



**Summit Semiconductor LLC**

**444-2250**

**FCC 15.407:2014**

**FCC 15.207:2014**

**Report #: FOCU0168.4 Rev.1**



Report Prepared By Northwest EMC Inc.

NORTHWEST EMC – (888) 364-2378 – [www.nwemc.com](http://www.nwemc.com)

California – Minnesota – Oregon – New York – Washington



WTD 12.5.23

# CERTIFICATE OF TEST

Last Date of Test: July 07, 2014  
Summit Semiconductor LLC  
Model: 444-2250

## Emissions

Test Description	Specification	Test Method	Pass/Fail
Duty Cycle	FCC 15.407:2014	ANSI C63.10:2009	Pass
Emission Bandwidth	FCC 15.407:2014	ANSI C63.10:2009	Pass
Peak Transmit Power	FCC 15.407:2014	ANSI C63.10:2009	Pass
Peak Power Spectral Density	FCC 15.407:2014	ANSI C63.10:2009	Pass
Peak Excursion	FCC 15.407:2014	ANSI C63.10:2009	Pass
Band Edge Compliance	FCC 15.407:2014	ANSI C63.10:2009	Pass
Frequency Stability	FCC 15.407:2014	ANSI C63.10:2009	Pass
Spurious Radiated Emissions	FCC 15.407:2014	ANSI C63.10:2009	Pass
AC Powerline Conducted Emissions	FCC 15.207:2014	ANSI C63.10:2009	Pass

## Deviations From Test Standards

None

## Approved By:

A handwritten signature in blue ink that reads "Kyle Holgate".

Kyle Holgate, Operations Manager



NVLAP Lab Code: 200630-0

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America.

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

## REVISION HISTORY

Revision Number	Description	Date	Page Number
01	Added "Rev.1" to the Report #.	8/25/2014	Cover Page
02	Removed Configuration FOCU0168-4	8/25/2014	Pg. 9

### Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

# ACCREDITATIONS AND AUTHORIZATIONS

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## United States

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**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

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## Canada

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

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## European Union

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**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.

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## Australia/New Zealand

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

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## Korea

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

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## Japan

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

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## Taiwan

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**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.

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## Singapore

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

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## Hong Kong

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

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## Vietnam

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

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## Russia

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

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## SCOPE

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

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

## 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.

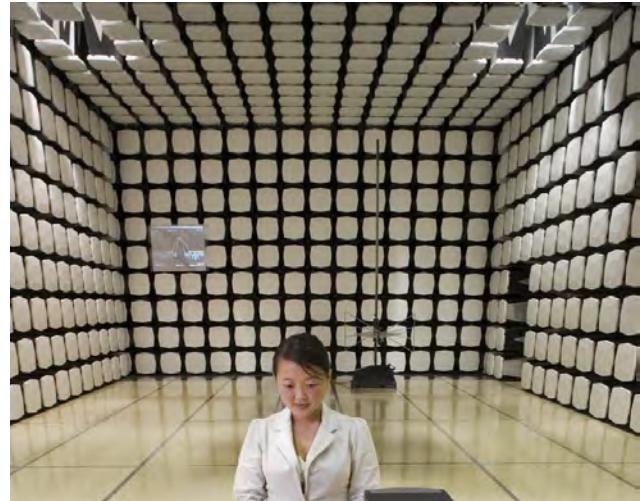
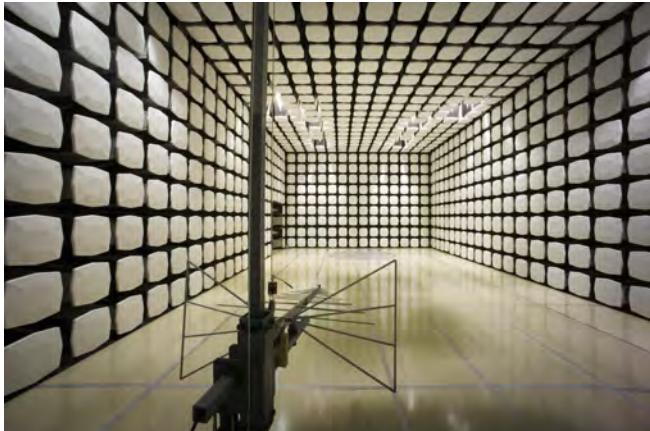
The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

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

# FACILITIES



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

<b>Company Name:</b>	Summit Semiconductor LLC
<b>Address:</b>	22867 NW Bennett St, Suite 200
<b>City, State, Zip:</b>	Hillsboro, OR 97124
<b>Test Requested By:</b>	Paul Hamilton
<b>Model:</b>	444-2250
<b>First Date of Test:</b>	June 11, 2014
<b>Last Date of Test:</b>	July 07, 2014
<b>Receipt Date of Samples:</b>	June 11, 2014
<b>Equipment Design Stage:</b>	Production
<b>Equipment Condition:</b>	No Damage

## Information Provided by the Party Requesting the Test

### Functional Description of the EUT (Equipment Under Test):

Client device, it has 4 antennas with diversity, there is only one radio (no monitor), the channel bandwidth is 20 MHz

### Testing Objective:

To demonstrate compliance under FCC 15.407 for operation in the 5.2 GHz, 5.3 GHz, and 5.6 GHz band(s).



# CONFIGURATIONS

## Configuration FOCU0168- 1

EUT					
Description	Manufacturer		Model/Part Number		Serial Number
Digital Wireless Client Module	Summit Semiconductor LLC		444-2250		02EA310000BA

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
AC/DC Power Supply	Condor	SA-183A61V	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power Cable	No	.9m	No	AC/DC Adapter	AC Mains
DC Power Cable	No	1.2m	Yes	AC/DC Adapter	Digital Wireless Client Module
USB to Serial Adapter	Yes	1m	No	Remote Laptop	Digital Wireless Client Module

## Configuration FOCU0168- 2

EUT					
Description	Manufacturer		Model/Part Number		Serial Number
Digital Wireless Client Module	Summit Semiconductor LLC		444-2250		02EA41000011

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Remote Laptop	Dell	Inspiron	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power Cable	No	.9m	No	AC/DC Adapter	AC Mains
DC Power Cable	No	1.2m	Yes	AC/DC Adapter	Digital Wireless Client Module
USB to Serial Adapter	Yes	1m	No	Remote Laptop	Digital Wireless Client Module



# CONFIGURATIONS

## Configuration FOCU0168- 3

EUT					
Description	Manufacturer	Model/Part Number	Serial Number		
Digital Wireless Client Module	Summit Semiconductor LLC	444-2250	02EA310000BA		

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power Cable	No	.9m	No	AC/DC Adapter	AC Mains
DC Power Cable	No	1.2m	Yes	AC/DC Adapter	Digital Wireless Client Module
USB to Serial Adapter	Yes	1m	No	Remote Laptop	Digital Wireless Client Module

## Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	6/11/2014	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	6/13/2014	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	6/13/2013	Band Edge Compliance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
4	6/13/2014	Duty Cycle	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
5	6/13/2014	Emission 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.
6	6/13/2014	Peak Transmit 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.
7	6/13/2014	Peak Excursion	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	6/13/2014	Peak 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.
9	7/07/2014	Frequency Stability	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 (mo.)
40GHz DC Block	Miteq	DCB4000	AMD	4/28/2014	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator, 'Precision N'	S.M. Electronics	SA18N-06/SM4032	REE	12/2/2013	12
Power Meter	Agilent	N1913A	SQR	4/29/2013	36
Power Sensor	Agilent	E9300H	SQO	4/29/2013	36
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24
MXG Analog Signal Generator	Agilent	N5181A	TIG	3/28/2014	36

### TEST DESCRIPTION

The transmission pulse duration (T) and Duty Cycle (x) were measured for each of the EUT operating modes per the FCC KDB 789033 D01 General UNII Test Procedures.

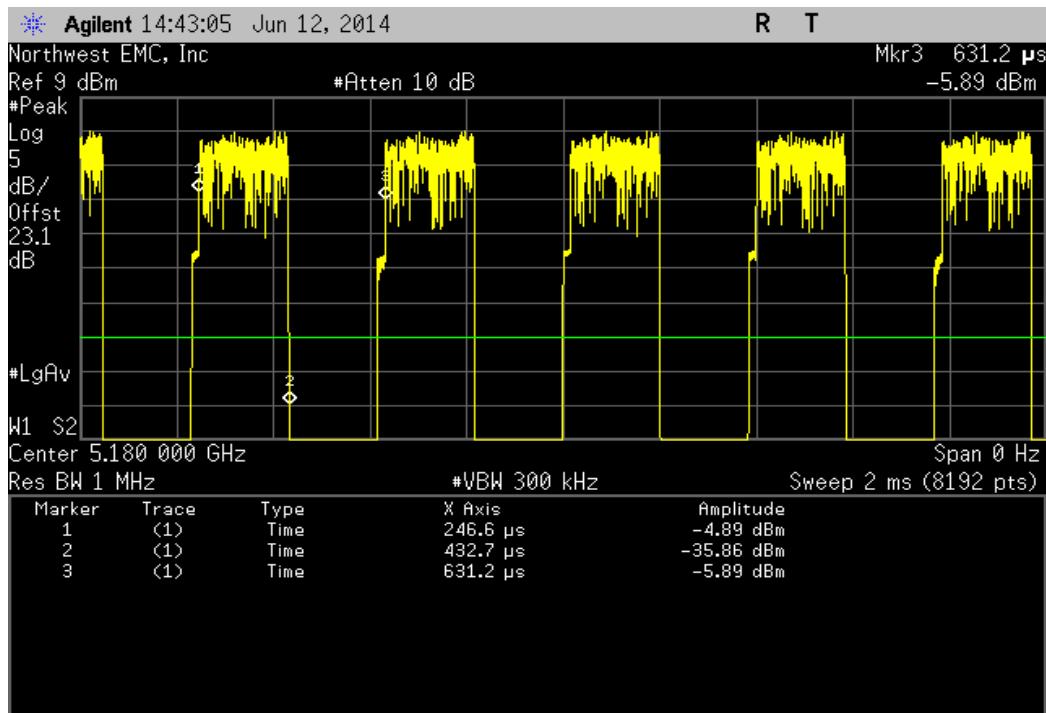
The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. The transmit power was set to its default maximum. A direct connection was made between the RF output of the EUT and a spectrum analyzer. Attenuation and a DC block were used

The duty cycle was calculated by dividing the transmission pulse duration (T) by the total period of a single on and total off time.

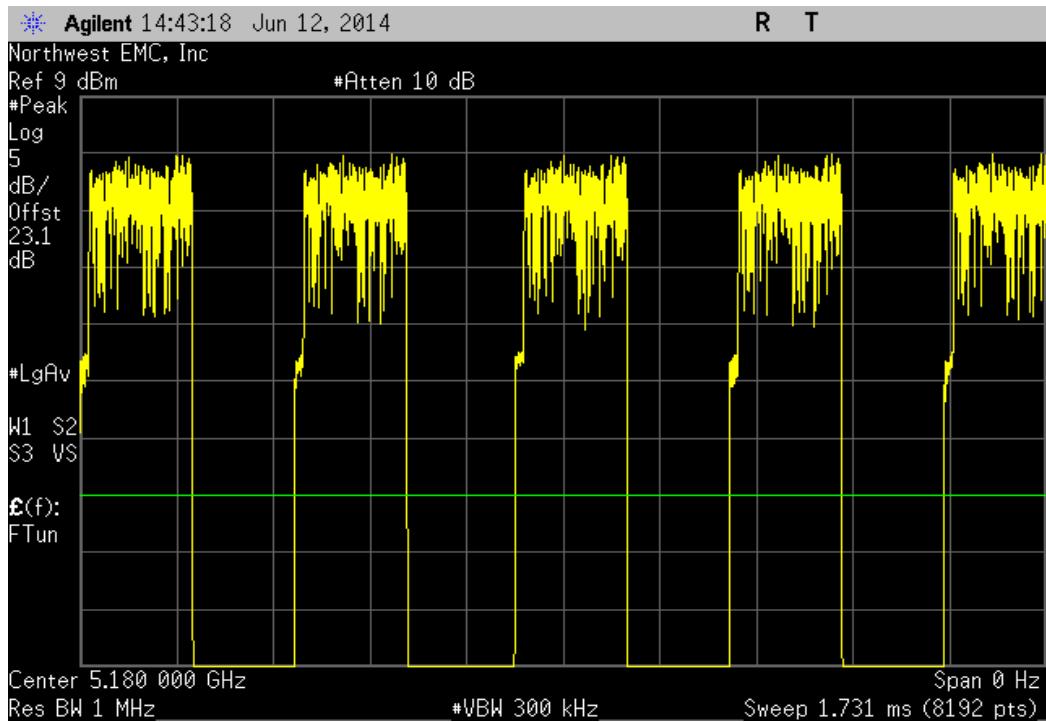
If the transmit duty cycle < 98 percent, burst gating was used during some of the other tests in this report only measure during the burst duration.



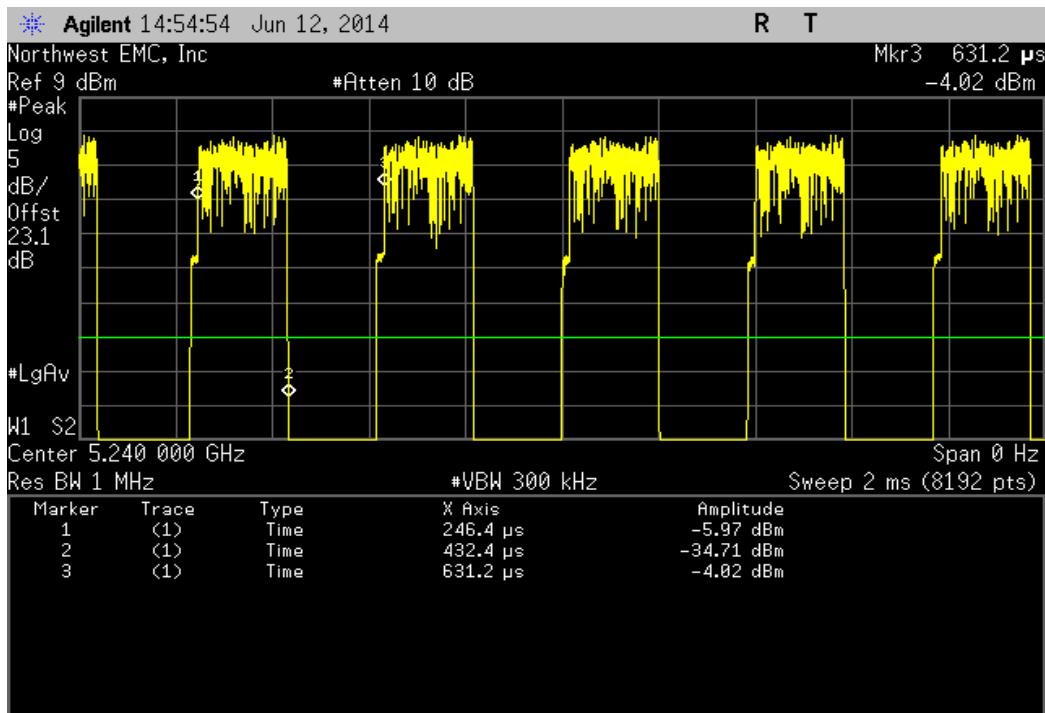
Antenna Port 1, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	186.1 uS	384.6 uS	1	48.4	N/A	N/A



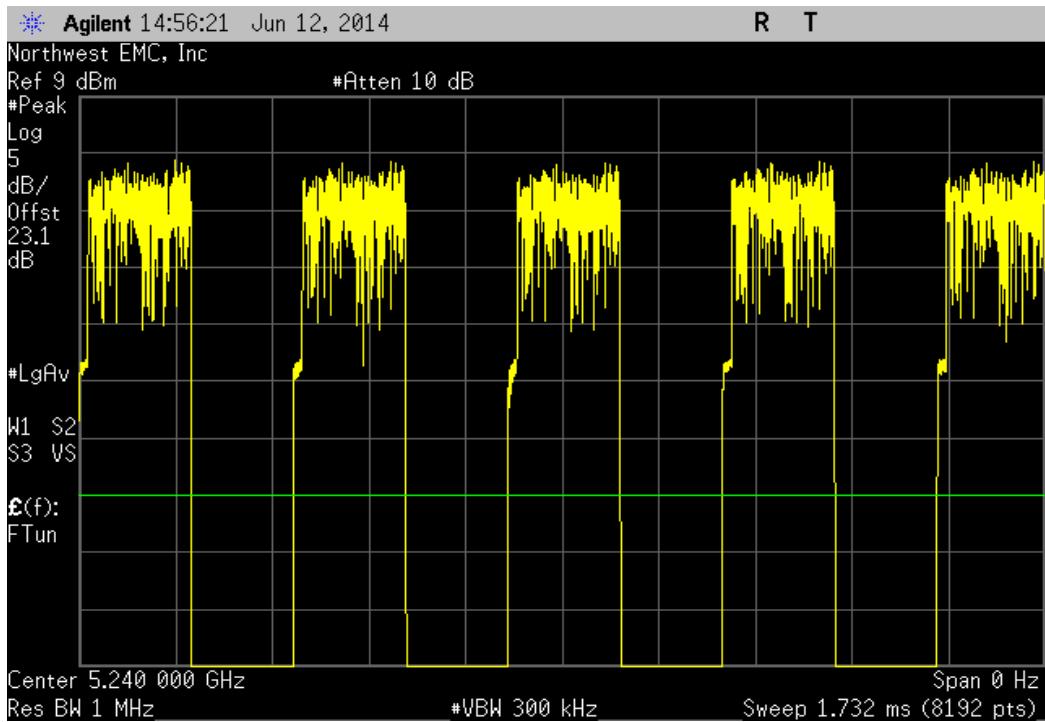
Antenna Port 1, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



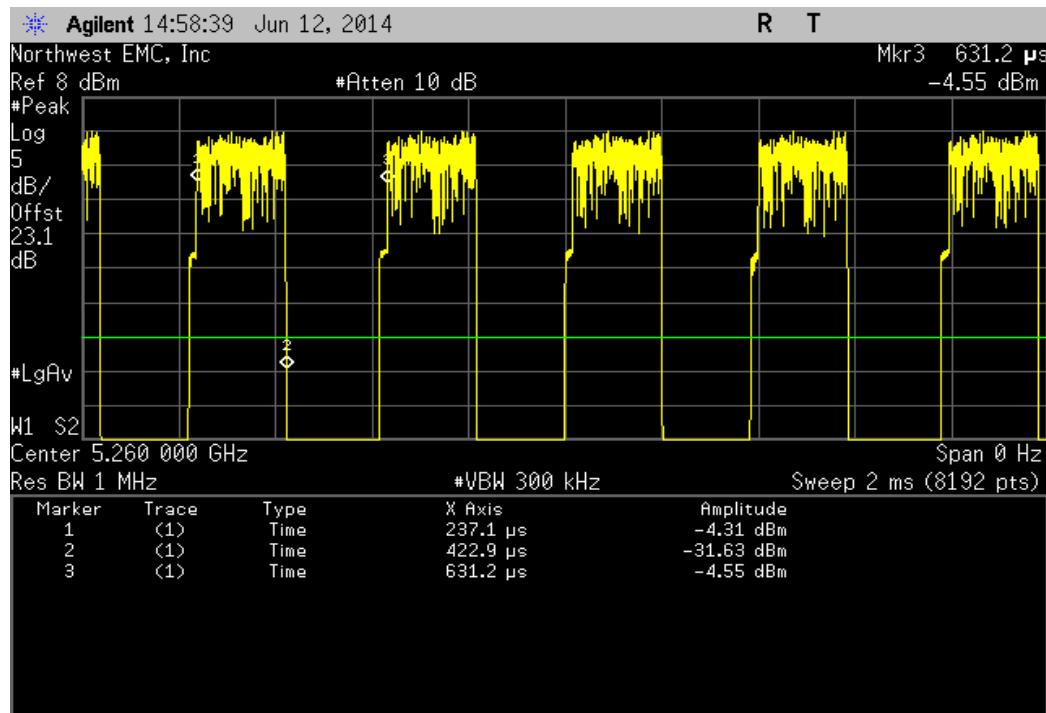
Antenna Port 1, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	186 uS	384.8 uS	1	48.3	N/A	N/A



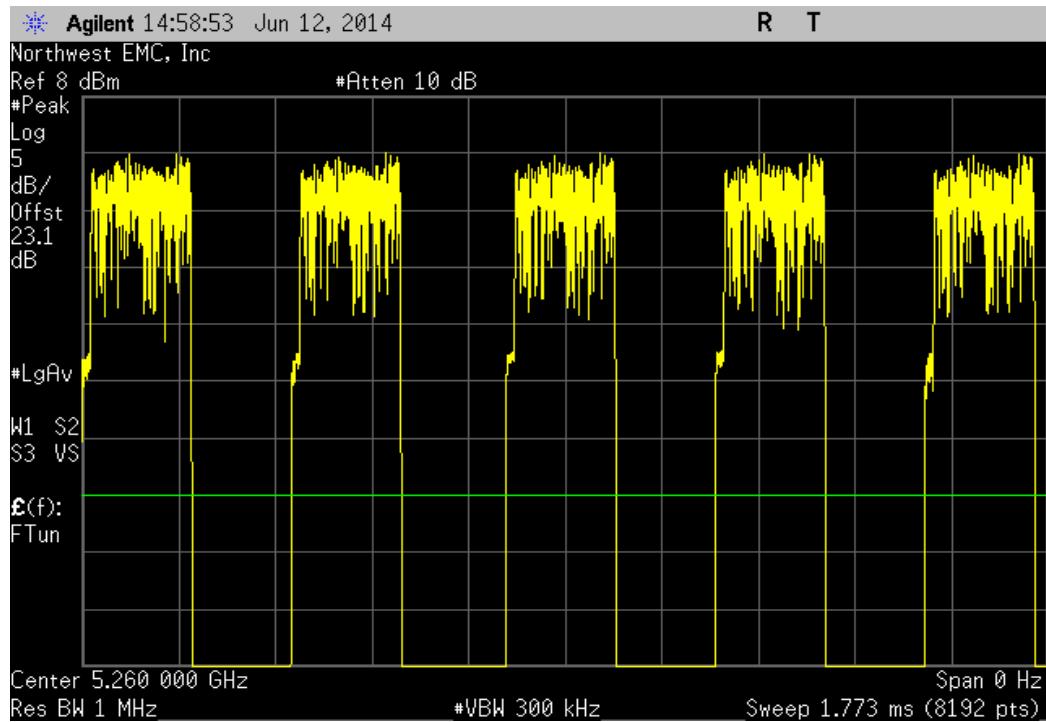
Antenna Port 1, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

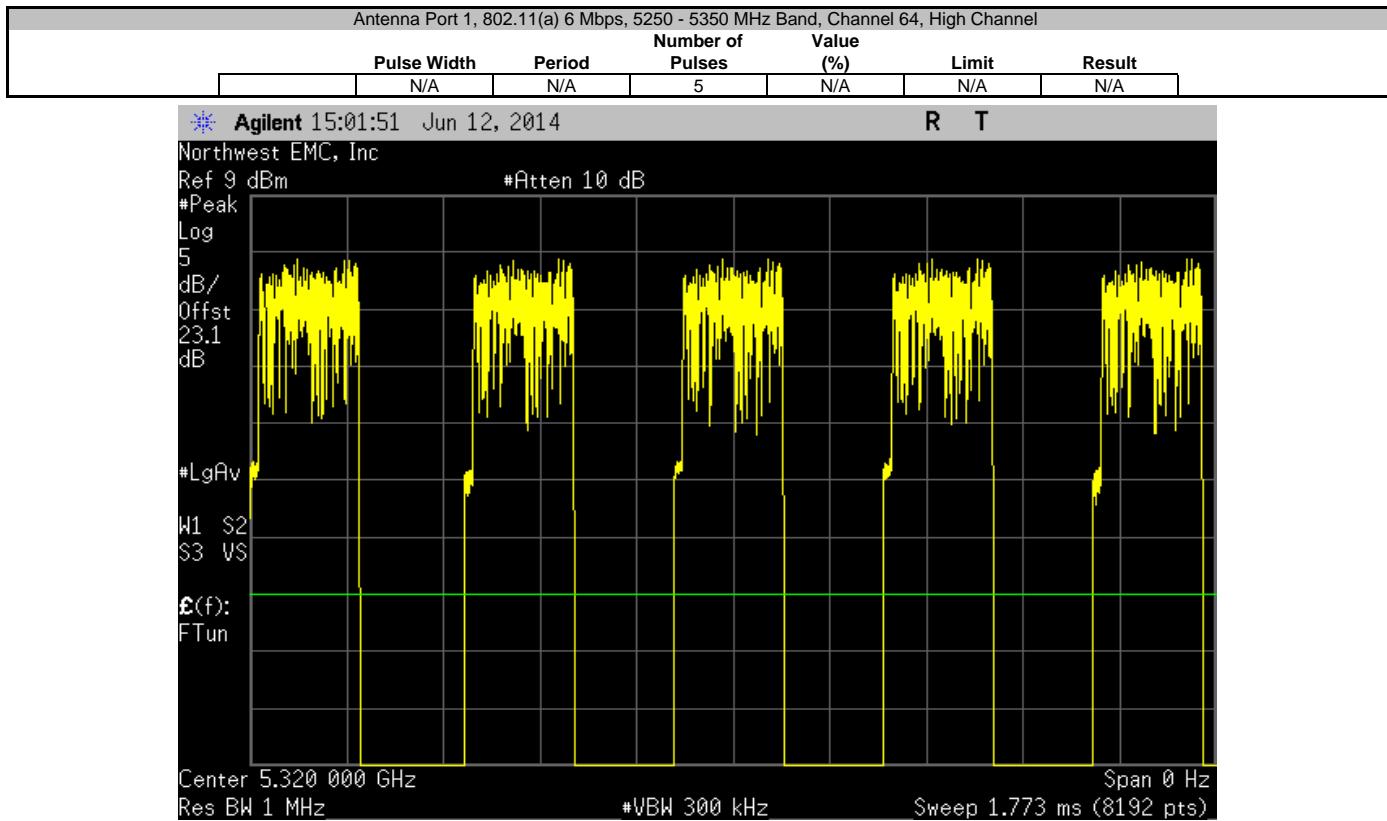
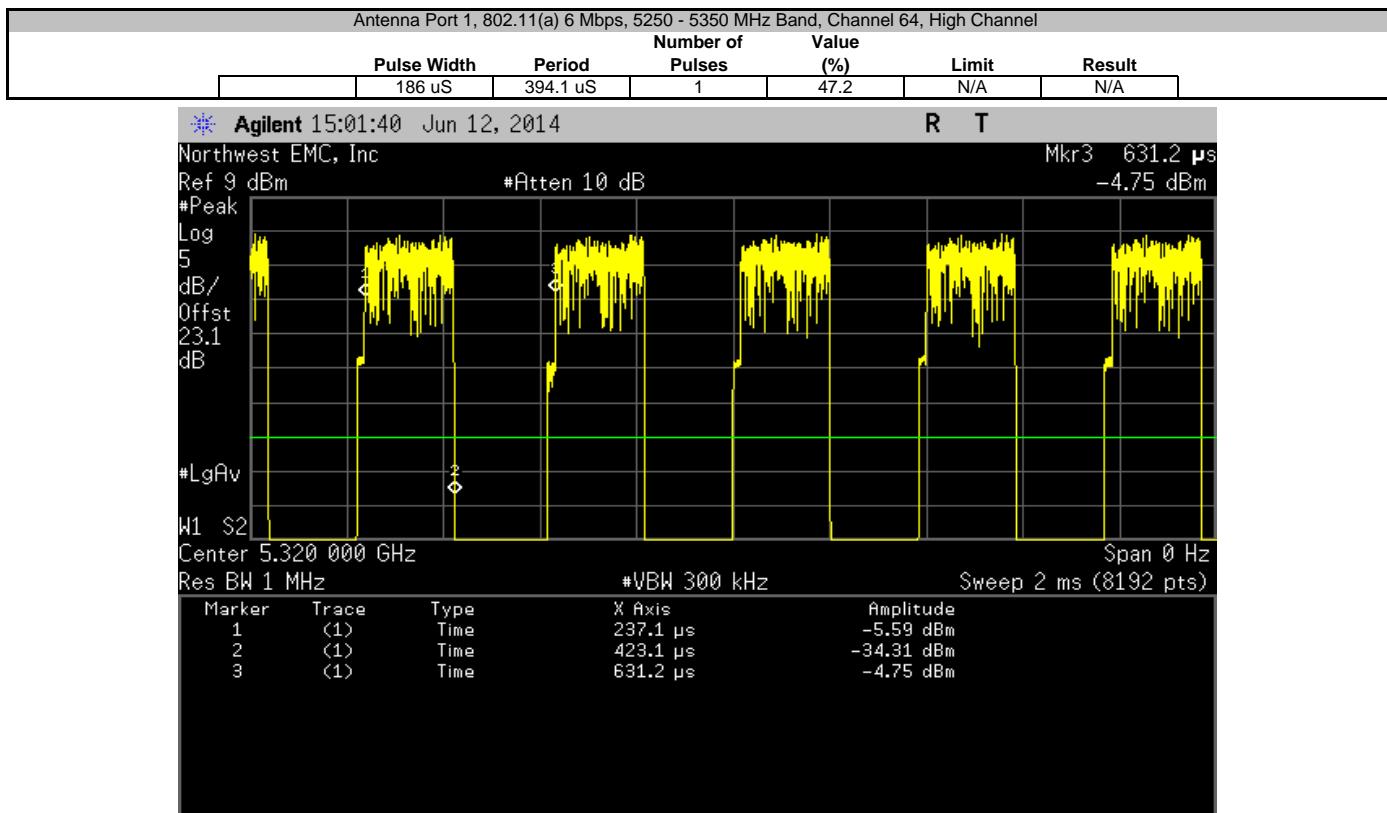


Antenna Port 1, 802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	185.8 $\mu$ s	394.1 $\mu$ s	1	47.1	N/A	N/A

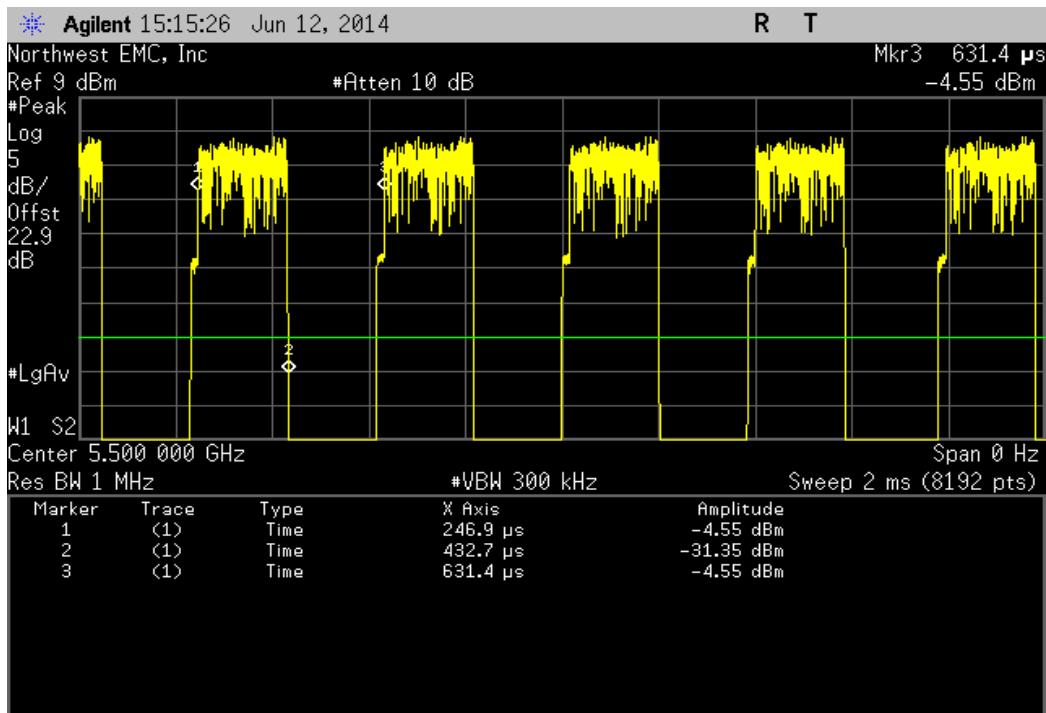


Antenna Port 1, 802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

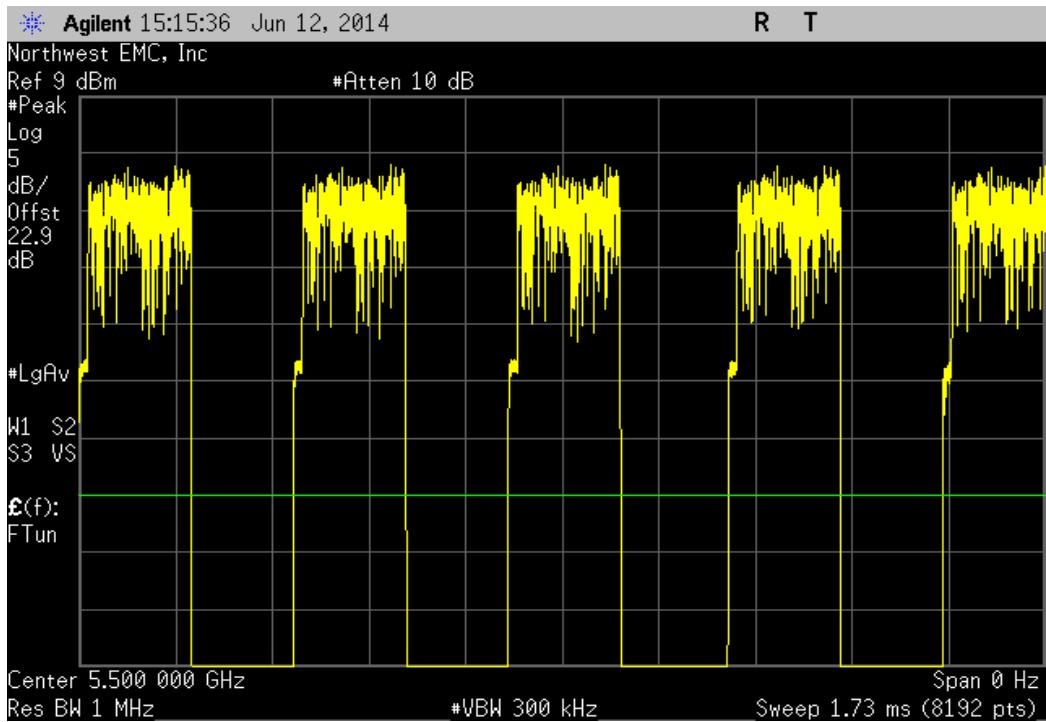




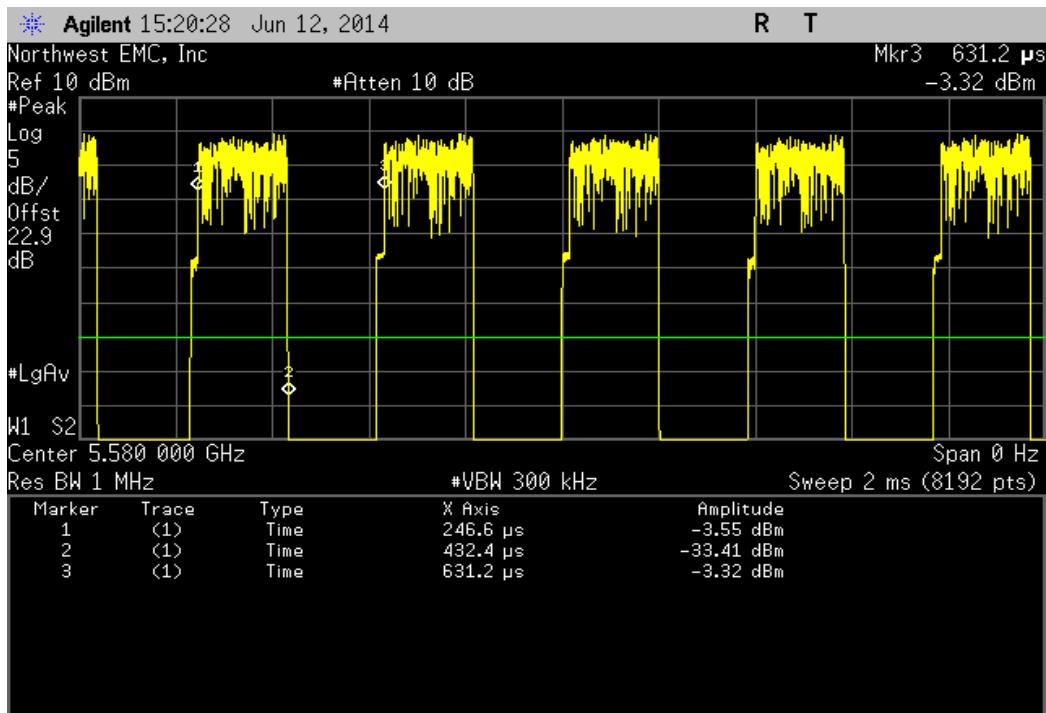
Antenna Port 1, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	185.8 $\mu$ s	384.5 $\mu$ s	1	48.3	N/A	N/A



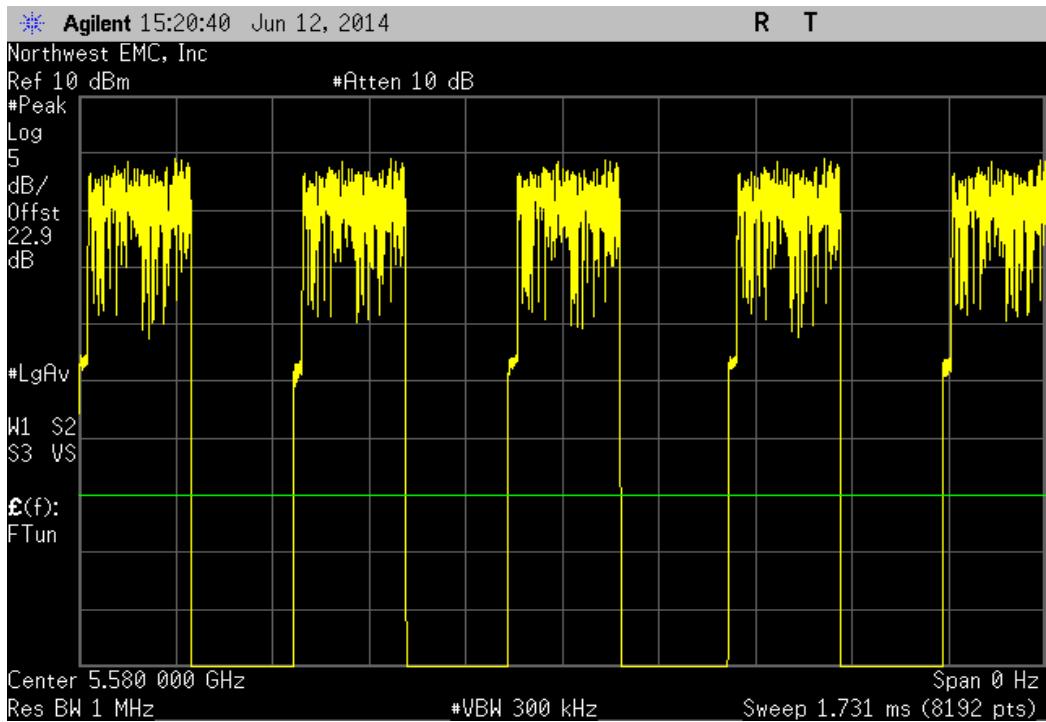
Antenna Port 1, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



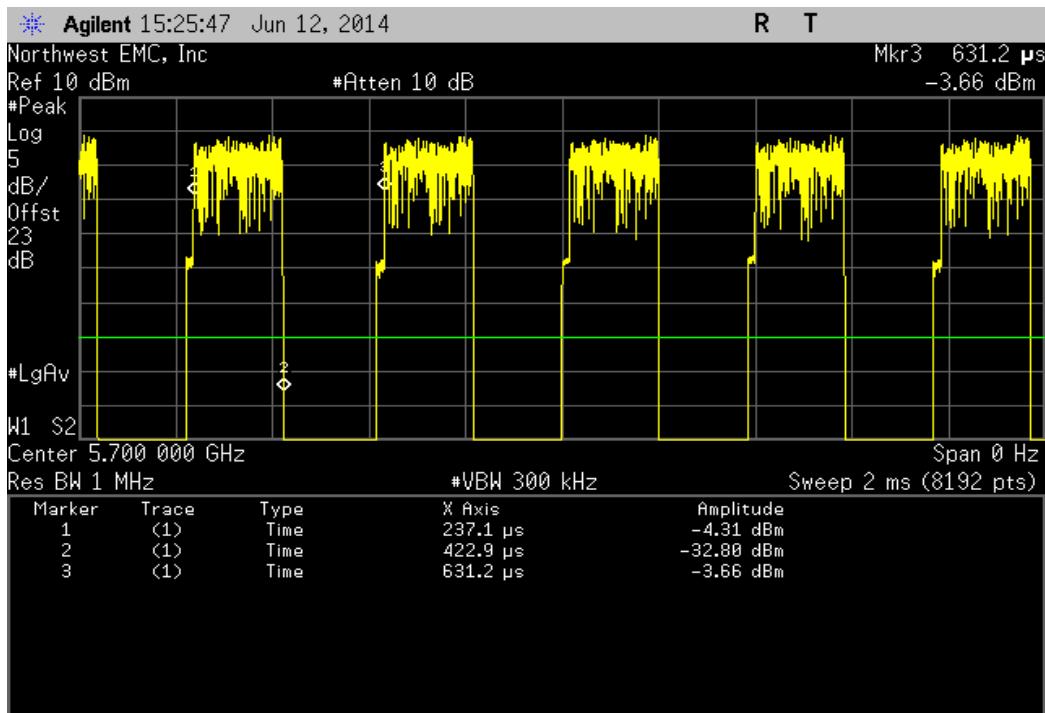
Antenna Port 1, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	185.8 uS	384.6 uS	1	48.3	N/A	N/A



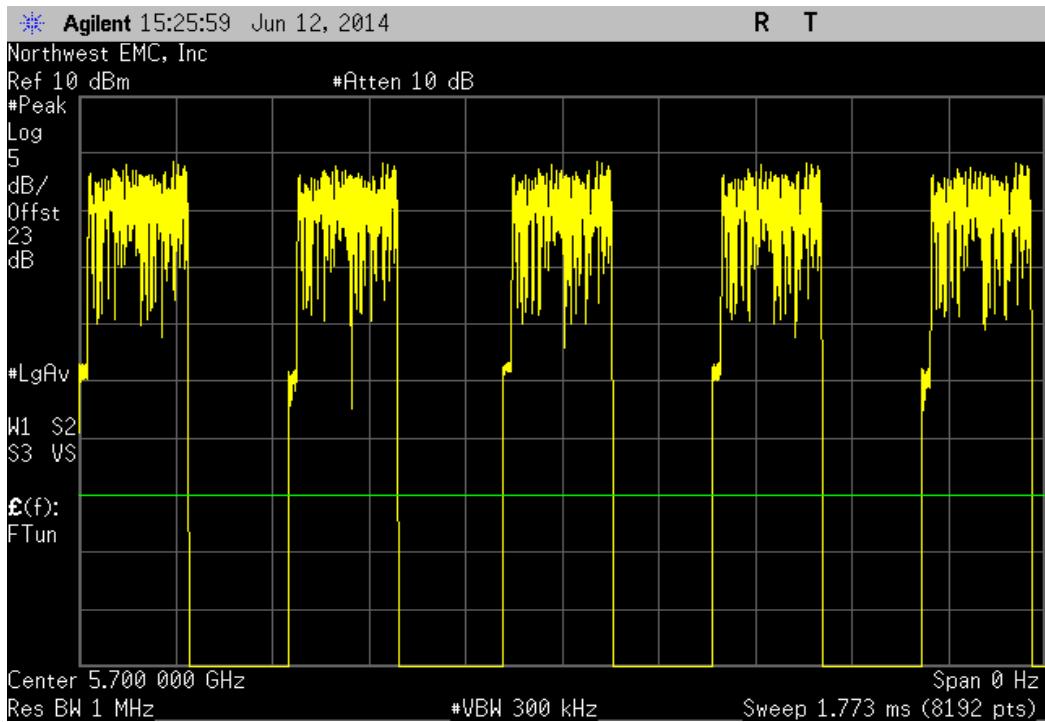
Antenna Port 1, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

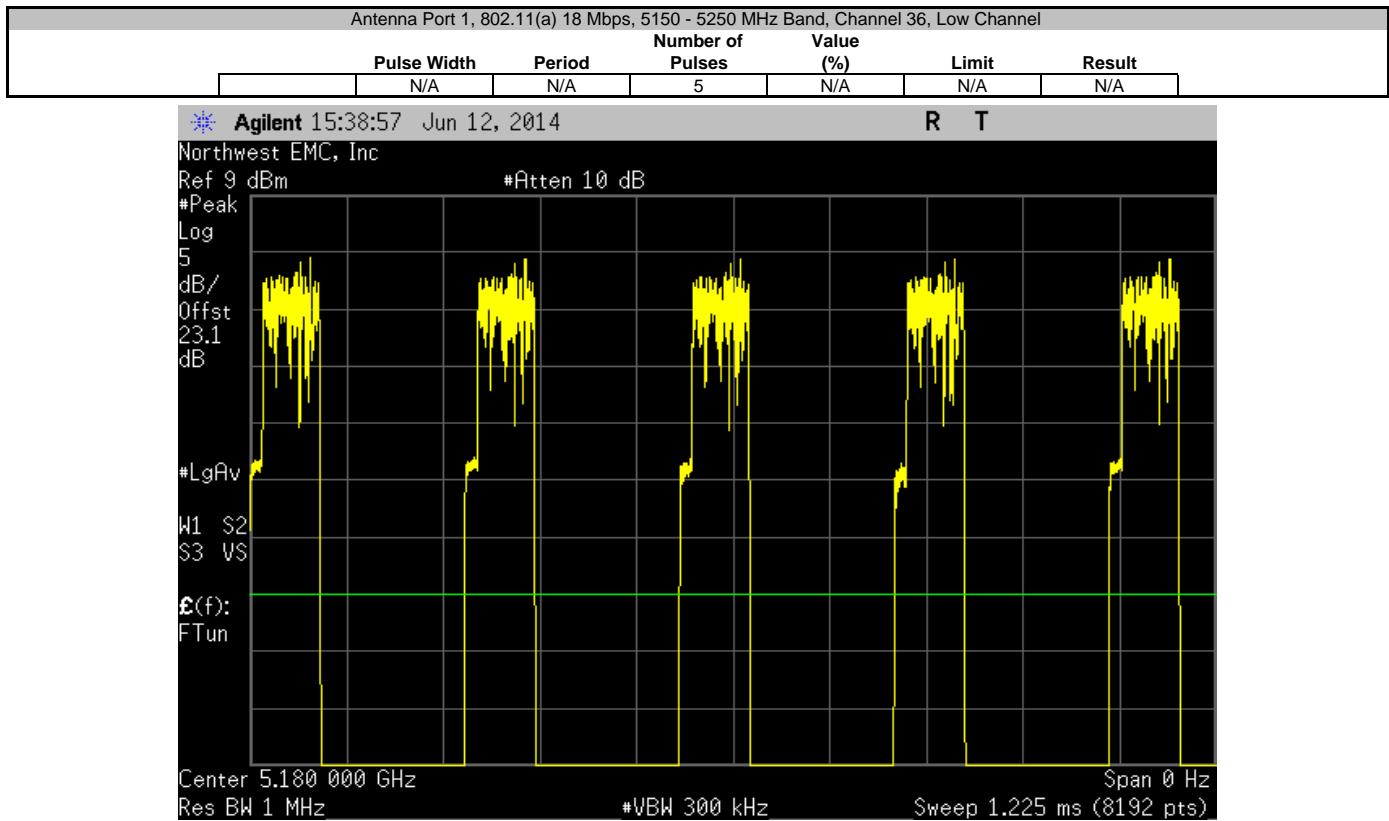
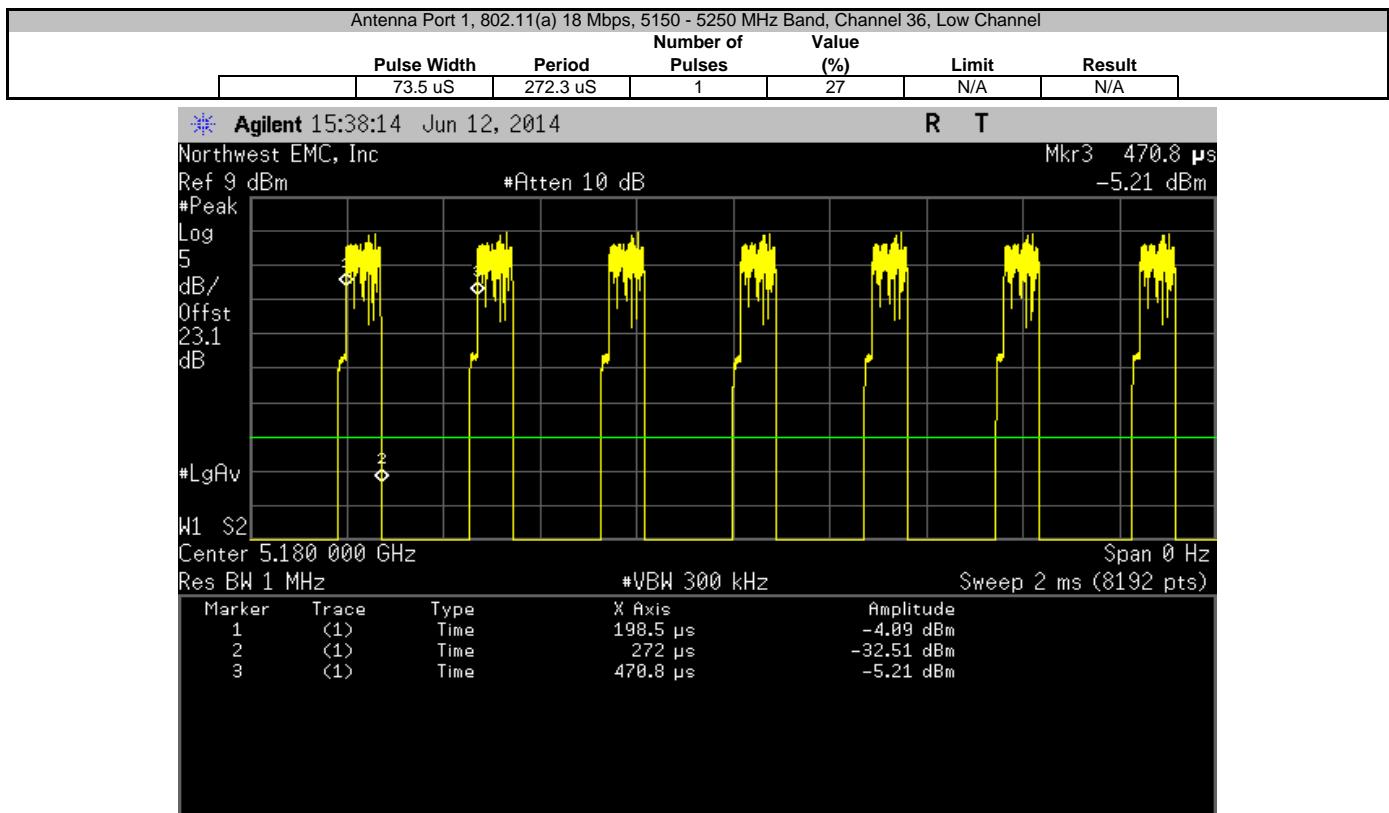


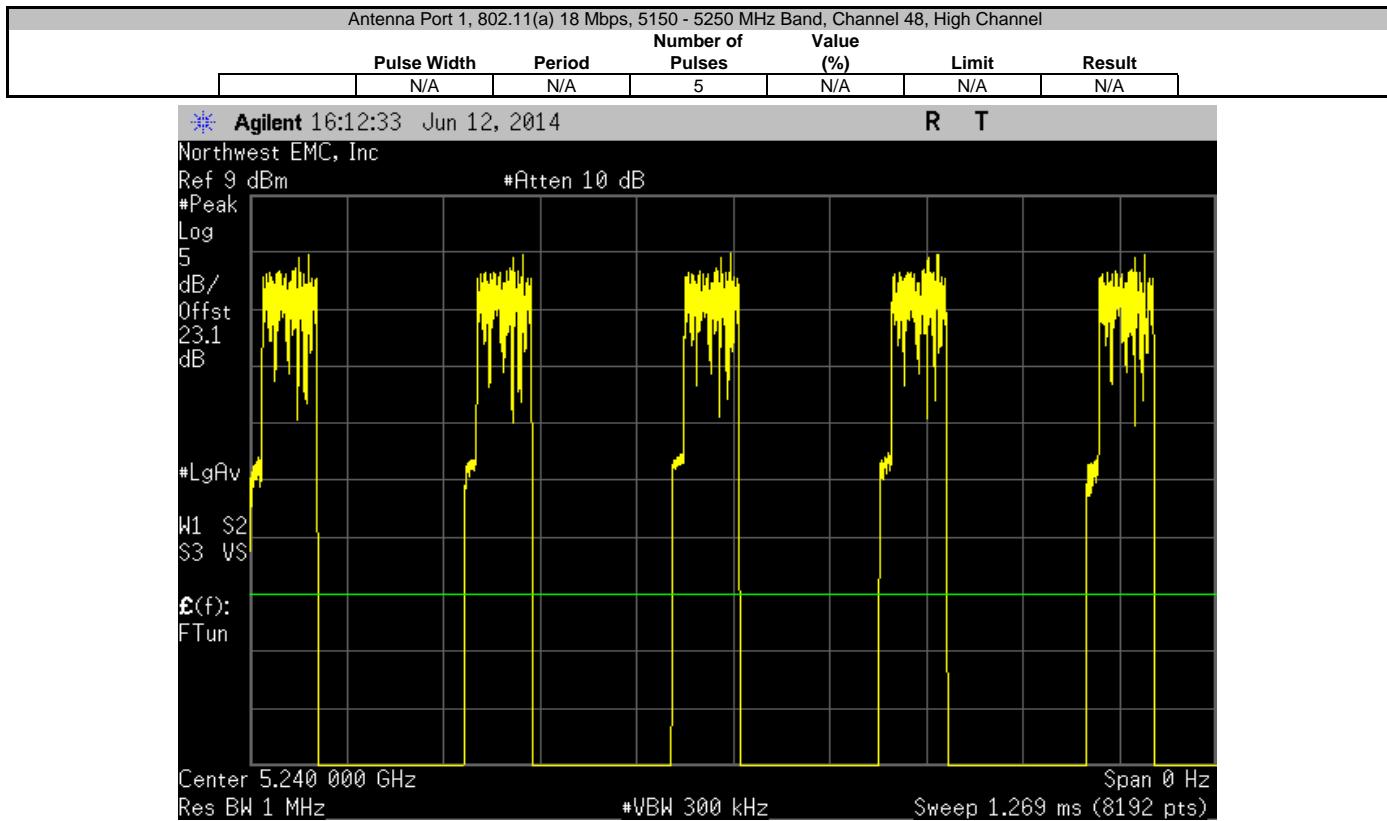
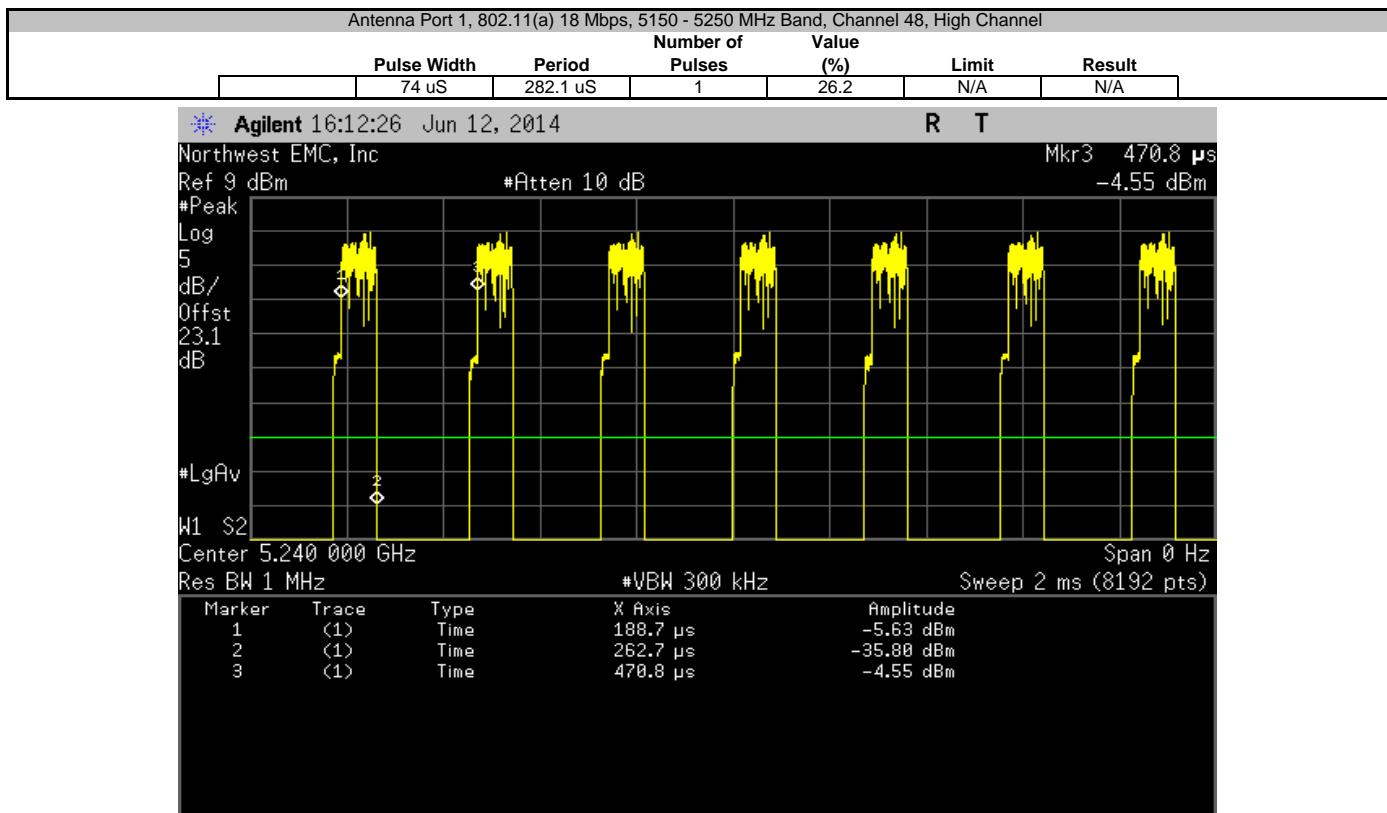
Antenna Port 1, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	185.8 uS	394.1 uS	1	47.1	N/A	N/A



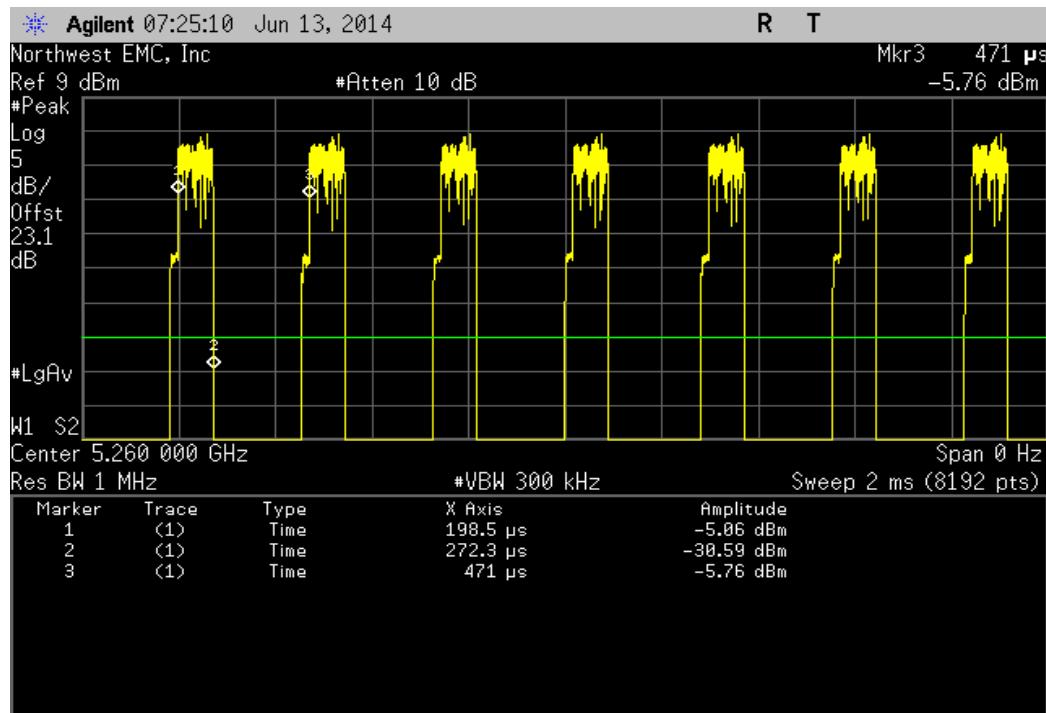
Antenna Port 1, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



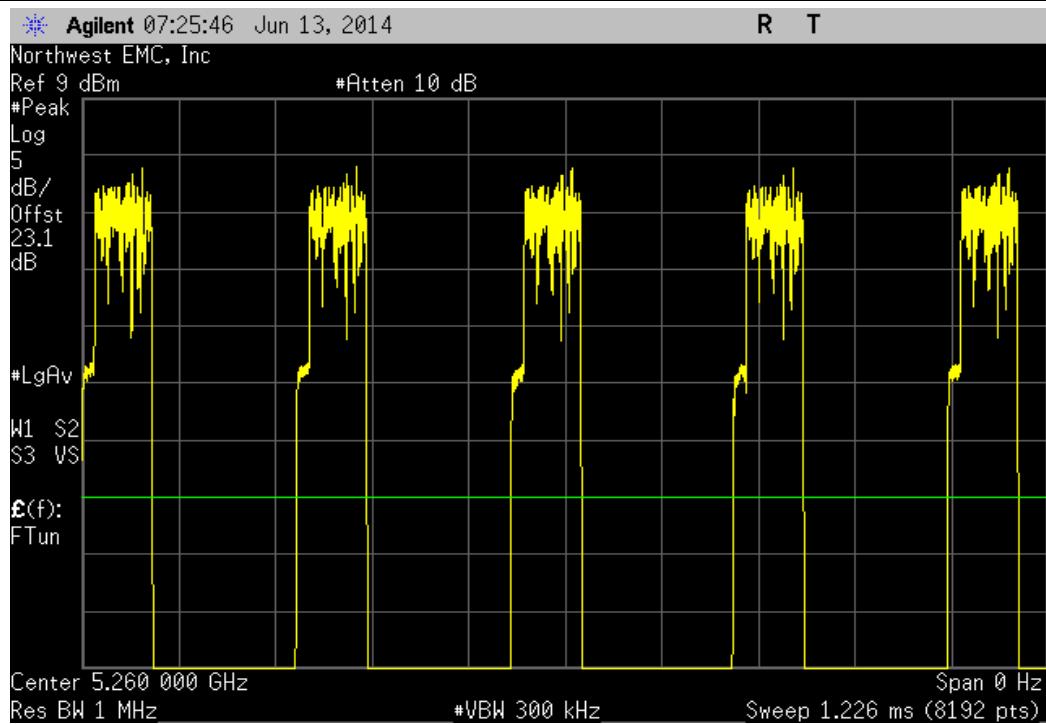




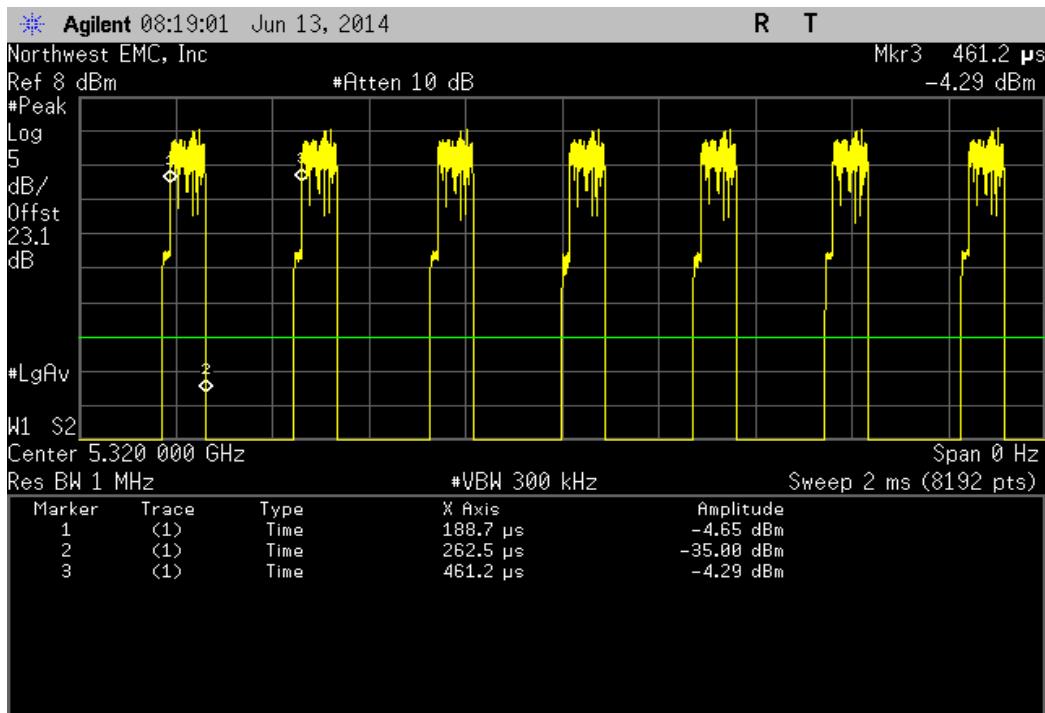
Antenna Port 1, 802.11(a) 18 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	73.8 $\mu$ s	272.5 $\mu$ s	1	27.1	N/A	N/A



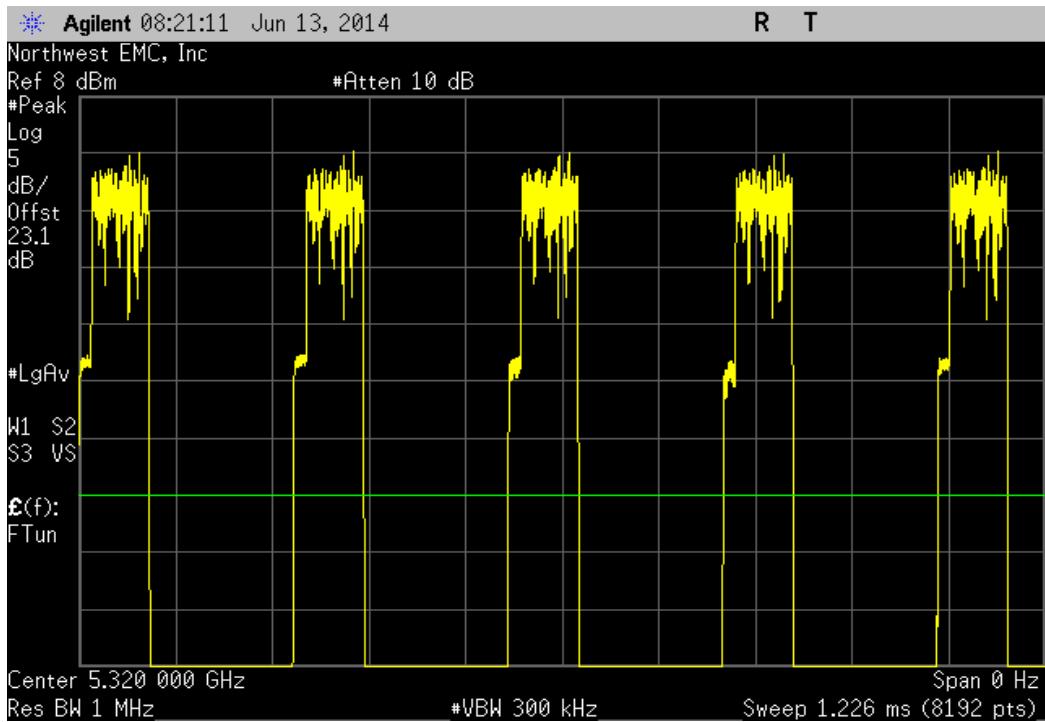
Antenna Port 1, 802.11(a) 18 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



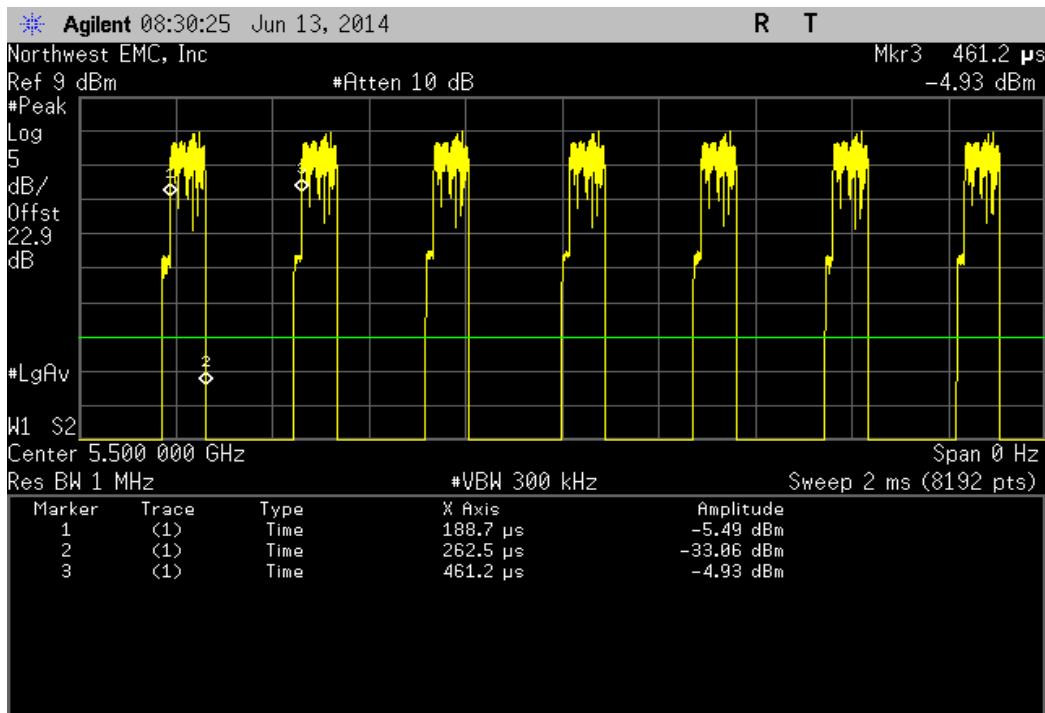
Antenna Port 1, 802.11(a) 18 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	73.8 uS	272.5 uS	1	27.1	N/A	N/A



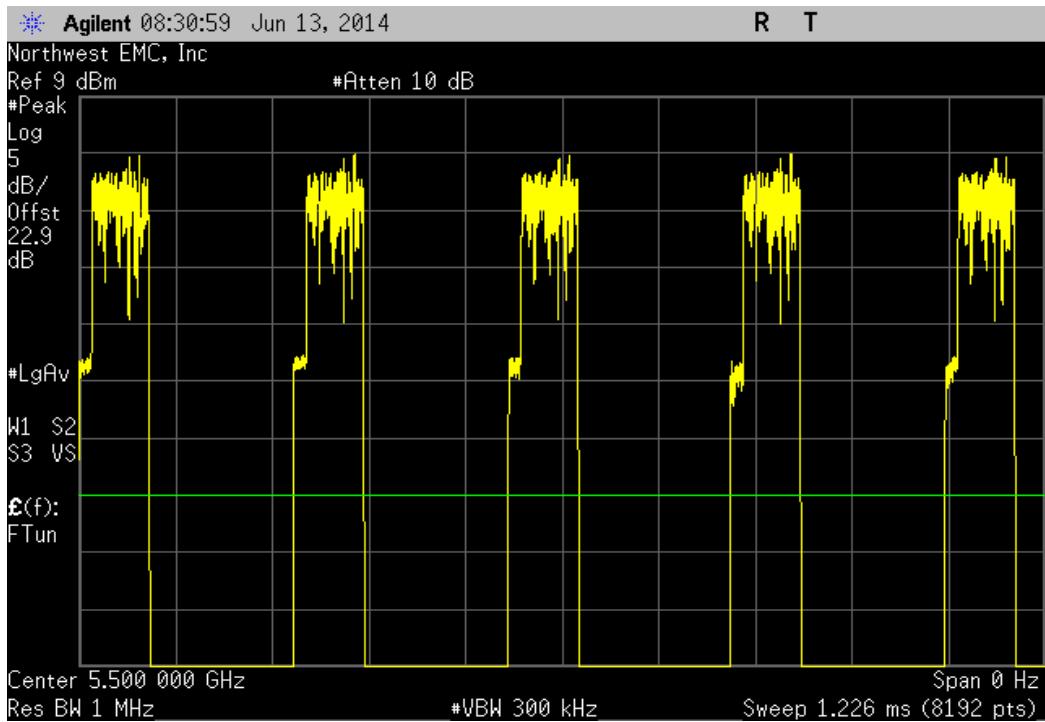
Antenna Port 1, 802.11(a) 18 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



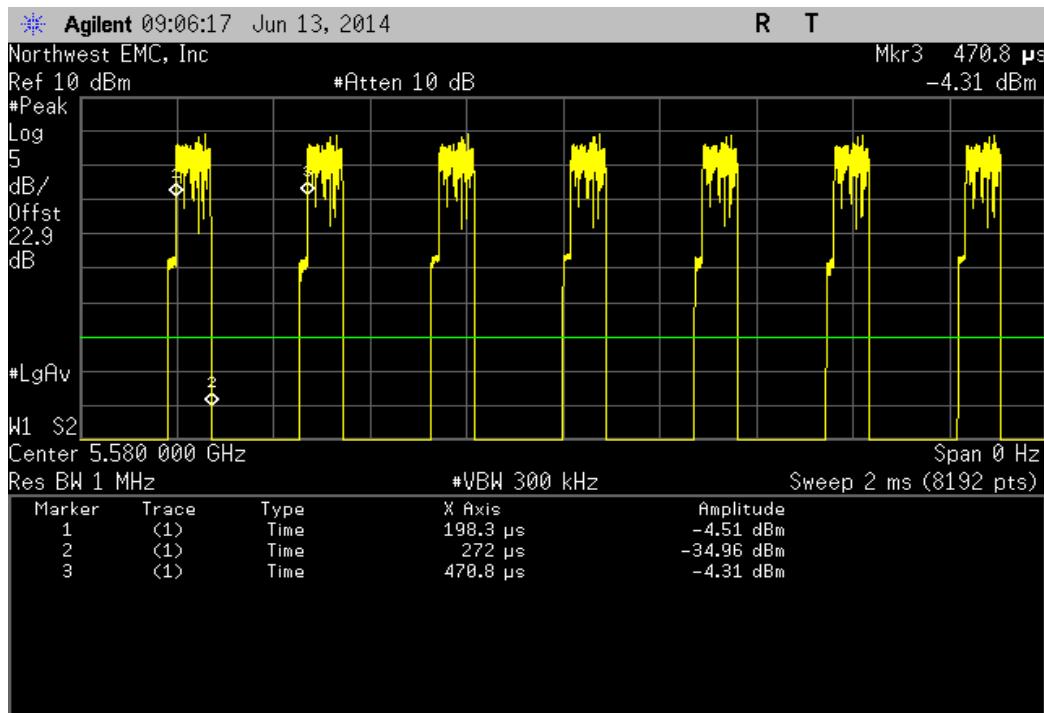
Antenna Port 1, 802.11(a) 18 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	73.8 uS	272.5 uS	1	27.1	N/A	N/A



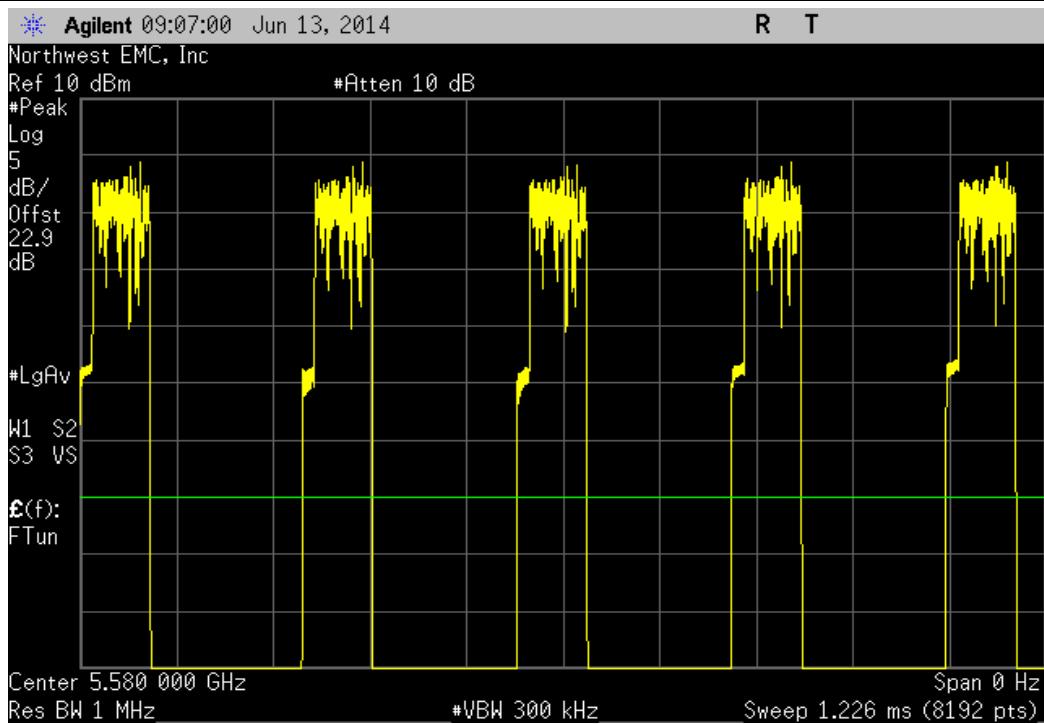
Antenna Port 1, 802.11(a) 18 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



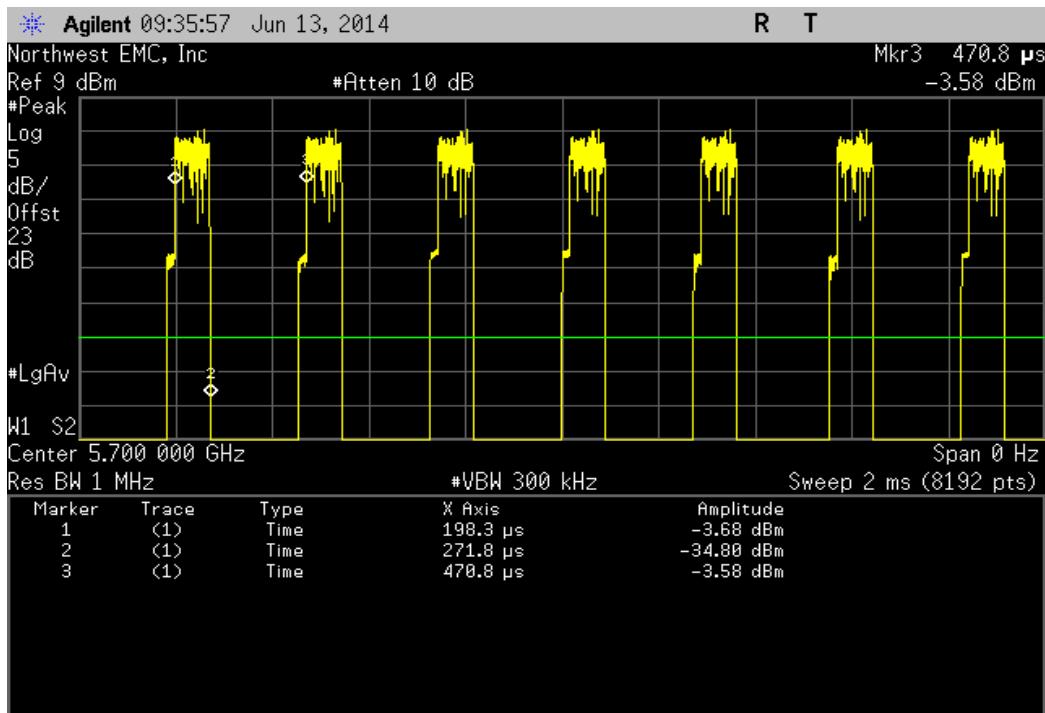
Antenna Port 1, 802.11(a) 18 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	73.7 uS	272.5 uS	1	27	N/A	N/A



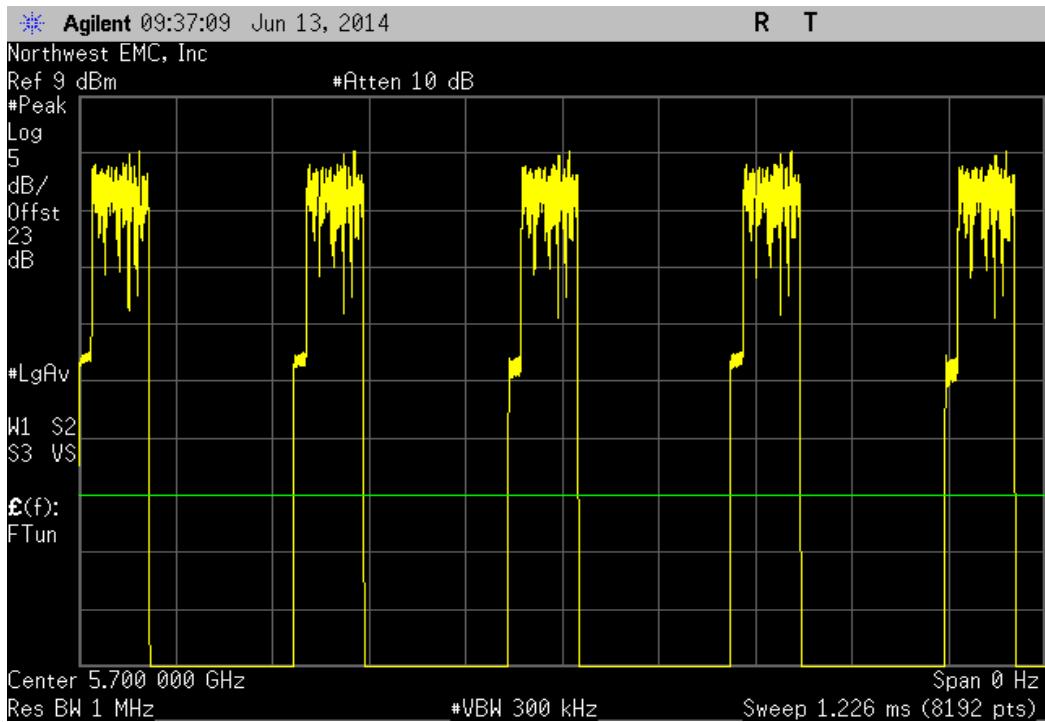
Antenna Port 1, 802.11(a) 18 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



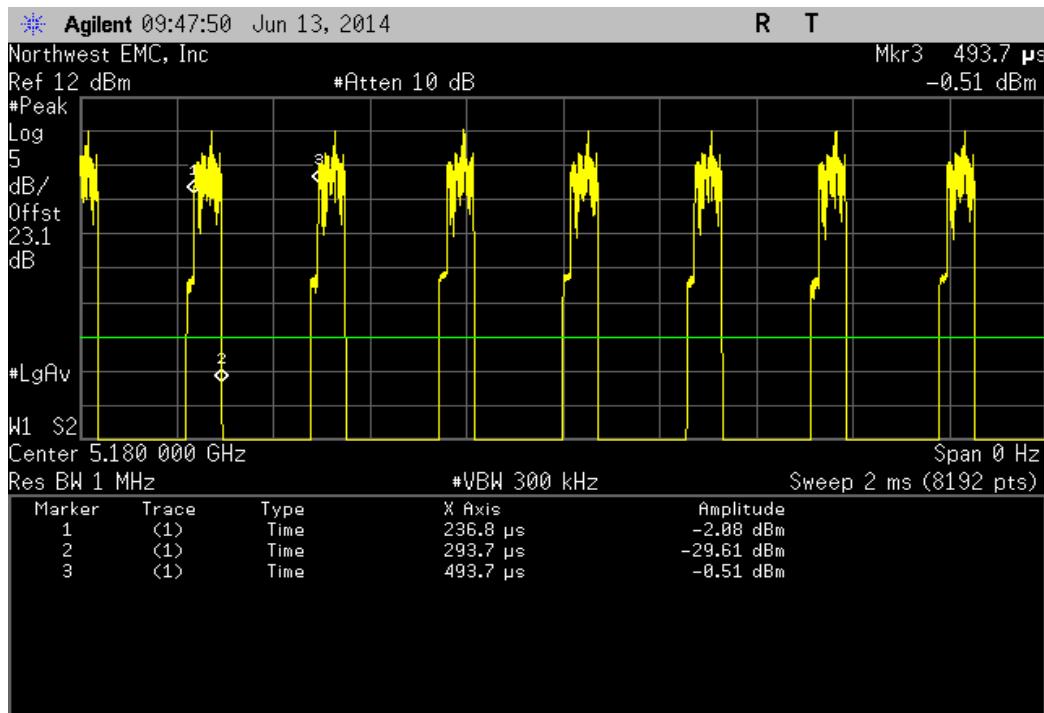
Antenna Port 1, 802.11(a) 18 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	73.5 $\mu$ s	272.5 $\mu$ s	1	27	N/A	N/A



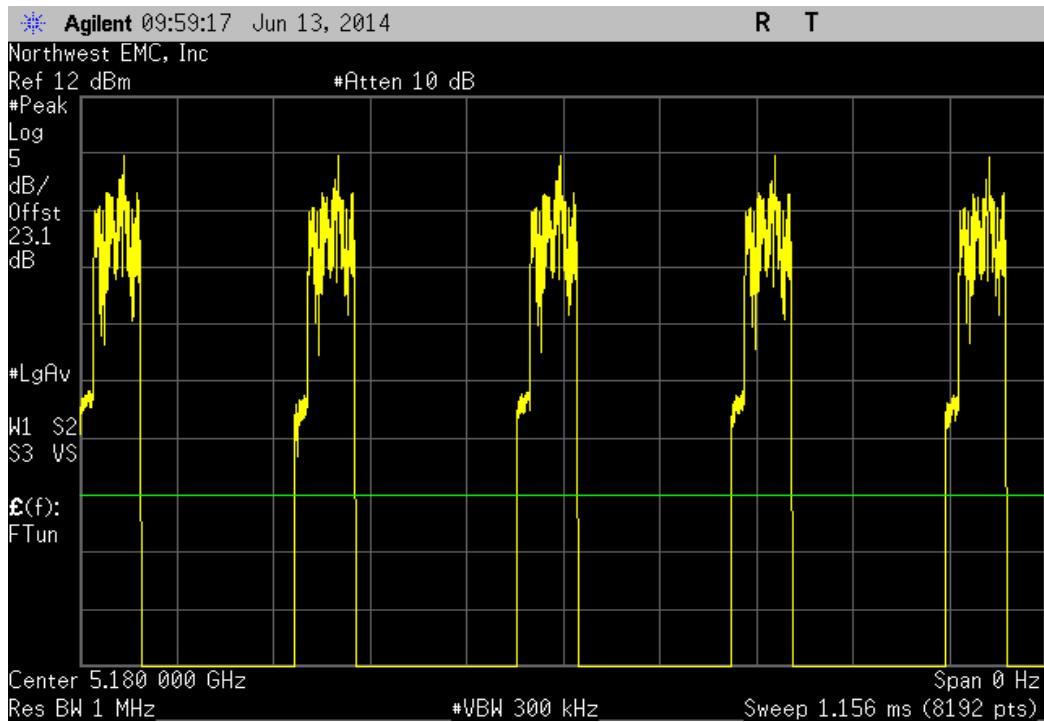
Antenna Port 1, 802.11(a) 18 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



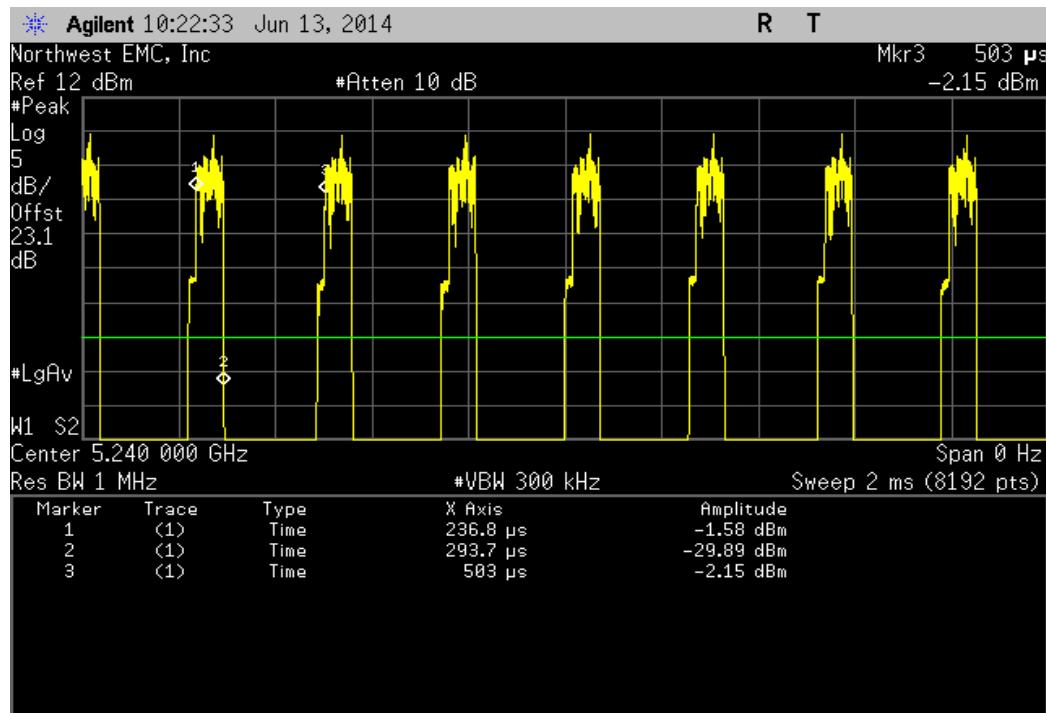
Antenna Port 1, 802.11(a) 36 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	56.9 uS	256.9 uS	1	22.1	N/A	N/A



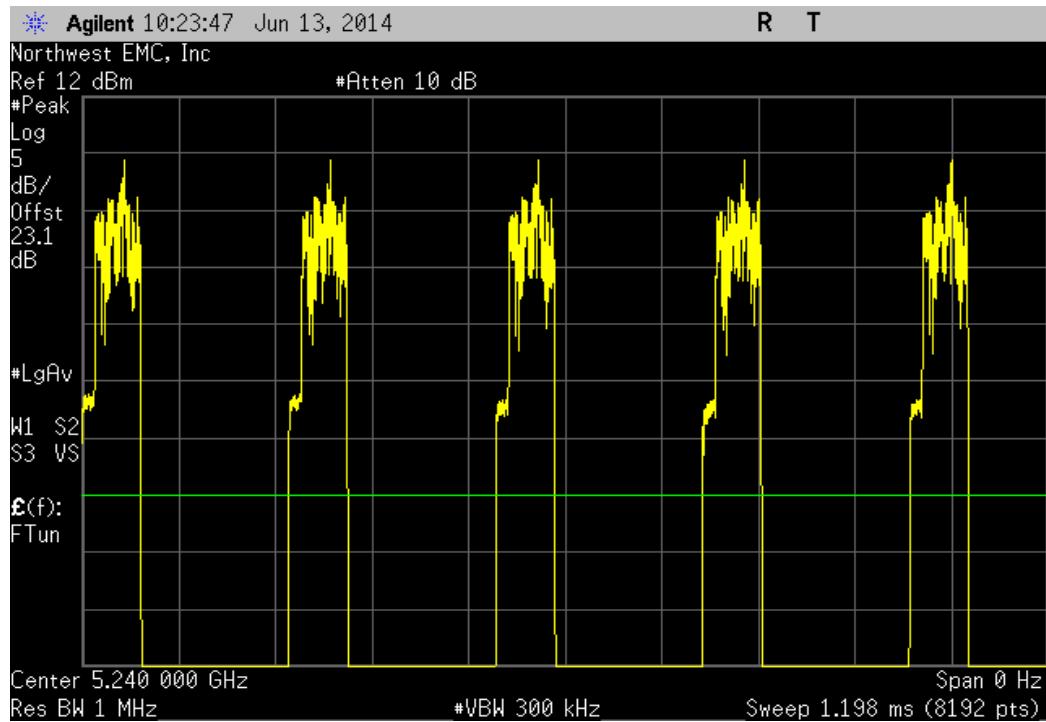
Antenna Port 1, 802.11(a) 36 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



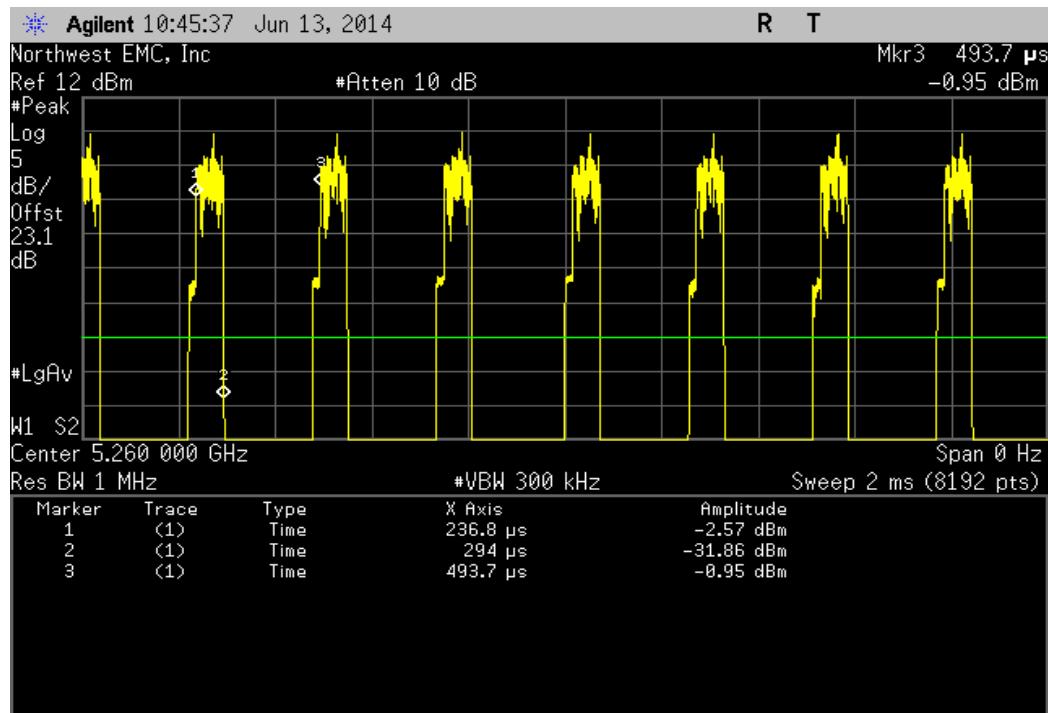
Antenna Port 1, 802.11(a) 36 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	56.9 uS	266.2 uS	1	21.4	N/A	N/A



