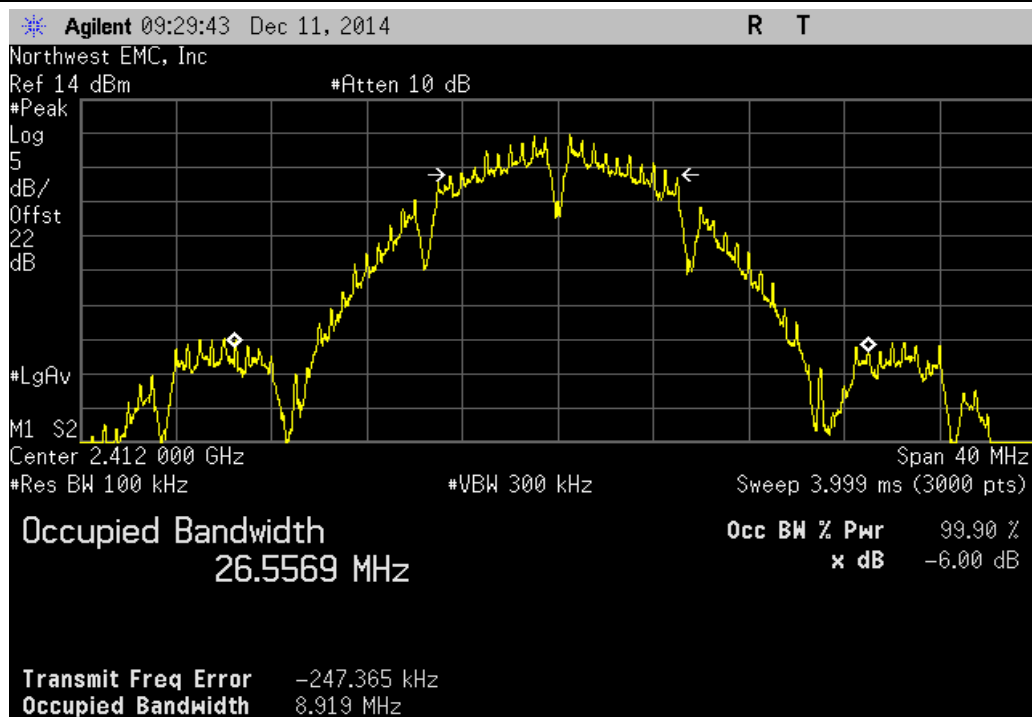
Antenna 0, 802.11(n) MCS7, Mid Channel 6, 2437 MHz					Limit	Result
				Value	(>)	
				15.441 MHz	500 kHz	Pass



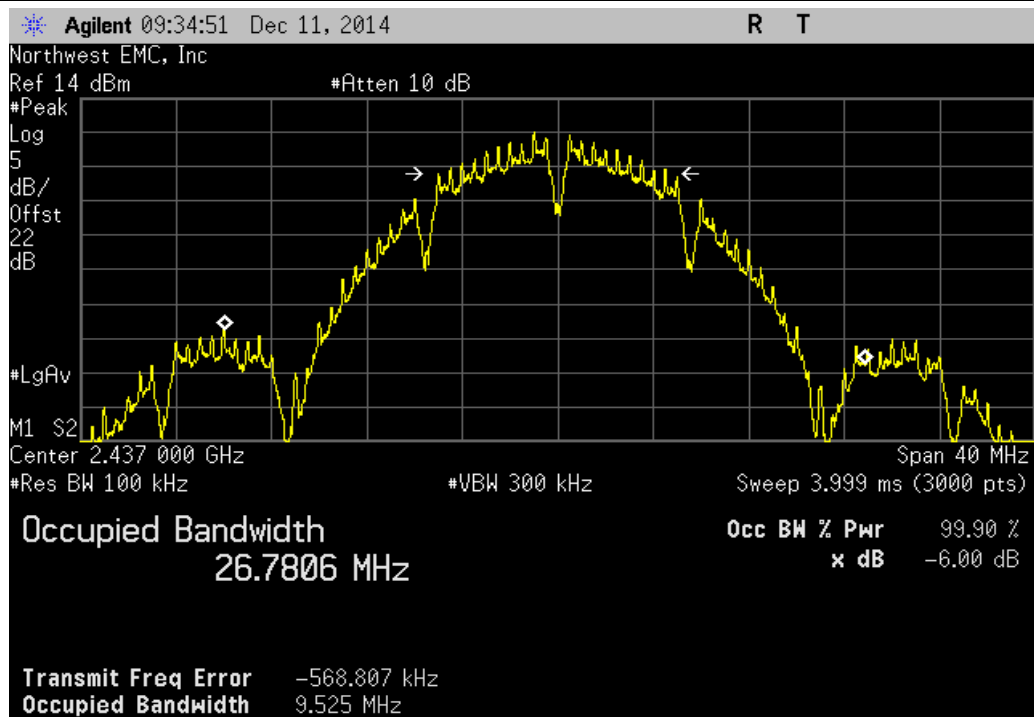
Antenna 0, 802.11(n) MCS7, High Channel 11, 2462 MHz					Limit	Result
Value					(>)	
				16.049 MHz	500 kHz	Pass



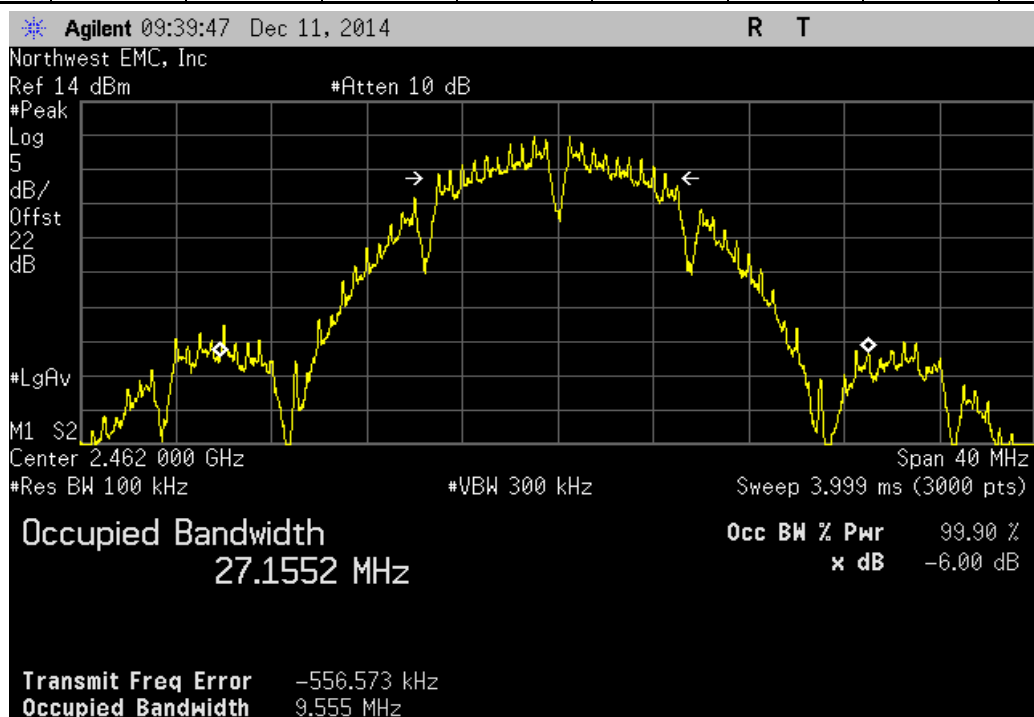
Antenna 1, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz					Limit	Result
Value					(>)	
				8.919 MHz	500 kHz	Pass



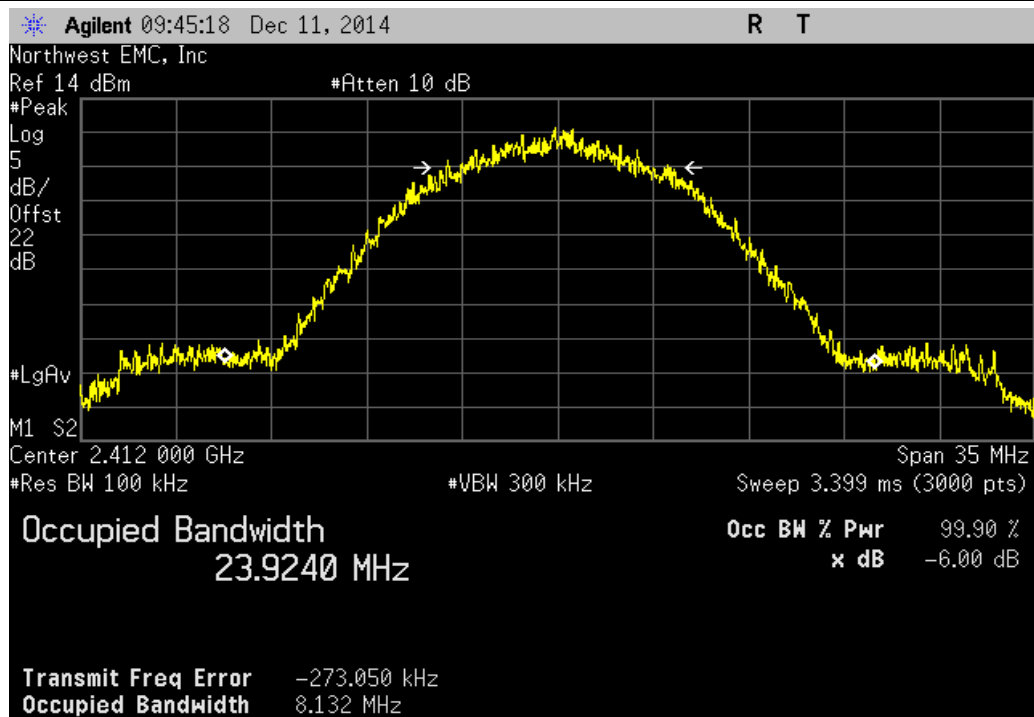
Antenna 1, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz					Limit	Result
				Value	(>)	
				9.525 MHz	500 kHz	Pass



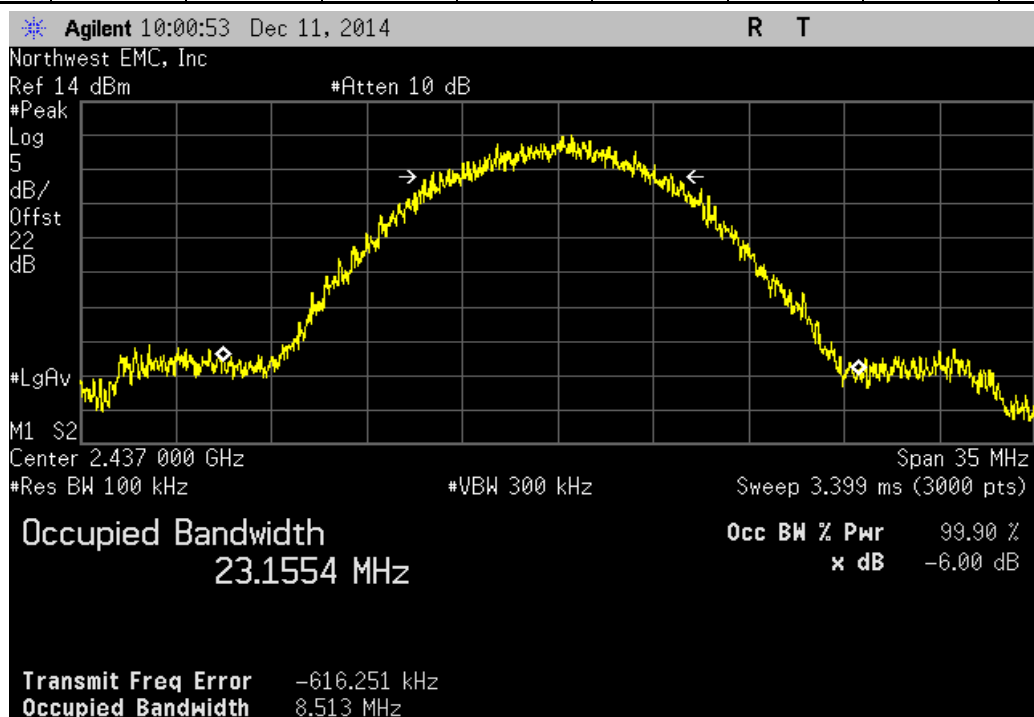
Antenna 1, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz					Limit	Result
				Value	(>)	
				9.555 MHz	500 kHz	Pass



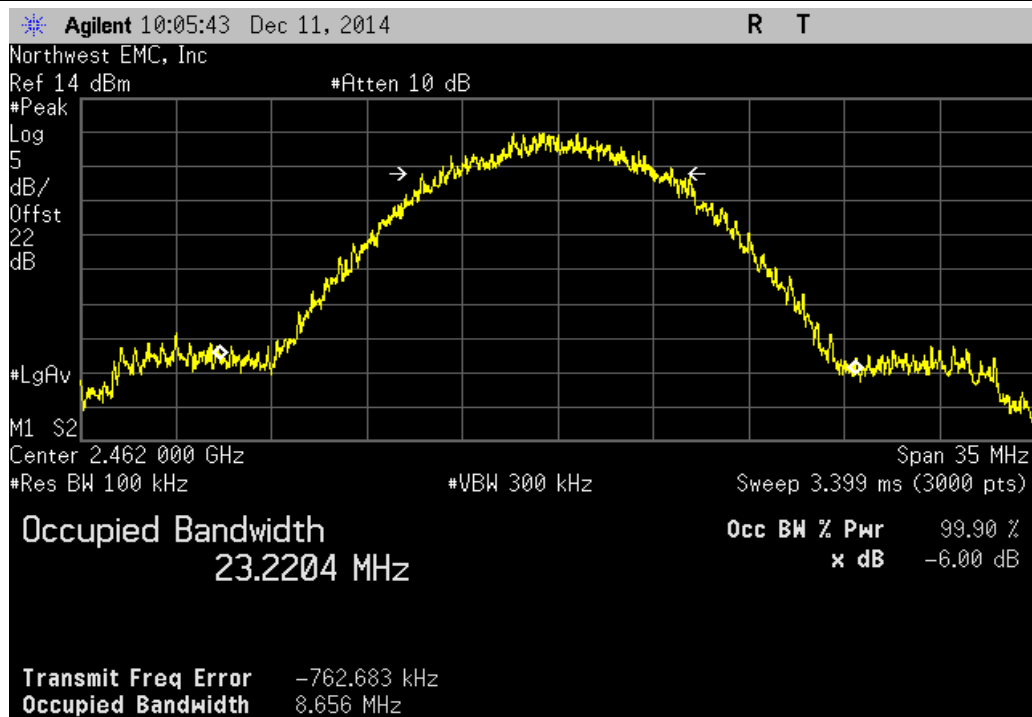
Antenna 1, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				8.132 MHz	500 kHz	Pass



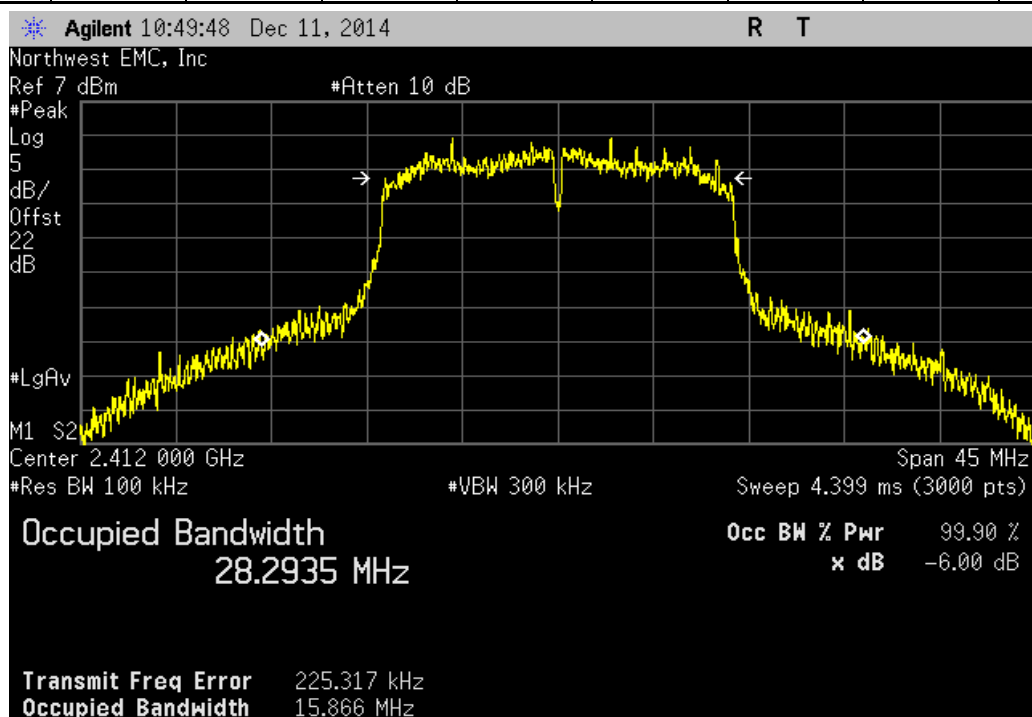
Antenna 1, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				8.513 MHz	500 kHz	Pass



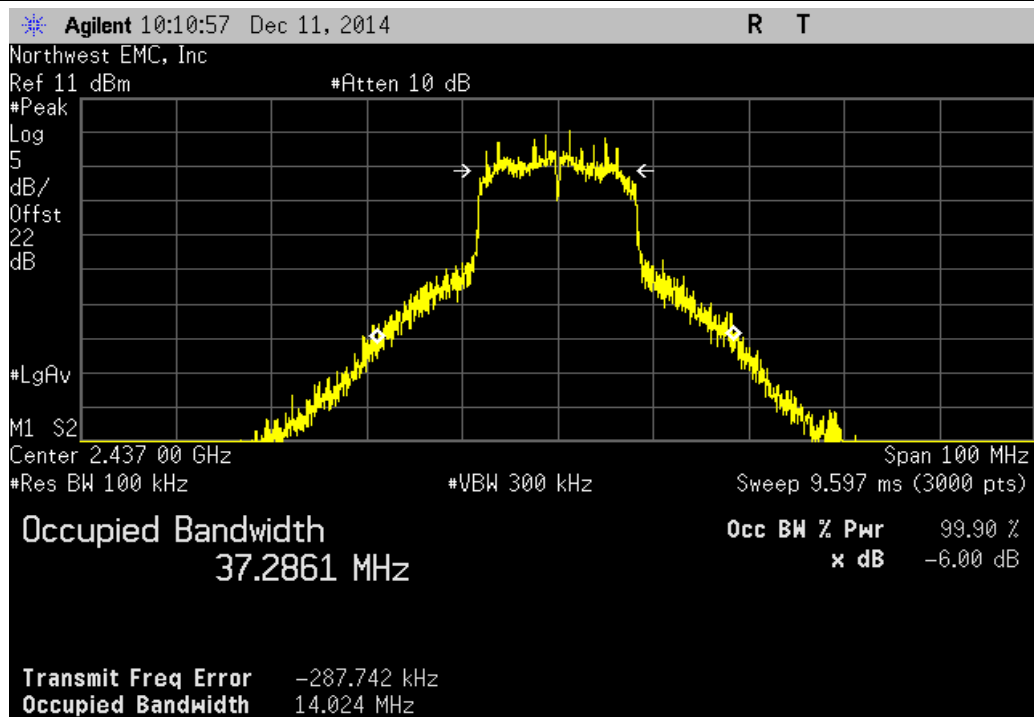
Antenna 1, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz				
	Value	Limit (>)	Result	
	8.656 MHz	500 kHz	Pass	



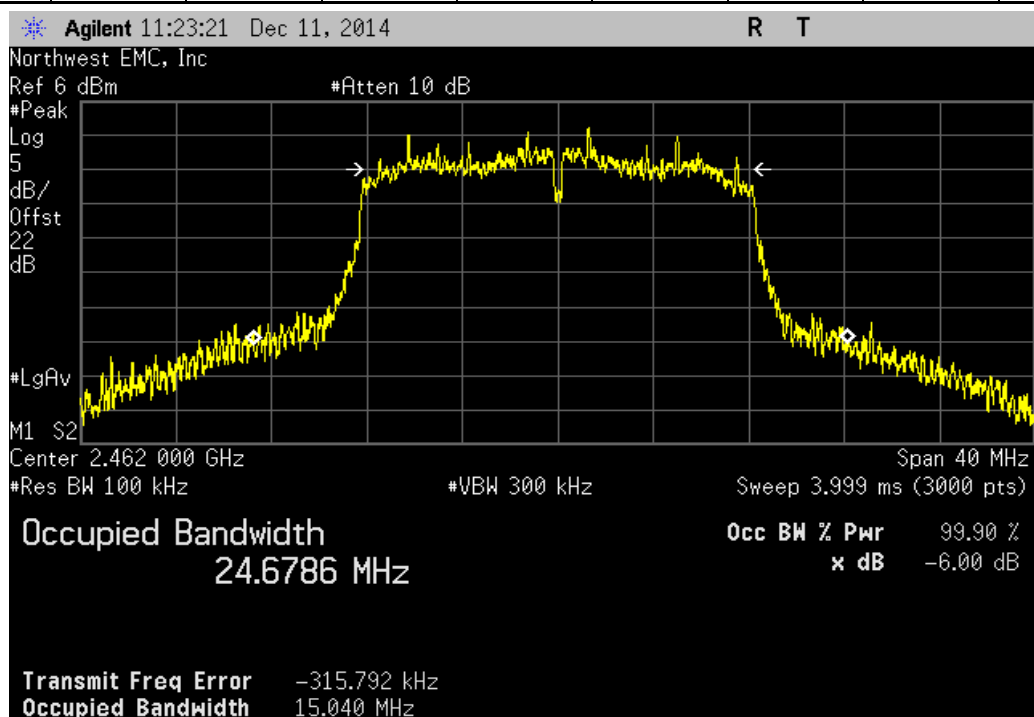
Antenna 1, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz				
	Value	Limit (>)	Result	
	15.866 MHz	500 kHz	Pass	



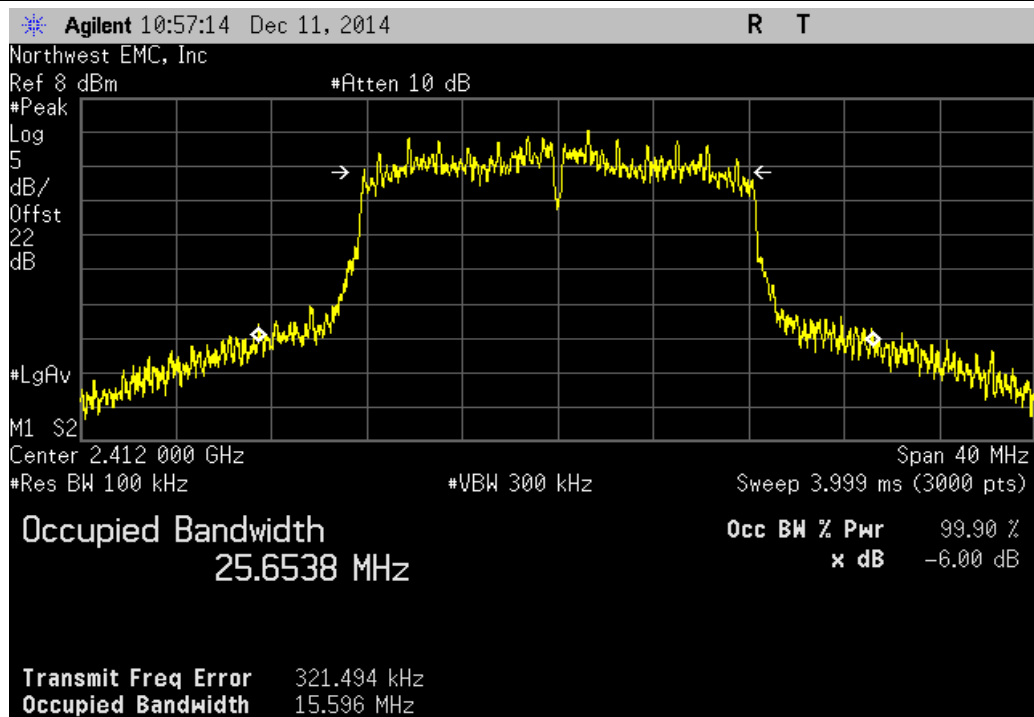
Antenna 1, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz				Value	Limit (>)	Result
				14.024 MHz	500 kHz	Pass



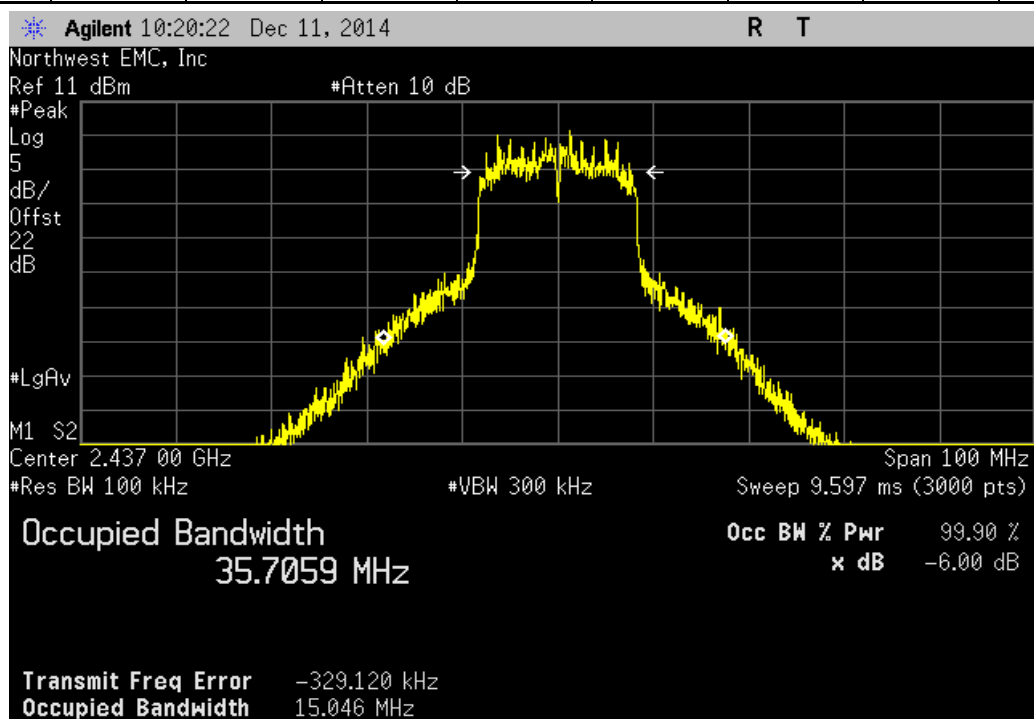
Antenna 1, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz				Value	Limit (>)	Result
				15.04 MHz	500 kHz	Pass



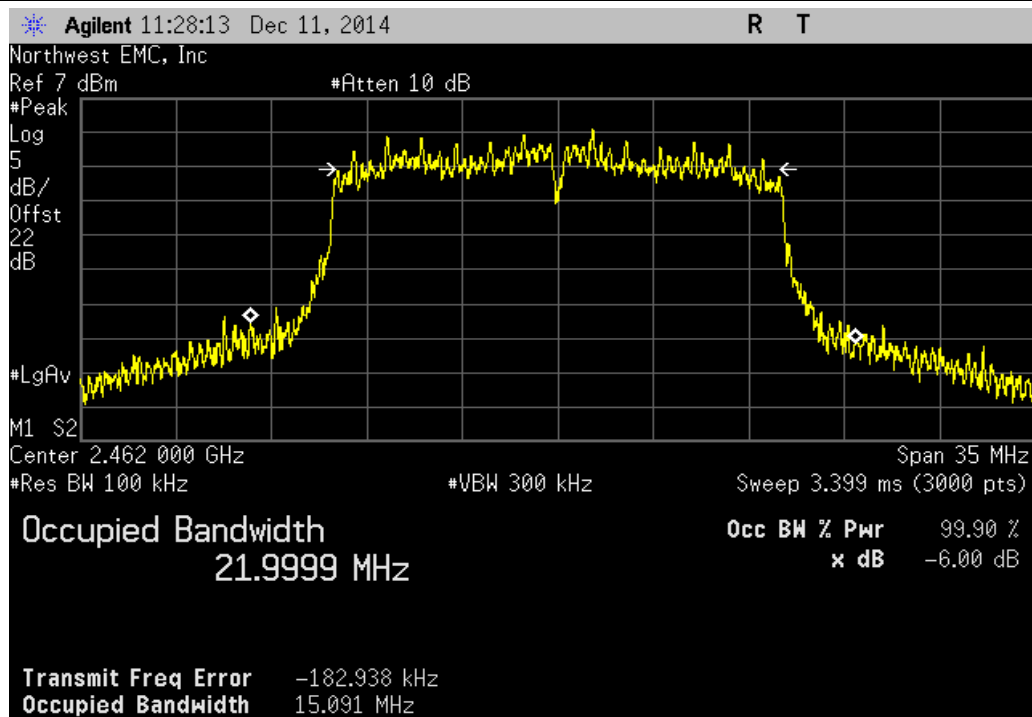
Antenna 1, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz					Limit	Result
				Value	(>)	
				15.596 MHz	500 kHz	Pass



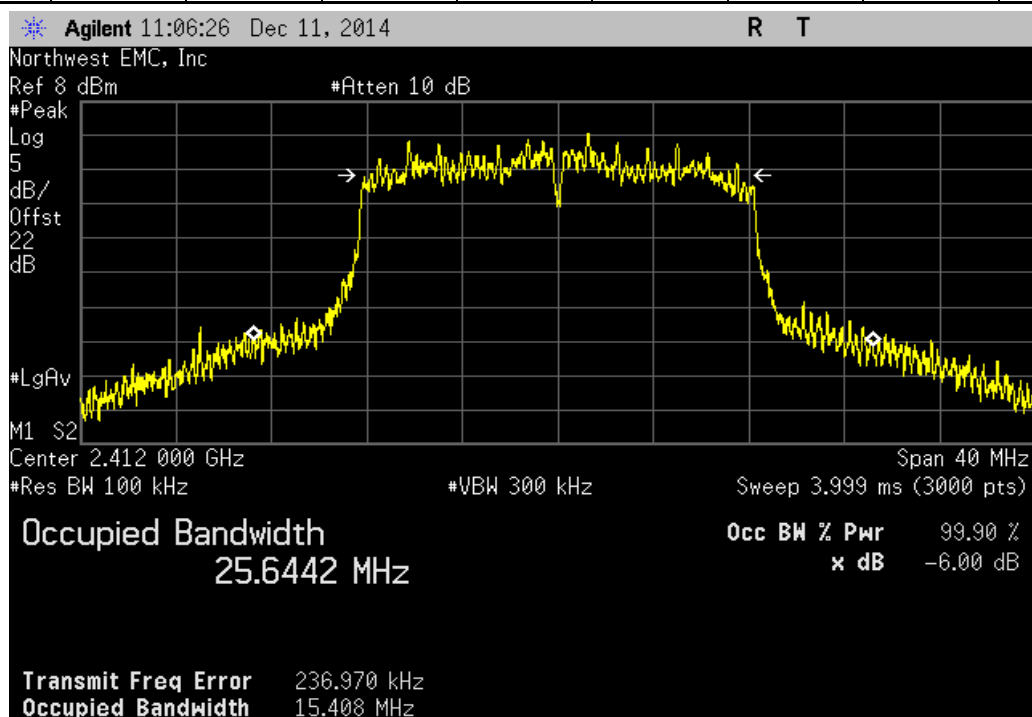
Antenna 1, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz					Limit	Result
				Value	(>)	
				15.046 MHz	500 kHz	Pass



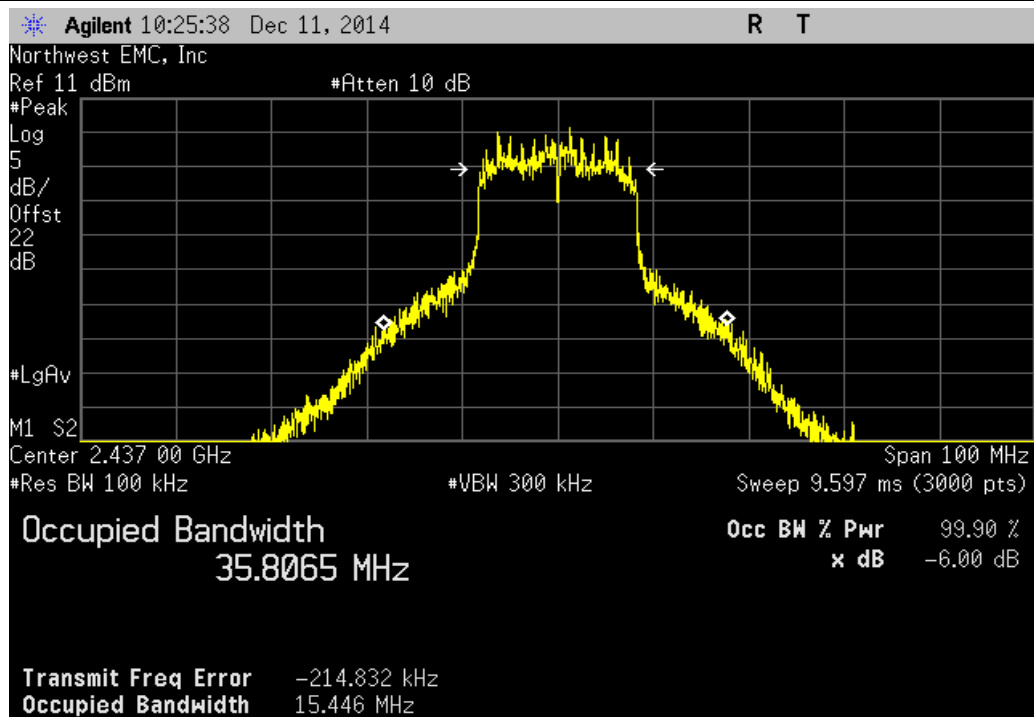
Antenna 1, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz					Limit	Result
				Value	(>)	
				15.091 MHz	500 kHz	Pass



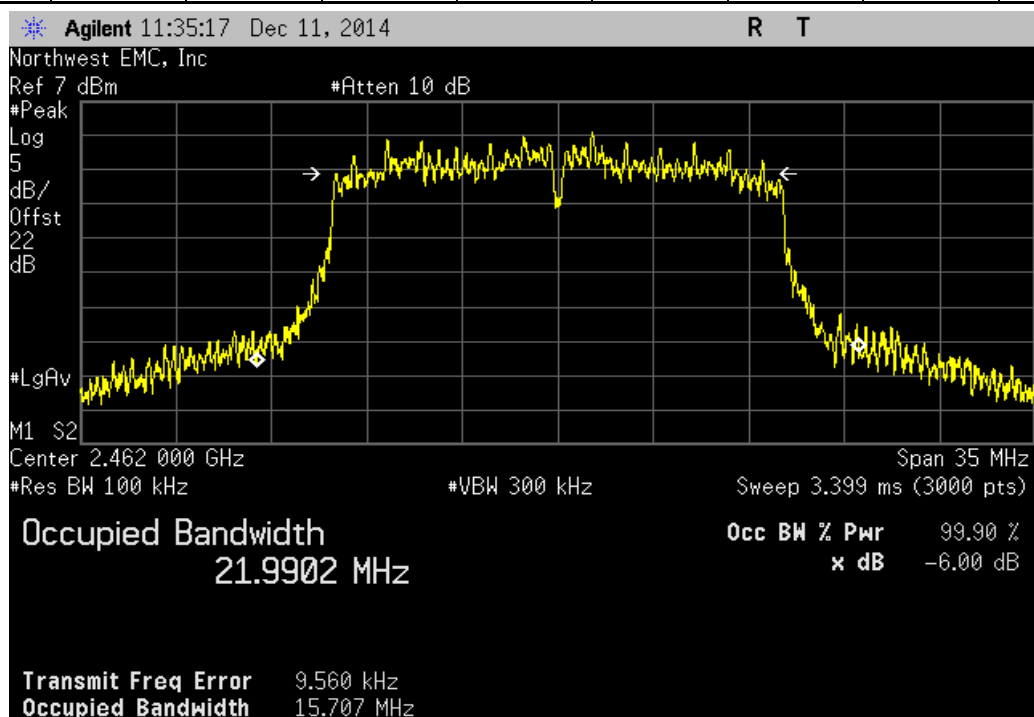
Antenna 1, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz					Limit	Result
				Value	(>)	
				15.408 MHz	500 kHz	Pass



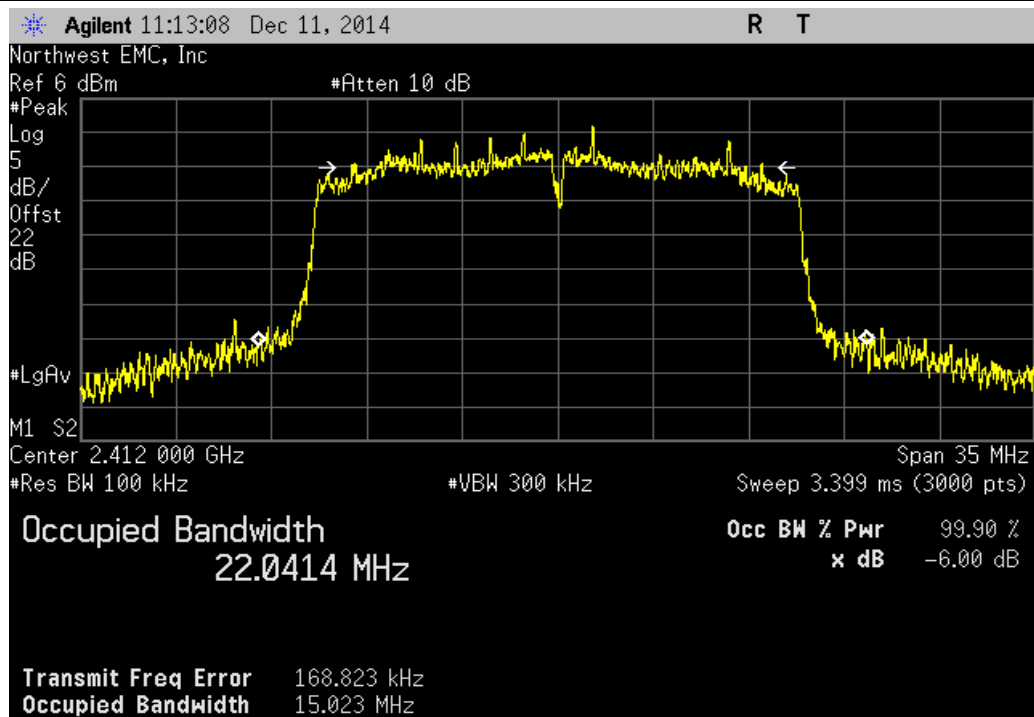
Antenna 1, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz				Value	Limit (>)	Result
				15.446 MHz	500 kHz	Pass



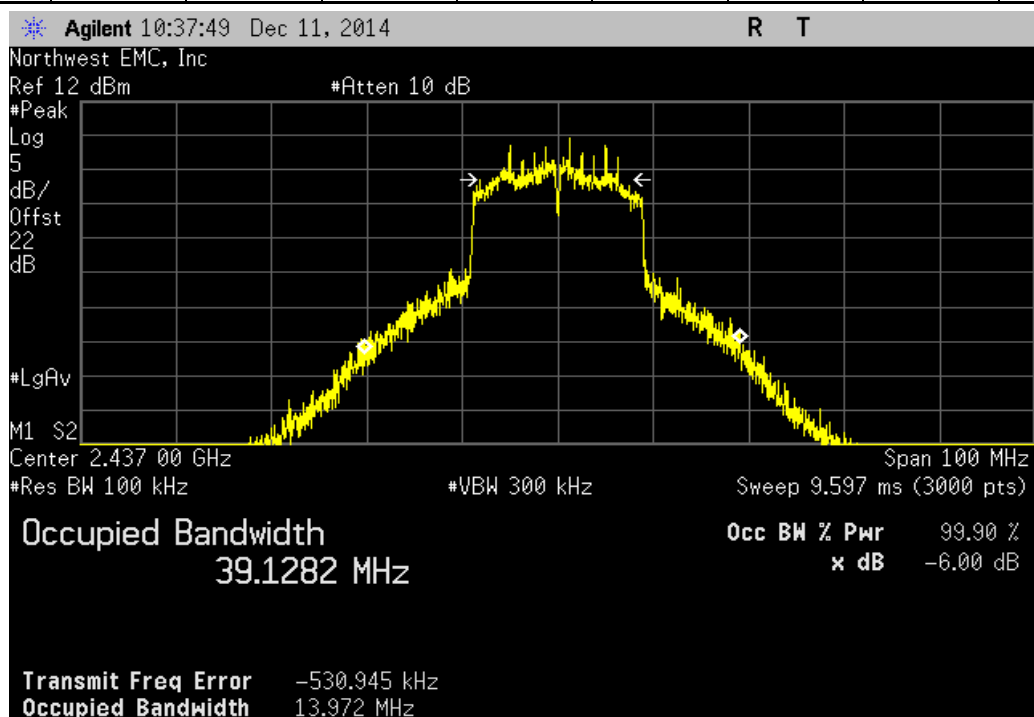
Antenna 1, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz				Value	Limit (>)	Result
				15.707 MHz	500 kHz	Pass



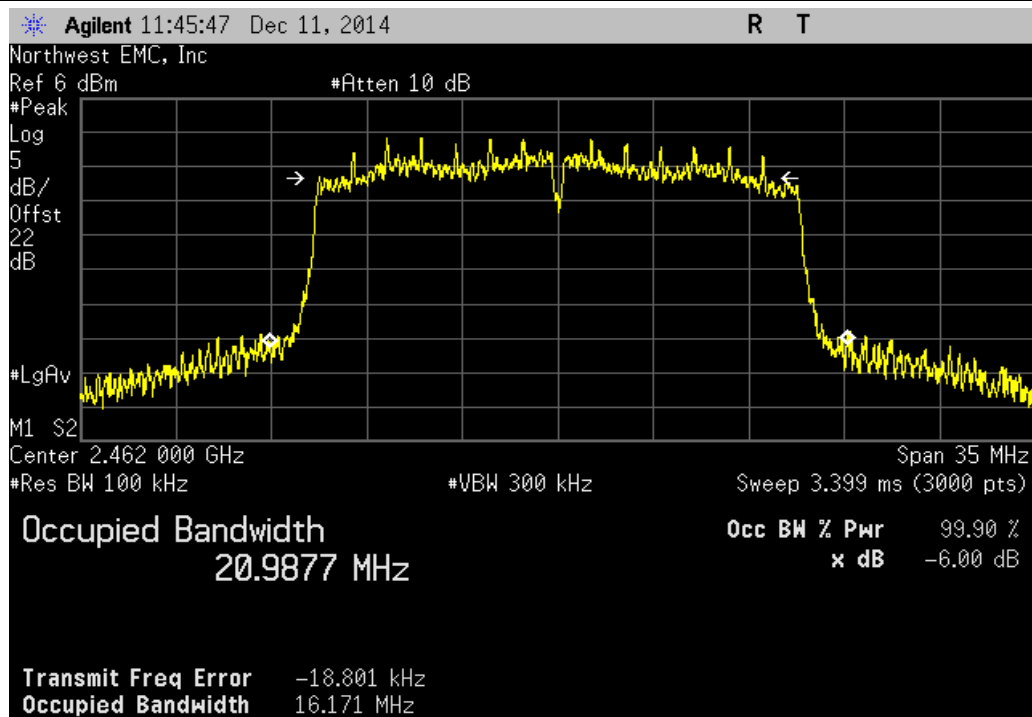
Antenna 1, 802.11(n) MCS0, Low Channel 1, 2412 MHz					Limit	Result
				Value	(>)	
				15.023 MHz	500 kHz	Pass



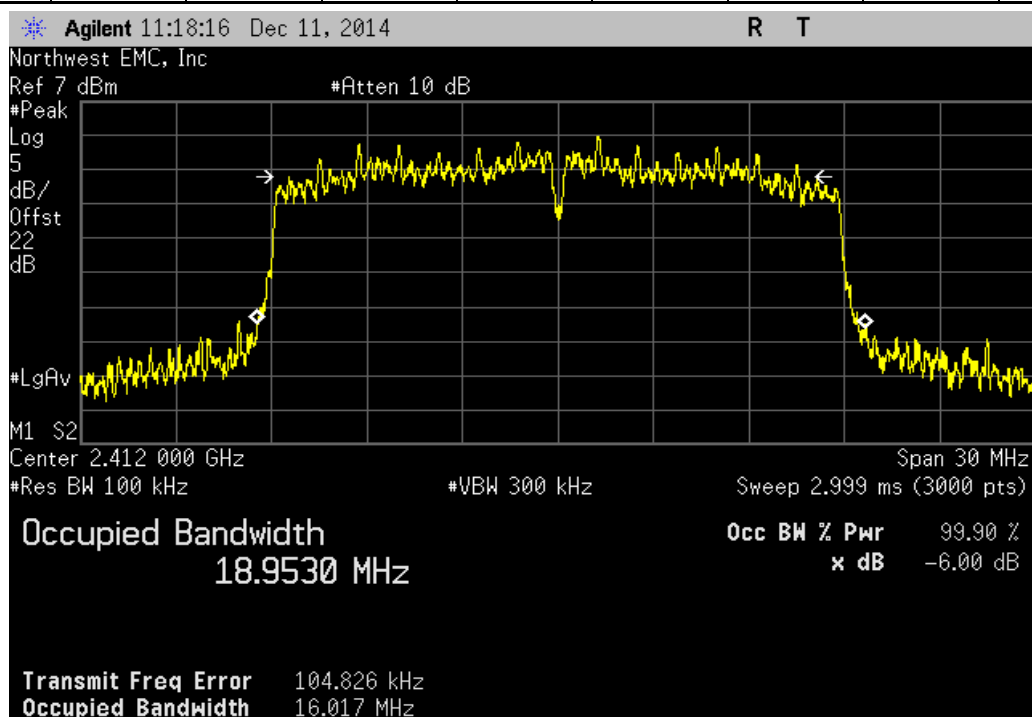
Antenna 1, 802.11(n) MCS0, Mid Channel 6, 2437 MHz					Limit	Result
				Value	(>)	
				13.972 MHz	500 kHz	Pass



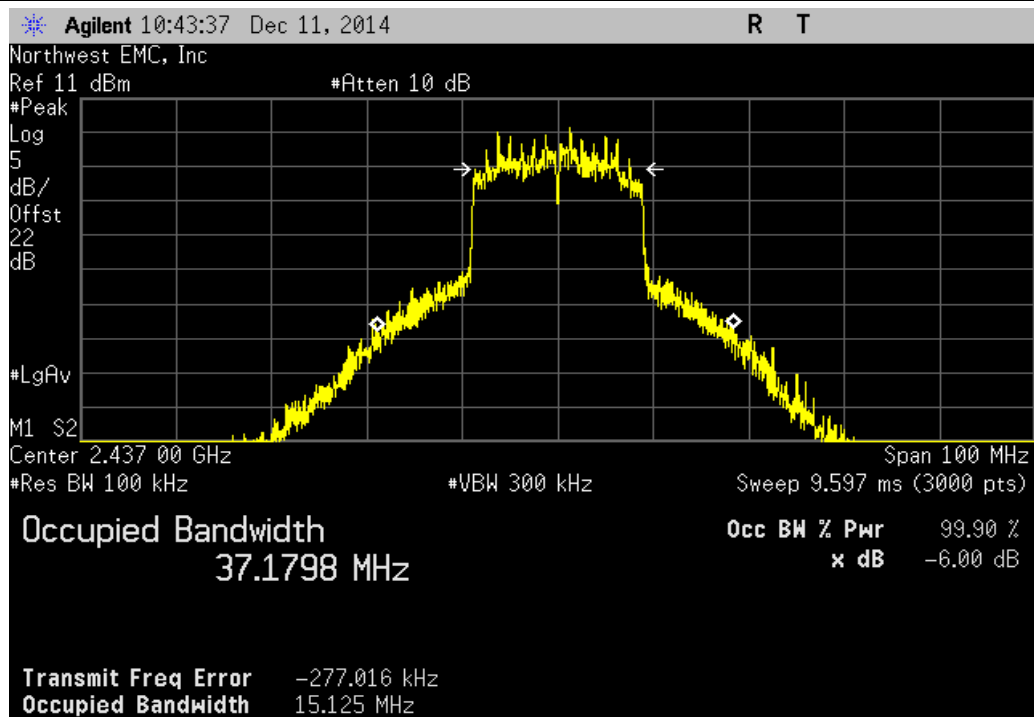
Antenna 1, 802.11(n) MCS0, High Channel 11, 2462 MHz					Limit	Result
				Value	(>)	
				16.171 MHz	500 kHz	Pass



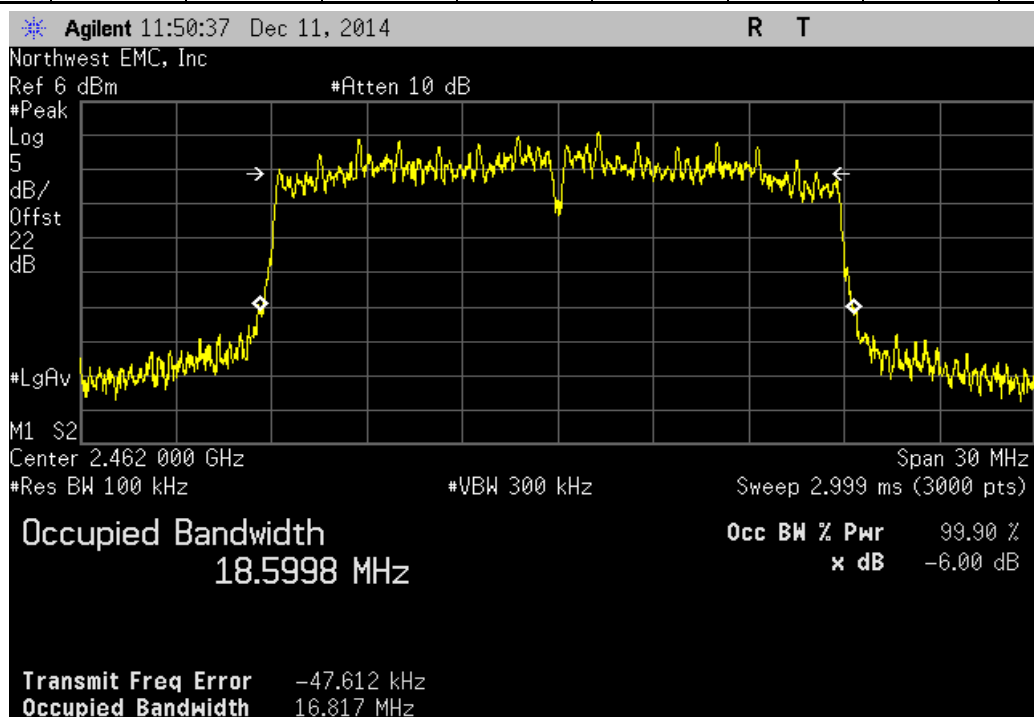
Antenna 1, 802.11(n) MCS7, Low Channel 1, 2412 MHz					Limit	Result
				Value	(>)	
				16.017 MHz	500 kHz	Pass

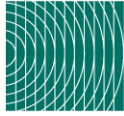


Antenna 1, 802.11(n) MCS7, Mid Channel 6, 2437 MHz					Limit	Result
				Value	(>)	
				15.125 MHz	500 kHz	Pass



Antenna 1, 802.11(n) MCS7, High Channel 11, 2462 MHz					Limit	Result
				Value	(>)	
				16.817 MHz	500 kHz	Pass





OUTPUT POWER

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo)
MN08 Direct Connect Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	10/2/2014	12
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	4/3/2014	12
40 GHz DC Block	Fairview Microwave	SD3379	AMI	10/2/2014	12
MXG Vector Signal Generator	Agilent	N5182A	TIF	8/12/2014	36
Spectrum Analyzer	Agilent	E4440A	AAX	4/28/2014	12

TEST DESCRIPTION

The transmit frequency was set to the required channels in each band. The transmit power was set to its default maximum. A direct connection was made between the RF output of the EUT and a spectrum analyzer. Attenuation and a DC block were used. The reference level offset on the spectrum analyzer was adjusted to compensate for cable loss and the external attenuation used between the RF output and the spectrum analyzer input.

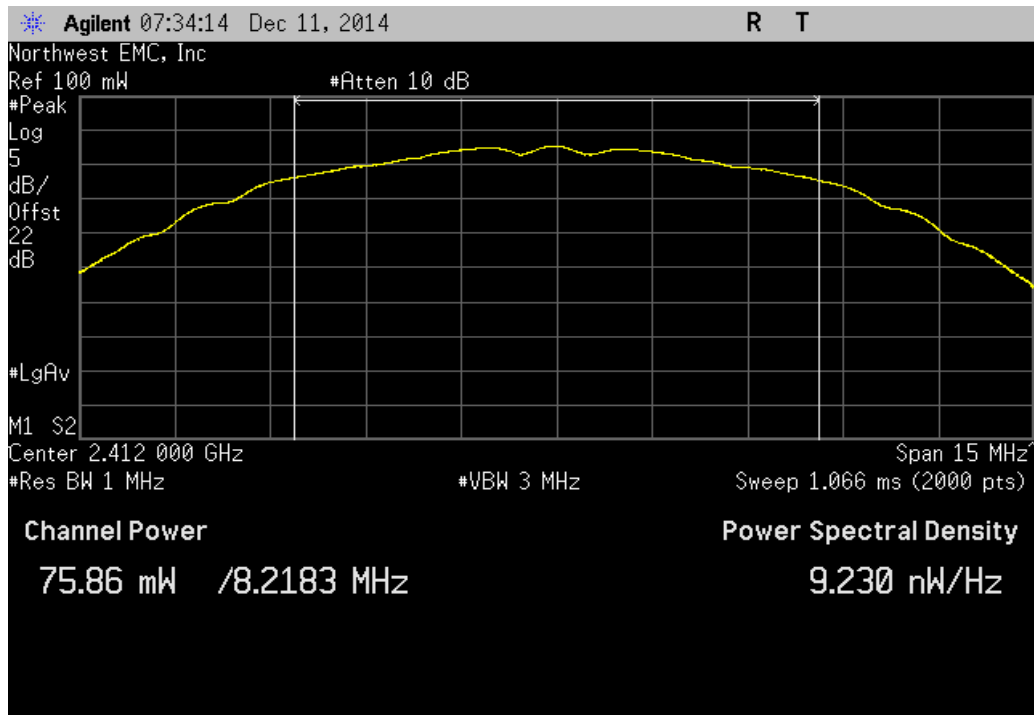
Prior to measuring peak transmit power; the emission bandwidth (B) and the transmission pulse duration (T) were measured. Both are required to determine the method of measuring Maximum Conducted Output Power. The transmission pulse duration (T) was measured using a zero span on the spectrum analyzer to see the pulses in the time domain.

The channel power integration method found in KDB 558074 DTS D01 Measurement Section 9.1.2 was used because the DTS Bandwidth of the radio was greater than the RBW on the analyzer.

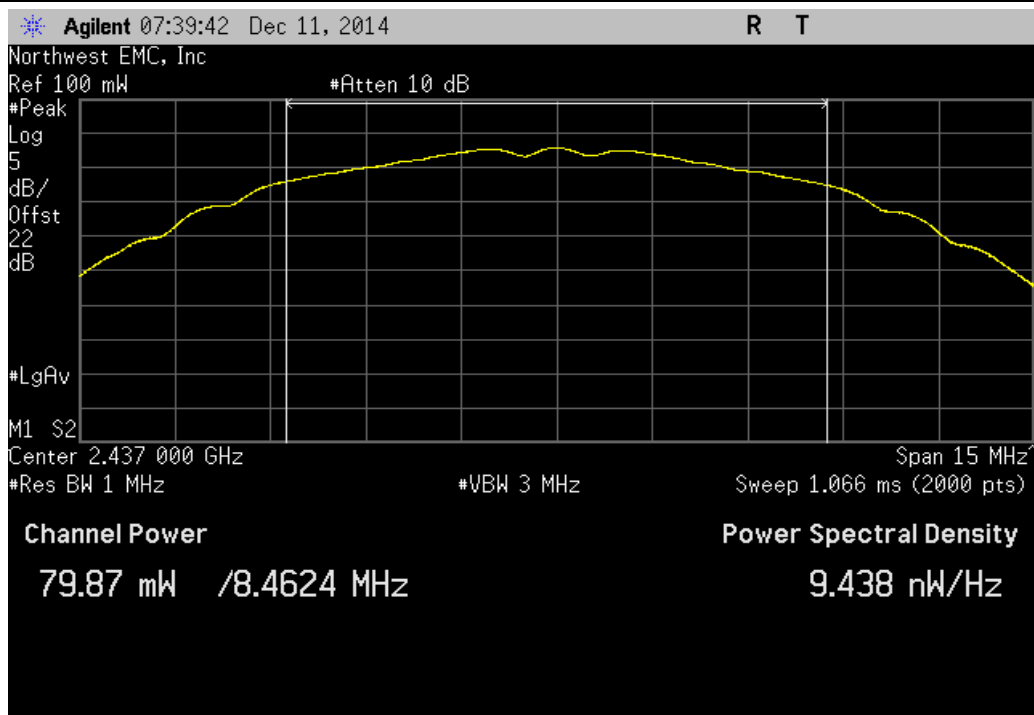
De Facto EIRP Limit: Per 47 CFR 15.247 (b)(1-3), the EUT meets the de facto EIRP limit of +36 dBm.

EUT: TH6320WF02		Work Order: HNYW0120	
Serial Number: 71630010589274		Date: 12/11/14	
Customer: Honeywell, Automation and Control Solutions		Temperature: 23.5°C	
Attendees: None		Humidity: 21%	
Project: None		Barometric Pres.: 1026.4	
Tested by: Trevor Buls		Power: 110VAC/60Hz	
Job Site: MN08			
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2014		ANSI C63.10:2009	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature <i>Trevor Buls</i>	
		Value	Limit (<) Result
Antenna 0			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz		75.858 mW	1 W Pass
Mid Channel 6, 2437 MHz		79.869 mW	1 W Pass
High Channel 11, 2462 MHz		76.559 mW	1 W Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz		75.95 mW	1 W Pass
Mid Channel 6, 2437 MHz		73.823 mW	1 W Pass
High Channel 11, 2462 MHz		74.748 mW	1 W Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz		25.44 mW	1 W Pass
Mid Channel 6, 2437 MHz		71.486 mW	1 W Pass
High Channel 11, 2462 MHz		25.536 mW	1 W Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz		25.675 mW	1 W Pass
Mid Channel 6, 2437 MHz		69.799 mW	1 W Pass
High Channel 11, 2462 MHz		24.271 mW	1 W Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz		26.009 mW	1 W Pass
Mid Channel 6, 2437 MHz		67.351 mW	1 W Pass
High Channel 11, 2462 MHz		25.417 mW	1 W Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz		24.066 mW	1 W Pass
Mid Channel 6, 2437 MHz		65.873 mW	1 W Pass
High Channel 11, 2462 MHz		22.442 mW	1 W Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz		23.454 mW	1 W Pass
Mid Channel 6, 2437 MHz		67.588 mW	1 W Pass
High Channel 11, 2462 MHz		21.688 mW	1 W Pass
Antenna 1			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz		69.576 mW	1 W Pass
Mid Channel 6, 2437 MHz		73.879 mW	1 W Pass
High Channel 11, 2462 MHz		73.38 mW	1 W Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz		72.493 mW	1 W Pass
Mid Channel 6, 2437 MHz		75.4 mW	1 W Pass
High Channel 11, 2462 MHz		75.296 mW	1 W Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz		30.488 mW	1 W Pass
Mid Channel 6, 2437 MHz		55.92 mW	1 W Pass
High Channel 11, 2462 MHz		24.681 mW	1 W Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz		30.132 mW	1 W Pass
Mid Channel 6, 2437 MHz		58.238 mW	1 W Pass
High Channel 11, 2462 MHz		24.403 mW	1 W Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz		28.868 mW	1 W Pass
Mid Channel 6, 2437 MHz		60.699 mW	1 W Pass
High Channel 11, 2462 MHz		24.102 mW	1 W Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz		20.972 mW	1 W Pass
Mid Channel 6, 2437 MHz		54.43 mW	1 W Pass
High Channel 11, 2462 MHz		19.784 mW	1 W Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz		21.899 mW	1 W Pass
Mid Channel 6, 2437 MHz		56.025 mW	1 W Pass
High Channel 11, 2462 MHz		20.997 mW	1 W Pass

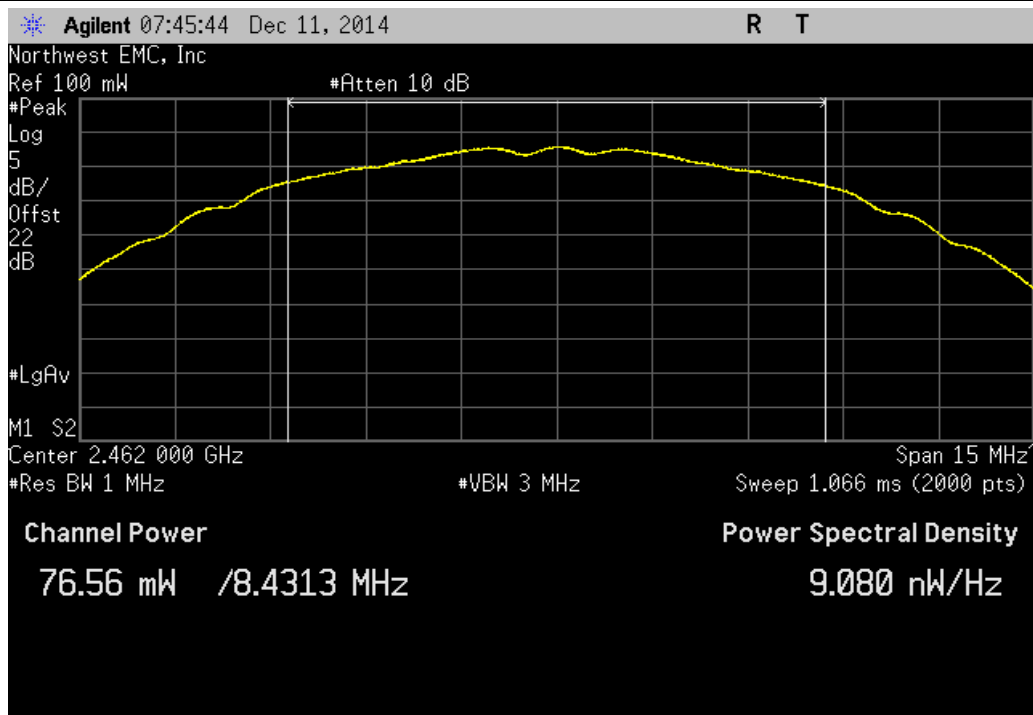
Antenna 0, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz					Limit	Result
Value					($\leq$)	
				75.858 mW	1 W	Pass



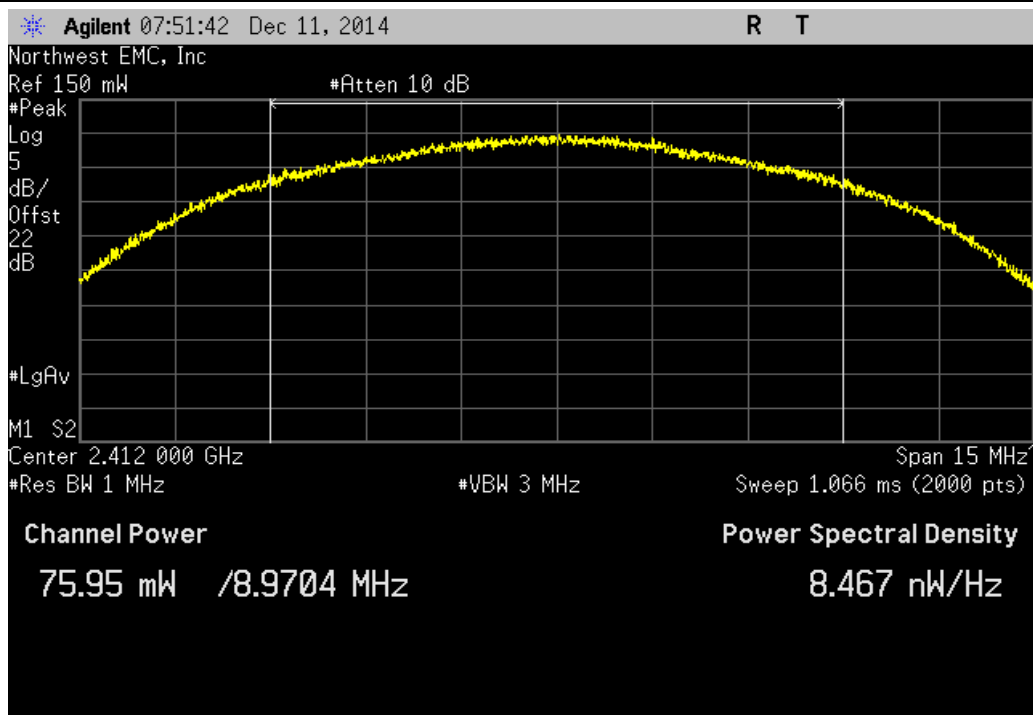
Antenna 0, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz					Limit	Result
Value					($\leq$)	
				79.869 mW	1 W	Pass



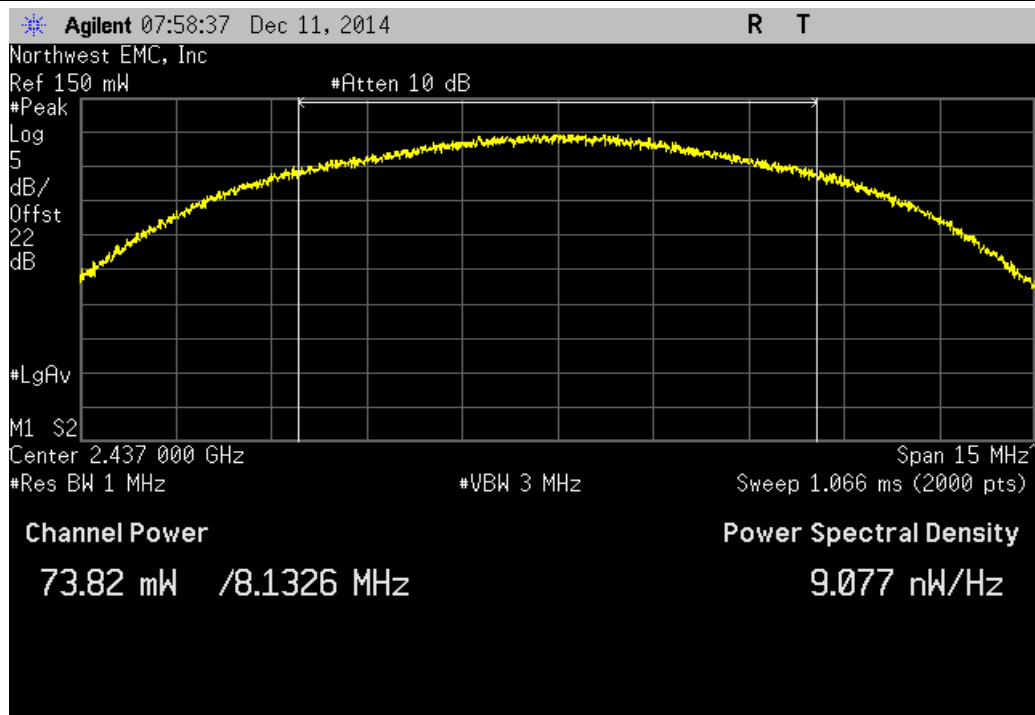
Antenna 0, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz					Limit	Result
Value					($\leq$)	
				76.559 mW	1 W	Pass



