



## **Summit Semiconductor LLC**

**444-2251**

**FCC 15.207:2014**

**FCC 15.407:2014**

**Report #: FOCU0169.4**



Report Prepared By Northwest EMC Inc.

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

California – Minnesota – Oregon – New York – Washington

# CERTIFICATE OF TEST

**Last Date of Test: July 7, 2014**  
**Summit Semiconductor LLC**  
**Model: 444-2251**

## Emissions

| Test Description                          | Specification   | Test Method      | Pass/Fail |
|-------------------------------------------|-----------------|------------------|-----------|
| Transmission Burst Duration               | 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 of the Modulation Envelope | 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      |
| Powerline Conducted Emissions             | FCC 15.207:2014 | ANSI C63.10:2009 | Pass      |

## Deviations From Test Standards

None

## Approved By:



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 |
|-----------------|-------------|------|-------------|
| 00              | None        |      |             |

## Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

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## United States

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

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

**NVLAP** - Each laboratory is accredited by NVLAP to ISO 17025

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## Canada

**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

**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

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

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## Korea

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

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## Japan

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

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## Taiwan

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

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

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## Singapore

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

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## Hong Kong

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

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## Vietnam

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

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## Russia

**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

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.

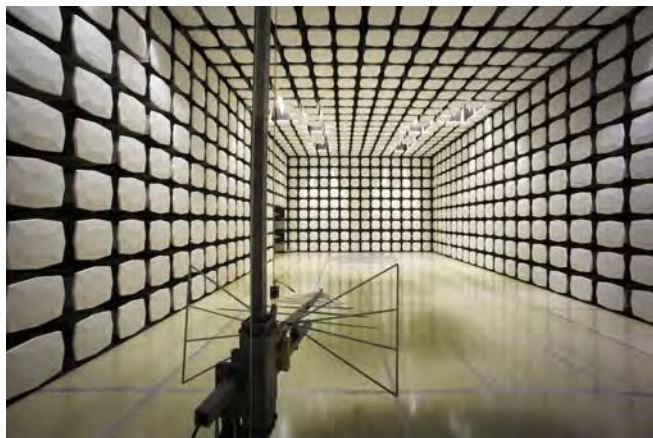
A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) for each test is listed below. Our measurement 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.

| <b>Test</b>                           | <b>+ MU</b> | <b>- MU</b> |
|---------------------------------------|-------------|-------------|
| 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       |



|                                                                                                   |                                                                                     |                                                                                            |                                                                                                       |                                                                                                                         |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Oregon</b><br>Labs EV01-12<br>22975 NW Evergreen Pkwy<br>Hillsboro, OR 97124<br>(503) 844-4066 | <b>California</b><br>Labs OC01-13<br>41 Tesla<br>Irvine, CA 92618<br>(949) 861-8918 | <b>New York</b><br>Labs NY01-04<br>4939 Jordan Rd.<br>Elbridge, NY 13060<br>(315) 685-0796 | <b>Minnesota</b><br>Labs MN01-08<br>9349 W Broadway Ave.<br>Brooklyn Park, MN 55445<br>(763) 425-2281 | <b>Washington</b><br>Labs NC01-05, SU02, SU07<br>19201 120 <sup>th</sup> Ave. NE<br>Bothell, WA 98011<br>(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                                                                                                |



## 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>                   | 444-2251                       |
| <b>First Date of Test:</b>      | June 11, 2014                  |
| <b>Last Date of Test:</b>       | July 7, 2014                   |
| <b>Receipt Date of Samples:</b> | June 09, 2014                  |
| <b>Equipment Design Stage:</b>  | Production                     |
| <b>Equipment Condition:</b>     | No Damage                      |

## Information Provided by the Party Requesting the Test

|                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------|
| <b>Functional Description of the EUT (Equipment Under Test):</b>                                                             |
| This is a Master device; it has 1 antenna, no diversity, and a monitor radio that shares the antenna with the working radio. |
| <b>Testing Objective:</b>                                                                                                    |
| To demonstrate compliance under FCC 15.407 for operation in the 5.2 GHz, 5.3GHz, and 5.6 GHz bands.                          |

## Configuration FOCU0169- 1

| EUT                            |                          |                   |               |
|--------------------------------|--------------------------|-------------------|---------------|
| Description                    | Manufacturer             | Model/Part Number | Serial Number |
| Digital Wireless Master Module | Summit Semiconductor LLC | 444-2251          | 02EA4F000062  |

| Peripherals in test setup boundary |                          |                   |               |
|------------------------------------|--------------------------|-------------------|---------------|
| Description                        | Manufacturer             | Model/Part Number | Serial Number |
| Glenwood-Bridge                    | Summit Semiconductor LLC | 088R104           | None          |
| Laptop Computer Direct Connect     | Dell                     | Latitude E5540    | 61FHTY1       |
| AC/DC Adapter (DELL)               | Dell                     | DPN-6C3W2         | None          |

| Cables                |        |            |         |                     |                     |
|-----------------------|--------|------------|---------|---------------------|---------------------|
| Cable Type            | Shield | Length (m) | Ferrite | Connection 1        | Connection 2        |
| USB to Serial Adapter | Yes    | 1m         | No      | Glenwood-Bridge     | Laptop              |
| DC Power Cable        | No     | 1.4m       | Yes     | Glenwood-Bridge     | AC/DC Power Adapter |
| AC Power Cable x2     | No     | .9m        | No      | AC/DC Power Adapter | AC Mains            |
| DC Power Cable        | No     | 1.2m       | Yes     | Laptop              | AC/DC Power Adapter |

## Configuration FOCU0169- 2

| EUT                            |                          |                   |               |
|--------------------------------|--------------------------|-------------------|---------------|
| Description                    | Manufacturer             | Model/Part Number | Serial Number |
| Digital Wireless Master Module | Summit Semiconductor LLC | 444-2251          | 02EA4F000061  |

| Peripherals in test setup boundary |                          |                   |               |
|------------------------------------|--------------------------|-------------------|---------------|
| Description                        | Manufacturer             | Model/Part Number | Serial Number |
| Glenwood-Bridge                    | Summit Semiconductor LLC | 088R104           | None          |

| Cables                |        |            |         |                     |                     |
|-----------------------|--------|------------|---------|---------------------|---------------------|
| Cable Type            | Shield | Length (m) | Ferrite | Connection 1        | Connection 2        |
| USB to Serial Adapter | Yes    | 1m         | No      | Glenwood-Bridge     | Laptop              |
| DC Power Cable        | No     | 1.4m       | Yes     | Glenwood-Bridge     | AC/DC Power Adapter |
| AC Power Cable        | No     | .9m        | No      | AC/DC Power Adapter | AC Mains            |

## Configuration FOCU0169- 3

| EUT                            |                          |                   |               |
|--------------------------------|--------------------------|-------------------|---------------|
| Description                    | Manufacturer             | Model/Part Number | Serial Number |
| Digital Wireless Master Module | Summit Semiconductor LLC | 444-2251          | 02EA4F000062  |

| Peripherals in test setup boundary |                          |                   |                          |
|------------------------------------|--------------------------|-------------------|--------------------------|
| Description                        | Manufacturer             | Model/Part Number | Serial Number            |
| Glenwood-Bridge                    | Summit Semiconductor LLC | 088R104           | None                     |
| AC/DC Adapter (DELL)               | Dell                     | DPN-6C3W2         | None                     |
| Laptop Computer Radiated           | Dell                     | PP04X             | CN-0HN341-48643-79E-0502 |
| Ethernet Hub                       | D-Link                   | DGS-2205          | P1BH481000045            |

| Cables                |        |            |         |                     |                     |
|-----------------------|--------|------------|---------|---------------------|---------------------|
| Cable Type            | Shield | Length (m) | Ferrite | Connection 1        | Connection 2        |
| USB to Serial Adapter | Yes    | 1m         | No      | Glenwood-Bridge     | Laptop              |
| DC Power Cable        | No     | 1.2m       | Yes     | Laptop              | AC/DC Power Adapter |
| AC Power Cable        | No     | .9m        | No      | AC/DC Power Adapter | AC Mains            |
| Ethernet              | No     | 1m         | No      | Laptop              | Ethernet Hub        |
| DC Power Cable        | No     | 2m         | No      | Glenwood-Bridge     | DC Power Supply     |

## Configuration FOCU0169- 8

| EUT                            |                          |                   |               |
|--------------------------------|--------------------------|-------------------|---------------|
| Description                    | Manufacturer             | Model/Part Number | Serial Number |
| Digital Wireless Master Module | Summit Semiconductor LLC | 444-2251          | 02EA4F000062  |
| Digital Wireless Master Module | Summit Semiconductor LLC | 444-2251          | 02EA4F000063  |

| Peripherals in test setup boundary |                          |                   |               |
|------------------------------------|--------------------------|-------------------|---------------|
| Description                        | Manufacturer             | Model/Part Number | Serial Number |
| Glenwood-Bridge                    | Summit Semiconductor LLC | 088R104           | None          |
| Laptop Computer Direct Connect     | Dell                     | Latitude E5540    | 61FHTY1       |
| AC/DC Adapter (DELL)               | Dell                     | DPN-6C3W2         | None          |

| Cables                |        |            |         |                     |                     |
|-----------------------|--------|------------|---------|---------------------|---------------------|
| Cable Type            | Shield | Length (m) | Ferrite | Connection 1        | Connection 2        |
| USB to Serial Adapter | Yes    | 1m         | No      | Glenwood-Bridge     | Laptop              |
| DC Power Cable        | No     | 1.4m       | Yes     | Glenwood-Bridge     | AC/DC Power Adapter |
| AC Power Cable x2     | No     | .9m        | No      | AC/DC Power Adapter | AC Mains            |
| DC Power Cable        | No     | 1.2m       | Yes     | Laptop              | AC/DC Power Adapter |

## Equipment Modifications

| Item | Date      | Test                                      | Modification                         | Note                                                                | Disposition of EUT                                |
|------|-----------|-------------------------------------------|--------------------------------------|---------------------------------------------------------------------|---------------------------------------------------|
| 1    | 6/11/2014 | Transmission Burst Duration               | 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    | 6/11/2014 | 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. |
| 3    | 6/11/2014 | 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. |
| 4    | 6/11/2014 | 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. |
| 5    | 6/11/2014 | Peak Excursion of the Modulation Envelope | 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    | 6/11/2014 | Band Edge Compliance                      | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | EUT remained at Northwest EMC following the test. |
| 7    | 6/11/2014 | 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. |
| 8    | 6/12/2014 | 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. |
| 9    | 7/7/2014  | Frequency Stability                       | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | Scheduled testing was completed.                  |

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

#### TEST EQUIPMENT

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

#### 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.

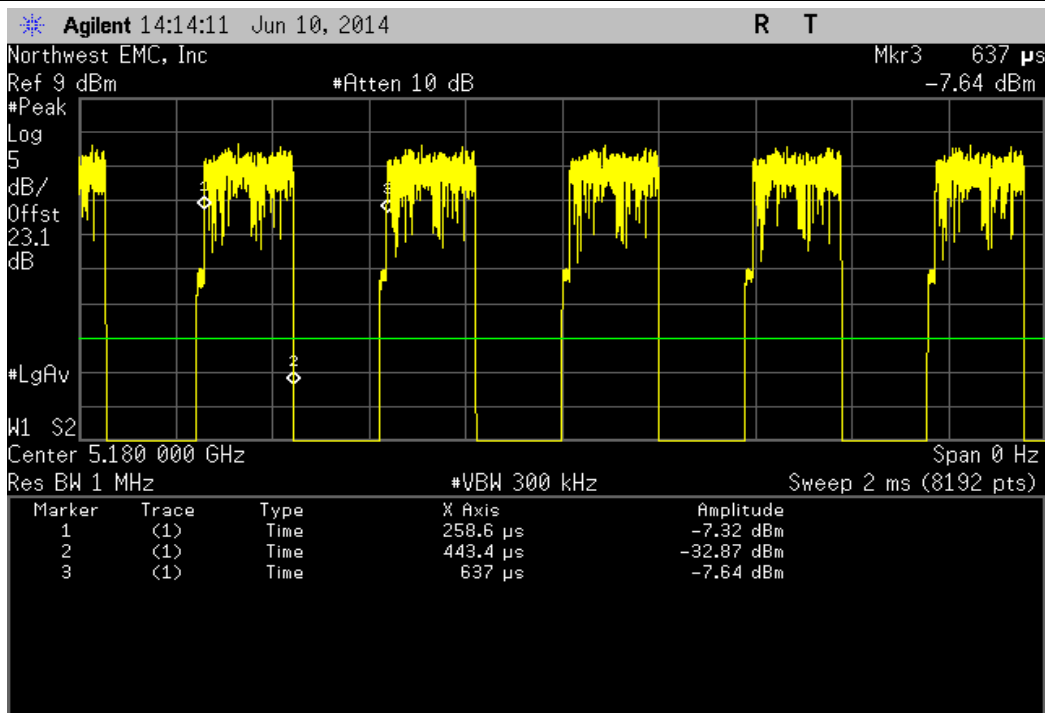
The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. The transmit power was set to its default maximum. A direct connection was made between the RF output of the EUT and a spectrum analyzer. Attenuation and a DC block were used

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

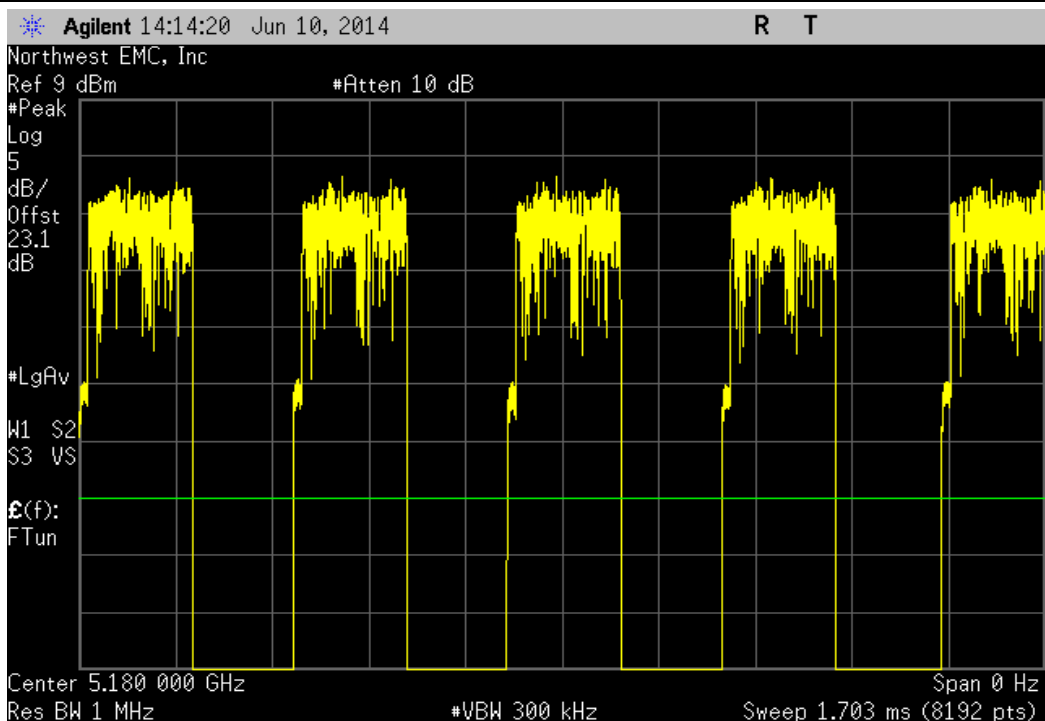
If the transmit duty cycle < 98 percent, burst gating was used during some of the other tests in this report only measure during the burst duration.

| EUT:                                            | 444-2251                 |                                                                                                    |                  | Work Order:       | FOCU0169 |        |
|-------------------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------|------------------|-------------------|----------|--------|
| Serial Number:                                  | 02EA4F000062             |                                                                                                    |                  | Date:             | 06/11/14 |        |
| Customer:                                       | Summit Semiconductor LLC |                                                                                                    |                  | Temperature:      | 22.2°C   |        |
| Attendees:                                      | Paul Hamilton            |                                                                                                    |                  | Humidity:         | 41%      |        |
| Project:                                        | None                     |                                                                                                    |                  | Barometric Pres.: | 1017     |        |
| Tested by:                                      | Brandon Hobbs            | Power:                                                                                             | 110VAC/60Hz      | Job Site:         | EV06     |        |
| TEST SPECIFICATIONS                             |                          |                                                                                                    | Test Method      |                   |          |        |
| FCC 15.407:2014                                 |                          |                                                                                                    | ANSI C63.10:2009 |                   |          |        |
| COMMENTS                                        |                          |                                                                                                    |                  |                   |          |        |
| Modes of operation were provided by the client. |                          |                                                                                                    |                  |                   |          |        |
| DEVIATIONS FROM TEST STANDARD                   |                          |                                                                                                    |                  |                   |          |        |
| None                                            |                          |                                                                                                    |                  |                   |          |        |
| Configuration #                                 | 1                        | <i>Signature</i>  |                  |                   |          |        |
|                                                 | Pulse Width              | Period                                                                                             | Number of Pulses | Value (%)         | Limit    | Result |
| 802.11(a) 6 Mbps                                |                          |                                                                                                    |                  |                   |          |        |
| Low Channel 36, 5180MHz                         | 184.8 uS                 | 378.4 uS                                                                                           | 1                | 48.8              | N/A      | N/A    |
| Low Channel 36, 5180MHz                         | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| High Channel 48, 5240MHz                        | 184.9 uS                 | 377.3 uS                                                                                           | 1                | 49                | N/A      | N/A    |
| High Channel 48, 5240MHz                        | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| Low Channel 52, 5260MHz                         | 184.8 uS                 | 377.2 uS                                                                                           | 1                | 49                | N/A      | N/A    |
| Low Channel 52, 5260MHz                         | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| High Channel 64, 5320MHz                        | 184.6 uS                 | 378.5 uS                                                                                           | 1                | 48.8              | N/A      | N/A    |
| High Channel 64, 5320MHz                        | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| Low Channel 100, 5500MHz                        | 184.9 uS                 | 378.7 uS                                                                                           | 1                | 48.8              | N/A      | N/A    |
| Low Channel 100, 5500MHz                        | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| Mid Channel 116, 5580MHz                        | 184.9 uS                 | 377.3 uS                                                                                           | 1                | 49                | N/A      | N/A    |
| Mid Channel 116, 5580MHz                        | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| High Channel 140, 5700MHz                       | 184.9 uS                 | 377.3 uS                                                                                           | 1                | 49                | N/A      | N/A    |
| High Channel 140, 5700MHz                       | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| 802.11(a) 18 Mbps                               |                          |                                                                                                    |                  |                   |          |        |
| Low Channel 36, 5180MHz                         | 72.7 uS                  | 278.8 uS                                                                                           | 1                | 26.1              | N/A      | N/A    |
| Low Channel 36, 5180MHz                         | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| High Channel 48, 5240MHz                        | 73 uS                    | 277.7 uS                                                                                           | 1                | 26.3              | N/A      | N/A    |
| High Channel 48, 5240MHz                        | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| Low Channel 52, 5260MHz                         | 72.8 uS                  | 278.8 uS                                                                                           | 1                | 26.1              | N/A      | N/A    |
| Low Channel 52, 5260MHz                         | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| High Channel 64, 5320MHz                        | 72.7 uS                  | 277.6 uS                                                                                           | 1                | 26.2              | N/A      | N/A    |
| High Channel 64, 5320MHz                        | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| Low Channel 100, 5500MHz                        | 73 uS                    | 286.9 uS                                                                                           | 1                | 25.4              | N/A      | N/A    |
| Low Channel 100, 5500MHz                        | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| Mid Channel 116, 5580MHz                        | 72.7 uS                  | 286.9 uS                                                                                           | 1                | 25.3              | N/A      | N/A    |
| Mid Channel 116, 5580MHz                        | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| High Channel 140, 5700MHz                       | 72.7 uS                  | 277.6 uS                                                                                           | 1                | 26.2              | N/A      | N/A    |
| High Channel 140, 5700MHz                       | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| 802.11(a) 36 Mbps                               |                          |                                                                                                    |                  |                   |          |        |
| Low Channel 36, 5180MHz                         | 45 uS                    | 254 uS                                                                                             | 1                | 17.7              | N/A      | N/A    |
| Low Channel 36, 5180MHz                         | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| High Channel 48, 5240MHz                        | 44.9 uS                  | 262.9 uS                                                                                           | 1                | 17.1              | N/A      | N/A    |
| High Channel 48, 5240MHz                        | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| Low Channel 52, 5260MHz                         | 44.9 uS                  | 253.7 uS                                                                                           | 1                | 17.7              | N/A      | N/A    |
| Low Channel 52, 5260MHz                         | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| High Channel 64, 5320MHz                        | 44.9 uS                  | 253.7 uS                                                                                           | 1                | 17.7              | N/A      | N/A    |
| High Channel 64, 5320MHz                        | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| Low Channel 100, 5500MHz                        | 44.9 uS                  | 253.7 uS                                                                                           | 1                | 17.7              | N/A      | N/A    |
| Low Channel 100, 5500MHz                        | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| Mid Channel 116, 5580MHz                        | 44.7 uS                  | 253.7 uS                                                                                           | 1                | 17.6              | N/A      | N/A    |
| Mid Channel 116, 5580MHz                        | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |
| High Channel 140, 5700MHz                       | 44.9 uS                  | 254.9 uS                                                                                           | 1                | 17.6              | N/A      | N/A    |
| High Channel 140, 5700MHz                       | N/A                      | N/A                                                                                                | 5                | N/A               | N/A      | N/A    |

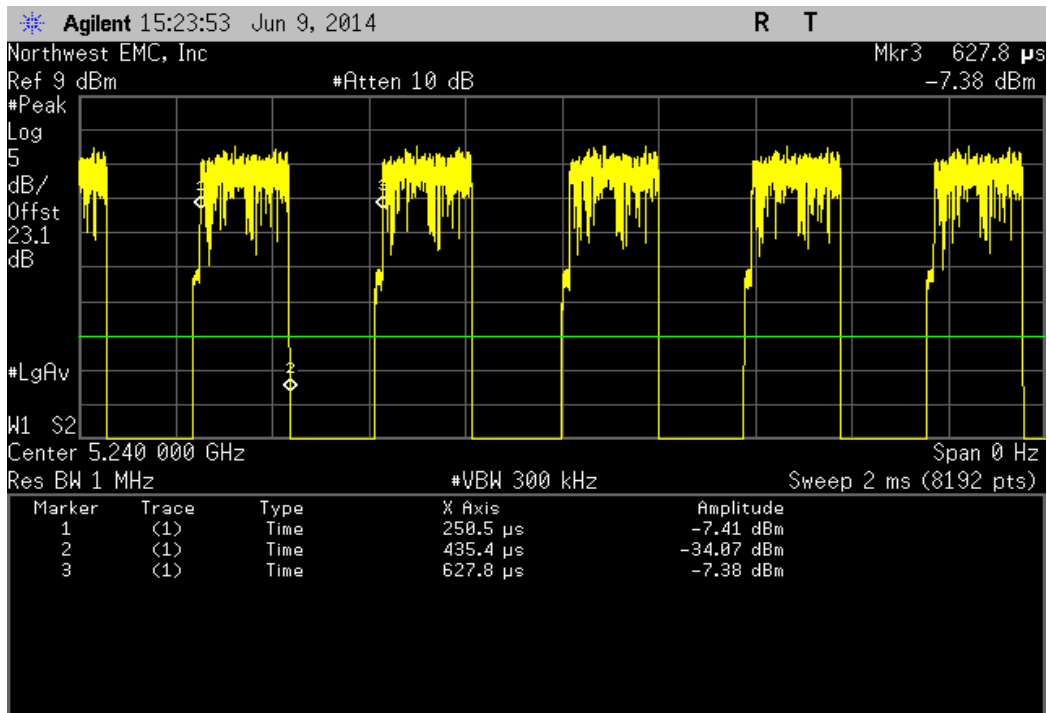
| 802.11(a) 6 Mbps, Low Channel 36, 5180MHz |          |                  |           |       |        |  |
|-------------------------------------------|----------|------------------|-----------|-------|--------|--|
| Pulse Width                               | Period   | Number of Pulses | Value (%) | Limit | Result |  |
| 184.8 uS                                  | 378.4 uS | 1                | 48.8      | N/A   | N/A    |  |



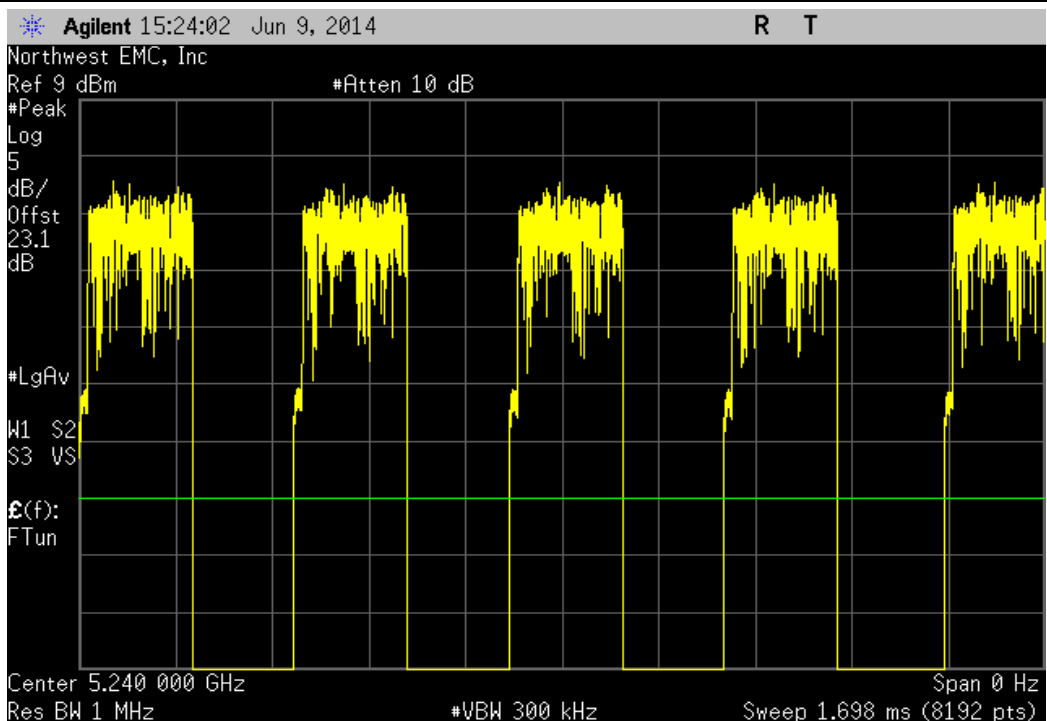
| 802.11(a) 6 Mbps, Low Channel 36, 5180MHz |        |                  |           |       |        |  |
|-------------------------------------------|--------|------------------|-----------|-------|--------|--|
| Pulse Width                               | Period | Number of Pulses | Value (%) | Limit | Result |  |
| N/A                                       | N/A    | 5                | N/A       | N/A   | N/A    |  |



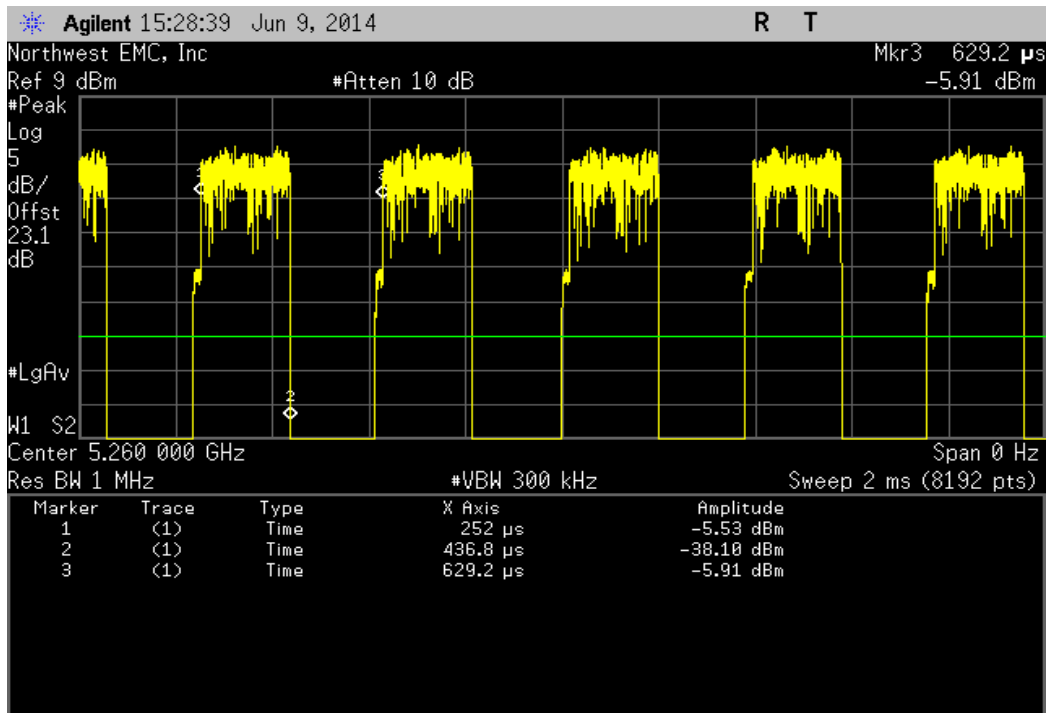
| 802.11(a) 6 Mbps, High Channel 48, 5240MHz |          |                  |           |       |        |  |
|--------------------------------------------|----------|------------------|-----------|-------|--------|--|
| Pulse Width                                | Period   | Number of Pulses | Value (%) | Limit | Result |  |
| 184.9 uS                                   | 377.3 uS | 1                | 49        | N/A   | N/A    |  |



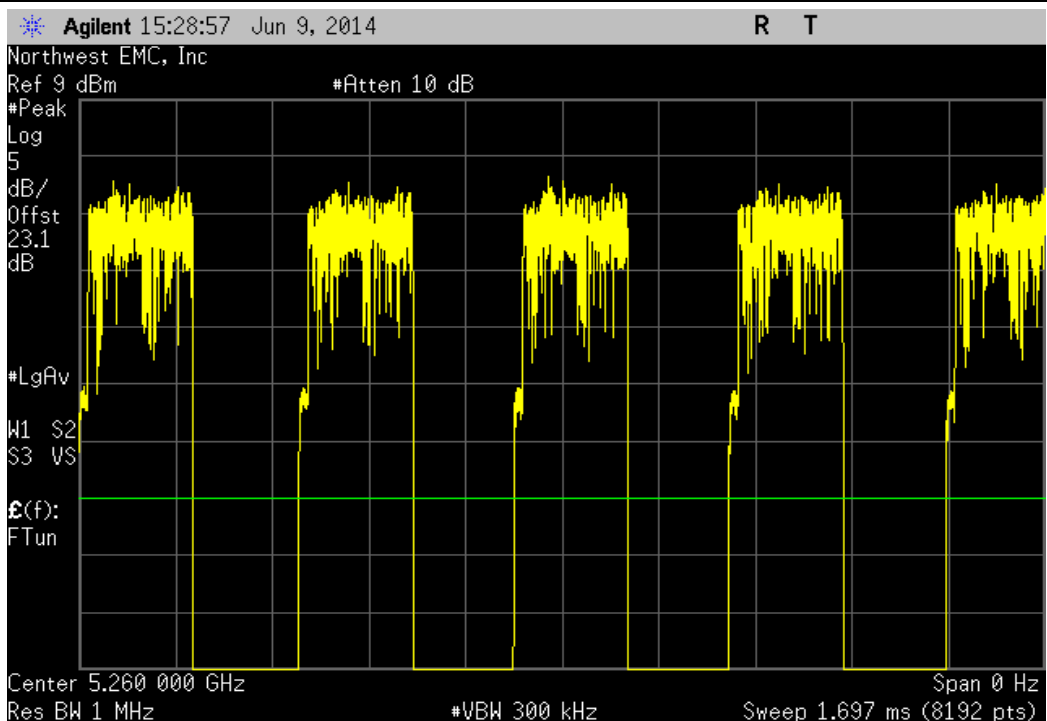
| 802.11(a) 6 Mbps, High Channel 48, 5240MHz |        |                  |           |       |        |  |
|--------------------------------------------|--------|------------------|-----------|-------|--------|--|
| Pulse Width                                | Period | Number of Pulses | Value (%) | Limit | Result |  |
| N/A                                        | N/A    | 5                | N/A       | N/A   | N/A    |  |



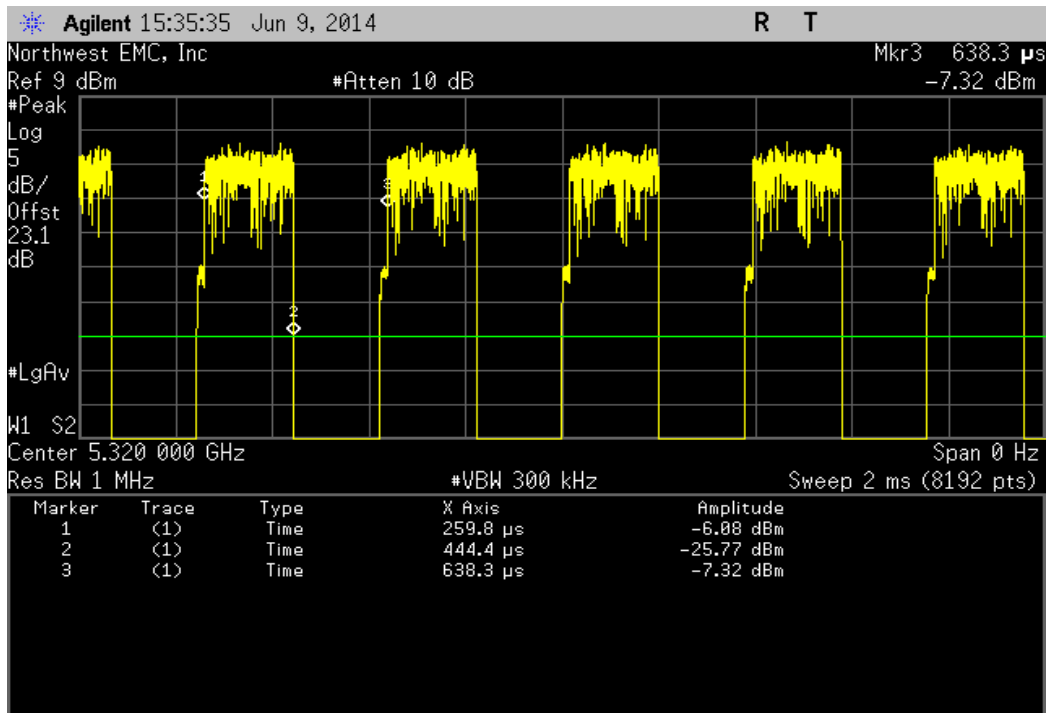
| 802.11(a) 6 Mbps, Low Channel 52, 5260MHz |          |                  |           |       |        |  |
|-------------------------------------------|----------|------------------|-----------|-------|--------|--|
| Pulse Width                               | Period   | Number of Pulses | Value (%) | Limit | Result |  |
| 184.8 uS                                  | 377.2 uS | 1                | 49        | N/A   | N/A    |  |



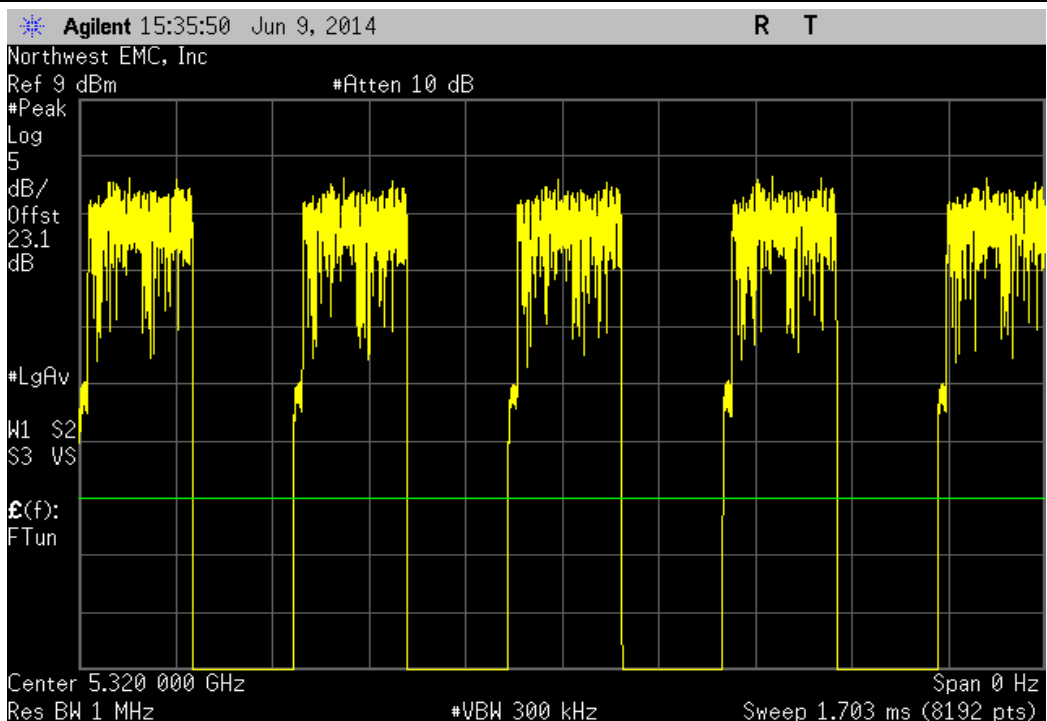
| 802.11(a) 6 Mbps, Low Channel 52, 5260MHz |        |                  |           |       |        |  |
|-------------------------------------------|--------|------------------|-----------|-------|--------|--|
| Pulse Width                               | Period | Number of Pulses | Value (%) | Limit | Result |  |
| N/A                                       | N/A    | 5                | N/A       | N/A   | N/A    |  |



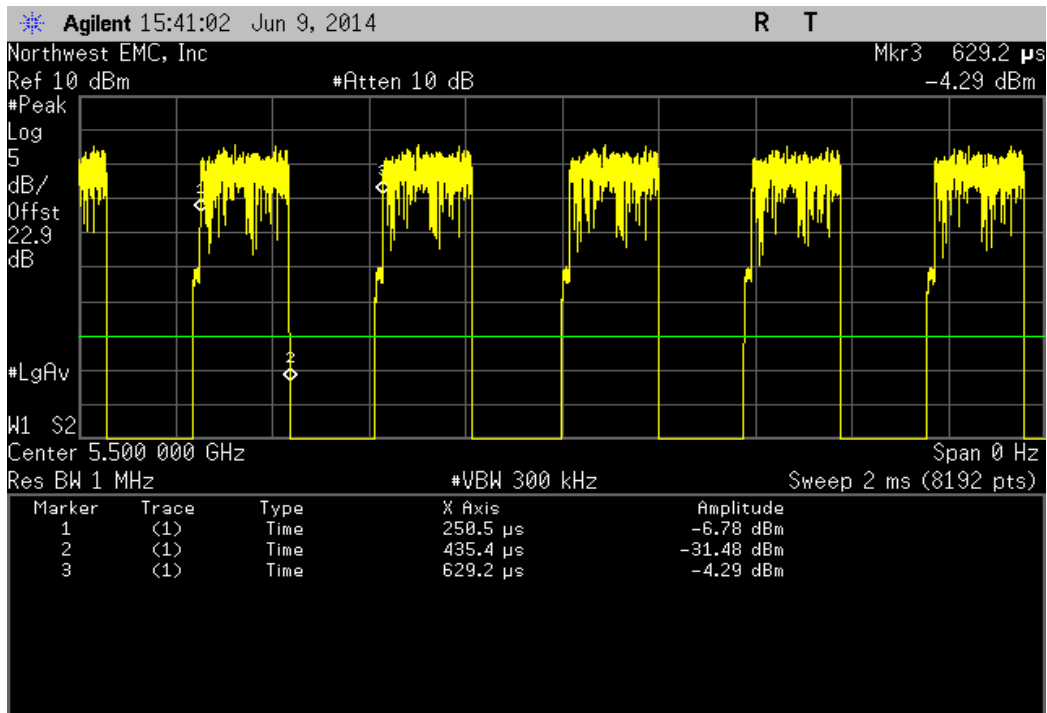
| 802.11(a) 6 Mbps, High Channel 64, 5320MHz |               |                  |           |       |        |  |
|--------------------------------------------|---------------|------------------|-----------|-------|--------|--|
| Pulse Width                                | Period        | Number of Pulses | Value (%) | Limit | Result |  |
| 184.6 $\mu$ s                              | 378.5 $\mu$ s | 1                | 48.8      | N/A   | N/A    |  |



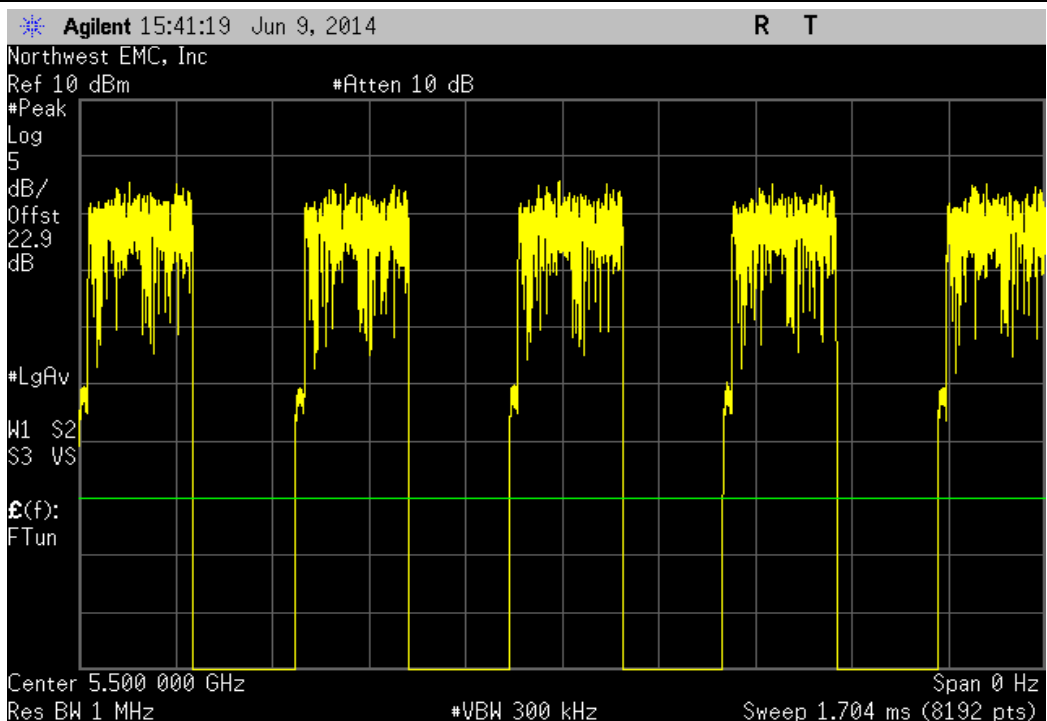
| 802.11(a) 6 Mbps, High Channel 64, 5320MHz |        |                  |           |       |        |  |
|--------------------------------------------|--------|------------------|-----------|-------|--------|--|
| Pulse Width                                | Period | Number of Pulses | Value (%) | Limit | Result |  |
| N/A                                        | N/A    | 5                | N/A       | N/A   | N/A    |  |



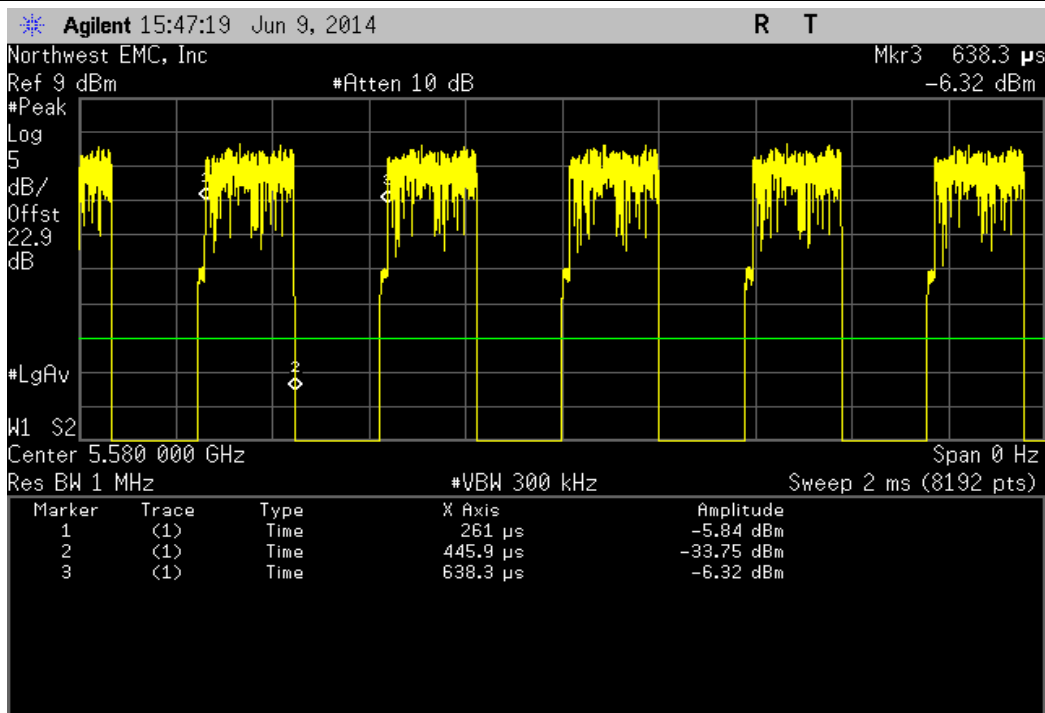
| 802.11(a) 6 Mbps, Low Channel 100, 5500MHz |          |                  |           |       |        |  |
|--------------------------------------------|----------|------------------|-----------|-------|--------|--|
| Pulse Width                                | Period   | Number of Pulses | Value (%) | Limit | Result |  |
| 184.9 uS                                   | 378.7 uS | 1                | 48.8      | N/A   | N/A    |  |



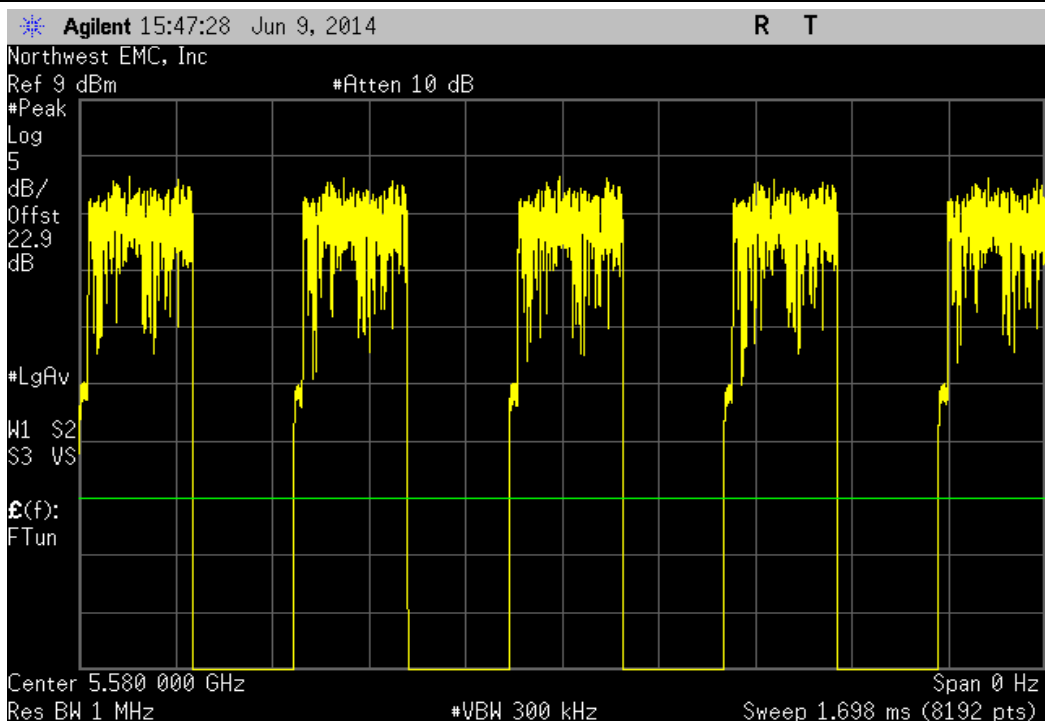
| 802.11(a) 6 Mbps, Low Channel 100, 5500MHz |        |                  |           |       |        |  |
|--------------------------------------------|--------|------------------|-----------|-------|--------|--|
| Pulse Width                                | Period | Number of Pulses | Value (%) | Limit | Result |  |
| N/A                                        | N/A    | 5                | N/A       | N/A   | N/A    |  |



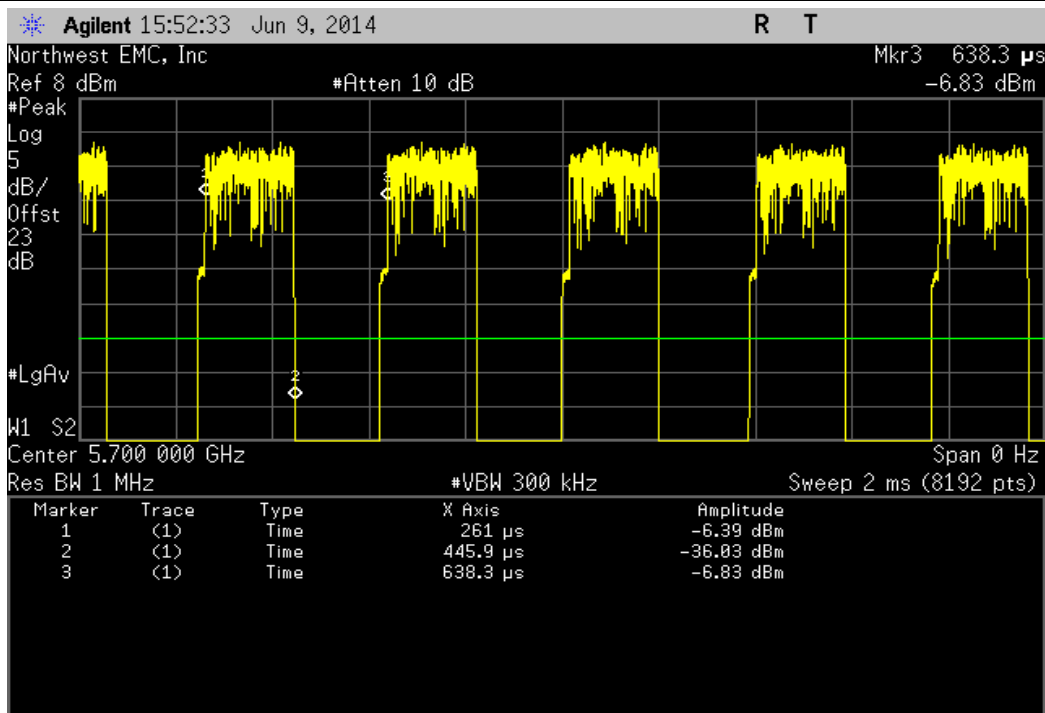
| 802.11(a) 6 Mbps, Mid Channel 116, 5580MHz |          |                  |           |       |        |  |
|--------------------------------------------|----------|------------------|-----------|-------|--------|--|
| Pulse Width                                | Period   | Number of Pulses | Value (%) | Limit | Result |  |
| 184.9 uS                                   | 377.3 uS | 1                | 49        | N/A   | N/A    |  |



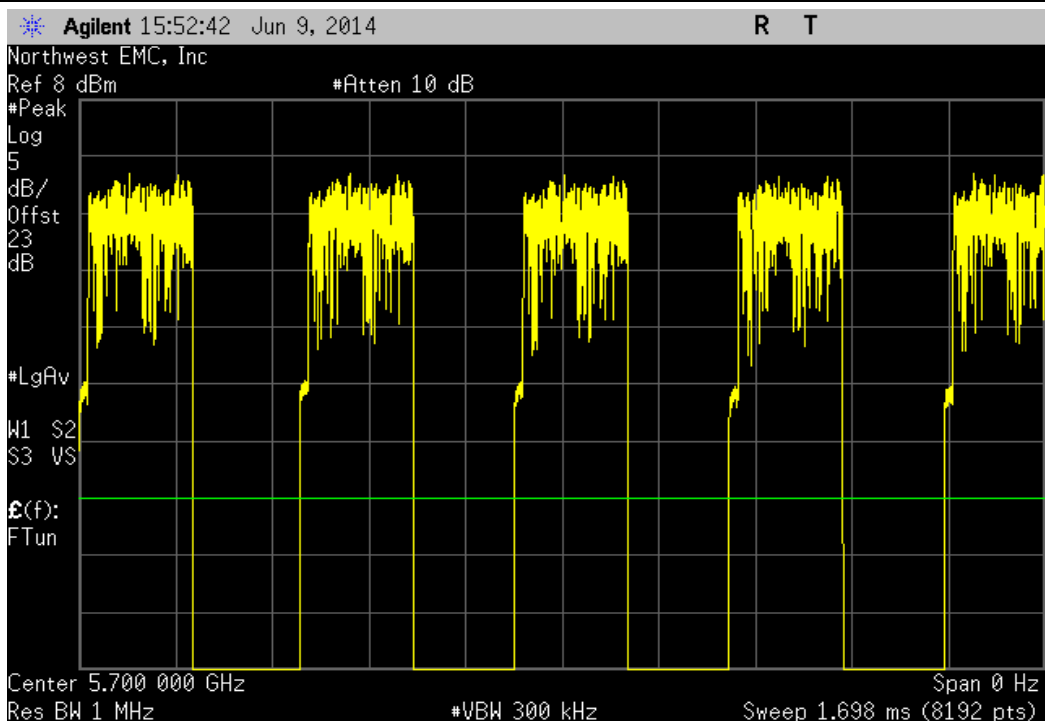
| 802.11(a) 6 Mbps, Mid Channel 116, 5580MHz |        |                  |           |       |        |  |
|--------------------------------------------|--------|------------------|-----------|-------|--------|--|
| Pulse Width                                | Period | Number of Pulses | Value (%) | Limit | Result |  |
| N/A                                        | N/A    | 5                | N/A       | N/A   | N/A    |  |



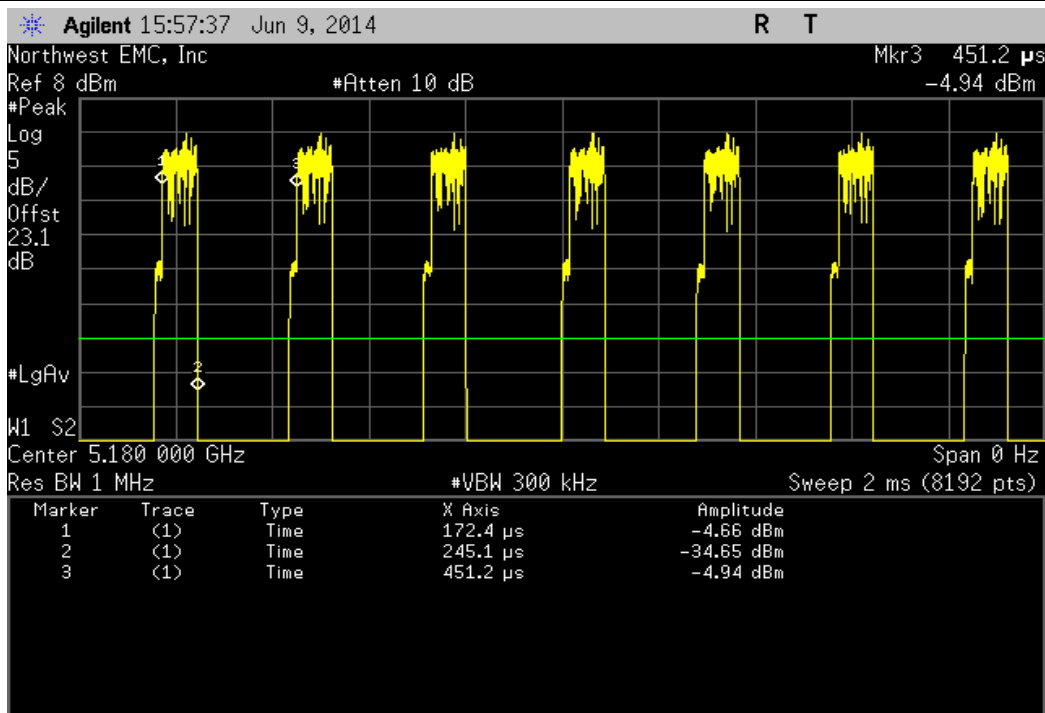
| 802.11(a) 6 Mbps, High Channel 140, 5700MHz |          |                  |           |       |        |  |
|---------------------------------------------|----------|------------------|-----------|-------|--------|--|
| Pulse Width                                 | Period   | Number of Pulses | Value (%) | Limit | Result |  |
| 184.9 uS                                    | 377.3 uS | 1                | 49        | N/A   | N/A    |  |



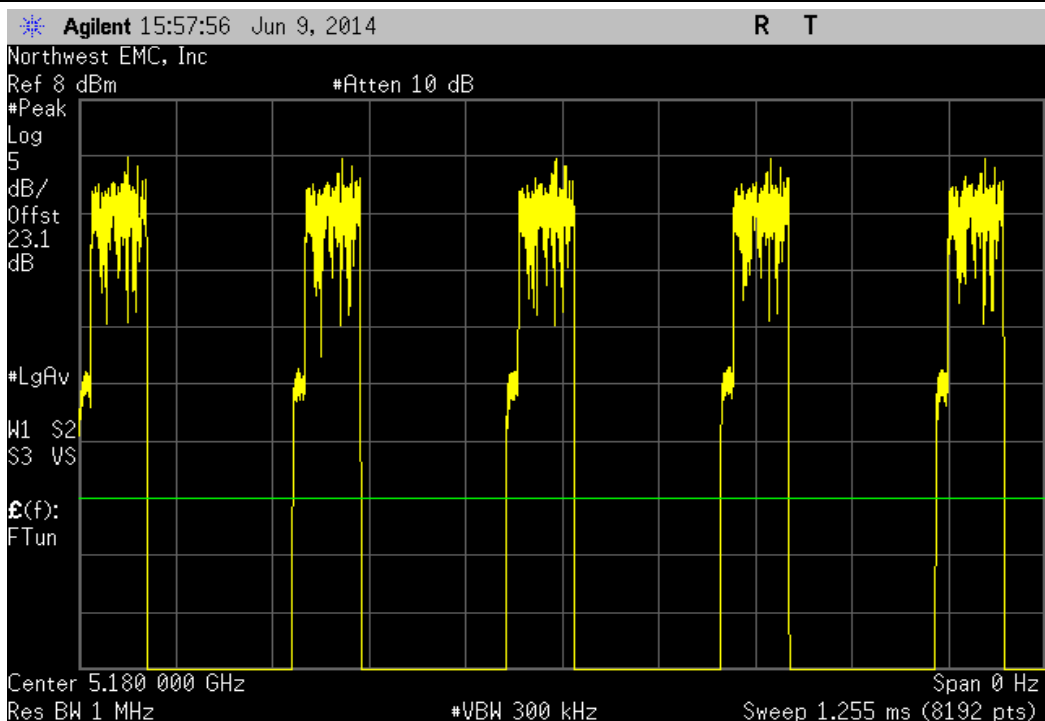
| 802.11(a) 6 Mbps, High Channel 140, 5700MHz |        |                  |           |       |        |  |
|---------------------------------------------|--------|------------------|-----------|-------|--------|--|
| Pulse Width                                 | Period | Number of Pulses | Value (%) | Limit | Result |  |
| N/A                                         | N/A    | 5                | N/A       | N/A   | N/A    |  |



