Logic PD, Inc.

37x Torpedo + Wireless SOM -31

FCC 15.207:2013

FCC 15.247:2013

Report #: LGPD0096

Report Prepared By Northwest EMC Inc.

NORTHWEST EMC – (888) 364-2378 – www.nwemc.com

California – Minnesota – Oregon – New York – Washington

CERTIFICATE OF TEST

Last Date of Test: June 3, 2013
Logic PD, Inc.
Model: 37x Torpedo + Wireless SOM -31

Emissions

Test Description	Specification	Test Method	Pass/Fail
Duty Cycle	FCC 15.247:2013	ANSI C63.10:2009	Pass
Occupied Bandwidth	FCC 15.247:2013	ANSI C63.10:2009	Pass
Output Power	FCC 15.247:2013	ANSI C63.10:2009	Pass
Band Edge Compliance	FCC 15.247:2013	ANSI C63.10:2009	Pass
Spurious Conducted Emissions	FCC 15.247:2013	ANSI C63.10:2009	Pass
Power Spectral Density	FCC 15.247:2013	ANSI C63.10:2009	Pass
Spurious Radiated Emissions	FCC 15.247:2013	ANSI C63.10:2009	Pass
AC Powerline Conducted Emissions	FCC 15.207:2013	ANSI C63.10:2009	Pass

Deviations From Test Standards

None

Approved By:

Tim O'Shea, Operations Manager

NVLAP Lab Code: 200881-0

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).

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.

NORTHWEST EMC
REV 2012.08.02

REVISION HISTORY

Revision Number	Description	Date	Page Number
00	None		

Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

NORTHWEST EMC

REV 2012.05.24

ACCREDITATIONS AND AUTHORIZATIONS

United States

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

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

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

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

European Union

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

Australia/New Zealand

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

Korea

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

Japan

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

Taiwan

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

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

Singapore

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

Hong Kong

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

Vietnam

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

Russia

GOST – Accredited by Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC to perform EMC and Hygienic testing for Information Technology products to GOST standards.

SCOPE

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

MEASUREMENT UNCERTAINTY

Measurement Uncertainty

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

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) for each test is listed below. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-1 as applicable), and are available upon request.

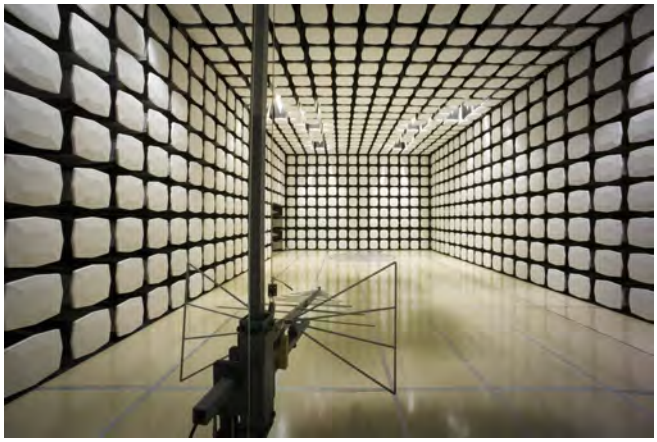
The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

Test	+ MU	- MU
Frequency Accuracy (Hz)	0.12	-0.01
Amplitude Accuracy (dB)	0.49	-0.49
Conducted Power (dB)	0.41	-0.41
Radiated Power via Substitution (dB)	0.69	-0.68
Temperature (degrees C)	0.81	-0.81
Humidity (% RH)	2.89	-2.89
Field Strength (dB)	3.80	-3.80
AC Powerline Conducted Emissions (dB)	2.94	-2.94

LOCATIONS

REV 2013.02.26

Oregon	California	New York	Minnesota	Washington
Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 685-0796	Labs MN01-08 9349 W Broadway Ave. Brooklyn Park, MN 55445 (763) 425-2281	Labs NC01-05,SU02,SU07 19201 120th Ave. NE Bothell, WA 98011 (425) 984-6600
VCCI				
A-0108	A-0029		A-0109	A-0110
Industry Canada				
2834D-1, 2834D-*2*	2834B-1, 2834B-2, 2834B-3		2834E-1	2834C-1
NVLAP				
NVLAP Lab Code: 200630-0	NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200629-0



PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	Logic PD, Inc.
Address:	6201 Bury Drive
City, State, Zip:	Eden Prairie, MN 55346
Test Requested By:	Nathan Kro
Model:	37x Torpedo + Wireless SOM -31
First Date of Test:	May 21, 2013
Last Date of Test:	June 03, 2013
Receipt Date of Samples:	May 21, 2013
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):
802.11abgn SISO radio module with 1 stream and 1 antenna

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

CONFIGURATIONS

Configuration LGPD0096- 1

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
802.11 and BT module	Logic PD, Inc.	37x Torpedo + Wireless SOM -31	1413M00359

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Power Supply	Sceptre	AD2405A	None

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Laptop	Acer	Aspire One	LUSAL0B1370114F42B1601
Laptop Supply	Delta Electronics Inc	ADP-40TH A	AP0400100201108409P101

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
AC Power	No	1.8m	No	Power Supply	AC Mains
DC Power	No	1.5m	No	802.11 and BT module	Power Supply
DC Power	No	2.4m	Yes	Laptop	Laptop Supply
Serial	Yes	> 3.0m	No	802.11 and BT module	Laptop
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Configuration LGPD0096- 2

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
802.11 and BT module	Logic PD, Inc.	37x Torpedo + Wireless SOM -31	1413M00359

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Power Supply	Sceptre	AD2405A	None

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
AC Power	No	1.8m	No	Power Supply	AC Mains
DC Power	No	1.5m	No	802.11 and BT module	Power Supply
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

MODIFICATIONS

WTD 12.5.23

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	5/21/2013	Spurious Radiated Emissions	Modified from delivered configuration.	Power lowered to pass radiated band edge. Modification authorized by Nathan Kro.	EUT remained at Northwest EMC following the test.
2	5/22/2013	AC Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	6/3/2013	Duty Cycle	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
4	6/3/2013	Occupied Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
5	6/3/2013	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
6	6/3/2013	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.
7	6/3/2013	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.
8	6/3/2013	Band Edge Compliance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

Duty Cycle

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
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	4/12/2013	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	10/5/2012	12
Signal Generator MXG	Agilent	N5183A	TIK	6/7/2012	36
Spectrum Analyzer	Agilent	E4440A	AAX	5/15/2012	24

TEST DESCRIPTION

The Duty Cycle (x) were measured for each of the EUT operating modes. The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. 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 duty cycle was calculated by dividing the transmission pulse duration (T) by the total period of a single on and total off time.

If the transmit duty cycle < 98 percent, burst gating was used during some of the other tests in this report to only measure during the burst duration.

Duty Cycle

EUT:	37x Torpedo + Wireless SOM -31			**Work Order:**	LGPD0096
Serial Number:	1413M00359			**Date:**	06/03/13
Customer:	Logic PD, Inc.			**Temperature:**	23.1°C
Attendees:	None			**Humidity:**	39%
Project:	None			**Barometric Pres.:**	1015.6
Tested by:	Trevor Buls	**Power:**	110VAC/60Hz	**Job Site:**	MN08

TEST SPECIFICATIONS	Test Method
FCC 15.247:2013	ANSI C63.10:2009

COMMENTS

None

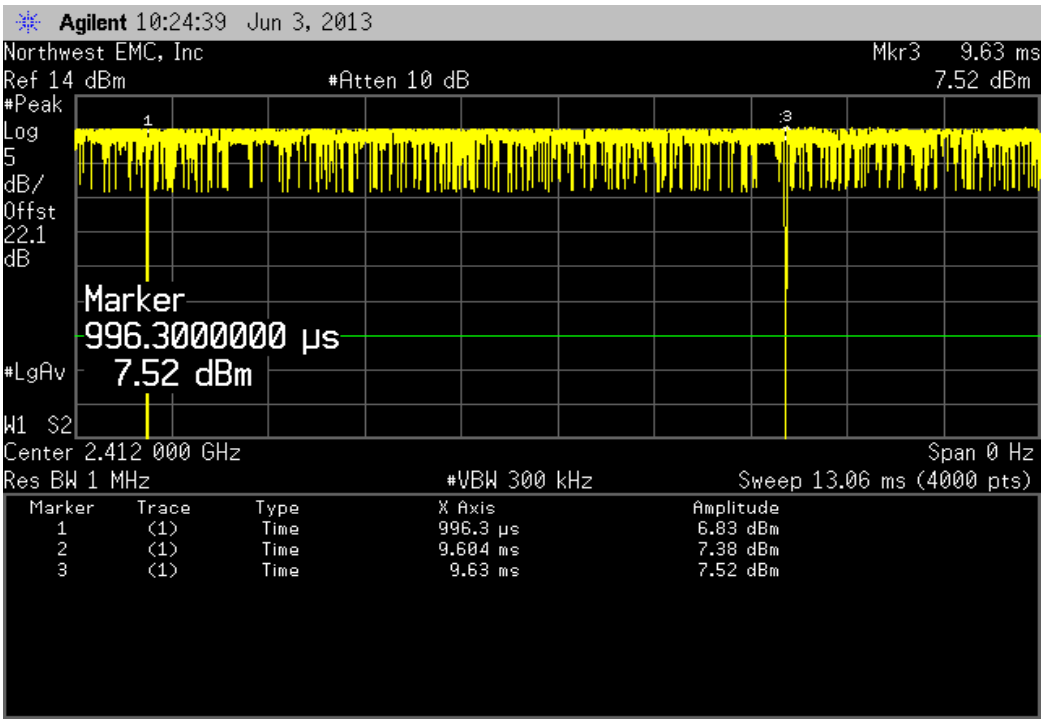
DEVIATIONS FROM TEST STANDARD

None

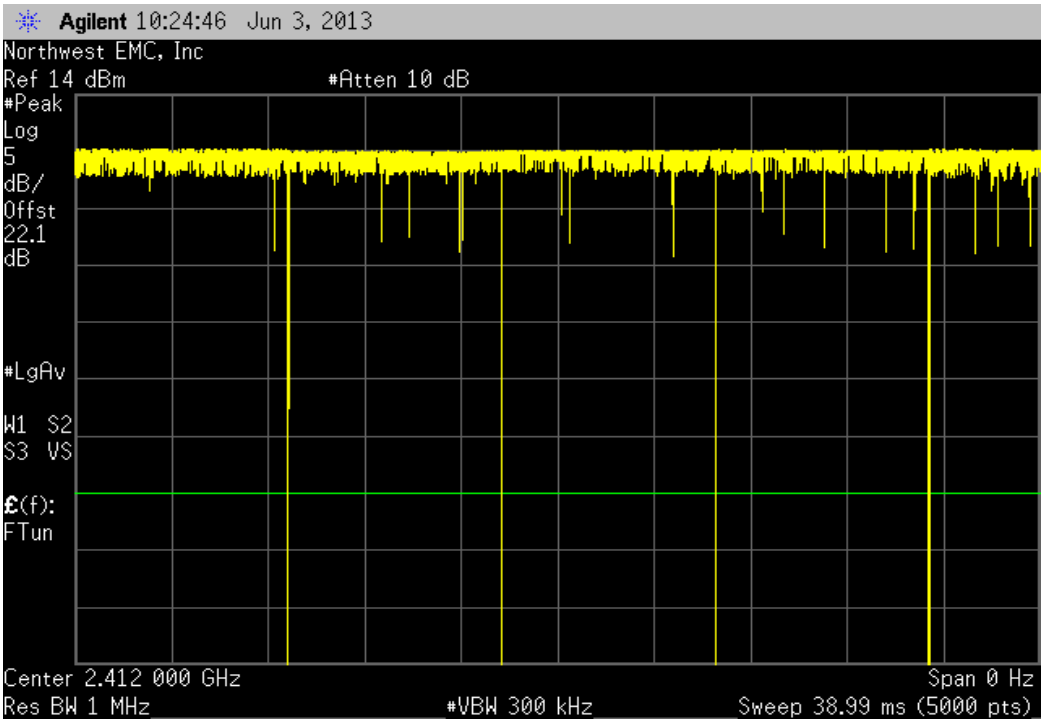
Configuration #	1	Signature	Trevor Buls

	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
2400 MHz - 2483.5 MHz Band						
802.11(b) 1 Mbps						
Low Channel 1, 2412 MHz	8.608 mS	8.634 mS	1	99.7	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	8.608 mS	8.634 mS	1	99.7	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	8.608 mS	8.634 mS	1	99.7	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
802.11(b) 11 Mbps						
Low Channel 1, 2412 MHz	858.6 uS	886.2 uS	1	96.9	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	858.7 uS	886.3 uS	1	96.9	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	858.6 uS	886.2 uS	1	96.9	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
802.11(g) 6 Mbps						
Low Channel 1, 2412 MHz	1.422 mS	1.46 mS	1	97.4	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	1.422 mS	1.46 mS	1	97.4	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	1.42 mS	1.46 mS	1	97.3	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
802.11(g) 36 Mbps						
Low Channel 1, 2412 MHz	249 uS	287 uS	1	86.8	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	248 uS	287 uS	1	86.4	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	248 uS	287 uS	1	86.4	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
802.11(g) 54 Mbps						
Low Channel 1, 2412 MHz	172 uS	211 uS	1	81.5	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	173 uS	211 uS	1	82	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	172 uS	211 uS	1	81.5	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
802.11(n) MCS0						
Low Channel 1, 2412 MHz	1.328 mS	1.366 mS	1	97.2	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	1.328 mS	1.366 mS	1	97.2	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	1.328 mS	1.368 mS	1	97.1	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
802.11(n) MCS7						
Low Channel 1, 2412 MHz	159 uS	199 uS	1	79.9	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	161 uS	199 uS	1	80.9	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	160 uS	199 uS	1	80.4	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
5725 MHz - 5850 MHz Band						
802.11(a) 6 Mbps						
Low Channel 149, 5745 MHz	1.42 mS	1.458 mS	1	97.4	N/A	N/A
Low Channel 149, 5745 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 157, 5785 MHz	1.42 mS	1.46 mS	1	97.3	N/A	N/A
Mid Channel 157, 5785 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 165, 5825 MHz	1.42 mS	1.46 mS	1	97.3	N/A	N/A
High Channel 165, 5825 MHz	N/A	N/A	5	N/A	N/A	N/A
802.11(a) 36 Mbps						
Low Channel 149, 5745 MHz	248 uS	287 uS	1	86.4	N/A	N/A
Low Channel 149, 5745 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 157, 5785 MHz	248 uS	287 uS	1	86.4	N/A	N/A
Mid Channel 157, 5785 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 165, 5825 MHz	248 uS	286 uS	1	86.7	N/A	N/A
High Channel 165, 5825 MHz	N/A	N/A	5	N/A	N/A	N/A
802.11(a) 54 Mbps						
Low Channel 149, 5745 MHz	173 uS	211 uS	1	82	N/A	N/A
Low Channel 149, 5745 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 157, 5785 MHz	172 uS	211 uS	1	81.5	N/A	N/A
Mid Channel 157, 5785 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 165, 5825 MHz	172 uS	211 uS	1	81.5	N/A	N/A
High Channel 165, 5825 MHz	N/A	N/A	5	N/A	N/A	N/A
802.11(n) MCS0 - UNII						
Low Channel 149, 5745 MHz	1.328 mS	1.368 mS	1	97.1	N/A	N/A
Low Channel 149, 5745 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 157, 5785 MHz	1.328 mS	1.366 mS	1	97.2	N/A	N/A
Mid Channel 157, 5785 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 165, 5825 MHz	1.328 mS	1.366 mS	1	97.2	N/A	N/A
High Channel 165, 5825 MHz	N/A	N/A	5	N/A	N/A	N/A
802.11(n) MCS7 - UNII						
Low Channel 149, 5745 MHz	161 uS	199 uS	1	80.9	N/A	N/A
Low Channel 149, 5745 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 157, 5785 MHz	160 uS	199 uS	1	80.4	N/A	N/A
Mid Channel 157, 5785 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 165, 5825 MHz	160 uS	198 uS	1	80.8	N/A	N/A
High Channel 165, 5825 MHz	N/A	N/A	5	N/A	N/A	N/A

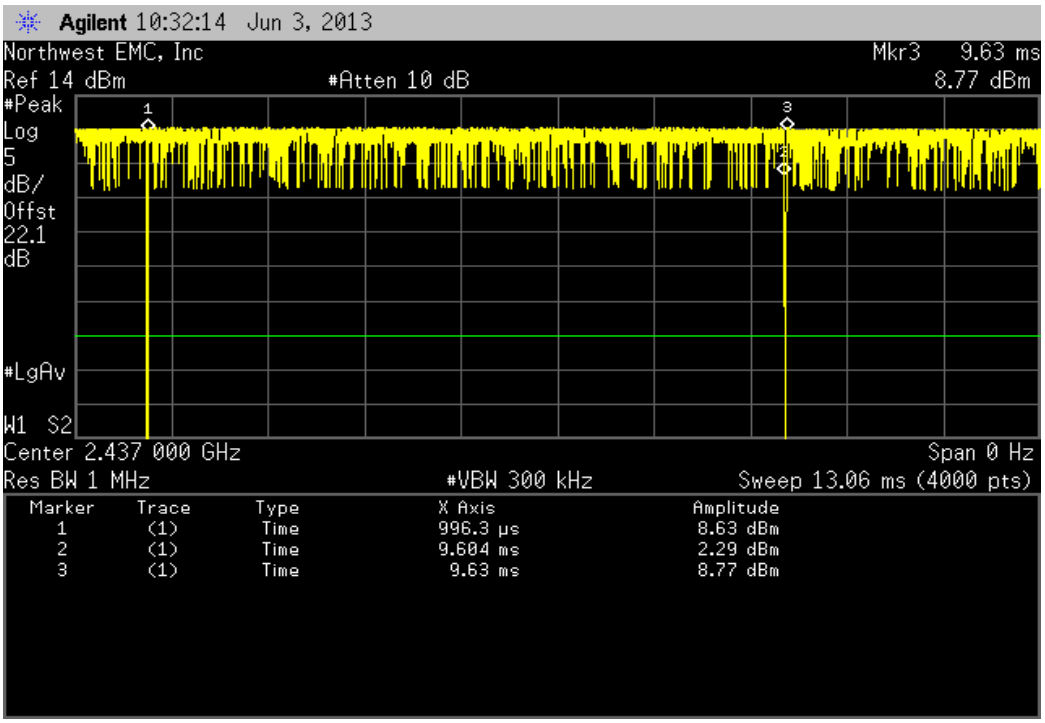
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	8.608 mS	8.634 mS	1	99.7	N/A	N/A



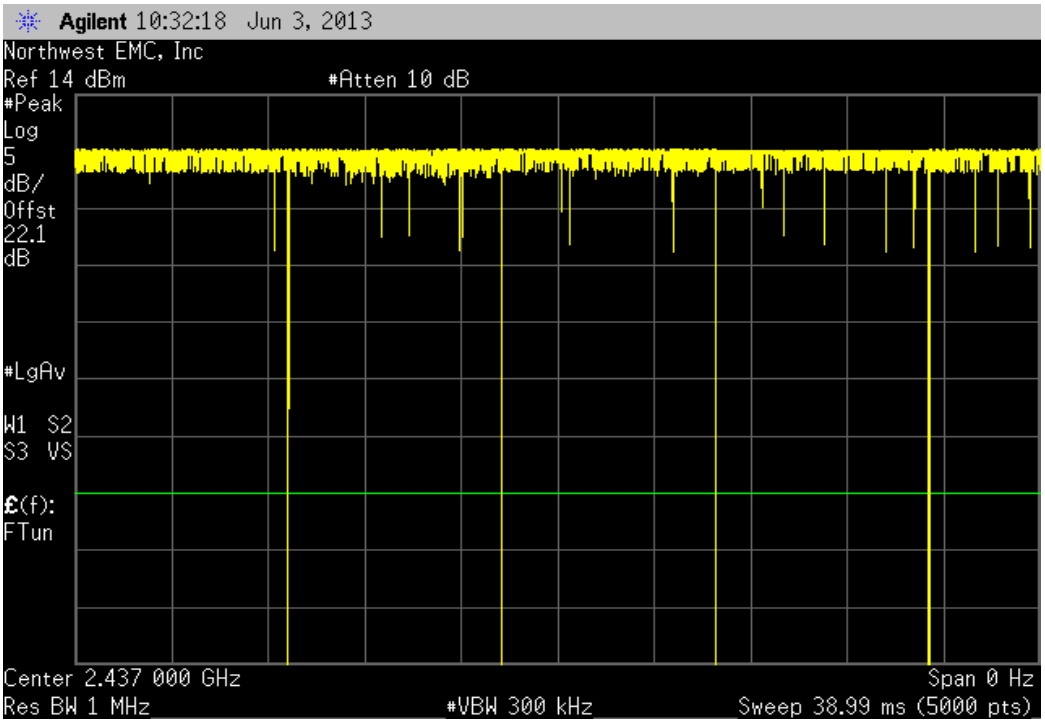
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	8.608 mS	8.634 mS	1	99.7	N/A	N/A

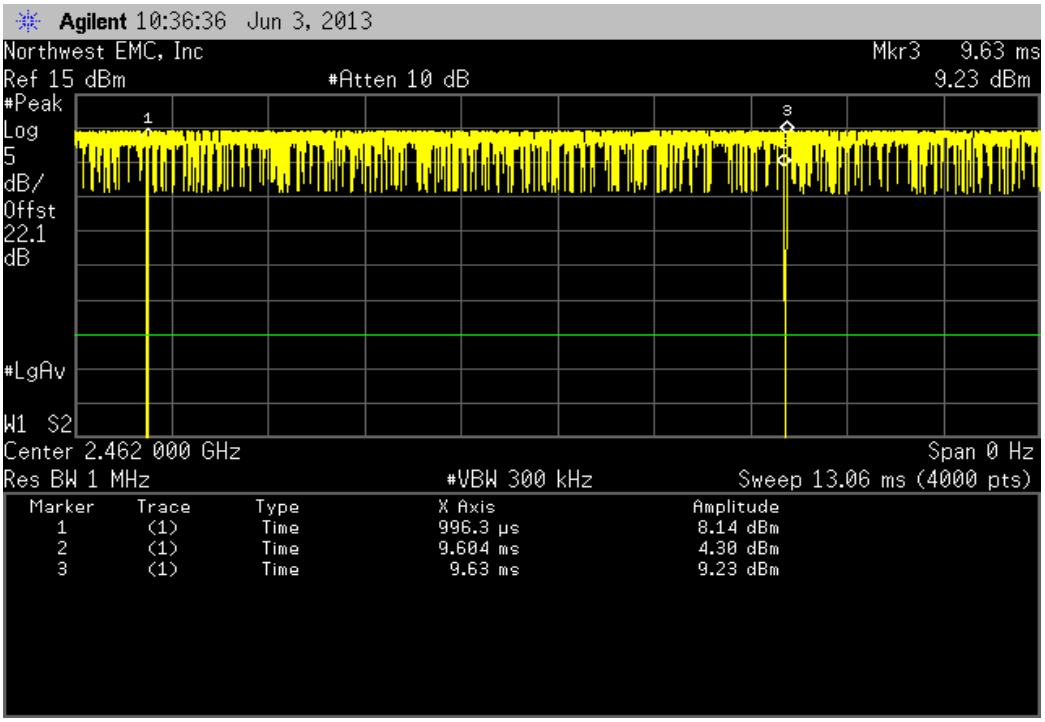


2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



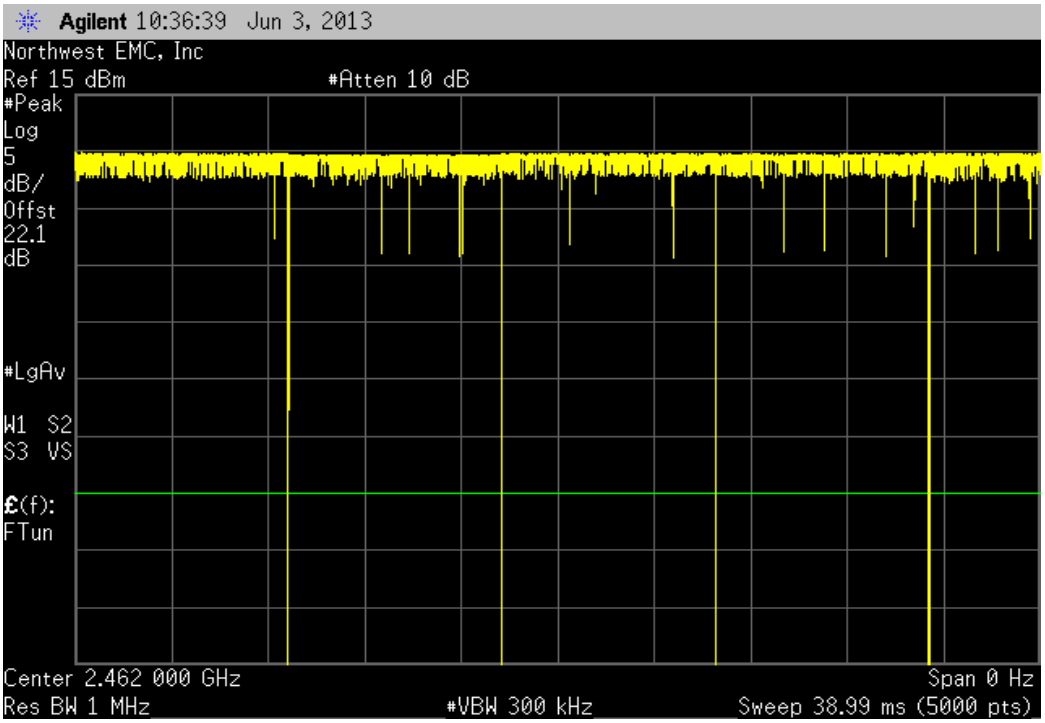
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz

	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	8.608 mS	8.634 mS	1	99.7	N/A	N/A

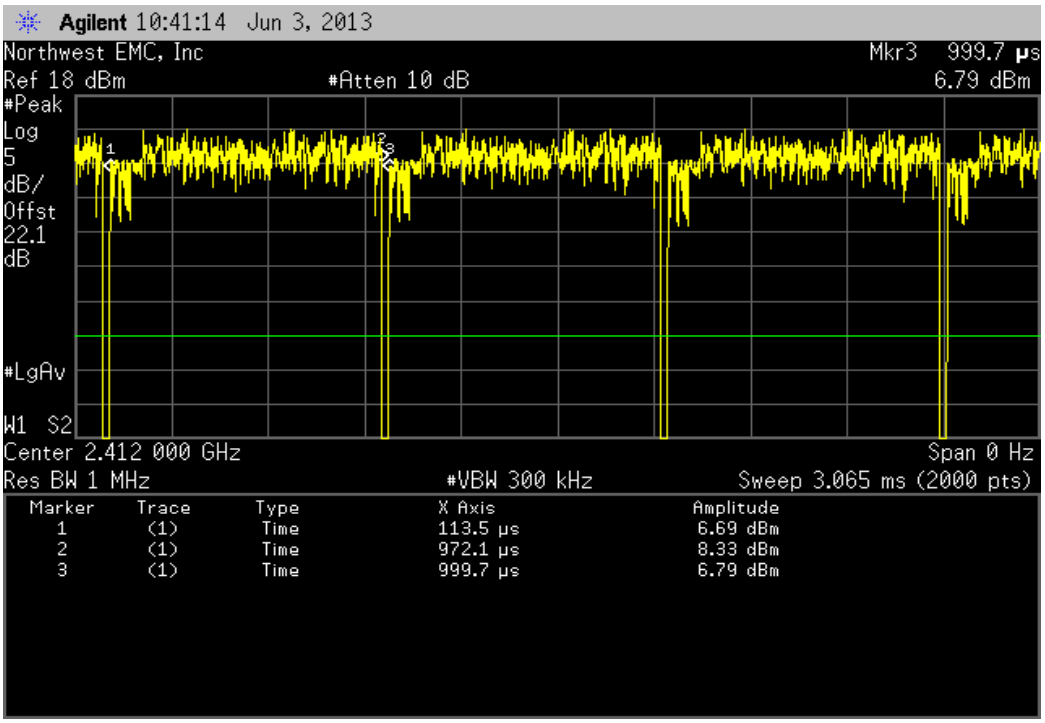


2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz

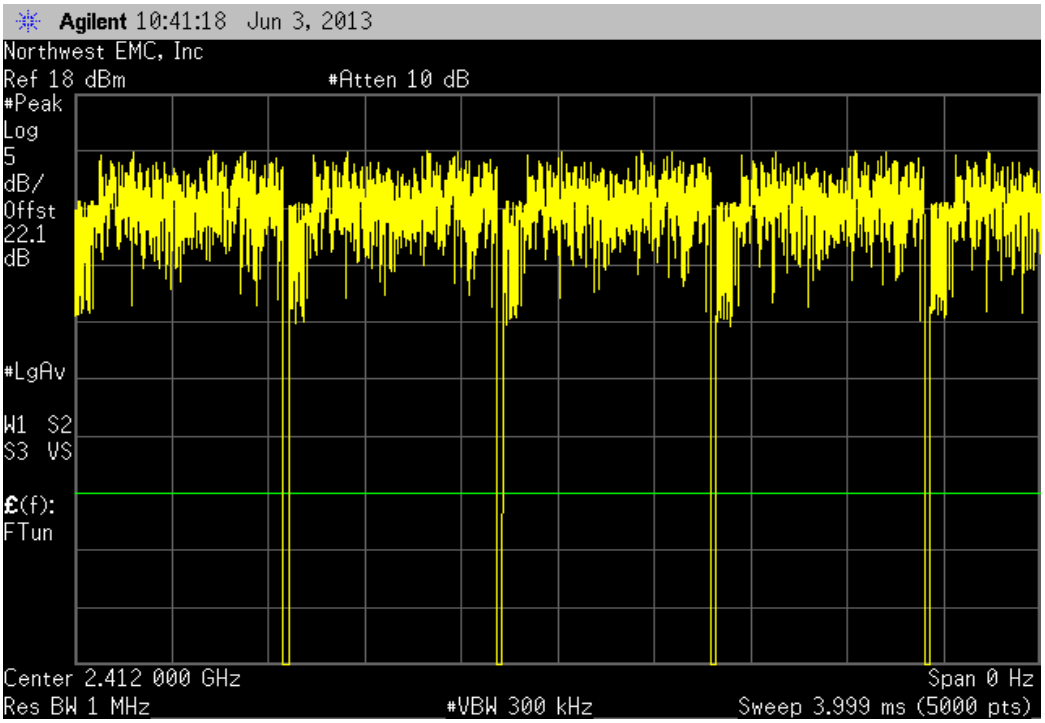
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



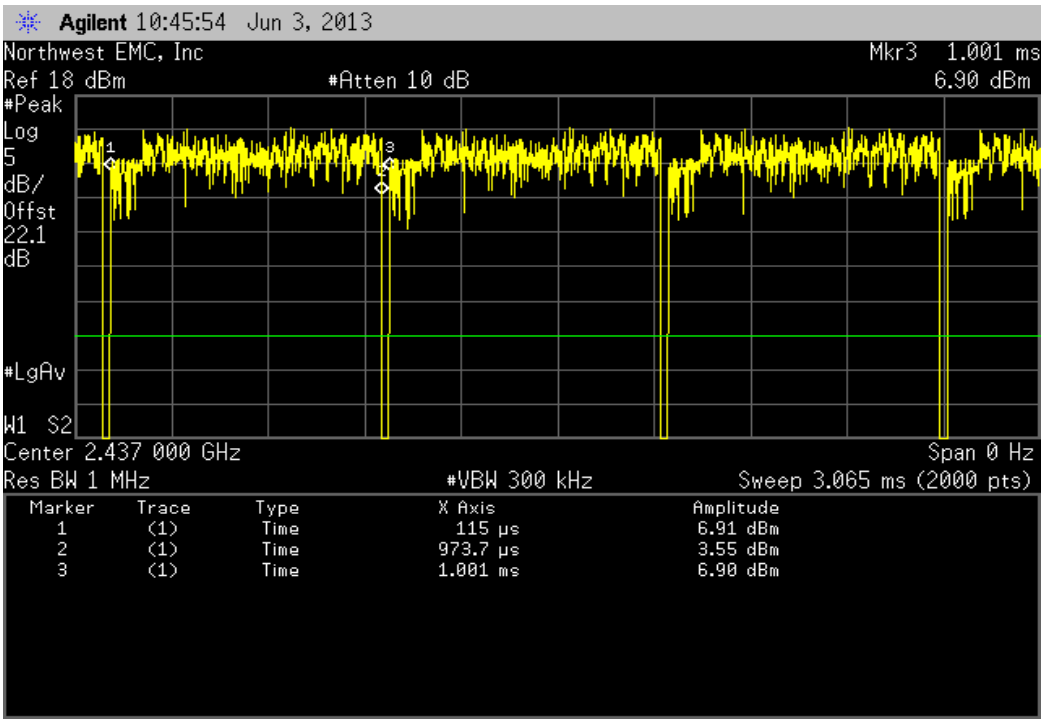
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	858.6 uS	886.2 uS	1	96.9	N/A	N/A



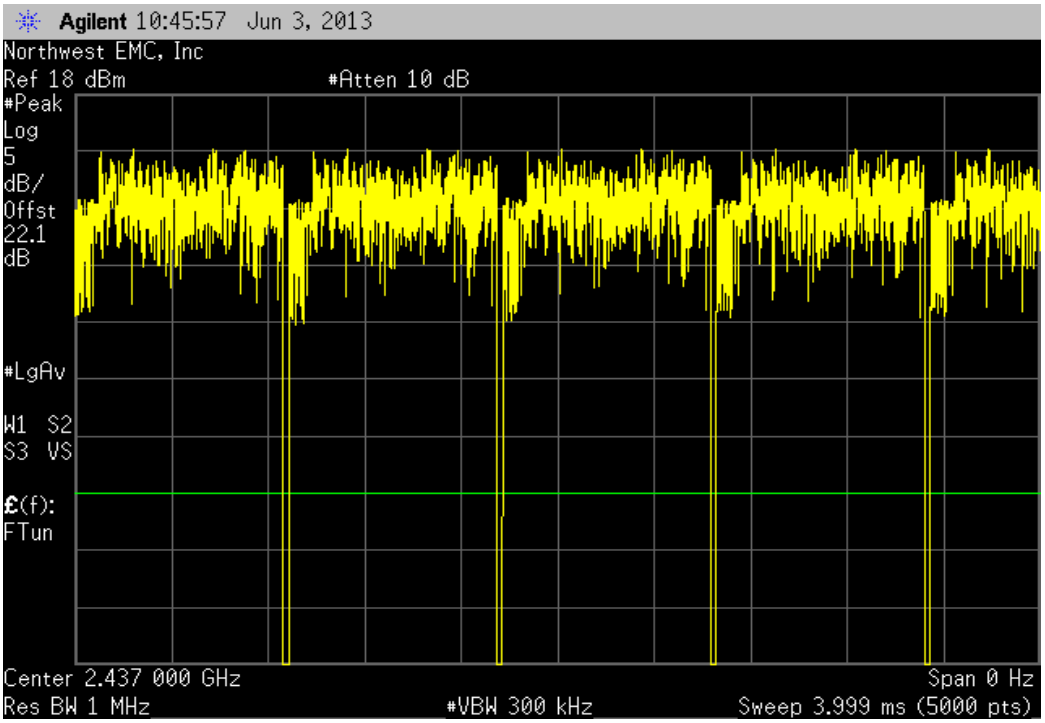
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	858.7 uS	886.3 uS	1	96.9	N/A	N/A

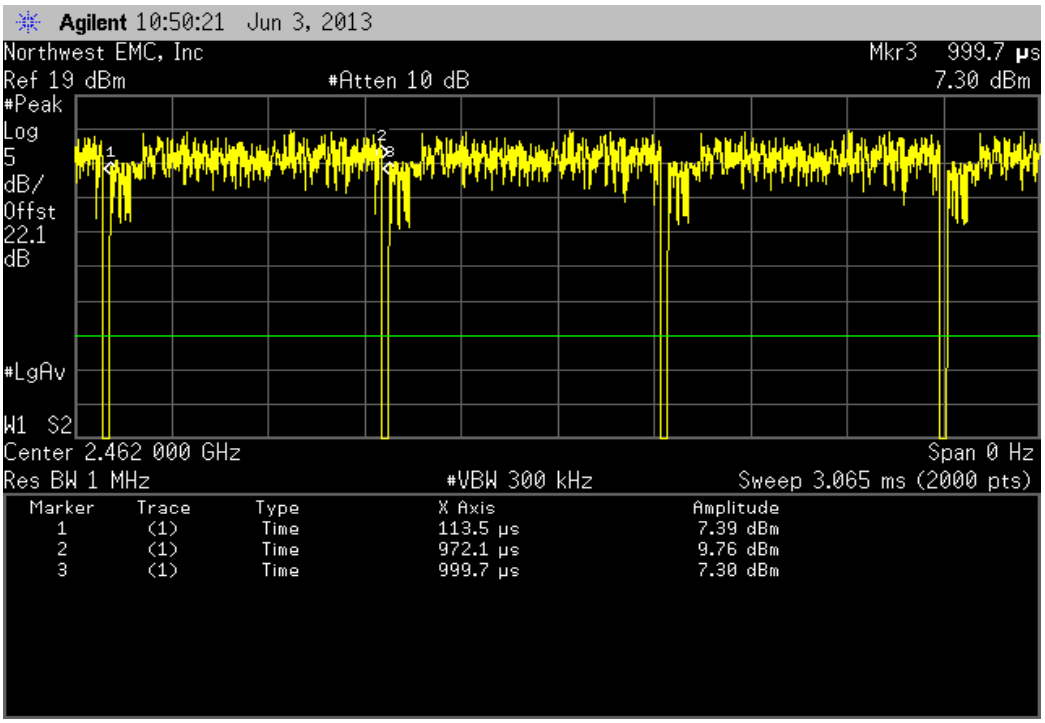


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

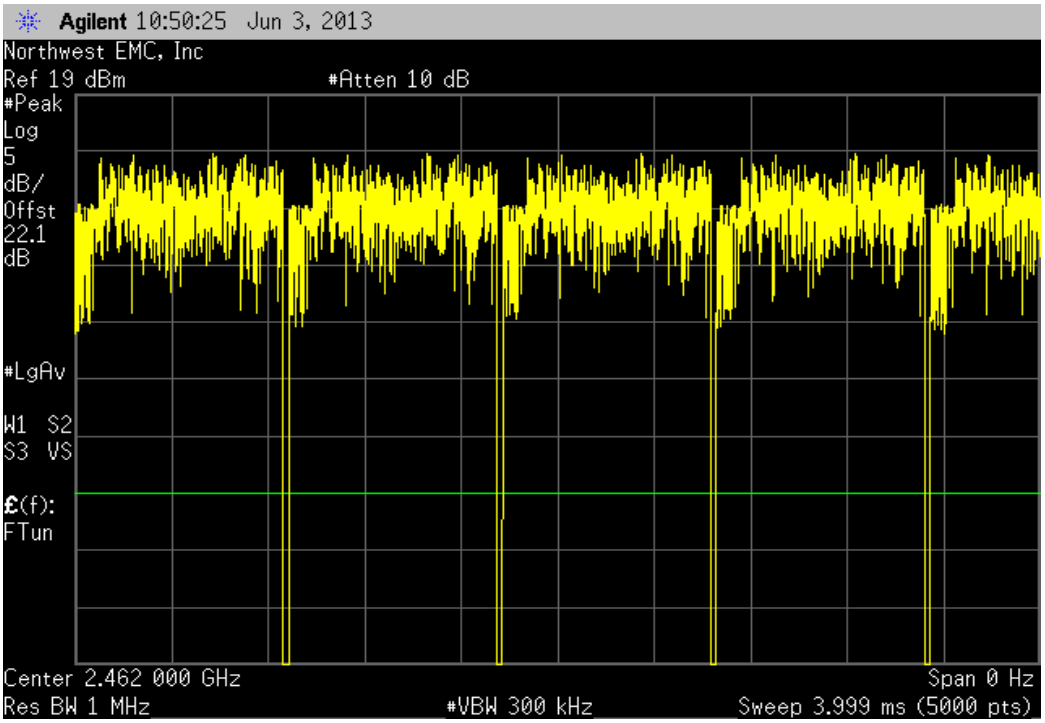


Duty Cycle

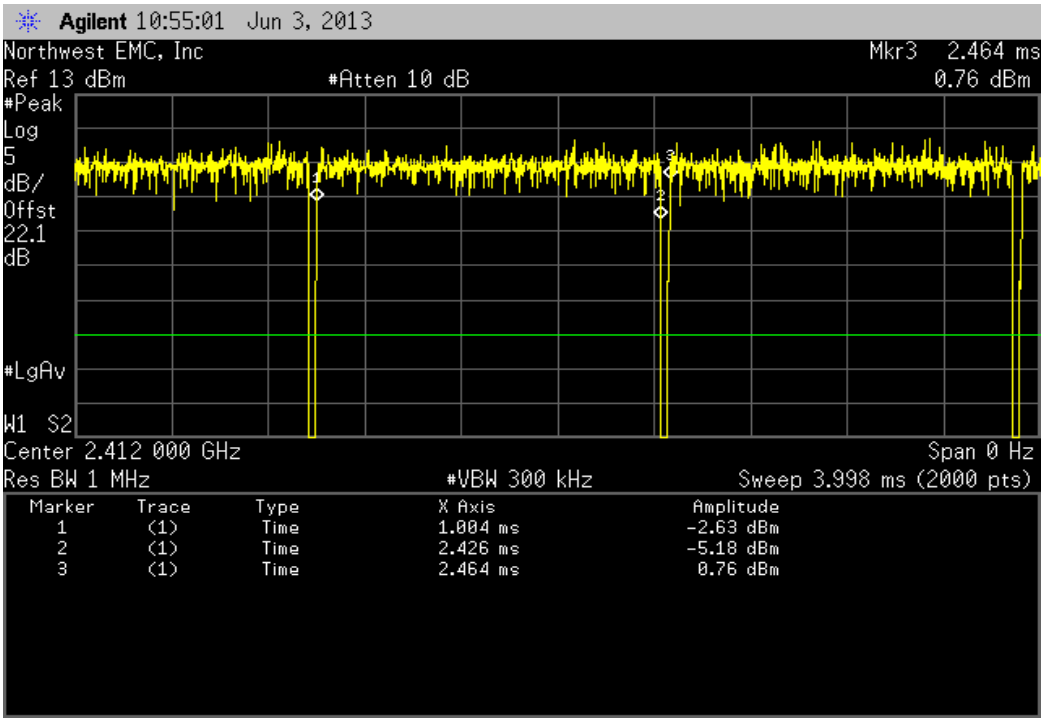
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	858.6 uS	886.2 uS	1	96.9	N/A	N/A



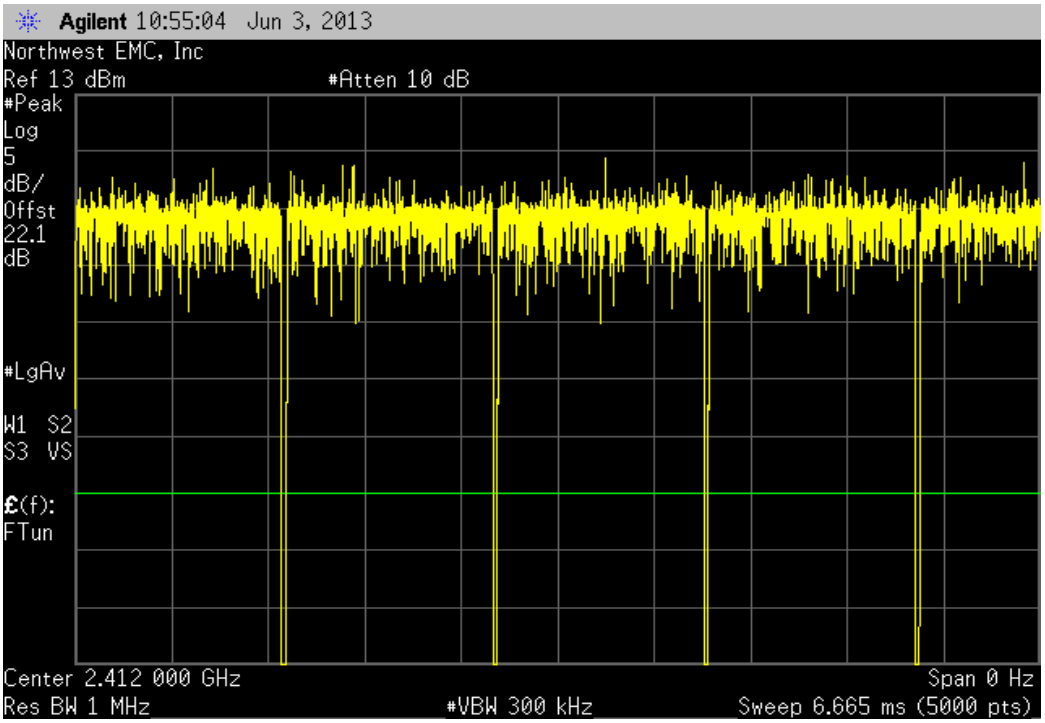
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	1.422 mS	1.46 mS	1	97.4	N/A	N/A

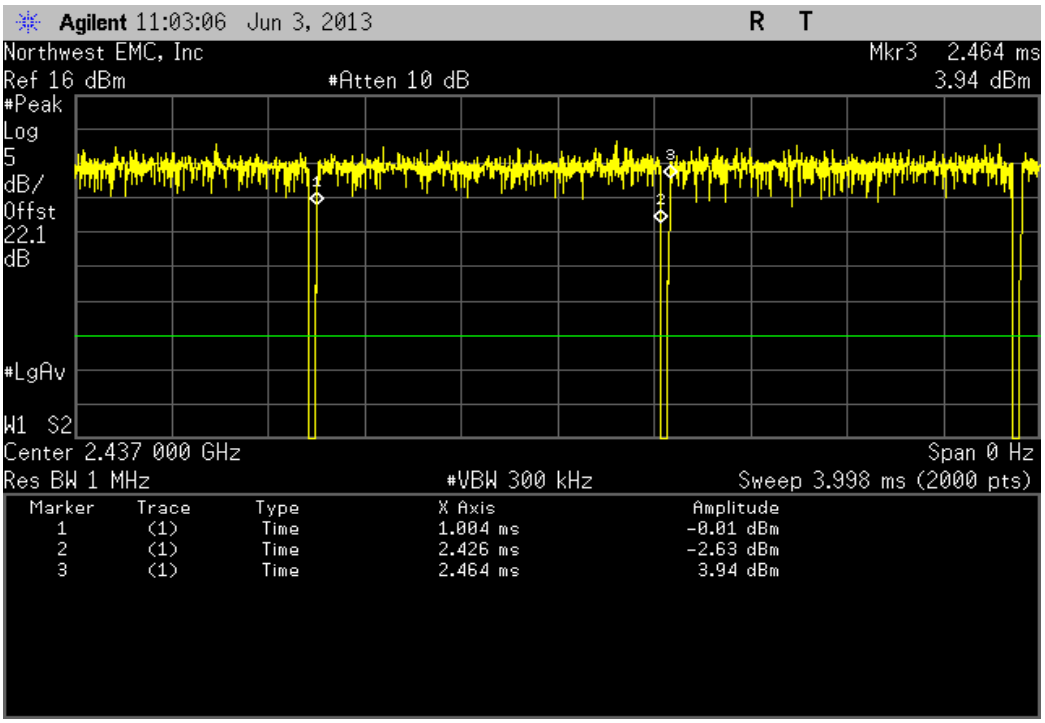


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

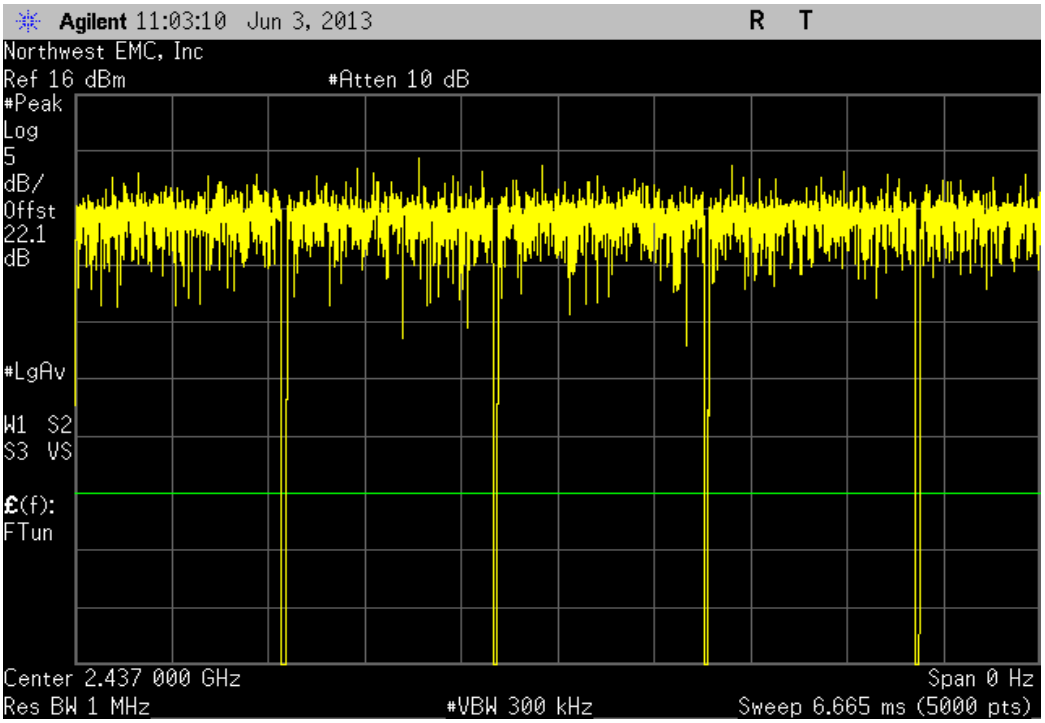


Duty Cycle

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	1.422 mS	1.46 mS	1	97.4	N/A	N/A

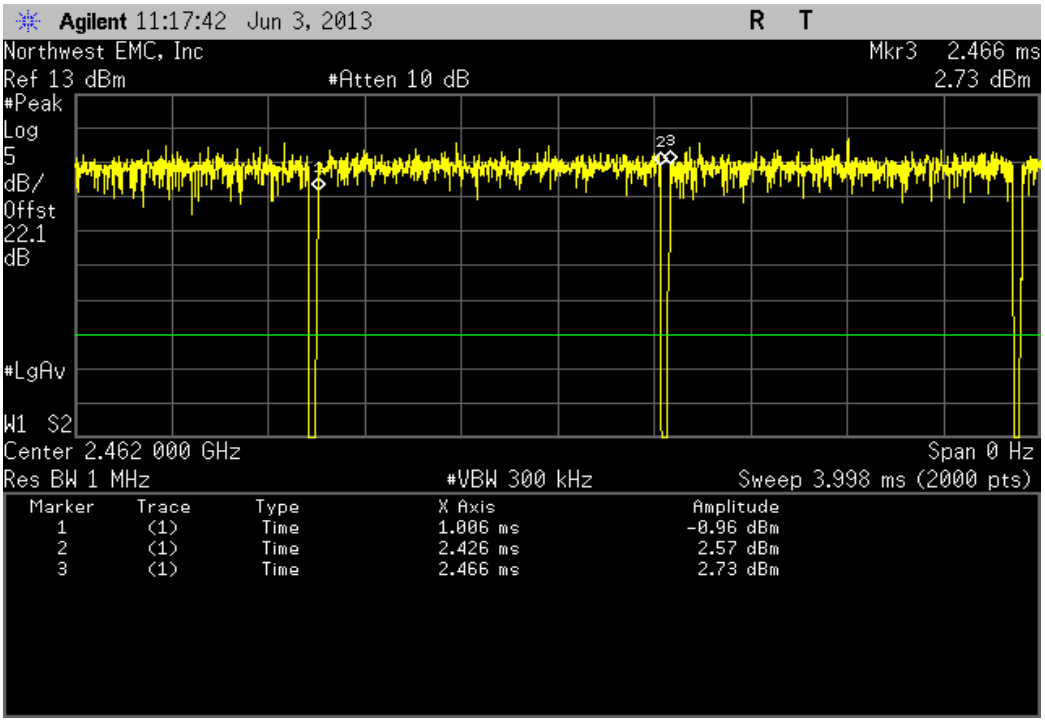


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

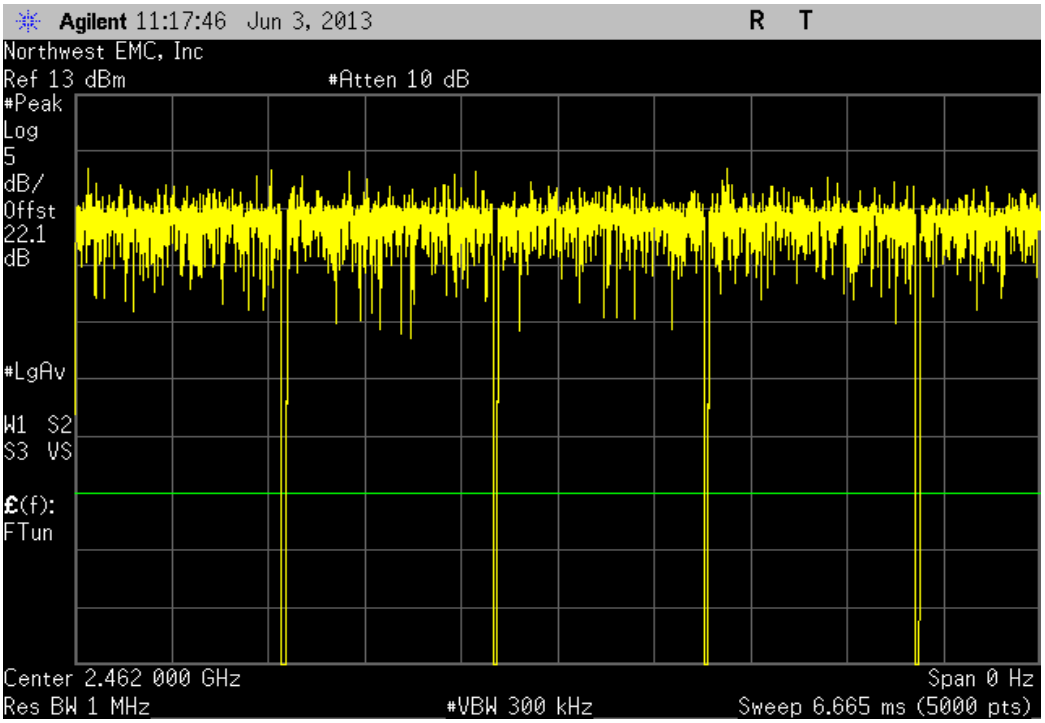


Duty Cycle

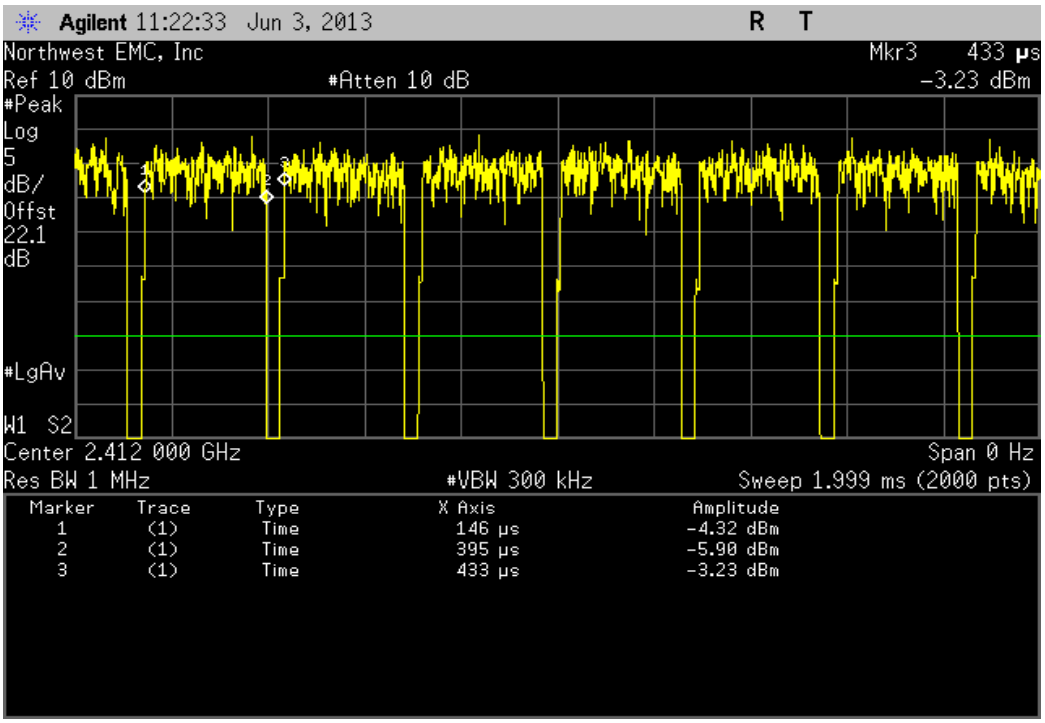
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	1.42 mS	1.46 mS	1	97.3	N/A	N/A



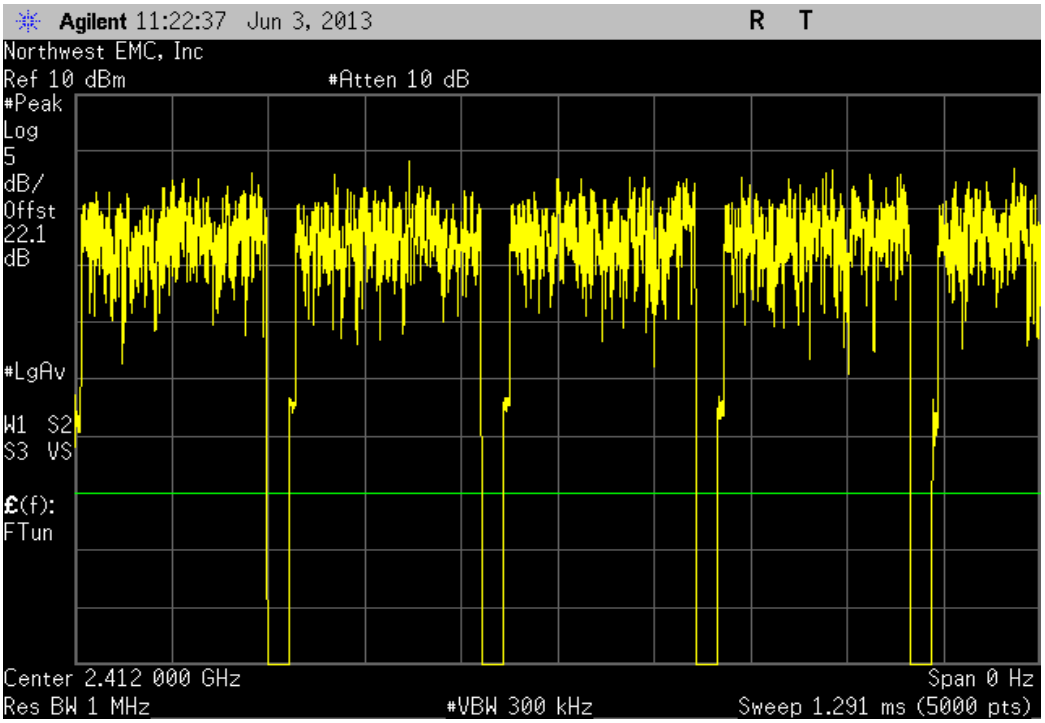
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	249 uS	287 uS	1	86.8	N/A	N/A

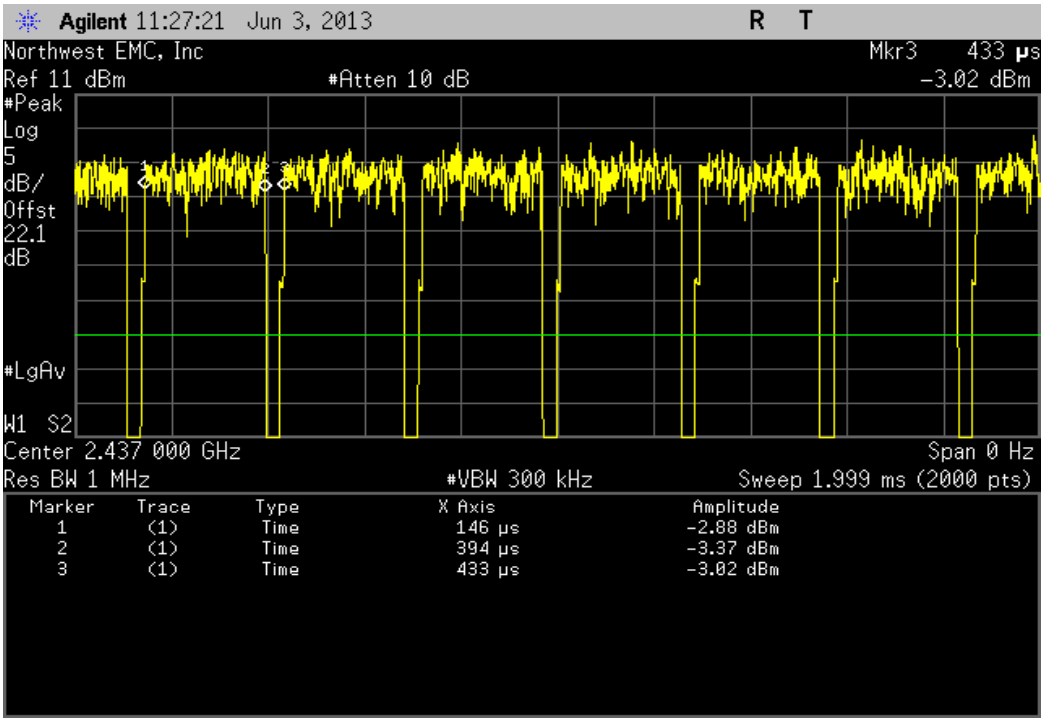


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

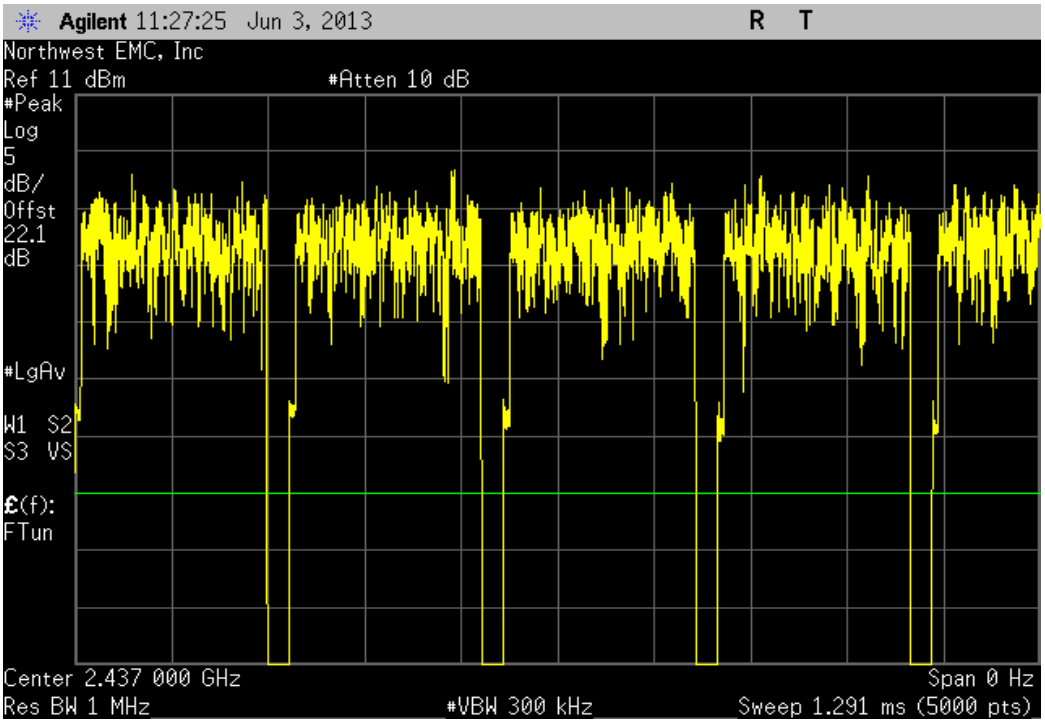


Duty Cycle

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	248 uS	287 uS	1	86.4	N/A	N/A

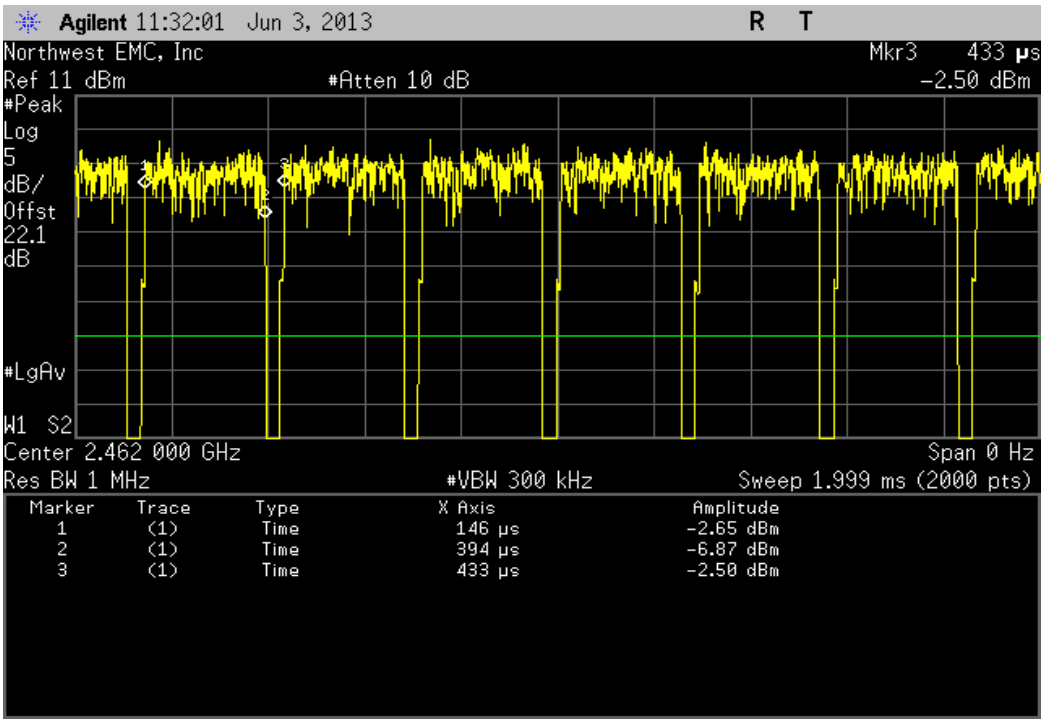


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



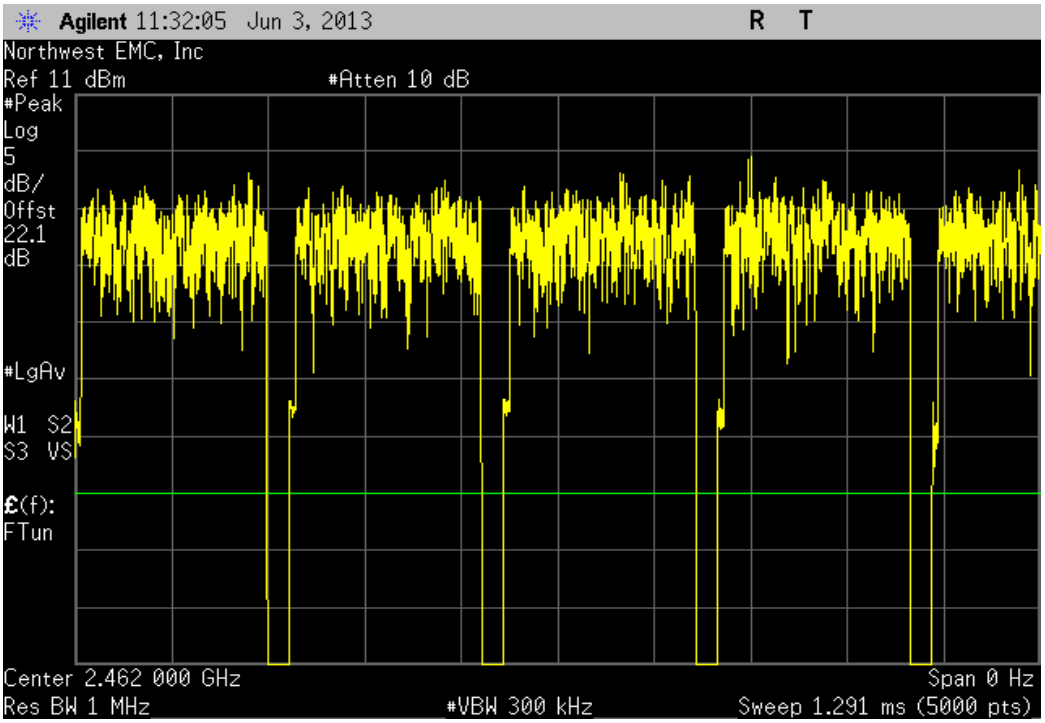
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz

Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
248 uS	287 uS	1	86.4	N/A	N/A

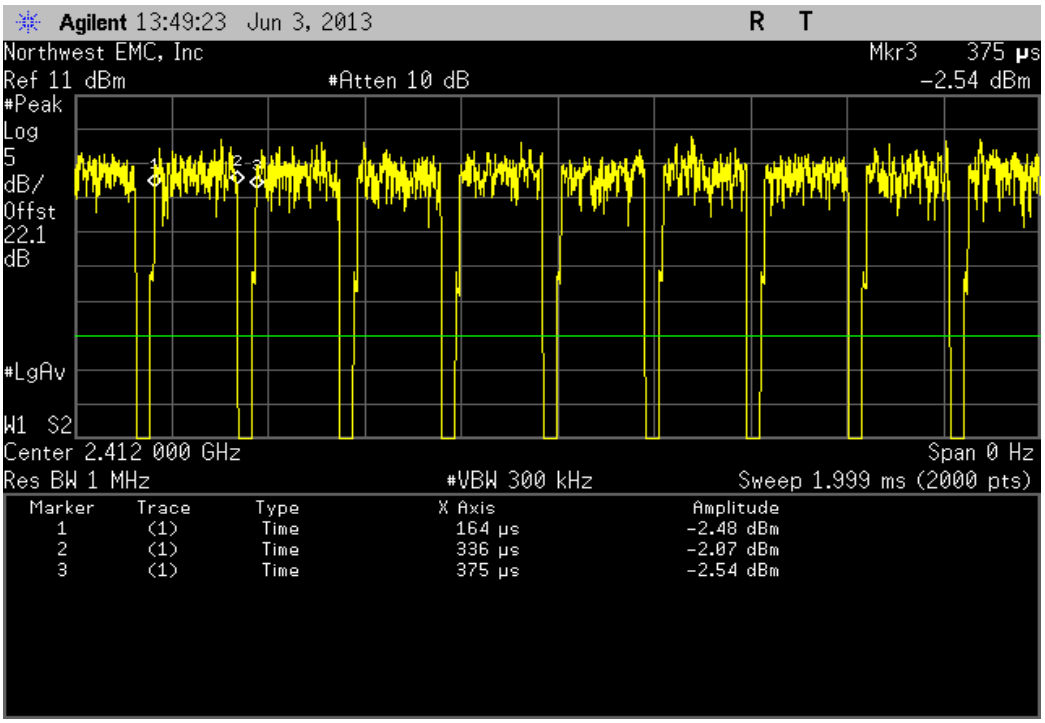


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz

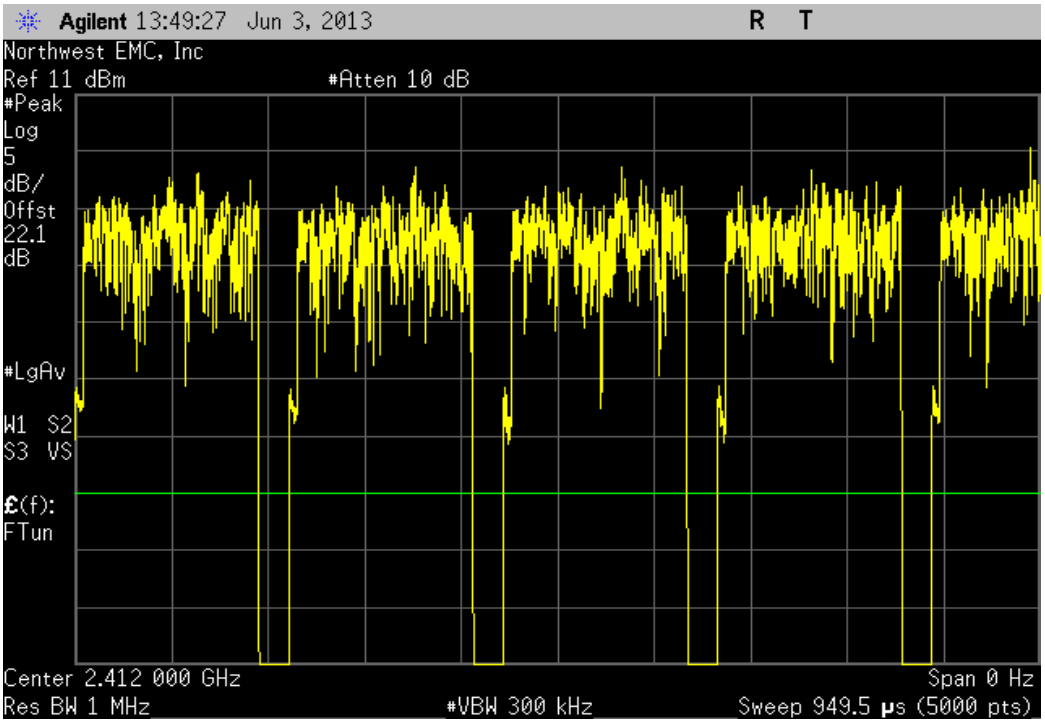
Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
N/A	N/A	5	N/A	N/A	N/A



2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	172 uS	211 uS	1	81.5	N/A	N/A

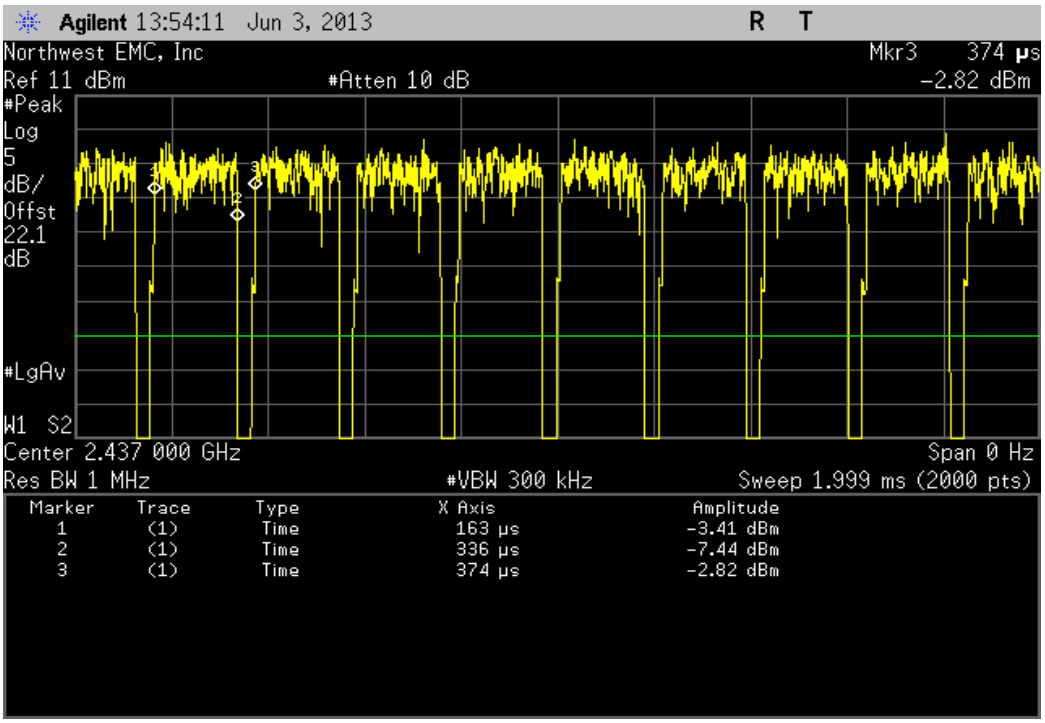


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

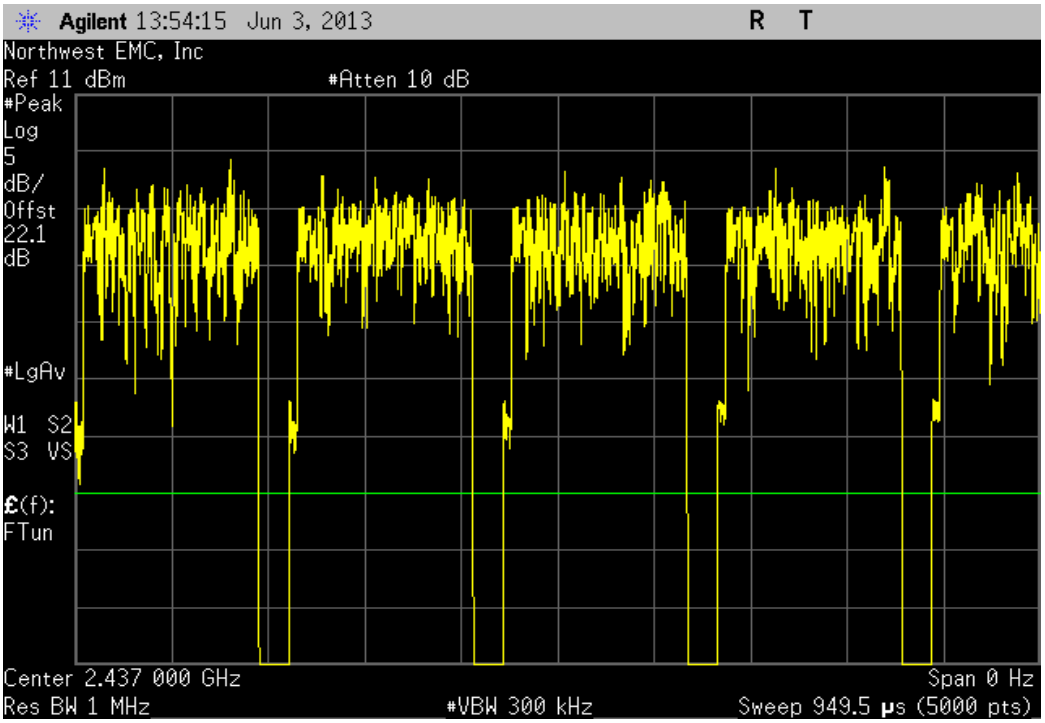


Duty Cycle

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	173 uS	211 uS	1	82	N/A	N/A

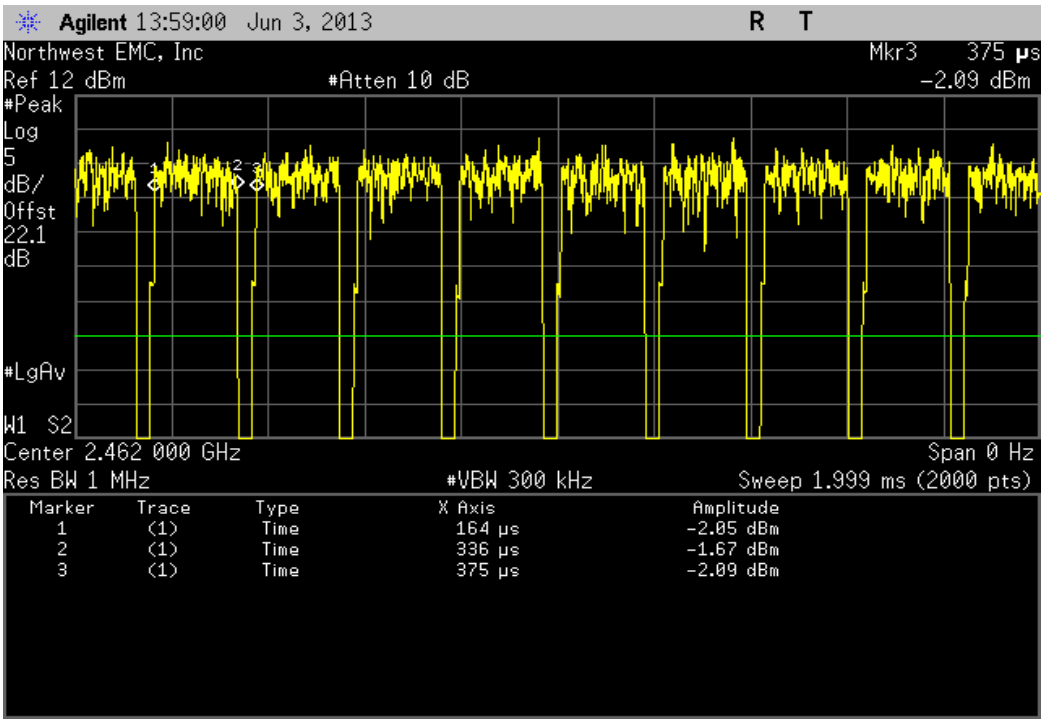


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

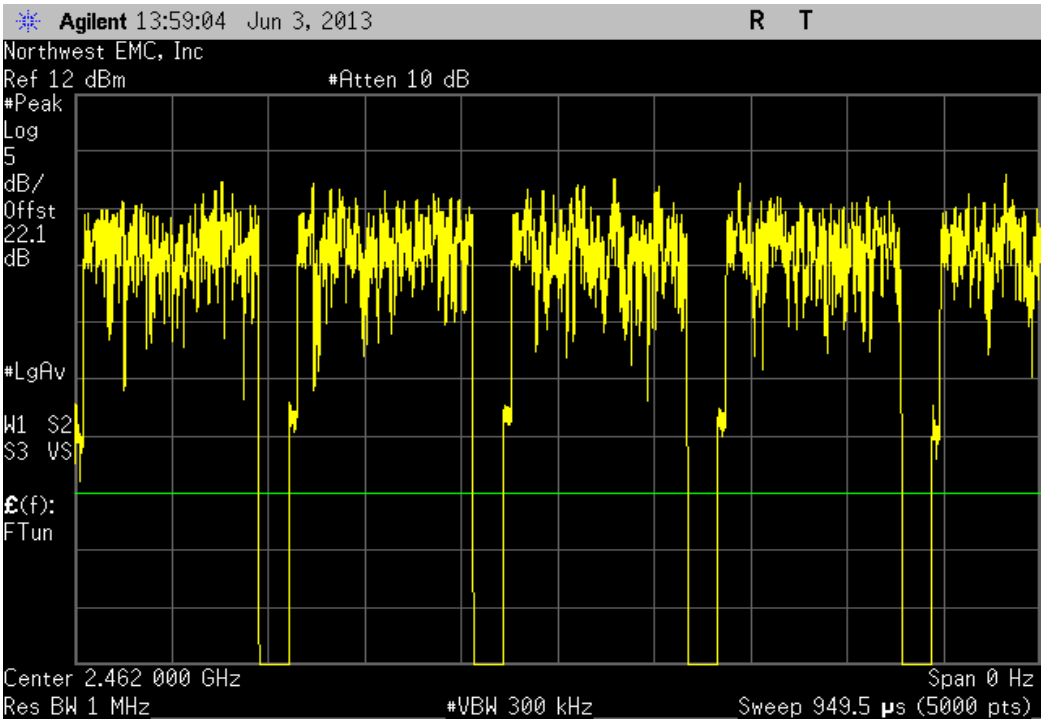


Duty Cycle

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	172 uS	211 uS	1	81.5	N/A	N/A

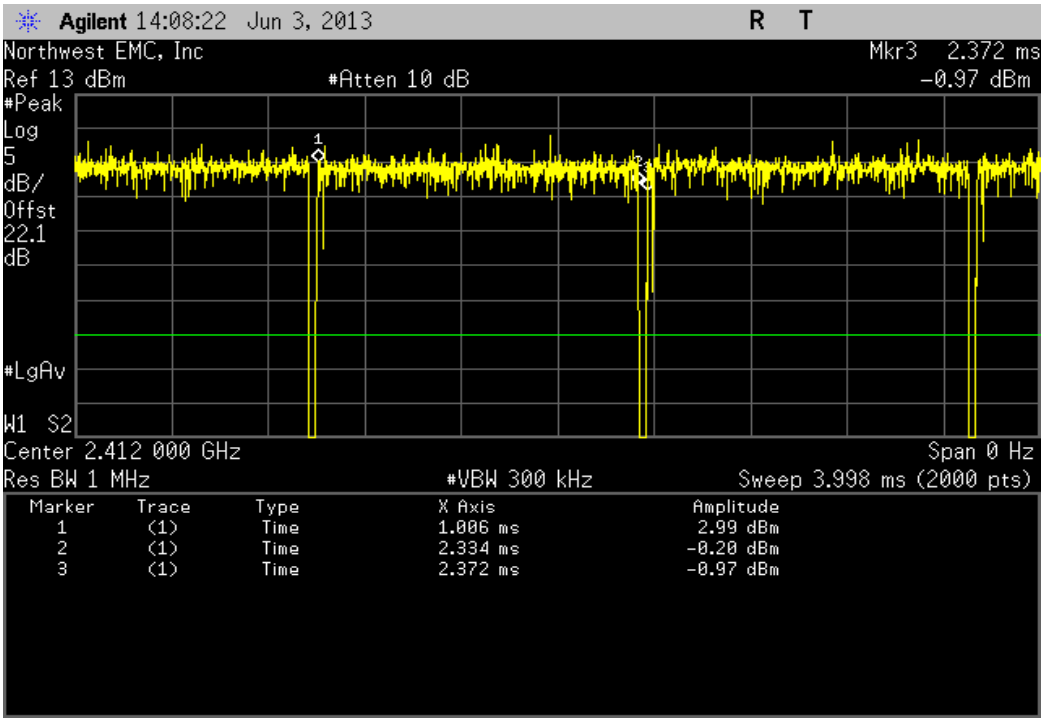


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

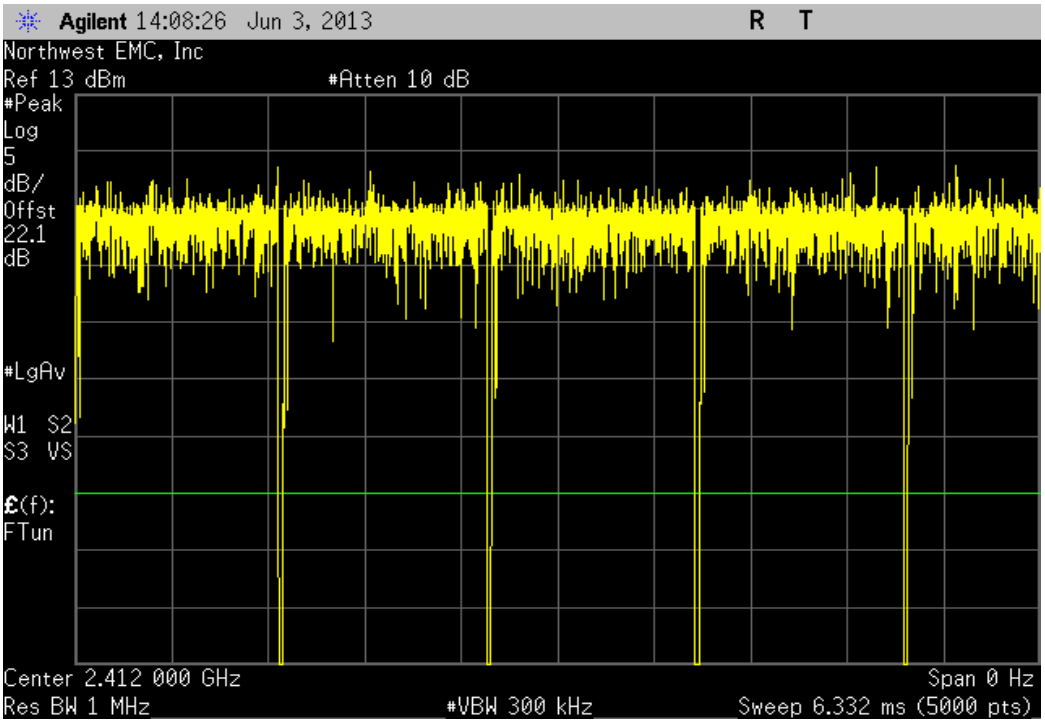


Duty Cycle

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	1.328 mS	1.366 mS	1	97.2	N/A	N/A

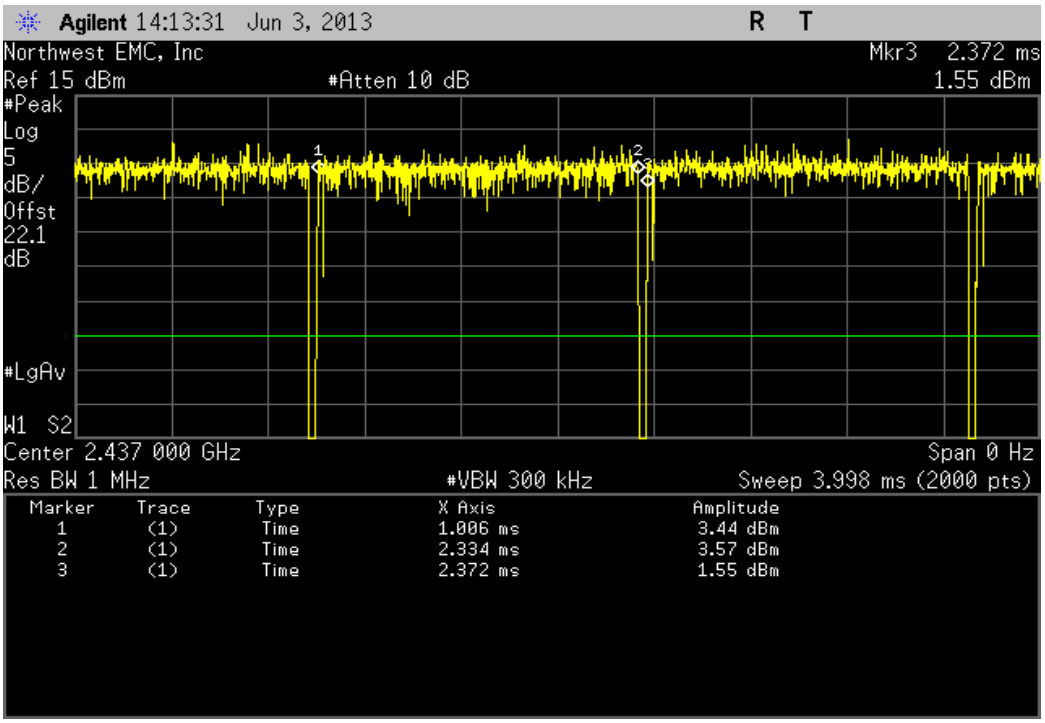


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

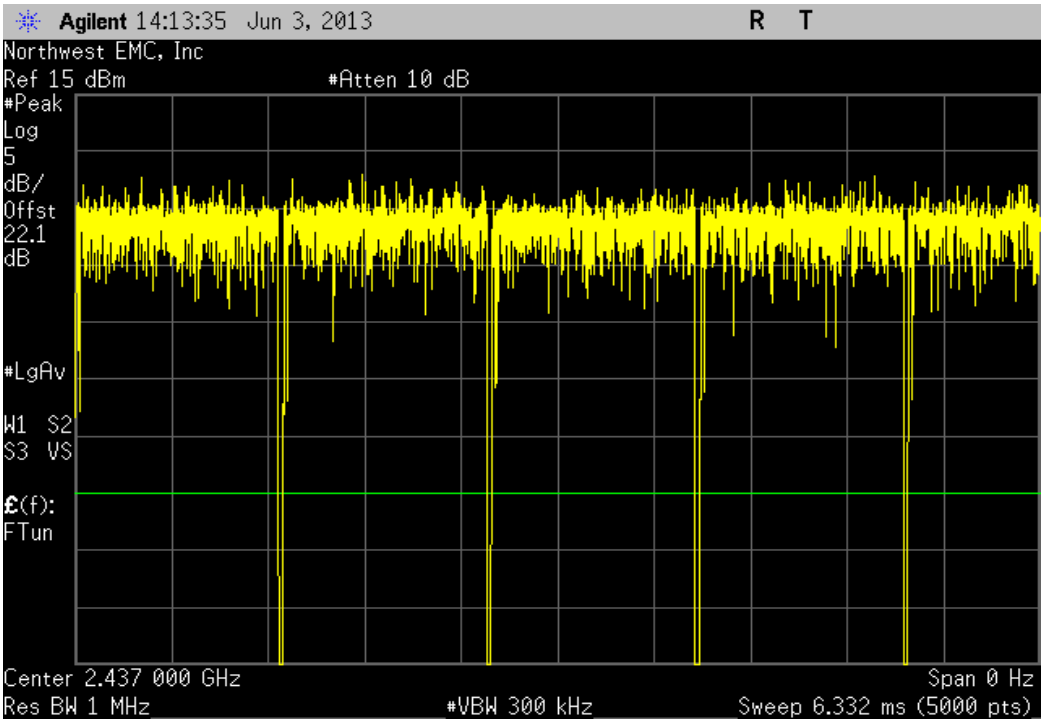


Duty Cycle

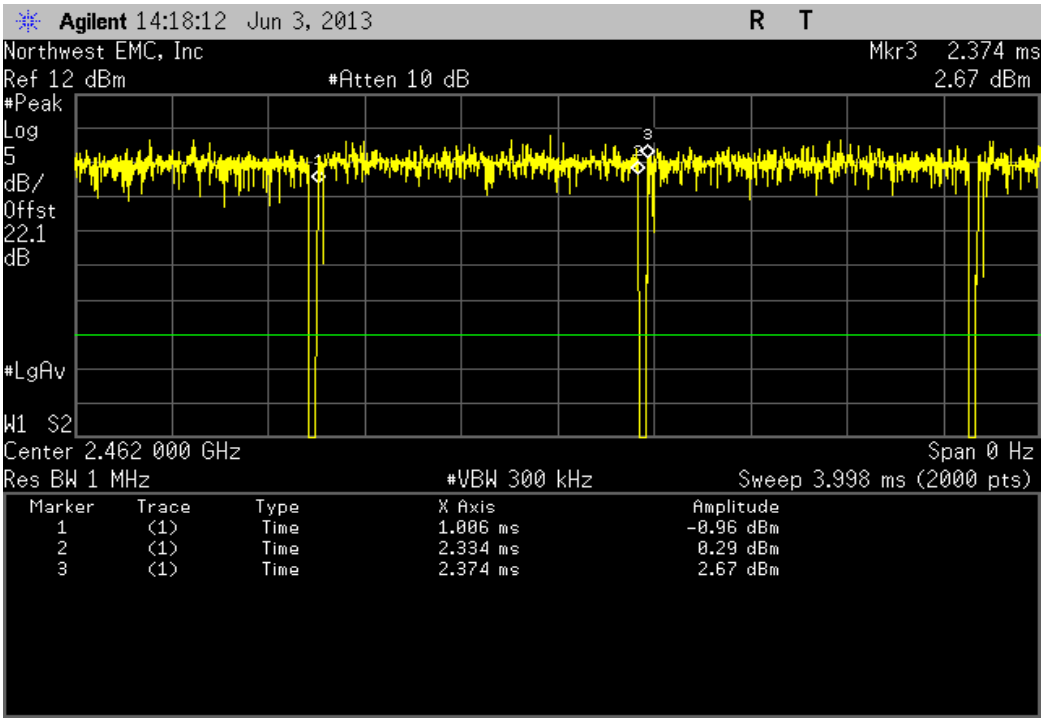
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	1.328 mS	1.366 mS	1	97.2	N/A	N/A



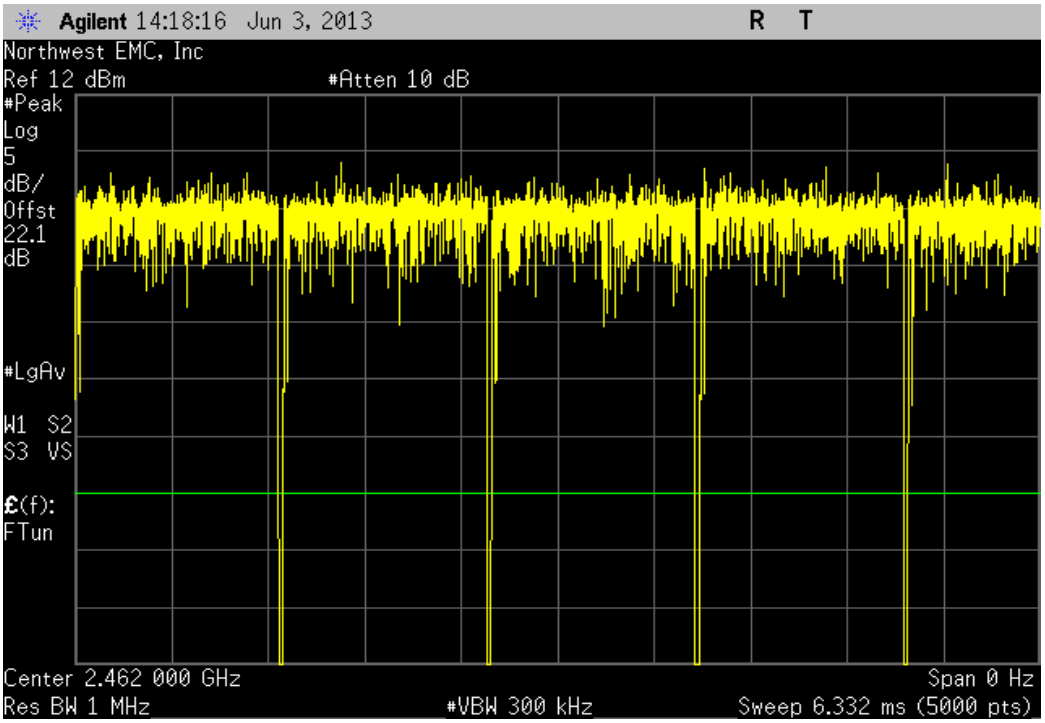
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



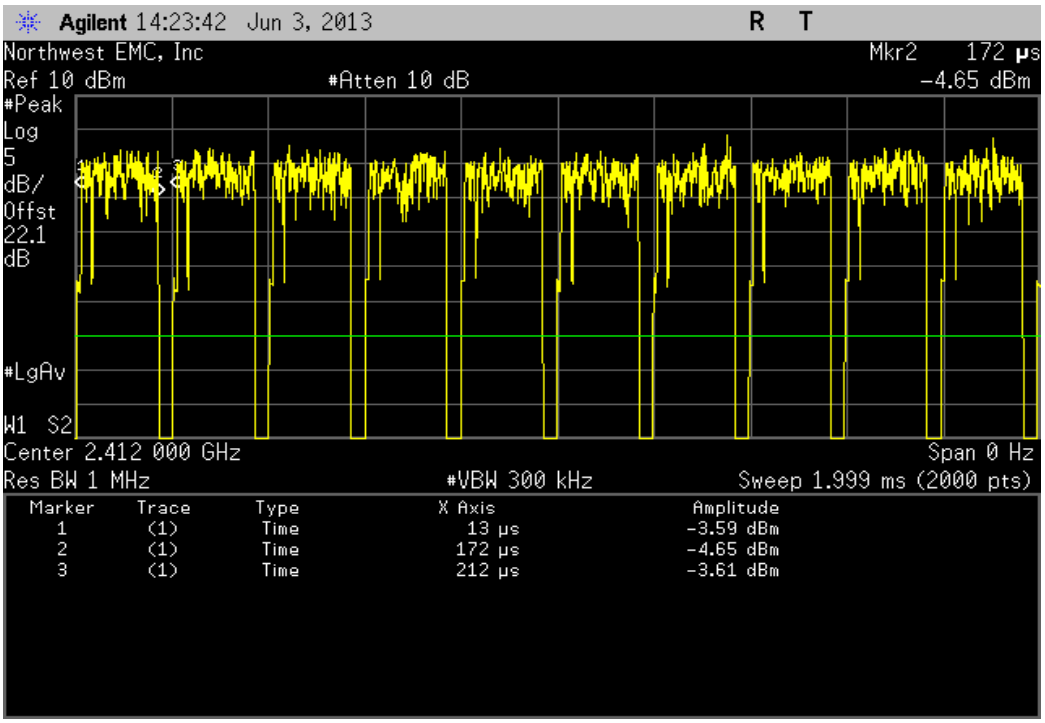
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	1.328 mS	1.368 mS	1	97.1	N/A	N/A



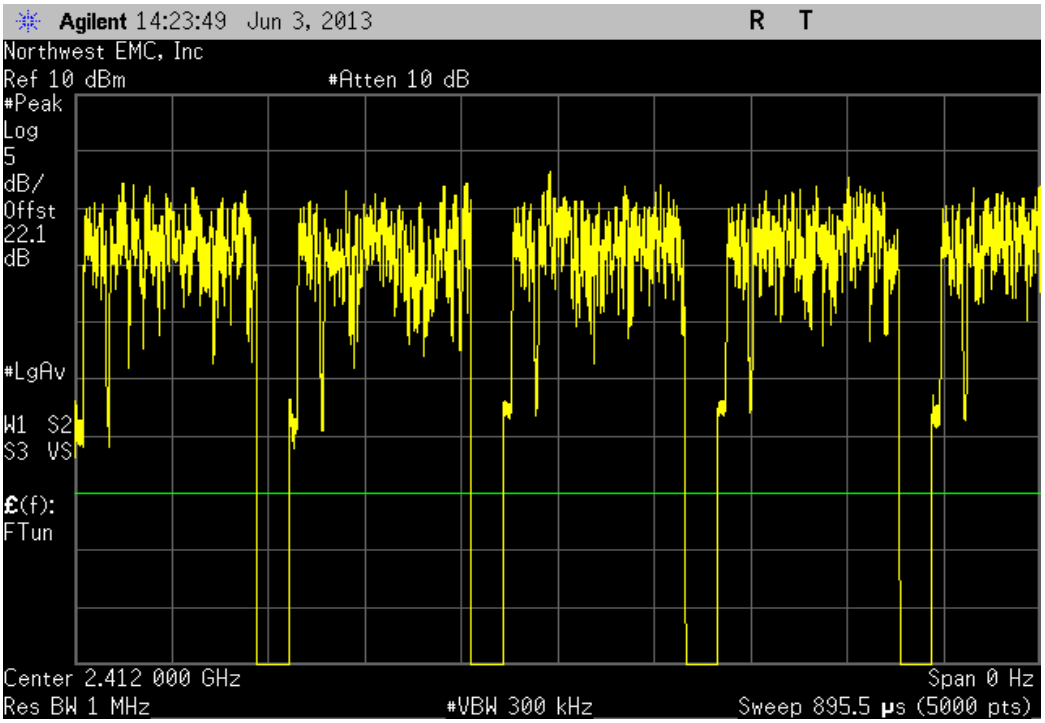
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



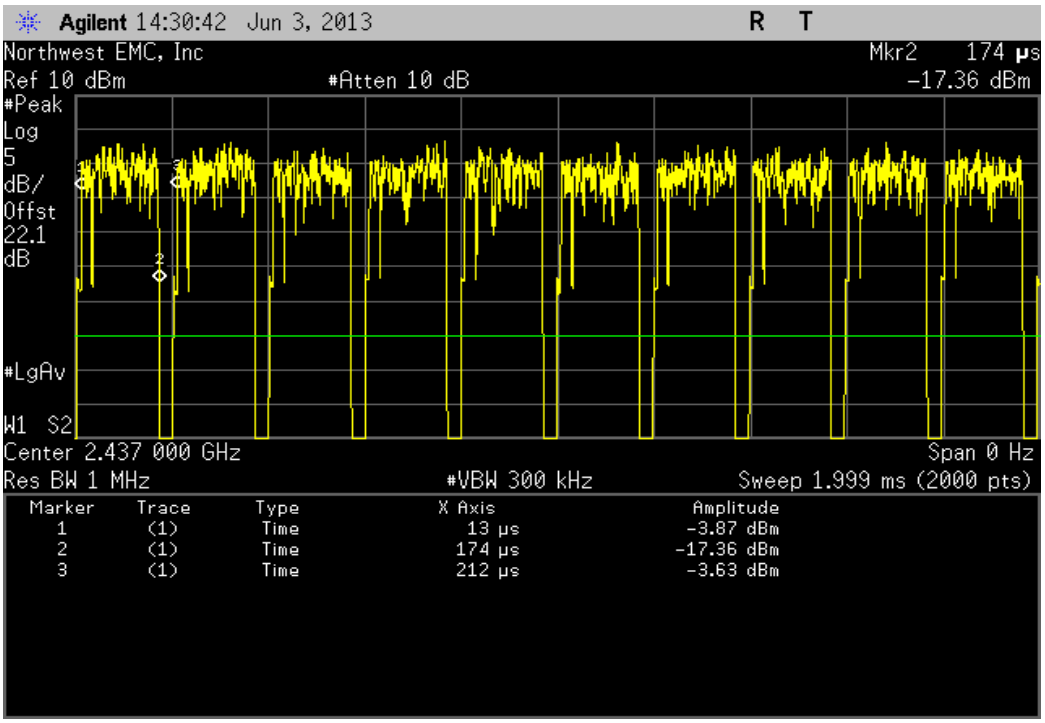
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	159 uS	199 uS	1	79.9	N/A	N/A



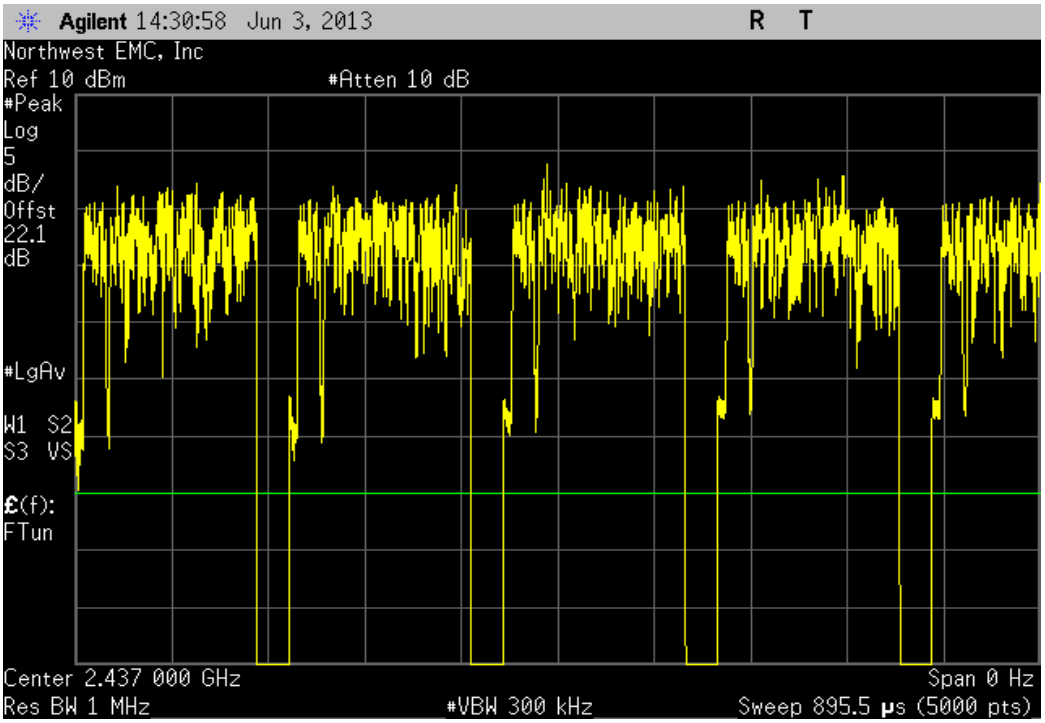
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



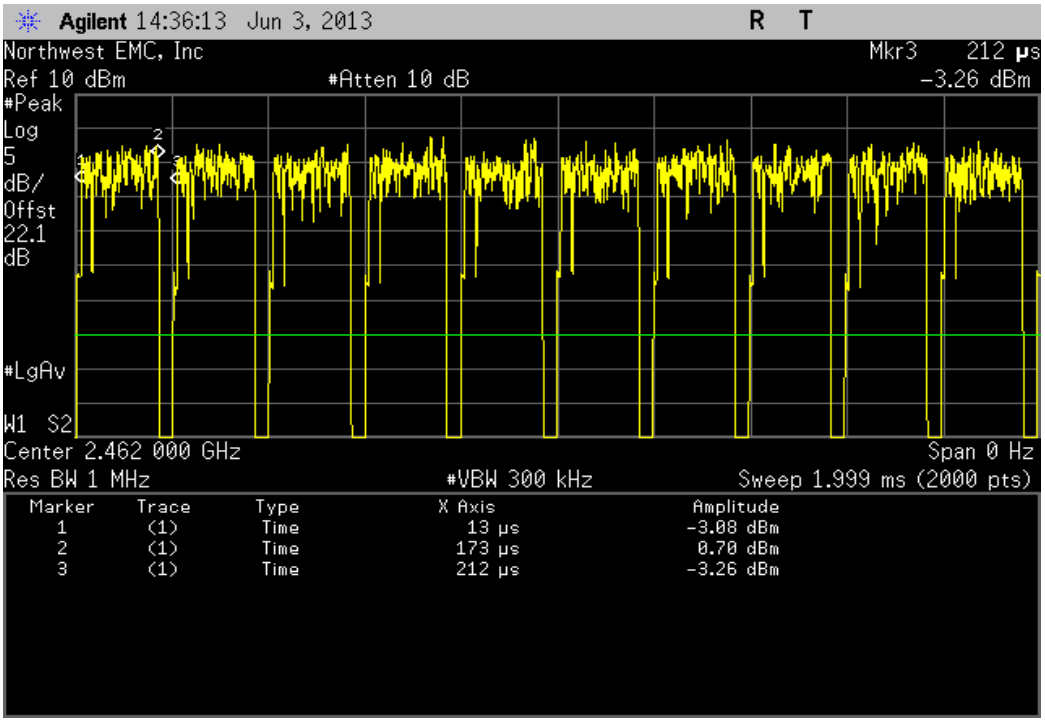
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	161 uS	199 uS	1	80.9	N/A	N/A



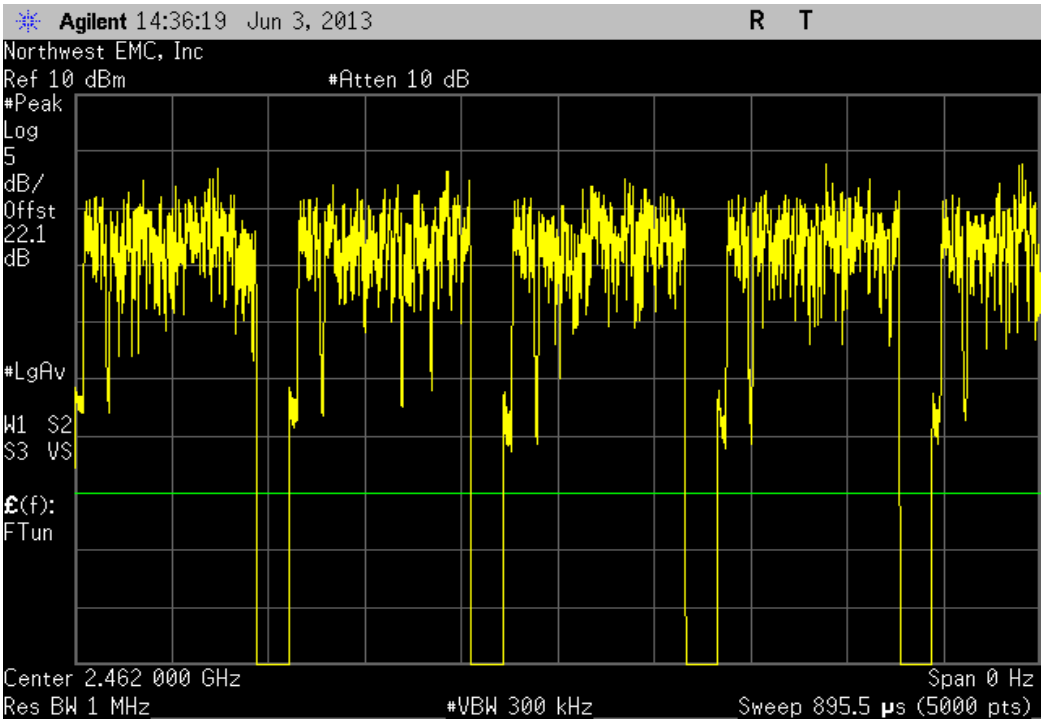
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	160 uS	199 uS	1	80.4	N/A	N/A

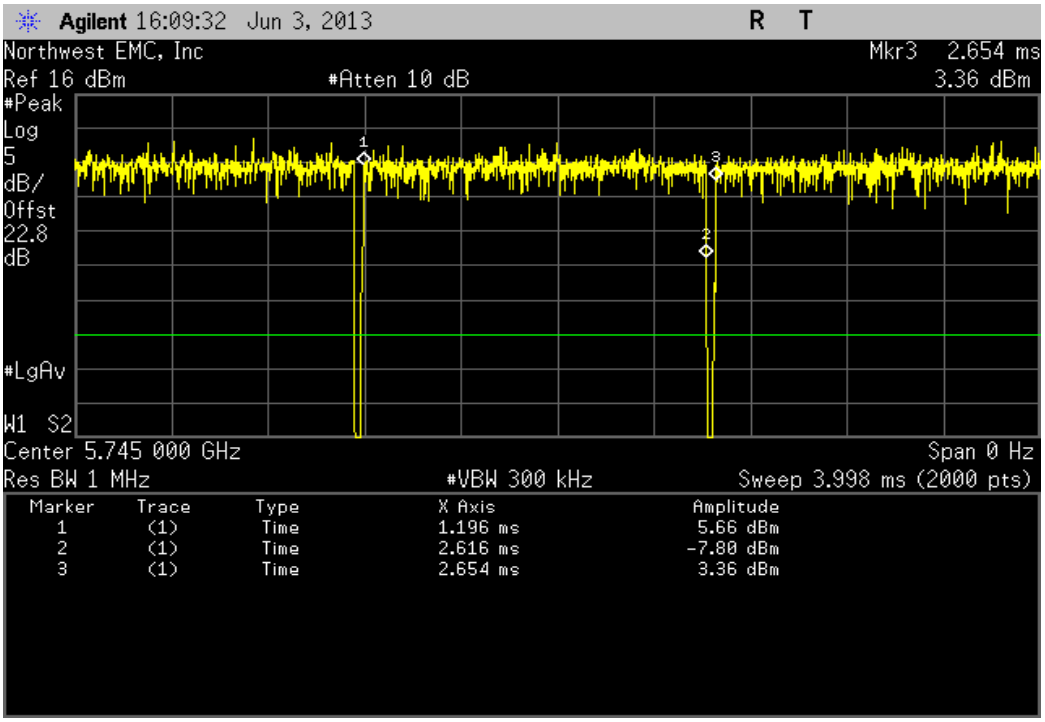


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

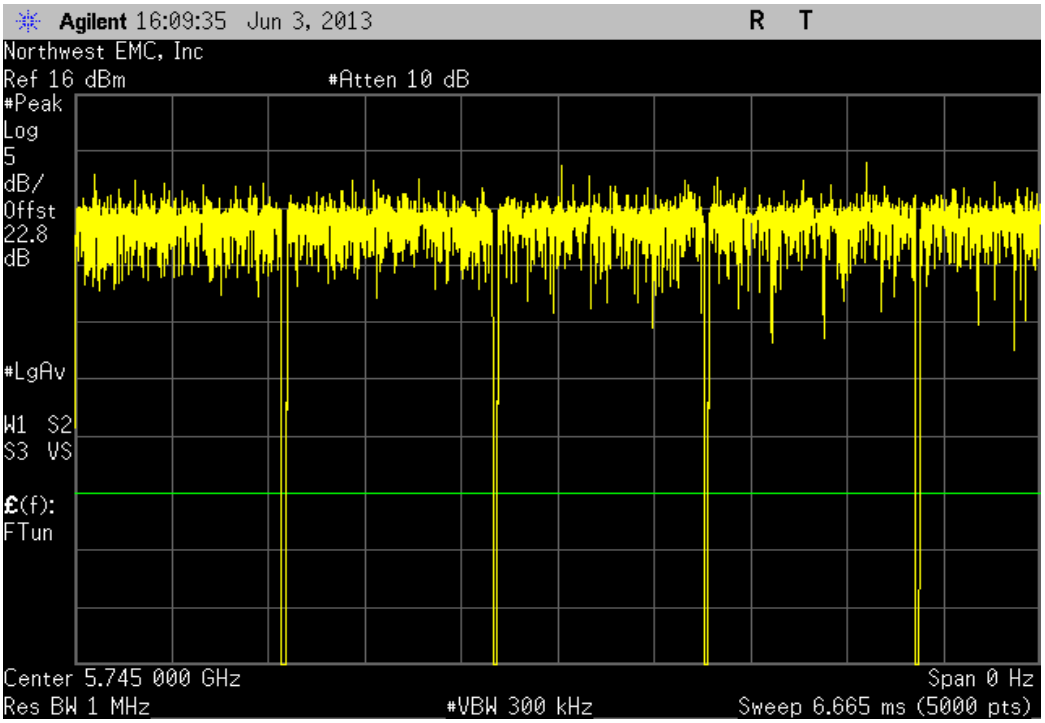


Duty Cycle

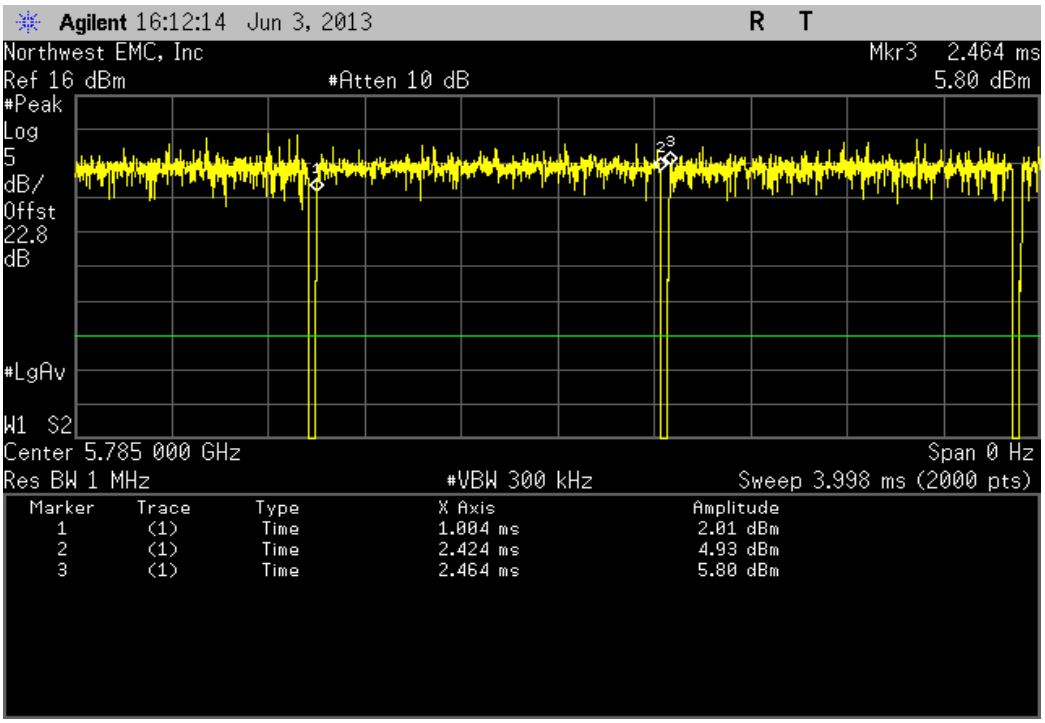
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	1.42 mS	1.458 mS	1	97.4	N/A	N/A



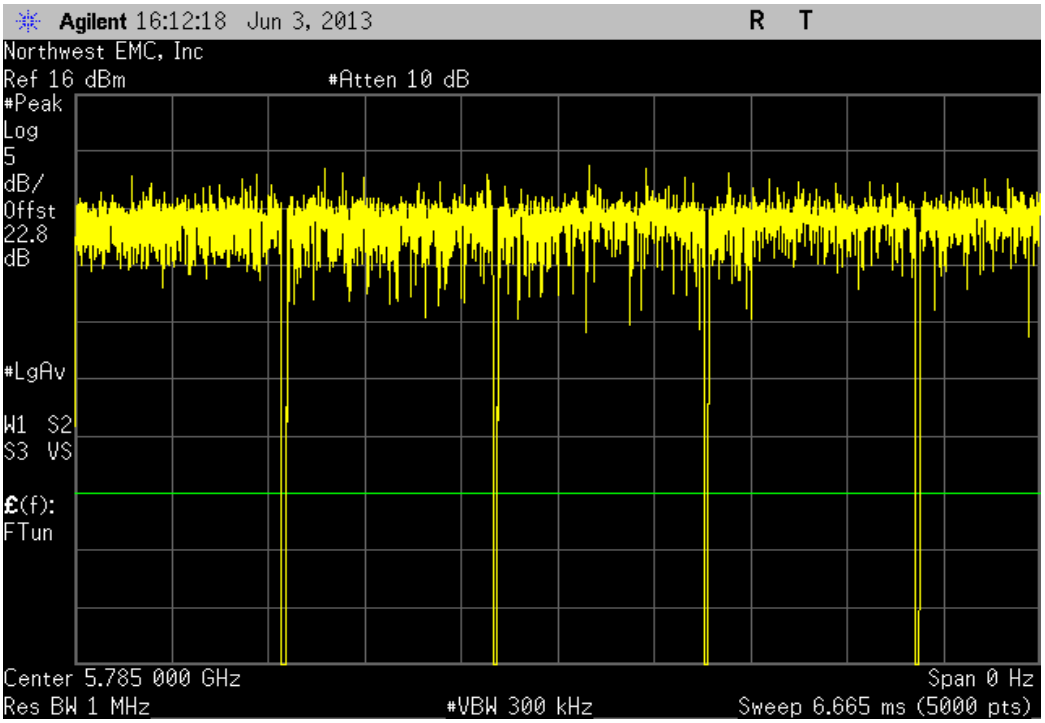
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	1.42 mS	1.46 mS	1	97.3	N/A	N/A