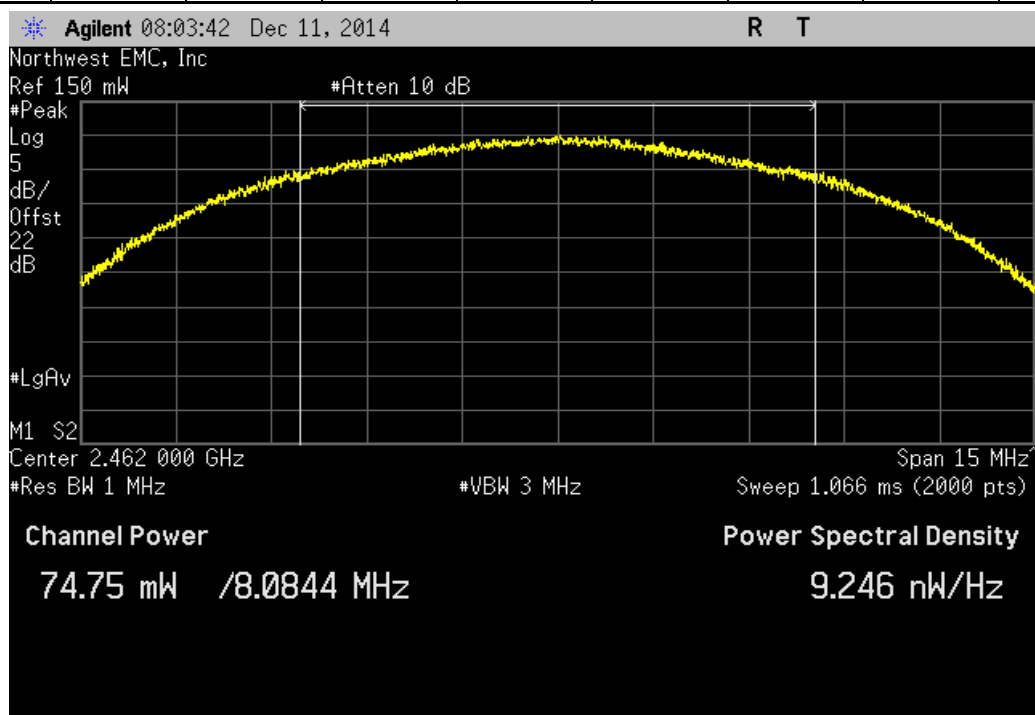
Antenna 0, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz					Limit	Result
Value					($\leq$)	
				75.95 mW	1 W	Pass



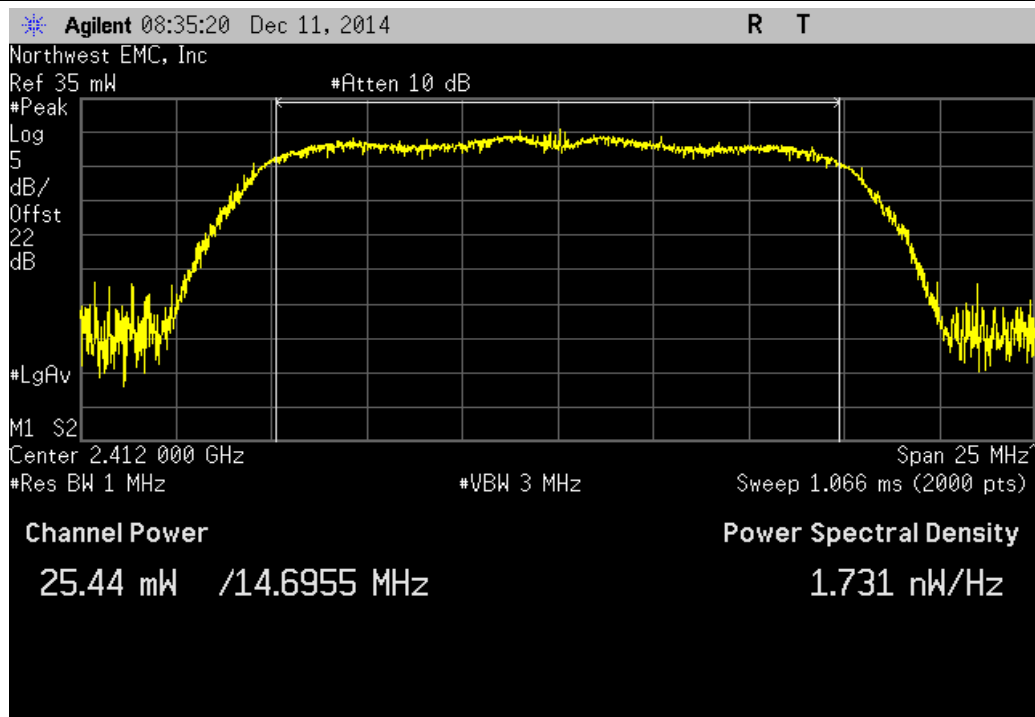
Antenna 0, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz			
	Value	Limit (<)	Result
	73.823 mW	1 W	Pass



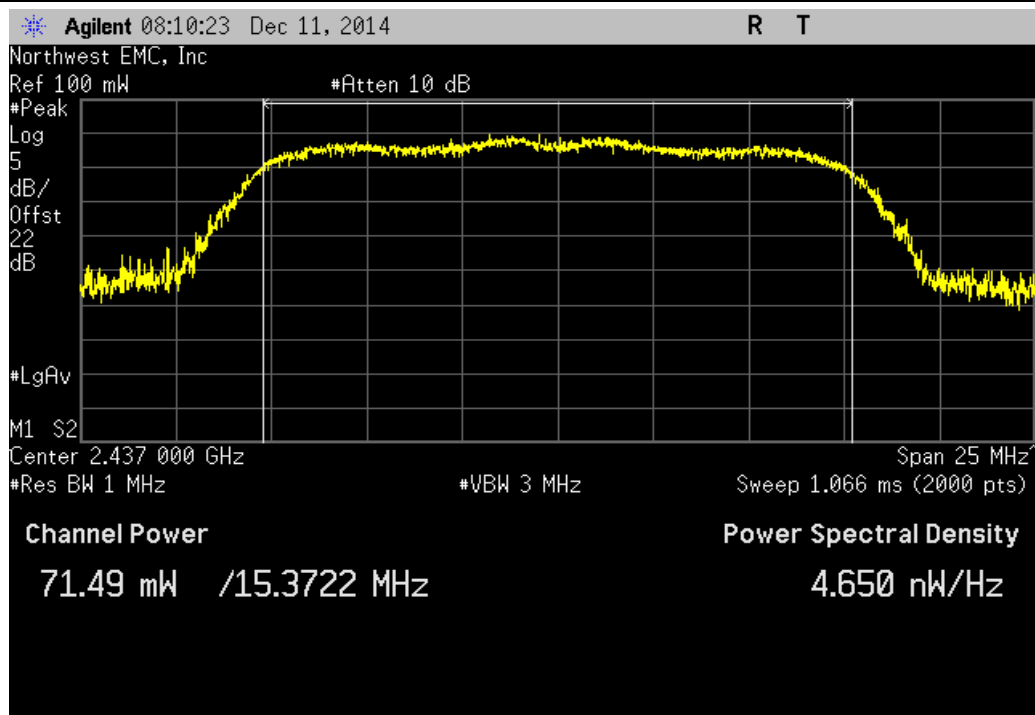
Antenna 0, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz			
	Value	Limit (<)	Result
	74.748 mW	1 W	Pass



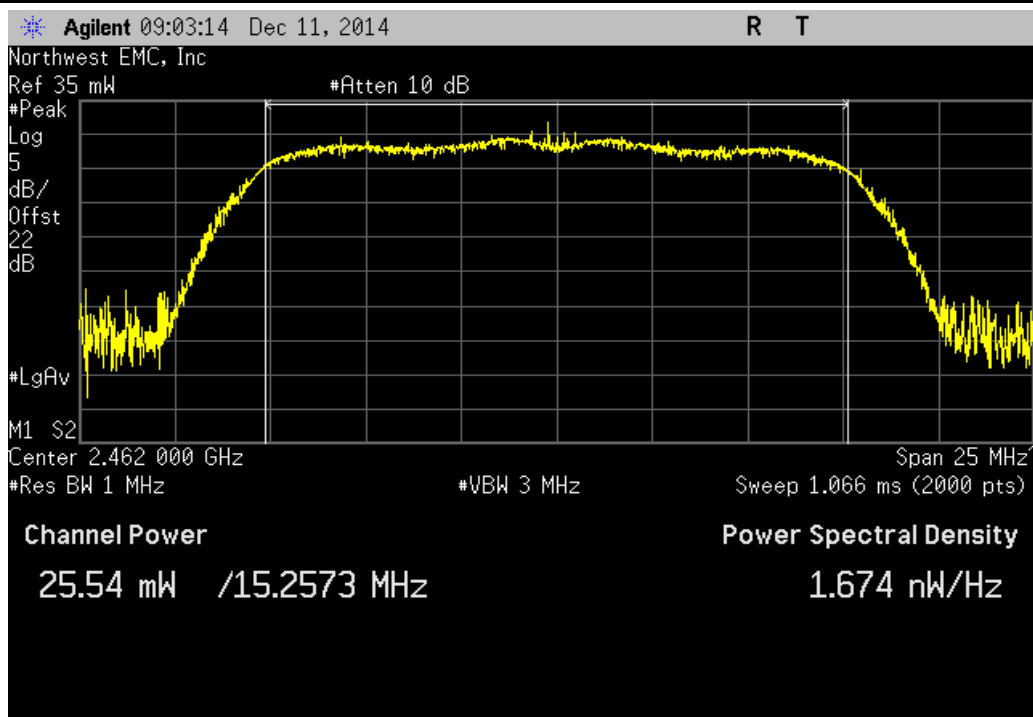
Antenna 0, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz					Limit	Result
Value					($\leq$)	
25.44 mW					1 W	Pass



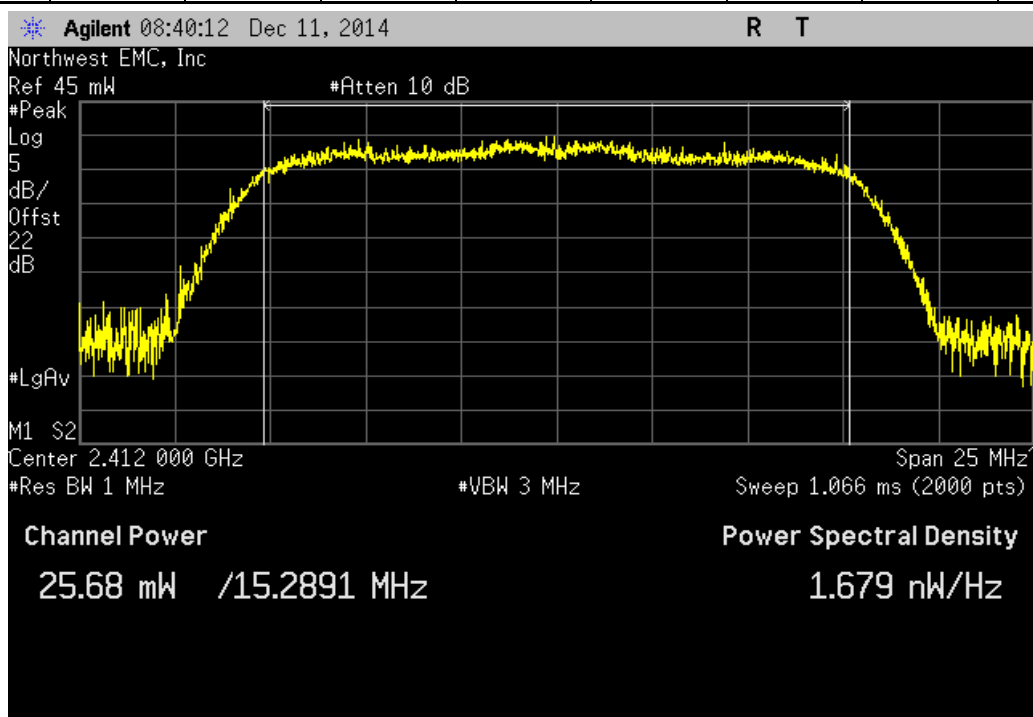
Antenna 0, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz					Limit	Result
Value					($\leq$)	
71.486 mW					1 W	Pass



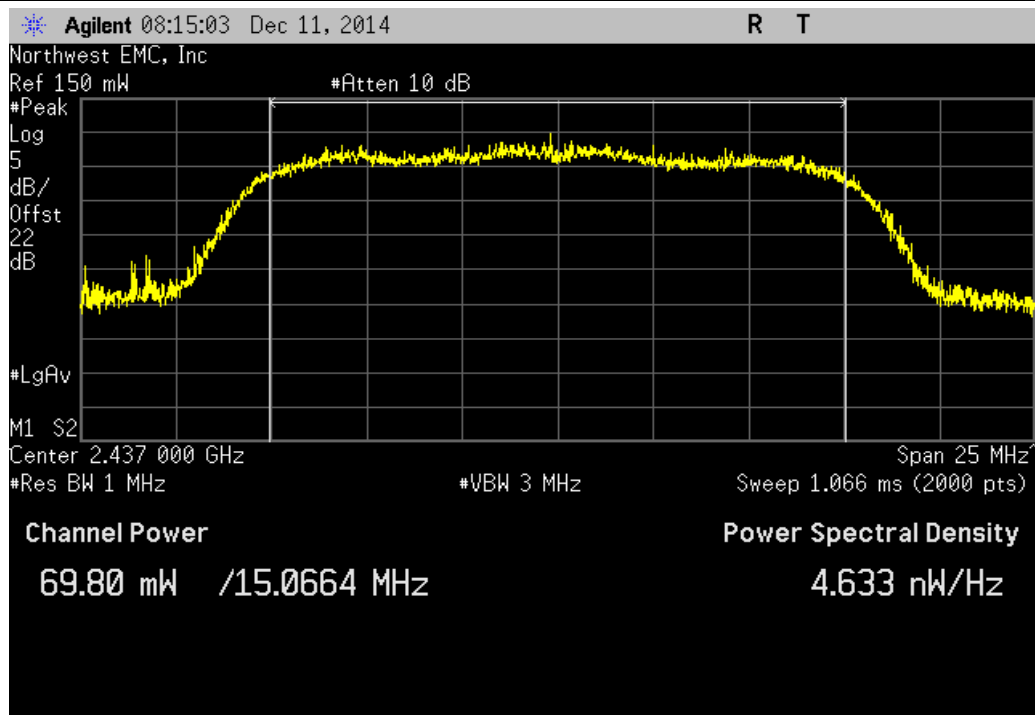
Antenna 0, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz				
	Value	Limit ($\leq$)	Result	
	25.536 mW	1 W	Pass	



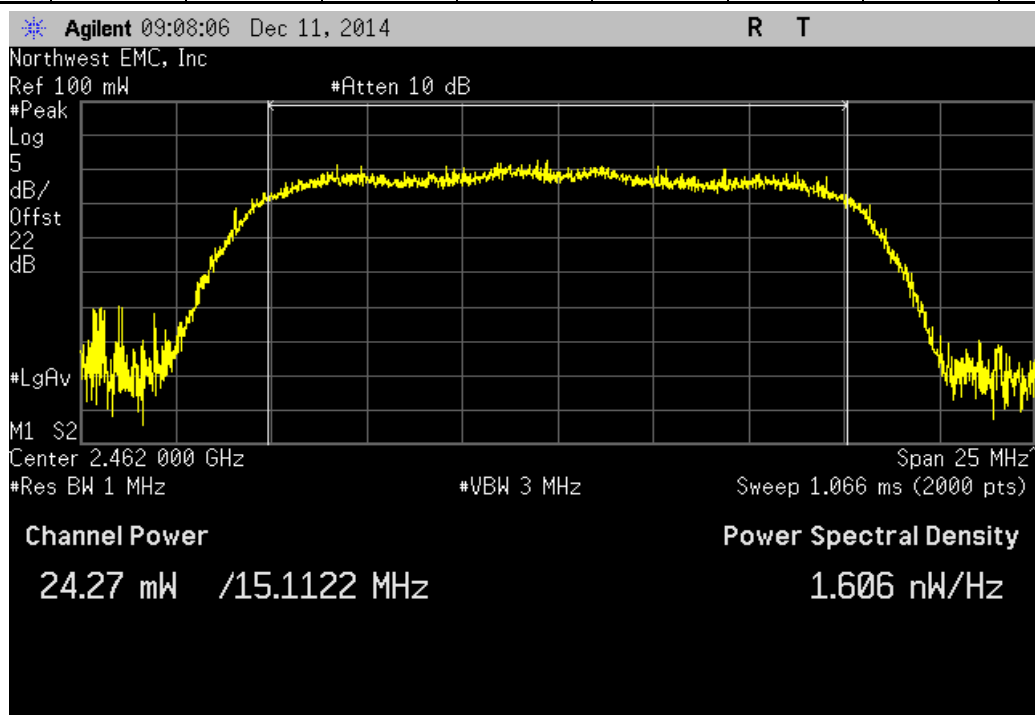
Antenna 0, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz				
	Value	Limit ($\leq$)	Result	
	25.675 mW	1 W	Pass	



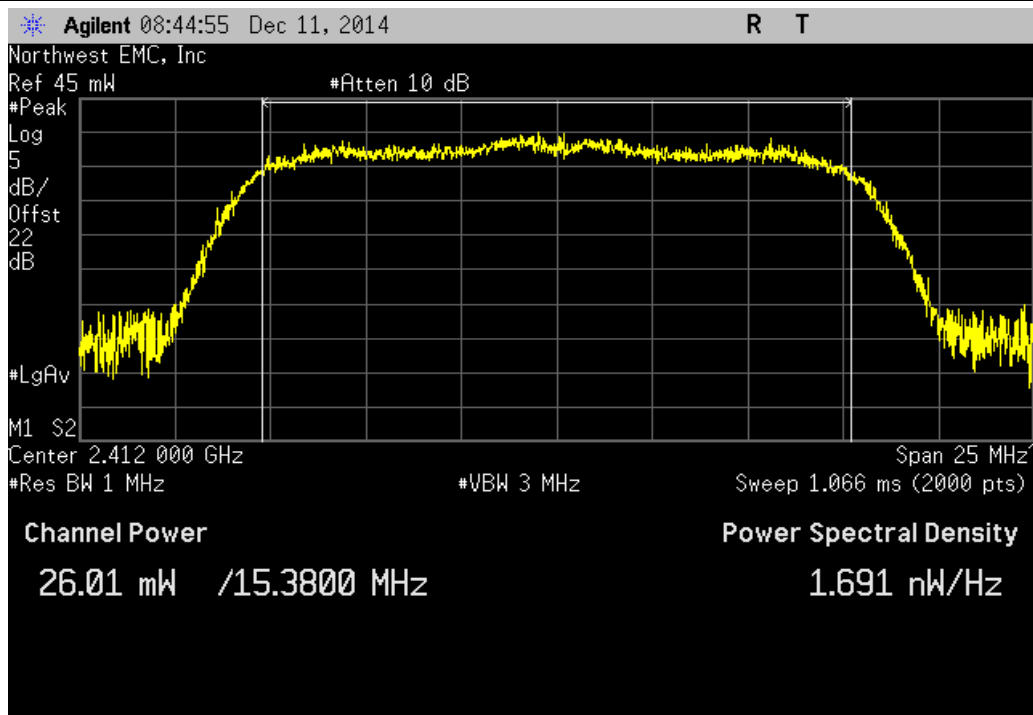
Antenna 0, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit ($\leq$)	Result
				69.799 mW	1 W	Pass



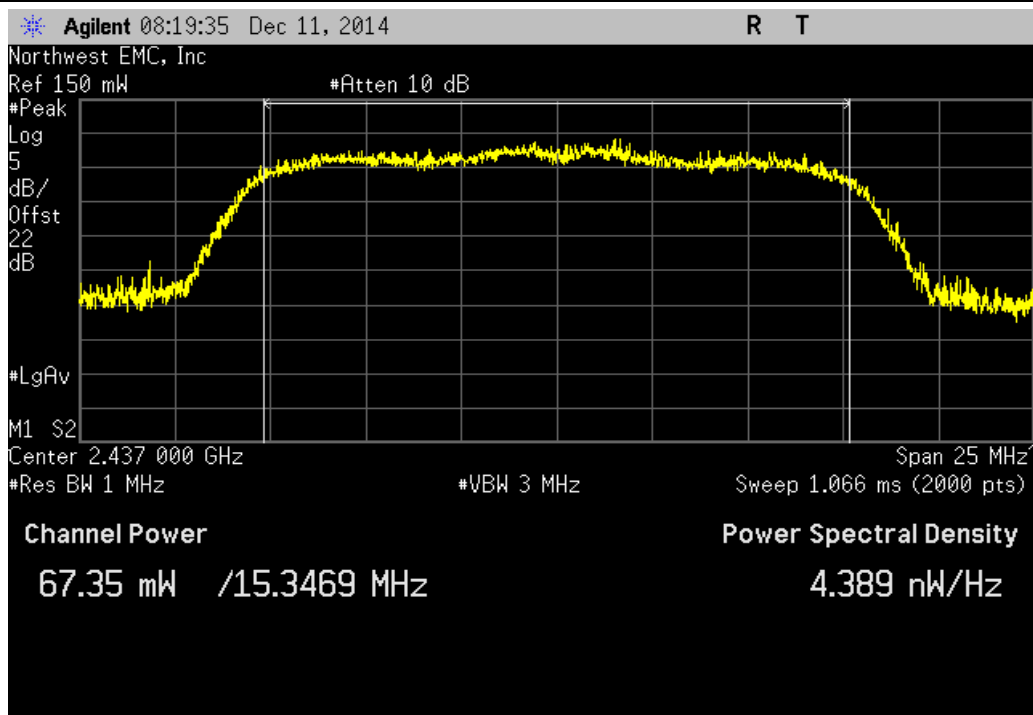
Antenna 0, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
				Value	Limit ($\leq$)	Result
				24.271 mW	1 W	Pass



Antenna 0, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz					Limit	Result
Value					($\leq$)	
26.009 mW					1 W	Pass

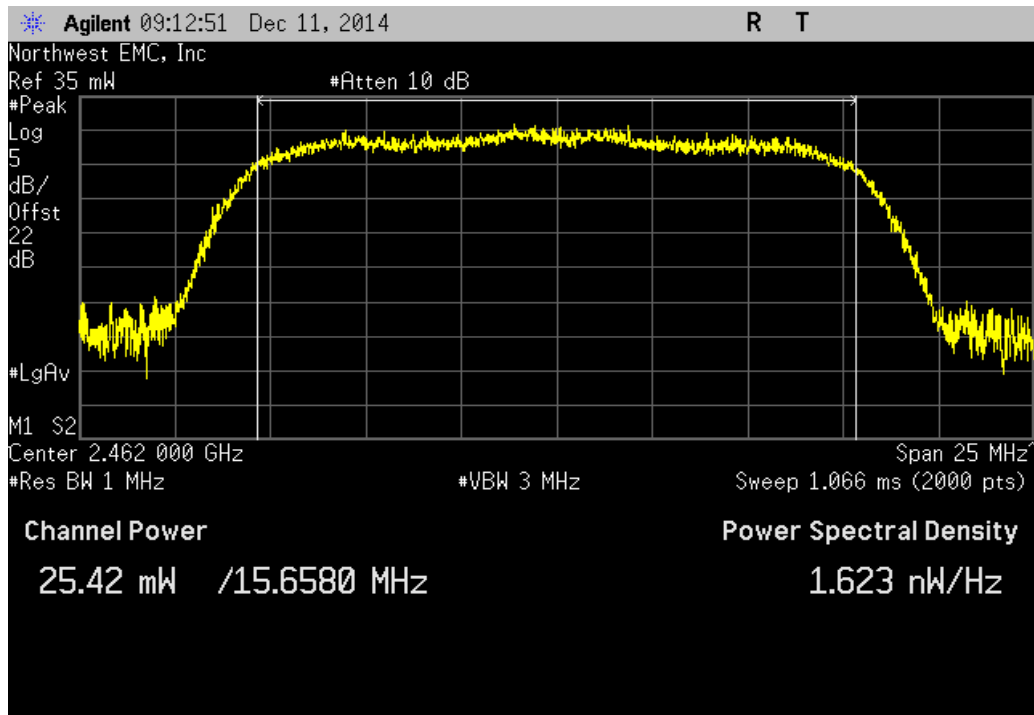


Antenna 0, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz					Limit	Result
Value					($\leq$)	
67.351 mW					1 W	Pass



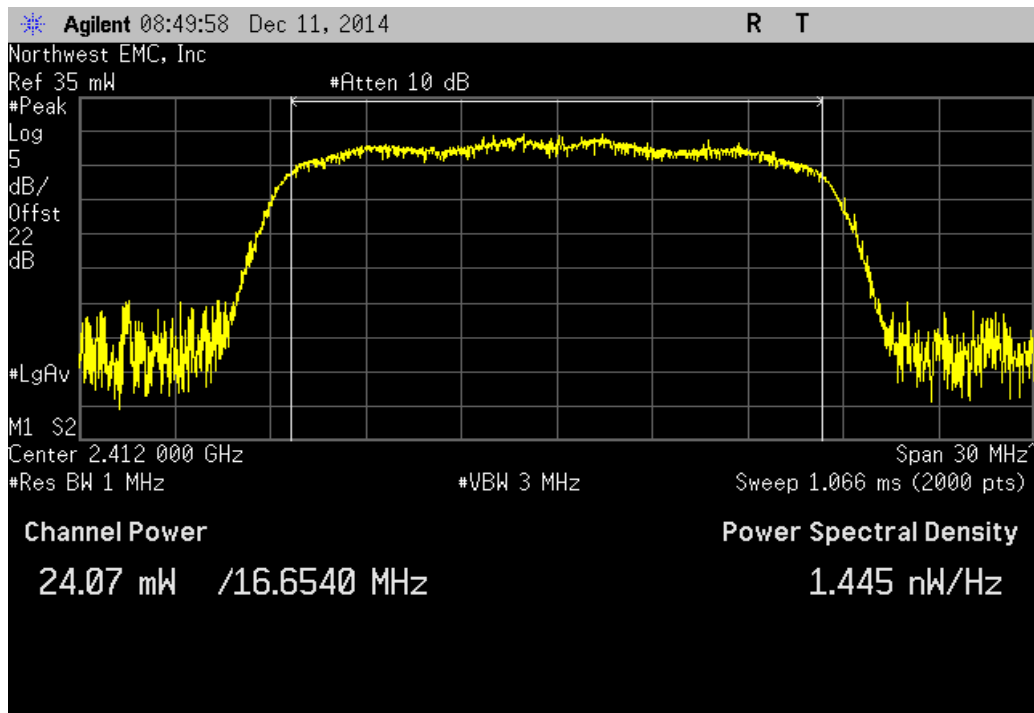
Antenna 0, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz

	Value	Limit ($\leq$)	Result
	25.417 mW	1 W	Pass

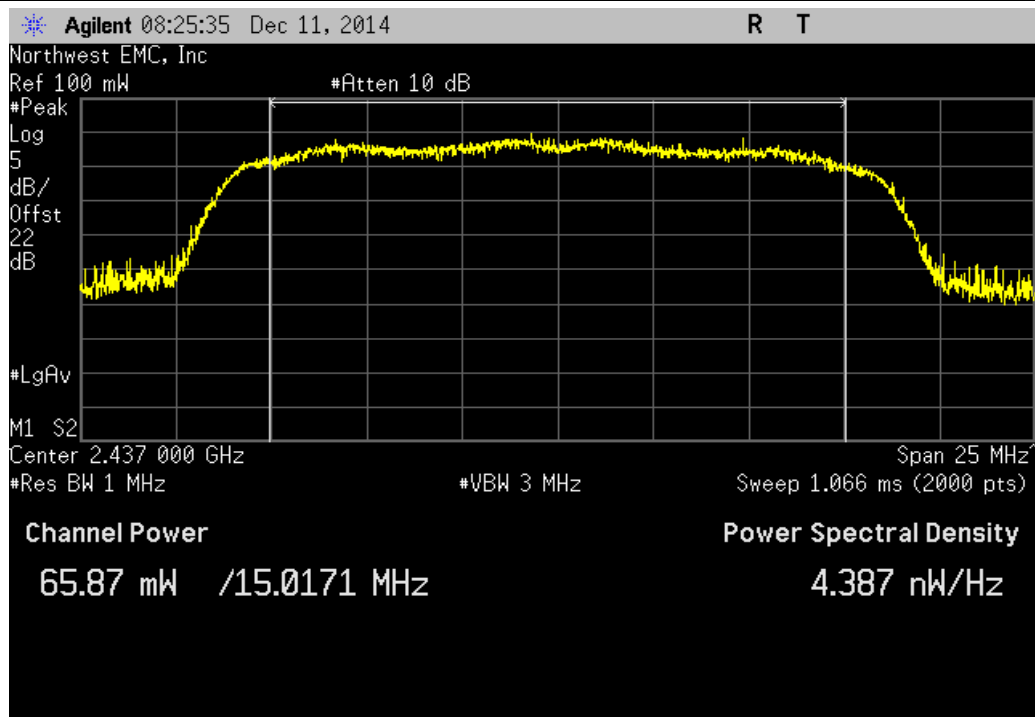


Antenna 0, 802.11(n) MCS0, Low Channel 1, 2412 MHz

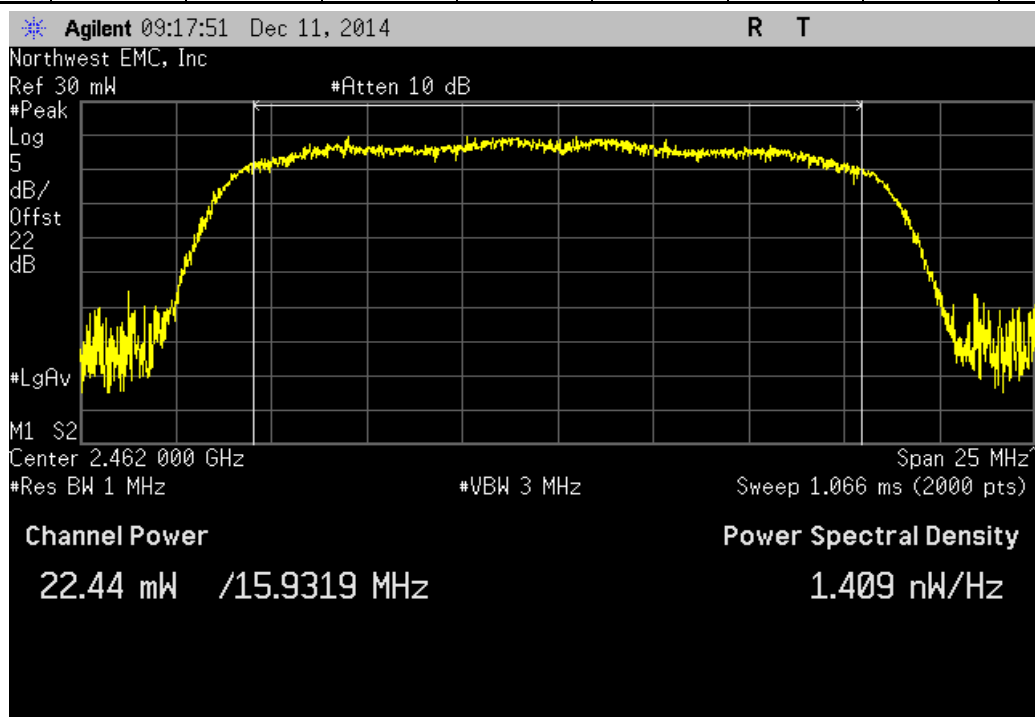
	Value	Limit ($\leq$)	Result
	24.066 mW	1 W	Pass



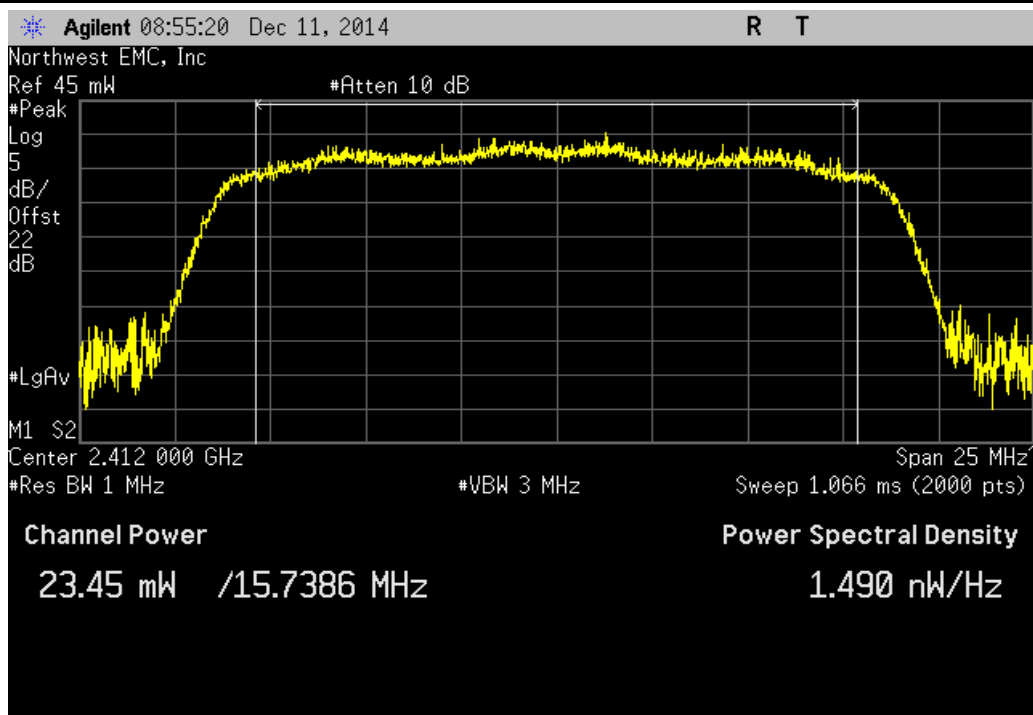
Antenna 0, 802.11(n) MCS0, Mid Channel 6, 2437 MHz			
	Value	Limit (<)	Result
	65.873 mW	1 W	Pass



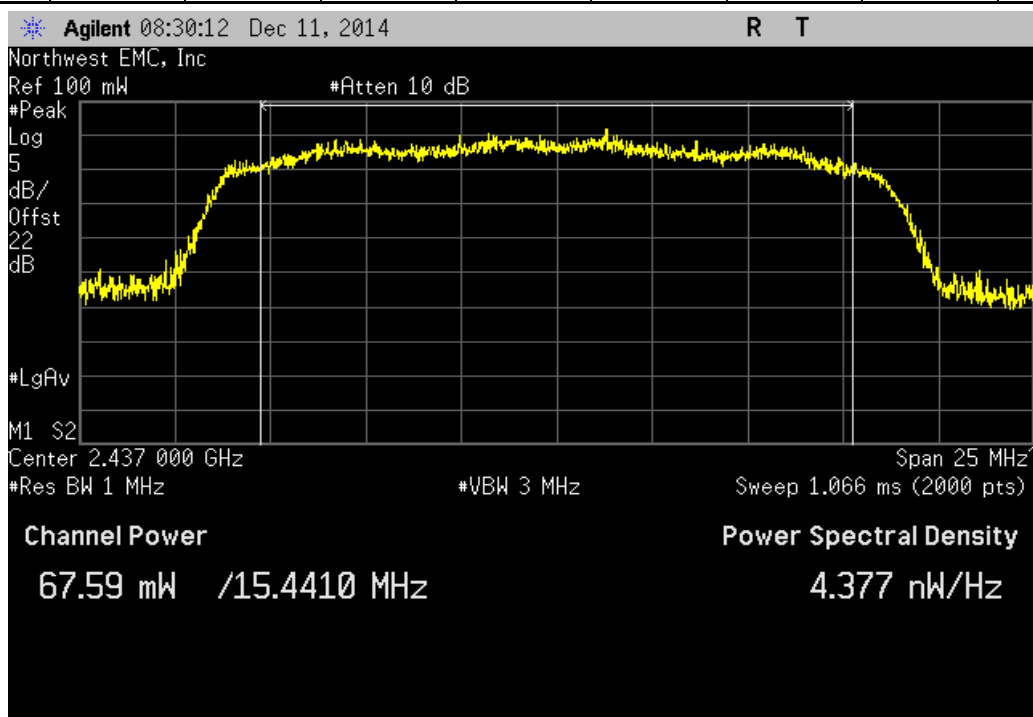
Antenna 0, 802.11(n) MCS0, High Channel 11, 2462 MHz			
	Value	Limit (<)	Result
	22.442 mW	1 W	Pass



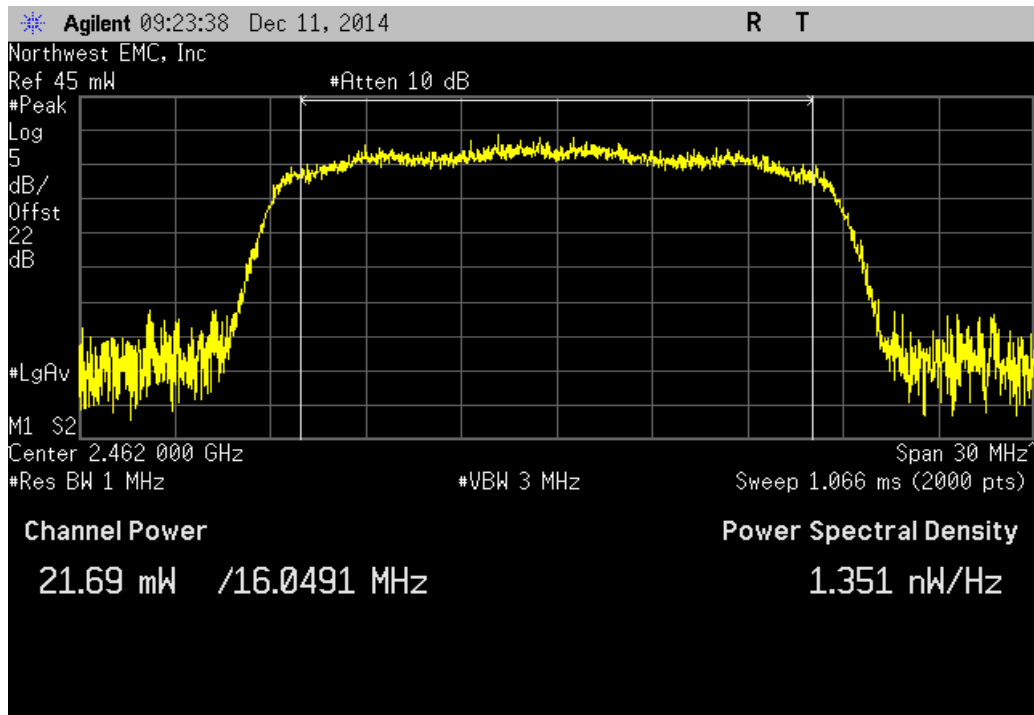
Antenna 0, 802.11(n) MCS7, Low Channel 1, 2412 MHz			
	Value	Limit ($\leq$)	Result
	23.454 mW	1 W	Pass



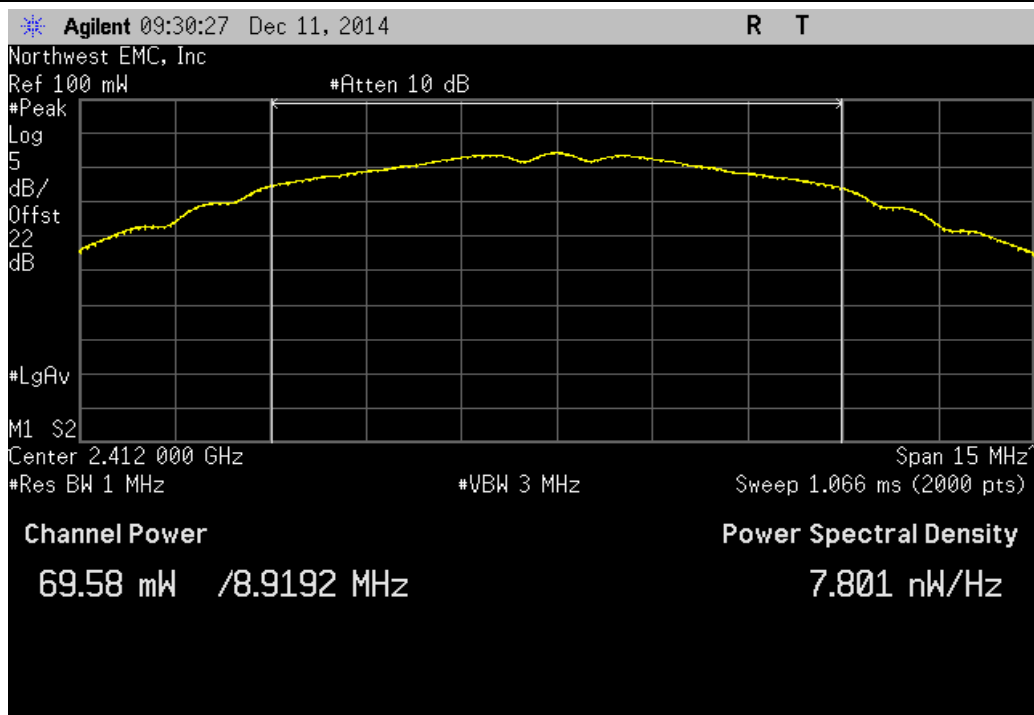
Antenna 0, 802.11(n) MCS7, Mid Channel 6, 2437 MHz			
	Value	Limit ($\leq$)	Result
	67.588 mW	1 W	Pass



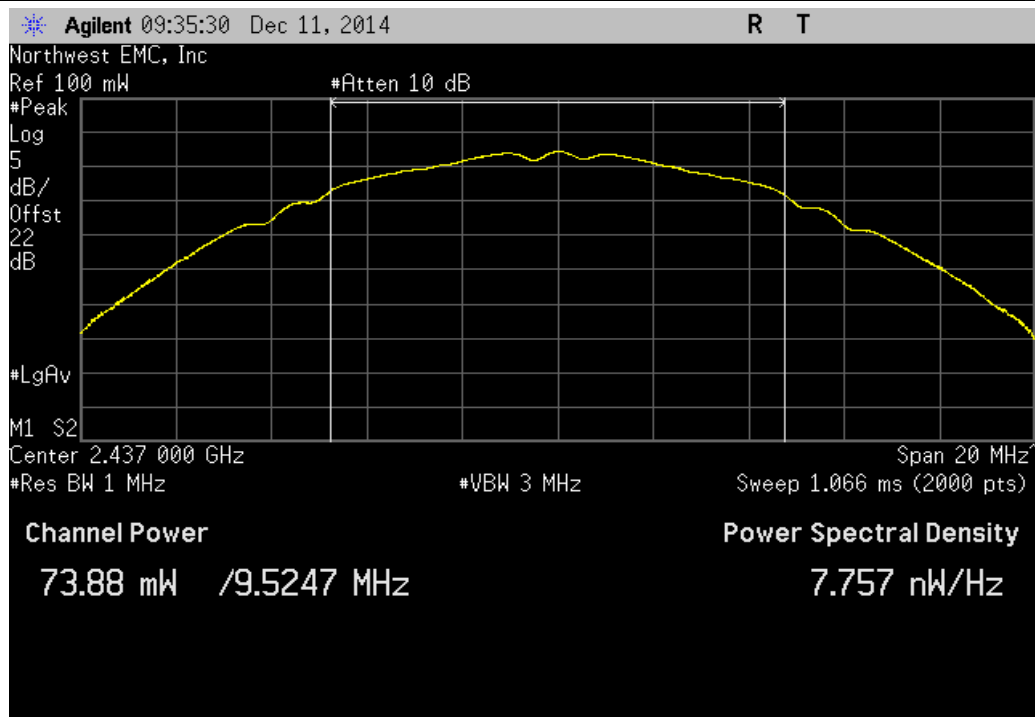
Antenna 0, 802.11(n) MCS7, High Channel 11, 2462 MHz				Limit		
			Value	($\leq$)	Result	
			21.688 mW	1 W	Pass	



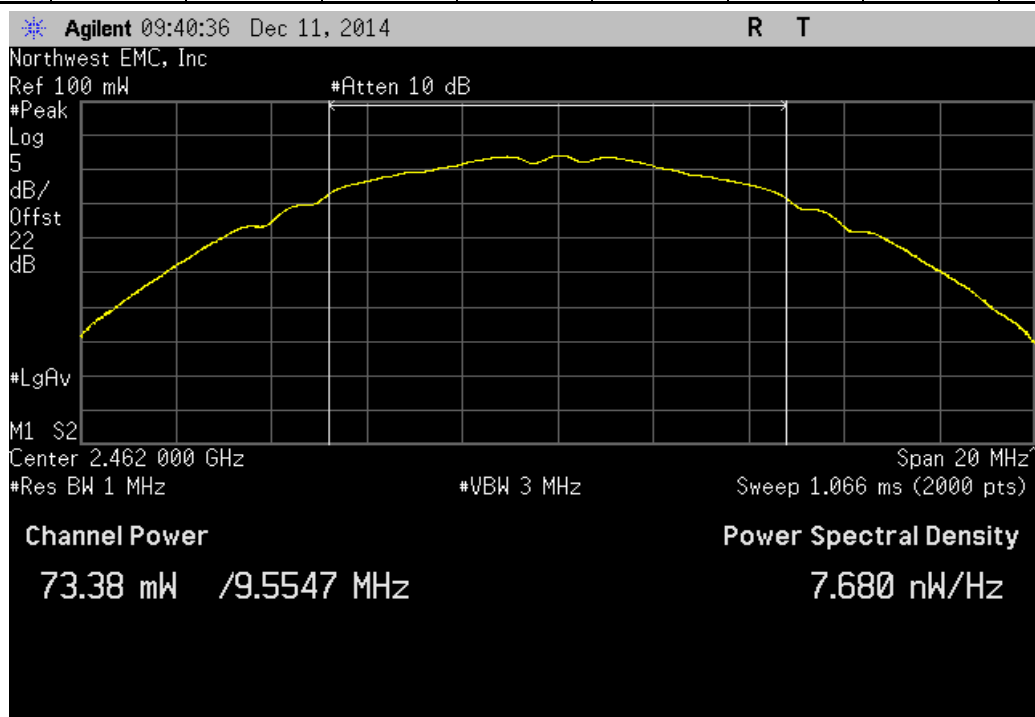
Antenna 1, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz				Limit		
			Value	($\leq$)	Result	
			69.576 mW	1 W	Pass	



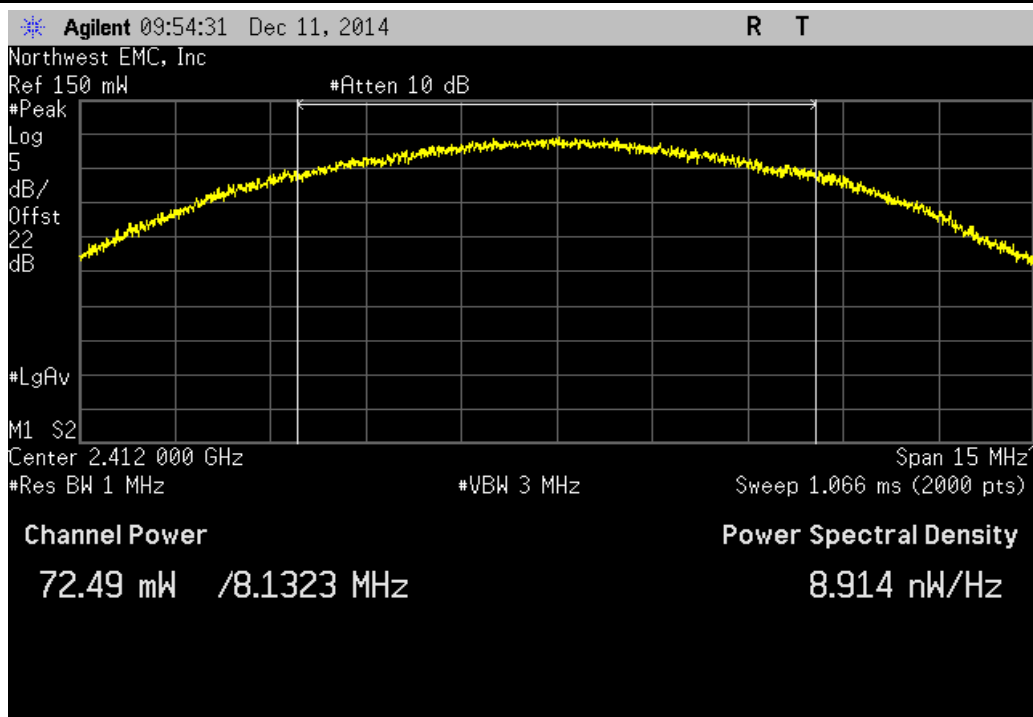
Antenna 1, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz			
	Value	Limit ($\leq$)	Result
	73.879 mW	1 W	Pass



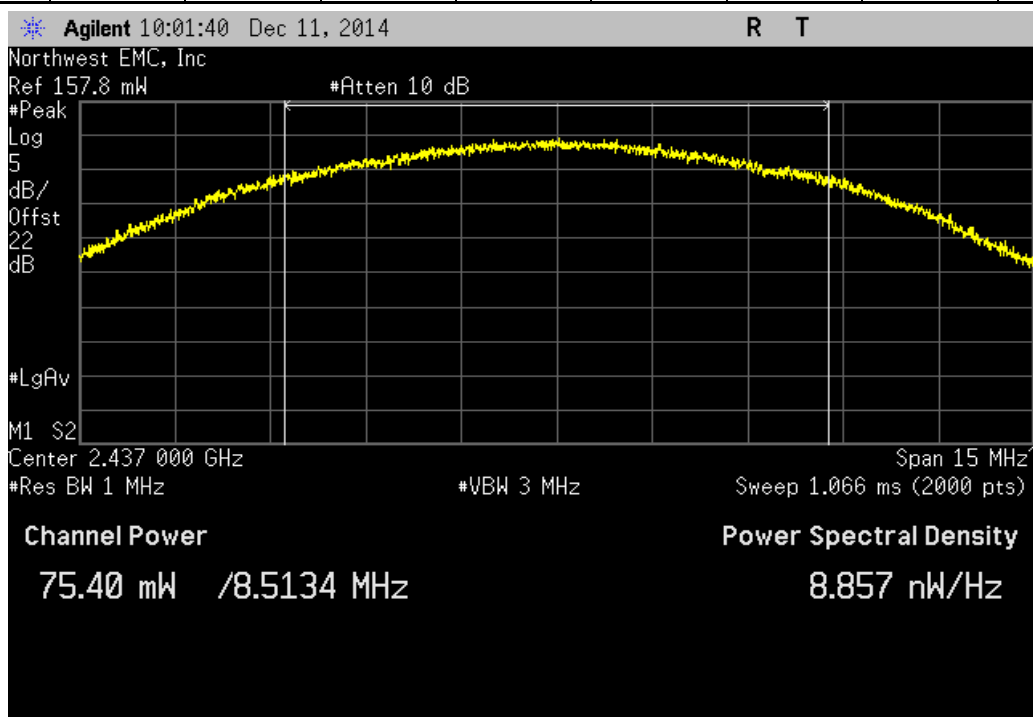
Antenna 1, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz			
	Value	Limit ($\leq$)	Result
	73.38 mW	1 W	Pass



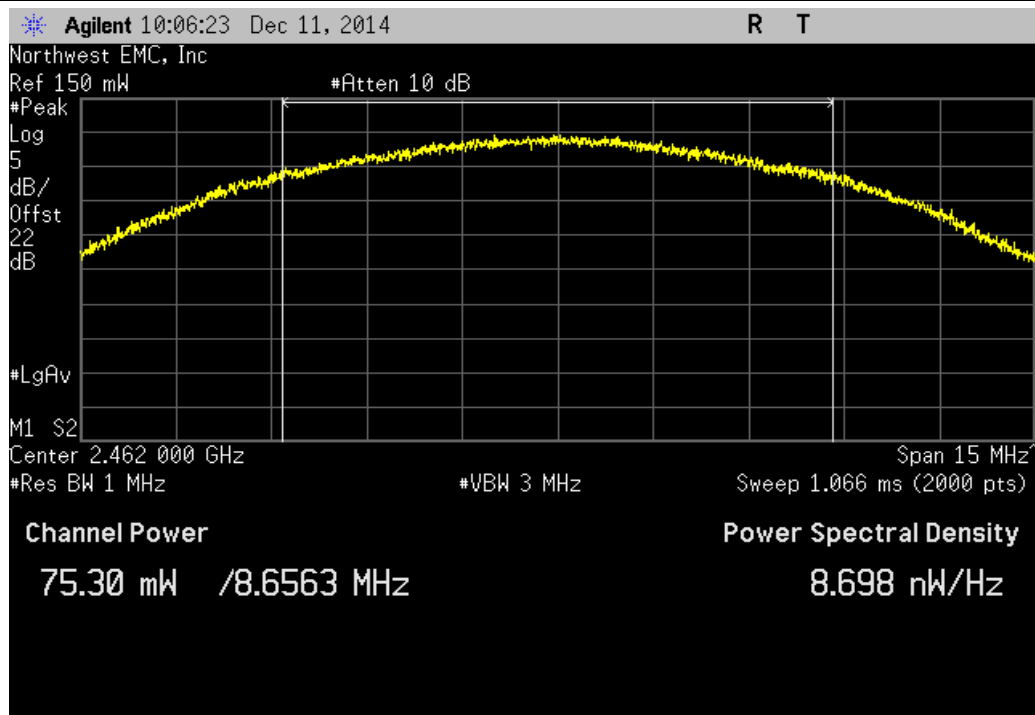
Antenna 1, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz			
	Value	Limit (<)	Result
	72.493 mW	1 W	Pass



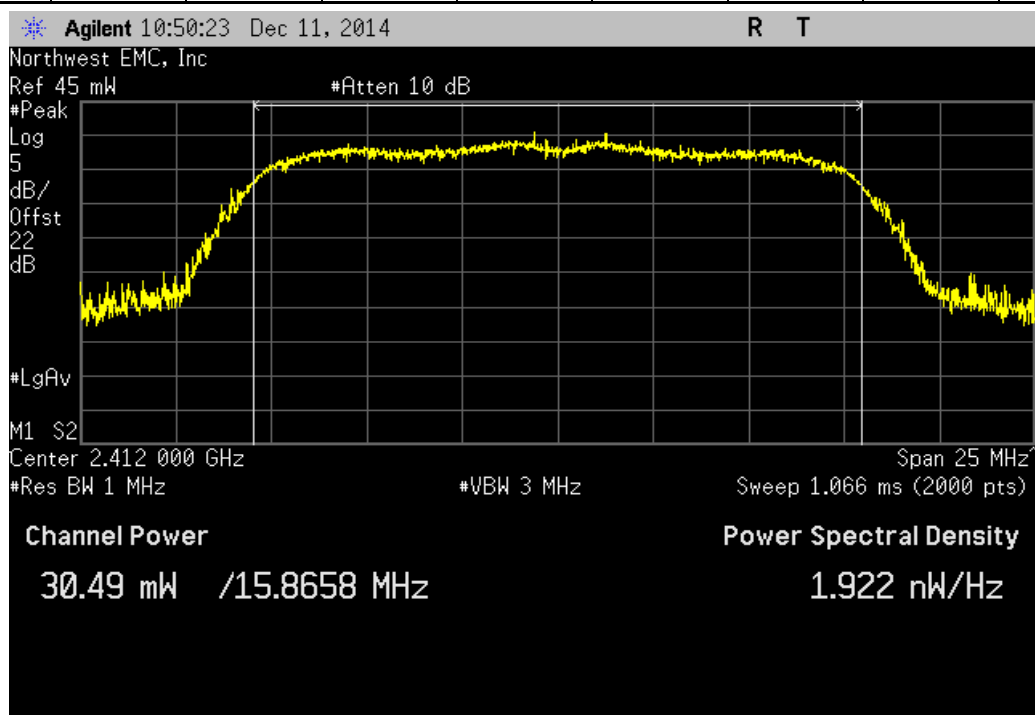
Antenna 1, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz			
	Value	Limit (<)	Result
	75.4 mW	1 W	Pass



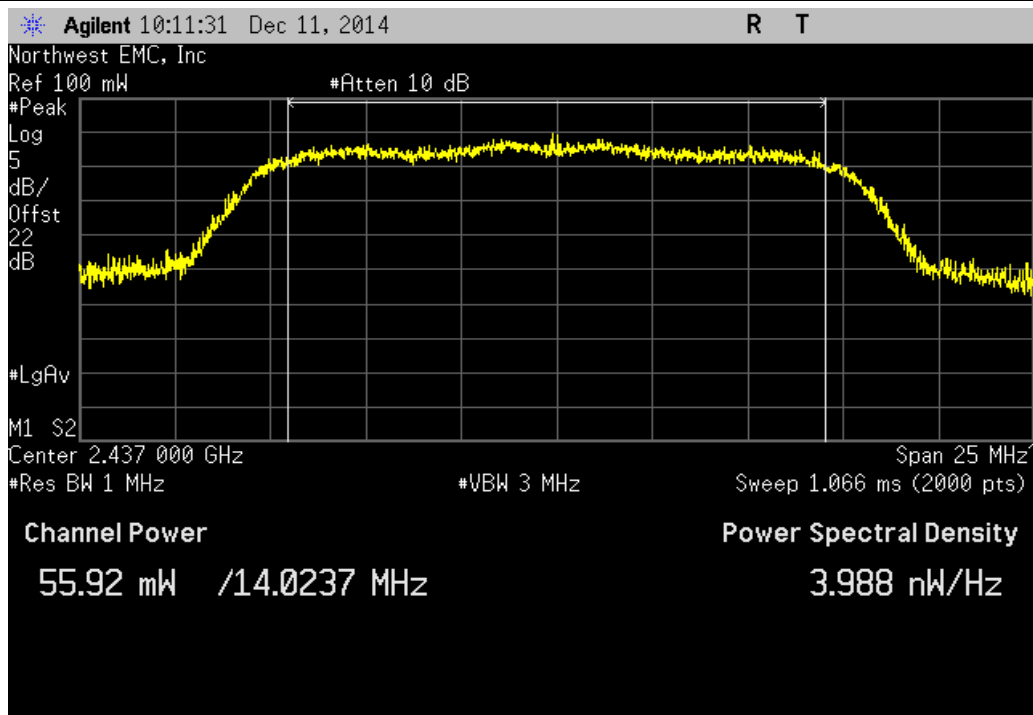
Antenna 1, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz			
	Value	Limit (<)	Result
	75.296 mW	1 W	Pass



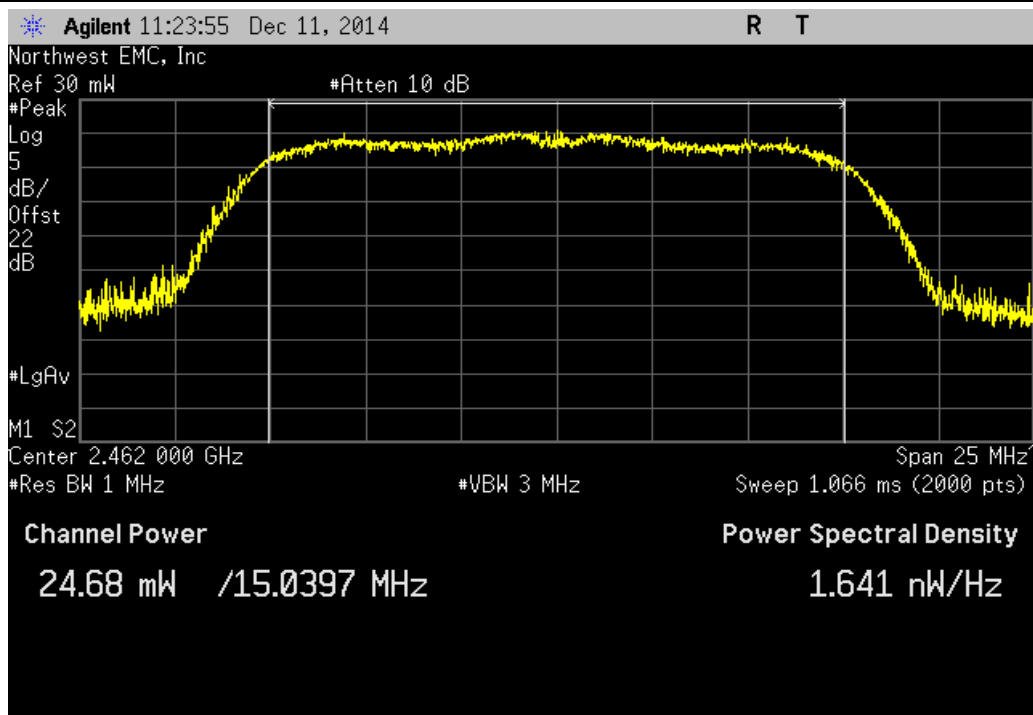
Antenna 1, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz			
	Value	Limit (<)	Result
	30.488 mW	1 W	Pass



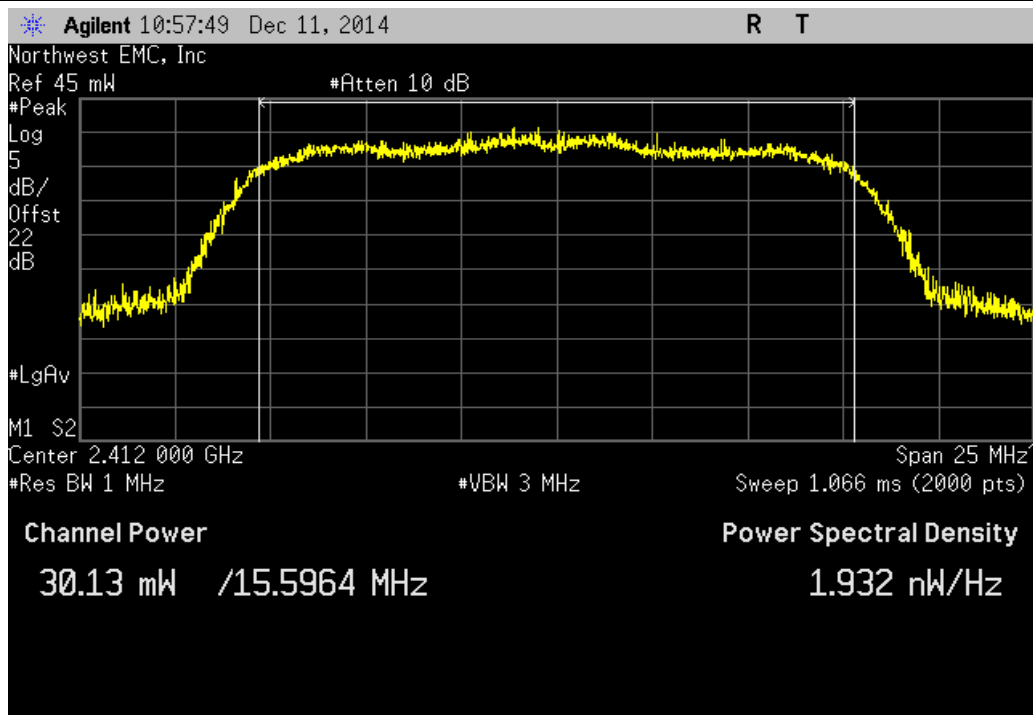
Antenna 1, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz					Limit	Result
Value					($\leq$)	
55.92 mW					1 W	Pass



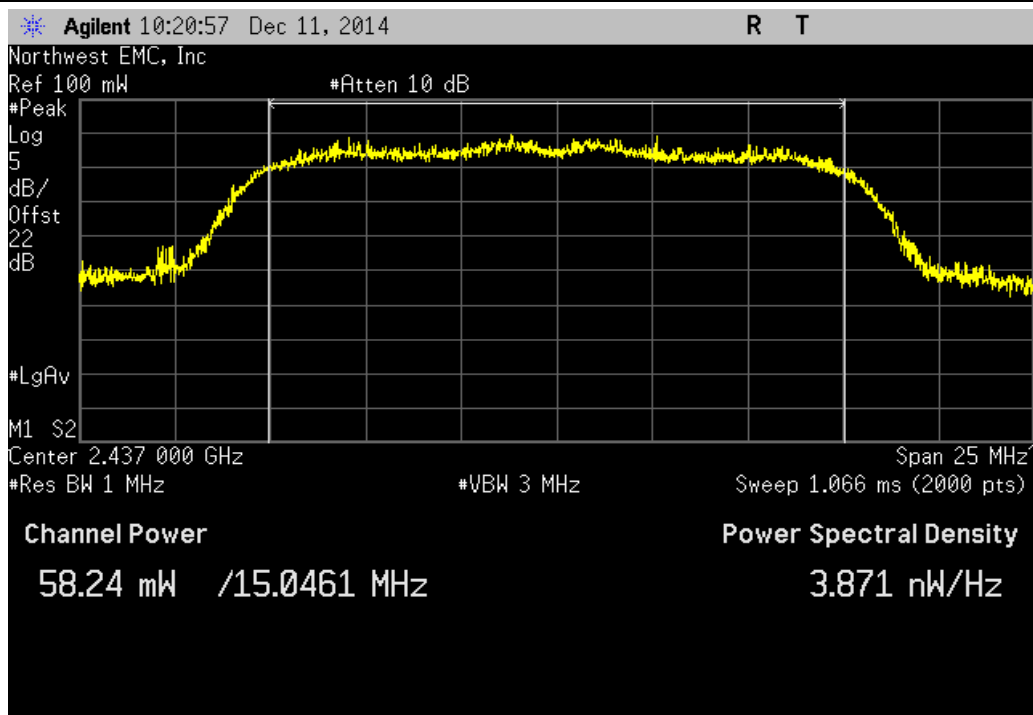
Antenna 1, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz					Limit	Result
Value					($\leq$)	
24.681 mW					1 W	Pass



Antenna 1, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz					Limit	Result
Value					($\leq$)	
				30.132 mW	1 W	Pass

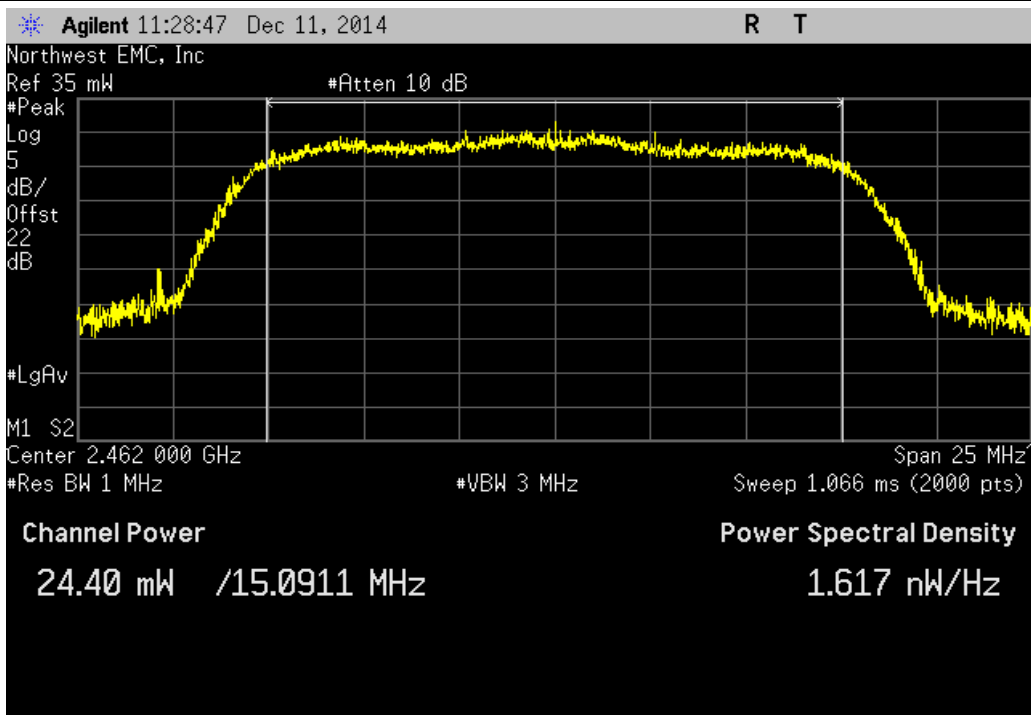


Antenna 1, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz					Limit	Result
Value					($\leq$)	
				58.238 mW	1 W	Pass