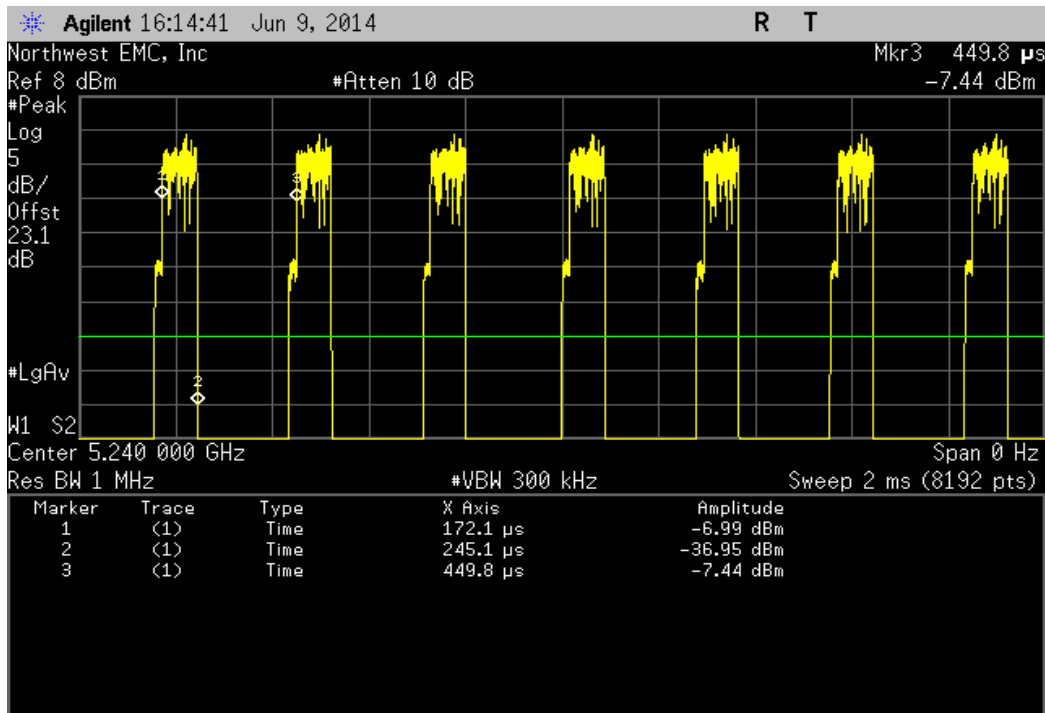
| 802.11(a) 18 Mbps, Low Channel 36, 5180MHz |             |          |                  |           |       |        |
|--------------------------------------------|-------------|----------|------------------|-----------|-------|--------|
|                                            | Pulse Width | Period   | Number of Pulses | Value (%) | Limit | Result |
|                                            | 72.7 uS     | 278.8 uS | 1                | 26.1      | N/A   | N/A    |



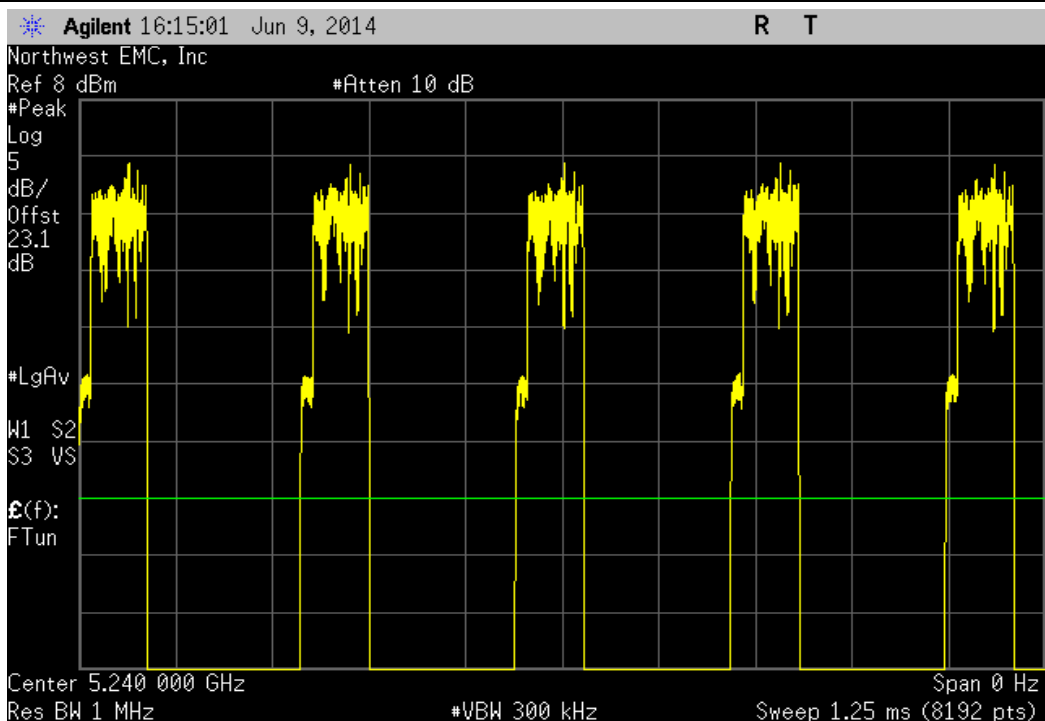
| 802.11(a) 18 Mbps, Low Channel 36, 5180MHz |             |        |                  |           |       |        |
|--------------------------------------------|-------------|--------|------------------|-----------|-------|--------|
|                                            | Pulse Width | Period | Number of Pulses | Value (%) | Limit | Result |
|                                            | N/A         | N/A    | 5                | N/A       | N/A   | N/A    |



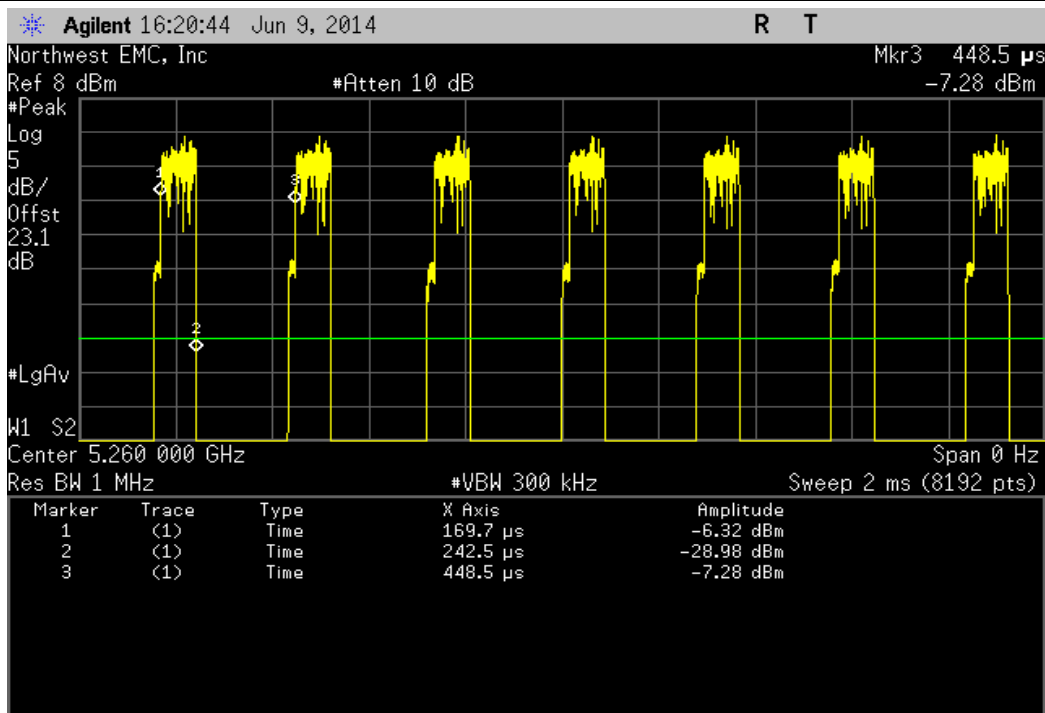
| 802.11(a) 18 Mbps, High Channel 48, 5240MHz |             |          |                  |           |       |        |
|---------------------------------------------|-------------|----------|------------------|-----------|-------|--------|
|                                             | Pulse Width | Period   | Number of Pulses | Value (%) | Limit | Result |
|                                             | 73 uS       | 277.7 uS | 1                | 26.3      | N/A   | N/A    |



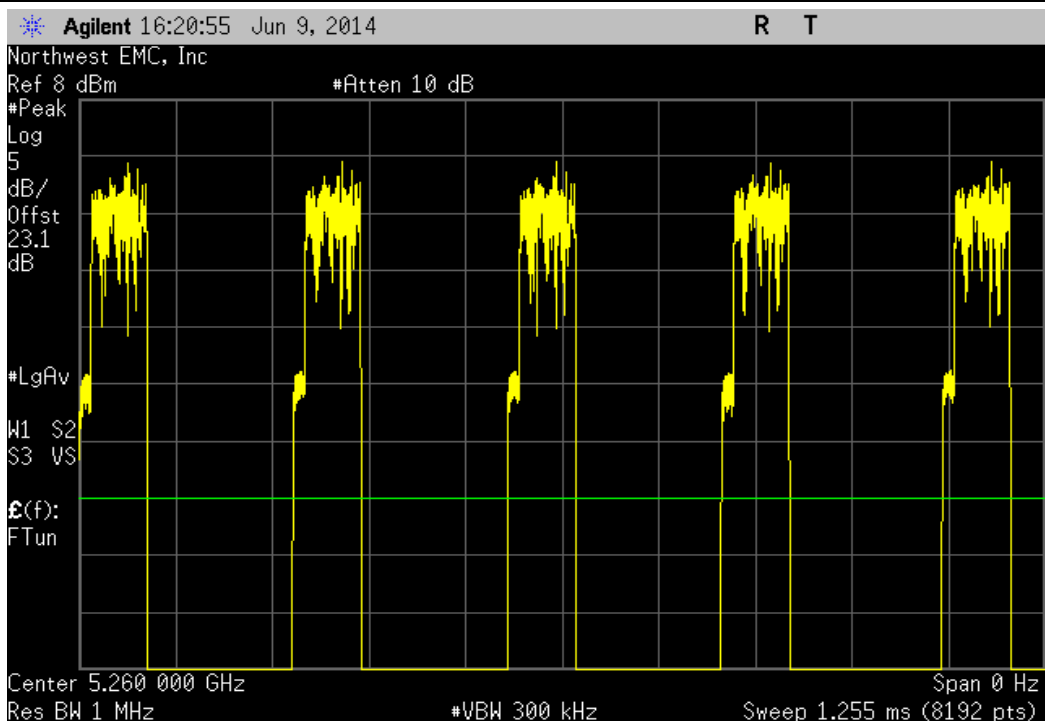
| 802.11(a) 18 Mbps, High Channel 48, 5240MHz |             |        |                  |           |       |        |
|---------------------------------------------|-------------|--------|------------------|-----------|-------|--------|
|                                             | Pulse Width | Period | Number of Pulses | Value (%) | Limit | Result |
|                                             | N/A         | N/A    | 5                | N/A       | N/A   | N/A    |



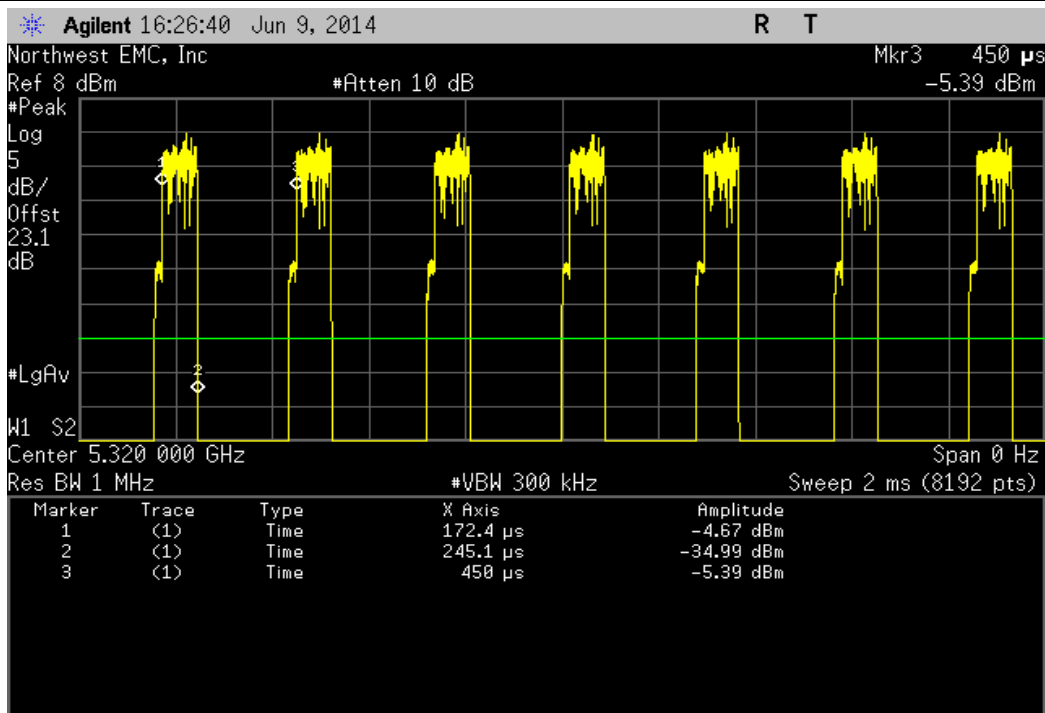
| 802.11(a) 18 Mbps, Low Channel 52, 5260MHz |             |          |                  |           |       |        |
|--------------------------------------------|-------------|----------|------------------|-----------|-------|--------|
|                                            | Pulse Width | Period   | Number of Pulses | Value (%) | Limit | Result |
|                                            | 72.8 uS     | 278.8 uS | 1                | 26.1      | N/A   | N/A    |



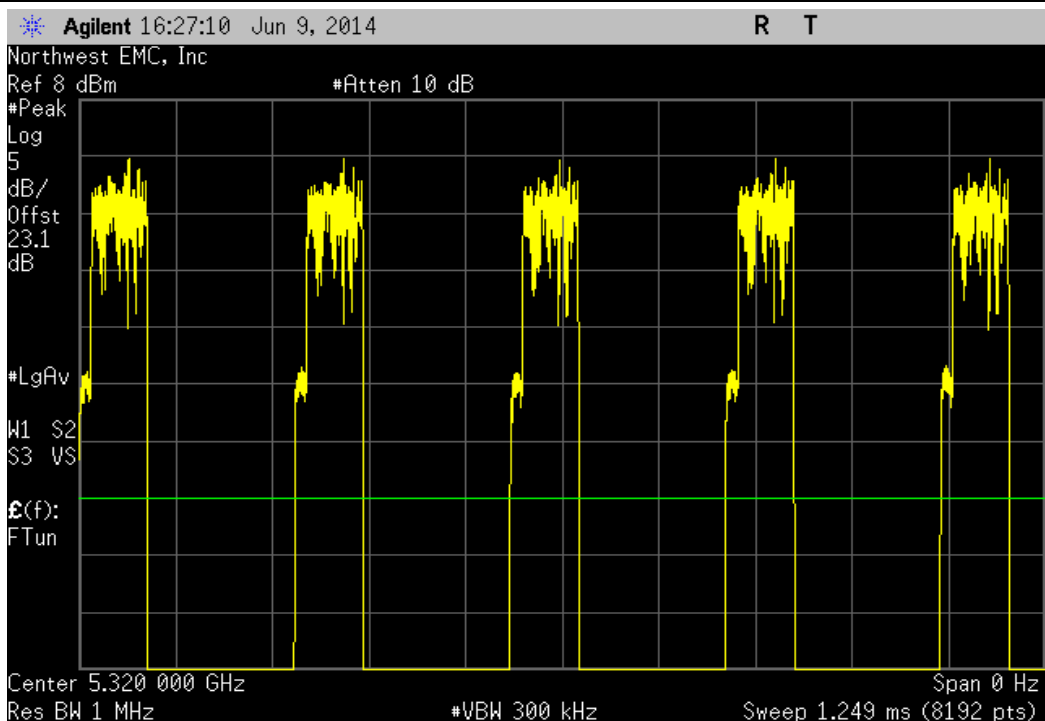
| 802.11(a) 18 Mbps, Low Channel 52, 5260MHz |             |        |                  |           |       |        |
|--------------------------------------------|-------------|--------|------------------|-----------|-------|--------|
|                                            | Pulse Width | Period | Number of Pulses | Value (%) | Limit | Result |
|                                            | N/A         | N/A    | 5                | N/A       | N/A   | N/A    |



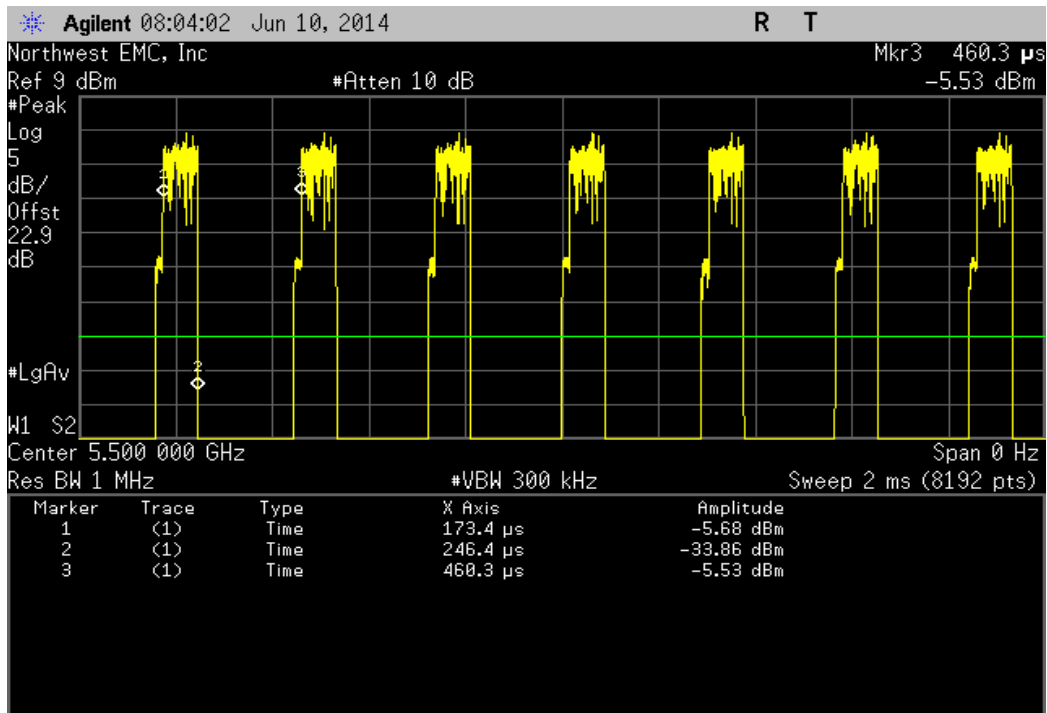
| 802.11(a) 18 Mbps, High Channel 64, 5320MHz |             |          |                  |           |       |        |
|---------------------------------------------|-------------|----------|------------------|-----------|-------|--------|
|                                             | Pulse Width | Period   | Number of Pulses | Value (%) | Limit | Result |
|                                             | 72.7 uS     | 277.6 uS | 1                | 26.2      | N/A   | N/A    |



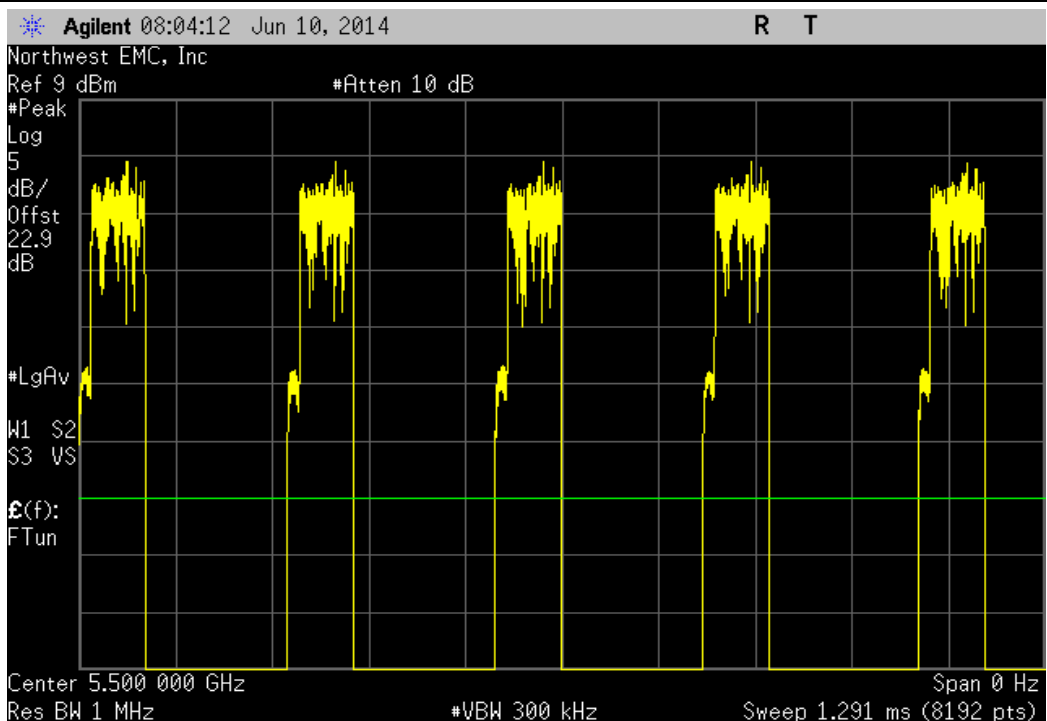
| 802.11(a) 18 Mbps, High Channel 64, 5320MHz |             |        |                  |           |       |        |
|---------------------------------------------|-------------|--------|------------------|-----------|-------|--------|
|                                             | Pulse Width | Period | Number of Pulses | Value (%) | Limit | Result |
|                                             | N/A         | N/A    | 5                | N/A       | N/A   | N/A    |



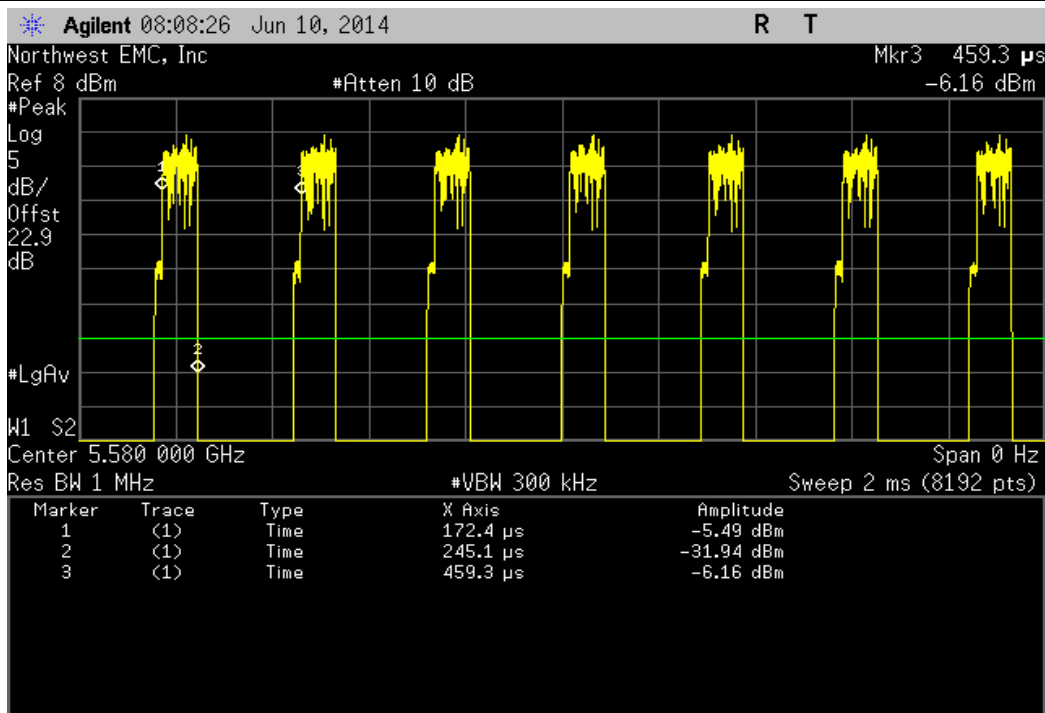
| 802.11(a) 18 Mbps, Low Channel 100, 5500MHz |             |          |                  |           |       |        |
|---------------------------------------------|-------------|----------|------------------|-----------|-------|--------|
|                                             | Pulse Width | Period   | Number of Pulses | Value (%) | Limit | Result |
|                                             | 73 uS       | 286.9 uS | 1                | 25.4      | N/A   | N/A    |



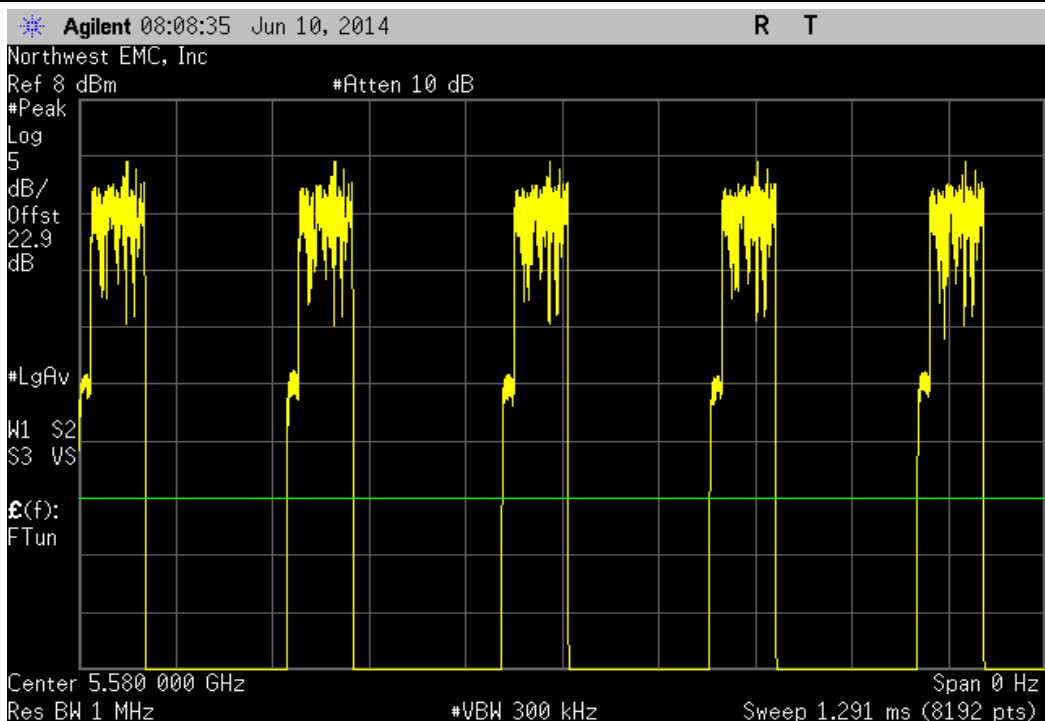
| 802.11(a) 18 Mbps, Low Channel 100, 5500MHz |             |        |                  |           |       |        |
|---------------------------------------------|-------------|--------|------------------|-----------|-------|--------|
|                                             | Pulse Width | Period | Number of Pulses | Value (%) | Limit | Result |
|                                             | N/A         | N/A    | 5                | N/A       | N/A   | N/A    |



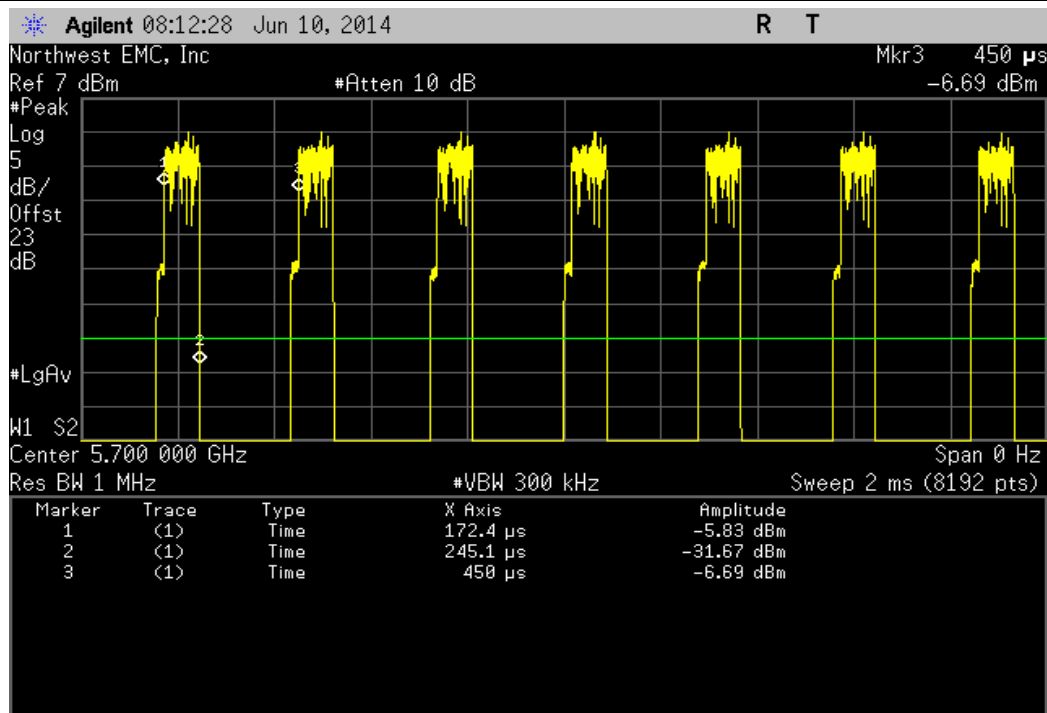
| 802.11(a) 18 Mbps, Mid Channel 116, 5580MHz |          |                  |           |       |        |  |
|---------------------------------------------|----------|------------------|-----------|-------|--------|--|
| Pulse Width                                 | Period   | Number of Pulses | Value (%) | Limit | Result |  |
| 72.7 uS                                     | 286.9 uS | 1                | 25.3      | N/A   | N/A    |  |



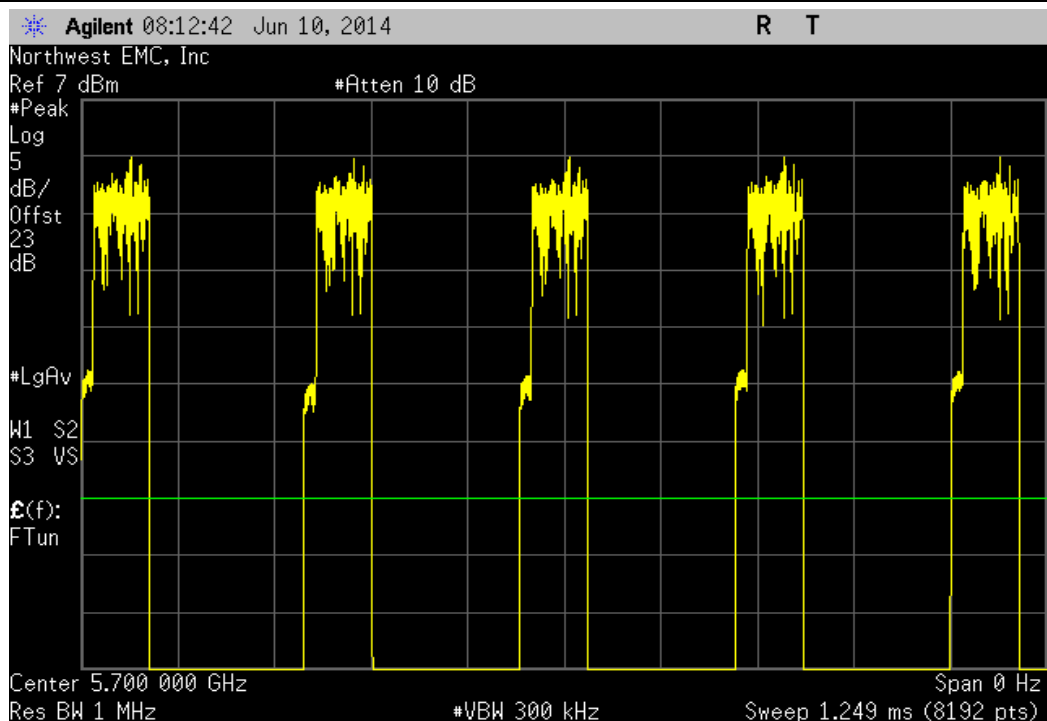
| 802.11(a) 18 Mbps, Mid Channel 116, 5580MHz |        |                  |           |       |        |  |
|---------------------------------------------|--------|------------------|-----------|-------|--------|--|
| Pulse Width                                 | Period | Number of Pulses | Value (%) | Limit | Result |  |
| N/A                                         | N/A    | 5                | N/A       | N/A   | N/A    |  |



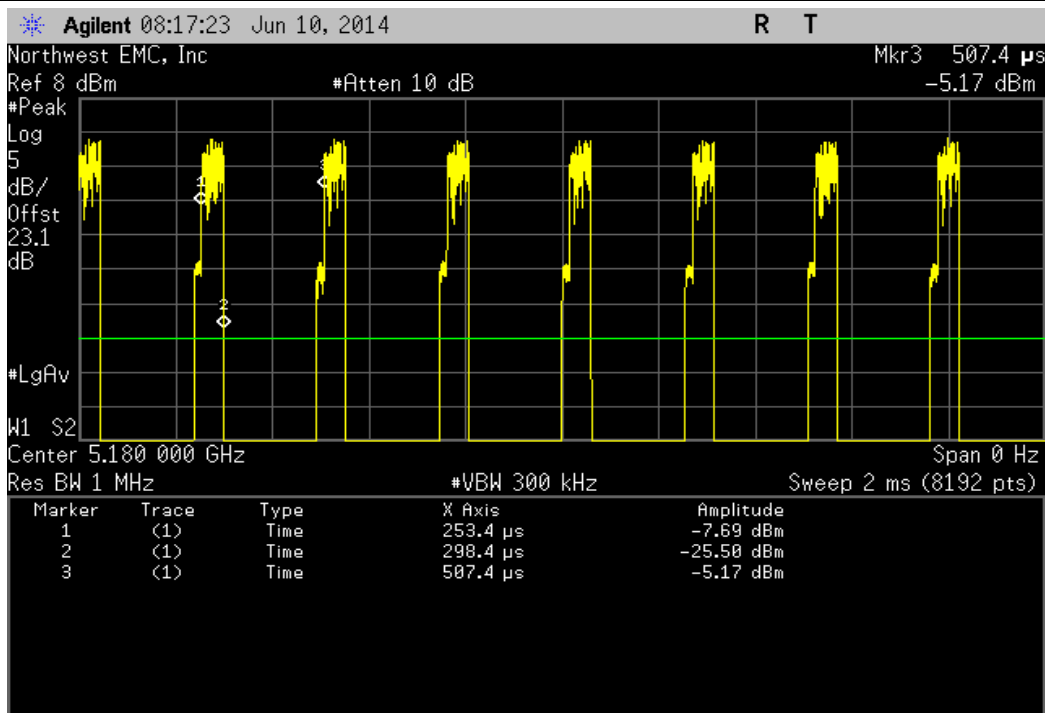
| 802.11(a) 18 Mbps, High Channel 140, 5700MHz |          |                  |           |       |        |  |
|----------------------------------------------|----------|------------------|-----------|-------|--------|--|
| Pulse Width                                  | Period   | Number of Pulses | Value (%) | Limit | Result |  |
| 72.7 uS                                      | 277.6 uS | 1                | 26.2      | N/A   | N/A    |  |



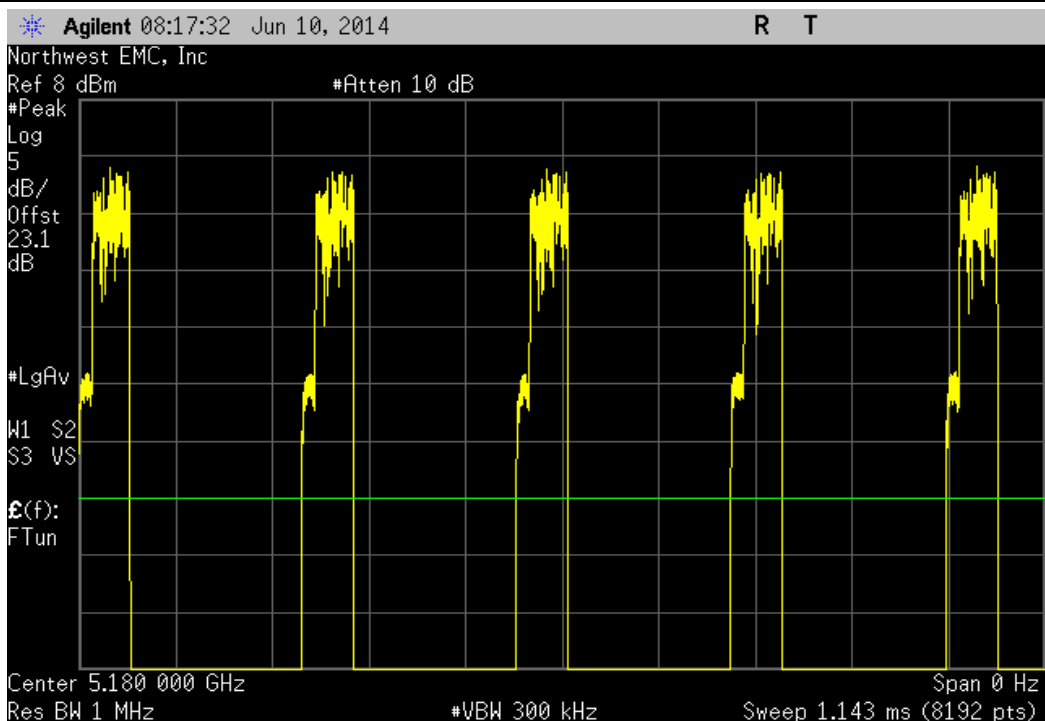
| 802.11(a) 18 Mbps, High Channel 140, 5700MHz |        |                  |           |       |        |  |
|----------------------------------------------|--------|------------------|-----------|-------|--------|--|
| Pulse Width                                  | Period | Number of Pulses | Value (%) | Limit | Result |  |
| N/A                                          | N/A    | 5                | N/A       | N/A   | N/A    |  |



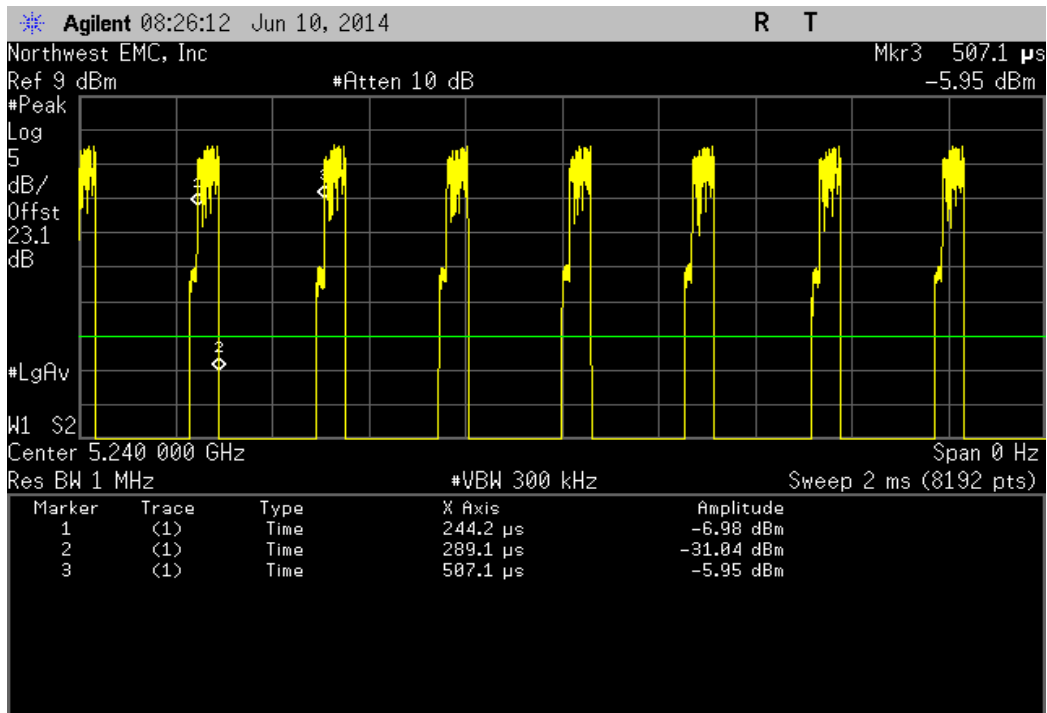
| 802.11(a) 36 Mbps, Low Channel 36, 5180MHz |             |             |                  |           |       |        |
|--------------------------------------------|-------------|-------------|------------------|-----------|-------|--------|
|                                            | Pulse Width | Period      | Number of Pulses | Value (%) | Limit | Result |
|                                            | 45 $\mu$ S  | 254 $\mu$ S | 1                | 17.7      | N/A   | N/A    |



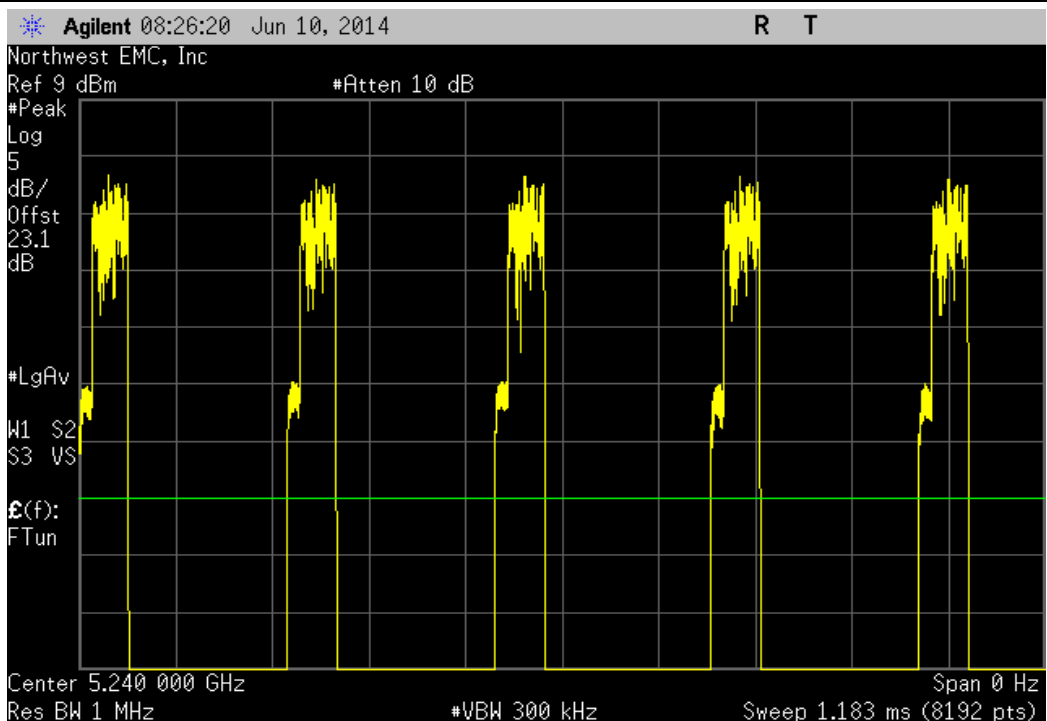
| 802.11(a) 36 Mbps, Low Channel 36, 5180MHz |             |        |                  |           |       |        |
|--------------------------------------------|-------------|--------|------------------|-----------|-------|--------|
|                                            | Pulse Width | Period | Number of Pulses | Value (%) | Limit | Result |
|                                            | N/A         | N/A    | 5                | N/A       | N/A   | N/A    |



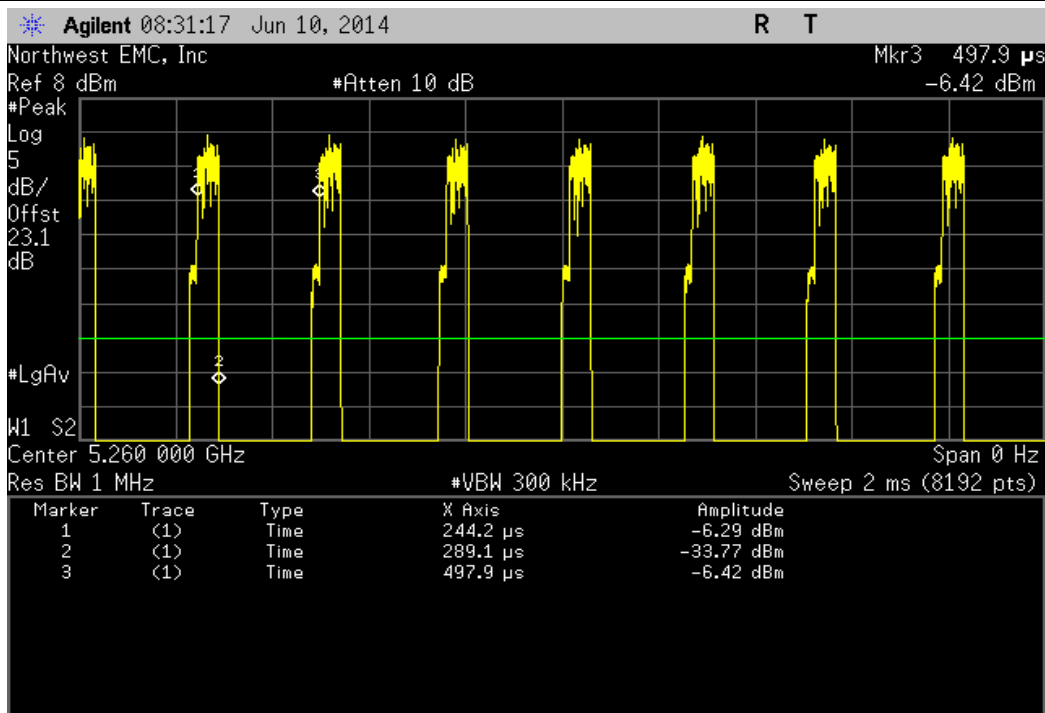
| 802.11(a) 36 Mbps, High Channel 48, 5240MHz |             |          |                  |           |       |        |
|---------------------------------------------|-------------|----------|------------------|-----------|-------|--------|
|                                             | Pulse Width | Period   | Number of Pulses | Value (%) | Limit | Result |
|                                             | 44.9 uS     | 262.9 uS | 1                | 17.1      | N/A   | N/A    |



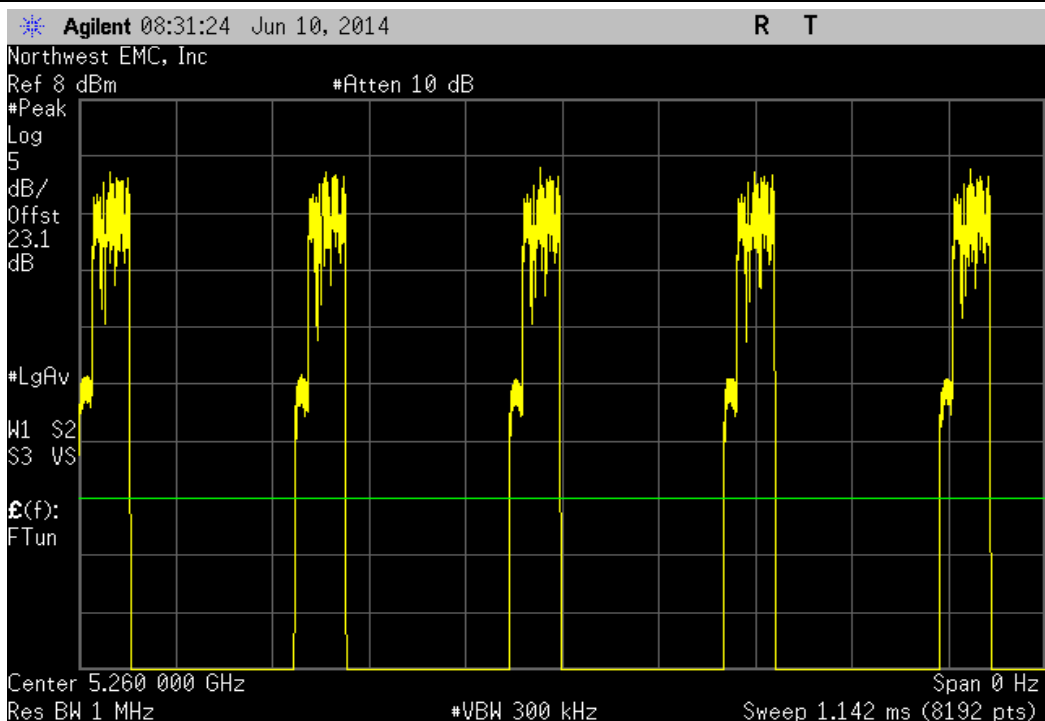
| 802.11(a) 36 Mbps, High Channel 48, 5240MHz |             |        |                  |           |       |        |
|---------------------------------------------|-------------|--------|------------------|-----------|-------|--------|
|                                             | Pulse Width | Period | Number of Pulses | Value (%) | Limit | Result |
|                                             | N/A         | N/A    | 5                | N/A       | N/A   | N/A    |



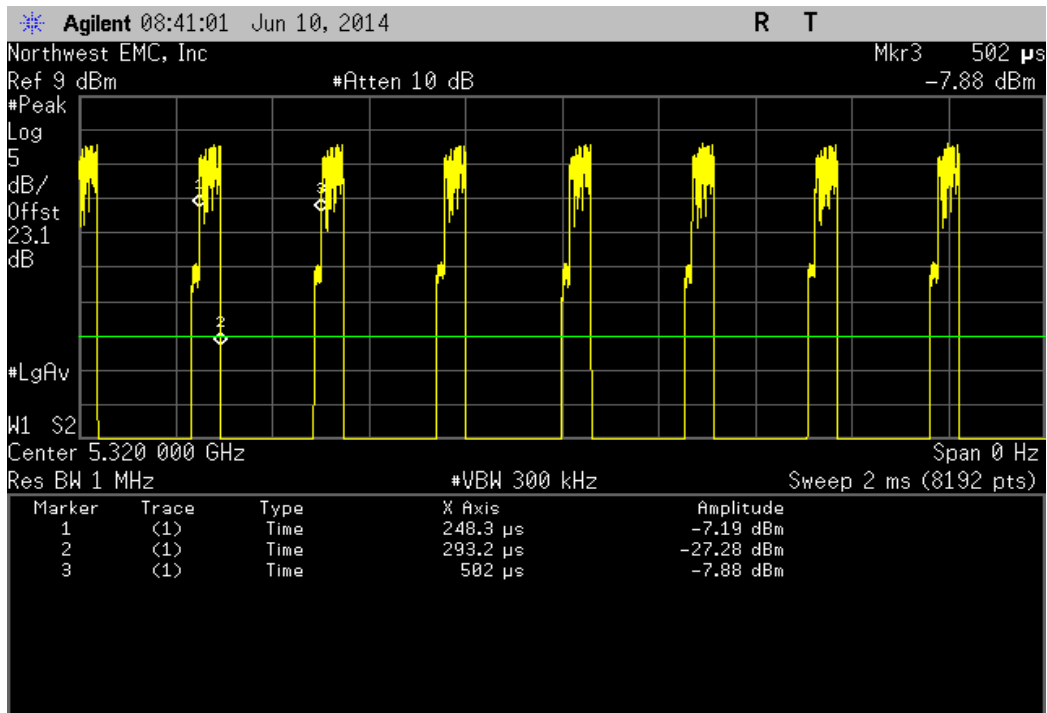
| 802.11(a) 36 Mbps, Low Channel 52, 5260MHz |             |          |                  |           |       |        |
|--------------------------------------------|-------------|----------|------------------|-----------|-------|--------|
|                                            | Pulse Width | Period   | Number of Pulses | Value (%) | Limit | Result |
|                                            | 44.9 uS     | 253.7 uS | 1                | 17.7      | N/A   | N/A    |



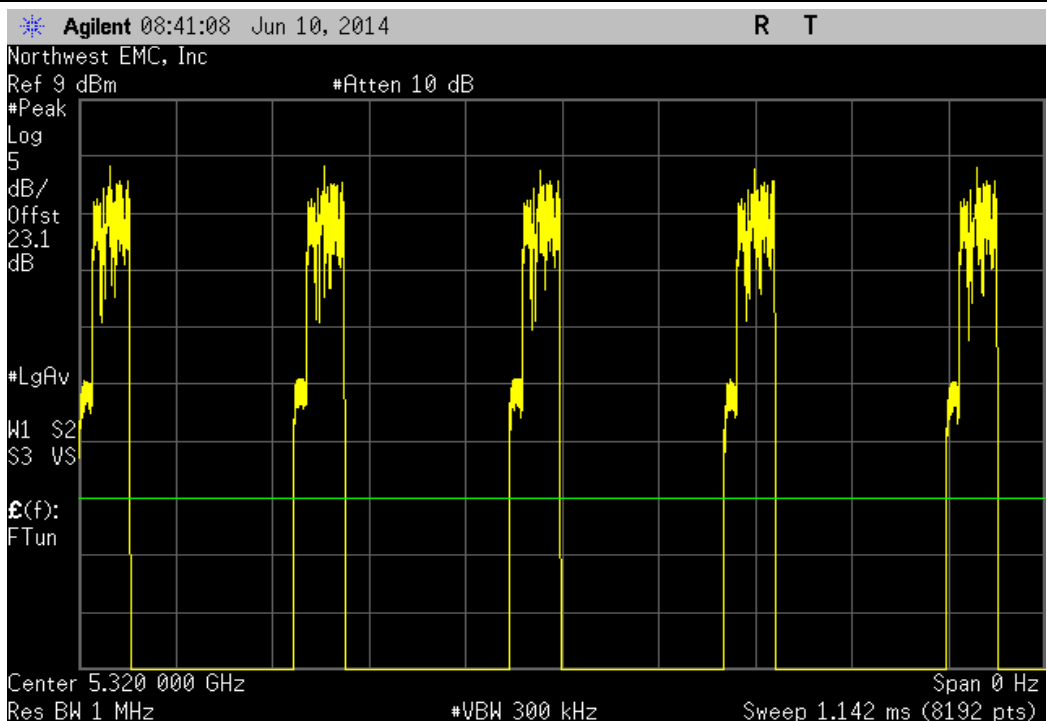
| 802.11(a) 36 Mbps, Low Channel 52, 5260MHz |             |        |                  |           |       |        |
|--------------------------------------------|-------------|--------|------------------|-----------|-------|--------|
|                                            | Pulse Width | Period | Number of Pulses | Value (%) | Limit | Result |
|                                            | N/A         | N/A    | 5                | N/A       | N/A   | N/A    |



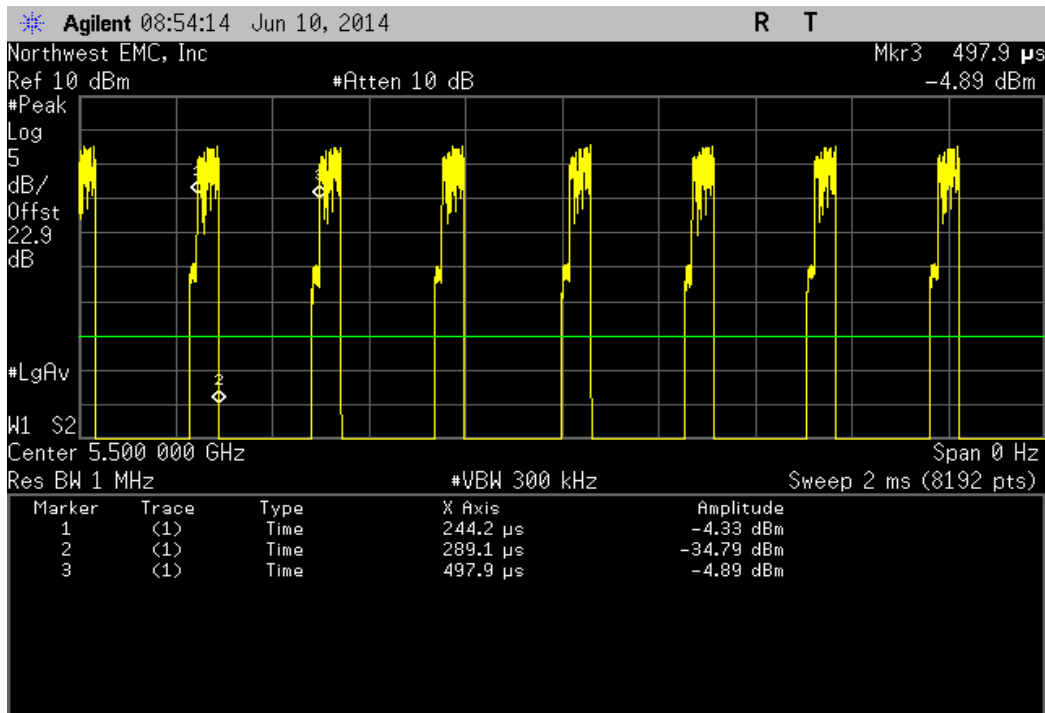
| 802.11(a) 36 Mbps, High Channel 64, 5320MHz |             |          |                  |           |       |        |
|---------------------------------------------|-------------|----------|------------------|-----------|-------|--------|
|                                             | Pulse Width | Period   | Number of Pulses | Value (%) | Limit | Result |
|                                             | 44.9 uS     | 253.7 uS | 1                | 17.7      | N/A   | N/A    |



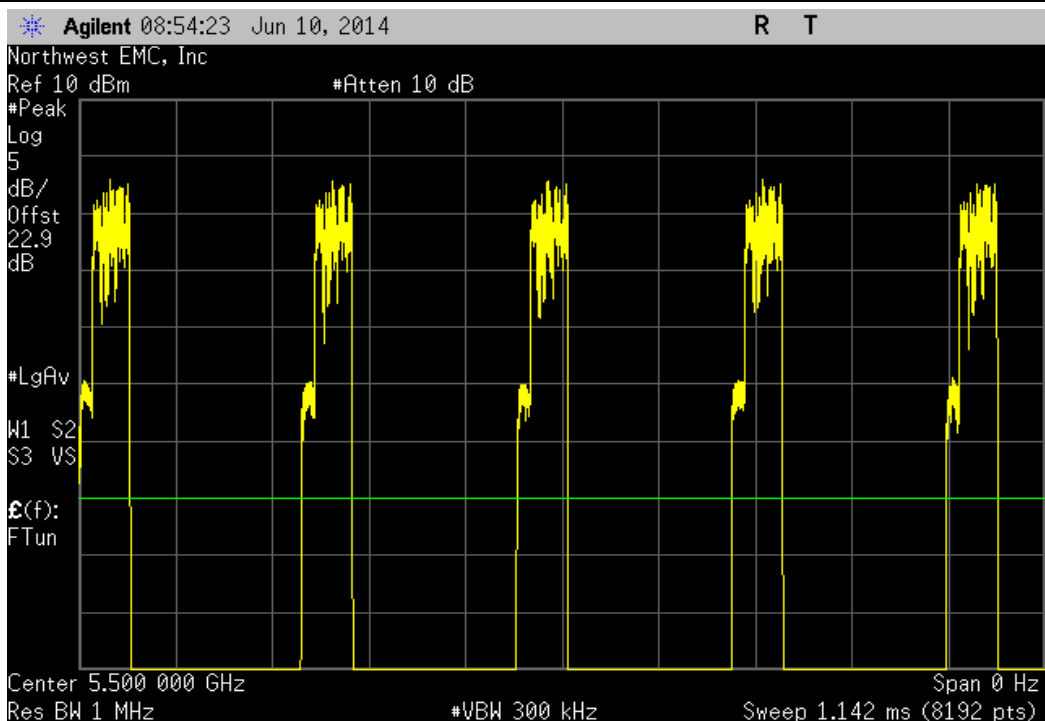
| 802.11(a) 36 Mbps, High Channel 64, 5320MHz |             |        |                  |           |       |        |
|---------------------------------------------|-------------|--------|------------------|-----------|-------|--------|
|                                             | Pulse Width | Period | Number of Pulses | Value (%) | Limit | Result |
|                                             | N/A         | N/A    | 5                | N/A       | N/A   | N/A    |



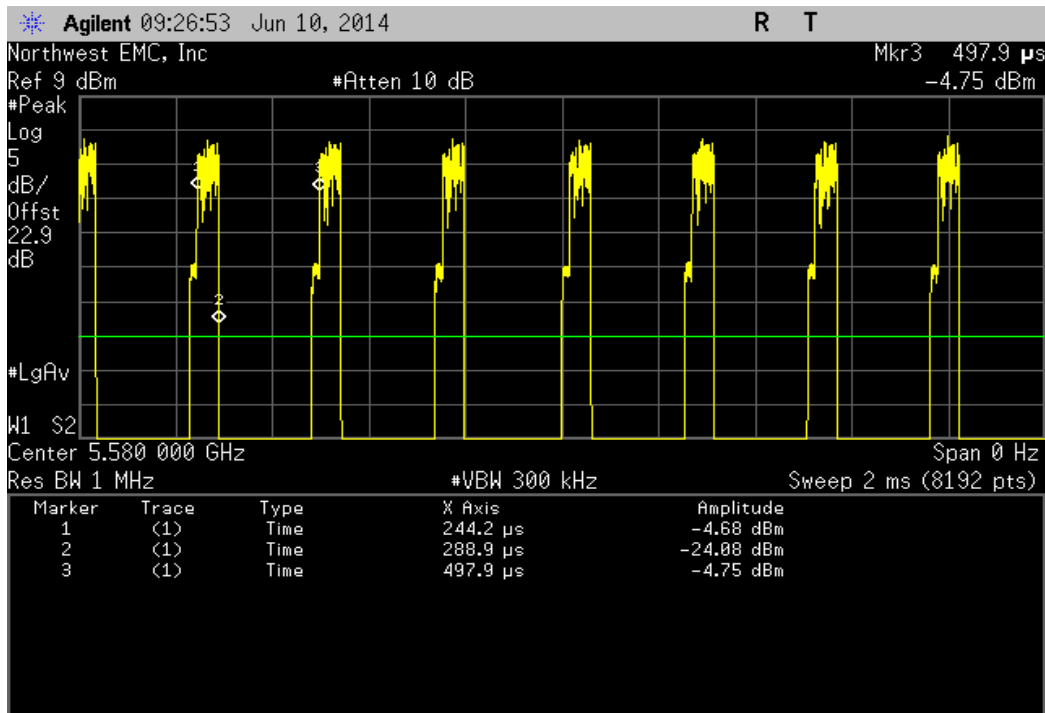
| 802.11(a) 36 Mbps, Low Channel 100, 5500MHz |          |                  |           |       |        |  |
|---------------------------------------------|----------|------------------|-----------|-------|--------|--|
| Pulse Width                                 | Period   | Number of Pulses | Value (%) | Limit | Result |  |
| 44.9 uS                                     | 253.7 uS | 1                | 17.7      | N/A   | N/A    |  |