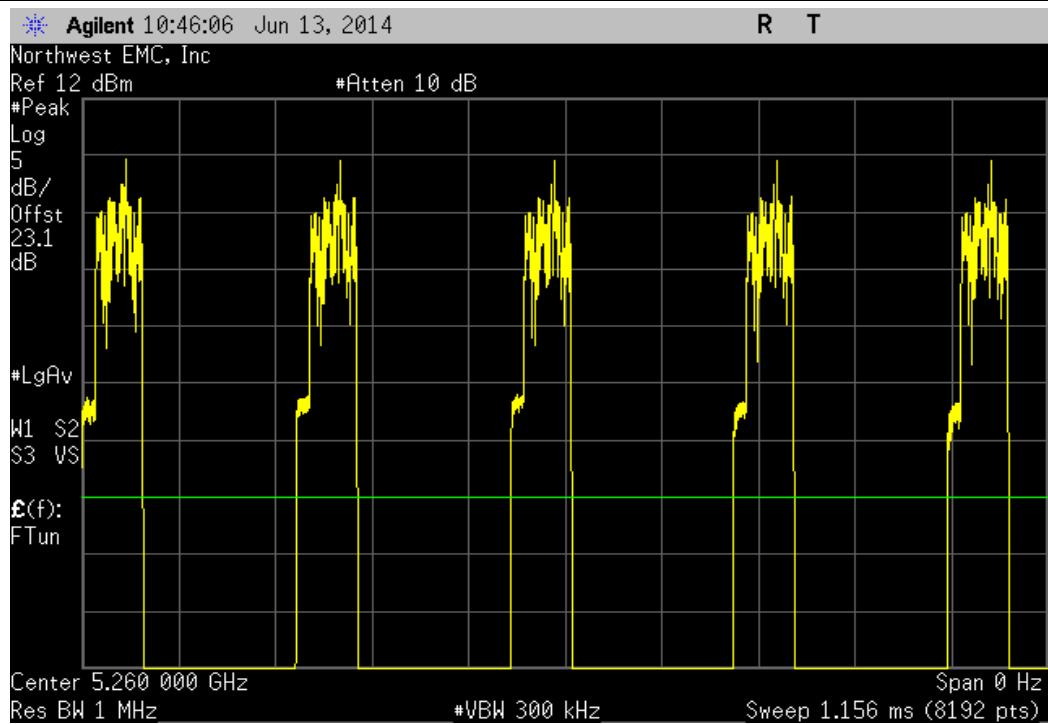
Antenna Port 1, 802.11(a) 36 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



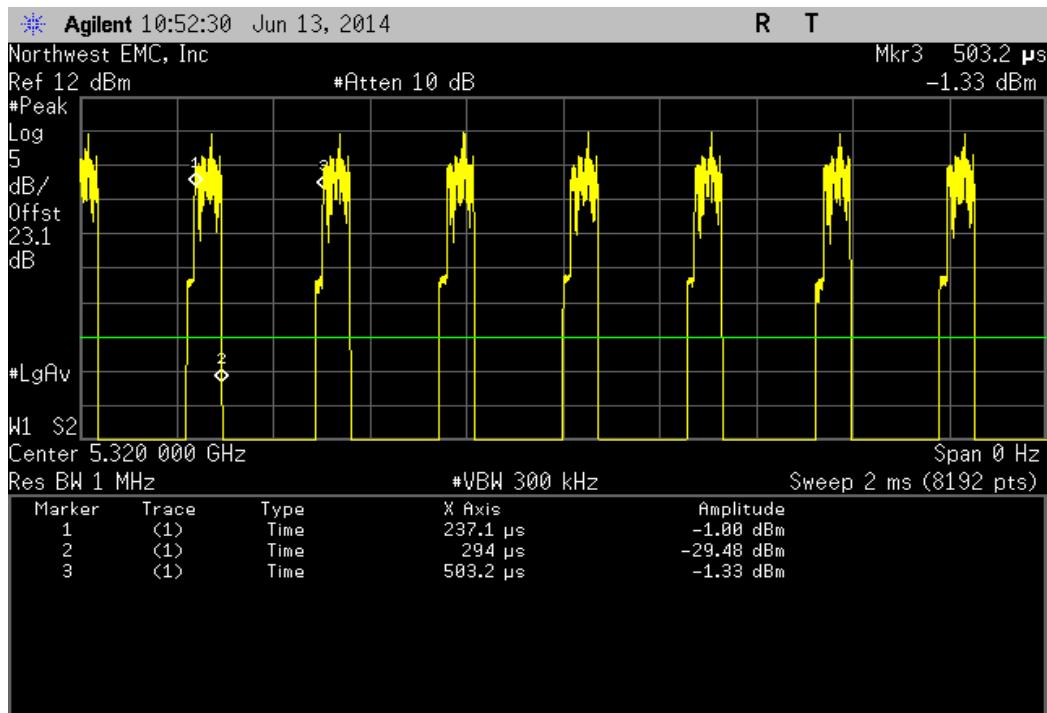
Antenna Port 1, 802.11(a) 36 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	57.2 uS	256.9 uS	1	22.3	N/A	N/A



Antenna Port 1, 802.11(a) 36 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



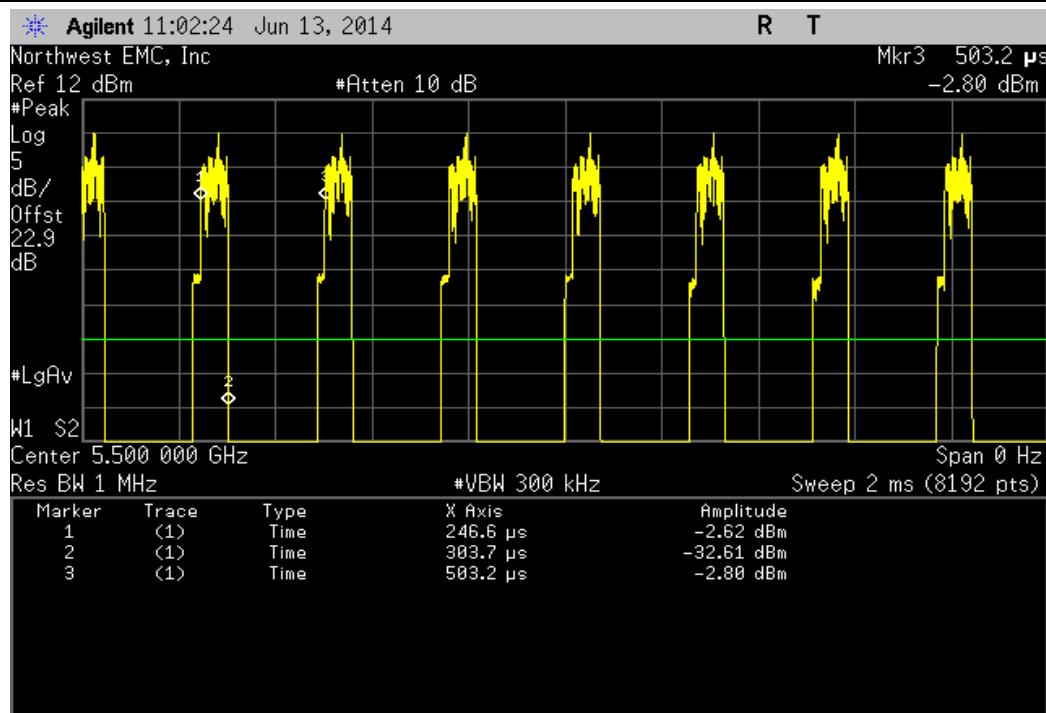
Antenna Port 1, 802.11(a) 36 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	56.9 uS	266.1 uS	1	21.4	N/A	N/A



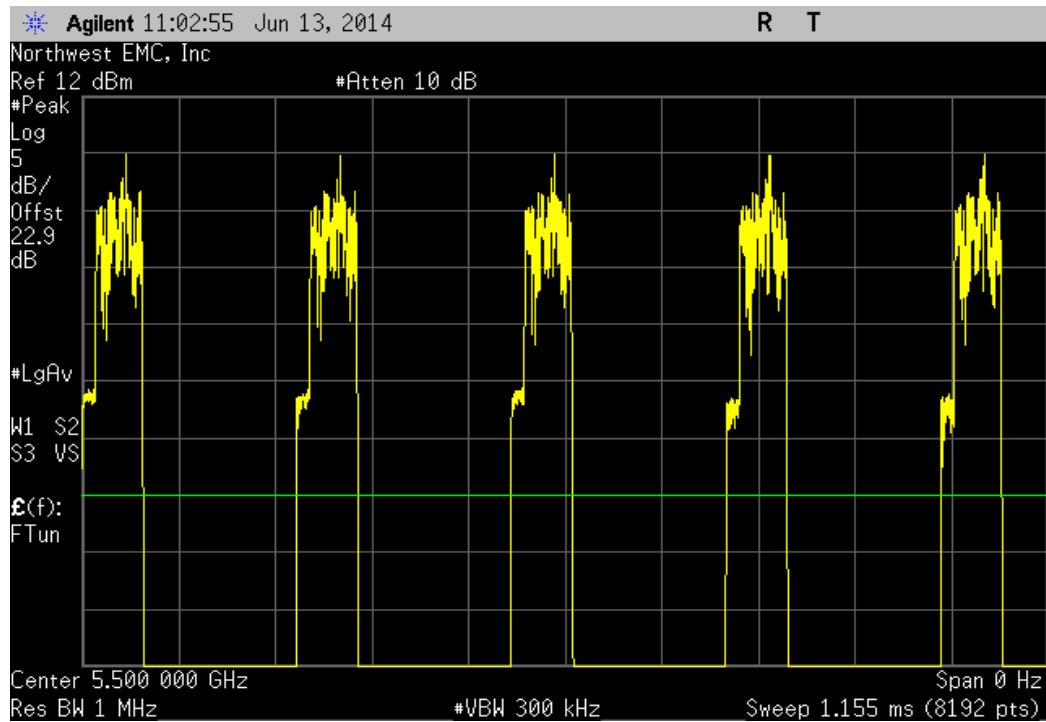
Antenna Port 1, 802.11(a) 36 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



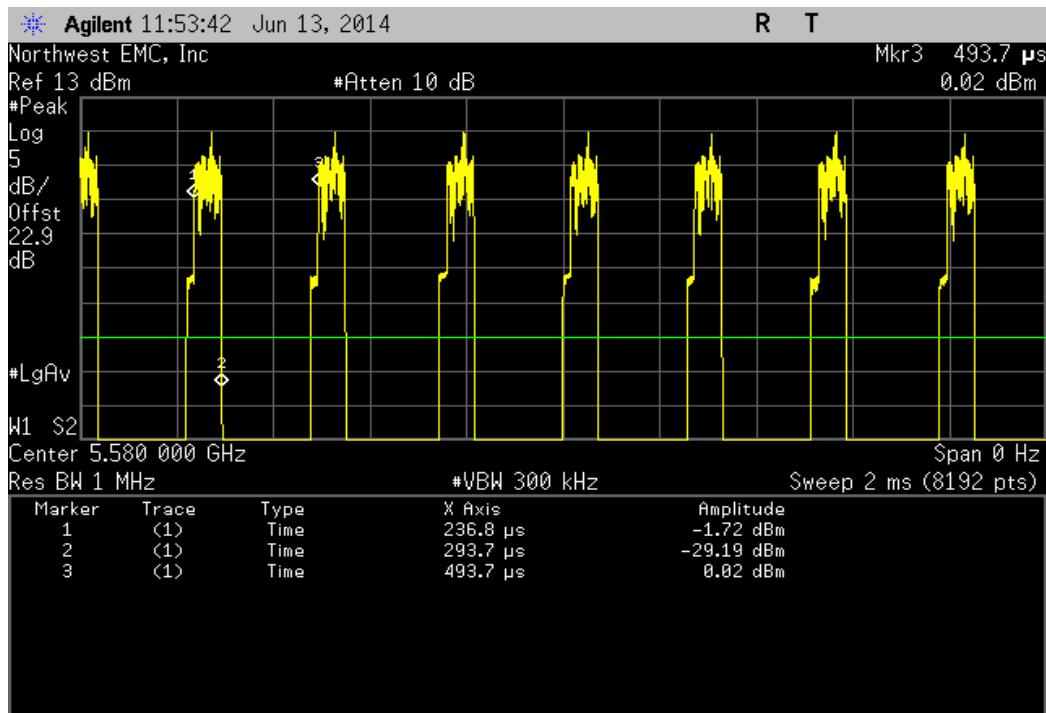
Antenna Port 1, 802.11(a) 36 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	57.1 uS	256.6 uS	1	22.3	N/A	N/A



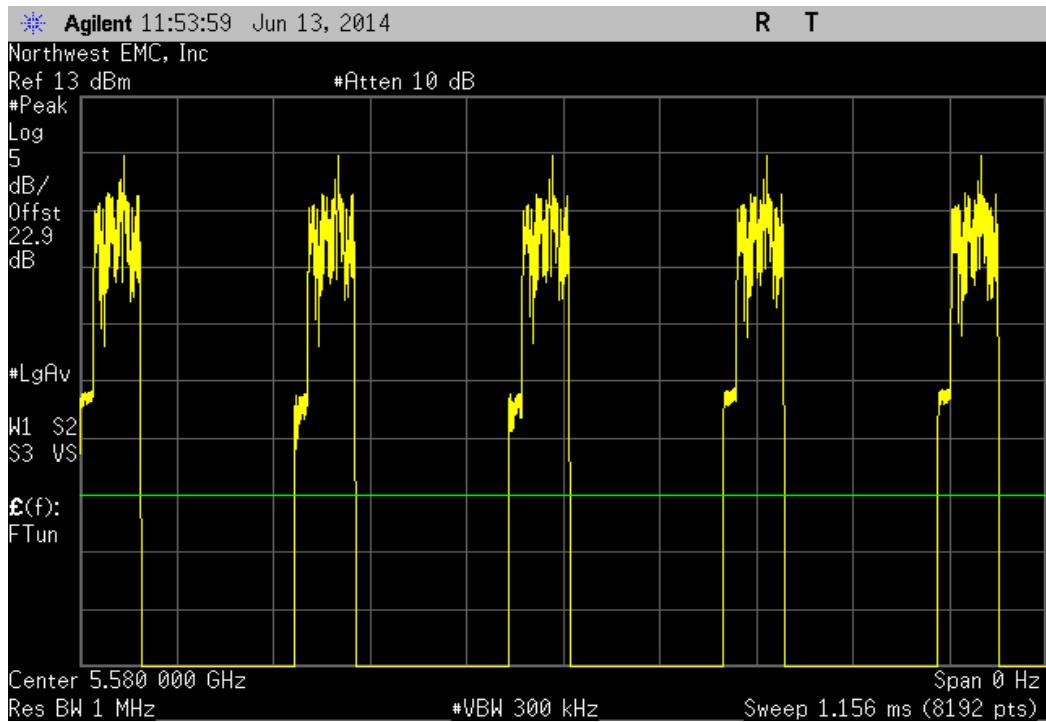
Antenna Port 1, 802.11(a) 36 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



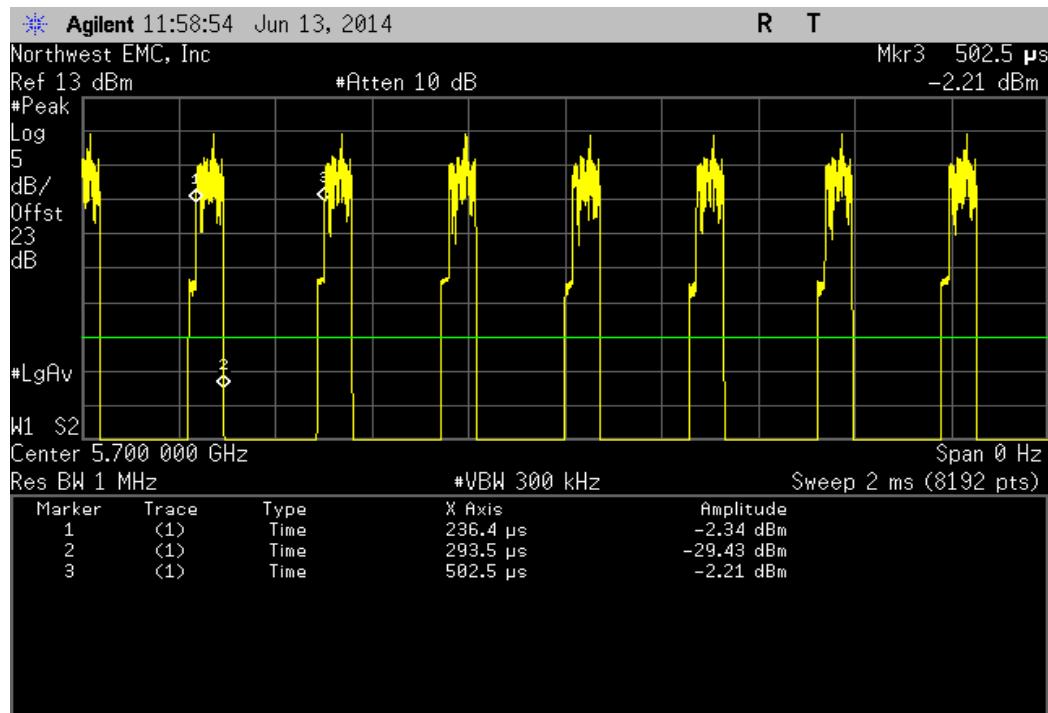
Antenna Port 1, 802.11(a) 36 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	56.9 uS	256.9 uS	1	22.1	N/A	N/A



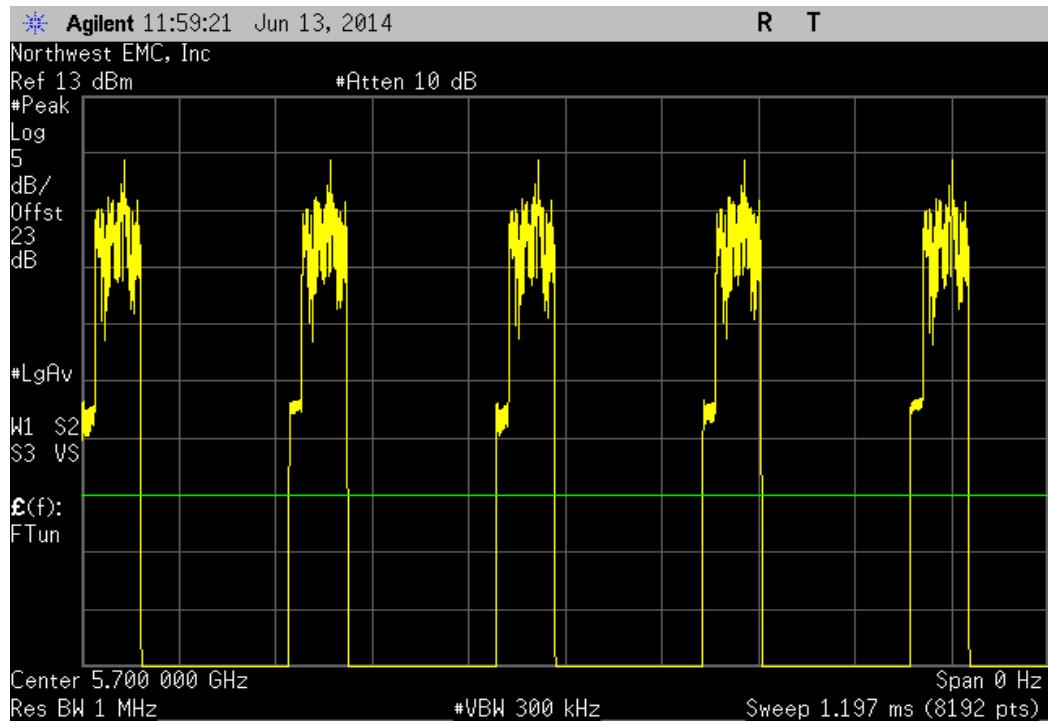
Antenna Port 1, 802.11(a) 36 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



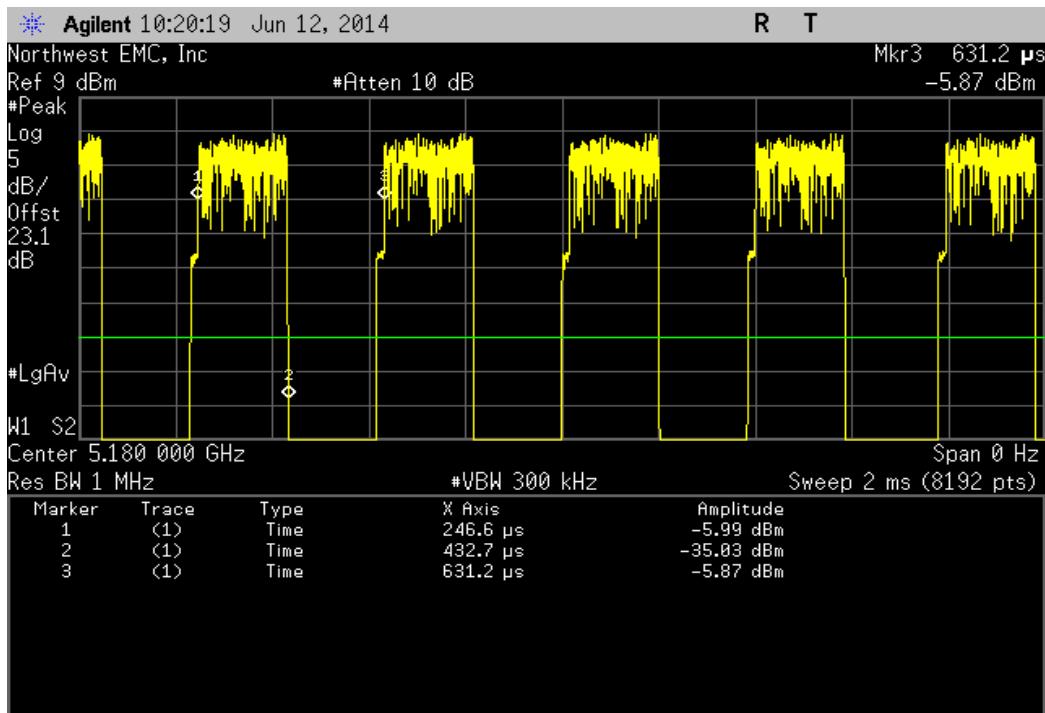
Antenna Port 1, 802.11(a) 36 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	57.1 uS	266.1 uS	1	21.5	N/A	N/A



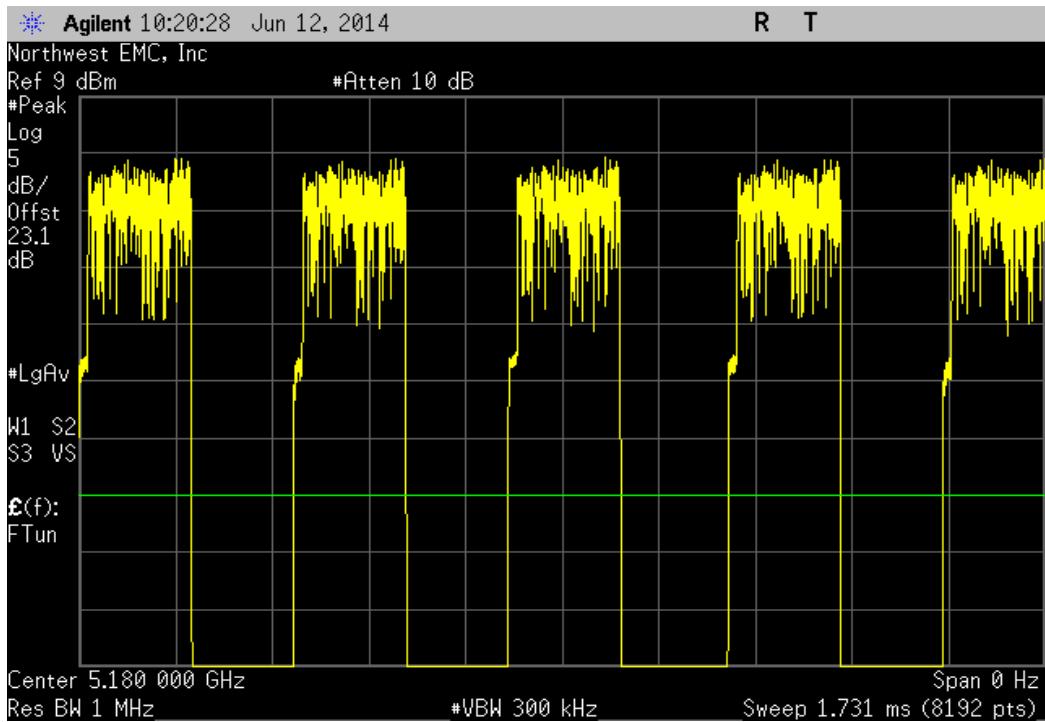
Antenna Port 1, 802.11(a) 36 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



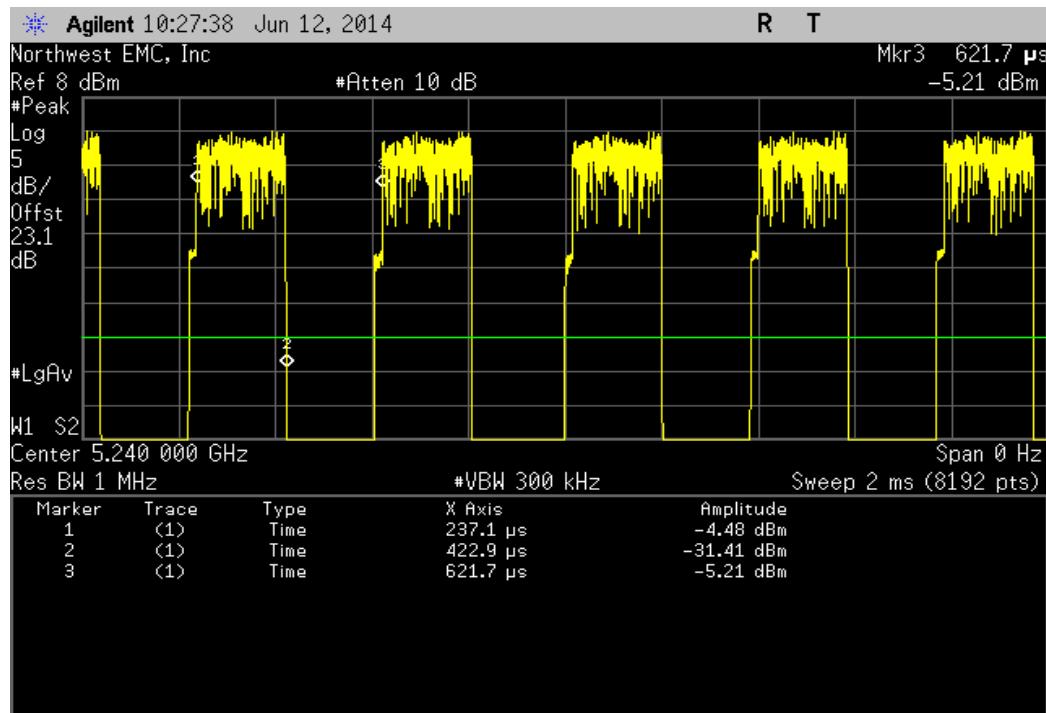
Antenna Port 2, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	186.1 uS	384.6 uS	1	48.4	N/A	N/A



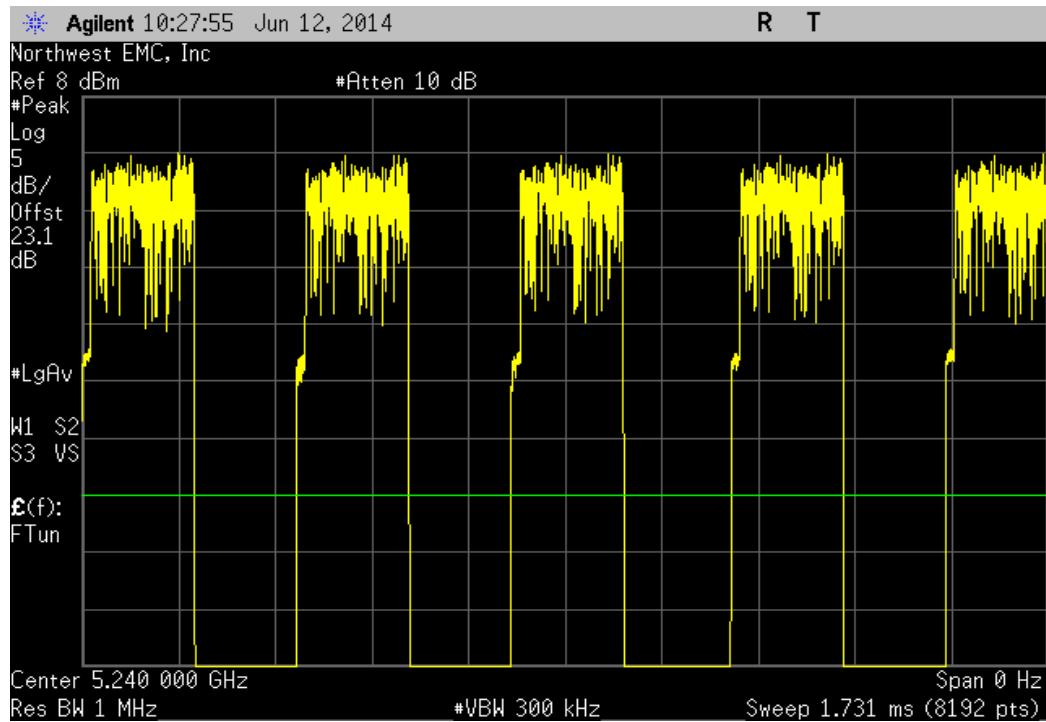
Antenna Port 2, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



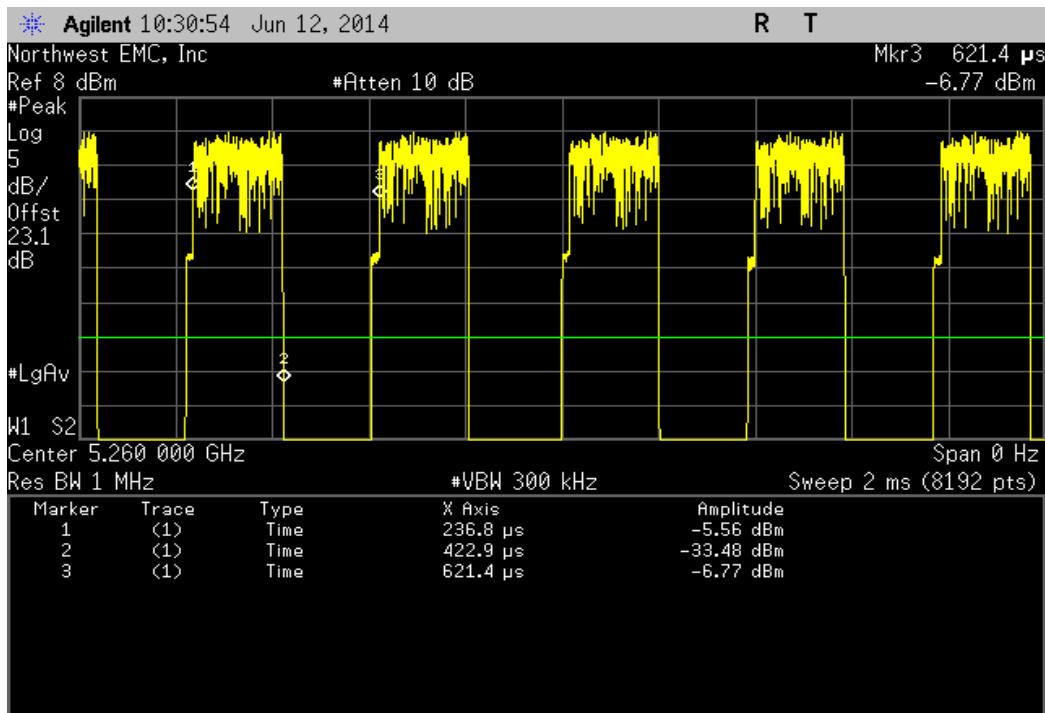
Antenna Port 2, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	185.8 uS	384.6 uS	1	48.3	N/A	N/A



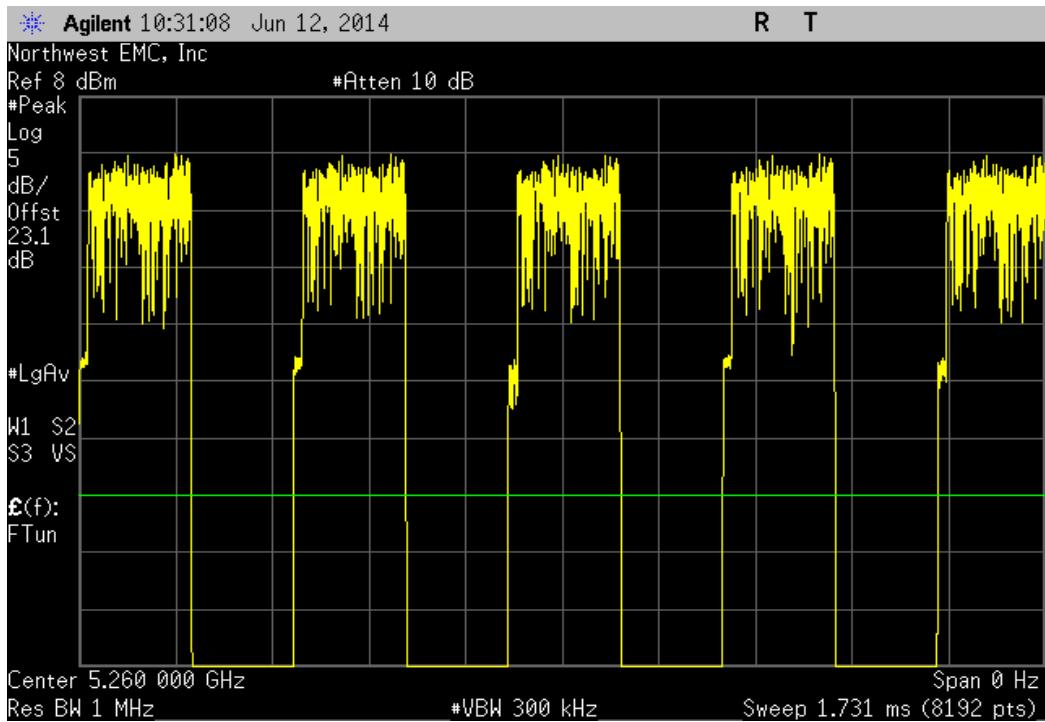
Antenna Port 2, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

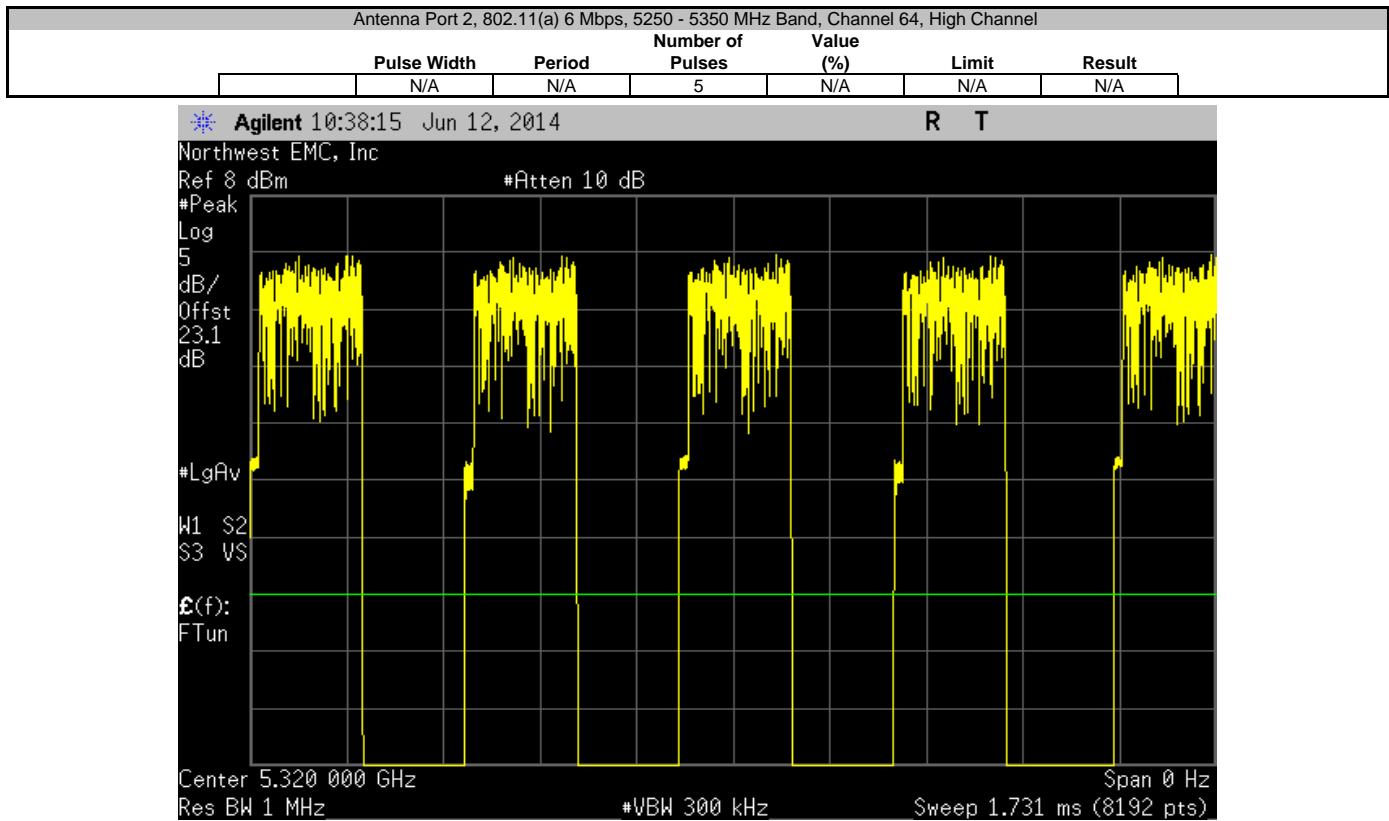
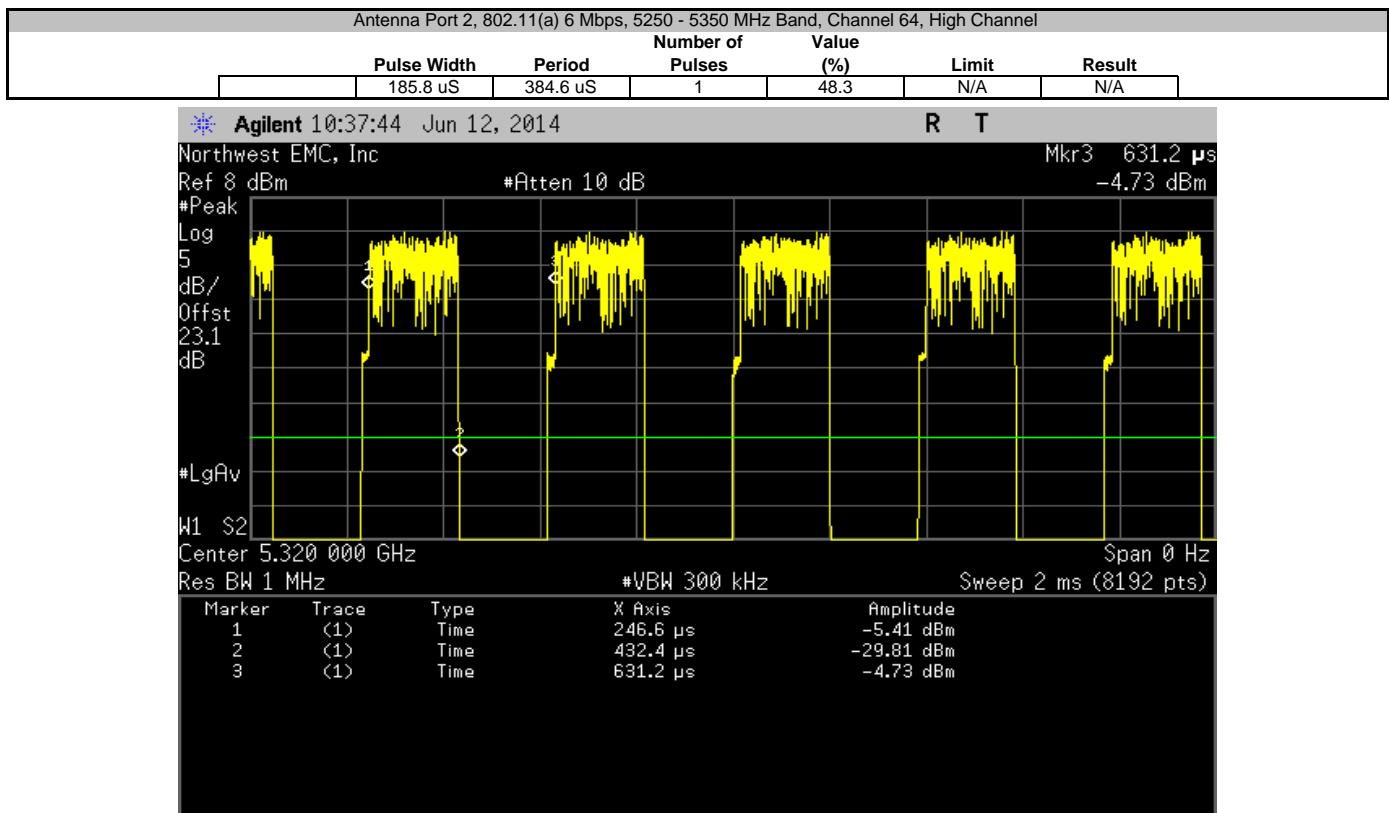


Antenna Port 2, 802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	186.1 uS	384.6 uS	1	48.4	N/A	N/A

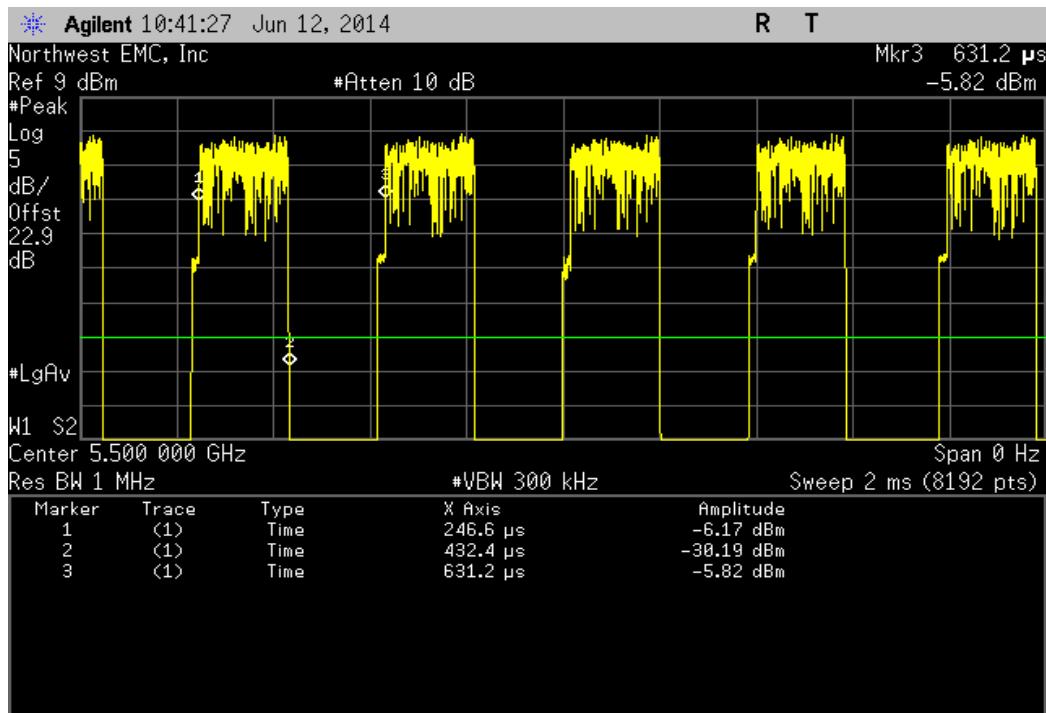


Antenna Port 2, 802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

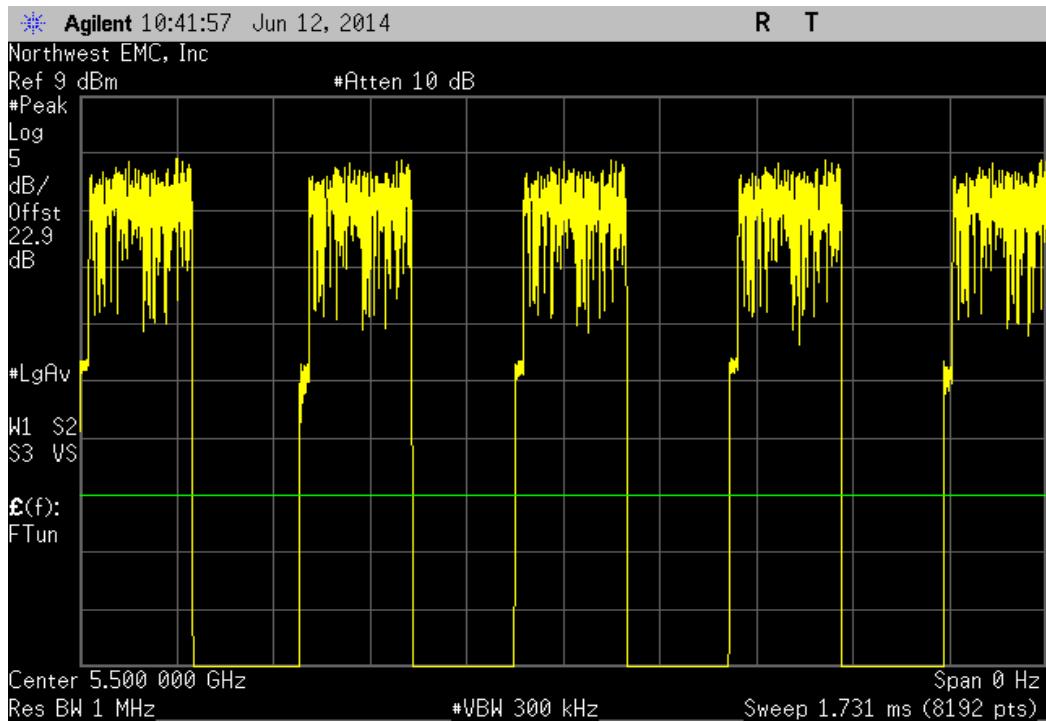




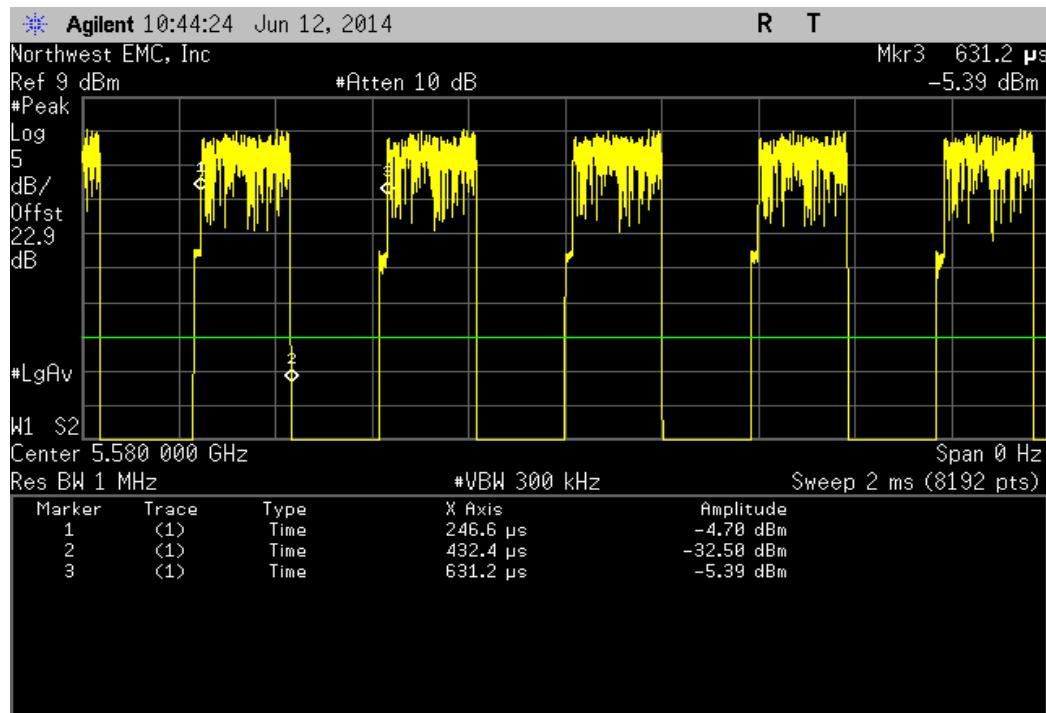
Antenna Port 2, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	185.8 uS	384.6 uS	1	48.3	N/A	N/A



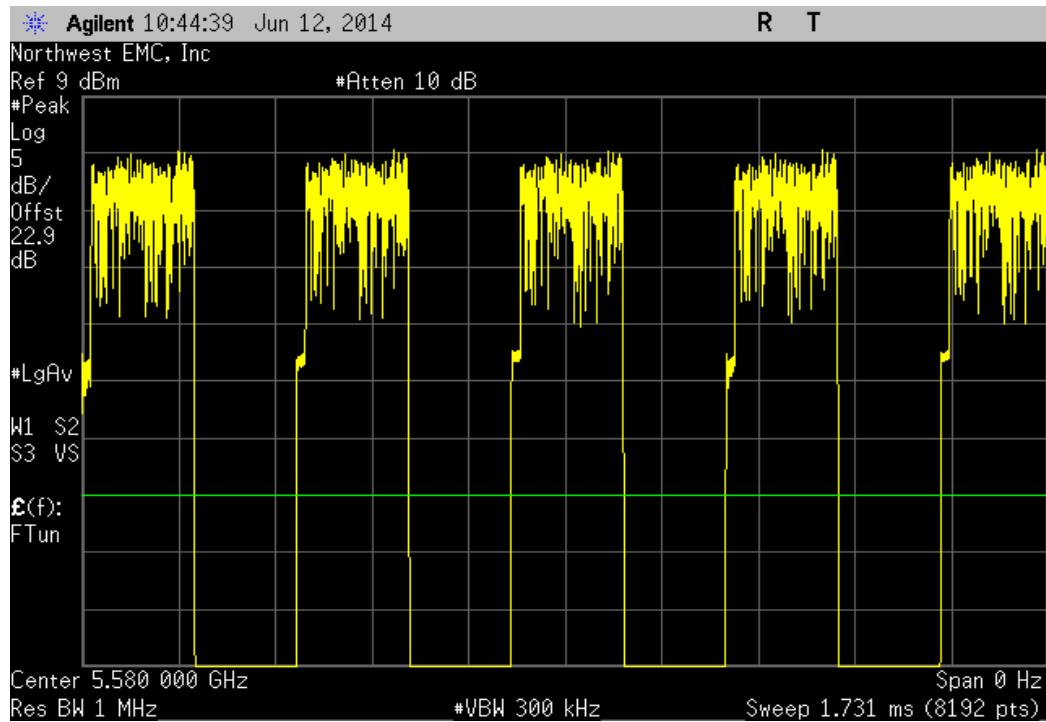
Antenna Port 2, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



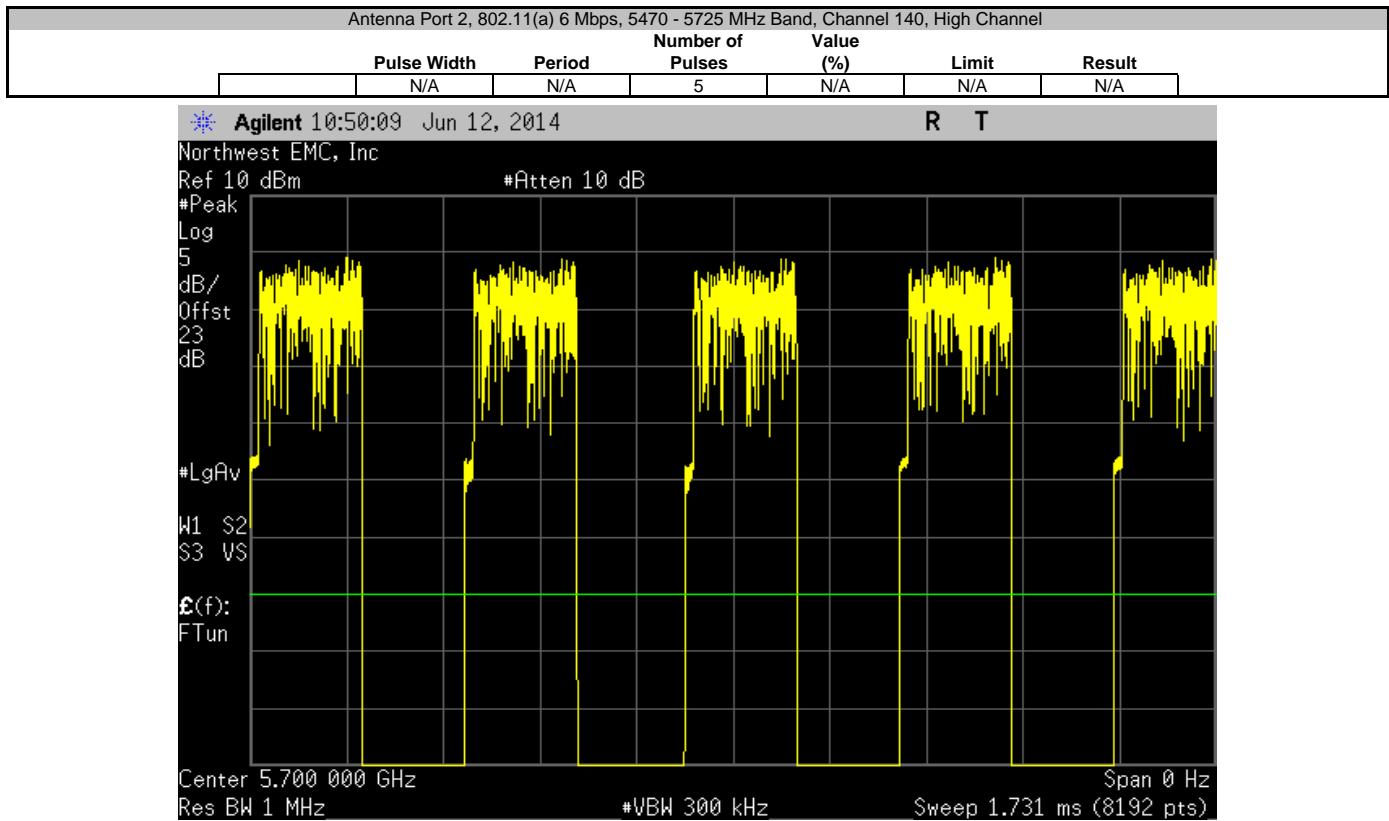
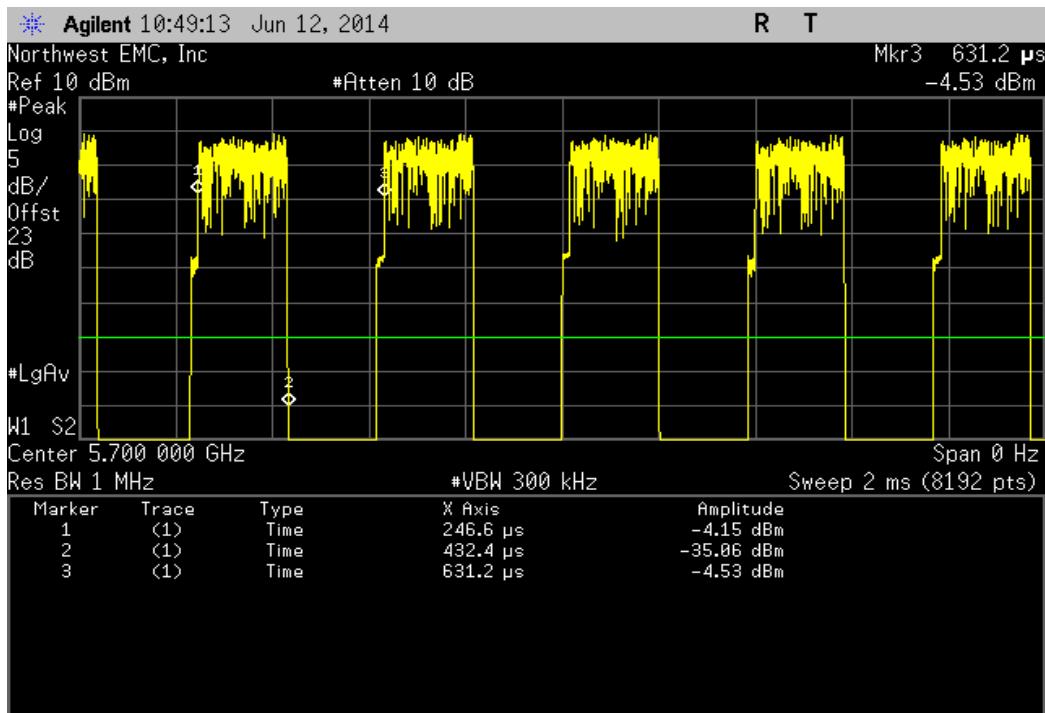
Antenna Port 2, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	185.8 uS	384.6 uS	1	48.3	N/A	N/A



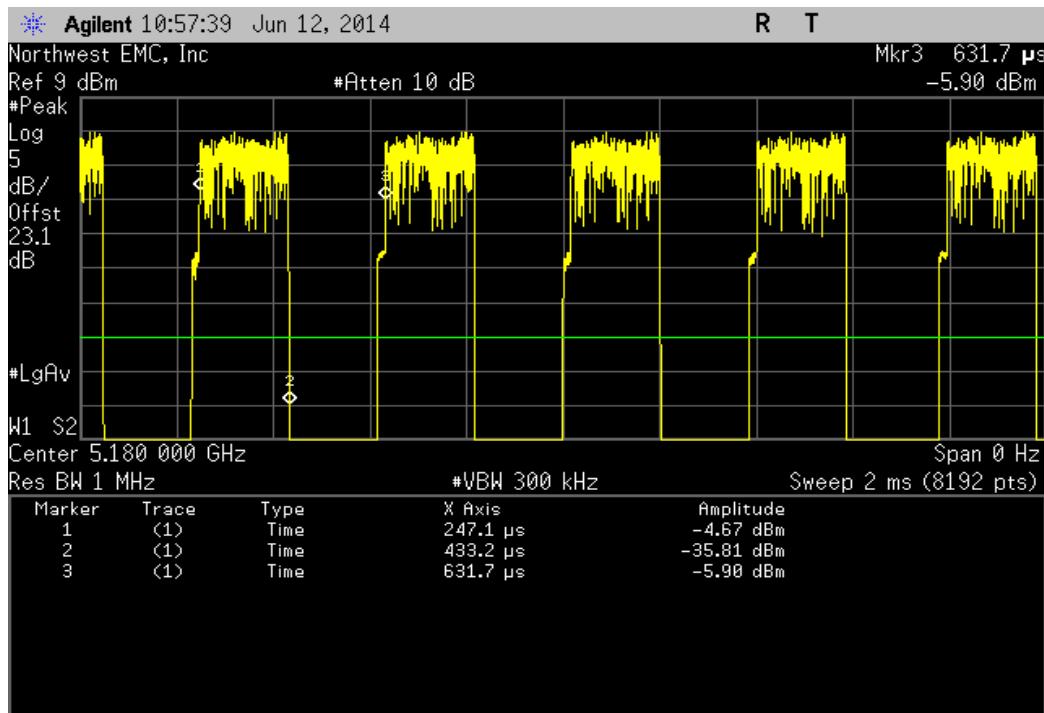
Antenna Port 2, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



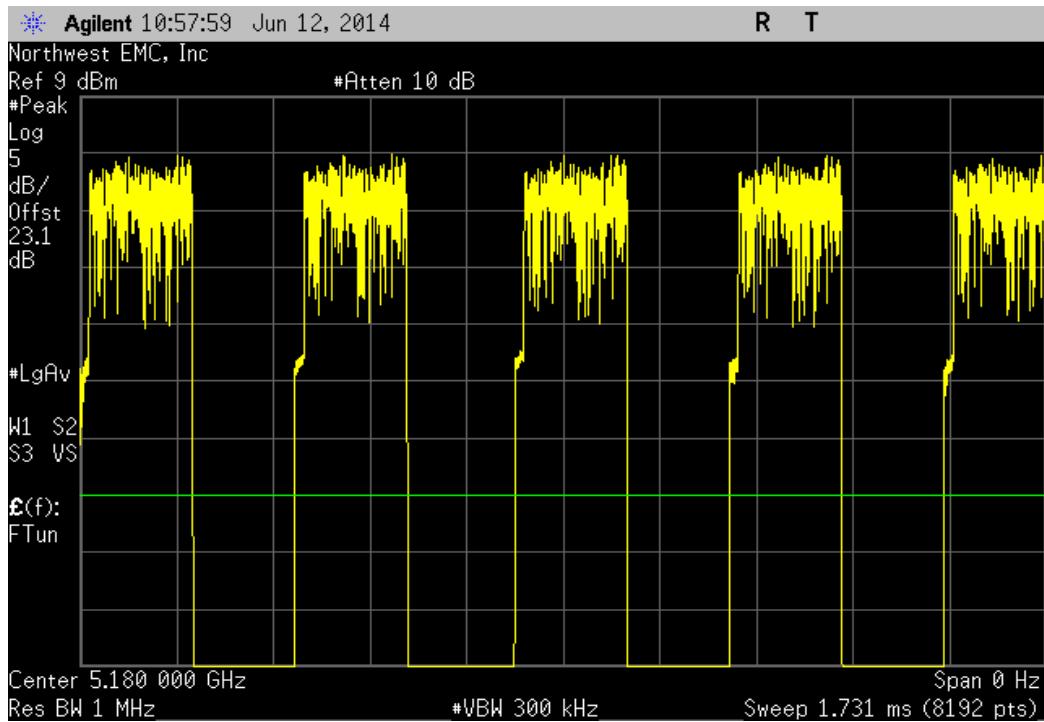
Antenna Port 2, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	185.8 uS	384.6 uS	1	48.3	N/A	N/A



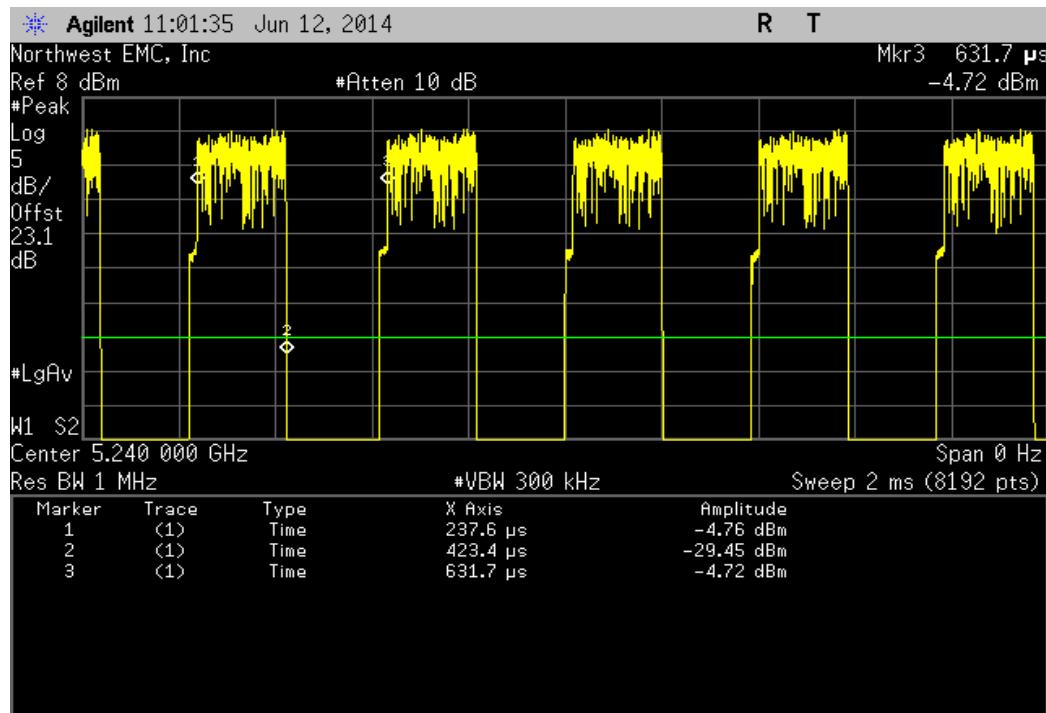
Antenna Port 3, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	186.1 uS	384.6 uS	1	48.4	N/A	N/A



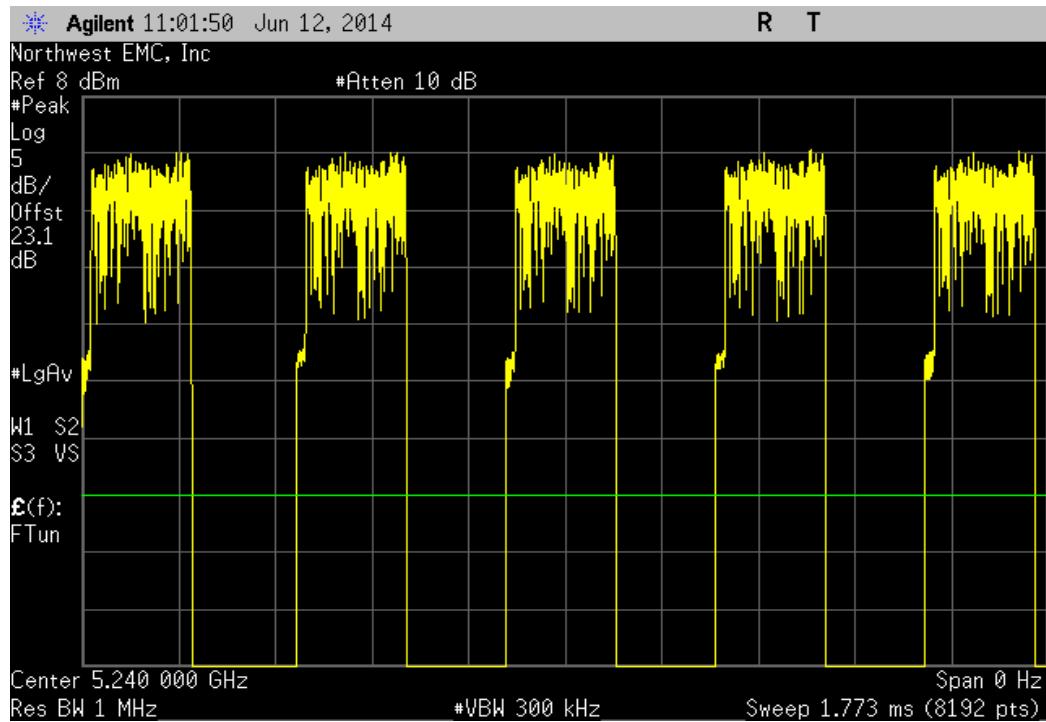
Antenna Port 3, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



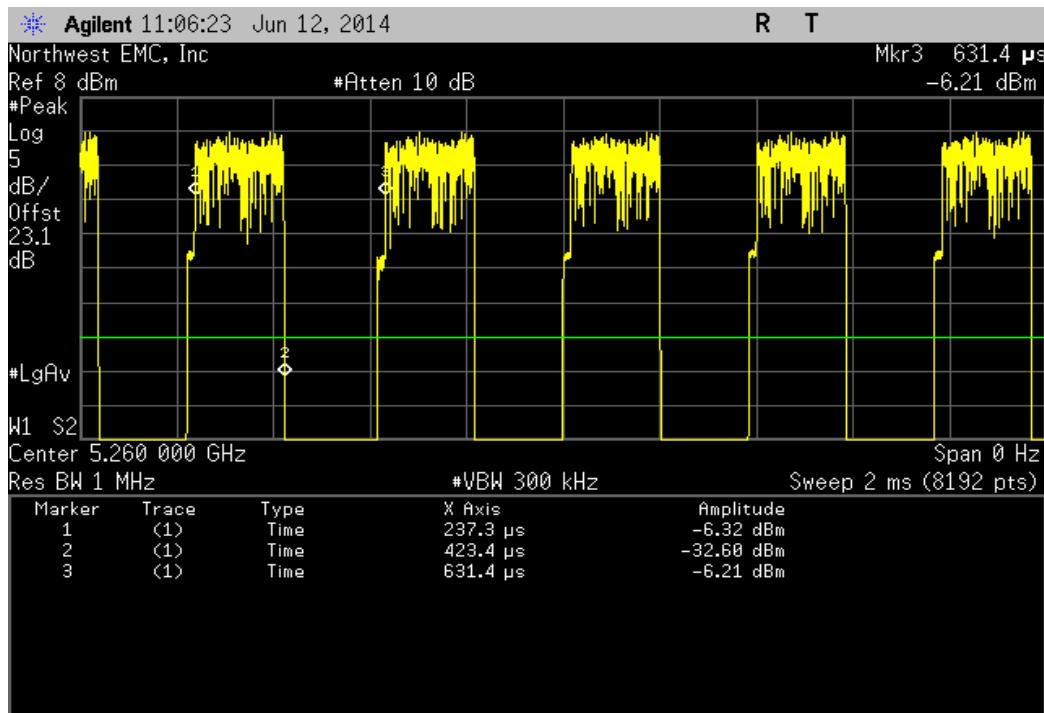
Antenna Port 3, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	185.8 $\mu$ s	394.1 $\mu$ s	1	47.1	N/A	N/A



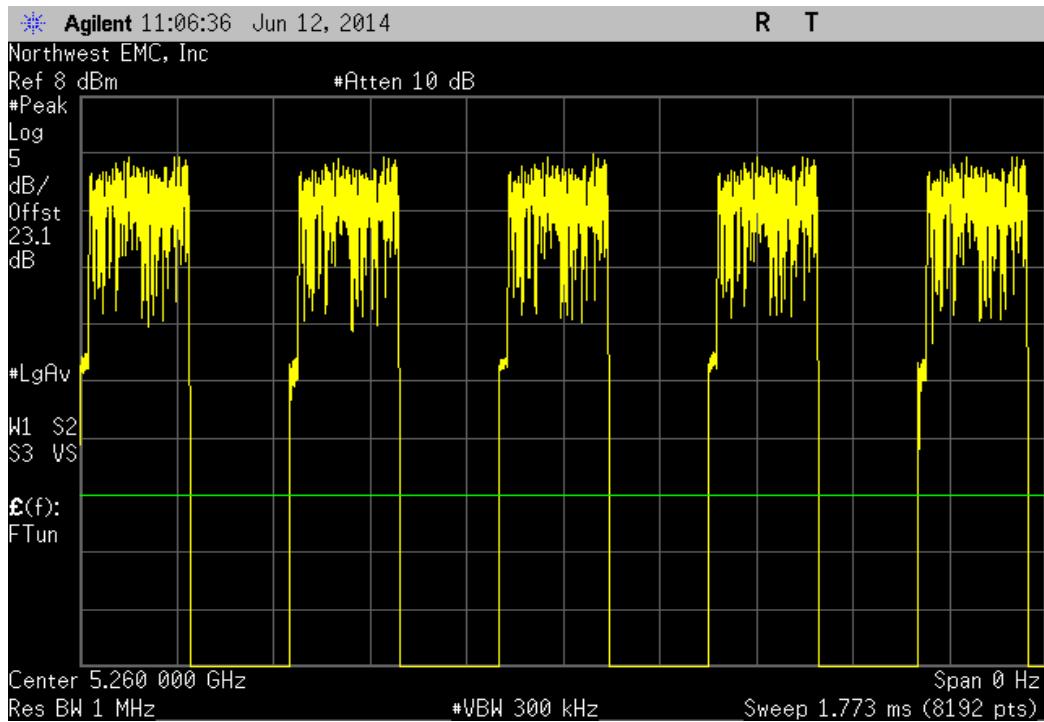
Antenna Port 3, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



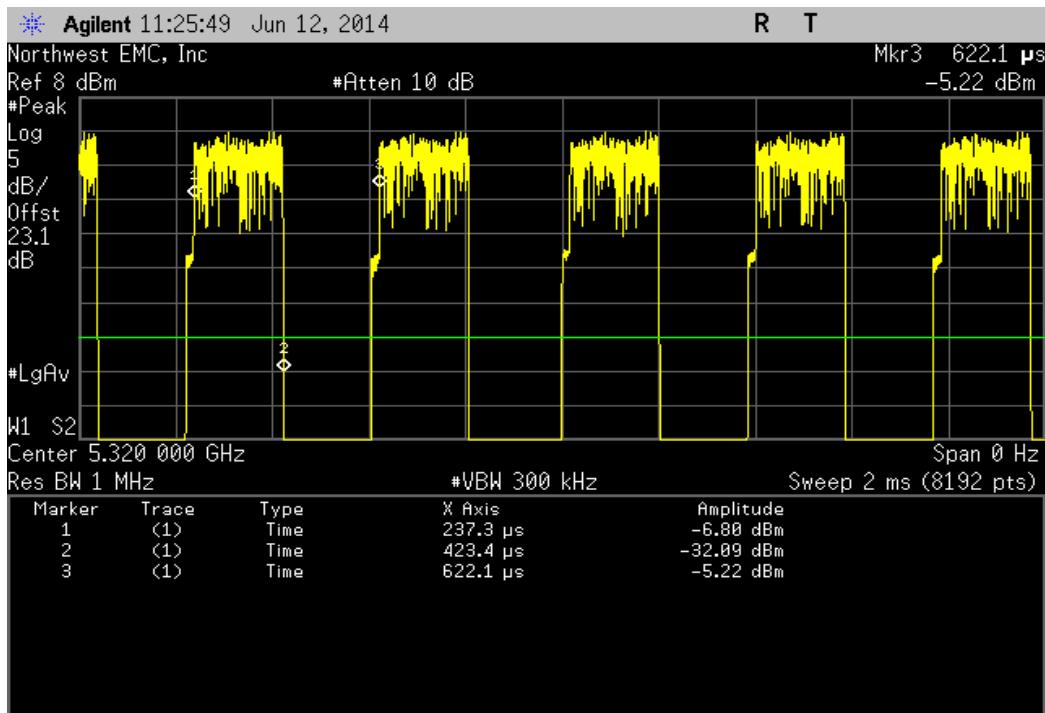
Antenna Port 3, 802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	186.1 uS	394.1 uS	1	47.2	N/A	N/A



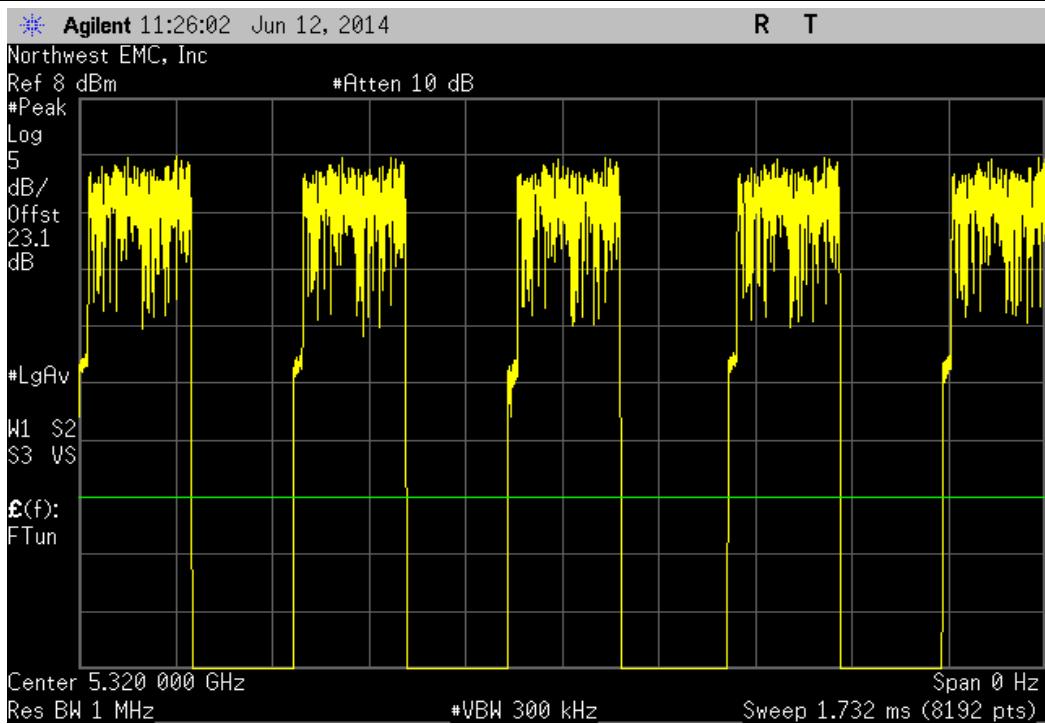
Antenna Port 3, 802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



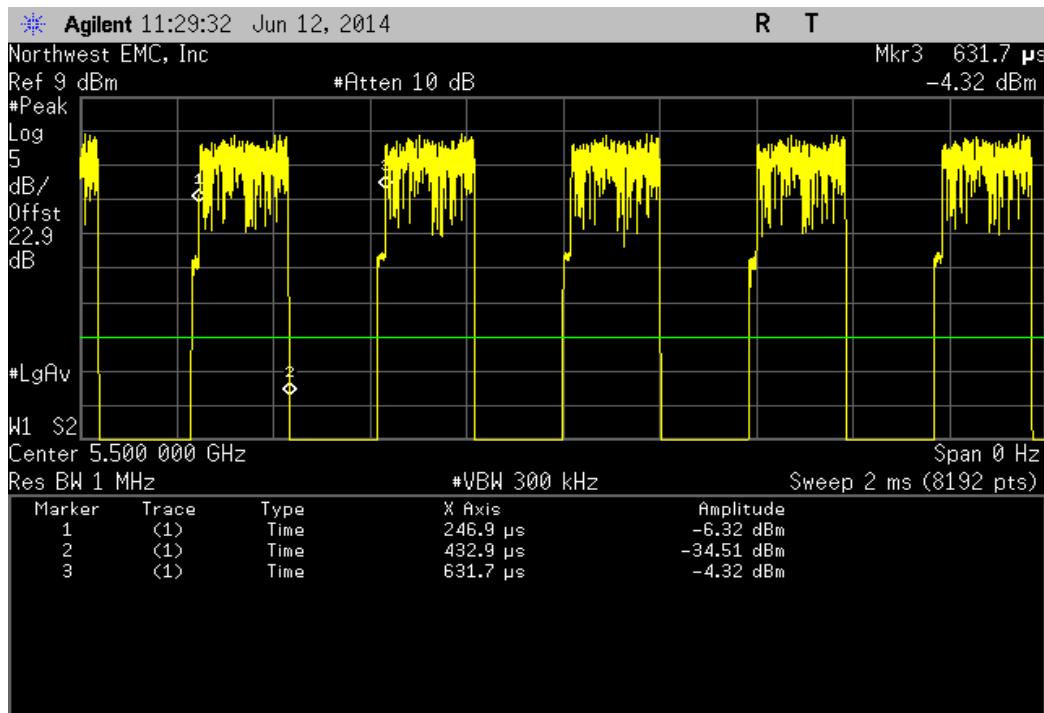
Antenna Port 3, 802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	186.1 $\mu$ s	384.8 $\mu$ s	1	48.4	N/A	N/A



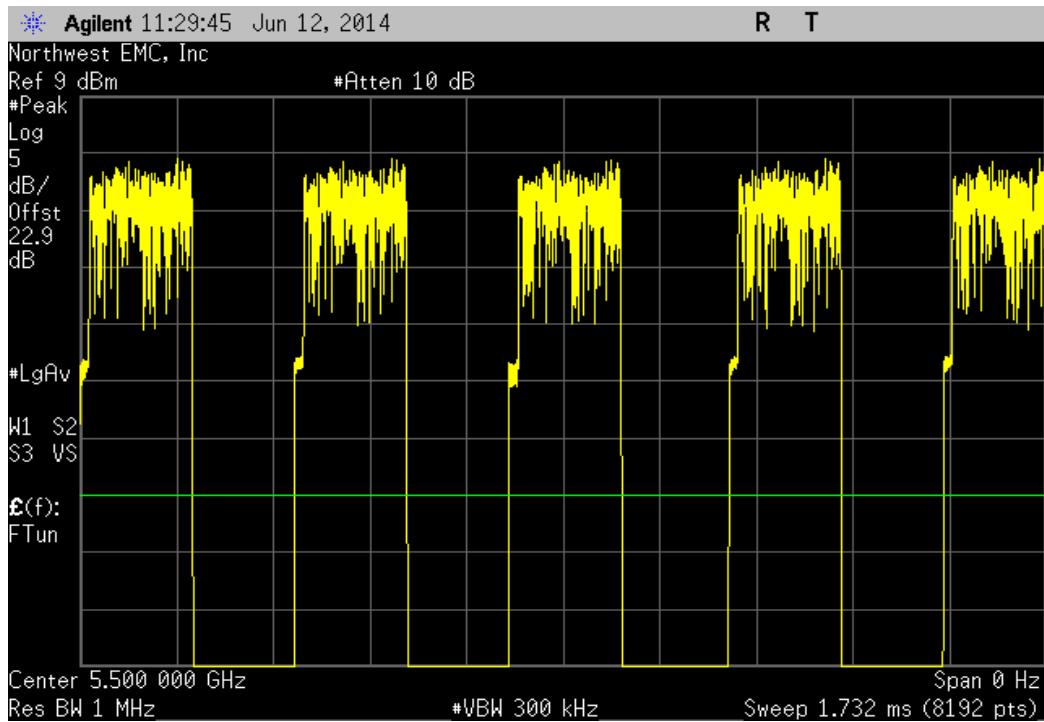
Antenna Port 3, 802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



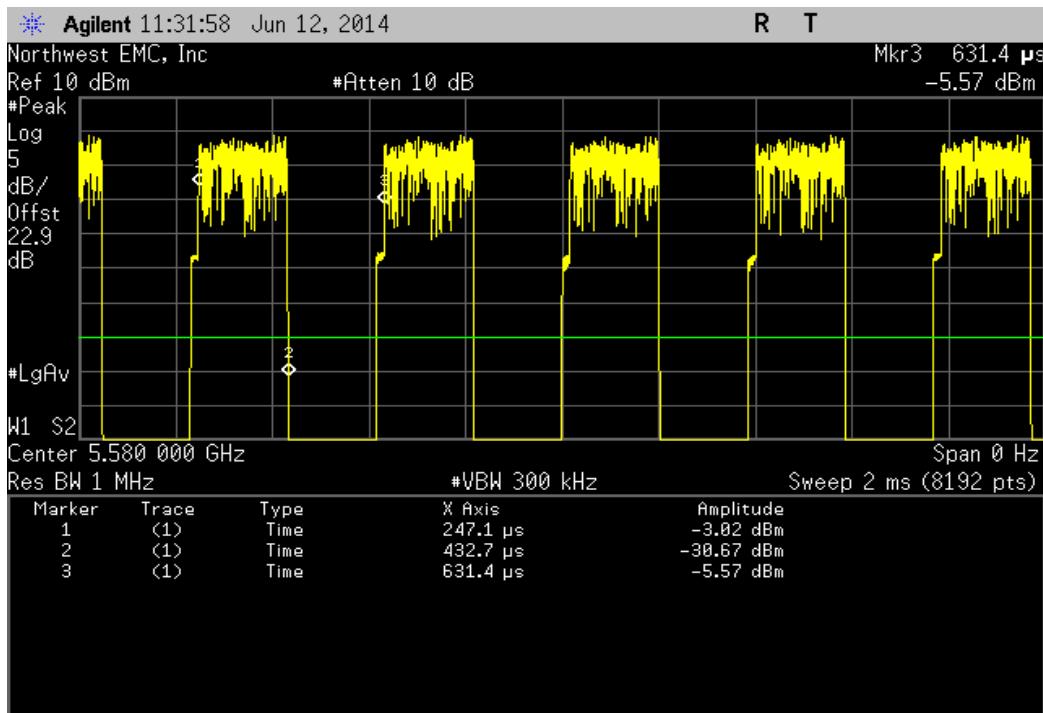
Antenna Port 3, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	186 uS	384.8 uS	1	48.3	N/A	N/A



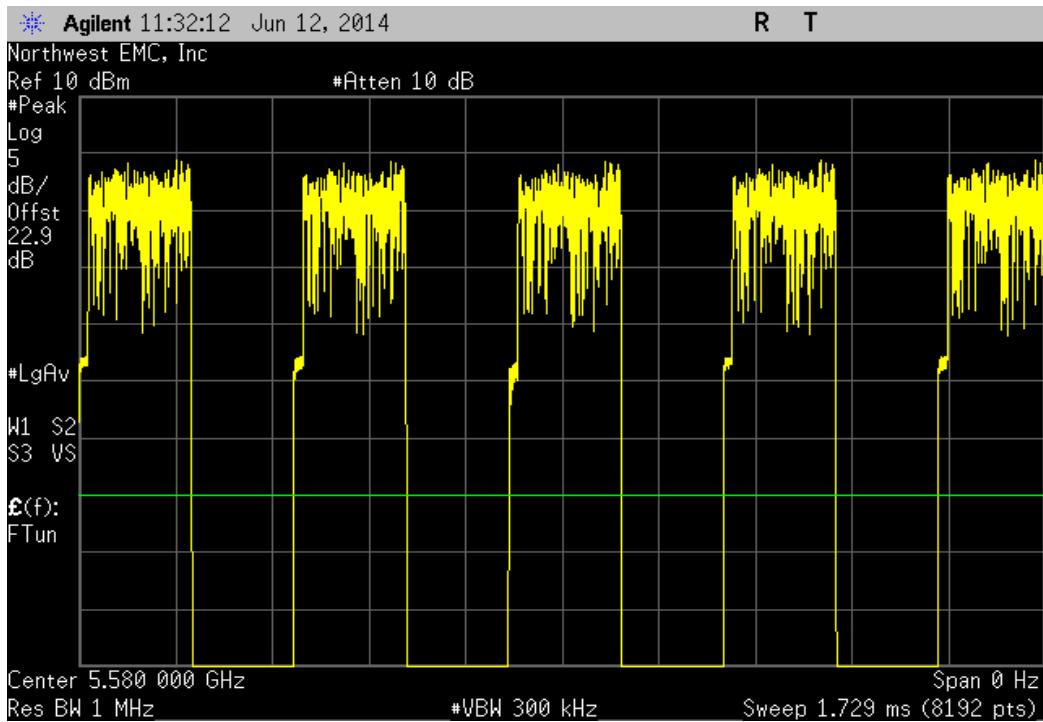
Antenna Port 3, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



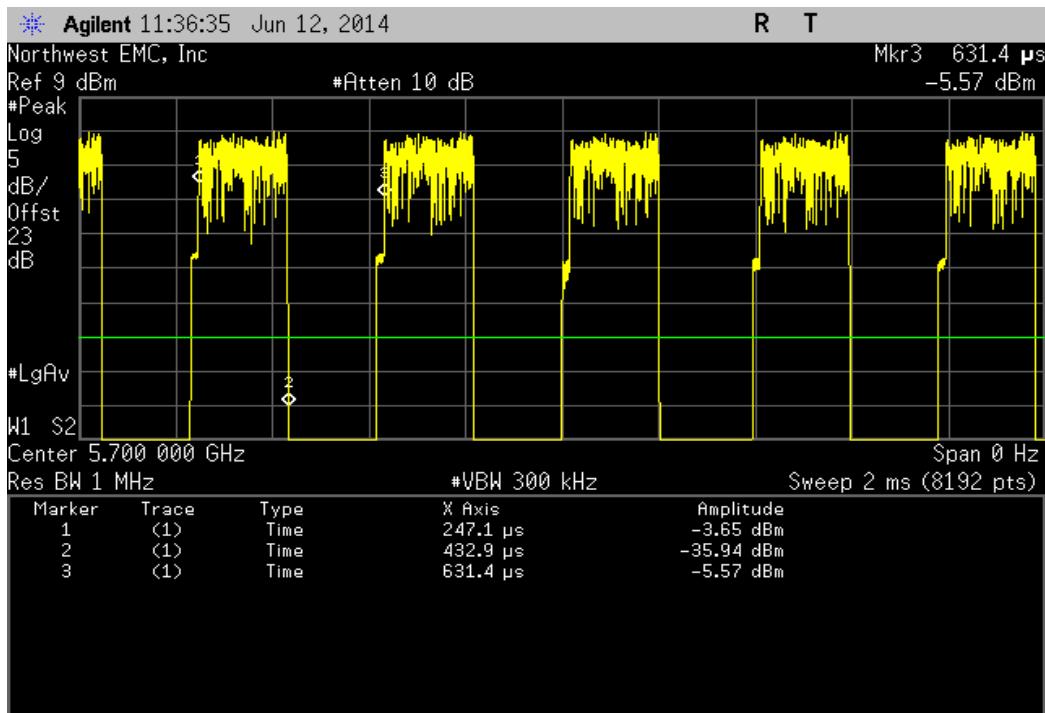
Antenna Port 3, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	185.6 uS	384.3 uS	1	48.3	N/A	N/A



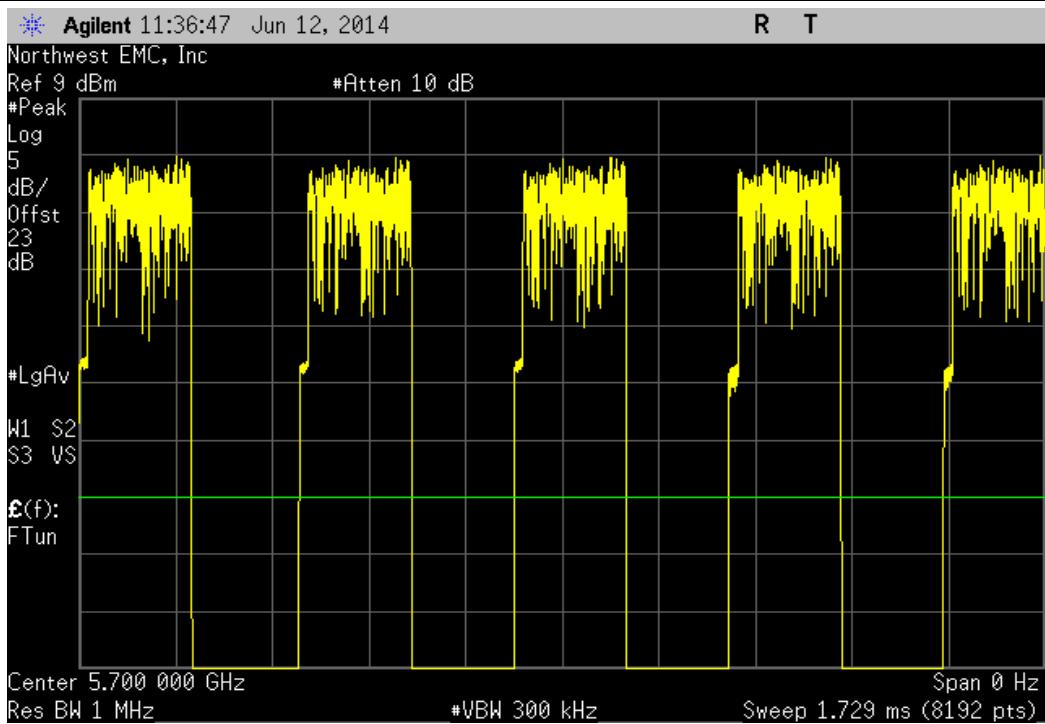
Antenna Port 3, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



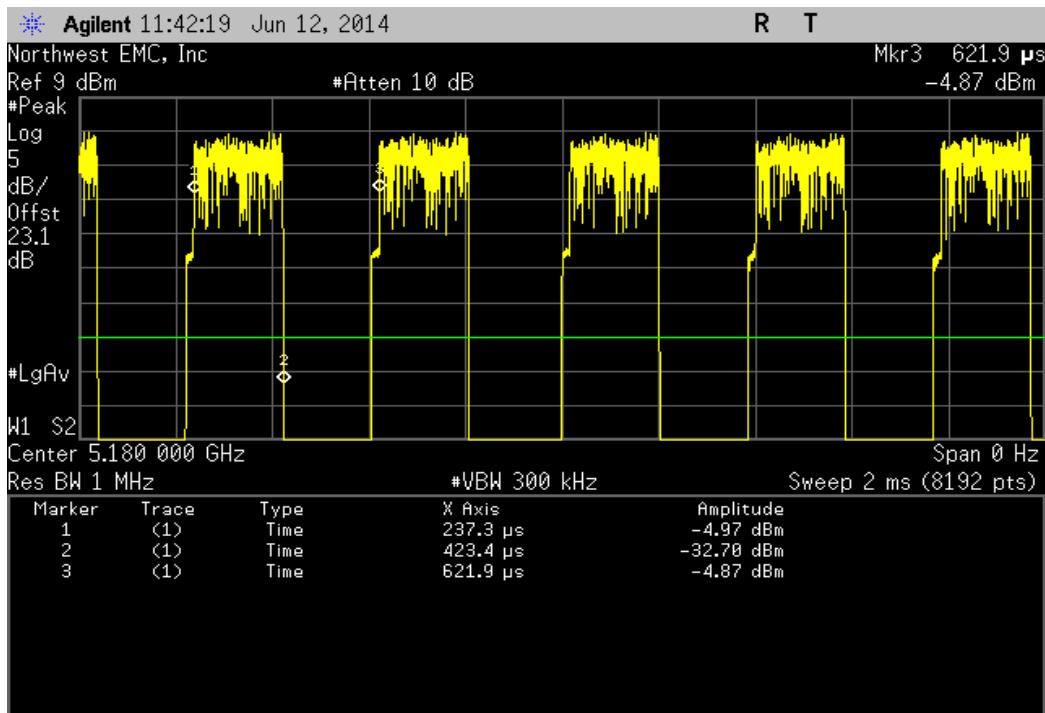
Antenna Port 3, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	185.8 uS	384.3 uS	1	48.3	N/A	N/A