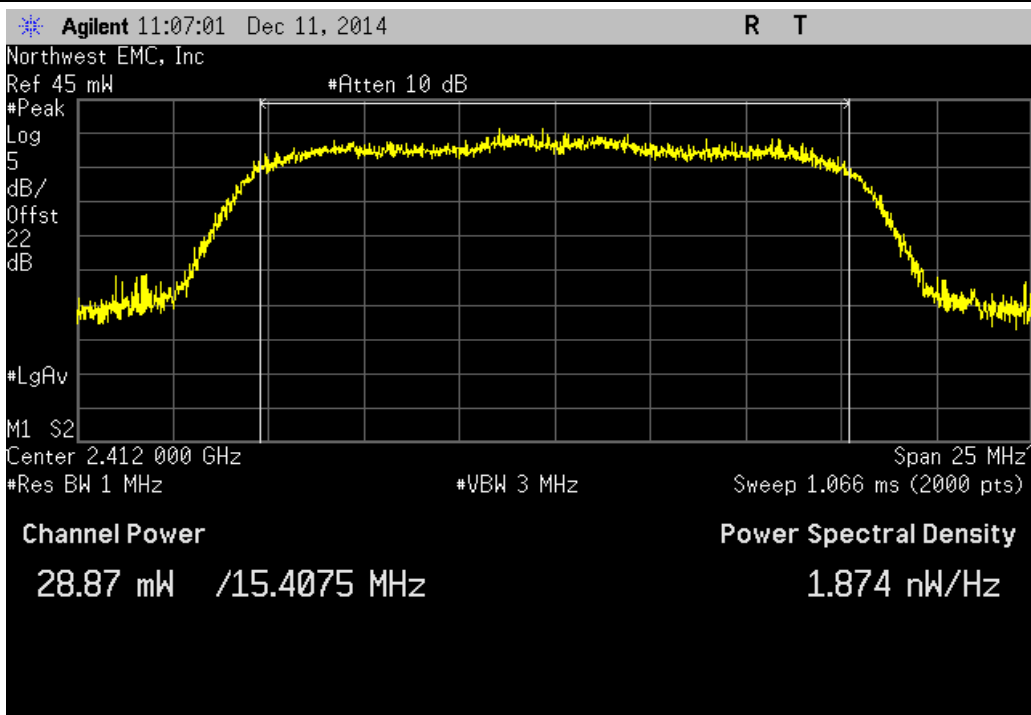
Antenna 1, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz

	Value	Limit (<)	Result
	24.403 mW	1 W	Pass

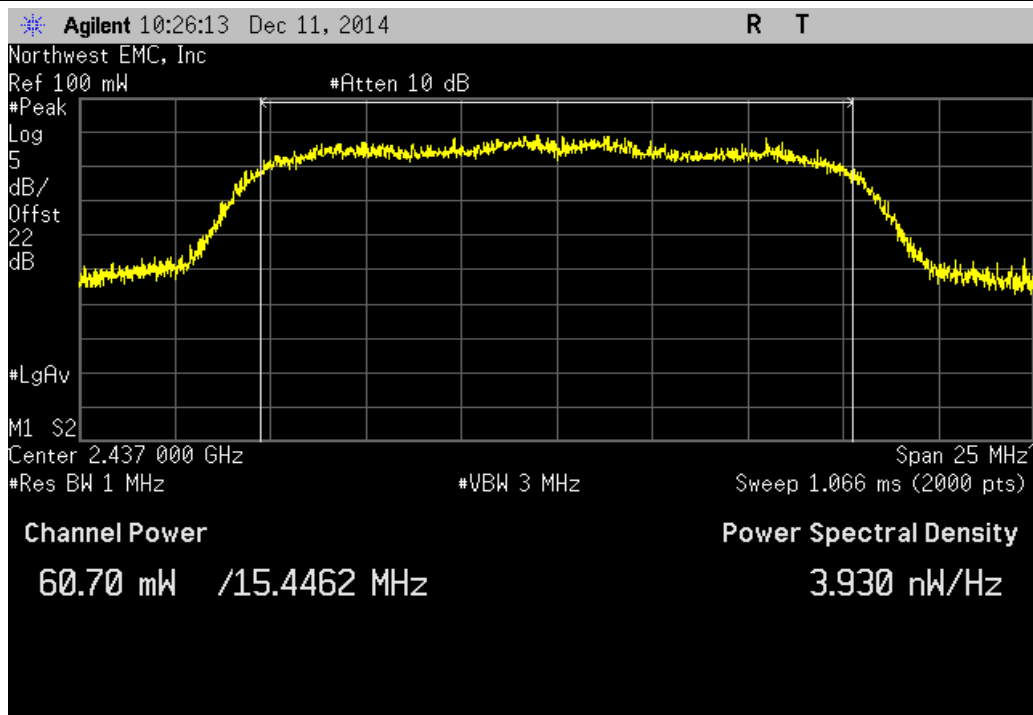


Antenna 1, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz

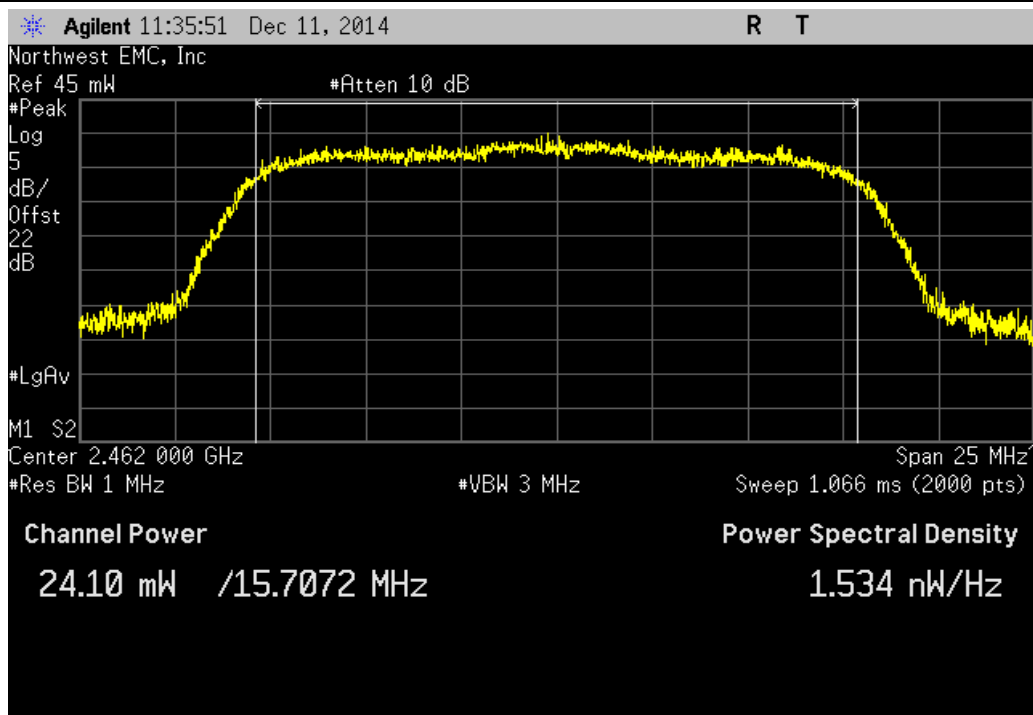
	Value	Limit (<)	Result
	28.868 mW	1 W	Pass



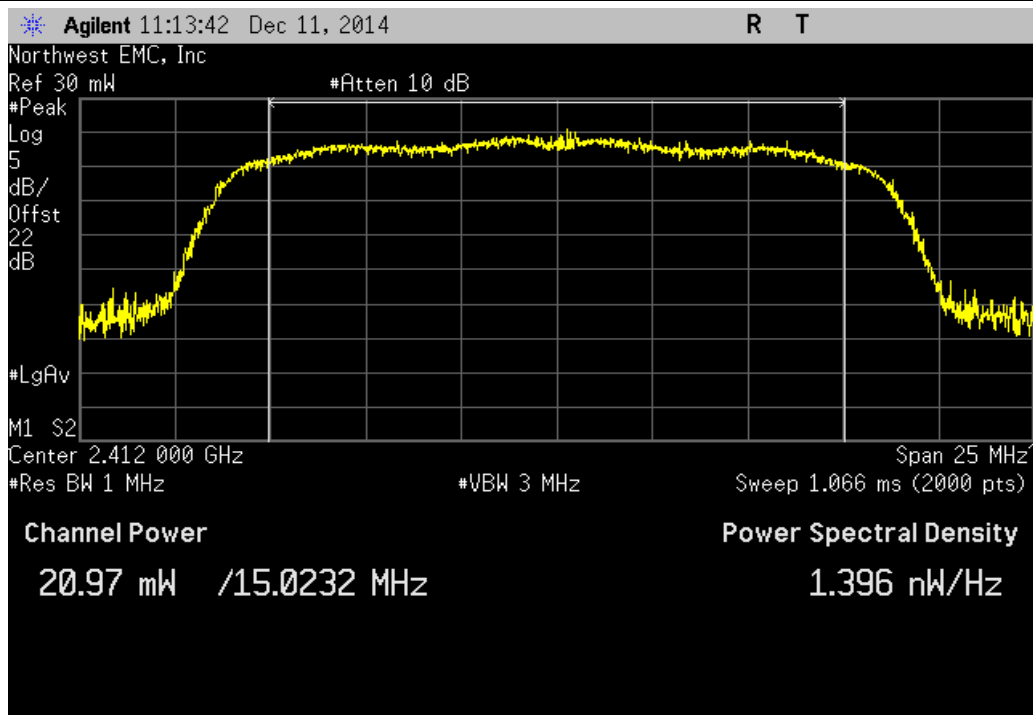
Antenna 1, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz			
	Value	Limit (<)	Result
	60.699 mW	1 W	Pass



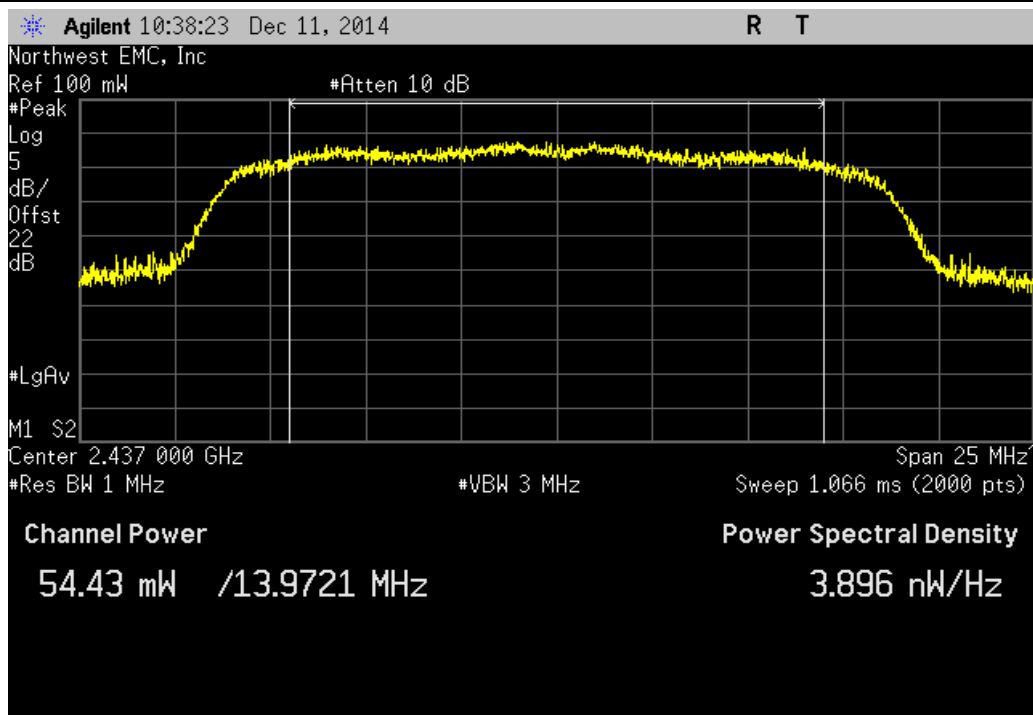
Antenna 1, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz			
	Value	Limit (<)	Result
	24.102 mW	1 W	Pass



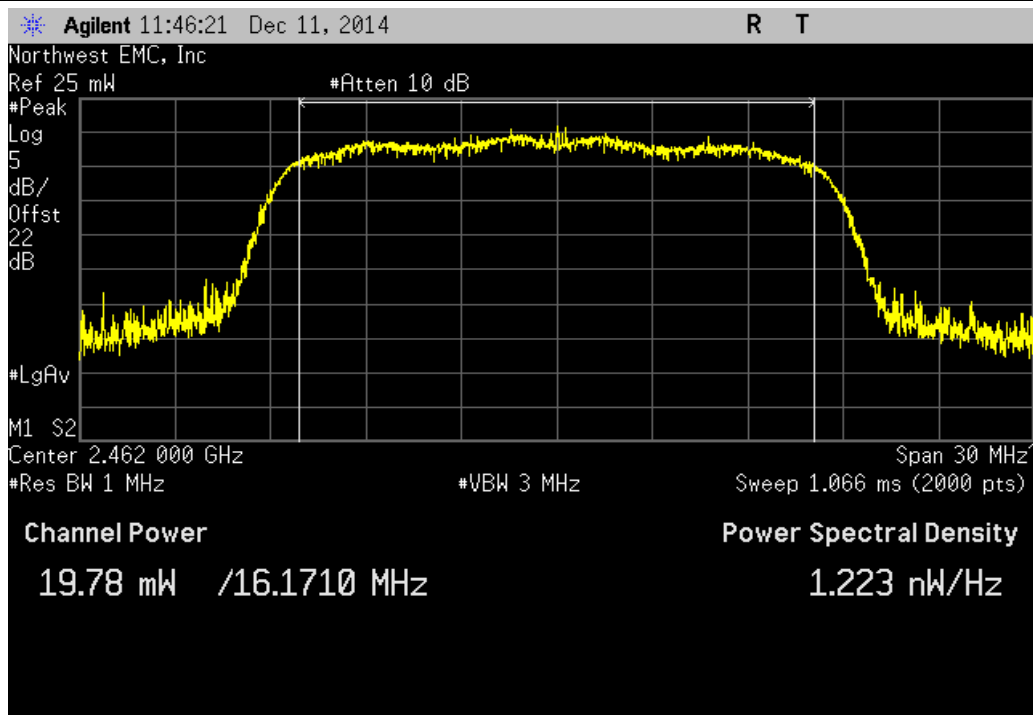
Antenna 1, 802.11(n) MCS0, Low Channel 1, 2412 MHz					Limit	Result
Value					($\leq$)	
20.972 mW					1 W	Pass



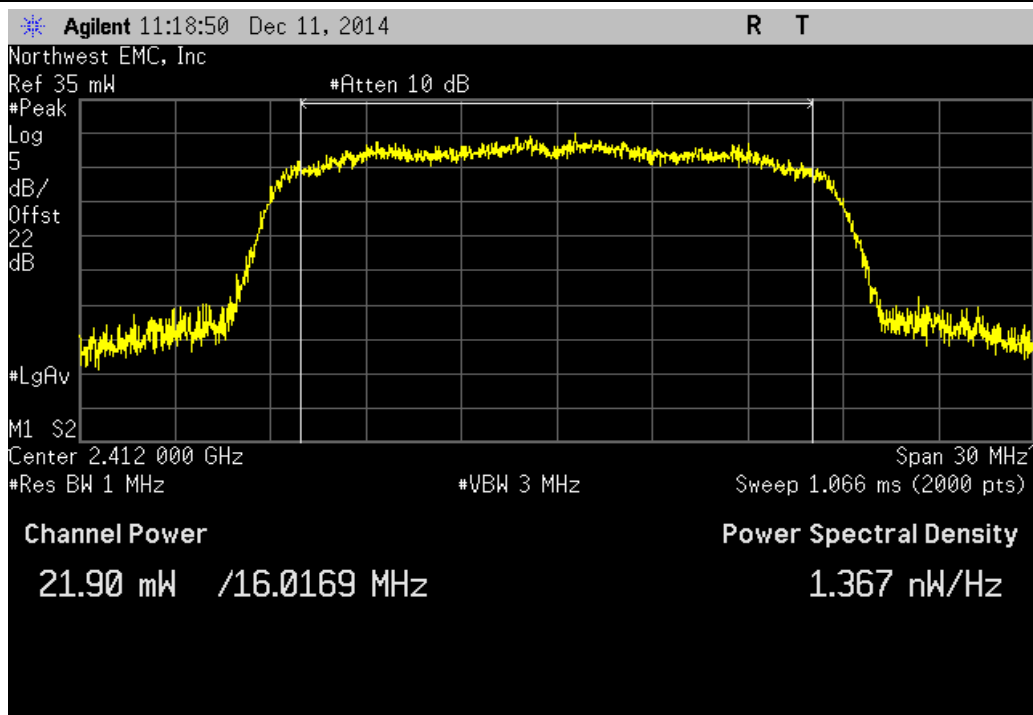
Antenna 1, 802.11(n) MCS0, Mid Channel 6, 2437 MHz					Limit	Result
Value					($\leq$)	
54.43 mW					1 W	Pass



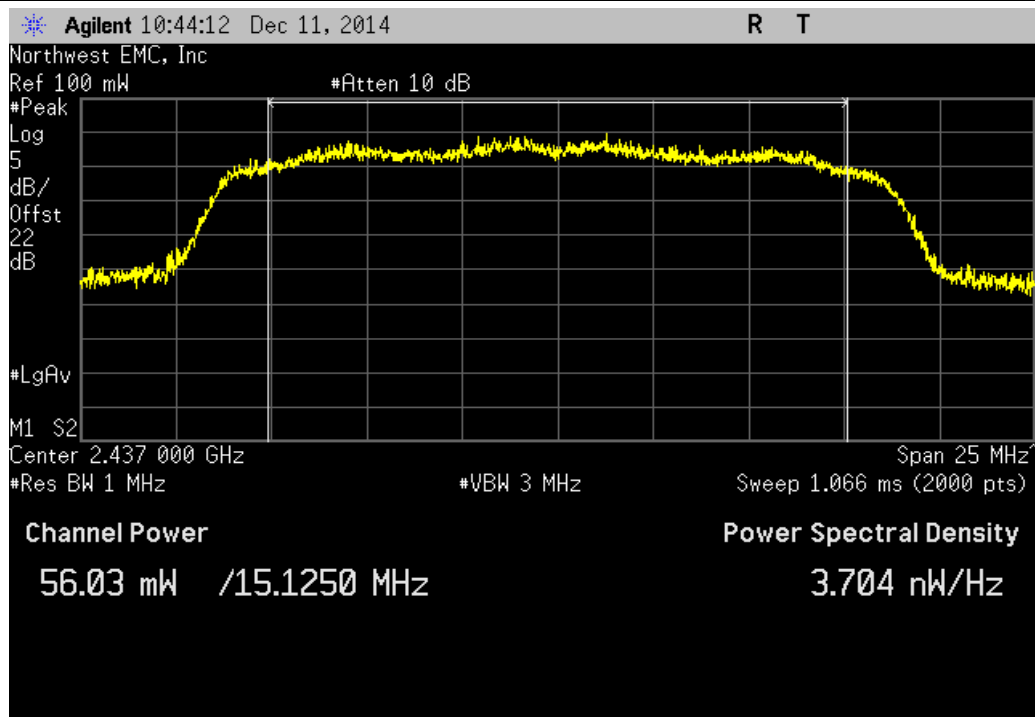
Antenna 1, 802.11(n) MCS0, High Channel 11, 2462 MHz					Limit	Result
Value					($\leq$)	
				19.784 mW	1 W	Pass



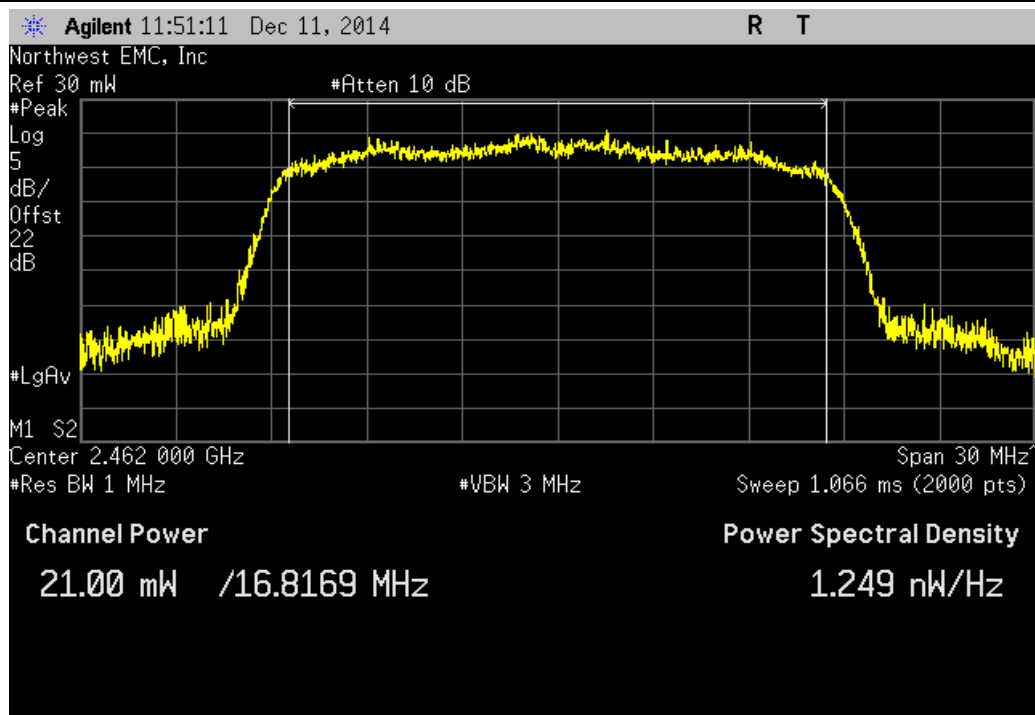
Antenna 1, 802.11(n) MCS7, Low Channel 1, 2412 MHz					Limit	Result
Value					($\leq$)	
				21.899 mW	1 W	Pass



Antenna 1, 802.11(n) MCS7, Mid Channel 6, 2437 MHz			
	Value	Limit (<)	Result
	56.025 mW	1 W	Pass



Antenna 1, 802.11(n) MCS7, High Channel 11, 2462 MHz			
	Value	Limit (<)	Result
	20.997 mW	1 W	Pass



BAND EDGE COMPLIANCE

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo)
MN08 Direct Connect Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	10/2/2014	12
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	4/3/2014	12
40 GHz DC Block	Fairview Microwave	SD3379	AMI	10/2/2014	12
MXG Vector Signal Generator	Agilent	N5182A	TIF	8/12/2014	36
Spectrum Analyzer	Agilent	E4440A	AAX	4/28/2014	12

TEST DESCRIPTION

The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in each available band. The channels closest to the band edges were selected. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet.

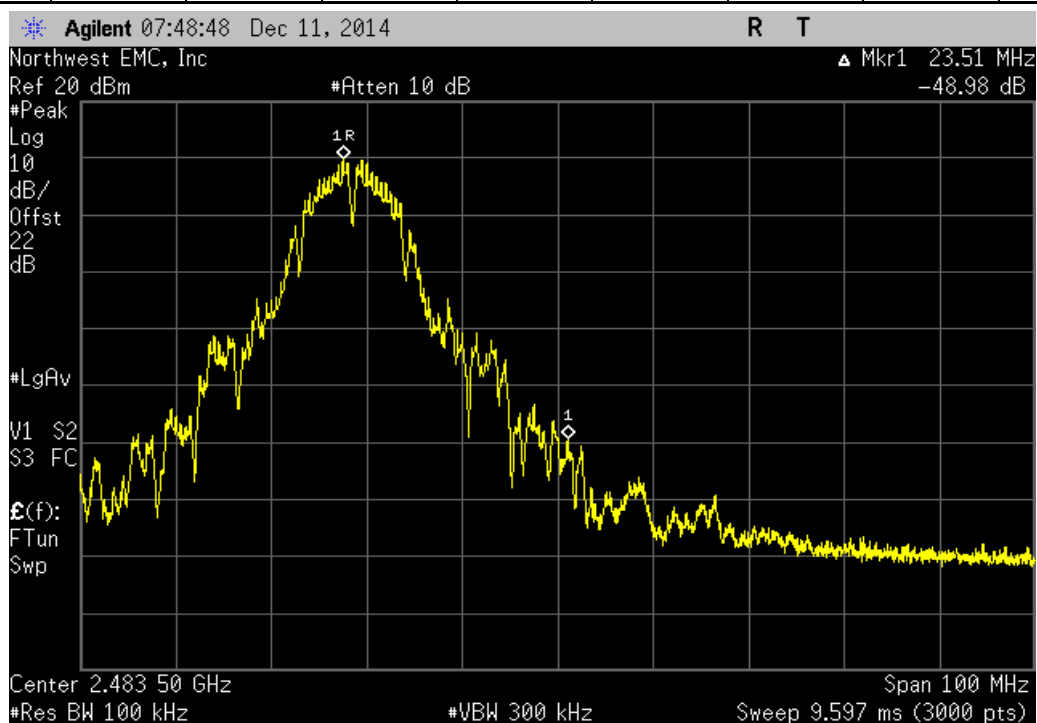
The spectrum was scanned below the lower band edge and above the higher band edge.

EUT: TH6320WF02		Work Order: HNYW0120	
Serial Number: 71630010589274		Date: 12/11/14	
Customer: Honeywell, Automation and Control Solutions		Temperature: 23.5°C	
Attendees: None		Humidity: 21%	
Project: None		Barometric Pres.: 1026.4	
Tested by: Trevor Buls		Power: 110VAC/60Hz	
		Job Site: MN08	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2014		ANSI C63.10:2009	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature <i>Trevor Buls</i>	
		Value (dBc)	Limit ≤ (dBc) Result
Antenna 0			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz		-30.43	-20 Pass
High Channel 11, 2462 MHz		-48.98	-20 Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz		-31.4	-20 Pass
High Channel 11, 2462 MHz		-51.06	-20 Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz		-28.73	-20 Pass
High Channel 11, 2462 MHz		-37.05	-20 Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz		-28.46	-20 Pass
High Channel 11, 2462 MHz		-37.1	-20 Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz		-32.57	-20 Pass
High Channel 11, 2462 MHz		-38.1	-20 Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz		-30.16	-20 Pass
High Channel 11, 2462 MHz		-35.53	-20 Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz		-32.42	-20 Pass
High Channel 11, 2462 MHz		-37.38	-20 Pass
Antenna 1			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz		-27.79	-20 Pass
High Channel 11, 2462 MHz		-52.25	-20 Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz		-30.84	-20 Pass
High Channel 11, 2462 MHz		-54.69	-20 Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz		-26.13	-20 Pass
High Channel 11, 2462 MHz		-43.92	-20 Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz		-26.99	-20 Pass
High Channel 11, 2462 MHz		-43.92	-20 Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz		-27.71	-20 Pass
High Channel 11, 2462 MHz		-43.21	-20 Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz		-29.3	-20 Pass
High Channel 11, 2462 MHz		-41.12	-20 Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz		-31.5	-20 Pass
High Channel 11, 2462 MHz		-42.72	-20 Pass

Antenna 0, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-30.43	-20	Pass



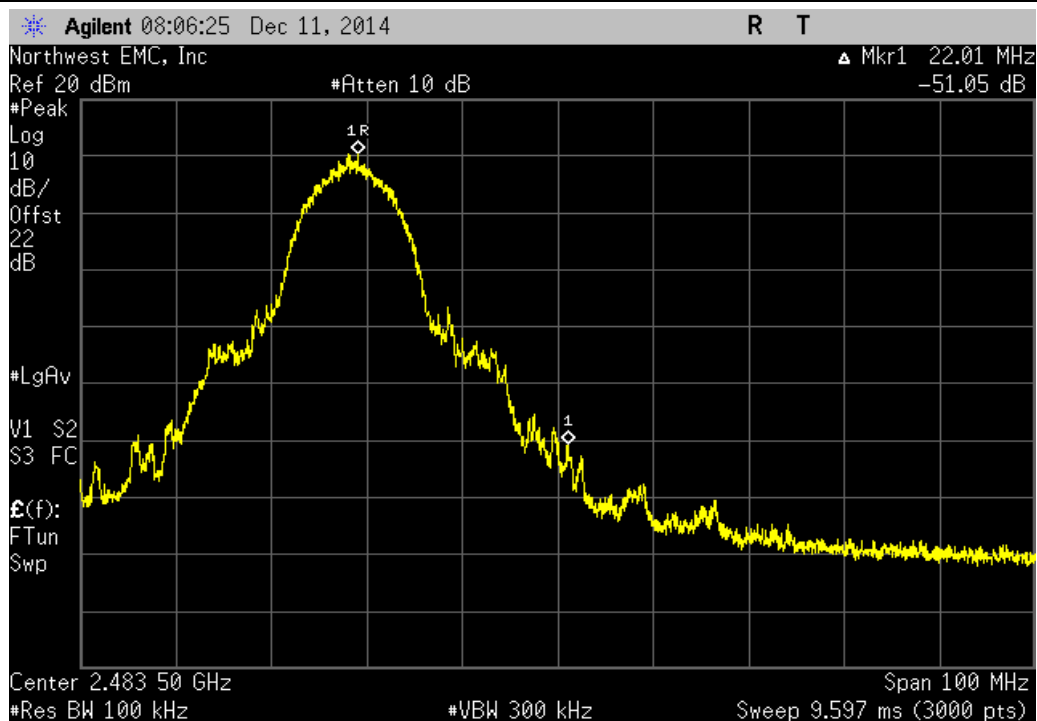
Antenna 0, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-48.98	-20	Pass



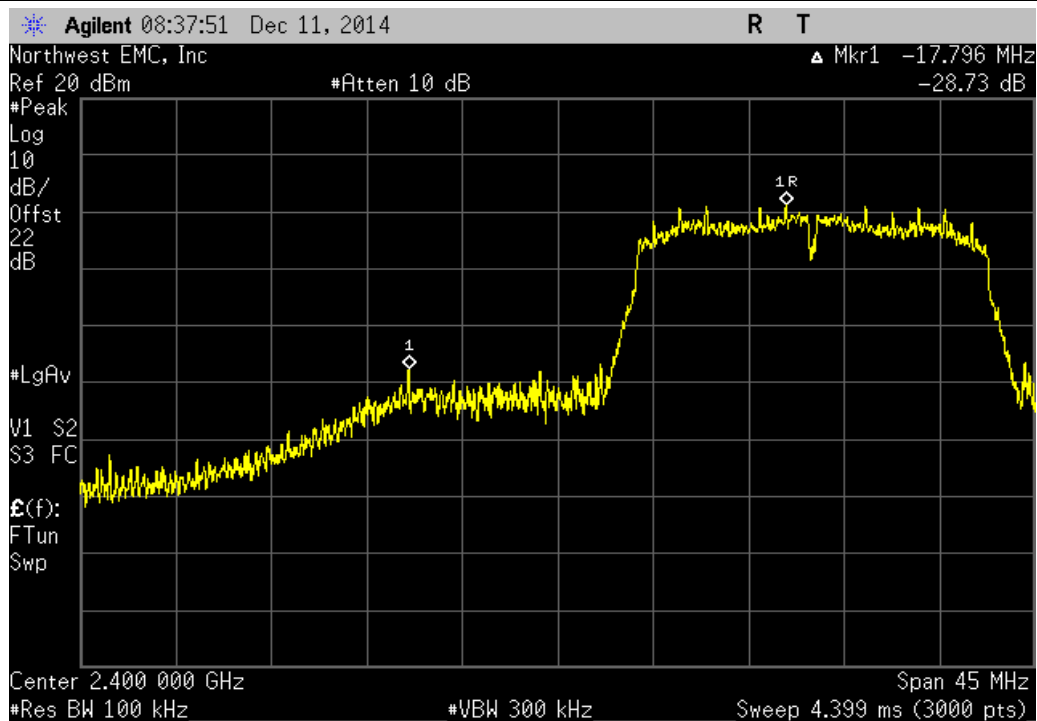
Antenna 0, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-31.4	-20	Pass



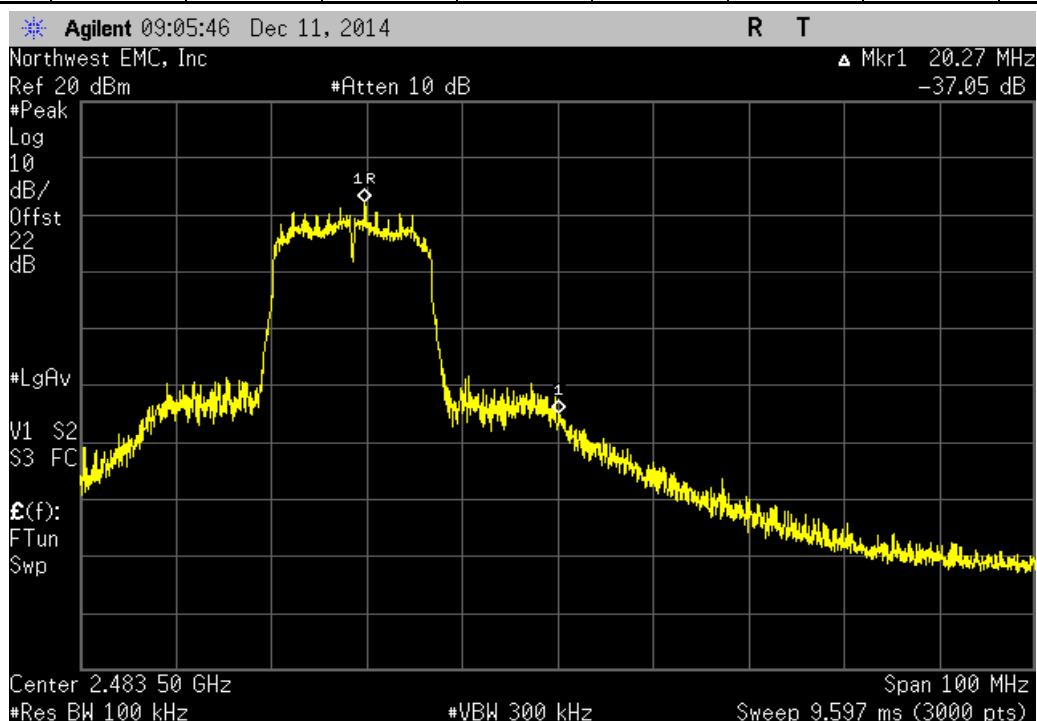
Antenna 0, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-51.06	-20	Pass



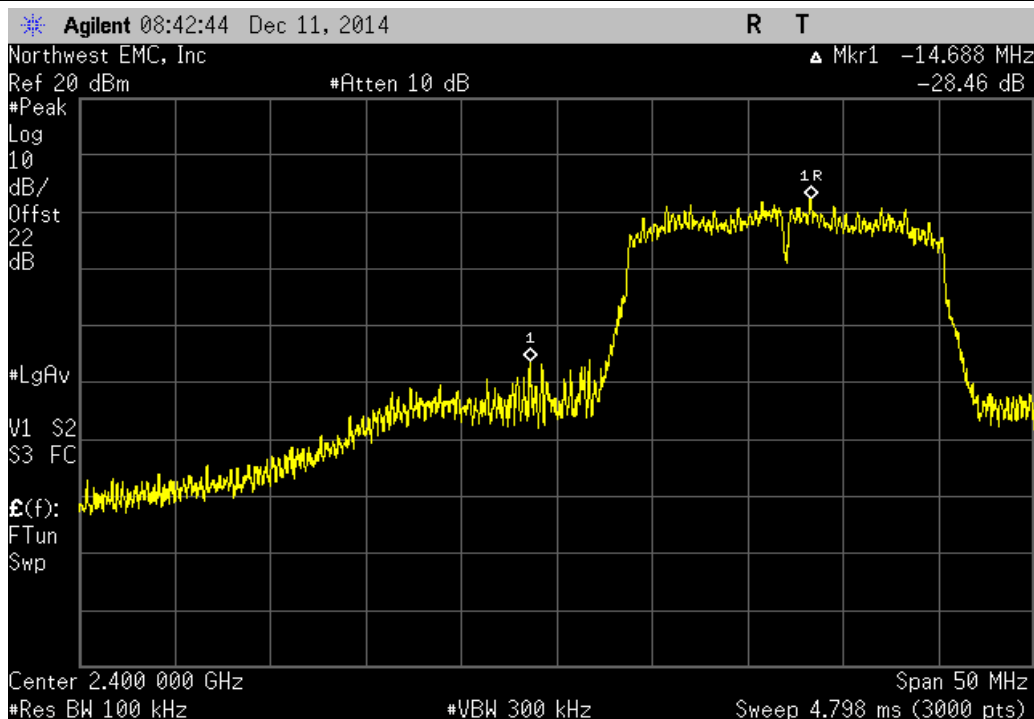
Antenna 0, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-28.73	-20	Pass



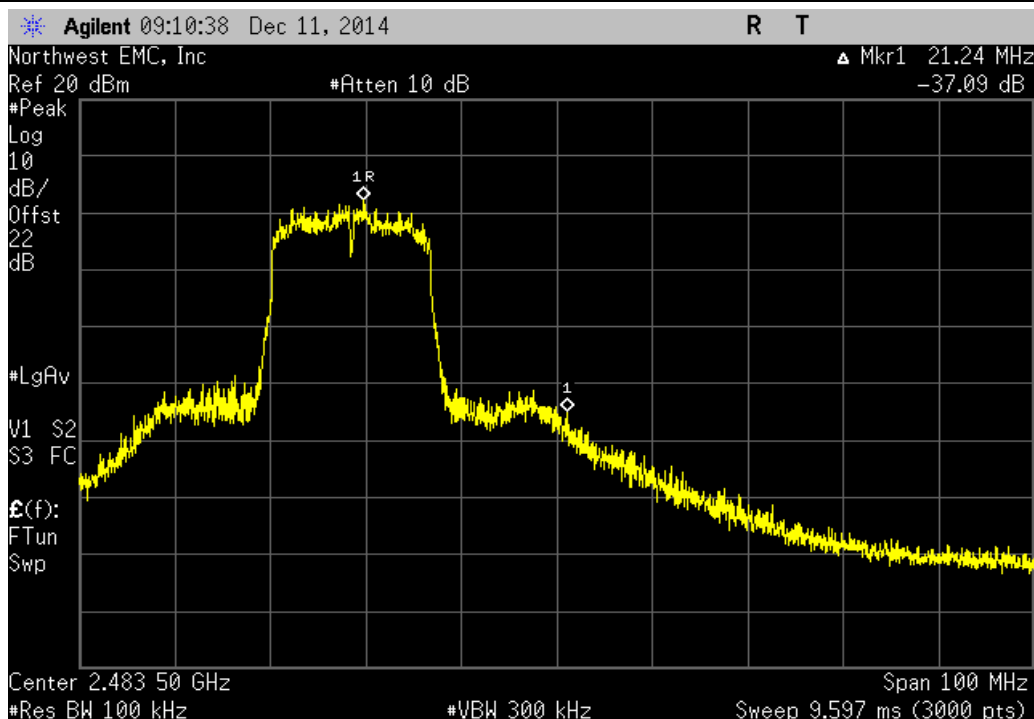
Antenna 0, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-37.05	-20	Pass



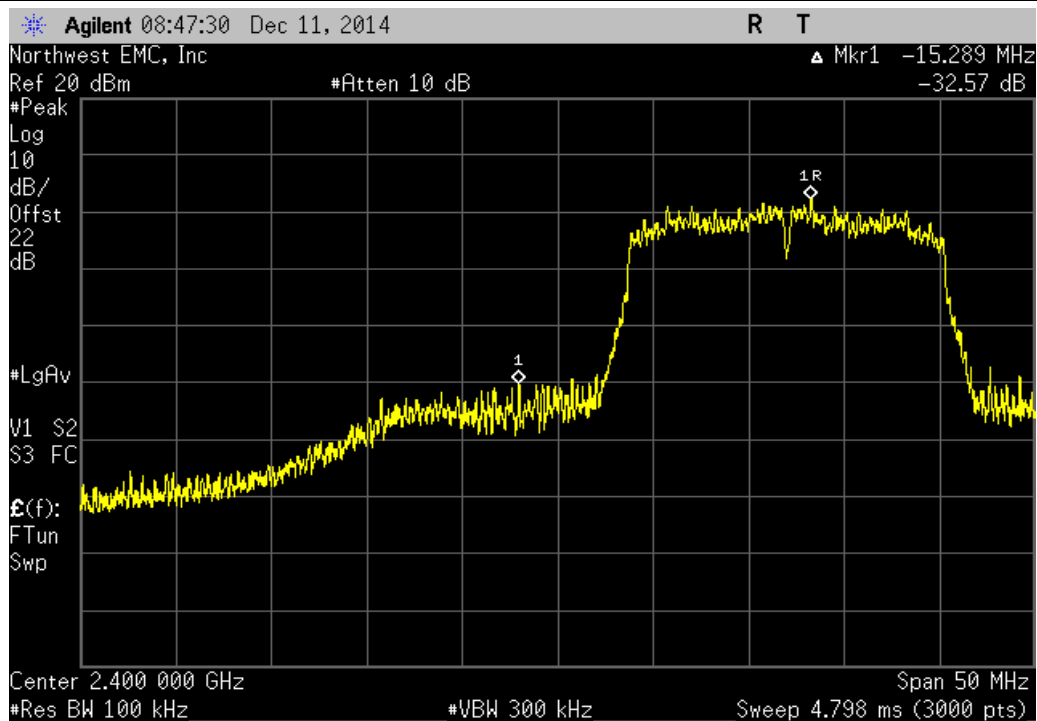
Antenna 0, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-28.46	-20	Pass



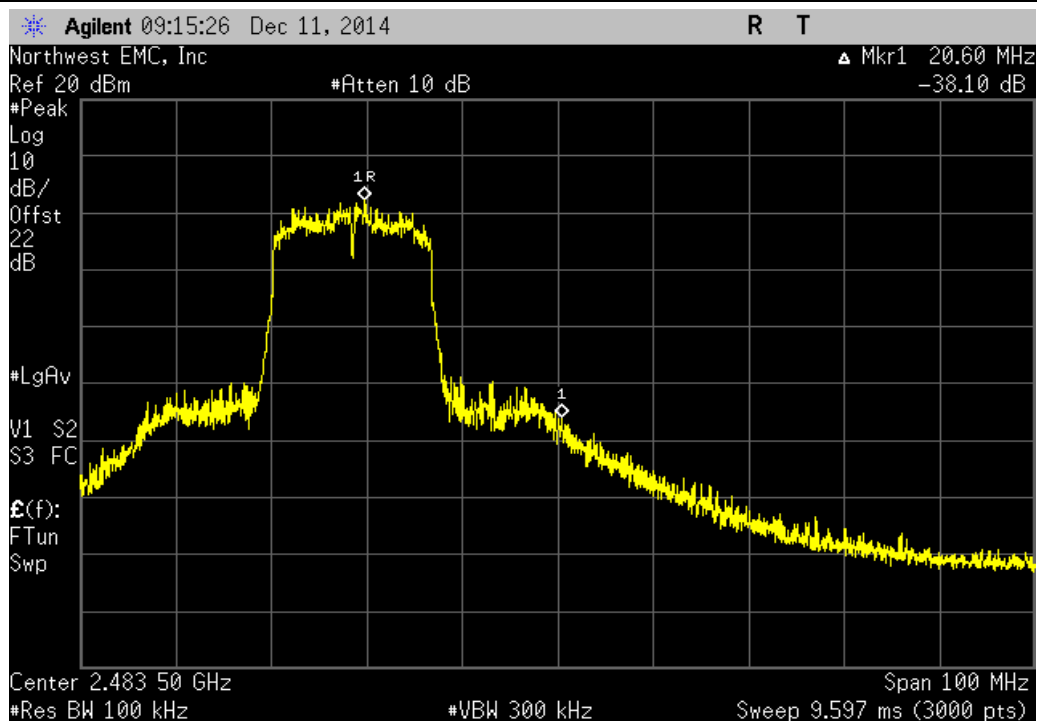
Antenna 0, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-37.1	-20	Pass



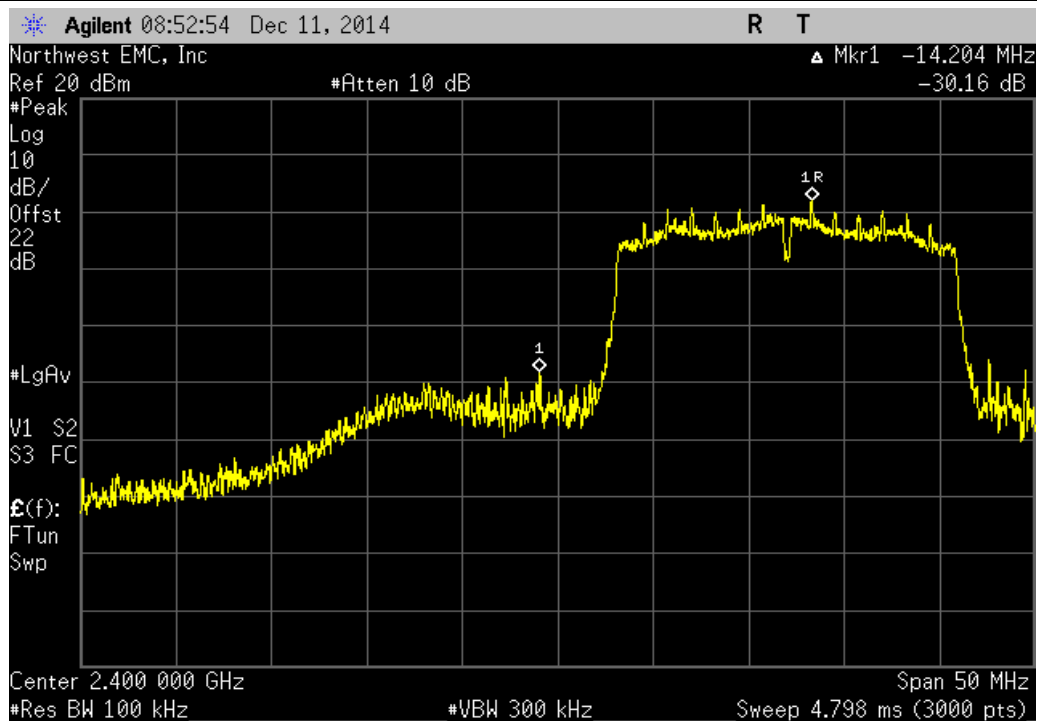
Antenna 0, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-32.57	-20	Pass



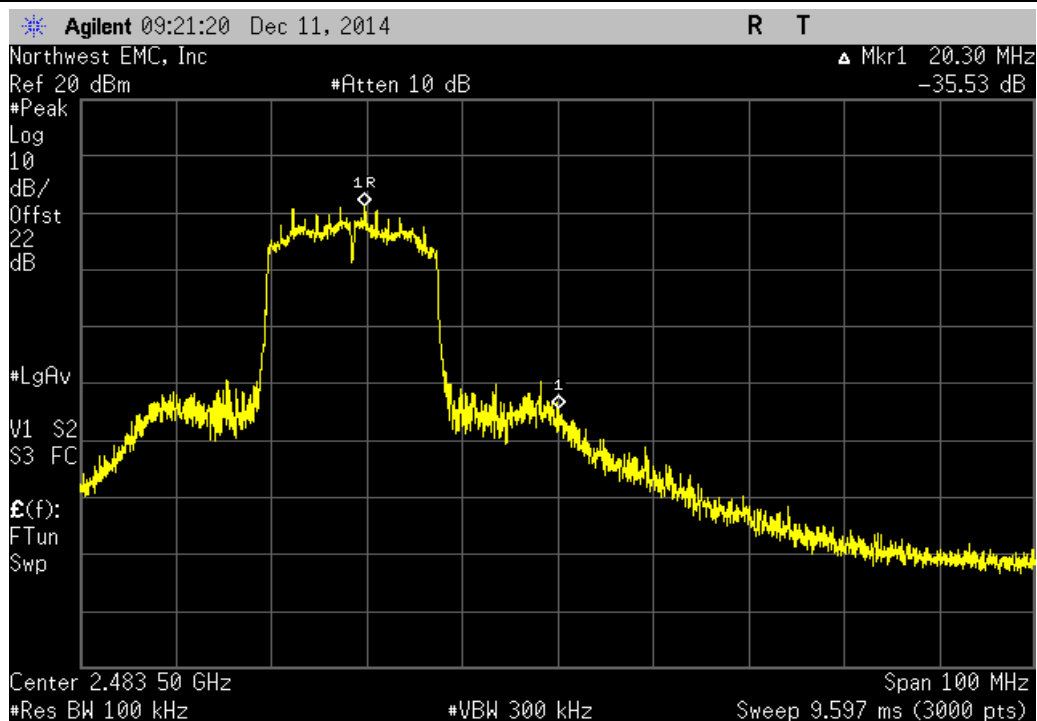
Antenna 0, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-38.1	-20	Pass



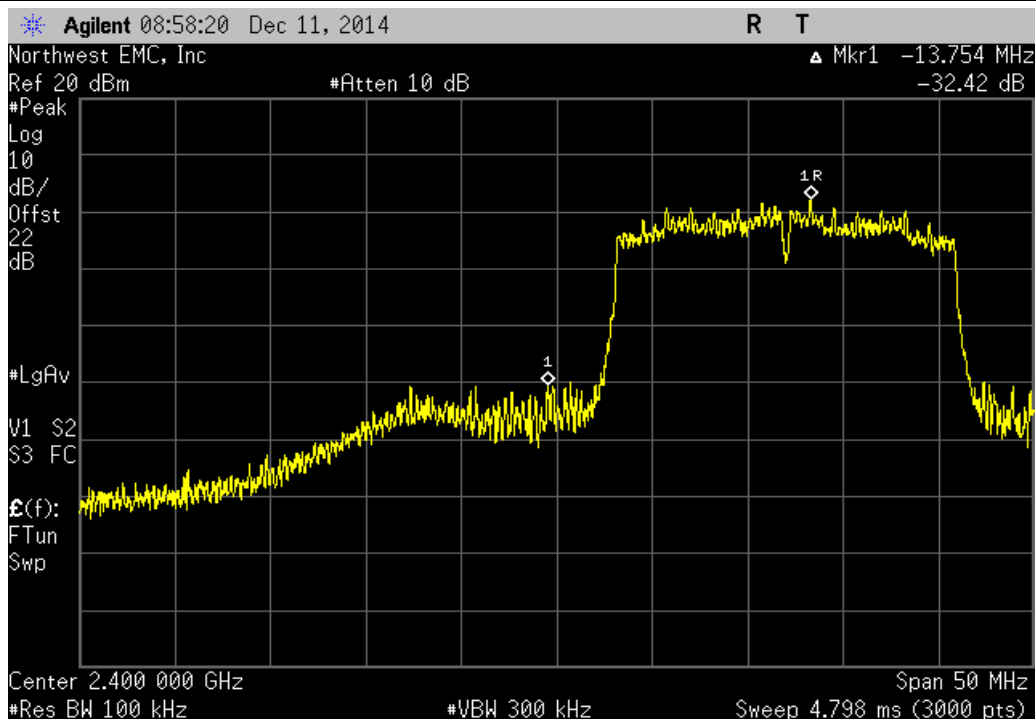
Antenna 0, 802.11(n) MCS0, Low Channel 1, 2412 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-30.16	-20	Pass



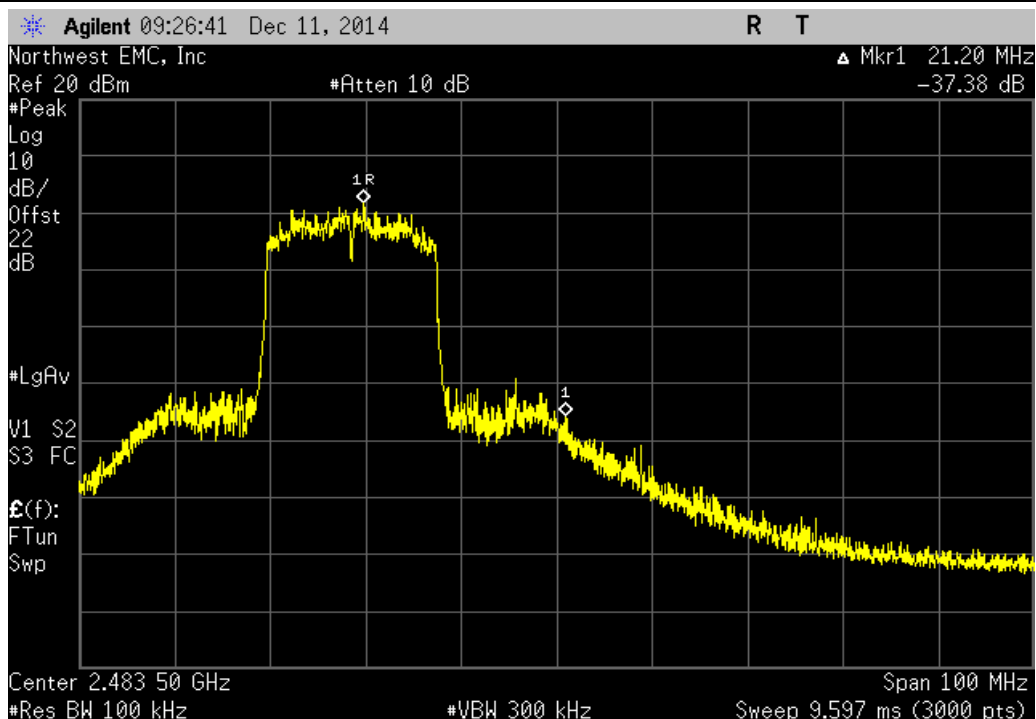
Antenna 0, 802.11(n) MCS0, High Channel 11, 2462 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-35.53	-20	Pass



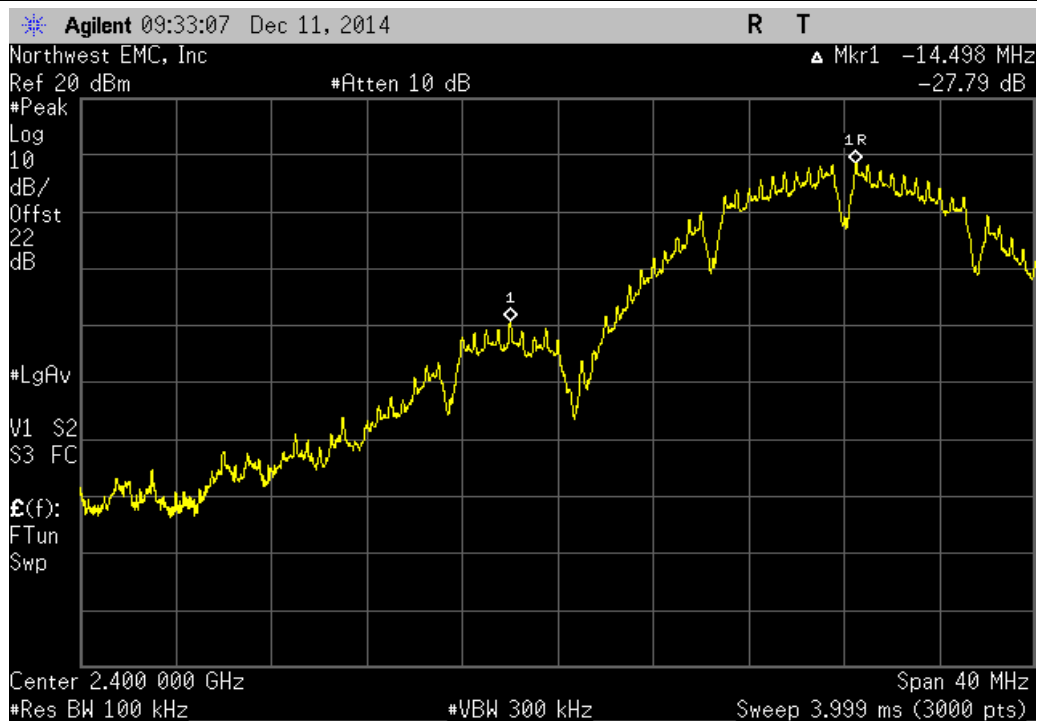
Antenna 0, 802.11(n) MCS7, Low Channel 1, 2412 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-32.42	-20	Pass



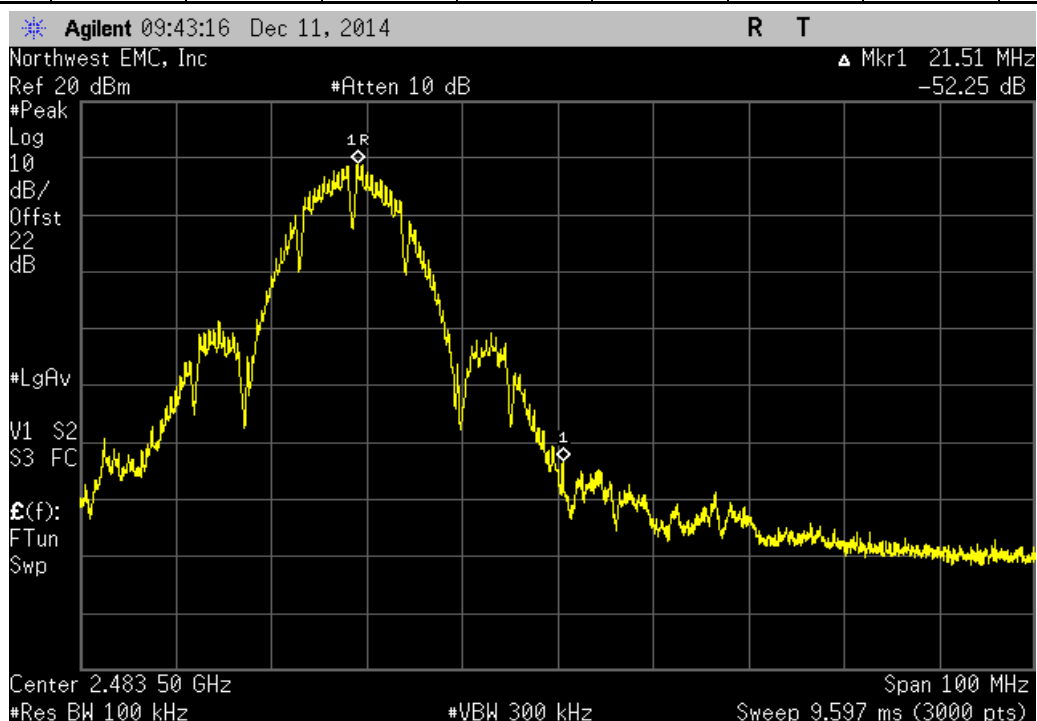
Antenna 0, 802.11(n) MCS7, High Channel 11, 2462 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-37.38	-20	Pass



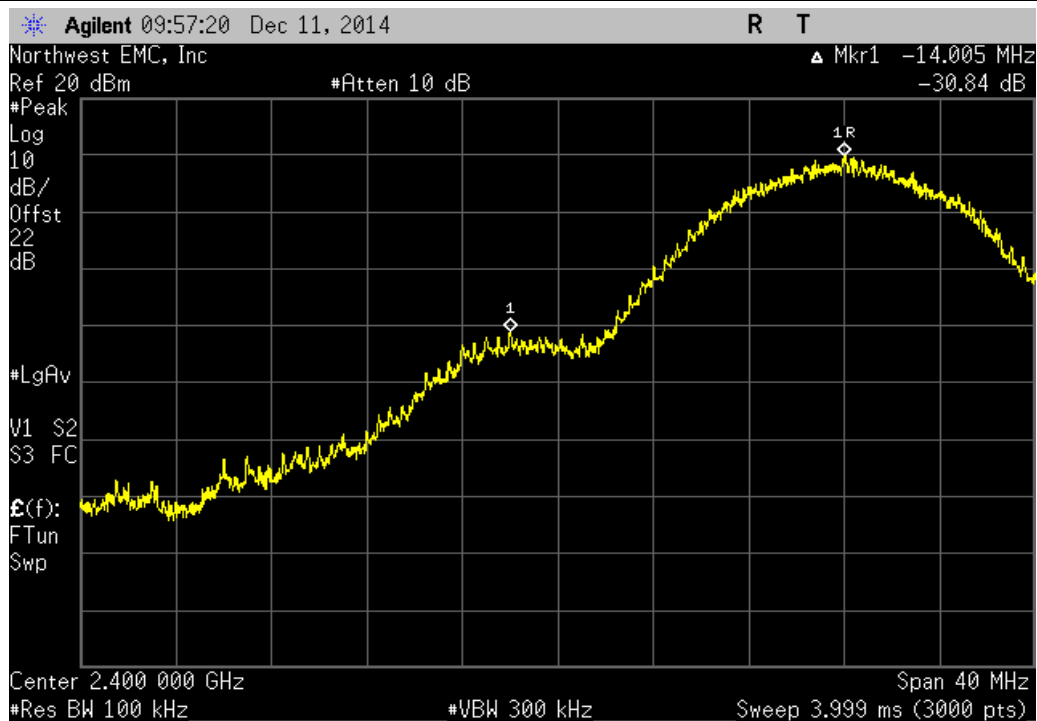
Antenna 1, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-27.79	-20	Pass



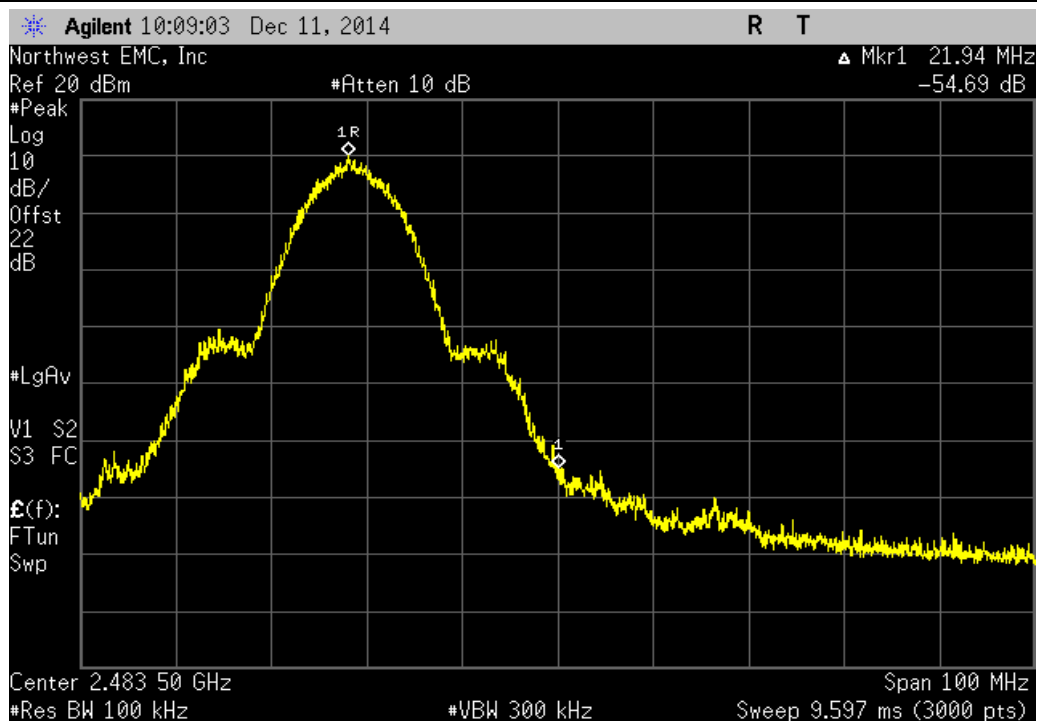
Antenna 1, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-52.25	-20	Pass



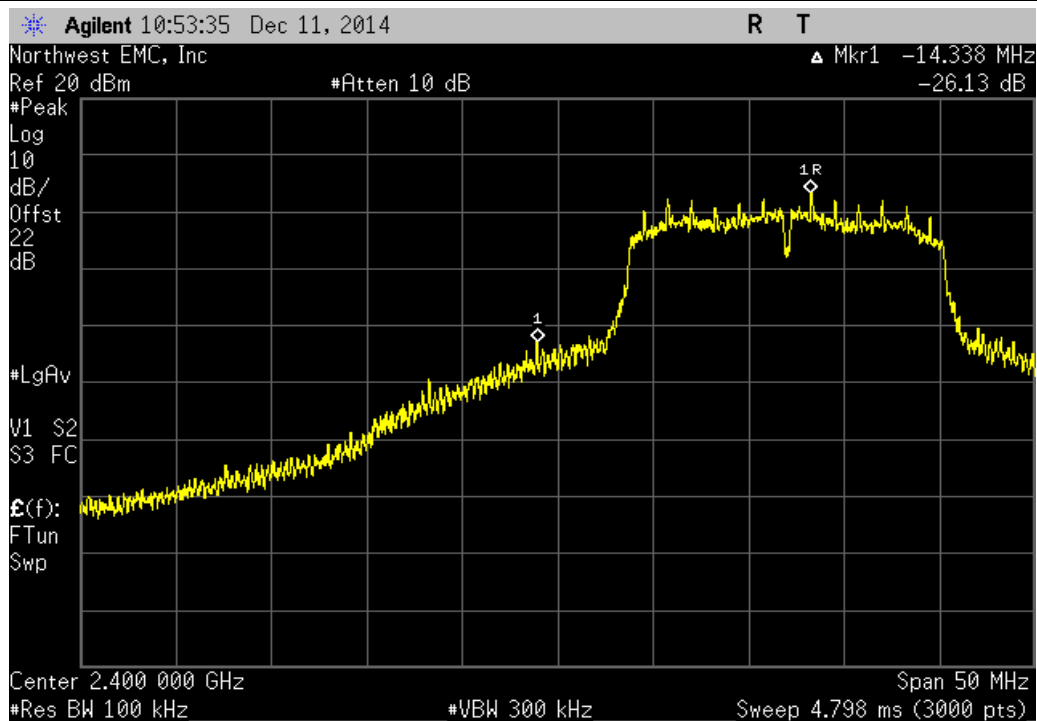
Antenna 1, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-30.84	-20	Pass



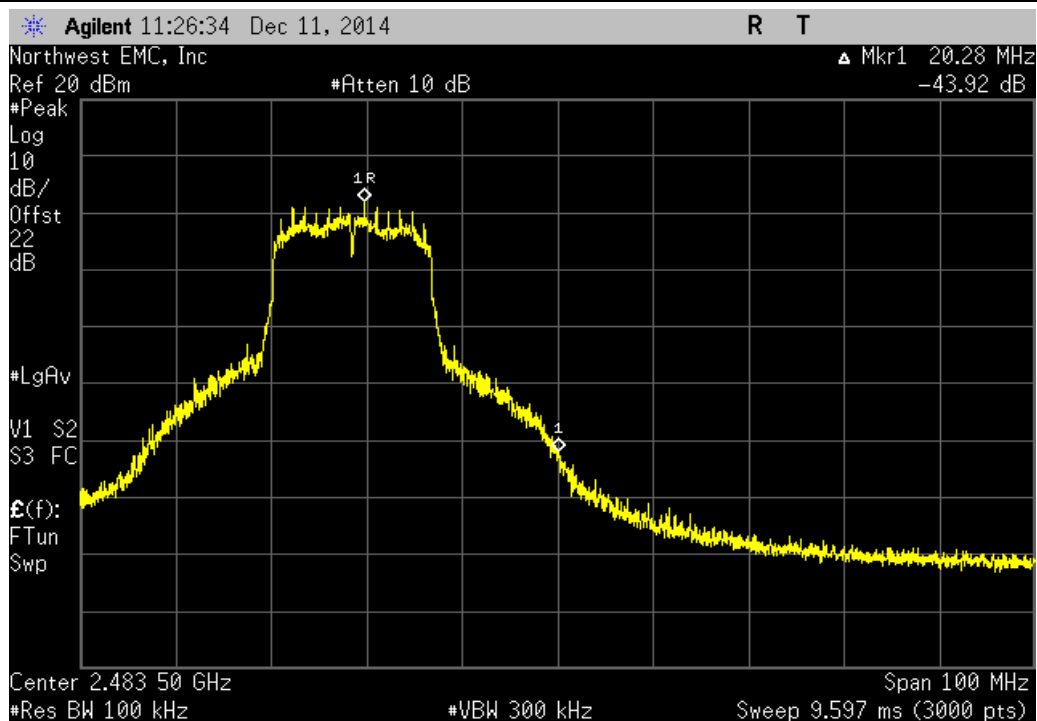
Antenna 1, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-54.69	-20	Pass



