ZOLL Medical Corp.

X Series

802.11 a/b/g/n

Report No. LGPD0044 Rev 01

Report Prepared By

www.nwemc.com
1-888-EMI-CERT

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EMC Test Report

22975 NW Evergreen Parkway
Suite 400
Hillsboro, Oregon 97124

Certificate of Test

Last Date of Test: October 27, 2011
ZOLL Medical Corp.
Model: X Series

Emissions			
Test Description	**Specification**	**Test Method**	**Pass/Fail**
Occupied Bandwidth	FCC 15.247:2011	ANSI C63.10:2009	**Pass**
Output Power	FCC 15.247:2011	ANSI C63.10:2009	**Pass**
Band Edge Compliance	FCC 15.247:2011	ANSI C63.10:2009	**Pass**
Spurious Conducted Emissions	FCC 15.247:2011	ANSI C63.10:2009	**Pass**
Power Spectral Density	FCC 15.247:2011	ANSI C63.10:2009	**Pass**
Spurious Radiated Emissions	FCC 15.247:2011	ANSI C63.10:2009	**Pass**
AC Powerline Conducted Emissions	FCC 15.207:2011	ANSI C63.10:2009	**Pass**

Modifications made to the product
See the Modifications section of this report

Test Facility

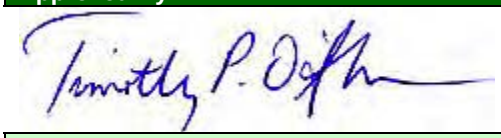
The measurement facility used to collect the data is located at:

Northwest EMC, Inc.
9349 W Broadway Ave.
Brooklyn Park, MN 55445

Phone: (763) 425-2281 Fax: (763) 424-3469

This site has been fully described in a report filed with and accepted by the FCC (Federal Communications Commission) and Industry Canada (Site filing #2834E-1).

Approved By:



Tim O'Shea, Operations Manager

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.

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. This Report may only be duplicated in its entirety. 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 Number	Description	Date	Page Number
01	Corrected mfg informatjon	1/20/12	8

Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

Accreditations and Authorizations

FCC

Accredited by NVLAP for performance of FCC radio, digital, and ISM device testing. Our Open Area Test Sites, certification chambers, and conducted measurement facilities have been fully described in reports filed with the FCC and accepted by the FCC in letters maintained in our files. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by the FCC as a Telecommunications Certification Body (TCB). This allows Northwest EMC to certify transmitters to FCC specifications in accordance with 47 CFR 2.960 and 2.962.

NVLAP

Northwest EMC, Inc. is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP) for satisfactory compliance with the requirements of ISO/IEC 17025 for Testing Laboratories. NVLAP is administered by the National Institute of Standards and Technology (NIST), an agency of the U.S. Commerce Department. The NVLAP accreditation encompasses Electromagnetic Compatibility Testing in accordance with the European Union EMC Directive 2004/108/EC, and ANSI C63.4. Additionally, Northwest EMC is accredited by NVLAP to perform radio testing in accordance with the European Union R&TTE Directive 1999/5/EEC, the requirements of FCC, and the RSS radio standards for Industry Canada.

Industry Canada

Accredited by NVLAP for performance of Industry Canada RSS and ICES testing. Our Open Area Test Sites and certification chambers comply with RSS-Gen, Issue 2 and have been filed with Industry Canada and accepted. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by NIST and recognized by Industry Canada as a Certification Body (CB) per the APEC Mutual Recognition Arrangement (MRA). This allows Northwest EMC to certify transmitters to Industry Canada technical requirements. (*Site Filing Numbers - Hillsboro: 2834D-1, 2834D-2, Sultan: 2834C-1, Irvine: 2834B-1, 2834B-2, Brooklyn Park: 2834E-1)*

CAB

Designated by NIST and validated by the European Commission as a Conformity Assessment Body (CAB) to conduct tests and approve products to the EMC directive and transmitters to the R&TTE directive, as described in the U.S. - EU Mutual Recognition Agreement.

Australia/New Zealand

The National Association of Testing Authorities (NATA), Australia has been appointed by the ACA as an accreditation body to accredit test laboratories and competent bodies for EMC standards. Accredited test reports or assessments by competent bodies must carry the NATA logo. Test reports made by an overseas laboratory that has been accredited for the relevant standards by an overseas accreditation body that has a Mutual Recognition Agreement (MRA) with NATA are also accepted as technical grounds for product conformity. The report should be endorsed with the respective logo of the accreditation body (NVLAP).

Accreditations and Authorizations

VCCI

Accepted as an Associate Member to the VCCI, Acceptance No. 564. Conducted and radiated measurement facilities have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. *(Registration Numbers. - Hillsboro: C-1071, R-1025, G-84, C-2687, T-1658, and R-2318, Irvine: R-1943, G-85, C-2766, and T-1659, Sultan: R-871, G-83, C-3265, and T-1511, Brooklyn Park: R-3125, G-86, G-141, C-3464, and T-1634).*

BSMI

Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement (US0017).

GOST

Northwest EMC, Inc. has been assessed and accredited by the Russian Certification bodies Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC, to perform EMC and Hygienic testing for Information Technology Products. As a result of their laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification

KCC

Northwest EMC, Inc is a CAB designated by MRA partners and recognized by Korea. (*Assigned Lab Numbers: Hillsboro: US0017, Irvine: US0158, Sultan: US0157, Brooklyn Park: US0175)*

VIETNAM

Vietnam MIC has approved Northwest EMC as an accredited test lab. Per Decision No. 194/QD-QLCL (dated December 15, 2009), Northwest EMC test reports can be used for Vietnam approval submissions.

SCOPE

For details on the Scopes of our Accreditations, please visit:
http://www.nwemc.com/accreditations/

Northwest EMC Locations

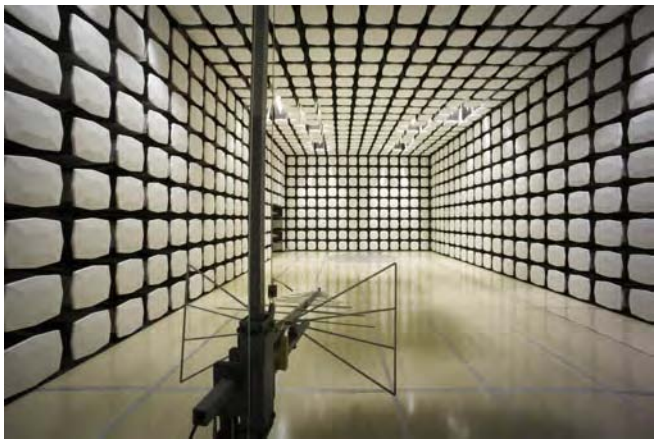
Oregon
Labs EV01-EV12
22975 NW Evergreen Pkwy
Suite 400
Hillsboro, OR 97124
(503) 844-4066

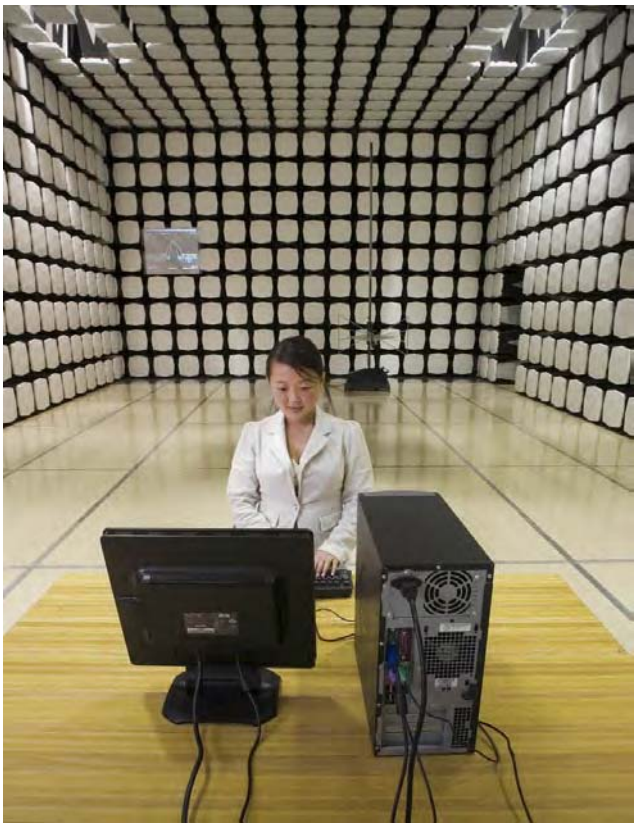
California
Labs OC01-OC13
41 Tesla
Irvine, CA 92618
(949) 861-8918

Minnesota
Labs MN01-MN08
9349 W Broadway Ave.
Brooklyn Park,
MN 55445
(763) 425-2281

Washington
Labs SU01-SU07
14128 339th Ave. SE
Sultan, WA 98294
(360) 793-8675

New York
Labs WA01-WA04
4939 Jordan Rd.
Elbridge, NY 13060
(315) 685-0796





Party Requesting the Test

Company Name:	ZOLL Medical Corp.
Address:	269 Mill Road
City, State, Zip:	Chelmsford, MA 01824
Test Requested By:	Curt McNamara - Logic Product Development
Model:	X Series
First Date of Test:	October 19, 2011
Last Date of Test:	October 27, 2011
Receipt Date of Samples:	October 19, 2011
Equipment Design Stage:	Prototype
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):
802.11a/b/g/n

Testing Objective:
To demonstrate compliance under FCC 15.247 for operation in the 2.4 an 5.8 GHz bands

CONFIGURATION 1 LGPD0044

Software/Firmware Running during test	
Description	**Version**
Iris Software	00.03.02.1002

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
CPA Board	Logic Product Development	1020247 rev B	L341100050
CP Board	Logic Product Development	1020246 rev B	L341100012

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Debug Board	ZOLL Medical Corp	None	None
DC Power Supply	Agilent	E3620A	MY40003282
Laptop	DELL	PP18L/KX335 A01	CN-0WM416-12961-81N-4502
Laptop Power Brick	DELL	DA130PE1-00/JU012	CN-0JU012-48661-09K-HHFR-A04

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
AC Power Cable	No	1.80 m	No	AC Mains	DC Power Supply
AC Power Cable	No	1.00 m	No	AC Mains	Laptop Power Brick
DC Power Cable	No	1.80 m	Yes	Laptop Power Brick	Laptop
DC Power Cable	No	0.50 m	No	DC Power Supply	CP Board
Serial Cable	Yes	2.0 m	No	Laptop	Debug Board
Ribbon Cable	No	0.13 m	No	CP Board	CPA Board
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 2 LGPD0044

Software/Firmware Running during test	
Description	**Version**
Iris Software	00.03.02.1002

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
X-series	ZOLL Medical Corp.	X-Series	AR11J000137
X-series Power Brick	Propaq MD	8300-0004	4142F 0000587
Propaq.MD Battery Pack	ZOLL Medical Corp.	8000-0580-01	AJ10BMV0059
X-series USB Board	ZOLL Medical Corp.	None	None

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
DC Power Supply	V Infinity	3A-1WP05	None
Ethernet to USB Adapter	D-Link	DUB-E100	Q8031A9000586

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Laptop	DELL	PP18L/KX335 A01	CN-0WM416-12961-81N-4502
Laptop Power Brick	DELL	DA130PE1-00/JU012	CN-0JU012-48661-09K-HHFR-A04

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
AC Power Cable	No	1.00 m	No	AC Mains	Laptop Power Brick
DC Power Cable	No	1.80 m	Yes	Laptop Power Brick	Laptop
DC Power Cable	No	1.90m	No	X-series Power Brick	X-series
DC Power Cable	No	1.00m	Yes	DC Power Supply	X-series USB Board
AC Power Cable	No	1.80m	No	AC Mains	X-series Power Brick
3 ea. Invasive Pressure (8300-0787-01)	No	4.30m	No	X-series	Self Terminated
Manual Defib.	No	2.40m	No	X-series	Termination
2 ea. Temp. Leads, (11J40753 409B)	No	3.10m	No	X-series	Self Terminated
USB	Yes	0.30m	No	X-series	Unterminated
SpO2, (PS-10153D 0299)	No	0.95m	No	X-series	Self Terminated
ECG, (8300-0789-01, Lot:58646)	No	3.10m	No	X-series	Termination
Patient Leads, (8300-0790-01, Lot:57862)	No	0.80m	No	ECG, (8300-0789-01, Lot:58646)	Termination
USB	PA	0.15m	No	Ethernet to USB Adapter	X-series USB Board
USB	Yes	1.80m	No	X-series USB Board	Laptop
Cat5 Ethernet	No	7.50m	No	Ethernet to USB Adapter	Laptop
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 3 LGPD0044

Software/Firmware Running during test	
Description	**Version**
Iris Software	00.03.02.1002

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
X-series	ZOLL Medical Corp.	X-Series	AR11J000137
X-series Power Brick	Propaq MD	8300-0004	4142F 0000587
Propaq.MD Battery Pack	ZOLL Medical Corp.	8000-0580-01	AJ10BMV0059
X-series USB Board	ZOLL Medical Corp.	None	None

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
DC Power Supply	V Infinity	3A-1WP05	None
Ethernet to USB Adapter	D-Link	DUB-E100	Q8031A9000586

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Laptop	DELL	PP18L/KX335 A01	CN-0WM416-12961-81N-4502
Laptop Power Brick	DELL	DA130PE1-00/JU012	CN-0JU012-48661-09K-HHFR-A04

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
AC Power Cable	No	1.00 m	No	AC Mains	Laptop Power Brick
DC Power Cable	No	1.80 m	Yes	Laptop Power Brick	Laptop
DC Power Cable	No	0.50 m	No	DC Power Supply	CP Board
DC Power Cable	No	1.90m	No	X-series Power Brick	X-series
DC Power Cable	No	1.00m	Yes	DC Power Supply	X-series USB Board
AC Power Cable	No	1.80m	No	AC Mains	X-series Power Brick
3 ea. Invasive Pressure (8300-0787-01)	No	4.30m	No	X-series	Self Terminated
Manual Defib.	No	2.40m	No	X-series	Termination
2 ea. Temp. Leads, (11J40753 409B)	No	3.10m	No	X-series	Self Terminated
USB	Yes	0.30m	No	X-series	Unterminated
SpO2, (PS-10153D 0299)	No	0.95m	No	X-series	Self Terminated
ECG, (8300-0789-01, Lot:58646)	No	3.10m	No	X-series	Termination
Patient Leads, (8300-0790-01, Lot:57862)	No	0.80m	No	ECG, (8300-0789-01, Lot:58646)	Termination
USB	PA	0.15m	No	Ethernet to USB Adapter	X-series USB Board
Cat5 Ethernet	No	0.90m	No	Ethernet to USB Adapter	Laptop
USB	Yes	1.80m	No	X-series USB Board	Laptop
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	10/19/2011	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.
2	10/20/2011	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.
3	10/20/2011	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.
4	10/20/2011	Power Spectral Density	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	10/20/2011	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.
6	10/24/2011	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.
7	10/27/2011	AC Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

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
Spectrum Analyzer	Agilent	E4440A	AAX	5/23/2011	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	10/12/2011	12
Signal Generator	Agilent	N5183A	TIA	1/18/2011	12
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	6/2/2011	12

MEASUREMENT UNCERTAINTY

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 for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The occupied bandwidth was measured with the EUT set to low, medium, and high transmit frequencies in the ISM band. 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 required data rates available in 802.11a/b/g/n.

NORTHWEST EMC

Occupied Bandwidth

XMit 2011.08.04
PsaTx 2011.09.28

EUT:	X Series	**Work Order:**	LGPD0044
Serial Number:	3411000112, 341100050	**Date:**	10/19/11
Customer:	ZOLL Medical Corp.	**Temperature:**	23.23C°C
Attendees:	Curt McNamara, Karl Karcht	**Humidity:**	23%
Project:	None	**Barometric Pres.:**	1020.2
Tested by:	Trevor Buls	**Power:** 15VDC	**Job Site:** MN08

TEST SPECIFICATIONS	Test Method
FCC 15.247:2011	ANSI C63.10:2009

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

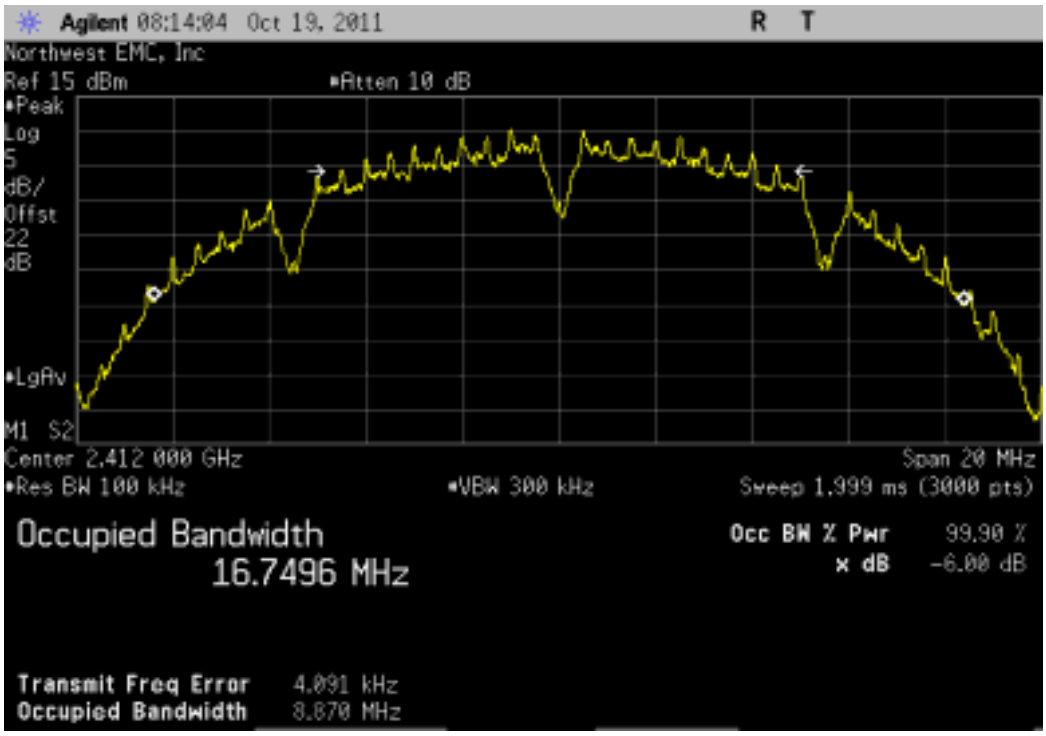
None

Configuration #	1	Signature	Trevor Buls

		Value	Limit	Result
2400 MHz - 2483.5 MHz Band				
	802.11(b) 1 Mbps			
	Low Channel 1, 2412 MHz	8.87 MHz	> 500 kHz	Pass
	Mid Channel 6, 2437 MHz	9.498 MHz	> 500 kHz	Pass
	High Channel 11, 2462 MHz	9.532 MHz	> 500 kHz	Pass
	802.11(b) 11 Mbps			
	Low Channel 1, 2412 MHz	9.083 MHz	> 500 kHz	Pass
	Mid Channel 6, 2437 MHz	8.974 MHz	> 500 kHz	Pass
	High Channel 11, 2462 MHz	8.429 MHz	> 500 kHz	Pass
	802.11(g) 6 Mbps			
	Low Channel 1, 2412 MHz	15.545 MHz	> 500 kHz	Pass
	Mid Channel 6, 2437 MHz	15.766 MHz	> 500 kHz	Pass
	High Channel 11, 2462 MHz	15.171 MHz	> 500 kHz	Pass
	802.11(g) 36 Mbps			
	Low Channel 1, 2412 MHz	15.88 MHz	> 500 kHz	Pass
	Mid Channel 6, 2437 MHz	16.002 MHz	> 500 kHz	Pass
	High Channel 11, 2462 MHz	15.149 MHz	> 500 kHz	Pass
	802.11(g) 54 Mbps			
	Low Channel 1, 2412 MHz	14.859 MHz	> 500 kHz	Pass
	Mid Channel 6, 2437 MHz	15.221 MHz	> 500 kHz	Pass
	High Channel 11, 2462 MHz	15.84 MHz	> 500 kHz	Pass
	802.11(n) MCS0			
	Low Channel 1, 2412 MHz	15.199 MHz	> 500 kHz	Pass
	Mid Channel 6, 2437 MHz	15.672 MHz	> 500 kHz	Pass
	High Channel 11, 2462 MHz	15.893 MHz	> 500 kHz	Pass
	802.11(n) MCS7			
	Low Channel 1, 2412 MHz	16.232 MHz	> 500 kHz	Pass
	Mid Channel 6, 2437 MHz	15.712 MHz	> 500 kHz	Pass
	High Channel 11, 2462 MHz	15.032 MHz	> 500 kHz	Pass
5725 MHz - 5850 MHz Band				
	802.11(a) 6 Mbps			
	Low Channel 149, 5745 MHz	16.273 MHz	> 500 kHz	Pass
	Mid Channel 157, 5785 MHz	13.695 MHz	> 500 kHz	Pass
	High Channel 165, 5825 MHz	14.054 MHz	> 500 kHz	Pass
	802.11(a) 36 Mbps			
	Low Channel 149, 5745 MHz	15.178 MHz	> 500 kHz	Pass
	Mid Channel 157, 5785 MHz	15.547 MHz	> 500 kHz	Pass
	High Channel 165, 5825 MHz	13.631 MHz	> 500 kHz	Pass
	802.11(a) 54 Mbps			
	Low Channel 149, 5745 MHz	14.974 MHz	> 500 kHz	Pass
	Mid Channel 157, 5785 MHz	15.303 MHz	> 500 kHz	Pass
	High Channel 165, 5825 MHz	15.291 MHz	> 500 kHz	Pass
	802.11(n) MCS0 - UNII			
	Low Channel 149, 5745 MHz	14.675 MHz	> 500 kHz	Pass
	Mid Channel 157, 5785 MHz	14.095 MHz	> 500 kHz	Pass
	High Channel 165, 5825 MHz	14.004 MHz	> 500 kHz	Pass
	802.11(n) MCS7 - UNII			
	Low Channel 149, 5745 MHz	15.668 MHz	> 500 kHz	Pass
	Mid Channel 157, 5785 MHz	15.557 MHz	> 500 kHz	Pass
	High Channel 165, 5825 MHz	16.135 MHz	> 500 kHz	Pass

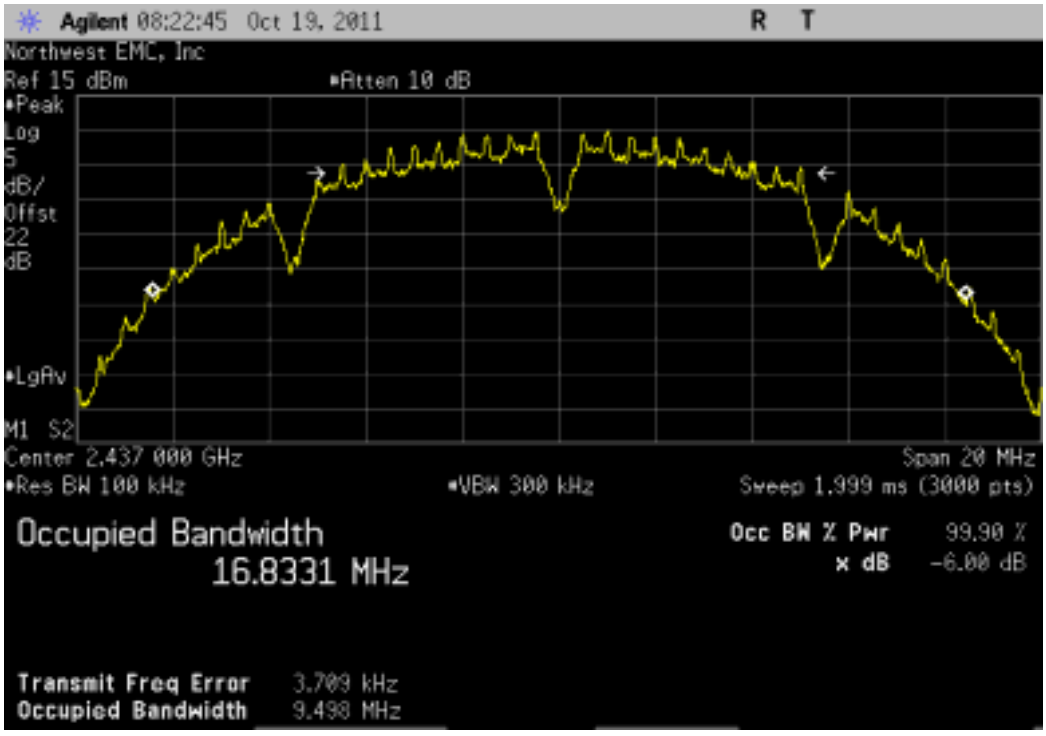
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				8.87 MHz	> 500 kHz	Pass



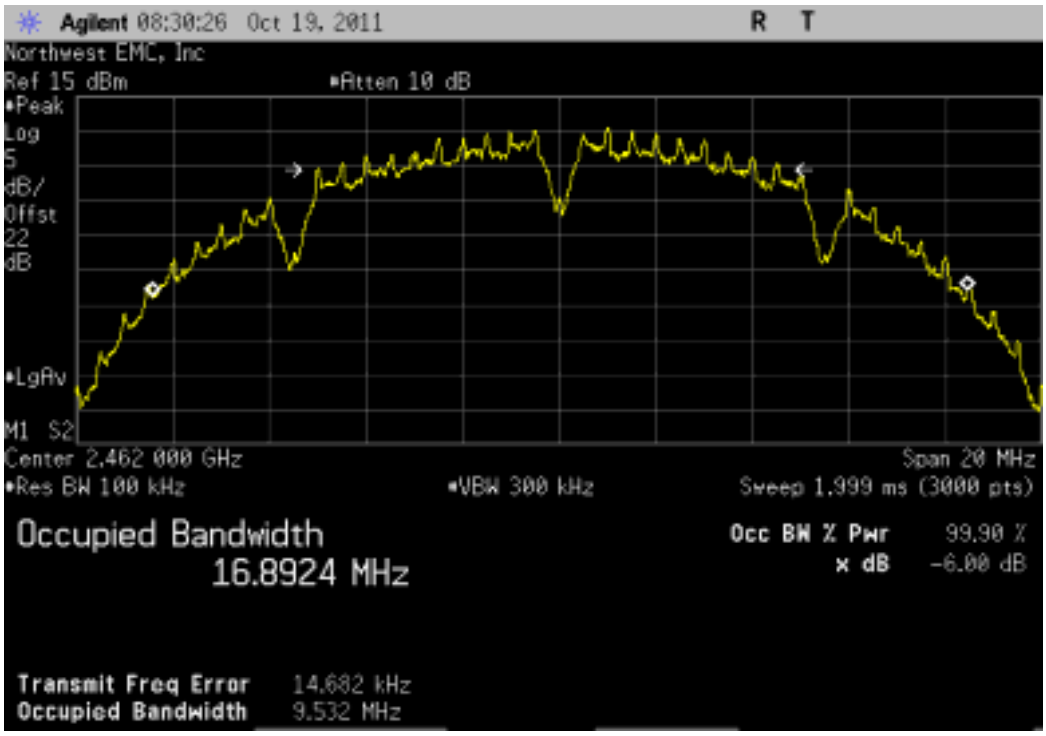
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				9.498 MHz	> 500 kHz	Pass



2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				9.532 MHz	> 500 kHz	Pass



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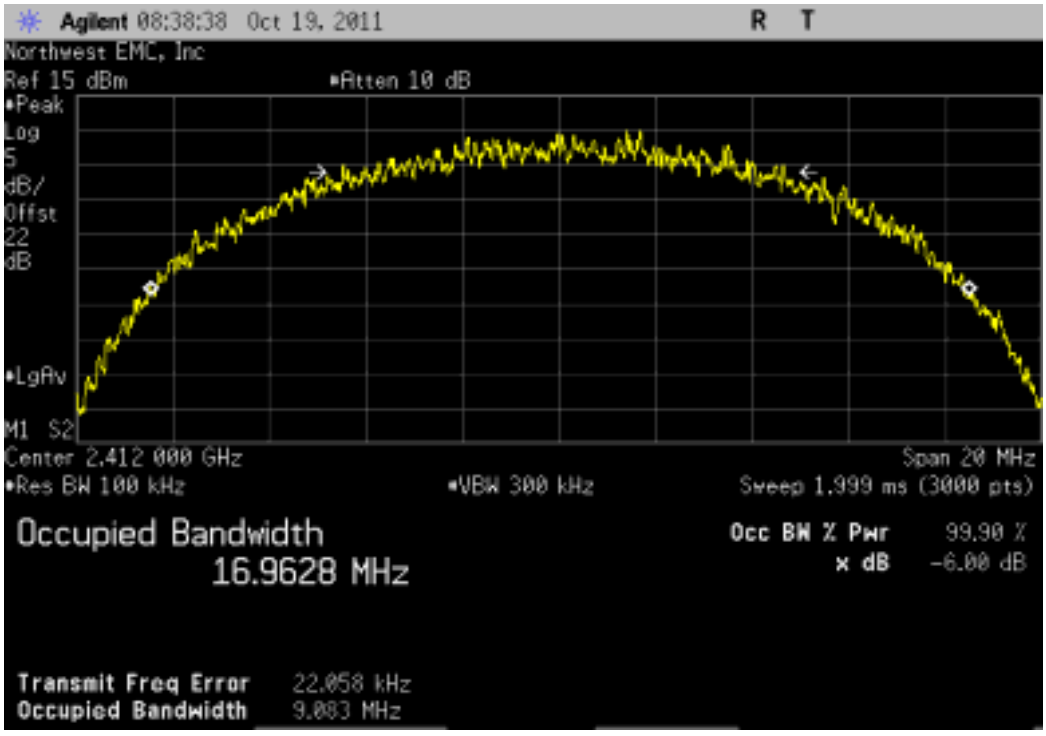
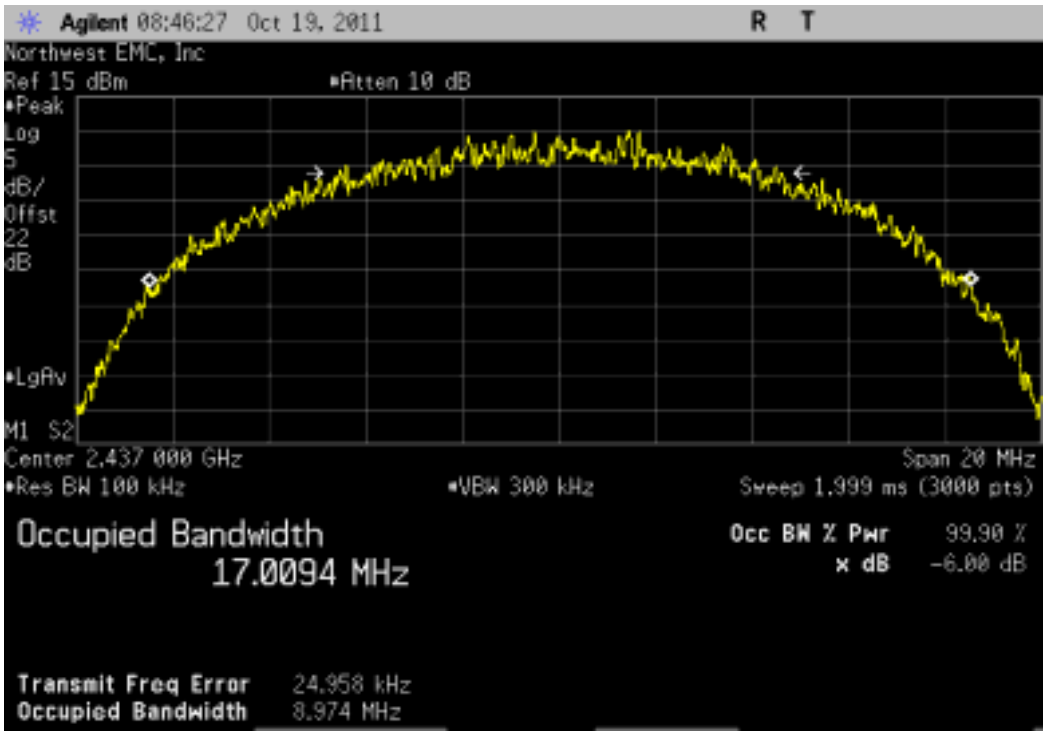
				Value	Limit	Result
				9.083 MHz	> 500 kHz	Pass



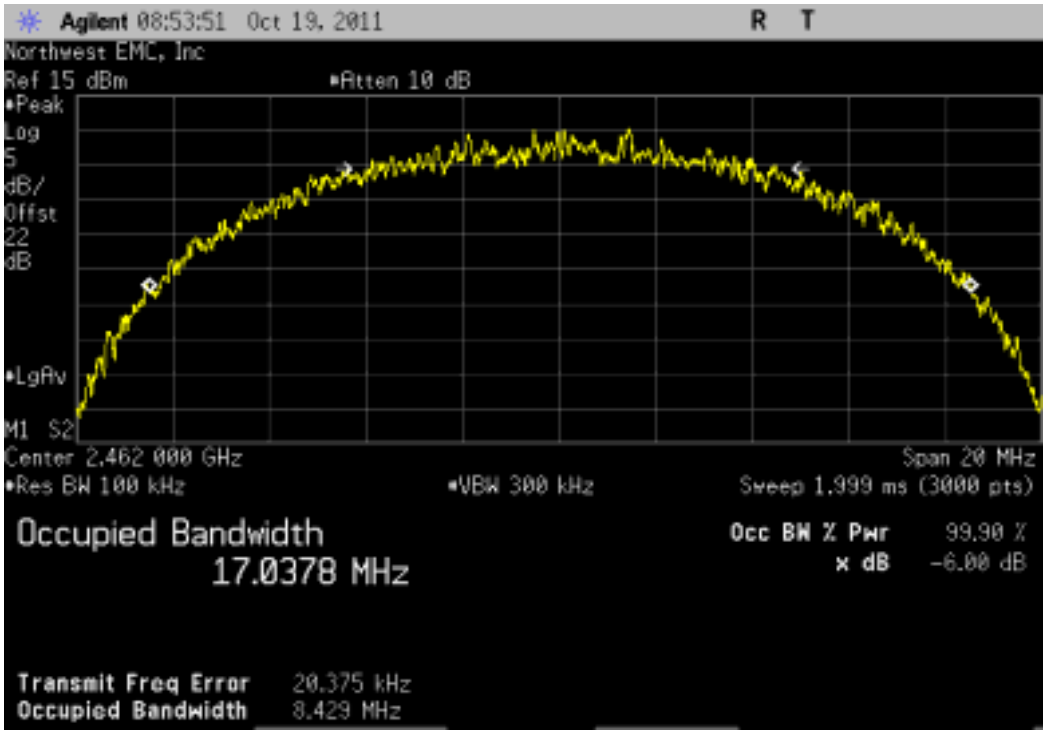
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				8.974 MHz	> 500 kHz	Pass



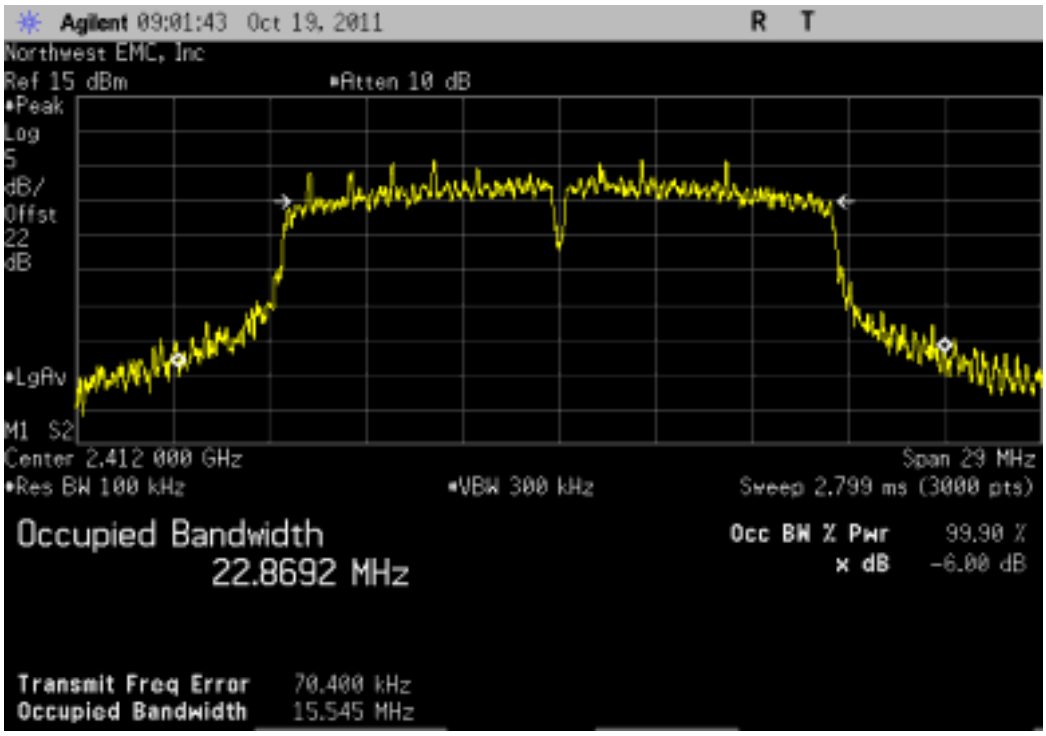
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				8.429 MHz	> 500 kHz	Pass



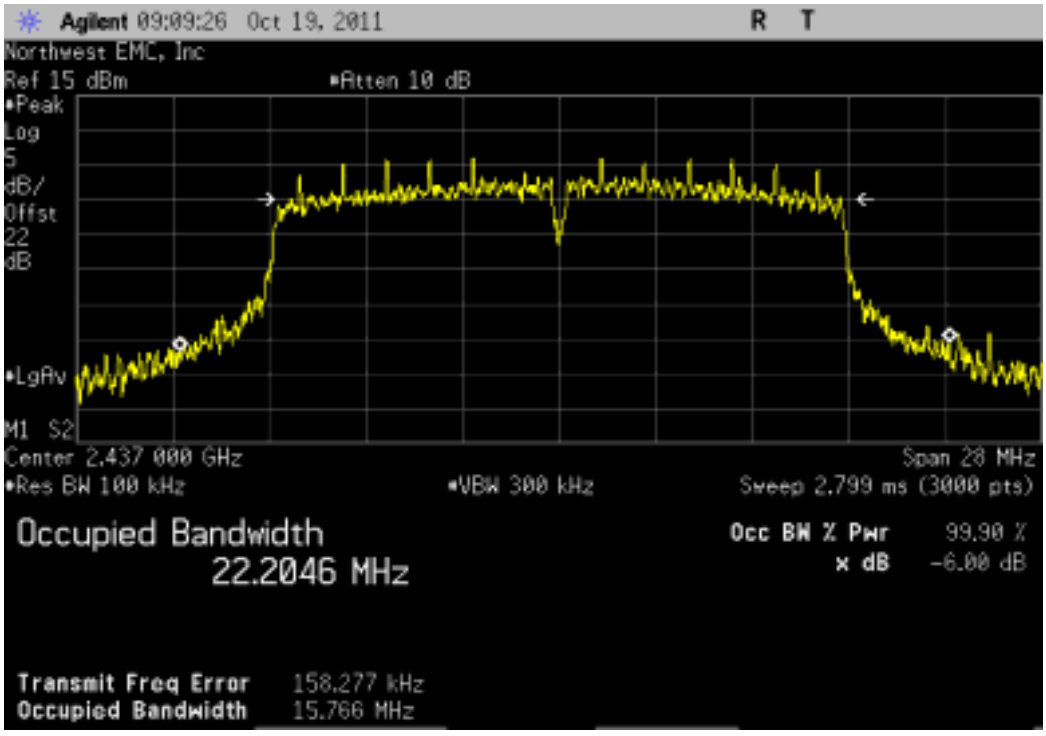
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				15.545 MHz	> 500 kHz	Pass



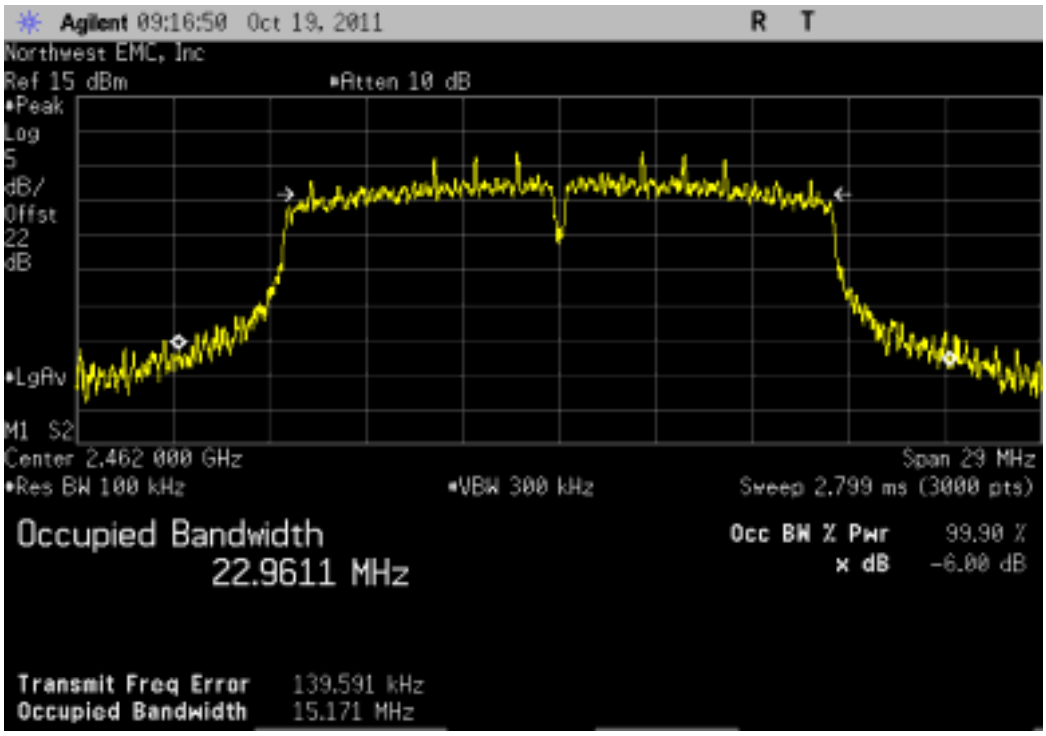
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				15.766 MHz	> 500 kHz	Pass



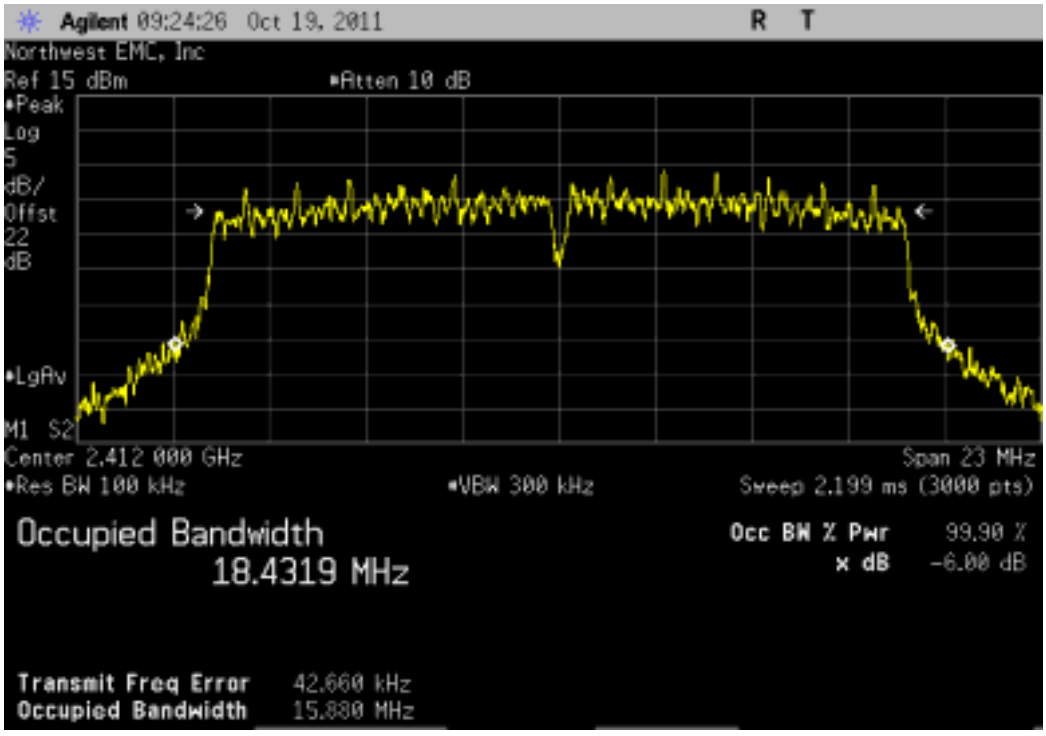
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				15.171 MHz	> 500 kHz	Pass



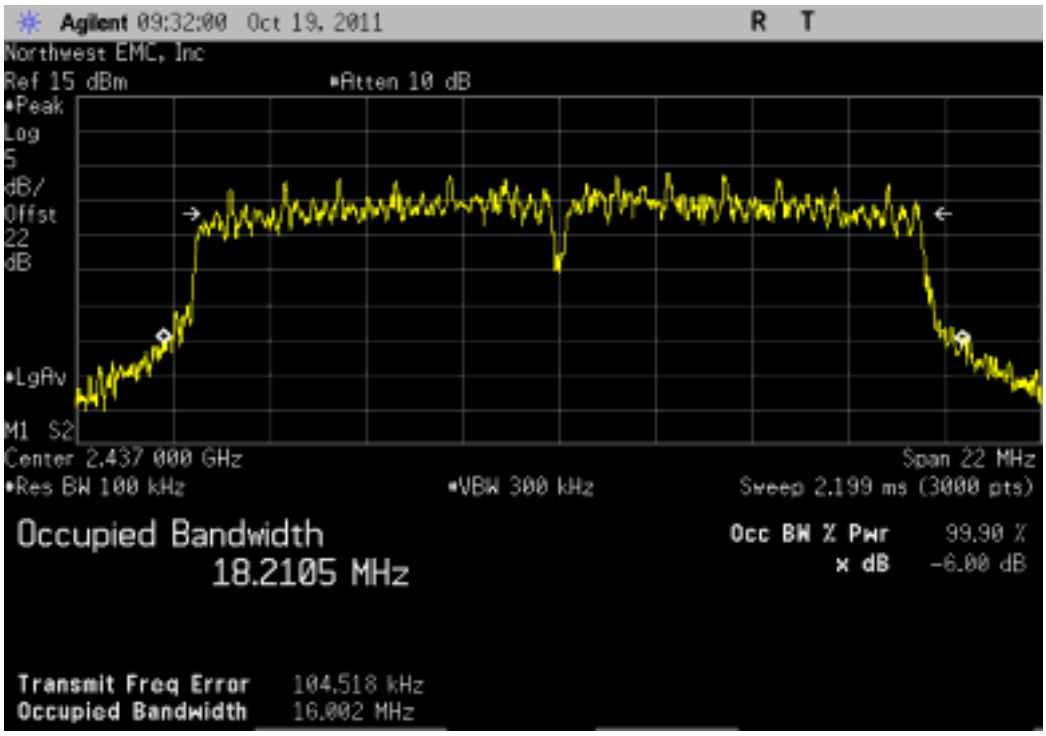
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				15.88 MHz	> 500 kHz	Pass



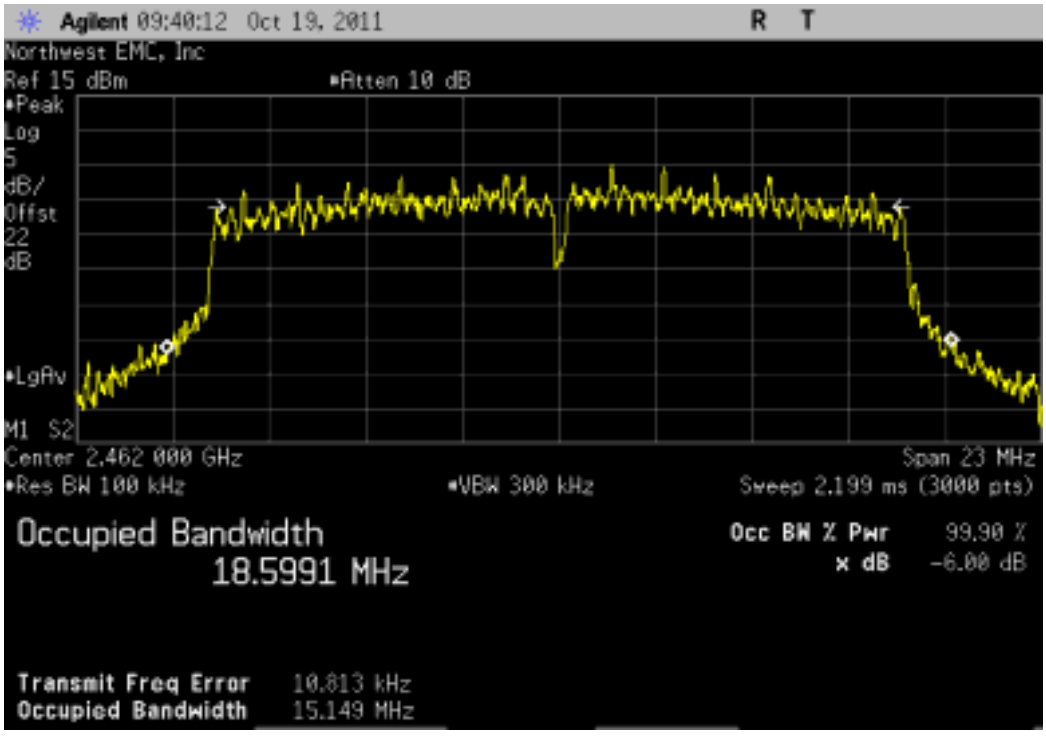
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				16.002 MHz	> 500 kHz	Pass



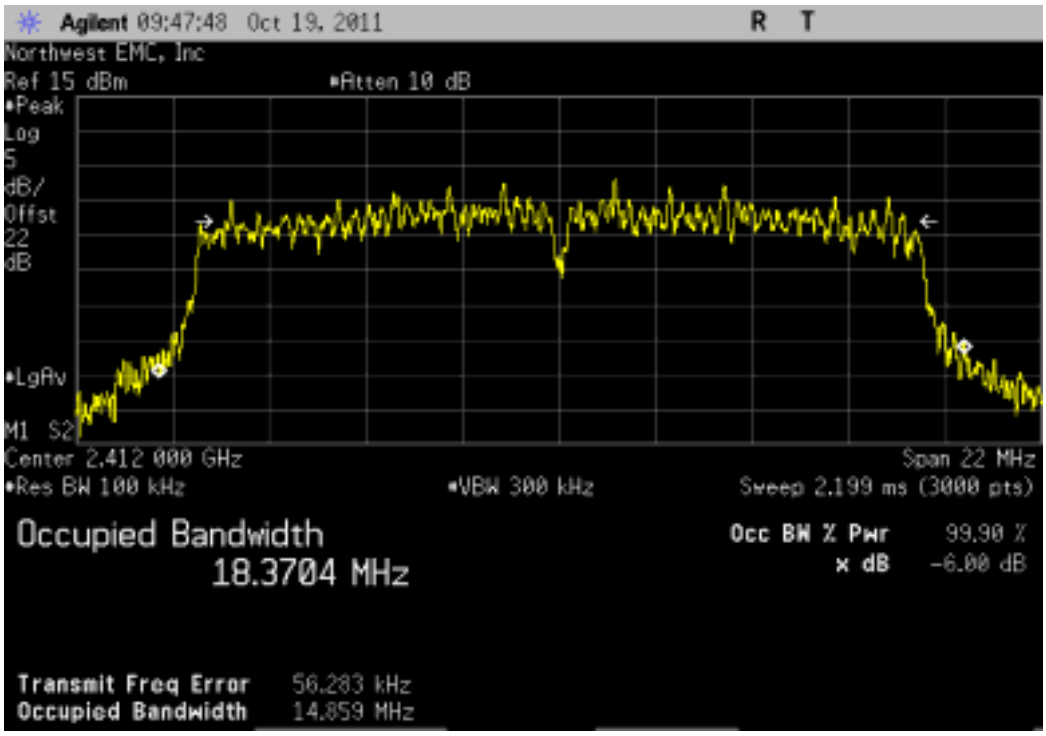
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				15.149 MHz	> 500 kHz	Pass



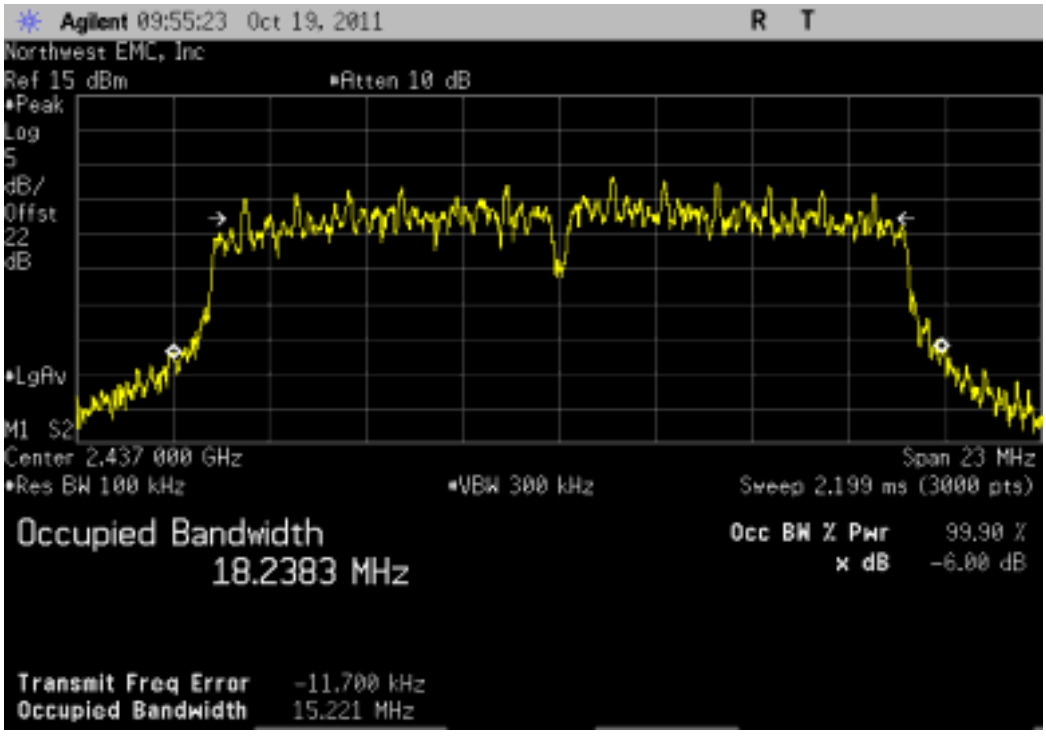
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				14.859 MHz	> 500 kHz	Pass



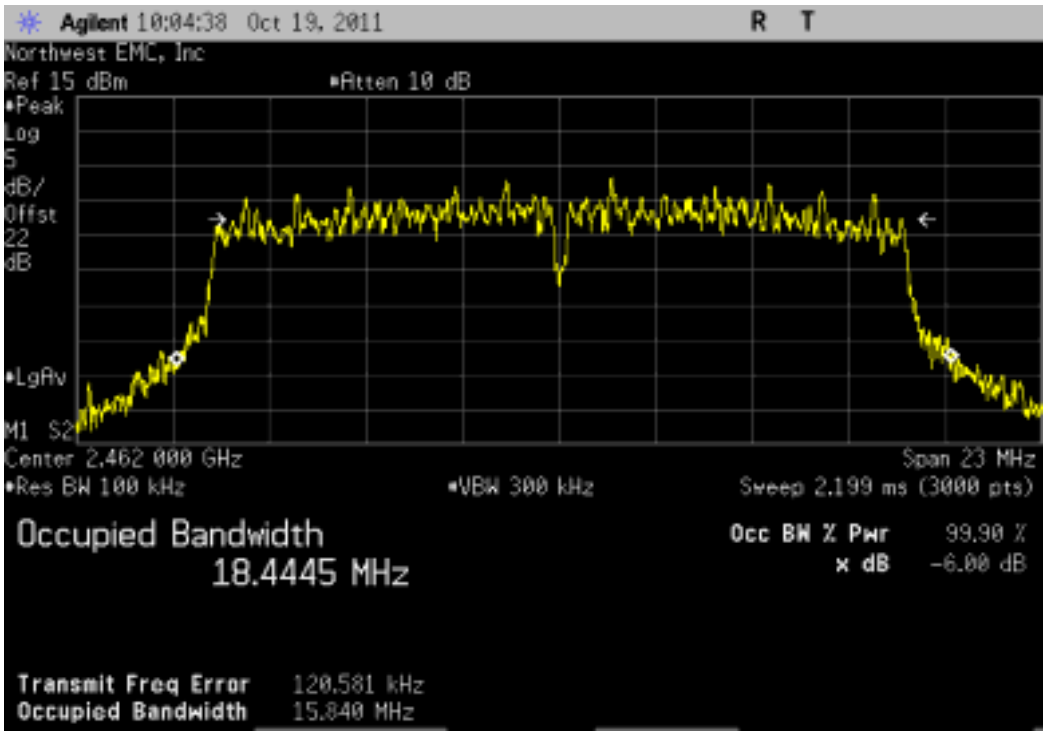
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				15.221 MHz	> 500 kHz	Pass



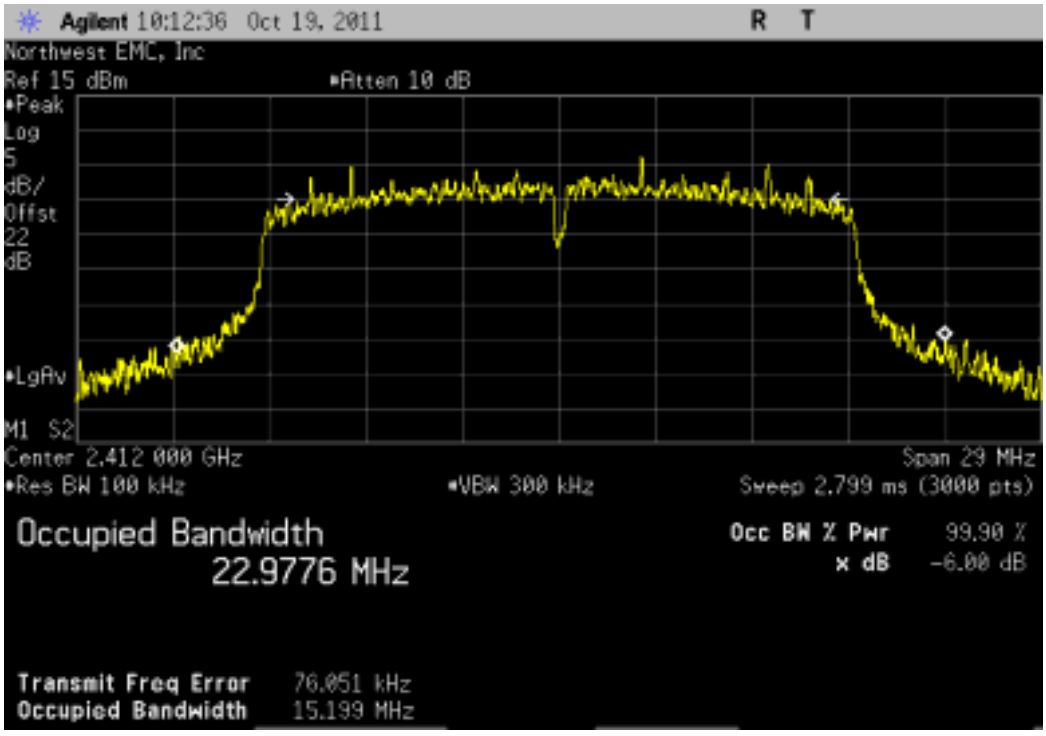
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				15.84 MHz	> 500 kHz	Pass



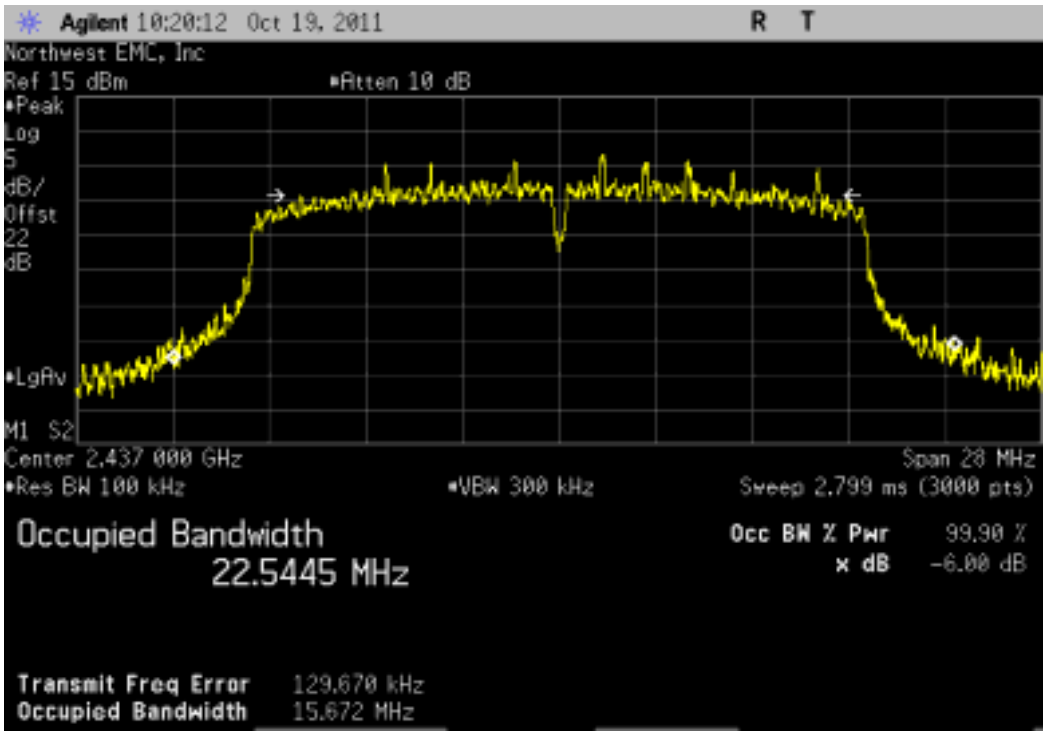
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz

				Value	Limit	Result
				15.199 MHz	> 500 kHz	Pass



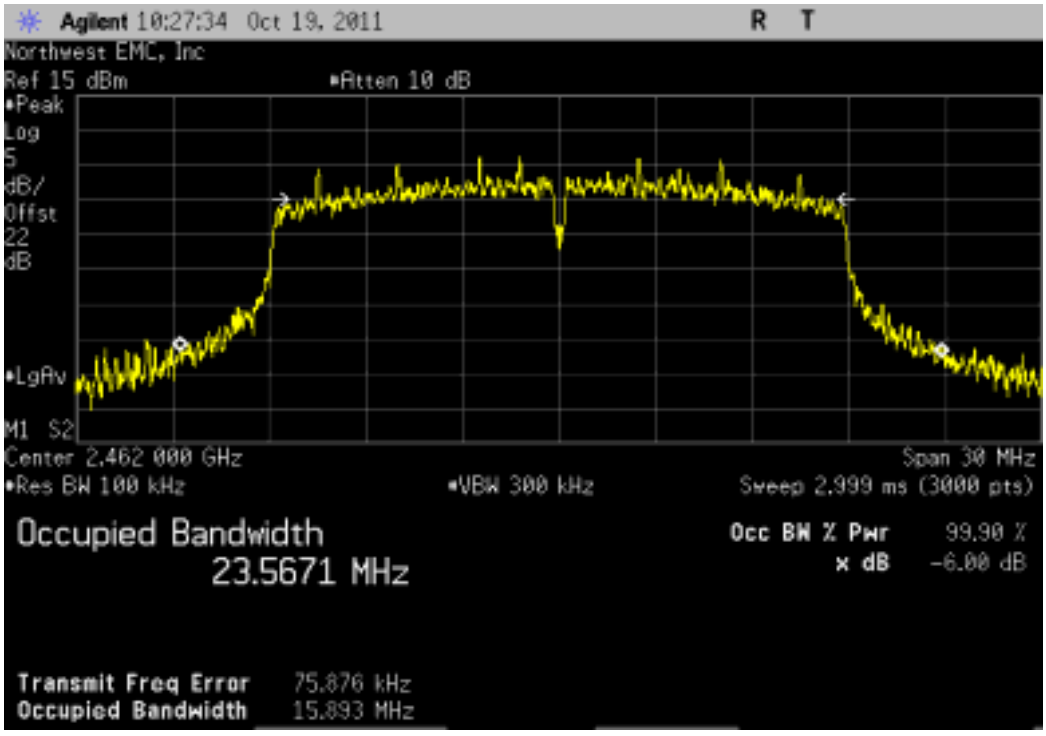
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				15.672 MHz	> 500 kHz	Pass



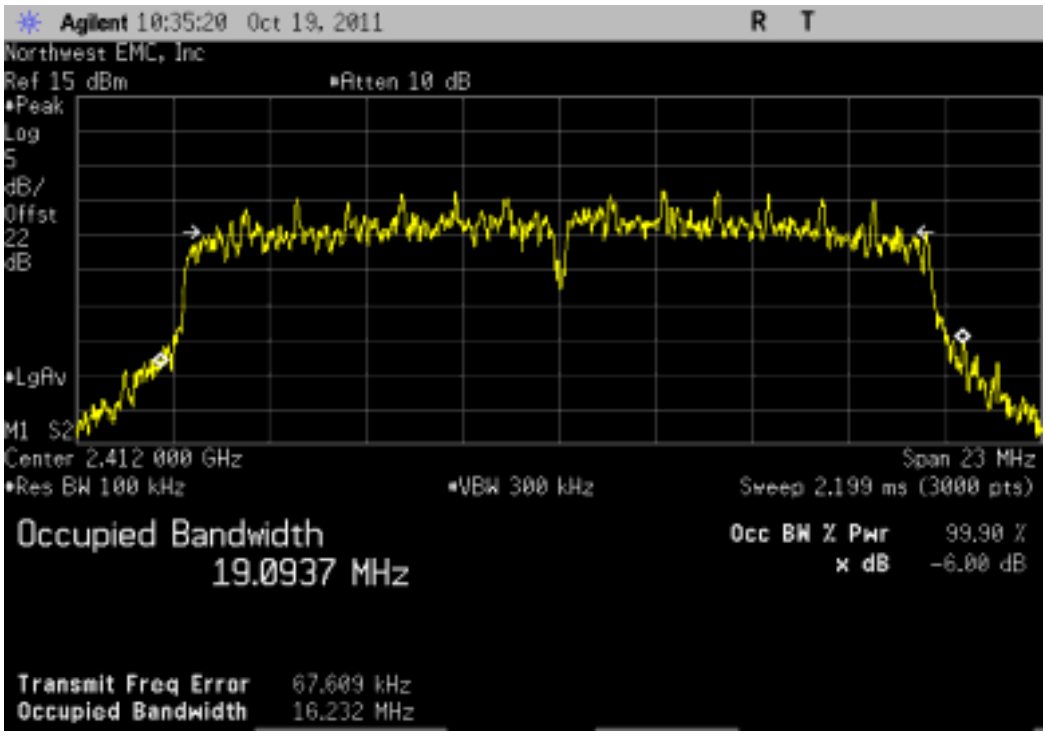
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz

				Value	Limit	Result
				15.893 MHz	> 500 kHz	Pass



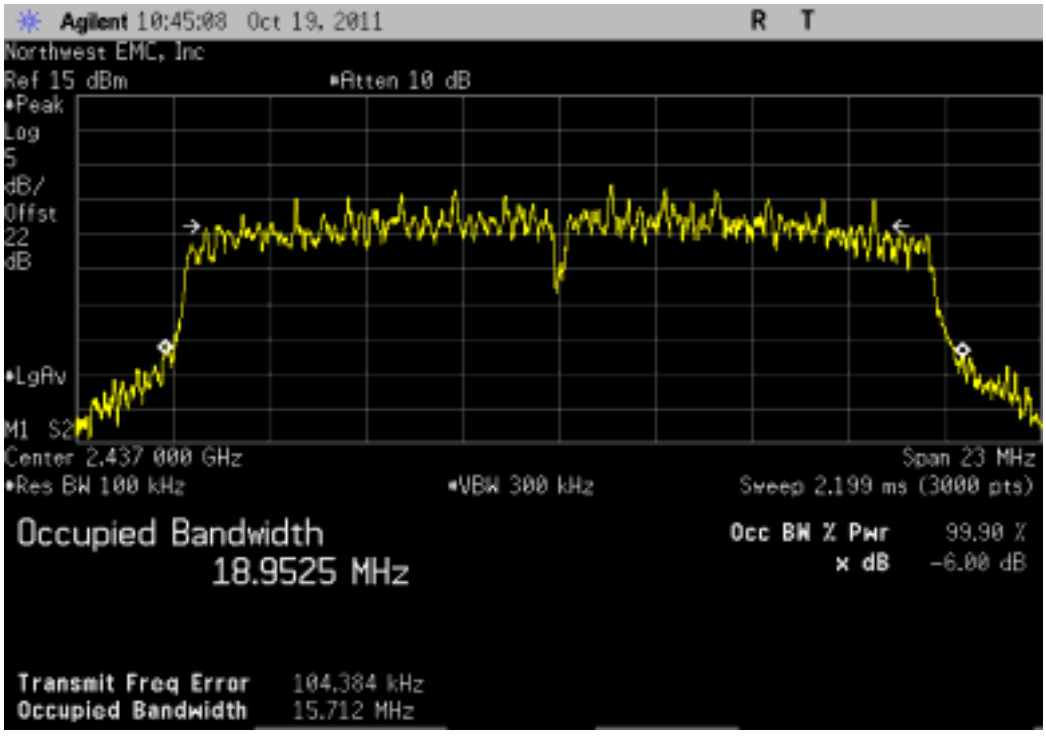
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz

				Value	Limit	Result
				16.232 MHz	> 500 kHz	Pass



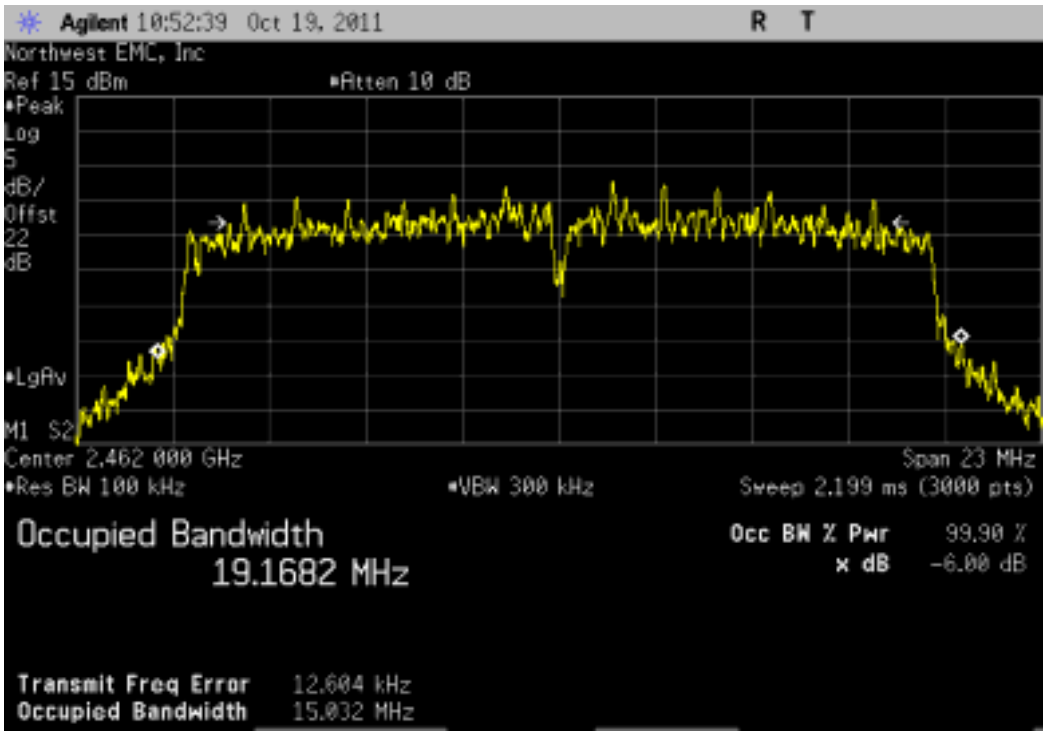
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				15.712 MHz	> 500 kHz	Pass



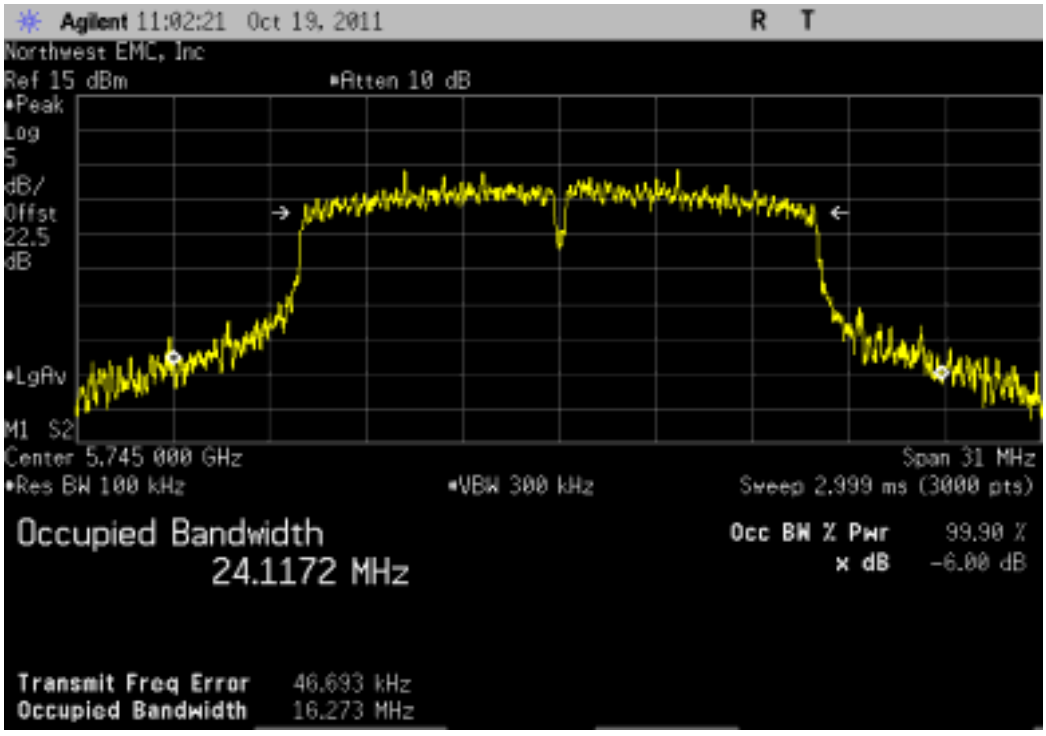
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz

				Value	Limit	Result
				15.032 MHz	> 500 kHz	Pass



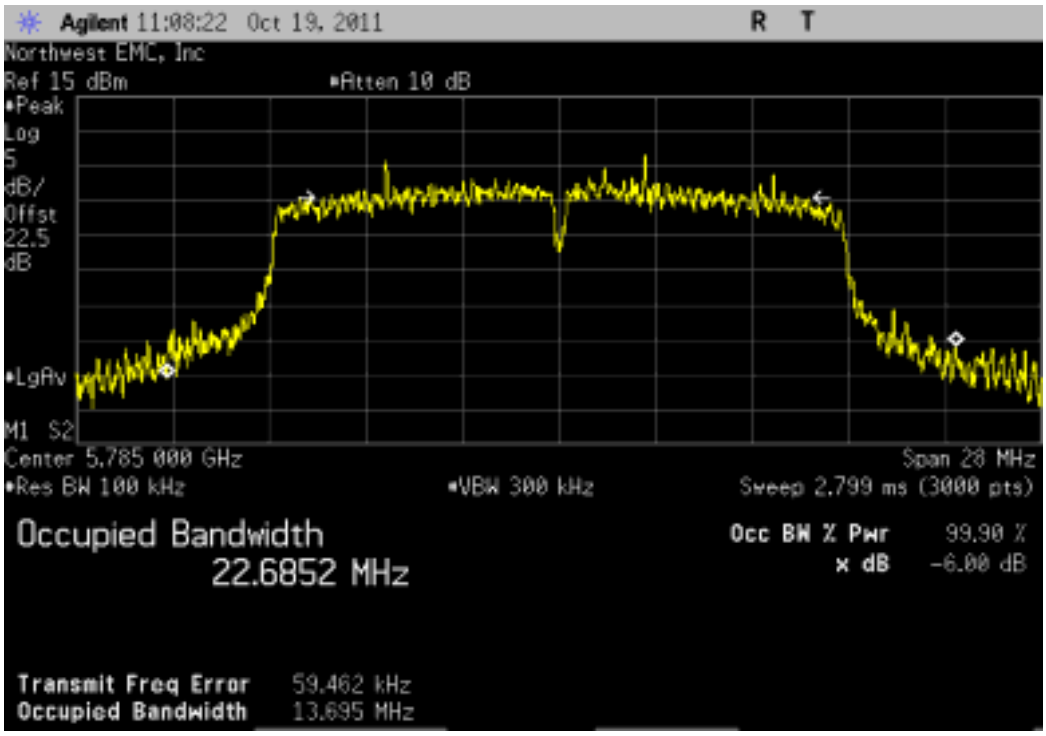
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz

				Value	Limit	Result
				16.273 MHz	> 500 kHz	Pass



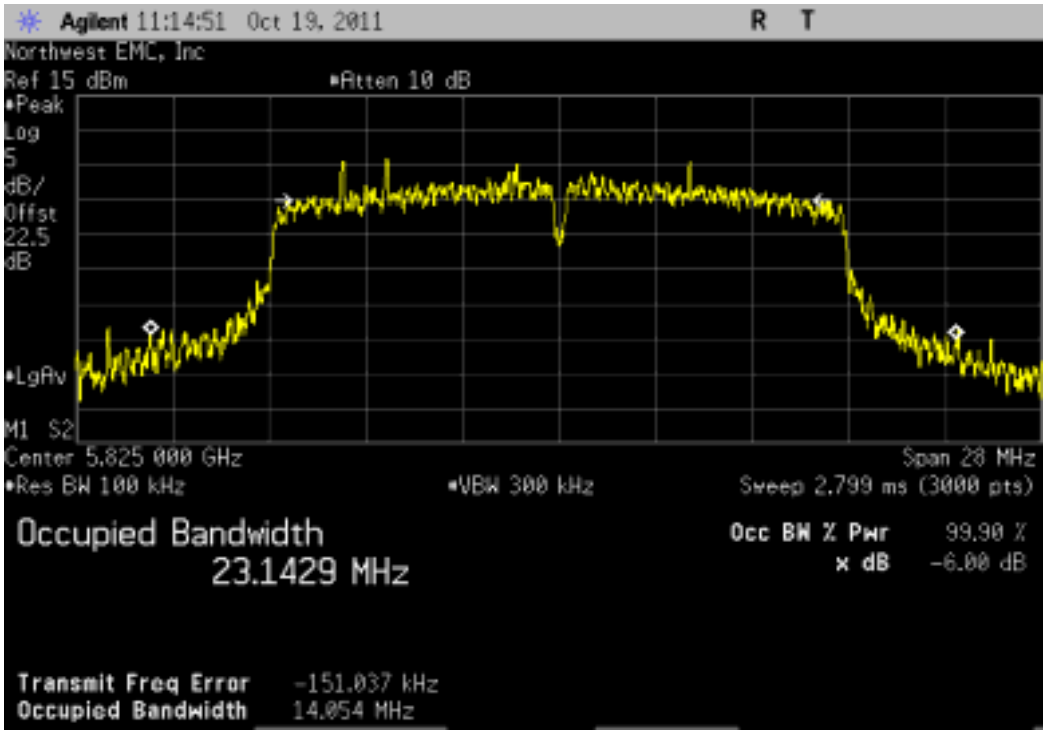
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz

				Value	Limit	Result
				13.695 MHz	> 500 kHz	Pass



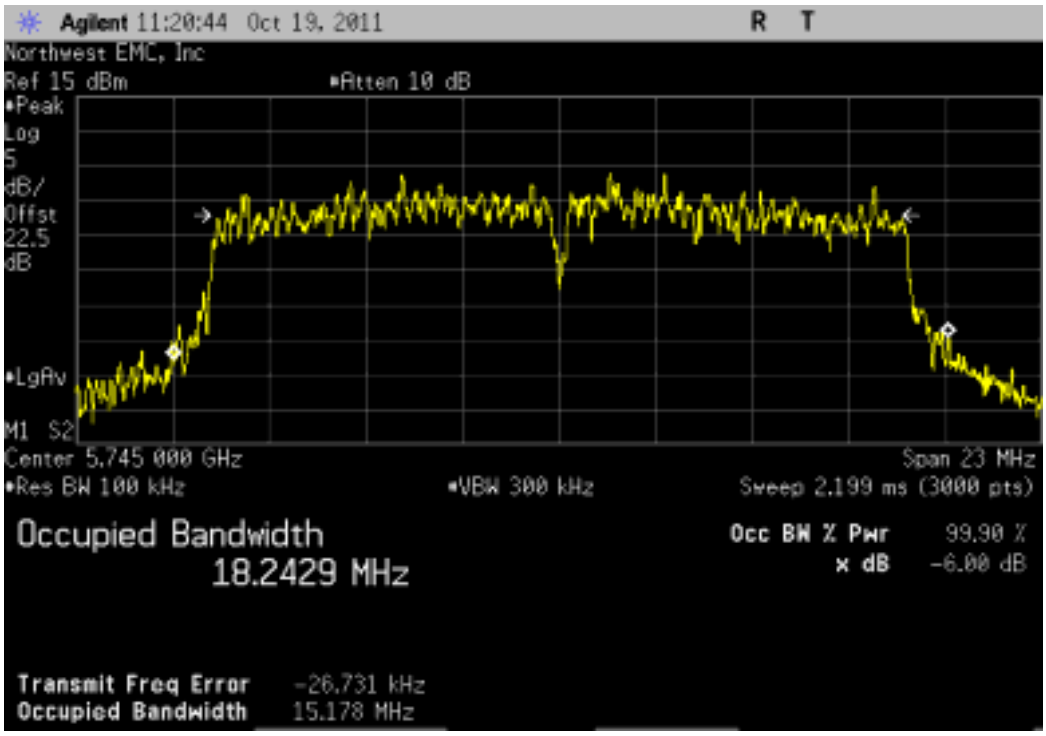
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz

				Value	Limit	Result
				14.054 MHz	> 500 kHz	Pass



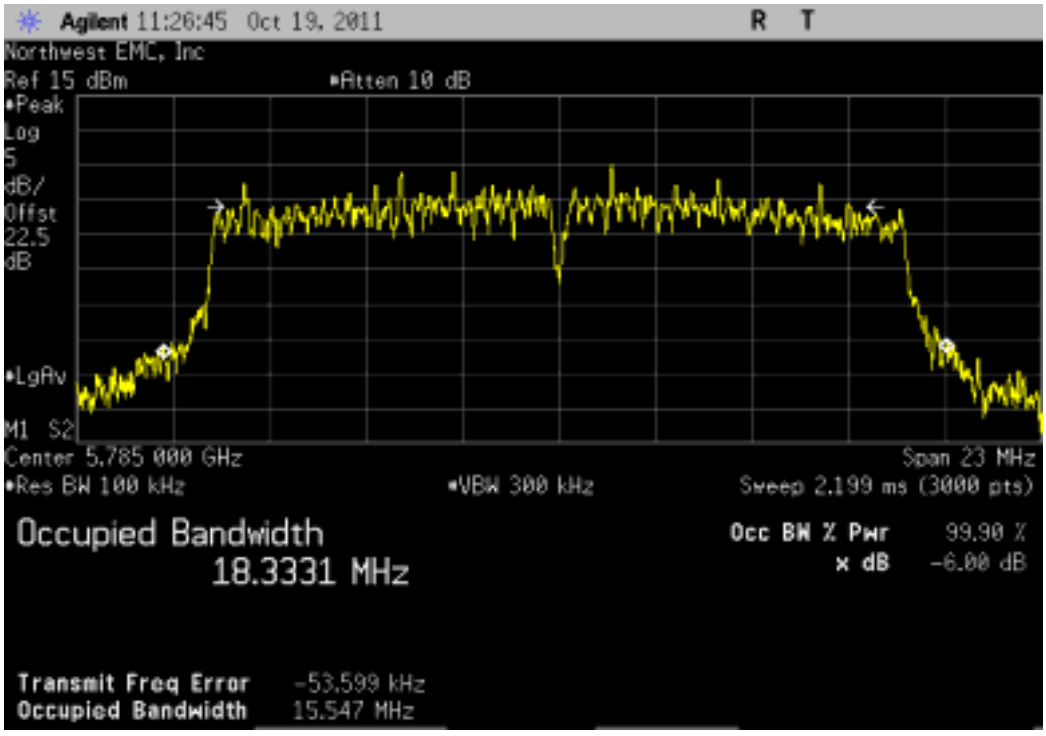
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz