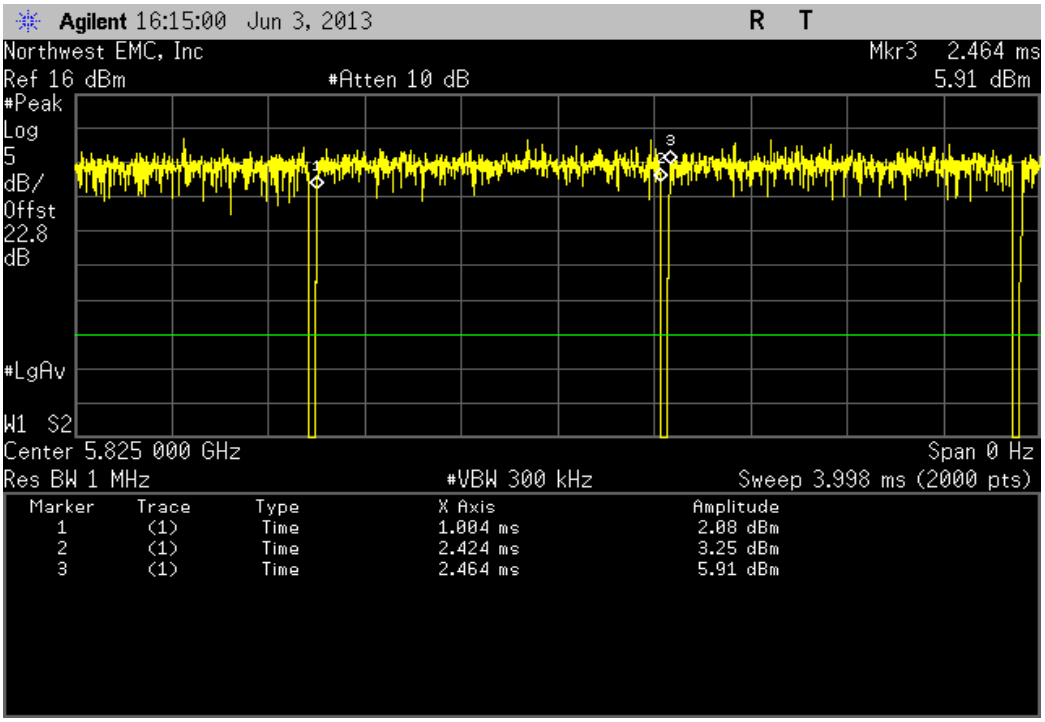


5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

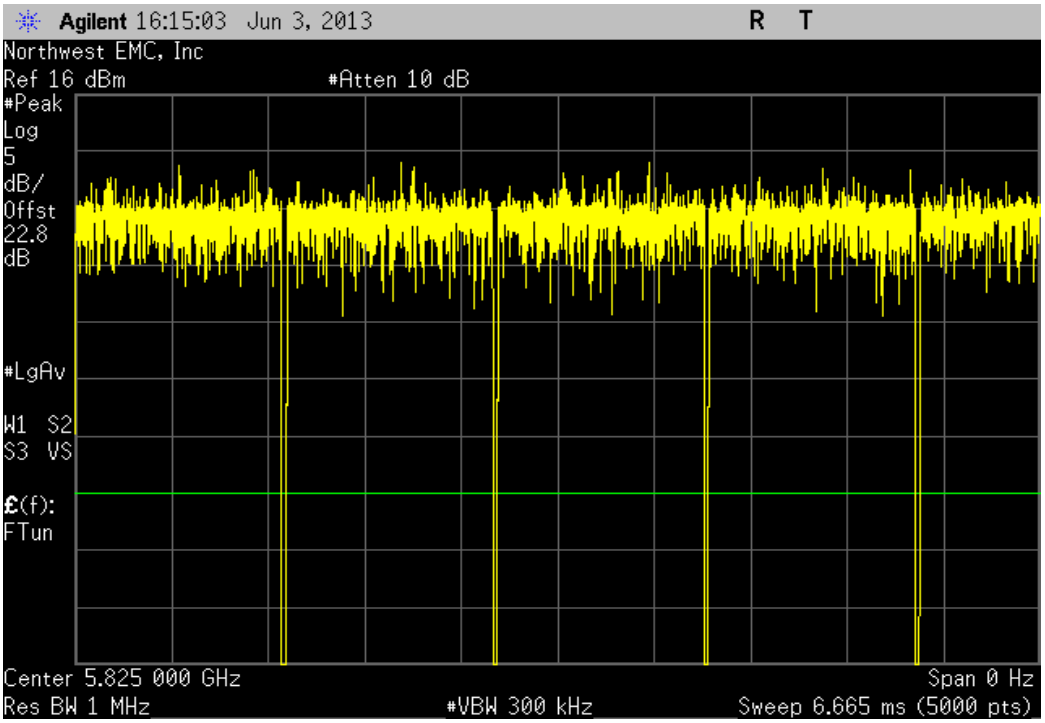


Duty Cycle

5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	1.42 mS	1.46 mS	1	97.3	N/A	N/A

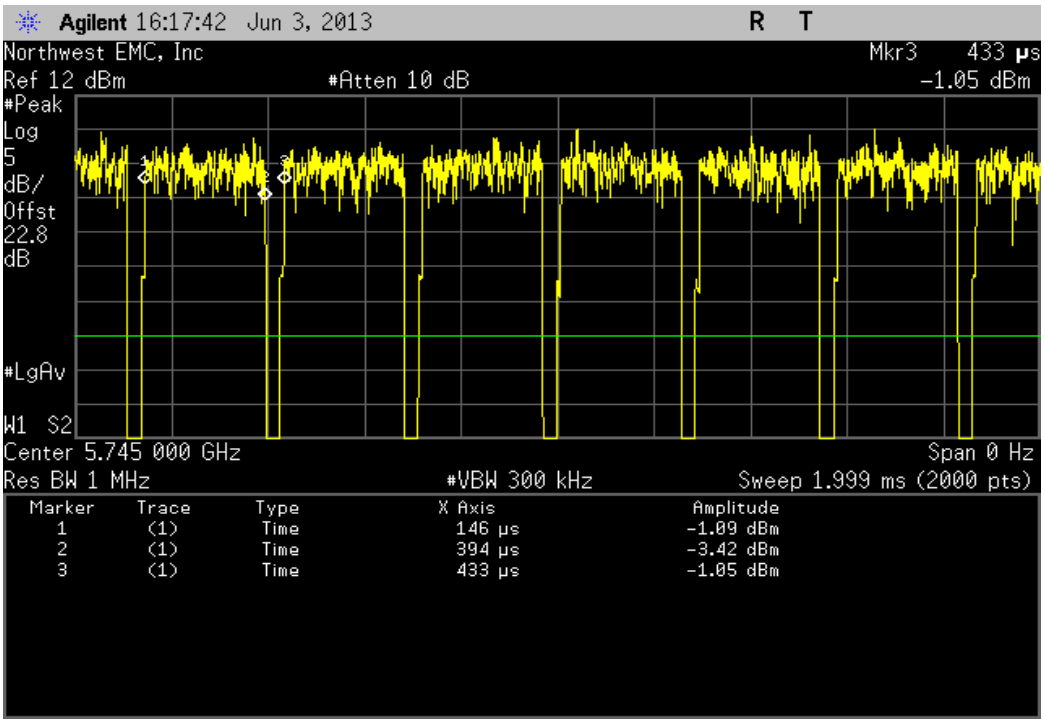


5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



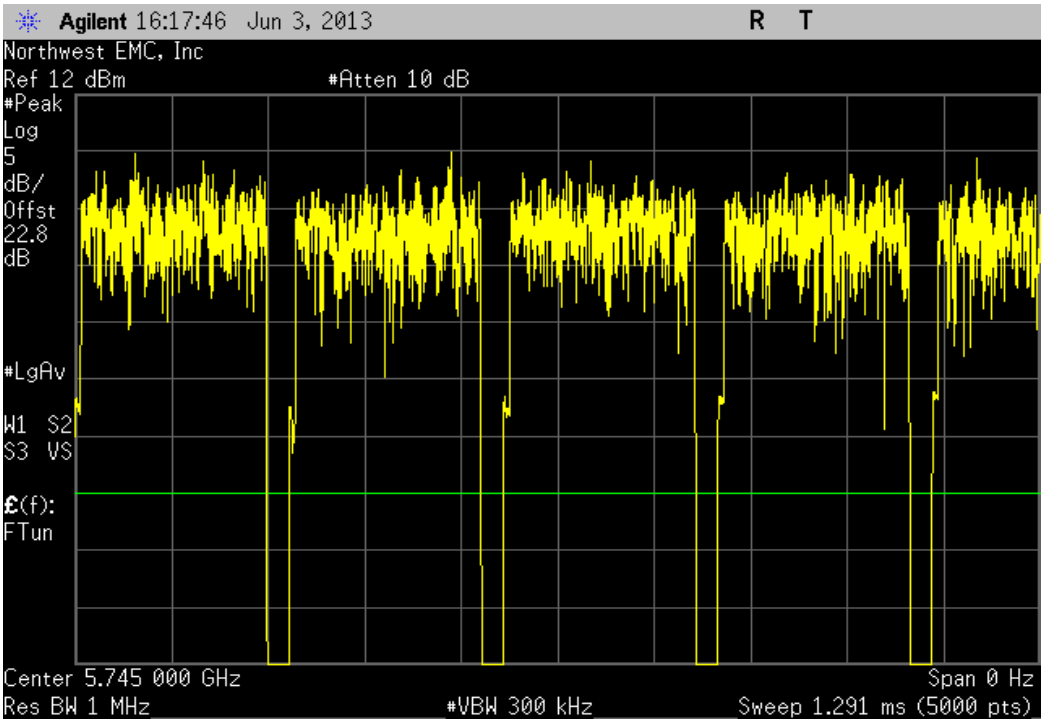
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz

	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	248 uS	287 uS	1	86.4	N/A	N/A

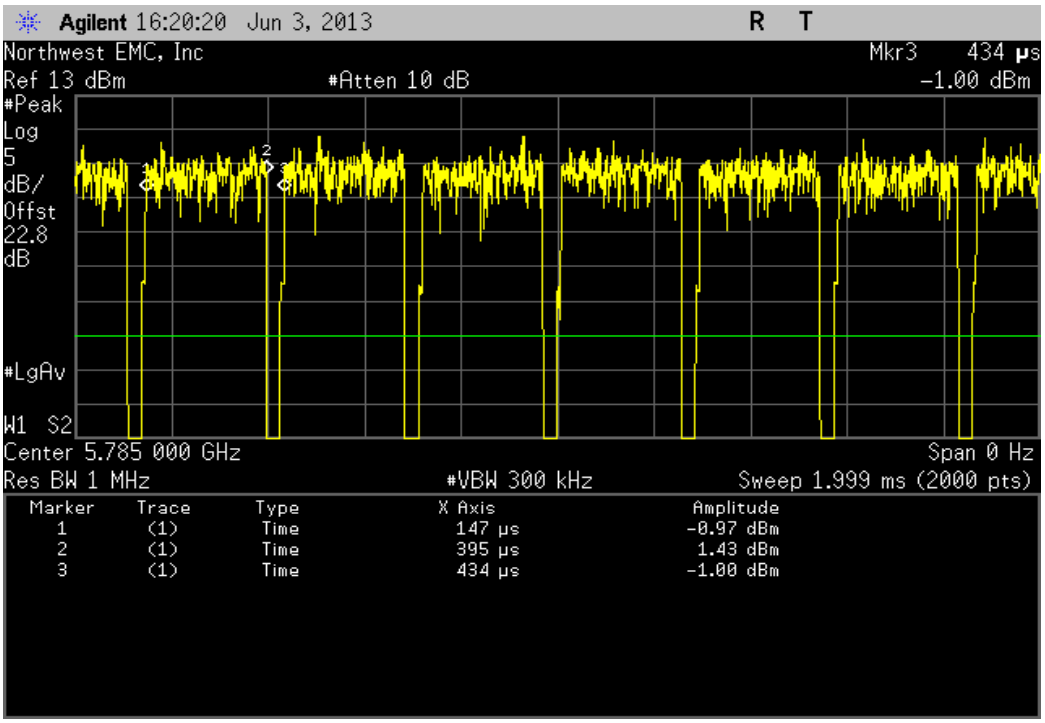


5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz

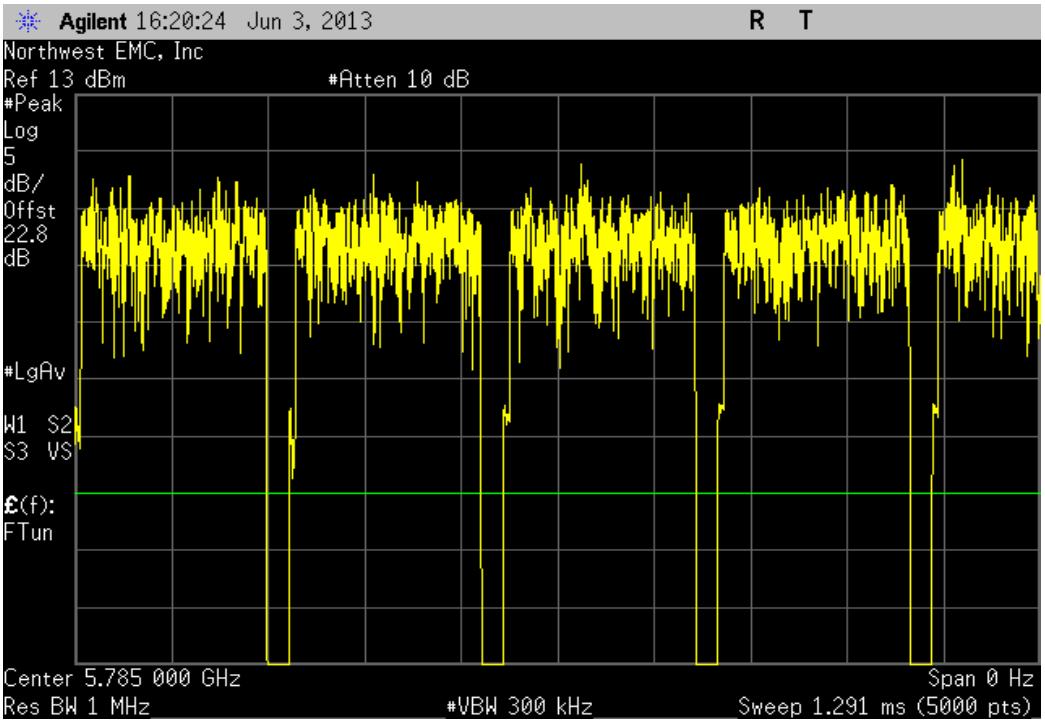
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	248 uS	287 uS	1	86.4	N/A	N/A

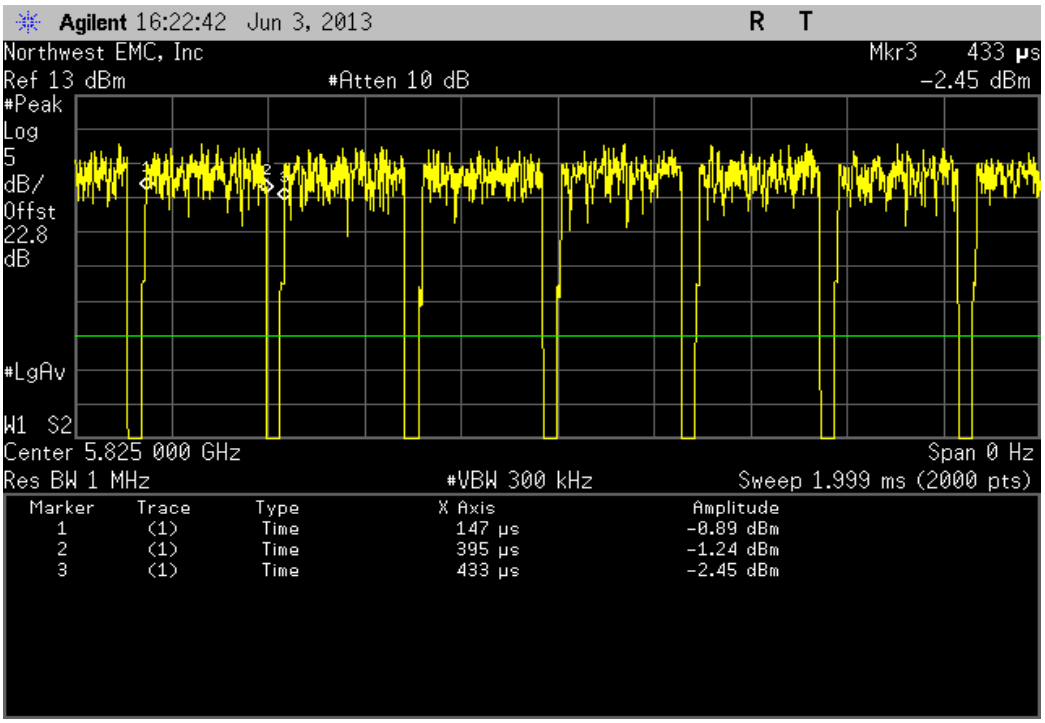


5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



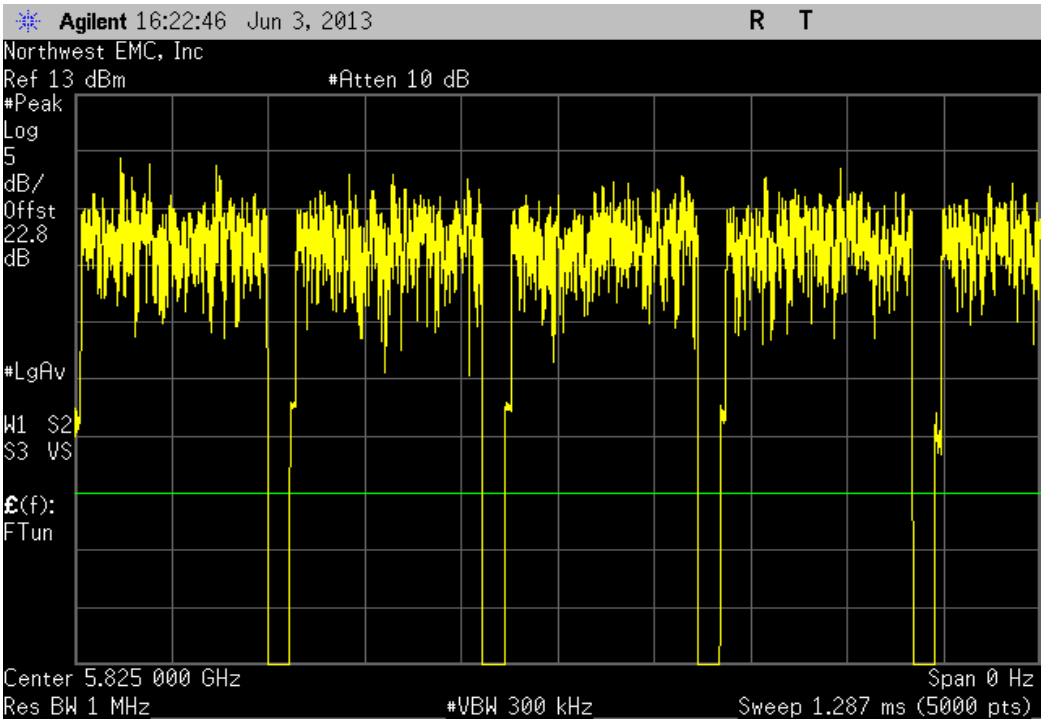
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz

Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
248 uS	286 uS	1	86.7	N/A	N/A



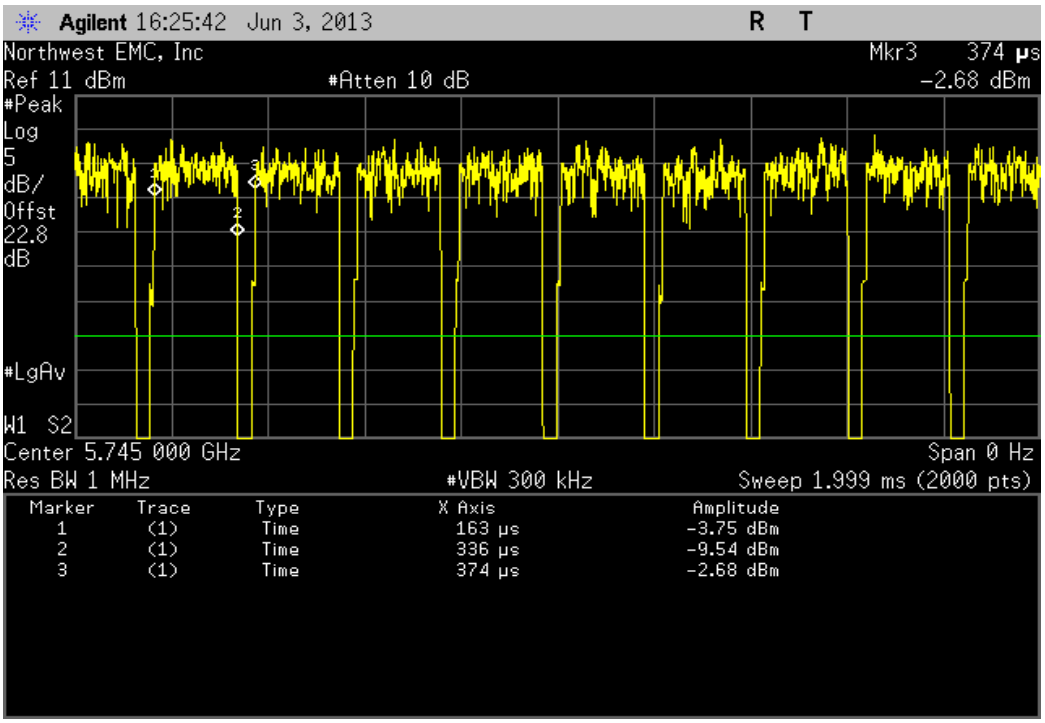
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz

Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
N/A	N/A	5	N/A	N/A	N/A

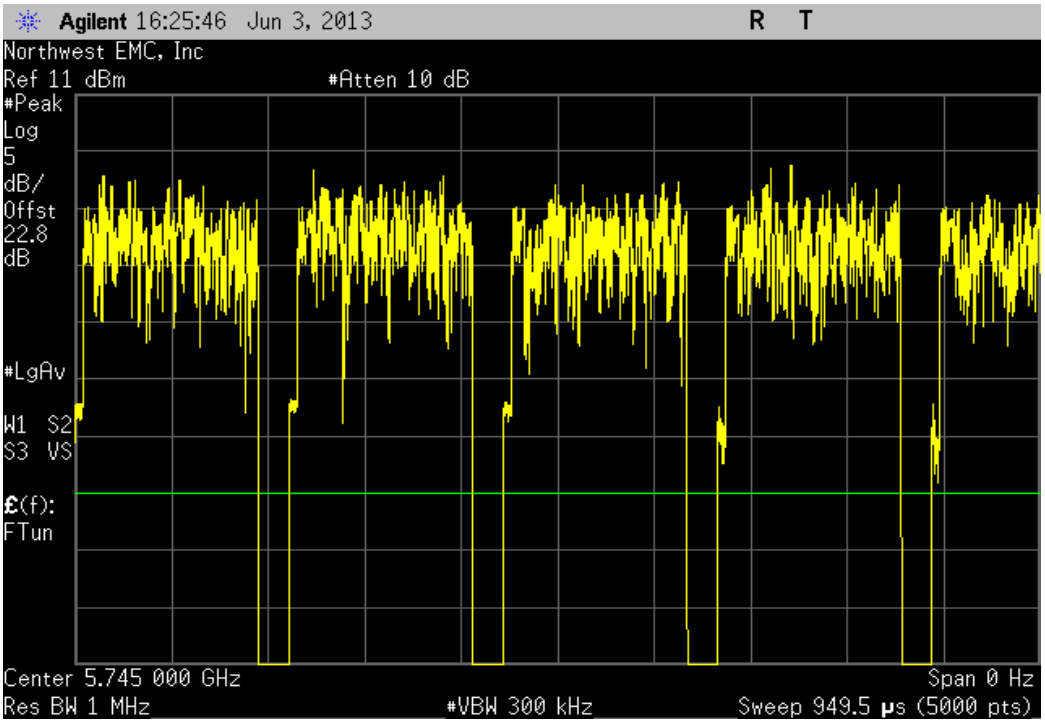


Duty Cycle

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	173 uS	211 uS	1	82	N/A	N/A

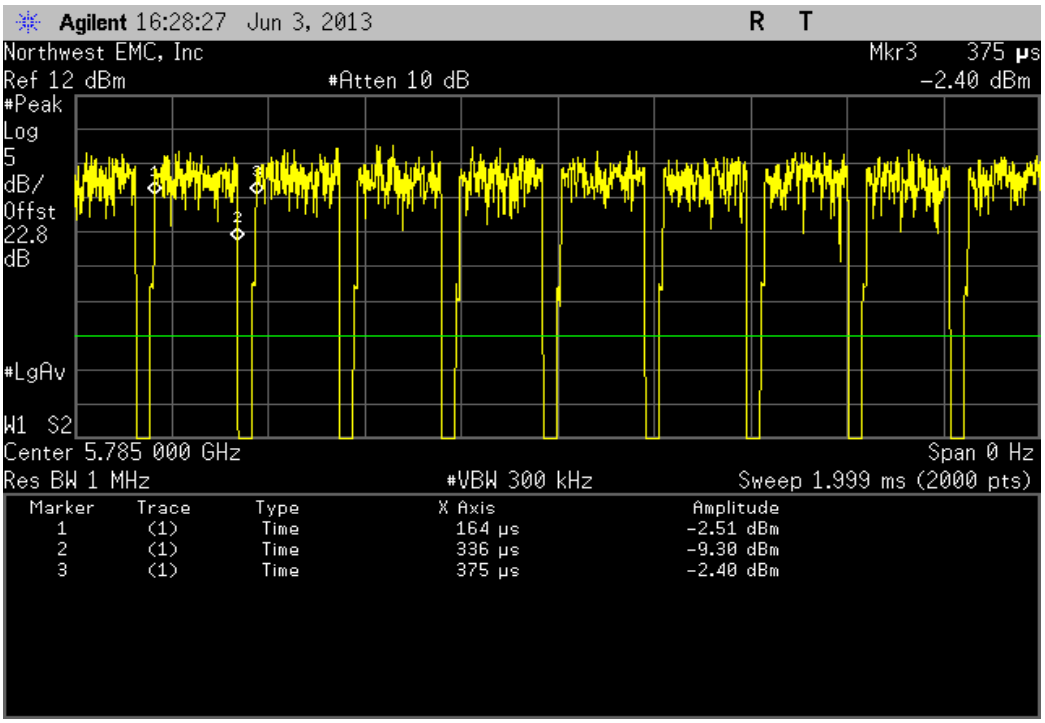


5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

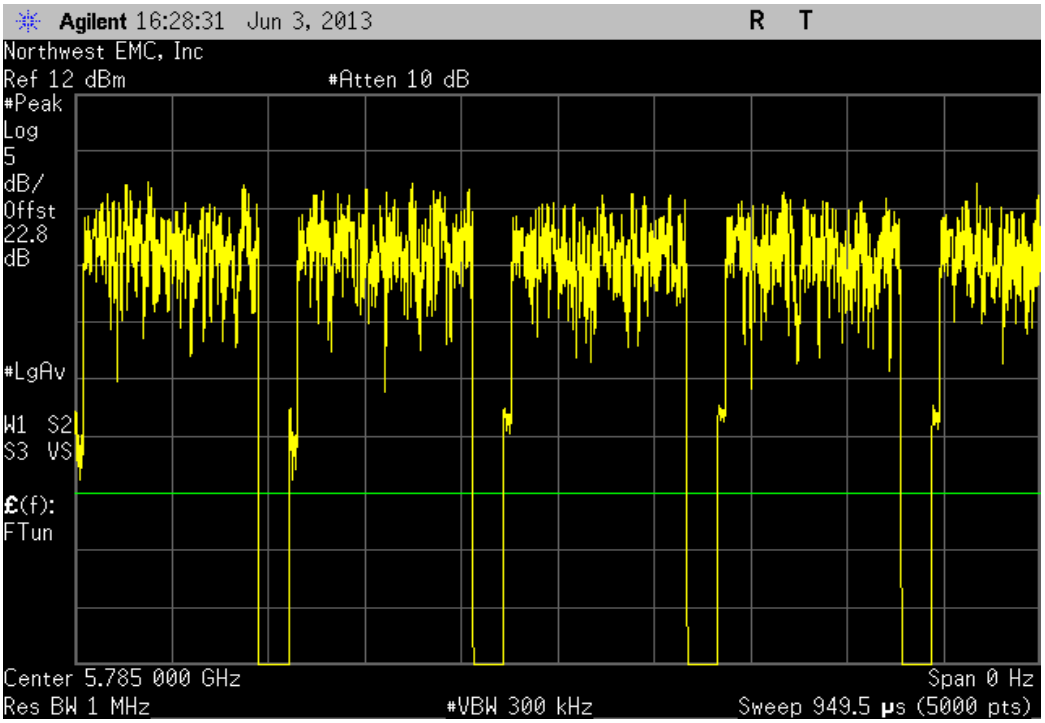


Duty Cycle

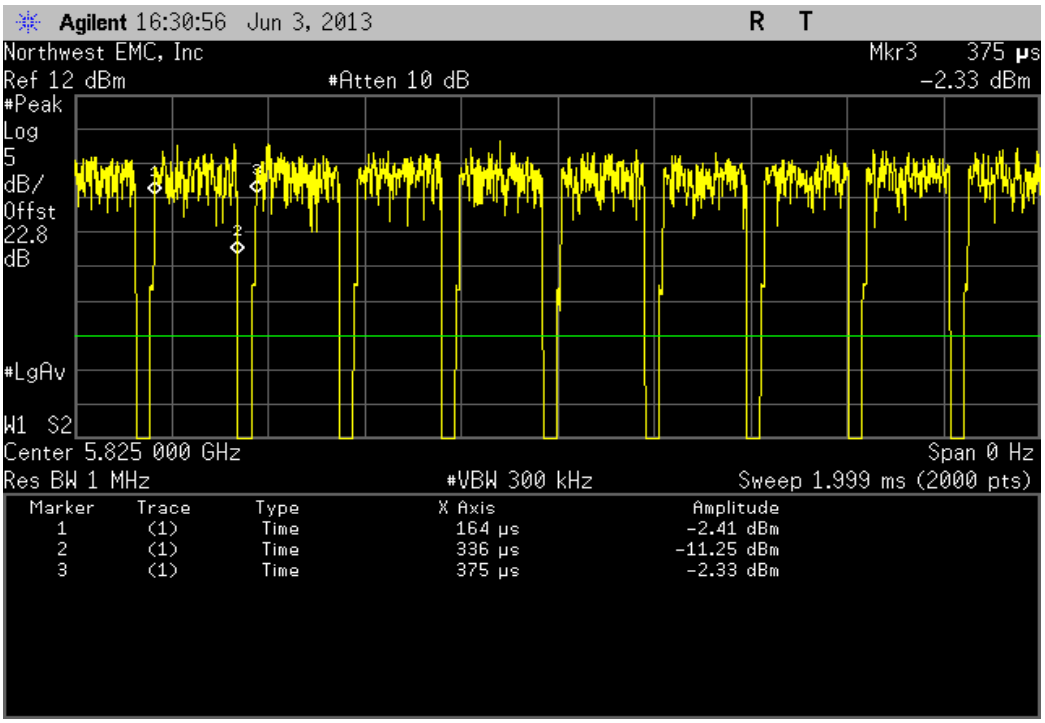
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	172 uS	211 uS	1	81.5	N/A	N/A



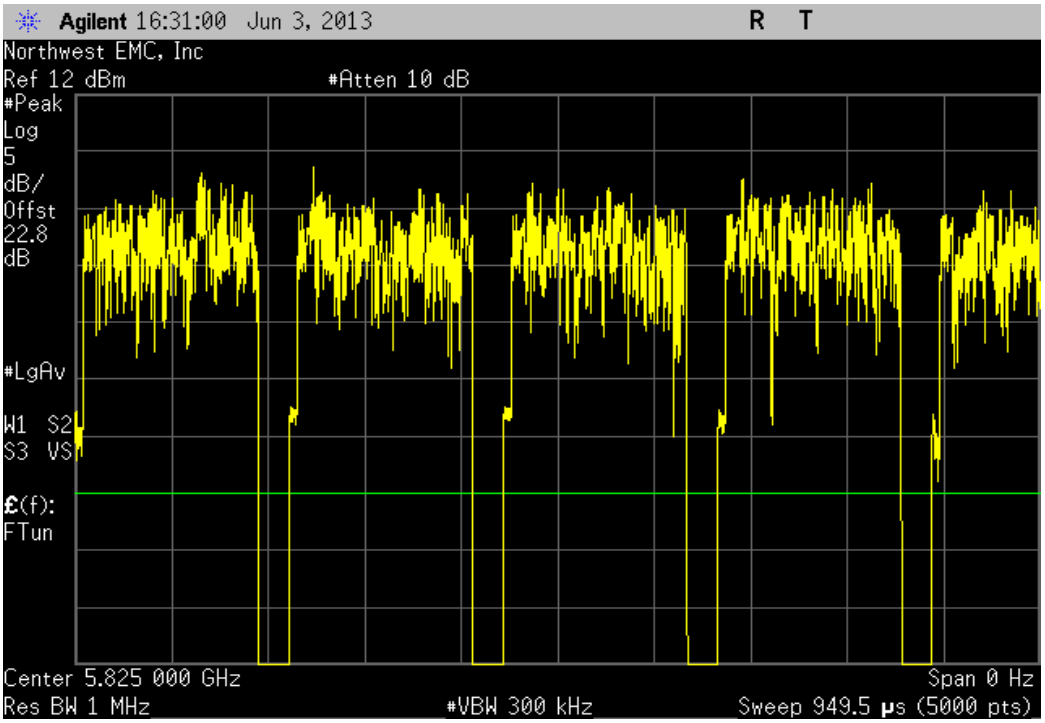
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	172 uS	211 uS	1	81.5	N/A	N/A

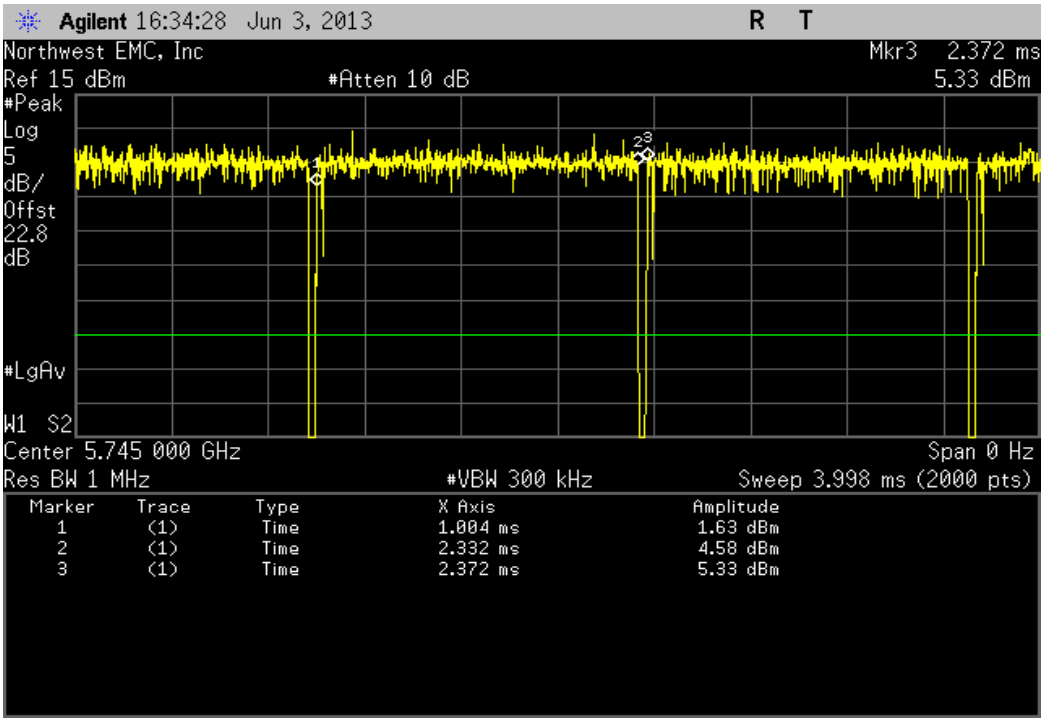


5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

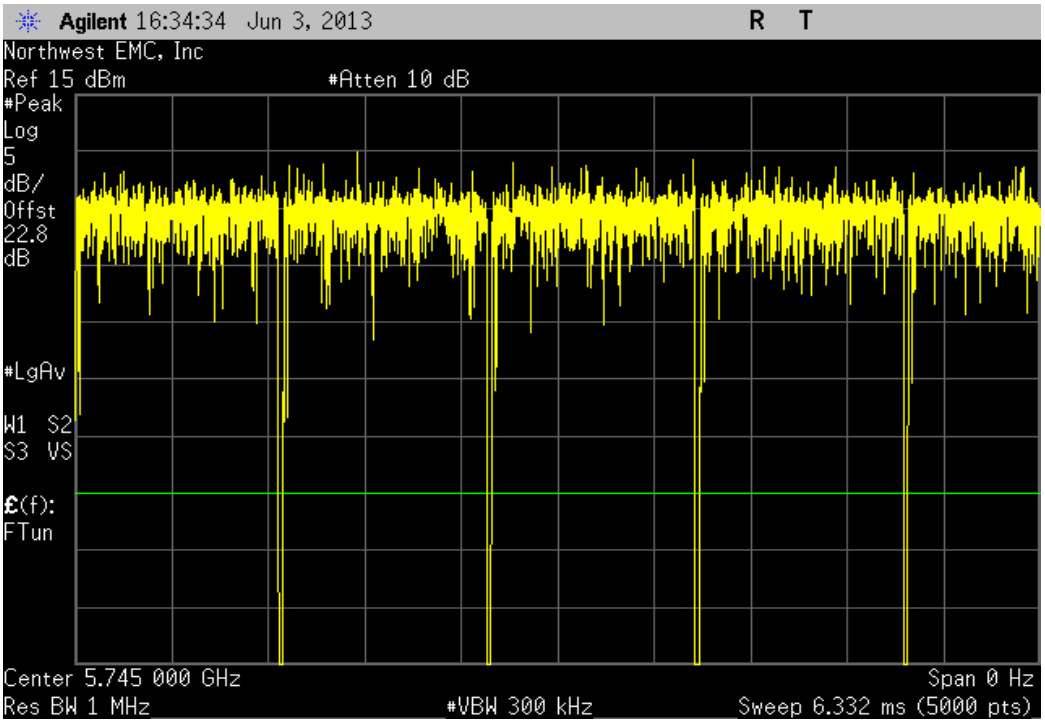


Duty Cycle

5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	1.328 mS	1.368 mS	1	97.1	N/A	N/A

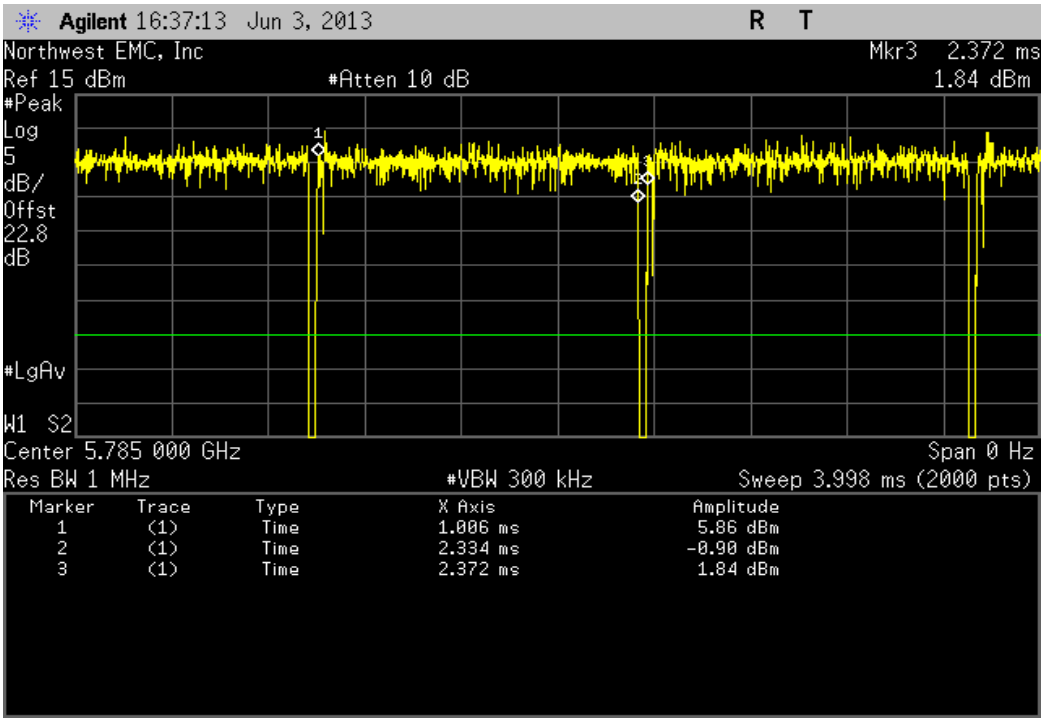


5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

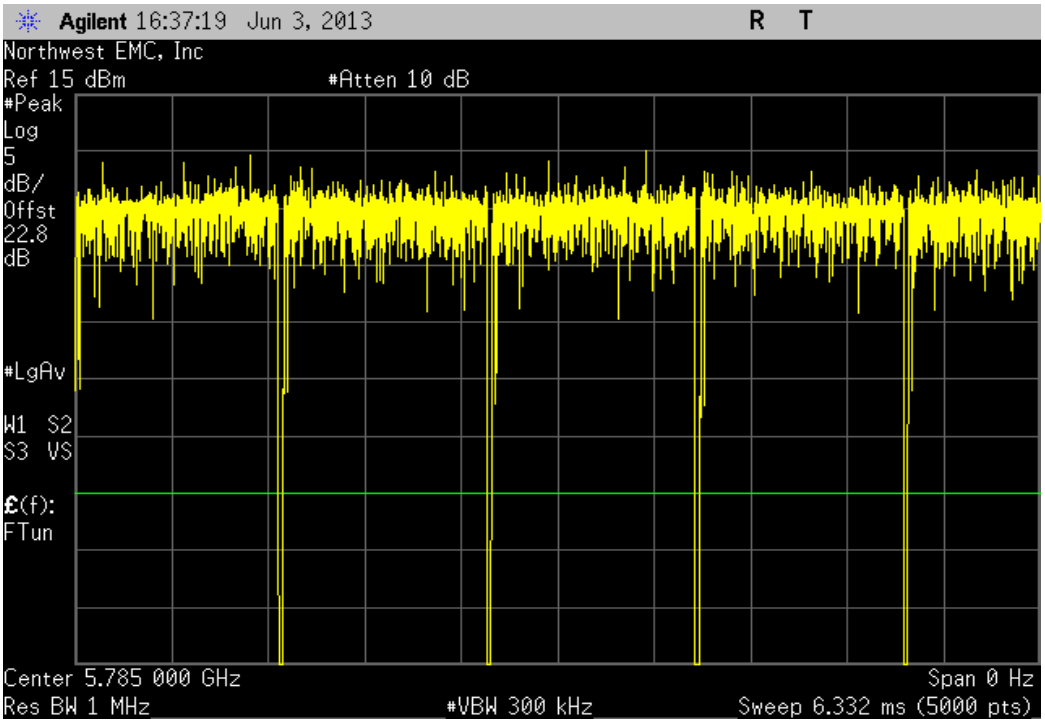


Duty Cycle

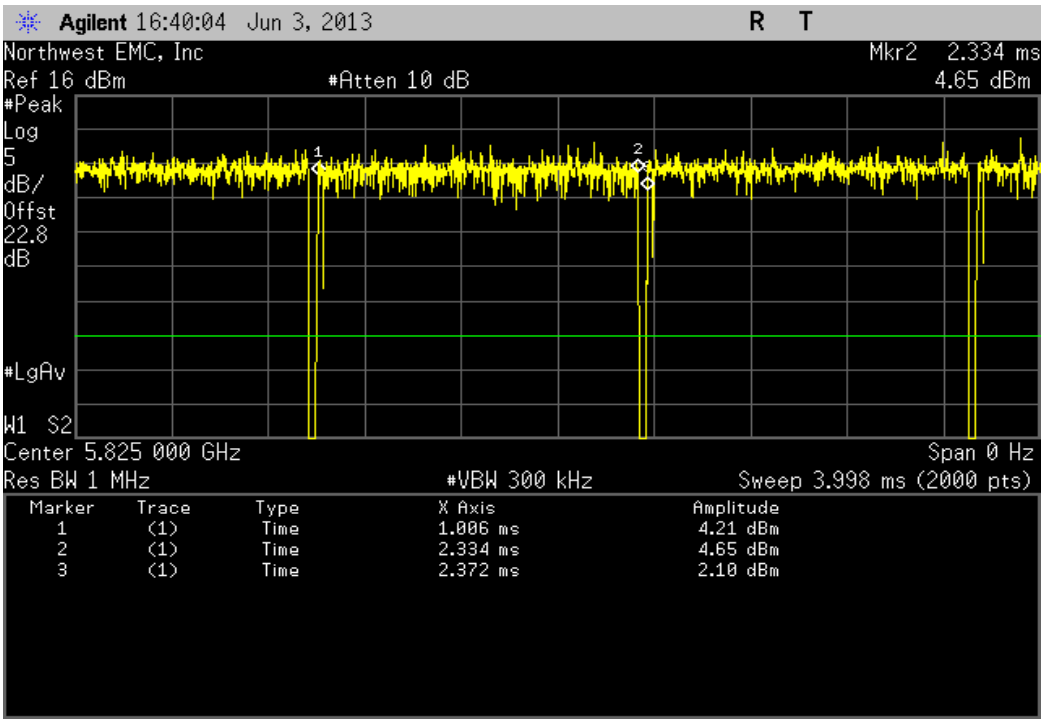
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	1.328 mS	1.366 mS	1	97.2	N/A	N/A



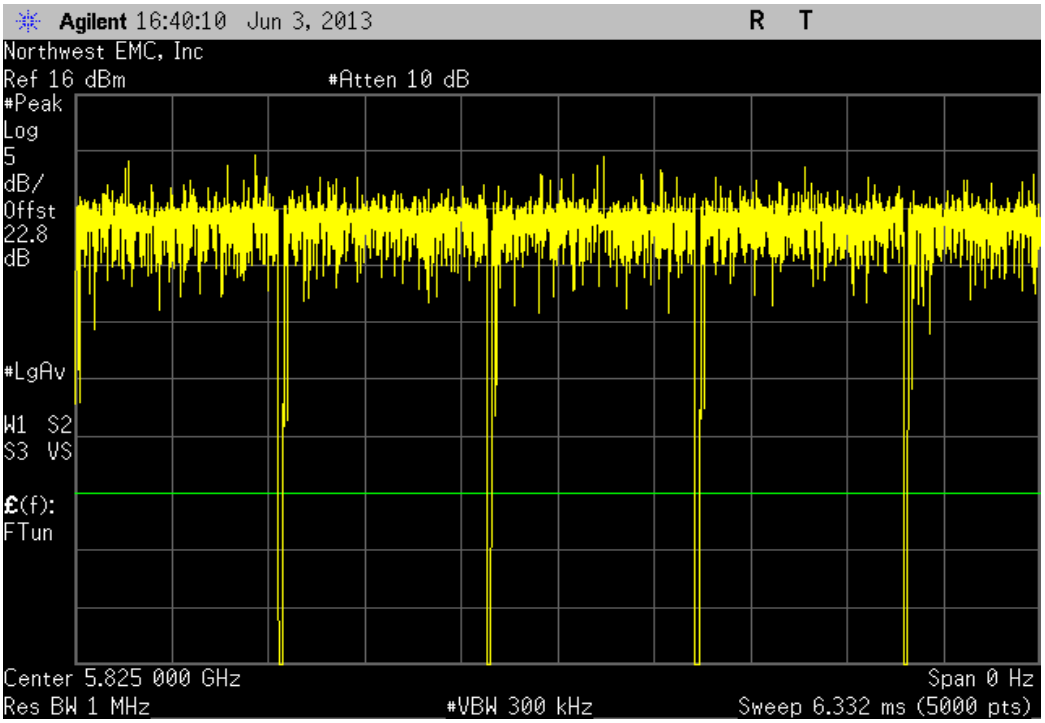
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	1.328 mS	1.366 mS	1	97.2	N/A	N/A

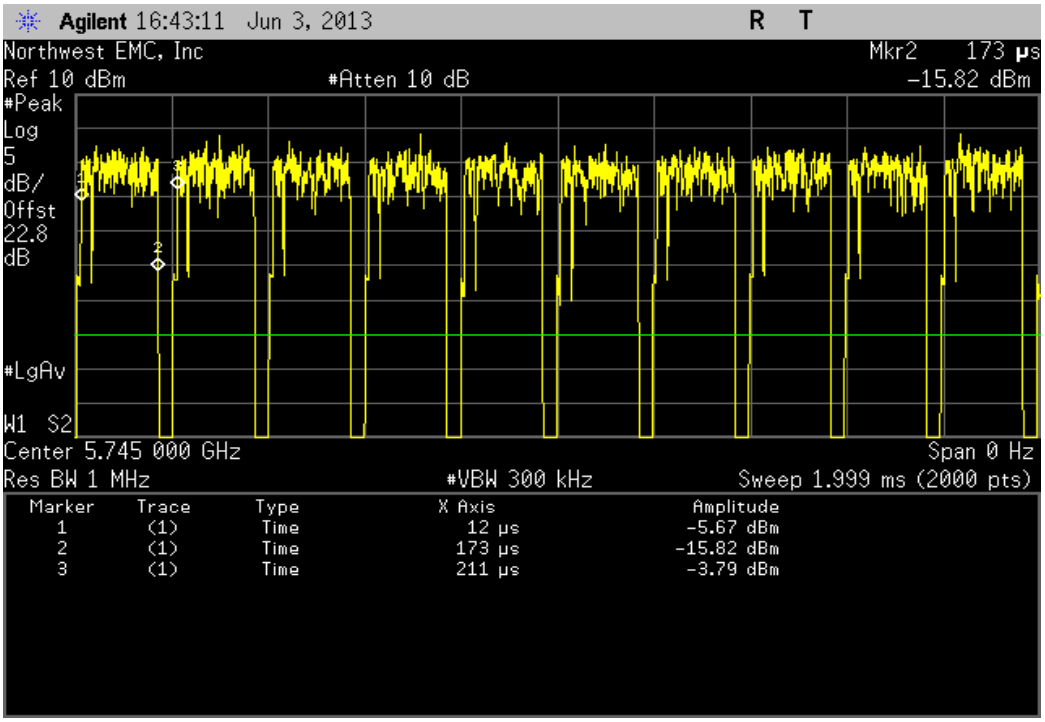


5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

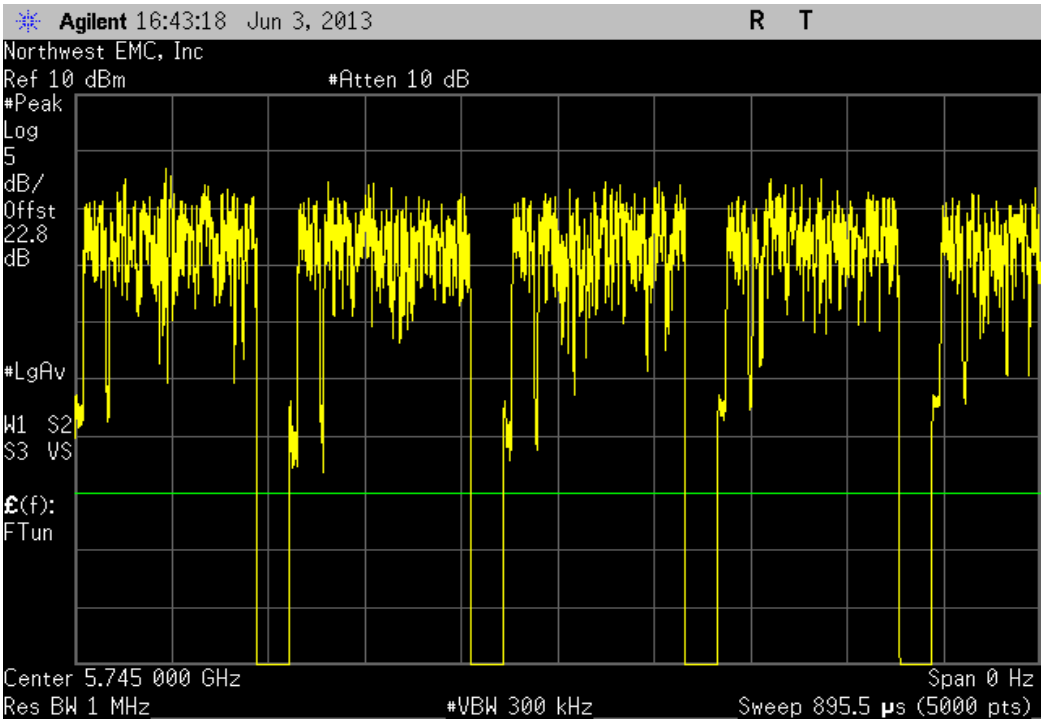


Duty Cycle

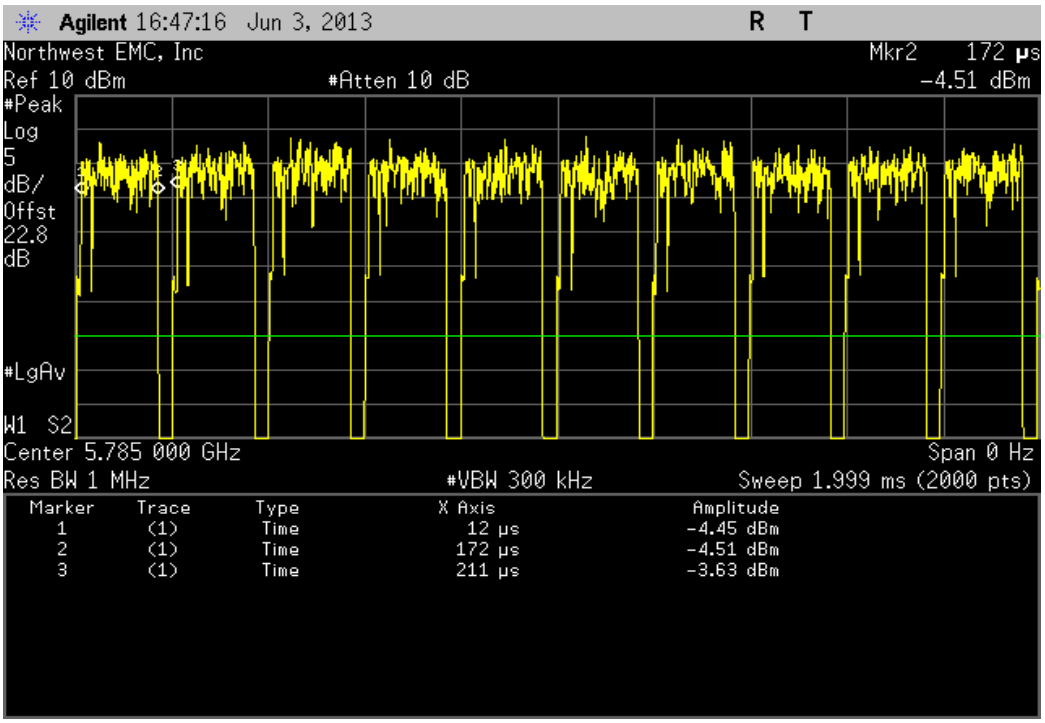
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	161 uS	199 uS	1	80.9	N/A	N/A



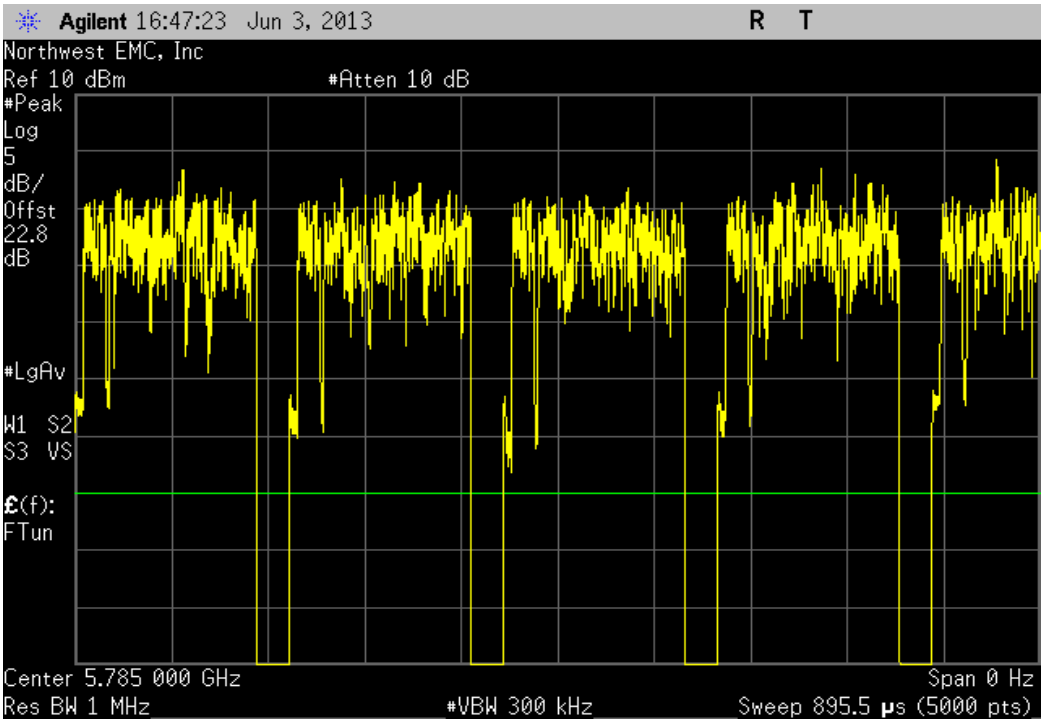
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Mid Channel 157, 5785 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	160 uS	199 uS	1	80.4	N/A	N/A

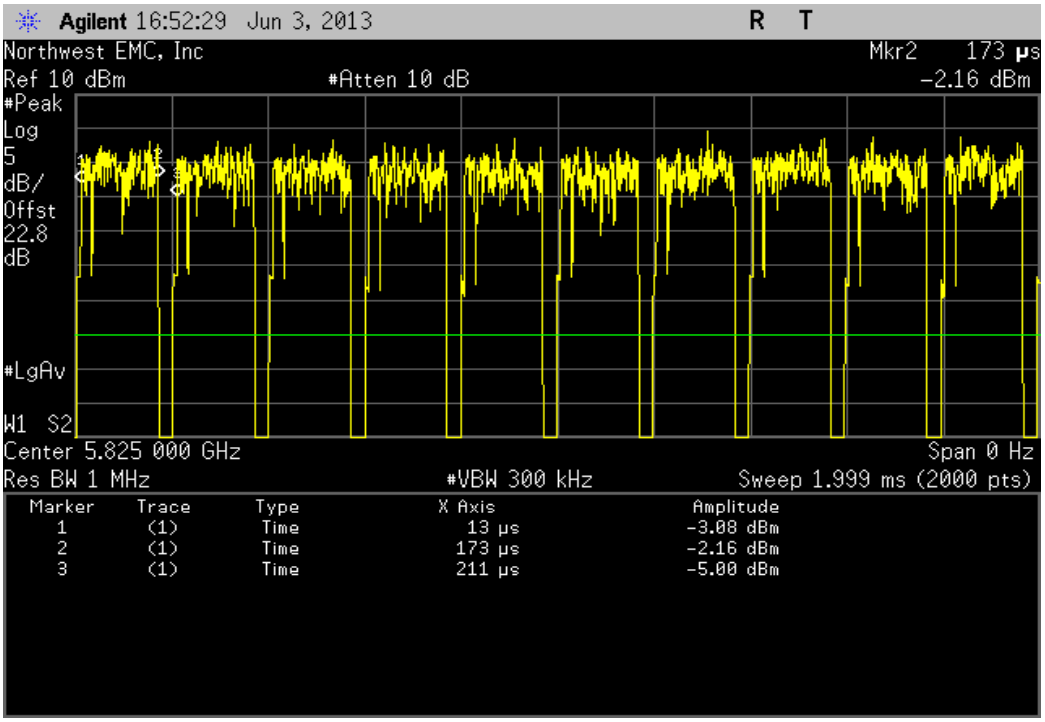


5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Mid Channel 157, 5785 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

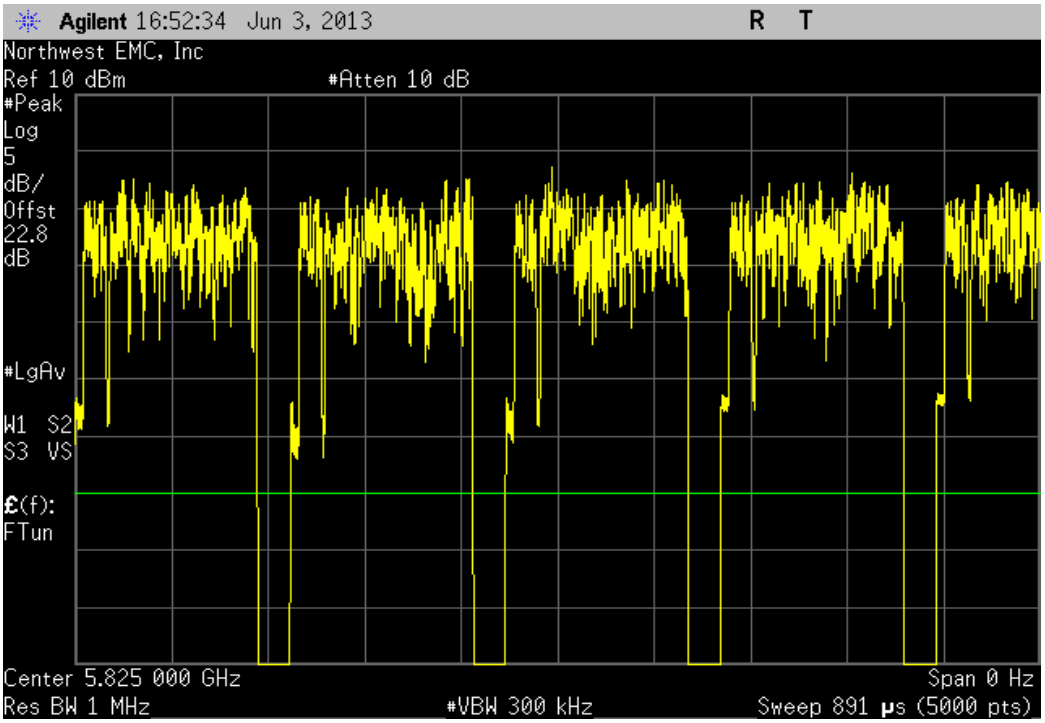


Duty Cycle

5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	160 uS	198 uS	1	80.8	N/A	N/A



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



Occupied Bandwidth

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	4/12/2013	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	10/5/2012	12
Signal Generator MXG	Agilent	N5183A	TIK	6/7/2012	36
Spectrum Analyzer	Agilent	E4440A	AAX	5/15/2012	24

TEST DESCRIPTION

The 6dB occupied bandwidth was measured. The 26 dB (99.9%) emission bandwidth (EBW) was also measured at the same time.

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

Occupied Bandwidth

EUT:	37x Torpedo + Wireless SOM -31			**Work Order:**	LGPD0096
Serial Number:	1413M00359			**Date:**	06/03/13
Customer:	Logic PD, Inc.			**Temperature:**	23.1°C
Attendees:	None			**Humidity:**	39%
Project:	None			**Barometric Pres.:**	1015.6
Tested by:	Trevor Buls	**Power:**	110VAC/60Hz	**Job Site:**	MN08

TEST SPECIFICATIONS	Test Method
FCC 15.247:2013	ANSI C63.10:2009

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

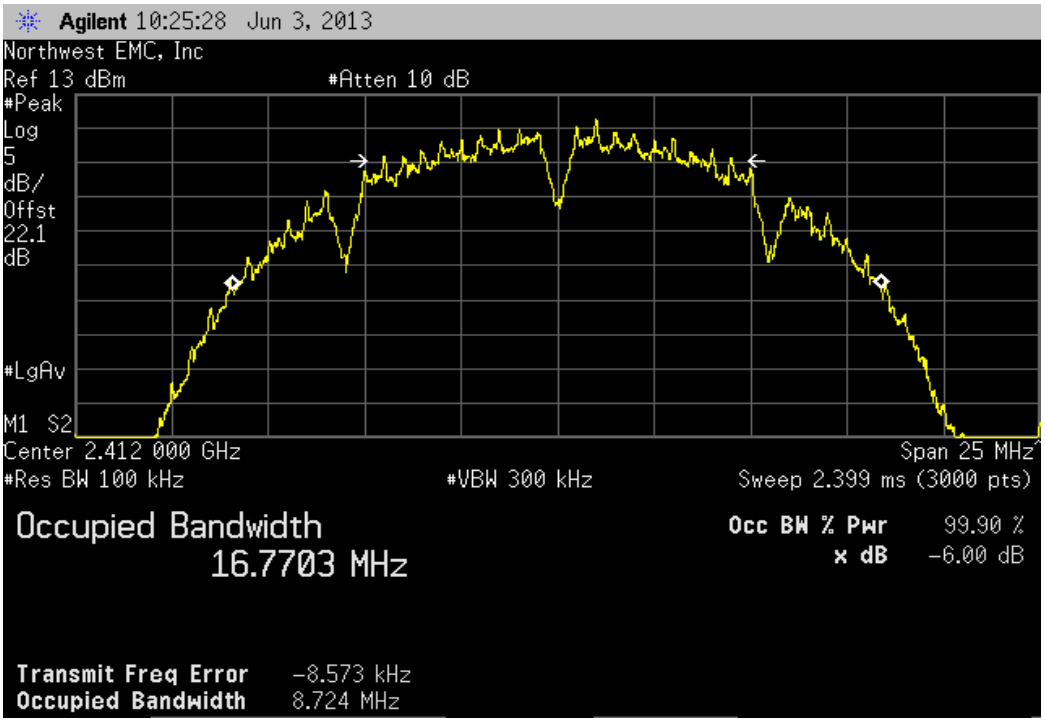
None

Configuration #	1	Signature	Trevor Buls

	Value	Limit	Result
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz	8.724 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	9.24 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	9.673 MHz	> 500 kHz	Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz	9.257 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	9.168 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	9.682 MHz	> 500 kHz	Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz	12.596 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	16.118 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	16.296 MHz	> 500 kHz	Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz	16.431 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	16.466 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	16.484 MHz	> 500 kHz	Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz	16.402 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	16.456 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	16.485 MHz	> 500 kHz	Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz	17.532 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	14.671 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	12.236 MHz	> 500 kHz	Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz	17.728 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	17.71 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	17.693 MHz	> 500 kHz	Pass
5725 MHz - 5850 MHz Band			
802.11(a) 6 Mbps			
Low Channel 149, 5745 MHz	16.298 MHz	> 500 kHz	Pass
Mid Channel 157, 5785 MHz	16.301 MHz	> 500 kHz	Pass
High Channel 165, 5825 MHz	16.292 MHz	> 500 kHz	Pass
802.11(a) 36 Mbps			
Low Channel 149, 5745 MHz	16.504 MHz	> 500 kHz	Pass
Mid Channel 157, 5785 MHz	16.558 MHz	> 500 kHz	Pass
High Channel 165, 5825 MHz	16.449 MHz	> 500 kHz	Pass
802.11(a) 54 Mbps			
Low Channel 149, 5745 MHz	16.466 MHz	> 500 kHz	Pass
Mid Channel 157, 5785 MHz	16.486 MHz	> 500 kHz	Pass
High Channel 165, 5825 MHz	16.495 MHz	> 500 kHz	Pass
802.11(n) MCS0 - UNII			
Low Channel 149, 5745 MHz	17.539 MHz	> 500 kHz	Pass
Mid Channel 157, 5785 MHz	17.547 MHz	> 500 kHz	Pass
High Channel 165, 5825 MHz	17.513 MHz	> 500 kHz	Pass
802.11(n) MCS7 - UNII			
Low Channel 149, 5745 MHz	17.684 MHz	> 500 kHz	Pass
Mid Channel 157, 5785 MHz	17.735 MHz	> 500 kHz	Pass
High Channel 165, 5825 MHz	17.713 MHz	> 500 kHz	Pass

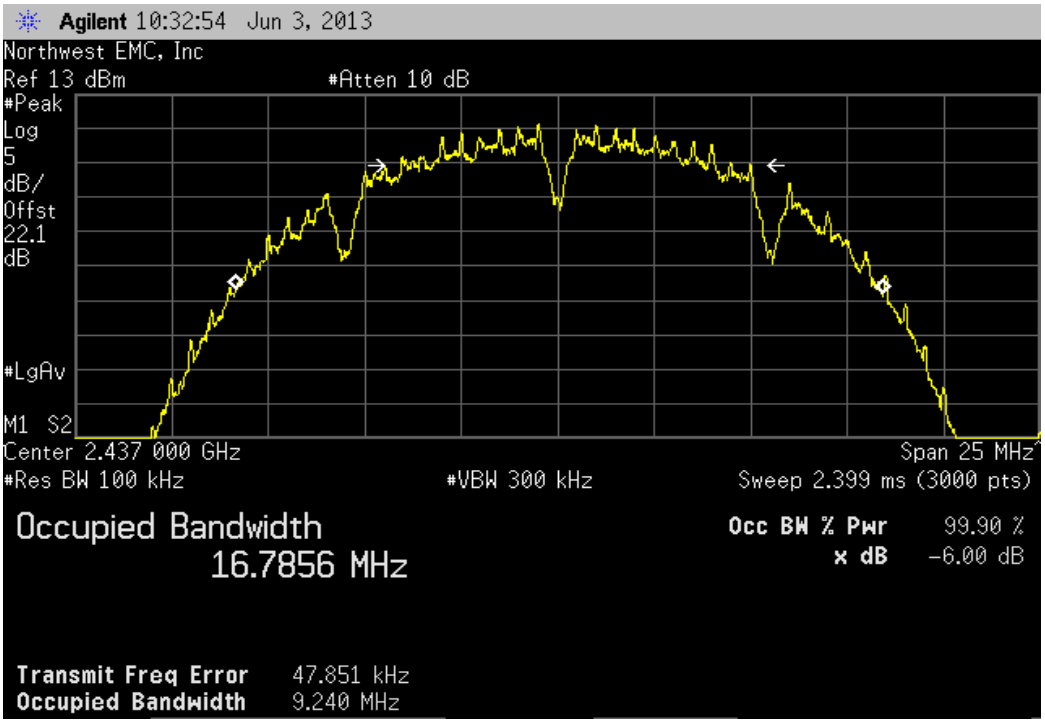
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				8.724 MHz	> 500 kHz	Pass

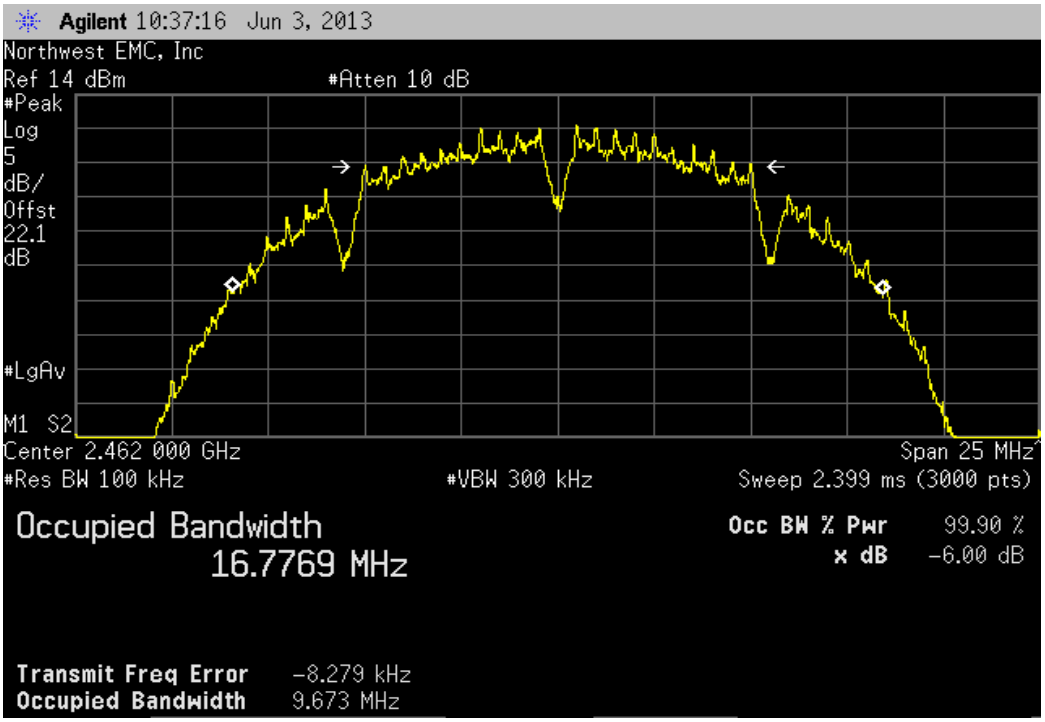


2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz

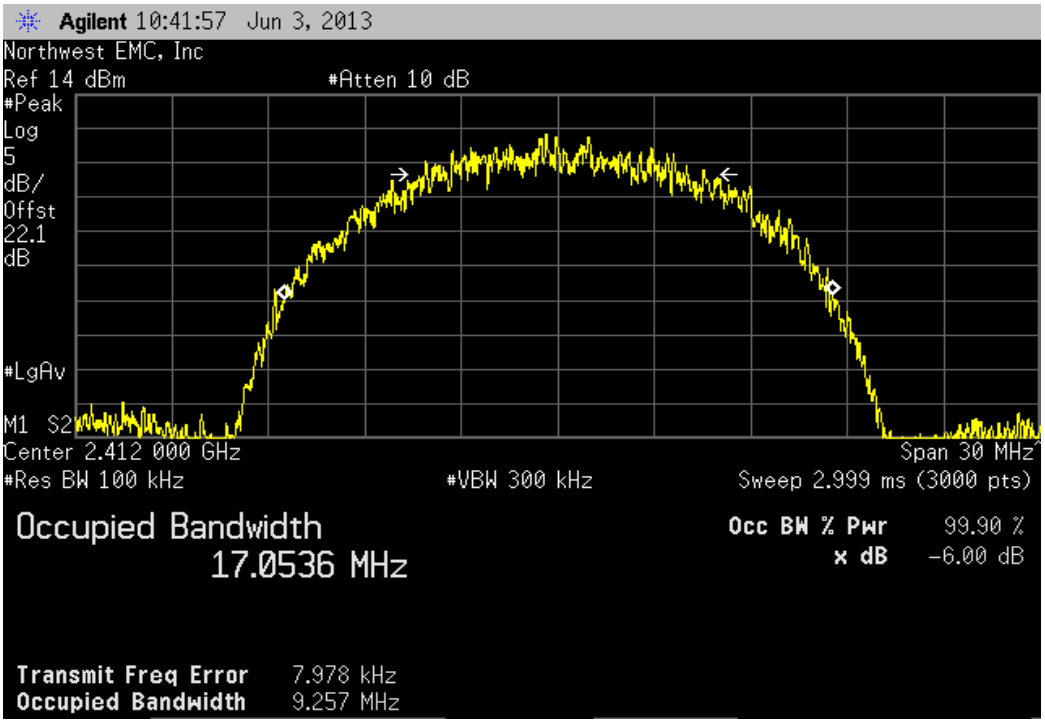
				Value	Limit	Result
				9.24 MHz	> 500 kHz	Pass



2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
				Value	Limit	Result
				9.673 MHz	> 500 kHz	Pass

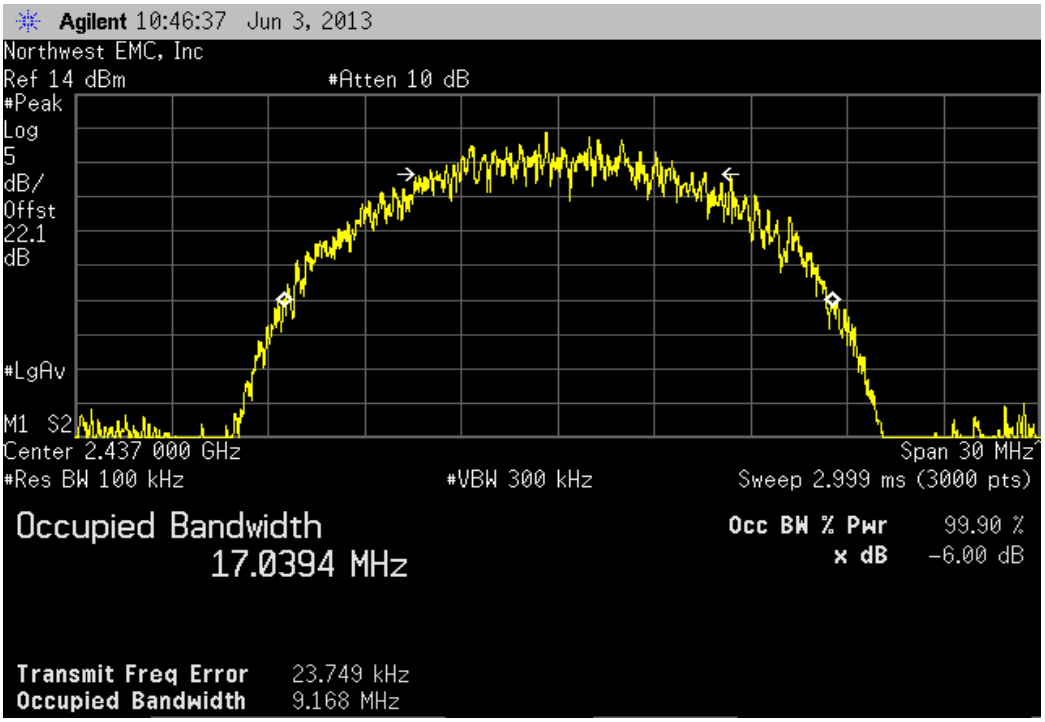


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				9.257 MHz	> 500 kHz	Pass



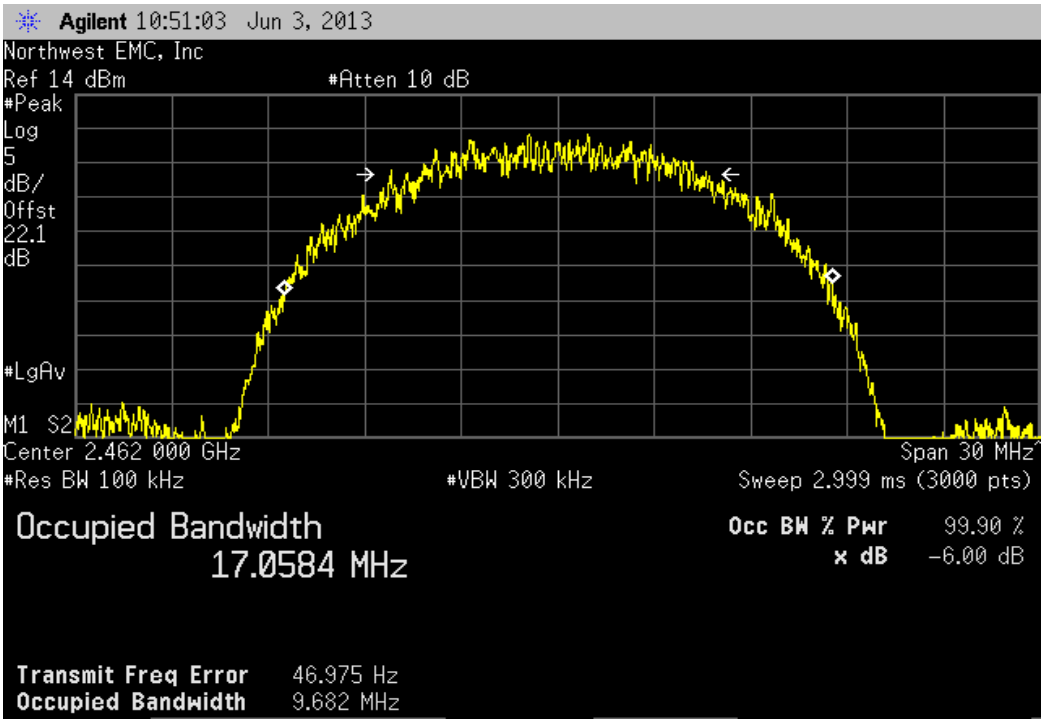
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				9.168 MHz	> 500 kHz	Pass



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

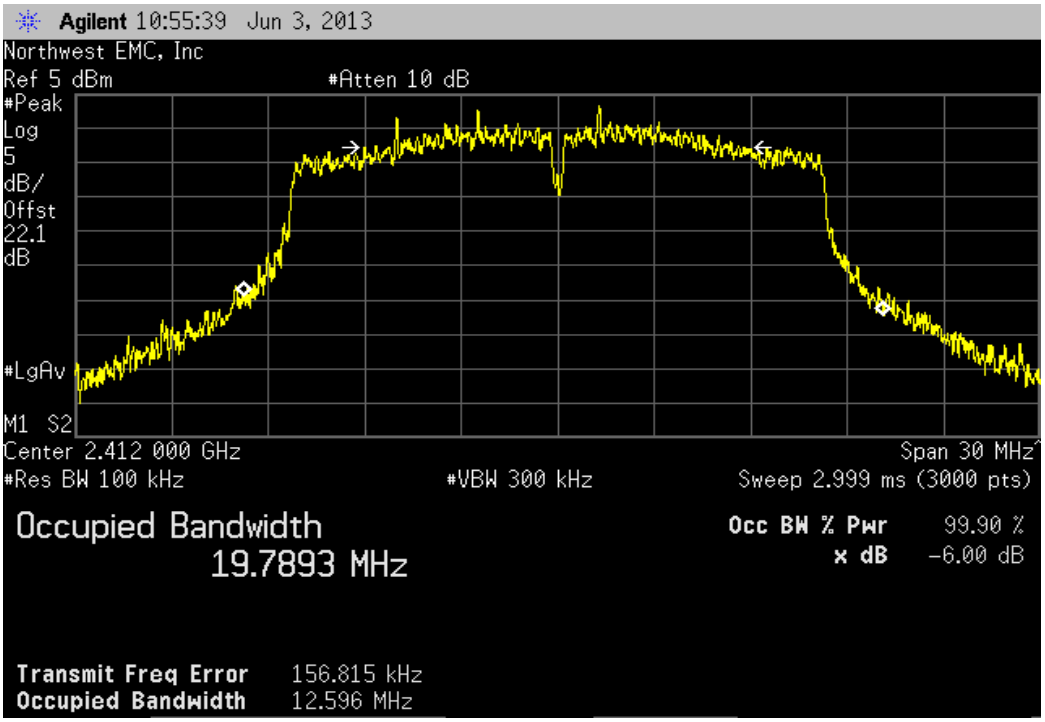
				Value	Limit	Result
				9.682 MHz	> 500 kHz	Pass



Occupied Bandwidth

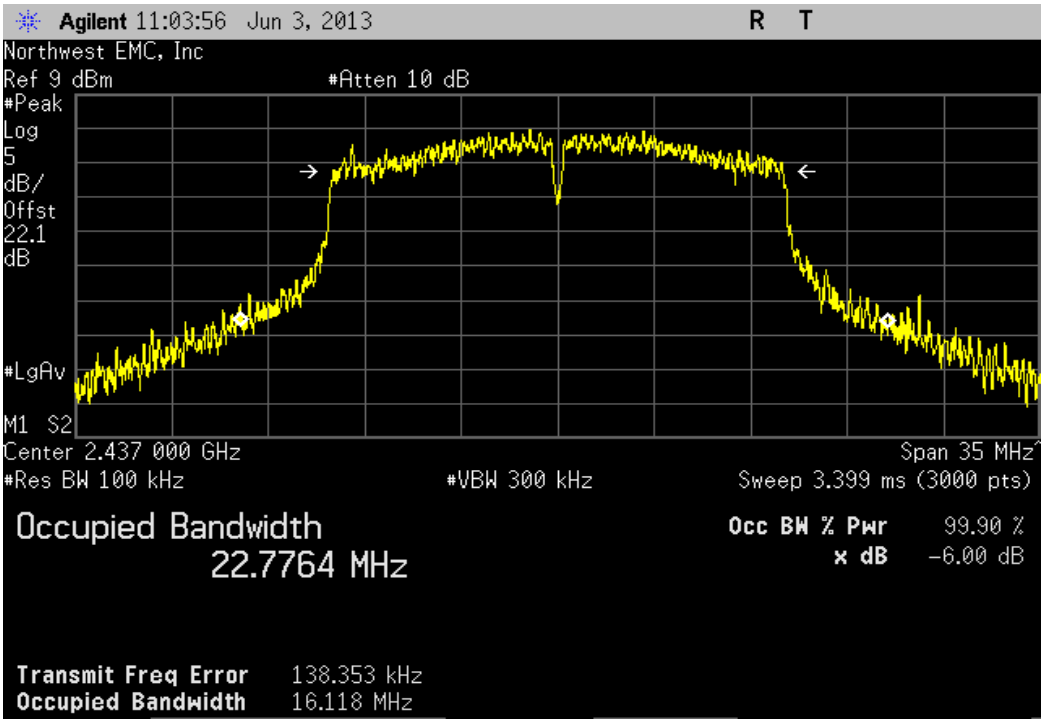
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				12.596 MHz	> 500 kHz	Pass



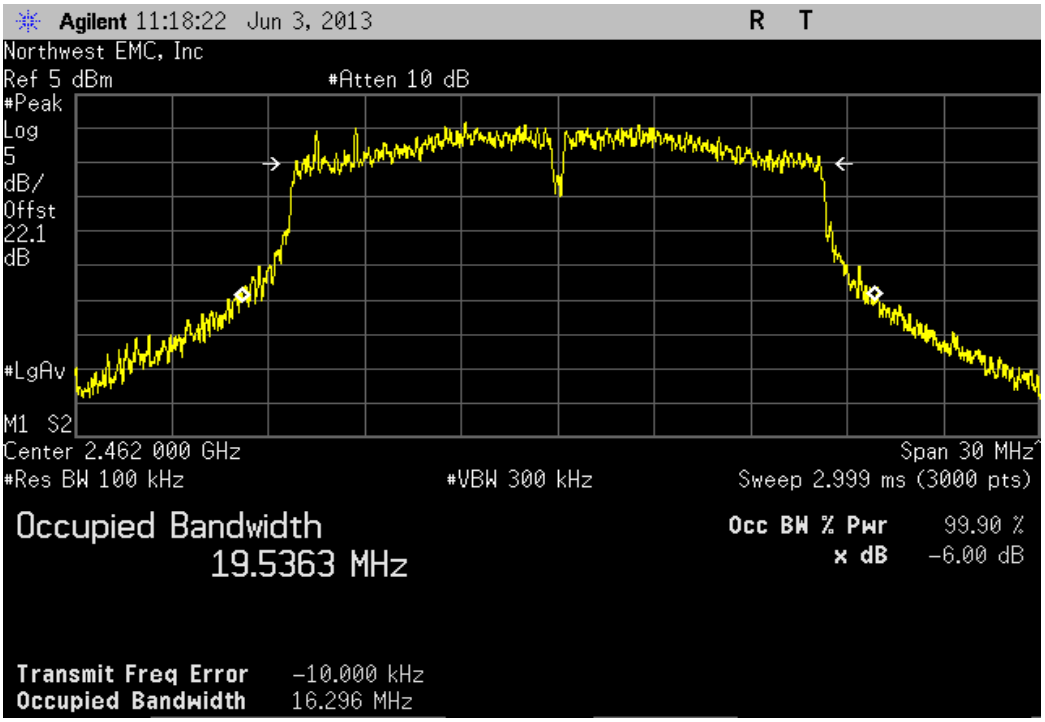
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				16.118 MHz	> 500 kHz	Pass



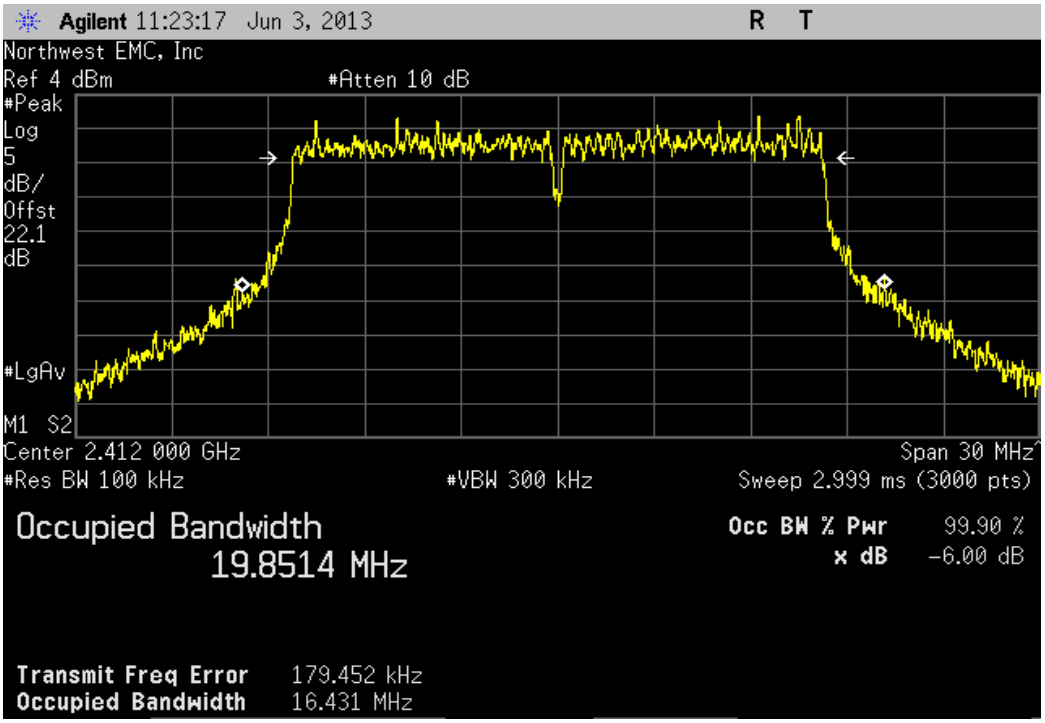
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				16.296 MHz	> 500 kHz	Pass



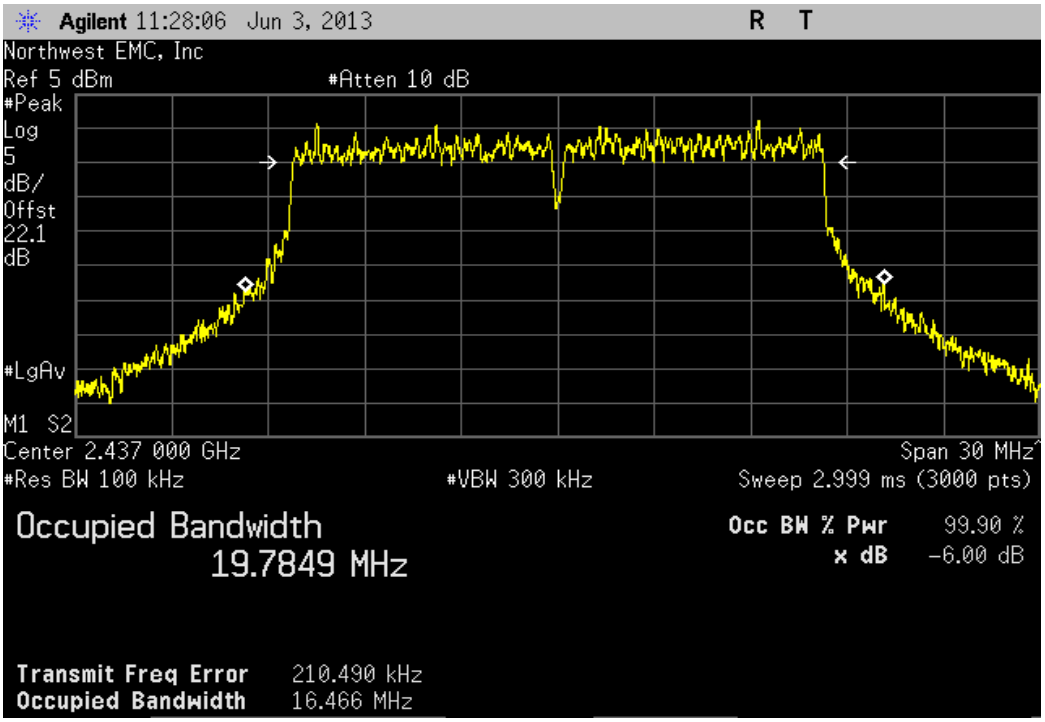
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				16.431 MHz	> 500 kHz	Pass



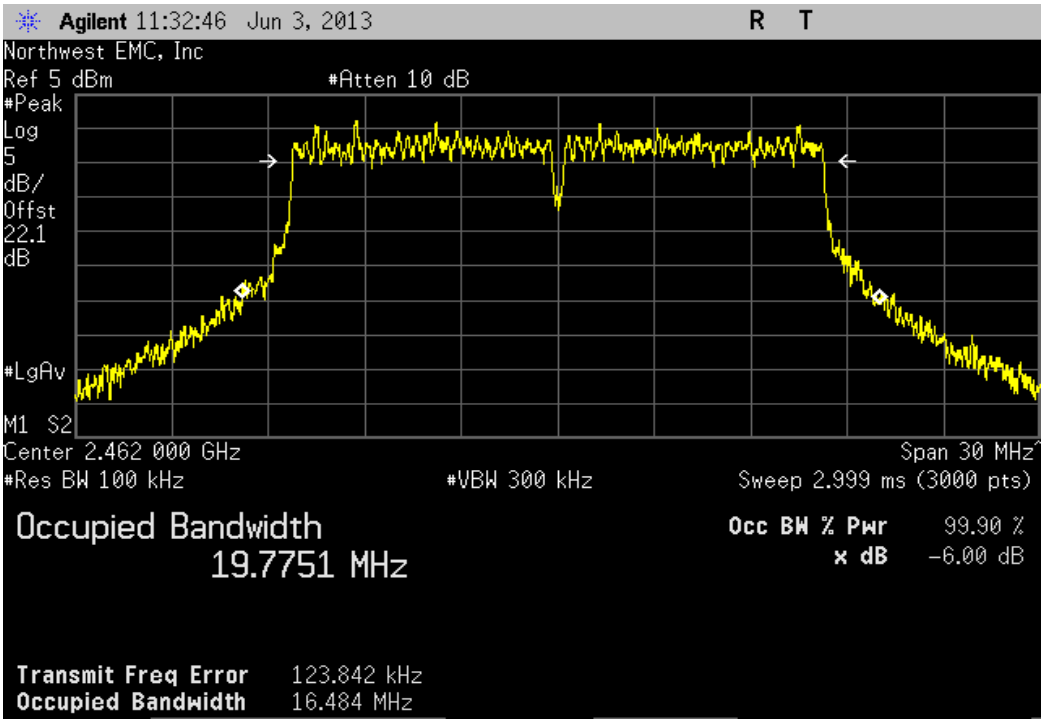
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				16.466 MHz	> 500 kHz	Pass



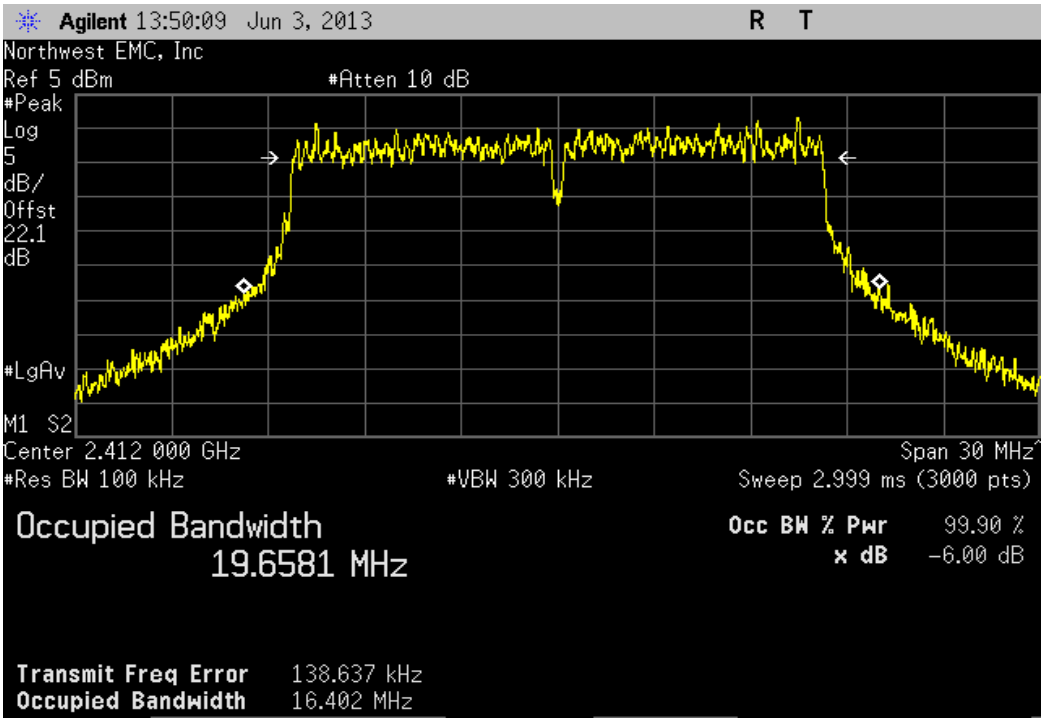
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				16.484 MHz	> 500 kHz	Pass



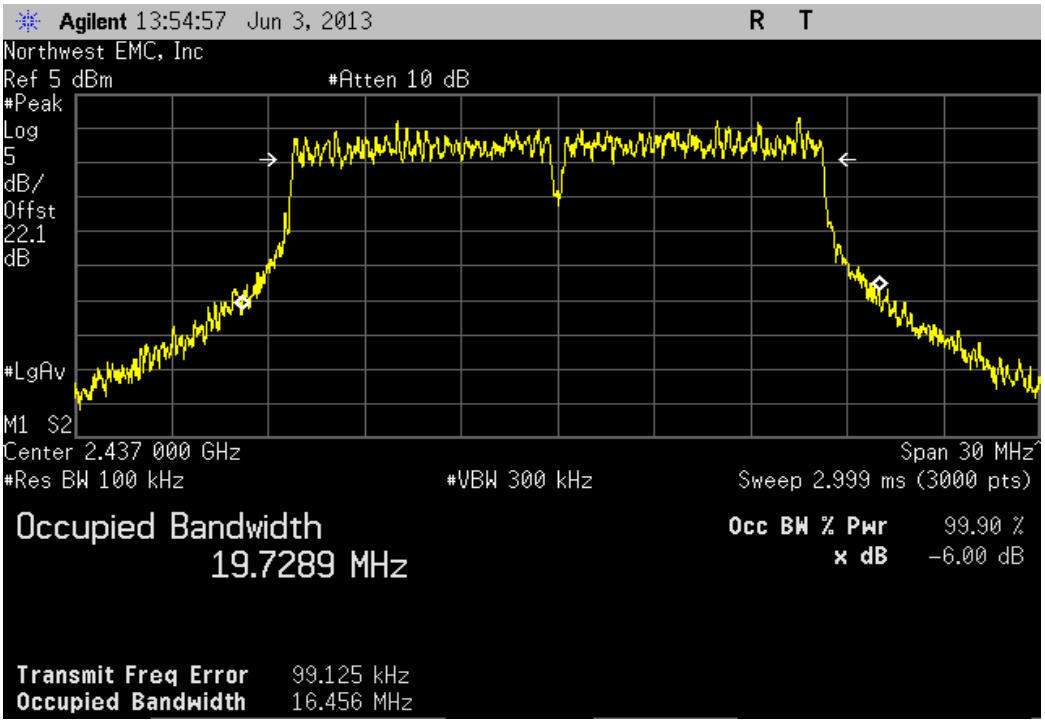
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				16.402 MHz	> 500 kHz	Pass



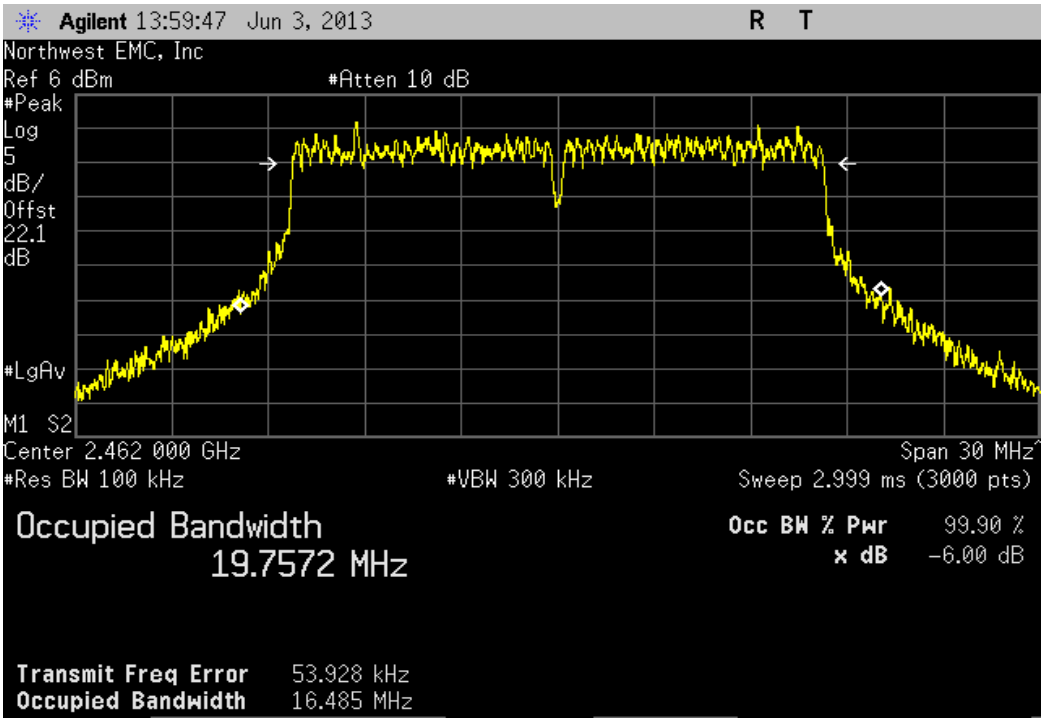
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				16.456 MHz	> 500 kHz	Pass



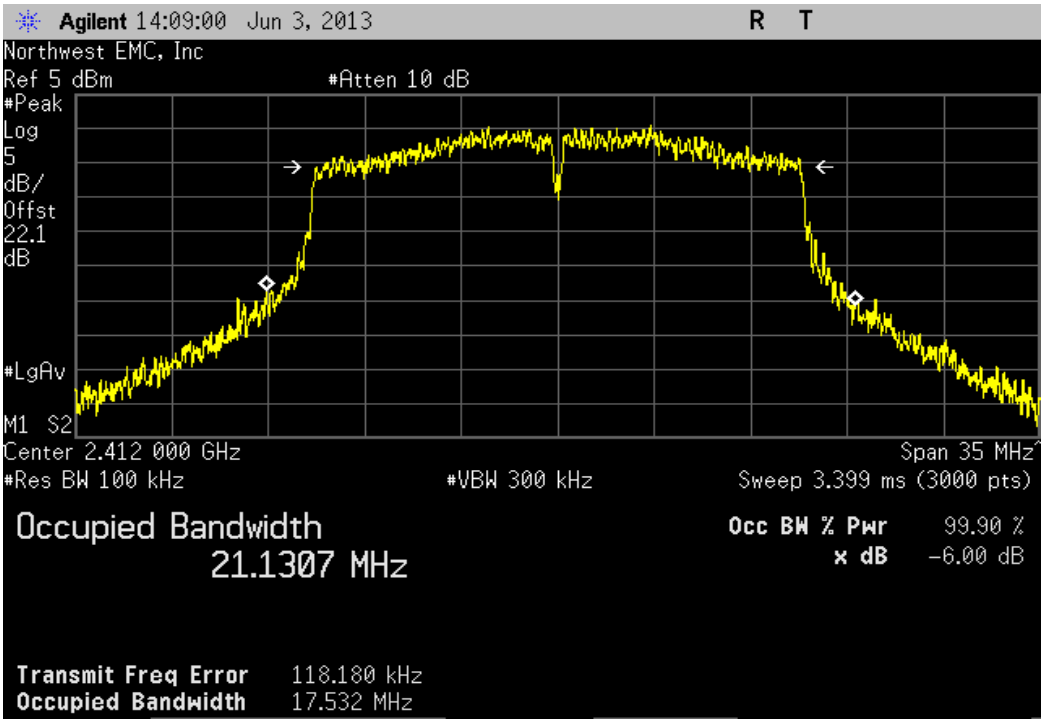
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				16.485 MHz	> 500 kHz	Pass



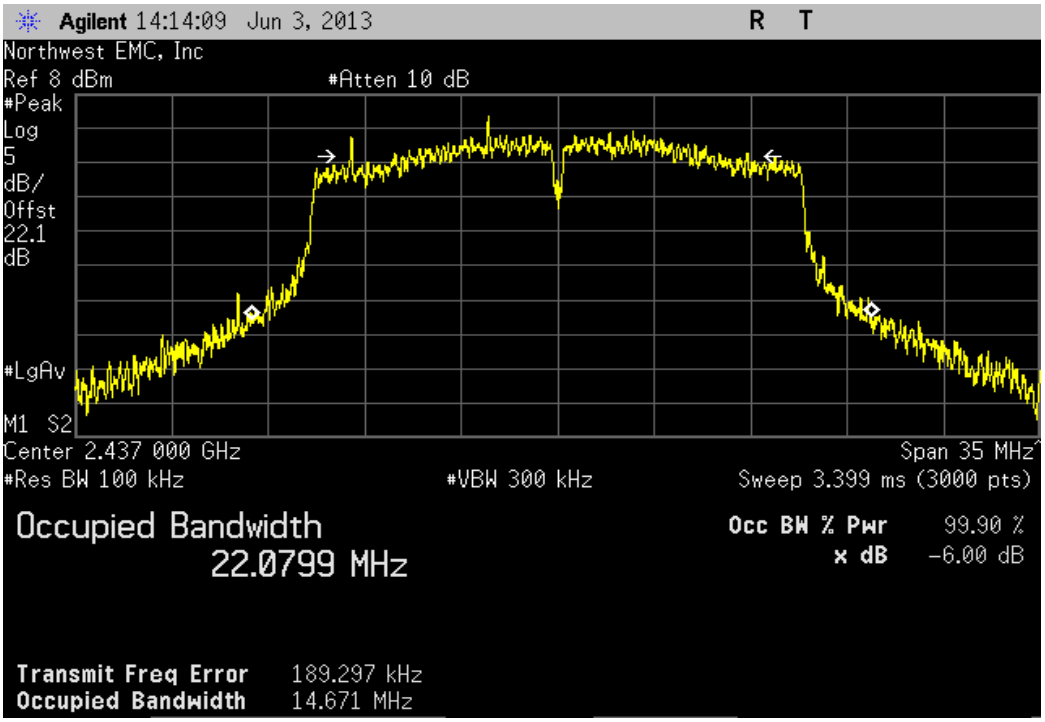
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz

				Value	Limit	Result
				17.532 MHz	> 500 kHz	Pass



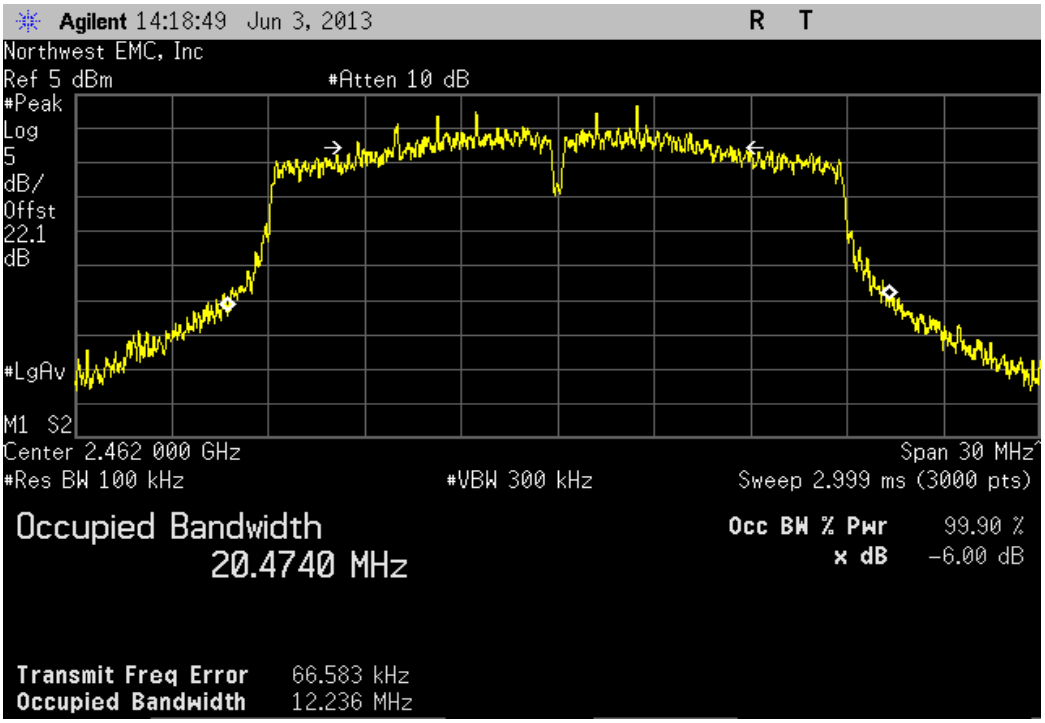
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				14.671 MHz	> 500 kHz	Pass

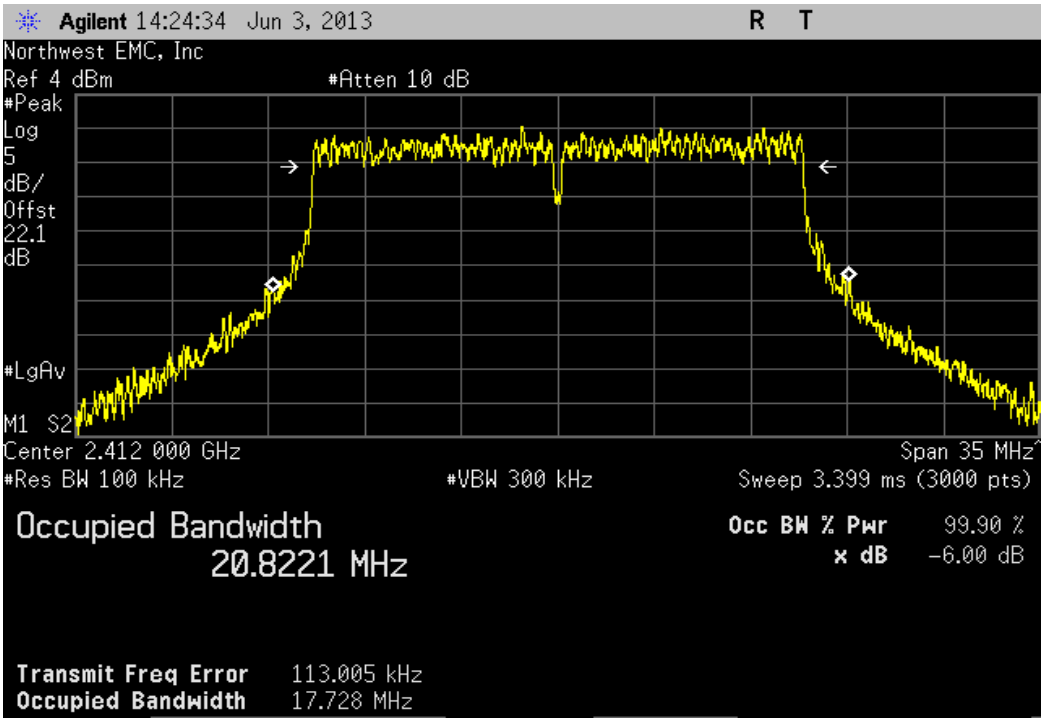


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz

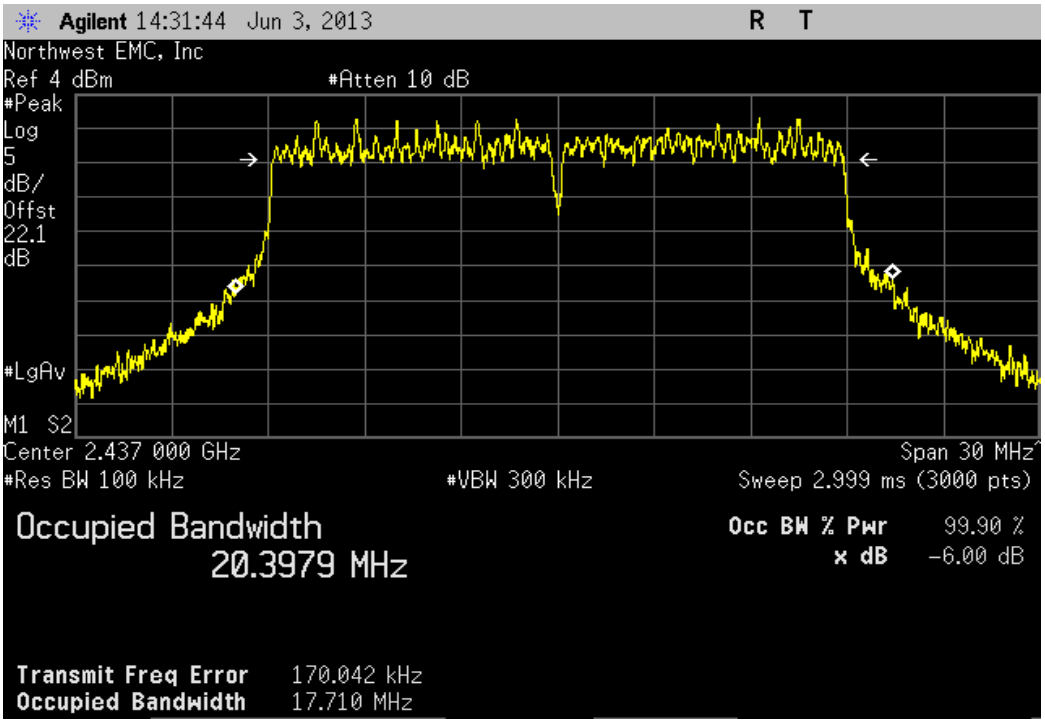
				Value	Limit	Result
				12.236 MHz	> 500 kHz	Pass



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				17.728 MHz	> 500 kHz	Pass

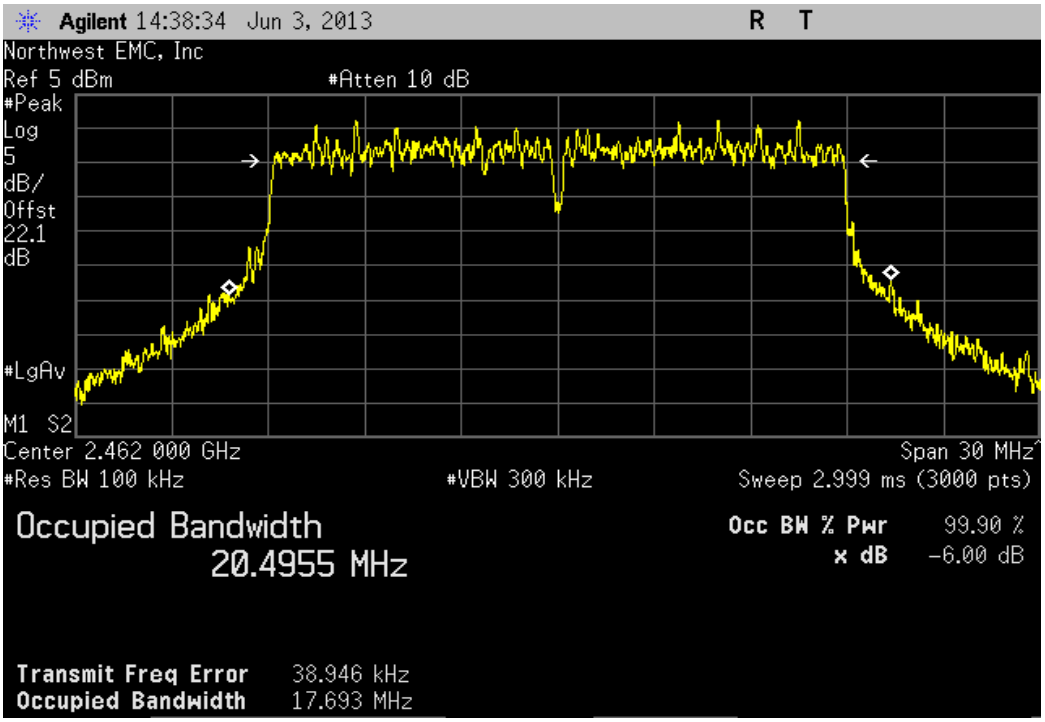


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				17.71 MHz	> 500 kHz	Pass



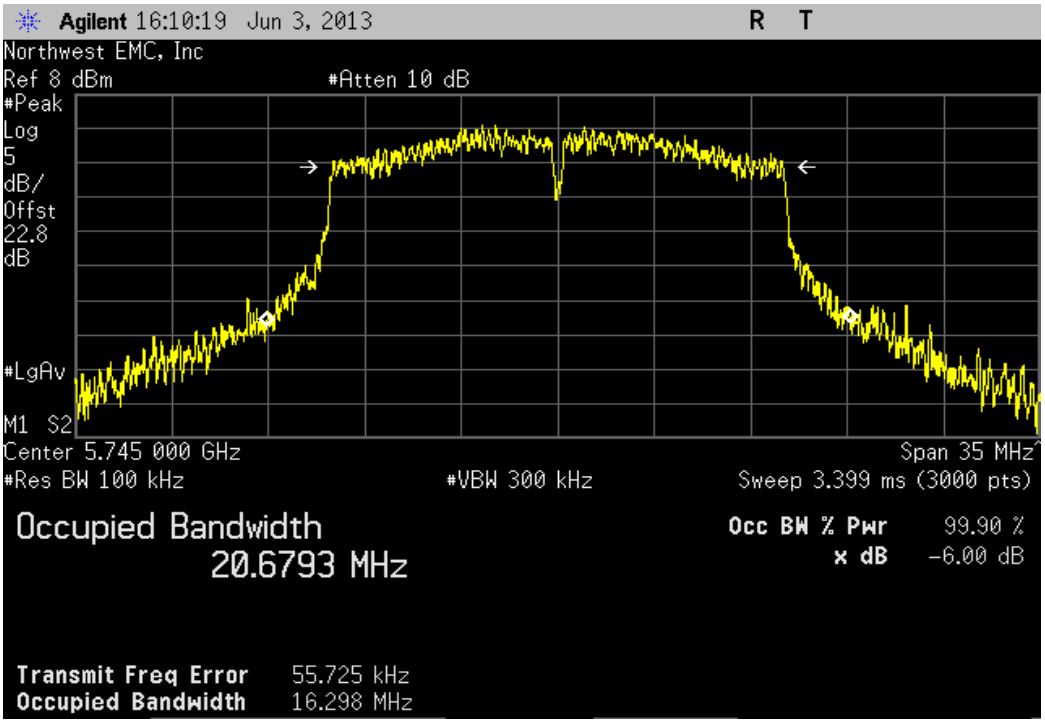
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz

				Value	Limit	Result
				17.693 MHz	> 500 kHz	Pass



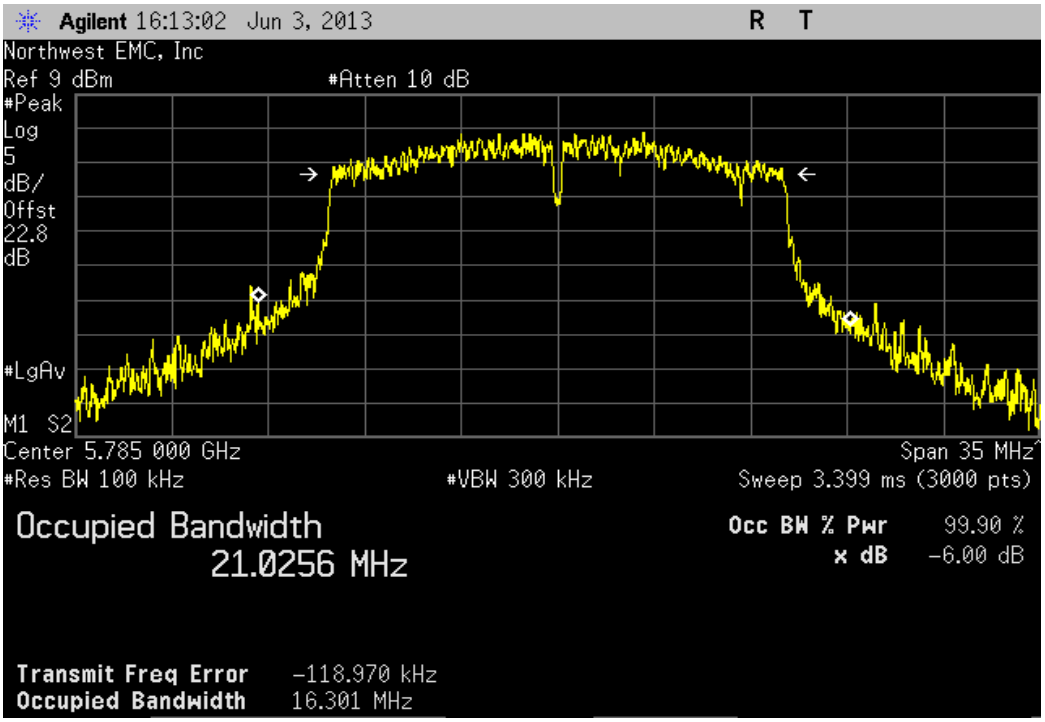
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz

				Value	Limit	Result
				16.298 MHz	> 500 kHz	Pass



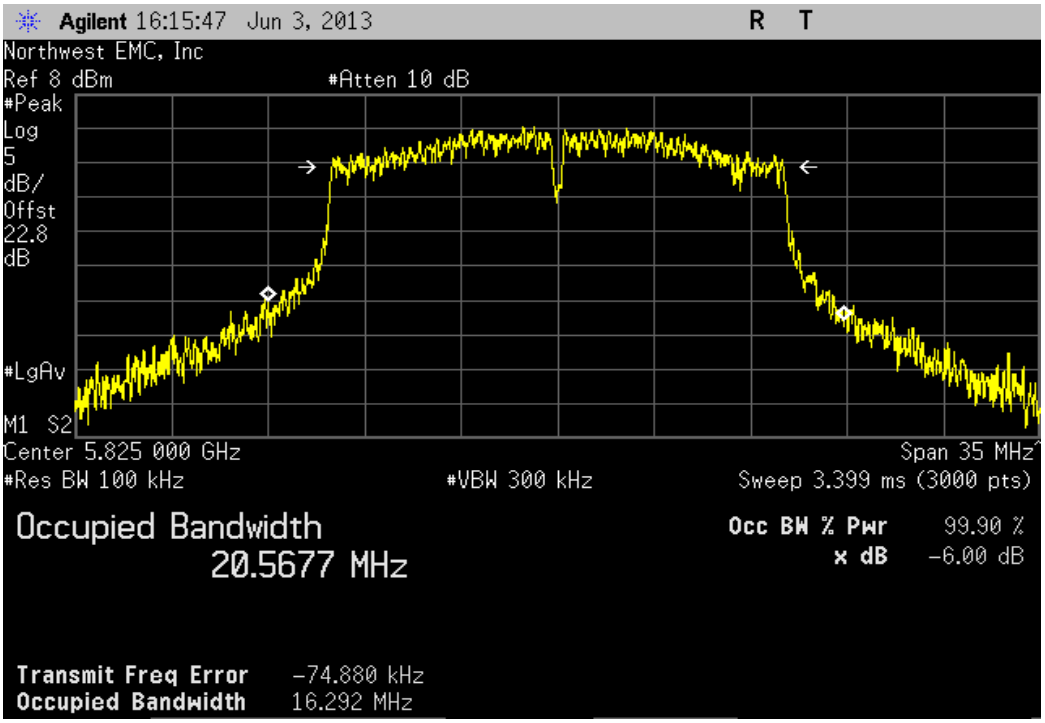
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz