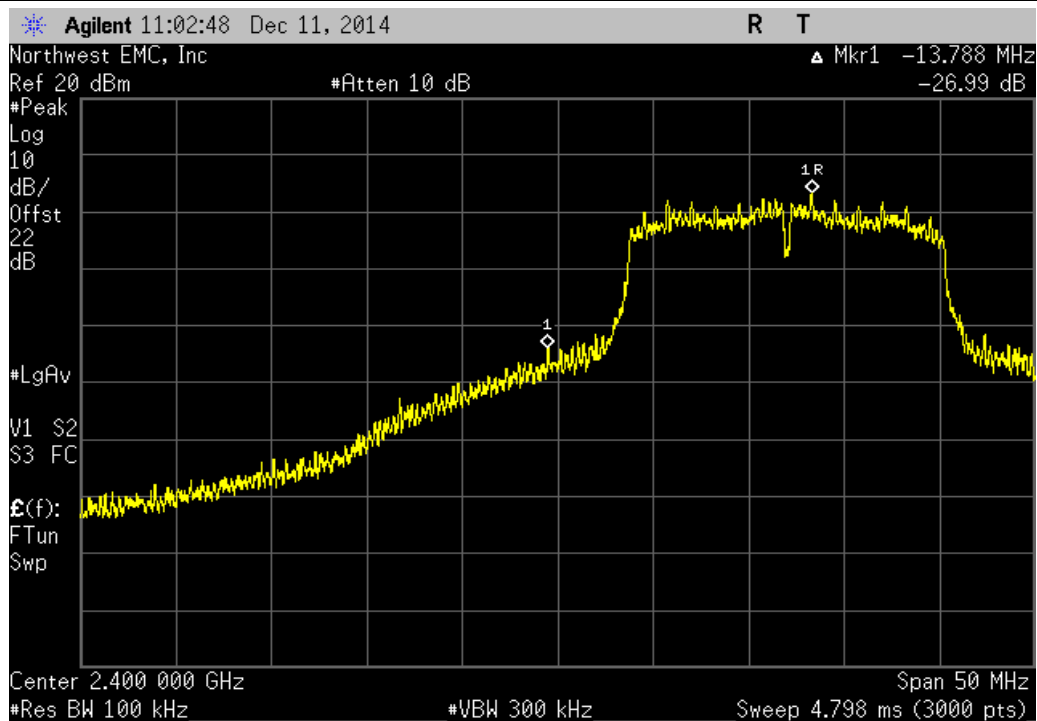
Antenna 1, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-26.13	-20	Pass



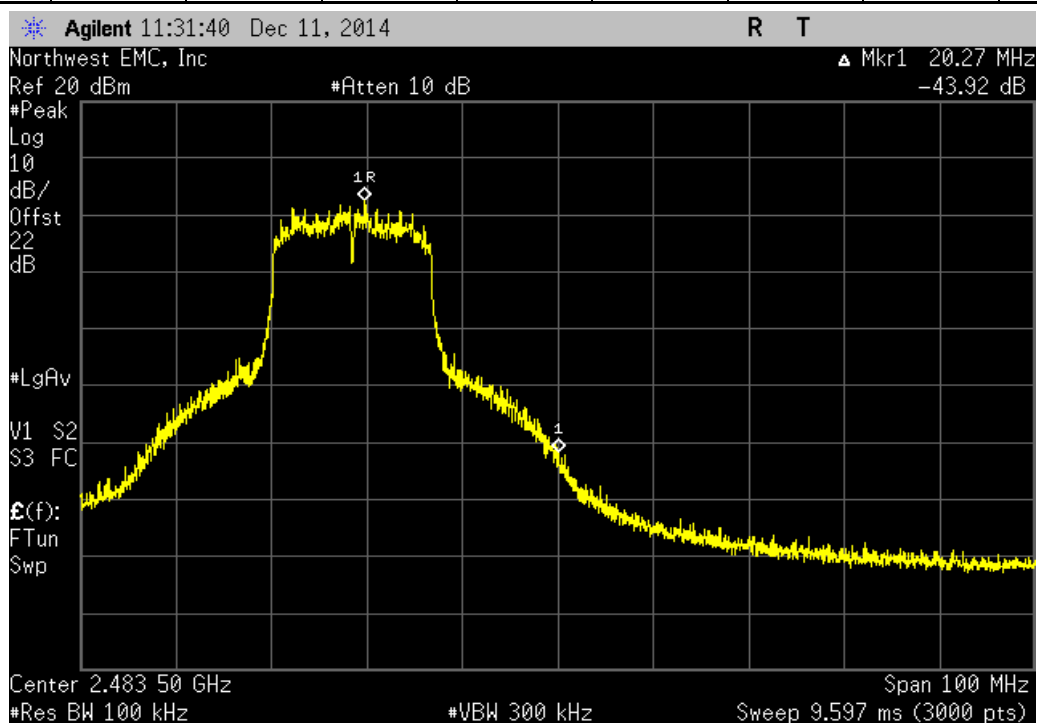
Antenna 1, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-43.92	-20	Pass



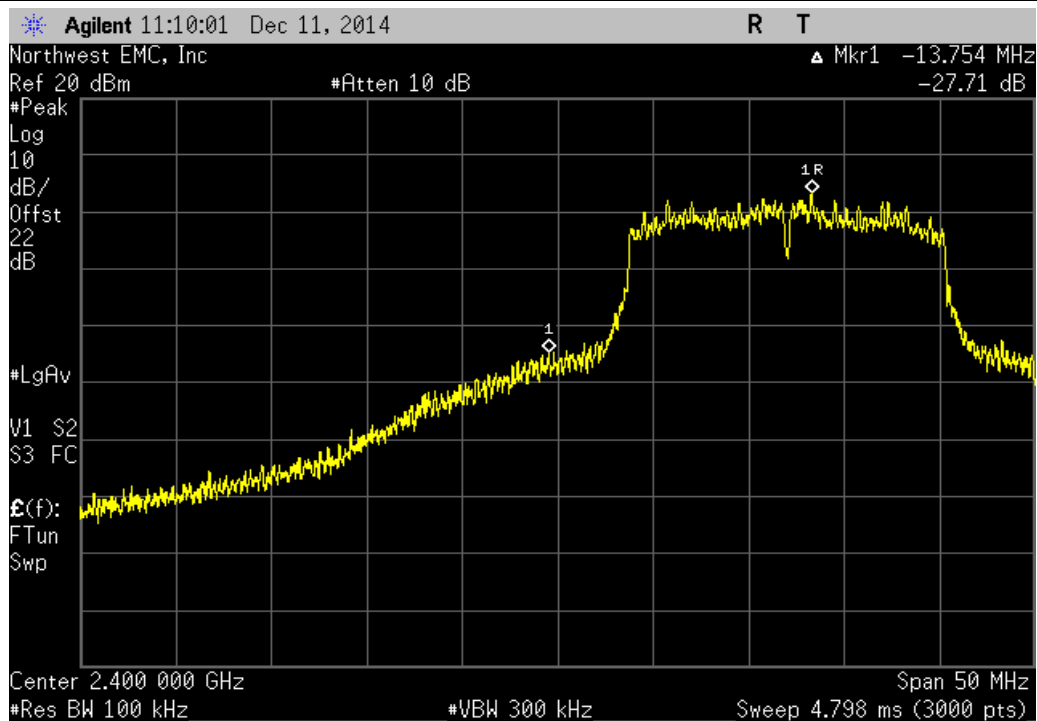
Antenna 1, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-26.99	-20	Pass



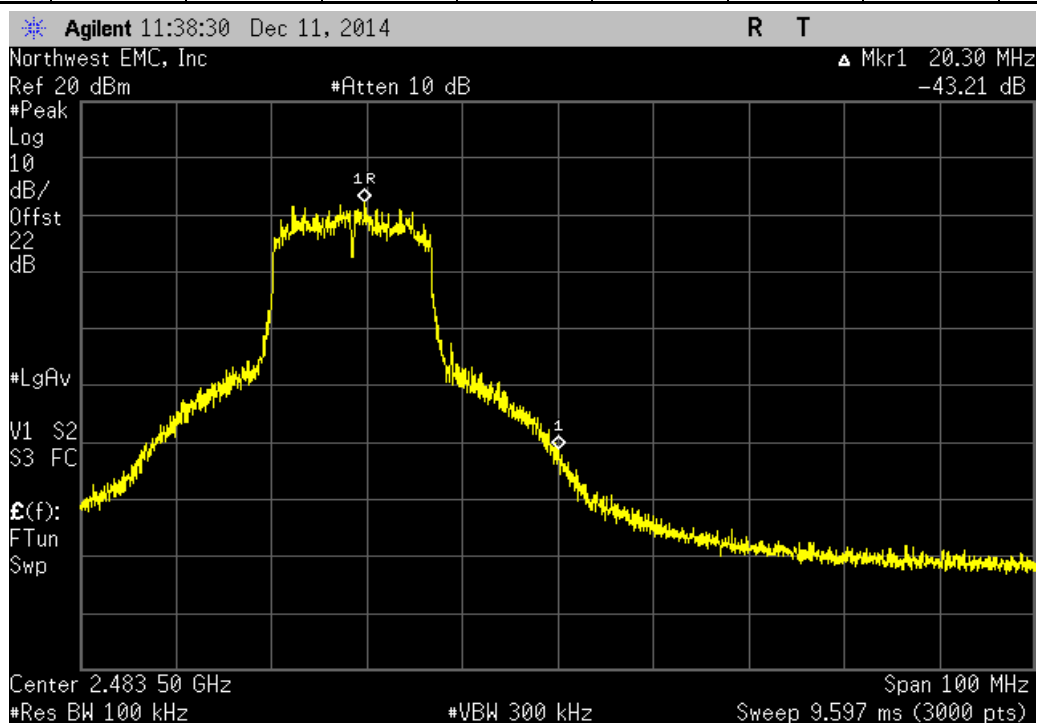
Antenna 1, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-43.92	-20	Pass



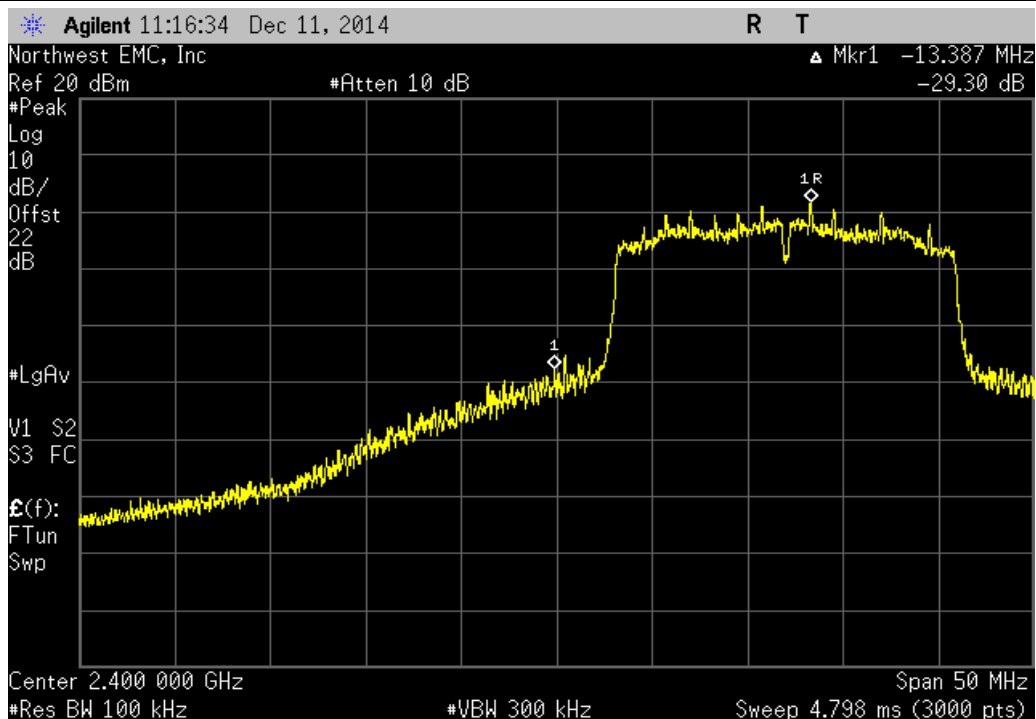
Antenna 1, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-27.71	-20	Pass



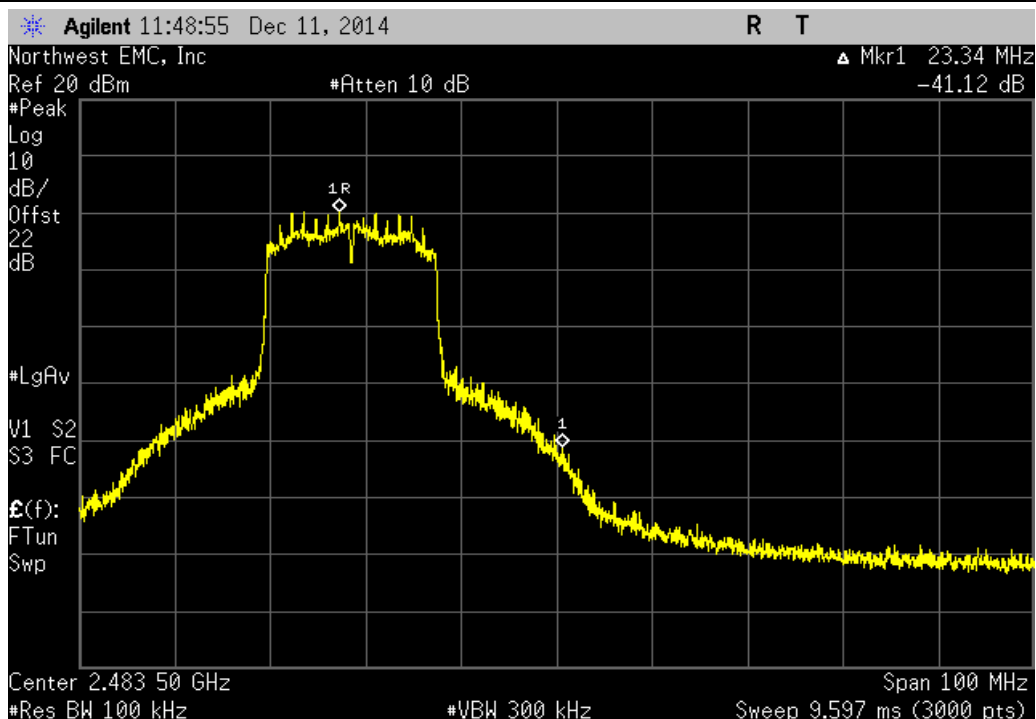
Antenna 1, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-43.21	-20	Pass



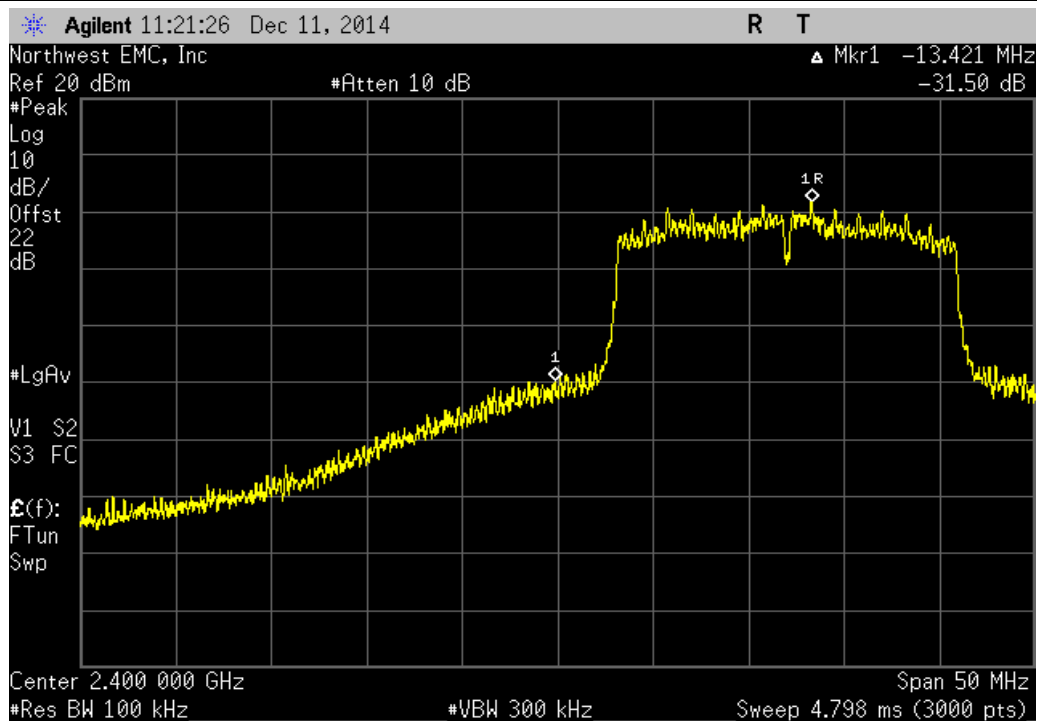
Antenna 1, 802.11(n) MCS0, Low Channel 1, 2412 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-29.3	-20	Pass



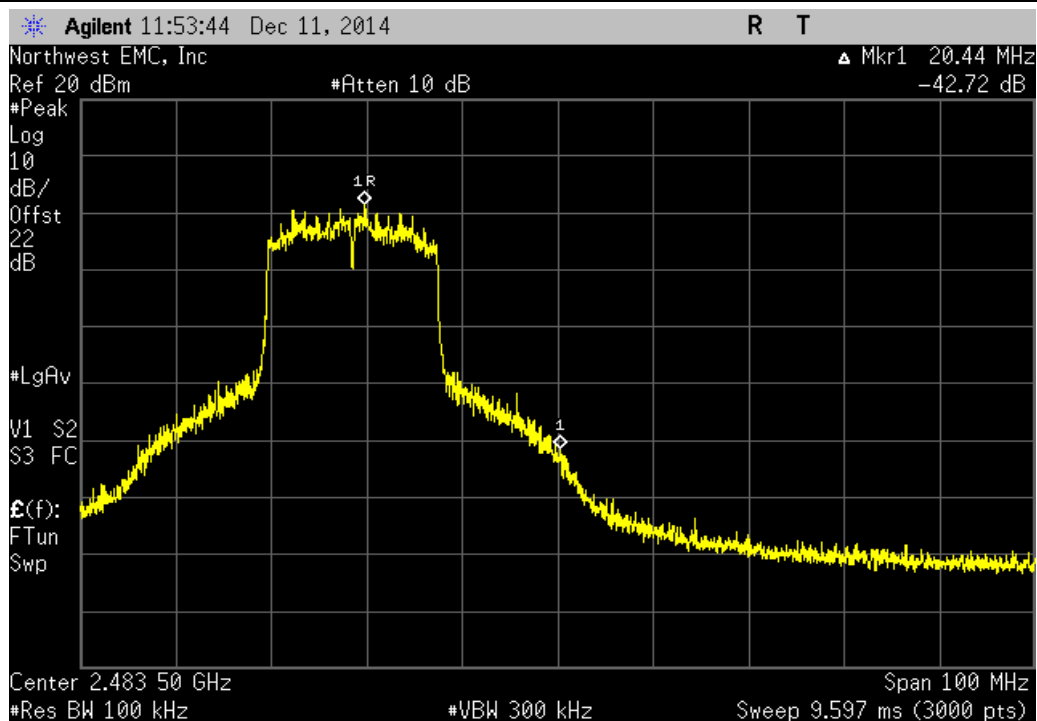
Antenna 1, 802.11(n) MCS0, High Channel 11, 2462 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-41.12	-20	Pass

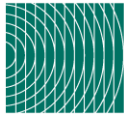


Antenna 1, 802.11(n) MCS7, Low Channel 1, 2412 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-31.5	-20	Pass



Antenna 1, 802.11(n) MCS7, High Channel 11, 2462 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-42.72	-20	Pass





Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo)
MN08 Direct Connect Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	10/2/2014	12
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	4/3/2014	12
40 GHz DC Block	Fairview Microwave	SD3379	AMI	10/2/2014	12
MXG Vector Signal Generator	Agilent	N5182A	TIF	8/12/2014	36
Spectrum Analyzer	Agilent	E4440A	AAX	4/28/2014	12

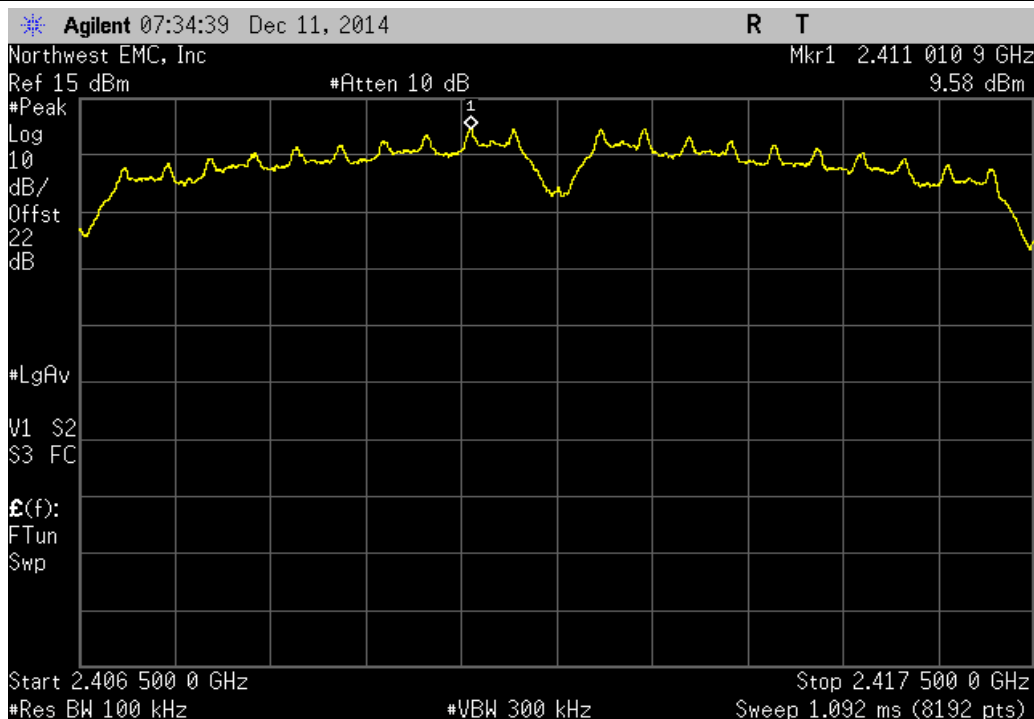
TEST DESCRIPTION

The spurious RF conducted emissions were measured with the EUT set to low, medium and high transmit frequencies. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

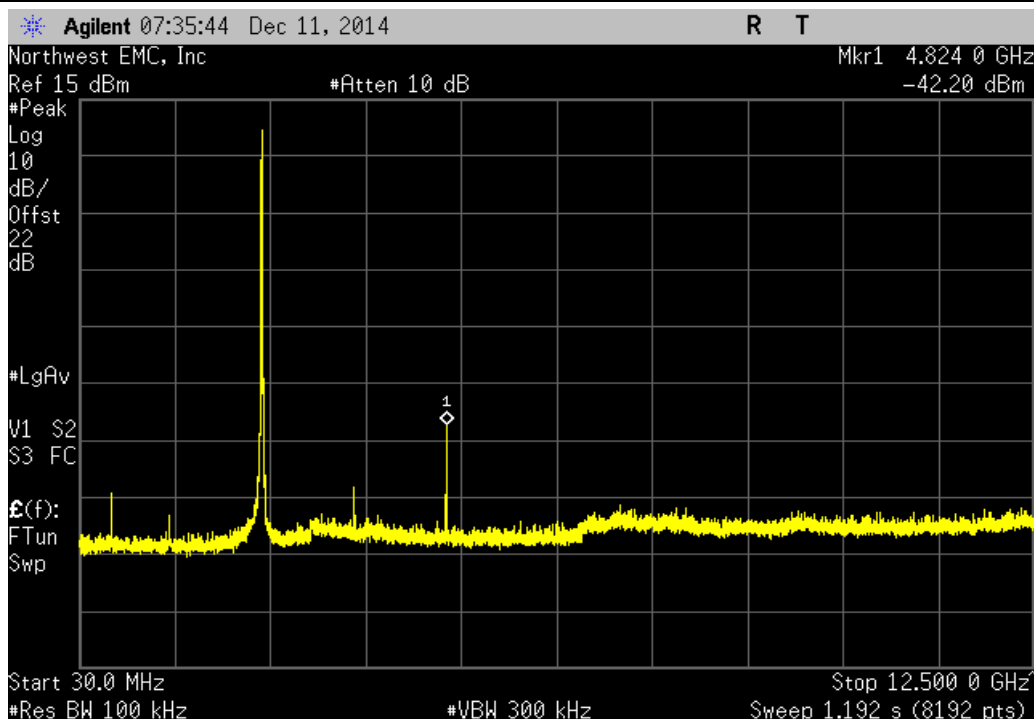
EUT: TH6320WF02		Work Order: HNYW0120	
Serial Number: 71630010589274		Date: 12/11/14	
Customer: Honeywell, Automation and Control Solutions		Temperature: 23.5°C	
Attendees: None		Humidity: 21%	
Project: None		Barometric Pres.: 1026.4	
Tested by: Trevor Buls		Power: 110VAC/60Hz	
Job Site: MN08			
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2014		ANSI C63.10:2009	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature <i>Trevor Buls</i>	
		Frequency Range	Value (dBc) Limit ≤ (dBc) Result
Antenna 0			
802.11(b) 1 Mbps			
	Low Channel 1, 2412 MHz	Fundamental	N/A N/A N/A
	Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-51.78 -20 Pass
	Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-62.2 -20 Pass
	Mid Channel 6, 2437 MHz	Fundamental	N/A N/A N/A
	Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-52.82 -20 Pass
	Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-62.42 -20 Pass
	High Channel 11, 2462 MHz	Fundamental	N/A N/A N/A
	High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-53.26 -20 Pass
	High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-62.01 -20 Pass
802.11(b) 11 Mbps			
	Low Channel 1, 2412 MHz	Fundamental	N/A N/A N/A
	Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-51.67 -20 Pass
	Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-61.68 -20 Pass
	Mid Channel 6, 2437 MHz	Fundamental	N/A N/A N/A
	Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-53.19 -20 Pass
	Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-61.93 -20 Pass
	High Channel 11, 2462 MHz	Fundamental	N/A N/A N/A
	High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-54.11 -20 Pass
	High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-61.9 -20 Pass
802.11(g) 6 Mbps			
	Low Channel 1, 2412 MHz	Fundamental	N/A N/A N/A
	Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-43.07 -20 Pass
	Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-54.42 -20 Pass
	Mid Channel 6, 2437 MHz	Fundamental	N/A N/A N/A
	Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-58.78 -20 Pass
	Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-58.86 -20 Pass
	High Channel 11, 2462 MHz	Fundamental	N/A N/A N/A
	High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-53.15 -20 Pass
	High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-53.94 -20 Pass
802.11(g) 36 Mbps			
	Low Channel 1, 2412 MHz	Fundamental	N/A N/A N/A
	Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-43.85 -20 Pass
	Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-54.6 -20 Pass
	Mid Channel 6, 2437 MHz	Fundamental	N/A N/A N/A
	Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-59.22 -20 Pass
	Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-59.85 -20 Pass
	High Channel 11, 2462 MHz	Fundamental	N/A N/A N/A
	High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-54.83 -20 Pass
	High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-54.02 -20 Pass
802.11(g) 54 Mbps			
	Low Channel 1, 2412 MHz	Fundamental	N/A N/A N/A
	Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-44.69 -20 Pass
	Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-54.46 -20 Pass
	Mid Channel 6, 2437 MHz	Fundamental	N/A N/A N/A
	Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-59.35 -20 Pass
	Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-59.34 -20 Pass
	High Channel 11, 2462 MHz	Fundamental	N/A N/A N/A
	High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-56.3 -20 Pass
	High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-53.93 -20 Pass
802.11(n) MCS0			
	Low Channel 1, 2412 MHz	Fundamental	N/A N/A N/A
	Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-43.24 -20 Pass
	Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-54.49 -20 Pass
	Mid Channel 6, 2437 MHz	Fundamental	N/A N/A N/A
	Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-60.86 -20 Pass
	Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-59.93 -20 Pass
	High Channel 11, 2462 MHz	Fundamental	N/A N/A N/A
	High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-50.36 -20 Pass
	High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-54.35 -20 Pass
802.11(n) MCS7			
	Low Channel 1, 2412 MHz	Fundamental	N/A N/A N/A
	Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-45.44 -20 Pass
	Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-54.59 -20 Pass
	Mid Channel 6, 2437 MHz	Fundamental	N/A N/A N/A
	Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-58.36 -20 Pass
	Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-59.41 -20 Pass
	High Channel 11, 2462 MHz	Fundamental	N/A N/A N/A
	High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-56.57 -20 Pass
	High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-54.21 -20 Pass

Antenna 1					
802.11(b) 1 Mbps					
Low Channel 1, 2412 MHz	Fundamental	N/A	N/A	N/A	
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-51.59	-20	Pass	
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-61.64	-20	Pass	
Mid Channel 6, 2437 MHz	Fundamental	N/A	N/A	N/A	
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-54.44	-20	Pass	
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-61.26	-20	Pass	
High Channel 11, 2462 MHz	Fundamental	N/A	N/A	N/A	
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-55.15	-20	Pass	
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-61.36	-20	Pass	
802.11(b) 11 Mbps					
Low Channel 1, 2412 MHz	Fundamental	N/A	N/A	N/A	
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-54.33	-20	Pass	
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-62.55	-20	Pass	
Mid Channel 6, 2437 MHz	Fundamental	N/A	N/A	N/A	
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-56.24	-20	Pass	
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-62.19	-20	Pass	
High Channel 11, 2462 MHz	Fundamental	N/A	N/A	N/A	
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-56.38	-20	Pass	
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-61.44	-20	Pass	
802.11(g) 6 Mbps					
Low Channel 1, 2412 MHz	Fundamental	N/A	N/A	N/A	
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-44.9	-20	Pass	
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-54.78	-20	Pass	
Mid Channel 6, 2437 MHz	Fundamental	N/A	N/A	N/A	
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-60.73	-20	Pass	
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-58.55	-20	Pass	
High Channel 11, 2462 MHz	Fundamental	N/A	N/A	N/A	
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-58.08	-20	Pass	
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-55.33	-20	Pass	
802.11(g) 36 Mbps					
Low Channel 1, 2412 MHz	Fundamental	N/A	N/A	N/A	
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-46.93	-20	Pass	
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-55.13	-20	Pass	
Mid Channel 6, 2437 MHz	Fundamental	N/A	N/A	N/A	
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-60.53	-20	Pass	
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-58.76	-20	Pass	
High Channel 11, 2462 MHz	Fundamental	N/A	N/A	N/A	
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-58.24	-20	Pass	
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-54.78	-20	Pass	
802.11(g) 54 Mbps					
Low Channel 1, 2412 MHz	Fundamental	N/A	N/A	N/A	
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-46.39	-20	Pass	
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-55.45	-20	Pass	
Mid Channel 6, 2437 MHz	Fundamental	N/A	N/A	N/A	
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-60.59	-20	Pass	
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-58.39	-20	Pass	
High Channel 11, 2462 MHz	Fundamental	N/A	N/A	N/A	
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-58.54	-20	Pass	
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-54.87	-20	Pass	
802.11(n) MCS0					
Low Channel 1, 2412 MHz	Fundamental	N/A	N/A	N/A	
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-48.2	-20	Pass	
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-53.77	-20	Pass	
Mid Channel 6, 2437 MHz	Fundamental	N/A	N/A	N/A	
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-59.78	-20	Pass	
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-58.77	-20	Pass	
High Channel 11, 2462 MHz	Fundamental	N/A	N/A	N/A	
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-57.84	-20	Pass	
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-52.38	-20	Pass	
802.11(n) MCS7					
Low Channel 1, 2412 MHz	Fundamental	N/A	N/A	N/A	
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-47.04	-20	Pass	
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-54	-20	Pass	
Mid Channel 6, 2437 MHz	Fundamental	N/A	N/A	N/A	
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-59.94	-20	Pass	
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-59.31	-20	Pass	
High Channel 11, 2462 MHz	Fundamental	N/A	N/A	N/A	
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-57.98	-20	Pass	
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-53.77	-20	Pass	

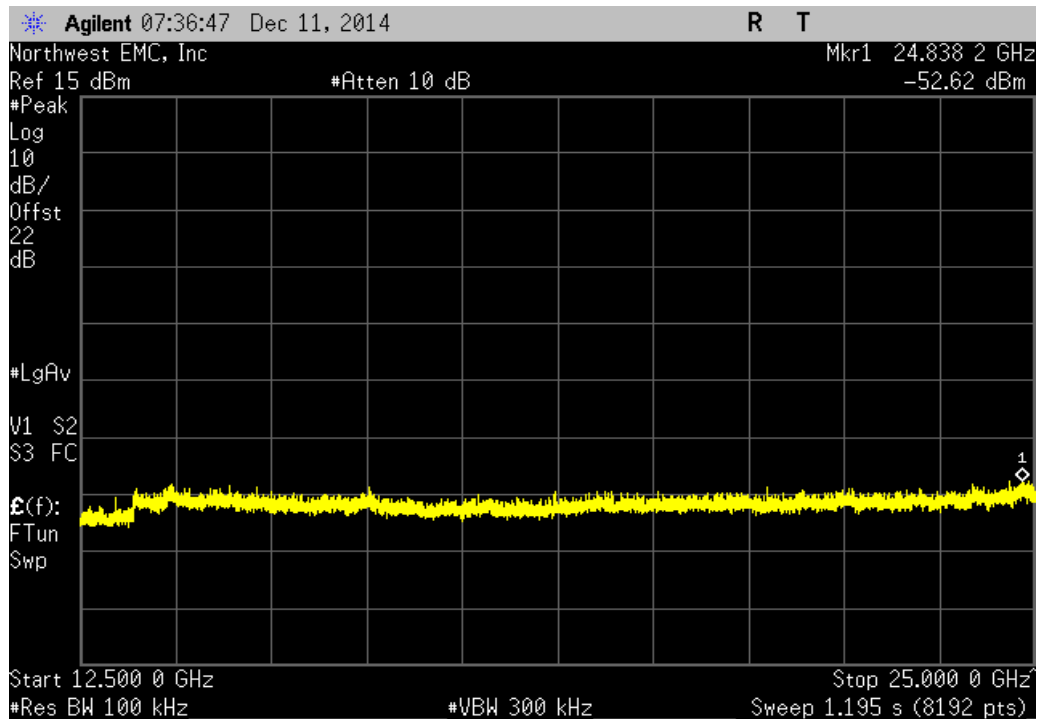
Antenna 0, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



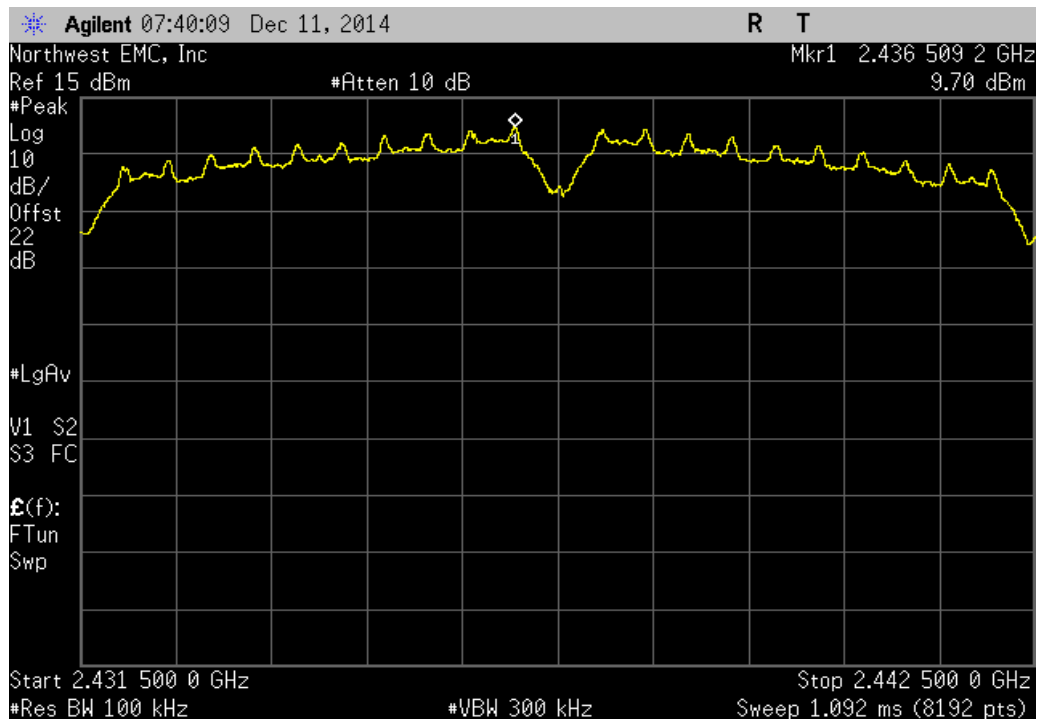
Antenna 0, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-51.78	-20	Pass	



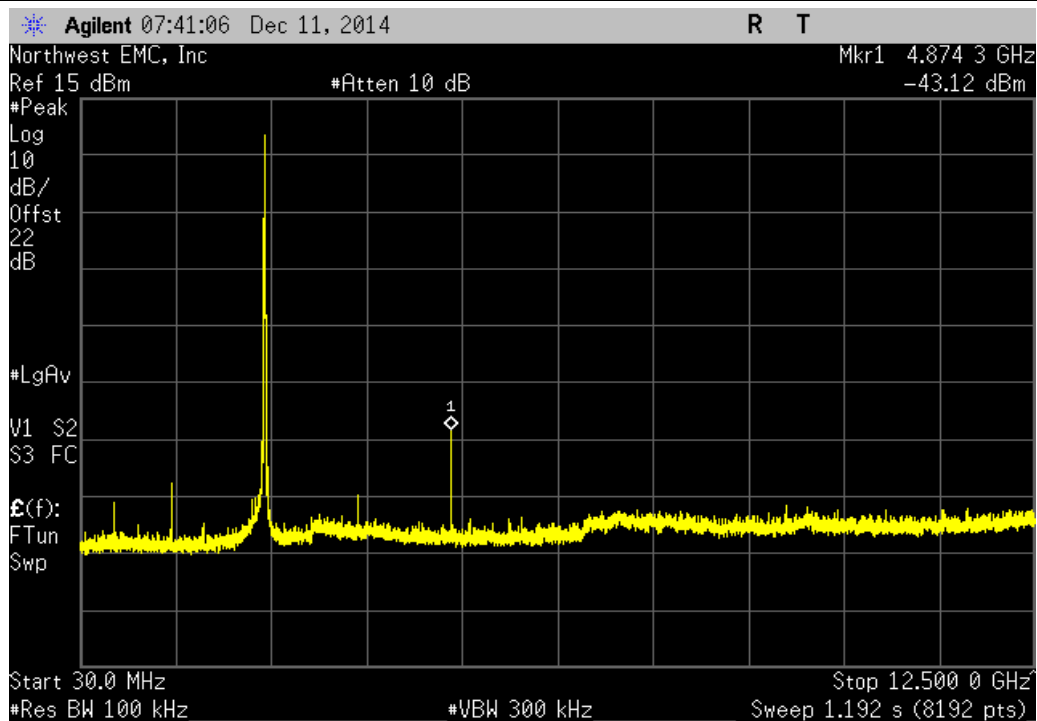
Antenna 0, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-62.2	-20	Pass	



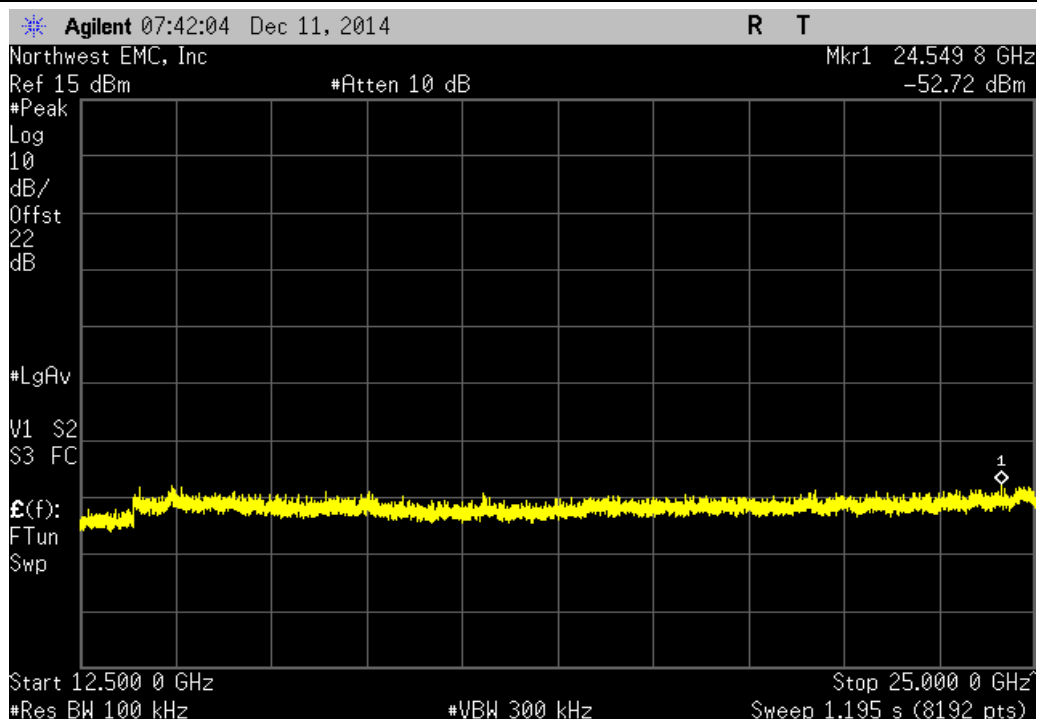
Antenna 0, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



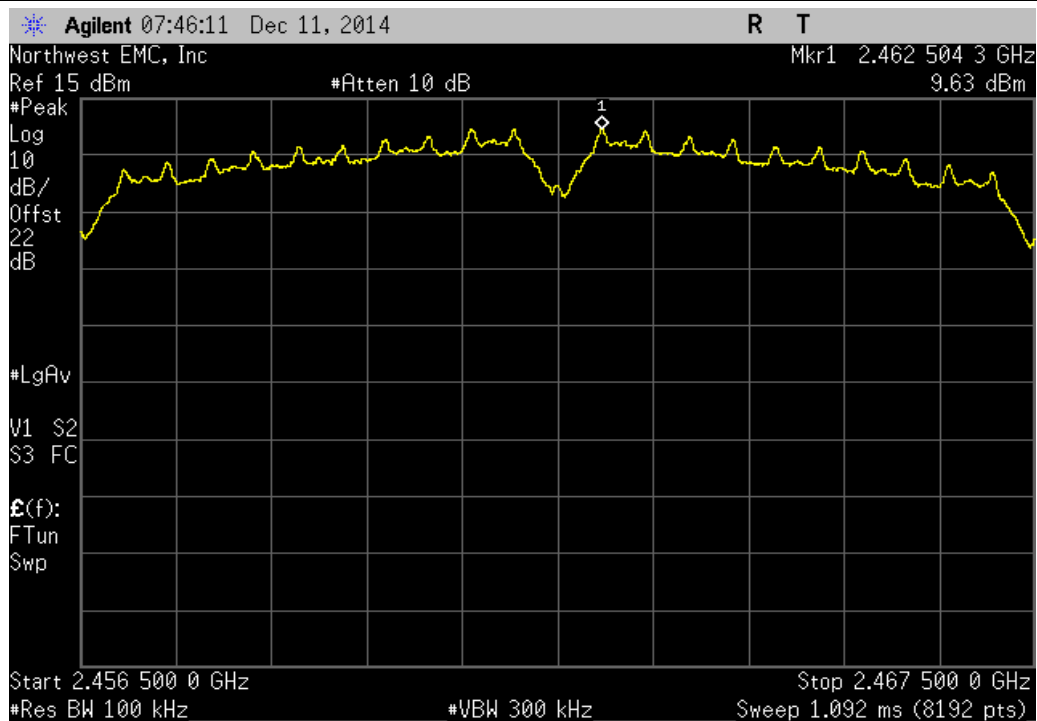
Antenna 0, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-52.82	-20	Pass	



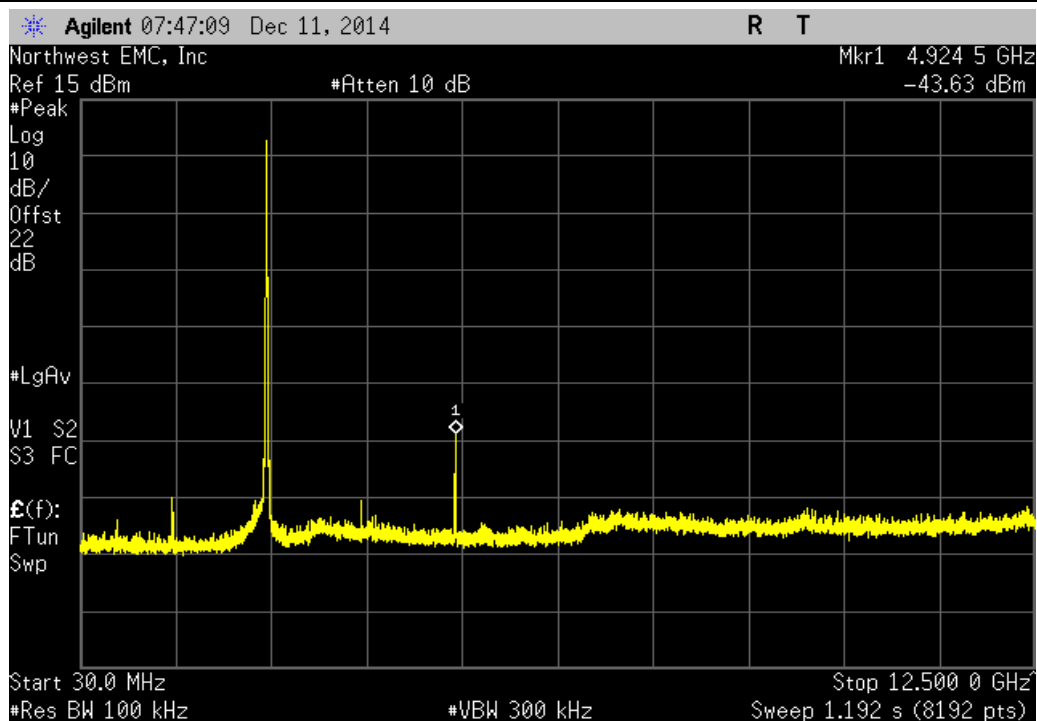
Antenna 0, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-62.42	-20	Pass	



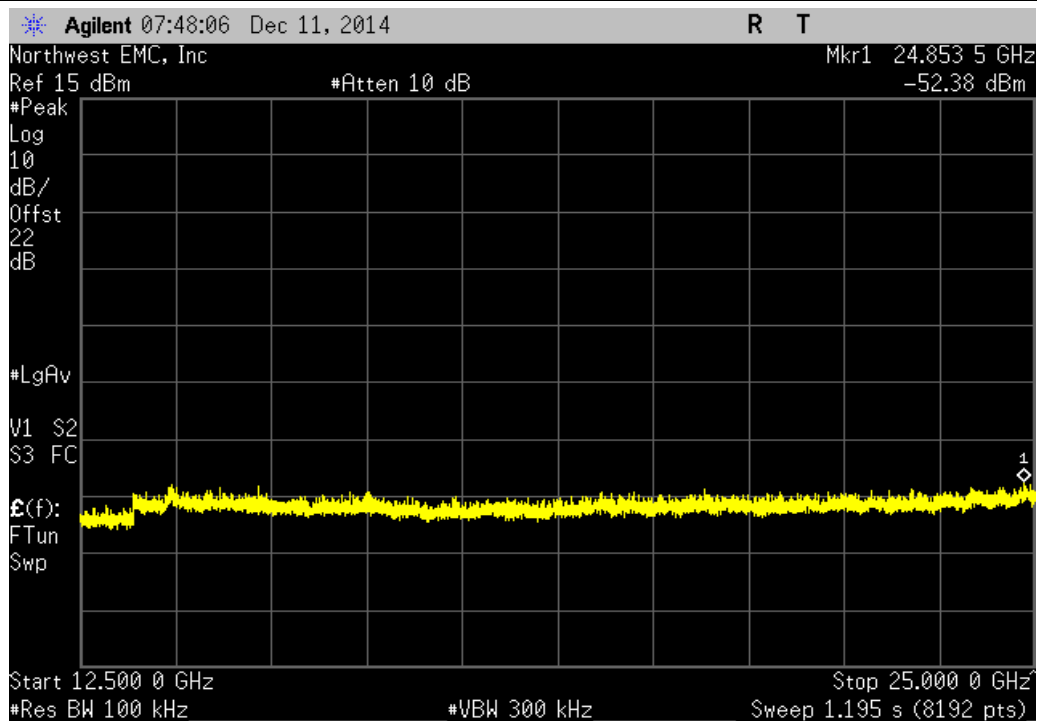
Antenna 0, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



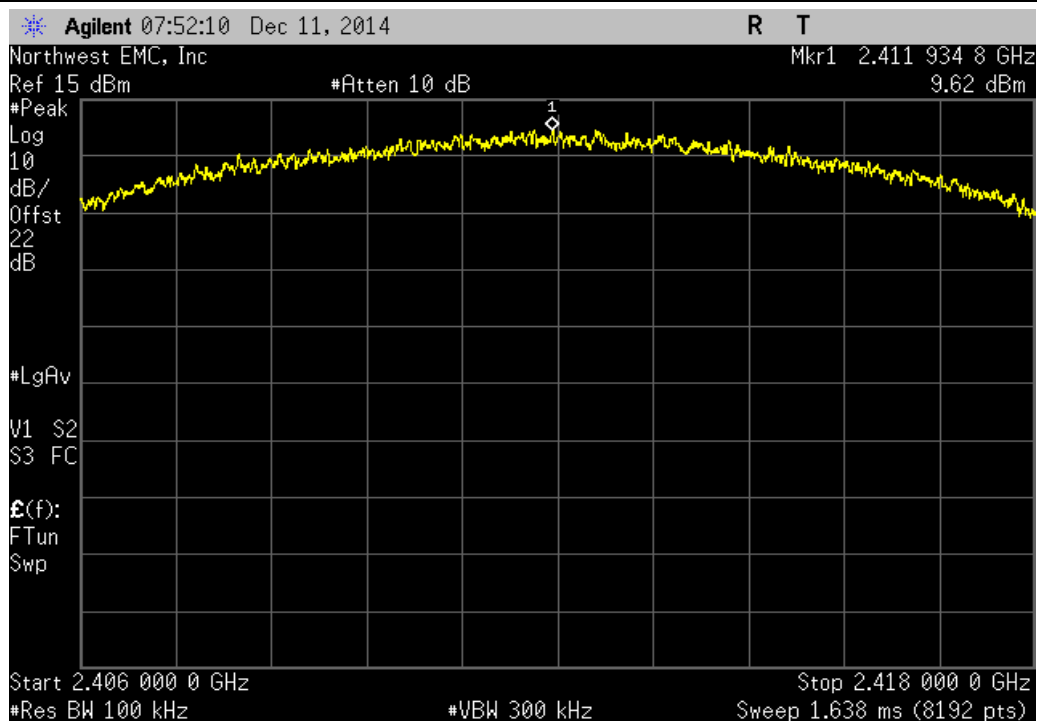
Antenna 0, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-53.26	-20	Pass	



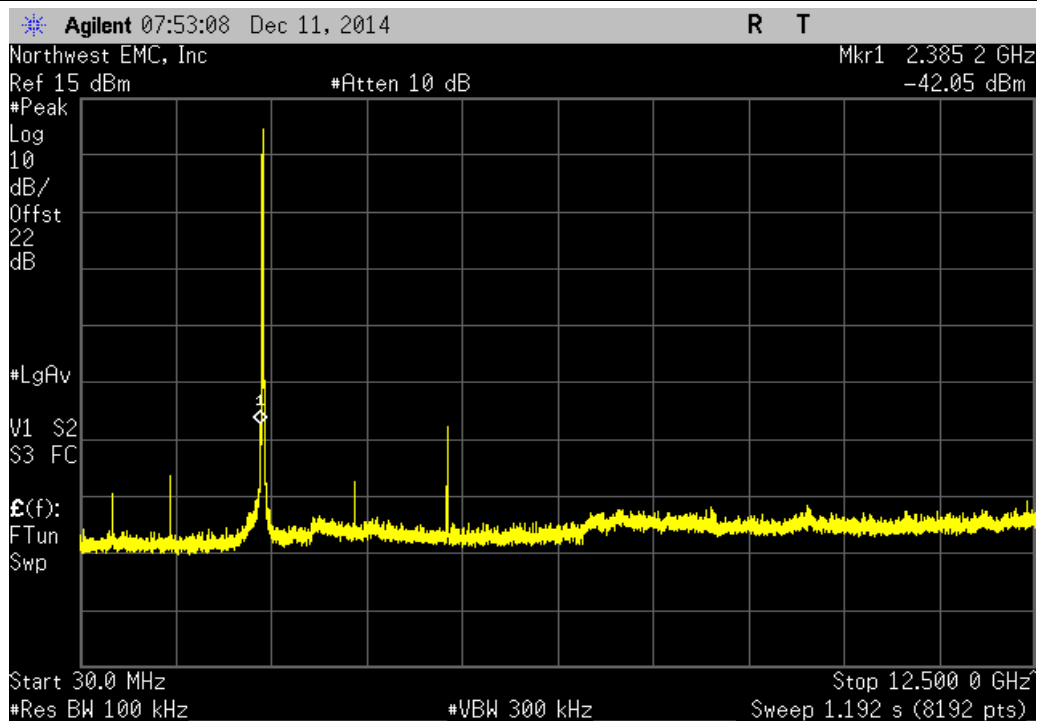
Antenna 0, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-62.01	-20	Pass	



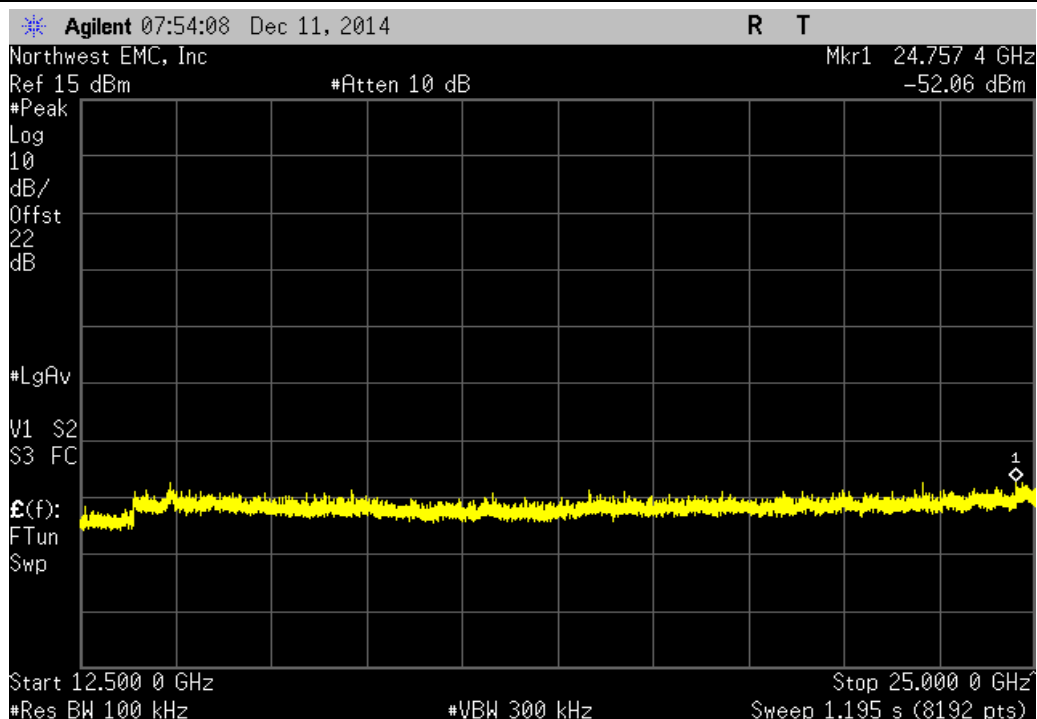
Antenna 0, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



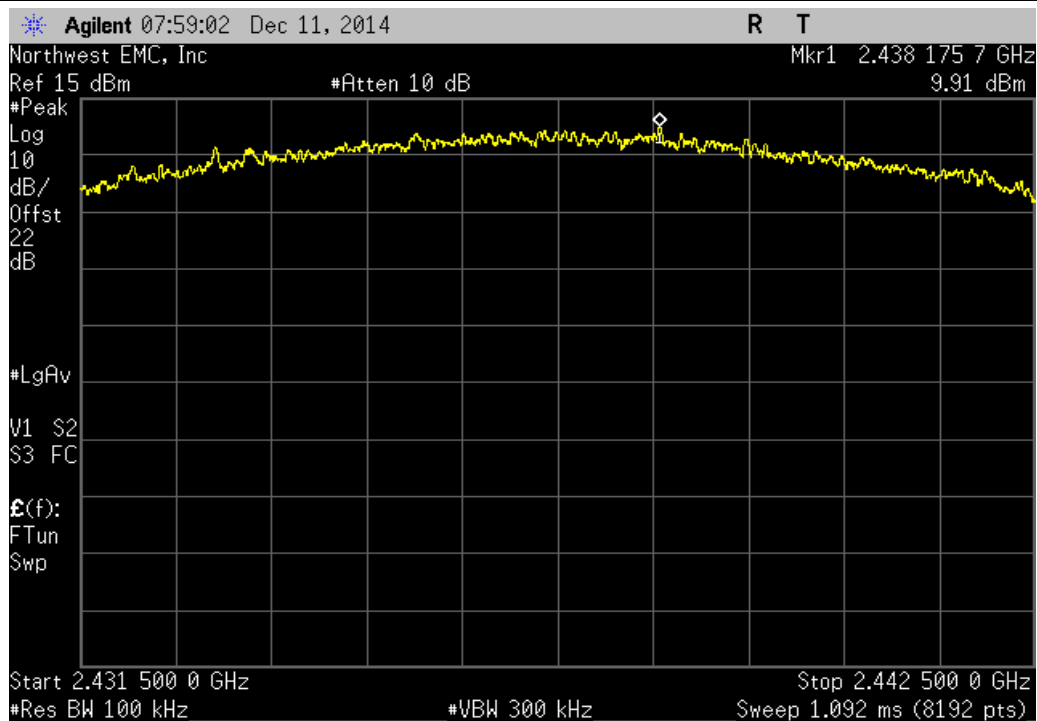
Antenna 0, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-51.67	-20	Pass	



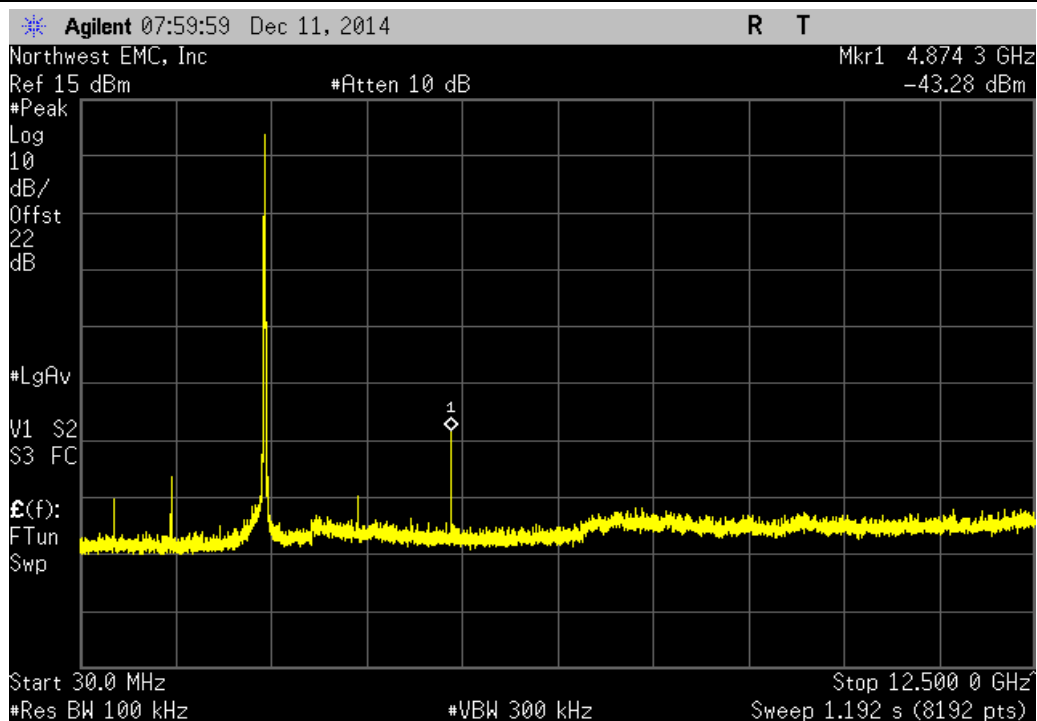
Antenna 0, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-61.68	-20	Pass	



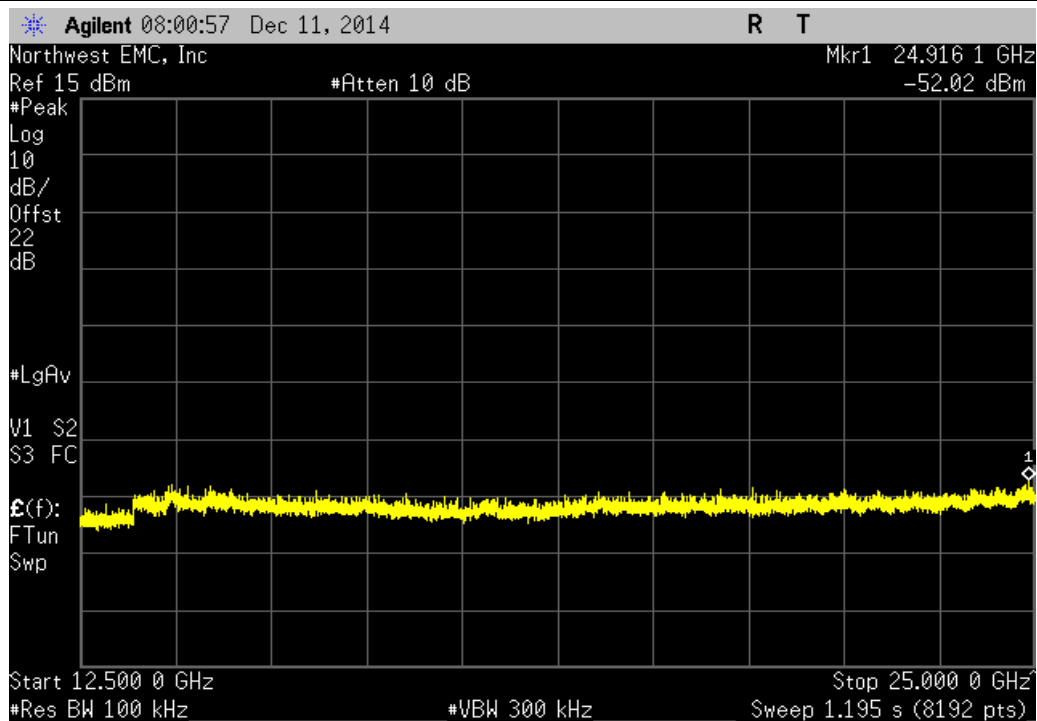
Antenna 0, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



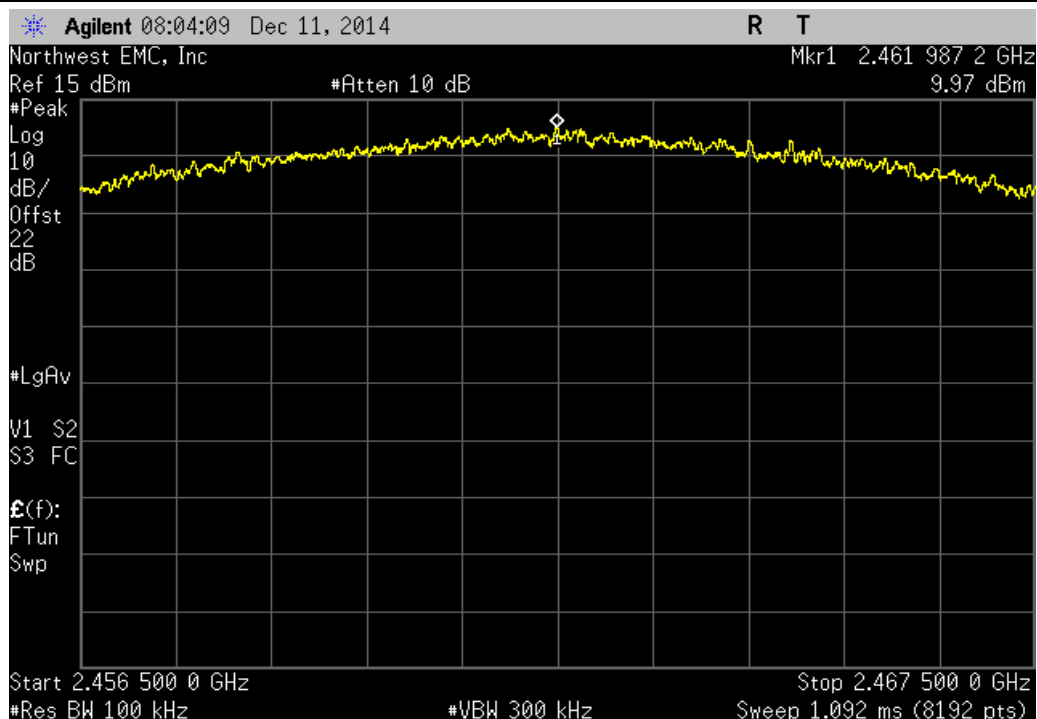
Antenna 0, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-53.19	-20	Pass	



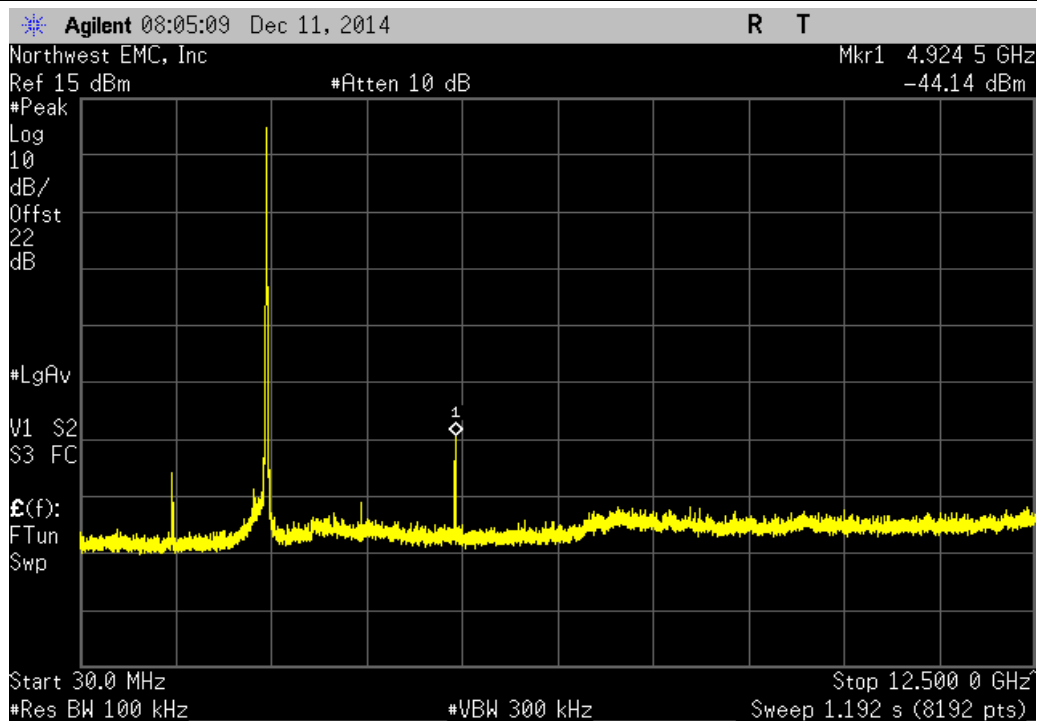
Antenna 0, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-61.93	-20	Pass	