				Value	Limit	Result
				15.178 MHz	> 500 kHz	Pass



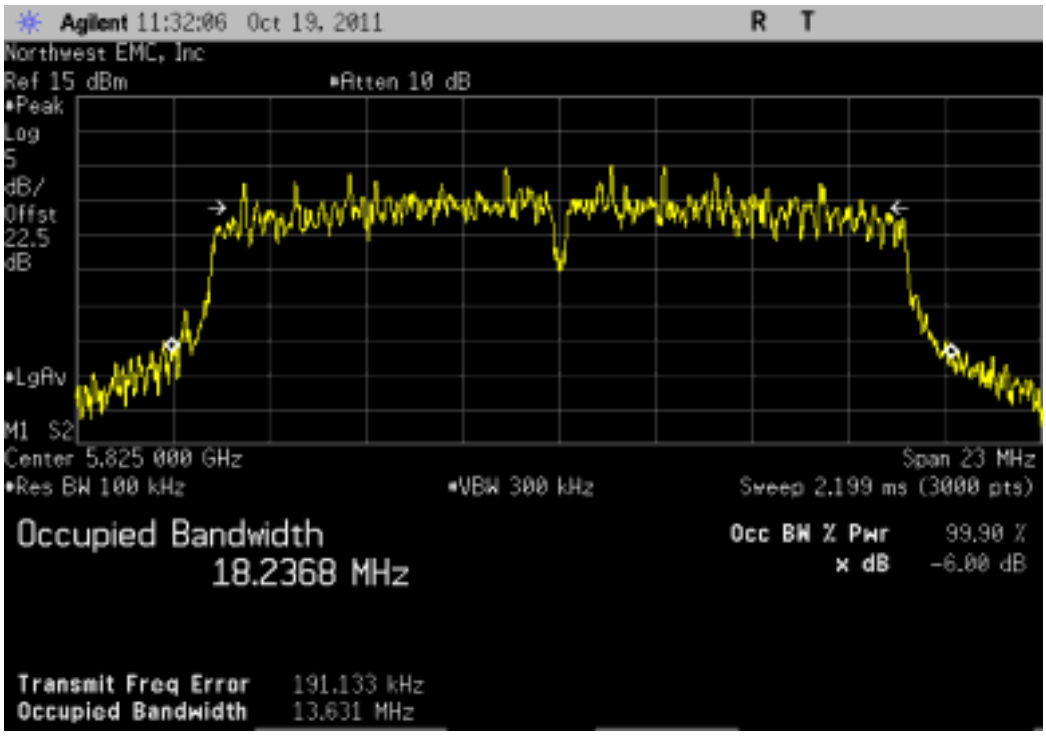
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz

				Value	Limit	Result
				15.547 MHz	> 500 kHz	Pass



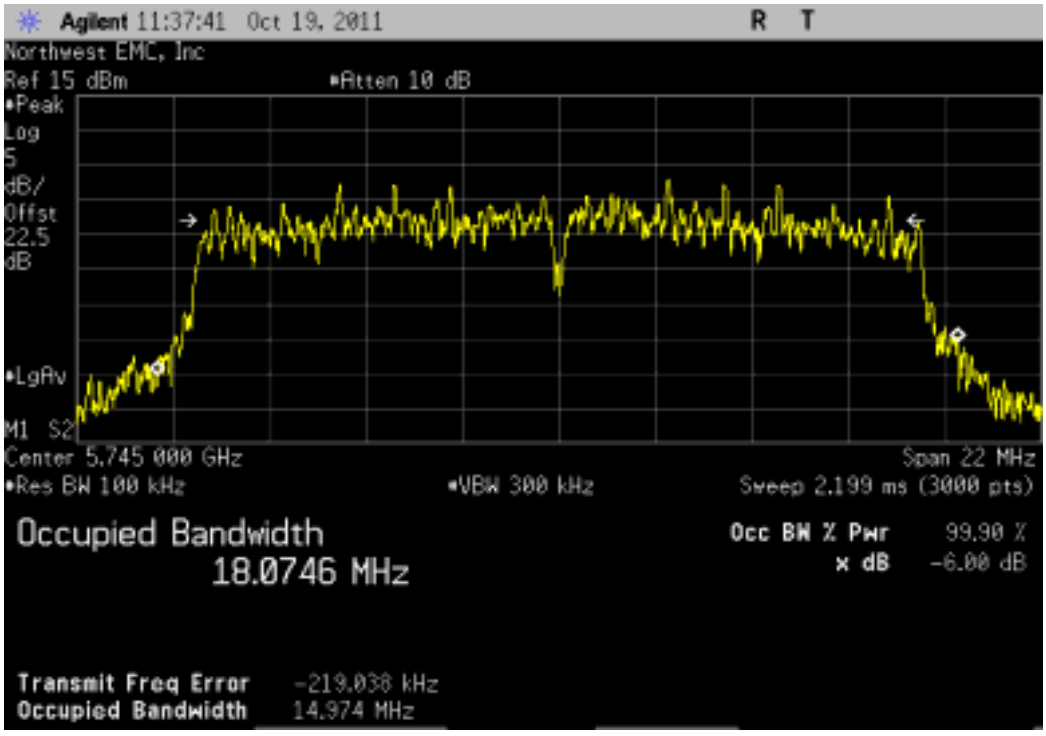
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz

				Value	Limit	Result
				13.631 MHz	> 500 kHz	Pass



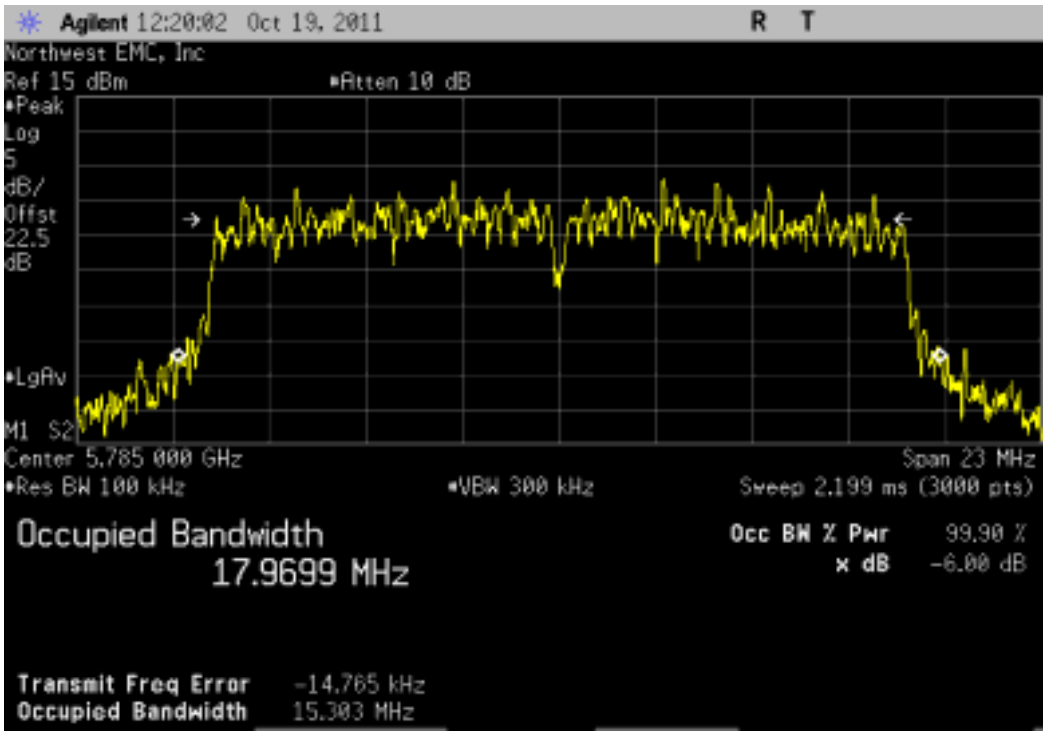
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz

				Value	Limit	Result
				14.974 MHz	> 500 kHz	Pass



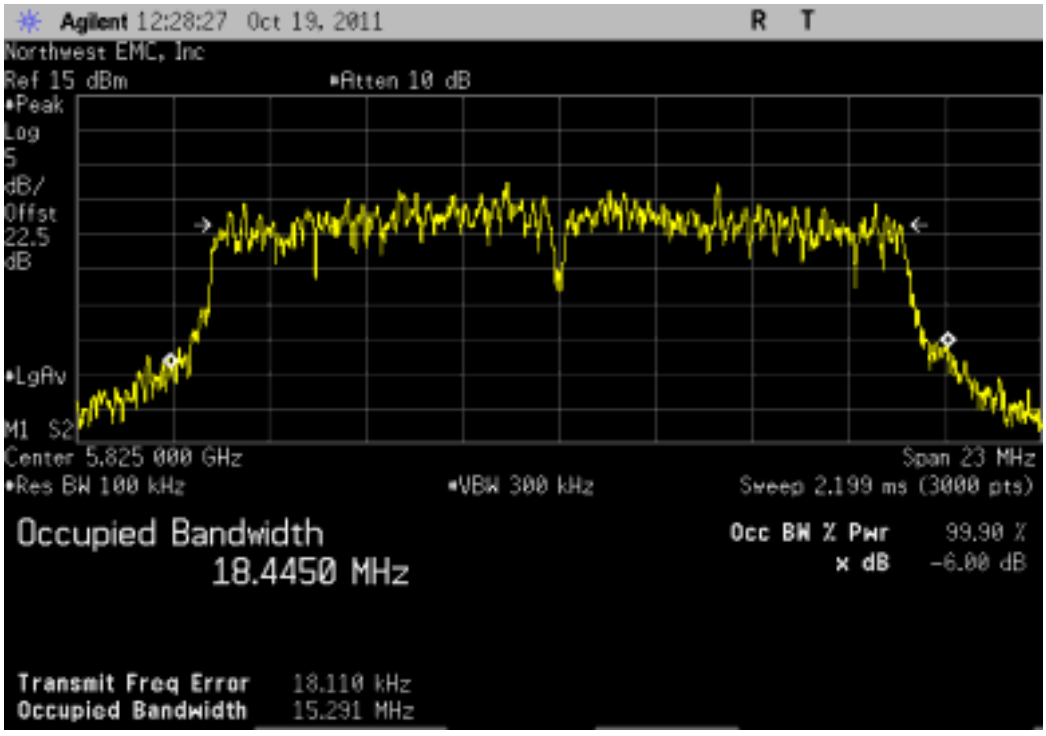
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz

				Value	Limit	Result
				15.303 MHz	> 500 kHz	Pass



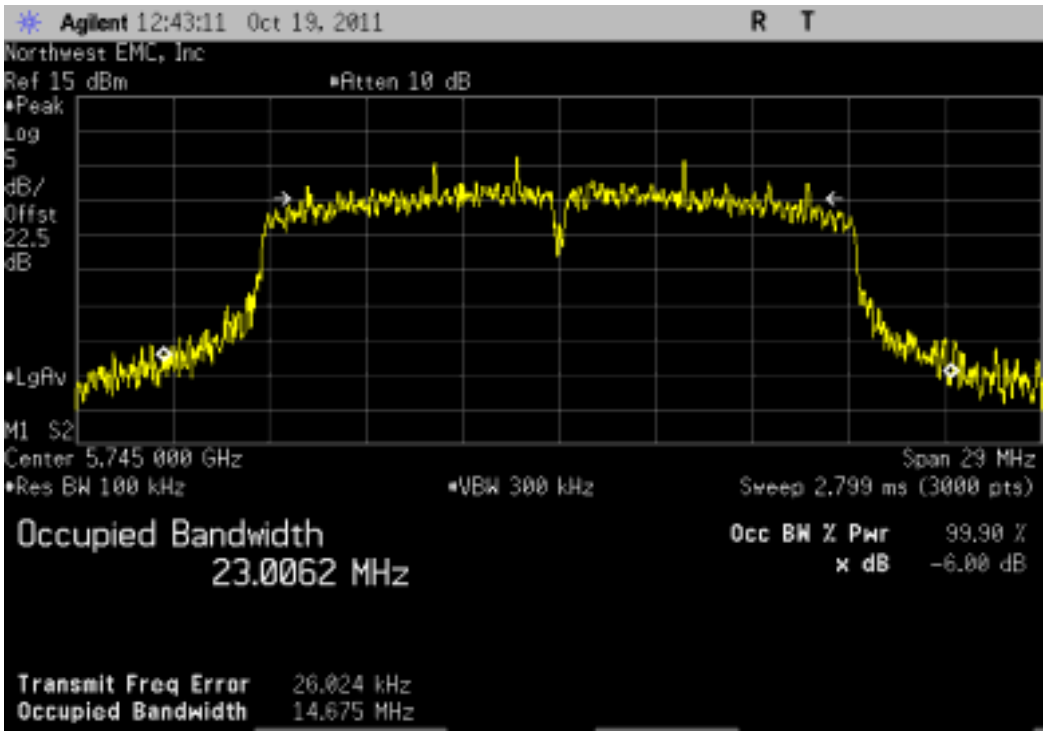
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz

				Value	Limit	Result
				15.291 MHz	> 500 kHz	Pass



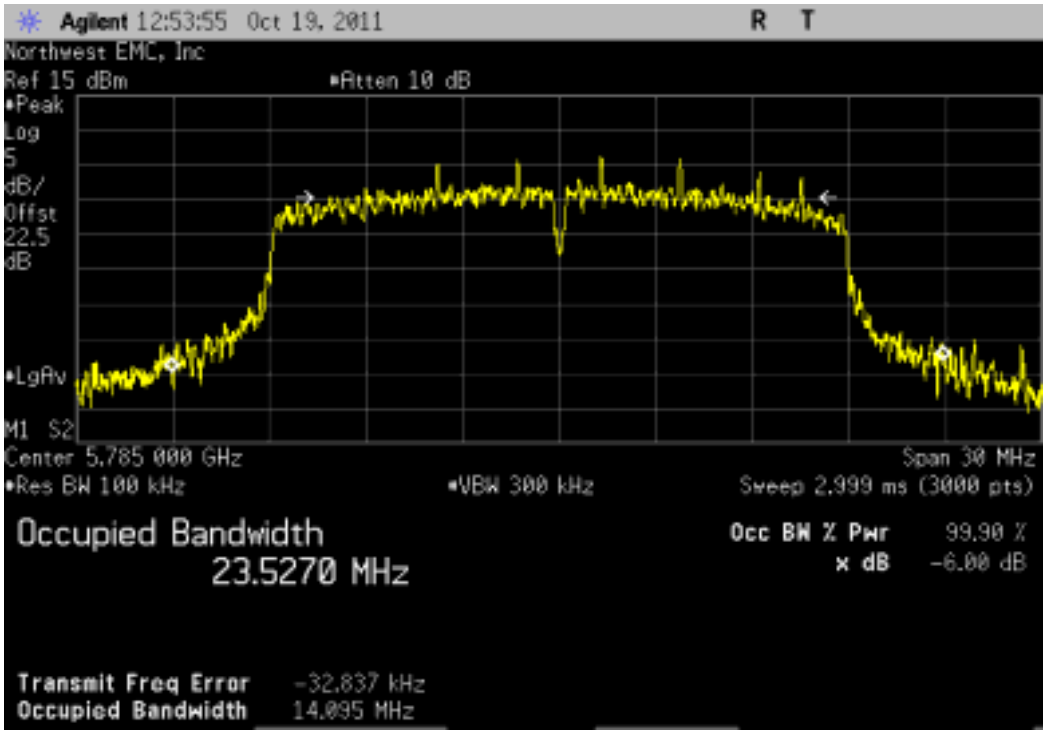
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz

				Value	Limit	Result
				14.675 MHz	> 500 kHz	Pass



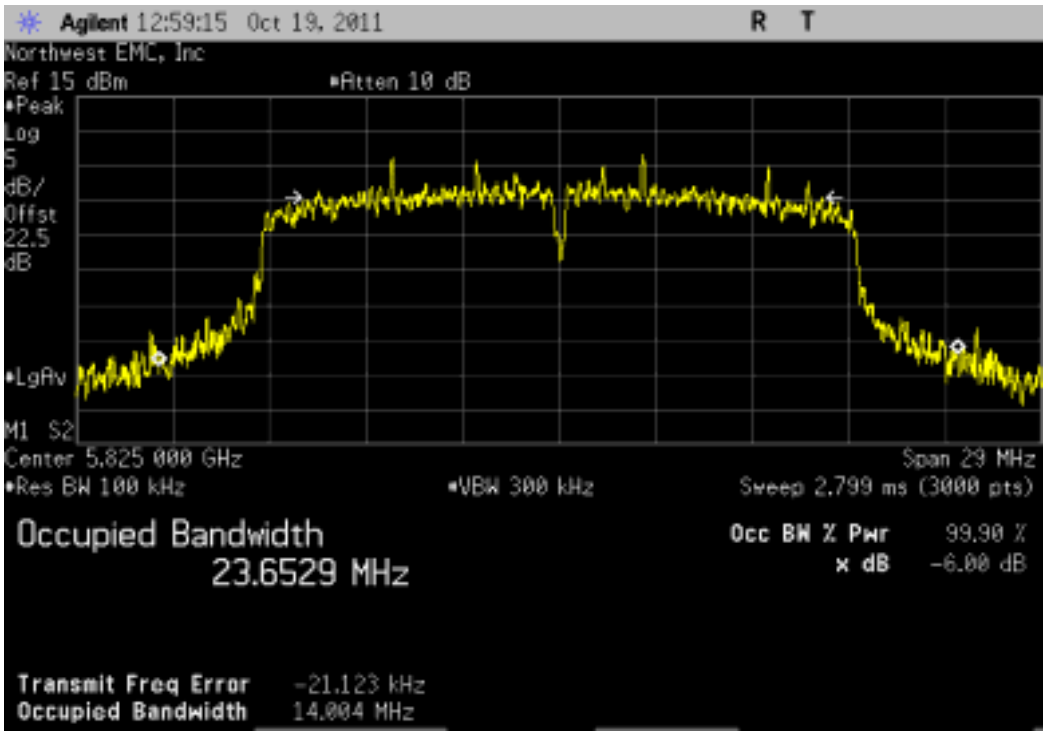
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz

				Value	Limit	Result
				14.095 MHz	> 500 kHz	Pass



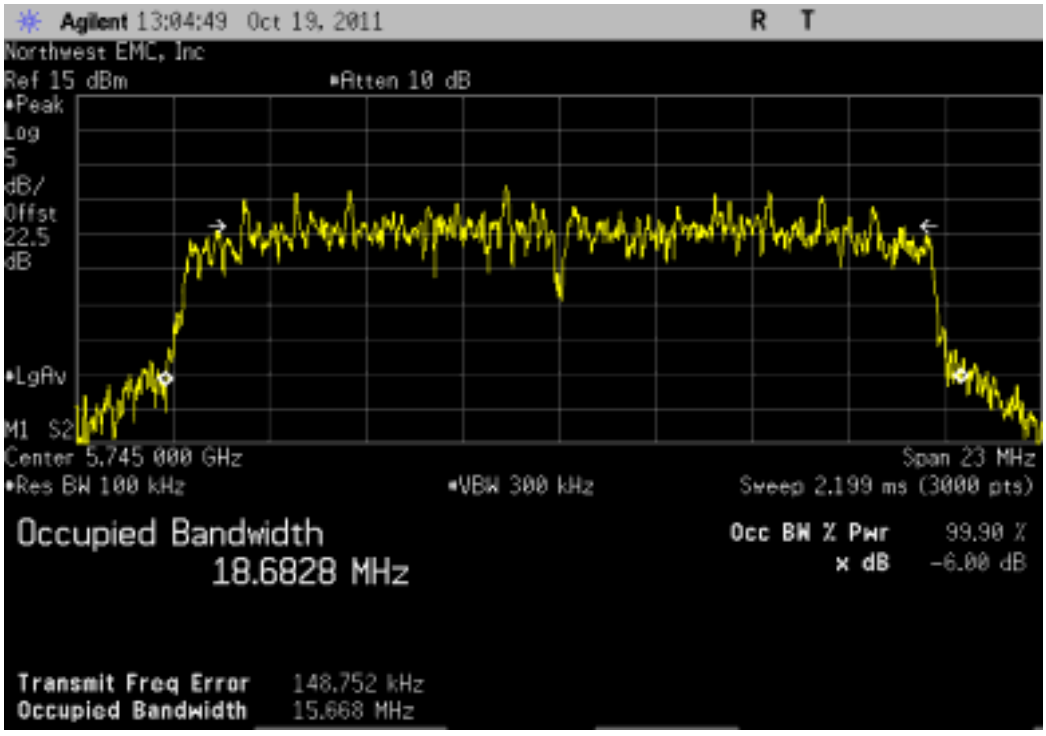
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz

				Value	Limit	Result
				14.004 MHz	> 500 kHz	Pass



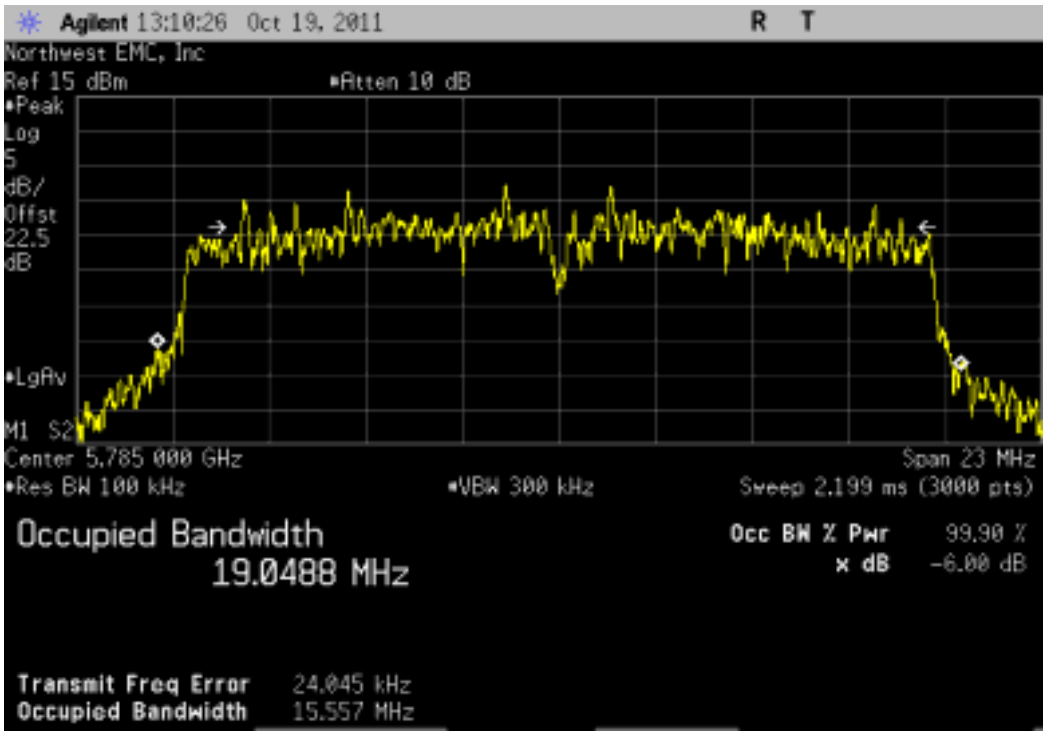
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz

				Value	Limit	Result
				15.668 MHz	> 500 kHz	Pass



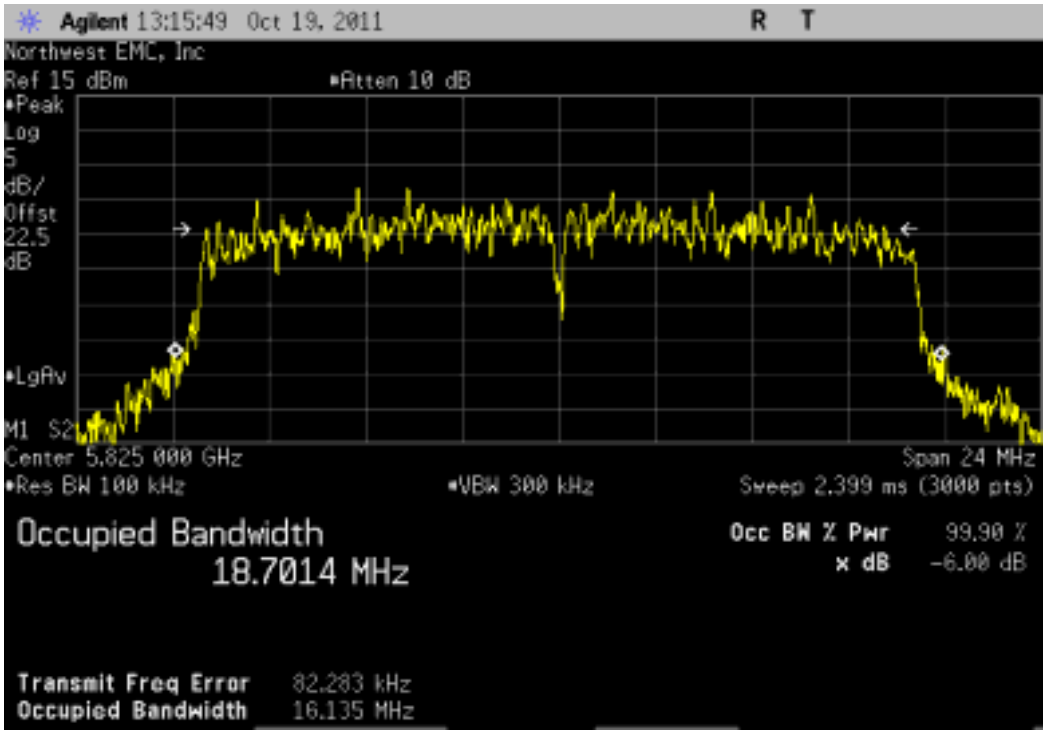
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Mid Channel 157, 5785 MHz

				Value	Limit	Result
				15.557 MHz	> 500 kHz	Pass



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz

				Value	Limit	Result
				16.135 MHz	> 500 kHz	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
Spectrum Analyzer	Agilent	E4440A	AAX	5/23/2011	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	10/12/2011	12
Signal Generator	Agilent	N5183A	TIA	1/18/2011	12
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	6/2/2011	12

MEASUREMENT UNCERTAINTY

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 for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

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. The amplitude accuracy of the spectrum analyzer was further enhanced by calibrating the setup using the power meter and synthesized signal generator.

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.

Method #3 found in ANSI C63.10 section 6.10.2.2 was used because the analyzer sweep time was greater than T for the operating mode which has the shortest transmission pulse duration and the Emission Bandwidth was greater than the largest RBW on the analyzer.

The spectrum analyzer settings were as follows:

- The span was set to encompass entire emission bandwidth (B), centered on the transmit channel.
- The RBW = 1 MHz, VBW = 3 MHz
- Sample detector mode because the bin width (span / number of spectral points) < 0.5 RBW.
- Power was integrated across “B”, by using the channel power function of the analyzer.

Output Power

EUT:	X Series	Work Order:	LGPD0044
Serial Number:	3411000112, 341100050	Date:	10/20/11
Customer:	ZOLL Medical Corp.	Temperature:	23.23C°C
Attendees:	Curt McNamara, Karl Karcht	Humidity:	23%
Project:	None	Barometric Pres.:	1020.2
Tested by:	Trevor Buls	Power: 15VDC	Job Site: MN08

TEST SPECIFICATIONS	TEST METHOD
FCC 15.247:2011	ANSI C63.10:2009

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

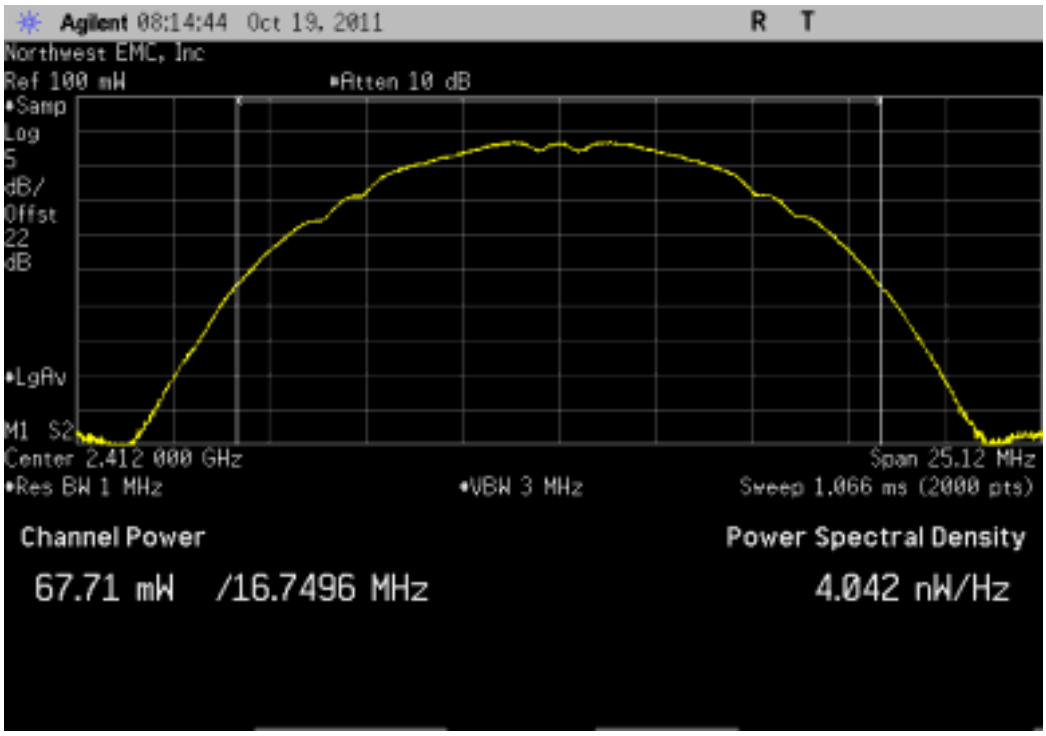
None

Configuration #	1	Signature	Trevor Buls

	Value	Limit	Result
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz	67.708 mW	< 1 W	Pass
Mid Channel 6, 2437 MHz	71.007 mW	< 1 W	Pass
High Channel 11, 2462 MHz	74.419 mW	< 1 W	Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz	29.958 mW	< 1 W	Pass
Mid Channel 6, 2437 MHz	35.099 mW	< 1 W	Pass
High Channel 11, 2462 MHz	35.959 mW	< 1 W	Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz	33.092 mW	< 1 W	Pass
Mid Channel 6, 2437 MHz	29.517 mW	< 1 W	Pass
High Channel 11, 2462 MHz	31.685 mW	< 1 W	Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz	6.506 mW	< 1 W	Pass
Mid Channel 6, 2437 MHz	4.974 mW	< 1 W	Pass
High Channel 11, 2462 MHz	6.382 mW	< 1 W	Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz	3.128 mW	< 1 W	Pass
Mid Channel 6, 2437 MHz	3.388 mW	< 1 W	Pass
High Channel 11, 2462 MHz	4.021 mW	< 1 W	Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz	26.796 mW	< 1 W	Pass
Mid Channel 6, 2437 MHz	28.616 mW	< 1 W	Pass
High Channel 11, 2462 MHz	29.543 mW	< 1 W	Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz	2.538 mW	< 1 W	Pass
Mid Channel 6, 2437 MHz	2.273 mW	< 1 W	Pass
High Channel 11, 2462 MHz	3.179 mW	< 1 W	Pass
5725 MHz - 5850 MHz Band			
802.11(a) 6 Mbps			
Low Channel 149, 5745 MHz	27.453 mW	< 1 W	Pass
Mid Channel 157, 5785 MHz	29.52 mW	< 1 W	Pass
High Channel 165, 5825 MHz	27.546 mW	< 1 W	Pass
802.11(a) 36 Mbps			
Low Channel 149, 5745 MHz	9.009 mW	< 1 W	Pass
Mid Channel 157, 5785 MHz	9.342 mW	< 1 W	Pass
High Channel 165, 5825 MHz	9.935 mW	< 1 W	Pass
802.11(a) 54 Mbps			
Low Channel 149, 5745 MHz	3.742 mW	< 1 W	Pass
Mid Channel 157, 5785 MHz	3.15 mW	< 1 W	Pass
High Channel 165, 5825 MHz	4.312 mW	< 1 W	Pass
802.11(n) MCS0 - UNII			
Low Channel 149, 5745 MHz	25.768 mW	< 1 W	Pass
Mid Channel 157, 5785 MHz	28.182 mW	< 1 W	Pass
High Channel 165, 5825 MHz	27.989 mW	< 1 W	Pass
802.11(n) MCS7 - UNII			
Low Channel 149, 5745 MHz	2.55 mW	< 1 W	Pass
Mid Channel 157, 5785 MHz	2.728 mW	< 1 W	Pass
High Channel 165, 5825 MHz	2.865 mW	< 1 W	Pass

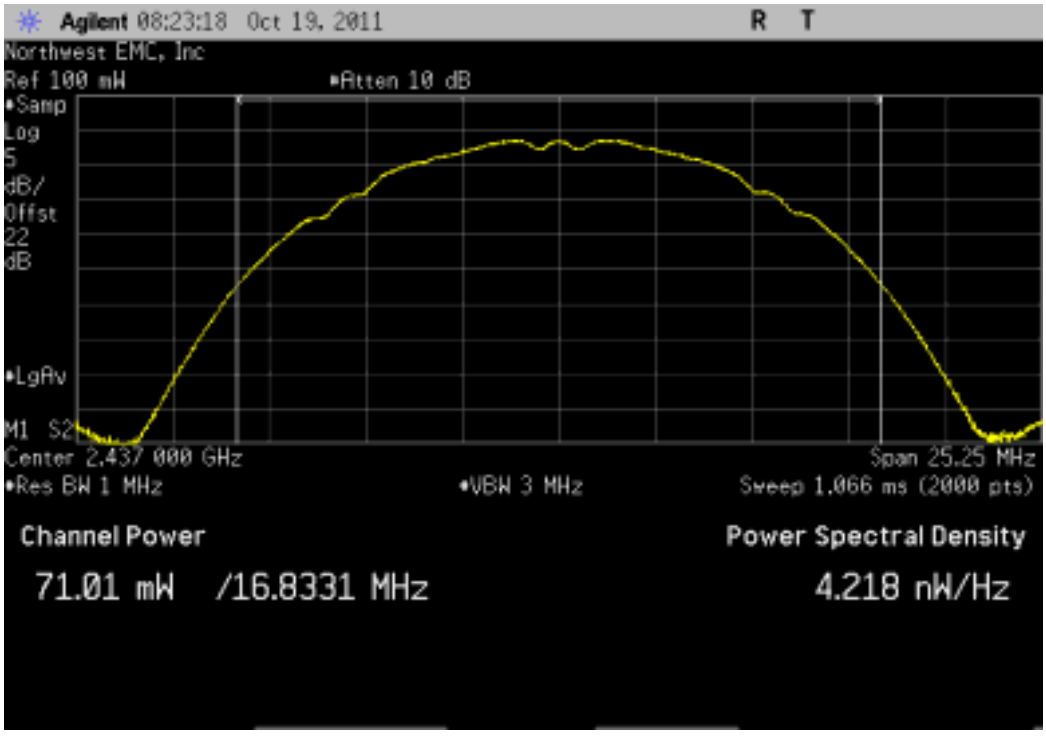
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				67.708 mW	< 1 W	Pass



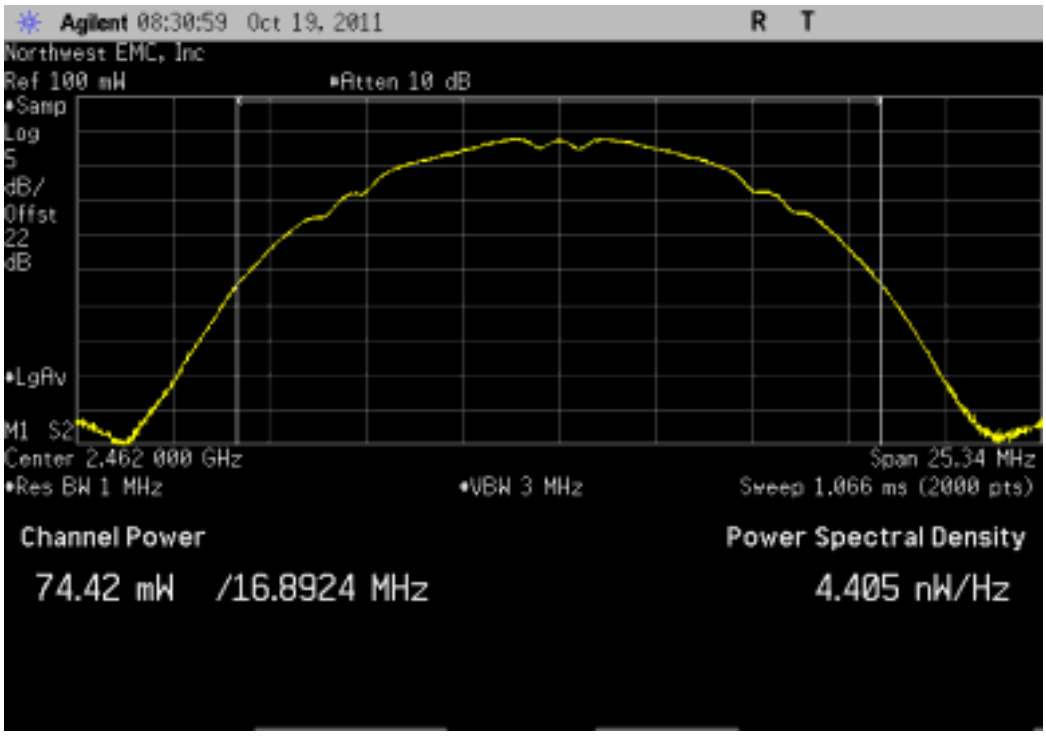
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				71.007 mW	< 1 W	Pass



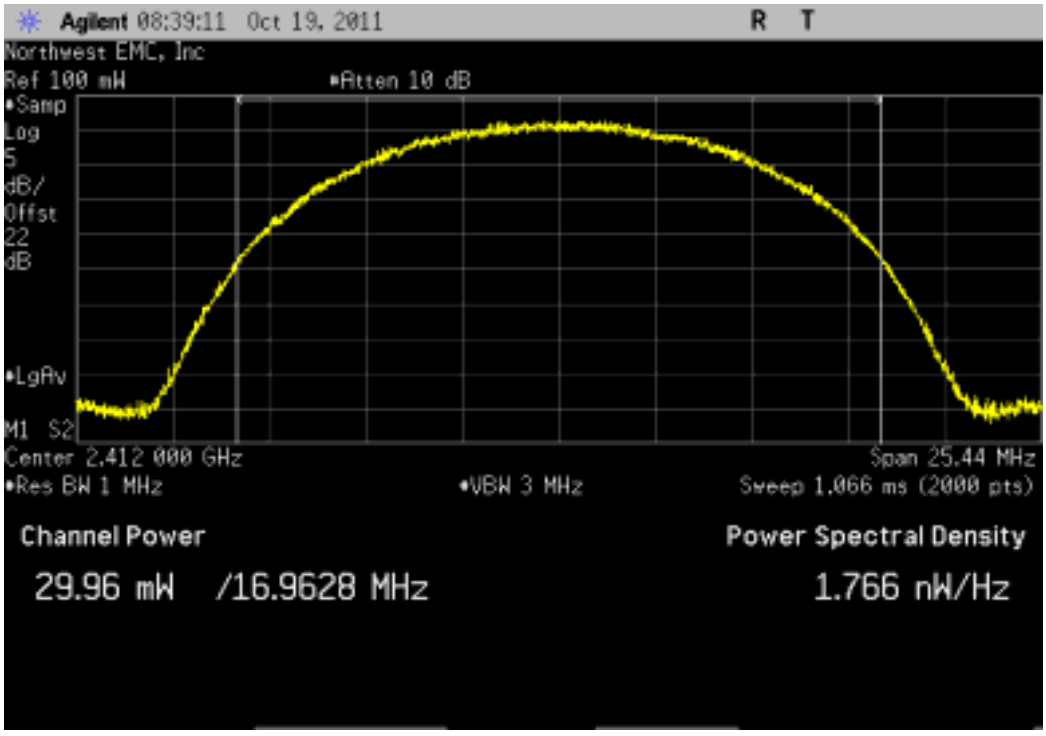
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				74.419 mW	< 1 W	Pass



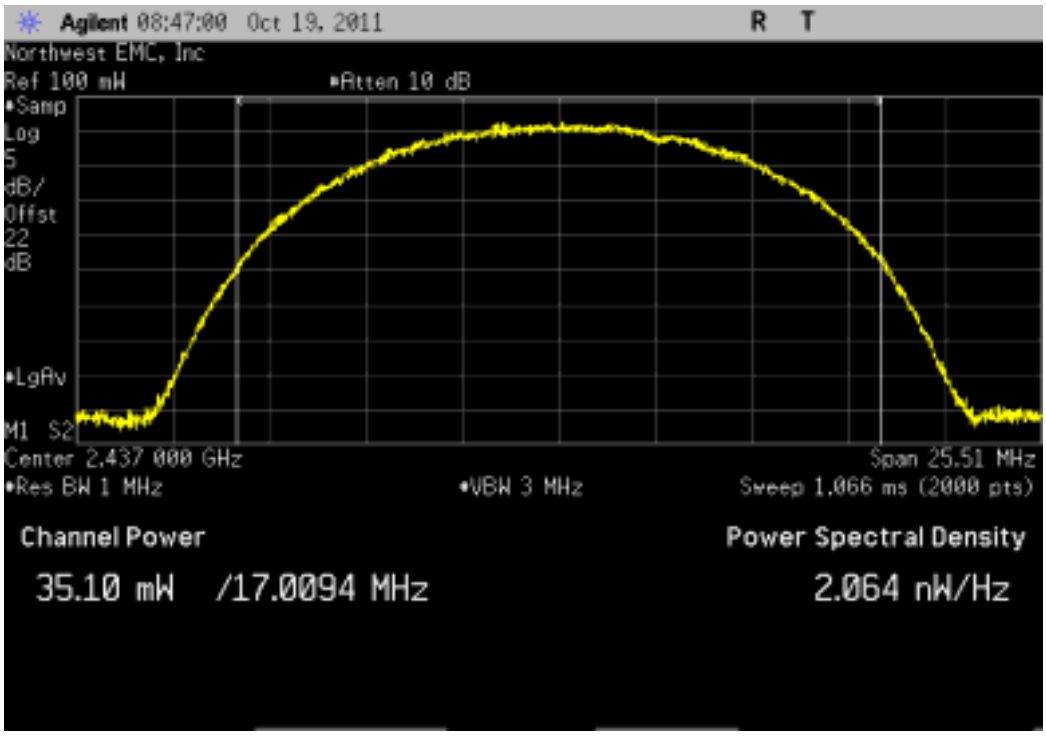
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				29.958 mW	< 1 W	Pass



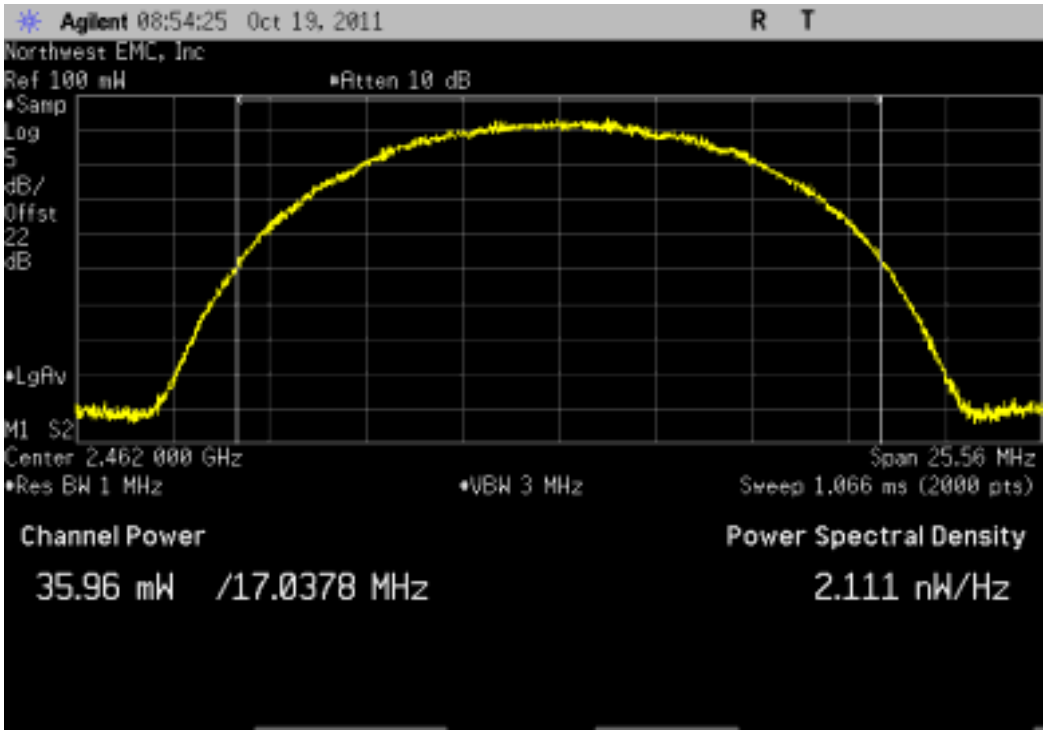
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				35.099 mW	< 1 W	Pass



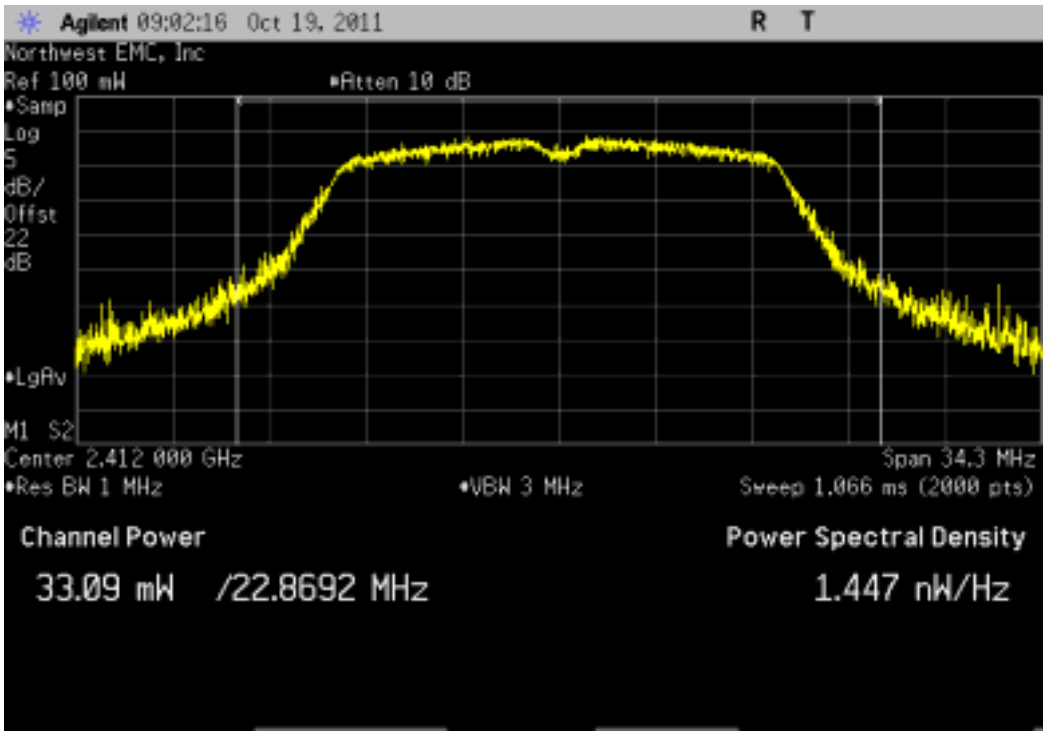
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				35.959 mW	< 1 W	Pass



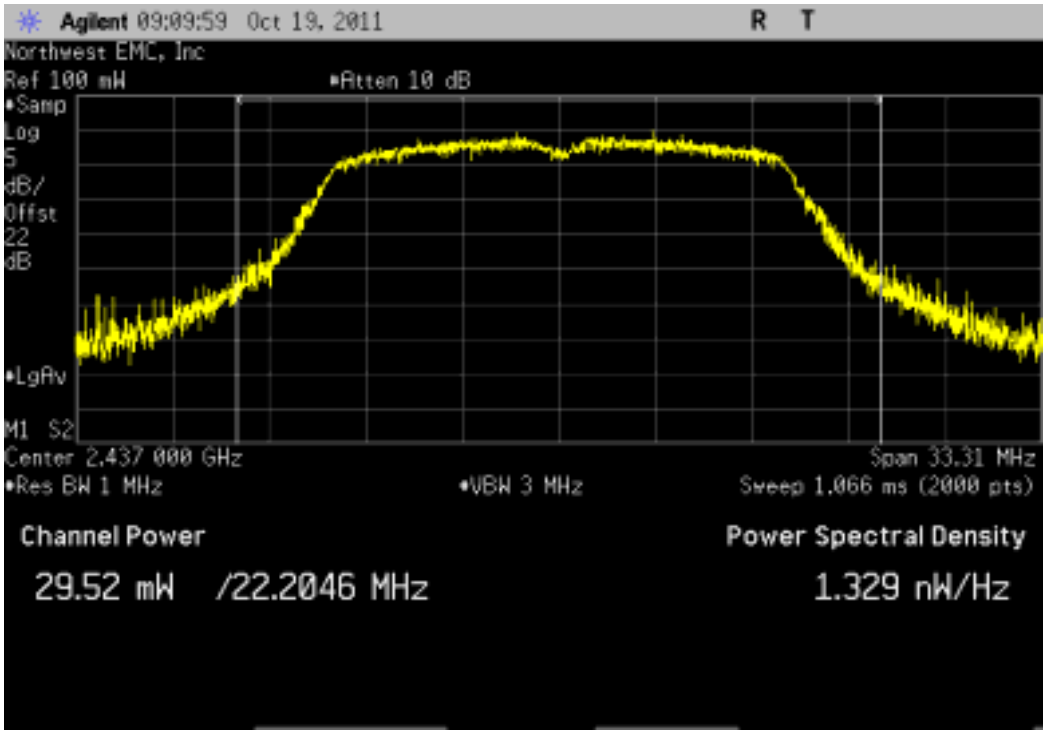
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				33.092 mW	< 1 W	Pass



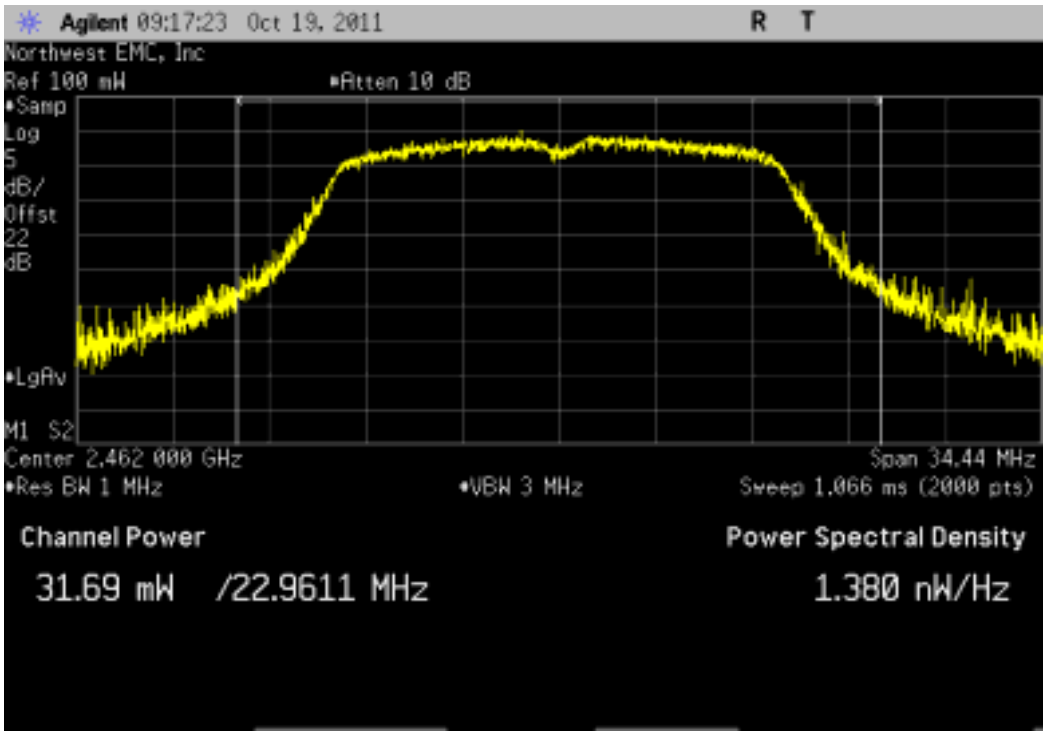
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				29.517 mW	< 1 W	Pass



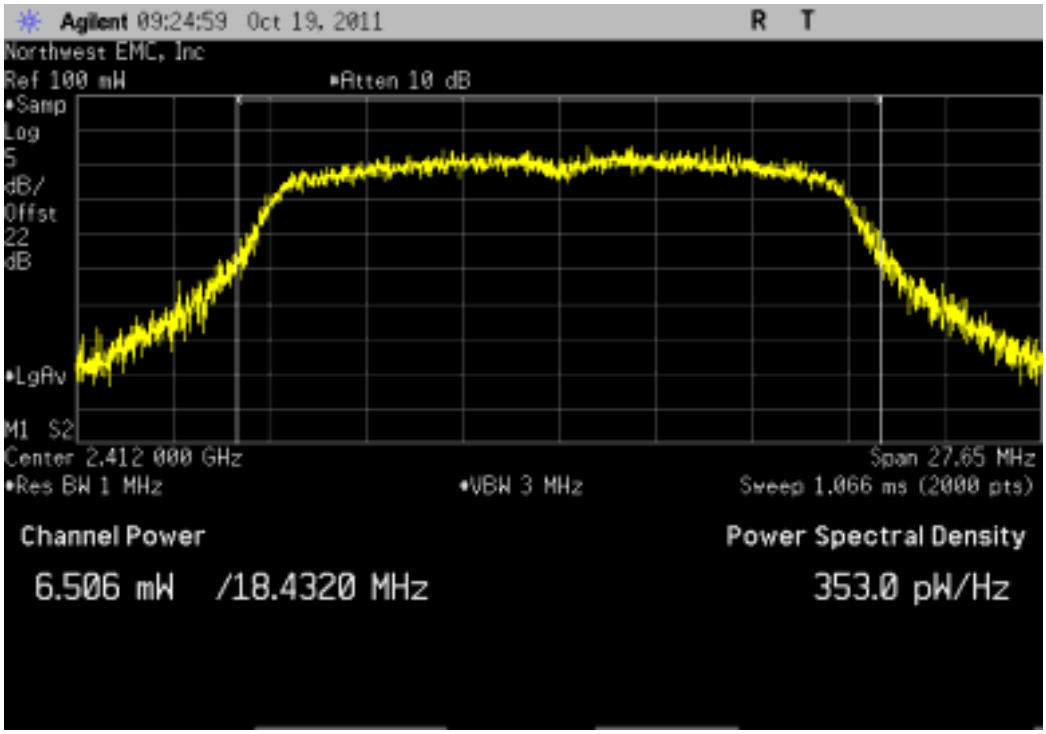
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				31.685 mW	< 1 W	Pass



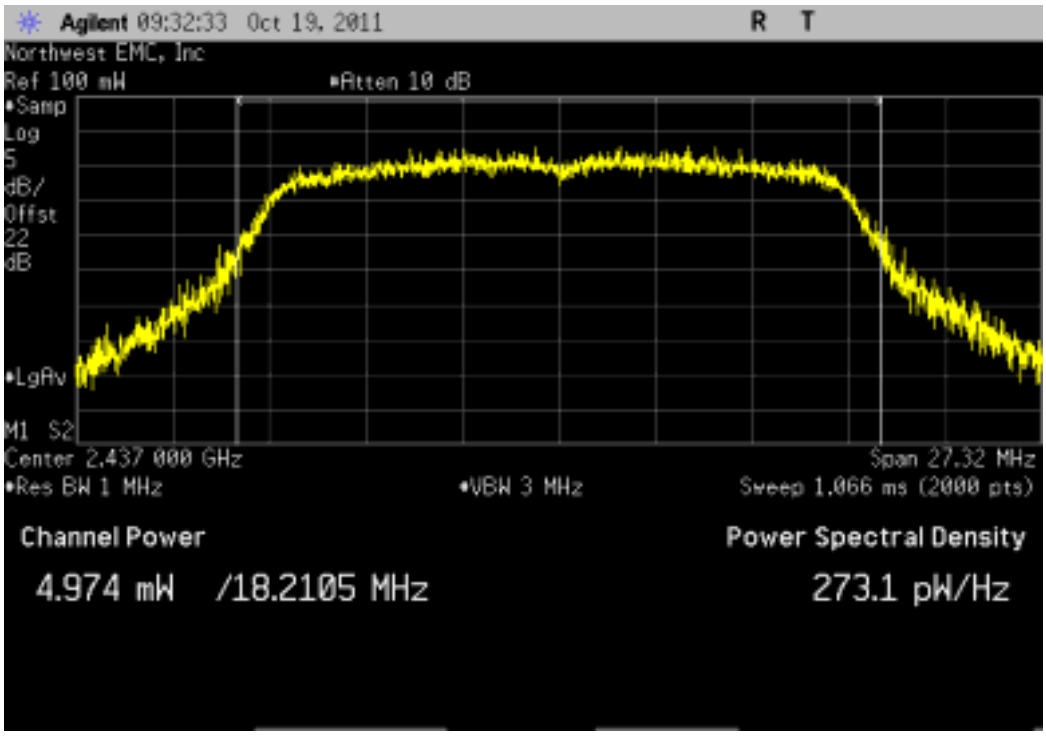
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				6.506 mW	< 1 W	Pass



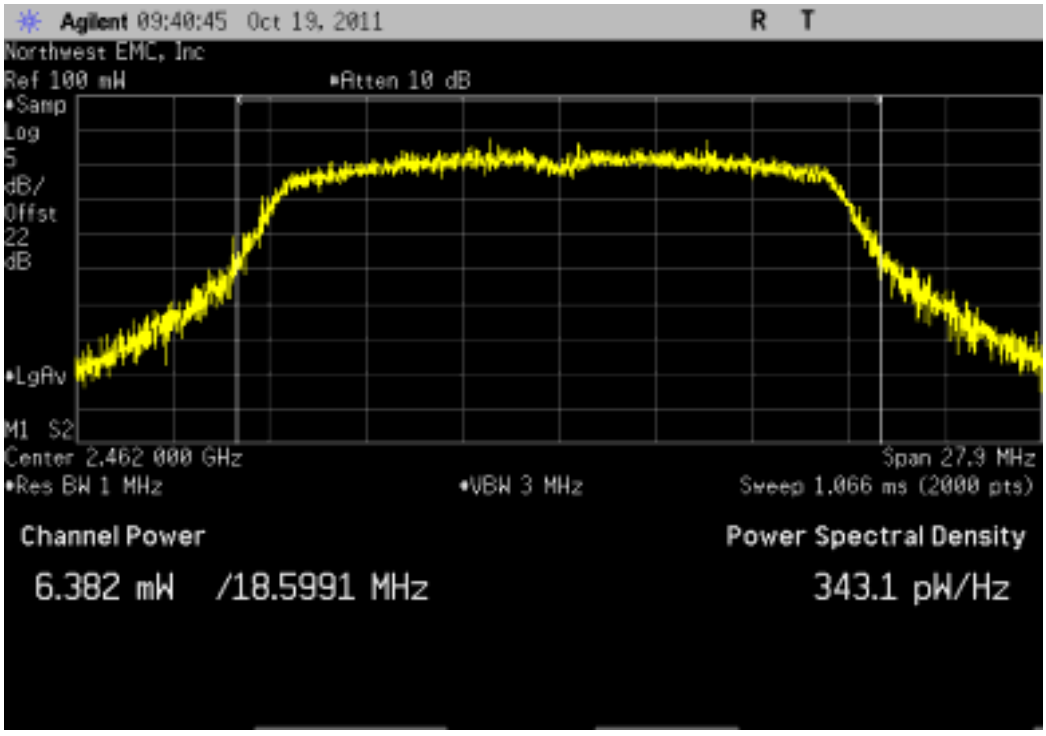
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				4.974 mW	< 1 W	Pass



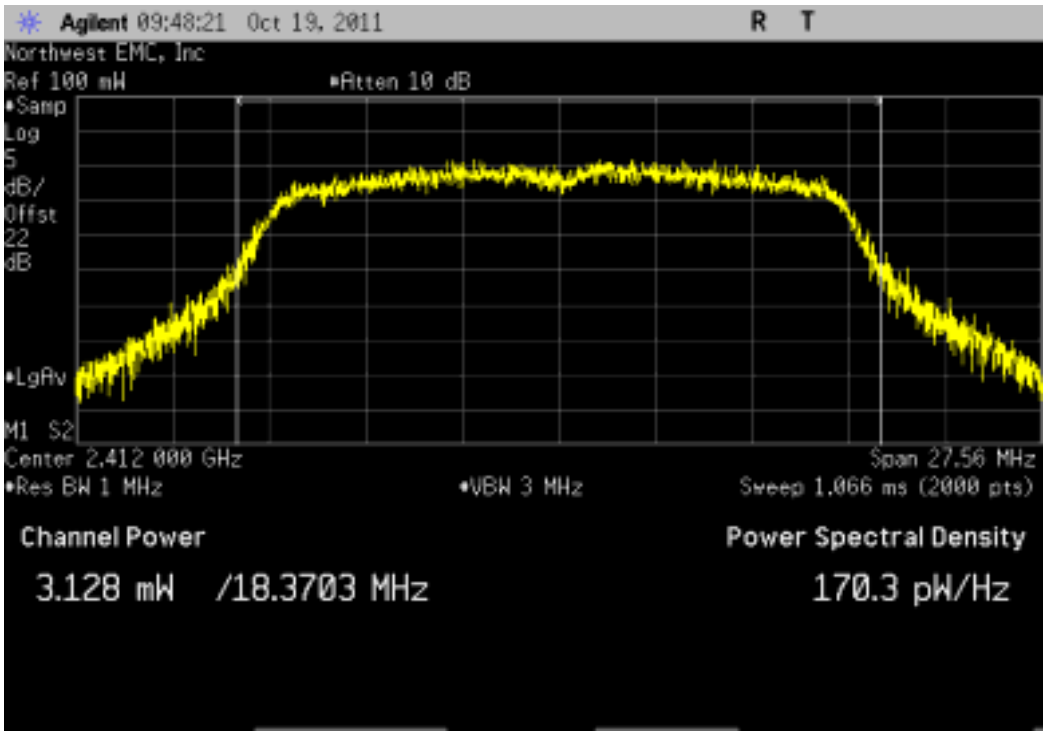
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				6.382 mW	< 1 W	Pass



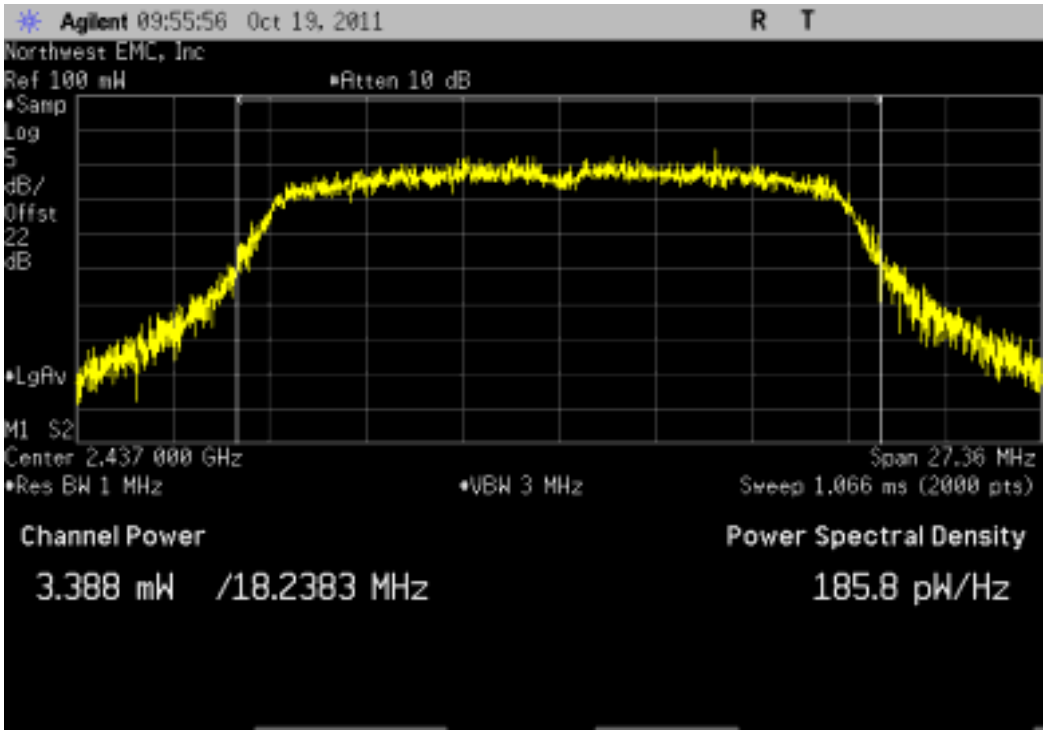
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				3.128 mW	< 1 W	Pass



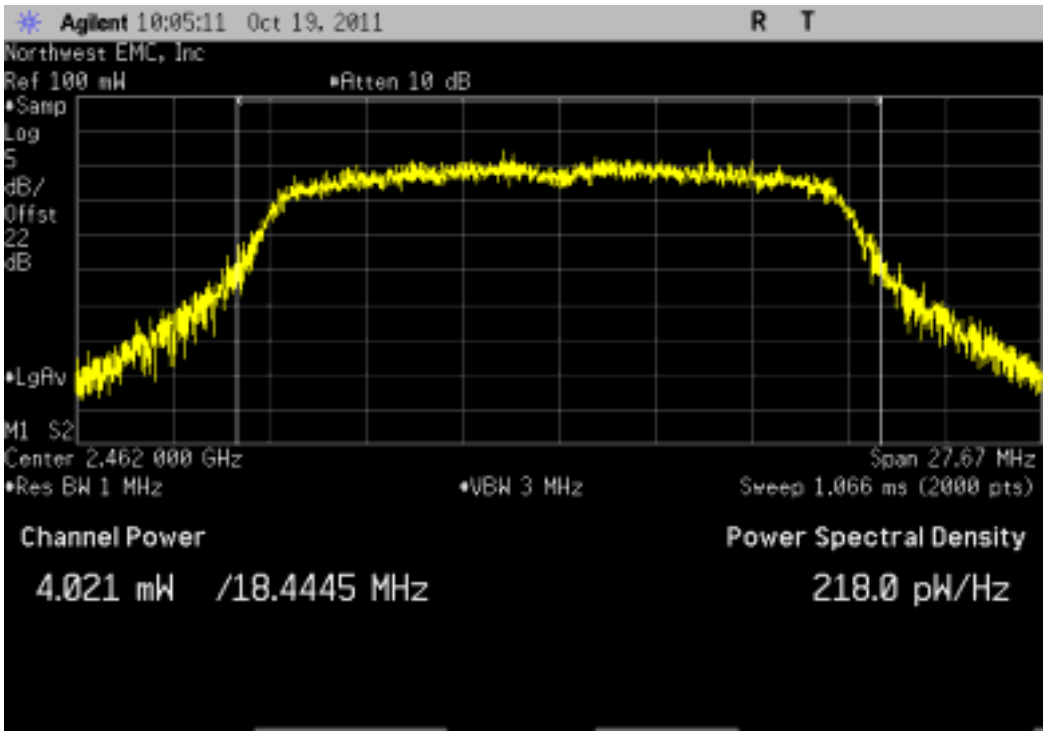
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				3.388 mW	< 1 W	Pass



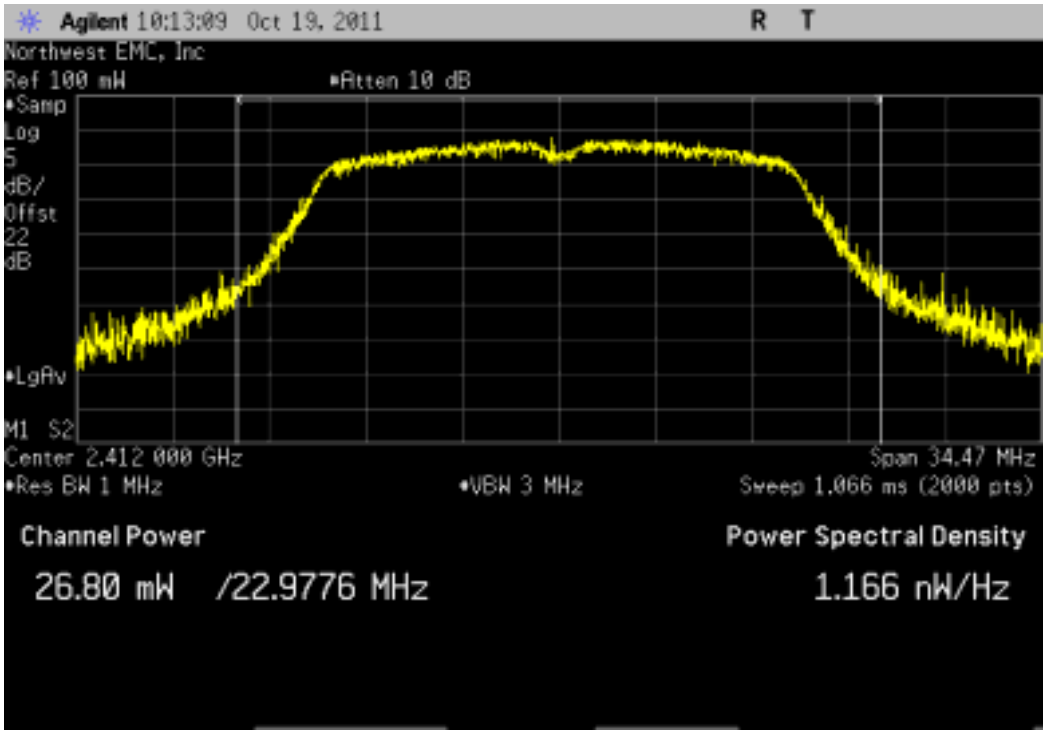
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				4.021 mW	< 1 W	Pass



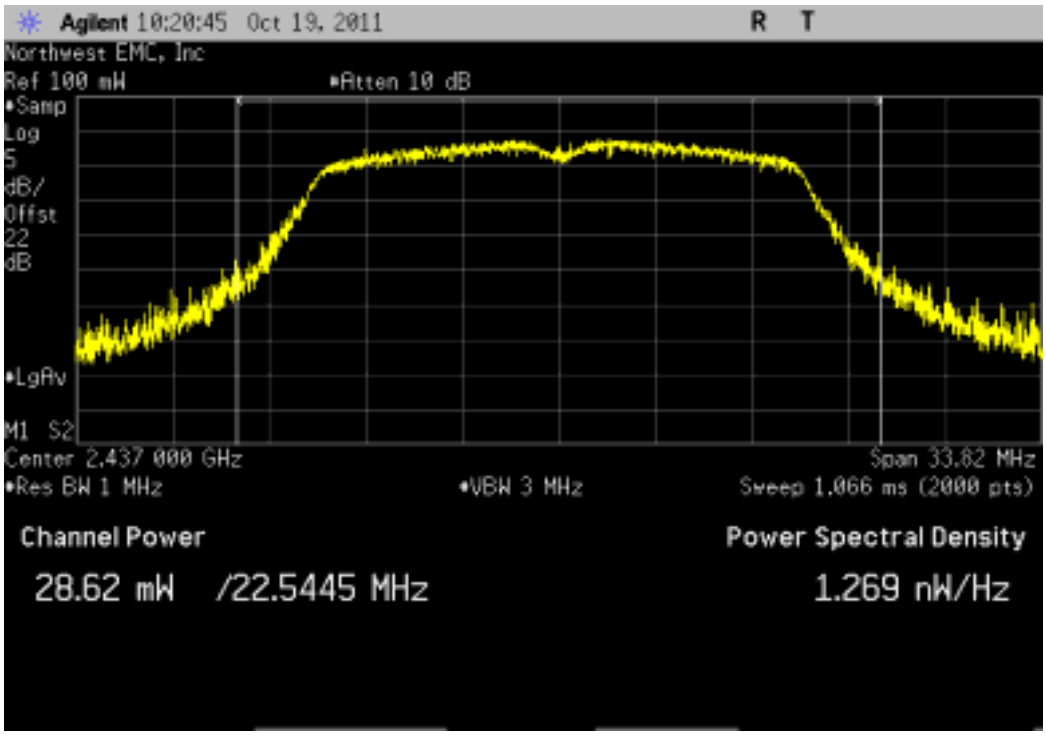
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz

				Value	Limit	Result
				26.796 mW	< 1 W	Pass



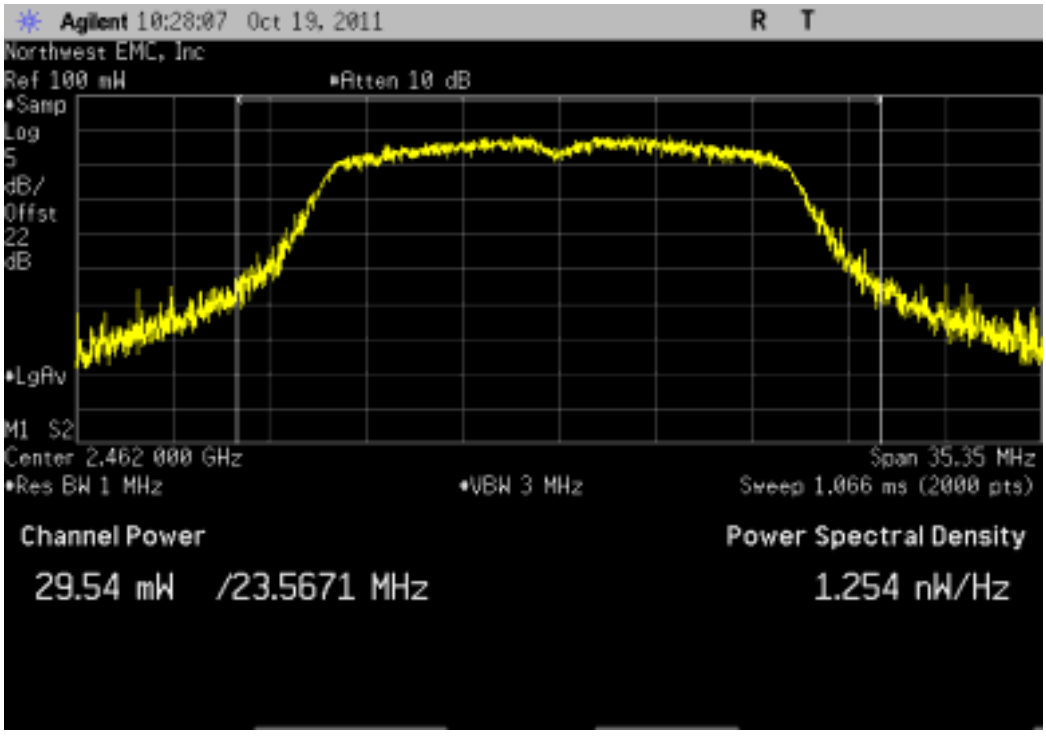
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				28.616 mW	< 1 W	Pass



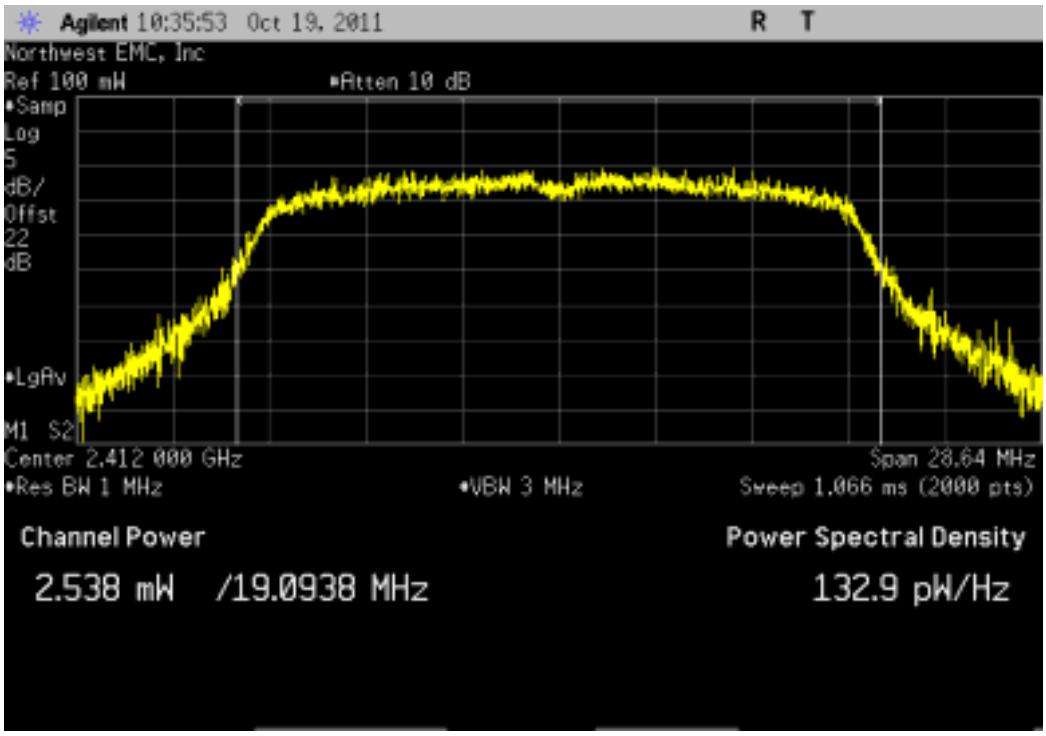
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz

				Value	Limit	Result
				29.543 mW	< 1 W	Pass



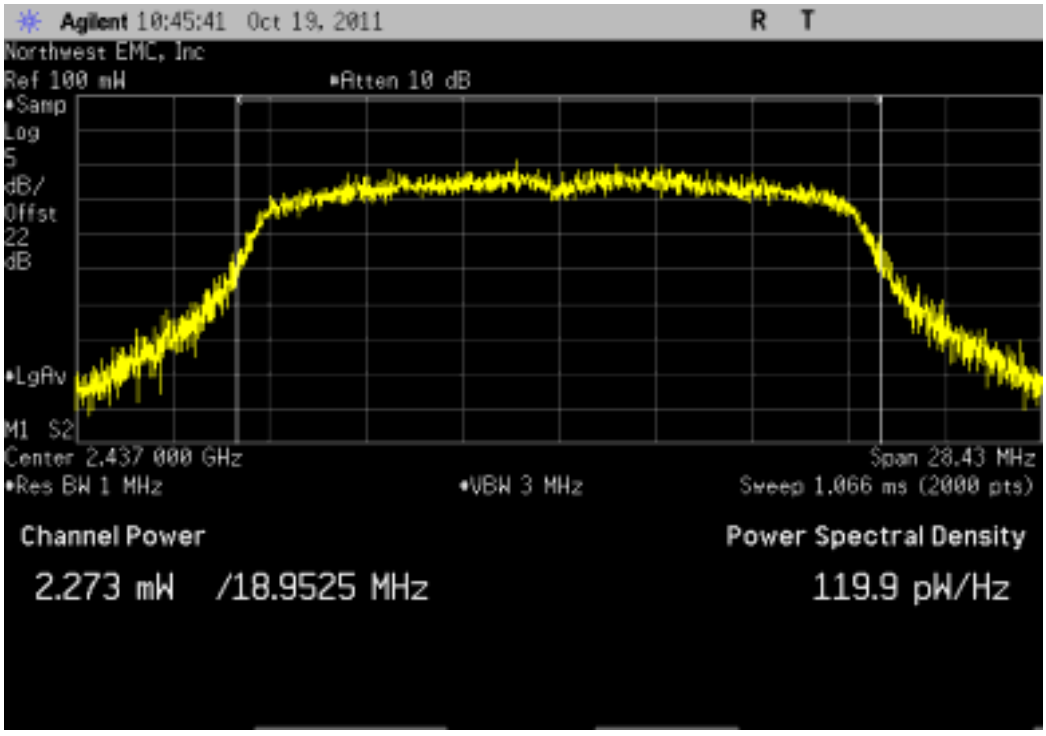
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz

				Value	Limit	Result
				2.538 mW	< 1 W	Pass



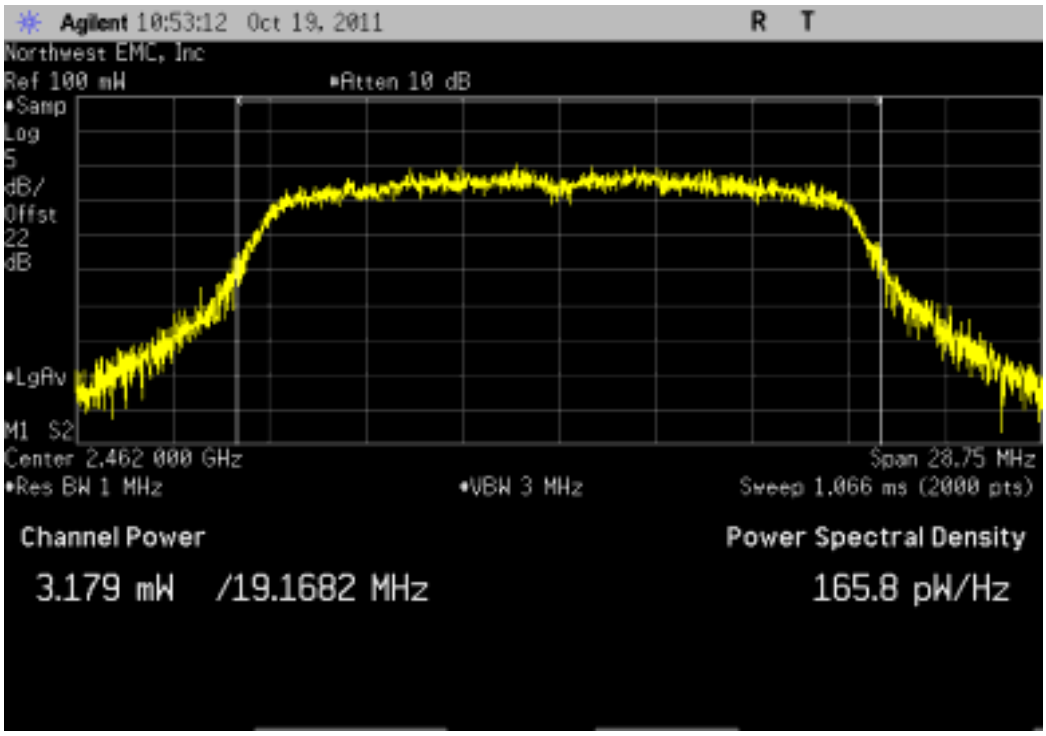
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				2.273 mW	< 1 W	Pass



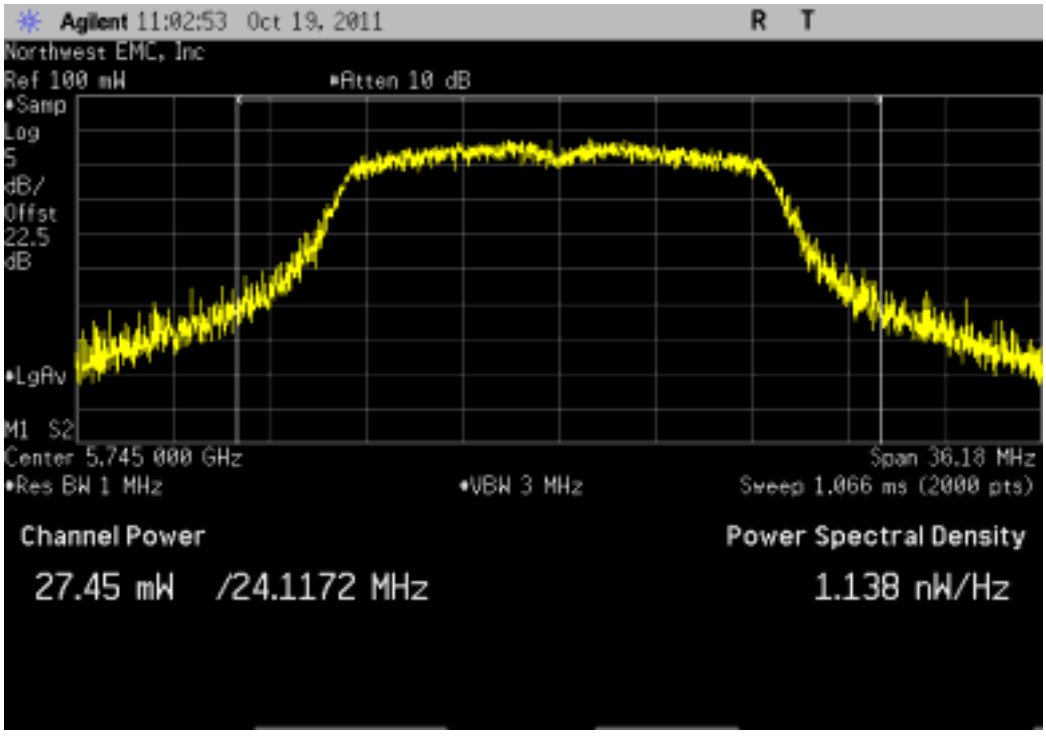
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz

				Value	Limit	Result
				3.179 mW	< 1 W	Pass



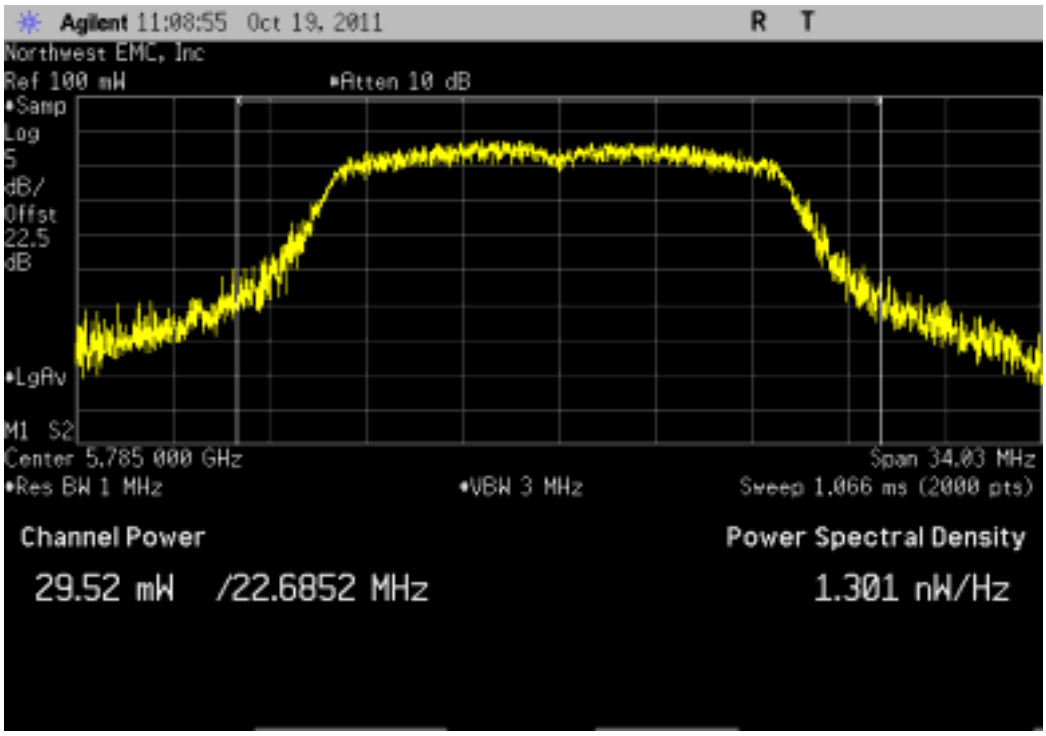
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz