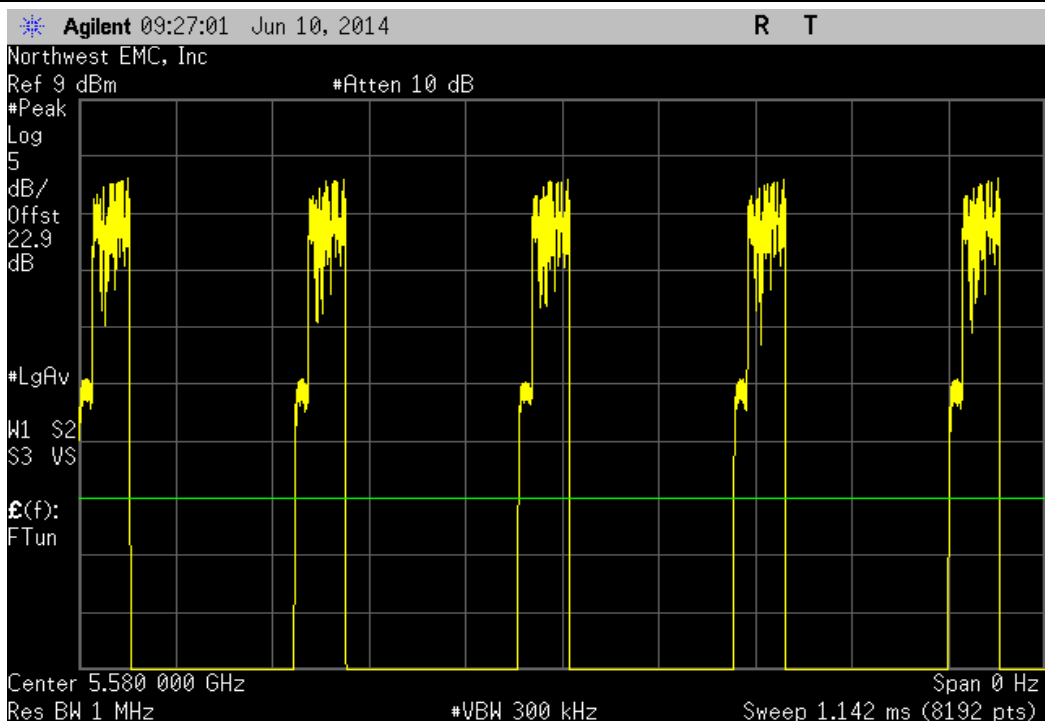
| 802.11(a) 36 Mbps, Low Channel 100, 5500MHz |        |                  |           |       |        |  |
|---------------------------------------------|--------|------------------|-----------|-------|--------|--|
| Pulse Width                                 | Period | Number of Pulses | Value (%) | Limit | Result |  |
| N/A                                         | N/A    | 5                | N/A       | N/A   | N/A    |  |



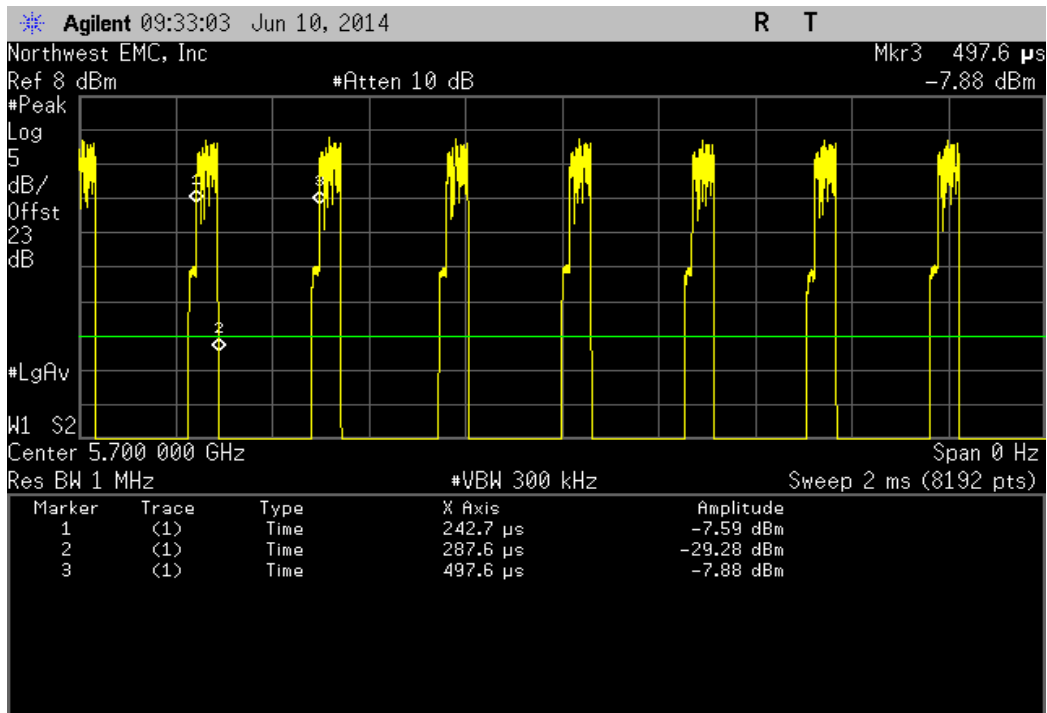
| 802.11(a) 36 Mbps, Mid Channel 116, 5580MHz |          |                  |           |       |        |  |
|---------------------------------------------|----------|------------------|-----------|-------|--------|--|
| Pulse Width                                 | Period   | Number of Pulses | Value (%) | Limit | Result |  |
| 44.7 uS                                     | 253.7 uS | 1                | 17.6      | N/A   | N/A    |  |



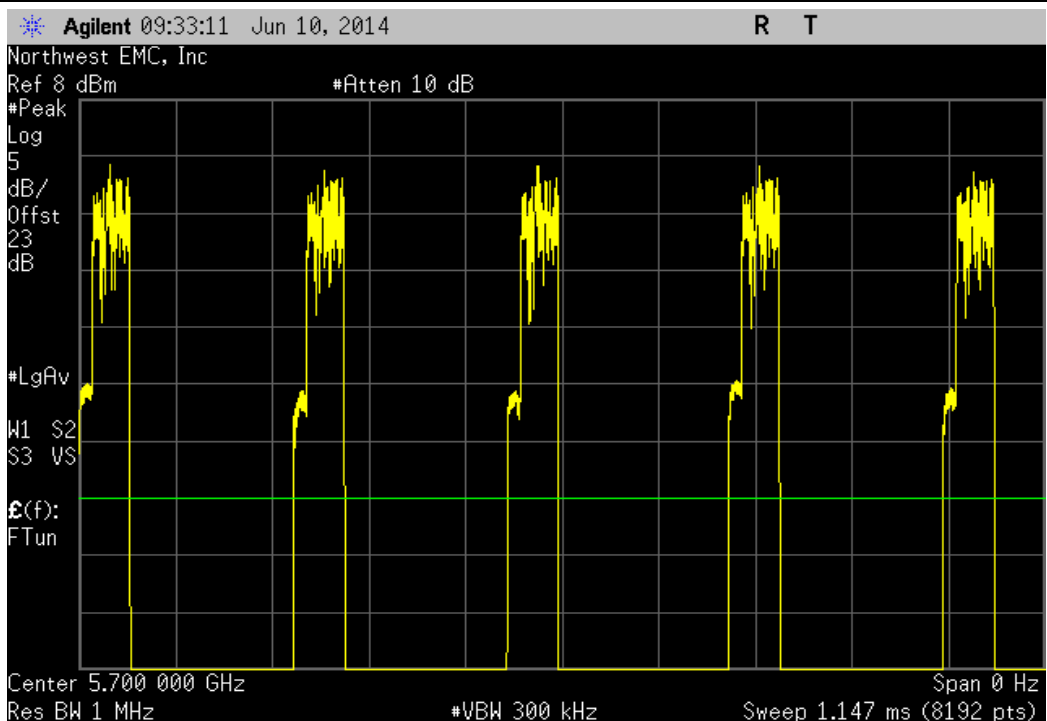
| 802.11(a) 36 Mbps, Mid Channel 116, 5580MHz |        |                  |           |       |        |  |
|---------------------------------------------|--------|------------------|-----------|-------|--------|--|
| Pulse Width                                 | Period | Number of Pulses | Value (%) | Limit | Result |  |
| N/A                                         | N/A    | 5                | N/A       | N/A   | N/A    |  |



| 802.11(a) 36 Mbps, High Channel 140, 5700MHz |             |          |                  |           |       |        |
|----------------------------------------------|-------------|----------|------------------|-----------|-------|--------|
|                                              | Pulse Width | Period   | Number of Pulses | Value (%) | Limit | Result |
|                                              | 44.9 uS     | 254.9 uS | 1                | 17.6      | N/A   | N/A    |



| 802.11(a) 36 Mbps, High Channel 140, 5700MHz |             |        |                  |           |       |        |
|----------------------------------------------|-------------|--------|------------------|-----------|-------|--------|
|                                              | 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 |
|---------------------------------|------------------|-----------------|-----|-----------|----------|
| 40GHz DC Block                  | Miteq            | DCB4000         | AMD | 4/28/2014 | 12 mo    |
| Attenuator 20 dB, SMA M/F 26GHz | S.M. Electronics | SA26B-20        | AUY | 7/30/2013 | 12 mo    |
| EV06 Direct Connect Cable       | ESM Cable Corp.  | TT              | ECA | NCR       | 0 mo     |
| Attenuator, 'Precision N'       | S.M. Electronics | SA18N-06/SM4032 | REE | 12/2/2013 | 12 mo    |
| Power Meter                     | Agilent          | N1913A          | SQR | 4/29/2013 | 36 mo    |
| Power Sensor                    | Agilent          | E9300H          | SQO | 4/29/2013 | 36 mo    |
| Spectrum Analyzer               | Agilent          | E4446A          | AAQ | 1/21/2014 | 24 mo    |
| MXG Analog Signal Generator     | Agilent          | N5181A          | TIG | 3/28/2014 | 36 mo    |

### TEST DESCRIPTION

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.



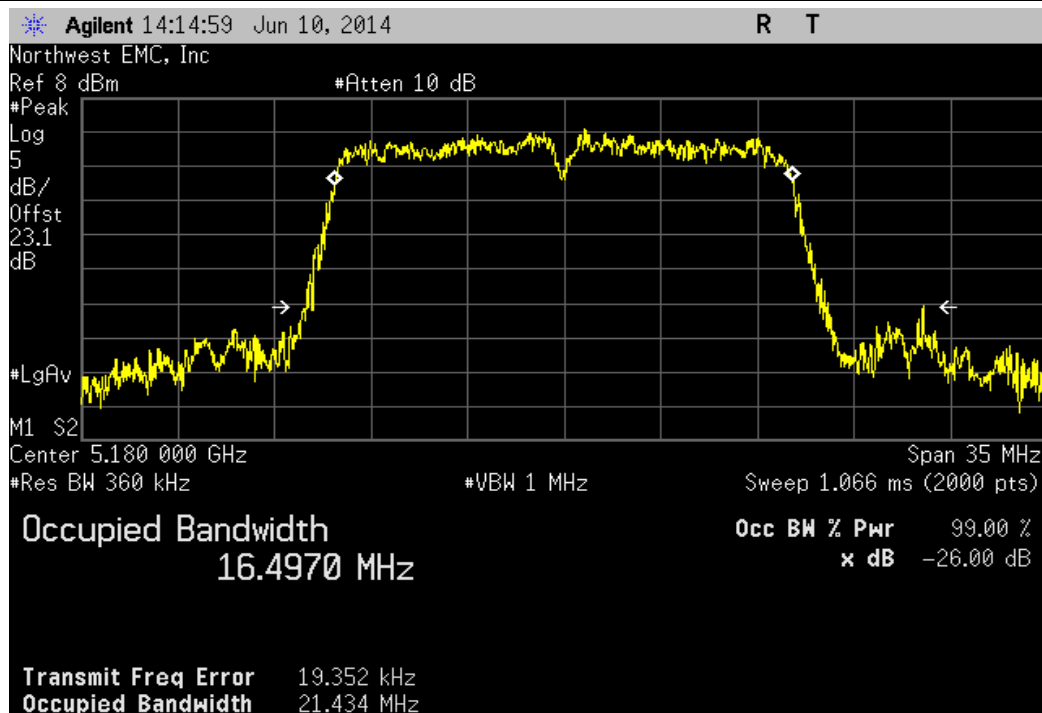
## EMISSION BANDWIDTH

XMit 2014.02.07  
PsaTx 2014.04.29

|                                                 |   |                                                                                             |                |
|-------------------------------------------------|---|---------------------------------------------------------------------------------------------|----------------|
| EUT: 444-2251                                   |   | Work Order: FOCU0169                                                                        |                |
| Serial Number: 02EA4F000062                     |   | Date: 06/11/14                                                                              |                |
| Customer: Summit Semiconductor LLC              |   | Temperature: 22.2°C                                                                         |                |
| Attendees: Paul Hamilton                        |   | Humidity: 41%                                                                               |                |
| Project: None                                   |   | Barometric Pres.: 1017                                                                      |                |
| Tested by: Brandon Hobbs                        |   | Power: 110VAC/60Hz                                                                          |                |
|                                                 |   | Job Site: EV06                                                                              |                |
| TEST SPECIFICATIONS                             |   | Test Method                                                                                 |                |
| FCC 15.407:2014                                 |   | ANSI C63.10:2009                                                                            |                |
| COMMENTS                                        |   |                                                                                             |                |
| Modes of operation were provided by the client. |   |                                                                                             |                |
| DEVIATIONS FROM TEST STANDARD                   |   |                                                                                             |                |
| None                                            |   |                                                                                             |                |
| Configuration #                                 | 1 | Signature  |                |
|                                                 |   | Value                                                                                       | Limit          |
| 802.11(a) 6 Mbps                                |   |                                                                                             | Result         |
| Low Channel 36, 5180MHz                         |   | 21.434 MHz                                                                                  | > 500 kHz Pass |
| High Channel 48, 5240MHz                        |   | 22.555 MHz                                                                                  | > 500 kHz Pass |
| Low Channel 52, 5260MHz                         |   | 21.699 MHz                                                                                  | > 500 kHz Pass |
| High Channel 64, 5320MHz                        |   | 22.474 MHz                                                                                  | > 500 kHz Pass |
| Low Channel 100, 5500MHz                        |   | 22.615 MHz                                                                                  | > 500 kHz Pass |
| Mid Channel 116, 5580MHz                        |   | 22.891 MHz                                                                                  | > 500 kHz Pass |
| High Channel 140, 5700MHz                       |   | 22.18 MHz                                                                                   | > 500 kHz Pass |
| 802.11(a) 18 Mbps                               |   |                                                                                             |                |
| Low Channel 36, 5180MHz                         |   | 18.437 MHz                                                                                  | > 500 kHz Pass |
| High Channel 48, 5240MHz                        |   | 18.724 MHz                                                                                  | > 500 kHz Pass |
| Low Channel 52, 5260MHz                         |   | 18.668 MHz                                                                                  | > 500 kHz Pass |
| High Channel 64, 5320MHz                        |   | 18.677 MHz                                                                                  | > 500 kHz Pass |
| Low Channel 100, 5500MHz                        |   | 18.891 MHz                                                                                  | > 500 kHz Pass |
| Mid Channel 116, 5580MHz                        |   | 18.614 MHz                                                                                  | > 500 kHz Pass |
| High Channel 140, 5700MHz                       |   | 18.705 MHz                                                                                  | > 500 kHz Pass |
| 802.11(a) 36 Mbps                               |   |                                                                                             |                |
| Low Channel 36, 5180MHz                         |   | 18.454 MHz                                                                                  | > 500 kHz Pass |
| High Channel 48, 5240MHz                        |   | 18.47 MHz                                                                                   | > 500 kHz Pass |
| Low Channel 52, 5260MHz                         |   | 18.517 MHz                                                                                  | > 500 kHz Pass |
| High Channel 64, 5320MHz                        |   | 18.208 MHz                                                                                  | > 500 kHz Pass |
| Low Channel 100, 5500MHz                        |   | 18.608 MHz                                                                                  | > 500 kHz Pass |
| Mid Channel 116, 5580MHz                        |   | 18.586 MHz                                                                                  | > 500 kHz Pass |
| High Channel 140, 5700MHz                       |   | 18.457 MHz                                                                                  | > 500 kHz Pass |

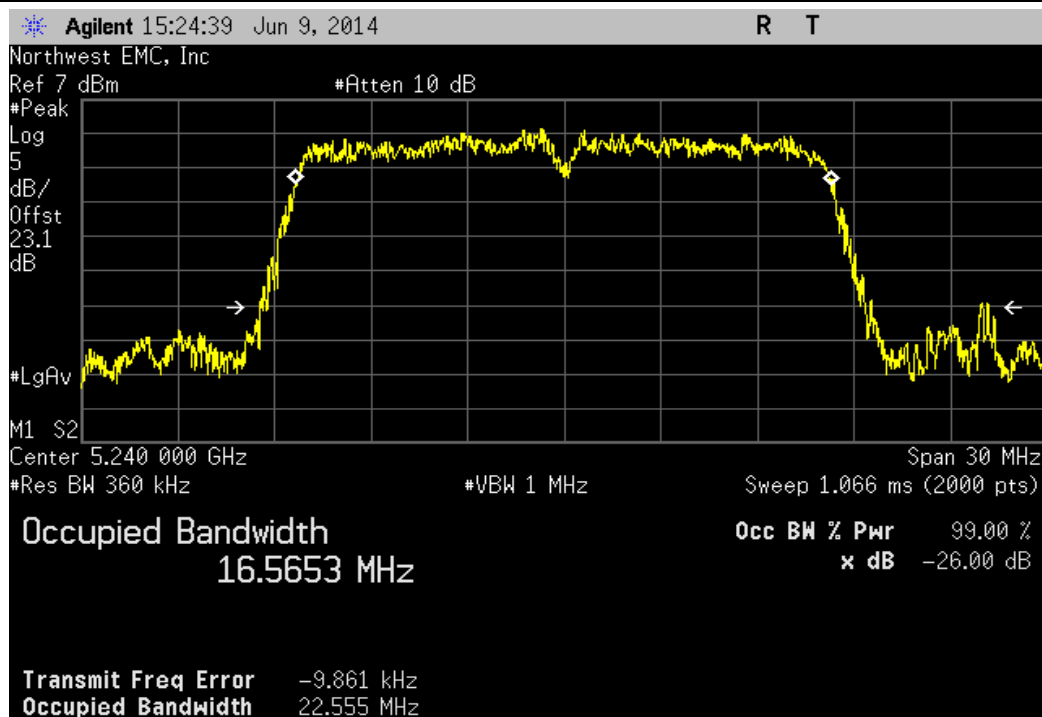
802.11(a) 6 Mbps, Low Channel 36, 5180MHz

|  |  |  |  | Value      | Limit     | Result |
|--|--|--|--|------------|-----------|--------|
|  |  |  |  | 21.434 MHz | > 500 kHz | Pass   |



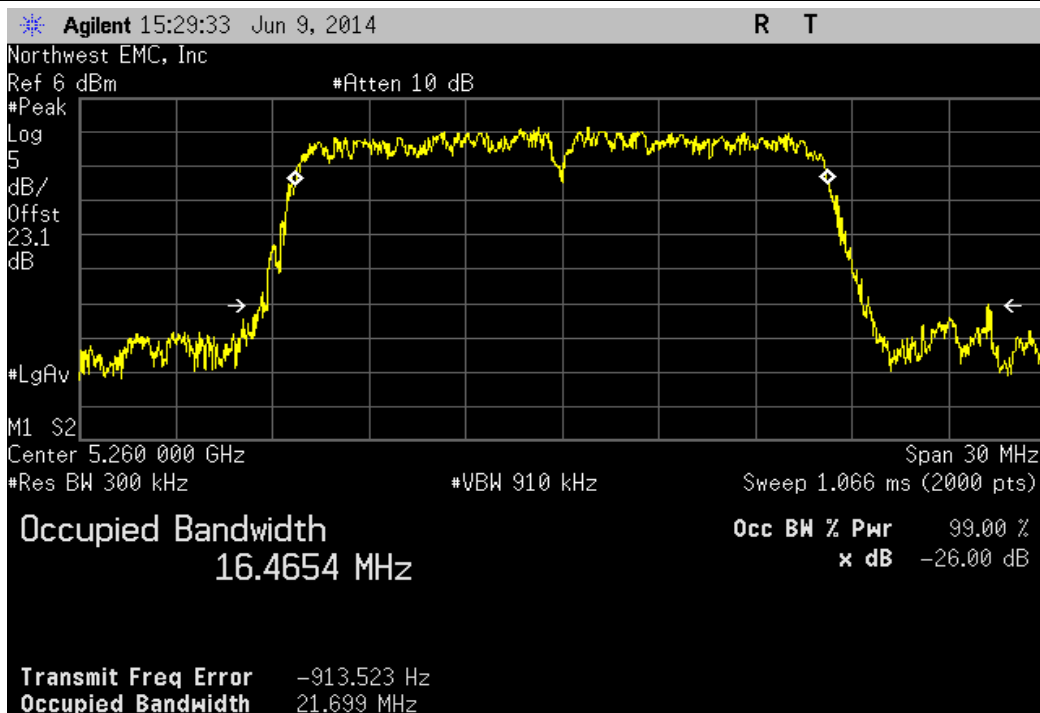
802.11(a) 6 Mbps, High Channel 48, 5240MHz

|  |  |  |  | Value      | Limit     | Result |
|--|--|--|--|------------|-----------|--------|
|  |  |  |  | 22.555 MHz | > 500 kHz | Pass   |



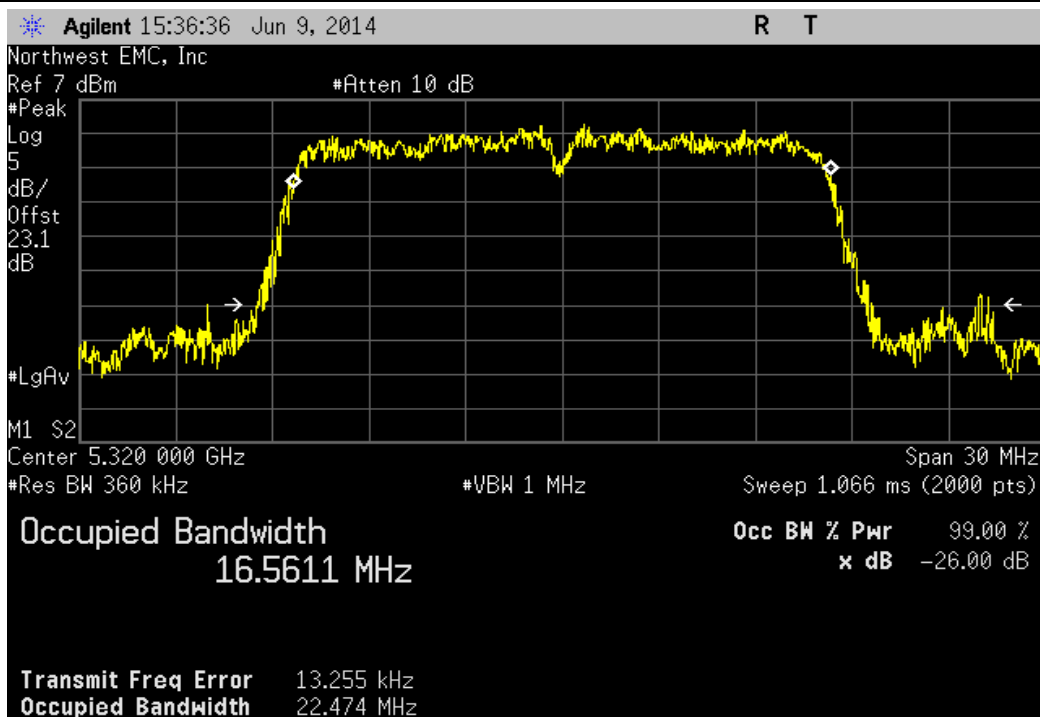
802.11(a) 6 Mbps, Low Channel 52, 5260MHz

|  | Value      | Limit     | Result |
|--|------------|-----------|--------|
|  | 21.699 MHz | > 500 kHz | Pass   |



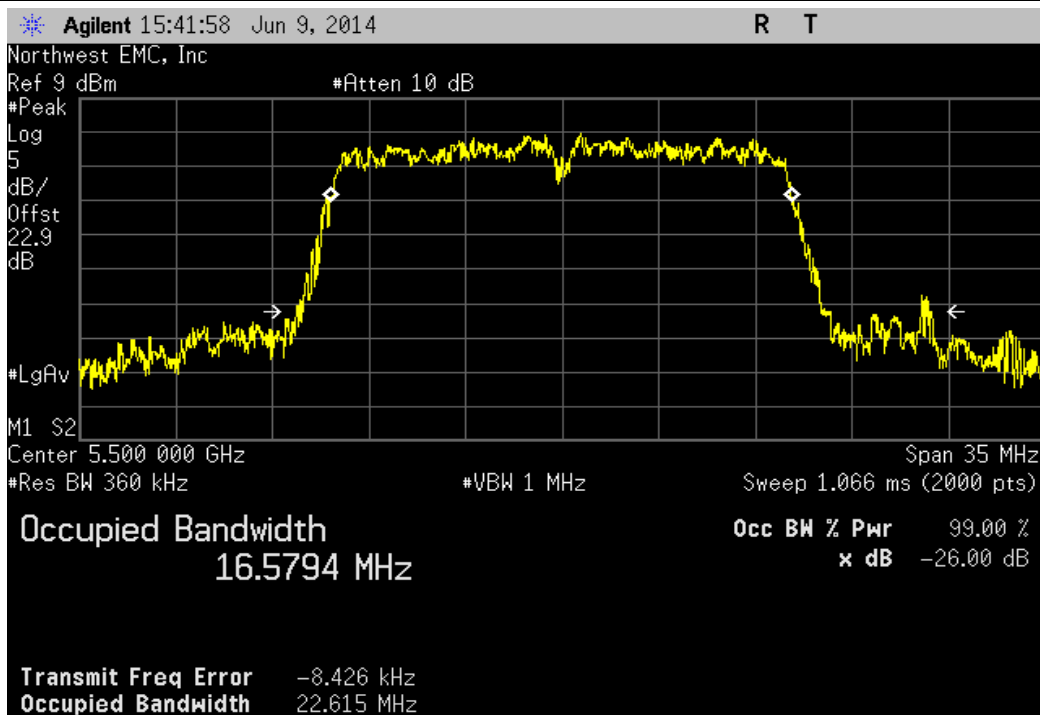
802.11(a) 6 Mbps, High Channel 64, 5320MHz

|  | Value      | Limit     | Result |
|--|------------|-----------|--------|
|  | 22.474 MHz | > 500 kHz | Pass   |



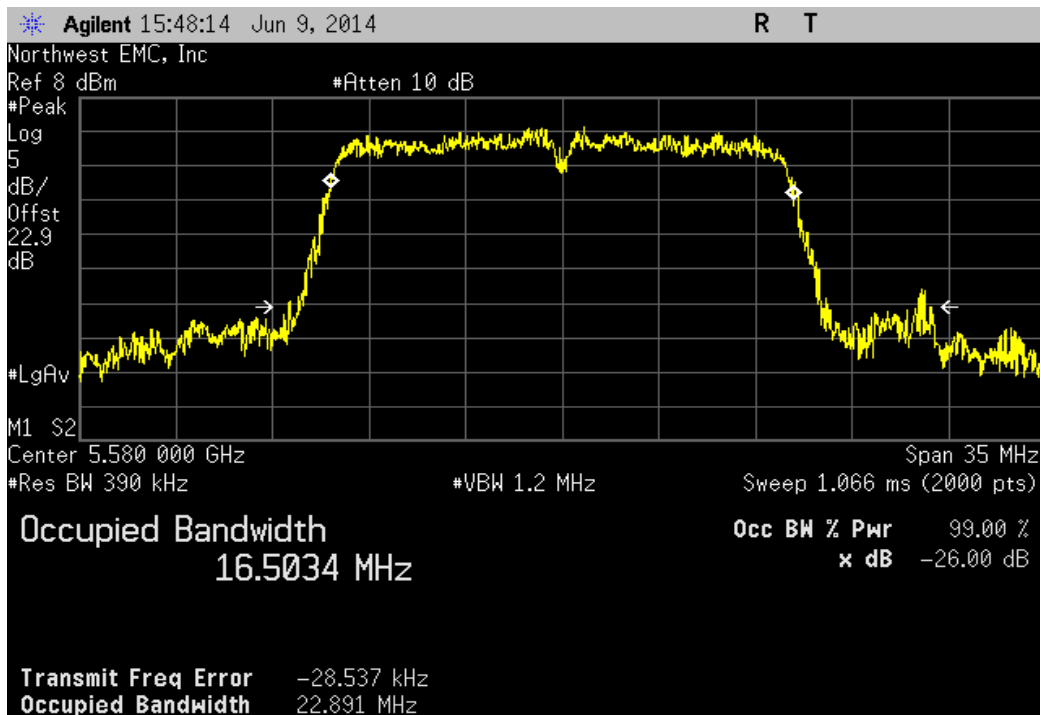
802.11(a) 6 Mbps, Low Channel 100, 5500MHz

|  | Value      | Limit     | Result |
|--|------------|-----------|--------|
|  | 22.615 MHz | > 500 kHz | Pass   |



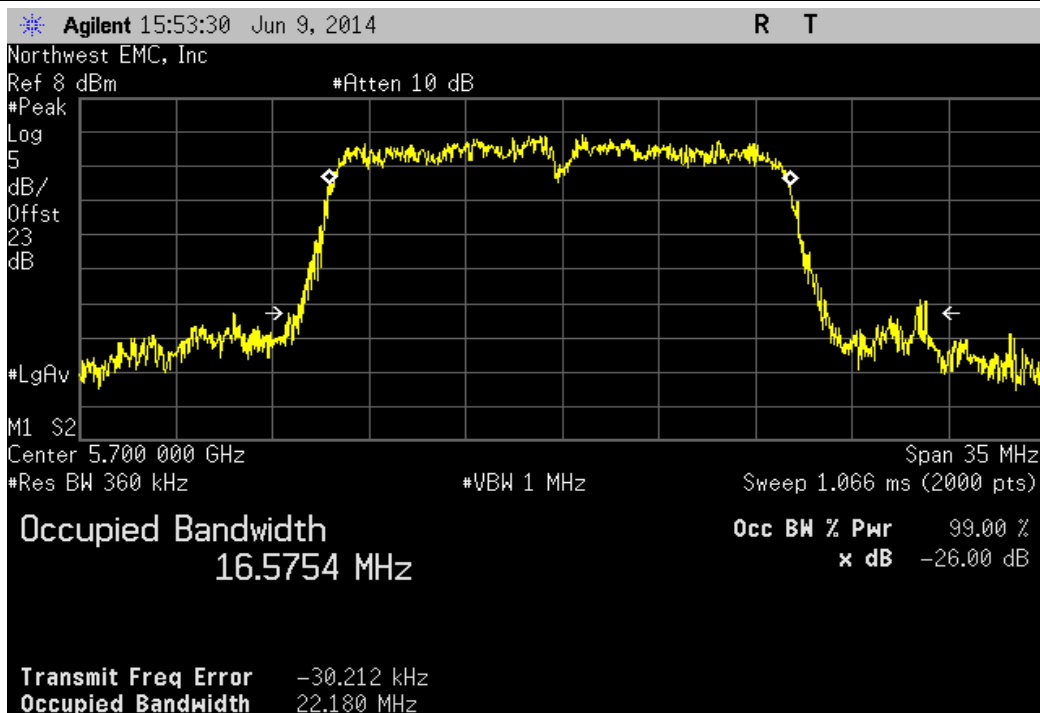
802.11(a) 6 Mbps, Mid Channel 116, 5580MHz

|  | Value      | Limit     | Result |
|--|------------|-----------|--------|
|  | 22.891 MHz | > 500 kHz | Pass   |



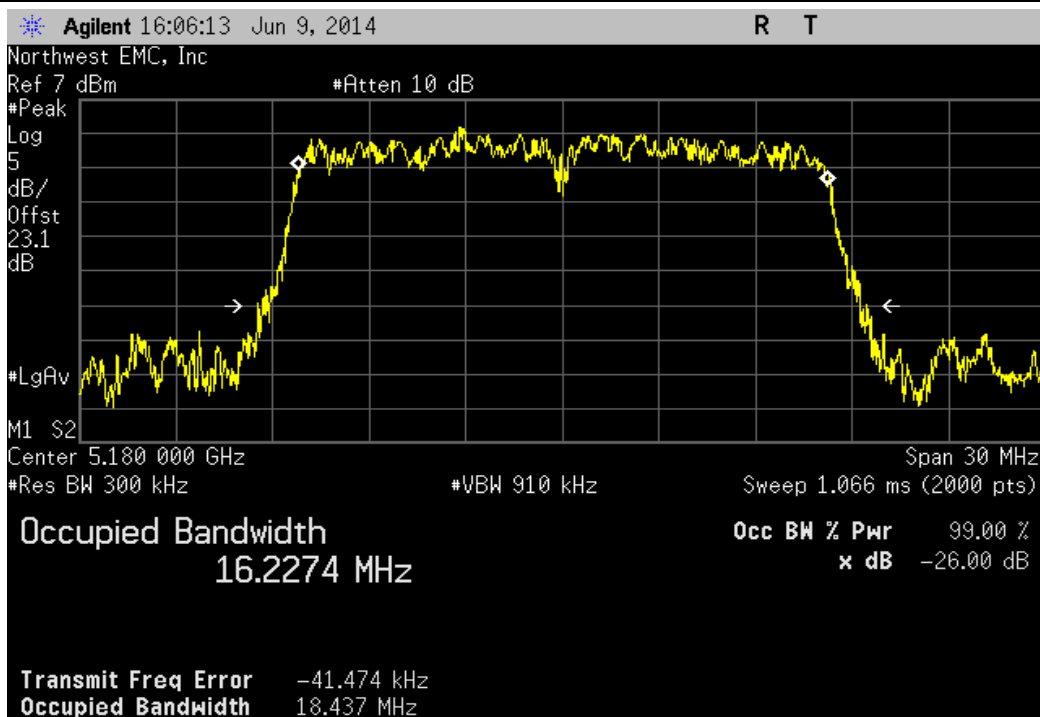
802.11(a) 6 Mbps, High Channel 140, 5700MHz

|  |  |  |  | Value     | Limit     | Result |
|--|--|--|--|-----------|-----------|--------|
|  |  |  |  | 22.18 MHz | > 500 kHz | Pass   |



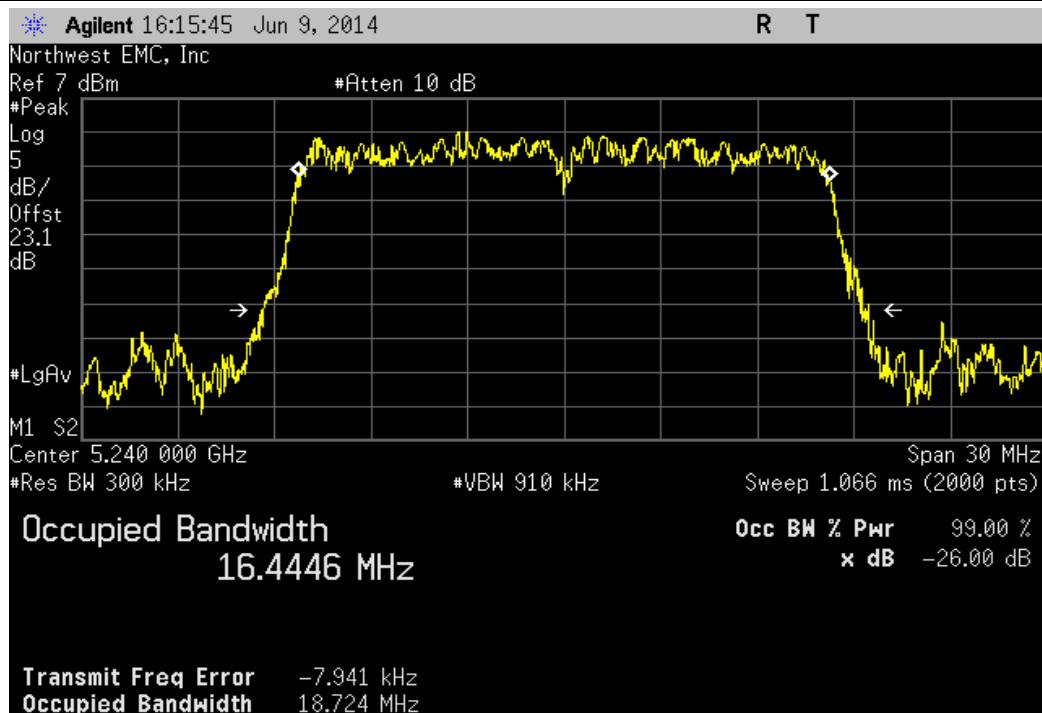
802.11(a) 18 Mbps, Low Channel 36, 5180MHz

|  |  |  |  | Value      | Limit     | Result |
|--|--|--|--|------------|-----------|--------|
|  |  |  |  | 18.437 MHz | > 500 kHz | Pass   |



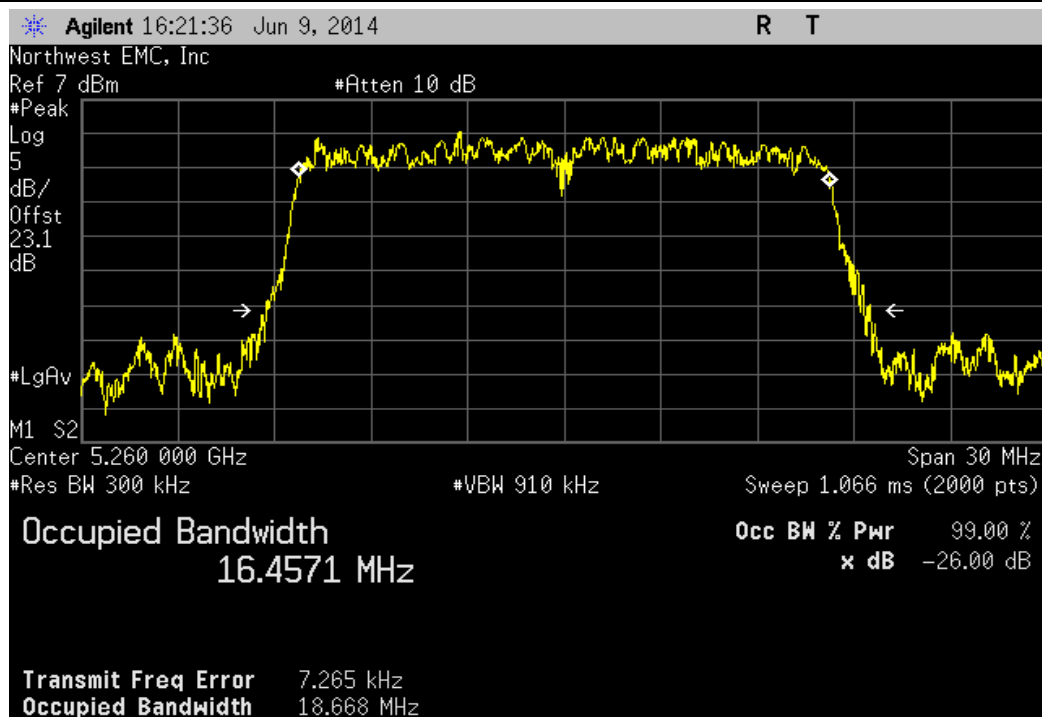
802.11(a) 18 Mbps, High Channel 48, 5240MHz

|  | Value      | Limit     | Result |
|--|------------|-----------|--------|
|  | 18.724 MHz | > 500 kHz | Pass   |



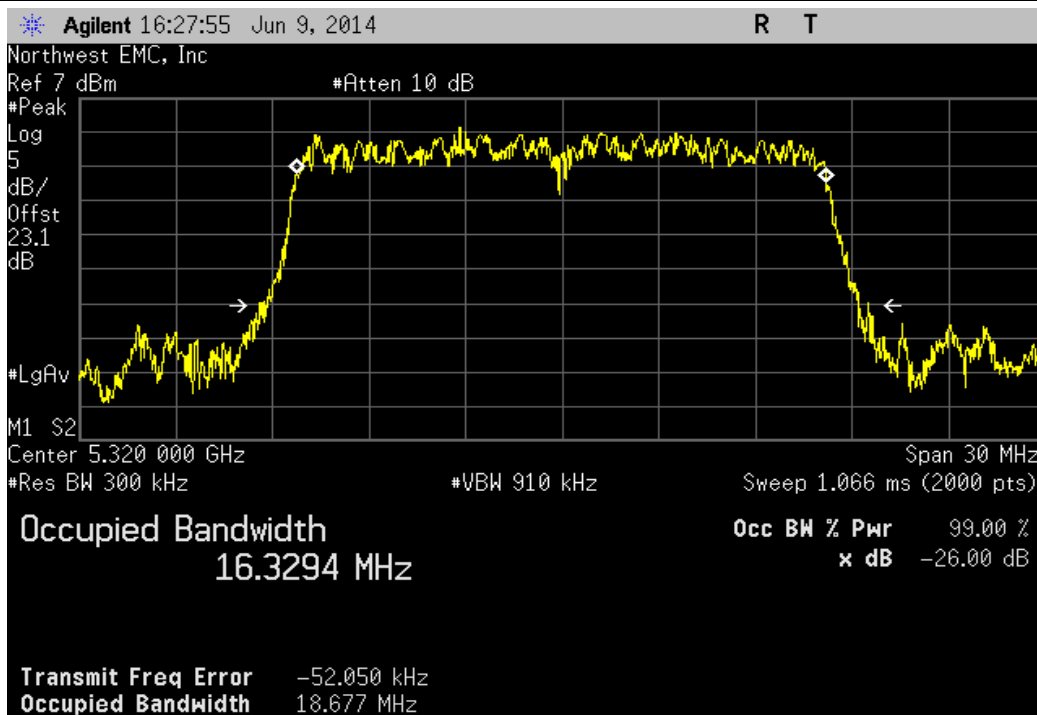
802.11(a) 18 Mbps, Low Channel 52, 5260MHz

|  | Value      | Limit     | Result |
|--|------------|-----------|--------|
|  | 18.668 MHz | > 500 kHz | Pass   |



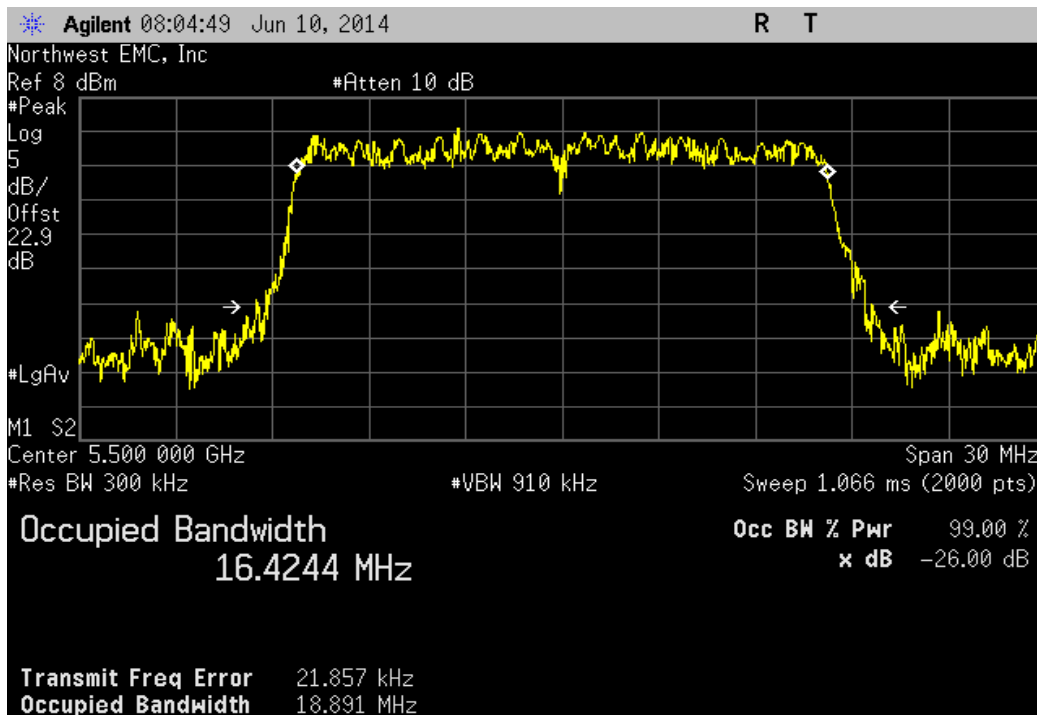
802.11(a) 18 Mbps, High Channel 64, 5320MHz

| Value      | Limit     | Result |
|------------|-----------|--------|
| 18.677 MHz | > 500 kHz | Pass   |

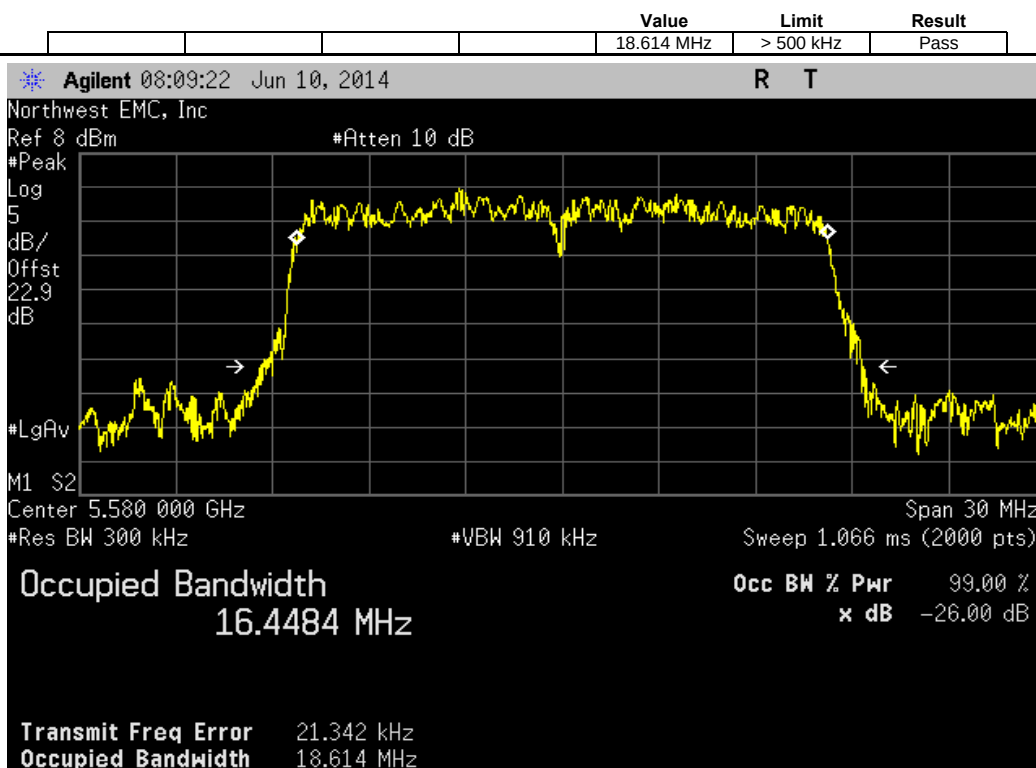


802.11(a) 18 Mbps, Low Channel 100, 5500MHz

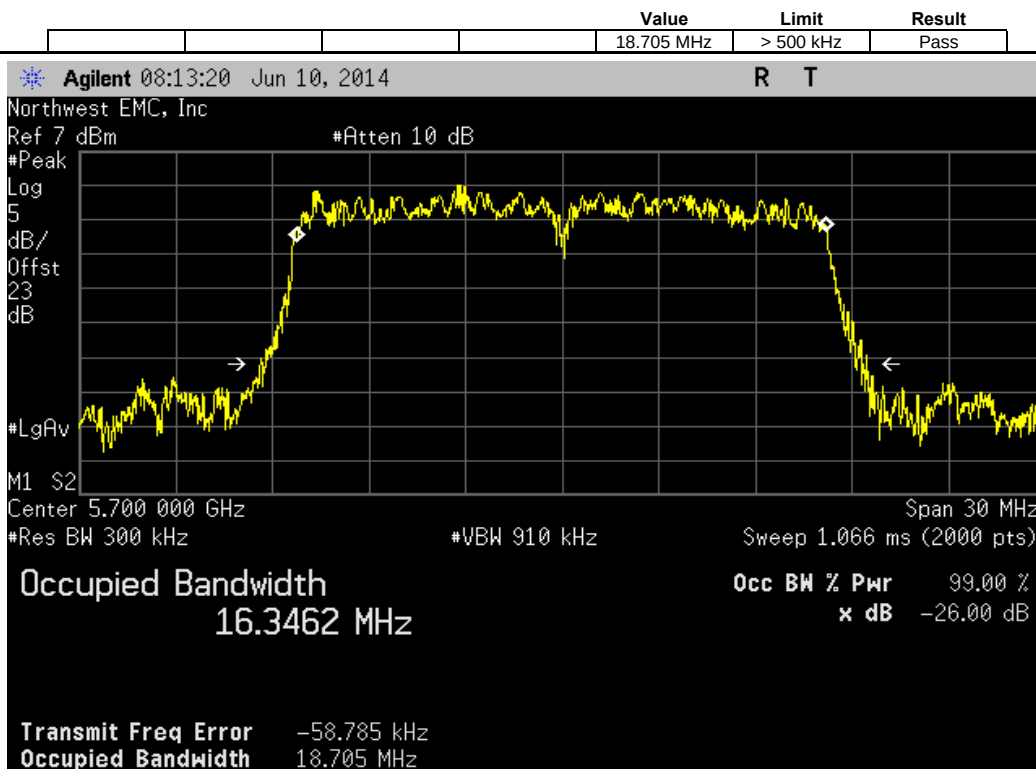
| Value      | Limit     | Result |
|------------|-----------|--------|
| 18.891 MHz | > 500 kHz | Pass   |



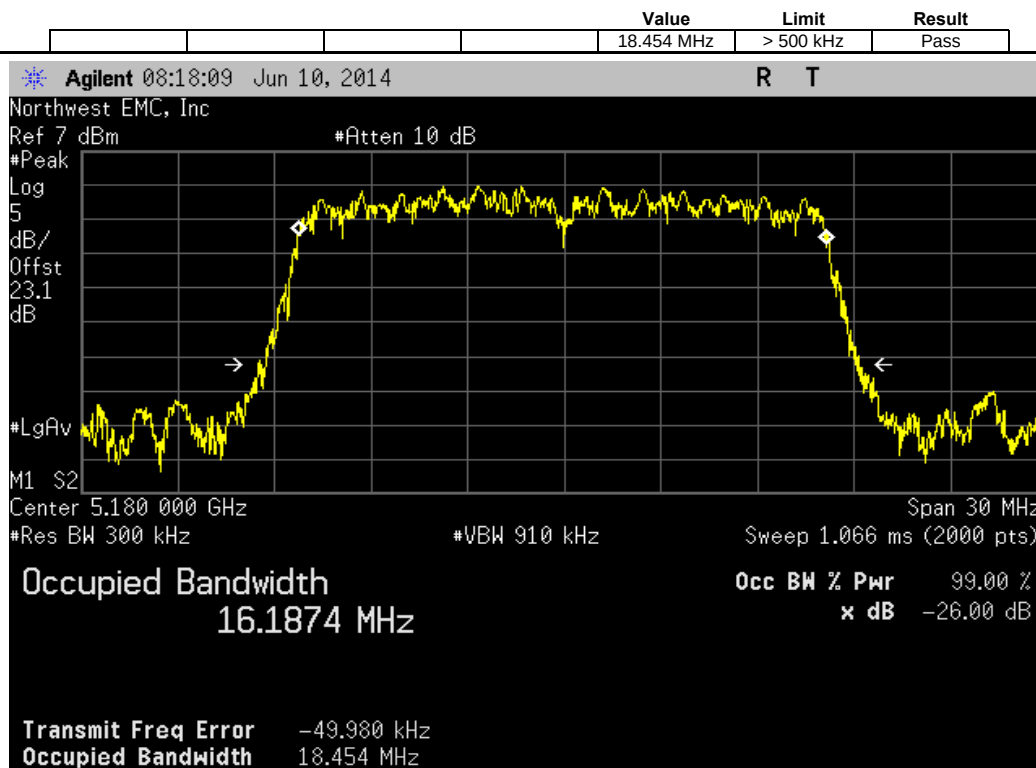
802.11(a) 18 Mbps, Mid Channel 116, 5580MHz



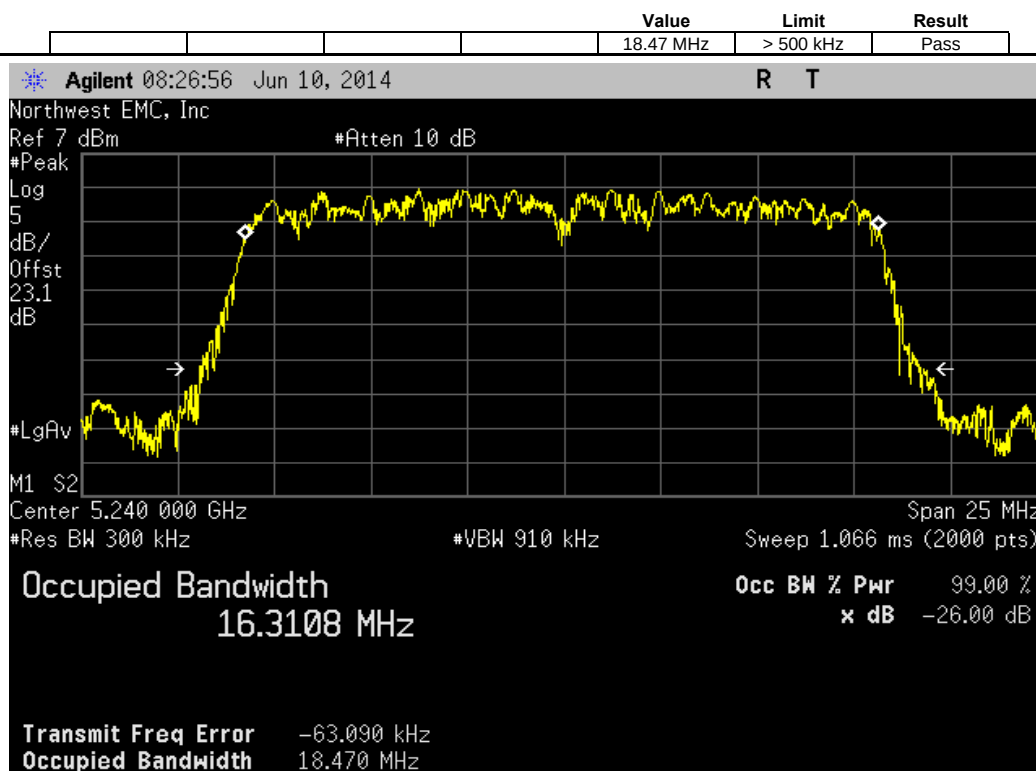
802.11(a) 18 Mbps, High Channel 140, 5700MHz



802.11(a) 36 Mbps, Low Channel 36, 5180MHz

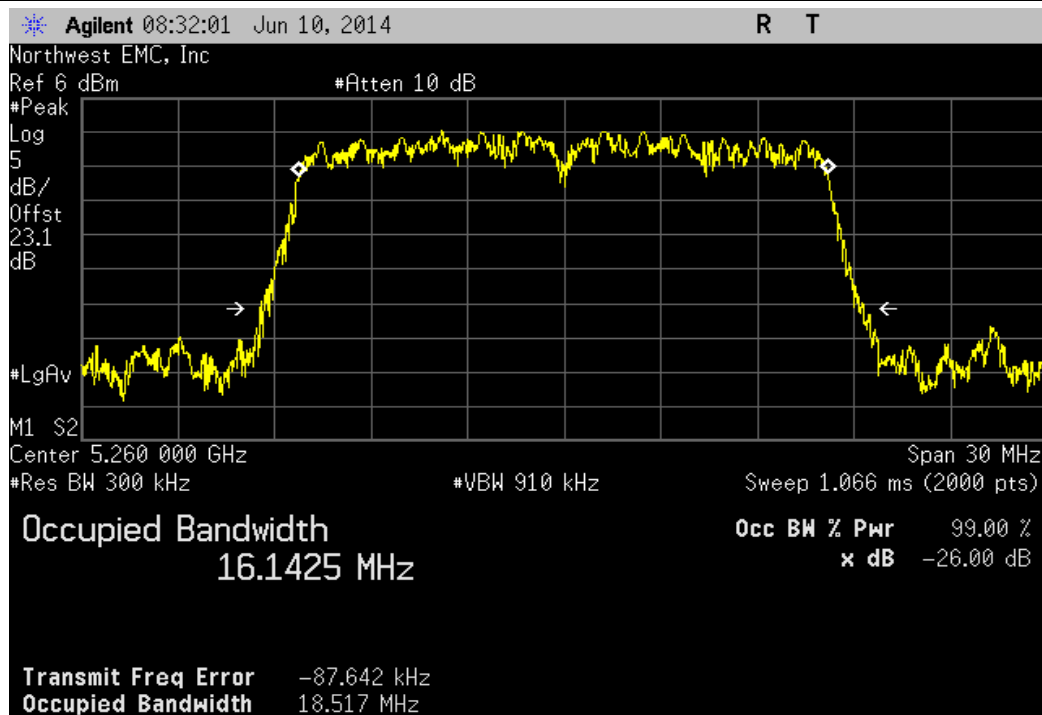


802.11(a) 36 Mbps, High Channel 48, 5240MHz



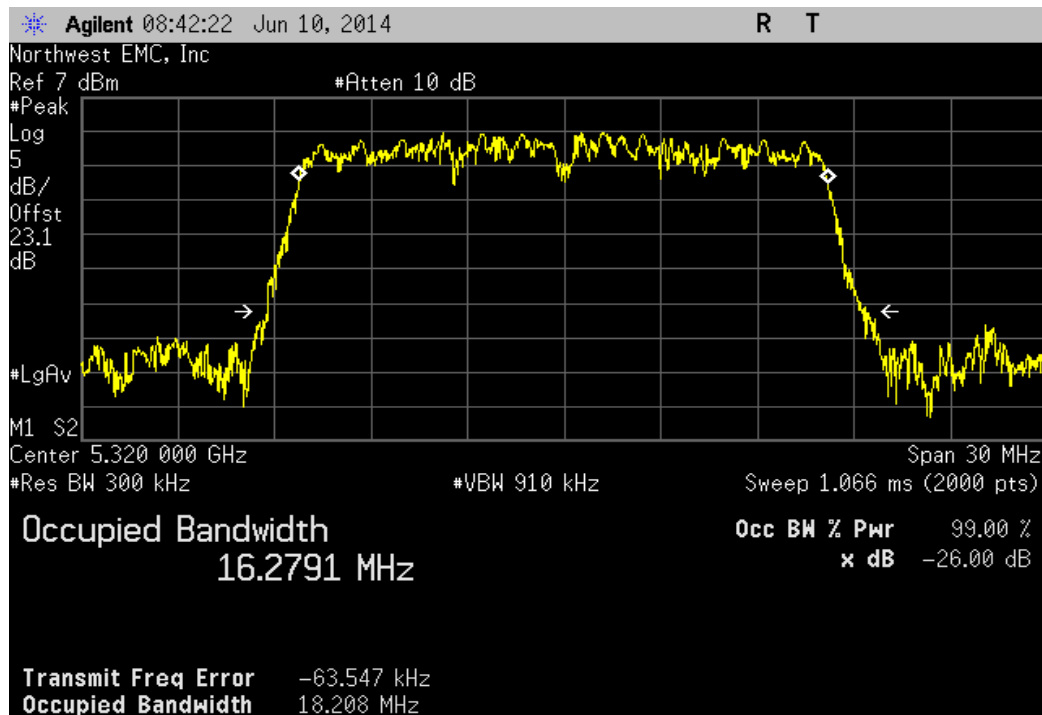
802.11(a) 36 Mbps, Low Channel 52, 5260MHz

|  |  |  |  | Value      | Limit     | Result |
|--|--|--|--|------------|-----------|--------|
|  |  |  |  | 18.517 MHz | > 500 kHz | Pass   |