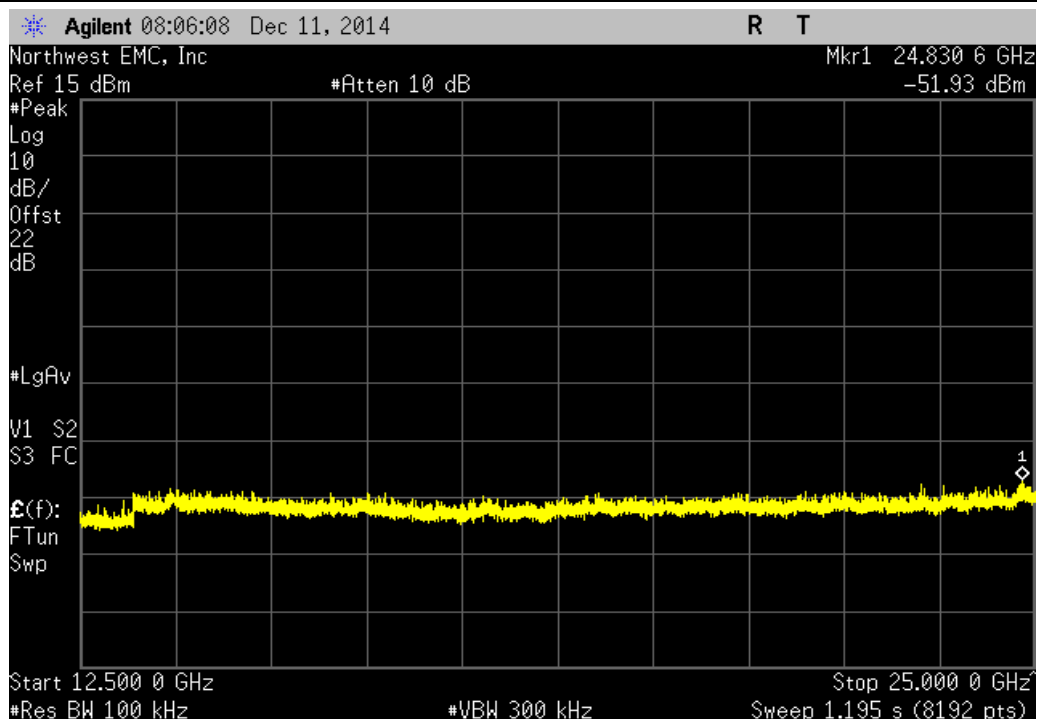
Antenna 0, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



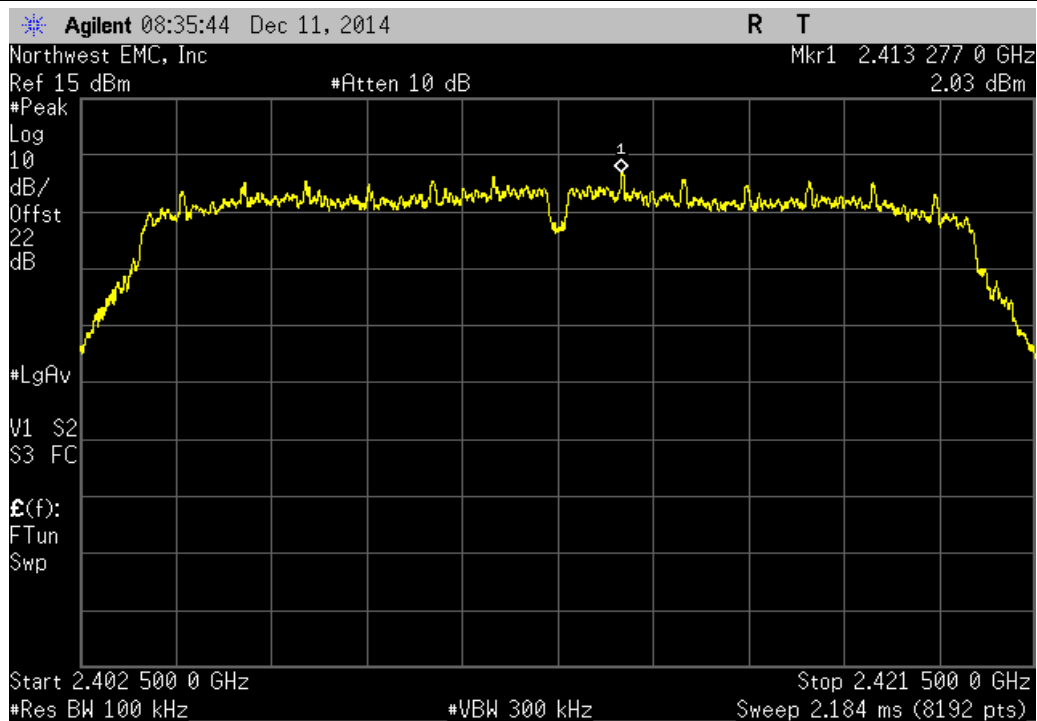
Antenna 0, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-54.11	-20	Pass	



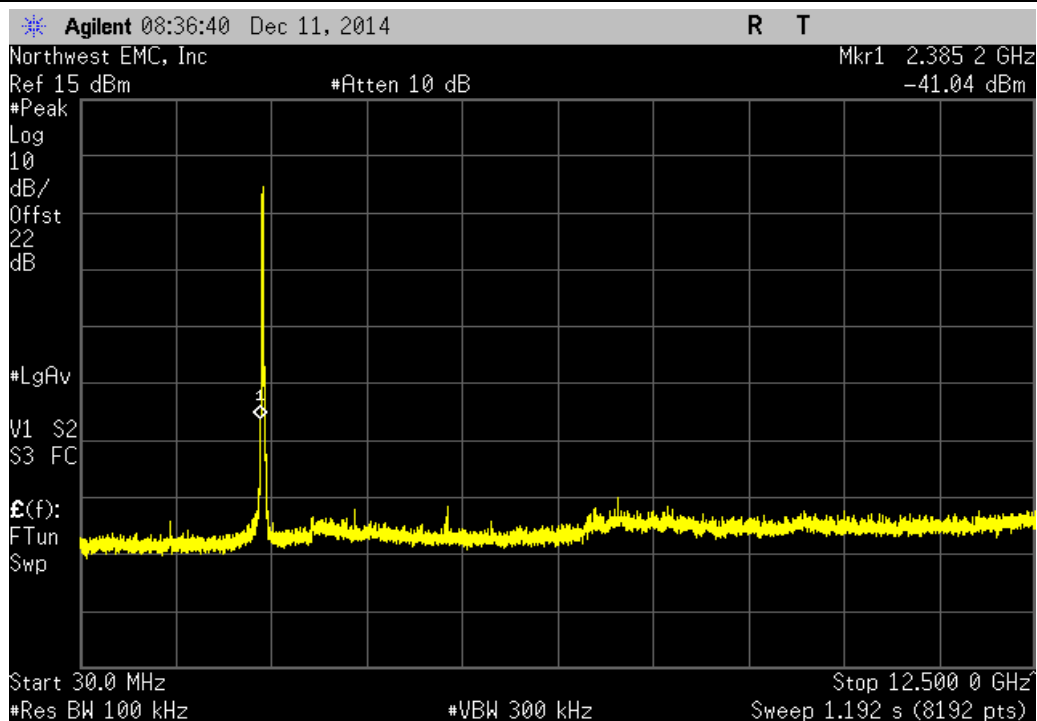
Antenna 0, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-61.9	-20	Pass	



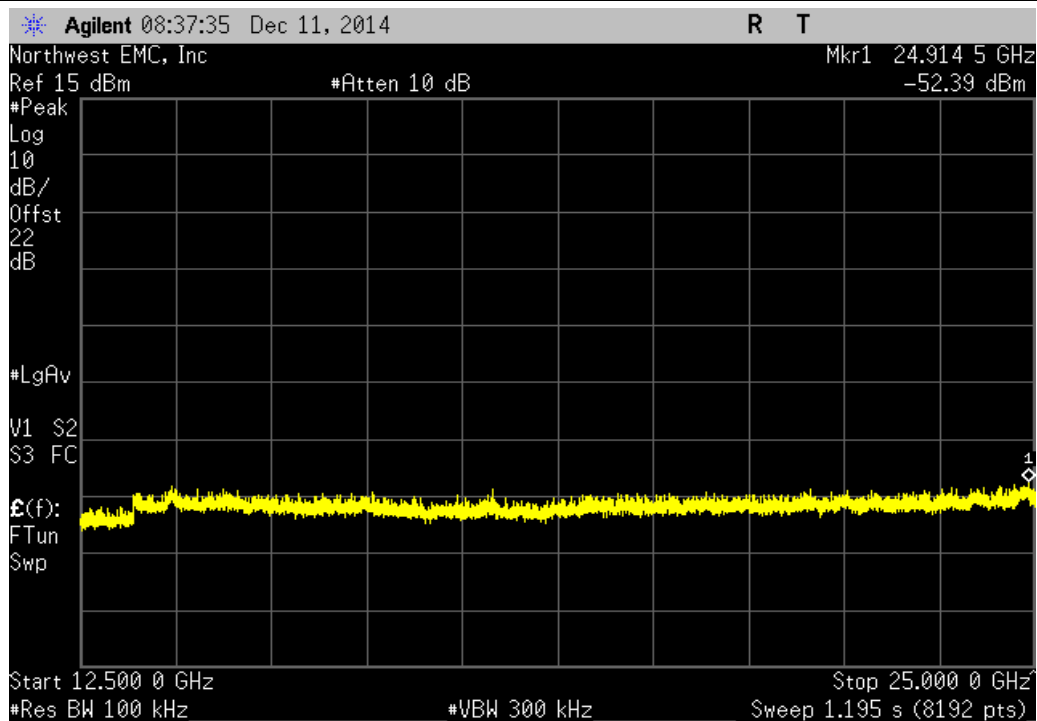
Antenna 0, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



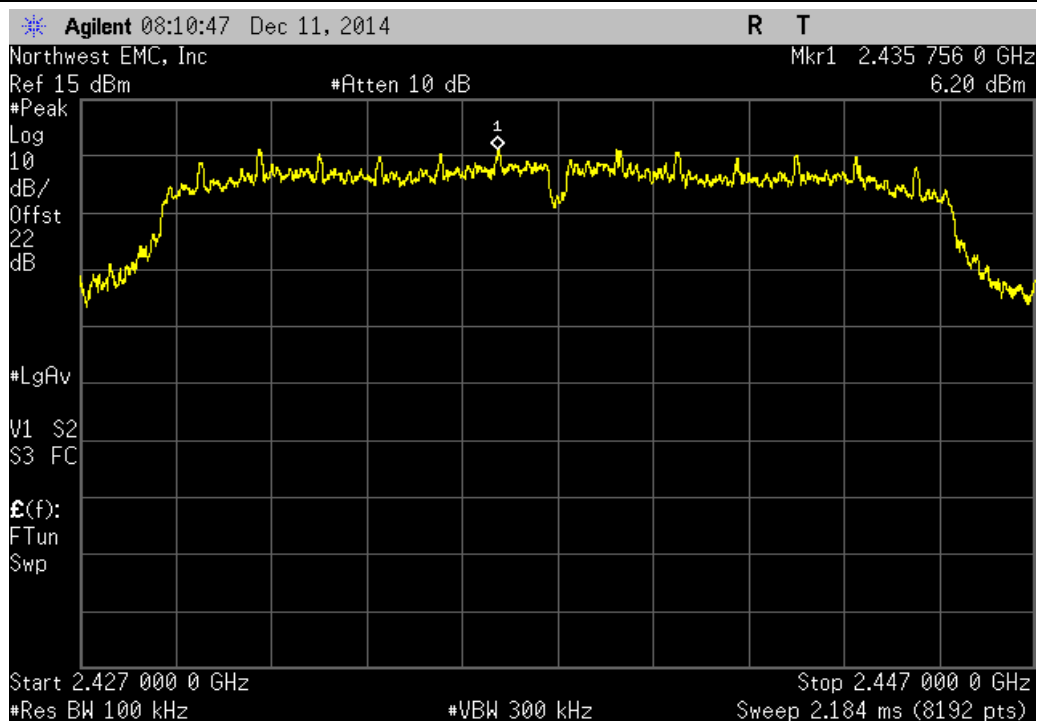
Antenna 0, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-43.07	-20	Pass	



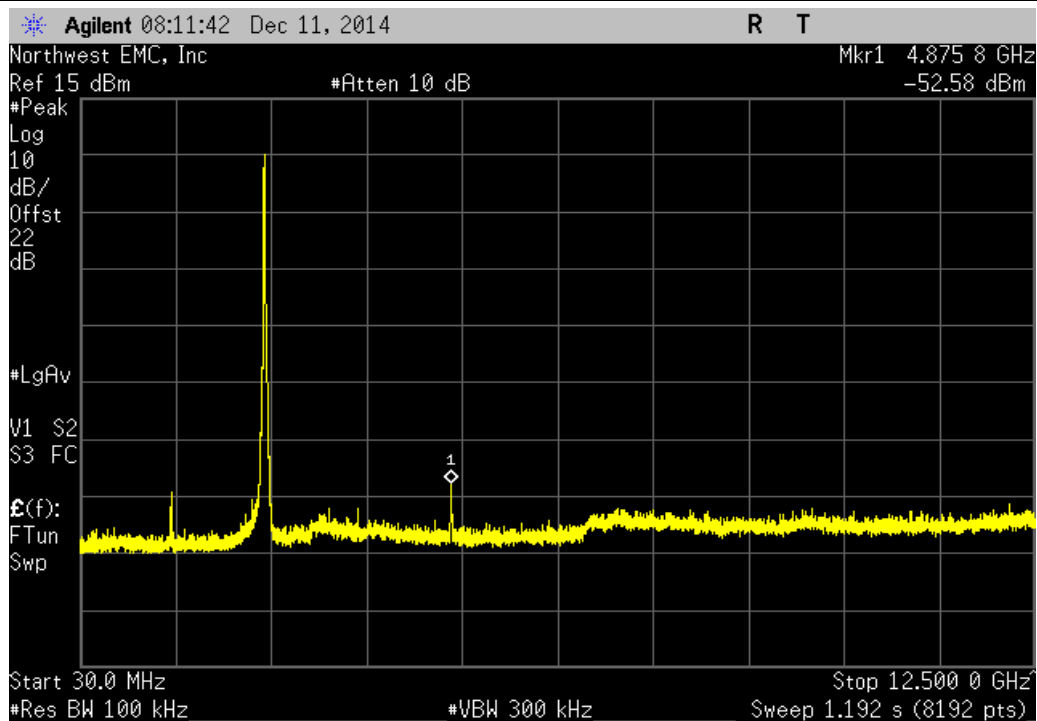
Antenna 0, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-54.42	-20	Pass	



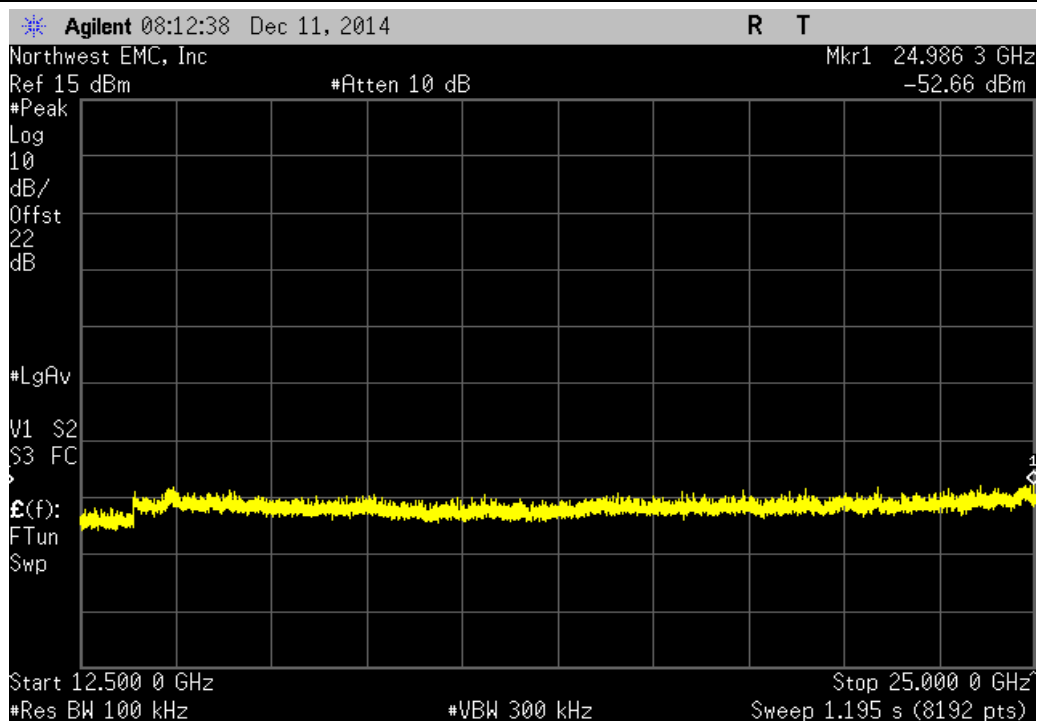
Antenna 0, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



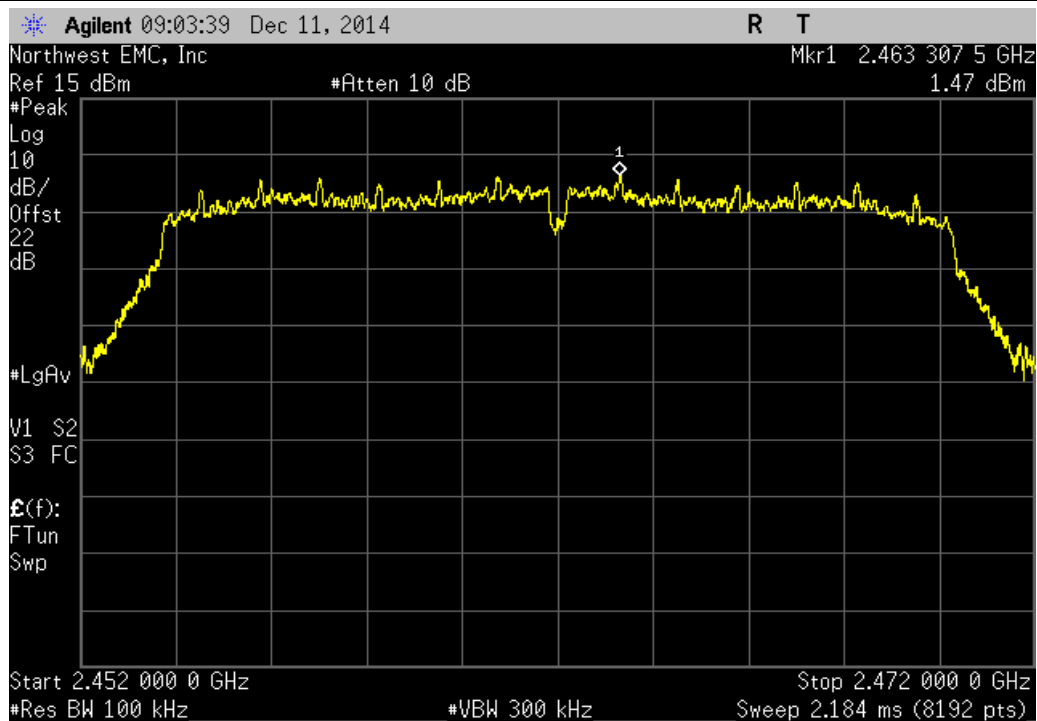
Antenna 0, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-58.78	-20	Pass	



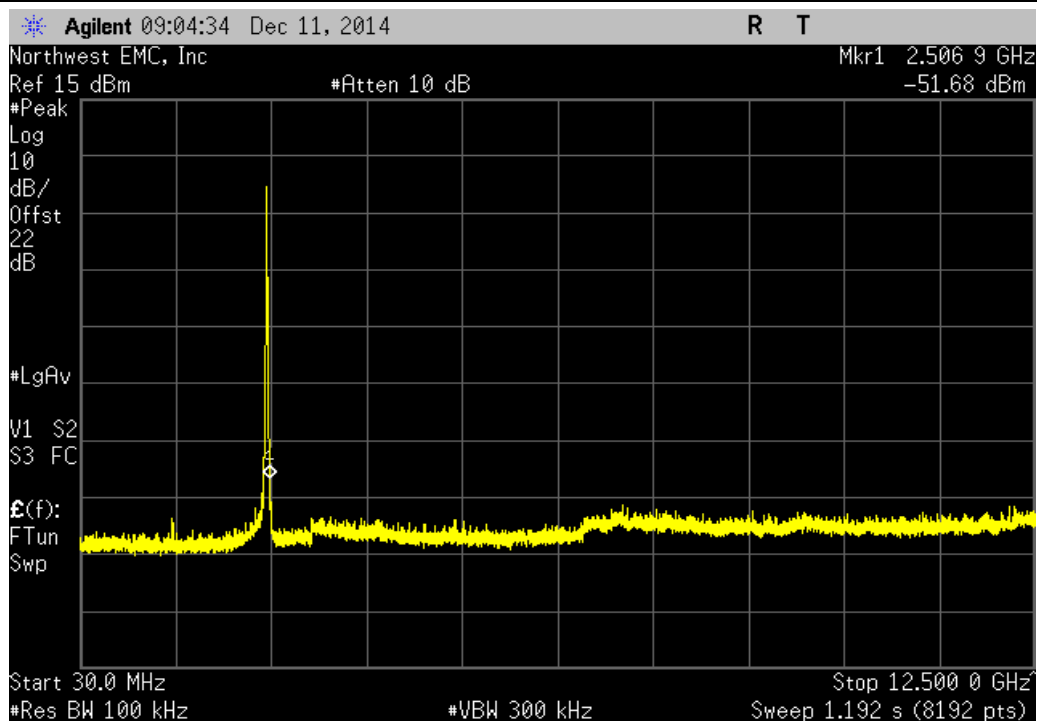
Antenna 0, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-58.86	-20	Pass	



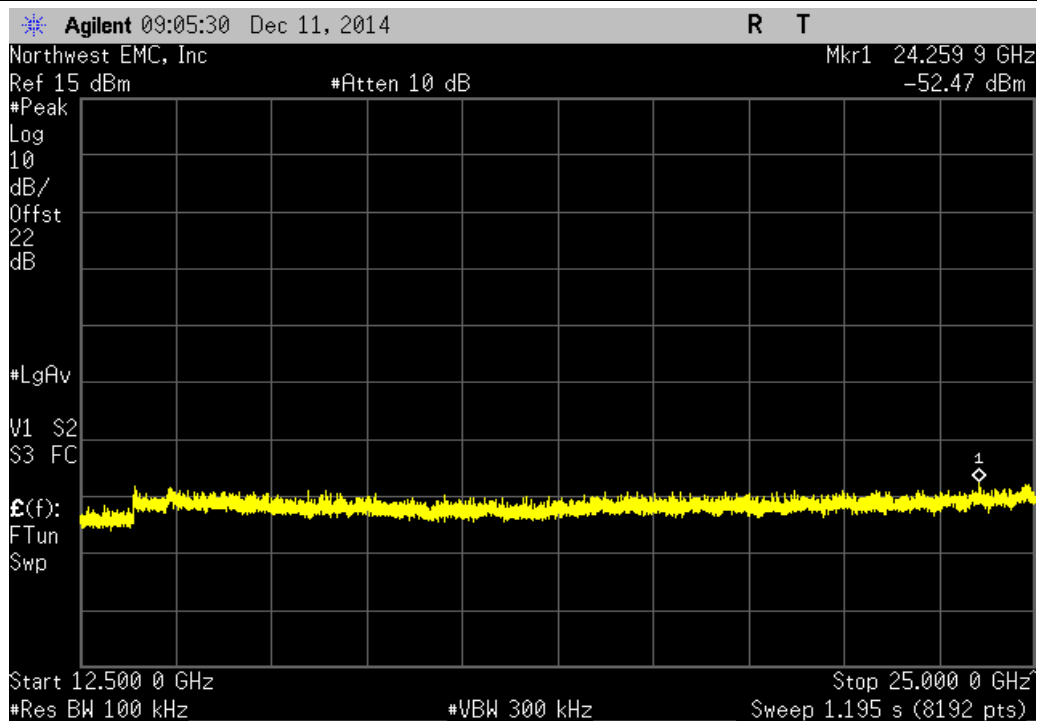
Antenna 0, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



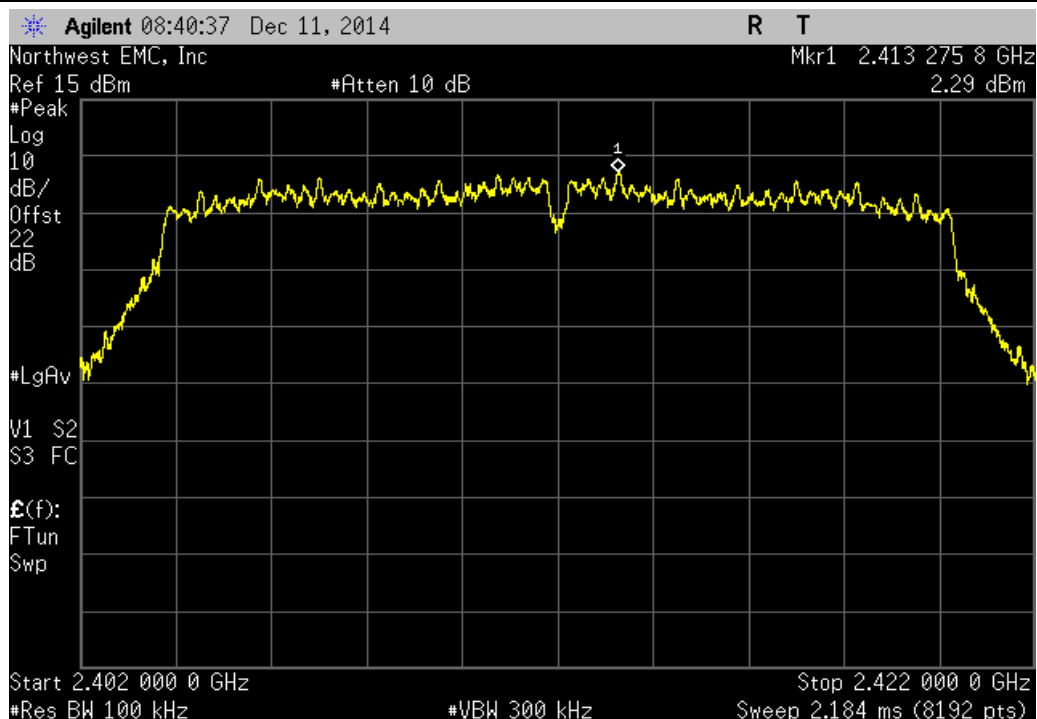
Antenna 0, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-53.15	-20	Pass	



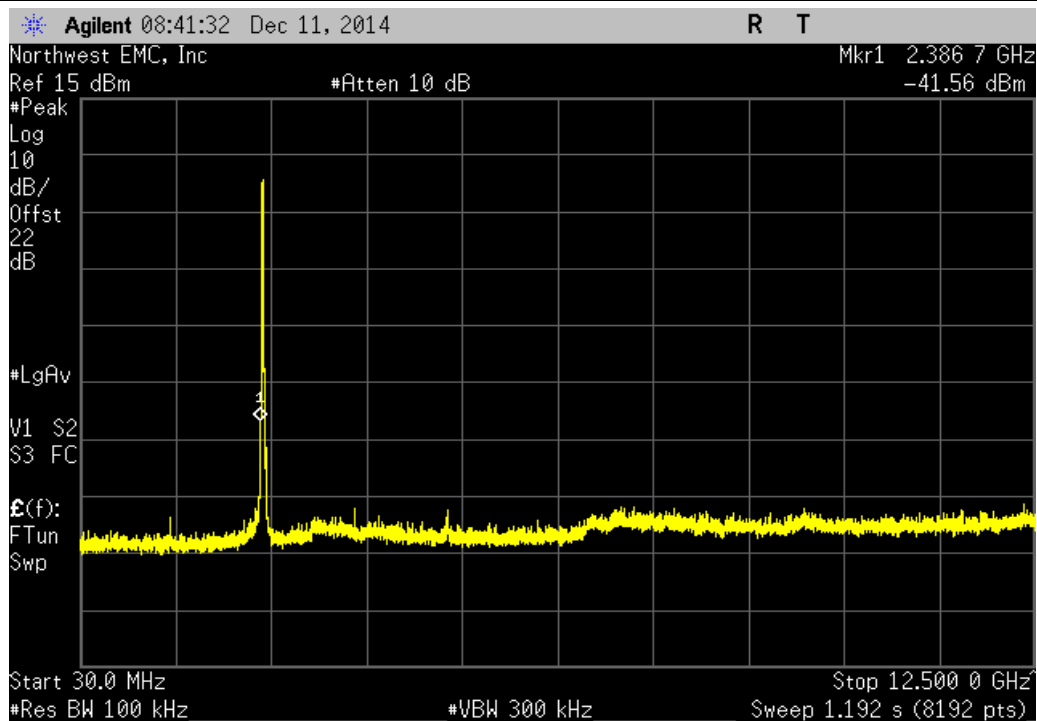
Antenna 0, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-53.94	-20	Pass	



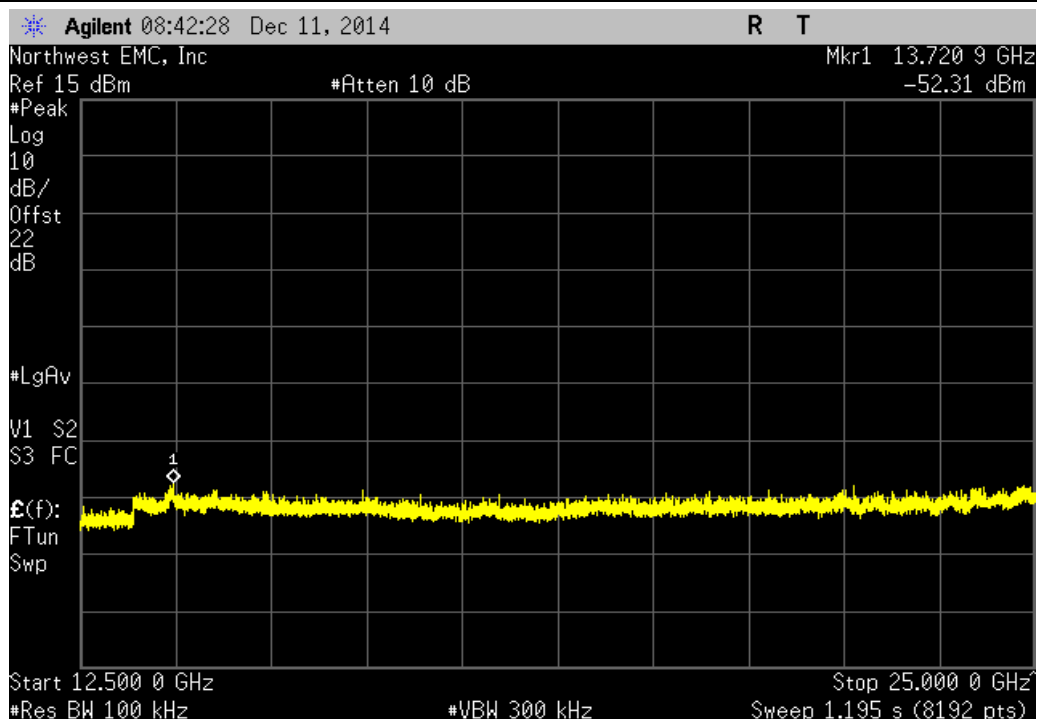
Antenna 0, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



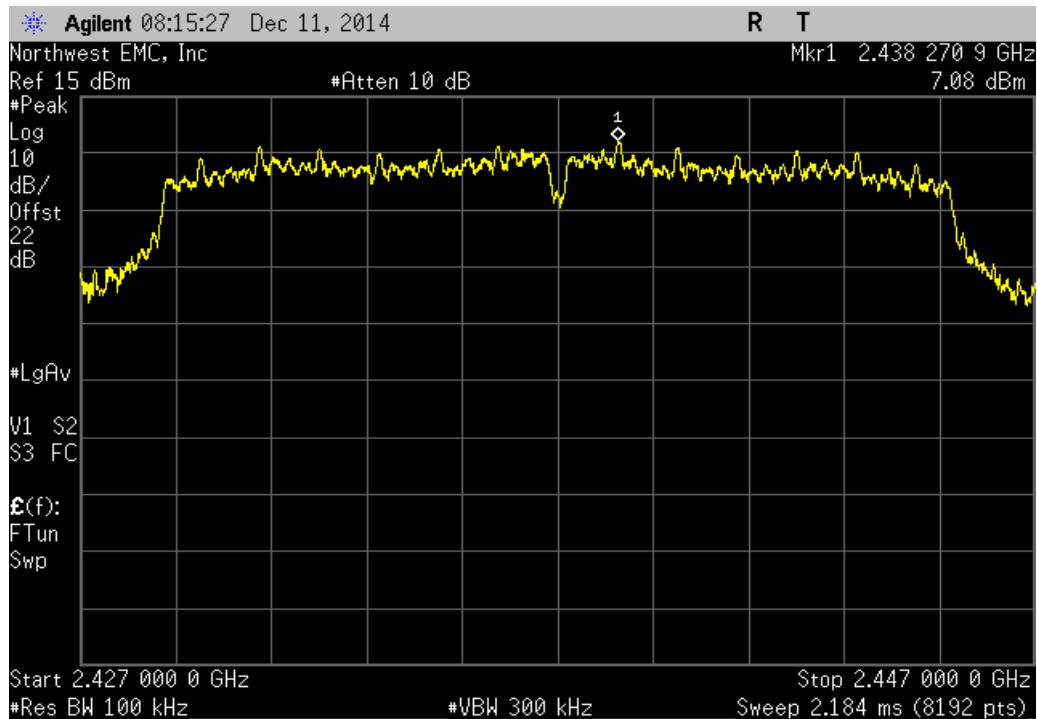
Antenna 0, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-43.85	-20	Pass	



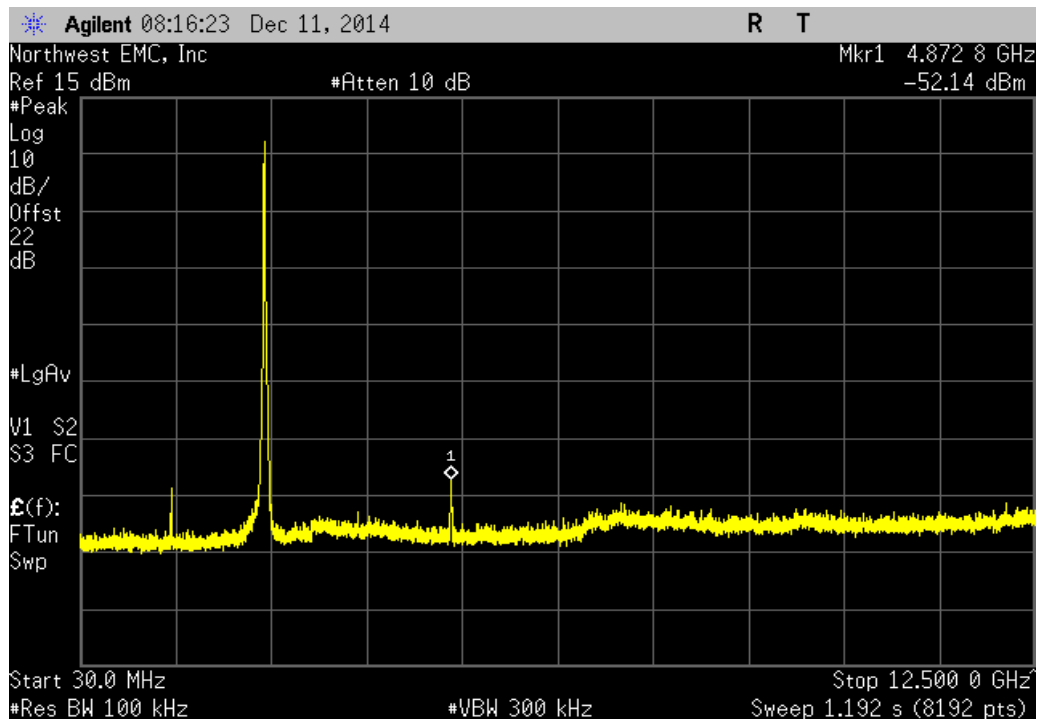
Antenna 0, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-54.6	-20	Pass	



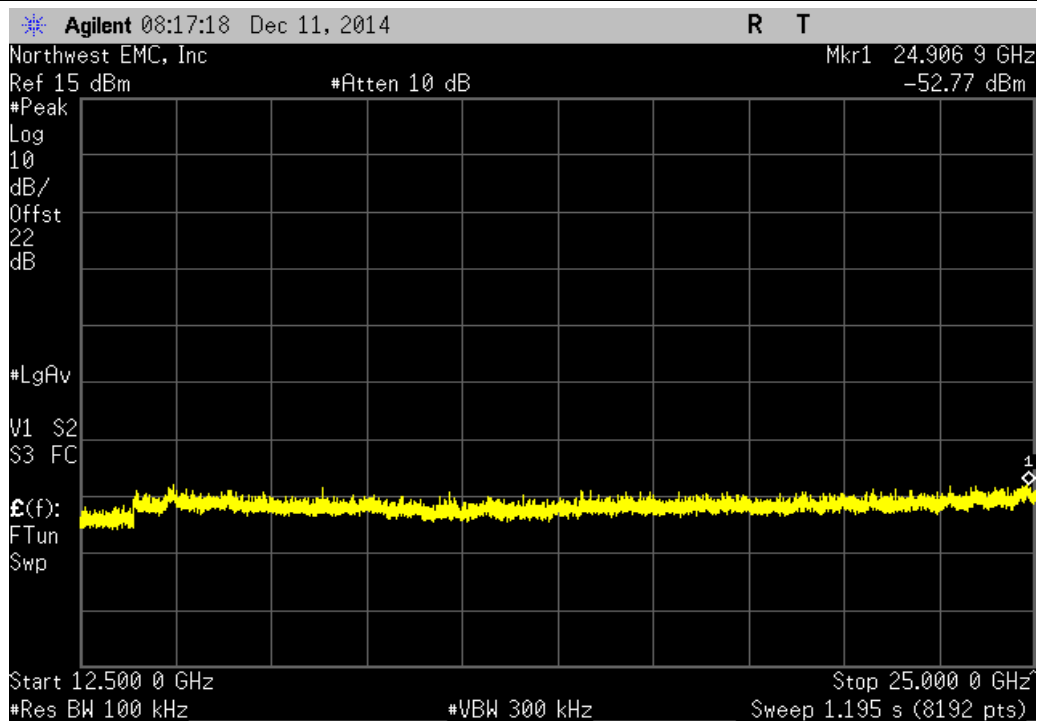
Antenna 0, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



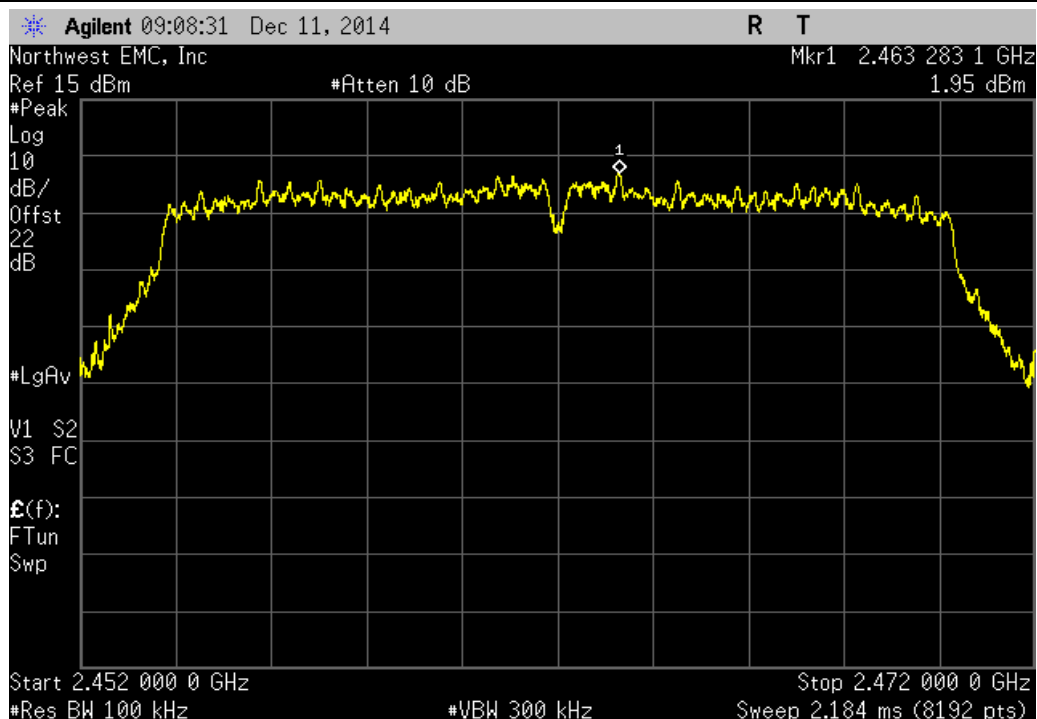
Antenna 0, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-59.22	-20	Pass	



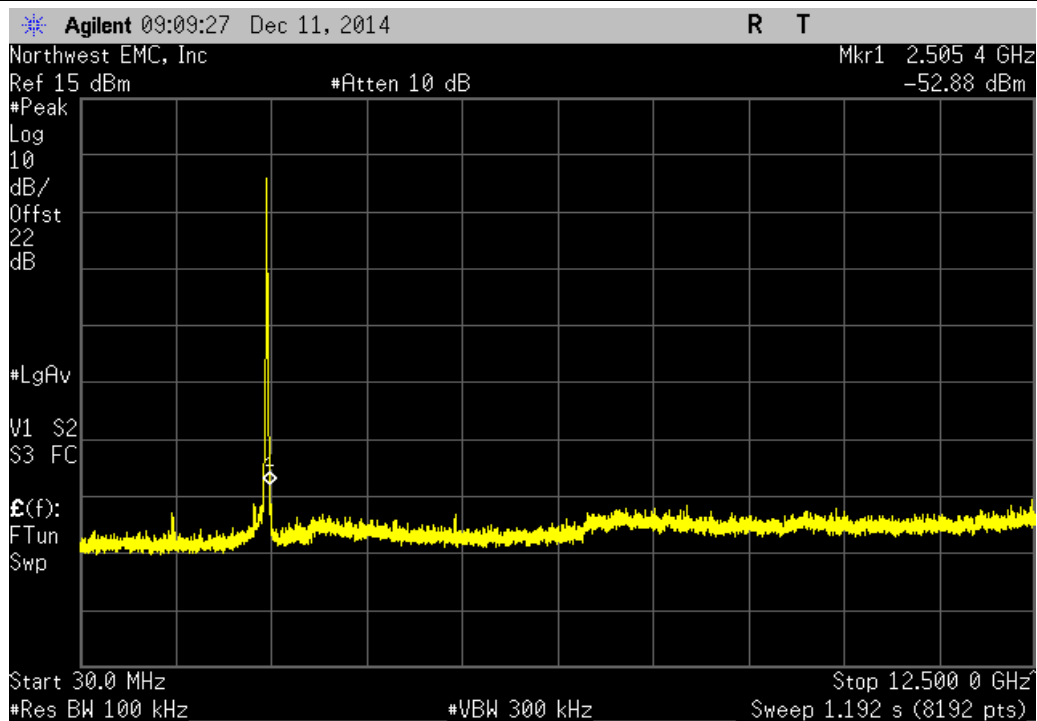
Antenna 0, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-59.85	-20	Pass	



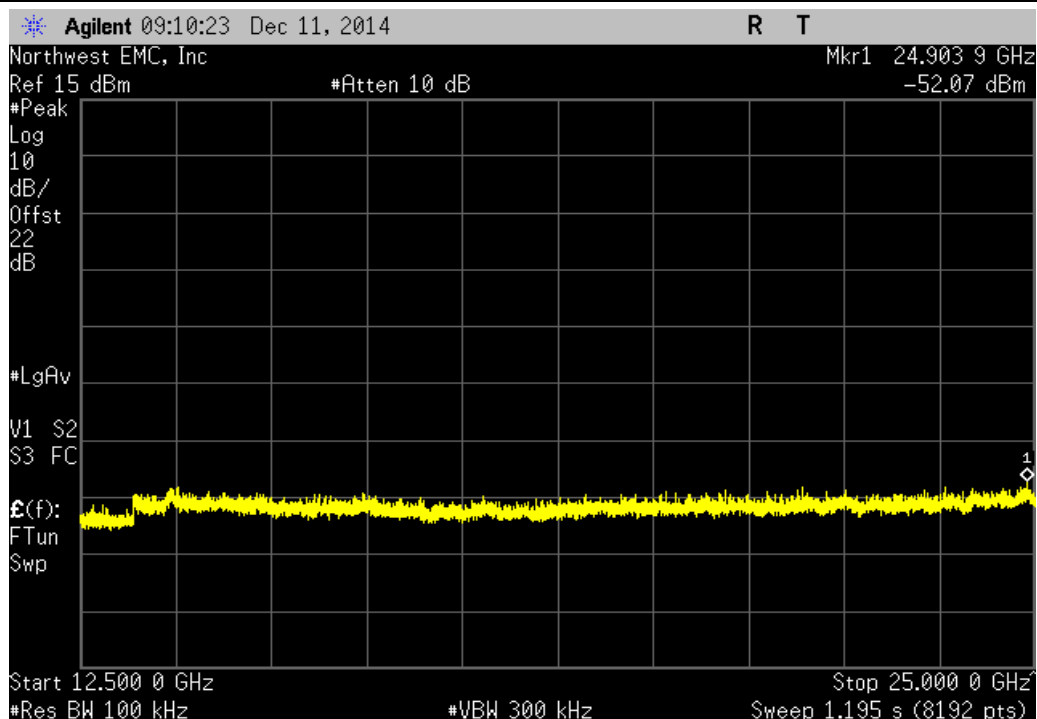
Antenna 0, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



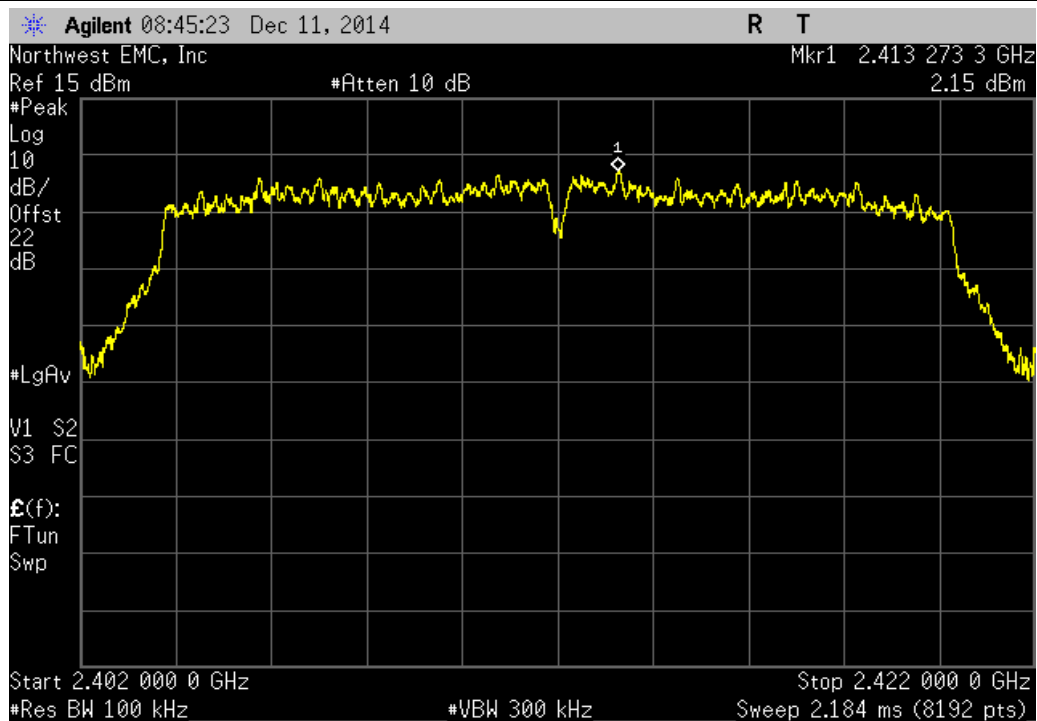
Antenna 0, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-54.83	-20	Pass	



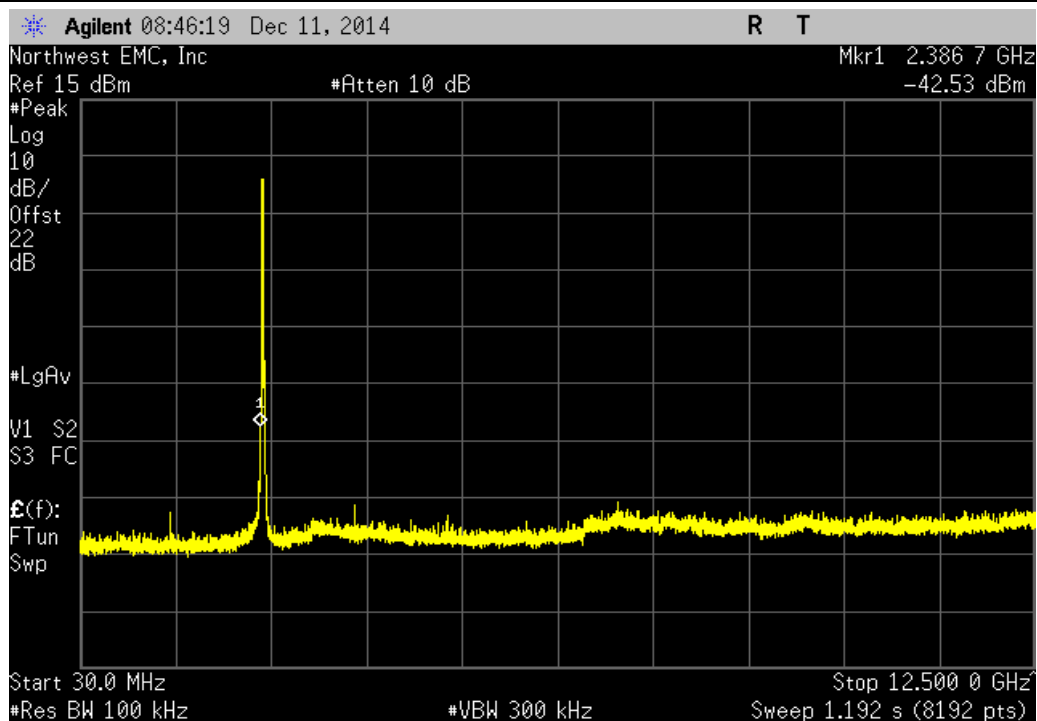
Antenna 0, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-54.02	-20	Pass	



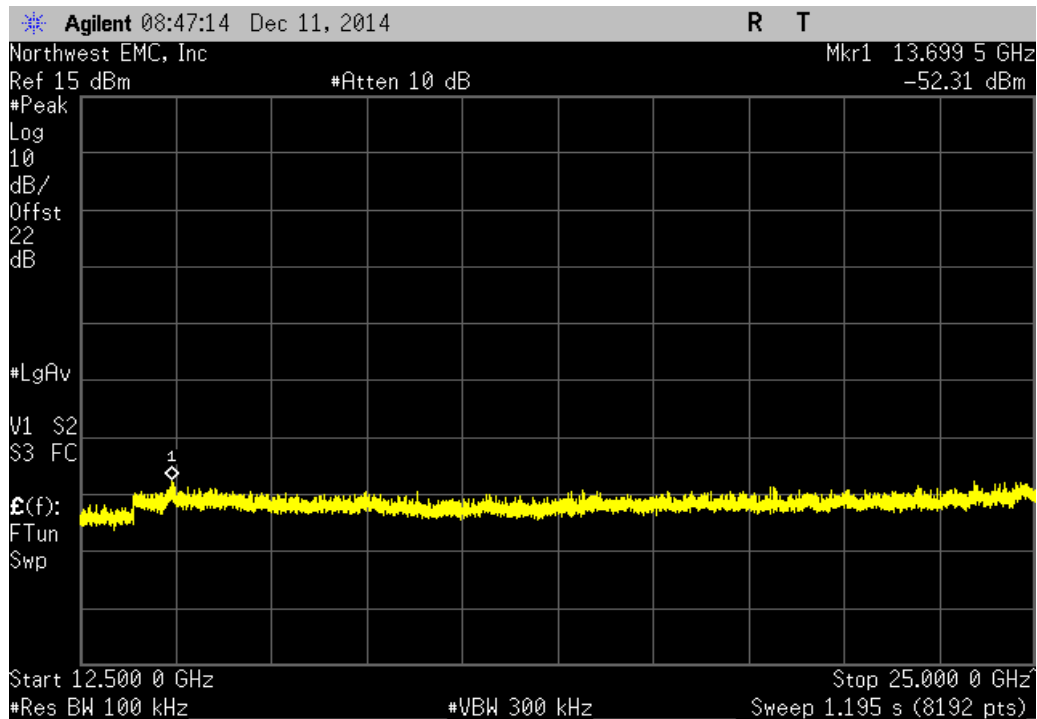
Antenna 0, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



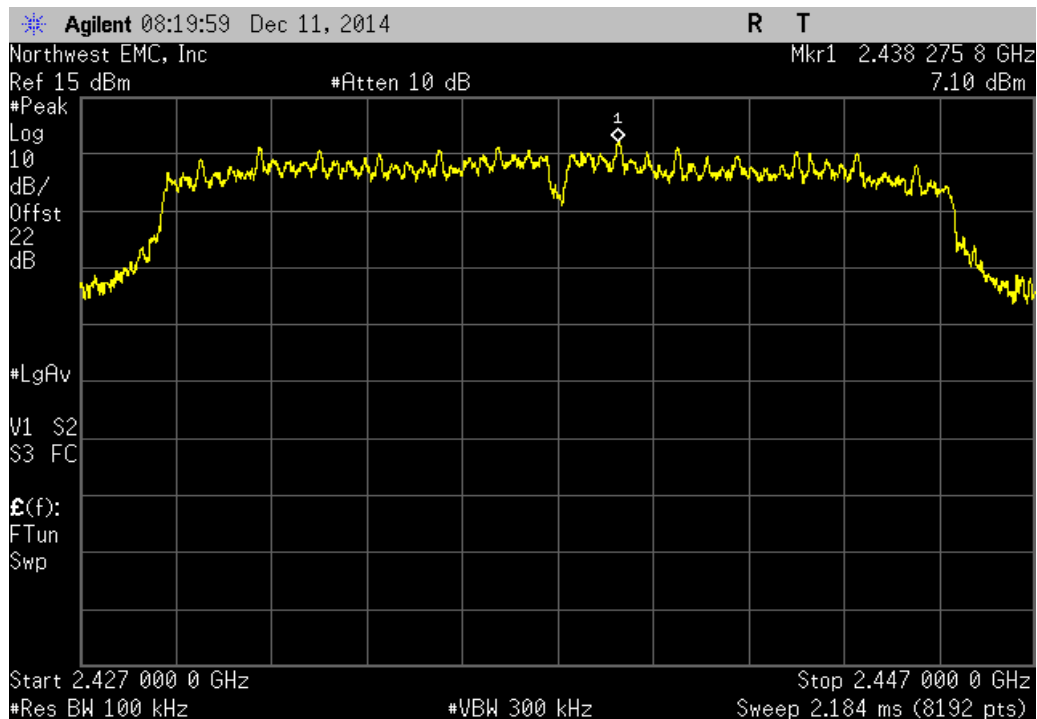
Antenna 0, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-44.69	-20	Pass	



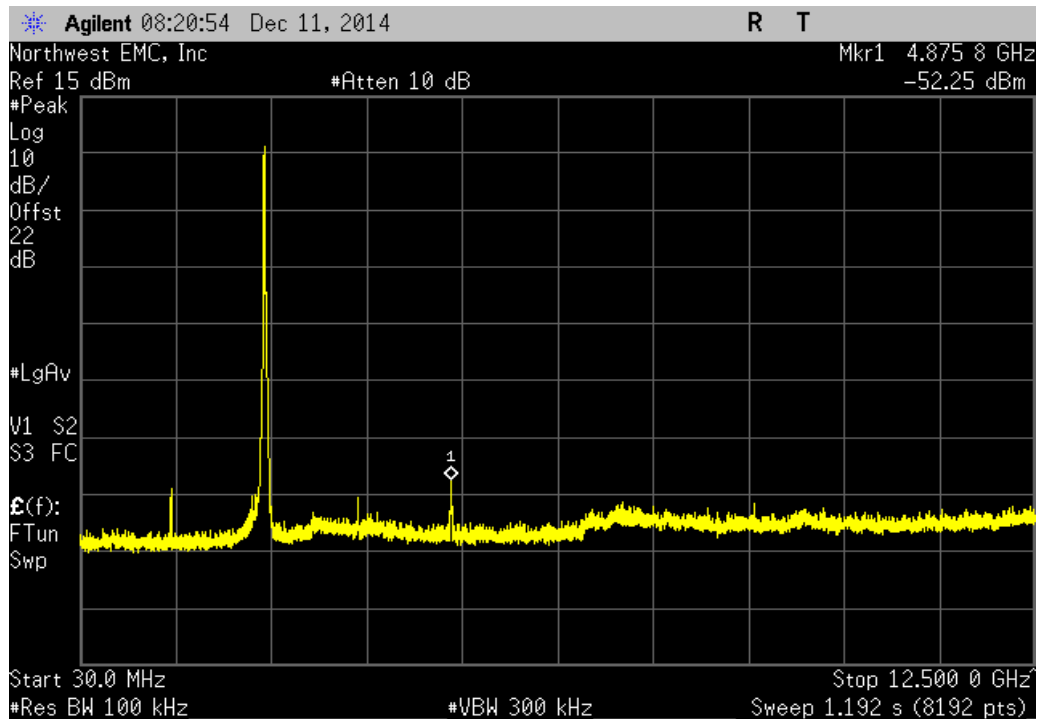
Antenna 0, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-54.46	-20	Pass	



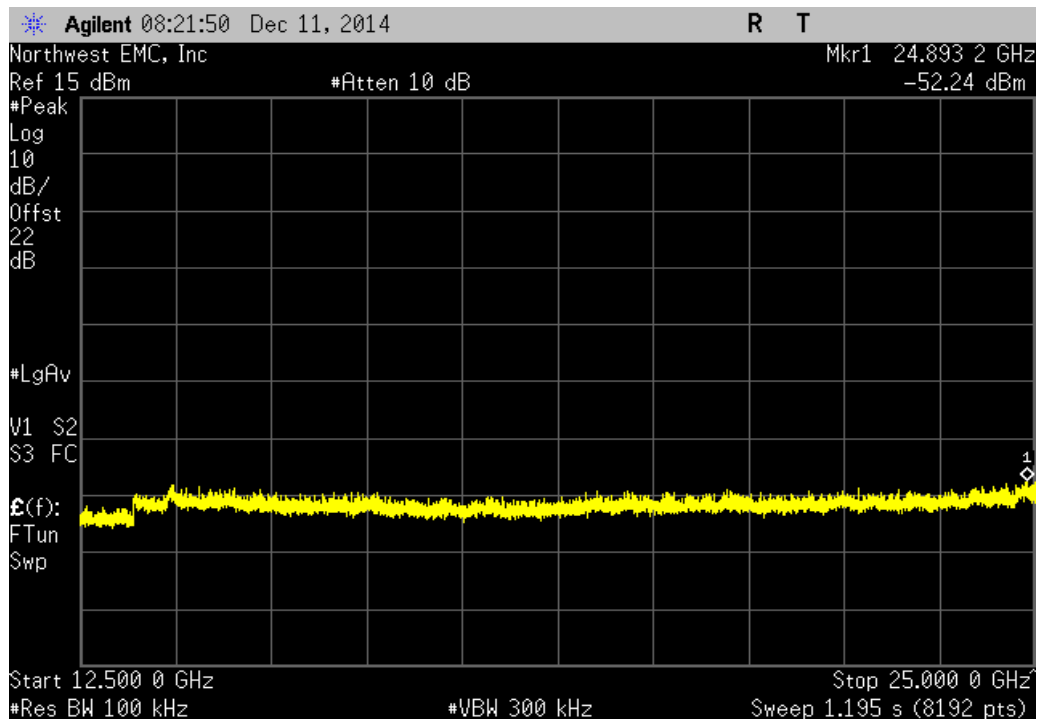
Antenna 0, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



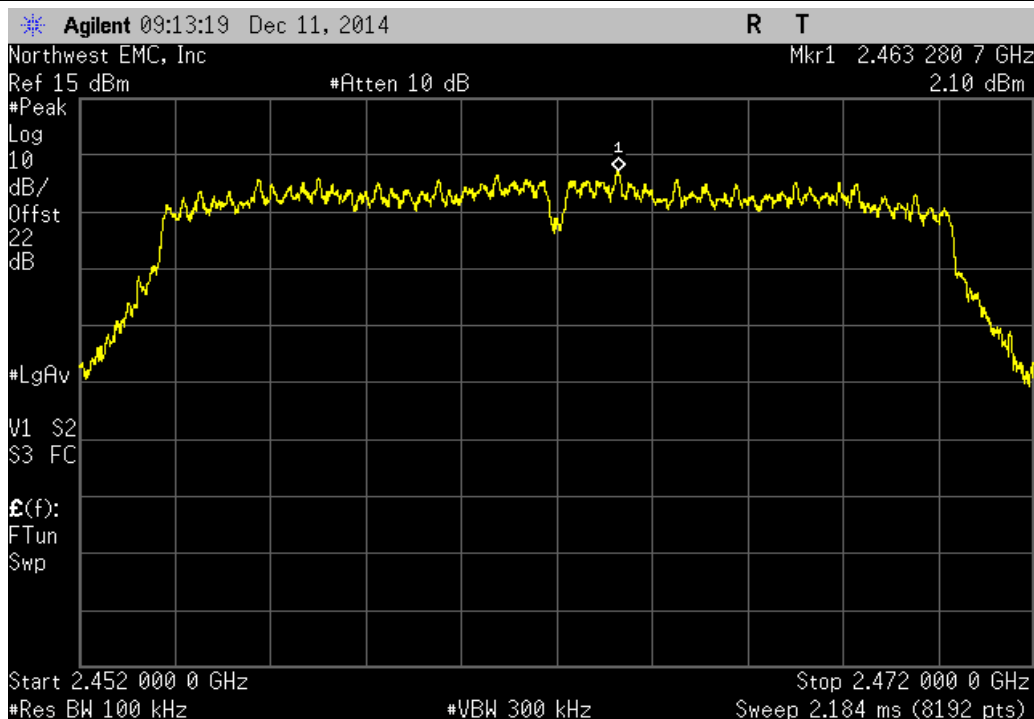
Antenna 0, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-59.35	-20	Pass	



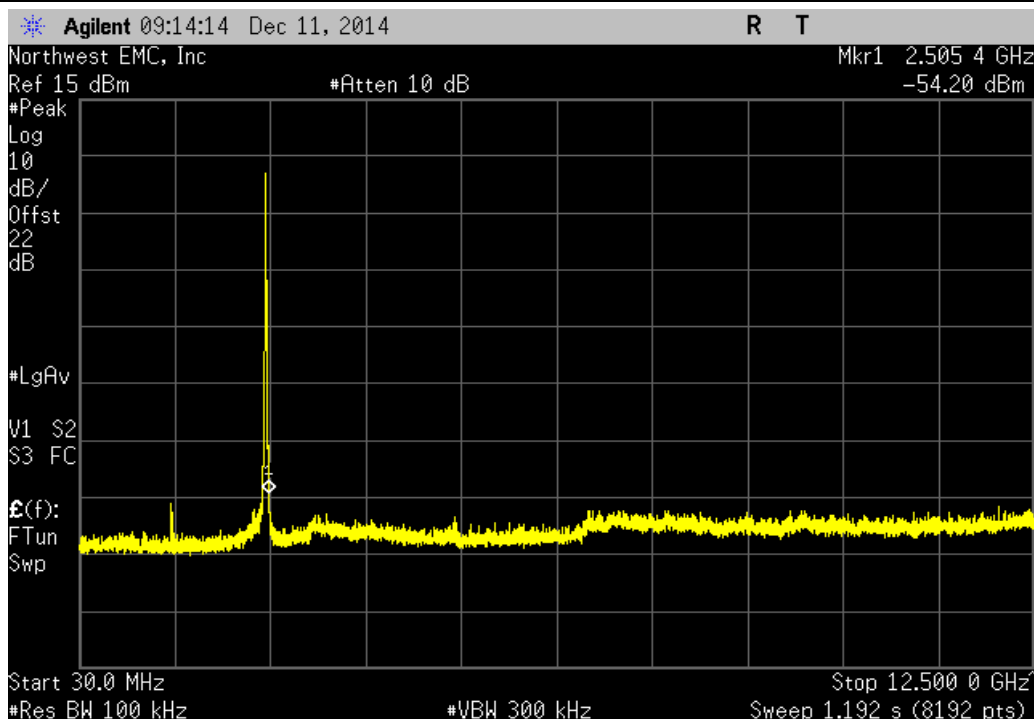
Antenna 0, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-59.34	-20	Pass	



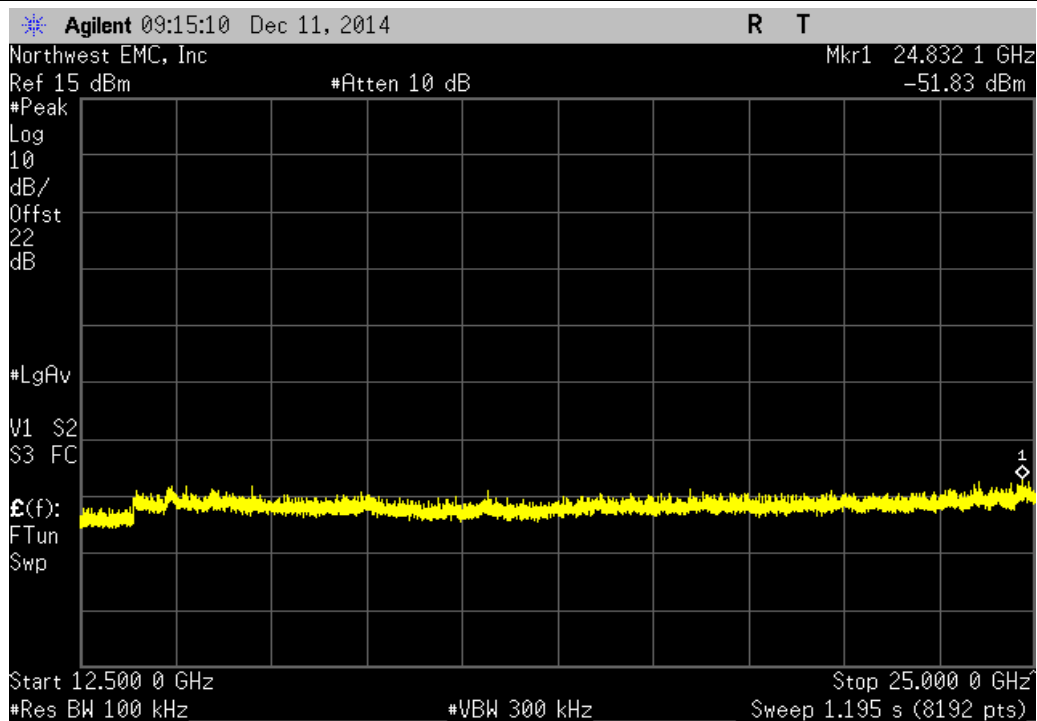
Antenna 0, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



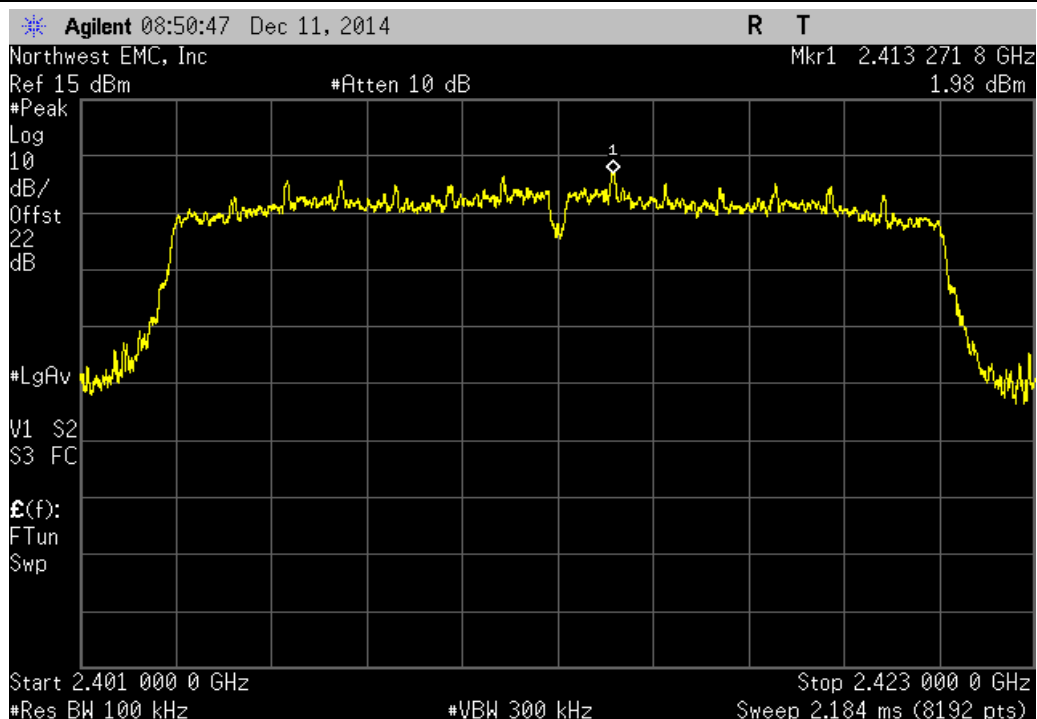
Antenna 0, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-56.3	-20	Pass	