				Value	Limit	Result
				27.453 mW	< 1 W	Pass



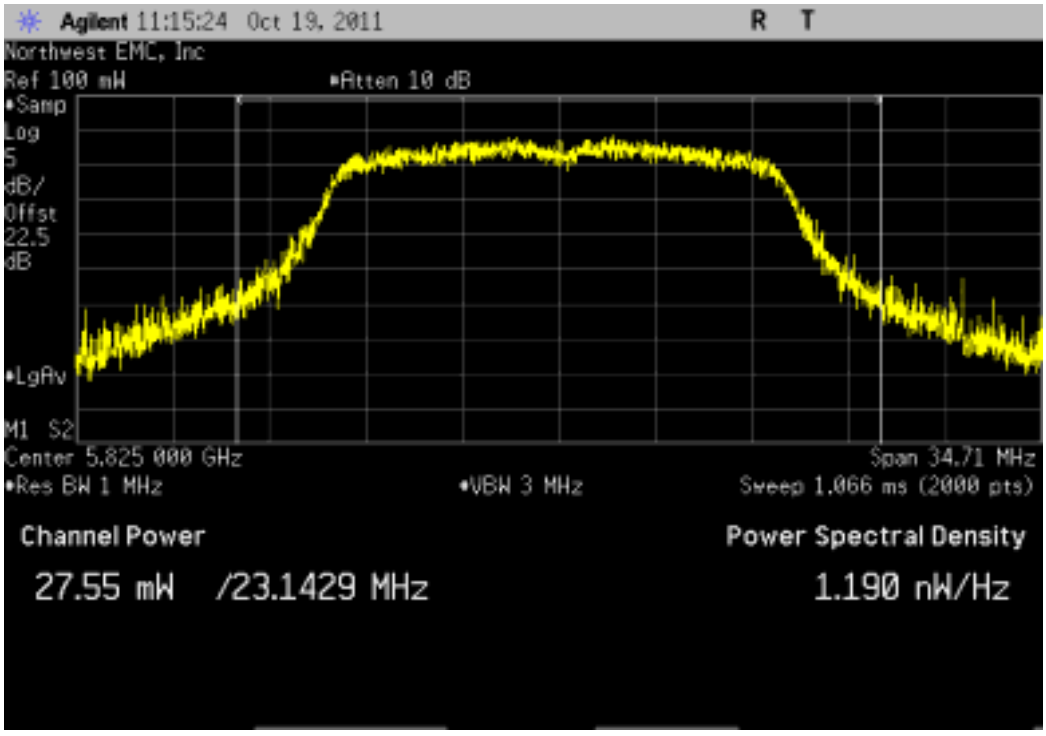
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz

				Value	Limit	Result
				29.52 mW	< 1 W	Pass



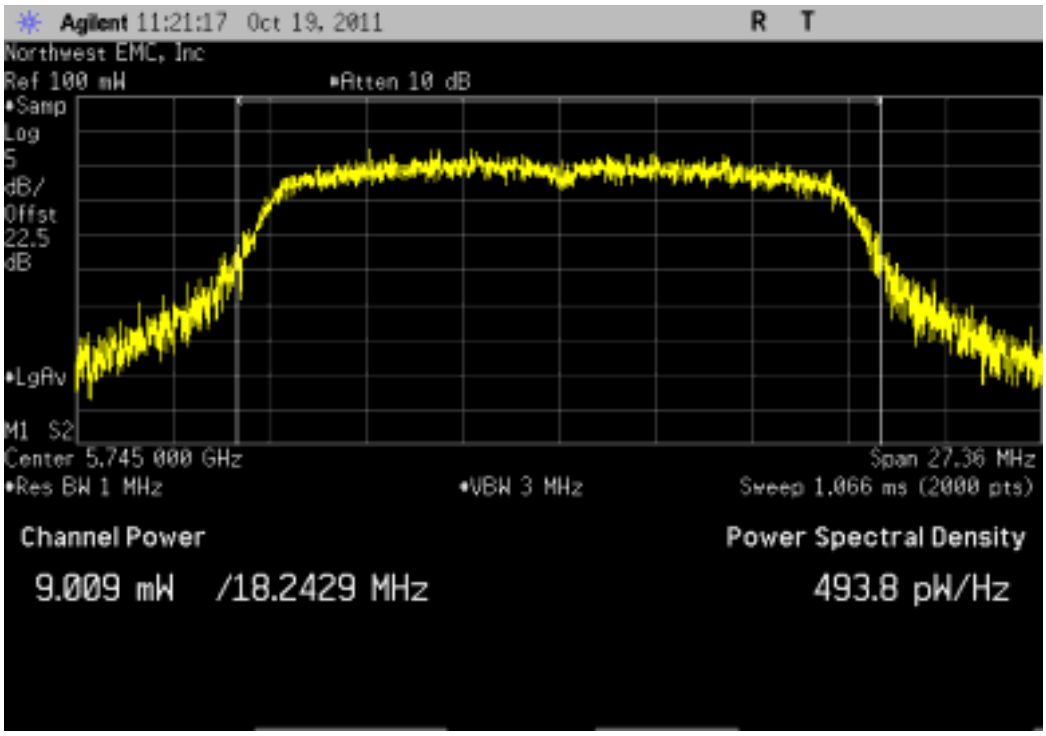
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz

				Value	Limit	Result
				27.546 mW	< 1 W	Pass



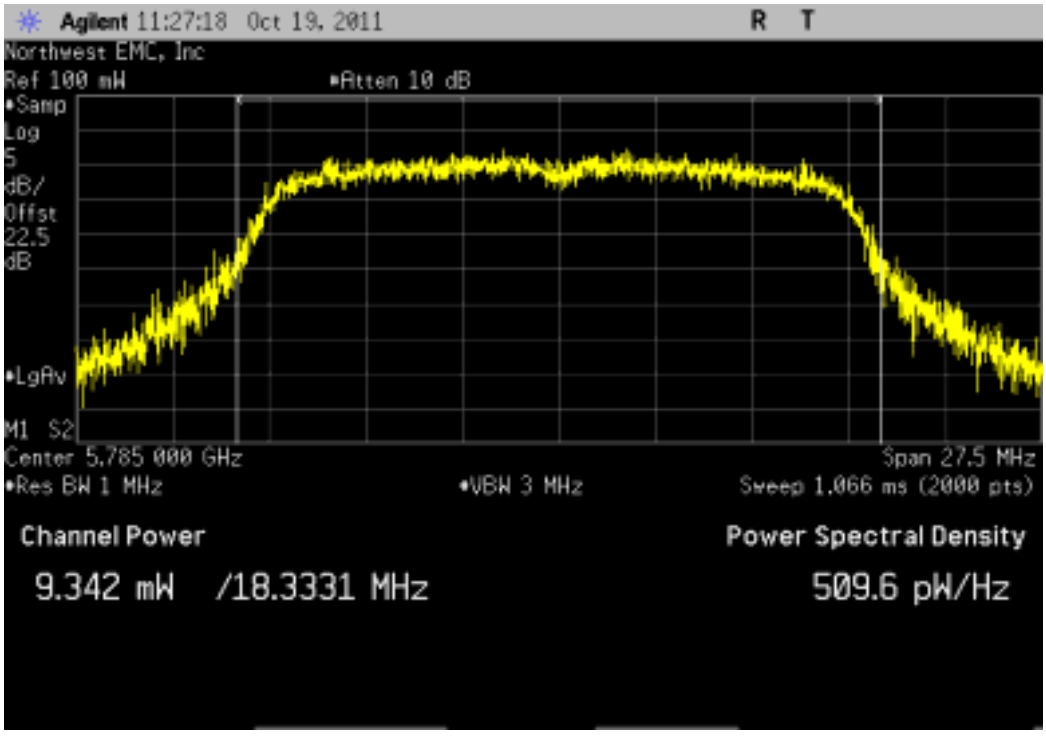
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz

				Value	Limit	Result
				9.009 mW	< 1 W	Pass



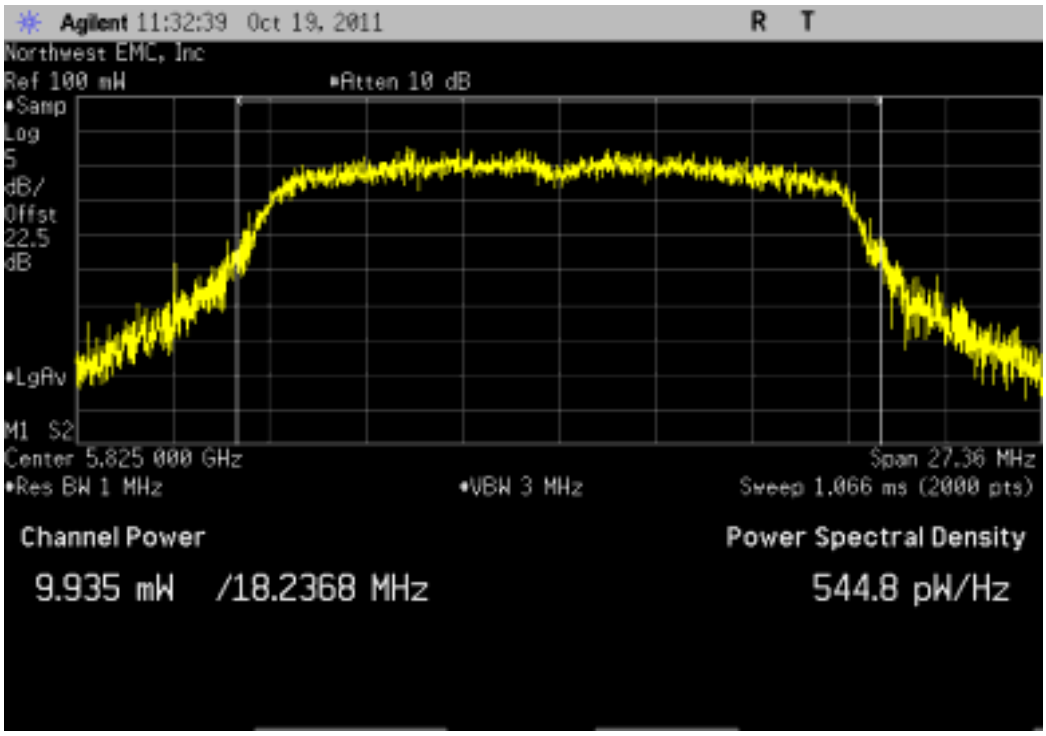
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz

				Value	Limit	Result
				9.342 mW	< 1 W	Pass



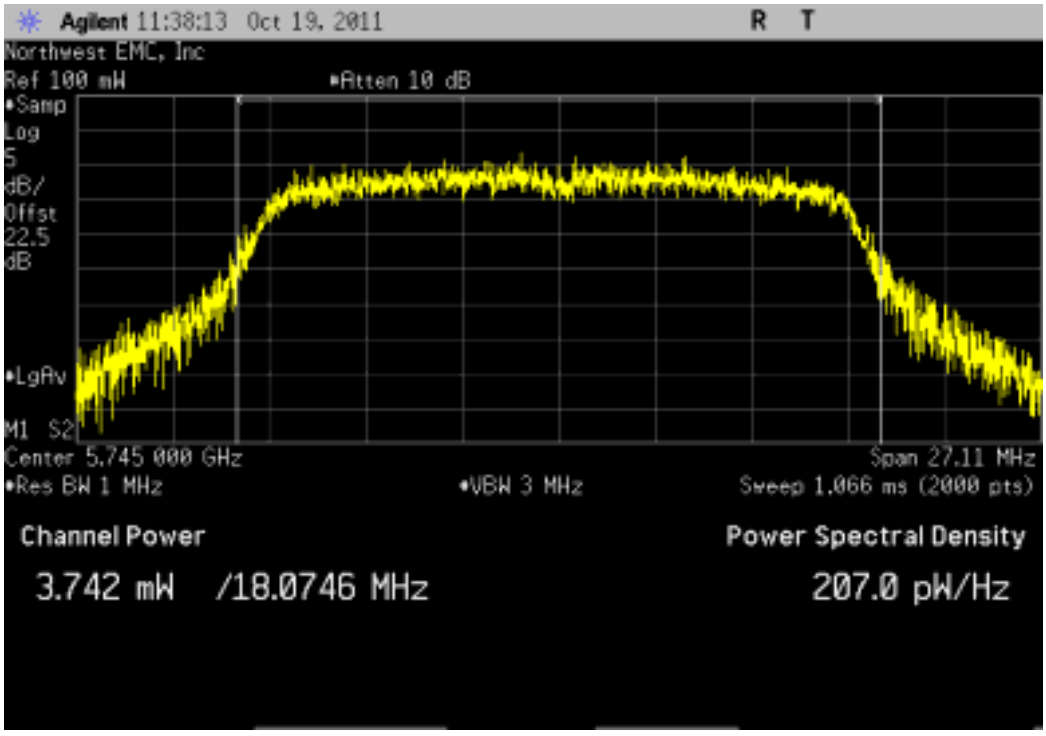
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz

				Value	Limit	Result
				9.935 mW	< 1 W	Pass



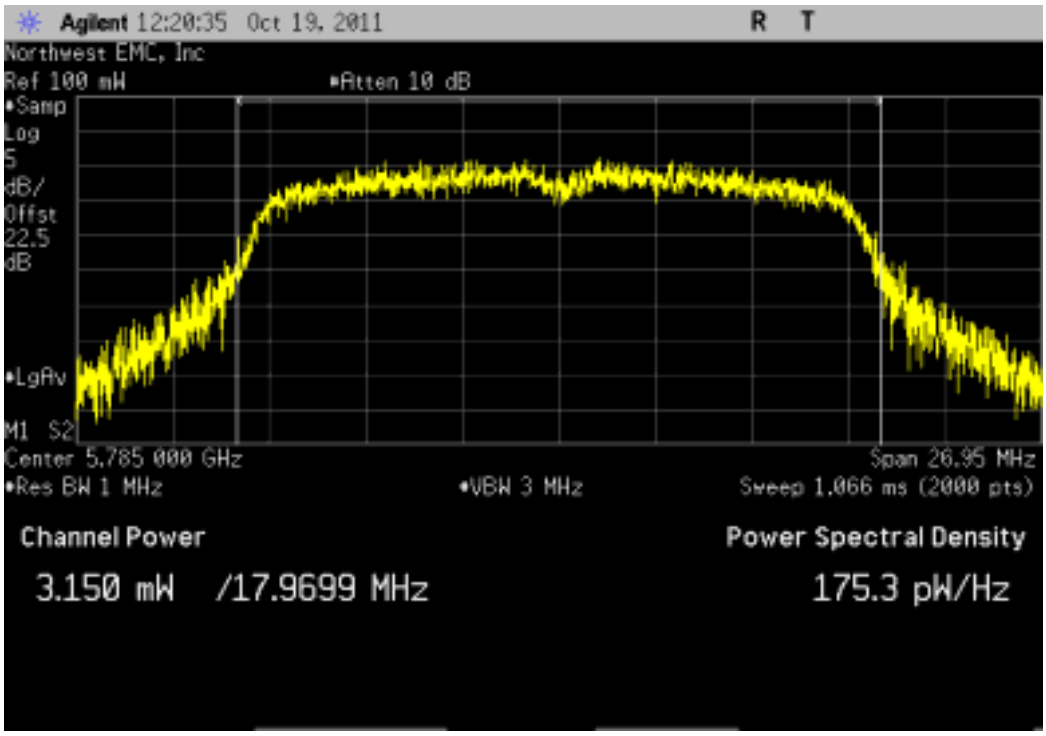
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz

				Value	Limit	Result
				3.742 mW	< 1 W	Pass



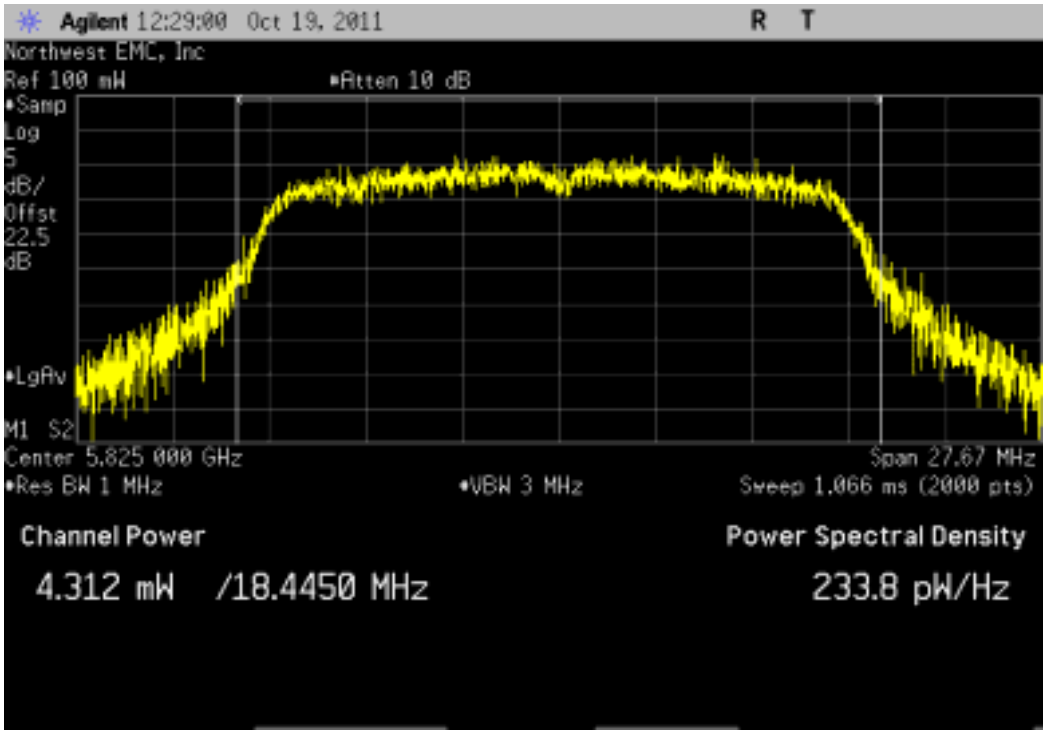
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz

				Value	Limit	Result
				3.15 mW	< 1 W	Pass



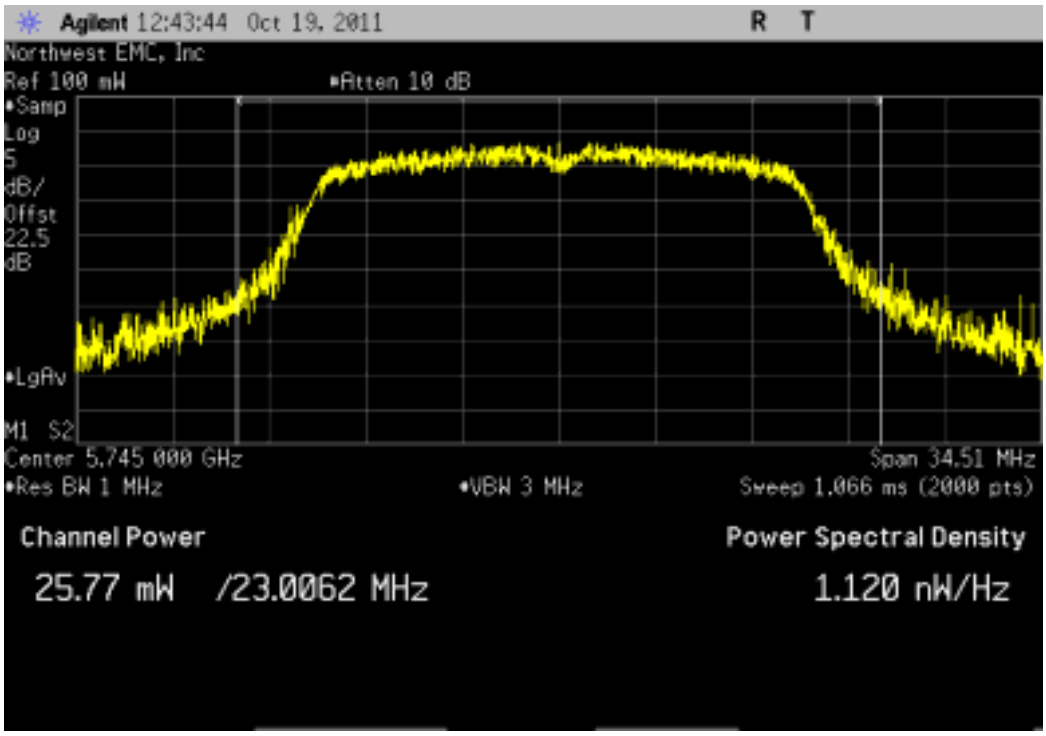
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz

				Value	Limit	Result
				4.312 mW	< 1 W	Pass



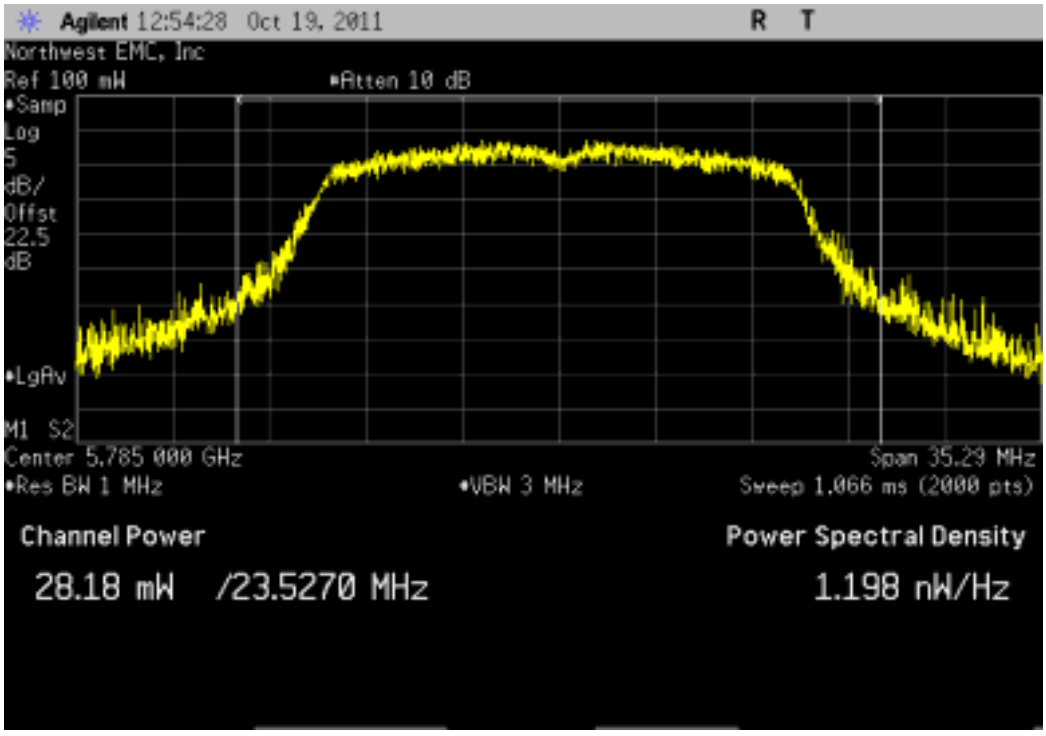
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz

				Value	Limit	Result
				25.768 mW	< 1 W	Pass



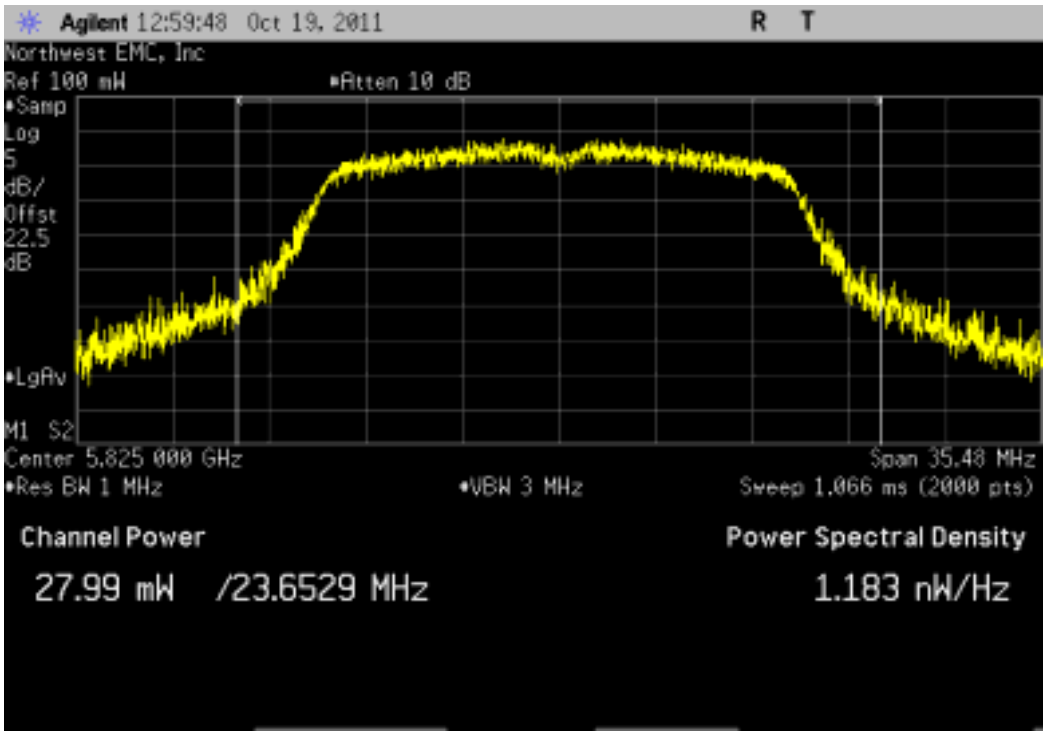
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz

				Value	Limit	Result
				28.182 mW	< 1 W	Pass



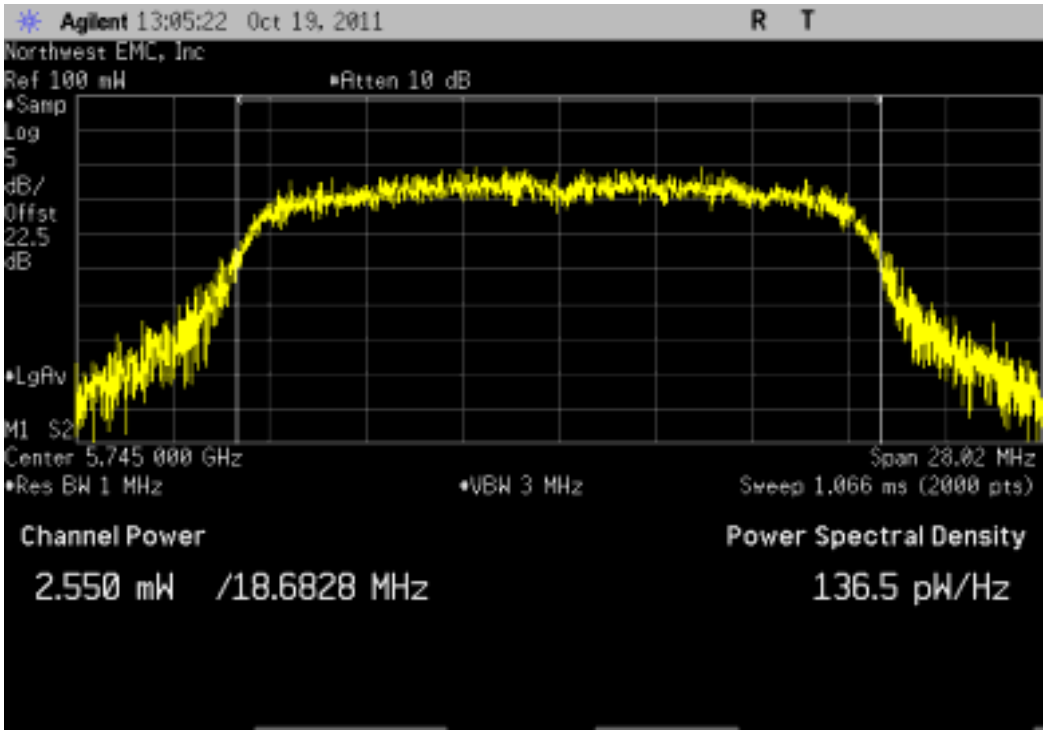
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz

				Value	Limit	Result
				27.989 mW	< 1 W	Pass



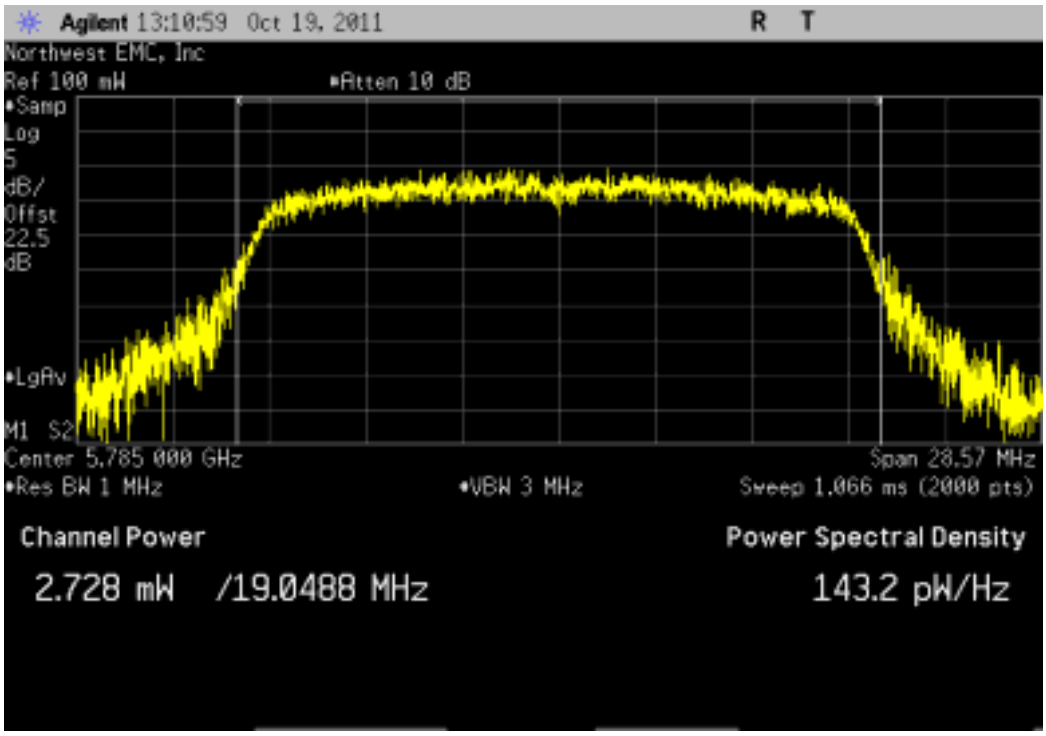
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz

				Value	Limit	Result
				2.55 mW	< 1 W	Pass



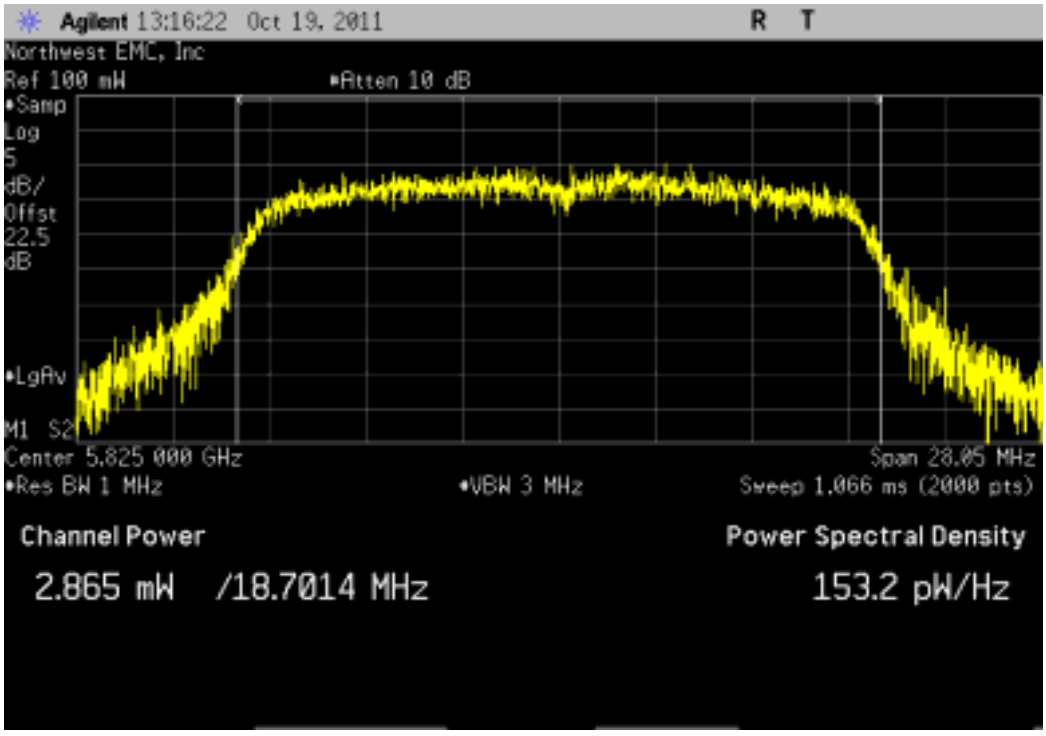
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Mid Channel 157, 5785 MHz

				Value	Limit	Result
				2.728 mW	< 1 W	Pass



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz

				Value	Limit	Result
				2.865 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
Spectrum Analyzer	Agilent	E4440A	AAX	5/23/2011	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	10/12/2011	12
Signal Generator	Agilent	N5183A	TIA	1/18/2011	12
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	6/2/2011	12

MEASUREMENT UNCERTAINTY

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 for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

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 the ISM 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 required data rates available in 802.11 a/b/g/n.

The spectrum was scanned across each band edge from ~25 MHz below the band edge to ~25 MHz above the band edge.

Band Edge Compliance

EUT:	X Series	Work Order:	LGPD0044
Serial Number:	3411000112, 341100050	Date:	10/20/11
Customer:	ZOLL Medical Corp.	Temperature:	23.23C°C
Attendees:	Curt McNamara, Karl Karcht	Humidity:	23%
Project:	None	Barometric Pres.:	1020.2
Tested by:	Trevor Buls	Power: 15VDC	Job Site: MN08

TEST SPECIFICATIONS	TEST METHOD
FCC 15.247:2011	ANSI C63.10:2009

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

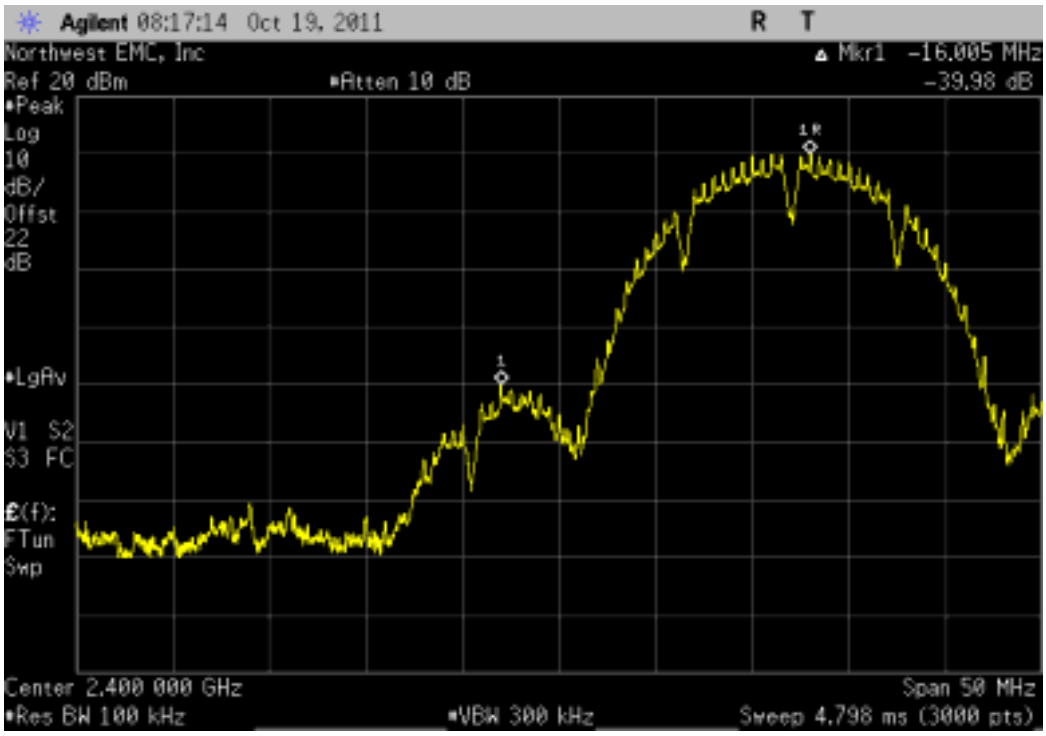
None

Configuration #	1	Signature	Trevor Buls

	Value	Limit	Result
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz	-39.98 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-57.21 dBc	≤ -20 dBc	Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz	-40.2 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-58 dBc	≤ -20 dBc	Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz	-27.21 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-43.23 dBc	≤ -20 dBc	Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz	-31.52 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-49.78 dBc	≤ -20 dBc	Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz	-33.27 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-52.34 dBc	≤ -20 dBc	Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz	-25.88 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-40.35 dBc	≤ -20 dBc	Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz	-32.92 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-52.08 dBc	≤ -20 dBc	Pass
5725 MHz - 5850 MHz Band			
802.11(a) 6 Mbps			
Low Channel 149, 5745 MHz	-39.91 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	-46.24 dBc	≤ -20 dBc	Pass
802.11(a) 36 Mbps			
Low Channel 149, 5745 MHz	-44.78 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	-53.25 dBc	≤ -20 dBc	Pass
802.11(a) 54 Mbps			
Low Channel 149, 5745 MHz	-47.12 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	-55.47 dBc	≤ -20 dBc	Pass
802.11(n) MCS0 - UNII			
Low Channel 149, 5745 MHz	-34.57 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	-46.81 dBc	≤ -20 dBc	Pass
802.11(n) MCS7 - UNII			
Low Channel 149, 5745 MHz	-49.11 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	-55.01 dBc	≤ -20 dBc	Pass

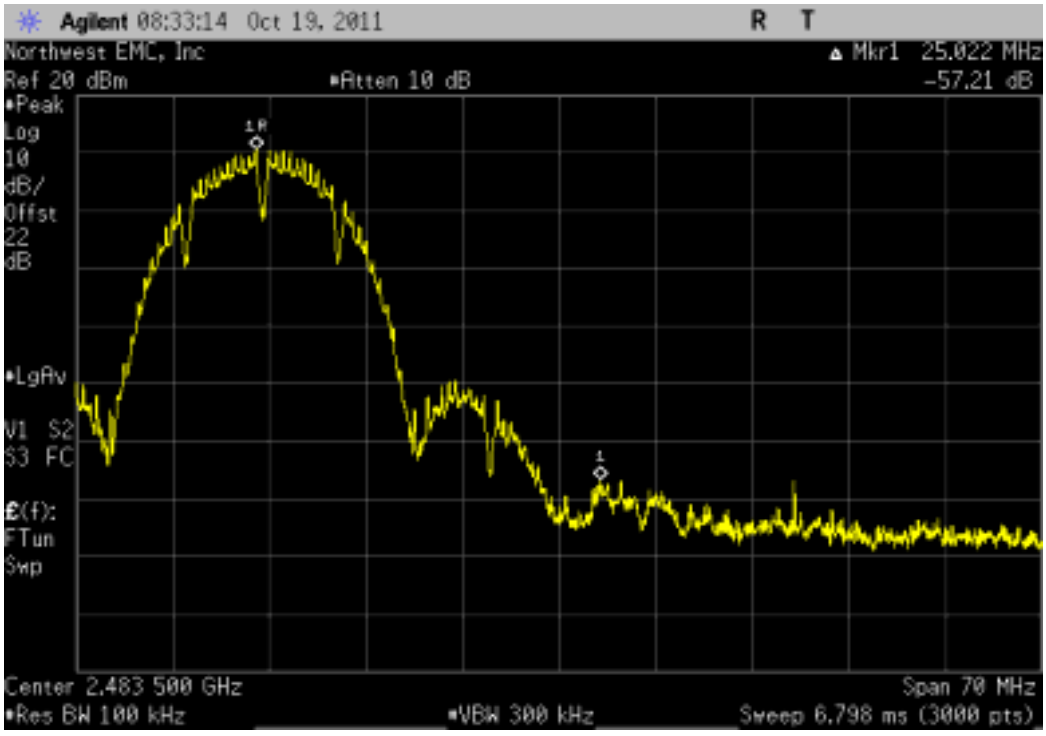
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				-39.98 dBc	≤ -20 dBc	Pass



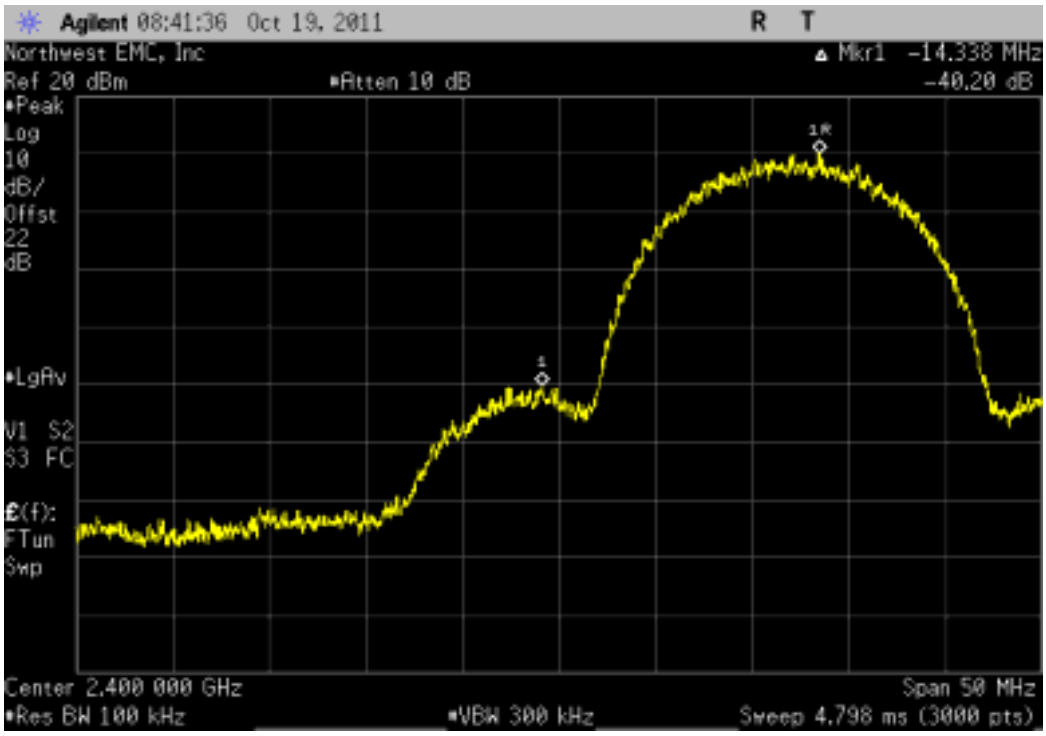
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				-57.21 dBc	≤ -20 dBc	Pass



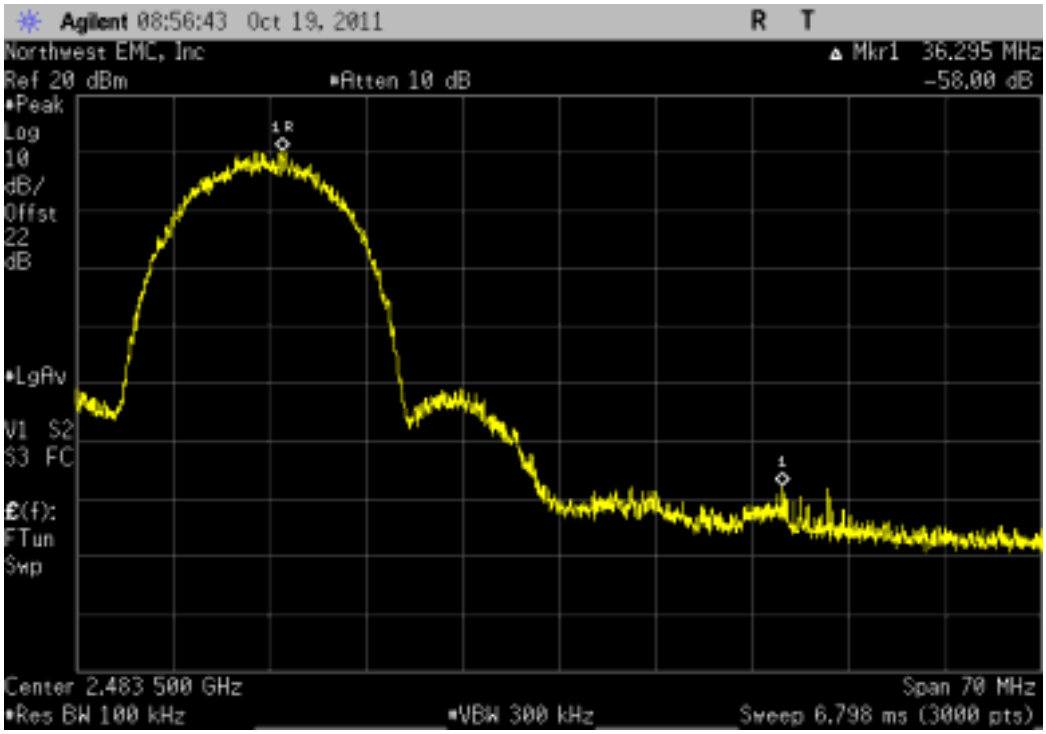
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				-40.2 dBc	≤ -20 dBc	Pass



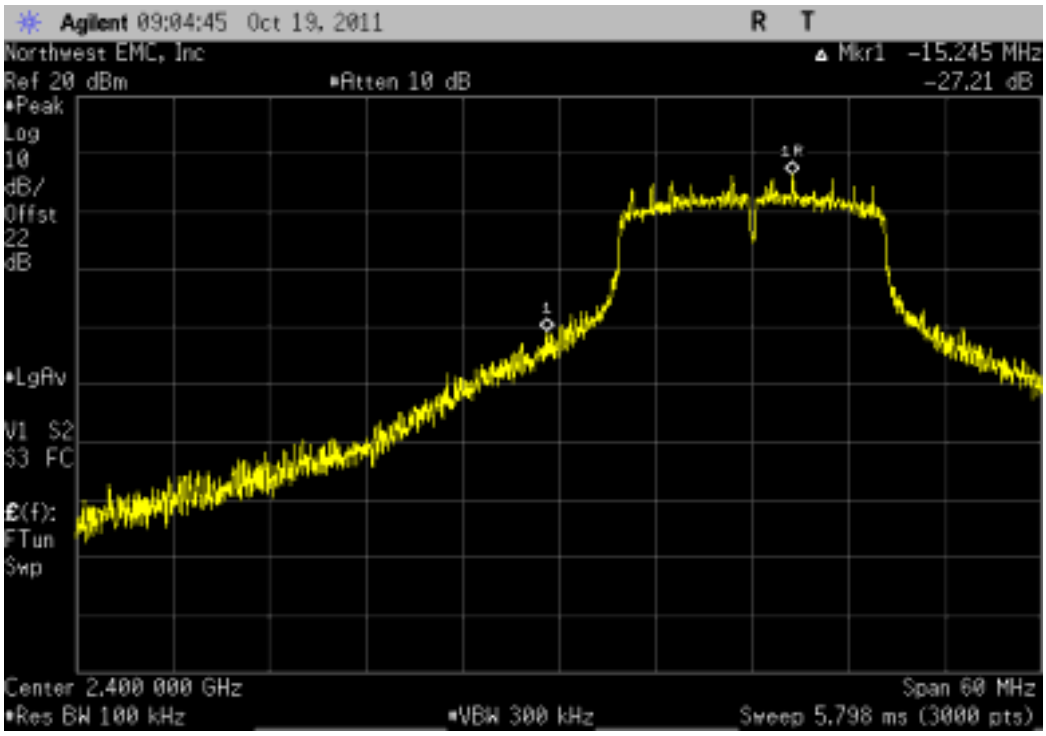
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				-58 dBc	≤ -20 dBc	Pass



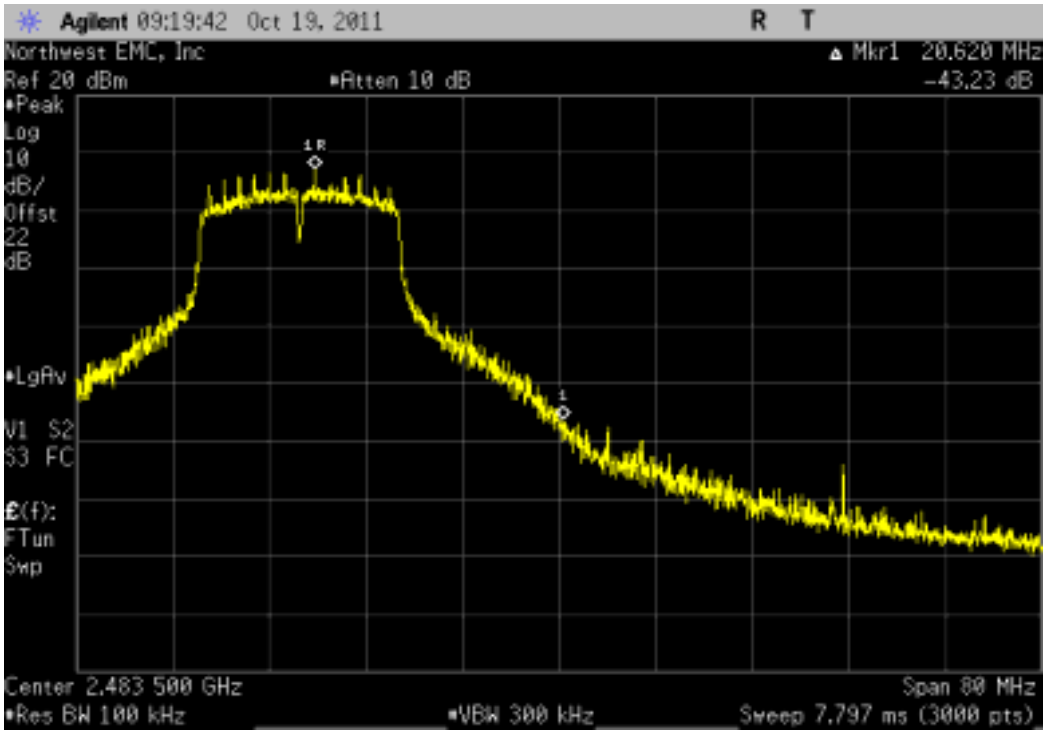
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				-27.21 dBc	≤ -20 dBc	Pass



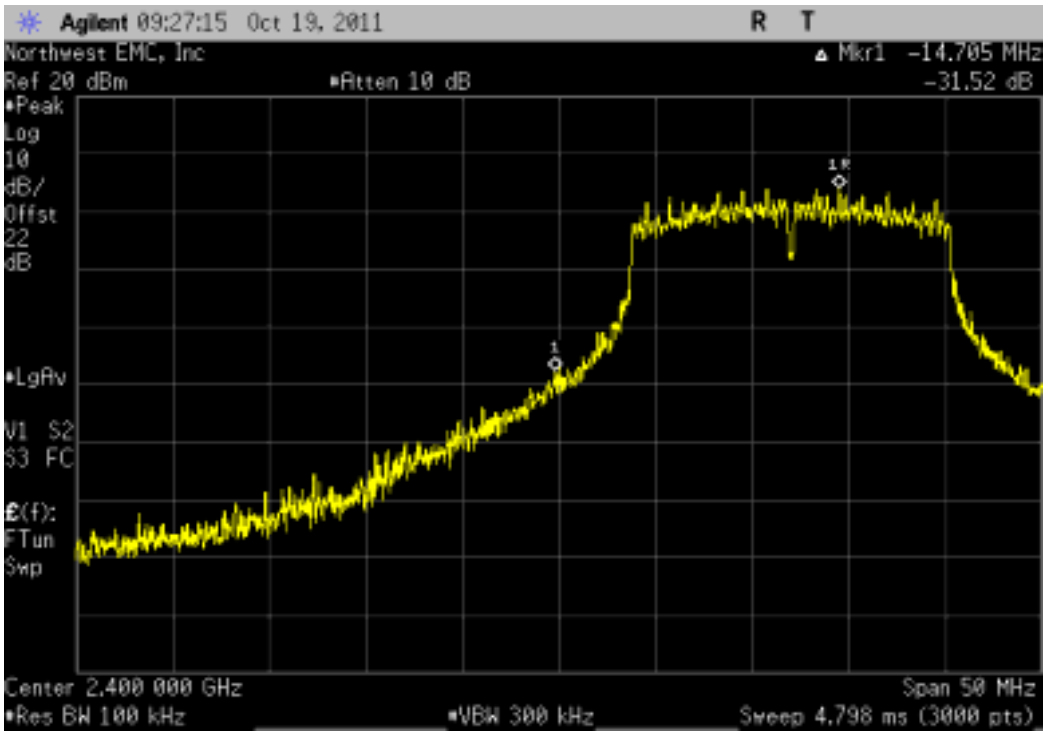
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				-43.23 dBc	≤ -20 dBc	Pass



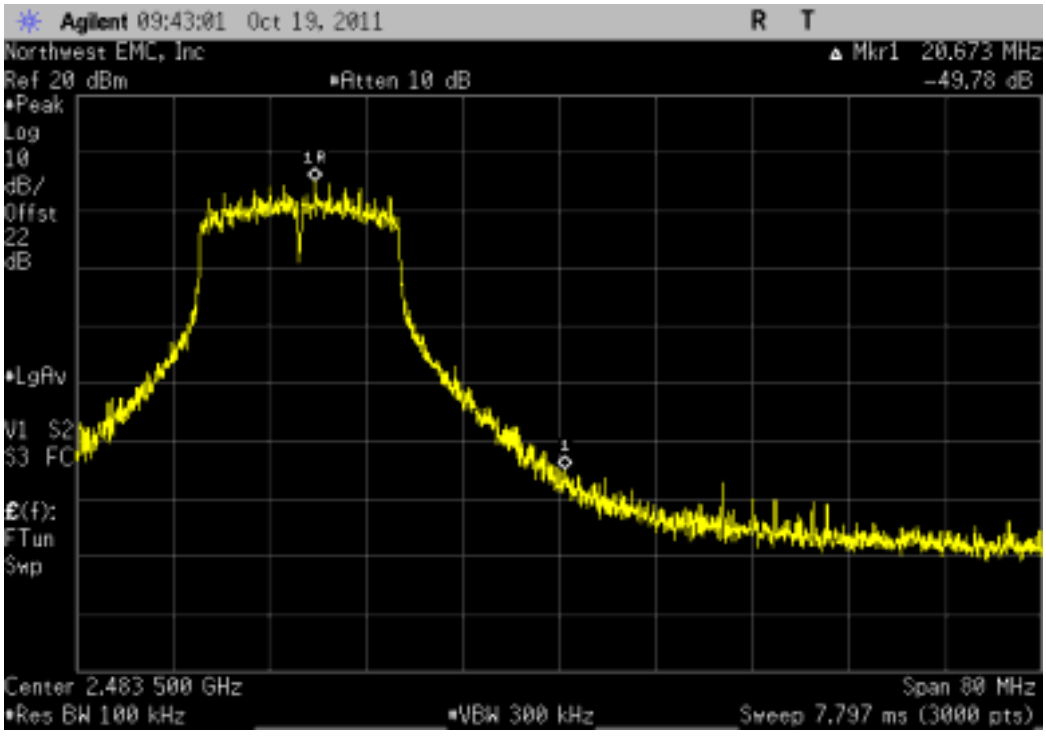
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				-31.52 dBc	≤ -20 dBc	Pass



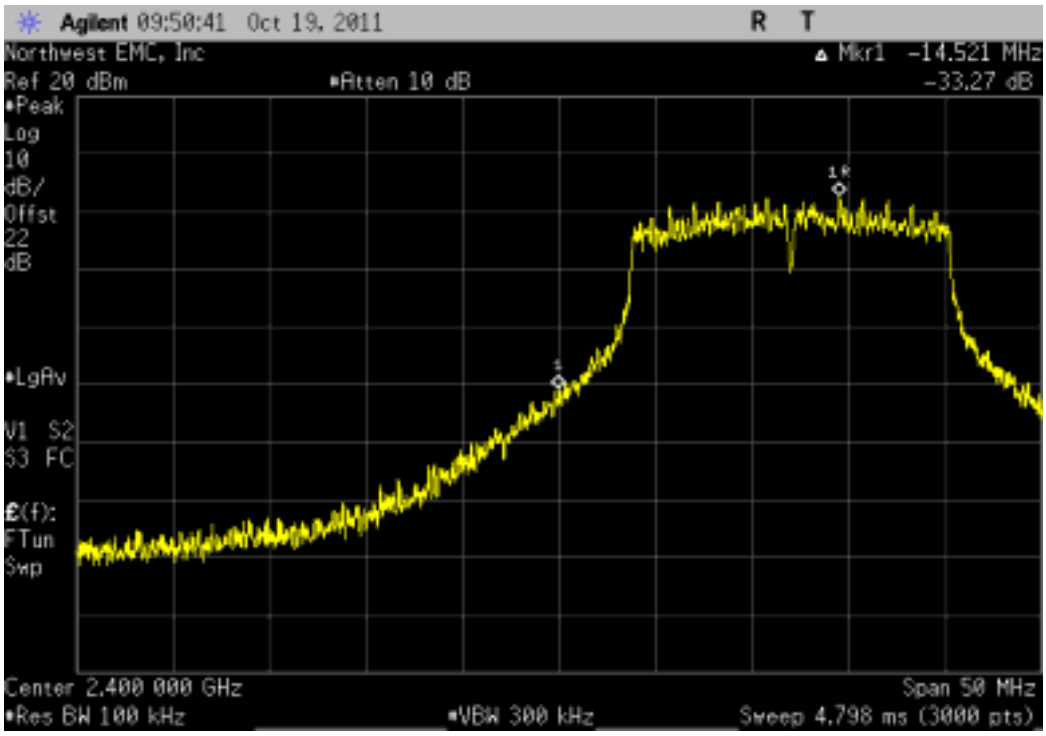
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				-49.78 dBc	≤ -20 dBc	Pass



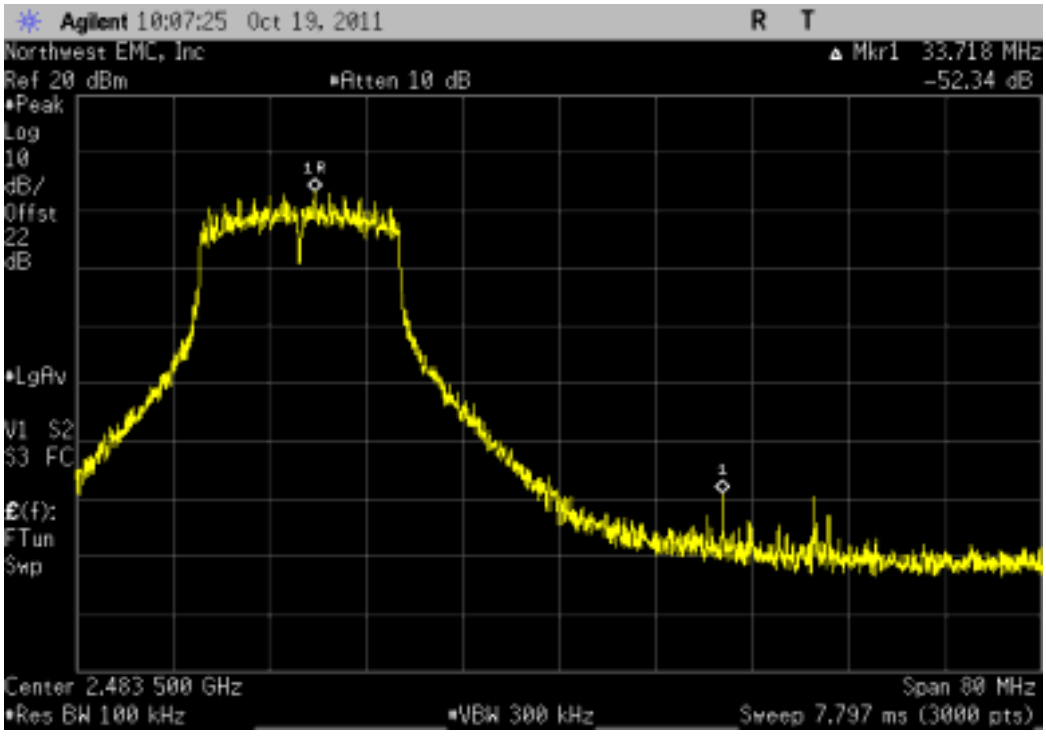
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				-33.27 dBc	≤ -20 dBc	Pass



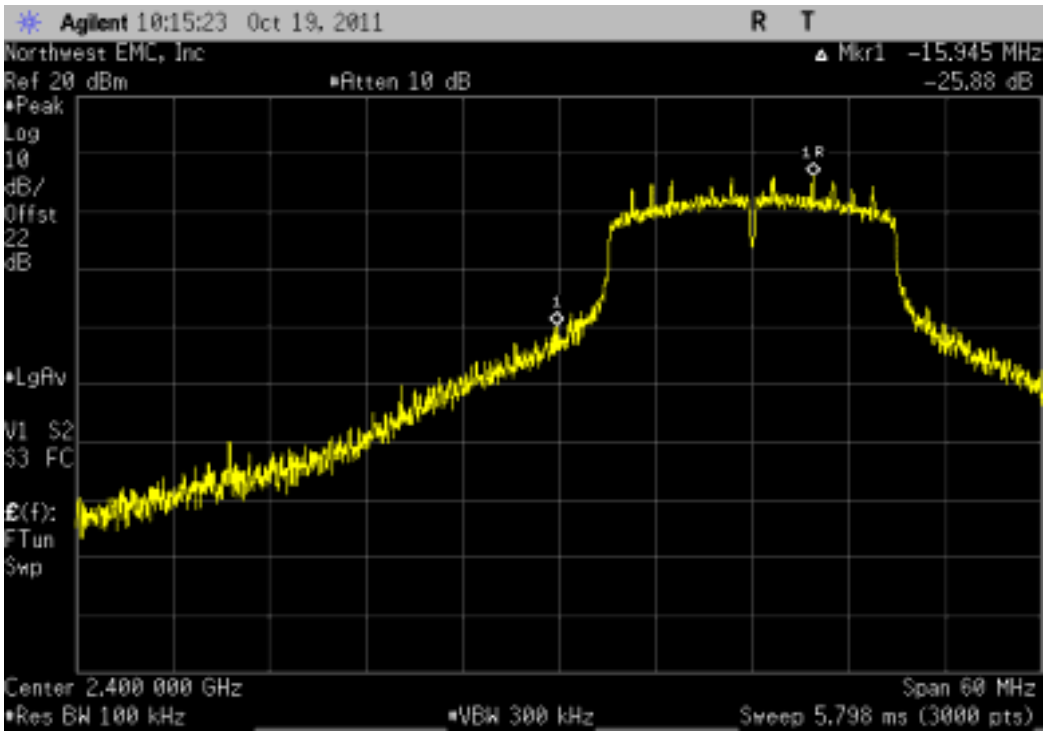
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				-52.34 dBc	≤ -20 dBc	Pass



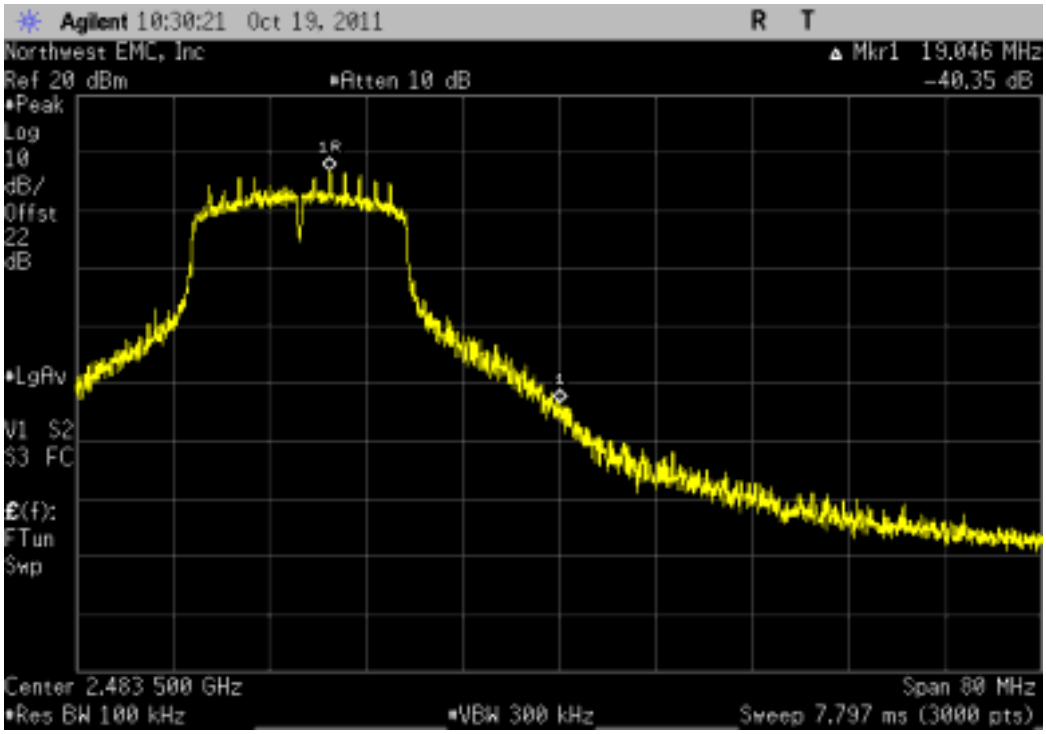
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz

				Value	Limit	Result
				-25.88 dBc	≤ -20 dBc	Pass



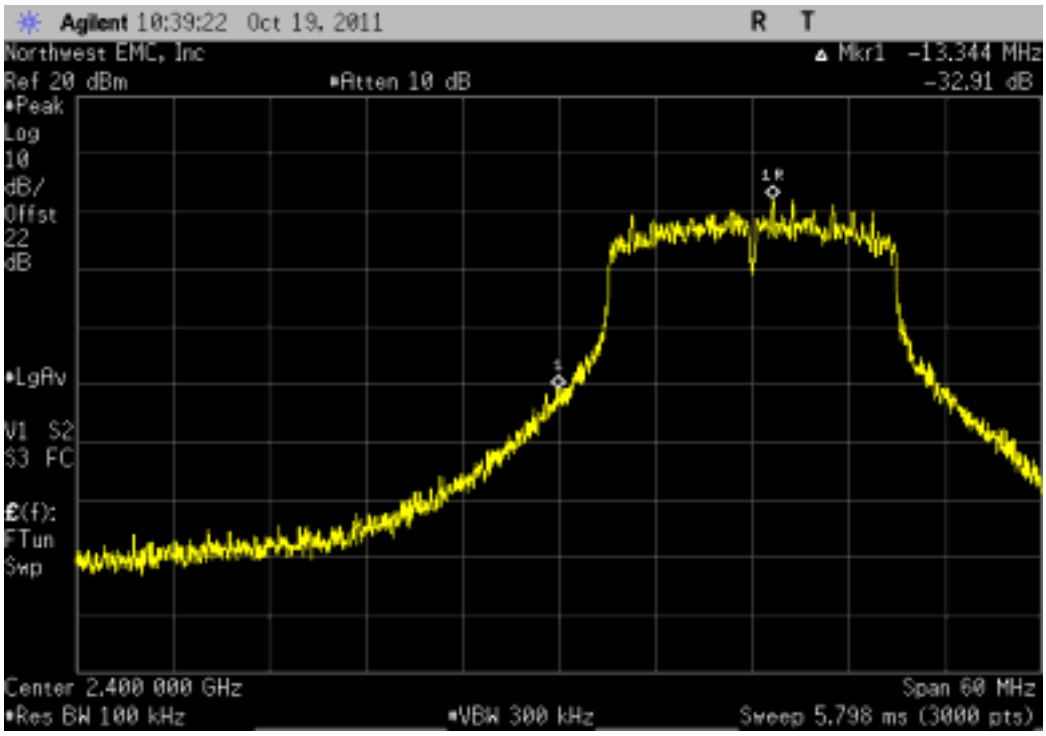
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz

				Value	Limit	Result
				-40.35 dBc	≤ -20 dBc	Pass



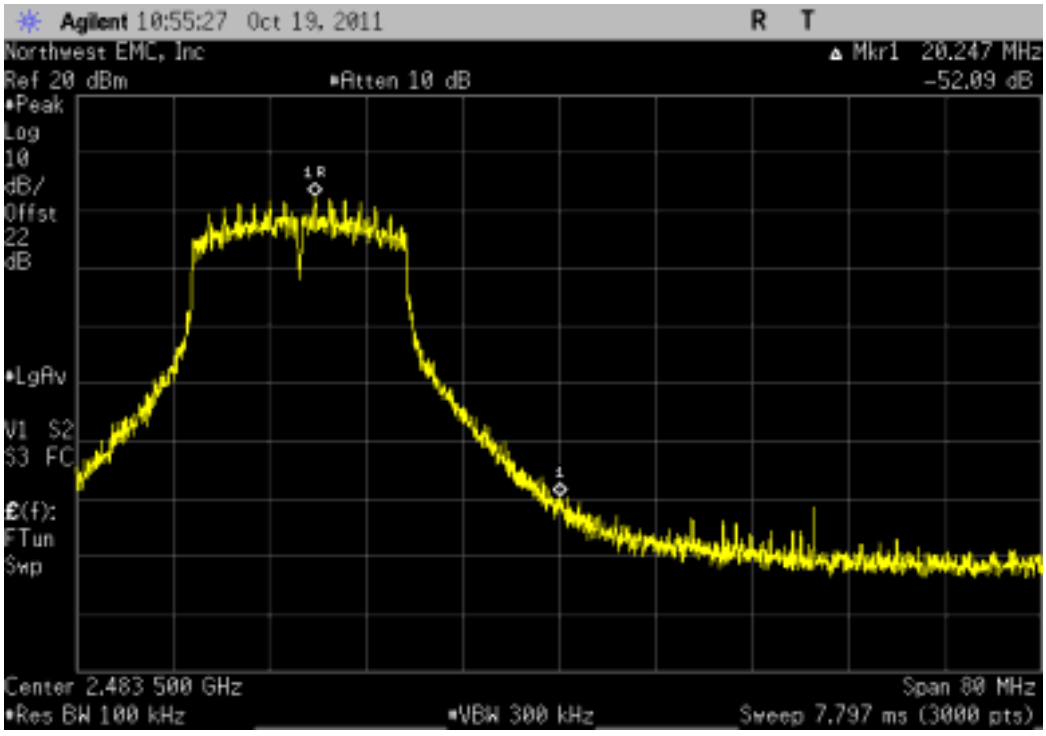
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz

				Value	Limit	Result
				-32.92 dBc	≤ -20 dBc	Pass



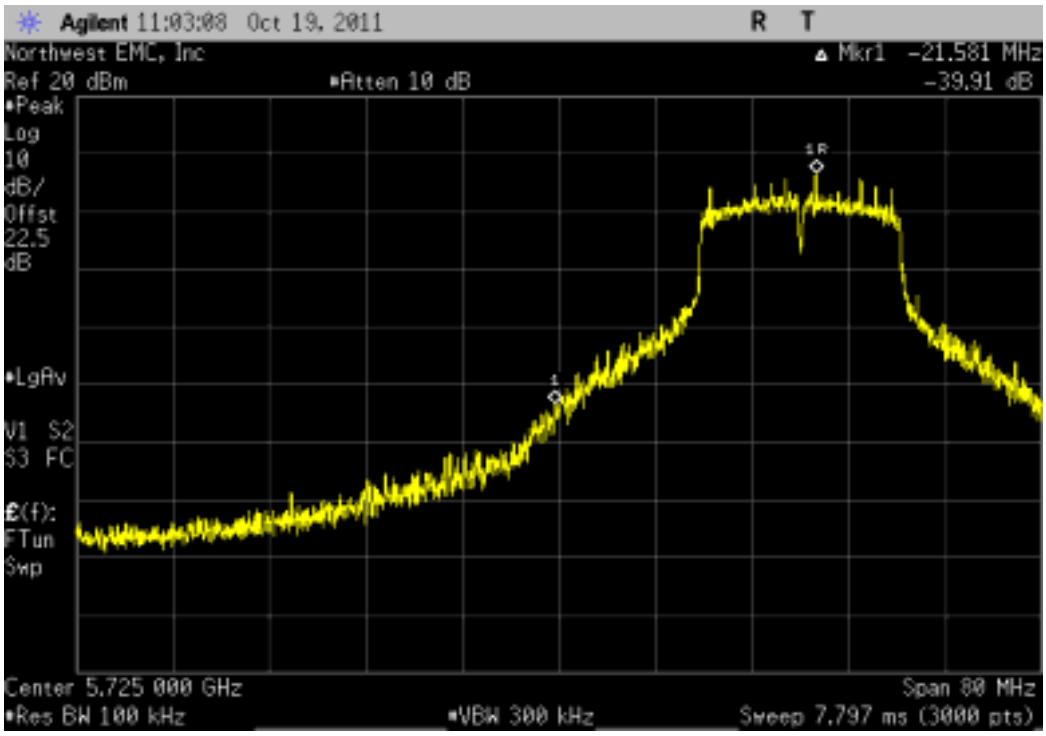
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz

				Value	Limit	Result
				-52.08 dBc	≤ -20 dBc	Pass



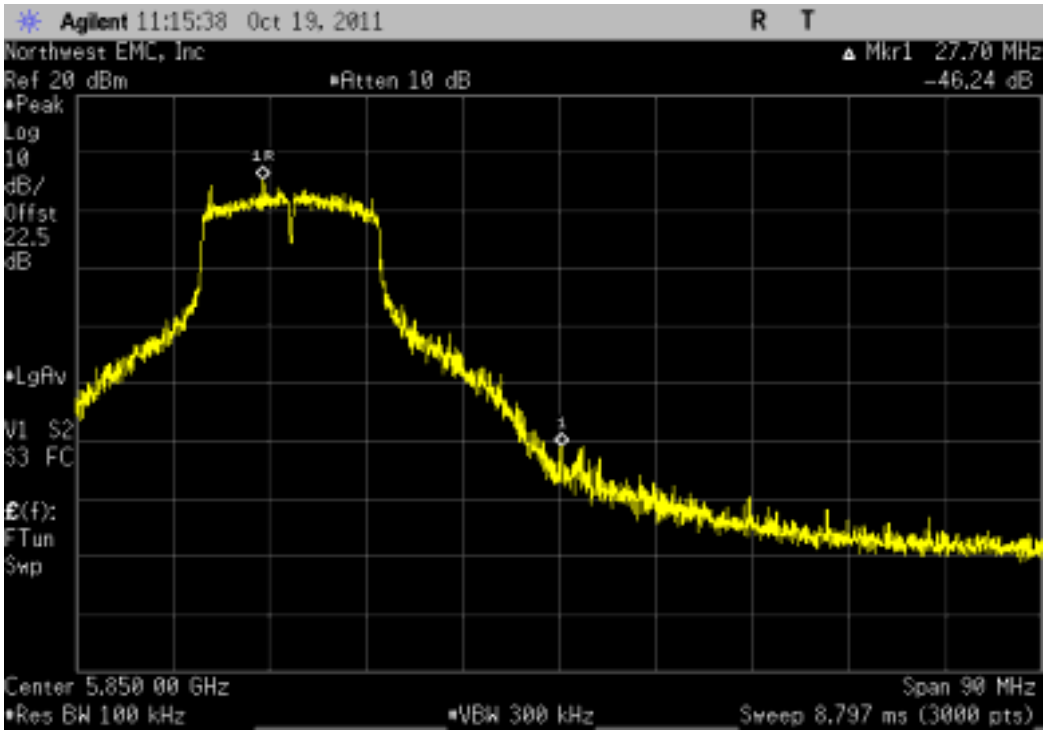
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz

				Value	Limit	Result
				-39.91 dBc	≤ -20 dBc	Pass



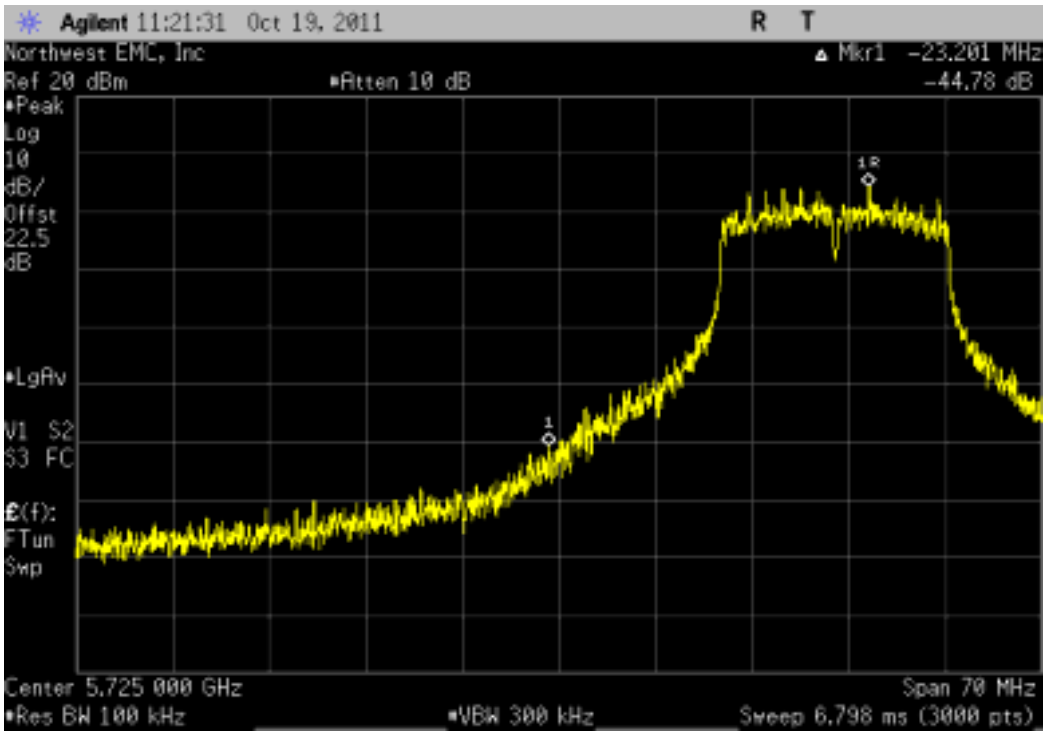
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz

				Value	Limit	Result
				-46.24 dBc	≤ -20 dBc	Pass



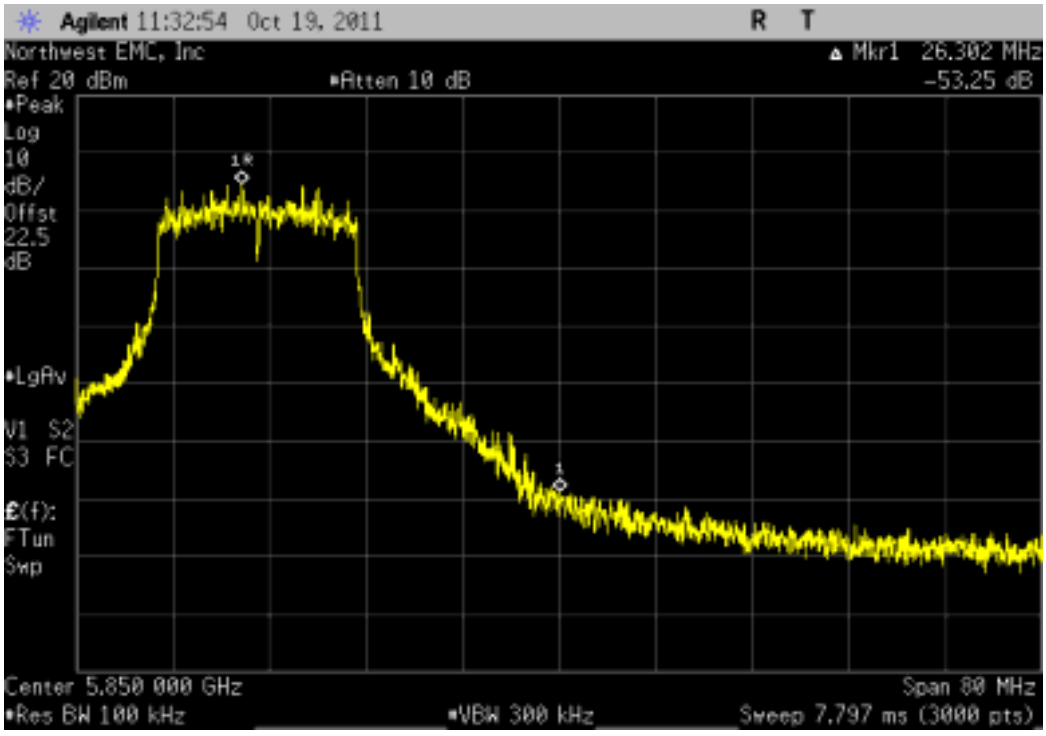
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz

				Value	Limit	Result
				-44.78 dBc	≤ -20 dBc	Pass



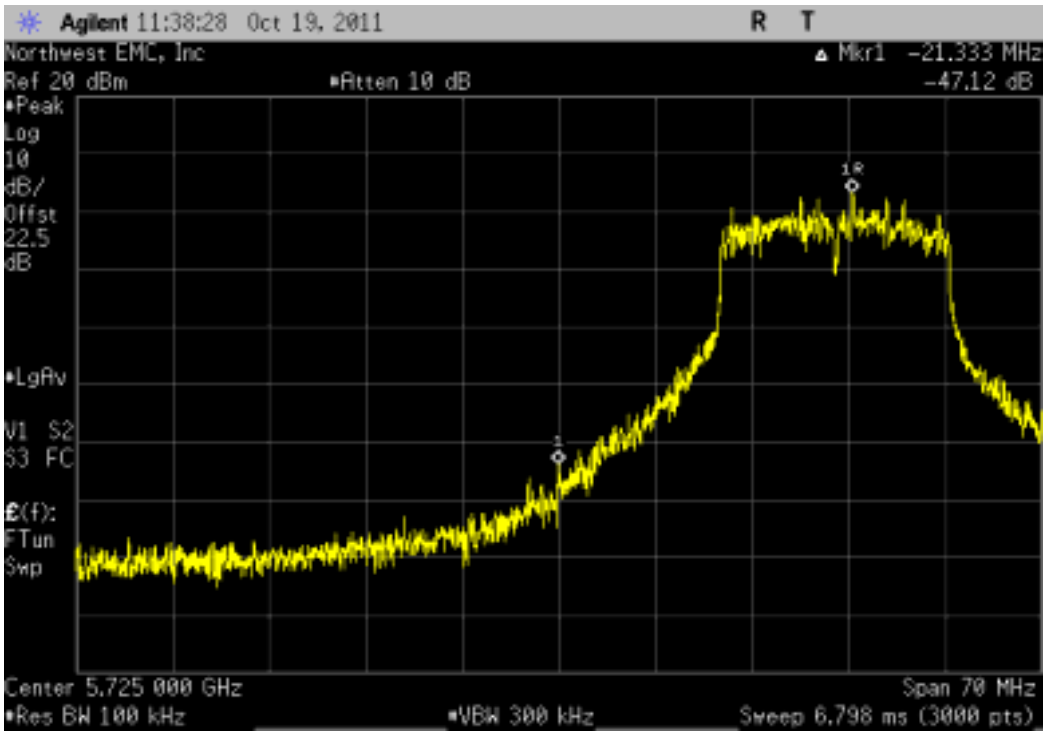
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz

				Value	Limit	Result
				-53.25 dBc	≤ -20 dBc	Pass



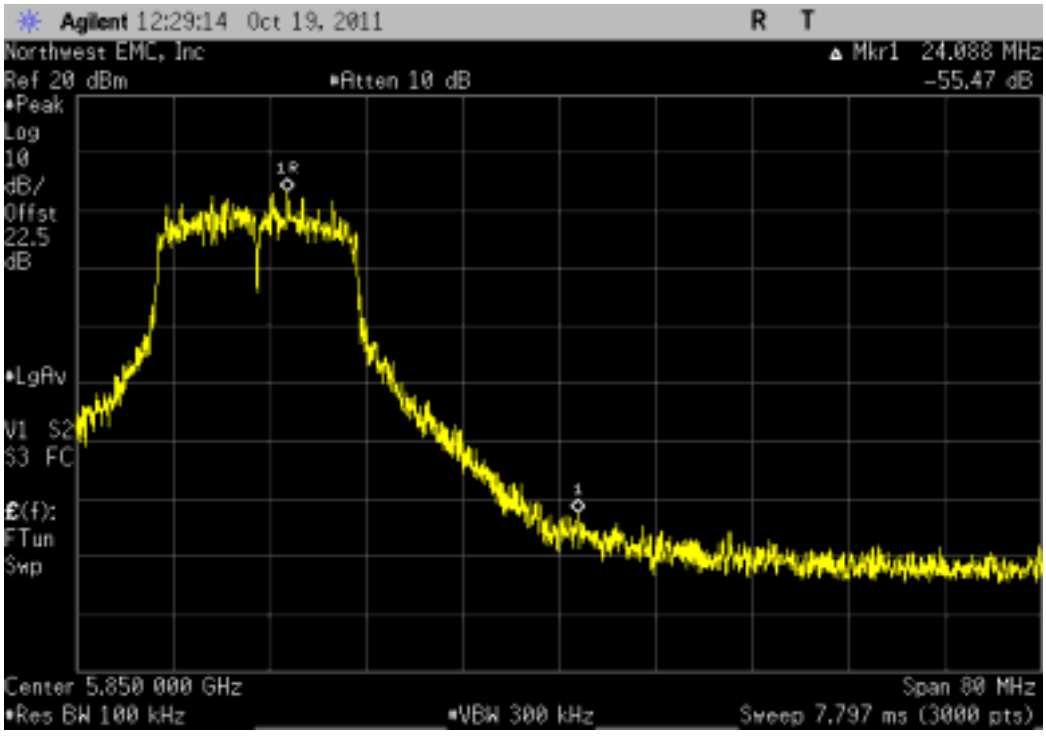
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz