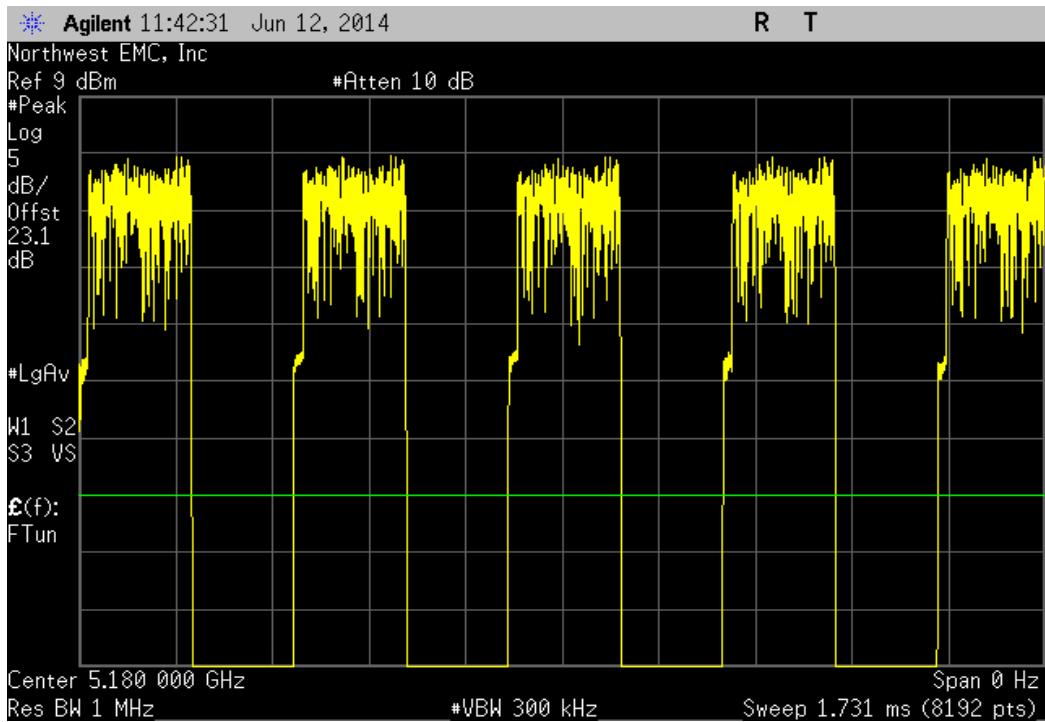
Antenna Port 3, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



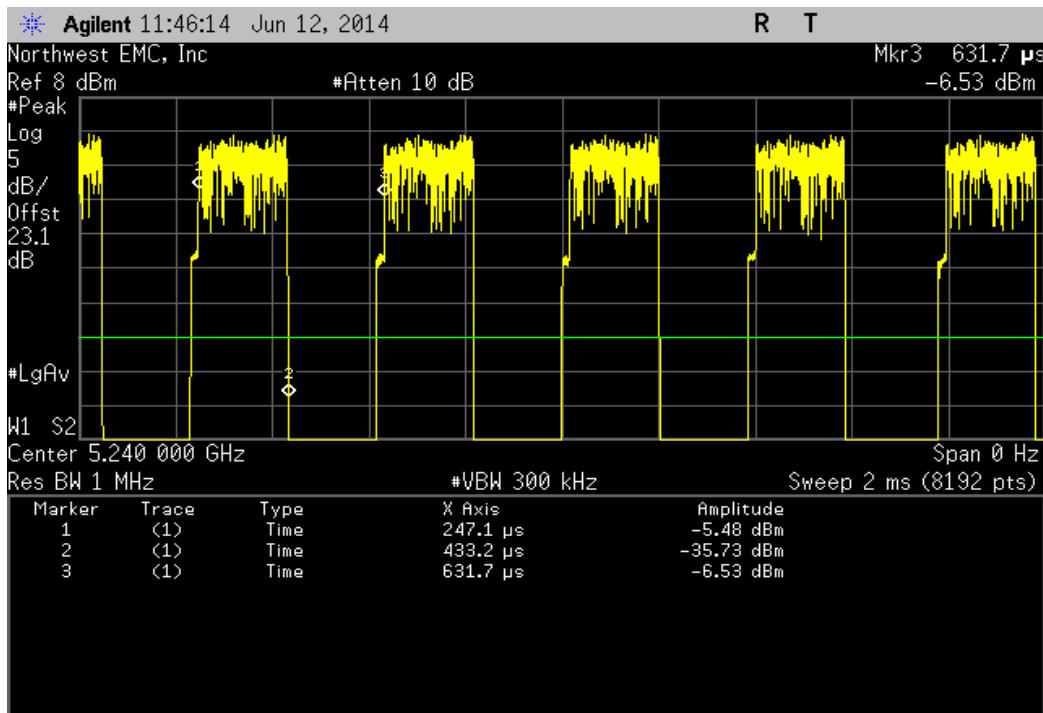
Antenna Port 4, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	186.1 uS	384.6 uS	1	48.4	N/A	N/A



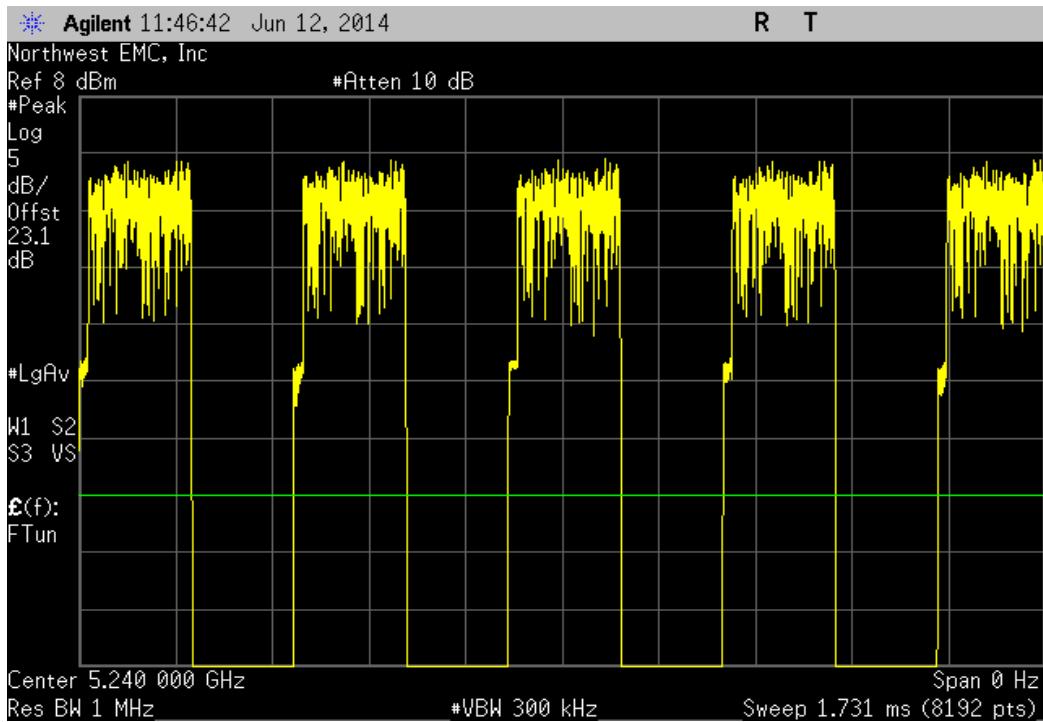
Antenna Port 4, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



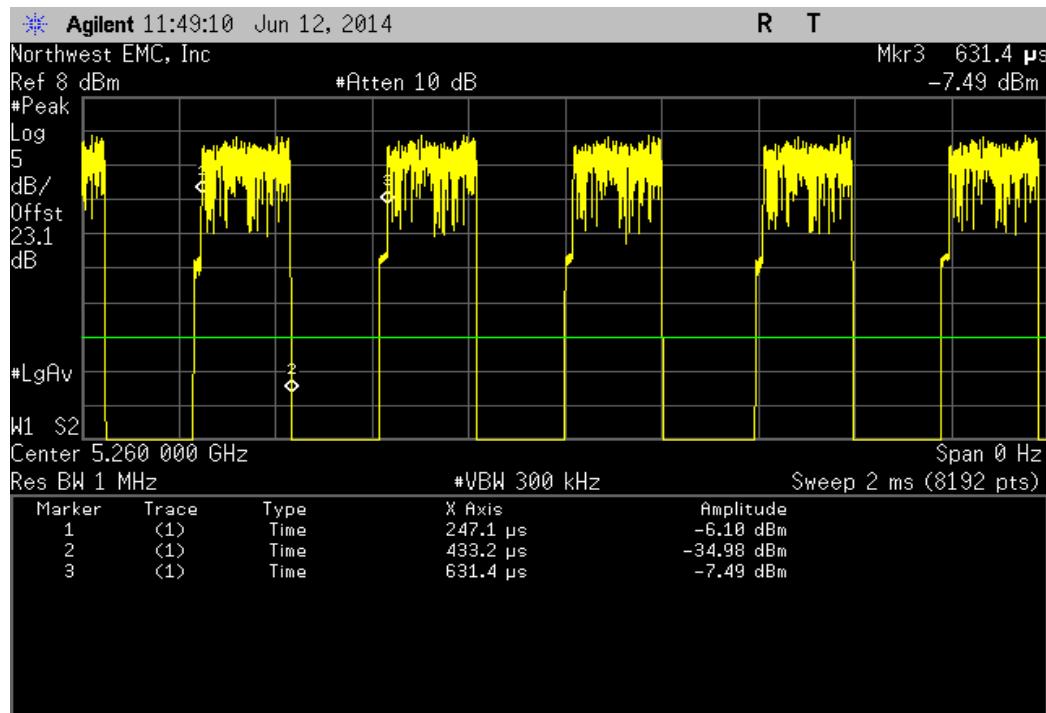
Antenna Port 4, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	186.1 uS	384.6 uS	1	48.4	N/A	N/A



Antenna Port 4, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



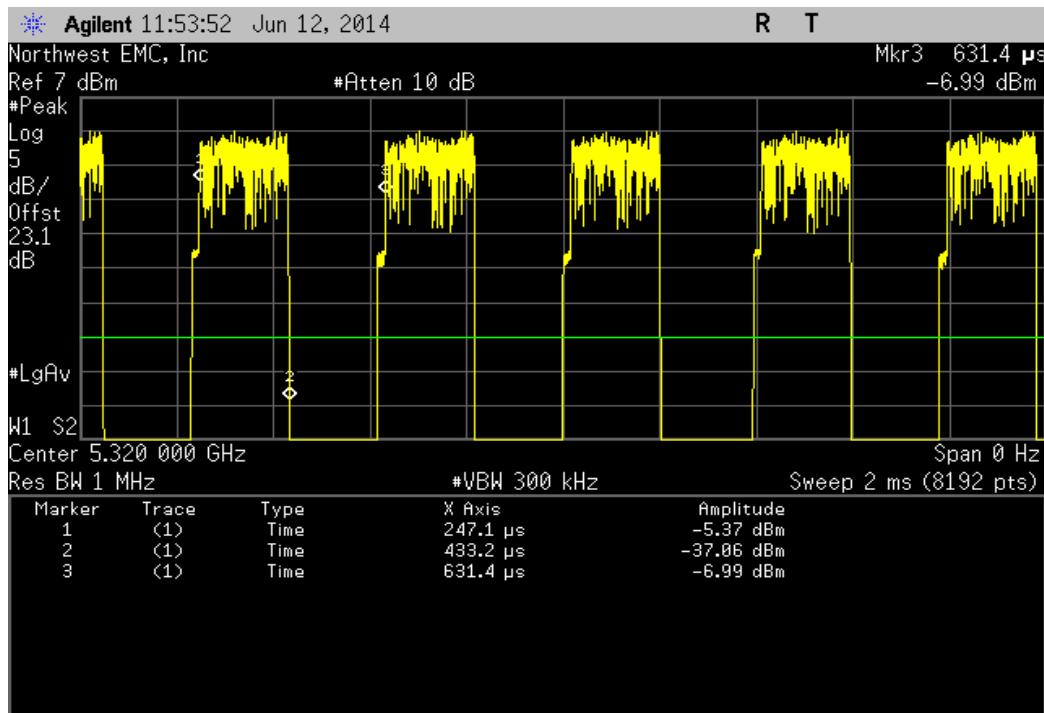
Antenna Port 4, 802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	186.1 $\mu$ s	384.3 $\mu$ s	1	48.4	N/A	N/A



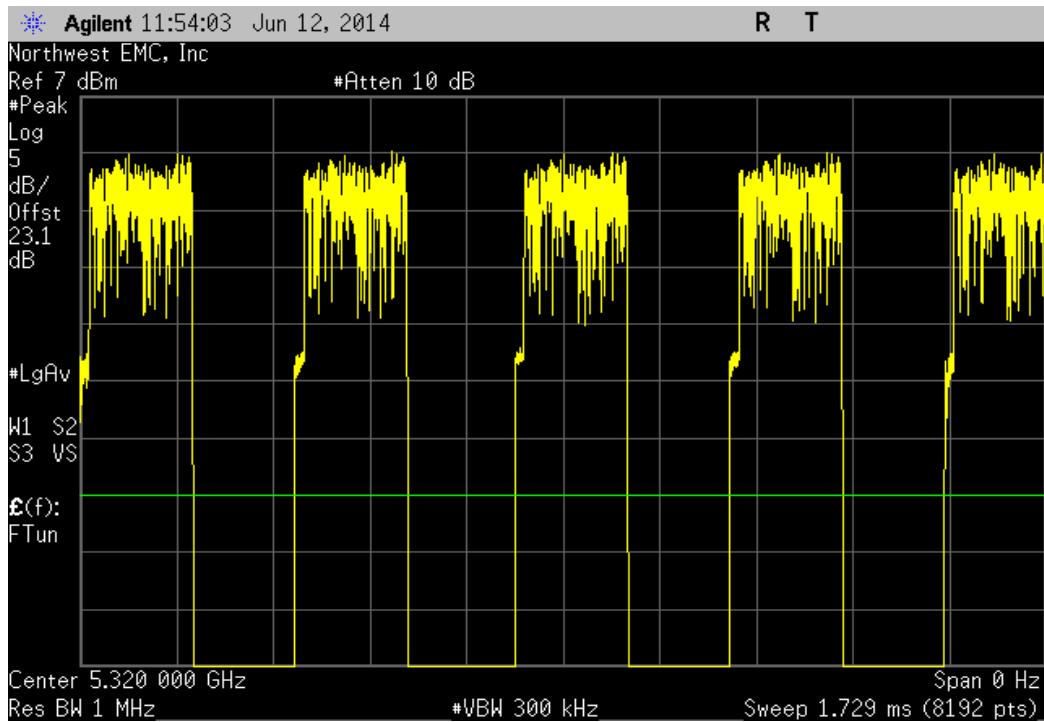
Antenna Port 4, 802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



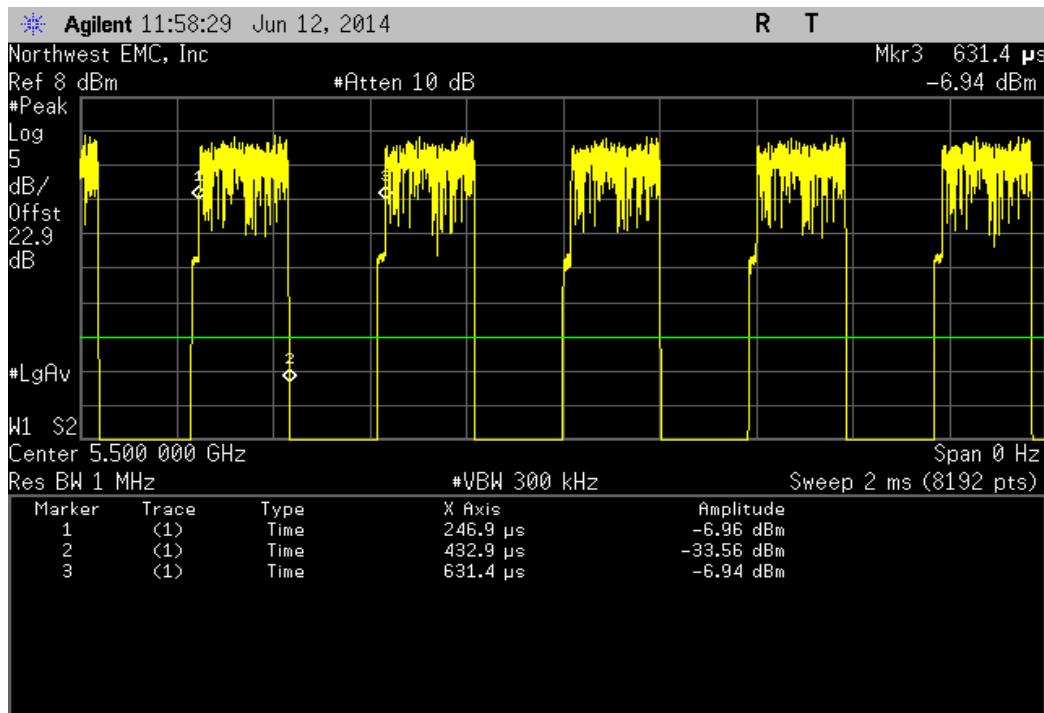
Antenna Port 4, 802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	186.1 uS	384.3 uS	1	48.4	N/A	N/A



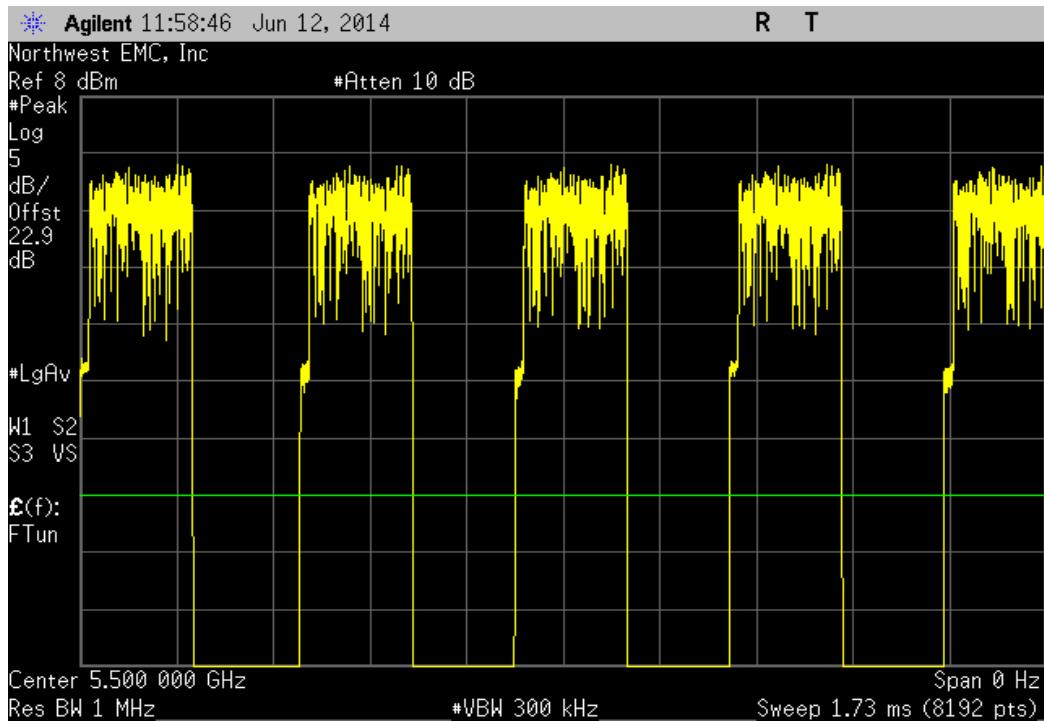
Antenna Port 4, 802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



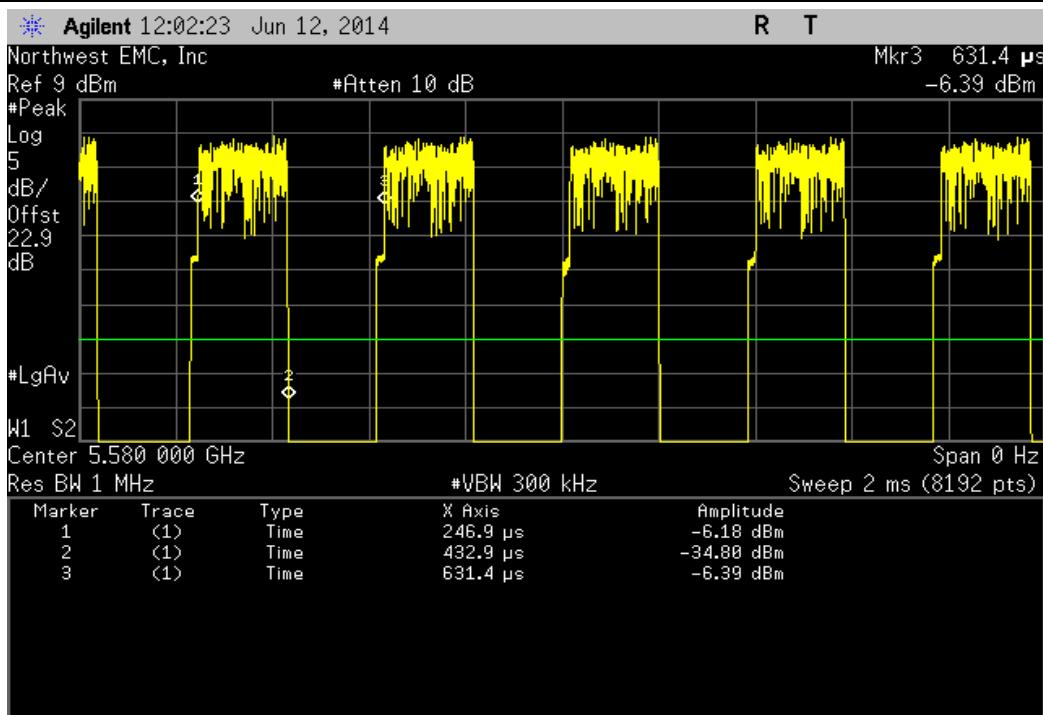
Antenna Port 4, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	186 uS	384.5 uS	1	48.4	N/A	N/A



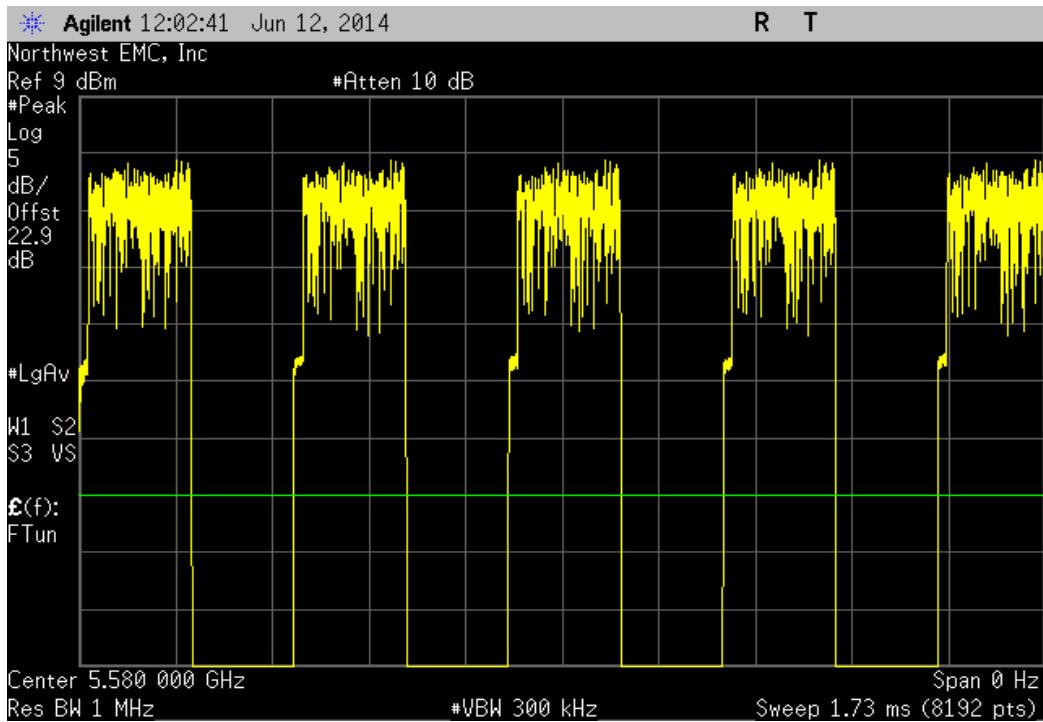
Antenna Port 4, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



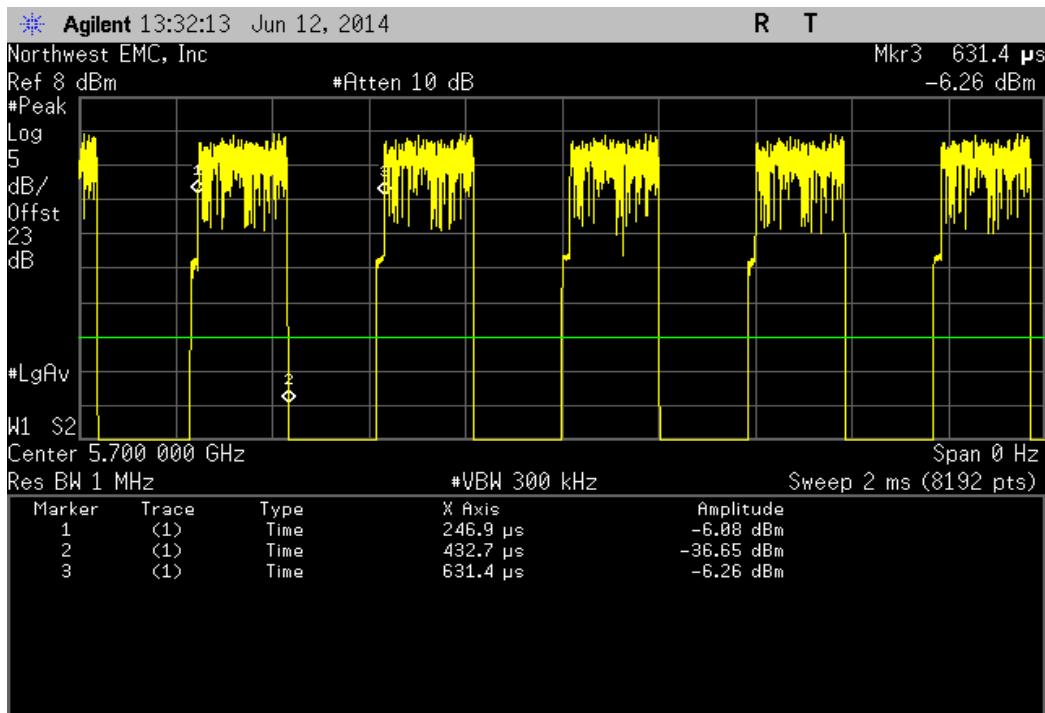
Antenna Port 4, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	186 uS	384.5 uS	1	48.4	N/A	N/A



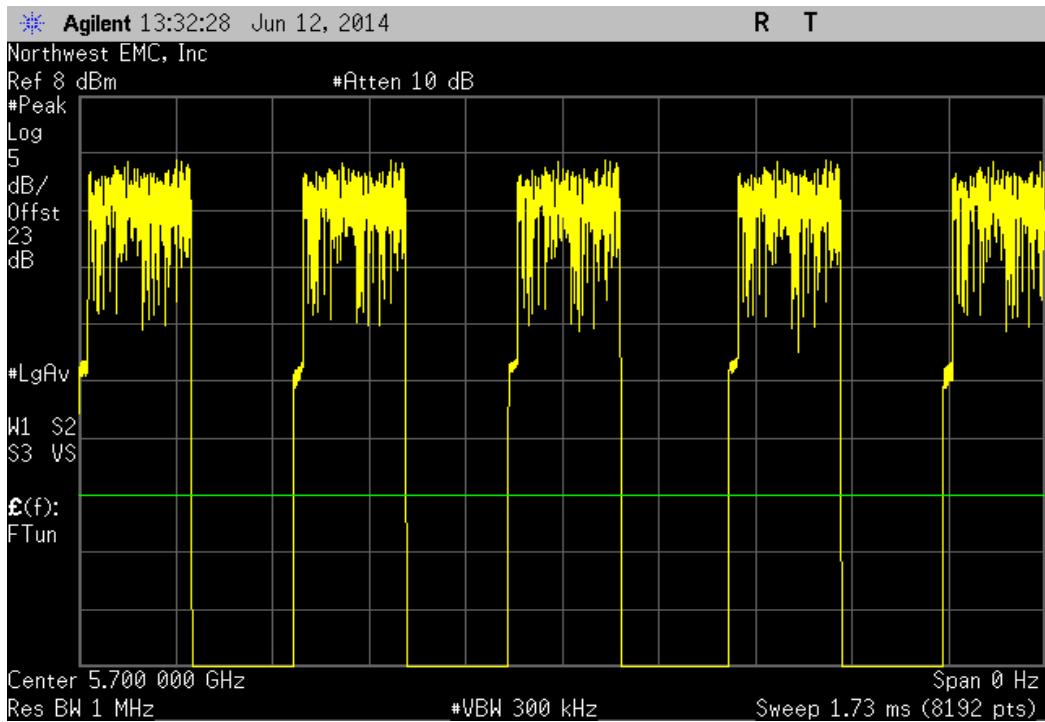
Antenna Port 4, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



Antenna Port 4, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	185.8 $\mu$ s	384.5 $\mu$ s	1	48.3	N/A	N/A



Antenna Port 4, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



## EMISSION BANDWIDTH

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

### TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo.)
40GHz DC Block	Miteq	DCB4000	AMD	4/28/2014	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator, 'Precision N'	S.M. Electronics	SA18N-06/SM4032	REE	12/2/2013	12
Power Meter	Agilent	N1913A	SQR	4/29/2013	36
Power Sensor	Agilent	E9300H	SQO	4/29/2013	36
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24
MXG Analog Signal Generator	Agilent	N5181A	TIG	3/28/2014	36

### TEST DESCRIPTION

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FCC KDB 789033 D01 General UNII Test Procedures were followed.

The transmit frequencies and data rates listed in the datasheet were measured in each band utilized by the radio. The transmit power was set to its default maximum.

A direct connection was made between the RF output of the EUT and a spectrum analyzer. Attenuation and a DC block were used. The reference level offset on the spectrum analyzer was adjusted to compensate for cable loss and the external attenuation used between the RF output and the spectrum analyzer input.

The spectrum analyzer settings were as follows:

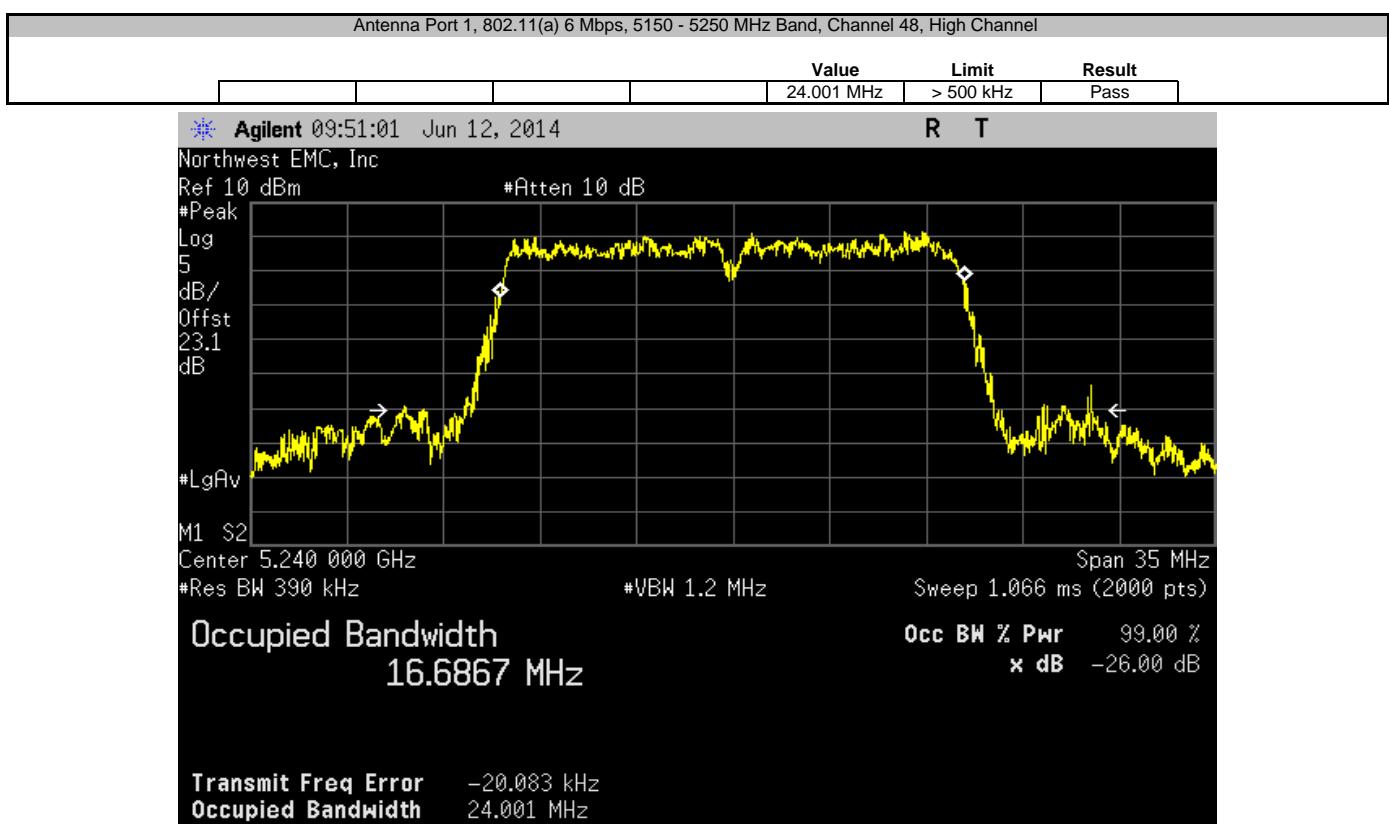
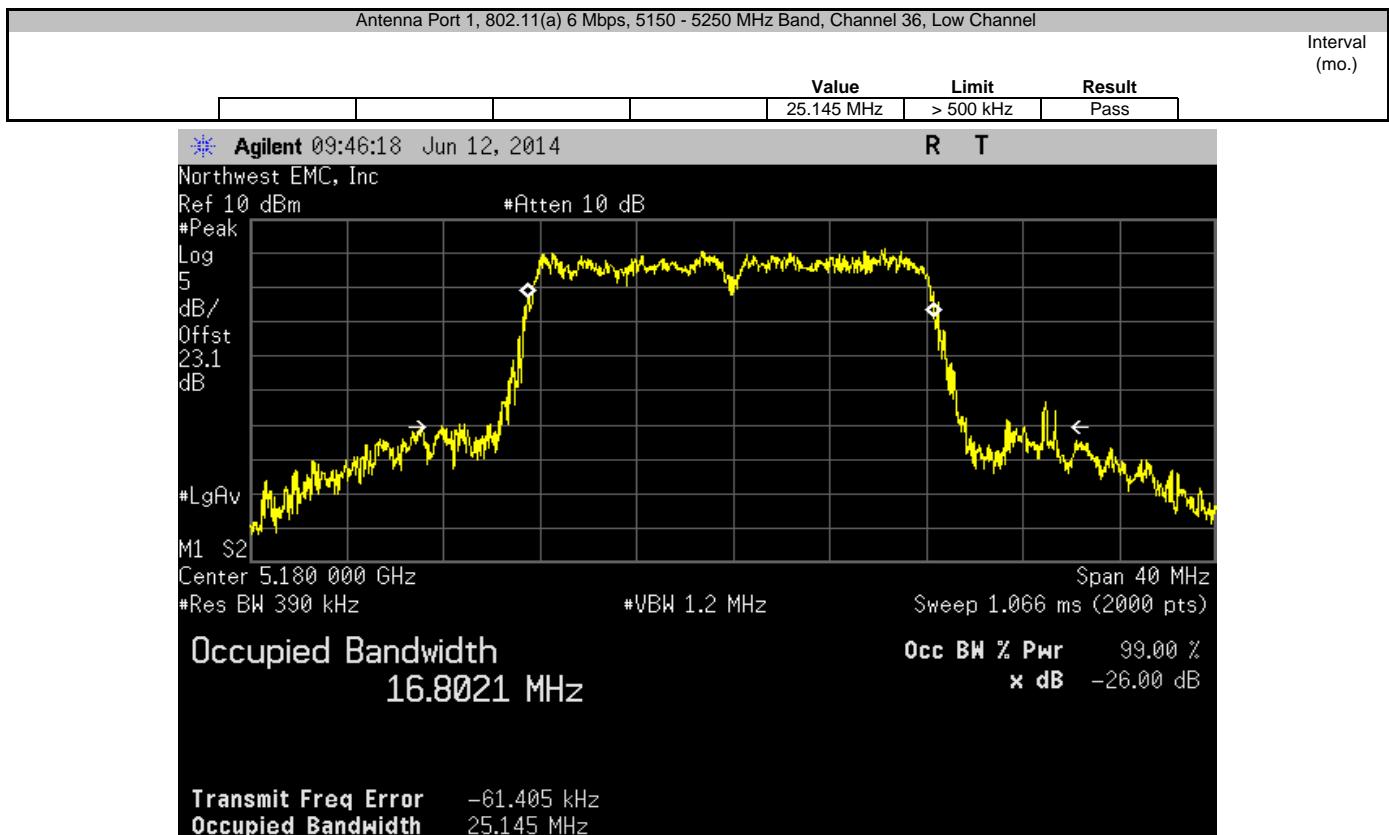
- RBW = Approx. 1% of the emission bandwidth (B). This was an iterative process to determine the RBW based on the emissions bandwidth (B).
- VBW= > RBW
- A peak detector was used
- Trace max hold.

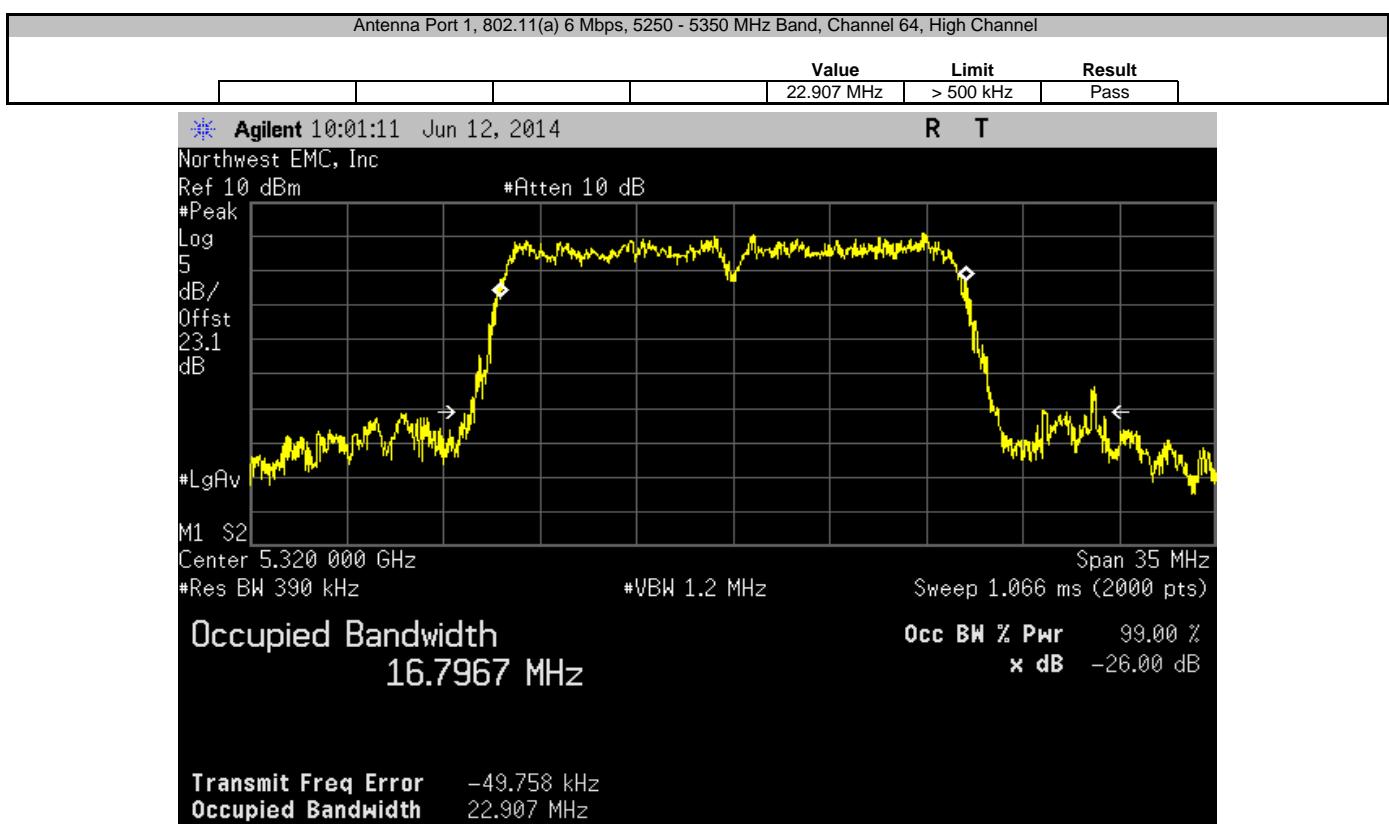
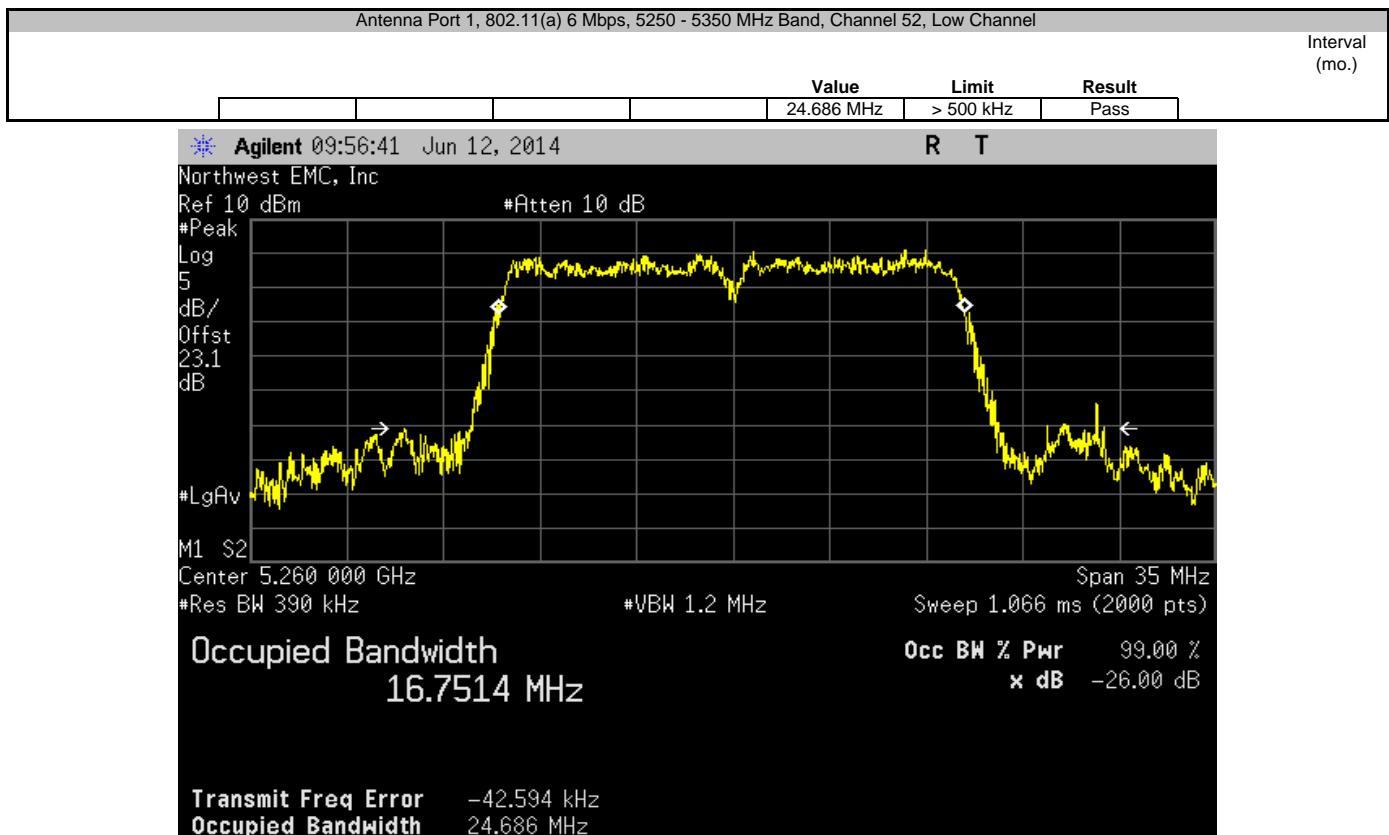
The spectrum analyzer occupied bandwidth measurement function was then used to measure 26 dB emission bandwidth.

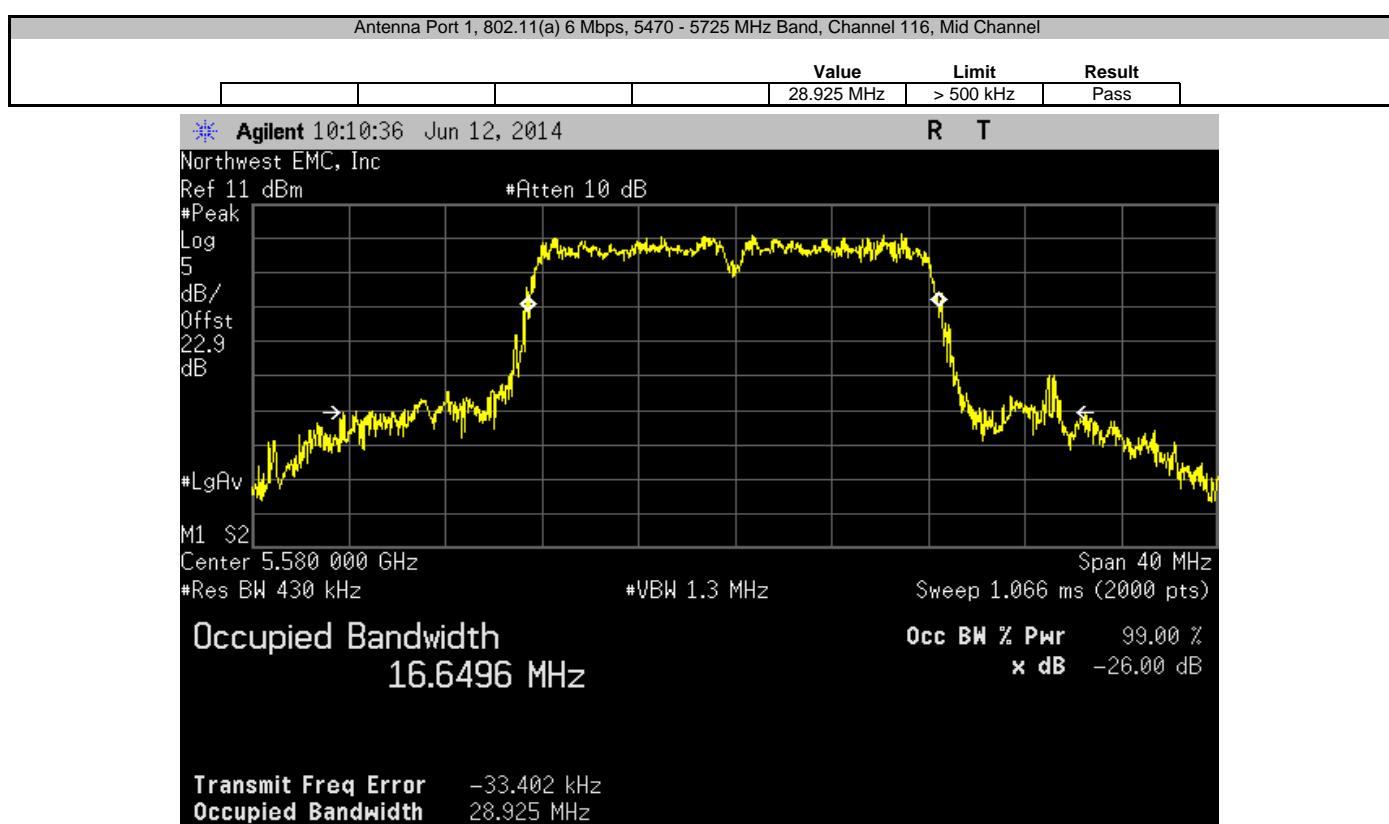
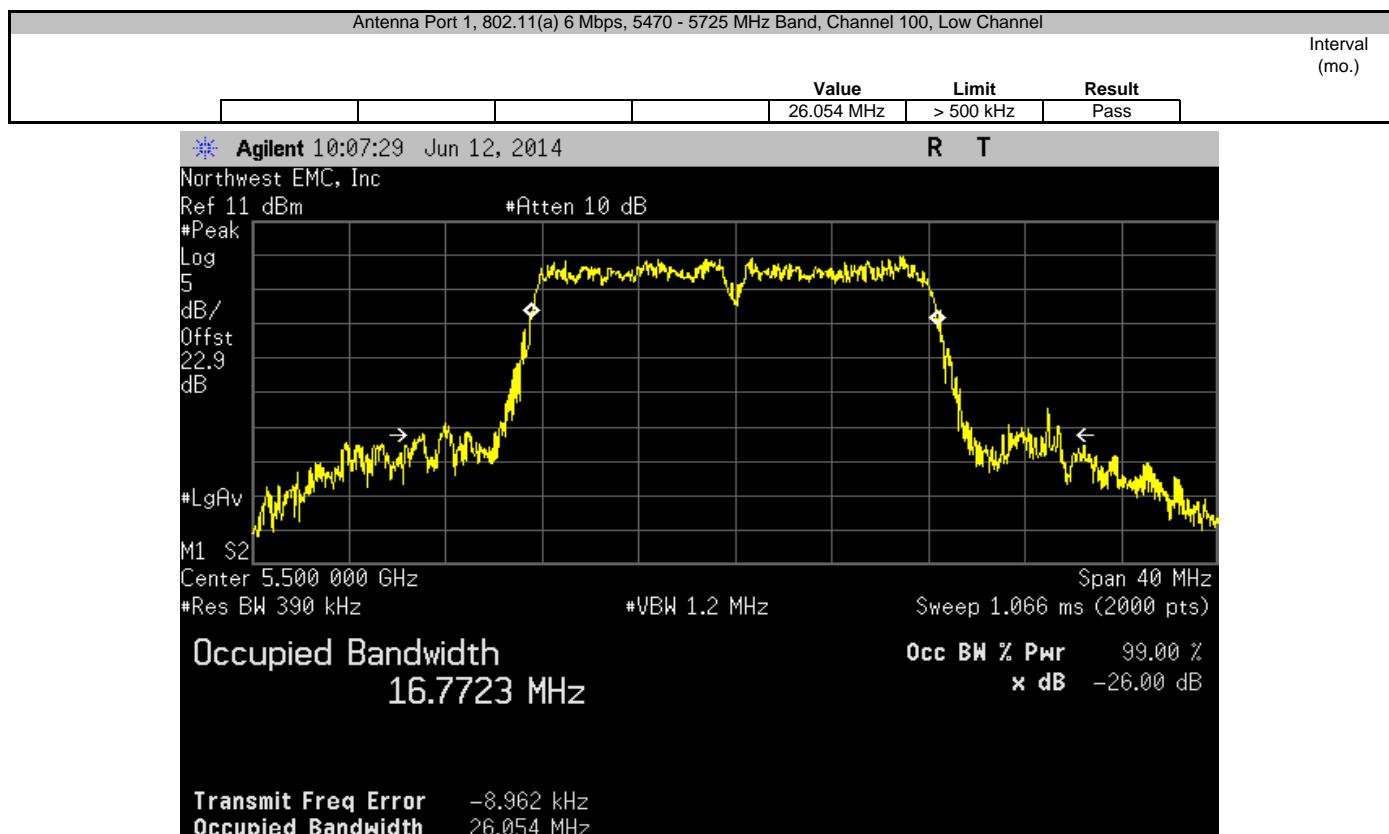


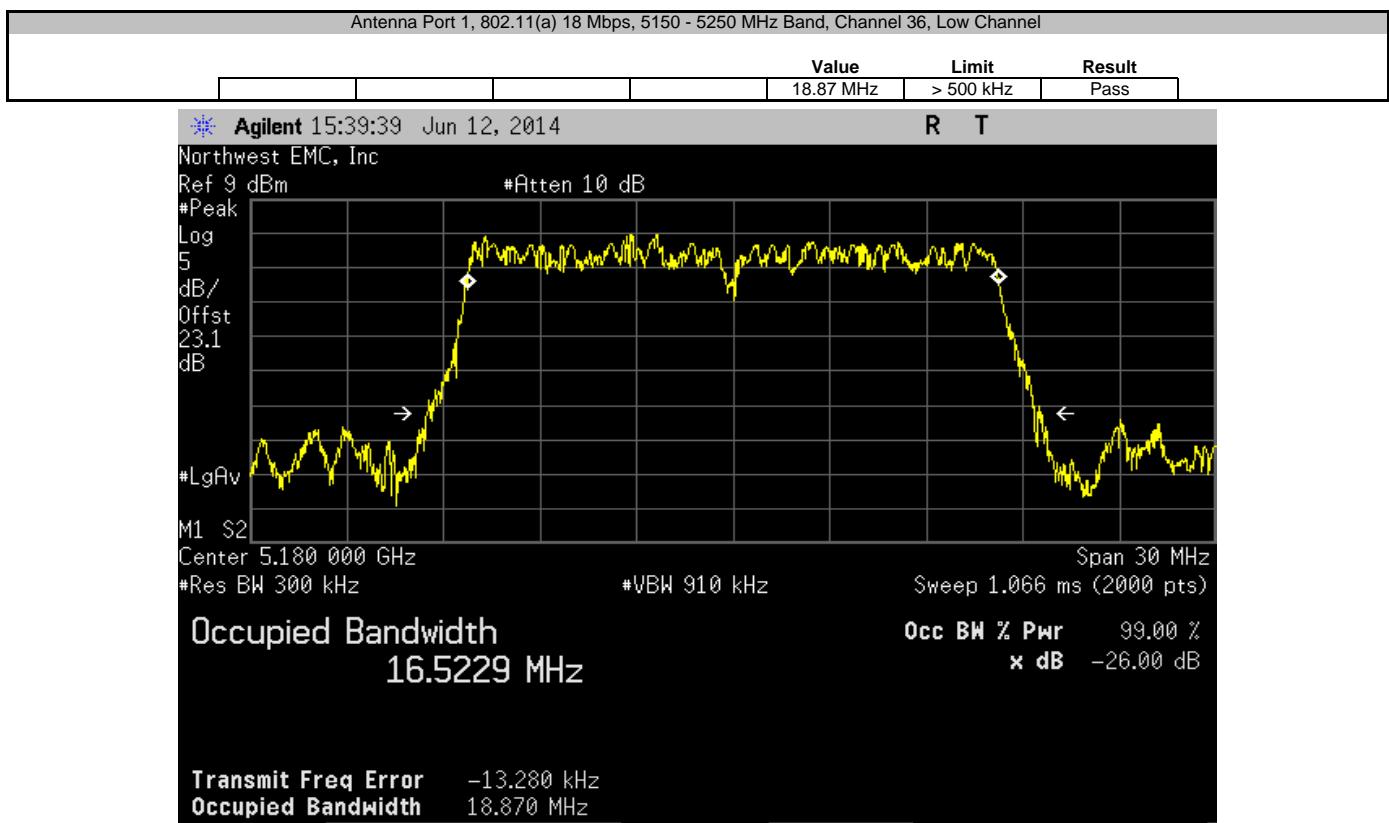
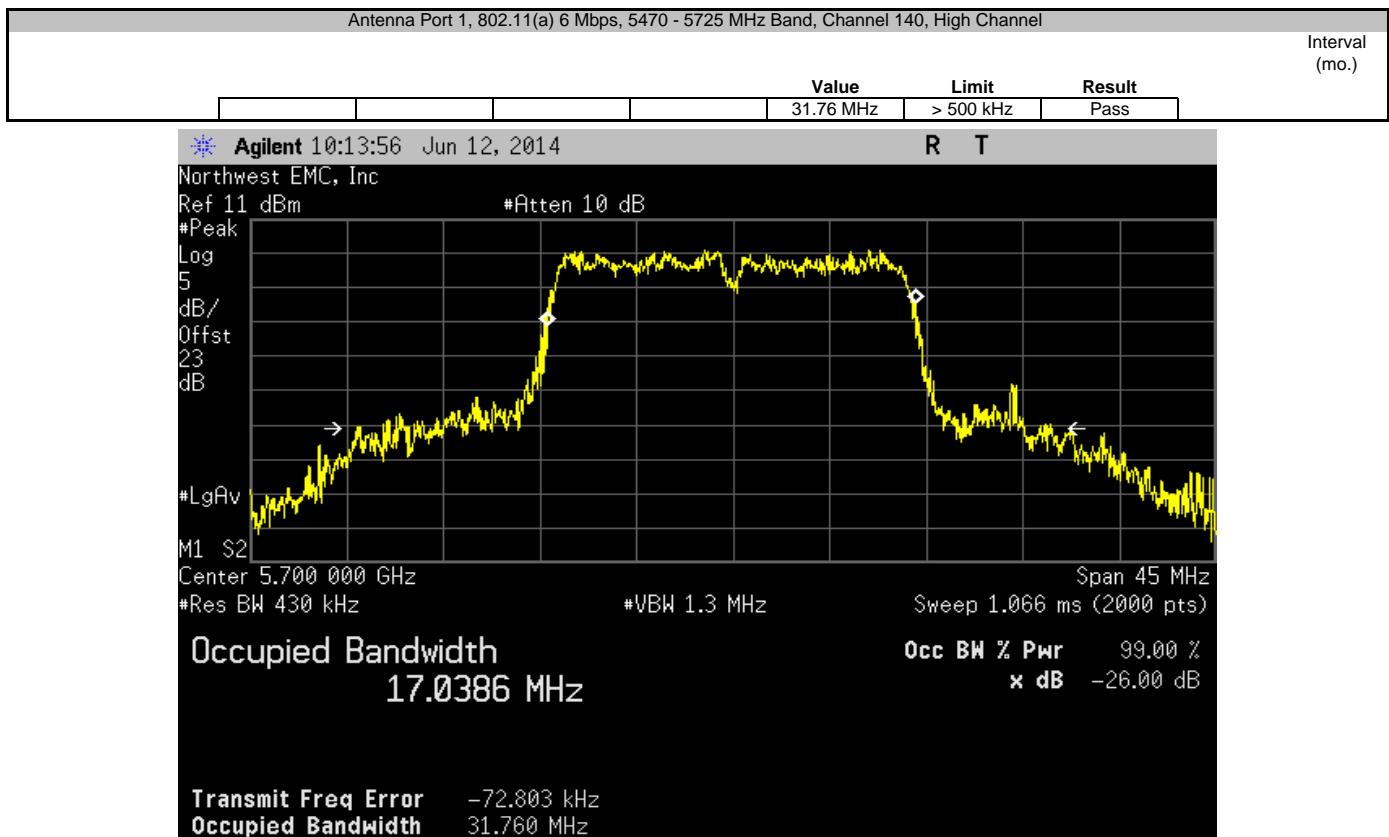
## EMISSION BANDWIDTH

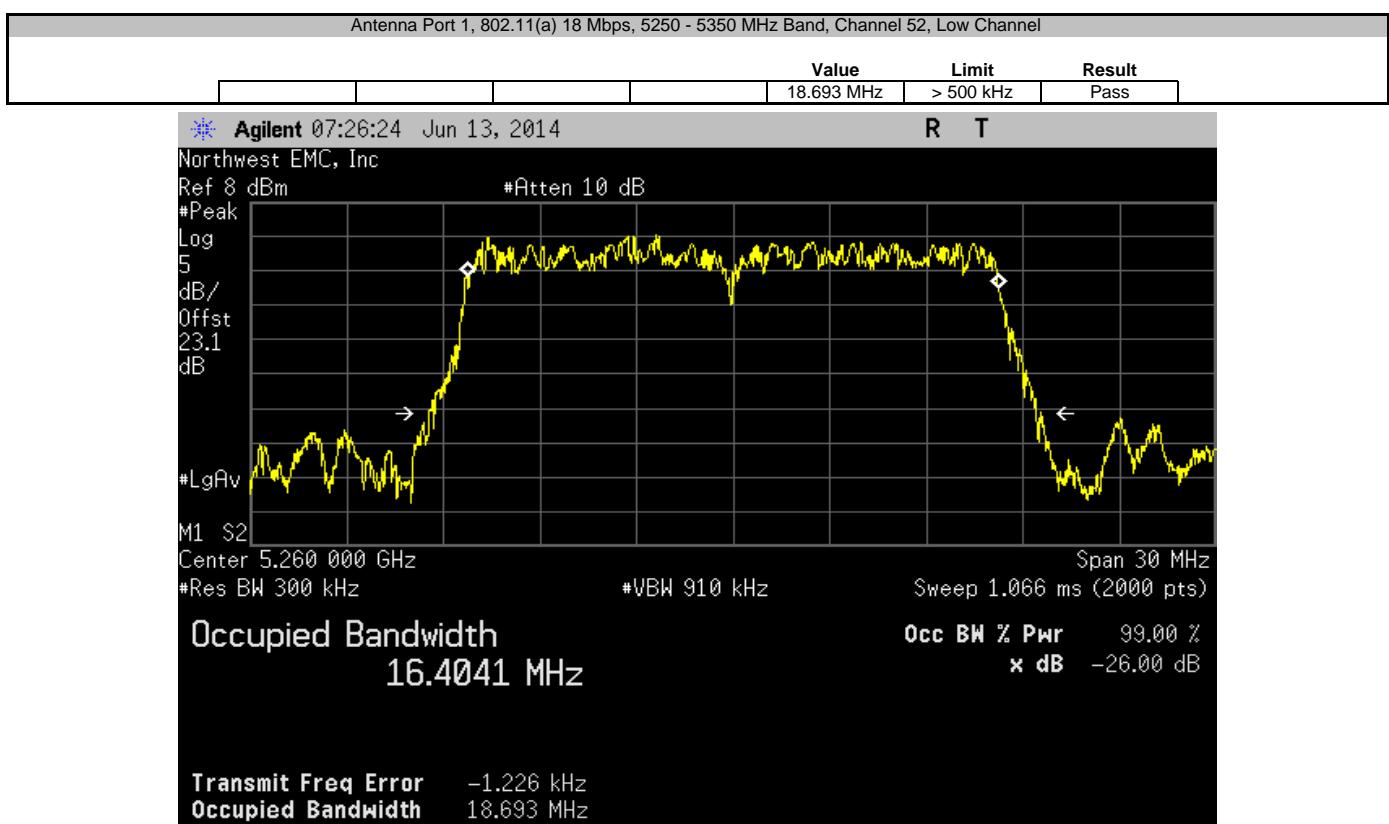
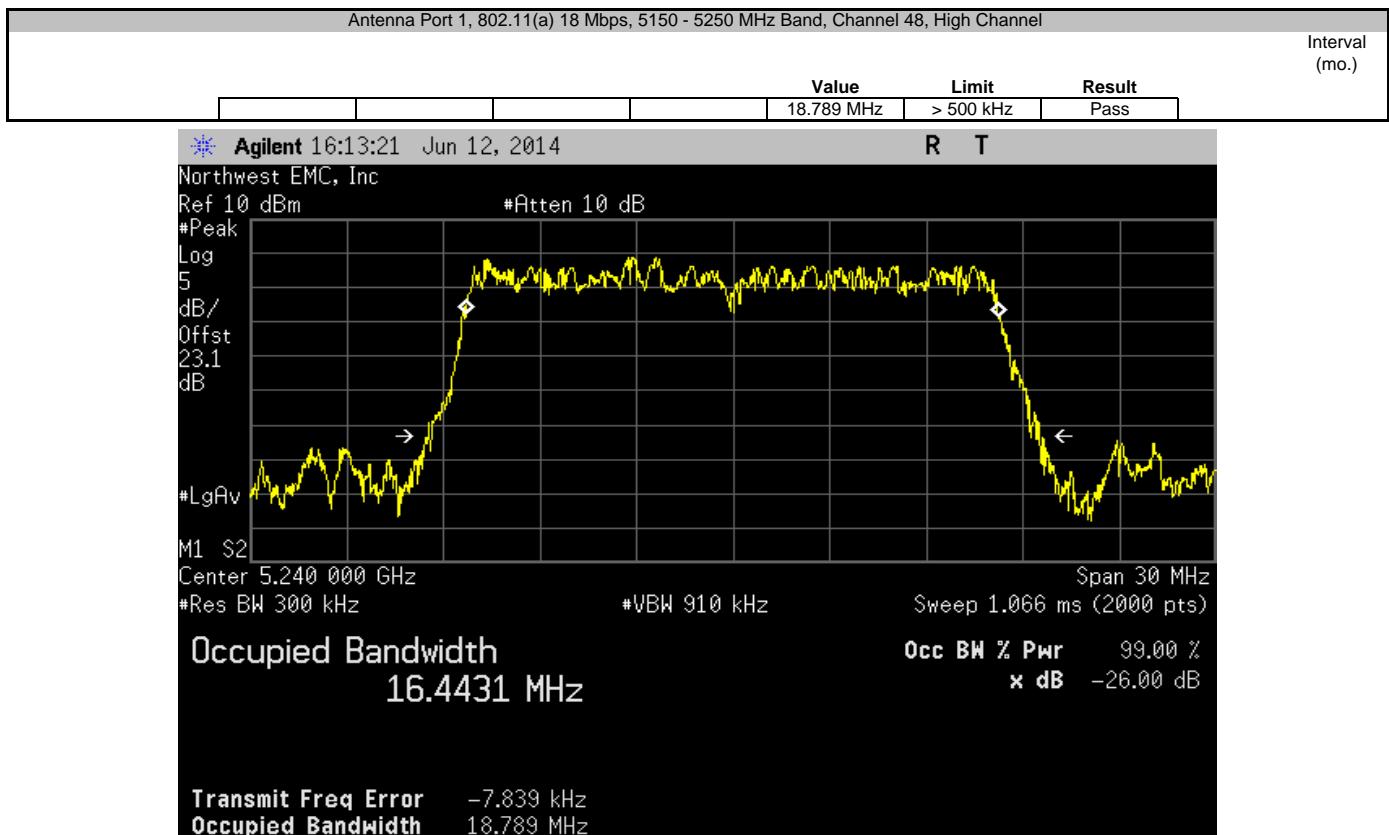
EUT:	444-2250	Work Order:	FOCU0168	
Serial Number:	02EA41000011	Date:	06/13/14	
Customer:	Summit Semiconductor, LLC	Temperature:	22.5°C	
Attendees:	None	Humidity:	Interval (mo.)	
Project:	None	Barometric Pres.:	1019	
Tested by:	Jared Ison	Job Site:	EV06	
TEST SPECIFICATIONS		Power:	18 VDC	
FCC 15.407:2014		Test Method	ANSI C63.10:2009	
COMMENTS				
Test was performed on all antenna ports to determine which antenna port produces the highest output power.				
DEVIATIONS FROM TEST STANDARD				
None				
Configuration #	2	Signature		
		Value	Limit	Result
Antenna Port 1	802.11(a) 6 Mbps			
	5150 - 5250 MHz Band			
	Channel 36, Low Channel	25.145 MHz	> 500 kHz	Pass
	Channel 48, High Channel	24.001 MHz	> 500 kHz	Pass
	5250 - 5350 MHz Band			
	Channel 52, Low Channel	24.686 MHz	> 500 kHz	Pass
	Channel 64, High Channel	22.907 MHz	> 500 kHz	Pass
	5470 - 5725 MHz Band			
	Channel 100, Low Channel	26.054 MHz	> 500 kHz	Pass
	Channel 116, Mid Channel	28.925 MHz	> 500 kHz	Pass
	Channel 140, High Channel	31.76 MHz	> 500 kHz	Pass
	802.11(a) 18 Mbps			
	5150 - 5250 MHz Band			
	Channel 36, Low Channel	18.87 MHz	> 500 kHz	Pass
	Channel 48, High Channel	18.789 MHz	> 500 kHz	Pass
	5250 - 5350 MHz Band			
	Channel 52, Low Channel	18.693 MHz	> 500 kHz	Pass
	Channel 64, High Channel	18.874 MHz	> 500 kHz	Pass
	5470 - 5725 MHz Band			
	Channel 100, Low Channel	18.939 MHz	> 500 kHz	Pass
	Channel 116, Mid Channel	20.388 MHz	> 500 kHz	Pass
	Channel 140, High Channel	22.766 MHz	> 500 kHz	Pass
	802.11(a) 36 Mbps			
	5150 - 5250 MHz Band			
	Channel 36, Low Channel	19.857 MHz	> 500 kHz	Pass
	Channel 48, High Channel	19.295 MHz	> 500 kHz	Pass
	5250 - 5350 MHz Band			
	Channel 52, Low Channel	19.38 MHz	> 500 kHz	Pass
	Channel 64, High Channel	18.84 MHz	> 500 kHz	Pass
	5470 - 5725 MHz Band			
	Channel 100, Low Channel	21.239 MHz	> 500 kHz	Pass
	Channel 116, Mid Channel	27.573 MHz	> 500 kHz	Pass
	Channel 140, High Channel	28.308 MHz	> 500 kHz	Pass
Antenna Port 2	802.11(a) 6 Mbps			
	5150 - 5250 MHz Band			
	Channel 36, Low Channel	24.285 MHz	> 500 kHz	Pass
	Channel 48, High Channel	25.694 MHz	> 500 kHz	Pass
	5250 - 5350 MHz Band			
	Channel 52, Low Channel	24.759 MHz	> 500 kHz	Pass
	Channel 64, High Channel	23.102 MHz	> 500 kHz	Pass
	5470 - 5725 MHz Band			
	Channel 100, Low Channel	26.371 MHz	> 500 kHz	Pass
	Channel 116, Mid Channel	29.243 MHz	> 500 kHz	Pass
	Channel 140, High Channel	30.931 MHz	> 500 kHz	Pass
Antenna Port 3	802.11(a) 6 Mbps			
	5150 - 5250 MHz Band			
	Channel 36, Low Channel	24.976 MHz	> 500 kHz	Pass
	Channel 48, High Channel	22.815 MHz	> 500 kHz	Pass
	5250 - 5350 MHz Band			
	Channel 52, Low Channel	23.039 MHz	> 500 kHz	Pass
	Channel 64, High Channel	22.903 MHz	> 500 kHz	Pass
	5470 - 5725 MHz Band			
	Channel 100, Low Channel	25.154 MHz	> 500 kHz	Pass
	Channel 116, Mid Channel	27.812 MHz	> 500 kHz	Pass
	Channel 140, High Channel	30.915 MHz	> 500 kHz	Pass
Antenna Port 4	802.11(a) 6 Mbps			
	5150 - 5250 MHz Band			
	Channel 36, Low Channel	24.688 MHz	> 500 kHz	Pass
	Channel 48, High Channel	22.267 MHz	> 500 kHz	Pass
	5250 - 5350 MHz Band			
	Channel 52, Low Channel	25.239 MHz	> 500 kHz	Pass
	Channel 64, High Channel	24.158 MHz	> 500 kHz	Pass
	5470 - 5725 MHz Band			
	Channel 100, Low Channel	23.239 MHz	> 500 kHz	Pass
	Channel 116, Mid Channel	29.304 MHz	> 500 kHz	Pass
	Channel 140, High Channel	27.604 MHz	> 500 kHz	Pass

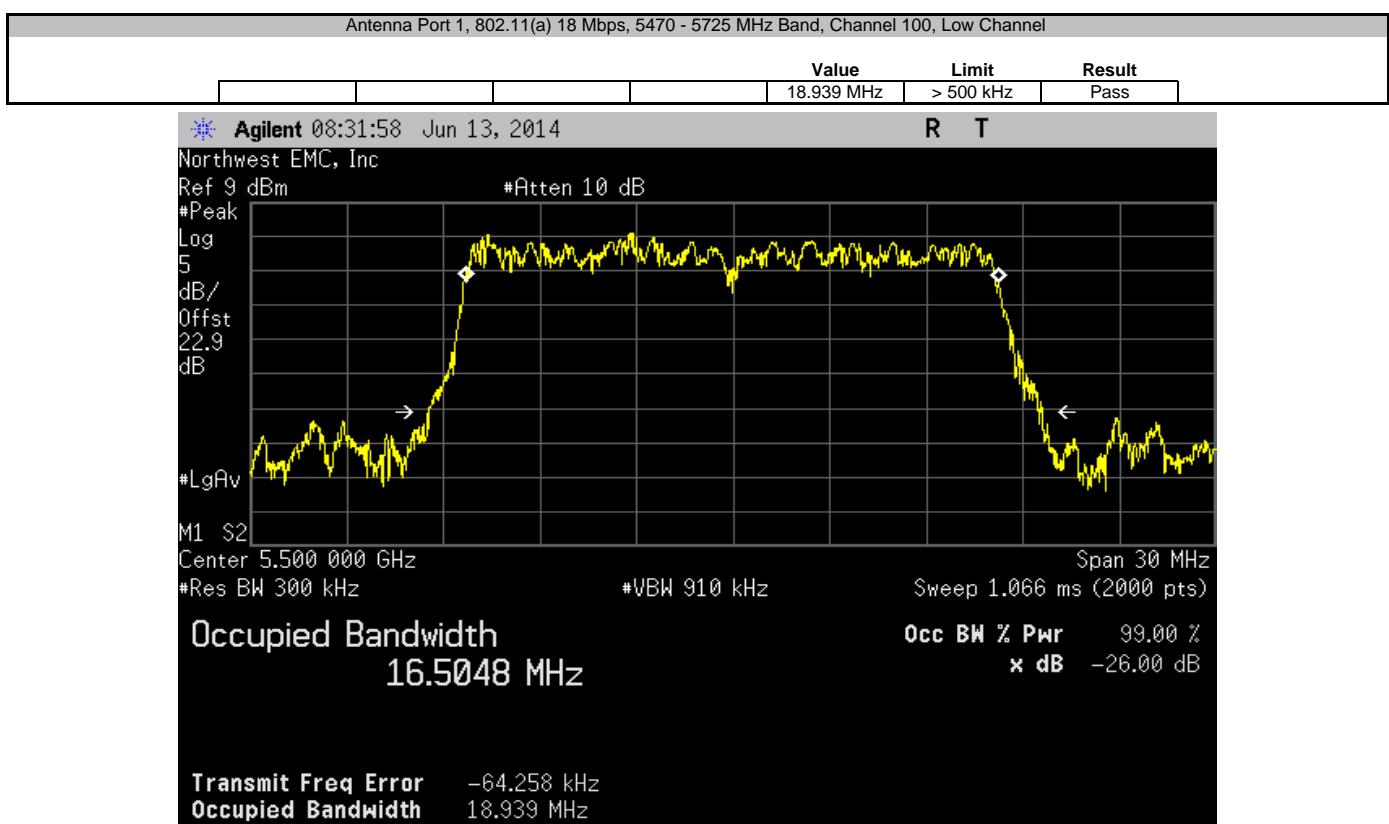
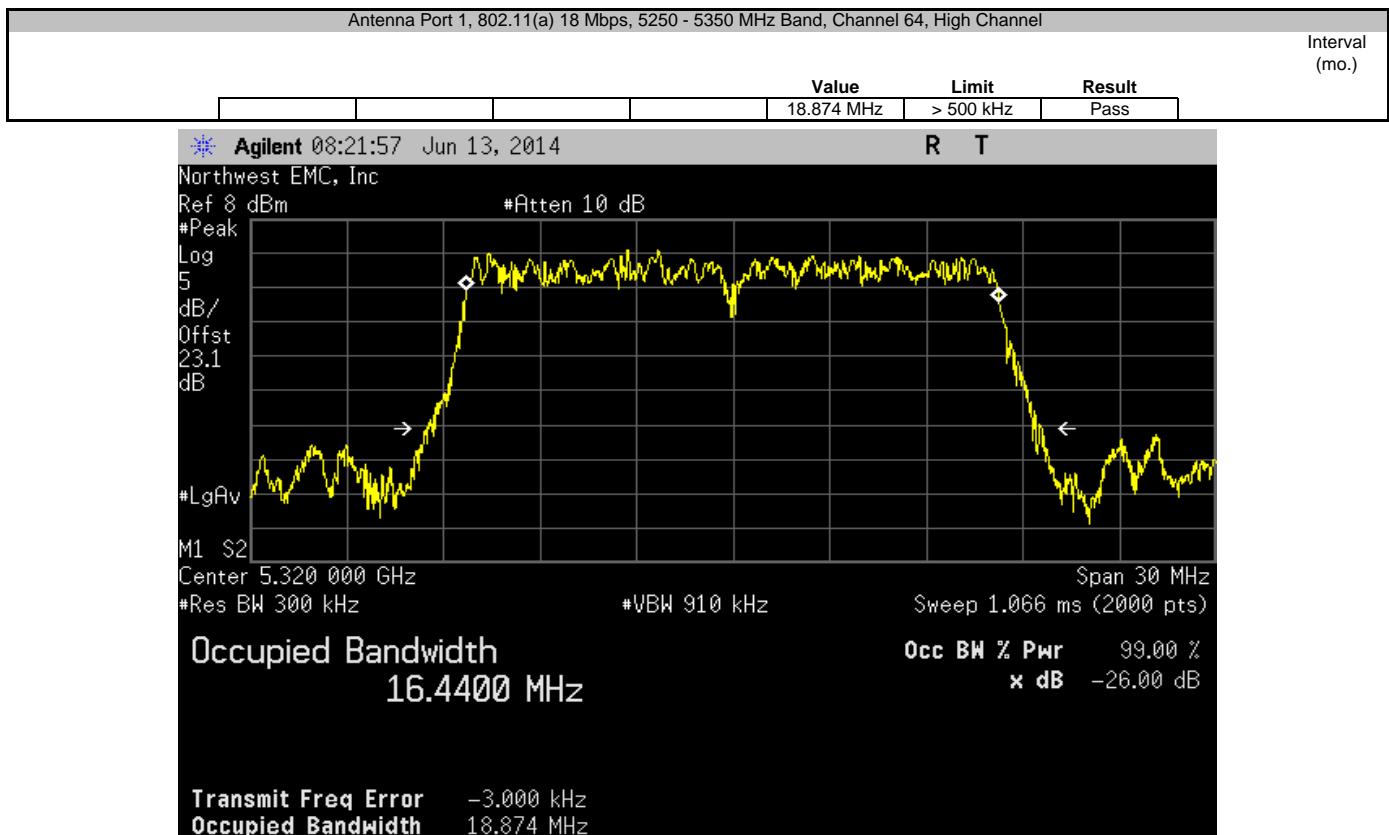


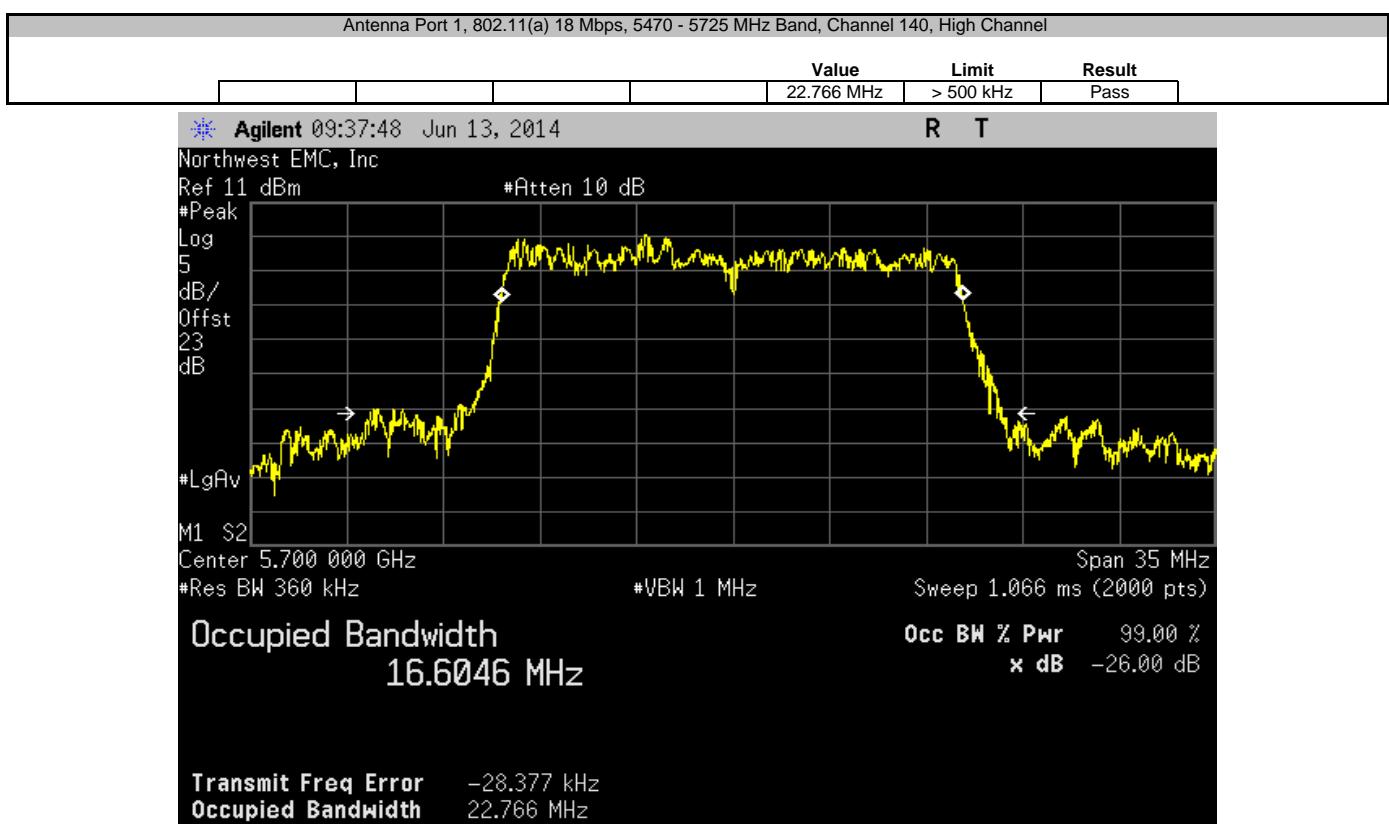
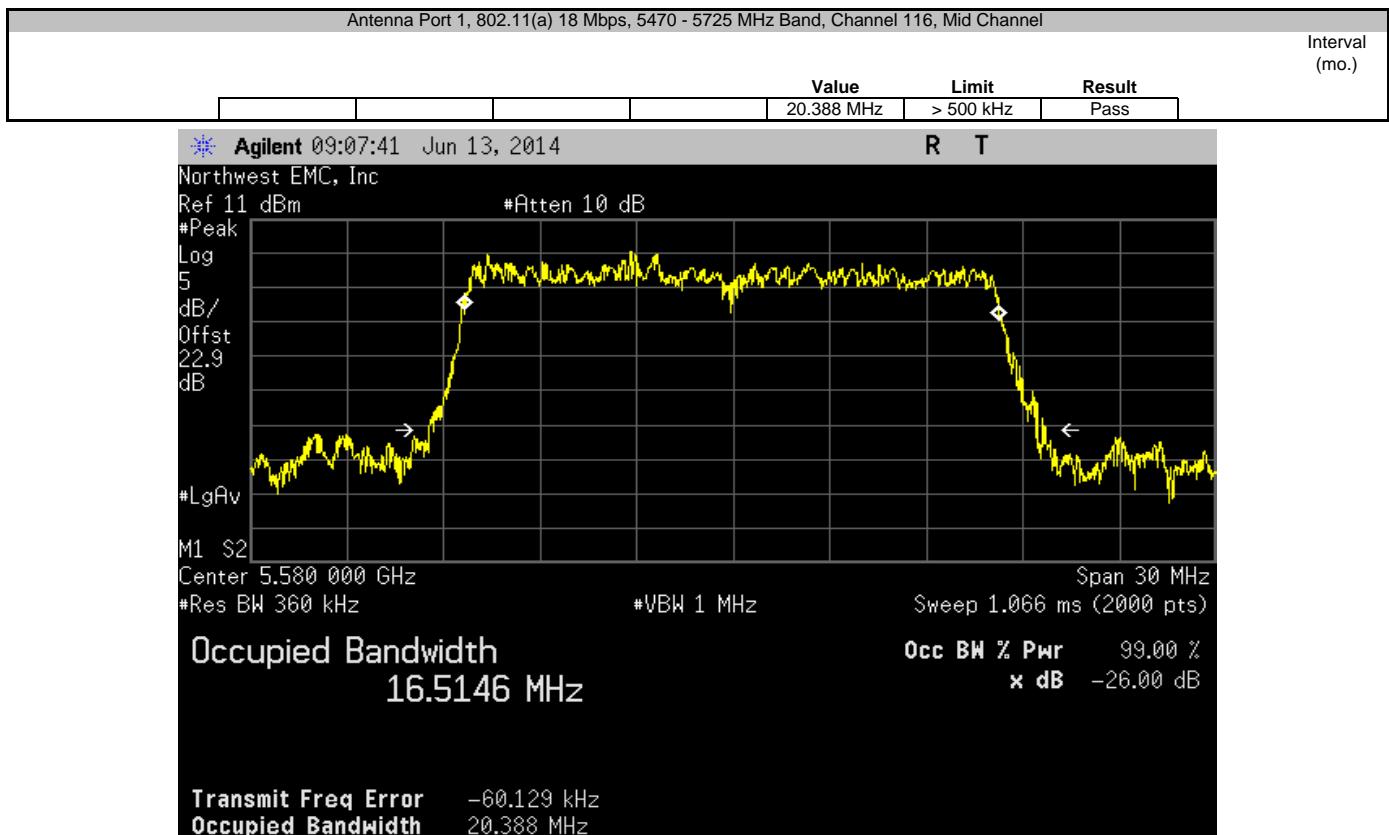


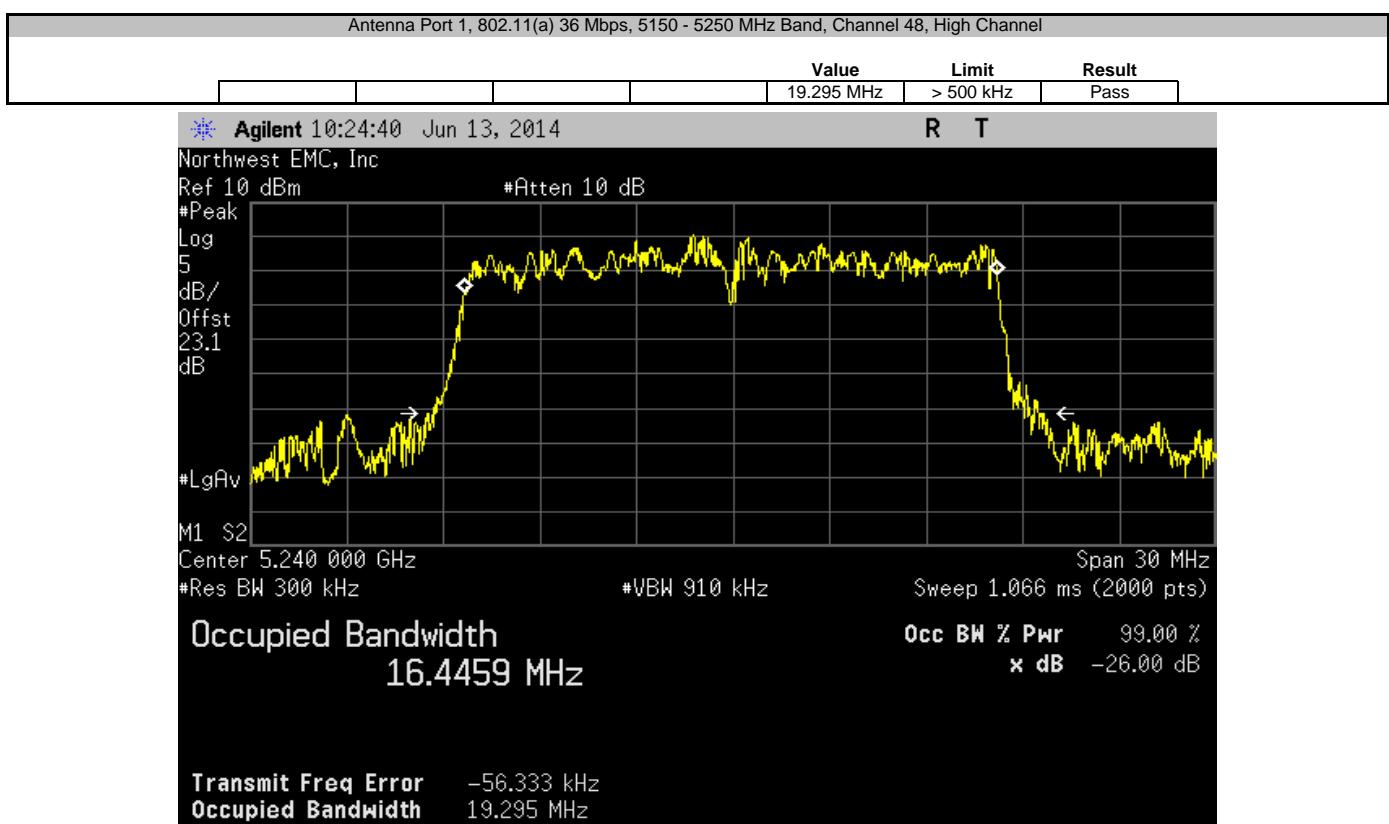
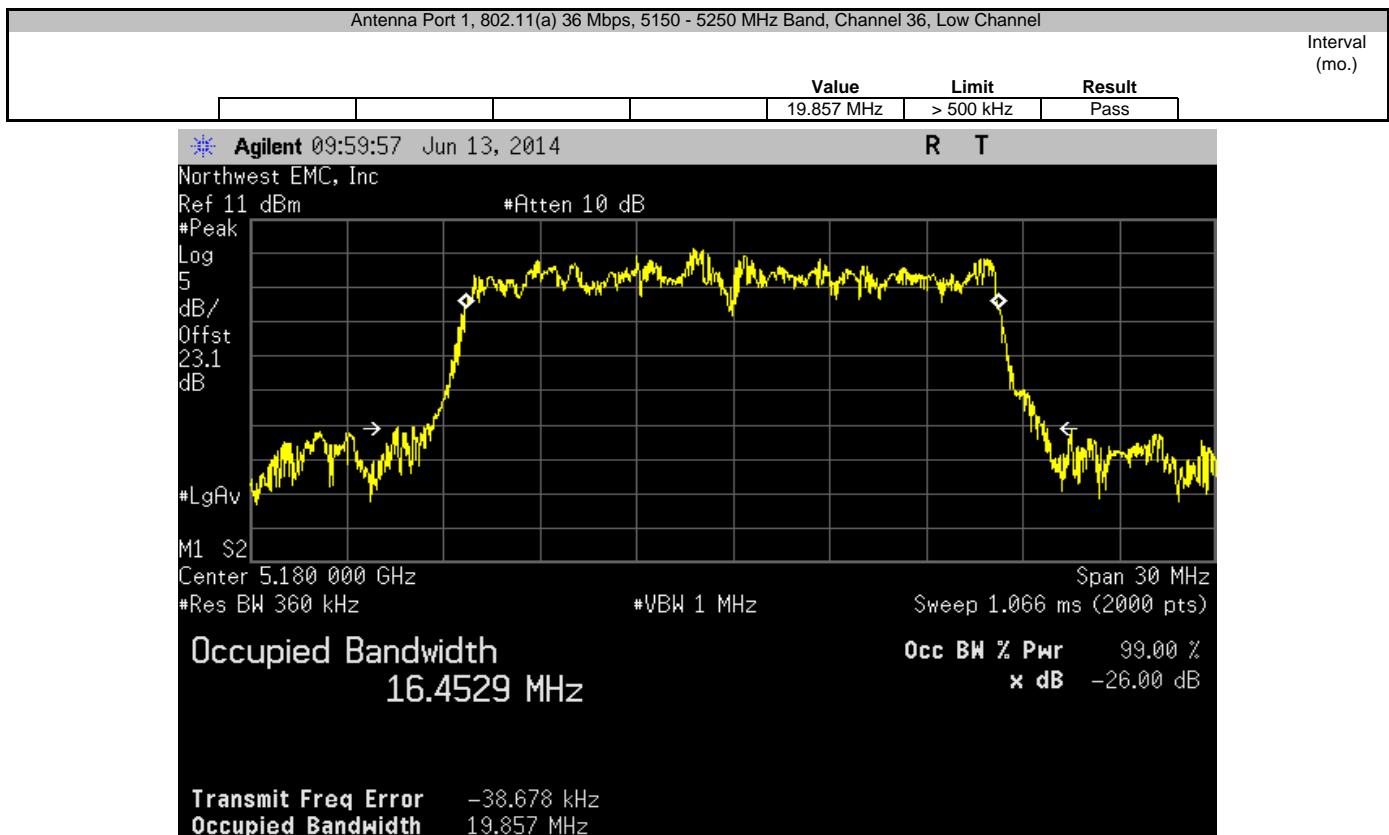