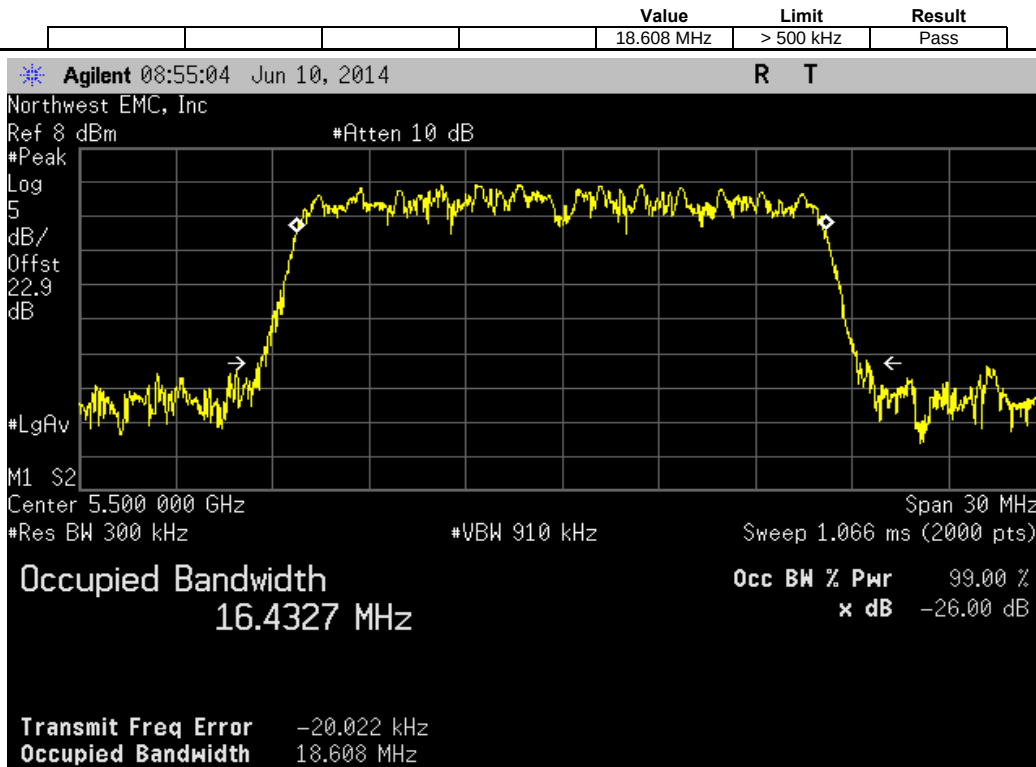


802.11(a) 36 Mbps, High Channel 64, 5320MHz

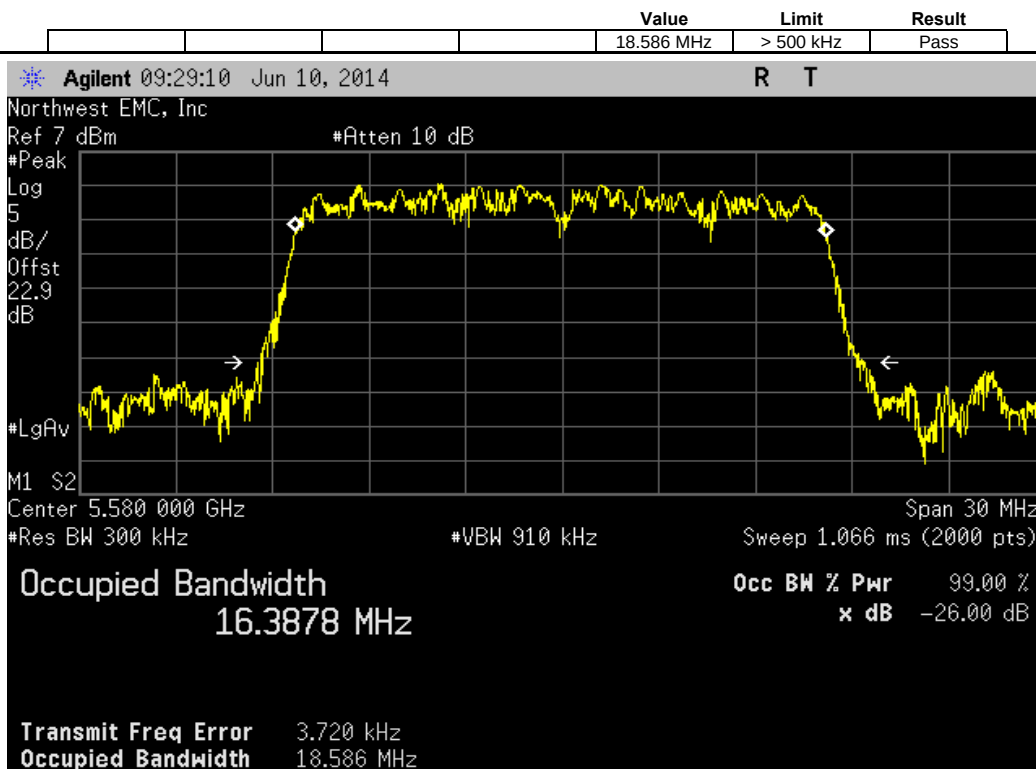
|  |  |  |  | Value      | Limit     | Result |
|--|--|--|--|------------|-----------|--------|
|  |  |  |  | 18.208 MHz | > 500 kHz | Pass   |



802.11(a) 36 Mbps, Low Channel 100, 5500MHz

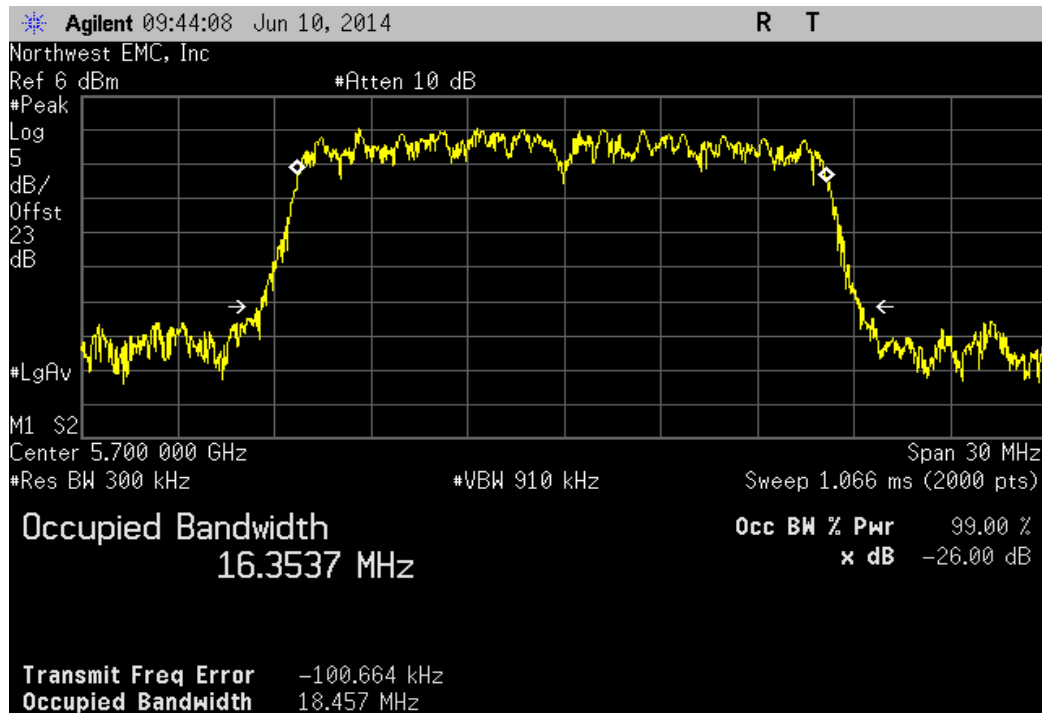


802.11(a) 36 Mbps, Mid Channel 116, 5580MHz



802.11(a) 36 Mbps, High Channel 140, 5700MHz

|  |  |  |  | Value      | Limit     | Result |
|--|--|--|--|------------|-----------|--------|
|  |  |  |  | 18.457 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 |
|---------------------------------|------------------|-----------------|-----|-----------|----------|
| 40GHz DC Block                  | Miteq            | DCB4000         | AMD | 4/28/2014 | 12 mo    |
| Attenuator 20 dB, SMA M/F 26GHz | S.M. Electronics | SA26B-20        | AUY | 7/30/2013 | 12 mo    |
| EV06 Direct Connect Cable       | ESM Cable Corp.  | TT              | ECA | NCR       | 0 mo     |
| Attenuator, 'Precision N'       | S.M. Electronics | SA18N-06/SM4032 | REE | 12/2/2013 | 12 mo    |
| Power Meter                     | Agilent          | N1913A          | SQR | 4/29/2013 | 36 mo    |
| Power Sensor                    | Agilent          | E9300H          | SQO | 4/29/2013 | 36 mo    |
| Spectrum Analyzer               | Agilent          | E4446A          | AAQ | 1/21/2014 | 24 mo    |
| MXG Analog Signal Generator     | Agilent          | N5181A          | TIG | 3/28/2014 | 36 mo    |

### 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.



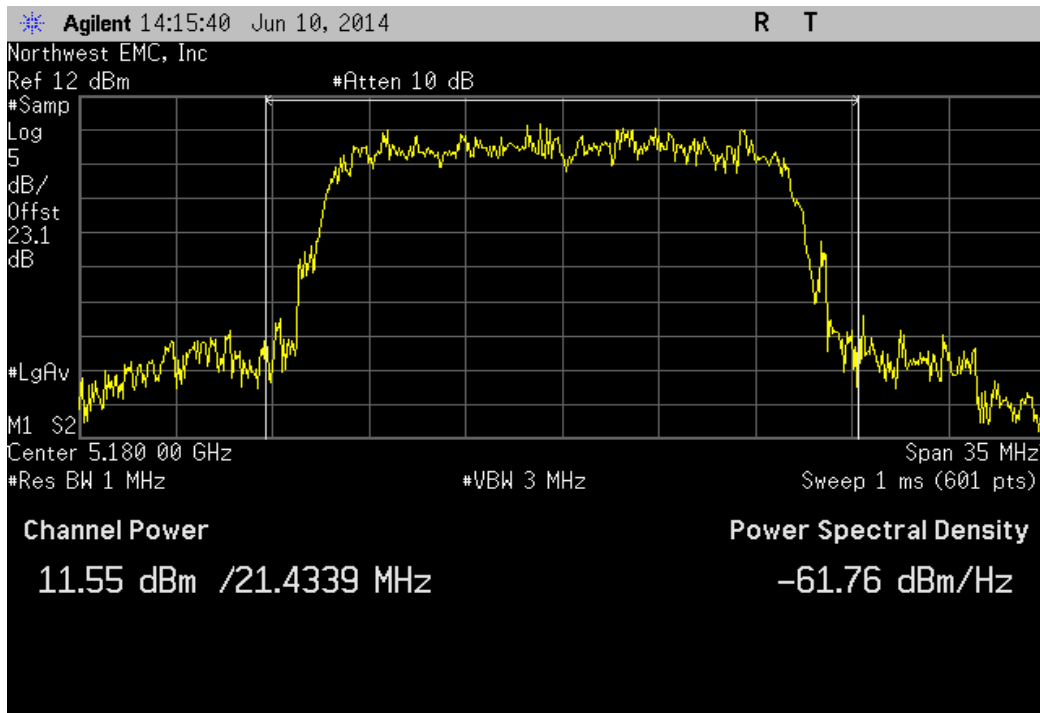
# PEAK TRANSMIT POWER

XMit 2014.02.07  
PsaTx 2014.04.29

|                                                 |                           |                                                                                             |          |
|-------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------------|----------|
| EUT: 444-2251                                   |                           | Work Order: FOCU0169                                                                        |          |
| Serial Number: 02EA4F000062                     |                           | Date: 06/11/14                                                                              |          |
| Customer: Summit Semiconductor LLC              |                           | Temperature: 22.2°C                                                                         |          |
| Attendees: Paul Hamilton                        |                           | Humidity: 41%                                                                               |          |
| Project: None                                   |                           | Barometric Pres.: 1017                                                                      |          |
| Tested by: Brandon Hobbs                        |                           | Power: 110VAC/60Hz                                                                          |          |
|                                                 |                           | Job Site: EV06                                                                              |          |
| TEST SPECIFICATIONS                             |                           | Test Method                                                                                 |          |
| FCC 15.407:2014                                 |                           | ANSI C63.10:2009                                                                            |          |
| COMMENTS                                        |                           |                                                                                             |          |
| Modes of operation were provided by the client. |                           |                                                                                             |          |
| DEVIATIONS FROM TEST STANDARD                   |                           |                                                                                             |          |
| None                                            |                           |                                                                                             |          |
| Configuration #                                 | 1                         | Signature  |          |
|                                                 |                           | Value                                                                                       | Limit    |
| 802.11(a) 6 Mbps                                |                           |                                                                                             |          |
|                                                 | Low Channel 36, 5180MHz   | 11.555 dBm                                                                                  | < 17 dBm |
|                                                 | High Channel 48, 5240MHz  | 10.937 dBm                                                                                  | < 17 dBm |
|                                                 | Low Channel 52, 5260MHz   | 11.34 dBm                                                                                   | < 24 dBm |
|                                                 | High Channel 64, 5320MHz  | 11.325 dBm                                                                                  | < 24 dBm |
|                                                 | Low Channel 100, 5500MHz  | 12.322 dBm                                                                                  | < 24 dBm |
|                                                 | Mid Channel 116, 5580MHz  | 11.736 dBm                                                                                  | < 24 dBm |
|                                                 | High Channel 140, 5700MHz | 11.062 dBm                                                                                  | < 24 dBm |
| 802.11(a) 18 Mbps                               |                           |                                                                                             |          |
|                                                 | Low Channel 36, 5180MHz   | 11.836 dBm                                                                                  | < 17 dBm |
|                                                 | High Channel 48, 5240MHz  | 11.422 dBm                                                                                  | < 17 dBm |
|                                                 | Low Channel 52, 5260MHz   | 11.394 dBm                                                                                  | < 24 dBm |
|                                                 | High Channel 64, 5320MHz  | 11.743 dBm                                                                                  | < 24 dBm |
|                                                 | Low Channel 100, 5500MHz  | 12.741 dBm                                                                                  | < 24 dBm |
|                                                 | Mid Channel 116, 5580MHz  | 11.515 dBm                                                                                  | < 24 dBm |
|                                                 | High Channel 140, 5700MHz | 10.833 dBm                                                                                  | < 24 dBm |
| 802.11(a) 36 Mbps                               |                           |                                                                                             |          |
|                                                 | Low Channel 36, 5180MHz   | 11.438 dBm                                                                                  | < 17 dBm |
|                                                 | High Channel 48, 5240MHz  | 11.476 dBm                                                                                  | < 17 dBm |
|                                                 | Low Channel 52, 5260MHz   | 11.095 dBm                                                                                  | < 24 dBm |
|                                                 | High Channel 64, 5320MHz  | 11.766 dBm                                                                                  | < 24 dBm |
|                                                 | Low Channel 100, 5500MHz  | 12.586 dBm                                                                                  | < 24 dBm |
|                                                 | Mid Channel 116, 5580MHz  | 11.976 dBm                                                                                  | < 24 dBm |
|                                                 | High Channel 140, 5700MHz | 10.981 dBm                                                                                  | < 24 dBm |

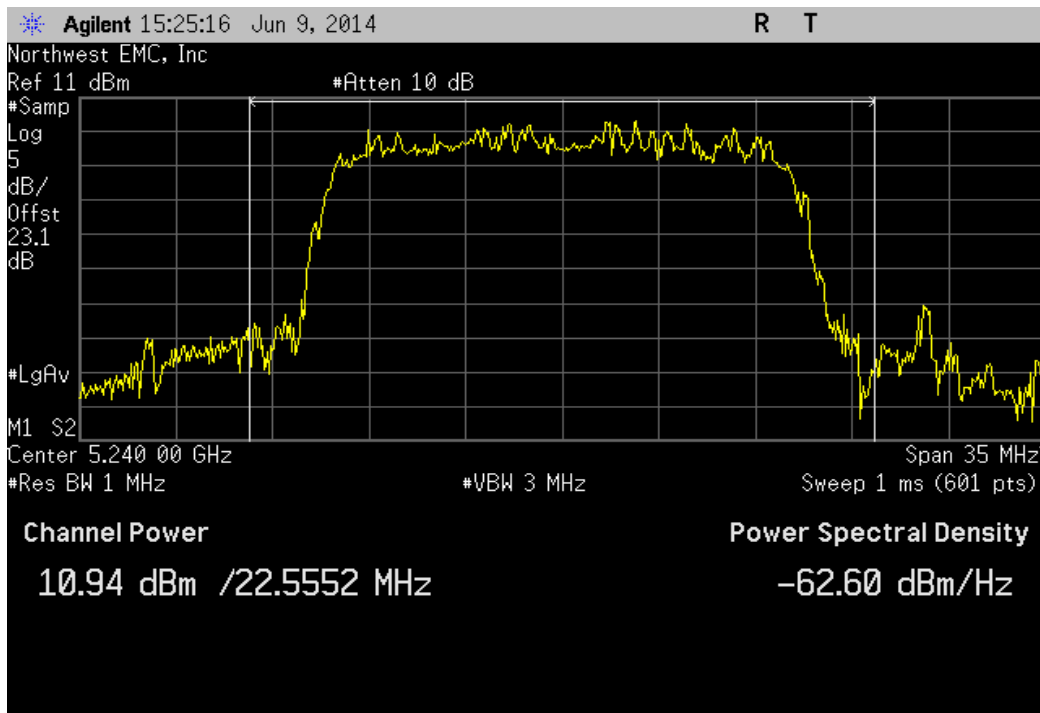
802.11(a) 6 Mbps, Low Channel 36, 5180MHz

|  | Value      | Limit    | Result |
|--|------------|----------|--------|
|  | 11.555 dBm | < 17 dBm | Pass   |



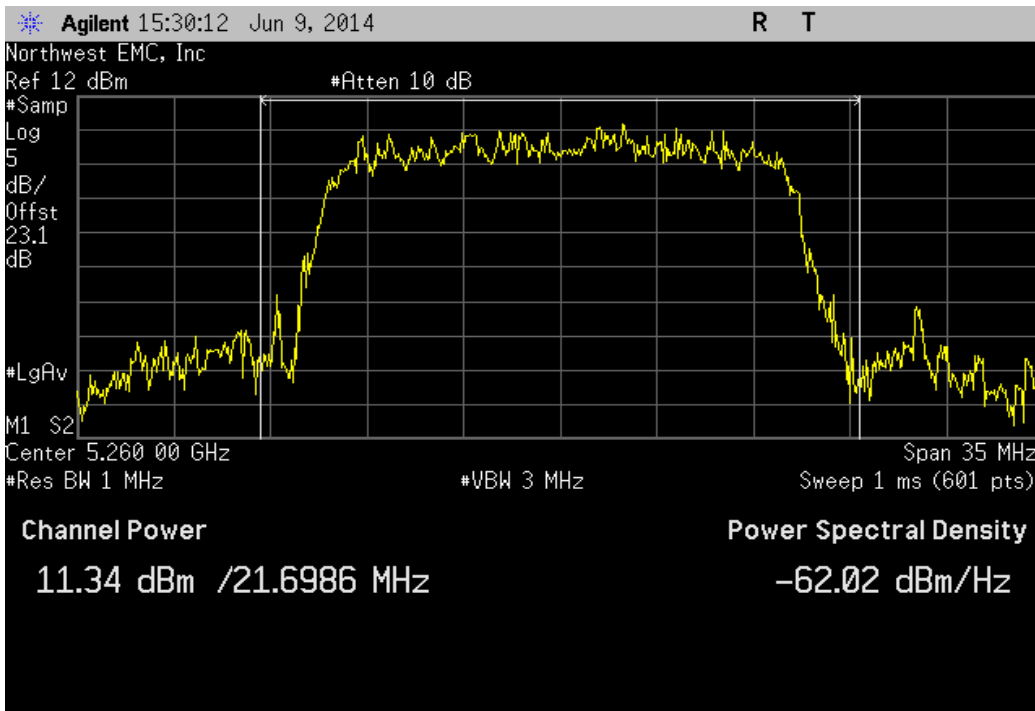
802.11(a) 6 Mbps, High Channel 48, 5240MHz

|  | Value      | Limit    | Result |
|--|------------|----------|--------|
|  | 10.937 dBm | < 17 dBm | Pass   |



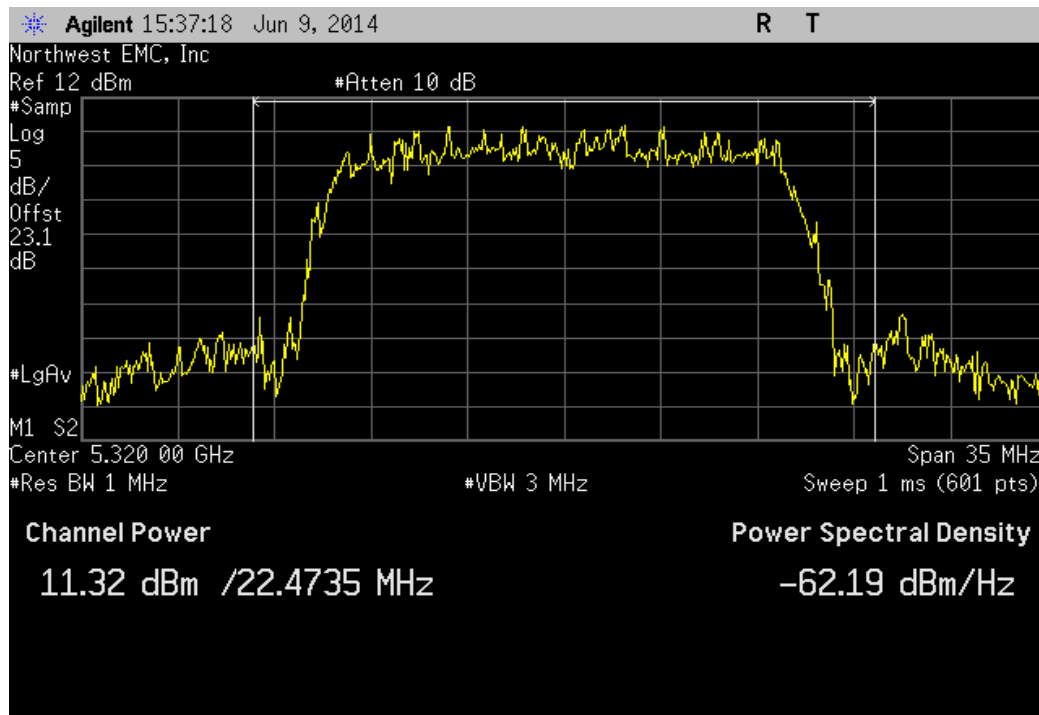
802.11(a) 6 Mbps, Low Channel 52, 5260MHz

| Value     | Limit    | Result |
|-----------|----------|--------|
| 11.34 dBm | < 24 dBm | Pass   |



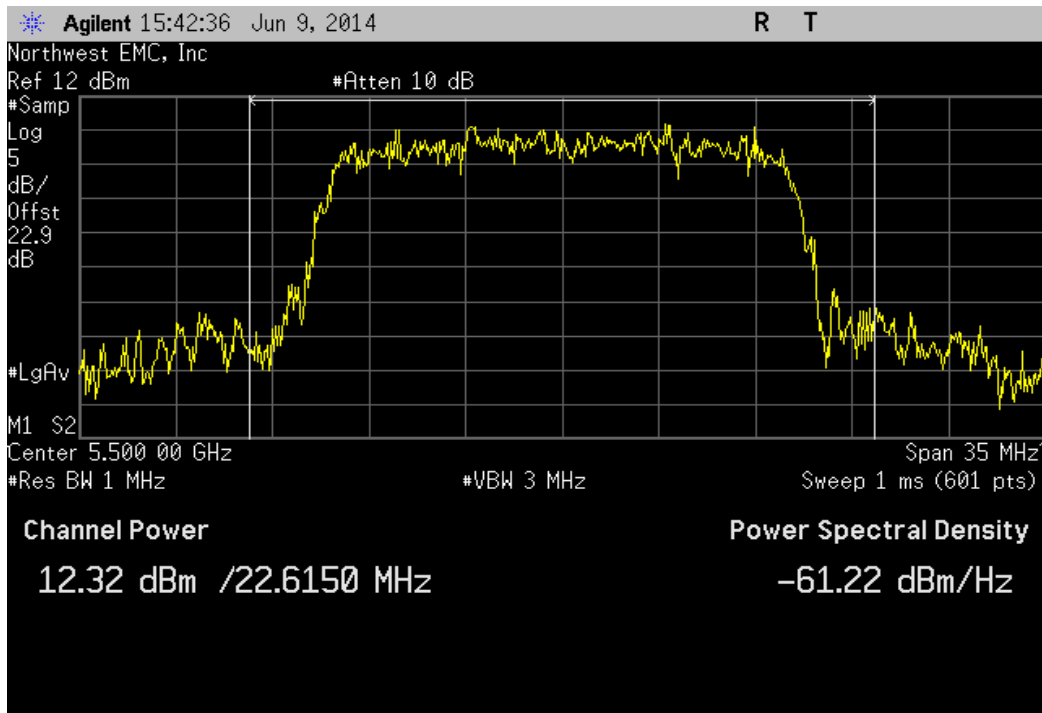
802.11(a) 6 Mbps, High Channel 64, 5320MHz

| Value      | Limit    | Result |
|------------|----------|--------|
| 11.325 dBm | < 24 dBm | Pass   |



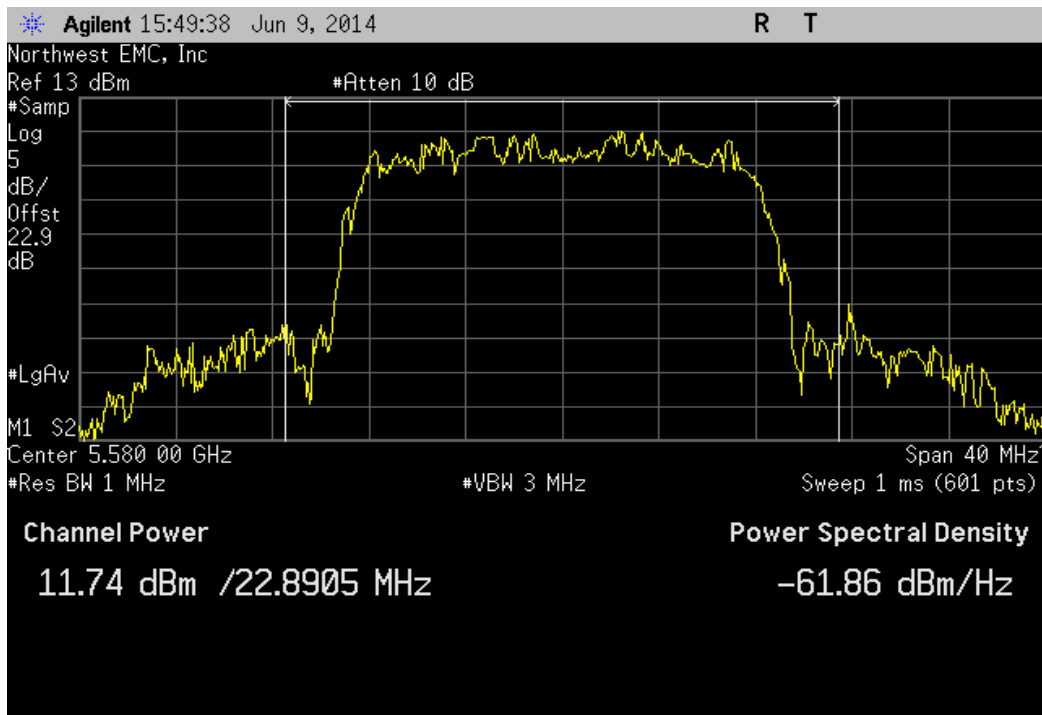
802.11(a) 6 Mbps, Low Channel 100, 5500MHz

|  | Value      | Limit    | Result |
|--|------------|----------|--------|
|  | 12.322 dBm | < 24 dBm | Pass   |



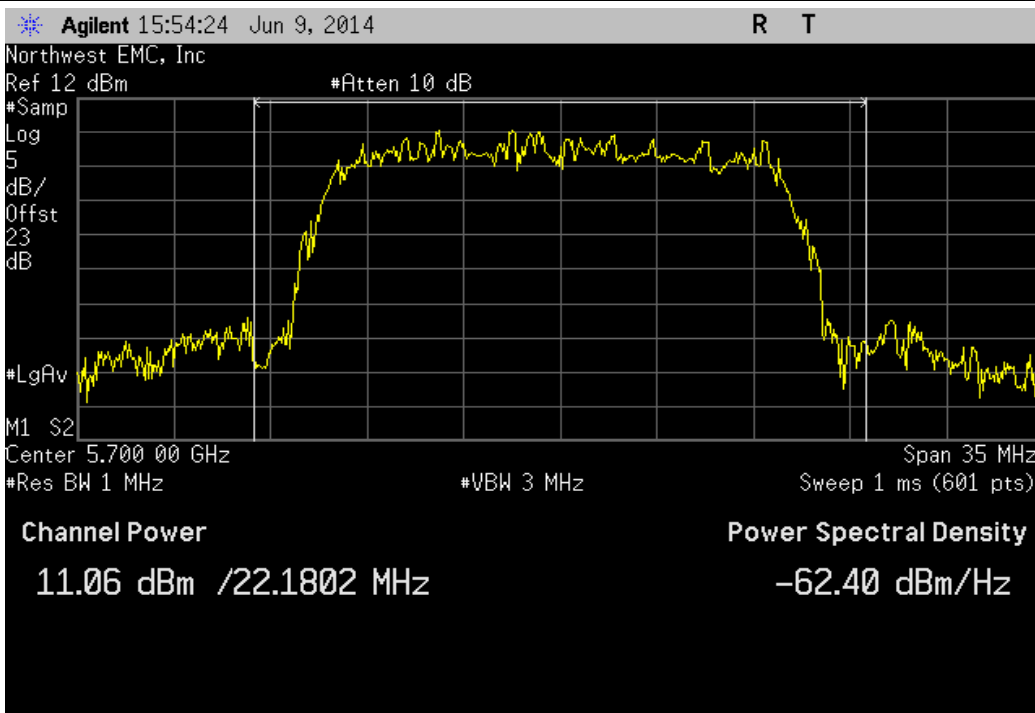
802.11(a) 6 Mbps, Mid Channel 116, 5580MHz

|  | Value      | Limit    | Result |
|--|------------|----------|--------|
|  | 11.736 dBm | < 24 dBm | Pass   |



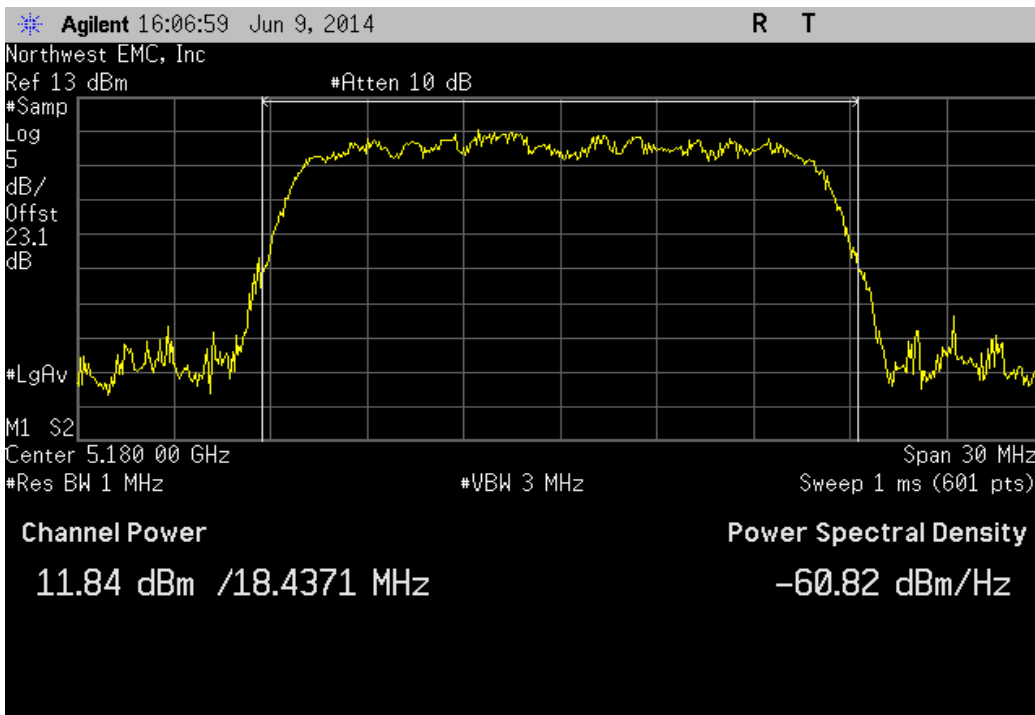
802.11(a) 6 Mbps, High Channel 140, 5700MHz

| Value      | Limit    | Result |
|------------|----------|--------|
| 11.062 dBm | < 24 dBm | Pass   |



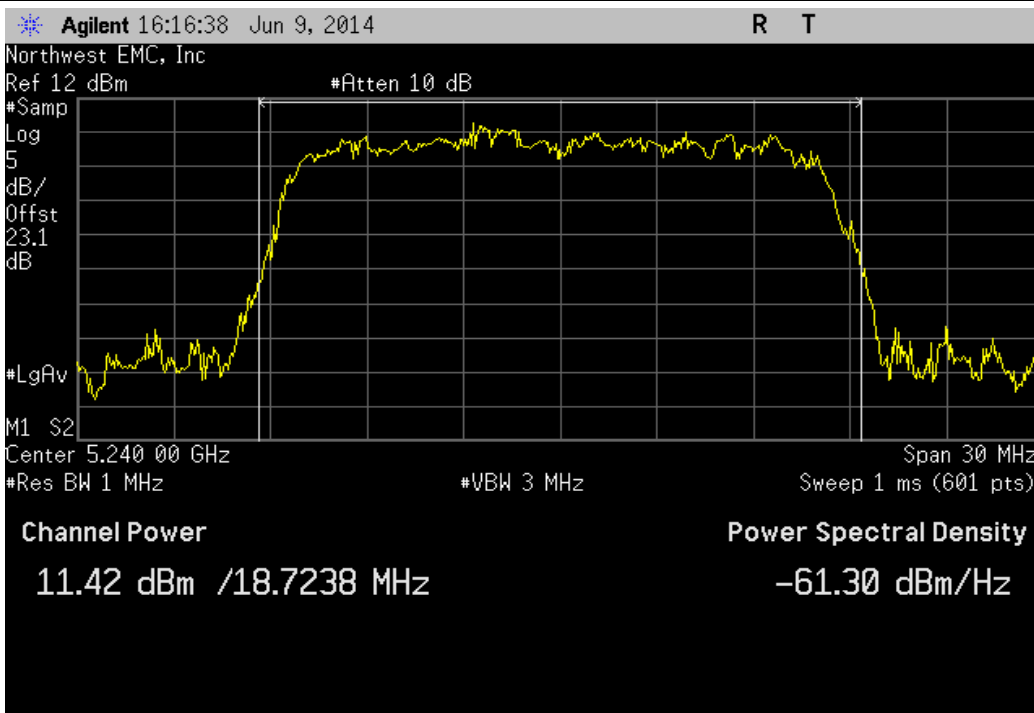
802.11(a) 18 Mbps, Low Channel 36, 5180MHz

| Value      | Limit    | Result |
|------------|----------|--------|
| 11.836 dBm | < 17 dBm | Pass   |



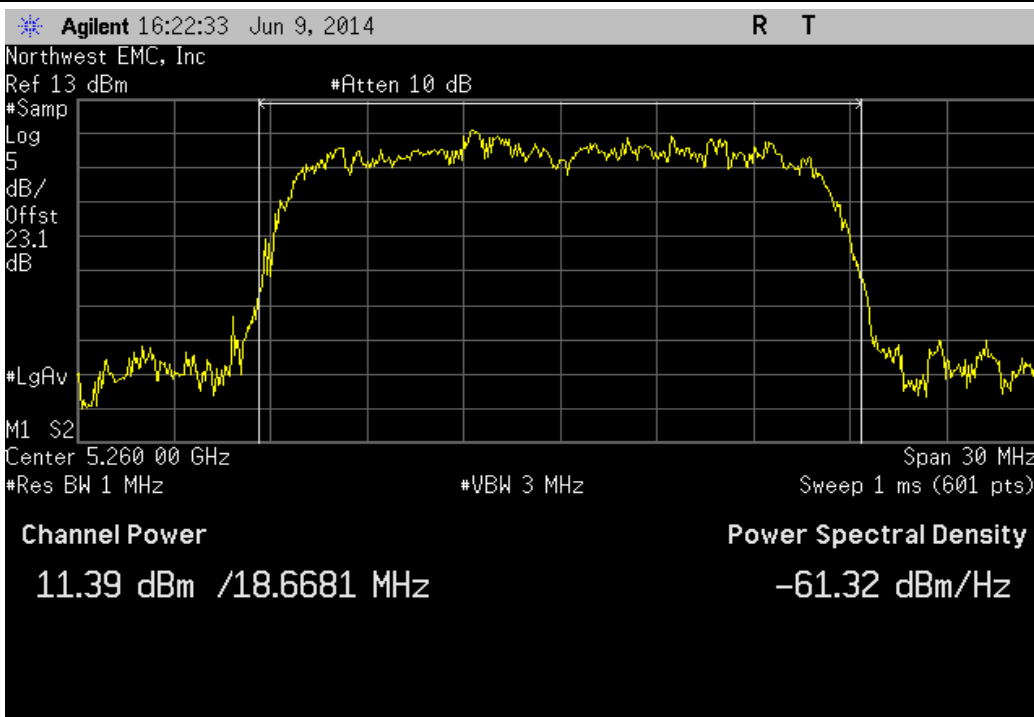
802.11(a) 18 Mbps, High Channel 48, 5240MHz

| Value      | Limit    | Result |
|------------|----------|--------|
| 11.422 dBm | < 17 dBm | Pass   |



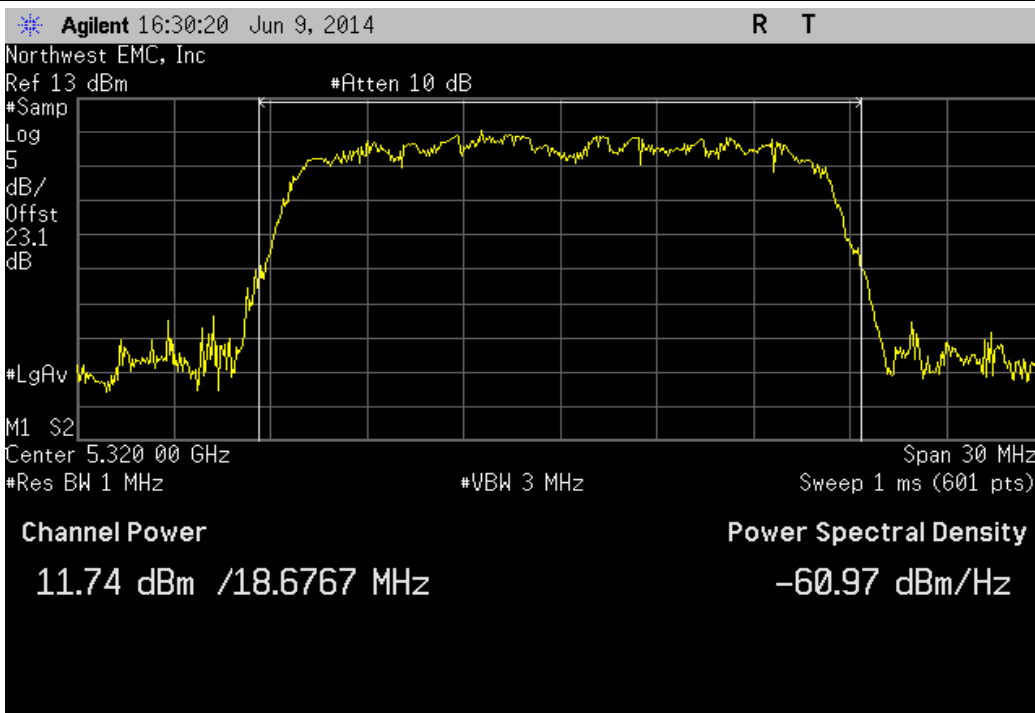
802.11(a) 18 Mbps, Low Channel 52, 5260MHz

| Value      | Limit    | Result |
|------------|----------|--------|
| 11.394 dBm | < 24 dBm | Pass   |



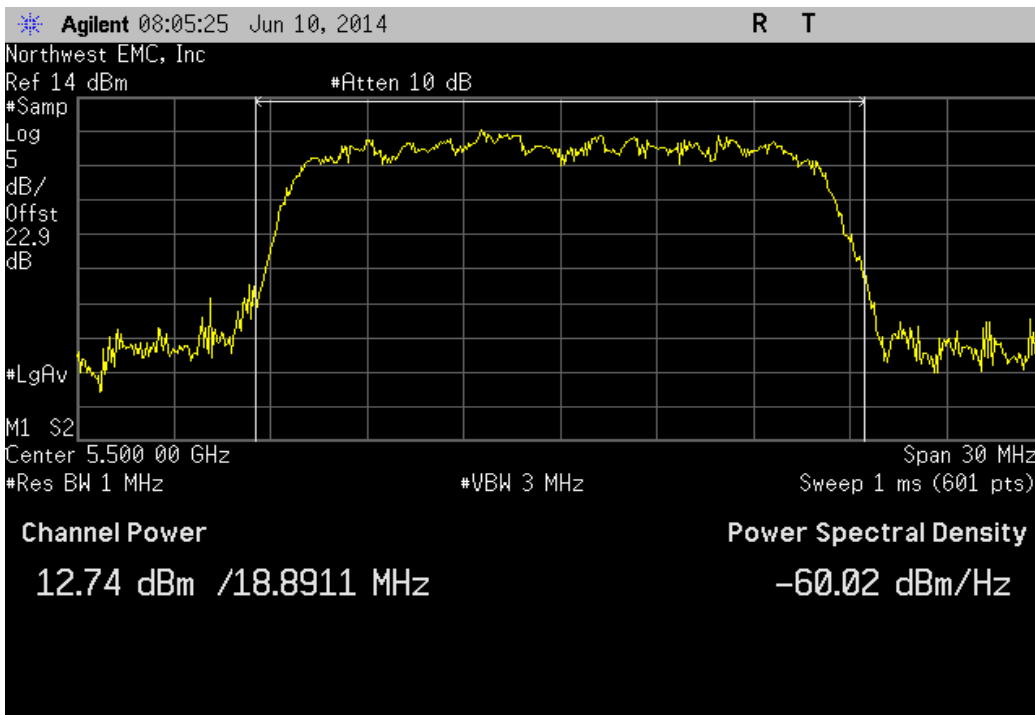
802.11(a) 18 Mbps, High Channel 64, 5320MHz

| Value      | Limit    | Result |
|------------|----------|--------|
| 11.743 dBm | < 24 dBm | Pass   |



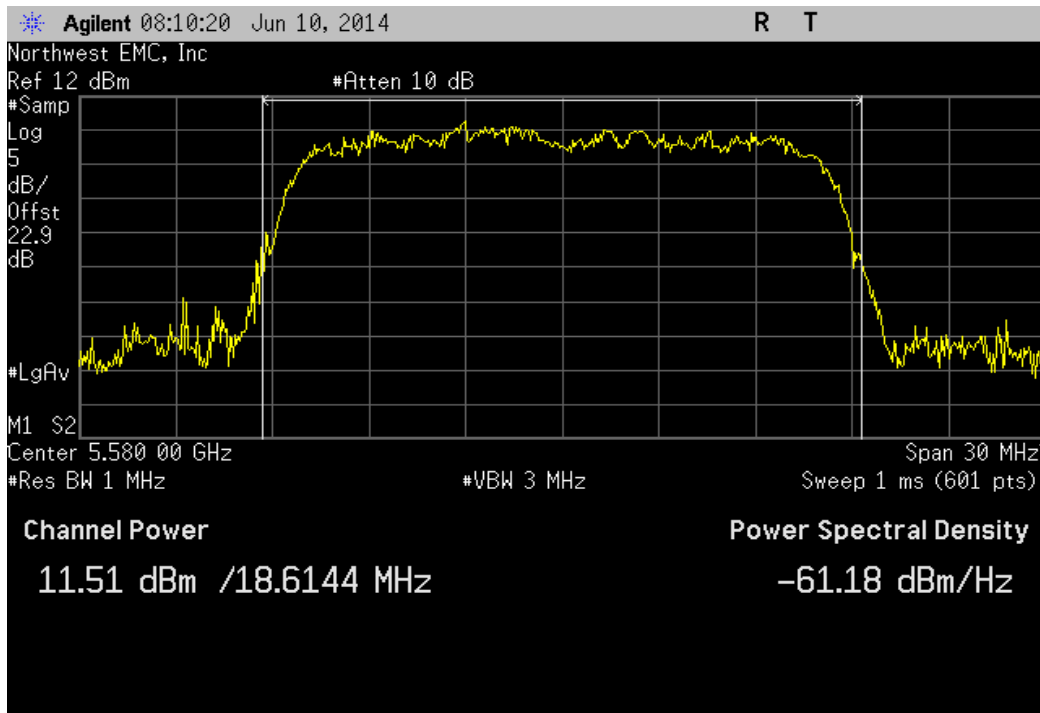
802.11(a) 18 Mbps, Low Channel 100, 5500MHz

| Value      | Limit    | Result |
|------------|----------|--------|
| 12.741 dBm | < 24 dBm | Pass   |



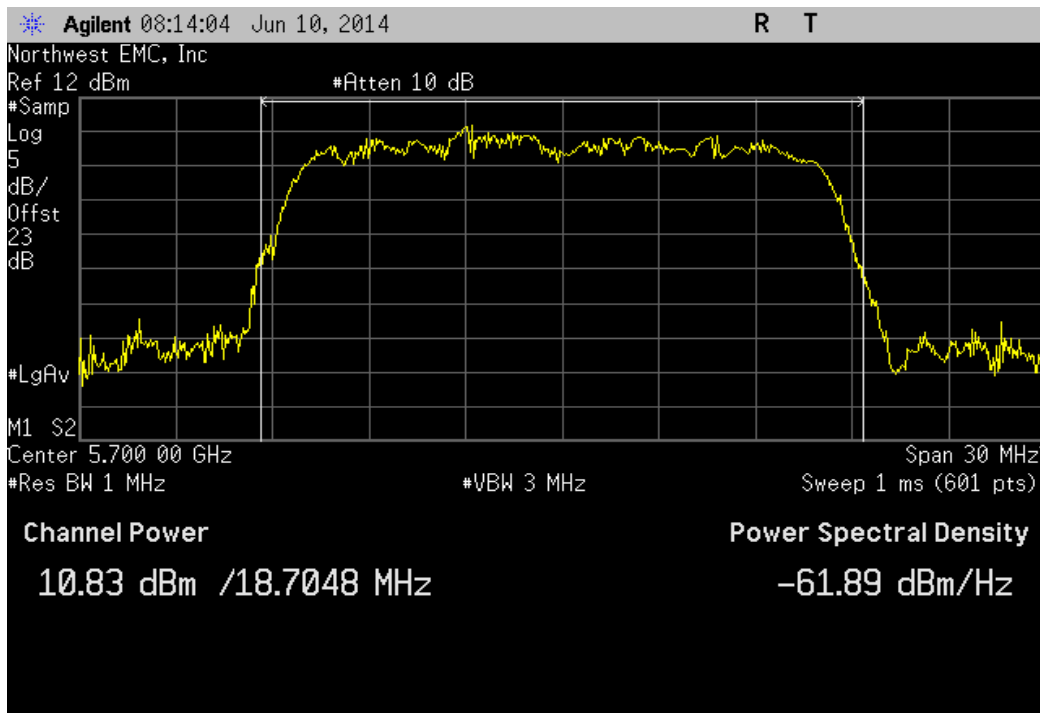
802.11(a) 18 Mbps, Mid Channel 116, 5580MHz

| Value      | Limit    | Result |
|------------|----------|--------|
| 11.515 dBm | < 24 dBm | Pass   |



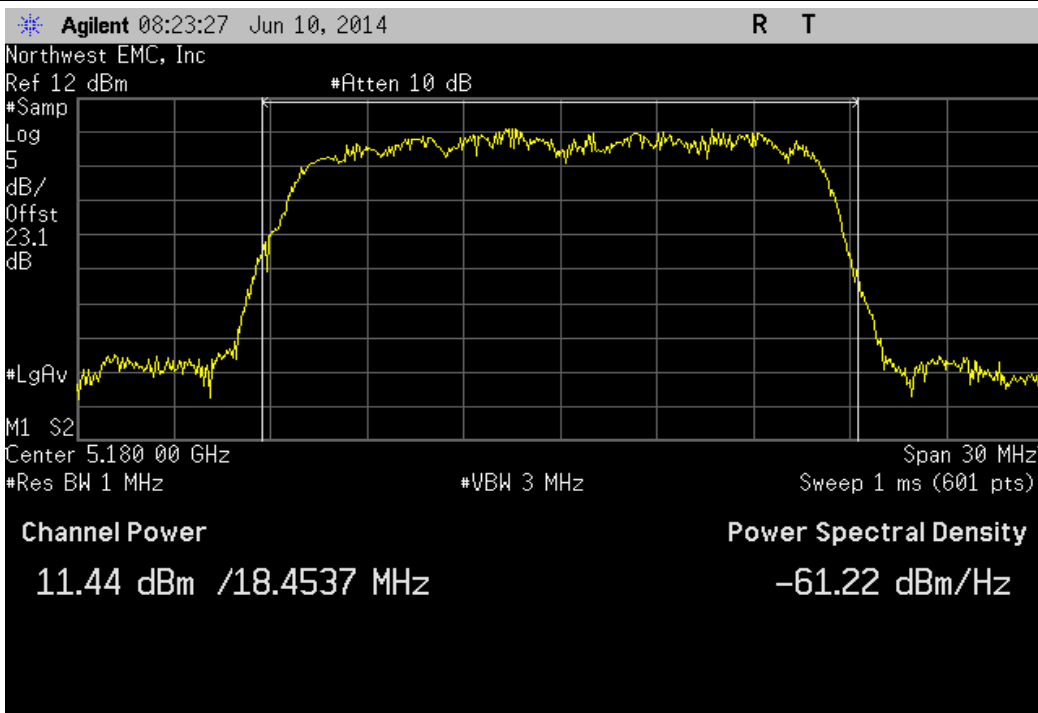
802.11(a) 18 Mbps, High Channel 140, 5700MHz

| Value      | Limit    | Result |
|------------|----------|--------|
| 10.833 dBm | < 24 dBm | Pass   |



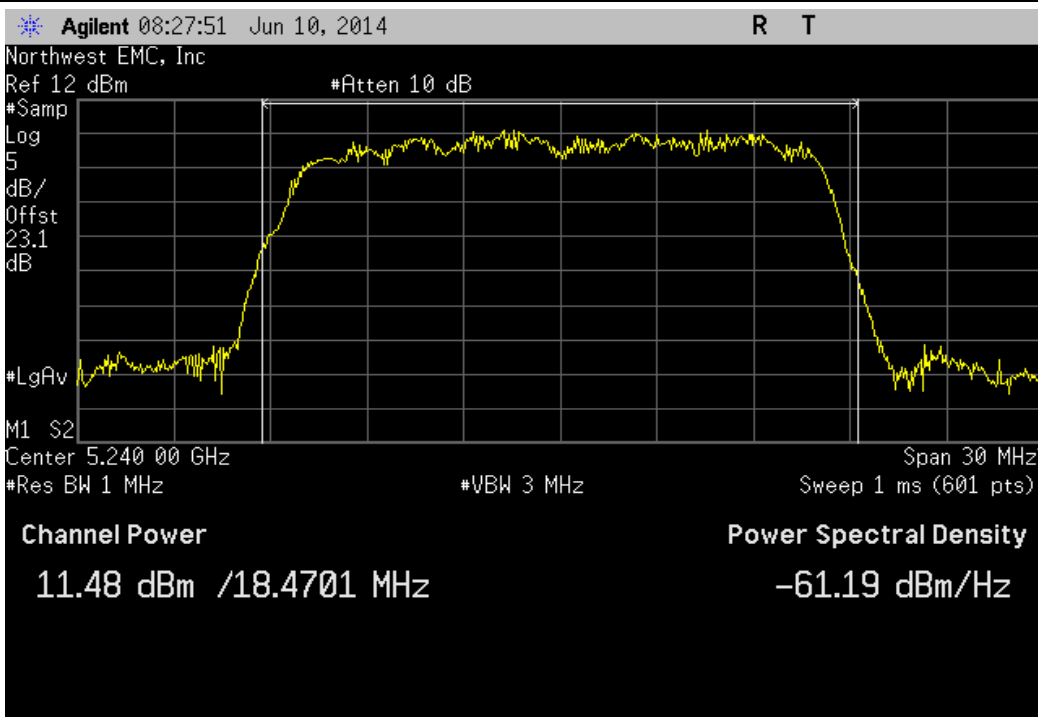
802.11(a) 36 Mbps, Low Channel 36, 5180MHz

|  | Value      | Limit    | Result |
|--|------------|----------|--------|
|  | 11.438 dBm | < 17 dBm | Pass   |



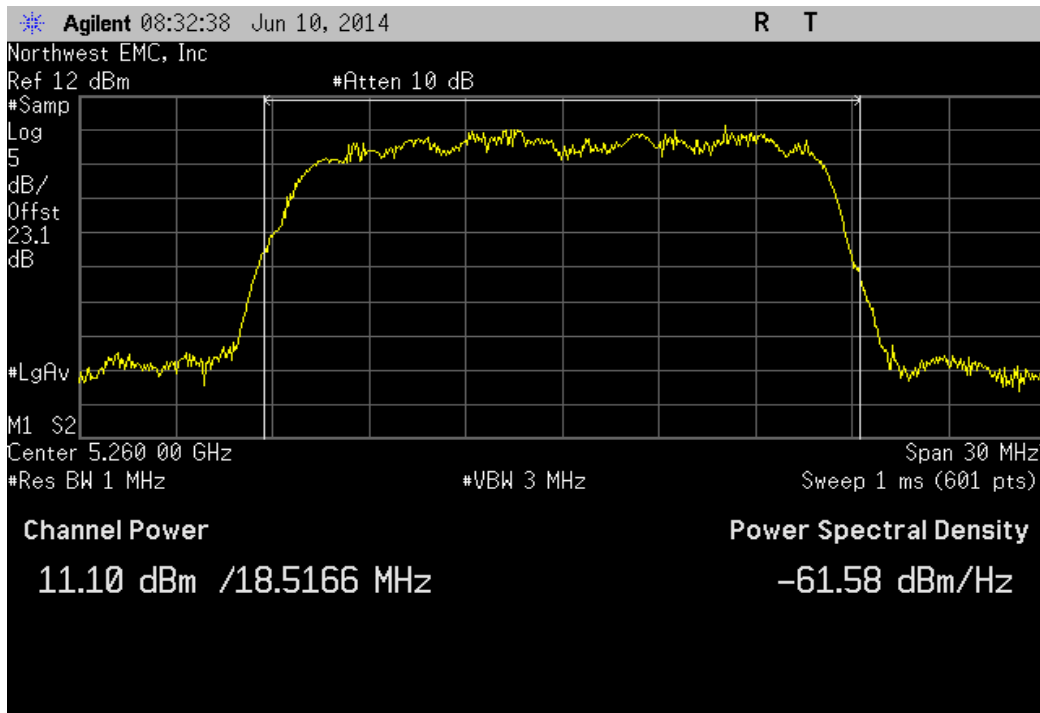
802.11(a) 36 Mbps, High Channel 48, 5240MHz

|  | Value      | Limit    | Result |
|--|------------|----------|--------|
|  | 11.476 dBm | < 17 dBm | Pass   |



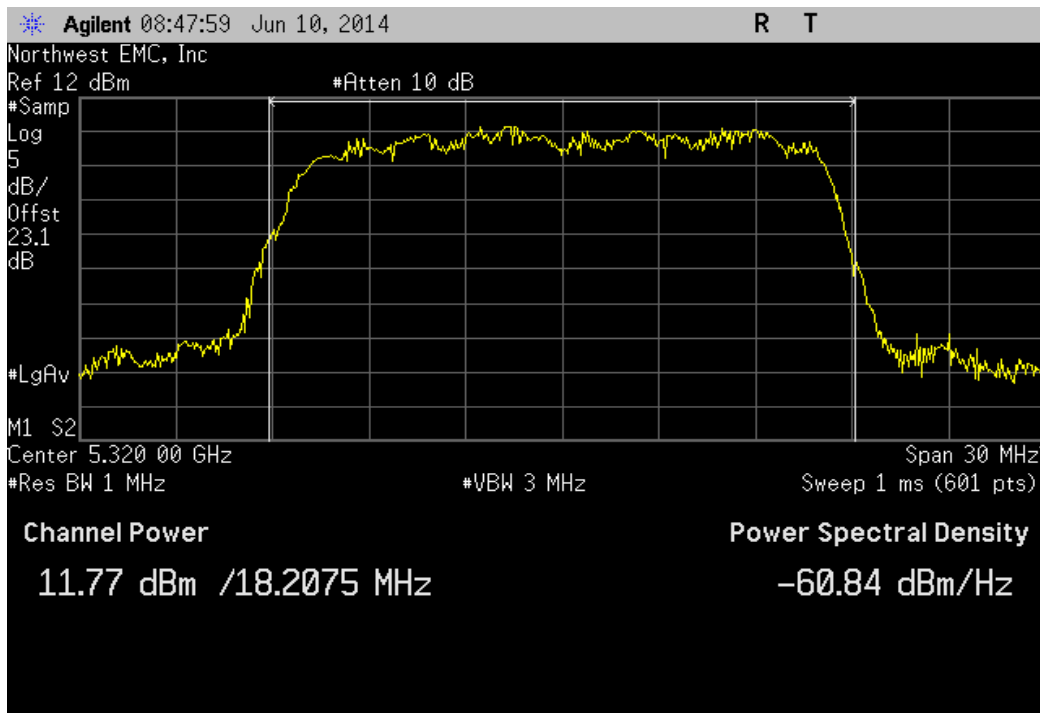
802.11(a) 36 Mbps, Low Channel 52, 5260MHz

| Value      | Limit    | Result |
|------------|----------|--------|
| 11.095 dBm | < 24 dBm | Pass   |



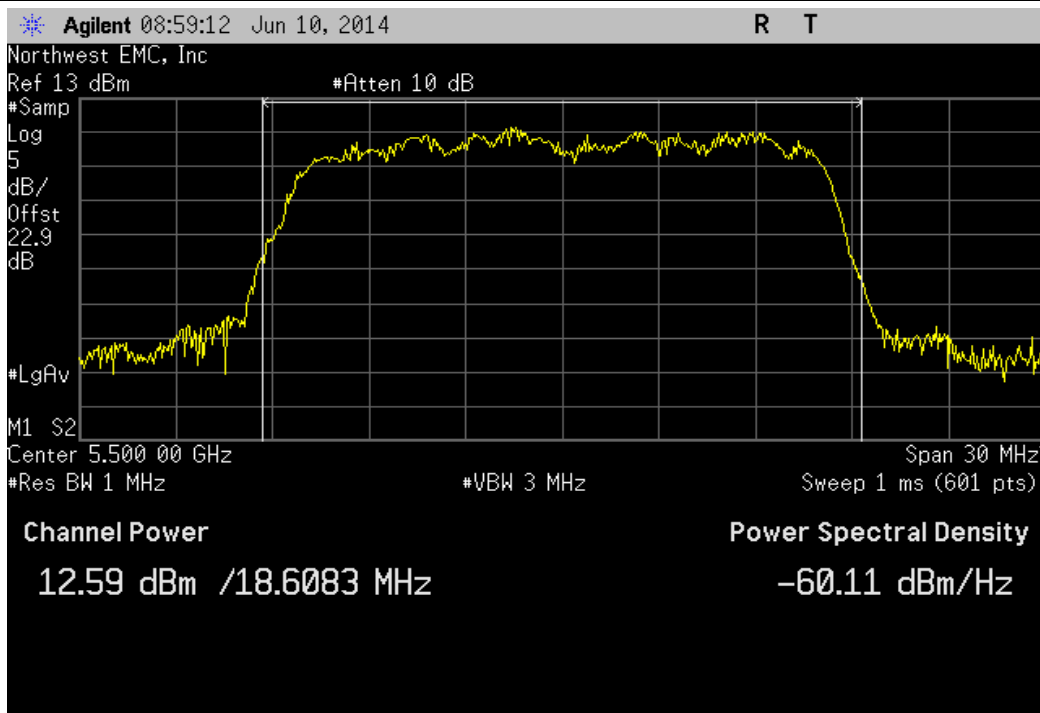
802.11(a) 36 Mbps, High Channel 64, 5320MHz

| Value      | Limit    | Result |
|------------|----------|--------|
| 11.766 dBm | < 24 dBm | Pass   |