				Value	Limit	Result
				-47.12 dBc	≤ -20 dBc	Pass



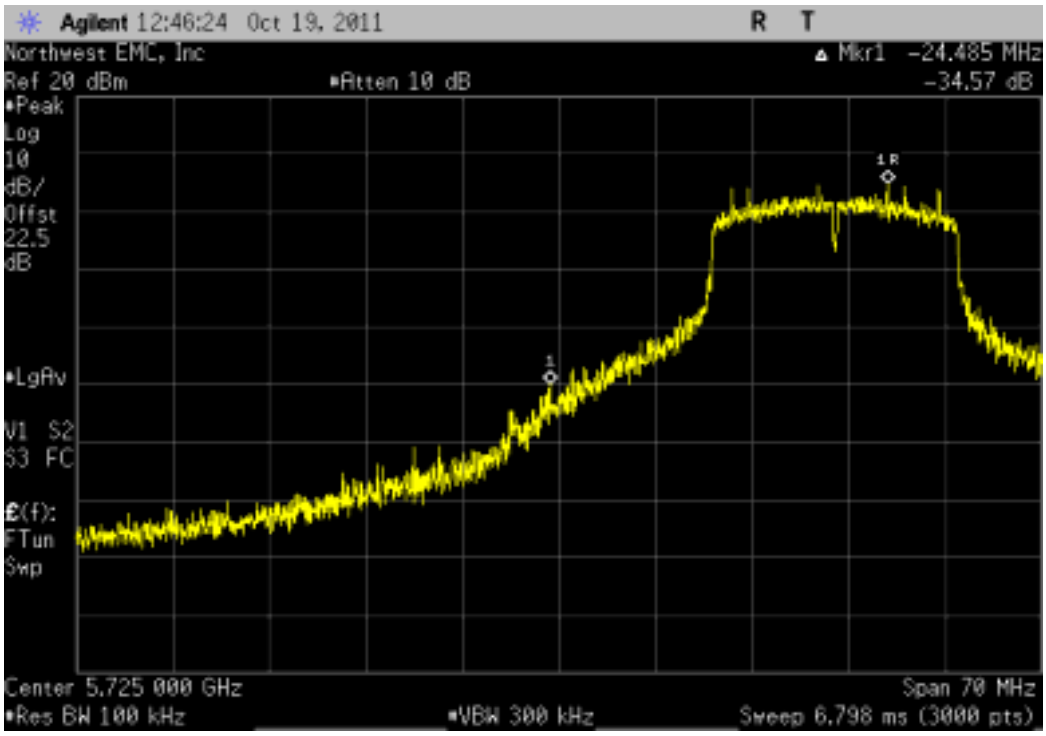
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz

				Value	Limit	Result
				-55.47 dBc	≤ -20 dBc	Pass



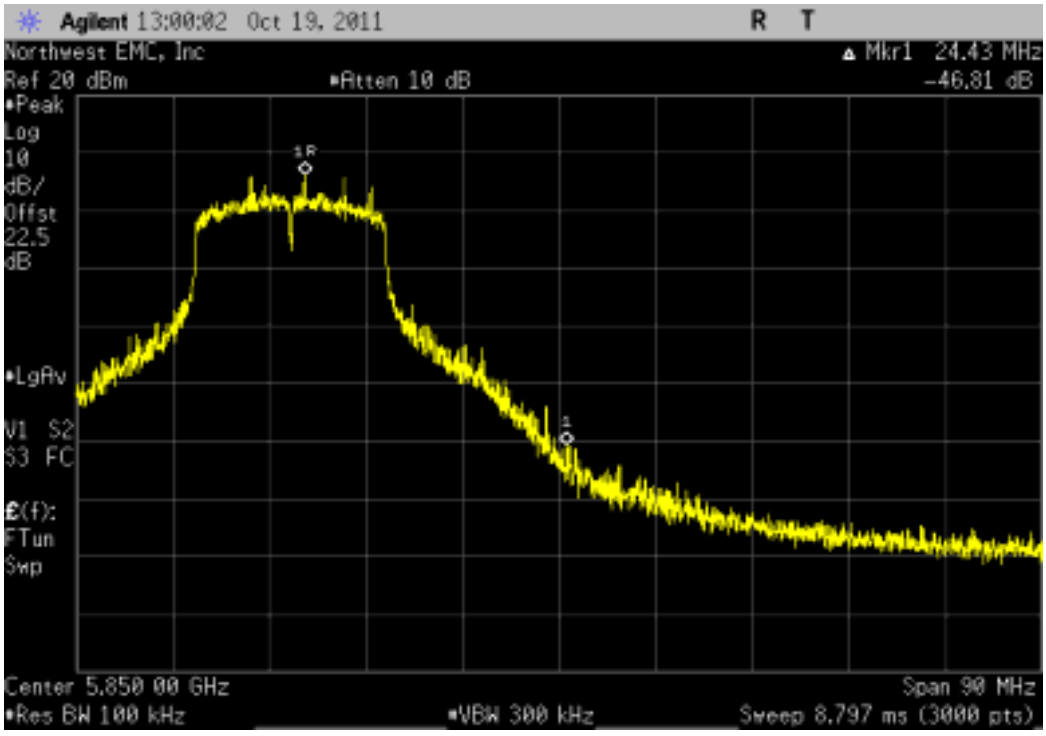
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz

				Value	Limit	Result
				-34.57 dBc	≤ -20 dBc	Pass



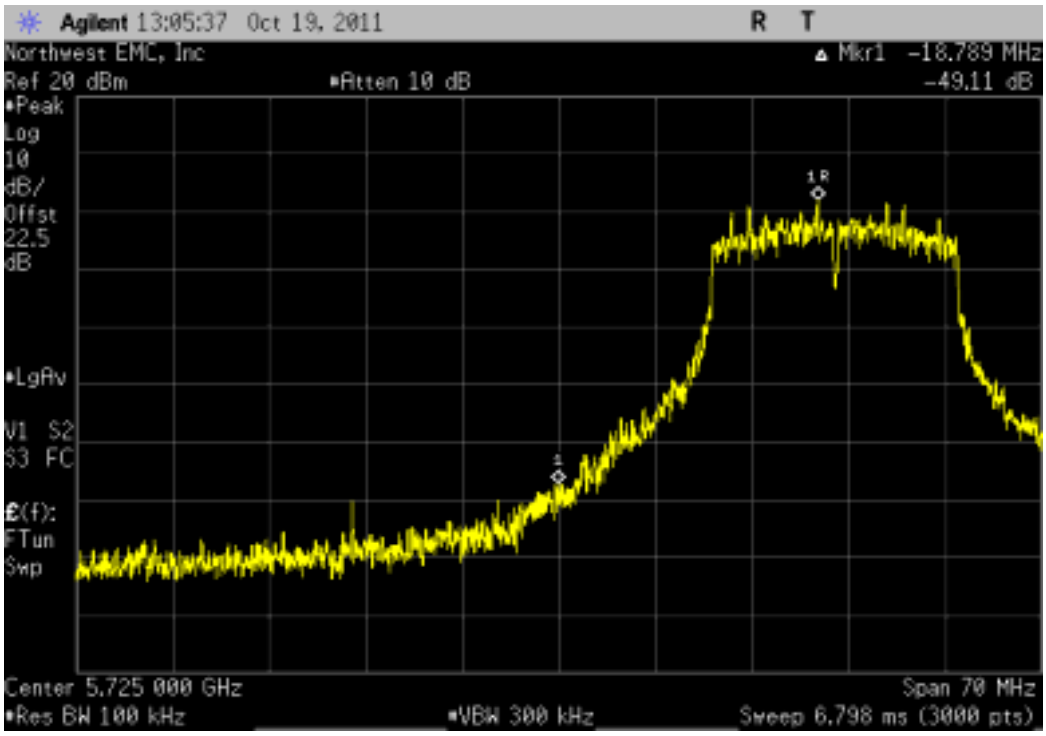
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz

				Value	Limit	Result
				-46.81 dBc	≤ -20 dBc	Pass



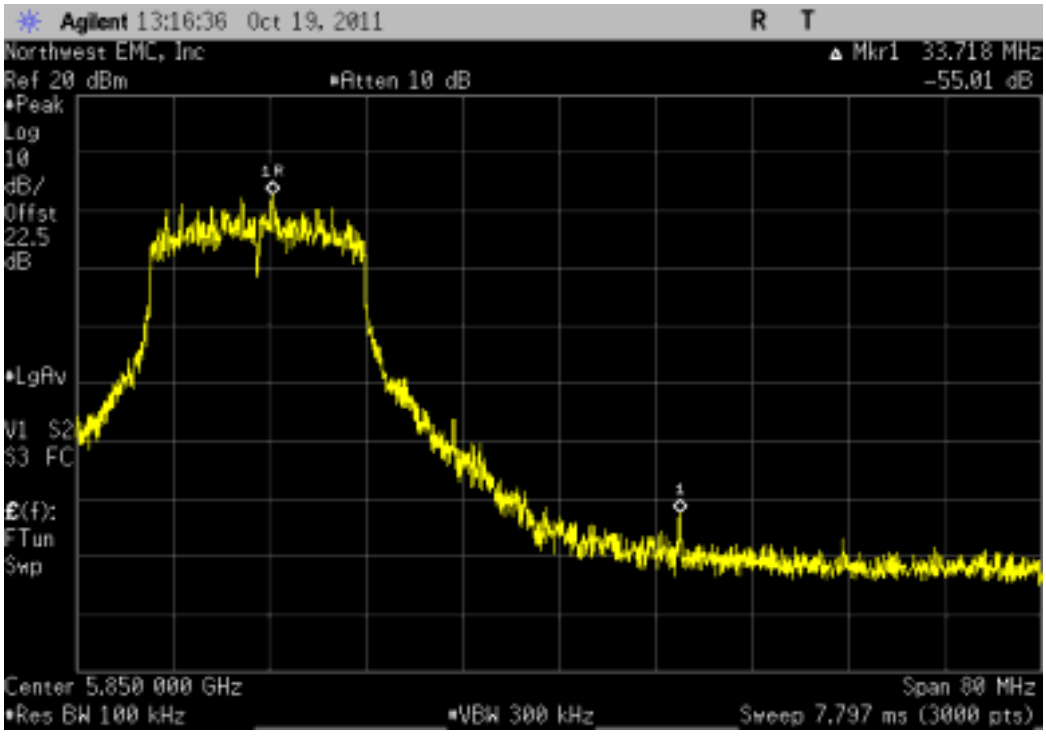
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz

				Value	Limit	Result
				-49.11 dBc	≤ -20 dBc	Pass



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz

				Value	Limit	Result
				-55.01 dBc	≤ -20 dBc	Pass



Spurious Conducted Emissions

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
Signal Generator	Agilent	N5183A	TIA	1/18/2011	12
Spectrum Analyzer	Agilent	E4446A	AAT	2/15/2011	12
Attenuator SMA - 20dB, 40 GHz	Fairview Microwave	SA4014-20	AQI	10/12/2011	12
Spectrum Analyzer	Agilent	E4440A	AAX	5/23/2011	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	10/12/2011	12
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	6/2/2011	12

MEASUREMENT UNCERTAINTY

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 for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

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 its maximum data rate using direct sequence modulation. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

NORTHWEST
EMC

Spurious Conducted Emissions

XMit 2011.08.04
PsaTx 2011.09.28

EUT:	X Series	**Work Order:**	LGPD0044
Serial Number:	3411000112, 341100050	**Date:**	10/20/11
Customer:	ZOLL Medical Corp.	**Temperature:**	23.23C°C
Attendees:	Curt McNamara, Karl Karcht	**Humidity:**	23%
Project:	None	**Barometric Pres.:**	1020.2
Tested by:	Trevor Buls	**Power:** 15VDC	**Job Site:** MN08

TEST SPECIFICATIONS	TEST METHOD
FCC 15.247:2011	ANSI C63.10:2009

COMMENTS

None

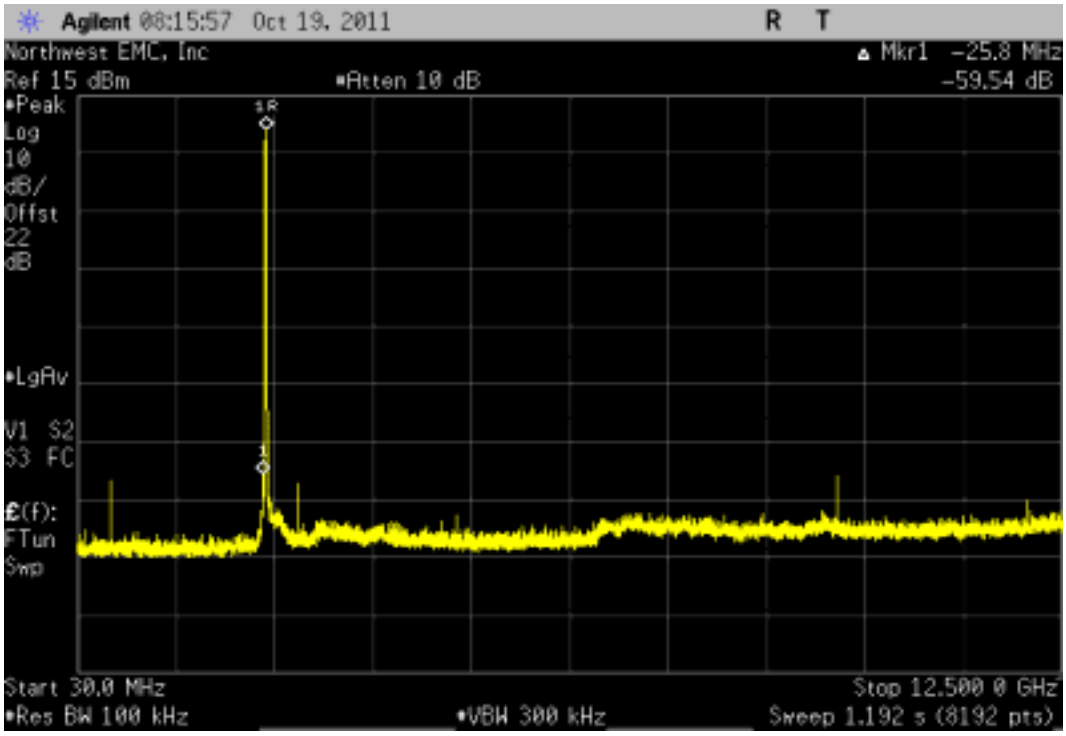
DEVIATIONS FROM TEST STANDARD

None

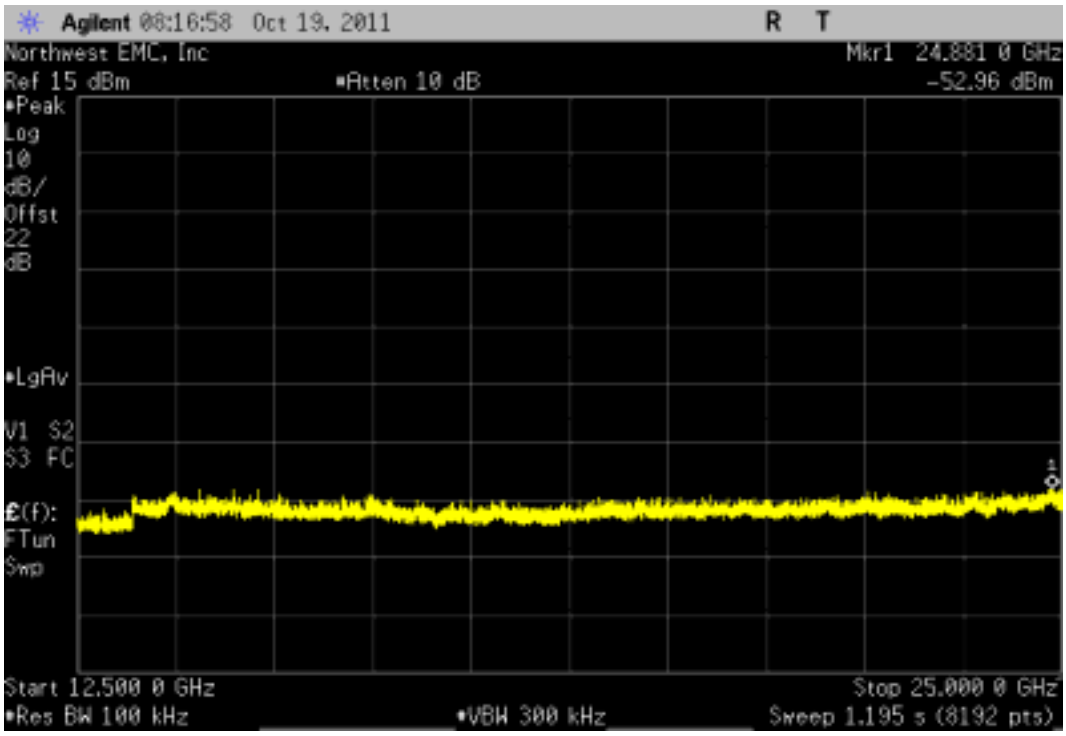
Configuration #	1	Signature

	Frequency Range	Value	Limit	Result
2400 MHz - 2483.5 MHz Band				
802.11(b) 1 Mbps				
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-59.54 dBc	≤ -20 dBc	Pass
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-62.03 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-53.72 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-61.66 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-58.06 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-61.14 dBc	≤ -20 dBc	Pass
802.11(b) 11 Mbps				
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-49.02 dBc	≤ -20 dBc	Pass
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-61.78 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-52.81 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-61.23 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-55.07 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-60.25 dBc	≤ -20 dBc	Pass
802.11(g) 6 Mbps				
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-47.45 dBc	≤ -20 dBc	Pass
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-57.59 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-56.32 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-57.89 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-52.18 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-60.01 dBc	≤ -20 dBc	Pass
802.11(g) 36 Mbps				
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-46.81 dBc	≤ -20 dBc	Pass
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-54.54 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-49.39 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-54.34 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-48.61 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-55.7 dBc	≤ -20 dBc	Pass
802.11(g) 54 Mbps				
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-46.26 dBc	≤ -20 dBc	Pass
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-53.51 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-55.69 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-54.9 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-51.96 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-56.17 dBc	≤ -20 dBc	Pass
802.11(n) MCS0				
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-45.28 dBc	≤ -20 dBc	Pass
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-57.77 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-47.09 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-56.28 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-50.32 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-58.36 dBc	≤ -20 dBc	Pass
802.11(n) MCS7				
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-52.19 dBc	≤ -20 dBc	Pass
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-53.48 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-45.76 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-54.45 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-52.86 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-54.47 dBc	≤ -20 dBc	Pass
5725 MHz - 5850 MHz Band				
802.11(a) 6 Mbps				
Low Channel 149, 5745 MHz	30 MHz - 12.5 GHz	-53.72 dBc	≤ -20 dBc	Pass
Low Channel 149, 5745 MHz	12.5 GHz - 25 GHz	-52.7 dBc	≤ -20 dBc	Pass
Low Channel 149, 5745 MHz	25 GHz - 32 GHz	-49.9 dBc	≤ -20 dBc	Pass
Low Channel 149, 5745 MHz	32 GHz - 40 GHz	-40.07 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	30 MHz - 12.5 GHz	-54.79 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	12.5 GHz - 25 GHz	-53.88 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	25 GHz - 32 GHz	-50.99 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	32 GHz - 40 GHz	-41.73 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	30 MHz - 12.5 GHz	-54.08 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	12.5 GHz - 25 GHz	-52.18 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	25 GHz - 32 GHz	-49.35 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	32 GHz - 40 GHz	-40.44 dBc	≤ -20 dBc	Pass
802.11(a) 36 Mbps				
Low Channel 149, 5745 MHz	30 MHz - 12.5 GHz	-53.01 dBc	≤ -20 dBc	Pass
Low Channel 149, 5745 MHz	12.5 GHz - 25 GHz	-52.08 dBc	≤ -20 dBc	Pass
Low Channel 149, 5745 MHz	25 GHz - 32 GHz	-49.02 dBc	≤ -20 dBc	Pass
Low Channel 149, 5745 MHz	32 GHz - 40 GHz	-40.49 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	30 MHz - 12.5 GHz	-50.26 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	12.5 GHz - 25 GHz	-50.34 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	25 GHz - 32 GHz	-47.3 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	32 GHz - 40 GHz	-38.04 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	30 MHz - 12.5 GHz	-51.36 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	12.5 GHz - 25 GHz	-52.19 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	25 GHz - 32 GHz	-48.38 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	32 GHz - 40 GHz	-39.76 dBc	≤ -20 dBc	Pass
802.11(a) 54 Mbps				
Low Channel 149, 5745 MHz	30 MHz - 12.5 GHz	-53.27 dBc	≤ -20 dBc	Pass
Low Channel 149, 5745 MHz	12.5 GHz - 25 GHz	-50.88 dBc	≤ -20 dBc	Pass
Low Channel 149, 5745 MHz	25 GHz - 32 GHz	-48.52 dBc	≤ -20 dBc	Pass
Low Channel 149, 5745 MHz	32 GHz - 40 GHz	-38.97 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	30 MHz - 12.5 GHz	-51.88 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	12.5 GHz - 25 GHz	-50.14 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	25 GHz - 32 GHz	-47.71 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	32 GHz - 40 GHz	-38.06 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	30 MHz - 12.5 GHz	-53.04 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	12.5 GHz - 25 GHz	-50.91 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	25 GHz - 32 GHz	-48.53 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	32 GHz - 40 GHz	-38.8 dBc	≤ -20 dBc	Pass
802.11(n) MCS0 - UNII				
Low Channel 149, 5745 MHz	30 MHz - 12.5 GHz	-52.6 dBc	≤ -20 dBc	Pass
Low Channel 149, 5745 MHz	12.5 GHz - 25 GHz	-52.77 dBc	≤ -20 dBc	Pass
Low Channel 149, 5745 MHz	25 GHz - 32 GHz	-49.82 dBc	≤ -20 dBc	Pass
Low Channel 149, 5745 MHz	32 GHz - 40 GHz	-39.94 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	30 MHz - 12.5 GHz	-52.64 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	12.5 GHz - 25 GHz	-54.11 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	25 GHz - 32 GHz	-50.99 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	32 GHz - 40 GHz	-41.81 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	30 MHz - 12.5 GHz	-51.89 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	12.5 GHz - 25 GHz	-51.76 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	25 GHz - 32 GHz	-48.55 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	32 GHz - 40 GHz	-39.42 dBc	≤ -20 dBc	Pass
802.11(n) MCS7 - UNII				
Low Channel 149, 5745 MHz	30 MHz - 12.5 GHz	-52.19 dBc	≤ -20 dBc	Pass
Low Channel 149, 5745 MHz	12.5 GHz - 25 GHz	-50.77 dBc	≤ -20 dBc	Pass
Low Channel 149, 5745 MHz	25 GHz - 32 GHz	-47.72 dBc	≤ -20 dBc	Pass
Low Channel 149, 5745 MHz	32 GHz - 40 GHz	-38.31 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	30 MHz - 12.5 GHz	-52.31 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	12.5 GHz - 25 GHz	-50.25 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	25 GHz - 32 GHz	-47.79 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz	32 GHz - 40 GHz	-38.98 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	30 MHz - 12.5 GHz	-51.78 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	12.5 GHz - 25 GHz	-50.34 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	25 GHz - 32 GHz	-47.55 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	32 GHz - 40 GHz	-38.86 dBc	≤ -20 dBc	Pass

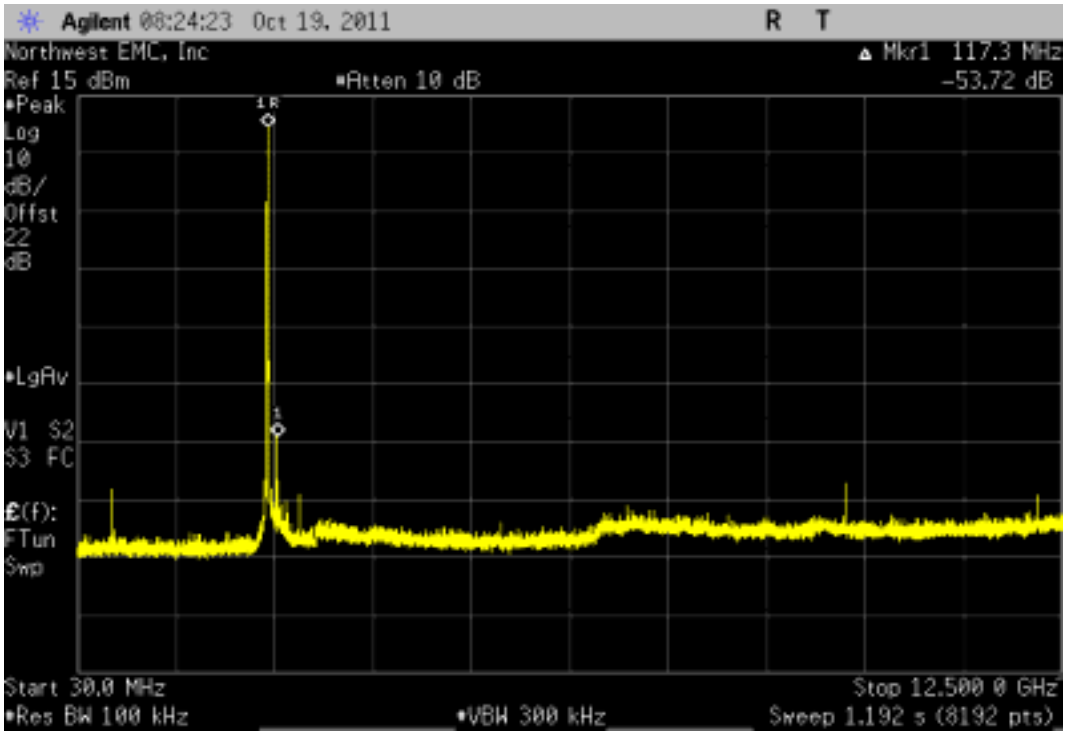
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-59.54 dBc	≤ -20 dBc	Pass



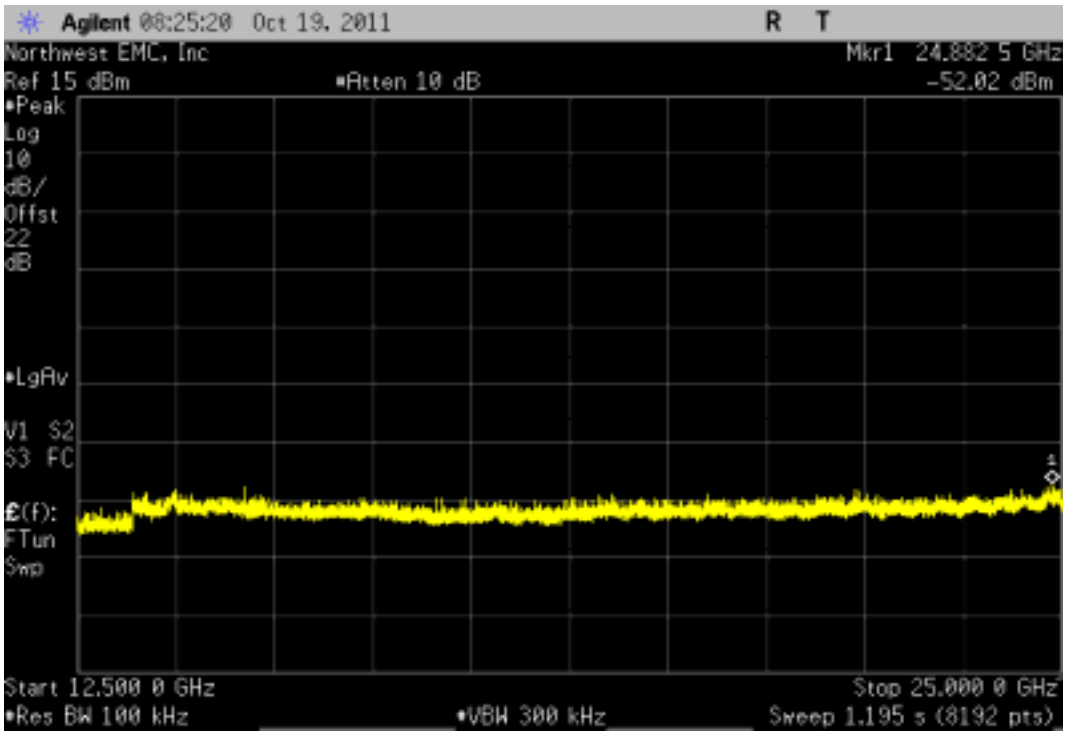
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-62.03 dBc	≤ -20 dBc	Pass



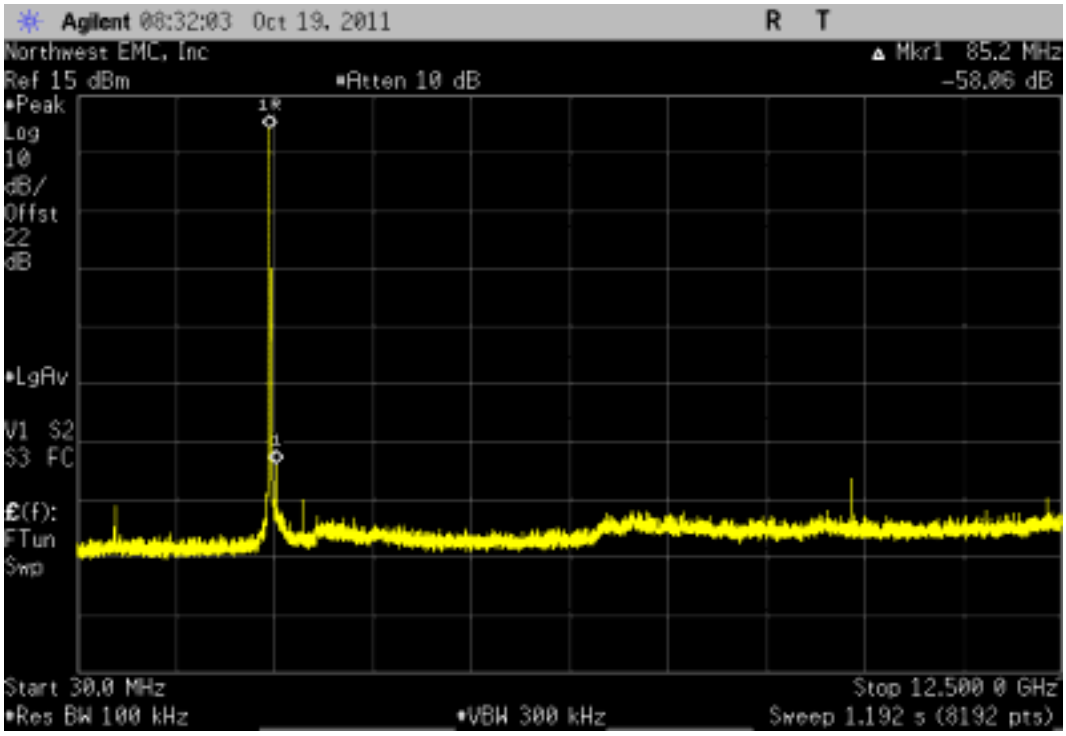
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-53.72 dBc	≤ -20 dBc	Pass



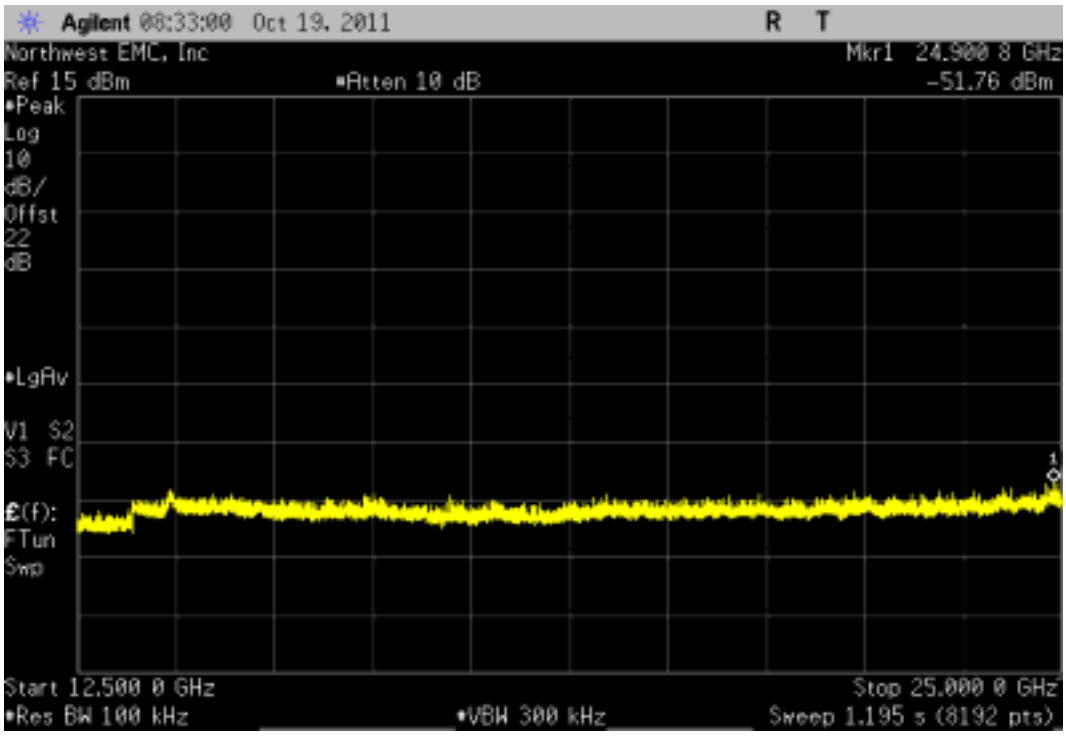
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-61.66 dBc	≤ -20 dBc	Pass



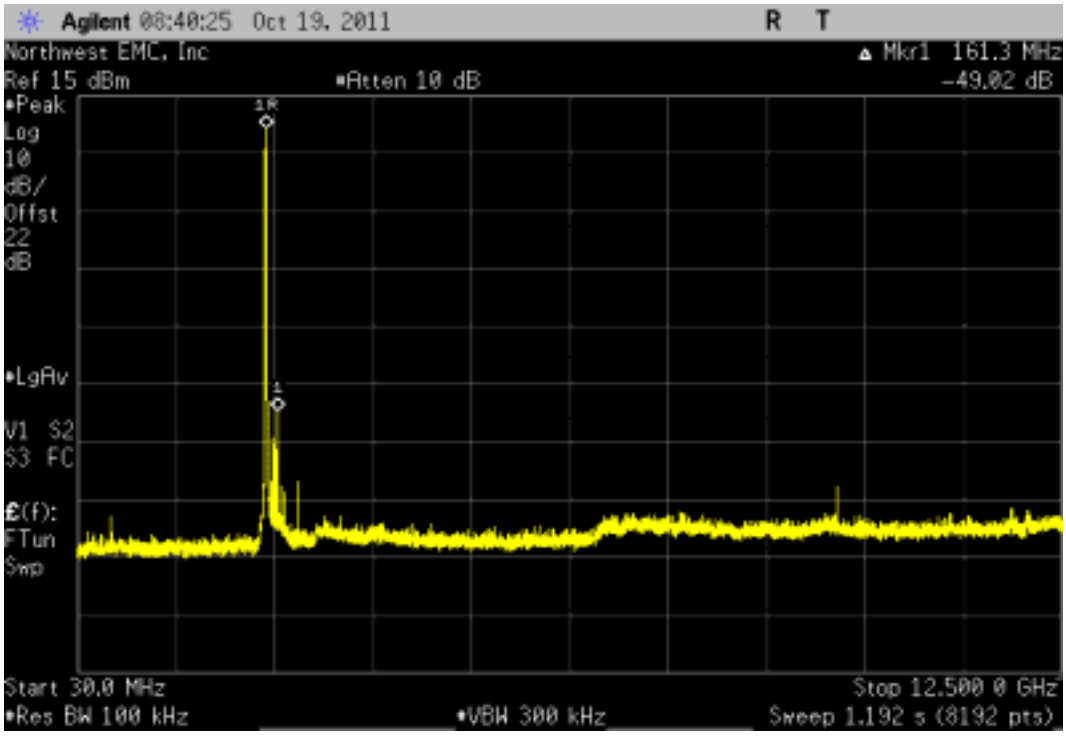
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-58.06 dBc	≤ -20 dBc	Pass



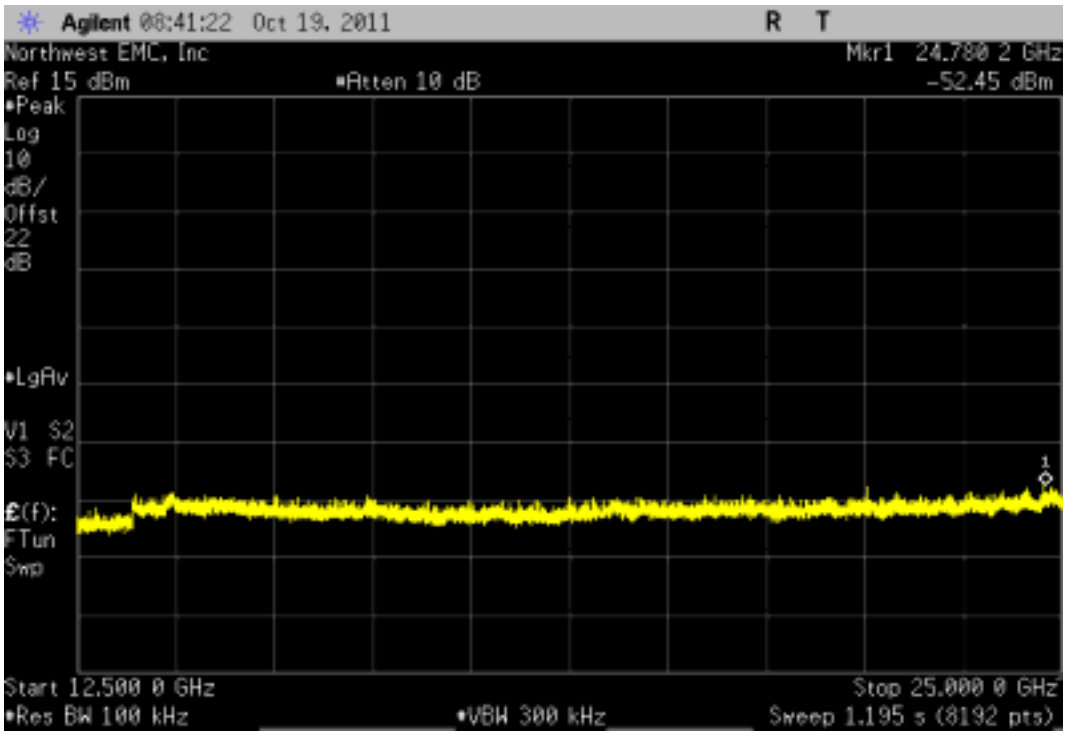
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-61.14 dBc	≤ -20 dBc	Pass



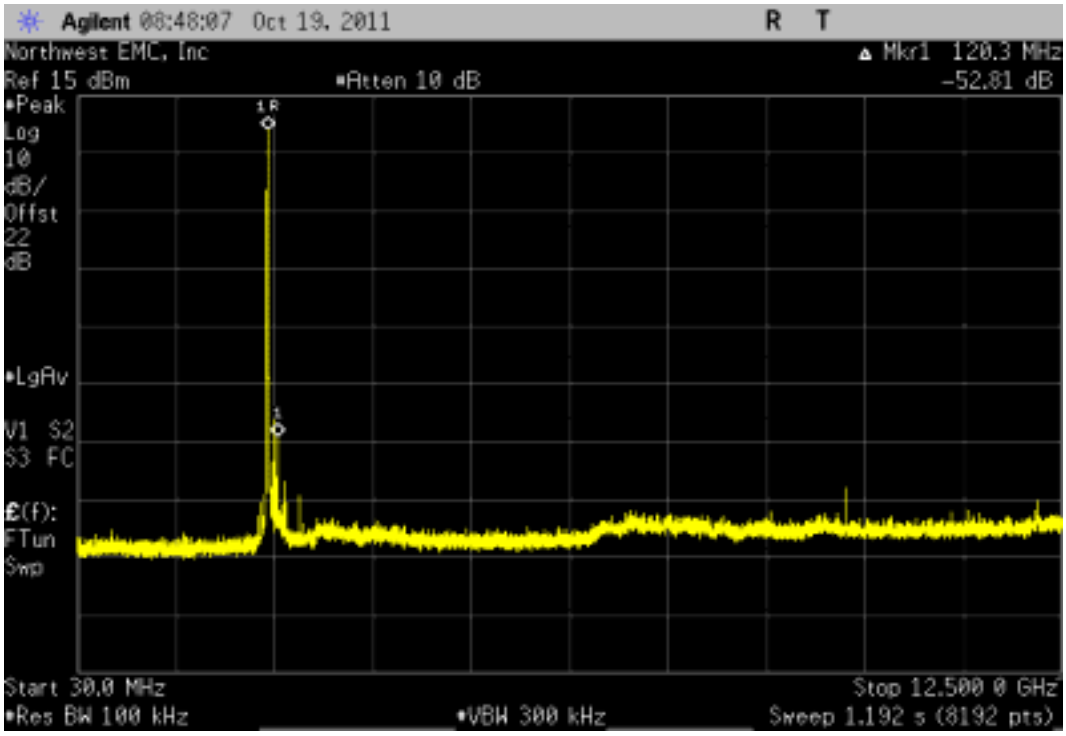
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-49.02 dBc	≤ -20 dBc	Pass



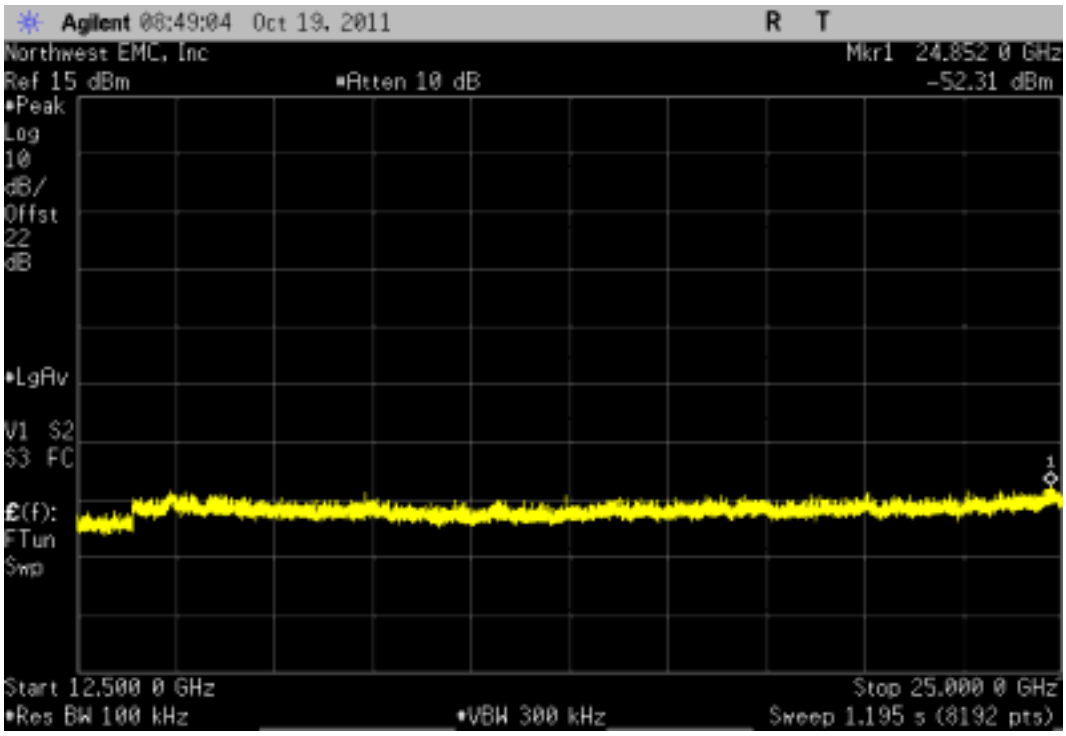
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-61.78 dBc	≤ -20 dBc	Pass



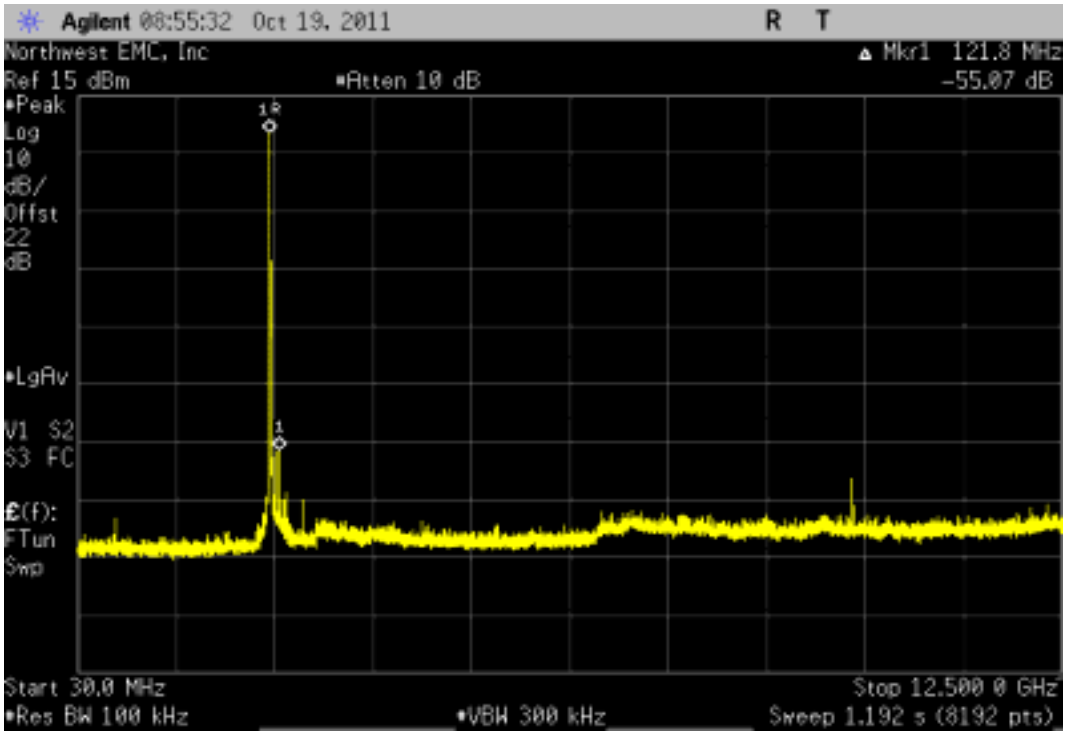
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-52.81 dBc	≤ -20 dBc	Pass



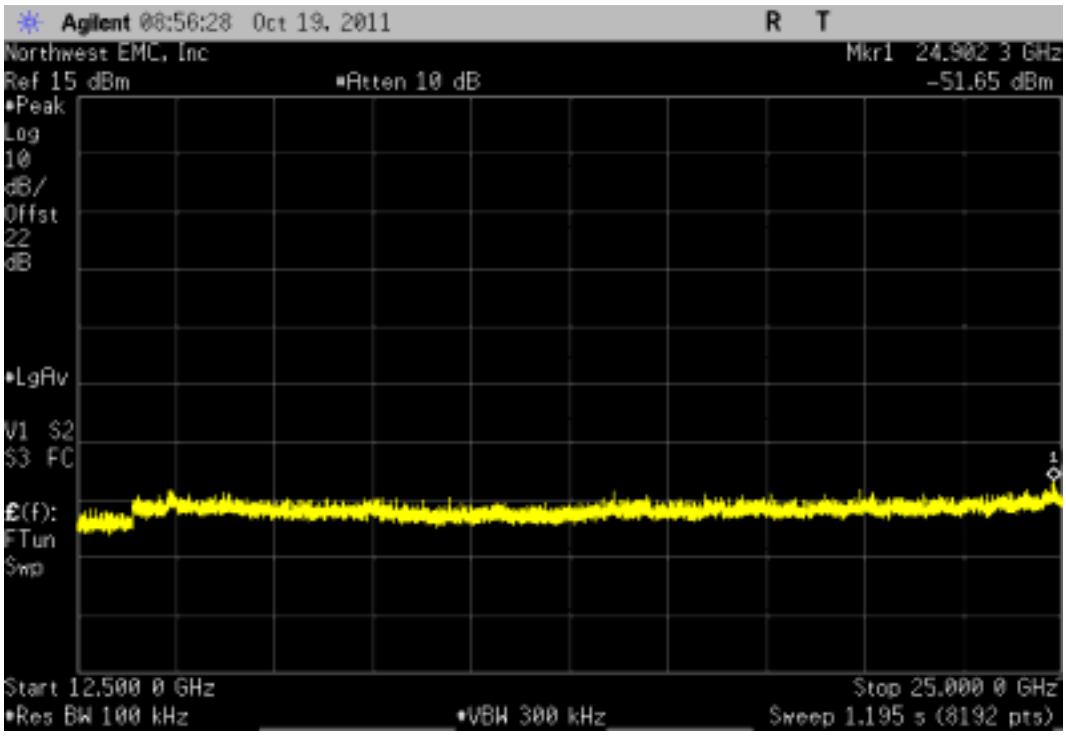
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-61.23 dBc	≤ -20 dBc	Pass



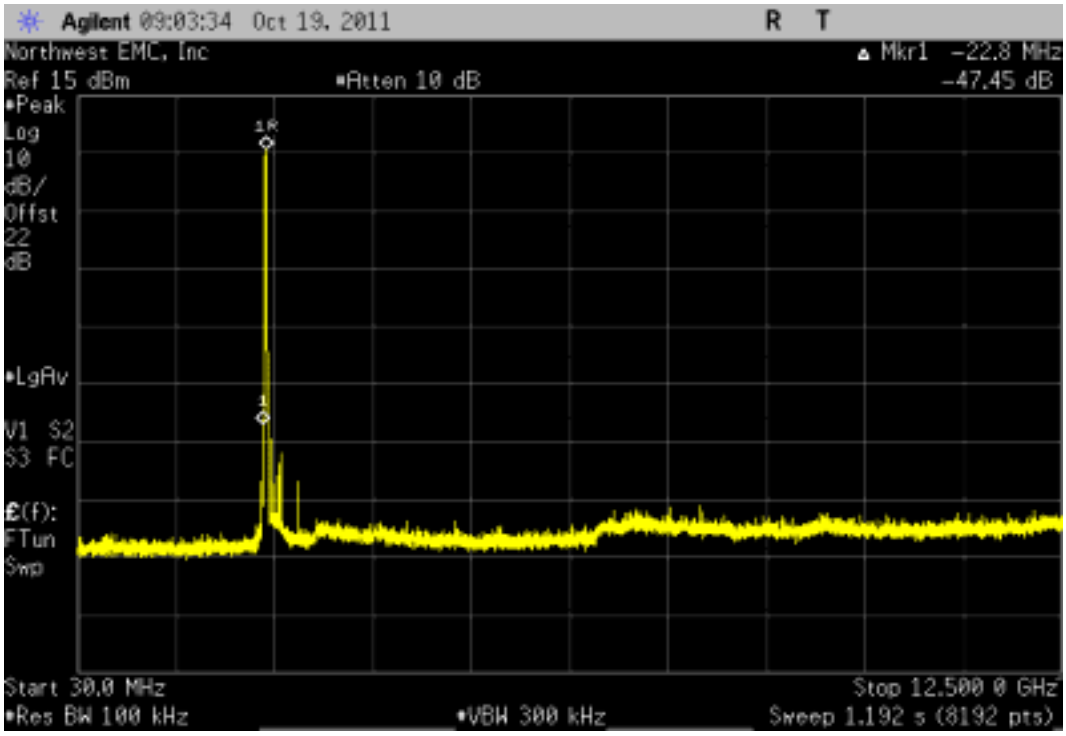
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-55.07 dBc	≤ -20 dBc	Pass



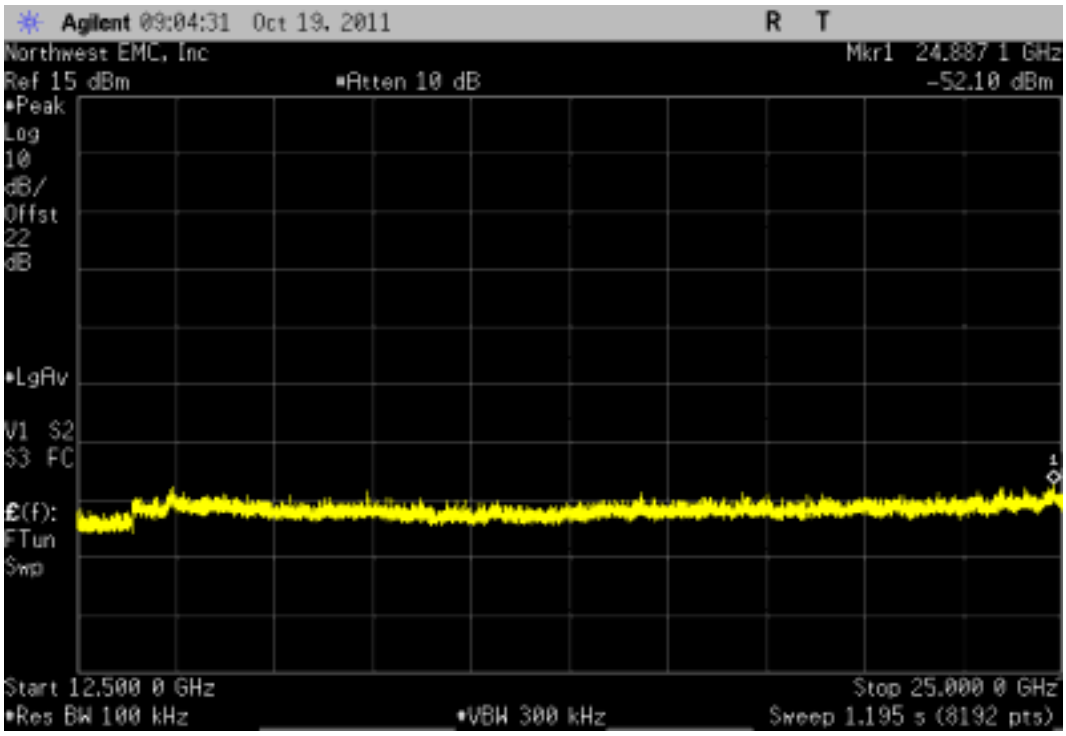
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-60.25 dBc	≤ -20 dBc	Pass



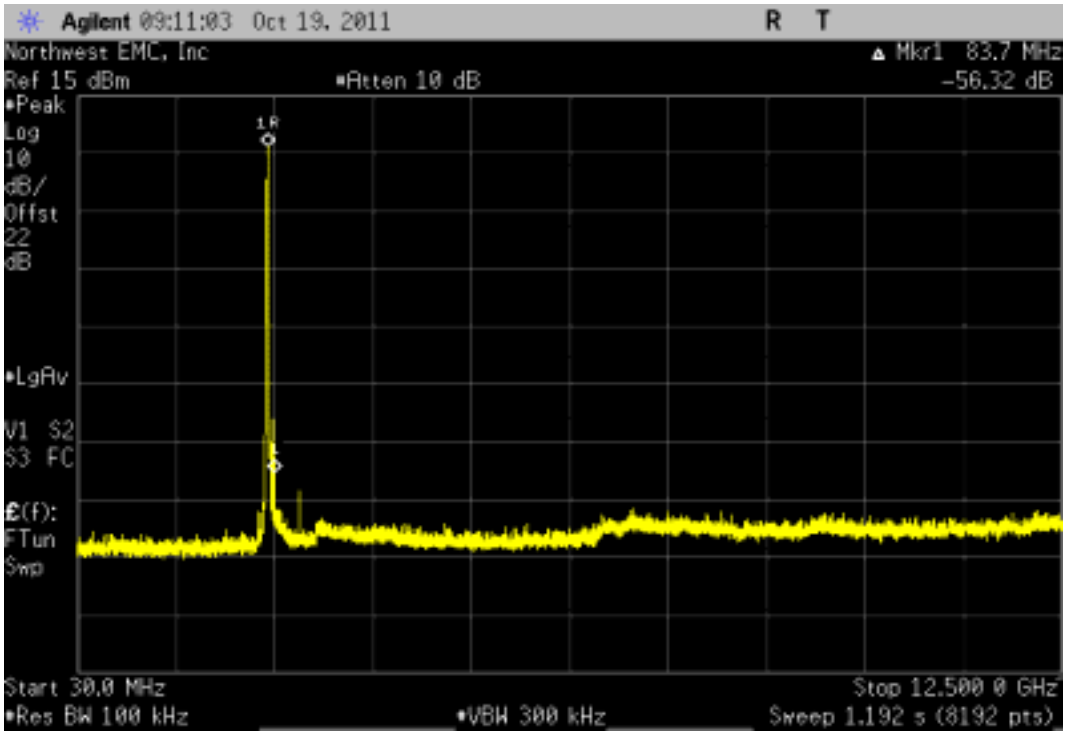
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-47.45 dBc	≤ -20 dBc	Pass



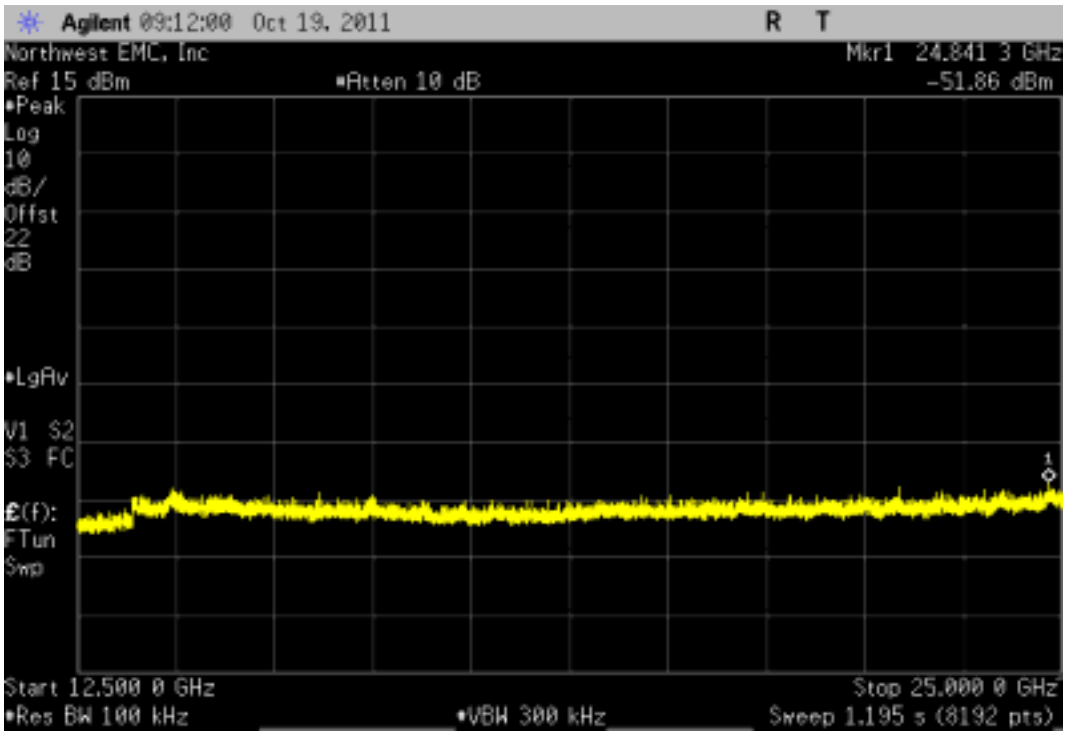
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-57.59 dBc	≤ -20 dBc	Pass



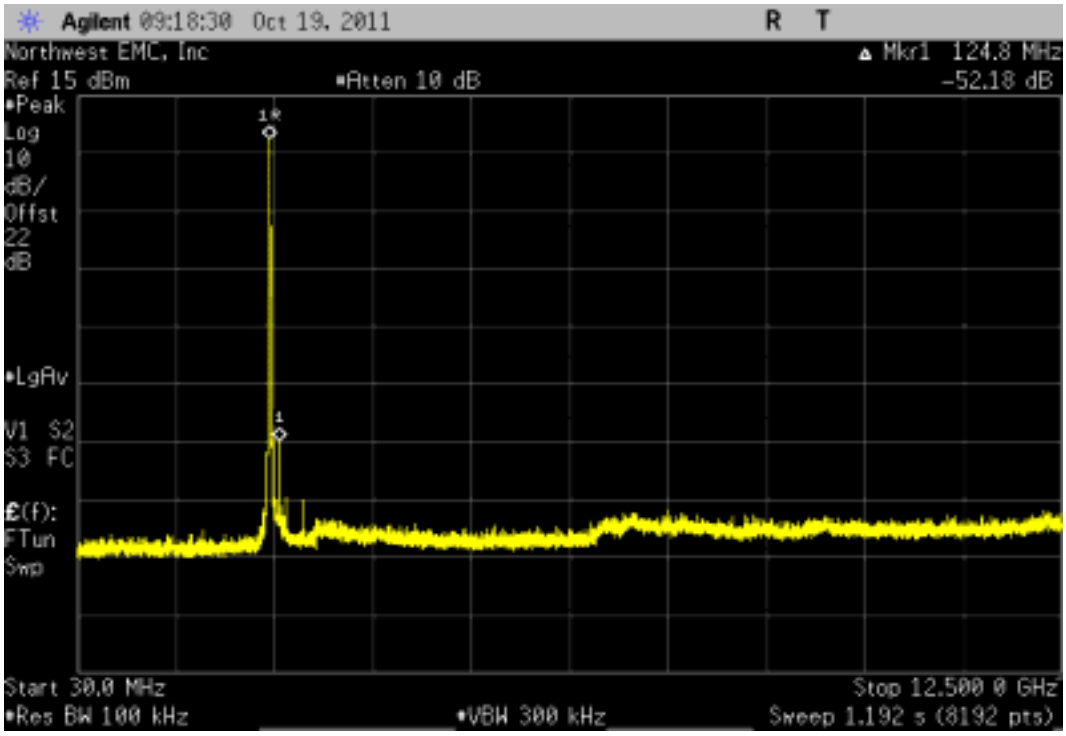
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-56.32 dBc	≤ -20 dBc	Pass



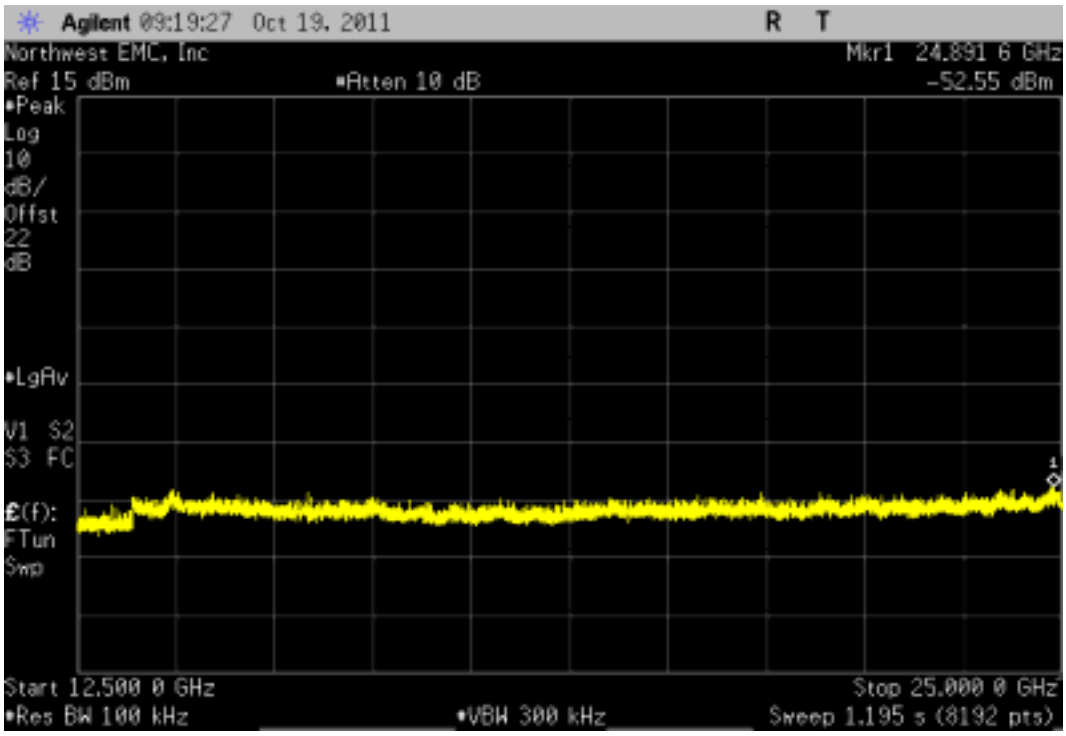
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-57.89 dBc	≤ -20 dBc	Pass



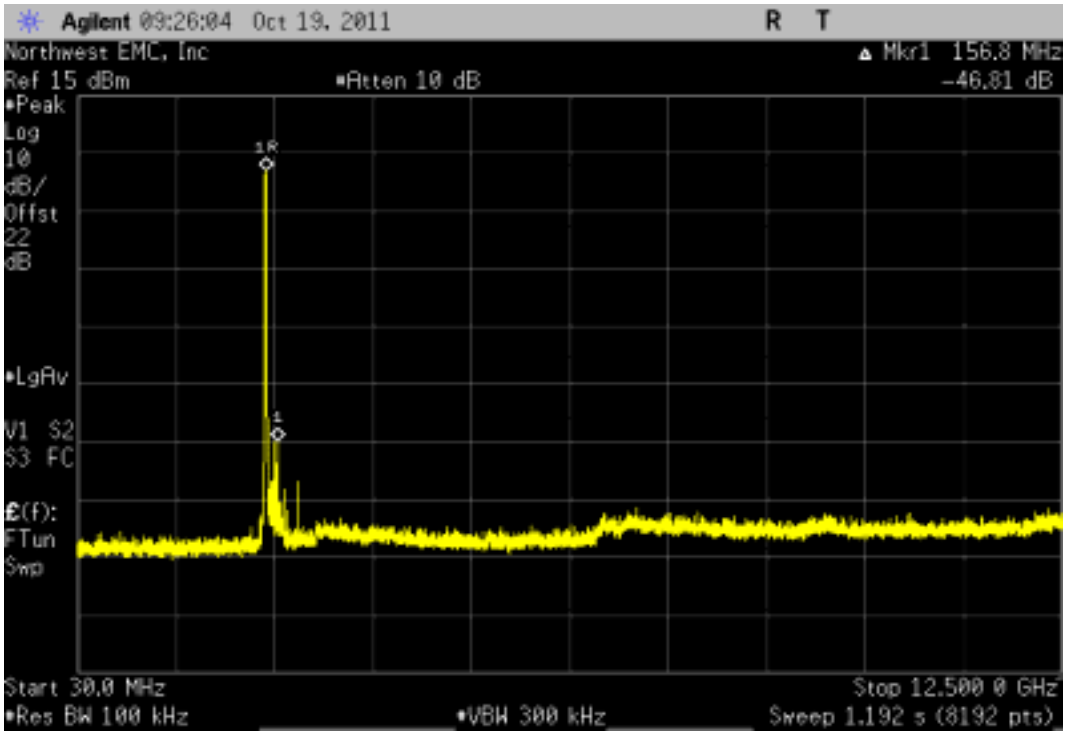
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-52.18 dBc	≤ -20 dBc	Pass



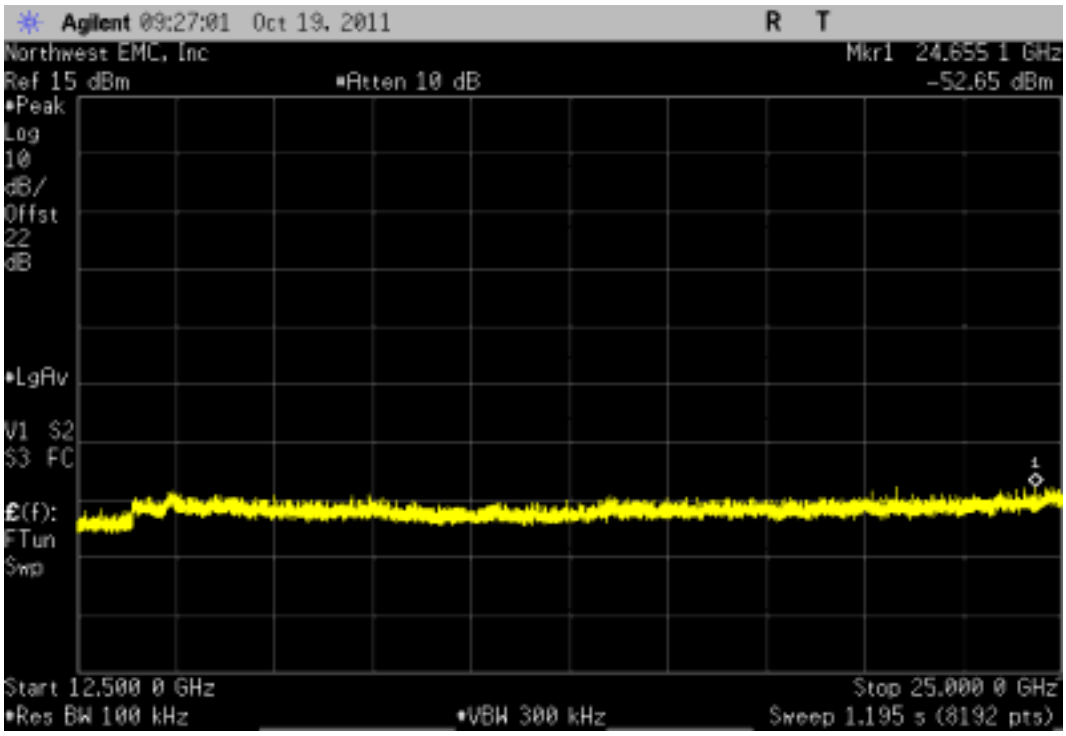
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-60.01 dBc	≤ -20 dBc	Pass



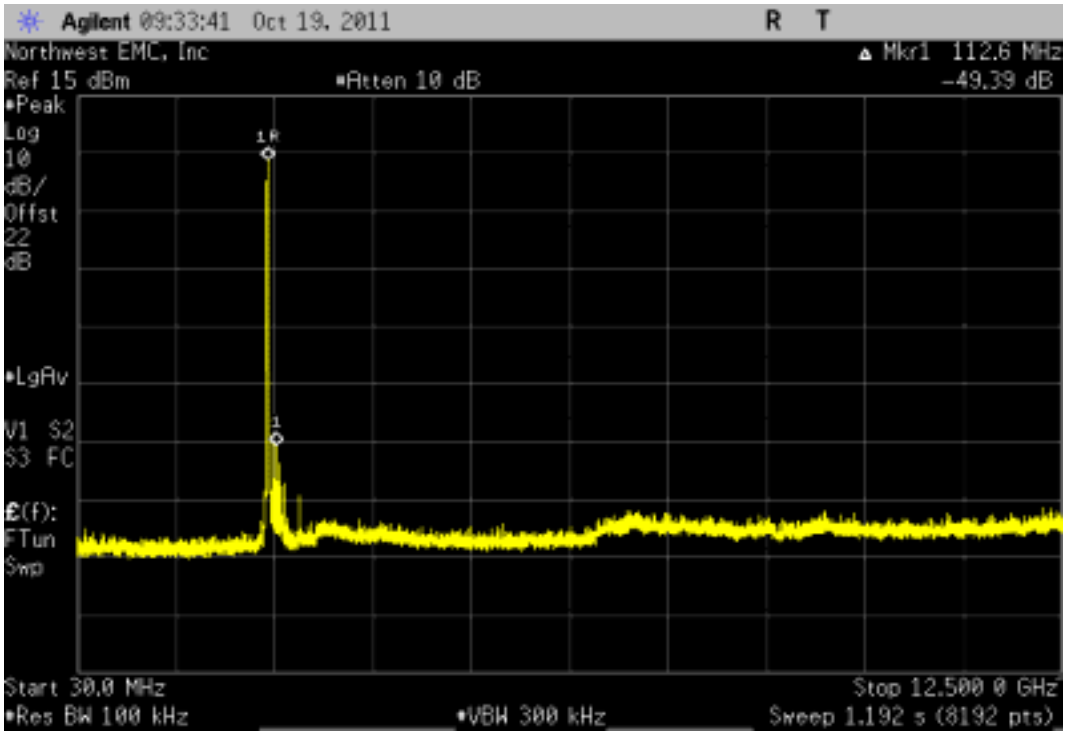
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-46.81 dBc	≤ -20 dBc	Pass



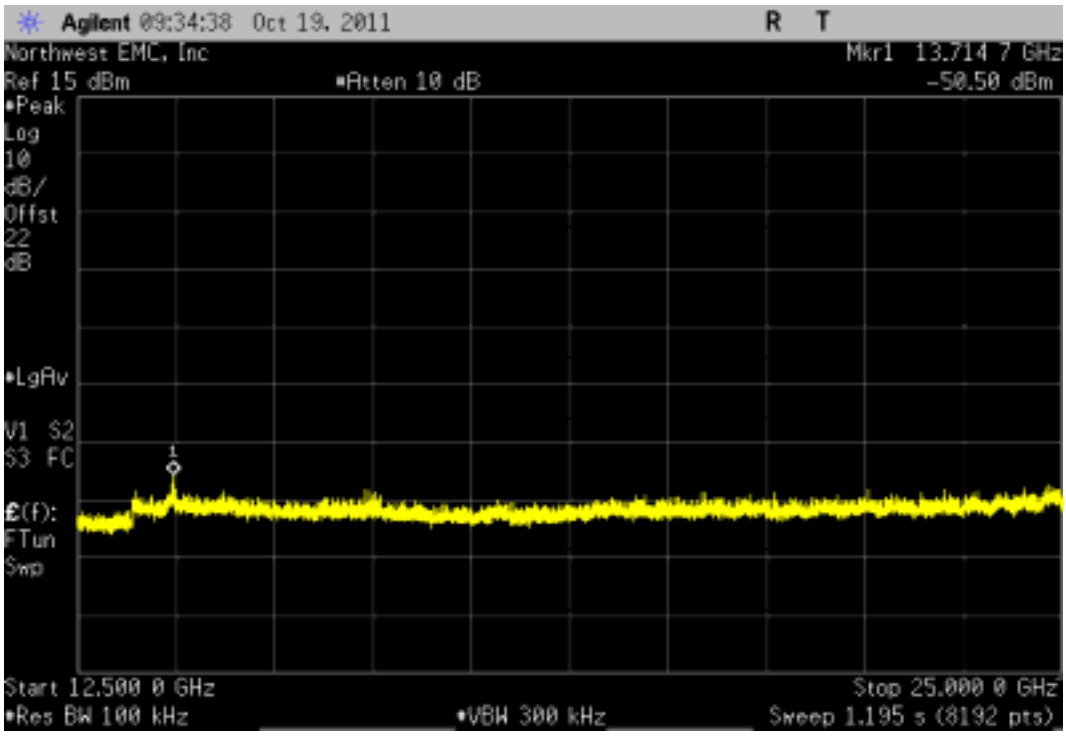
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-54.54 dBc	≤ -20 dBc	Pass



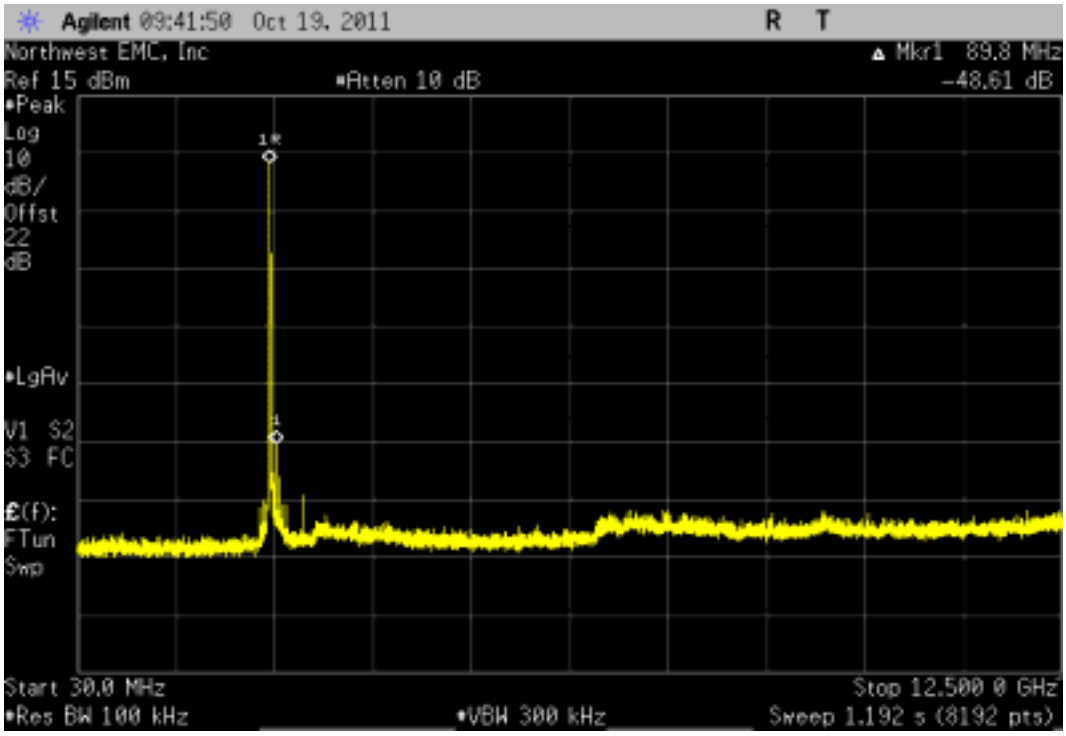
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-49.39 dBc	≤ -20 dBc	Pass



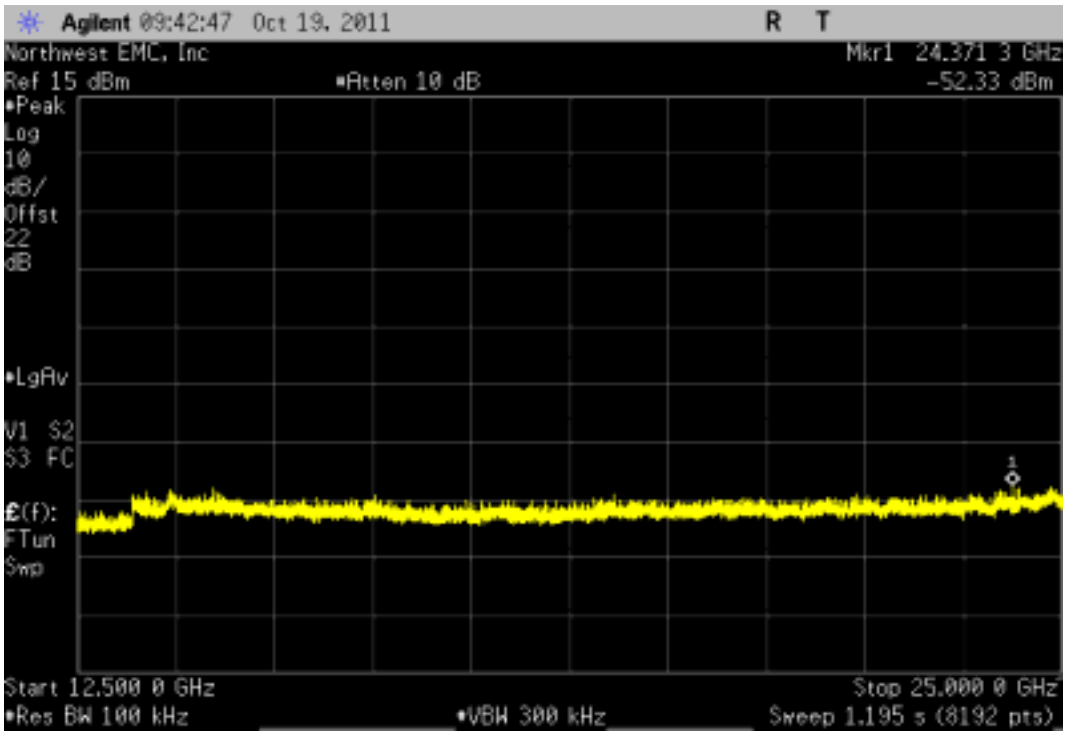
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-54.34 dBc	≤ -20 dBc	Pass



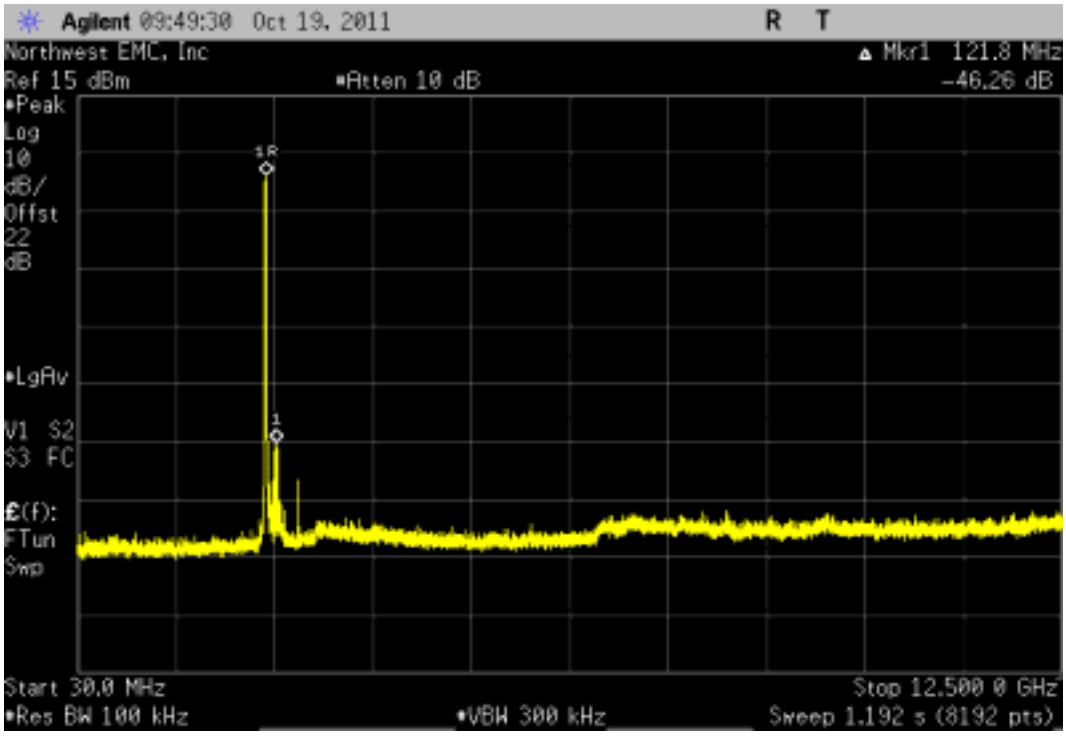
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-48.61 dBc	≤ -20 dBc	Pass



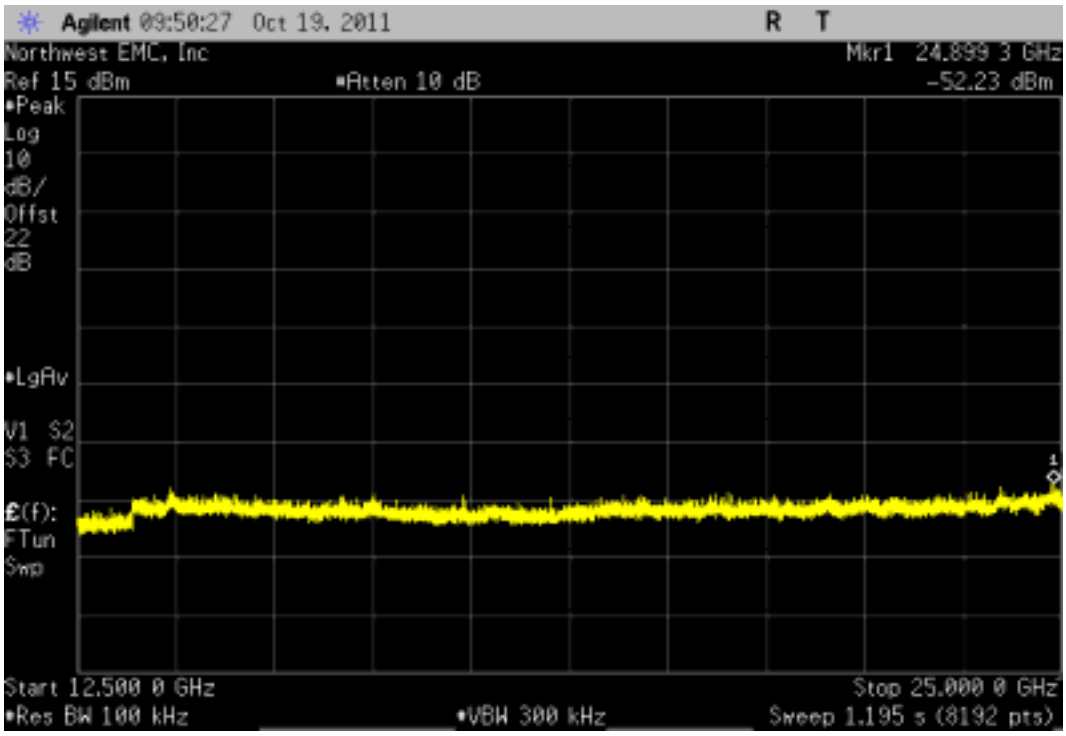
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-55.7 dBc	≤ -20 dBc	Pass