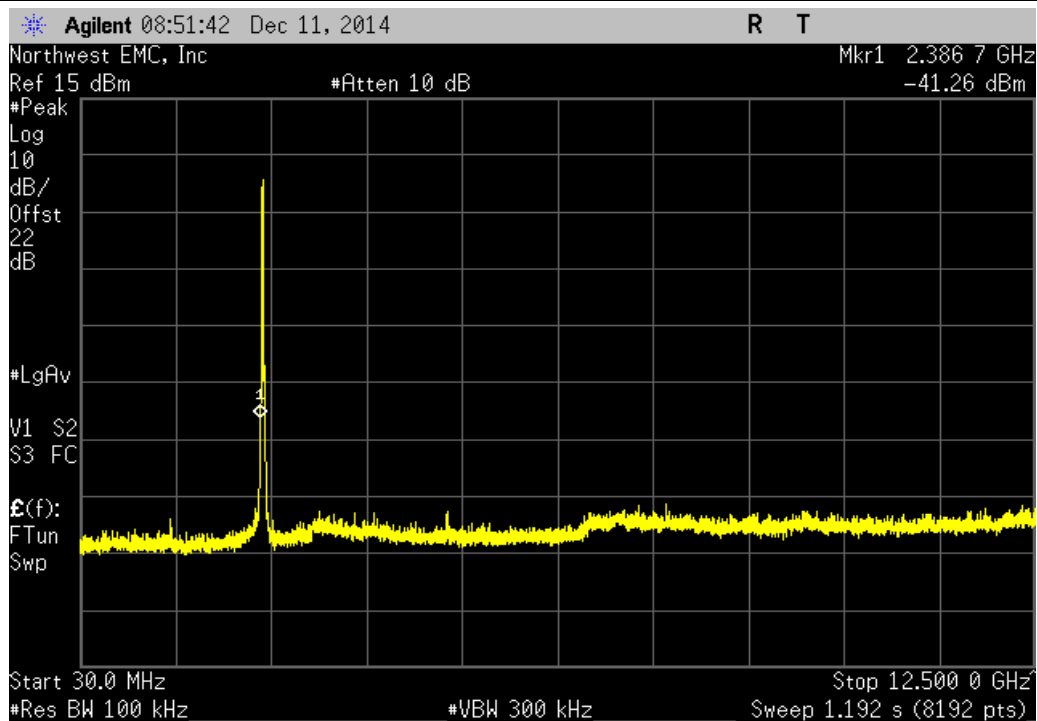
Antenna 0, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-53.93	-20	Pass	



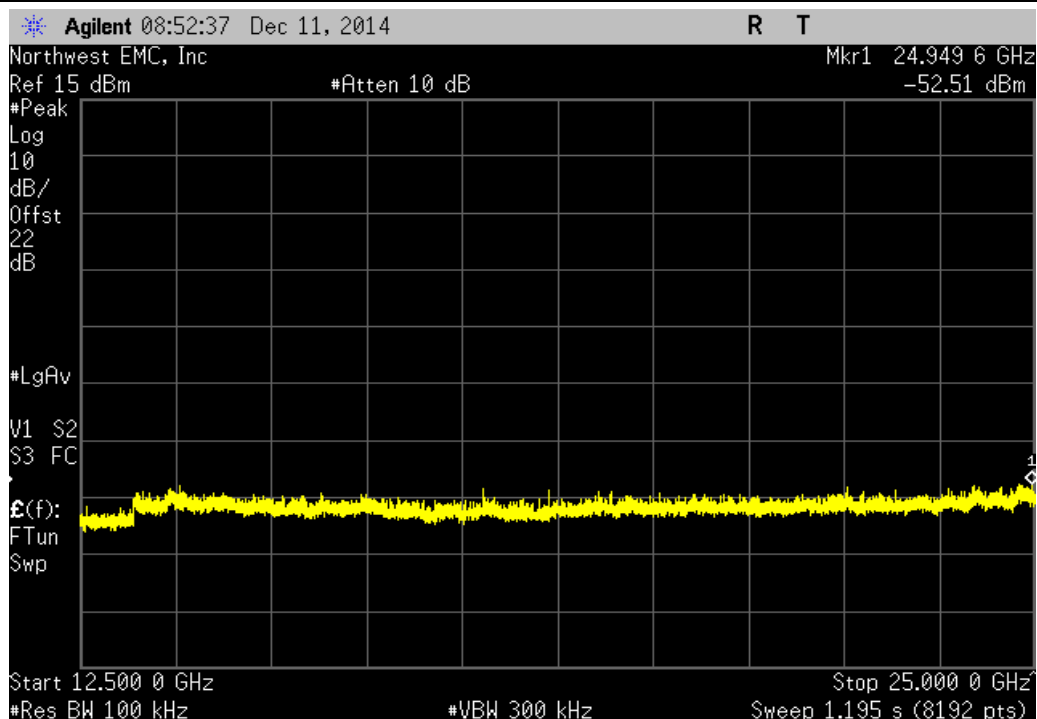
Antenna 0, 802.11(n) MCS0, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



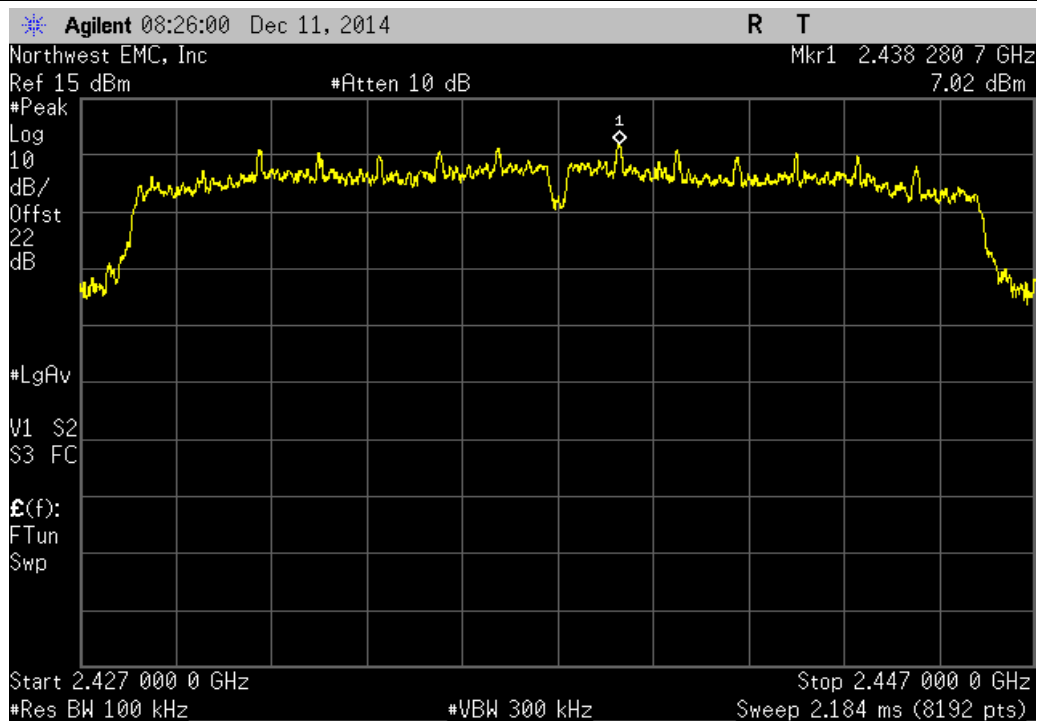
Antenna 0, 802.11(n) MCS0, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-43.24	-20	Pass	



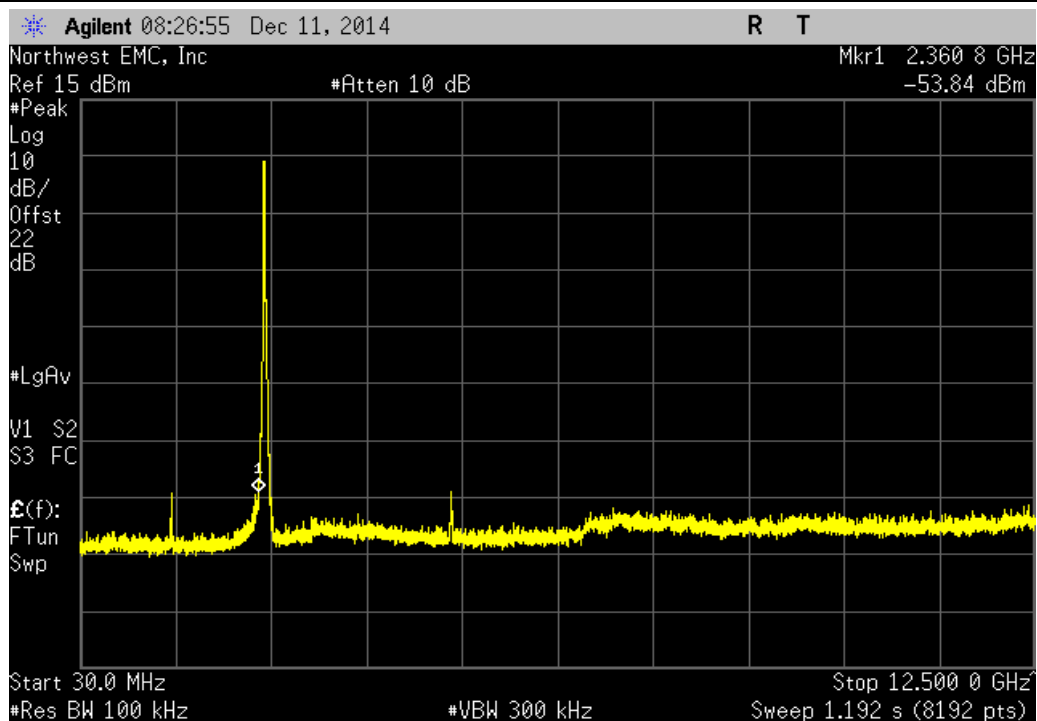
Antenna 0, 802.11(n) MCS0, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-54.49	-20	Pass	



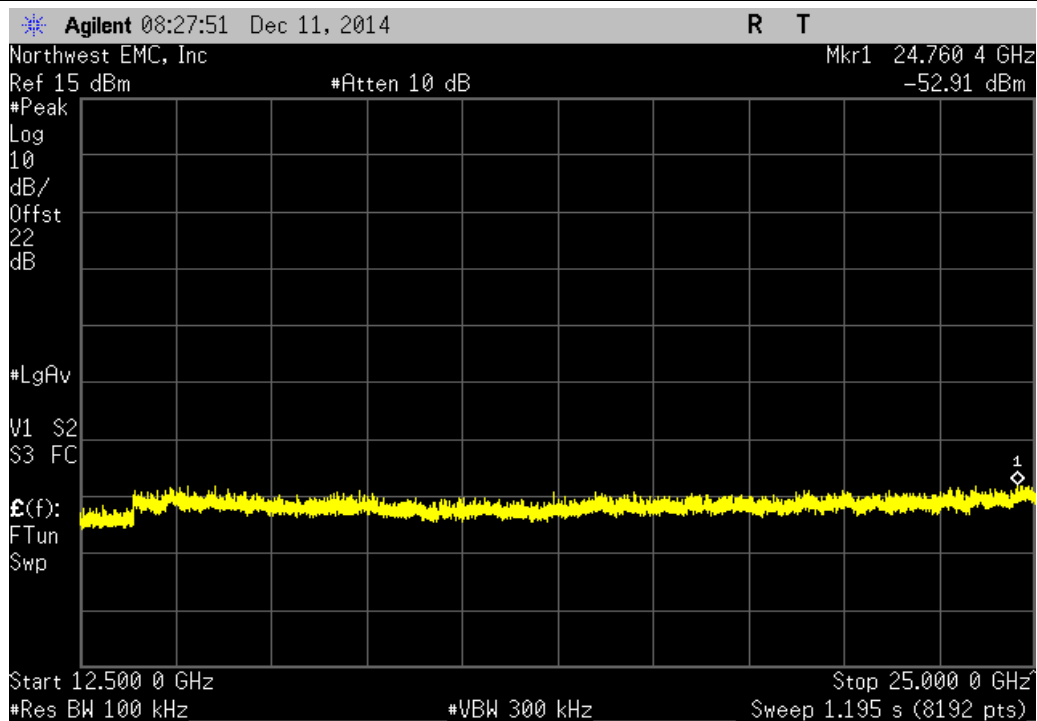
Antenna 0, 802.11(n) MCS0, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



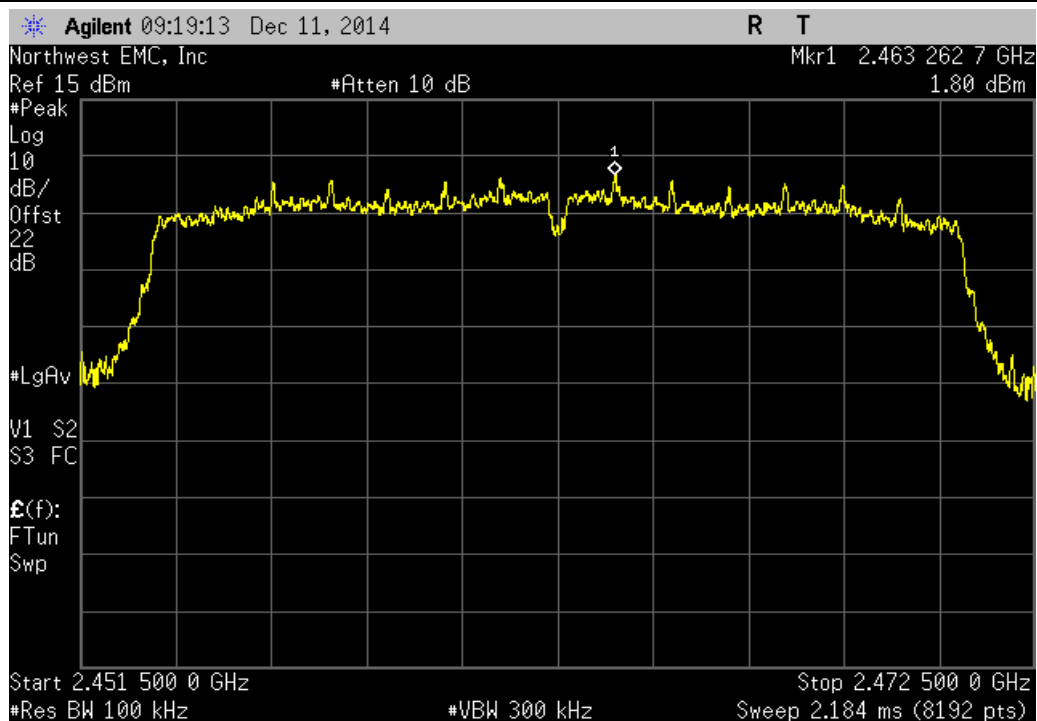
Antenna 0, 802.11(n) MCS0, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-60.86	-20	Pass	



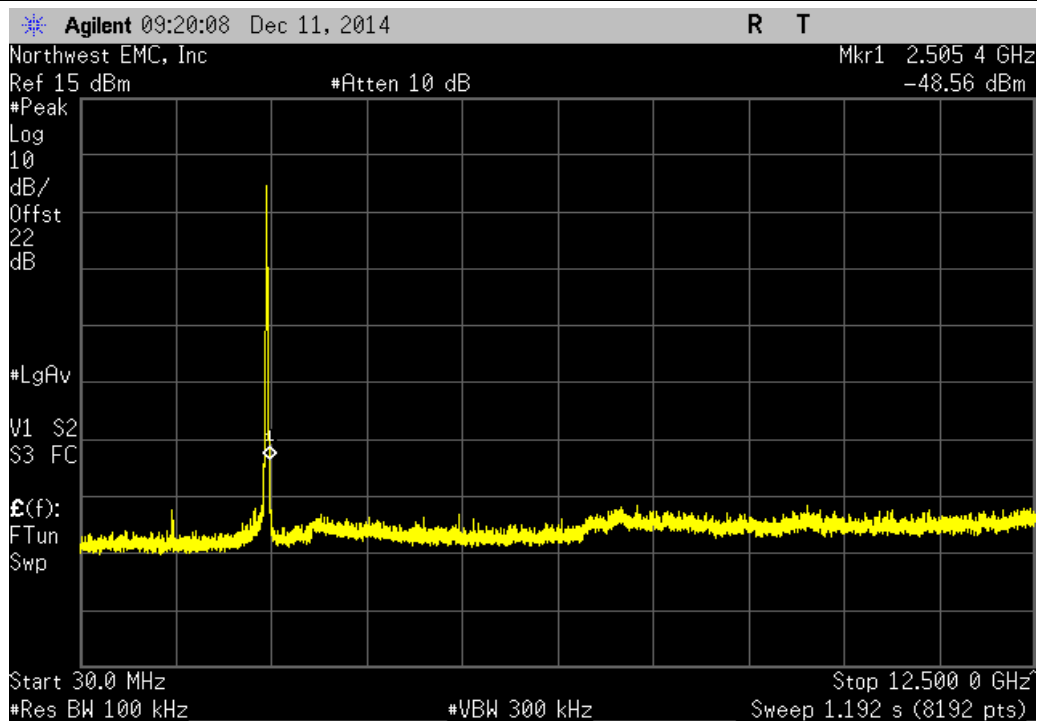
Antenna 0, 802.11(n) MCS0, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-59.93	-20	Pass	



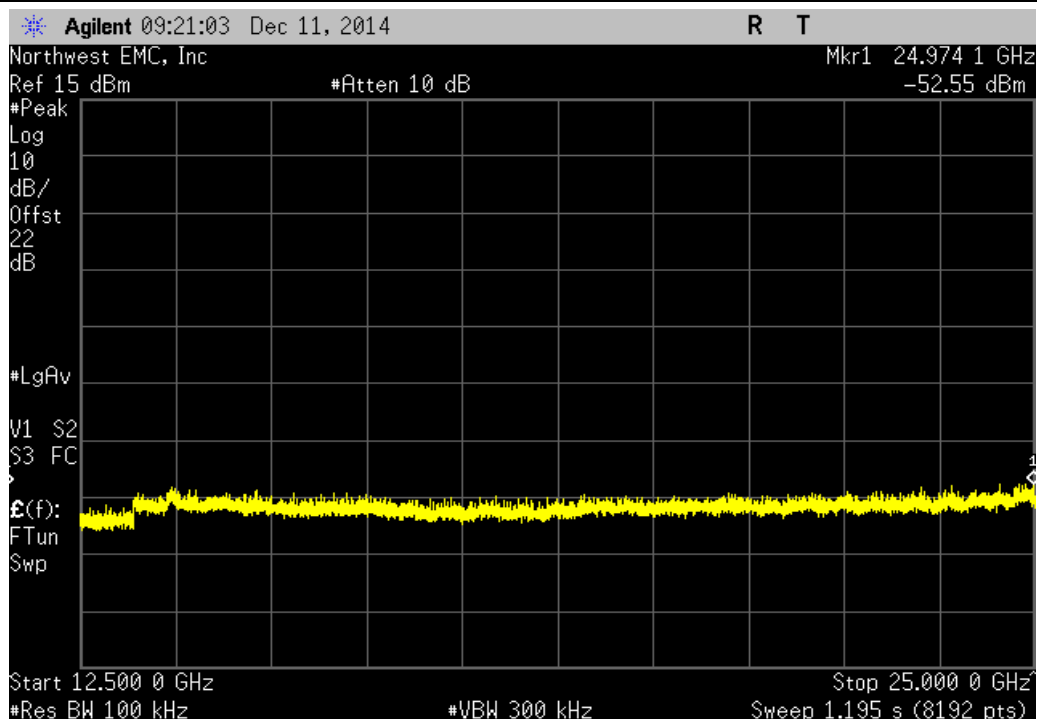
Antenna 0, 802.11(n) MCS0, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



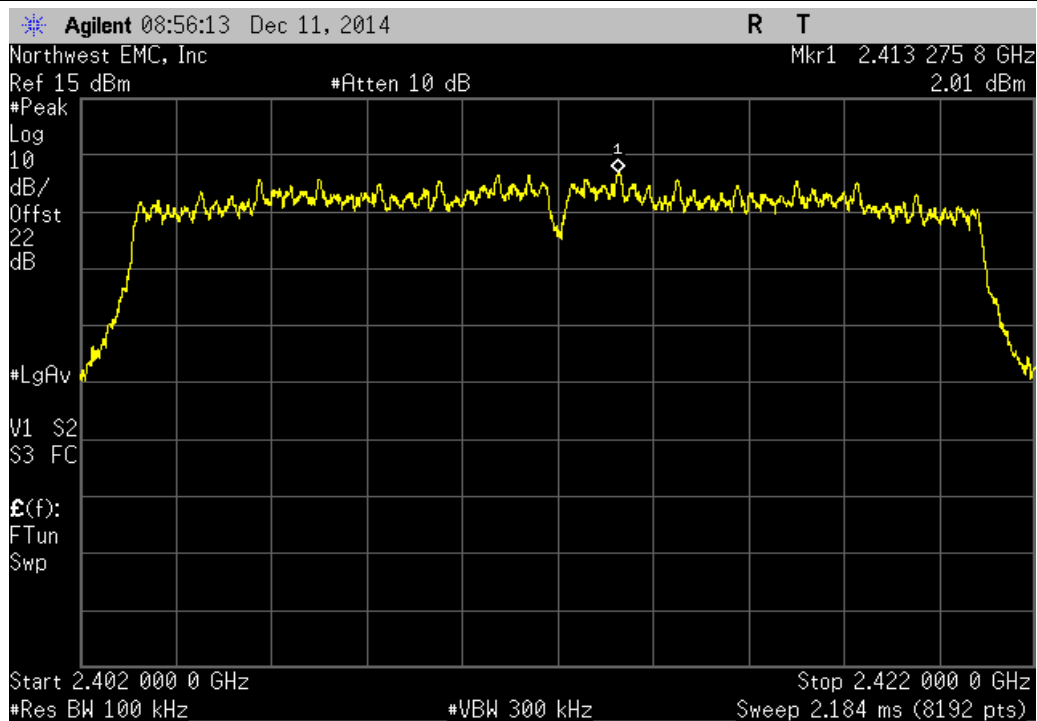
Antenna 0, 802.11(n) MCS0, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-50.36	-20	Pass	



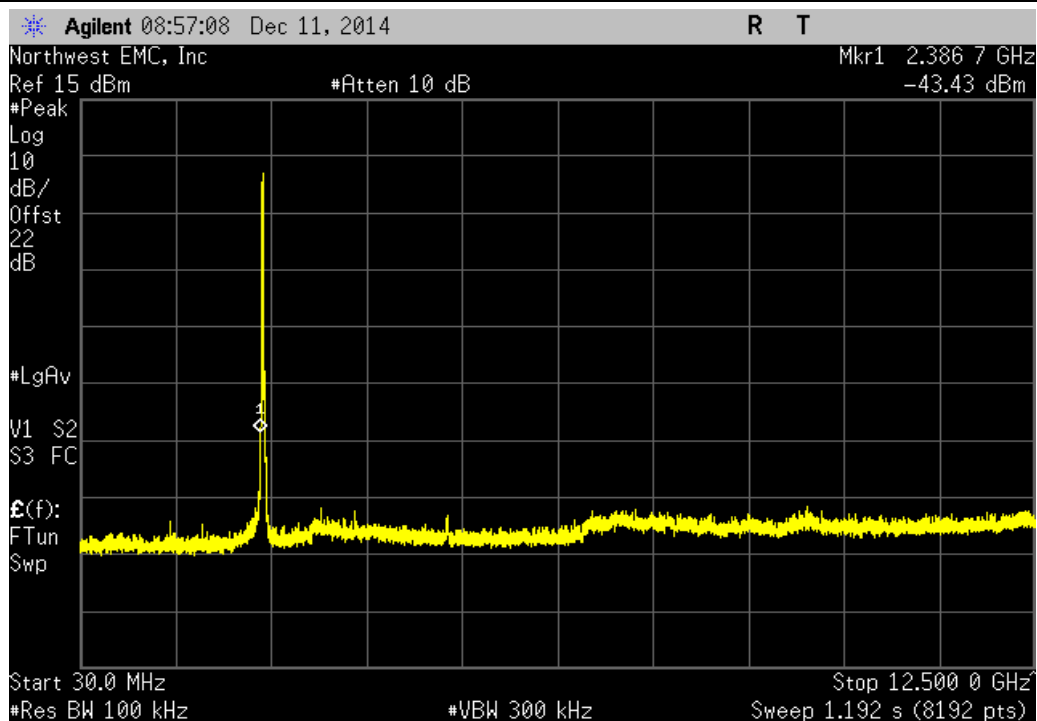
Antenna 0, 802.11(n) MCS0, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-54.35	-20	Pass	



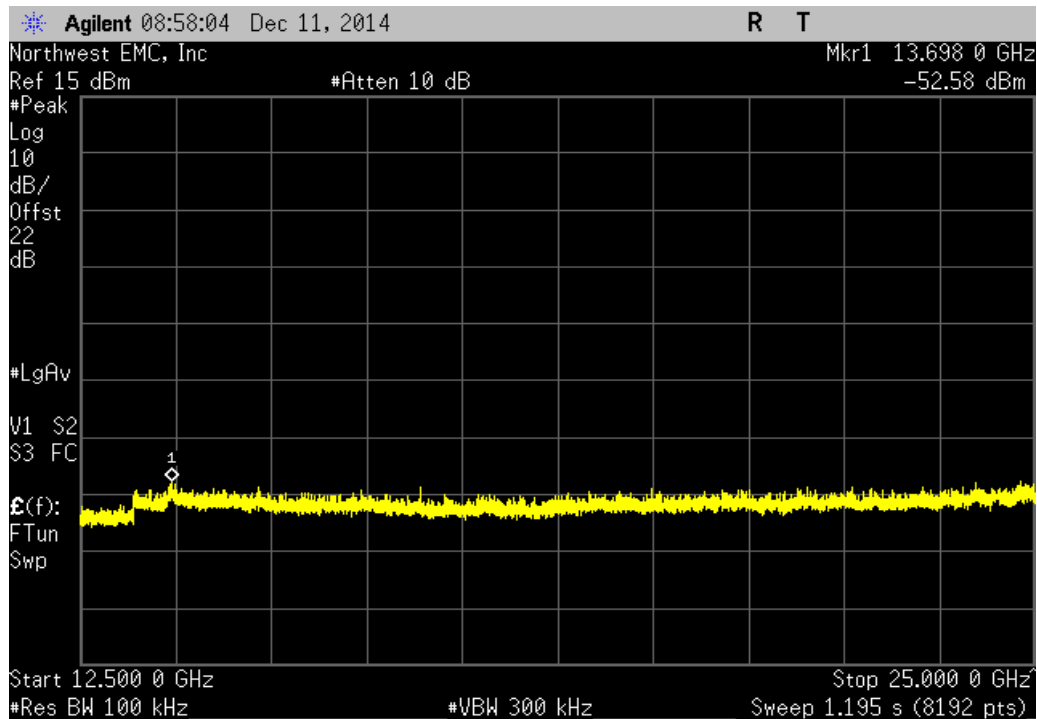
Antenna 0, 802.11(n) MCS7, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



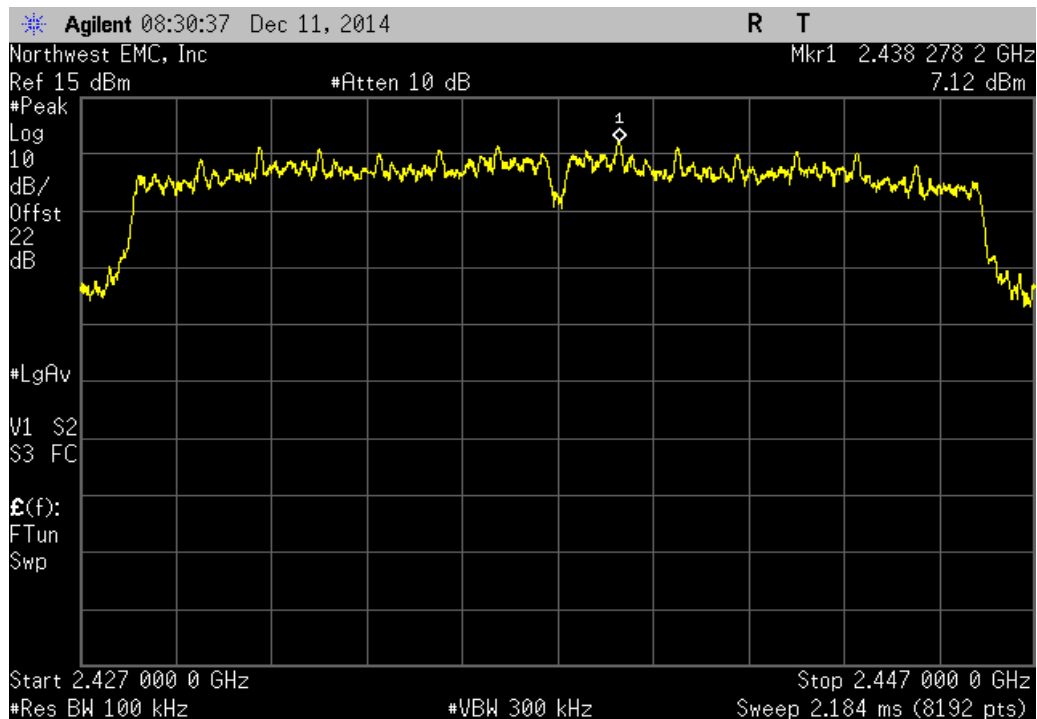
Antenna 0, 802.11(n) MCS7, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-45.44	-20	Pass	



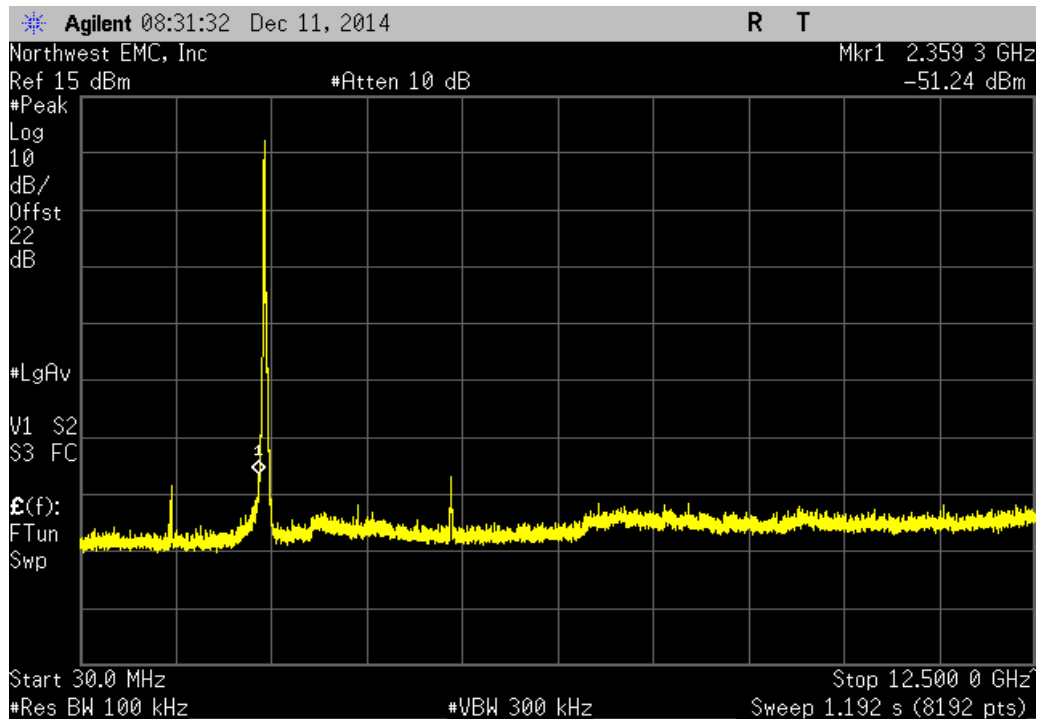
Antenna 0, 802.11(n) MCS7, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-54.59	-20	Pass	



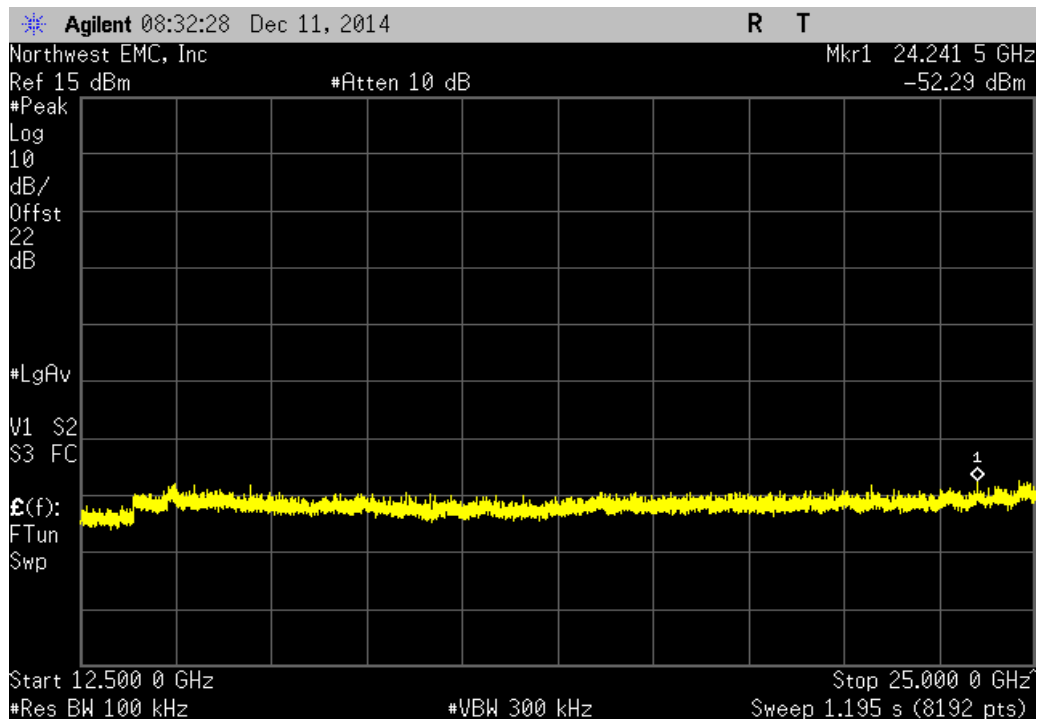
Antenna 0, 802.11(n) MCS7, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



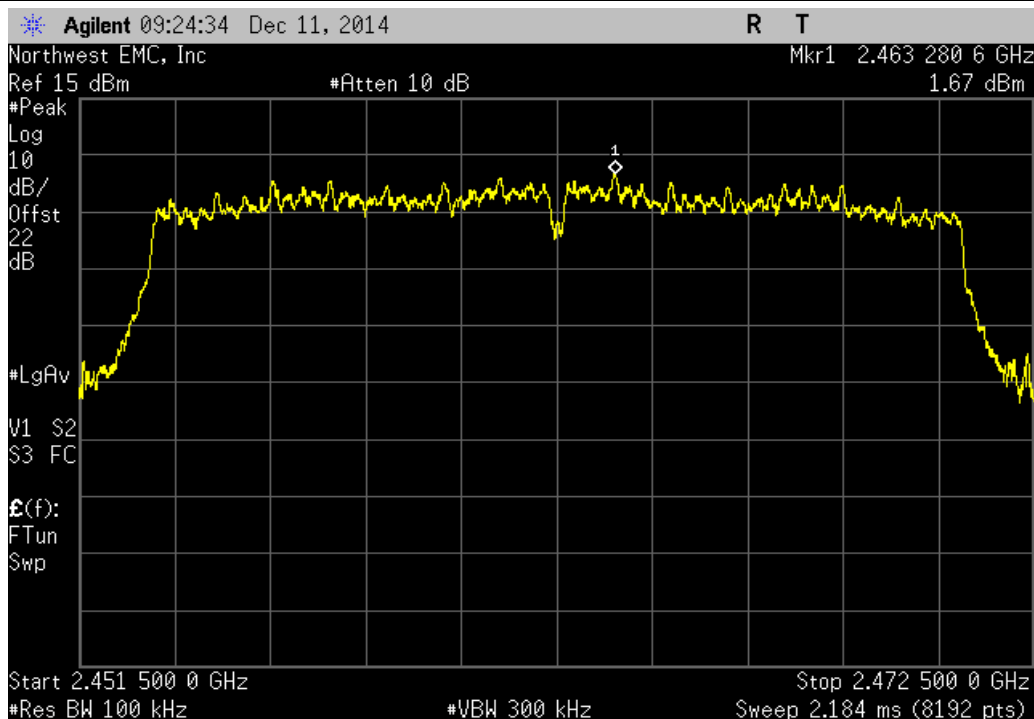
Antenna 0, 802.11(n) MCS7, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-58.36	-20	Pass	



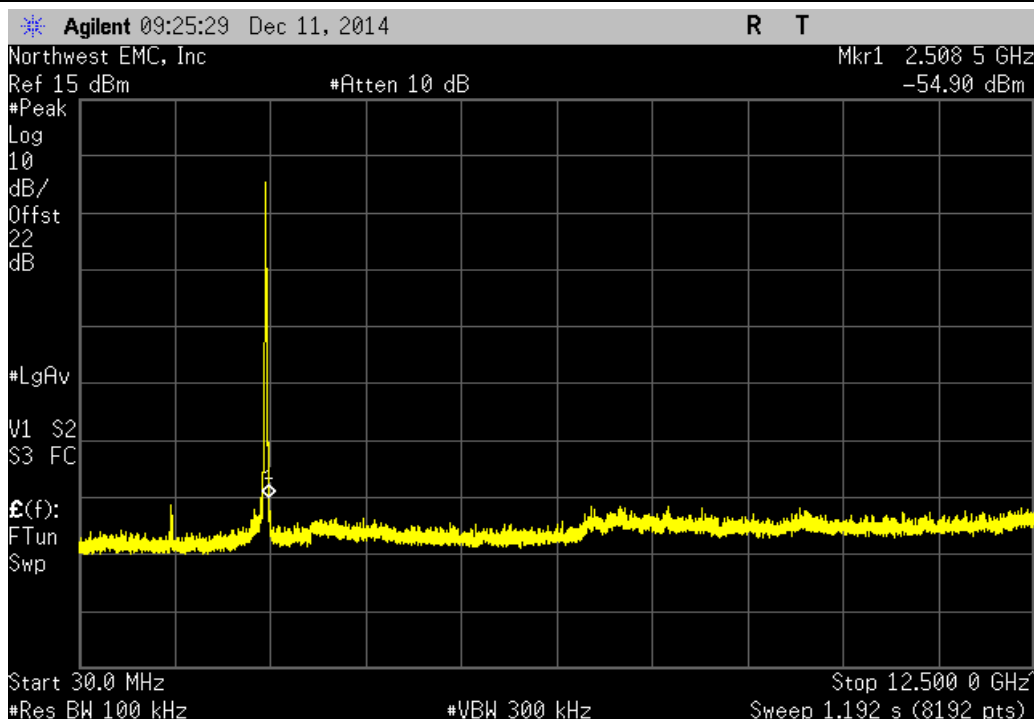
Antenna 0, 802.11(n) MCS7, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-59.41	-20	Pass	



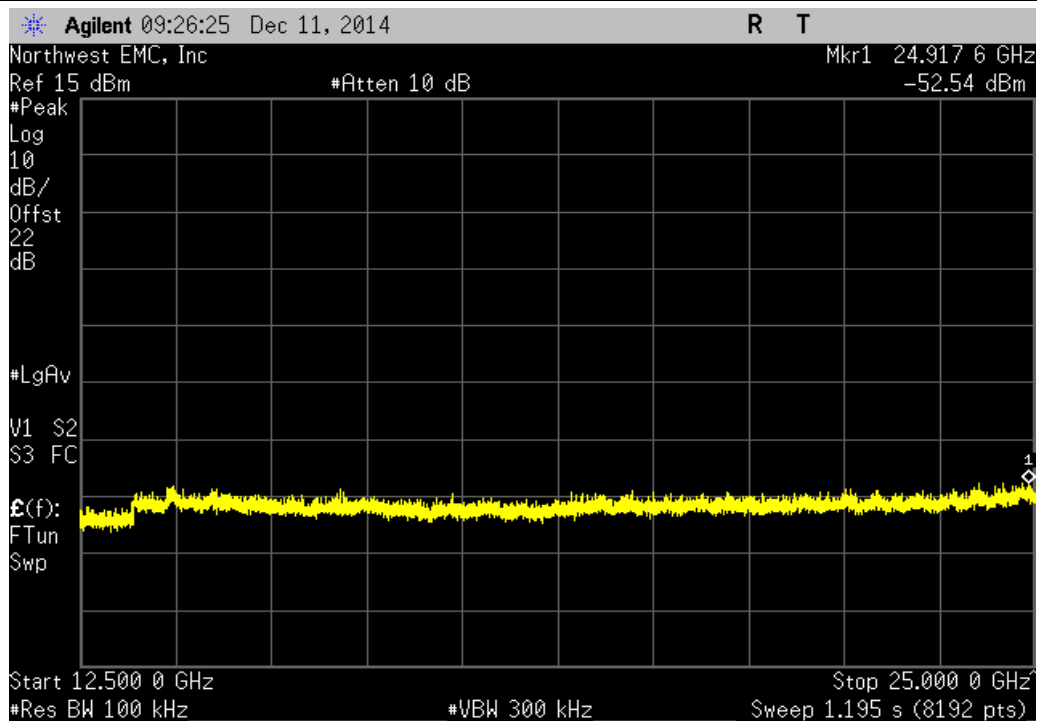
Antenna 0, 802.11(n) MCS7, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



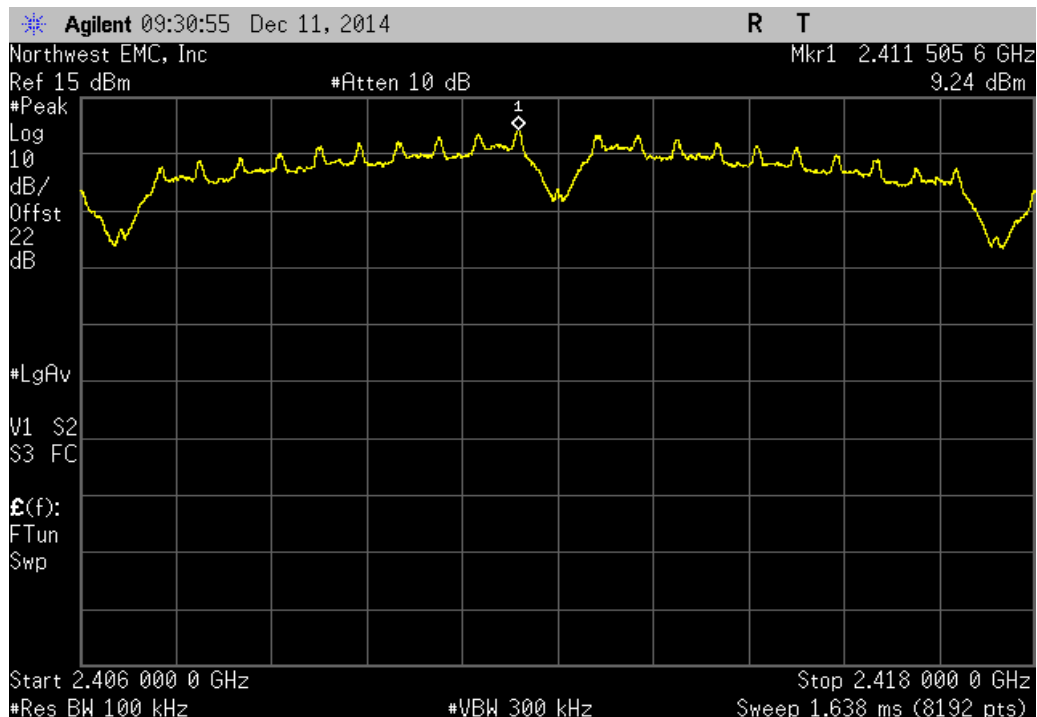
Antenna 0, 802.11(n) MCS7, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-56.57	-20	Pass	



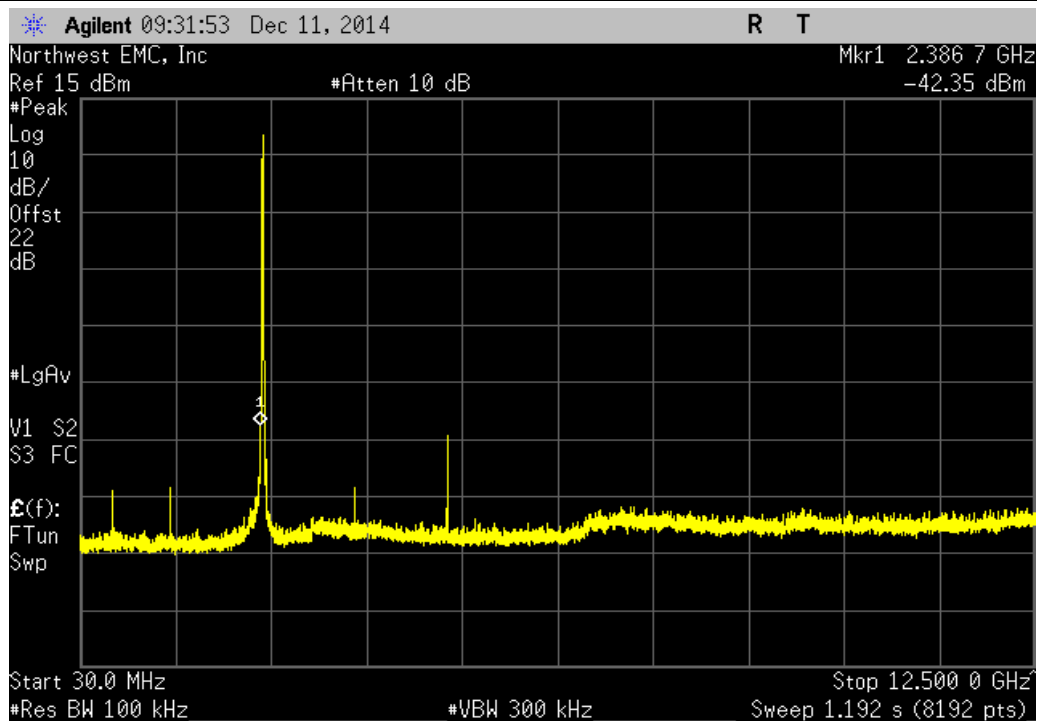
Antenna 0, 802.11(n) MCS7, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-54.21	-20	Pass	



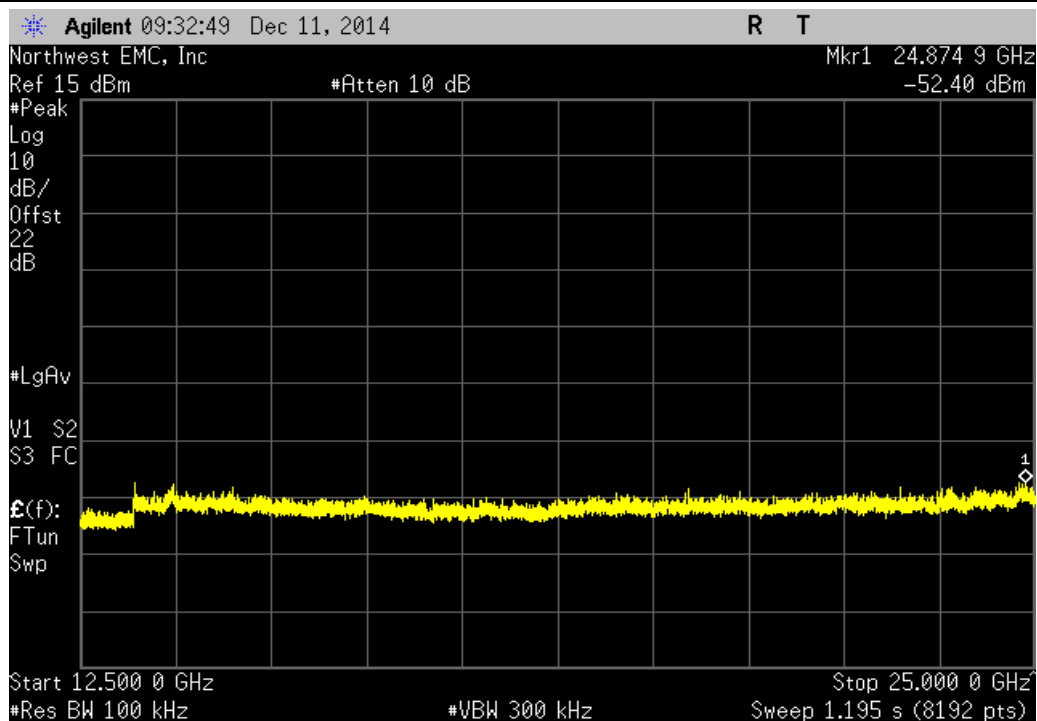
Antenna 1, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



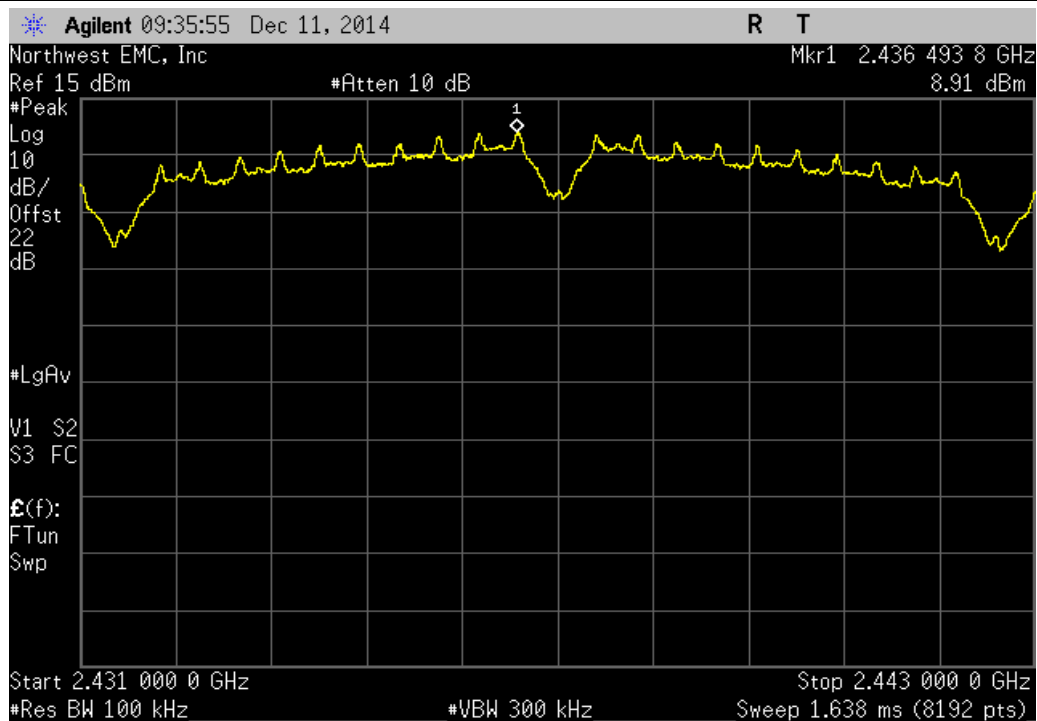
Antenna 1, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-51.59	-20	Pass	



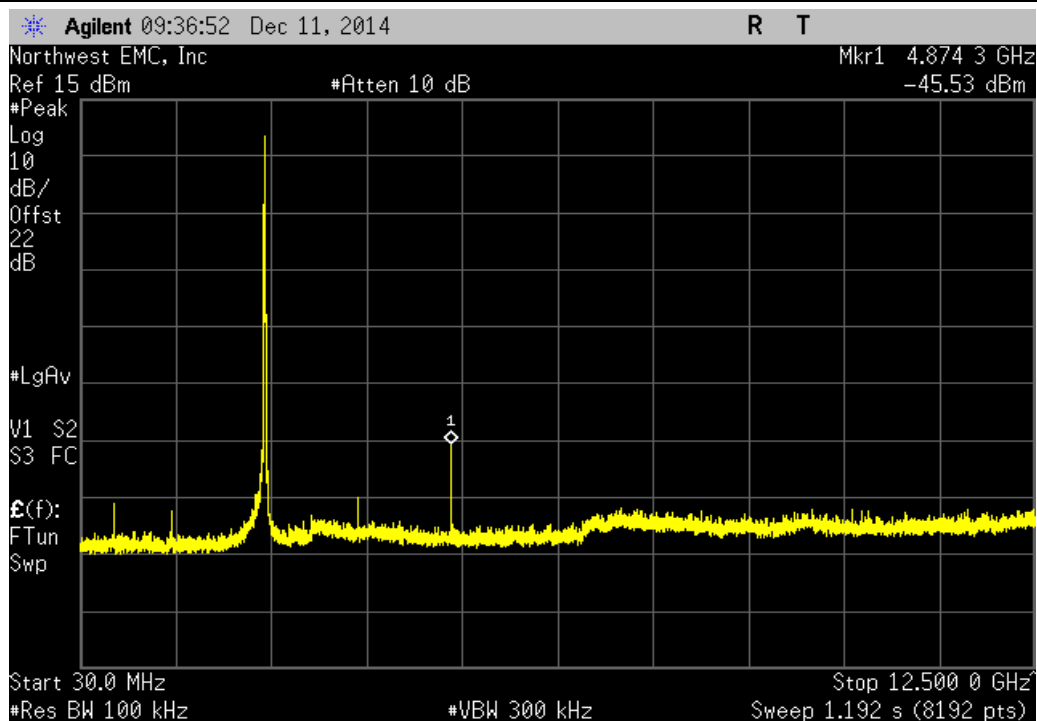
Antenna 1, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-61.64	-20	Pass	



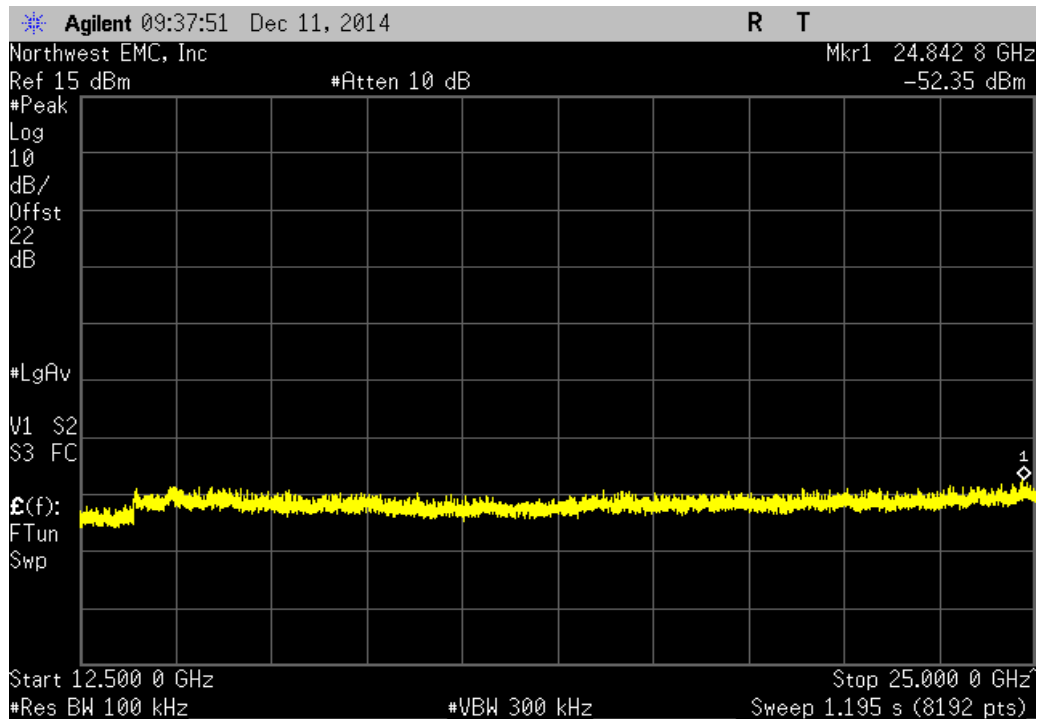
Antenna 1, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



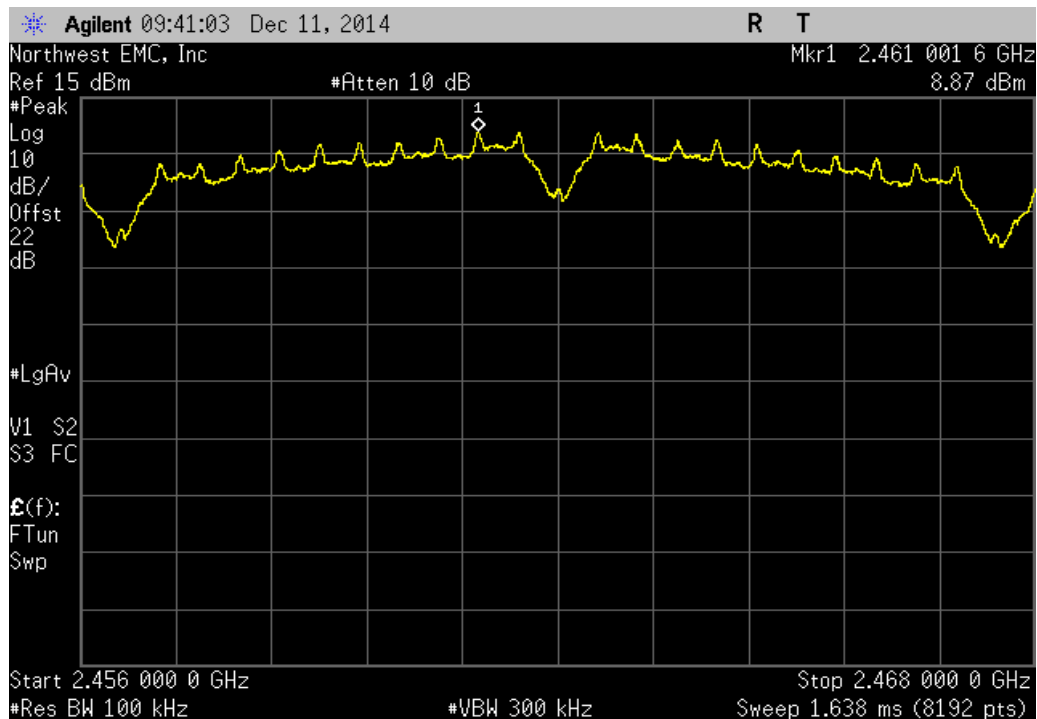
Antenna 1, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-54.44	-20	Pass	



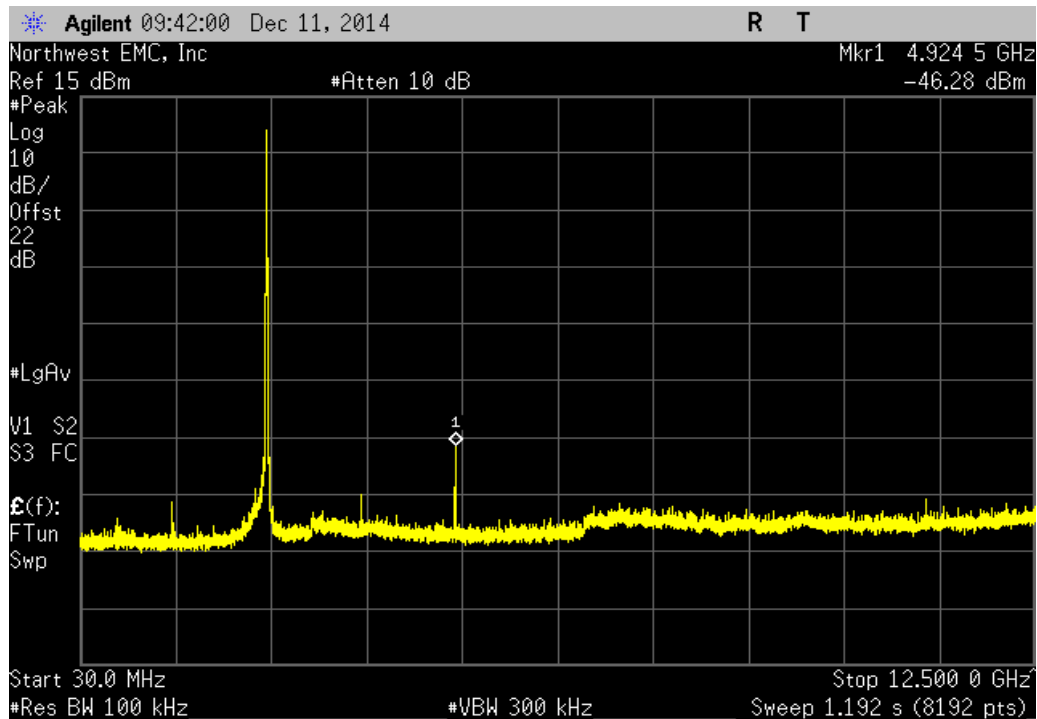
Antenna 1, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-61.26	-20	Pass	



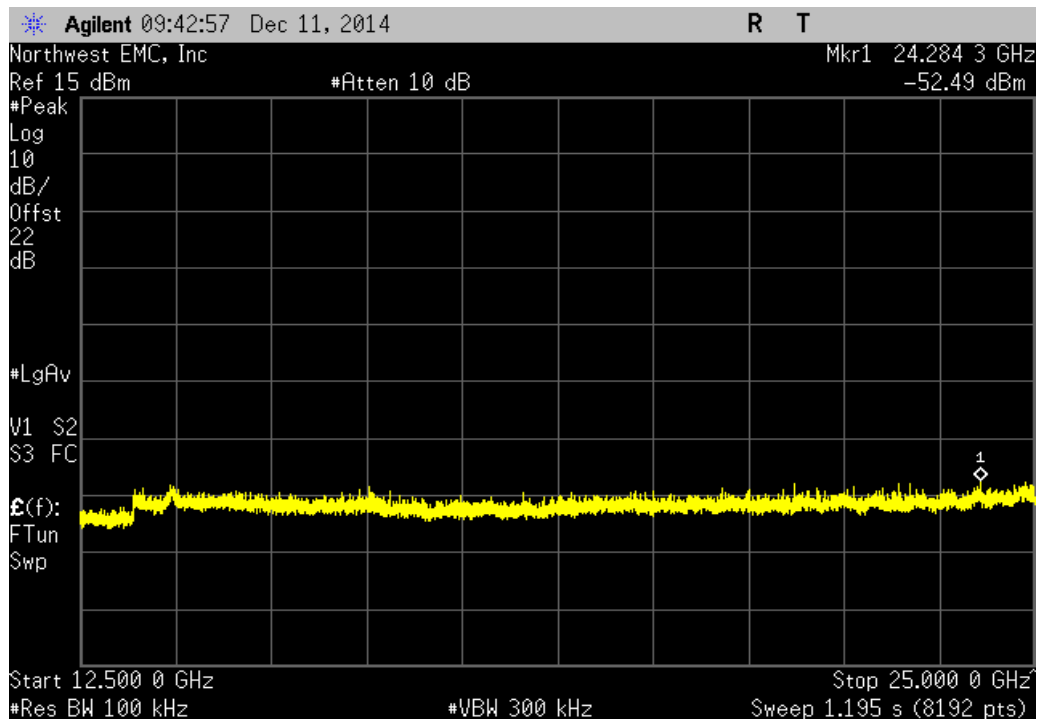
Antenna 1, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



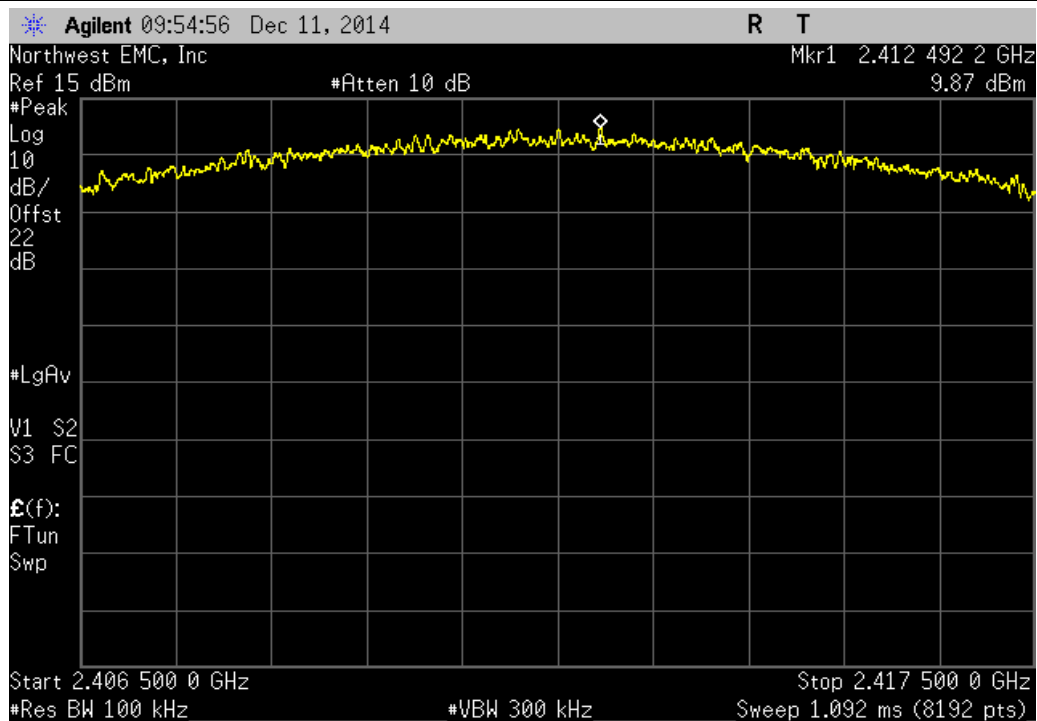
Antenna 1, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-55.15	-20	Pass	



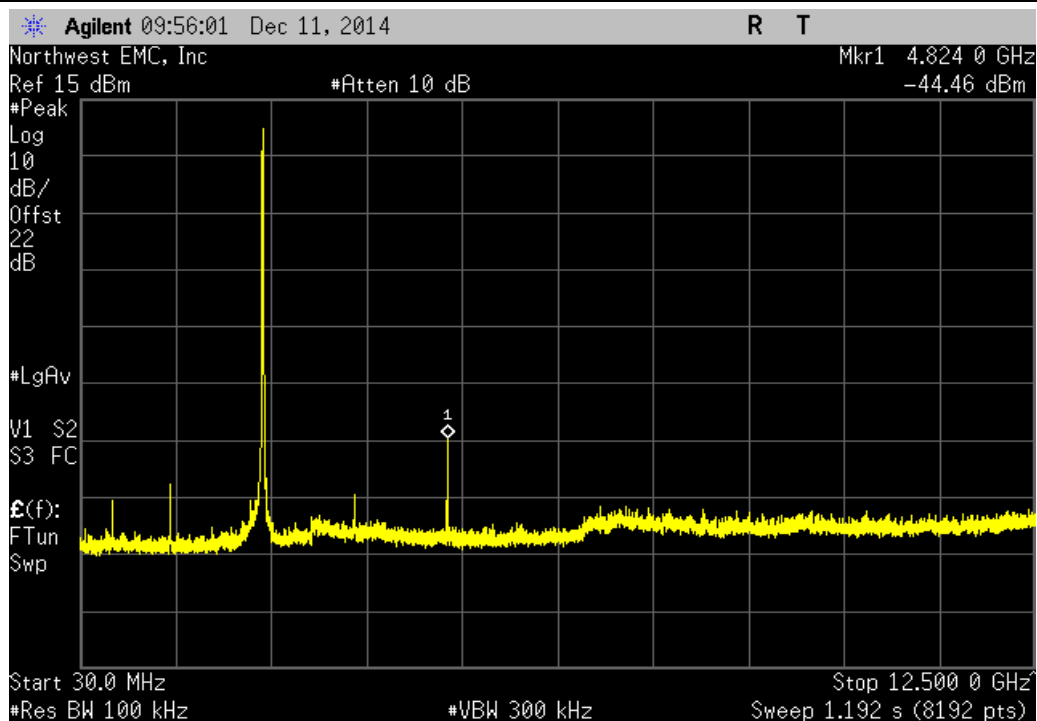
Antenna 1, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-61.36	-20	Pass	