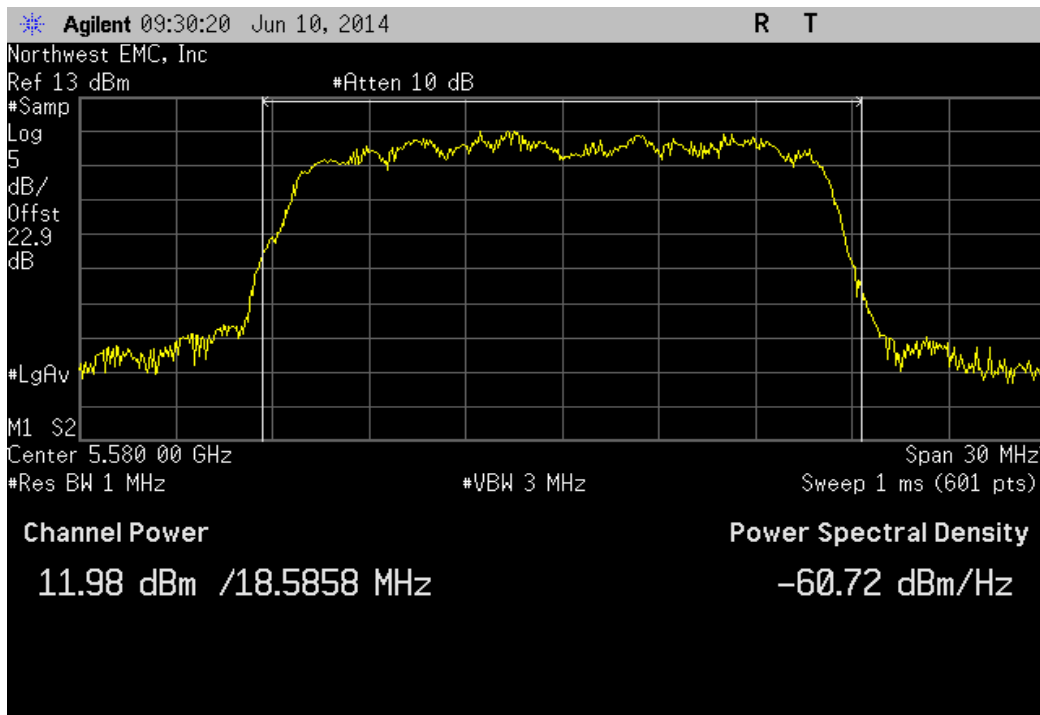
802.11(a) 36 Mbps, Low Channel 100, 5500MHz

|  | Value      | Limit    | Result |
|--|------------|----------|--------|
|  | 12.586 dBm | < 24 dBm | Pass   |



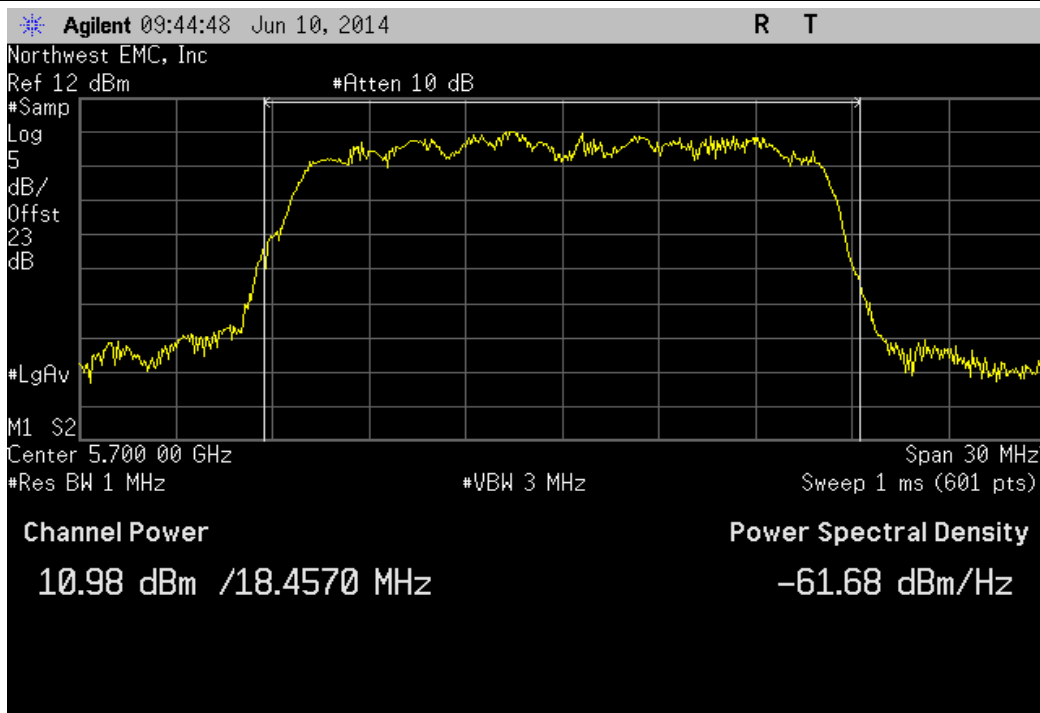
802.11(a) 36 Mbps, Mid Channel 116, 5580MHz

|  | Value      | Limit    | Result |
|--|------------|----------|--------|
|  | 11.976 dBm | < 24 dBm | Pass   |



802.11(a) 36 Mbps, High Channel 140, 5700MHz

| Value      | Limit    | Result |
|------------|----------|--------|
| 10.981 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 |
|---------------------------------|------------------|-----------------|-----|-----------|----------|
| Spectrum Analyzer               | Agilent          | E4446A          | AAQ | 1/21/2014 | 24 mo    |
| 40GHz DC Block                  | Miteq            | DCB4000         | AMD | 4/28/2014 | 12 mo    |
| Attenuator 20 dB, SMA M/F 26GHz | S.M. Electronics | SA26B-20        | AUY | 7/30/2013 | 12 mo    |
| EV06 Direct Connect Cable       | ESM Cable Corp.  | TT              | ECA | NCR       | 0 mo     |
| Attenuator, 'Precision N'       | S.M. Electronics | SA18N-06/SM4032 | REE | 12/2/2013 | 12 mo    |
| Power Meter                     | Agilent          | N1913A          | SQR | 4/29/2013 | 36 mo    |
| Power Sensor                    | Agilent          | E9300H          | SQO | 4/29/2013 | 36 mo    |
| MXG Analog Signal Generator     | Agilent          | N5181A          | TIG | 3/28/2014 | 36 mo    |

## 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 ≥ 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).

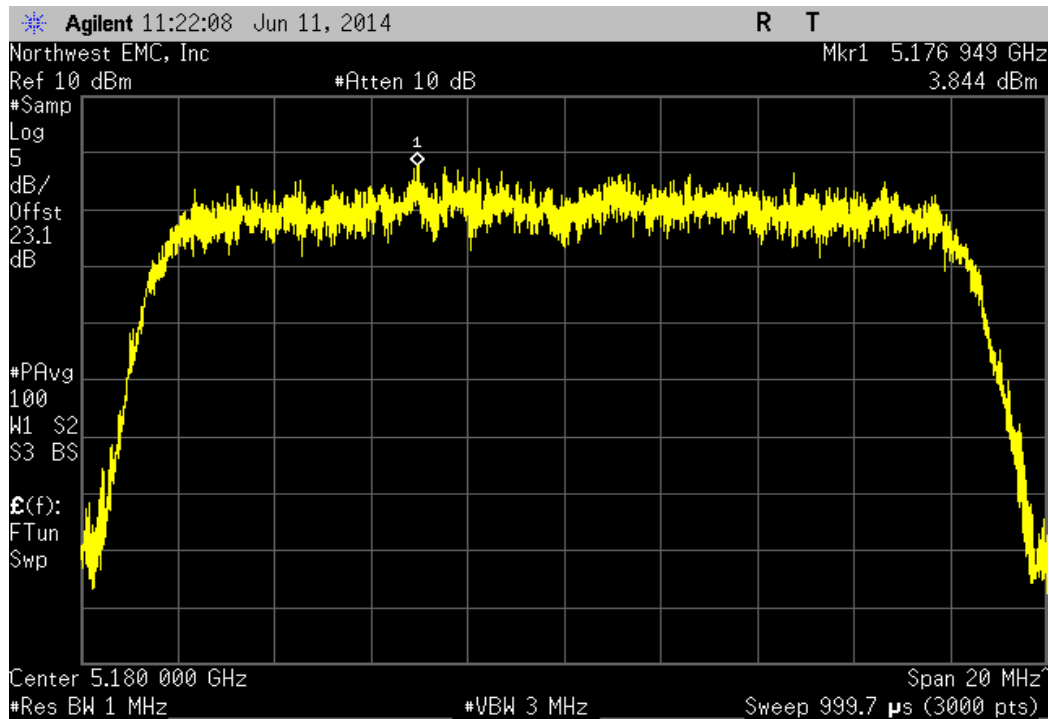


# PEAK POWER SPECTRAL DENSITY

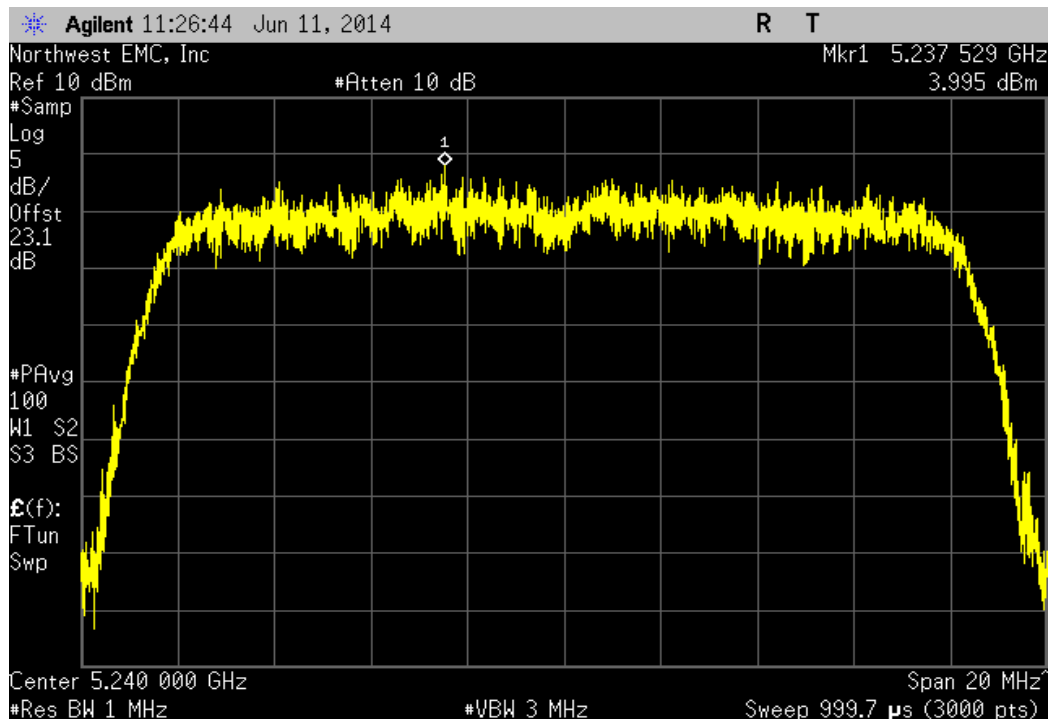
XMit 2014.02.07  
PsaTx 2014.04.29

|                                                 |   |                                                                                             |                      |
|-------------------------------------------------|---|---------------------------------------------------------------------------------------------|----------------------|
| EUT: 444-2251                                   |   | Work Order: FOCU0169                                                                        |                      |
| Serial Number: 02EA4F000062                     |   | Date: 06/11/14                                                                              |                      |
| Customer: Summit Semiconductor LLC              |   | Temperature: 22.2°C                                                                         |                      |
| Attendees: Paul Hamilton                        |   | Humidity: 41%                                                                               |                      |
| Project: None                                   |   | Barometric Pres.: 1017                                                                      |                      |
| Tested by: Brandon Hobbs                        |   | Power: 110VAC/60Hz                                                                          |                      |
|                                                 |   | Job Site: EV06                                                                              |                      |
| TEST SPECIFICATIONS                             |   | Test Method                                                                                 |                      |
| FCC 15.407:2014                                 |   | ANSI C63.10:2009                                                                            |                      |
| COMMENTS                                        |   |                                                                                             |                      |
| Modes of operation were provided by the client. |   |                                                                                             |                      |
| DEVIATIONS FROM TEST STANDARD                   |   |                                                                                             |                      |
| None                                            |   |                                                                                             |                      |
| Configuration #                                 | 1 | Signature  |                      |
|                                                 |   | Value<br>(dBm / MHz)                                                                        | Limit<br>(dBm / MHz) |
| Result                                          |   |                                                                                             |                      |
| 802.11(a) 6 Mbps                                |   |                                                                                             |                      |
| Low Channel 36, 5180MHz                         |   | 3.844                                                                                       | 4                    |
| High Channel 48, 5240MHz                        |   | 3.995                                                                                       | 4                    |
| Low Channel 52, 5260MHz                         |   | 3.632                                                                                       | 11                   |
| High Channel 64, 5320MHz                        |   | 3.467                                                                                       | 11                   |
| Low Channel 100, 5500MHz                        |   | 5.757                                                                                       | 11                   |
| Mid Channel 116, 5580MHz                        |   | 3.937                                                                                       | 11                   |
| High Channel 140, 5700MHz                       |   | 2.517                                                                                       | 11                   |
| 802.11(a) 18 Mbps                               |   |                                                                                             |                      |
| Low Channel 36, 5180MHz                         |   | 3.671                                                                                       | 4                    |
| High Channel 48, 5240MHz                        |   | 3.277                                                                                       | 4                    |
| Low Channel 52, 5260MHz                         |   | 3.717                                                                                       | 11                   |
| High Channel 64, 5320MHz                        |   | 3.421                                                                                       | 11                   |
| Low Channel 100, 5500MHz                        |   | 5.641                                                                                       | 11                   |
| Mid Channel 116, 5580MHz                        |   | 4.381                                                                                       | 11                   |
| High Channel 140, 5700MHz                       |   | 1.905                                                                                       | 11                   |
| 802.11(a) 36 Mbps                               |   |                                                                                             |                      |
| Low Channel 36, 5180MHz                         |   | 1.974                                                                                       | 4                    |
| High Channel 48, 5240MHz                        |   | 1.103                                                                                       | 4                    |
| Low Channel 52, 5260MHz                         |   | 1.768                                                                                       | 11                   |
| High Channel 64, 5320MHz                        |   | 1.426                                                                                       | 11                   |
| Low Channel 100, 5500MHz                        |   | 2.898                                                                                       | 11                   |
| Mid Channel 116, 5580MHz                        |   | 2.159                                                                                       | 11                   |
| High Channel 140, 5700MHz                       |   | 1.16                                                                                        | 11                   |

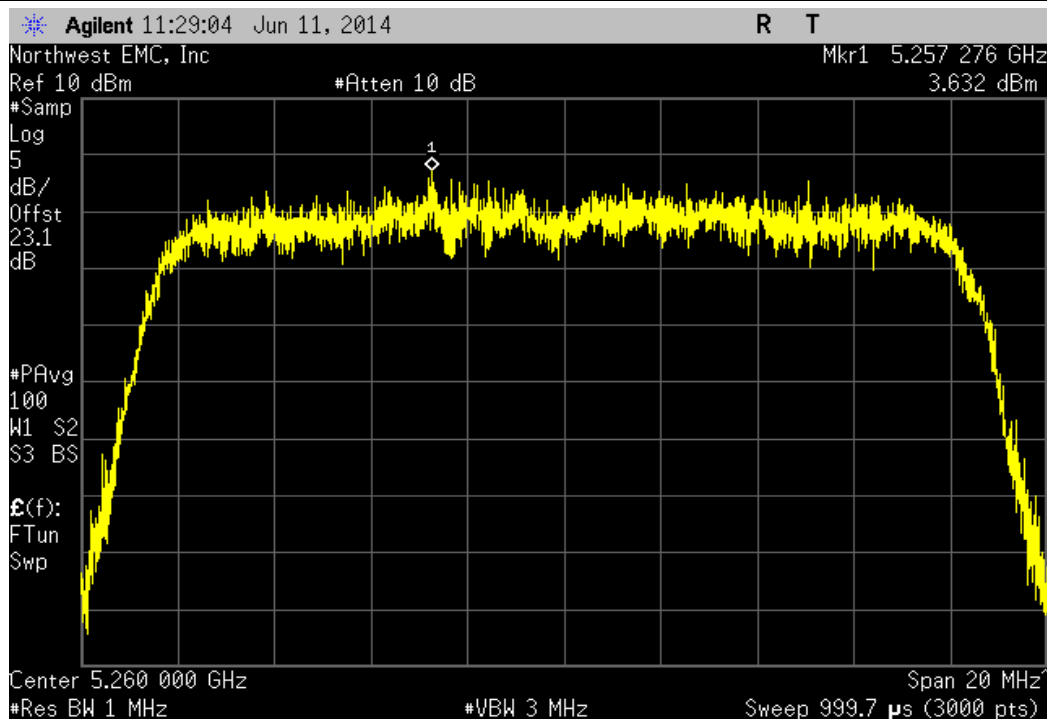
| 802.11(a) 6 Mbps, Low Channel 36, 5180MHz |  |  |                      |                      |        |  |
|-------------------------------------------|--|--|----------------------|----------------------|--------|--|
|                                           |  |  | Value<br>(dBm / MHz) | Limit<br>(dBm / MHz) | Result |  |
|                                           |  |  | 3.844                | 4                    | Pass   |  |



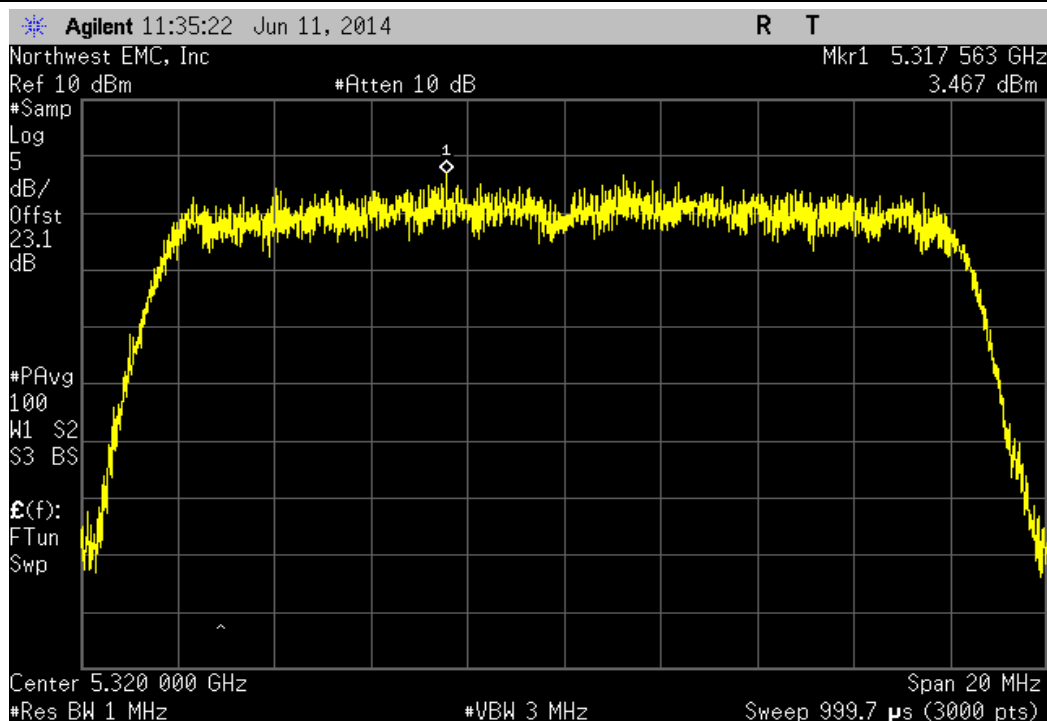
| 802.11(a) 6 Mbps, High Channel 48, 5240MHz |  |  |                      |                      |        |  |
|--------------------------------------------|--|--|----------------------|----------------------|--------|--|
|                                            |  |  | Value<br>(dBm / MHz) | Limit<br>(dBm / MHz) | Result |  |
|                                            |  |  | 3.995                | 4                    | Pass   |  |



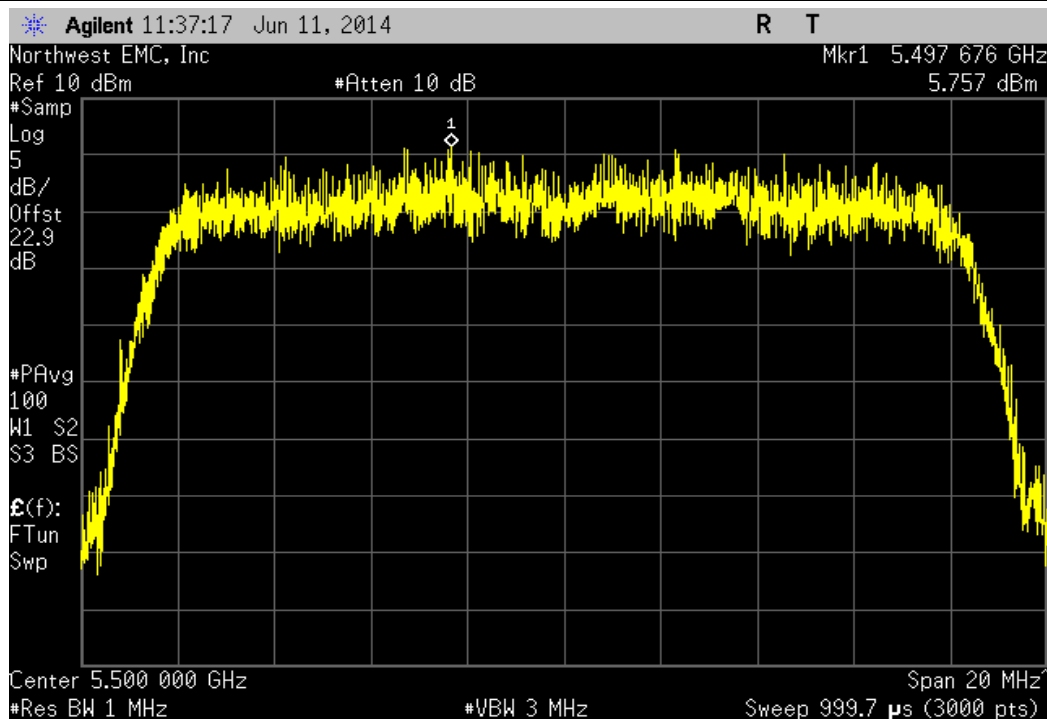
| 802.11(a) 6 Mbps, Low Channel 52, 5260MHz |  |  |  | Value       | Limit       | Result |
|-------------------------------------------|--|--|--|-------------|-------------|--------|
|                                           |  |  |  | (dBm / MHz) | (dBm / MHz) |        |
|                                           |  |  |  | 3.632       | 11          | Pass   |



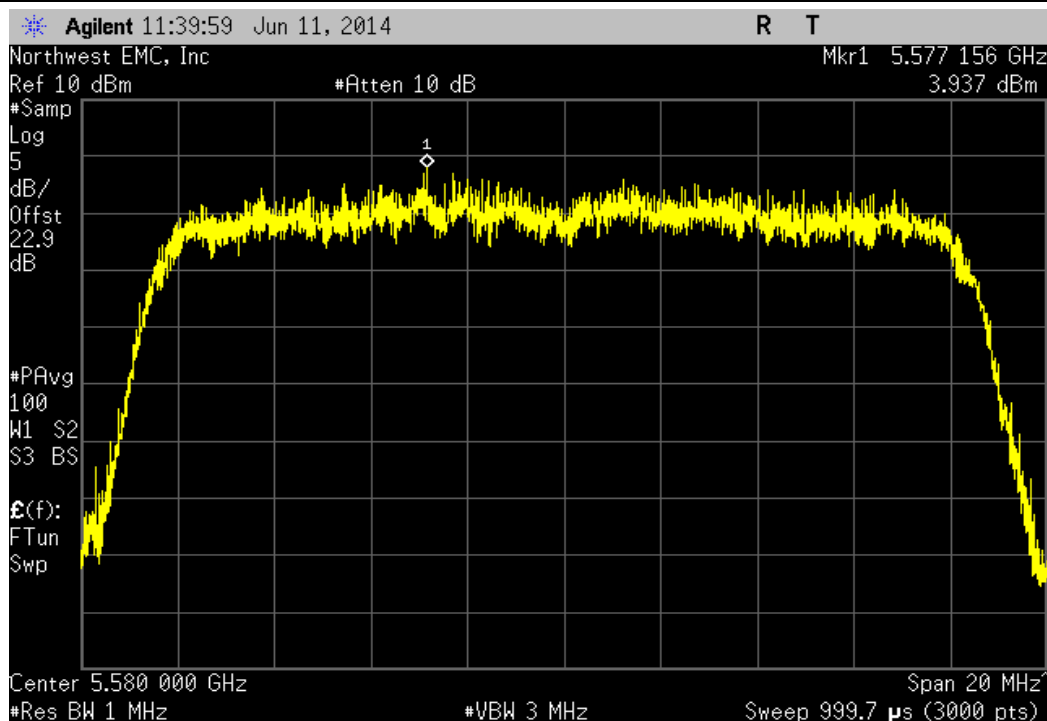
| 802.11(a) 6 Mbps, High Channel 64, 5320MHz |  |  |  | Value       | Limit       | Result |
|--------------------------------------------|--|--|--|-------------|-------------|--------|
|                                            |  |  |  | (dBm / MHz) | (dBm / MHz) |        |
|                                            |  |  |  | 3.467       | 11          | Pass   |



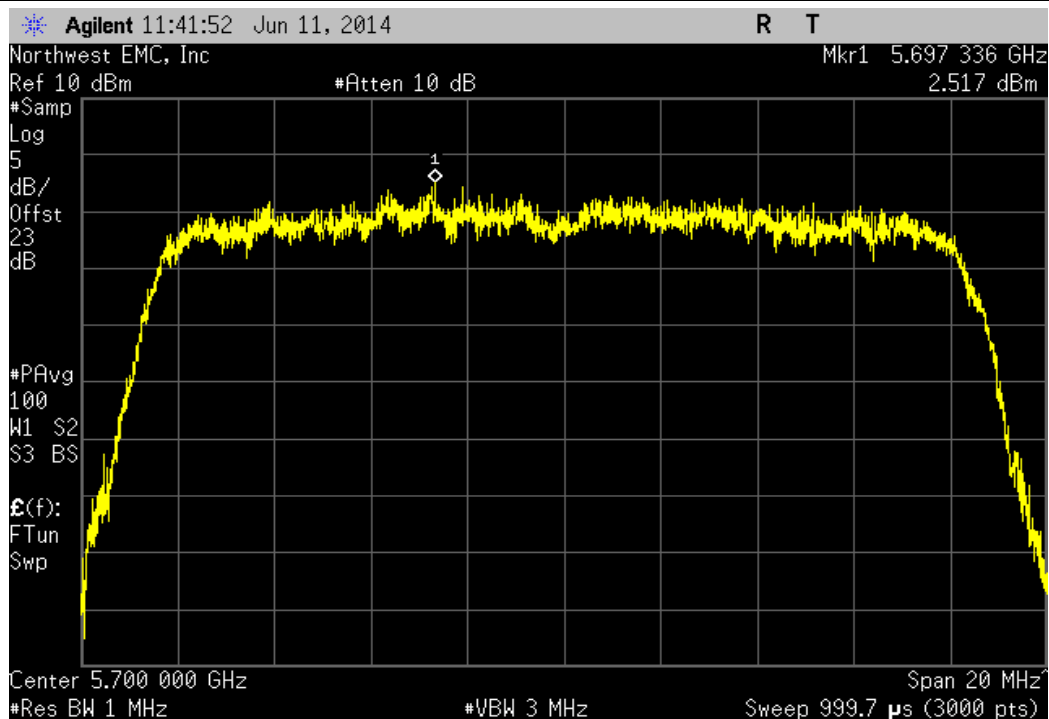
| 802.11(a) 6 Mbps, Low Channel 100, 5500MHz |                      |                      |        |
|--------------------------------------------|----------------------|----------------------|--------|
|                                            | Value<br>(dBm / MHz) | Limit<br>(dBm / MHz) | Result |
|                                            | 5.757                | 11                   | Pass   |



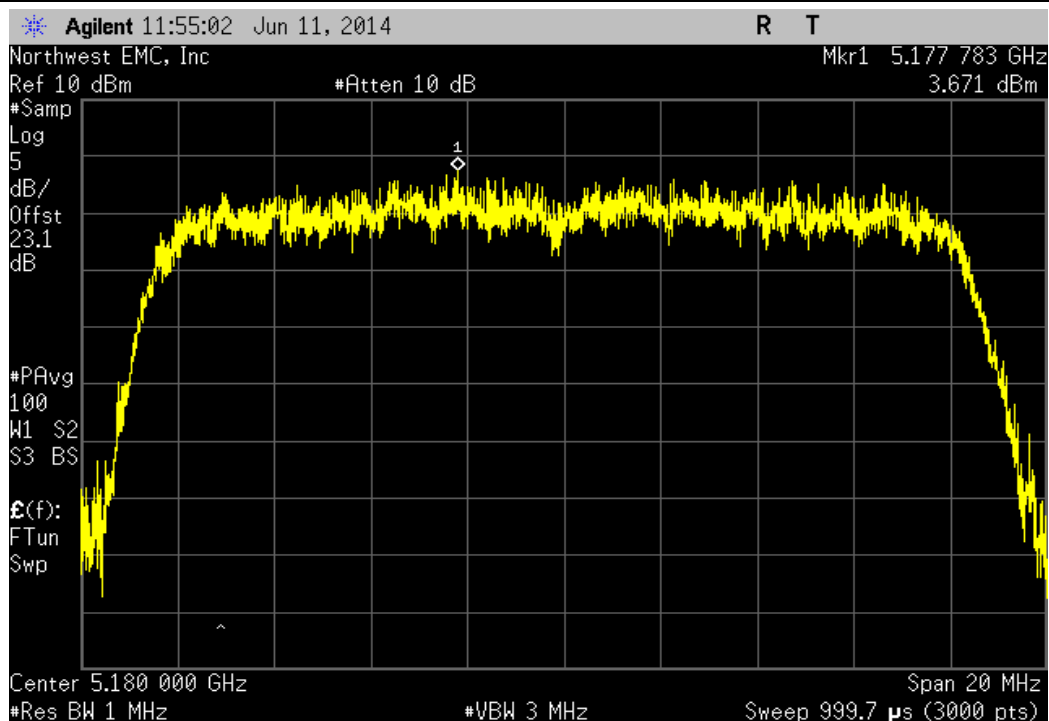
| 802.11(a) 6 Mbps, Mid Channel 116, 5580MHz |                      |                      |        |
|--------------------------------------------|----------------------|----------------------|--------|
|                                            | Value<br>(dBm / MHz) | Limit<br>(dBm / MHz) | Result |
|                                            | 3.937                | 11                   | Pass   |



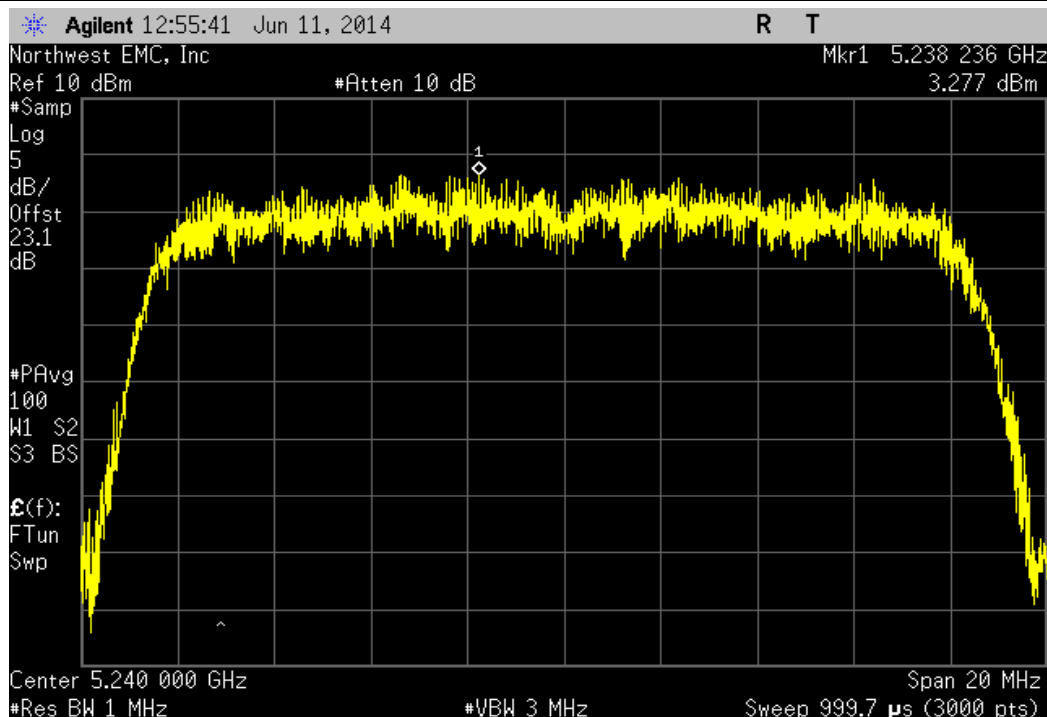
| 802.11(a) 6 Mbps, High Channel 140, 5700MHz |                      |                      |        |
|---------------------------------------------|----------------------|----------------------|--------|
|                                             | Value<br>(dBm / MHz) | Limit<br>(dBm / MHz) | Result |
|                                             | 2.517                | 11                   | Pass   |



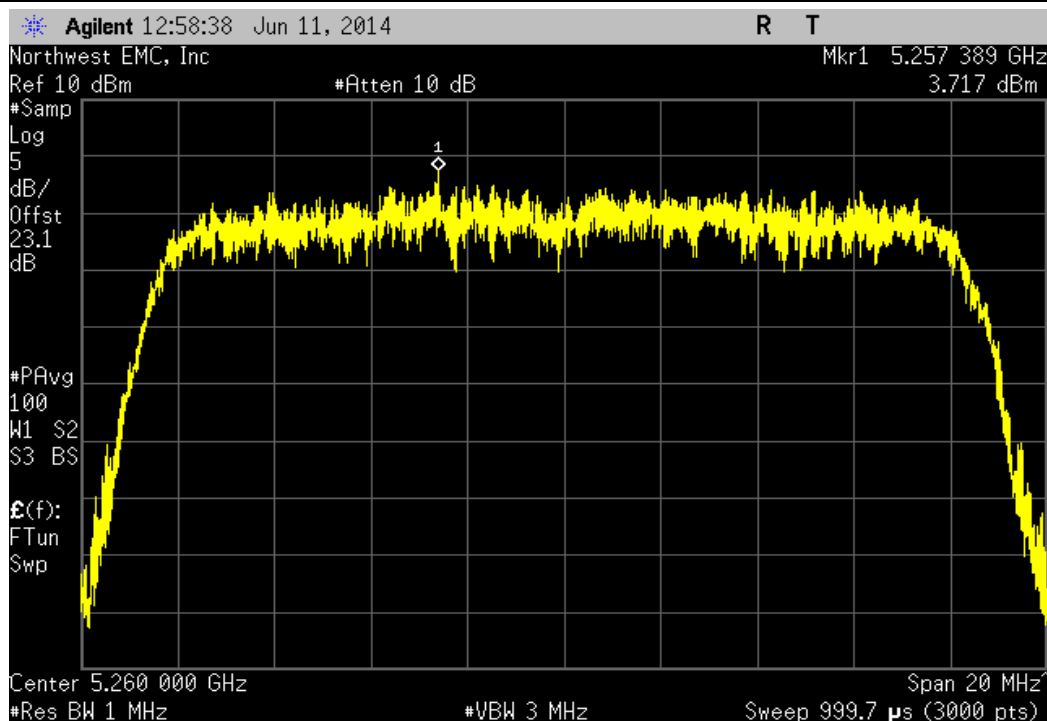
| 802.11(a) 18 Mbps, Low Channel 36, 5180MHz |                      |                      |        |
|--------------------------------------------|----------------------|----------------------|--------|
|                                            | Value<br>(dBm / MHz) | Limit<br>(dBm / MHz) | Result |
|                                            | 3.671                | 4                    | Pass   |



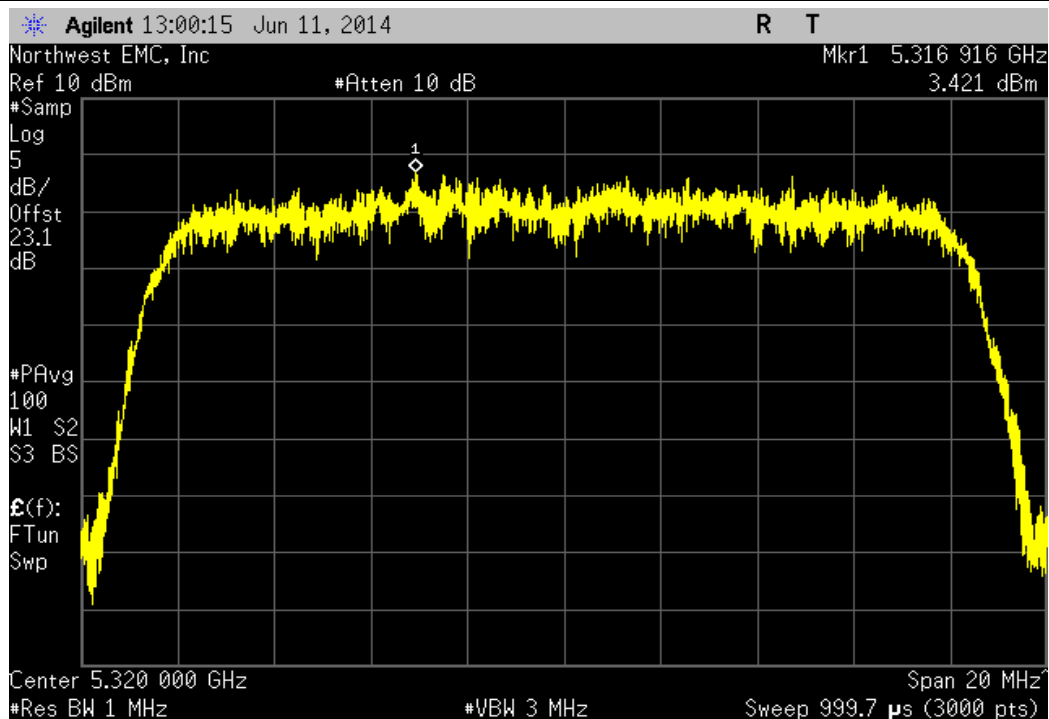
| 802.11(a) 18 Mbps, High Channel 48, 5240MHz |  |  |  | Value       | Limit       | Result |
|---------------------------------------------|--|--|--|-------------|-------------|--------|
|                                             |  |  |  | (dBm / MHz) | (dBm / MHz) |        |
|                                             |  |  |  | 3.277       | 4           | Pass   |



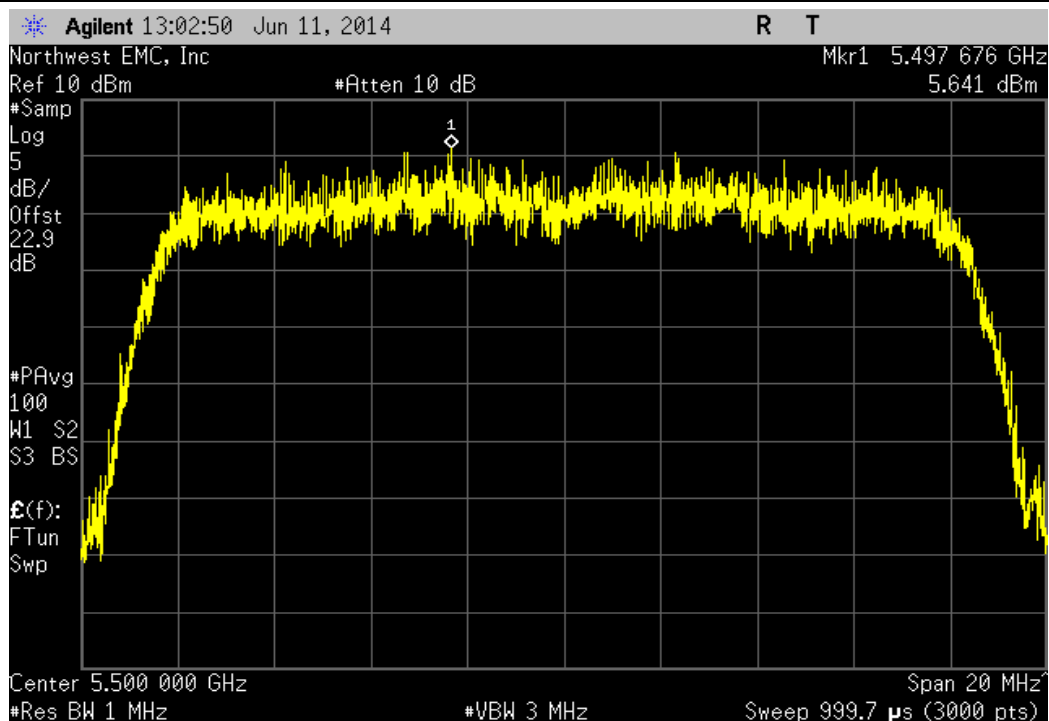
| 802.11(a) 18 Mbps, Low Channel 52, 5260MHz |  |  |  | Value       | Limit       | Result |
|--------------------------------------------|--|--|--|-------------|-------------|--------|
|                                            |  |  |  | (dBm / MHz) | (dBm / MHz) |        |
|                                            |  |  |  | 3.717       | 11          | Pass   |



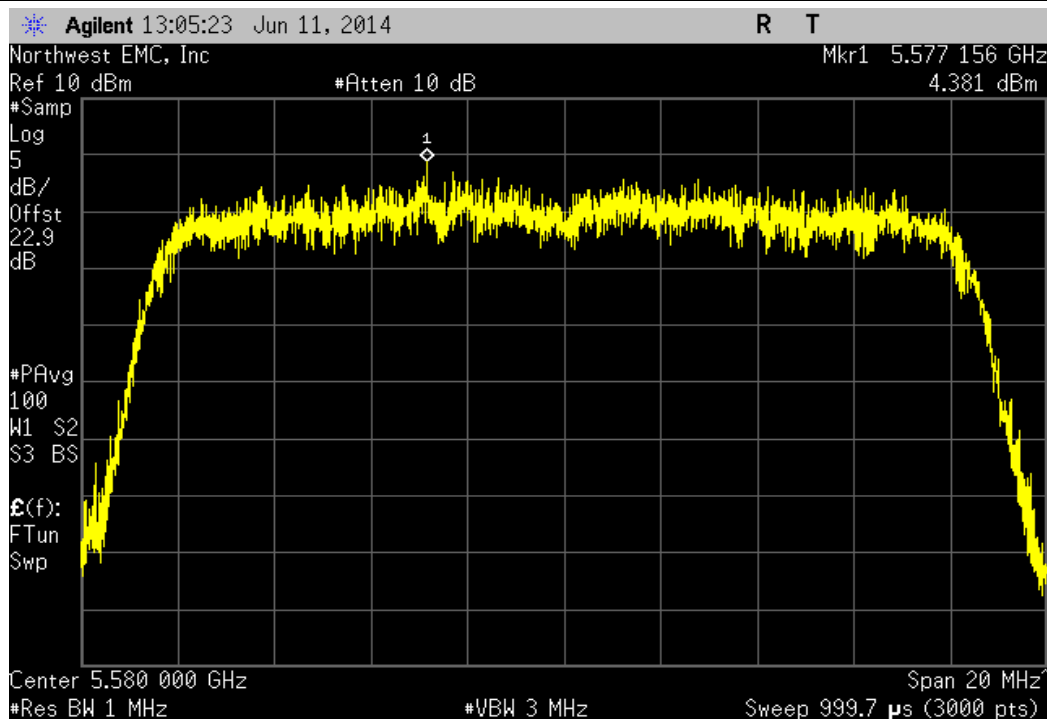
| 802.11(a) 18 Mbps, High Channel 64, 5320MHz |             |             |        |  |
|---------------------------------------------|-------------|-------------|--------|--|
|                                             | Value       | Limit       | Result |  |
|                                             | (dBm / MHz) | (dBm / MHz) |        |  |
|                                             | 3.421       | 11          | Pass   |  |



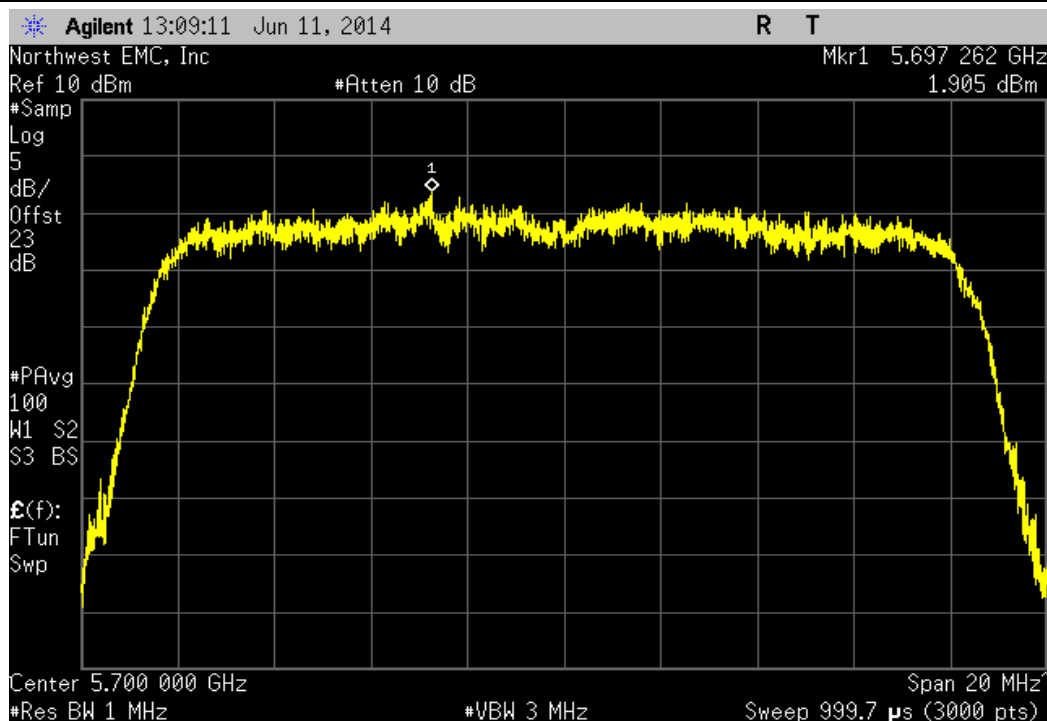
| 802.11(a) 18 Mbps, Low Channel 100, 5500MHz |             |             |        |  |
|---------------------------------------------|-------------|-------------|--------|--|
|                                             | Value       | Limit       | Result |  |
|                                             | (dBm / MHz) | (dBm / MHz) |        |  |
|                                             | 5.641       | 11          | Pass   |  |



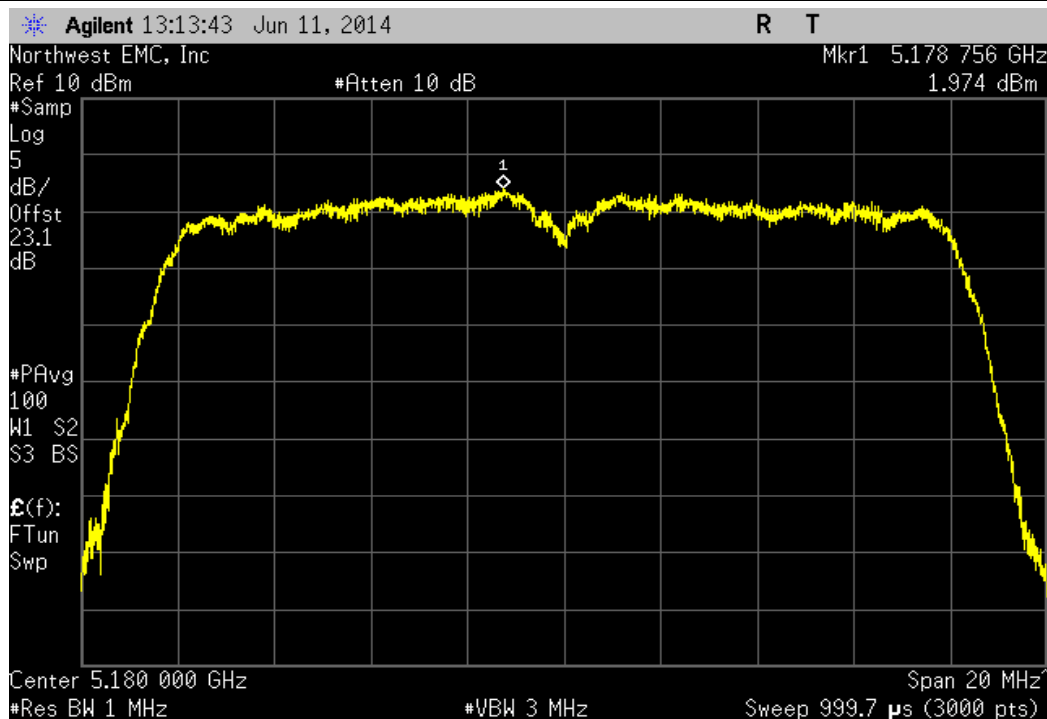
| 802.11(a) 18 Mbps, Mid Channel 116, 5580MHz |  |  |  | Value       | Limit       | Result |
|---------------------------------------------|--|--|--|-------------|-------------|--------|
|                                             |  |  |  | (dBm / MHz) | (dBm / MHz) |        |
|                                             |  |  |  | 4.381       | 11          | Pass   |



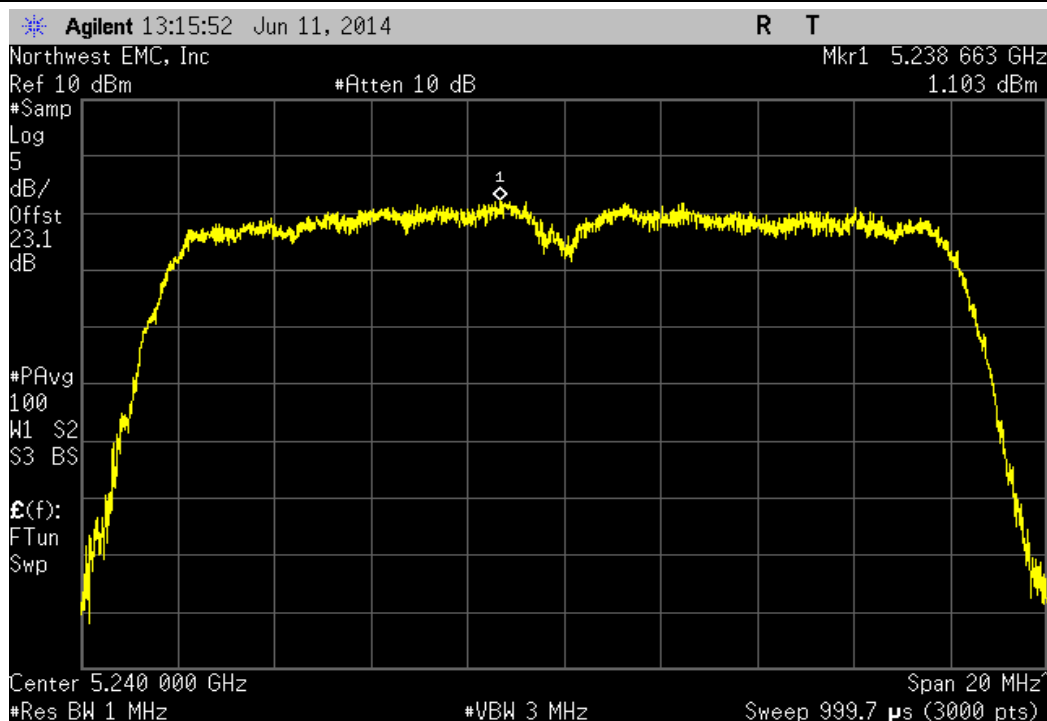
| 802.11(a) 18 Mbps, High Channel 140, 5700MHz |  |  |  | Value       | Limit       | Result |
|----------------------------------------------|--|--|--|-------------|-------------|--------|
|                                              |  |  |  | (dBm / MHz) | (dBm / MHz) |        |
|                                              |  |  |  | 1.905       | 11          | Pass   |



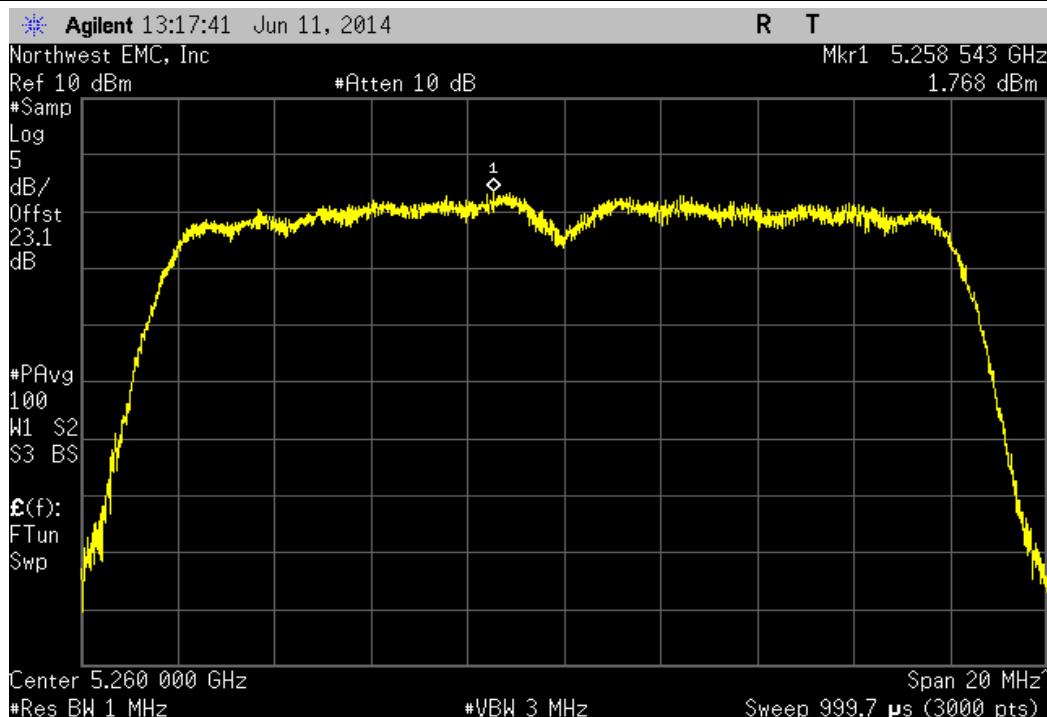
| 802.11(a) 36 Mbps, Low Channel 36, 5180MHz |  |  |  | Value       | Limit       | Result |
|--------------------------------------------|--|--|--|-------------|-------------|--------|
|                                            |  |  |  | (dBm / MHz) | (dBm / MHz) |        |
|                                            |  |  |  | 1.974       | 4           | Pass   |



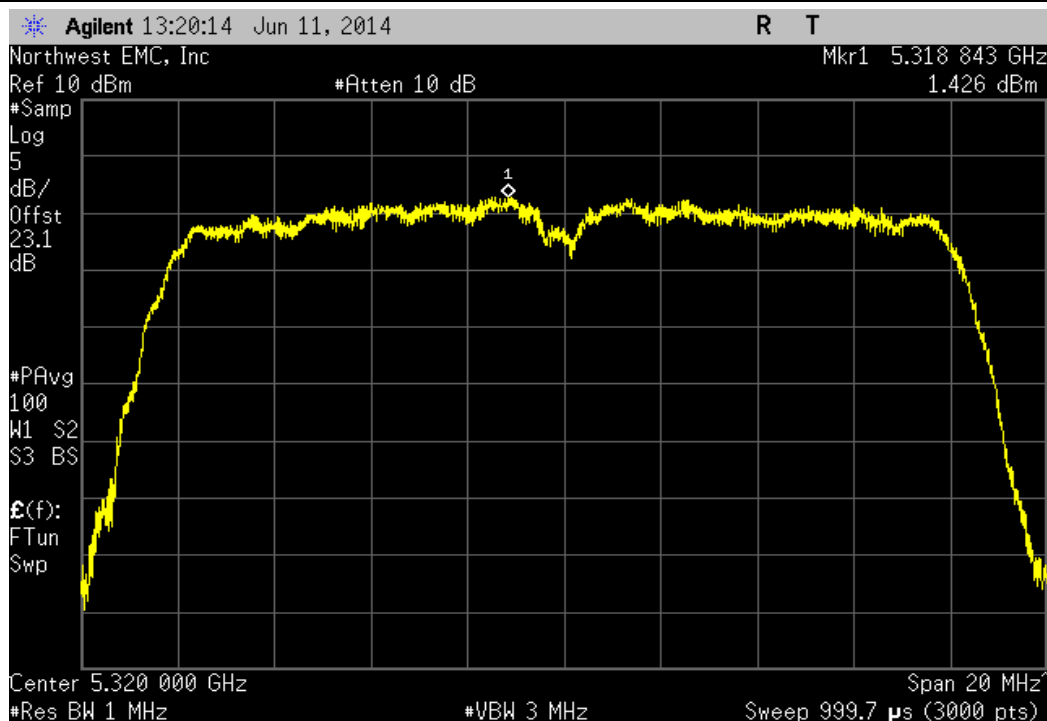
| 802.11(a) 36 Mbps, High Channel 48, 5240MHz |  |  |  | Value       | Limit       | Result |
|---------------------------------------------|--|--|--|-------------|-------------|--------|
|                                             |  |  |  | (dBm / MHz) | (dBm / MHz) |        |
|                                             |  |  |  | 1.103       | 4           | Pass   |



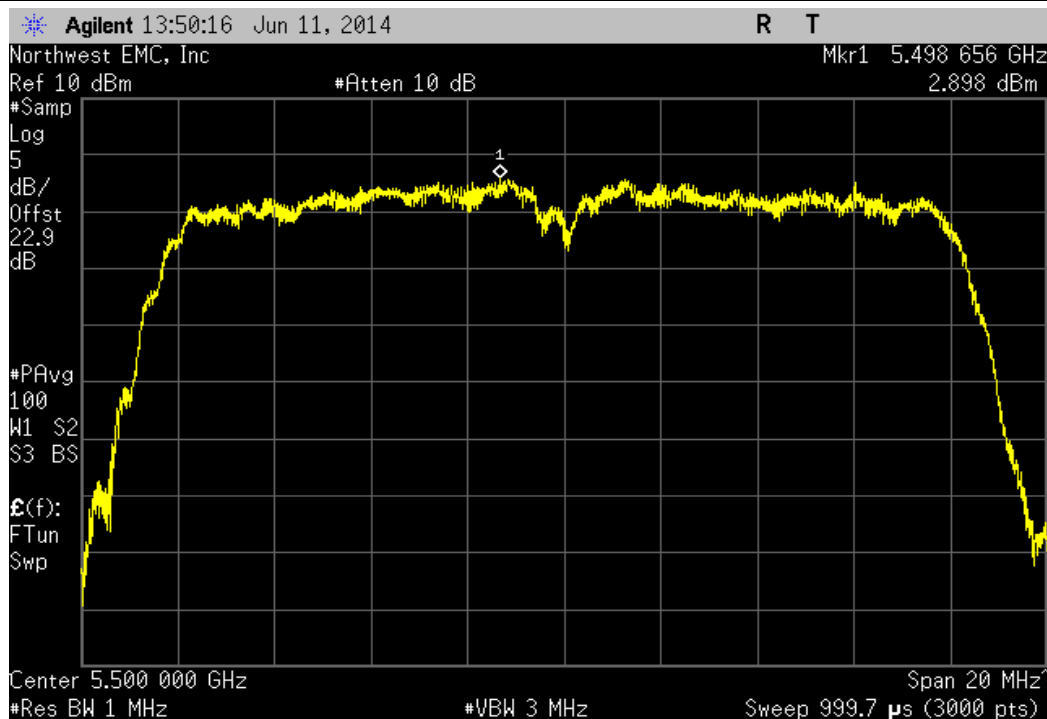
| 802.11(a) 36 Mbps, Low Channel 52, 5260MHz |  |  |  | Value       | Limit       | Result |
|--------------------------------------------|--|--|--|-------------|-------------|--------|
|                                            |  |  |  | (dBm / MHz) | (dBm / MHz) |        |
|                                            |  |  |  | 1.768       | 11          | Pass   |