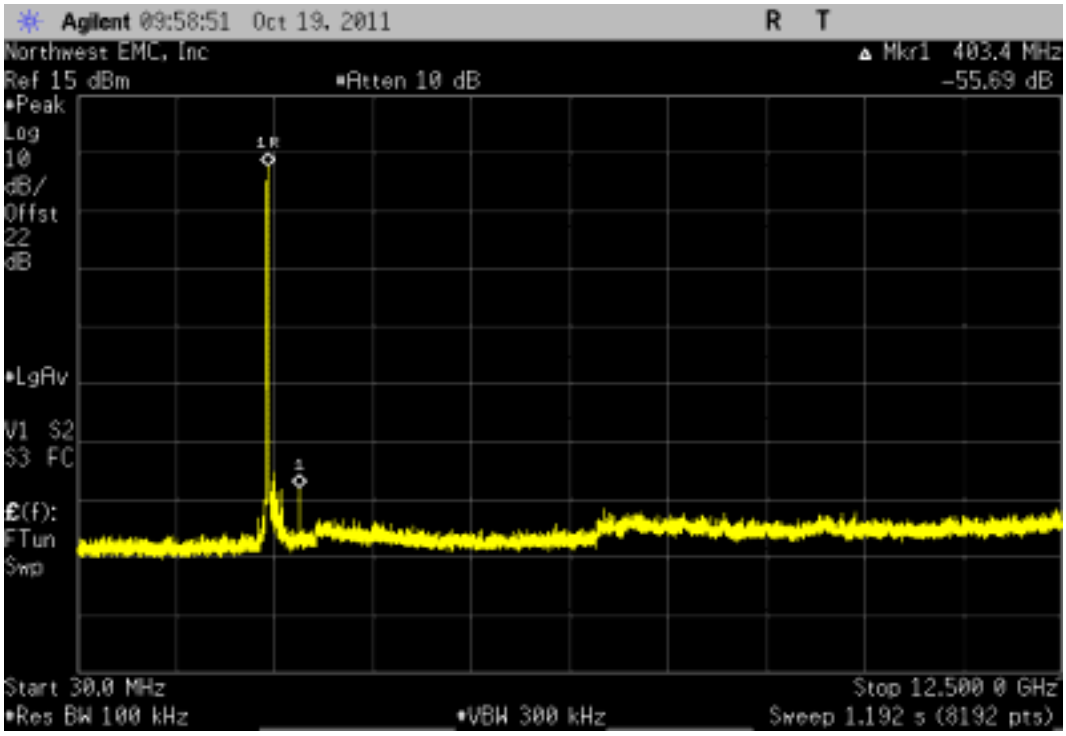
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-46.26 dBc	≤ -20 dBc	Pass



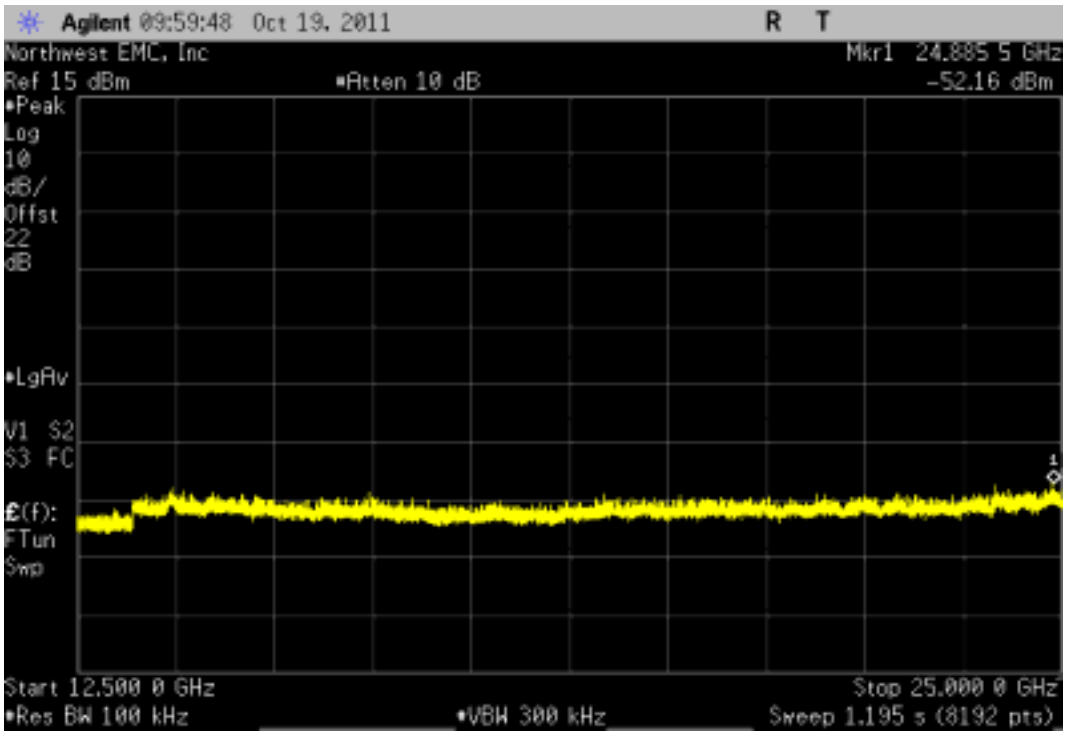
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-53.51 dBc	≤ -20 dBc	Pass



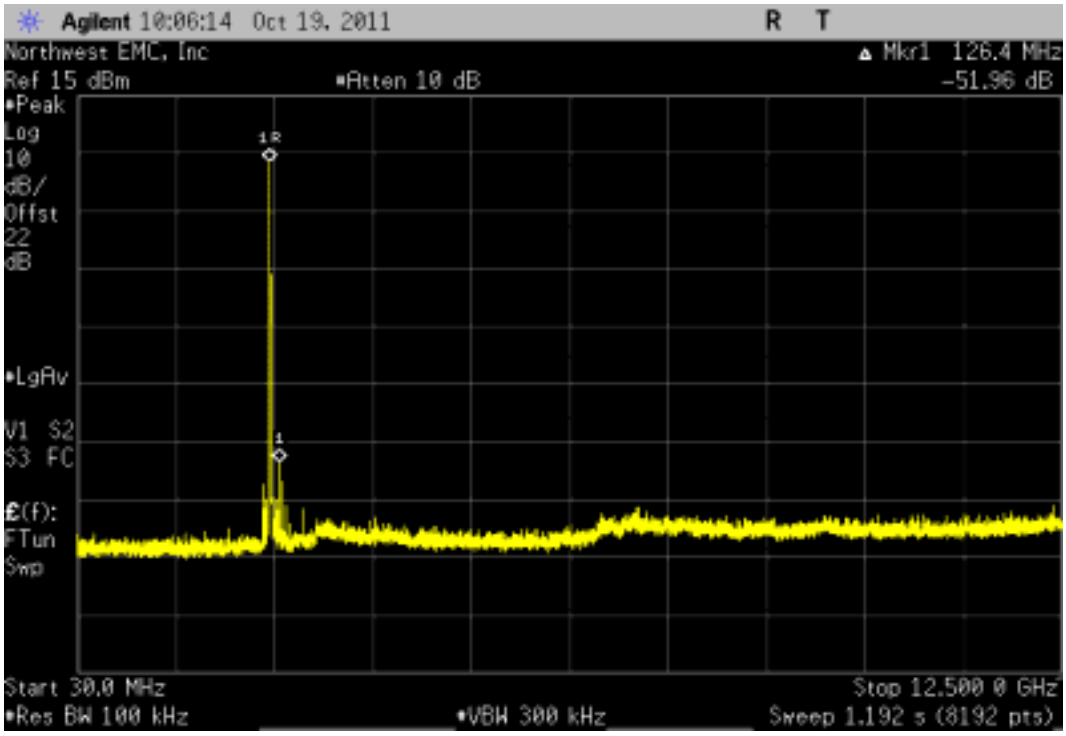
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-55.69 dBc	≤ -20 dBc	Pass



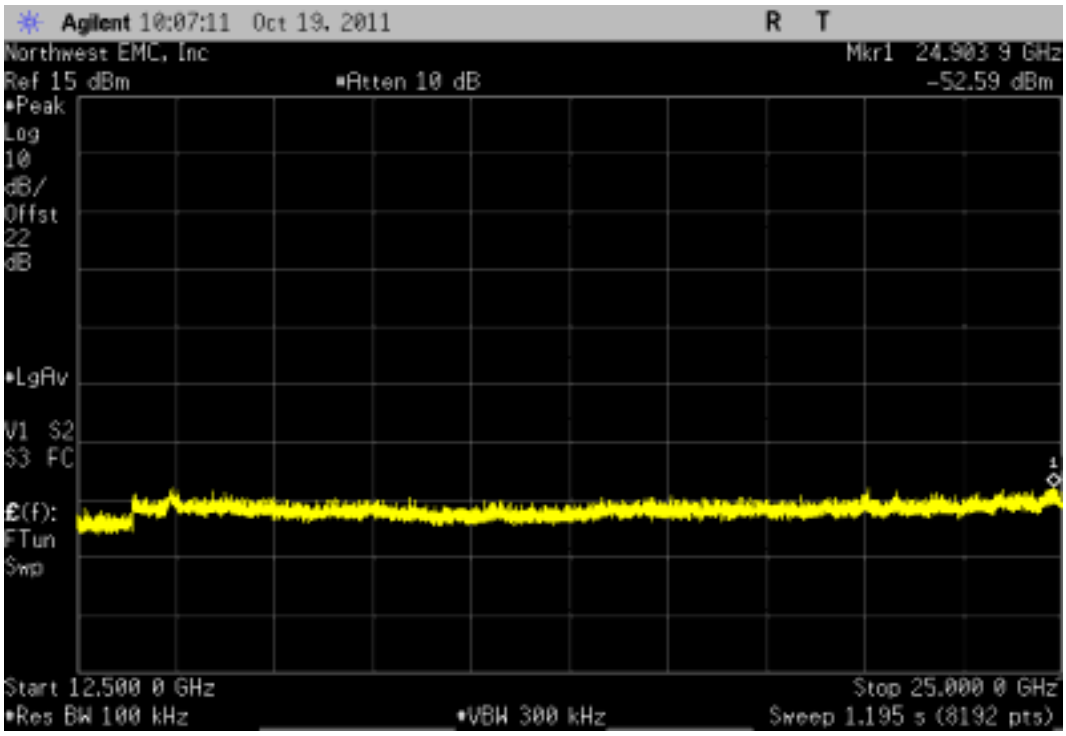
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-54.9 dBc	≤ -20 dBc	Pass



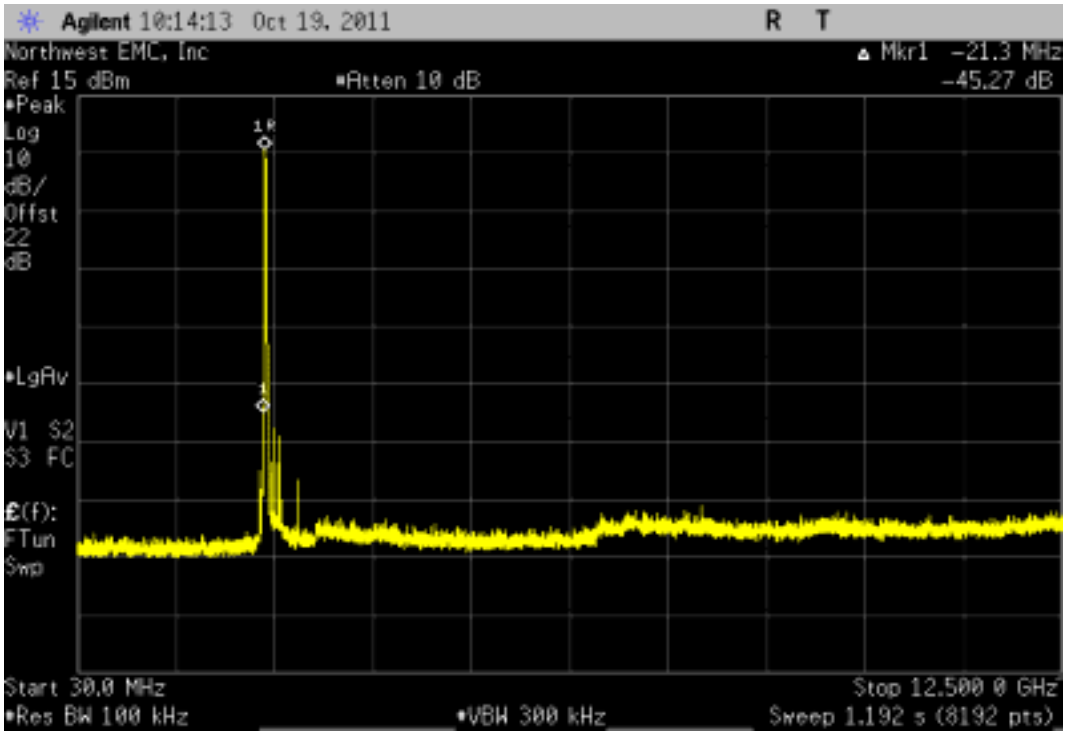
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-51.96 dBc	≤ -20 dBc	Pass



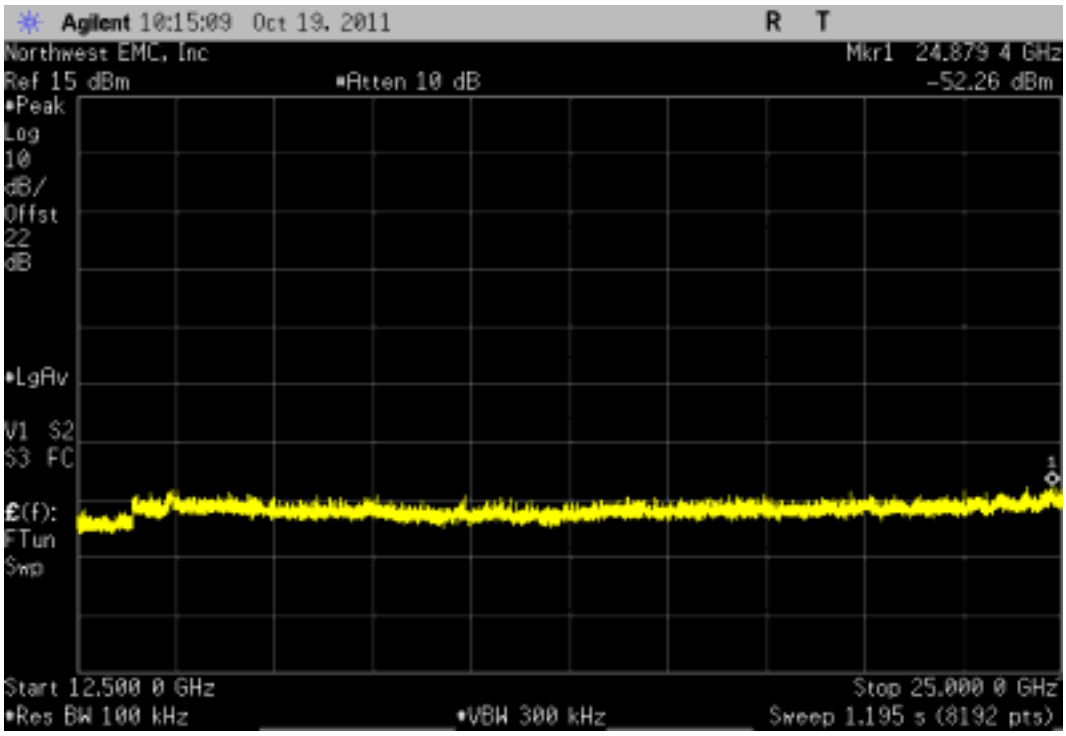
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-56.17 dBc	≤ -20 dBc	Pass



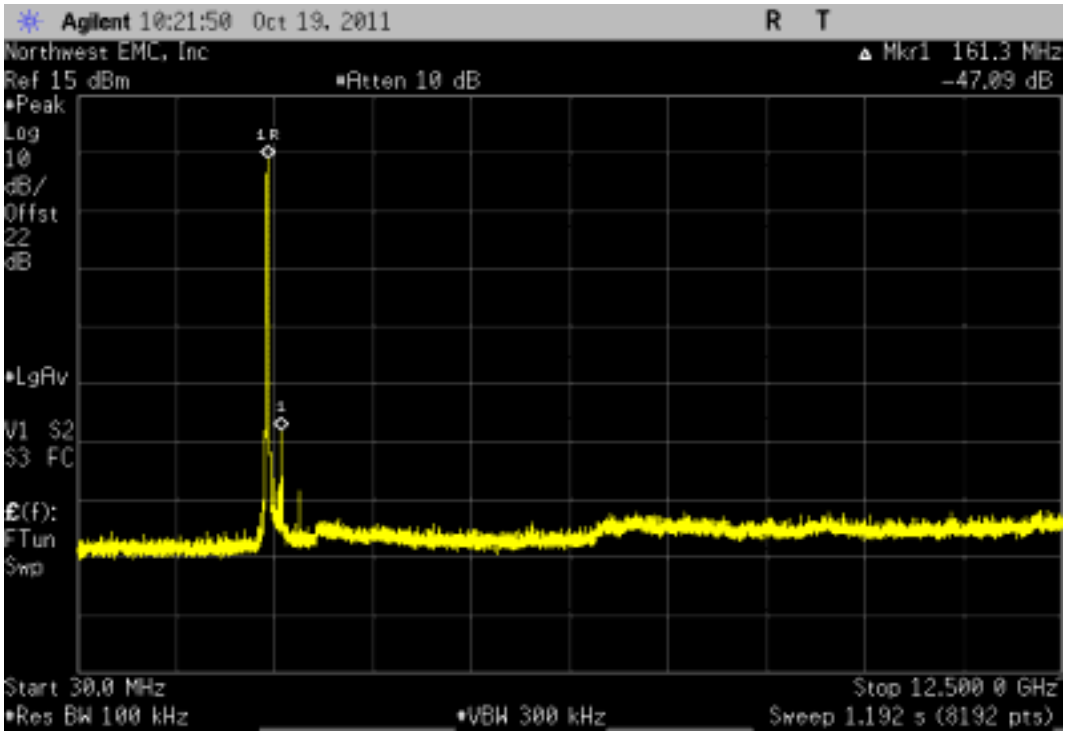
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-45.28 dBc	≤ -20 dBc	Pass



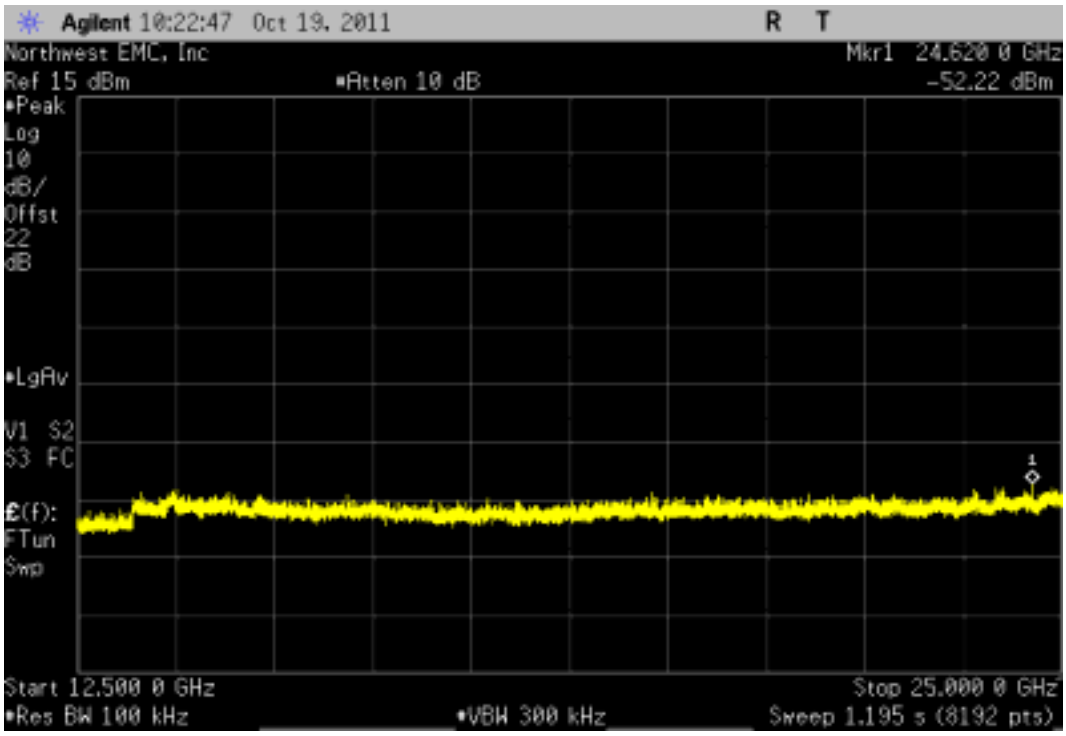
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-57.77 dBc	≤ -20 dBc	Pass



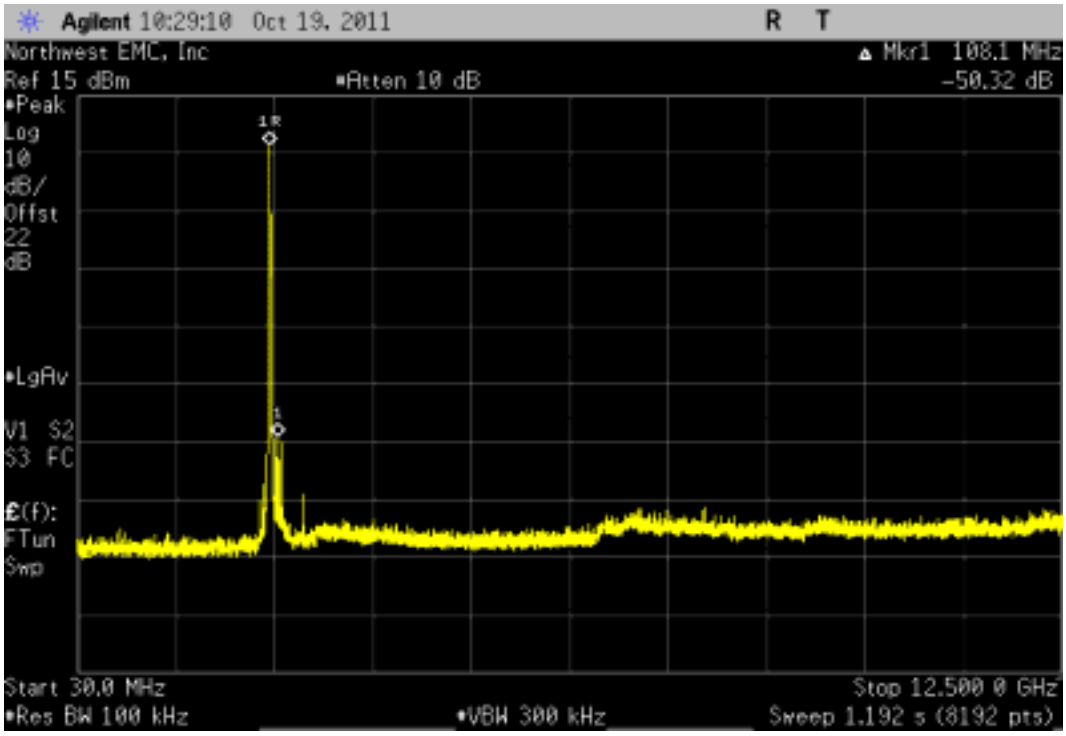
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-47.09 dBc	≤ -20 dBc	Pass



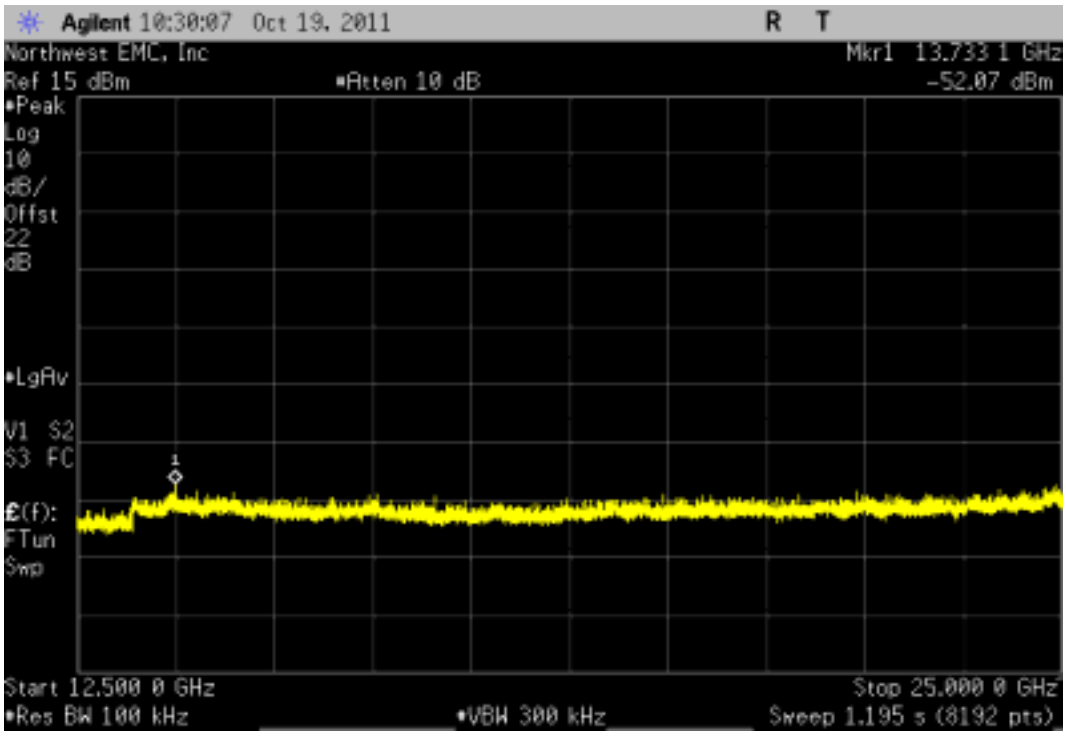
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-56.28 dBc	≤ -20 dBc	Pass



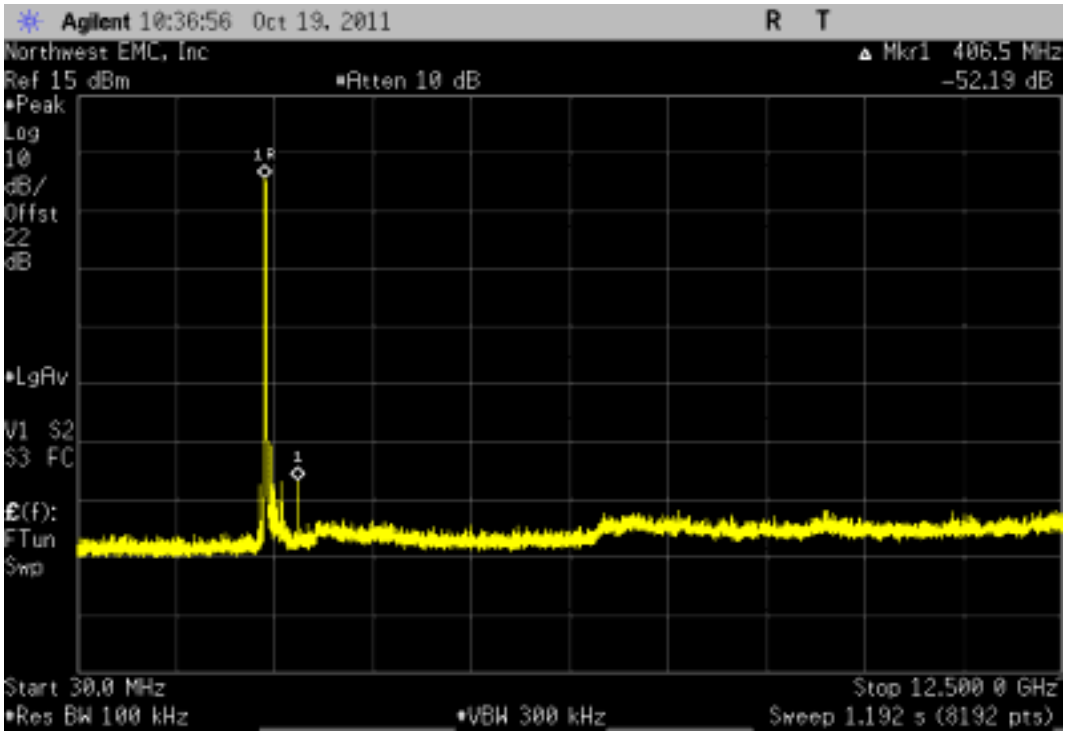
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-50.32 dBc	≤ -20 dBc	Pass



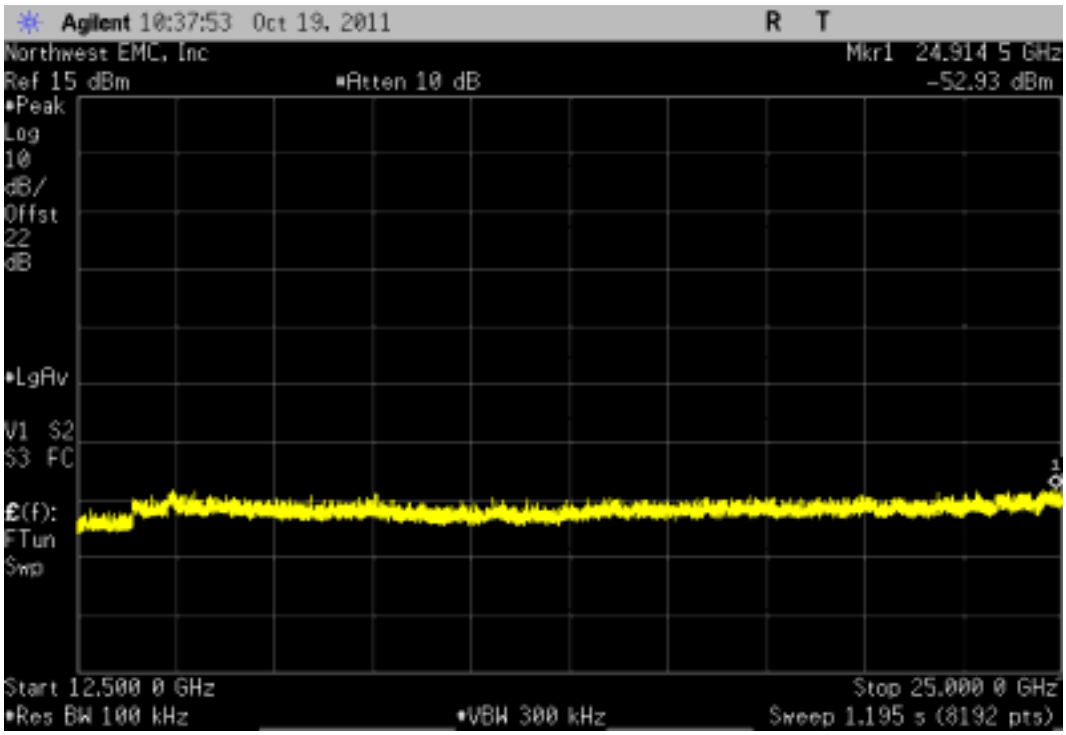
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-58.36 dBc	≤ -20 dBc	Pass



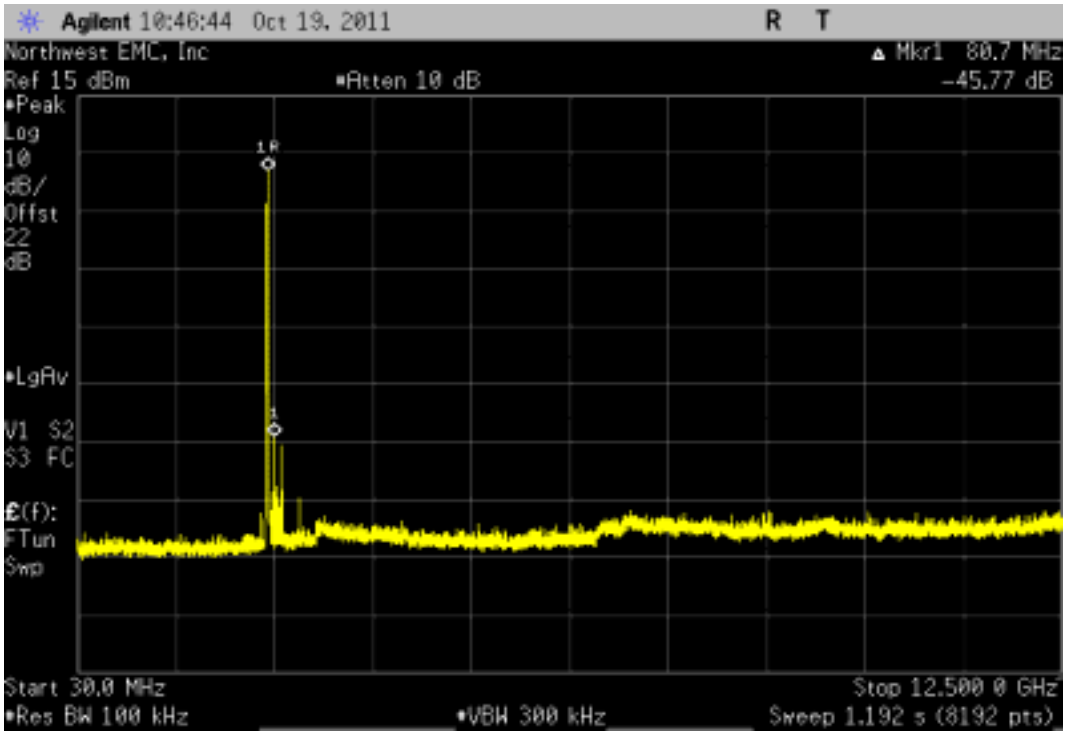
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-52.19 dBc	≤ -20 dBc	Pass



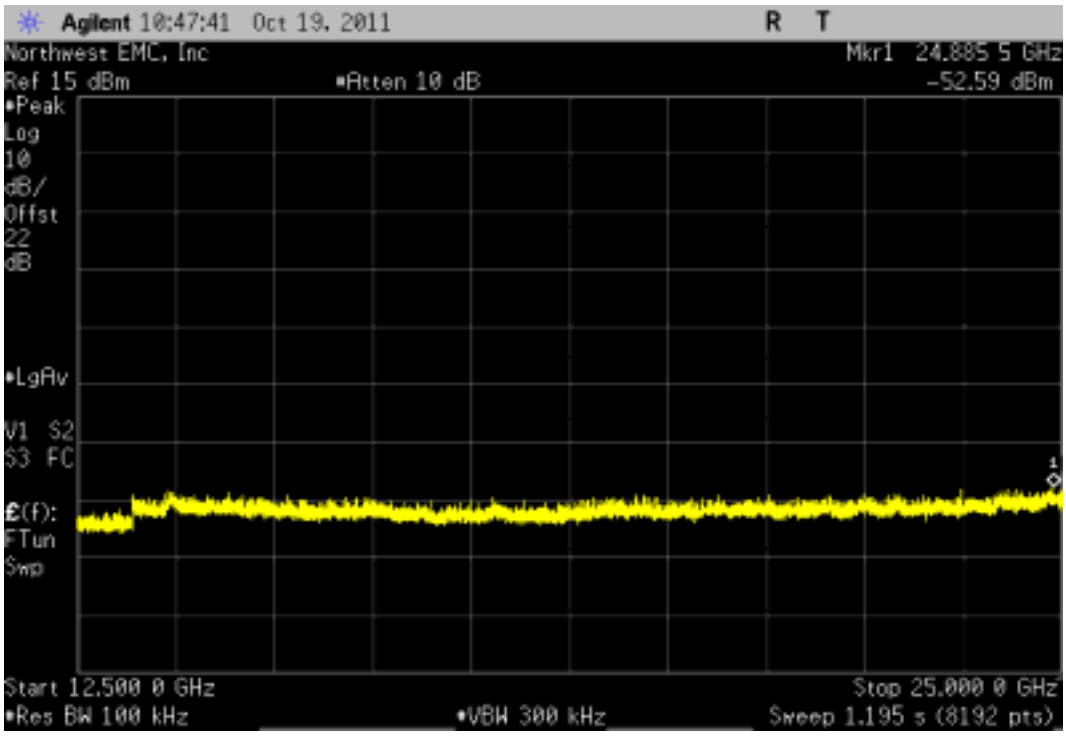
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-53.48 dBc	≤ -20 dBc	Pass



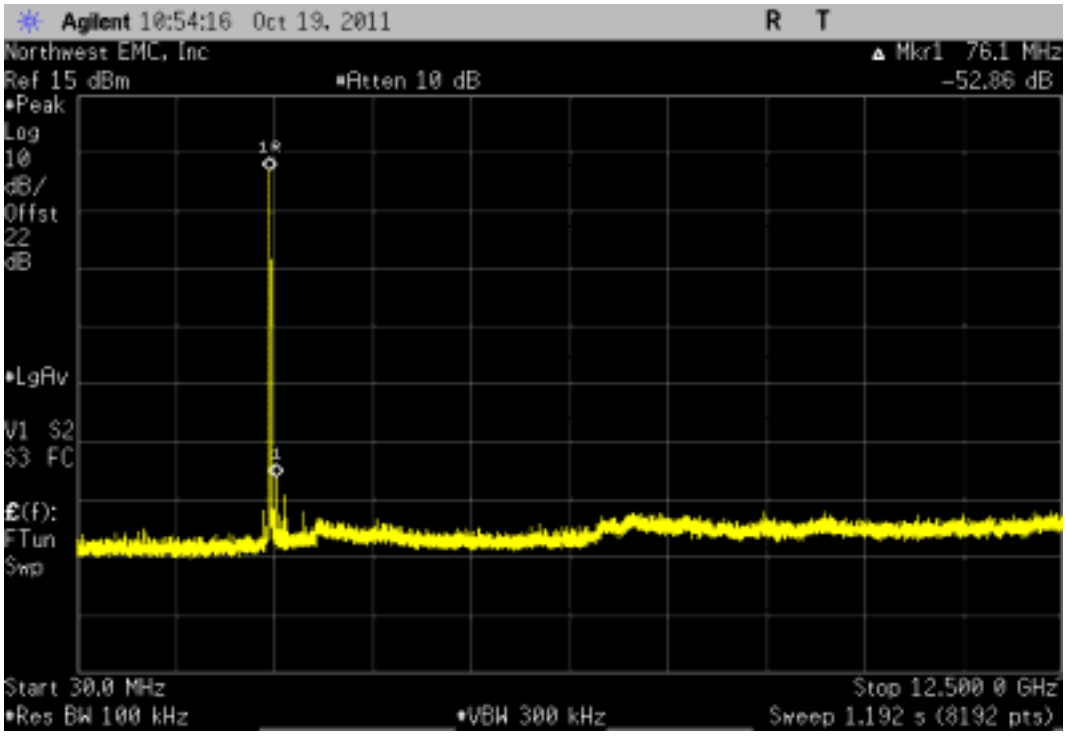
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-45.76 dBc	≤ -20 dBc	Pass



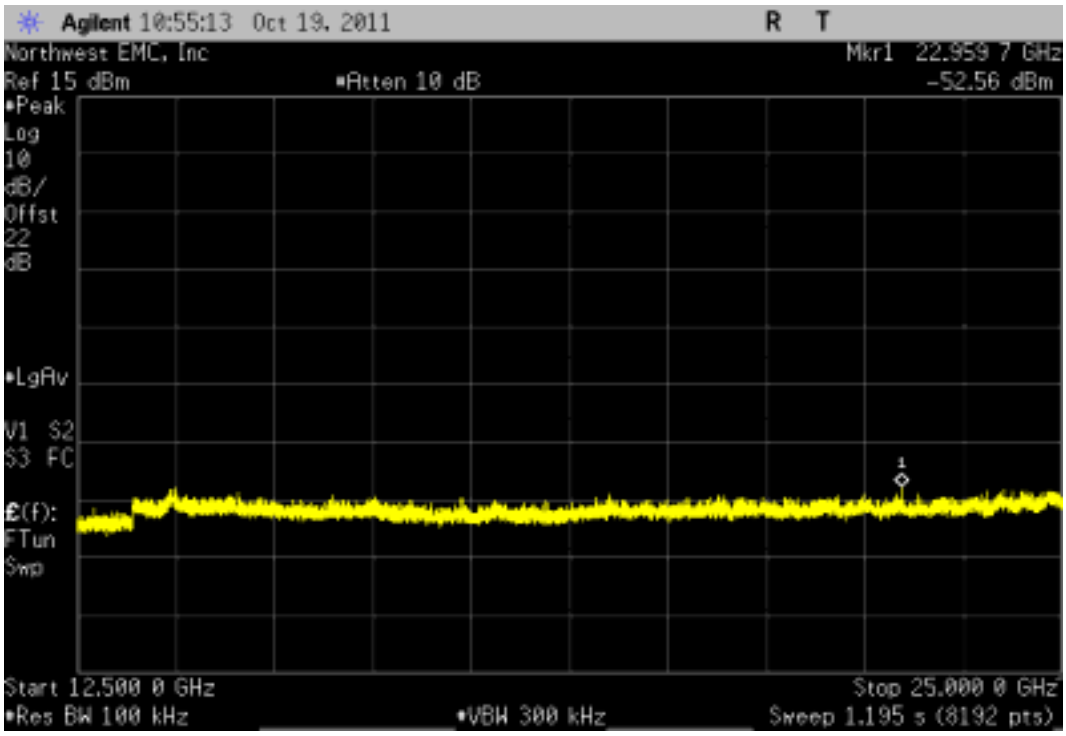
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-54.45 dBc	≤ -20 dBc	Pass



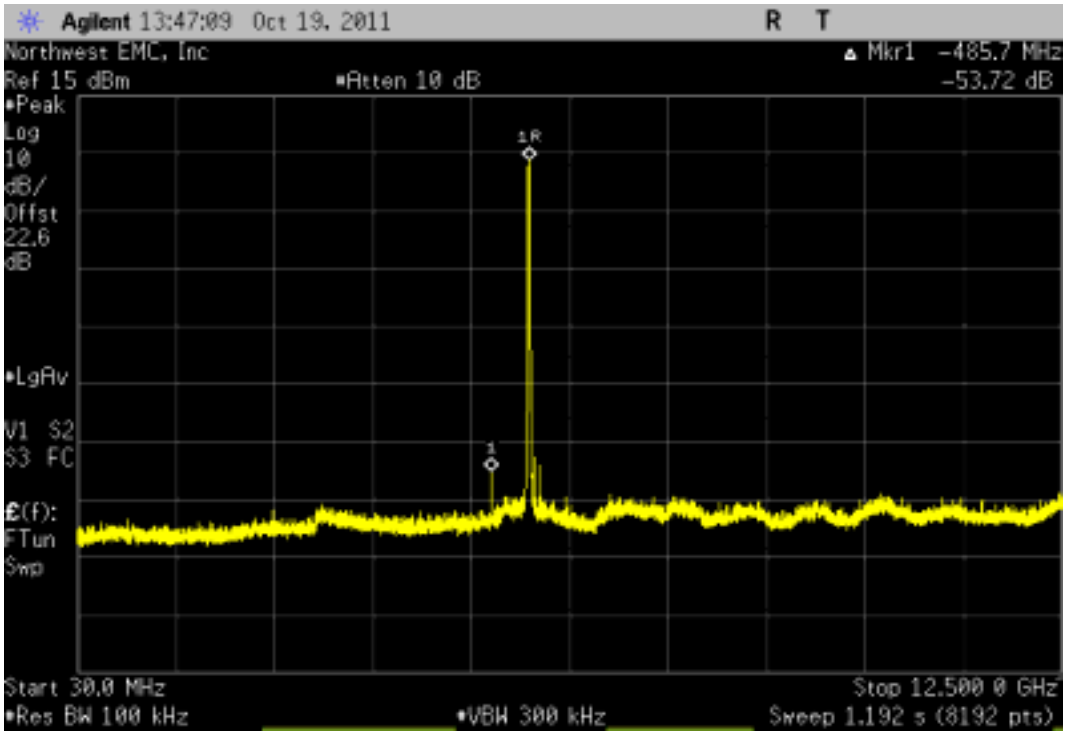
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-52.86 dBc	≤ -20 dBc	Pass



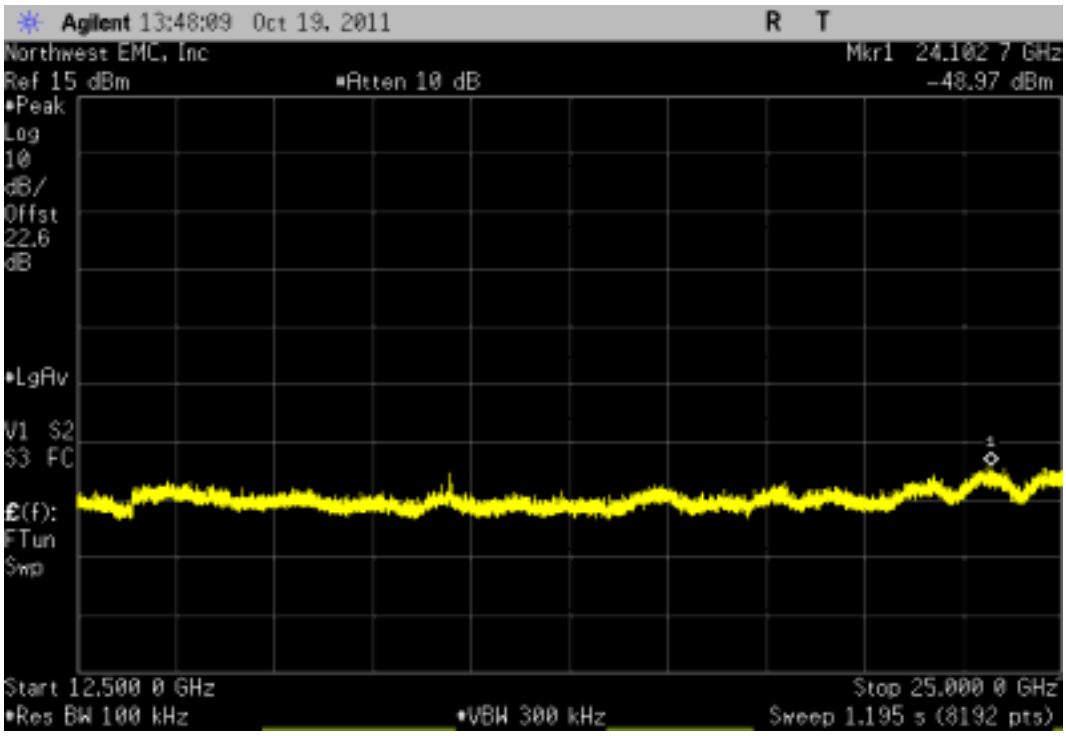
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-54.47 dBc	≤ -20 dBc	Pass



5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-53.72 dBc	≤ -20 dBc	Pass

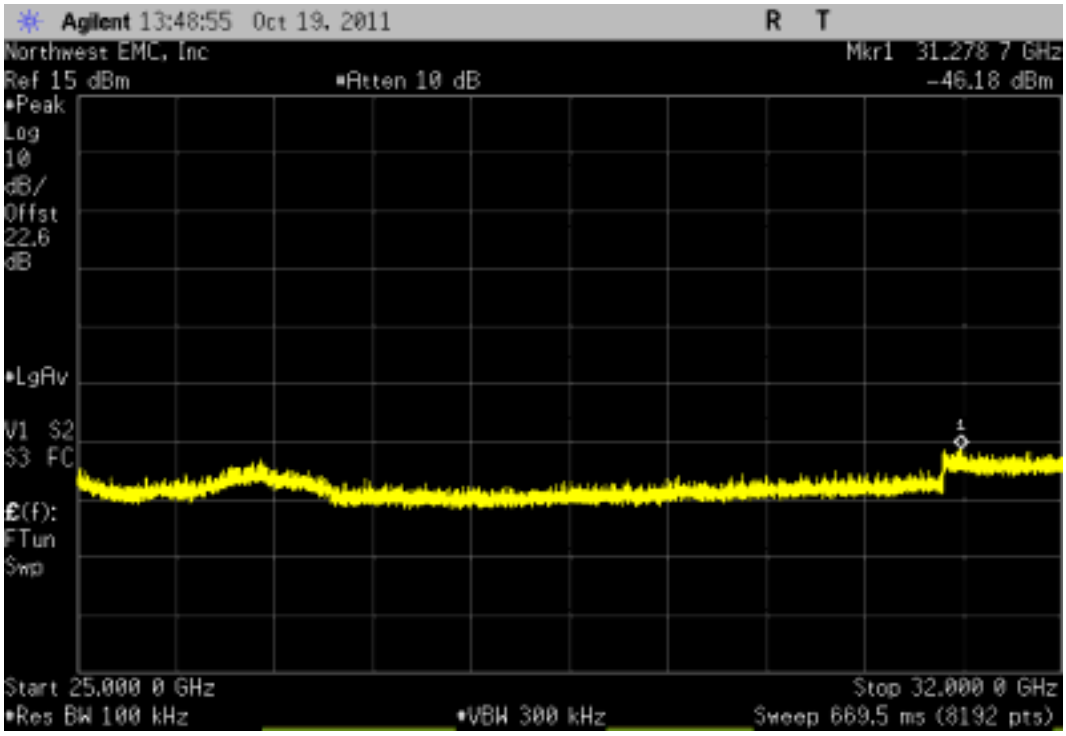


5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-52.7 dBc	≤ -20 dBc	Pass



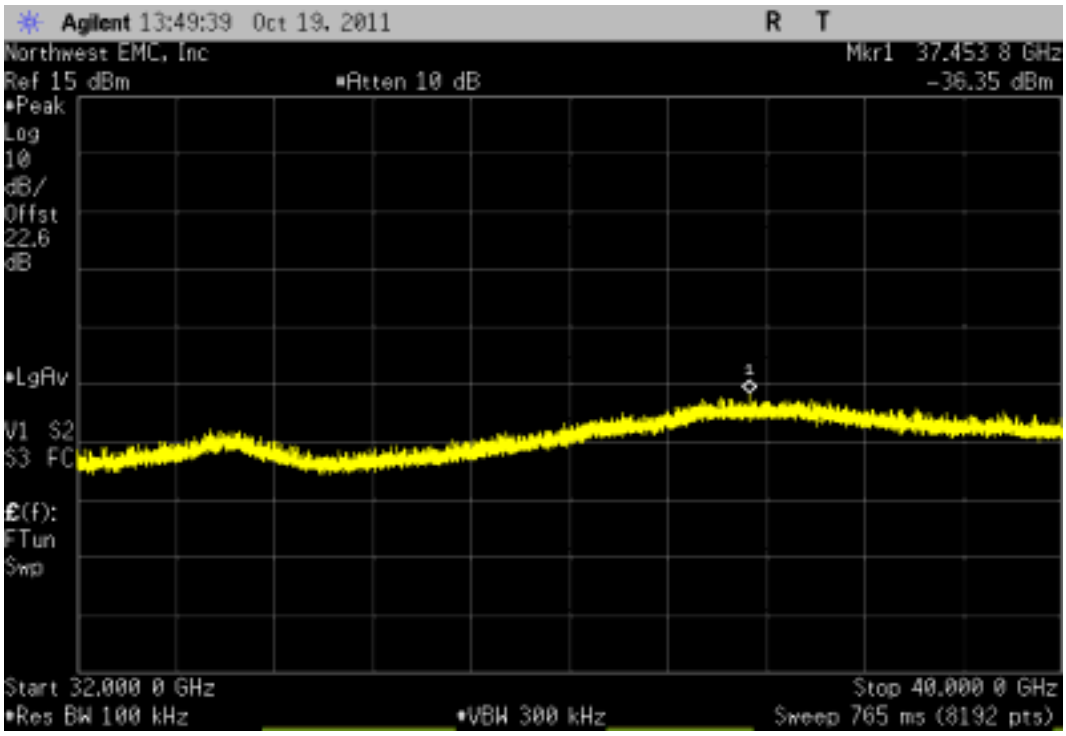
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz

Frequency Range		Value	Limit	Result
25 GHz - 32 GHz		-49.9 dBc	≤ -20 dBc	Pass

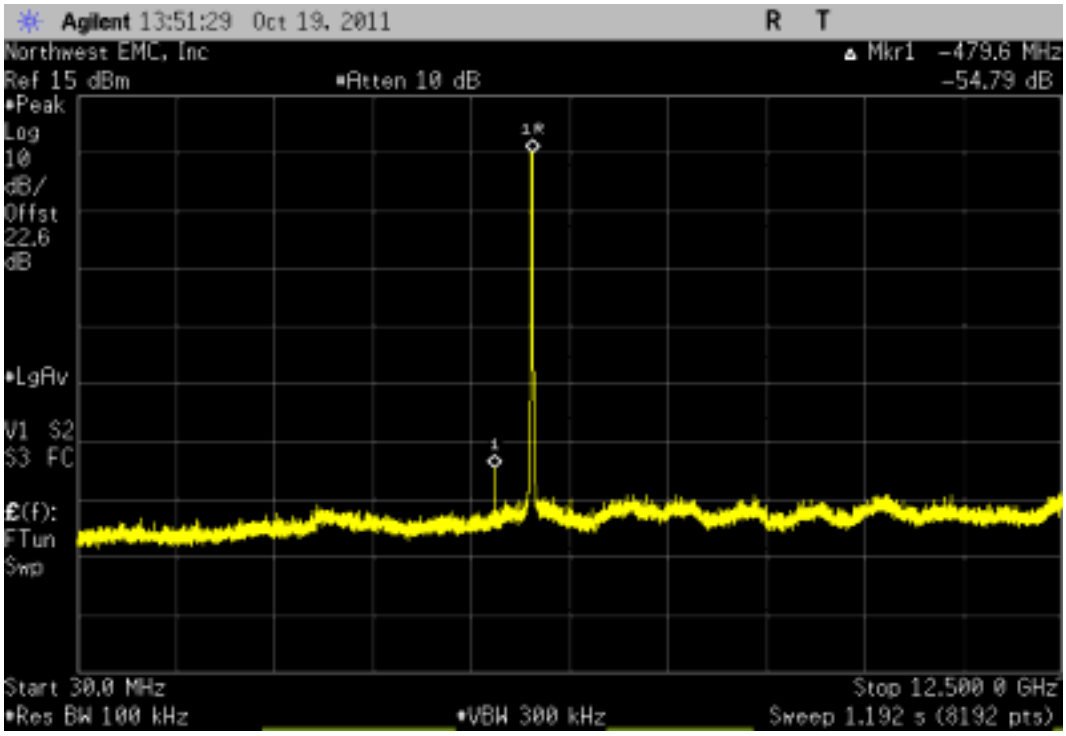


5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz

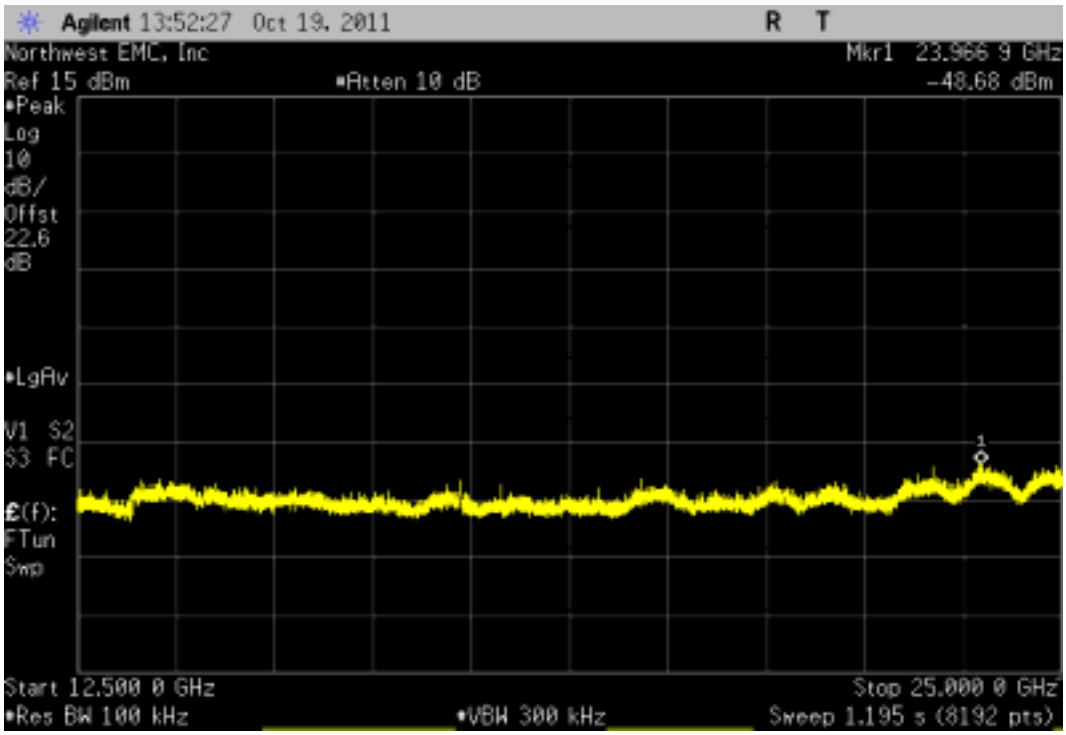
Frequency Range		Value	Limit	Result
32 GHz - 40 GHz		-40.07 dBc	≤ -20 dBc	Pass



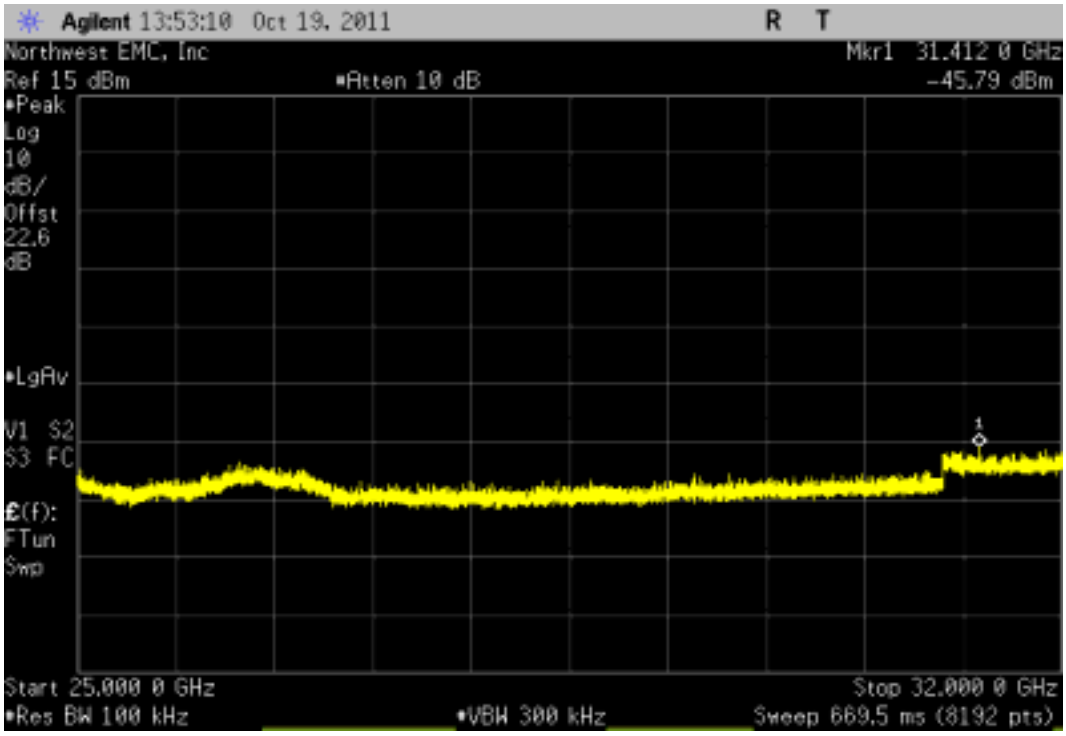
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-54.79 dBc	≤ -20 dBc	Pass



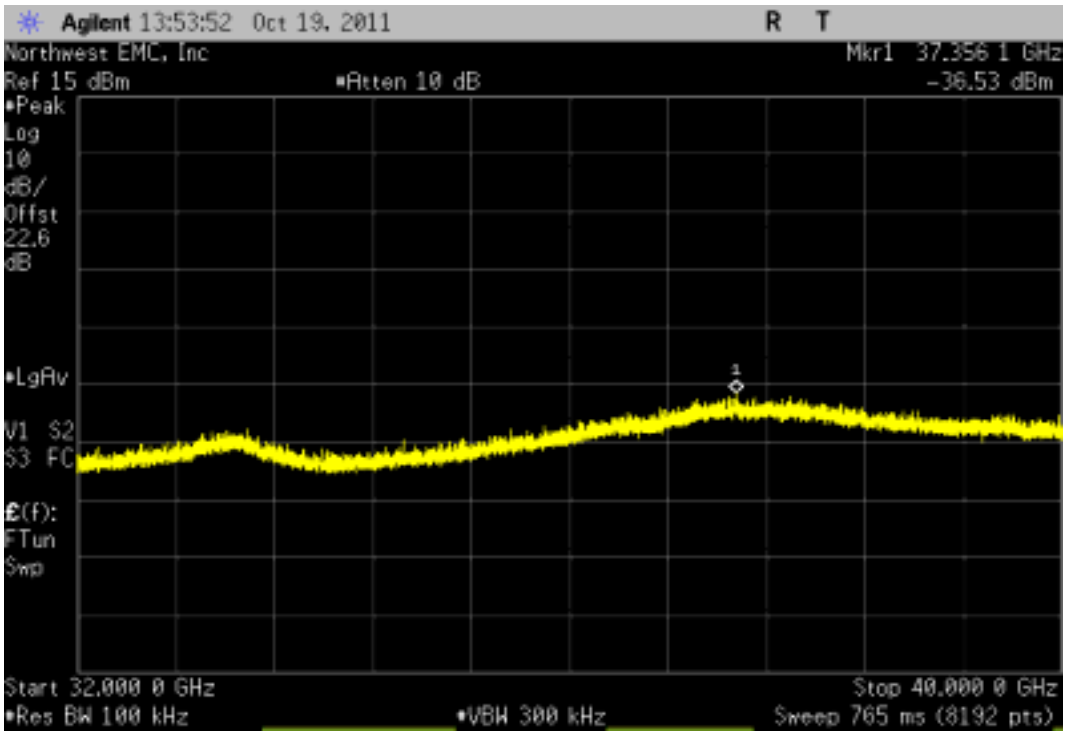
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-53.88 dBc	≤ -20 dBc	Pass



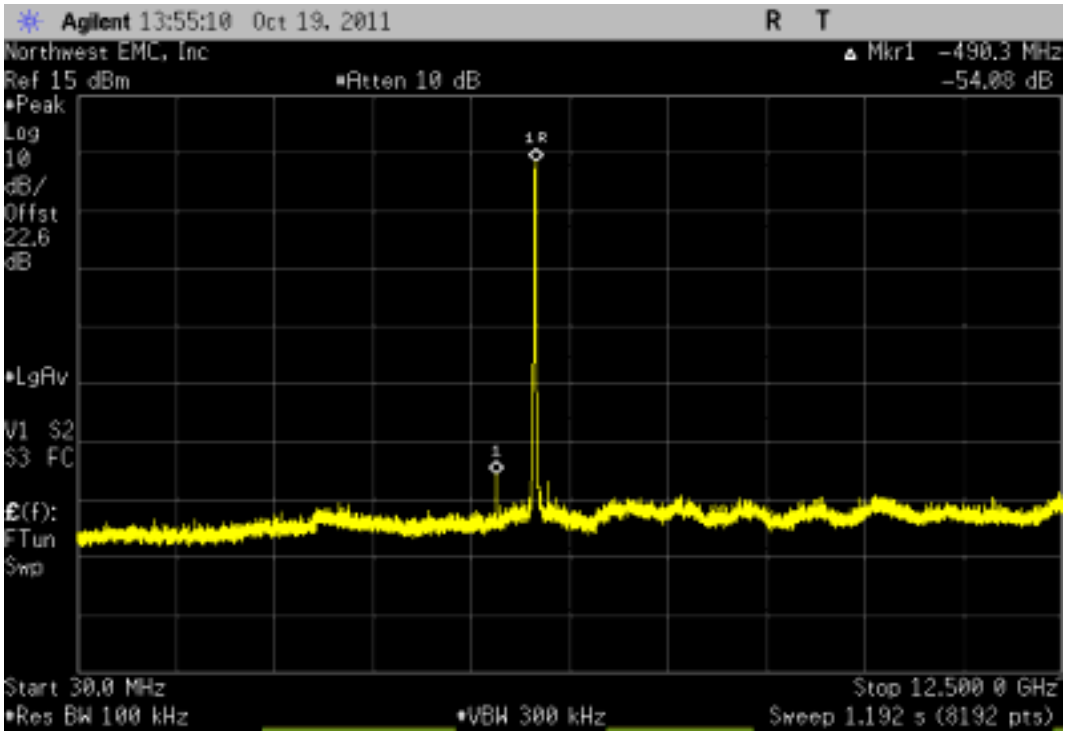
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-50.99 dBc	≤ -20 dBc	Pass



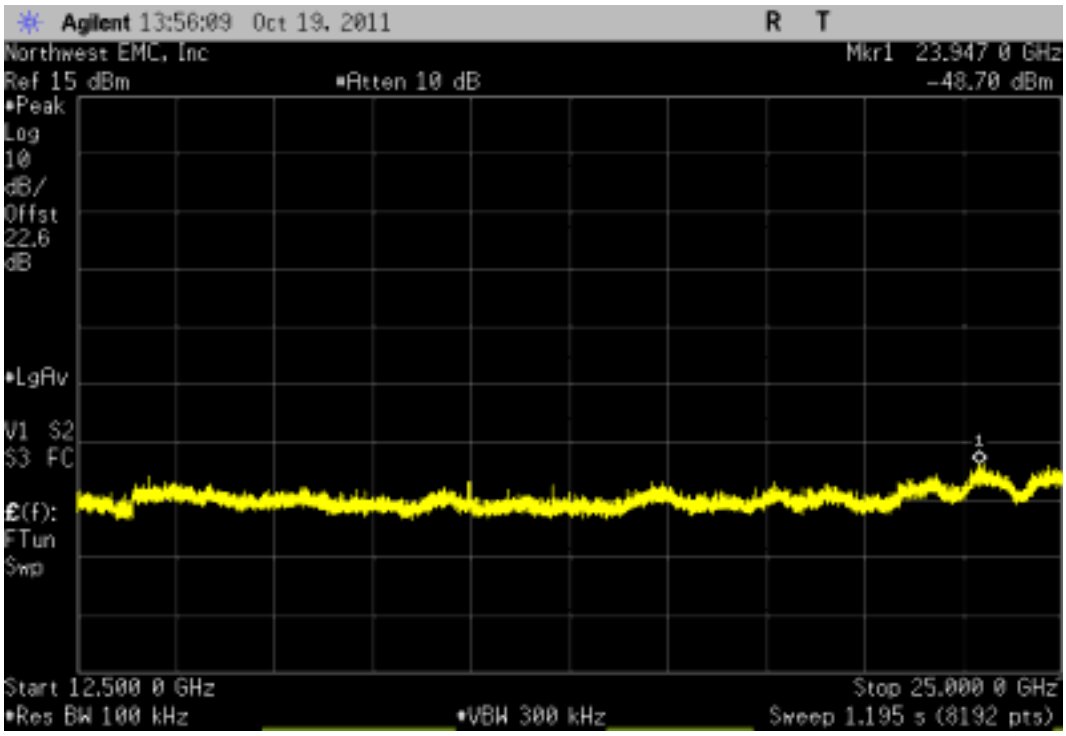
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-41.73 dBc	≤ -20 dBc	Pass



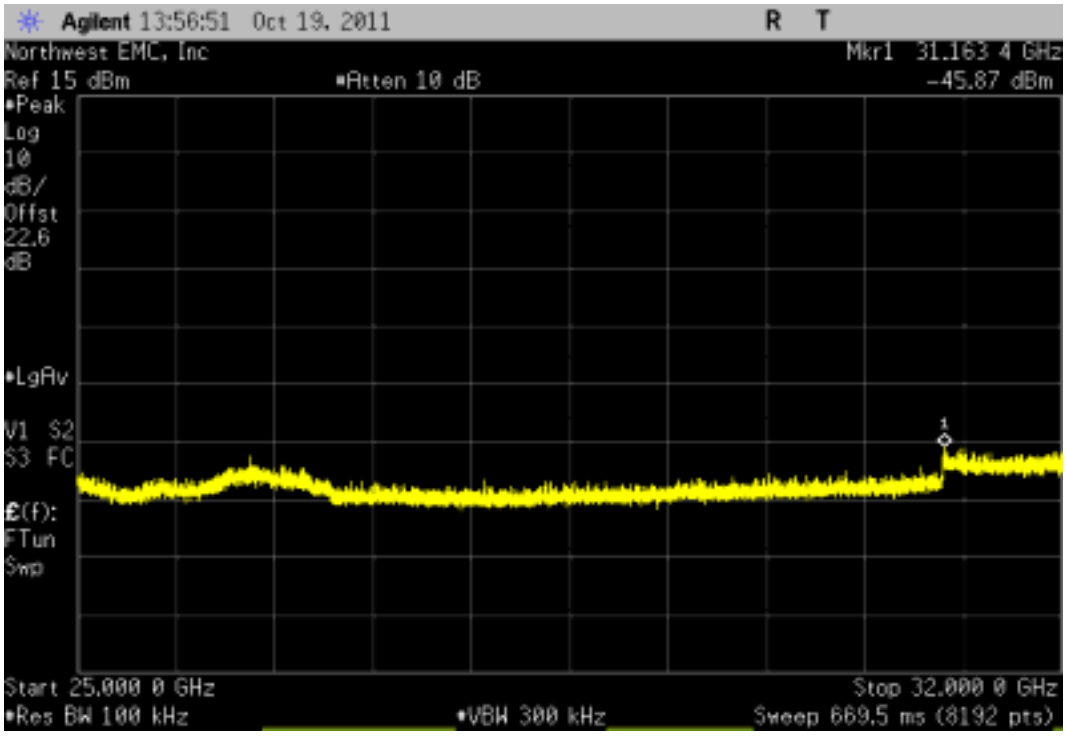
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-54.08 dBc	≤ -20 dBc	Pass



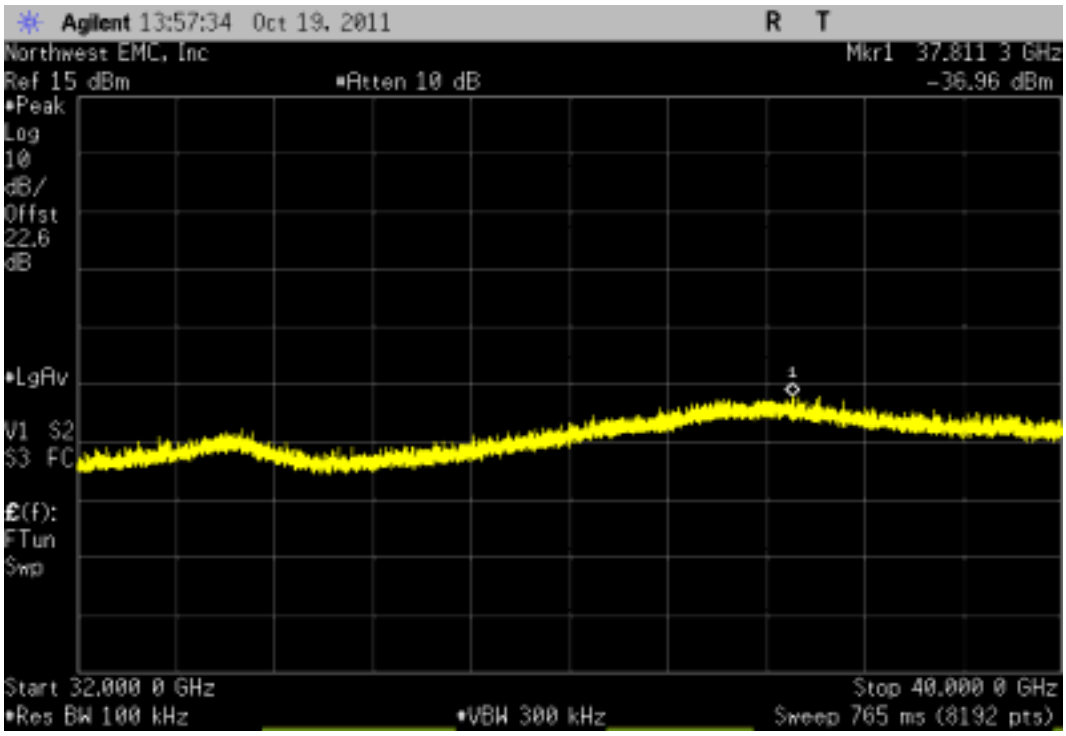
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-52.18 dBc	≤ -20 dBc	Pass



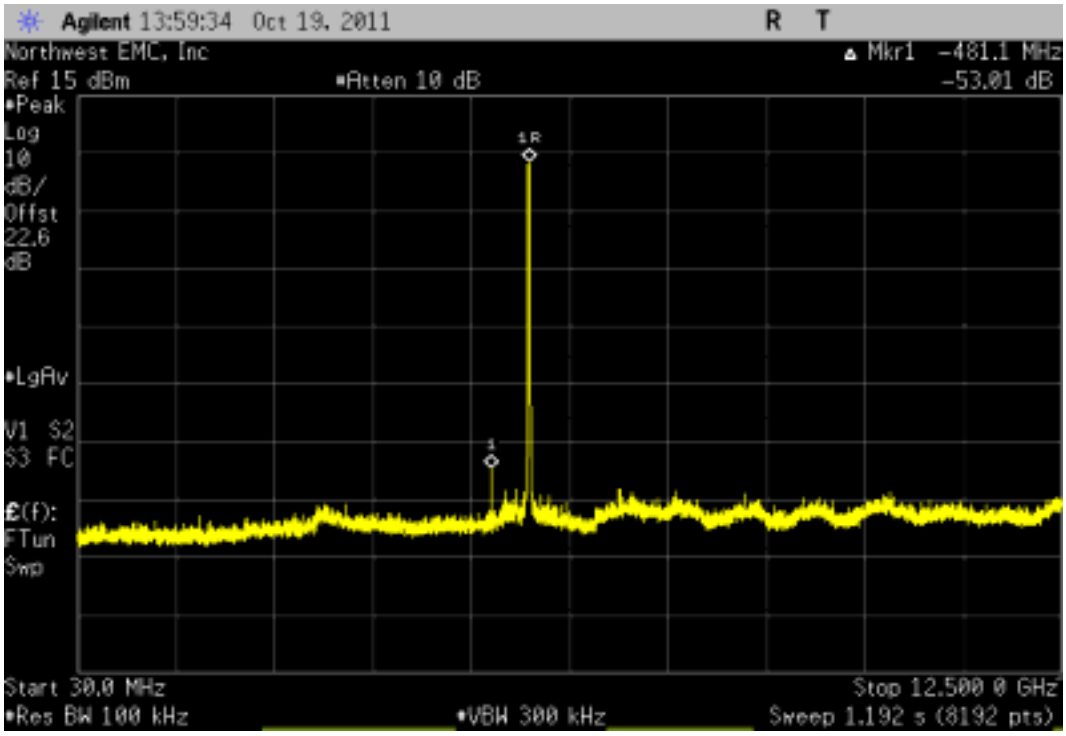
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz				
Frequency Range		Value	Limit	Result
25 GHz - 32 GHz		-49.35 dBc	≤ -20 dBc	Pass



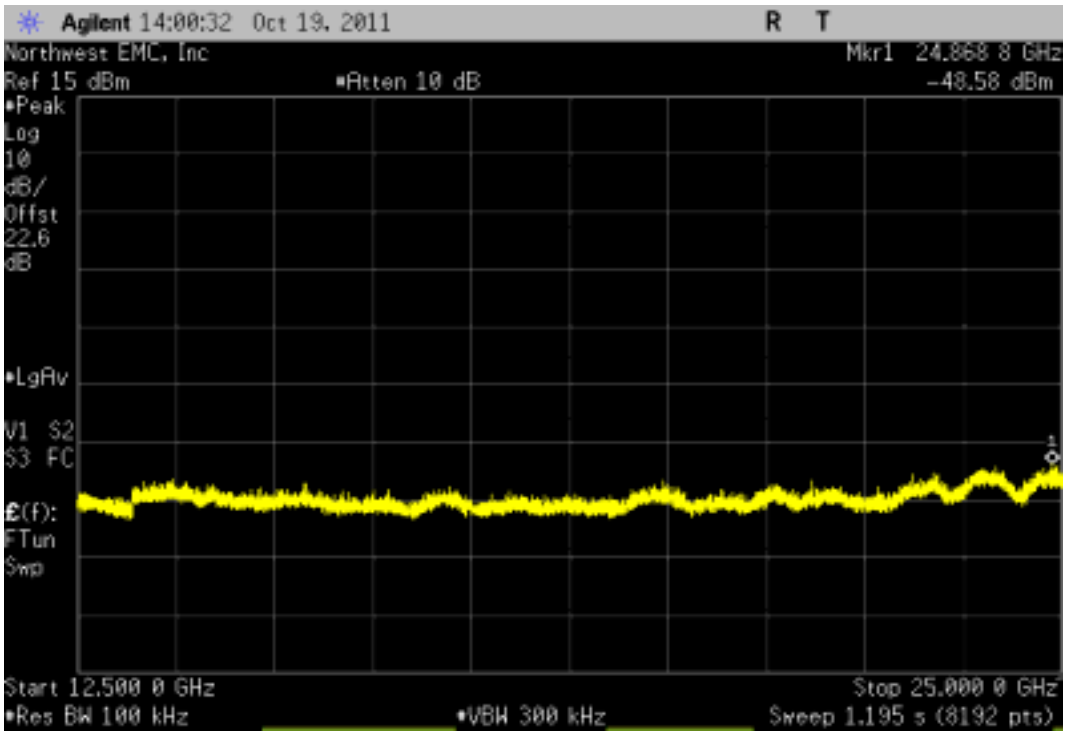
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz				
Frequency Range		Value	Limit	Result
32 GHz - 40 GHz		-40.44 dBc	≤ -20 dBc	Pass



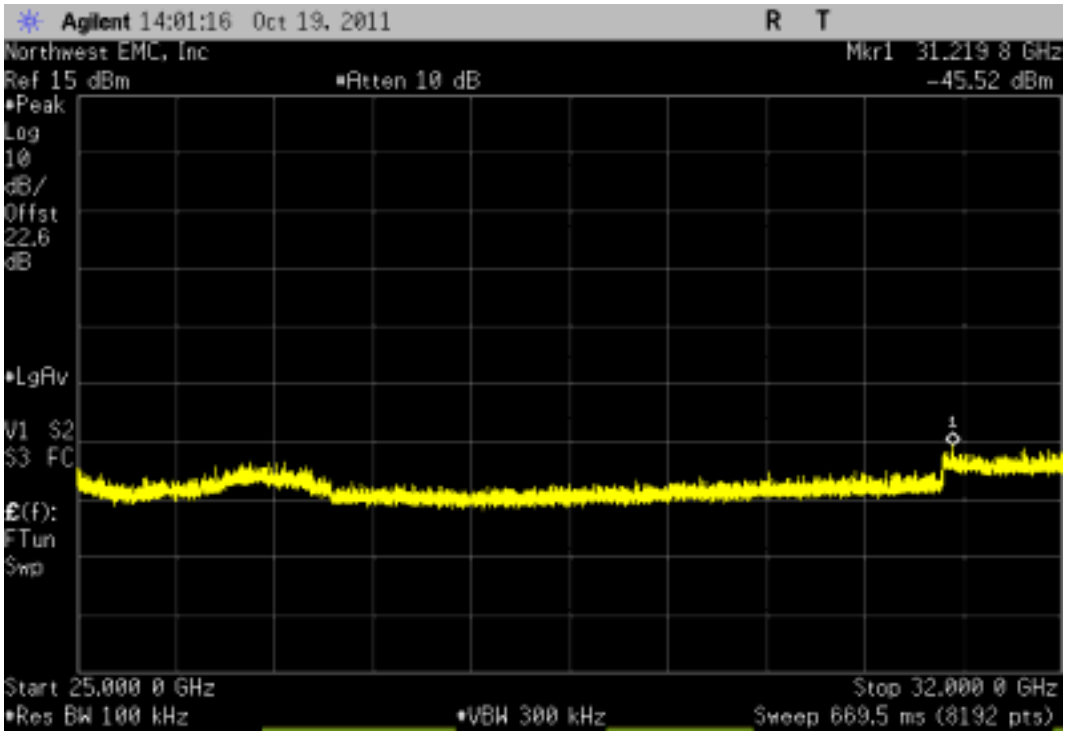
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-53.01 dBc	≤ -20 dBc	Pass



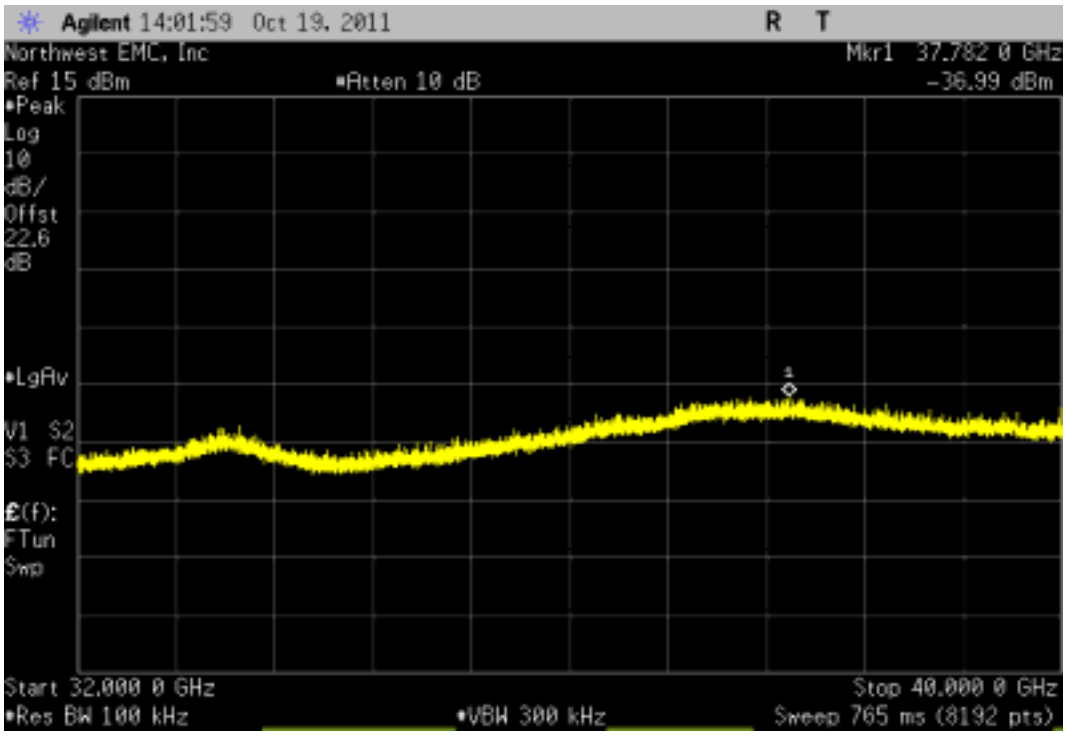
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-52.08 dBc	≤ -20 dBc	Pass



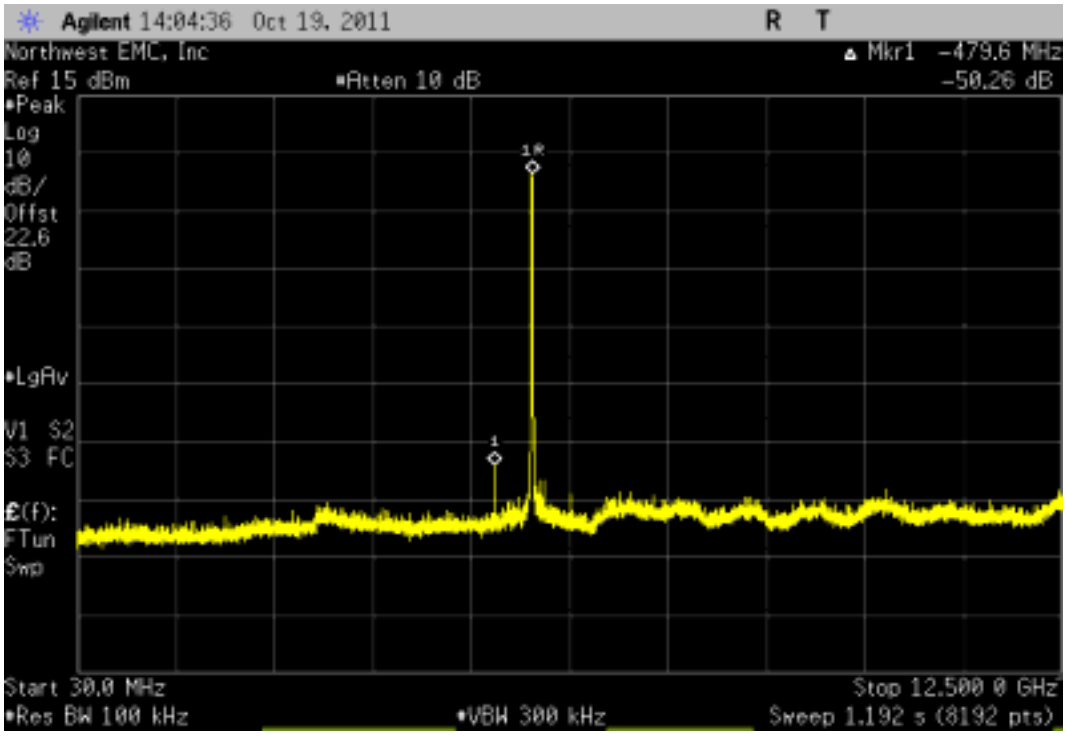
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-49.02 dBc	≤ -20 dBc	Pass



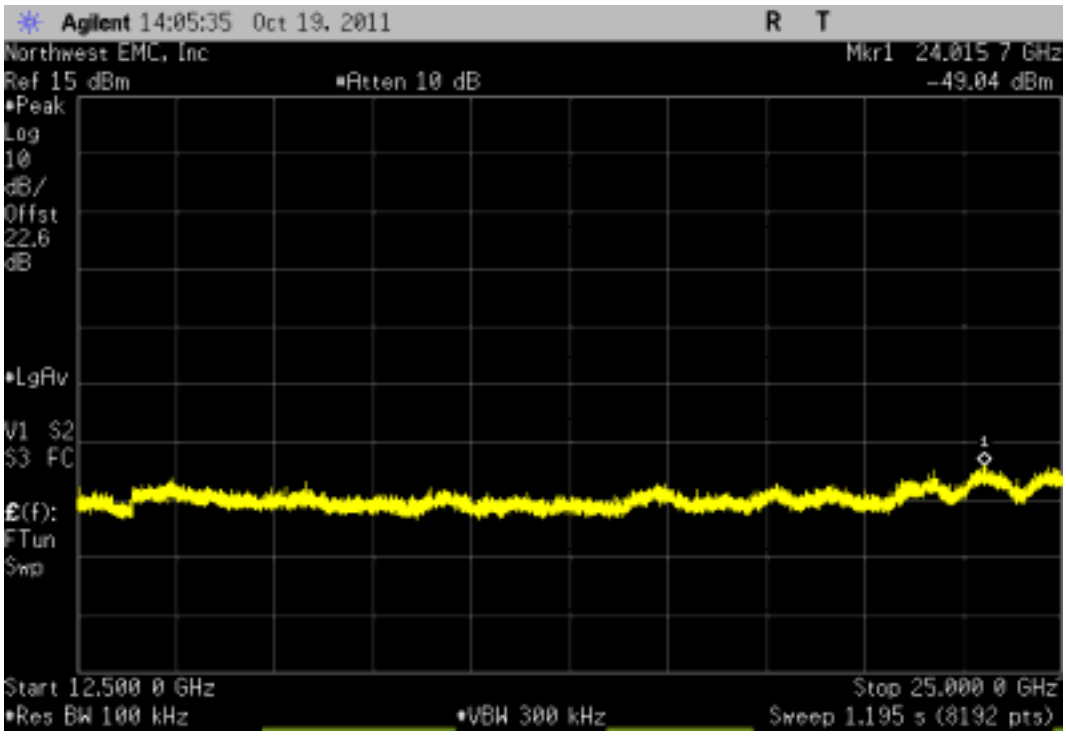
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-40.49 dBc	≤ -20 dBc	Pass