				Value	Limit	Result
				16.301 MHz	> 500 kHz	Pass

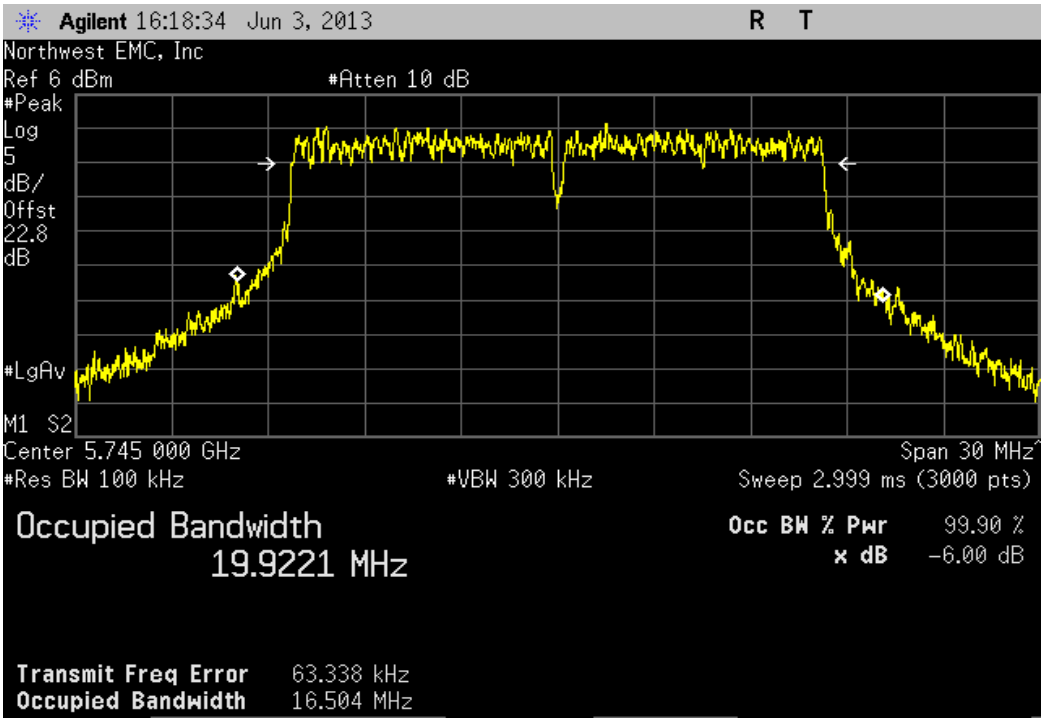


5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz

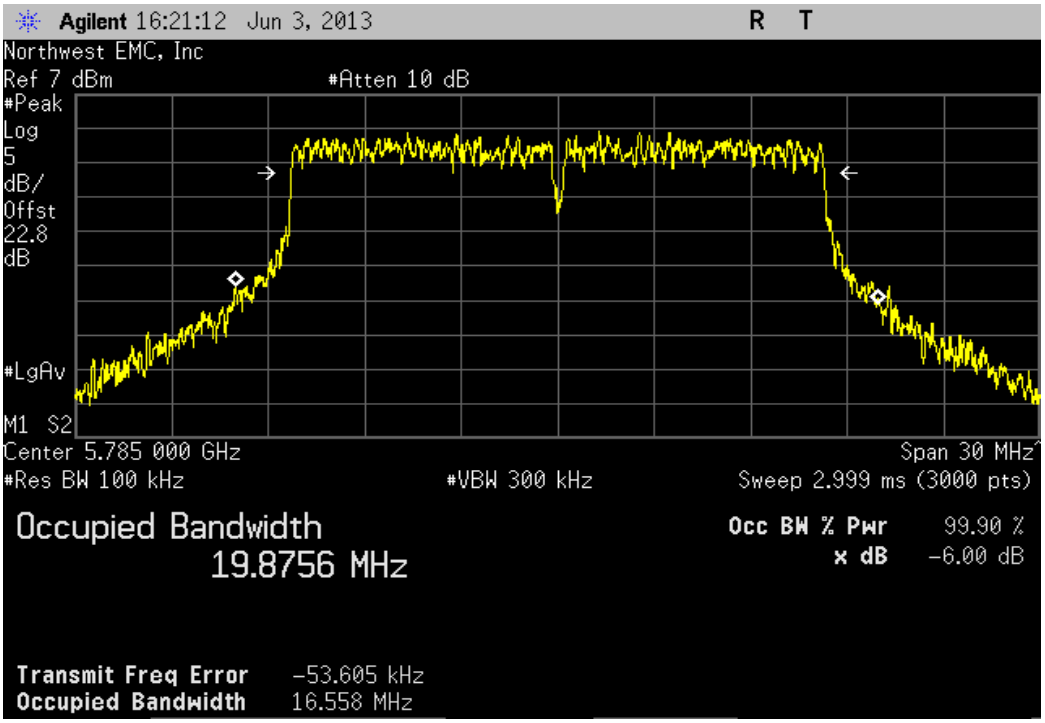
				Value	Limit	Result
				16.292 MHz	> 500 kHz	Pass



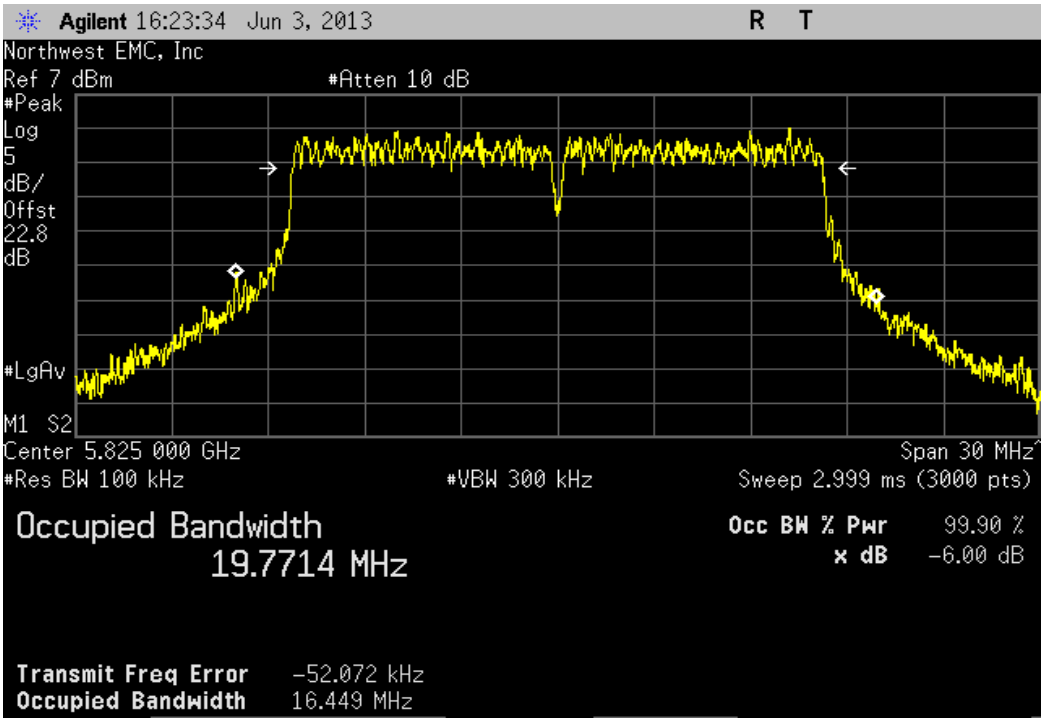
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz						
				Value	Limit	Result
				16.504 MHz	> 500 kHz	Pass



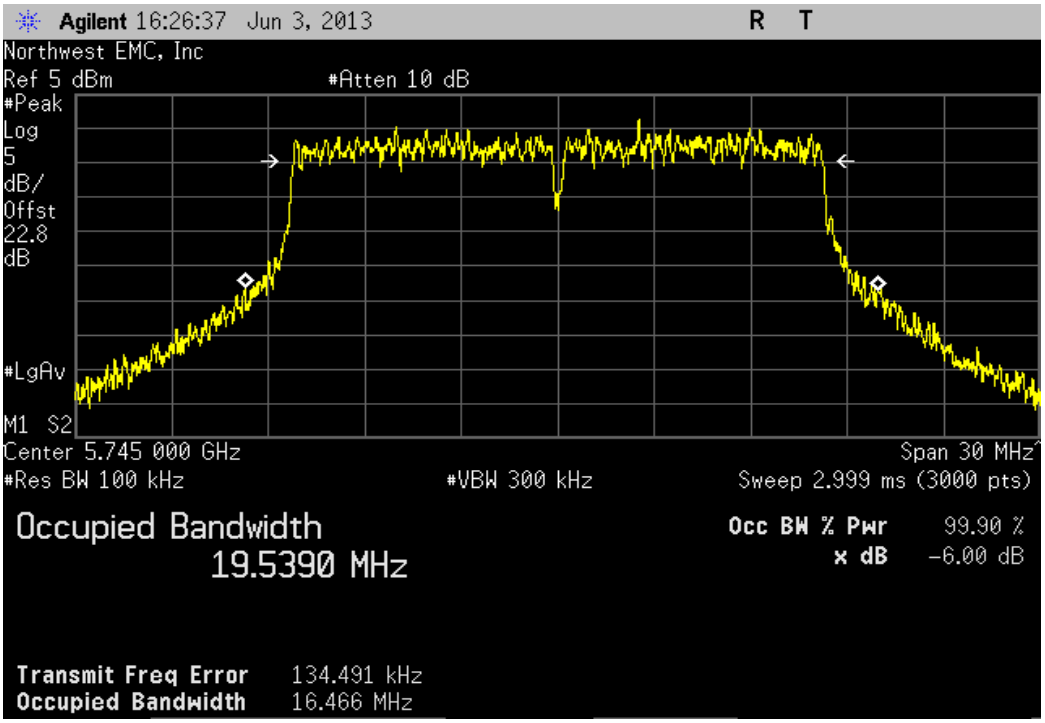
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz						
				Value	Limit	Result
				16.558 MHz	> 500 kHz	Pass



5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz						
				Value	Limit	Result
				16.449 MHz	> 500 kHz	Pass

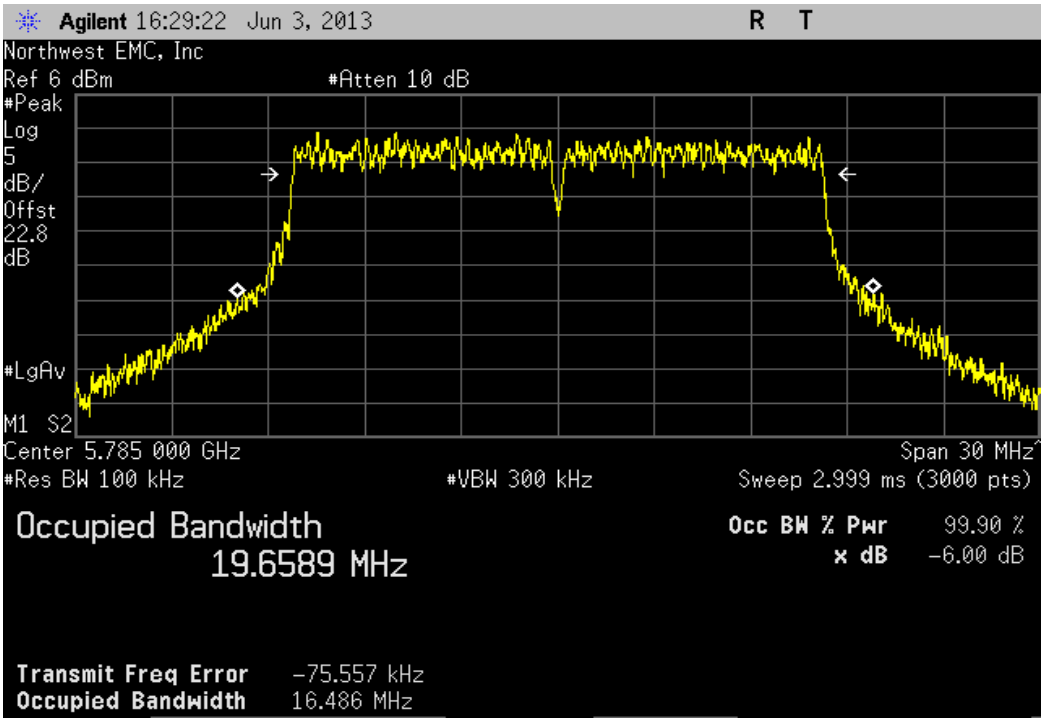


5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz						
				Value	Limit	Result
				16.466 MHz	> 500 kHz	Pass



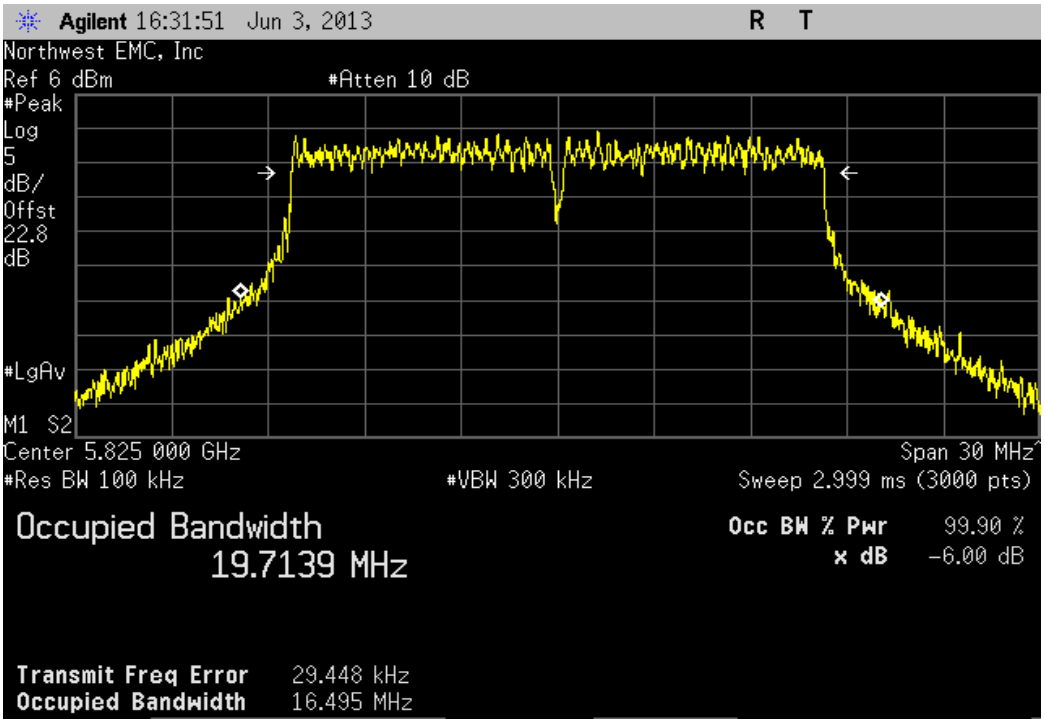
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz

				Value	Limit	Result
				16.486 MHz	> 500 kHz	Pass



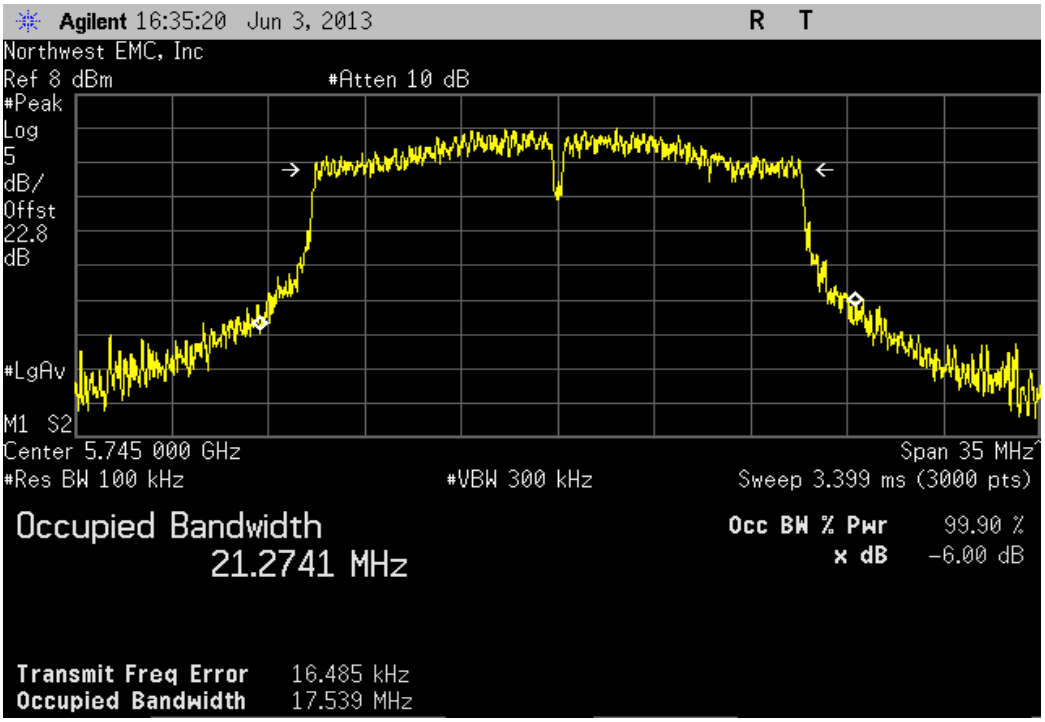
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz

				Value	Limit	Result
				16.495 MHz	> 500 kHz	Pass



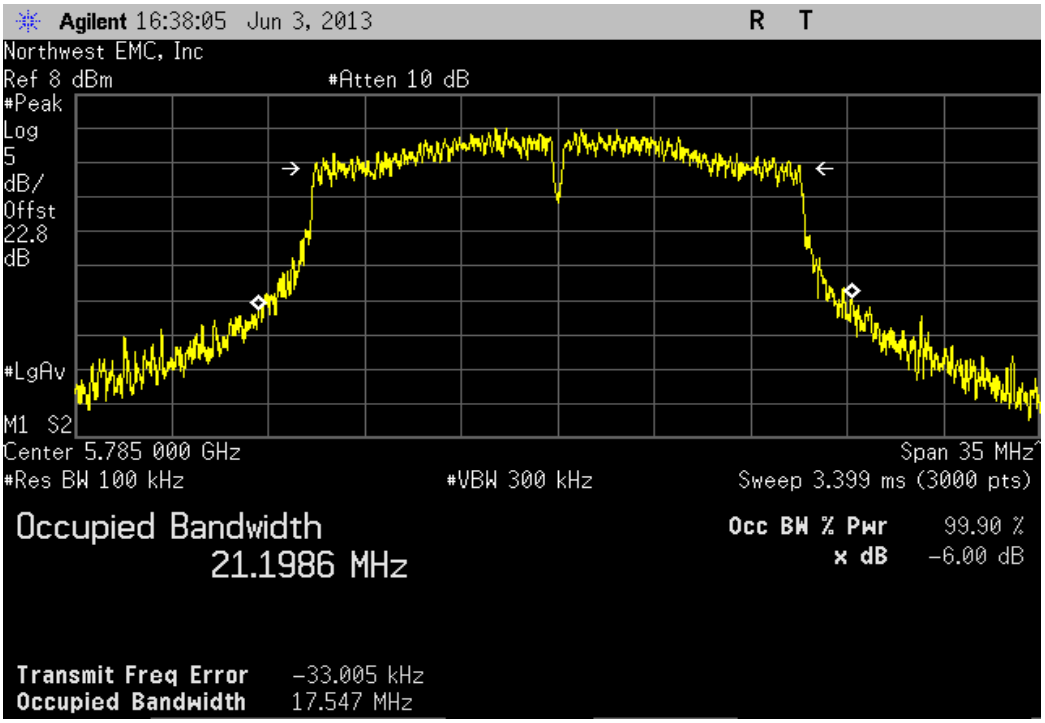
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz

				Value	Limit	Result
				17.539 MHz	> 500 kHz	Pass



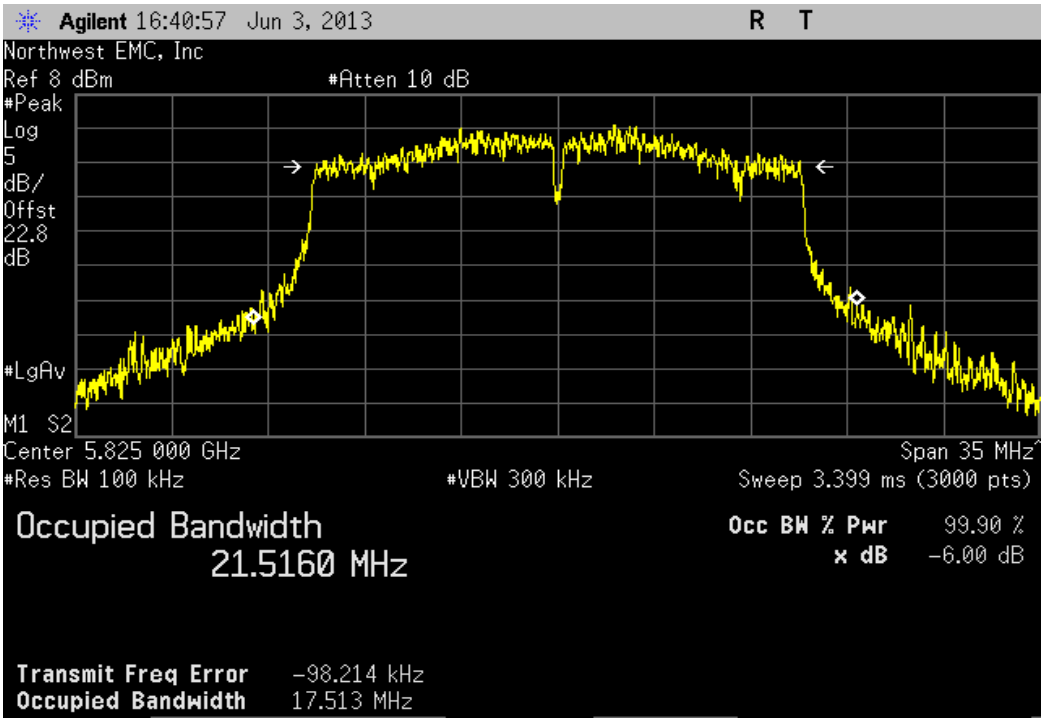
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz

				Value	Limit	Result
				17.547 MHz	> 500 kHz	Pass



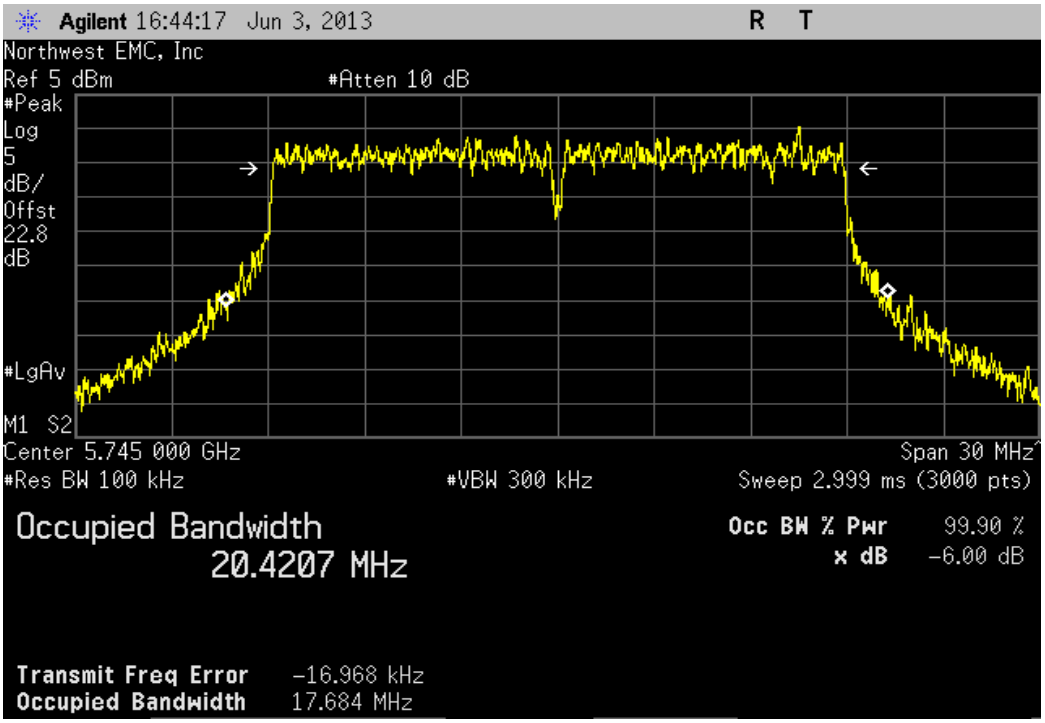
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz

				Value	Limit	Result
				17.513 MHz	> 500 kHz	Pass

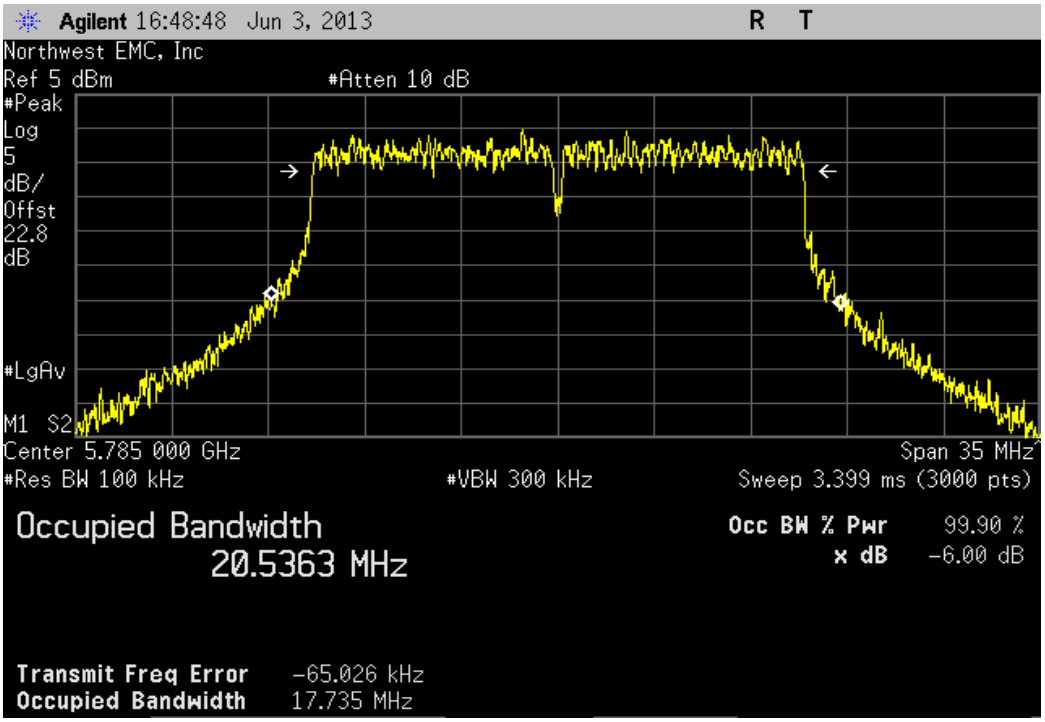


5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz

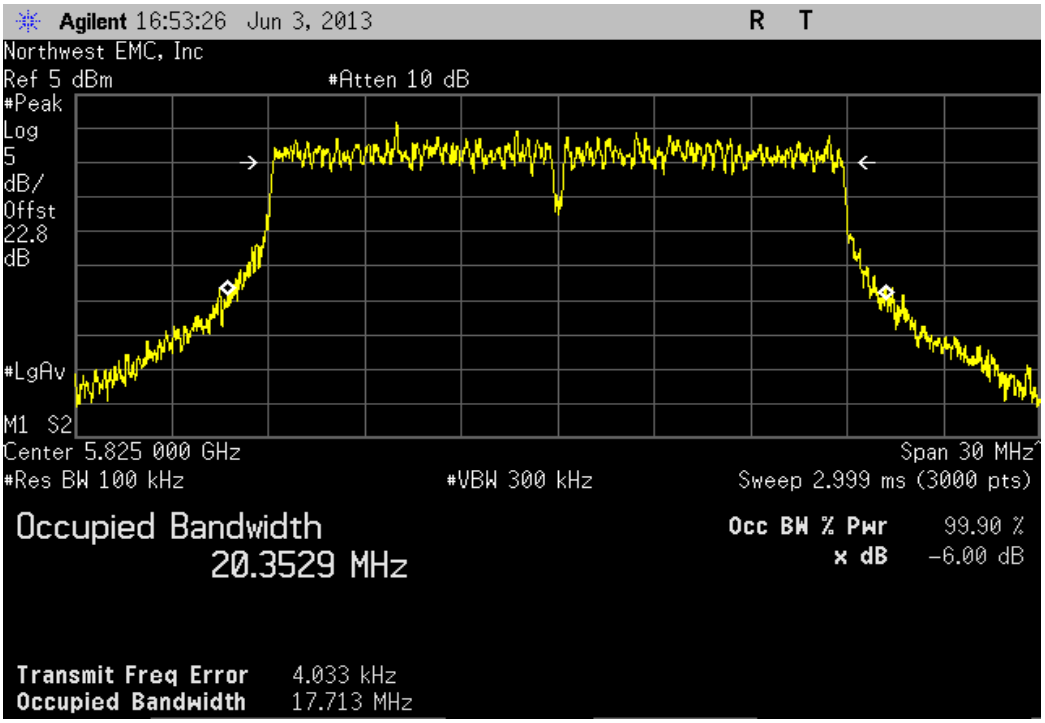
				Value	Limit	Result
				17.684 MHz	> 500 kHz	Pass



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Mid Channel 157, 5785 MHz						
				Value	Limit	Result
				17.735 MHz	> 500 kHz	Pass



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz						
				Value	Limit	Result
				17.713 MHz	> 500 kHz	Pass



Output Power

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	4/12/2013	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	10/5/2012	12
Signal Generator MXG	Agilent	N5183A	TIK	6/7/2012	36
Spectrum Analyzer	Agilent	E4440A	AAX	5/15/2012	24

TEST DESCRIPTION

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

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

Method PK2 found in KDB 558074 DTS D01 Measurement Section 5.2.1.2 was used because 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.
Peak detector mode
Power was integrated across “B”, by using the channel power function of the analyzer.

Output Power

EUT:	37x Torpedo + Wireless SOM -31	**Work Order:**	LGPD0096
Serial Number:	1413M00359	**Date:**	06/03/13
Customer:	Logic PD, Inc.	**Temperature:**	23.1°C
Attendees:	None	**Humidity:**	39%
Project:	None	**Barometric Pres.:**	1015.6
Tested by:	Trevor Buls	**Power:** 110VAC/60Hz	**Job Site:** MN08

TEST SPECIFICATIONS	Test Method
FCC 15.247:2013	ANSI C63.10:2009

COMMENTS

None

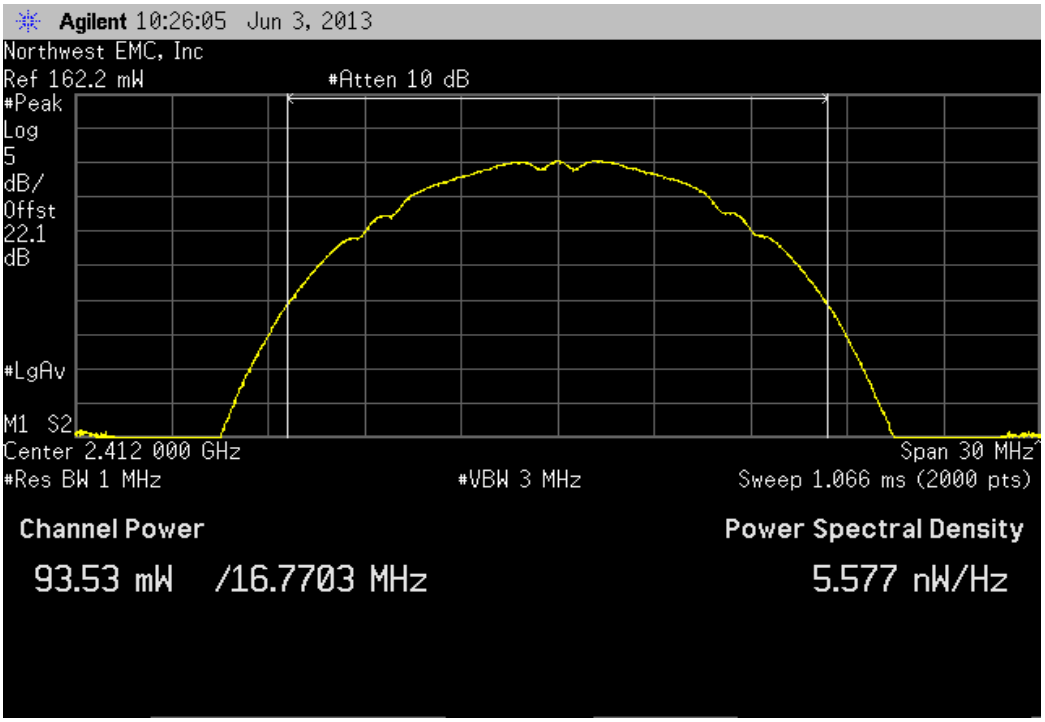
DEVIATIONS FROM TEST STANDARD

None

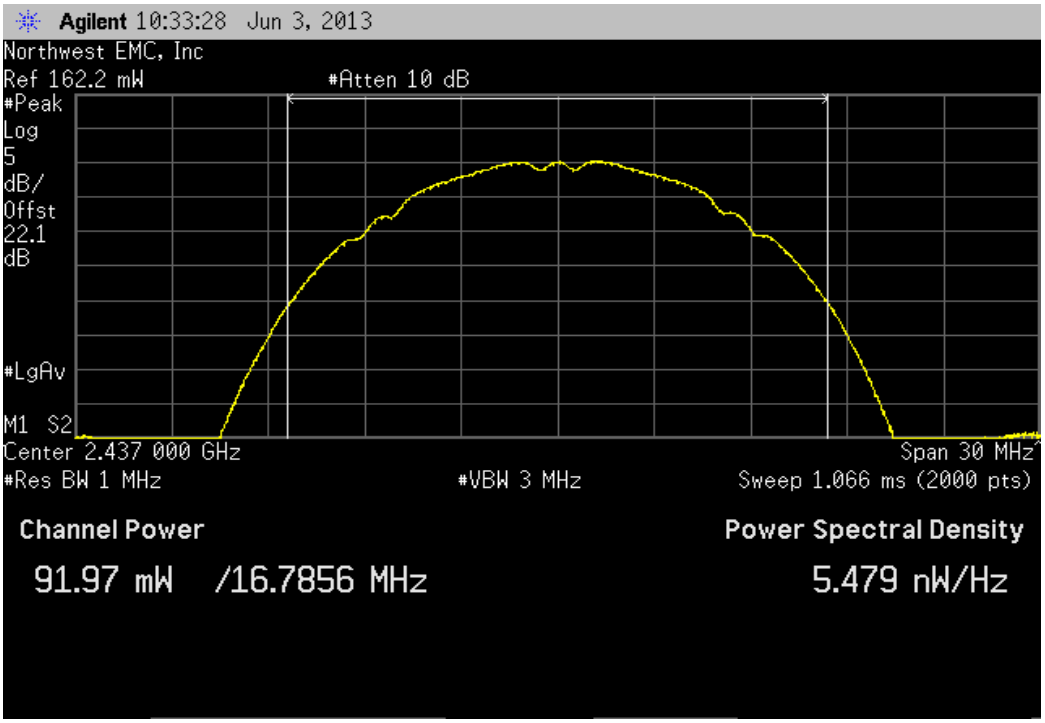
Configuration #	1	Signature	Trevor Buls

	Value	Limit	Result
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz	93.528 mW	< 1 W	Pass
Mid Channel 6, 2437 MHz	91.97 mW	< 1 W	Pass
High Channel 11, 2462 MHz	106.274 mW	< 1 W	Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz	84.114 mW	< 1 W	Pass
Mid Channel 6, 2437 MHz	86.725 mW	< 1 W	Pass
High Channel 11, 2462 MHz	98.558 mW	< 1 W	Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz	35.857 mW	< 1 W	Pass
Mid Channel 6, 2437 MHz	73.778 mW	< 1 W	Pass
High Channel 11, 2462 MHz	34.143 mW	< 1 W	Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz	26.076 mW	< 1 W	Pass
Mid Channel 6, 2437 MHz	27.29 mW	< 1 W	Pass
High Channel 11, 2462 MHz	29.963 mW	< 1 W	Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz	28.822 mW	< 1 W	Pass
Mid Channel 6, 2437 MHz	30.205 mW	< 1 W	Pass
High Channel 11, 2462 MHz	33.344 mW	< 1 W	Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz	35.593 mW	< 1 W	Pass
Mid Channel 6, 2437 MHz	56.158 mW	< 1 W	Pass
High Channel 11, 2462 MHz	32.477 mW	< 1 W	Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz	24.135 mW	< 1 W	Pass
Mid Channel 6, 2437 MHz	24.799 mW	< 1 W	Pass
High Channel 11, 2462 MHz	26.9 mW	< 1 W	Pass
5725 MHz - 5850 MHz Band			
802.11(a) 6 Mbps			
Low Channel 149, 5745 MHz	69.547 mW	< 1 W	Pass
Mid Channel 157, 5785 MHz	71.389 mW	< 1 W	Pass
High Channel 165, 5825 MHz	73.593 mW	< 1 W	Pass
802.11(a) 36 Mbps			
Low Channel 149, 5745 MHz	43.769 mW	< 1 W	Pass
Mid Channel 157, 5785 MHz	45.008 mW	< 1 W	Pass
High Channel 165, 5825 MHz	46.64 mW	< 1 W	Pass
802.11(a) 54 Mbps			
Low Channel 149, 5745 MHz	30.871 mW	< 1 W	Pass
Mid Channel 157, 5785 MHz	32 mW	< 1 W	Pass
High Channel 165, 5825 MHz	32.804 mW	< 1 W	Pass
802.11(n) MCS0 - UNII			
Low Channel 149, 5745 MHz	69.117 mW	< 1 W	Pass
Mid Channel 157, 5785 MHz	68.93 mW	< 1 W	Pass
High Channel 165, 5825 MHz	72.188 mW	< 1 W	Pass
802.11(n) MCS7 - UNII			
Low Channel 149, 5745 MHz	25.748 mW	< 1 W	Pass
Mid Channel 157, 5785 MHz	26.401 mW	< 1 W	Pass
High Channel 165, 5825 MHz	26.591 mW	< 1 W	Pass

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				93.528 mW	< 1 W	Pass

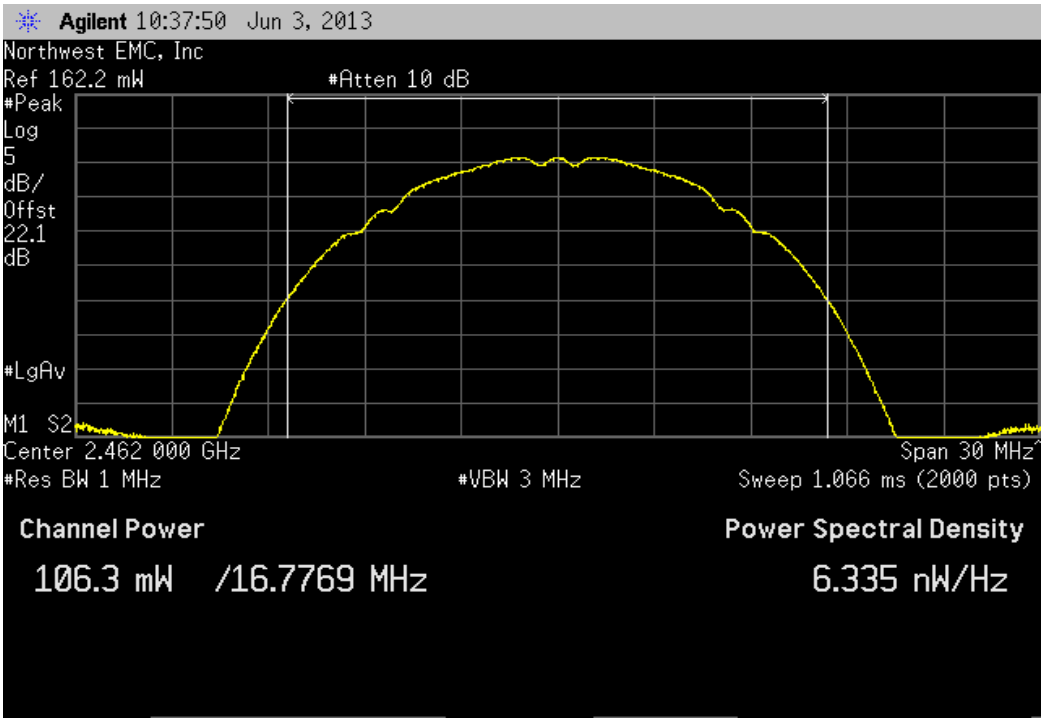


2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				91.97 mW	< 1 W	Pass



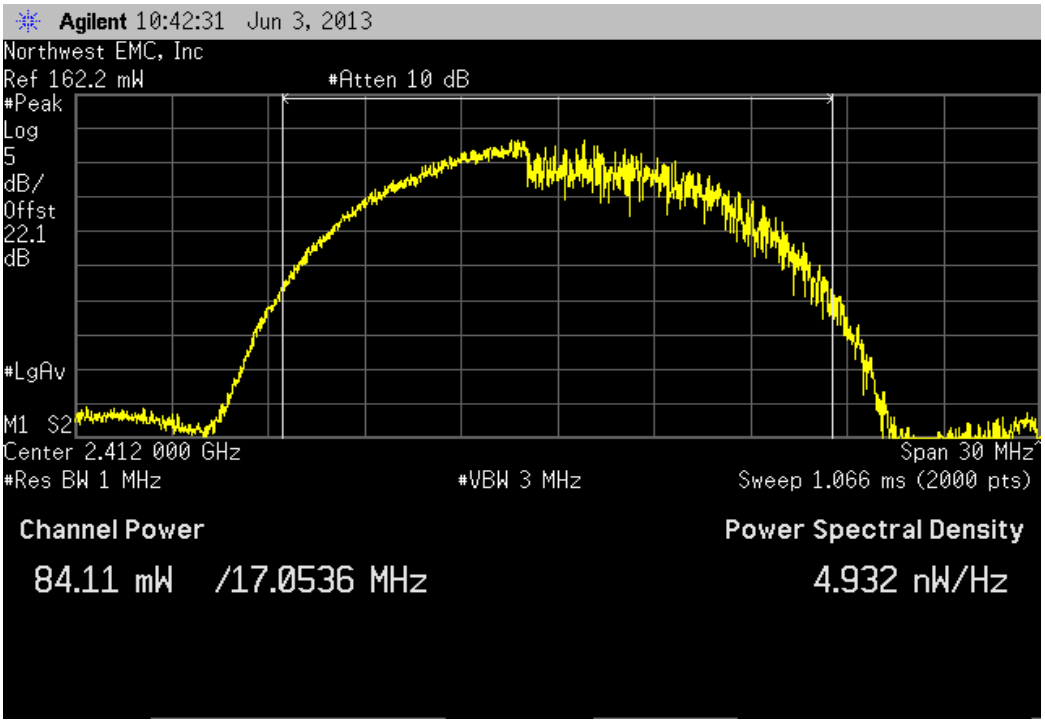
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				106.274 mW	< 1 W	Pass

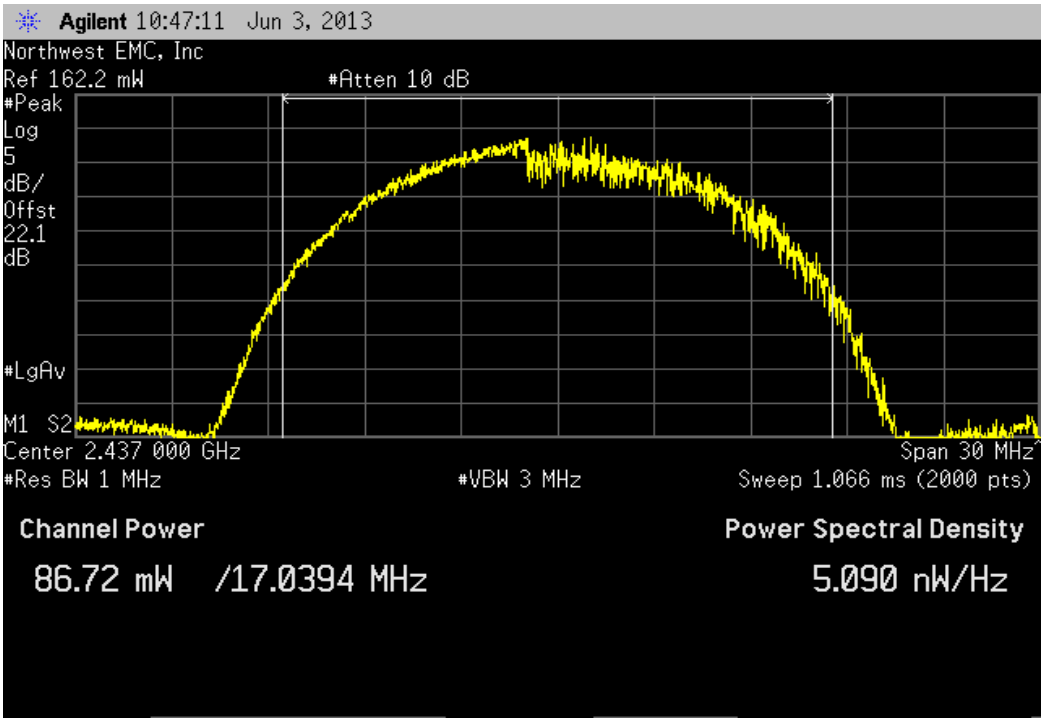


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz

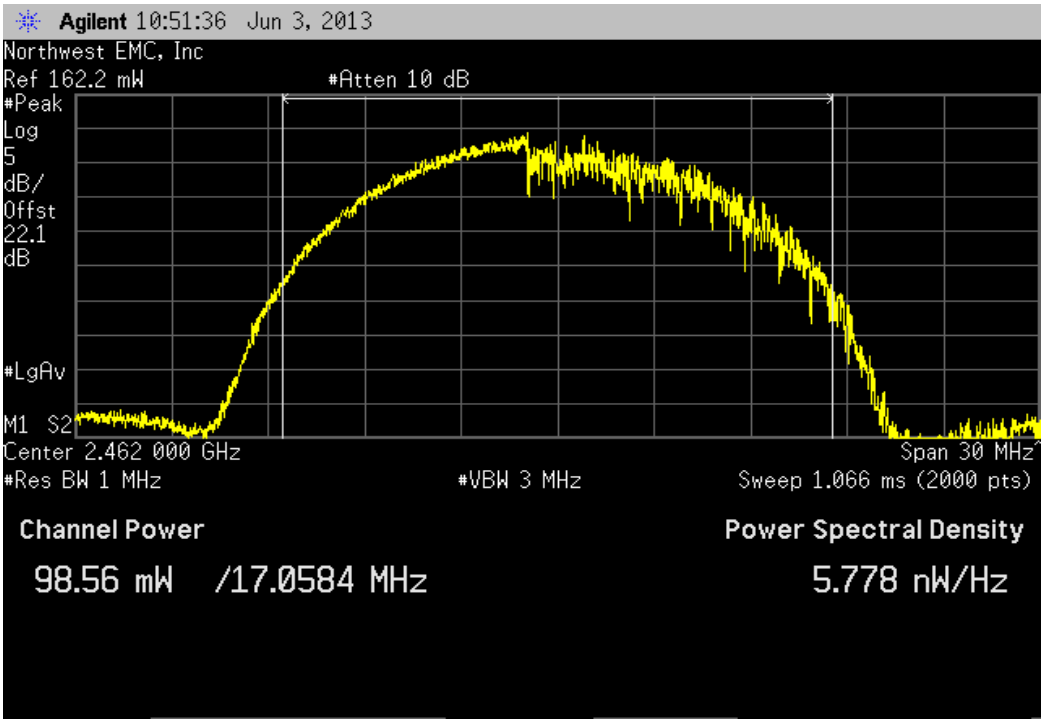
				Value	Limit	Result
				84.114 mW	< 1 W	Pass



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				86.725 mW	< 1 W	Pass

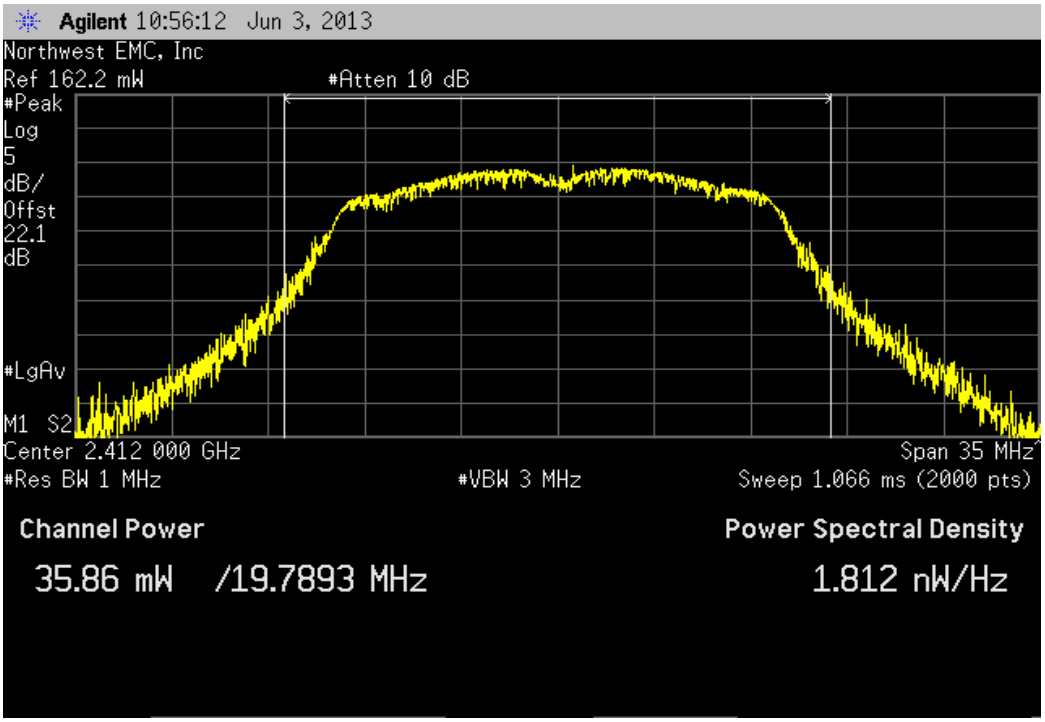


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
				Value	Limit	Result
				98.558 mW	< 1 W	Pass



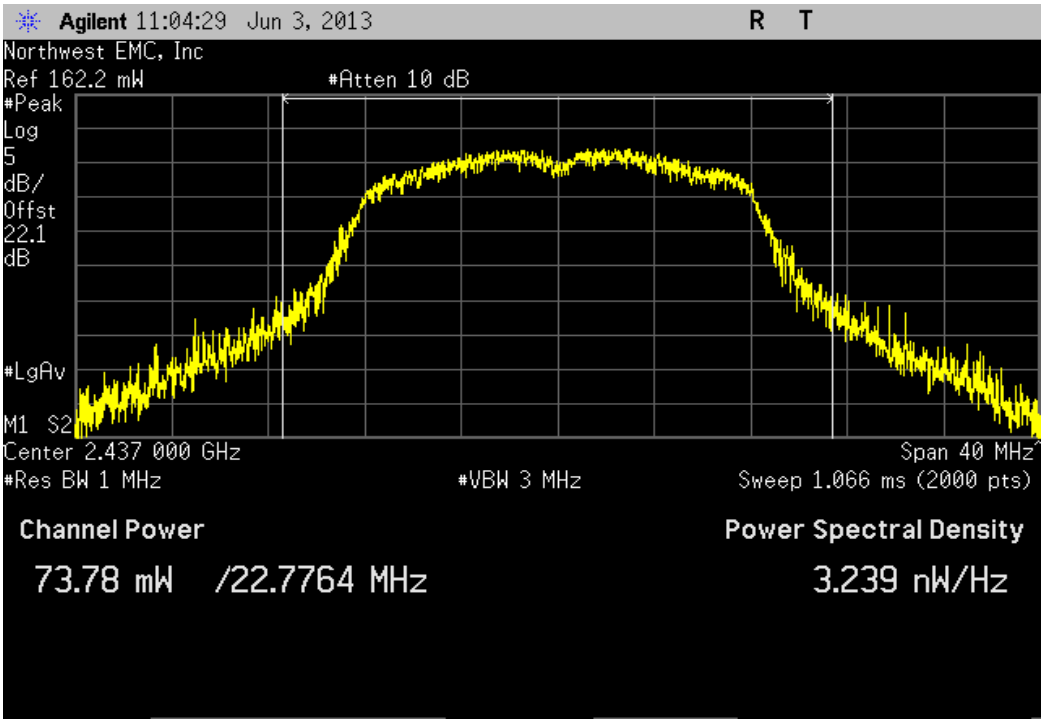
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				35.857 mW	< 1 W	Pass



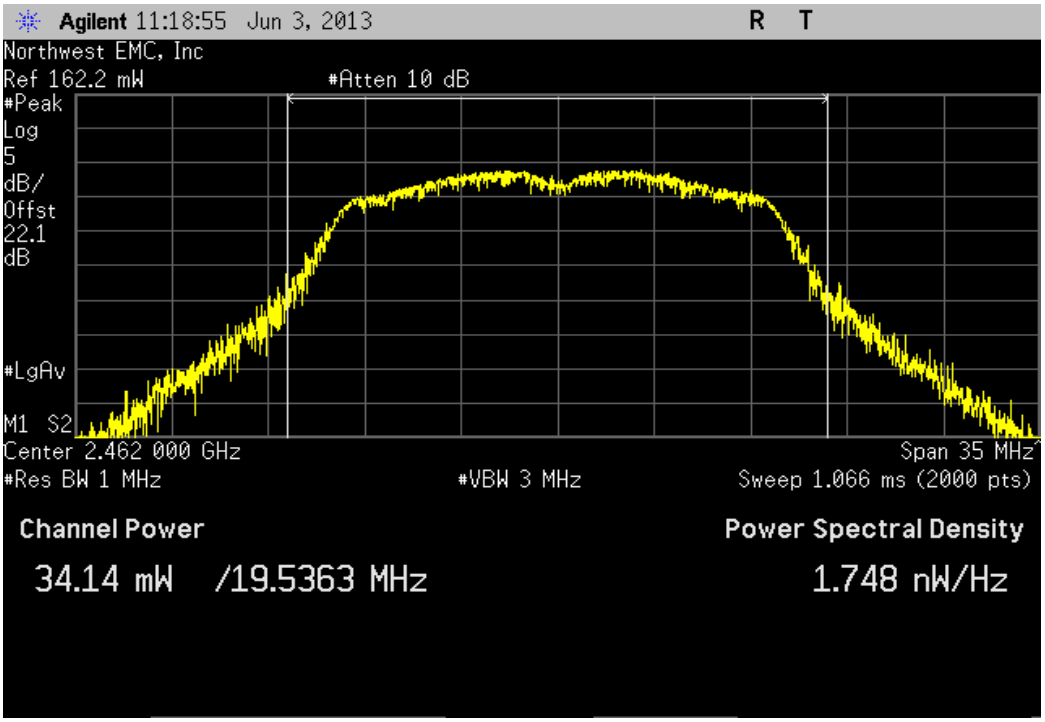
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				73.778 mW	< 1 W	Pass



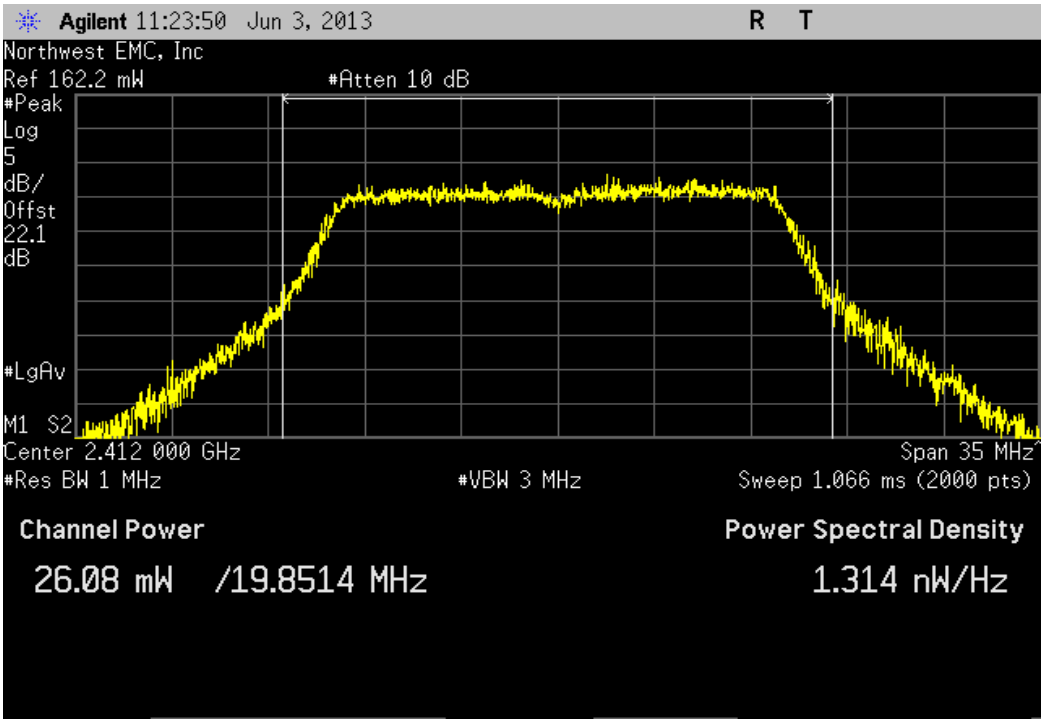
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				34.143 mW	< 1 W	Pass



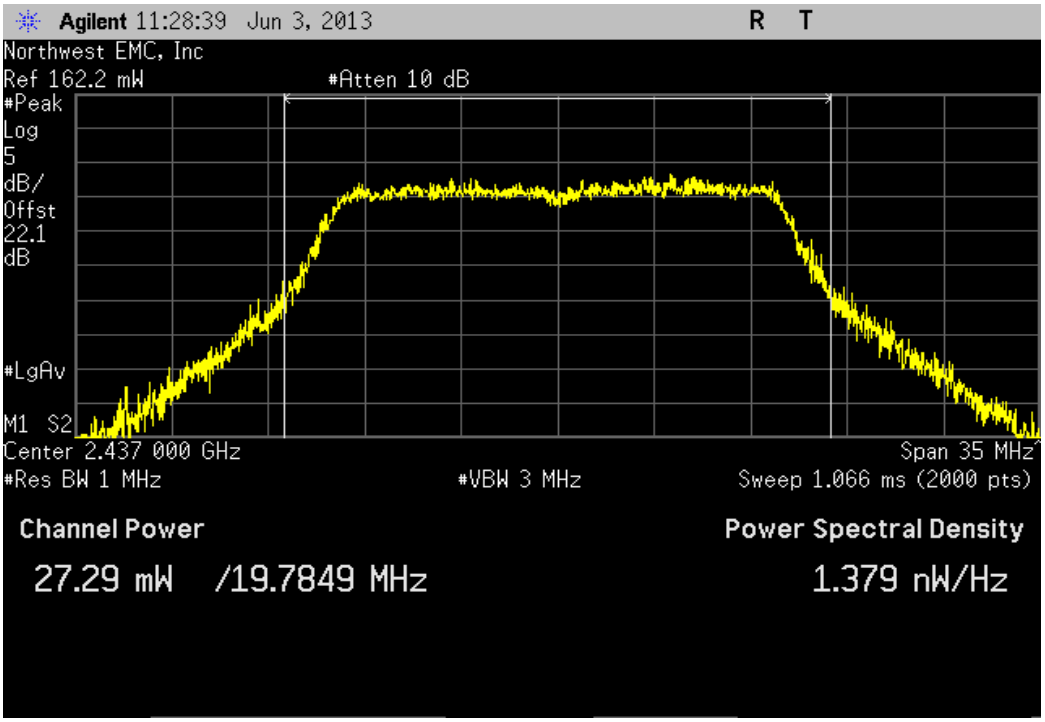
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				26.076 mW	< 1 W	Pass



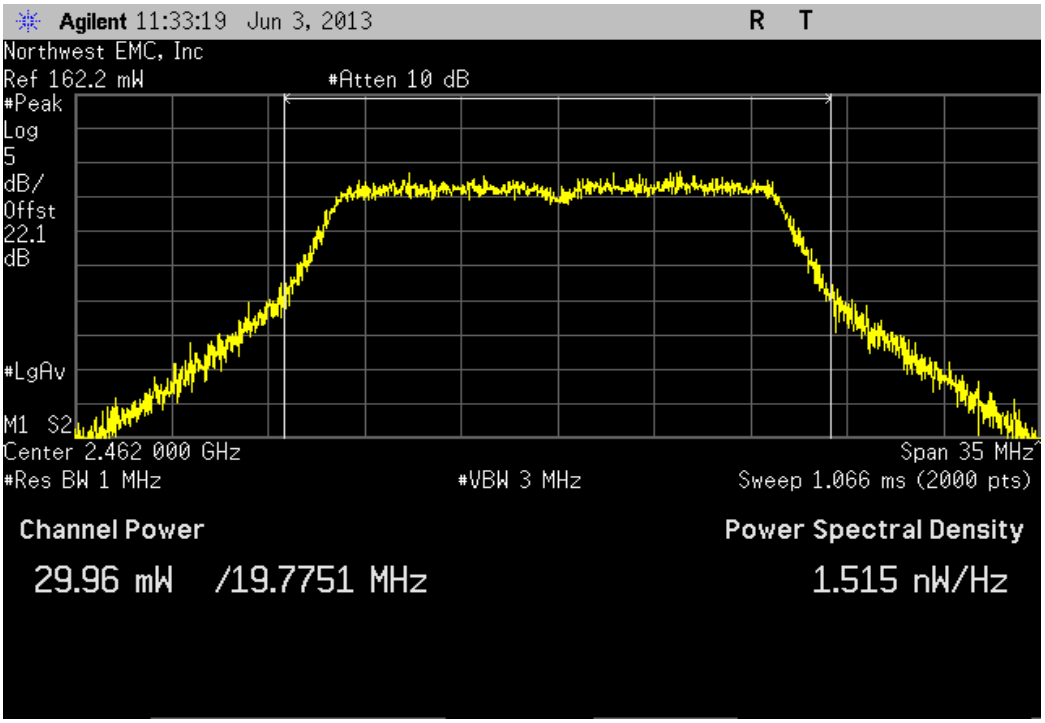
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				27.29 mW	< 1 W	Pass

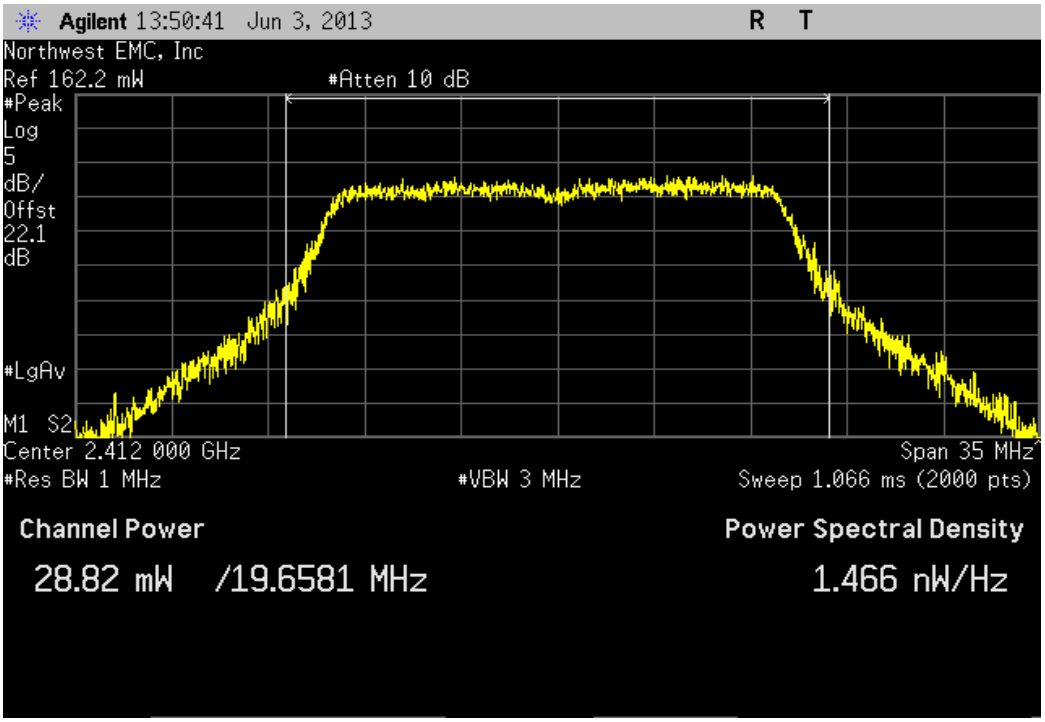


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz

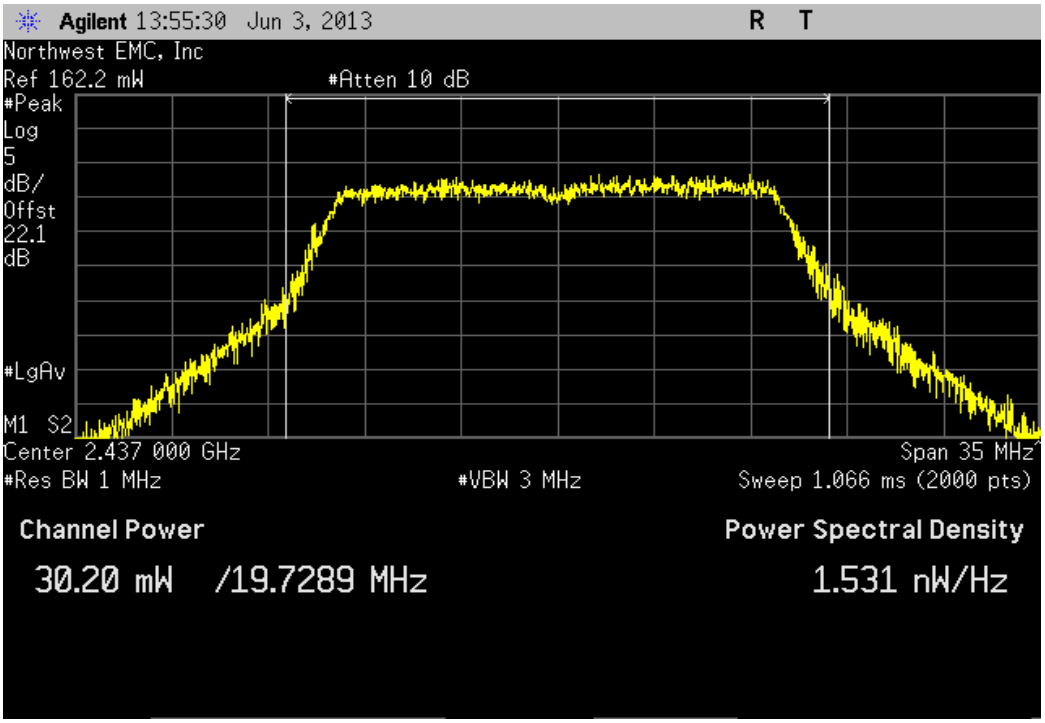
				Value	Limit	Result
				29.963 mW	< 1 W	Pass



2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				28.822 mW	< 1 W	Pass

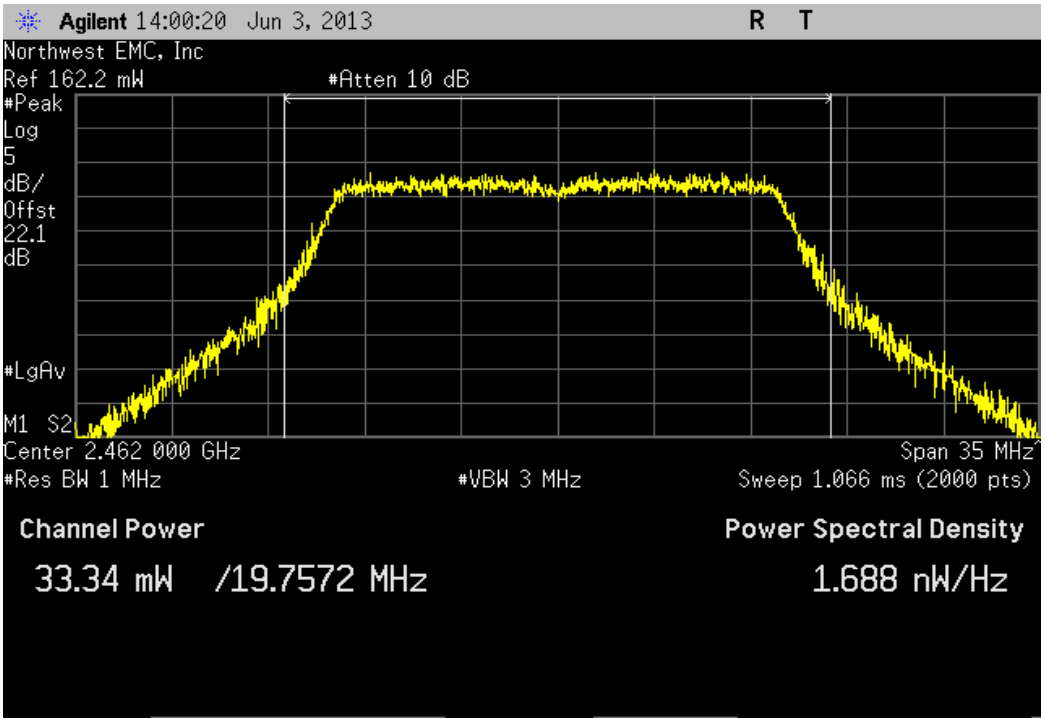


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				30.205 mW	< 1 W	Pass



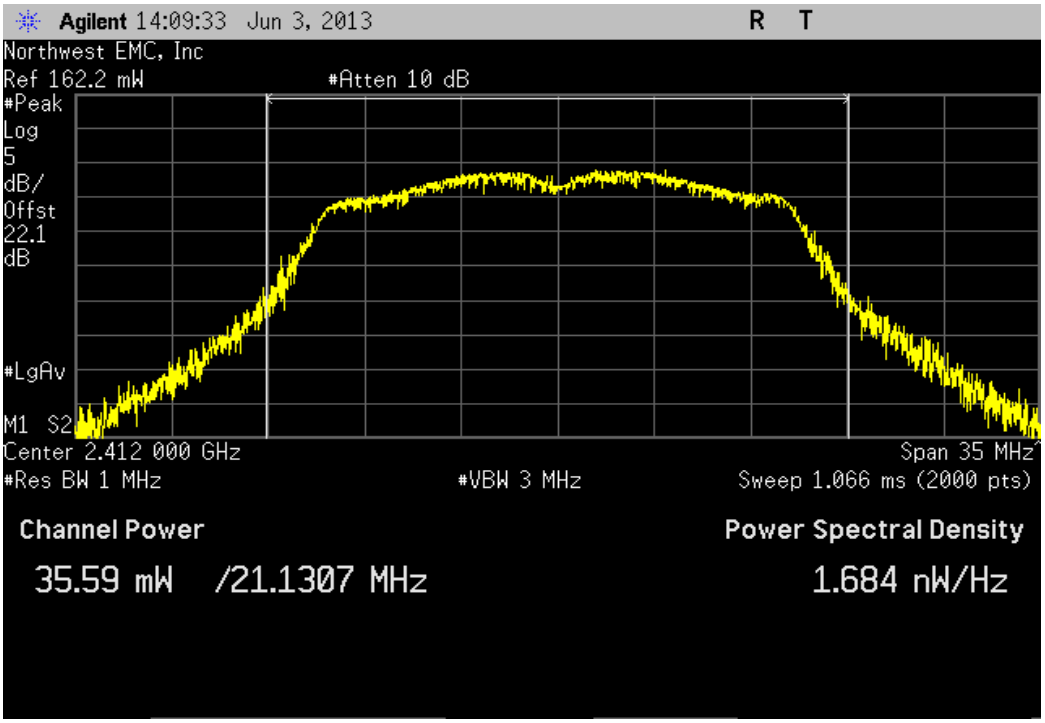
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				33.344 mW	< 1 W	Pass

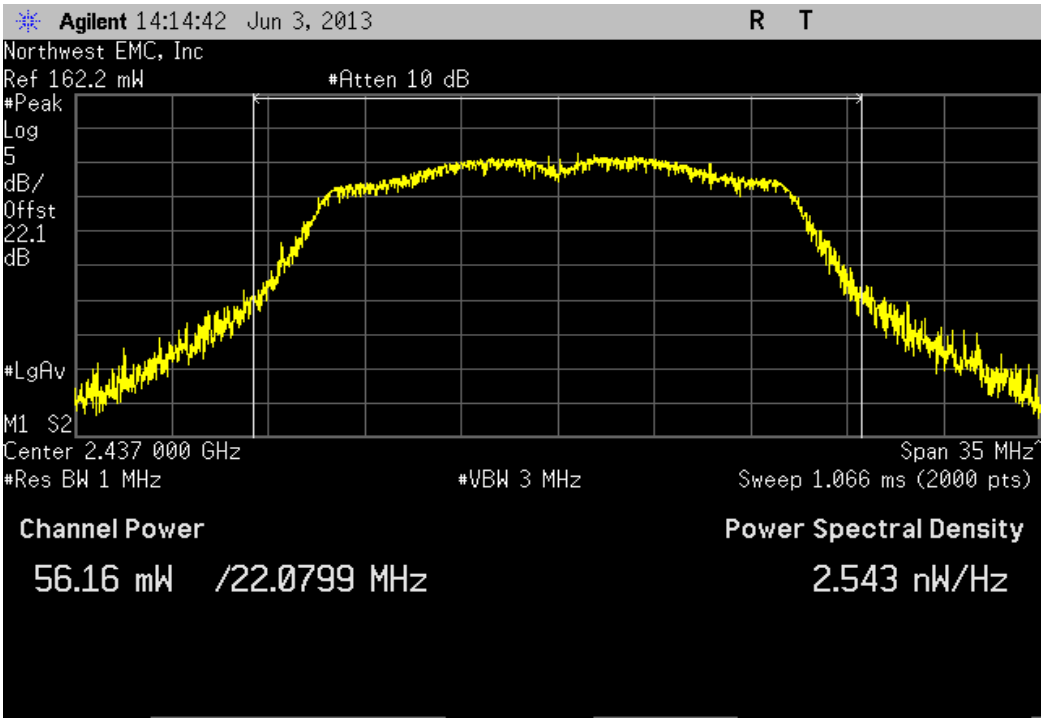


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz

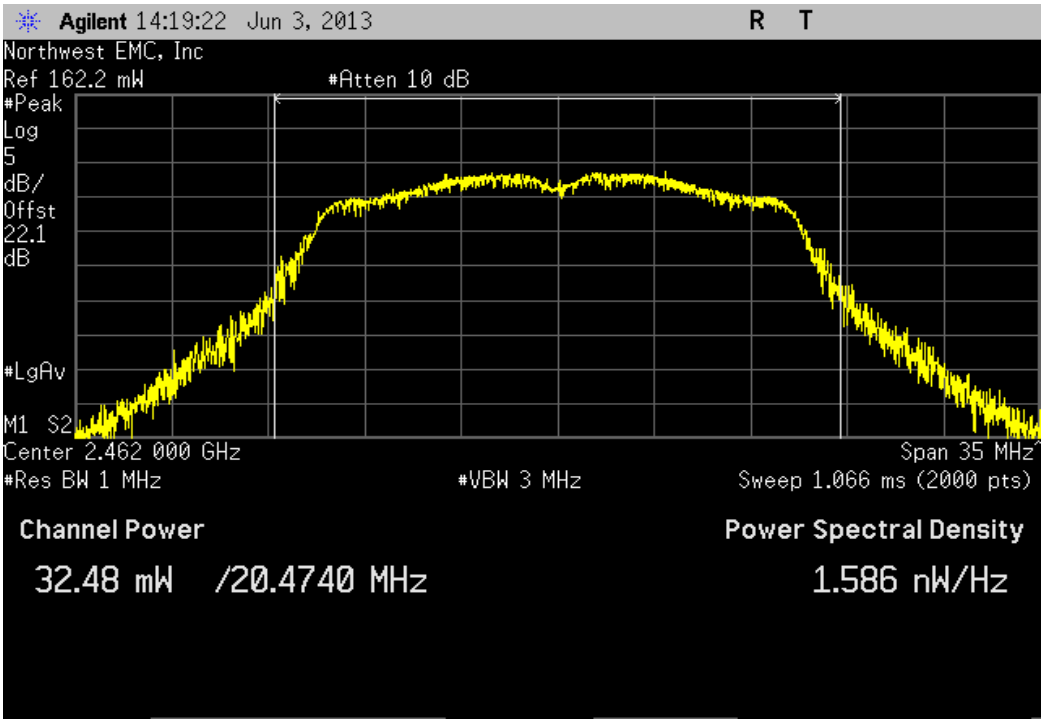
				Value	Limit	Result
				35.593 mW	< 1 W	Pass



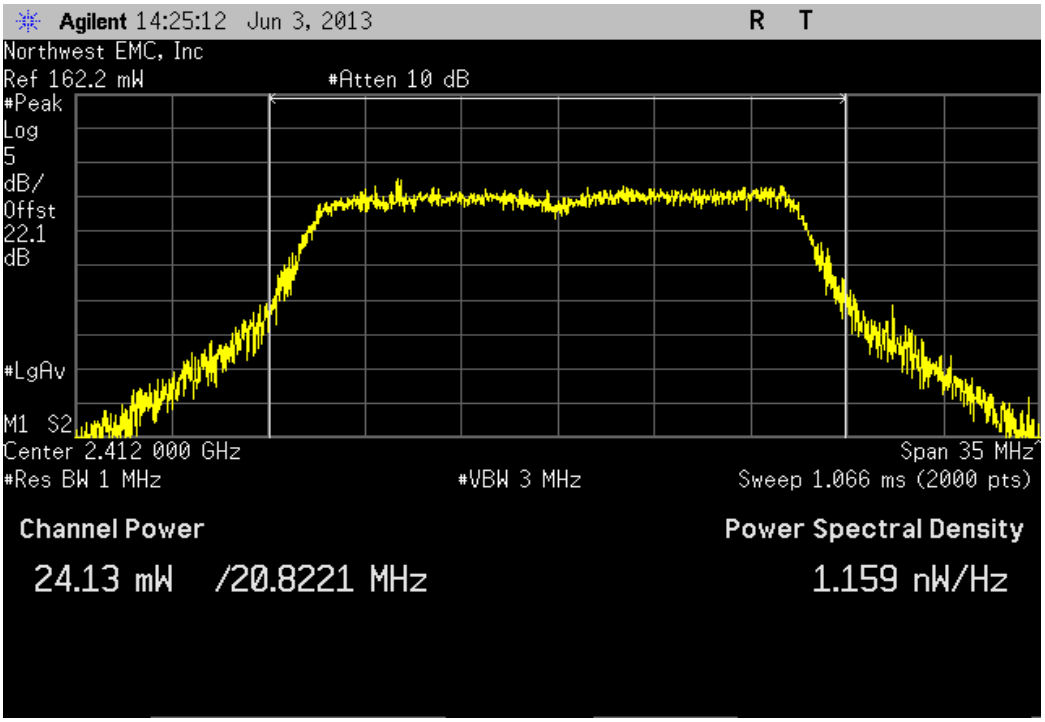
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				56.158 mW	< 1 W	Pass



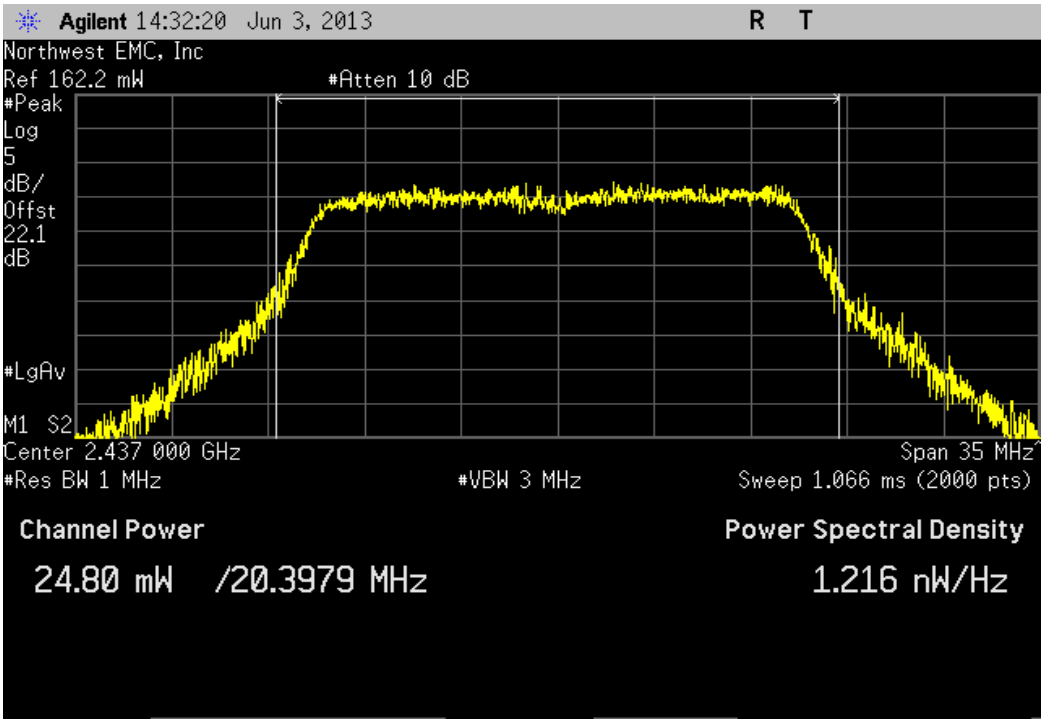
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
				Value	Limit	Result
				32.477 mW	< 1 W	Pass



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				24.135 mW	< 1 W	Pass

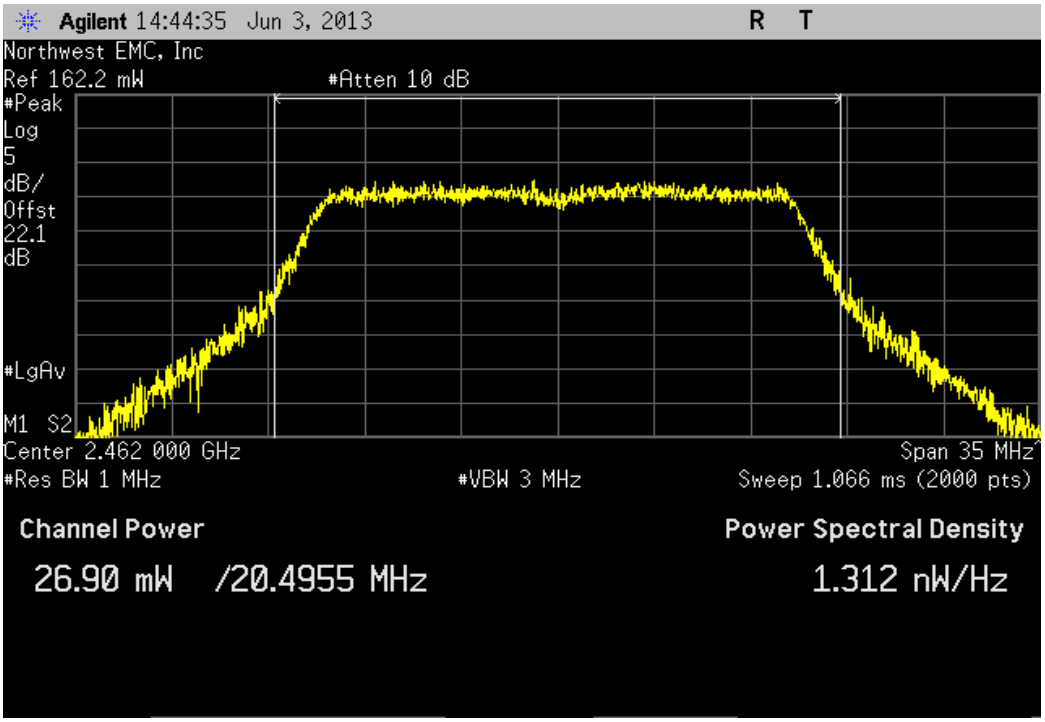


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				24.799 mW	< 1 W	Pass



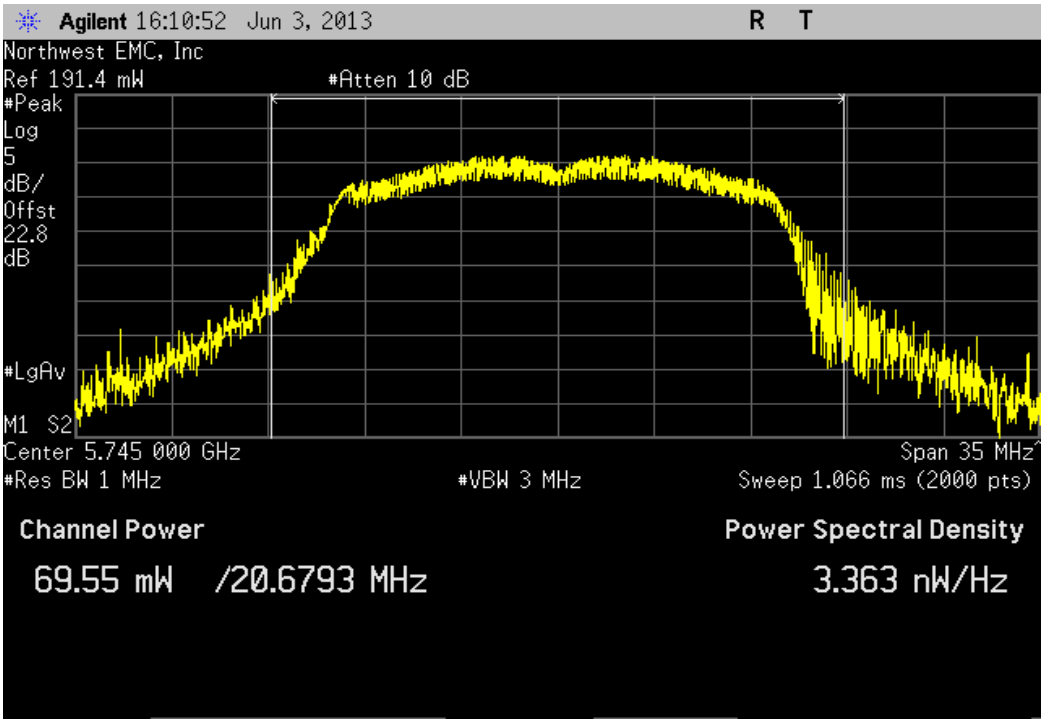
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz

				Value	Limit	Result
				26.9 mW	< 1 W	Pass



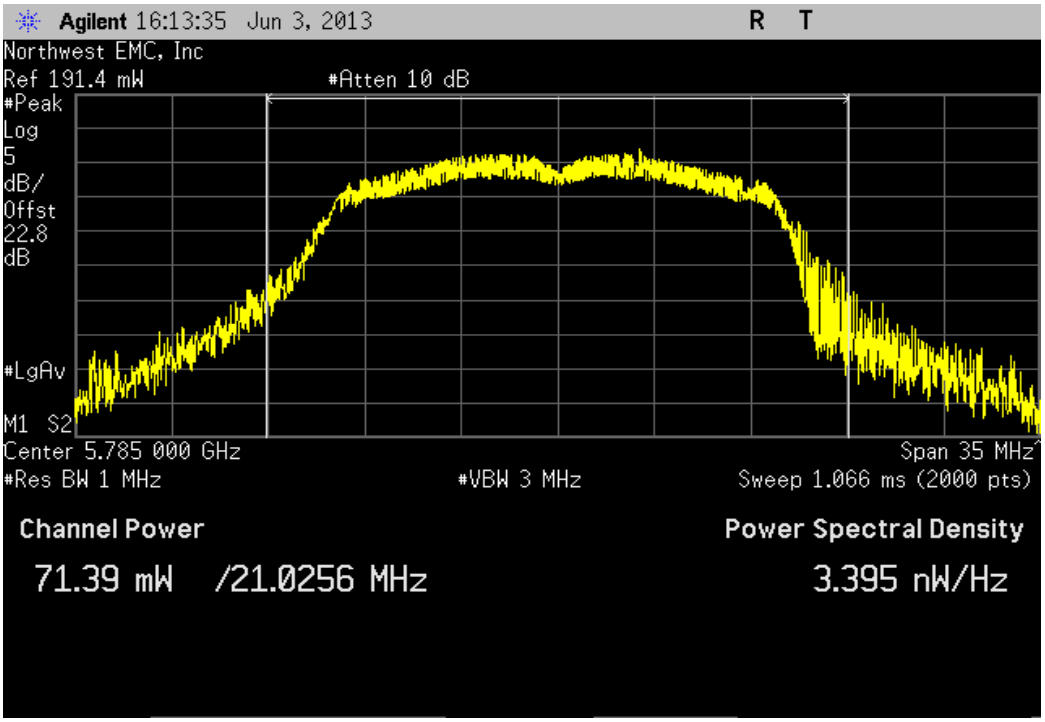
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz

				Value	Limit	Result
				69.547 mW	< 1 W	Pass



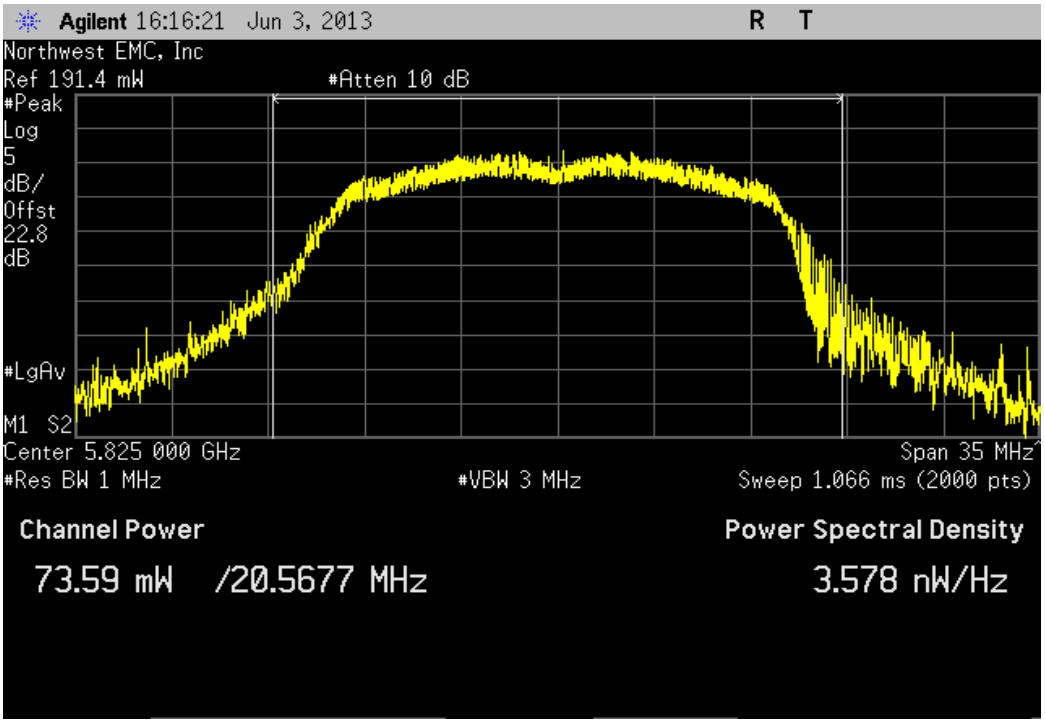
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz

				Value	Limit	Result
				71.389 mW	< 1 W	Pass

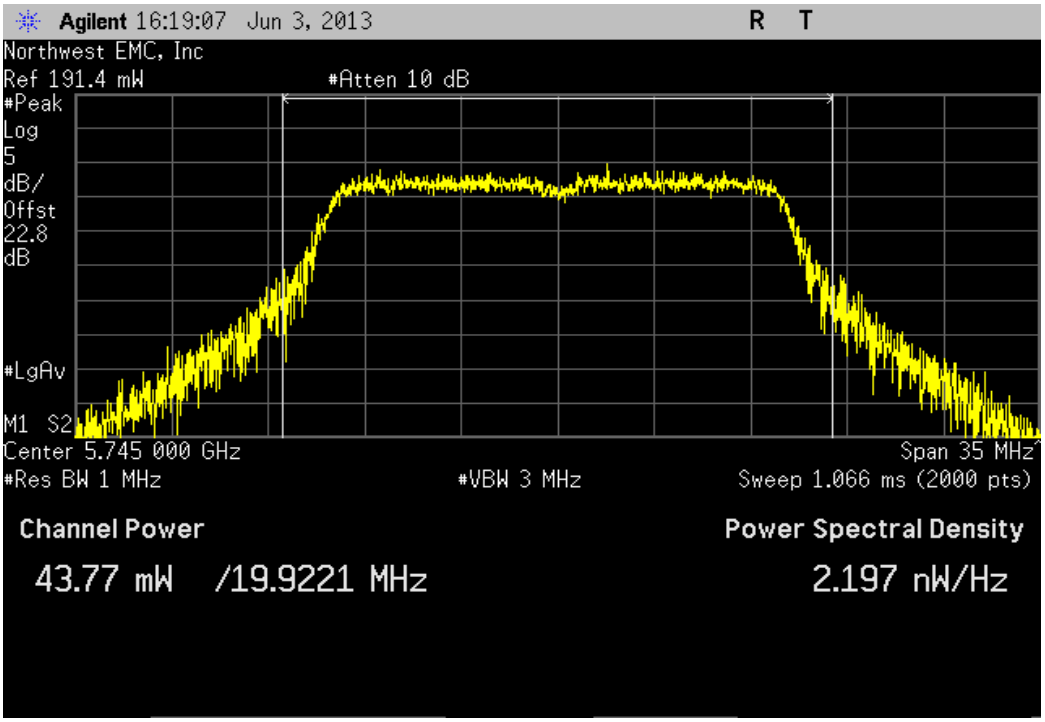


5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz

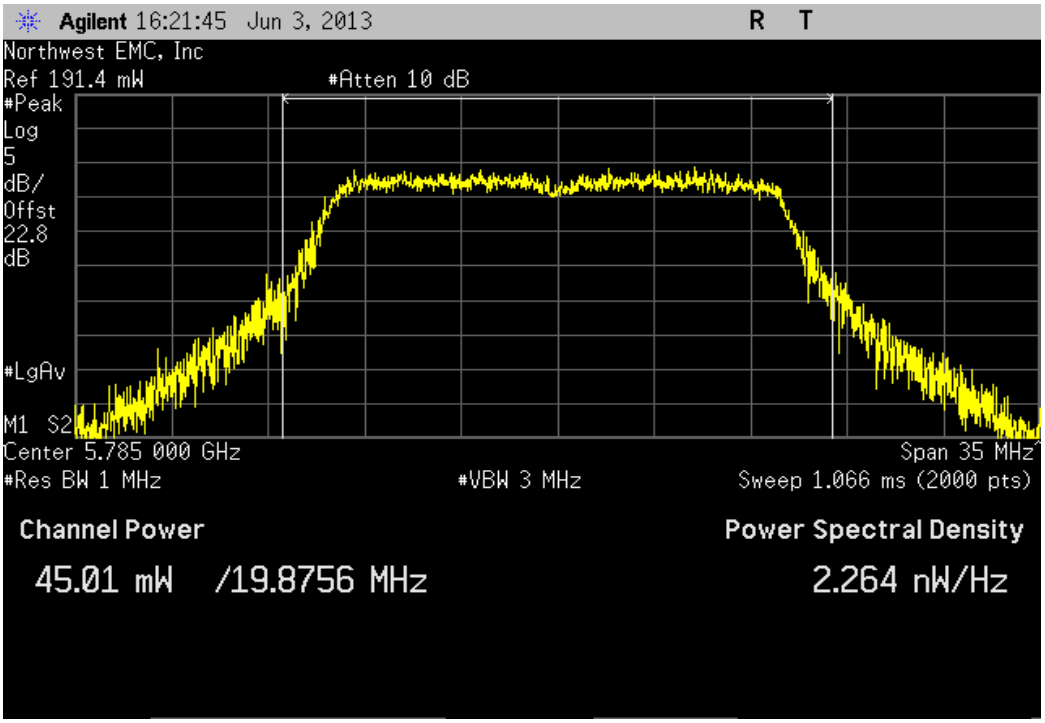
				Value	Limit	Result
				73.593 mW	< 1 W	Pass



5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz						
				Value	Limit	Result
				43.769 mW	< 1 W	Pass

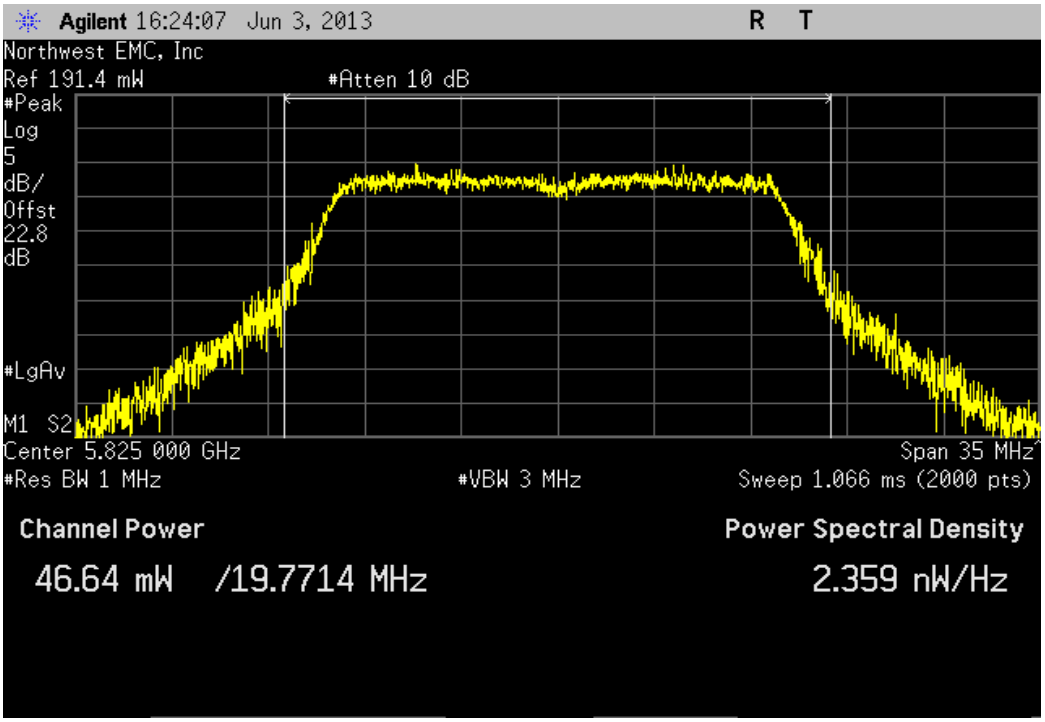


5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz						
				Value	Limit	Result
				45.008 mW	< 1 W	Pass



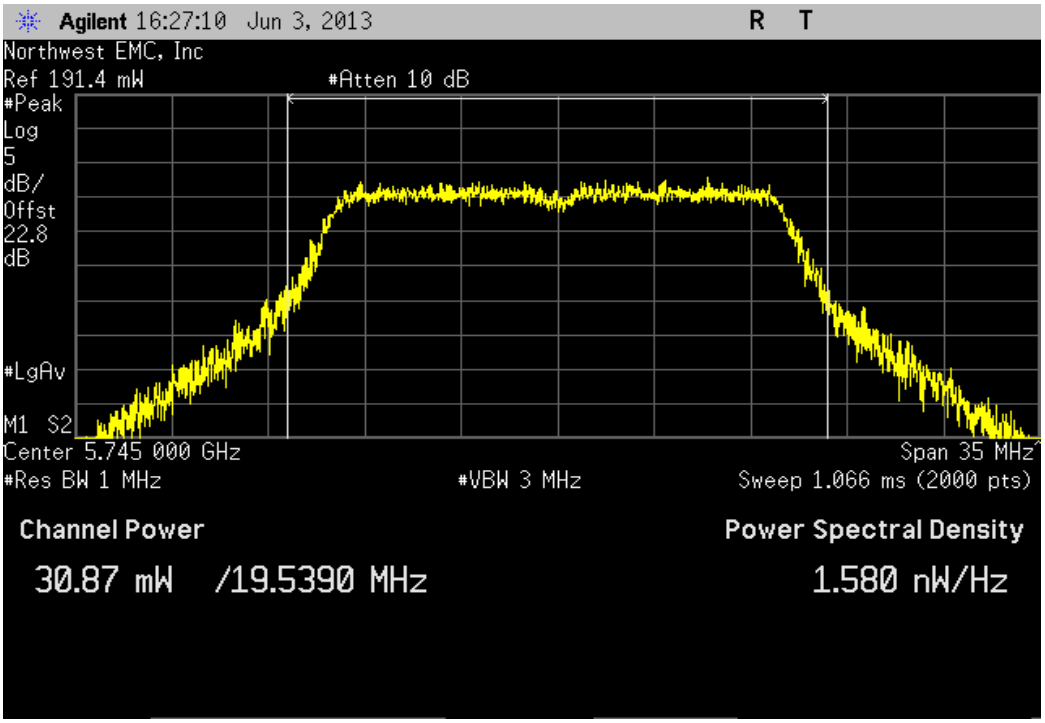
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz

				Value	Limit	Result
				46.64 mW	< 1 W	Pass

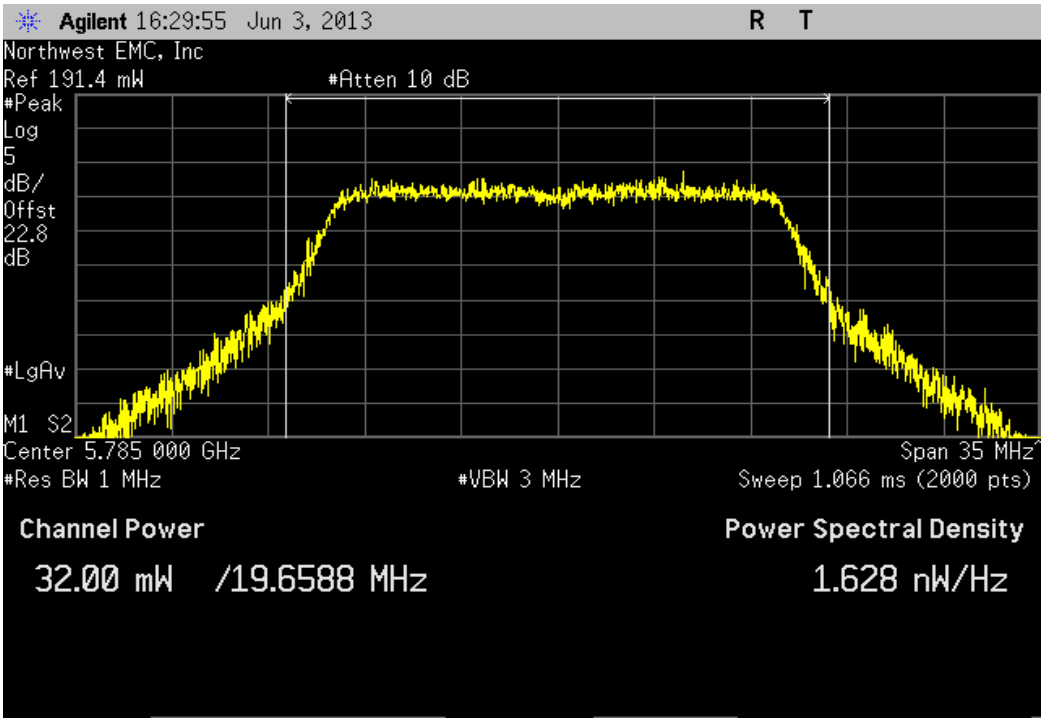


5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz

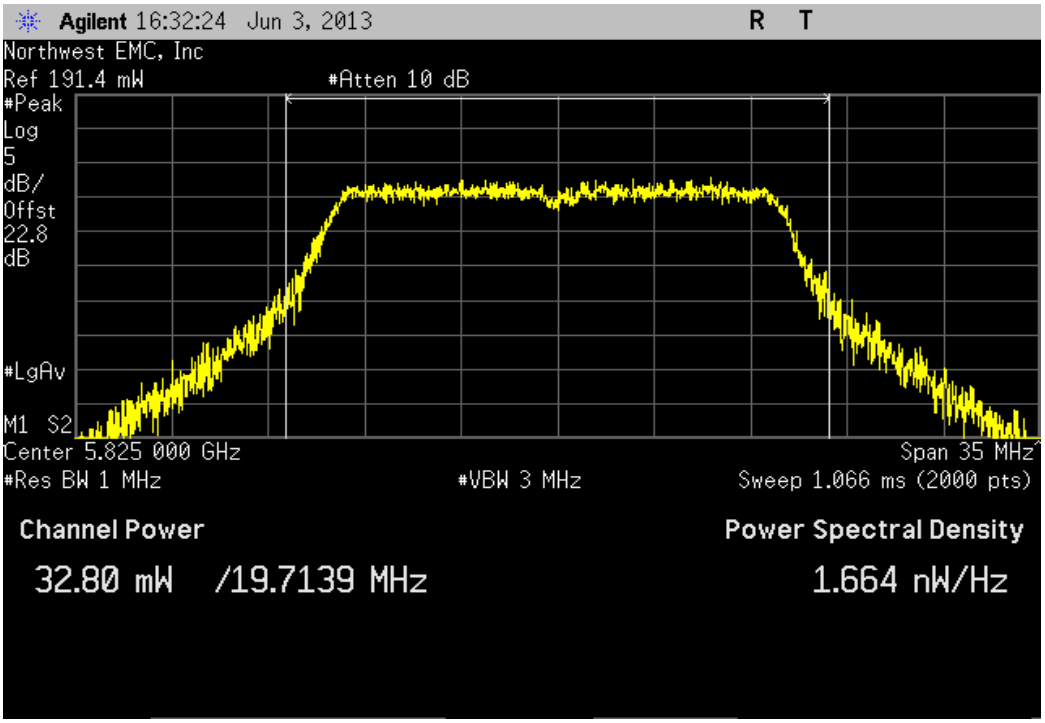
				Value	Limit	Result
				30.871 mW	< 1 W	Pass



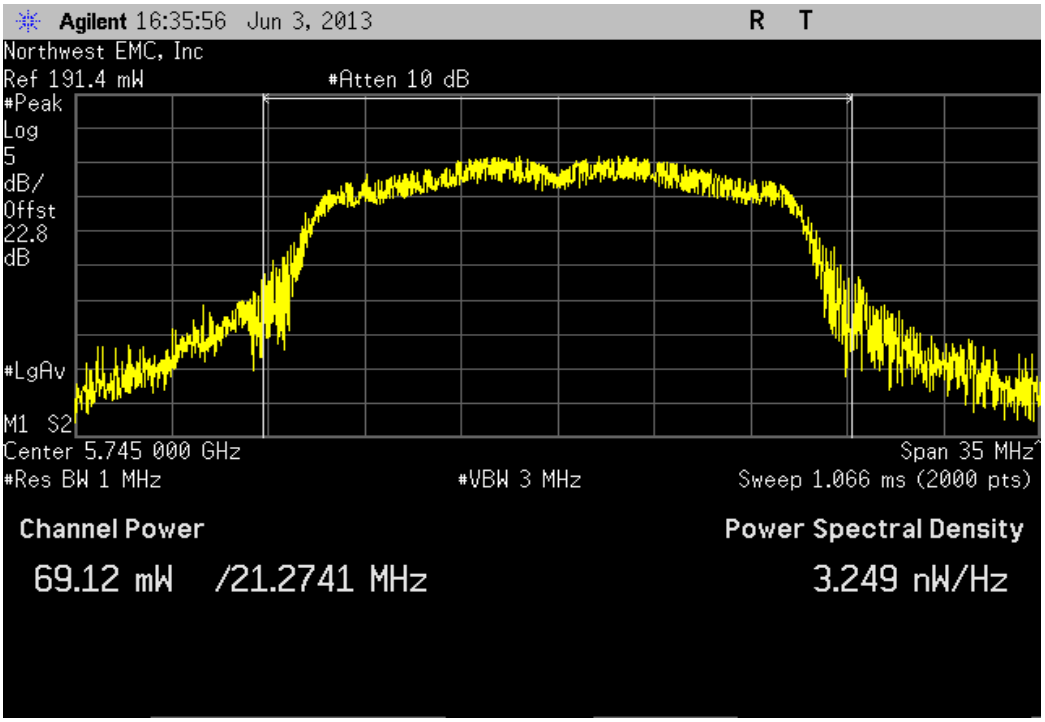
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz						
				Value	Limit	Result
				32 mW	< 1 W	Pass



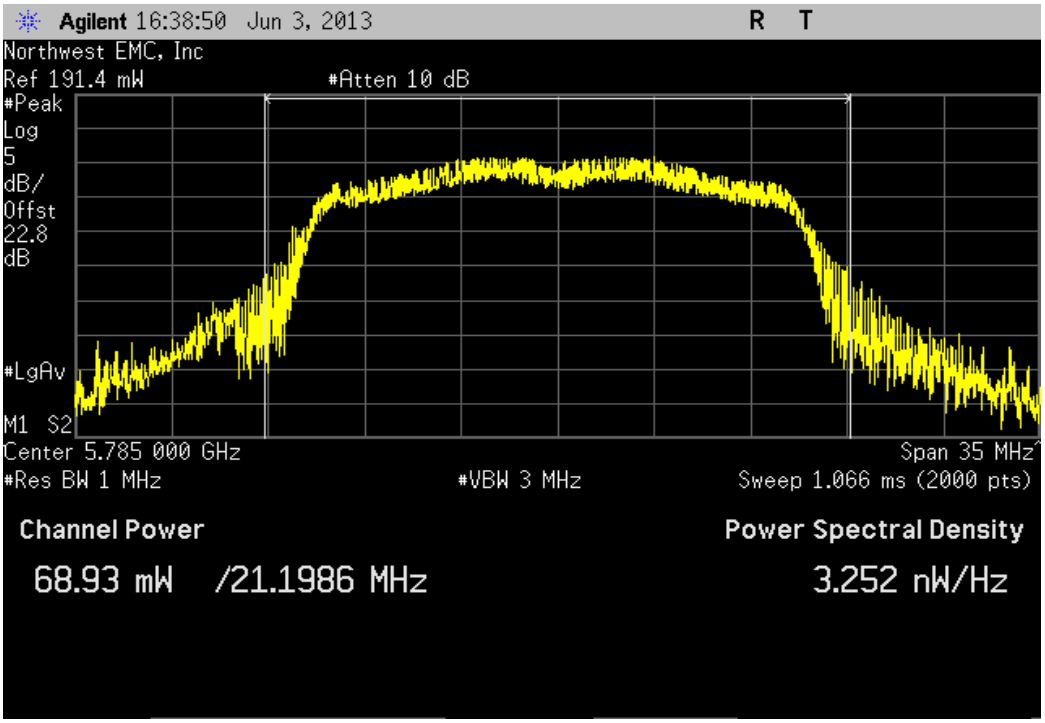
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz						
				Value	Limit	Result
				32.804 mW	< 1 W	Pass



5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz						
				Value	Limit	Result
				69.117 mW	< 1 W	Pass

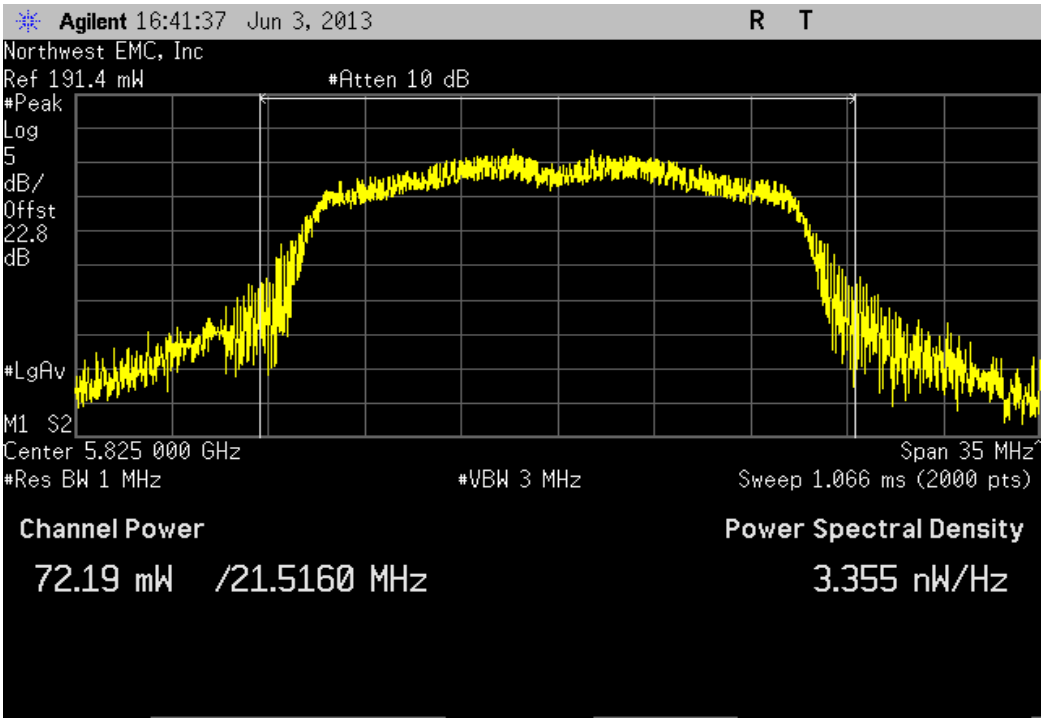


5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz						
				Value	Limit	Result
				68.93 mW	< 1 W	Pass



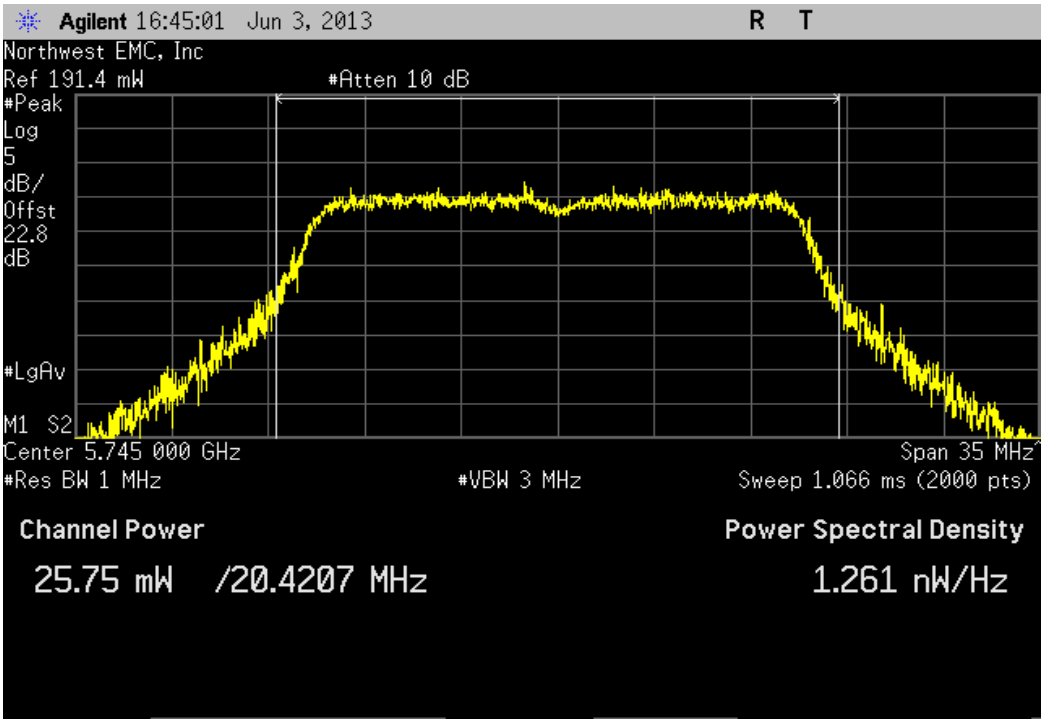
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz

				Value	Limit	Result
				72.188 mW	< 1 W	Pass

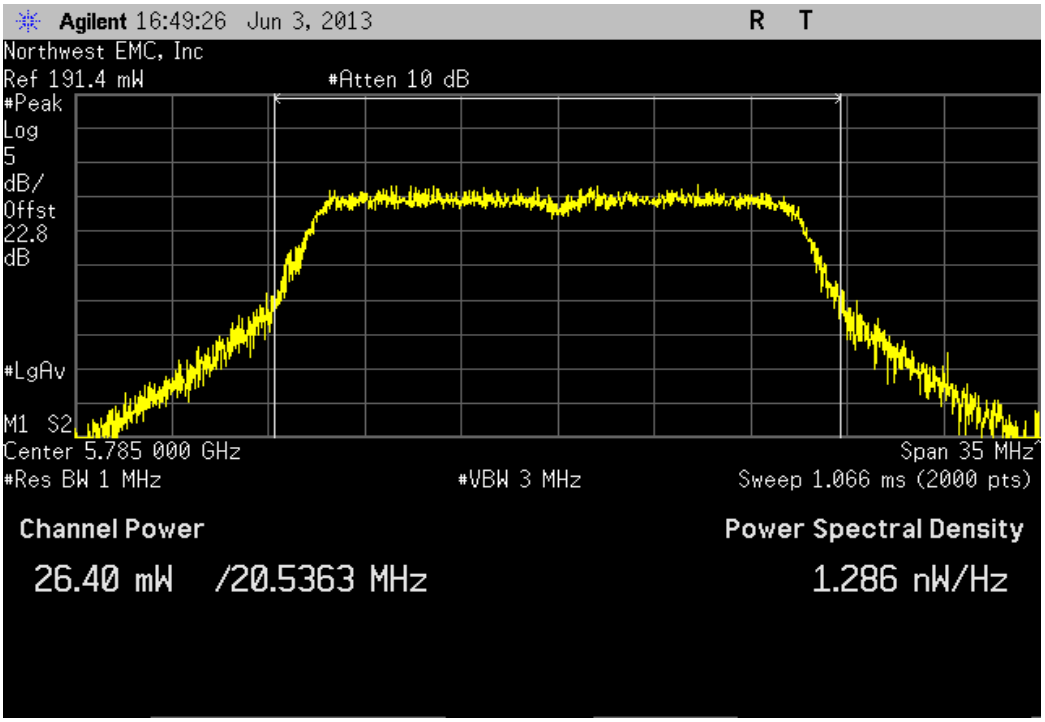


5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz

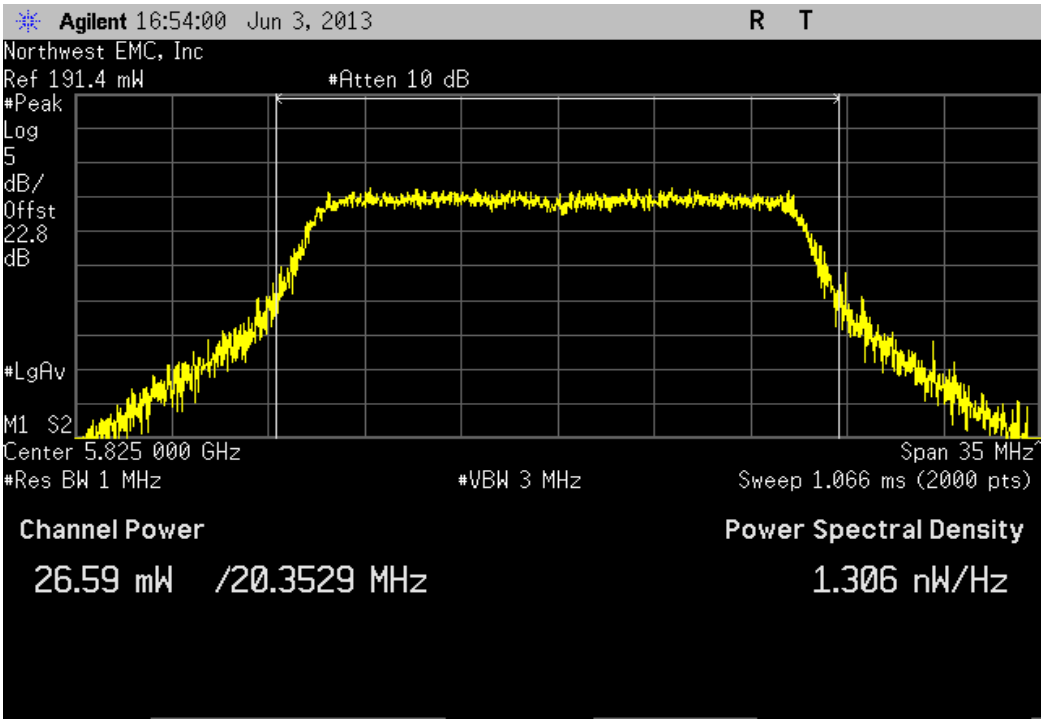
				Value	Limit	Result
				25.748 mW	< 1 W	Pass



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Mid Channel 157, 5785 MHz						
				Value	Limit	Result
				26.401 mW	< 1 W	Pass



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz						
				Value	Limit	Result
				26.591 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
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	4/12/2013	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	10/5/2012	12
Signal Generator MXG	Agilent	N5183A	TIK	6/7/2012	36
Spectrum Analyzer	Agilent	E4440A	AAX	5/15/2012	24

TEST DESCRIPTION

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

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

Band Edge Compliance

EUT:	37x Torpedo + Wireless SOM -31	**Work Order:**	LGPD0096
Serial Number:	1413M00359	**Date:**	06/03/13
Customer:	Logic PD, Inc.	**Temperature:**	23.1°C
Attendees:	None	**Humidity:**	39%
Project:	None	**Barometric Pres.:**	1015.6
Tested by:	Trevor Buls	**Power:** 110VAC/60Hz	**Job Site:** MN08

TEST SPECIFICATIONS	Test Method
FCC 15.247:2013	ANSI C63.10:2009

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

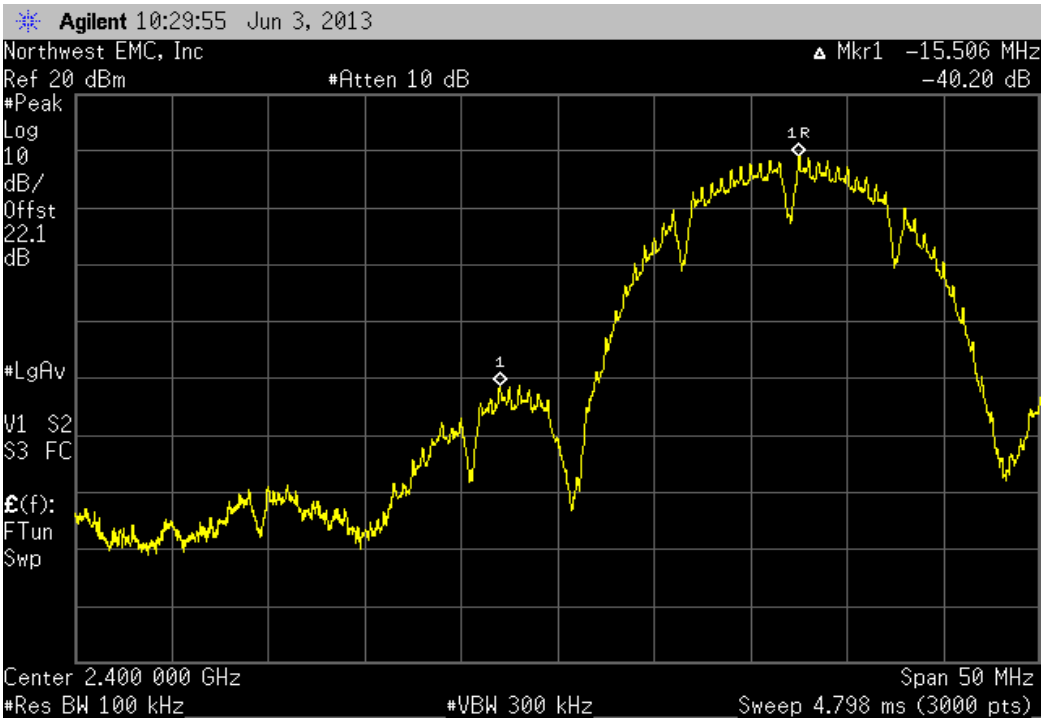
None

Configuration #	1	Signature	Trevor Buls

	Value	Limit	Result
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz	-40.2 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-54.44 dBc	≤ -20 dBc	Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz	-39.26 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-53.27 dBc	≤ -20 dBc	Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz	-30.76 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-51.68 dBc	≤ -20 dBc	Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz	-31.44 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-46.29 dBc	≤ -20 dBc	Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz	-30.75 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-46.94 dBc	≤ -20 dBc	Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz	-31.46 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-47.96 dBc	≤ -20 dBc	Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz	-30.57 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-46.86 dBc	≤ -20 dBc	Pass
5725 MHz - 5850 MHz Band			
802.11(a) 6 Mbps			
Low Channel 149, 5745 MHz	-42.03 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	-50.46 dBc	≤ -20 dBc	Pass
802.11(a) 36 Mbps			
Low Channel 149, 5745 MHz	-45.76 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	-54.01 dBc	≤ -20 dBc	Pass
802.11(a) 54 Mbps			
Low Channel 149, 5745 MHz	-48.81 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	-54.41 dBc	≤ -20 dBc	Pass
802.11(n) MCS0 - UNII			
Low Channel 149, 5745 MHz	-41.04 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	-50.97 dBc	≤ -20 dBc	Pass
802.11(n) MCS7 - UNII			
Low Channel 149, 5745 MHz	-46 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	-54.07 dBc	≤ -20 dBc	Pass