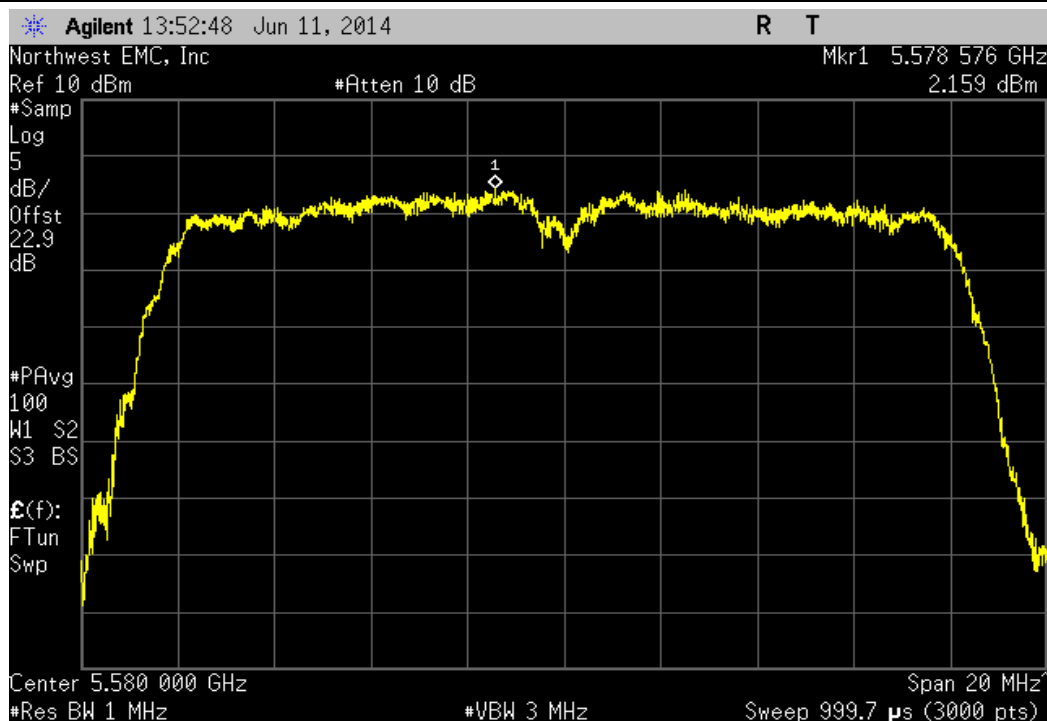
| 802.11(a) 36 Mbps, High Channel 64, 5320MHz |  |  |  | Value       | Limit       | Result |
|---------------------------------------------|--|--|--|-------------|-------------|--------|
|                                             |  |  |  | (dBm / MHz) | (dBm / MHz) |        |
|                                             |  |  |  | 1.426       | 11          | Pass   |



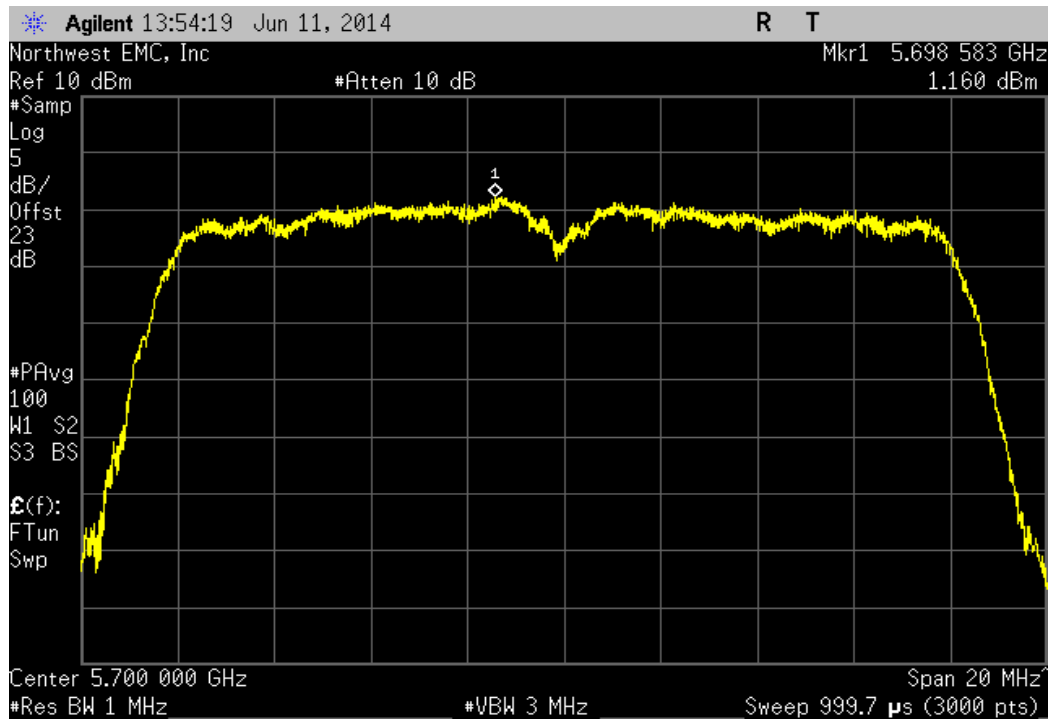
| 802.11(a) 36 Mbps, Low Channel 100, 5500MHz |  |  |  | Value       | Limit       | Result |
|---------------------------------------------|--|--|--|-------------|-------------|--------|
|                                             |  |  |  | (dBm / MHz) | (dBm / MHz) |        |
|                                             |  |  |  | 2.898       | 11          | Pass   |



| 802.11(a) 36 Mbps, Mid Channel 116, 5580MHz |  |  |  | Value       | Limit       | Result |
|---------------------------------------------|--|--|--|-------------|-------------|--------|
|                                             |  |  |  | (dBm / MHz) | (dBm / MHz) |        |
|                                             |  |  |  | 2.159       | 11          | Pass   |



| 802.11(a) 36 Mbps, High Channel 140, 5700MHz |  |  |  | Value       | Limit       | Result |
|----------------------------------------------|--|--|--|-------------|-------------|--------|
|                                              |  |  |  | (dBm / MHz) | (dBm / MHz) |        |
|                                              |  |  |  | 1.16        | 11          | Pass   |



# PEAK EXCURSION OF THE MODULATION ENVELOPE

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

## 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  $\geq$  3 MHz with peak detector and trace max-hold..

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



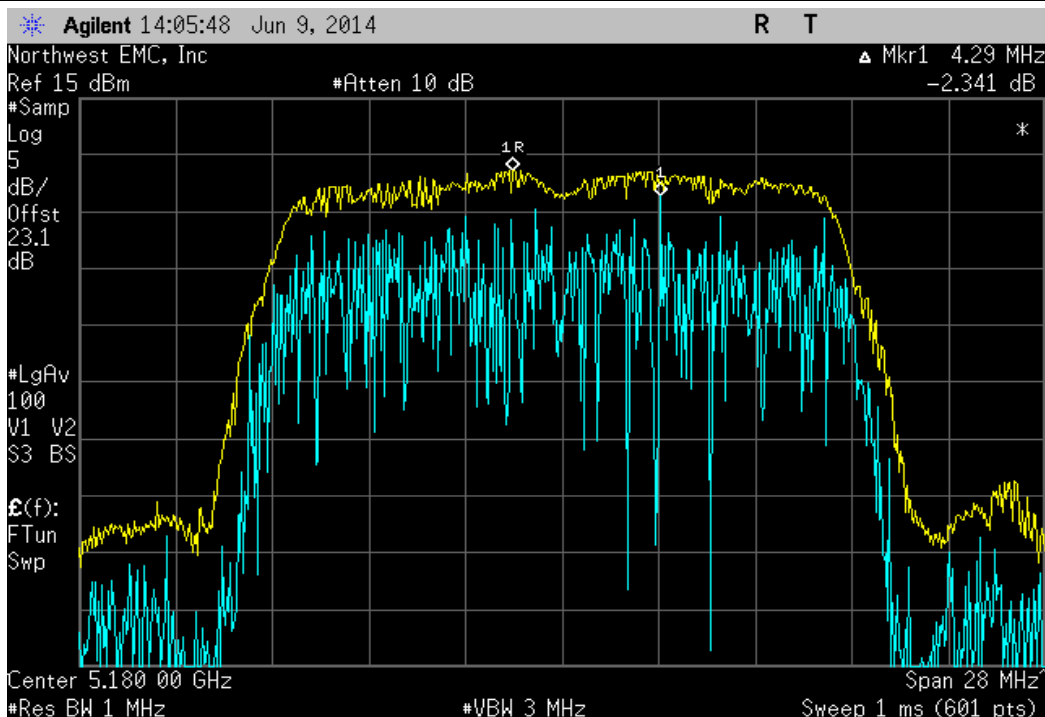
# PEAK EXCURSION OF THE MODULATION ENVELOPE

XMit 2014.02.07  
PsaTx 2014.04.29

|                                                 |                           |                                                                                             |         |
|-------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------------|---------|
| EUT: 444-2251                                   |                           | Work Order: FOCU0169                                                                        |         |
| Serial Number: 02EA4F000062                     |                           | Date: 06/11/14                                                                              |         |
| Customer: Summit Semiconductor LLC              |                           | Temperature: 22.2°C                                                                         |         |
| Attendees: Paul Hamilton                        |                           | Humidity: 41%                                                                               |         |
| Project: None                                   |                           | Barometric Pres.: 1017                                                                      |         |
| Tested by: Brandon Hobbs                        |                           | Power: 110VAC/60Hz                                                                          |         |
|                                                 |                           | Job Site: EV06                                                                              |         |
| TEST SPECIFICATIONS                             |                           | Test Method                                                                                 |         |
| FCC 15.407:2014                                 |                           | ANSI C63.10:2009                                                                            |         |
| COMMENTS                                        |                           |                                                                                             |         |
| Modes of operation were provided by the client. |                           |                                                                                             |         |
| DEVIATIONS FROM TEST STANDARD                   |                           |                                                                                             |         |
| None                                            |                           |                                                                                             |         |
| Configuration #                                 | 1                         | Signature  |         |
|                                                 |                           | Value                                                                                       | Limit   |
| 802.11(a) 6 Mbps                                |                           |                                                                                             |         |
|                                                 | Low Channel 36, 5180MHz   | 2.341 dB                                                                                    | ≤ 13 dB |
|                                                 | High Channel 48, 5240MHz  | 4.269 dB                                                                                    | ≤ 13 dB |
|                                                 | Low Channel 52, 5260MHz   | 4.048 dB                                                                                    | ≤ 13 dB |
|                                                 | High Channel 64, 5320MHz  | 2.826 dB                                                                                    | ≤ 13 dB |
|                                                 | Low Channel 100, 5500MHz  | 3.807 dB                                                                                    | ≤ 13 dB |
|                                                 | Mid Channel 116, 5580MHz  | 4.267 dB                                                                                    | ≤ 13 dB |
|                                                 | High Channel 140, 5700MHz | 6.036 dB                                                                                    | ≤ 13 dB |
| 802.11(a) 18 Mbps                               |                           |                                                                                             |         |
|                                                 | Low Channel 36, 5180MHz   | 8.631 dB                                                                                    | ≤ 13 dB |
|                                                 | High Channel 48, 5240MHz  | 8.157 dB                                                                                    | ≤ 13 dB |
|                                                 | Low Channel 52, 5260MHz   | 8.377 dB                                                                                    | ≤ 13 dB |
|                                                 | High Channel 64, 5320MHz  | 9.064 dB                                                                                    | ≤ 13 dB |
|                                                 | Low Channel 100, 5500MHz  | 8.966 dB                                                                                    | ≤ 13 dB |
|                                                 | Mid Channel 116, 5580MHz  | 9.033 dB                                                                                    | ≤ 13 dB |
|                                                 | High Channel 140, 5700MHz | 9.456 dB                                                                                    | ≤ 13 dB |
| 802.11(a) 36 Mbps                               |                           |                                                                                             |         |
|                                                 | Low Channel 36, 5180MHz   | 8.764 dB                                                                                    | ≤ 13 dB |
|                                                 | High Channel 48, 5240MHz  | 7.312 dB                                                                                    | ≤ 13 dB |
|                                                 | Low Channel 52, 5260MHz   | 8.744 dB                                                                                    | ≤ 13 dB |
|                                                 | High Channel 64, 5320MHz  | 8.368 dB                                                                                    | ≤ 13 dB |
|                                                 | Low Channel 100, 5500MHz  | 8.301 dB                                                                                    | ≤ 13 dB |
|                                                 | Mid Channel 116, 5580MHz  | 8.159 dB                                                                                    | ≤ 13 dB |
|                                                 | High Channel 140, 5700MHz | 8.291 dB                                                                                    | ≤ 13 dB |
|                                                 |                           |                                                                                             | Pass    |

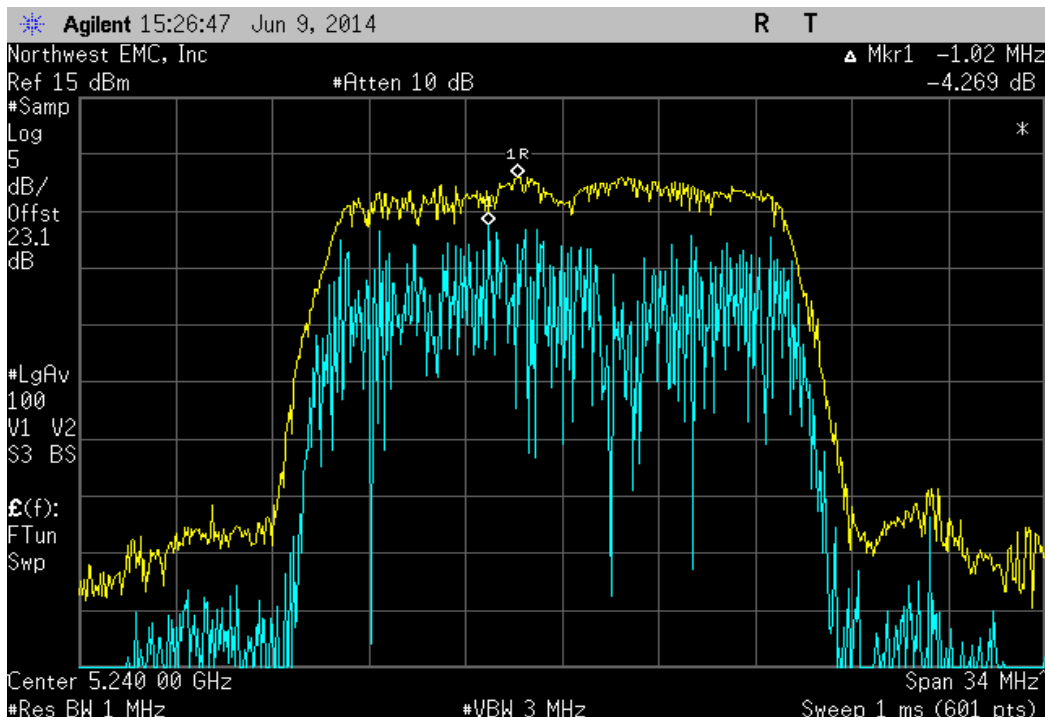
802.11(a) 6 Mbps, Low Channel 36, 5180MHz

|  | Value    | Limit   | Result |
|--|----------|---------|--------|
|  | 2.341 dB | ≤ 13 dB | Pass   |



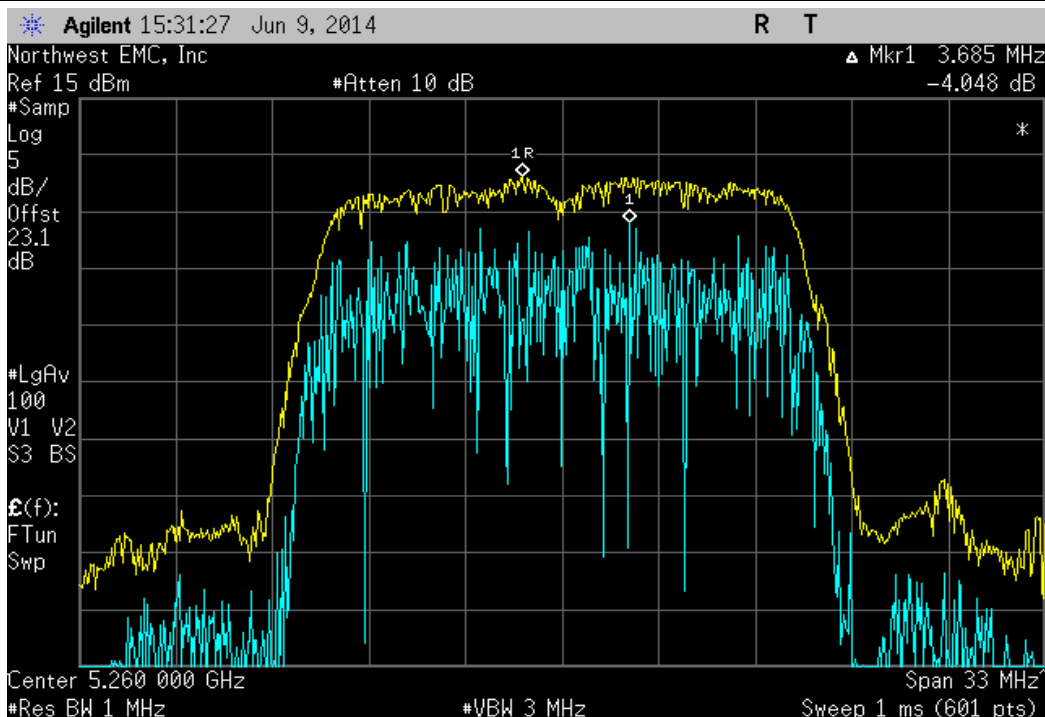
802.11(a) 6 Mbps, High Channel 48, 5240MHz

|  | Value    | Limit   | Result |
|--|----------|---------|--------|
|  | 4.269 dB | ≤ 13 dB | Pass   |



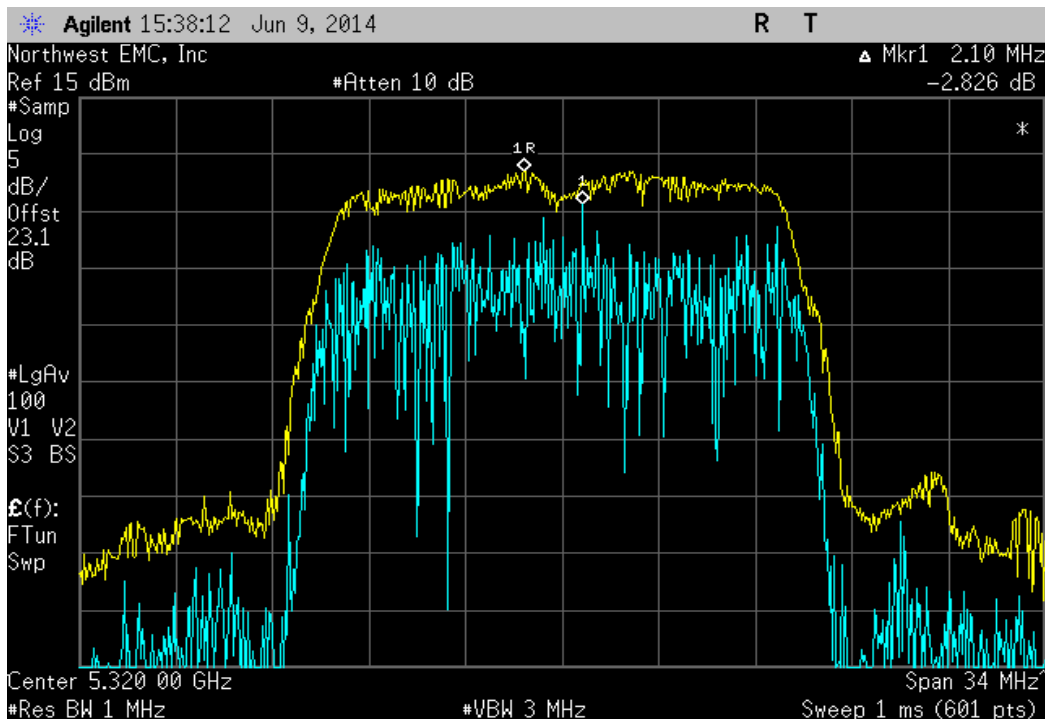
802.11(a) 6 Mbps, Low Channel 52, 5260MHz

|  | Value    | Limit   | Result |
|--|----------|---------|--------|
|  | 4.048 dB | ≤ 13 dB | Pass   |



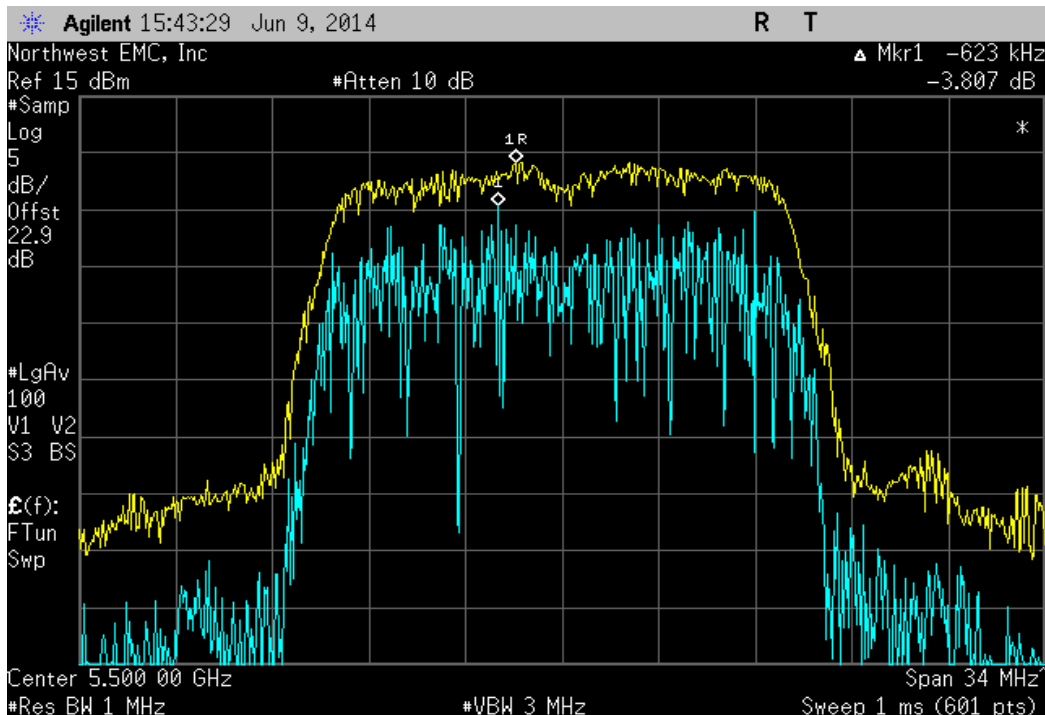
802.11(a) 6 Mbps, High Channel 64, 5320MHz

|  | Value    | Limit   | Result |
|--|----------|---------|--------|
|  | 2.826 dB | ≤ 13 dB | Pass   |



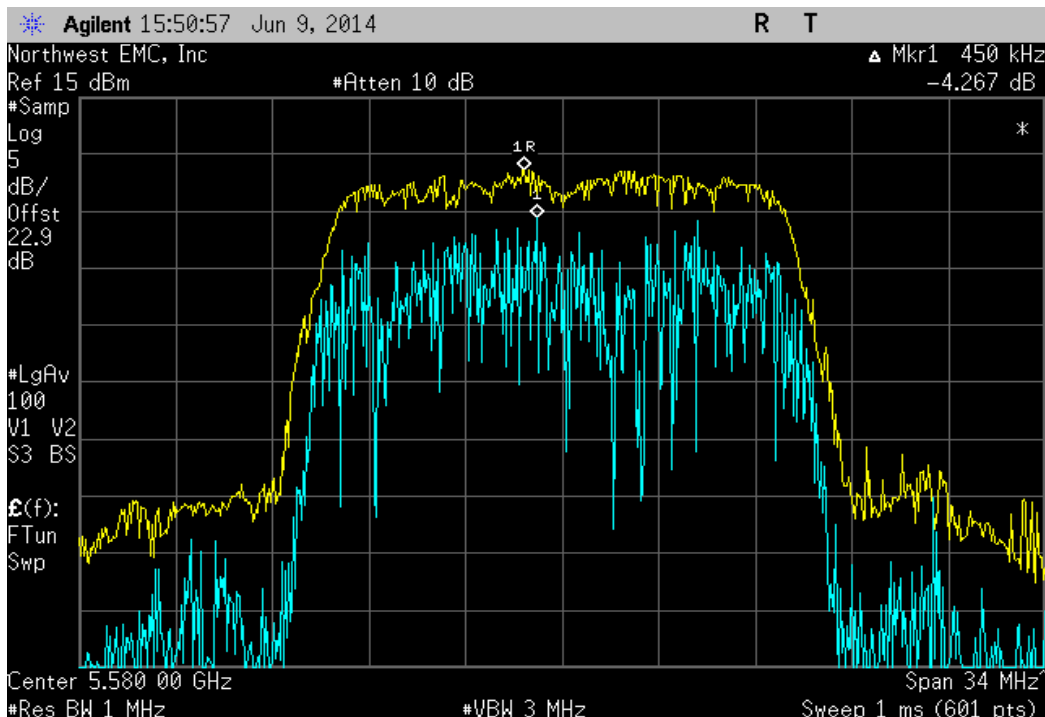
802.11(a) 6 Mbps, Low Channel 100, 5500MHz

|  | Value    | Limit   | Result |
|--|----------|---------|--------|
|  | 3.807 dB | ≤ 13 dB | Pass   |



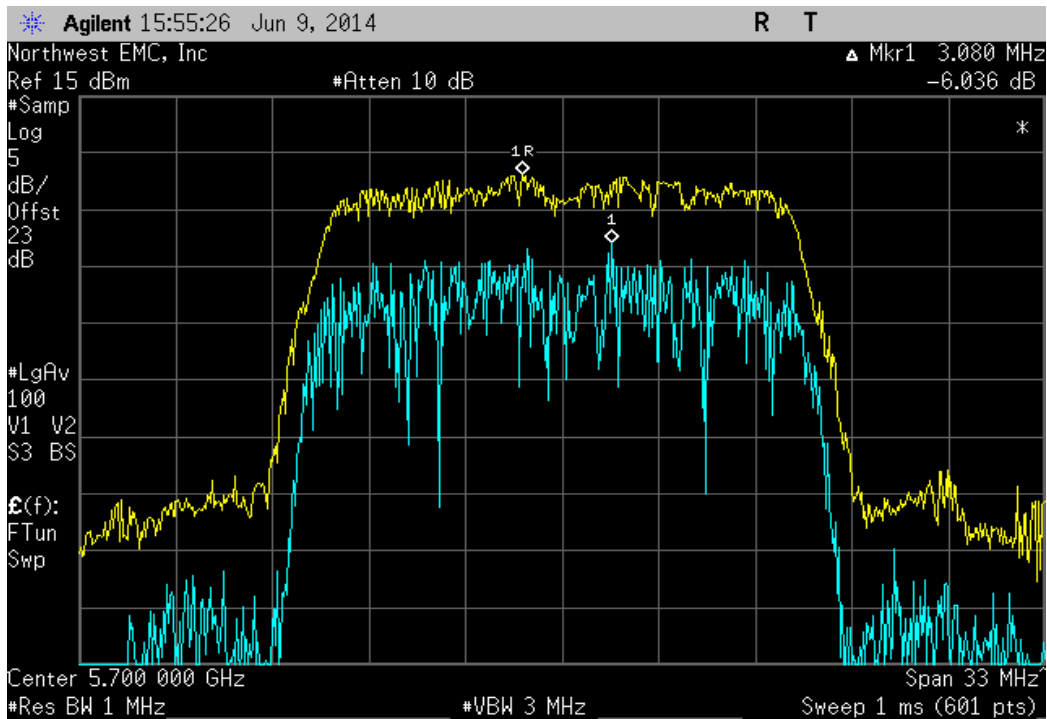
802.11(a) 6 Mbps, Mid Channel 116, 5580MHz

|  | Value    | Limit   | Result |
|--|----------|---------|--------|
|  | 4.267 dB | ≤ 13 dB | Pass   |



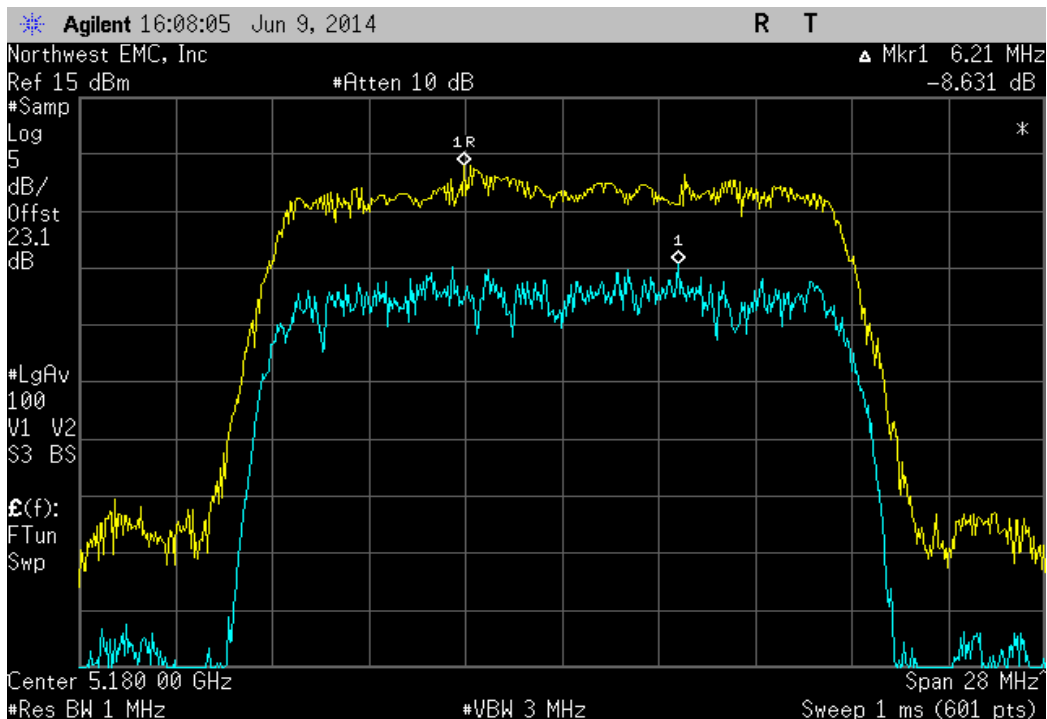
802.11(a) 6 Mbps, High Channel 140, 5700MHz

| Value    | Limit   | Result |
|----------|---------|--------|
| 6.036 dB | ≤ 13 dB | Pass   |



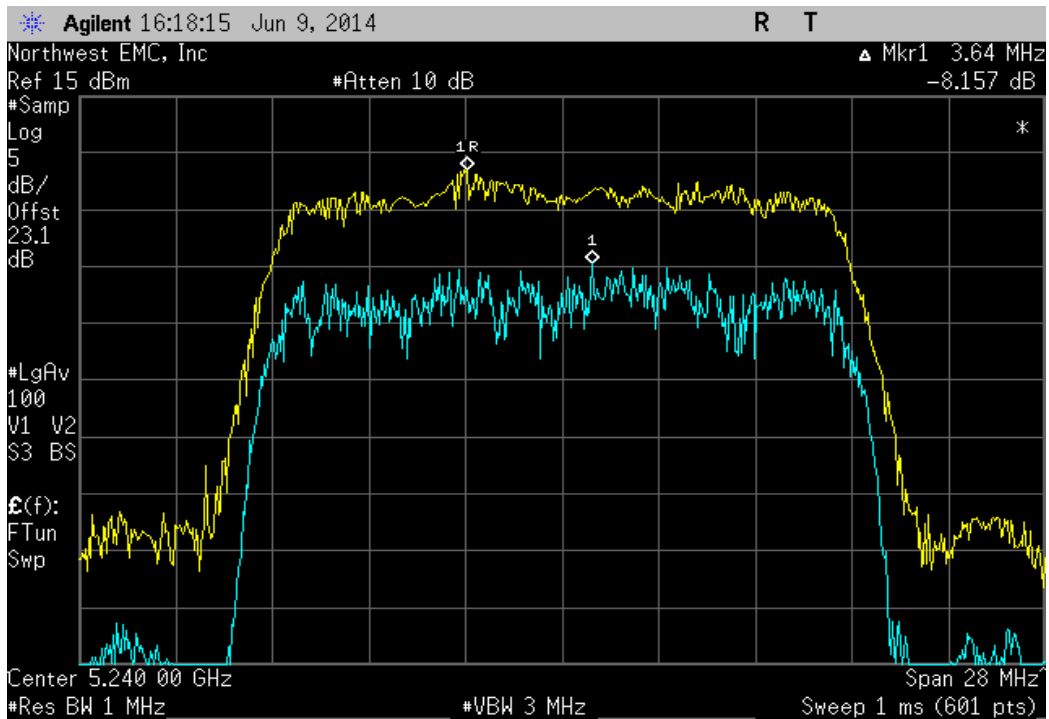
802.11(a) 18 Mbps, Low Channel 36, 5180MHz

| Value    | Limit   | Result |
|----------|---------|--------|
| 8.631 dB | ≤ 13 dB | Pass   |



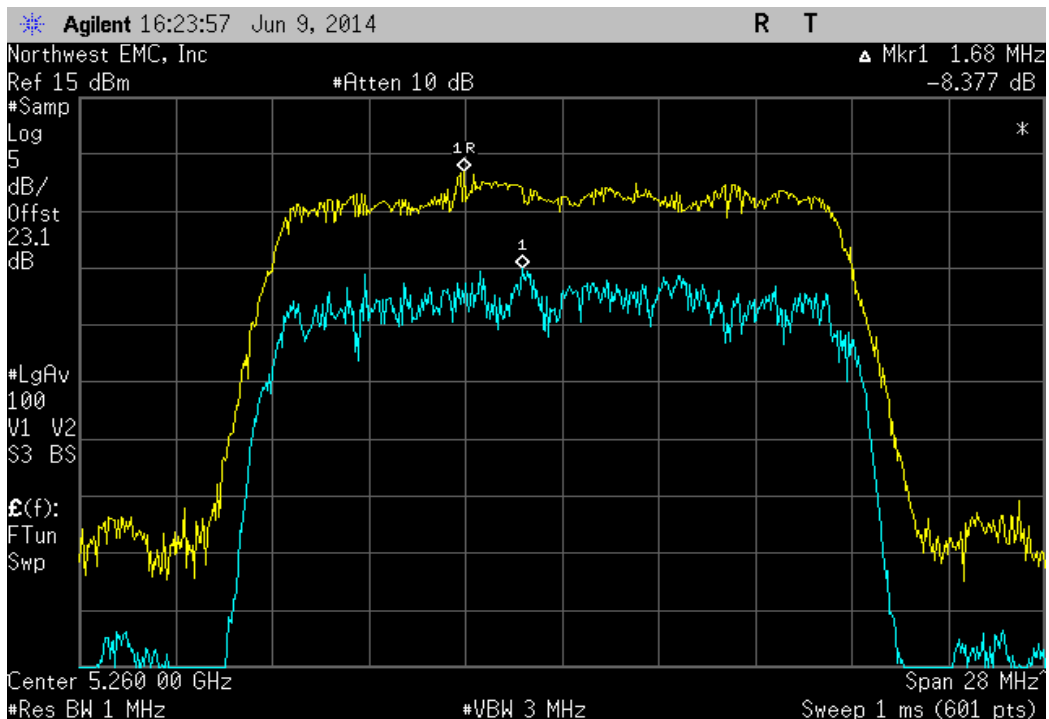
802.11(a) 18 Mbps, High Channel 48, 5240MHz

| Value    | Limit   | Result |
|----------|---------|--------|
| 8.157 dB | ≤ 13 dB | Pass   |



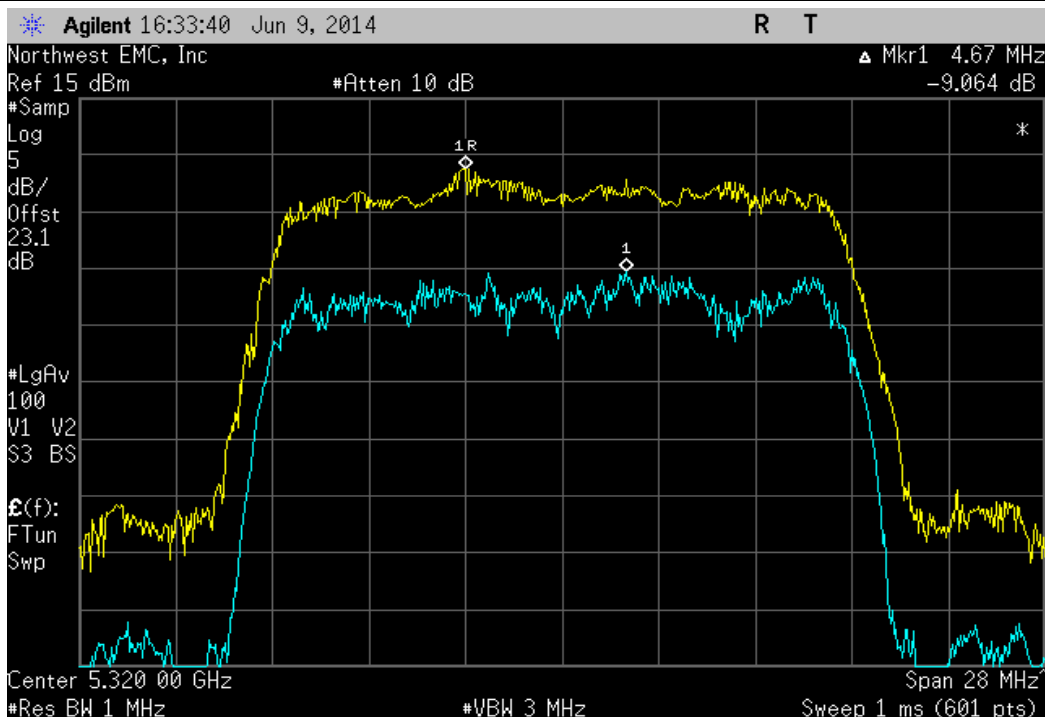
802.11(a) 18 Mbps, Low Channel 52, 5260MHz

| Value    | Limit   | Result |
|----------|---------|--------|
| 8.377 dB | ≤ 13 dB | Pass   |



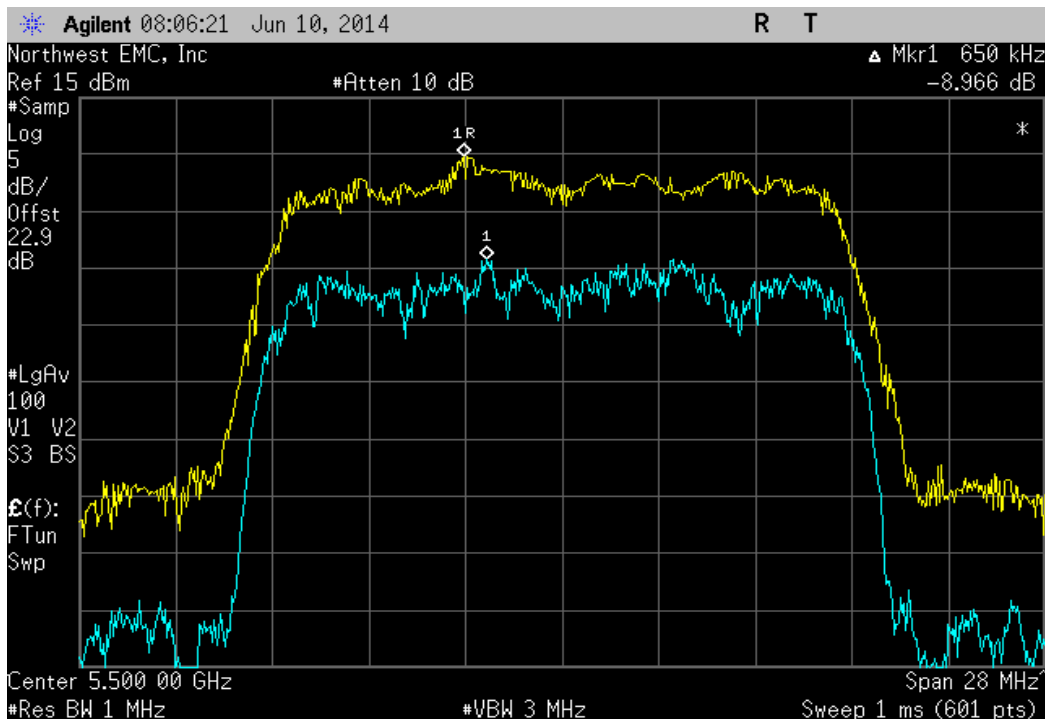
802.11(a) 18 Mbps, High Channel 64, 5320MHz

| Value    | Limit   | Result |
|----------|---------|--------|
| 9.064 dB | ≤ 13 dB | Pass   |



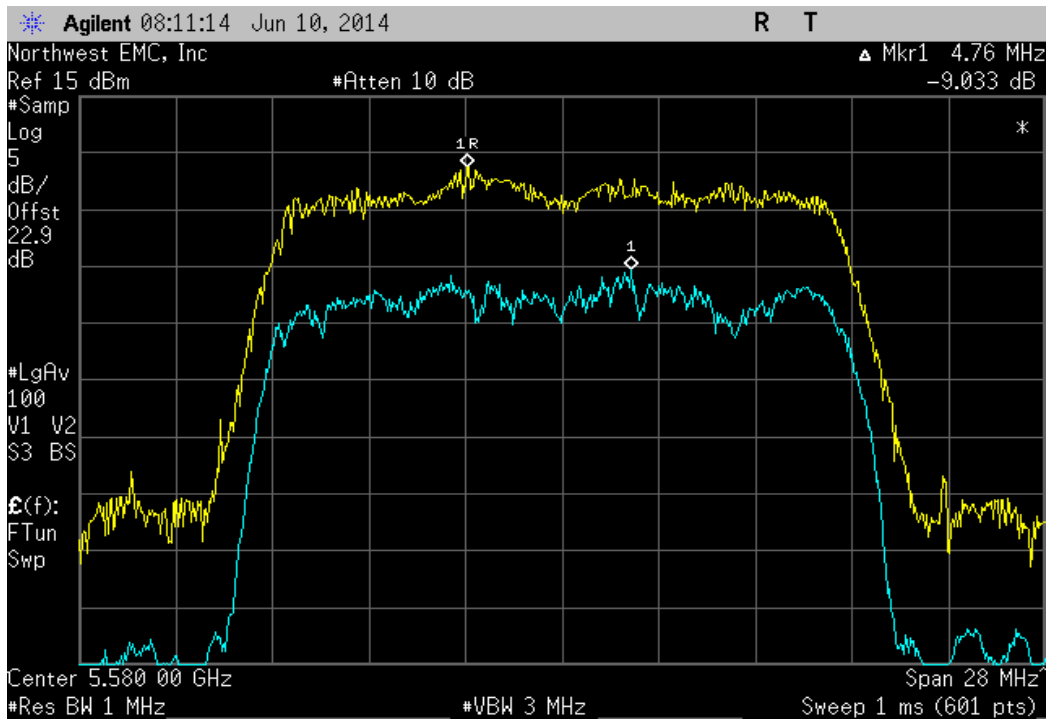
802.11(a) 18 Mbps, Low Channel 100, 5500MHz

| Value    | Limit   | Result |
|----------|---------|--------|
| 8.966 dB | ≤ 13 dB | Pass   |



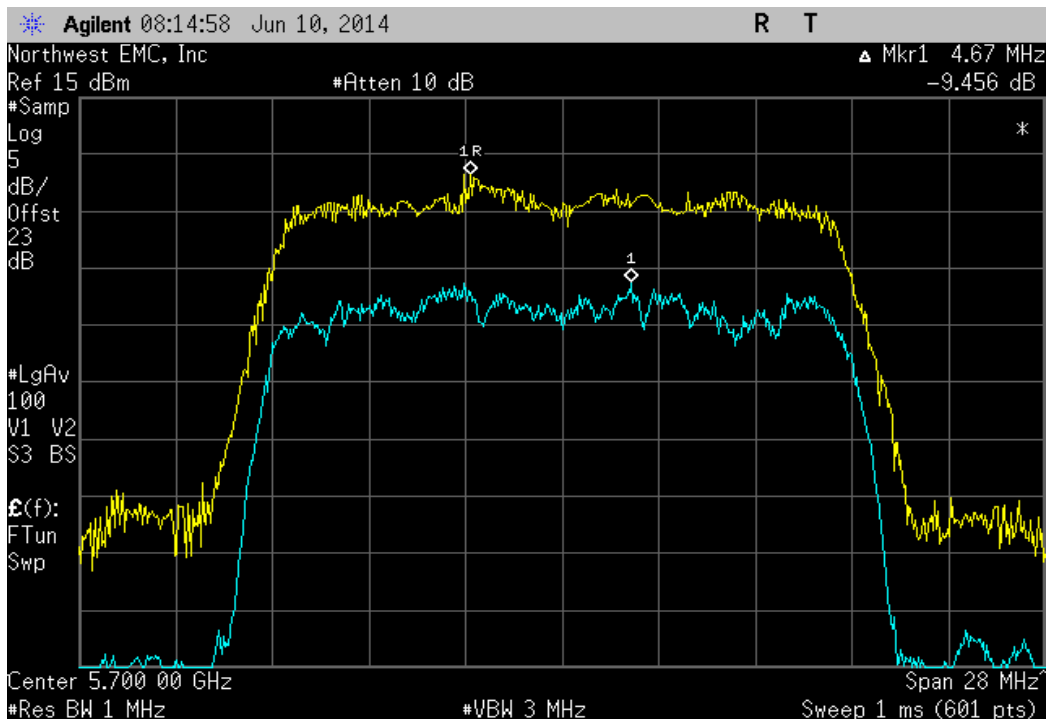
802.11(a) 18 Mbps, Mid Channel 116, 5580MHz

| Value    | Limit   | Result |
|----------|---------|--------|
| 9.033 dB | ≤ 13 dB | Pass   |



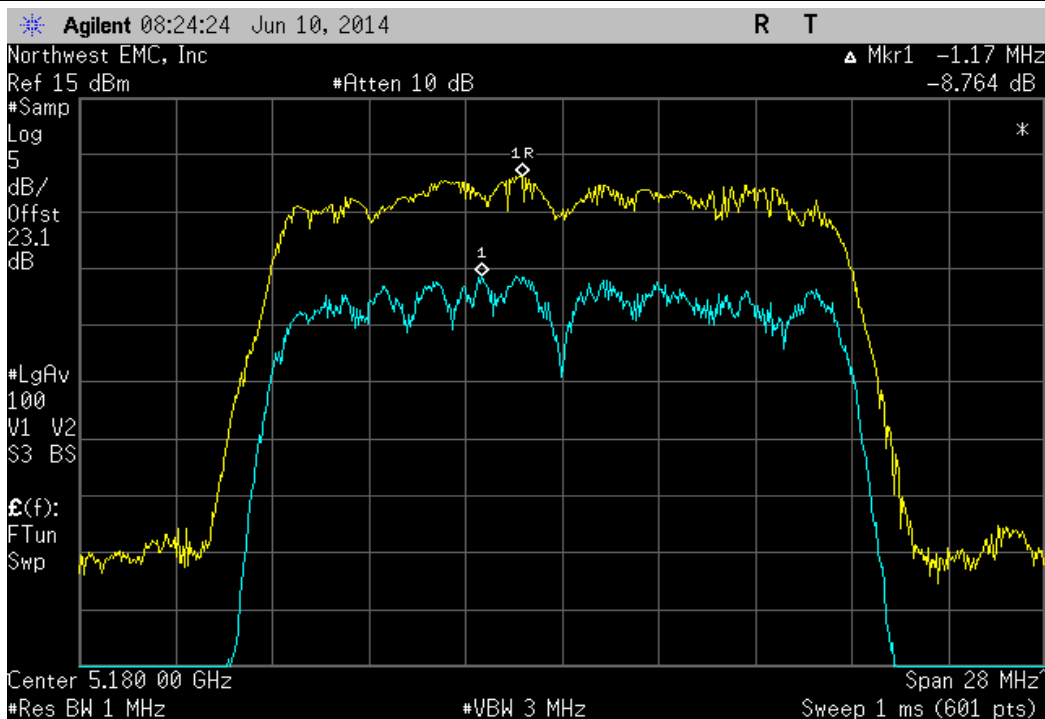
802.11(a) 18 Mbps, High Channel 140, 5700MHz

| Value    | Limit   | Result |
|----------|---------|--------|
| 9.456 dB | ≤ 13 dB | Pass   |



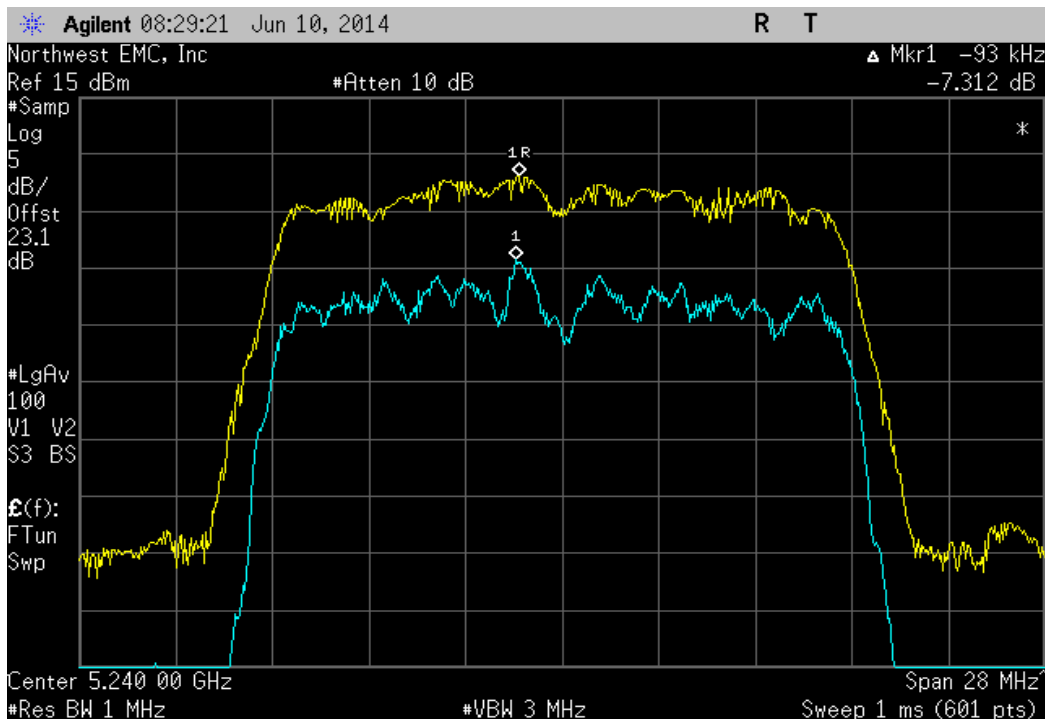
802.11(a) 36 Mbps, Low Channel 36, 5180MHz

|  | Value    | Limit   | Result |
|--|----------|---------|--------|
|  | 8.764 dB | ≤ 13 dB | Pass   |



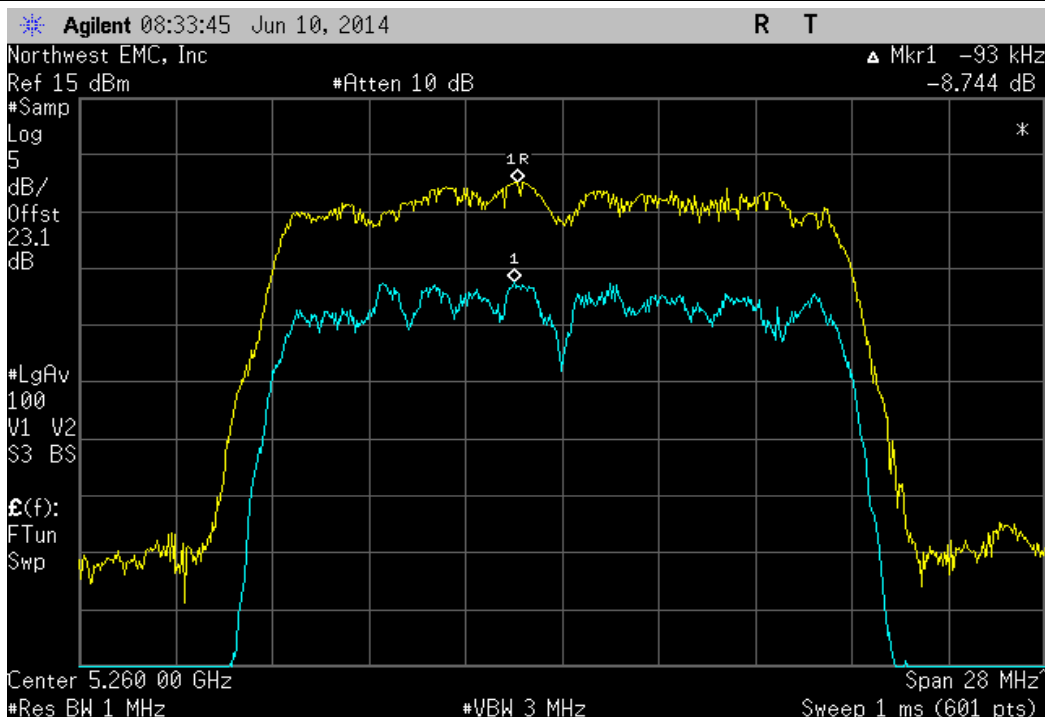
802.11(a) 36 Mbps, High Channel 48, 5240MHz

|  | Value    | Limit   | Result |
|--|----------|---------|--------|
|  | 7.312 dB | ≤ 13 dB | Pass   |



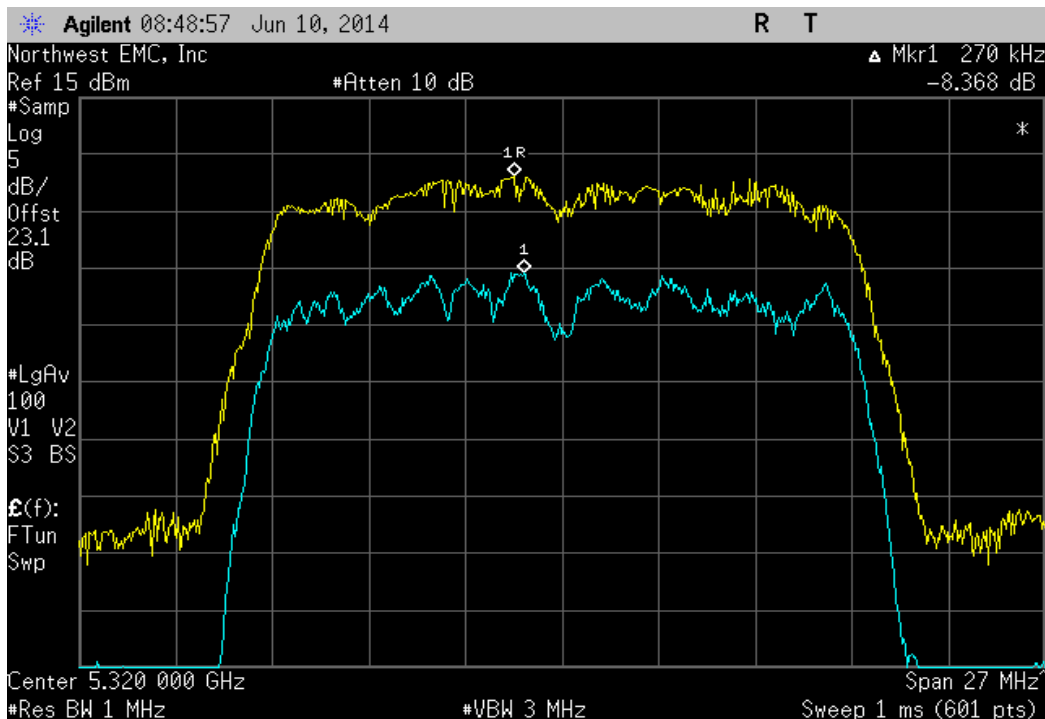
802.11(a) 36 Mbps, Low Channel 52, 5260MHz

|  | Value    | Limit   | Result |
|--|----------|---------|--------|
|  | 8.744 dB | ≤ 13 dB | Pass   |



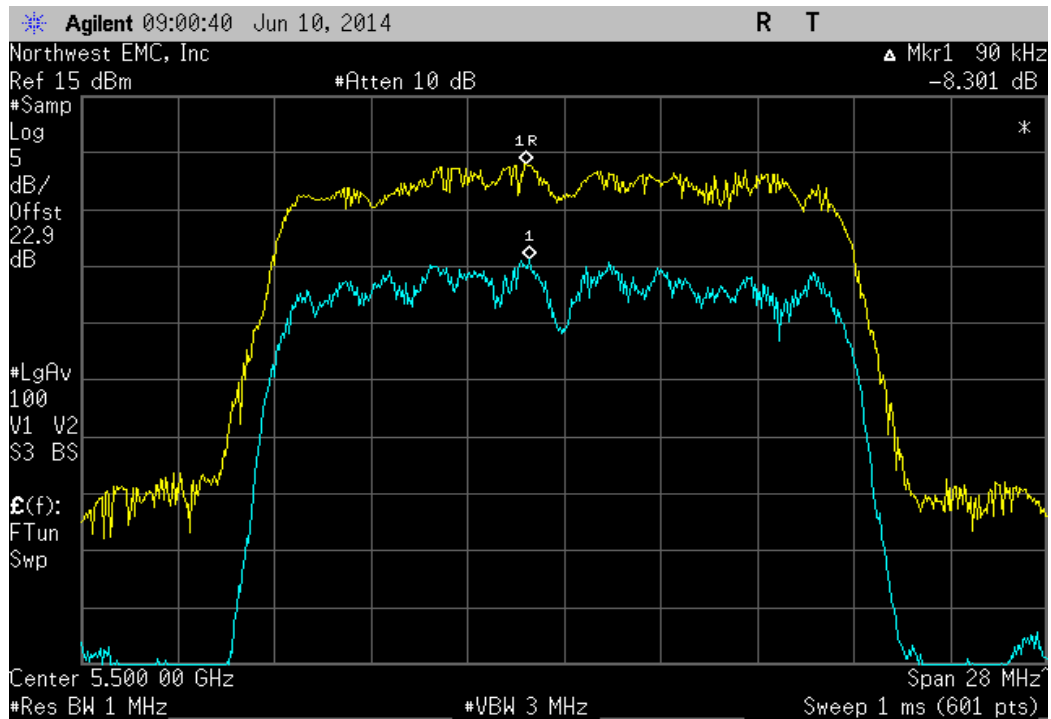
802.11(a) 36 Mbps, High Channel 64, 5320MHz

|  | Value    | Limit   | Result |
|--|----------|---------|--------|
|  | 8.368 dB | ≤ 13 dB | Pass   |