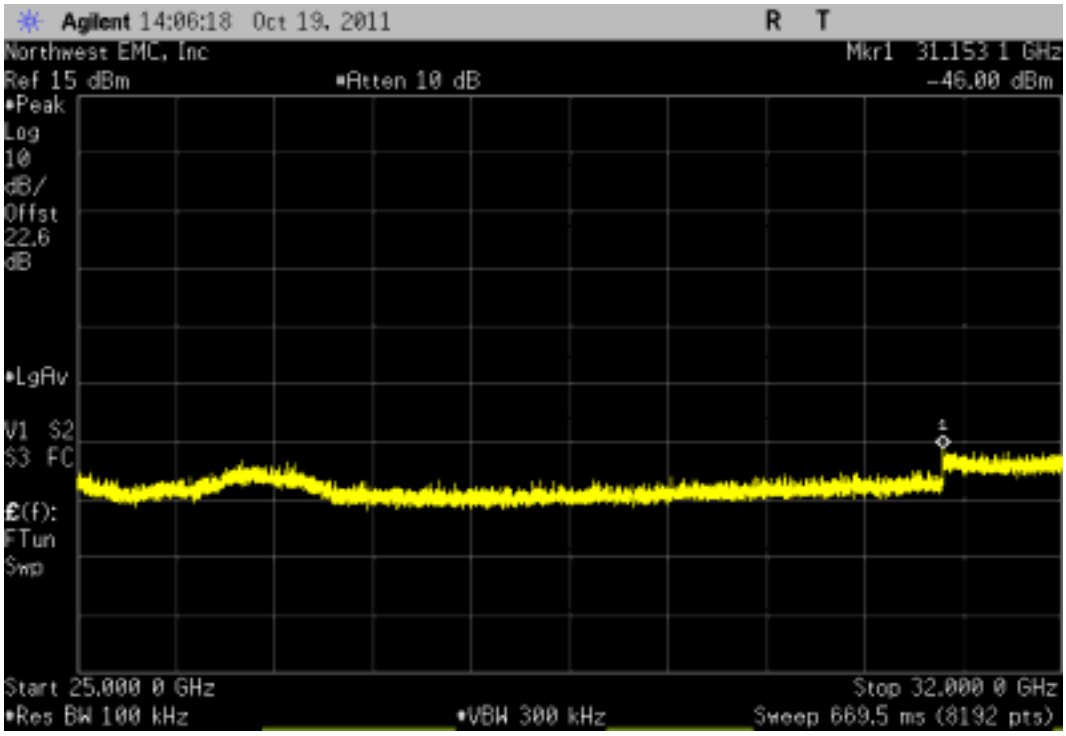
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-50.26 dBc	≤ -20 dBc	Pass



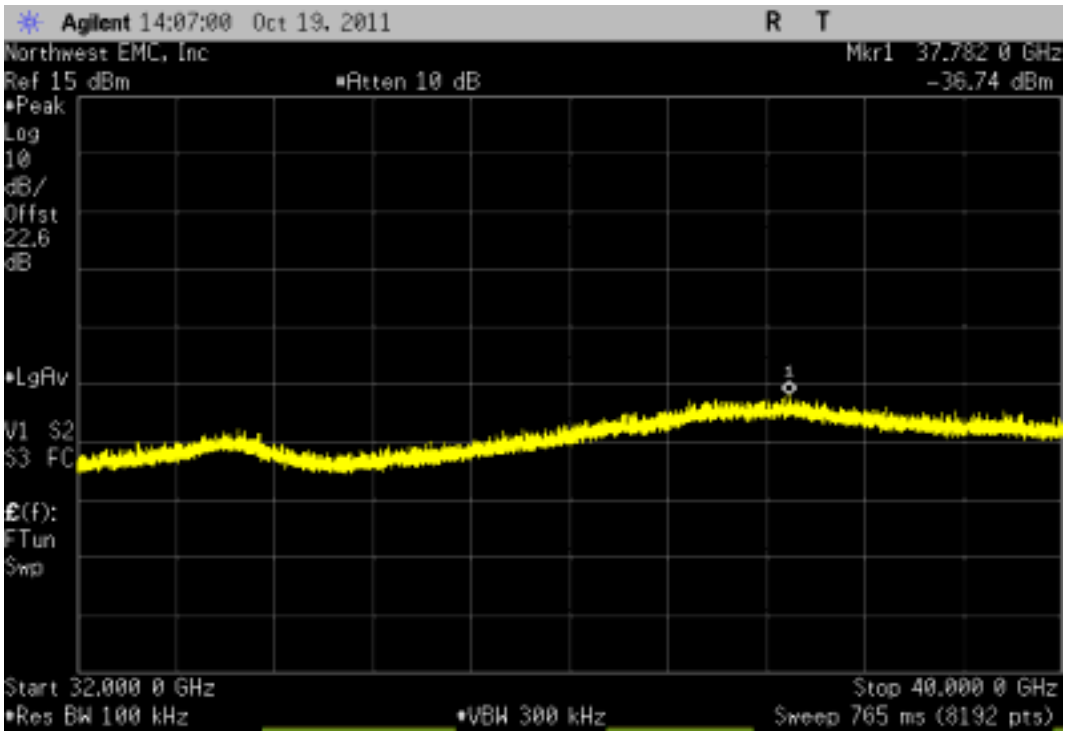
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-50.34 dBc	≤ -20 dBc	Pass



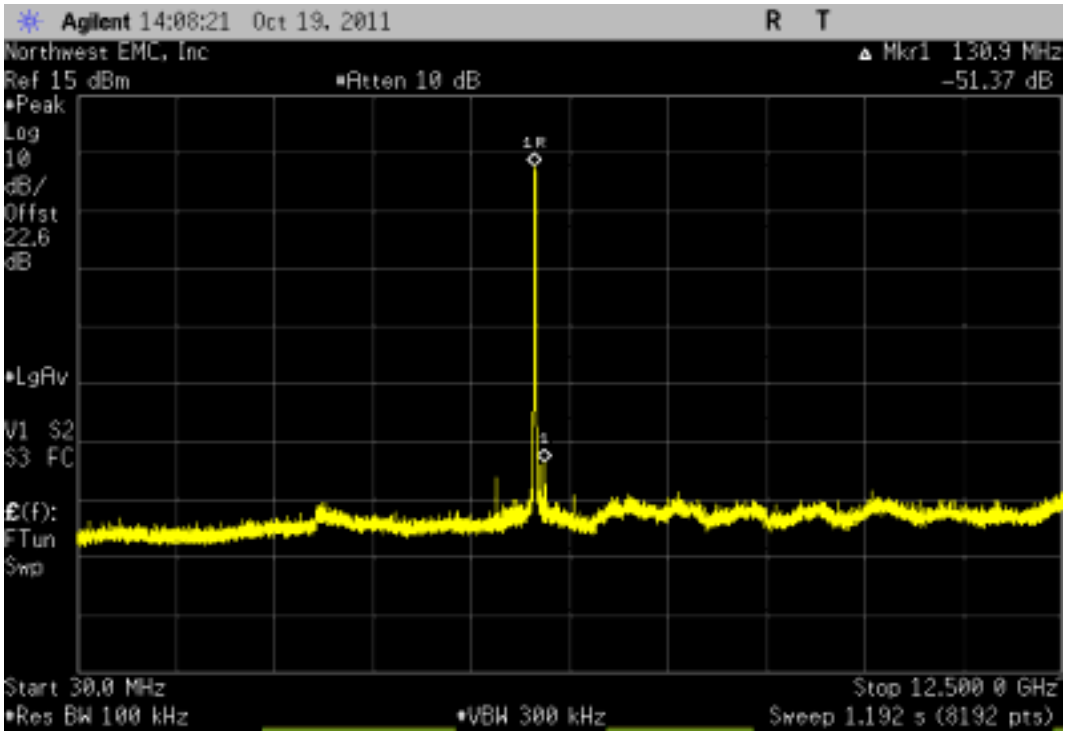
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-47.3 dBc	≤ -20 dBc	Pass



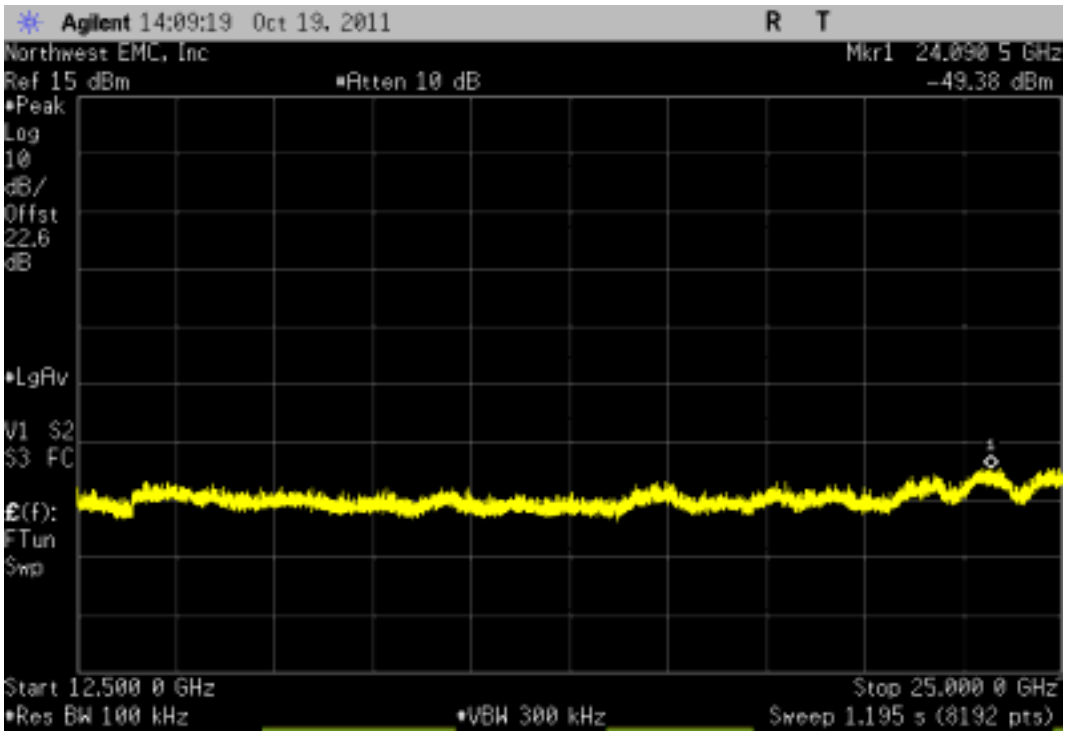
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-38.04 dBc	≤ -20 dBc	Pass



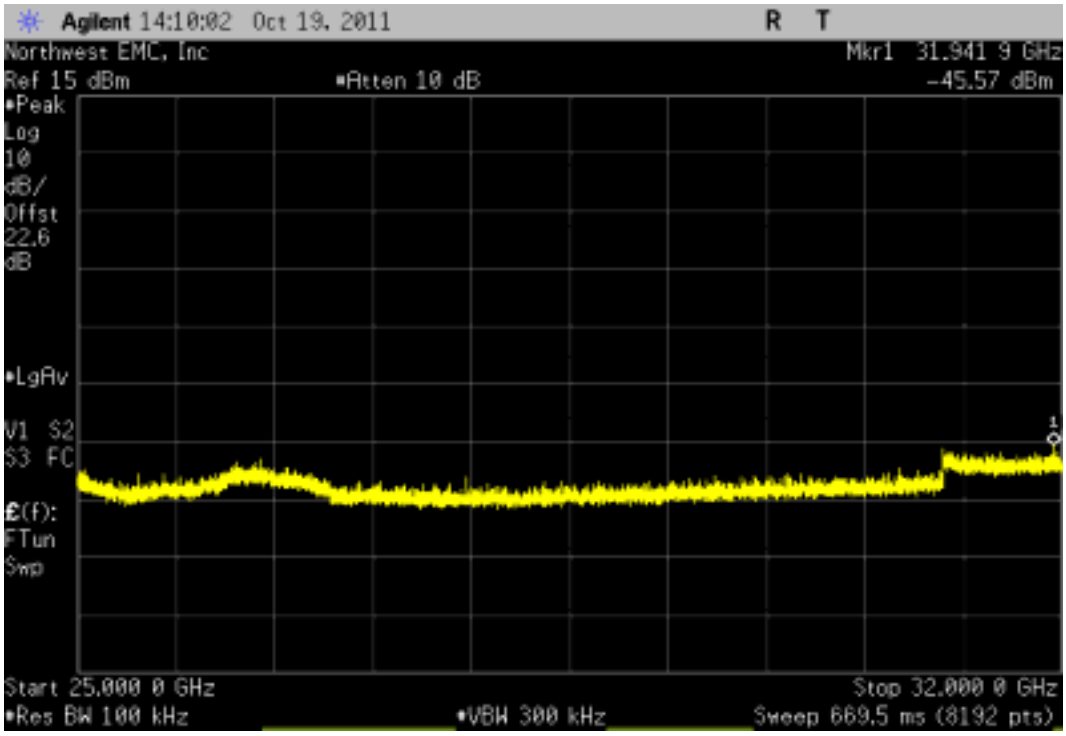
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-51.36 dBc	≤ -20 dBc	Pass



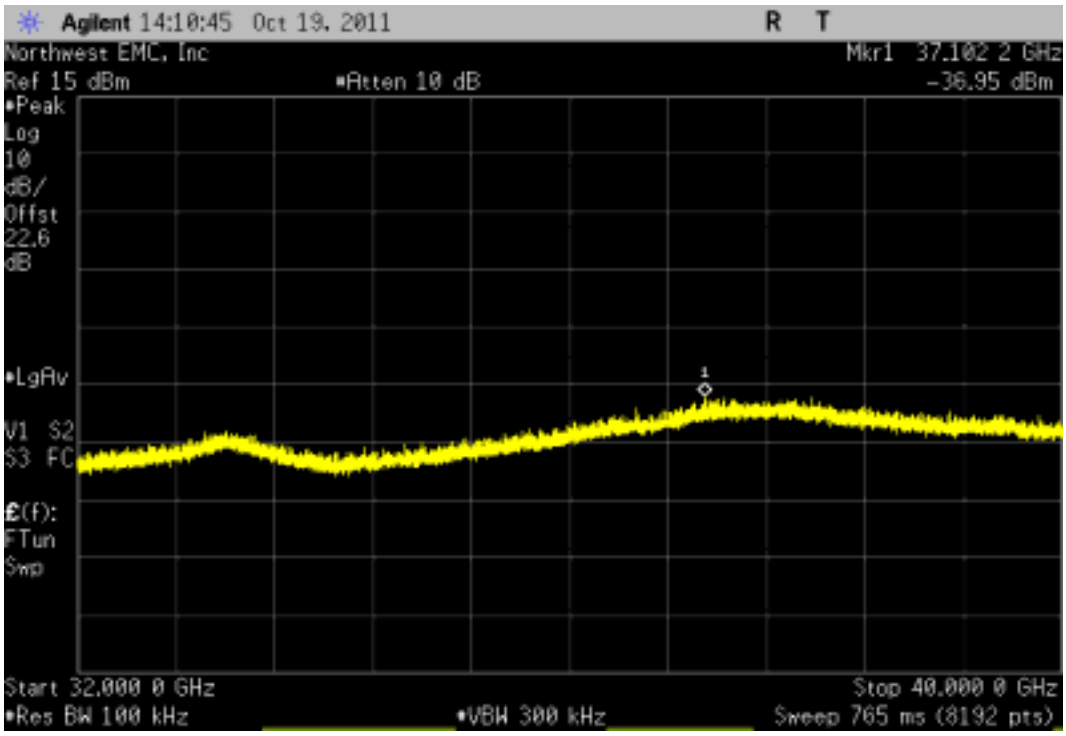
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-52.19 dBc	≤ -20 dBc	Pass



5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz				
Frequency Range		Value	Limit	Result
25 GHz - 32 GHz		-48.38 dBc	≤ -20 dBc	Pass

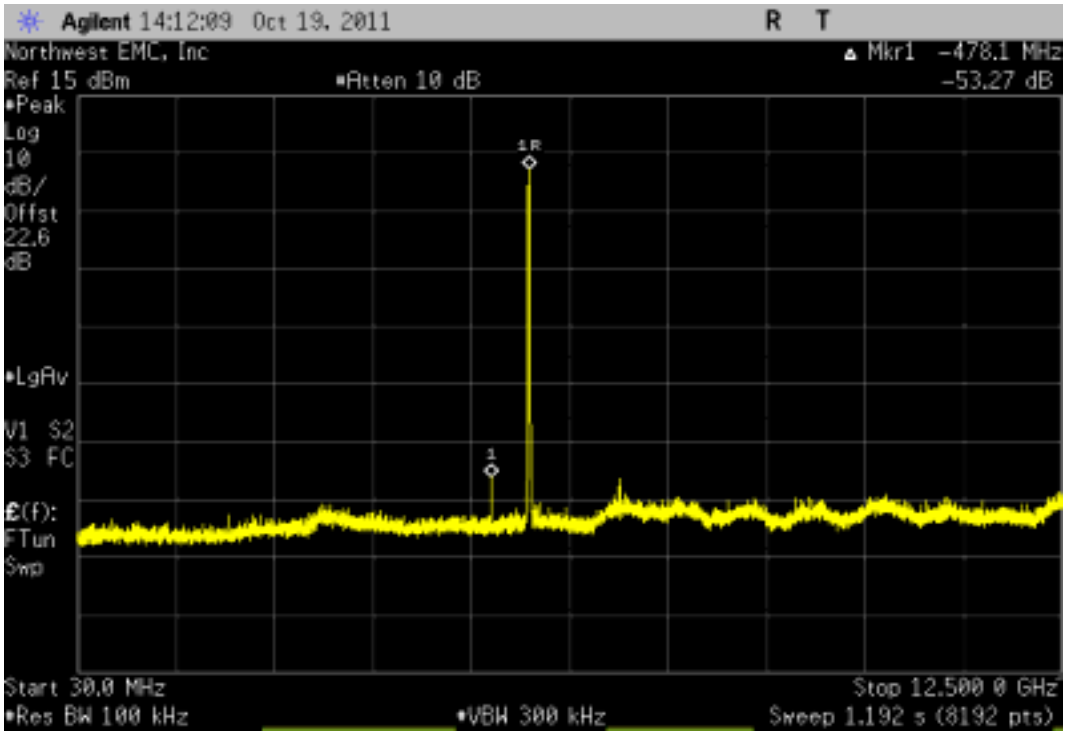


5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz				
Frequency Range		Value	Limit	Result
32 GHz - 40 GHz		-39.76 dBc	≤ -20 dBc	Pass



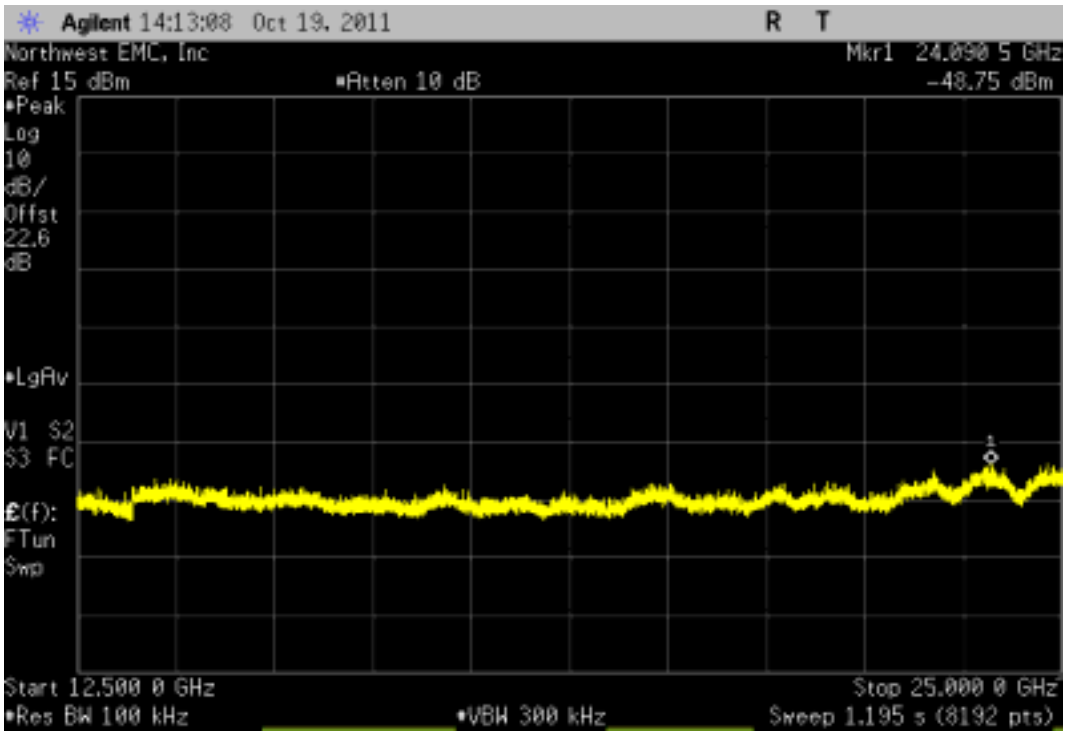
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz

Frequency Range		Value	Limit	Result
30 MHz - 12.5 GHz		-53.27 dBc	≤ -20 dBc	Pass

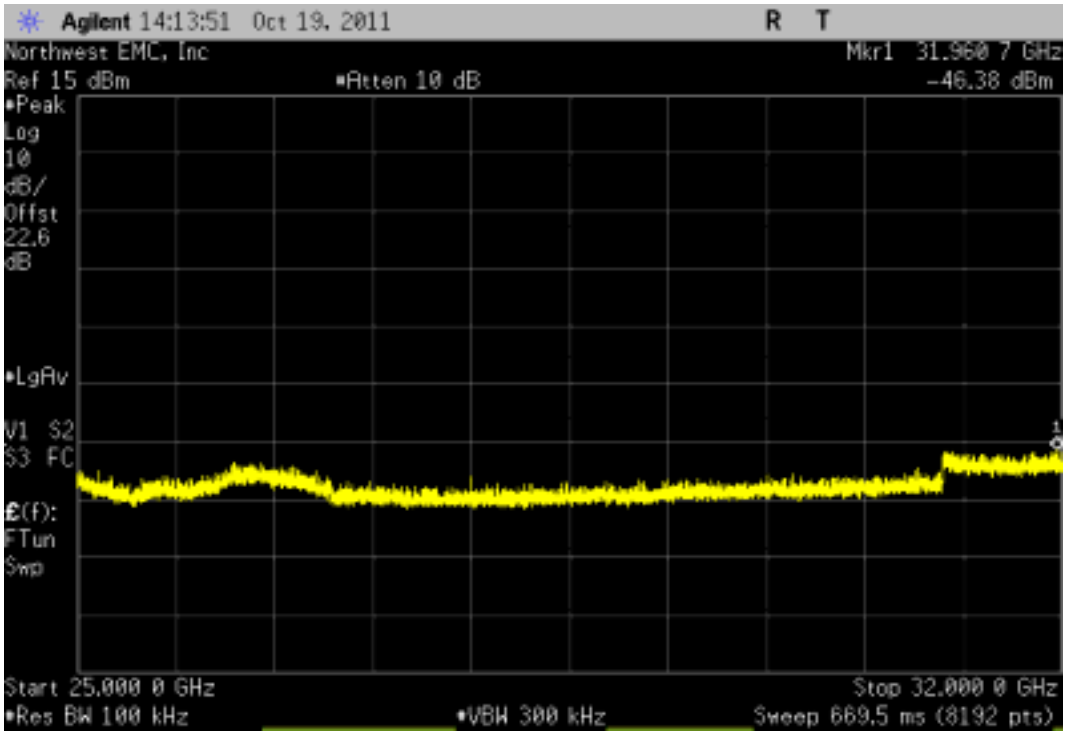


5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz

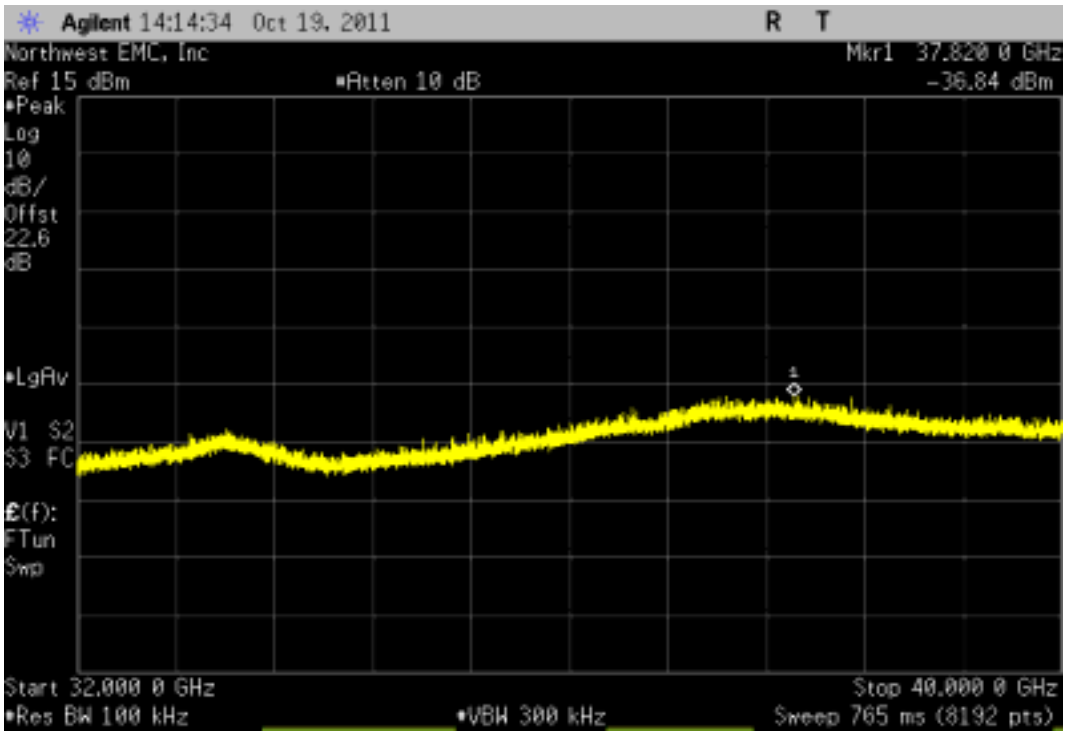
Frequency Range		Value	Limit	Result
12.5 GHz - 25 GHz		-50.88 dBc	≤ -20 dBc	Pass



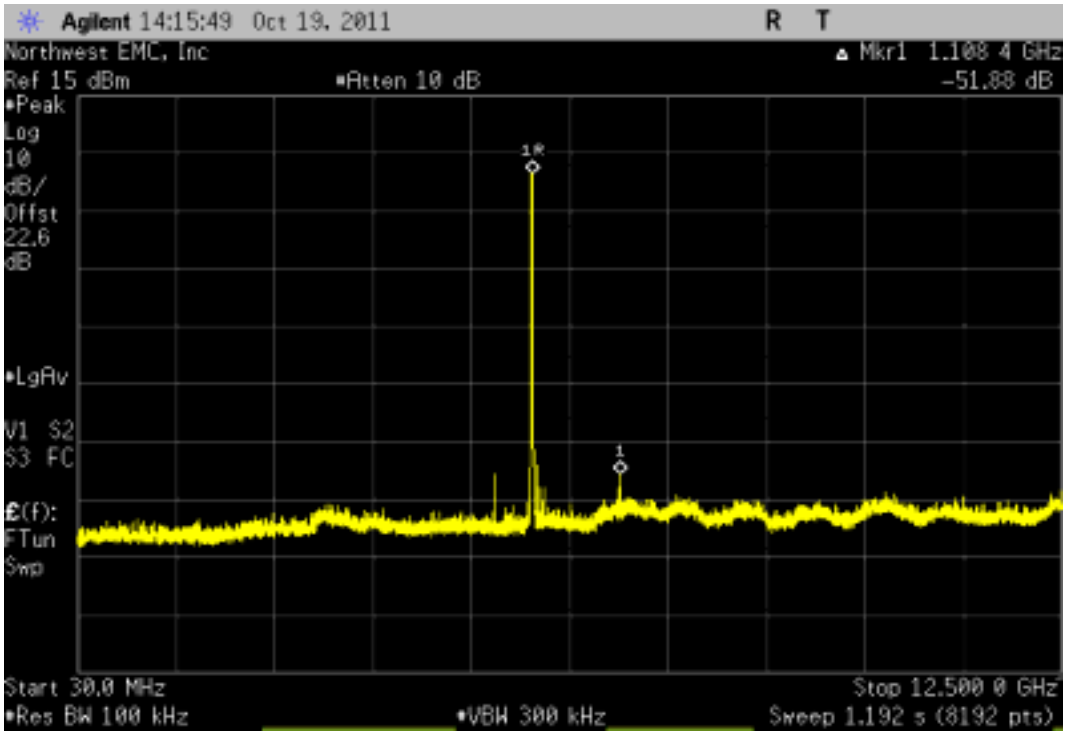
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		Value	Limit	Result
25 GHz - 32 GHz		-48.52 dBc	≤ -20 dBc	Pass



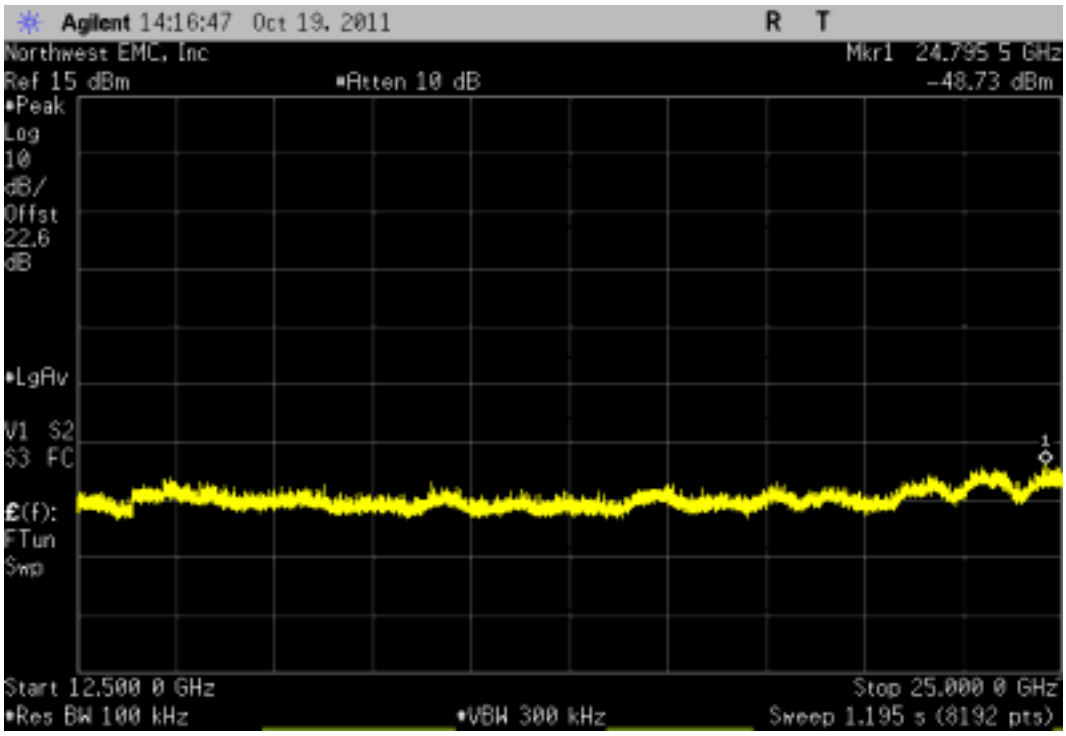
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		Value	Limit	Result
32 GHz - 40 GHz		-38.97 dBc	≤ -20 dBc	Pass



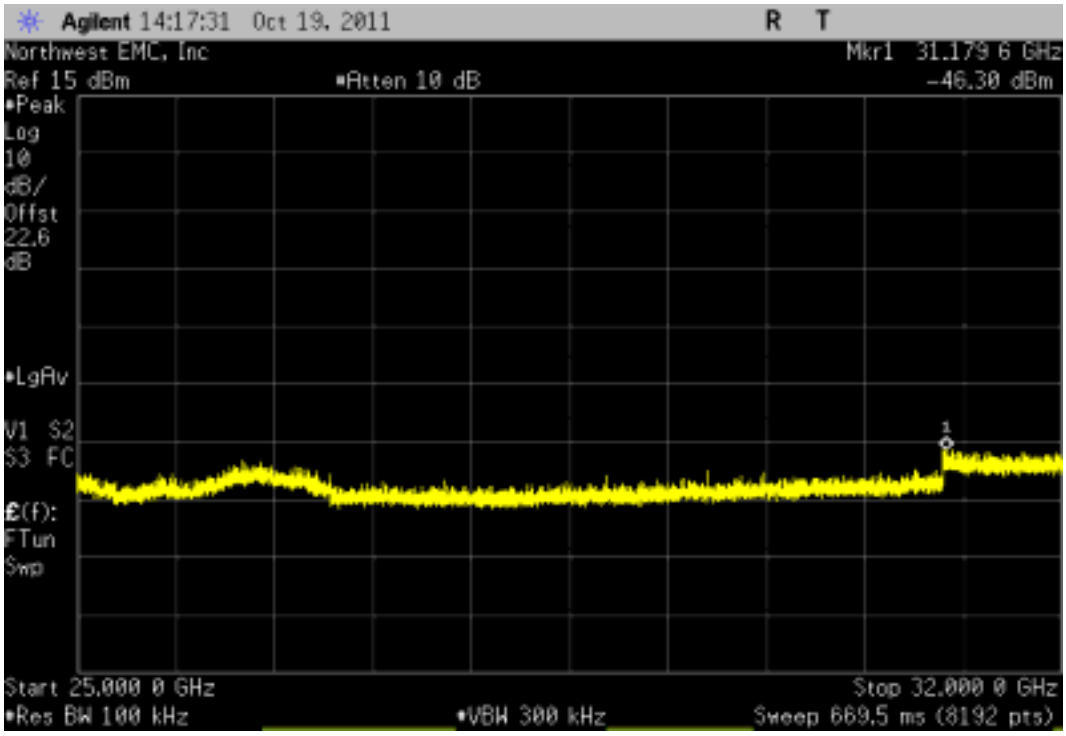
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		Value	Limit	Result
30 MHz - 12.5 GHz		-51.88 dBc	≤ -20 dBc	Pass



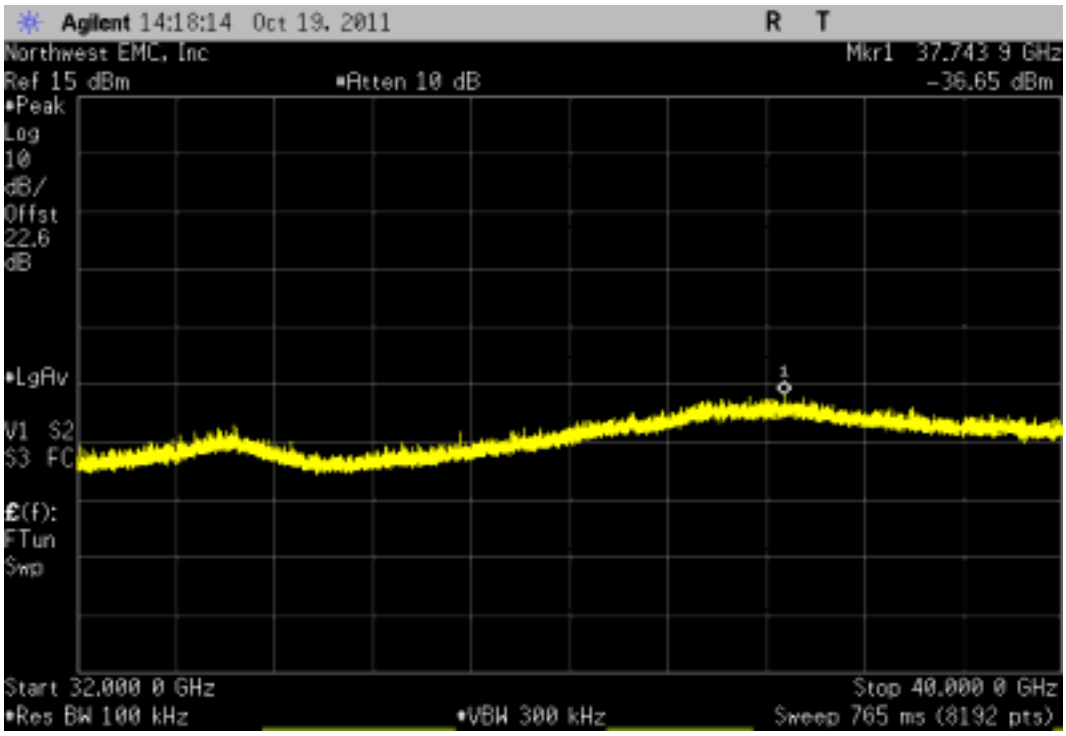
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		Value	Limit	Result
12.5 GHz - 25 GHz		-50.14 dBc	≤ -20 dBc	Pass



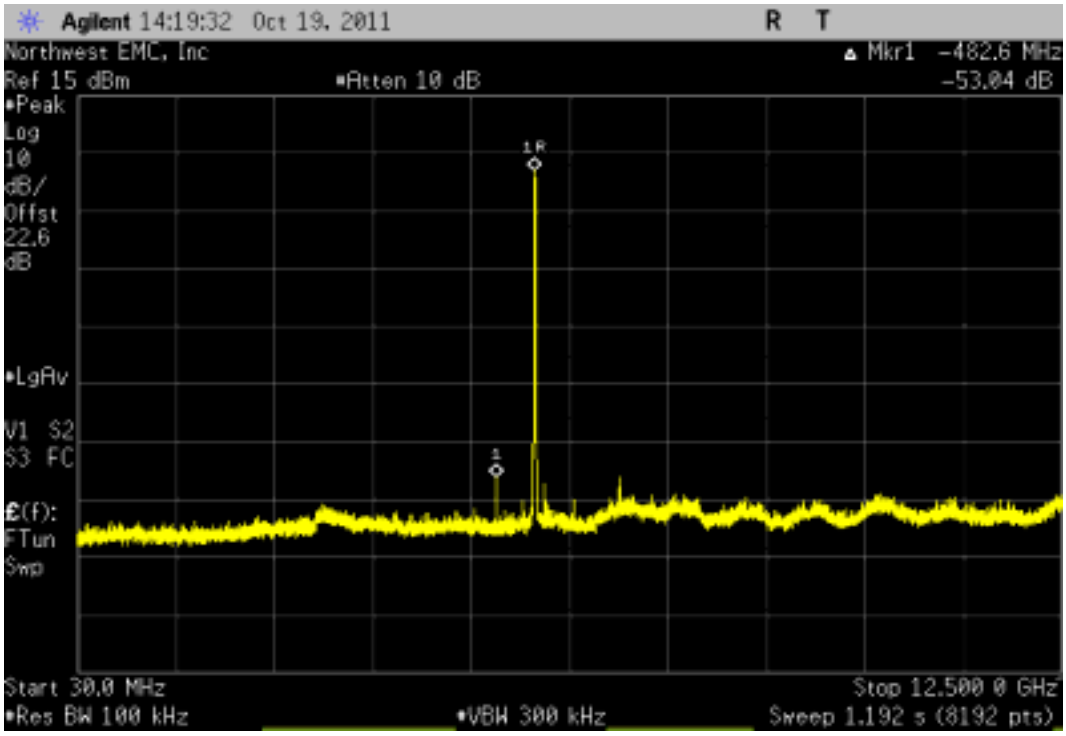
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		Value	Limit	Result
25 GHz - 32 GHz		-47.71 dBc	≤ -20 dBc	Pass



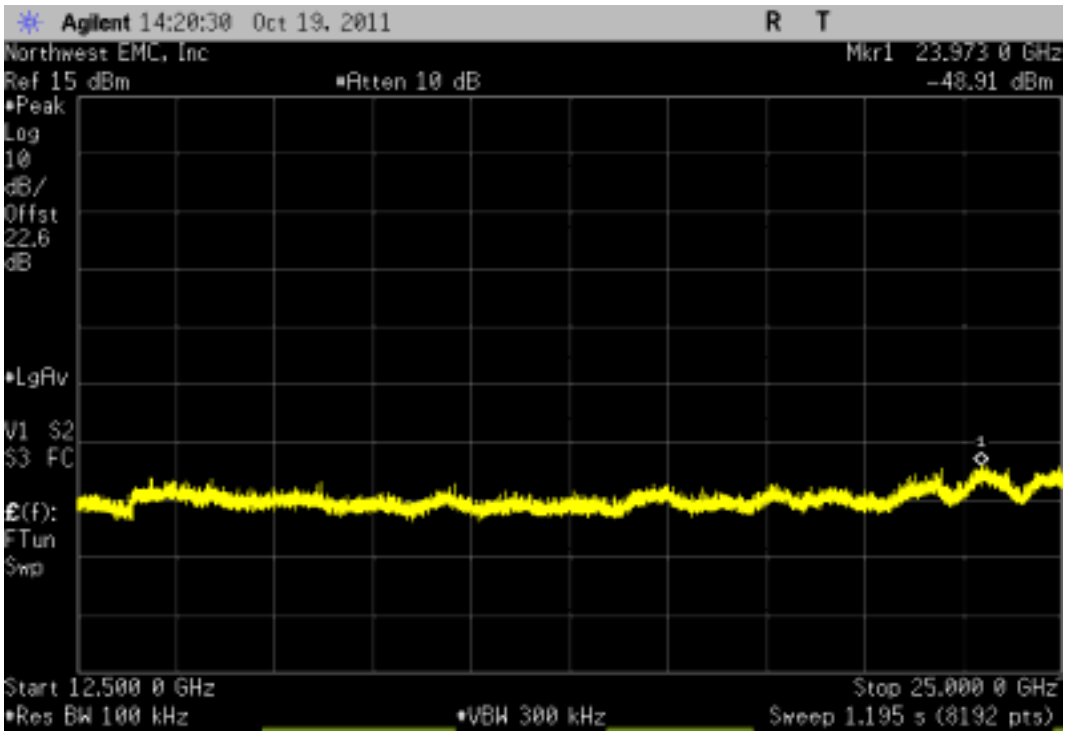
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		Value	Limit	Result
32 GHz - 40 GHz		-38.06 dBc	≤ -20 dBc	Pass



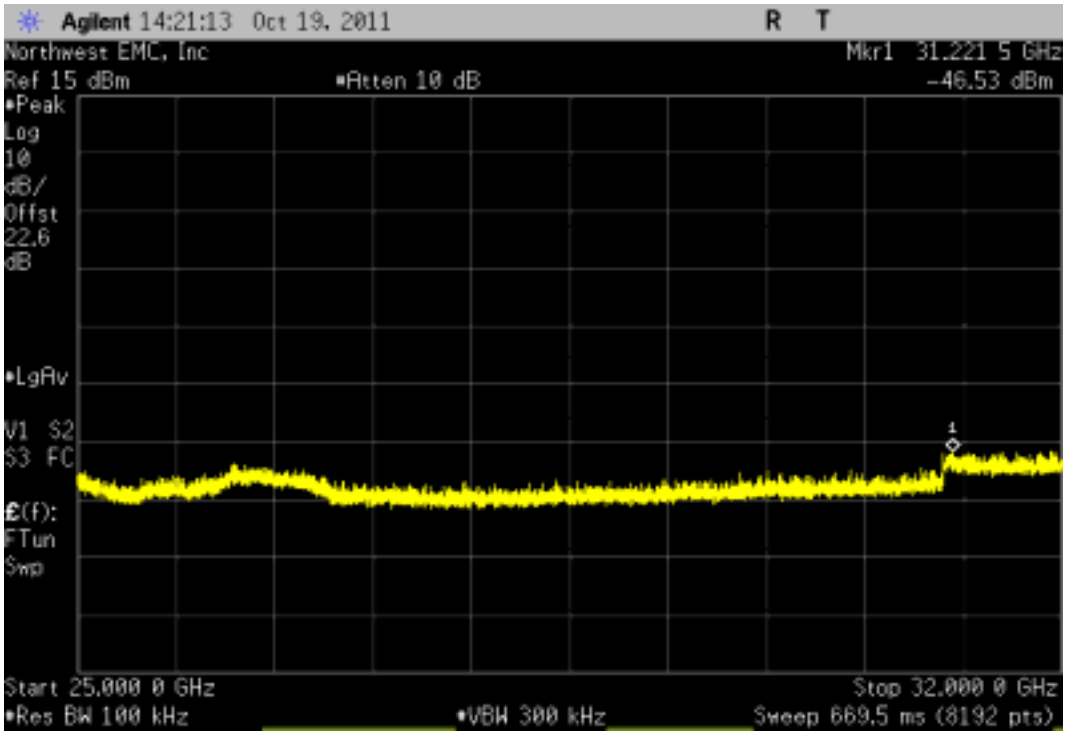
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-53.04 dBc	≤ -20 dBc	Pass



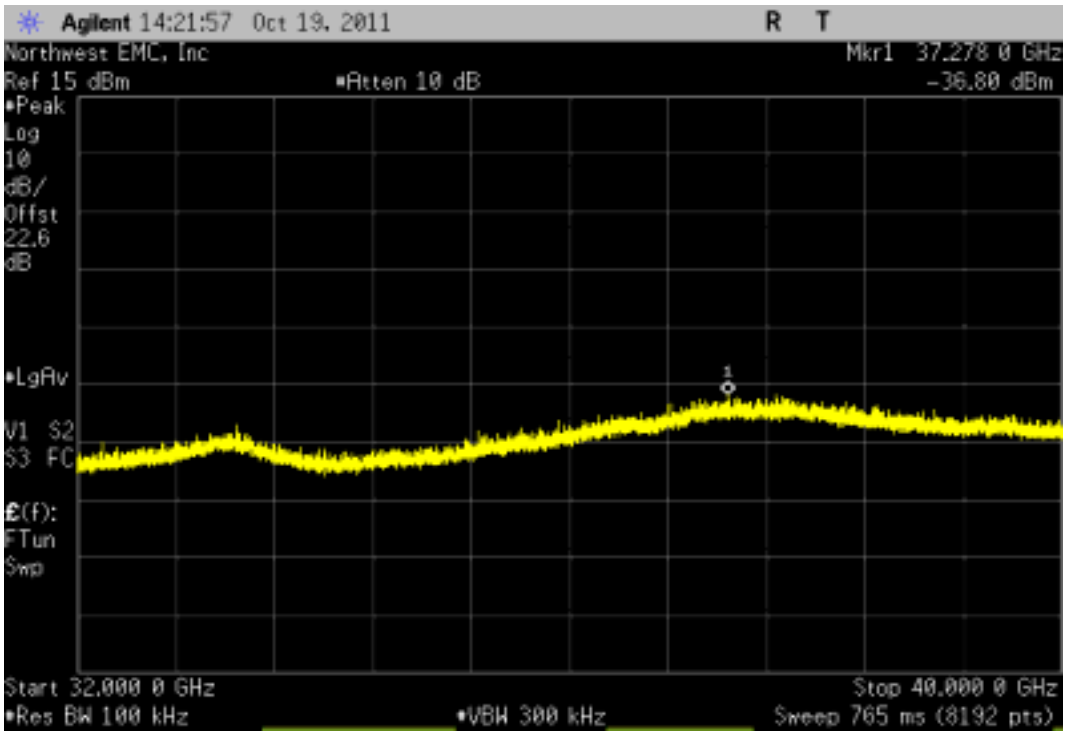
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-50.91 dBc	≤ -20 dBc	Pass



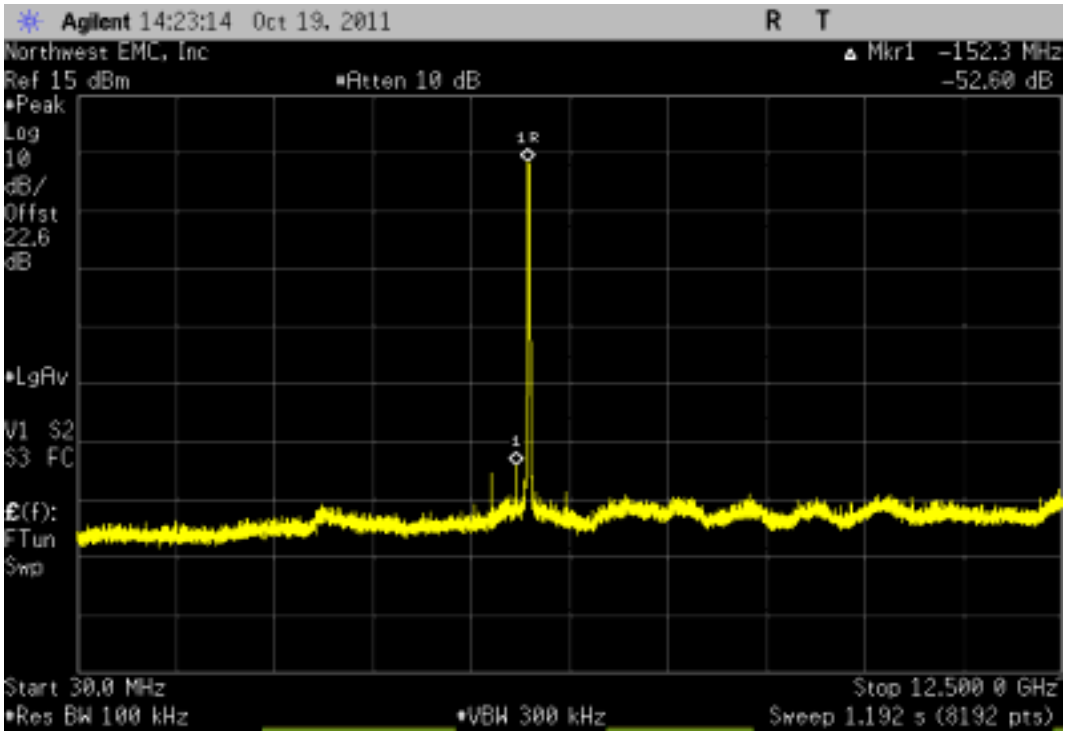
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-48.53 dBc	≤ -20 dBc	Pass



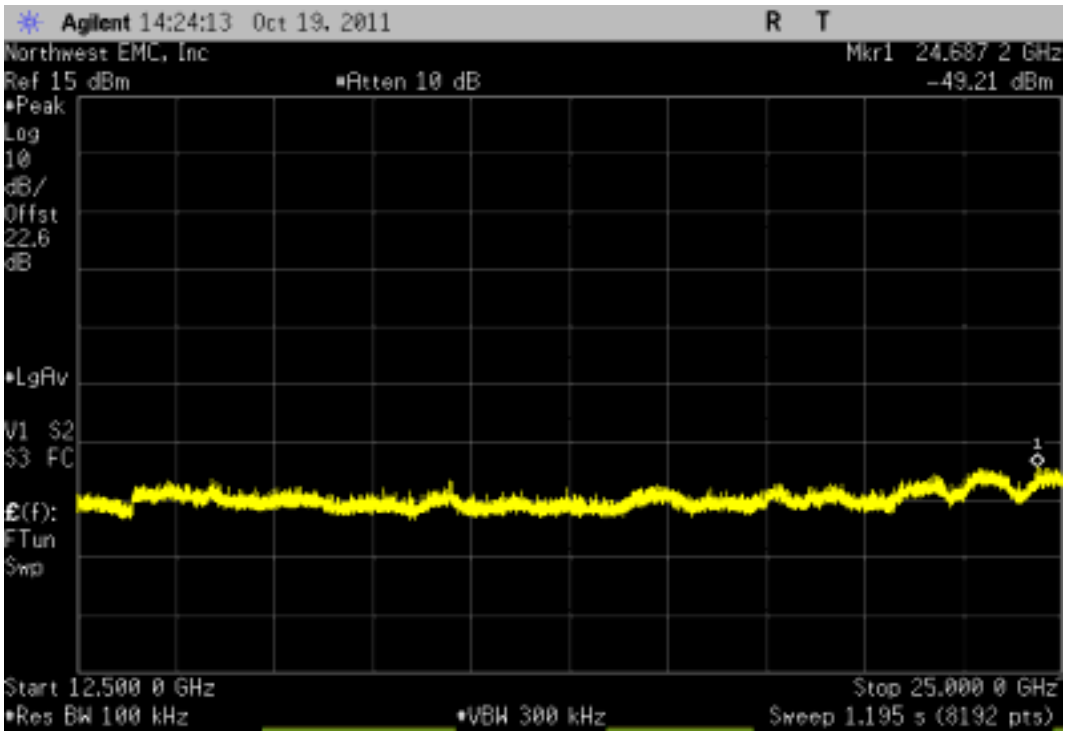
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-38.8 dBc	≤ -20 dBc	Pass



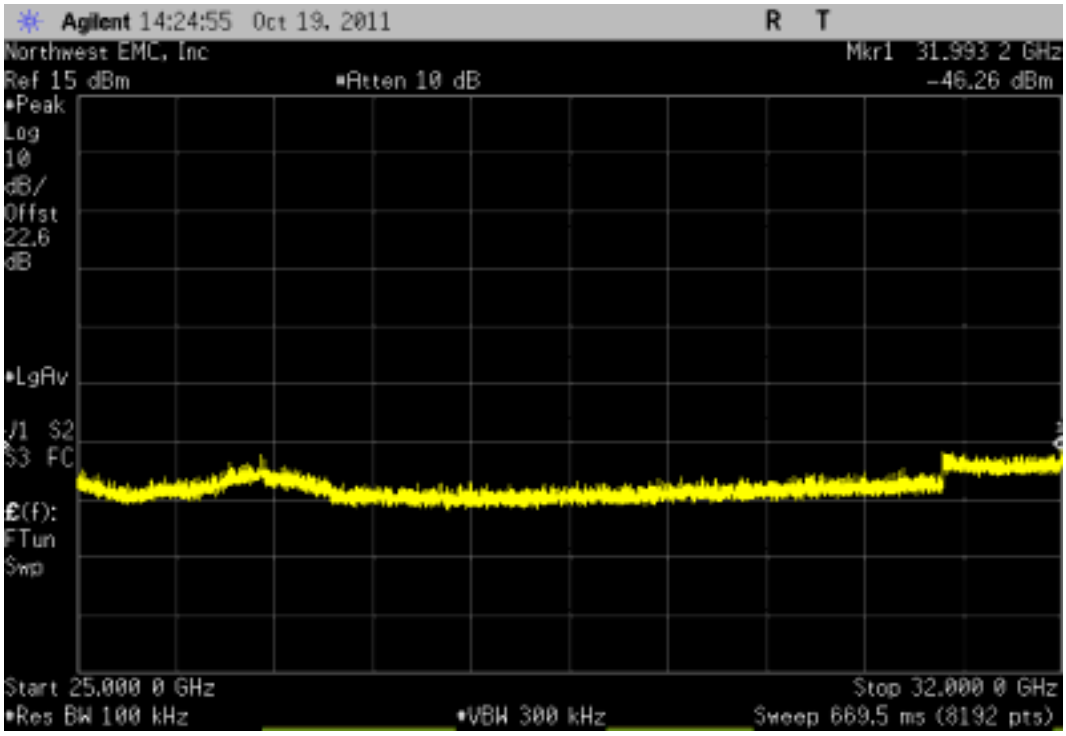
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-52.6 dBc	≤ -20 dBc	Pass



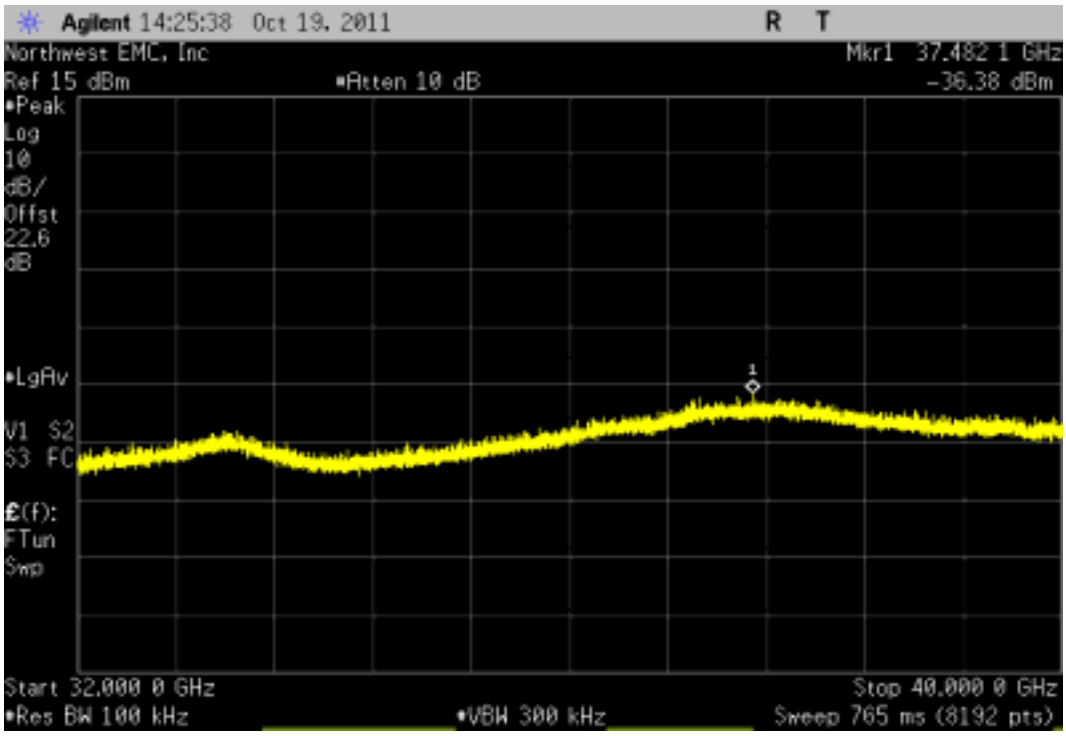
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-52.77 dBc	≤ -20 dBc	Pass



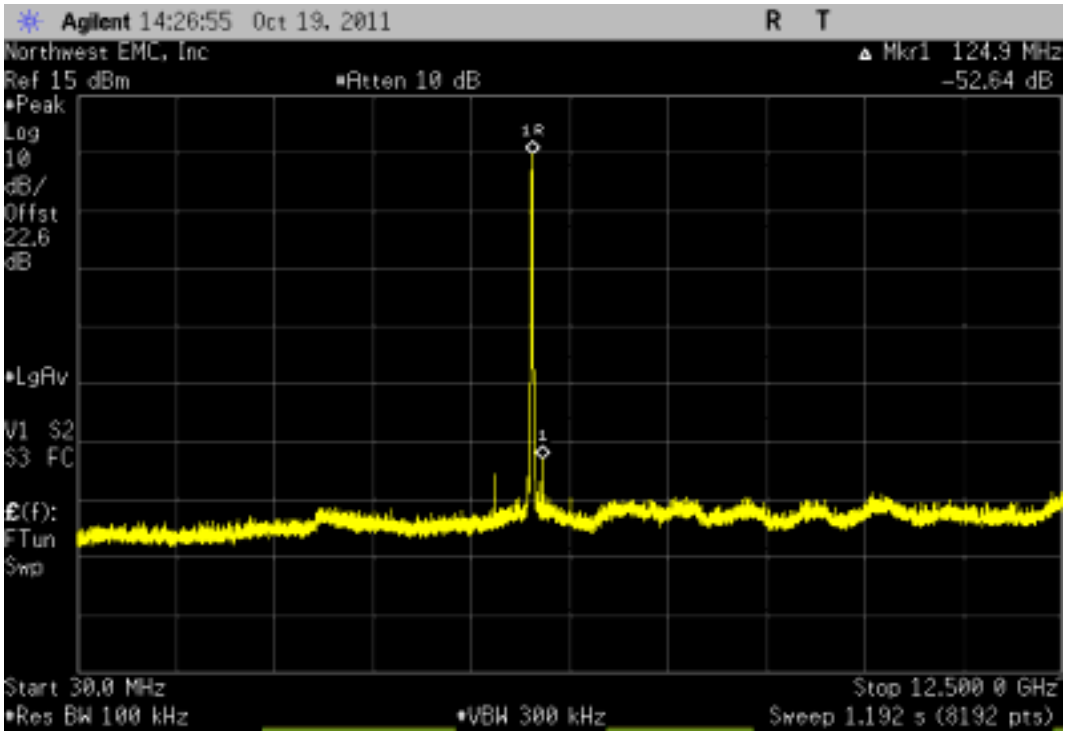
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-49.82 dBc	≤ -20 dBc	Pass



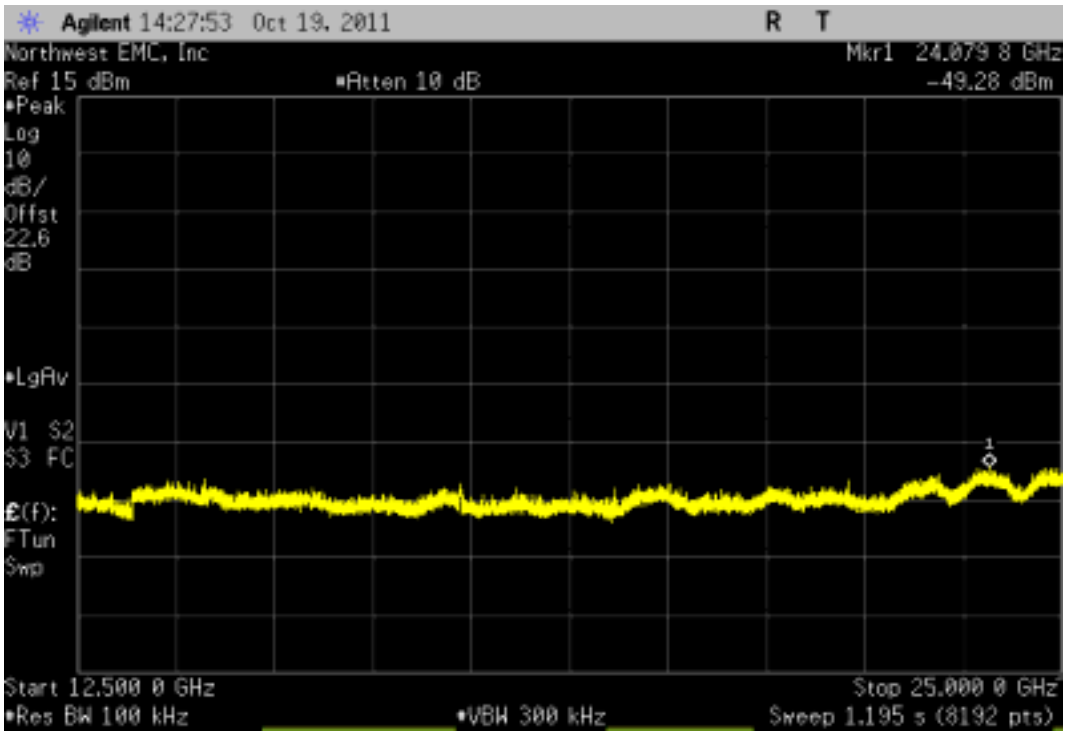
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-39.94 dBc	≤ -20 dBc	Pass



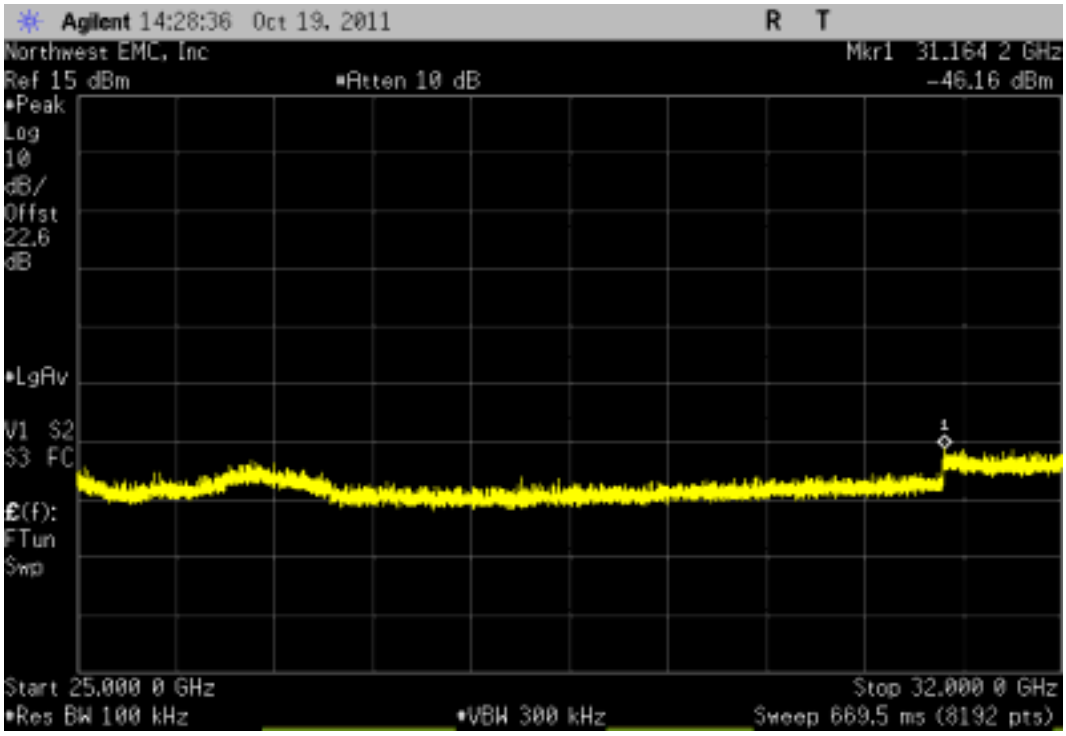
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-52.64 dBc	≤ -20 dBc	Pass



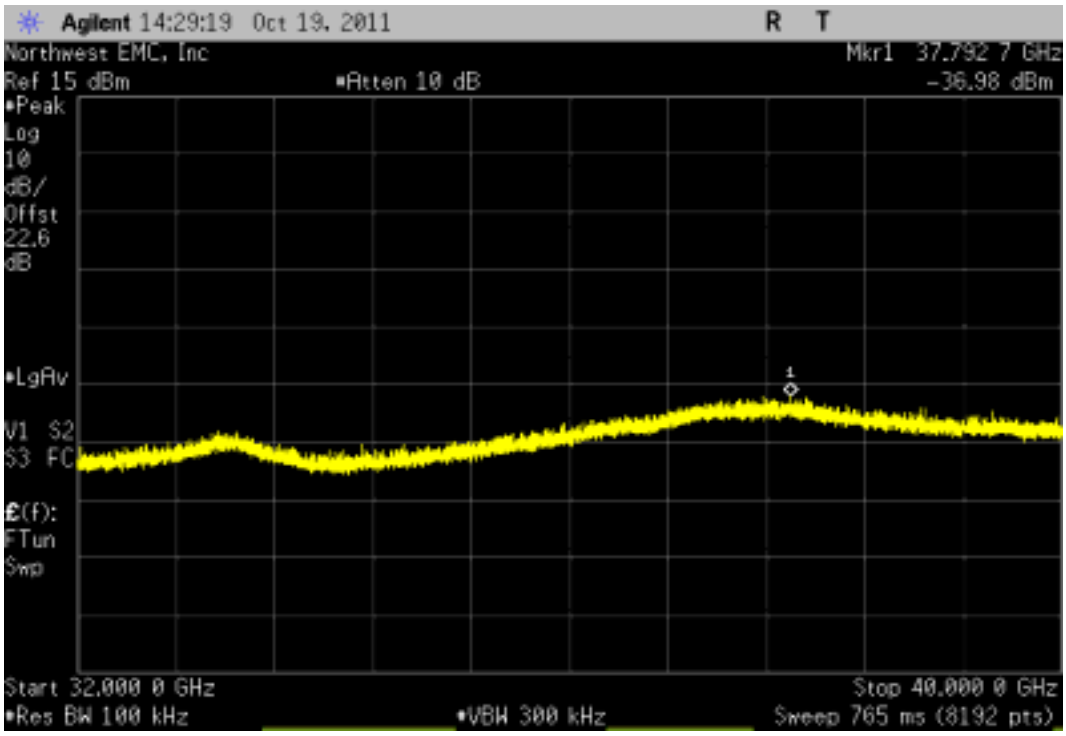
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-54.11 dBc	≤ -20 dBc	Pass



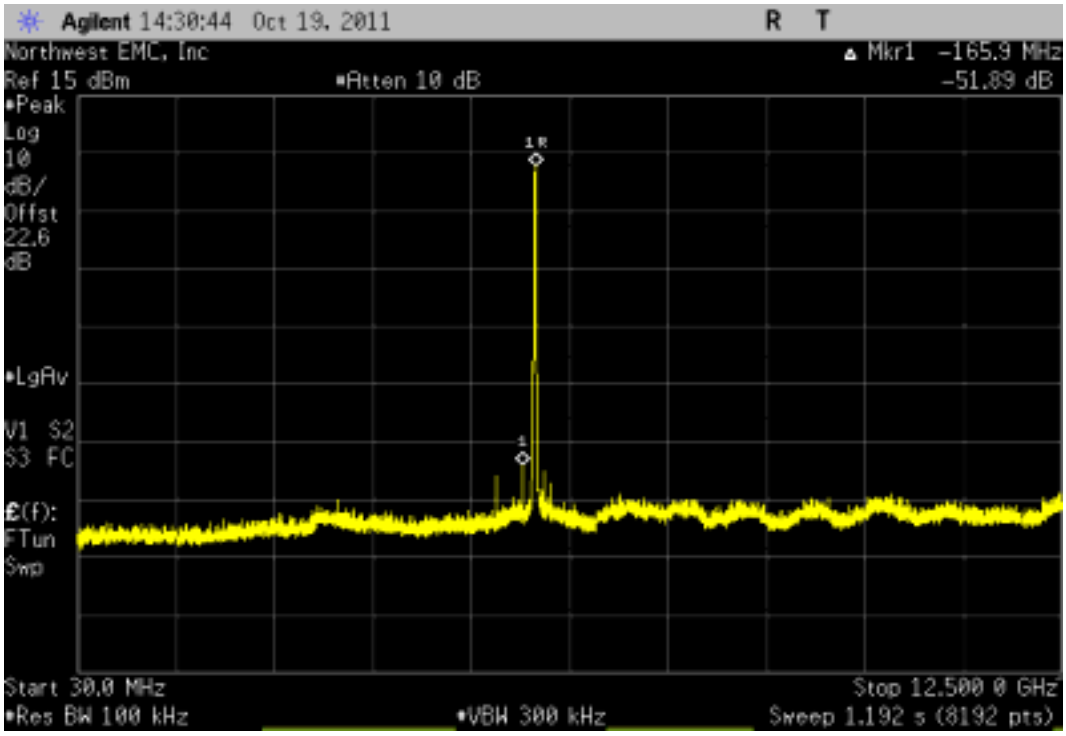
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-50.99 dBc	≤ -20 dBc	Pass



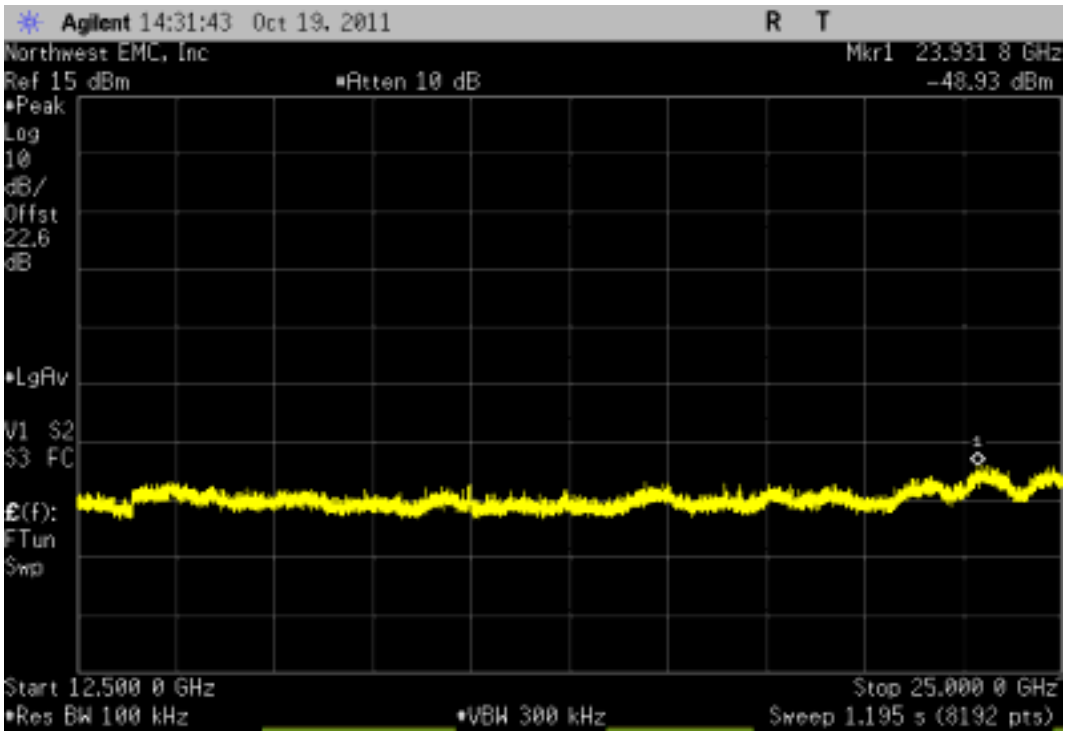
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-41.81 dBc	≤ -20 dBc	Pass



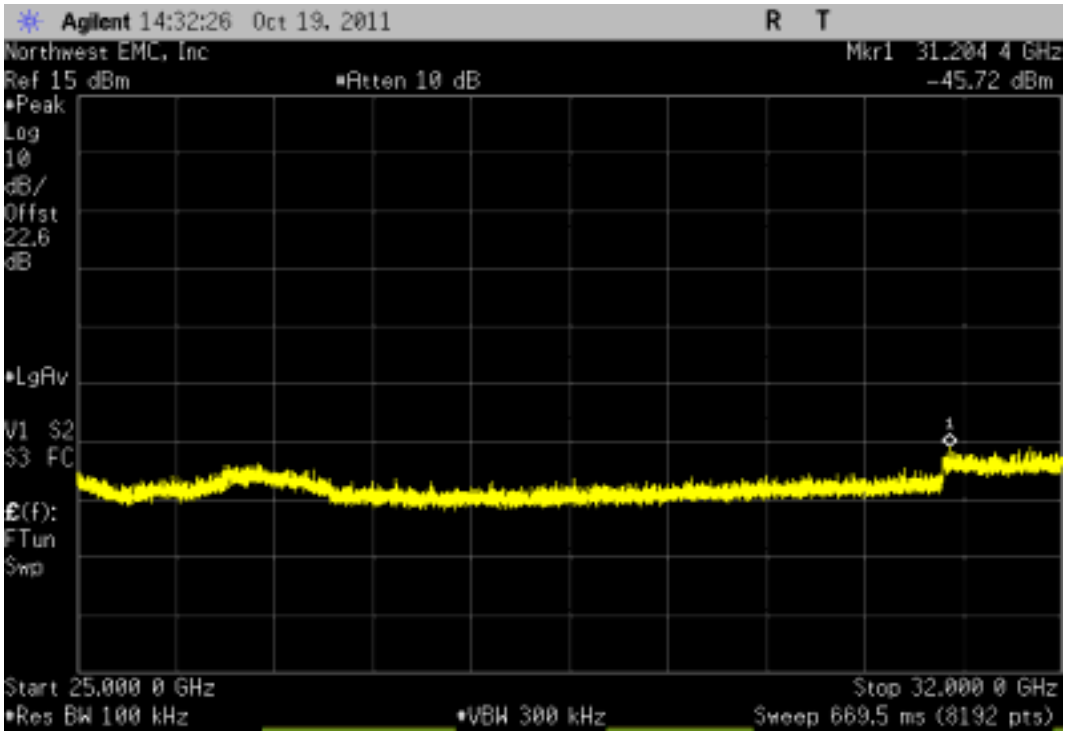
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-51.89 dBc	≤ -20 dBc	Pass



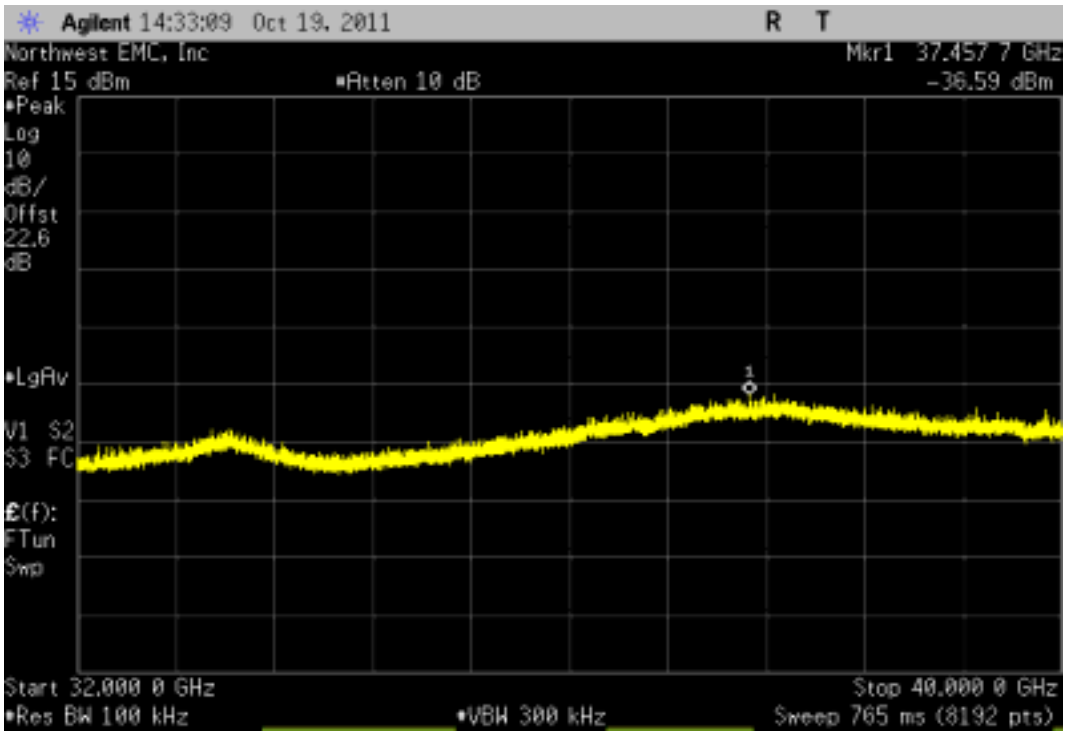
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-51.76 dBc	≤ -20 dBc	Pass



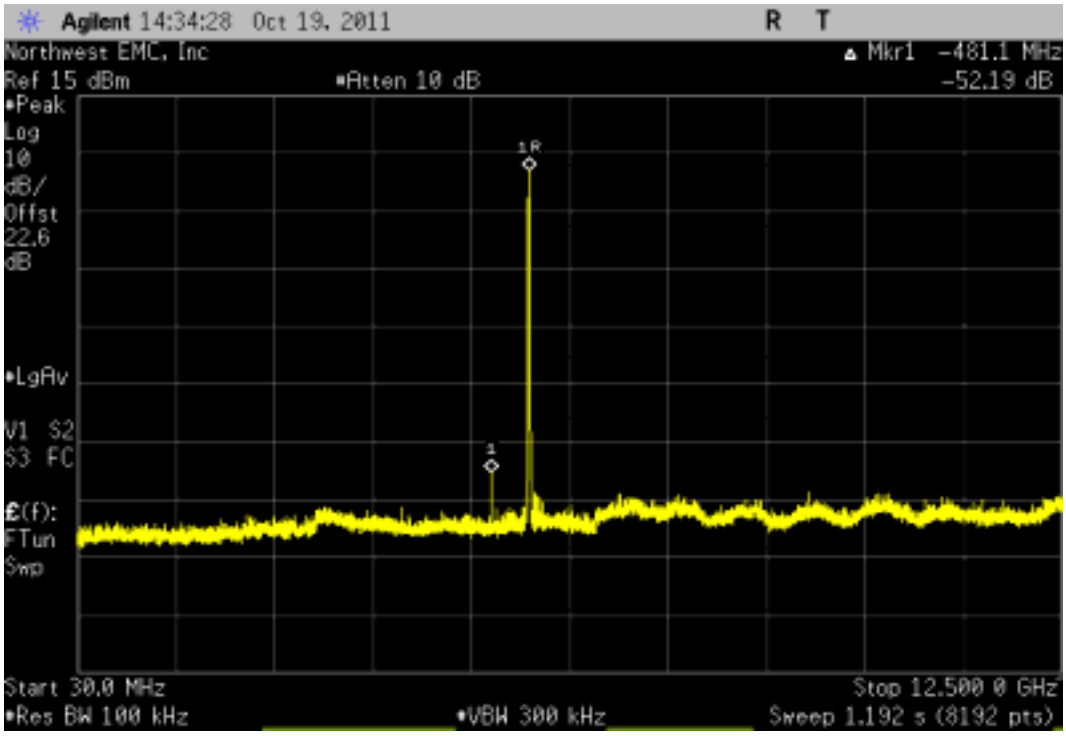
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-48.55 dBc	≤ -20 dBc	Pass



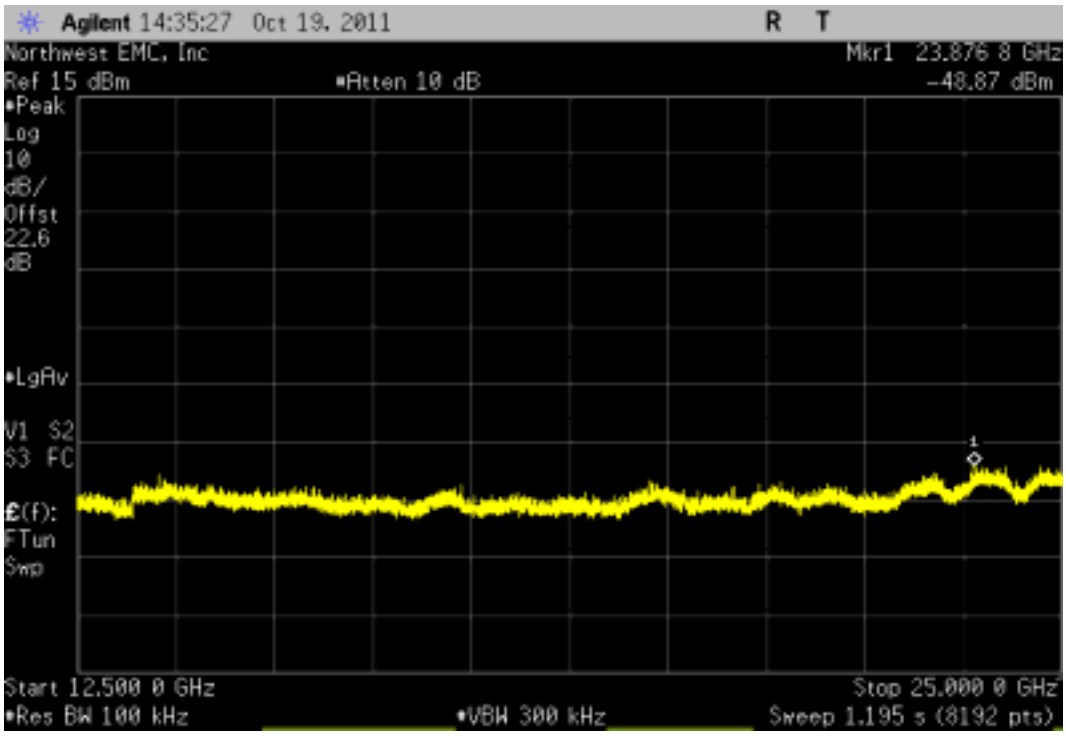
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-39.42 dBc	≤ -20 dBc	Pass



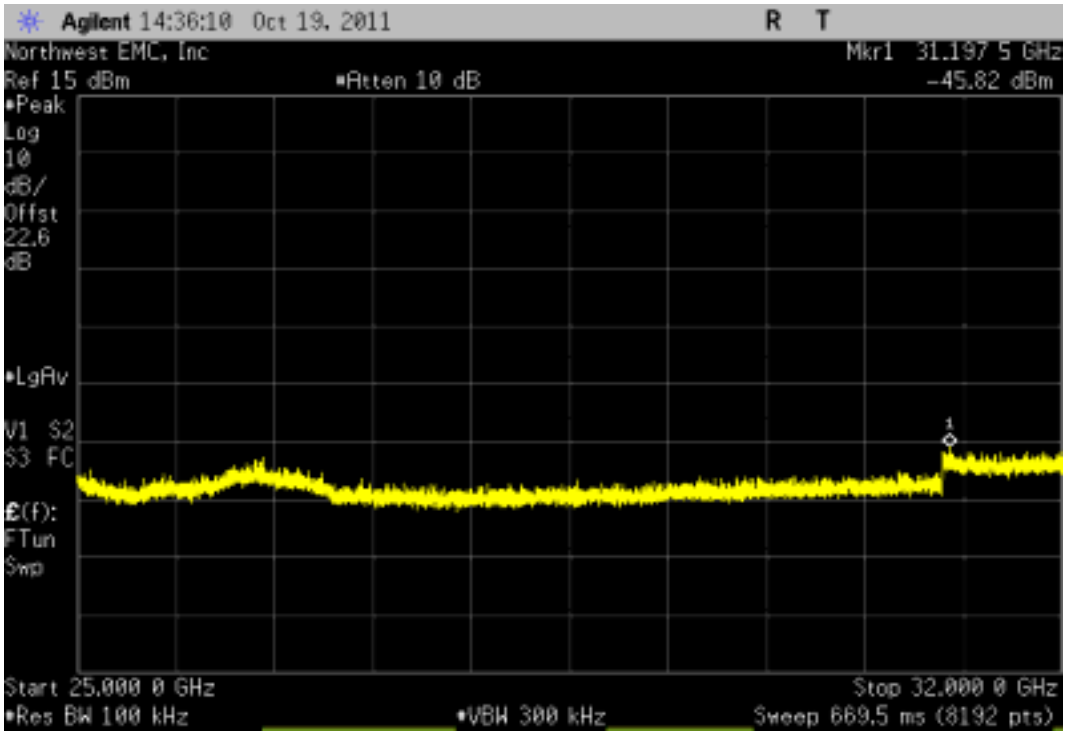
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-52.19 dBc	≤ -20 dBc	Pass