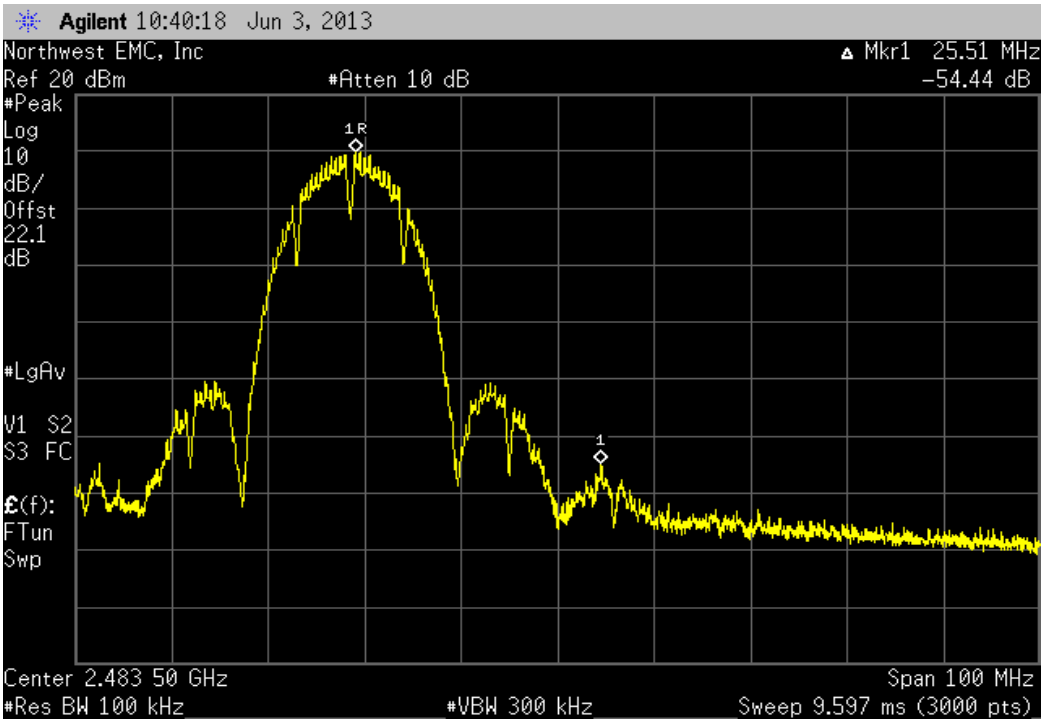
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				-40.2 dBc	≤ -20 dBc	Pass



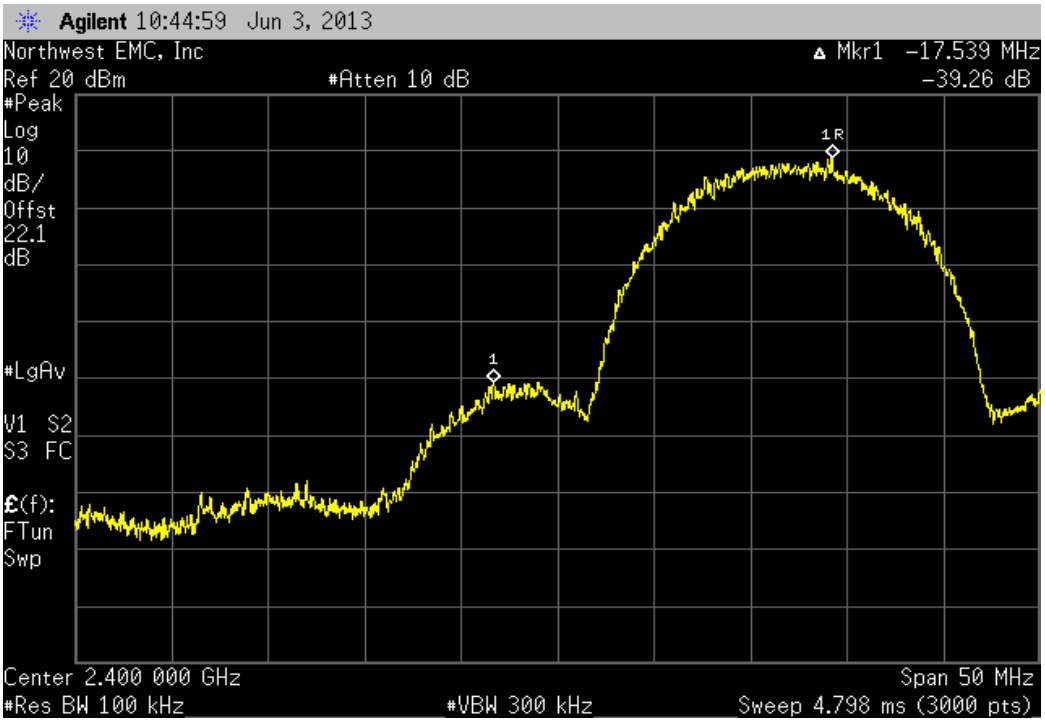
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				-54.44 dBc	≤ -20 dBc	Pass



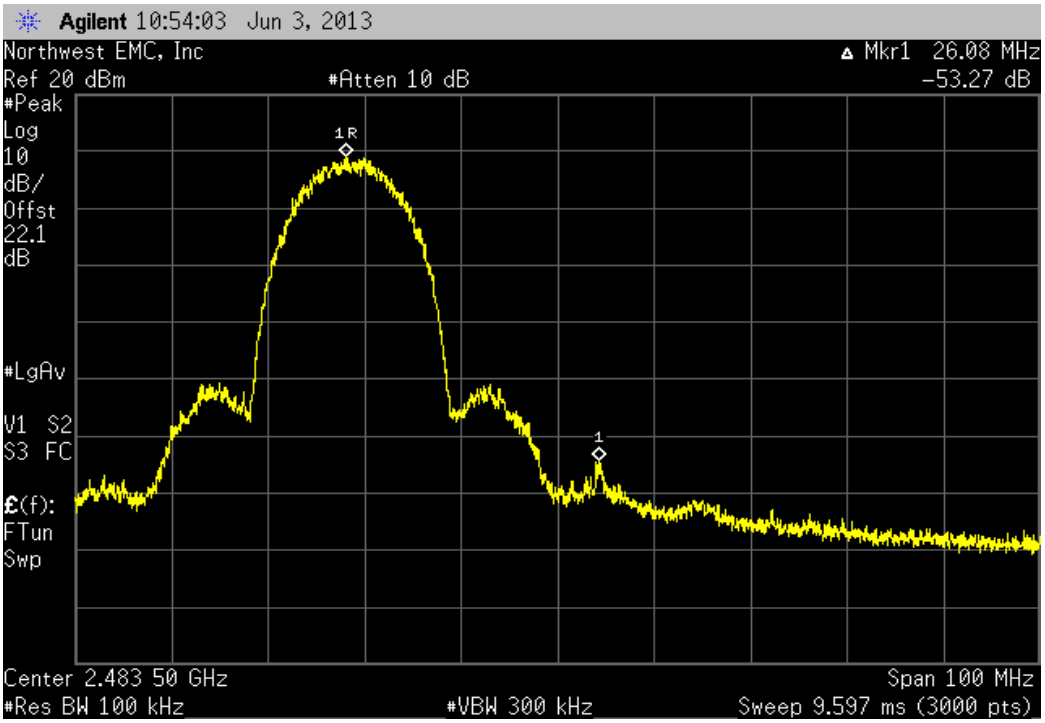
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				-39.26 dBc	≤ -20 dBc	Pass



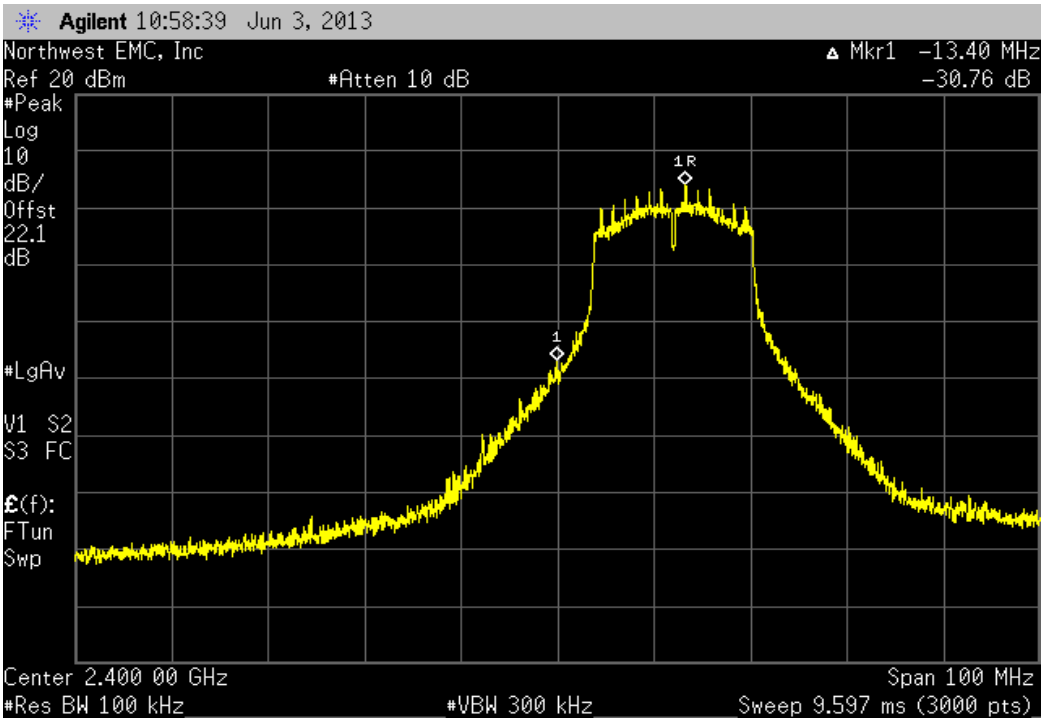
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				-53.27 dBc	≤ -20 dBc	Pass

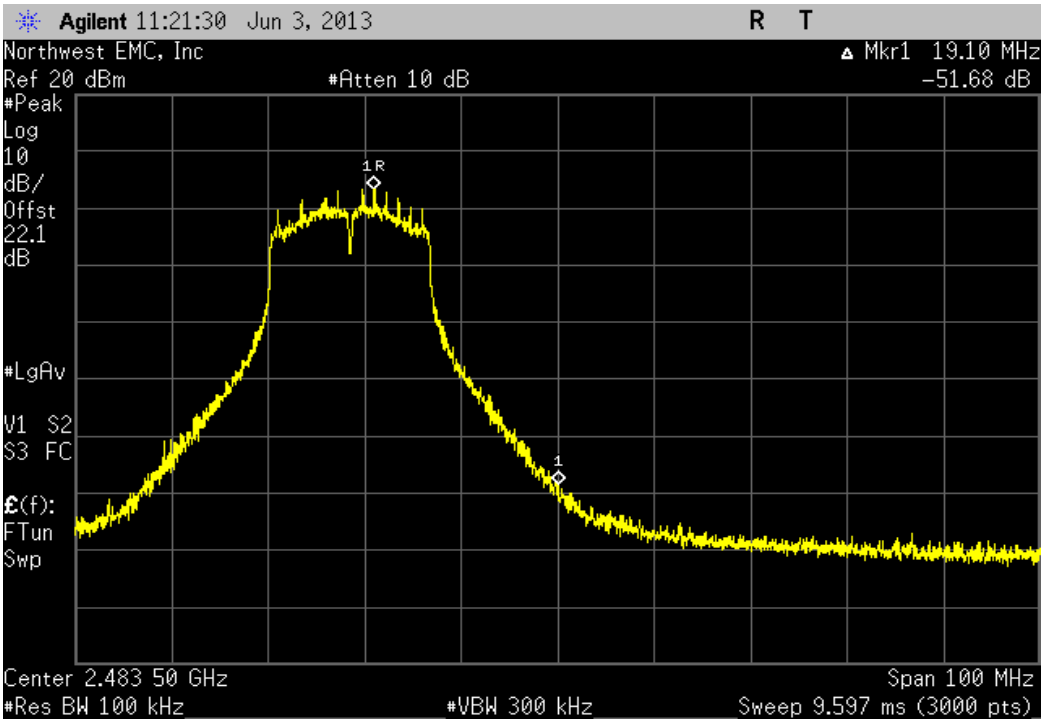


Band Edge Compliance

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				-30.76 dBc	≤ -20 dBc	Pass

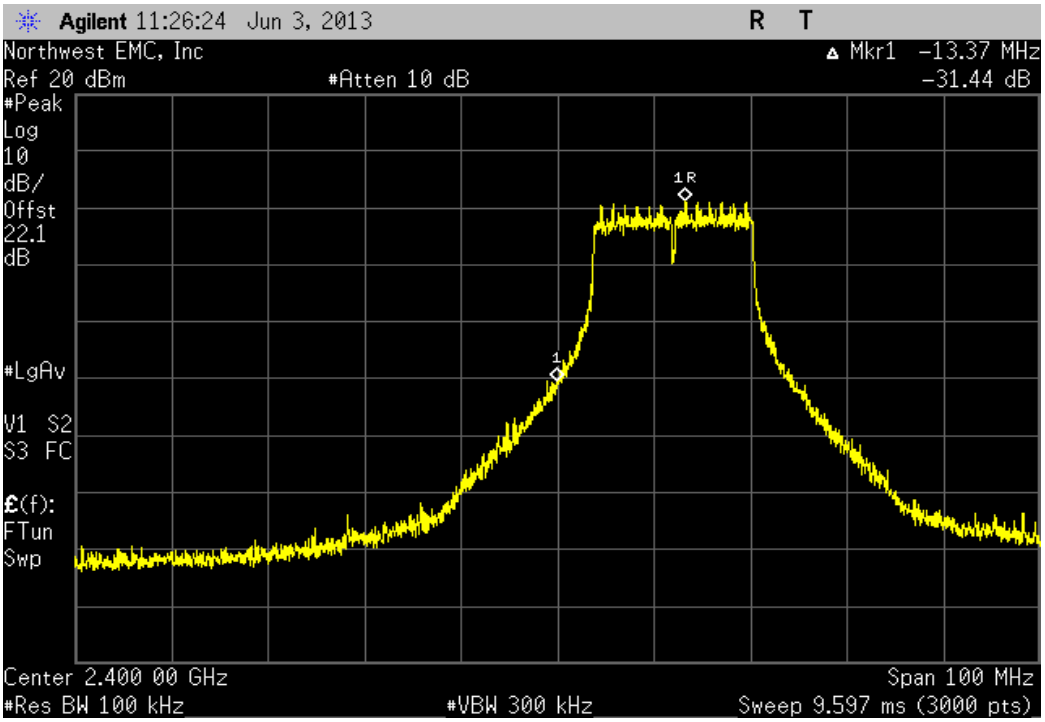


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
				Value	Limit	Result
				-51.68 dBc	≤ -20 dBc	Pass



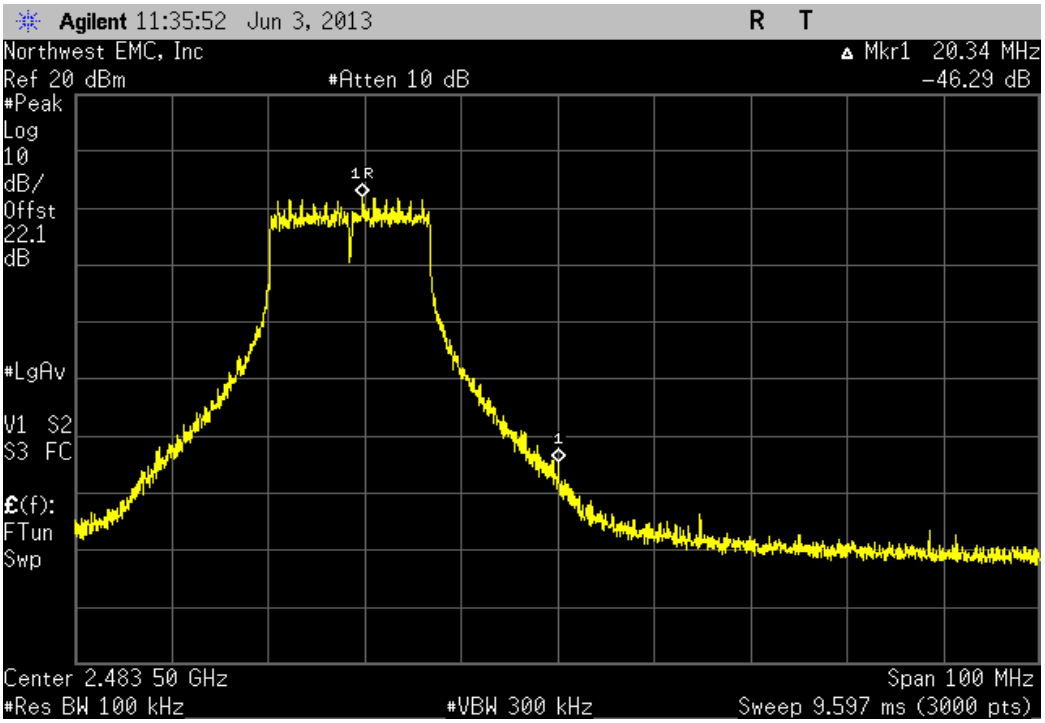
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				-31.44 dBc	≤ -20 dBc	Pass



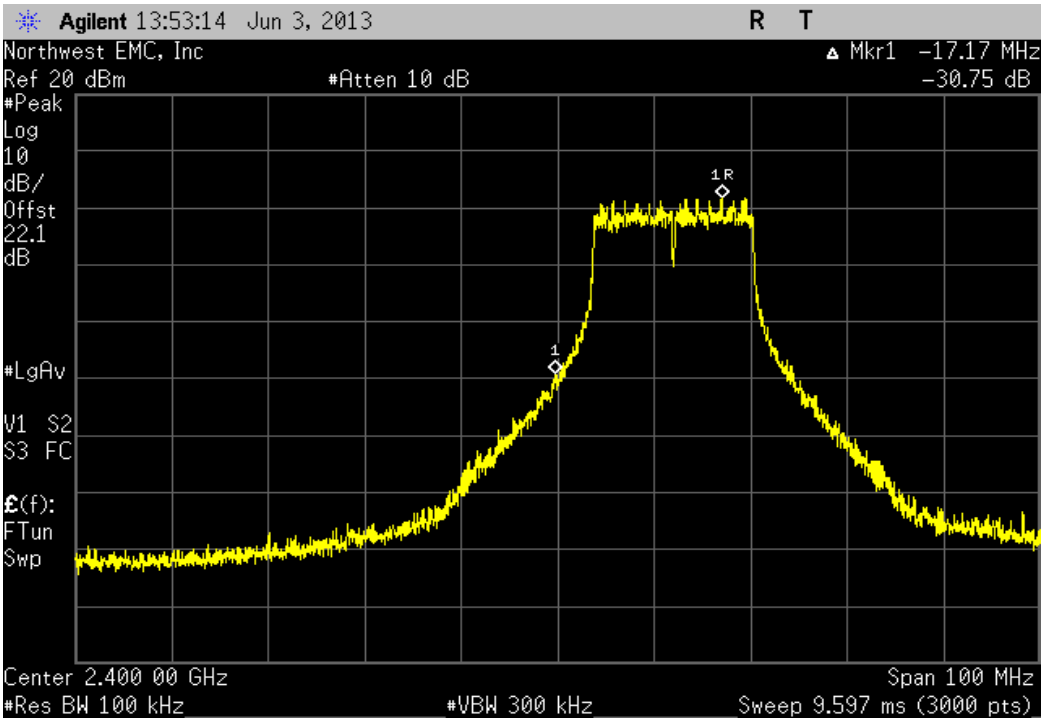
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				-46.29 dBc	≤ -20 dBc	Pass



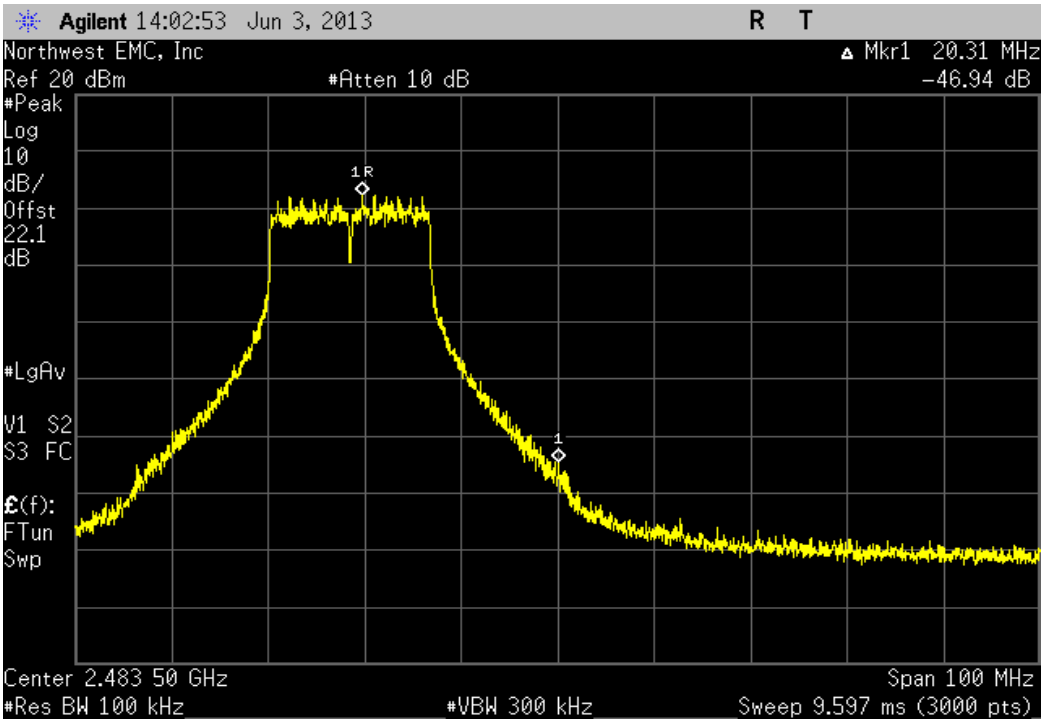
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				-30.75 dBc	≤ -20 dBc	Pass

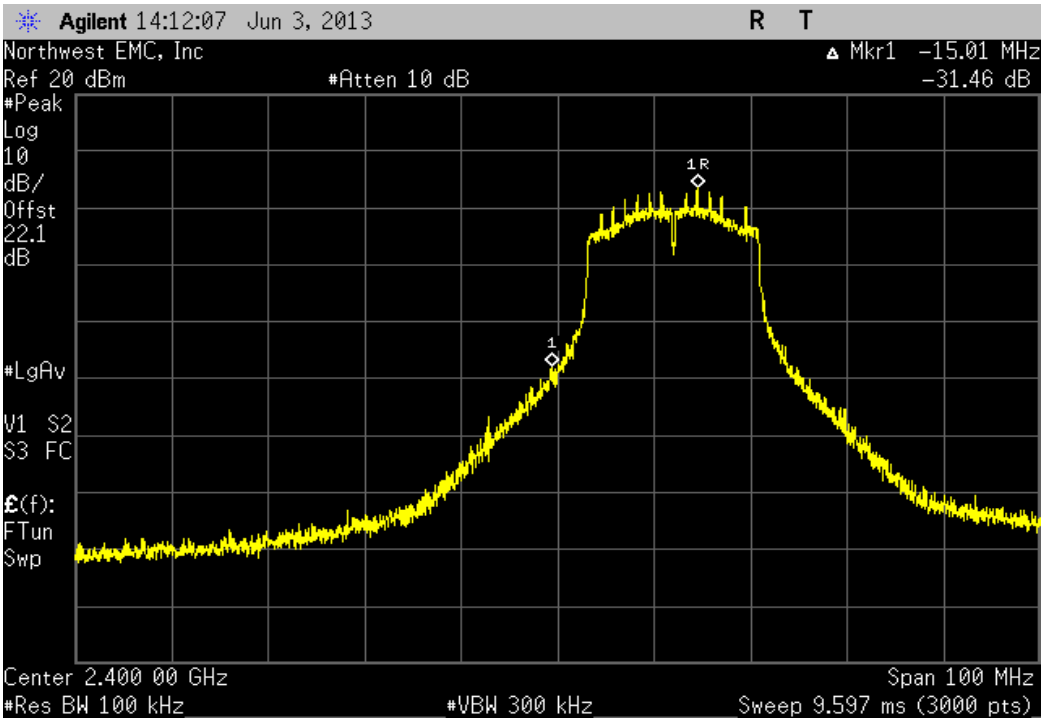


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz

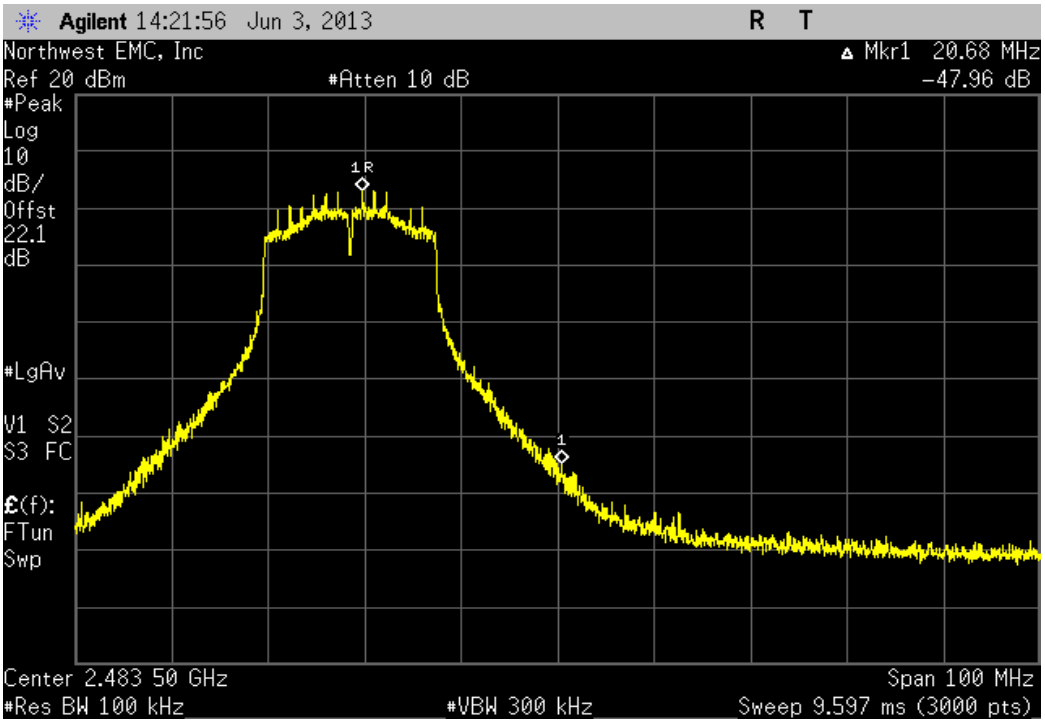
				Value	Limit	Result
				-46.94 dBc	≤ -20 dBc	Pass



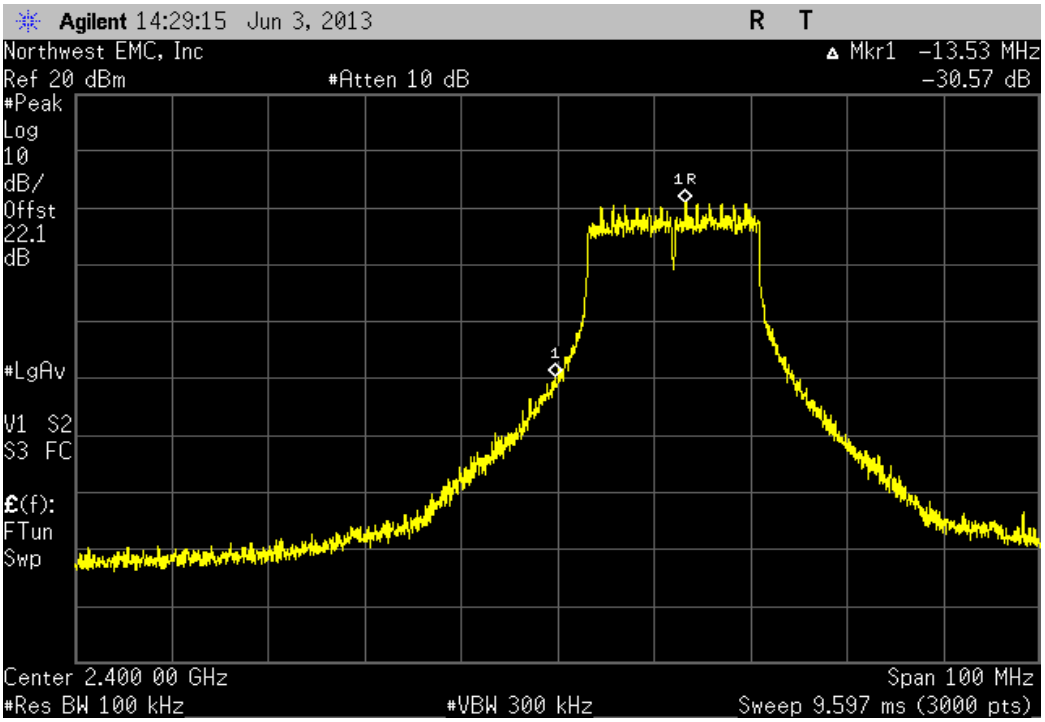
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				-31.46 dBc	≤ -20 dBc	Pass



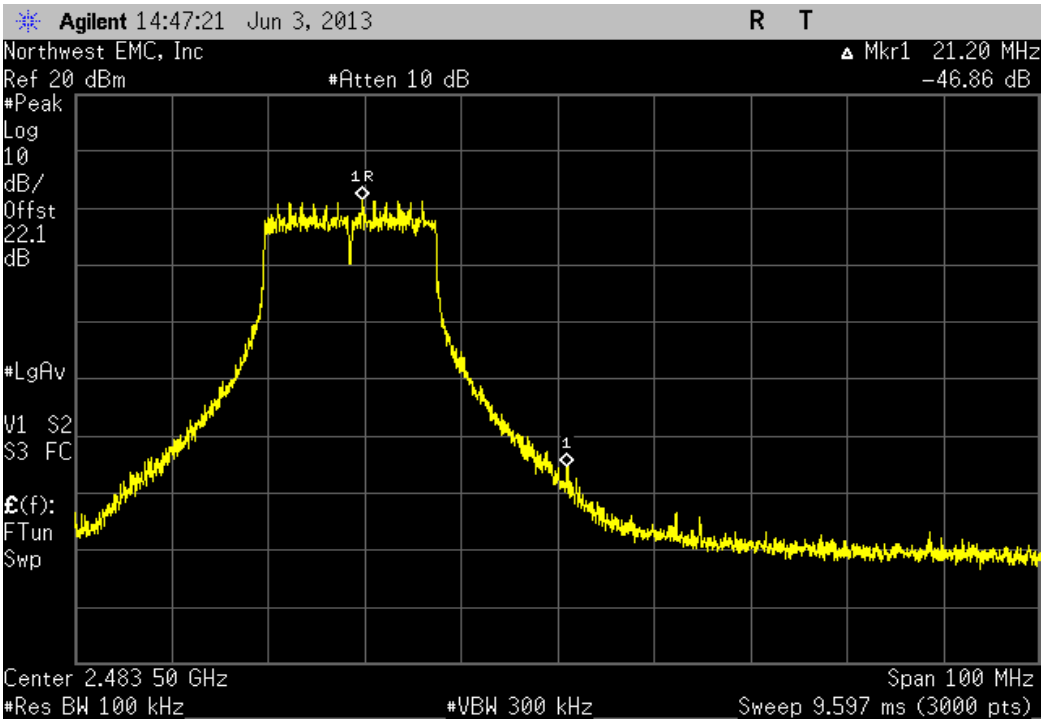
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
				Value	Limit	Result
				-47.96 dBc	≤ -20 dBc	Pass



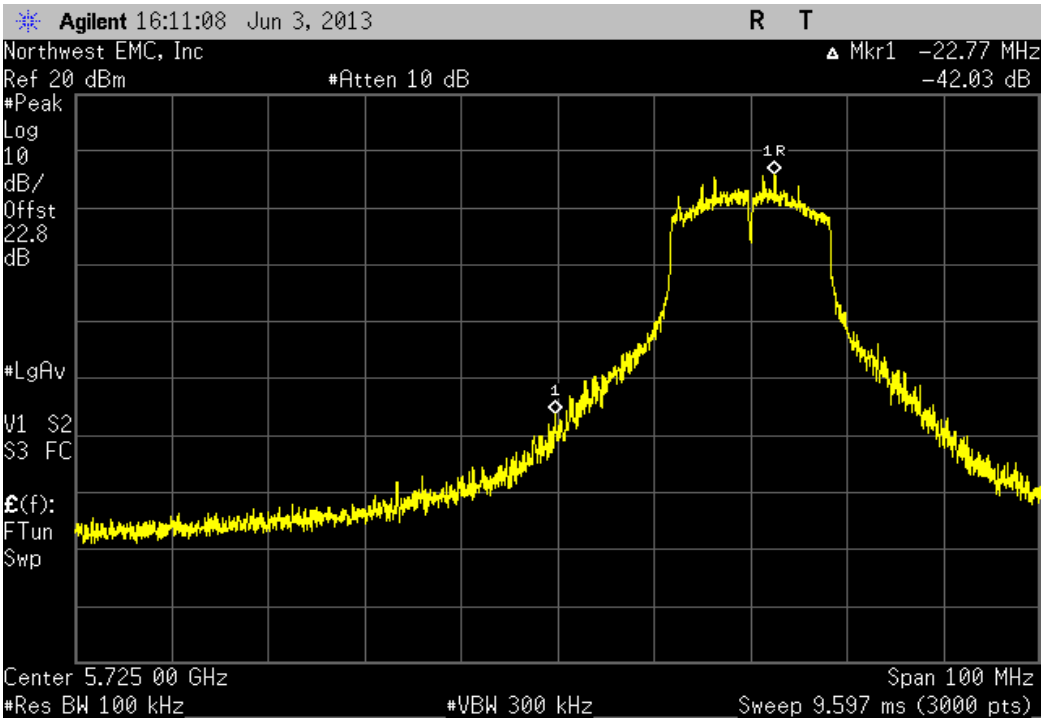
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				-30.57 dBc	≤ -20 dBc	Pass



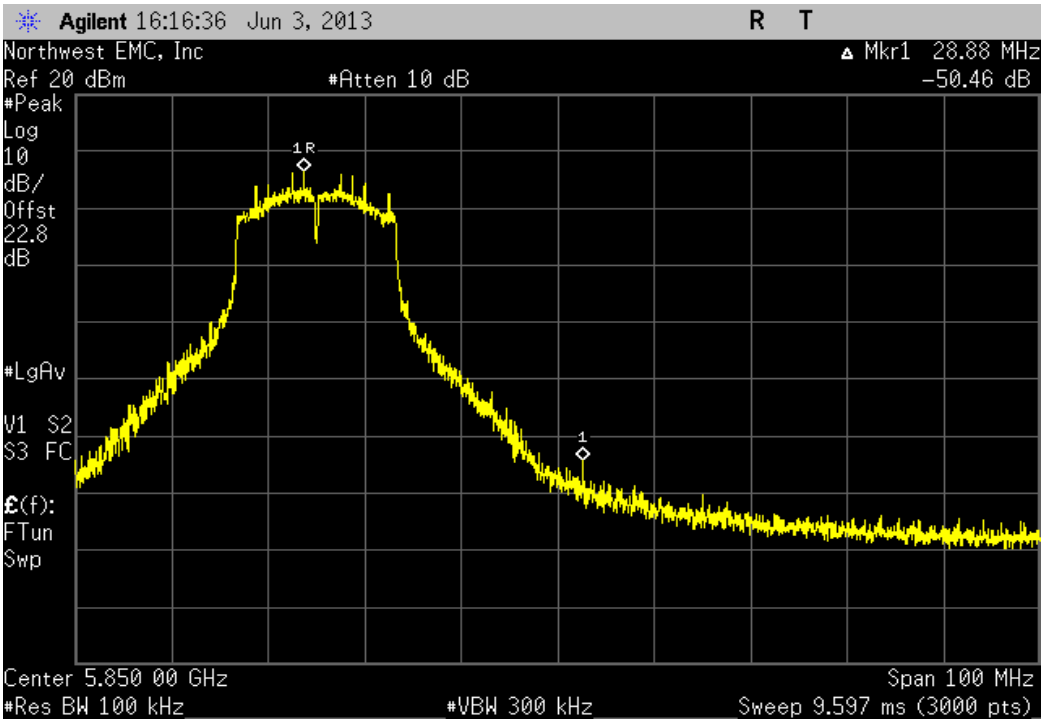
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
				Value	Limit	Result
				-46.86 dBc	≤ -20 dBc	Pass



5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz						
				Value	Limit	Result
				-42.03 dBc	≤ -20 dBc	Pass

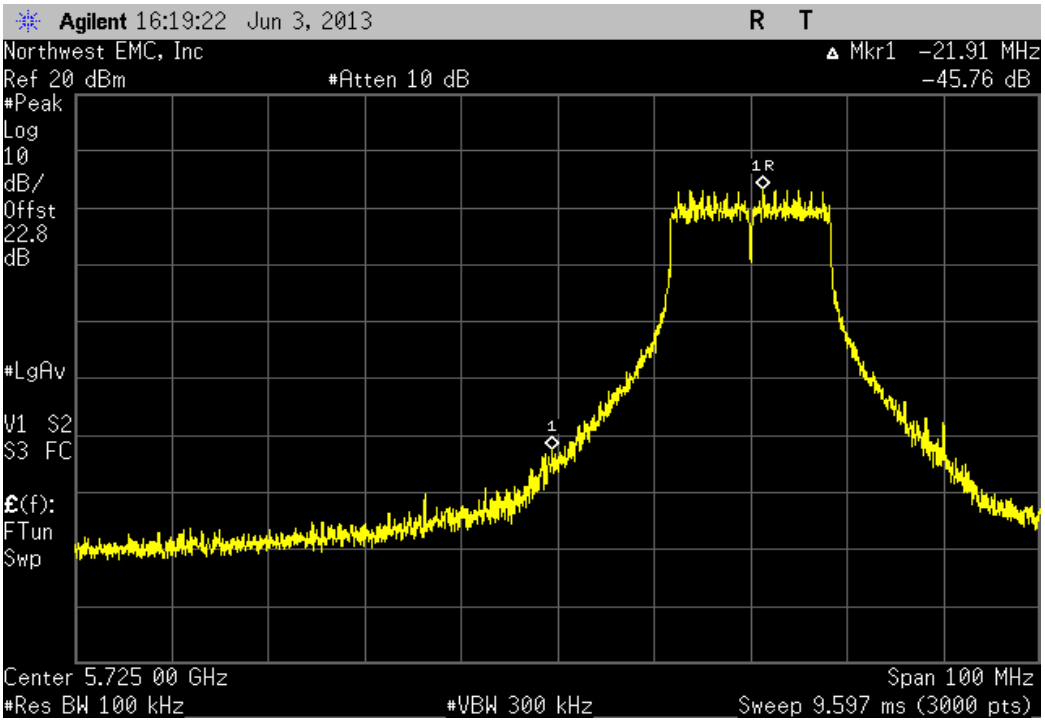


5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz						
				Value	Limit	Result
				-50.46 dBc	≤ -20 dBc	Pass

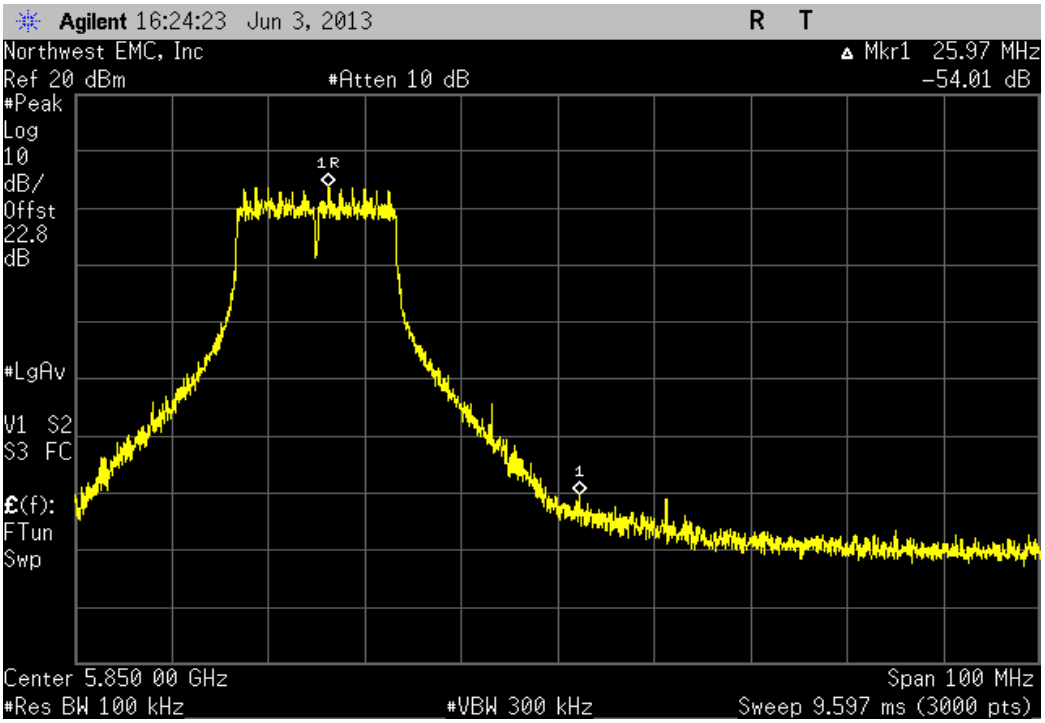


Band Edge Compliance

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz						
				Value	Limit	Result
				-45.76 dBc	≤ -20 dBc	Pass

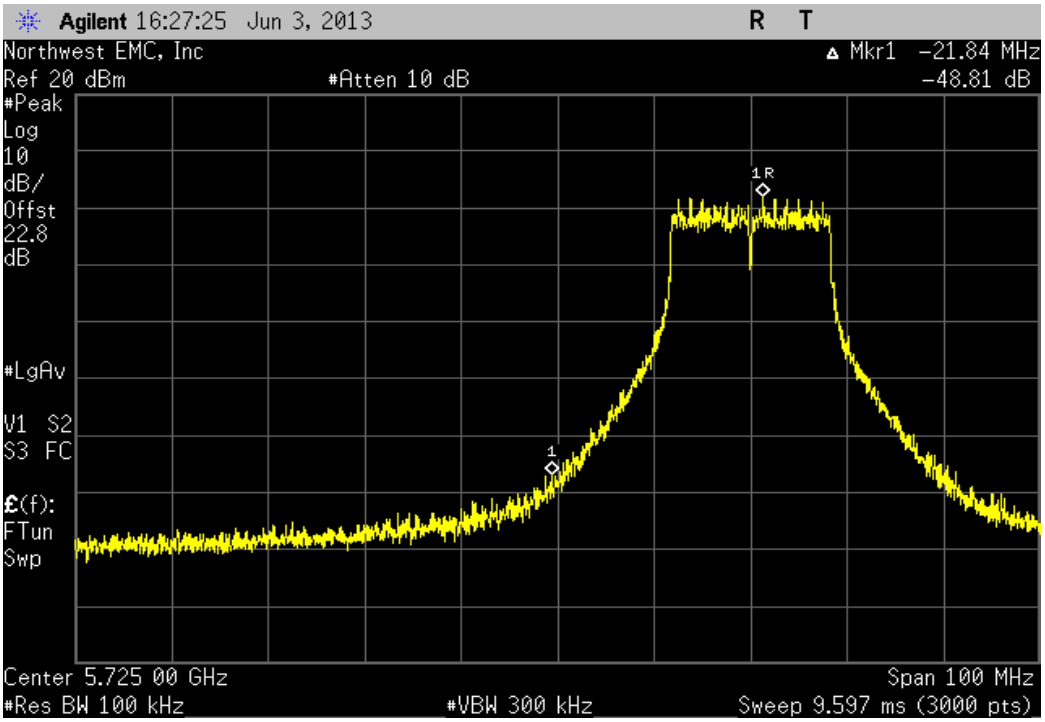


5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz						
				Value	Limit	Result
				-54.01 dBc	≤ -20 dBc	Pass



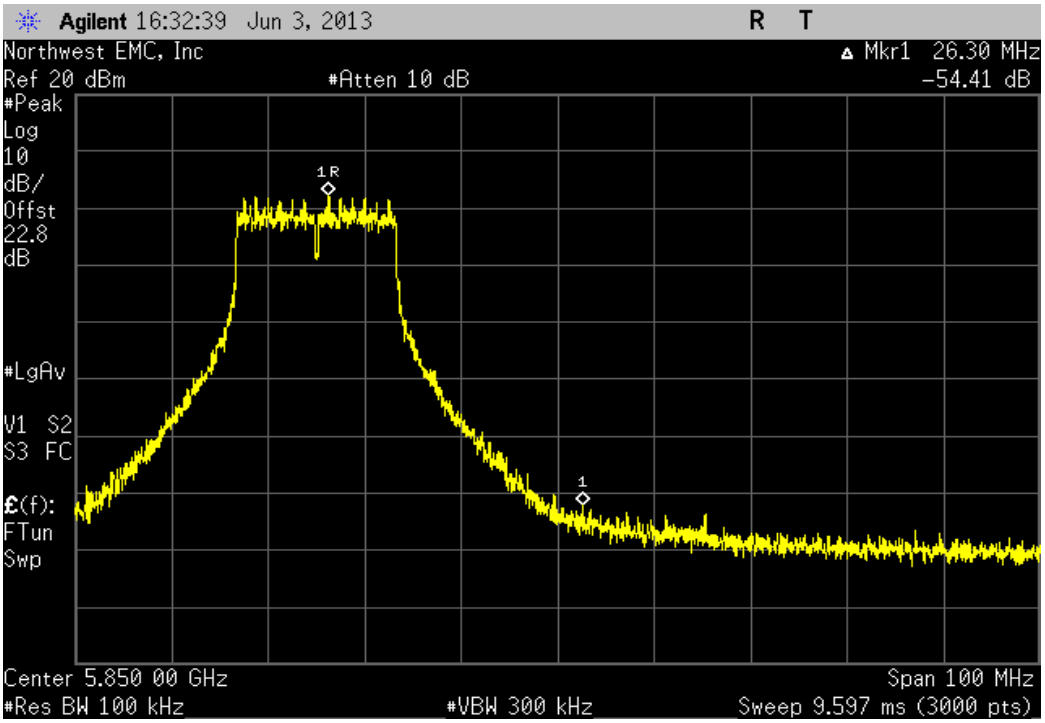
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz

				Value	Limit	Result
				-48.81 dBc	≤ -20 dBc	Pass



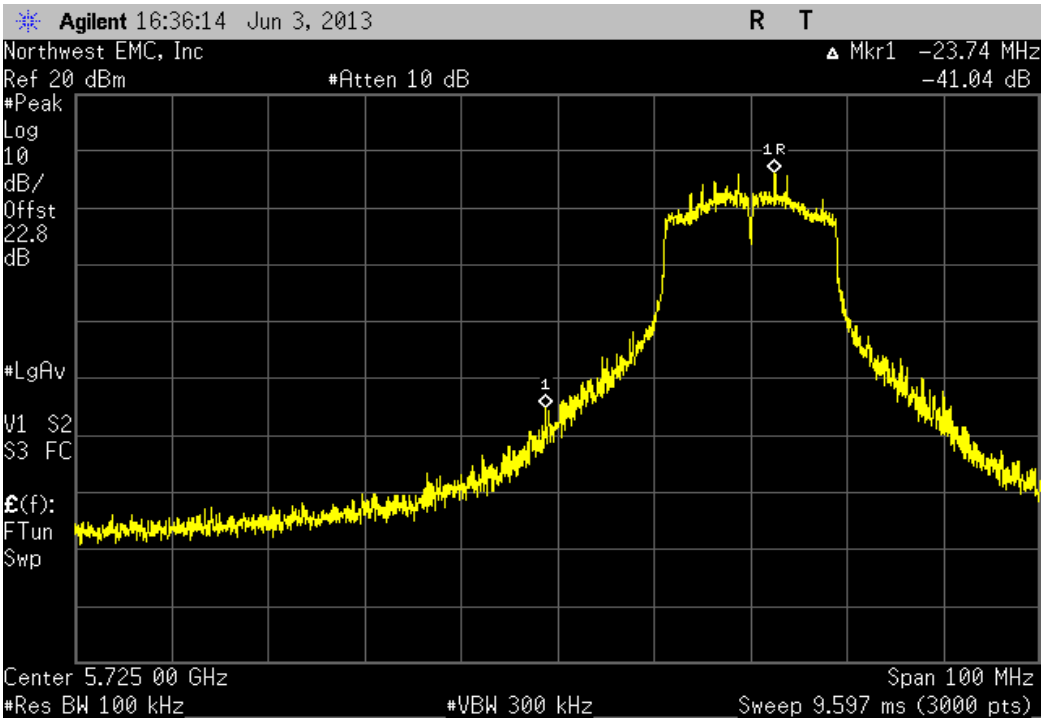
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz

				Value	Limit	Result
				-54.41 dBc	≤ -20 dBc	Pass



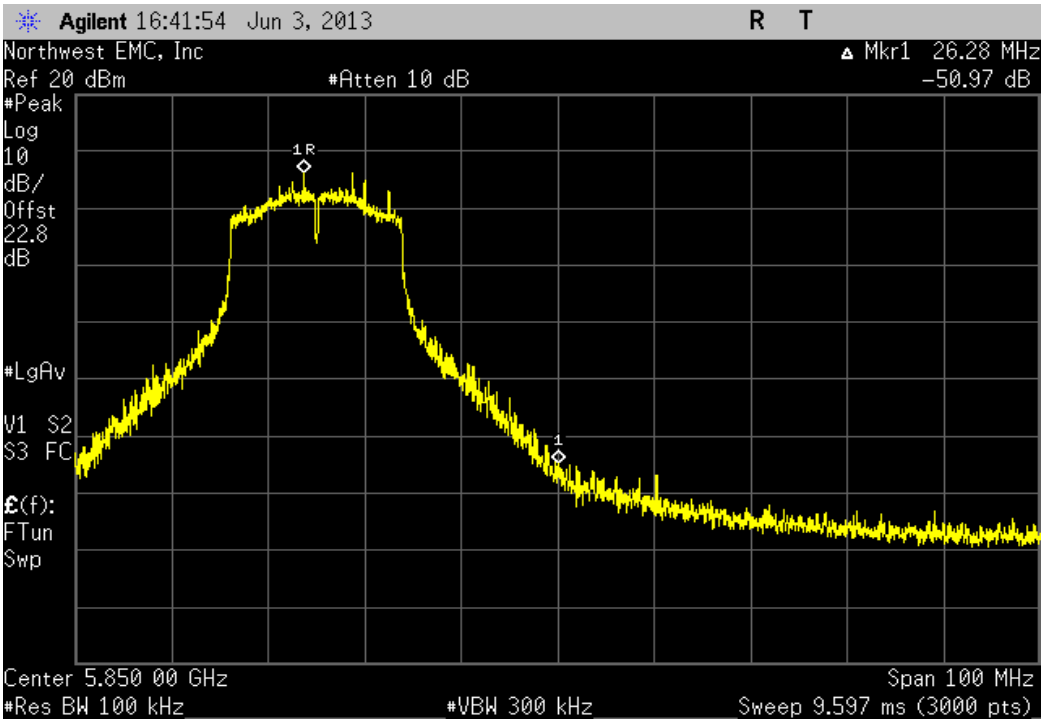
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz

				Value	Limit	Result
				-41.04 dBc	≤ -20 dBc	Pass



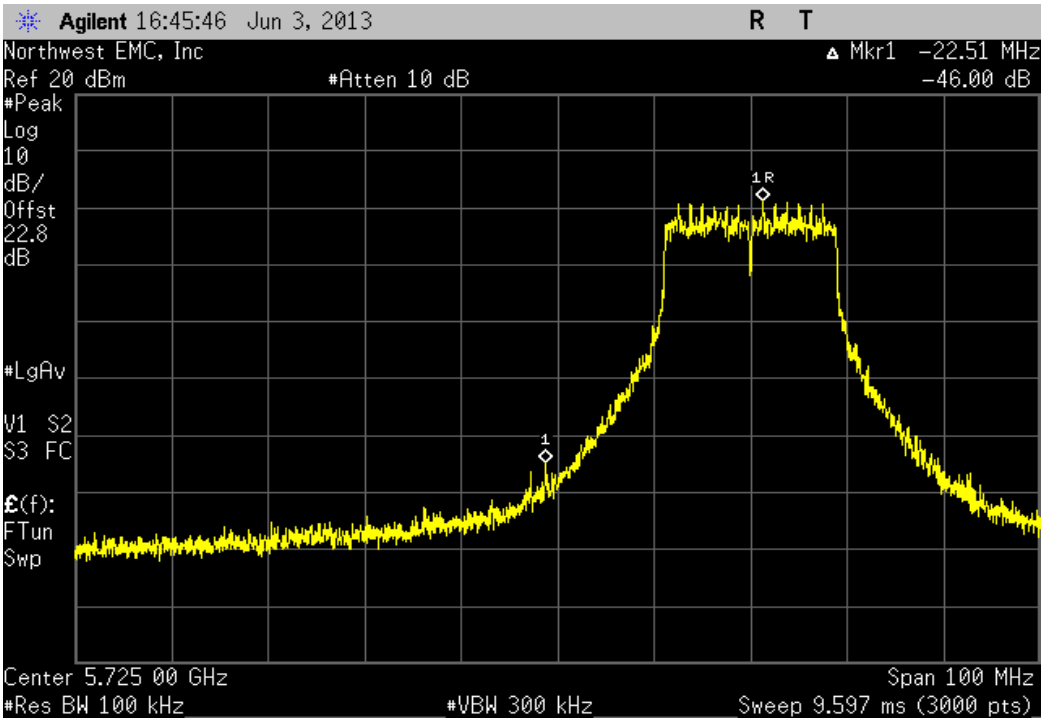
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz

				Value	Limit	Result
				-50.97 dBc	≤ -20 dBc	Pass

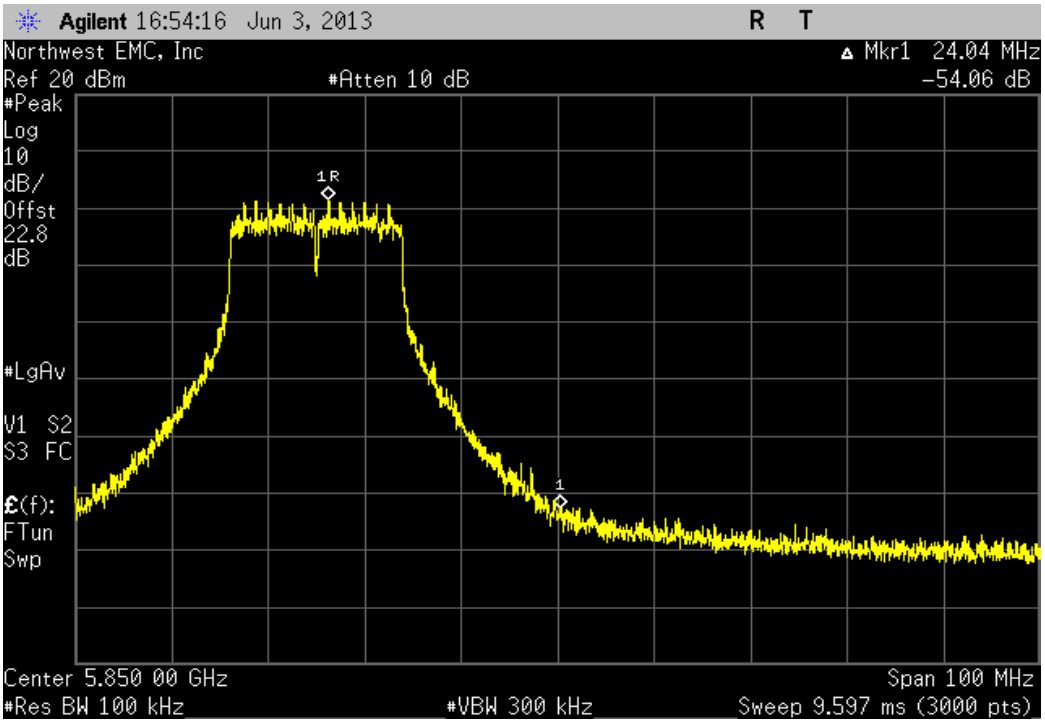


Band Edge Compliance

5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz						
				Value	Limit	Result
				-46 dBc	≤ -20 dBc	Pass



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz						
				Value	Limit	Result
				-54.07 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
Attenuator SMA - 20dB, 40 GHz	Fairview Microwave	SA4014-20	AQI	10/5/2012	12
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	4/12/2013	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	10/5/2012	12
Signal Generator MXG	Agilent	N5183A	TIK	6/7/2012	36
Spectrum Analyzer	Agilent	E4446A	AAT	6/28/2012	24
Spectrum Analyzer	Agilent	E4440A	AAX	5/15/2012	24

TEST DESCRIPTION

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

Spurious Conducted Emissions

EUT:	37x Torpedo + Wireless SOM -31			**Work Order:**	LGPD0096
Serial Number:	1413M00359			**Date:**	06/03/13
Customer:	Logic PD, Inc.			**Temperature:**	23.1°C
Attendees:	None			**Humidity:**	39%
Project:	None			**Barometric Pres.:**	1015.6
Tested by:	Trevor Buls	**Power:**	110VAC/60Hz	**Job Site:**	MN08

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2013	ANSI C63.10:2009

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

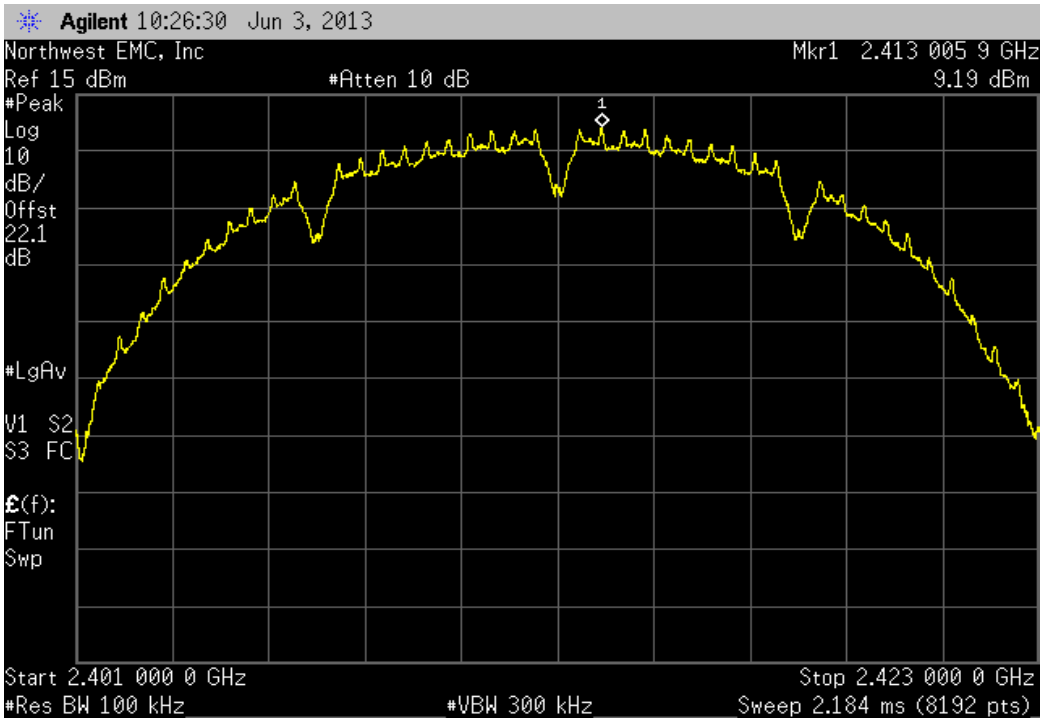
None

Configuration #	1	*Signature* Trevor Buls

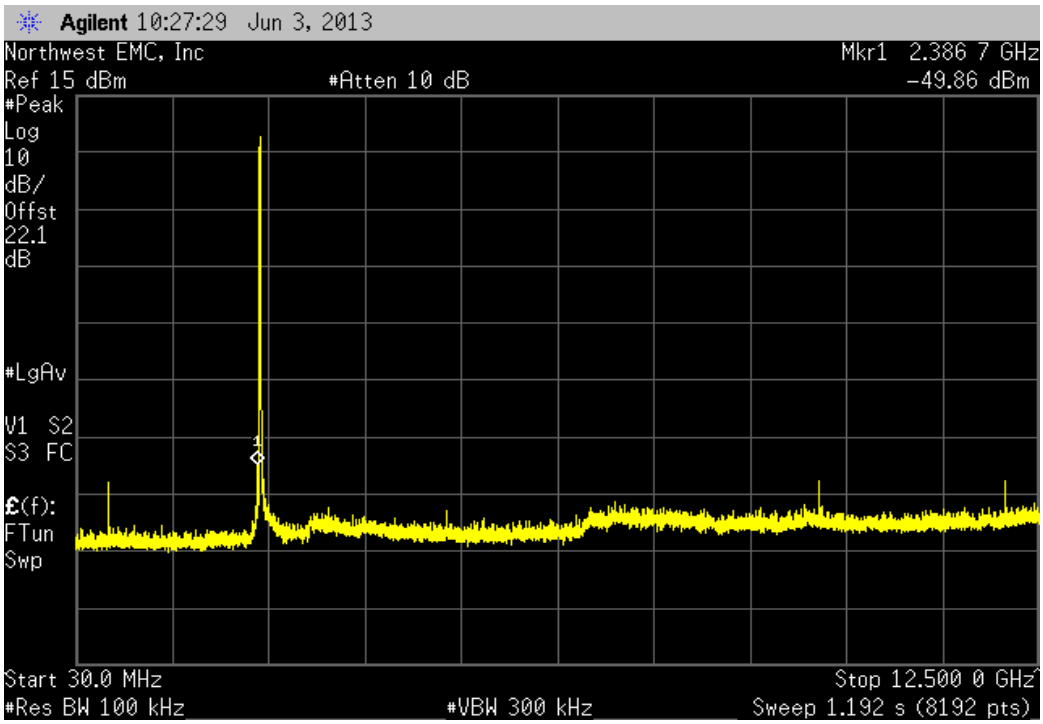
	Frequency Range	Value	Limit	Result
2400 MHz - 2483.5 MHz Band				
802.11(b) 1 Mbps				
Low Channel 1, 2412 MHz	Fundamental	N/A	N/A	N/A
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-59.05 dBc	≤ -20 dBc	Pass
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-61.24 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	Fundamental	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-63.91 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-61.19 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	Fundamental	N/A	N/A	N/A
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-64.4 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-61.94 dBc	≤ -20 dBc	Pass
802.11(b) 11 Mbps				
Low Channel 1, 2412 MHz	Fundamental	N/A	N/A	N/A
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-58.48 dBc	≤ -20 dBc	Pass
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-61.12 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	Fundamental	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-64.13 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-60.78 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	Fundamental	N/A	N/A	N/A
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-64.21 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-61.93 dBc	≤ -20 dBc	Pass
802.11(g) 6 Mbps				
Low Channel 1, 2412 MHz	Fundamental	N/A	N/A	N/A
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-55.64 dBc	≤ -20 dBc	Pass
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-55.88 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	Fundamental	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-62.92 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-58.74 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	Fundamental	N/A	N/A	N/A
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-59.9 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-55.74 dBc	≤ -20 dBc	Pass
802.11(g) 36 Mbps				
Low Channel 1, 2412 MHz	Fundamental	N/A	N/A	N/A
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-56.08 dBc	≤ -20 dBc	Pass
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-53.25 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	Fundamental	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-57.7 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-53.82 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	Fundamental	N/A	N/A	N/A
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-58.12 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-54.55 dBc	≤ -20 dBc	Pass
802.11(g) 54 Mbps				
Low Channel 1, 2412 MHz	Fundamental	N/A	N/A	N/A
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-53.73 dBc	≤ -20 dBc	Pass
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-52.84 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	Fundamental	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-58.41 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-54.18 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	Fundamental	N/A	N/A	N/A
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-58.88 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-54.57 dBc	≤ -20 dBc	Pass
802.11(n) MCS0				
Low Channel 1, 2412 MHz	Fundamental	N/A	N/A	N/A
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-54.01 dBc	≤ -20 dBc	Pass
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-56.04 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	Fundamental	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-61.21 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-58.78 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	Fundamental	N/A	N/A	N/A
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-60.36 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-55.6 dBc	≤ -20 dBc	Pass
802.11(n) MCS7				
Low Channel 1, 2412 MHz	Fundamental	N/A	N/A	N/A
Low Channel 1, 2412 MHz	30 MHz - 12.5 GHz	-52.15 dBc	≤ -20 dBc	Pass
Low Channel 1, 2412 MHz	12.5 GHz - 25 GHz	-53.22 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	Fundamental	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	30 MHz - 12.5 GHz	-57.68 dBc	≤ -20 dBc	Pass
Mid Channel 6, 2437 MHz	12.5 GHz - 25 GHz	-53.14 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	Fundamental	N/A	N/A	N/A
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	-58.11 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	12.5 GHz - 25 GHz	-52.65 dBc	≤ -20 dBc	Pass

5725 MHz - 5850 MHz Band					
802.11(a) 6 Mbps					
	Low Channel 149, 5745 MHz	Fundamental	N/A	N/A	N/A
	Low Channel 149, 5745 MHz	30 MHz - 12.5 GHz	-57.68 dBc	≤ -20 dBc	Pass
	Low Channel 149, 5745 MHz	12.5 GHz - 25 GHz	-53.58 dBc	≤ -20 dBc	Pass
	Low Channel 149, 5745 MHz	25 GHz - 32 GHz	-51.1 dBc	≤ -20 dBc	Pass
	Low Channel 149, 5745 MHz	32 GHz - 40 GHz	-41.72 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	Fundamental	N/A	N/A	N/A
	Mid Channel 157, 5785 MHz	30 MHz - 12.5 GHz	-58.02 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	12.5 GHz - 25 GHz	-54 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	25 GHz - 32 GHz	-51.21 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	32 GHz - 40 GHz	-42.45 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	Fundamental	N/A	N/A	N/A
	High Channel 165, 5825 MHz	30 MHz - 12.5 GHz	-59.43 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	12.5 GHz - 25 GHz	-54.75 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	25 GHz - 32 GHz	-52.06 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	32 GHz - 40 GHz	-42.48 dBc	≤ -20 dBc	Pass
802.11(a) 36 Mbps					
	Low Channel 149, 5745 MHz	Fundamental	N/A	N/A	N/A
	Low Channel 149, 5745 MHz	30 MHz - 12.5 GHz	-55.41 dBc	≤ -20 dBc	Pass
	Low Channel 149, 5745 MHz	12.5 GHz - 25 GHz	-51.57 dBc	≤ -20 dBc	Pass
	Low Channel 149, 5745 MHz	25 GHz - 32 GHz	-49.06 dBc	≤ -20 dBc	Pass
	Low Channel 149, 5745 MHz	32 GHz - 40 GHz	-39.28 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	Fundamental	N/A	N/A	N/A
	Mid Channel 157, 5785 MHz	30 MHz - 12.5 GHz	-56.81 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	12.5 GHz - 25 GHz	-51.2 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	25 GHz - 32 GHz	-48.62 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	32 GHz - 40 GHz	-38.68 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	Fundamental	N/A	N/A	N/A
	High Channel 165, 5825 MHz	30 MHz - 12.5 GHz	-56.71 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	12.5 GHz - 25 GHz	-51.45 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	-39.79 dBc	≤ -20 dBc	Pass
802.11(a) 54 Mbps					
	Low Channel 149, 5745 MHz	Fundamental	N/A	N/A	N/A
	Low Channel 149, 5745 MHz	30 MHz - 12.5 GHz	-54.86 dBc	≤ -20 dBc	Pass
	Low Channel 149, 5745 MHz	12.5 GHz - 25 GHz	-50.38 dBc	≤ -20 dBc	Pass
	Low Channel 149, 5745 MHz	25 GHz - 32 GHz	-47.42 dBc	≤ -20 dBc	Pass
	Low Channel 149, 5745 MHz	32 GHz - 40 GHz	-38.08 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	Fundamental	N/A	N/A	N/A
	Mid Channel 157, 5785 MHz	30 MHz - 12.5 GHz	-55.14 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	12.5 GHz - 25 GHz	-49.48 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	25 GHz - 32 GHz	-48.18 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	32 GHz - 40 GHz	-38.56 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	Fundamental	N/A	N/A	N/A
	High Channel 165, 5825 MHz	30 MHz - 12.5 GHz	-54.42 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	12.5 GHz - 25 GHz	-50.53 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	25 GHz - 32 GHz	-47.11 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	32 GHz - 40 GHz	-38.12 dBc	≤ -20 dBc	Pass
802.11(n) MCS0 - UNII					
	Low Channel 149, 5745 MHz	Fundamental	N/A	N/A	N/A
	Low Channel 149, 5745 MHz	30 MHz - 12.5 GHz	-57.2 dBc	≤ -20 dBc	Pass
	Low Channel 149, 5745 MHz	12.5 GHz - 25 GHz	-54.55 dBc	≤ -20 dBc	Pass
	Low Channel 149, 5745 MHz	25 GHz - 32 GHz	-52.11 dBc	≤ -20 dBc	Pass
	Low Channel 149, 5745 MHz	32 GHz - 40 GHz	-41.9 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	Fundamental	N/A	N/A	N/A
	Mid Channel 157, 5785 MHz	30 MHz - 12.5 GHz	-59.28 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	12.5 GHz - 25 GHz	-54.03 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	25 GHz - 32 GHz	-51.71 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	32 GHz - 40 GHz	-42.8 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	Fundamental	N/A	N/A	N/A
	High Channel 165, 5825 MHz	30 MHz - 12.5 GHz	-58.82 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	12.5 GHz - 25 GHz	-54.09 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	25 GHz - 32 GHz	-52.35 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	32 GHz - 40 GHz	-42.55 dBc	≤ -20 dBc	Pass
802.11(n) MCS7 - UNII					
	Low Channel 149, 5745 MHz	Fundamental	N/A	N/A	N/A
	Low Channel 149, 5745 MHz	30 MHz - 12.5 GHz	-53.12 dBc	≤ -20 dBc	Pass
	Low Channel 149, 5745 MHz	12.5 GHz - 25 GHz	-49.5 dBc	≤ -20 dBc	Pass
	Low Channel 149, 5745 MHz	25 GHz - 32 GHz	-45.49 dBc	≤ -20 dBc	Pass
	Low Channel 149, 5745 MHz	32 GHz - 40 GHz	-37.22 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	Fundamental	N/A	N/A	N/A
	Mid Channel 157, 5785 MHz	30 MHz - 12.5 GHz	-53.68 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	12.5 GHz - 25 GHz	-49.43 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	25 GHz - 32 GHz	-46.86 dBc	≤ -20 dBc	Pass
	Mid Channel 157, 5785 MHz	32 GHz - 40 GHz	-37.79 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	Fundamental	N/A	N/A	N/A
	High Channel 165, 5825 MHz	30 MHz - 12.5 GHz	-54.16 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	12.5 GHz - 25 GHz	-49.37 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	25 GHz - 32 GHz	-45.87 dBc	≤ -20 dBc	Pass
	High Channel 165, 5825 MHz	32 GHz - 40 GHz	-37.2 dBc	≤ -20 dBc	Pass

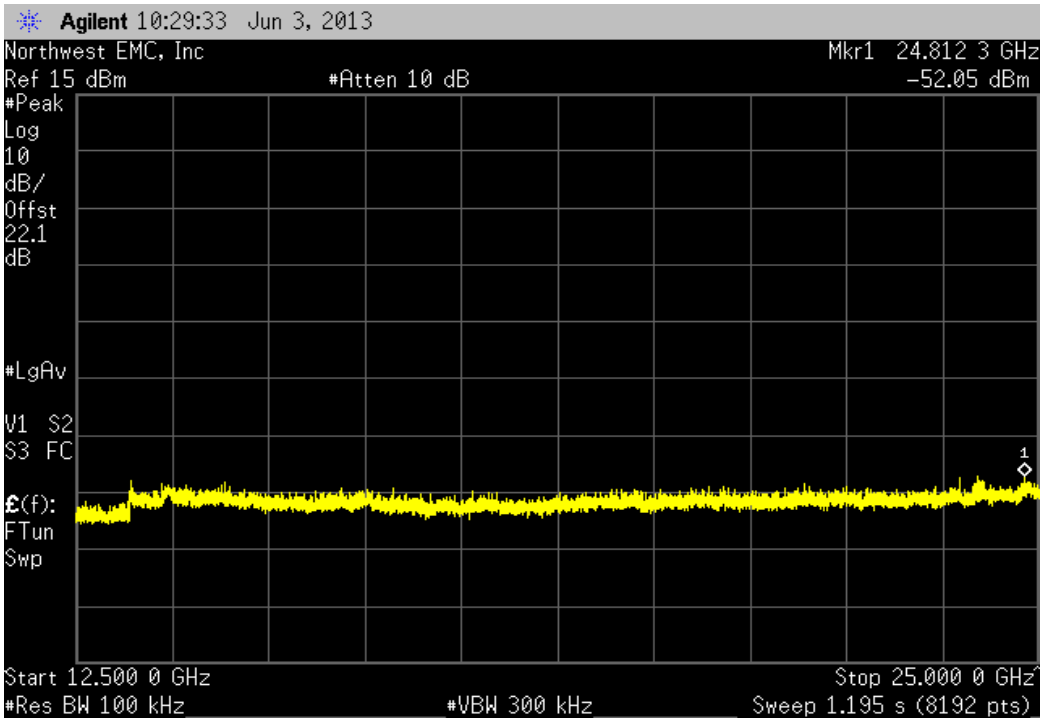
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



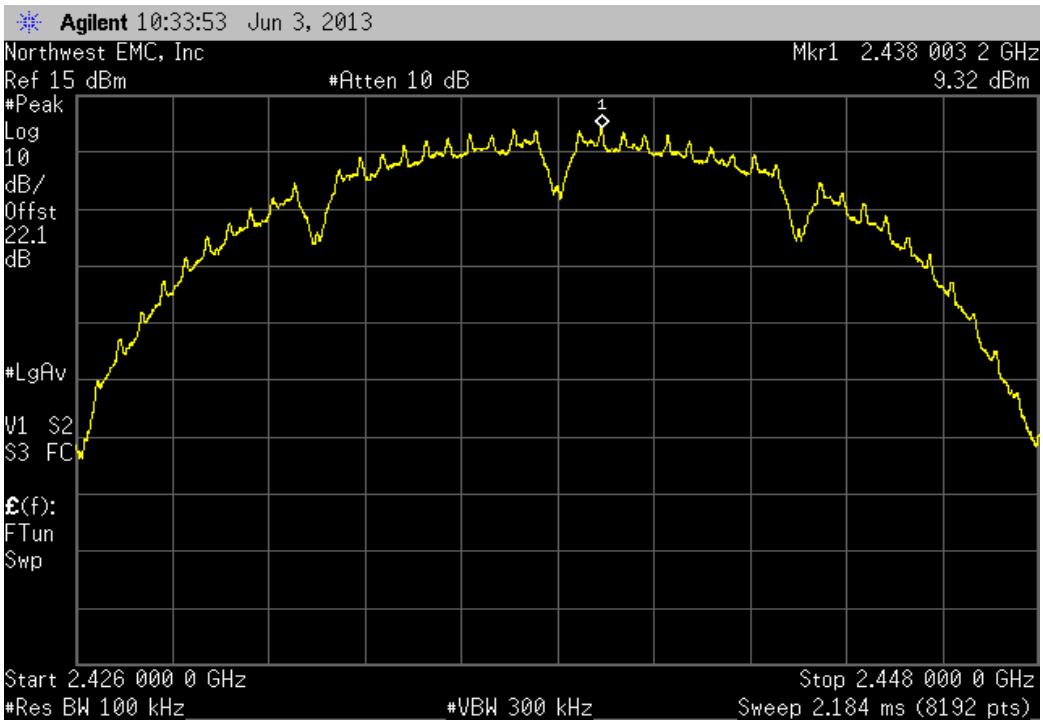
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz					
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-59.05 dBc	≤ -20 dBc	Pass



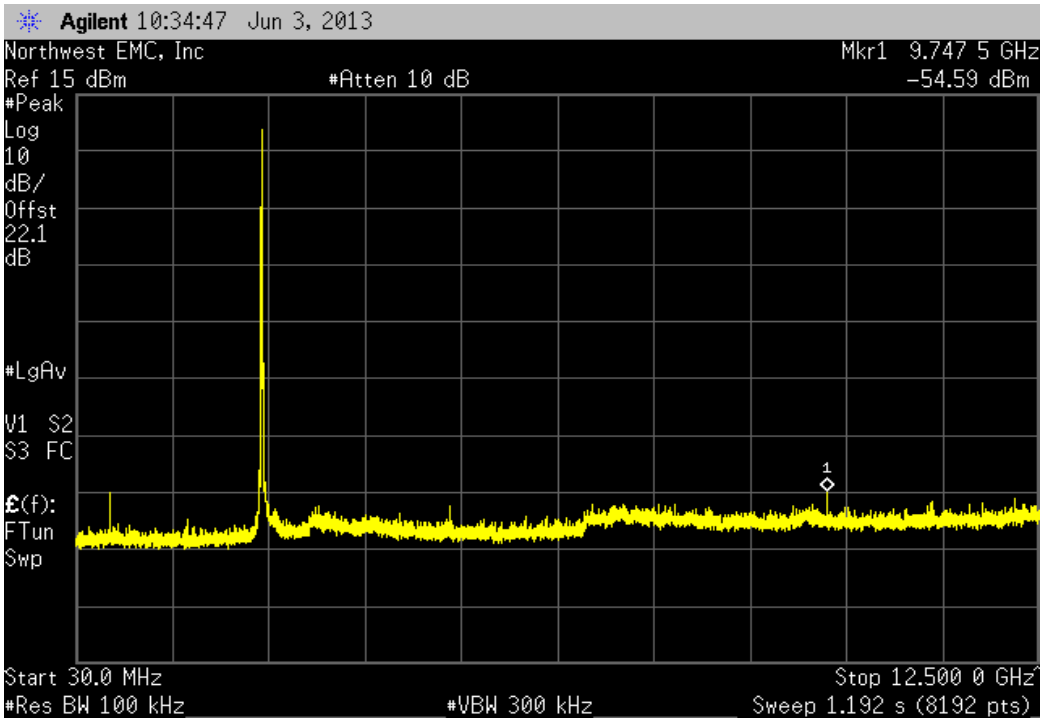
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-61.24 dBc	≤ -20 dBc	Pass



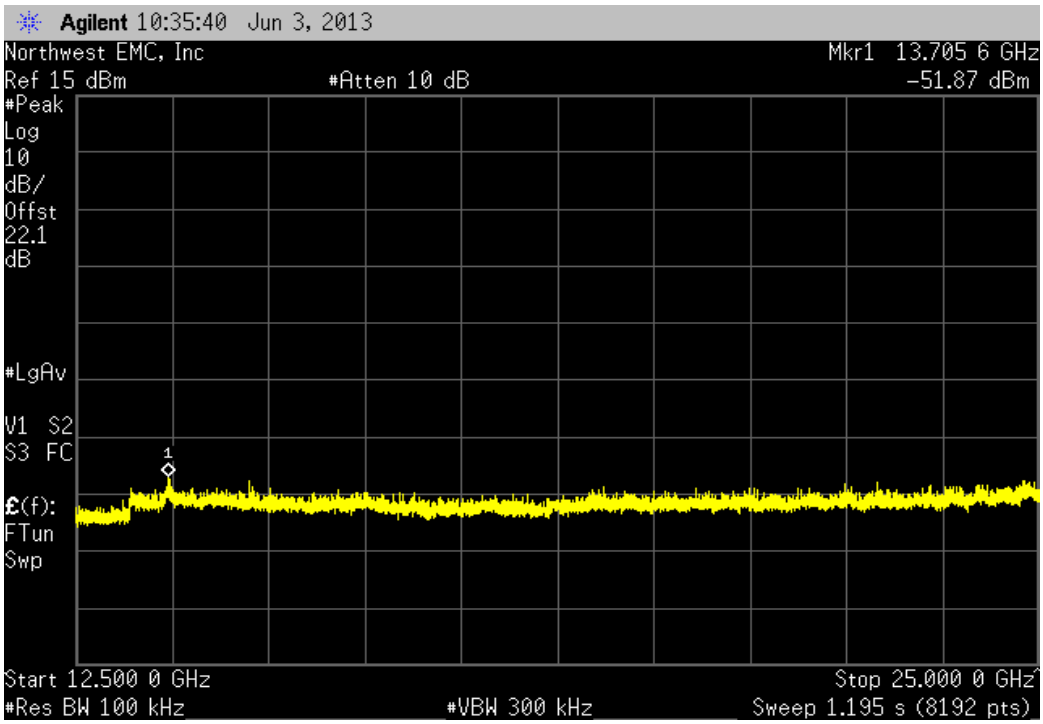
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



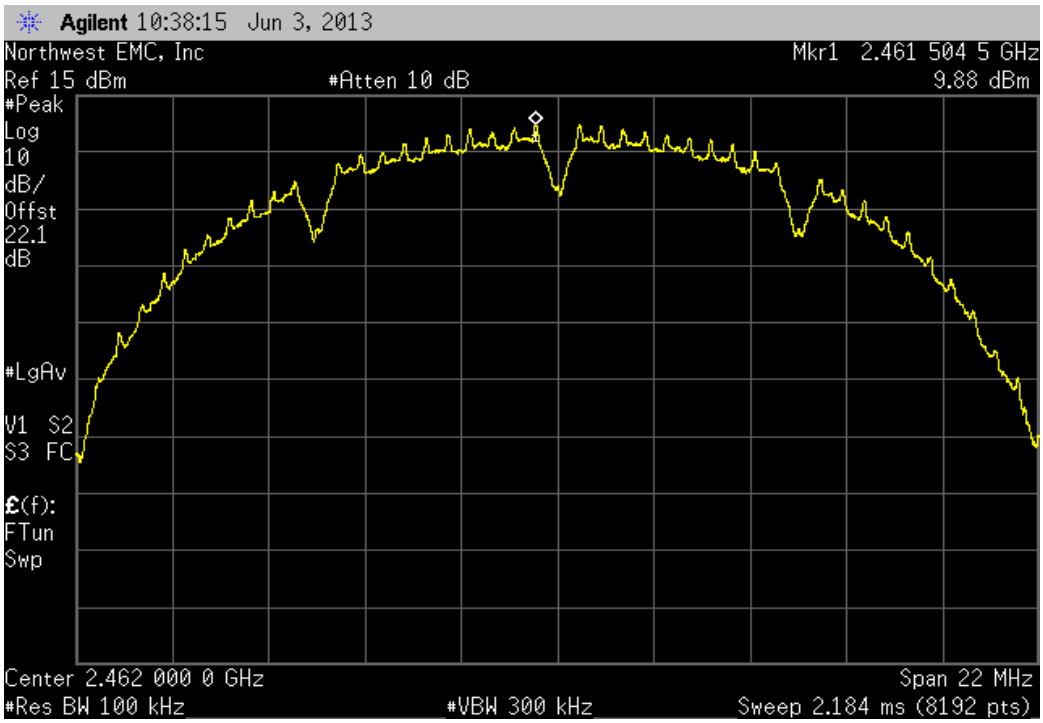
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-63.91 dBc	≤ -20 dBc	Pass



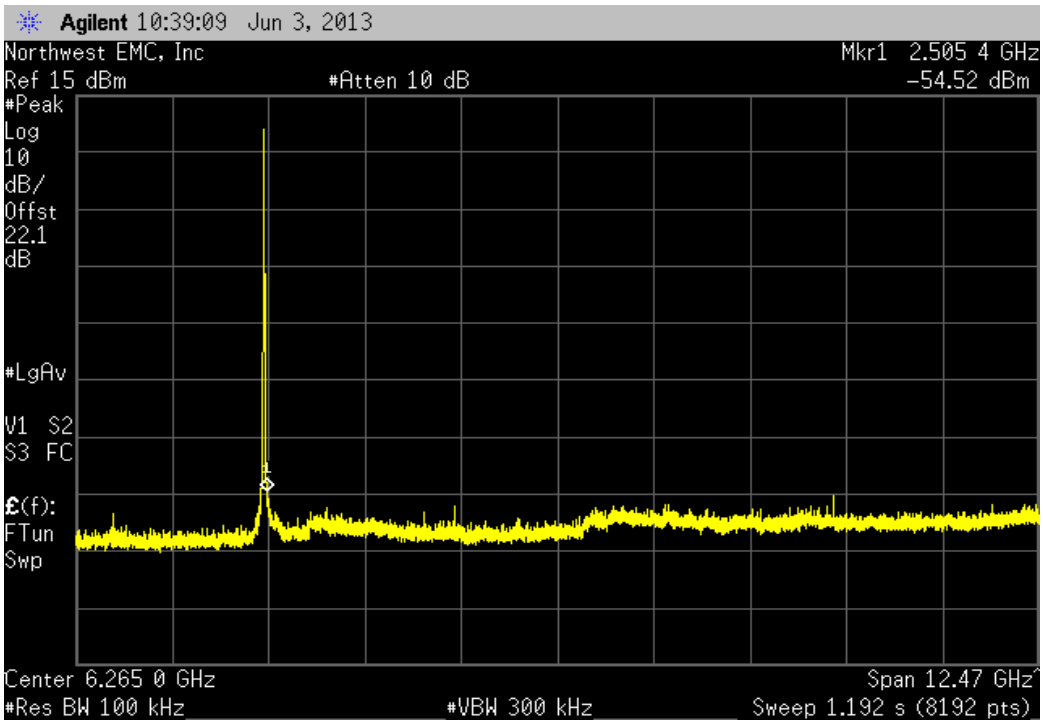
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-61.19 dBc	≤ -20 dBc	Pass



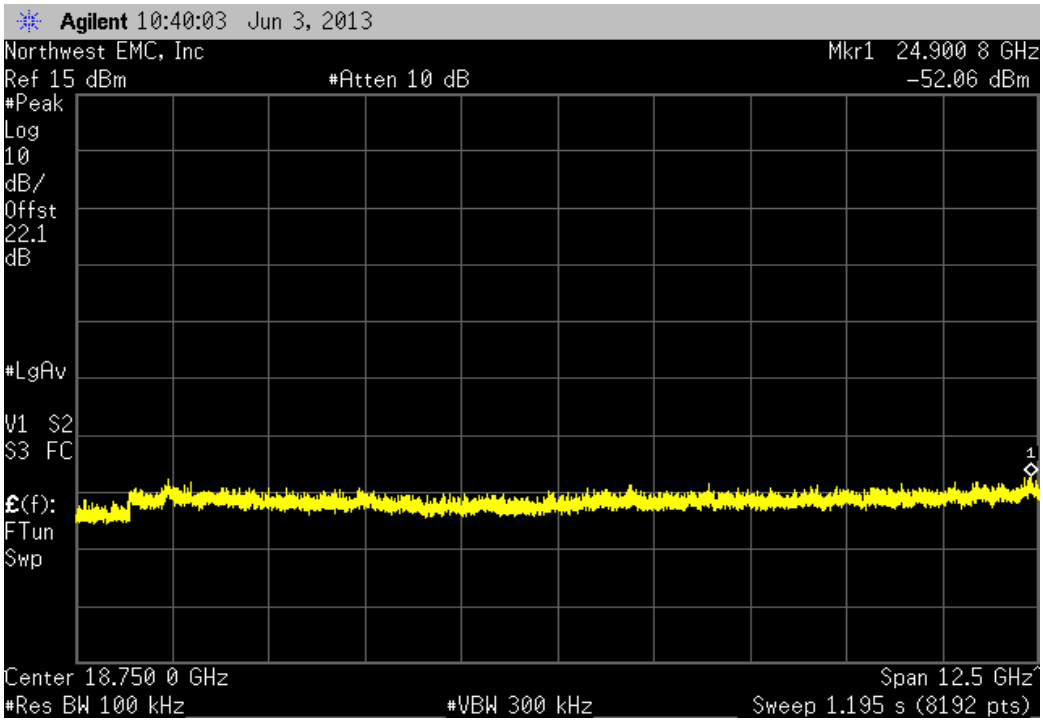
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
	Frequency Range			Value	Limit	Result
	Fundamental			N/A	N/A	N/A



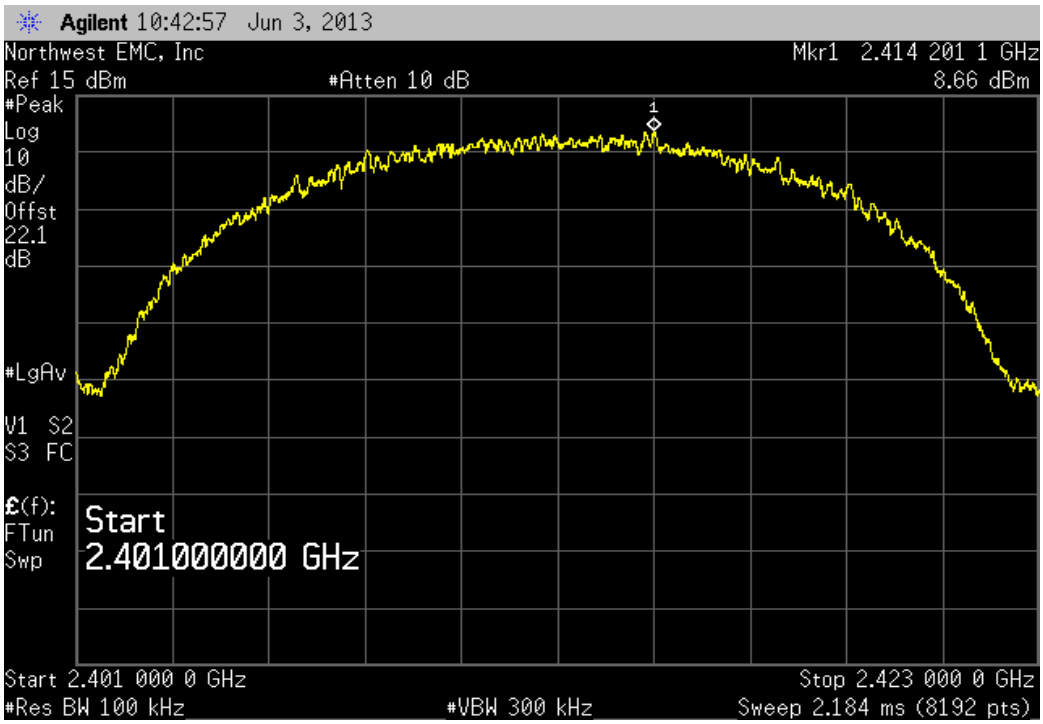
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz					
Frequency Range		Value	Limit	Result
30 MHz - 12.5 GHz		-64.4 dBc	≤ -20 dBc	Pass



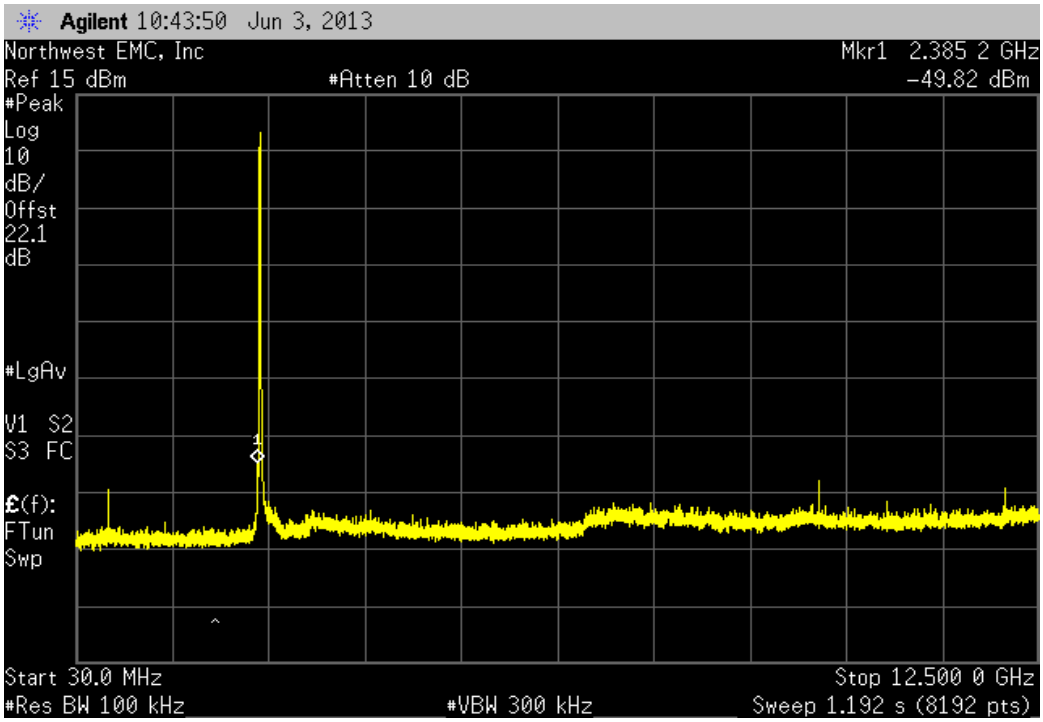
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz					
Frequency Range		Value	Limit	Result	
12.5 GHz - 25 GHz		-61.94 dBc	≤ -20 dBc	Pass	



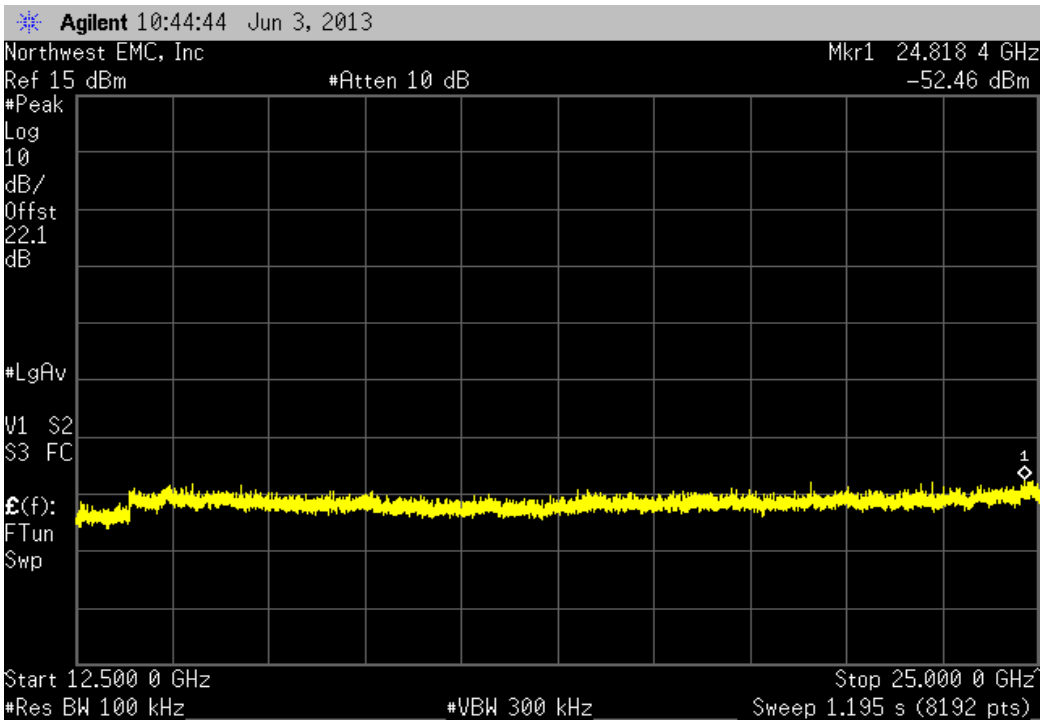
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz					
Frequency Range		Value	Limit	Result	
Fundamental		N/A	N/A	N/A	



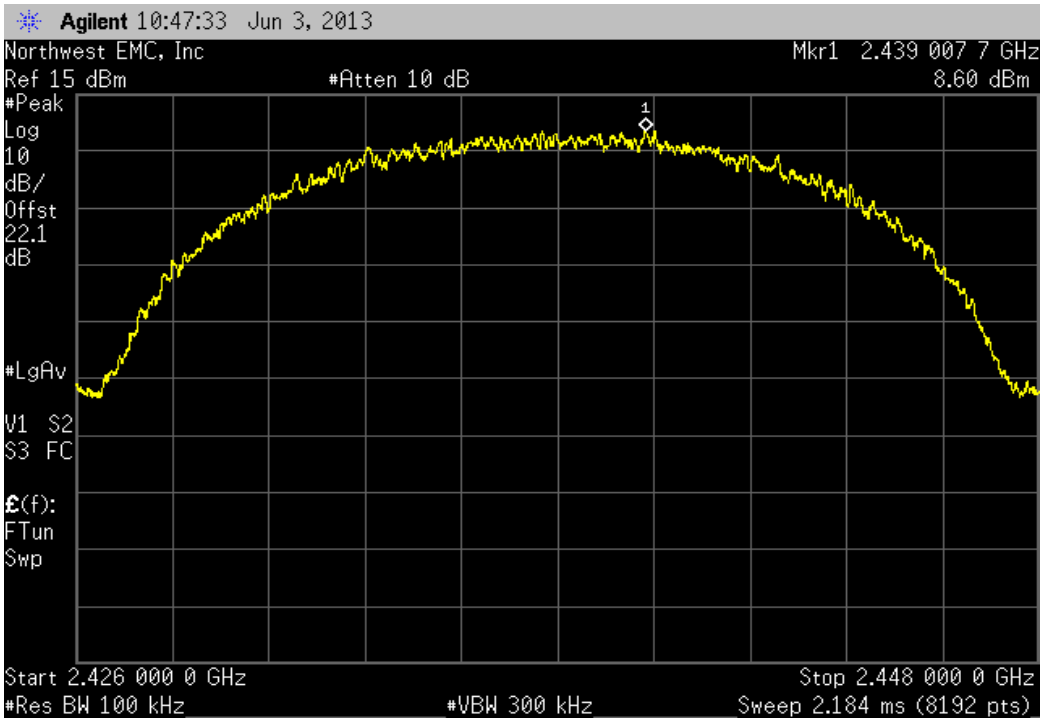
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-58.48 dBc	≤ -20 dBc	Pass



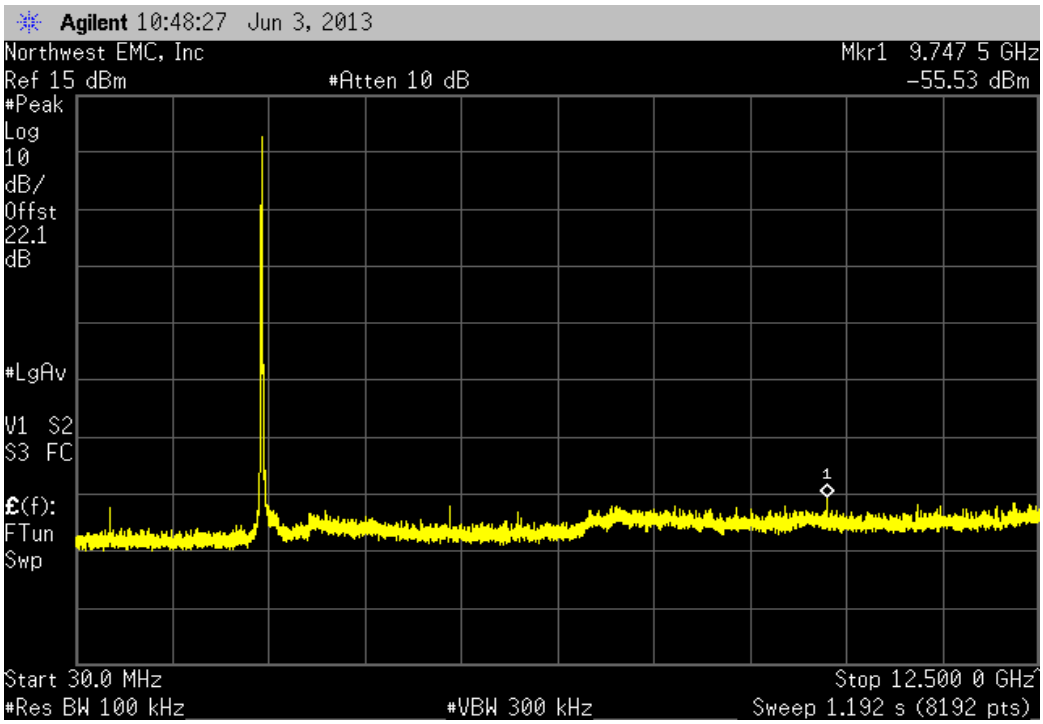
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-61.12 dBc	≤ -20 dBc	Pass



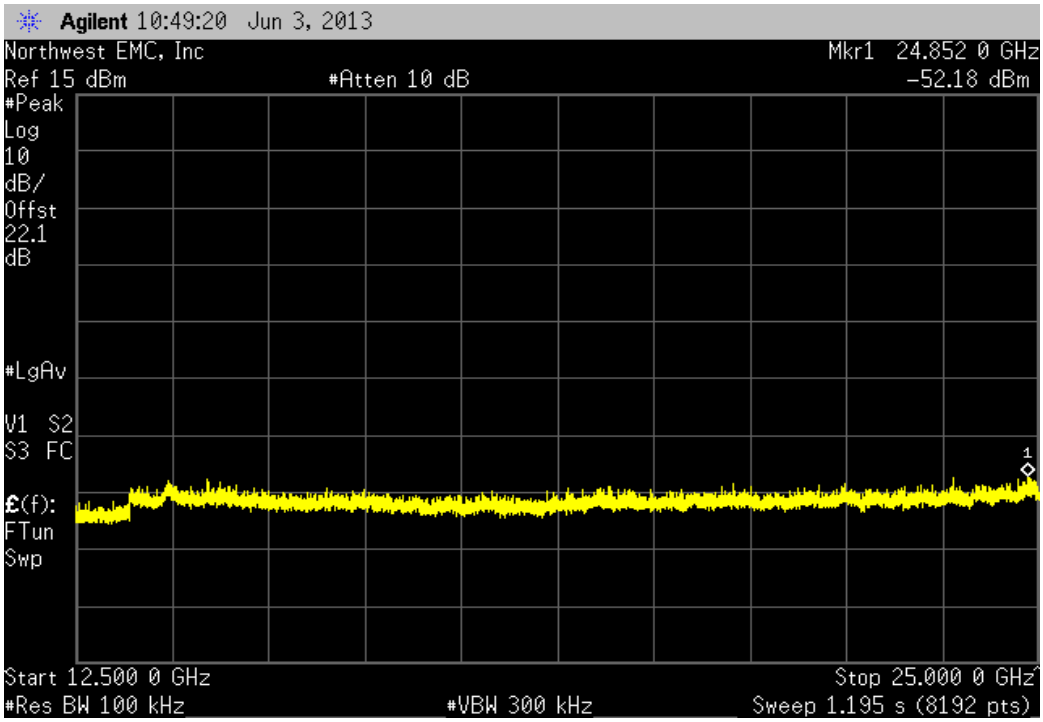
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
	Frequency Range			Value	Limit	Result
	Fundamental			N/A	N/A	N/A



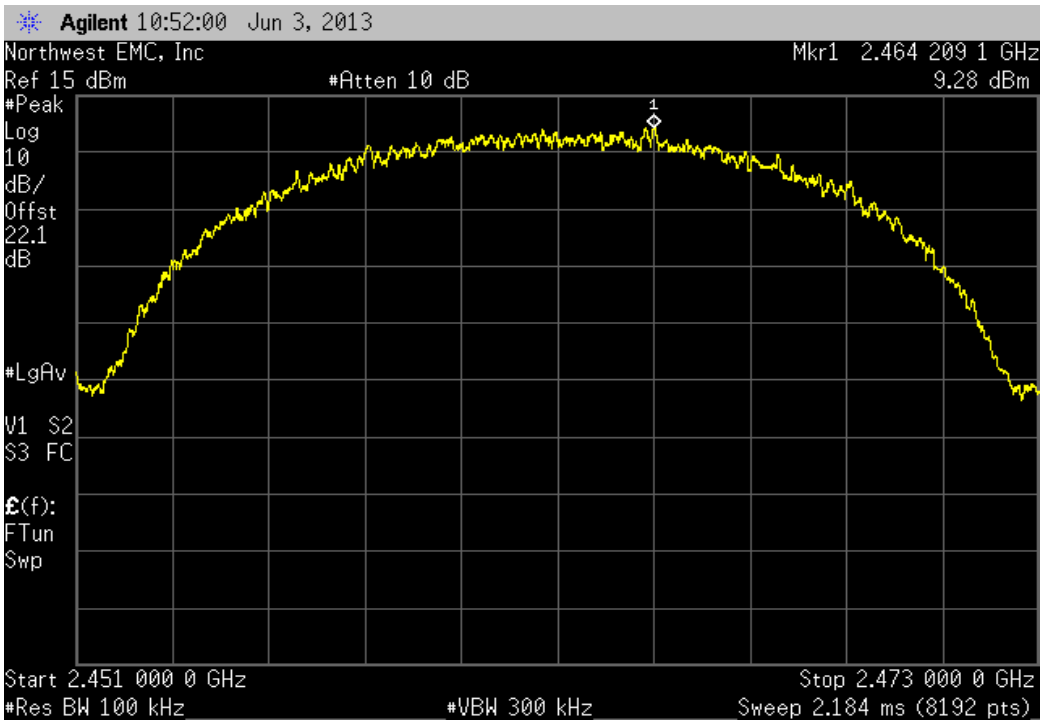
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz					
Frequency Range			Value	Limit	Result
30 MHz - 12.5 GHz			-64.13 dBc	≤ -20 dBc	Pass



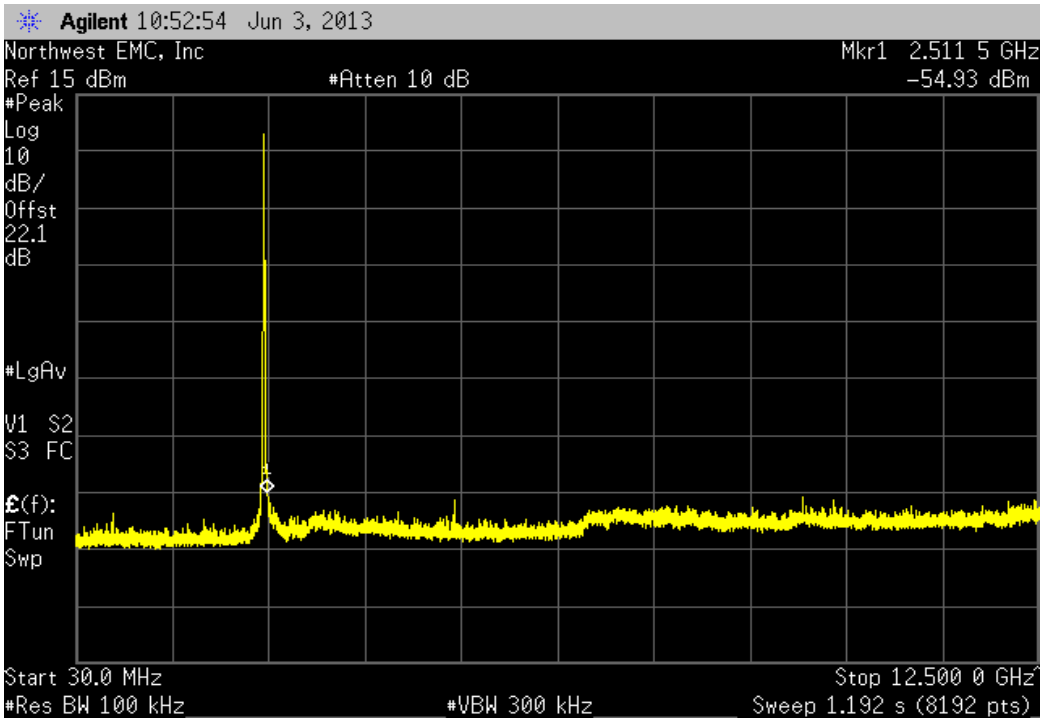
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-60.78 dBc	≤ -20 dBc	Pass



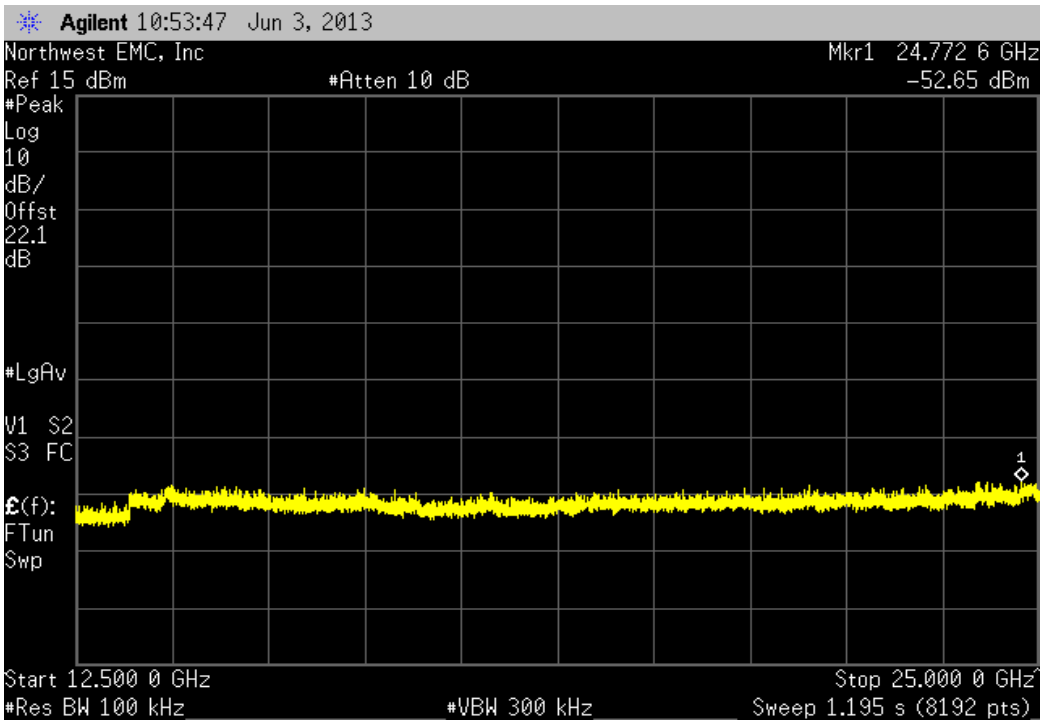
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



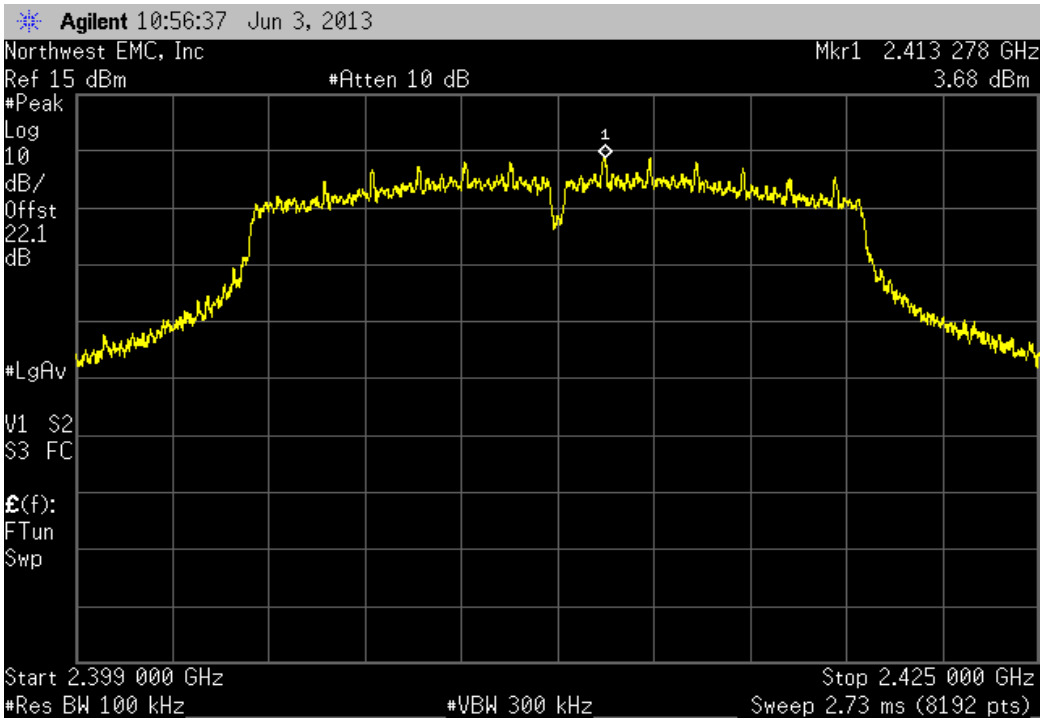
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-64.21 dBc	≤ -20 dBc	Pass



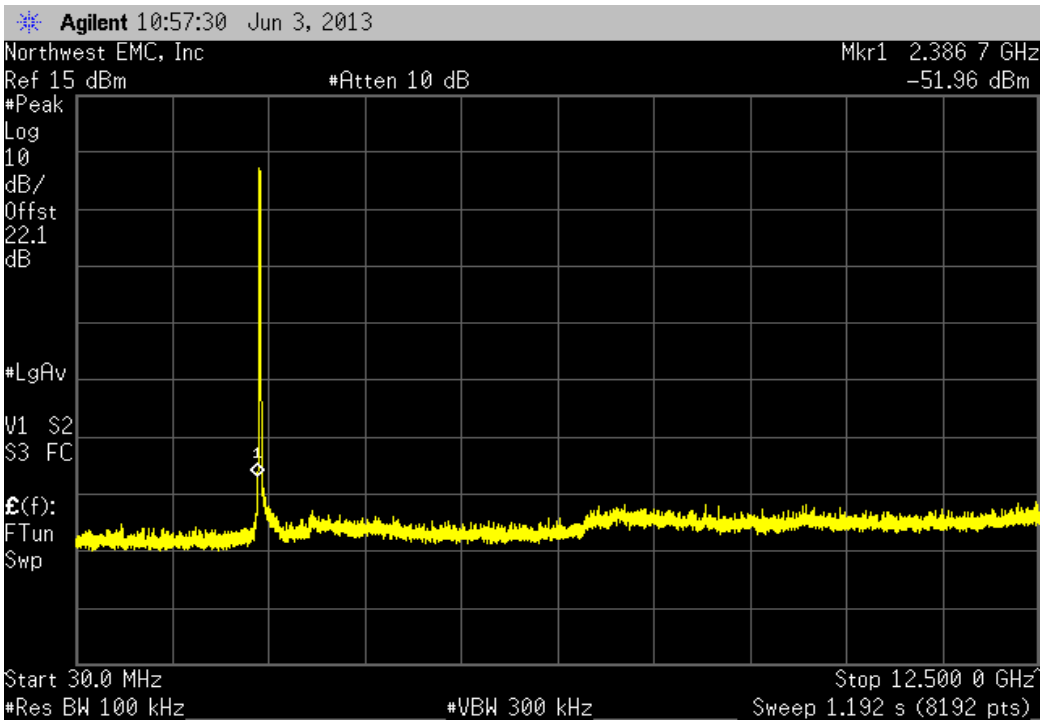
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-61.93 dBc	≤ -20 dBc	Pass



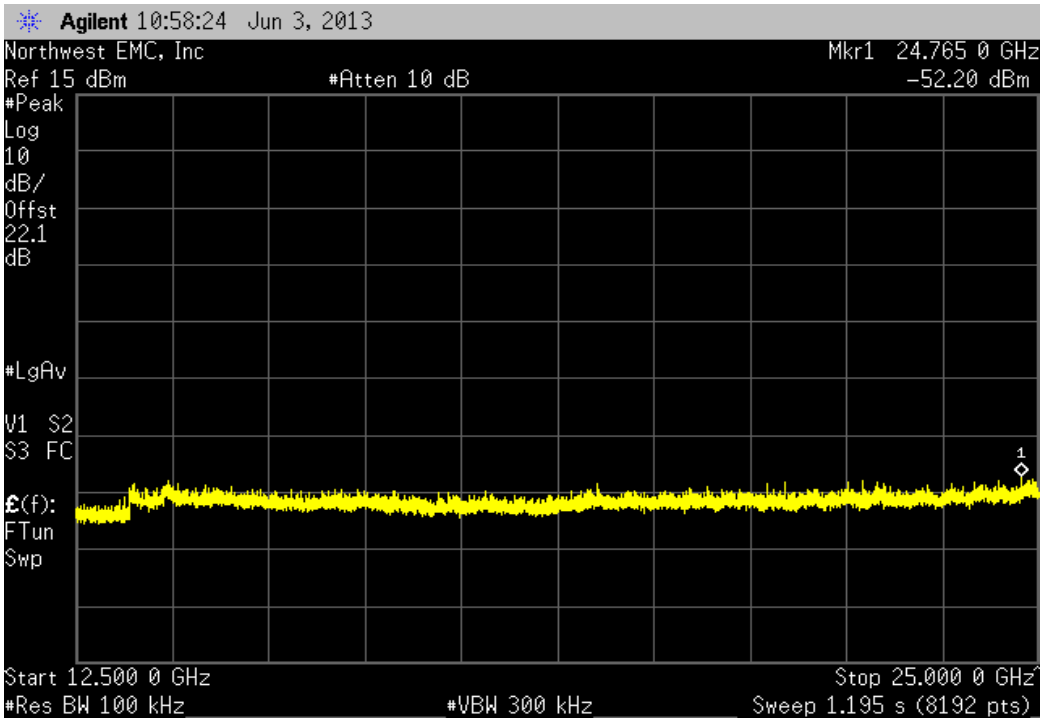
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
	Frequency Range			Value	Limit	Result
	Fundamental			N/A	N/A	N/A



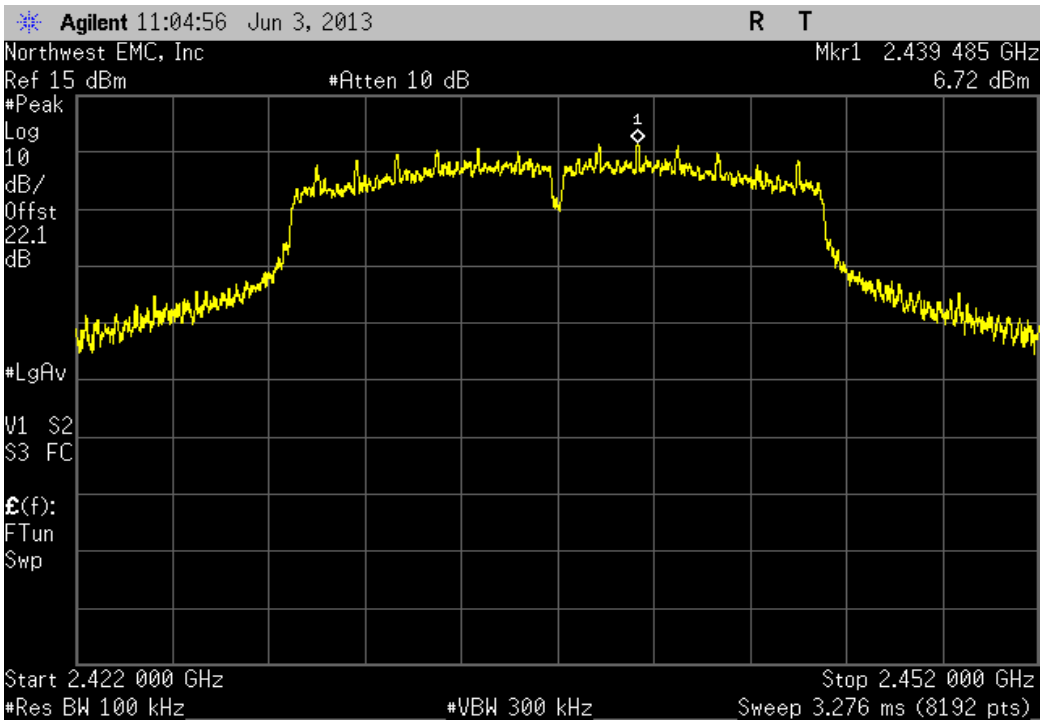
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz					
Frequency Range		Value	Limit	Result	
30 MHz - 12.5 GHz		-55.64 dBc	≤ -20 dBc	Pass	



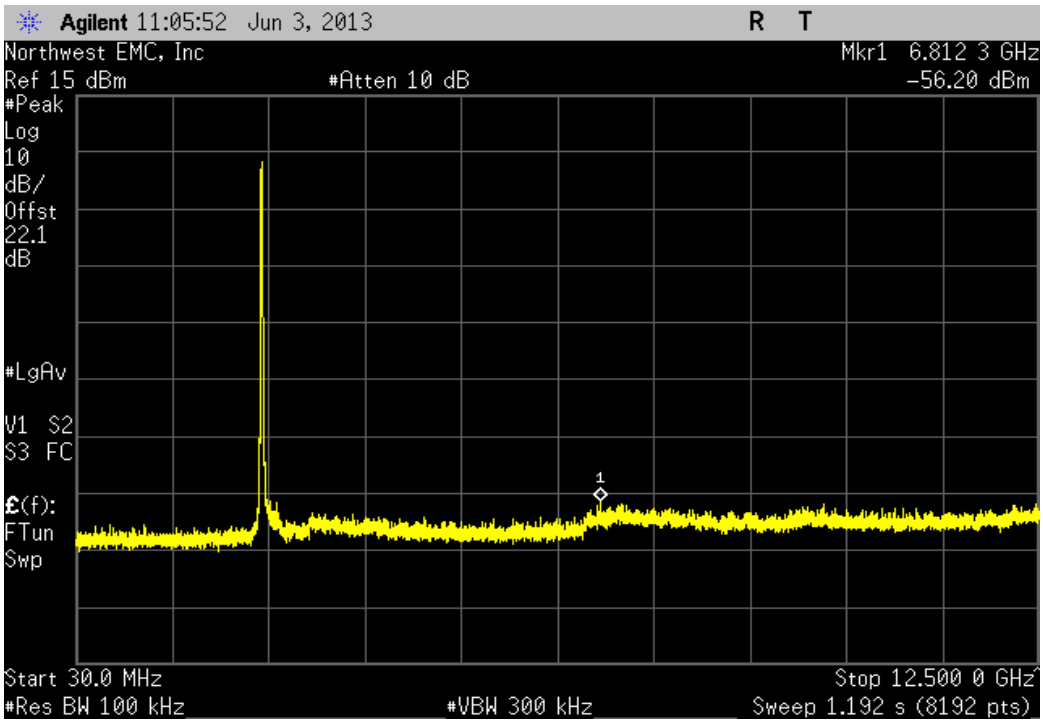
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-55.88 dBc	≤ -20 dBc	Pass



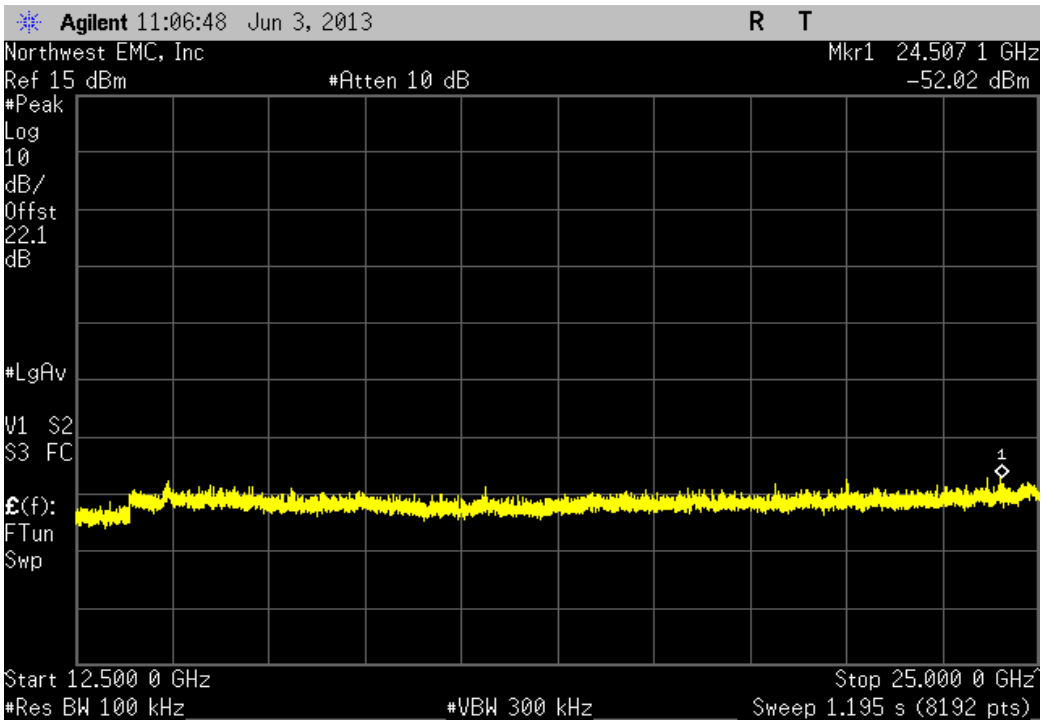
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