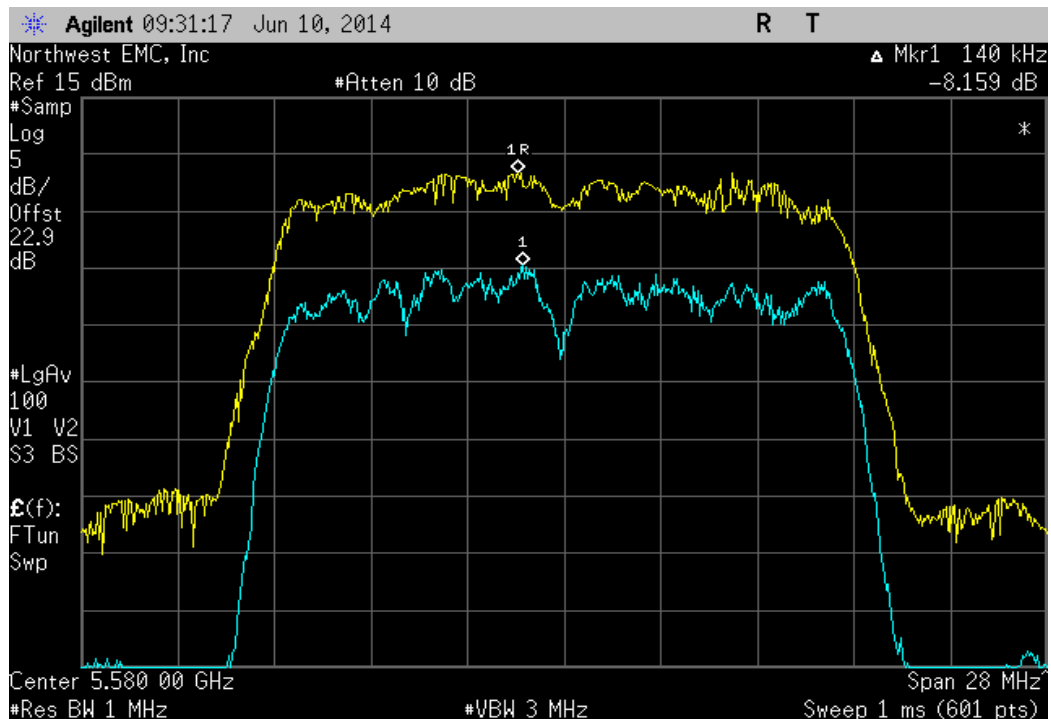
802.11(a) 36 Mbps, Low Channel 100, 5500MHz

|  | Value    | Limit   | Result |
|--|----------|---------|--------|
|  | 8.301 dB | ≤ 13 dB | Pass   |



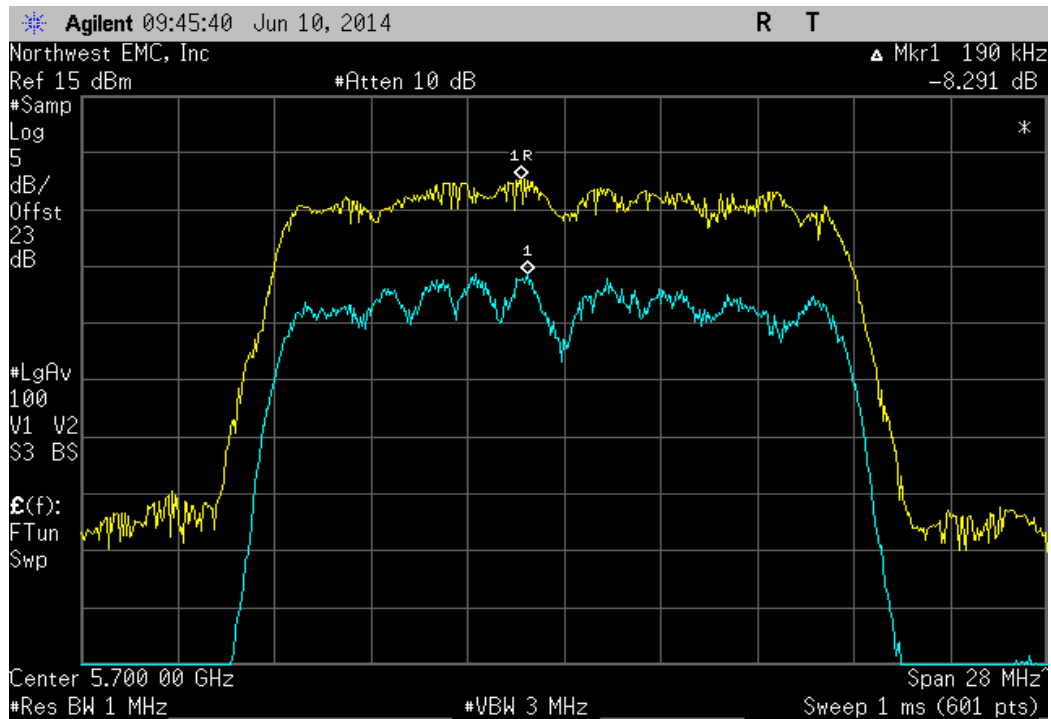
802.11(a) 36 Mbps, Mid Channel 116, 5580MHz

|  | Value    | Limit   | Result |
|--|----------|---------|--------|
|  | 8.159 dB | ≤ 13 dB | Pass   |



802.11(a) 36 Mbps, High Channel 140, 5700MHz

| Value    | Limit   | Result |
|----------|---------|--------|
| 8.291 dB | ≤ 13 dB | Pass   |



## BAND EDGE COMPLIANCE

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

### TEST EQUIPMENT

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

### 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 of the TDWR Restricted band.



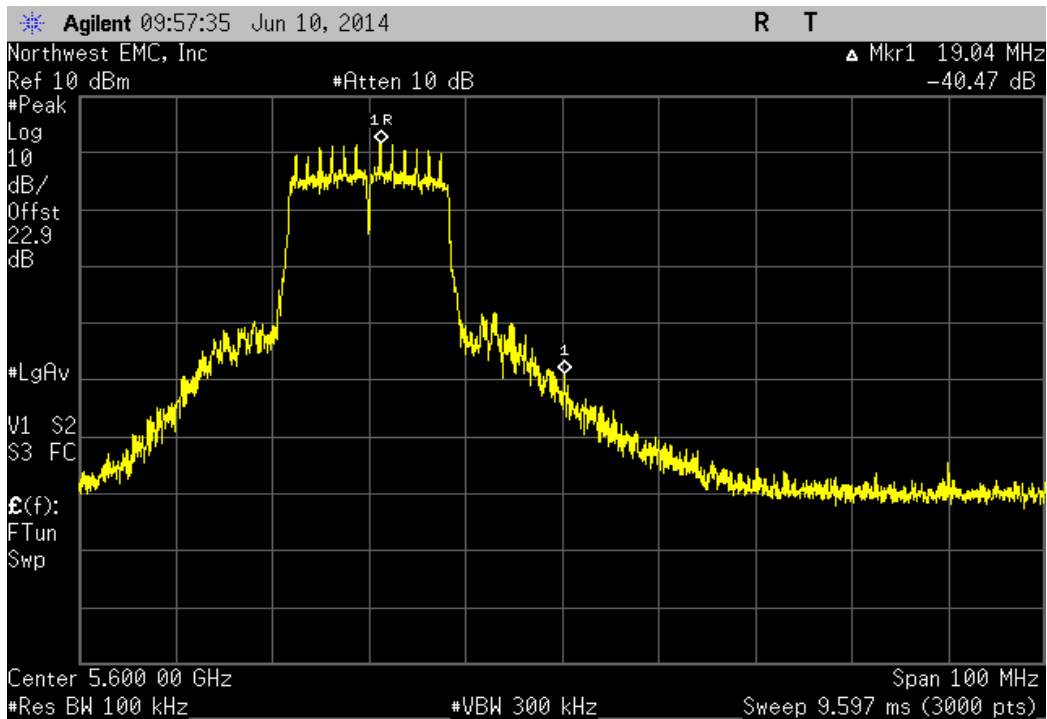
## BAND EDGE COMPLIANCE

XMit 2014.02.07  
PsaTx 2014.04.29

|                                                 |   |                                                                                             |           |
|-------------------------------------------------|---|---------------------------------------------------------------------------------------------|-----------|
| EUT: 444-2251                                   |   | Work Order: FOCU0169                                                                        |           |
| Serial Number: 02EA4F000062                     |   | Date: 06/11/14                                                                              |           |
| Customer: Summit Semiconductor LLC              |   | Temperature: 22.2°C                                                                         |           |
| Attendees: Paul Hamilton                        |   | Humidity: 41%                                                                               |           |
| Project: None                                   |   | Barometric Pres.: 1017                                                                      |           |
| Tested by: Brandon Hobbs                        |   | Power: 110VAC/60Hz                                                                          |           |
|                                                 |   | Job Site: EV06                                                                              |           |
| TEST SPECIFICATIONS                             |   | Test Method                                                                                 |           |
| FCC 15.407:2014                                 |   | ANSI C63.10:2009                                                                            |           |
| COMMENTS                                        |   |                                                                                             |           |
| Modes of operation were provided by the client. |   |                                                                                             |           |
| DEVIATIONS FROM TEST STANDARD                   |   |                                                                                             |           |
| None                                            |   |                                                                                             |           |
| Configuration #                                 | 1 | Signature  |           |
|                                                 |   | Value                                                                                       | Limit     |
| 802.11(a) 6 Mbps                                |   |                                                                                             |           |
| 5600 MHz Band Edge                              |   |                                                                                             |           |
| Channel 116, 5580 MHz                           |   | -40.47 dBc                                                                                  | ≤ -20 dBc |
| 5650 MHz Band Edge                              |   |                                                                                             |           |
| Channel 132, 5660 MHz                           |   | -30.14 dBc                                                                                  | ≤ -20 dBc |
| 802.11(a) 18 Mbps                               |   |                                                                                             |           |
| 5600 MHz Band Edge                              |   |                                                                                             |           |
| Channel 116, 5580 MHz                           |   | -42.96 dBc                                                                                  | ≤ -20 dBc |
| 5650 MHz Band Edge                              |   |                                                                                             |           |
| Channel 132, 5660 MHz                           |   | -31.22 dBc                                                                                  | ≤ -20 dBc |
| 802.11(a) 36 Mbps                               |   |                                                                                             |           |
| 5600 MHz Band Edge                              |   |                                                                                             |           |
| Channel 116, 5580 MHz                           |   | -42.99 dBc                                                                                  | ≤ -20 dBc |
| 5650 MHz Band Edge                              |   |                                                                                             |           |
| Channel 132, 5660 MHz                           |   | -32.06 dBc                                                                                  | ≤ -20 dBc |

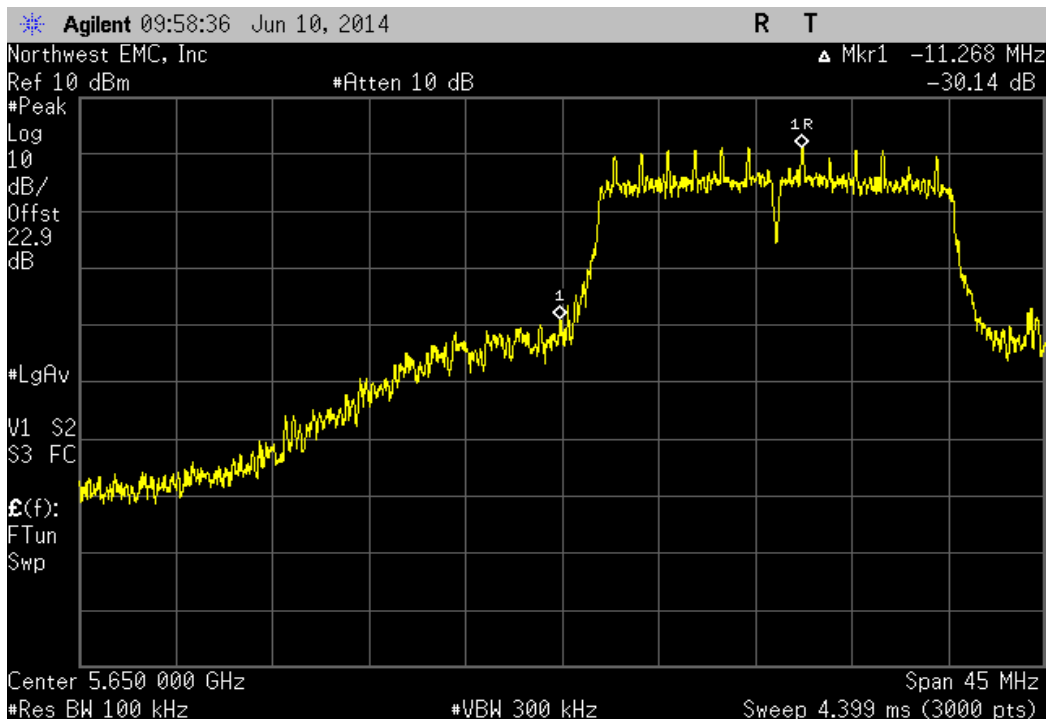
802.11(a) 6 Mbps, 5600 MHz Band Edge, Channel 116, 5580 MHz

| Value      | Limit     | Result |
|------------|-----------|--------|
| -40.47 dBc | ≤ -20 dBc | Pass   |



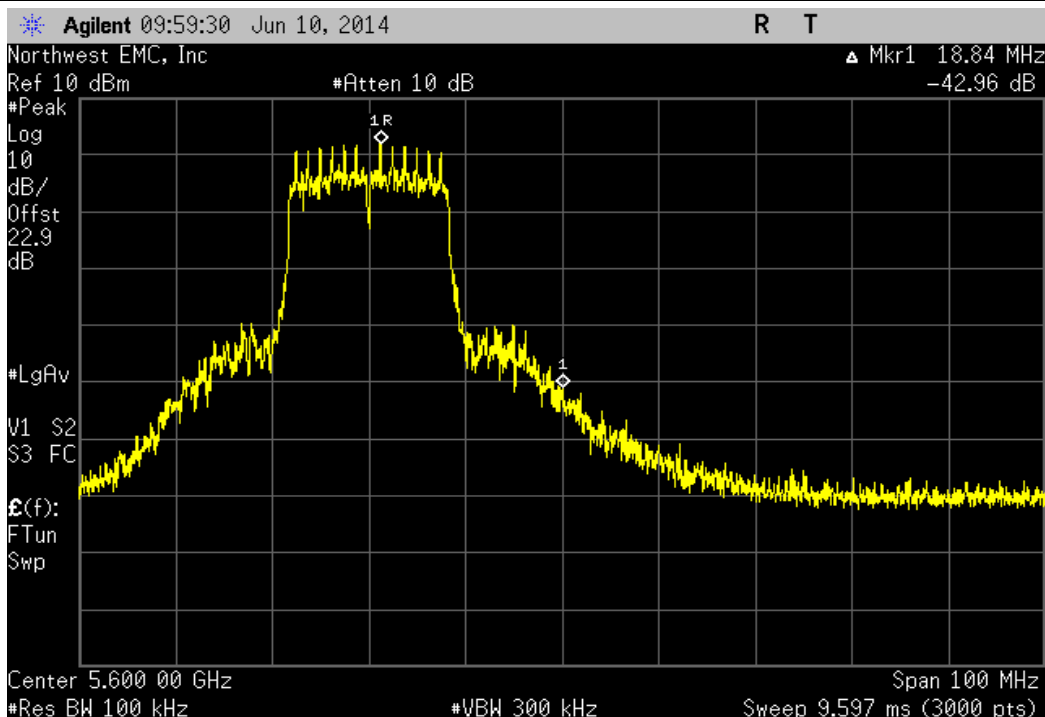
802.11(a) 6 Mbps, 5650 MHz Band Edge, Channel 132, 5660 MHz

| Value      | Limit     | Result |
|------------|-----------|--------|
| -30.14 dBc | ≤ -20 dBc | Pass   |



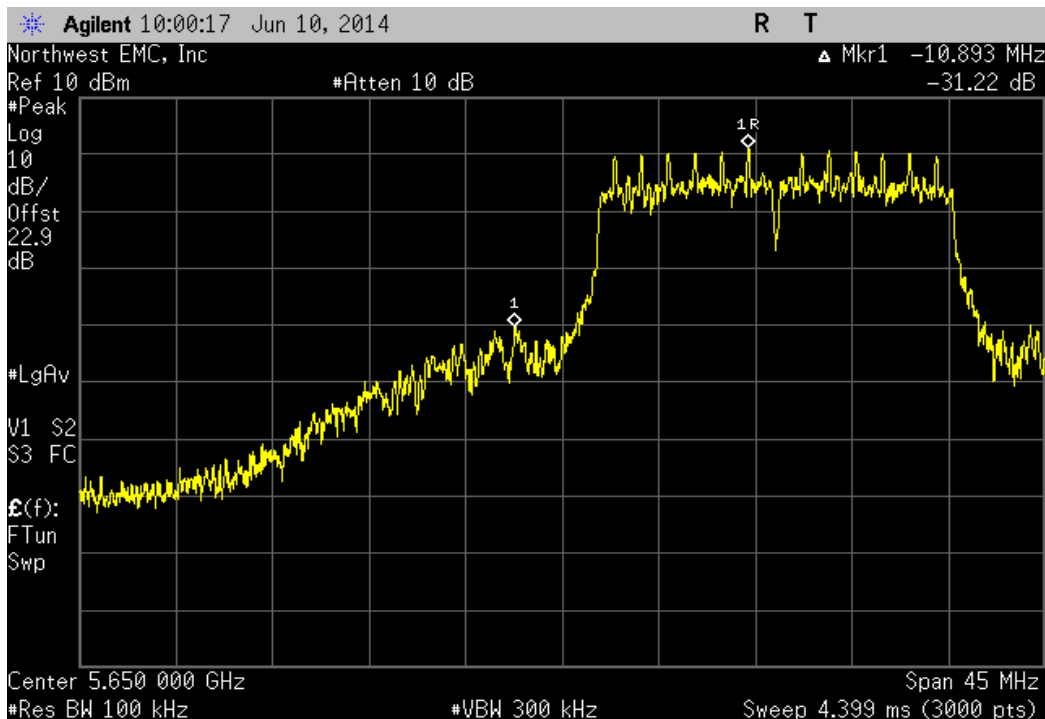
802.11(a) 18 Mbps, 5600 MHz Band Edge, Channel 116, 5580 MHz

| Value      | Limit     | Result |
|------------|-----------|--------|
| -42.96 dBc | ≤ -20 dBc | Pass   |



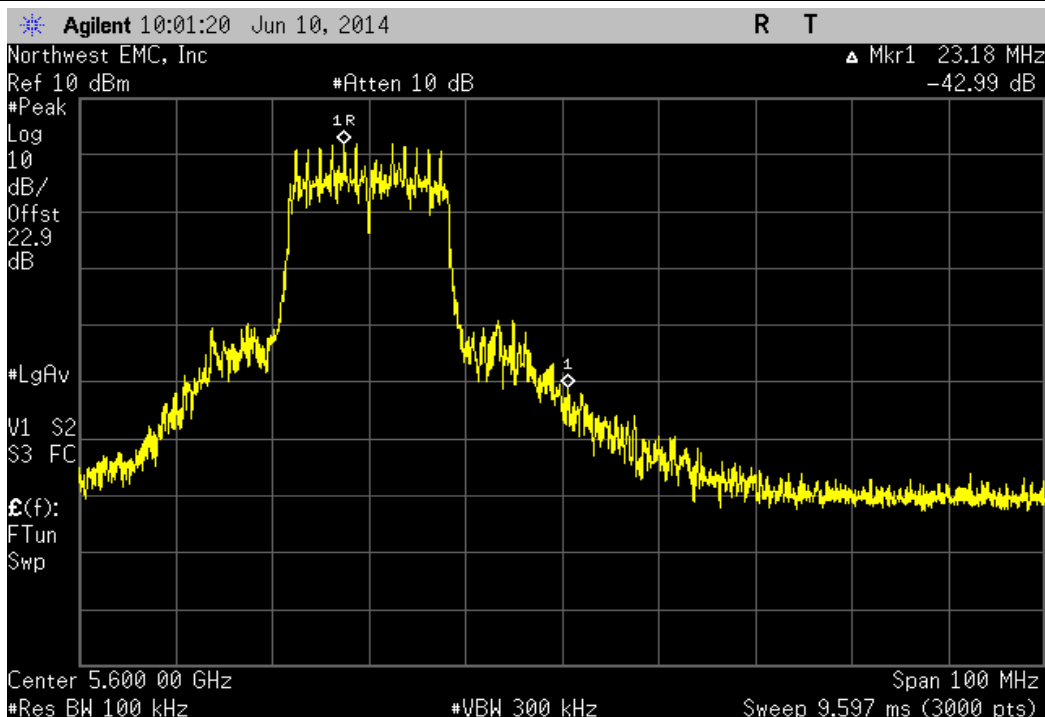
802.11(a) 18 Mbps, 5650 MHz Band Edge, Channel 132, 5660 MHz

| Value      | Limit     | Result |
|------------|-----------|--------|
| -31.22 dBc | ≤ -20 dBc | Pass   |



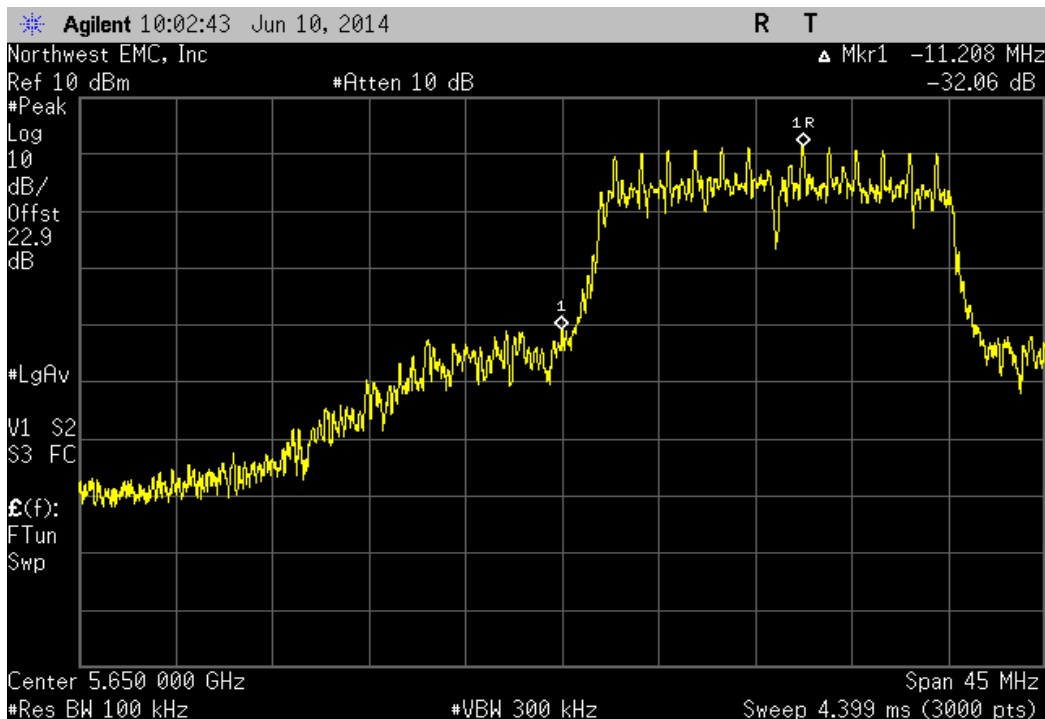
802.11(a) 36 Mbps, 5600 MHz Band Edge, Channel 116, 5580 MHz

| Value      | Limit     | Result |
|------------|-----------|--------|
| -42.99 dBc | ≤ -20 dBc | Pass   |



802.11(a) 36 Mbps, 5650 MHz Band Edge, Channel 132, 5660 MHz

| Value      | Limit     | Result |
|------------|-----------|--------|
| -32.06 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 |
|-------------------------------------|--------------------|------------------|----------|------------|----------|
| Spectrum Analyzer                   | Agilent            | E4440            | AFE      | 11/4/2013  | 12 mo    |
| Multimeter                          | Tektronix          | DMM912           | MMH      | 2/5/2013   | 24 mo    |
| DC Power Supply                     | Tektronix          | PS280            | TPM      | NCR        | 0 mo     |
| DC Power Supply                     | Topward            | TPS-2000         | TPD      | NCR        | 0 mo     |
| Multimeter                          | Tektronix          | DMM912           | MMH      | 2/5/2013   | 24 mo    |
| Humidity Temperature Meter          | Omega              | HH311            | DUH      | 2/19/2013  | 36 mo    |
| EV01 Cable                          | ESM Cable Corp.    | TTBJ-141 KMKM-72 | ECC      | 8/26/2013  | 12 mo    |
| 18GHz DC Block, 'N'                 | Fairview Microwave | SD3074           | AMF      | NCR        | 13 mo    |
| Spectrum Analyzer                   | Agilent            | E4407B           | AAU      | 10/23/2012 | 24 mo    |
| Chamber Temp. & Humidity Controller | Extech             | 445703           | CP100795 | 1/11//2013 | 24 mo    |
| Chamber, Temp./Humidity Chamber     | Thermotron         | SE/600/10/10     | 32292    | 6/18/2014  | 12 mo    |

### 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: 444-2251                                                                                                                                                                                                                                                                           |   | Work Order: FOCU0169                                                                        |  |
| Serial Number: 02EA4F000062, 02EA4F000063                                                                                                                                                                                                                                               |   | Date: 07/07/14                                                                              |  |
| Customer: Summit Semiconductor                                                                                                                                                                                                                                                          |   | Temperature: 27.4°C                                                                         |  |
| Attendees: None                                                                                                                                                                                                                                                                         |   | Humidity: 37%                                                                               |  |
| Project: None                                                                                                                                                                                                                                                                           |   | Barometric Pres.: 1017.2 mb                                                                 |  |
| Tested by: Brandon Hobbs, Jared Ison                                                                                                                                                                                                                                                    |   | Power: 3.3, 1.2VDC                                                                          |  |
| Job Site: Cascade Tek, EV06                                                                                                                                                                                                                                                             |   | Test Method                                                                                 |  |
| FCC 15.407:2012                                                                                                                                                                                                                                                                         |   | ANSI C63.10:2009                                                                            |  |
| COMMENTS                                                                                                                                                                                                                                                                                |   |                                                                                             |  |
| A 20 dB attenuator was used inline with the DC block in front of the spectrum analyzer. A SMA 60" extension was used for measurement. Voltage was varied from 110% to the operating end point voltage of 3.06VDC, 1.12VDC. Extreme voltage test was performed on EUT s/n: 02EA4F000063. |   |                                                                                             |  |
| DEVIATIONS FROM TEST STANDARD                                                                                                                                                                                                                                                           |   |                                                                                             |  |
| None                                                                                                                                                                                                                                                                                    |   |                                                                                             |  |
| Configuration #                                                                                                                                                                                                                                                                         | 8 | Signature  |  |
| <b>444-2251</b>                                                                                                                                                                                                                                                                         |   |                                                                                             |  |

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              | 5179.959612              | 7.80            | 100                 |
| 3.3, 1.2 (100%)   | 5180.000000              | 5179.968074              | 6.16            | 100                 |
| 3.06, 1.12        | 5180.000000              | 5179.961780              | 7.38            | 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              | 5179.975000              | 4.83            | 100                 |
| 40        | 5180.000000              | 5179.967750              | 6.23            | 100                 |
| 30        | 5180.000000              | 5179.968750              | 6.03            | 100                 |
| 20        | 5180.000000              | 5179.975000              | 4.83            | 100                 |
| 10        | 5180.000000              | 5179.983250              | 3.23            | 100                 |
| 0         | 5180.000000              | 5179.989500              | 2.03            | 100                 |
| -10       | 5180.000000              | 5179.990250              | 1.88            | 100                 |
| -20       | 5180.000000              | 5179.981250              | 3.62            | 100                 |
| -30       | 5180.000000              | 5179.962750              | 7.19            | 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              | 5319.959032              | 7.70            | 100                 |
| 3.3, 1.2 (100%)   | 5320.000000              | 5319.967730              | 6.07            | 100                 |
| 3.06, 1.12        | 5320.000000              | 5319.961222              | 7.29            | 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              | 5319.973750              | 4.93            | n/a                 |
| 40        | 5320.000000              | 5319.967000              | 6.20            | 100                 |
| 30        | 5320.000000              | 5319.968250              | 5.97            | 100                 |
| 20        | 5320.000000              | 5319.974500              | 4.79            | 100                 |
| 10        | 5320.000000              | 5319.975500              | 4.61            | 100                 |
| 0         | 5320.000000              | 5319.989000              | 2.07            | 100                 |
| -10       | 5320.000000              | 5319.989750              | 1.93            | 100                 |
| -20       | 5320.000000              | 5319.981750              | 3.43            | 100                 |
| -30       | 5320.000000              | 5319.961250              | 7.28            | 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              | 5499.958273              | 7.59            | 100                 |
| 3.3, 1.2 (100%)   | 5500.000000              | 5499.966465              | 6.10            | 100                 |
| 3.06, 1.12        | 5500.000000              | 5499.959459              | 7.37            | 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              | 5499.973500              | 4.82            | 100                 |
| 40        | 5500.000000              | 5499.965750              | 6.23            | 100                 |
| 30        | 5500.000000              | 5499.969500              | 5.55            | 100                 |
| 20        | 5500.000000              | 5499.974750              | 4.59            | 100                 |
| 10        | 5500.000000              | 5499.982000              | 3.27            | 100                 |
| 0         | 5500.000000              | 5499.991750              | 1.50            | 100                 |
| -10       | 5500.000000              | 5499.989250              | 1.95            | 100                 |
| -20       | 5500.000000              | 5499.982250              | 3.23            | 100                 |
| -30       | 5500.000000              | 5499.963250              | 6.68            | 100                 |

## 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              | 5699.956981              | 7.55            | 100                 |
| 3.3, 1.2 (100%)   | 5700.000000              | 5699.965452              | 6.06            | 100                 |
| 3.06, 1.12        | 5700.000000              | 5699.958034              | 7.36            | 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              | 5699.972250              | 4.87            | 100                 |
| 40        | 5700.000000              | 5699.964500              | 6.23            | 100                 |
| 30        | 5700.000000              | 5699.968250              | 5.57            | 100                 |
| 20        | 5700.000000              | 5699.975000              | 4.39            | 100                 |
| 10        | 5700.000000              | 5699.984000              | 2.81            | 100                 |
| 0         | 5700.000000              | 5699.991000              | 1.58            | 100                 |
| -10       | 5700.000000              | 5699.988750              | 1.97            | 100                 |
| -20       | 5700.000000              | 5699.980500              | 3.42            | 100                 |
| -30       | 5700.000000              | 5699.960500              | 6.93            | 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.

## CHANNELS OF OPERATION

|                        |
|------------------------|
| Low Ch. 36, 5180 MHz   |
| High Ch. 48, 5240 MHz  |
| Low Ch. 52, 5260 MHz   |
| High Ch. 64, 5320 MHz  |
| Low Ch. 100, 5500 MHz  |
| Mid Ch. 116, 5580 MHz  |
| High Ch. 140, 5700 MHz |

## MODES OF OPERATION

|         |
|---------|
| 6 Mbps  |
| 18 Mbps |
| 36 Mbps |

## POWER SETTINGS INVESTIGATED

|             |
|-------------|
| 110VAC/60Hz |
|-------------|

## CONFIGURATIONS INVESTIGATED

|              |
|--------------|
| FOCU0169 - 2 |
|--------------|

## FREQUENCY RANGE INVESTIGATED

|                 |        |                |        |
|-----------------|--------|----------------|--------|
| Start Frequency | 30 MHz | Stop Frequency | 40 GHz |
|-----------------|--------|----------------|--------|

## SAMPLE CALCULATIONS

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

## TEST EQUIPMENT

| Description              | Manufacturer    | Model                      | ID  | Last Cal. | Interval |
|--------------------------|-----------------|----------------------------|-----|-----------|----------|
| 5.47-5.725 Notch Filter  | Micro-Tronics   | BRC50704                   | HGI | 10/4/2012 | 24 mo    |
| 5.725-5.875 Notch Filter | Micro-Tronics   | BRC50705                   | HGJ | 2/18/2014 | 24 mo    |
| BP Filter                | Micro-Tronics   | BRC50703                   | HHJ | 6/20/2013 | 36 mo    |
| Spectrum Analyzer        | Agilent         | E4440A                     | AFD | 7/5/2012  | 24 mo    |
| Spectrum Analyzer        | Agilent         | E4446A                     | AAQ | 1/21/2014 | 24 mo    |
| EV01 Cable               | ESM Cable Corp. | TTBJ-141 KMKM-72           | ECC | 8/26/2013 | 12 mo    |
| Antenna, Horn            | EMCO            | 3115                       | AHF | 10/6/2011 | 36 mo    |
| LP Filter                | Micro-Tronics   | LPM50004                   | LFD | 7/6/2012  | 24 mo    |
| OC Cable                 | ESM Cable Corp. | KMKM-72                    | OCV | 6/24/2013 | 12 mo    |
| Pre-Amplifier            | Miteq           | JSW45-26004000-40-5P       | AVR | 6/24/2013 | 12 mo    |
| Antenna, Horn            | ETS Lindgren    | 3160-10                    | AIW | NCR       | 0 mo     |
| Cable                    | ESM Cable Corp. | KMKM-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    | 3160-09                    | 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     |
| 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 | 1/27/2014 | 36 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    |

## 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

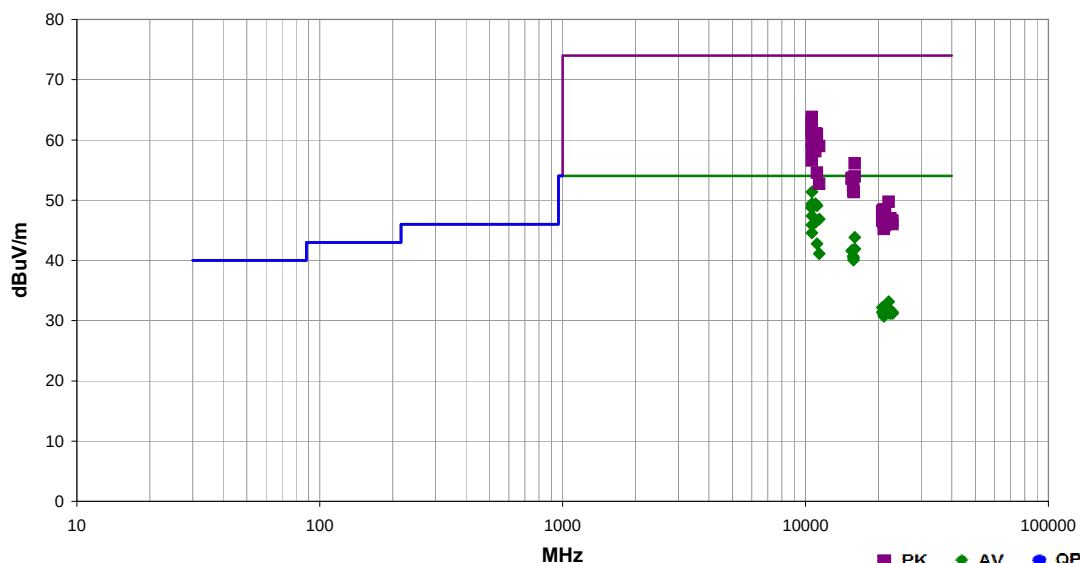
The highest gain antenna of each type to be used with the EUT were tested. The EUT was configured for the lowest, a middle, and the highest transmit frequency in each operational band. For each configuration, the spectrum was scanned throughout the specified range. Measurements were made to satisfy the 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.

|                 |                                                                             |                   |               |                                                                                    |
|-----------------|-----------------------------------------------------------------------------|-------------------|---------------|------------------------------------------------------------------------------------|
| Work Order:     | FOCU0169                                                                    | Date:             | 06/12/14      |  |
| Project:        | None                                                                        | Temperature:      | 24 °C         |                                                                                    |
| Job Site:       | EV01                                                                        | Humidity:         | 40.1% RH      |                                                                                    |
| Serial Number:  | 02EAF000061                                                                 | Barometric Pres.: | 1011.7 mbar   |                                                                                    |
| EUT:            | 444-2251                                                                    | Tested by:        | Brandon Hobbs |                                                                                    |
| Configuration:  | 2                                                                           |                   |               |                                                                                    |
| Customer:       | Summit Semiconductor LLC                                                    |                   |               |                                                                                    |
| Attendees:      | None                                                                        |                   |               |                                                                                    |
| EUT Power:      | 110VAC/60Hz                                                                 |                   |               |                                                                                    |
| Operating Mode: | Tx                                                                          |                   |               |                                                                                    |
| Deviations:     | None                                                                        |                   |               |                                                                                    |
| Comments:       | Please Reference data comments for EUT orientation, Data Rate and frequency |                   |               |                                                                                    |

|                     |                  |
|---------------------|------------------|
| Test Specifications | Test Method      |
| FCC 15.407:2014     | ANSI C63.10:2009 |

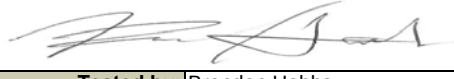
|       |    |                   |   |                   |      |         |      |
|-------|----|-------------------|---|-------------------|------|---------|------|
| Run # | 30 | Test Distance (m) | 3 | Antenna Height(s) | 1-4m | Results | Pass |
|-------|----|-------------------|---|-------------------|------|---------|------|



| Freq (MHz) | Amplitude (dBuV) | Factor (dB) | Antenna Height (meters) | Azimuth (degrees) | Test Distance (meters) | External Attenuation (dB) | Polarity/Transducer Type | Detector | Distance Adjustment (dB) | Adjusted (dBuV/m) | Spec. Limit (dBuV/m) | Compared to Spec. (dB) | Comments                            |
|------------|------------------|-------------|-------------------------|-------------------|------------------------|---------------------------|--------------------------|----------|--------------------------|-------------------|----------------------|------------------------|-------------------------------------|
| 10638.620  | 61.2             | -9.8        | 1.0                     | 327.0             | 3.0                    | 0.0                       | Horz                     | AV       | 0.0                      | 51.4              | 54.0                 | -2.6                   | Ch.64, 5320MHz, 6Mbps, EUT Vert     |
| 11000.880  | 58.0             | -8.6        | 1.0                     | 311.0             | 3.0                    | 0.0                       | Horz                     | AV       | 0.0                      | 49.4              | 54.0                 | -4.6                   | Ch.100, 5500MHz, 6Mbps, EUT Vert    |
| 10640.960  | 59.2             | -9.8        | 1.2                     | 245.0             | 3.0                    | 0.0                       | Horz                     | AV       | 0.0                      | 49.4              | 54.0                 | -4.6                   | Ch.64, 5320MHz, 6Mbps, EUT Horz     |
| 10638.620  | 59.1             | -9.8        | 1.0                     | 329.0             | 3.0                    | 0.0                       | Horz                     | AV       | 0.0                      | 49.3              | 54.0                 | -4.7                   | Ch.64, 5320MHz, 18Mbps, EUT Vert    |
| 11158.540  | 56.5             | -7.4        | 1.0                     | 313.0             | 3.0                    | 0.0                       | Horz                     | AV       | 0.0                      | 49.1              | 54.0                 | -4.9                   | Ch.116, 5580MHz, 6Mbps, EUT Vert    |
| 10641.040  | 58.7             | -9.8        | 1.0                     | 66.0              | 3.0                    | 0.0                       | Vert                     | AV       | 0.0                      | 48.9              | 54.0                 | -5.1                   | Ch.64, 5320MHz, 6Mbps, EUT On Side  |
| 10638.580  | 58.5             | -9.8        | 1.0                     | 329.0             | 3.0                    | 0.0                       | Horz                     | AV       | 0.0                      | 48.7              | 54.0                 | -5.3                   | Ch.64, 5320MHz, 36Mbps, EUT Vert    |
| 10640.960  | 57.2             | -9.8        | 1.6                     | 308.0             | 3.0                    | 0.0                       | Vert                     | AV       | 0.0                      | 47.4              | 54.0                 | -6.6                   | Ch.64, 5320MHz, 6Mbps, EUT Vert     |
| 11401.040  | 51.9             | -5.1        | 1.0                     | 311.0             | 3.0                    | 0.0                       | Horz                     | AV       | 0.0                      | 46.8              | 54.0                 | -7.2                   | Ch.140, 5700MHz, 6Mbps, EUT Vert    |
| 11001.040  | 54.9             | -8.6        | 1.0                     | 63.0              | 3.0                    | 0.0                       | Vert                     | AV       | 0.0                      | 46.3              | 54.0                 | -7.7                   | Ch.100, 5500MHz, 6Mbps, EUT On Side |
| 10641.080  | 55.7             | -9.8        | 1.2                     | 326.0             | 3.0                    | 0.0                       | Vert                     | AV       | 0.0                      | 45.9              | 54.0                 | -8.1                   | Ch.64, 5320MHz, 6Mbps, EUT Horz     |
| 10638.670  | 54.4             | -9.8        | 1.0                     | 326.0             | 3.0                    | 0.0                       | Horz                     | AV       | 0.0                      | 44.6              | 54.0                 | -9.4                   | Ch.64, 5320MHz, 6Mbps, EUT On Side  |
| 15959.790  | 31.4             | 12.4        | 1.0                     | 330.0             | 3.0                    | 0.0                       | Horz                     | AV       | 0.0                      | 43.8              | 54.0                 | -10.2                  | Ch.64, 5320MHz, 6Mbps, EUT Vert     |
| 10637.750  | 73.6             | -9.8        | 1.0                     | 327.0             | 3.0                    | 0.0                       | Horz                     | PK       | 0.0                      | 63.8              | 74.0                 | -10.2                  | Ch.64, 5320MHz, 6Mbps, EUT Vert     |
| 10638.380  | 73.0             | -9.8        | 1.0                     | 329.0             | 3.0                    | 0.0                       | Horz                     | PK       | 0.0                      | 63.2              | 74.0                 | -10.8                  | Ch.64, 5320MHz, 36Mbps, EUT Vert    |
| 11158.460  | 50.2             | -7.4        | 1.0                     | 41.0              | 3.0                    | 0.0                       | Vert                     | AV       | 0.0                      | 42.8              | 54.0                 | -11.2                  | Ch.116, 5580MHz, 6Mbps, EUT On Side |
| 15960.040  | 29.5             | 12.4        | 1.0                     | 12.0              | 3.0                    | 0.0                       | Vert                     | AV       | 0.0                      | 41.9              | 54.0                 | -12.1                  | Ch.64, 5320MHz, 6Mbps, EUT On Side  |
| 10637.880  | 71.5             | -9.8        | 1.2                     | 245.0             | 3.0                    | 0.0                       | Horz                     | PK       | 0.0                      | 61.7              | 74.0                 | -12.3                  | Ch.64, 5320MHz, 6Mbps, EUT Horz     |
| 15539.960  | 29.6             | 12.0        | 1.0                     | 104.0             | 3.0                    | 0.0                       | Vert                     | AV       | 0.0                      | 41.6              | 54.0                 | -12.4                  | Ch.36, 5180MHz, 6Mbps, EUT On Side  |
| 15719.330  | 29.1             | 12.5        | 1.0                     | 340.0             | 3.0                    | 0.0                       | Horz                     | AV       | 0.0                      | 41.6              | 54.0                 | -12.4                  | Ch.48, 5240MHz, 6Mbps, EUT Vert     |
| 10636.330  | 71.4             | -9.8        | 1.0                     | 329.0             | 3.0                    | 0.0                       | Horz                     | PK       | 0.0                      | 61.6              | 74.0                 | -12.4                  | Ch.64, 5320MHz, 18Mbps, EUT Vert    |
| 15539.920  | 29.5             | 12.0        | 1.0                     | 45.0              | 3.0                    | 0.0                       | Horz                     | AV       | 0.0                      | 41.5              | 54.0                 | -12.5                  | Ch.36, 5180MHz, 6Mbps, EUT Vert     |
| 11401.040  | 46.2             | -5.1        | 1.0                     | 42.0              | 3.0                    | 0.0                       | Vert                     | AV       | 0.0                      | 41.1              | 54.0                 | -12.9                  | Ch.140, 5700MHz, 6Mbps, EUT On Side |
| 10997.670  | 69.7             | -8.6        | 1.0                     | 311.0             | 3.0                    | 0.0                       | Horz                     | PK       | 0.0                      | 61.1              | 74.0                 | -12.9                  | Ch.100, 5500MHz, 6Mbps, EUT Vert    |
| 10637.790  | 70.9             | -9.8        | 1.0                     | 66.0              | 3.0                    | 0.0                       | Vert                     | PK       | 0.0                      | 61.1              | 74.0                 | -12.9                  | Ch.64, 5320MHz, 6Mbps, EUT On Side  |
| 11157.710  | 68.4             | -7.4        | 1.0                     | 313.0             | 3.0                    | 0.0                       | Horz                     | PK       | 0.0                      | 61.0              | 74.0                 | -13.0                  | Ch.116, 5580MHz, 6Mbps, EUT Vert    |
| 15719.920  | 28.2             | 12.5        | 1.0                     | 104.0             | 3.0                    | 0.0                       | Vert                     | AV       | 0.0                      | 40.7              | 54.0                 | -13.3                  | Ch.48, 5240MHz, 6Mbps, EUT On Side  |
| 15779.830  | 27.9             | 12.5        | 1.0                     | 109.0             | 3.0                    | 0.0                       | Vert                     | AV       | 0.0                      | 40.4              | 54.0                 | -13.6                  | Ch.52, 5260MHz, 6Mbps, EUT On Side  |
| 15779.920  | 27.5             | 12.5        | 1.0                     | 320.0             | 3.0                    | 0.0                       | Horz                     | AV       | 0.0                      | 40.0              | 54.0                 | -14.0                  | Ch.52, 5260MHz, 6Mbps, EUT Vert     |
| 10637.750  | 69.3             | -9.8        | 1.6                     | 308.0             | 3.0                    | 0.0                       | Vert                     | PK       | 0.0                      | 59.5              | 74.0                 | -14.5                  | Ch.64, 5320MHz, 6Mbps, EUT Vert     |
| 11402.670  | 64.0             | -5.0        | 1.0                     | 311.0             | 3.0                    | 0.0                       | Horz                     | PK       | 0.0                      | 59.0              | 74.0                 | -15.0                  | Ch.140, 5700MHz, 6Mbps, EUT Vert    |
| 10639.620  | 68.2             | -9.8        | 1.2                     | 326.0             | 3.0                    | 0.0                       | Vert                     | PK       | 0.0                      | 58.4              | 74.0                 | -15.6                  | Ch.64, 5320MHz, 6Mbps, EUT Horz     |
| 10992.170  | 66.7             | -8.6        | 1.0                     | 63.0              | 3.0                    | 0.0                       | Vert                     | PK       | 0.0                      | 58.1              | 74.0                 | -15.9                  | Ch.100, 5500MHz, 6Mbps, EUT On Side |
| 10632.170  | 66.4             | -9.8        | 1.0                     | 326.0             | 3.0                    | 0.0                       | Horz                     | PK       | 0.0                      | 56.6              | 74.0                 | -17.4                  | Ch.64, 5320MHz, 6Mbps, EUT On Side  |

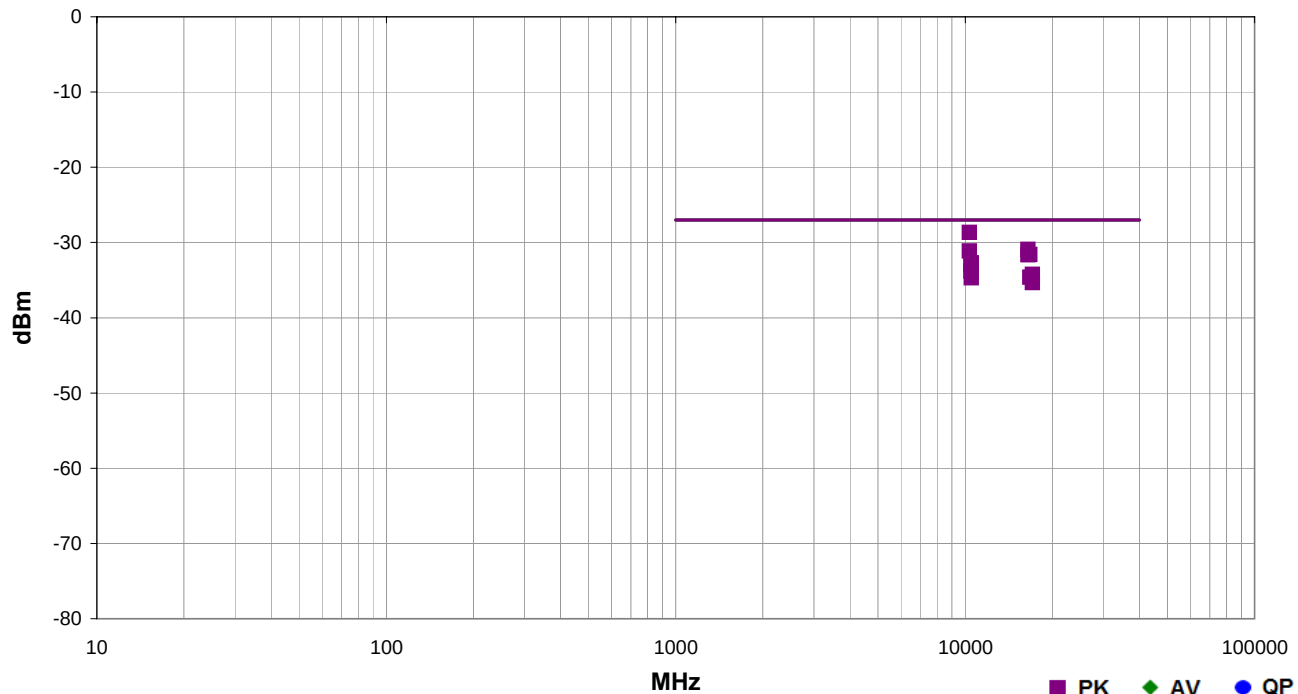
| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB) | Antenna Height<br>(meters) | Azimuth<br>(degrees) | Test Distance<br>(meters) | External<br>Attenuation<br>(dB) | Polarity/<br>Transducer<br>Type | Detector | Distance<br>Adjustment<br>(dB) | Adjusted<br>(dBuV/m) | Spec. Limit<br>(dBuV/m) | Compared to<br>Spec.<br>(dB) | Comments                            |
|---------------|---------------------|----------------|----------------------------|----------------------|---------------------------|---------------------------------|---------------------------------|----------|--------------------------------|----------------------|-------------------------|------------------------------|-------------------------------------|
| 15962.670     | 43.7                | 12.4           | 1.0                        | 330.0                | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 56.1                 | 74.0                    | -17.9                        | Ch.64, 5320MHz, 6Mbps, EUT Vert     |
| 11155.580     | 62.0                | -7.4           | 1.0                        | 41.0                 | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 54.6                 | 74.0                    | -19.4                        | Ch.116, 5580MHz, 6Mbps, EUT On Side |
| 15962.040     | 41.5                | 12.4           | 1.0                        | 12.0                 | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 53.9                 | 74.0                    | -20.1                        | Ch.64, 5320MHz, 6Mbps, EUT On Side  |
| 15716.710     | 41.2                | 12.5           | 1.0                        | 340.0                | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 53.7                 | 74.0                    | -20.3                        | Ch.48, 5240MHz, 6Mbps, EUT Vert     |
| 15542.250     | 41.6                | 12.1           | 1.0                        | 45.0                 | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 53.7                 | 74.0                    | -20.3                        | Ch.36, 5180MHz, 6Mbps, EUT Vert     |
| 15544.790     | 41.5                | 12.1           | 1.0                        | 104.0                | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 53.6                 | 74.0                    | -20.4                        | Ch.36, 5180MHz, 6Mbps, EUT On Side  |
| 22002.120     | 32.9                | 0.2            | 1.1                        | 317.0                | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 33.1                 | 54.0                    | -20.9                        | Ch.100, 5500MHz, 6Mbps, EUT Vert    |
| 11396.000     | 57.8                | -5.1           | 1.0                        | 42.0                 | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 52.7                 | 74.0                    | -21.3                        | Ch.140, 5700MHz, 6Mbps, EUT On Side |
| 15717.040     | 39.9                | 12.5           | 1.0                        | 104.0                | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 52.4                 | 74.0                    | -21.6                        | Ch.48, 5240MHz, 6Mbps, EUT On Side  |
| 20722.330     | 32.7                | -0.5           | 1.1                        | 314.0                | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 32.2                 | 54.0                    | -21.8                        | Ch.36, 5180MHz, 6Mbps, EUT Vert     |
| 22322.380     | 31.4                | 0.4            | 1.1                        | 318.0                | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 31.8                 | 54.0                    | -22.2                        | Ch.116, 5580MHz, 6Mbps, EUT Vert    |
| 21281.920     | 32.0                | -0.2           | 1.1                        | 317.0                | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 31.8                 | 54.0                    | -22.2                        | Ch.64, 5320MHz, 6Mbps, EUT Vert     |
| 20962.170     | 32.0                | -0.3           | 1.1                        | 318.0                | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 31.7                 | 54.0                    | -22.3                        | Ch.48, 5240MHz, 6Mbps, EUT Vert     |
| 21042.290     | 31.9                | -0.3           | 1.1                        | 318.0                | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 31.6                 | 54.0                    | -22.4                        | Ch.52, 5260MHz, 6Mbps, EUT Vert     |
| 15769.000     | 39.0                | 12.6           | 1.0                        | 320.0                | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 51.6                 | 74.0                    | -22.4                        | Ch.52, 5260MHz, 6Mbps, EUT Vert     |
| 22802.250     | 31.0                | 0.4            | 1.1                        | 319.0                | 3.0                       | 0.0                             | Horz                            | AV       | 0.0                            | 31.4                 | 54.0                    | -22.6                        | Ch.140, 5700MHz, 6Mbps, EUT Vert    |
| 20728.790     | 31.9                | -0.5           | 1.1                        | 181.0                | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 31.4                 | 54.0                    | -22.6                        | Ch.36, 5180MHz, 6Mbps, EUT On Side  |
| 15789.460     | 38.8                | 12.5           | 1.0                        | 109.0                | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 51.3                 | 74.0                    | -22.7                        | Ch.52, 5260MHz, 6Mbps, EUT On Side  |
| 22004.880     | 31.0                | 0.2            | 1.1                        | 334.0                | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 31.2                 | 54.0                    | -22.8                        | Ch.100, 5500MHz, 6Mbps, EUT On Side |
| 22802.330     | 30.8                | 0.4            | 1.1                        | 319.0                | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 31.2                 | 54.0                    | -22.8                        | Ch.140, 5700MHz, 6Mbps, EUT On Side |
| 22331.830     | 30.8                | 0.4            | 1.1                        | 334.0                | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 31.2                 | 54.0                    | -22.8                        | Ch.116, 5580MHz, 6Mbps, EUT On Side |
| 21267.620     | 31.4                | -0.2           | 1.1                        | 170.0                | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 31.2                 | 54.0                    | -22.8                        | Ch.64, 5320MHz, 6Mbps, EUT On Side  |
| 20957.540     | 31.3                | -0.3           | 1.1                        | 360.0                | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 31.0                 | 54.0                    | -23.0                        | Ch.48, 5240MHz, 6Mbps, EUT On Side  |
| 21027.670     | 31.0                | -0.3           | 1.1                        | 170.0                | 3.0                       | 0.0                             | Vert                            | AV       | 0.0                            | 30.7                 | 54.0                    | -23.3                        | Ch.52, 5260MHz, 6Mbps, EUT On Side  |
| 22012.290     | 49.5                | 0.2            | 1.1                        | 317.0                | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 49.7                 | 74.0                    | -24.3                        | Ch.100, 5500MHz, 6Mbps, EUT Vert    |
| 21282.920     | 48.7                | -0.2           | 1.1                        | 317.0                | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 48.5                 | 74.0                    | -25.5                        | Ch.64, 5320MHz, 6Mbps, EUT Vert     |
| 20963.420     | 48.7                | -0.3           | 1.1                        | 318.0                | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 48.4                 | 74.0                    | -25.6                        | Ch.48, 5240MHz, 6Mbps, EUT Vert     |
| 20715.290     | 48.7                | -0.5           | 1.1                        | 314.0                | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 48.2                 | 74.0                    | -25.8                        | Ch.36, 5180MHz, 6Mbps, EUT Vert     |
| 21046.790     | 48.3                | -0.3           | 1.1                        | 318.0                | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 48.0                 | 74.0                    | -26.0                        | Ch.52, 5260MHz, 6Mbps, EUT Vert     |
| 22324.620     | 46.6                | 0.4            | 1.1                        | 334.0                | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 47.0                 | 74.0                    | -27.0                        | Ch.116, 5580MHz, 6Mbps, EUT On Side |
| 22317.710     | 46.6                | 0.4            | 1.1                        | 318.0                | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 47.0                 | 74.0                    | -27.0                        | Ch.116, 5580MHz, 6Mbps, EUT Vert    |
| 22799.250     | 46.2                | 0.4            | 1.1                        | 319.0                | 3.0                       | 0.0                             | Horz                            | PK       | 0.0                            | 46.6                 | 74.0                    | -27.4                        | Ch.140, 5700MHz, 6Mbps, EUT Vert    |
| 20726.120     | 47.1                | -0.5           | 1.1                        | 181.0                | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 46.6                 | 74.0                    | -27.4                        | Ch.36, 5180MHz, 6Mbps, EUT On Side  |
| 20962.210     | 46.6                | -0.3           | 1.1                        | 360.0                | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 46.3                 | 74.0                    | -27.7                        | Ch.48, 5240MHz, 6Mbps, EUT On Side  |
| 22003.210     | 46.0                | 0.2            | 1.1                        | 334.0                | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 46.2                 | 74.0                    | -27.8                        | Ch.100, 5500MHz, 6Mbps, EUT On Side |
| 22789.120     | 45.6                | 0.4            | 1.1                        | 319.0                | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 46.0                 | 74.0                    | -28.0                        | Ch.140, 5700MHz, 6Mbps, EUT On Side |
| 21291.500     | 46.1                | -0.2           | 1.1                        | 170.0                | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 45.9                 | 74.0                    | -28.1                        | Ch.64, 5320MHz, 6Mbps, EUT On Side  |
| 21038.330     | 45.5                | -0.3           | 1.1                        | 170.0                | 3.0                       | 0.0                             | Vert                            | PK       | 0.0                            | 45.2                 | 74.0                    | -28.8                        | Ch.52, 5260MHz, 6Mbps, EUT On Side  |

## SPURIOUS RADIATED EMISSIONS

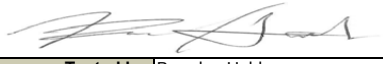
|                        |                                                                             |                          |             |                                                                                    |
|------------------------|-----------------------------------------------------------------------------|--------------------------|-------------|------------------------------------------------------------------------------------|
| <b>Work Order:</b>     | FOCU0169                                                                    | <b>Date:</b>             | 06/12/14    |  |
| <b>Project:</b>        | None                                                                        | <b>Temperature:</b>      | 24 °C       |                                                                                    |
| <b>Job Site:</b>       | EV01                                                                        | <b>Humidity:</b>         | 40.1% RH    |                                                                                    |
| <b>Serial Number:</b>  | 02EAF000061                                                                 | <b>Barometric Pres.:</b> | 1011.7 mbar |                                                                                    |
| <b>EUT:</b>            | 444-2251                                                                    |                          |             |                                                                                    |
| <b>Configuration:</b>  | 2                                                                           |                          |             |                                                                                    |
| <b>Customer:</b>       | Summit Semiconductor LLC                                                    |                          |             |                                                                                    |
| <b>Attendees:</b>      | None                                                                        |                          |             |                                                                                    |
| <b>EUT Power:</b>      | 110VAC/60Hz                                                                 |                          |             |                                                                                    |
| <b>Operating Mode:</b> | Tx                                                                          |                          |             |                                                                                    |
| <b>Deviations:</b>     | None                                                                        |                          |             |                                                                                    |
| <b>Comments:</b>       | Please Reference data comments for EUT orientation, Data Rate and frequency |                          |             |                                                                                    |

| Test Specifications | Test Method      |
|---------------------|------------------|
| FCC 15.407:2014     | ANSI C63.10:2009 |

| Run # | 32 | Test Distance (m) | 3 | Antenna Height(s) | 1-4m | Results | Pass |
|-------|----|-------------------|---|-------------------|------|---------|------|
|-------|----|-------------------|---|-------------------|------|---------|------|