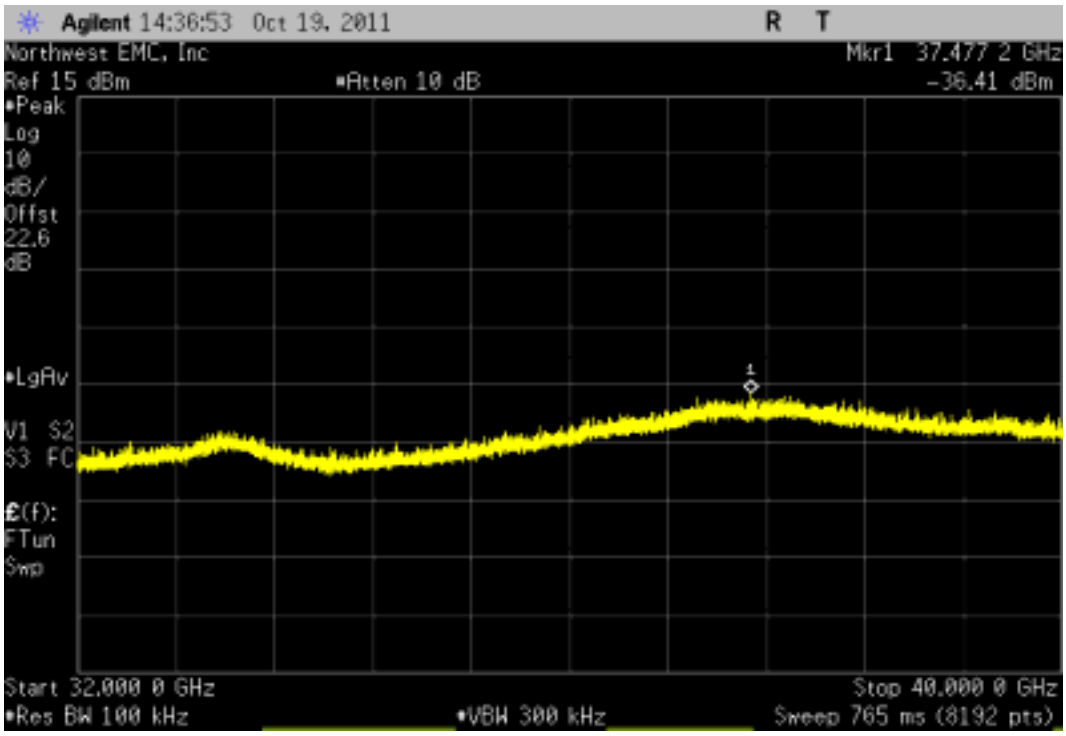
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-50.77 dBc	≤ -20 dBc	Pass



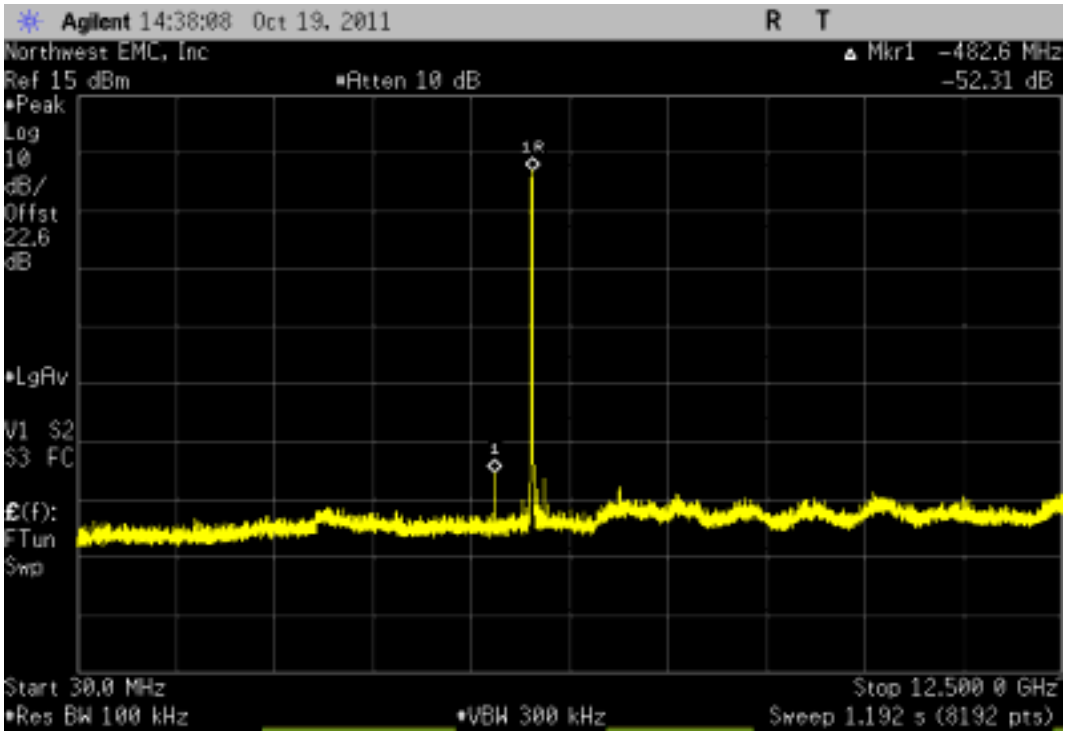
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-47.72 dBc	≤ -20 dBc	Pass



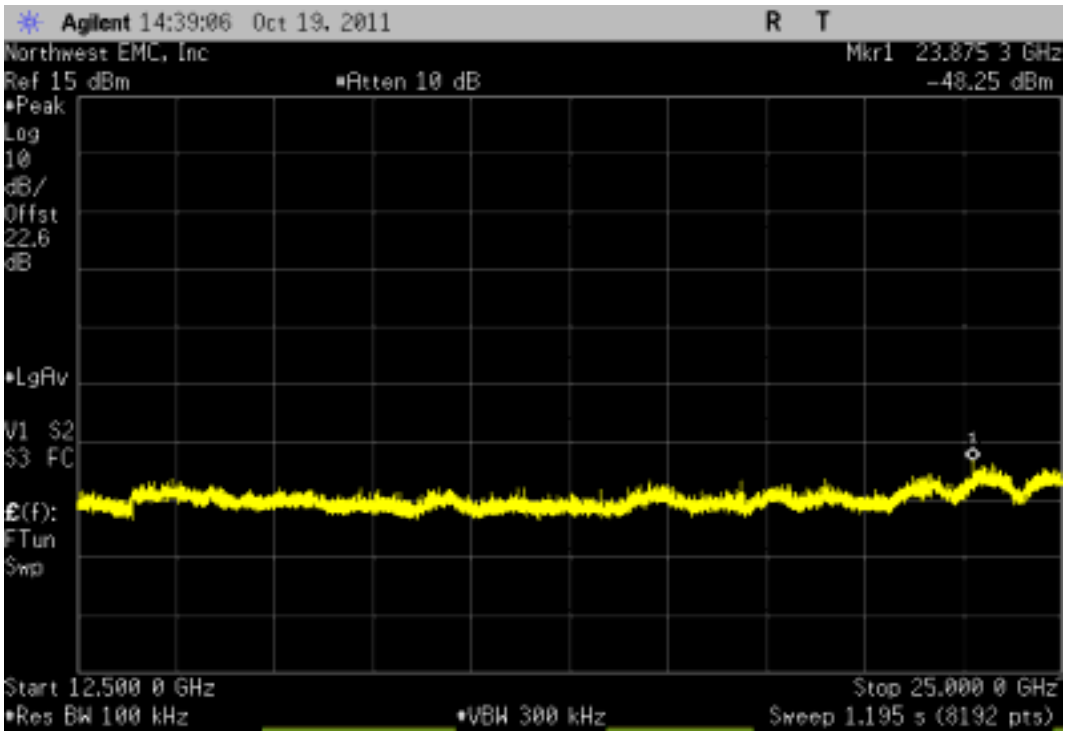
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-38.31 dBc	≤ -20 dBc	Pass



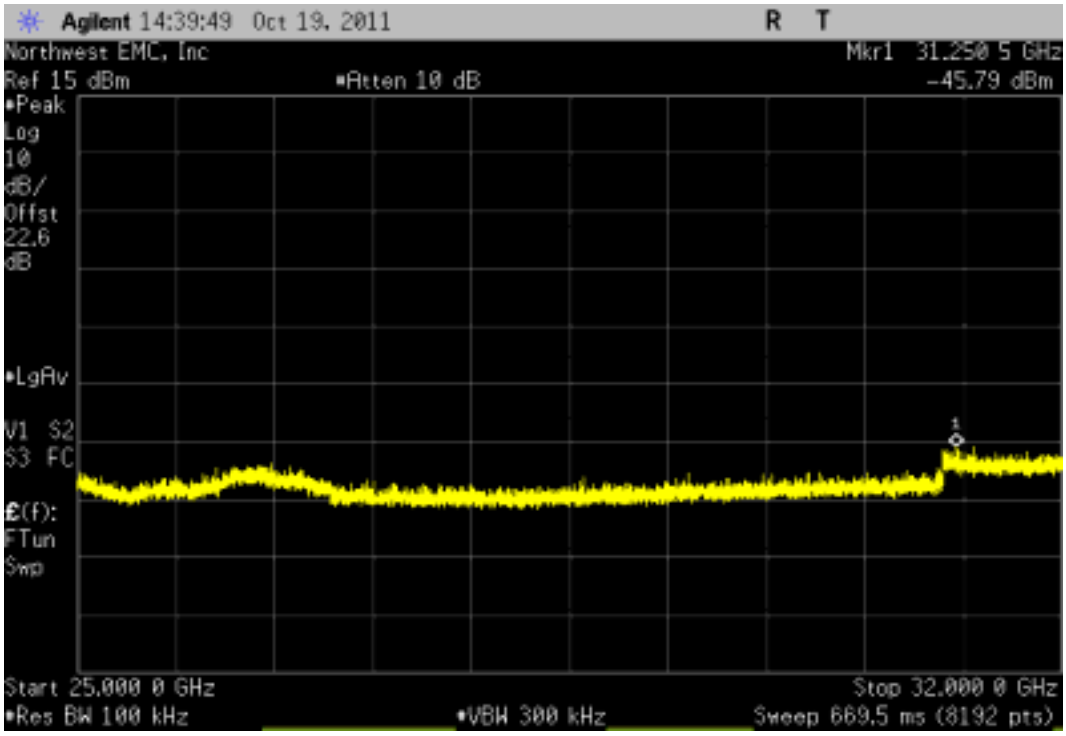
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-52.31 dBc	≤ -20 dBc	Pass



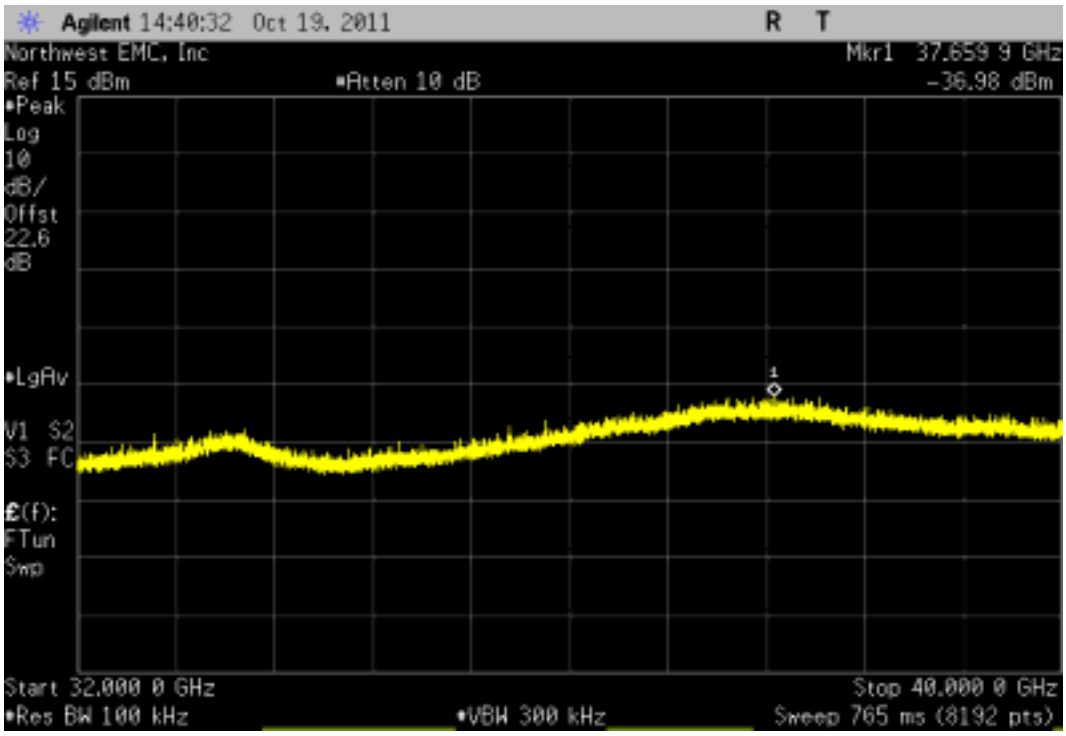
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-50.25 dBc	≤ -20 dBc	Pass



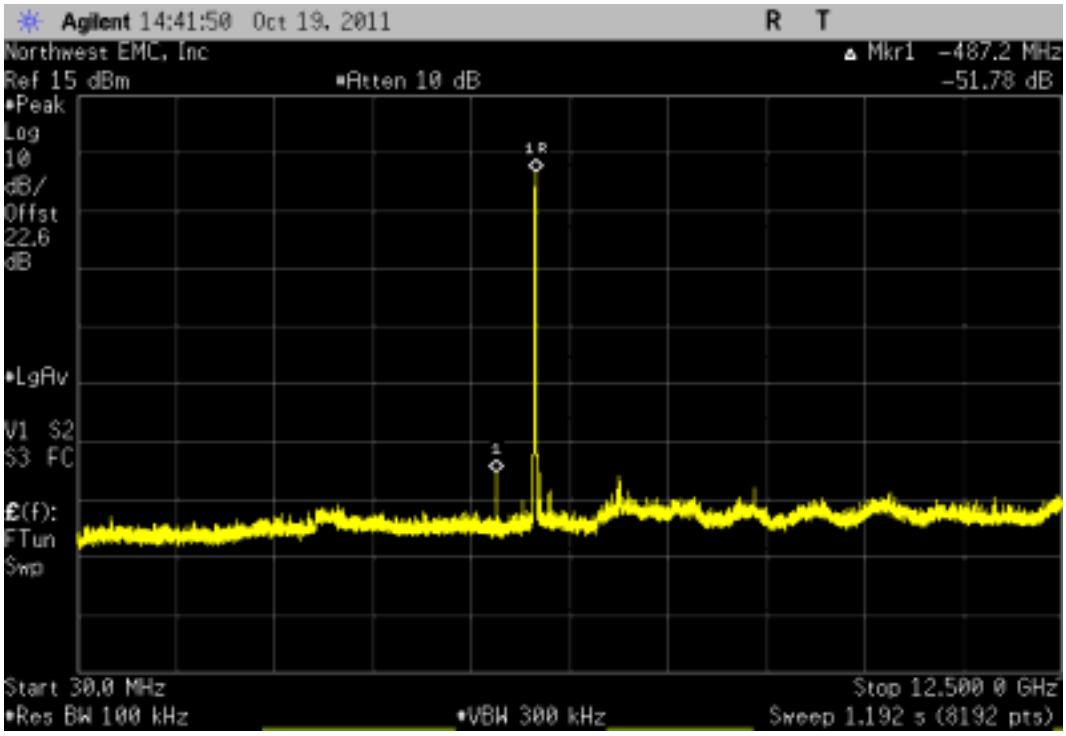
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-47.79 dBc	≤ -20 dBc	Pass



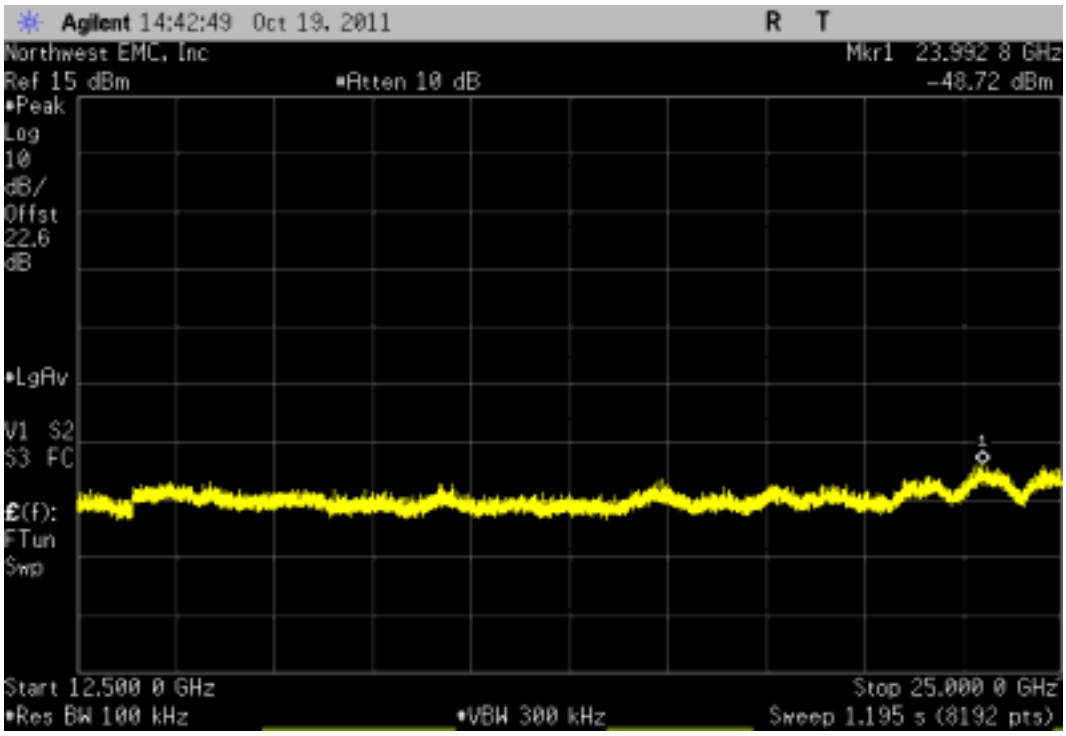
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-38.98 dBc	≤ -20 dBc	Pass



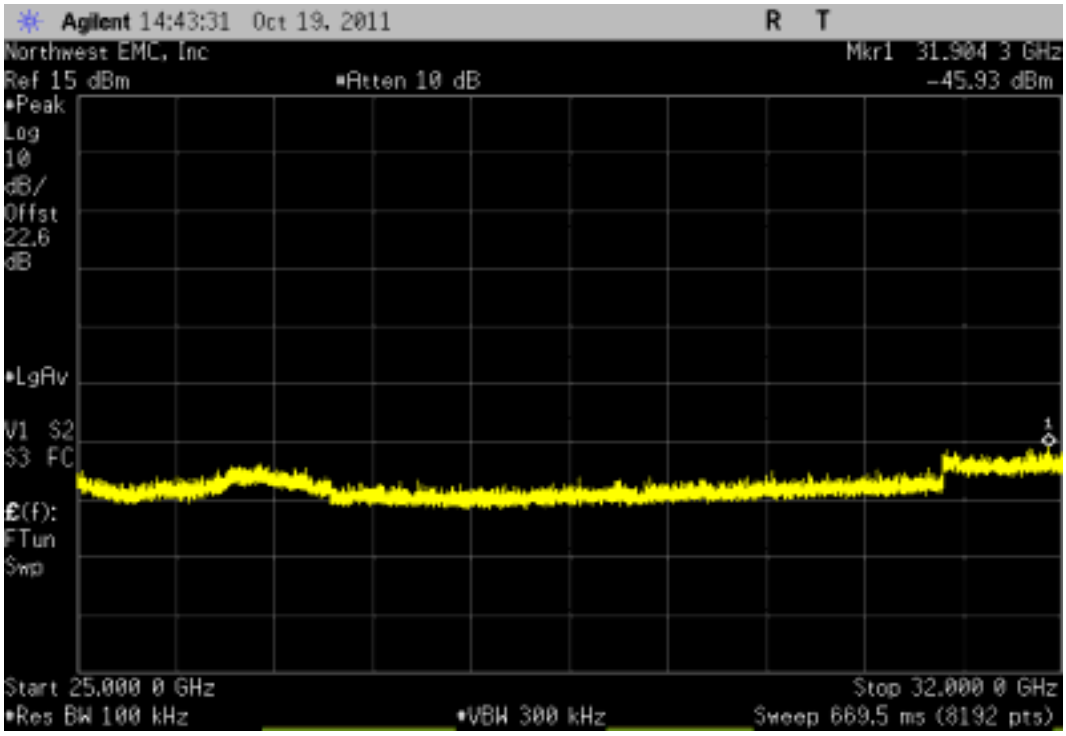
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-51.78 dBc	≤ -20 dBc	Pass



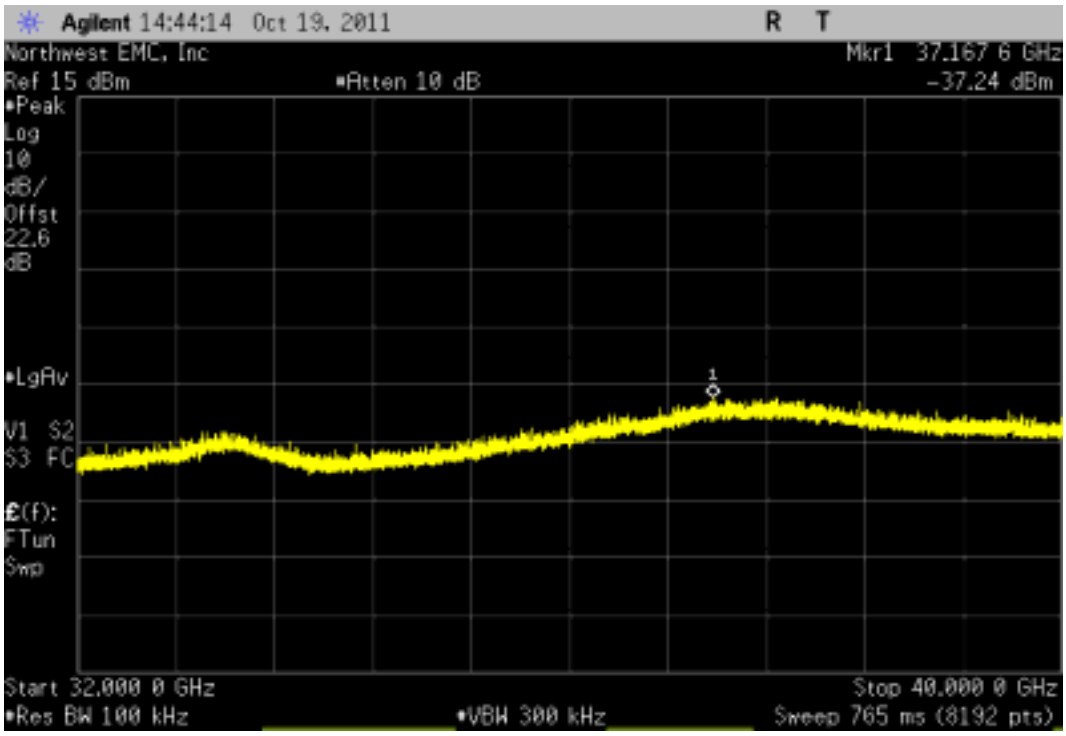
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-50.34 dBc	≤ -20 dBc	Pass



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz				
Frequency Range		Value	Limit	Result
25 GHz - 32 GHz		-47.55 dBc	≤ -20 dBc	Pass



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz				
Frequency Range		Value	Limit	Result
32 GHz - 40 GHz		-38.86 dBc	≤ -20 dBc	Pass



Power Spectral Density

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
Spectrum Analyzer	Agilent	E4440A	AAX	5/23/2011	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	10/12/2011	12
Signal Generator	Agilent	N5183A	TIA	1/18/2011	12
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	6/2/2011	12

MEASUREMENT UNCERTAINTY

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 for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The peak power spectral density measurements were measured with the EUT set to the required transmit frequencies in each band. 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 lowest, middle, and maximum data rate for each modulation type available. Per the procedure outlined in FCC KDB 558074, March 23, 2005, the spectrum analyzer was used as follows:

> The emission peak(s) were located and zoom in on within the passband. The resolution bandwidth was set to 3 kHz, the video bandwidth was set to greater than or equal to the resolution bandwidth. The sweep speed was set equal to the span divided by 3 kHz (sweep = (SPAN/3 kHz)). For example, given a span of 1.5 MHz, the sweep should be 1.5 x 10^6 ÷ 3 x 10^3 = 500 seconds. External attenuation was used and added to the reading. The following FCC procedure was used for modifying the power spectral density measurements:

"If the spectrum line spacing cannot be resolved on the available spectrum analyzer, the noise density function on most modern conventional spectrum analyzers will directly measure the noise power density normalized to a 1 Hz noise power bandwidth. Add 34.8 dB for correction to 3 kHz."

NORTHWEST EMC

Power Spectral Density

XMit 2011.08.04
PsaTx 2011.09.28

EUT:	X Series	Work Order:	LGPD0044
Serial Number:	3411000112, 341100050	Date:	10/20/11
Customer:	ZOLL Medical Corp.	Temperature:	23.23C°C
Attendees:	Curt McNamara, Karl Karcht	Humidity:	23%
Project:	None	Barometric Pres.:	1020.2
Tested by:	Trevor Buls	Power: 15VDC	Job Site: MN08

TEST SPECIFICATIONS	TEST METHOD
FCC 15.247:2011	ANSI C63.10:2009

COMMENTS

None

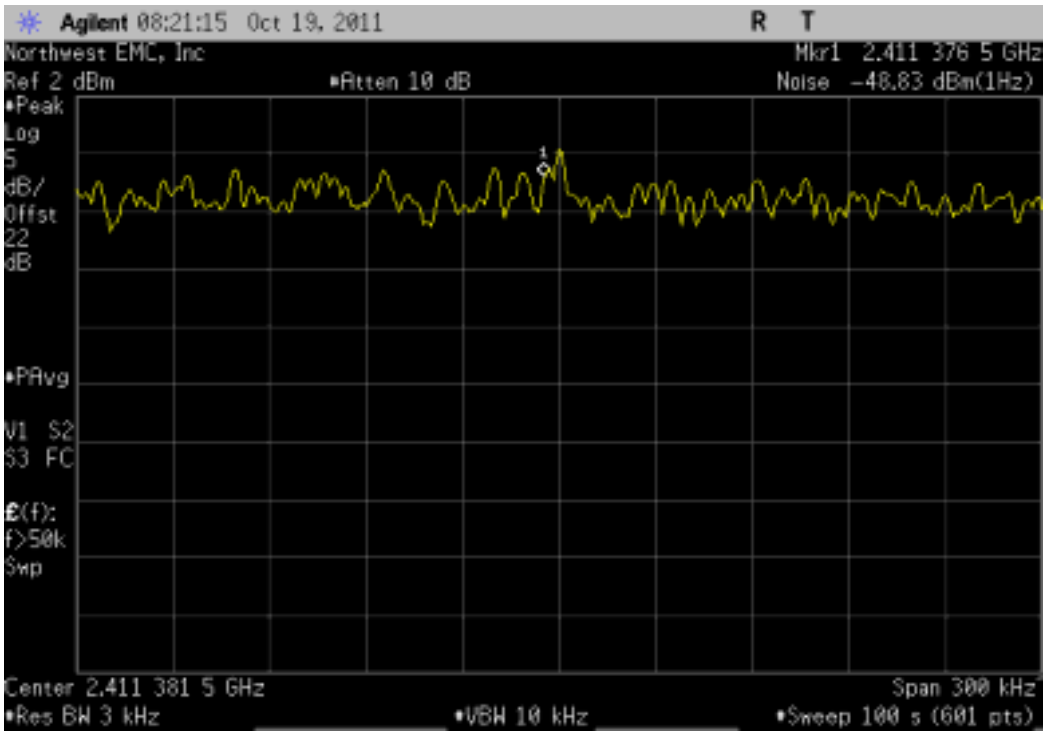
DEVIATIONS FROM TEST STANDARD

None

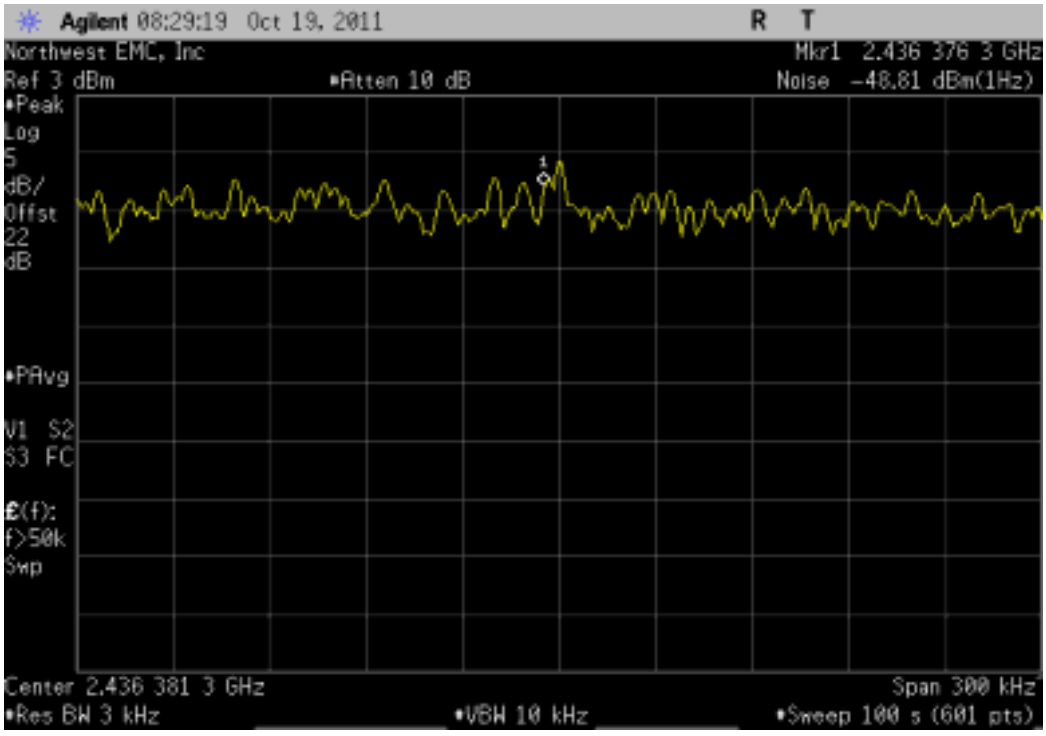
Configuration #	1	Signature	Trevor Buls

	Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
2400 MHz - 2483.5 MHz Band					
802.11(b) 1 Mbps					
Low Channel 1, 2412 MHz	-48.832	34.8	-14.032	8	Pass
Mid Channel 6, 2437 MHz	-48.813	34.8	-14.013	8	Pass
High Channel 11, 2462 MHz	-48.496	34.8	-13.696	8	Pass
802.11(b) 11 Mbps					
Low Channel 1, 2412 MHz	-52.681	34.8	-17.881	8	Pass
Mid Channel 6, 2437 MHz	-52.878	34.8	-18.078	8	Pass
High Channel 11, 2462 MHz	-52.594	34.8	-17.794	8	Pass
802.11(g) 6 Mbps					
Low Channel 1, 2412 MHz	-52.093	34.8	-17.293	8	Pass
Mid Channel 6, 2437 MHz	-51.973	34.8	-17.173	8	Pass
High Channel 11, 2462 MHz	-52.067	34.8	-17.267	8	Pass
802.11(g) 36 Mbps					
Low Channel 1, 2412 MHz	-55.765	34.8	-20.965	8	Pass
Mid Channel 6, 2437 MHz	-56.067	34.8	-21.267	8	Pass
High Channel 11, 2462 MHz	-55.427	34.8	-20.627	8	Pass
802.11(g) 54 Mbps					
Low Channel 1, 2412 MHz	-57.697	34.8	-22.897	8	Pass
Mid Channel 6, 2437 MHz	-57.603	34.8	-22.803	8	Pass
High Channel 11, 2462 MHz	-57.55	34.8	-22.75	8	Pass
802.11(n) MCS0					
Low Channel 1, 2412 MHz	-53.062	34.8	-18.262	8	Pass
Mid Channel 6, 2437 MHz	-52.859	34.8	-18.059	8	Pass
High Channel 11, 2462 MHz	-51.823	34.8	-17.023	8	Pass
802.11(n) MCS7					
Low Channel 1, 2412 MHz	-59.28	34.8	-24.48	8	Pass
Mid Channel 6, 2437 MHz	-58.64	34.8	-23.84	8	Pass
High Channel 11, 2462 MHz	-58.139	34.8	-23.339	8	Pass
5725 MHz - 5850 MHz Band					
802.11(a) 6 Mbps					
Low Channel 149, 5745 MHz	-52.513	34.8	-17.713	8	Pass
Mid Channel 157, 5785 MHz	-52.402	34.8	-17.602	8	Pass
High Channel 165, 5825 MHz	-52.18	34.8	-17.38	8	Pass
802.11(a) 36 Mbps					
Low Channel 149, 5745 MHz	-54.418	34.8	-19.618	8	Pass
Mid Channel 157, 5785 MHz	-55.745	34.8	-20.945	8	Pass
High Channel 165, 5825 MHz	-55.417	34.8	-20.617	8	Pass
802.11(a) 54 Mbps					
Low Channel 149, 5745 MHz	-57	34.8	-22.2	8	Pass
Mid Channel 157, 5785 MHz	-58.25	34.8	-23.45	8	Pass
High Channel 165, 5825 MHz	-56.62	34.8	-21.82	8	Pass
802.11(n) MCS0 - UNII					
Low Channel 149, 5745 MHz	-53.363	34.8	-18.563	8	Pass
Mid Channel 157, 5785 MHz	-52.823	34.8	-18.023	8	Pass
High Channel 165, 5825 MHz	-52.915	34.8	-18.115	8	Pass
802.11(n) MCS7 - UNII					
Low Channel 149, 5745 MHz	-57.596	34.8	-22.796	8	Pass
Mid Channel 157, 5785 MHz	-57.5	34.8	-22.7	8	Pass
High Channel 165, 5825 MHz	-58.024	34.8	-23.224	8	Pass

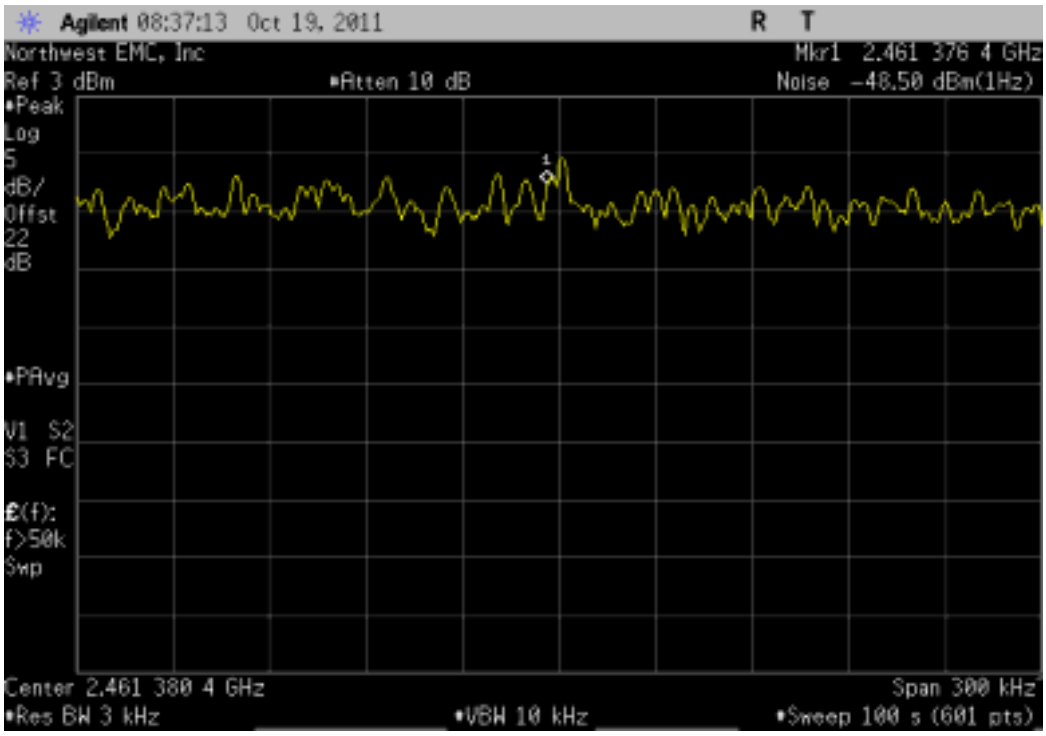
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-48.832	34.8	-14.032	8	Pass



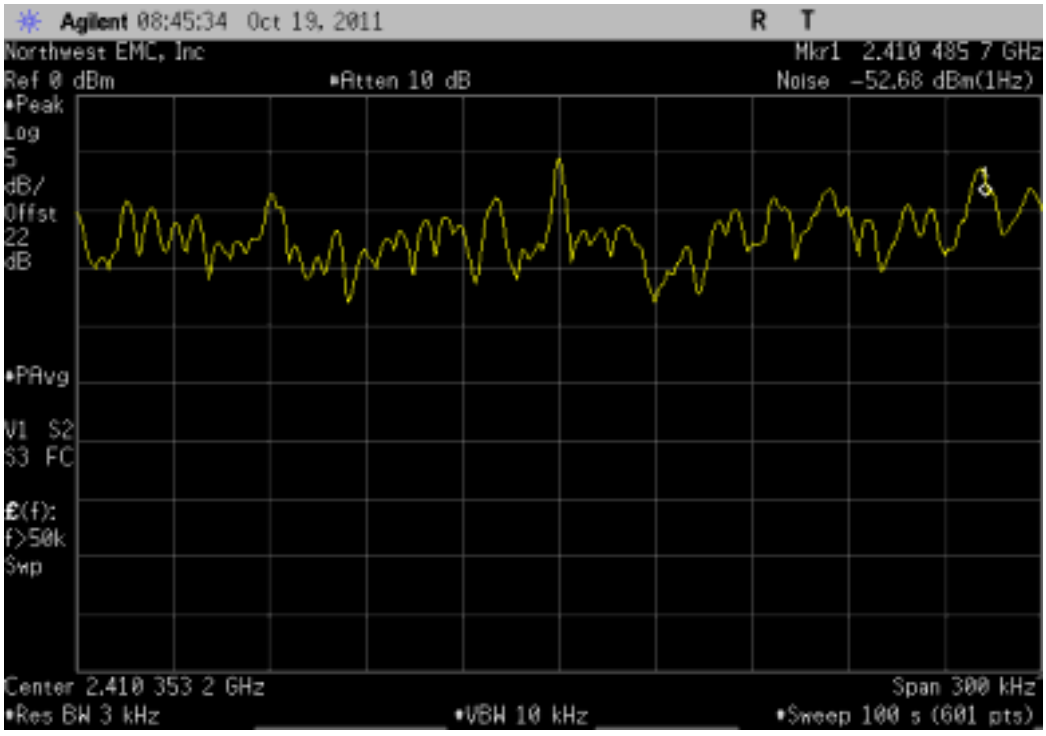
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-48.813	34.8	-14.013	8	Pass



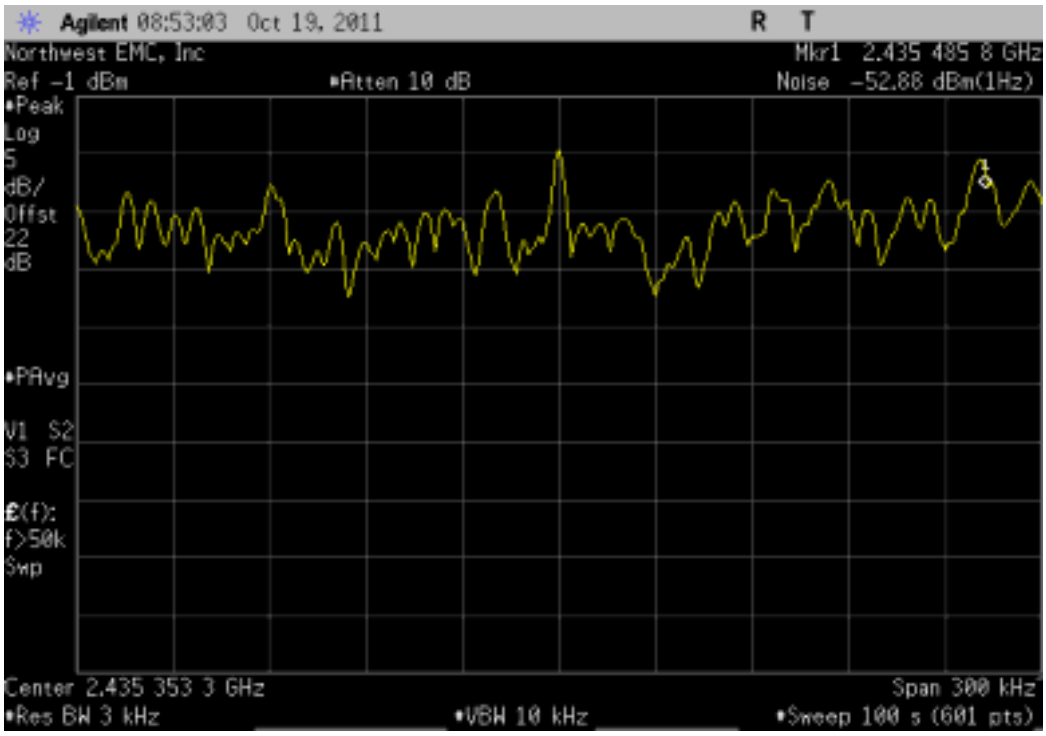
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-48.496	34.8	-13.696	8	Pass



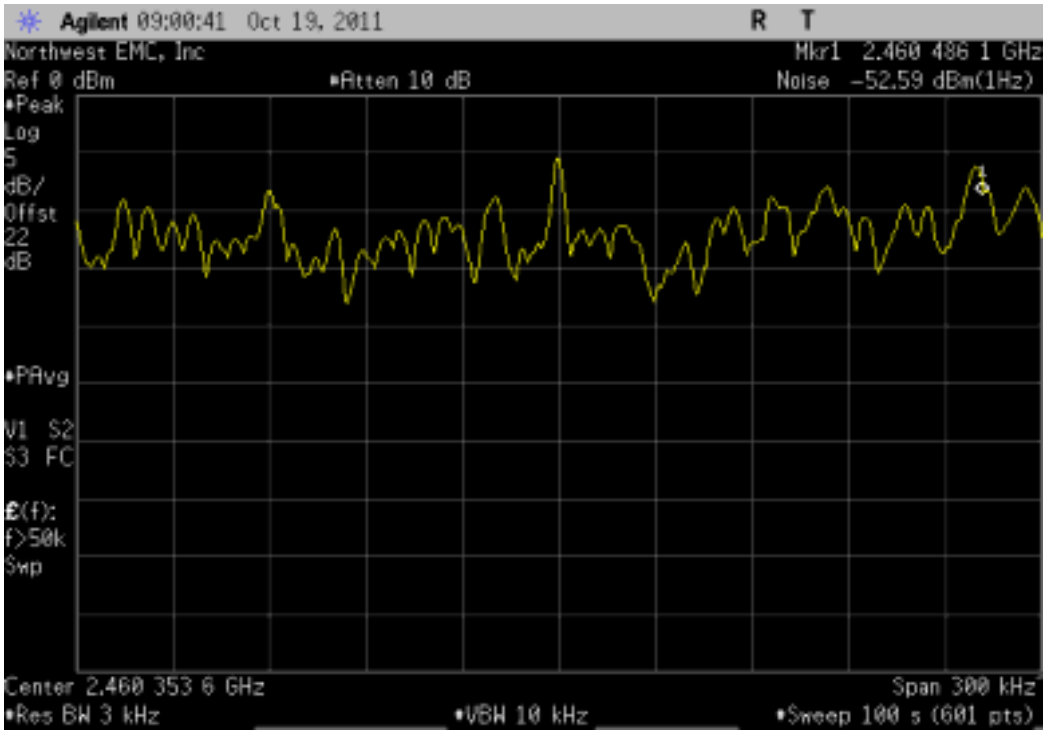
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-52.681	34.8	-17.881	8	Pass



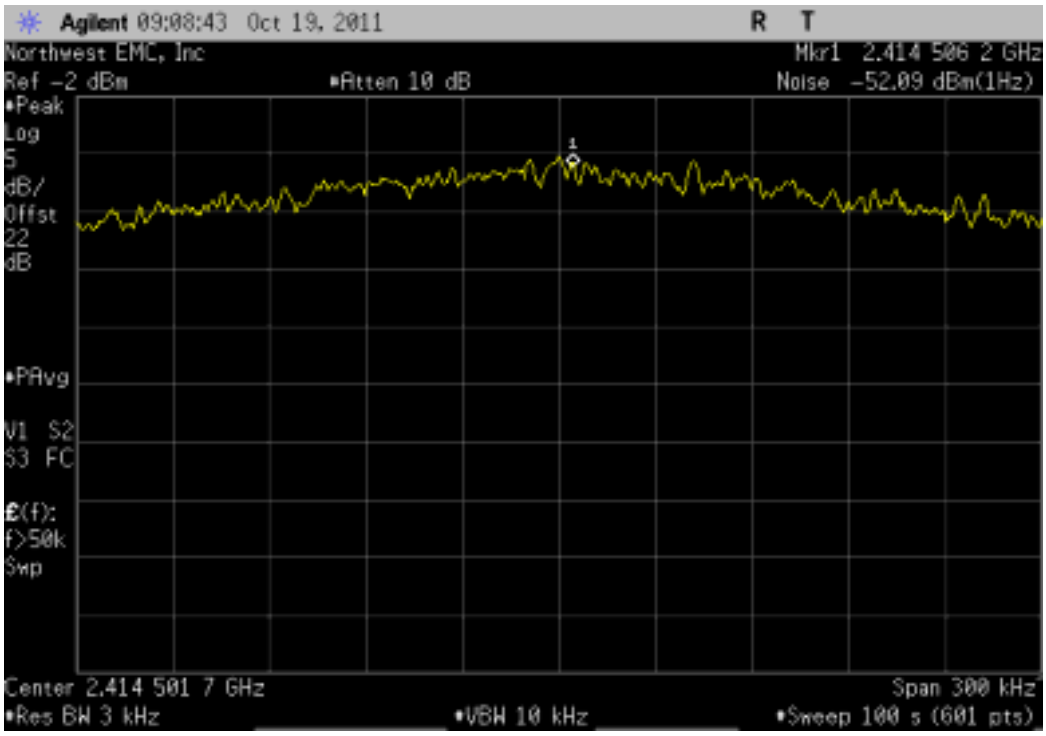
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-52.878	34.8	-18.078	8	Pass



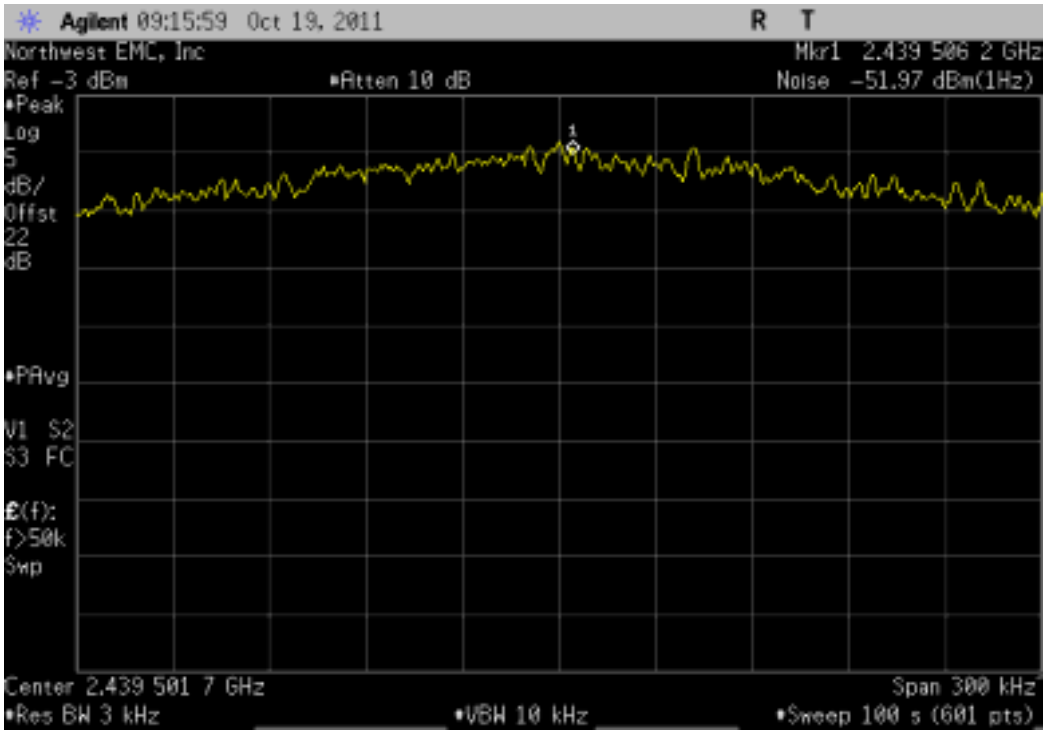
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-52.594	34.8	-17.794	8	Pass



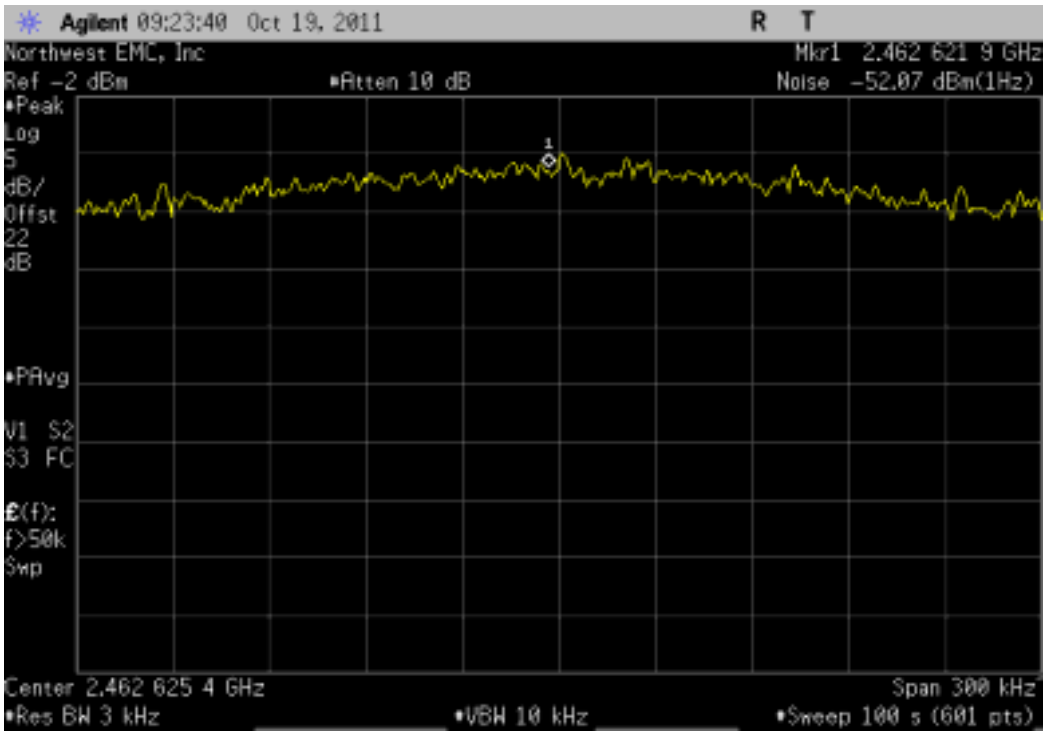
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-52.093	34.8	-17.293	8	Pass



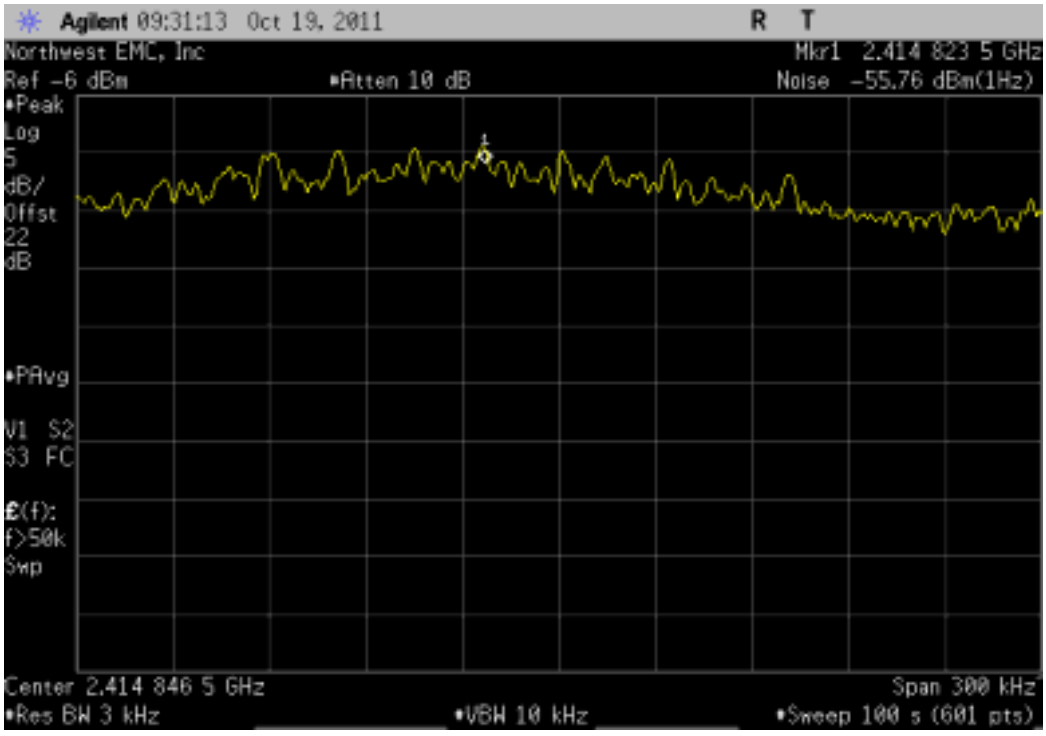
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-51.973	34.8	-17.173	8	Pass



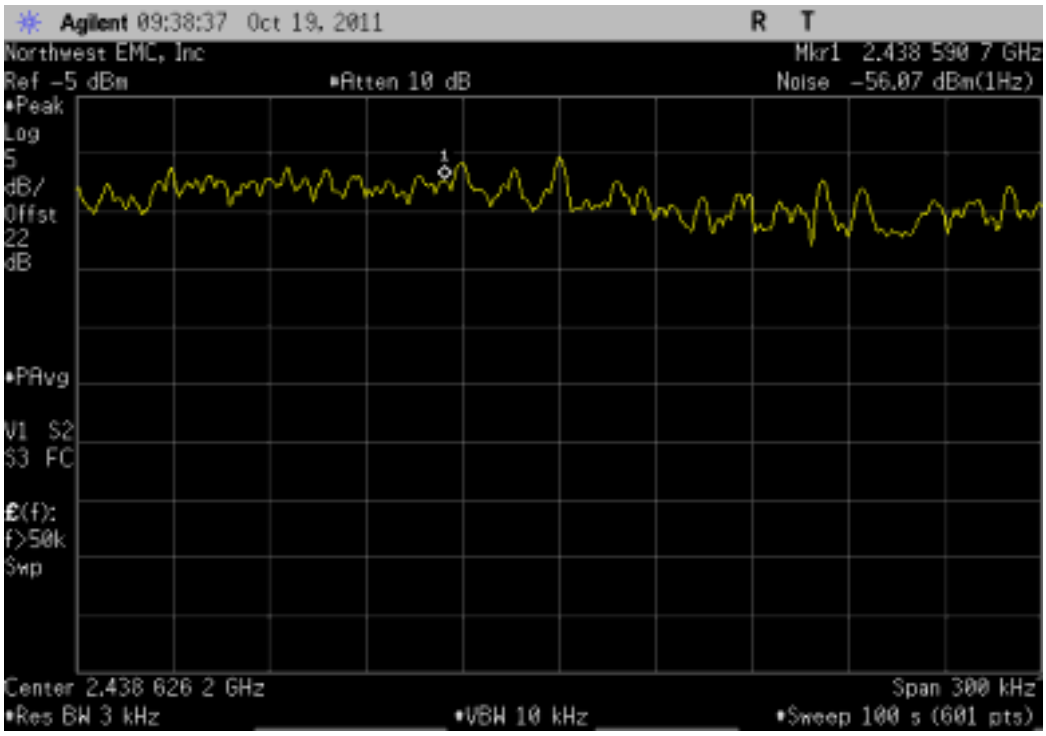
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-52.067	34.8	-17.267	8	Pass



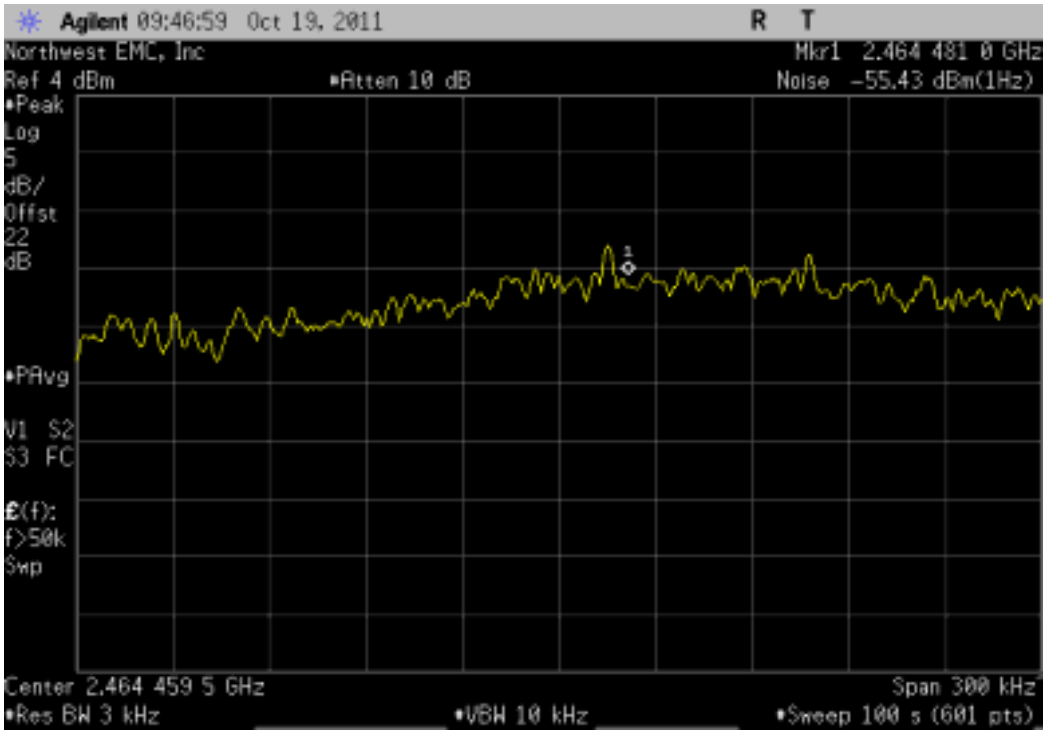
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-55.765	34.8	-20.965	8	Pass



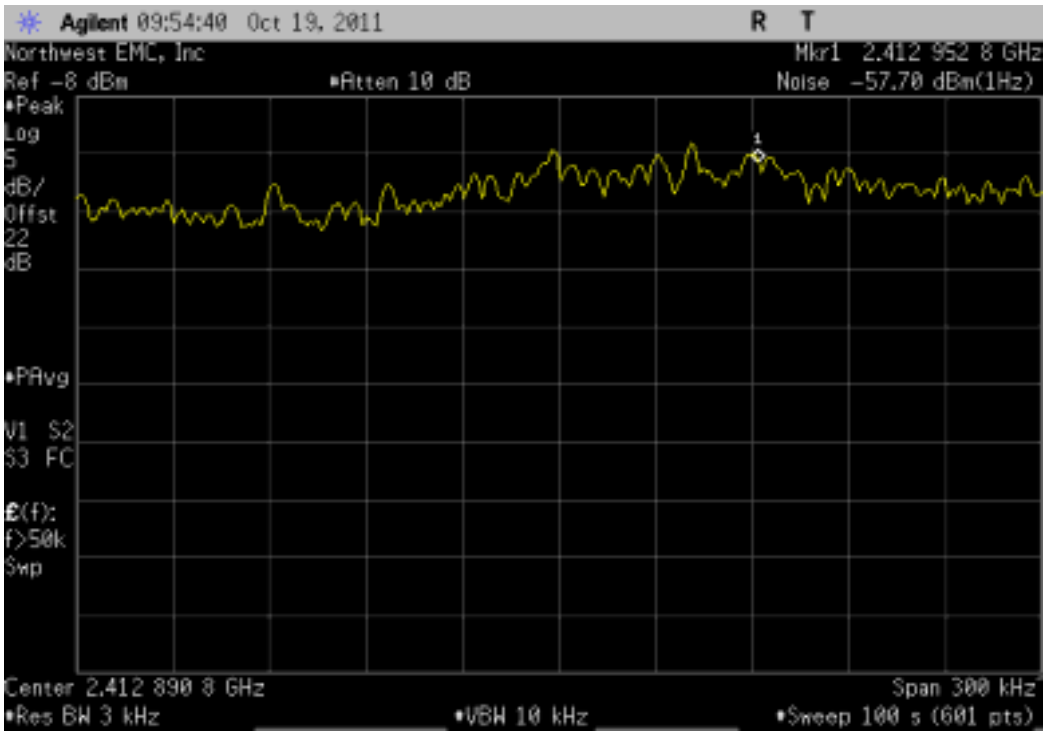
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-56.067	34.8	-21.267	8	Pass



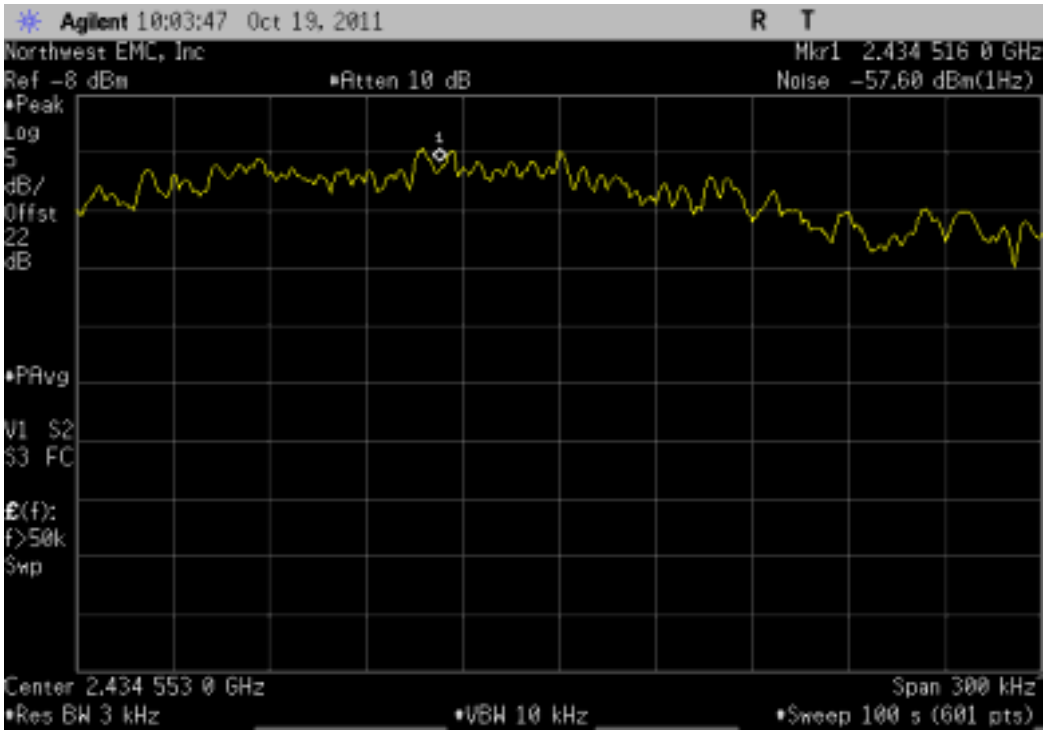
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-55.427	34.8	-20.627	8	Pass



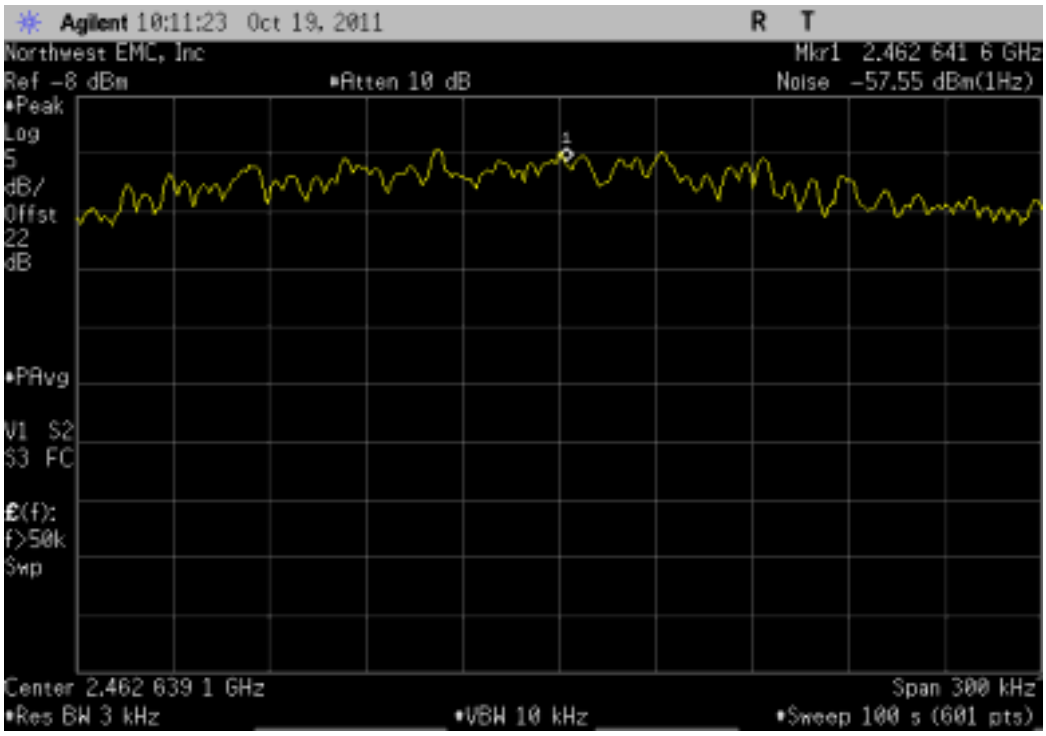
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-57.697	34.8	-22.897	8	Pass



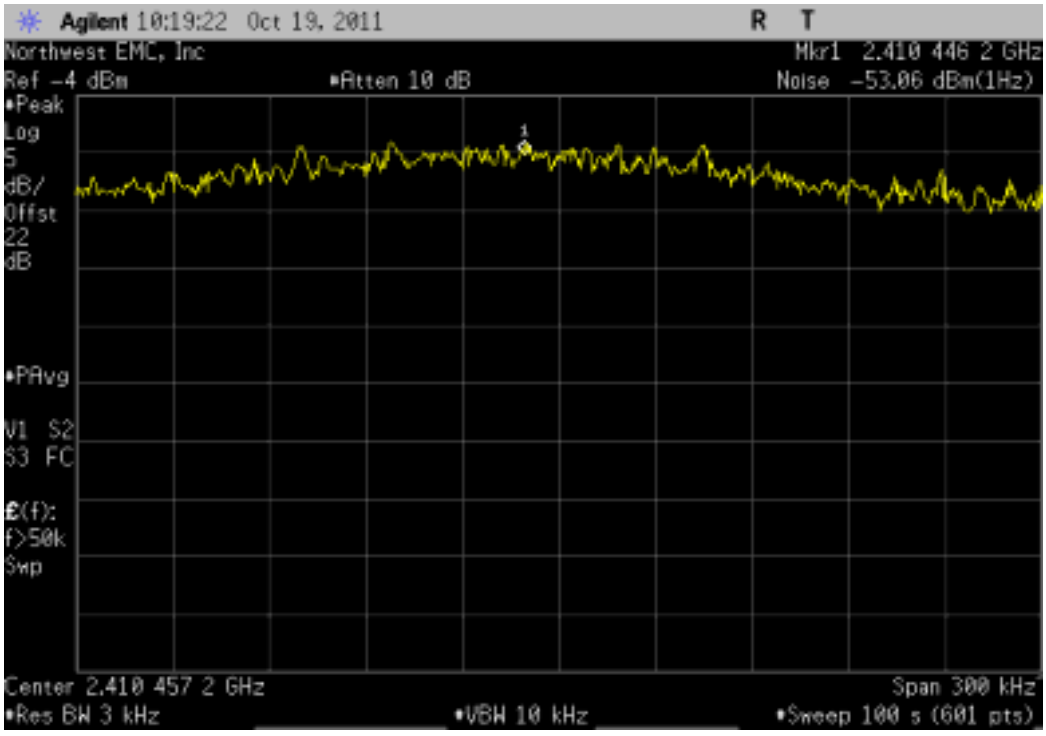
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-57.603	34.8	-22.803	8	Pass



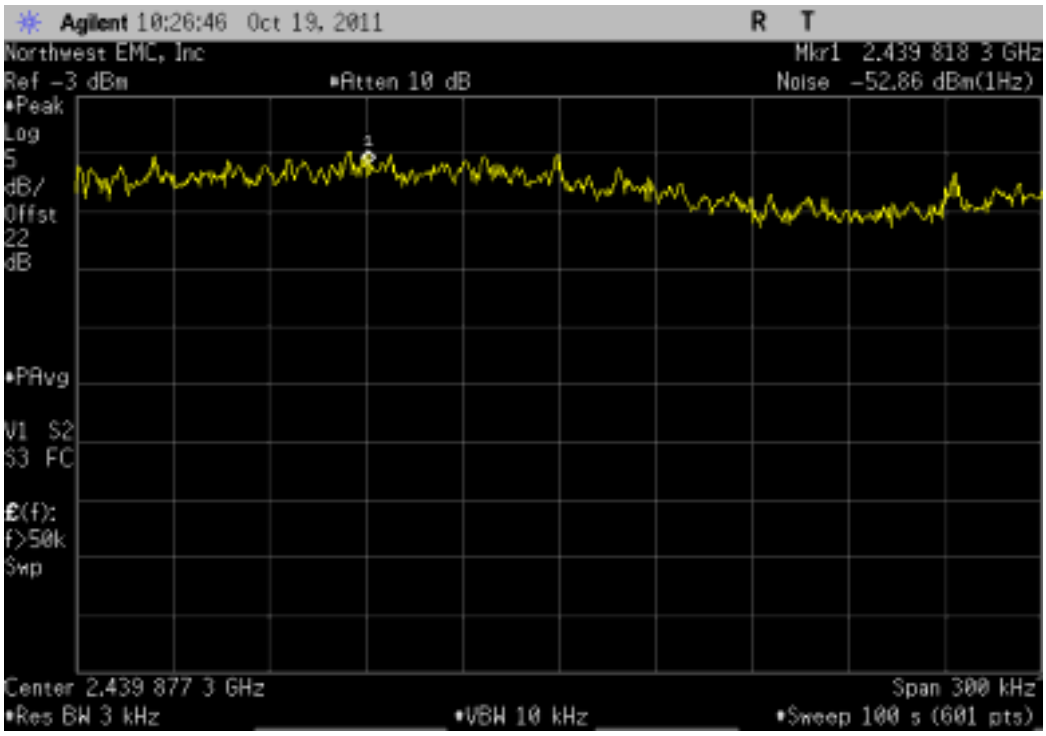
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-57.55	34.8	-22.75	8	Pass



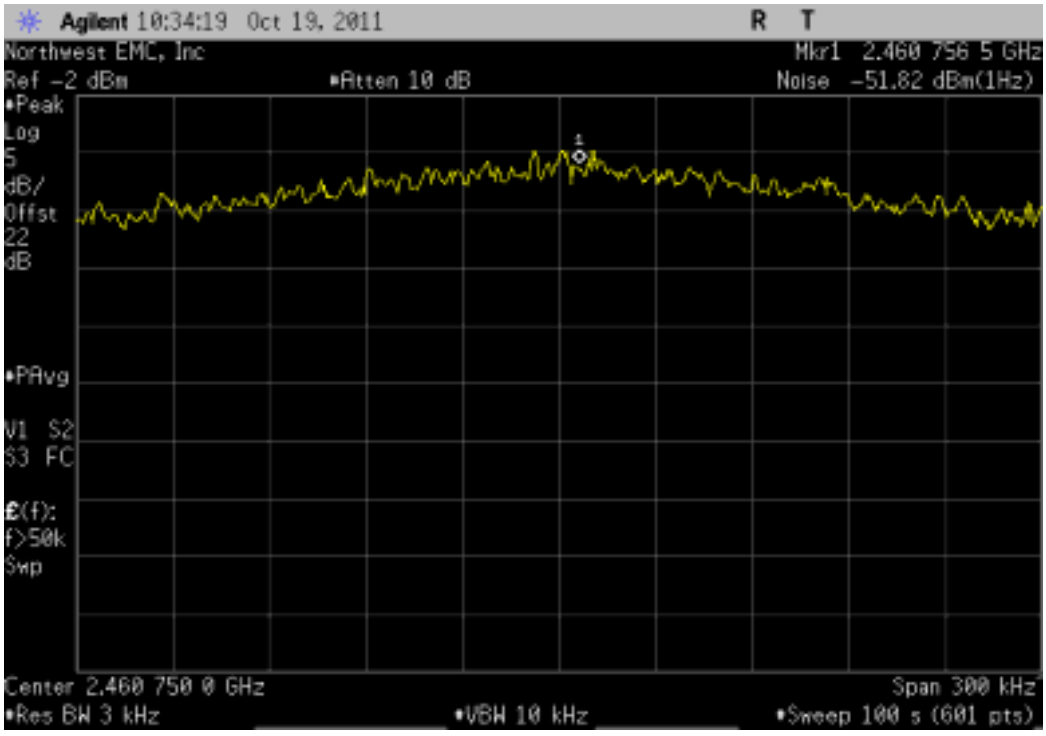
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-53.062	34.8	-18.262	8	Pass



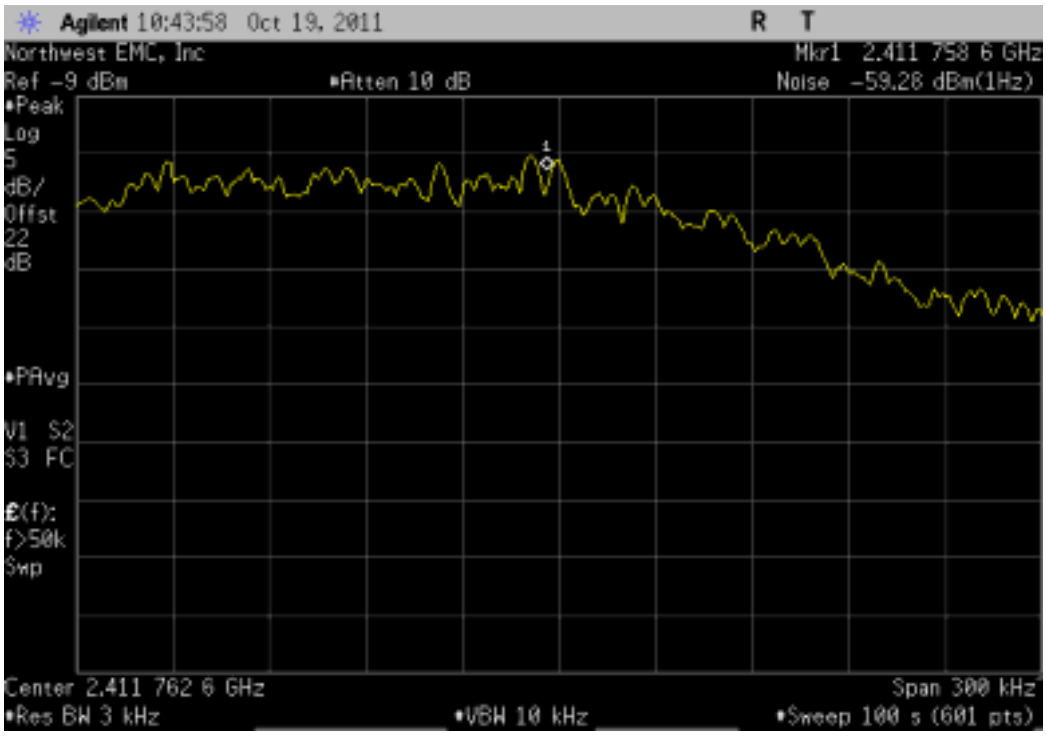
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-52.859	34.8	-18.059	8	Pass



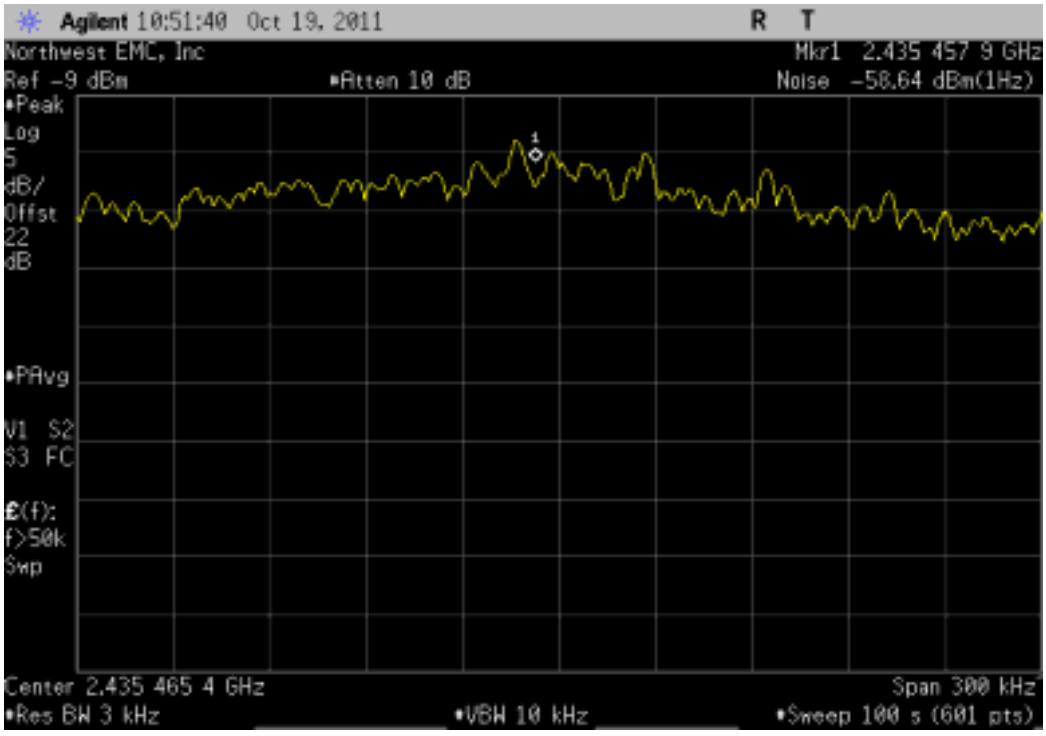
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-51.823	34.8	-17.023	8	Pass



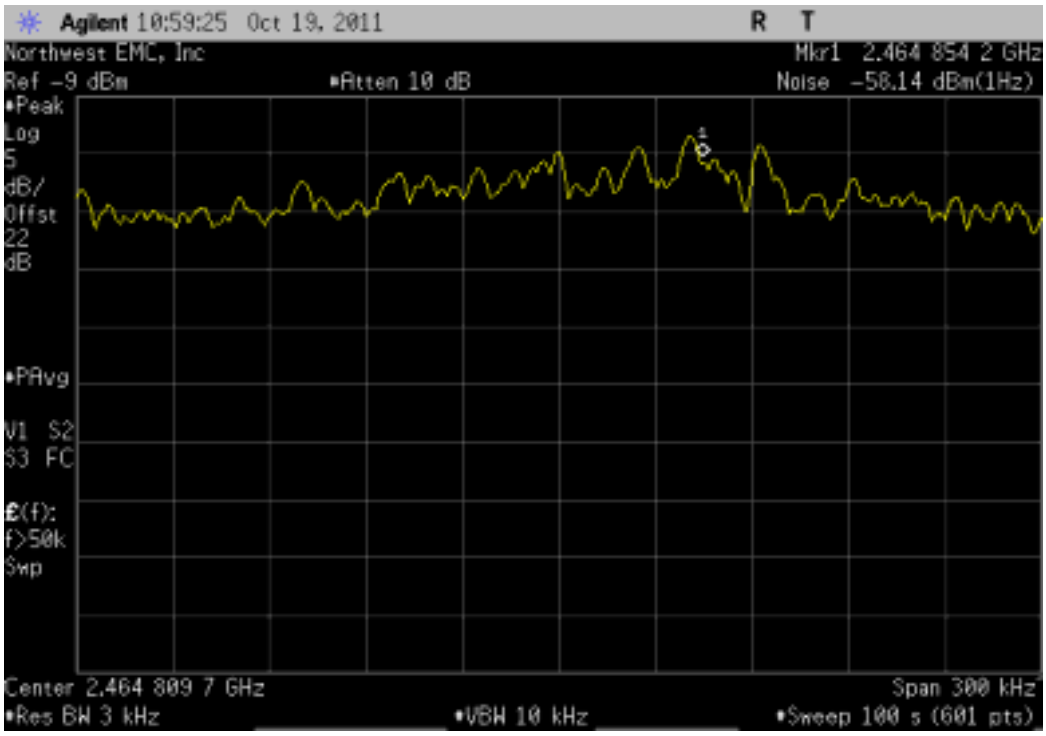
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-59.28	34.8	-24.48	8	Pass



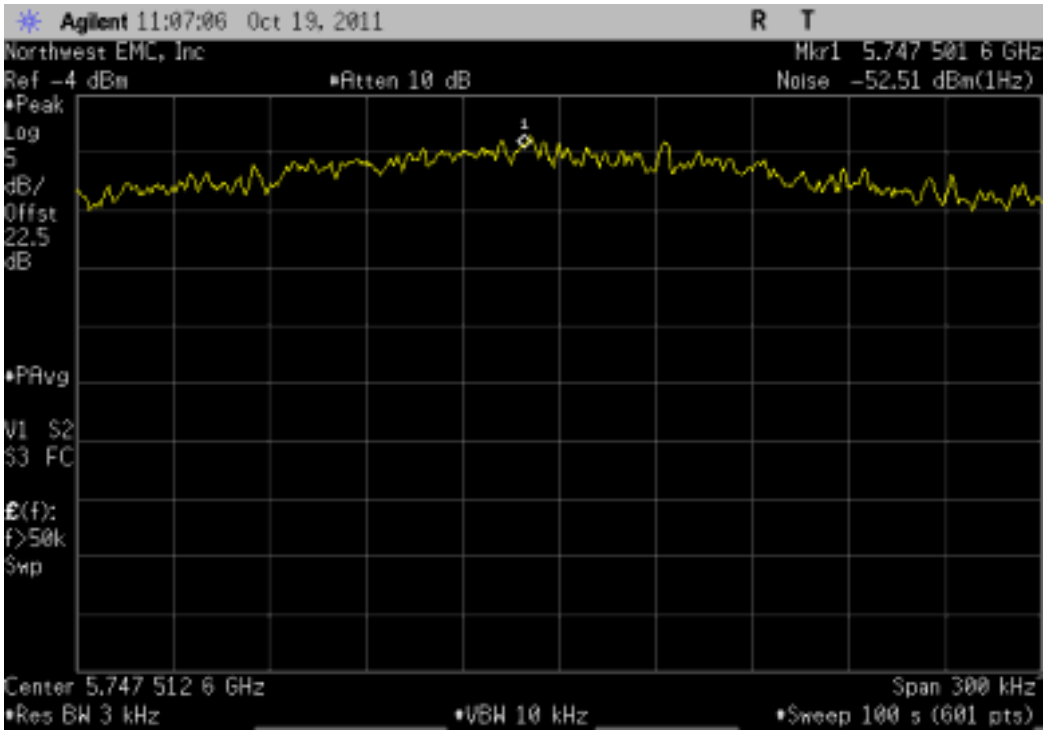
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-58.64	34.8	-23.84	8	Pass