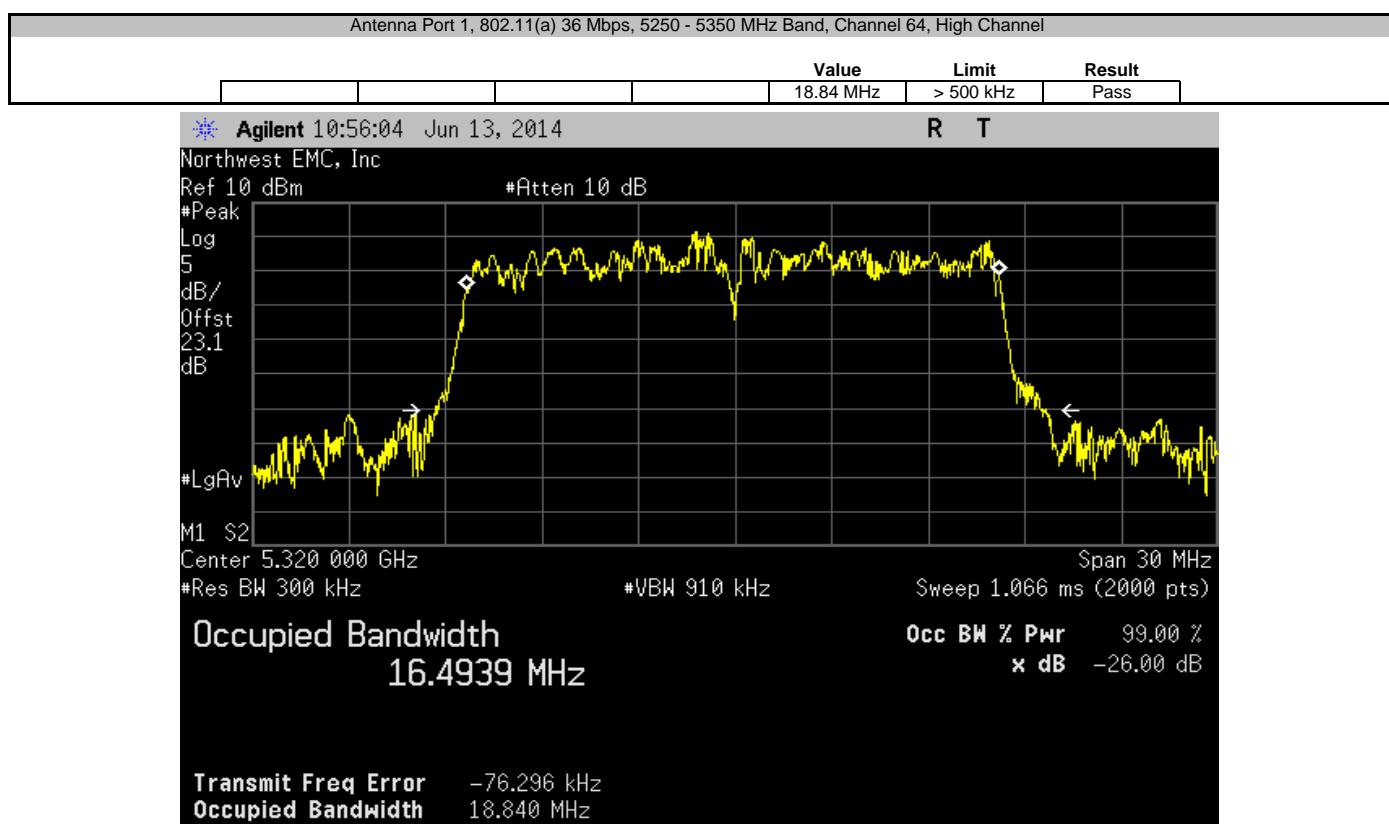
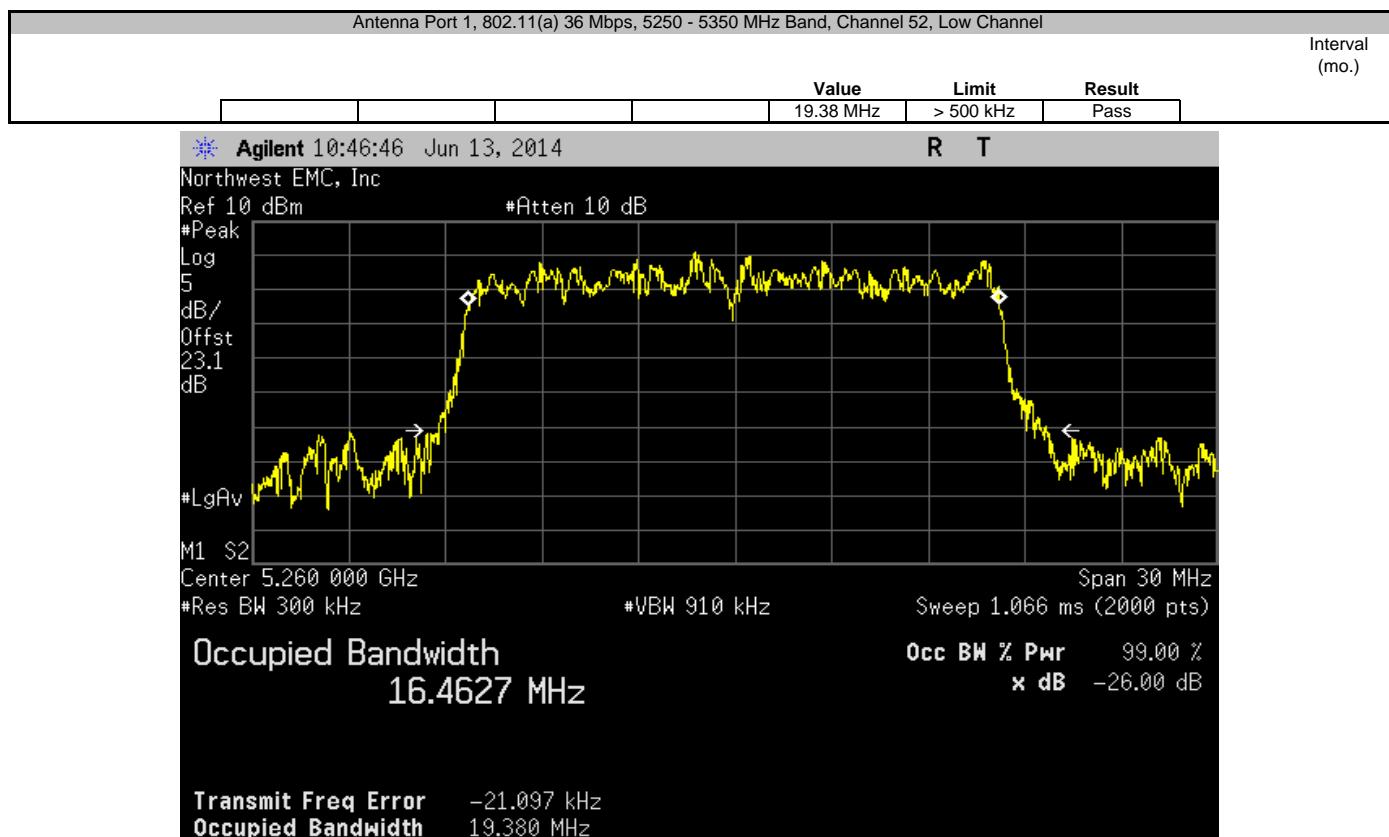


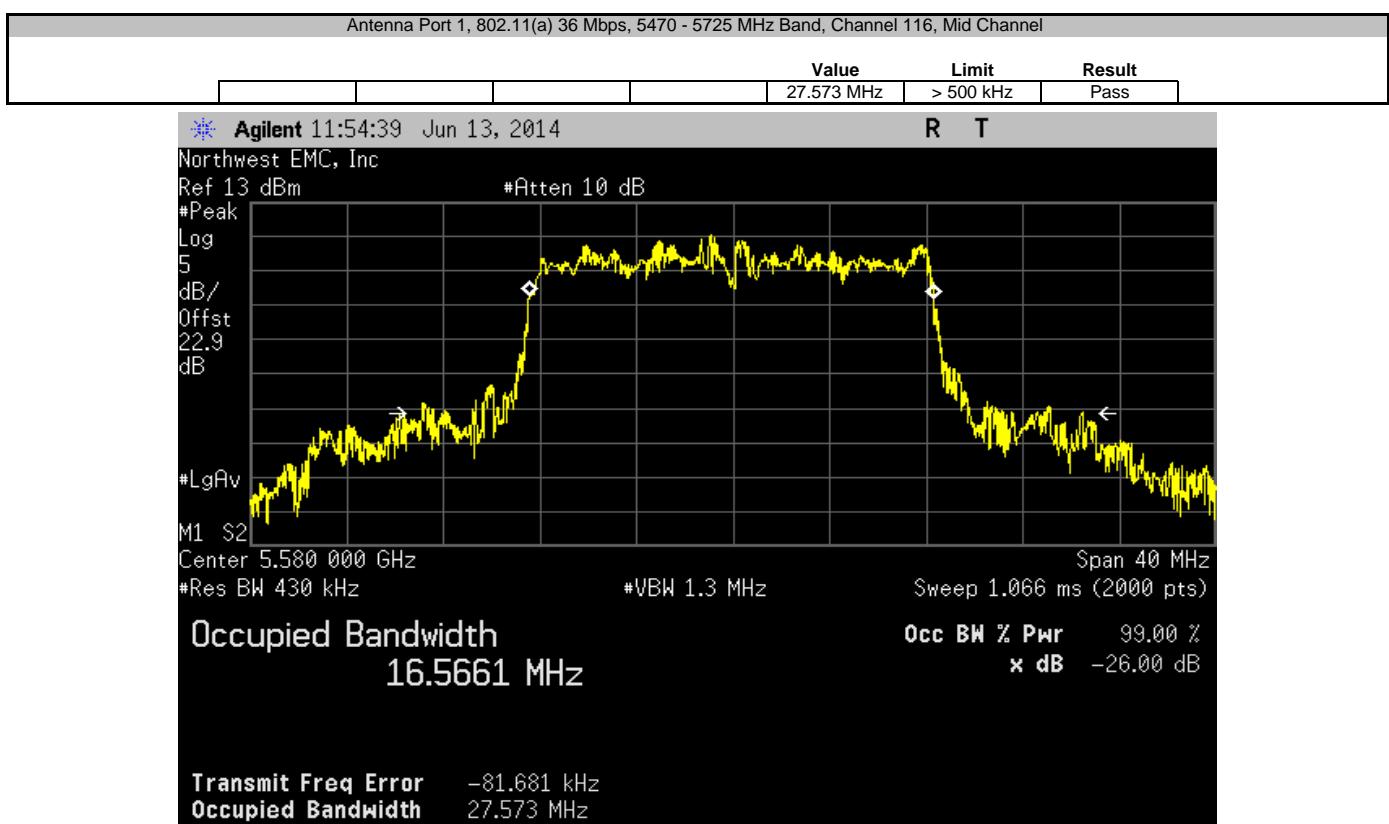
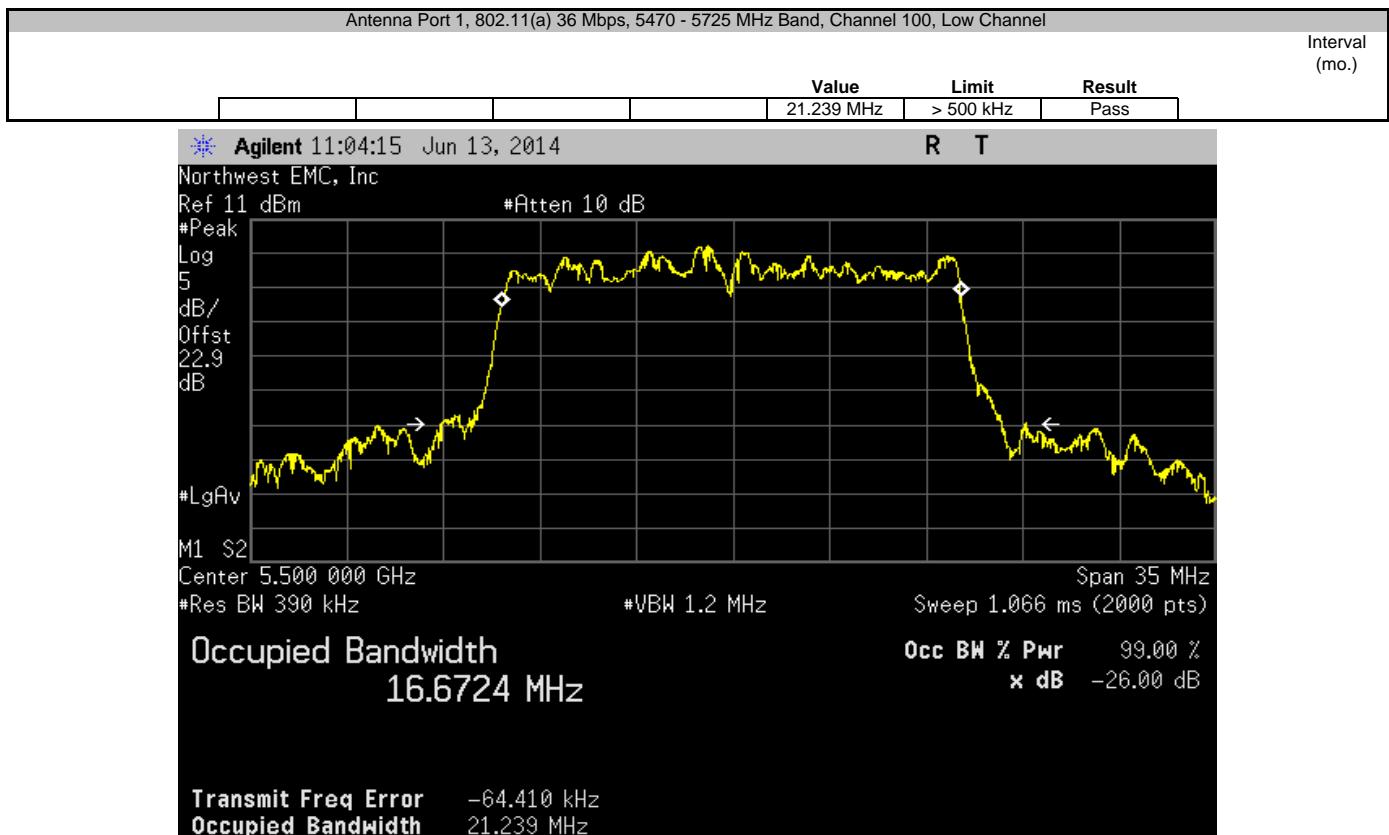


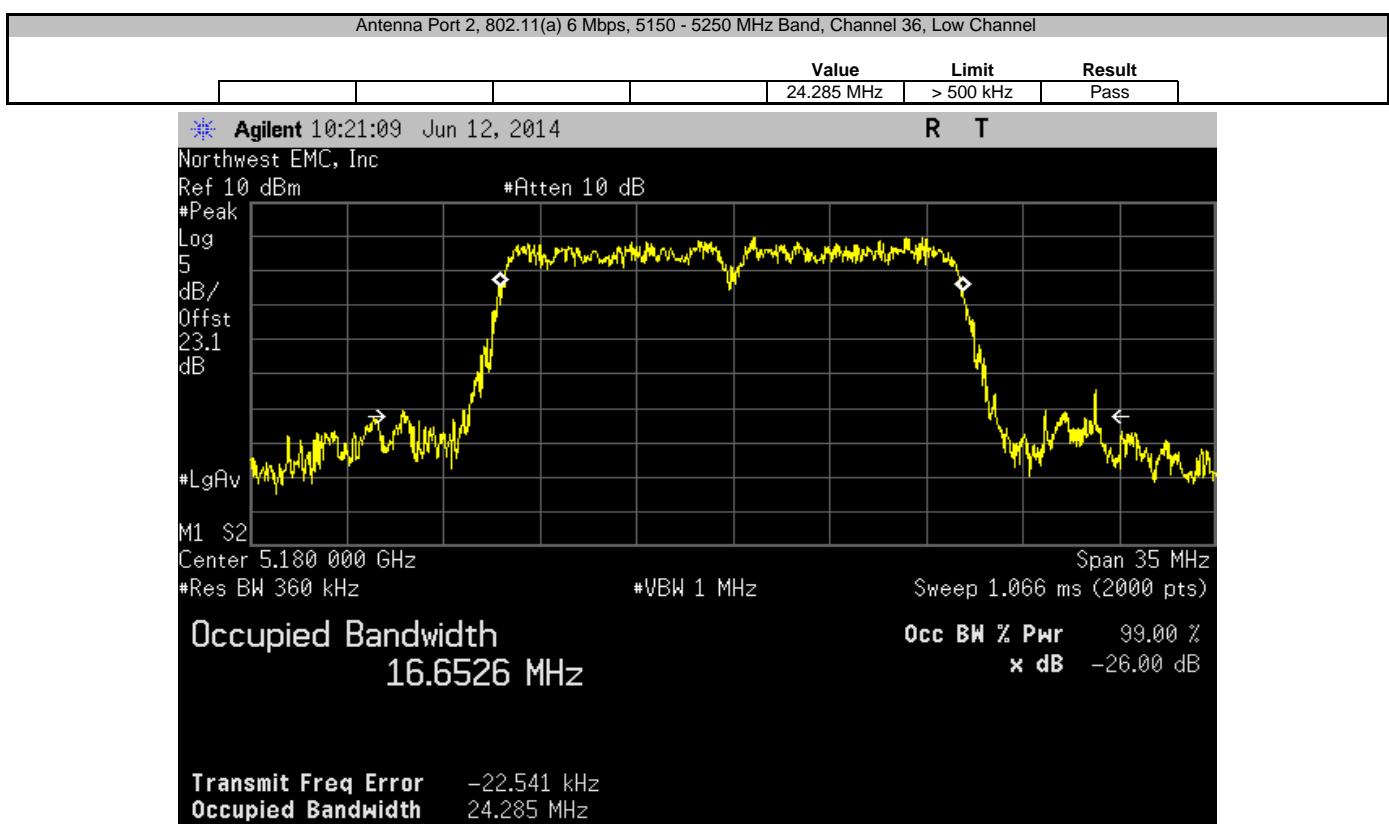
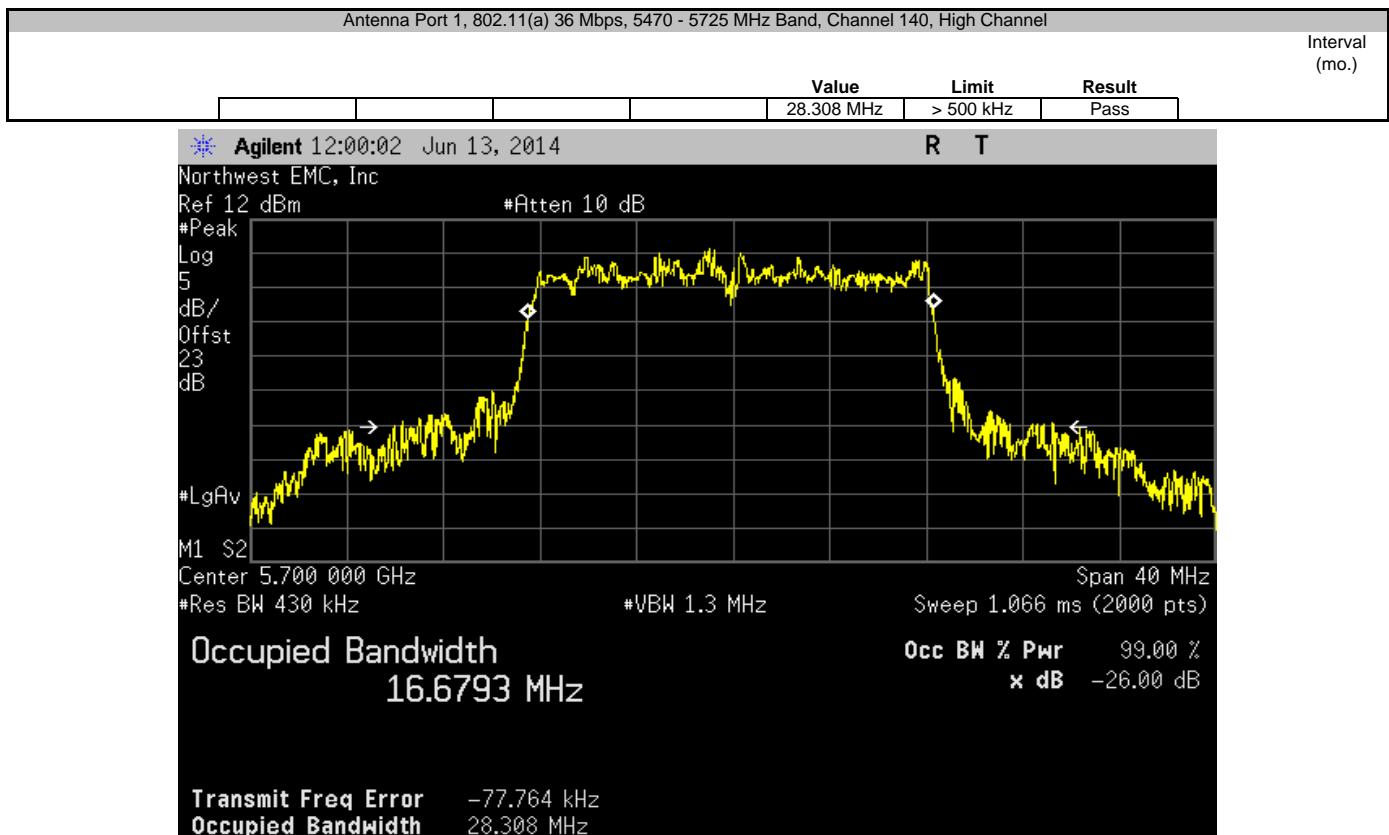


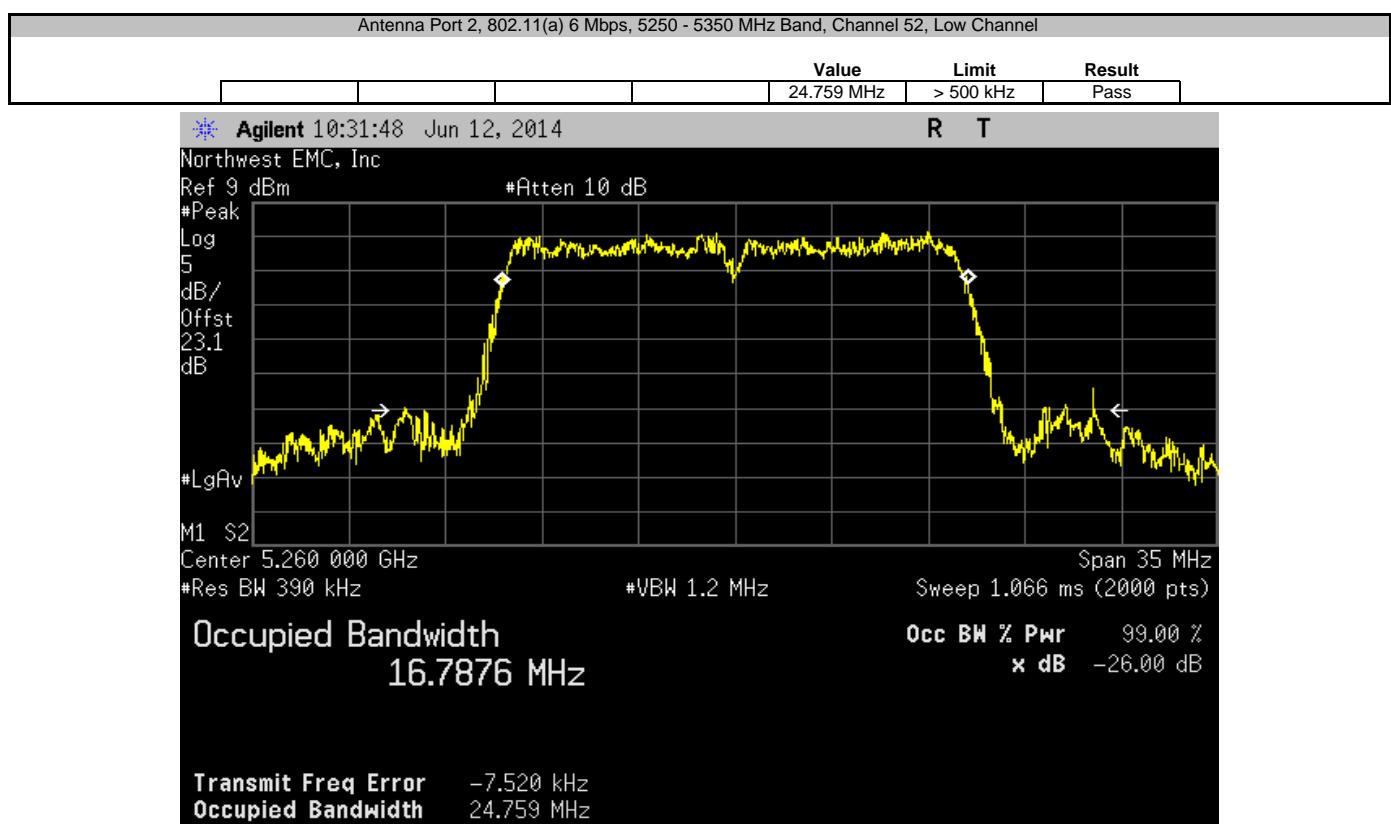
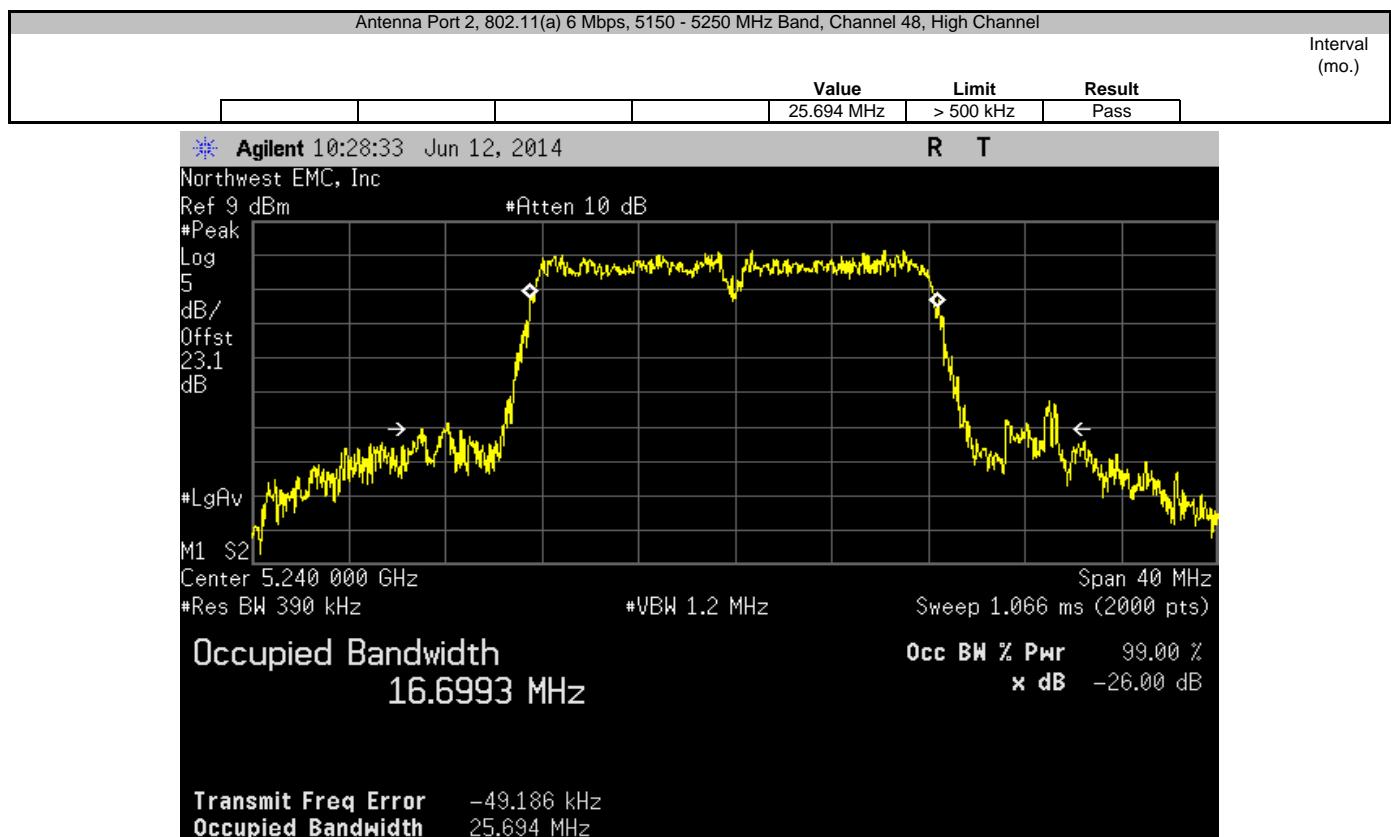


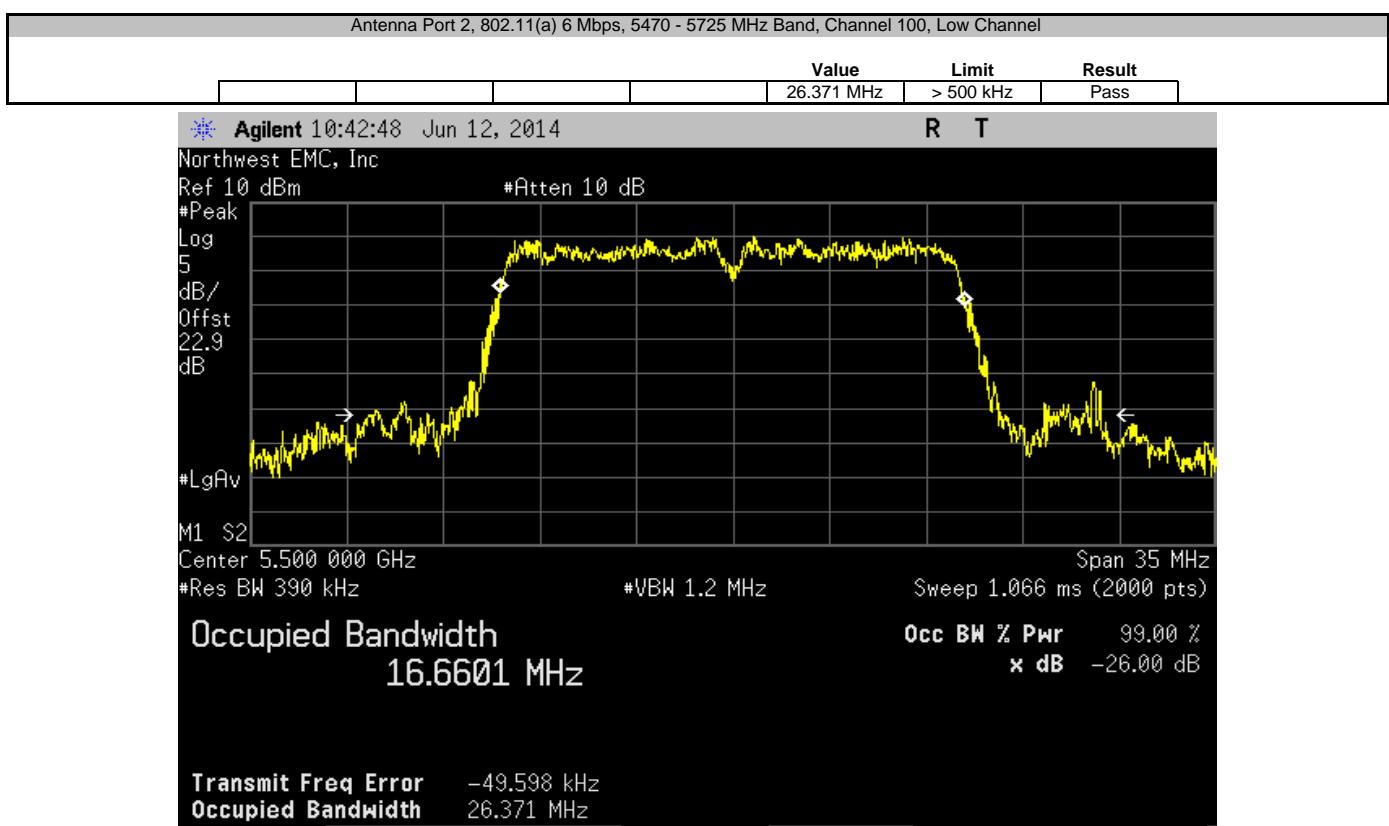
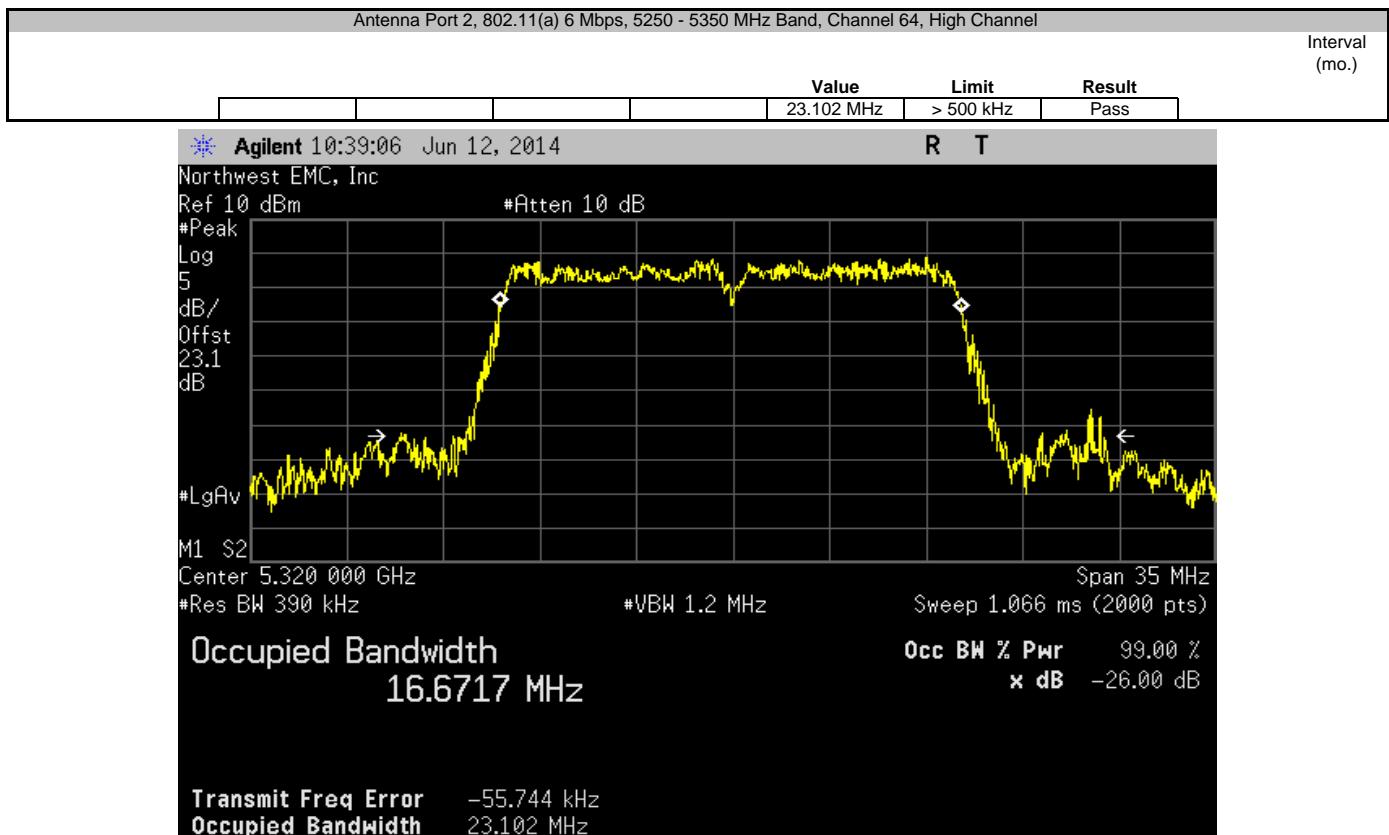


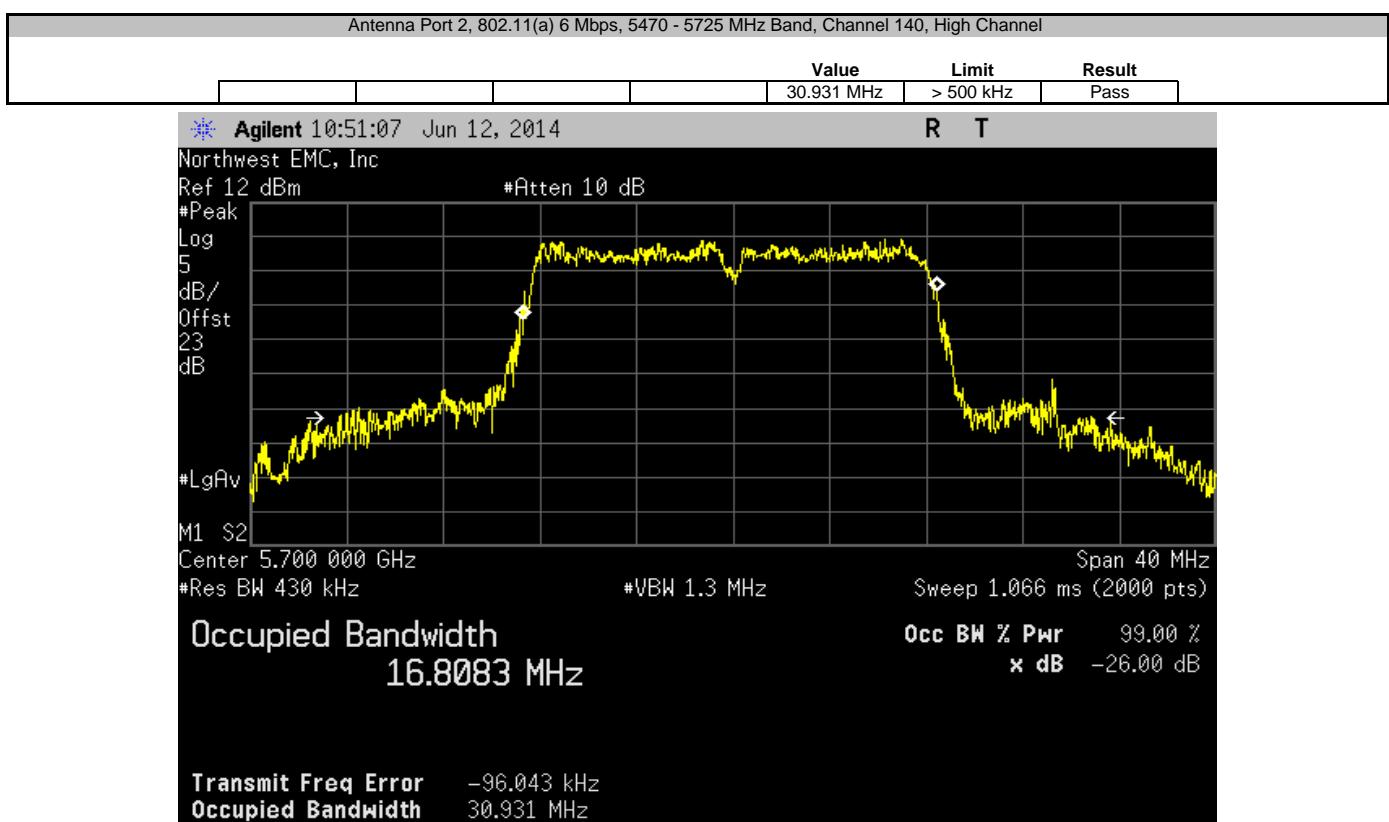
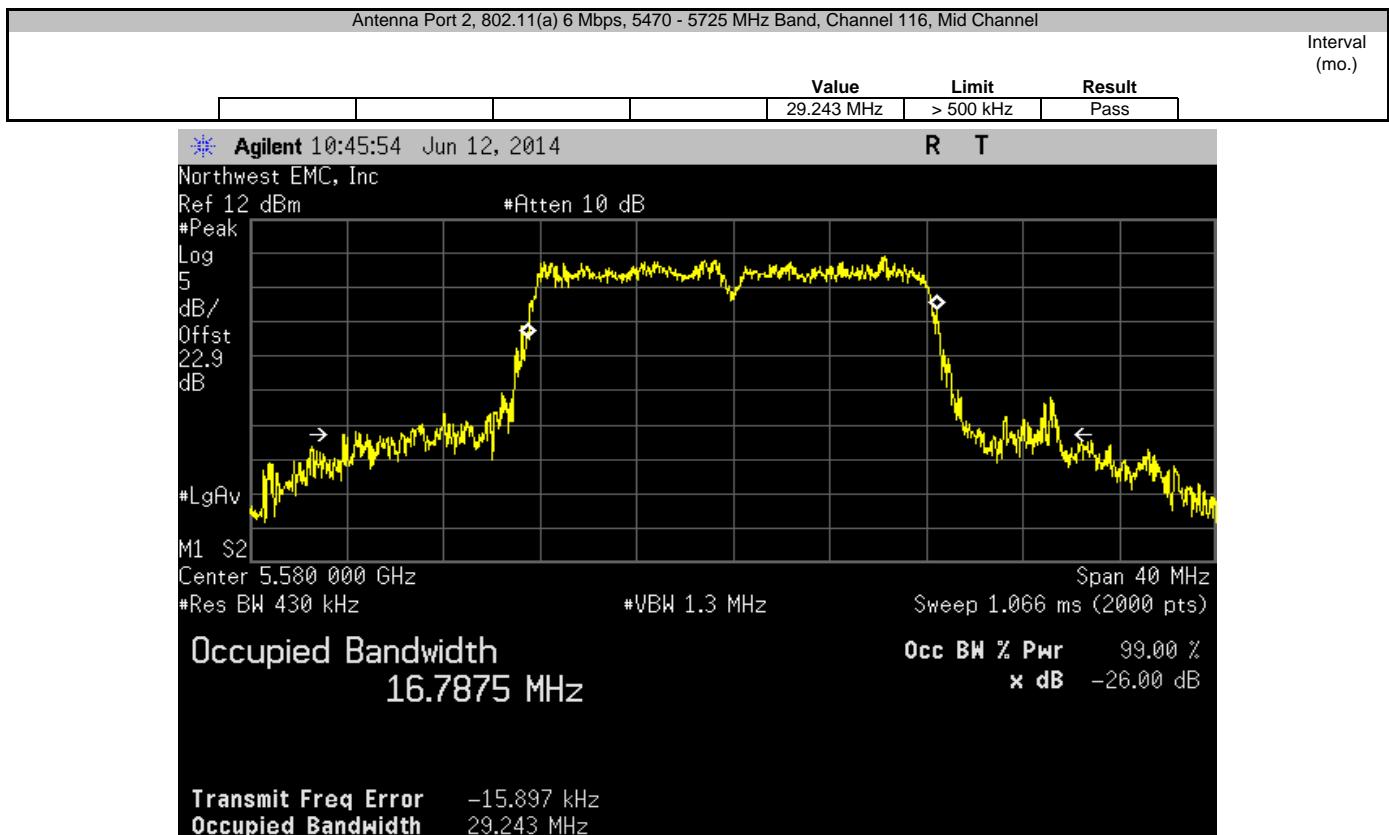


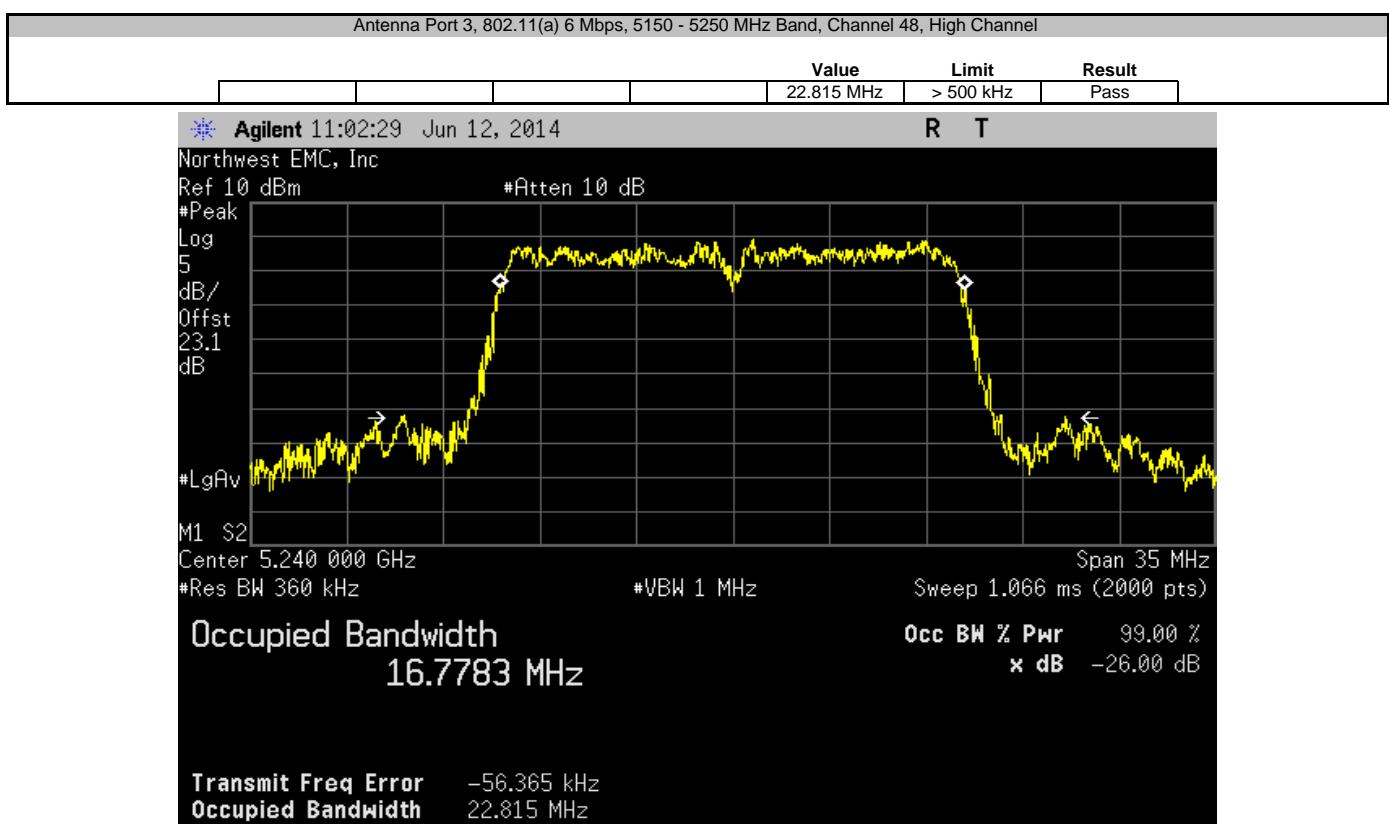
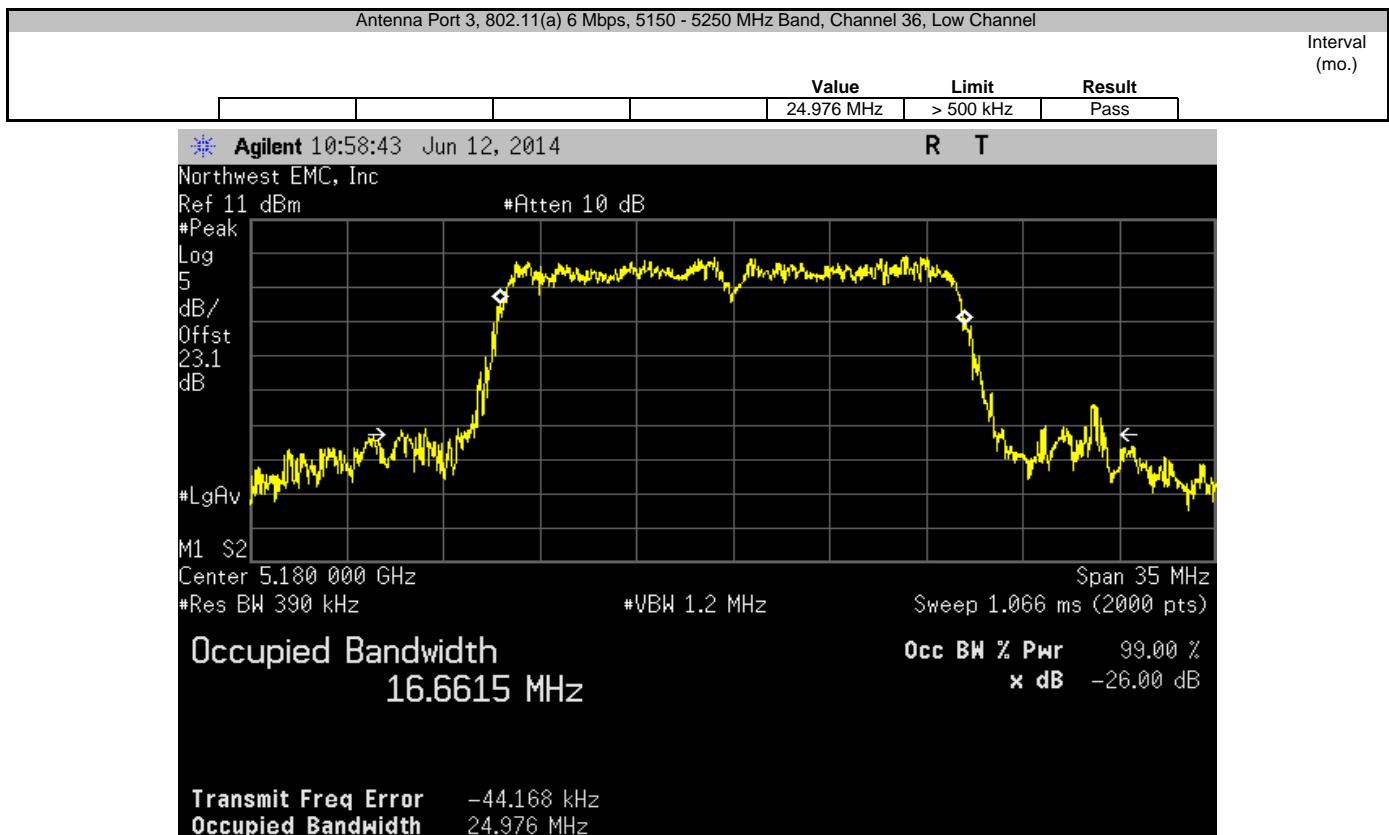


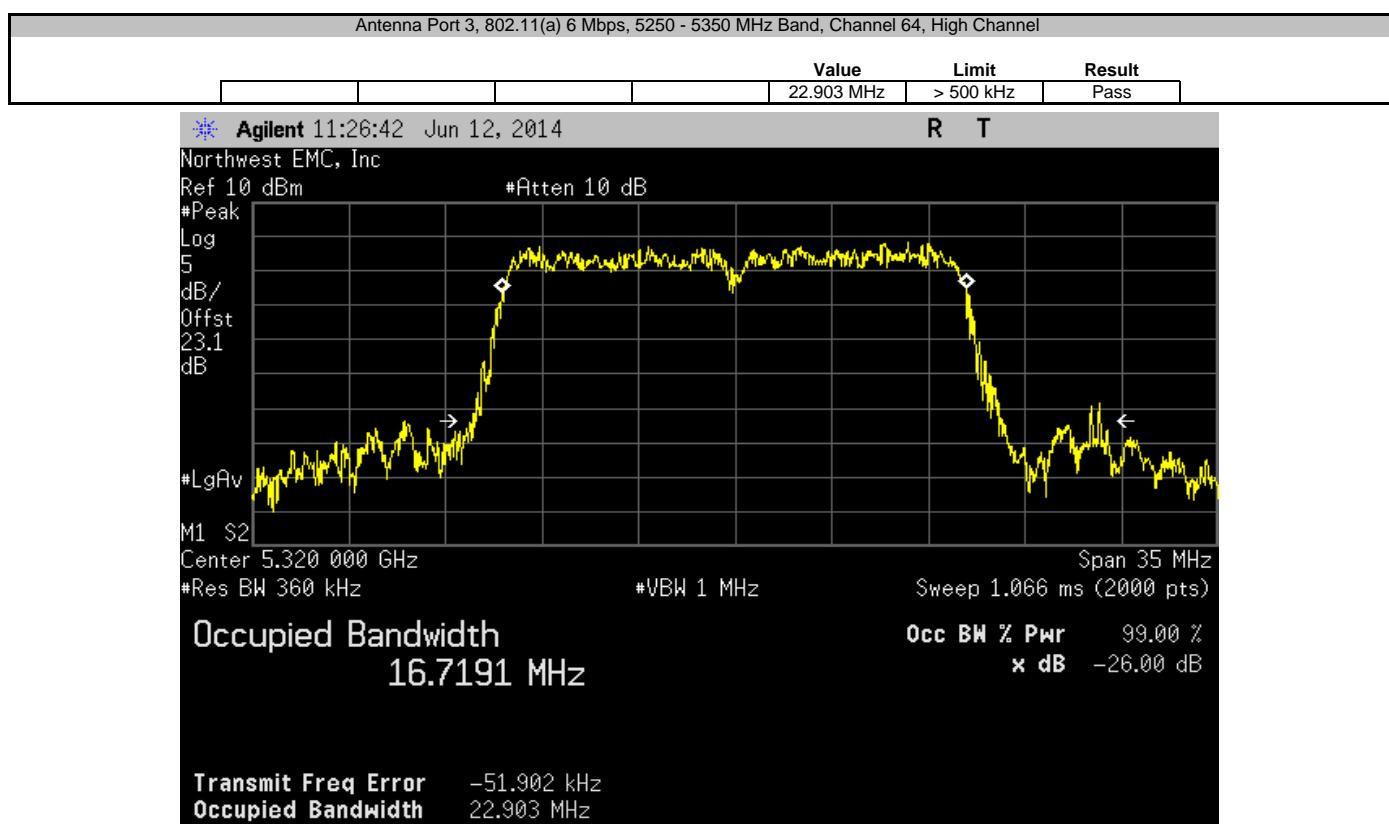
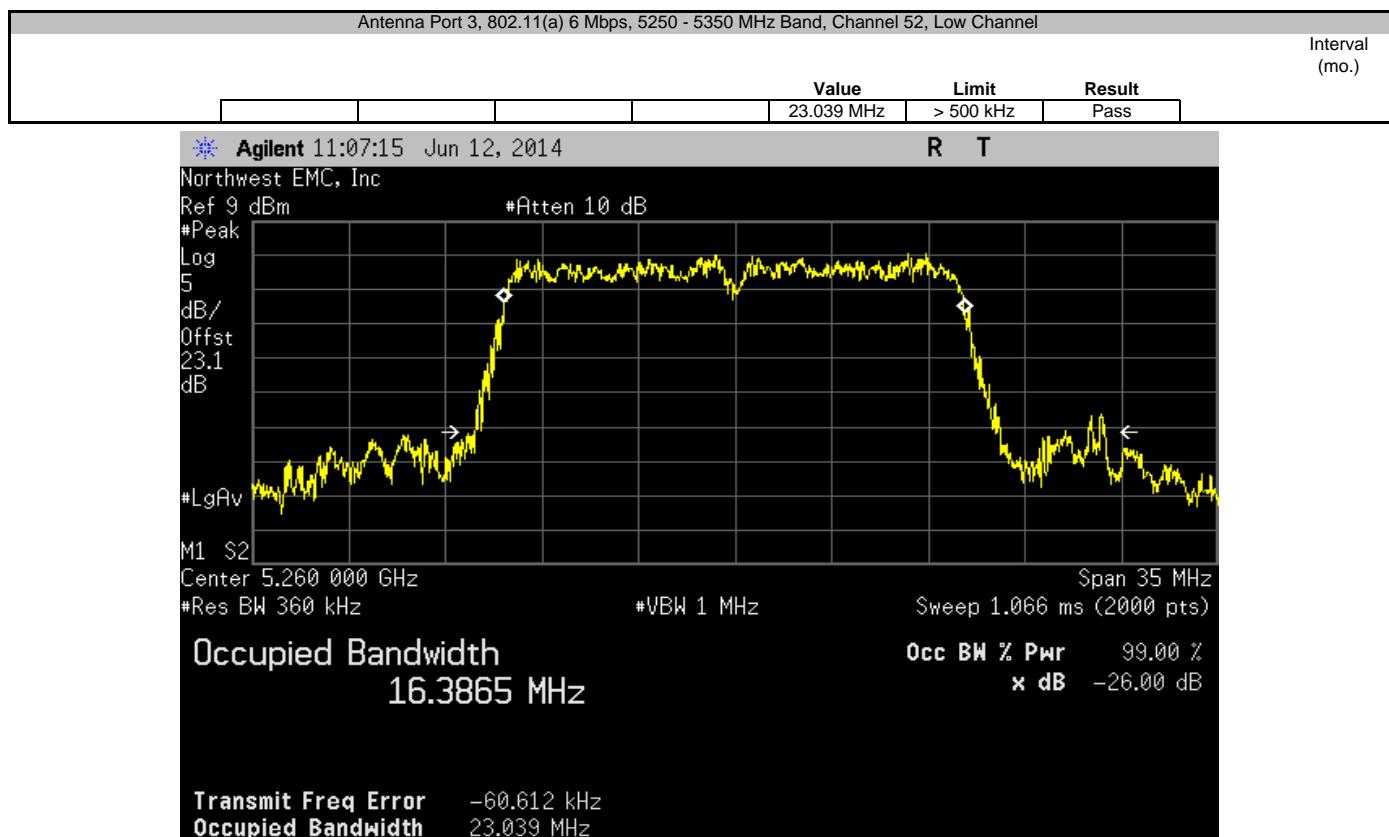


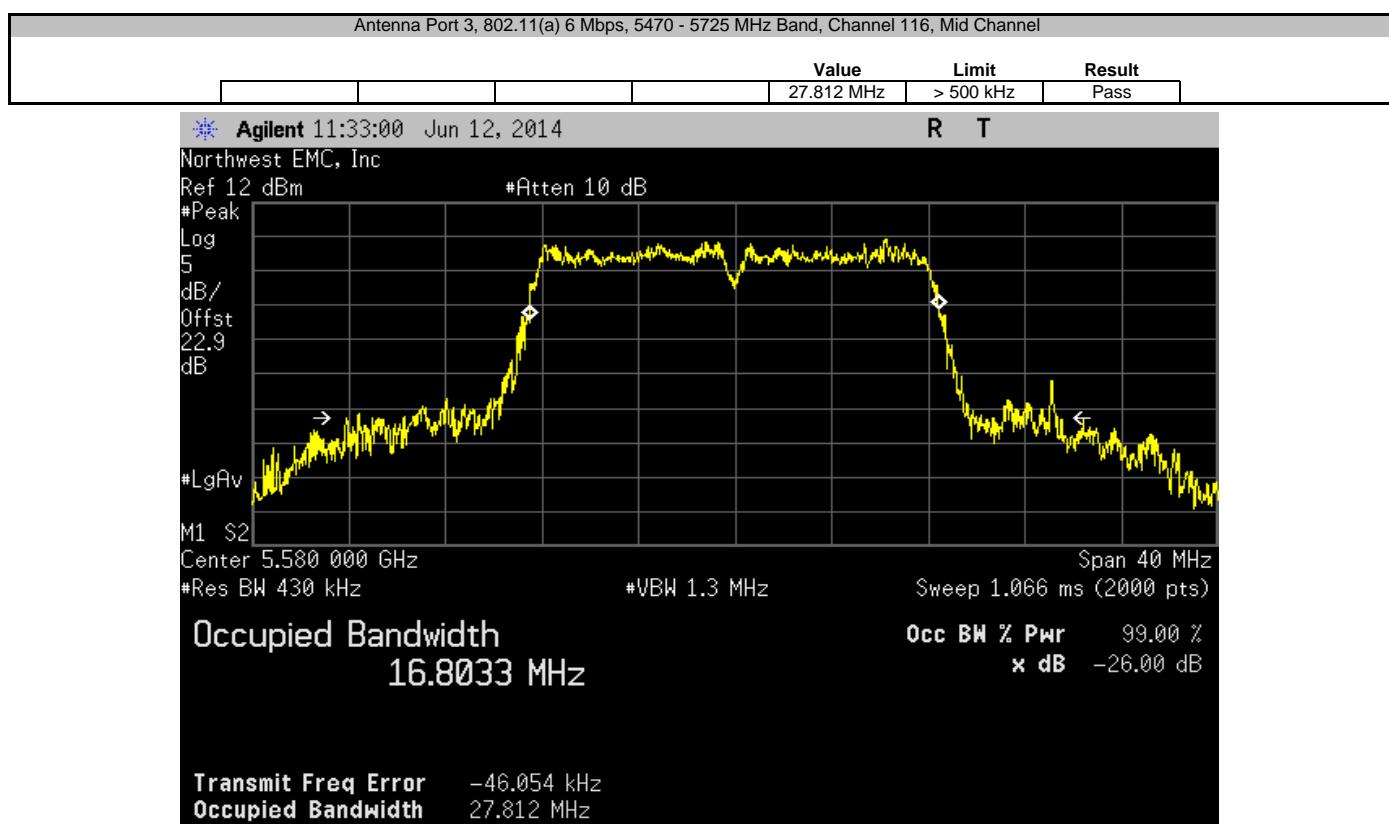
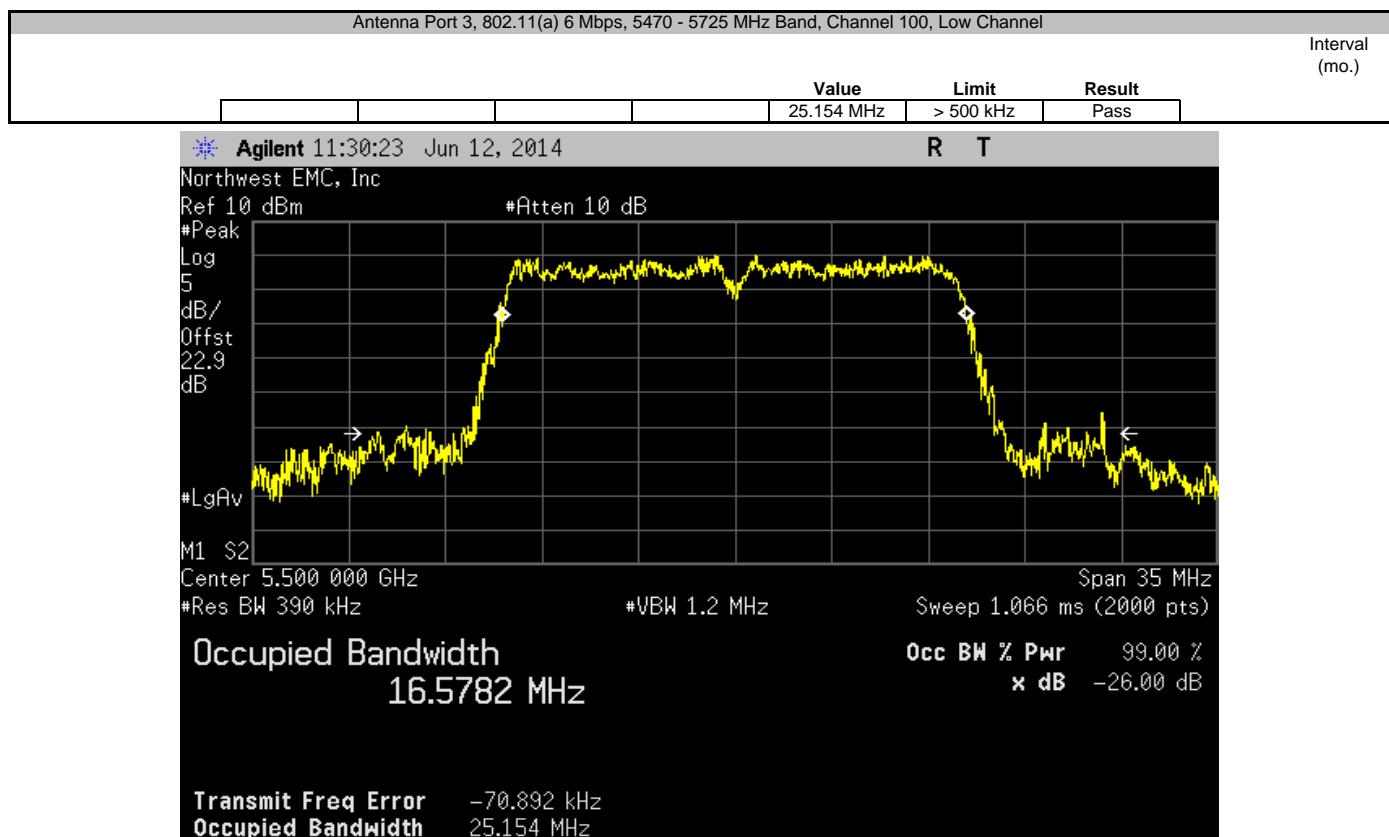


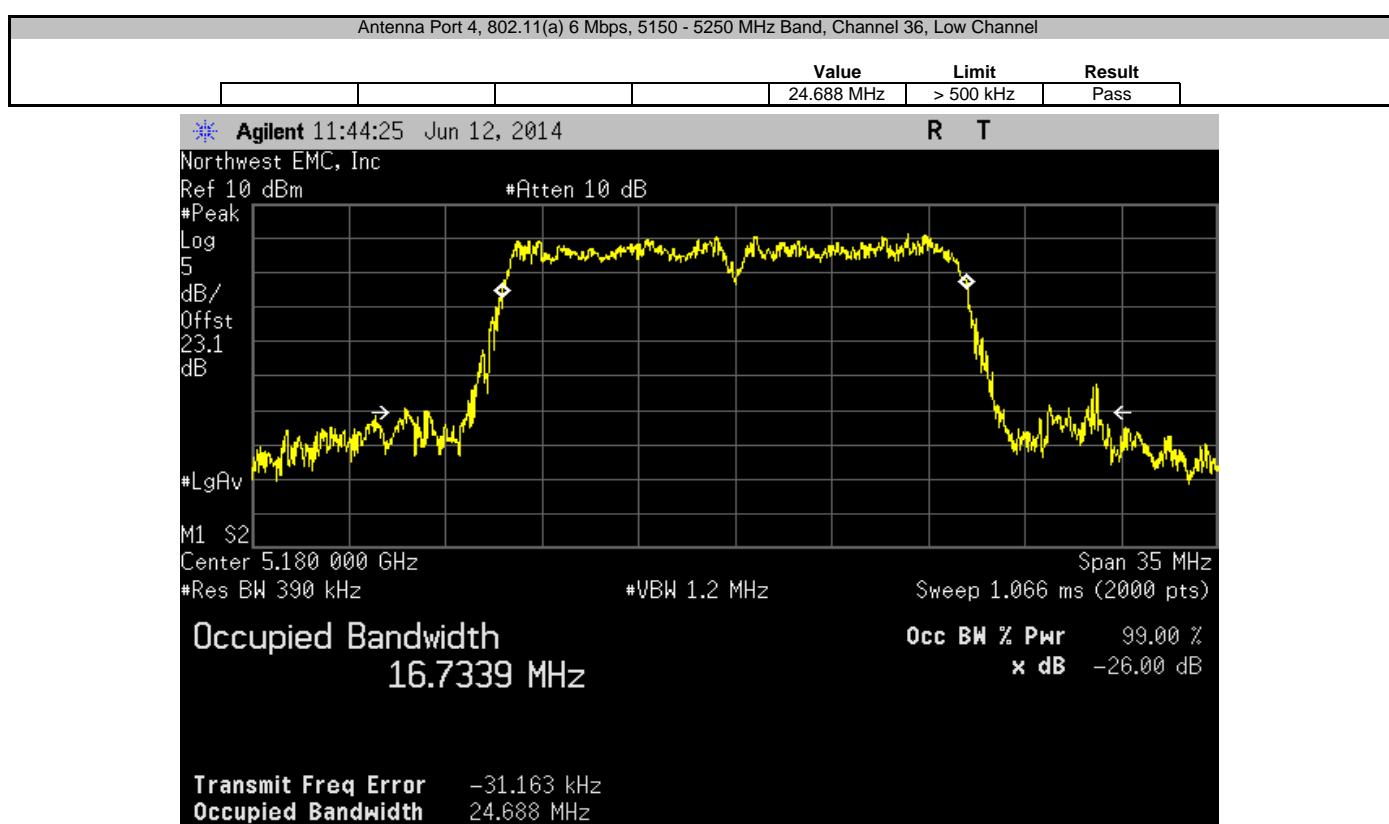
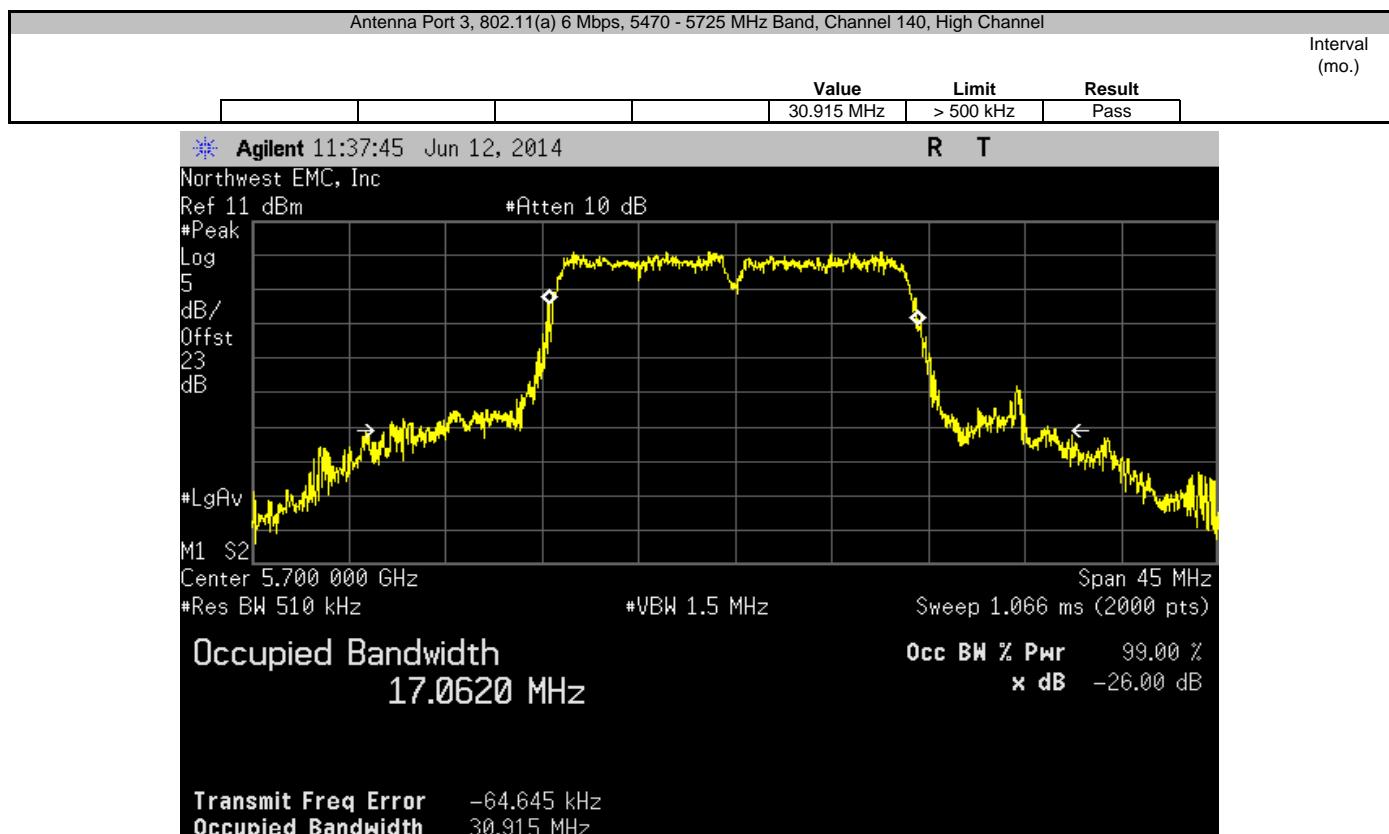


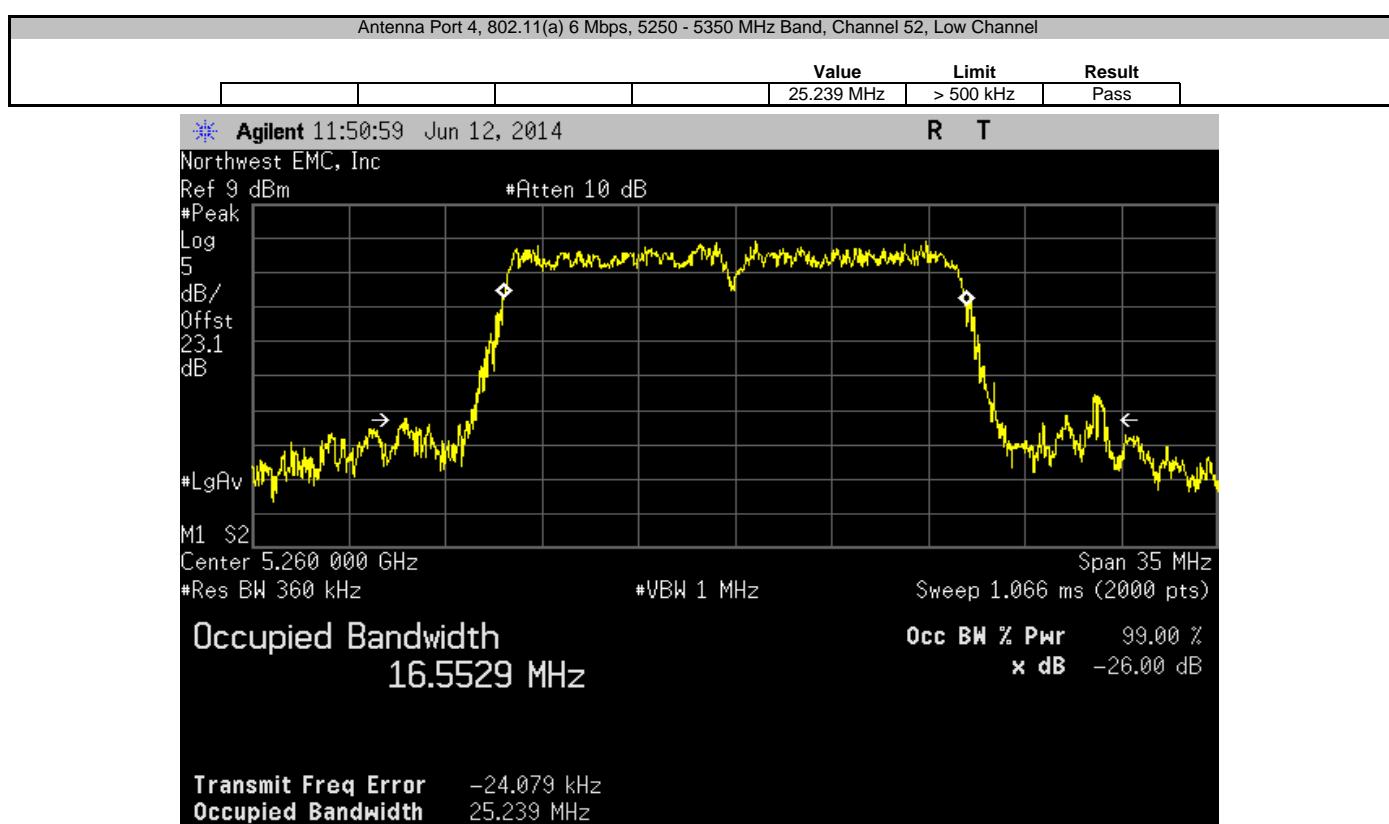
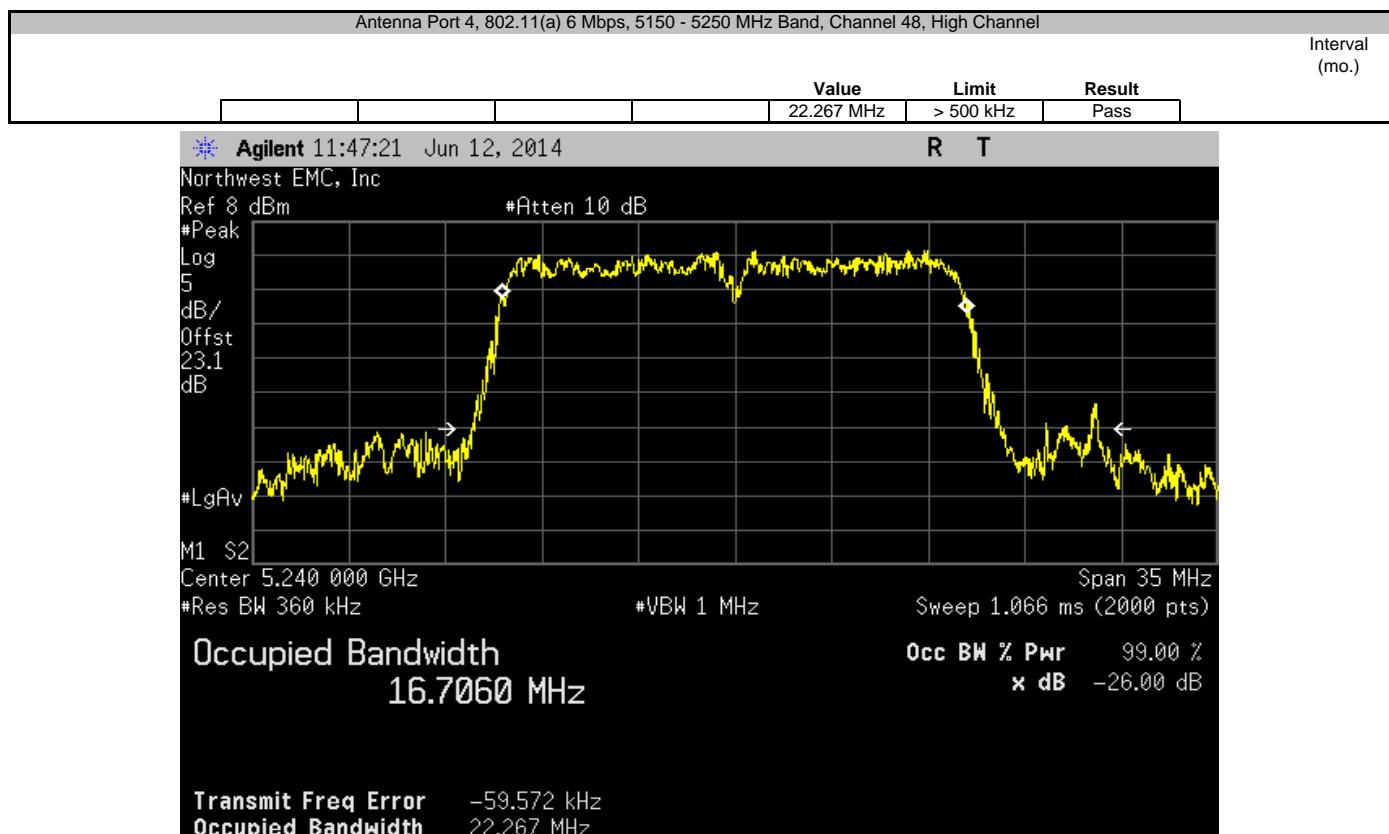


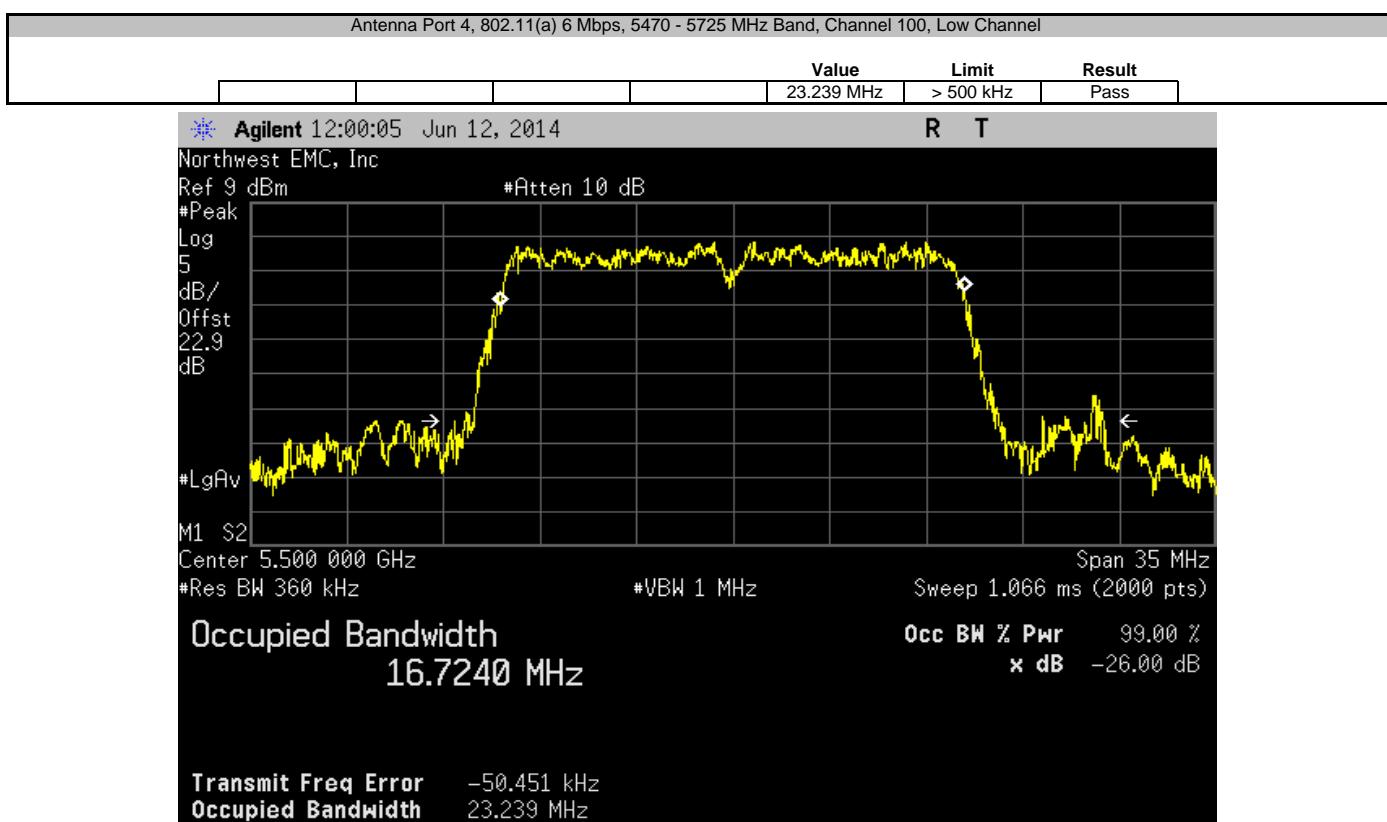
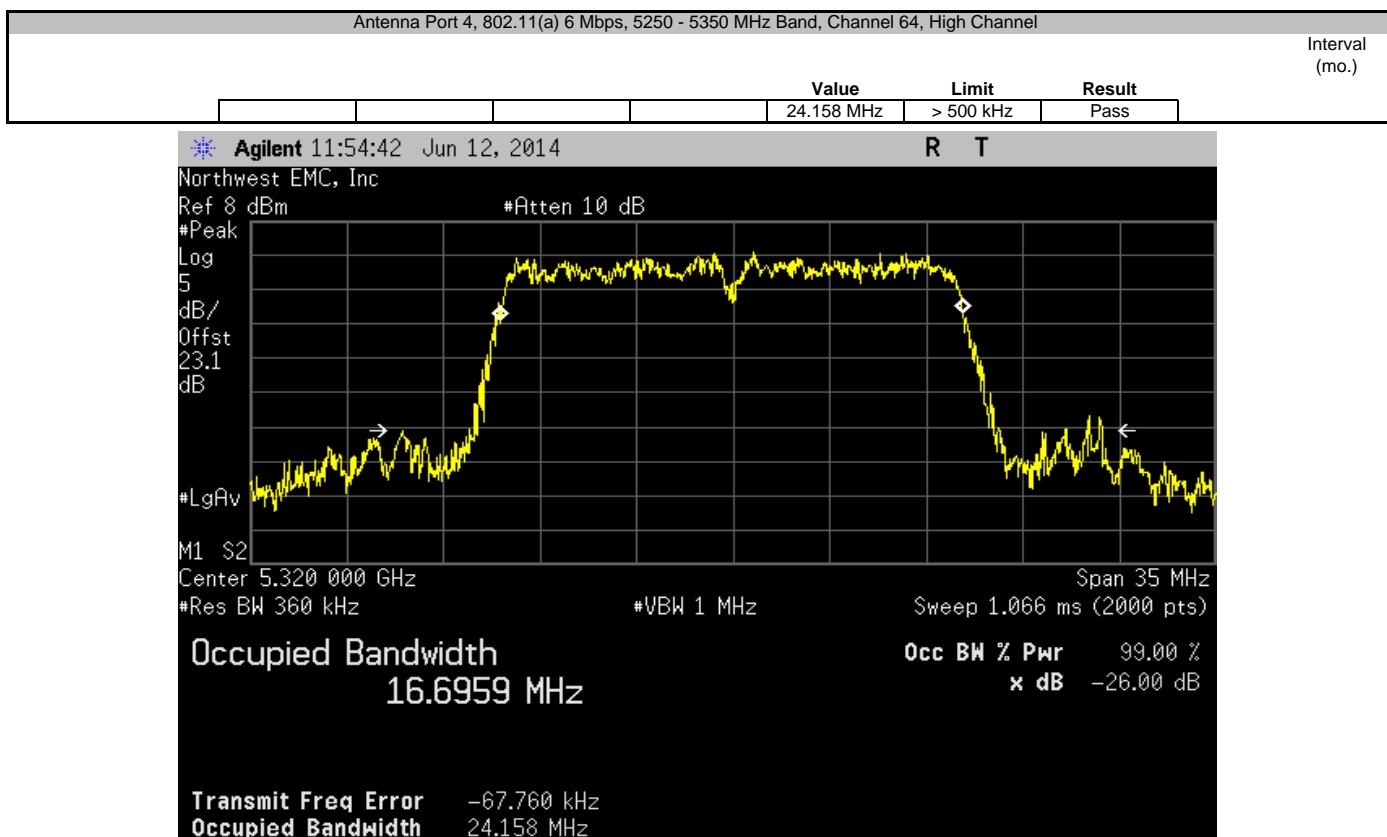


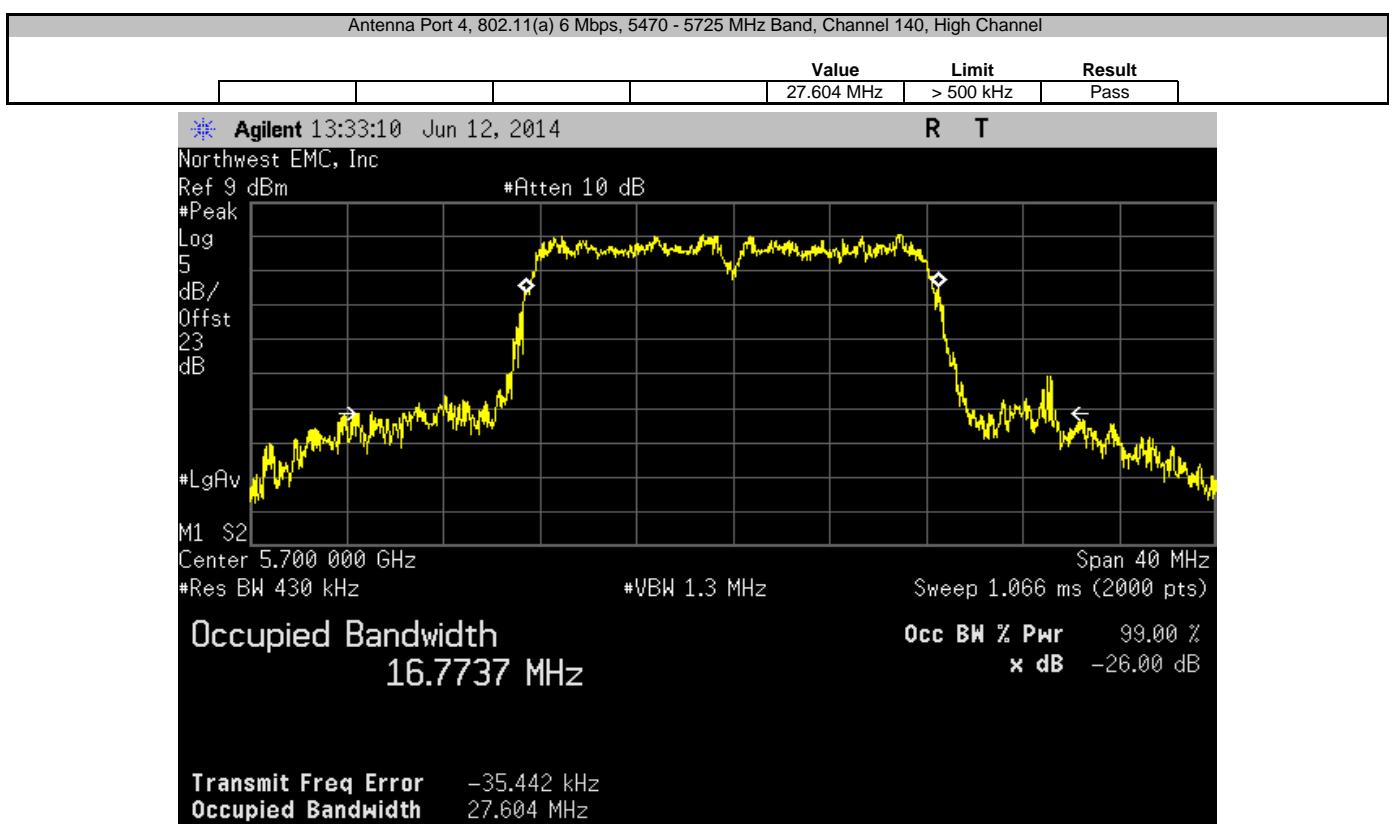
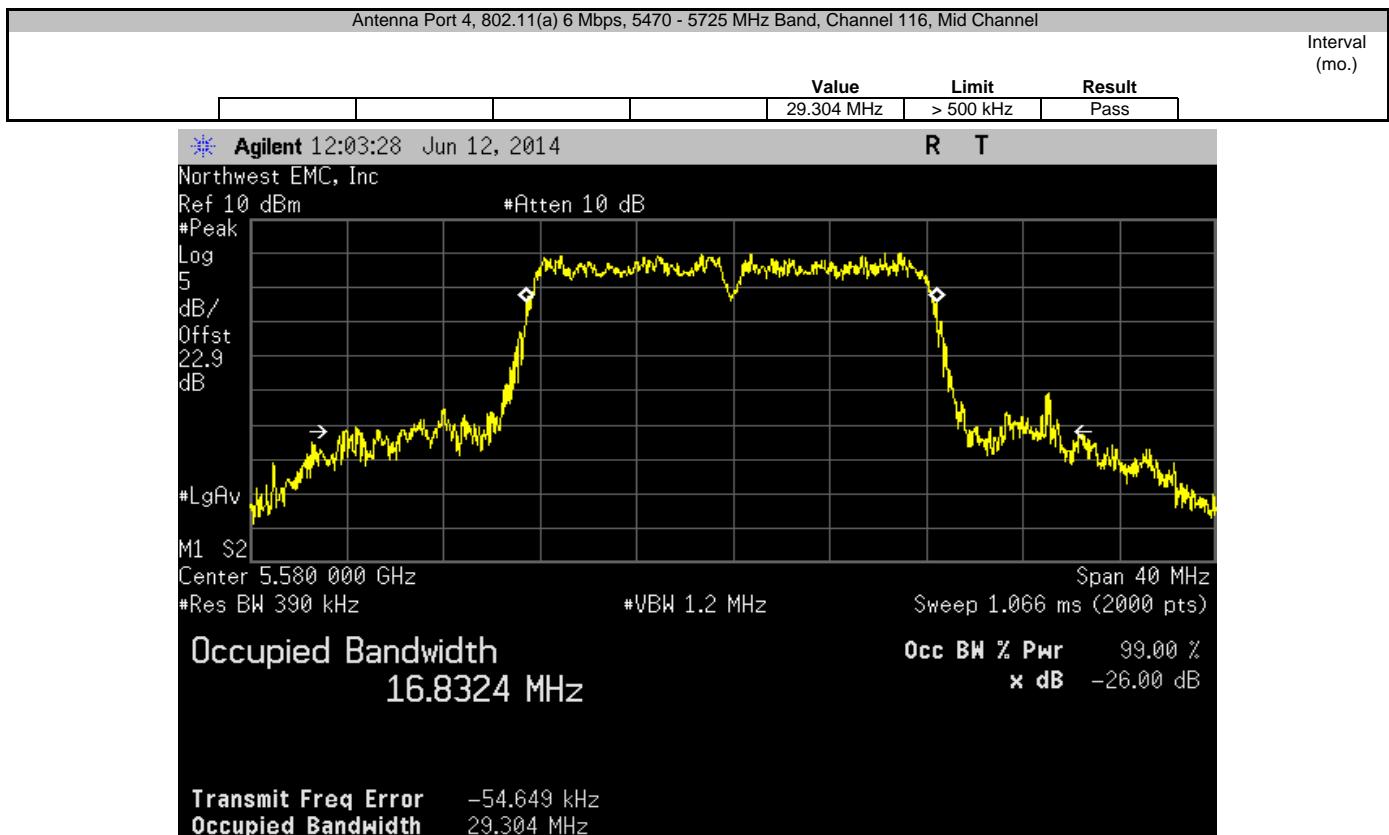












## PEAK TRANSMIT POWER

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

### TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo.)
40GHz DC Block	Miteq	DCB4000	AMD	4/28/2014	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator, 'Precision N'	S.M. Electronics	SA18N-06/SM4032	REE	12/2/2013	12
Power Meter	Agilent	N1913A	SQR	4/29/2013	36
Power Sensor	Agilent	E9300H	SQO	4/29/2013	36
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24
MXG Analog Signal Generator	Agilent	N5181A	TIG	3/28/2014	36

### TEST DESCRIPTION

FCC KDB 789033 D01 General UNII Test Procedures Section C was followed. 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. The method of measuring the emission bandwidth and the associated data are found elsewhere in this test report. The transmission pulse duration (T) was measured using a zero span on the spectrum analyzer to see the pulses in the time domain.

Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep) was used for this test.