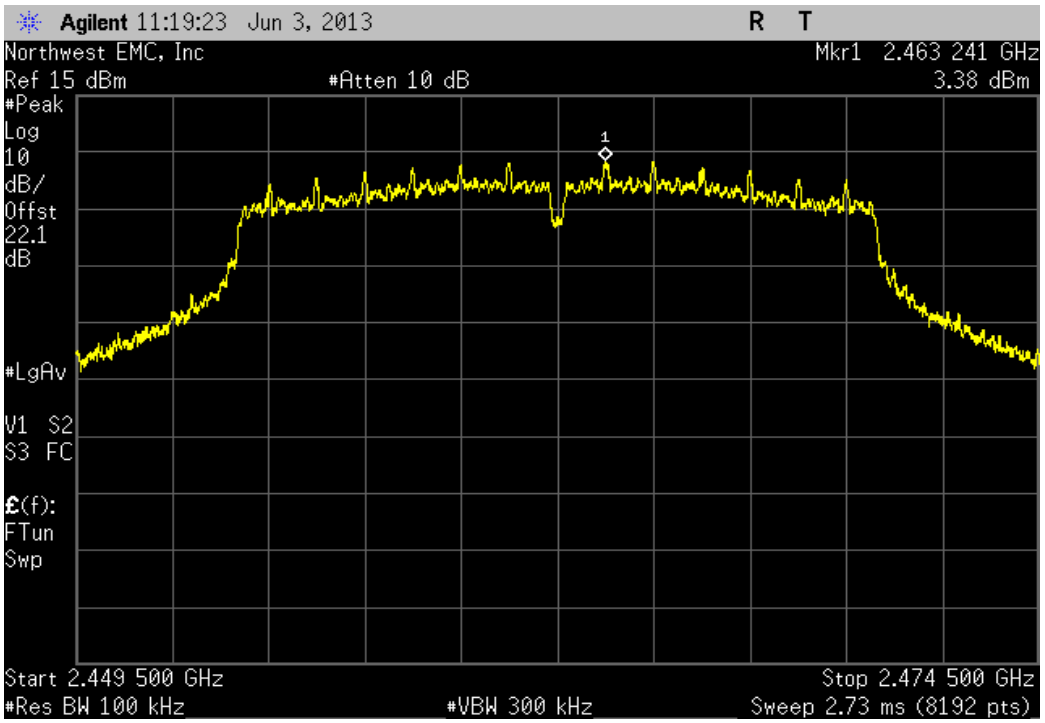
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-62.92 dBc	≤ -20 dBc	Pass



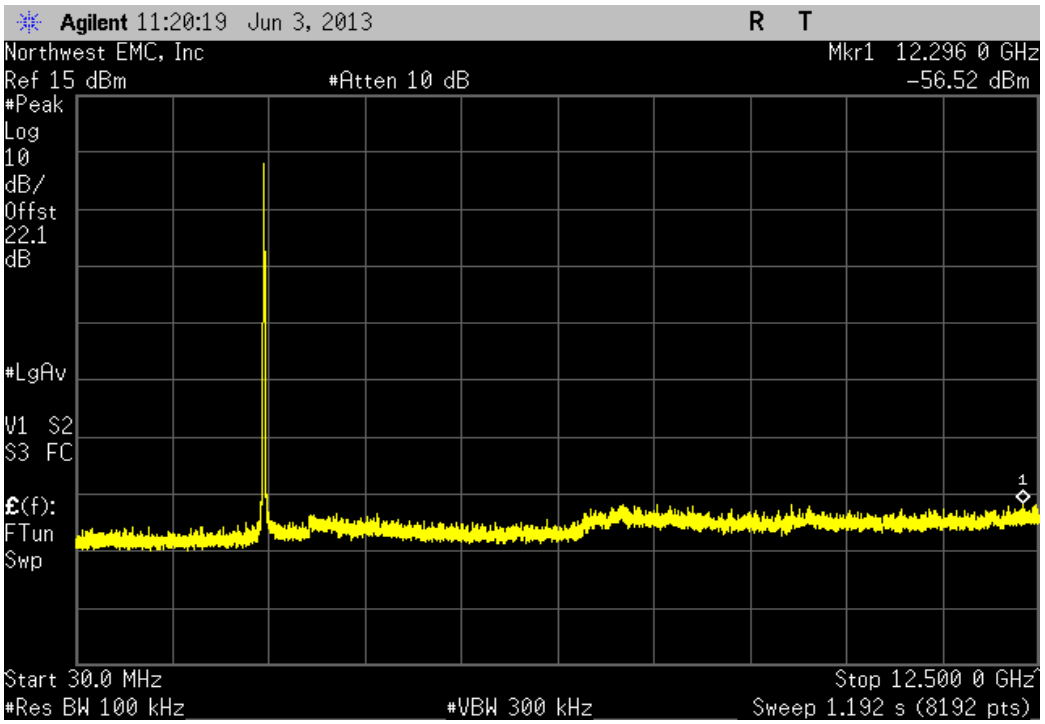
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-58.74 dBc	≤ -20 dBc	Pass



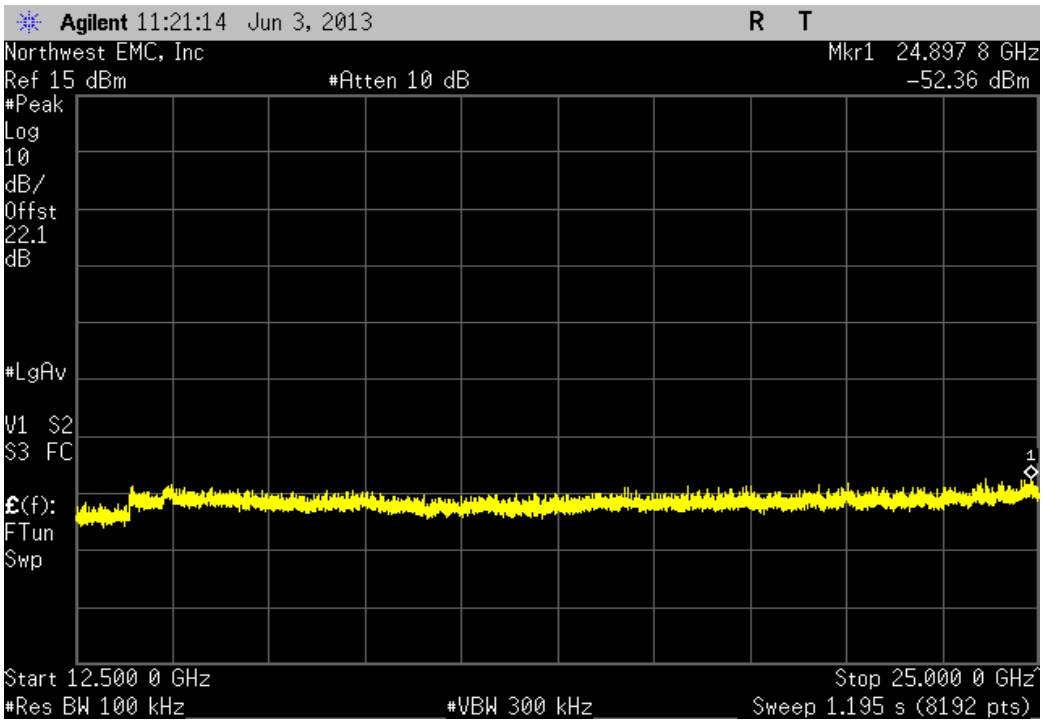
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



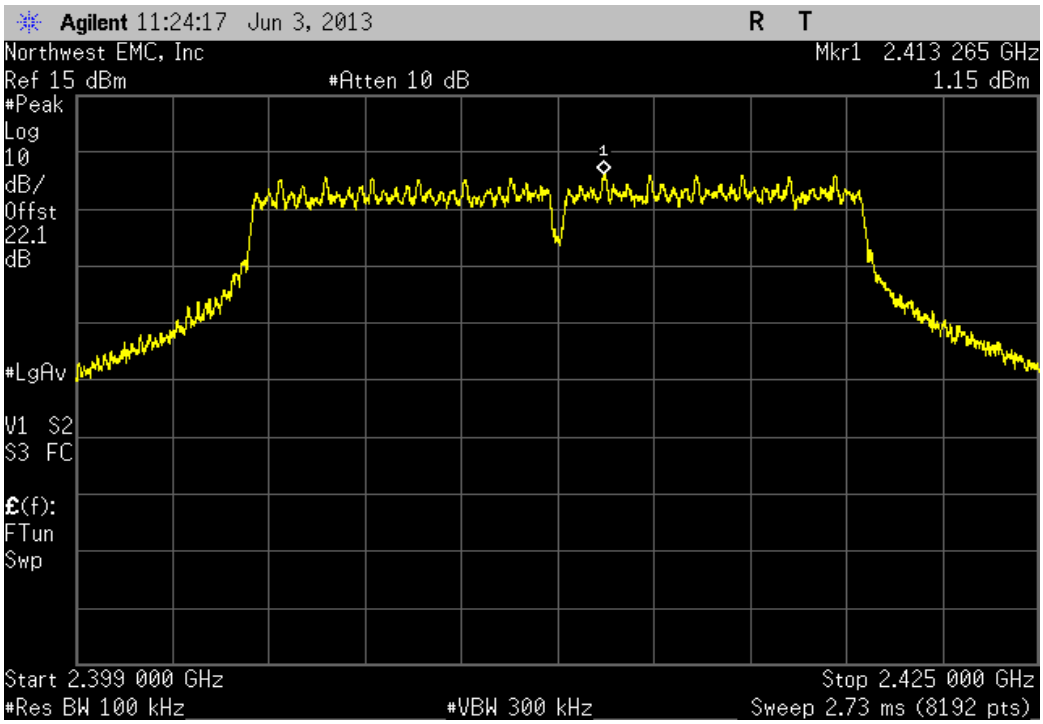
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz					
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-59.9 dBc	≤ -20 dBc	Pass



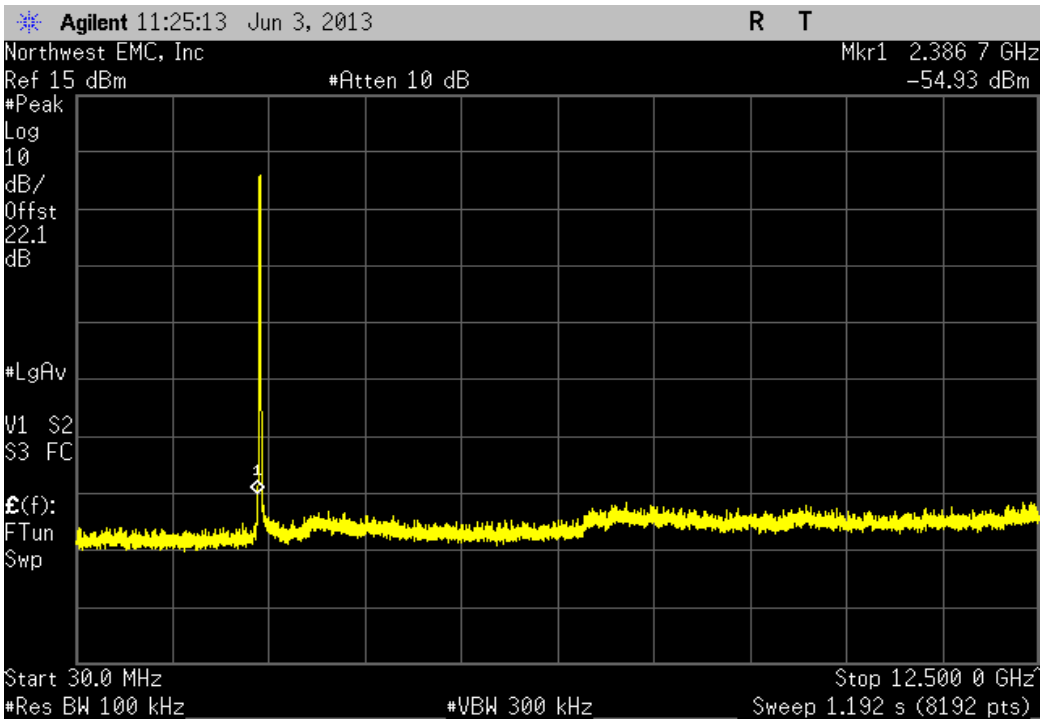
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz				
Frequency Range		Value	Limit	Result
12.5 GHz - 25 GHz		-55.74 dBc	≤ -20 dBc	Pass



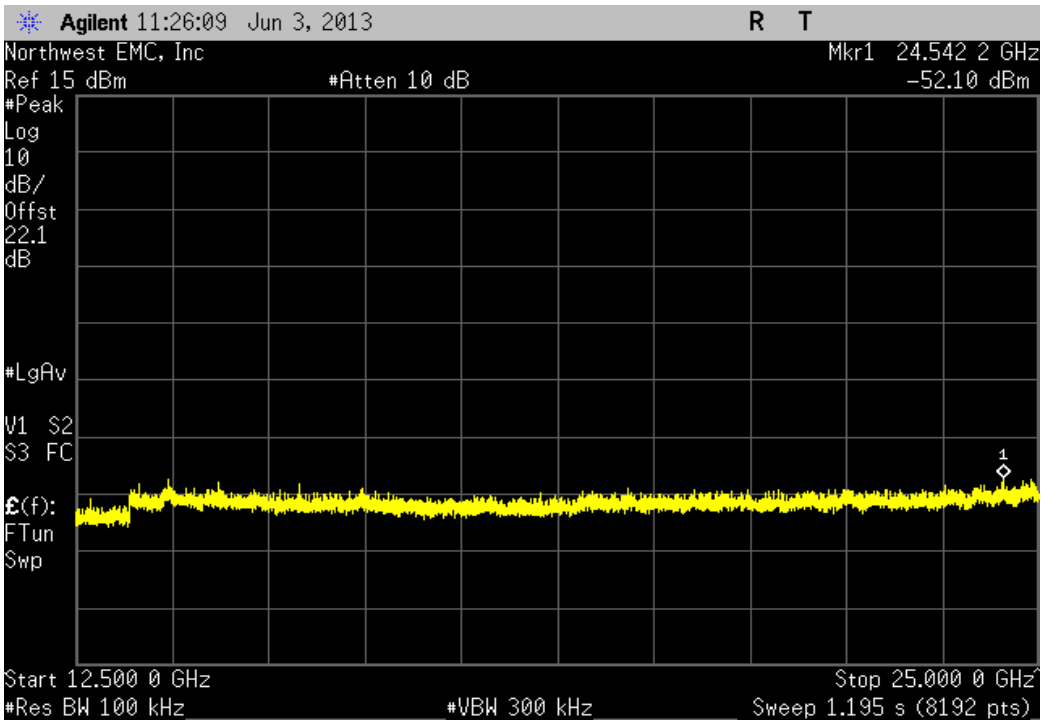
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
	Frequency Range			Value	Limit	Result
	Fundamental			N/A	N/A	N/A



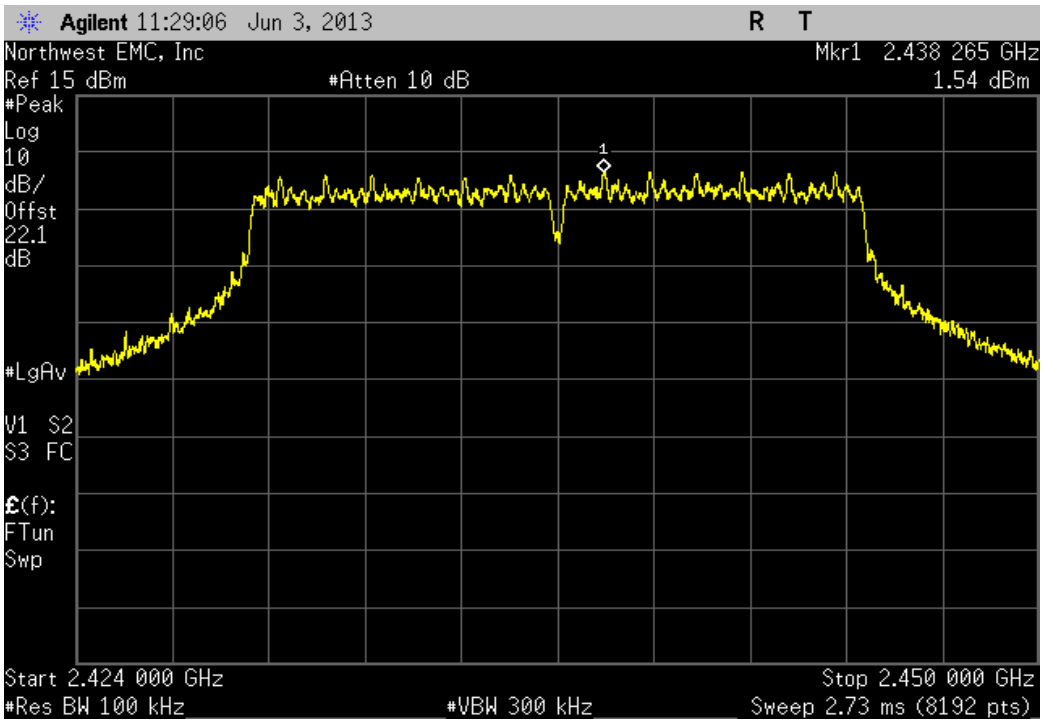
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-56.08 dBc	≤ -20 dBc	Pass



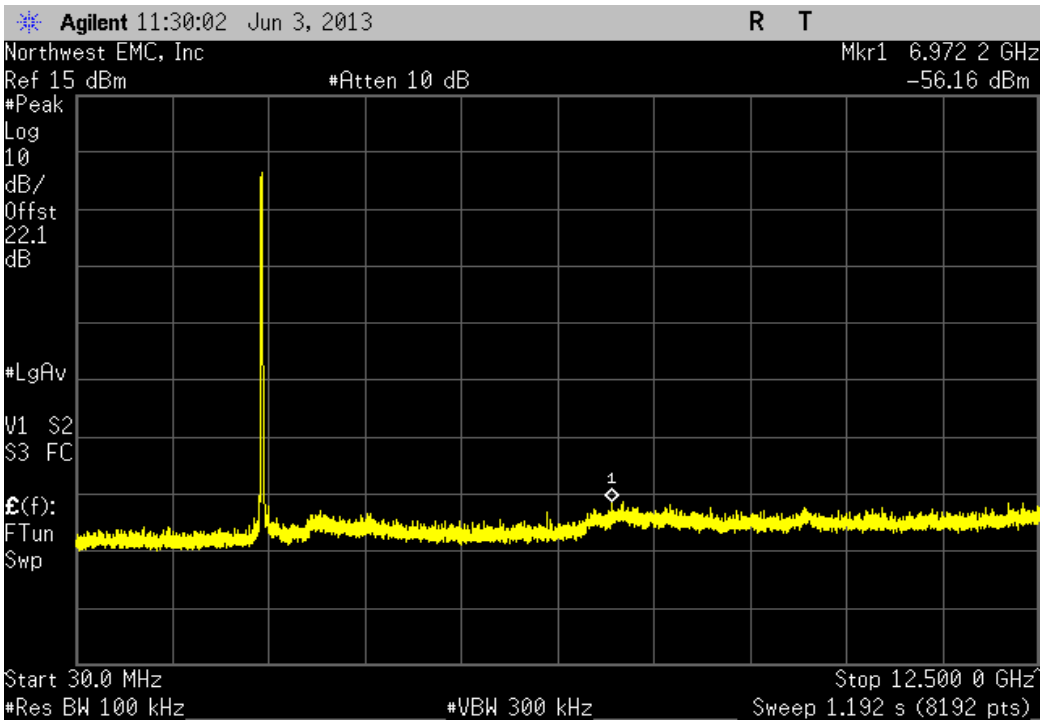
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-53.25 dBc	≤ -20 dBc	Pass



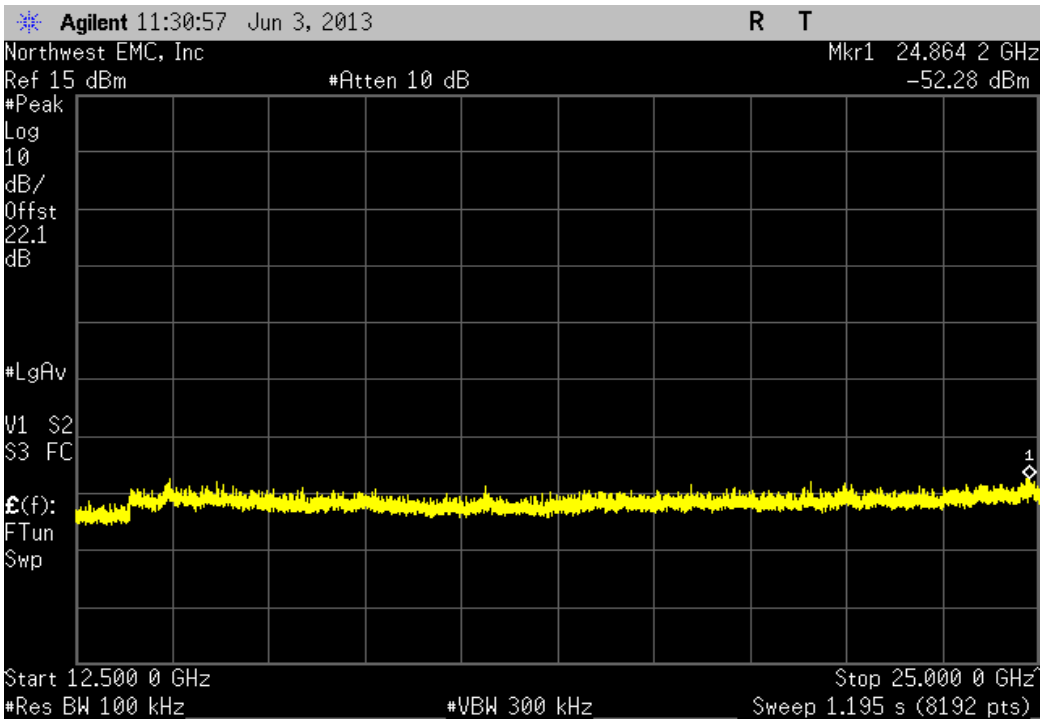
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



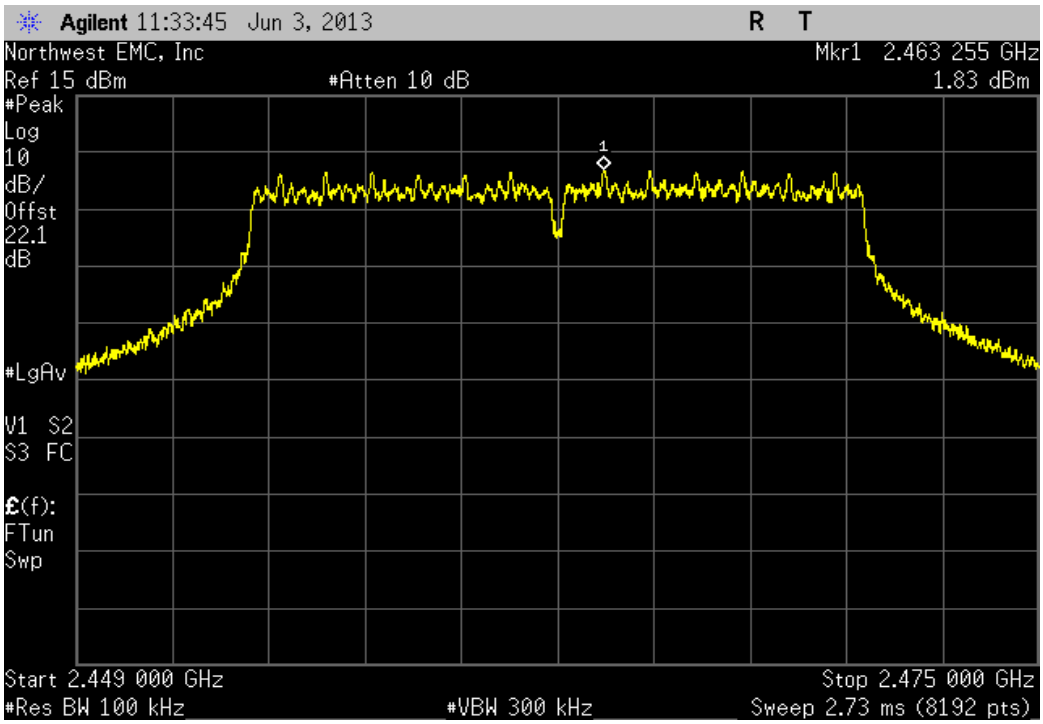
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz					
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-57.7 dBc	≤ -20 dBc	Pass



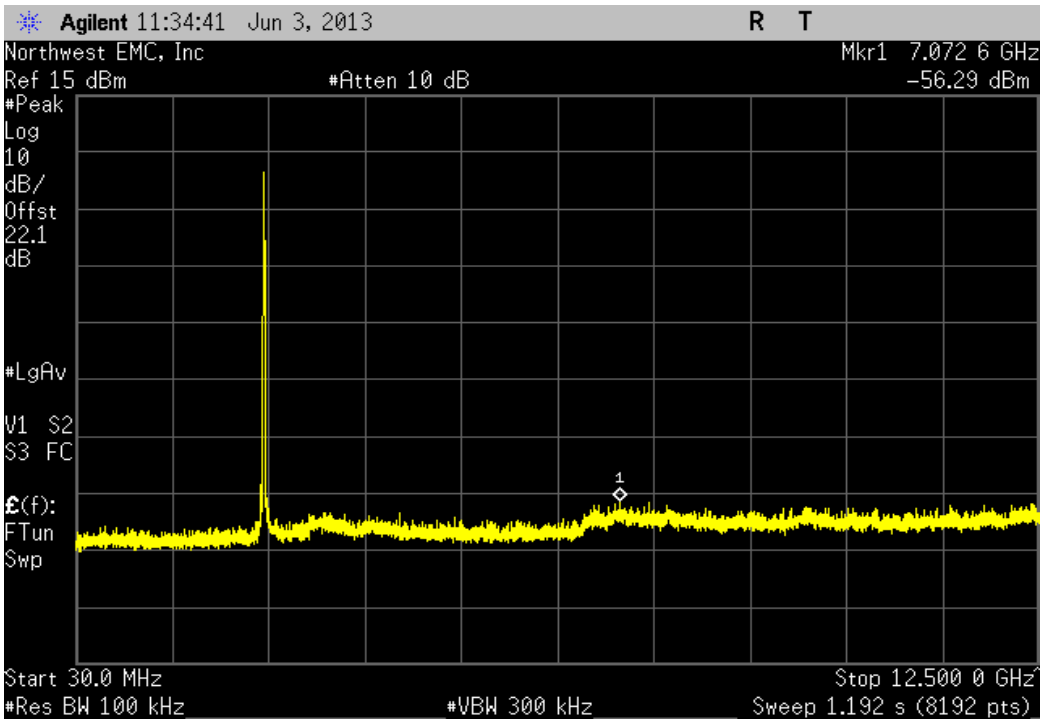
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-53.82 dBc	≤ -20 dBc	Pass



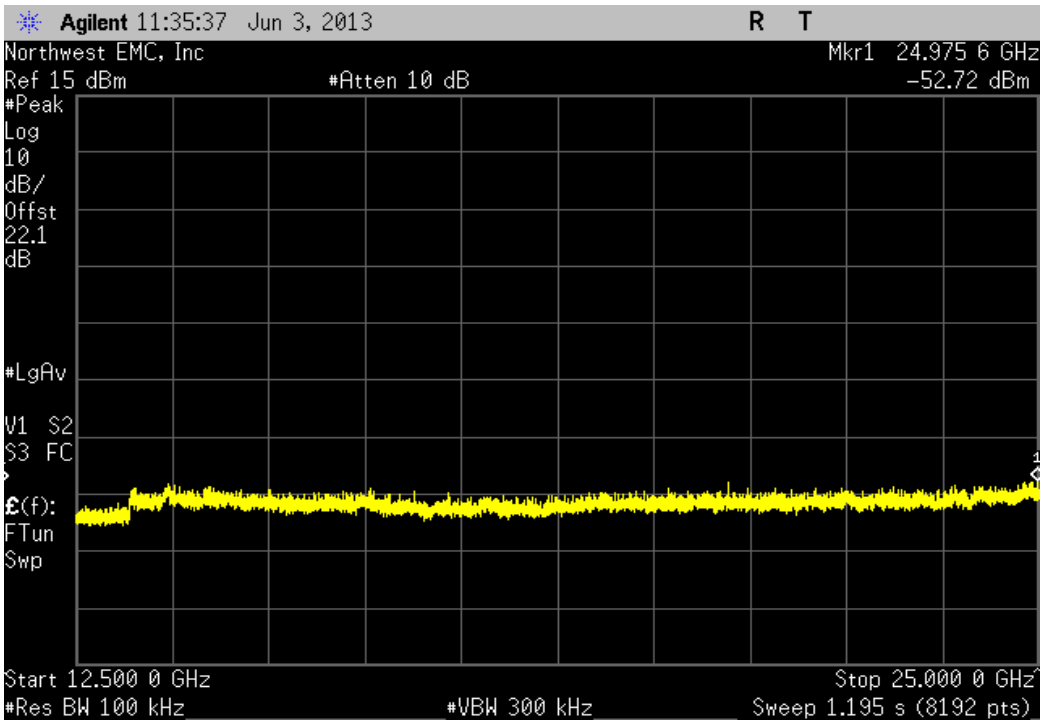
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



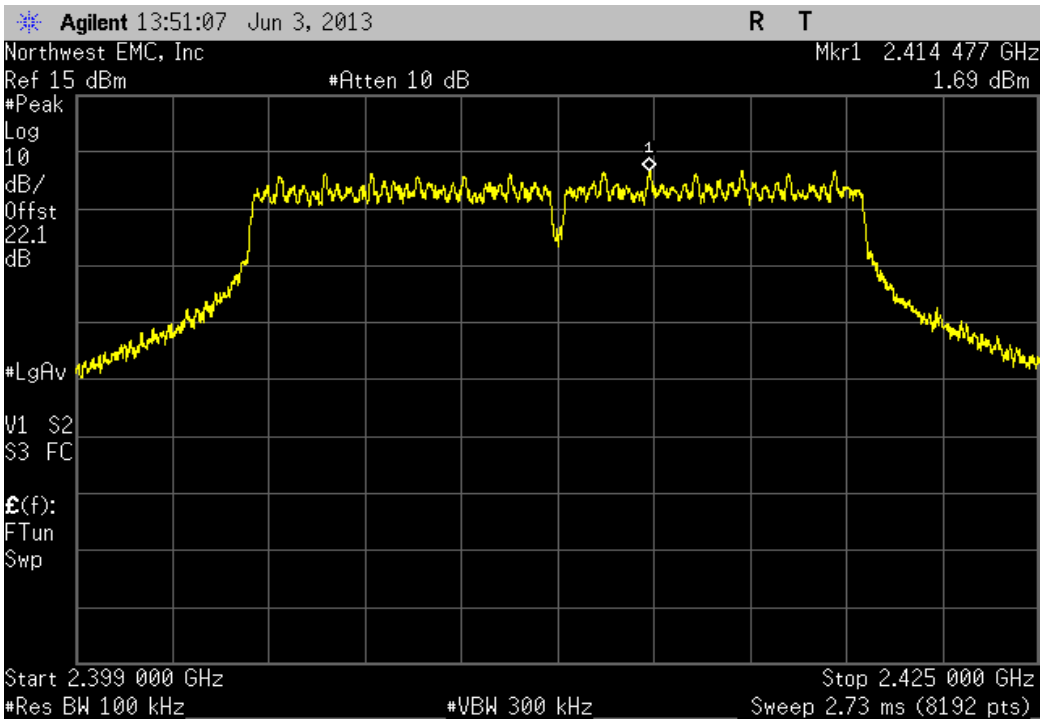
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-58.12 dBc	≤ -20 dBc	Pass



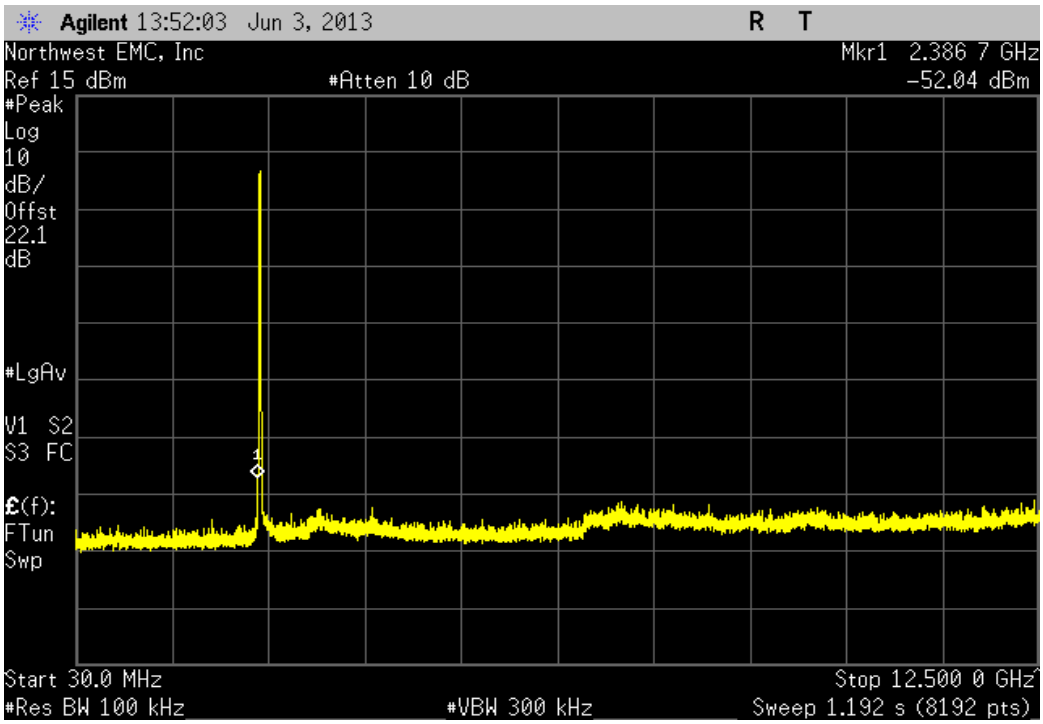
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-54.55 dBc	≤ -20 dBc	Pass



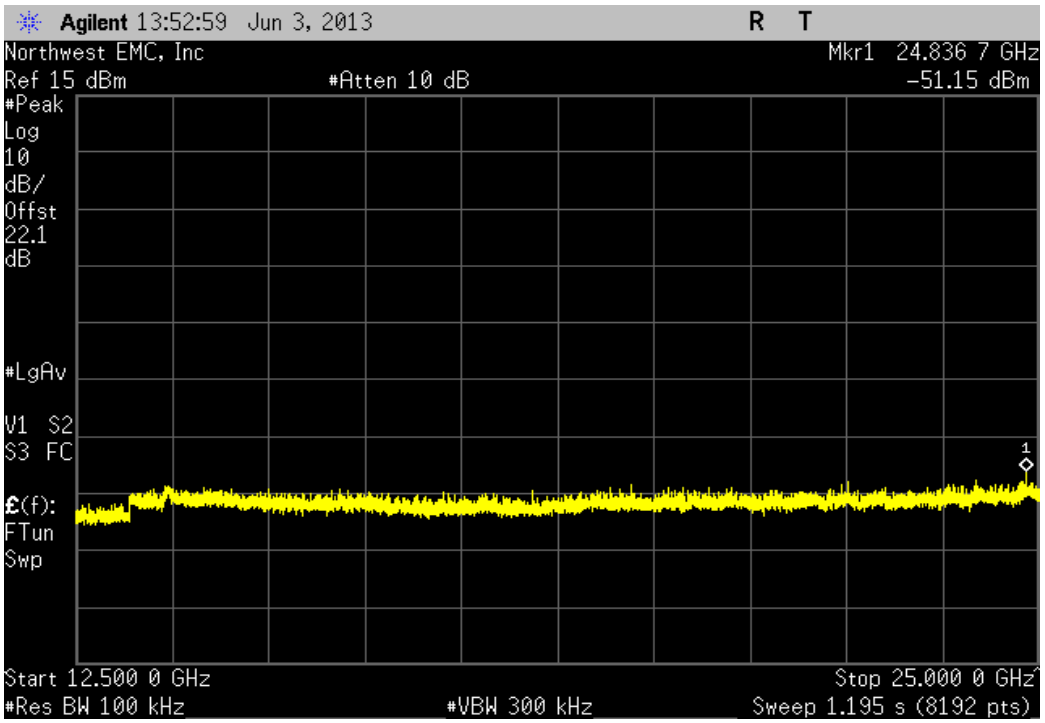
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
	Frequency Range			Value	Limit	Result
	Fundamental			N/A	N/A	N/A



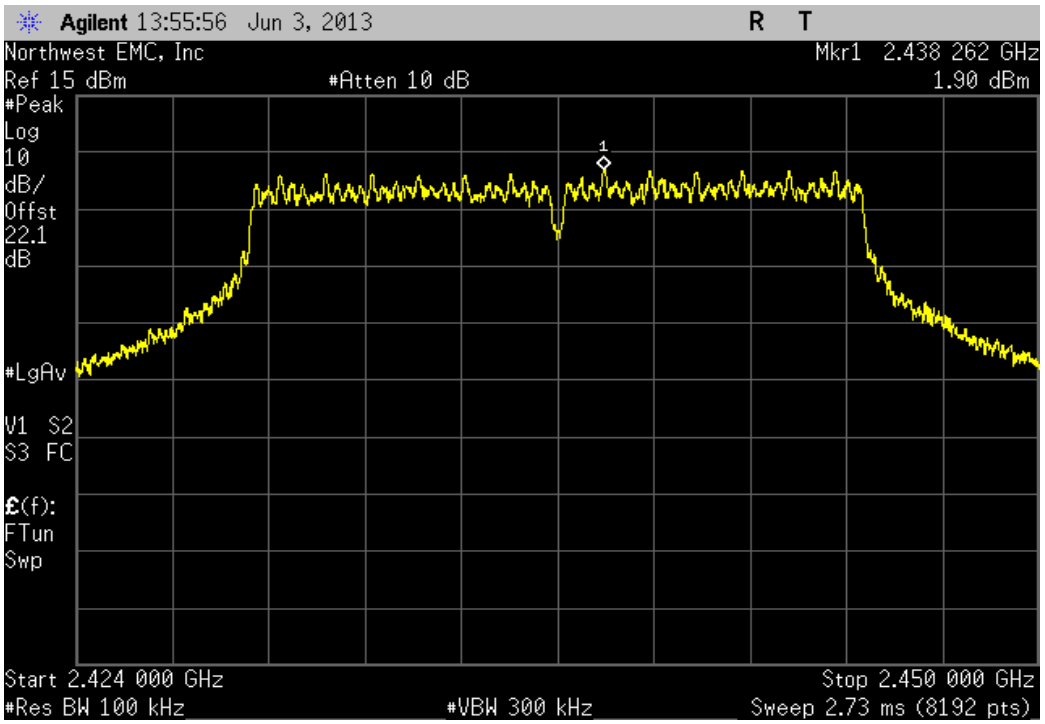
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz					
Frequency Range			Value	Limit	Result
30 MHz - 12.5 GHz			-53.73 dBc	≤ -20 dBc	Pass



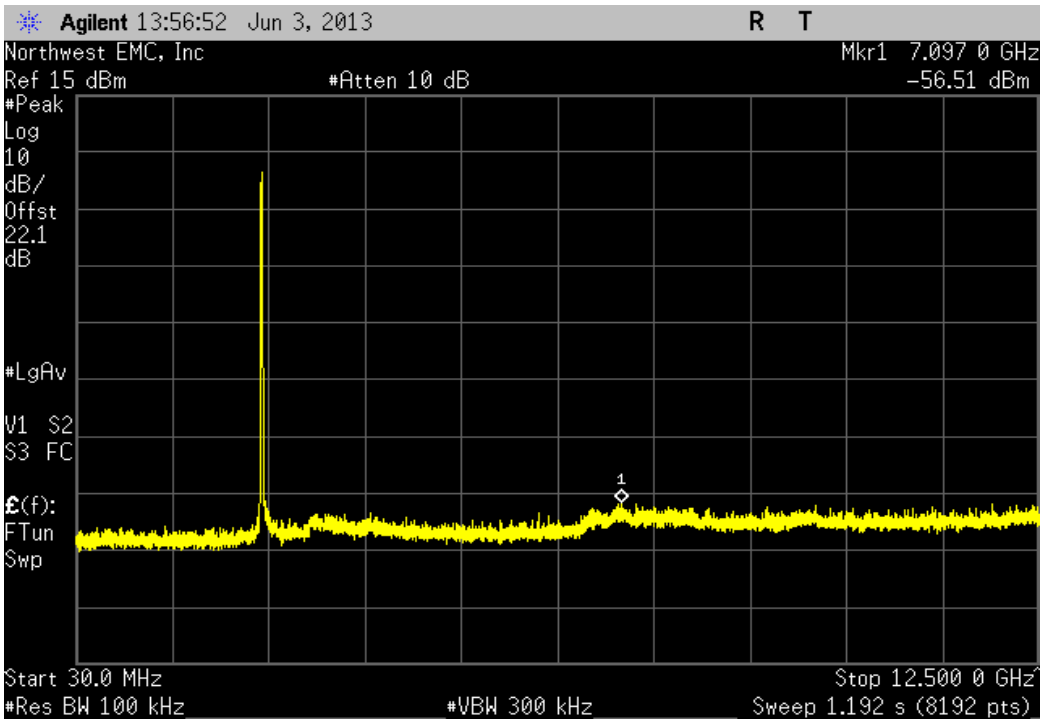
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-52.84 dBc	≤ -20 dBc	Pass



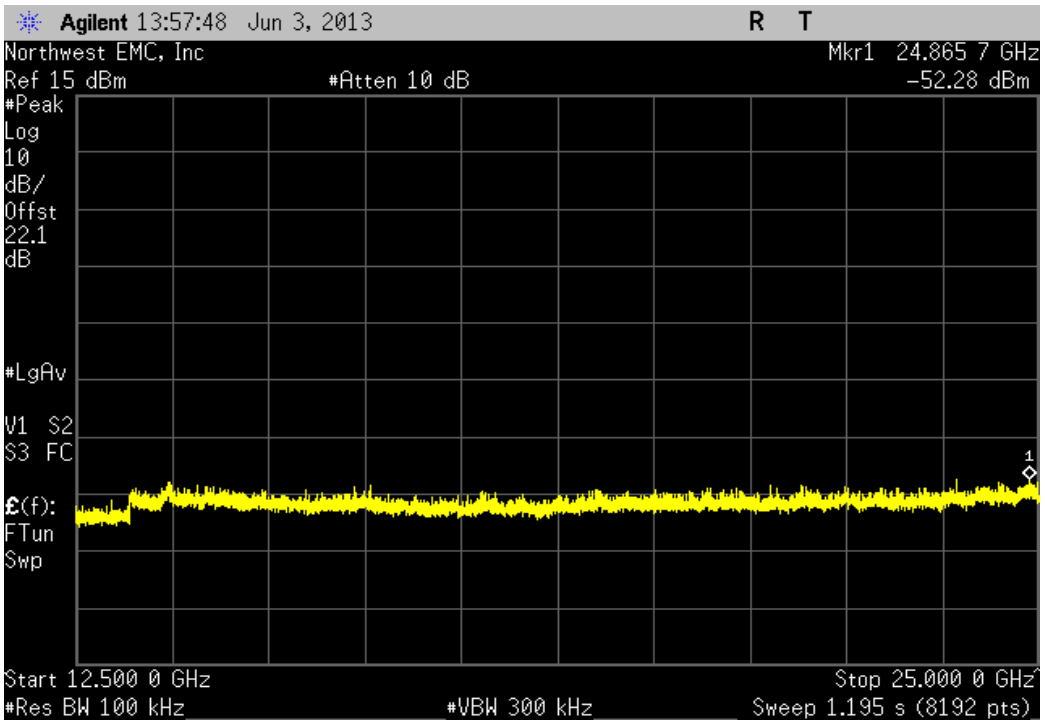
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz					
	Frequency Range		**Value**	**Limit**	**Result**
	Fundamental		N/A	N/A	N/A



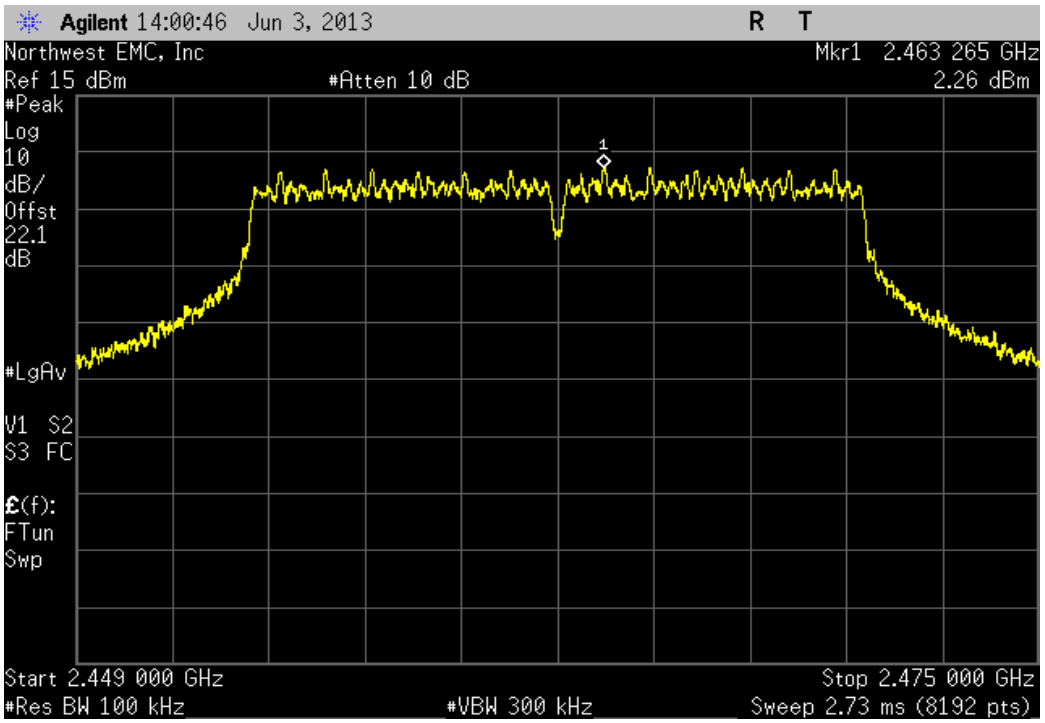
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-58.41 dBc	≤ -20 dBc	Pass



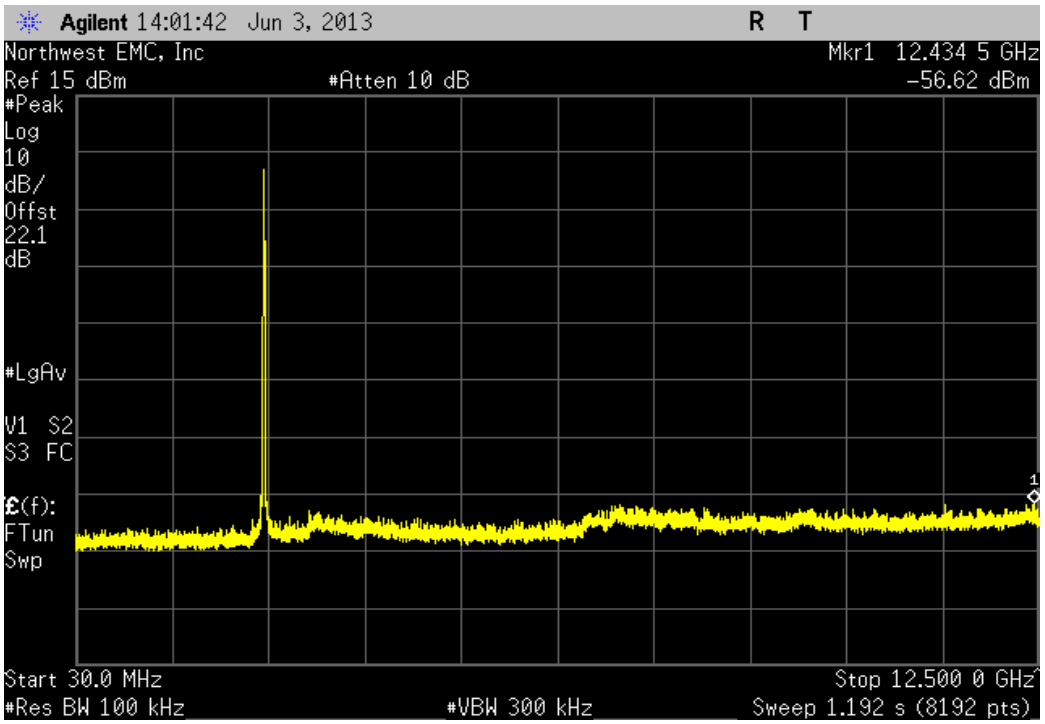
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-54.18 dBc	≤ -20 dBc	Pass



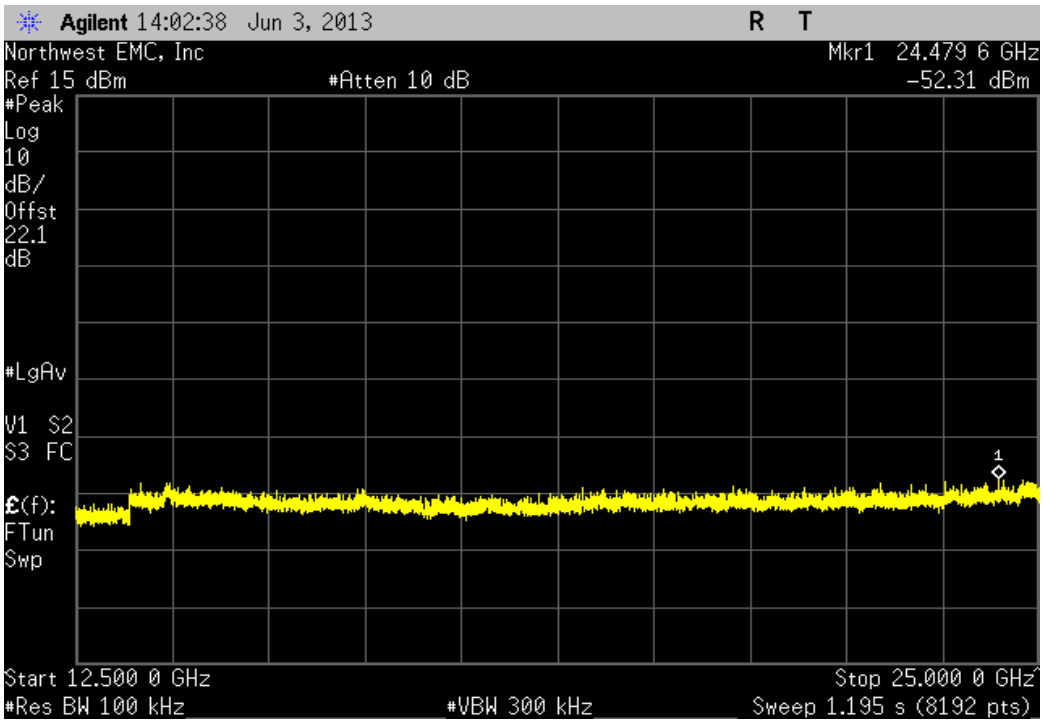
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
	Frequency Range			Value	Limit	Result
	Fundamental			N/A	N/A	N/A



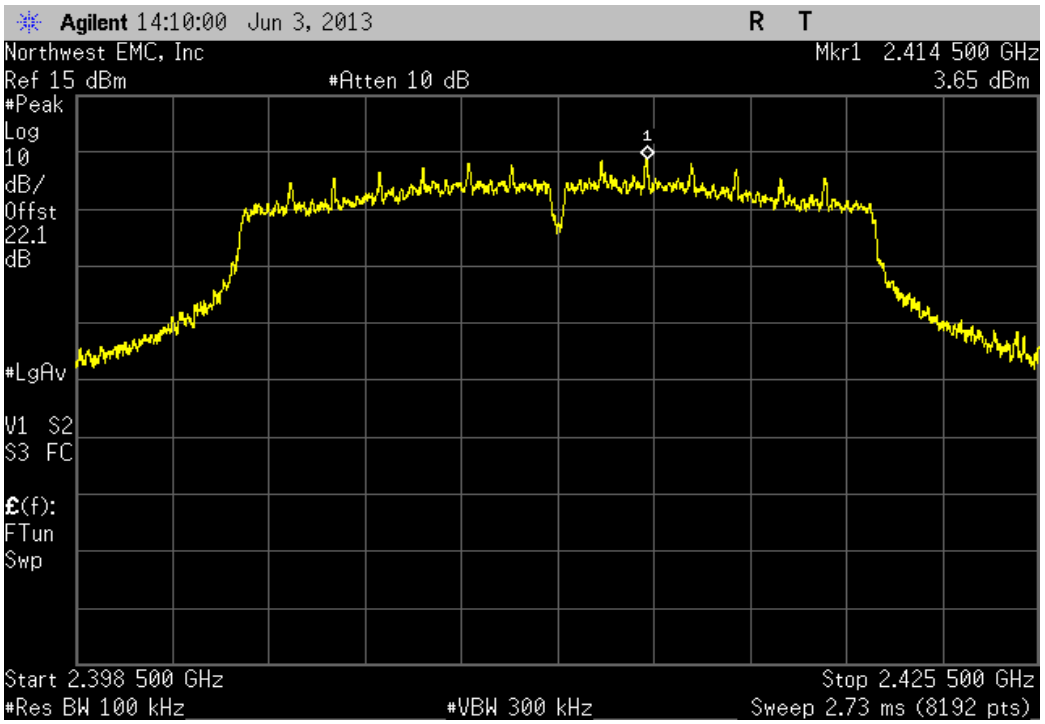
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz					
Frequency Range			Value	Limit	Result
30 MHz - 12.5 GHz			-58.88 dBc	≤ -20 dBc	Pass



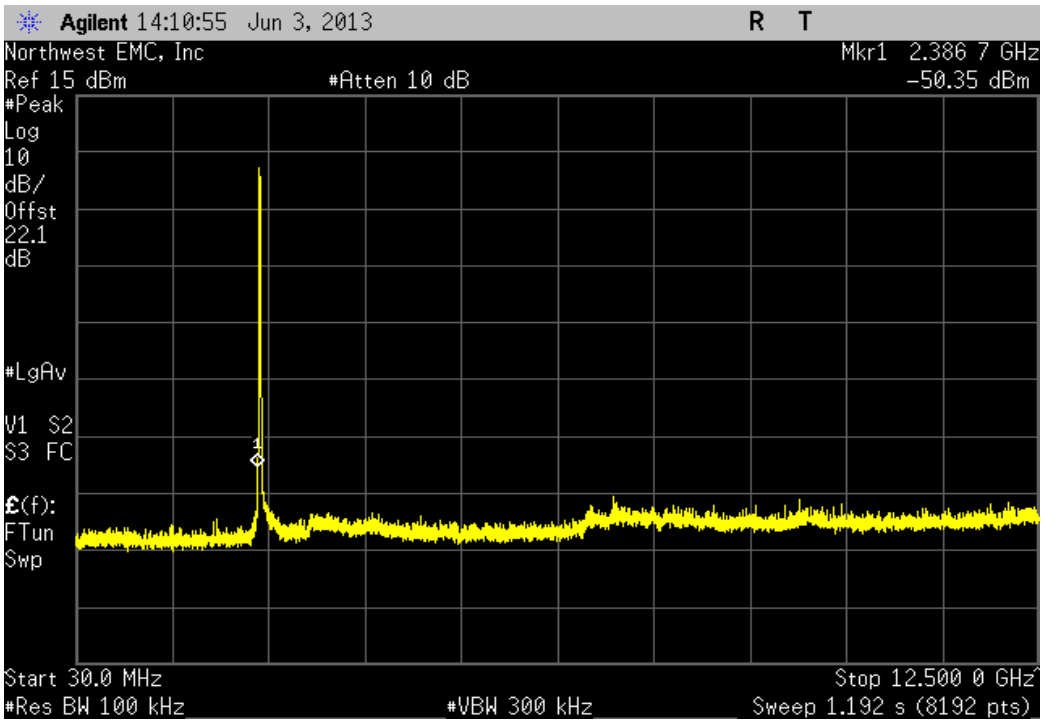
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-54.57 dBc	≤ -20 dBc	Pass



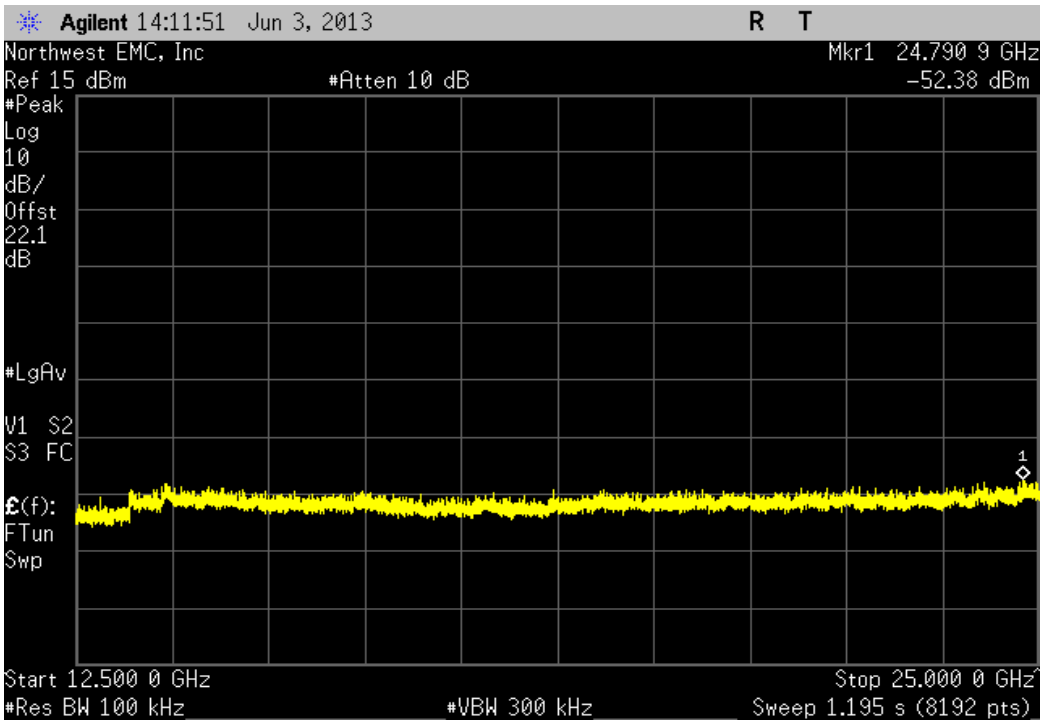
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



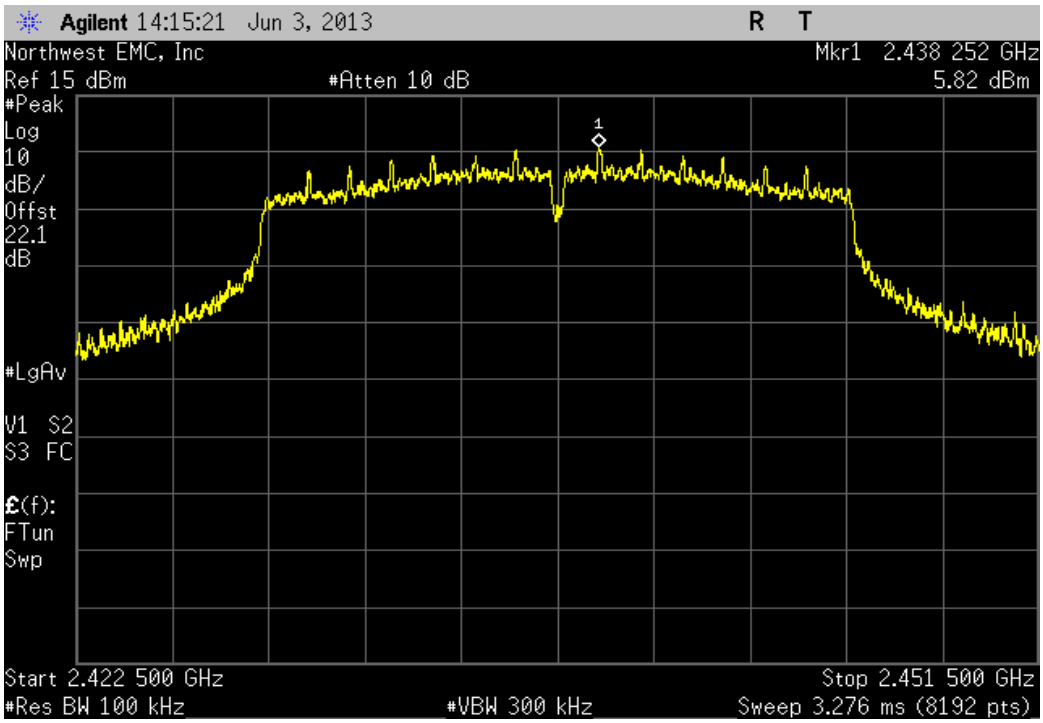
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-54.01 dBc	≤ -20 dBc	Pass



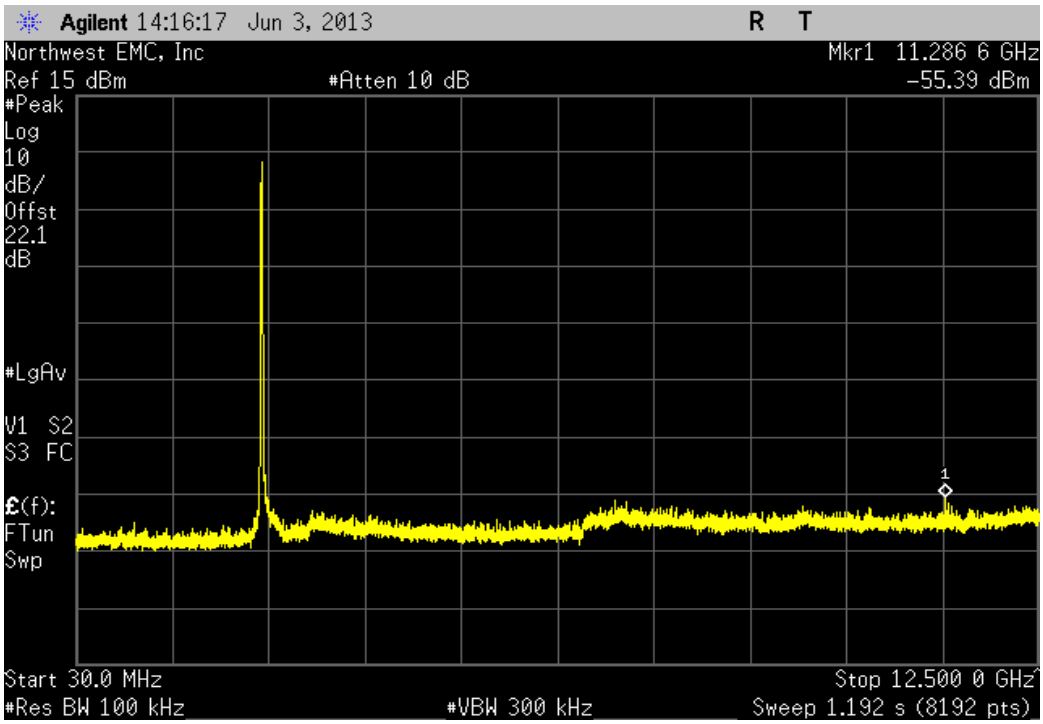
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-56.04 dBc	≤ -20 dBc	Pass



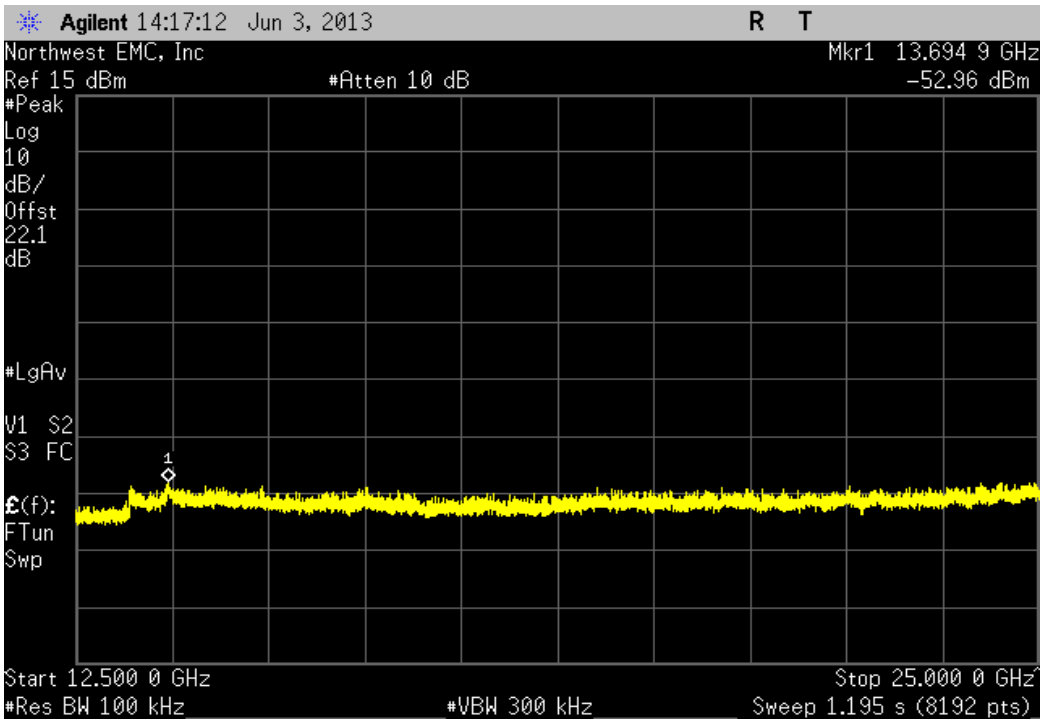
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



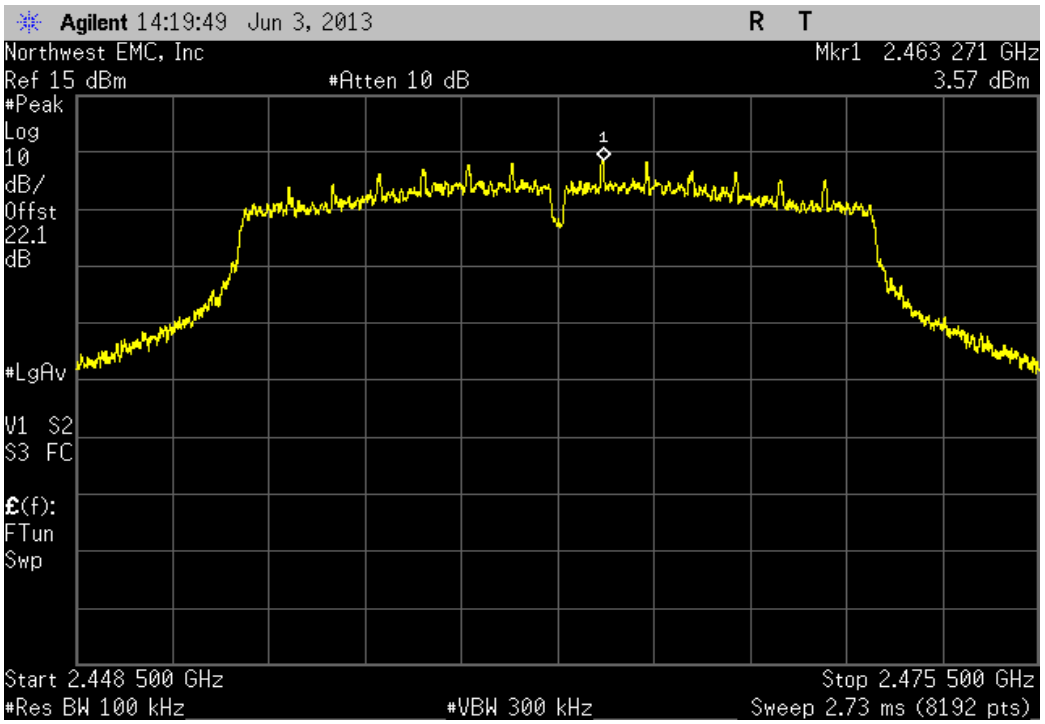
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz					
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-61.21 dBc	≤ -20 dBc	Pass



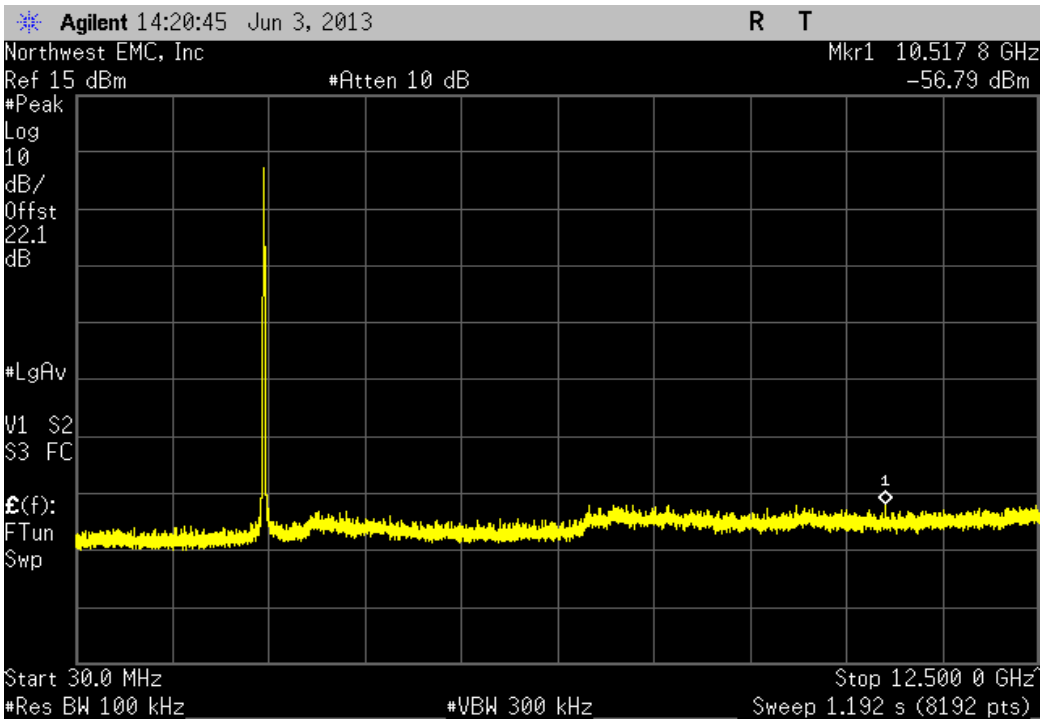
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-58.78 dBc	≤ -20 dBc	Pass



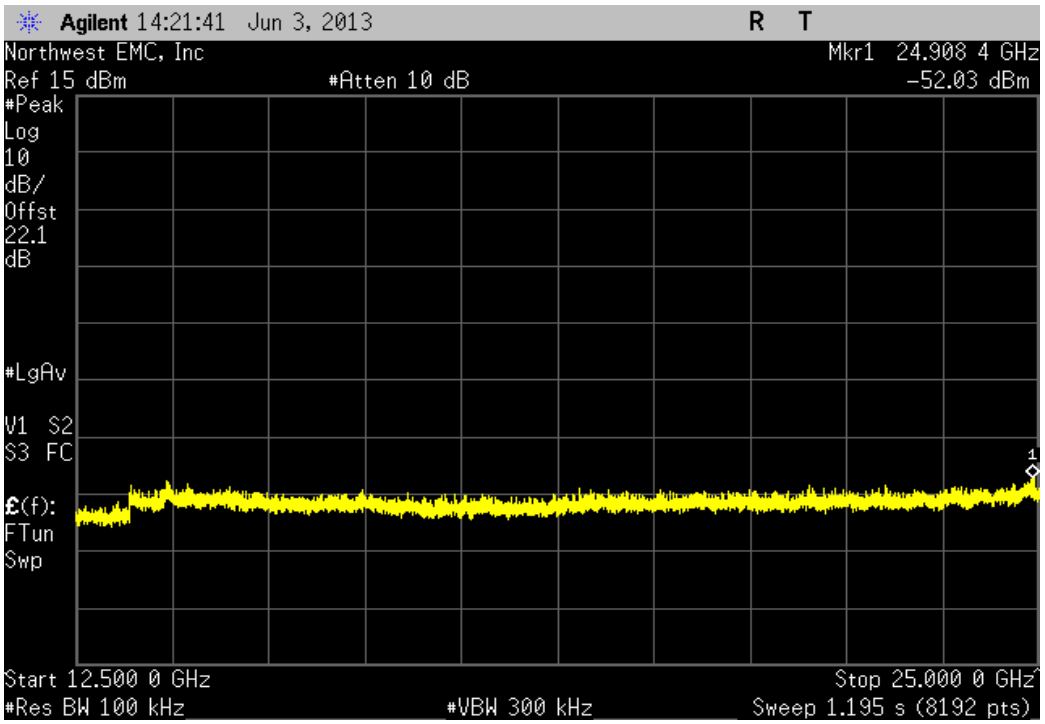
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz					
	Frequency Range		**Value**	**Limit**	**Result**
	Fundamental		N/A	N/A	N/A



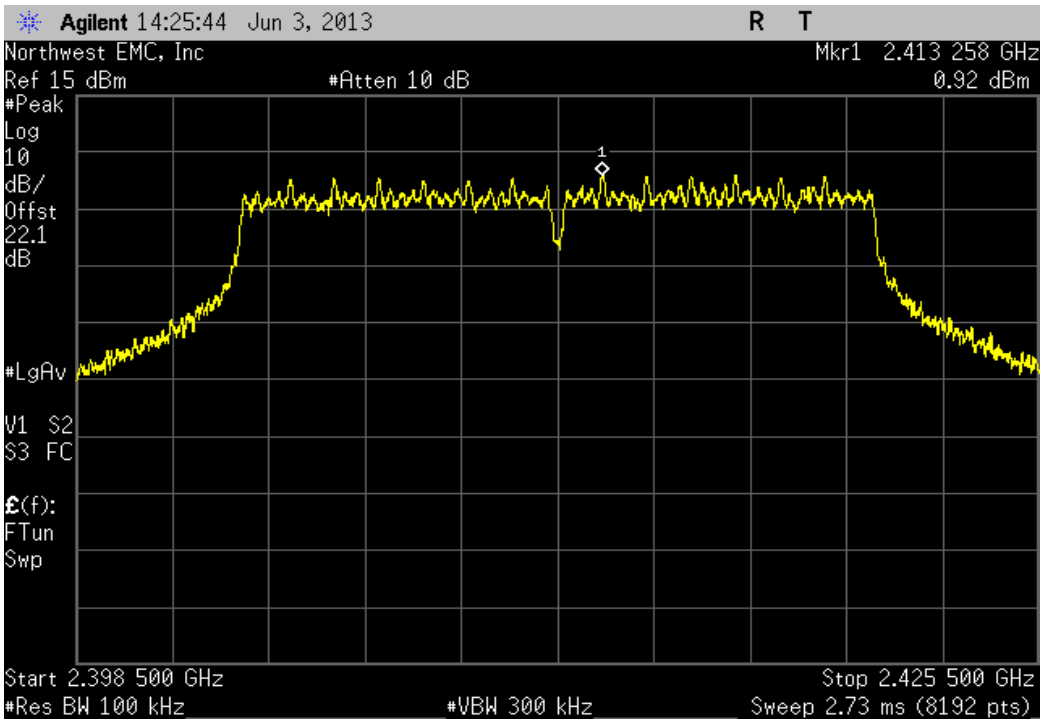
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-60.36 dBc	≤ -20 dBc	Pass



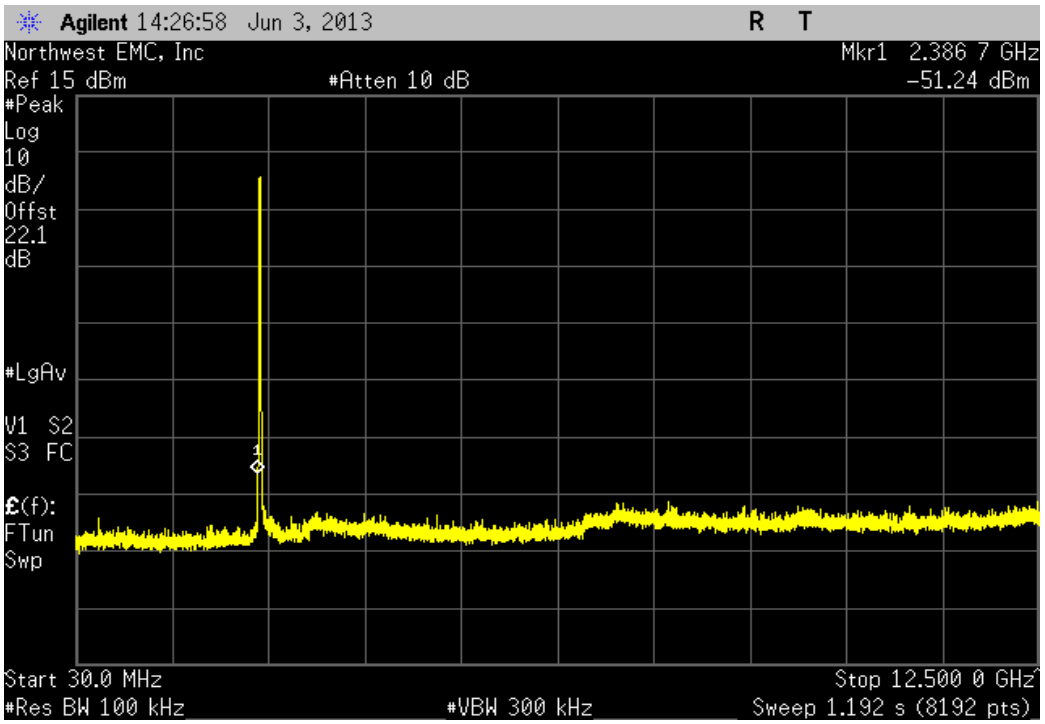
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-55.6 dBc	≤ -20 dBc	Pass



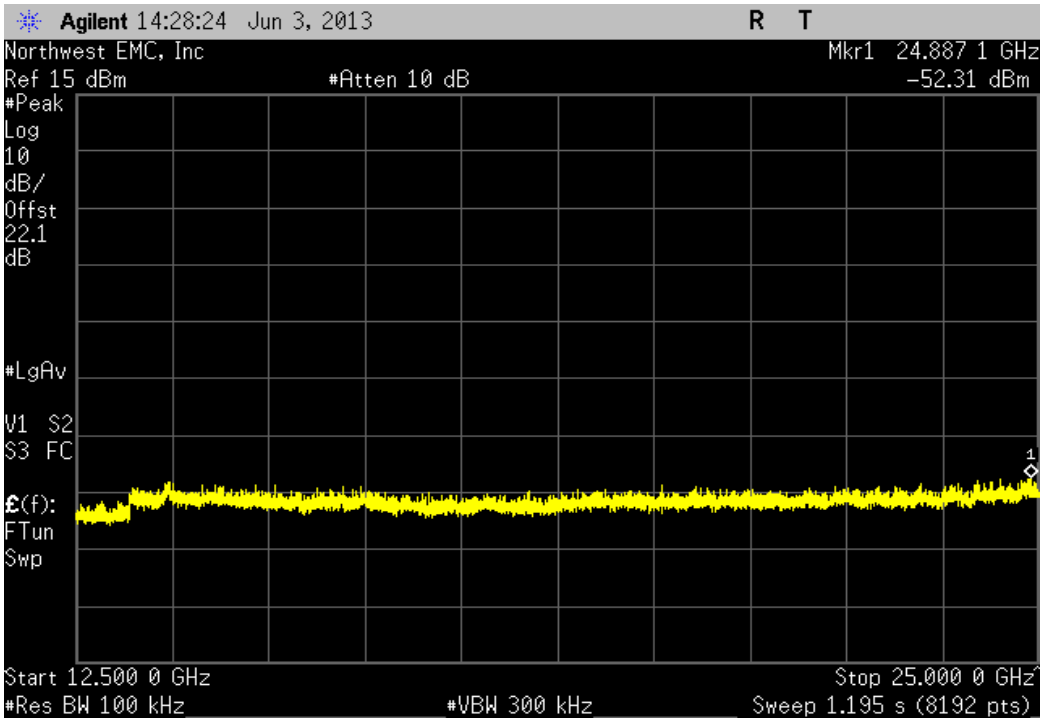
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



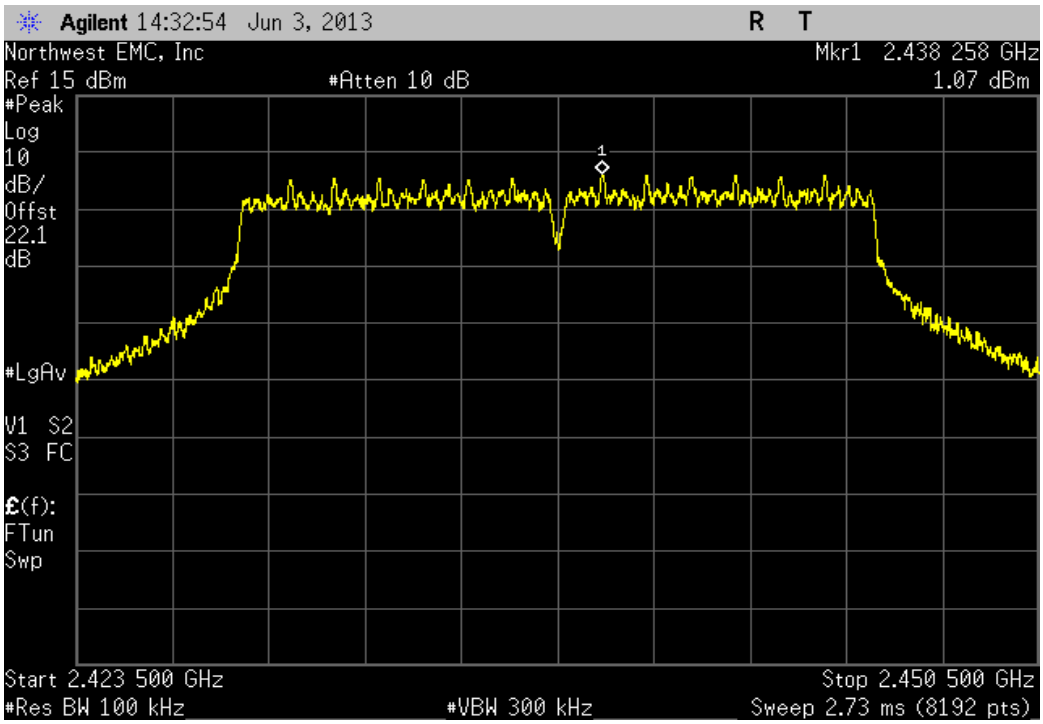
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz					
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-52.15 dBc	≤ -20 dBc	Pass



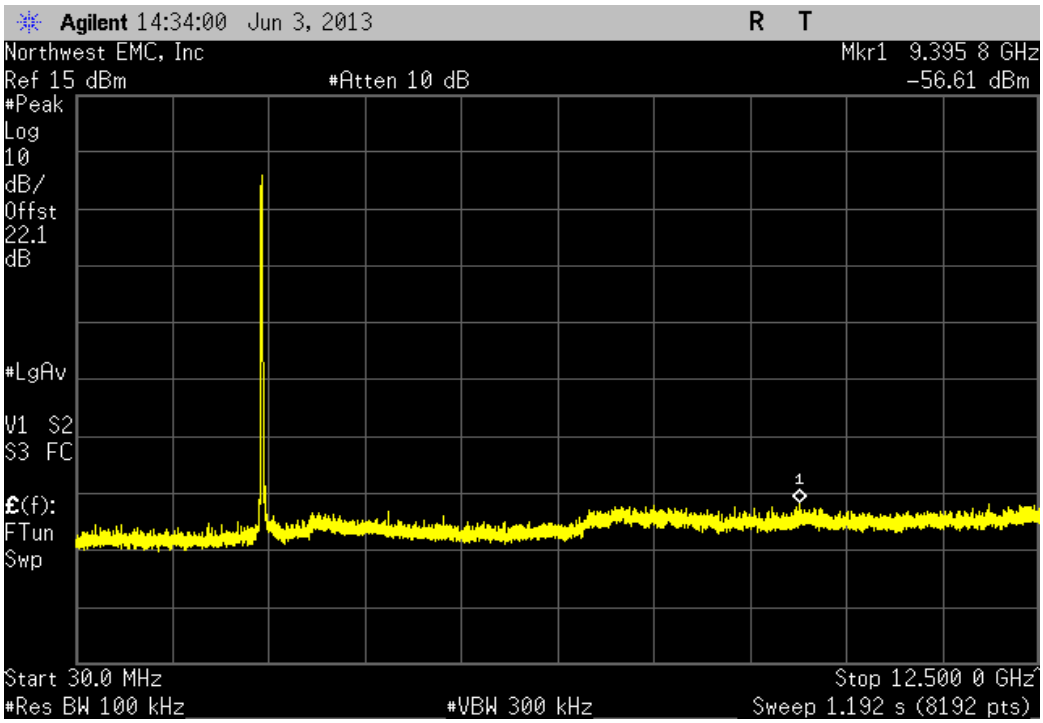
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-53.22 dBc	≤ -20 dBc	Pass



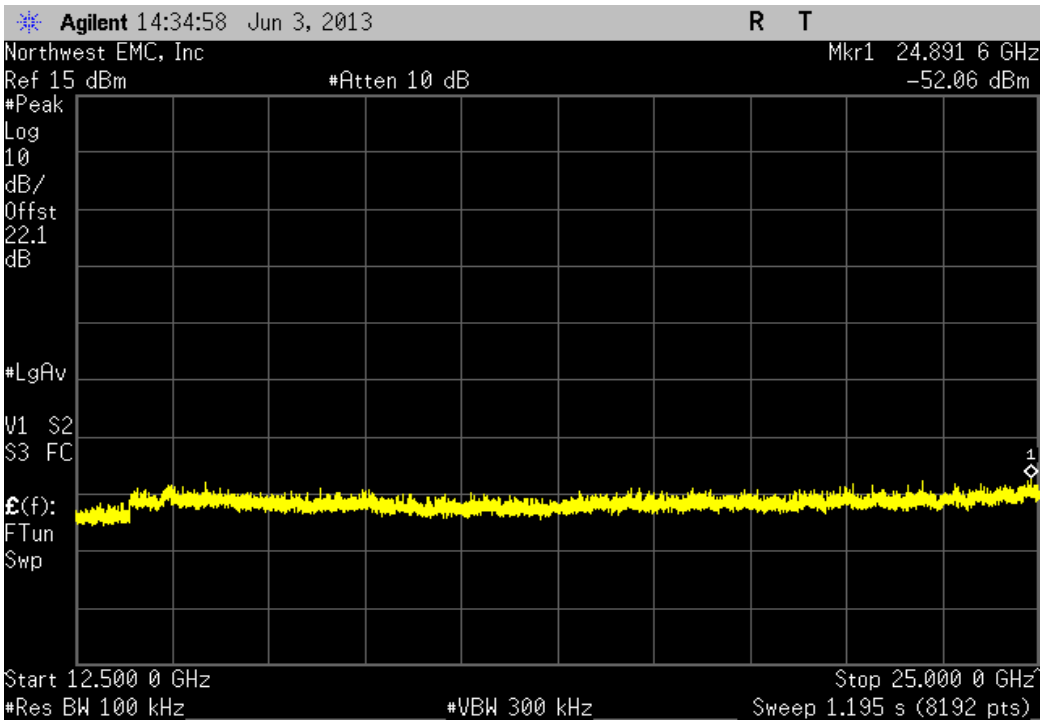
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



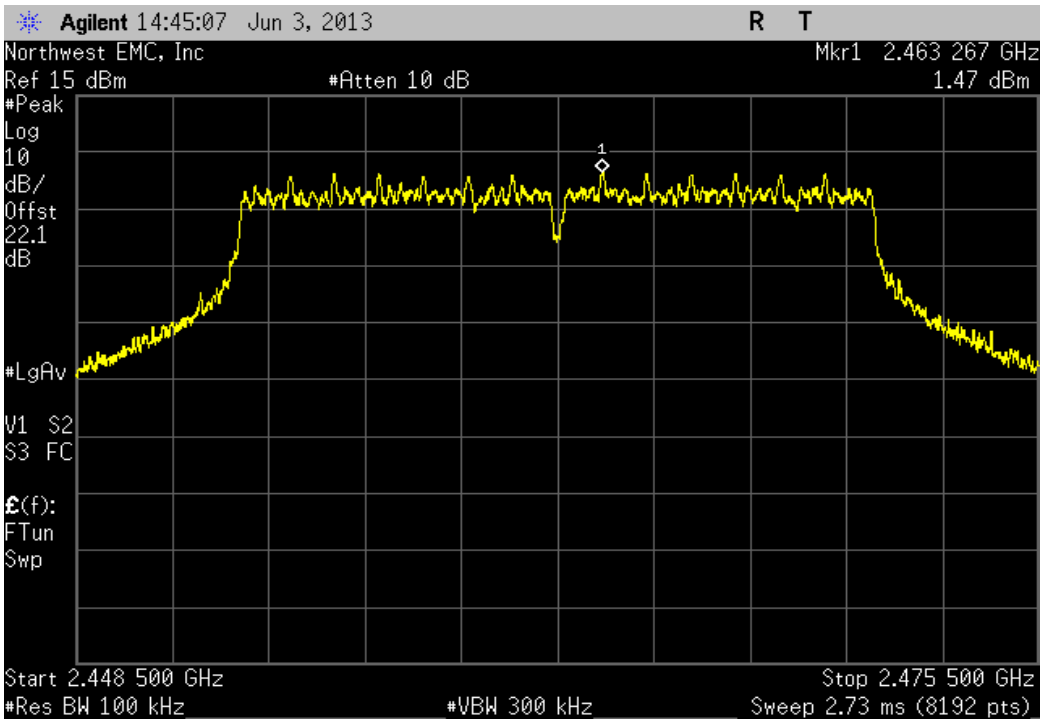
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-57.68 dBc	≤ -20 dBc	Pass



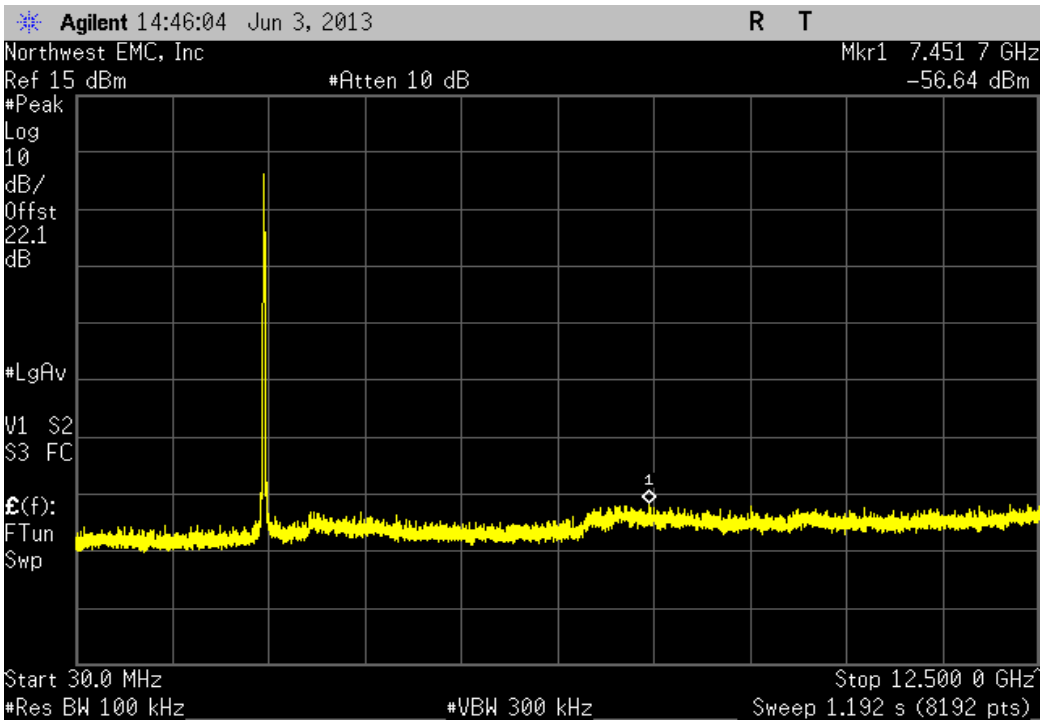
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-53.14 dBc	≤ -20 dBc	Pass



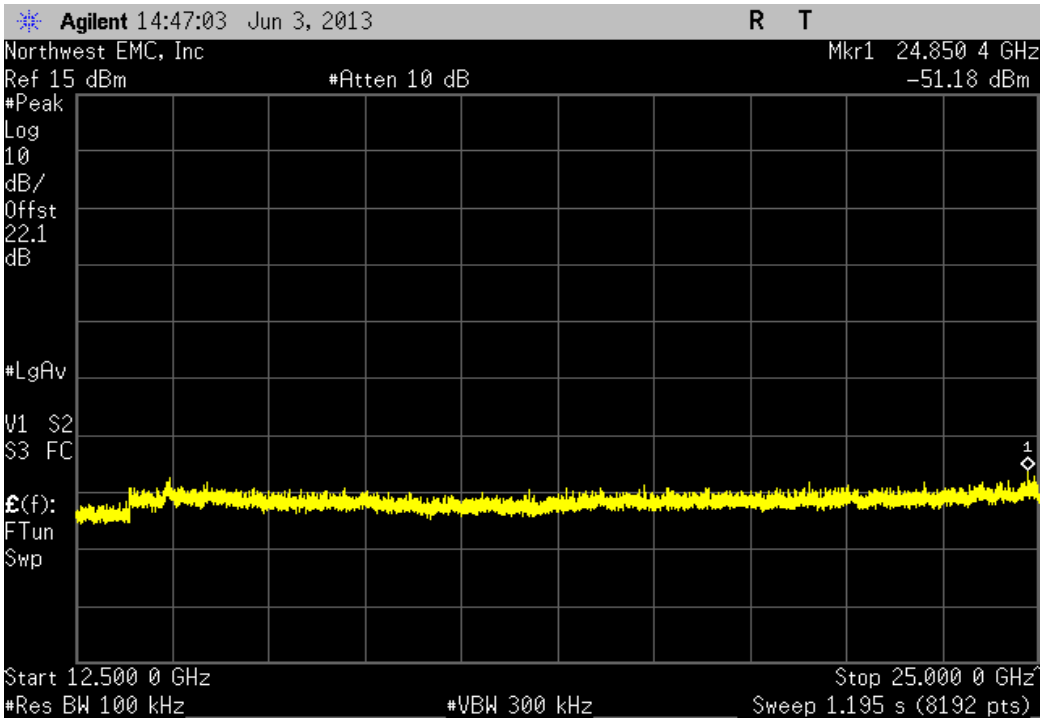
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



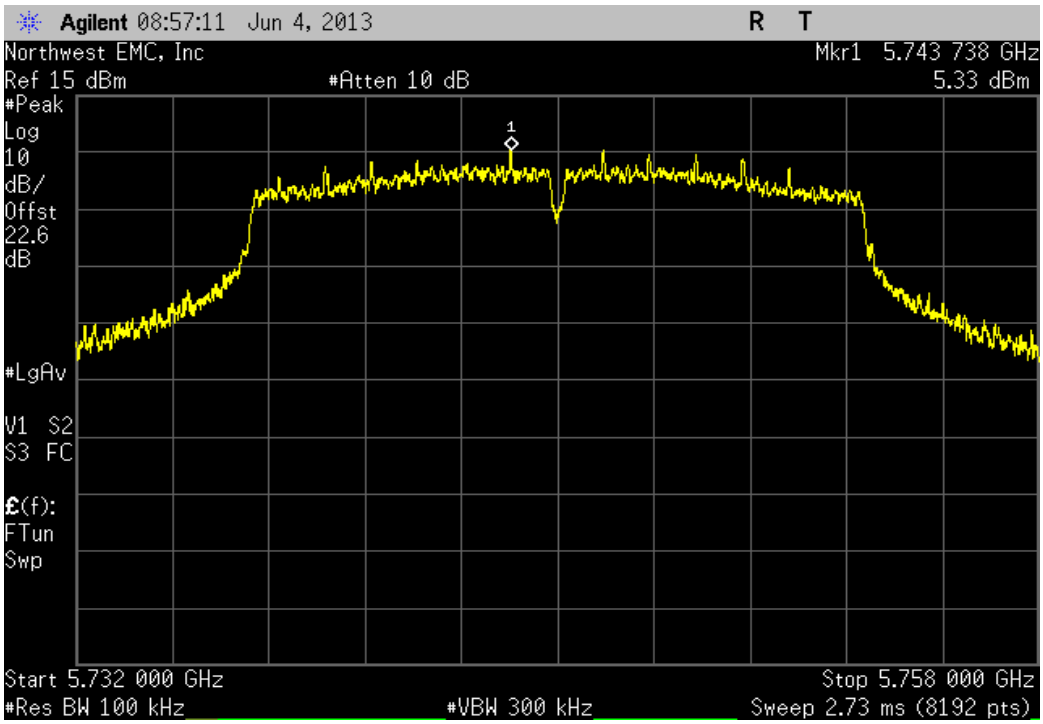
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz					
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-58.11 dBc	≤ -20 dBc	Pass



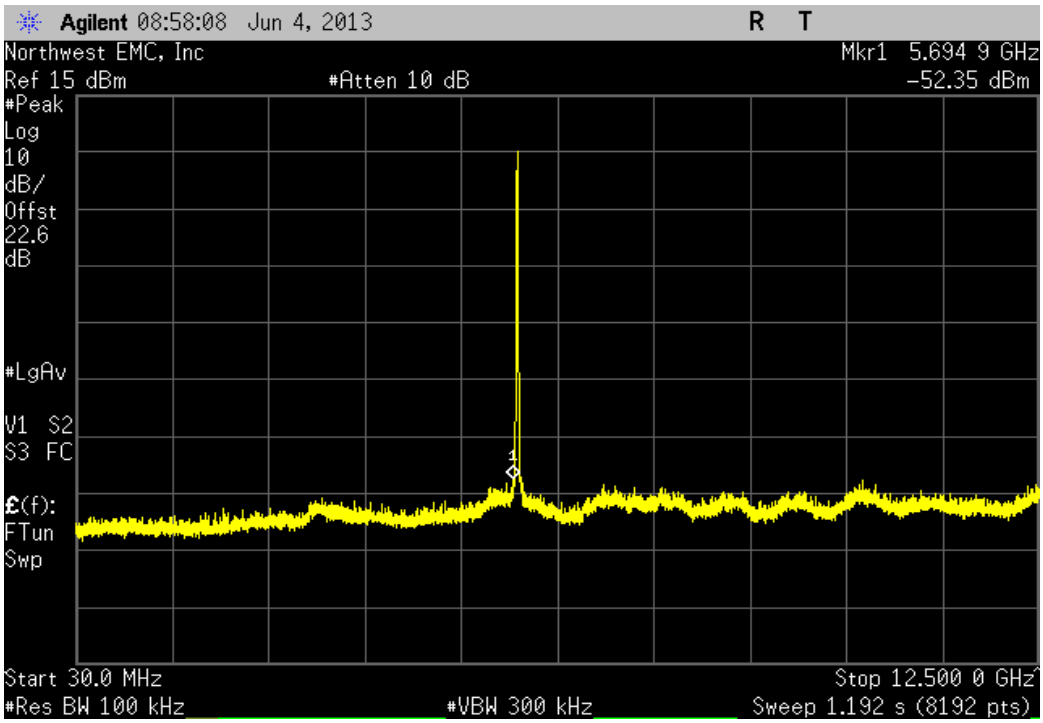
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-52.65 dBc	≤ -20 dBc	Pass



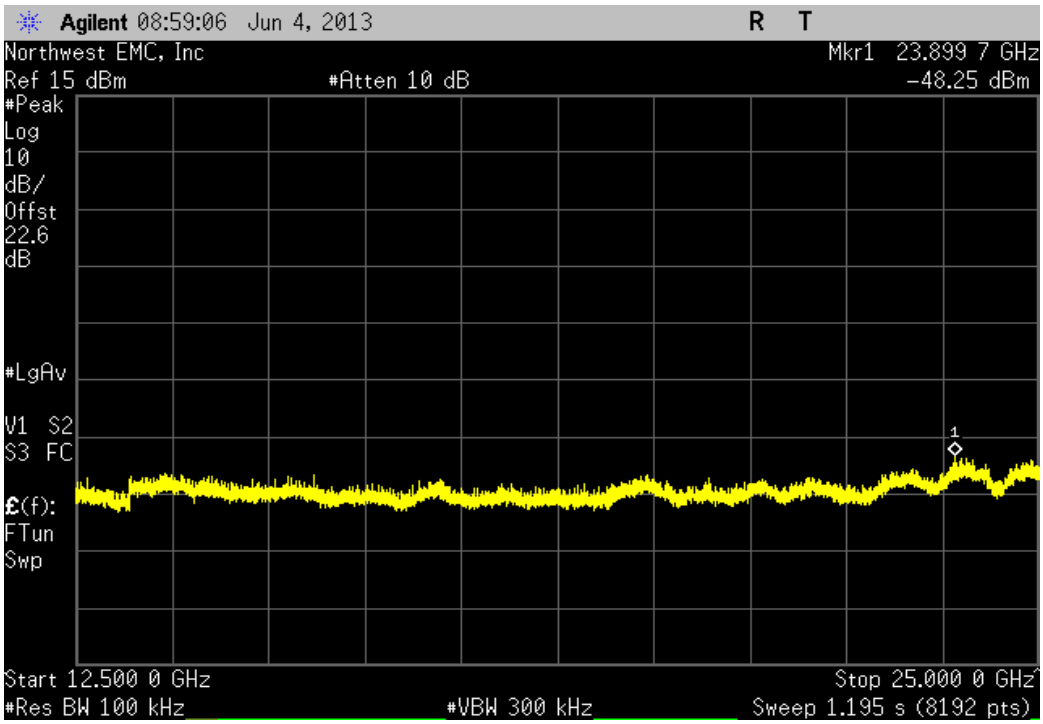
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



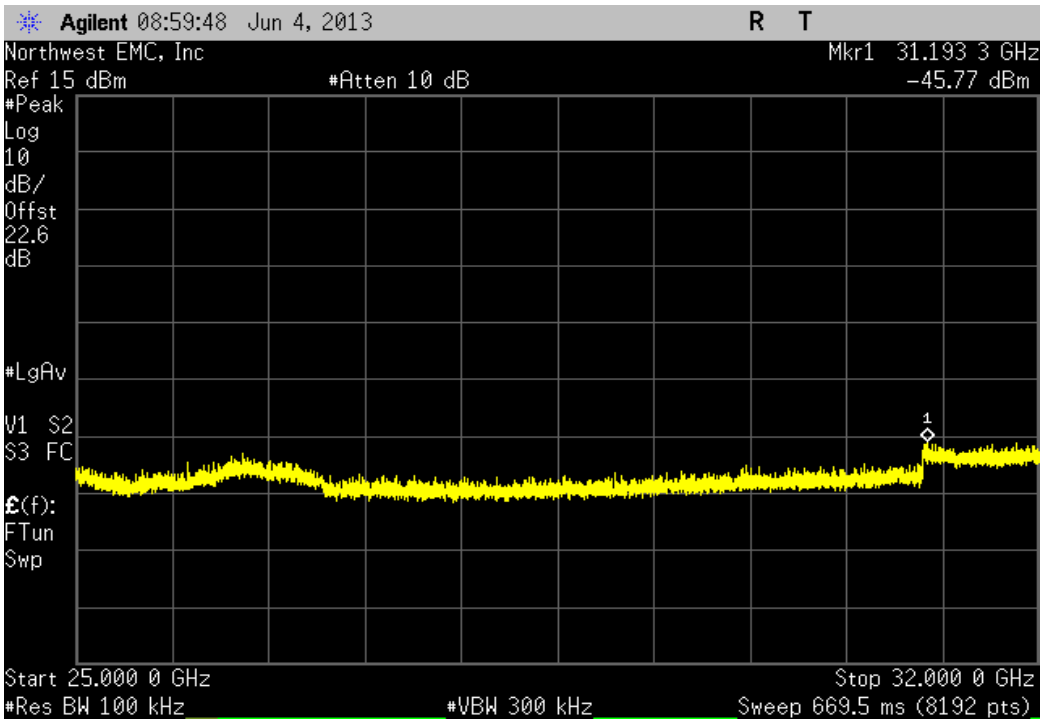
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-57.68 dBc	≤ -20 dBc	Pass



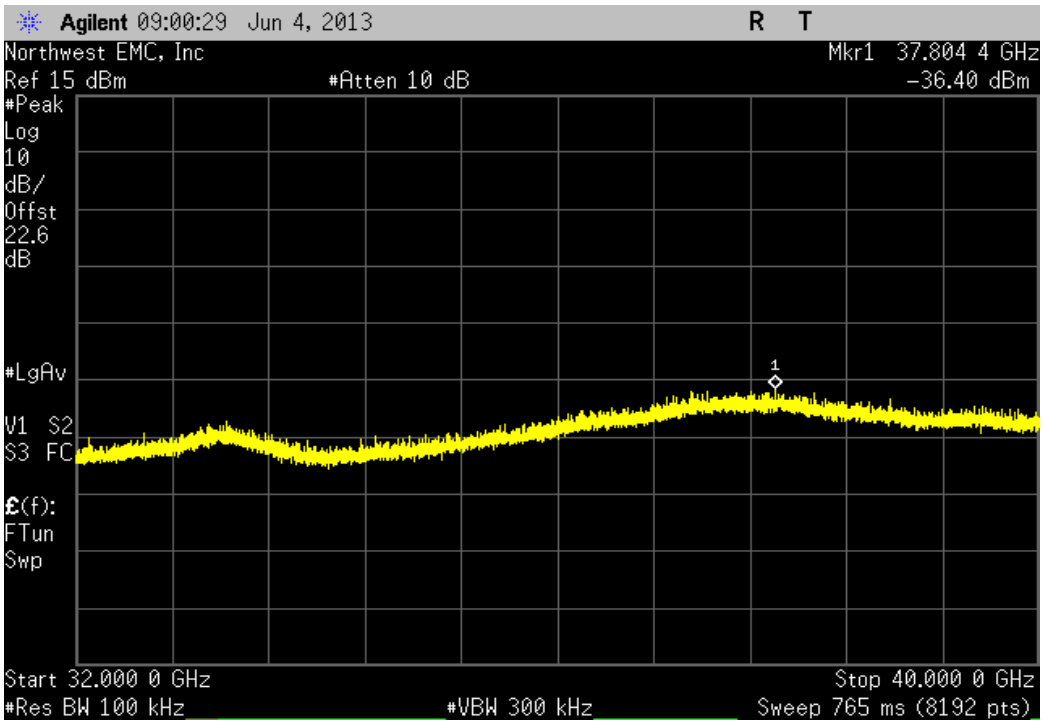
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-53.58 dBc	≤ -20 dBc	Pass



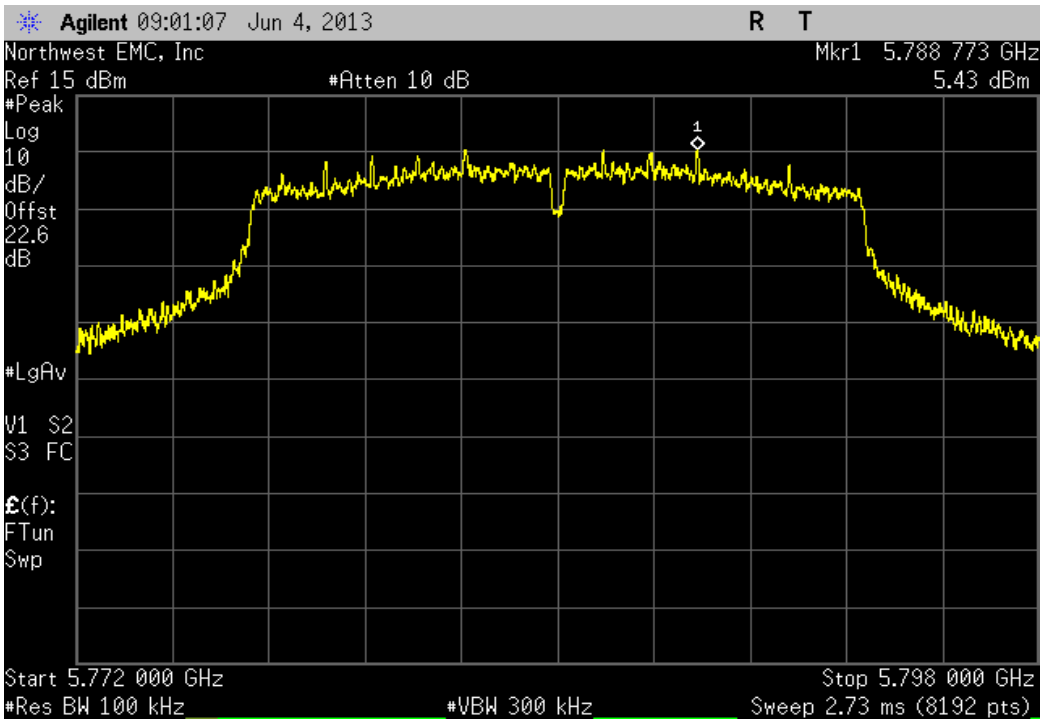
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-51.1 dBc	≤ -20 dBc	Pass



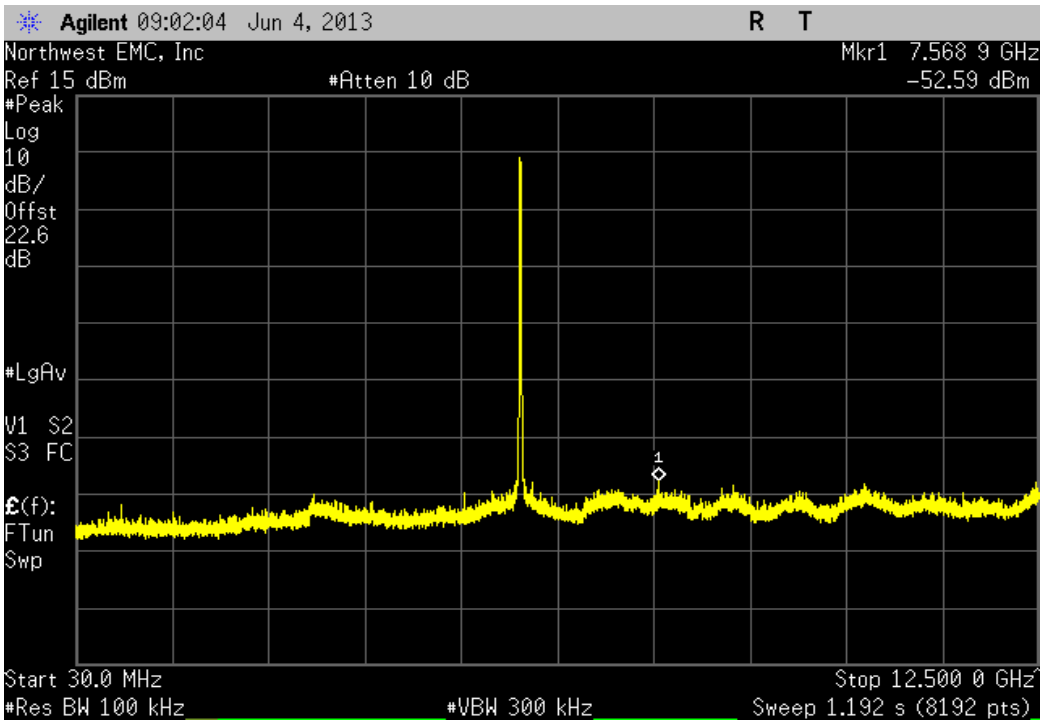
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-41.72 dBc	≤ -20 dBc	Pass



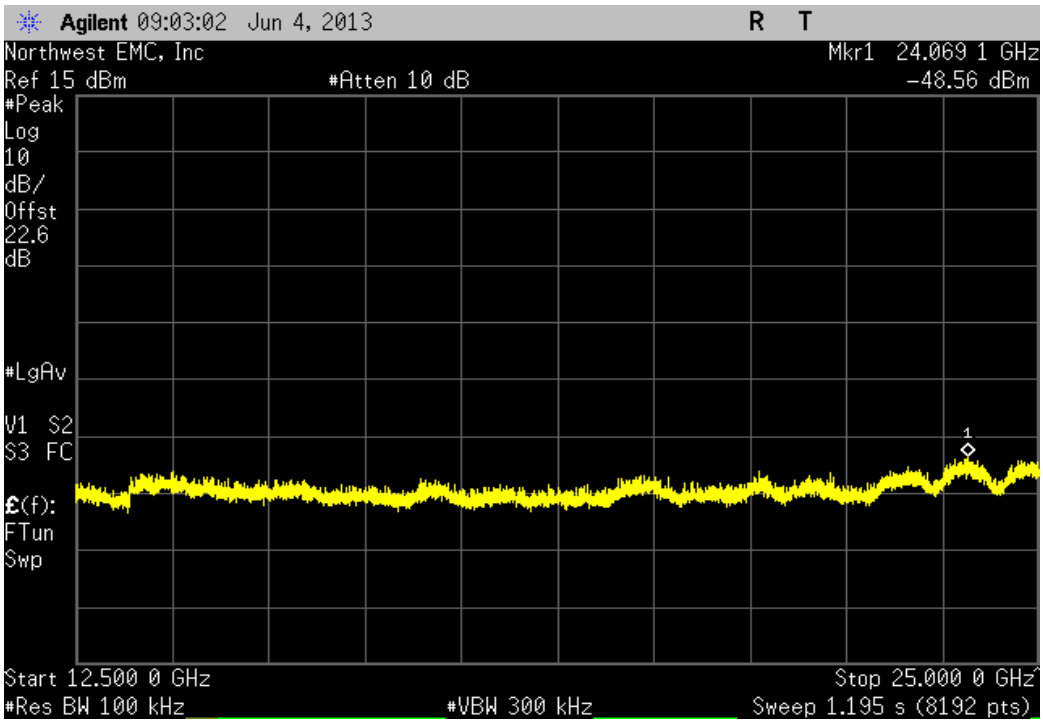
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



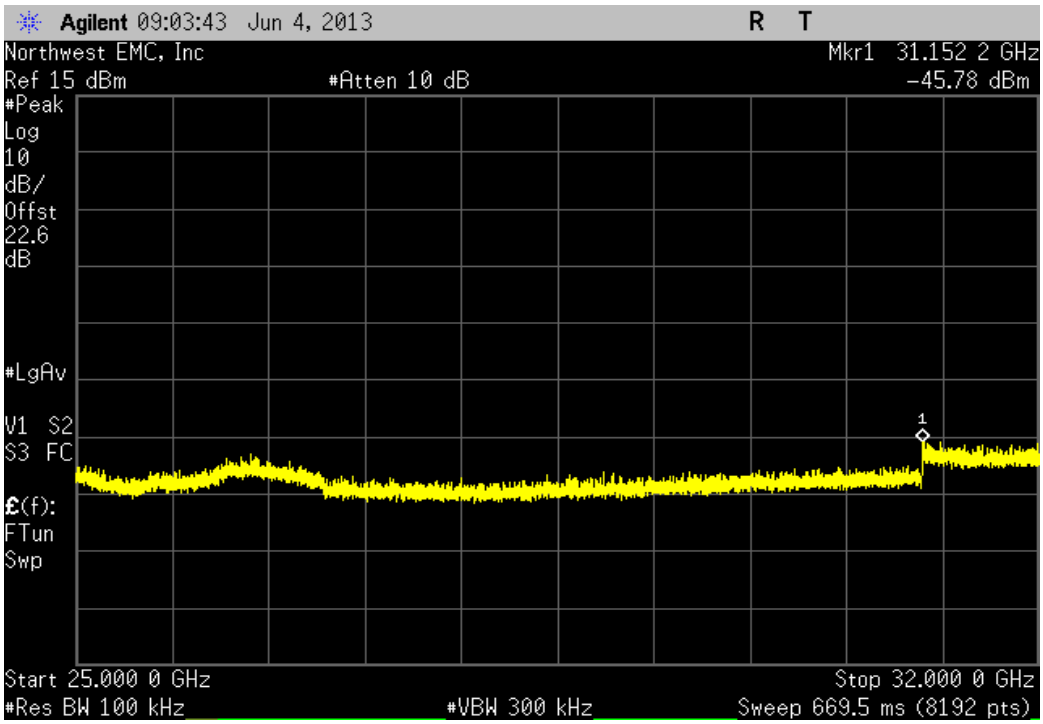
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz					
Frequency Range			**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz			-58.02 dBc	≤ -20 dBc	Pass



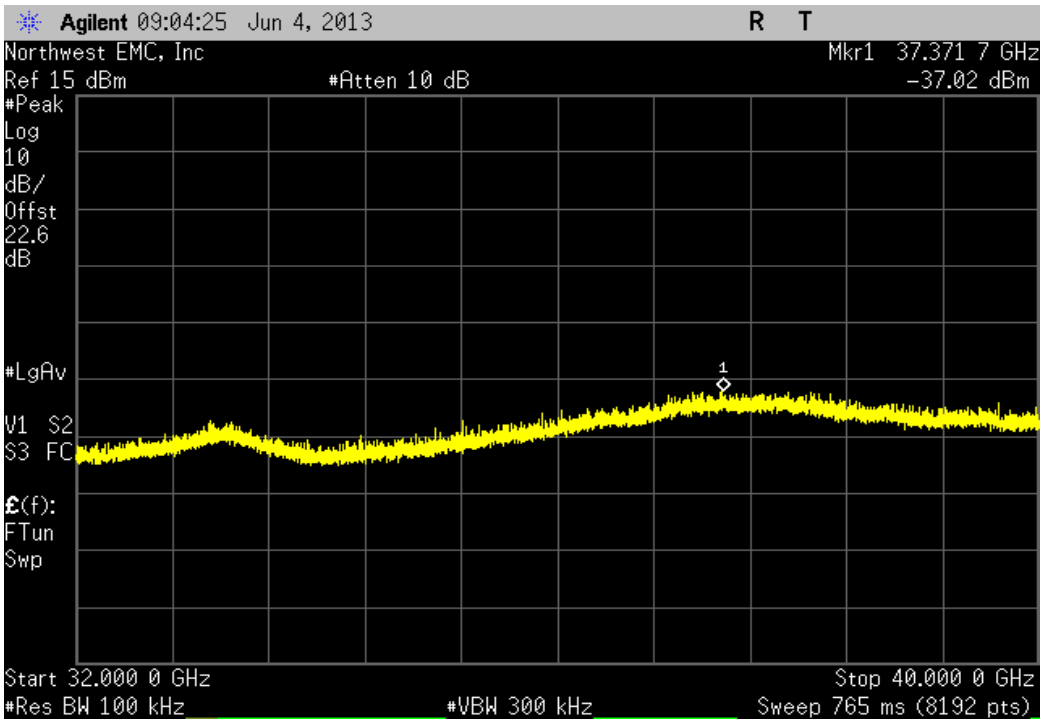
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-54 dBc	≤ -20 dBc	Pass



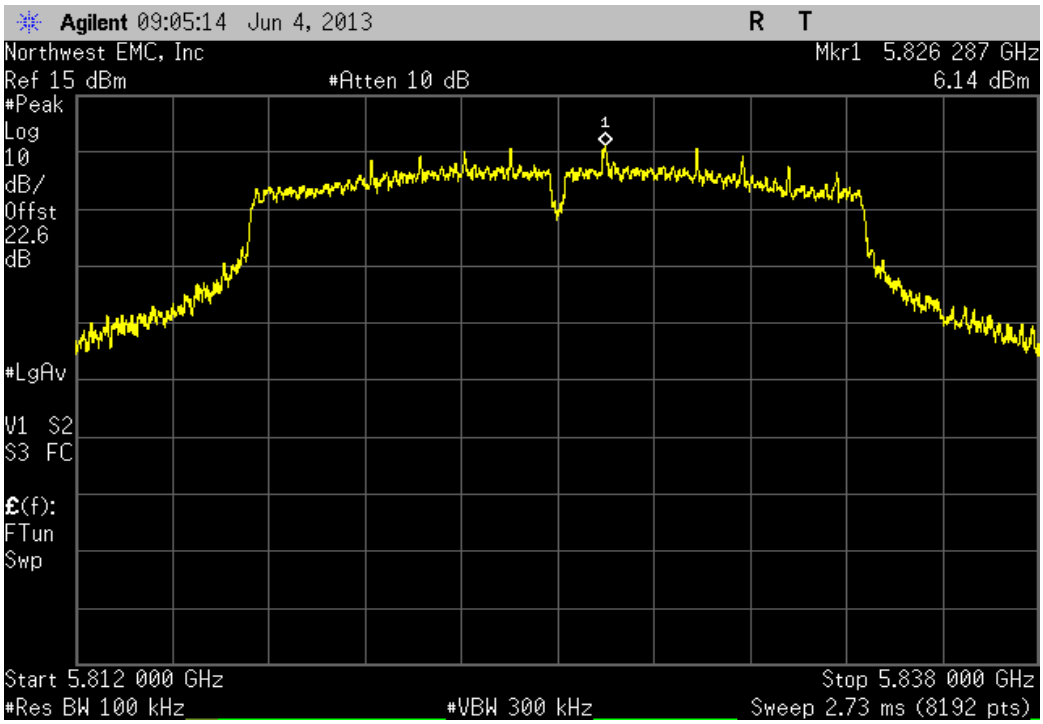
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-51.21 dBc	≤ -20 dBc	Pass



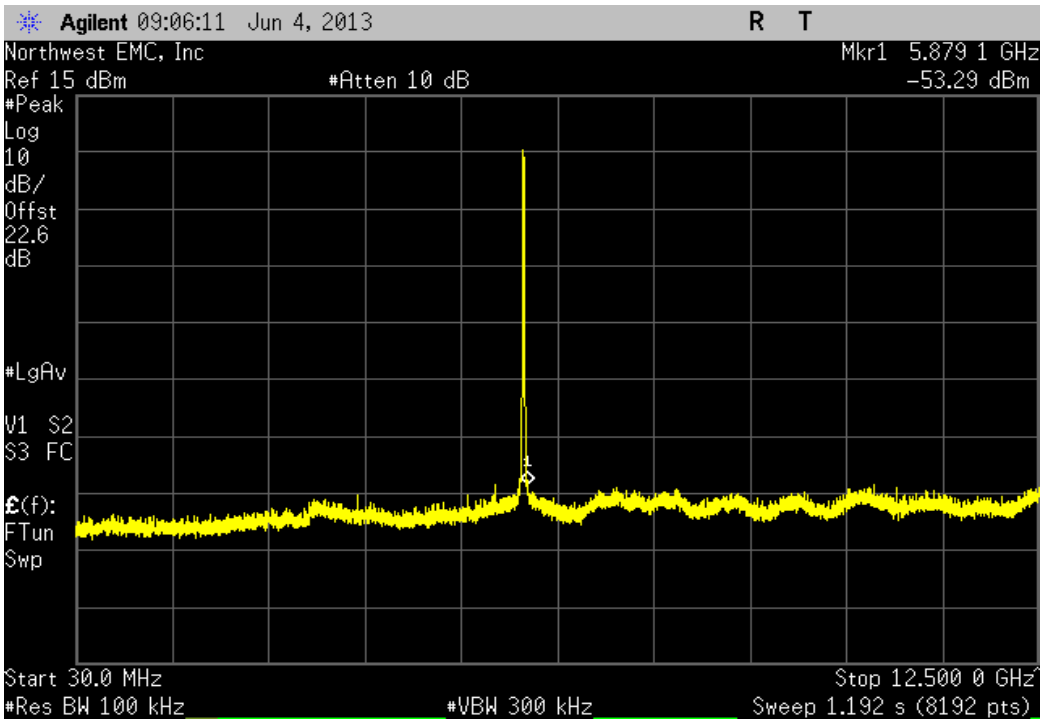
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-42.45 dBc	≤ -20 dBc	Pass