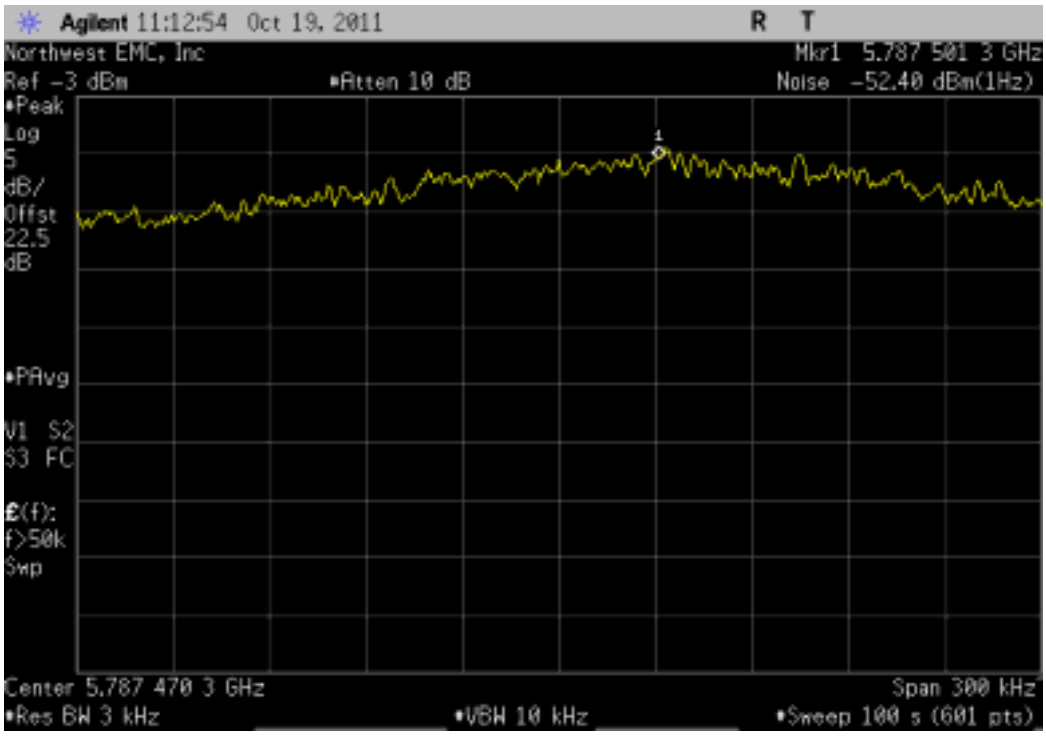
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-58.139	34.8	-23.339	8	Pass



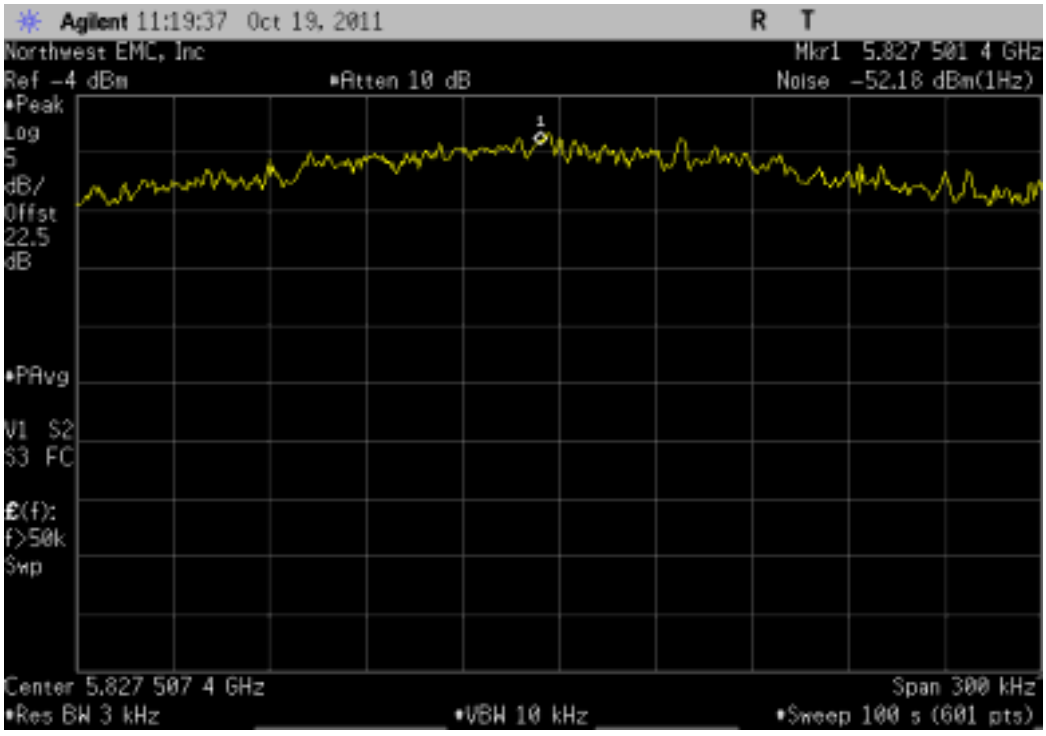
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-52.513	34.8	-17.713	8	Pass



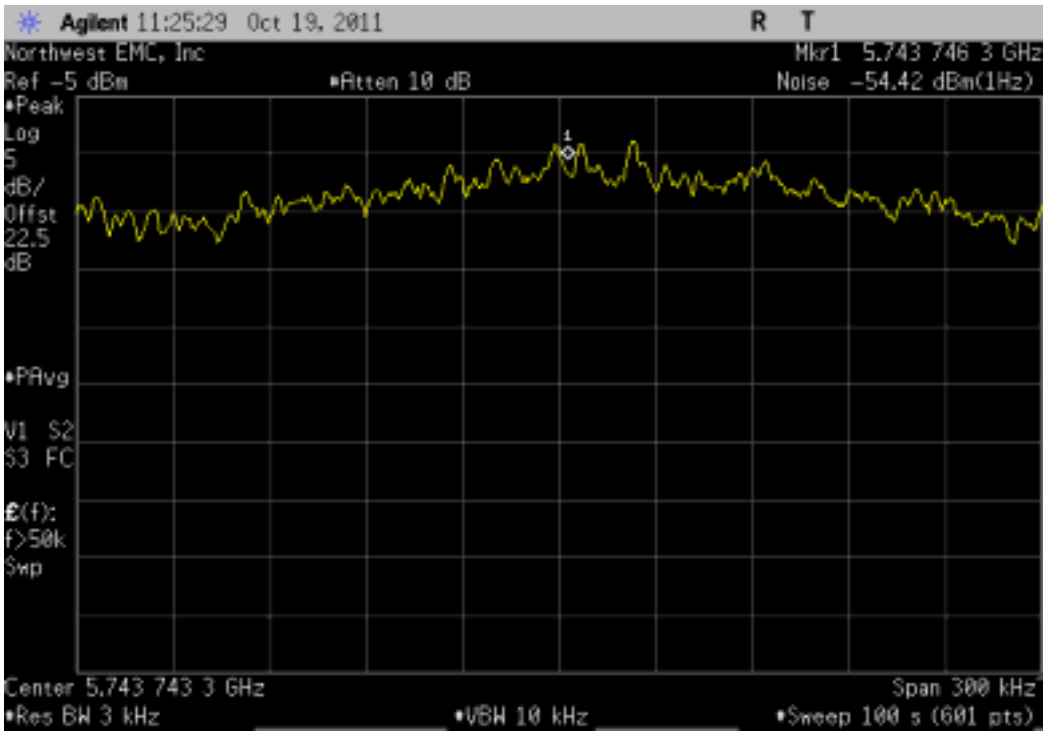
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-52.402	34.8	-17.602	8	Pass



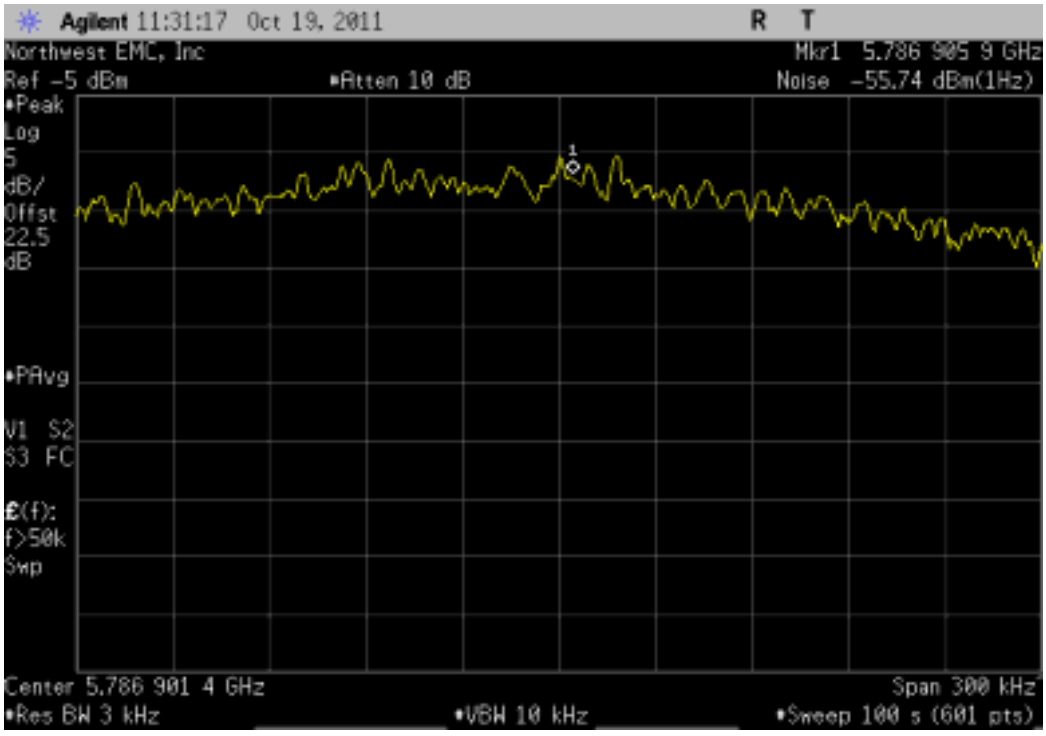
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-52.18	34.8	-17.38	8	Pass



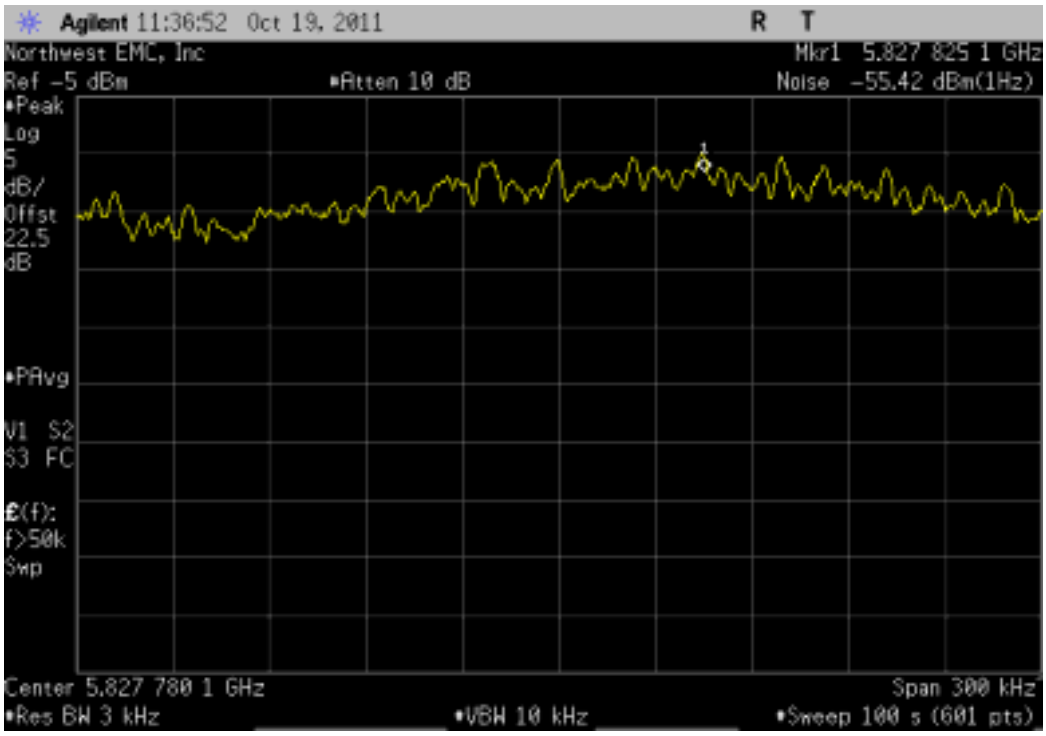
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-54.418	34.8	-19.618	8	Pass



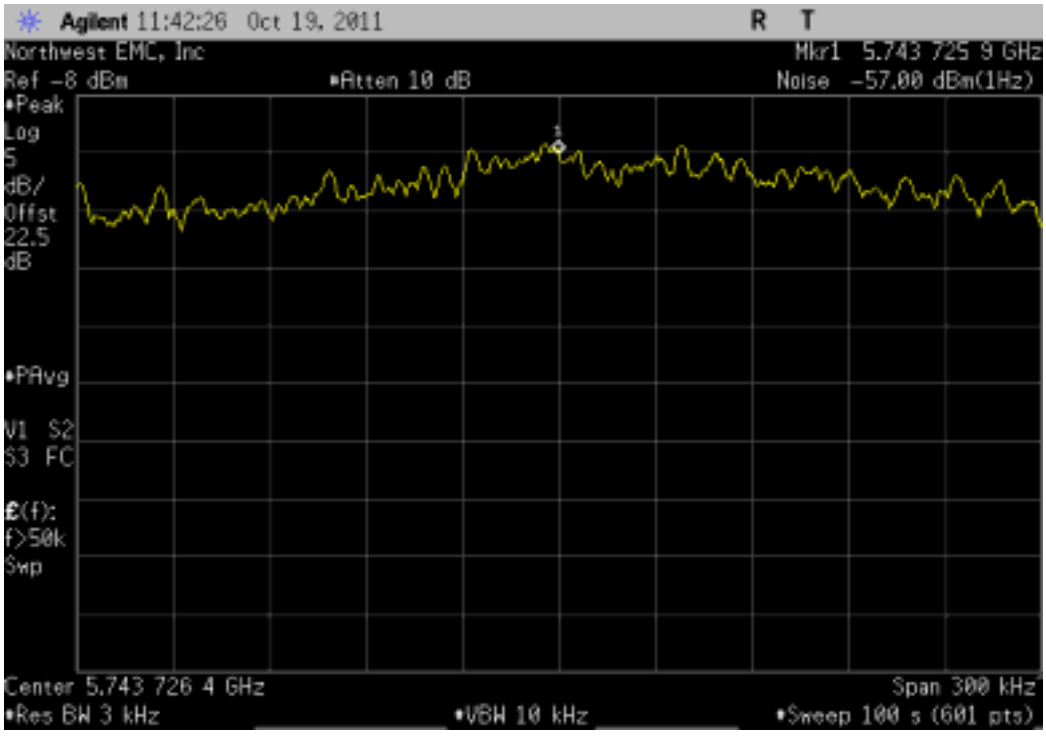
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-55.745	34.8	-20.945	8	Pass



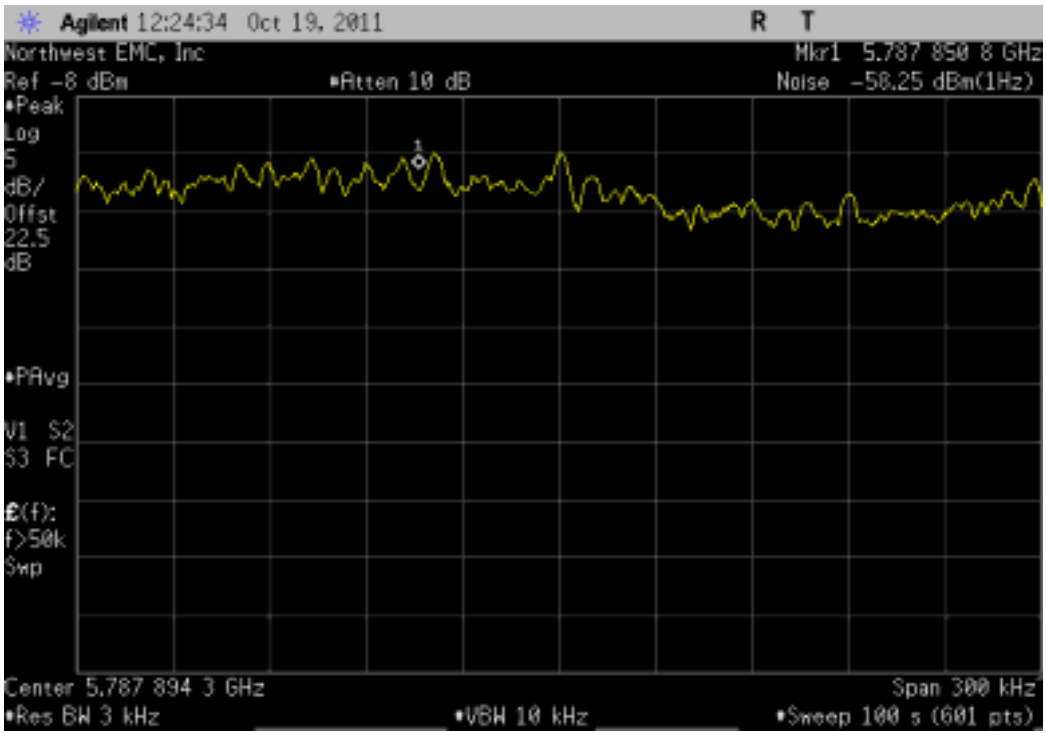
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-55.417	34.8	-20.617	8	Pass



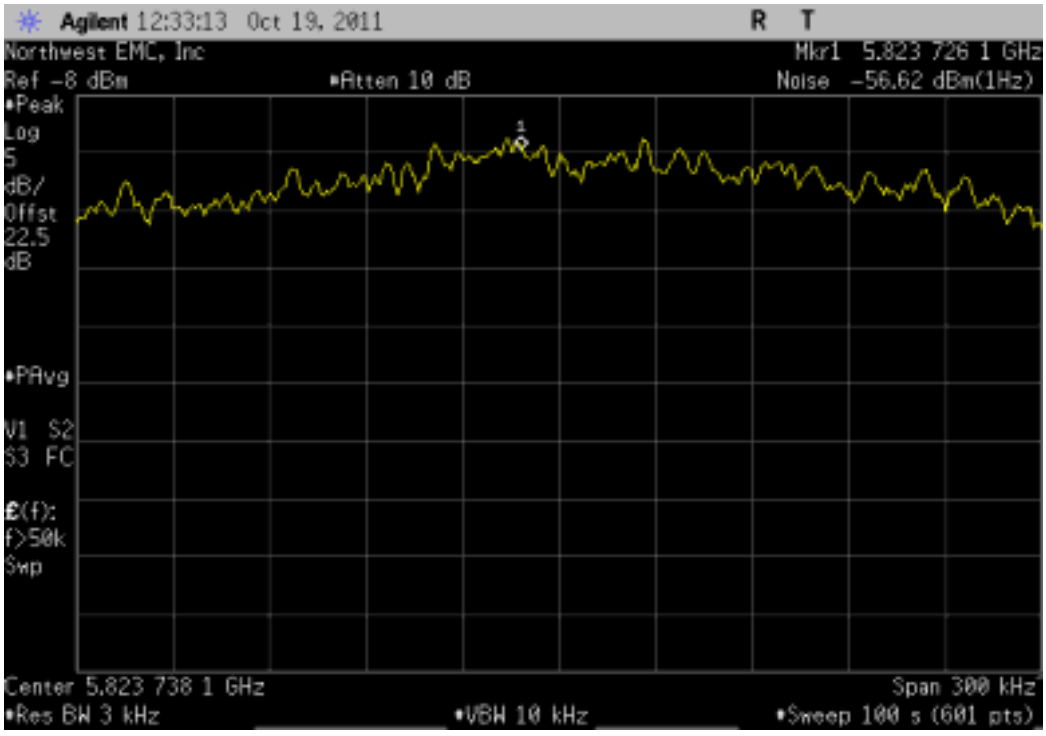
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-57	34.8	-22.2	8	Pass



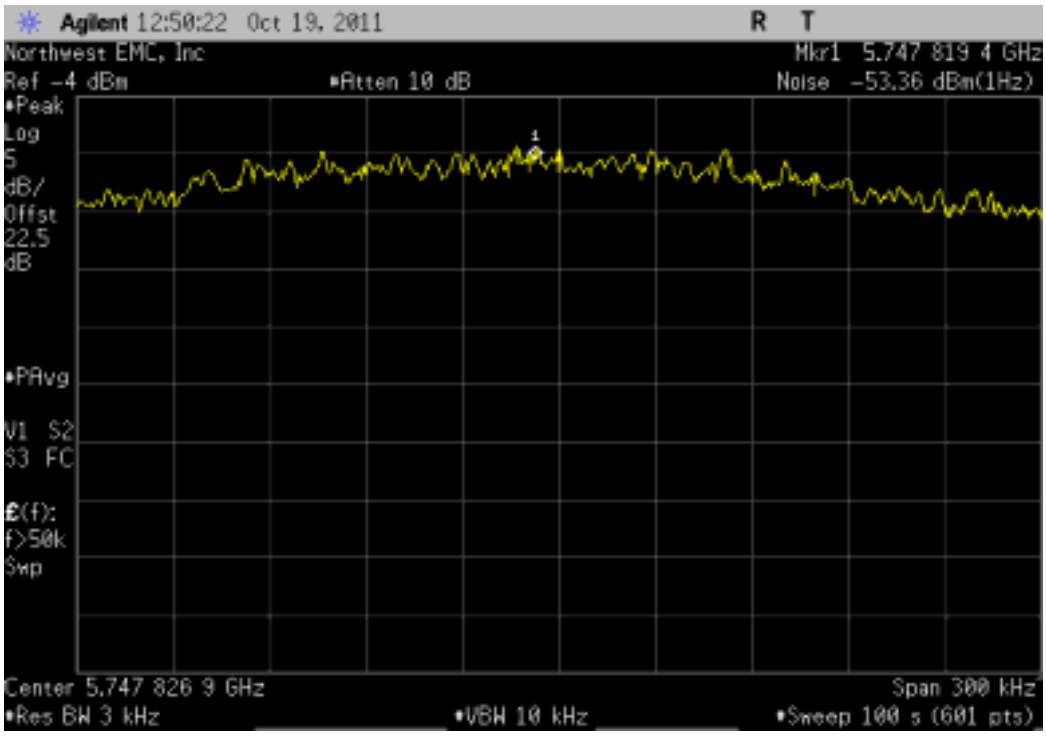
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-58.25	34.8	-23.45	8	Pass



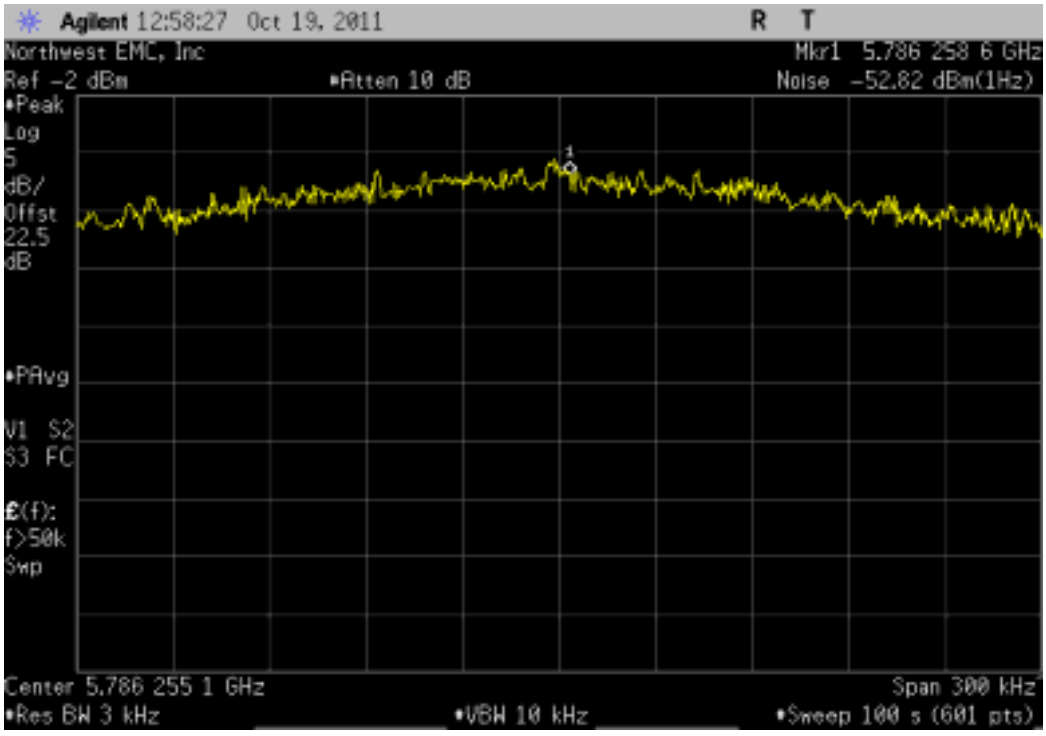
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-56.62	34.8	-21.82	8	Pass



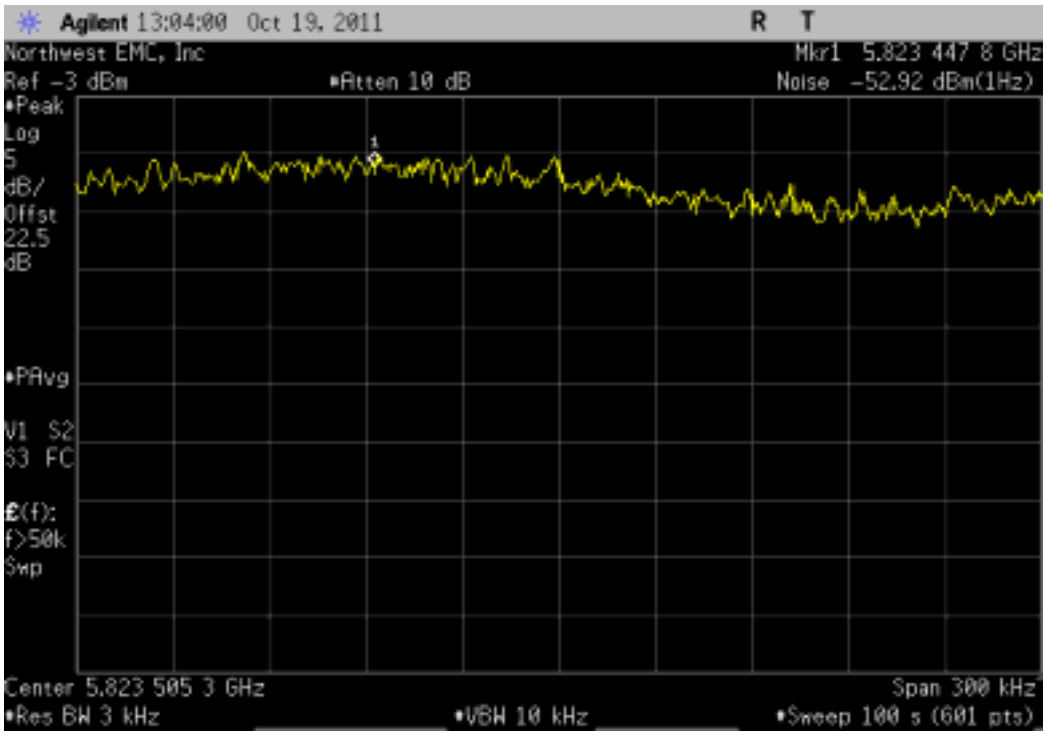
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-53.363	34.8	-18.563	8	Pass



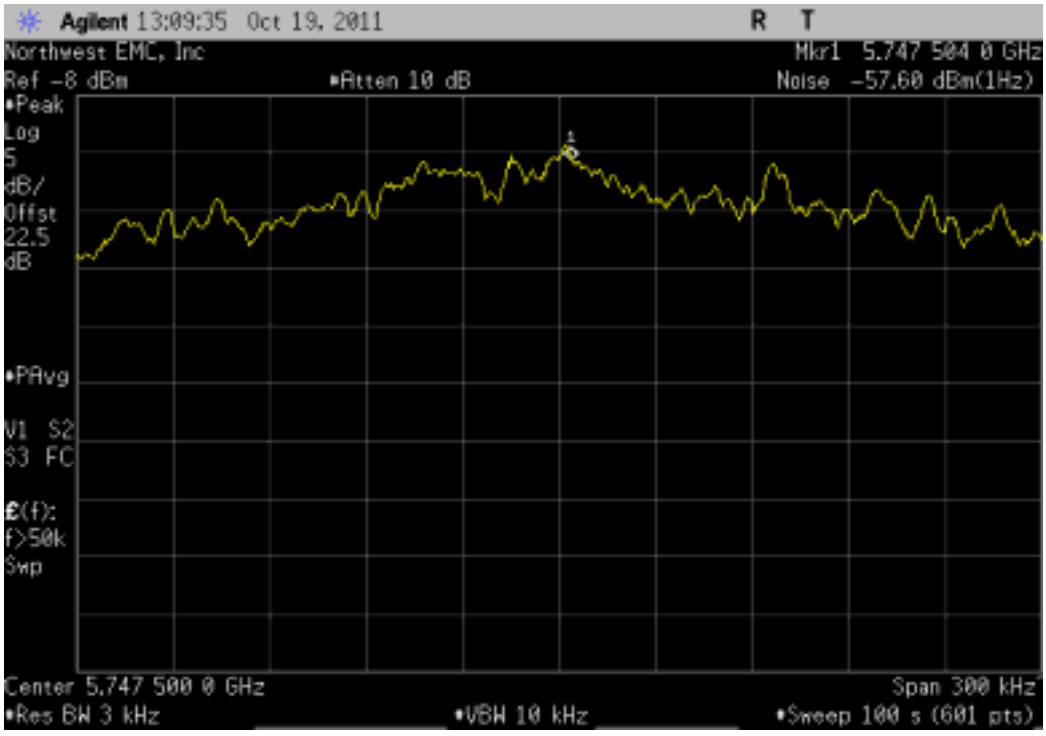
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-52.823	34.8	-18.023	8	Pass



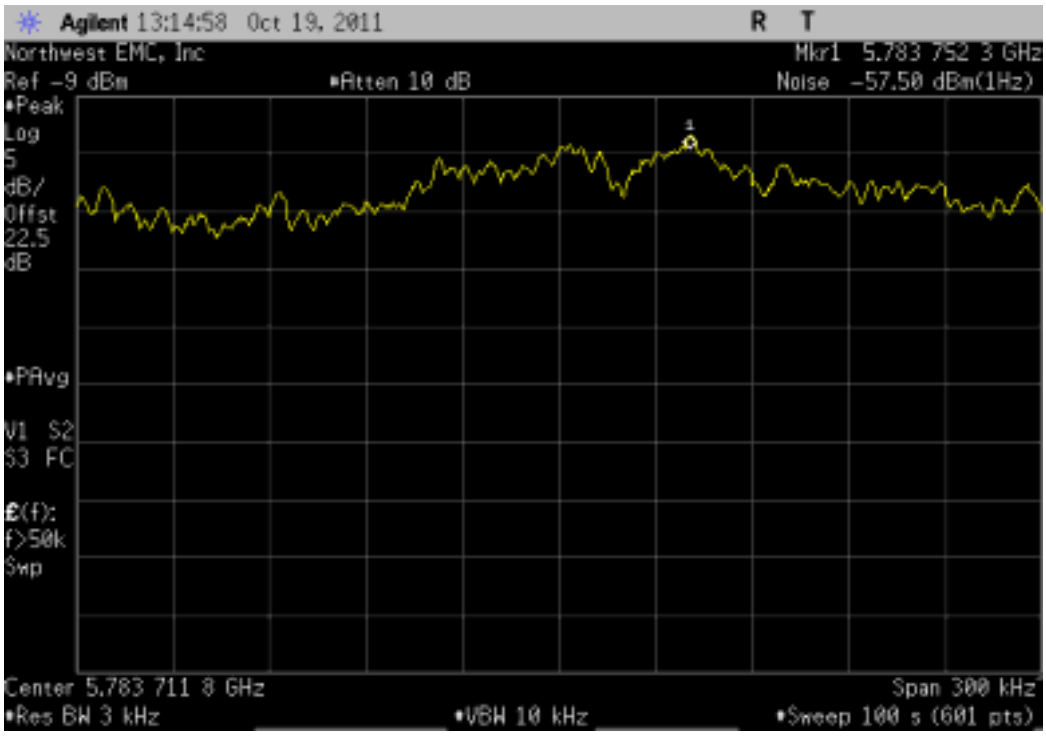
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-52.915	34.8	-18.115	8	Pass



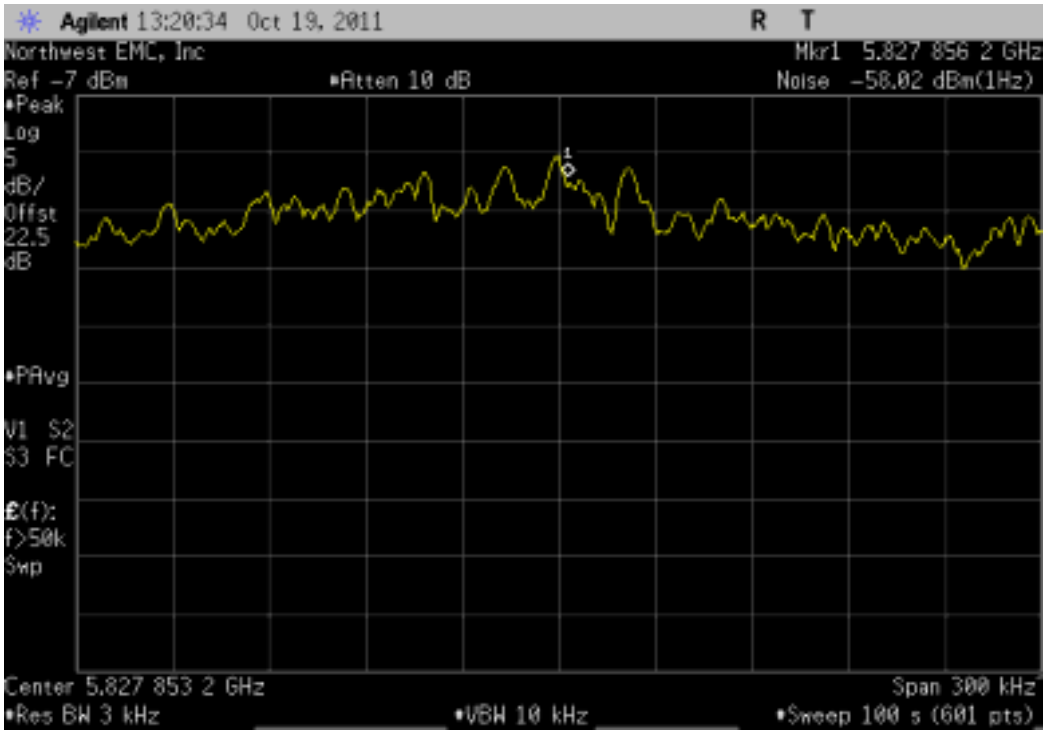
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-57.596	34.8	-22.796	8	Pass



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Mid Channel 157, 5785 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-57.5	34.8	-22.7	8	Pass



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz						
		Value (dBm / Hz)	(dBm / Hz) To (dBm / 3 kHz)	Value (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
		-58.024	34.8	-23.224	8	Pass



Spurious Radiated Emissions

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. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION
Transmitting modulated, see comments. Ch 1-2412MHz, Ch 6-2437MHz, Ch 11-2463MHz.
Transmitting modulated, see comments. Ch 149-5745MHz, Ch 157-5785MHz, Ch 165-5825MHz.

POWER SETTINGS INVESTIGATED
110VAC/60Hz

CONFIGURATIONS INVESTIGATED
LGPD0044 - 2

FREQUENCY RANGE INVESTIGATED			
Start Frequency	30 MHz	Stop Frequency	40 GHz

SAMPLE CALCULATIONS
Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
5G Notch Filter	Micro-Tronics	BRC50705	HGZ	6/2/2011	24 mo
5G Notch Filter	Micro-Tronics	BRC50703	HHB	6/2/2011	24 mo
5G Notch Filter	Micro-Tronics	BRC50704	HHA	6/2/2011	24 mo
Signal Generator	Agilent	N5183A	TIA	1/18/2011	12 mo
Antenna, Horn	ETS	3115	AJA	5/13/2011	24 mo
Attenuator, 20 dB, 'SMA'	SM Electronics	SA6-20	REO	7/1/2011	12 mo
High Pass Filter	Micro-Tronics	HPM50111	HGQ	7/9/2010	24 mo
Low Pass Filter	Micro-Tronics	LPM50004	HGK	7/9/2010	24 mo
Pre-Amplifier	Miteq	JSW45-26004000-40-5P	AVN	10/12/2011	12 mo
26-40GHz Cable	N/A	TTBJ141-KMKM-72	EVX	10/12/2011	12 mo
Antenna, Horn	ETS	3160-10	AIC	NCR	0 mo
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	4/15/2011	12 mo
MN05 Cables	N/A	18-26GHz Standard Gain Horn Cable	EVD	4/15/2011	12 mo
Antenna, Horn	ETS	3160-09	AHG	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVW	7/1/2011	12 mo
Antenna, Horn	ETS Lindgren	3160-08	AIQ	NCR	0 mo
MN05 Cables	ESM Cable Corp.	Standard Gain Horn Cables	MNJ	7/1/2011	12 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVV	7/1/2011	12 mo
Antenna, Horn	ETS	3160-07	AXP	NCR	0 mo
Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVX	7/1/2011	12 mo
MN05 Cables	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	10/18/2011	12 mo
Antenna, Horn (DRG)	ETS Lindgren	3115	AIP	6/29/2011	24 mo
Pre-Amplifier	Miteq	AM-1616-1000	AVY	7/1/2011	12 mo
MN05 Cables	ESM Cable Corp.	Bilog Cables	MNH	2/2/2011	12 mo
Antenna, Biconilog	ETS Lindgren	3142D	AXN	12/30/2009	24 mo
Spectrum Analyzer	Agilent	E4446A	AAT	2/15/2011	12 mo

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

Measurements were made using the IF bandwidths and detectors specified. No video filter was used, except in the case of the FCC Average Measurements above 1GHz. In that case, a peak detector with a 10Hz video bandwidth was used.

MEASUREMENT UNCERTAINTY

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 for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

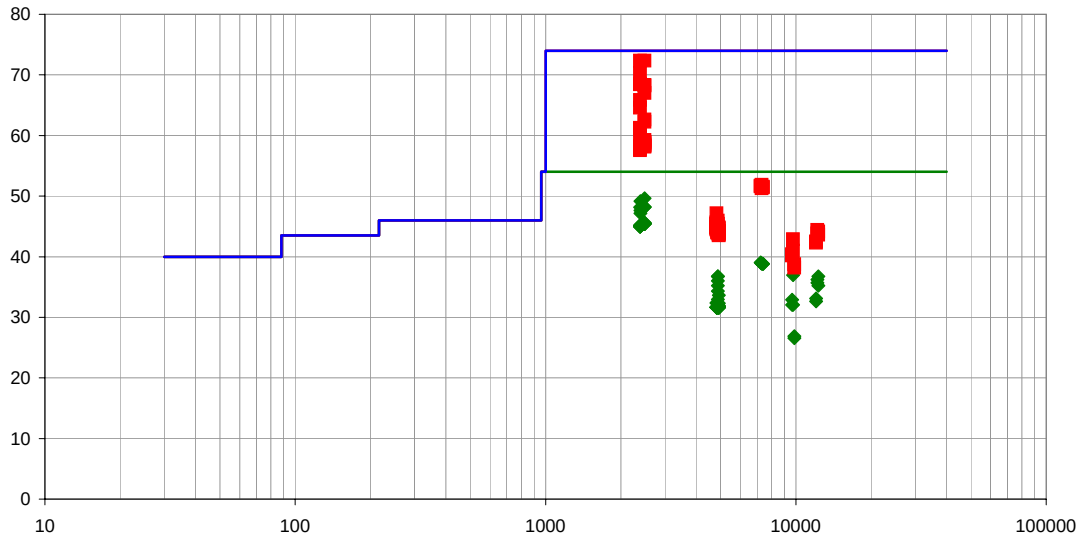
The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify compliance. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.10:2009). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

Spurious Radiated Emissions

Work Order:	LGPD0044	**Date:**	10/24/11	Trevor Buls	
Project:	None	**Temperature:**	23.57 °C		
Job Site:	MN05	**Humidity:**	29.1% RH		
Serial Number:	AR11J000137	**Barometric Pres.:**	1016.9 mbar	**Tested by:**	Trevor Buls
EUT:	X Series				
Configuration:	2				
Customer:	ZOLL Medical Corp.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting modulated, see comments. Ch 1-2412MHz, Ch 6-2437MHz, Ch 11-2463MHz.				
Deviations:	None				
Comments:	None				

Test Specifications	**Test Method**
FCC 15.247:2011	ANSI C63.10:2009

Run #	1	**Test Distance (m)**	3	**Antenna Height(s)**	1-4m	**Results**	Pass



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2389.415	56.1	-3.7	1.0	252.0	3.0	20.0	Horz	PK	0.0	72.4	74.0	-1.6	EUT Horizontal, MCS0
2485.158	55.8	-3.5	1.1	230.0	3.0	20.0	Vert	PK	0.0	72.3	74.0	-1.7	EUT Horizontal, MCS0
2389.366	54.0	-3.7	1.0	203.0	3.0	20.0	Vert	PK	0.0	70.3	74.0	-3.7	EUT Horizontal, MCS0
2483.500	33.1	-3.5	1.1	230.0	3.0	20.0	Vert	AV	0.0	49.6	54.0	-4.4	EUT Horizontal, MCS0
2389.998	32.9	-3.7	1.0	252.0	3.0	20.0	Horz	AV	0.0	49.2	54.0	-4.8	EUT Horizontal, MCS0
2389.800	52.3	-3.7	1.2	225.0	3.0	20.0	Horz	PK	0.0	68.6	74.0	-5.4	EUT Horizontal, 6Mbps
2389.083	52.2	-3.7	1.3	217.0	3.0	20.0	Vert	PK	0.0	68.5	74.0	-5.5	EUT Horizontal, 6Mbps
2484.783	51.8	-3.5	1.0	55.0	3.0	20.0	Horz	PK	0.0	68.3	74.0	-5.7	EUT Horizontal, MCS0
2483.517	31.7	-3.5	2.1	103.0	3.0	20.0	Horz	AV	0.0	48.2	54.0	-5.8	EUT Horizontal, 6 Mbps
2483.525	51.7	-3.5	2.1	103.0	3.0	20.0	Horz	PK	0.0	68.2	74.0	-5.8	EUT Horizontal, 6 Mbps
2483.500	31.7	-3.5	1.0	55.0	3.0	20.0	Horz	AV	0.0	48.2	54.0	-5.8	EUT Horizontal, MCS0
2389.985	31.9	-3.7	1.0	203.0	3.0	20.0	Vert	AV	0.0	48.2	54.0	-5.8	EUT Horizontal, MCS0
2483.500	31.6	-3.5	1.0	166.0	3.0	20.0	Vert	AV	0.0	48.1	54.0	-5.9	EUT Horizontal, 6 Mbps
2390.000	31.4	-3.7	1.2	225.0	3.0	20.0	Horz	AV	0.0	47.7	54.0	-6.3	EUT Horizontal, 6Mbps
2390.000	30.9	-3.7	1.3	217.0	3.0	20.0	Vert	AV	0.0	47.2	54.0	-6.8	EUT Horizontal, 6Mbps
2483.500	50.5	-3.5	1.0	166.0	3.0	20.0	Vert	PK	0.0	67.0	74.0	-7.0	EUT Horizontal, 6 Mbps
2389.567	49.6	-3.7	1.3	212.0	3.0	20.0	Horz	PK	0.0	65.9	74.0	-8.1	EUT Horizontal, 36Mbps
4823.744	41.4	4.4	1.1	131.0	3.0	0.0	Horz	AV	0.0	45.8	54.0	-8.2	EUT Horizontal, 1 Mbps
2483.908	29.1	-3.5	1.3	247.0	3.0	20.0	Horz	AV	0.0	45.6	54.0	-8.4	EUT Horizontal, 36 Mbps
2487.092	29.0	-3.5	1.0	214.0	3.0	20.0	Vert	AV	0.0	45.5	54.0	-8.5	EUT Horizontal, 1 Mbps

NORTHWEST

EMC

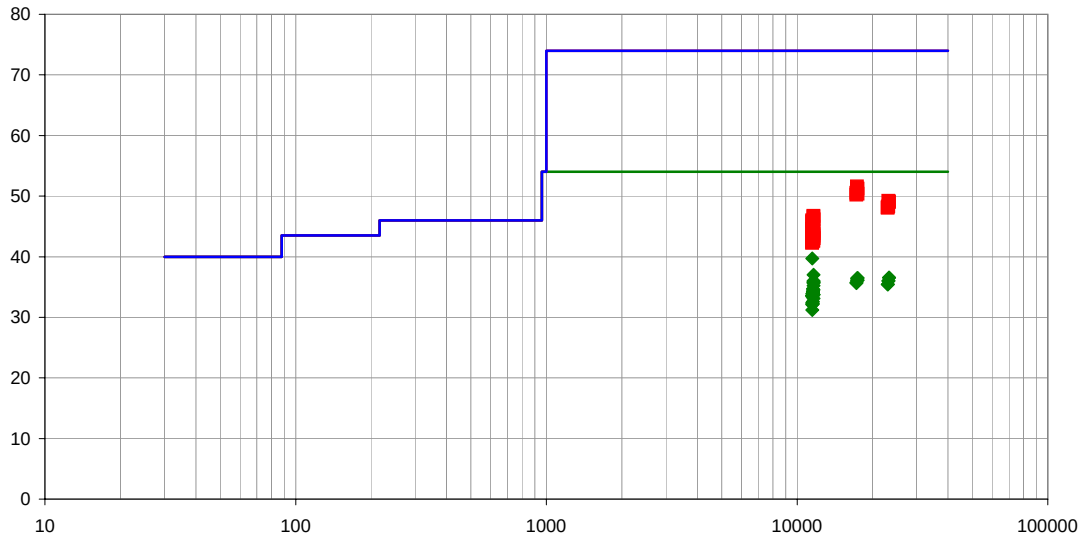
Spurious Radiated Emissions

PSA-ESCI 2011.07.26
PSA-ESCI Version 2011.06.23

Work Order:	LGPD0044	**Date:**	10/26/11		
Project:	None	**Temperature:**	23.84 °C		
Job Site:	MN05	**Humidity:**	24.37% RH		
Serial Number:	AR11J000137	**Barometric Pres.:**	1018.6 mbar	**Tested by:**	Trevor Buls
EUT:	X Series				
Configuration:	2				
Customer:	ZOLL Medical Corp.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting modulated, see comments. Ch 149-5745MHz, Ch 157-5785MHz, Ch 165-5825MHz.				
Deviations:	None				
Comments:	None				

Test Specifications	**Test Method**
FCC 15.247:2011	ANSI C63.10:2009

Run #	56	**Test Distance (m)**	3	**Antenna Height(s)**	1-4m	**Results**	Pass



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
11490.120	46.1	-6.4	1.0	139.0	3.0	0.0	Vert	AV	0.0	39.7	54.0	-14.3	EUT on Side, Ch 149, 54Mbps
11650.030	43.5	-6.5	1.2	90.0	3.0	0.0	Horz	AV	0.0	37.0	54.0	-17.0	EUT on Side, Ch 165, MCS7
17474.820	33.1	3.4	1.1	173.0	3.0	0.0	Vert	AV	0.0	36.5	54.0	-17.5	EUT on Side, Ch 165, 6Mbps
17352.780	32.9	3.5	1.0	147.0	3.0	0.0	Vert	AV	0.0	36.4	54.0	-17.6	EUT on Side, Ch 157, 6Mbps
17352.950	32.6	3.5	1.0	168.0	3.0	0.0	Horz	AV	0.0	36.1	54.0	-17.9	EUT on Side, Ch 157, 6Mbps
17475.030	32.7	3.4	1.0	179.0	3.0	0.0	Horz	AV	0.0	36.1	54.0	-17.9	EUT on Side, Ch 165, 6Mbps
11650.050	42.5	-6.5	1.0	140.0	3.0	0.0	Vert	AV	0.0	36.0	54.0	-18.0	EUT on Side, Ch 165, 54Mbps
11650.030	42.3	-6.5	1.0	138.0	3.0	0.0	Vert	AV	0.0	35.8	54.0	-18.2	EUT on Side, Ch 165, 36Mbps
11649.990	42.2	-6.5	1.1	139.0	3.0	0.0	Vert	AV	0.0	35.7	54.0	-18.3	EUT on Side, Ch 165, MCS0
17235.100	32.1	3.6	1.0	181.0	3.0	0.0	Vert	AV	0.0	35.7	54.0	-18.3	EUT on Side, Ch 149, 6Mbps
11650.010	42.1	-6.5	1.1	139.0	3.0	0.0	Vert	AV	0.0	35.6	54.0	-18.4	EUT on Side, Ch 165, 6Mbps
17237.500	32.0	3.6	1.0	162.0	3.0	0.0	Horz	AV	0.0	35.6	54.0	-18.4	EUT on Side, Ch 149, 6Mbps
22982.020	25.3	10.1	1.2	183.0	3.0	0.0	Vert	AV	0.0	35.4	54.0	-18.6	EUT on Side, Ch 149, 6Mbps
22982.090	25.3	10.1	1.2	128.0	3.0	0.0	Horz	AV	0.0	35.4	54.0	-18.6	EUT on Side, Ch 149, 6Mbps
11650.040	41.7	-6.5	1.0	137.0	3.0	0.0	Vert	AV	0.0	35.2	54.0	-18.8	EUT on Side, Ch 165, MCS7
23139.350	39.1	10.1	1.2	136.0	3.0	0.0	Vert	PK	0.0	49.2	68.2	-19.0	EUT on Side, Ch 157, 6Mbps
23300.810	39.0	10.1	1.2	183.0	3.0	0.0	Horz	PK	0.0	49.1	68.2	-19.1	EUT on Side, Ch 165, 6Mbps
23298.250	38.9	10.1	1.2	209.0	3.0	0.0	Vert	PK	0.0	49.0	68.2	-19.2	EUT on Side, Ch 165, 6Mbps
11570.040	41.1	-6.4	1.0	106.0	3.0	0.0	Horz	AV	0.0	34.7	54.0	-19.3	EUT on Side, Ch 157, 36Mbps
11650.030	41.0	-6.5	1.0	104.0	3.0	0.0	Horz	AV	0.0	34.5	54.0	-19.5	EUT on Side, Ch 165, 54Mbps

AC Powerline Conducted Emissions

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.

MODES OF OPERATION
Transmitting Wifi, Channel 1, 1 Mbps
Transmitting Wifi, Channel 6, 1 Mbps
Transmitting Wifi, Channel 11, 1 Mbps
Transmitting Wifi, Channel 149, 6 Mbps
Transmitting Wifi, Channel 157, 6 Mbps
Transmitting Wifi, Channel 165, 6 Mbps

POWER SETTINGS INVESTIGATED
110VAC/60Hz

CONFIGURATIONS INVESTIGATED
LGPD0044 - 3

SAMPLE CALCULATIONS
Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
MN03 Cables	ESM Cable Corp.	Conducted Cables	MNC	5/18/2011	12 mo
LISN	Solar Electronics	9252-50-R-24-BNC	LIY	7/5/2011	12 mo
LISN	Solar	9252-50-R-24-BNC	LIQ	3/9/2011	12 mo
High Pass Filter	TTE	H97-100K-50-720B	HGN	6/28/2010	24 mo
Attenuator, 20 dB	SM Electronics	SA01B-20	REF	1/3/2011	12 mo
Receiver	Rohde & Schwarz	ESCI	ARG	3/22/2011	12 mo

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0
Measurements were made using the bandwidths and detectors specified. No video filter was used.			

MEASUREMENT UNCERTAINTY

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 for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The EUT will be powered either directly or indirectly from the AC power line. Therefore, conducted emissions measurements were made on the AC input of the EUT, or on the AC input of the device used to power the EUT. The AC power line conducted emissions were measured with the EUT operating at the lowest, the highest, and a middle channel in the operational band. The EUT was transmitting at its maximum data rate. For each mode, the spectrum was scanned from 150 kHz to 30 MHz. The test setup and procedures were in accordance with ANSI C63.10-2009.

NORTHWEST

EMC

AC Powerline Conducted Emissions

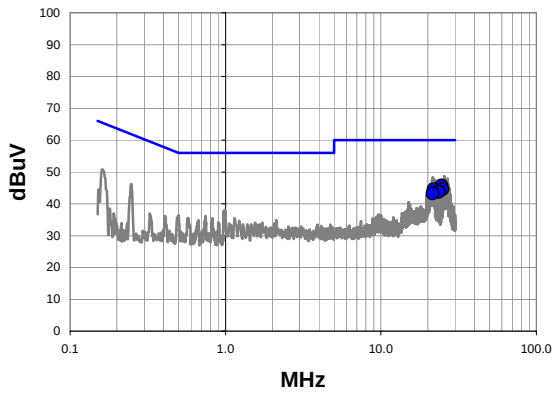
PSA-ESCI 2011.10.17
PSA-ESCI Version 2011.06.23

Work Order:	LGPD0044	**Date:**	10/27/11		
Project:	None	**Temperature:**	23.84 °C		
Job Site:	MN05	**Humidity:**	26.4% RH		
Serial Number:	AR11J000137	**Barometric Pres.:**	1018 mbar	**Tested by:**	Bryan Weller
EUT:	X Series				
Configuration:	3				
Customer:	ZOLL Medical Corp.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting Wifi, Channel 1, 1 Mbps				
Deviations:	None				
Comments:	None				

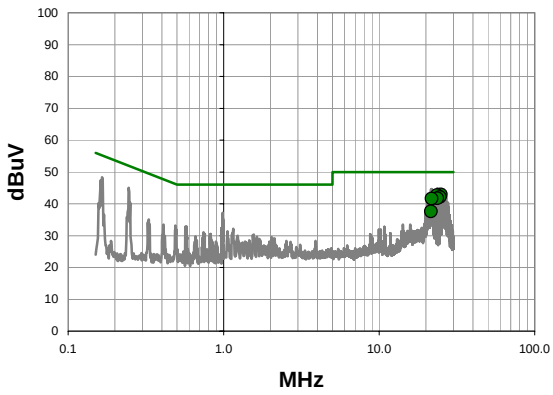
Test Specifications	**Test Method**
FCC 15.207:2011	ANSI C63.10:2009

Run #	1	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.556	23.8	21.9	45.7	60.0	-14.3
21.790	22.9	21.6	44.5	60.0	-15.5
24.902	22.6	21.9	44.5	60.0	-15.5
23.632	22.1	21.8	43.9	60.0	-16.1
23.520	21.9	21.8	43.7	60.0	-16.3
21.500	21.6	21.6	43.2	60.0	-16.8

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.902	21.0	21.9	42.9	50.0	-7.1
23.520	20.9	21.8	42.7	50.0	-7.3
24.556	20.2	21.9	42.1	50.0	-7.9
23.632	19.9	21.8	41.7	50.0	-8.3
21.790	20.0	21.6	41.6	50.0	-8.4
21.500	16.0	21.6	37.6	50.0	-12.4

NORTHWEST

EMC

AC Powerline Conducted Emissions

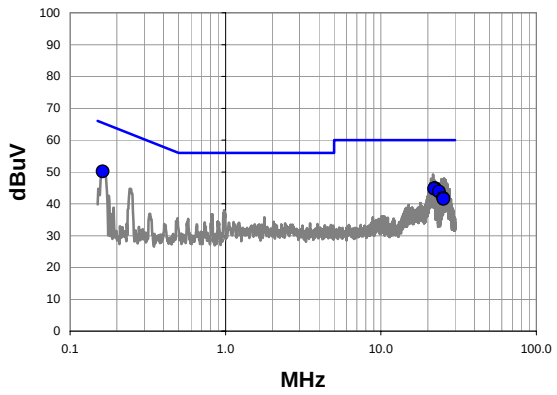
PSA-ESCI 2011.10.17
PSA-ESCI Version 2011.06.23

Work Order:	LGPD0044	**Date:**	10/27/11		
Project:	None	**Temperature:**	23.84 °C		
Job Site:	MN05	**Humidity:**	26.4% RH		
Serial Number:	AR11J000137	**Barometric Pres.:**	1018 mbar	**Tested by:**	Bryan Weller
EUT:	X Series				
Configuration:	3				
Customer:	ZOLL Medical Corp.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting Wifi, Channel 1, 1 Mbps				
Deviations:	None				
Comments:	None				

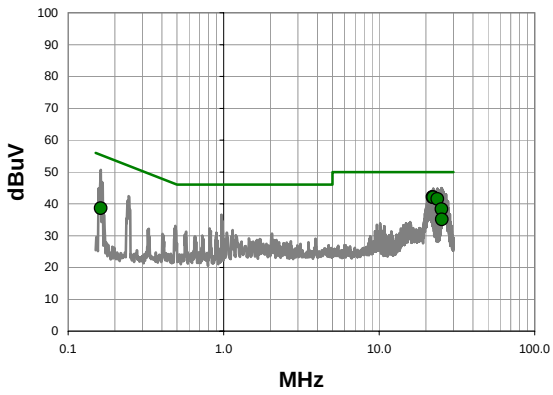
Test Specifications	**Test Method**
FCC 15.207:2011	ANSI C63.10:2009

Run #	2	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
22.250	23.2	21.7	44.9	60.0	-15.1
0.162	30.0	20.2	50.2	65.4	-15.2
22.020	23.1	21.7	44.8	60.0	-15.2
23.632	22.0	21.8	43.8	60.0	-16.2
25.192	19.8	22.0	41.8	60.0	-18.2
25.308	19.5	22.0	41.5	60.0	-18.5

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
22.020	20.4	21.7	42.1	50.0	-7.9
22.250	20.3	21.7	42.0	50.0	-8.0
23.632	19.7	21.8	41.5	50.0	-8.5
25.192	16.3	22.0	38.3	50.0	-11.7
25.308	13.1	22.0	35.1	50.0	-14.9
0.162	18.4	20.2	38.6	55.4	-16.8

NORTHWEST

EMC

AC Powerline Conducted Emissions

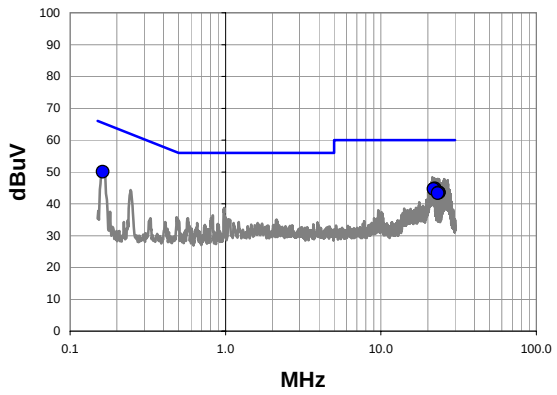
PSA-ESCI 2011.10.17
PSA-ESCI Version 2011.06.23

Work Order:	LGPD0044	**Date:**	10/27/11		
Project:	None	**Temperature:**	23.84 °C		
Job Site:	MN05	**Humidity:**	26.4% RH		
Serial Number:	AR11J000137	**Barometric Pres.:**	1018 mbar	**Tested by:**	Bryan Weller
EUT:	X Series				
Configuration:	3				
Customer:	ZOLL Medical Corp.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting Wifi, Channel 6, 1 Mbps				
Deviations:	None				
Comments:	None				

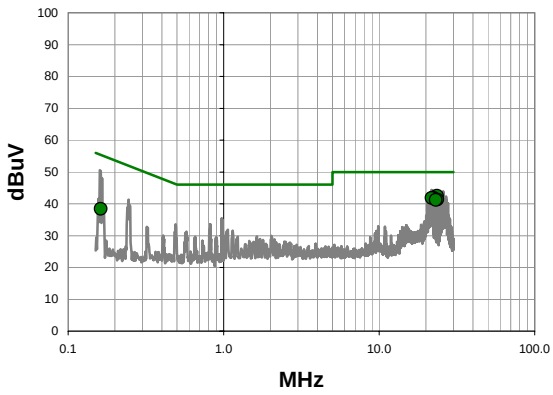
Test Specifications	**Test Method**
FCC 15.207:2011	ANSI C63.10:2009

Run #	3	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
22.250	23.1	21.7	44.8	60.0	-15.2
0.162	29.9	20.2	50.1	65.4	-15.3
21.790	23.0	21.6	44.6	60.0	-15.4
23.632	21.7	21.8	43.5	60.0	-16.5
23.520	21.7	21.8	43.5	60.0	-16.5
23.174	21.6	21.7	43.3	60.0	-16.7

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
23.520	20.7	21.8	42.5	50.0	-7.5
22.250	20.2	21.7	41.9	50.0	-8.1
21.790	20.2	21.6	41.8	50.0	-8.2
23.632	19.5	21.8	41.3	50.0	-8.7
23.174	19.5	21.7	41.2	50.0	-8.8
0.162	18.2	20.2	38.4	55.4	-17.0

NORTHWEST

EMC

AC Powerline Conducted Emissions

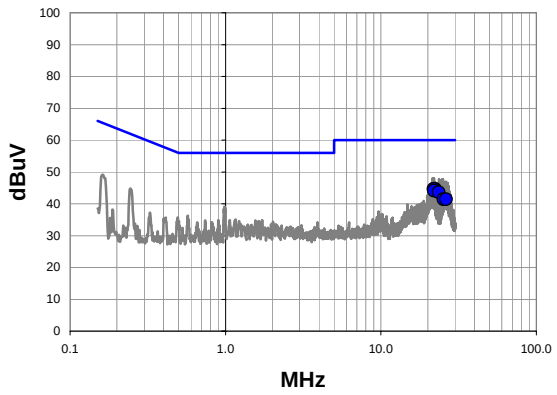
PSA-ESCI 2011.10.17
PSA-ESCI Version 2011.06.23

Work Order:	LGPD0044	**Date:**	10/27/11		
Project:	None	**Temperature:**	23.84 °C		
Job Site:	MN05	**Humidity:**	26.4% RH		
Serial Number:	AR11J000137	**Barometric Pres.:**	1018 mbar	**Tested by:**	Bryan Weller
EUT:	X Series				
Configuration:	3				
Customer:	ZOLL Medical Corp.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting Wifi, Channel 6, 1 Mbps				
Deviations:	None				
Comments:	None				

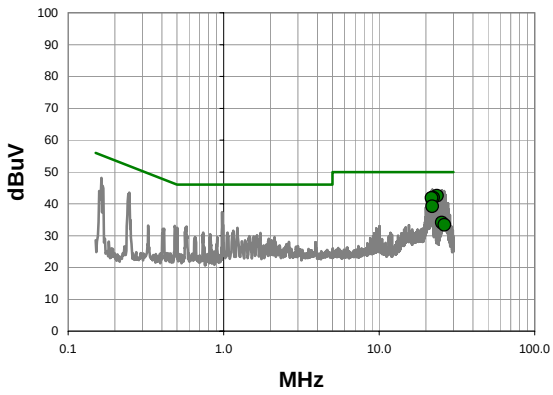
Test Specifications	**Test Method**
FCC 15.207:2011	ANSI C63.10:2009

Run #	4	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
22.250	23.0	21.7	44.7	60.0	-15.3
21.790	23.0	21.6	44.6	60.0	-15.4
21.964	22.5	21.7	44.2	60.0	-15.8
23.520	21.8	21.8	43.6	60.0	-16.4
25.302	19.4	22.0	41.4	60.0	-18.6
26.228	19.3	22.1	41.4	60.0	-18.6

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
23.520	20.7	21.8	42.5	50.0	-7.5
22.250	20.2	21.7	41.9	50.0	-8.1
21.790	20.2	21.6	41.8	50.0	-8.2
21.964	17.5	21.7	39.2	50.0	-10.8
25.302	12.1	22.0	34.1	50.0	-15.9
26.228	11.3	22.1	33.4	50.0	-16.6

NORTHWEST

EMC

AC Powerline Conducted Emissions

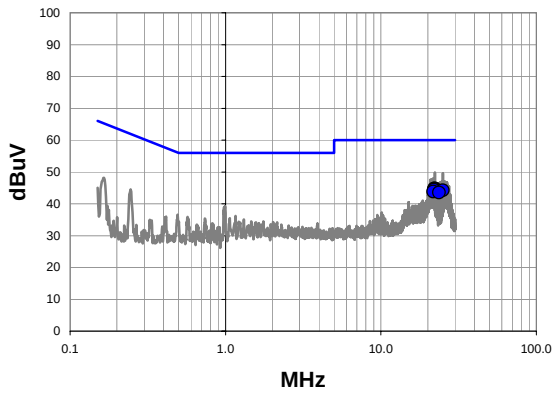
PSA-ESCI 2011.10.17
PSA-ESCI Version 2011.06.23

Work Order:	LGPD0044	**Date:**	10/27/11	Elaine L Reeves	
Project:	None	**Temperature:**	23.84 °C		
Job Site:	MN05	**Humidity:**	26.4% RH		
Serial Number:	AR11J000137	**Barometric Pres.:**	1018 mbar	**Tested by:**	Elaine Reeves
EUT:	X Series				
Configuration:	3				
Customer:	ZOLL Medical Corp.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting Wifi, Channel 11, 1 Mbps				
Deviations:	None				
Comments:	None				

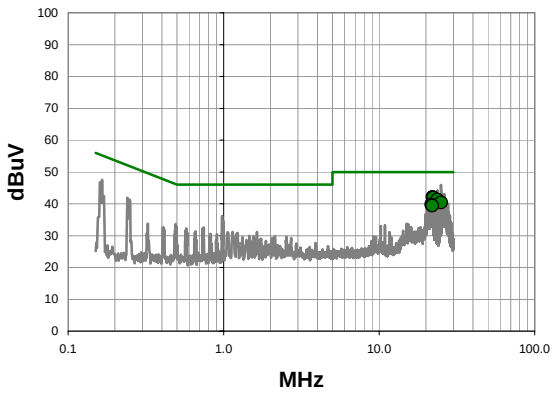
Test Specifications	**Test Method**
FCC 15.207:2011	ANSI C63.10:2009

Run #	5	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
22.250	23.1	21.7	44.8	60.0	-15.2
22.020	23.1	21.7	44.8	60.0	-15.2
21.964	22.8	21.7	44.5	60.0	-15.5
25.018	22.3	22.0	44.3	60.0	-15.7
21.676	22.2	21.6	43.8	60.0	-16.2
23.632	21.7	21.8	43.5	60.0	-16.5

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
22.020	20.4	21.7	42.1	50.0	-7.9
22.250	20.2	21.7	41.9	50.0	-8.1
23.632	19.5	21.8	41.3	50.0	-8.7
25.018	18.4	22.0	40.4	50.0	-9.6
21.676	18.1	21.6	39.7	50.0	-10.3
21.964	17.7	21.7	39.4	50.0	-10.6

NORTHWEST

EMC

AC Powerline Conducted Emissions

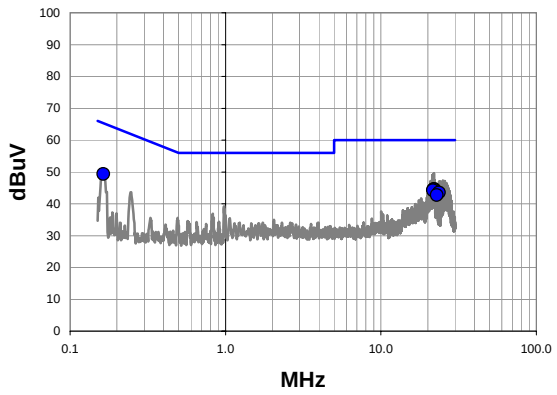
PSA-ESCI 2011.10.17
PSA-ESCI Version 2011.06.23

Work Order:	LGPD0044	**Date:**	10/27/11	Elaine L Reeves	
Project:	None	**Temperature:**	23.84 °C		
Job Site:	MN05	**Humidity:**	26.4% RH		
Serial Number:	AR11J000137	**Barometric Pres.:**	1018 mbar	**Tested by:**	Elaine Reeves
EUT:	X Series				
Configuration:	3				
Customer:	ZOLL Medical Corp.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting Wifi, Channel 11, 1 Mbps				
Deviations:	None				
Comments:	None				

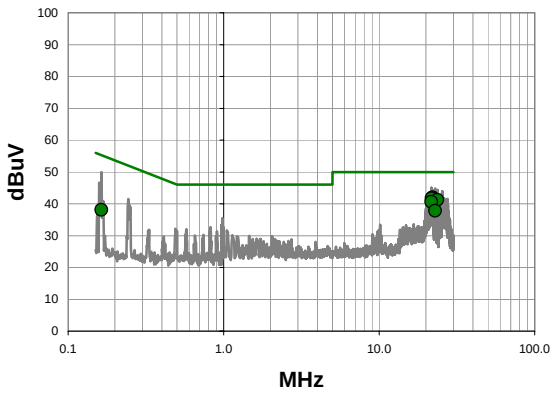
Test Specifications	**Test Method**
FCC 15.207:2011	ANSI C63.10:2009

Run #	6	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
22.020	23.0	21.7	44.7	60.0	-15.3
21.790	22.9	21.6	44.5	60.0	-15.5
21.674	22.6	21.6	44.2	60.0	-15.8
0.164	29.1	20.2	49.3	65.3	-16.0
23.632	21.7	21.8	43.5	60.0	-16.5
22.884	21.0	21.7	42.7	60.0	-17.3

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
22.020	20.3	21.7	42.0	50.0	-8.0
21.790	20.1	21.6	41.7	50.0	-8.3
23.632	19.4	21.8	41.2	50.0	-8.8
21.674	19.0	21.6	40.6	50.0	-9.4
22.884	16.1	21.7	37.8	50.0	-12.2
0.164	17.9	20.2	38.1	55.3	-17.2

NORTHWEST

EMC

AC Powerline Conducted Emissions

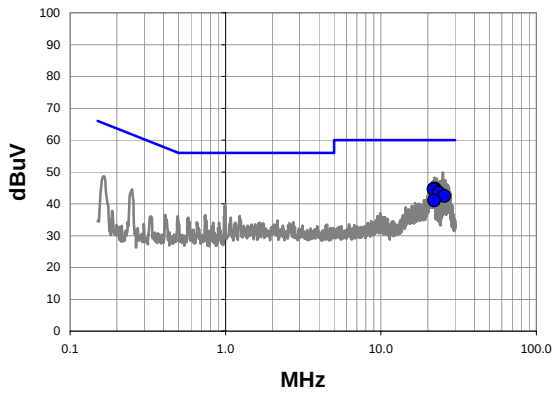
PSA-ESCI 2011.10.17
PSA-ESCI Version 2011.06.23

Work Order:	LGPD0044	**Date:**	10/27/11	Elaine L Reeves	
Project:	None	**Temperature:**	23.84 °C		
Job Site:	MN05	**Humidity:**	26.4% RH		
Serial Number:	AR11J000137	**Barometric Pres.:**	1018 mbar	**Tested by:**	Elaine Reeves
EUT:	X Series				
Configuration:	3				
Customer:	ZOLL Medical Corp.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting Wifi, Channel 149, 6 Mbps				
Deviations:	None				
Comments:	None				

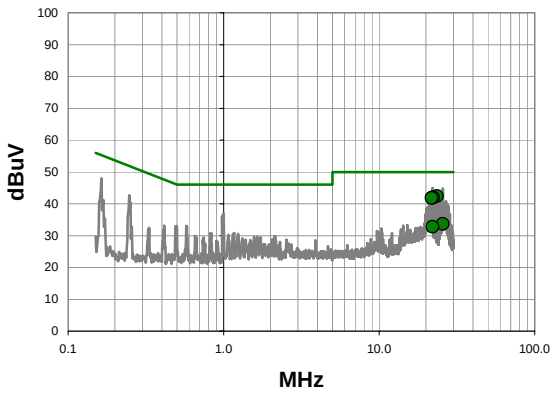
Test Specifications	**Test Method**
FCC 15.207:2011	ANSI C63.10:2009

Run #	7	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
22.020	23.1	21.7	44.8	60.0	-15.2
22.250	23.0	21.7	44.7	60.0	-15.3
21.790	22.9	21.6	44.5	60.0	-15.5
23.520	21.7	21.8	43.5	60.0	-16.5
25.670	20.4	22.0	42.4	60.0	-17.6
22.062	19.3	21.7	41.0	60.0	-19.0

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
23.520	20.6	21.8	42.4	50.0	-7.6
22.020	20.3	21.7	42.0	50.0	-8.0
22.250	20.2	21.7	41.9	50.0	-8.1
21.790	20.2	21.6	41.8	50.0	-8.2
25.670	11.6	22.0	33.6	50.0	-16.4
22.062	11.1	21.7	32.8	50.0	-17.2

NORTHWEST

EMC

AC Powerline Conducted Emissions

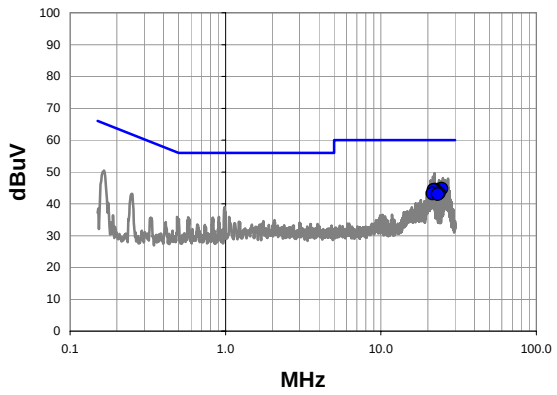
PSA-ESCI 2011.10.17
PSA-ESCI Version 2011.06.23

Work Order:	LGPD0044	**Date:**	10/27/11	Elaine L Reeves	
Project:	None	**Temperature:**	23.84 °C		
Job Site:	MN05	**Humidity:**	26.4% RH		
Serial Number:	AR11J000137	**Barometric Pres.:**	1018 mbar	**Tested by:**	Elaine Reeves
EUT:	X Series				
Configuration:	3				
Customer:	ZOLL Medical Corp.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting Wifi, Channel 149, 6 Mbps				
Deviations:	None				
Comments:	None				

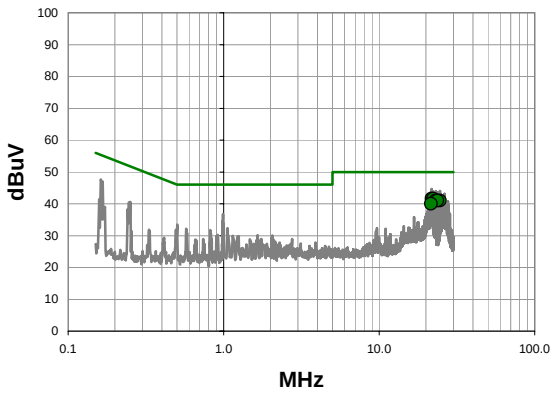
Test Specifications	**Test Method**
FCC 15.207:2011	ANSI C63.10:2009

Run #	8	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.556	22.8	21.9	44.7	60.0	-15.3
22.250	22.7	21.7	44.4	60.0	-15.6
21.790	22.7	21.6	44.3	60.0	-15.7
23.632	21.5	21.8	43.3	60.0	-16.7
21.560	21.6	21.6	43.2	60.0	-16.8
23.174	21.3	21.7	43.0	60.0	-17.0

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
21.790	20.0	21.6	41.6	50.0	-8.4
22.250	19.9	21.7	41.6	50.0	-8.4
23.174	19.3	21.7	41.0	50.0	-9.0
24.556	19.1	21.9	41.0	50.0	-9.0
23.632	19.2	21.8	41.0	50.0	-9.0
21.560	18.4	21.6	40.0	50.0	-10.0

NORTHWEST

EMC

AC Powerline Conducted Emissions

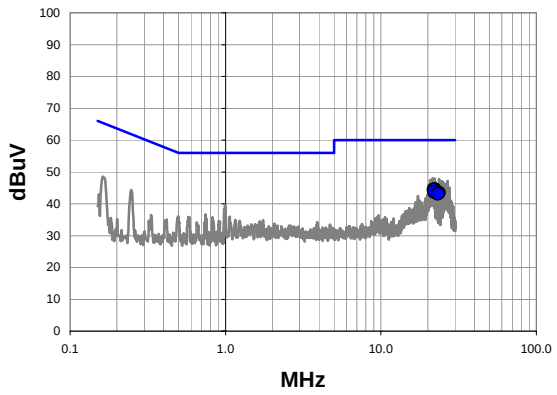
PSA-ESCI 2011.10.17
PSA-ESCI Version 2011.06.23

Work Order:	LGPD0044	**Date:**	10/27/11	Elaine L Reeves	
Project:	None	**Temperature:**	23.84 °C		
Job Site:	MN05	**Humidity:**	26.4% RH		
Serial Number:	AR11J000137	**Barometric Pres.:**	1018 mbar	**Tested by:**	Elaine Reeves
EUT:	X Series				
Configuration:	3				
Customer:	ZOLL Medical Corp.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting Wifi, Channel 157, 6 Mbps				
Deviations:	None				
Comments:	None				

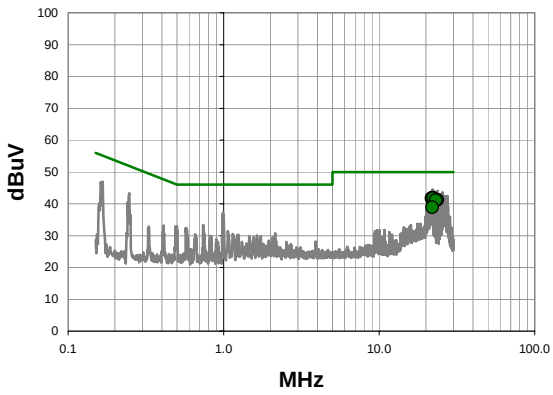
Test Specifications	**Test Method**
FCC 15.207:2011	ANSI C63.10:2009

Run #	9	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
22.020	22.9	21.7	44.6	60.0	-15.4
22.250	22.8	21.7	44.5	60.0	-15.5
21.790	22.8	21.6	44.4	60.0	-15.6
21.964	22.1	21.7	43.8	60.0	-16.2
23.632	21.6	21.8	43.4	60.0	-16.6
23.174	21.4	21.7	43.1	60.0	-16.9

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
22.020	20.2	21.7	41.9	50.0	-8.1
21.790	20.1	21.6	41.7	50.0	-8.3
22.250	20.0	21.7	41.7	50.0	-8.3
23.632	19.4	21.8	41.2	50.0	-8.8
23.174	19.4	21.7	41.1	50.0	-8.9
21.964	17.2	21.7	38.9	50.0	-11.1

NORTHWEST

EMC

AC Powerline Conducted Emissions

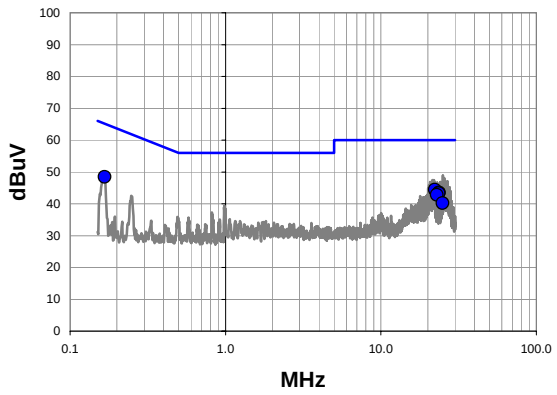
PSA-ESCI 2011.10.17
PSA-ESCI Version 2011.06.23

Work Order:	LGPD0044	**Date:**	10/27/11	Elaine L Reeves	
Project:	None	**Temperature:**	23.84 °C		
Job Site:	MN05	**Humidity:**	26.4% RH		
Serial Number:	AR11J000137	**Barometric Pres.:**	1018 mbar	**Tested by:**	Elaine Reeves
EUT:	X Series				
Configuration:	3				
Customer:	ZOLL Medical Corp.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting Wifi, Channel 157, 6 Mbps				
Deviations:	None				
Comments:	None				

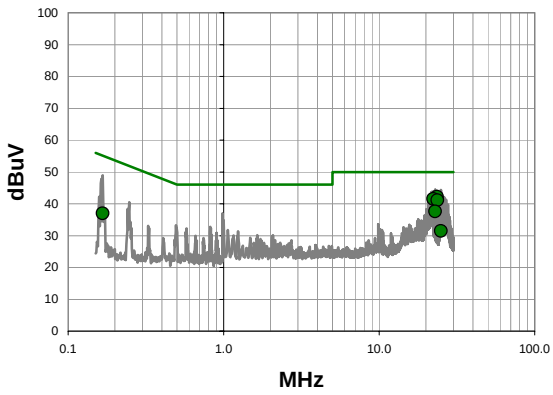
Test Specifications	**Test Method**
FCC 15.207:2011	ANSI C63.10:2009

Run #	10	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
22.250	22.7	21.7	44.4	60.0	-15.6
23.632	21.7	21.8	43.5	60.0	-16.5
0.167	28.2	20.2	48.4	65.1	-16.7
23.520	21.5	21.8	43.3	60.0	-16.7
22.886	21.1	21.7	42.8	60.0	-17.2
24.930	18.3	21.9	40.2	60.0	-19.8

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
23.520	20.4	21.8	42.2	50.0	-7.8
22.250	19.8	21.7	41.5	50.0	-8.5
23.632	19.3	21.8	41.1	50.0	-8.9
22.886	15.9	21.7	37.6	50.0	-12.4
0.167	16.8	20.2	37.0	55.1	-18.1
24.930	9.5	21.9	31.4	50.0	-18.6

NORTHWEST

EMC

AC Powerline Conducted Emissions

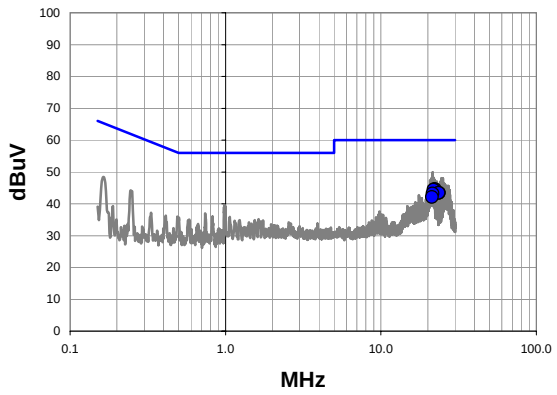
PSA-ESCI 2011.10.17
PSA-ESCI Version 2011.06.23

Work Order:	LGPD0044	**Date:**	10/27/11	Elaine L Reeves	
Project:	None	**Temperature:**	23.84 °C		
Job Site:	MN05	**Humidity:**	26.4% RH		
Serial Number:	AR11J000137	**Barometric Pres.:**	1018 mbar	**Tested by:**	Elaine Reeves
EUT:	X Series				
Configuration:	3				
Customer:	ZOLL Medical Corp.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting Wifi, Channel 165, 6 Mbps				
Deviations:	None				
Comments:	None				

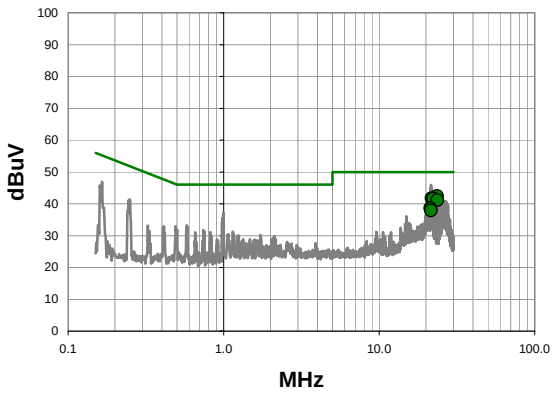
Test Specifications	**Test Method**
FCC 15.207:2011	ANSI C63.10:2009

Run #	11	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
22.250	22.9	21.7	44.6	60.0	-15.4
21.790	22.8	21.6	44.4	60.0	-15.6
23.632	21.6	21.8	43.4	60.0	-16.6
23.520	21.6	21.8	43.4	60.0	-16.6
21.500	21.6	21.6	43.2	60.0	-16.8
21.330	20.5	21.6	42.1	60.0	-17.9

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
23.520	20.6	21.8	42.4	50.0	-7.6
21.790	20.1	21.6	41.7	50.0	-8.3
22.250	19.9	21.7	41.6	50.0	-8.4
23.632	19.3	21.8	41.1	50.0	-8.9
21.330	17.0	21.6	38.6	50.0	-11.4
21.500	16.3	21.6	37.9	50.0	-12.1

NORTHWEST

EMC

AC Powerline Conducted Emissions

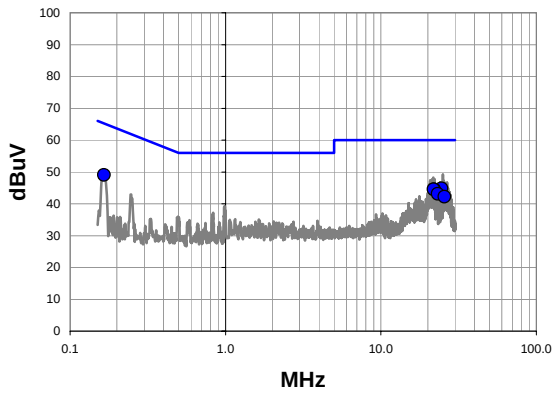
PSA-ESCI 2011.10.17
PSA-ESCI Version 2011.06.23

Work Order:	LGPD0044	**Date:**	10/27/11	Elaine L Reeves	
Project:	None	**Temperature:**	23.84 °C		
Job Site:	MN05	**Humidity:**	26.4% RH		
Serial Number:	AR11J000137	**Barometric Pres.:**	1018 mbar	**Tested by:**	Elaine Reeves
EUT:	X Series				
Configuration:	3				
Customer:	ZOLL Medical Corp.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting Wifi, Channel 165, 6 Mbps				
Deviations:	None				
Comments:	None				

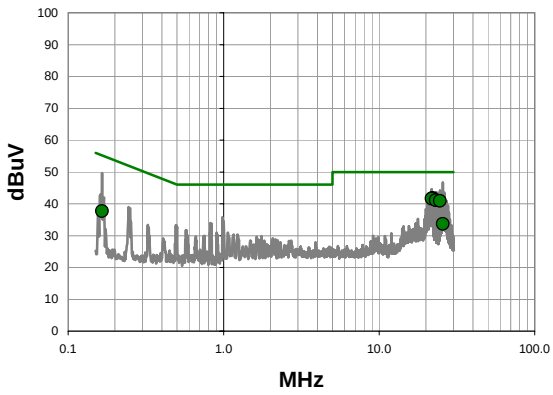
Test Specifications	**Test Method**
FCC 15.207:2011	ANSI C63.10:2009

Run #	12	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
24.556	22.9	21.9	44.8	60.0	-15.2
22.020	22.9	21.7	44.6	60.0	-15.4
21.790	22.9	21.6	44.5	60.0	-15.5
0.165	28.8	20.2	49.0	65.2	-16.2
23.174	21.4	21.7	43.1	60.0	-16.9
25.674	20.2	22.0	42.2	60.0	-17.8

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
22.020	20.1	21.7	41.8	50.0	-8.2
21.790	20.0	21.6	41.6	50.0	-8.4
23.174	19.4	21.7	41.1	50.0	-8.9
24.556	19.0	21.9	40.9	50.0	-9.1
25.674	11.6	22.0	33.6	50.0	-16.4
0.165	17.5	20.2	37.7	55.2	-17.5