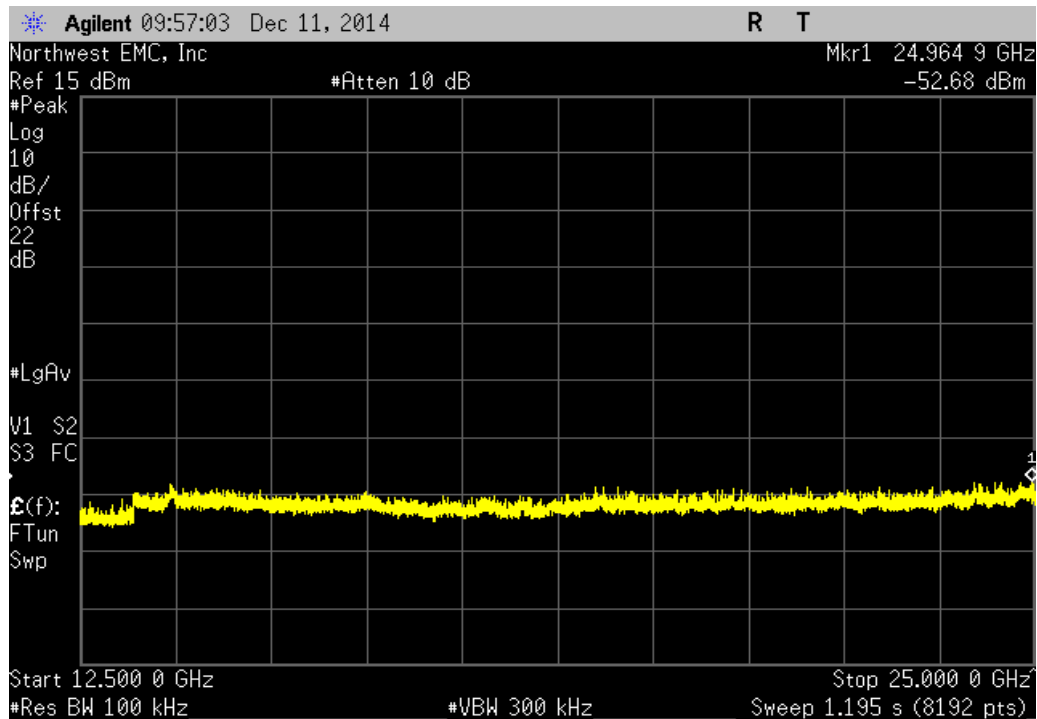
Antenna 1, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



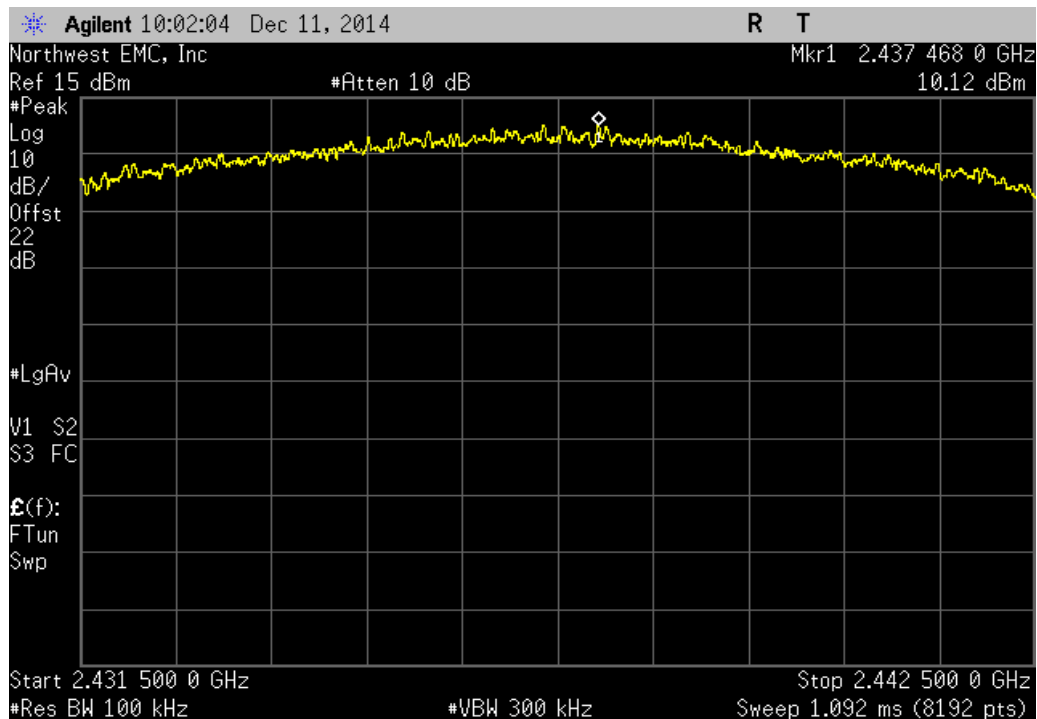
Antenna 1, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-54.33	-20	Pass	



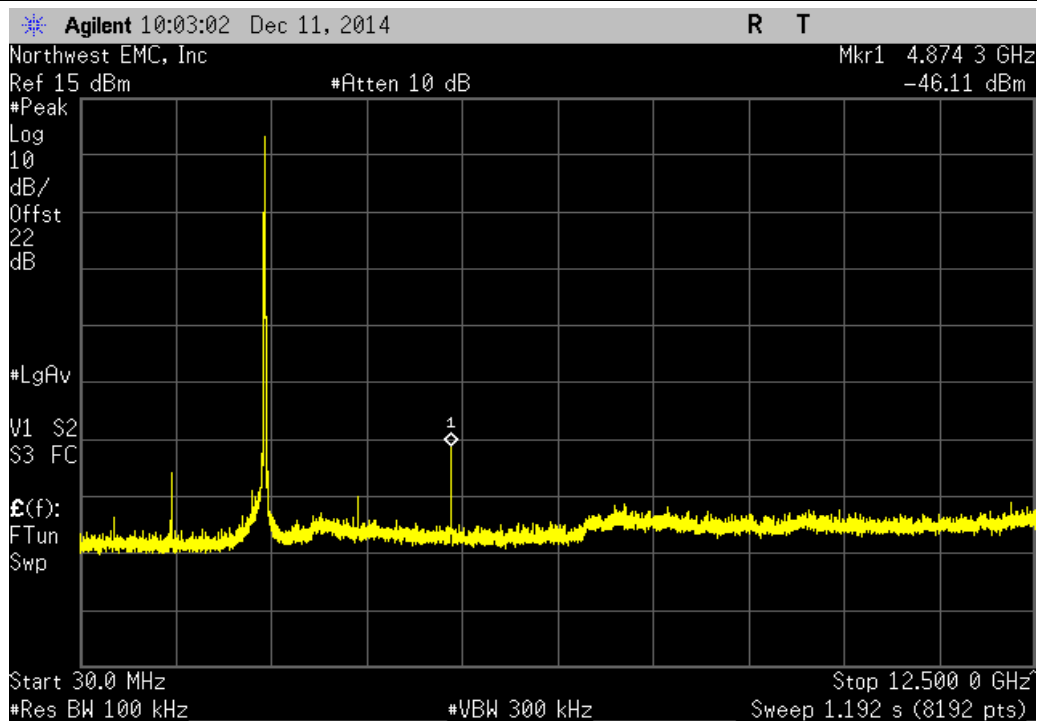
Antenna 1, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-62.55	-20	Pass	



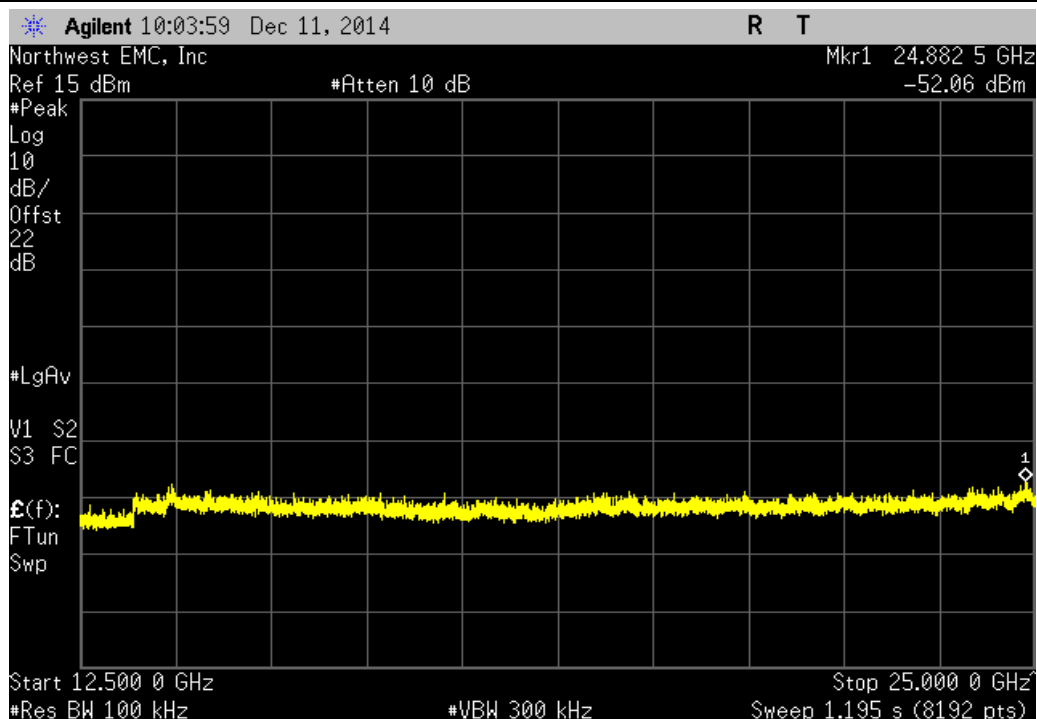
Antenna 1, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



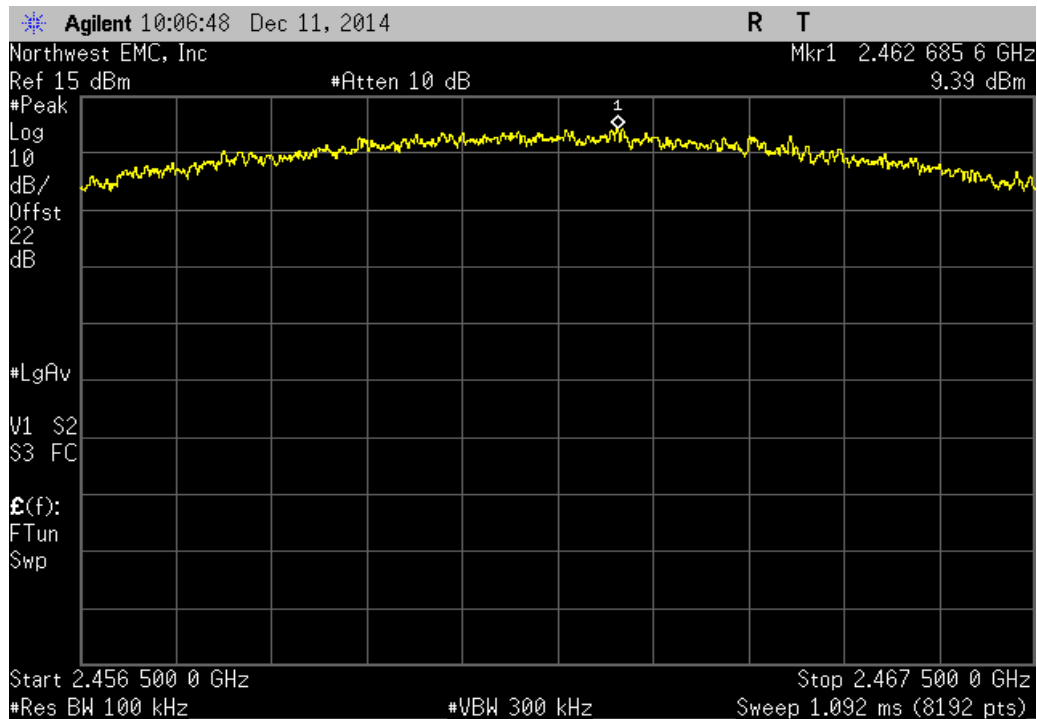
Antenna 1, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-56.24	-20	Pass	



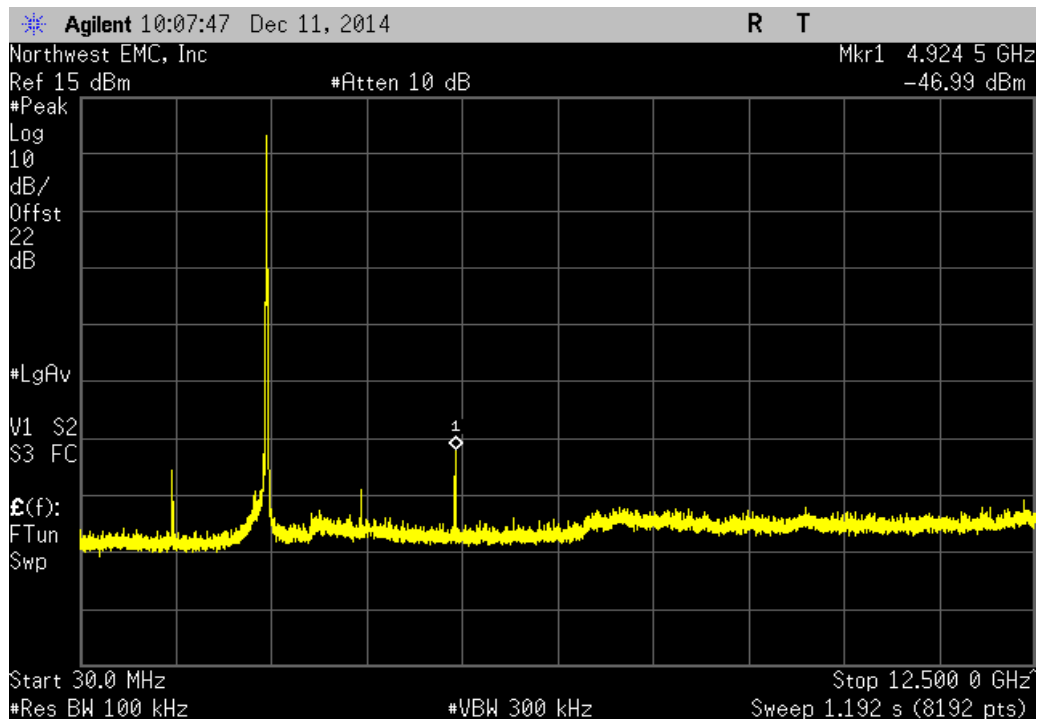
Antenna 1, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-62.19	-20	Pass	



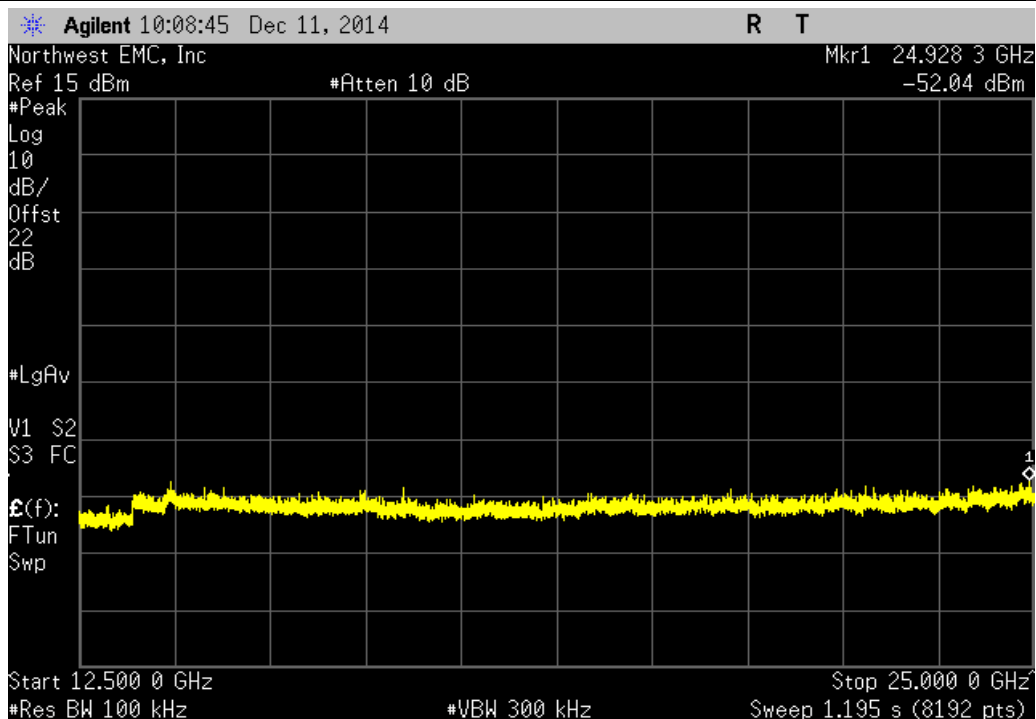
Antenna 1, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



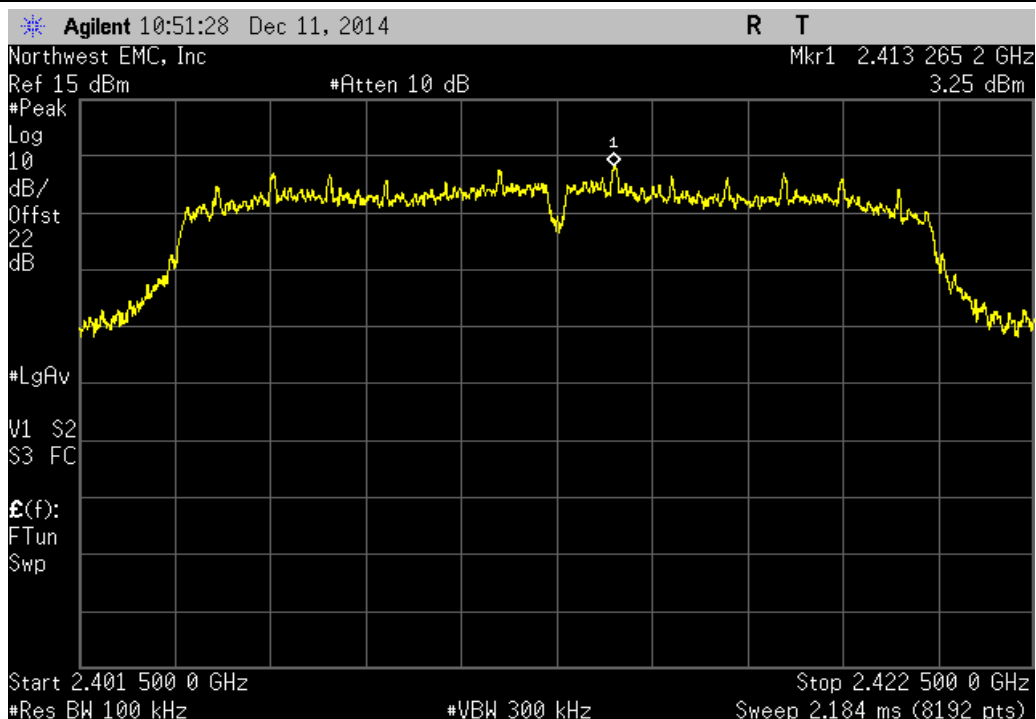
Antenna 1, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-56.38	-20	Pass	



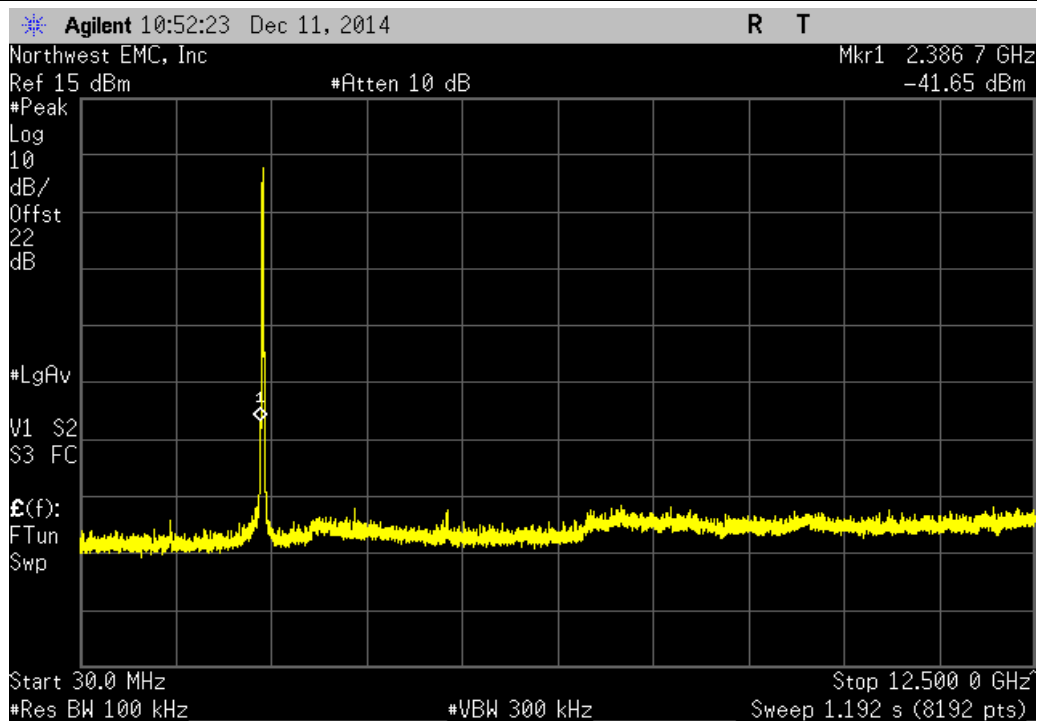
Antenna 1, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-61.44	-20	Pass	



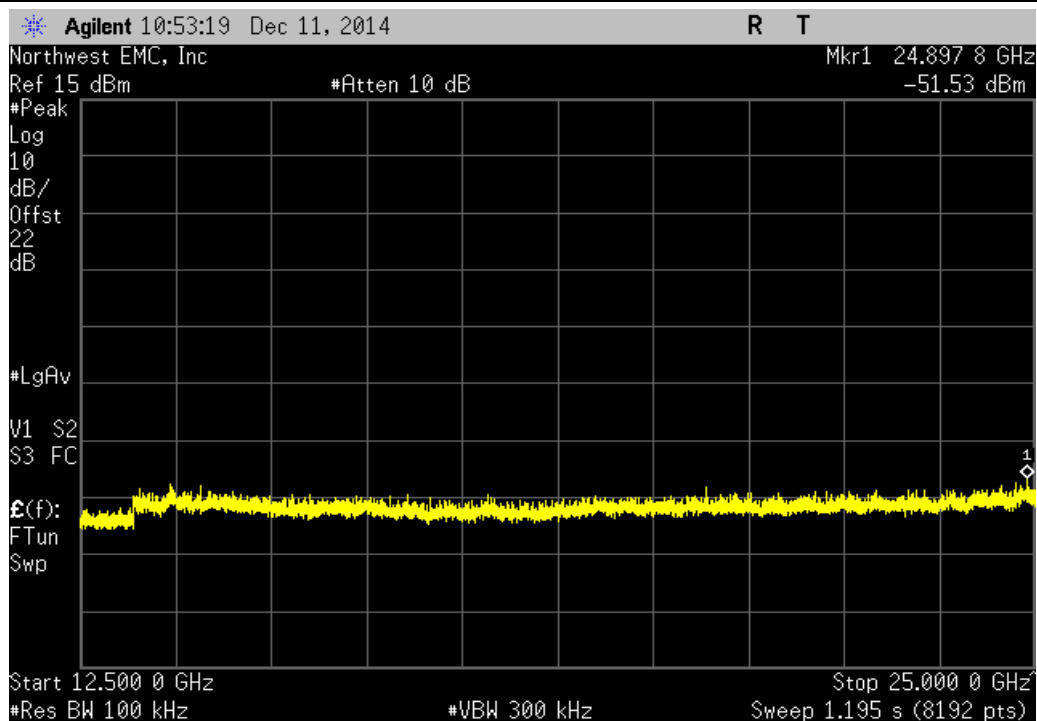
Antenna 1, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	

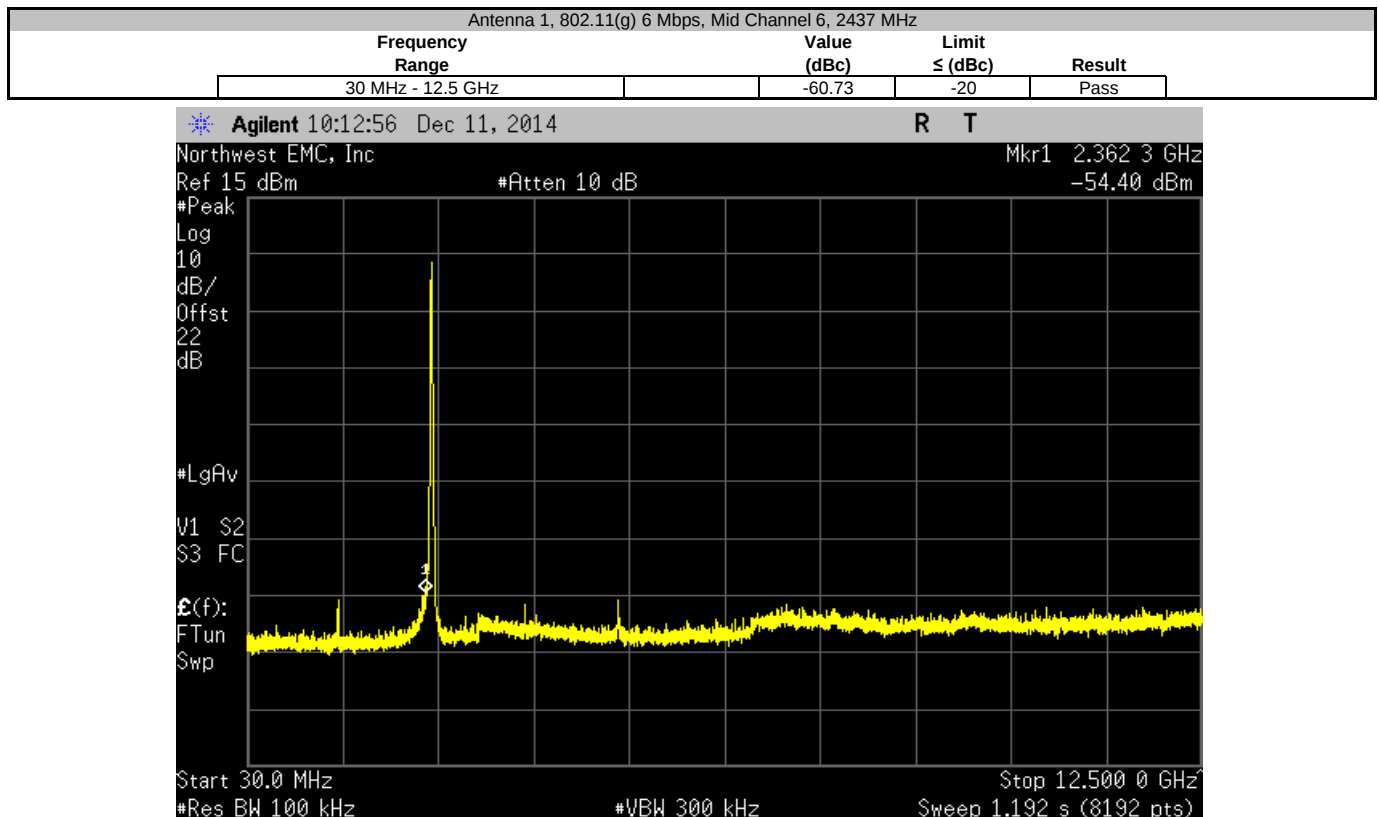
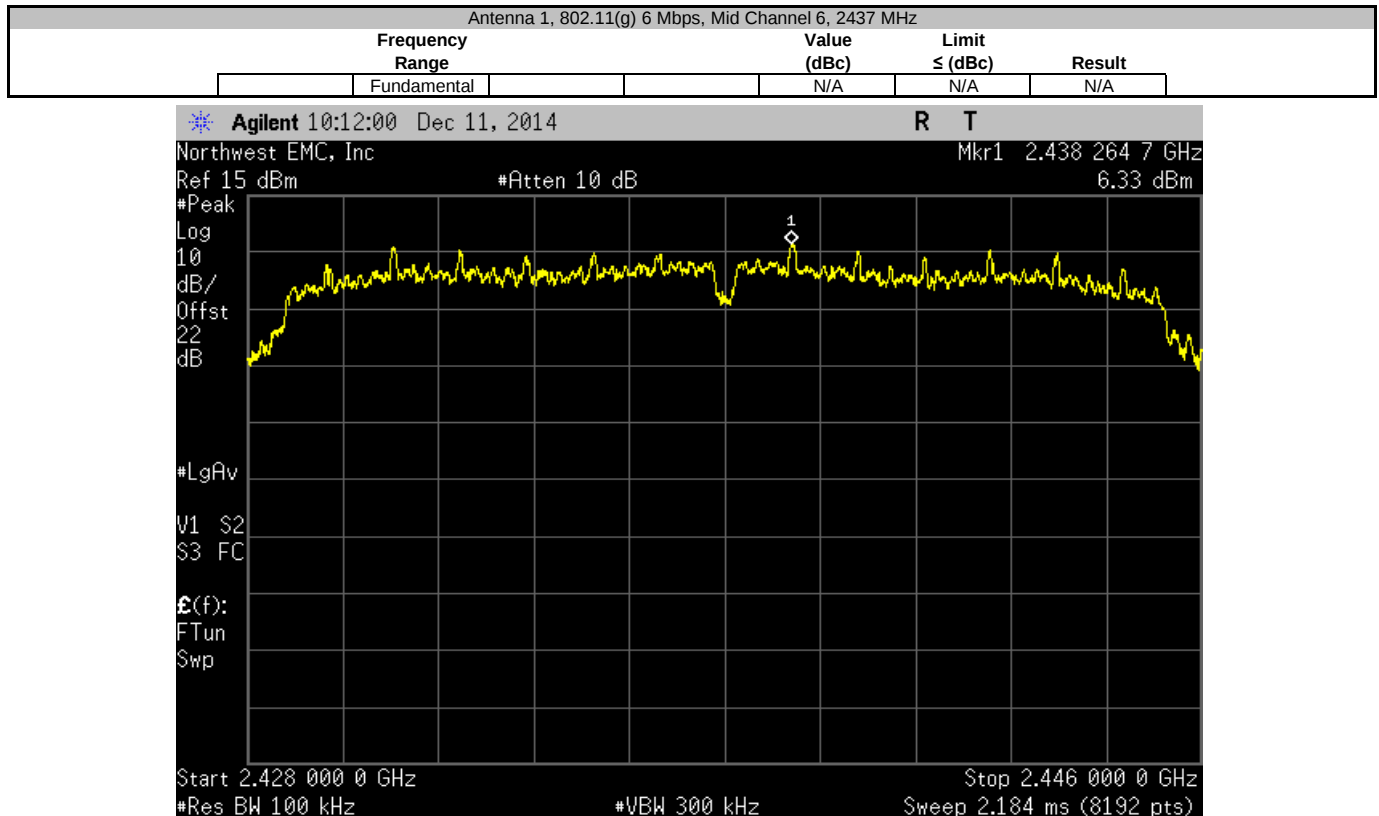


Antenna 1, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-44.9	-20	Pass	

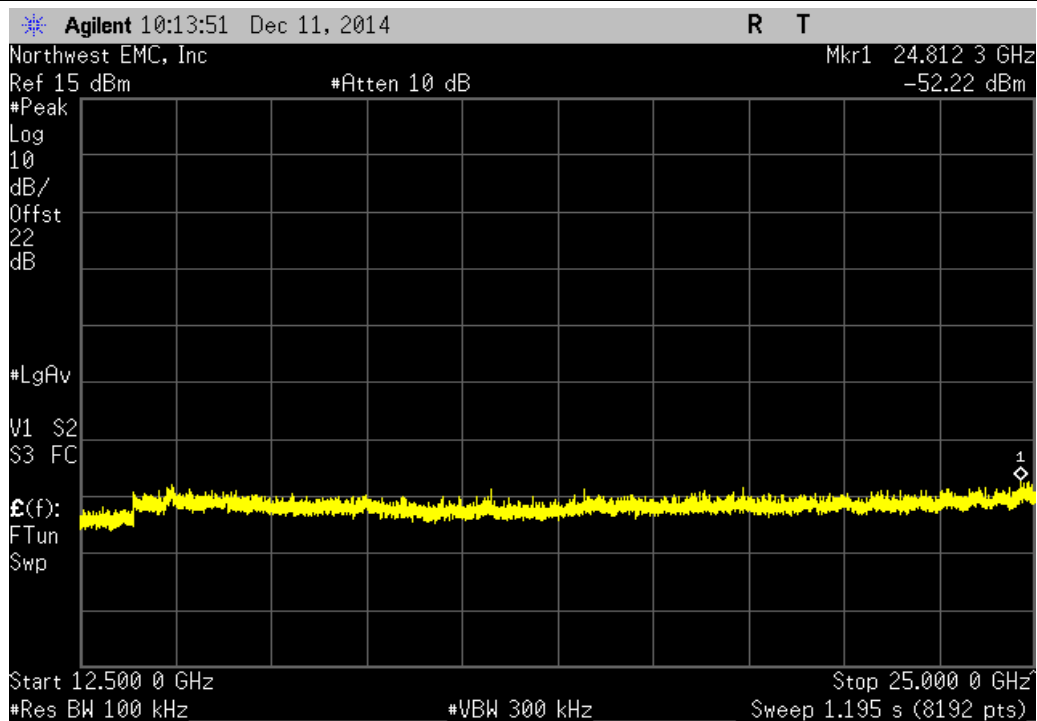


Antenna 1, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-54.78	-20	Pass	

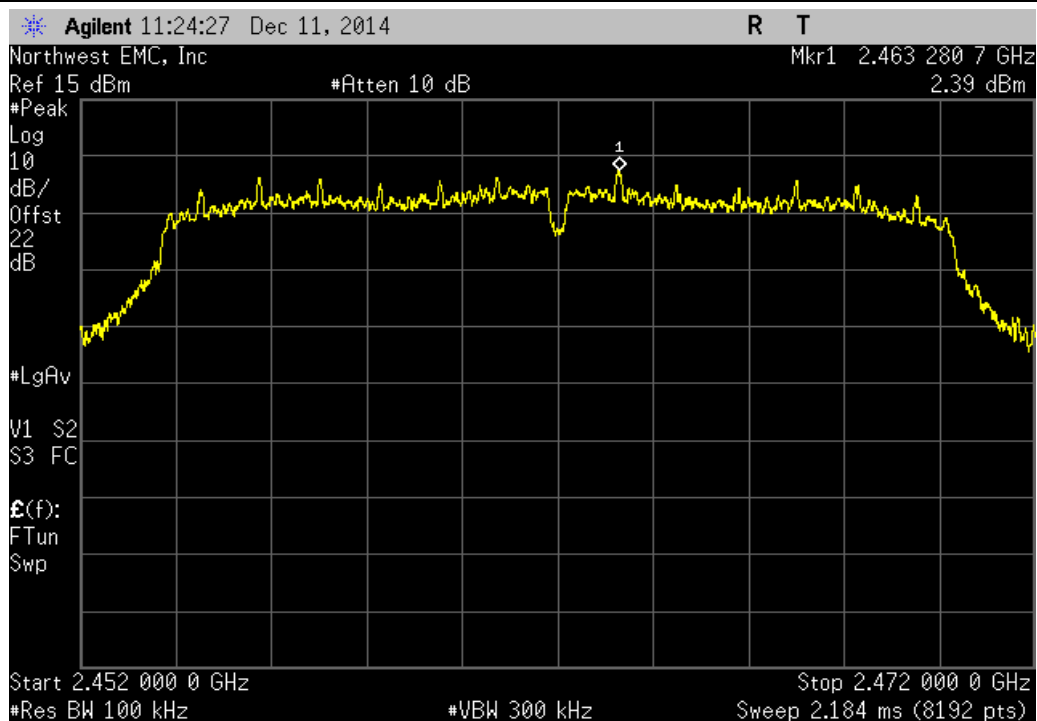




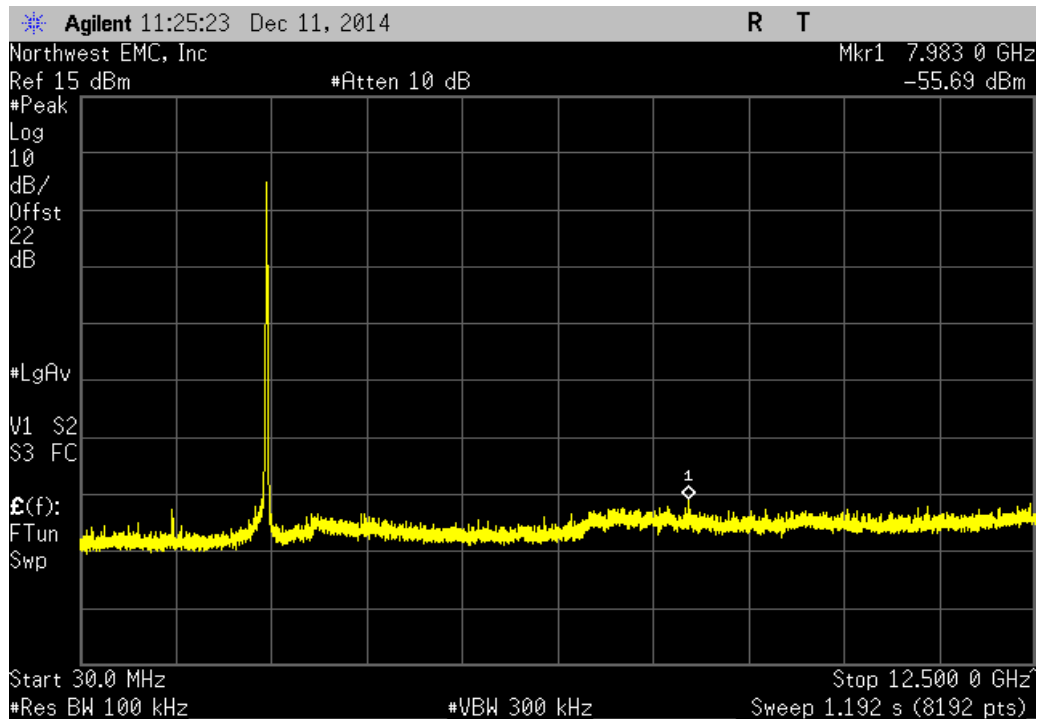
Antenna 1, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-58.55	-20	Pass	



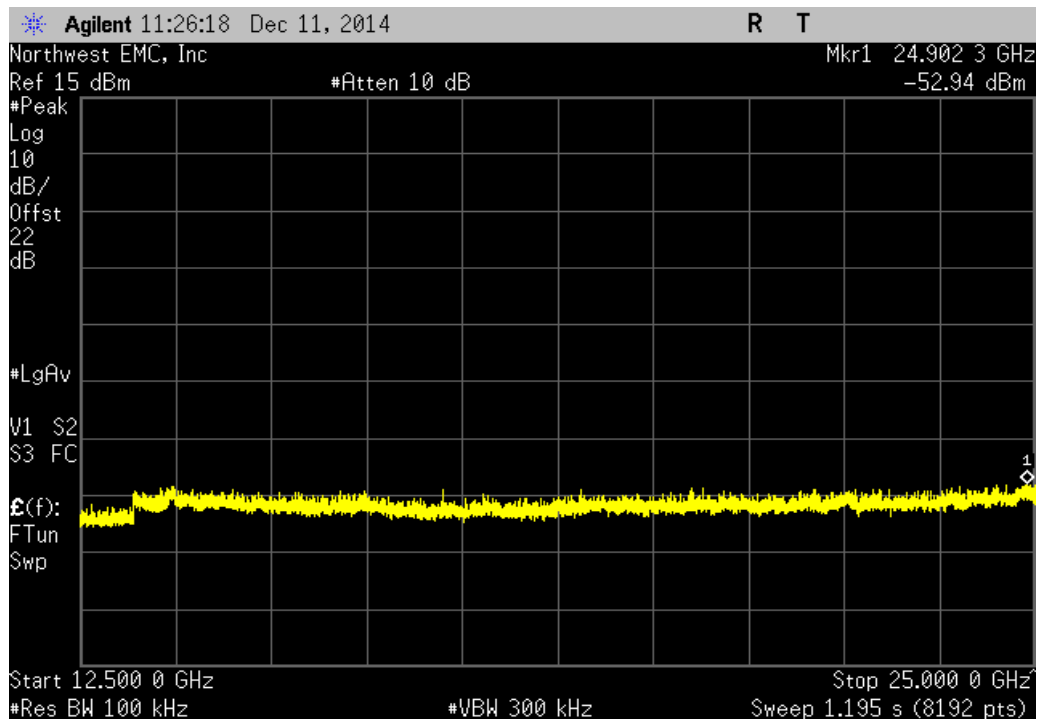
Antenna 1, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



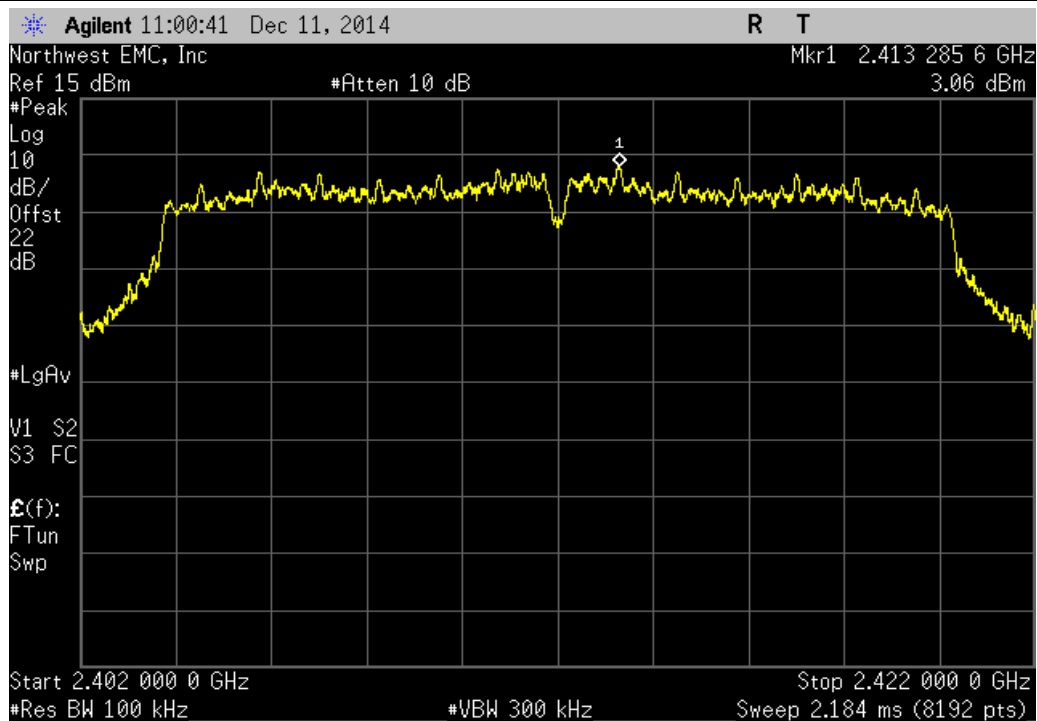
Antenna 1, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-58.08	-20	Pass	



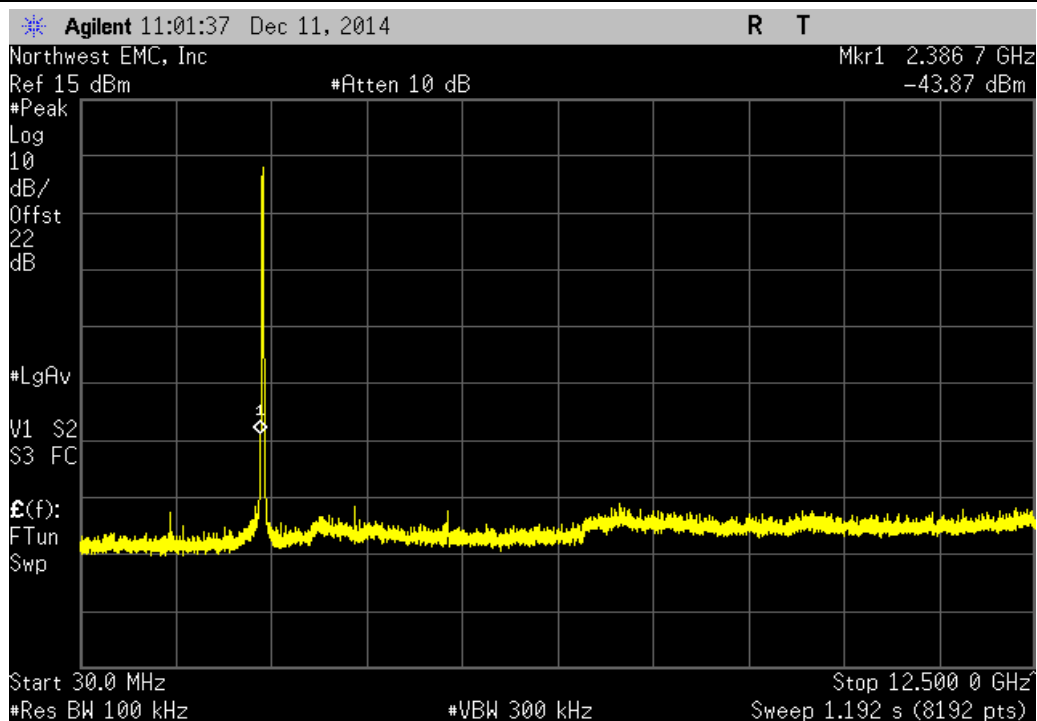
Antenna 1, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-55.33	-20	Pass	



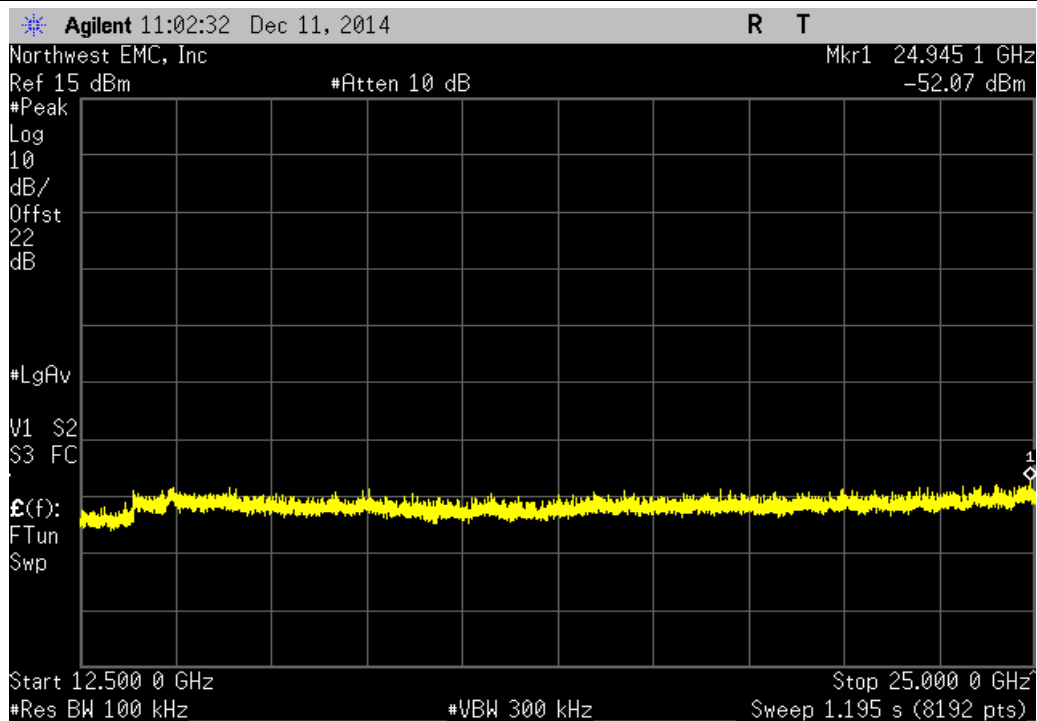
Antenna 1, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



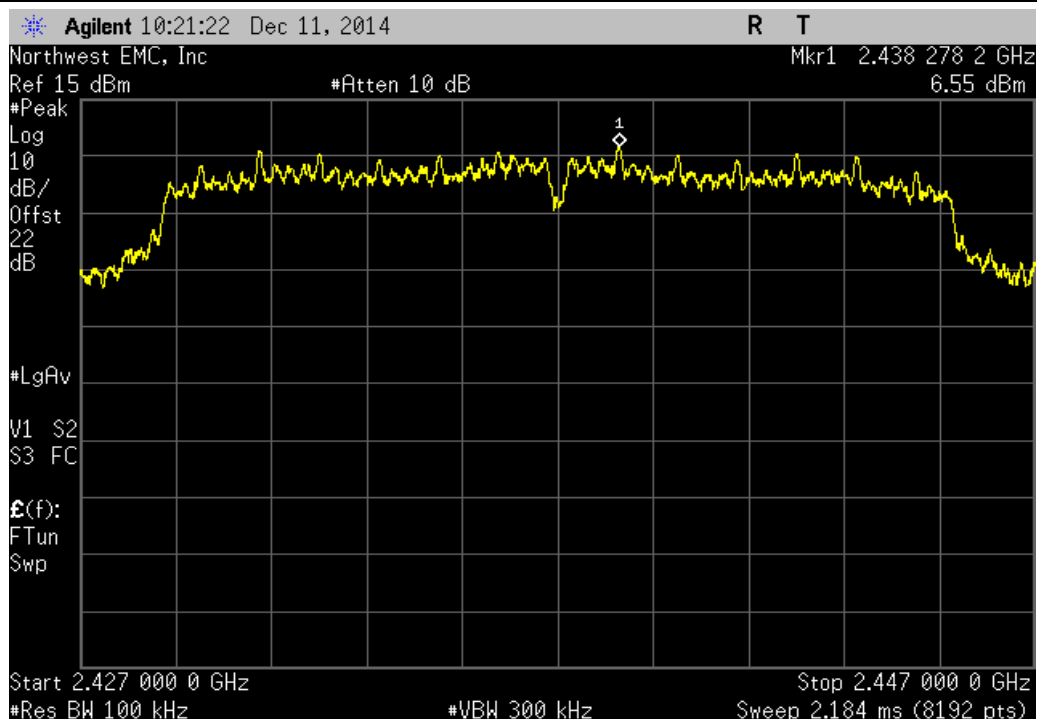
Antenna 1, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-46.93	-20	Pass	



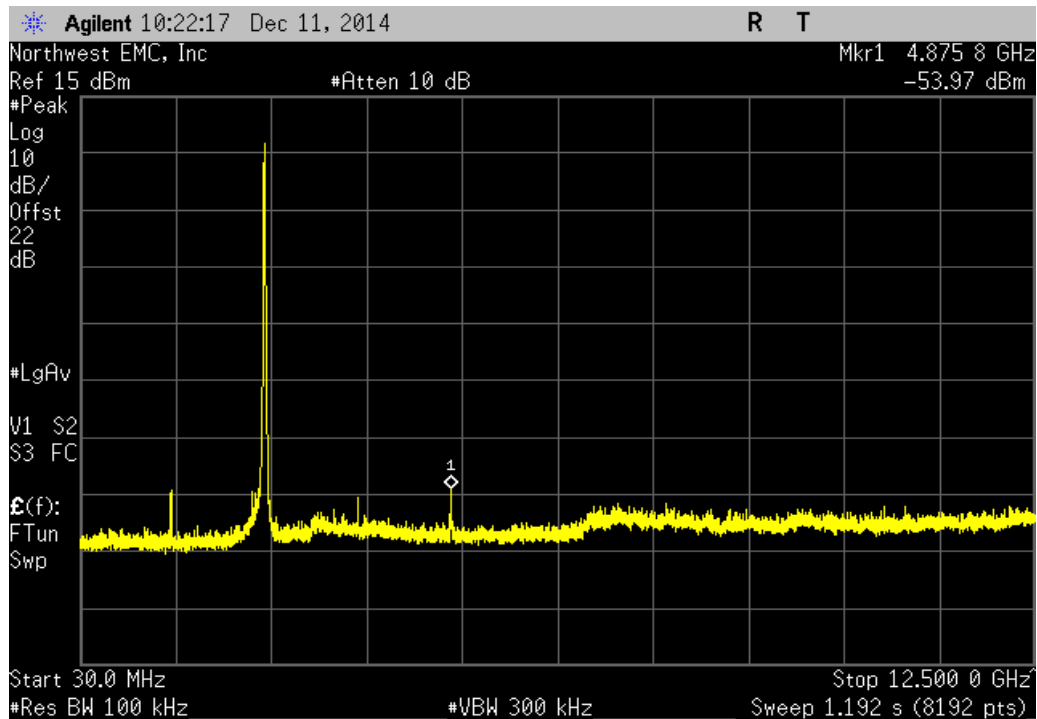
Antenna 1, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-55.13	-20	Pass	



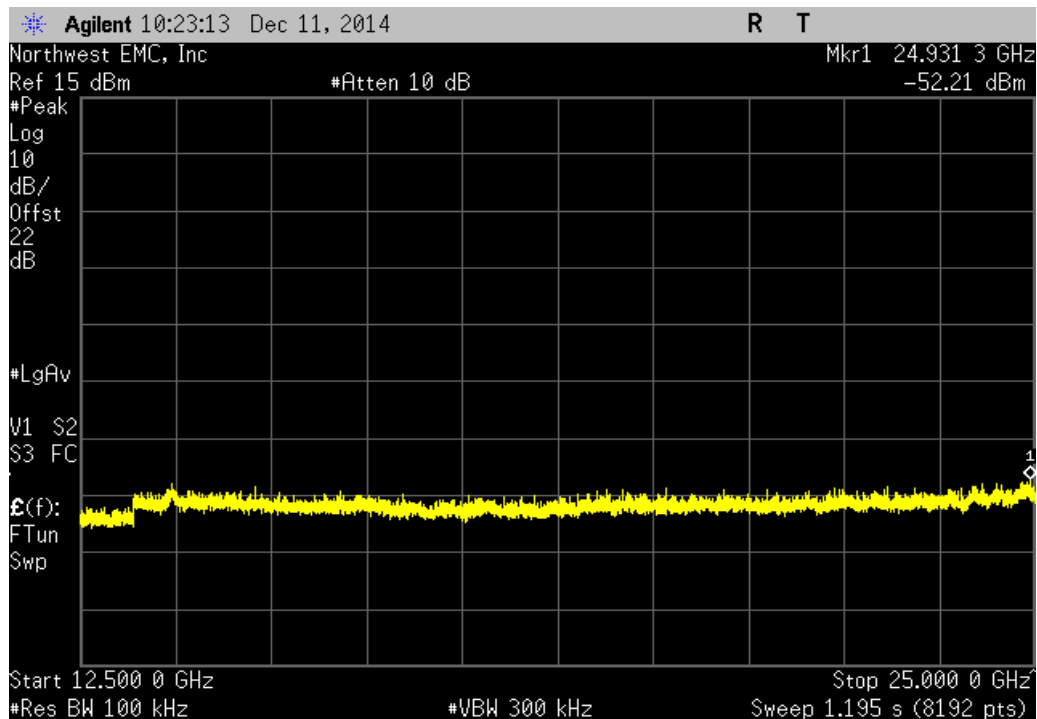
Antenna 1, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



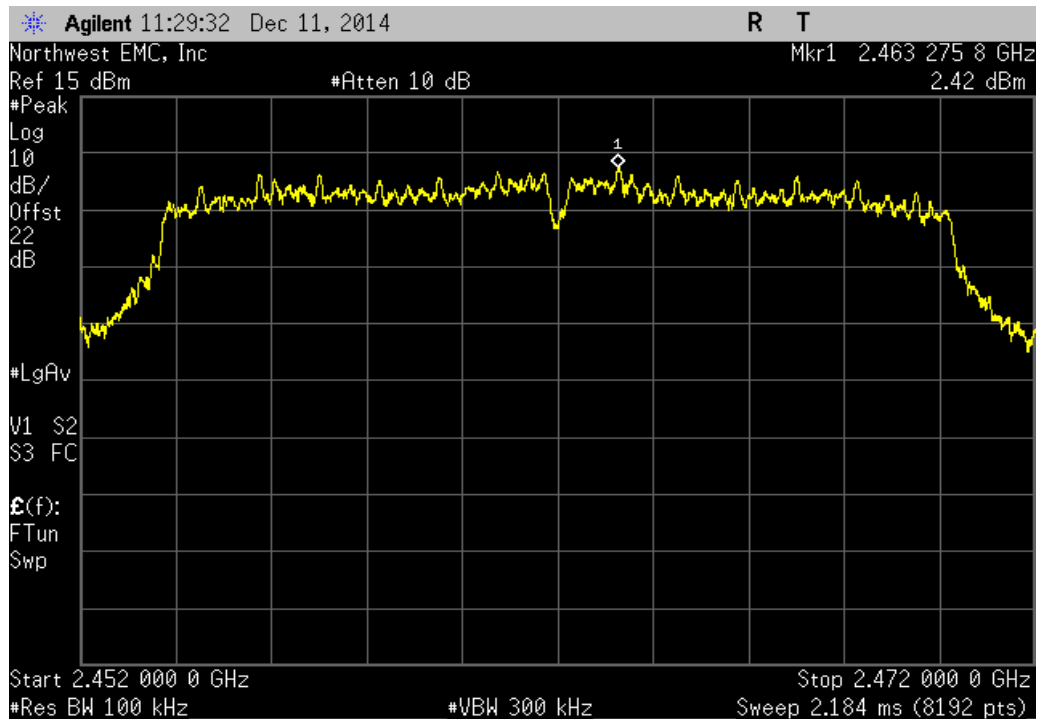
Antenna 1, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-60.53	-20	Pass	



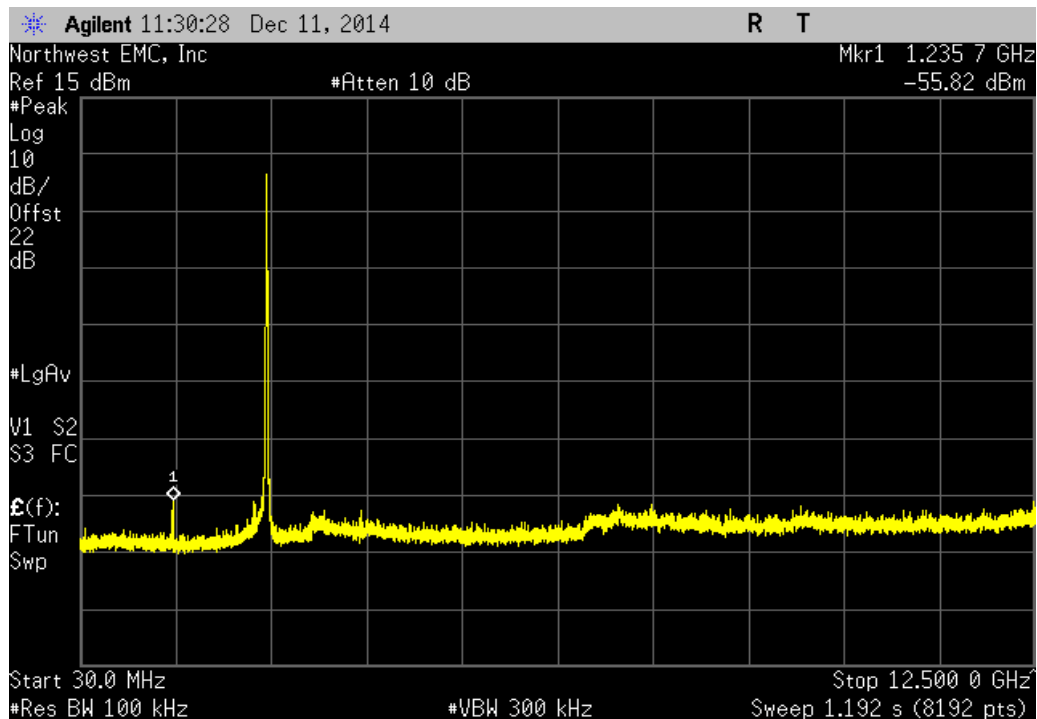
Antenna 1, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-58.76	-20	Pass	



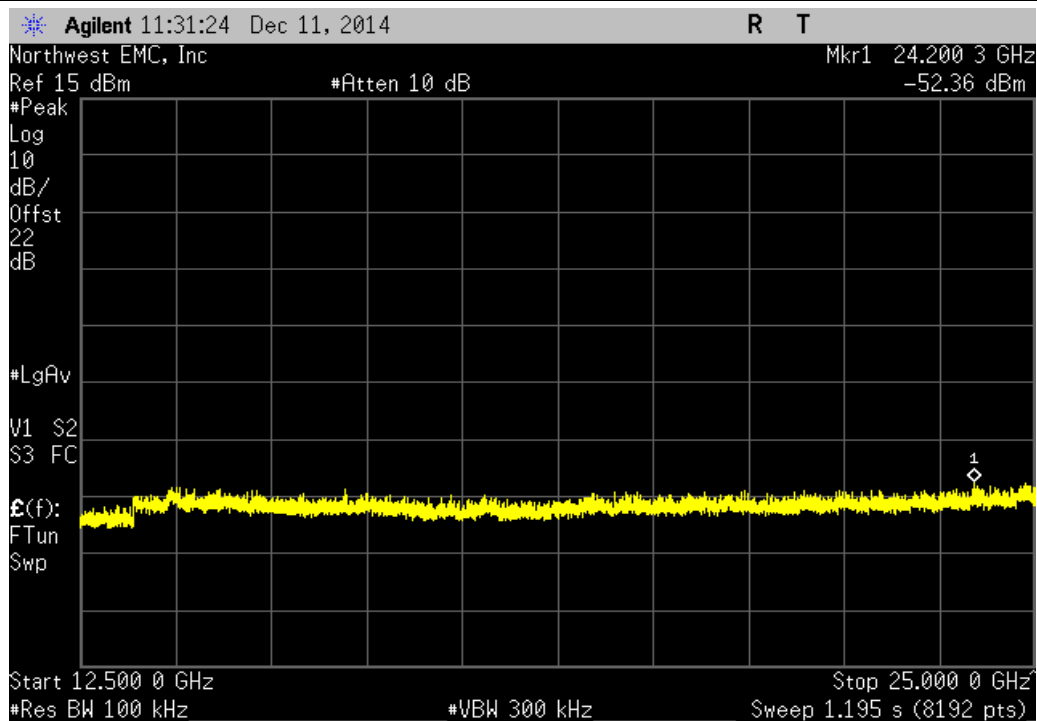
Antenna 1, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



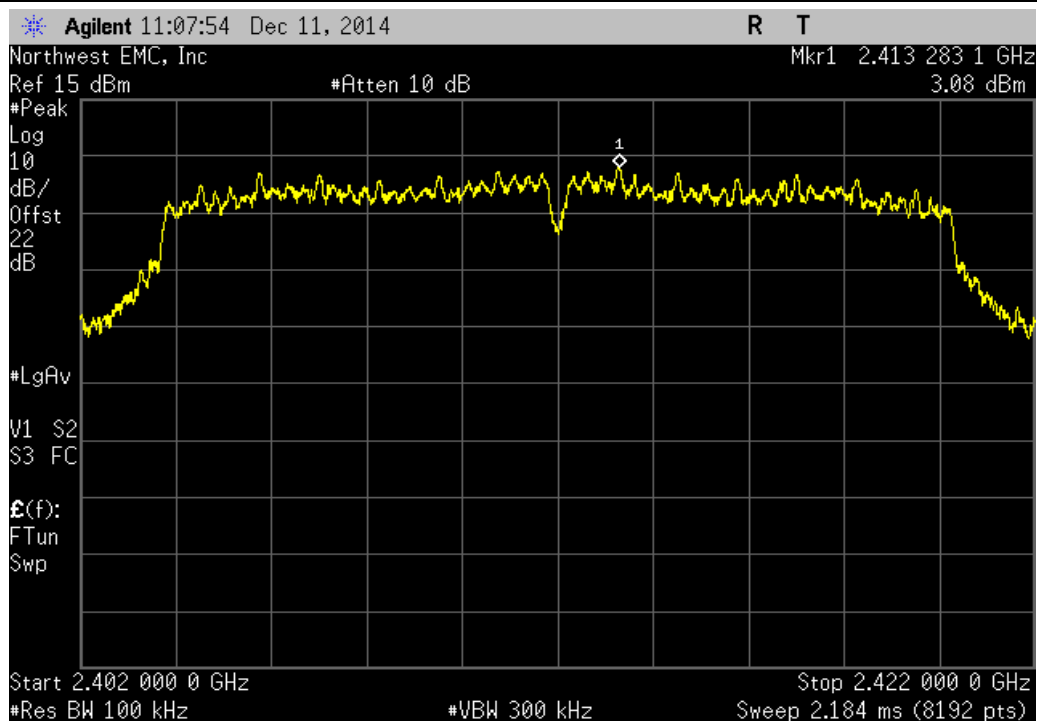
Antenna 1, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-58.24	-20	Pass	



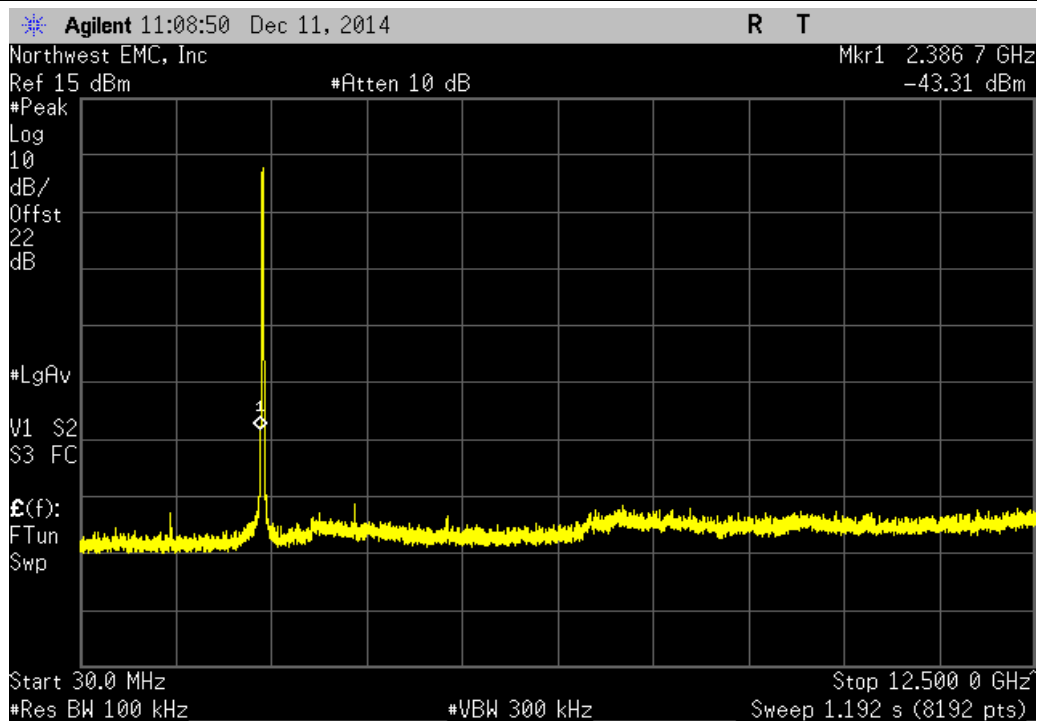
Antenna 1, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-54.78	-20	Pass	