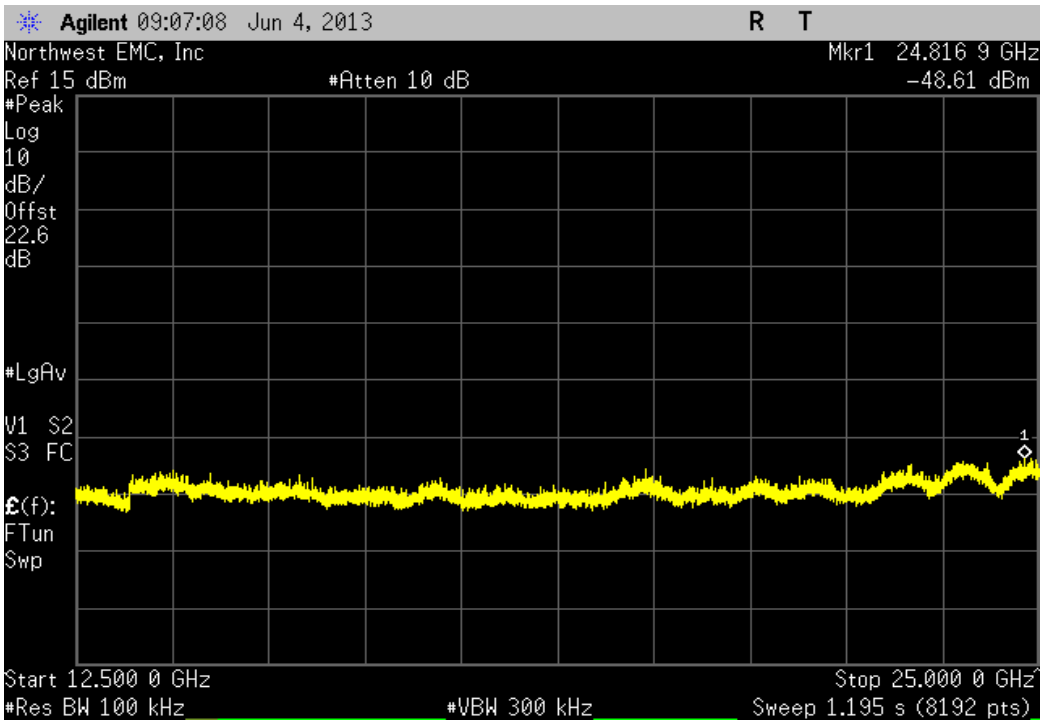
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



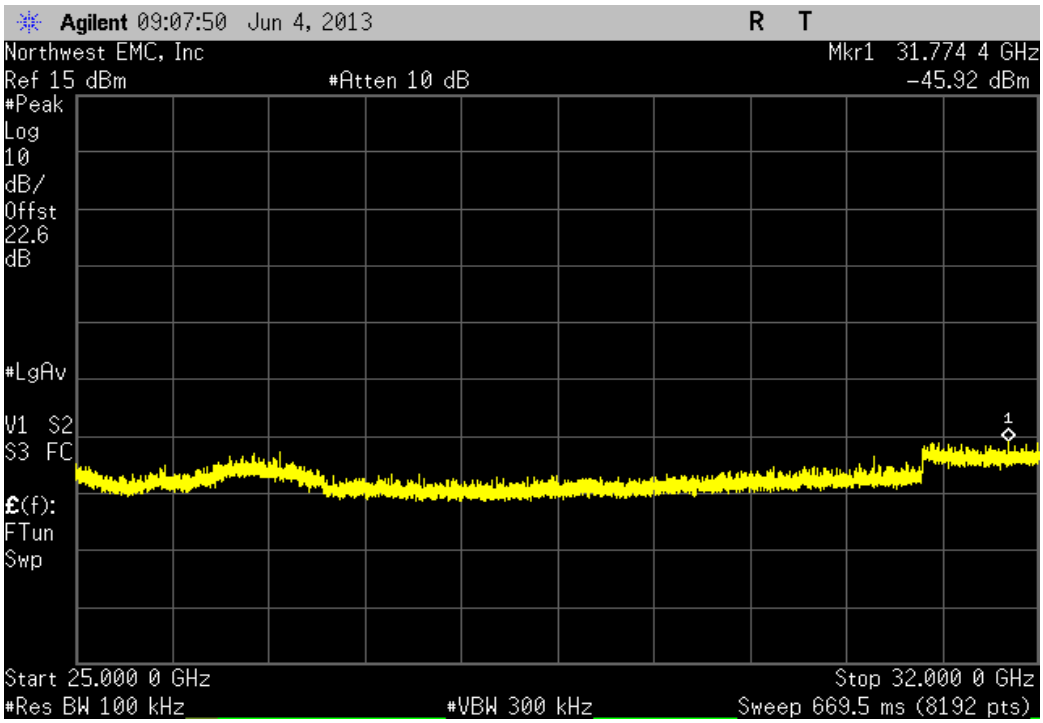
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-59.43 dBc	≤ -20 dBc	Pass



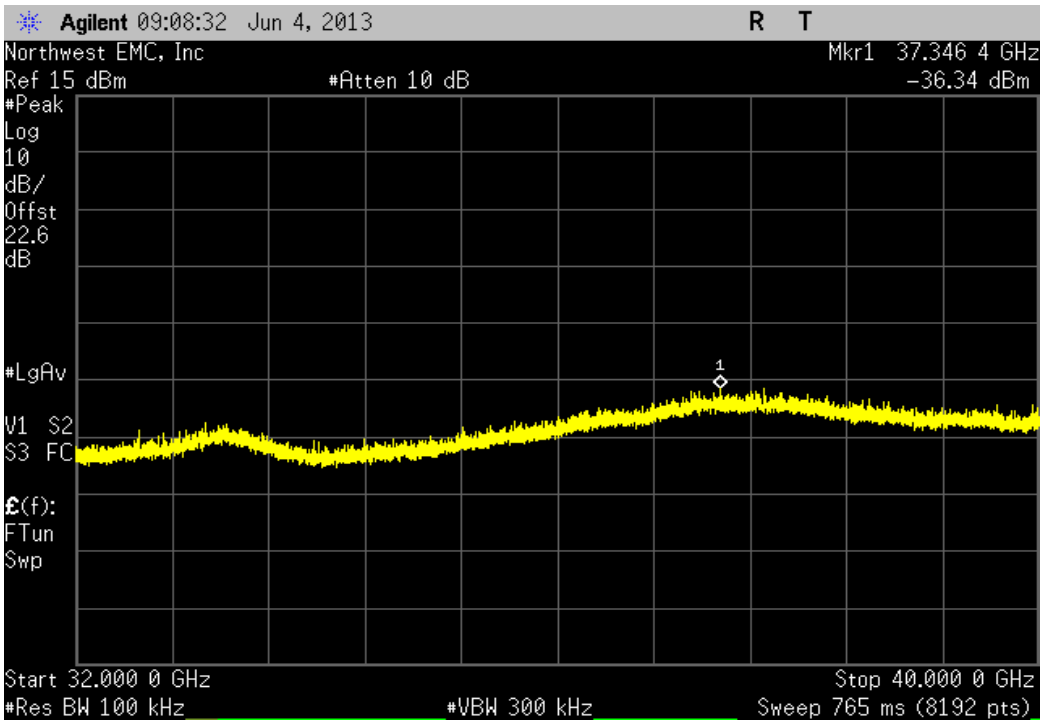
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-54.75 dBc	≤ -20 dBc	Pass



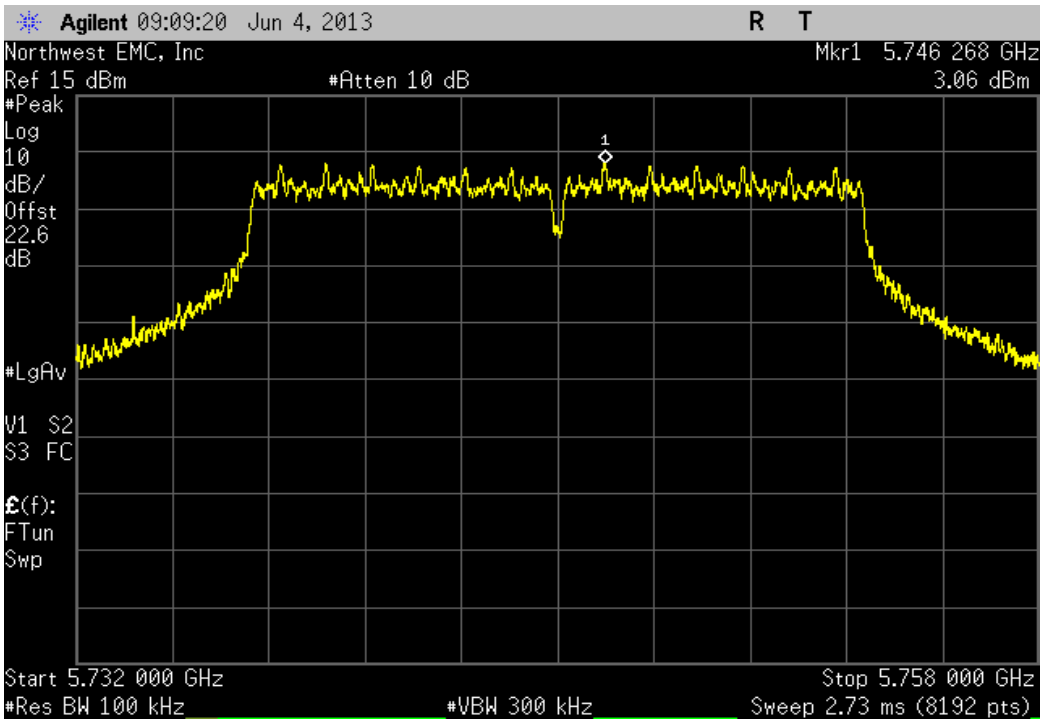
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-52.06 dBc	≤ -20 dBc	Pass



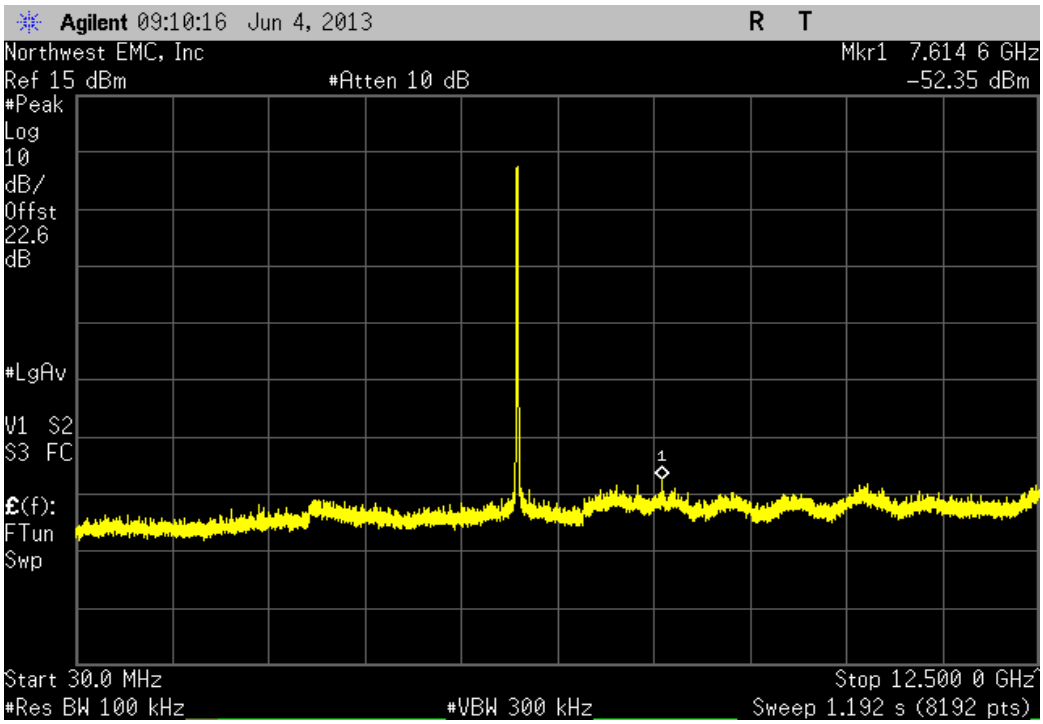
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-42.48 dBc	≤ -20 dBc	Pass



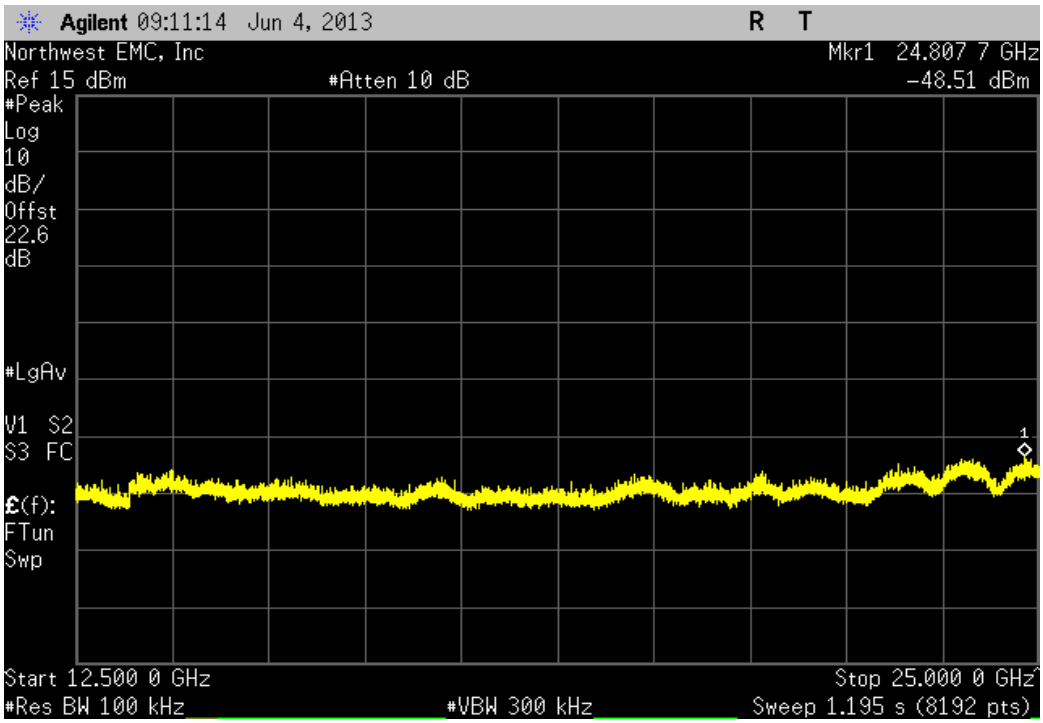
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



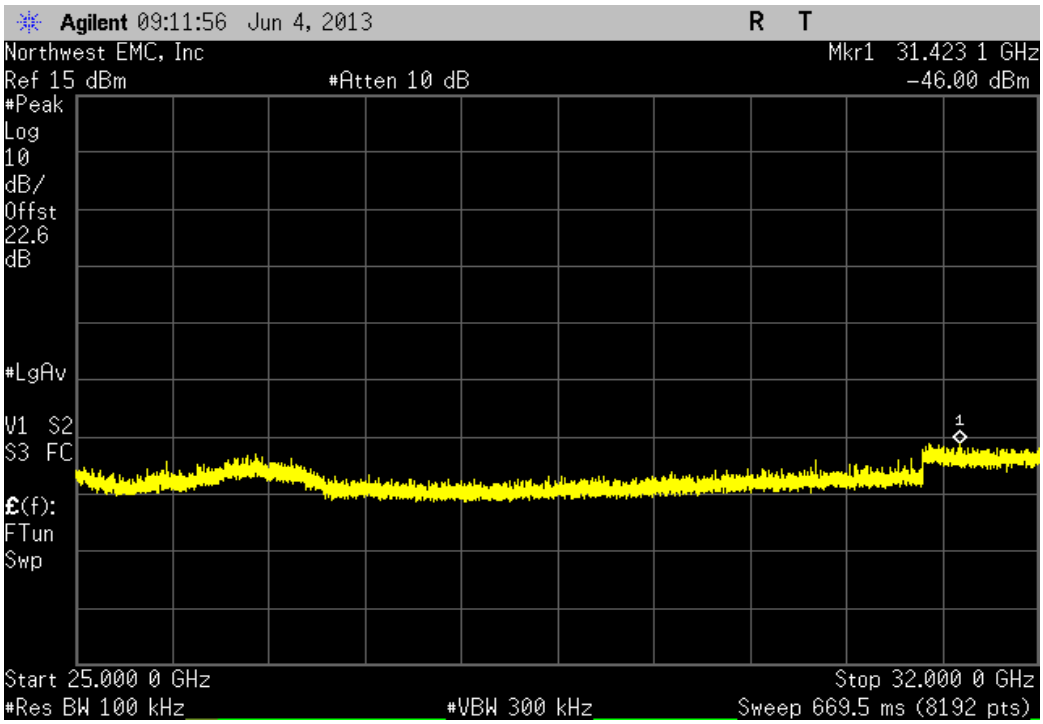
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz					
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-55.41 dBc	≤ -20 dBc	Pass



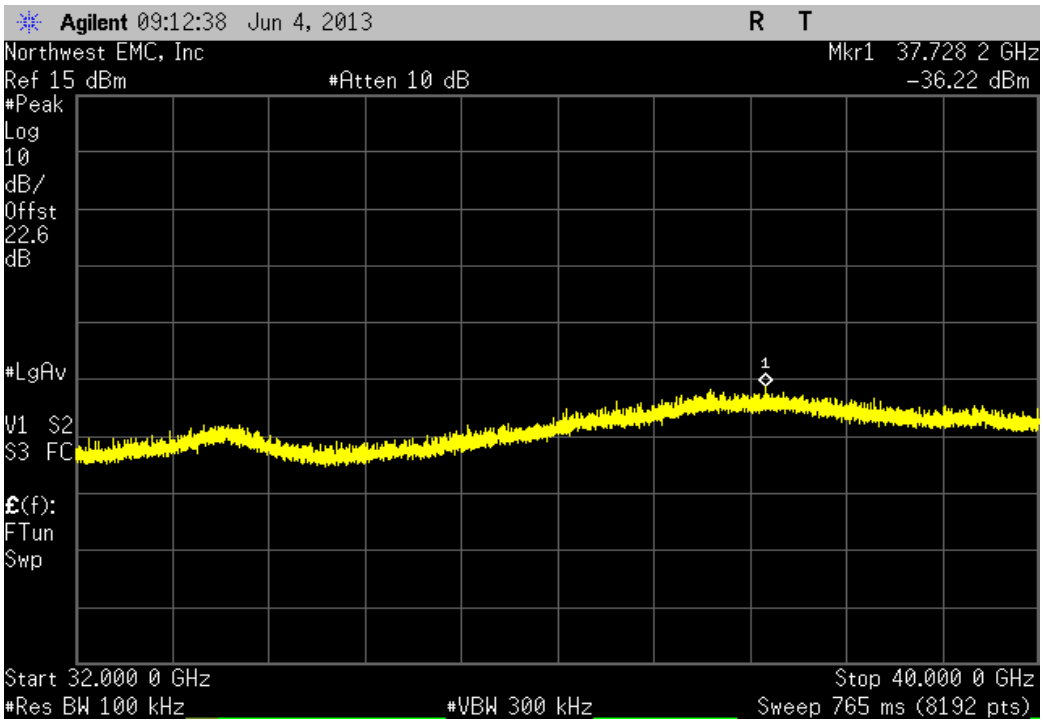
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-51.57 dBc	≤ -20 dBc	Pass



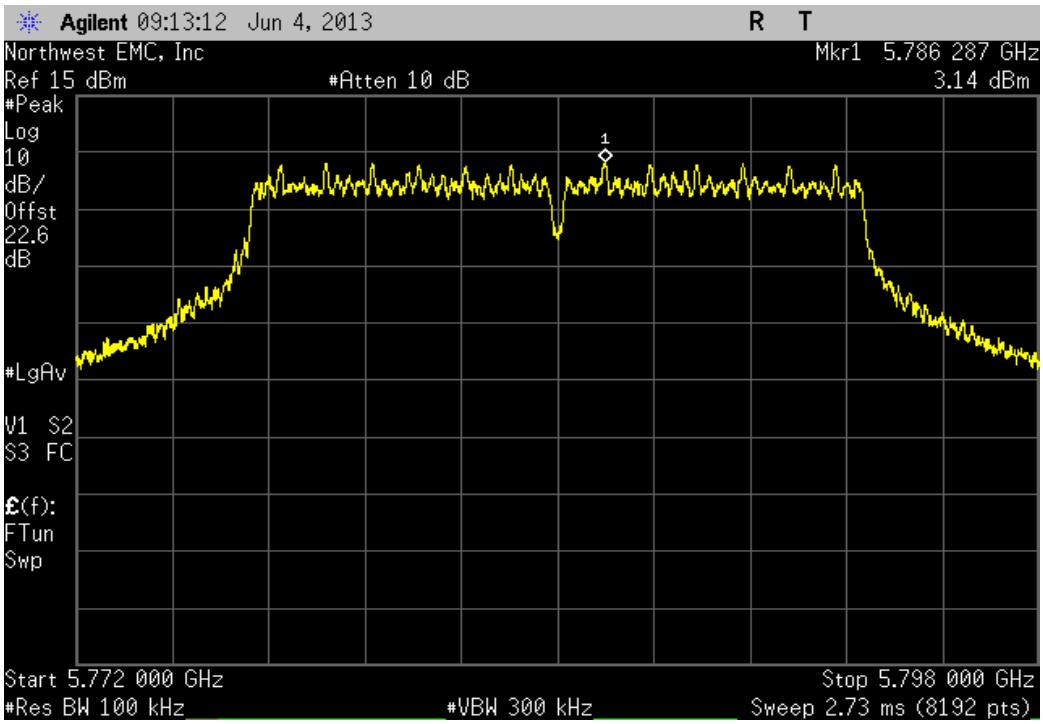
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-49.06 dBc	≤ -20 dBc	Pass



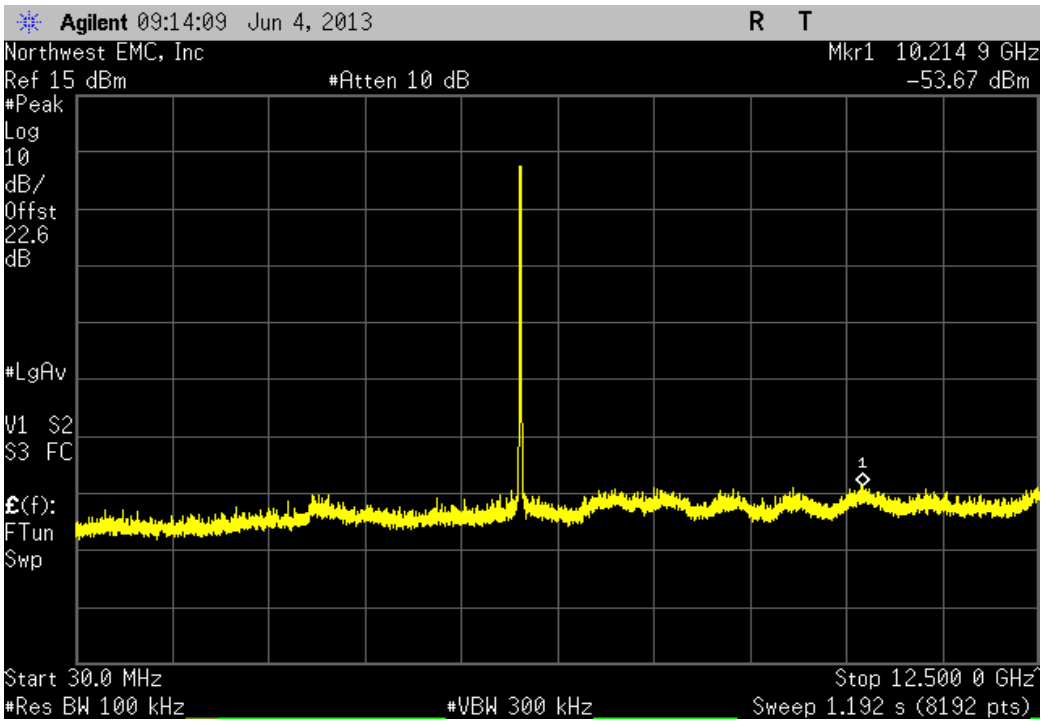
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-39.28 dBc	≤ -20 dBc	Pass



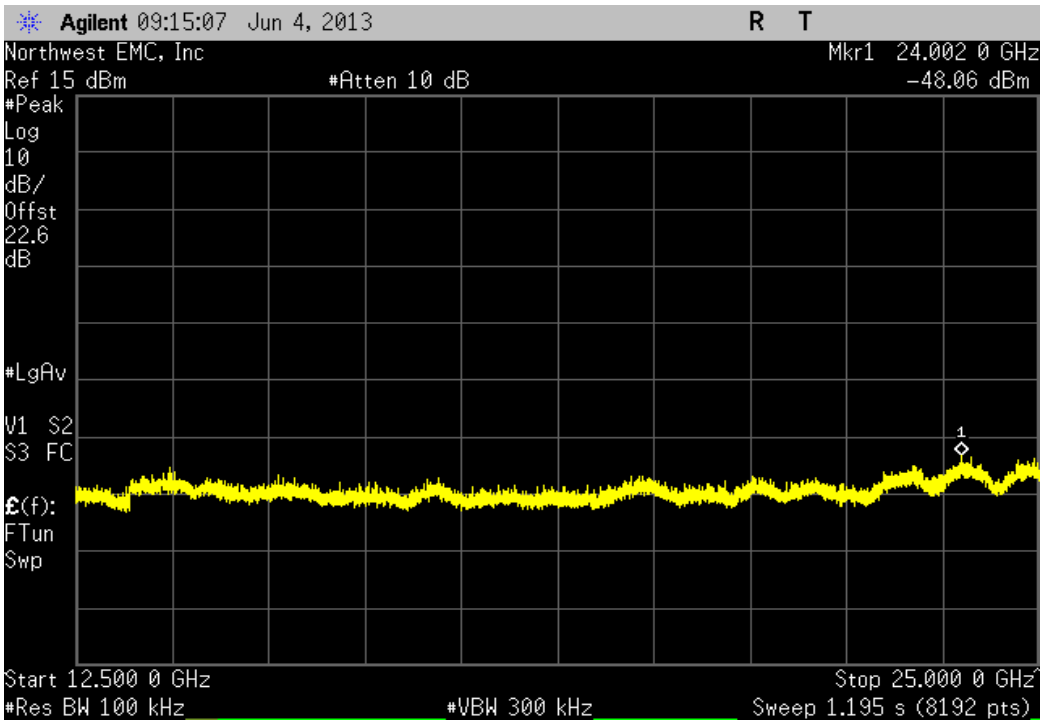
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



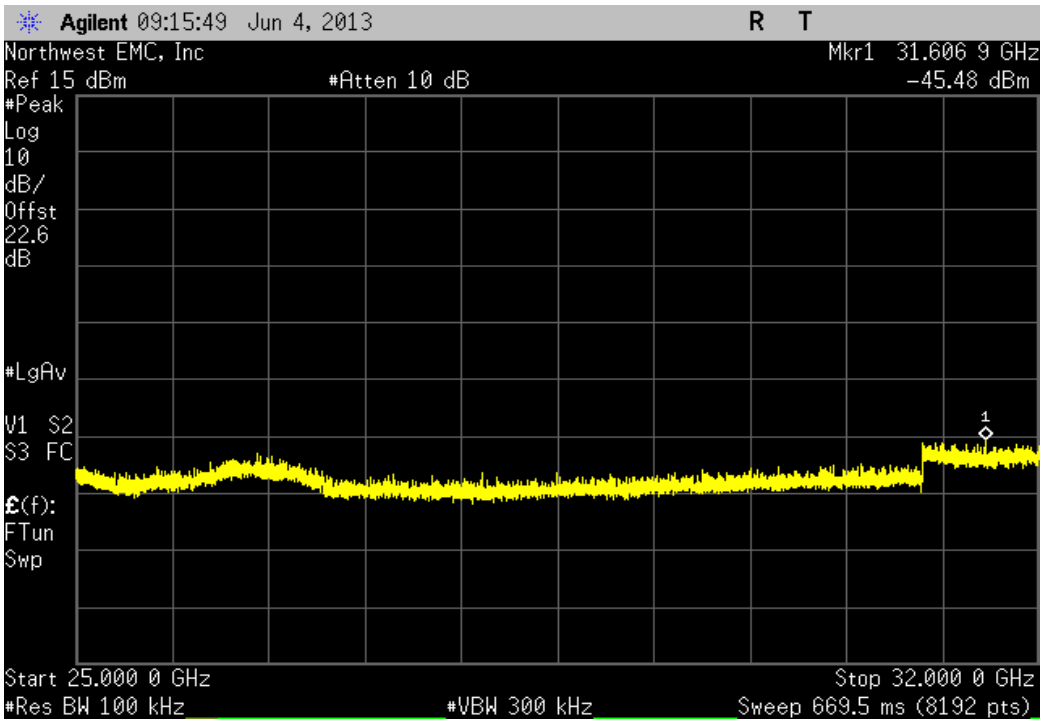
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-56.81 dBc	≤ -20 dBc	Pass



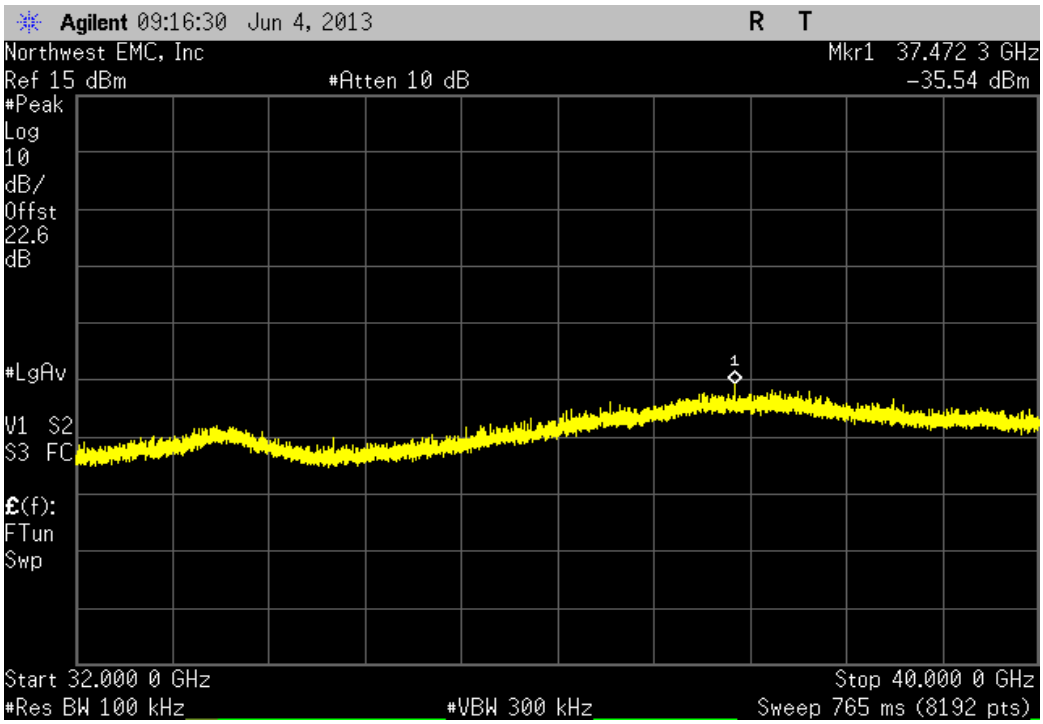
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-51.2 dBc	≤ -20 dBc	Pass



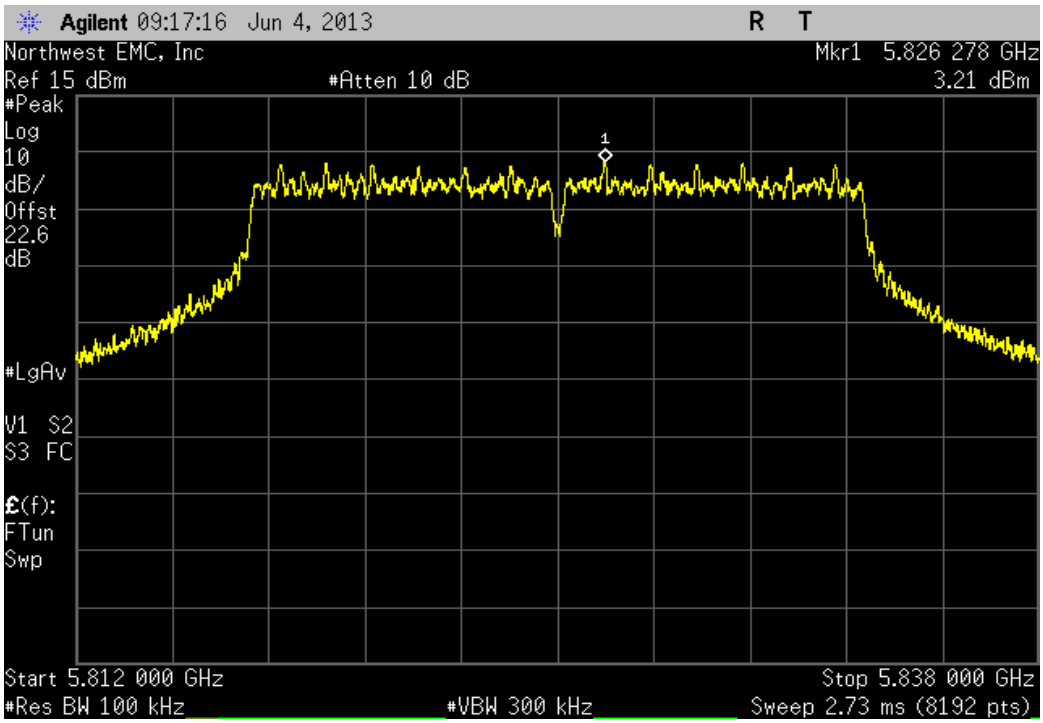
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-48.62 dBc	≤ -20 dBc	Pass



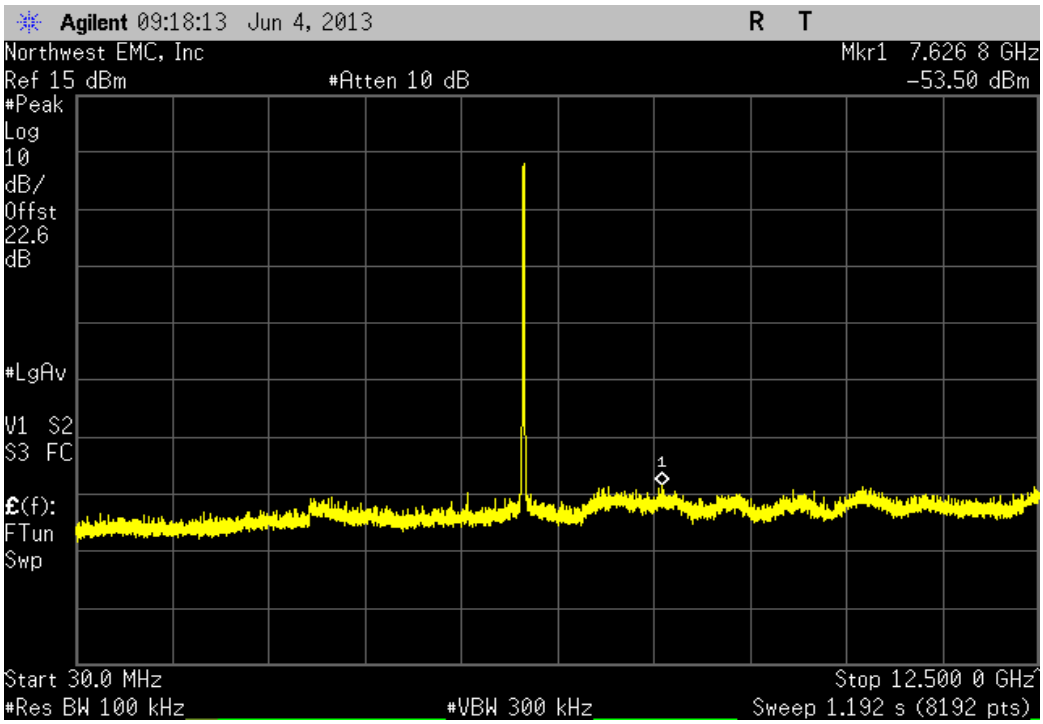
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-38.68 dBc	≤ -20 dBc	Pass



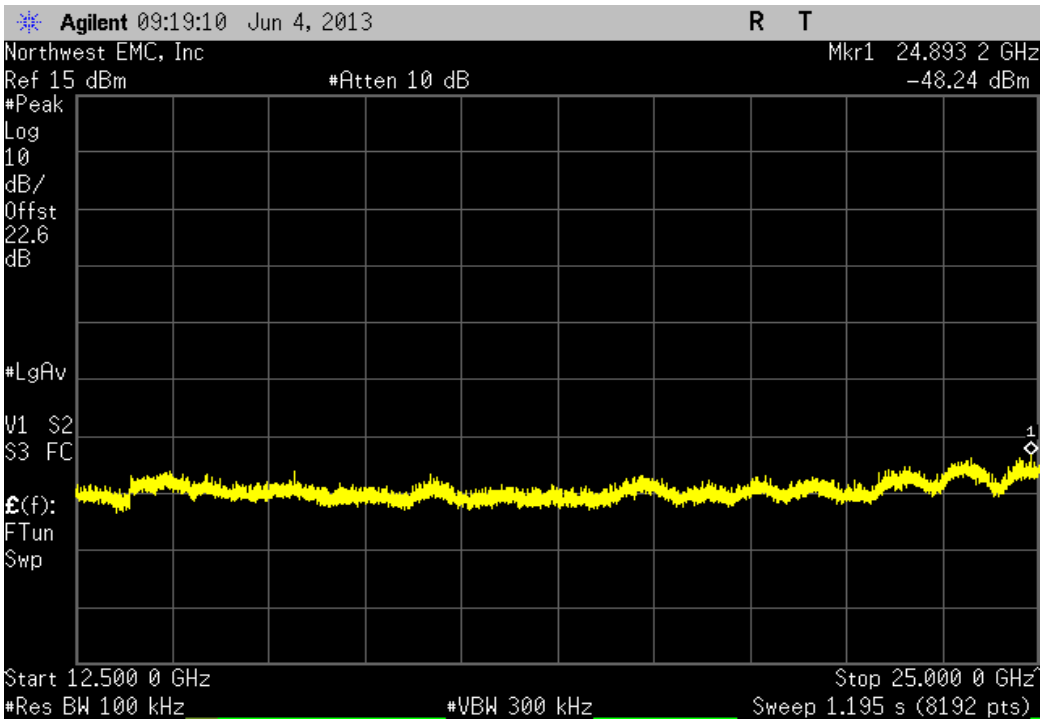
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



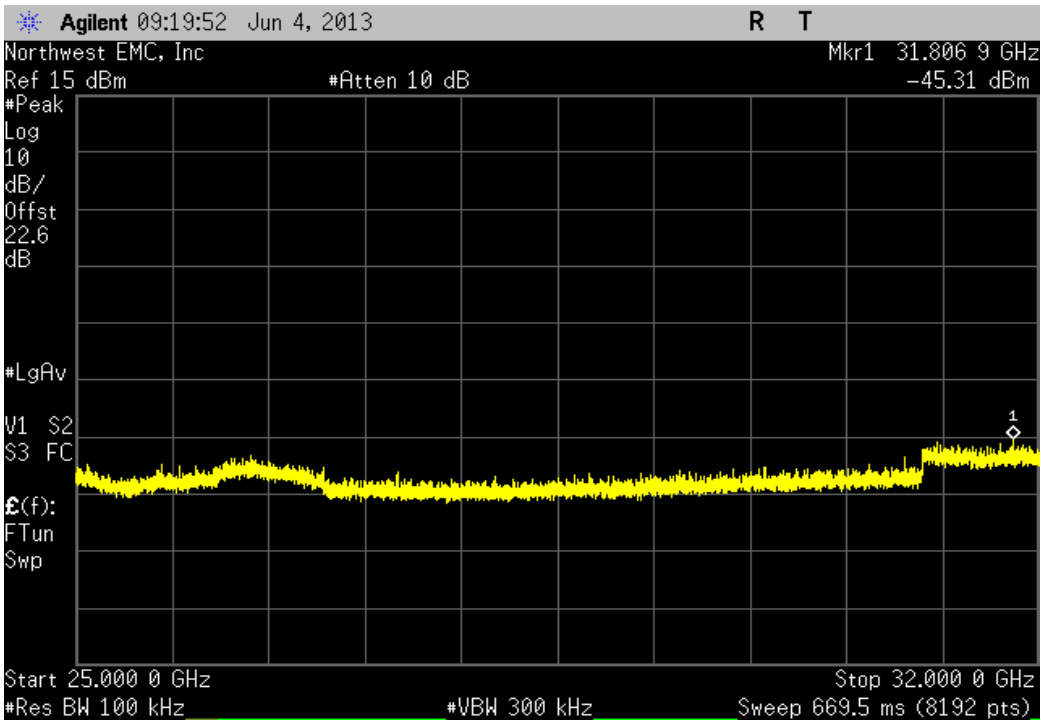
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz					
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-56.71 dBc	≤ -20 dBc	Pass



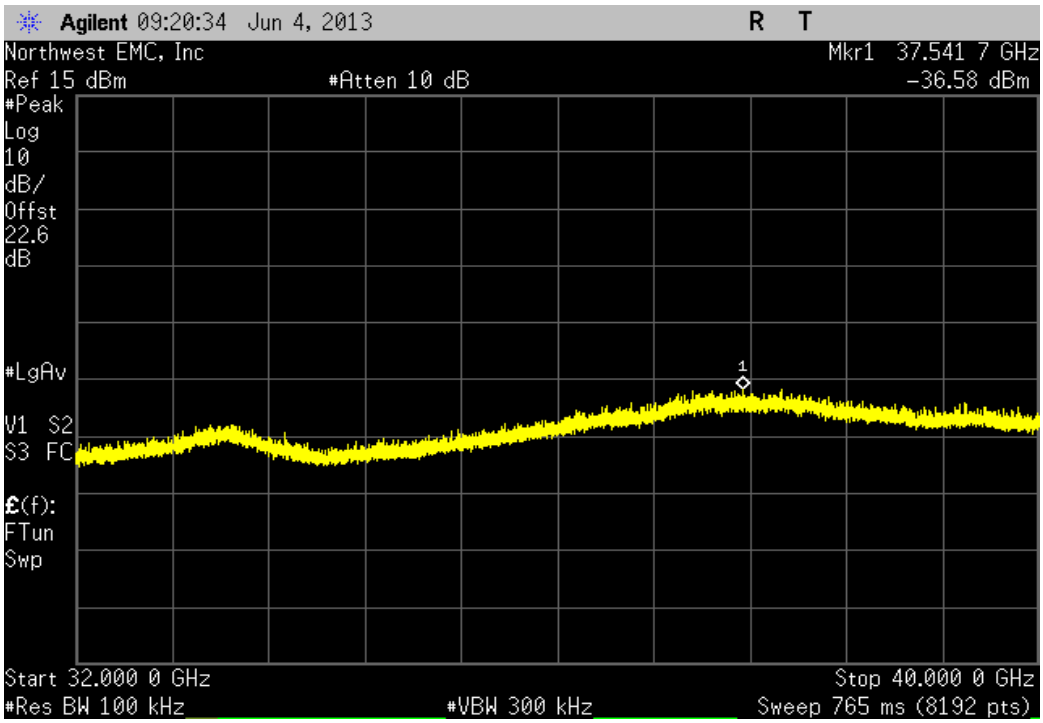
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-51.45 dBc	≤ -20 dBc	Pass



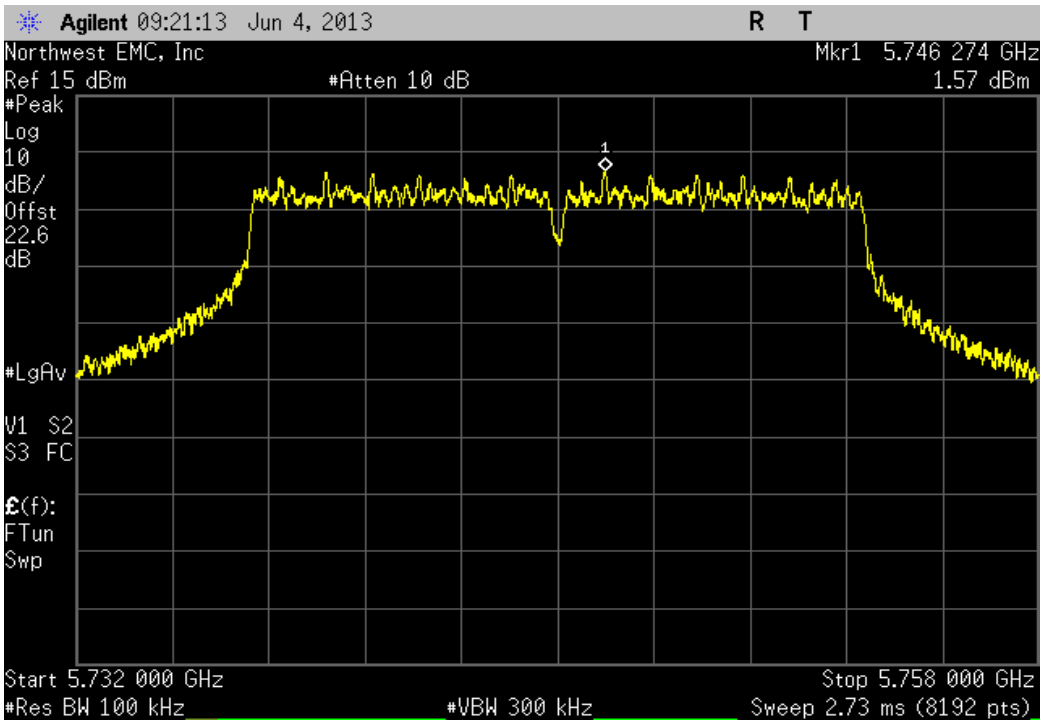
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-48.53 dBc	≤ -20 dBc	Pass



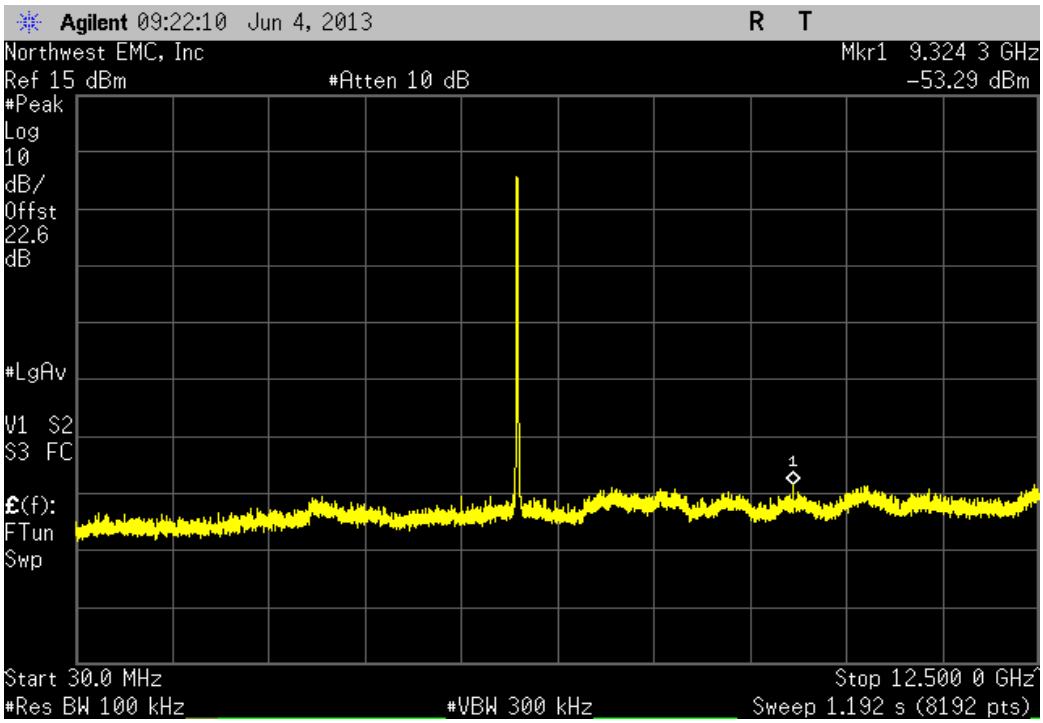
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-39.79 dBc	≤ -20 dBc	Pass



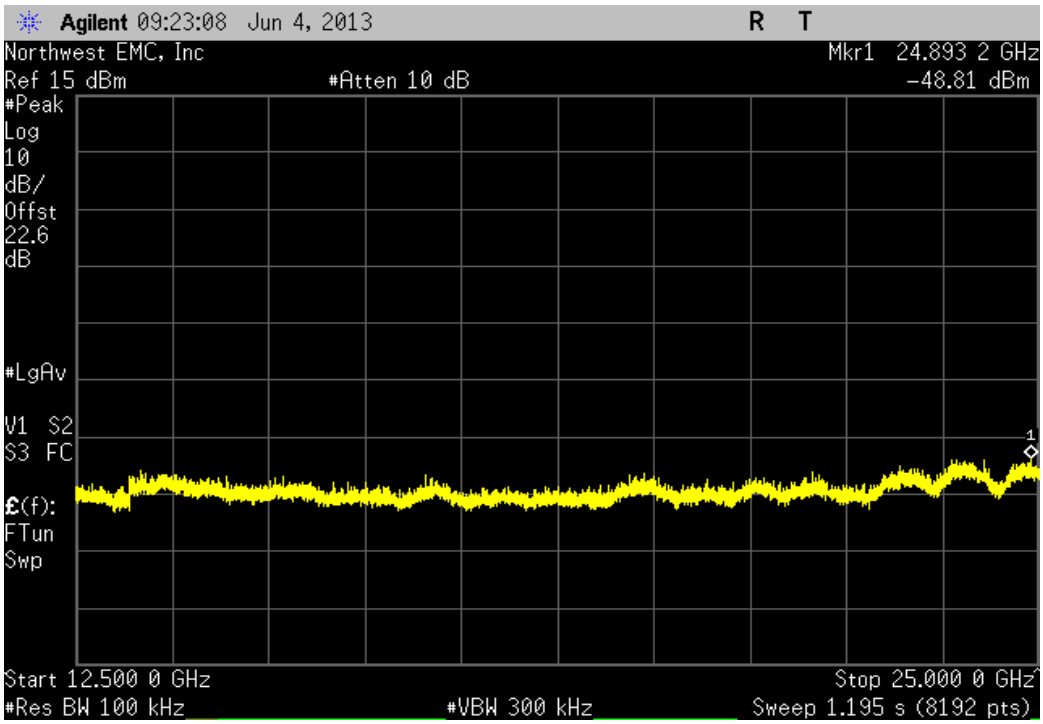
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



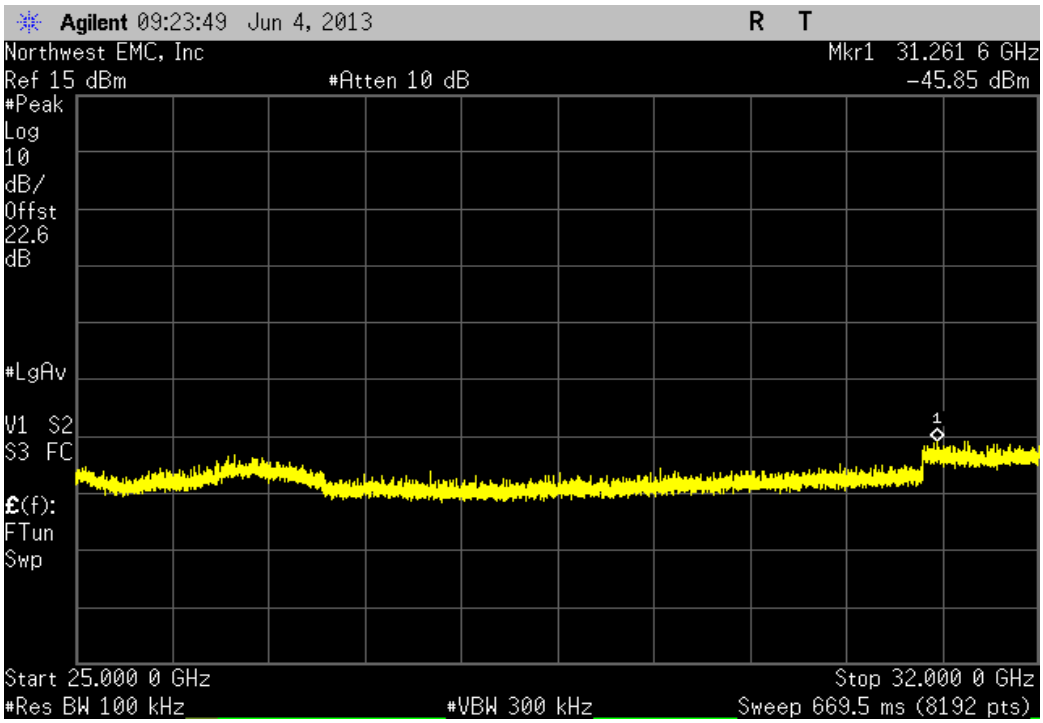
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-54.86 dBc	≤ -20 dBc	Pass



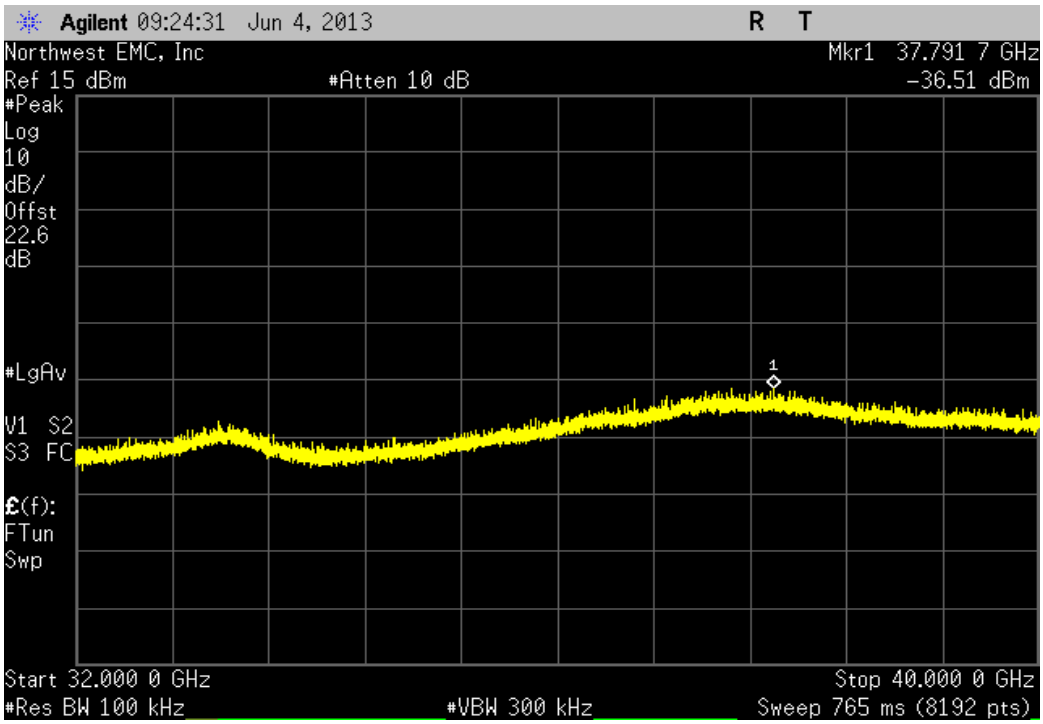
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-50.38 dBc	≤ -20 dBc	Pass



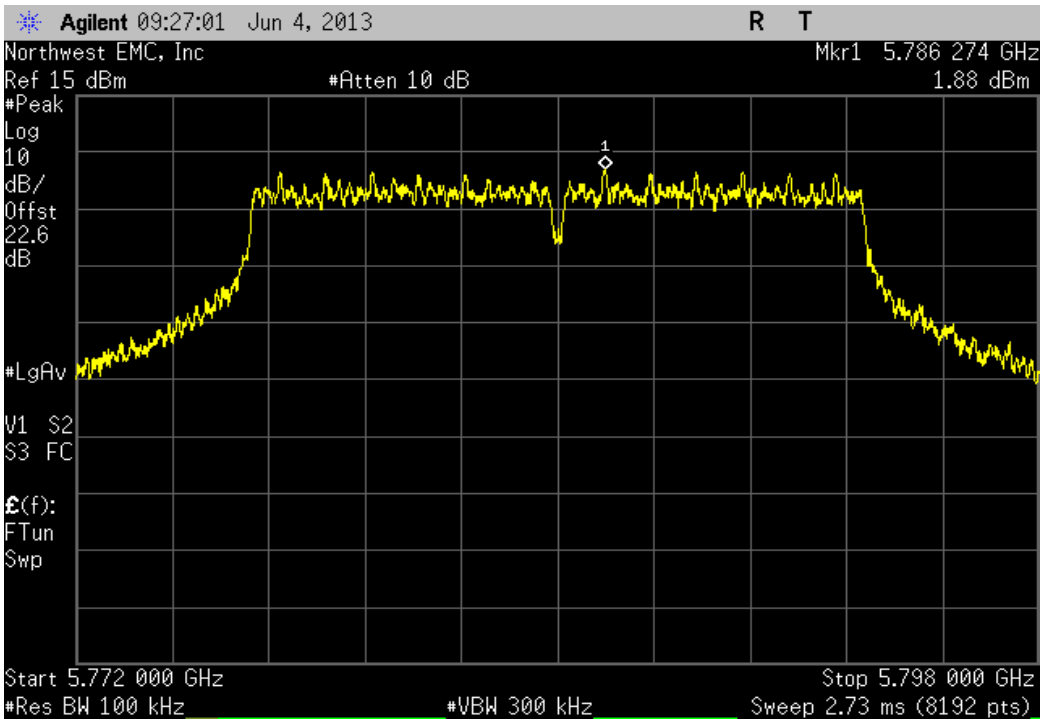
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-47.42 dBc	≤ -20 dBc	Pass



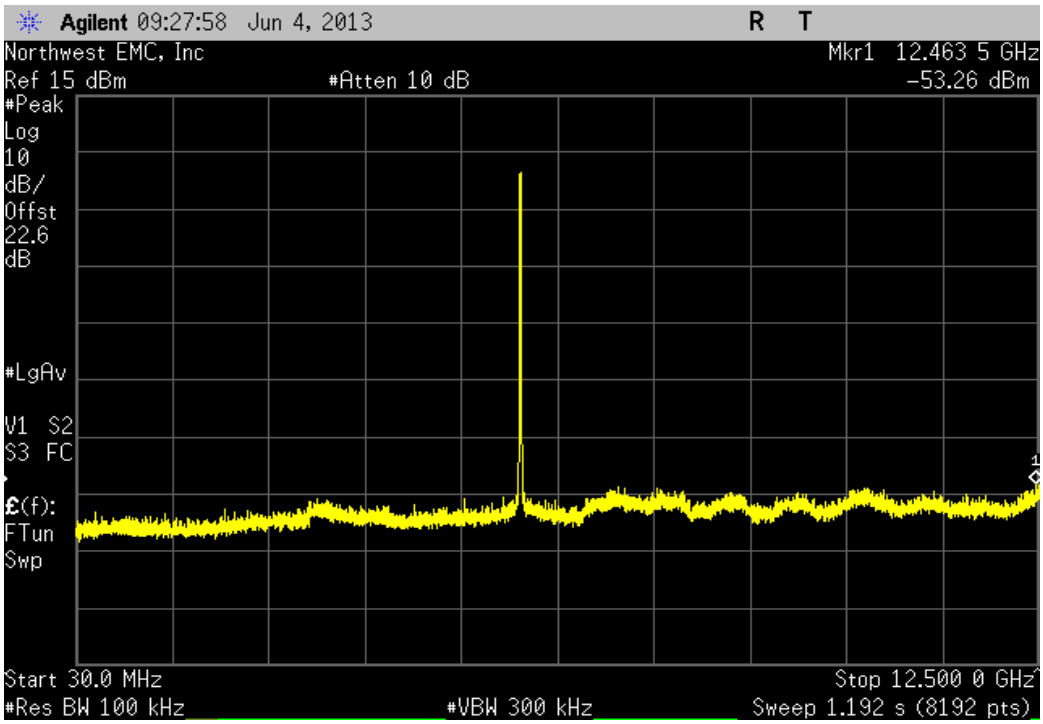
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-38.08 dBc	≤ -20 dBc	Pass



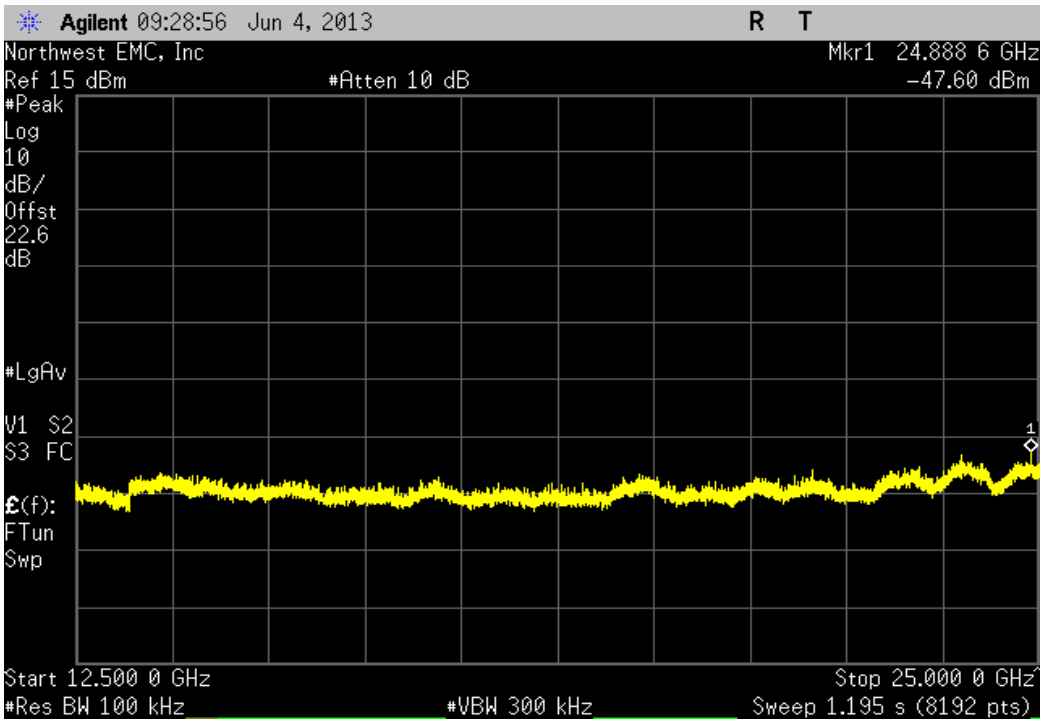
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



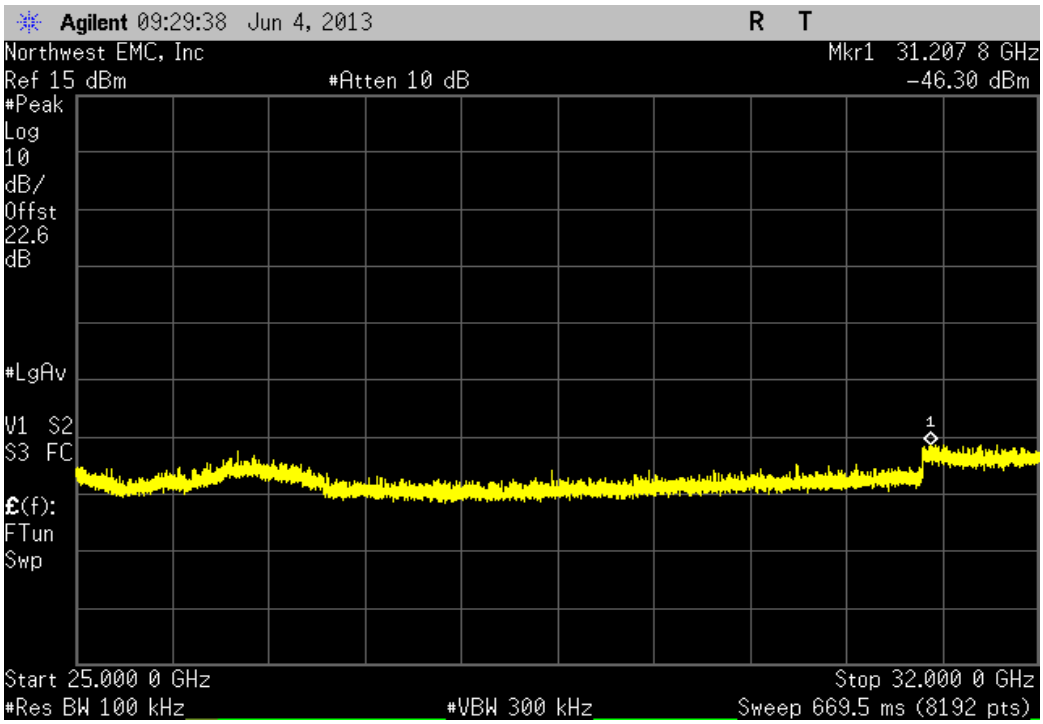
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz					
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-55.14 dBc	≤ -20 dBc	Pass



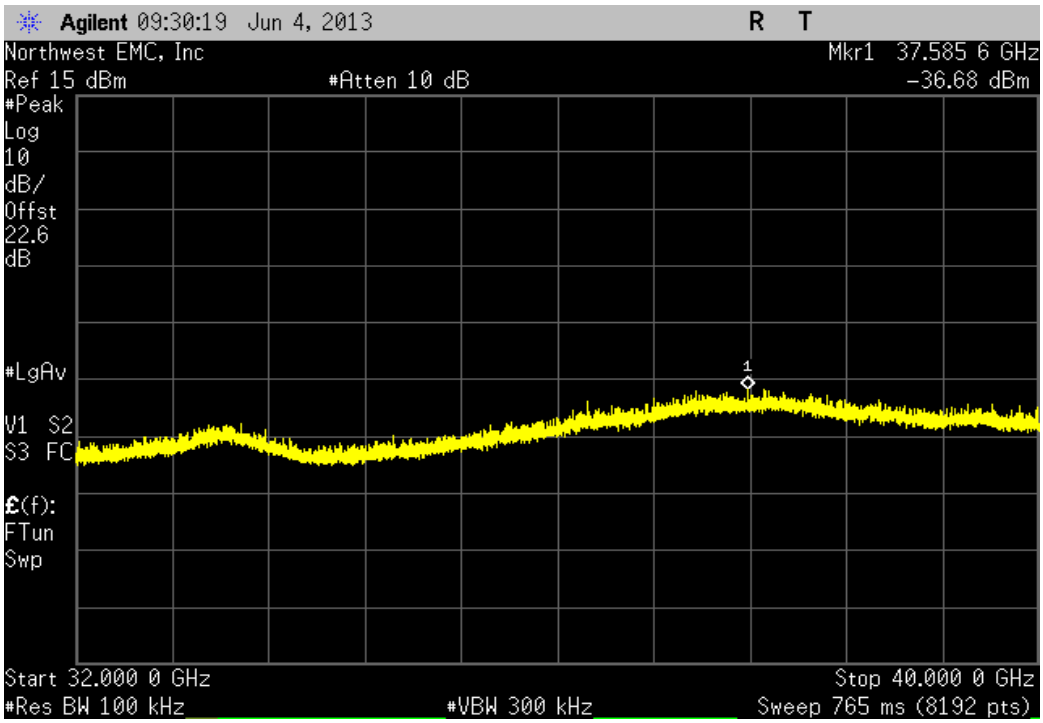
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-49.48 dBc	≤ -20 dBc	Pass



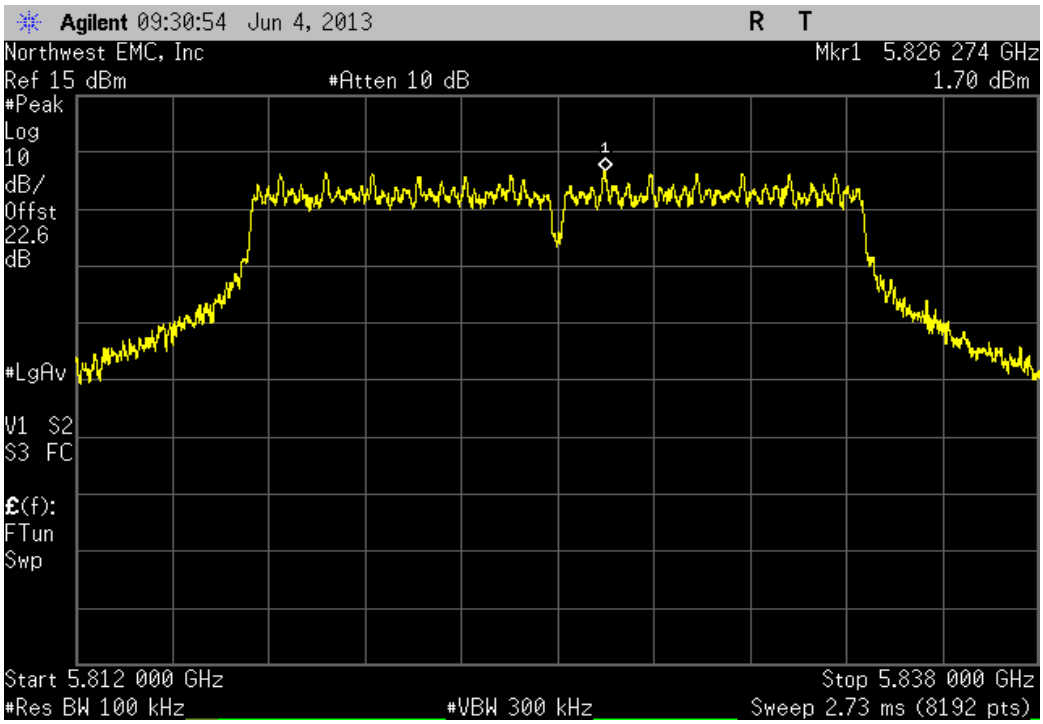
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-48.18 dBc	≤ -20 dBc	Pass



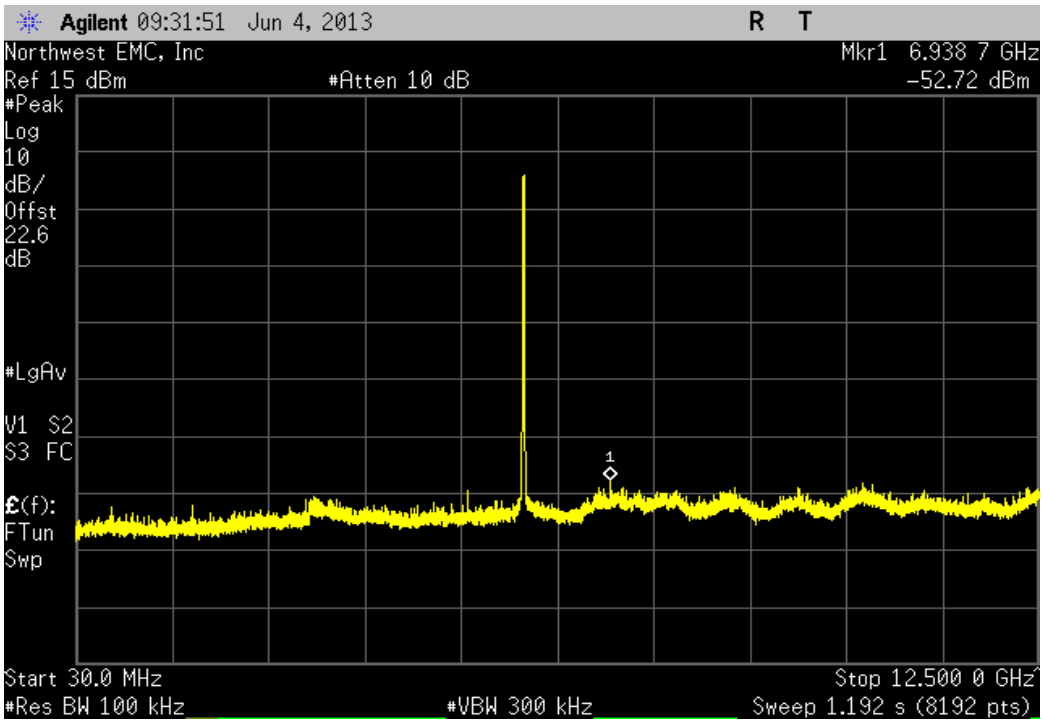
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz				
Frequency Range		Value	Limit	Result
32 GHz - 40 GHz		-38.56 dBc	≤ -20 dBc	Pass



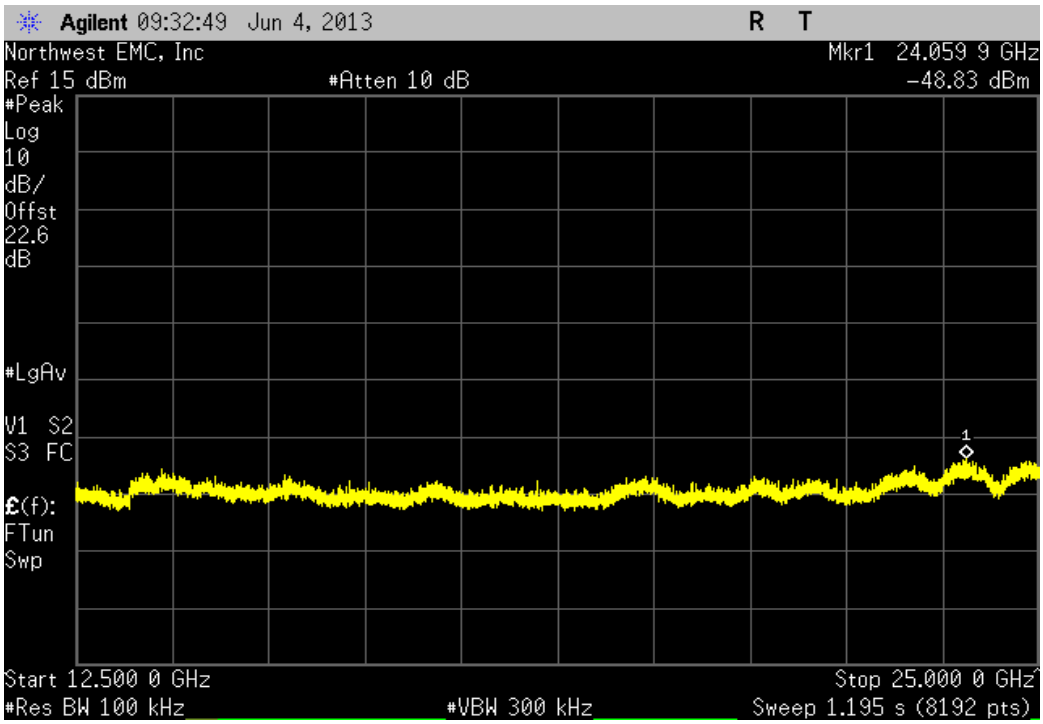
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz						
	Frequency Range			Value	Limit	Result
	Fundamental			N/A	N/A	N/A



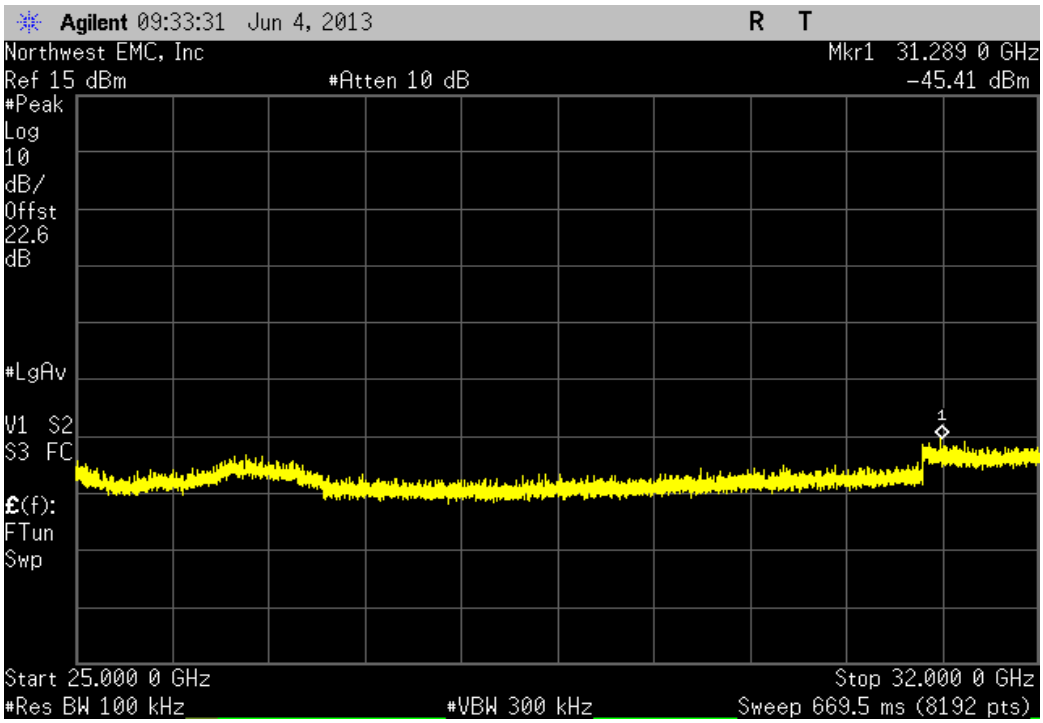
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-54.42 dBc	≤ -20 dBc	Pass



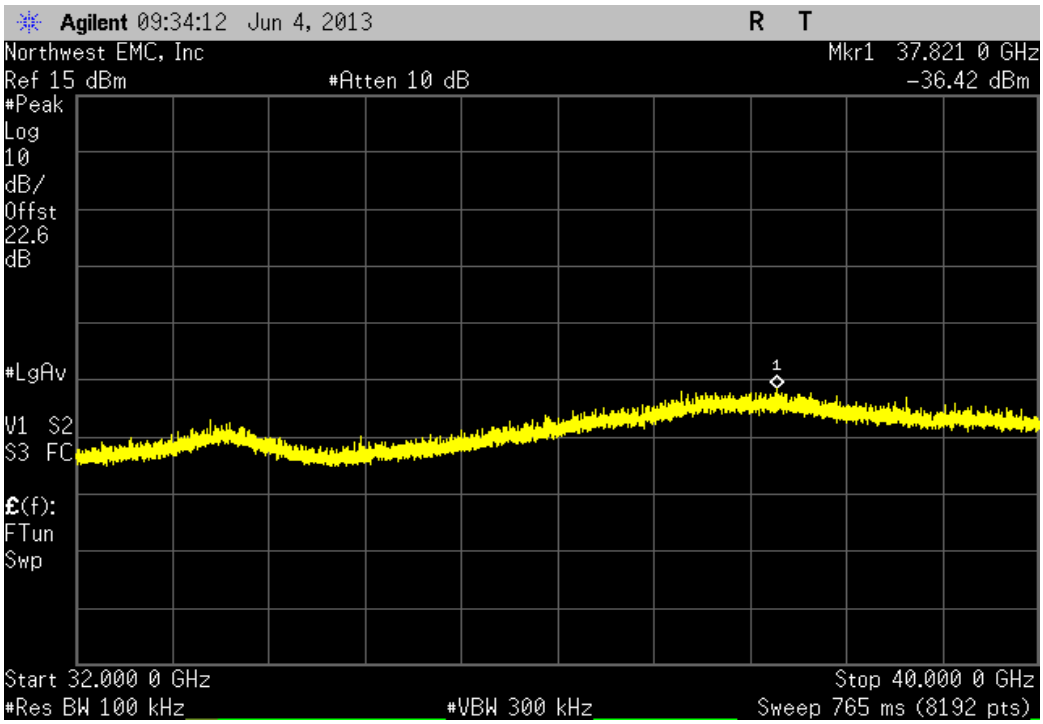
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-50.53 dBc	≤ -20 dBc	Pass



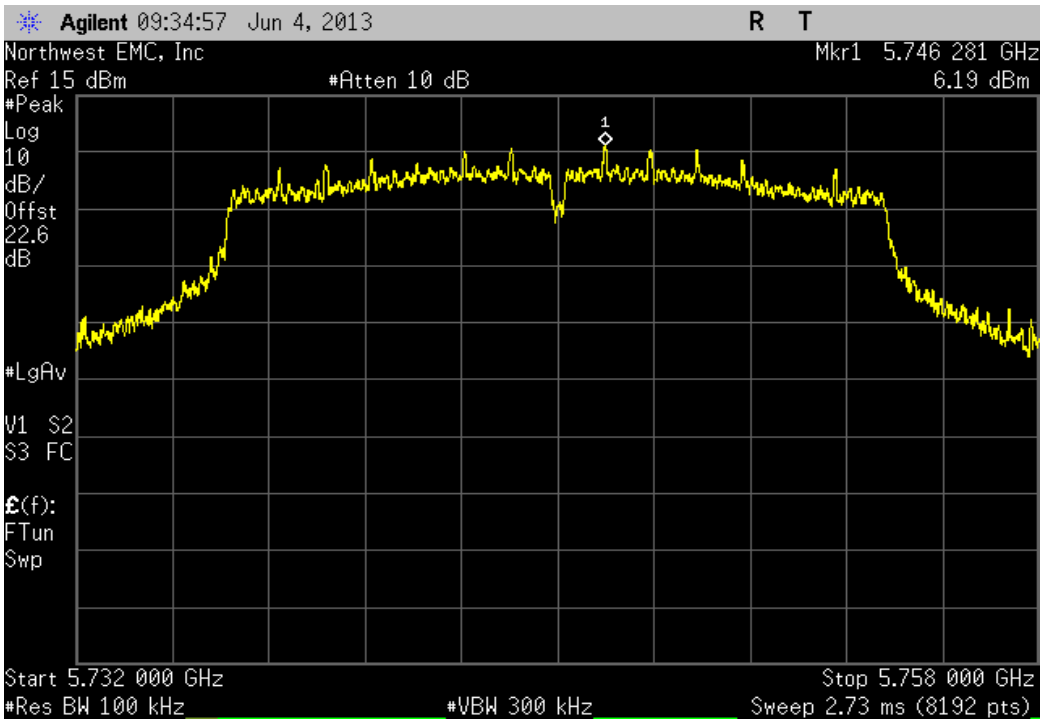
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-47.11 dBc	≤ -20 dBc	Pass



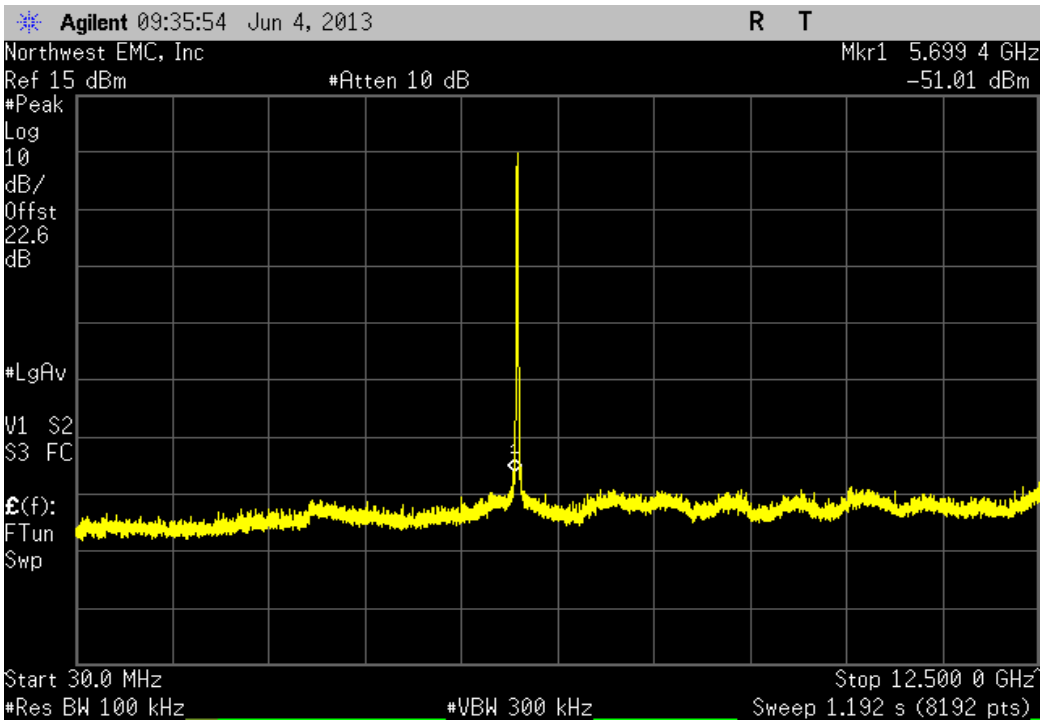
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-38.12 dBc	≤ -20 dBc	Pass



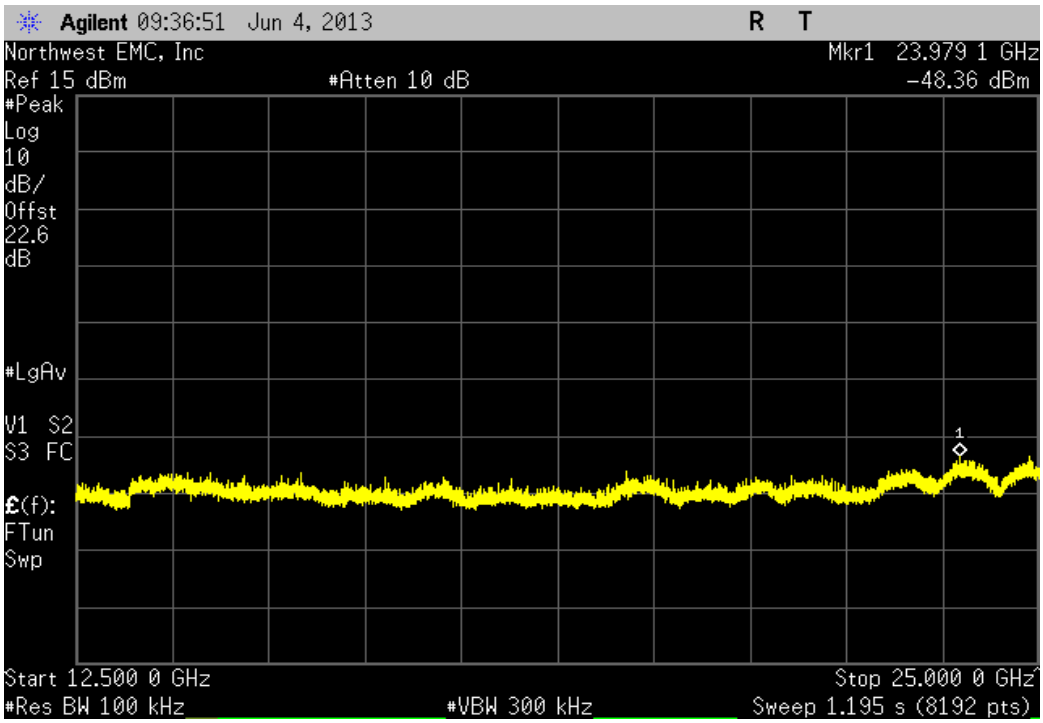
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz						
Frequency Range				**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



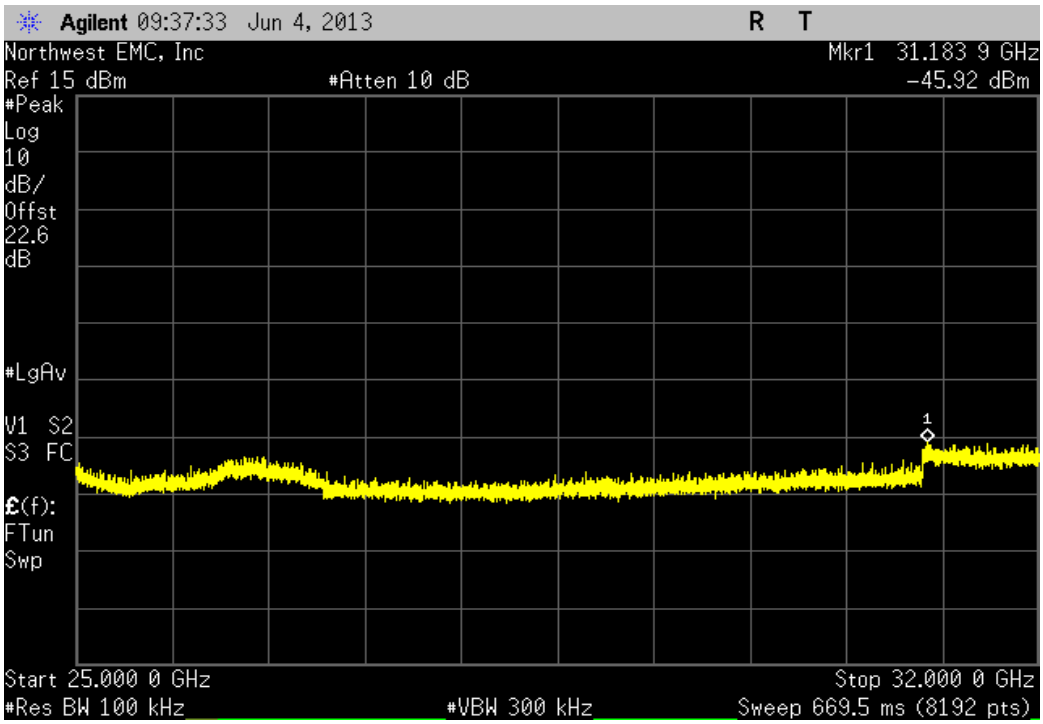
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz					
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-57.2 dBc	≤ -20 dBc	Pass



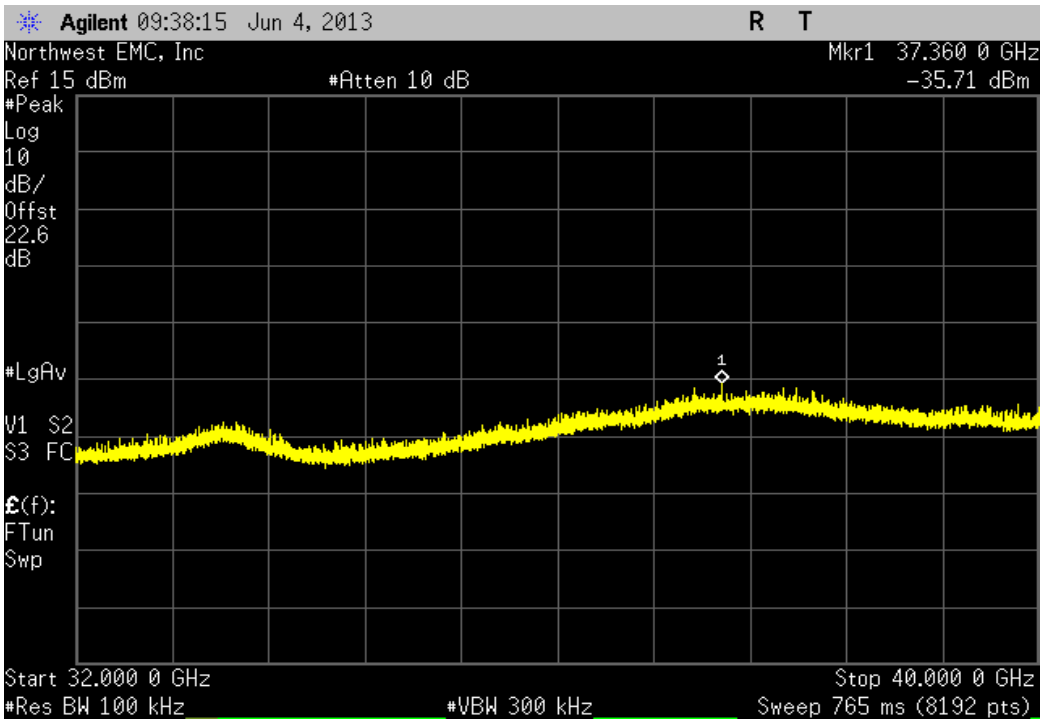
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-54.55 dBc	≤ -20 dBc	Pass



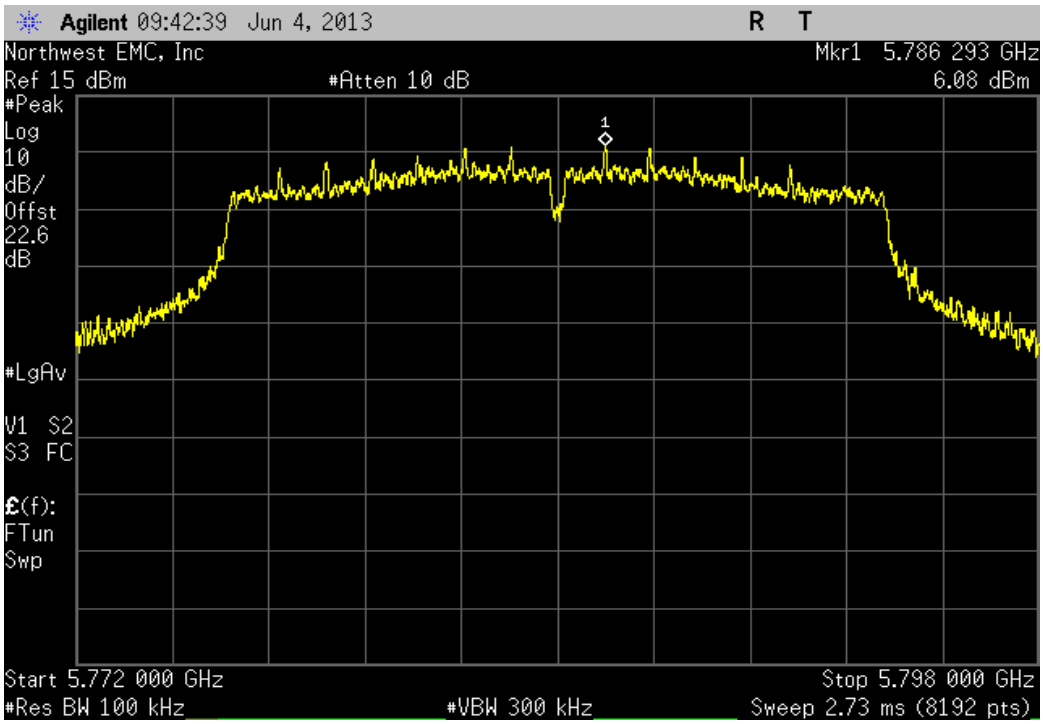
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-52.11 dBc	≤ -20 dBc	Pass



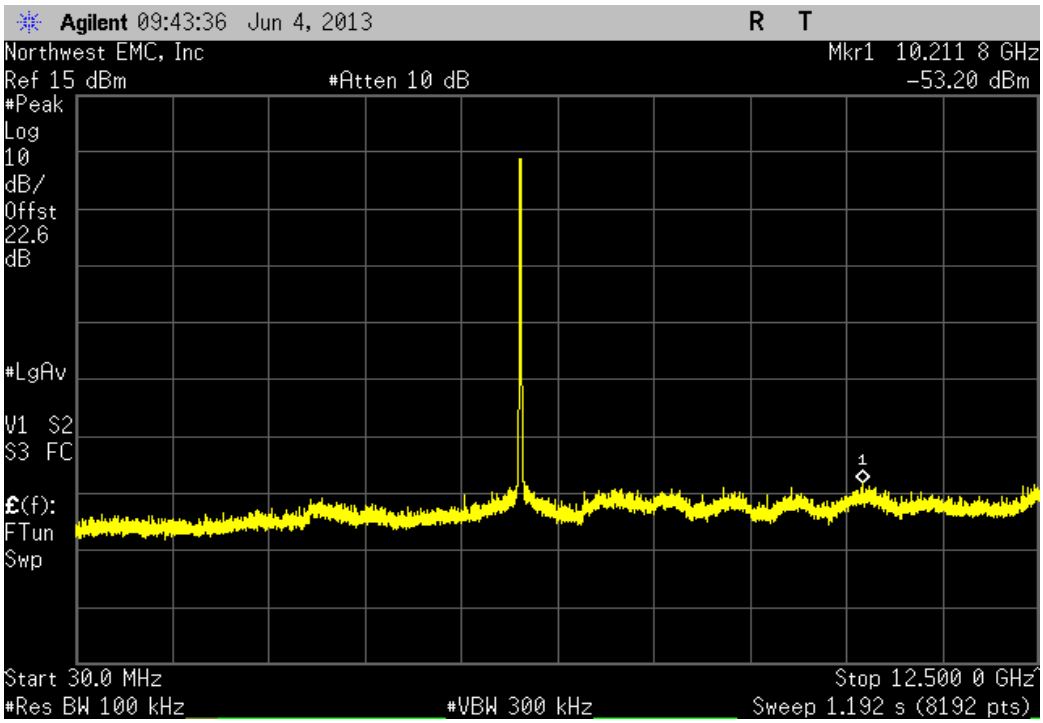
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-41.9 dBc	≤ -20 dBc	Pass



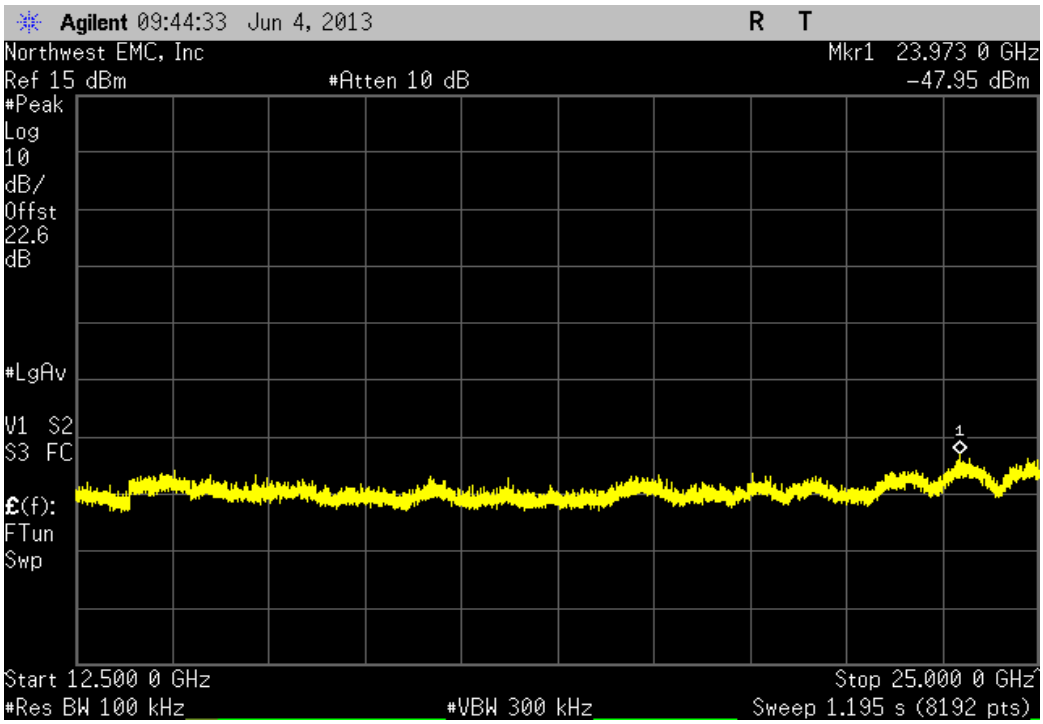
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz					
	Frequency Range		**Value**	**Limit**	**Result**
	Fundamental		N/A	N/A	N/A



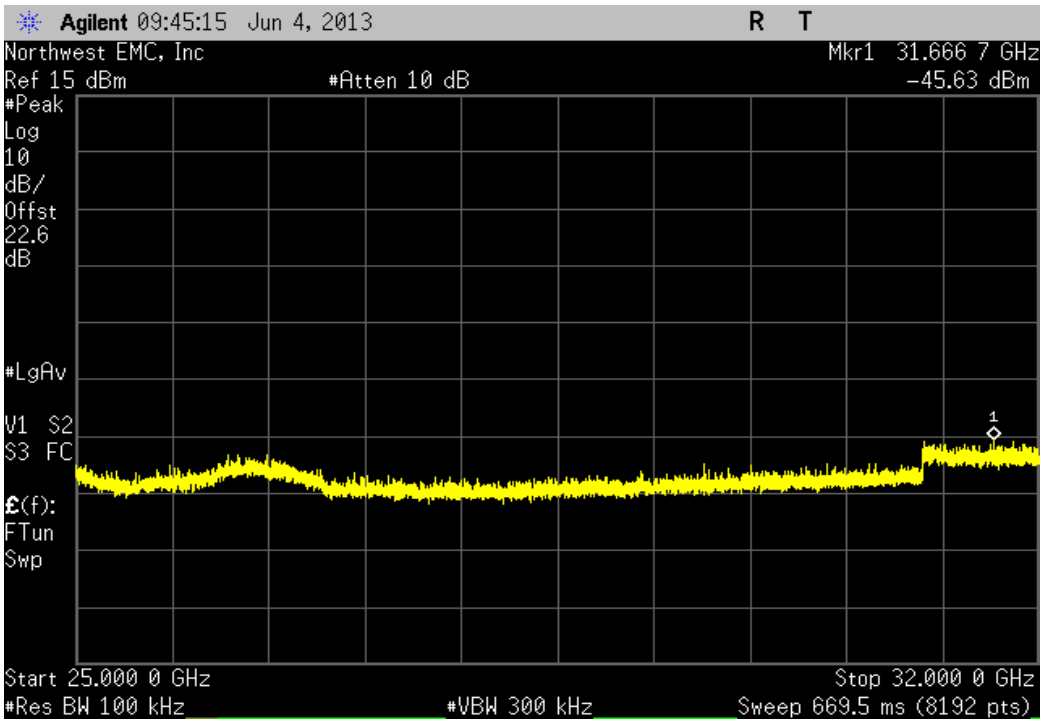
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-59.28 dBc	≤ -20 dBc	Pass



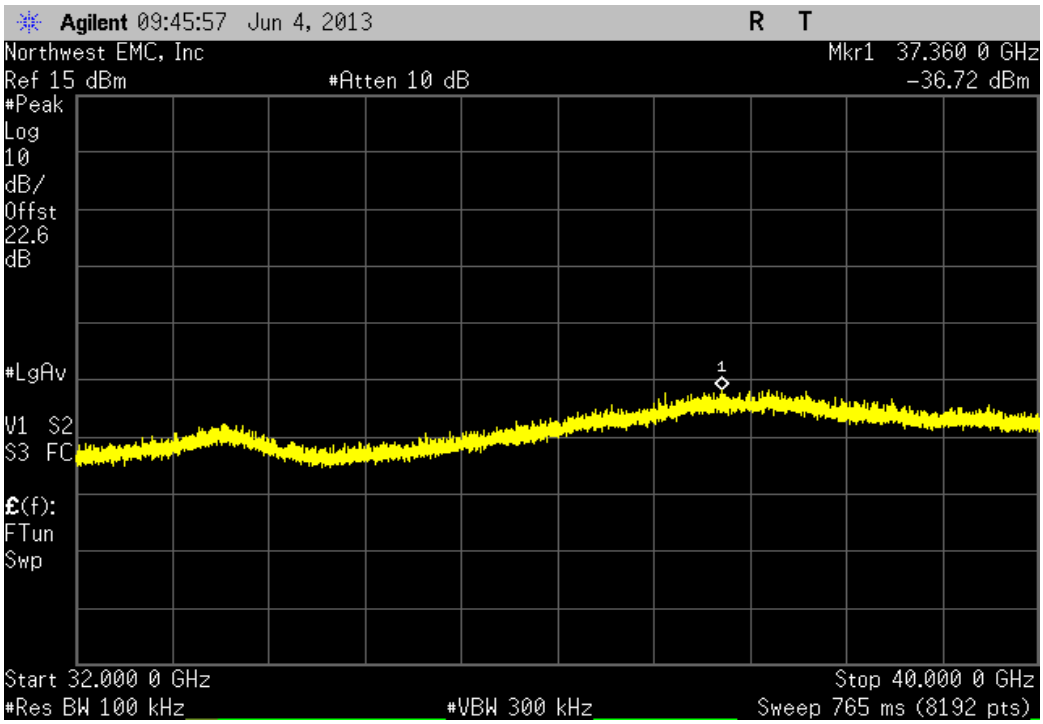
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-54.03 dBc	≤ -20 dBc	Pass



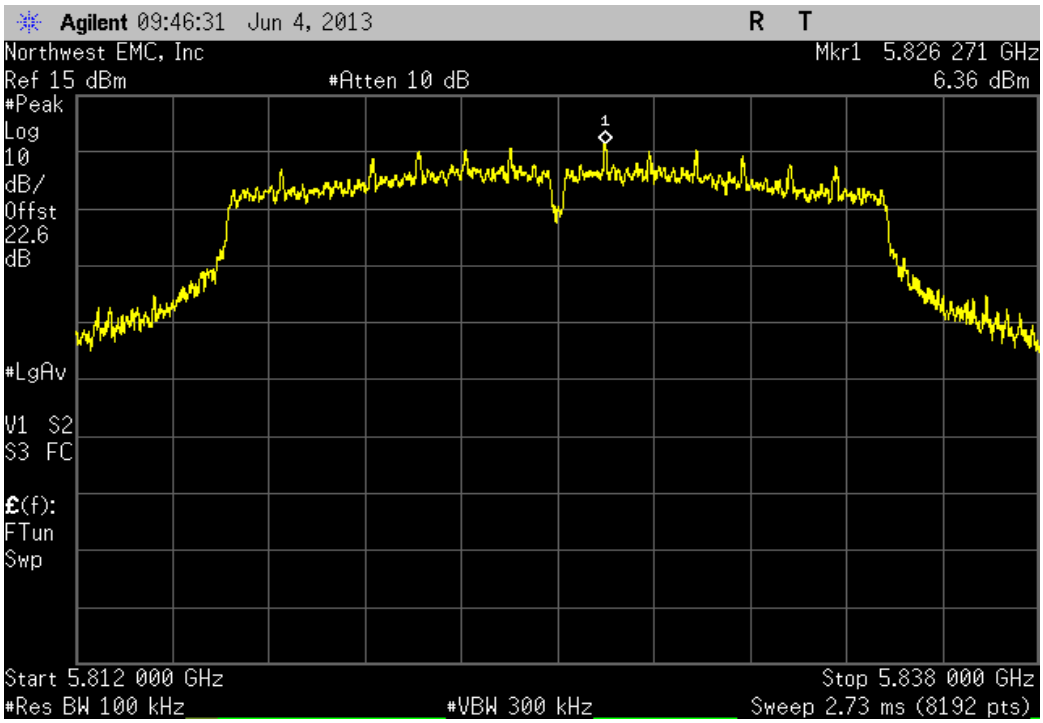
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-51.71 dBc	≤ -20 dBc	Pass



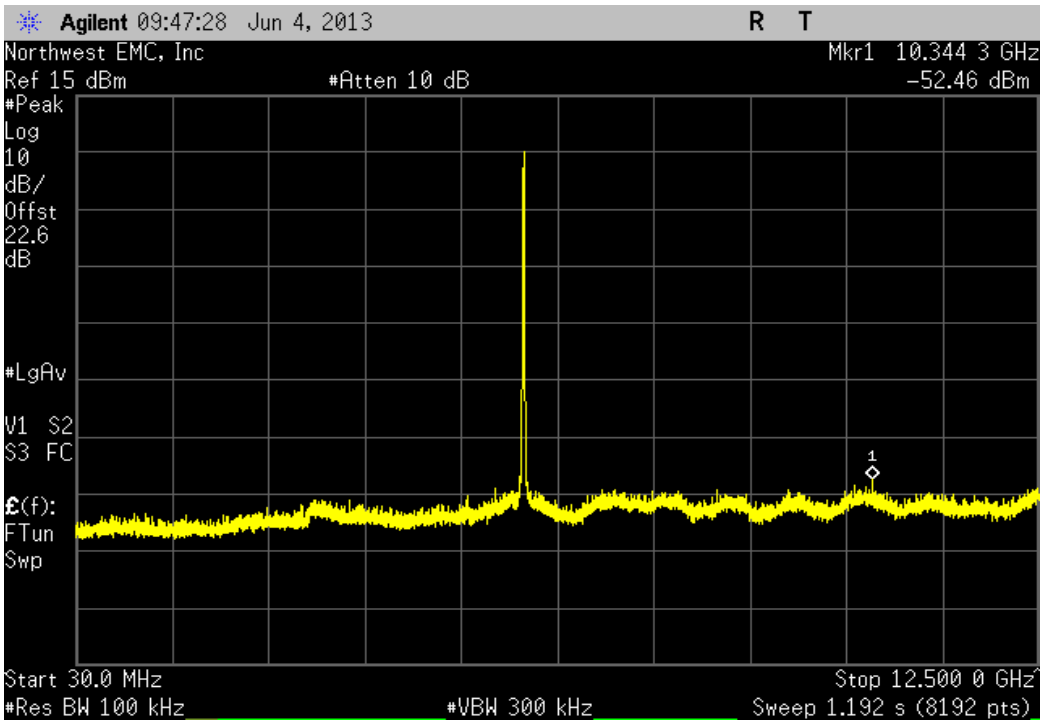
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-42.8 dBc	≤ -20 dBc	Pass



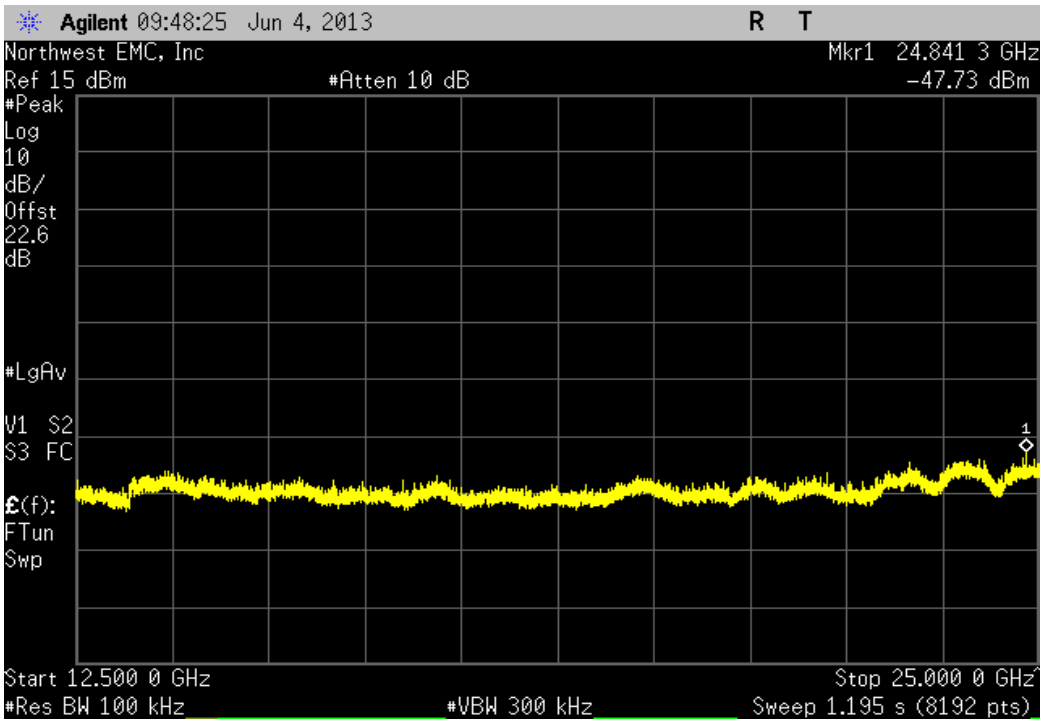
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



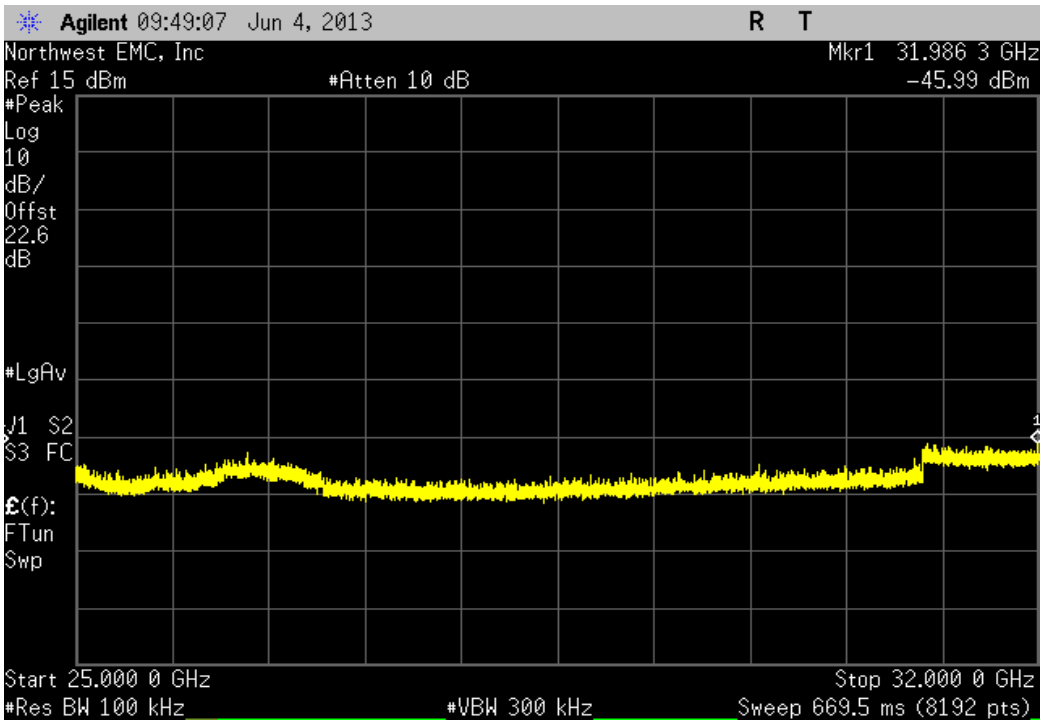
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz					
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-58.82 dBc	≤ -20 dBc	Pass



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		-54.09 dBc	≤ -20 dBc	Pass

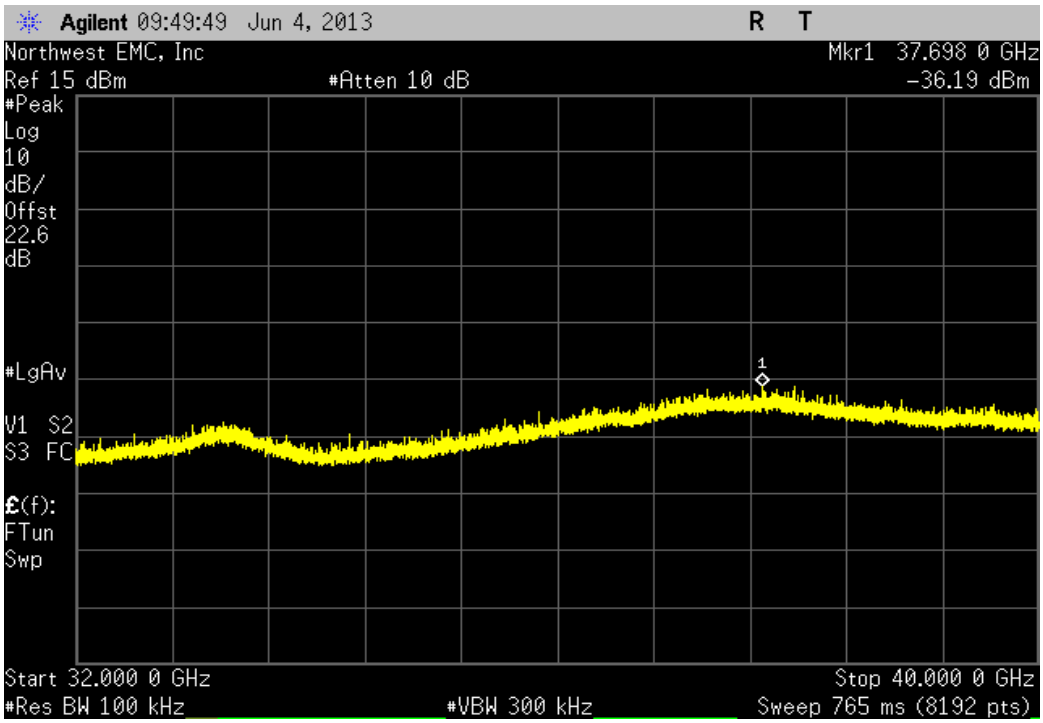


5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-52.35 dBc	≤ -20 dBc	Pass

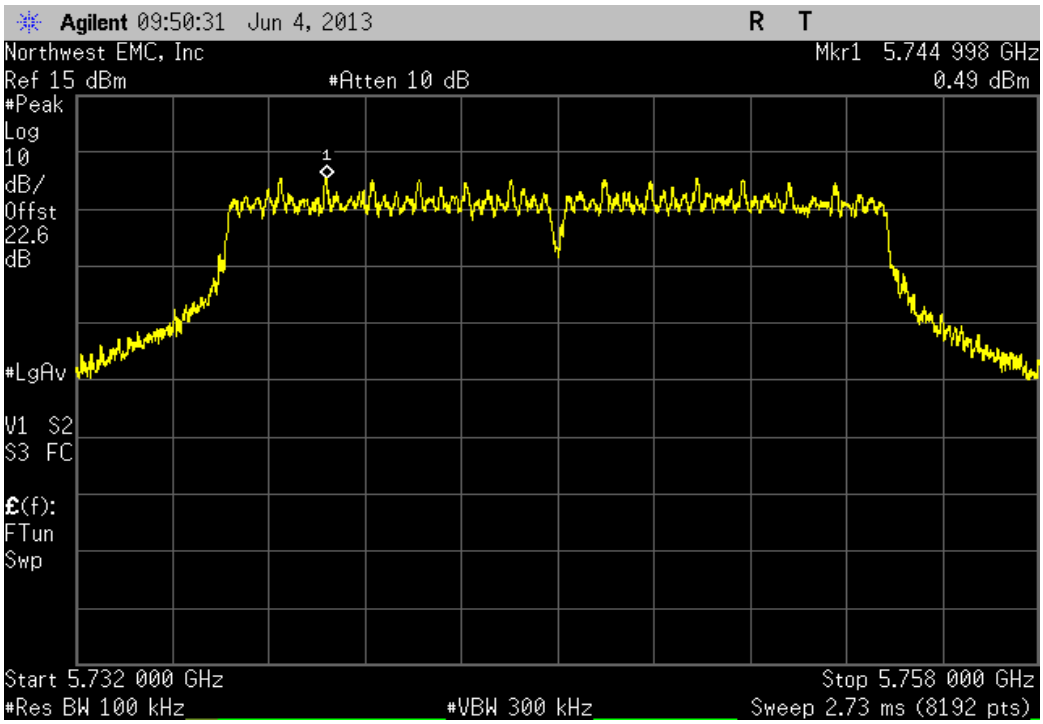


Spurious Conducted Emissions

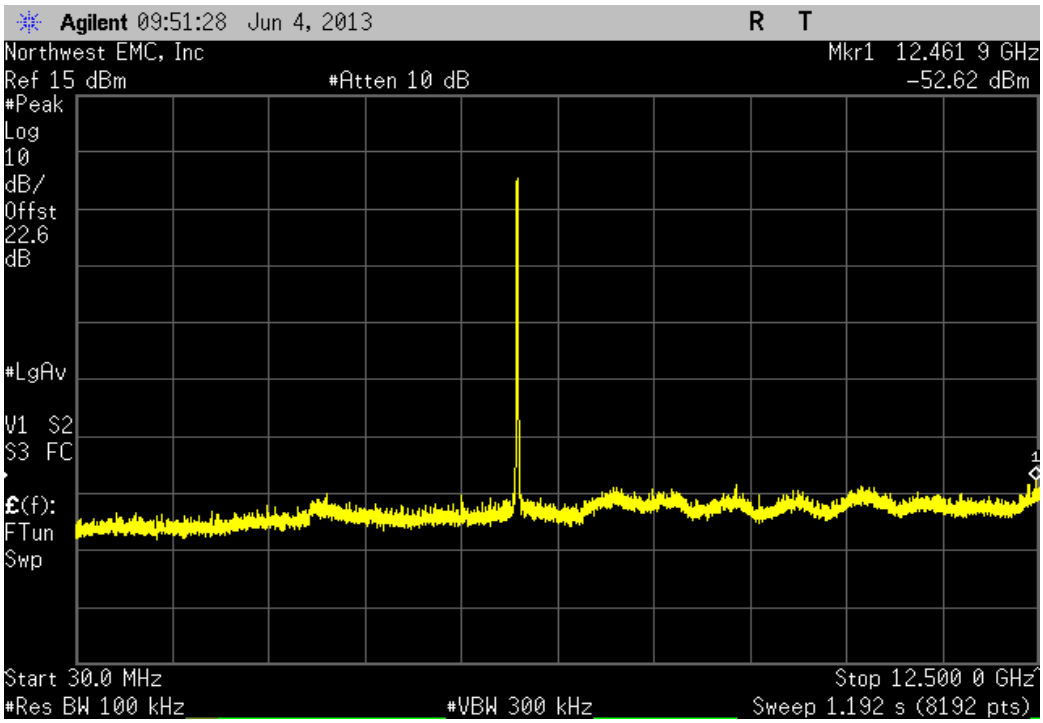
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz				
Frequency Range	**Value**	**Limit**	**Result**	
32 GHz - 40 GHz		-42.55 dBc	≤ -20 dBc	Pass



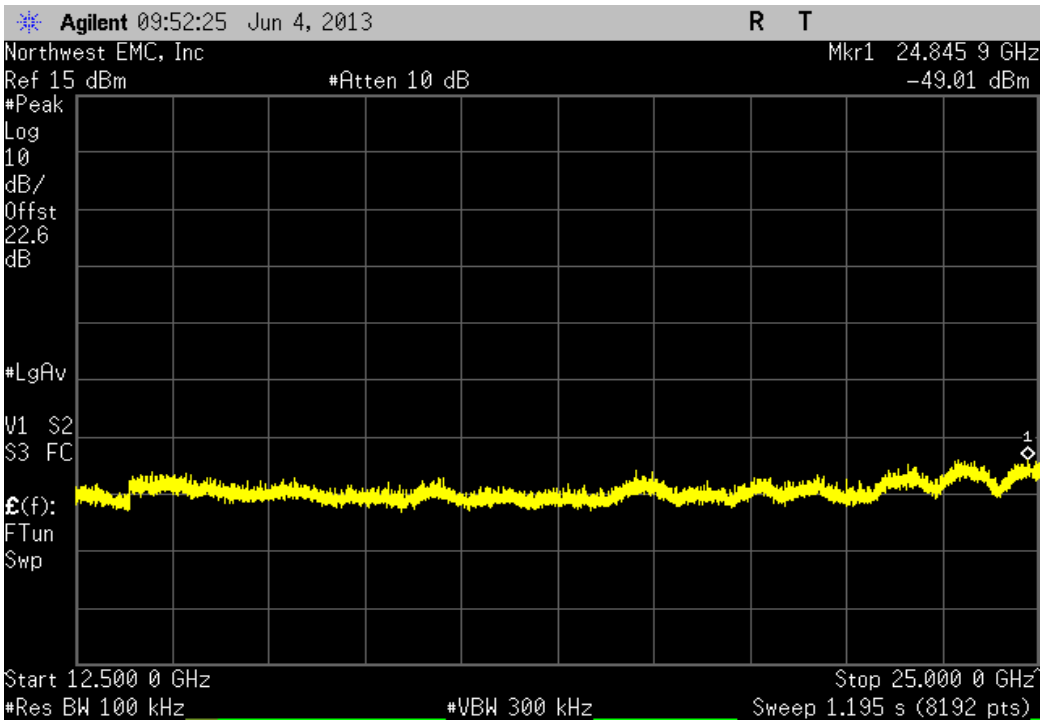
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