The spectrum analyzer settings were set per the guidance as well as the following specifics:

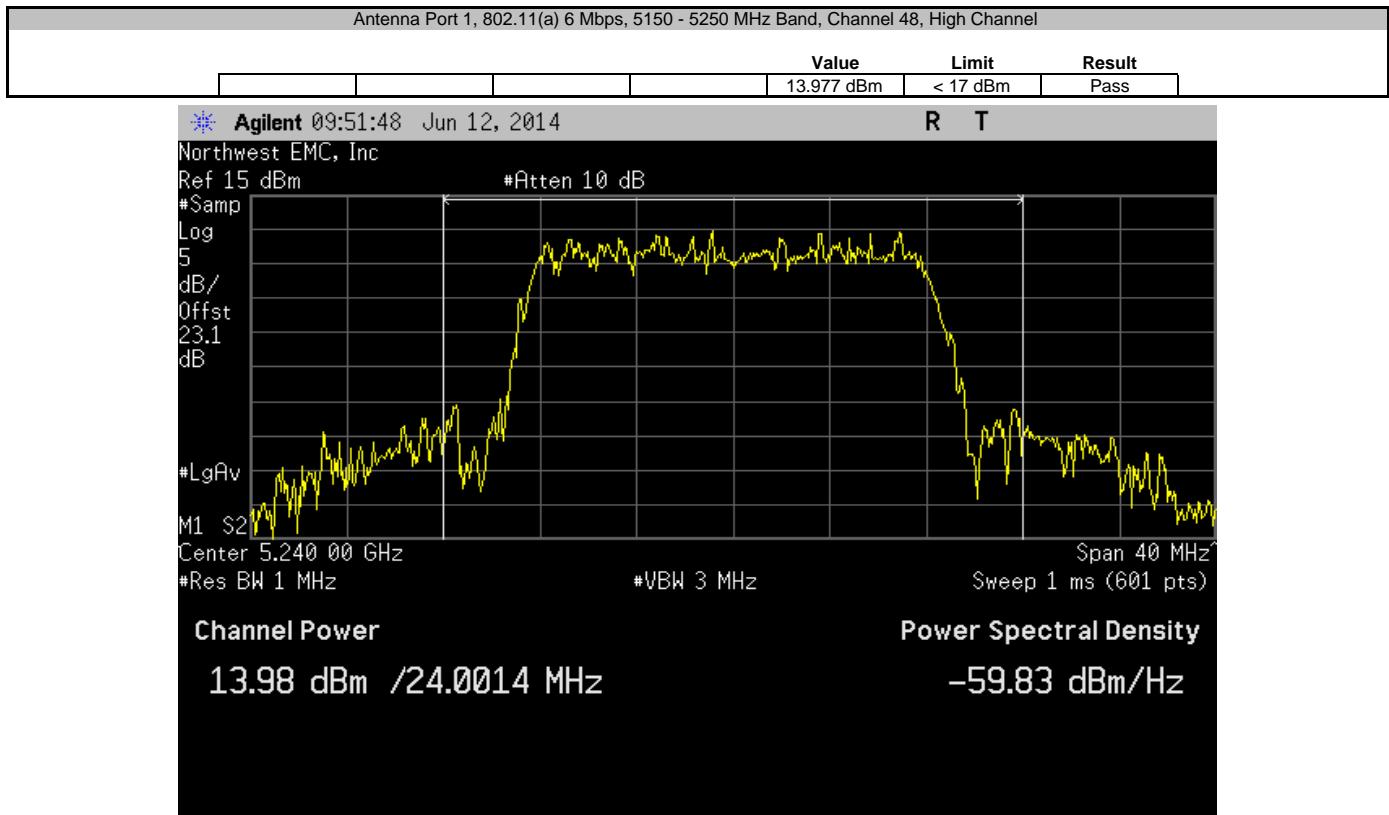
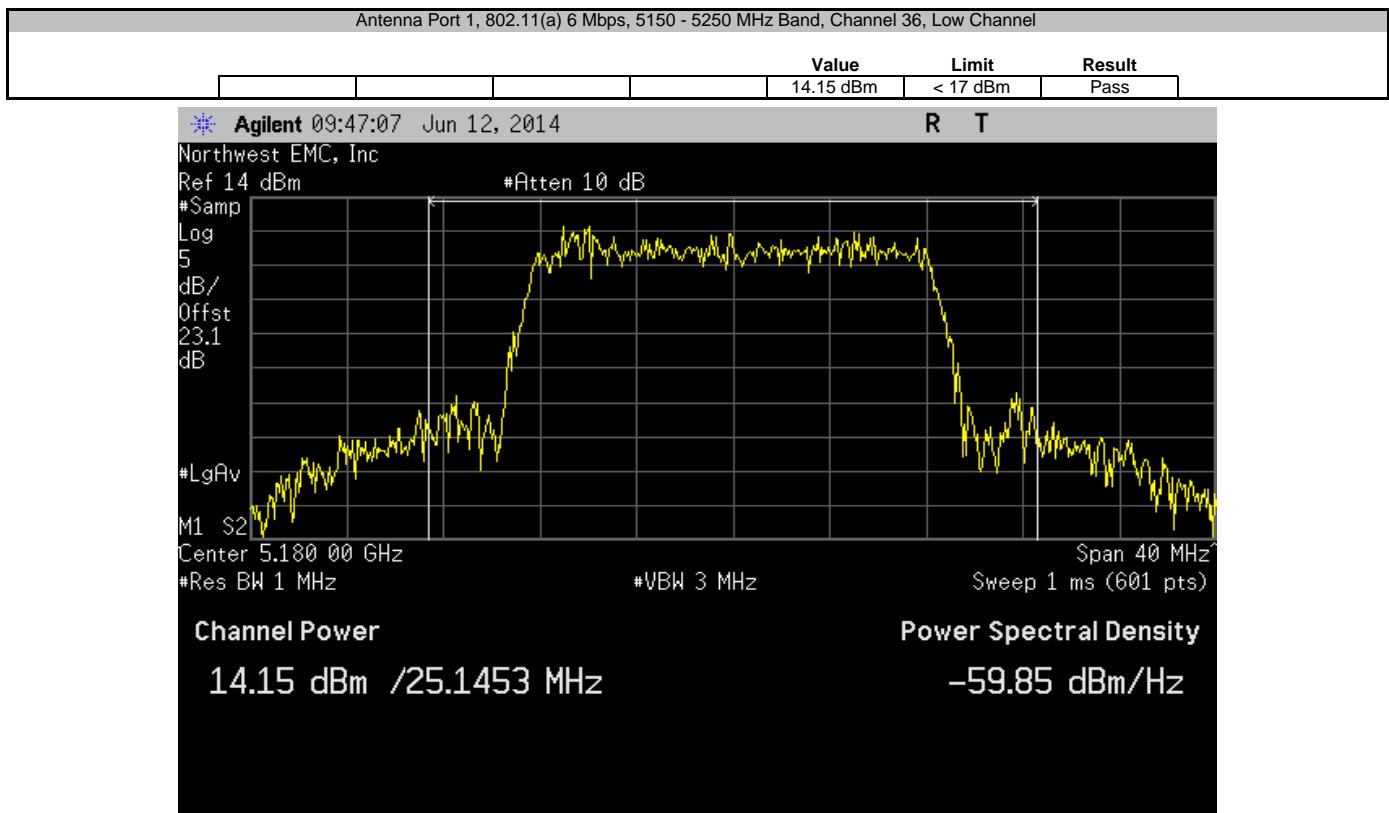
- RBW = 1 MHz, VBW = 3 MHz
- Sample Detector
- The number of points was set to 601. This satisfied the requirement of being  $> 2 * \text{span} / \text{RBW}$
- Trace average 100 traces in power averaging mode.
- Power was integrated across "B", by using the channel power function of the analyzer.

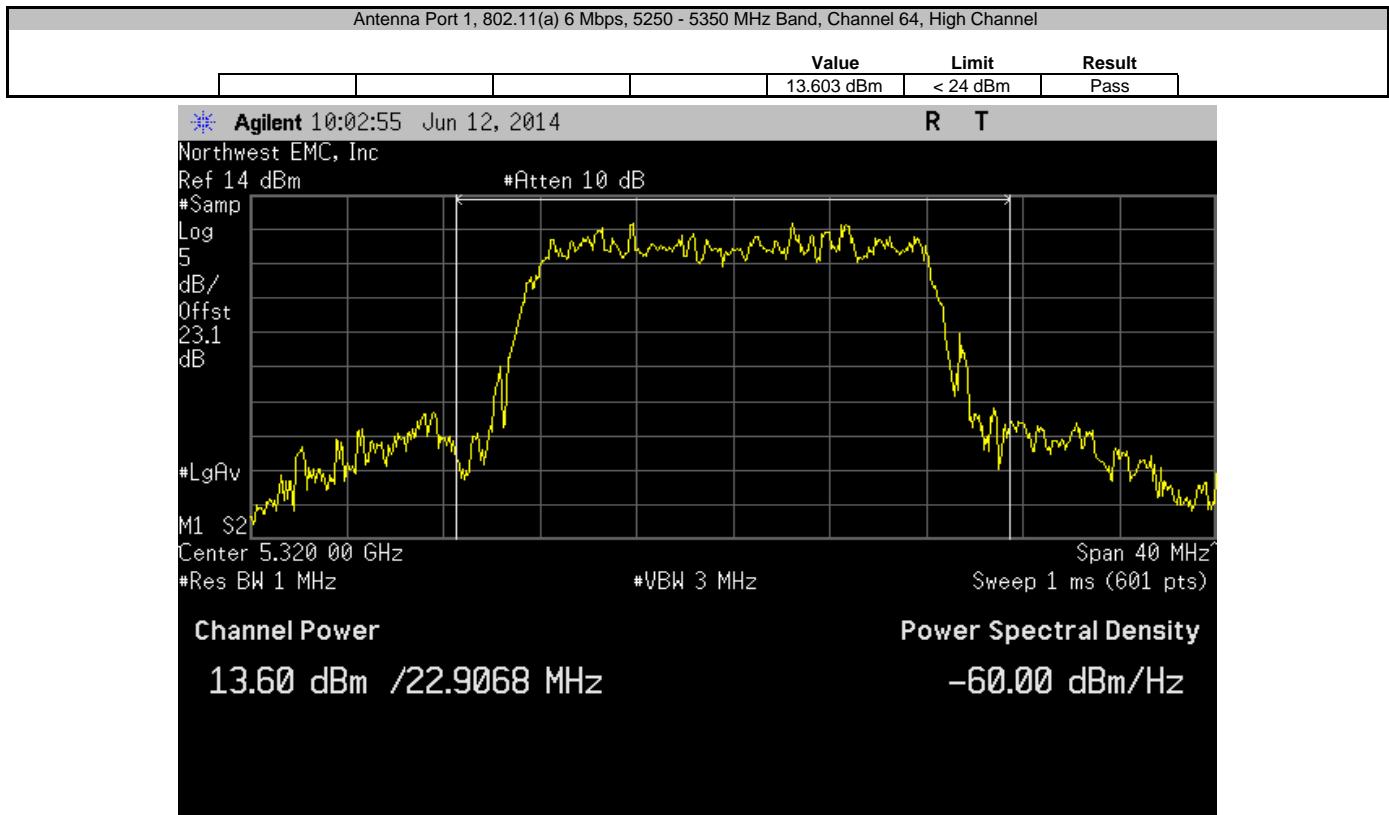
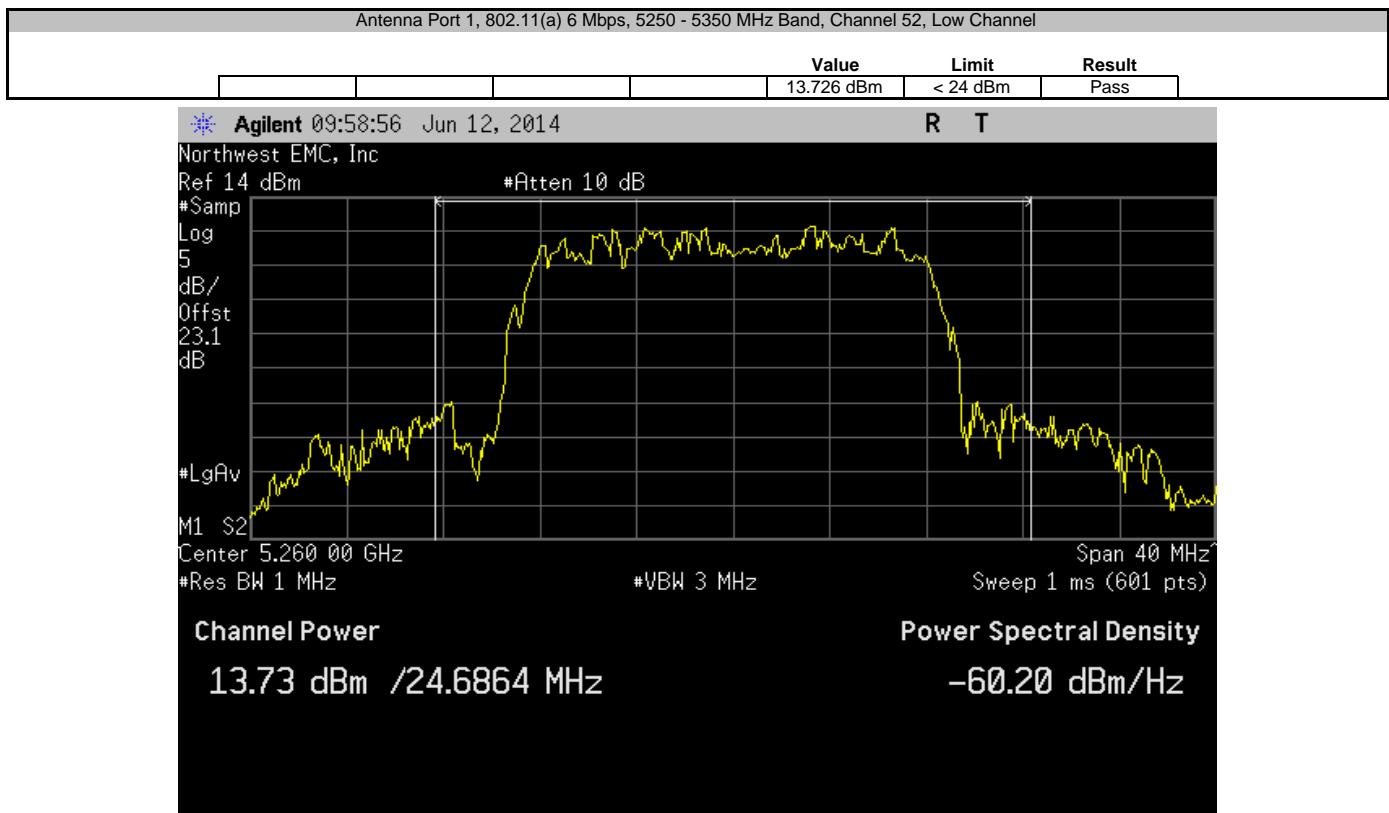


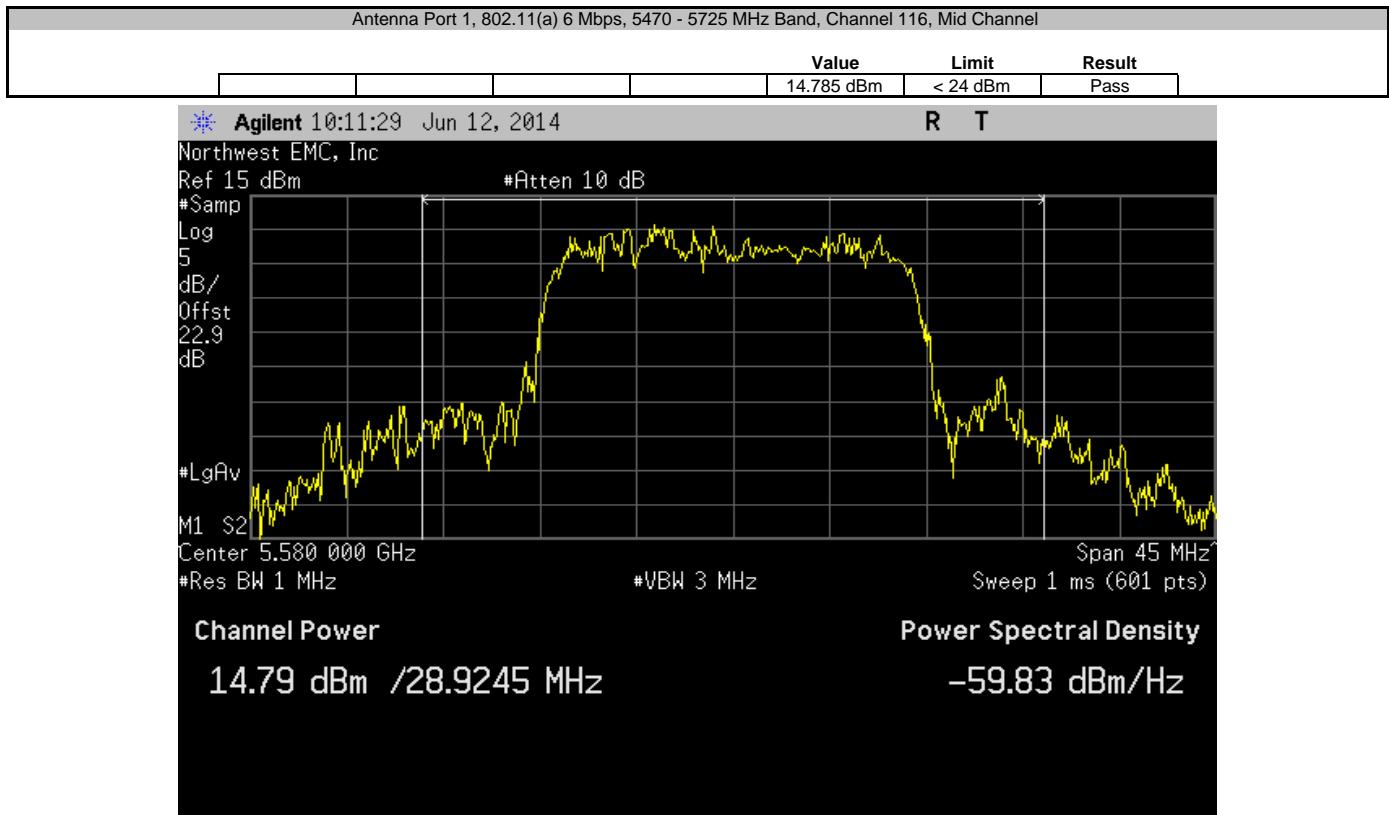
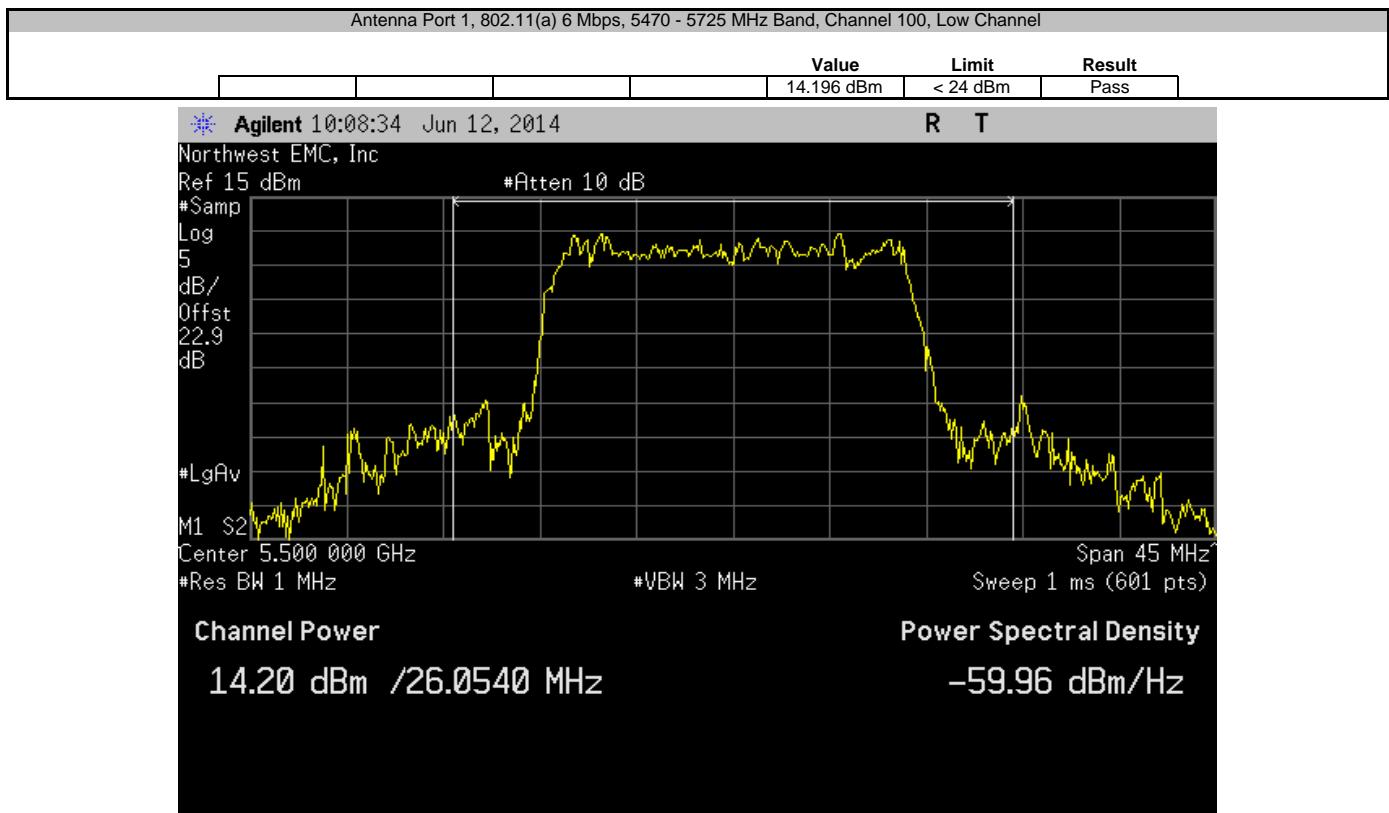
## PEAK TRANSMIT POWER

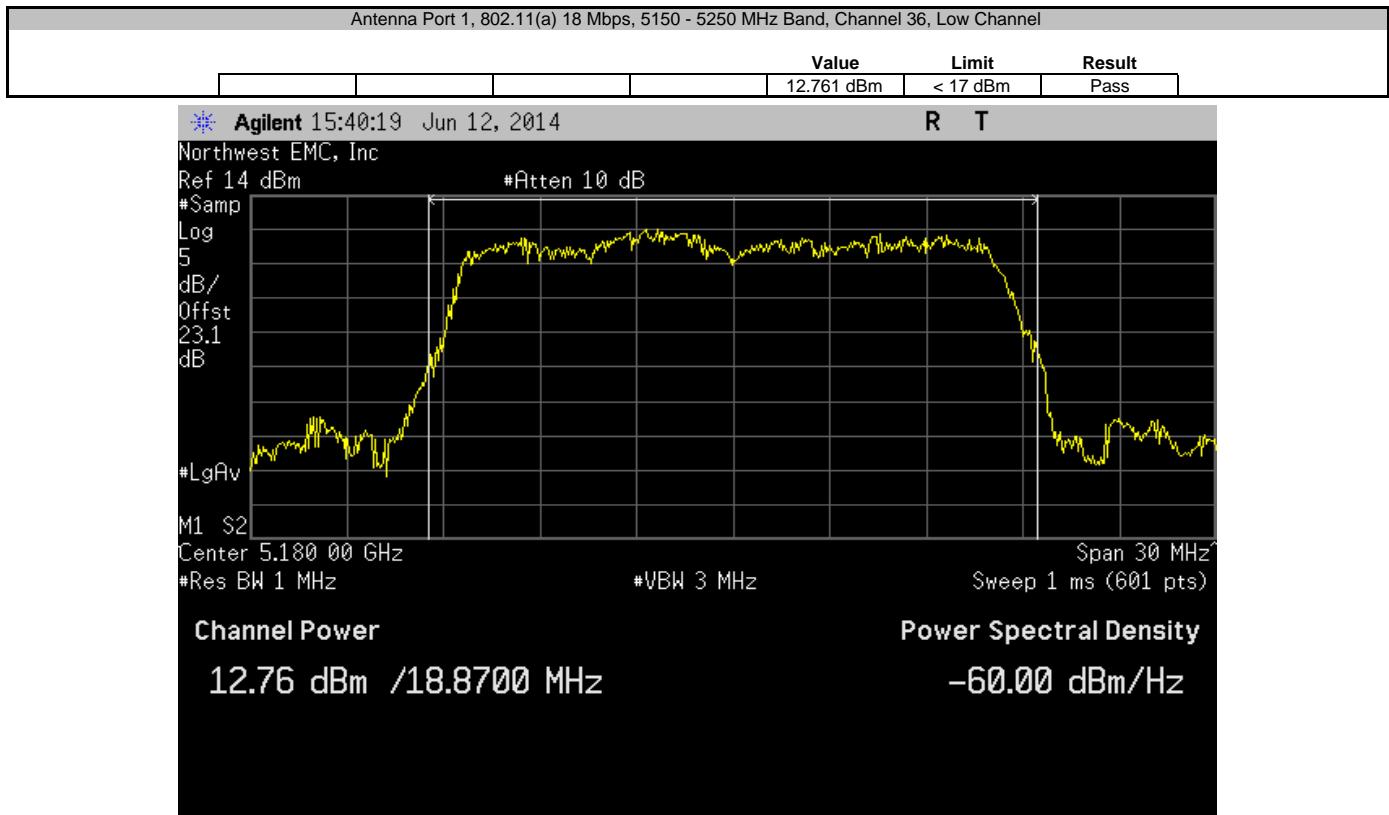
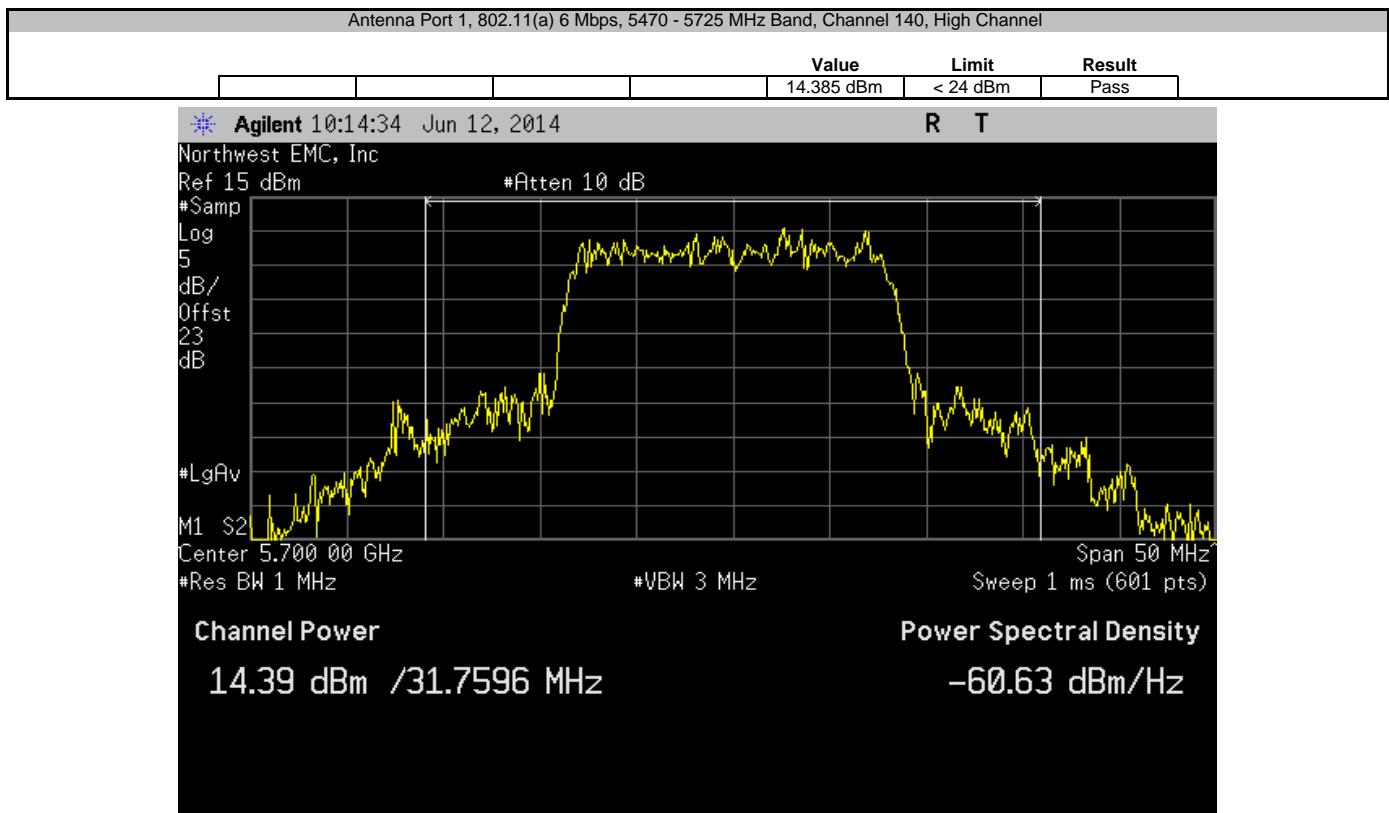
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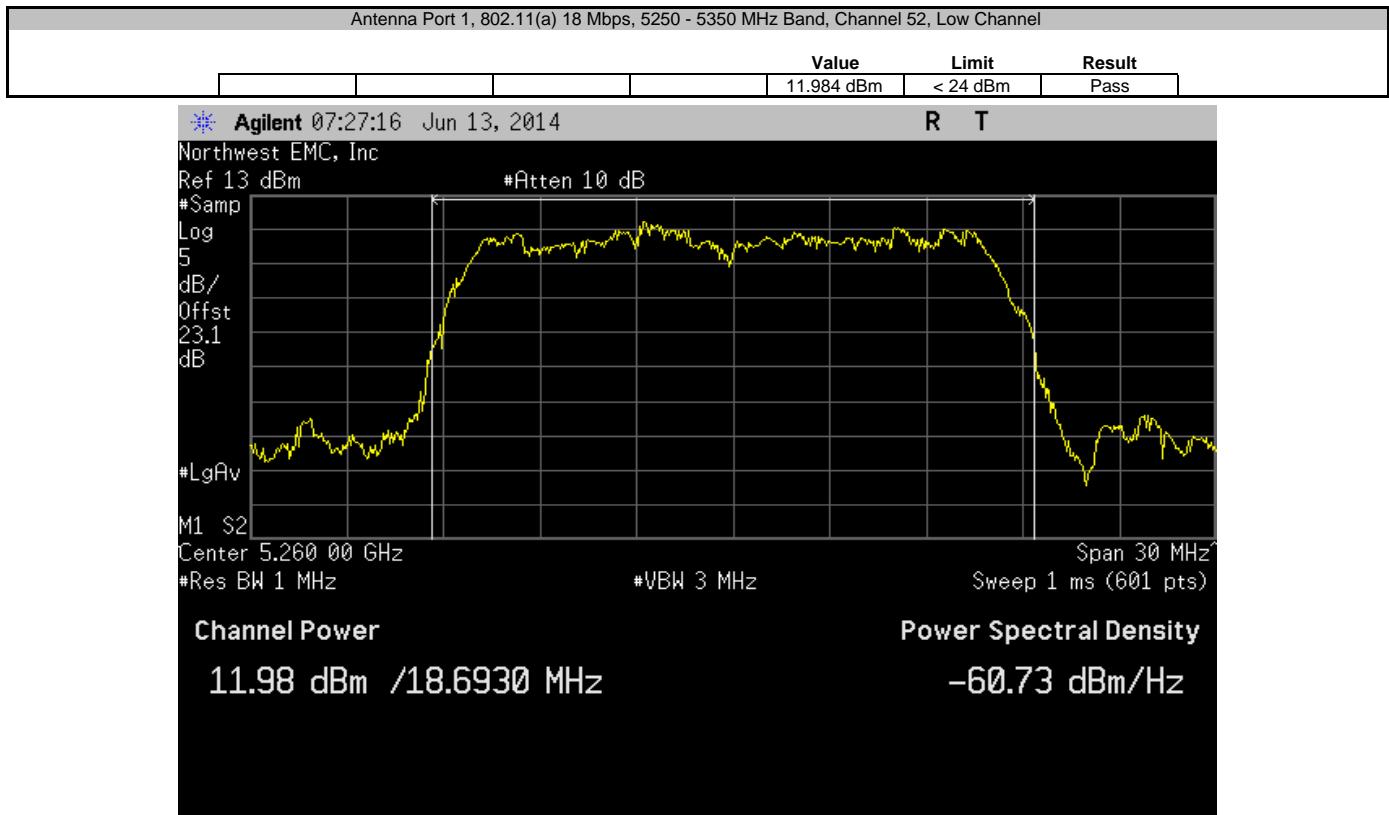
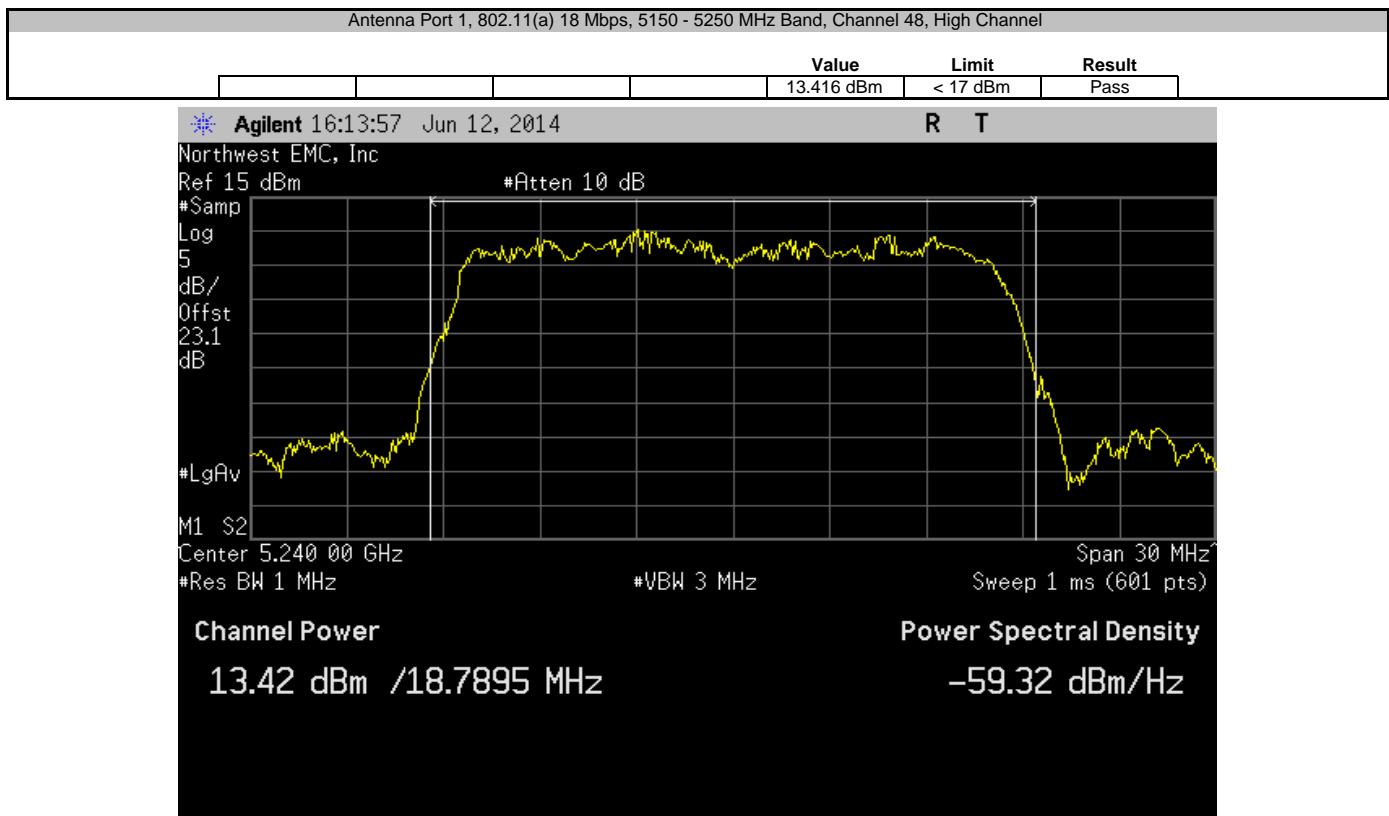
EUT: 444-2250		Work Order: FOCU0168		
Serial Number: 02EA41000011		Date: 06/13/14		
Customer: Summit Semiconductor, LLC		Temperature: 22.5°C		
Attendees: None		Humidity: 43%		
Project: None		Barometric Pres.: 1019		
Tested by: Jared Ison	Power: 18 VDC	Job Site: EV06		
TEST SPECIFICATIONS	Test Method			
FCC 15.407:2014	ANSI C63.10:2009			
COMMENTS	Test was performed on all antenna ports to determine which port produced the highest output power.			
DEVIATIONS FROM TEST STANDARD	None			
Configuration #	2	Signature		
		Value	Limit	Result
Antenna Port 1	802.11(a) 6 Mbps			
	5150 - 5250 MHz Band			
	Channel 36, Low Channel	14.15 dBm	< 17 dBm	Pass
	Channel 48, High Channel	13.977 dBm	< 17 dBm	Pass
	5250 - 5350 MHz Band			
	Channel 52, Low Channel	13.726 dBm	< 24 dBm	Pass
	Channel 64, High Channel	13.603 dBm	< 24 dBm	Pass
	5470 - 5725 MHz Band			
	Channel 100, Low Channel	14.196 dBm	< 24 dBm	Pass
	Channel 116, Mid Channel	14.785 dBm	< 24 dBm	Pass
	Channel 140, High Channel	14.385 dBm	< 24 dBm	Pass
	802.11(a) 18 Mbps			
	5150 - 5250 MHz Band			
	Channel 36, Low Channel	12.761 dBm	< 17 dBm	Pass
	Channel 48, High Channel	13.416 dBm	< 17 dBm	Pass
	5250 - 5350 MHz Band			
	Channel 52, Low Channel	11.984 dBm	< 24 dBm	Pass
	Channel 64, High Channel	12.556 dBm	< 24 dBm	Pass
	5470 - 5725 MHz Band			
	Channel 100, Low Channel	13.573 dBm	< 24 dBm	Pass
	Channel 116, Mid Channel	14.018 dBm	< 24 dBm	Pass
	Channel 140, High Channel	13.716 dBm	< 24 dBm	Pass
	802.11(a) 36 Mbps			
	5150 - 5250 MHz Band			
	Channel 36, Low Channel	13.397 dBm	< 17 dBm	Pass
	Channel 48, High Channel	13.307 dBm	< 17 dBm	Pass
	5250 - 5350 MHz Band			
	Channel 52, Low Channel	13.524 dBm	< 24 dBm	Pass
	Channel 64, High Channel	13.001 dBm	< 24 dBm	Pass
	5470 - 5725 MHz Band			
	Channel 100, Low Channel	11.57 dBm	< 24 dBm	Pass
	Channel 116, Mid Channel	14.51 dBm	< 24 dBm	Pass
	Channel 140, High Channel	14.285 dBm	< 24 dBm	Pass
Antenna Port 2	802.11(a) 6 Mbps			
	5150 - 5250 MHz Band			
	Channel 36, Low Channel	13.238 dBm	< 17 dBm	Pass
	Channel 48, High Channel	12.946 dBm	< 17 dBm	Pass
	5250 - 5350 MHz Band			
	Channel 52, Low Channel	12.952 dBm	< 24 dBm	Pass
	Channel 64, High Channel	12.775 dBm	< 24 dBm	Pass
	5470 - 5725 MHz Band			
	Channel 100, Low Channel	13.559 dBm	< 24 dBm	Pass
	Channel 116, Mid Channel	14.457 dBm	< 24 dBm	Pass
	Channel 140, High Channel	14.465 dBm	< 24 dBm	Pass
Antenna Port 3	802.11(a) 6 Mbps			
	5150 - 5250 MHz Band			
	Channel 36, Low Channel	13.947 dBm	< 17 dBm	Pass
	Channel 48, High Channel	13.263 dBm	< 17 dBm	Pass
	5250 - 5350 MHz Band			
	Channel 52, Low Channel	13.018 dBm	< 24 dBm	Pass
	Channel 64, High Channel	13.02 dBm	< 24 dBm	Pass
	5470 - 5725 MHz Band			
	Channel 100, Low Channel	13.73 dBm	< 24 dBm	Pass
	Channel 116, Mid Channel	14.072 dBm	< 24 dBm	Pass
	Channel 140, High Channel	13.725 dBm	< 24 dBm	Pass
Antenna Port 4	802.11(a) 6 Mbps			
	5150 - 5250 MHz Band			
	Channel 36, Low Channel	13.727 dBm	< 17 dBm	Pass
	Channel 48, High Channel	11.929 dBm	< 17 dBm	Pass
	5250 - 5350 MHz Band			
	Channel 52, Low Channel	12.363 dBm	< 24 dBm	Pass
	Channel 64, High Channel	11.998 dBm	< 24 dBm	Pass
	5470 - 5725 MHz Band			
	Channel 100, Low Channel	12.159 dBm	< 24 dBm	Pass
	Channel 116, Mid Channel	13.49 dBm	< 24 dBm	Pass
	Channel 140, High Channel	11.916 dBm	< 24 dBm	Pass

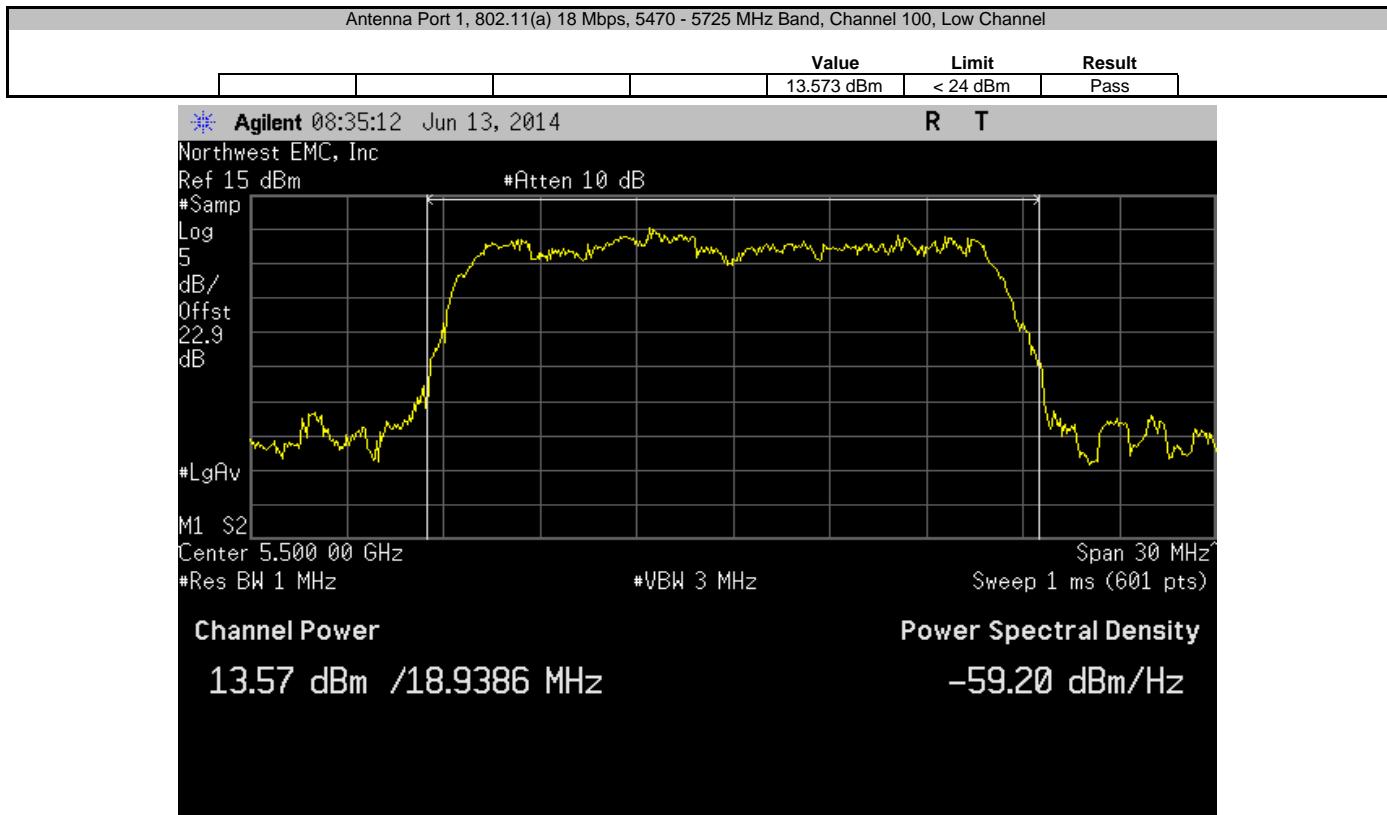
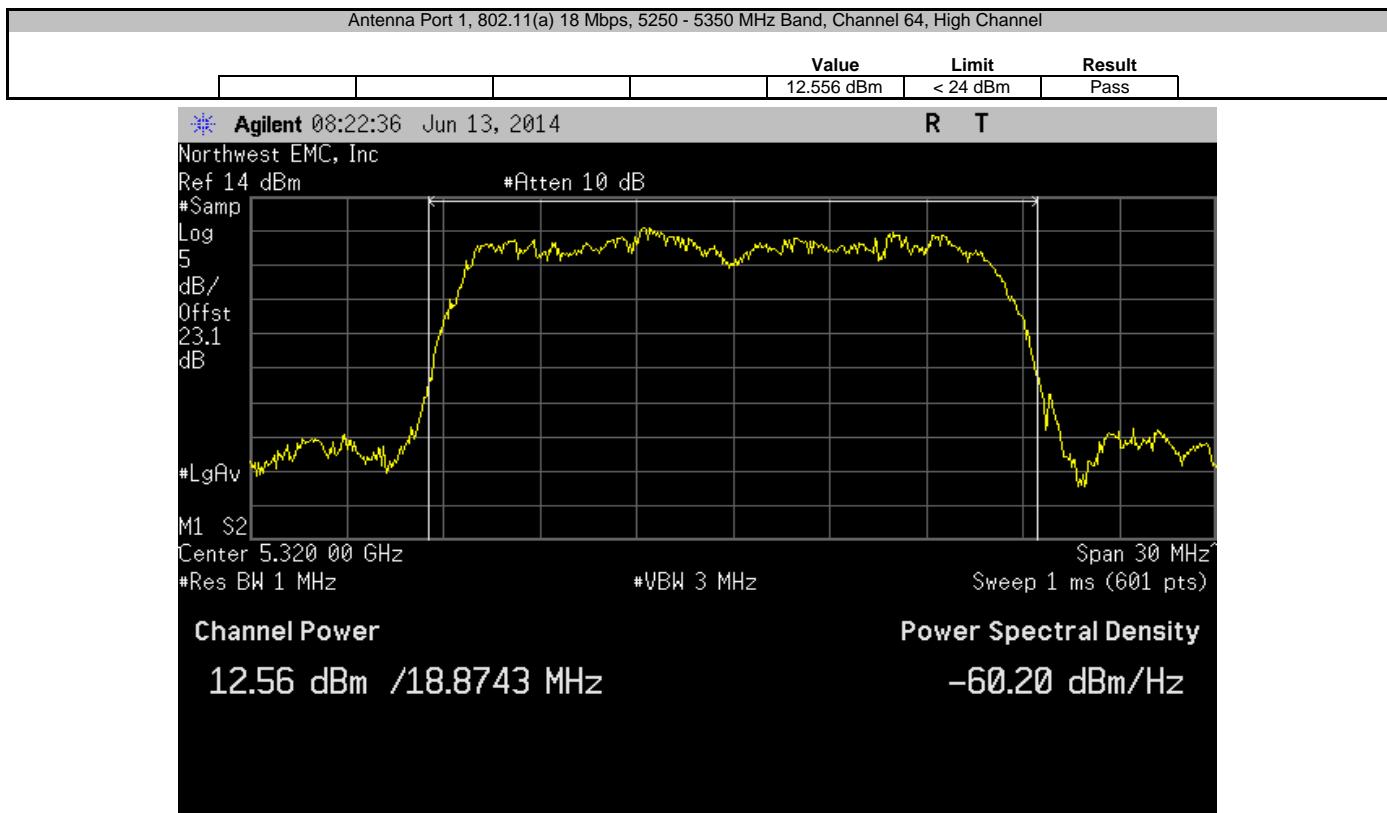


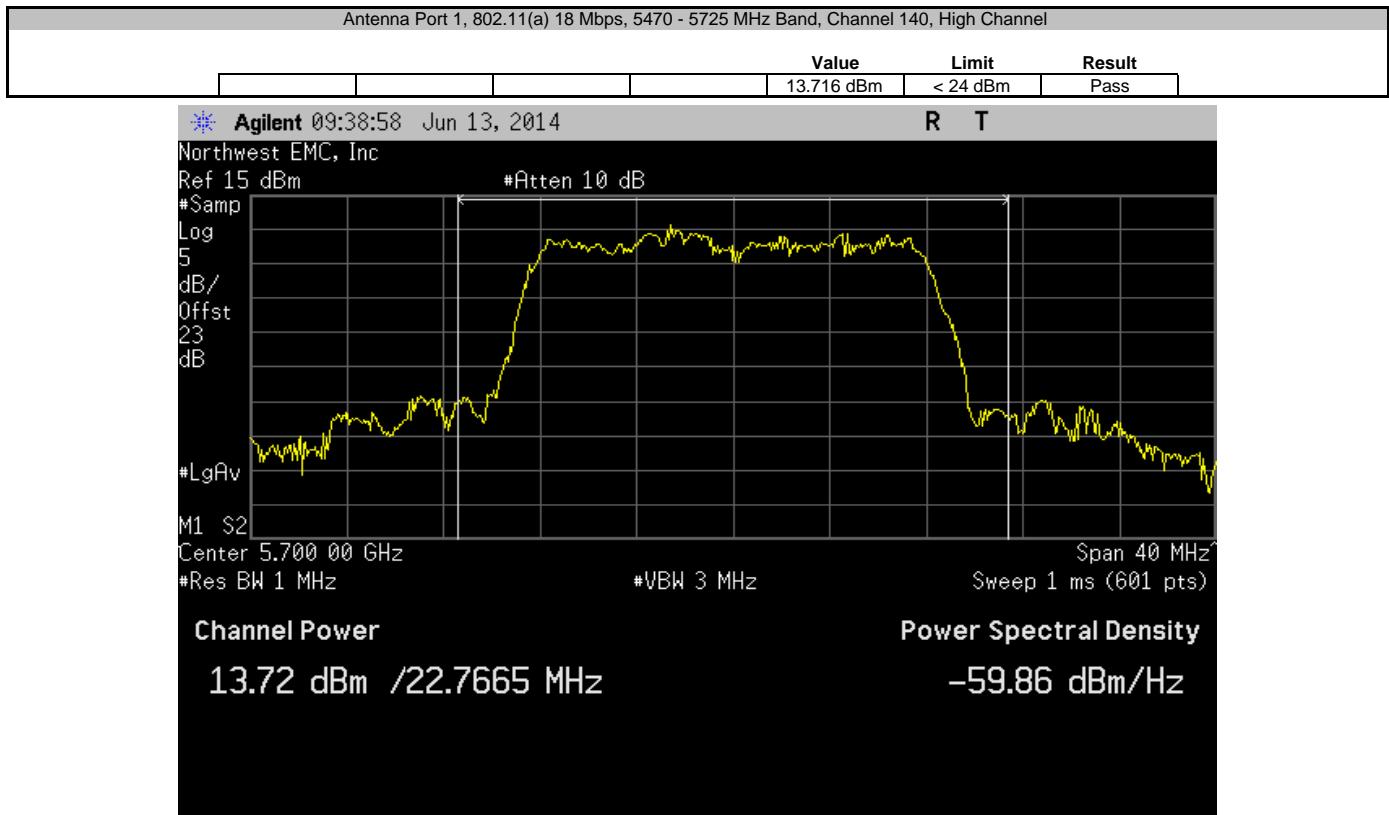
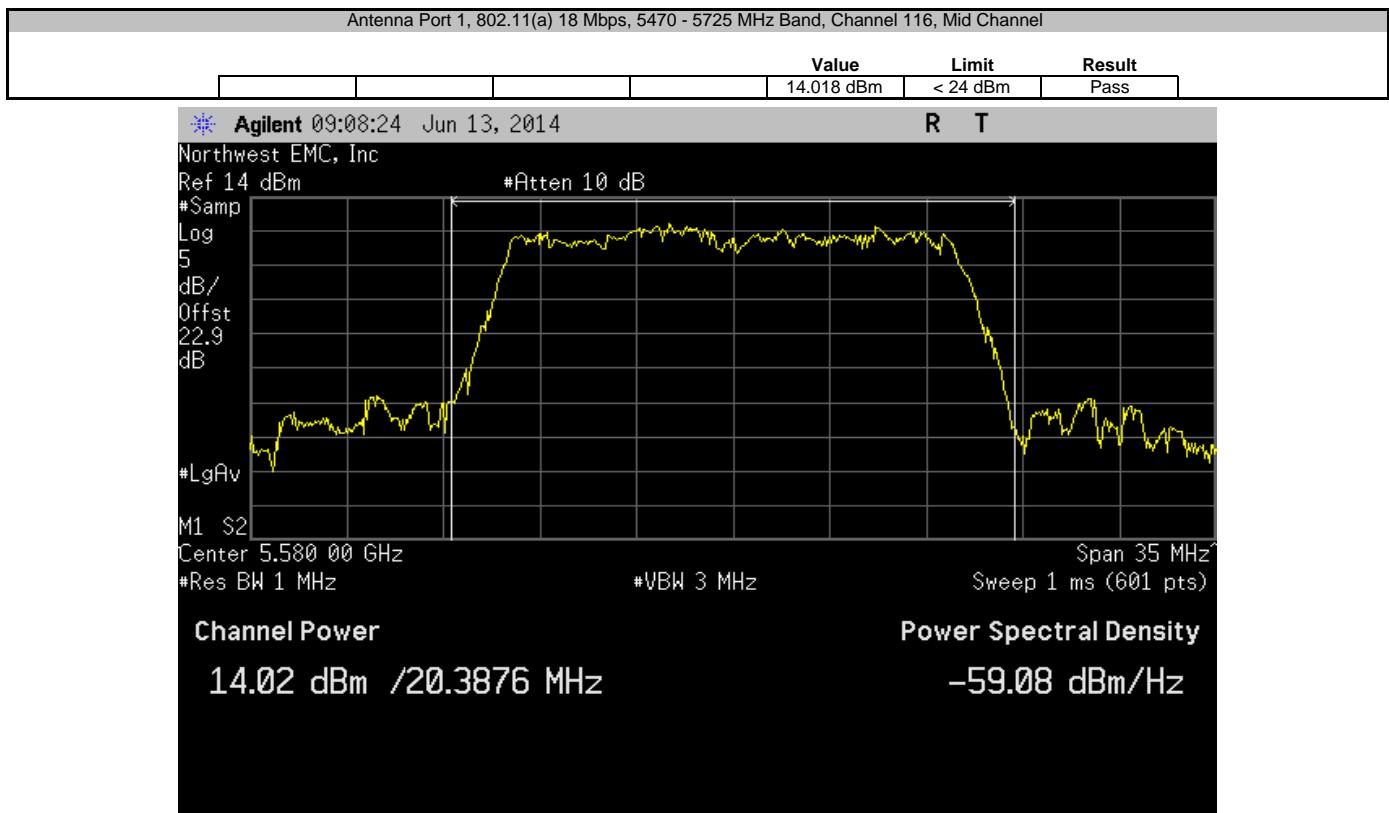


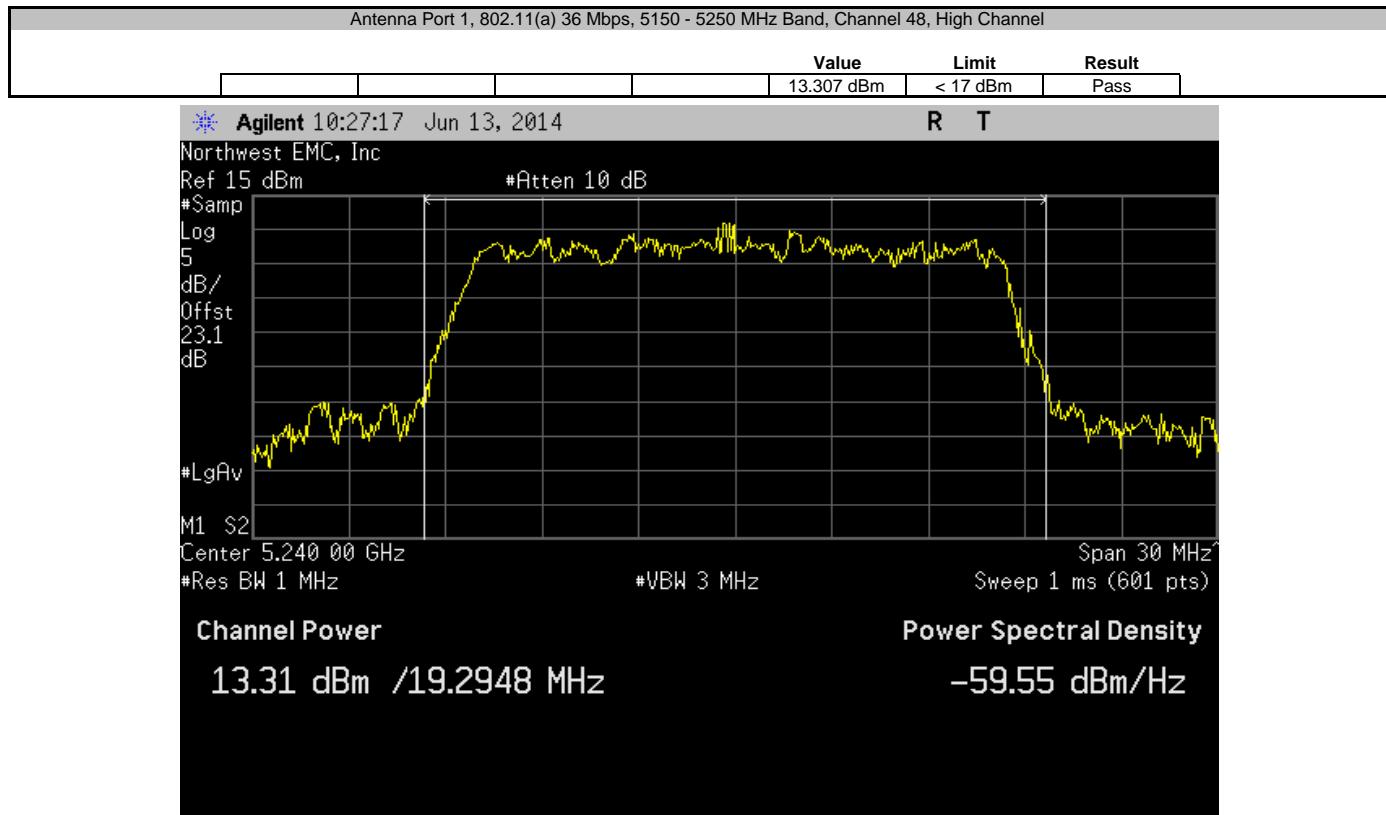
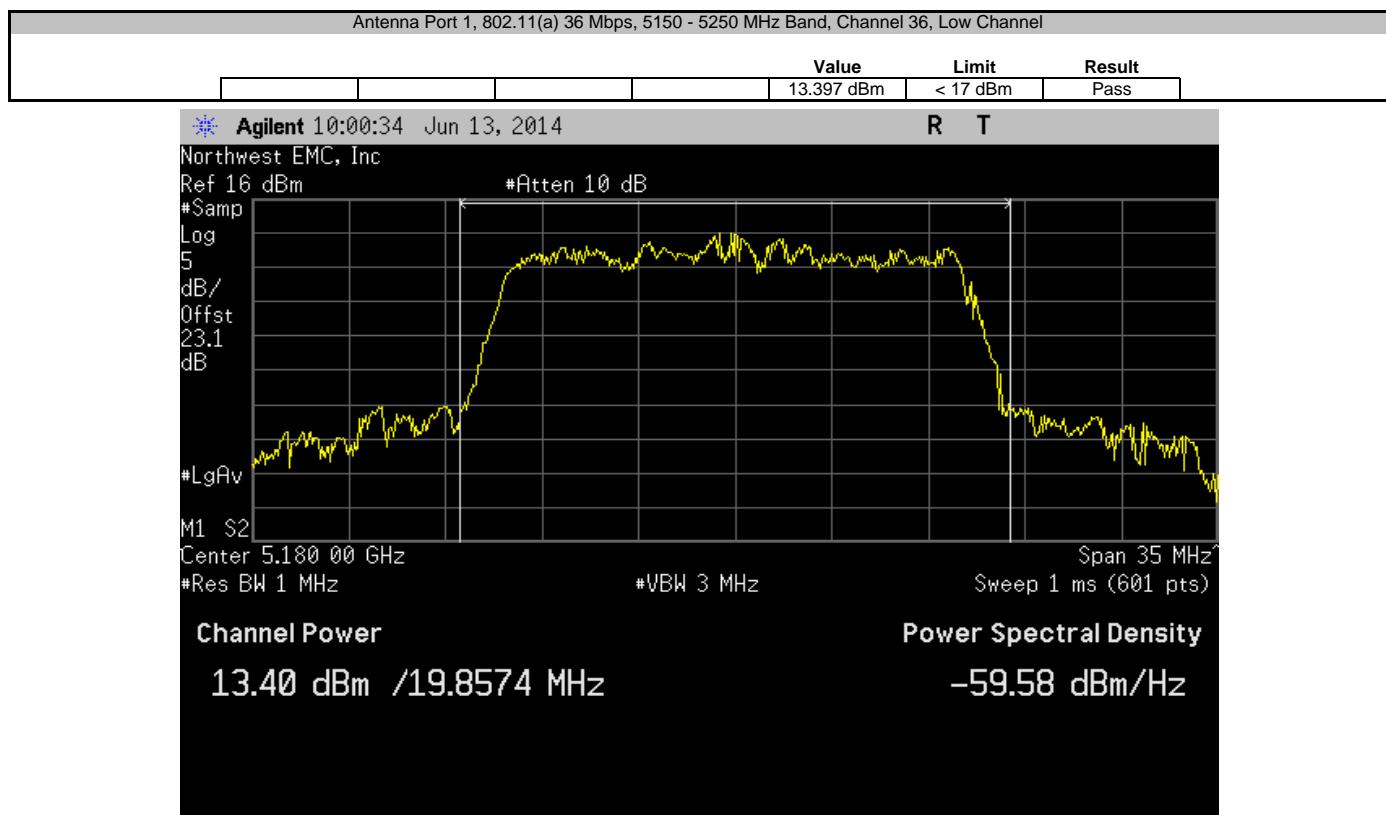


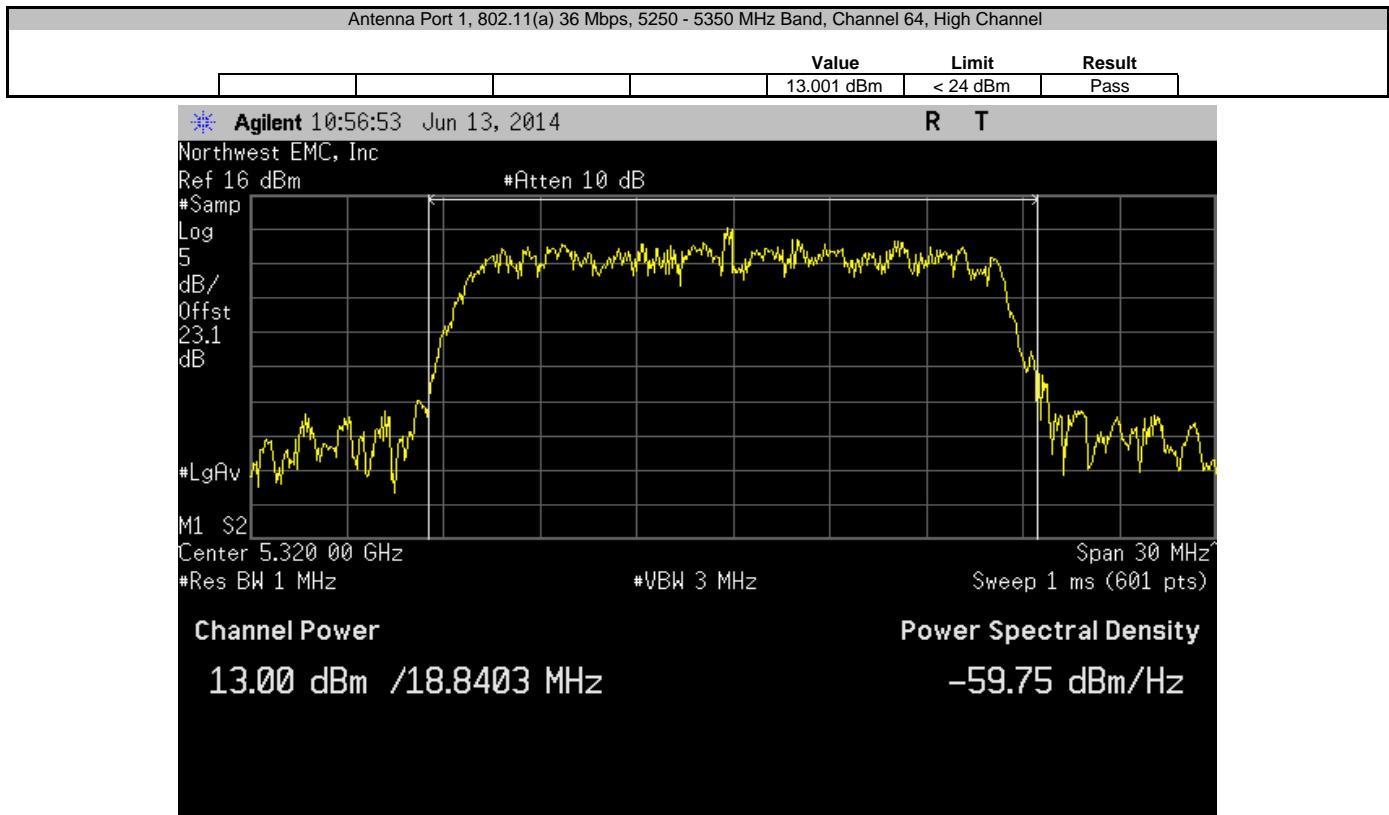
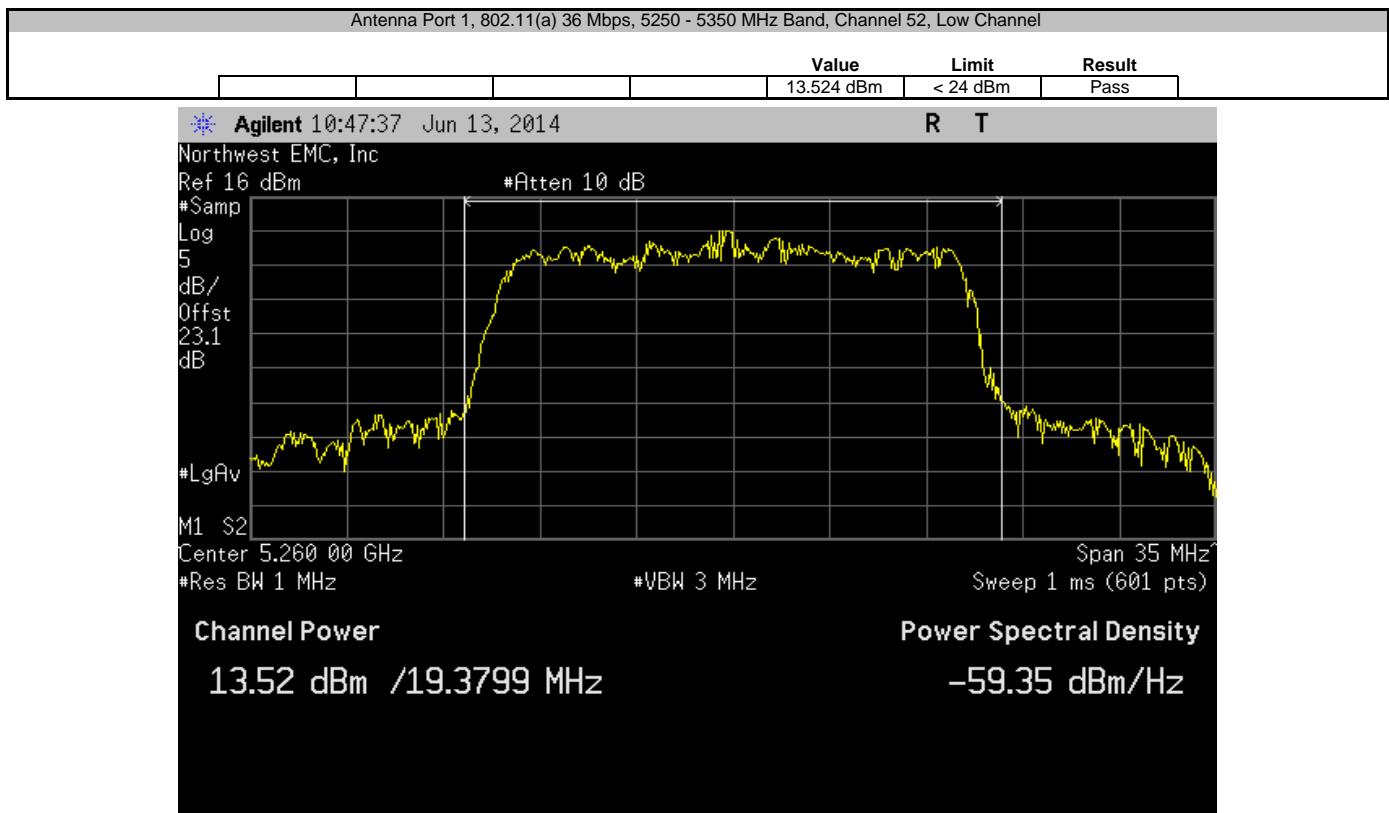


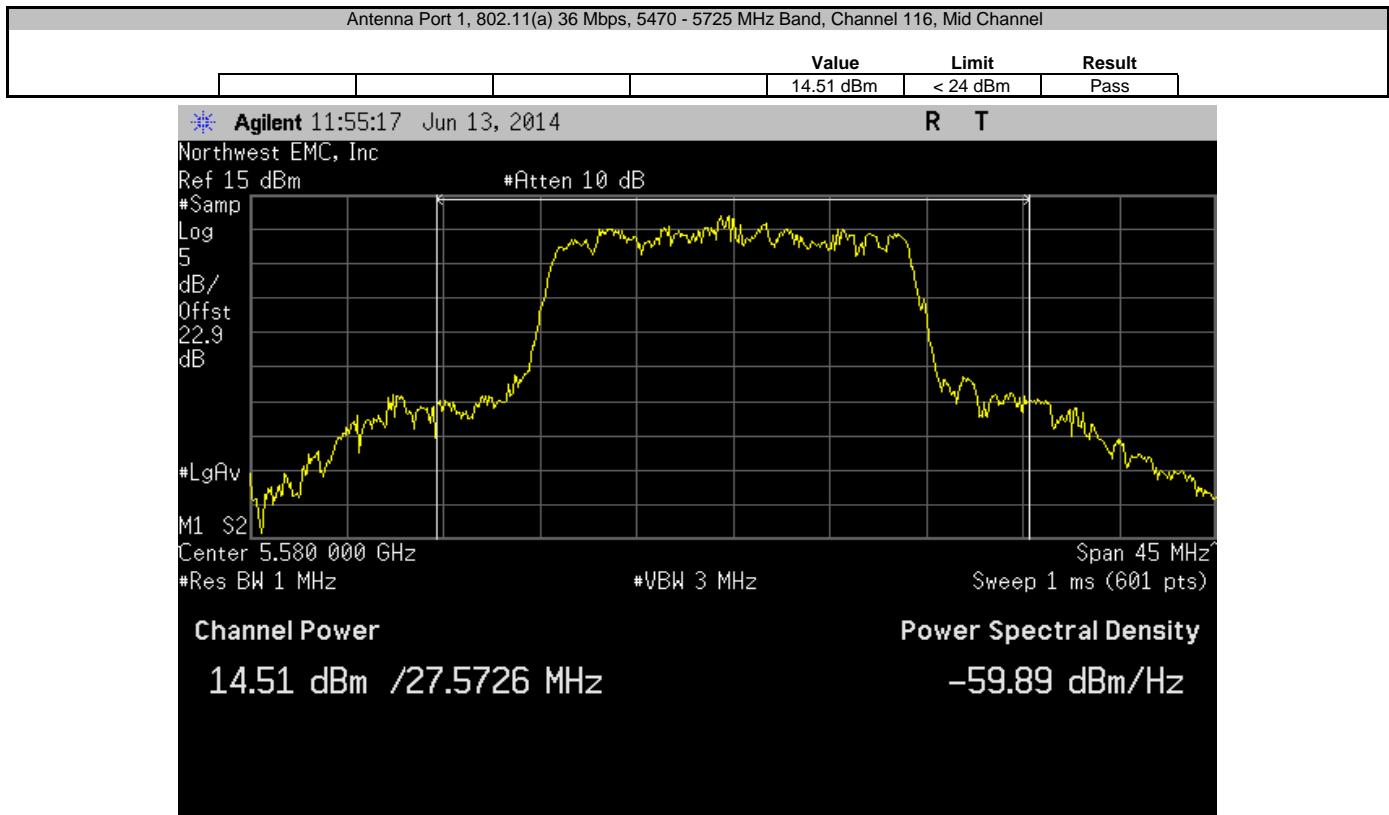
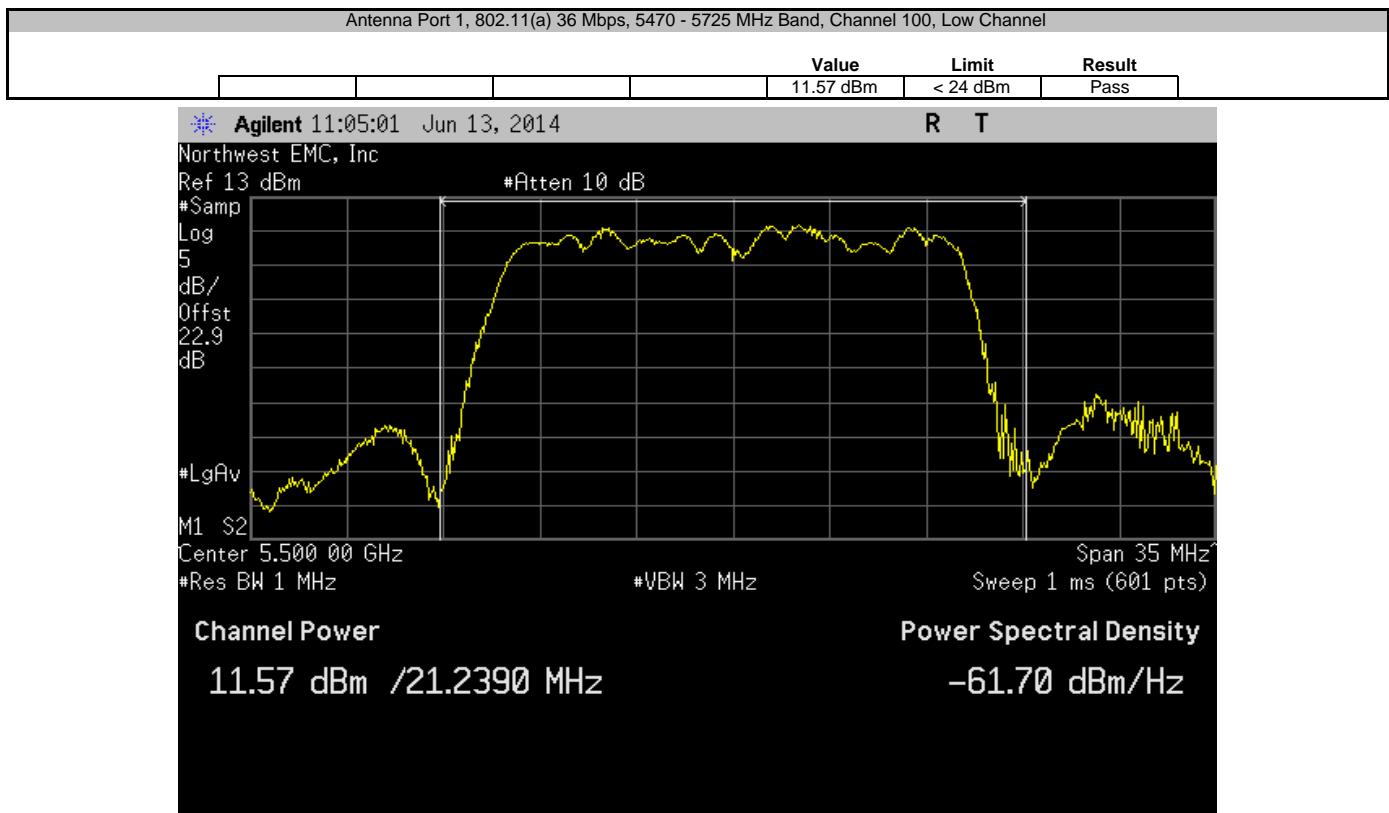


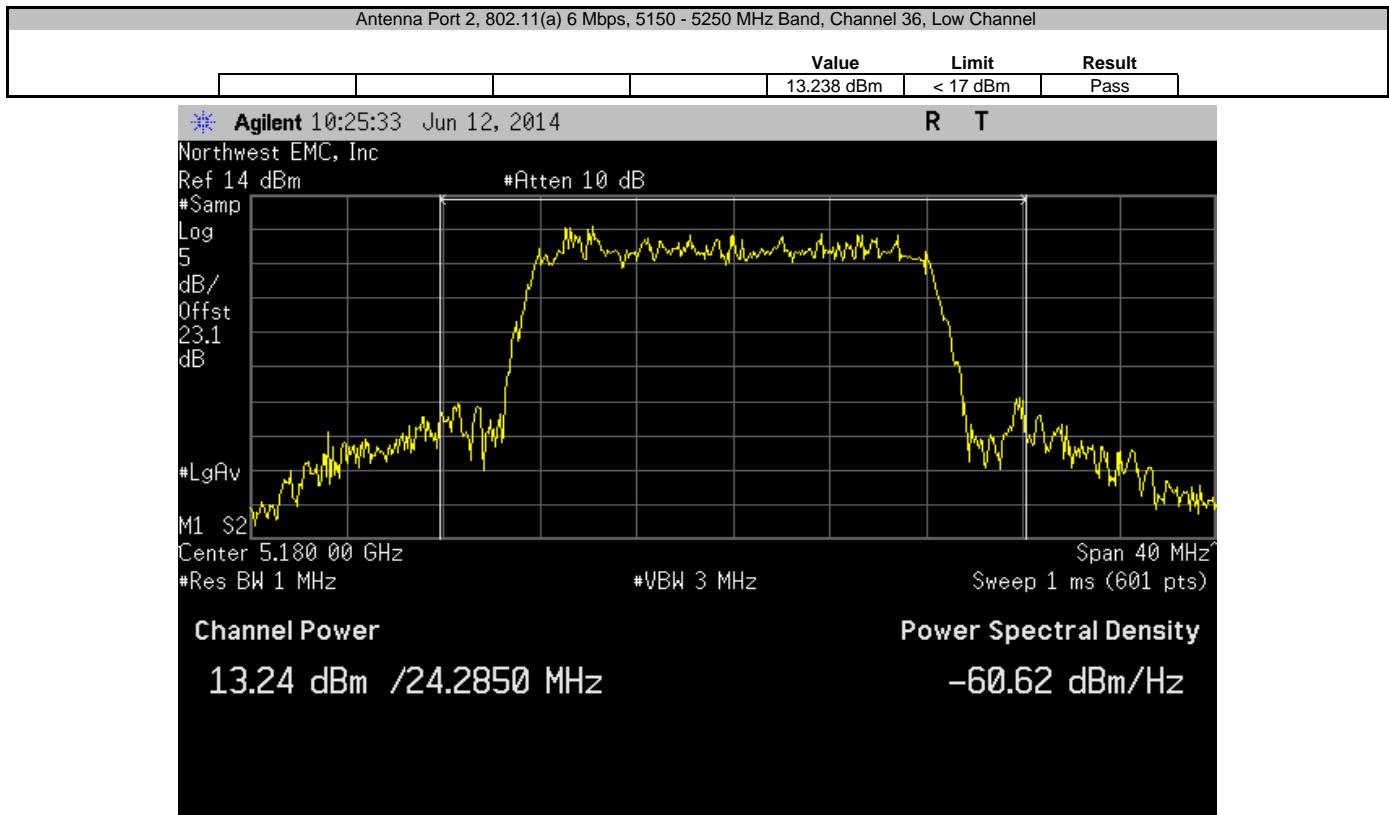
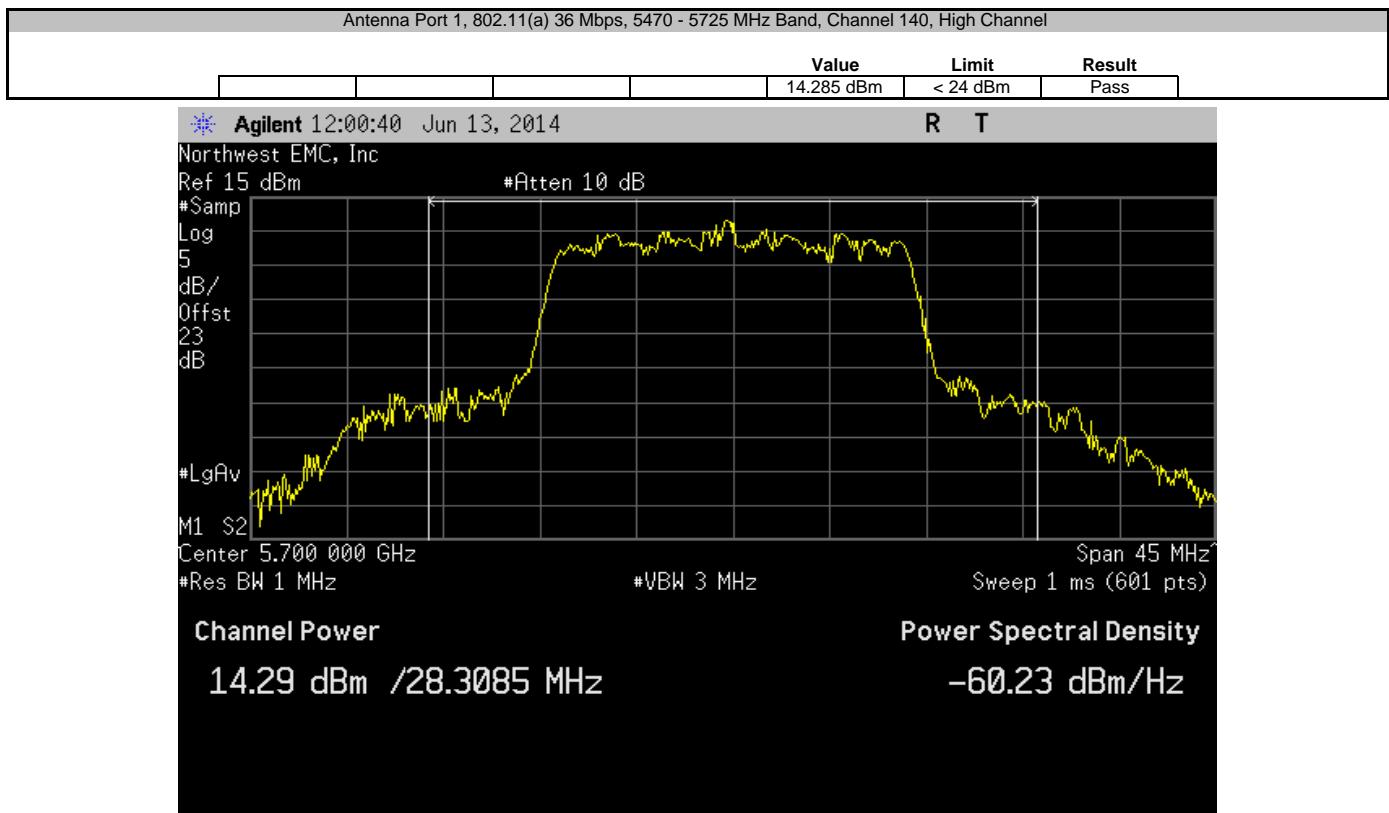


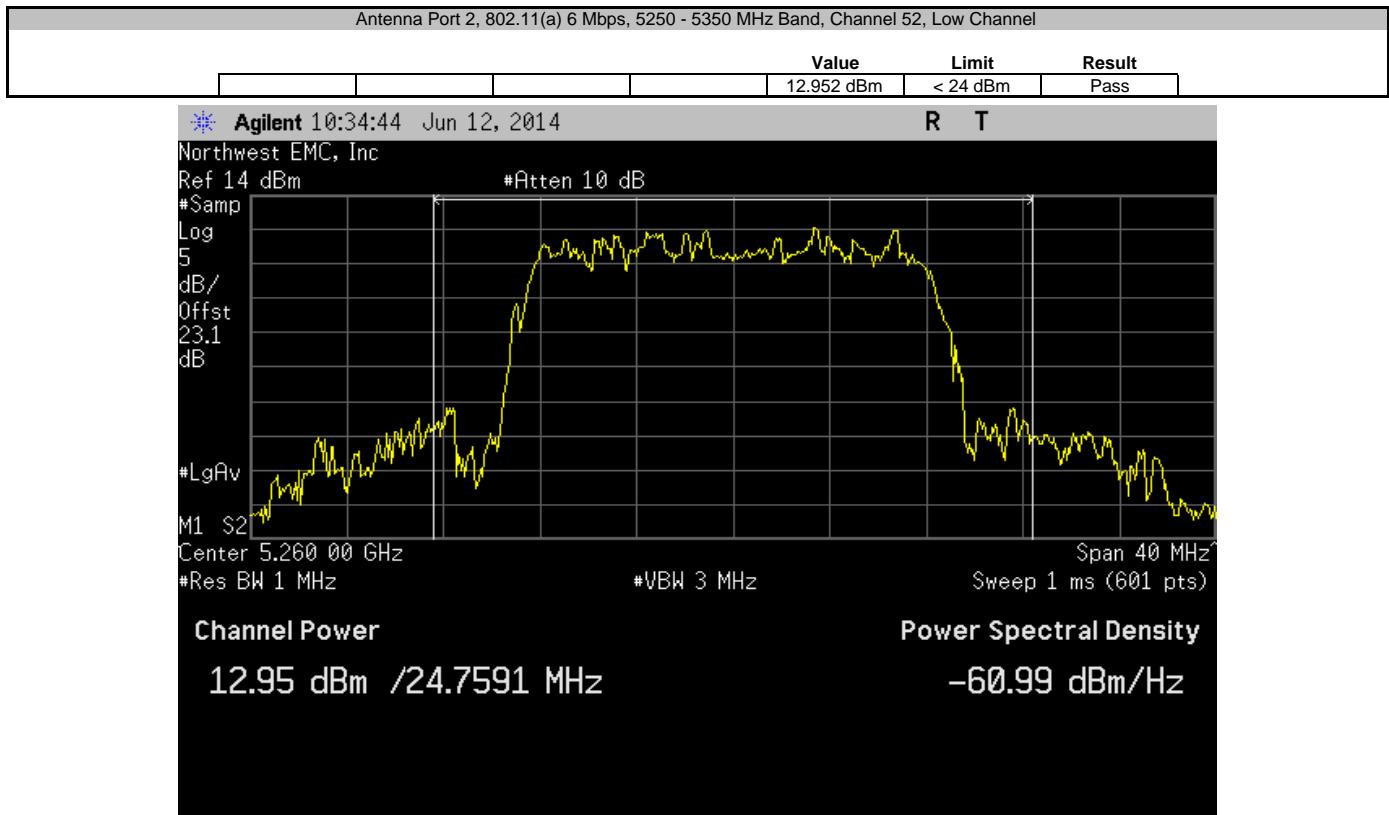
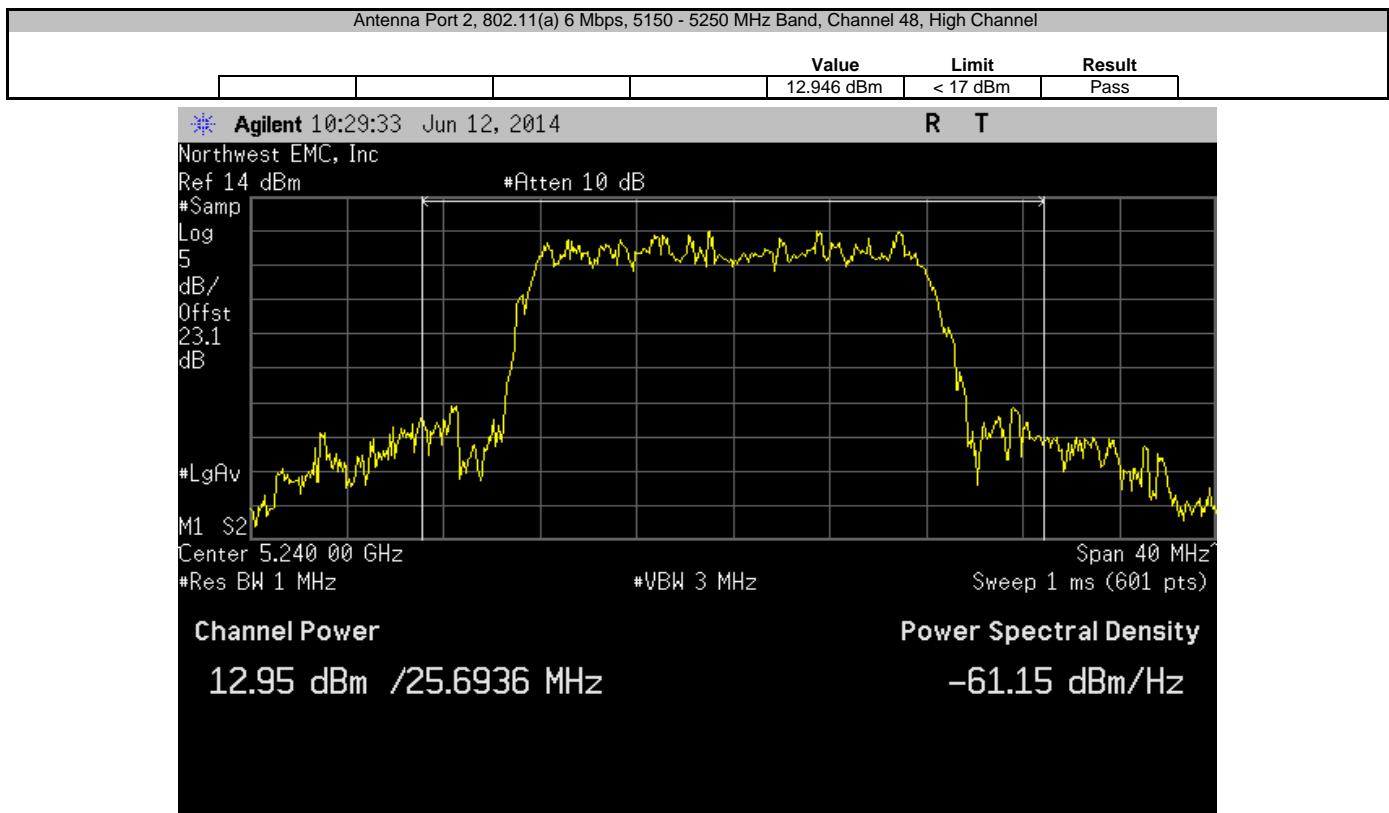


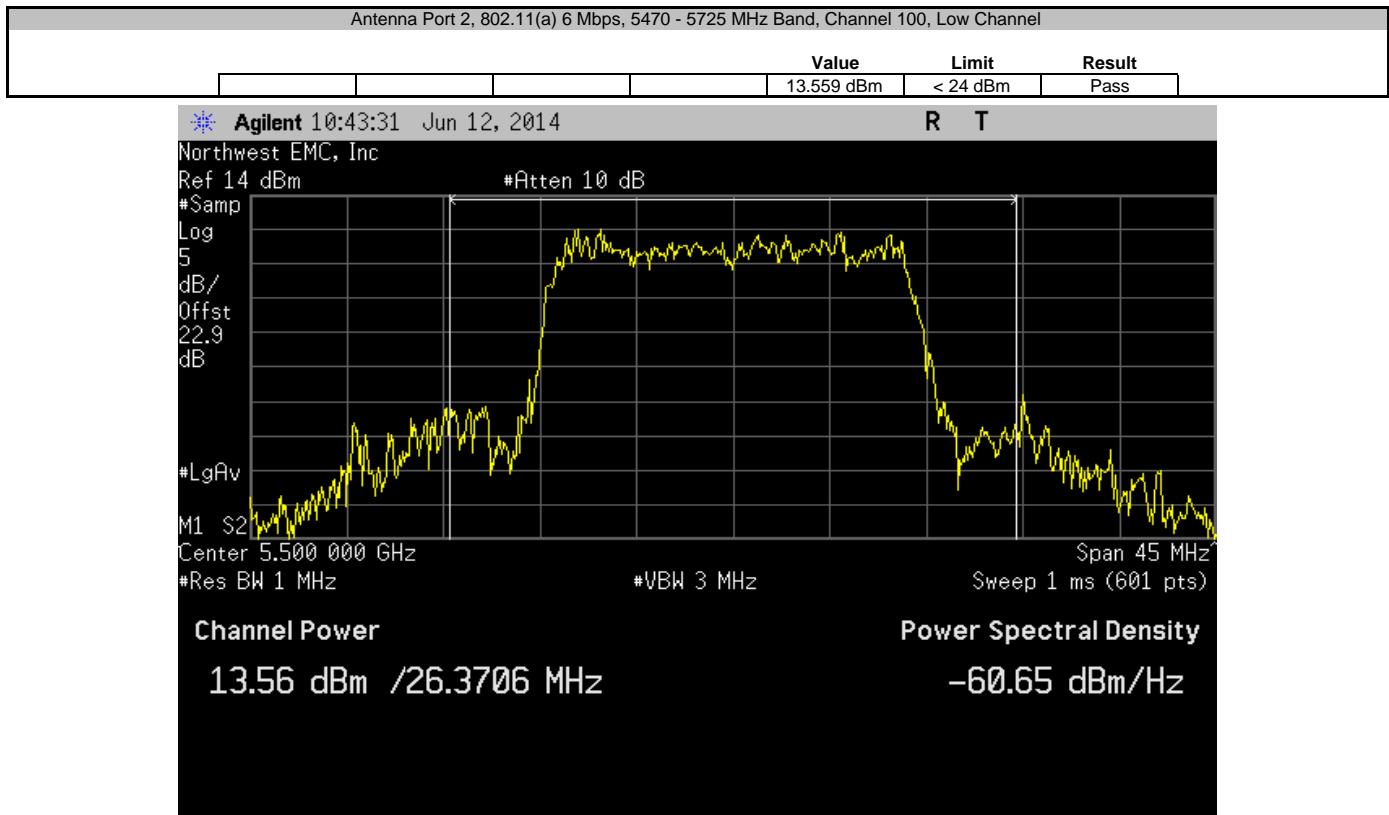
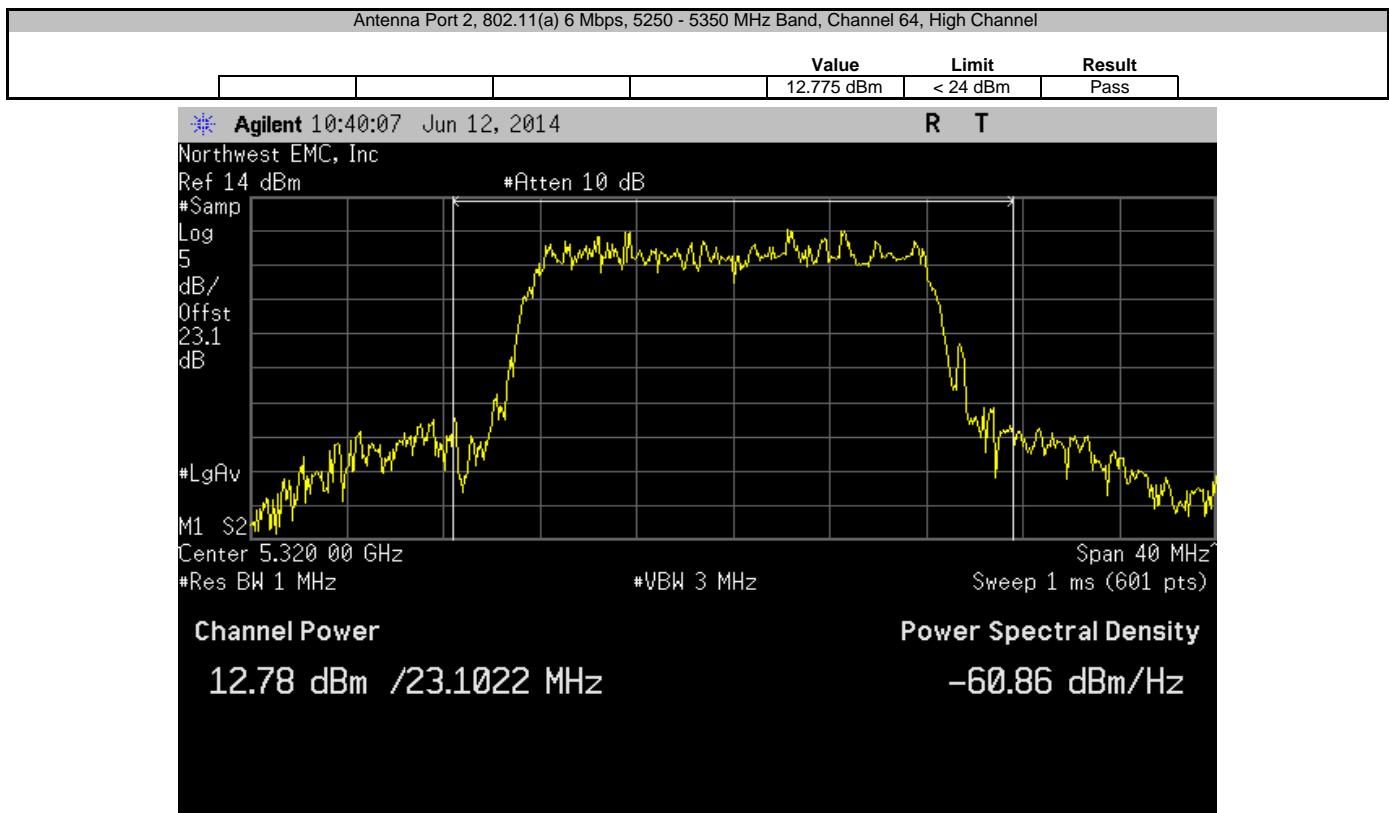