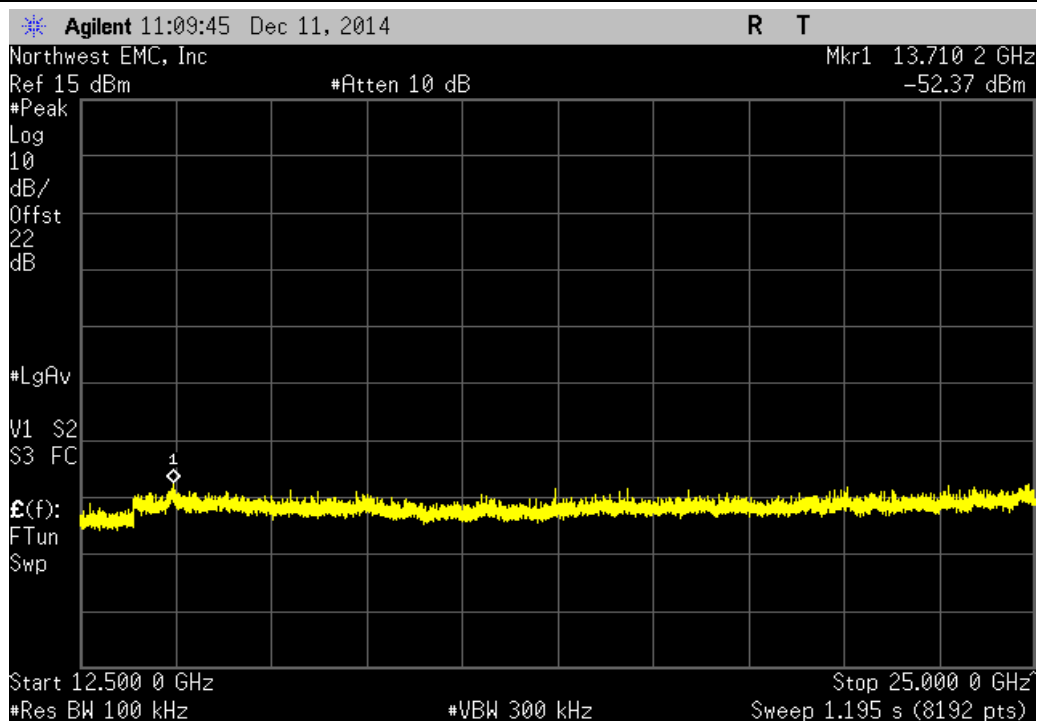
Antenna 1, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



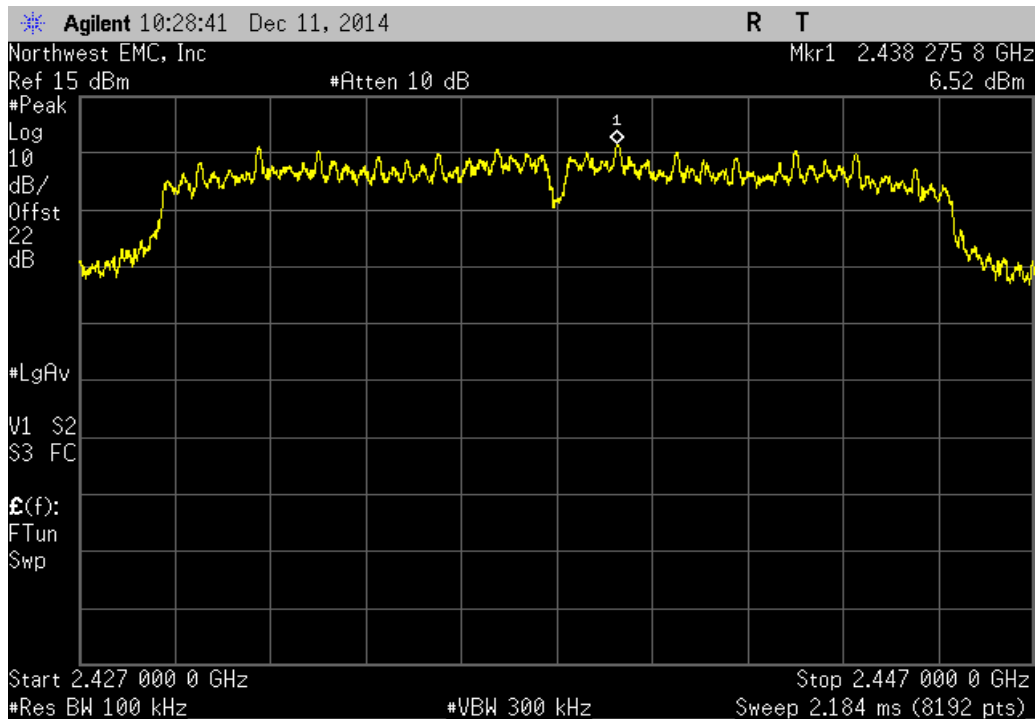
Antenna 1, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-46.39	-20	Pass	



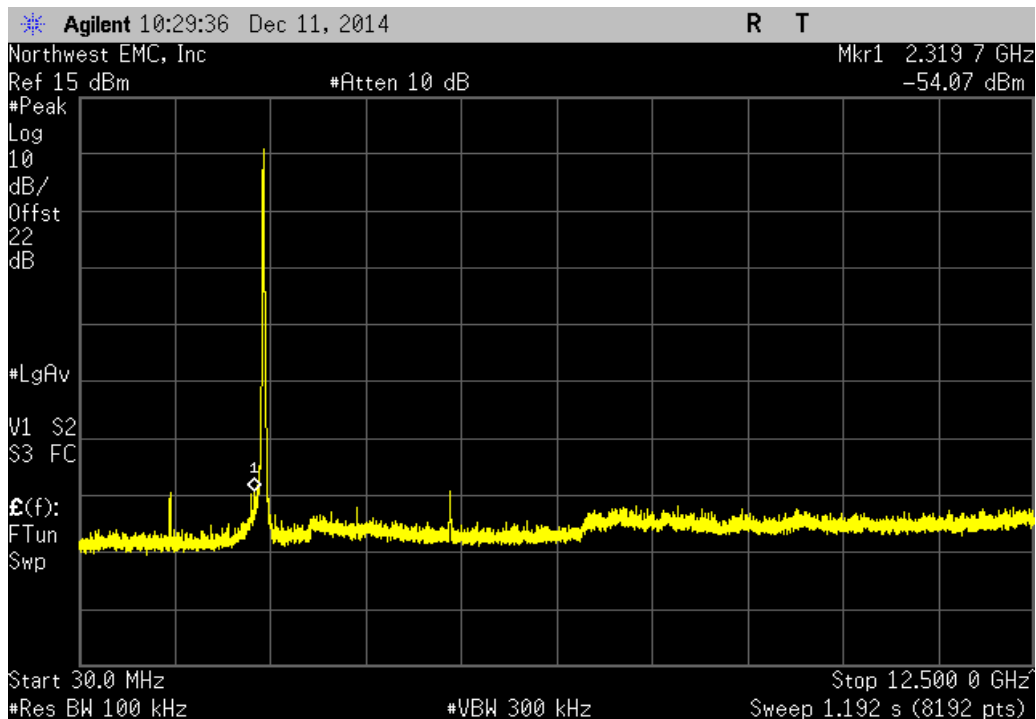
Antenna 1, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-55.45	-20	Pass	



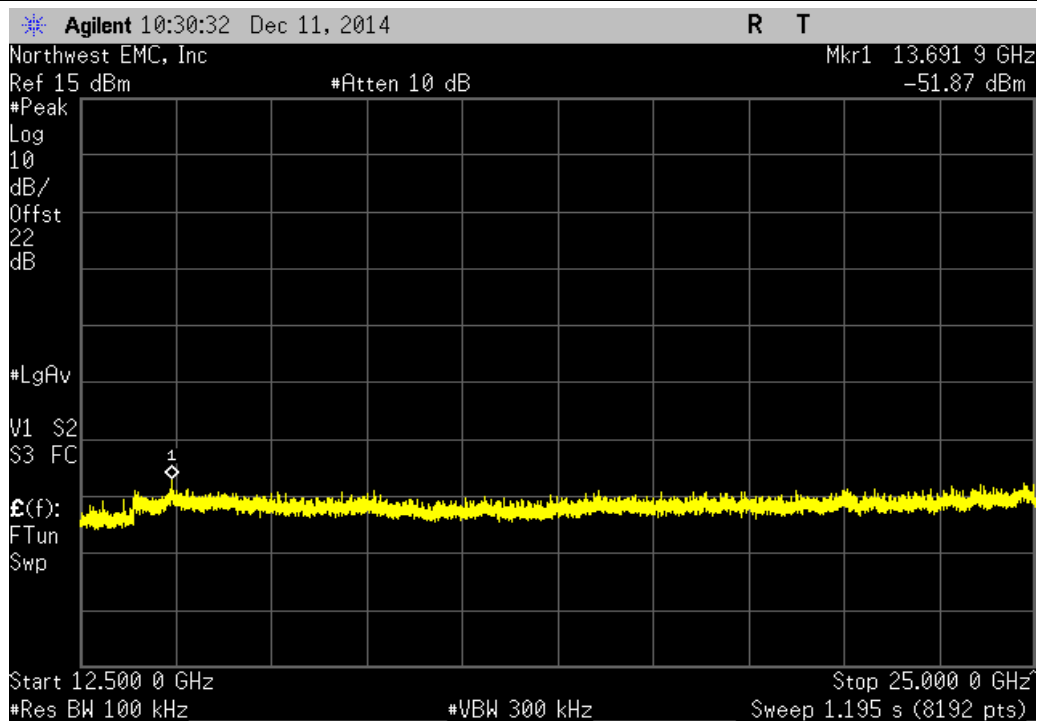
Antenna 1, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



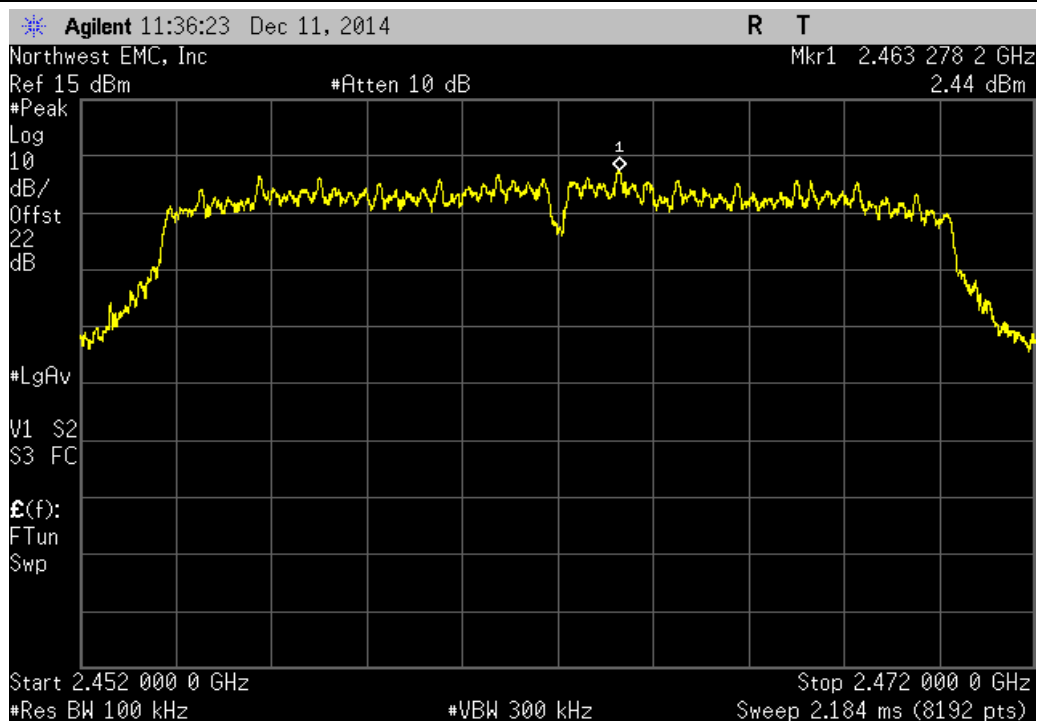
Antenna 1, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-60.59	-20	Pass	



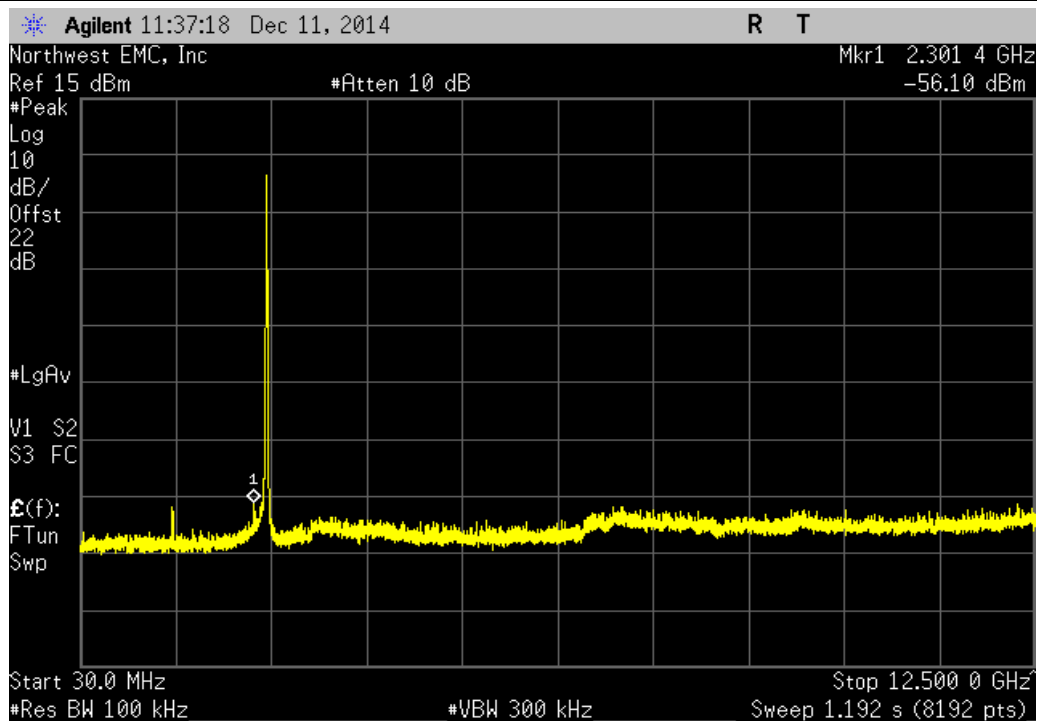
Antenna 1, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-58.39	-20	Pass	



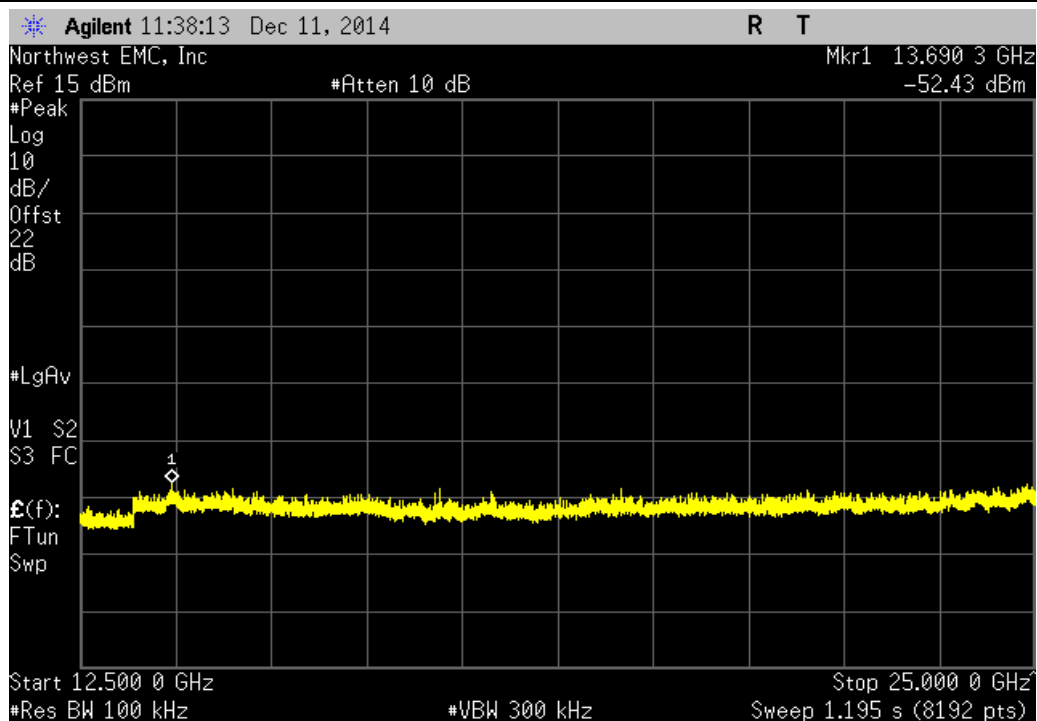
Antenna 1, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	

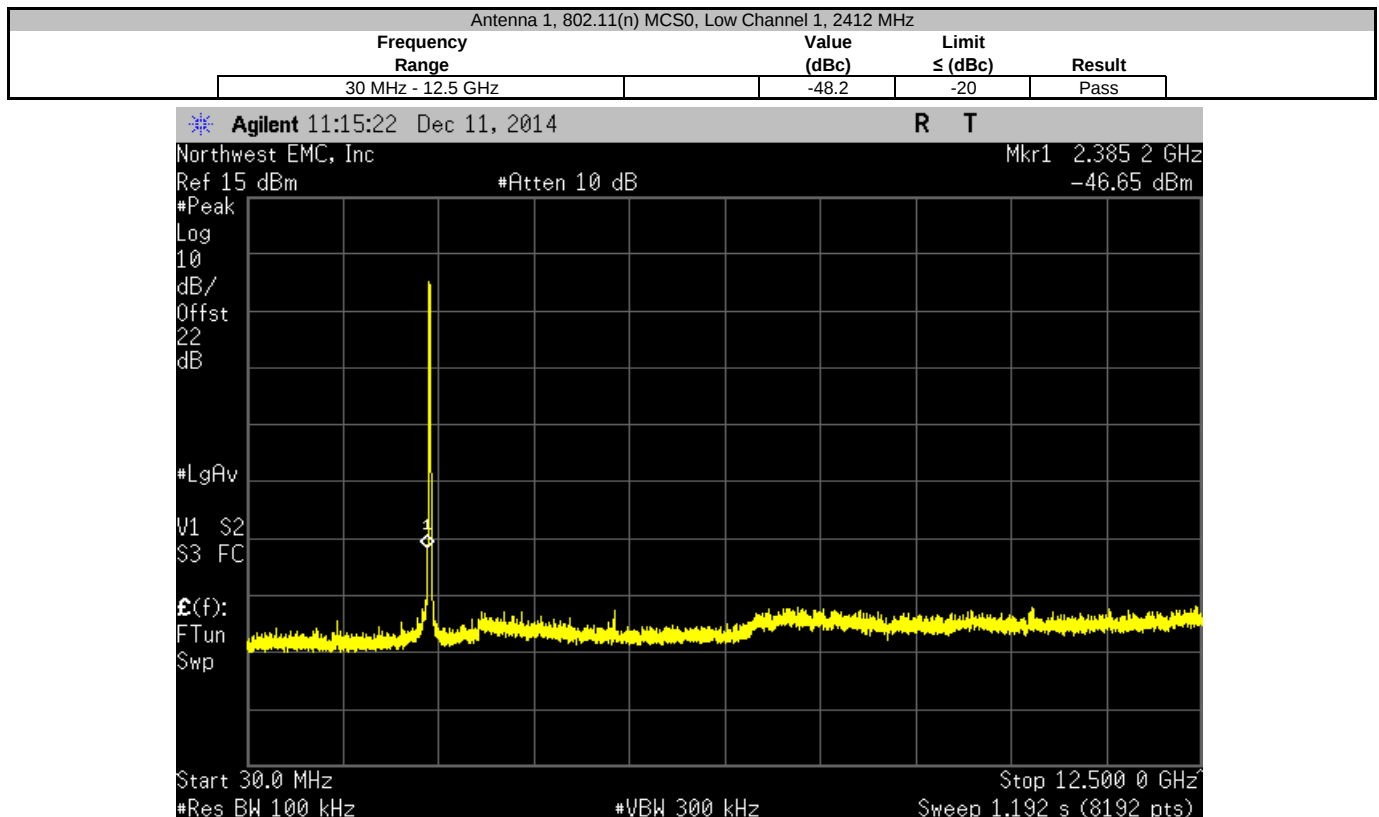
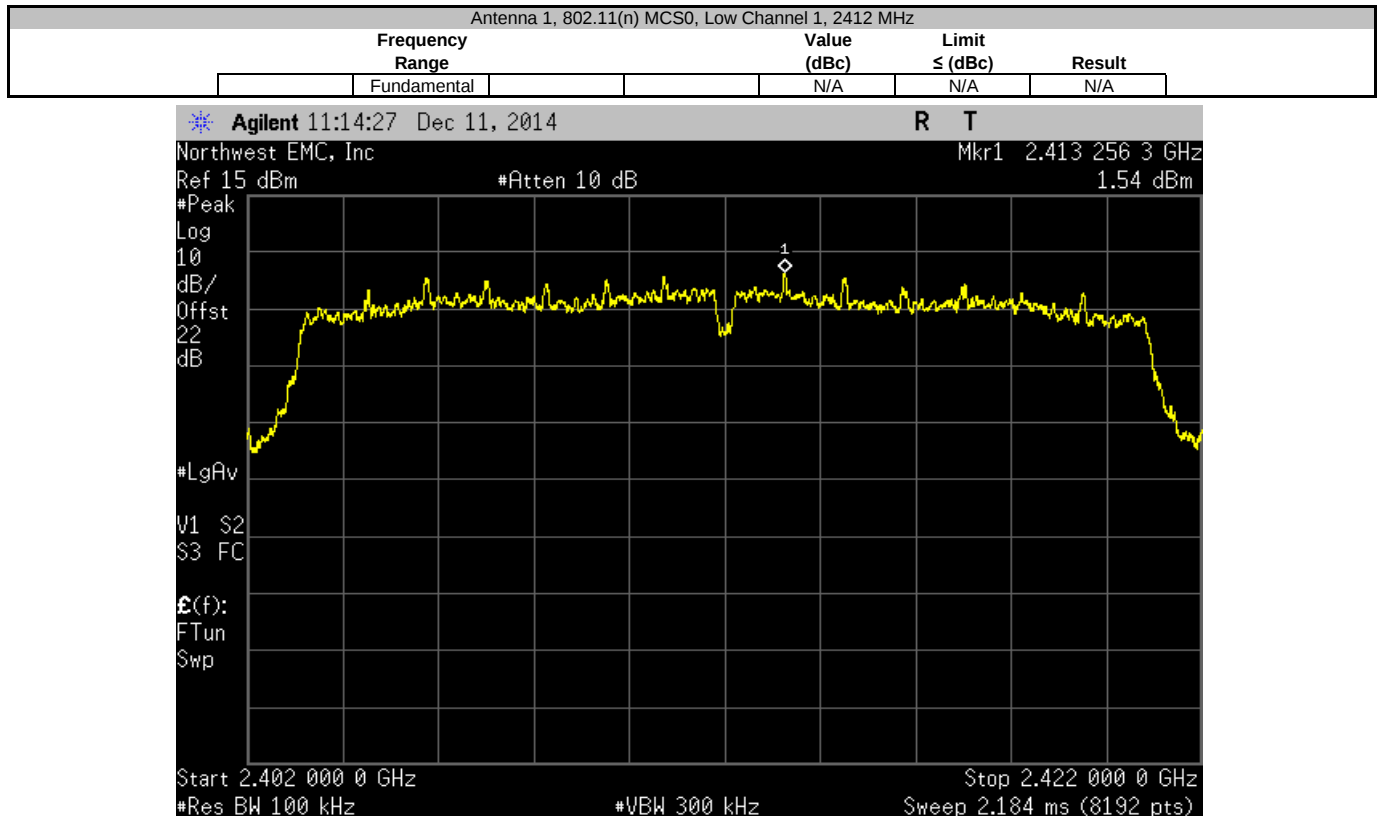


Antenna 1, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-58.54	-20	Pass	

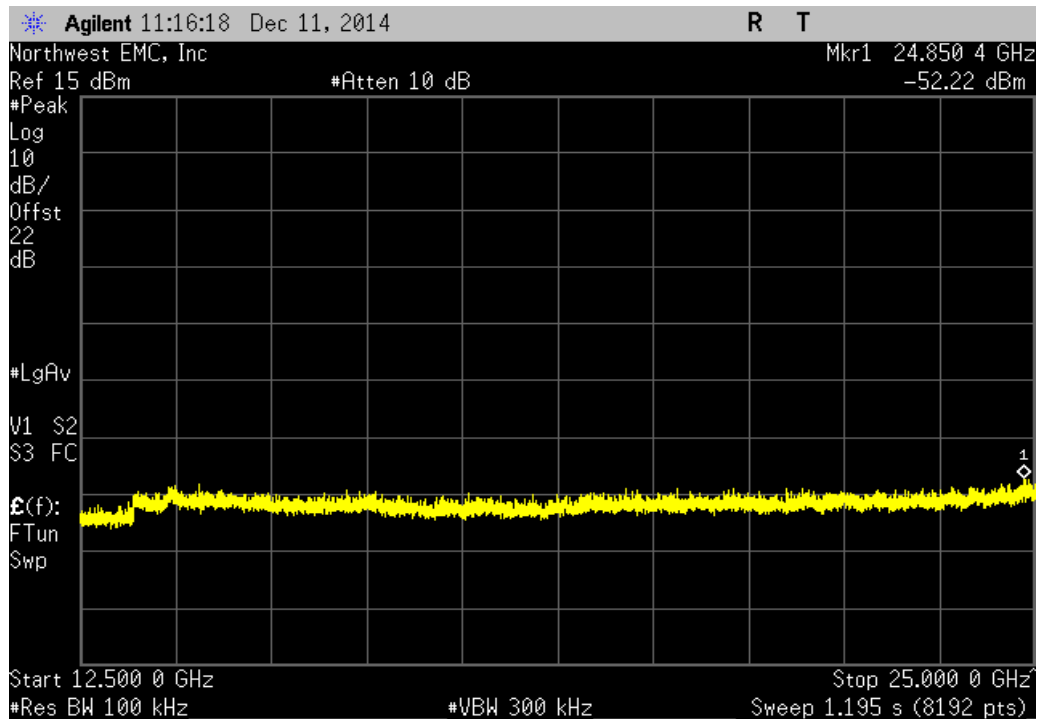


Antenna 1, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-54.87	-20	Pass	

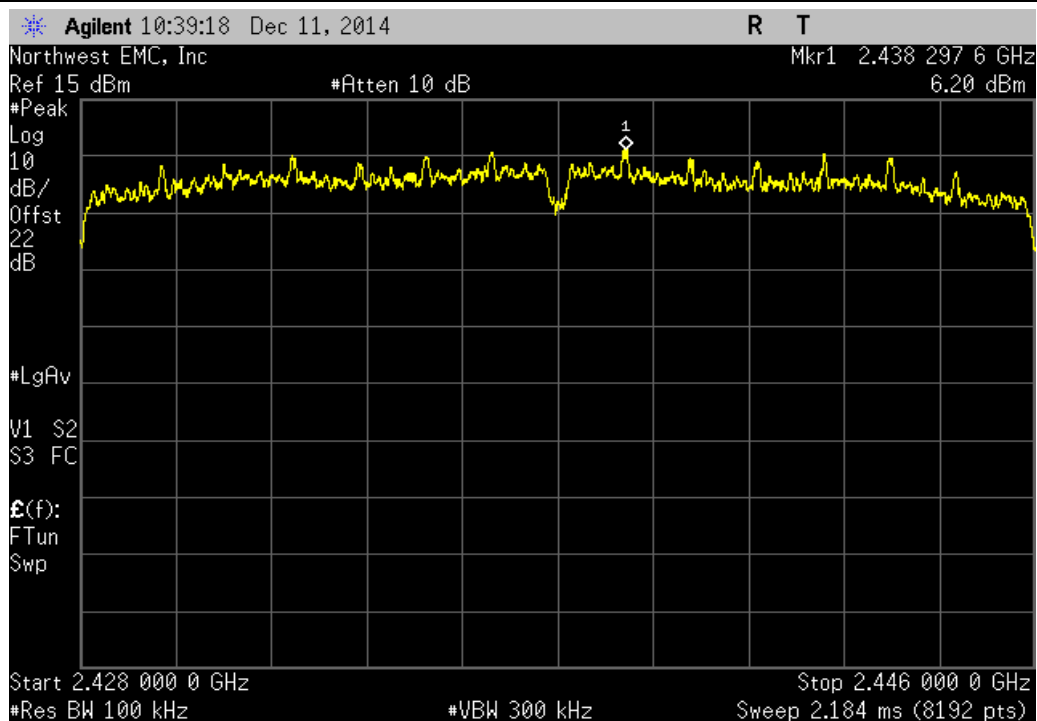




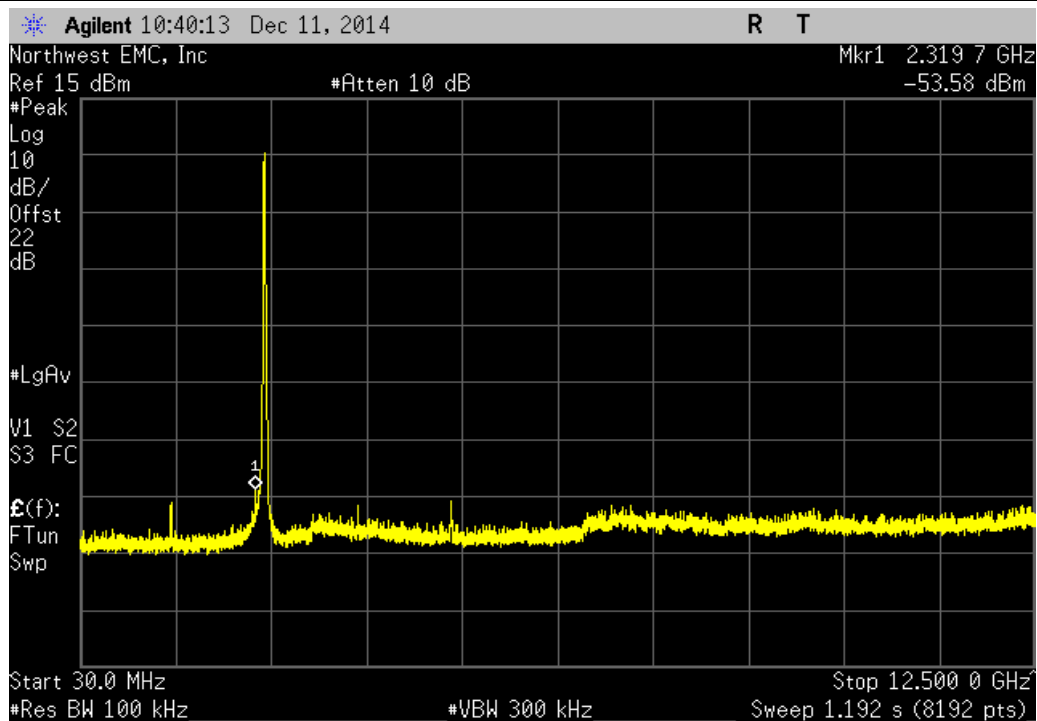
Antenna 1, 802.11(n) MCS0, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-53.77	-20	Pass	



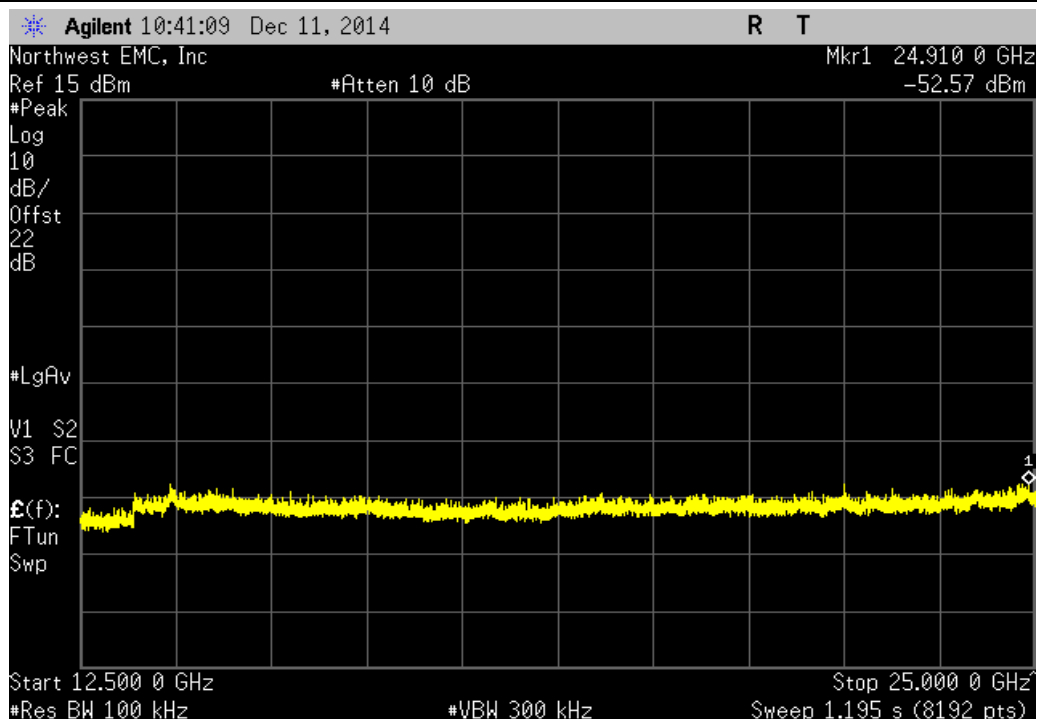
Antenna 1, 802.11(n) MCS0, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	

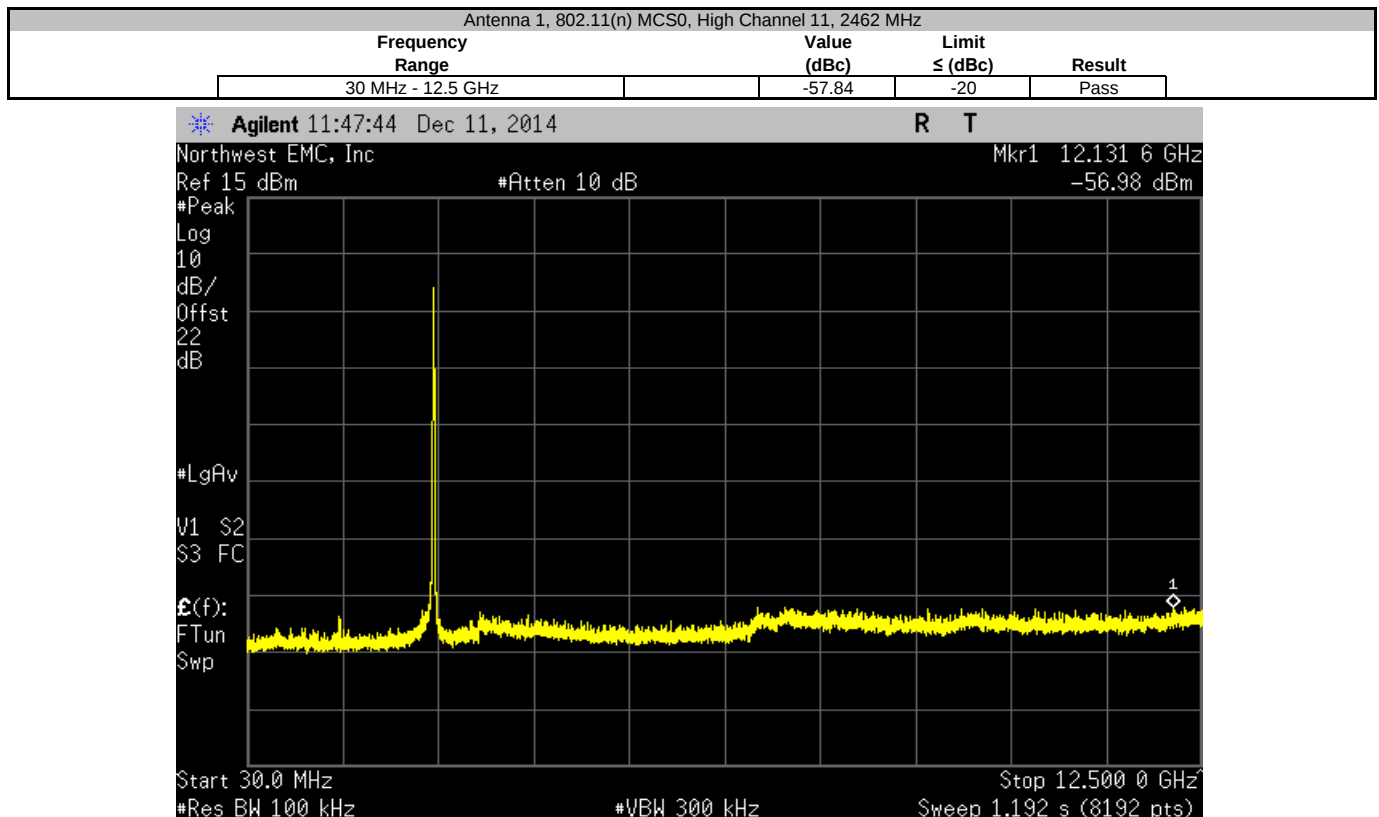
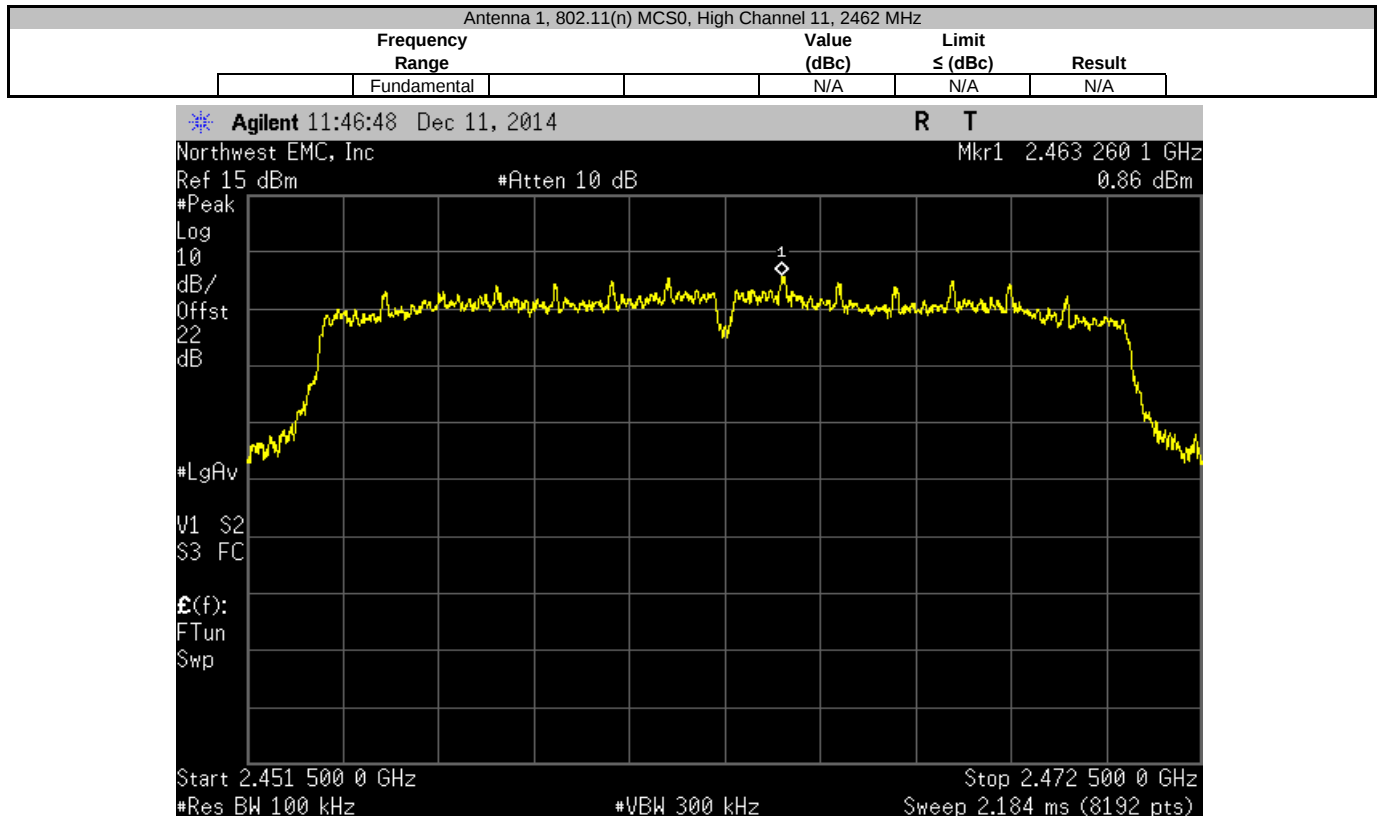


Antenna 1, 802.11(n) MCS0, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-59.78	-20	Pass	

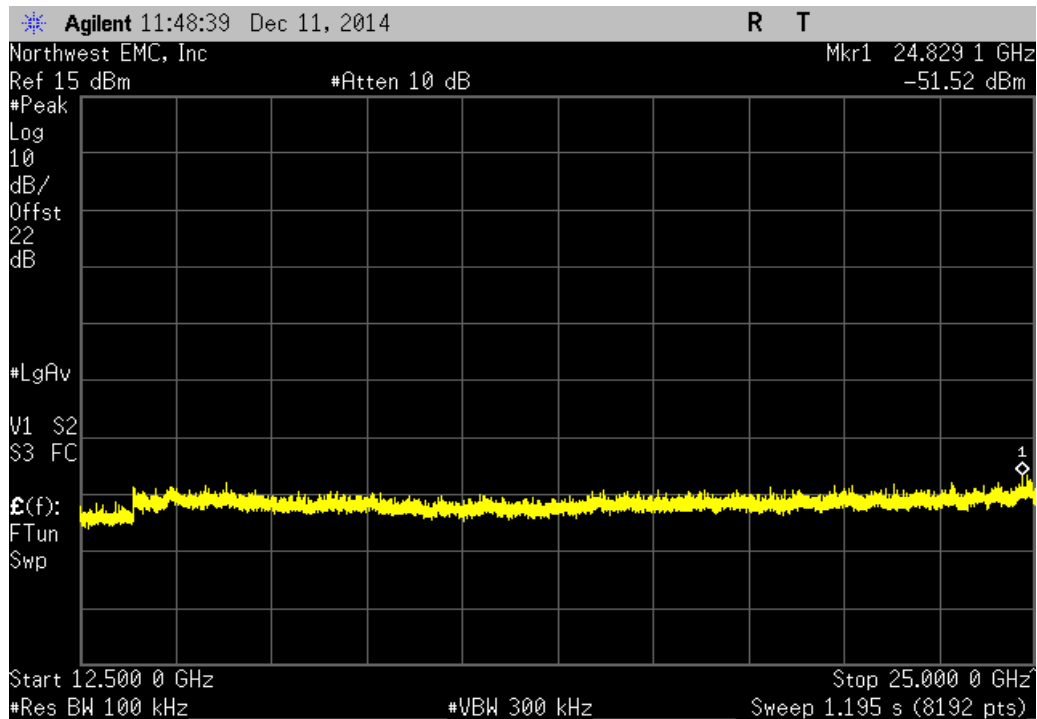


Antenna 1, 802.11(n) MCS0, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-58.77	-20	Pass	

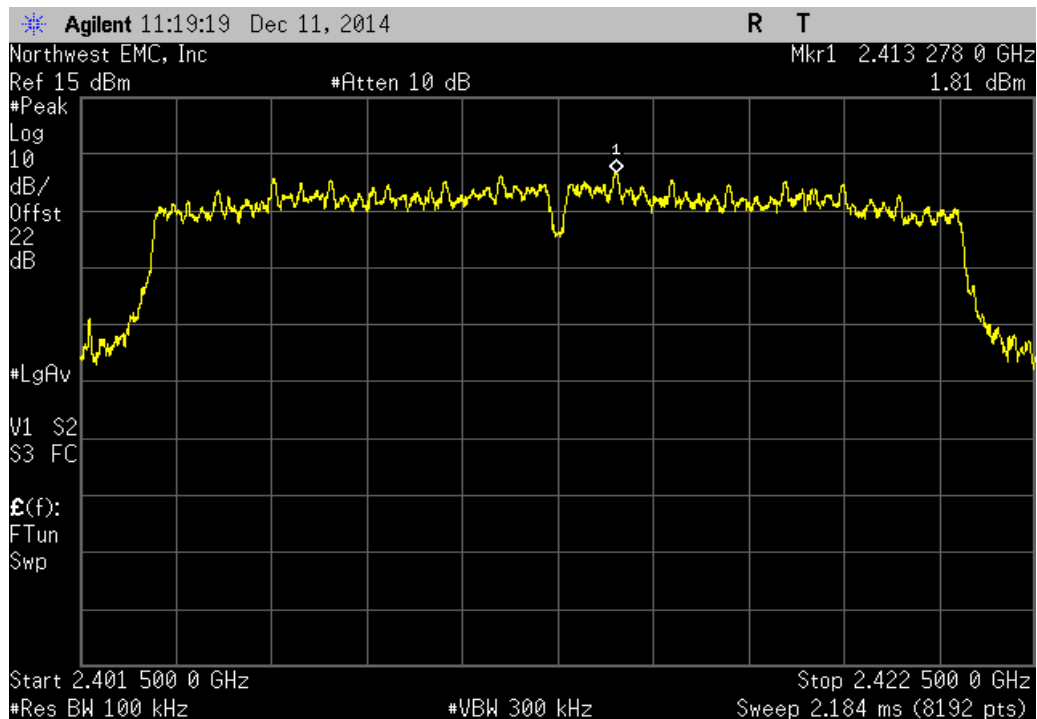


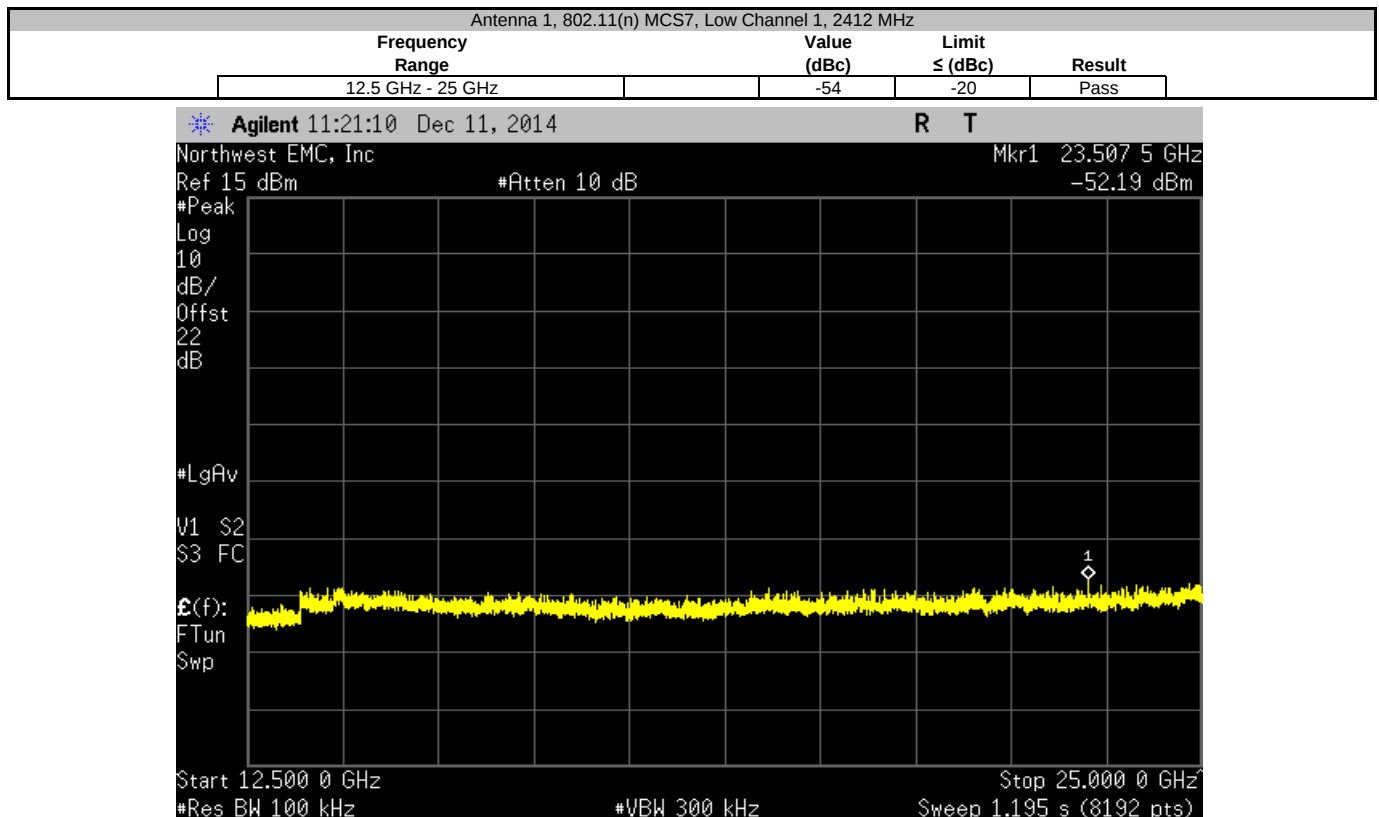
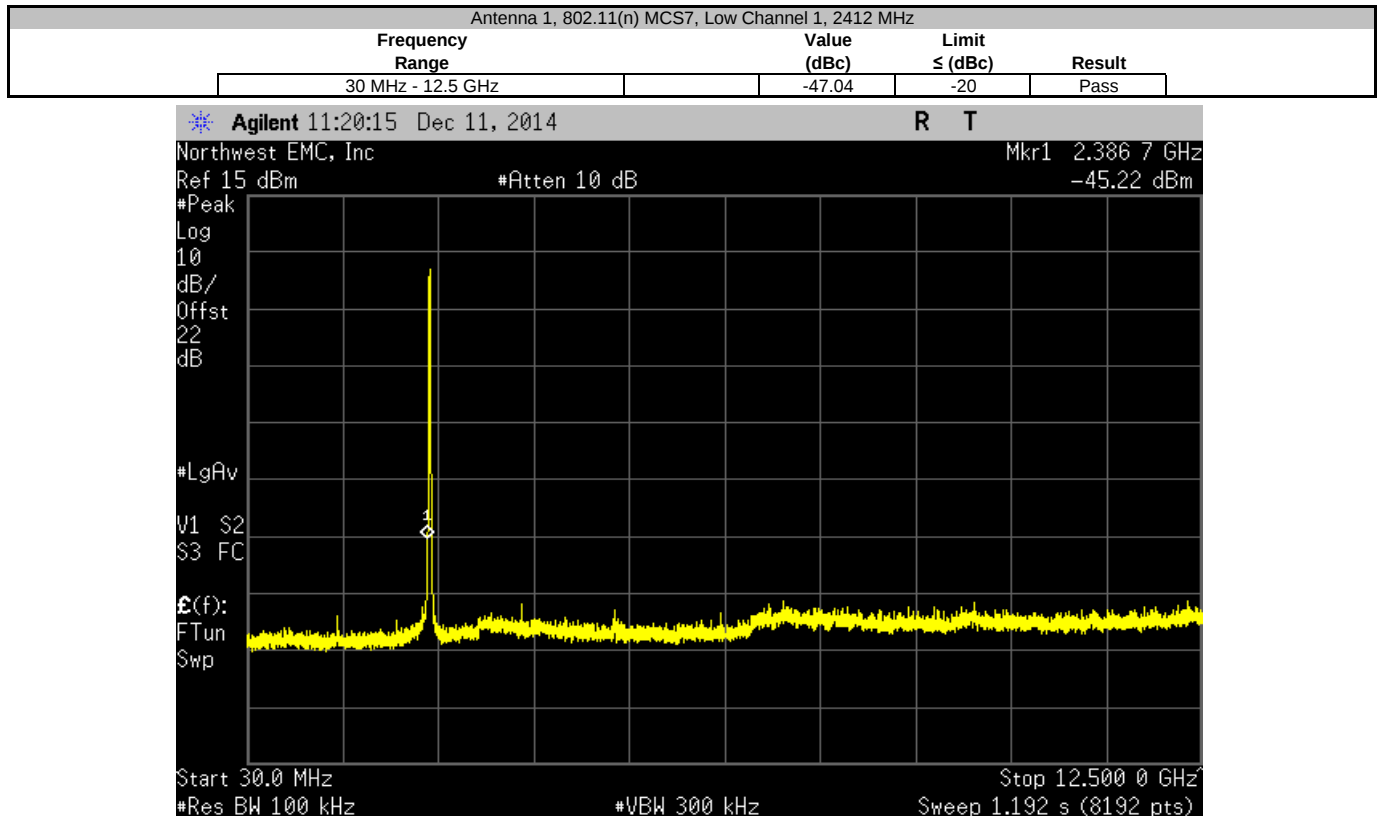


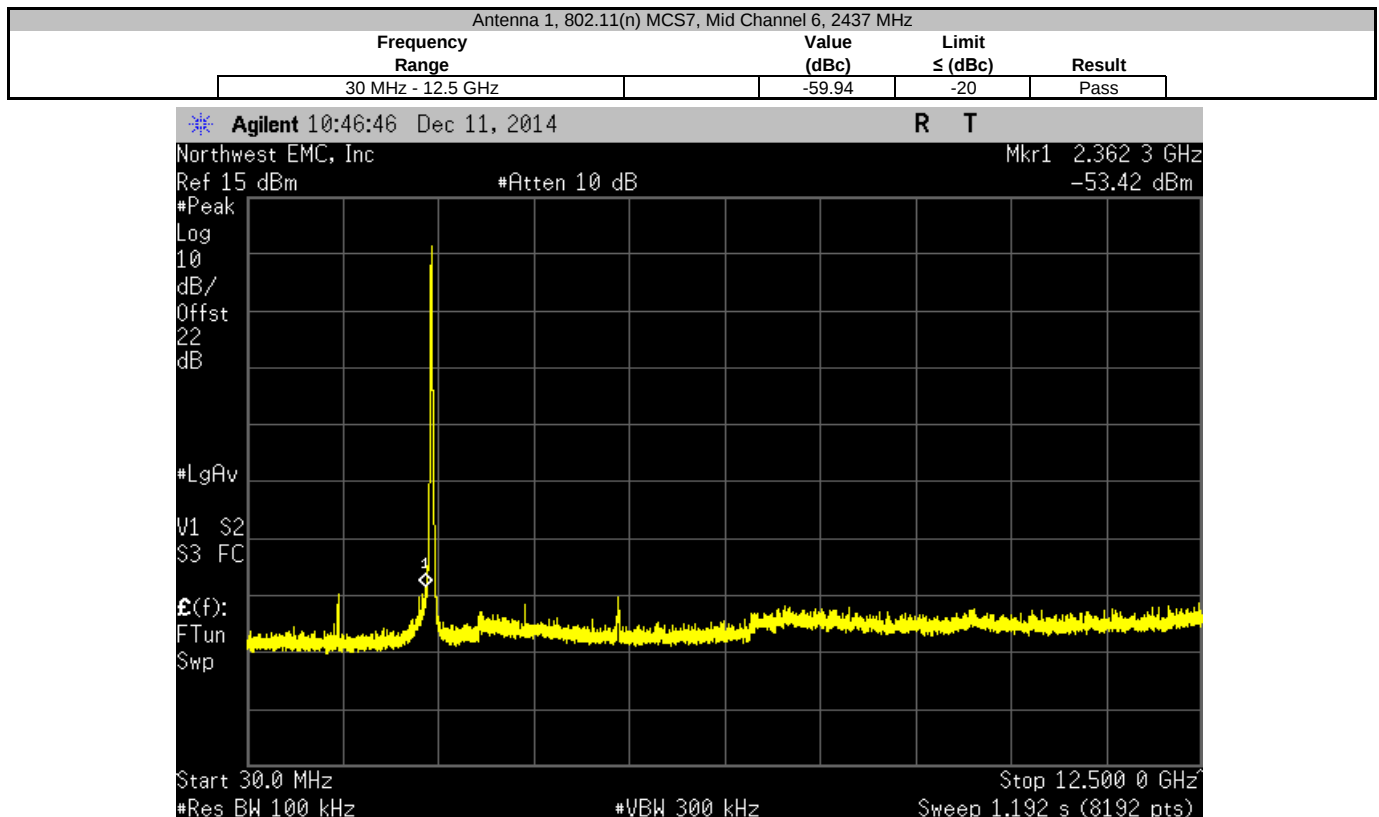
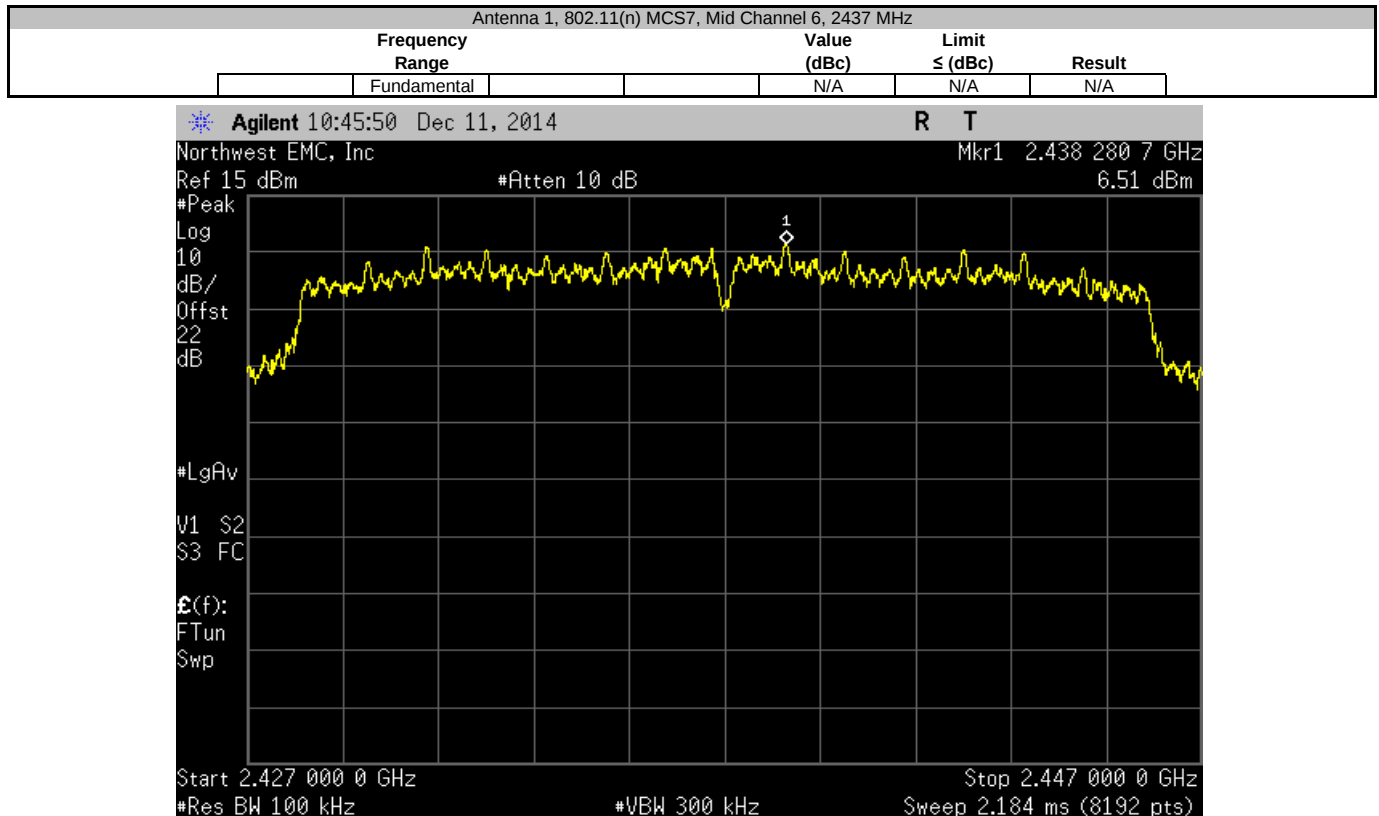
Antenna 1, 802.11(n) MCS0, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-52.38	-20	Pass	



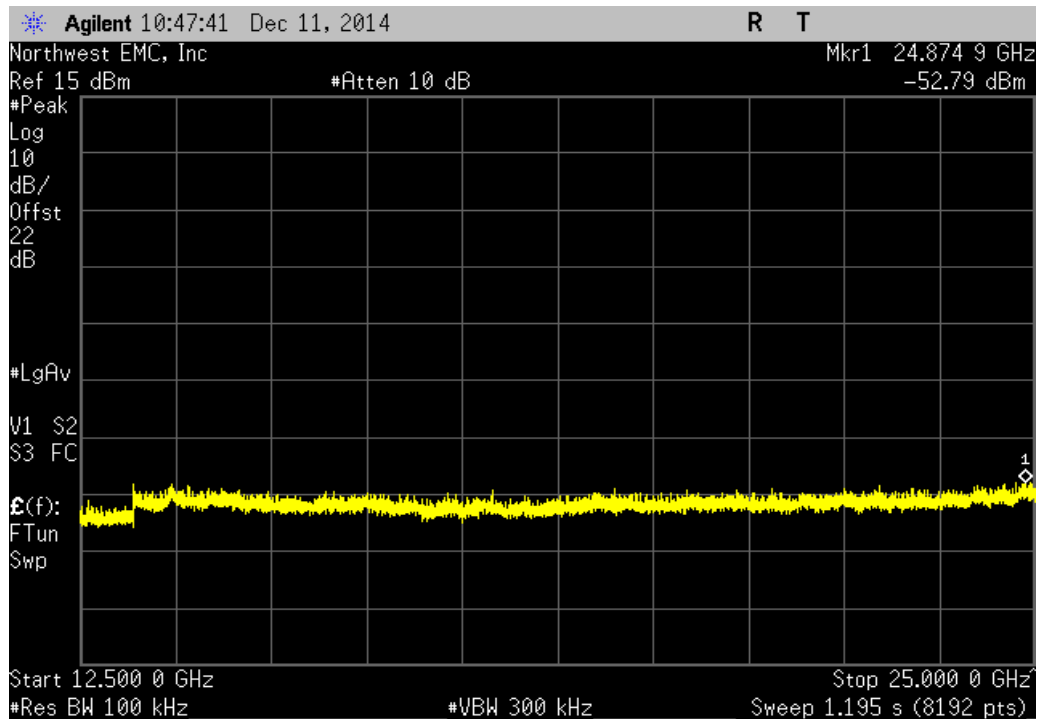
Antenna 1, 802.11(n) MCS7, Low Channel 1, 2412 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



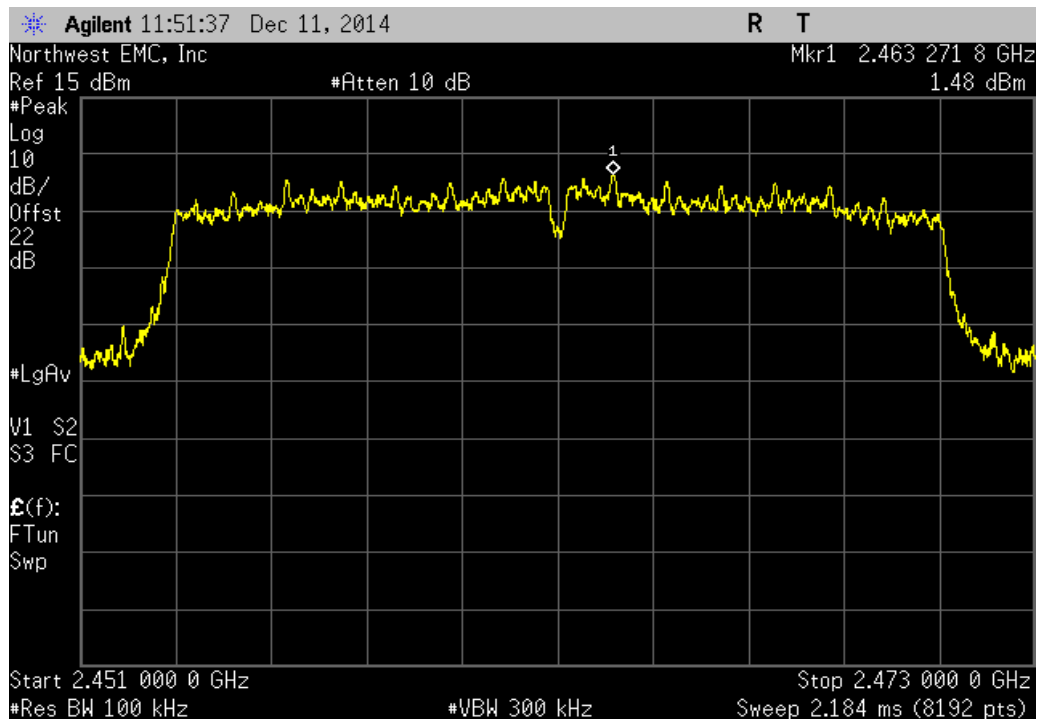




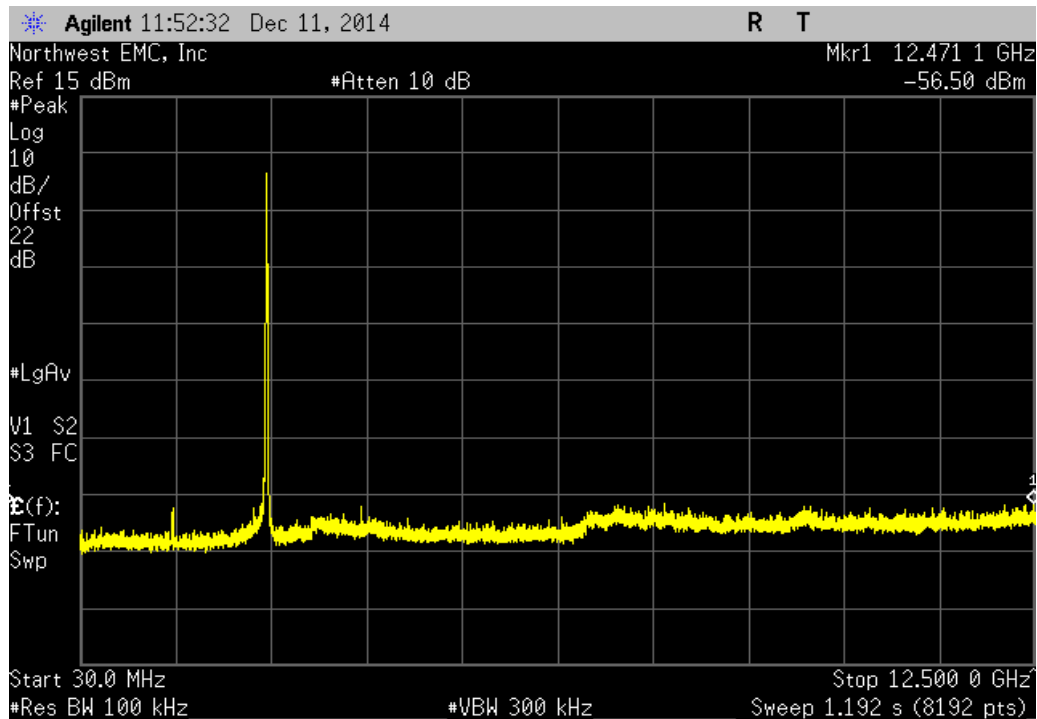
Antenna 1, 802.11(n) MCS7, Mid Channel 6, 2437 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-59.31	-20	Pass	



Antenna 1, 802.11(n) MCS7, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	



Antenna 1, 802.11(n) MCS7, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-57.98	-20	Pass	



Antenna 1, 802.11(n) MCS7, High Channel 11, 2462 MHz				
Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-53.77	-20	Pass	