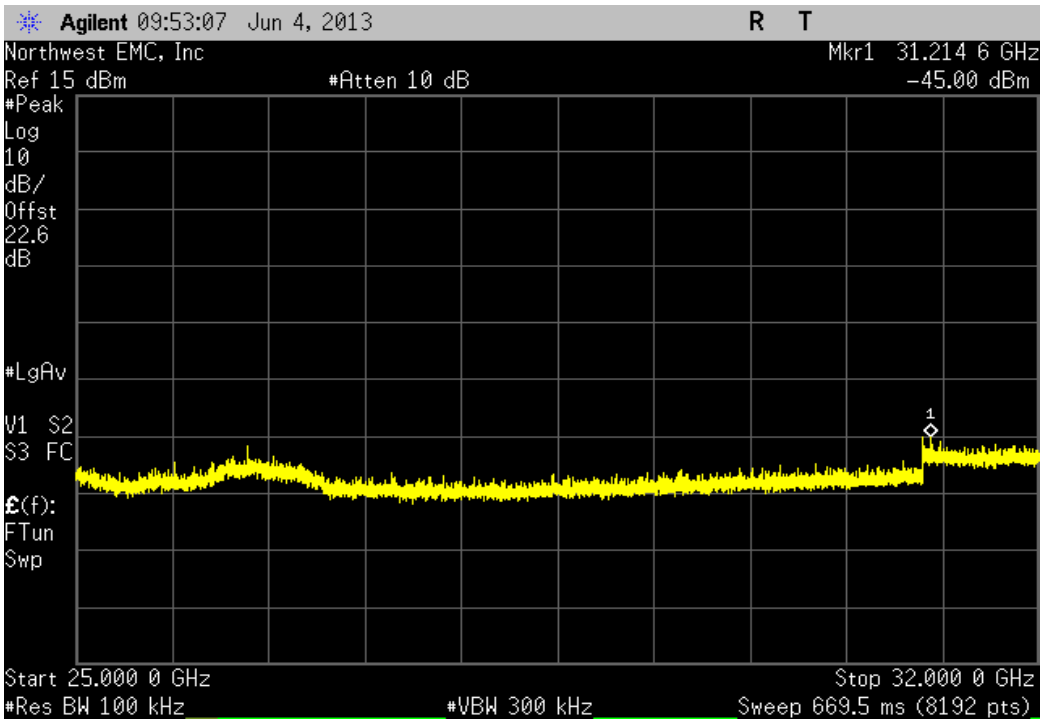
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-53.12 dBc	≤ -20 dBc	Pass



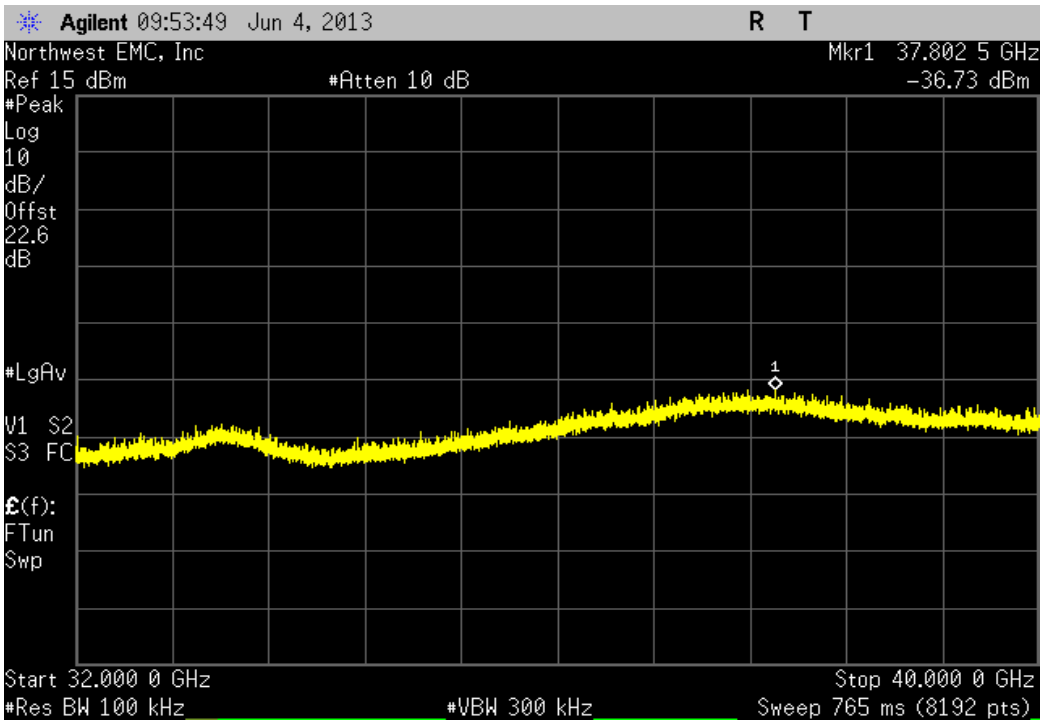
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-49.5 dBc	≤ -20 dBc	Pass



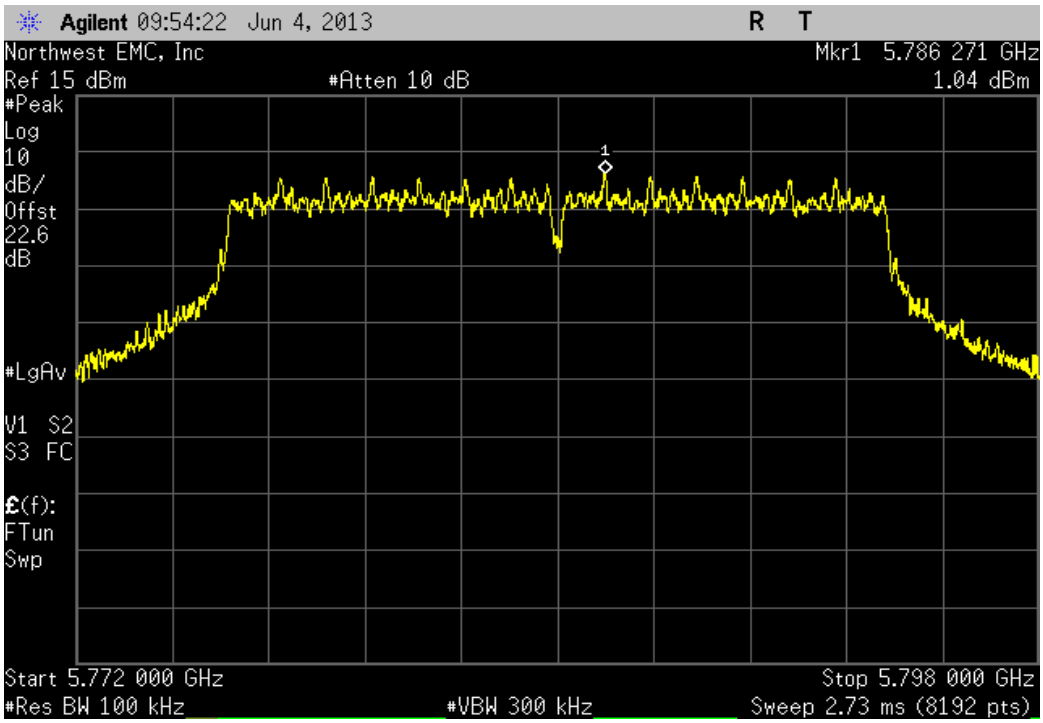
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-45.49 dBc	≤ -20 dBc	Pass



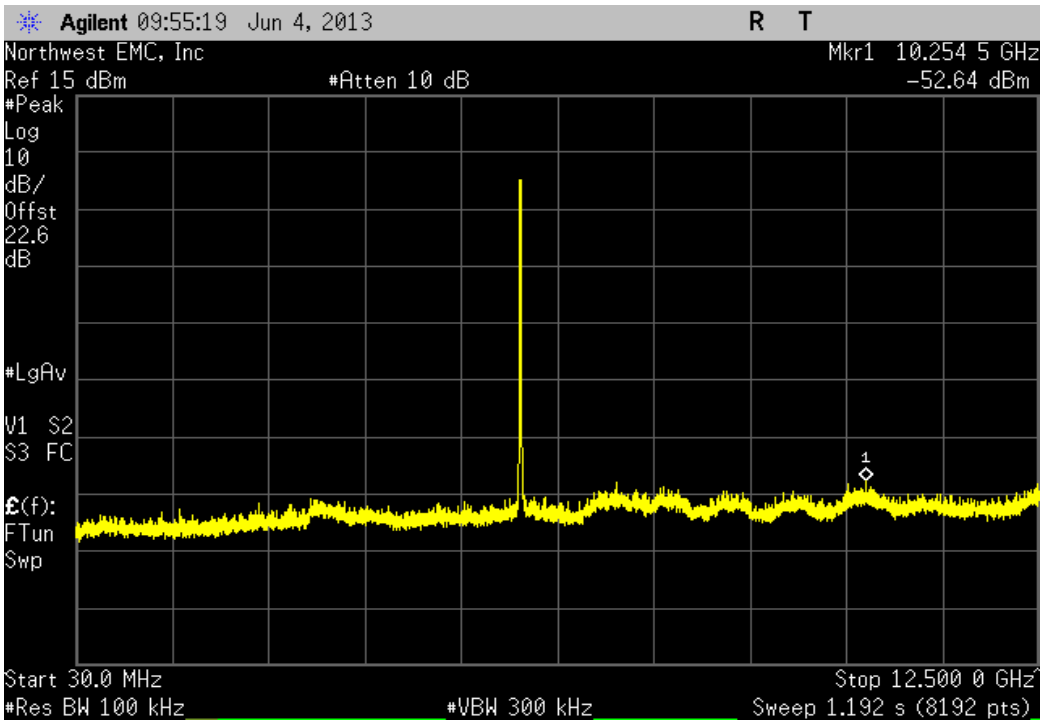
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-37.22 dBc	≤ -20 dBc	Pass



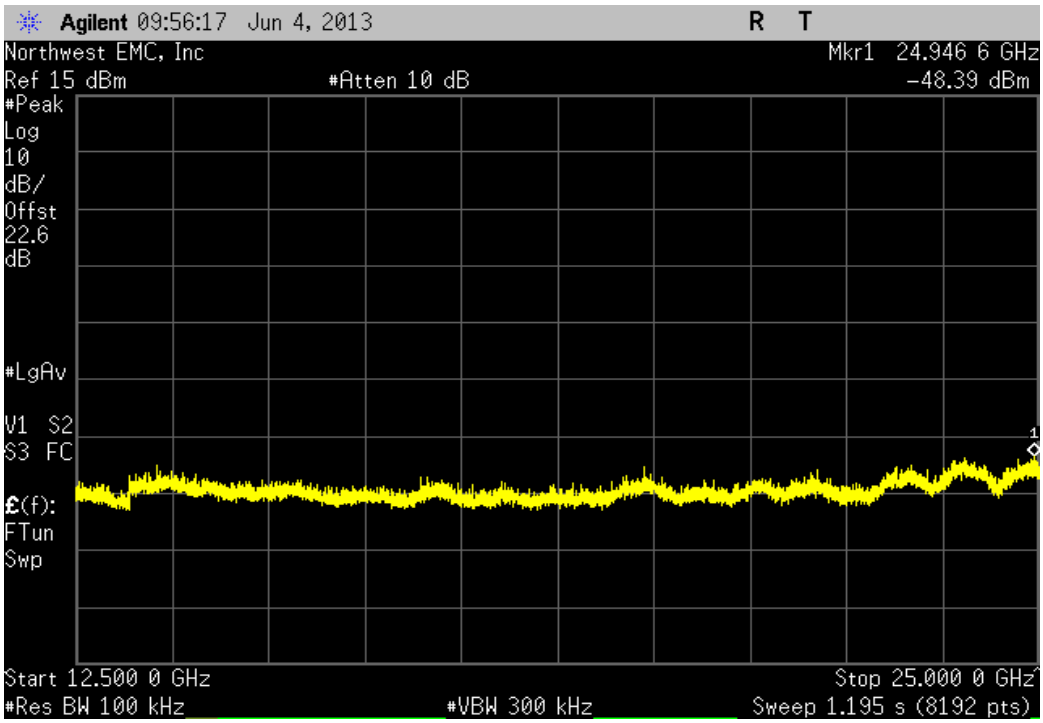
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Mid Channel 157, 5785 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



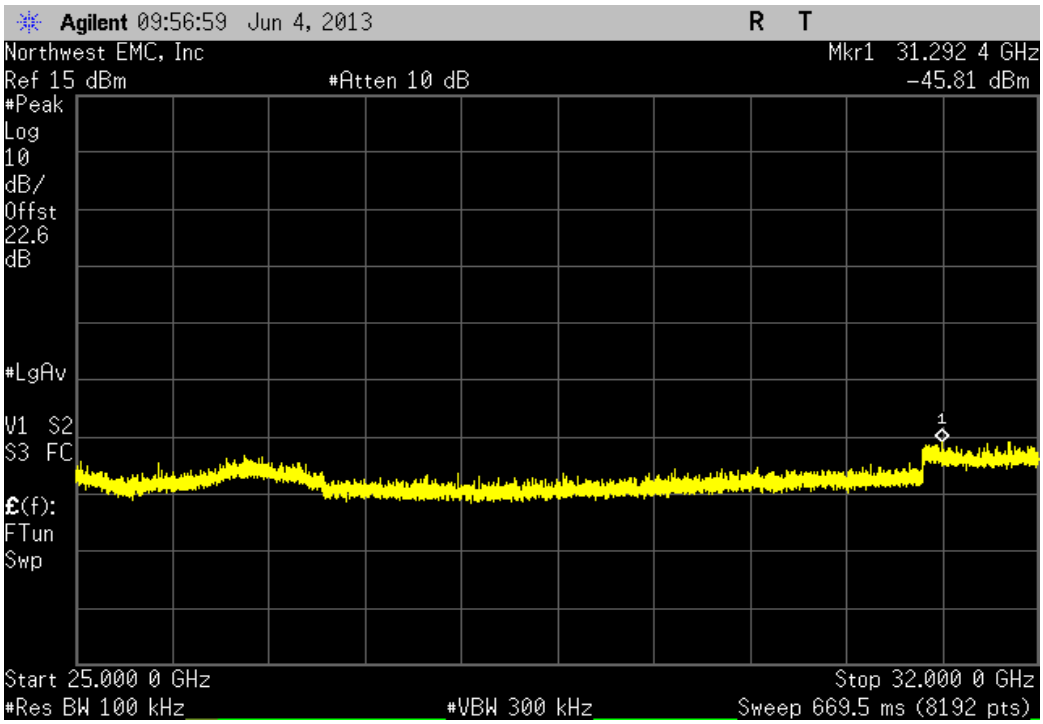
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Mid Channel 157, 5785 MHz					
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-53.68 dBc	≤ -20 dBc	Pass



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		-49.43 dBc	≤ -20 dBc	Pass

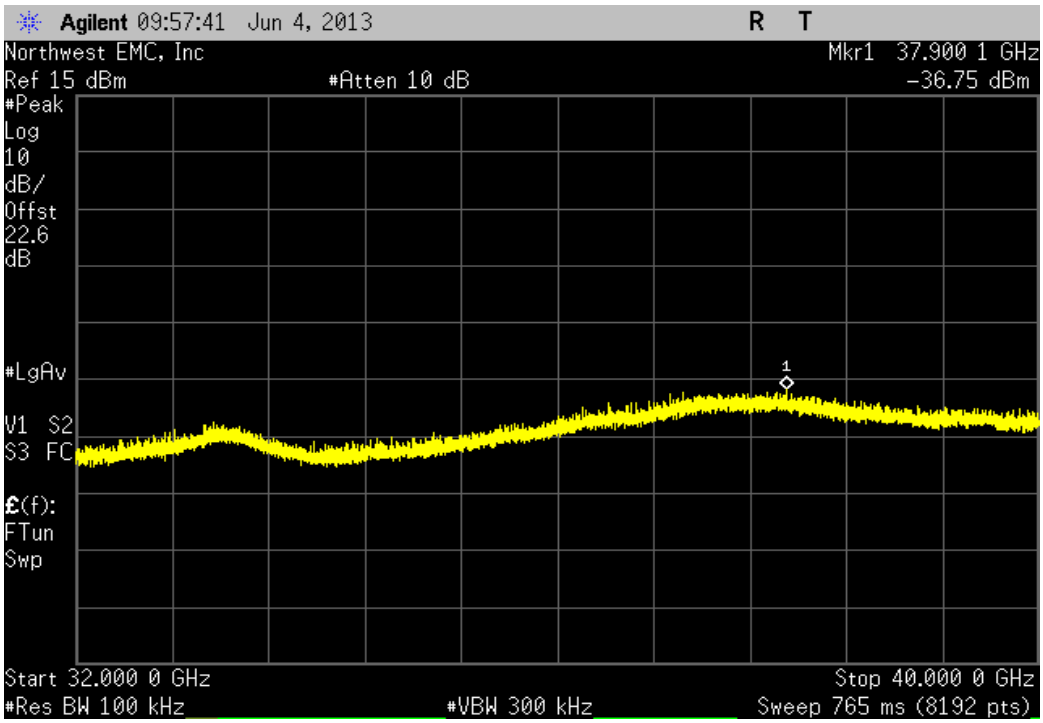


5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-46.86 dBc	≤ -20 dBc	Pass

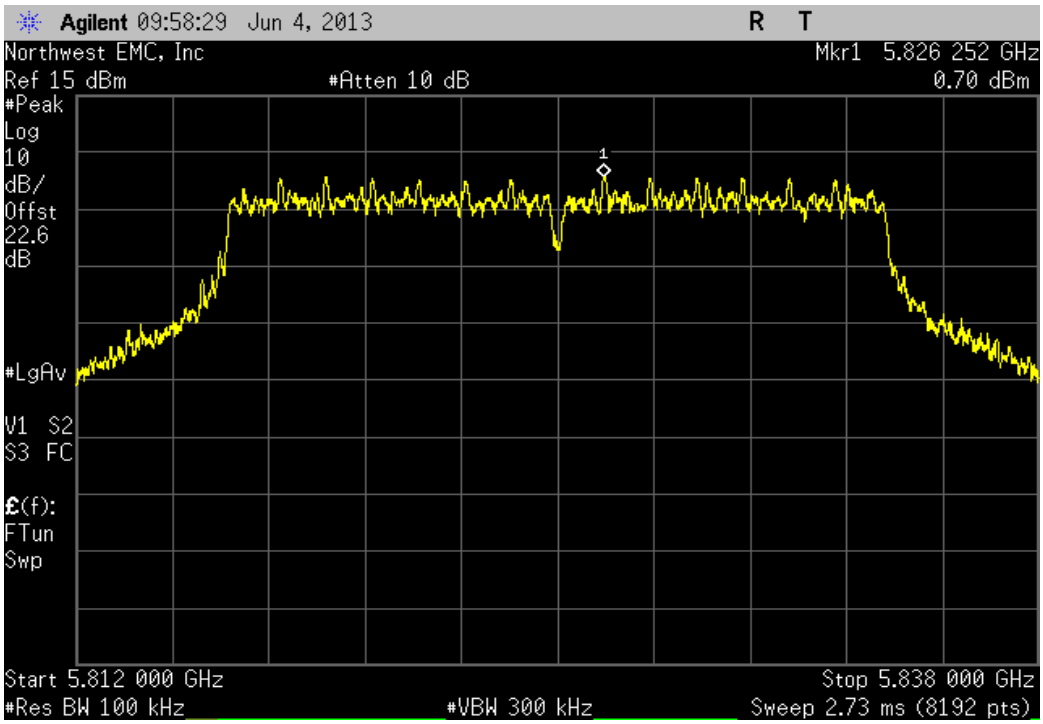


Spurious Conducted Emissions

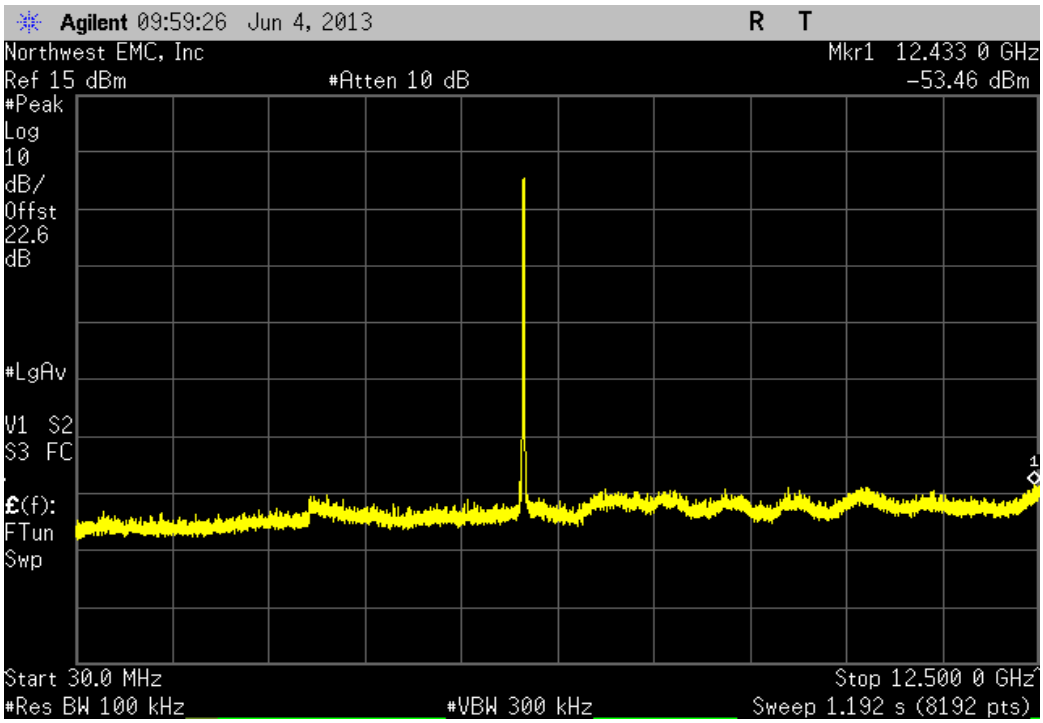
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Mid Channel 157, 5785 MHz				
Frequency Range		**Value**	**Limit**	**Result**
32 GHz - 40 GHz		-37.79 dBc	≤ -20 dBc	Pass



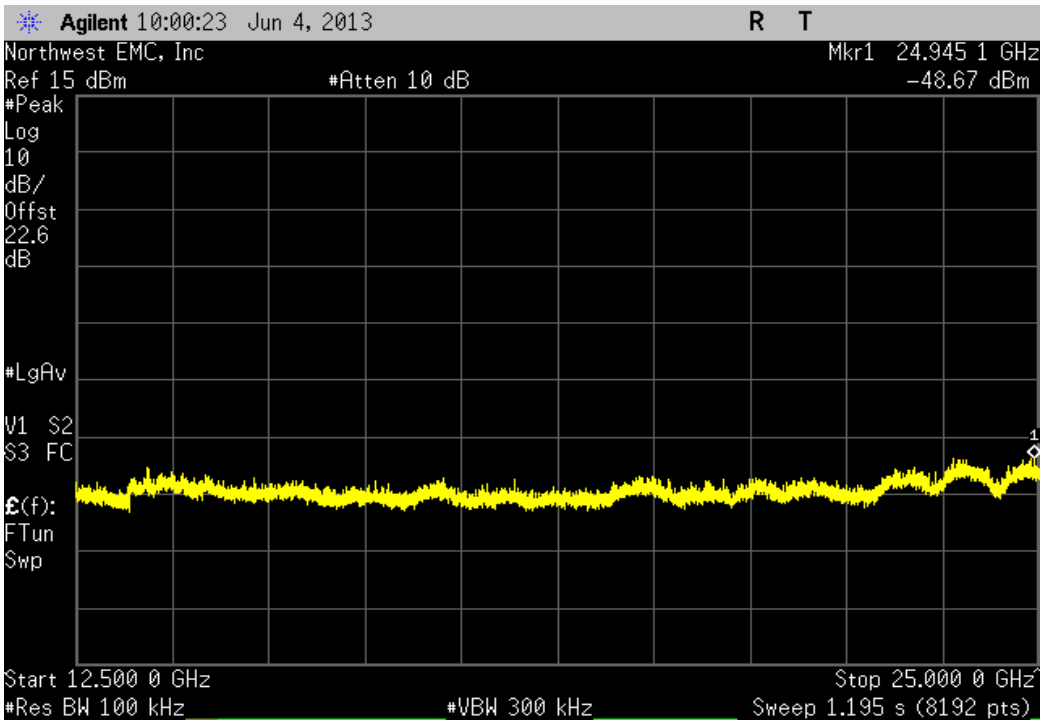
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz						
	Frequency Range			**Value**	**Limit**	**Result**
	Fundamental			N/A	N/A	N/A



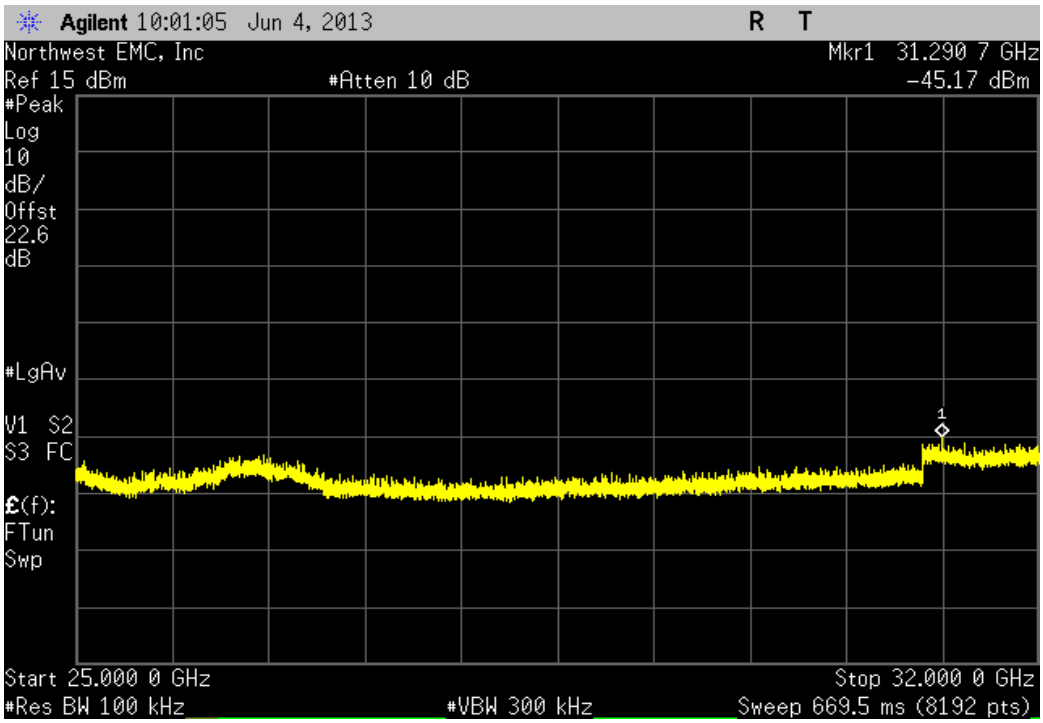
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
30 MHz - 12.5 GHz		-54.16 dBc	≤ -20 dBc	Pass



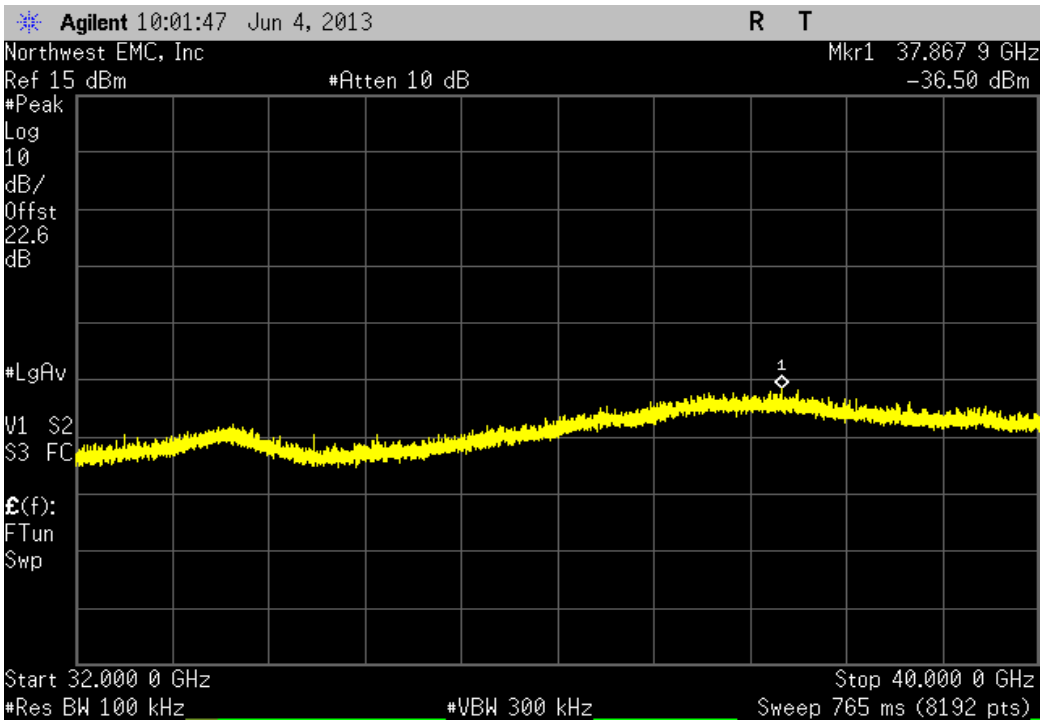
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
12.5 GHz - 25 GHz		-49.37 dBc	≤ -20 dBc	Pass



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz				
Frequency Range		**Value**	**Limit**	**Result**
25 GHz - 32 GHz		-45.87 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		-37.2 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
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	4/12/2013	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	10/5/2012	12
Signal Generator MXG	Agilent	N5183A	TIK	6/7/2012	36
Spectrum Analyzer	Agilent	E4440A	AAX	5/15/2012	24

TEST DESCRIPTION

The maximum 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 D01 DTS Measurement Section 5.3.1, the spectrum analyzer was used as follows:

- RBW = 100 kHz
- VBW = 300 kHz
- Detector = Peak (to match method used for power measurement)
- Trace = Max hold

The observed power level is then scaled to an equivalent value in 3 kHz by adding a Bandwidth Correction Factor (BWCF) where:

BWCF = 10*LOG (3 kHz / 100 kHz) = -15.2 dB

Power Spectral Density

EUT:	37x Torpedo + Wireless SOM -31			**Work Order:**	LGPD0096
Serial Number:	1413M00359			**Date:**	06/03/13
Customer:	Logic PD, Inc.			**Temperature:**	23.1°C
Attendees:	None			**Humidity:**	39%
Project:	None			**Barometric Pres.:**	1015.6
Tested by:	Trevor Buls	**Power:**	110VAC/60Hz	**Job Site:**	MN08

TEST SPECIFICATIONS	Test Method
FCC 15.247:2013	ANSI C63.10:2009

COMMENTS

None

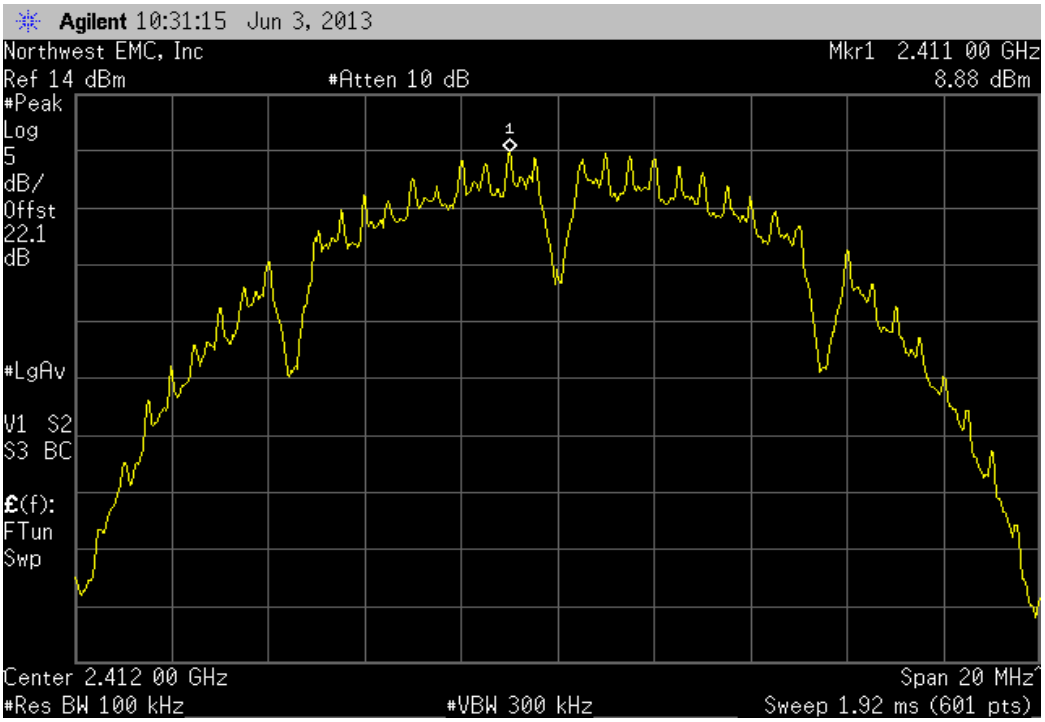
DEVIATIONS FROM TEST STANDARD

None

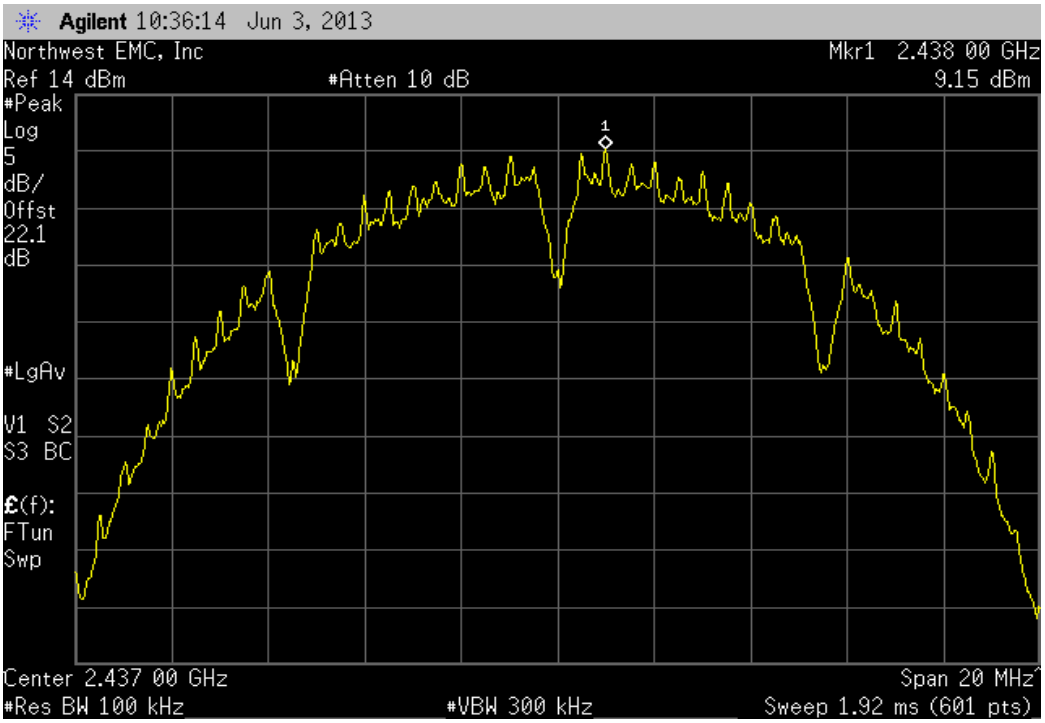
Configuration #	1	Signature	Trevor Buls

	Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
2400 MHz - 2483.5 MHz Band					
802.11(b) 1 Mbps					
Low Channel 1, 2412 MHz	8.879	-15.2	-6.321	8	Pass
Mid Channel 6, 2437 MHz	9.151	-15.2	-6.049	8	Pass
High Channel 11, 2462 MHz	9.336	-15.2	-5.864	8	Pass
802.11(b) 11 Mbps					
Low Channel 1, 2412 MHz	8.234	-15.2	-6.966	8	Pass
Mid Channel 6, 2437 MHz	8.026	-15.2	-7.174	8	Pass
High Channel 11, 2462 MHz	8.553	-15.2	-6.647	8	Pass
802.11(g) 6 Mbps					
Low Channel 1, 2412 MHz	3.931	-15.2	-11.269	8	Pass
Mid Channel 6, 2437 MHz	5.769	-15.2	-9.431	8	Pass
High Channel 11, 2462 MHz	0.977	-15.2	-14.223	8	Pass
802.11(g) 36 Mbps					
Low Channel 1, 2412 MHz	-0.097	-15.2	-15.297	8	Pass
Mid Channel 6, 2437 MHz	0.659	-15.2	-14.541	8	Pass
High Channel 11, 2462 MHz	0.865	-15.2	-14.335	8	Pass
802.11(g) 54 Mbps					
Low Channel 1, 2412 MHz	1.22	-15.2	-13.98	8	Pass
Mid Channel 6, 2437 MHz	1.103	-15.2	-14.097	8	Pass
High Channel 11, 2462 MHz	1.998	-15.2	-13.202	8	Pass
802.11(n) MCS0					
Low Channel 1, 2412 MHz	3.564	-15.2	-11.636	8	Pass
Mid Channel 6, 2437 MHz	5.732	-15.2	-9.468	8	Pass
High Channel 11, 2462 MHz	3.389	-15.2	-11.811	8	Pass
802.11(n) MCS7					
Low Channel 1, 2412 MHz	0.858	-15.2	-14.342	8	Pass
Mid Channel 6, 2437 MHz	1.014	-15.2	-14.186	8	Pass
High Channel 11, 2462 MHz	1.192	-15.2	-14.008	8	Pass
5725 MHz - 5850 MHz Band					
802.11(a) 6 Mbps					
Low Channel 149, 5745 MHz	3.546	-15.2	-11.654	8	Pass
Mid Channel 157, 5785 MHz	3.485	-15.2	-11.715	8	Pass
High Channel 165, 5825 MHz	3.535	-15.2	-11.665	8	Pass
802.11(a) 36 Mbps					
Low Channel 149, 5745 MHz	1.149	-15.2	-14.051	8	Pass
Mid Channel 157, 5785 MHz	2.032	-15.2	-13.168	8	Pass
High Channel 165, 5825 MHz	1.722	-15.2	-13.478	8	Pass
802.11(a) 54 Mbps					
Low Channel 149, 5745 MHz	0.463	-15.2	-14.737	8	Pass
Mid Channel 157, 5785 MHz	1.509	-15.2	-13.691	8	Pass
High Channel 165, 5825 MHz	1.398	-15.2	-13.802	8	Pass
802.11(n) MCS0 - UNII					
Low Channel 149, 5745 MHz	3.65	-15.2	-11.55	8	Pass
Mid Channel 157, 5785 MHz	3.093	-15.2	-12.107	8	Pass
High Channel 165, 5825 MHz	3.732	-15.2	-11.468	8	Pass
802.11(n) MCS7 - UNII					
Low Channel 149, 5745 MHz	-0.337	-15.2	-15.537	8	Pass
Mid Channel 157, 5785 MHz	-0.133	-15.2	-15.333	8	Pass
High Channel 165, 5825 MHz	-0.245	-15.2	-15.445	8	Pass

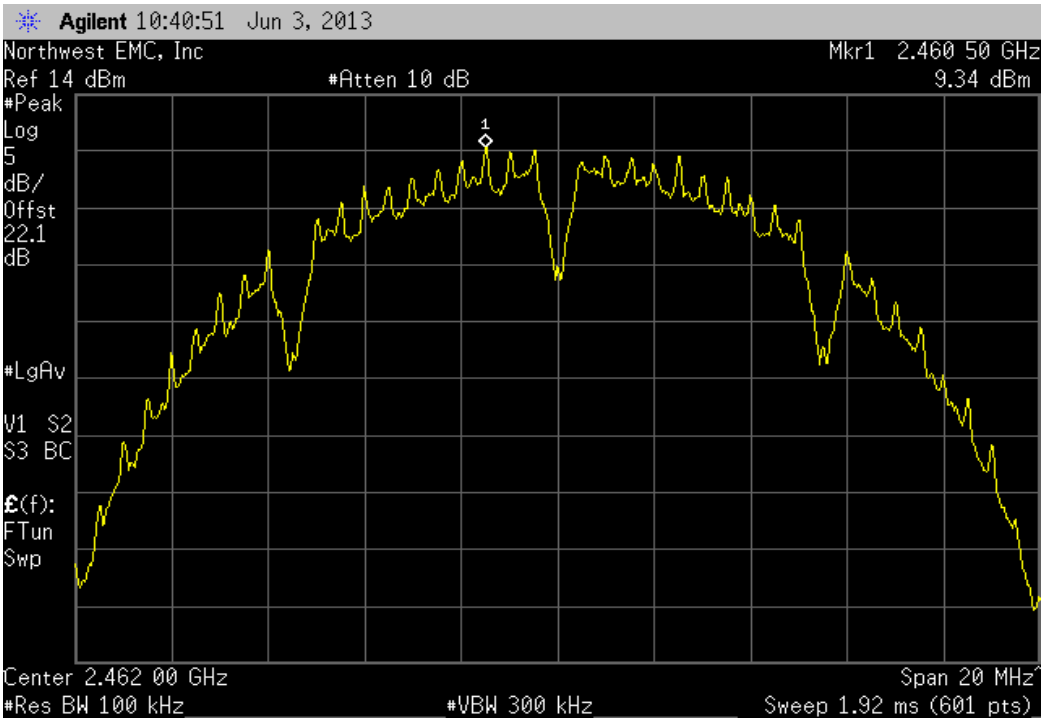
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		8.879	-15.2	-6.321	8	Pass



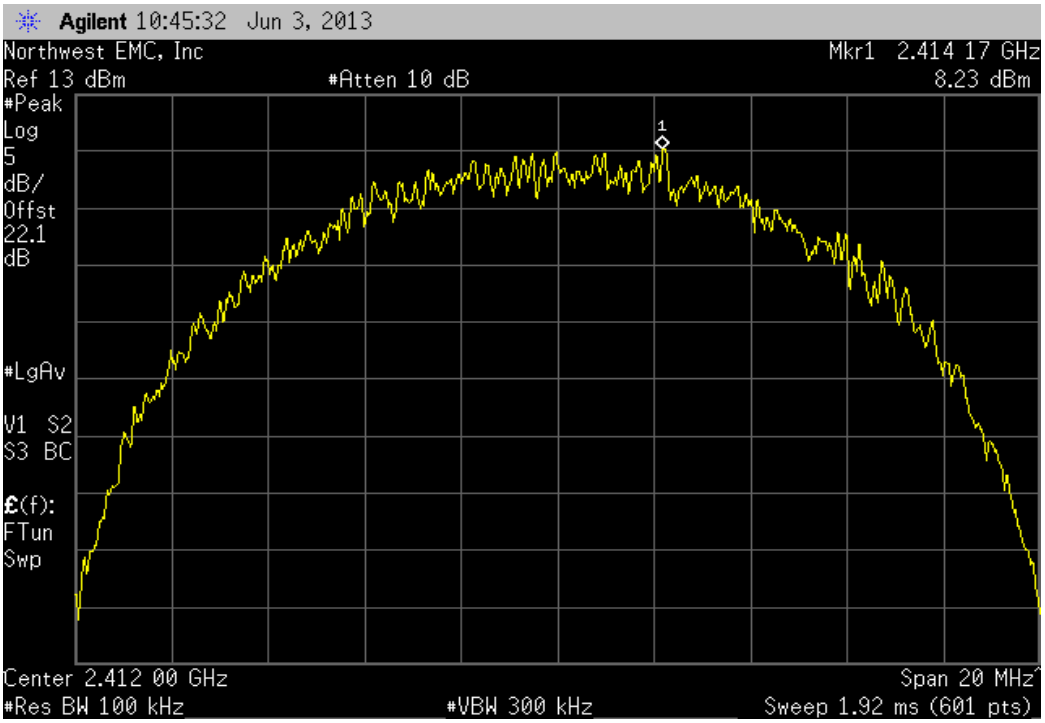
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		9.151	-15.2	-6.049	8	Pass



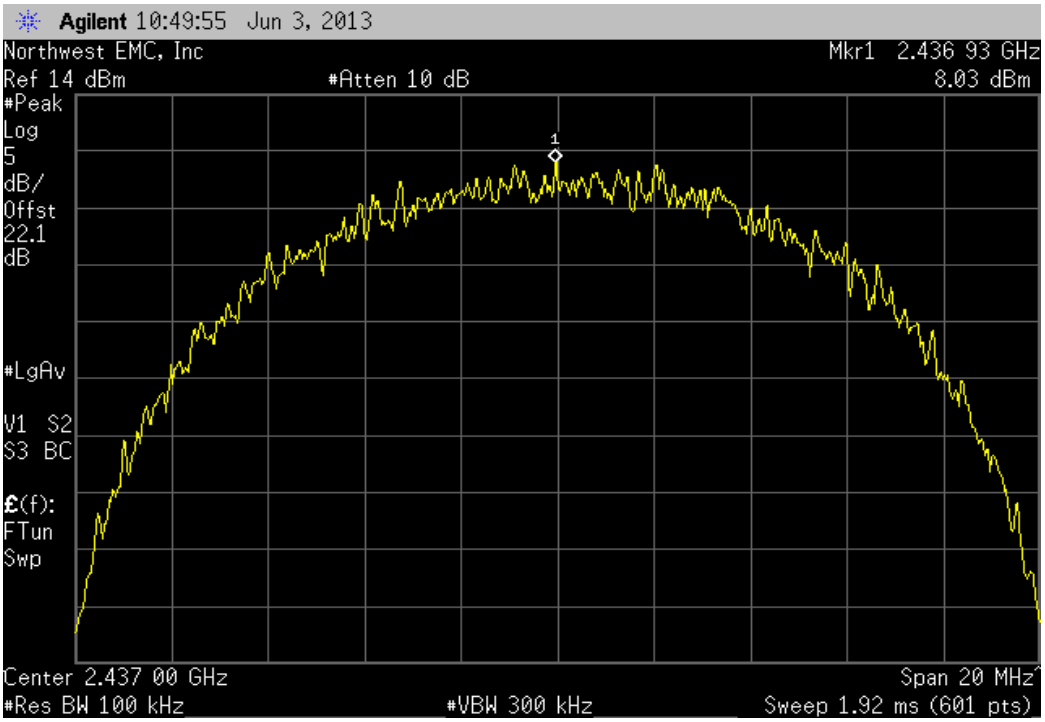
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		9.336	-15.2	-5.864	8	Pass



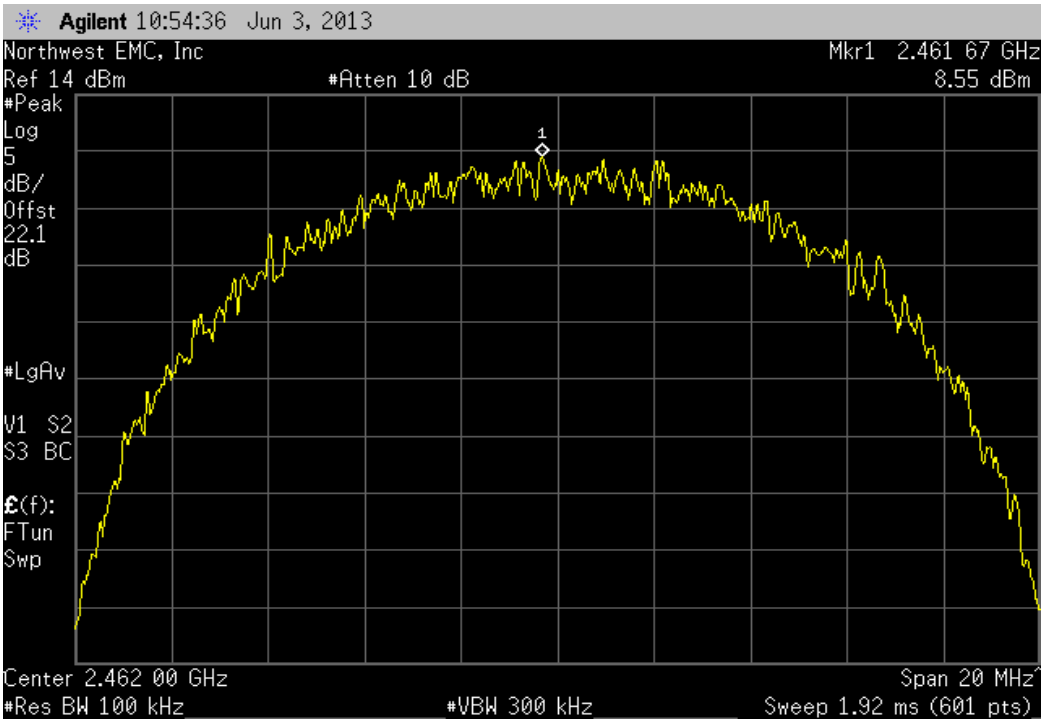
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		8.234	-15.2	-6.966	8	Pass



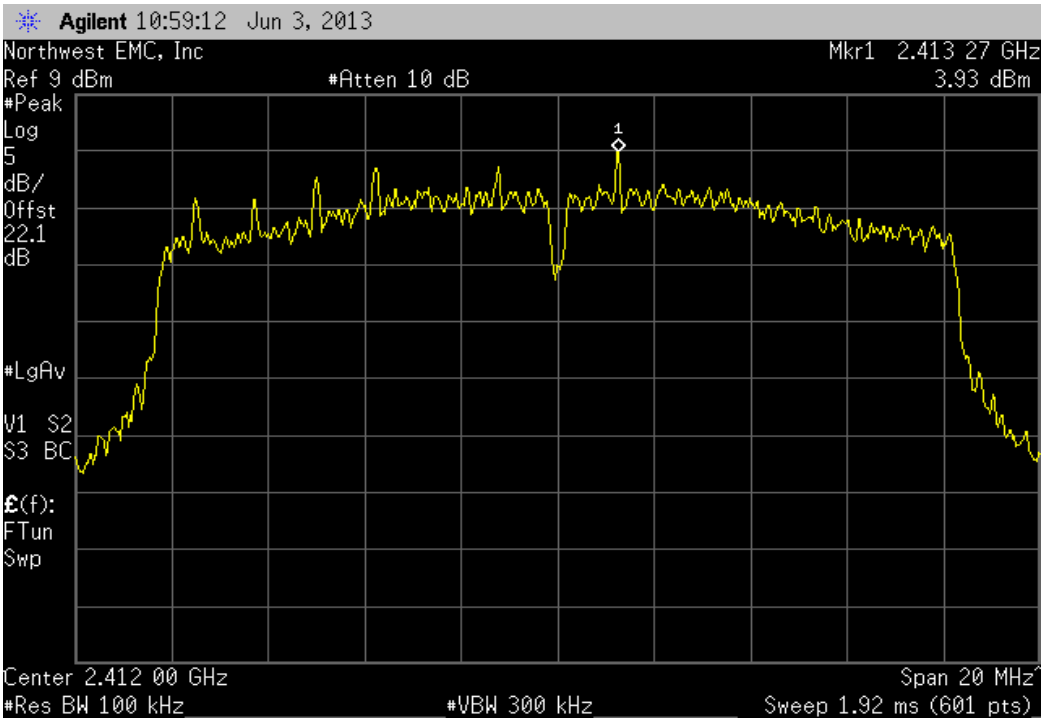
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		8.026	-15.2	-7.174	8	Pass



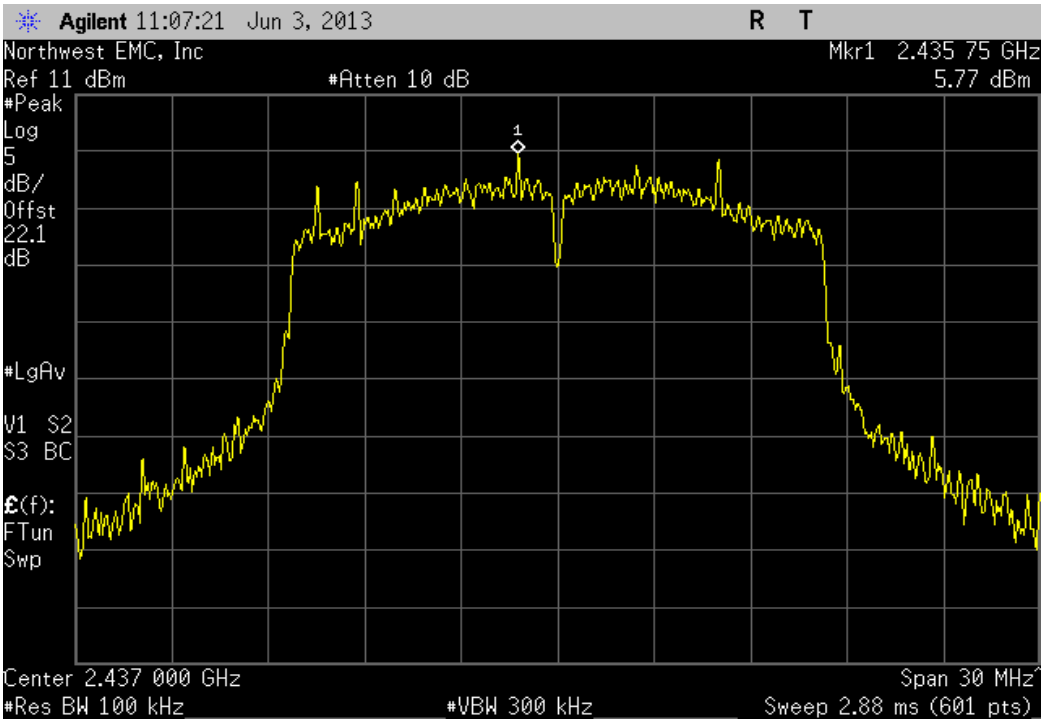
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		8.553	-15.2	-6.647	8	Pass



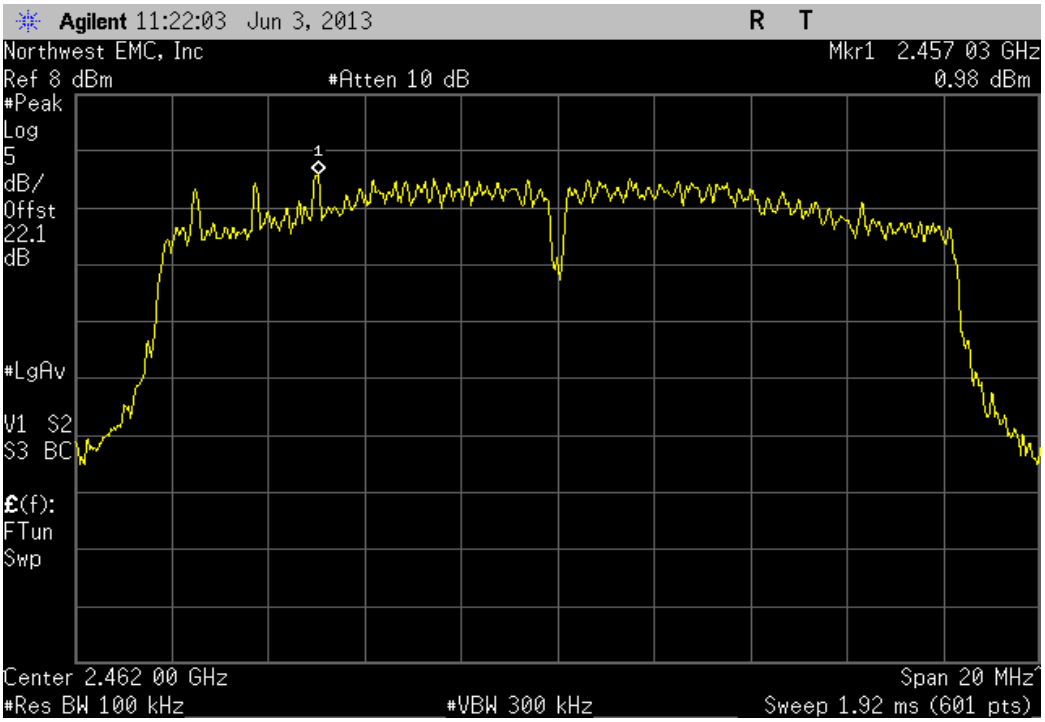
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		3.931	-15.2	-11.269	8	Pass



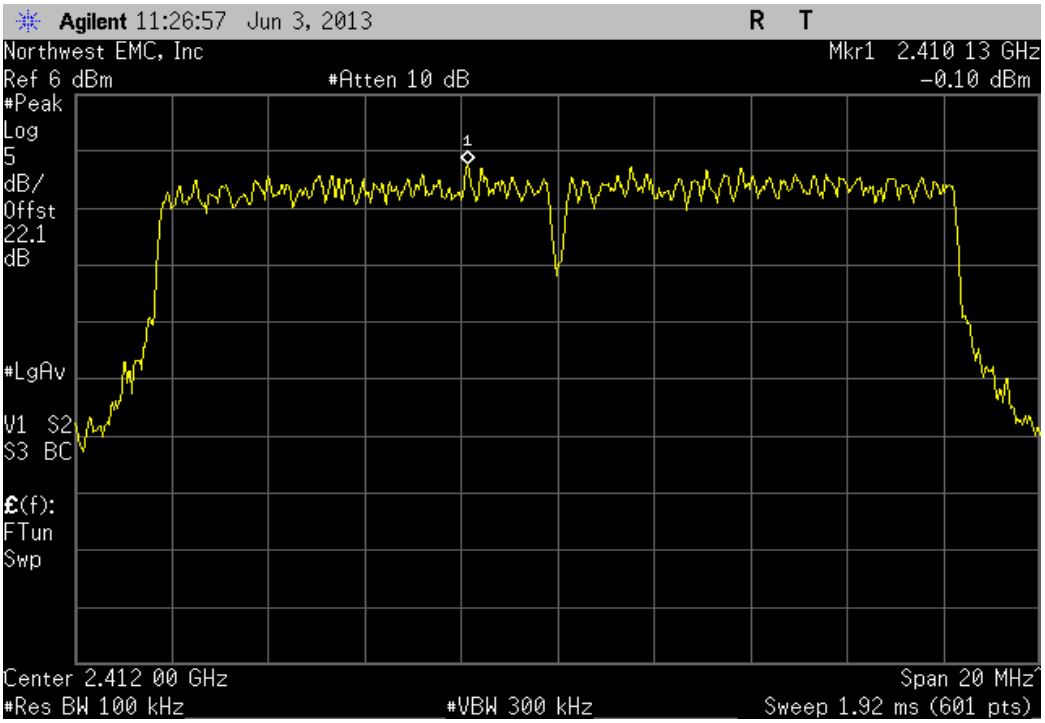
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		5.769	-15.2	-9.431	8	Pass



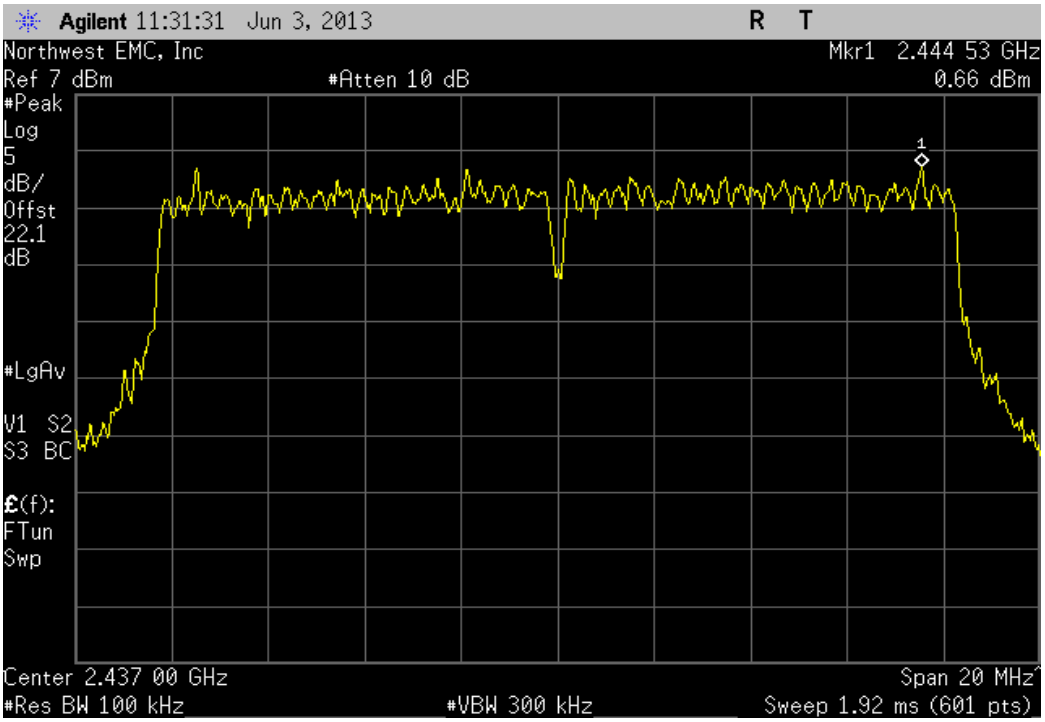
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		0.977	-15.2	-14.223	8	Pass



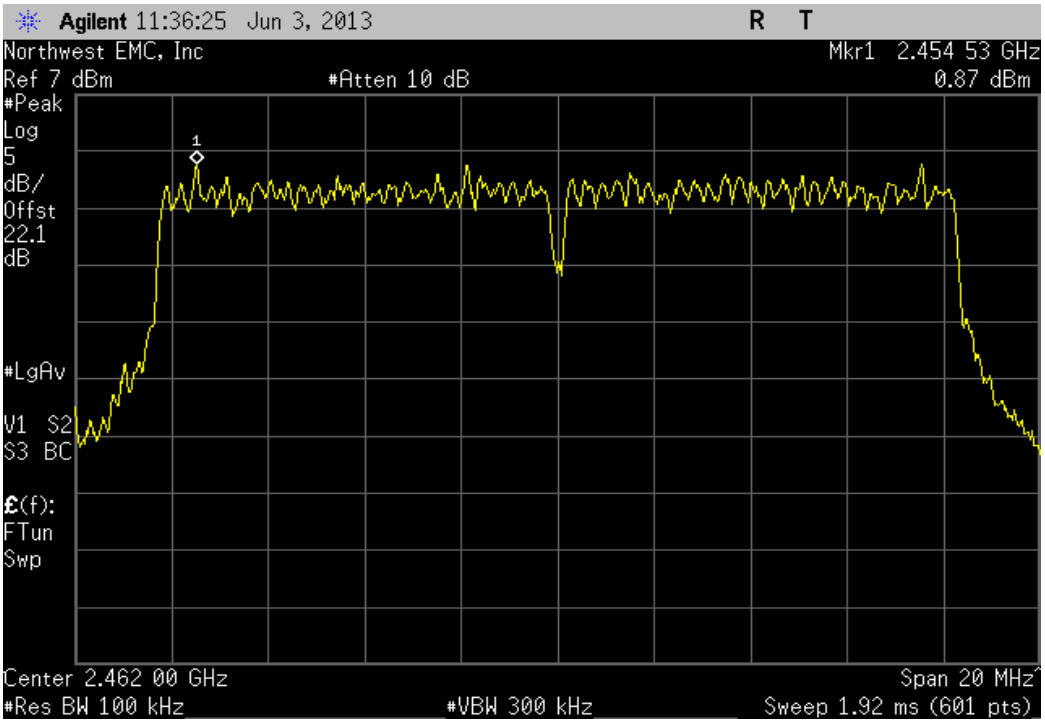
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		-0.097	-15.2	-15.297	8	Pass



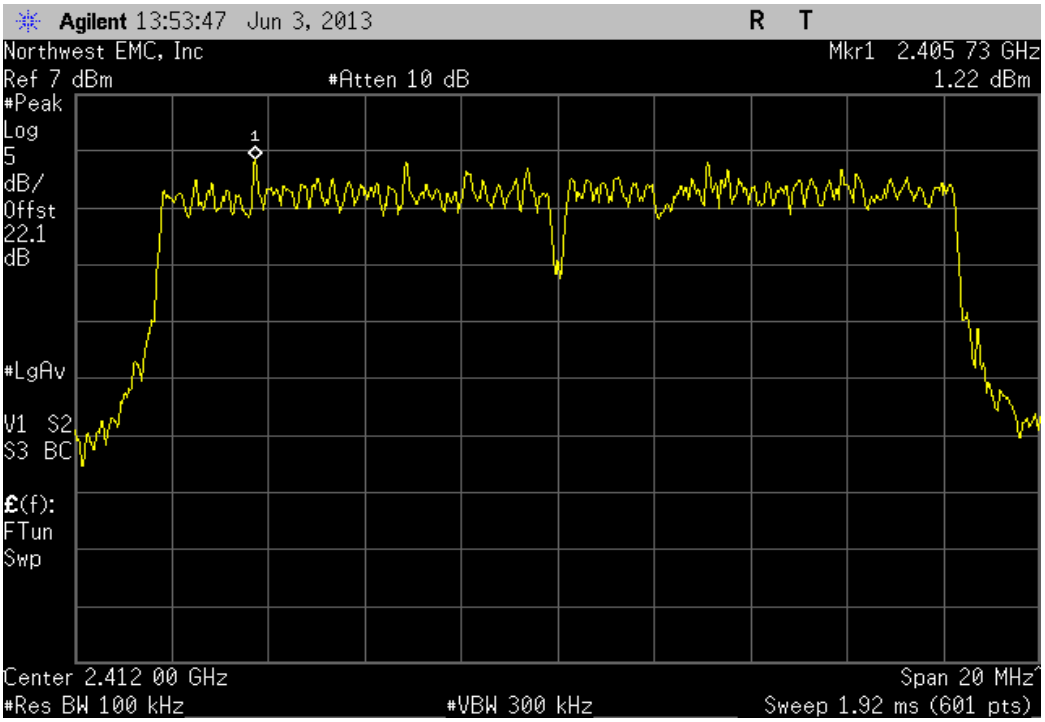
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		0.659	-15.2	-14.541	8	Pass



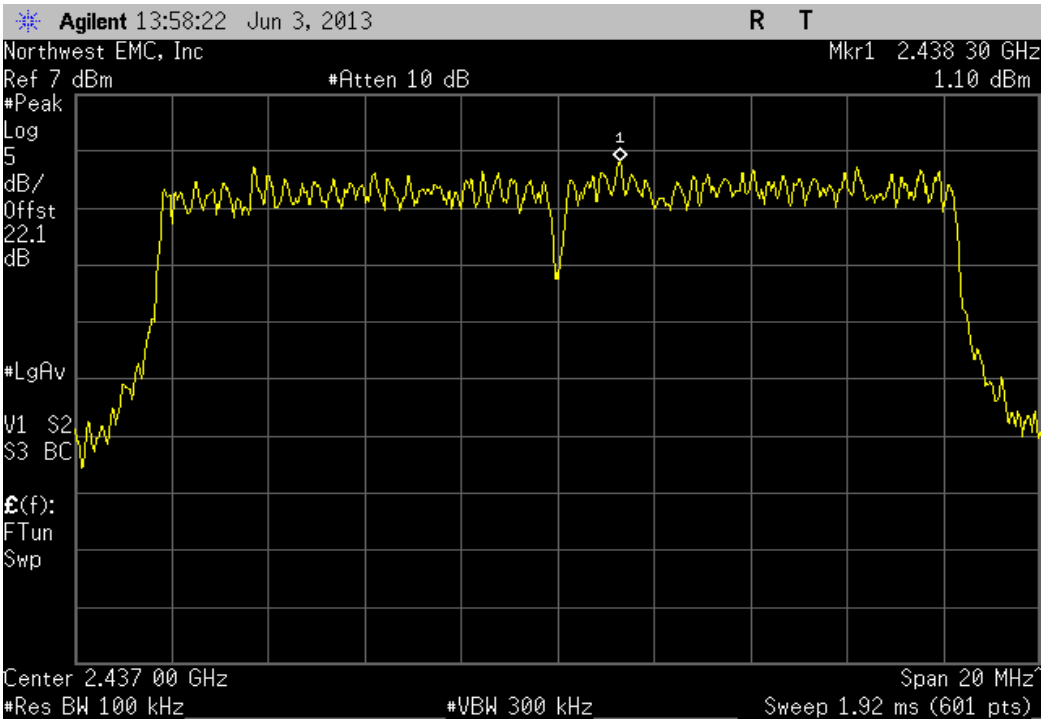
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		0.865	-15.2	-14.335	8	Pass



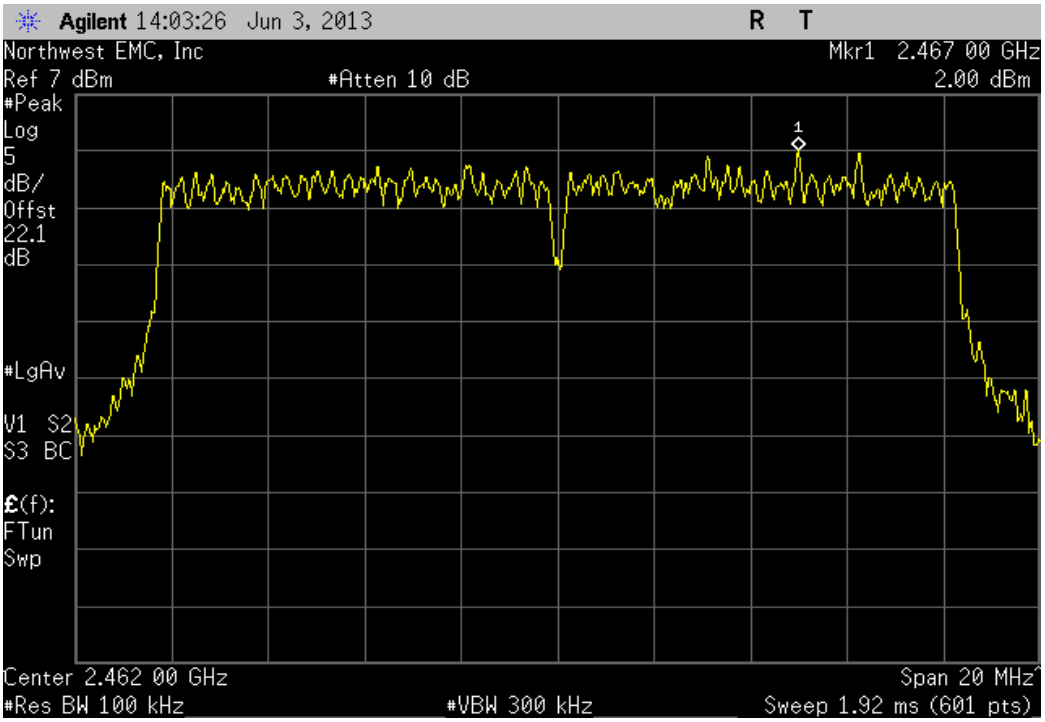
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		1.22	-15.2	-13.98	8	Pass



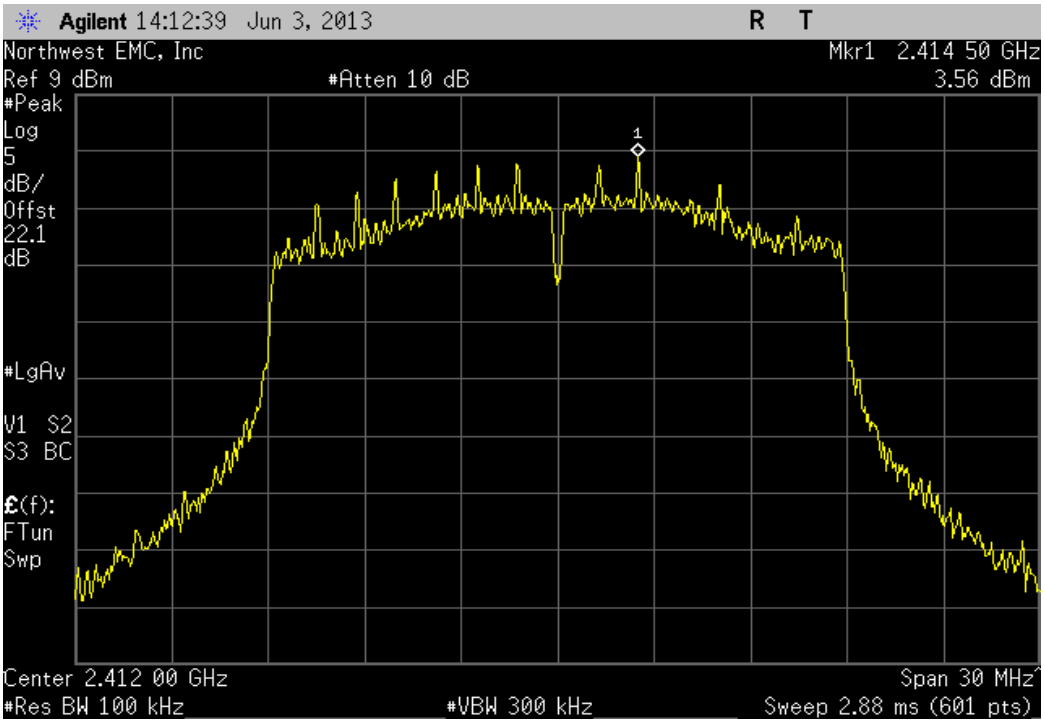
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		1.103	-15.2	-14.097	8	Pass



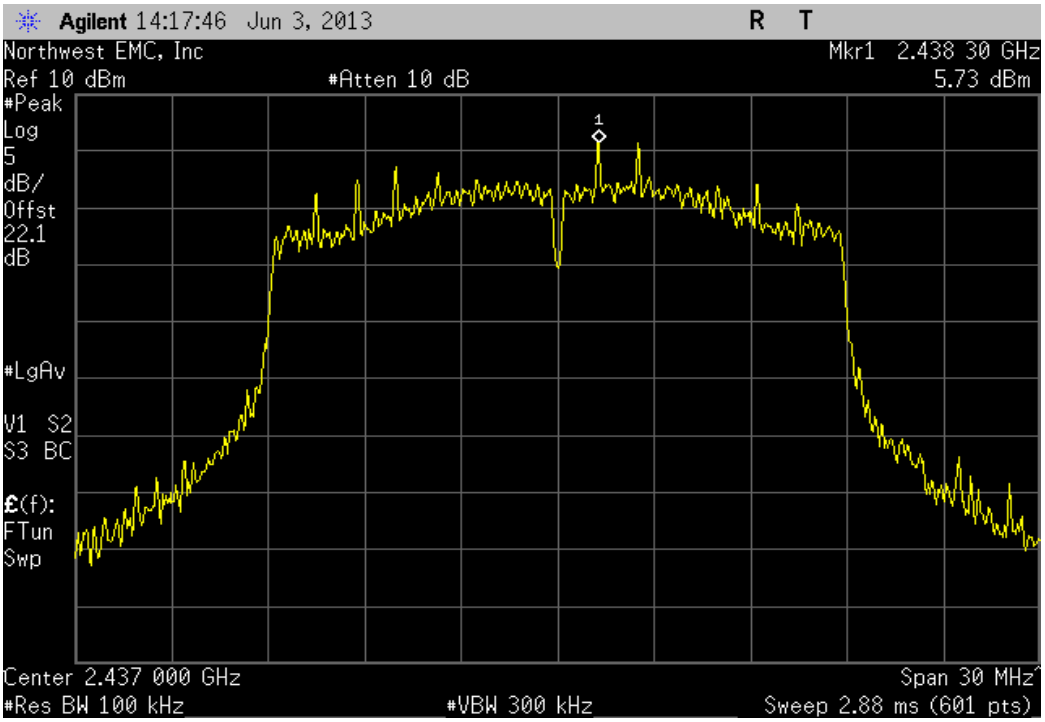
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		1.998	-15.2	-13.202	8	Pass



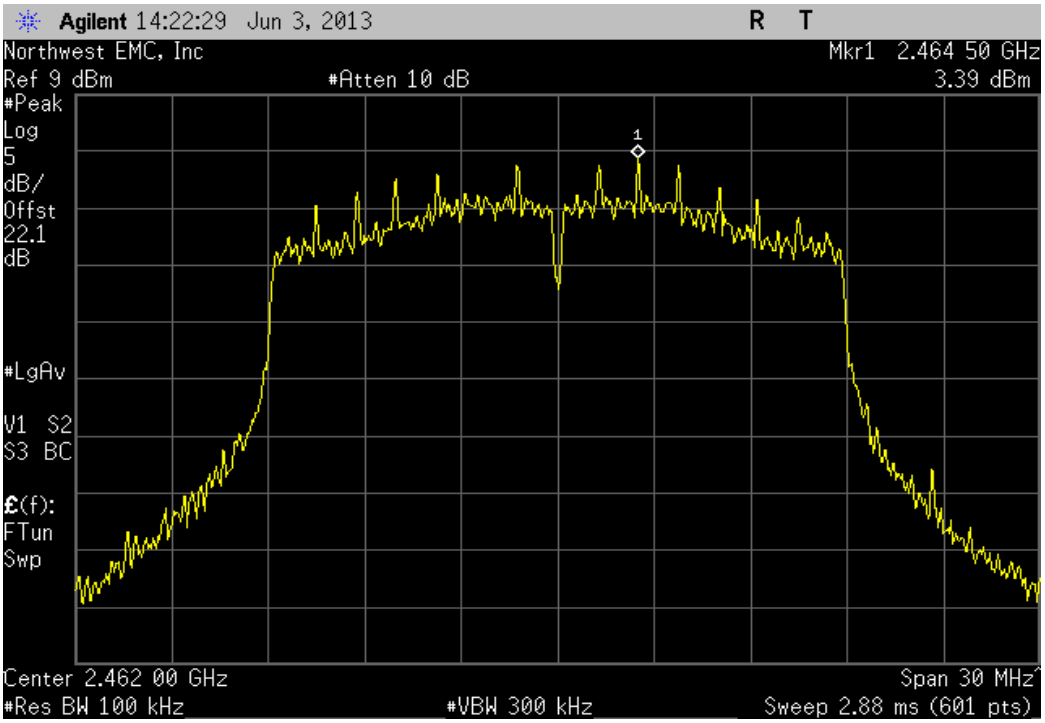
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		3.564	-15.2	-11.636	8	Pass



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		5.732	-15.2	-9.468	8	Pass

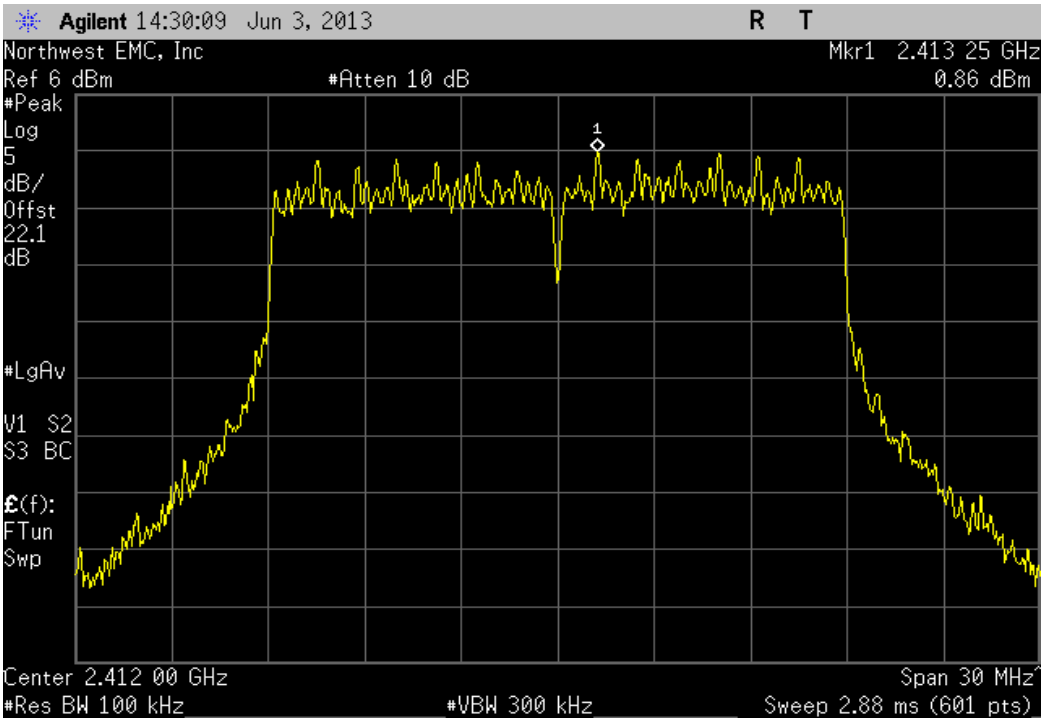


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		3.389	-15.2	-11.811	8	Pass

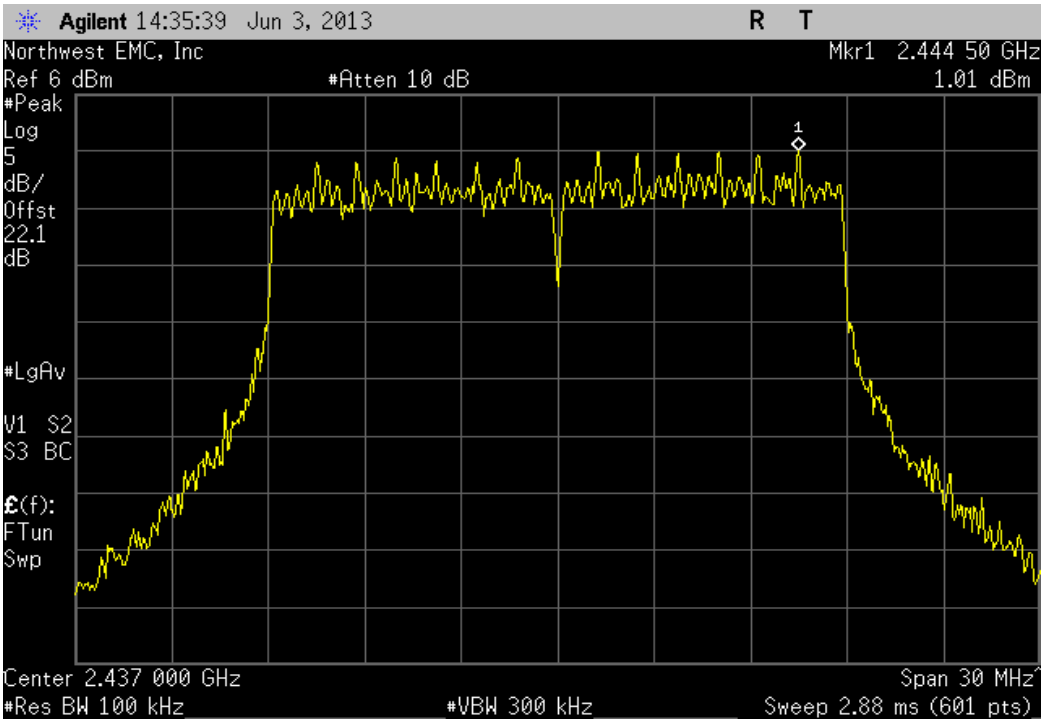


Power Spectral Density

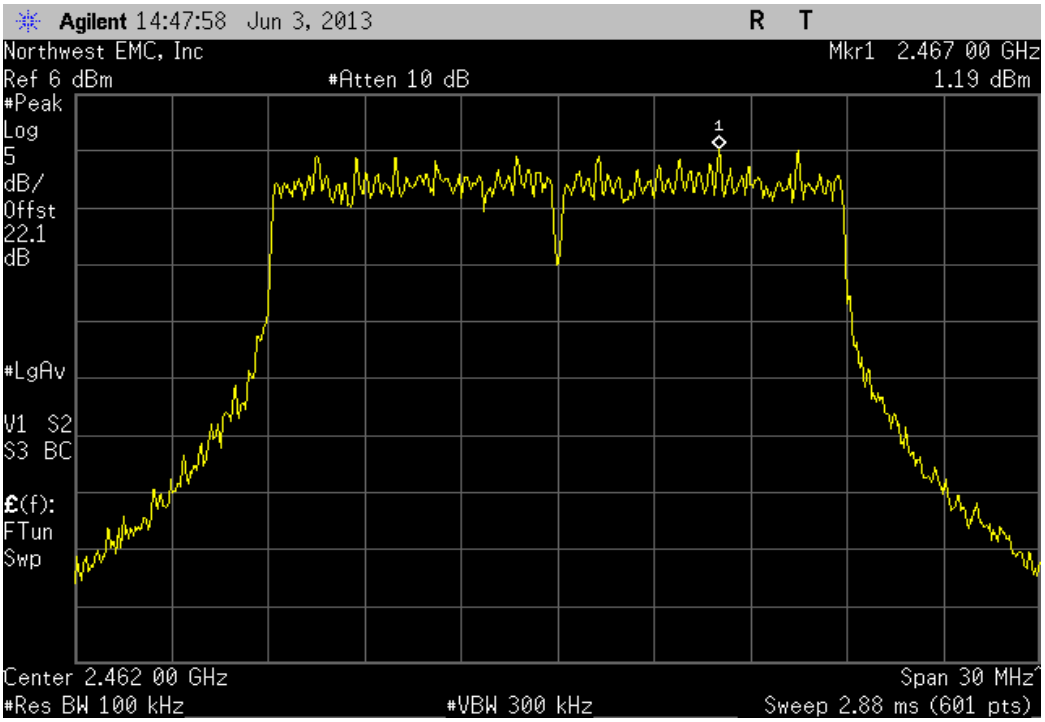
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		0.858	-15.2	-14.342	8	Pass



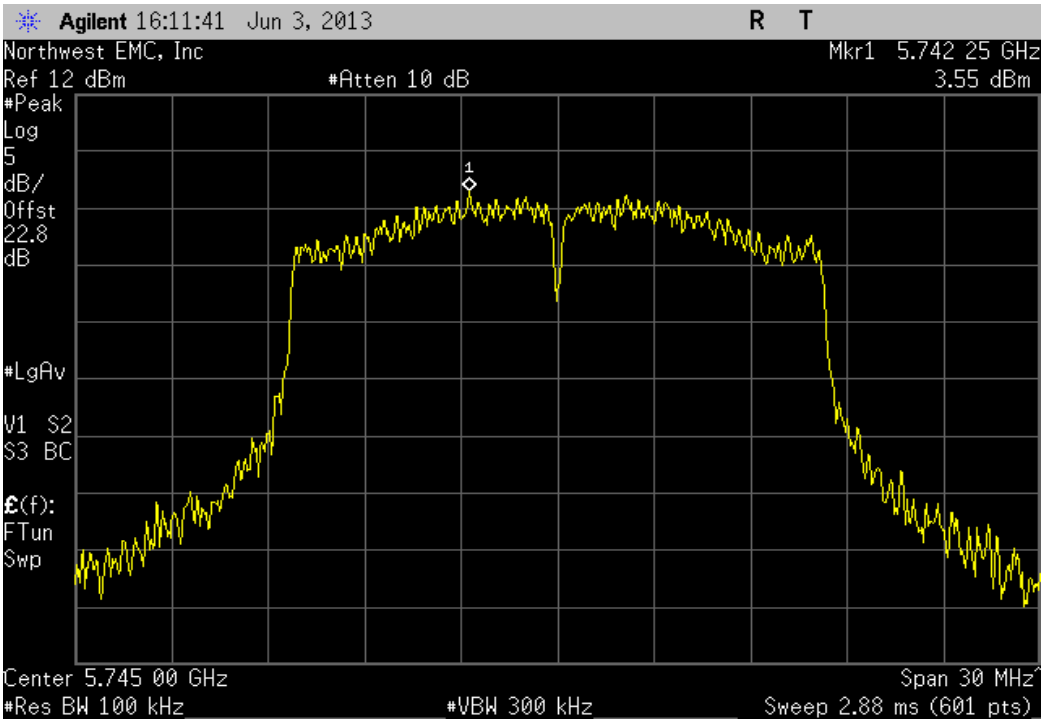
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		1.014	-15.2	-14.186	8	Pass



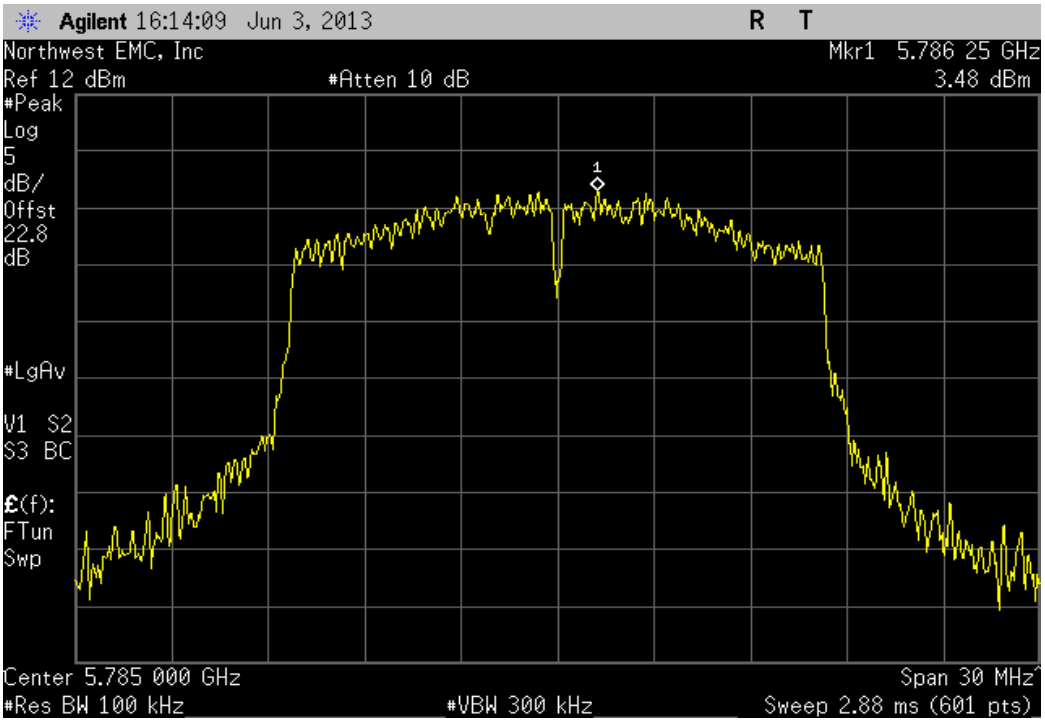
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		1.192	-15.2	-14.008	8	Pass



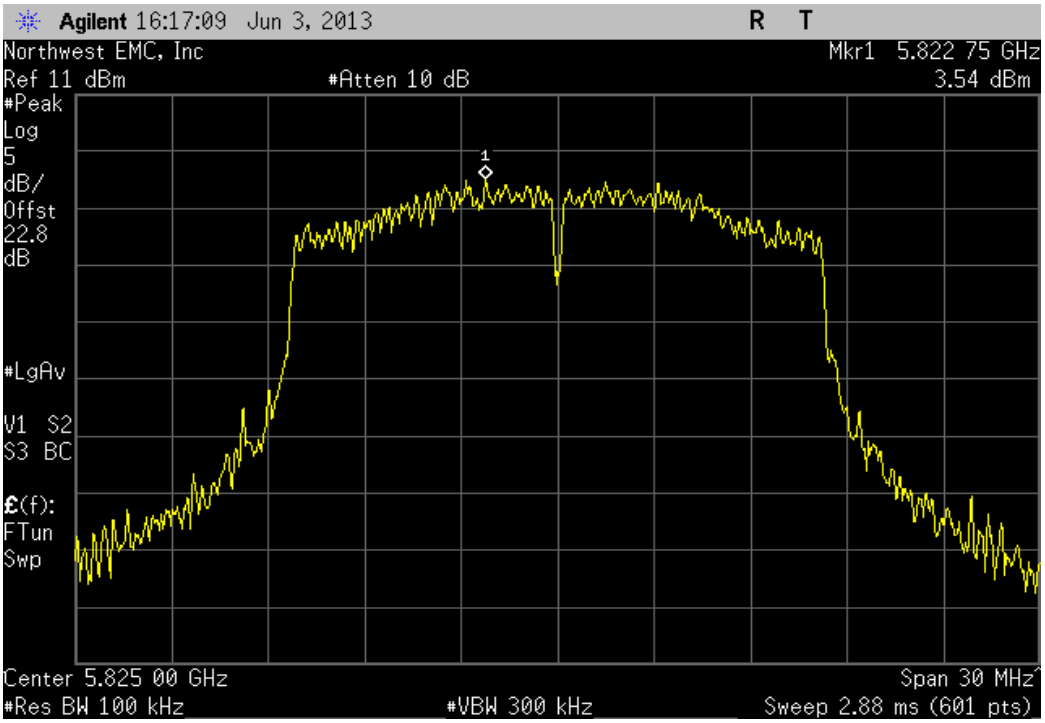
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		3.546	-15.2	-11.654	8	Pass



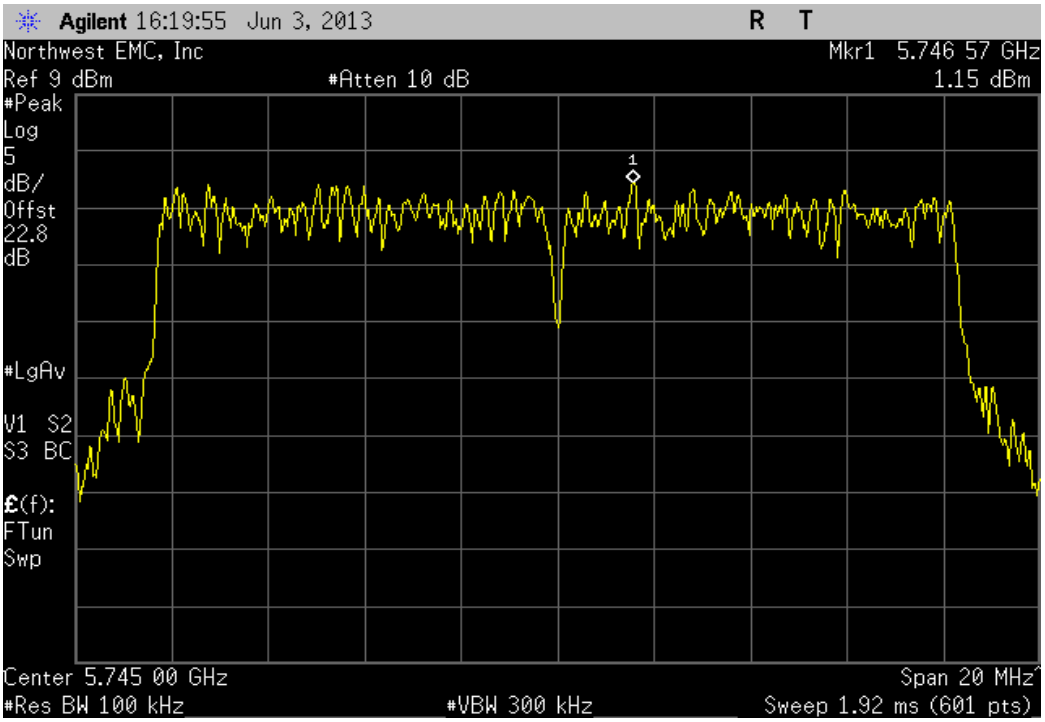
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		3.485	-15.2	-11.715	8	Pass



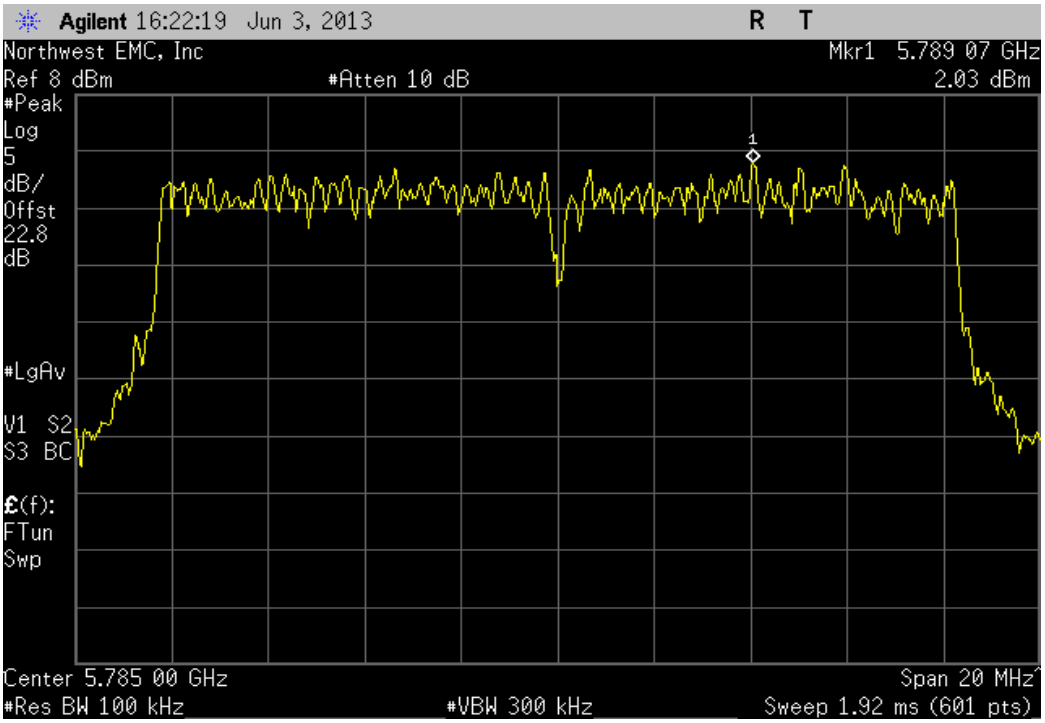
5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		3.535	-15.2	-11.665	8	Pass



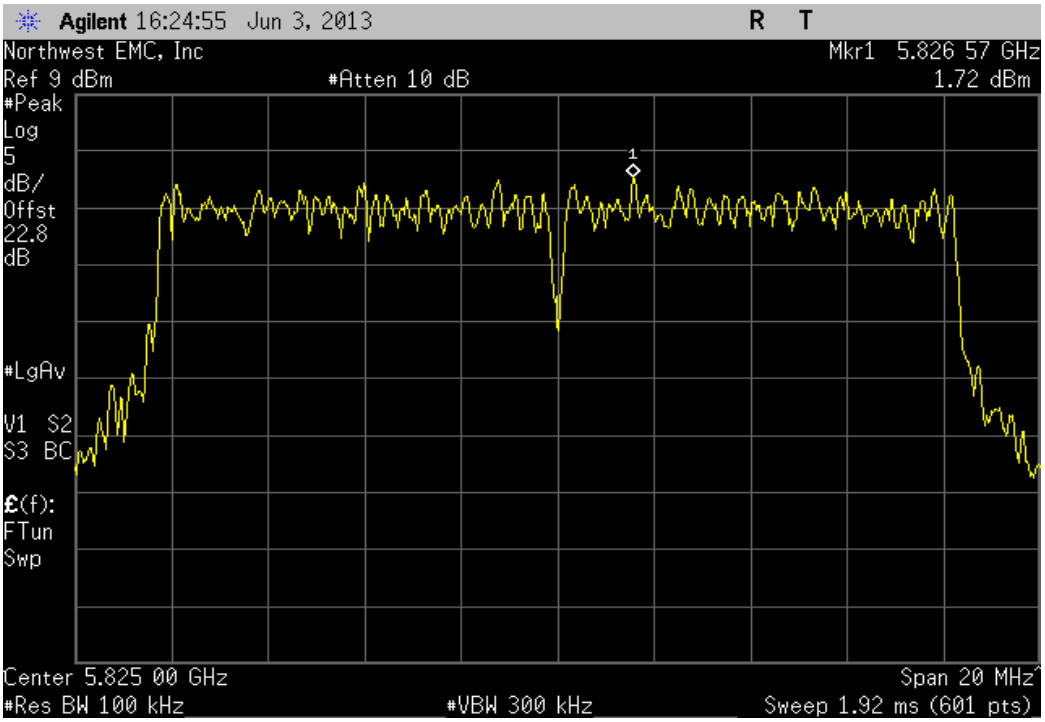
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		1.149	-15.2	-14.051	8	Pass



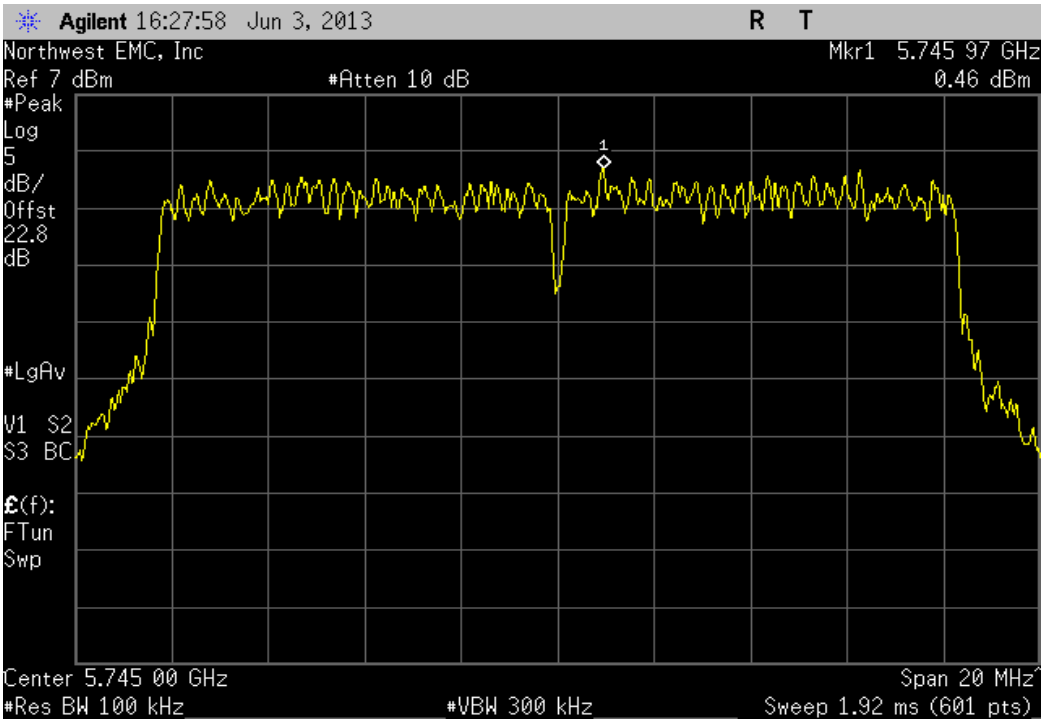
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		2.032	-15.2	-13.168	8	Pass



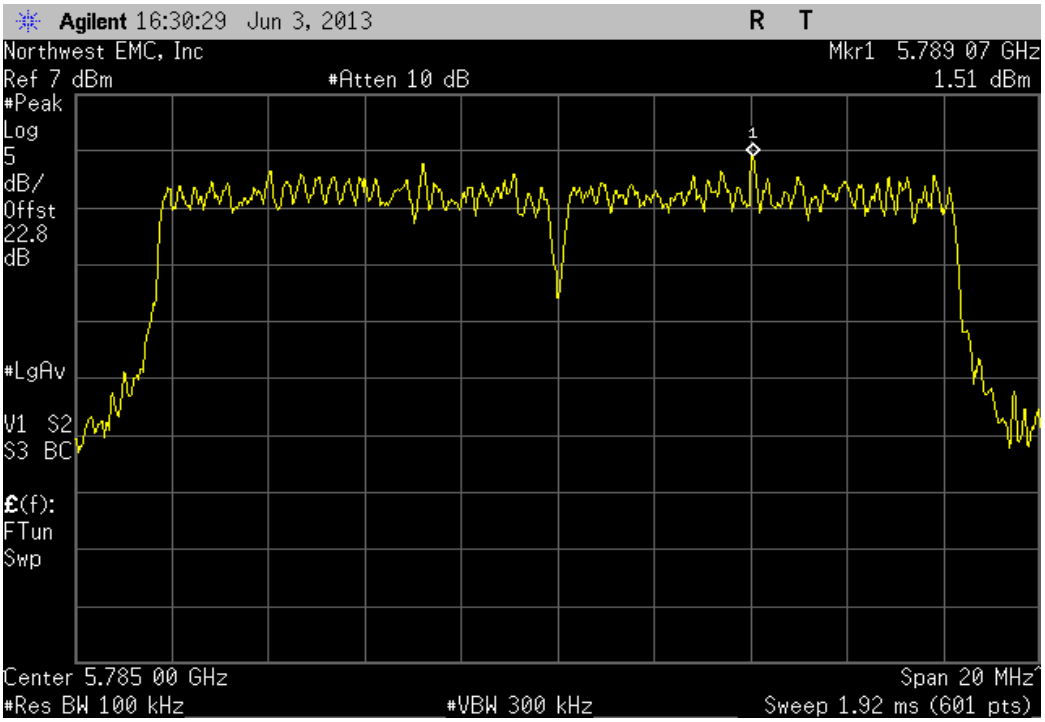
5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		1.722	-15.2	-13.478	8	Pass



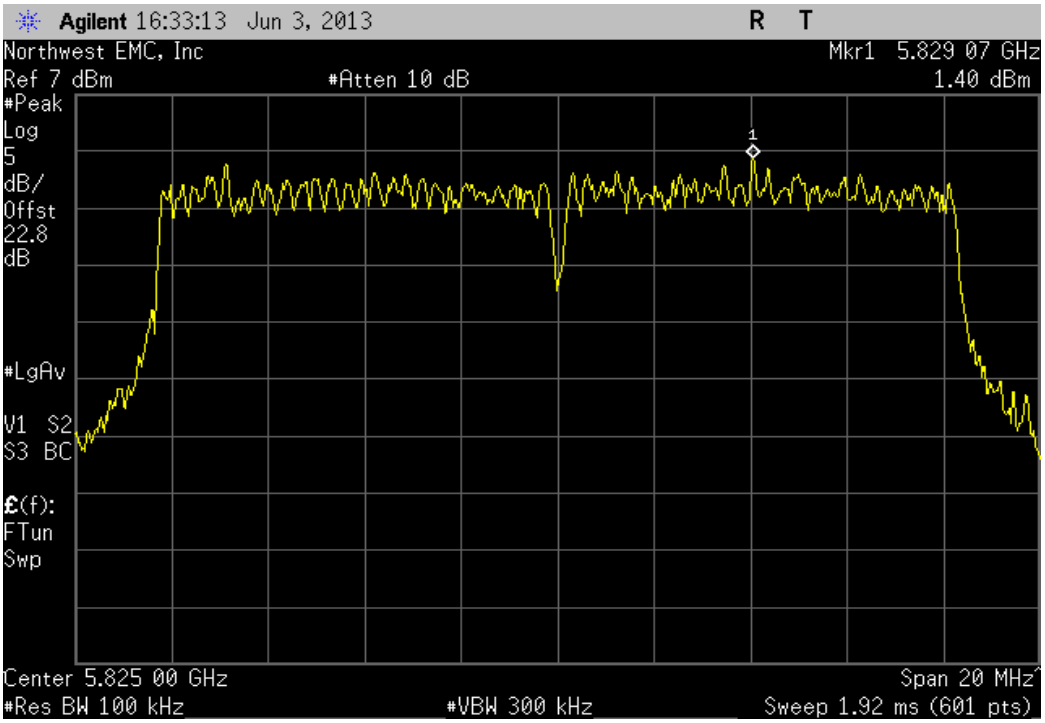
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		0.463	-15.2	-14.737	8	Pass



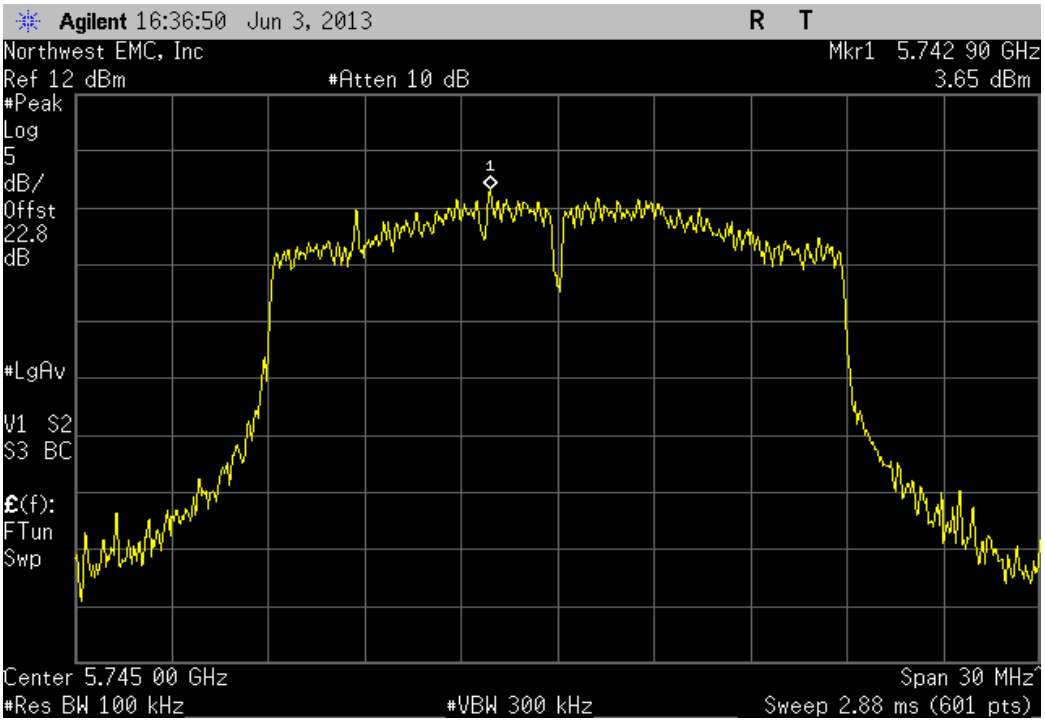
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		1.509	-15.2	-13.691	8	Pass



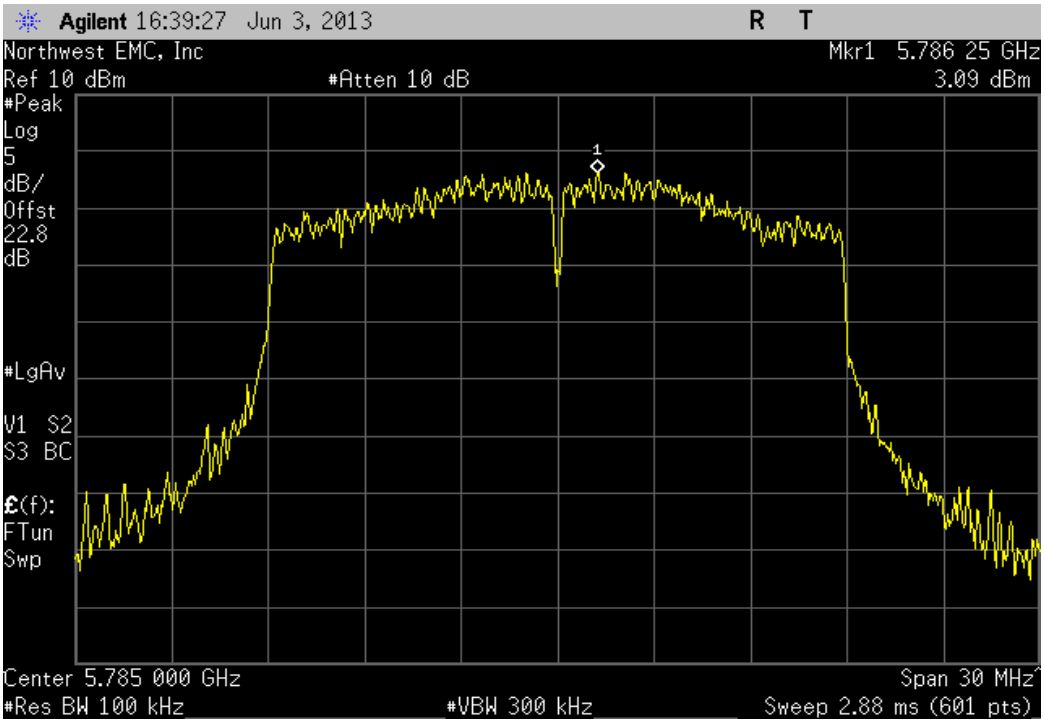
5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		1.398	-15.2	-13.802	8	Pass



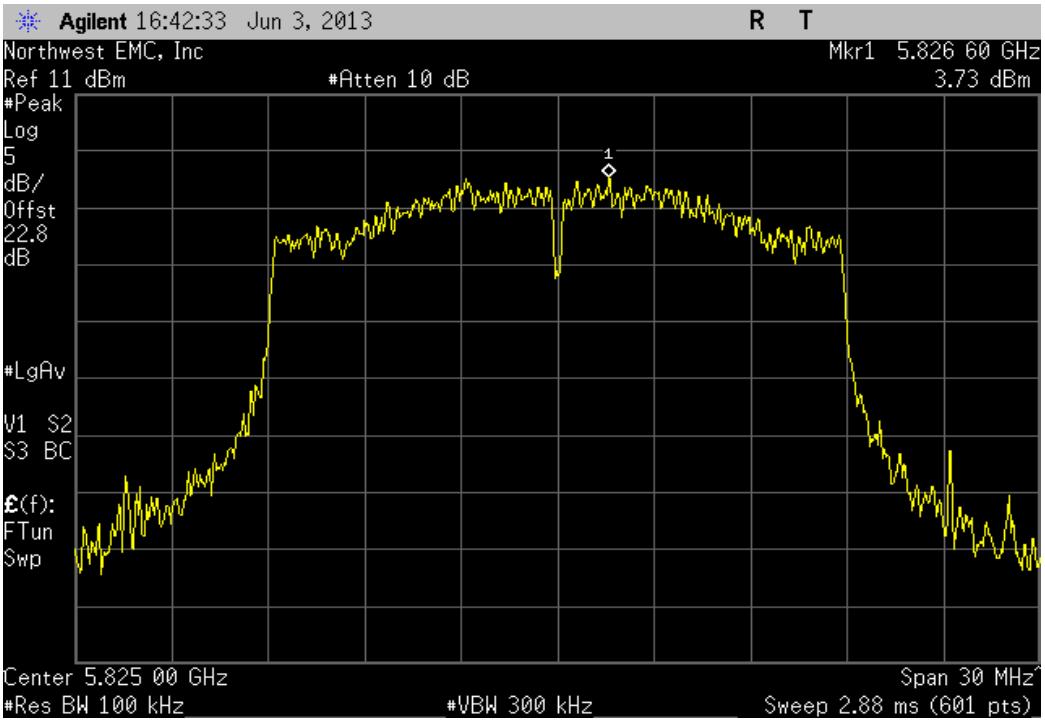
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Low Channel 149, 5745 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		3.65	-15.2	-11.55	8	Pass



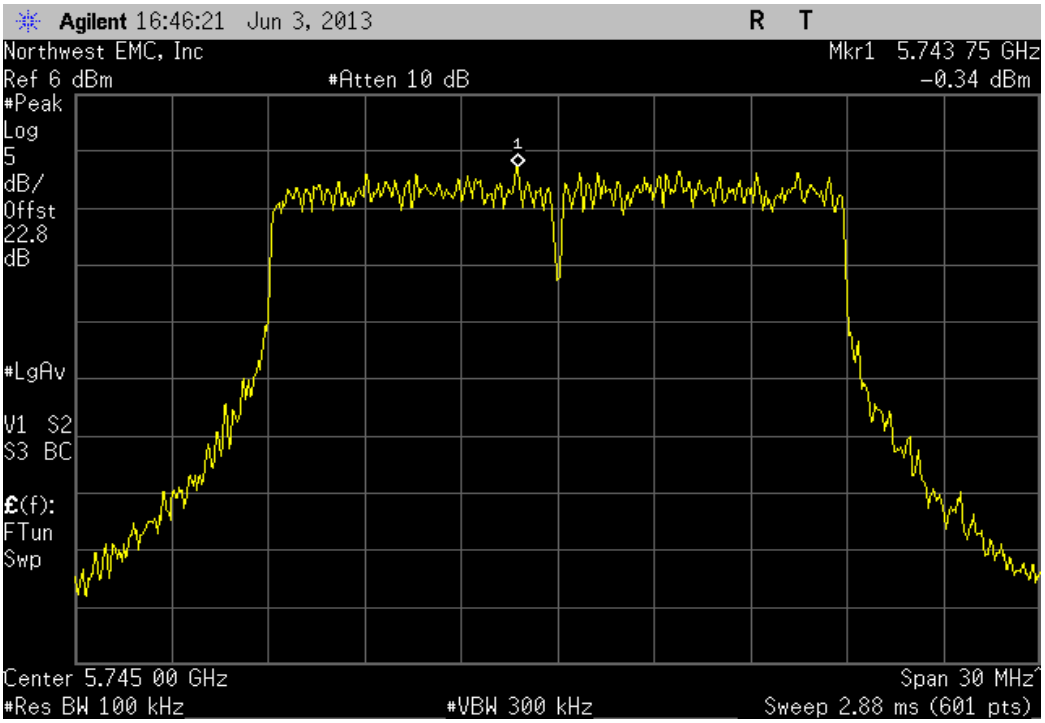
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, Mid Channel 157, 5785 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		3.093	-15.2	-12.107	8	Pass



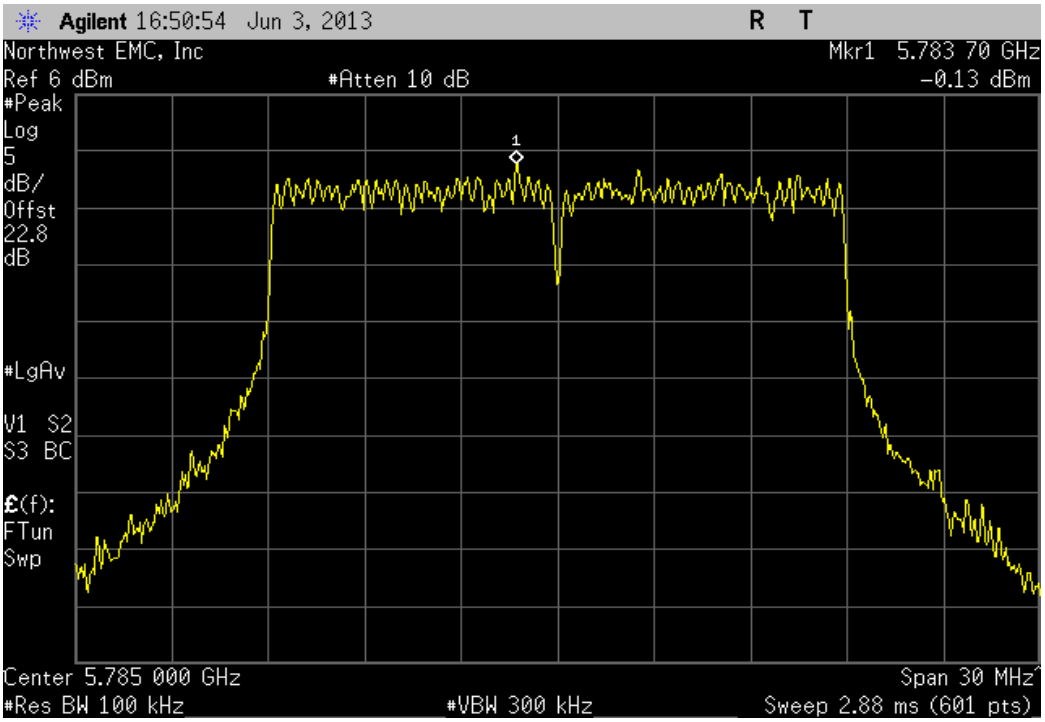
5725 MHz - 5850 MHz Band, 802.11(n) MCS0 - UNII, High Channel 165, 5825 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		3.732	-15.2	-11.468	8	Pass



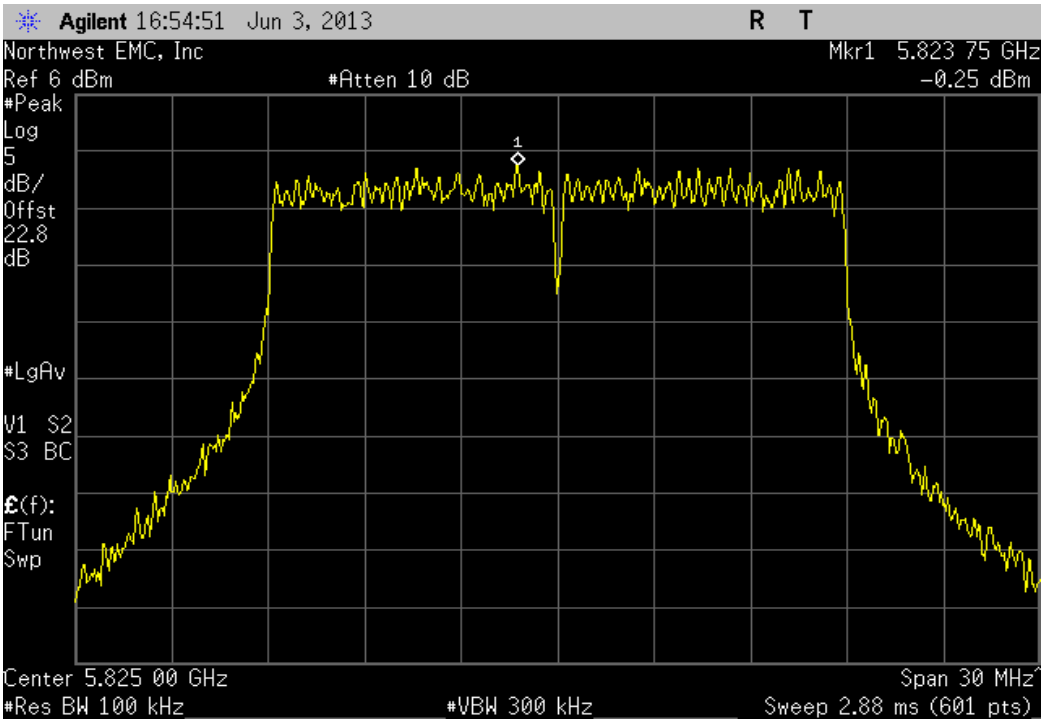
5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Low Channel 149, 5745 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		-0.337	-15.2	-15.537	8	Pass



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, Mid Channel 157, 5785 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		-0.133	-15.2	-15.333	8	Pass



5725 MHz - 5850 MHz Band, 802.11(n) MCS7 - UNII, High Channel 165, 5825 MHz						
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Value dBm/3kHz	Limit dBm/3kHz	Result
		-0.245	-15.2	-15.445	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 802.11an, Ch 149, 157, 165 (5745, 5785, 5825 MHz) at 6, 36, 54 Mbps, MCS0, MCS7 -PIFA (See comments)
Transmitting 802.11bgn, Ch 1, 6, 11 (2412, 2437, 2462 MHz) at 1, 11, 6, 36, 54 Mbps, MCS0, MCS7 -PIFA (See comments)
Transmitting 802.11an, Ch 149, 157, 165 (5745, 5785, 5825 MHz) at 6, 36, 54 Mbps, MCS0, MCS7 -Chip (See comments)
Transmitting 802.11bgn, Ch 1, 6, 11 (2412, 2437, 2462 MHz) at 1, 11, 6, 36, 54 Mbps, MCS0, MCS7 -Chip (See comments)

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

LGPD0096 - 1
LGPD0100 - 1

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
Attenuator, 20 dB, 'SMA'	SM Electronics	SA6-20	REO	5/20/2013	12 mo
High Pass Filter	Micro-Tronics	HPM50111	HGQ	6/1/2012	24 mo
Low Pass Filter	Micro-Tronics	LPM50004	HGK	5/31/2012	24 mo
5G Notch Filter	Micro-Tronics	BRC50705	HGZ	6/2/2011	36 mo
Spectrum Analyzer	Agilent	E4440A	AAX	5/15/2012	24 mo
Signal Generator MXG	Agilent	N5183A	TIK	6/7/2012	36 mo
Antenna, Horn	ETS	3115	AJA	5/13/2011	36 mo
MN05 1m Horn Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNO	8/28/2012	12 mo
Pre-Amplifier	Miteq	JSW45-26004000-40-5P	AVN	10/5/2012	12 mo
26-40GHz Cable	N/A	TTBJ141-KMKM-72	MNQ	10/5/2012	12 mo
Antenna, Horn	ETS	3160-10	AIC	NCR	0 mo
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	10/5/2012	12 mo
MN05 Cables	N/A	18-26GHz Standard Gain Horn Cable	MNP	10/5/2012	12 mo
Antenna, Horn	ETS	3160-09	AHG	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVW	5/20/2013	12 mo
Antenna, Horn	ETS Lindgren	3160-08	AIQ	NCR	0 mo
MN05 Cables	ESM Cable Corp.	Standard Gain Horn Cables	MNJ	5/20/2013	12 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVV	5/20/2013	12 mo
Antenna, Horn	ETS	3160-07	AXP	NCR	0 mo
Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVX	5/20/2013	12 mo
MN05 Cables	ESM Cable Corp.	Double Ridge Guide Horn Cable	MNI	5/20/2013	12 mo
Antenna, Horn (DRG)	ETS Lindgren	3115	AIP	6/29/2011	36 mo
Pre-Amplifier	Miteq	AM-1616-1000	PAD	5/20/2013	12 mo
MN05 Cables	ESM Cable Corp.	Bilog Cables	MNH	5/20/2013	12 mo
Antenna, Bilog	Teseq	CBL 6141B	AYD	12/17/2012	12 mo
Spectrum Analyzer	Agilent	E4446A	AAT	6/28/2012	24 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

TEST DESCRIPTION

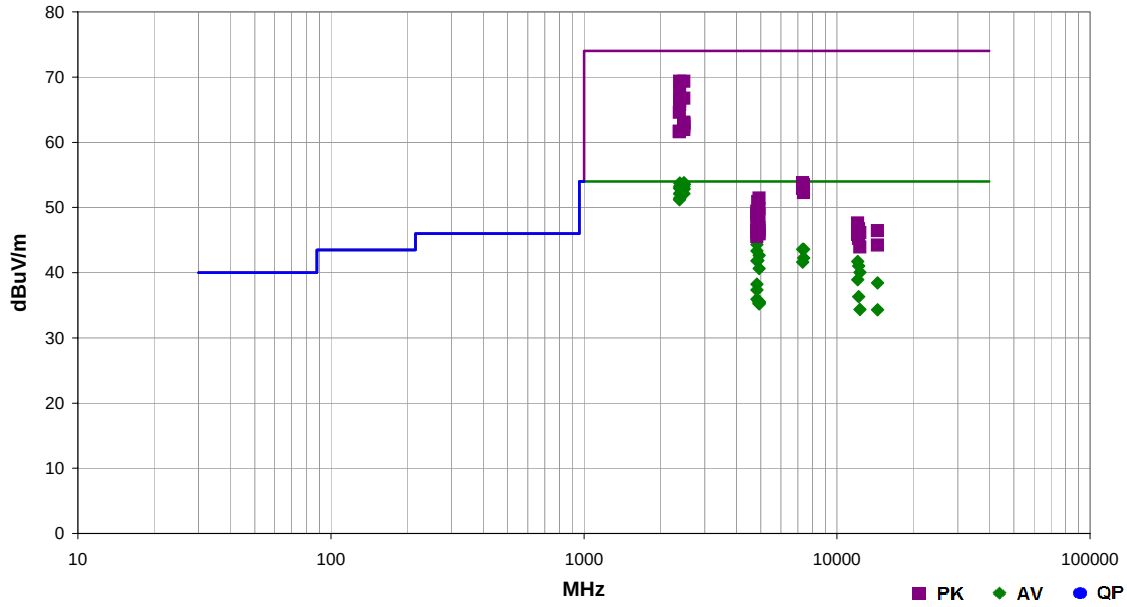
The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify 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. A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

Spurious Radiated Emissions

Work Order:	LGPD0096	**Date:**	05/21/13	Trevor Buls	
Project:	None	**Temperature:**	22.2 °C		
Job Site:	MN05	**Humidity:**	48.5% RH		
Serial Number:	1413M00359	**Barometric Pres.:**	1000 mbar	**Tested by:**	Trevor Buls
EUT:	37x Torpedo + Wireless SOM -31				
Configuration:	1				
Customer:	Logic PD, Inc.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting 802.11bgn, Ch 1, 6, 11 (2412, 2437, 2462 MHz) at 1, 11, 6, 36, 54 Mbps, MCS0, MCS7 -PIFA (See comments)				
Deviations:	None				
Comments:	EUT orientation is based on the transmit module.				