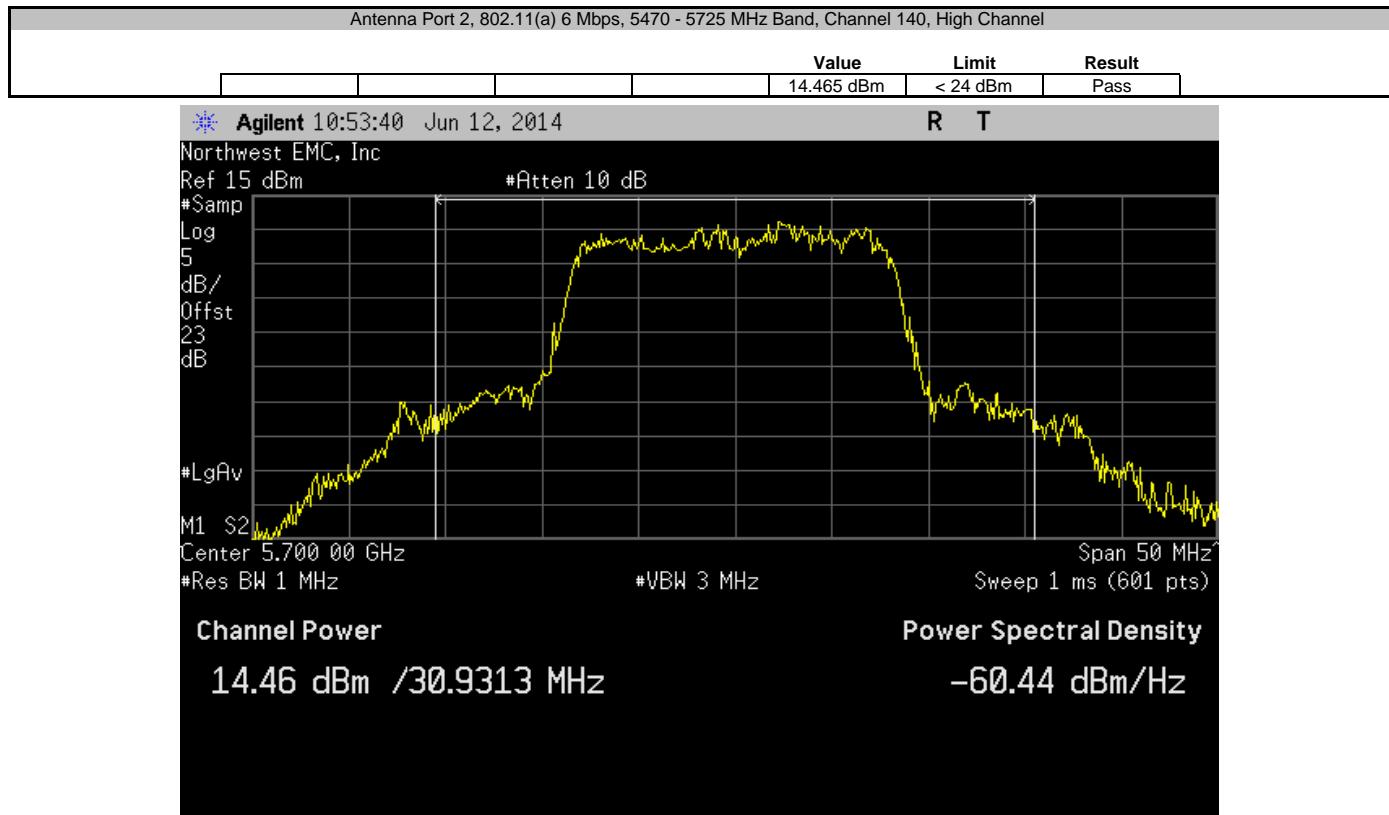
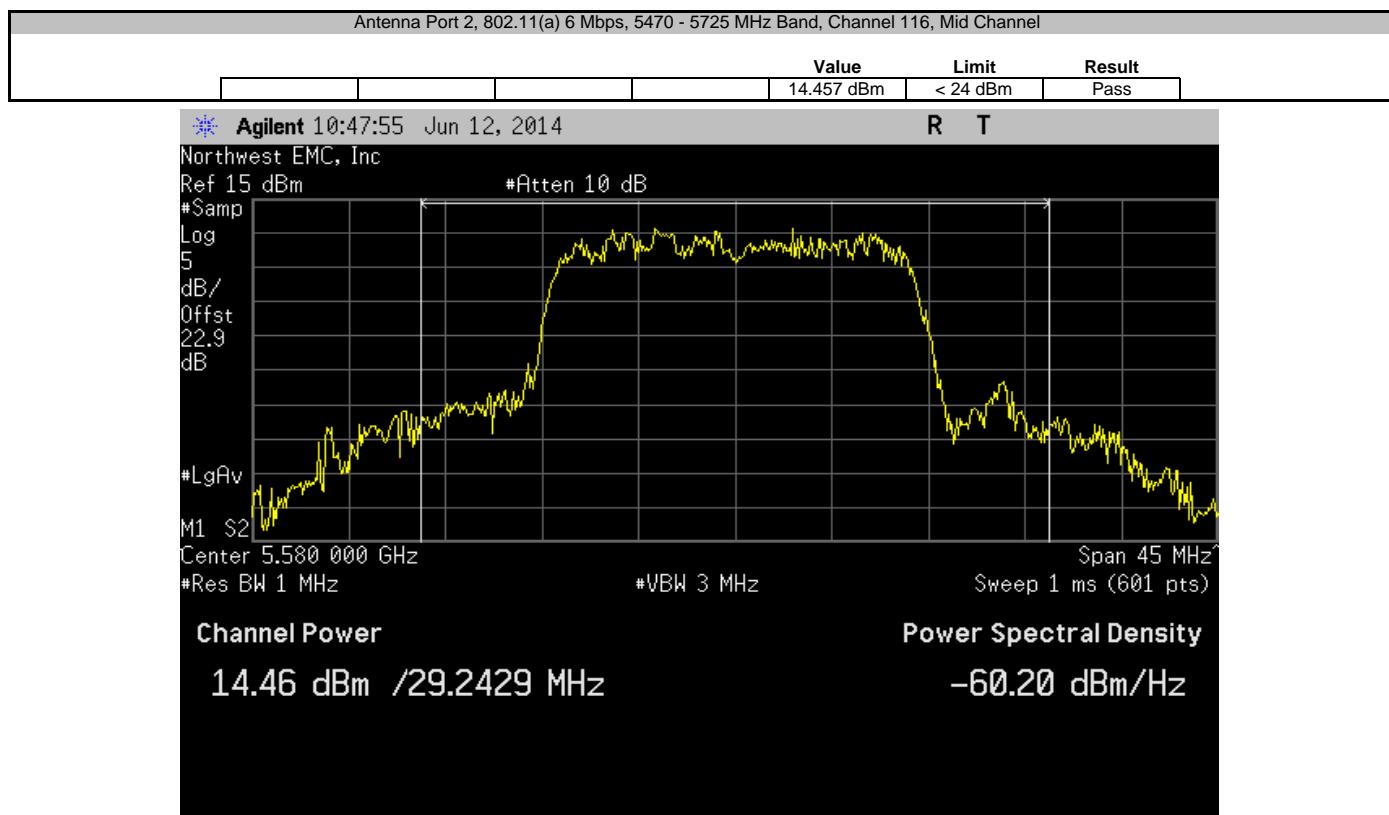


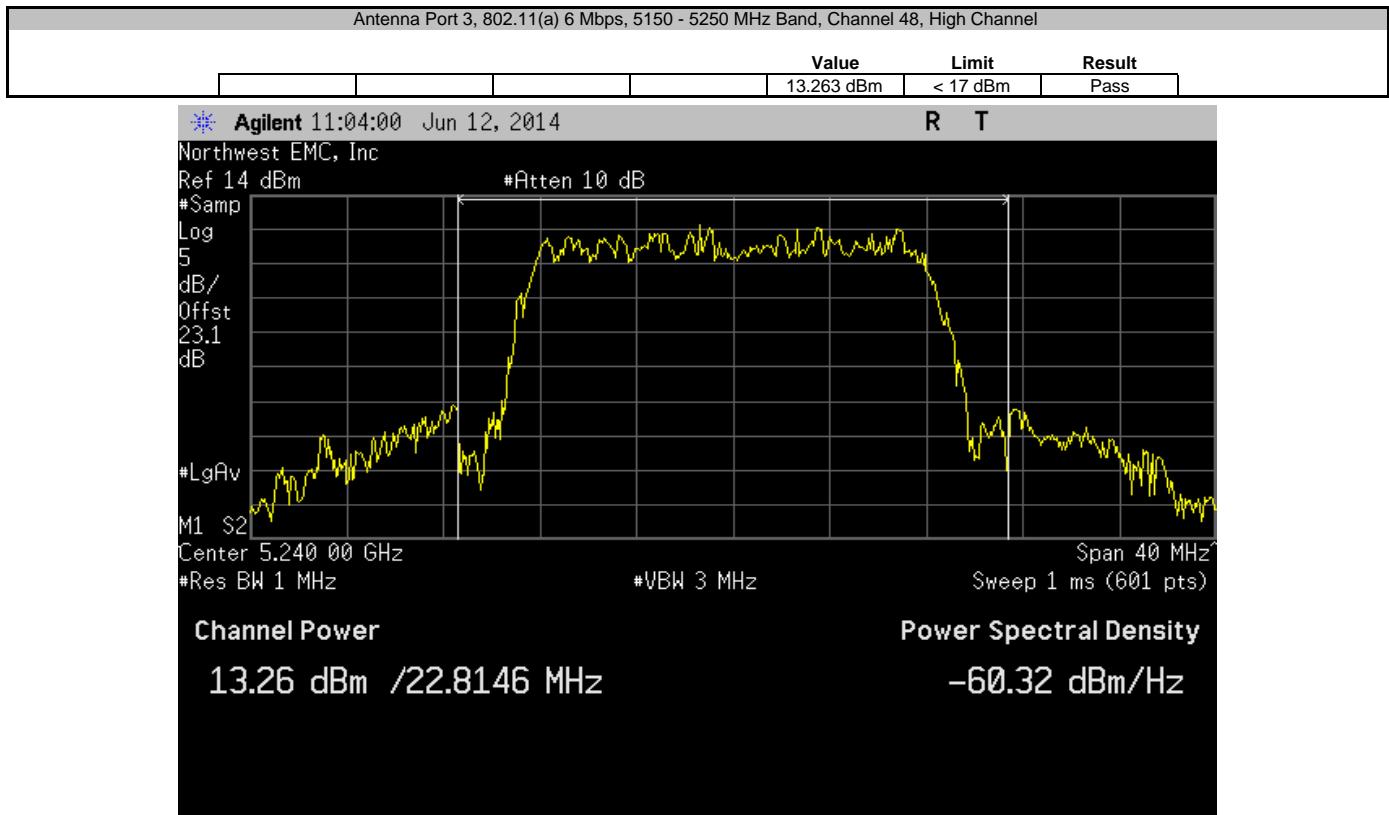
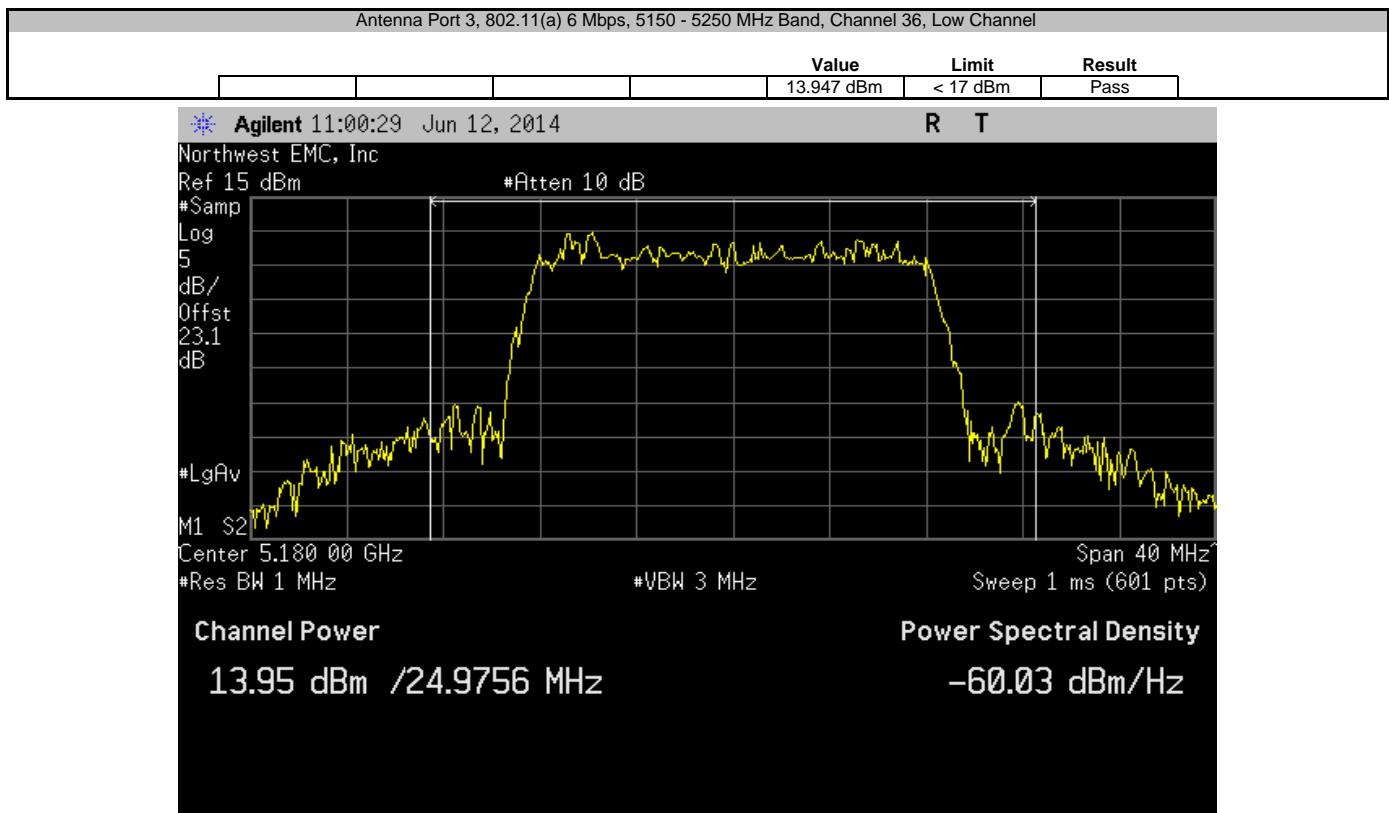


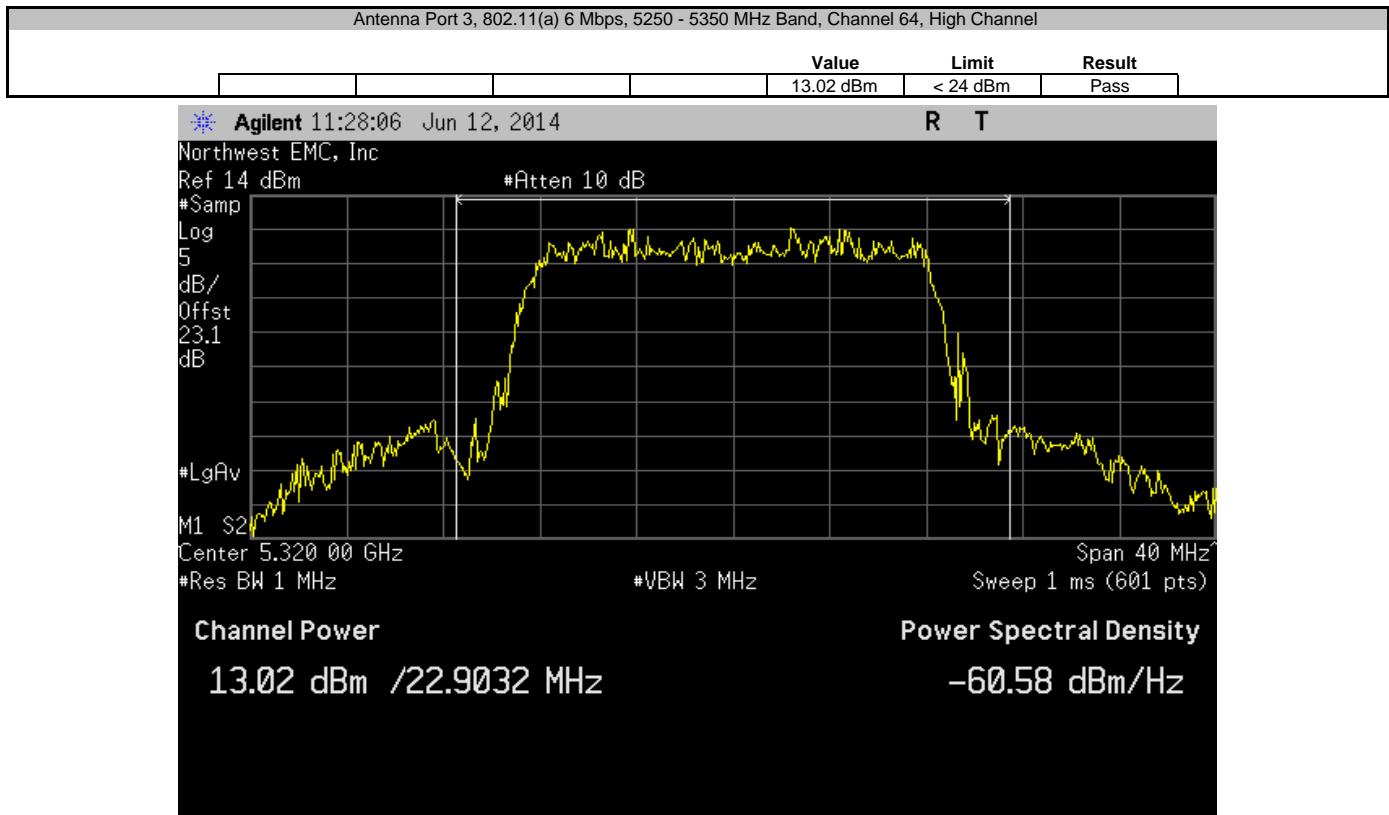
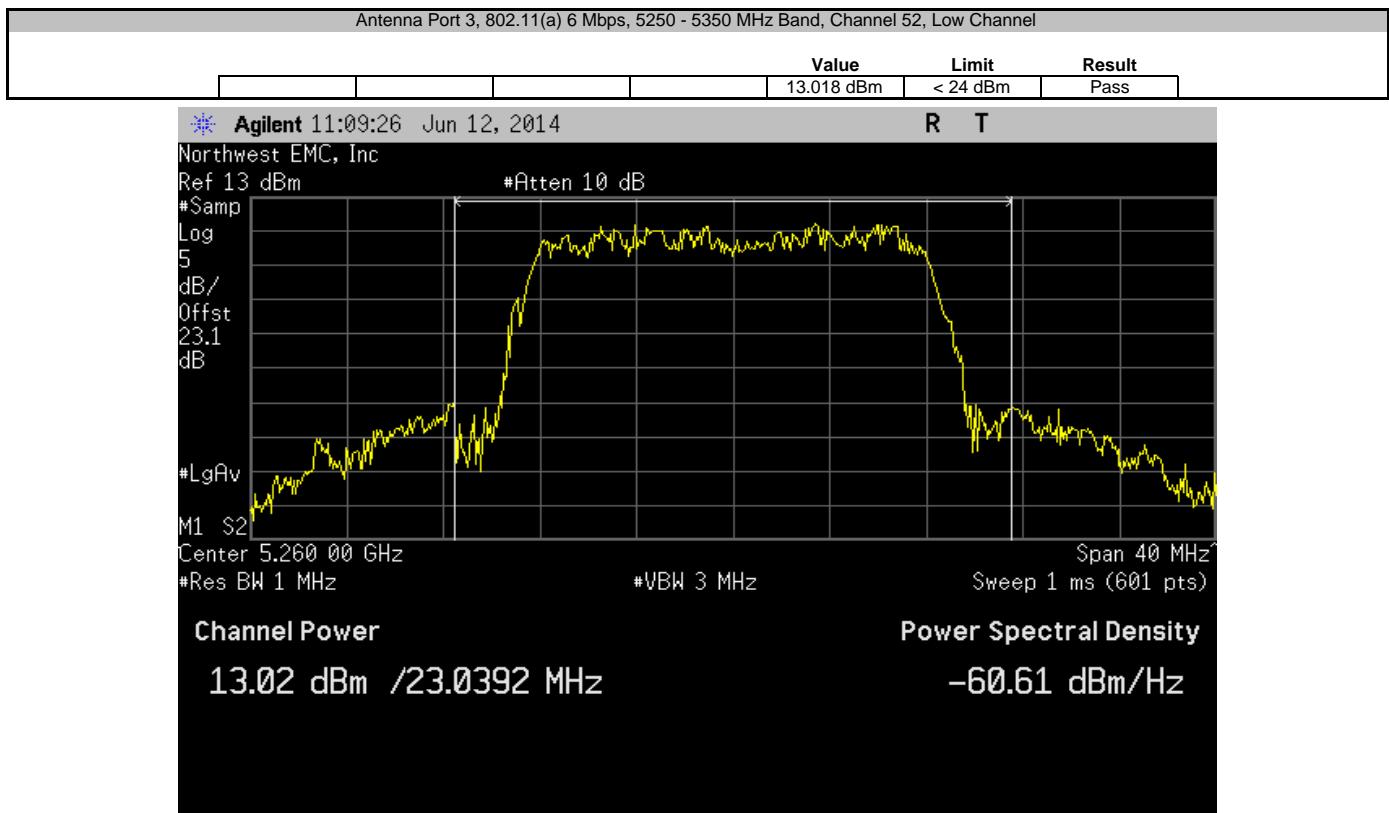


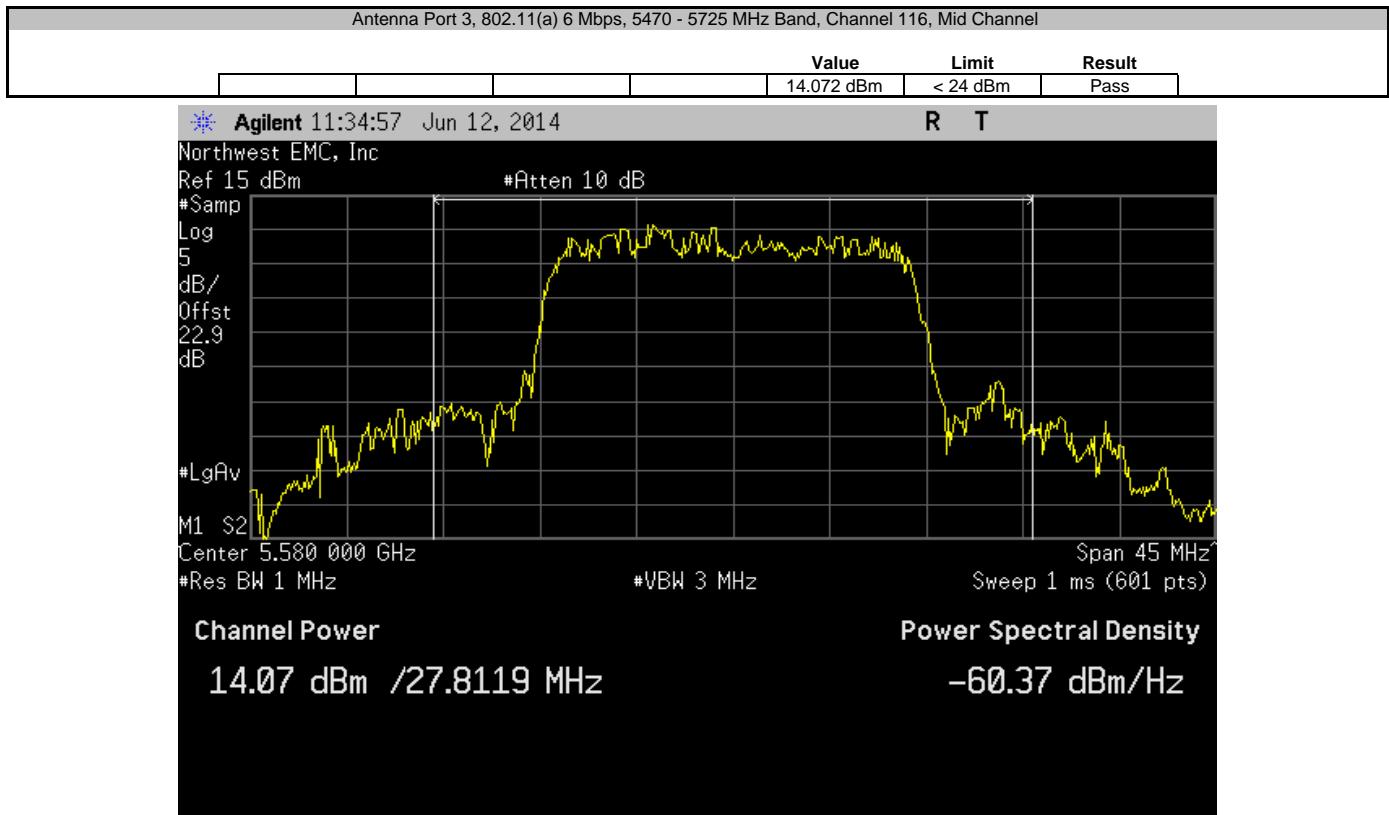
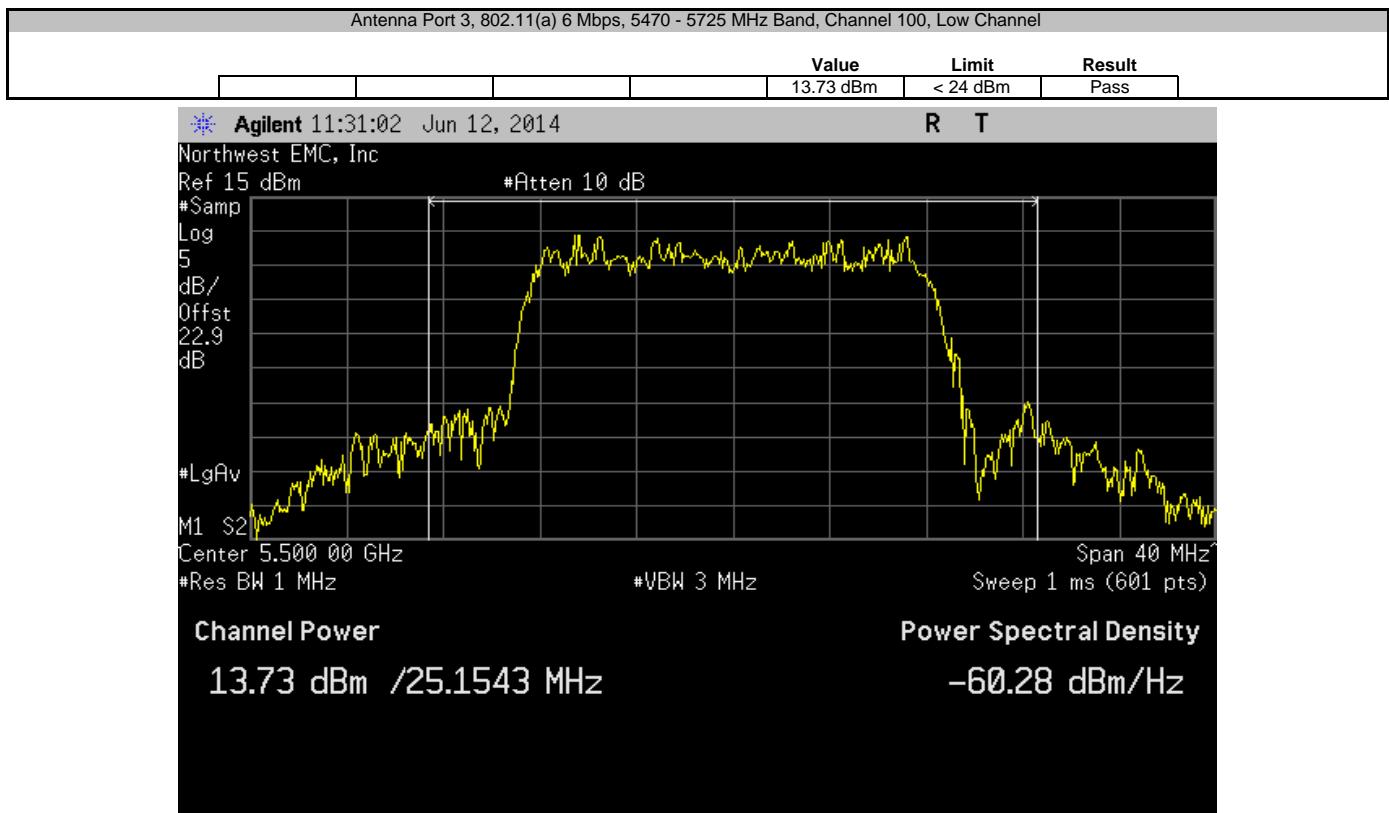


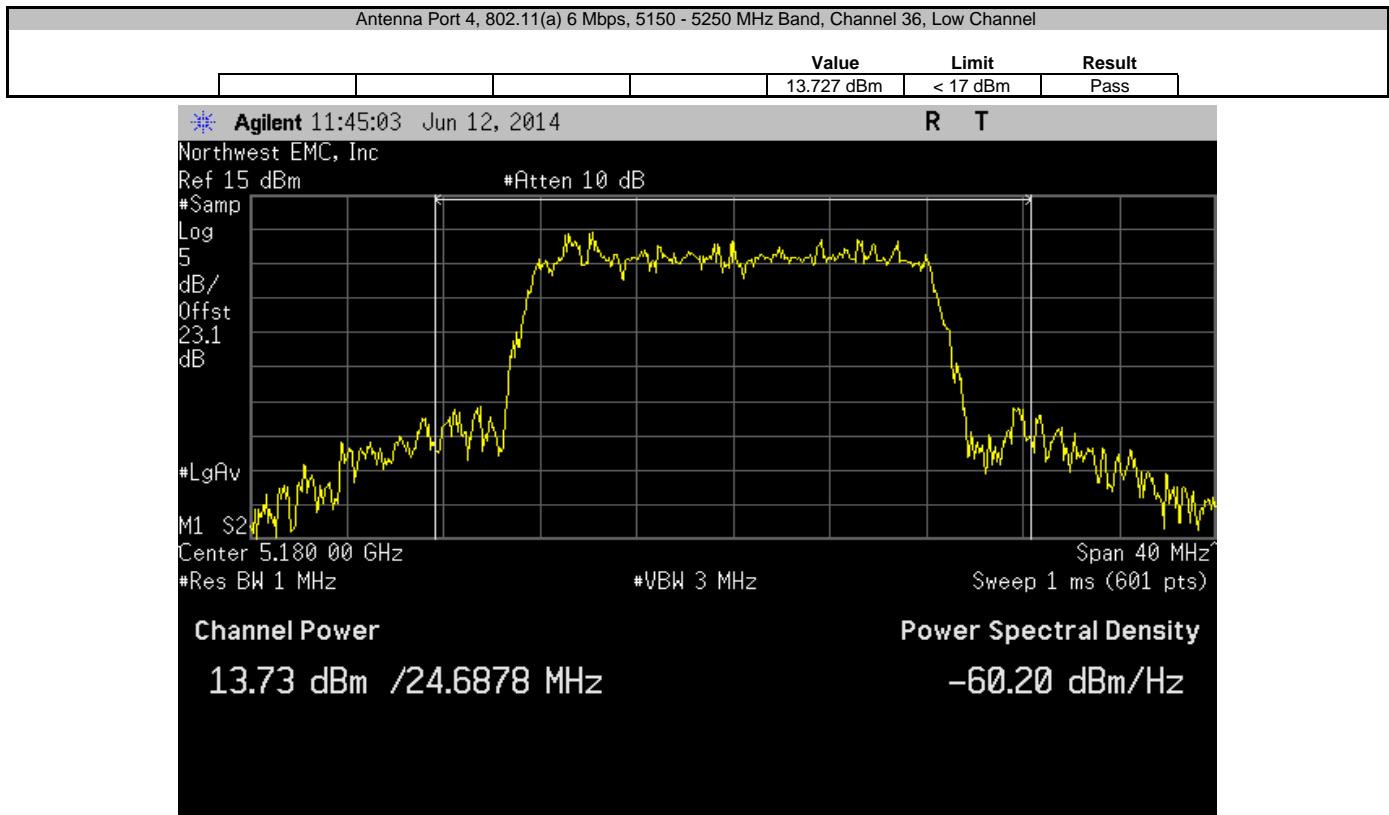
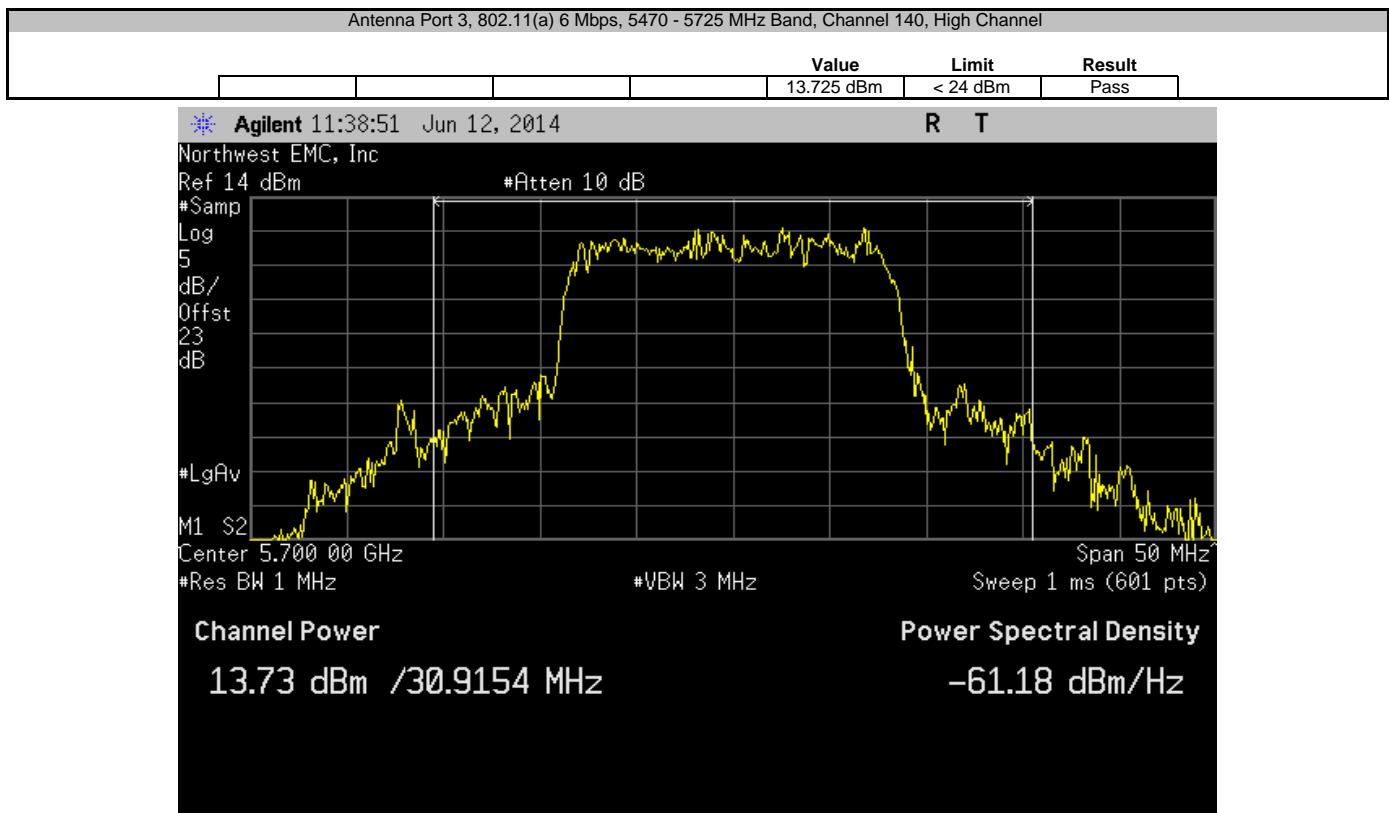


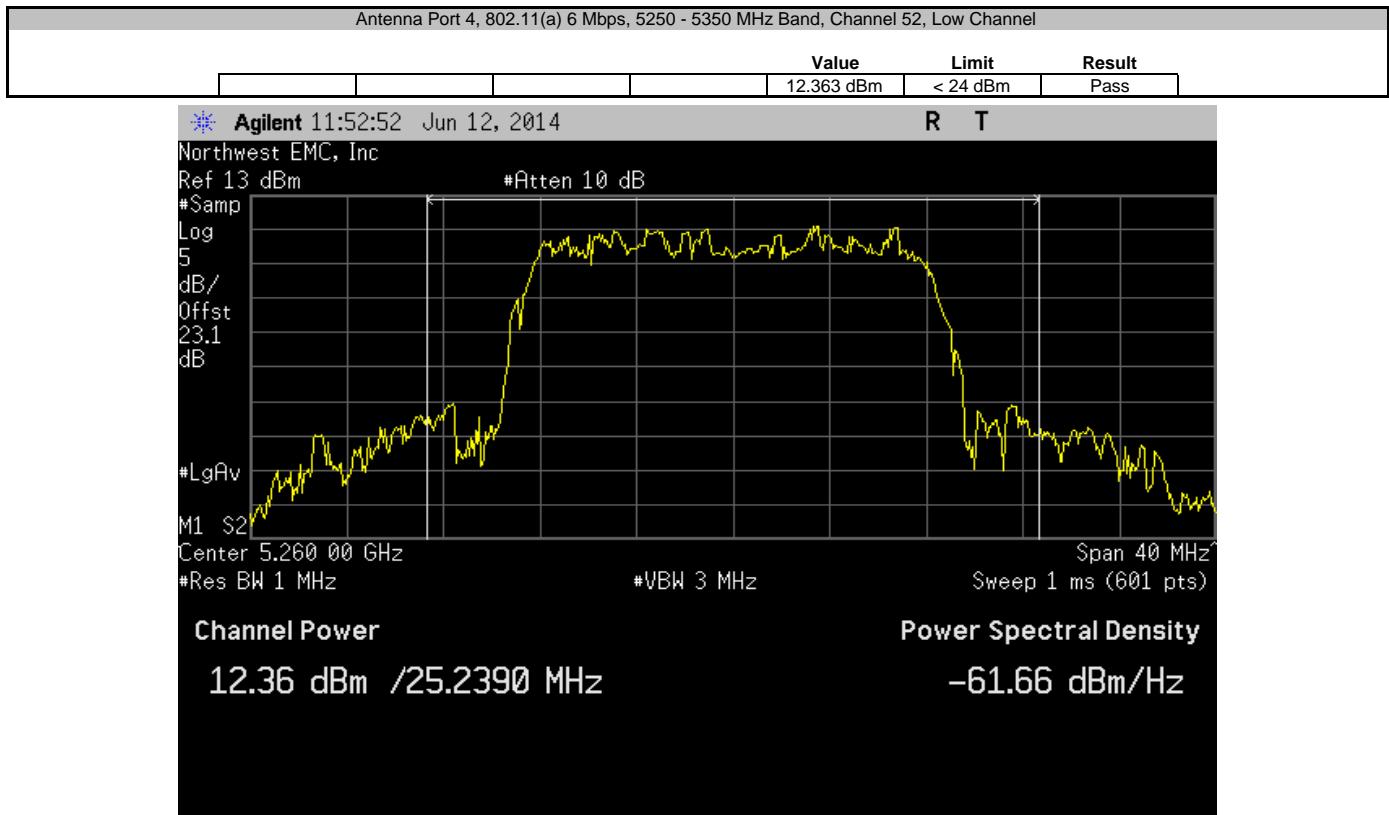
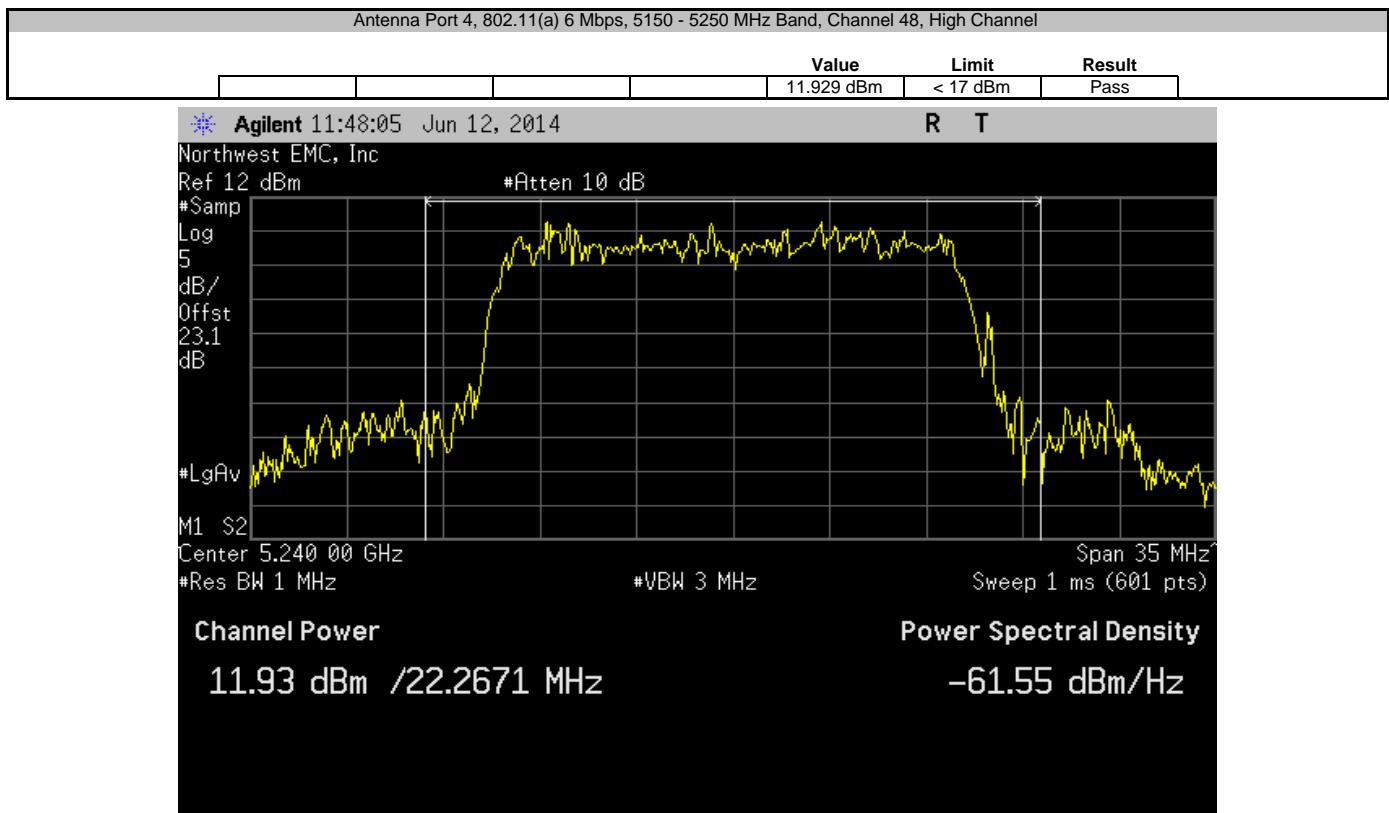


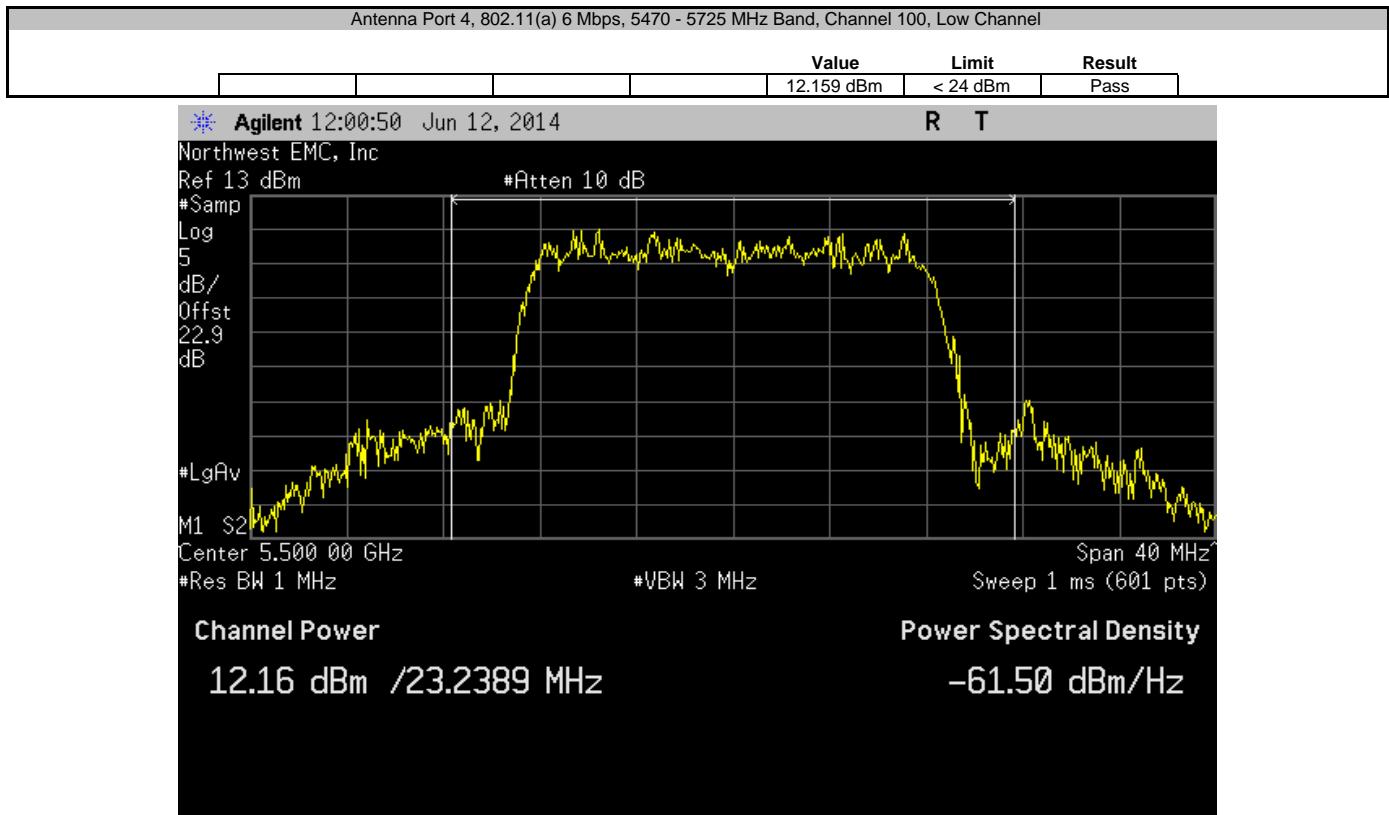
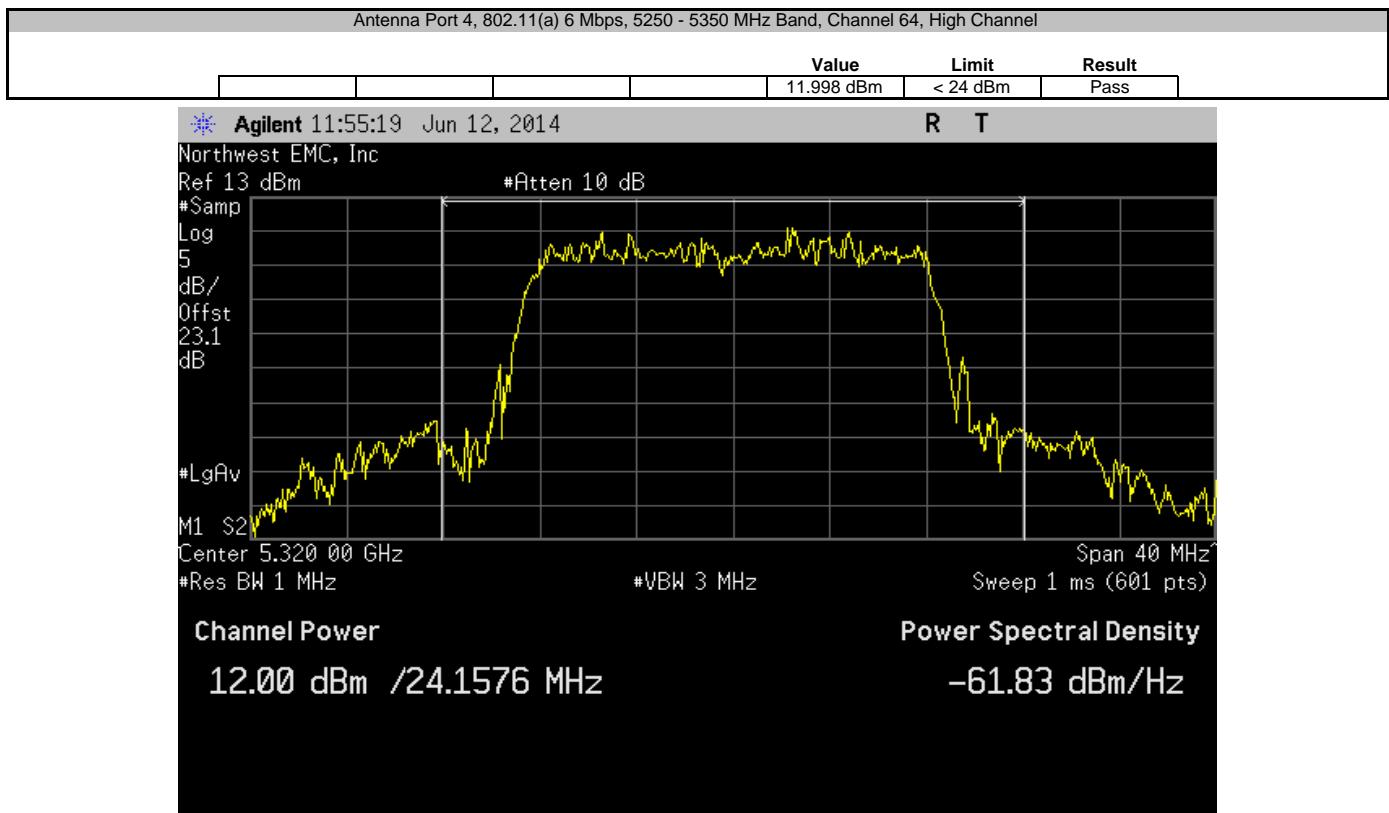


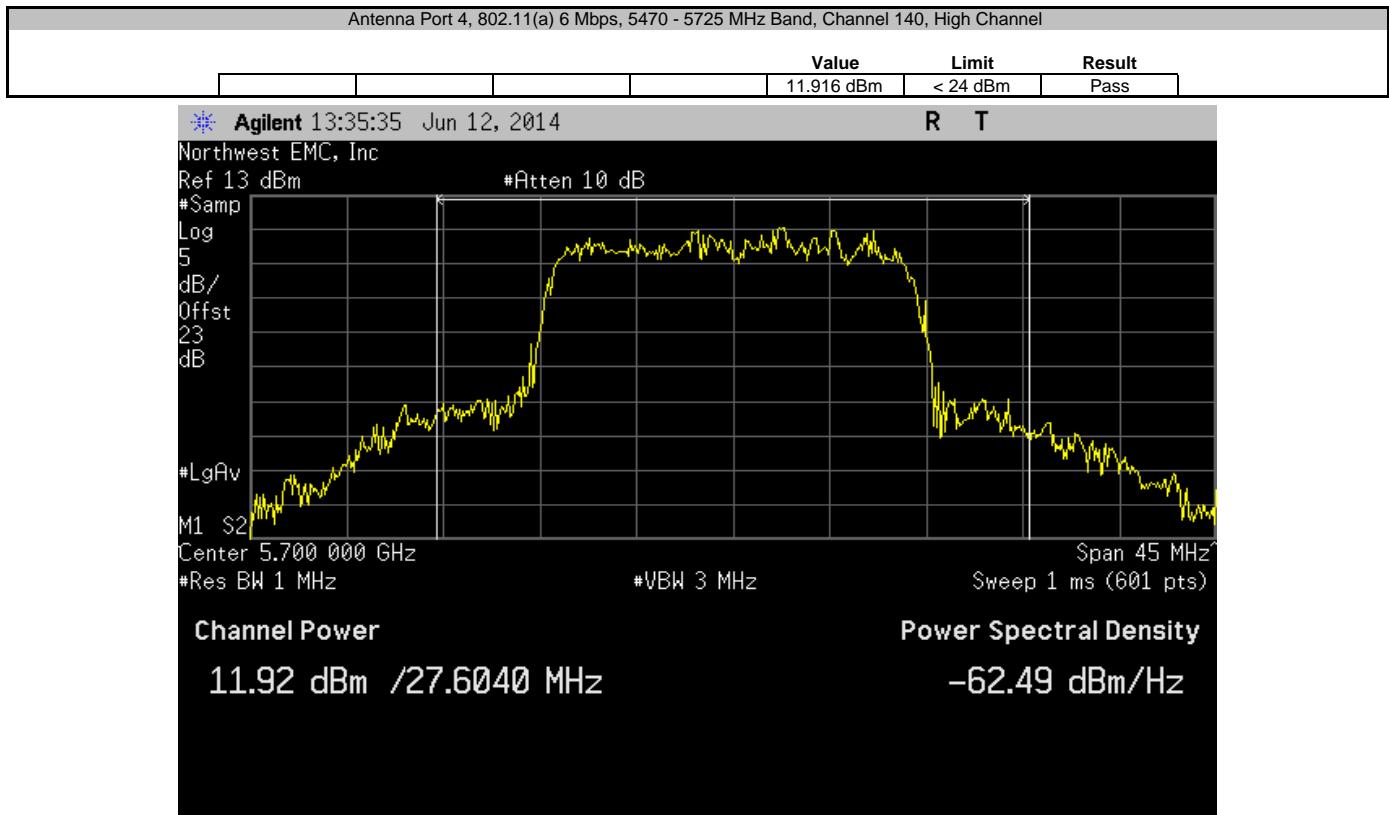
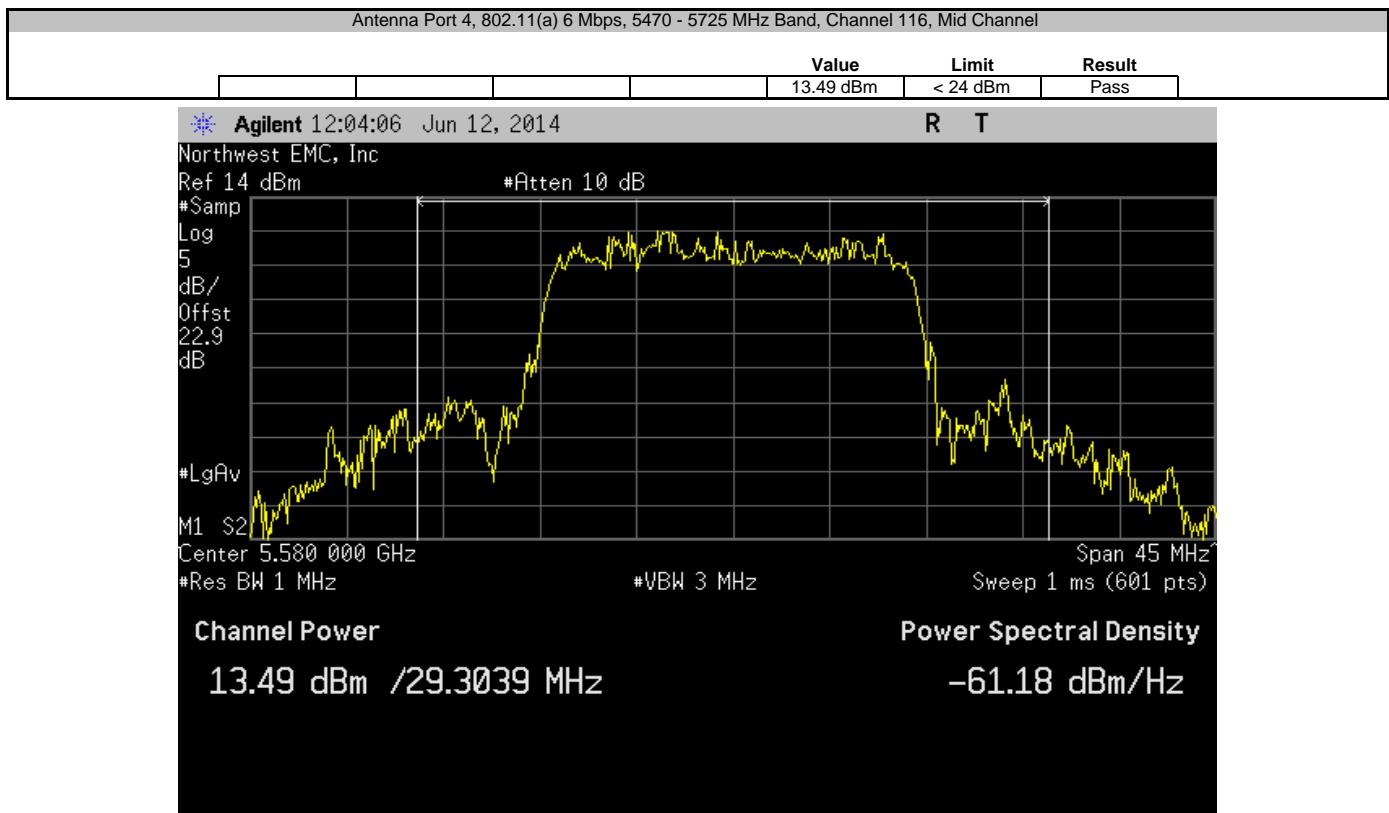












## PEAK POWER SPECTRAL DENSITY

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 (mo.)
40GHz DC Block	Miteq	DCB4000	AMD	4/28/2014	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator, 'Precision N'	S.M. Electronics	SA18N-06/SM4032	REE	12/2/2013	12
Power Meter	Agilent	N1913A	SQR	4/29/2013	36
Power Sensor	Agilent	E9300H	SQO	4/29/2013	36
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24
MXG Analog Signal Generator	Agilent	N5181A	TIG	3/28/2014	36

### TEST DESCRIPTION

FCC KDB 789033 D01 General UNII Test Procedures Section E was followed. The transmit frequency was set to the required channels in each band. The transmit power was set to its default maximum. The data rate(s) listed in the datasheet were tested. 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 power spectral density, the transmission pulse duration (T) was measured. The transmission pulse duration and the associated data are found elsewhere in this test report.

The spectrum analyzer settings were as follows:

- The span was set to encompass entire emission bandwidth (B), centered on the transmit channel.
- RBW = 1 MHz, VBW  $\geq$  3 MHz
- Sample detector was used because Method SA-1 Alternate was used to measure the Maximum Conducted Output Power.
- Trace average 100 traces in power averaging mode (not video averaging).

The peak power spectral density (PPSD) was determined to be the highest level found across the emission in any 1 MHz band after 100 sweeps of power averaging (not video averaging).

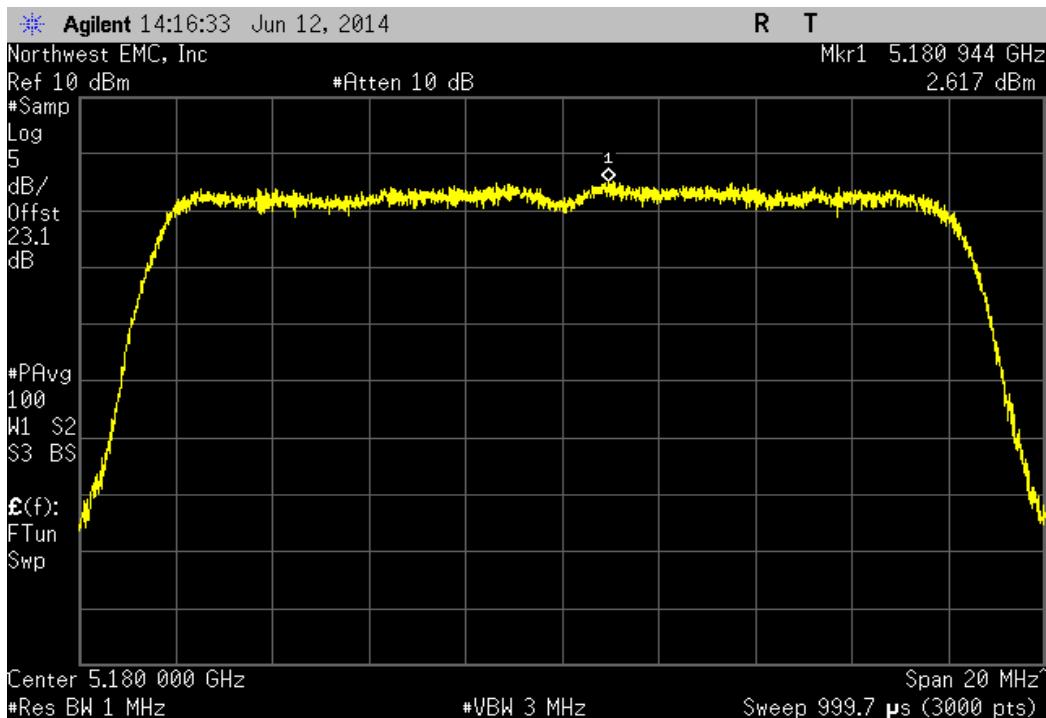


## PEAK POWER SPECTRAL DENSITY

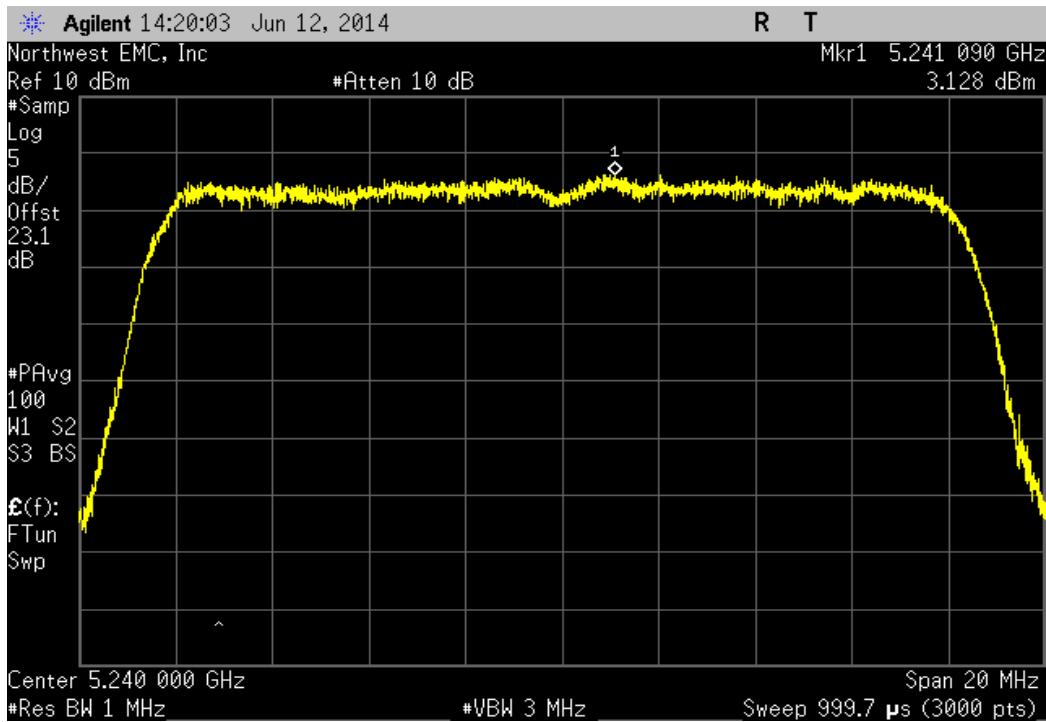
XMit 2014.02.07  
PsaTx 2014.04.29

EUT: 444-2250		Work Order: FOCU0168
Serial Number: 02EA41000011		Date: 06/13/14
Customer: Summit Semiconductor, LLC		Temperature: 22.5°C
Attendees: None		Humidity: 43%
Project: None		Barometric Pres.: 1019
Tested by: Jared Ison	Power: 18 VDC	Job Site: EV06
TEST SPECIFICATIONS	Test Method	
FCC 15.407:2014	ANSI C63.10:2009	
COMMENTS	Test was performed on the antenna port that produced the highest output power.	
DEVIATIONS FROM TEST STANDARD	None	
Configuration #	2	Signature
Antenna Port 1		Value (dBm / MHz) Limit (dBm / MHz) Result
802.11(a) 6 Mbps		
5150 - 5250 MHz Band	Channel 36, Low Channel	2.617 4 Pass
	Channel 48, High Channel	3.128 4 Pass
5250 - 5350 MHz Band	Channel 52, Low Channel	2.928 11 Pass
	Channel 64, High Channel	1.903 11 Pass
5470 - 5725 MHz Band	Channel 100, Low Channel	2.892 11 Pass
	Channel 116, Mid Channel	3.897 11 Pass
	Channel 140, High Channel	3.136 11 Pass
802.11(a) 18 Mbps		
5150 - 5250 MHz Band	Channel 36, Low Channel	3.623 4 Pass
	Channel 48, High Channel	3.781 4 Pass
5250 - 5350 MHz Band	Channel 52, Low Channel	2.779 11 Pass
	Channel 64, High Channel	3.247 11 Pass
5470 - 5725 MHz Band	Channel 100, Low Channel	3.785 11 Pass
	Channel 116, Mid Channel	3.879 11 Pass
	Channel 140, High Channel	3.735 11 Pass
802.11(a) 36 Mbps		
5150 - 5250 MHz Band	Channel 36, Low Channel	3.094 4 Pass
	Channel 48, High Channel	3.125 4 Pass
5250 - 5350 MHz Band	Channel 52, Low Channel	3.362 11 Pass
	Channel 64, High Channel	3.332 11 Pass
5470 - 5725 MHz Band	Channel 100, Low Channel	3.399 11 Pass
	Channel 116, Mid Channel	5.435 11 Pass
	Channel 140, High Channel	3.656 11 Pass

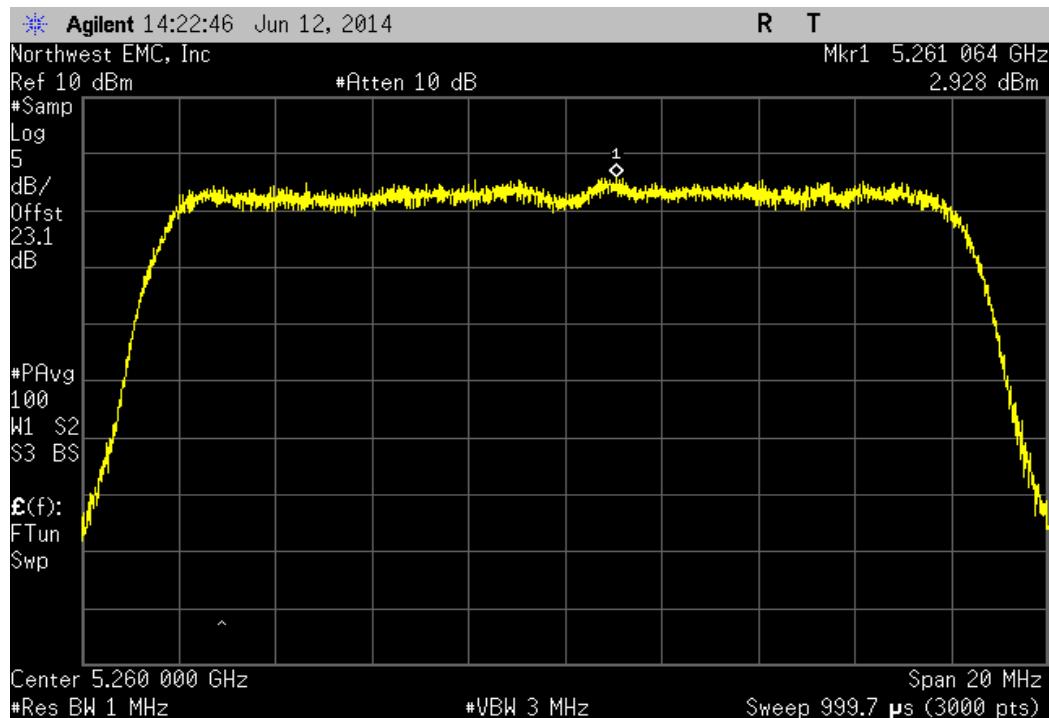
Antenna Port 1, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	2.617	4



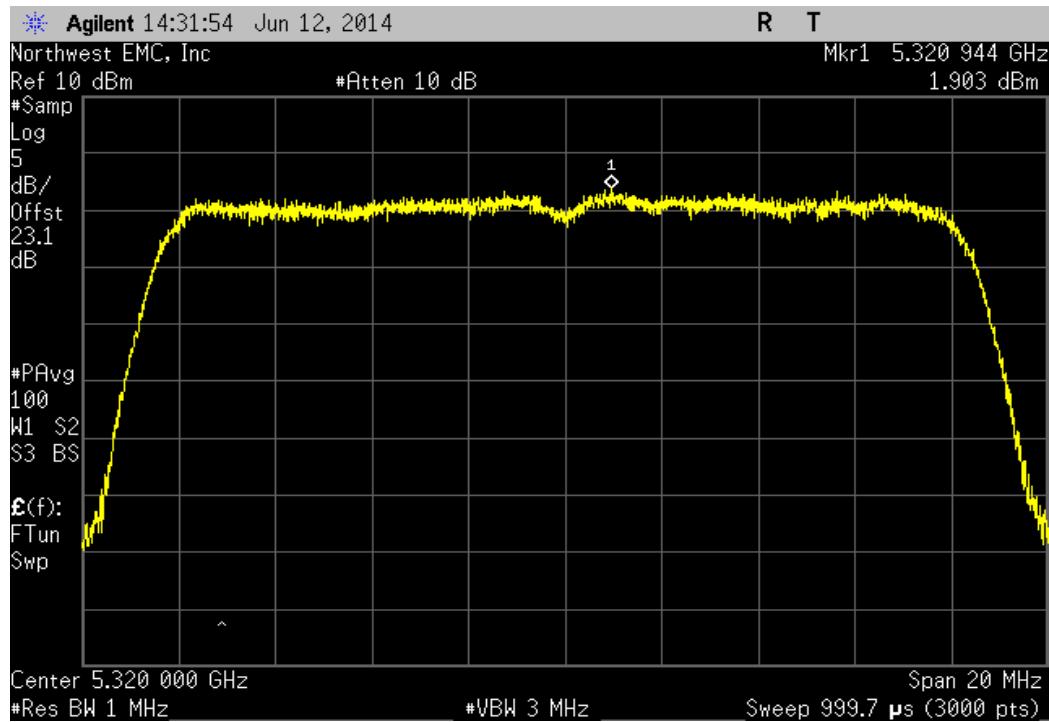
Antenna Port 1, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	3.128	4



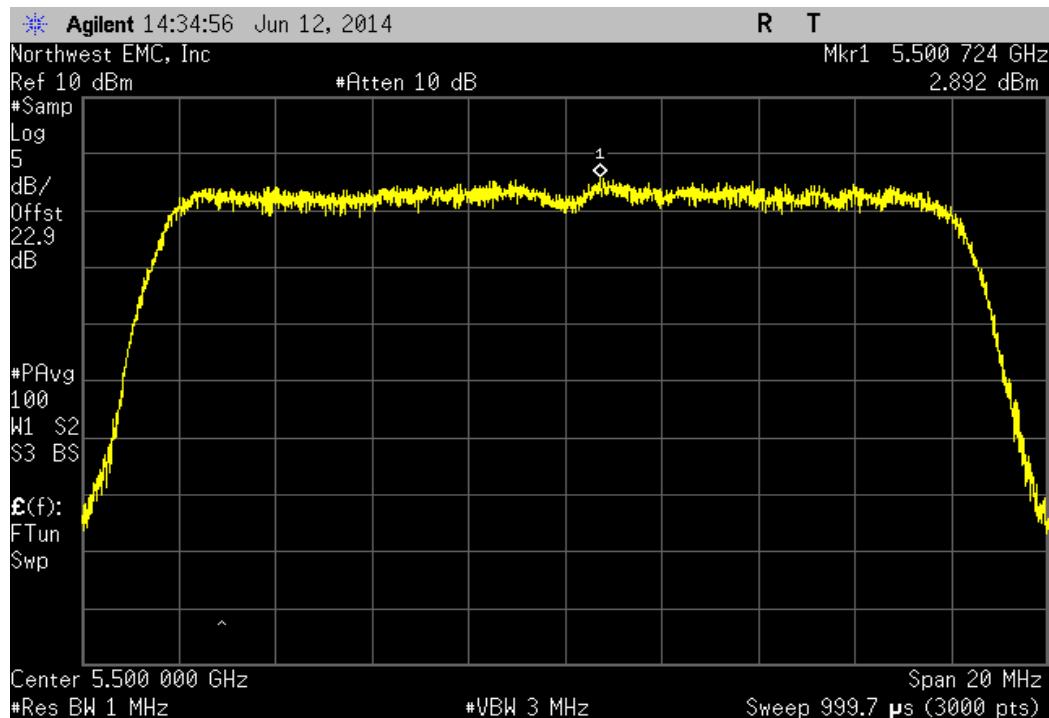
Antenna Port 1, 802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	2.928	11



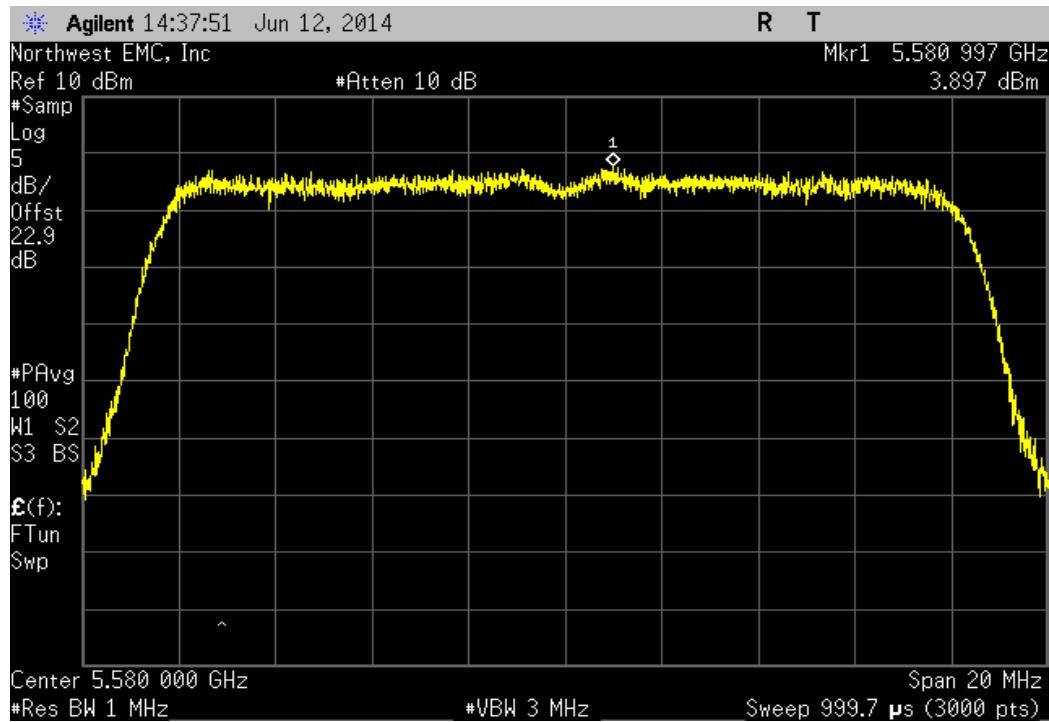
Antenna Port 1, 802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	1.903	11



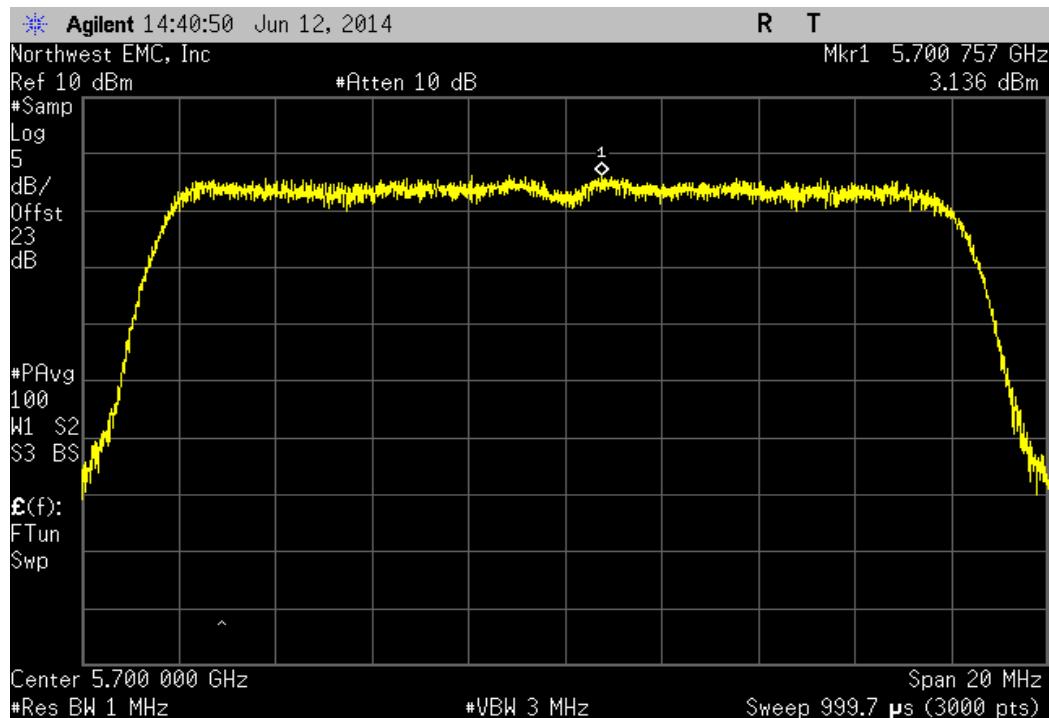
Antenna Port 1, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	2.892	11



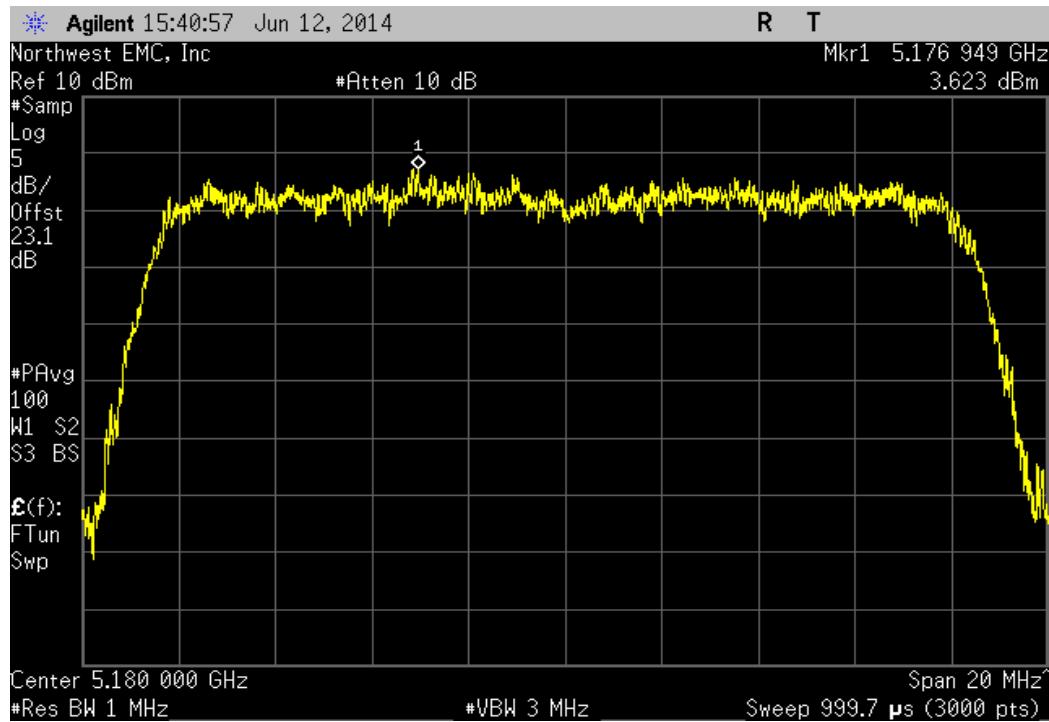
Antenna Port 1, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	3.897	11



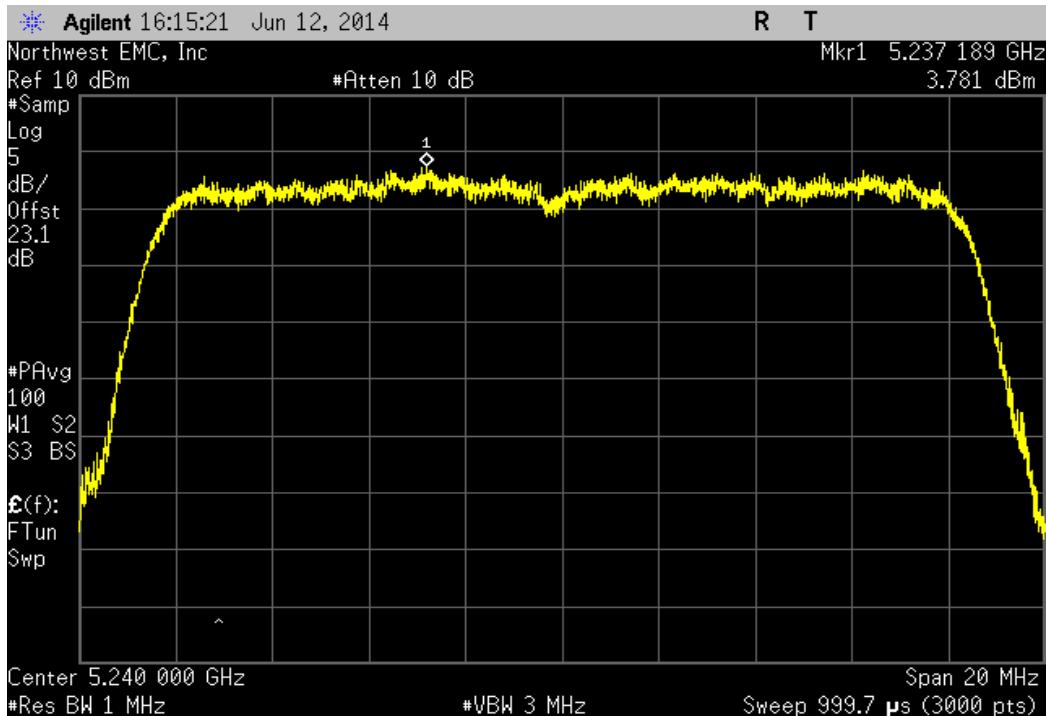
Antenna Port 1, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	3.136	11



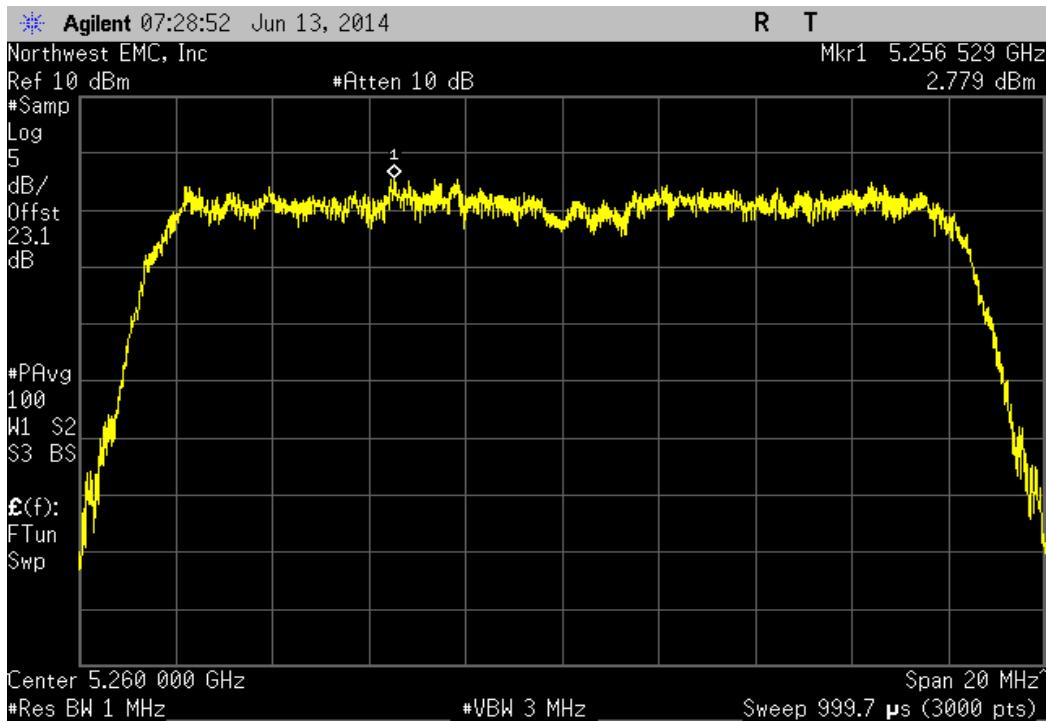
Antenna Port 1, 802.11(a) 18 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	3.623	4



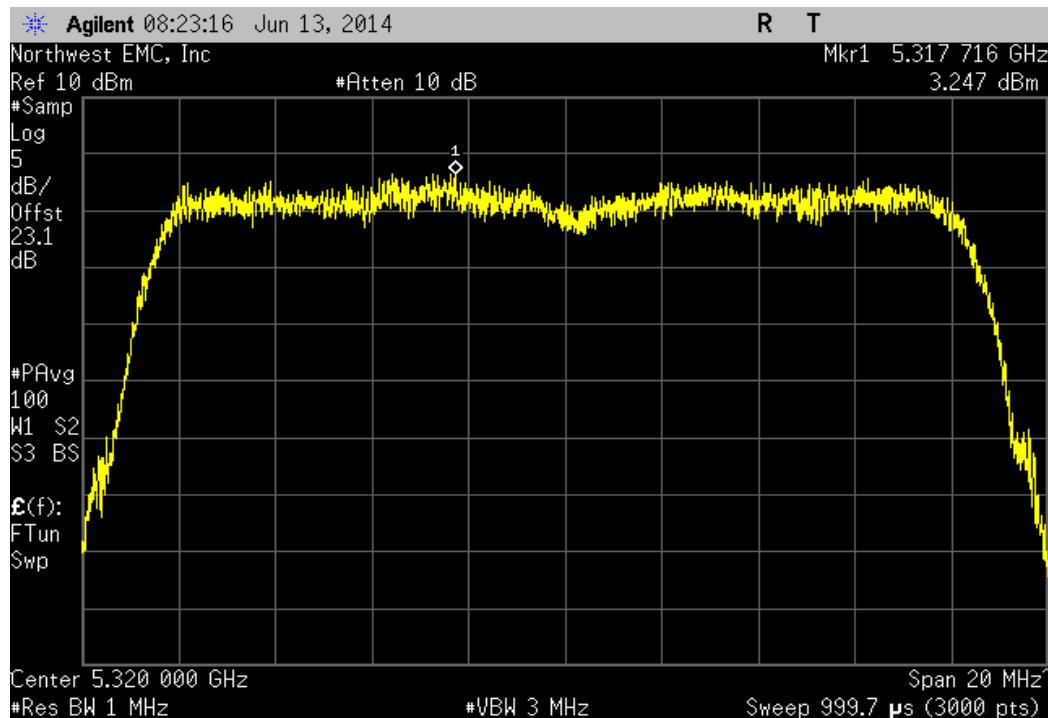
Antenna Port 1, 802.11(a) 18 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	3.781	4



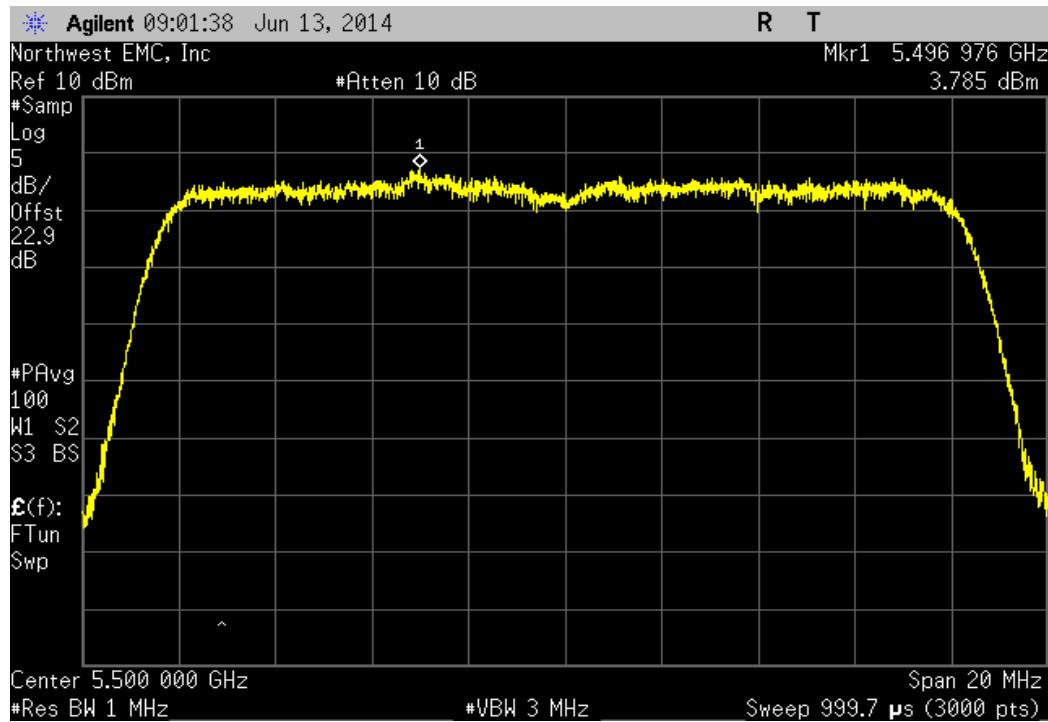
Antenna Port 1, 802.11(a) 18 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	2.779	11



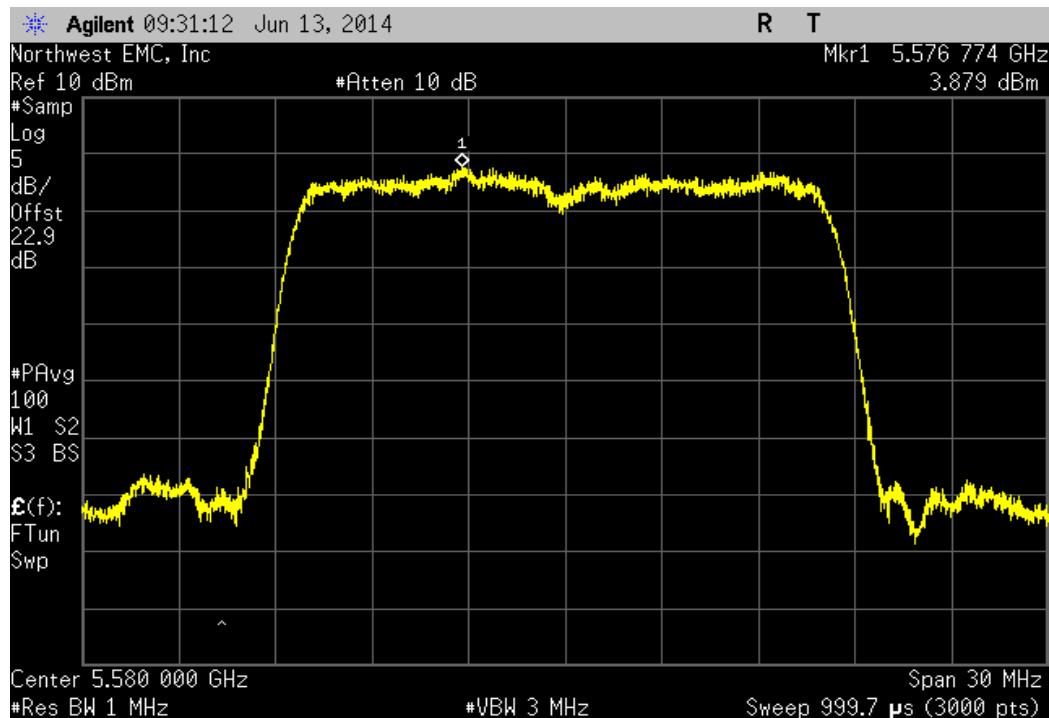
Antenna Port 1, 802.11(a) 18 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	3.247	11



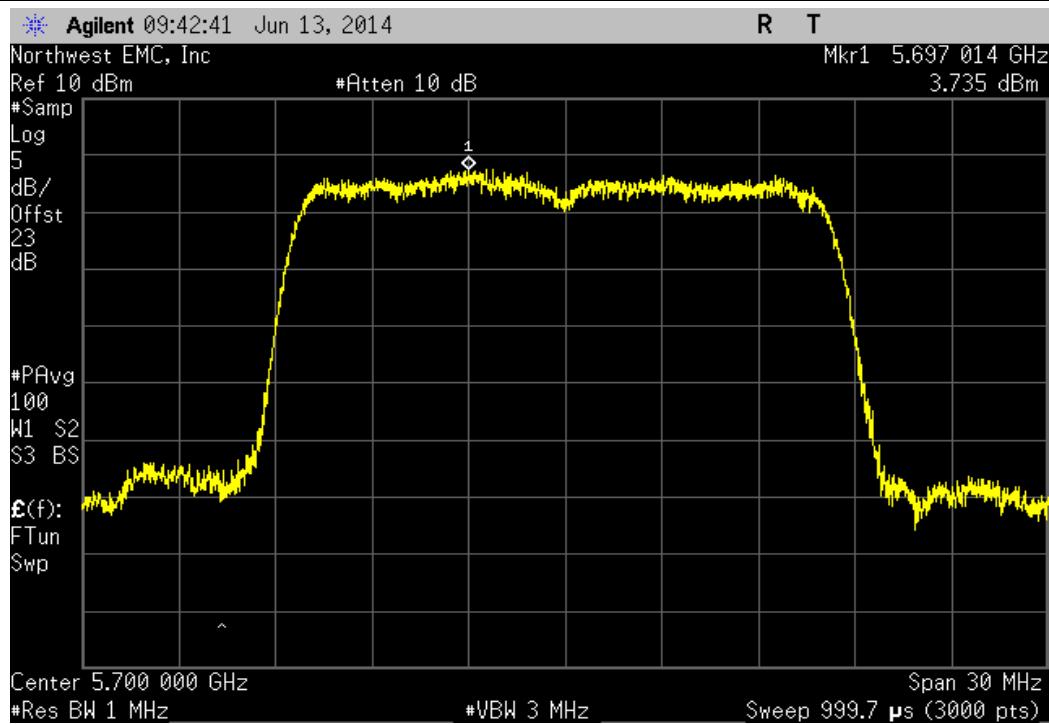
Antenna Port 1, 802.11(a) 18 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	3.785	11



Antenna Port 1, 802.11(a) 18 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	3.879	11



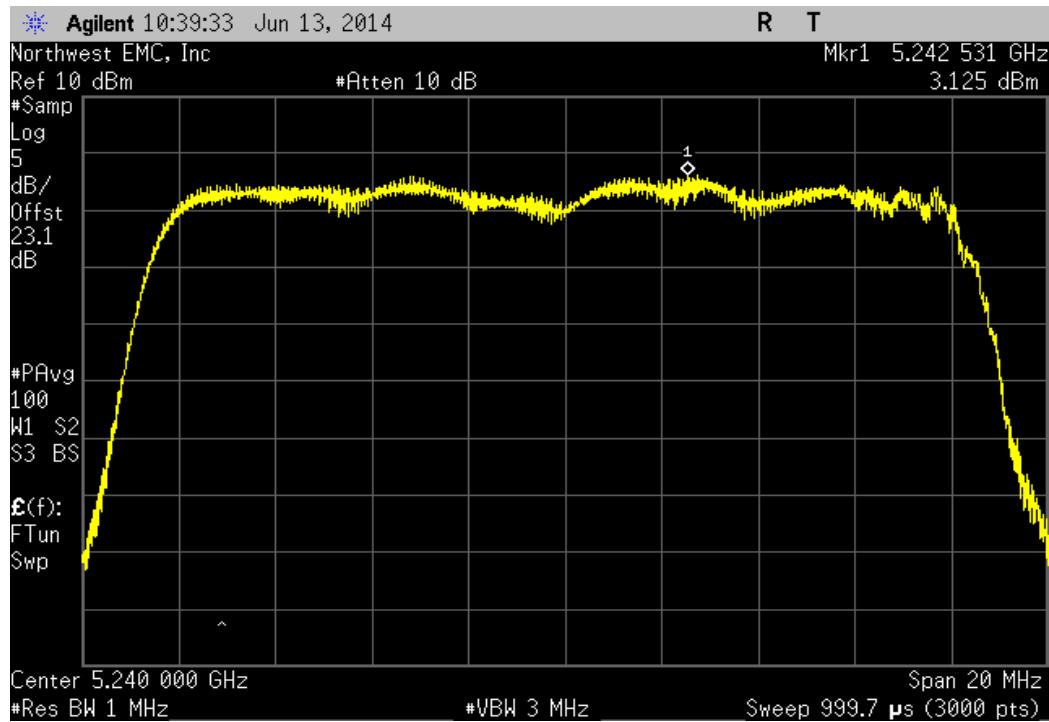
Antenna Port 1, 802.11(a) 18 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	3.735	11



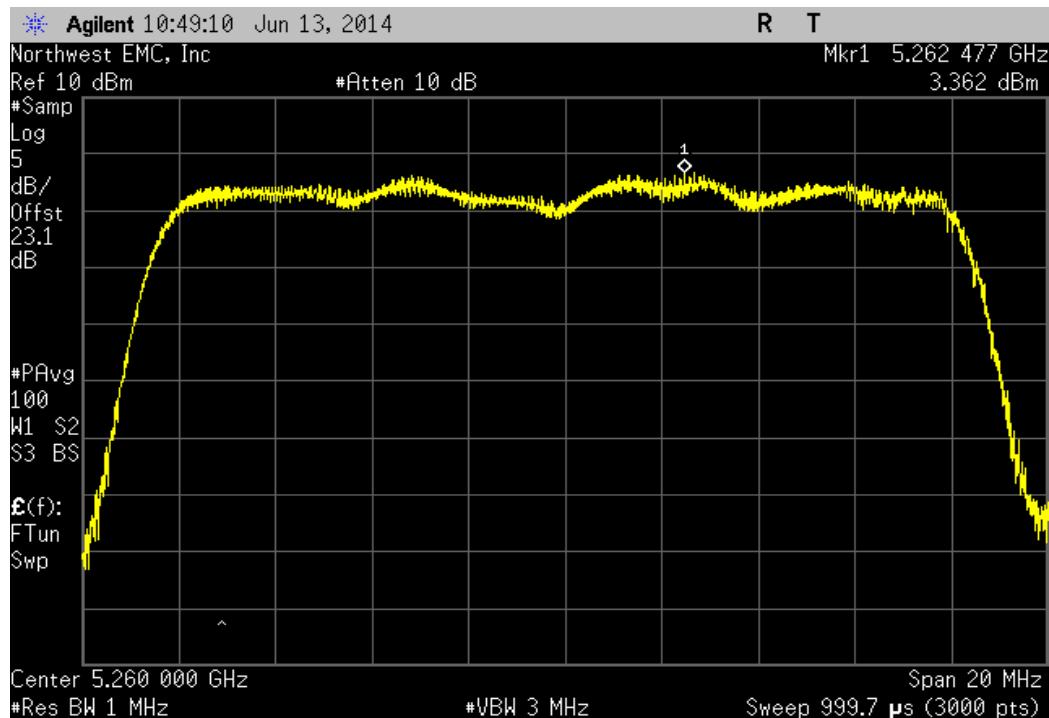
Antenna Port 1, 802.11(a) 36 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	3.094	4



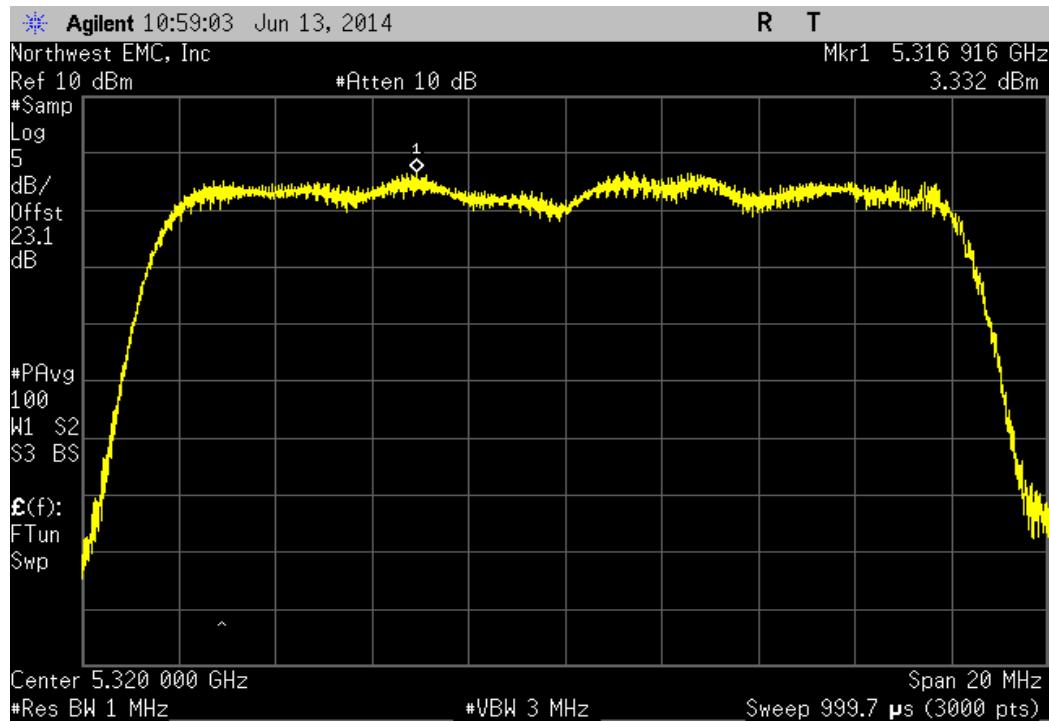
Antenna Port 1, 802.11(a) 36 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	3.125	4



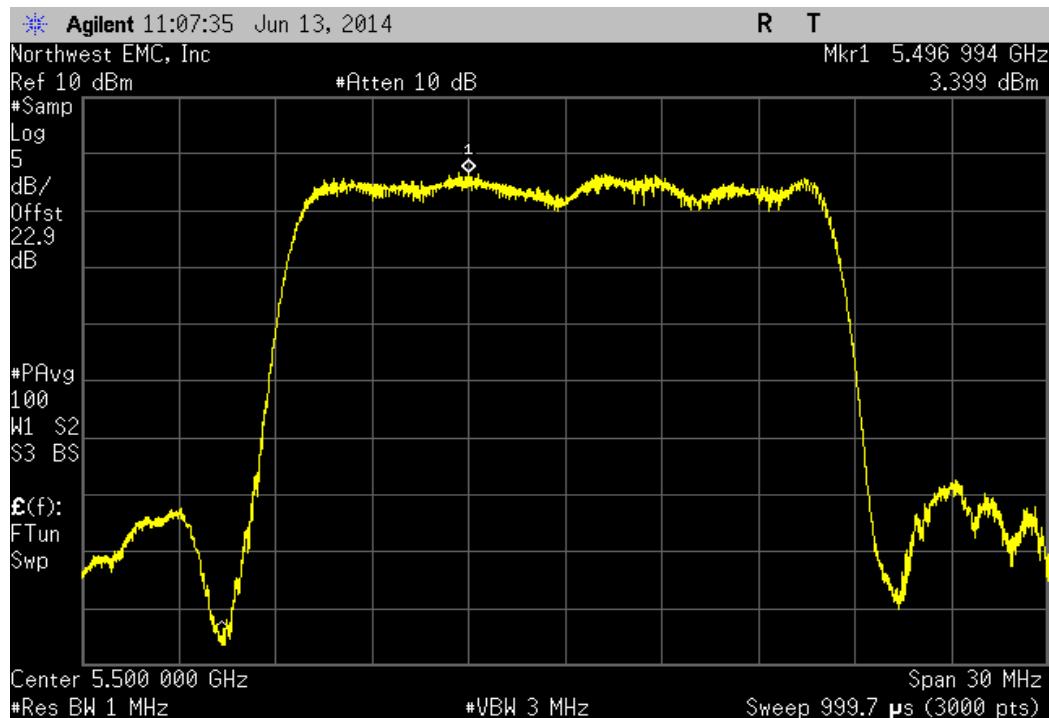
Antenna Port 1, 802.11(a) 36 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	3.362	11



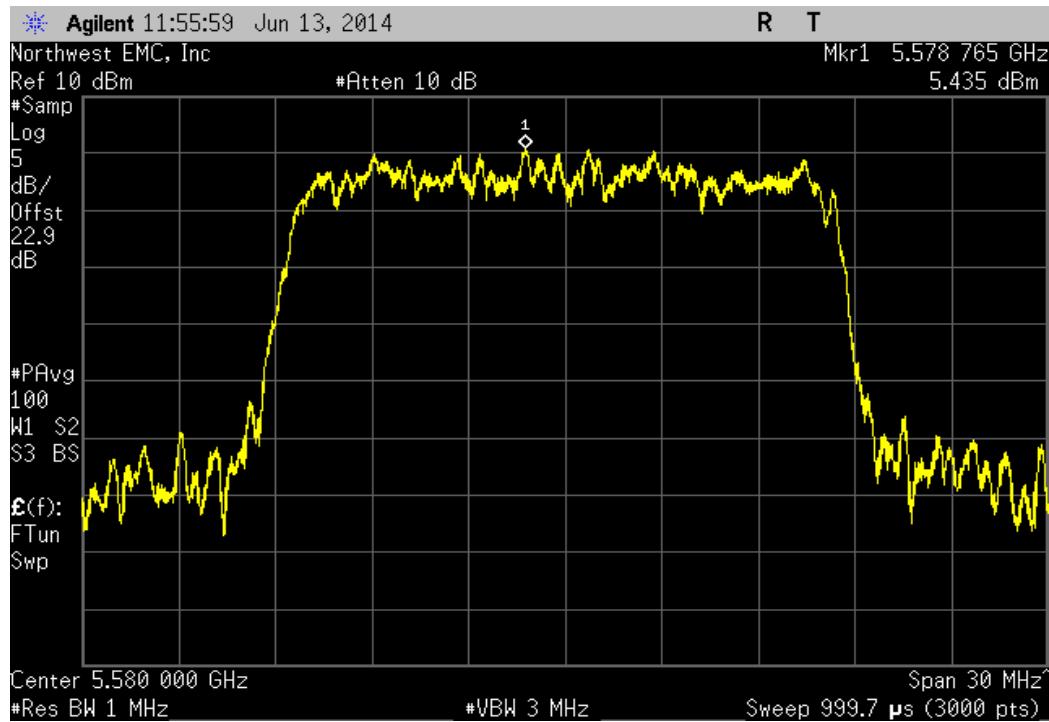
Antenna Port 1, 802.11(a) 36 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel		
	Value (dBm / MHz)	Limit (dBm / MHz)
	3.332	11



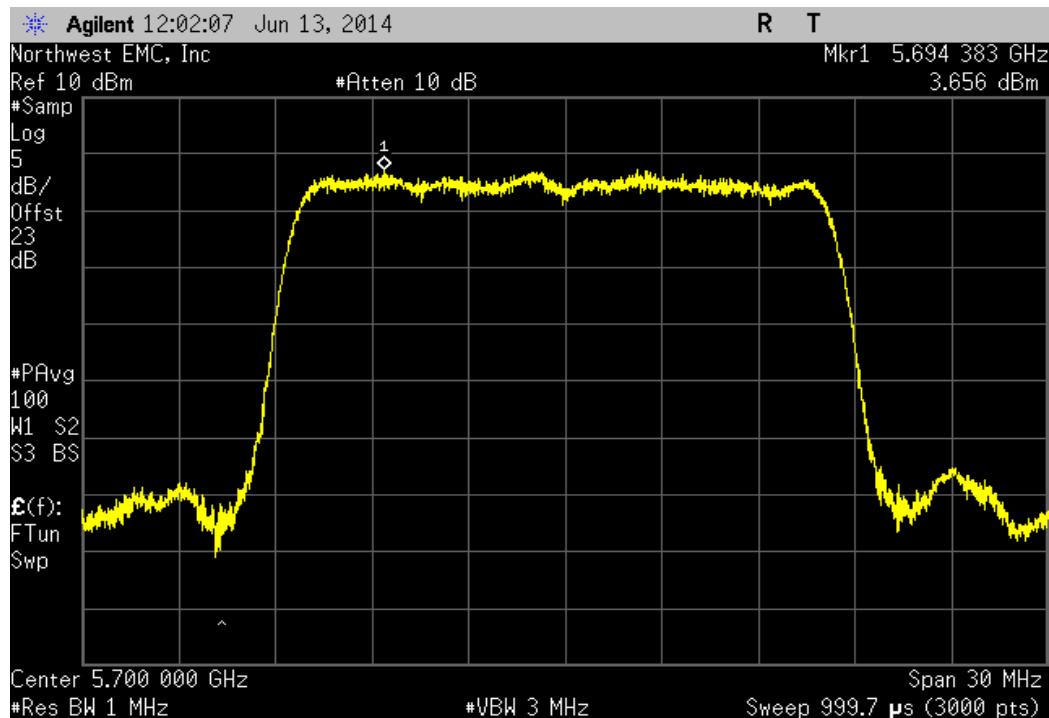
Antenna Port 1, 802.11(a) 36 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel		
Value (dBm / MHz)	Limit (dBm / MHz)	Result
3.399	11	Pass



Antenna Port 1, 802.11(a) 36 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel		
Value (dBm / MHz)	Limit (dBm / MHz)	Result
5.435	11	Pass



Antenna Port 1, 802.11(a) 36 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel		
Value (dBm / MHz)	Limit (dBm / MHz)	Result
3.656	11	Pass



## PEAK EXCURSION

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

### TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo.)
40GHz DC Block	Miteq	DCB4000	AMD	4/28/2014	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator, 'Precision N'	S.M. Electronics	SA18N-06/SM4032	REE	12/2/2013	12
Power Meter	Agilent	N1913A	SQR	4/29/2013	36
Power Sensor	Agilent	E9300H	SQO	4/29/2013	36
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24
MXG Analog Signal Generator	Agilent	N5181A	TIG	3/28/2014	36

### TEST DESCRIPTION

FCC KDB 789033 D01 General UNII Test Procedures Section F was followed to show that the ratio of the maximum peak-max-hold spectrum to the maximum of the average spectrum does not exceed 13 dBm.

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

The spectrum analyzer settings were as follows:

Span set to encompass the entire emission bandwidth (B), centered on the transmit channel.

Using the marker delta function, the largest difference between the following two traces was measured:

➢1st Trace: RBW = 1 MHz, VBW >= 3 MHz with peak detector and trace max-hold..

➢2nd Trace: The same procedure and settings as was used for peak power spectral density

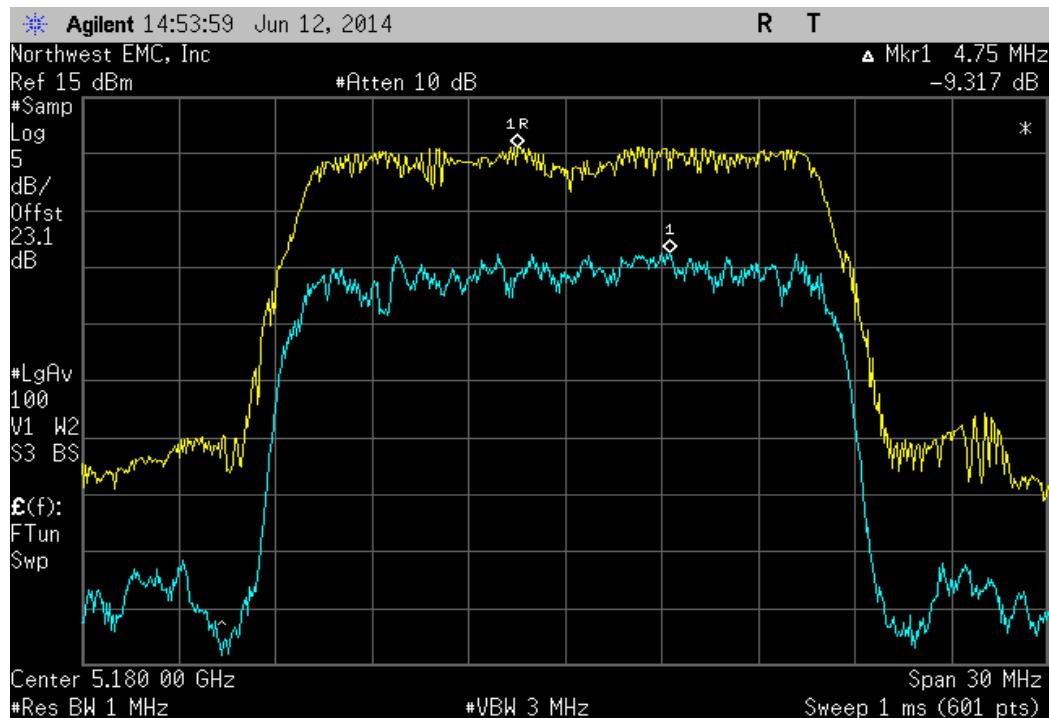


## PEAK EXCURSION

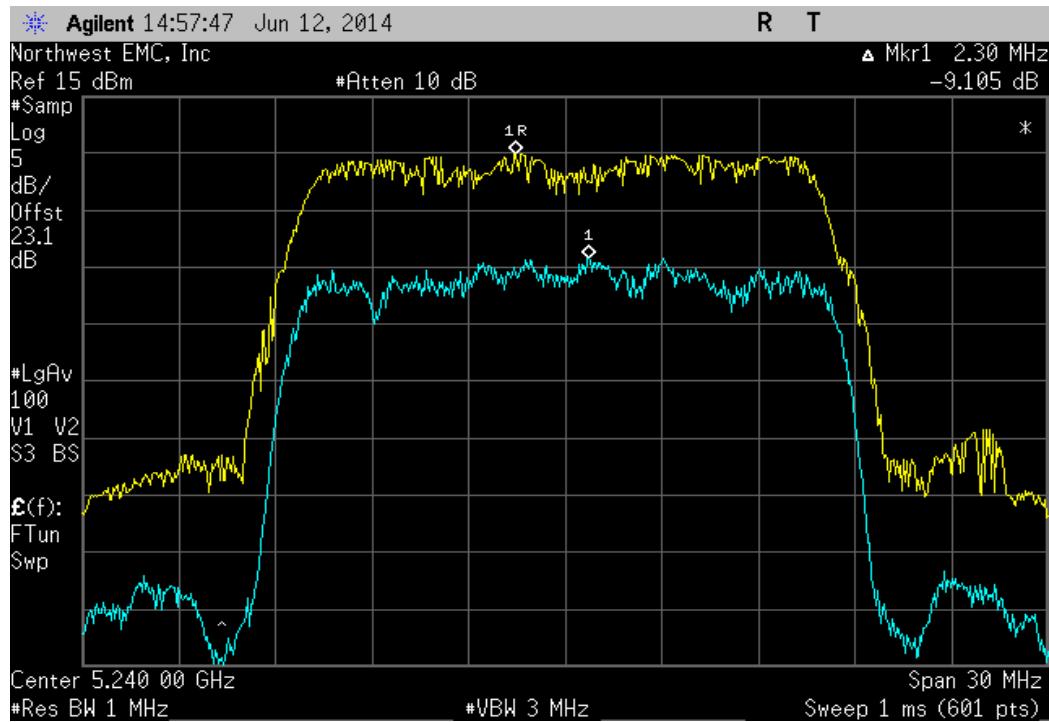
XMit 2014.02.07  
PsaTx 2014.04.29

EUT: 444-2250		Work Order: FOCU0168		
Serial Number: 02EA41000011		Date: 06/13/14		
Customer: Summit Semiconductor, LLC		Temperature: 22.5°C		
Attendees: None		Humidity: 43%		
Project: None		Barometric Pres.: 1019		
Tested by: Jared Ison	Power: 18 VDC	Job Site: EV06		
TEST SPECIFICATIONS				
FCC 15.407:2014	ANSI C63.10:2009	Test Method		
COMMENTS				
Test was performed on the antenna port that produced the highest output power.				
DEVIATIONS FROM TEST STANDARD				
None				
Configuration #	2	Signature		
		Value	Limit	Result
Antenna Port 1				
802.11(a) 6 Mbps				
5150 - 5250 MHz Band				
Channel 36, Low Channel				
Channel 48, High Channel				
9.317 dB ≤ 13 dB Pass				
9.105 dB ≤ 13 dB Pass				
5250 - 5350 MHz Band				
Channel 52, Low Channel				
Channel 64, High Channel				
8.841 dB ≤ 13 dB Pass				
9.036 dB ≤ 13 dB Pass				
5470 - 5725 MHz Band				
Channel 100, Low Channel				
Channel 116, Mid Channel				
Channel 140, High Channel				
9.43 dB ≤ 13 dB Pass				
9.435 dB ≤ 13 dB Pass				
9.155 dB ≤ 13 dB Pass				
802.11(a) 18 Mbps				
5150 - 5250 MHz Band				
Channel 36, Low Channel				
Channel 48, High Channel				
9.465 dB ≤ 13 dB Pass				
8.785 dB ≤ 13 dB Pass				
5250 - 5350 MHz Band				
Channel 52, Low Channel				
Channel 64, High Channel				
9.281 dB ≤ 13 dB Pass				
9.39 dB ≤ 13 dB Pass				
5470 - 5725 MHz Band				
Channel 100, Low Channel				
Channel 116, Mid Channel				
Channel 140, High Channel				
8.565 dB ≤ 13 dB Pass				
8.659 dB ≤ 13 dB Pass				
8.129 dB ≤ 13 dB Pass				
802.11(a) 36 Mbps				
5150 - 5250 MHz Band				
Channel 36, Low Channel				
Channel 48, High Channel				
9.56 dB ≤ 13 dB Pass				
9.614 dB ≤ 13 dB Pass				
5250 - 5350 MHz Band				
Channel 52, Low Channel				
Channel 64, High Channel				
9.536 dB ≤ 13 dB Pass				
10.286 dB ≤ 13 dB Pass				
5470 - 5725 MHz Band				
Channel 100, Low Channel				
Channel 116, Mid Channel				
Channel 140, High Channel				
10.035 dB ≤ 13 dB Pass				
9.581 dB ≤ 13 dB Pass				
9.95 dB ≤ 13 dB Pass				

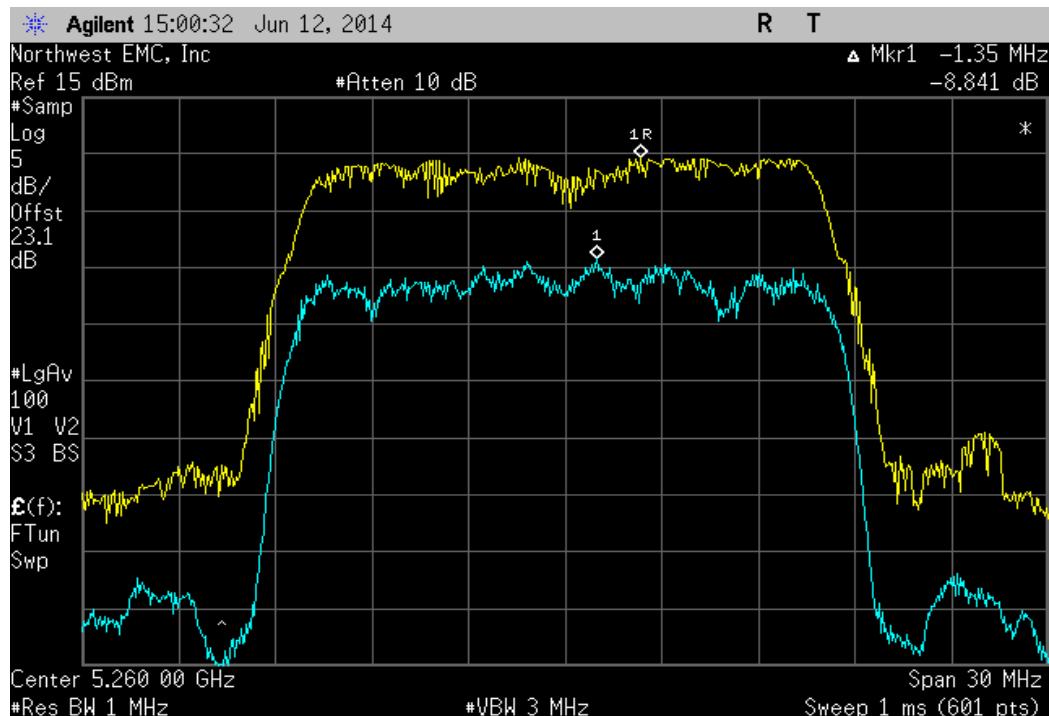
Antenna Port 1, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel		
	Value	Limit
	9.317 dB	≤ 13 dB



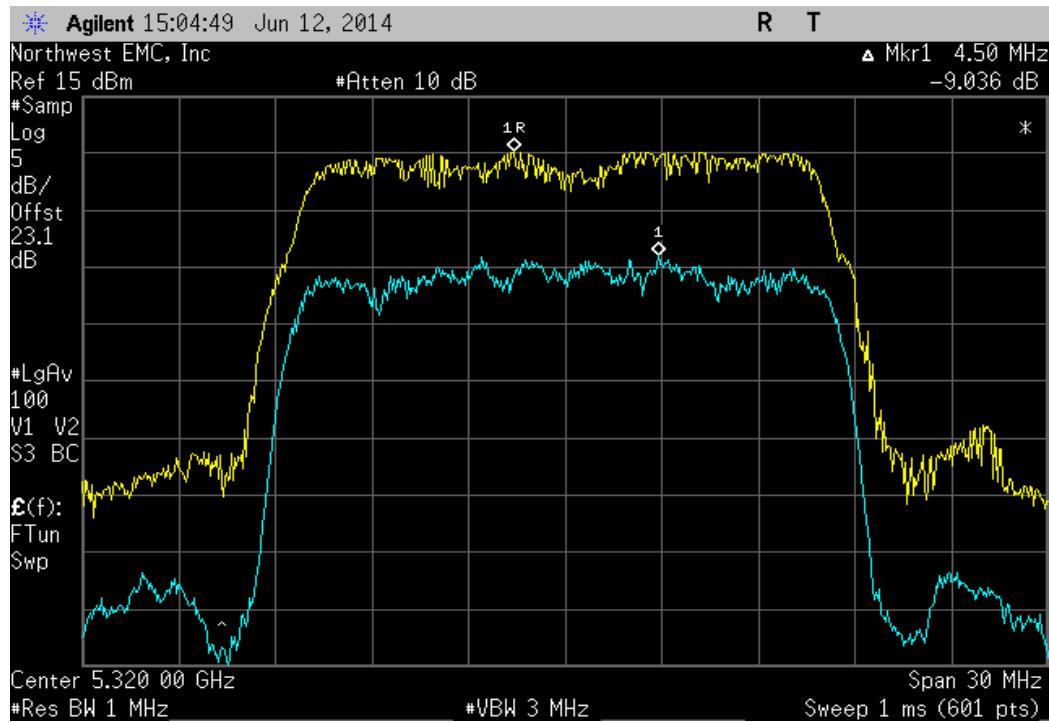
Antenna Port 1, 802.11(a) 6 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel		
	Value	Limit
	9.105 dB	≤ 13 dB



Antenna Port 1, 802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel				Value	Limit	Result
				8.841 dB	$\leq 13 \text{ dB}$	Pass

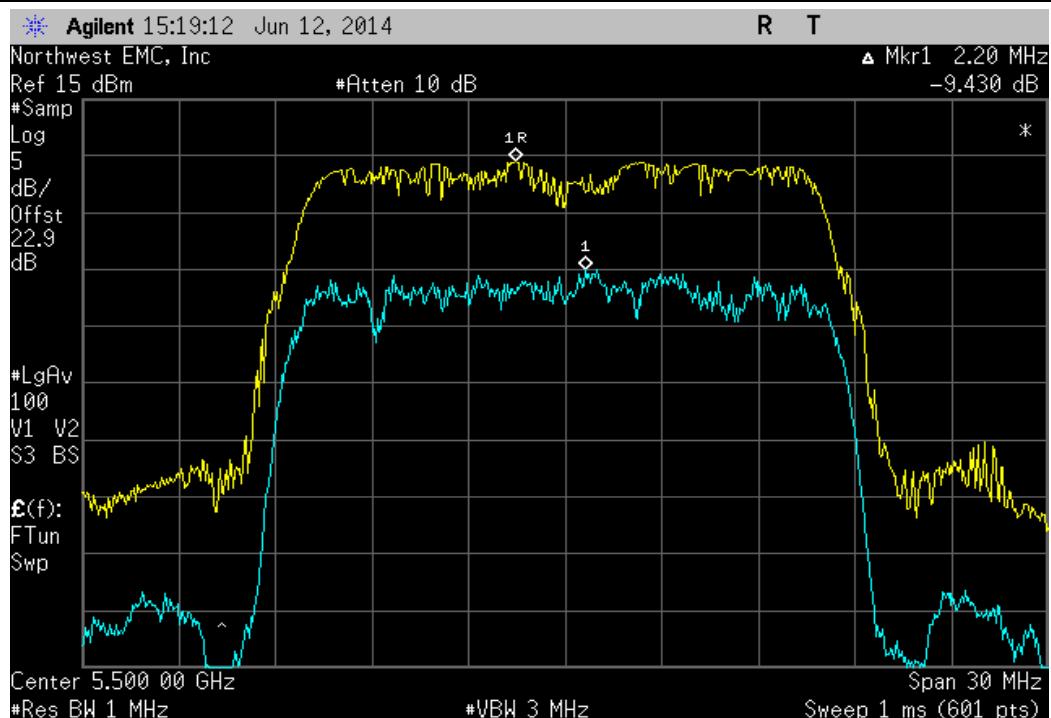


Antenna Port 1, 802.11(a) 6 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel				Value	Limit	Result
				9.036 dB	$\leq 13 \text{ dB}$	Pass



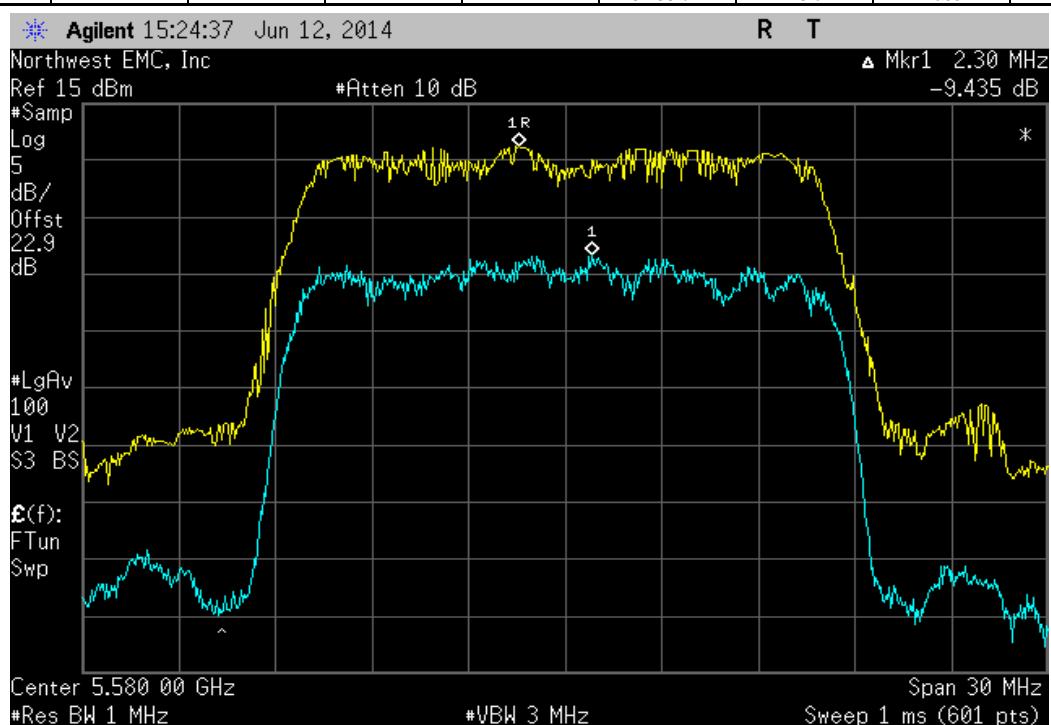
Antenna Port 1, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel

		Value	Limit	Result
		9.43 dB	≤ 13 dB	Pass



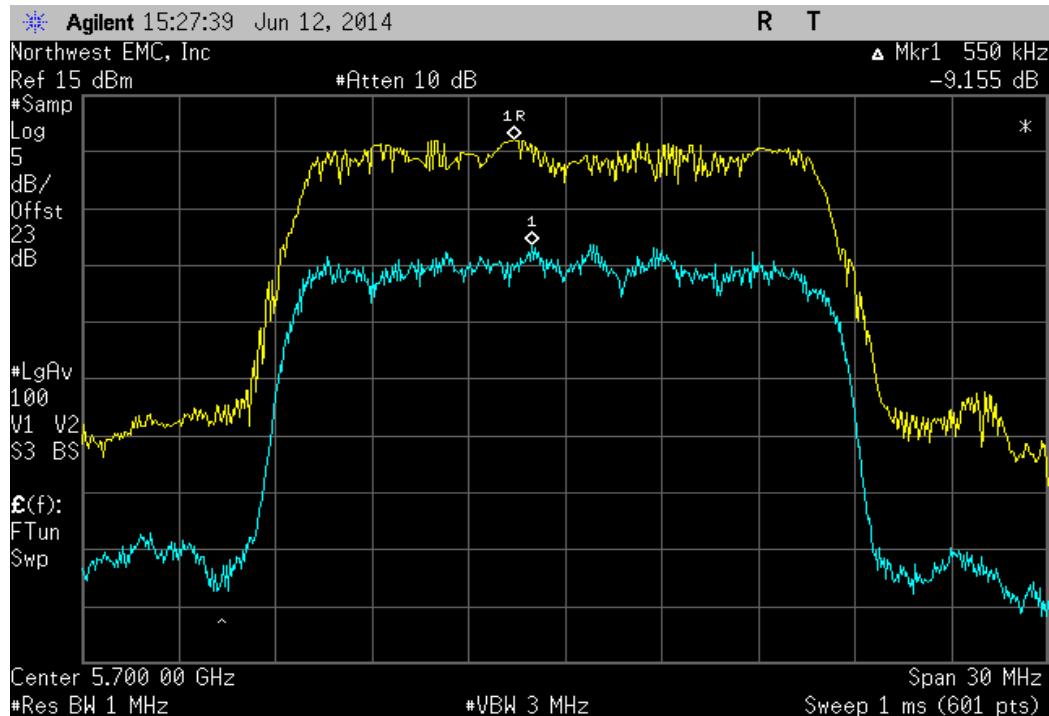
Antenna Port 1, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel

		Value	Limit	Result
		9.435 dB	≤ 13 dB	Pass



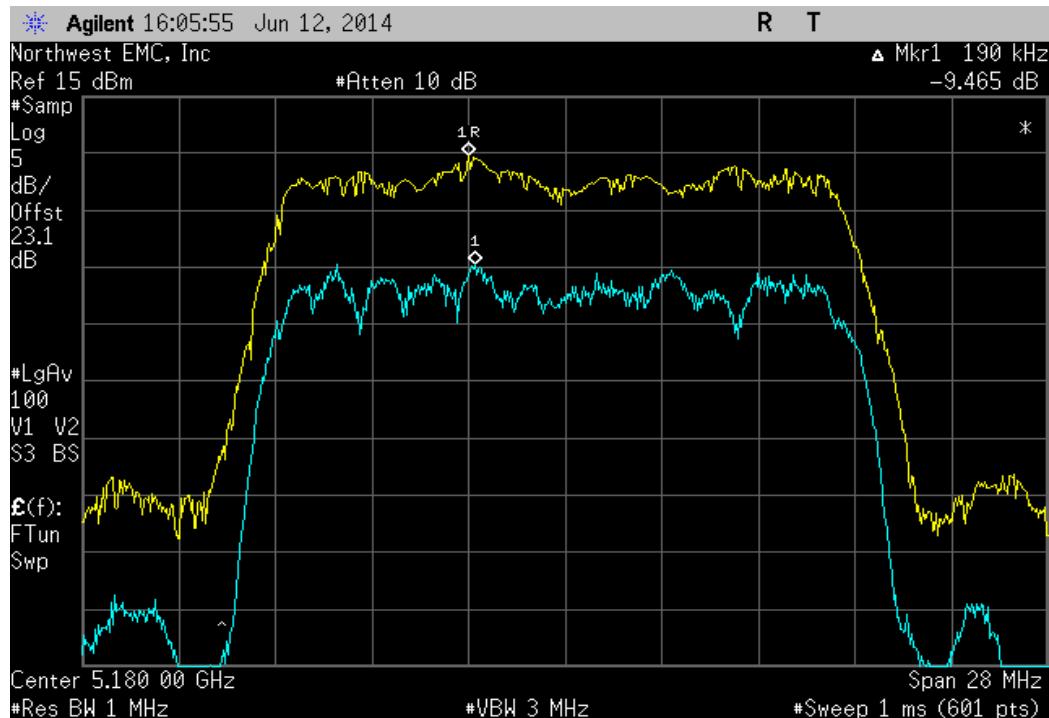
Antenna Port 1, 802.11(a) 6 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel

		Value	Limit	Result
		9.155 dB	≤ 13 dB	Pass

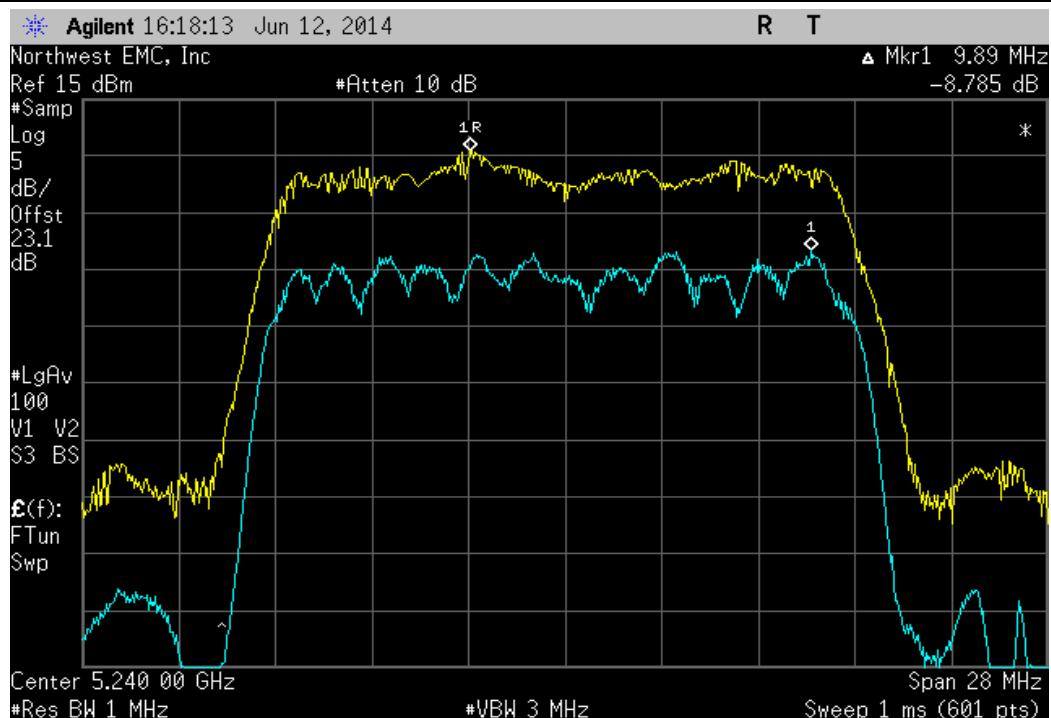


Antenna Port 1, 802.11(a) 18 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel

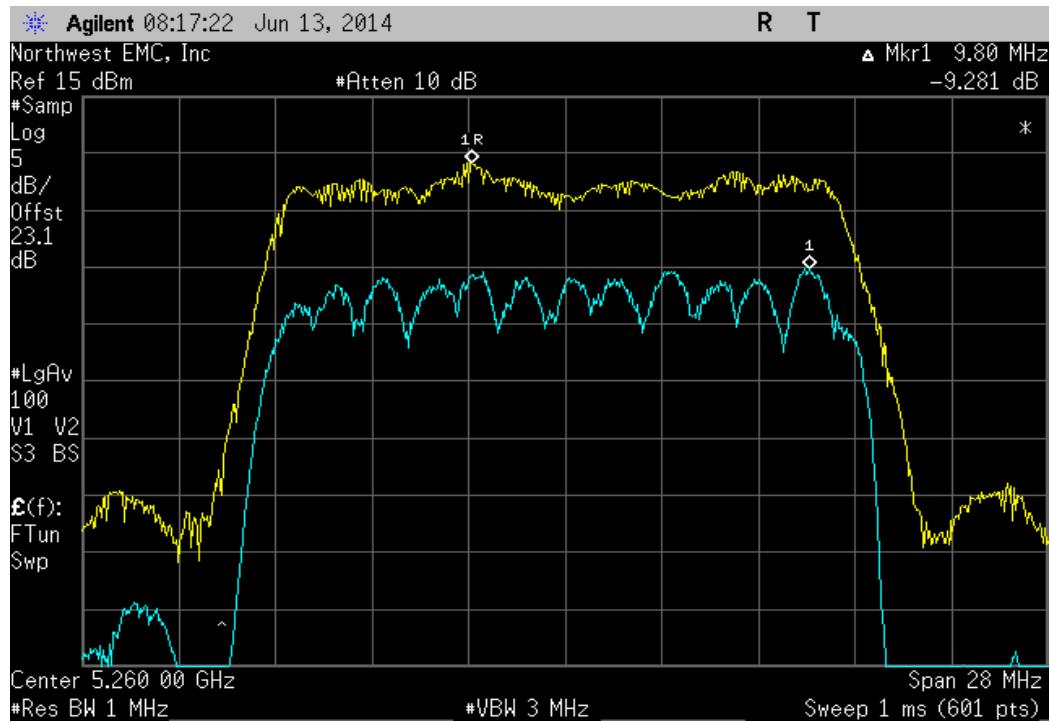
		Value	Limit	Result
		9.465 dB	≤ 13 dB	Pass



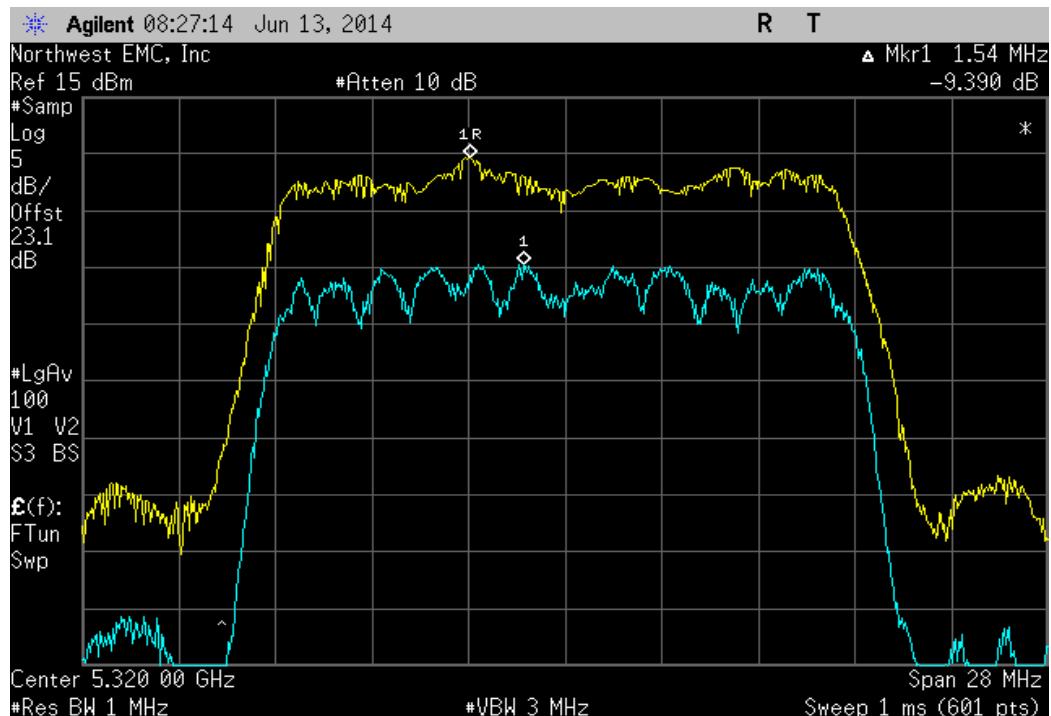
Antenna Port 1, 802.11(a) 18 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel			Value	Limit	Result
			8.785 dB	≤ 13 dB	Pass



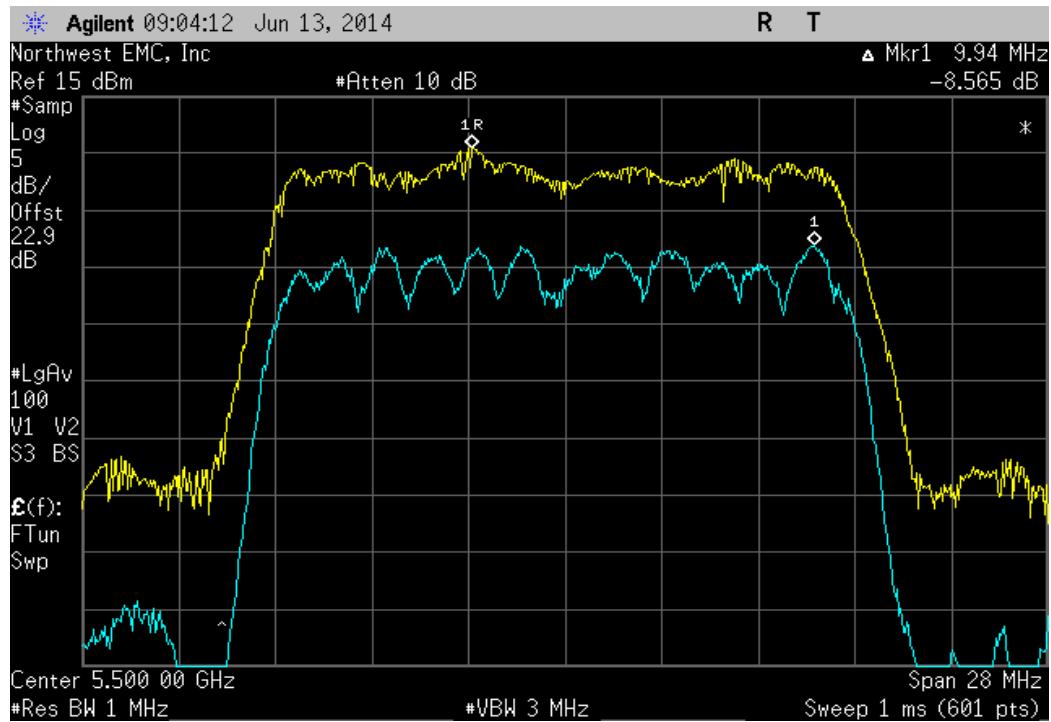
Antenna Port 1, 802.11(a) 18 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel			Value	Limit	Result
			9.281 dB	≤ 13 dB	Pass



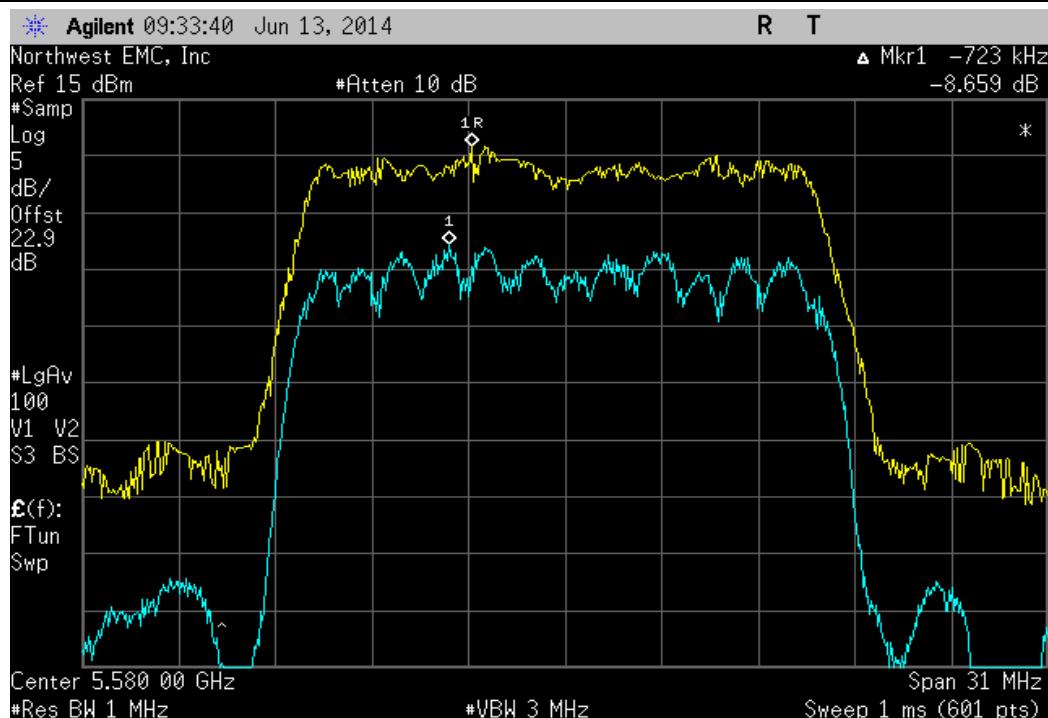
Antenna Port 1, 802.11(a) 18 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel		
	Value	Limit
	9.39 dB	≤ 13 dB



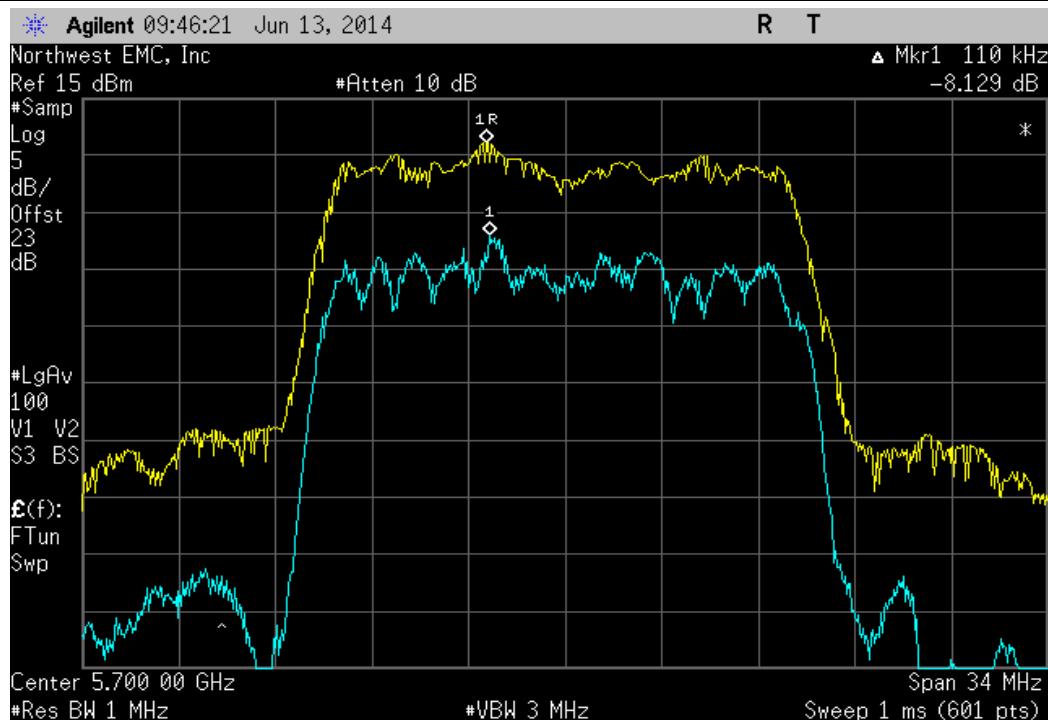
Antenna Port 1, 802.11(a) 18 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel		
	Value	Limit
	8.565 dB	≤ 13 dB



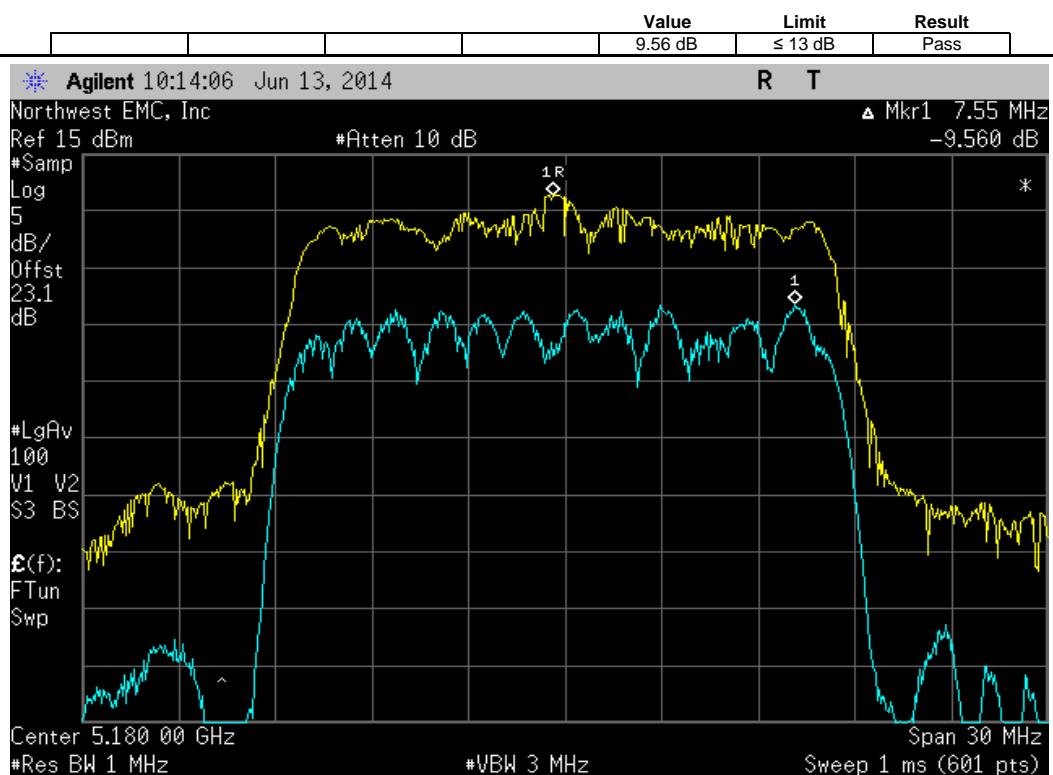
Antenna Port 1, 802.11(a) 18 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel			Value	Limit	Result
			8.659 dB	≤ 13 dB	Pass



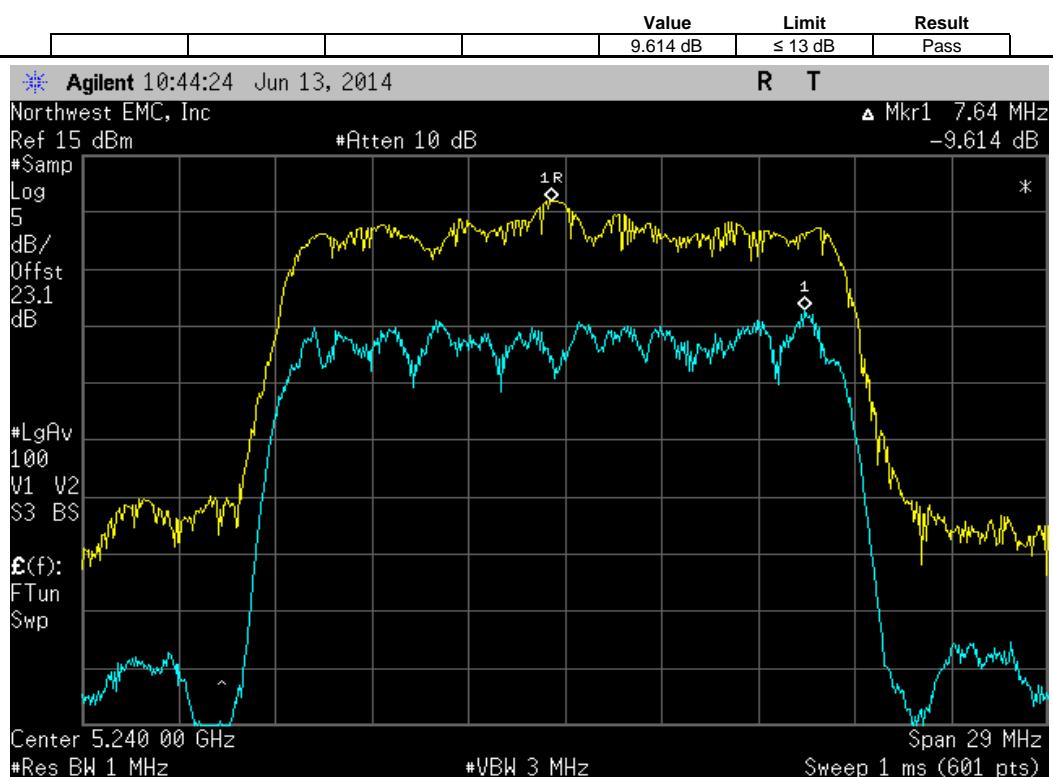
Antenna Port 1, 802.11(a) 18 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel			Value	Limit	Result
			8.129 dB	≤ 13 dB	Pass



Antenna Port 1, 802.11(a) 36 Mbps, 5150 - 5250 MHz Band, Channel 36, Low Channel

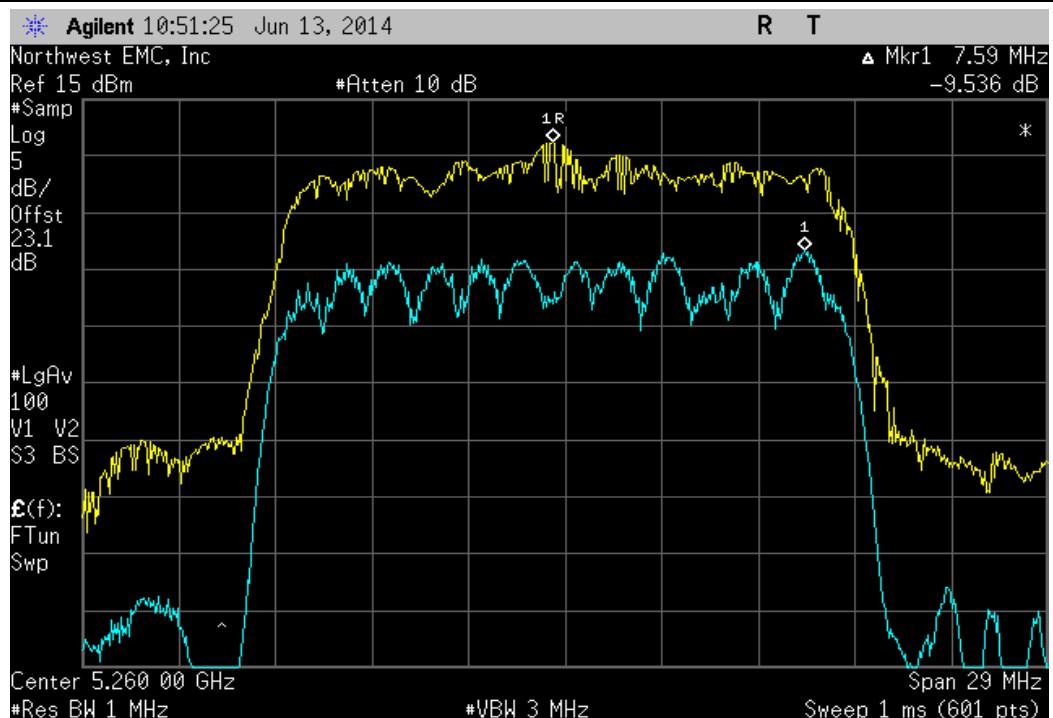


Antenna Port 1, 802.11(a) 36 Mbps, 5150 - 5250 MHz Band, Channel 48, High Channel



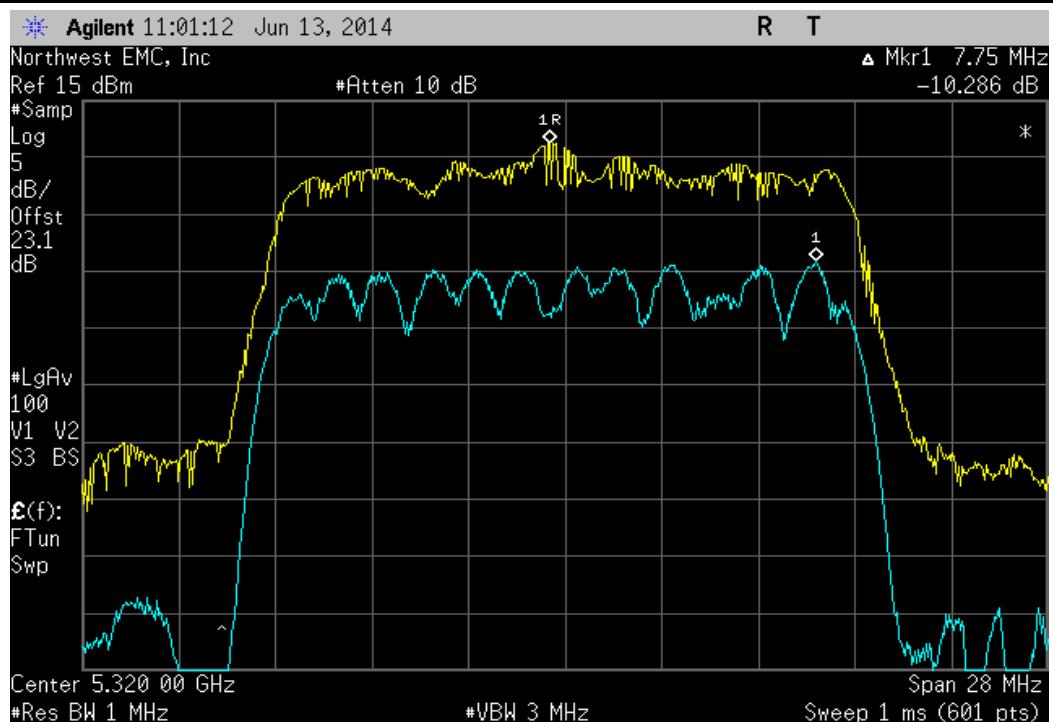
Antenna Port 1, 802.11(a) 36 Mbps, 5250 - 5350 MHz Band, Channel 52, Low Channel

		Value	Limit	Result
		9.536 dB	≤ 13 dB	Pass

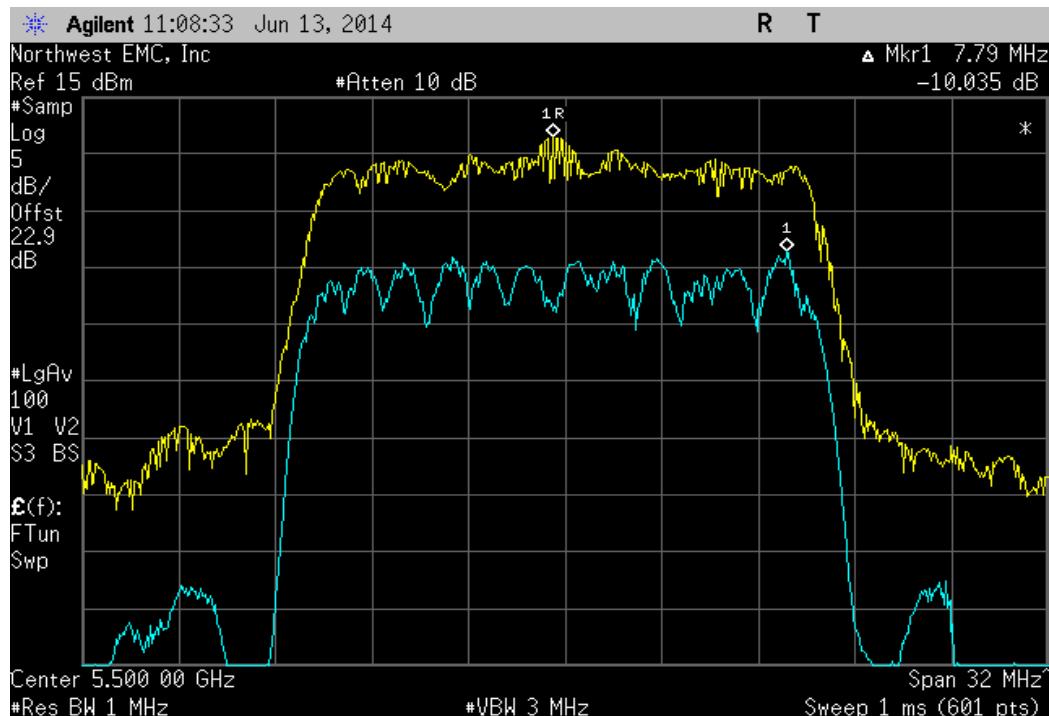


Antenna Port 1, 802.11(a) 36 Mbps, 5250 - 5350 MHz Band, Channel 64, High Channel

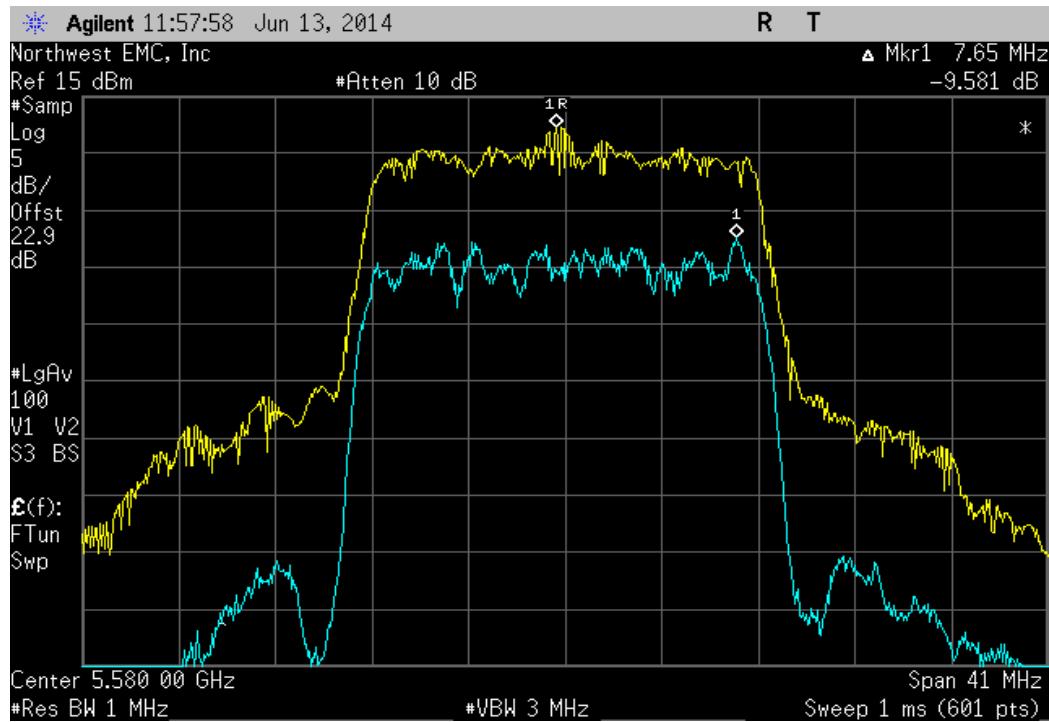
		Value	Limit	Result
		10.286 dB	≤ 13 dB	Pass



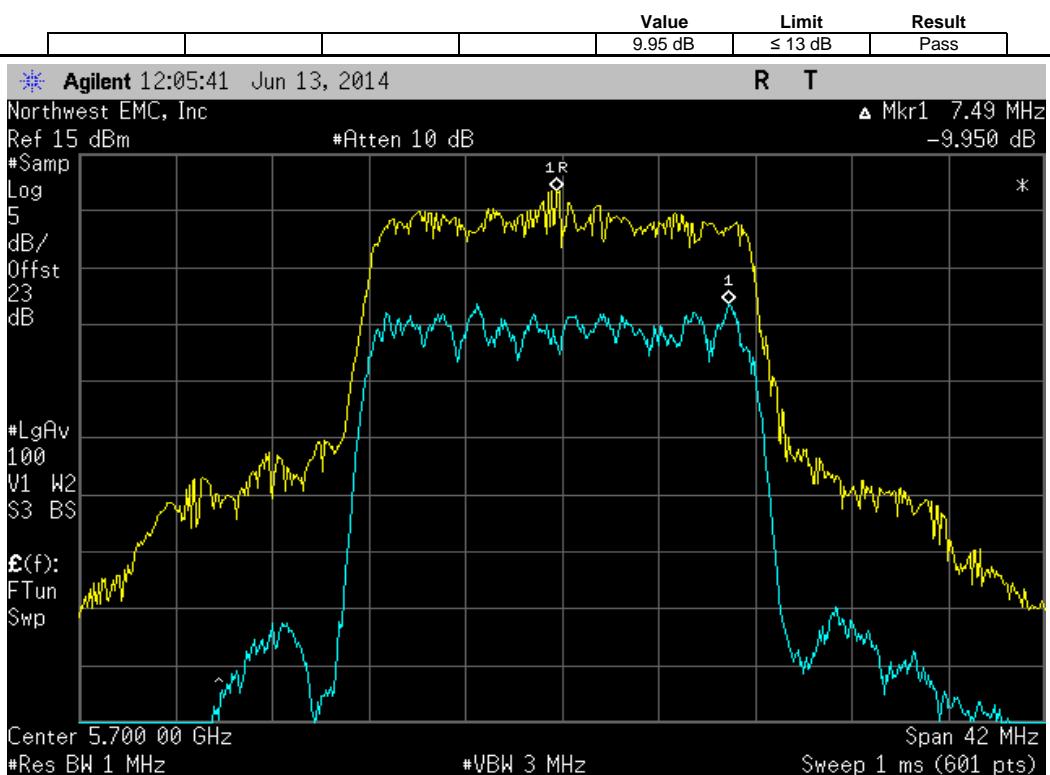
Antenna Port 1, 802.11(a) 36 Mbps, 5470 - 5725 MHz Band, Channel 100, Low Channel						
				Value	Limit	Result
				10.035 dB	≤ 13 dB	Pass



Antenna Port 1, 802.11(a) 36 Mbps, 5470 - 5725 MHz Band, Channel 116, Mid Channel						
				Value	Limit	Result
				9.581 dB	≤ 13 dB	Pass



Antenna Port 1, 802.11(a) 36 Mbps, 5470 - 5725 MHz Band, Channel 140, High Channel



## BAND EDGE COMPLIANCE

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

### TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo.)
40GHz DC Block	Miteq	DCB4000	AMD	4/28/2014	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator, 'Precision N'	S.M. Electronics	SA18N-06/SM4032	REE	12/2/2013	12
Power Meter	Agilent	N1913A	SQR	4/29/2013	36
Power Sensor	Agilent	E9300H	SQO	4/29/2013	36
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24
MXG Analog Signal Generator	Agilent	N5181A	TIG	3/28/2014	36

### 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.

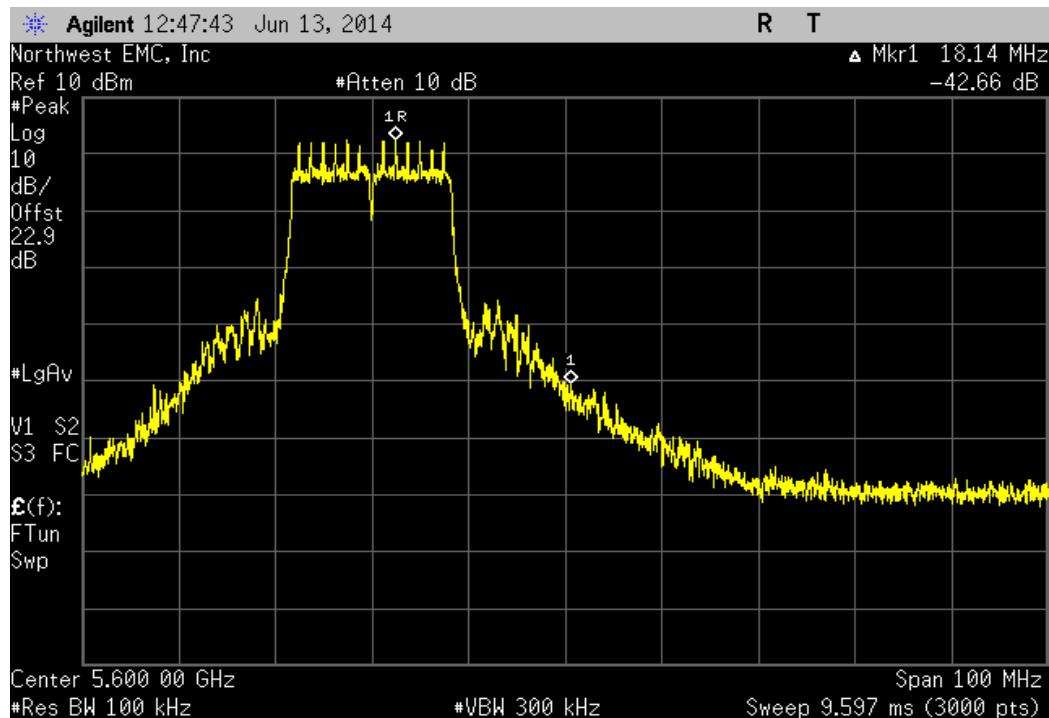


## BAND EDGE COMPLIANCE

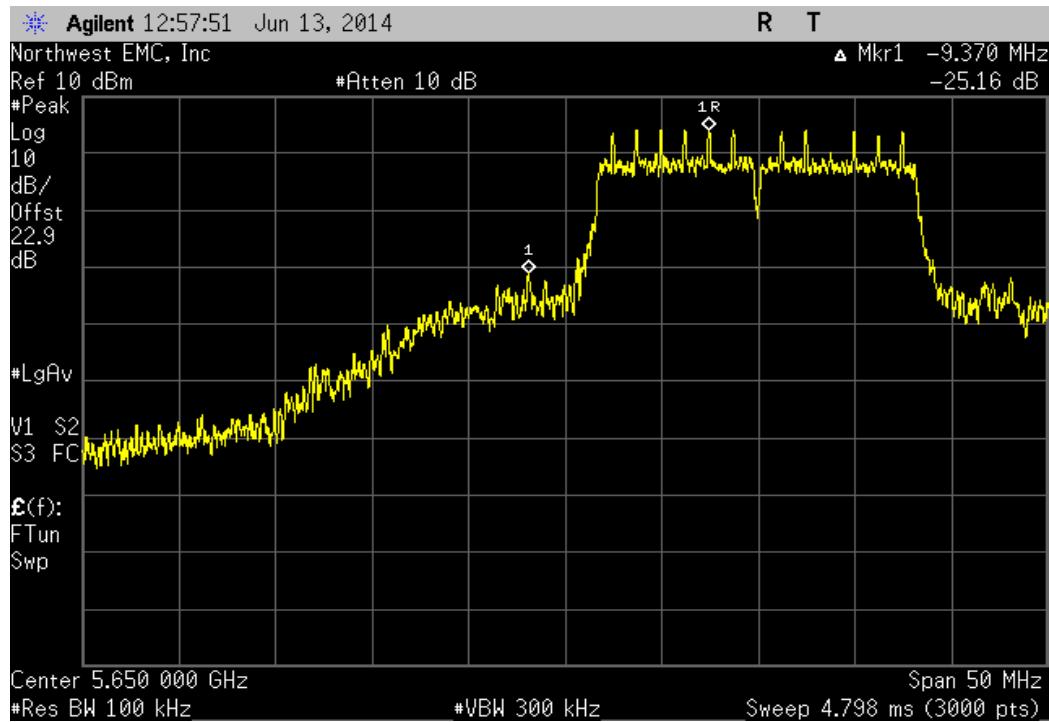
XMit 2014.02.07  
PsaTx 2014.04.29

EUT: 444-2250	Work Order: FOCU0168		
Serial Number: 02EA41000011	Date: 06/13/14		
Customer: Summit Semiconductor, LLC	Temperature: 22.5°C		
Attendees: None	Humidity: 43%		
Project: None	Barometric Pres.: 1019		
Tested by: Jared Ison	Job Site: EV06		
TEST SPECIFICATIONS	Test Method		
FCC 15.407:2014	ANSI C63.10:2009		
COMMENTS	Test was performed on the antenna port that produced the highest output power.		
DEVIATIONS FROM TEST STANDARD	None		
Configuration #	2		
	Signature		
	Value	Limit	Result
Antenna Port 1			
802.11(a) 6 Mbps			
5600 MHz Band Edge			
Channel 116, 5580 MHz	-42.66 dBc	≤ -20 dBc	Pass
Channel 132, 5660 MHz	-25.17 dBc	≤ -20 dBc	Pass
802.11(a) 18 Mbps			
5600 MHz Band Edge			
Channel 116, 5580 MHz	-37.98 dBc	≤ -20 dBc	Pass
Channel 132, 5660 MHz	-28.19 dBc	≤ -20 dBc	Pass
802.11(a) 36 Mbps			
5600 MHz Band Edge			
Channel 116, 5580 MHz	-39.36 dBc	≤ -20 dBc	Pass
Channel 132, 5660 MHz	-24.82 dBc	≤ -20 dBc	Pass

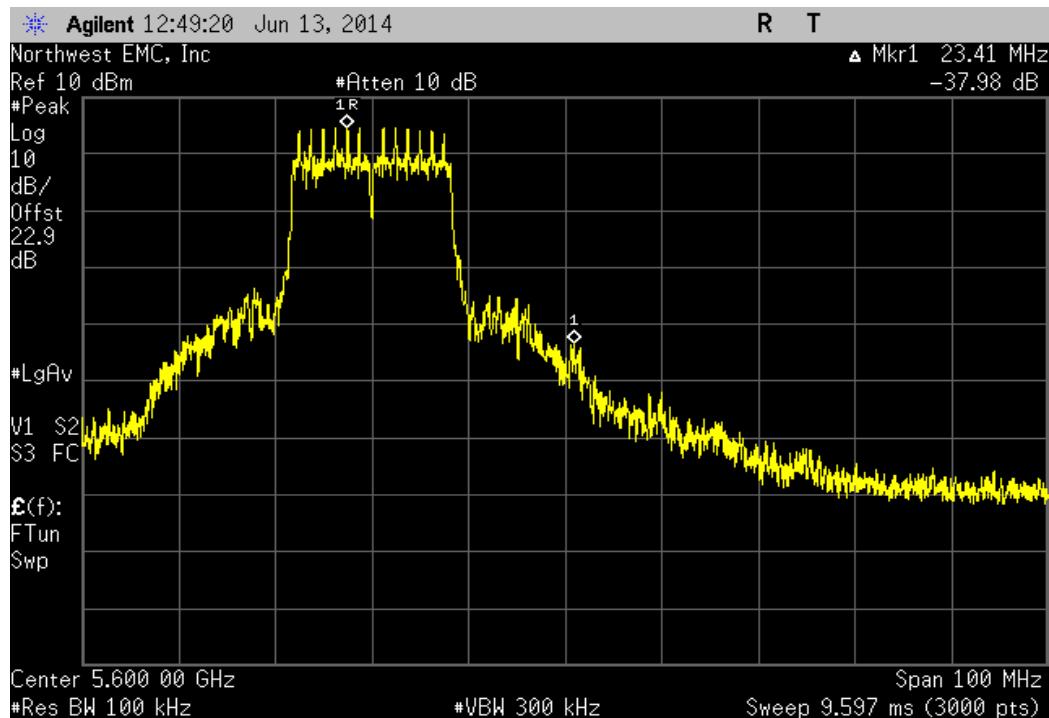
Antenna Port 1, 802.11(a) 6 Mbps, 5600 MHz Band Edge, Channel 116, 5580 MHz		
	Value	Limit
	-42.66 dBc	≤ -20 dBc



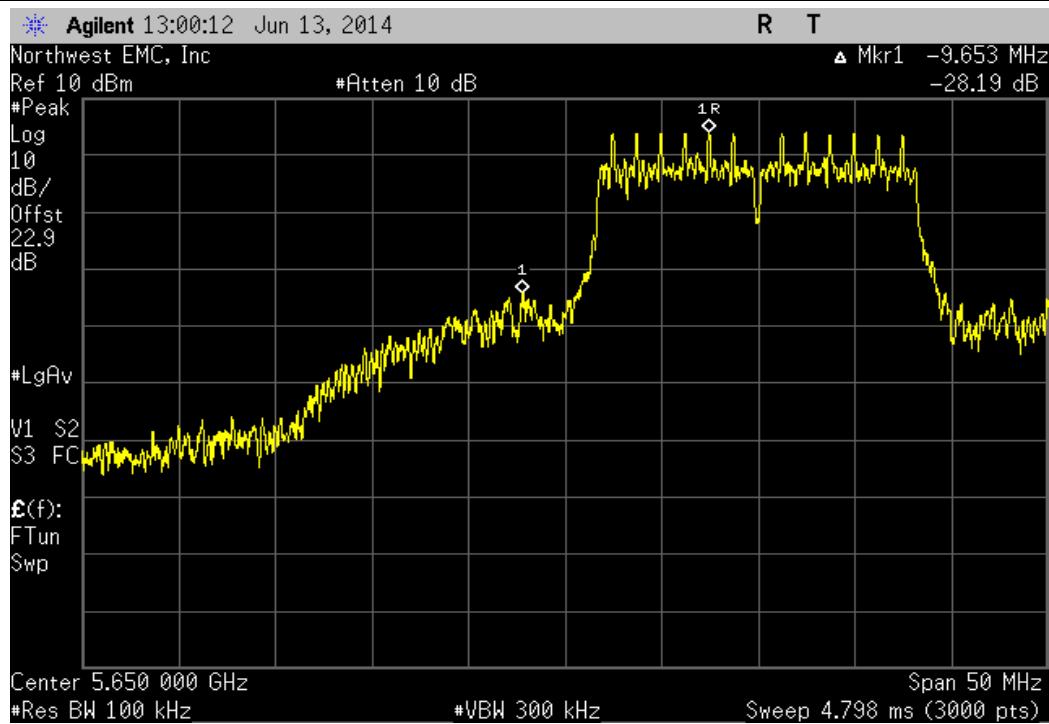
Antenna Port 1, 802.11(a) 6 Mbps, 5600 MHz Band Edge, Channel 132, 5660 MHz		
	Value	Limit
	-25.17 dBc	≤ -20 dBc



Antenna Port 1, 802.11(a) 18 Mbps, 5600 MHz Band Edge, Channel 116, 5580 MHz				Value	Limit	Result
				-37.98 dBc	≤ -20 dBc	Pass



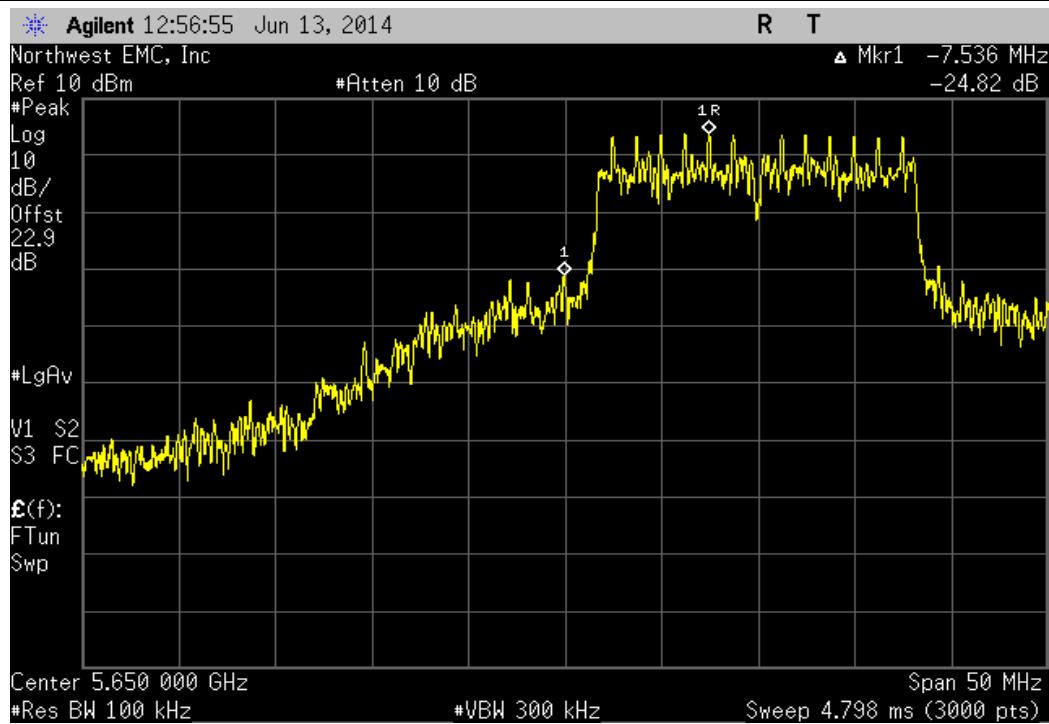
Antenna Port 1, 802.11(a) 18 Mbps, 5600 MHz Band Edge, Channel 132, 5660 MHz				Value	Limit	Result
				-28.19 dBc	≤ -20 dBc	Pass



Antenna Port 1, 802.11(a) 36 Mbps, 5600 MHz Band Edge, Channel 116, 5580 MHz				Value	Limit	Result
				-39.36 dBc	≤ -20 dBc	Pass



Antenna Port 1, 802.11(a) 36 Mbps, 5600 MHz Band Edge, Channel 132, 5660 MHz				Value	Limit	Result
				-24.82 dBc	≤ -20 dBc	Pass



## FREQUENCY STABILITY

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

### TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo.)
Spectrum Analyzer	Agilent	E4440	AFE	11/4/2013	12
Multimeter	Tektronix	DMM912	MMH	2/5/2013	24
DC Power Supply	Tektronix	PS280	TPM	NCR	0
DC Power Supply	Topward	TPS-2000	TPD	NCR	0
Multimeter	Tektronix	DMM912	MMH	2/5/2013	24
Humidity Temperature Meter	Omega	HH311	DUH	2/19/2013	36
EV06 Cable Direct Connect Cable	ESM Cable Corp.	TTBJ-141 KMKM-132	ECB	NCR	0
18GHz DC Block, 'N'	Fairview Microwave	SD3074	AMF	NCR	13
Spectrum Analyzer	Agilent	E4407B	AAU	10/23/2012	24
Chamber Temp. & Humidity	Extech	445703	CP100795	1/11/2013	24
Chamber, Temp./Humidity	Thermotron	SE/600/10/10	32292	6/18/2014	12

### TEST DESCRIPTION

#### Variation of Supply Voltage

The primary supply voltage was varied from 85% of nominal to 115% of nominal DC voltage of 18 VDC.

#### Variation of Ambient Temperature

Using a temperature chamber, the transmit frequency was recorded at the extremes of the specified temperature range (-30° to +50° C) and at 10°C intervals.

A direct connect measurement was made between the EUT's antenna cable and a spectrum analyzer. The spectrum analyzer is equipped with a precision frequency reference that exceeds the stability requirement of the EUT. Measurements were made at the lowest and highest channel of each band to determine frequency stability.