Test Specifications	**Test Method**
FCC 15.247:2013	ANSI C63.10:2009

Run #	15	**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
2483.500	86.4	-3.6	1.2	253.0	3.0	20.0	Vert	AV	0.0	53.8	54.0	-0.2	EUT Vertical, Ch 11, MCS0 MD
2389.958	37.6	-3.8	1.4	241.0	3.0	20.0	Vert	AV	0.0	53.8	54.0	-0.2	EUT Vertical, Ch 1, MCS0
2488.092	37.1	-3.5	1.2	253.0	3.0	20.0	Vert	AV	0.0	53.6	54.0	-0.4	EUT Vertical, Ch 11, 1 Mbps
2483.500	37.1	-3.6	1.2	253.0	3.0	20.0	Vert	AV	0.0	53.5	54.0	-0.5	EUT Vertical, Ch 11, 36 Mbps
2389.950	37.1	-3.8	1.4	241.0	3.0	20.0	Vert	AV	0.0	53.3	54.0	-0.7	EUT Vertical, Ch 1, 36 Mbps
2487.725	36.8	-3.5	1.2	253.0	3.0	20.0	Vert	AV	0.0	53.3	54.0	-0.7	EUT Vertical, Ch 11, 11 Mbps
2386.233	36.8	-3.8	1.4	241.0	3.0	20.0	Vert	AV	0.0	53.0	54.0	-1.0	EUT Vertical, Ch 1, 1 Mbps
2483.500	85.0	-3.6	1.2	253.0	3.0	20.0	Vert	AV	0.0	52.9	54.0	-1.1	EUT Vertical, Ch 11, 54 Mbps MD
2483.500	83.9	-3.7	1.2	253.0	3.0	20.0	Vert	AV	0.0	52.8	54.0	-1.2	EUT Vertical, Ch 11, MCS7 MD
2389.858	36.0	-3.8	1.4	241.0	3.0	20.0	Vert	AV	0.0	52.2	54.0	-1.8	EUT Vertical, Ch 1, MCS7
2483.500	35.7	-3.6	1.2	253.0	3.0	20.0	Vert	AV	0.0	52.1	54.0	-1.9	EUT Vertical, Ch 11, 6 Mbps
2389.992	35.9	-3.8	1.4	241.0	3.0	20.0	Vert	AV	0.0	52.1	54.0	-1.9	EUT Vertical, Ch 1, 54 Mbps
2389.958	35.3	-3.8	1.4	241.0	3.0	20.0	Vert	AV	0.0	51.5	54.0	-2.5	EUT Vertical, Ch 1, 6 Mbps
2386.417	35.0	-3.8	1.4	241.0	3.0	20.0	Vert	AV	0.0	51.2	54.0	-2.8	EUT Vertical, Ch 1, 11 Mbps
2389.967	53.2	-3.8	1.4	241.0	3.0	20.0	Vert	PK	0.0	69.4	74.0	-4.6	EUT Vertical, Ch 1, 36 Mbps
2483.558	52.9	-3.6	1.2	253.0	3.0	20.0	Vert	PK	0.0	69.3	74.0	-4.7	EUT Vertical, Ch 11, 36 Mbps
4924.017	42.9	4.9	1.0	318.0	3.0	0.0	Horz	AV	0.0	47.8	54.0	-6.2	EUT on Side, Ch 11, 1 Mbps
2389.525	51.6	-3.8	1.4	241.0	3.0	20.0	Vert	PK	0.0	67.8	74.0	-6.2	EUT Vertical, Ch 1, MCS0
4874.008	42.4	4.7	1.0	320.0	3.0	0.0	Horz	AV	0.0	47.1	54.0	-6.9	EUT on Side, Ch 6, 1 Mbps
2483.600	50.3	-3.6	1.2	253.0	3.0	20.0	Vert	PK	0.0	66.7	74.0	-7.3	EUT Vertical, Ch 11, 6 Mbps
2389.875	50.2	-3.8	1.4	241.0	3.0	20.0	Vert	PK	0.0	66.4	74.0	-7.6	EUT Vertical, Ch 1, 54 Mbps
2389.783	49.6	-3.8	1.4	241.0	3.0	20.0	Vert	PK	0.0	65.8	74.0	-8.2	EUT Vertical, Ch 1, MCS7
2385.383	48.4	-3.8	1.4	241.0	3.0	20.0	Vert	PK	0.0	64.6	74.0	-9.4	EUT Vertical, Ch 1, 6 Mbps
4823.975	39.9	4.4	1.0	322.0	3.0	0.0	Horz	AV	0.0	44.3	54.0	-9.7	EUT on Side, Ch 1, 1 Mbps
7310.017	31.2	12.4	1.2	349.0	3.0	0.0	Horz	AV	0.0	43.6	54.0	-10.4	EUT on Side, Ch 6, 1 Mbps
7386.950	30.5	13.1	1.2	347.0	3.0	0.0	Horz	AV	0.0	43.6	54.0	-10.4	EUT on Side, Ch 11, 1 Mbps
4824.000	38.9	4.4	1.0	321.0	3.0	0.0	Horz	AV	0.0	43.3	54.0	-10.7	EUT Horizontal, Ch 1, 1 Mbps

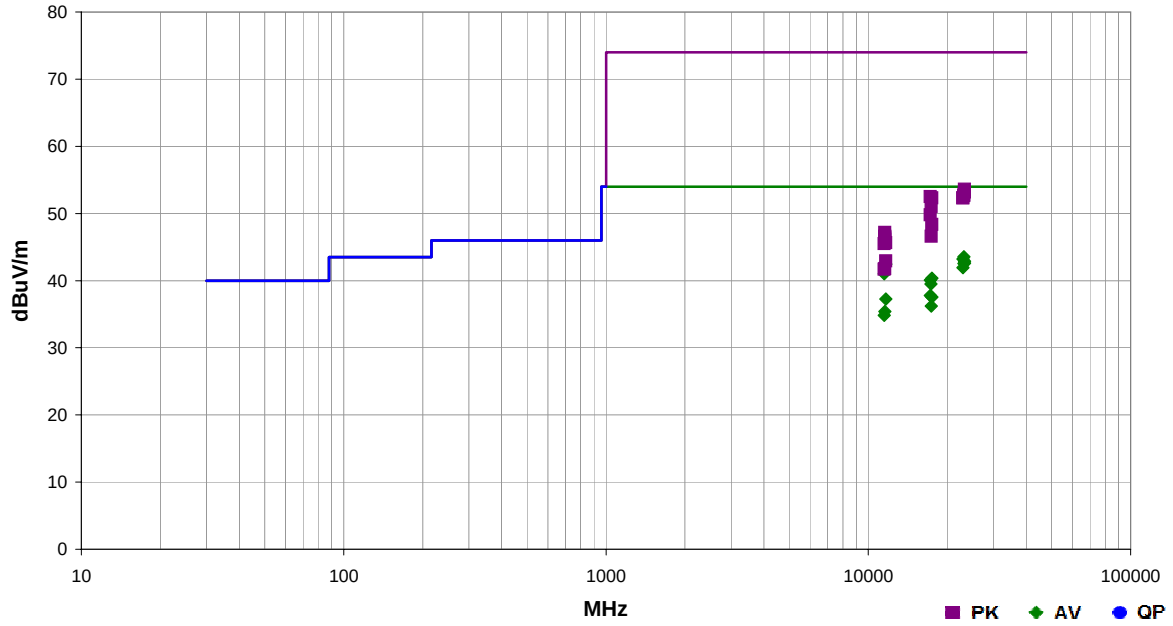
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2487.392	46.6	-3.6	1.2	253.0	3.0	20.0	Vert	PK	0.0	63.0	74.0	-11.0	EUT Vertical, Ch 11, 11 Mbps
2483.500	94.0	-3.7	1.2	253.0	3.0	20.0	Vert	PK	0.0	62.9	74.0	-11.1	EUT Vertical, Ch 11, MCS7 MD
2483.500	95.0	-3.7	1.2	253.0	3.0	20.0	Vert	PK	0.0	62.9	74.0	-11.1	EUT Vertical, Ch 11, 54 Mbps MD
4924.017	37.7	4.9	1.0	319.0	3.0	0.0	Vert	AV	0.0	42.6	54.0	-11.4	EUT Vertical, Ch 11, 1 Mbps
2483.500	95.0	-3.6	1.2	253.0	3.0	20.0	Vert	PK	0.0	62.4	74.0	-11.6	EUT Vertical, Ch 11, MCS0 MD
7386.425	29.2	13.1	1.8	242.0	3.0	0.0	Vert	AV	0.0	42.3	54.0	-11.7	EUT Vertical, Ch 11, 1 Mbps
2485.975	45.5	-3.6	1.2	253.0	3.0	20.0	Vert	PK	0.0	61.9	74.0	-12.1	EUT Vertical, Ch 11, 1 Mbps
4874.017	37.2	4.7	1.0	322.0	3.0	0.0	Vert	AV	0.0	41.9	54.0	-12.1	EUT Vertical, Ch 6, 1 Mbps
4823.942	37.4	4.4	1.1	321.0	3.0	0.0	Vert	AV	0.0	41.8	54.0	-12.2	EUT Vertical, Ch 1, 1 Mbps
12061.120	48.3	-6.6	1.0	248.0	3.0	0.0	Horz	AV	0.0	41.7	54.0	-12.3	EUT on Side, Ch 1, 1 Mbps
2385.850	45.5	-3.8	1.4	241.0	3.0	20.0	Vert	PK	0.0	61.7	74.0	-12.3	EUT Vertical, Ch 1, 11 Mbps
7311.408	29.2	12.4	1.0	298.0	3.0	0.0	Vert	AV	0.0	41.6	54.0	-12.4	EUT Vertical, Ch 6, 1 Mbps
2385.400	45.4	-3.8	1.4	241.0	3.0	20.0	Vert	PK	0.0	61.6	74.0	-12.4	EUT Vertical, Ch 1, 1 Mbps
12186.000	47.3	-6.3	1.0	250.0	3.0	0.0	Horz	AV	0.0	41.0	54.0	-13.0	EUT on Side, Ch 6, 1 Mbps
4924.067	35.7	4.9	1.0	334.0	3.0	0.0	Horz	AV	0.0	40.6	54.0	-13.4	EUT on Side, Ch 11, 11 Mbps
12309.080	46.0	-6.0	1.0	250.0	3.0	0.0	Horz	AV	0.0	40.0	54.0	-14.0	EUT on Side, Ch 11, 1 Mbps
12061.070	45.5	-6.6	1.0	287.0	3.0	0.0	Vert	AV	0.0	38.9	54.0	-15.1	EUT Vertical, Ch 1, 1 Mbps
14471.910	37.6	0.8	1.0	210.0	3.0	0.0	Horz	AV	0.0	38.4	54.0	-15.6	EUT on Side, Ch 1, 1 Mbps
4823.917	33.8	4.4	1.0	177.0	3.0	0.0	Horz	AV	0.0	38.2	54.0	-15.8	EUT Vertical, Ch 1, 1 Mbps
4823.958	32.9	4.4	1.2	352.0	3.0	0.0	Vert	AV	0.0	37.3	54.0	-16.7	EUT Horizontal, Ch 1, 1 Mbps
12184.040	42.6	-6.3	1.5	288.0	3.0	0.0	Vert	AV	0.0	36.3	54.0	-17.7	EUT Vertical, Ch 6, 1 Mbps
4824.017	31.5	4.4	1.0	288.0	3.0	0.0	Vert	AV	0.0	35.9	54.0	-18.1	EUT on Side, Ch 1, 1 Mbps
4924.008	30.6	4.9	1.0	334.0	3.0	0.0	Horz	AV	0.0	35.5	54.0	-18.5	EUT on Side, Ch 11, 6 Mbps
4922.642	30.6	4.9	1.0	334.0	3.0	0.0	Horz	AV	0.0	35.5	54.0	-18.5	EUT on Side, Ch 11, MCS0
4922.825	30.5	4.9	1.0	334.0	3.0	0.0	Horz	AV	0.0	35.4	54.0	-18.6	EUT on Side, Ch 11, 54 Mbps
4922.917	30.3	4.9	1.0	334.0	3.0	0.0	Horz	AV	0.0	35.2	54.0	-18.8	EUT on Side, Ch 11, 36 Mbps
4922.375	30.3	4.9	1.0	334.0	3.0	0.0	Horz	AV	0.0	35.2	54.0	-18.8	EUT on Side, Ch 11, MCS7
12309.140	40.3	-6.0	1.0	289.0	3.0	0.0	Vert	AV	0.0	34.3	54.0	-19.7	EUT Vertical, Ch 11, 1 Mbps
14471.970	33.5	0.8	1.0	243.0	3.0	0.0	Vert	AV	0.0	34.3	54.0	-19.7	EUT Vertical, Ch 1, 1 Mbps
7311.350	41.4	12.4	1.2	349.0	3.0	0.0	Horz	PK	0.0	53.8	74.0	-20.2	EUT on Side, Ch 6, 1 Mbps
7388.075	40.4	13.1	1.2	347.0	3.0	0.0	Horz	PK	0.0	53.5	74.0	-20.5	EUT on Side, Ch 11, 1 Mbps
7309.783	40.5	12.4	1.0	298.0	3.0	0.0	Vert	PK	0.0	52.9	74.0	-21.1	EUT Vertical, Ch 6, 1 Mbps
7387.933	39.2	13.1	1.8	242.0	3.0	0.0	Vert	PK	0.0	52.3	74.0	-21.7	EUT Vertical, Ch 11, 1 Mbps
4924.175	46.5	4.9	1.0	318.0	3.0	0.0	Horz	PK	0.0	51.4	74.0	-22.6	EUT on Side, Ch 11, 1 Mbps
4873.908	46.2	4.7	1.0	320.0	3.0	0.0	Horz	PK	0.0	50.9	74.0	-23.1	EUT on Side, Ch 6, 1 Mbps
4924.292	44.9	4.9	1.0	334.0	3.0	0.0	Horz	PK	0.0	49.8	74.0	-24.2	EUT on Side, Ch 11, 11 Mbps
4823.883	45.0	4.4	1.0	322.0	3.0	0.0	Horz	PK	0.0	49.4	74.0	-24.6	EUT on Side, Ch 1, 1 Mbps
4824.150	44.5	4.4	1.0	321.0	3.0	0.0	Horz	PK	0.0	48.9	74.0	-25.1	EUT Horizontal, Ch 1, 1 Mbps
4923.958	44.0	4.9	1.0	319.0	3.0	0.0	Vert	PK	0.0	48.9	74.0	-25.1	EUT Vertical, Ch 11, 1 Mbps
4874.033	43.7	4.7	1.0	322.0	3.0	0.0	Vert	PK	0.0	48.4	74.0	-25.6	EUT Vertical, Ch 6, 1 Mbps
4823.950	43.6	4.4	1.1	321.0	3.0	0.0	Vert	PK	0.0	48.0	74.0	-26.0	EUT Vertical, Ch 1, 1 Mbps
12061.320	54.2	-6.6	1.0	248.0	3.0	0.0	Horz	PK	0.0	47.6	74.0	-26.4	EUT on Side, Ch 1, 1 Mbps
4922.383	42.0	4.9	1.0	334.0	3.0	0.0	Horz	PK	0.0	46.9	74.0	-27.1	EUT on Side, Ch 11, MCS0
12185.040	53.0	-6.3	1.0	250.0	3.0	0.0	Horz	PK	0.0	46.7	74.0	-27.3	EUT on Side, Ch 6, 1 Mbps
4923.150	41.7	4.9	1.0	334.0	3.0	0.0	Horz	PK	0.0	46.6	74.0	-27.4	EUT on Side, Ch 11, 6 Mbps
4824.000	42.0	4.4	1.0	177.0	3.0	0.0	Horz	PK	0.0	46.4	74.0	-27.6	EUT Vertical, Ch 1, 1 Mbps
14472.120	45.6	0.8	1.0	210.0	3.0	0.0	Horz	PK	0.0	46.4	74.0	-27.6	EUT on Side, Ch 1, 1 Mbps
4923.217	41.5	4.9	1.0	334.0	3.0	0.0	Horz	PK	0.0	46.4	74.0	-27.6	EUT on Side, Ch 11, 54 Mbps
4824.150	41.7	4.4	1.0	288.0	3.0	0.0	Vert	PK	0.0	46.1	74.0	-27.9	EUT on Side, Ch 1, 1 Mbps
12309.870	52.1	-6.0	1.0	250.0	3.0	0.0	Horz	PK	0.0	46.1	74.0	-27.9	EUT on Side, Ch 11, 1 Mbps
4923.517	41.1	4.9	1.0	334.0	3.0	0.0	Horz	PK	0.0	46.0	74.0	-28.0	EUT on Side, Ch 11, 36 Mbps
4924.033	41.0	4.9	1.0	334.0	3.0	0.0	Horz	PK	0.0	45.9	74.0	-28.1	EUT on Side, Ch 11, MCS7
12061.650	52.4	-6.6	1.0	287.0	3.0	0.0	Vert	PK	0.0	45.8	74.0	-28.2	EUT Vertical, Ch 1, 1 Mbps
4823.733	41.1	4.4	1.2	352.0	3.0	0.0	Vert	PK	0.0	45.5	74.0	-28.5	EUT Horizontal, Ch 1, 1 Mbps
12186.090	51.5	-6.3	1.5	288.0	3.0	0.0	Vert	PK	0.0	45.2	74.0	-28.8	EUT Vertical, Ch 6, 1 Mbps
14472.180	43.4	0.8	1.0	243.0	3.0	0.0	Vert	PK	0.0	44.2	74.0	-29.8	EUT Vertical, Ch 1, 1 Mbps
12308.210	49.9	-6.0	1.0	289.0	3.0	0.0	Vert	PK	0.0	43.9	74.0	-30.1	EUT Vertical, Ch 11, 1 Mbps

Spurious Radiated Emissions

Work Order:	LGPD0096	**Date:**	05/21/13	Trevor Buls	
Project:	None	**Temperature:**	22.2 °C		
Job Site:	MN05	**Humidity:**	48.5% RH		
Serial Number:	1413M00359	**Barometric Pres.:**	1000 mbar	**Tested by:**	Trevor Buls
EUT:	37x Torpedo + Wireless SOM -31				
Configuration:	1				
Customer:	Logic PD, Inc.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting 802.11an, Ch 149, 157, 165 (5745, 5785, 5825 MHz) at 6, 36, 54 Mbps, MCS0, MCS7 -PIFA (See comments)				
Deviations:	None				
Comments:	EUT orientation is based on the transmit module.				

Test Specifications	**Test Method**
FCC 15.247:2013	ANSI C63.10:2009

Run #	6	**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
23140.000	31.3	12.3	1.2	300.0	3.0	0.0	Horz	AV	0.0	43.6	54.0	-10.4	EUT on Side, Ch 157, 6 Mbps
22979.990	31.0	12.2	1.2	288.0	3.0	0.0	Horz	AV	0.0	43.2	54.0	-10.8	EUT on Side, Ch 149, 6 Mbps
23299.970	30.6	12.3	1.2	238.0	3.0	0.0	Horz	AV	0.0	42.9	54.0	-11.1	EUT on Side, Ch 165, 6 Mbps
23301.600	30.3	12.3	1.2	297.0	3.0	0.0	Vert	AV	0.0	42.6	54.0	-11.4	EUT on Side, Ch 165, 6 Mbps
23139.950	30.3	12.3	1.2	330.0	3.0	0.0	Vert	AV	0.0	42.6	54.0	-11.4	EUT on Side, Ch 157, 6 Mbps
11569.980	49.5	-7.0	1.0	272.0	3.0	0.0	Horz	AV	0.0	42.5	54.0	-11.5	EUT on Side, Ch 157, 6 Mbps
11650.030	49.4	-7.0	1.0	272.0	3.0	0.0	Horz	AV	0.0	42.4	54.0	-11.6	EUT on Side, Ch 165, 6 Mbps
11570.030	49.4	-7.0	1.0	273.0	3.0	0.0	Horz	AV	0.0	42.4	54.0	-11.6	EUT on Side, Ch 157, MCS0
11570.060	49.3	-7.0	1.0	273.0	3.0	0.0	Horz	AV	0.0	42.3	54.0	-11.7	EUT on Side, Ch 157, 54 Mbps
11569.970	49.3	-7.0	1.0	273.0	3.0	0.0	Horz	AV	0.0	42.3	54.0	-11.7	EUT on Side, Ch 157, 36 Mbps
11570.010	49.2	-7.0	1.0	273.0	3.0	0.0	Horz	AV	0.0	42.2	54.0	-11.8	EUT on Side, Ch 157, MCS7
22980.130	29.7	12.2	1.2	346.0	3.0	0.0	Vert	AV	0.0	41.9	54.0	-12.1	EUT on Side, Ch 149, 6 Mbps
11490.050	48.1	-7.1	1.0	274.0	3.0	0.0	Horz	AV	0.0	41.0	54.0	-13.0	EUT on Side, Ch 149, 6 Mbps
17475.030	37.4	2.9	1.0	242.0	3.0	0.0	Horz	AV	0.0	40.3	54.0	-13.7	EUT on Side, Ch 165, 6 Mbps
17232.510	37.2	2.9	1.1	244.0	3.0	0.0	Horz	AV	0.0	40.1	54.0	-13.9	EUT on Side, Ch 149, 6 Mbps
17353.070	36.6	2.9	1.0	241.0	3.0	0.0	Horz	AV	0.0	39.5	54.0	-14.5	EUT on Side, Ch 157, 6 Mbps
17234.930	34.9	2.9	1.1	330.0	3.0	0.0	Vert	AV	0.0	37.8	54.0	-16.2	EUT on Side, Ch 149, 6 Mbps
17474.960	34.6	2.9	1.0	324.0	3.0	0.0	Vert	AV	0.0	37.5	54.0	-16.5	EUT on Side, Ch 165, 6 Mbps
11649.980	44.2	-7.0	1.0	291.0	3.0	0.0	Vert	AV	0.0	37.2	54.0	-16.8	EUT on Side, Ch 165, 6 Mbps
17354.520	33.3	2.9	1.0	323.0	3.0	0.0	Vert	AV	0.0	36.2	54.0	-17.8	EUT on Side, Ch 157, 6 Mbps
11570.090	42.4	-7.0	1.0	270.0	3.0	0.0	Vert	AV	0.0	35.4	54.0	-18.6	EUT on Side, Ch 157, 6 Mbps
11489.980	41.9	-7.1	1.0	335.0	3.0	0.0	Vert	AV	0.0	34.8	54.0	-19.2	EUT on Side, Ch 149, 6 Mbps
23299.320	41.3	12.3	1.2	297.0	3.0	0.0	Vert	PK	0.0	53.6	74.0	-20.4	EUT on Side, Ch 165, 6 Mbps
23299.730	40.9	12.3	1.2	238.0	3.0	0.0	Horz	PK	0.0	53.2	74.0	-20.8	EUT on Side, Ch 165, 6 Mbps

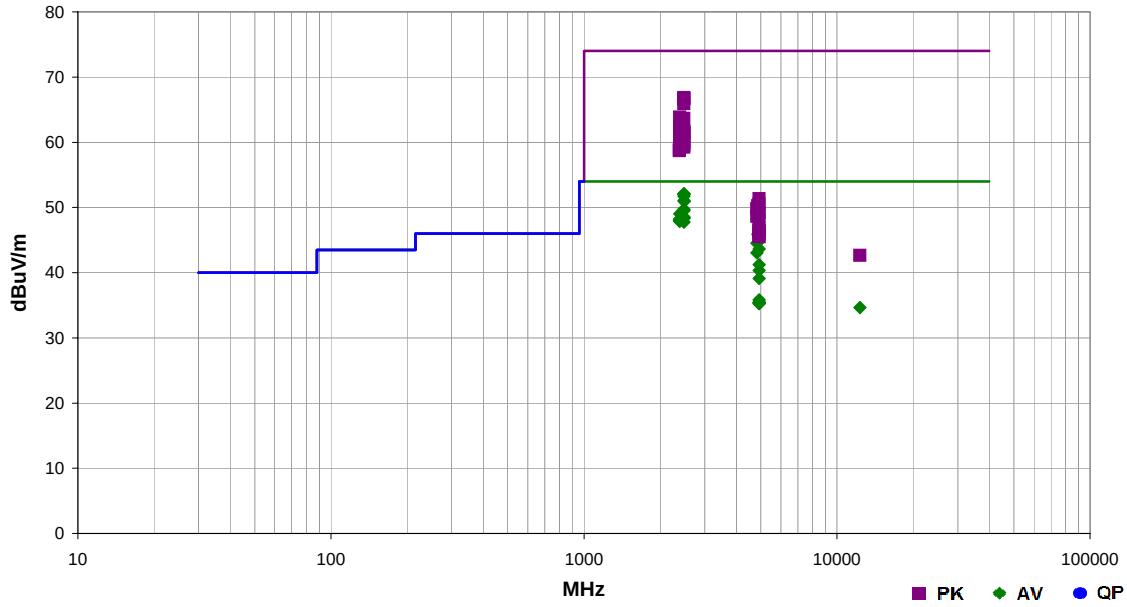
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
23139.850	40.5	12.3	1.2	300.0	3.0	0.0	Horz	PK	0.0	52.8	74.0	-21.2	EUT on Side, Ch 157, 6 Mbps
23137.530	40.4	12.3	1.2	330.0	3.0	0.0	Vert	PK	0.0	52.7	74.0	-21.3	EUT on Side, Ch 157, 6 Mbps
17235.080	49.6	2.9	1.1	244.0	3.0	0.0	Horz	PK	0.0	52.5	74.0	-21.5	EUT on Side, Ch 149, 6 Mbps
17474.180	49.4	2.9	1.0	242.0	3.0	0.0	Horz	PK	0.0	52.3	74.0	-21.7	EUT on Side, Ch 165, 6 Mbps
22980.450	40.1	12.2	1.2	346.0	3.0	0.0	Vert	PK	0.0	52.3	74.0	-21.7	EUT on Side, Ch 149, 6 Mbps
22979.780	40.1	12.2	1.2	288.0	3.0	0.0	Horz	PK	0.0	52.3	74.0	-21.7	EUT on Side, Ch 149, 6 Mbps
17355.280	48.1	2.9	1.0	241.0	3.0	0.0	Horz	PK	0.0	51.0	74.0	-23.0	EUT on Side, Ch 157, 6 Mbps
17233.380	46.9	2.9	1.1	330.0	3.0	0.0	Vert	PK	0.0	49.8	74.0	-24.2	EUT on Side, Ch 149, 6 Mbps
17474.300	45.4	2.9	1.0	324.0	3.0	0.0	Vert	PK	0.0	48.3	74.0	-25.7	EUT on Side, Ch 165, 6 Mbps
11569.850	54.2	-7.0	1.0	273.0	3.0	0.0	Horz	PK	0.0	47.2	74.0	-26.8	EUT on Side, Ch 157, MCS7
17356.160	43.7	2.9	1.0	323.0	3.0	0.0	Vert	PK	0.0	46.6	74.0	-27.4	EUT on Side, Ch 157, 6 Mbps
11570.210	53.6	-7.0	1.0	273.0	3.0	0.0	Horz	PK	0.0	46.6	74.0	-27.4	EUT on Side, Ch 157, 36 Mbps
11569.790	53.5	-7.0	1.0	272.0	3.0	0.0	Horz	PK	0.0	46.5	74.0	-27.5	EUT on Side, Ch 157, 6 Mbps
11569.920	53.3	-7.0	1.0	273.0	3.0	0.0	Horz	PK	0.0	46.3	74.0	-27.7	EUT on Side, Ch 157, 54 Mbps
11570.140	53.1	-7.0	1.0	273.0	3.0	0.0	Horz	PK	0.0	46.1	74.0	-27.9	EUT on Side, Ch 157, MCS0
11649.790	52.6	-7.0	1.0	272.0	3.0	0.0	Horz	PK	0.0	45.6	74.0	-28.4	EUT on Side, Ch 165, 6 Mbps
11490.010	52.6	-7.1	1.0	274.0	3.0	0.0	Horz	PK	0.0	45.5	74.0	-28.5	EUT on Side, Ch 149, 6 Mbps
11650.170	49.9	-7.0	1.0	291.0	3.0	0.0	Vert	PK	0.0	42.9	74.0	-31.1	EUT on Side, Ch 165, 6 Mbps
11569.850	48.8	-7.0	1.0	270.0	3.0	0.0	Vert	PK	0.0	41.8	74.0	-32.2	EUT on Side, Ch 157, 6 Mbps
11489.630	48.8	-7.1	1.0	335.0	3.0	0.0	Vert	PK	0.0	41.7	74.0	-32.3	EUT on Side, Ch 149, 6 Mbps

Spurious Radiated Emissions

Work Order:	LGPD0100	**Date:**	05/29/13	Trevor Buls	
Project:	None	**Temperature:**	22.4 °C		
Job Site:	MN05	**Humidity:**	50.2% RH		
Serial Number:	1413M00359	**Barometric Pres.:**	1009.4 mbar	**Tested by:**	Trevor Buls
EUT:	37x Torpedo + Wireless SOM -31				
Configuration:	1				
Customer:	Logic PD, Inc.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting 802.11bgn, Ch 1, 6, 11 (2412, 2437, 2462 MHz) at 1, 11, 6, 36, 54 Mbps, MCS0, MCS7 -Chip (See comments)				
Deviations:	None				
Comments:	EUT orientation is based on the transmit module.				

Test Specifications	**Test Method**
FCC 15.247:2013	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
2483.500	35.7	-3.6	1.1	309.0	3.0	20.0	Horz	AV	0.0	52.1	54.0	-1.9	EUT on Side, Ch 11, 54 Mbps
2483.542	35.6	-3.6	1.1	309.0	3.0	20.0	Horz	AV	0.0	52.0	54.0	-2.0	EUT on Side, Ch 11, MCS0
2483.517	35.6	-3.6	1.1	309.0	3.0	20.0	Horz	AV	0.0	52.0	54.0	-2.0	EUT on Side, Ch 11, 36 Mbps
2483.525	35.3	-3.6	1.1	309.0	3.0	20.0	Horz	AV	0.0	51.7	54.0	-2.3	EUT on Side, Ch 11, MCS7
2487.800	34.6	-3.5	1.1	309.0	3.0	20.0	Horz	AV	0.0	51.1	54.0	-2.9	EUT on Side, Ch 11, 11 Mbps
2488.070	34.5	-3.5	1.1	309.0	3.0	20.0	Horz	AV	0.0	51.0	54.0	-3.0	EUT on Side, Ch 11, 1 Mbps
2483.583	33.3	-3.6	1.1	308.0	3.0	20.0	Horz	AV	0.0	49.7	54.0	-4.3	EUT on Side, Ch 11, 6 Mbps
2483.533	33.1	-3.6	1.3	249.0	3.0	20.0	Vert	AV	0.0	49.5	54.0	-4.5	EUT Vertical, Ch 11, 6 Mbps
2389.950	32.9	-3.8	1.0	347.0	3.0	20.0	Horz	AV	0.0	49.1	54.0	-4.9	EUT on Side, Ch 1, MCS0
2483.550	32.1	-3.6	1.0	0.0	3.0	20.0	Horz	AV	0.0	48.5	54.0	-5.5	EUT Vertical, Ch 11, 6 Mbps
2483.575	32.0	-3.6	1.0	194.0	3.0	20.0	Horz	AV	0.0	48.4	54.0	-5.6	EUT Horizontal, Ch 11, 6 Mbps
2483.517	31.9	-3.6	1.0	220.0	3.0	20.0	Vert	AV	0.0	48.3	54.0	-5.7	EUT Horizontal, Ch 11, 6 Mbps
2390.000	32.1	-3.8	1.0	347.0	3.0	20.0	Horz	AV	0.0	48.3	54.0	-5.7	EUT on Side, Ch 1, MCS7
2386.050	31.9	-3.8	1.0	347.0	3.0	20.0	Horz	AV	0.0	48.1	54.0	-5.9	EUT on Side, Ch 1, 1 Mbps
2389.900	31.8	-3.8	1.0	347.0	3.0	20.0	Horz	AV	0.0	48.0	54.0	-6.0	EUT on Side, Ch 1, 6 Mbps
2389.958	31.8	-3.8	1.0	347.0	3.0	20.0	Horz	AV	0.0	48.0	54.0	-6.0	EUT on Side, Ch 1, 36 Mbps
2390.000	31.8	-3.8	1.0	347.0	3.0	20.0	Horz	AV	0.0	48.0	54.0	-6.0	EUT on Side, Ch 1, 54 Mbps
2385.258	31.7	-3.8	1.0	347.0	3.0	20.0	Horz	AV	0.0	47.9	54.0	-6.1	EUT on Side, Ch 1, 11 Mbps
4923.983	42.9	4.9	1.0	308.0	3.0	0.0	Horz	AV	0.0	47.8	54.0	-6.2	EUT on Side, Ch 11, 1 Mbps
2484.242	31.3	-3.6	1.0	0.0	3.0	20.0	Vert	AV	0.0	47.7	54.0	-6.3	EUT on Side, Ch 11, 6 Mbps
2483.517	50.4	-3.6	1.1	309.0	3.0	20.0	Horz	PK	0.0	66.8	74.0	-7.2	EUT on Side, Ch 11, 36 Mbps
2484.417	50.3	-3.6	1.1	309.0	3.0	20.0	Horz	PK	0.0	66.7	74.0	-7.3	EUT on Side, Ch 11, MCS0
2483.517	50.2	-3.6	1.1	309.0	3.0	20.0	Horz	PK	0.0	66.6	74.0	-7.4	EUT on Side, Ch 11, 54 Mbps
4924.000	41.2	4.9	1.0	319.0	3.0	0.0	Vert	AV	0.0	46.1	54.0	-7.9	EUT Vertical, Ch 11, 1 Mbps
2483.725	49.5	-3.6	1.1	309.0	3.0	20.0	Horz	PK	0.0	65.9	74.0	-8.1	EUT on Side, Ch 11, MCS7
4874.008	41.2	4.7	1.0	331.0	3.0	0.0	Horz	AV	0.0	45.9	54.0	-8.1	EUT on Side, Ch 6, 1 Mbps
4874.000	40.0	4.7	1.0	321.0	3.0	0.0	Vert	AV	0.0	44.7	54.0	-9.3	EUT Vertical, Ch 6, 1 Mbps

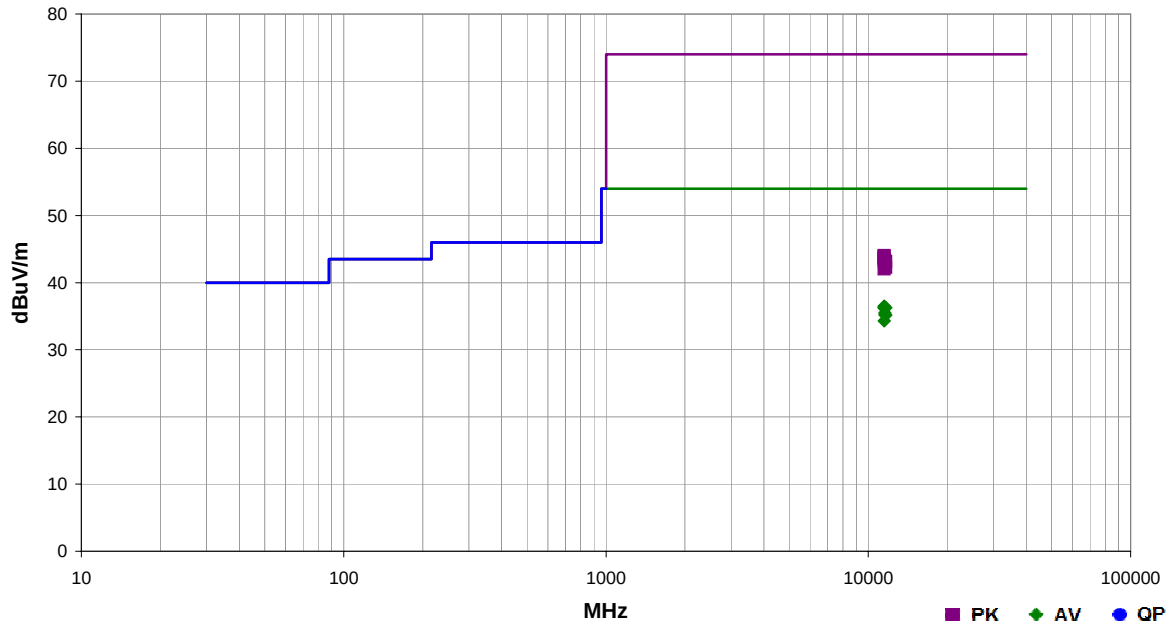
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4824.025	40.1	4.4	1.1	295.0	3.0	0.0	Horz	AV	0.0	44.5	54.0	-9.5	EUT on Side, Ch 1, 1 Mbps
2389.842	47.7	-3.8	1.0	347.0	3.0	20.0	Horz	PK	0.0	63.9	74.0	-10.1	EUT on Side, Ch 1, MCS0
2483.733	47.2	-3.6	1.1	308.0	3.0	20.0	Horz	PK	0.0	63.6	74.0	-10.4	EUT on Side, Ch 11, 6 Mbps
4924.008	38.7	4.9	1.2	113.0	3.0	0.0	Vert	AV	0.0	43.6	54.0	-10.4	EUT Horizontal, Ch 11, 1 Mbps
4824.008	38.6	4.4	1.0	322.0	3.0	0.0	Vert	AV	0.0	43.0	54.0	-11.0	EUT Vertical, Ch 1, 1 Mbps
2389.142	46.0	-3.8	1.0	347.0	3.0	20.0	Horz	PK	0.0	62.2	74.0	-11.8	EUT on Side, Ch 1, 6 Mbps
2389.942	45.7	-3.8	1.0	347.0	3.0	20.0	Horz	PK	0.0	61.9	74.0	-12.1	EUT on Side, Ch 1, MCS7
2484.183	45.3	-3.6	1.3	249.0	3.0	20.0	Vert	PK	0.0	61.7	74.0	-12.3	EUT Vertical, Ch 11, 6 Mbps
2488.130	45.1	-3.5	1.1	309.0	3.0	20.0	Horz	PK	0.0	61.6	74.0	-12.4	EUT on Side, Ch 11, 11 Mbps
2487.758	44.9	-3.5	1.1	309.0	3.0	20.0	Horz	PK	0.0	61.4	74.0	-12.6	EUT on Side, Ch 11, 1 Mbps
4924.050	36.3	4.9	1.0	342.0	3.0	0.0	Horz	AV	0.0	41.2	54.0	-12.8	EUT Horizontal, Ch 11, 1 Mbps
2389.817	44.7	-3.8	1.0	347.0	3.0	20.0	Horz	PK	0.0	60.9	74.0	-13.1	EUT on Side, Ch 1, 54 Mbps
4923.958	35.4	4.9	1.0	309.0	3.0	0.0	Horz	AV	0.0	40.3	54.0	-13.7	EUT on Side, Ch 11, 11 Mbps
2485.858	43.7	-3.6	1.0	220.0	3.0	20.0	Vert	PK	0.0	60.1	74.0	-13.9	EUT Horizontal, Ch 11, 6 Mbps
2484.108	43.3	-3.6	1.0	194.0	3.0	20.0	Horz	PK	0.0	59.7	74.0	-14.3	EUT Horizontal, Ch 11, 6 Mbps
2389.858	43.4	-3.8	1.0	347.0	3.0	20.0	Horz	PK	0.0	59.6	74.0	-14.4	EUT on Side, Ch 1, 36 Mbps
2487.583	43.1	-3.5	1.0	0.0	3.0	20.0	Horz	PK	0.0	59.6	74.0	-14.4	EUT Vertical, Ch 11, 6 Mbps
2485.750	42.8	-3.6	1.0	0.0	3.0	20.0	Vert	PK	0.0	59.2	74.0	-14.8	EUT on Side, Ch 11, 6 Mbps
4923.975	34.2	4.9	1.0	232.0	3.0	0.0	Horz	AV	0.0	39.1	54.0	-14.9	EUT Vertical, Ch 11, 1 Mbps
2385.108	42.7	-3.8	1.0	347.0	3.0	20.0	Horz	PK	0.0	58.9	74.0	-15.1	EUT on Side, Ch 1, 11 Mbps
2385.033	42.5	-3.8	1.0	347.0	3.0	20.0	Horz	PK	0.0	58.7	74.0	-15.3	EUT on Side, Ch 1, 1 Mbps
4924.275	30.9	4.9	1.0	309.0	3.0	0.0	Horz	AV	0.0	35.8	54.0	-18.2	EUT on Side, Ch 11, 6 Mbps
4924.033	30.5	4.9	1.0	153.0	3.0	0.0	Vert	AV	0.0	35.4	54.0	-18.6	EUT on Side, Ch 11, 1 Mbps
4923.858	30.5	4.9	1.0	309.0	3.0	0.0	Horz	AV	0.0	35.4	54.0	-18.6	EUT on Side, Ch 11, MCS0
4922.575	30.5	4.9	1.0	309.0	3.0	0.0	Horz	AV	0.0	35.4	54.0	-18.6	EUT on Side, Ch 11, 54 Mbps
4922.333	30.4	4.9	1.0	309.0	3.0	0.0	Horz	AV	0.0	35.3	54.0	-18.7	EUT on Side, Ch 11, 36 Mbps
4922.550	30.3	4.9	1.0	309.0	3.0	0.0	Horz	AV	0.0	35.2	54.0	-18.8	EUT on Side, Ch 11, MCS7
12309.040	40.6	-6.0	1.2	271.0	3.0	0.0	Horz	AV	0.0	34.6	54.0	-19.4	EUT on Side, Ch 11, 1 Mbps
4924.017	46.4	4.9	1.0	308.0	3.0	0.0	Horz	PK	0.0	51.3	74.0	-22.7	EUT on Side, Ch 11, 1 Mbps
4924.167	45.6	4.9	1.0	319.0	3.0	0.0	Vert	PK	0.0	50.5	74.0	-23.5	EUT Vertical, Ch 11, 1 Mbps
4873.808	45.6	4.7	1.0	331.0	3.0	0.0	Horz	PK	0.0	50.3	74.0	-23.7	EUT on Side, Ch 6, 1 Mbps
4874.267	45.2	4.7	1.0	321.0	3.0	0.0	Vert	PK	0.0	49.9	74.0	-24.1	EUT Vertical, Ch 6, 1 Mbps
4823.742	45.4	4.4	1.1	295.0	3.0	0.0	Horz	PK	0.0	49.8	74.0	-24.2	EUT on Side, Ch 1, 1 Mbps
4923.908	44.4	4.9	1.2	113.0	3.0	0.0	Vert	PK	0.0	49.3	74.0	-24.7	EUT Horizontal, Ch 11, 1 Mbps
4924.183	44.2	4.9	1.0	309.0	3.0	0.0	Horz	PK	0.0	49.1	74.0	-24.9	EUT on Side, Ch 11, 11 Mbps
4824.000	44.2	4.4	1.0	322.0	3.0	0.0	Vert	PK	0.0	48.6	74.0	-25.4	EUT Vertical, Ch 1, 1 Mbps
4923.983	43.1	4.9	1.0	342.0	3.0	0.0	Horz	PK	0.0	48.0	74.0	-26.0	EUT Horizontal, Ch 11, 1 Mbps
4924.075	41.6	4.9	1.0	232.0	3.0	0.0	Horz	PK	0.0	46.5	74.0	-27.5	EUT Vertical, Ch 11, 1 Mbps
4922.325	41.5	4.9	1.0	309.0	3.0	0.0	Horz	PK	0.0	46.4	74.0	-27.6	EUT on Side, Ch 11, MCS0
4923.808	41.2	4.9	1.0	309.0	3.0	0.0	Horz	PK	0.0	46.1	74.0	-27.9	EUT on Side, Ch 11, MCS7
4922.025	41.2	4.9	1.0	309.0	3.0	0.0	Horz	PK	0.0	46.1	74.0	-27.9	EUT on Side, Ch 11, 54 Mbps
4923.733	41.1	4.9	1.0	309.0	3.0	0.0	Horz	PK	0.0	46.0	74.0	-28.0	EUT on Side, Ch 11, 6 Mbps
4924.892	40.6	4.9	1.0	153.0	3.0	0.0	Vert	PK	0.0	45.5	74.0	-28.5	EUT on Side, Ch 11, 1 Mbps
4921.858	40.6	4.9	1.0	309.0	3.0	0.0	Horz	PK	0.0	45.5	74.0	-28.5	EUT on Side, Ch 11, 36 Mbps
12310.280	48.6	-6.0	1.2	271.0	3.0	0.0	Horz	PK	0.0	42.6	74.0	-31.4	EUT on Side, Ch 11, 1 Mbps

Spurious Radiated Emissions

Work Order:	LGPD0100	**Date:**	05/29/13	Trevor Buls	
Project:	None	**Temperature:**	22.4 °C		
Job Site:	MN05	**Humidity:**	50.2% RH		
Serial Number:	1413M00359	**Barometric Pres.:**	1009.4 mbar	**Tested by:**	Trevor Buls
EUT:	37x Torpedo + Wireless SOM -31				
Configuration:	1				
Customer:	Logic PD, Inc.				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting 802.11an, Ch 149, 157, 165 (5745, 5785, 5825 MHz) at 6, 36, 54 Mbps, MCS0, MCS7 -Chip (See comments)				
Deviations:	None				
Comments:	EUT orientation is based on the transmit module.				

Test Specifications	**Test Method**
FCC 15.247:2013	ANSI C63.10:2009

Run #	10	**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
11489.990	43.6	-7.1	1.0	230.0	3.0	0.0	Horz	AV	0.0	36.5	54.0	-17.5	EUT on Side, Ch 149, 6 Mbps
11489.990	43.5	-7.1	1.0	230.0	3.0	0.0	Horz	AV	0.0	36.4	54.0	-17.6	EUT on Side, Ch 149, MCS0
11489.990	43.4	-7.1	1.0	230.0	3.0	0.0	Horz	AV	0.0	36.3	54.0	-17.7	EUT on Side, Ch 149, MCS7
11489.980	43.4	-7.1	1.0	230.0	3.0	0.0	Horz	AV	0.0	36.3	54.0	-17.7	EUT on Side, Ch 149, 36 Mbps
11650.060	43.2	-7.0	1.1	265.0	3.0	0.0	Vert	AV	0.0	36.2	54.0	-17.8	EUT Vertical, Ch 165, 6 Mbps
11490.020	43.3	-7.1	1.0	230.0	3.0	0.0	Horz	AV	0.0	36.2	54.0	-17.8	EUT on Side, Ch 149, 54 Mbps
11569.930	42.5	-7.0	1.1	263.0	3.0	0.0	Vert	AV	0.0	35.5	54.0	-18.5	EUT Vertical, Ch 157, 6 Mbps
11570.030	42.2	-7.0	1.0	221.0	3.0	0.0	Horz	AV	0.0	35.2	54.0	-18.8	EUT on Side, Ch 157, 6 Mbps
11649.980	42.1	-7.0	1.3	297.0	3.0	0.0	Horz	AV	0.0	35.1	54.0	-18.9	EUT on Side, Ch 165, 6 Mbps
11490.040	41.4	-7.1	1.0	251.0	3.0	0.0	Vert	AV	0.0	34.3	54.0	-19.7	EUT Vertical, Ch 149, 6 Mbps
11490.180	51.1	-7.1	1.0	230.0	3.0	0.0	Horz	PK	0.0	44.0	74.0	-30.0	EUT on Side, Ch 149, 6 Mbps
11490.090	51.0	-7.1	1.0	230.0	3.0	0.0	Horz	PK	0.0	43.9	74.0	-30.1	EUT on Side, Ch 149, 36 Mbps
11489.830	50.8	-7.1	1.0	230.0	3.0	0.0	Horz	PK	0.0	43.7	74.0	-30.3	EUT on Side, Ch 149, 54 Mbps
11489.880	50.7	-7.1	1.0	230.0	3.0	0.0	Horz	PK	0.0	43.6	74.0	-30.4	EUT on Side, Ch 149, MCS7
11490.410	50.3	-7.1	1.0	230.0	3.0	0.0	Horz	PK	0.0	43.2	74.0	-30.8	EUT on Side, Ch 149, MCS0
11649.840	50.1	-7.0	1.1	265.0	3.0	0.0	Vert	PK	0.0	43.1	74.0	-30.9	EUT Vertical, Ch 165, 6 Mbps
11570.230	50.0	-7.0	1.0	221.0	3.0	0.0	Horz	PK	0.0	43.0	74.0	-31.0	EUT on Side, Ch 157, 6 Mbps
11569.680	49.9	-7.0	1.1	263.0	3.0	0.0	Vert	PK	0.0	42.9	74.0	-31.1	EUT Vertical, Ch 157, 6 Mbps
11650.170	49.2	-7.0	1.3	297.0	3.0	0.0	Horz	PK	0.0	42.2	74.0	-31.8	EUT on Side, Ch 165, 6 Mbps
11490.110	49.1	-7.1	1.0	251.0	3.0	0.0	Vert	PK	0.0	42.0	74.0	-32.0	EUT Vertical, Ch 149, 6 Mbps

AC POWERLINE CONDUCTED EMISSIONS

TEST DESCRIPTION

The EUT will be powered either directly or indirectly from the AC power line. Therefore, conducted emissions measurements were made on the DC input of the EUT. The 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.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Receiver	Rohde & Schwarz	ESCI	ARG	04/01/2013	12 mo
Attenuator 20dB, BNC	Fairview Microwave	SA01B-20	AQP	08/15/2012	12 mo
High Pass Filter	TTE	H97-100K-50-720B	HGN	05/31/2012	24 mo
DC Power Supply	EZ Digital Co	GP-4303D	TPY	NCR	0 mo
MN03 Cables	ESM Cable Corp.	Conducted Cables	MNC	01/17/2013	12 mo
LISN	Solar Electronics	9252-50-R-24-BNC	LIY	05/24/2013	12 mo

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	2.94 dB	-2.94 dB

CONFIGURATIONS INVESTIGATED

LGPD0096-2

MODES INVESTIGATED

Transmitting 802.11 Ch. 1
Transmitting 802.11 Ch. 11
Transmitting 802.11 Ch. 149
Transmitting 802.11 Ch. 157
Transmitting 802.11 Ch. 165
Transmitting 802.11 Ch. 6

AC POWERLINE CONDUCTED EMISSIONS

EUT:	37x Torpedo + Wireless SOM -31	Work Order:	LGPD0096
Serial Number:	1413M00359	Date:	05/30/2013
Customer:	Logic PD, Inc.	Temperature:	22.8°C
Attendees:	None	Relative Humidity:	60.6%
Customer Project:	None	Bar. Pressure:	1002.2 mb
Tested By:	Mike Sutherland, Trevor Buls	Job Site:	MN03
Power:	5 VDC	Configuration:	LGPD0096-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2013	ANSI C63.10:2009

TEST PARAMETERS

Run #:	1	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

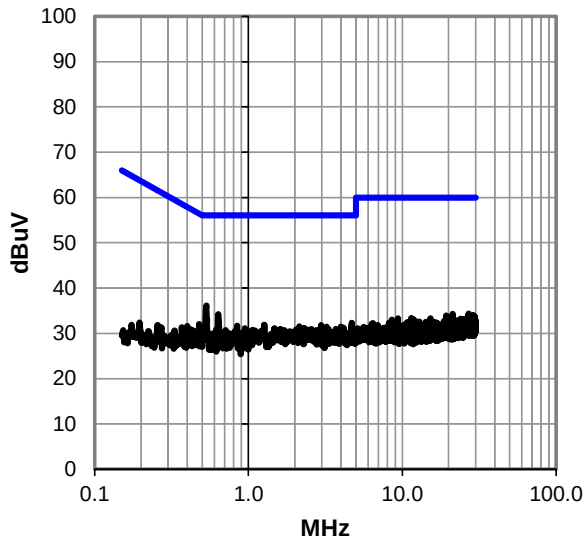
EUT OPERATING MODES

Transmitting 802.11 Ch. 1

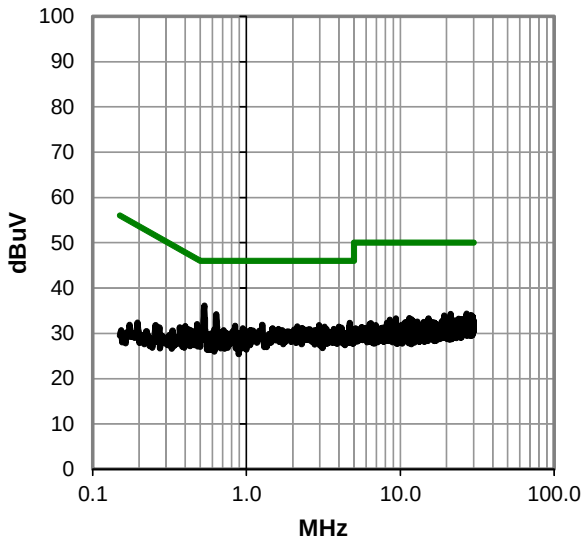
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #1

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.533	15.9	20.2	36.1	56.0	-19.9
0.636	14.0	20.2	34.2	56.0	-21.8
4.688	11.9	20.4	32.3	56.0	-23.7
1.272	11.7	20.2	31.9	56.0	-24.1
2.968	11.5	20.3	31.8	56.0	-24.2
0.844	11.5	20.2	31.7	56.0	-24.3
0.478	11.8	20.2	32.0	56.4	-24.4
2.144	11.2	20.3	31.5	56.0	-24.5
3.984	11.1	20.4	31.5	56.0	-24.5
3.224	11.1	20.3	31.4	56.0	-24.6
4.152	10.9	20.4	31.3	56.0	-24.7
2.304	10.9	20.3	31.2	56.0	-24.8
4.736	10.8	20.4	31.2	56.0	-24.8
1.480	10.9	20.2	31.1	56.0	-24.9
0.946	10.9	20.2	31.1	56.0	-24.9
3.072	10.7	20.3	31.0	56.0	-25.0
4.904	10.6	20.4	31.0	56.0	-25.0
3.704	10.6	20.4	31.0	56.0	-25.0
0.619	10.7	20.2	30.9	56.0	-25.1
0.709	10.5	20.2	30.7	56.0	-25.3
1.048	10.4	20.2	30.6	56.0	-25.4
0.973	10.4	20.2	30.6	56.0	-25.4
26.970	12.3	22.1	34.4	60.0	-25.6
0.483	10.4	20.2	30.6	56.3	-25.7
21.240	12.8	21.5	34.3	60.0	-25.7
0.677	10.0	20.2	30.2	56.0	-25.8

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.533	15.9	20.2	36.1	46.0	-9.9
0.636	14.0	20.2	34.2	46.0	-11.8
4.688	11.9	20.4	32.3	46.0	-13.7
1.272	11.7	20.2	31.9	46.0	-14.1
2.968	11.5	20.3	31.8	46.0	-14.2
0.844	11.5	20.2	31.7	46.0	-14.3
0.478	11.8	20.2	32.0	46.4	-14.4
2.144	11.2	20.3	31.5	46.0	-14.5
3.984	11.1	20.4	31.5	46.0	-14.5
3.224	11.1	20.3	31.4	46.0	-14.6
4.152	10.9	20.4	31.3	46.0	-14.7
2.304	10.9	20.3	31.2	46.0	-14.8
4.736	10.8	20.4	31.2	46.0	-14.8
1.480	10.9	20.2	31.1	46.0	-14.9
0.946	10.9	20.2	31.1	46.0	-14.9
3.072	10.7	20.3	31.0	46.0	-15.0
4.904	10.6	20.4	31.0	46.0	-15.0
3.704	10.6	20.4	31.0	46.0	-15.0
0.619	10.7	20.2	30.9	46.0	-15.1
0.709	10.5	20.2	30.7	46.0	-15.3
1.048	10.4	20.2	30.6	46.0	-15.4
0.973	10.4	20.2	30.6	46.0	-15.4
26.970	12.3	22.1	34.4	50.0	-15.6
0.483	10.4	20.2	30.6	46.3	-15.7
21.240	12.8	21.5	34.3	50.0	-15.7
0.677	10.0	20.2	30.2	46.0	-15.8

CONCLUSION

Pass

Trevor Buls

Tested_By

AC POWERLINE CONDUCTED EMISSIONS

EUT:	37x Torpedo + Wireless SOM -31	Work Order:	LGPD0096
Serial Number:	1413M00359	Date:	05/30/2013
Customer:	Logic PD, Inc.	Temperature:	22.8°C
Attendees:	None	Relative Humidity:	60.6%
Customer Project:	None	Bar. Pressure:	1002.2 mb
Tested By:	Mike Sutherland, Trevor Buls	Job Site:	MN03
Power:	5 VDC	Configuration:	LGPD0096-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2013	ANSI C63.10:2009

TEST PARAMETERS

Run #:	2	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

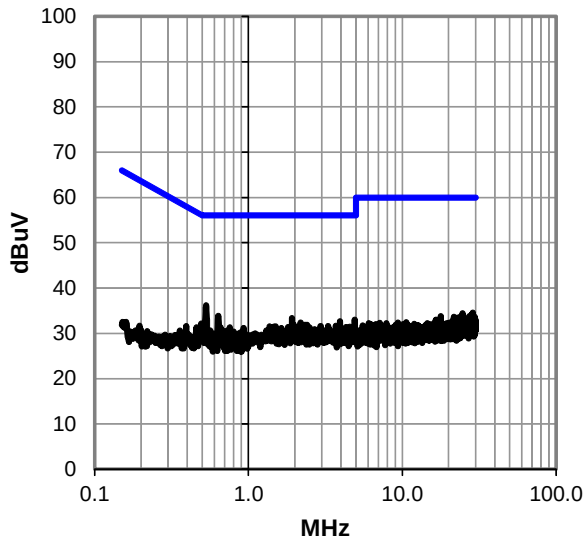
EUT OPERATING MODES

Transmitting 802.11 Ch. 1

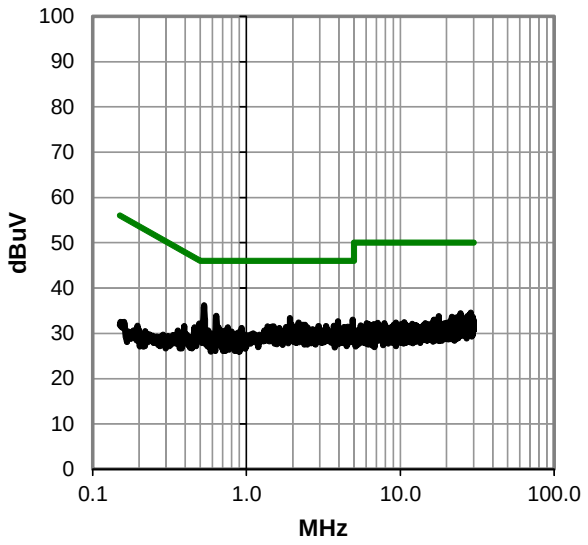
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #2

Peak Data - vs - Quasi Peak Limit

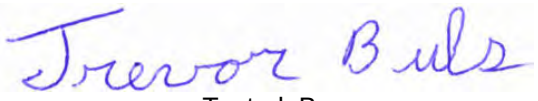
Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.531	16.0	20.2	36.2	56.0	-19.8
0.636	13.7	20.2	33.9	56.0	-22.1
1.920	13.1	20.3	33.4	56.0	-22.6
4.912	12.6	20.4	33.0	56.0	-23.0
3.936	12.3	20.4	32.7	56.0	-23.3
2.184	12.1	20.3	32.4	56.0	-23.6
0.493	12.0	20.2	32.2	56.1	-23.9
1.968	11.7	20.3	32.0	56.0	-24.0
2.400	11.6	20.3	31.9	56.0	-24.1
2.328	11.6	20.3	31.9	56.0	-24.1
3.696	11.3	20.4	31.7	56.0	-24.3
3.288	11.3	20.3	31.6	56.0	-24.4
2.944	11.3	20.3	31.6	56.0	-24.4
1.504	11.3	20.3	31.6	56.0	-24.4
1.368	11.3	20.2	31.5	56.0	-24.5
4.560	11.1	20.4	31.5	56.0	-24.5
1.456	11.2	20.2	31.4	56.0	-24.6
1.816	11.1	20.3	31.4	56.0	-24.6
4.312	11.0	20.4	31.4	56.0	-24.6
2.496	11.0	20.3	31.3	56.0	-24.7
0.658	11.1	20.2	31.3	56.0	-24.7
0.755	11.1	20.2	31.3	56.0	-24.7
0.930	11.0	20.2	31.2	56.0	-24.8
1.640	10.9	20.3	31.2	56.0	-24.8
4.144	10.6	20.4	31.0	56.0	-25.0
4.096	10.6	20.4	31.0	56.0	-25.0

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.531	16.0	20.2	36.2	46.0	-9.8
0.636	13.7	20.2	33.9	46.0	-12.1
1.920	13.1	20.3	33.4	46.0	-12.6
4.912	12.6	20.4	33.0	46.0	-13.0
3.936	12.3	20.4	32.7	46.0	-13.3
2.184	12.1	20.3	32.4	46.0	-13.6
0.493	12.0	20.2	32.2	46.1	-13.9
1.968	11.7	20.3	32.0	46.0	-14.0
2.400	11.6	20.3	31.9	46.0	-14.1
2.328	11.6	20.3	31.9	46.0	-14.1
3.696	11.3	20.4	31.7	46.0	-14.3
3.288	11.3	20.3	31.6	46.0	-14.4
2.944	11.3	20.3	31.6	46.0	-14.4
1.504	11.3	20.3	31.6	46.0	-14.4
1.368	11.3	20.2	31.5	46.0	-14.5
4.560	11.1	20.4	31.5	46.0	-14.5
1.456	11.2	20.2	31.4	46.0	-14.6
1.816	11.1	20.3	31.4	46.0	-14.6
4.312	11.0	20.4	31.4	46.0	-14.6
2.496	11.0	20.3	31.3	46.0	-14.7
0.658	11.1	20.2	31.3	46.0	-14.7
0.755	11.1	20.2	31.3	46.0	-14.7
0.930	11.0	20.2	31.2	46.0	-14.8
1.640	10.9	20.3	31.2	46.0	-14.8
4.144	10.6	20.4	31.0	46.0	-15.0
4.096	10.6	20.4	31.0	46.0	-15.0

CONCLUSION

Pass



Tested_By

AC POWERLINE CONDUCTED EMISSIONS

EUT:	37x Torpedo + Wireless SOM -31	Work Order:	LGPD0096
Serial Number:	1413M00359	Date:	05/30/2013
Customer:	Logic PD, Inc.	Temperature:	22.8°C
Attendees:	None	Relative Humidity:	60.6%
Customer Project:	None	Bar. Pressure:	1002.2 mb
Tested By:	Mike Sutherland, Trevor Buls	Job Site:	MN03
Power:	5 VDC	Configuration:	LGPD0096-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2013	ANSI C63.10:2009

TEST PARAMETERS

Run #:	3	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

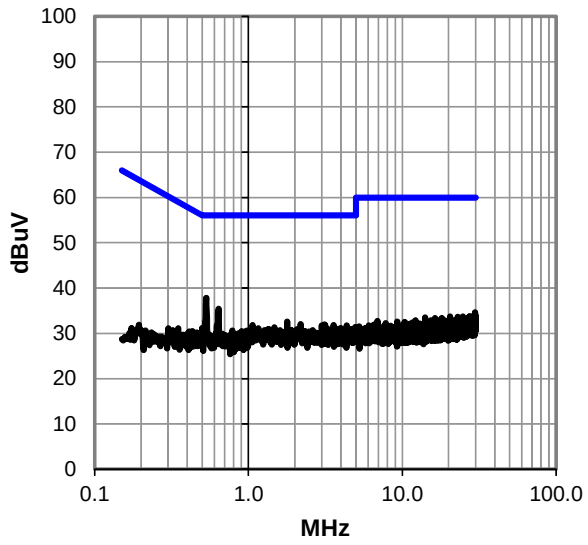
EUT OPERATING MODES

Transmitting 802.11 Ch. 6

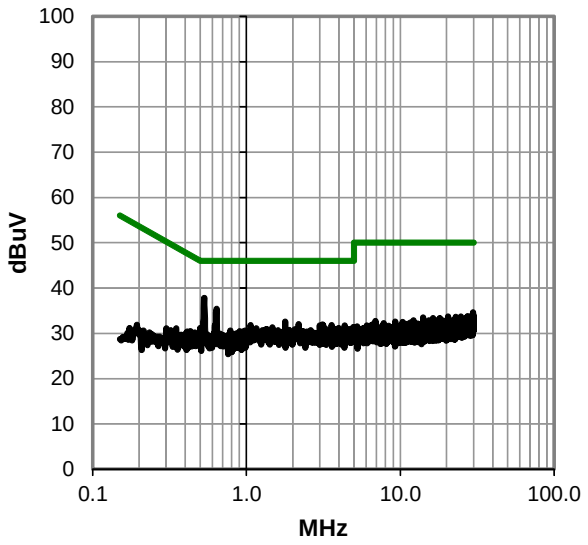
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #3

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.531	17.6	20.2	37.8	56.0	-18.2
0.640	15.2	20.2	35.4	56.0	-20.6
1.784	12.3	20.3	32.6	56.0	-23.4
2.184	11.7	20.3	32.0	56.0	-24.0
3.120	11.6	20.3	31.9	56.0	-24.1
0.624	11.7	20.2	31.9	56.0	-24.1
3.576	11.5	20.4	31.9	56.0	-24.1
1.064	11.6	20.2	31.8	56.0	-24.2
4.352	11.4	20.4	31.8	56.0	-24.2
3.152	11.4	20.3	31.7	56.0	-24.3
3.000	11.4	20.3	31.7	56.0	-24.3
4.944	11.0	20.4	31.4	56.0	-24.6
1.472	11.1	20.2	31.3	56.0	-24.7
0.500	11.0	20.2	31.2	56.0	-24.8
3.976	10.8	20.4	31.2	56.0	-24.8
4.744	10.6	20.4	31.0	56.0	-25.0
3.752	10.6	20.4	31.0	56.0	-25.0
1.360	10.7	20.2	30.9	56.0	-25.1
3.848	10.5	20.4	30.9	56.0	-25.1
1.896	10.5	20.3	30.8	56.0	-25.2
2.616	10.4	20.3	30.7	56.0	-25.3
29.740	12.3	22.4	34.7	60.0	-25.3
0.786	10.4	20.2	30.6	56.0	-25.4
0.980	10.4	20.2	30.6	56.0	-25.4
4.304	10.2	20.4	30.6	56.0	-25.4
0.903	10.3	20.2	30.5	56.0	-25.5

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.531	17.6	20.2	37.8	46.0	-8.2
0.640	15.2	20.2	35.4	46.0	-10.6
1.784	12.3	20.3	32.6	46.0	-13.4
2.184	11.7	20.3	32.0	46.0	-14.0
3.120	11.6	20.3	31.9	46.0	-14.1
0.624	11.7	20.2	31.9	46.0	-14.1
3.576	11.5	20.4	31.9	46.0	-14.1
1.064	11.6	20.2	31.8	46.0	-14.2
4.352	11.4	20.4	31.8	46.0	-14.2
3.152	11.4	20.3	31.7	46.0	-14.3
3.000	11.4	20.3	31.7	46.0	-14.3
4.944	11.0	20.4	31.4	46.0	-14.6
1.472	11.1	20.2	31.3	46.0	-14.7
0.500	11.0	20.2	31.2	46.0	-14.8
3.976	10.8	20.4	31.2	46.0	-14.8
4.744	10.6	20.4	31.0	46.0	-15.0
3.752	10.6	20.4	31.0	46.0	-15.0
1.360	10.7	20.2	30.9	46.0	-15.1
3.848	10.5	20.4	30.9	46.0	-15.1
1.896	10.5	20.3	30.8	46.0	-15.2
2.616	10.4	20.3	30.7	46.0	-15.3
29.740	12.3	22.4	34.7	50.0	-15.3
0.786	10.4	20.2	30.6	46.0	-15.4
0.980	10.4	20.2	30.6	46.0	-15.4
4.304	10.2	20.4	30.6	46.0	-15.4
0.903	10.3	20.2	30.5	46.0	-15.5

CONCLUSION

Pass

Trevor Buls

Tested_By

AC POWERLINE CONDUCTED EMISSIONS

EUT:	37x Torpedo + Wireless SOM -31	Work Order:	LGPD0096
Serial Number:	1413M00359	Date:	05/30/2013
Customer:	Logic PD, Inc.	Temperature:	22.8°C
Attendees:	None	Relative Humidity:	60.6%
Customer Project:	None	Bar. Pressure:	1002.2 mb
Tested By:	Mike Sutherland, Trevor Buls	Job Site:	MN03
Power:	5 VDC	Configuration:	LGPD0096-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2013	ANSI C63.10:2009

TEST PARAMETERS

Run #:	4	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

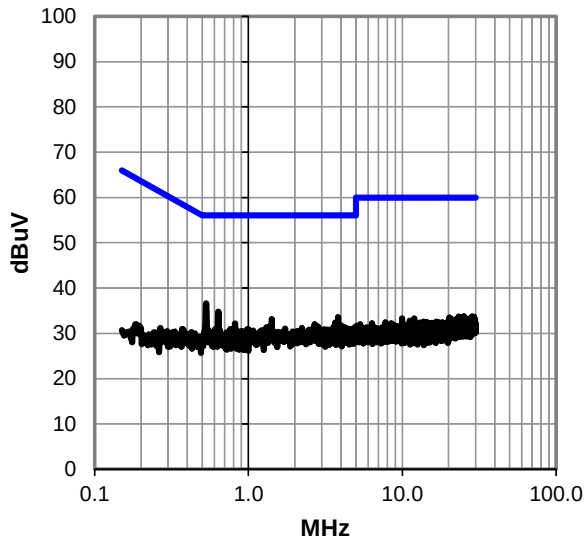
EUT OPERATING MODES

Transmitting 802.11 Ch. 6

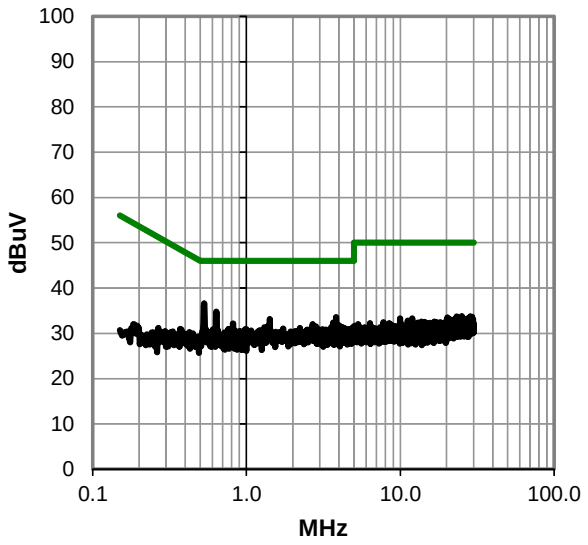
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #4

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.531	16.4	20.2	36.6	56.0	-19.4
0.638	14.6	20.2	34.8	56.0	-21.2
3.832	13.2	20.4	33.6	56.0	-22.4
1.416	12.9	20.2	33.1	56.0	-22.9
3.664	12.0	20.4	32.4	56.0	-23.6
0.818	12.0	20.2	32.2	56.0	-23.8
2.696	11.7	20.3	32.0	56.0	-24.0
4.008	11.4	20.4	31.8	56.0	-24.2
3.736	11.3	20.4	31.7	56.0	-24.3
1.368	11.3	20.2	31.5	56.0	-24.5
2.824	11.2	20.3	31.5	56.0	-24.5
3.576	11.1	20.4	31.5	56.0	-24.5
4.184	11.0	20.4	31.4	56.0	-24.6
1.304	11.1	20.2	31.3	56.0	-24.7
4.912	10.9	20.4	31.3	56.0	-24.7
2.224	10.9	20.3	31.2	56.0	-24.8
4.320	10.8	20.4	31.2	56.0	-24.8
1.736	10.8	20.3	31.1	56.0	-24.9
0.762	10.8	20.2	31.0	56.0	-25.0
4.800	10.6	20.4	31.0	56.0	-25.0
3.120	10.6	20.3	30.9	56.0	-25.1
2.952	10.6	20.3	30.9	56.0	-25.1
2.856	10.6	20.3	30.9	56.0	-25.1
0.607	10.7	20.2	30.9	56.0	-25.1
0.980	10.7	20.2	30.9	56.0	-25.1
1.000	10.7	20.2	30.9	56.0	-25.1

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.531	16.4	20.2	36.6	46.0	-9.4
0.638	14.6	20.2	34.8	46.0	-11.2
3.832	13.2	20.4	33.6	46.0	-12.4
1.416	12.9	20.2	33.1	46.0	-12.9
3.664	12.0	20.4	32.4	46.0	-13.6
0.818	12.0	20.2	32.2	46.0	-13.8
2.696	11.7	20.3	32.0	46.0	-14.0
4.008	11.4	20.4	31.8	46.0	-14.2
3.736	11.3	20.4	31.7	46.0	-14.3
1.368	11.3	20.2	31.5	46.0	-14.5
2.824	11.2	20.3	31.5	46.0	-14.5
3.576	11.1	20.4	31.5	46.0	-14.5
4.184	11.0	20.4	31.4	46.0	-14.6
1.304	11.1	20.2	31.3	46.0	-14.7
4.912	10.9	20.4	31.3	46.0	-14.7
2.224	10.9	20.3	31.2	46.0	-14.8
4.320	10.8	20.4	31.2	46.0	-14.8
1.736	10.8	20.3	31.1	46.0	-14.9
0.762	10.8	20.2	31.0	46.0	-15.0
4.800	10.6	20.4	31.0	46.0	-15.0
3.120	10.6	20.3	30.9	46.0	-15.1
2.952	10.6	20.3	30.9	46.0	-15.1
2.856	10.6	20.3	30.9	46.0	-15.1
0.607	10.7	20.2	30.9	46.0	-15.1
0.980	10.7	20.2	30.9	46.0	-15.1
1.000	10.7	20.2	30.9	46.0	-15.1

CONCLUSION

Pass

Trevor Buls

Tested_By

AC POWERLINE CONDUCTED EMISSIONS

EUT:	37x Torpedo + Wireless SOM -31	Work Order:	LGPD0096
Serial Number:	1413M00359	Date:	05/30/2013
Customer:	Logic PD, Inc.	Temperature:	22.8°C
Attendees:	None	Relative Humidity:	60.6%
Customer Project:	None	Bar. Pressure:	1002.2 mb
Tested By:	Mike Sutherland, Trevor Buls	Job Site:	MN03
Power:	5 VDC	Configuration:	LGPD0096-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2013	ANSI C63.10:2009

TEST PARAMETERS

Run #:	5	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

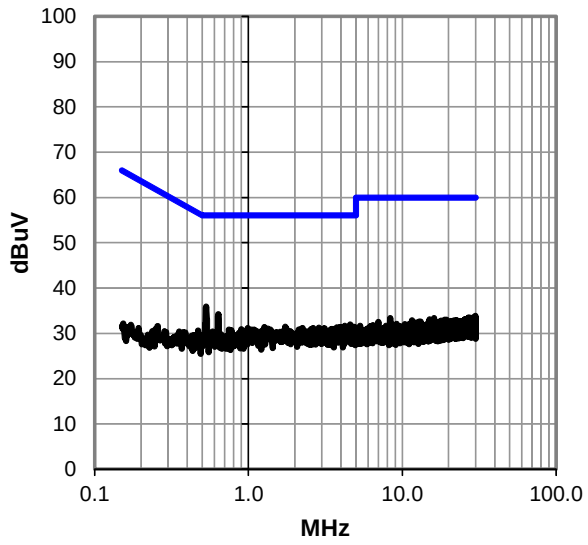
EUT OPERATING MODES

Transmitting 802.11 Ch. 11

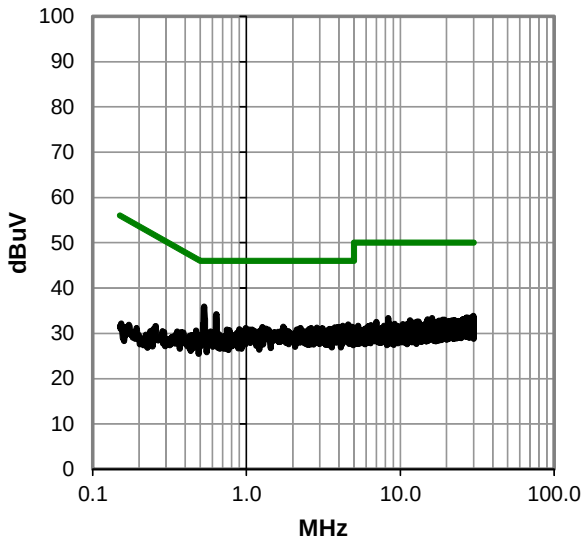
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #5

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.531	15.7	20.2	35.9	56.0	-20.1
0.636	14.0	20.2	34.2	56.0	-21.8
4.576	11.6	20.4	32.0	56.0	-24.0
4.232	11.3	20.4	31.7	56.0	-24.3
4.832	11.1	20.4	31.5	56.0	-24.5
1.736	11.2	20.3	31.5	56.0	-24.5
1.272	11.2	20.2	31.4	56.0	-24.6
4.904	11.0	20.4	31.4	56.0	-24.6
3.968	11.0	20.4	31.4	56.0	-24.6
3.936	11.0	20.4	31.4	56.0	-24.6
3.752	11.0	20.4	31.4	56.0	-24.6
2.872	10.9	20.3	31.2	56.0	-24.8
2.632	10.9	20.3	31.2	56.0	-24.8
2.240	10.9	20.3	31.2	56.0	-24.8
0.988	11.0	20.2	31.2	56.0	-24.8
3.120	10.8	20.3	31.1	56.0	-24.9
1.336	10.8	20.2	31.0	56.0	-25.0
5.000	10.6	20.4	31.0	56.0	-25.0
3.552	10.6	20.4	31.0	56.0	-25.0
3.472	10.6	20.3	30.9	56.0	-25.1
2.576	10.6	20.3	30.9	56.0	-25.1
0.900	10.7	20.2	30.9	56.0	-25.1
3.424	10.5	20.3	30.8	56.0	-25.2
0.747	10.6	20.2	30.8	56.0	-25.2
0.776	10.5	20.2	30.7	56.0	-25.3
0.584	10.2	20.2	30.4	56.0	-25.6

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.531	15.7	20.2	35.9	46.0	-10.1
0.636	14.0	20.2	34.2	46.0	-11.8
4.576	11.6	20.4	32.0	46.0	-14.0
4.232	11.3	20.4	31.7	46.0	-14.3
4.832	11.1	20.4	31.5	46.0	-14.5
1.736	11.2	20.3	31.5	46.0	-14.5
1.272	11.2	20.2	31.4	46.0	-14.6
4.904	11.0	20.4	31.4	46.0	-14.6
3.968	11.0	20.4	31.4	46.0	-14.6
3.936	11.0	20.4	31.4	46.0	-14.6
3.752	11.0	20.4	31.4	46.0	-14.6
2.872	10.9	20.3	31.2	46.0	-14.8
2.632	10.9	20.3	31.2	46.0	-14.8
2.240	10.9	20.3	31.2	46.0	-14.8
0.988	11.0	20.2	31.2	46.0	-14.8
3.120	10.8	20.3	31.1	46.0	-14.9
1.336	10.8	20.2	31.0	46.0	-15.0
5.000	10.6	20.4	31.0	46.0	-15.0
3.552	10.6	20.4	31.0	46.0	-15.0
3.472	10.6	20.3	30.9	46.0	-15.1
2.576	10.6	20.3	30.9	46.0	-15.1
0.900	10.7	20.2	30.9	46.0	-15.1
3.424	10.5	20.3	30.8	46.0	-15.2
0.747	10.6	20.2	30.8	46.0	-15.2
0.776	10.5	20.2	30.7	46.0	-15.3
0.584	10.2	20.2	30.4	46.0	-15.6

CONCLUSION

Pass

Trevor Buls

Tested_By

AC POWERLINE CONDUCTED EMISSIONS

EUT:	37x Torpedo + Wireless SOM -31	Work Order:	LGPD0096
Serial Number:	1413M00359	Date:	05/30/2013
Customer:	Logic PD, Inc.	Temperature:	22.8°C
Attendees:	None	Relative Humidity:	60.6%
Customer Project:	None	Bar. Pressure:	1002.2 mb
Tested By:	Mike Sutherland, Trevor Buls	Job Site:	MN03
Power:	5 VDC	Configuration:	LGPD0096-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2013	ANSI C63.10:2009

TEST PARAMETERS

Run #:	6	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

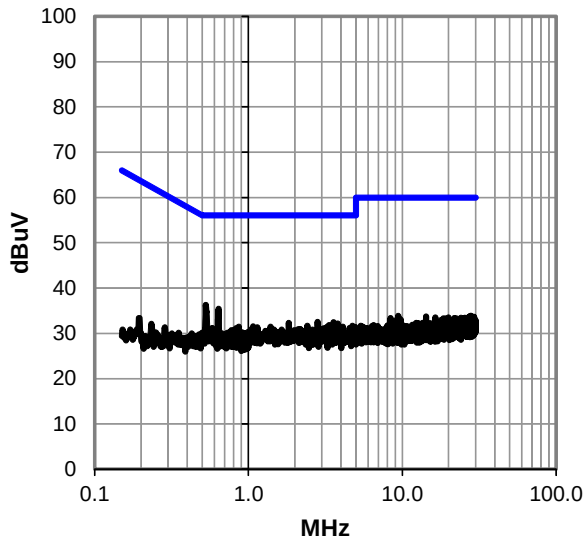
EUT OPERATING MODES

Transmitting 802.11 Ch. 11

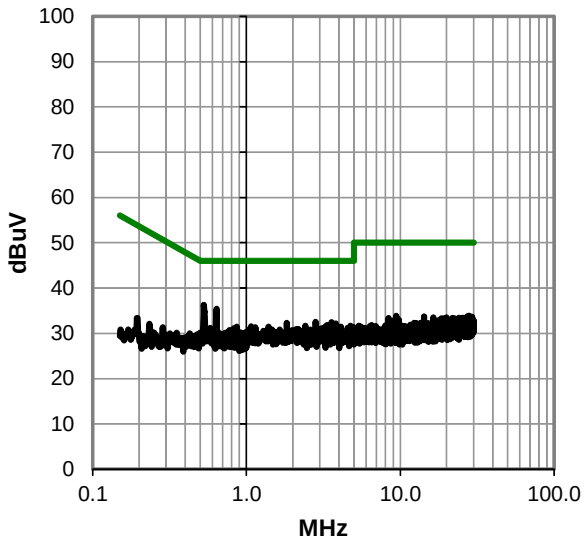
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #6

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.529	16.1	20.2	36.3	56.0	-19.7
0.640	15.2	20.2	35.4	56.0	-20.6
2.816	12.2	20.3	32.5	56.0	-23.5
3.568	12.1	20.4	32.5	56.0	-23.5
1.824	12.0	20.3	32.3	56.0	-23.7
3.800	11.8	20.4	32.2	56.0	-23.8
3.344	11.5	20.3	31.8	56.0	-24.2
2.408	11.4	20.3	31.7	56.0	-24.3
4.736	11.3	20.4	31.7	56.0	-24.3
1.072	11.3	20.2	31.5	56.0	-24.5
0.866	11.3	20.2	31.5	56.0	-24.5
4.104	11.1	20.4	31.5	56.0	-24.5
3.496	11.1	20.3	31.4	56.0	-24.6
3.248	11.1	20.3	31.4	56.0	-24.6
1.392	11.2	20.2	31.4	56.0	-24.6
4.960	11.0	20.4	31.4	56.0	-24.6
1.144	11.1	20.2	31.3	56.0	-24.7
4.544	10.8	20.4	31.2	56.0	-24.8
4.024	10.8	20.4	31.2	56.0	-24.8
3.088	10.8	20.3	31.1	56.0	-24.9
0.830	10.9	20.2	31.1	56.0	-24.9
3.712	10.7	20.4	31.1	56.0	-24.9
1.096	10.8	20.2	31.0	56.0	-25.0
2.168	10.6	20.3	30.9	56.0	-25.1
2.600	10.5	20.3	30.8	56.0	-25.2
0.774	10.5	20.2	30.7	56.0	-25.3

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.529	16.1	20.2	36.3	46.0	-9.7
0.640	15.2	20.2	35.4	46.0	-10.6
2.816	12.2	20.3	32.5	46.0	-13.5
3.568	12.1	20.4	32.5	46.0	-13.5
1.824	12.0	20.3	32.3	46.0	-13.7
3.800	11.8	20.4	32.2	46.0	-13.8
3.344	11.5	20.3	31.8	46.0	-14.2
2.408	11.4	20.3	31.7	46.0	-14.3
4.736	11.3	20.4	31.7	46.0	-14.3
1.072	11.3	20.2	31.5	46.0	-14.5
0.866	11.3	20.2	31.5	46.0	-14.5
4.104	11.1	20.4	31.5	46.0	-14.5
3.496	11.1	20.3	31.4	46.0	-14.6
3.248	11.1	20.3	31.4	46.0	-14.6
1.392	11.2	20.2	31.4	46.0	-14.6
4.960	11.0	20.4	31.4	46.0	-14.6
1.144	11.1	20.2	31.3	46.0	-14.7
4.544	10.8	20.4	31.2	46.0	-14.8
4.024	10.8	20.4	31.2	46.0	-14.8
3.088	10.8	20.3	31.1	46.0	-14.9
0.830	10.9	20.2	31.1	46.0	-14.9
3.712	10.7	20.4	31.1	46.0	-14.9
1.096	10.8	20.2	31.0	46.0	-15.0
2.168	10.6	20.3	30.9	46.0	-15.1
2.600	10.5	20.3	30.8	46.0	-15.2
0.774	10.5	20.2	30.7	46.0	-15.3

CONCLUSION

Pass

Trevor Buls

Tested_By

AC POWERLINE CONDUCTED EMISSIONS

EUT:	37x Torpedo + Wireless SOM -31	Work Order:	LGPD0096
Serial Number:	1413M00359	Date:	05/30/2013
Customer:	Logic PD, Inc.	Temperature:	22.8°C
Attendees:	None	Relative Humidity:	60.6%
Customer Project:	None	Bar. Pressure:	1002.2 mb
Tested By:	Mike Sutherland, Trevor Buls	Job Site:	MN03
Power:	5 VDC	Configuration:	LGPD0096-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2013	ANSI C63.10:2009

TEST PARAMETERS

Run #:	7	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

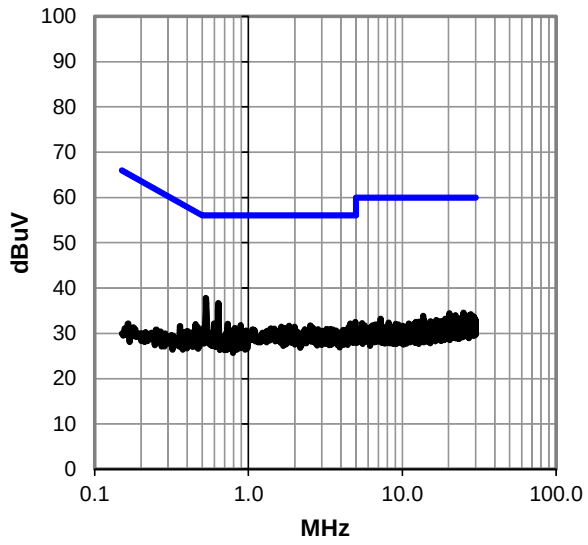
EUT OPERATING MODES

Transmitting 802.11 Ch. 149

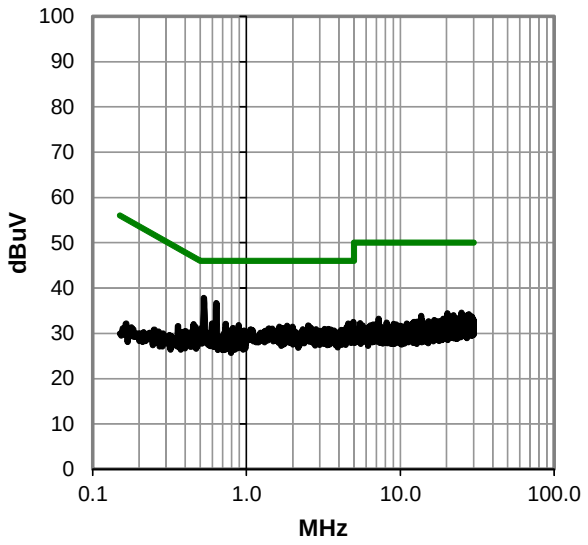
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #7

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.529	17.6	20.2	37.8	56.0	-18.2
0.636	16.5	20.2	36.7	56.0	-19.3
4.952	12.1	20.4	32.5	56.0	-23.5
0.597	12.0	20.2	32.2	56.0	-23.8
4.592	11.8	20.4	32.2	56.0	-23.8
0.731	11.9	20.2	32.1	56.0	-23.9
0.889	11.6	20.2	31.8	56.0	-24.2
2.520	11.4	20.3	31.7	56.0	-24.3
1.840	11.4	20.3	31.7	56.0	-24.3
2.560	11.2	20.3	31.5	56.0	-24.5
1.992	11.2	20.3	31.5	56.0	-24.5
1.640	11.2	20.3	31.5	56.0	-24.5
2.632	10.9	20.3	31.2	56.0	-24.8
0.816	11.0	20.2	31.2	56.0	-24.8
0.453	11.8	20.2	32.0	56.8	-24.8
1.720	10.9	20.3	31.2	56.0	-24.8
0.505	10.9	20.2	31.1	56.0	-24.9
1.472	10.8	20.2	31.0	56.0	-25.0
3.408	10.6	20.3	30.9	56.0	-25.1
3.224	10.6	20.3	30.9	56.0	-25.1
2.840	10.6	20.3	30.9	56.0	-25.1
0.466	11.3	20.2	31.5	56.6	-25.1
2.320	10.6	20.3	30.9	56.0	-25.1
3.536	10.5	20.4	30.9	56.0	-25.1
4.136	10.4	20.4	30.8	56.0	-25.2
4.304	10.3	20.4	30.7	56.0	-25.3

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.529	17.6	20.2	37.8	46.0	-8.2
0.636	16.5	20.2	36.7	46.0	-9.3
4.952	12.1	20.4	32.5	46.0	-13.5
0.597	12.0	20.2	32.2	46.0	-13.8
4.592	11.8	20.4	32.2	46.0	-13.8
0.731	11.9	20.2	32.1	46.0	-13.9
0.889	11.6	20.2	31.8	46.0	-14.2
2.520	11.4	20.3	31.7	46.0	-14.3
1.840	11.4	20.3	31.7	46.0	-14.3
2.560	11.2	20.3	31.5	46.0	-14.5
1.992	11.2	20.3	31.5	46.0	-14.5
1.640	11.2	20.3	31.5	46.0	-14.5
2.632	10.9	20.3	31.2	46.0	-14.8
0.816	11.0	20.2	31.2	46.0	-14.8
0.453	11.8	20.2	32.0	46.8	-14.8
1.720	10.9	20.3	31.2	46.0	-14.8
0.505	10.9	20.2	31.1	46.0	-14.9
1.472	10.8	20.2	31.0	46.0	-15.0
3.408	10.6	20.3	30.9	46.0	-15.1
3.224	10.6	20.3	30.9	46.0	-15.1
2.840	10.6	20.3	30.9	46.0	-15.1
0.466	11.3	20.2	31.5	46.6	-15.1
2.320	10.6	20.3	30.9	46.0	-15.1
3.536	10.5	20.4	30.9	46.0	-15.1
4.136	10.4	20.4	30.8	46.0	-15.2
4.304	10.3	20.4	30.7	46.0	-15.3

CONCLUSION

Pass

Trevor Buls

Tested_By

AC POWERLINE CONDUCTED EMISSIONS

EUT:	37x Torpedo + Wireless SOM -31	Work Order:	LGPD0096
Serial Number:	1413M00359	Date:	05/30/2013
Customer:	Logic PD, Inc.	Temperature:	22.8°C
Attendees:	None	Relative Humidity:	60.6%
Customer Project:	None	Bar. Pressure:	1002.2 mb
Tested By:	Mike Sutherland, Trevor Buls	Job Site:	MN03
Power:	5 VDC	Configuration:	LGPD0096-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2013	ANSI C63.10:2009

TEST PARAMETERS

Run #:	8	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

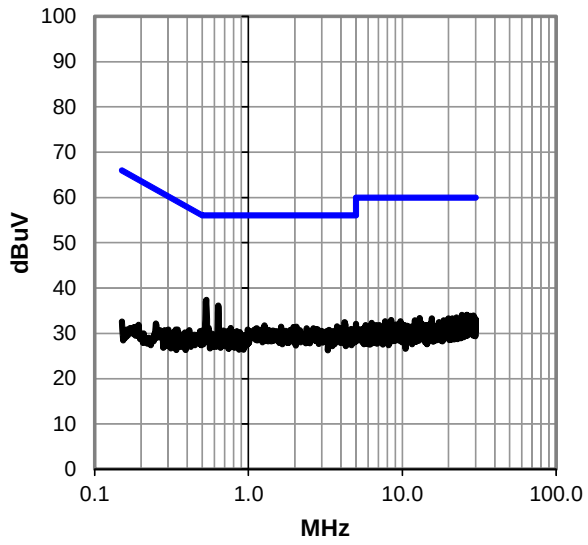
EUT OPERATING MODES

Transmitting 802.11 Ch. 149

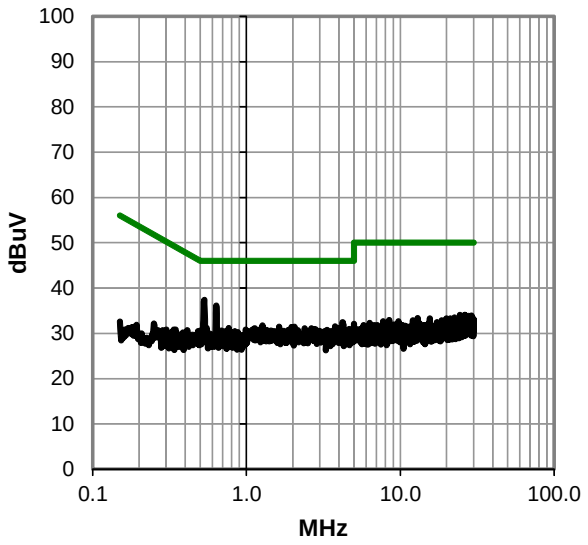
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #8

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.533	17.2	20.2	37.4	56.0	-18.6
0.636	15.9	20.2	36.1	56.0	-19.9
4.224	12.1	20.4	32.5	56.0	-23.5
5.000	11.7	20.4	32.1	56.0	-23.9
1.272	11.5	20.2	31.7	56.0	-24.3
3.760	11.2	20.4	31.6	56.0	-24.4
2.048	11.2	20.3	31.5	56.0	-24.5
1.632	11.2	20.3	31.5	56.0	-24.5
1.960	11.1	20.3	31.4	56.0	-24.6
0.551	11.0	20.2	31.2	56.0	-24.8
0.767	11.0	20.2	31.2	56.0	-24.8
2.648	10.8	20.3	31.1	56.0	-24.9
1.136	10.9	20.2	31.1	56.0	-24.9
2.392	10.8	20.3	31.1	56.0	-24.9
4.656	10.6	20.4	31.0	56.0	-25.0
0.991	10.6	20.2	30.8	56.0	-25.2
3.336	10.4	20.3	30.7	56.0	-25.3
0.687	10.4	20.2	30.6	56.0	-25.4
0.730	10.3	20.2	30.5	56.0	-25.5
0.838	10.3	20.2	30.5	56.0	-25.5
0.786	10.2	20.2	30.4	56.0	-25.6
0.878	10.1	20.2	30.3	56.0	-25.7
0.483	10.3	20.2	30.5	56.3	-25.8
26.370	12.1	22.0	34.1	60.0	-25.9
26.310	12.1	22.0	34.1	60.0	-25.9
24.490	12.3	21.8	34.1	60.0	-25.9

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.533	17.2	20.2	37.4	46.0	-8.6
0.636	15.9	20.2	36.1	46.0	-9.9
4.224	12.1	20.4	32.5	46.0	-13.5
5.000	11.7	20.4	32.1	46.0	-13.9
1.272	11.5	20.2	31.7	46.0	-14.3
3.760	11.2	20.4	31.6	46.0	-14.4
2.048	11.2	20.3	31.5	46.0	-14.5
1.632	11.2	20.3	31.5	46.0	-14.5
1.960	11.1	20.3	31.4	46.0	-14.6
0.551	11.0	20.2	31.2	46.0	-14.8
0.767	11.0	20.2	31.2	46.0	-14.8
2.648	10.8	20.3	31.1	46.0	-14.9
1.136	10.9	20.2	31.1	46.0	-14.9
2.392	10.8	20.3	31.1	46.0	-14.9
4.656	10.6	20.4	31.0	46.0	-15.0
0.991	10.6	20.2	30.8	46.0	-15.2
3.336	10.4	20.3	30.7	46.0	-15.3
0.687	10.4	20.2	30.6	46.0	-15.4
0.730	10.3	20.2	30.5	46.0	-15.5
0.838	10.3	20.2	30.5	46.0	-15.5
0.786	10.2	20.2	30.4	46.0	-15.6
0.878	10.1	20.2	30.3	46.0	-15.7
0.483	10.3	20.2	30.5	46.3	-15.8
26.370	12.1	22.0	34.1	50.0	-15.9
26.310	12.1	22.0	34.1	50.0	-15.9
24.490	12.3	21.8	34.1	50.0	-15.9

CONCLUSION

Pass

Trevor Buls

Tested_By

AC POWERLINE CONDUCTED EMISSIONS

EUT:	37x Torpedo + Wireless SOM -31	Work Order:	LGPD0096
Serial Number:	1413M00359	Date:	05/30/2013
Customer:	Logic PD, Inc.	Temperature:	22.8°C
Attendees:	None	Relative Humidity:	60.6%
Customer Project:	None	Bar. Pressure:	1002.2 mb
Tested By:	Mike Sutherland, Trevor Buls	Job Site:	MN03
Power:	5 VDC	Configuration:	LGPD0096-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2013	ANSI C63.10:2009

TEST PARAMETERS

Run #:	9	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

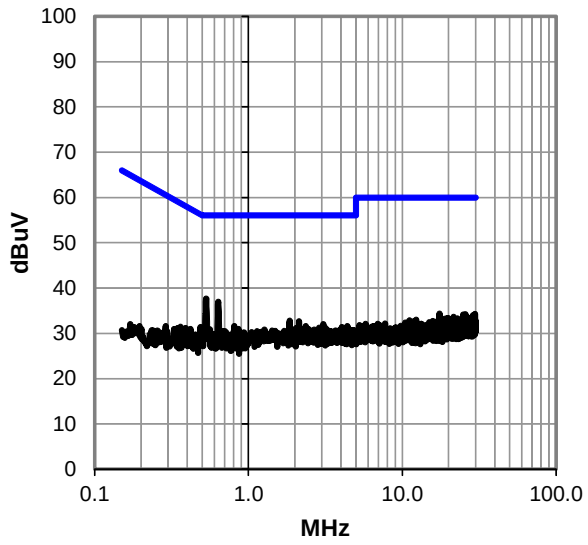
EUT OPERATING MODES

Transmitting 802.11 Ch. 157

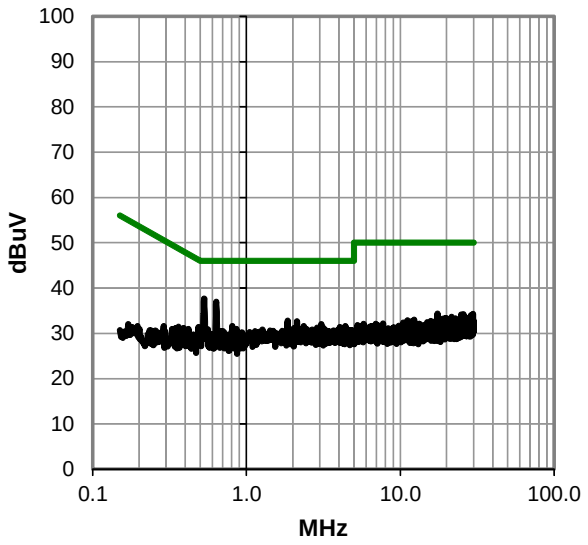
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #9

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.531	17.5	20.2	37.7	56.0	-18.3
0.636	16.8	20.2	37.0	56.0	-19.0
1.856	12.5	20.3	32.8	56.0	-23.2
2.128	12.4	20.3	32.7	56.0	-23.3
3.064	11.7	20.3	32.0	56.0	-24.0
2.360	11.3	20.3	31.6	56.0	-24.4
0.810	11.4	20.2	31.6	56.0	-24.4
4.384	11.2	20.4	31.6	56.0	-24.4
4.040	11.0	20.4	31.4	56.0	-24.6
4.440	10.9	20.4	31.3	56.0	-24.7
2.880	10.9	20.3	31.2	56.0	-24.8
0.488	11.2	20.2	31.4	56.2	-24.8
2.040	10.9	20.3	31.2	56.0	-24.8
3.184	10.8	20.3	31.1	56.0	-24.9
0.862	10.8	20.2	31.0	56.0	-25.0
4.200	10.6	20.4	31.0	56.0	-25.0
2.472	10.6	20.3	30.9	56.0	-25.1
1.912	10.6	20.3	30.9	56.0	-25.1
1.272	10.6	20.2	30.8	56.0	-25.2
4.872	10.3	20.4	30.7	56.0	-25.3
1.976	10.3	20.3	30.6	56.0	-25.4
1.712	10.3	20.3	30.6	56.0	-25.4
1.136	10.3	20.2	30.5	56.0	-25.5
0.682	10.3	20.2	30.5	56.0	-25.5
17.450	13.2	21.2	34.4	60.0	-25.6
1.048	10.1	20.2	30.3	56.0	-25.7

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.531	17.5	20.2	37.7	46.0	-8.3
0.636	16.8	20.2	37.0	46.0	-9.0
1.856	12.5	20.3	32.8	46.0	-13.2
2.128	12.4	20.3	32.7	46.0	-13.3
3.064	11.7	20.3	32.0	46.0	-14.0
2.360	11.3	20.3	31.6	46.0	-14.4
0.810	11.4	20.2	31.6	46.0	-14.4
4.384	11.2	20.4	31.6	46.0	-14.4
4.040	11.0	20.4	31.4	46.0	-14.6
4.440	10.9	20.4	31.3	46.0	-14.7
2.880	10.9	20.3	31.2	46.0	-14.8
0.488	11.2	20.2	31.4	46.2	-14.8
2.040	10.9	20.3	31.2	46.0	-14.8
3.184	10.8	20.3	31.1	46.0	-14.9
0.862	10.8	20.2	31.0	46.0	-15.0
4.200	10.6	20.4	31.0	46.0	-15.0
2.472	10.6	20.3	30.9	46.0	-15.1
1.912	10.6	20.3	30.9	46.0	-15.1
1.272	10.6	20.2	30.8	46.0	-15.2
4.872	10.3	20.4	30.7	46.0	-15.3
1.976	10.3	20.3	30.6	46.0	-15.4
1.712	10.3	20.3	30.6	46.0	-15.4
1.136	10.3	20.2	30.5	46.0	-15.5
0.682	10.3	20.2	30.5	46.0	-15.5
17.450	13.2	21.2	34.4	50.0	-15.6
1.048	10.1	20.2	30.3	46.0	-15.7

CONCLUSION

Pass

Trevor Buls

Tested_By

AC POWERLINE CONDUCTED EMISSIONS

EUT:	37x Torpedo + Wireless SOM -31	Work Order:	LGPD0096
Serial Number:	1413M00359	Date:	05/30/2013
Customer:	Logic PD, Inc.	Temperature:	22.8°C
Attendees:	None	Relative Humidity:	60.6%
Customer Project:	None	Bar. Pressure:	1002.2 mb
Tested By:	Mike Sutherland, Trevor Buls	Job Site:	MN03
Power:	5 VDC	Configuration:	LGPD0096-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2013	ANSI C63.10:2009

TEST PARAMETERS

Run #:	10	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

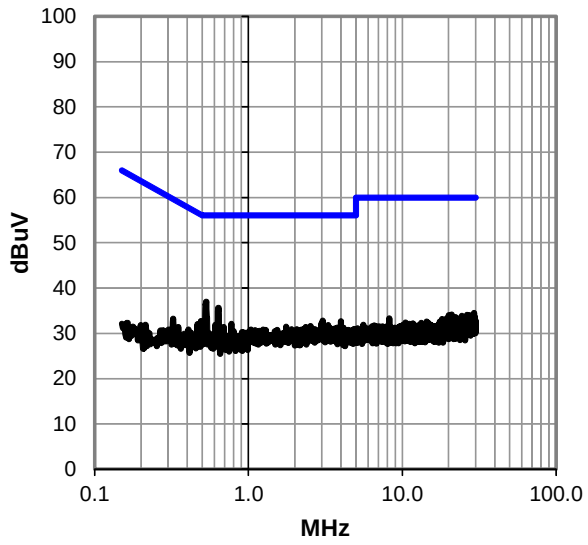
EUT OPERATING MODES

Transmitting 802.11 Ch. 157

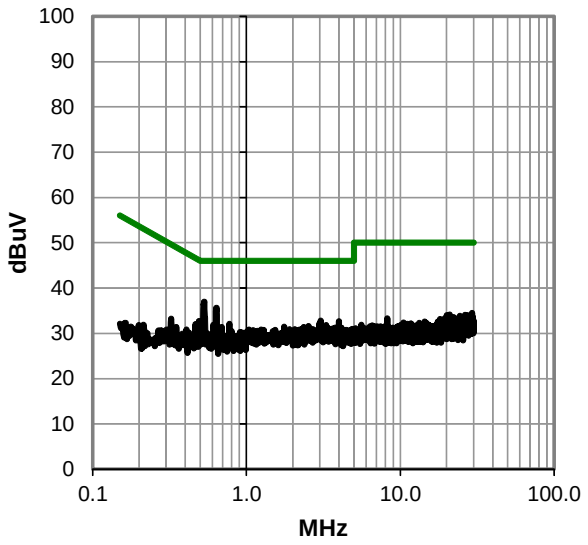
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #10

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.531	16.8	20.2	37.0	56.0	-19.0
0.638	15.4	20.2	35.6	56.0	-20.4
3.040	12.5	20.3	32.8	56.0	-23.2
3.992	12.3	20.4	32.7	56.0	-23.3
0.492	12.5	20.2	32.7	56.1	-23.4
0.774	11.9	20.2	32.1	56.0	-23.9
2.968	11.7	20.3	32.0	56.0	-24.0
0.611	11.7	20.2	31.9	56.0	-24.1
3.296	11.5	20.3	31.8	56.0	-24.2
2.528	11.3	20.3	31.6	56.0	-24.4
1.760	11.2	20.3	31.5	56.0	-24.5
0.466	11.8	20.2	32.0	56.6	-24.6
2.360	11.1	20.3	31.4	56.0	-24.6
0.689	11.2	20.2	31.4	56.0	-24.6
4.120	10.9	20.4	31.3	56.0	-24.7
3.904	10.9	20.4	31.3	56.0	-24.7
3.776	10.9	20.4	31.3	56.0	-24.7
4.144	10.8	20.4	31.2	56.0	-24.8
4.864	10.6	20.4	31.0	56.0	-25.0
2.064	10.6	20.3	30.9	56.0	-25.1
1.912	10.6	20.3	30.9	56.0	-25.1
1.248	10.6	20.2	30.8	56.0	-25.2
1.040	10.6	20.2	30.8	56.0	-25.2
4.448	10.4	20.4	30.8	56.0	-25.2
1.536	10.5	20.3	30.8	56.0	-25.2
2.160	10.4	20.3	30.7	56.0	-25.3

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.531	16.8	20.2	37.0	46.0	-9.0
0.638	15.4	20.2	35.6	46.0	-10.4
3.040	12.5	20.3	32.8	46.0	-13.2
3.992	12.3	20.4	32.7	46.0	-13.3
0.492	12.5	20.2	32.7	46.1	-13.4
0.774	11.9	20.2	32.1	46.0	-13.9
2.968	11.7	20.3	32.0	46.0	-14.0
0.611	11.7	20.2	31.9	46.0	-14.1
3.296	11.5	20.3	31.8	46.0	-14.2
2.528	11.3	20.3	31.6	46.0	-14.4
1.760	11.2	20.3	31.5	46.0	-14.5
0.466	11.8	20.2	32.0	46.6	-14.6
2.360	11.1	20.3	31.4	46.0	-14.6
0.689	11.2	20.2	31.4	46.0	-14.6
4.120	10.9	20.4	31.3	46.0	-14.7
3.904	10.9	20.4	31.3	46.0	-14.7
3.776	10.9	20.4	31.3	46.0	-14.7
4.144	10.8	20.4	31.2	46.0	-14.8
4.864	10.6	20.4	31.0	46.0	-15.0
2.064	10.6	20.3	30.9	46.0	-15.1
1.912	10.6	20.3	30.9	46.0	-15.1
1.248	10.6	20.2	30.8	46.0	-15.2
1.040	10.6	20.2	30.8	46.0	-15.2
4.448	10.4	20.4	30.8	46.0	-15.2
1.536	10.5	20.3	30.8	46.0	-15.2
2.160	10.4	20.3	30.7	46.0	-15.3

CONCLUSION

Pass

Trevor Buls

Tested_By

AC POWERLINE CONDUCTED EMISSIONS

EUT:	37x Torpedo + Wireless SOM -31	Work Order:	LGPD0096
Serial Number:	1413M00359	Date:	05/30/2013
Customer:	Logic PD, Inc.	Temperature:	22.8°C
Attendees:	None	Relative Humidity:	60.6%
Customer Project:	None	Bar. Pressure:	1002.2 mb
Tested By:	Mike Sutherland, Trevor Buls	Job Site:	MN03
Power:	5 VDC	Configuration:	LGPD0096-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2013	ANSI C63.10:2009

TEST PARAMETERS

Run #:	11	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

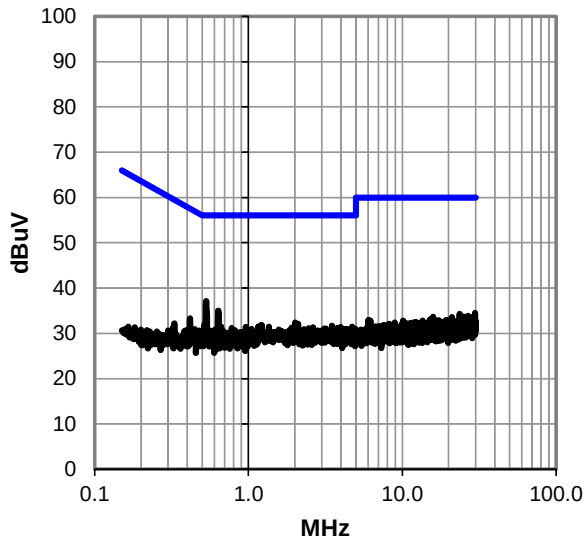
EUT OPERATING MODES

Transmitting 802.11 Ch. 165

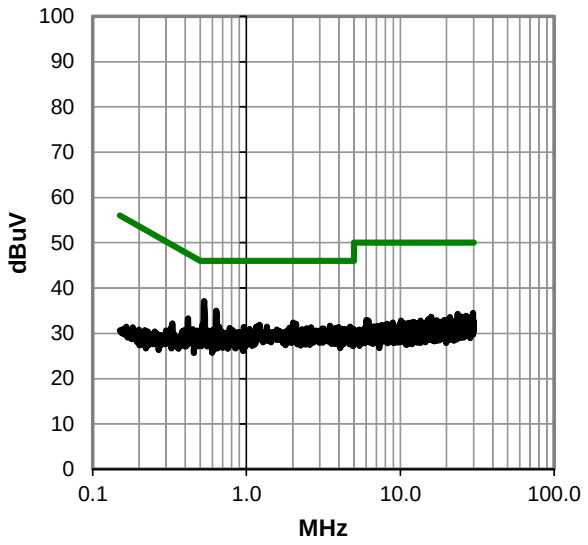
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #11

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.531	16.9	20.2	37.1	56.0	-18.9
0.638	14.8	20.2	35.0	56.0	-21.0
2.008	12.1	20.3	32.4	56.0	-23.6
2.104	11.8	20.3	32.1	56.0	-23.9
1.216	11.7	20.2	31.9	56.0	-24.1
0.417	13.1	20.2	33.3	57.5	-24.2
3.496	11.3	20.3	31.6	56.0	-24.4
0.663	11.3	20.2	31.5	56.0	-24.5
4.728	11.1	20.4	31.5	56.0	-24.5
1.360	11.2	20.2	31.4	56.0	-24.6
0.963	11.2	20.2	31.4	56.0	-24.6
3.976	11.0	20.4	31.4	56.0	-24.6
2.624	11.0	20.3	31.3	56.0	-24.7
1.904	11.0	20.3	31.3	56.0	-24.7
0.777	11.0	20.2	31.2	56.0	-24.8
3.928	10.8	20.4	31.2	56.0	-24.8
3.824	10.8	20.4	31.2	56.0	-24.8
2.472	10.8	20.3	31.1	56.0	-24.9
3.712	10.7	20.4	31.1	56.0	-24.9
3.112	10.7	20.3	31.0	56.0	-25.0
1.048	10.8	20.2	31.0	56.0	-25.0
4.952	10.6	20.4	31.0	56.0	-25.0
4.376	10.6	20.4	31.0	56.0	-25.0
4.128	10.6	20.4	31.0	56.0	-25.0
2.296	10.6	20.3	30.9	56.0	-25.1
4.216	10.5	20.4	30.9	56.0	-25.1

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.531	16.9	20.2	37.1	46.0	-8.9
0.638	14.8	20.2	35.0	46.0	-11.0
2.008	12.1	20.3	32.4	46.0	-13.6
2.104	11.8	20.3	32.1	46.0	-13.9
1.216	11.7	20.2	31.9	46.0	-14.1
0.417	13.1	20.2	33.3	47.5	-14.2
3.496	11.3	20.3	31.6	46.0	-14.4
0.663	11.3	20.2	31.5	46.0	-14.5
4.728	11.1	20.4	31.5	46.0	-14.5
1.360	11.2	20.2	31.4	46.0	-14.6
0.963	11.2	20.2	31.4	46.0	-14.6
3.976	11.0	20.4	31.4	46.0	-14.6
2.624	11.0	20.3	31.3	46.0	-14.7
1.904	11.0	20.3	31.3	46.0	-14.7
0.777	11.0	20.2	31.2	46.0	-14.8
3.928	10.8	20.4	31.2	46.0	-14.8
3.824	10.8	20.4	31.2	46.0	-14.8
2.472	10.8	20.3	31.1	46.0	-14.9
3.712	10.7	20.4	31.1	46.0	-14.9
3.112	10.7	20.3	31.0	46.0	-15.0
1.048	10.8	20.2	31.0	46.0	-15.0
4.952	10.6	20.4	31.0	46.0	-15.0
4.376	10.6	20.4	31.0	46.0	-15.0
4.128	10.6	20.4	31.0	46.0	-15.0
2.296	10.6	20.3	30.9	46.0	-15.1
4.216	10.5	20.4	30.9	46.0	-15.1

CONCLUSION

Pass

Trevor Buls

Tested_By

AC POWERLINE CONDUCTED EMISSIONS

WTD.2013.05.09, PSA-ESCI 2012.12.14, PSA-ESCI Version 2013.2.20

EUT:	37x Torpedo + Wireless SOM -31	Work Order:	LGPD0096
Serial Number:	1413M00359	Date:	05/30/2013
Customer:	Logic PD, Inc.	Temperature:	22.8°C
Attendees:	None	Relative Humidity:	60.6%
Customer Project:	None	Bar. Pressure:	1002.2 mb
Tested By:	Mike Sutherland, Trevor Buls	Job Site:	MN03
Power:	5 VDC	Configuration:	LGPD0096-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2013	ANSI C63.10:2009

TEST PARAMETERS

Run #:	12	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

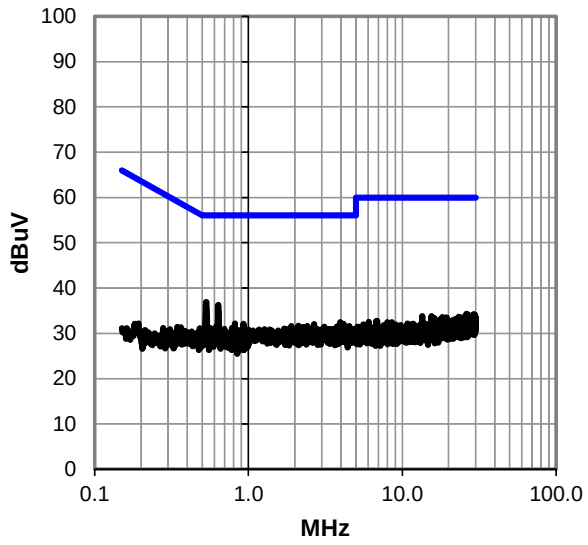
EUT OPERATING MODES

Transmitting 802.11 Ch. 165

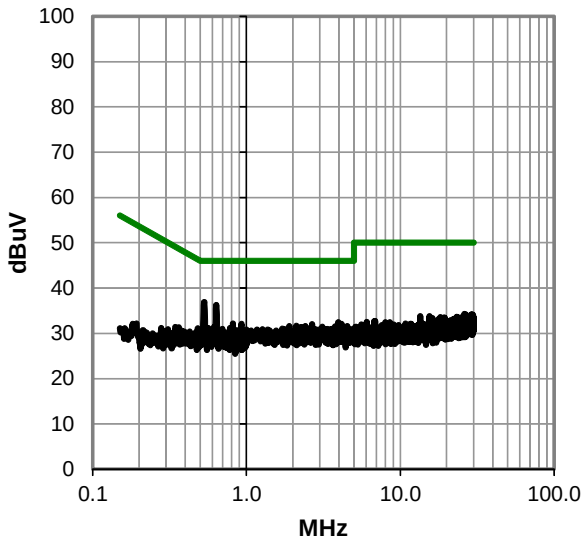
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



AC POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #12

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.531	16.7	20.2	36.9	56.0	-19.1
0.636	16.1	20.2	36.3	56.0	-19.7
3.944	12.1	20.4	32.5	56.0	-23.5
0.818	12.0	20.2	32.2	56.0	-23.8
0.929	11.9	20.2	32.1	56.0	-23.9
4.152	11.7	20.4	32.1	56.0	-23.9
2.672	11.7	20.3	32.0	56.0	-24.0
2.112	11.4	20.3	31.7	56.0	-24.3
2.408	11.3	20.3	31.6	56.0	-24.4
1.896	11.3	20.3	31.6	56.0	-24.4
4.520	11.2	20.4	31.6	56.0	-24.4
3.776	11.2	20.4	31.6	56.0	-24.4
3.112	11.1	20.3	31.4	56.0	-24.6
2.264	11.1	20.3	31.4	56.0	-24.6
4.312	10.9	20.4	31.3	56.0	-24.7
0.563	11.0	20.2	31.2	56.0	-24.8
0.782	11.0	20.2	31.2	56.0	-24.8
2.576	10.8	20.3	31.1	56.0	-24.9
1.712	10.8	20.3	31.1	56.0	-24.9
0.697	10.8	20.2	31.0	56.0	-25.0
3.600	10.6	20.4	31.0	56.0	-25.0
3.352	10.6	20.3	30.9	56.0	-25.1
1.272	10.7	20.2	30.9	56.0	-25.1
4.968	10.5	20.4	30.9	56.0	-25.1
1.784	10.6	20.3	30.9	56.0	-25.1
1.376	10.6	20.2	30.8	56.0	-25.2

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.531	16.7	20.2	36.9	46.0	-9.1
0.636	16.1	20.2	36.3	46.0	-9.7
3.944	12.1	20.4	32.5	46.0	-13.5
0.818	12.0	20.2	32.2	46.0	-13.8
0.929	11.9	20.2	32.1	46.0	-13.9
4.152	11.7	20.4	32.1	46.0	-13.9
2.672	11.7	20.3	32.0	46.0	-14.0
2.112	11.4	20.3	31.7	46.0	-14.3
2.408	11.3	20.3	31.6	46.0	-14.4
1.896	11.3	20.3	31.6	46.0	-14.4
4.520	11.2	20.4	31.6	46.0	-14.4
3.776	11.2	20.4	31.6	46.0	-14.4
3.112	11.1	20.3	31.4	46.0	-14.6
2.264	11.1	20.3	31.4	46.0	-14.6
4.312	10.9	20.4	31.3	46.0	-14.7
0.563	11.0	20.2	31.2	46.0	-14.8
0.782	11.0	20.2	31.2	46.0	-14.8
2.576	10.8	20.3	31.1	46.0	-14.9
1.712	10.8	20.3	31.1	46.0	-14.9
0.697	10.8	20.2	31.0	46.0	-15.0
3.600	10.6	20.4	31.0	46.0	-15.0
3.352	10.6	20.3	30.9	46.0	-15.1
1.272	10.7	20.2	30.9	46.0	-15.1
4.968	10.5	20.4	30.9	46.0	-15.1
1.784	10.6	20.3	30.9	46.0	-15.1
1.376	10.6	20.2	30.8	46.0	-15.2

CONCLUSION

Pass

Trevor Buls

Tested_By