EUT: 444-2250		Work Order: FOCU0168
Serial Number: 02EA41000011		Date: 07/07/14
Customer: Summit Semiconductor		Temperature: 27.4°C
Attendee: None		Humidity: 37%
Project: None		Barometric Pres.: 1017.2 mb
Tested by: Brandon Hobbs, Jared Ison	Power: 3.3, 1.2 VDC	Job Site: Cascade Tek, EV06
TEST SPECIFICATIONS		
FCC 15.407:2012	ANSI C63.10:2009	Test Method
COMMENTS		
A 20 dB attenuator was used inline with the DC block in front of the spectrum analyzer. Extreme voltage was tested at 90% and 110%.		
DEVIATIONS FROM TEST STANDARD		
None		
Configuration #	2	Signature:
444-2250		

Low Channel, 5150 MHz - 5250 MHz Band

Frequency Stability with Variation of DC Voltage (Ambient Temperature = 20°C)

Voltage (VDC)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)	Specification (ppm)
3.63, 1.32 (110%)	5180.000000	5179.955251	8.64	100
3.3, 1.2 (100%)	5180.000000	5179.967843	6.21	100
2.97, 1.08 (90%)	5180.000000	5179.959290	7.86	100

Frequency Stability with Variation of Ambient Temperature (Primary Supply = 18 VDC)

Temp (°C)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)	Specification (ppm)
50	5180.000000	5179.958750	7.96	100
40	5180.000000	5179.954500	8.78	100
30	5180.000000	5179.955750	8.54	100
20	5180.000000	5179.961250	7.48	100
10	5180.000000	5179.965250	6.71	100
0	5180.000000	5179.967750	6.23	100
-10	5180.000000	5179.961500	7.43	100
-20	5180.000000	5179.945500	10.52	100
-30	5180.000000	5179.917250	15.97	100

High Channel, 5250 MHz - 5350 MHz Band

Frequency Stability with Variation of DC Voltage (Ambient Temperature = 20°C)

Voltage (VDC)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)	Specification (ppm)
3.63, 1.32 (110%)	5320.000000	5319.953565	8.73	100
3.3, 1.2 (100%)	5320.000000	5319.964379	6.70	100
2.97, 1.08 (90%)	5320.000000	5319.957069	8.07	100

Frequency Stability with Variation of Ambient Temperature (Primary Supply = 18 VDC)

Temp (°C)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)	Specification (ppm)
50	5320.000000	5319.958000	7.89	100
40	5320.000000	5319.953500	8.74	100
30	5320.000000	5319.954750	8.51	100
20	5320.000000	5319.960000	7.52	100
10	5320.000000	5319.965500	6.48	100
0	5320.000000	5319.967250	6.16	100
-10	5320.000000	5319.960500	7.42	100
-20	5320.000000	5319.944250	10.48	100
-30	5320.000000	5319.915000	15.98	100

Low Channel, 5470 MHz - 5725 MHz Band

Frequency Stability with Variation of DC Voltage (Ambient Temperature = 20°C)

Voltage (VDC)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)	Specification (ppm)
3.63, 1.32 (110%)	5500.000000	5499.951879	8.75	100
3.3, 1.2 (100%)	5500.000000	5499.967828	5.85	100
2.97, 1.08 (90%)	5500.000000	5499.955053	8.17	100

Frequency Stability with Variation of Ambient Temperature (Primary Supply = 18 VDC)

Temp (°C)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)	Specification (ppm)
50	5500.000000	5499.956250	7.95	100
40	5500.000000	5499.952000	8.73	100
30	5500.000000	5499.953250	8.50	100
20	5500.000000	5499.958500	7.55	100
10	5500.000000	5499.964250	6.50	100
0	5500.000000	5499.966000	6.18	100
-10	5500.000000	5499.959300	7.45	100
-20	5500.000000	5499.942250	10.50	100
-30	5500.000000	5499.911500	16.09	100

High Channel, 5470 MHz - 5725 MHz Band

Frequency Stability with Variation of DC Voltage (Ambient Temperature = 20°C)

Voltage (VDC)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)	Specification (ppm)
3.63, 1.32 (110%)	5700.000000	5699.949933	8.78	100
3.3, 1.2 (100%)	5700.000000	5699.967618	5.68	100
2.97, 1.08 (90%)	5700.000000	5699.952905	8.26	100

Frequency Stability with Variation of Ambient Temperature (Primary Supply = 18 VDC)

Temp (°C)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)	Specification (ppm)
50	5700.000000	5699.955000	7.89	100
40	5700.000000	5699.950000	8.77	100
30	5700.000000	5699.951250	8.55	100
20	5700.000000	5699.957000	7.54	100
10	5700.000000	5699.963000	6.49	100
0	5700.000000	5699.965000	6.14	100
-10	5700.000000	5699.957250	7.50	100
-20	5700.000000	5699.940500	10.44	100
-30	5700.000000	5699.908500	16.05	100

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**

Ch. 36, 5180 MHz
Ch. 48, 5240 MHz
Ch. 52, 5260 MHz
Ch. 64, 5320 MHz
Ch. 100, 5500 MHz
Ch. 116, 5580 MHz
Ch. 140, 5700 MHz

**MODES OF OPERATION**

6 Mbps
18 Mbps
36 Mbps

**POWER SETTINGS INVESTIGATED**

18 VDC
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**CONFIGURATIONS INVESTIGATED**

FOCU0168 - 1
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**FREQUENCY RANGE INVESTIGATED**

Start Frequency	30 MHz	Stop Frequency	40000 MHz
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**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
Antenna, Horn	EMCO	3115	AHF	10/6/2011	36 mo
EV01 Cable	ESM Cable Corp.	TTBJ-141 KMMK-72	ECC	8/26/2013	12 mo
OC Cable	ESM Cable Corp.	KMMK-72	OCV	6/24/2013	12 mo
Pre-Amplifier	Miteq	JSW45-26004000-40-5P	AVR	6/24/2013	12 mo
Cable	ESM Cable Corp.	KMMK-72	EVY	9/10/2013	12 mo
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AVU	9/10/2013	12 mo
Antenna, Horn	ETS Lindgren	3160-10	AIW	NCR	0 mo
Antenna, Horn	ETS Lindgren	3160-09	AIV	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVD	2/18/2014	12 mo
Antenna, Horn	ETS	3160-08	AHV	NCR	0 mo
EV01 Cables	N/A	Standard Gain Horns Cables	EVF	2/18/2014	12 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVC	2/18/2014	12 mo
Antenna, Horn	ETS	3160-07	AHU	NCR	0 mo
BP Filter	Micro-Tronics	BRC50703	HHJ	6/20/2013	36 mo
5.725-5.875 Notch Filter	Micro-Tronics	BRC50705	HGJ	2/18/2014	24 mo
5.47-5.725 Notch Filter	Micro-Tronics	BRC50704	HGI	10/4/2012	24 mo
EV01 Cables	N/A	Double Ridge Horn Cables	EVB	2/18/2014	12 mo
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	2/18/2014	12 mo
Antenna, Horn	ETS	3115	AIZ	1/24/2014	24 mo
LP Filter	Micro-Tronics	LPM50004	LFD	7/6/2012	24 mo
EV01 Cables	N/A	Bilog Cables	EVA	2/18/2014	12 mo
Pre-Amplifier	Miteq	AM-1616-1000	AOL	2/18/2014	12 mo
Antenna, Biconilog	EMCO	3141	AXG	4/10/2012	36 mo
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	12 mo

**MEASUREMENT BANDWIDTHS**

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

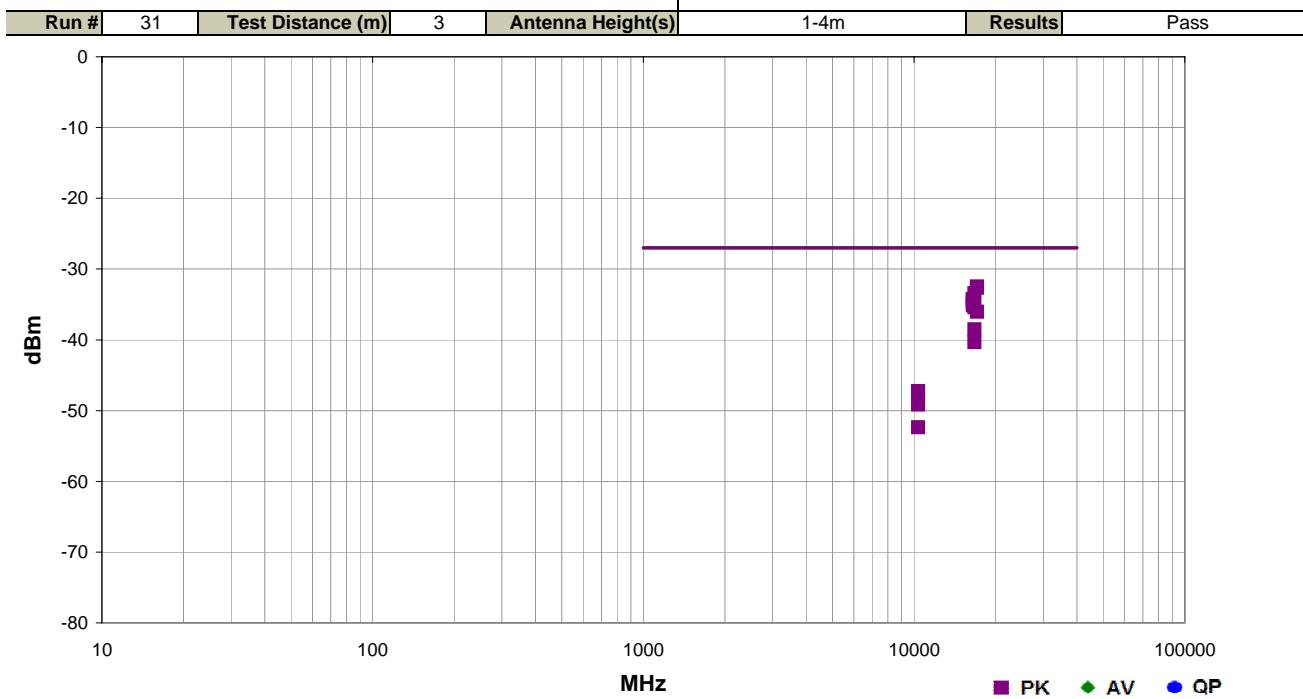
**TEST DESCRIPTION**

The highest gain antenna of each type to be used with the EUT were tested. The EUT was configured for the lowest, a middle, and the highest transmit frequency in each operational band. For each configuration, the spectrum was scanned throughout the specified range. Measurements were made to satisfy the three requirements of 47 CFR 15.407: Field strength under 1GHz, Restricted Bands of 47 CFR 15.205, and EIRP of 47 CFR 15.407.

While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis, and adjusting the measurement antenna height and polarization (per ANSI C63.10:2009). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

## SPURIOUS RADIATED EMISSIONS

Work Order:	FOCU0168	Date:	06/11/14	
Project:	None	Temperature:	22.3 °C	
Job Site:	EV01	Humidity:	42.5% RH	
Serial Number:	02EA31000BA	Barometric Pres.:	1016.6 mbar	Tested by: Jared Ison
EUT:	444-2250			
Configuration:	1			
Customer:	Summit Semiconductor LLC			
Attendees:	Paul Hamilton			
EUT Power:	18 VDC			
Operating Mode:	Continous Transmit			
Deviations:	None			
Comments:	Reference data comments for EUT channel, frequency, data rate and orientation.			
Test Specifications			Test Method	
FCC 15.407:2014			ANSI C63.10:2009	



	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
17102.250	1.2	144.0	Horz	PK	5.69E-07	-32.5	-27.0	-5.5	Ch. 140(5700MHz), 6Mbps, Ant 1, EUT Vert	
17100.800	1.3	138.0	Horz	PK	5.55E-07	-32.6	-27.0	-5.6	Ch. 140(5700MHz), 6Mbps, Ant 4, EUT Vert	
17100.550	1.0	140.0	Vert	PK	5.43E-07	-32.7	-27.0	-5.7	Ch. 140(5700MHz), 6Mbps, Ant 4, EUT Horz	
16742.180	1.3	143.0	Horz	PK	4.55E-07	-33.4	-27.0	-6.4	Ch. 116(5580MHz), 6Mbps, Ant 1, EUT Vert	
16499.210	1.1	138.0	Vert	PK	3.78E-07	-34.2	-27.0	-7.2	Ch. 100(5500MHz), 6Mbps, Ant 4, EUT Horz	
16500.750	1.0	94.0	Horz	PK	3.69E-07	-34.3	-27.0	-7.3	Ch. 100(5500MHz), 6Mbps, Ant 4, EUT Vert	
16502.230	1.0	138.0	Horz	PK	3.44E-07	-34.6	-27.0	-7.6	Ch. 100(5500MHz), 6Mbps, Ant 1, EUT Vert	
16501.830	1.0	138.0	Vert	PK	3.07E-07	-35.1	-27.0	-8.1	Ch. 100(5500MHz), 6Mbps, Ant 1, EUT Vert	
16742.130	1.1	96.0	Vert	PK	2.87E-07	-35.4	-27.0	-8.4	Ch. 116(5580MHz), 6Mbps, Ant 1, EUT Vert	
17102.230	1.0	102.0	Vert	PK	2.48E-07	-36.1	-27.0	-9.1	Ch. 140(5700MHz), 6Mbps, Ant 1, EUT Vert	
16740.590	1.0	130.0	Vert	PK	1.41E-07	-38.5	-27.0	-11.5	Ch. 116(5580MHz), 6Mbps, Ant 4, EUT Horz	
16740.360	1.0	102.0	Horz	PK	9.30E-08	-40.3	-27.0	-13.3	Ch. 116(5580MHz), 6Mbps, Ant 4, EUT Vert	
10360.240	1.3	105.0	Vert	PK	1.88E-08	-47.3	-27.0	-20.3	Ch. 36(5180MHz), 6Mbps, Ant 4, EUT Horz	
10360.070	1.0	56.0	Horz	PK	1.46E-08	-48.4	-27.0	-21.4	Ch. 36(5180MHz), 6Mbps, Ant 1, EUT Vert	
10360.410	1.2	189.0	Horz	PK	1.21E-08	-49.2	-27.0	-22.2	Ch. 36(5180MHz), 6Mbps, Ant 4, EUT Vert	
10361.190	1.0	59.0	Vert	PK	5.82E-09	-52.3	-27.0	-25.3	Ch. 36(5180MHz), 6Mbps, Ant 1, EUT Vert	





# AC POWERLINE CONDUCTED EMISSIONS

## TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50 Ω measuring port is terminated by a 50 Ω EMI meter or a 50 Ω resistive load. All 50 Ω measuring ports of the LISN are terminated by 50Ω.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
EV07 Cables	N/A	Conducted Cables	EVG	03/07/2014	12 mo
Attenuator	Fairview Microwave	SA6B10W-20	RKA	10/24/2013	12 mo
High Pass Filter	TTE	H97-100K-50-720B	HHD	01/22/2014	12 mo
Receiver	Rohde & Schwarz	ESCI	ARH	02/05/2014	12 mo
LISN	Solar	9252-50-R-24-BNC	LIR	10/09/2013	12 mo

## MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	2.94 dB	-2.94 dB

## CONFIGURATIONS INVESTIGATED

FOCU0168-3

## MODES INVESTIGATED

Continuous Transmit, Ch. 100 5500 MHz, 6Mbps, Ant 1  
 Continuous Transmit, Ch. 116 5580 MHz, 6Mbps, Ant 1  
 Continuous Transmit, Ch. 140 5700 MHz, 6Mbps, Ant 1  
 Continuous Transmit, Ch. 36 5180, 6Mbps, Ant 1  
 Continuous Transmit, Ch. 48 5240 MHz, 6Mbps, Ant 1  
 Continuous Transmit, Ch. 52 5260 MHz, 6Mbps, Ant 1  
 Continuous Transmit, Ch. 64 5320 MHz, 6Mbps, Ant 1

# AC POWERLINE CONDUCTED EMISSIONS

EUT:	444-2250	Work Order:	FOCU0168
Serial Number:	02EA310000BA	Date:	06/13/2014
Customer:	Summit Semiconductor LLC	Temperature:	22°C
Attendees:	None	Relative Humidity:	45%
Customer Project:	None	Bar. Pressure:	1012 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	16 VDC	Configuration:	FOCU0168-3

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

## TEST PARAMETERS

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

None

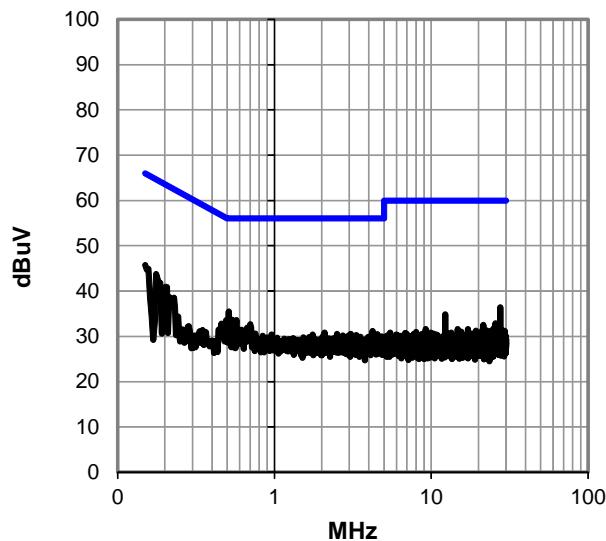
## EUT OPERATING MODES

Continuous Transmit, Ch. 36 5180, 6Mbps, Ant 1

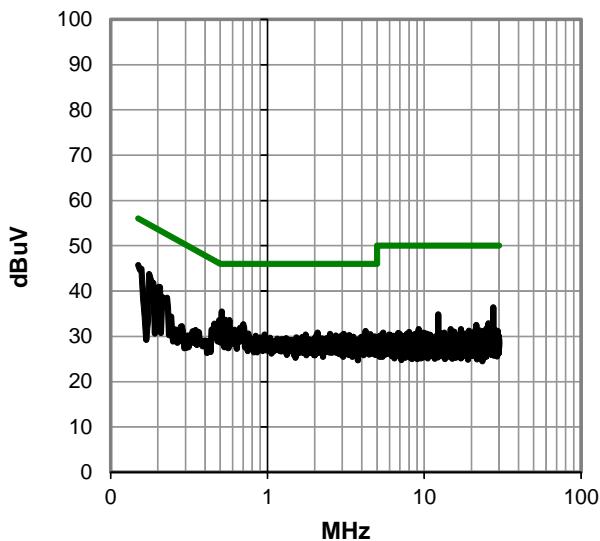
## DEVIATIONS FROM TEST STANDARD

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)
0.150	26.1	19.6	45.7	66.0	-20.3
0.512	15.7	19.8	35.5	56.0	-20.5
0.176	24.0	19.7	43.7	64.7	-20.9
0.538	13.9	19.8	33.7	56.0	-22.3
0.572	13.8	19.8	33.6	56.0	-22.4
0.493	13.8	19.8	33.6	56.1	-22.5
0.202	21.2	19.7	40.9	63.5	-22.6
0.560	13.6	19.8	33.4	56.0	-22.6
0.702	12.9	19.8	32.7	56.0	-23.3
27.646	16.7	19.7	36.4	60.0	-23.6
0.460	13.0	19.8	32.8	56.7	-23.9
0.213	18.9	19.7	38.6	63.1	-24.4
0.616	11.7	19.8	31.5	56.0	-24.5
4.220	11.6	19.6	31.2	56.0	-24.8
12.290	15.4	19.5	34.9	60.0	-25.1
2.083	11.2	19.6	30.8	56.0	-25.2
0.754	10.9	19.7	30.6	56.0	-25.4
2.512	11.0	19.6	30.6	56.0	-25.4
3.064	11.0	19.6	30.6	56.0	-25.4
4.545	10.9	19.6	30.5	56.0	-25.5
1.758	10.8	19.6	30.4	56.0	-25.6
0.960	10.7	19.7	30.4	56.0	-25.6
4.246	10.8	19.6	30.4	56.0	-25.6
3.019	10.8	19.6	30.4	56.0	-25.6
4.231	10.7	19.6	30.3	56.0	-25.7
3.317	10.7	19.6	30.3	56.0	-25.7

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.150	26.1	19.6	45.7	56.0	-10.3
0.512	15.7	19.8	35.5	46.0	-10.5
0.176	24.0	19.7	43.7	54.7	-10.9
0.538	13.9	19.8	33.7	46.0	-12.3
0.572	13.8	19.8	33.6	46.0	-12.4
0.493	13.8	19.8	33.6	46.1	-12.5
0.202	21.2	19.7	40.9	53.5	-12.6
0.560	13.6	19.8	33.4	46.0	-12.6
0.702	12.9	19.8	32.7	46.0	-13.3
27.646	16.7	19.7	36.4	50.0	-13.6
0.460	13.0	19.8	32.8	46.7	-13.9
0.213	18.9	19.7	38.6	53.1	-14.4
0.616	11.7	19.8	31.5	46.0	-14.5
4.220	11.6	19.6	31.2	46.0	-14.8
12.290	15.4	19.5	34.9	50.0	-15.1
2.083	11.2	19.6	30.8	46.0	-15.2
0.754	10.9	19.7	30.6	46.0	-15.4
2.512	11.0	19.6	30.6	46.0	-15.4
3.064	11.0	19.6	30.6	46.0	-15.4
4.545	10.9	19.6	30.5	46.0	-15.5
1.758	10.8	19.6	30.4	46.0	-15.6
0.960	10.7	19.7	30.4	46.0	-15.6
4.246	10.8	19.6	30.4	46.0	-15.6
3.019	10.8	19.6	30.4	46.0	-15.6
4.231	10.7	19.6	30.3	46.0	-15.7
3.317	10.7	19.6	30.3	46.0	-15.7

## CONCLUSION

Pass



Tested By

# AC POWERLINE CONDUCTED EMISSIONS

EUT:	444-2250	Work Order:	FOCU0168
Serial Number:	02EA310000BA	Date:	06/13/2014
Customer:	Summit Semiconductor LLC	Temperature:	22°C
Attendees:	None	Relative Humidity:	45%
Customer Project:	None	Bar. Pressure:	1012 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	16 VDC	Configuration:	FOCU0168-3

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

## TEST PARAMETERS

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

None

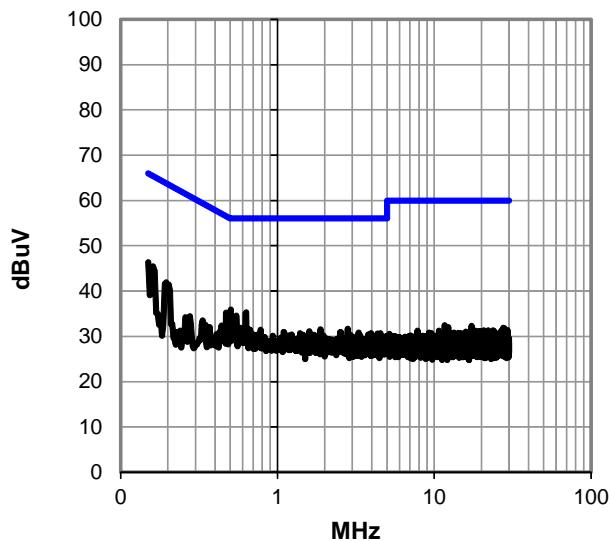
## EUT OPERATING MODES

Continuous Transmit, Ch. 36 5180, 6Mbps, Ant 1

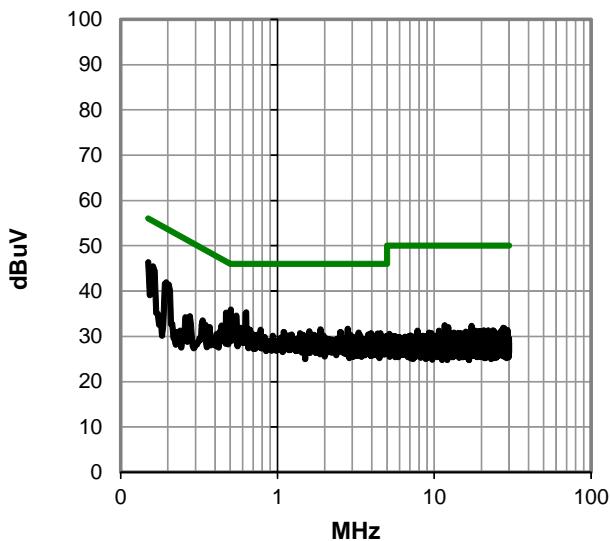
## DEVIATIONS FROM TEST STANDARD

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)
0.150	26.7	19.6	46.3	66.0	-19.7
0.161	25.7	19.7	45.4	65.4	-20.0
0.504	16.1	19.8	35.9	56.0	-20.1
0.631	15.5	19.8	35.3	56.0	-20.7
0.471	15.4	19.8	35.2	56.5	-21.3
0.545	14.8	19.8	34.6	56.0	-21.4
0.195	22.2	19.7	41.9	63.8	-21.9
0.583	12.1	19.8	31.9	56.0	-24.1
2.806	12.1	19.6	31.7	56.0	-24.3
1.881	11.9	19.6	31.5	56.0	-24.5
0.669	11.7	19.8	31.5	56.0	-24.5
0.463	12.3	19.8	32.1	56.6	-24.5
0.781	11.7	19.7	31.4	56.0	-24.6
0.441	12.6	19.8	32.4	57.0	-24.6
1.598	11.5	19.6	31.1	56.0	-24.9
1.098	11.3	19.7	31.0	56.0	-25.0
2.512	11.3	19.6	30.9	56.0	-25.1
2.541	11.3	19.6	30.9	56.0	-25.1
3.288	11.3	19.6	30.9	56.0	-25.1
3.948	11.1	19.6	30.7	56.0	-25.3
4.545	11.1	19.6	30.7	56.0	-25.3
1.396	11.0	19.7	30.7	56.0	-25.3
4.351	11.0	19.6	30.6	56.0	-25.4
3.799	10.8	19.6	30.4	56.0	-25.6
1.232	10.7	19.7	30.4	56.0	-25.6
1.456	10.7	19.7	30.4	56.0	-25.6

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.150	26.7	19.6	46.3	56.0	-9.7
0.161	25.7	19.7	45.4	55.4	-10.0
0.504	16.1	19.8	35.9	46.0	-10.1
0.631	15.5	19.8	35.3	46.0	-10.7
0.471	15.4	19.8	35.2	46.5	-11.3
0.545	14.8	19.8	34.6	46.0	-11.4
0.195	22.2	19.7	41.9	53.8	-11.9
0.583	12.1	19.8	31.9	46.0	-14.1
2.806	12.1	19.6	31.7	46.0	-14.3
1.881	11.9	19.6	31.5	46.0	-14.5
0.669	11.7	19.8	31.5	46.0	-14.5
0.463	12.3	19.8	32.1	46.6	-14.5
0.781	11.7	19.7	31.4	46.0	-14.6
0.441	12.6	19.8	32.4	47.0	-14.6
1.598	11.5	19.6	31.1	46.0	-14.9
1.098	11.3	19.7	31.0	46.0	-15.0
2.512	11.3	19.6	30.9	46.0	-15.1
2.541	11.3	19.6	30.9	46.0	-15.1
3.288	11.3	19.6	30.9	46.0	-15.1
3.948	11.1	19.6	30.7	46.0	-15.3
4.545	11.1	19.6	30.7	46.0	-15.3
1.396	11.0	19.7	30.7	46.0	-15.3
4.351	11.0	19.6	30.6	46.0	-15.4
3.799	10.8	19.6	30.4	46.0	-15.6
1.232	10.7	19.7	30.4	46.0	-15.6
1.456	10.7	19.7	30.4	46.0	-15.6

## CONCLUSION

Pass



Tested By

# AC POWERLINE CONDUCTED EMISSIONS

EUT:	444-2250	Work Order:	FOCU0168
Serial Number:	02EA310000BA	Date:	06/13/2014
Customer:	Summit Semiconductor LLC	Temperature:	22°C
Attendees:	None	Relative Humidity:	45%
Customer Project:	None	Bar. Pressure:	1012 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	16 VDC	Configuration:	FOCU0168-3

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

## TEST PARAMETERS

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

None

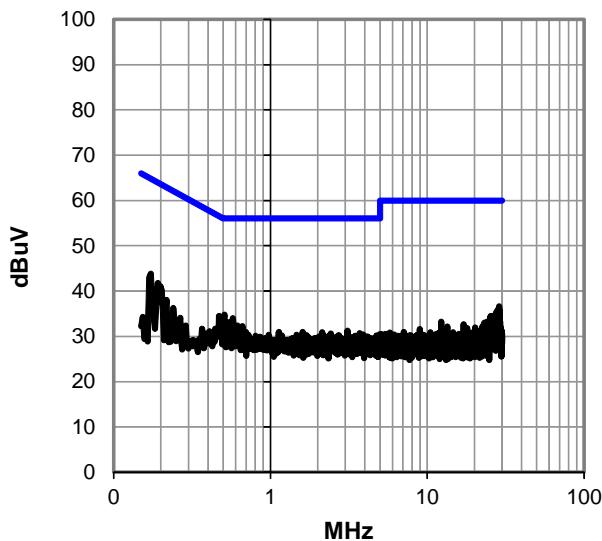
## EUT OPERATING MODES

Continuous Transmit, Ch. 48 5240 MHz, 6Mbps, Ant 1

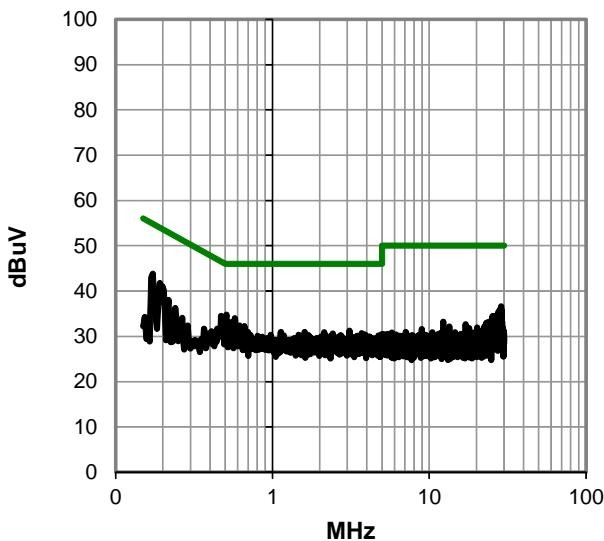
## DEVIATIONS FROM TEST STANDARD

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)
0.172	24.1	19.7	43.8	64.8	-21.0
0.508	15.0	19.8	34.8	56.0	-21.2
0.471	14.7	19.8	34.5	56.5	-22.0
0.575	14.2	19.8	34.0	56.0	-22.0
0.486	14.4	19.8	34.2	56.2	-22.0
0.191	22.0	19.7	41.7	64.0	-22.3
0.199	21.3	19.7	41.0	63.7	-22.6
0.538	13.3	19.8	33.1	56.0	-22.9
28.825	16.9	19.7	36.6	60.0	-23.4
0.616	12.6	19.8	32.4	56.0	-23.6
0.661	12.5	19.8	32.3	56.0	-23.7
28.549	16.4	19.7	36.1	60.0	-23.9
28.597	16.2	19.7	35.9	60.0	-24.1
28.870	16.1	19.7	35.8	60.0	-24.2
28.358	16.1	19.7	35.8	60.0	-24.2
28.209	15.9	19.7	35.6	60.0	-24.4
27.788	15.8	19.7	35.5	60.0	-24.5
28.791	15.7	19.7	35.4	60.0	-24.6
28.302	15.7	19.7	35.4	60.0	-24.6
28.086	15.7	19.7	35.4	60.0	-24.6
3.097	11.7	19.5	31.2	56.0	-24.8
0.217	18.3	19.7	38.0	62.9	-24.9
1.131	11.3	19.7	31.0	56.0	-25.0
0.698	11.2	19.8	31.0	56.0	-25.0
1.601	11.3	19.6	30.9	56.0	-25.1
2.139	11.3	19.6	30.9	56.0	-25.1

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.172	24.1	19.7	43.8	54.8	-11.0
0.508	15.0	19.8	34.8	46.0	-11.2
0.471	14.7	19.8	34.5	46.5	-12.0
0.575	14.2	19.8	34.0	46.0	-12.0
0.486	14.4	19.8	34.2	46.2	-12.0
0.191	22.0	19.7	41.7	54.0	-12.3
0.199	21.3	19.7	41.0	53.7	-12.6
0.538	13.3	19.8	33.1	46.0	-12.9
28.825	16.9	19.7	36.6	50.0	-13.4
0.616	12.6	19.8	32.4	46.0	-13.6
0.661	12.5	19.8	32.3	46.0	-13.7
28.549	16.4	19.7	36.1	50.0	-13.9
28.597	16.2	19.7	35.9	50.0	-14.1
28.870	16.1	19.7	35.8	50.0	-14.2
28.358	16.1	19.7	35.8	50.0	-14.2
28.209	15.9	19.7	35.6	50.0	-14.4
27.788	15.8	19.7	35.5	50.0	-14.5
28.791	15.7	19.7	35.4	50.0	-14.6
28.302	15.7	19.7	35.4	50.0	-14.6
28.086	15.7	19.7	35.4	50.0	-14.6
3.097	11.7	19.5	31.2	46.0	-14.8
0.217	18.3	19.7	38.0	52.9	-14.9
1.131	11.3	19.7	31.0	46.0	-15.0
0.698	11.2	19.8	31.0	46.0	-15.0
1.601	11.3	19.6	30.9	46.0	-15.1
2.139	11.3	19.6	30.9	46.0	-15.1

## CONCLUSION

Pass



Tested By

# AC POWERLINE CONDUCTED EMISSIONS

EUT:	444-2250	Work Order:	FOCU0168
Serial Number:	02EA310000BA	Date:	06/13/2014
Customer:	Summit Semiconductor LLC	Temperature:	22°C
Attendees:	None	Relative Humidity:	45%
Customer Project:	None	Bar. Pressure:	1012 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	16 VDC	Configuration:	FOCU0168-3

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

## TEST PARAMETERS

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

None

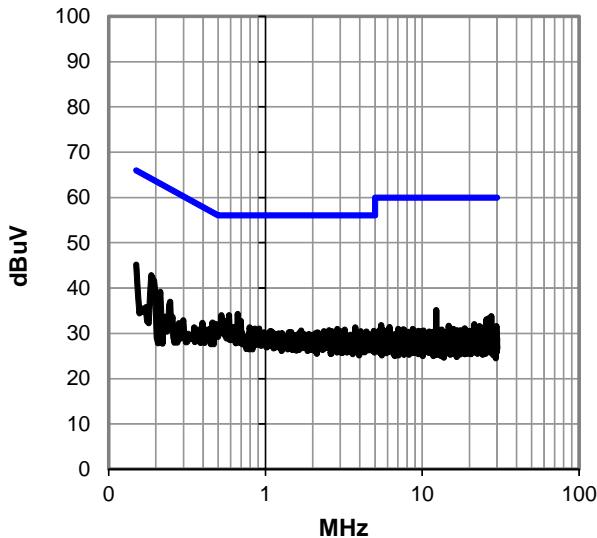
## EUT OPERATING MODES

Continuous Transmit, Ch. 48 5240 MHz, 6Mbps, Ant 1

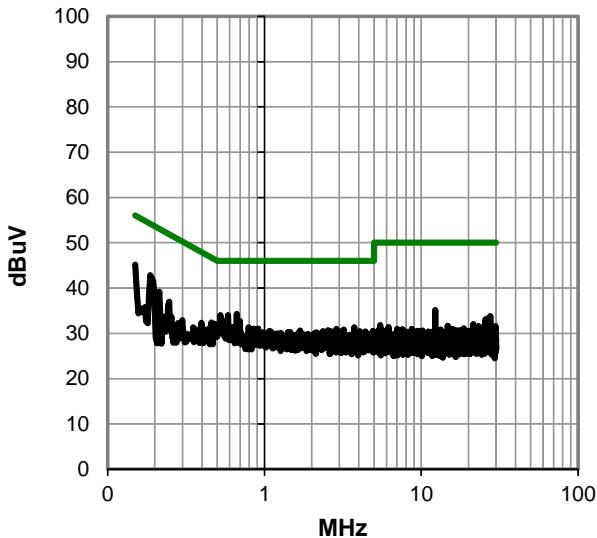
## DEVIATIONS FROM TEST STANDARD

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)
0.150	25.5	19.6	45.1	66.0	-20.9
0.187	23.1	19.7	42.8	64.2	-21.3
0.665	14.5	19.8	34.3	56.0	-21.7
0.523	14.2	19.8	34.0	56.0	-22.0
0.587	14.2	19.8	34.0	56.0	-22.0
0.684	13.0	19.8	32.8	56.0	-23.2
0.698	13.0	19.8	32.8	56.0	-23.2
0.213	19.4	19.7	39.1	63.1	-23.9
0.460	12.6	19.8	32.4	56.7	-24.3
0.792	11.6	19.7	31.3	56.0	-24.7
3.739	11.7	19.6	31.3	56.0	-24.7
12.286	15.7	19.5	35.2	60.0	-24.8
0.247	17.2	19.7	36.9	61.9	-24.9
0.859	11.3	19.7	31.0	56.0	-25.0
0.911	11.3	19.7	31.0	56.0	-25.0
2.877	11.4	19.6	31.0	56.0	-25.0
3.202	11.3	19.5	30.8	56.0	-25.2
0.818	11.1	19.7	30.8	56.0	-25.2
2.545	11.1	19.6	30.7	56.0	-25.3
1.691	11.0	19.6	30.6	56.0	-25.4
4.922	11.0	19.6	30.6	56.0	-25.4
1.072	10.8	19.7	30.5	56.0	-25.5
4.056	10.9	19.6	30.5	56.0	-25.5
2.362	10.9	19.6	30.5	56.0	-25.5
2.650	10.9	19.6	30.5	56.0	-25.5
3.004	10.9	19.6	30.5	56.0	-25.5

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.150	25.5	19.6	45.1	56.0	-10.9
0.187	23.1	19.7	42.8	54.2	-11.3
0.665	14.5	19.8	34.3	46.0	-11.7
0.523	14.2	19.8	34.0	46.0	-12.0
0.587	14.2	19.8	34.0	46.0	-12.0
0.684	13.0	19.8	32.8	46.0	-13.2
0.698	13.0	19.8	32.8	46.0	-13.2
0.213	19.4	19.7	39.1	53.1	-13.9
0.460	12.6	19.8	32.4	46.7	-14.3
0.792	11.6	19.7	31.3	46.0	-14.7
3.739	11.7	19.6	31.3	46.0	-14.7
12.286	15.7	19.5	35.2	50.0	-14.8
0.247	17.2	19.7	36.9	51.9	-14.9
0.859	11.3	19.7	31.0	46.0	-15.0
0.911	11.3	19.7	31.0	46.0	-15.0
2.877	11.4	19.6	31.0	46.0	-15.0
3.202	11.3	19.5	30.8	46.0	-15.2
0.818	11.1	19.7	30.8	46.0	-15.2
2.545	11.1	19.6	30.7	46.0	-15.3
1.691	11.0	19.6	30.6	46.0	-15.4
4.922	11.0	19.6	30.6	46.0	-15.4
1.072	10.8	19.7	30.5	46.0	-15.5
4.056	10.9	19.6	30.5	46.0	-15.5
2.362	10.9	19.6	30.5	46.0	-15.5
2.650	10.9	19.6	30.5	46.0	-15.5
3.004	10.9	19.6	30.5	46.0	-15.5

## CONCLUSION

Pass


  
 Tested By

# AC POWERLINE CONDUCTED EMISSIONS

EUT:	444-2250	Work Order:	FOCU0168
Serial Number:	02EA310000BA	Date:	06/13/2014
Customer:	Summit Semiconductor LLC	Temperature:	22°C
Attendees:	None	Relative Humidity:	45%
Customer Project:	None	Bar. Pressure:	1012 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	16 VDC	Configuration:	FOCU0168-3

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

## TEST PARAMETERS

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

None

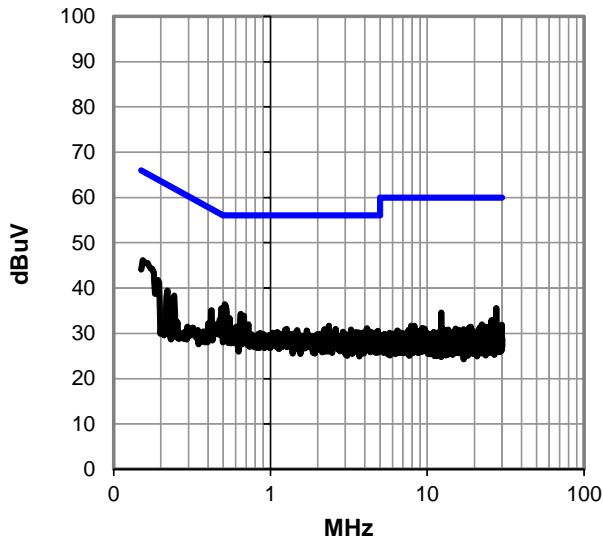
## EUT OPERATING MODES

Continuous Transmit, Ch. 52 5260 MHz, 6Mbps, Ant 1

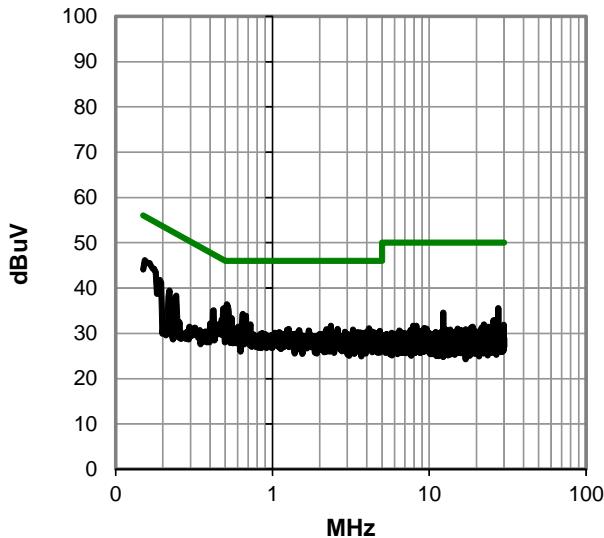
## DEVIATIONS FROM TEST STANDARD

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

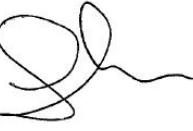
Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.512	16.6	19.8	36.4	56.0	-19.6
0.154	26.5	19.7	46.2	65.8	-19.6
0.486	15.7	19.8	35.5	56.2	-20.7
0.646	14.5	19.8	34.3	56.0	-21.7
0.676	14.1	19.8	33.9	56.0	-22.1
0.422	15.3	19.8	35.1	57.4	-22.3
0.549	13.6	19.8	33.4	56.0	-22.6
0.665	13.4	19.8	33.2	56.0	-22.8
0.221	19.7	19.7	39.4	62.8	-23.3
0.243	18.6	19.7	38.3	62.0	-23.6
0.725	12.2	19.8	32.0	56.0	-24.0
2.359	12.1	19.6	31.7	56.0	-24.3
27.646	15.9	19.7	35.6	60.0	-24.4
0.635	11.8	19.8	31.6	56.0	-24.4
0.605	11.7	19.8	31.5	56.0	-24.5
4.120	11.5	19.6	31.1	56.0	-24.9
0.572	11.3	19.8	31.1	56.0	-24.9
2.601	11.4	19.6	31.0	56.0	-25.0
1.269	11.3	19.7	31.0	56.0	-25.0
2.213	11.3	19.6	30.9	56.0	-25.1
3.269	11.3	19.6	30.9	56.0	-25.1
1.236	11.1	19.7	30.8	56.0	-25.2
1.478	11.0	19.7	30.7	56.0	-25.3
1.702	11.0	19.6	30.6	56.0	-25.4
4.843	11.0	19.6	30.6	56.0	-25.4
12.290	15.1	19.5	34.6	60.0	-25.4

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.512	16.6	19.8	36.4	46.0	-9.6
0.154	26.5	19.7	46.2	55.8	-9.6
0.486	15.7	19.8	35.5	46.2	-10.7
0.646	14.5	19.8	34.3	46.0	-11.7
0.676	14.1	19.8	33.9	46.0	-12.1
0.422	15.3	19.8	35.1	47.4	-12.3
0.549	13.6	19.8	33.4	46.0	-12.6
0.665	13.4	19.8	33.2	46.0	-12.8
0.221	19.7	19.7	39.4	52.8	-13.3
0.243	18.6	19.7	38.3	52.0	-13.6
0.725	12.2	19.8	32.0	46.0	-14.0
2.359	12.1	19.6	31.7	46.0	-14.3
27.646	15.9	19.7	35.6	50.0	-14.4
0.635	11.8	19.8	31.6	46.0	-14.4
0.605	11.7	19.8	31.5	46.0	-14.5
4.120	11.5	19.6	31.1	46.0	-14.9
0.572	11.3	19.8	31.1	46.0	-14.9
2.601	11.4	19.6	31.0	46.0	-15.0
1.269	11.3	19.7	31.0	46.0	-15.0
2.213	11.3	19.6	30.9	46.0	-15.1
3.269	11.3	19.6	30.9	46.0	-15.1
1.236	11.1	19.7	30.8	46.0	-15.2
1.478	11.0	19.7	30.7	46.0	-15.3
1.702	11.0	19.6	30.6	46.0	-15.4
4.843	11.0	19.6	30.6	46.0	-15.4
12.290	15.1	19.5	34.6	50.0	-15.4

## CONCLUSION

Pass


  
 Tested By

# AC POWERLINE CONDUCTED EMISSIONS

EUT:	444-2250	Work Order:	FOCU0168
Serial Number:	02EA310000BA	Date:	06/13/2014
Customer:	Summit Semiconductor LLC	Temperature:	22°C
Attendees:	None	Relative Humidity:	45%
Customer Project:	None	Bar. Pressure:	1012 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	16 VDC	Configuration:	FOCU0168-3

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

## TEST PARAMETERS

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

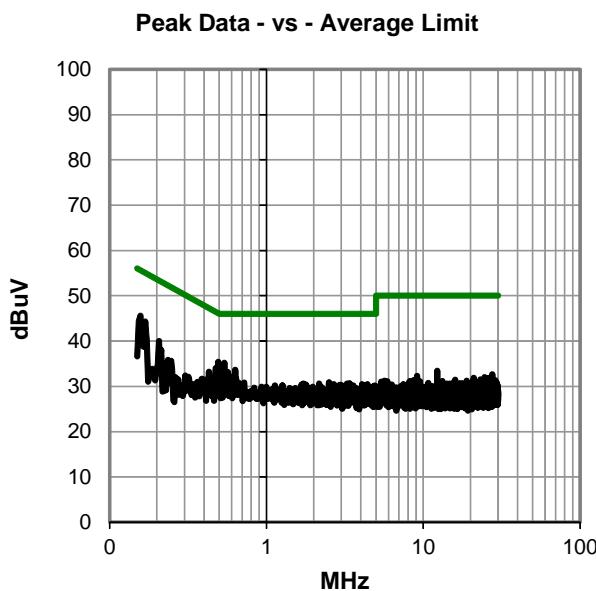
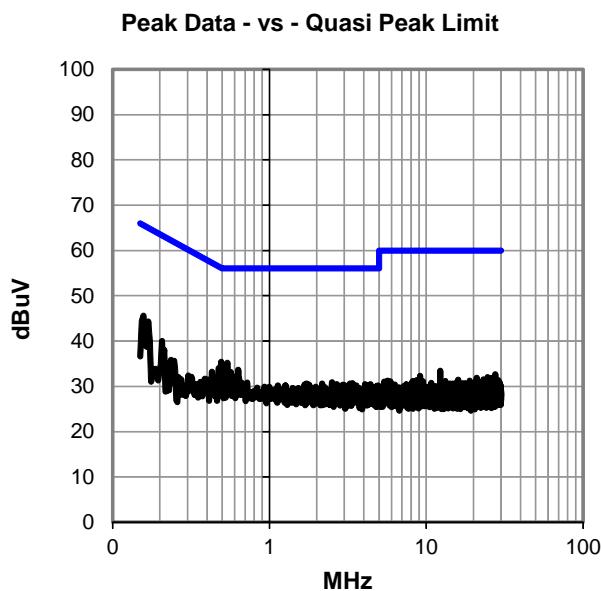
None

## EUT OPERATING MODES

Continuous Transmit, Ch. 52 5260 MHz, 6Mbps, Ant 1

## DEVIATIONS FROM TEST STANDARD

None



# AC POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #7

Peak Data - vs - Quasi Peak Limit

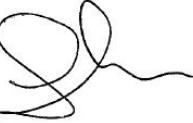
Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.157	25.9	19.7	45.6	65.6	-20.0
0.169	24.6	19.7	44.3	65.0	-20.7
0.493	15.6	19.8	35.4	56.1	-20.7
0.538	15.4	19.8	35.2	56.0	-20.8
0.512	14.9	19.8	34.7	56.0	-21.3
0.631	13.9	19.8	33.7	56.0	-22.3
0.549	13.4	19.8	33.2	56.0	-22.8
0.568	13.4	19.8	33.2	56.0	-22.8
0.206	20.3	19.7	40.0	63.4	-23.3
0.579	12.6	19.8	32.4	56.0	-23.6
0.430	13.4	19.8	33.2	57.3	-24.1
2.504	11.3	19.6	30.9	56.0	-25.1
0.721	11.1	19.8	30.9	56.0	-25.1
3.388	11.1	19.6	30.7	56.0	-25.3
3.265	11.1	19.6	30.7	56.0	-25.3
1.724	11.0	19.6	30.6	56.0	-25.4
2.172	11.0	19.6	30.6	56.0	-25.4
4.075	10.9	19.6	30.5	56.0	-25.5
4.399	10.9	19.6	30.5	56.0	-25.5
2.687	10.9	19.6	30.5	56.0	-25.5
1.676	10.8	19.6	30.4	56.0	-25.6
1.788	10.8	19.6	30.4	56.0	-25.6
2.926	10.8	19.6	30.4	56.0	-25.6
2.989	10.8	19.6	30.4	56.0	-25.6
3.586	10.6	19.6	30.2	56.0	-25.8
1.135	10.5	19.7	30.2	56.0	-25.8

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.157	25.9	19.7	45.6	55.6	-10.0
0.169	24.6	19.7	44.3	55.0	-10.7
0.493	15.6	19.8	35.4	46.1	-10.7
0.538	15.4	19.8	35.2	46.0	-10.8
0.512	14.9	19.8	34.7	46.0	-11.3
0.631	13.9	19.8	33.7	46.0	-12.3
0.549	13.4	19.8	33.2	46.0	-12.8
0.568	13.4	19.8	33.2	46.0	-12.8
0.206	20.3	19.7	40.0	53.4	-13.3
0.579	12.6	19.8	32.4	46.0	-13.6
0.430	13.4	19.8	33.2	47.3	-14.1
2.504	11.3	19.6	30.9	46.0	-15.1
0.721	11.1	19.8	30.9	46.0	-15.1
3.388	11.1	19.6	30.7	46.0	-15.3
3.265	11.1	19.6	30.7	46.0	-15.3
1.724	11.0	19.6	30.6	46.0	-15.4
2.172	11.0	19.6	30.6	46.0	-15.4
4.075	10.9	19.6	30.5	46.0	-15.5
4.399	10.9	19.6	30.5	46.0	-15.5
2.687	10.9	19.6	30.5	46.0	-15.5
1.676	10.8	19.6	30.4	46.0	-15.6
1.788	10.8	19.6	30.4	46.0	-15.6
2.926	10.8	19.6	30.4	46.0	-15.6
2.989	10.8	19.6	30.4	46.0	-15.6
3.586	10.6	19.6	30.2	46.0	-15.8
1.135	10.5	19.7	30.2	46.0	-15.8

## CONCLUSION

Pass



Tested By

# AC POWERLINE CONDUCTED EMISSIONS

EUT:	444-2250	Work Order:	FOCU0168
Serial Number:	02EA310000BA	Date:	06/13/2014
Customer:	Summit Semiconductor LLC	Temperature:	22°C
Attendees:	None	Relative Humidity:	45%
Customer Project:	None	Bar. Pressure:	1012 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	16 VDC	Configuration:	FOCU0168-3

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

## TEST PARAMETERS

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

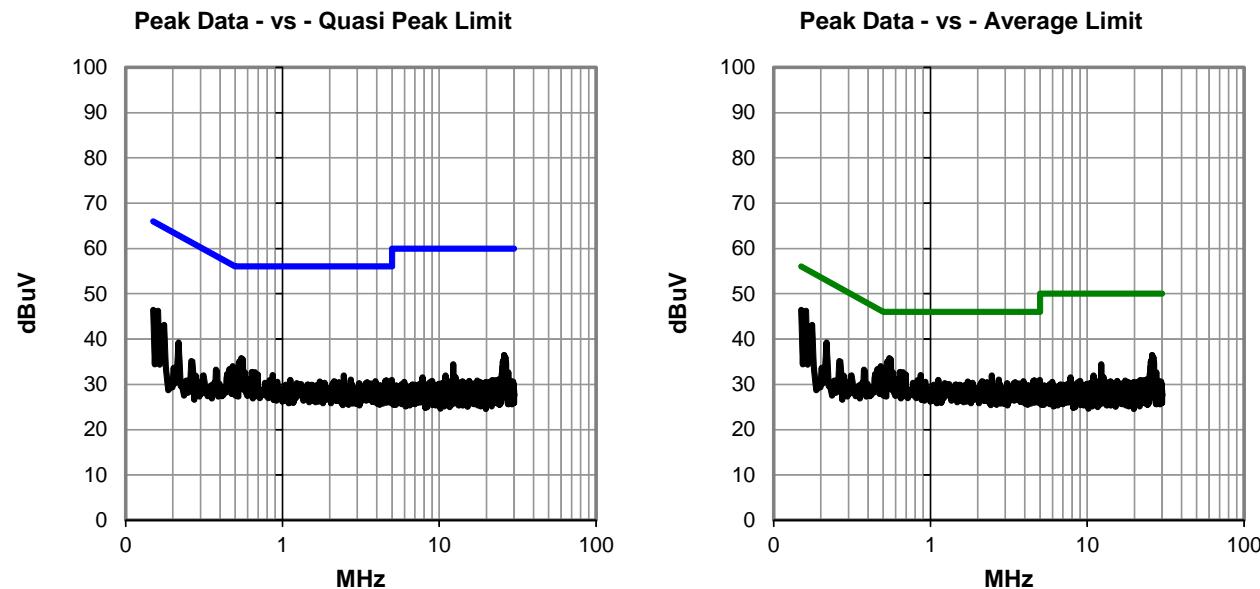
None

## EUT OPERATING MODES

Continuous Transmit, Ch. 64 5320 MHz, 6Mbps, Ant 1

## DEVIATIONS FROM TEST STANDARD

None



# AC POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #8

Peak Data - vs - Quasi Peak Limit

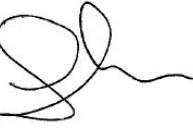
Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.161	26.5	19.7	46.2	65.4	-19.2
0.150	26.8	19.6	46.4	66.0	-19.6
0.545	16.0	19.8	35.8	56.0	-20.2
0.560	15.7	19.8	35.5	56.0	-20.5
0.531	15.3	19.8	35.1	56.0	-20.9
0.176	23.4	19.7	43.1	64.7	-21.5
0.482	14.2	19.8	34.0	56.3	-22.3
0.639	13.0	19.8	32.8	56.0	-23.2
0.460	13.6	19.8	33.4	56.7	-23.3
0.669	12.9	19.8	32.7	56.0	-23.3
0.579	12.8	19.8	32.6	56.0	-23.4
25.982	16.8	19.7	36.5	60.0	-23.5
0.217	19.5	19.7	39.2	62.9	-23.7
26.023	16.5	19.7	36.2	60.0	-23.8
0.698	12.4	19.8	32.2	56.0	-23.8
25.926	16.4	19.7	36.1	60.0	-23.9
0.866	12.3	19.7	32.0	56.0	-24.0
2.463	12.4	19.6	32.0	56.0	-24.0
26.396	16.3	19.7	36.0	60.0	-24.0
26.079	16.2	19.7	35.9	60.0	-24.1
0.512	11.9	19.8	31.7	56.0	-24.3
25.818	15.9	19.7	35.6	60.0	-24.4
26.168	15.8	19.7	35.5	60.0	-24.5
2.724	11.5	19.6	31.1	56.0	-24.9
25.560	15.4	19.7	35.1	60.0	-24.9
25.482	15.4	19.7	35.1	60.0	-24.9

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.161	26.5	19.7	46.2	55.4	-9.2
0.150	26.8	19.6	46.4	56.0	-9.6
0.545	16.0	19.8	35.8	46.0	-10.2
0.560	15.7	19.8	35.5	46.0	-10.5
0.531	15.3	19.8	35.1	46.0	-10.9
0.176	23.4	19.7	43.1	54.7	-11.5
0.482	14.2	19.8	34.0	46.3	-12.3
0.639	13.0	19.8	32.8	46.0	-13.2
0.460	13.6	19.8	33.4	46.7	-13.3
0.669	12.9	19.8	32.7	46.0	-13.3
0.579	12.8	19.8	32.6	46.0	-13.4
25.982	16.8	19.7	36.5	50.0	-13.5
0.217	19.5	19.7	39.2	52.9	-13.7
26.023	16.5	19.7	36.2	50.0	-13.8
0.698	12.4	19.8	32.2	46.0	-13.8
25.926	16.4	19.7	36.1	50.0	-13.9
0.866	12.3	19.7	32.0	46.0	-14.0
2.463	12.4	19.6	32.0	46.0	-14.0
26.396	16.3	19.7	36.0	50.0	-14.0
26.079	16.2	19.7	35.9	50.0	-14.1
0.512	11.9	19.8	31.7	46.0	-14.3
25.818	15.9	19.7	35.6	50.0	-14.4
26.168	15.8	19.7	35.5	50.0	-14.5
2.724	11.5	19.6	31.1	46.0	-14.9
25.560	15.4	19.7	35.1	50.0	-14.9
25.482	15.4	19.7	35.1	50.0	-14.9

## CONCLUSION

Pass


  
 Tested By

# AC POWERLINE CONDUCTED EMISSIONS

EUT:	444-2250	Work Order:	FOCU0168
Serial Number:	02EA310000BA	Date:	06/13/2014
Customer:	Summit Semiconductor LLC	Temperature:	22°C
Attendees:	None	Relative Humidity:	45%
Customer Project:	None	Bar. Pressure:	1012 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	16 VDC	Configuration:	FOCU0168-3

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

## TEST PARAMETERS

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

None

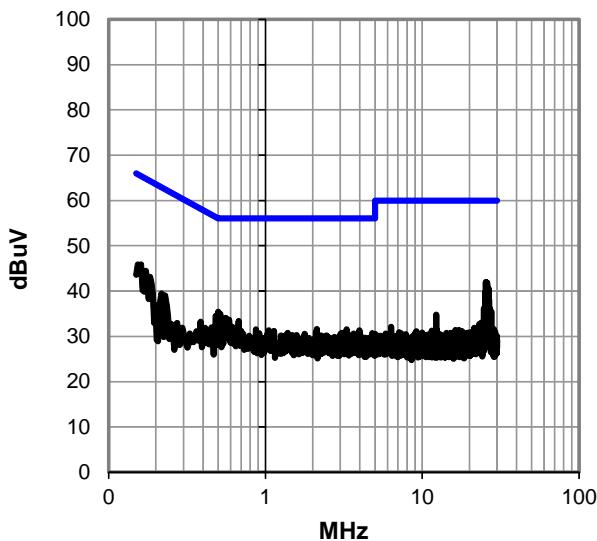
## EUT OPERATING MODES

Continuous Transmit, Ch. 64 5320 MHz, 6Mbps, Ant 1

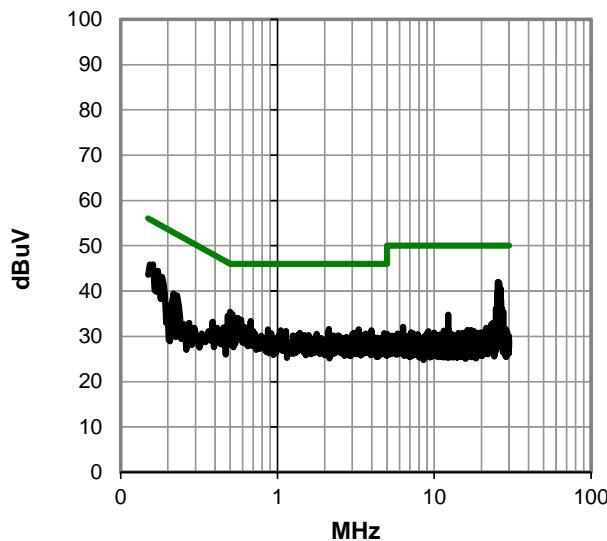
## DEVIATIONS FROM TEST STANDARD

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

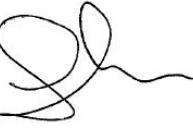
Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
25.493	22.3	19.7	42.0	60.0	-18.0
25.978	22.2	19.7	41.9	60.0	-18.1
25.900	22.2	19.7	41.9	60.0	-18.1
26.060	21.1	19.7	40.8	60.0	-19.2
26.579	20.8	19.7	40.5	60.0	-19.5
26.415	20.4	19.7	40.1	60.0	-19.9
0.154	26.2	19.7	45.9	65.8	-19.9
25.725	20.4	19.7	40.1	60.0	-19.9
26.497	20.3	19.7	40.0	60.0	-20.0
25.825	20.3	19.7	40.0	60.0	-20.0
25.404	20.3	19.7	40.0	60.0	-20.0
26.549	20.2	19.7	39.9	60.0	-20.1
26.139	20.0	19.7	39.7	60.0	-20.3
0.172	24.7	19.7	44.4	64.8	-20.4
26.463	19.9	19.7	39.6	60.0	-20.4
25.579	19.8	19.7	39.5	60.0	-20.5
0.501	15.6	19.8	35.4	56.0	-20.6
0.184	23.4	19.7	43.1	64.3	-21.2
25.534	19.0	19.7	38.7	60.0	-21.3
0.482	14.7	19.8	34.5	56.3	-21.8
26.661	18.5	19.7	38.2	60.0	-21.8
0.557	14.3	19.8	34.1	56.0	-21.9
25.329	18.4	19.7	38.1	60.0	-21.9
26.609	18.3	19.7	38.0	60.0	-22.0
25.363	18.3	19.7	38.0	60.0	-22.0
25.299	18.3	19.7	38.0	60.0	-22.0

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
25.493	22.3	19.7	42.0	50.0	-8.0
25.978	22.2	19.7	41.9	50.0	-8.1
25.900	22.2	19.7	41.9	50.0	-8.1
26.060	21.1	19.7	40.8	50.0	-9.2
26.579	20.8	19.7	40.5	50.0	-9.5
26.415	20.4	19.7	40.1	50.0	-9.9
0.154	26.2	19.7	45.9	55.8	-9.9
25.725	20.4	19.7	40.1	50.0	-9.9
26.497	20.3	19.7	40.0	50.0	-10.0
25.825	20.3	19.7	40.0	50.0	-10.0
25.404	20.3	19.7	40.0	50.0	-10.0
26.549	20.2	19.7	39.9	50.0	-10.1
26.139	20.0	19.7	39.7	50.0	-10.3
0.172	24.7	19.7	44.4	54.8	-10.4
26.463	19.9	19.7	39.6	50.0	-10.4
25.579	19.8	19.7	39.5	50.0	-10.5
0.501	15.6	19.8	35.4	46.0	-10.6
0.184	23.4	19.7	43.1	54.3	-11.2
25.534	19.0	19.7	38.7	50.0	-11.3
0.482	14.7	19.8	34.5	46.3	-11.8
26.661	18.5	19.7	38.2	50.0	-11.8
0.557	14.3	19.8	34.1	46.0	-11.9
25.329	18.4	19.7	38.1	50.0	-11.9
26.609	18.3	19.7	38.0	50.0	-12.0
25.363	18.3	19.7	38.0	50.0	-12.0
25.299	18.3	19.7	38.0	50.0	-12.0

## CONCLUSION

Pass



Tested By

# AC POWERLINE CONDUCTED EMISSIONS

EUT:	444-2250	Work Order:	FOCU0168
Serial Number:	02EA310000BA	Date:	06/13/2014
Customer:	Summit Semiconductor LLC	Temperature:	22°C
Attendees:	None	Relative Humidity:	45%
Customer Project:	None	Bar. Pressure:	1012 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	16 VDC	Configuration:	FOCU0168-3

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

## TEST PARAMETERS

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

None

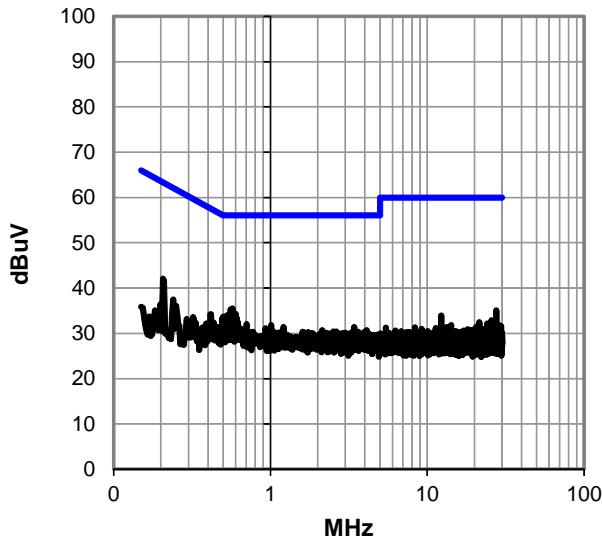
## EUT OPERATING MODES

Continuous Transmit, Ch. 100 5500 MHz, 6Mbps, Ant 1

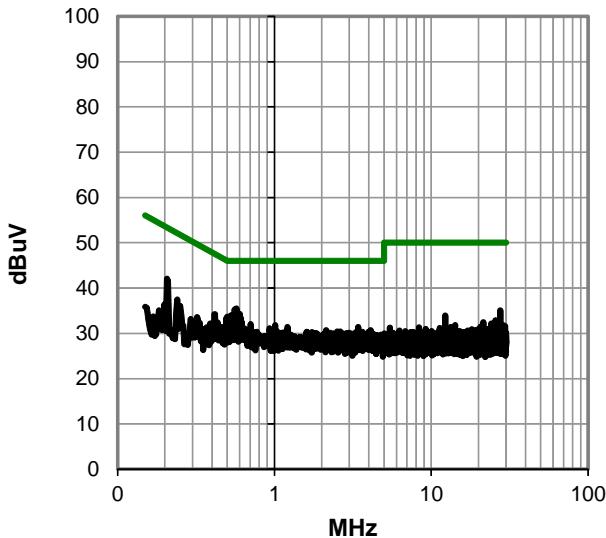
## DEVIATIONS FROM TEST STANDARD

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

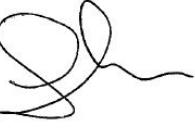
Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.572	15.7	19.8	35.5	56.0	-20.5
0.206	22.3	19.7	42.0	63.4	-21.3
0.601	14.5	19.8	34.3	56.0	-21.7
0.531	14.2	19.8	34.0	56.0	-22.0
0.501	13.9	19.8	33.7	56.0	-22.3
0.512	13.9	19.8	33.7	56.0	-22.3
0.583	13.4	19.8	33.2	56.0	-22.8
0.415	14.4	19.8	34.2	57.5	-23.3
0.706	12.3	19.8	32.1	56.0	-23.9
1.012	12.1	19.7	31.8	56.0	-24.2
3.422	11.8	19.6	31.4	56.0	-24.6
1.210	11.7	19.7	31.4	56.0	-24.6
0.240	17.7	19.7	37.4	62.1	-24.7
0.930	11.4	19.7	31.1	56.0	-24.9
27.650	15.4	19.7	35.1	60.0	-24.9
2.135	11.1	19.6	30.7	56.0	-25.3
4.101	11.1	19.6	30.7	56.0	-25.3
0.445	11.8	19.8	31.6	57.0	-25.4
3.493	10.8	19.6	30.4	56.0	-25.6
2.515	10.8	19.6	30.4	56.0	-25.6
2.631	10.8	19.6	30.4	56.0	-25.6
1.601	10.7	19.6	30.3	56.0	-25.7
0.773	10.6	19.7	30.3	56.0	-25.7
3.638	10.7	19.6	30.3	56.0	-25.7
0.251	16.3	19.8	36.1	61.7	-25.7
3.978	10.7	19.6	30.3	56.0	-25.7

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.572	15.7	19.8	35.5	46.0	-10.5
0.206	22.3	19.7	42.0	53.4	-11.3
0.601	14.5	19.8	34.3	46.0	-11.7
0.531	14.2	19.8	34.0	46.0	-12.0
0.501	13.9	19.8	33.7	46.0	-12.3
0.512	13.9	19.8	33.7	46.0	-12.3
0.583	13.4	19.8	33.2	46.0	-12.8
0.415	14.4	19.8	34.2	47.5	-13.3
0.706	12.3	19.8	32.1	46.0	-13.9
1.012	12.1	19.7	31.8	46.0	-14.2
3.422	11.8	19.6	31.4	46.0	-14.6
1.210	11.7	19.7	31.4	46.0	-14.6
0.240	17.7	19.7	37.4	52.1	-14.7
0.930	11.4	19.7	31.1	46.0	-14.9
27.650	15.4	19.7	35.1	50.0	-14.9
2.135	11.1	19.6	30.7	46.0	-15.3
4.101	11.1	19.6	30.7	46.0	-15.3
0.445	11.8	19.8	31.6	47.0	-15.4
3.493	10.8	19.6	30.4	46.0	-15.6
2.515	10.8	19.6	30.4	46.0	-15.6
2.631	10.8	19.6	30.4	46.0	-15.6
1.601	10.7	19.6	30.3	46.0	-15.7
0.773	10.6	19.7	30.3	46.0	-15.7
3.638	10.7	19.6	30.3	46.0	-15.7
0.251	16.3	19.8	36.1	51.7	-15.7
3.978	10.7	19.6	30.3	46.0	-15.7

## CONCLUSION

Pass



Tested By

# AC POWERLINE CONDUCTED EMISSIONS

EUT:	444-2250	Work Order:	FOCU0168
Serial Number:	02EA310000BA	Date:	06/13/2014
Customer:	Summit Semiconductor LLC	Temperature:	22°C
Attendees:	None	Relative Humidity:	45%
Customer Project:	None	Bar. Pressure:	1012 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	16 VDC	Configuration:	FOCU0168-3

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

## TEST PARAMETERS

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

None

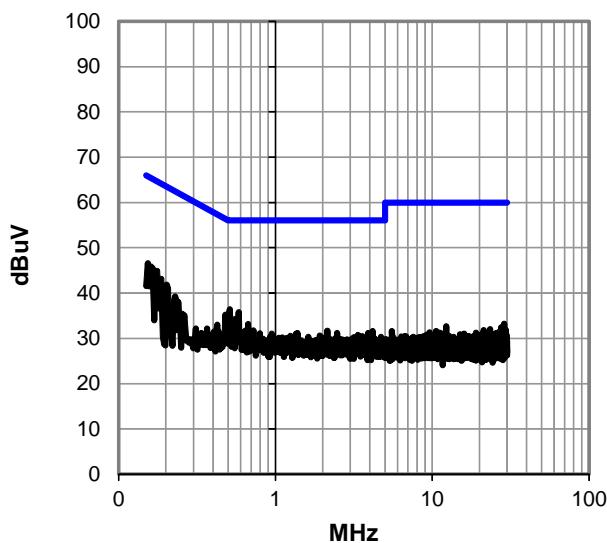
## EUT OPERATING MODES

Continuous Transmit, Ch. 100 5500 MHz, 6Mbps, Ant 1

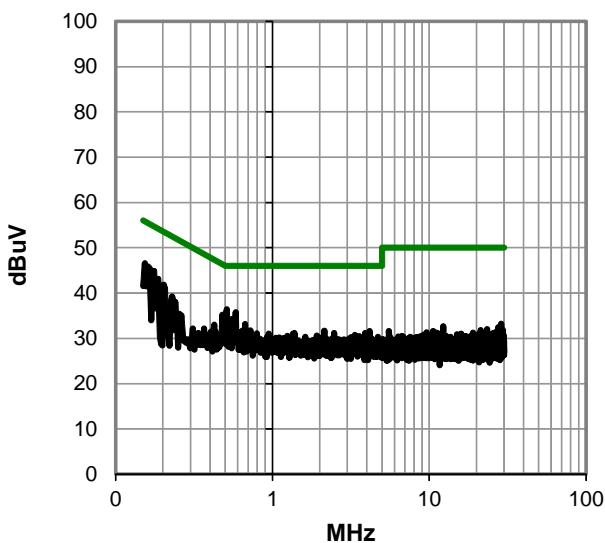
## DEVIATIONS FROM TEST STANDARD

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)
0.154	26.9	19.7	46.6	65.8	-19.2
0.161	26.1	19.7	45.8	65.4	-19.6
0.512	16.6	19.8	36.4	56.0	-19.6
0.176	25.1	19.7	44.8	64.7	-19.8
0.583	16.0	19.8	35.8	56.0	-20.2
0.184	23.4	19.7	43.1	64.3	-21.2
0.478	15.4	19.8	35.2	56.4	-21.2
0.202	22.1	19.7	41.8	63.5	-21.7
0.553	14.5	19.8	34.3	56.0	-21.7
0.669	13.4	19.8	33.2	56.0	-22.8
0.527	13.3	19.8	33.1	56.0	-22.9
0.228	19.5	19.7	39.2	62.5	-23.3
0.240	18.3	19.7	38.0	62.1	-24.1
0.646	12.0	19.8	31.8	56.0	-24.2
0.725	12.0	19.8	31.8	56.0	-24.2
2.139	12.1	19.6	31.7	56.0	-24.3
0.426	13.2	19.8	33.0	57.3	-24.3
4.161	12.0	19.6	31.6	56.0	-24.4
3.899	11.6	19.6	31.2	56.0	-24.8
2.478	11.6	19.6	31.2	56.0	-24.8
1.377	11.5	19.7	31.2	56.0	-24.8
0.698	11.4	19.8	31.2	56.0	-24.8
0.795	11.4	19.7	31.1	56.0	-24.9
0.948	11.3	19.7	31.0	56.0	-25.0
1.348	11.3	19.7	31.0	56.0	-25.0
4.034	11.2	19.6	30.8	56.0	-25.2

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.154	26.9	19.7	46.6	55.8	-9.2
0.161	26.1	19.7	45.8	55.4	-9.6
0.512	16.6	19.8	36.4	46.0	-9.6
0.176	25.1	19.7	44.8	54.7	-9.8
0.583	16.0	19.8	35.8	46.0	-10.2
0.184	23.4	19.7	43.1	54.3	-11.2
0.478	15.4	19.8	35.2	46.4	-11.2
0.202	22.1	19.7	41.8	53.5	-11.7
0.553	14.5	19.8	34.3	46.0	-11.7
0.669	13.4	19.8	33.2	46.0	-12.8
0.527	13.3	19.8	33.1	46.0	-12.9
0.228	19.5	19.7	39.2	52.5	-13.3
0.240	18.3	19.7	38.0	52.1	-14.1
0.646	12.0	19.8	31.8	46.0	-14.2
0.725	12.0	19.8	31.8	46.0	-14.2
2.139	12.1	19.6	31.7	46.0	-14.3
0.426	13.2	19.8	33.0	47.3	-14.3
4.161	12.0	19.6	31.6	46.0	-14.4
3.899	11.6	19.6	31.2	46.0	-14.8
2.478	11.6	19.6	31.2	46.0	-14.8
1.377	11.5	19.7	31.2	46.0	-14.8
0.698	11.4	19.8	31.2	46.0	-14.8
0.795	11.4	19.7	31.1	46.0	-14.9
0.948	11.3	19.7	31.0	46.0	-15.0
1.348	11.3	19.7	31.0	46.0	-15.0
4.034	11.2	19.6	30.8	46.0	-15.2

## CONCLUSION

Pass



Tested By

# AC POWERLINE CONDUCTED EMISSIONS

EUT:	444-2250	Work Order:	FOCU0168
Serial Number:	02EA310000BA	Date:	06/13/2014
Customer:	Summit Semiconductor LLC	Temperature:	22°C
Attendees:	None	Relative Humidity:	45%
Customer Project:	None	Bar. Pressure:	1012 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	16 VDC	Configuration:	FOCU0168-3

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

## TEST PARAMETERS

Run #:	13	Line:	High Line	Ext. Attenuation (dB):	20
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## COMMENTS

None

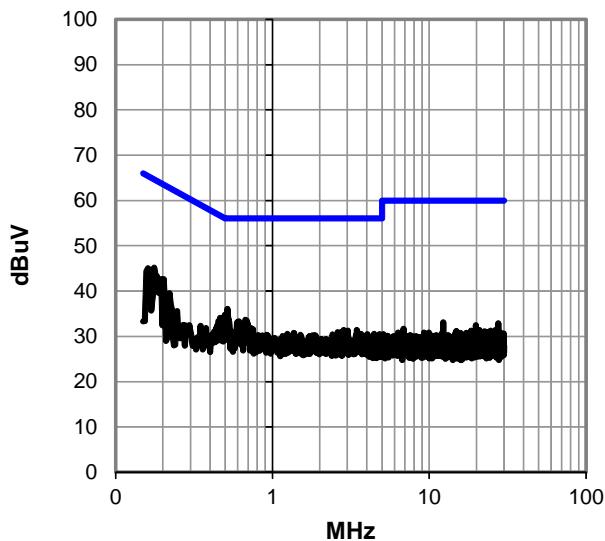
## EUT OPERATING MODES

Continuous Transmit, Ch. 116 5580 MHz, 6Mbps, Ant 1

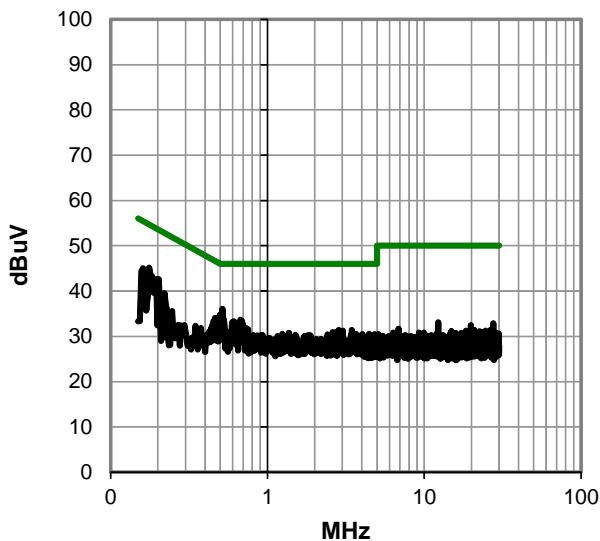
## DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



# AC POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #13

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.176	25.4	19.7	45.1	64.7	-19.5
0.516	16.3	19.8	36.1	56.0	-19.9
0.161	25.3	19.7	45.0	65.4	-20.4
0.202	22.9	19.7	42.6	63.5	-20.9
0.501	15.0	19.8	34.8	56.0	-21.2
0.672	13.9	19.8	33.7	56.0	-22.3
0.463	14.3	19.8	34.1	56.6	-22.5
0.687	13.6	19.8	33.4	56.0	-22.6
0.609	13.5	19.8	33.3	56.0	-22.7
0.598	13.4	19.8	33.2	56.0	-22.8
0.221	19.8	19.7	39.5	62.8	-23.2
0.665	12.9	19.8	32.7	56.0	-23.3
0.452	13.6	19.8	33.4	56.8	-23.4
0.728	12.1	19.8	31.9	56.0	-24.1
0.751	11.8	19.7	31.5	56.0	-24.5
3.459	11.8	19.6	31.4	56.0	-24.6
2.851	11.8	19.6	31.4	56.0	-24.6
0.542	11.5	19.8	31.3	56.0	-24.7
3.023	11.7	19.6	31.3	56.0	-24.7
2.750	11.4	19.6	31.0	56.0	-25.0
2.609	11.3	19.6	30.9	56.0	-25.1
1.370	11.1	19.7	30.8	56.0	-25.2
4.459	11.0	19.6	30.6	56.0	-25.4
1.247	10.9	19.7	30.6	56.0	-25.4
3.668	10.9	19.6	30.5	56.0	-25.5
4.037	10.9	19.6	30.5	56.0	-25.5

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.176	25.4	19.7	45.1	54.7	-9.5
0.516	16.3	19.8	36.1	46.0	-9.9
0.161	25.3	19.7	45.0	55.4	-10.4
0.202	22.9	19.7	42.6	53.5	-10.9
0.501	15.0	19.8	34.8	46.0	-11.2
0.672	13.9	19.8	33.7	46.0	-12.3
0.463	14.3	19.8	34.1	46.6	-12.5
0.687	13.6	19.8	33.4	46.0	-12.6
0.609	13.5	19.8	33.3	46.0	-12.7
0.598	13.4	19.8	33.2	46.0	-12.8
0.221	19.8	19.7	39.5	52.8	-13.2
0.665	12.9	19.8	32.7	46.0	-13.3
0.452	13.6	19.8	33.4	46.8	-13.4
0.728	12.1	19.8	31.9	46.0	-14.1
0.751	11.8	19.7	31.5	46.0	-14.5
3.459	11.8	19.6	31.4	46.0	-14.6
2.851	11.8	19.6	31.4	46.0	-14.6
0.542	11.5	19.8	31.3	46.0	-14.7
3.023	11.7	19.6	31.3	46.0	-14.7
2.750	11.4	19.6	31.0	46.0	-15.0
2.609	11.3	19.6	30.9	46.0	-15.1
1.370	11.1	19.7	30.8	46.0	-15.2
4.459	11.0	19.6	30.6	46.0	-15.4
1.247	10.9	19.7	30.6	46.0	-15.4
3.668	10.9	19.6	30.5	46.0	-15.5
4.037	10.9	19.6	30.5	46.0	-15.5

## CONCLUSION

Pass



Tested By

# AC POWERLINE CONDUCTED EMISSIONS

EUT:	444-2250	Work Order:	FOCU0168
Serial Number:	02EA310000BA	Date:	06/13/2014
Customer:	Summit Semiconductor LLC	Temperature:	22°C
Attendees:	None	Relative Humidity:	45%
Customer Project:	None	Bar. Pressure:	1012 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	16 VDC	Configuration:	FOCU0168-3

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

## TEST PARAMETERS

Run #:	14	Line:	Neutral	Ext. Attenuation (dB):	20
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## COMMENTS

None

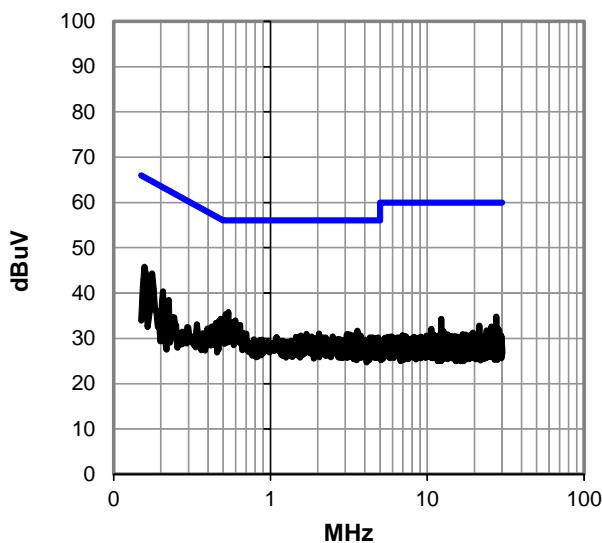
## EUT OPERATING MODES

Continuous Transmit, Ch. 116 5580 MHz, 6Mbps, Ant 1

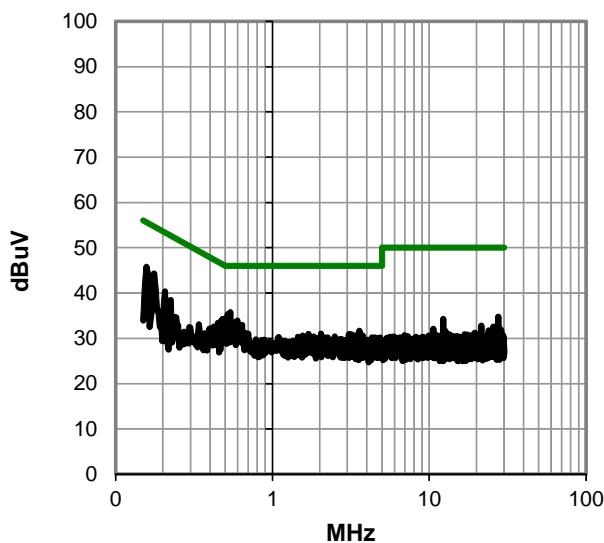
## DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



# AC POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #14

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.157	26.1	19.7	45.8	65.6	-19.8
0.538	16.0	19.8	35.8	56.0	-20.2
0.176	24.6	19.7	44.3	64.7	-20.3
0.519	15.6	19.8	35.4	56.0	-20.6
0.482	14.5	19.8	34.3	56.3	-22.0
0.598	14.2	19.8	34.0	56.0	-22.0
0.579	13.8	19.8	33.6	56.0	-22.4
0.609	13.2	19.8	33.0	56.0	-23.0
0.642	13.2	19.8	33.0	56.0	-23.0
0.206	20.6	19.7	40.3	63.4	-23.0
0.557	13.1	19.8	32.9	56.0	-23.1
0.448	13.6	19.8	33.4	56.9	-23.5
0.225	18.7	19.7	38.4	62.6	-24.2
3.582	12.1	19.6	31.7	56.0	-24.3
0.422	12.8	19.8	32.6	57.4	-24.8
0.672	11.4	19.8	31.2	56.0	-24.8
3.612	11.5	19.6	31.1	56.0	-24.9
0.702	11.3	19.8	31.1	56.0	-24.9
2.042	11.4	19.6	31.0	56.0	-25.0
3.511	11.4	19.6	31.0	56.0	-25.0
3.097	11.4	19.5	30.9	56.0	-25.1
1.695	11.3	19.6	30.9	56.0	-25.1
3.232	11.3	19.6	30.9	56.0	-25.1
3.071	11.3	19.5	30.8	56.0	-25.2
3.146	11.3	19.5	30.8	56.0	-25.2
27.646	15.1	19.7	34.8	60.0	-25.2

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.157	26.1	19.7	45.8	55.6	-9.8
0.538	16.0	19.8	35.8	46.0	-10.2
0.176	24.6	19.7	44.3	54.7	-10.3
0.519	15.6	19.8	35.4	46.0	-10.6
0.482	14.5	19.8	34.3	46.3	-12.0
0.598	14.2	19.8	34.0	46.0	-12.0
0.579	13.8	19.8	33.6	46.0	-12.4
0.609	13.2	19.8	33.0	46.0	-13.0
0.642	13.2	19.8	33.0	46.0	-13.0
0.206	20.6	19.7	40.3	53.4	-13.0
0.557	13.1	19.8	32.9	46.0	-13.1
0.448	13.6	19.8	33.4	46.9	-13.5
0.225	18.7	19.7	38.4	52.6	-14.2
3.582	12.1	19.6	31.7	46.0	-14.3
0.422	12.8	19.8	32.6	47.4	-14.8
0.672	11.4	19.8	31.2	46.0	-14.8
3.612	11.5	19.6	31.1	46.0	-14.9
0.702	11.3	19.8	31.1	46.0	-14.9
2.042	11.4	19.6	31.0	46.0	-15.0
3.511	11.4	19.6	31.0	46.0	-15.0
3.097	11.4	19.5	30.9	46.0	-15.1
1.695	11.3	19.6	30.9	46.0	-15.1
3.232	11.3	19.6	30.9	46.0	-15.1
3.071	11.3	19.5	30.8	46.0	-15.2
3.146	11.3	19.5	30.8	46.0	-15.2
27.646	15.1	19.7	34.8	50.0	-15.2

## CONCLUSION

Pass



Tested By

# AC POWERLINE CONDUCTED EMISSIONS

EUT:	444-2250	Work Order:	FOCU0168
Serial Number:	02EA310000BA	Date:	06/13/2014
Customer:	Summit Semiconductor LLC	Temperature:	22°C
Attendees:	None	Relative Humidity:	45%
Customer Project:	None	Bar. Pressure:	1012 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	16 VDC	Configuration:	FOCU0168-3

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

## TEST PARAMETERS

Run #:	15	Line:	Neutral	Ext. Attenuation (dB):	20
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## COMMENTS

None

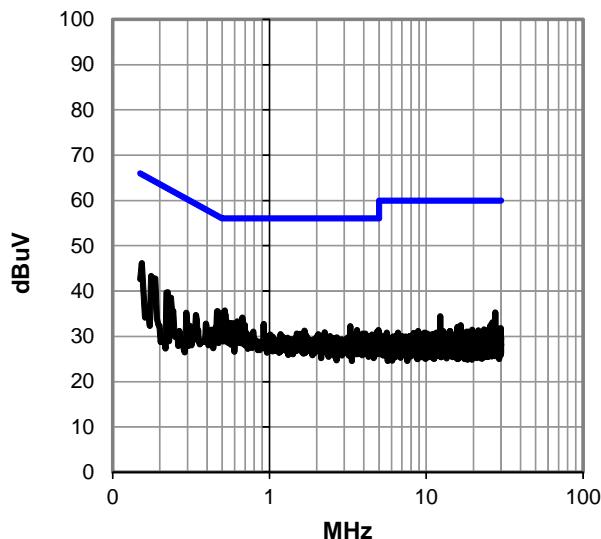
## EUT OPERATING MODES

Continuous Transmit, Ch. 140 5700 MHz, 6Mbps, Ant 1

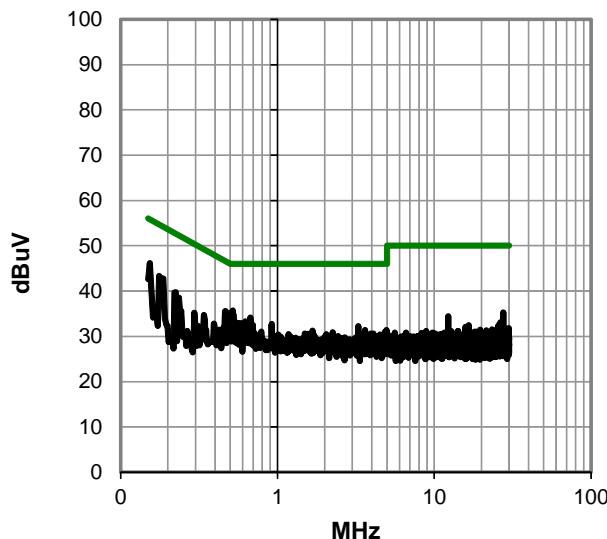
## DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



# AC POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #15

Peak Data - vs - Quasi Peak Limit

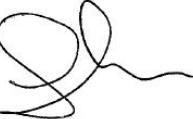
Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.154	26.5	19.7	46.2	65.8	-19.6
0.519	15.9	19.8	35.7	56.0	-20.3
0.501	15.3	19.8	35.1	56.0	-20.9
0.463	15.8	19.8	35.6	56.6	-21.0
0.176	23.6	19.7	43.3	64.7	-21.3
0.490	15.0	19.8	34.8	56.2	-21.4
0.672	14.4	19.8	34.2	56.0	-21.8
0.624	13.5	19.8	33.3	56.0	-22.7
0.225	20.0	19.7	39.7	62.6	-22.9
0.542	13.3	19.8	33.1	56.0	-22.9
0.560	13.2	19.8	33.0	56.0	-23.0
0.590	13.1	19.8	32.9	56.0	-23.1
0.642	13.0	19.8	32.8	56.0	-23.2
0.922	13.0	19.7	32.7	56.0	-23.3
0.695	12.8	19.8	32.6	56.0	-23.4
0.605	12.6	19.8	32.4	56.0	-23.6
0.236	18.8	19.7	38.5	62.2	-23.7
3.276	12.7	19.6	32.3	56.0	-23.7
0.340	14.9	19.8	34.7	59.2	-24.5
3.620	11.8	19.6	31.4	56.0	-24.6
4.959	11.8	19.6	31.4	56.0	-24.6
27.646	15.6	19.7	35.3	60.0	-24.7
1.672	11.6	19.6	31.2	56.0	-24.8
0.706	11.3	19.8	31.1	56.0	-24.9
0.788	11.3	19.7	31.0	56.0	-25.0
4.851	11.4	19.6	31.0	56.0	-25.0

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.154	26.5	19.7	46.2	55.8	-9.6
0.519	15.9	19.8	35.7	46.0	-10.3
0.501	15.3	19.8	35.1	46.0	-10.9
0.463	15.8	19.8	35.6	46.6	-11.0
0.176	23.6	19.7	43.3	54.7	-11.3
0.490	15.0	19.8	34.8	46.2	-11.4
0.672	14.4	19.8	34.2	46.0	-11.8
0.624	13.5	19.8	33.3	46.0	-12.7
0.225	20.0	19.7	39.7	52.6	-12.9
0.542	13.3	19.8	33.1	46.0	-12.9
0.560	13.2	19.8	33.0	46.0	-13.0
0.590	13.1	19.8	32.9	46.0	-13.1
0.642	13.0	19.8	32.8	46.0	-13.2
0.922	13.0	19.7	32.7	46.0	-13.3
0.695	12.8	19.8	32.6	46.0	-13.4
0.605	12.6	19.8	32.4	46.0	-13.6
0.236	18.8	19.7	38.5	52.2	-13.7
3.276	12.7	19.6	32.3	46.0	-13.7
0.340	14.9	19.8	34.7	49.2	-14.5
3.620	11.8	19.6	31.4	46.0	-14.6
4.959	11.8	19.6	31.4	46.0	-14.6
27.646	15.6	19.7	35.3	50.0	-14.7
1.672	11.6	19.6	31.2	46.0	-14.8
0.706	11.3	19.8	31.1	46.0	-14.9
0.788	11.3	19.7	31.0	46.0	-15.0
4.851	11.4	19.6	31.0	46.0	-15.0

## CONCLUSION

Pass



Tested By

# AC POWERLINE CONDUCTED EMISSIONS

EUT:	444-2250	Work Order:	FOCU0168
Serial Number:	02EA310000BA	Date:	06/13/2014
Customer:	Summit Semiconductor LLC	Temperature:	22°C
Attendees:	None	Relative Humidity:	45%
Customer Project:	None	Bar. Pressure:	1012 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	16 VDC	Configuration:	FOCU0168-3

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009

## TEST PARAMETERS

Run #:	16	Line:	High Line	Ext. Attenuation (dB):	20
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## COMMENTS

None

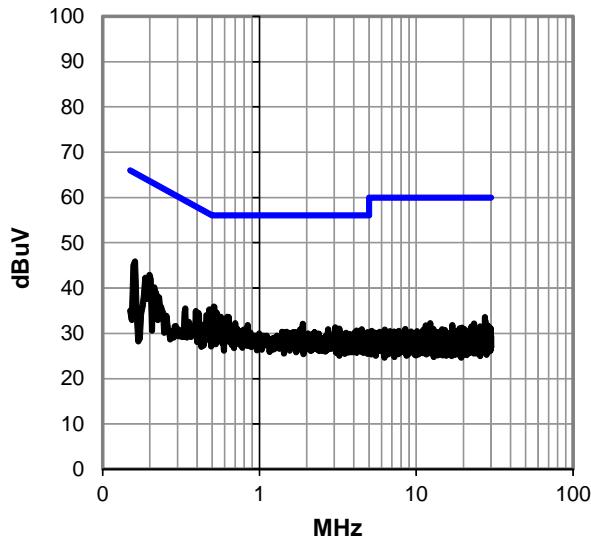
## EUT OPERATING MODES

Continuous Transmit, Ch. 140 5700 MHz, 6Mbps, Ant 1

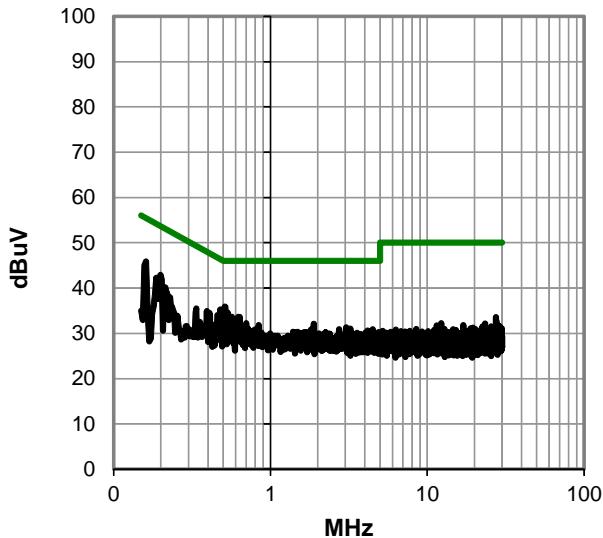
## DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



# AC POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #16

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBm)	Margin (dB)
0.161	26.1	19.7	45.8	65.4	-19.6
0.512	16.1	19.8	35.9	56.0	-20.1
0.199	23.2	19.7	42.9	63.7	-20.7
0.478	15.5	19.8	35.3	56.4	-21.1
0.534	14.8	19.8	34.6	56.0	-21.4
0.187	22.5	19.7	42.2	64.2	-21.9
0.545	14.0	19.8	33.8	56.0	-22.2
0.568	13.9	19.8	33.7	56.0	-22.3
0.624	13.9	19.8	33.7	56.0	-22.3
0.639	13.8	19.8	33.6	56.0	-22.4
0.213	20.4	19.7	40.1	63.1	-22.9
0.393	15.1	19.8	34.9	58.0	-23.1
0.407	14.7	19.8	34.5	57.7	-23.2
0.601	13.0	19.8	32.8	56.0	-23.2
0.702	12.5	19.8	32.3	56.0	-23.7
0.337	15.7	19.8	35.5	59.3	-23.8
1.889	12.5	19.6	32.1	56.0	-23.9
0.840	12.1	19.7	31.8	56.0	-24.2
0.228	18.2	19.7	37.9	62.5	-24.6
0.587	11.6	19.8	31.4	56.0	-24.6
3.045	11.8	19.6	31.4	56.0	-24.6
0.721	11.3	19.8	31.1	56.0	-24.9
3.228	11.5	19.6	31.1	56.0	-24.9
4.493	11.3	19.6	30.9	56.0	-25.1
2.735	11.3	19.6	30.9	56.0	-25.1
0.792	11.1	19.7	30.8	56.0	-25.2

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.161	26.1	19.7	45.8	55.4	-9.6
0.512	16.1	19.8	35.9	46.0	-10.1
0.199	23.2	19.7	42.9	53.7	-10.7
0.478	15.5	19.8	35.3	46.4	-11.1
0.534	14.8	19.8	34.6	46.0	-11.4
0.187	22.5	19.7	42.2	54.2	-11.9
0.545	14.0	19.8	33.8	46.0	-12.2
0.568	13.9	19.8	33.7	46.0	-12.3
0.624	13.9	19.8	33.7	46.0	-12.3
0.639	13.8	19.8	33.6	46.0	-12.4
0.213	20.4	19.7	40.1	53.1	-12.9
0.393	15.1	19.8	34.9	48.0	-13.1
0.407	14.7	19.8	34.5	47.7	-13.2
0.601	13.0	19.8	32.8	46.0	-13.2
0.702	12.5	19.8	32.3	46.0	-13.7
0.337	15.7	19.8	35.5	49.3	-13.8
1.889	12.5	19.6	32.1	46.0	-13.9
0.840	12.1	19.7	31.8	46.0	-14.2
0.228	18.2	19.7	37.9	52.5	-14.6
0.587	11.6	19.8	31.4	46.0	-14.6
3.045	11.8	19.6	31.4	46.0	-14.6
0.721	11.3	19.8	31.1	46.0	-14.9
3.228	11.5	19.6	31.1	46.0	-14.9
4.493	11.3	19.6	30.9	46.0	-15.1
2.735	11.3	19.6	30.9	46.0	-15.1
0.792	11.1	19.7	30.8	46.0	-15.2

## CONCLUSION

Pass



Tested By