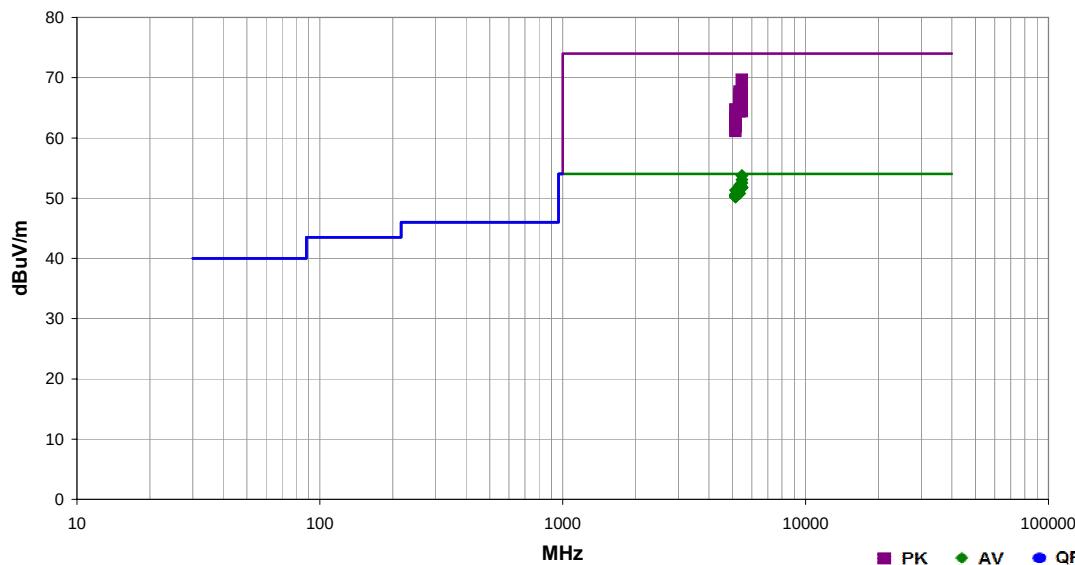


| Freq (MHz) | Antenna Height (meters) | Azimuth (degrees) | Polarity/Transducer Type | Detector | EIRP (Watts) | EIRP (dBm) | Spec. Limit (dBm) | Compared to Spec. (dB) | Comments                            |
|------------|-------------------------|-------------------|--------------------------|----------|--------------|------------|-------------------|------------------------|-------------------------------------|
| 10360.920  | 1.0                     | 330.0             | Horz                     | PK       | 1.36E-06     | -28.7      | -27.0             | -1.7                   | Ch.36, 5180MHz, 6Mbps, EUT Vert     |
| 16507.120  | 1.0                     | 339.0             | Horz                     | PK       | 8.07E-07     | -30.9      | -27.0             | -3.9                   | Ch.100, 5500MHz, 6Mbps, EUT Vert    |
| 10361.170  | 1.0                     | 320.0             | Vert                     | PK       | 7.67E-07     | -31.1      | -27.0             | -4.1                   | Ch.36, 5180MHz, 6Mbps, EUT On Side  |
| 16744.380  | 1.0                     | 341.0             | Horz                     | PK       | 6.89E-07     | -31.6      | -27.0             | -4.6                   | Ch.116, 5580MHz, 6Mbps, EUT Vert    |
| 16499.250  | 1.6                     | 304.0             | Vert                     | PK       | 6.87E-07     | -31.6      | -27.0             | -4.6                   | Ch.100, 5500MHz, 6Mbps, EUT On Side |
| 10517.790  | 1.0                     | 330.0             | Horz                     | PK       | 5.37E-07     | -32.7      | -27.0             | -5.7                   | Ch.52, 5260MHz, 6Mbps, EUT Vert     |
| 10477.790  | 1.0                     | 330.0             | Horz                     | PK       | 5.23E-07     | -32.8      | -27.0             | -5.8                   | Ch.48, 5240MHz, 6Mbps, EUT Vert     |
| 10477.880  | 1.0                     | 314.0             | Vert                     | PK       | 4.15E-07     | -33.8      | -27.0             | -6.8                   | Ch.48, 5240MHz, 6Mbps, EUT On Side  |
| 17102.250  | 1.1                     | 17.0              | Vert                     | PK       | 3.76E-07     | -34.3      | -27.0             | -7.3                   | Ch.140, 5700MHz, 6Mbps, EUT On Side |
| 16741.830  | 1.1                     | 17.0              | Vert                     | PK       | 3.45E-07     | -34.6      | -27.0             | -7.6                   | Ch.116, 5580MHz, 6Mbps, EUT On Side |
| 10517.710  | 1.0                     | 314.0             | Vert                     | PK       | 3.39E-07     | -34.7      | -27.0             | -7.7                   | Ch.52, 5260MHz, 6Mbps, EUT On Side  |
| 17101.920  | 1.0                     | 347.0             | Horz                     | PK       | 2.92E-07     | -35.4      | -27.0             | -8.4                   | Ch.140, 5700MHz, 6Mbps, EUT Vert    |

|                 |                                                                             |                   |               |                                                                                    |
|-----------------|-----------------------------------------------------------------------------|-------------------|---------------|------------------------------------------------------------------------------------|
| Work Order:     | FOCU0169                                                                    | Date:             | 06/12/14      |  |
| Project:        | None                                                                        | Temperature:      | 21.6 °C       |                                                                                    |
| Job Site:       | EV01                                                                        | Humidity:         | 42.8% RH      |                                                                                    |
| Serial Number:  | 02EAF000061                                                                 | Barometric Pres.: | 1012 mbar     |                                                                                    |
| EUT:            | 444-2251                                                                    | Tested by:        | Brandon Hobbs |                                                                                    |
| Configuration:  | 2                                                                           |                   |               |                                                                                    |
| Customer:       | Summit Semiconductor LLC                                                    |                   |               |                                                                                    |
| Attendees:      | None                                                                        |                   |               |                                                                                    |
| EUT Power:      | 110VAC/60Hz                                                                 |                   |               |                                                                                    |
| Operating Mode: | Tx                                                                          |                   |               |                                                                                    |
| Deviations:     | None                                                                        |                   |               |                                                                                    |
| Comments:       | Please Reference data comments for EUT orientation, Data Rate and frequency |                   |               |                                                                                    |

|                     |                 |             |                  |
|---------------------|-----------------|-------------|------------------|
| Test Specifications | FCC 15.407:2014 | Test Method | ANSI C63.10:2009 |
|---------------------|-----------------|-------------|------------------|

|       |    |                   |   |                   |      |         |      |
|-------|----|-------------------|---|-------------------|------|---------|------|
| Run # | 49 | Test Distance (m) | 1 | Antenna Height(s) | 1-4m | Results | Pass |
|-------|----|-------------------|---|-------------------|------|---------|------|



| Freq (MHz) | Amplitude (dBuV) | Factor (dB) | Antenna Height (meters) | Azimuth (degrees) | Test Distance (meters) | External Attenuation (dB) | Polarity/ Transducer Type | Detector | Distance Adjustment (dB) | Adjusted (dBuV/m) | Spec. Limit (dBuV/m) | Compared to Spec. (dB) | Comments                             |
|------------|------------------|-------------|-------------------------|-------------------|------------------------|---------------------------|---------------------------|----------|--------------------------|-------------------|----------------------|------------------------|--------------------------------------|
| 5469.487   | 24.8             | 38.5        | 1.1                     | 266.0             | 1.0                    | 0.0                       | Horz                      | AV       | -9.5                     | 53.8              | 54.0                 | -0.2                   | Ch.100, 5500MHz, 36Mbps, EUT Vert    |
| 5469.987   | 24.1             | 38.5        | 1.1                     | 266.0             | 1.0                    | 0.0                       | Horz                      | AV       | -9.5                     | 53.1              | 54.0                 | -0.9                   | Ch.100, 5500MHz, 6Mbps, EUT Vert     |
| 5469.743   | 23.6             | 38.5        | 1.1                     | 266.0             | 1.0                    | 0.0                       | Horz                      | AV       | -9.5                     | 52.6              | 54.0                 | -1.4                   | Ch.100, 5500MHz, 18Mbps, EUT Vert    |
| 5350.023   | 23.5             | 38.2        | 1.1                     | 168.0             | 1.0                    | 0.0                       | Vert                      | AV       | -9.5                     | 52.2              | 54.0                 | -1.8                   | Ch.64, 5320MHz, 18Mbps, EUT On Side  |
| 5469.840   | 22.9             | 38.5        | 1.1                     | 148.0             | 1.0                    | 0.0                       | Vert                      | AV       | -9.5                     | 51.9              | 54.0                 | -2.1                   | Ch.100, 5500MHz, 6Mbps, EUT On Side  |
| 5350.053   | 23.1             | 38.2        | 1.1                     | 140.0             | 1.0                    | 0.0                       | Horz                      | AV       | -9.5                     | 51.8              | 54.0                 | -2.2                   | Ch.64, 5320MHz, 6Mbps, EUT Vert      |
| 5469.923   | 22.8             | 38.5        | 1.1                     | 148.0             | 1.0                    | 0.0                       | Vert                      | AV       | -9.5                     | 51.8              | 54.0                 | -2.2                   | Ch.100, 5500MHz, 36Mbps, EUT On Side |
| 5469.953   | 22.8             | 38.5        | 1.1                     | 65.0              | 1.0                    | 0.0                       | Horz                      | AV       | -9.5                     | 51.8              | 54.0                 | -2.2                   | Ch.100, 5500MHz, 6Mbps, EUT Vert     |
| 5469.897   | 22.8             | 38.5        | 1.1                     | 148.0             | 1.0                    | 0.0                       | Vert                      | AV       | -9.5                     | 51.8              | 54.0                 | -2.2                   | Ch.100, 5500MHz, 18Mbps, EUT On Side |
| 5350.053   | 22.9             | 38.2        | 1.1                     | 168.0             | 1.0                    | 0.0                       | Vert                      | AV       | -9.5                     | 51.6              | 54.0                 | -2.4                   | Ch.64, 5320MHz, 6Mbps, EUT On Side   |
| 5350.060   | 22.8             | 38.2        | 1.1                     | 140.0             | 1.0                    | 0.0                       | Horz                      | AV       | -9.5                     | 51.5              | 54.0                 | -2.5                   | Ch.64, 5320MHz, 18Mbps, EUT Vert     |
| 5350.147   | 22.7             | 38.2        | 1.1                     | 140.0             | 1.0                    | 0.0                       | Horz                      | AV       | -9.5                     | 51.4              | 54.0                 | -2.6                   | Ch.64, 5320MHz, 36Mbps, EUT Vert     |
| 5149.883   | 23.0             | 37.9        | 1.1                     | 142.0             | 1.0                    | 0.0                       | Horz                      | AV       | -9.5                     | 51.3              | 54.0                 | -2.7                   | Ch.36, 5180MHz, 6Mbps, EUT Vert      |
| 5350.160   | 22.1             | 38.2        | 1.1                     | 168.0             | 1.0                    | 0.0                       | Vert                      | AV       | -9.5                     | 50.8              | 54.0                 | -3.2                   | Ch.64, 5320MHz, 36Mbps, EUT On Side  |
| 5148.190   | 22.3             | 37.9        | 1.1                     | 144.0             | 1.0                    | 0.0                       | Horz                      | AV       | -9.5                     | 50.6              | 54.0                 | -3.4                   | Ch.36, 5180MHz, 36Mbps, EUT Vert     |
| 5149.903   | 22.2             | 37.9        | 1.1                     | 132.0             | 1.0                    | 0.0                       | Vert                      | AV       | -9.5                     | 50.5              | 54.0                 | -3.5                   | Ch.36, 5180MHz, 6Mbps, EUT On Side   |
| 5149.770   | 22.2             | 37.9        | 1.1                     | 85.0              | 1.0                    | 0.0                       | Vert                      | AV       | -9.5                     | 50.5              | 54.0                 | -3.5                   | Ch.36, 5180MHz, 6Mbps, EUT Horz      |
| 5149.987   | 22.0             | 37.9        | 1.1                     | 195.0             | 1.0                    | 0.0                       | Horz                      | AV       | -9.5                     | 50.3              | 54.0                 | -3.7                   | Ch.36, 5180MHz, 6Mbps, EUT On Side   |
| 5149.957   | 22.0             | 37.9        | 1.1                     | 277.0             | 1.0                    | 0.0                       | Horz                      | AV       | -9.5                     | 50.3              | 54.0                 | -3.7                   | Ch.36, 5180MHz, 6Mbps, EUT Horz      |
| 5148.410   | 21.9             | 37.9        | 1.1                     | 97.0              | 1.0                    | 0.0                       | Vert                      | AV       | -9.5                     | 50.2              | 54.0                 | -3.8                   | Ch.36, 5180MHz, 6Mbps, EUT Vert      |
| 5148.207   | 21.9             | 37.9        | 1.1                     | 144.0             | 1.0                    | 0.0                       | Horz                      | AV       | -9.5                     | 50.2              | 54.0                 | -3.8                   | Ch.36, 5180MHz, 18Mbps, EUT Vert     |
| 5469.923   | 40.7             | 38.5        | 1.1                     | 266.0             | 1.0                    | 0.0                       | Horz                      | PK       | -9.5                     | 69.7              | 74.0                 | -4.3                   | Ch.100, 5500MHz, 6Mbps, EUT Vert     |
| 5350.670   | 39.0             | 38.2        | 1.1                     | 140.0             | 1.0                    | 0.0                       | Horz                      | PK       | -9.5                     | 67.7              | 74.0                 | -6.3                   | Ch.64, 5320MHz, 36Mbps, EUT Vert     |
| 5468.387   | 38.6             | 38.5        | 1.1                     | 266.0             | 1.0                    | 0.0                       | Horz                      | PK       | -9.5                     | 67.6              | 74.0                 | -6.4                   | Ch.100, 5500MHz, 18Mbps, EUT Vert    |
| 5350.000   | 38.5             | 38.2        | 1.1                     | 140.0             | 1.0                    | 0.0                       | Horz                      | PK       | -9.5                     | 67.2              | 74.0                 | -6.8                   | Ch.64, 5320MHz, 6Mbps, EUT Vert      |
| 5350.140   | 37.9             | 38.2        | 1.1                     | 168.0             | 1.0                    | 0.0                       | Vert                      | PK       | -9.5                     | 66.6              | 74.0                 | -7.4                   | Ch.64, 5320MHz, 6Mbps, EUT On Side   |
| 5469.663   | 37.1             | 38.5        | 1.1                     | 266.0             | 1.0                    | 0.0                       | Horz                      | PK       | -9.5                     | 66.1              | 74.0                 | -7.9                   | Ch.100, 5500MHz, 36Mbps, EUT Vert    |
| 5350.600   | 37.2             | 38.2        | 1.1                     | 140.0             | 1.0                    | 0.0                       | Horz                      | PK       | -9.5                     | 65.9              | 74.0                 | -8.1                   | Ch.64, 5320MHz, 18Mbps, EUT Vert     |
| 5469.350   | 36.2             | 38.5        | 1.1                     | 148.0             | 1.0                    | 0.0                       | Vert                      | PK       | -9.5                     | 65.2              | 74.0                 | -8.8                   | Ch.100, 5500MHz, 36Mbps, EUT On Side |
| 5350.497   | 36.3             | 38.2        | 1.1                     | 168.0             | 1.0                    | 0.0                       | Vert                      | PK       | -9.5                     | 65.0              | 74.0                 | -9.0                   | Ch.64, 5320MHz, 36Mbps, EUT On Side  |
| 5468.450   | 36.0             | 38.5        | 1.1                     | 65.0              | 1.0                    | 0.0                       | Horz                      | PK       | -9.5                     | 65.0              | 74.0                 | -9.0                   | Ch.100, 5500MHz, 6Mbps, EUT Vert     |
| 5148.593   | 36.4             | 37.9        | 1.1                     | 142.0             | 1.0                    | 0.0                       | Horz                      | PK       | -9.5                     | 64.7              | 74.0                 | -9.3                   | Ch.36, 5180MHz, 6Mbps, EUT Vert      |
| 5469.397   | 35.6             | 38.5        | 1.1                     | 148.0             | 1.0                    | 0.0                       | Vert                      | PK       | -9.5                     | 64.6              | 74.0                 | -9.4                   | Ch.100, 5500MHz, 18Mbps, EUT On Side |
| 5469.113   | 35.5             | 38.5        | 1.1                     | 148.0             | 1.0                    | 0.0                       | Vert                      | PK       | -9.5                     | 64.5              | 74.0                 | -9.5                   | Ch.100, 5500MHz, 6Mbps, EUT On Side  |

| Freq<br>(MHz) | Amplitude<br>(dBuV) | Factor<br>(dB) | Antenna Height<br>(meters) | Azimuth<br>(degrees) | Test Distance<br>(meters) | External<br>Attenuation<br>(dB) | Polarity/<br>Transducer<br>Type | Detector | Distance<br>Adjustment<br>(dB) | Adjusted<br>(dBuV/m) | Spec. Limit<br>(dBuV/m) | Compared to<br>Spec.<br>(dB) | Comments                            |
|---------------|---------------------|----------------|----------------------------|----------------------|---------------------------|---------------------------------|---------------------------------|----------|--------------------------------|----------------------|-------------------------|------------------------------|-------------------------------------|
| 5350.270      | 35.7                | 38.2           | 1.1                        | 168.0                | 1.0                       | 0.0                             | Vert                            | PK       | -9.5                           | 64.4                 | 74.0                    | -9.6                         | Ch.64, 5320MHz, 18Mbps, EUT On Side |
| 5149.640      | 35.1                | 37.9           | 1.1                        | 144.0                | 1.0                       | 0.0                             | Horz                            | PK       | -9.5                           | 63.4                 | 74.0                    | -10.6                        | Ch.36, 5180MHz, 36Mbps, EUT Vert    |
| 5149.227      | 34.6                | 37.9           | 1.1                        | 132.0                | 1.0                       | 0.0                             | Vert                            | PK       | -9.5                           | 62.9                 | 74.0                    | -11.1                        | Ch.36, 5180MHz, 6Mbps, EUT On Side  |
| 5149.353      | 33.9                | 37.9           | 1.1                        | 97.0                 | 1.0                       | 0.0                             | Vert                            | PK       | -9.5                           | 62.2                 | 74.0                    | -11.8                        | Ch.36, 5180MHz, 6Mbps, EUT Vert     |
| 5149.277      | 33.7                | 37.9           | 1.1                        | 85.0                 | 1.0                       | 0.0                             | Vert                            | PK       | -9.5                           | 62.0                 | 74.0                    | -12.0                        | Ch.36, 5180MHz, 6Mbps, EUT Horz     |
| 5148.710      | 33.6                | 37.9           | 1.1                        | 195.0                | 1.0                       | 0.0                             | Horz                            | PK       | -9.5                           | 61.9                 | 74.0                    | -12.1                        | Ch.36, 5180MHz, 6Mbps, EUT On Side  |
| 5148.097      | 33.5                | 37.9           | 1.1                        | 277.0                | 1.0                       | 0.0                             | Horz                            | PK       | -9.5                           | 61.8                 | 74.0                    | -12.2                        | Ch.36, 5180MHz, 6Mbps, EUT Horz     |
| 5148.790      | 32.8                | 37.9           | 1.1                        | 144.0                | 1.0                       | 0.0                             | Horz                            | PK       | -9.5                           | 61.1                 | 74.0                    | -12.9                        | Ch.36, 5180MHz, 18Mbps, EUT Vert    |

## 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  $\Omega$  measuring port is terminated by a 50  $\Omega$  EMI meter or a 50  $\Omega$  resistive load. All 50  $\Omega$  measuring ports of the LISN are terminated by 50 $\Omega$ .

## 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    |
| DC Power Supply  | Topward            | TPS-2000         | TPD | NCR        | 0 mo     |
| LISN             | Solar              | 9252-50-R-24-BNC | LIP | 02/16/2014 | 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

FOCU0169-3

## MODES INVESTIGATED

Tx 6Mbps High Channel 140, 5700MHz  
 Tx 6Mbps High Channel 48, 5240MHz  
 Tx 6Mbps High Channel 64, 5320MHz  
 Tx 6Mbps Low Channel 100, 5500MHz  
 Tx 6Mbps Low Channel 36, 5180MHz  
 Tx 6Mbps Low Channel 52, 5260MHz  
 Tx 6Mbps Mid Channel 116, 5580MHz

# POWERLINE CONDUCTED EMISSIONS

|                   |                          |                    |            |
|-------------------|--------------------------|--------------------|------------|
| EUT:              | 444-2251                 | Work Order:        | FOCU0169   |
| Serial Number:    | 02EAF000061              | Date:              | 06/11/2014 |
| Customer:         | Summit Semiconductor LLC | Temperature:       | 24.1°C     |
| Attendees:        | None                     | Relative Humidity: | 42.9%      |
| Customer Project: | None                     | Bar. Pressure:     | 1012.3 mb  |
| Tested By:        | Brandon Hobbs            | Job Site:          | EV07       |
| Power:            | 110VAC/60Hz              | Configuration:     | FOCU0169-3 |

## TEST SPECIFICATIONS

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

## TEST PARAMETERS

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

## COMMENTS

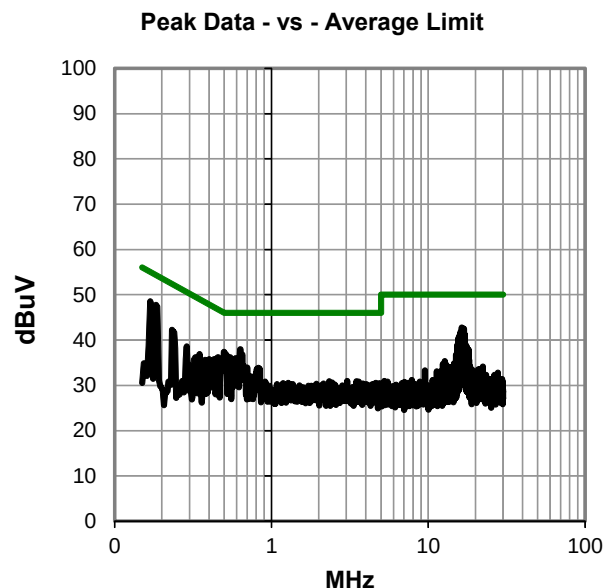
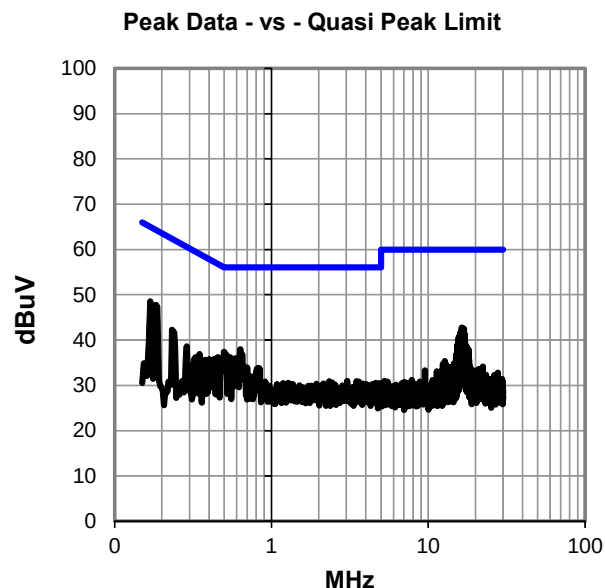
None

## EUT OPERATING MODES

Tx 6Mbps Low Channel 36, 5180MHz

## DEVIATIONS FROM TEST STANDARD

None



# 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) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.169      | 28.8        | 19.7        | 48.5            | 65.0               | -16.5       |
| 0.184      | 28.0        | 19.7        | 47.7            | 64.3               | -16.6       |
| 16.368     | 23.2        | 19.6        | 42.8            | 60.0               | -17.2       |
| 16.629     | 23.0        | 19.6        | 42.6            | 60.0               | -17.4       |
| 16.897     | 22.9        | 19.6        | 42.5            | 60.0               | -17.5       |
| 0.631      | 18.2        | 19.8        | 38.0            | 56.0               | -18.0       |
| 16.103     | 22.2        | 19.6        | 41.8            | 60.0               | -18.2       |
| 0.497      | 17.6        | 19.8        | 37.4            | 56.1               | -18.7       |
| 17.062     | 21.7        | 19.6        | 41.3            | 60.0               | -18.7       |
| 16.991     | 21.7        | 19.6        | 41.3            | 60.0               | -18.7       |
| 15.845     | 21.4        | 19.6        | 41.0            | 60.0               | -19.0       |
| 17.036     | 21.3        | 19.6        | 40.9            | 60.0               | -19.1       |
| 0.654      | 17.0        | 19.8        | 36.8            | 56.0               | -19.2       |
| 17.166     | 20.9        | 19.6        | 40.5            | 60.0               | -19.5       |
| 15.577     | 20.8        | 19.6        | 40.4            | 60.0               | -19.6       |
| 15.980     | 20.7        | 19.6        | 40.3            | 60.0               | -19.7       |
| 0.545      | 16.4        | 19.8        | 36.2            | 56.0               | -19.8       |
| 15.935     | 20.4        | 19.6        | 40.0            | 60.0               | -20.0       |
| 0.590      | 16.2        | 19.8        | 36.0            | 56.0               | -20.0       |
| 0.616      | 16.2        | 19.8        | 36.0            | 56.0               | -20.0       |
| 0.232      | 22.5        | 19.7        | 42.2            | 62.4               | -20.1       |
| 0.564      | 15.7        | 19.8        | 35.5            | 56.0               | -20.5       |
| 0.456      | 16.4        | 19.8        | 36.2            | 56.8               | -20.6       |
| 17.427     | 19.3        | 19.6        | 38.9            | 60.0               | -21.1       |
| 15.316     | 19.3        | 19.6        | 38.9            | 60.0               | -21.1       |
| 0.430      | 16.0        | 19.8        | 35.8            | 57.3               | -21.5       |

Peak Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.169      | 28.8        | 19.7        | 48.5            | 55.0               | -6.5        |
| 0.184      | 28.0        | 19.7        | 47.7            | 54.3               | -6.6        |
| 16.368     | 23.2        | 19.6        | 42.8            | 50.0               | -7.2        |
| 16.629     | 23.0        | 19.6        | 42.6            | 50.0               | -7.4        |
| 16.897     | 22.9        | 19.6        | 42.5            | 50.0               | -7.5        |
| 0.631      | 18.2        | 19.8        | 38.0            | 46.0               | -8.0        |
| 16.103     | 22.2        | 19.6        | 41.8            | 50.0               | -8.2        |
| 0.497      | 17.6        | 19.8        | 37.4            | 46.1               | -8.7        |
| 17.062     | 21.7        | 19.6        | 41.3            | 50.0               | -8.7        |
| 16.991     | 21.7        | 19.6        | 41.3            | 50.0               | -8.7        |
| 15.845     | 21.4        | 19.6        | 41.0            | 50.0               | -9.0        |
| 17.036     | 21.3        | 19.6        | 40.9            | 50.0               | -9.1        |
| 0.654      | 17.0        | 19.8        | 36.8            | 46.0               | -9.2        |
| 17.166     | 20.9        | 19.6        | 40.5            | 50.0               | -9.5        |
| 15.577     | 20.8        | 19.6        | 40.4            | 50.0               | -9.6        |
| 15.980     | 20.7        | 19.6        | 40.3            | 50.0               | -9.7        |
| 0.545      | 16.4        | 19.8        | 36.2            | 46.0               | -9.8        |
| 15.935     | 20.4        | 19.6        | 40.0            | 50.0               | -10.0       |
| 0.590      | 16.2        | 19.8        | 36.0            | 46.0               | -10.0       |
| 0.616      | 16.2        | 19.8        | 36.0            | 46.0               | -10.0       |
| 0.232      | 22.5        | 19.7        | 42.2            | 52.4               | -10.1       |
| 0.564      | 15.7        | 19.8        | 35.5            | 46.0               | -10.5       |
| 0.456      | 16.4        | 19.8        | 36.2            | 46.8               | -10.6       |
| 17.427     | 19.3        | 19.6        | 38.9            | 50.0               | -11.1       |
| 15.316     | 19.3        | 19.6        | 38.9            | 50.0               | -11.1       |
| 0.430      | 16.0        | 19.8        | 35.8            | 47.3               | -11.5       |

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

|                   |                          |                    |            |
|-------------------|--------------------------|--------------------|------------|
| EUT:              | 444-2251                 | Work Order:        | FOCU0169   |
| Serial Number:    | 02EAF000061              | Date:              | 06/11/2014 |
| Customer:         | Summit Semiconductor LLC | Temperature:       | 24.1°C     |
| Attendees:        | None                     | Relative Humidity: | 42.9%      |
| Customer Project: | None                     | Bar. Pressure:     | 1012.3 mb  |
| Tested By:        | Brandon Hobbs            | Job Site:          | EV07       |
| Power:            | 110VAC/60Hz              | Configuration:     | FOCU0169-3 |

## TEST SPECIFICATIONS

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

## TEST PARAMETERS

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

## COMMENTS

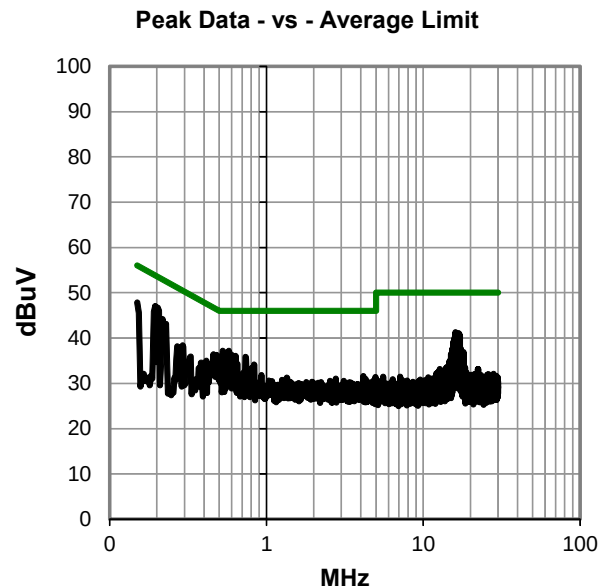
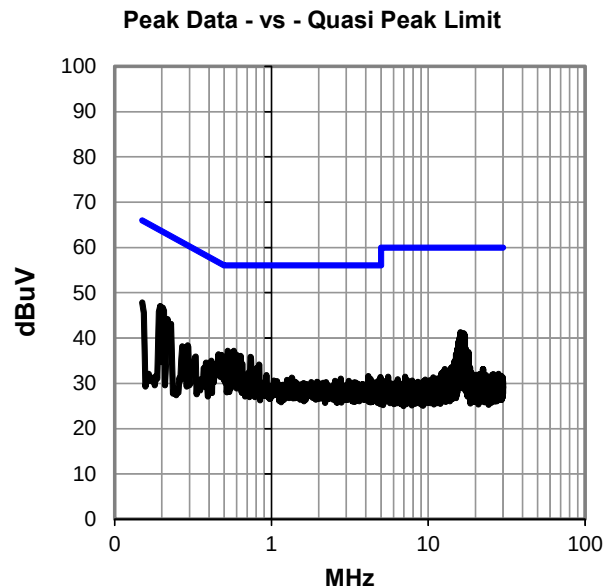
None

## EUT OPERATING MODES

Tx 6Mbps Low Channel 36, 5180MHz

## DEVIATIONS FROM TEST STANDARD

None



# 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) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.202      | 27.0        | 19.7        | 46.7            | 63.5               | -16.8       |
| 0.195      | 27.3        | 19.7        | 47.0            | 63.8               | -16.8       |
| 0.150      | 28.2        | 19.6        | 47.8            | 66.0               | -18.2       |
| 16.088     | 21.7        | 19.6        | 41.3            | 60.0               | -18.7       |
| 0.217      | 24.4        | 19.7        | 44.1            | 62.9               | -18.8       |
| 0.527      | 17.4        | 19.8        | 37.2            | 56.0               | -18.8       |
| 0.575      | 17.4        | 19.8        | 37.2            | 56.0               | -18.8       |
| 16.883     | 21.5        | 19.6        | 41.1            | 60.0               | -18.9       |
| 16.614     | 21.4        | 19.6        | 41.0            | 60.0               | -19.0       |
| 17.039     | 21.3        | 19.6        | 40.9            | 60.0               | -19.1       |
| 16.360     | 21.0        | 19.6        | 40.6            | 60.0               | -19.4       |
| 17.147     | 20.9        | 19.6        | 40.5            | 60.0               | -19.5       |
| 0.594      | 16.6        | 19.8        | 36.4            | 56.0               | -19.6       |
| 0.616      | 16.3        | 19.8        | 36.1            | 56.0               | -19.9       |
| 0.635      | 16.3        | 19.8        | 36.1            | 56.0               | -19.9       |
| 16.983     | 20.4        | 19.6        | 40.0            | 60.0               | -20.0       |
| 0.482      | 16.5        | 19.8        | 36.3            | 56.3               | -20.0       |
| 15.827     | 20.4        | 19.6        | 40.0            | 60.0               | -20.0       |
| 0.736      | 16.1        | 19.8        | 35.9            | 56.0               | -20.1       |
| 0.460      | 16.6        | 19.8        | 36.4            | 56.7               | -20.3       |
| 15.972     | 19.7        | 19.6        | 39.3            | 60.0               | -20.7       |
| 15.558     | 19.5        | 19.6        | 39.1            | 60.0               | -20.9       |
| 0.512      | 15.0        | 19.8        | 34.8            | 56.0               | -21.2       |
| 15.916     | 19.1        | 19.6        | 38.7            | 60.0               | -21.3       |
| 0.650      | 14.5        | 19.8        | 34.3            | 56.0               | -21.7       |
| 0.833      | 14.4        | 19.7        | 34.1            | 56.0               | -21.9       |

Peak Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.202      | 27.0        | 19.7        | 46.7            | 53.5               | -6.8        |
| 0.195      | 27.3        | 19.7        | 47.0            | 53.8               | -6.8        |
| 0.150      | 28.2        | 19.6        | 47.8            | 56.0               | -8.2        |
| 16.088     | 21.7        | 19.6        | 41.3            | 50.0               | -8.7        |
| 0.217      | 24.4        | 19.7        | 44.1            | 52.9               | -8.8        |
| 0.527      | 17.4        | 19.8        | 37.2            | 46.0               | -8.8        |
| 0.575      | 17.4        | 19.8        | 37.2            | 46.0               | -8.8        |
| 16.883     | 21.5        | 19.6        | 41.1            | 50.0               | -8.9        |
| 16.614     | 21.4        | 19.6        | 41.0            | 50.0               | -9.0        |
| 17.039     | 21.3        | 19.6        | 40.9            | 50.0               | -9.1        |
| 16.360     | 21.0        | 19.6        | 40.6            | 50.0               | -9.4        |
| 17.147     | 20.9        | 19.6        | 40.5            | 50.0               | -9.5        |
| 0.594      | 16.6        | 19.8        | 36.4            | 46.0               | -9.6        |
| 0.616      | 16.3        | 19.8        | 36.1            | 46.0               | -9.9        |
| 0.635      | 16.3        | 19.8        | 36.1            | 46.0               | -9.9        |
| 16.983     | 20.4        | 19.6        | 40.0            | 50.0               | -10.0       |
| 0.482      | 16.5        | 19.8        | 36.3            | 46.3               | -10.0       |
| 15.827     | 20.4        | 19.6        | 40.0            | 50.0               | -10.0       |
| 0.736      | 16.1        | 19.8        | 35.9            | 46.0               | -10.1       |
| 0.460      | 16.6        | 19.8        | 36.4            | 46.7               | -10.3       |
| 15.972     | 19.7        | 19.6        | 39.3            | 50.0               | -10.7       |
| 15.558     | 19.5        | 19.6        | 39.1            | 50.0               | -10.9       |
| 0.512      | 15.0        | 19.8        | 34.8            | 46.0               | -11.2       |
| 15.916     | 19.1        | 19.6        | 38.7            | 50.0               | -11.3       |
| 0.650      | 14.5        | 19.8        | 34.3            | 46.0               | -11.7       |
| 0.833      | 14.4        | 19.7        | 34.1            | 46.0               | -11.9       |

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

|                   |                          |                    |            |
|-------------------|--------------------------|--------------------|------------|
| EUT:              | 444-2251                 | Work Order:        | FOCU0169   |
| Serial Number:    | 02EAF000061              | Date:              | 06/11/2014 |
| Customer:         | Summit Semiconductor LLC | Temperature:       | 24.1°C     |
| Attendees:        | None                     | Relative Humidity: | 42.9%      |
| Customer Project: | None                     | Bar. Pressure:     | 1012.3 mb  |
| Tested By:        | Brandon Hobbs            | Job Site:          | EV07       |
| Power:            | 110VAC/60Hz              | Configuration:     | FOCU0169-3 |

## TEST SPECIFICATIONS

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

## TEST PARAMETERS

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

## COMMENTS

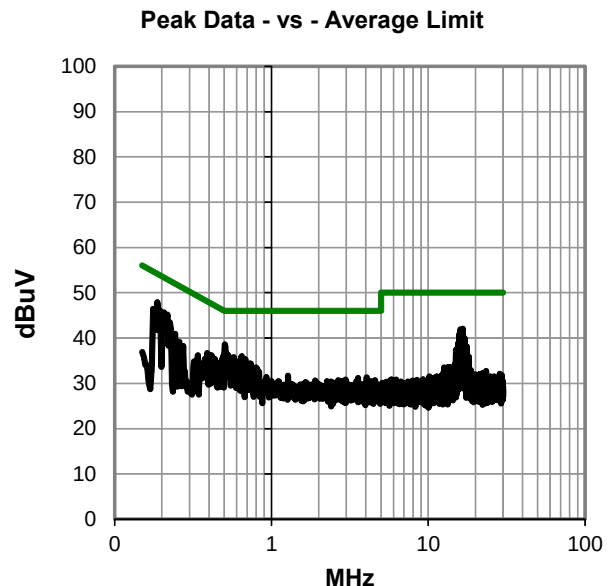
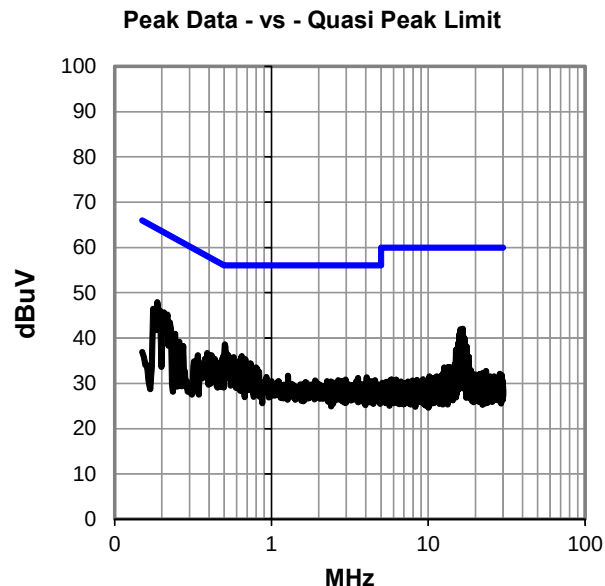
None

## EUT OPERATING MODES

Tx 6Mbps High Channel 48, 5240MHz

## DEVIATIONS FROM TEST STANDARD

None



# 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) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.187      | 28.2        | 19.7        | 47.9            | 64.2               | -16.2       |
| 0.504      | 18.8        | 19.8        | 38.6            | 56.0               | -17.4       |
| 0.206      | 25.9        | 19.7        | 45.6            | 63.4               | -17.7       |
| 16.603     | 22.5        | 19.6        | 42.1            | 60.0               | -17.9       |
| 16.073     | 22.3        | 19.6        | 41.9            | 60.0               | -18.1       |
| 0.176      | 26.7        | 19.7        | 46.4            | 64.7               | -18.2       |
| 16.334     | 21.9        | 19.6        | 41.5            | 60.0               | -18.5       |
| 0.225      | 23.7        | 19.7        | 43.4            | 62.6               | -19.2       |
| 15.808     | 21.2        | 19.6        | 40.8            | 60.0               | -19.2       |
| 16.856     | 20.6        | 19.6        | 40.2            | 60.0               | -19.8       |
| 0.531      | 16.4        | 19.8        | 36.2            | 56.0               | -19.8       |
| 0.646      | 16.2        | 19.8        | 36.0            | 56.0               | -20.0       |
| 0.493      | 16.2        | 19.8        | 36.0            | 56.1               | -20.1       |
| 17.125     | 20.2        | 19.6        | 39.8            | 60.0               | -20.2       |
| 16.983     | 20.2        | 19.6        | 39.8            | 60.0               | -20.2       |
| 0.575      | 16.0        | 19.8        | 35.8            | 56.0               | -20.2       |
| 16.939     | 19.8        | 19.6        | 39.4            | 60.0               | -20.6       |
| 0.680      | 15.6        | 19.8        | 35.4            | 56.0               | -20.6       |
| 0.657      | 15.4        | 19.8        | 35.2            | 56.0               | -20.8       |
| 16.017     | 19.5        | 19.6        | 39.1            | 60.0               | -20.9       |
| 0.243      | 21.2        | 19.7        | 40.9            | 62.0               | -21.0       |
| 15.543     | 19.3        | 19.6        | 38.9            | 60.0               | -21.1       |
| 0.616      | 15.0        | 19.8        | 34.8            | 56.0               | -21.2       |
| 0.415      | 16.4        | 19.8        | 36.2            | 57.5               | -21.3       |
| 0.389      | 16.9        | 19.8        | 36.7            | 58.1               | -21.4       |
| 17.084     | 19.0        | 19.6        | 38.6            | 60.0               | -21.4       |

Peak Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.187      | 28.2        | 19.7        | 47.9            | 54.2               | -6.2        |
| 0.504      | 18.8        | 19.8        | 38.6            | 46.0               | -7.4        |
| 0.206      | 25.9        | 19.7        | 45.6            | 53.4               | -7.7        |
| 16.603     | 22.5        | 19.6        | 42.1            | 50.0               | -7.9        |
| 16.073     | 22.3        | 19.6        | 41.9            | 50.0               | -8.1        |
| 0.176      | 26.7        | 19.7        | 46.4            | 54.7               | -8.2        |
| 16.334     | 21.9        | 19.6        | 41.5            | 50.0               | -8.5        |
| 0.225      | 23.7        | 19.7        | 43.4            | 52.6               | -9.2        |
| 15.808     | 21.2        | 19.6        | 40.8            | 50.0               | -9.2        |
| 16.856     | 20.6        | 19.6        | 40.2            | 50.0               | -9.8        |
| 0.531      | 16.4        | 19.8        | 36.2            | 46.0               | -9.8        |
| 0.646      | 16.2        | 19.8        | 36.0            | 46.0               | -10.0       |
| 0.493      | 16.2        | 19.8        | 36.0            | 46.1               | -10.1       |
| 17.125     | 20.2        | 19.6        | 39.8            | 50.0               | -10.2       |
| 16.983     | 20.2        | 19.6        | 39.8            | 50.0               | -10.2       |
| 0.575      | 16.0        | 19.8        | 35.8            | 46.0               | -10.2       |
| 16.939     | 19.8        | 19.6        | 39.4            | 50.0               | -10.6       |
| 0.680      | 15.6        | 19.8        | 35.4            | 46.0               | -10.6       |
| 0.657      | 15.4        | 19.8        | 35.2            | 46.0               | -10.8       |
| 16.017     | 19.5        | 19.6        | 39.1            | 50.0               | -10.9       |
| 0.243      | 21.2        | 19.7        | 40.9            | 52.0               | -11.0       |
| 15.543     | 19.3        | 19.6        | 38.9            | 50.0               | -11.1       |
| 0.616      | 15.0        | 19.8        | 34.8            | 46.0               | -11.2       |
| 0.415      | 16.4        | 19.8        | 36.2            | 47.5               | -11.3       |
| 0.389      | 16.9        | 19.8        | 36.7            | 48.1               | -11.4       |
| 17.084     | 19.0        | 19.6        | 38.6            | 50.0               | -11.4       |

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

|                   |                          |                    |            |
|-------------------|--------------------------|--------------------|------------|
| EUT:              | 444-2251                 | Work Order:        | FOCU0169   |
| Serial Number:    | 02EAF000061              | Date:              | 06/11/2014 |
| Customer:         | Summit Semiconductor LLC | Temperature:       | 24.1°C     |
| Attendees:        | None                     | Relative Humidity: | 42.9%      |
| Customer Project: | None                     | Bar. Pressure:     | 1012.3 mb  |
| Tested By:        | Brandon Hobbs            | Job Site:          | EV07       |
| Power:            | 110VAC/60Hz              | Configuration:     | FOCU0169-3 |

## TEST SPECIFICATIONS

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

## TEST PARAMETERS

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

## COMMENTS

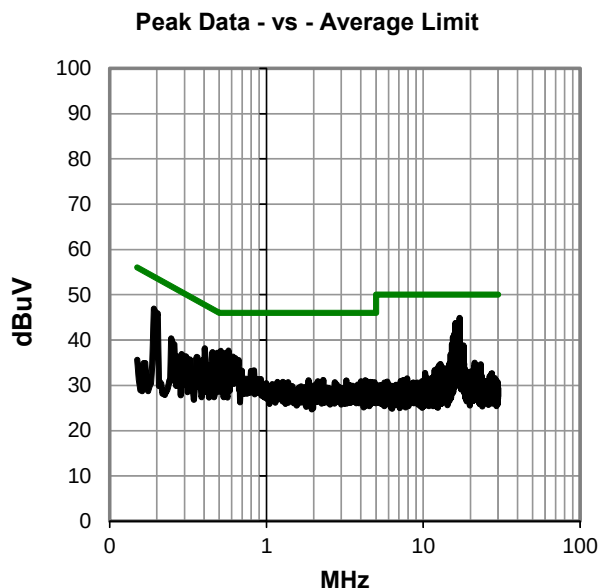
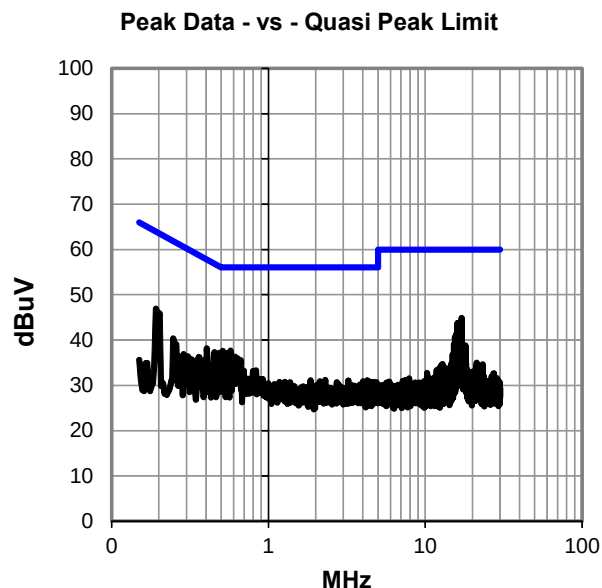
None

## EUT OPERATING MODES

Tx 6Mbps High Channel 48, 5240MHz

## DEVIATIONS FROM TEST STANDARD

None



# 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) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 17.088     | 25.3        | 19.6        | 44.9            | 60.0               | -15.1       |
| 16.039     | 24.2        | 19.6        | 43.8            | 60.0               | -16.2       |
| 16.301     | 24.1        | 19.6        | 43.7            | 60.0               | -16.3       |
| 0.191      | 27.2        | 19.7        | 46.9            | 64.0               | -17.1       |
| 16.562     | 22.9        | 19.6        | 42.5            | 60.0               | -17.5       |
| 16.827     | 22.5        | 19.6        | 42.1            | 60.0               | -17.9       |
| 0.572      | 17.9        | 19.8        | 37.7            | 56.0               | -18.3       |
| 0.512      | 17.8        | 19.8        | 37.6            | 56.0               | -18.4       |
| 16.994     | 21.9        | 19.6        | 41.5            | 60.0               | -18.5       |
| 15.771     | 21.7        | 19.6        | 41.3            | 60.0               | -18.7       |
| 0.545      | 17.3        | 19.8        | 37.1            | 56.0               | -18.9       |
| 0.486      | 17.4        | 19.8        | 37.2            | 56.2               | -19.0       |
| 0.527      | 16.9        | 19.8        | 36.7            | 56.0               | -19.3       |
| 15.510     | 21.1        | 19.6        | 40.7            | 60.0               | -19.3       |
| 0.452      | 17.5        | 19.8        | 37.3            | 56.8               | -19.5       |
| 0.404      | 18.4        | 19.8        | 38.2            | 57.8               | -19.6       |
| 0.613      | 16.6        | 19.8        | 36.4            | 56.0               | -19.6       |
| 0.635      | 16.2        | 19.8        | 36.0            | 56.0               | -20.0       |
| 15.954     | 20.1        | 19.6        | 39.7            | 60.0               | -20.3       |
| 0.665      | 15.8        | 19.8        | 35.6            | 56.0               | -20.4       |
| 15.248     | 19.5        | 19.6        | 39.1            | 60.0               | -20.9       |
| 17.353     | 19.4        | 19.6        | 39.0            | 60.0               | -21.0       |
| 0.598      | 15.2        | 19.8        | 35.0            | 56.0               | -21.0       |
| 18.058     | 19.2        | 19.6        | 38.8            | 60.0               | -21.2       |
| 0.247      | 20.6        | 19.7        | 40.3            | 61.9               | -21.5       |
| 17.069     | 18.2        | 19.6        | 37.8            | 60.0               | -22.2       |

Peak Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 17.088     | 25.3        | 19.6        | 44.9            | 50.0               | -5.1        |
| 16.039     | 24.2        | 19.6        | 43.8            | 50.0               | -6.2        |
| 16.301     | 24.1        | 19.6        | 43.7            | 50.0               | -6.3        |
| 0.191      | 27.2        | 19.7        | 46.9            | 54.0               | -7.1        |
| 16.562     | 22.9        | 19.6        | 42.5            | 50.0               | -7.5        |
| 16.827     | 22.5        | 19.6        | 42.1            | 50.0               | -7.9        |
| 0.572      | 17.9        | 19.8        | 37.7            | 46.0               | -8.3        |
| 0.512      | 17.8        | 19.8        | 37.6            | 46.0               | -8.4        |
| 16.994     | 21.9        | 19.6        | 41.5            | 50.0               | -8.5        |
| 15.771     | 21.7        | 19.6        | 41.3            | 50.0               | -8.7        |
| 0.545      | 17.3        | 19.8        | 37.1            | 46.0               | -8.9        |
| 0.486      | 17.4        | 19.8        | 37.2            | 46.2               | -9.0        |
| 0.527      | 16.9        | 19.8        | 36.7            | 46.0               | -9.3        |
| 15.510     | 21.1        | 19.6        | 40.7            | 50.0               | -9.3        |
| 0.452      | 17.5        | 19.8        | 37.3            | 46.8               | -9.5        |
| 0.404      | 18.4        | 19.8        | 38.2            | 47.8               | -9.6        |
| 0.613      | 16.6        | 19.8        | 36.4            | 46.0               | -9.6        |
| 0.635      | 16.2        | 19.8        | 36.0            | 46.0               | -10.0       |
| 15.954     | 20.1        | 19.6        | 39.7            | 50.0               | -10.3       |
| 0.665      | 15.8        | 19.8        | 35.6            | 46.0               | -10.4       |
| 15.248     | 19.5        | 19.6        | 39.1            | 50.0               | -10.9       |
| 17.353     | 19.4        | 19.6        | 39.0            | 50.0               | -11.0       |
| 0.598      | 15.2        | 19.8        | 35.0            | 46.0               | -11.0       |
| 18.058     | 19.2        | 19.6        | 38.8            | 50.0               | -11.2       |
| 0.247      | 20.6        | 19.7        | 40.3            | 51.9               | -11.5       |
| 17.069     | 18.2        | 19.6        | 37.8            | 50.0               | -12.2       |

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

|                   |                          |                    |            |
|-------------------|--------------------------|--------------------|------------|
| EUT:              | 444-2251                 | Work Order:        | FOCU0169   |
| Serial Number:    | 02EAF000061              | Date:              | 06/11/2014 |
| Customer:         | Summit Semiconductor LLC | Temperature:       | 24.1°C     |
| Attendees:        | None                     | Relative Humidity: | 42.9%      |
| Customer Project: | None                     | Bar. Pressure:     | 1012.3 mb  |
| Tested By:        | Brandon Hobbs            | Job Site:          | EV07       |
| Power:            | 110VAC/60Hz              | Configuration:     | FOCU0169-3 |

## TEST SPECIFICATIONS

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

## TEST PARAMETERS

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

## COMMENTS

None

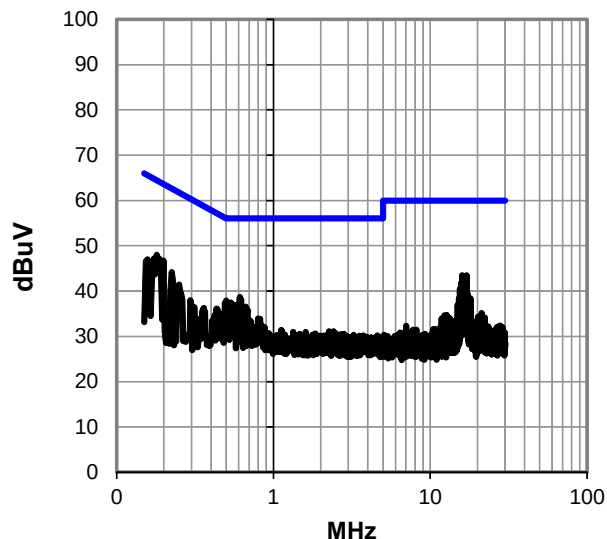
## EUT OPERATING MODES

Tx 6Mbps Low Channel 52, 5260MHz

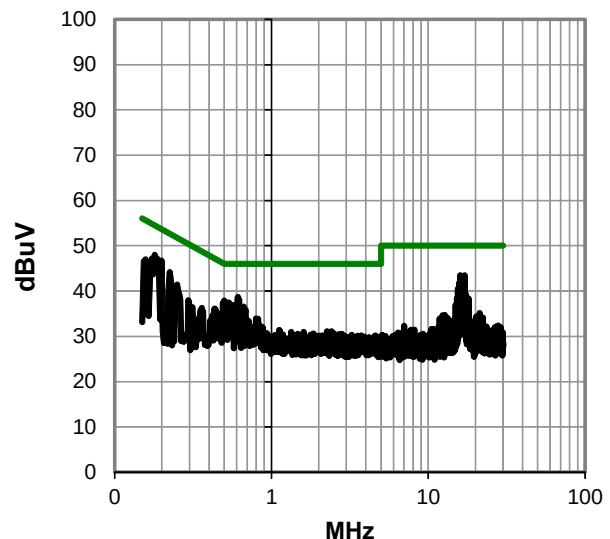
## DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



# POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #5

Peak Data - vs - Quasi Peak Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 17.084     | 23.9        | 19.6        | 43.5            | 60.0               | -16.5       |
| 16.032     | 23.9        | 19.6        | 43.5            | 60.0               | -16.5       |
| 0.180      | 28.2        | 19.7        | 47.9            | 64.5               | -16.5       |
| 16.289     | 23.7        | 19.6        | 43.3            | 60.0               | -16.7       |
| 0.199      | 27.0        | 19.7        | 46.7            | 63.7               | -16.9       |
| 0.613      | 18.9        | 19.8        | 38.7            | 56.0               | -17.3       |
| 16.815     | 22.9        | 19.6        | 42.5            | 60.0               | -17.5       |
| 16.554     | 22.8        | 19.6        | 42.4            | 60.0               | -17.6       |
| 0.172      | 27.4        | 19.7        | 47.1            | 64.8               | -17.7       |
| 0.624      | 18.3        | 19.8        | 38.1            | 56.0               | -17.9       |
| 0.501      | 18.1        | 19.8        | 37.9            | 56.0               | -18.1       |
| 16.991     | 22.2        | 19.6        | 41.8            | 60.0               | -18.2       |
| 15.767     | 22.2        | 19.6        | 41.8            | 60.0               | -18.2       |
| 0.225      | 24.4        | 19.7        | 44.1            | 62.6               | -18.5       |
| 0.534      | 17.7        | 19.8        | 37.5            | 56.0               | -18.5       |
| 0.157      | 27.3        | 19.7        | 47.0            | 65.6               | -18.6       |
| 0.490      | 17.6        | 19.8        | 37.4            | 56.2               | -18.8       |
| 0.665      | 16.8        | 19.8        | 36.6            | 56.0               | -19.4       |
| 15.502     | 20.9        | 19.6        | 40.5            | 60.0               | -19.5       |
| 15.927     | 20.6        | 19.6        | 40.2            | 60.0               | -19.8       |
| 0.684      | 16.1        | 19.8        | 35.9            | 56.0               | -20.1       |
| 0.251      | 21.7        | 19.8        | 41.5            | 61.7               | -20.3       |
| 17.353     | 19.8        | 19.6        | 39.4            | 60.0               | -20.6       |
| 0.434      | 16.3        | 19.8        | 36.1            | 57.2               | -21.1       |
| 0.478      | 15.3        | 19.8        | 35.1            | 56.4               | -21.3       |
| 18.054     | 18.8        | 19.6        | 38.4            | 60.0               | -21.6       |

Peak Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 17.084     | 23.9        | 19.6        | 43.5            | 50.0               | -6.5        |
| 16.032     | 23.9        | 19.6        | 43.5            | 50.0               | -6.5        |
| 0.180      | 28.2        | 19.7        | 47.9            | 54.5               | -6.5        |
| 16.289     | 23.7        | 19.6        | 43.3            | 50.0               | -6.7        |
| 0.199      | 27.0        | 19.7        | 46.7            | 53.7               | -6.9        |
| 0.613      | 18.9        | 19.8        | 38.7            | 46.0               | -7.3        |
| 16.815     | 22.9        | 19.6        | 42.5            | 50.0               | -7.5        |
| 16.554     | 22.8        | 19.6        | 42.4            | 50.0               | -7.6        |
| 0.172      | 27.4        | 19.7        | 47.1            | 54.8               | -7.7        |
| 0.624      | 18.3        | 19.8        | 38.1            | 46.0               | -7.9        |
| 0.501      | 18.1        | 19.8        | 37.9            | 46.0               | -8.1        |
| 16.991     | 22.2        | 19.6        | 41.8            | 50.0               | -8.2        |
| 15.767     | 22.2        | 19.6        | 41.8            | 50.0               | -8.2        |
| 0.225      | 24.4        | 19.7        | 44.1            | 52.6               | -8.5        |
| 0.534      | 17.7        | 19.8        | 37.5            | 46.0               | -8.5        |
| 0.157      | 27.3        | 19.7        | 47.0            | 55.6               | -8.6        |
| 0.490      | 17.6        | 19.8        | 37.4            | 46.2               | -8.8        |
| 0.665      | 16.8        | 19.8        | 36.6            | 46.0               | -9.4        |
| 15.502     | 20.9        | 19.6        | 40.5            | 50.0               | -9.5        |
| 15.927     | 20.6        | 19.6        | 40.2            | 50.0               | -9.8        |
| 0.684      | 16.1        | 19.8        | 35.9            | 46.0               | -10.1       |
| 0.251      | 21.7        | 19.8        | 41.5            | 51.7               | -10.3       |
| 17.353     | 19.8        | 19.6        | 39.4            | 50.0               | -10.6       |
| 0.434      | 16.3        | 19.8        | 36.1            | 47.2               | -11.1       |
| 0.478      | 15.3        | 19.8        | 35.1            | 46.4               | -11.3       |
| 18.054     | 18.8        | 19.6        | 38.4            | 50.0               | -11.6       |

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

|                   |                          |                    |            |
|-------------------|--------------------------|--------------------|------------|
| EUT:              | 444-2251                 | Work Order:        | FOCU0169   |
| Serial Number:    | 02EAF000061              | Date:              | 06/11/2014 |
| Customer:         | Summit Semiconductor LLC | Temperature:       | 24.1°C     |
| Attendees:        | None                     | Relative Humidity: | 42.9%      |
| Customer Project: | None                     | Bar. Pressure:     | 1012.3 mb  |
| Tested By:        | Brandon Hobbs            | Job Site:          | EV07       |
| Power:            | 110VAC/60Hz              | Configuration:     | FOCU0169-3 |

## TEST SPECIFICATIONS

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

## TEST PARAMETERS

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

## COMMENTS

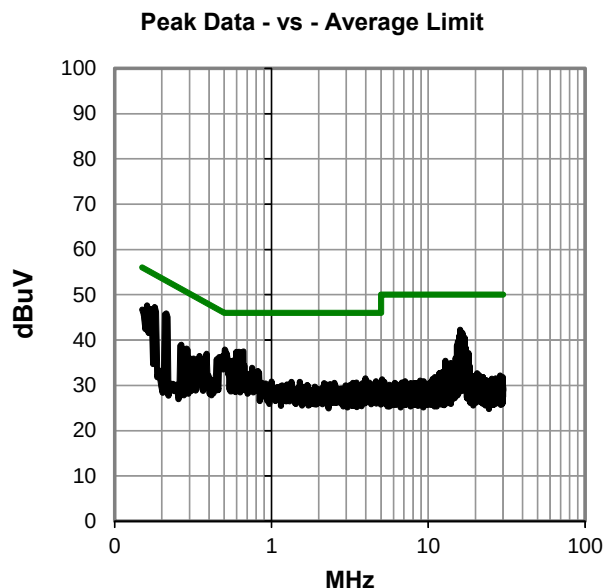
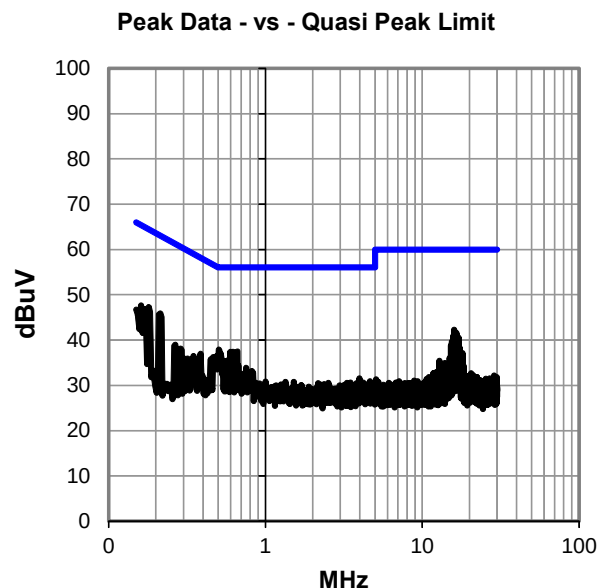
None

## EUT OPERATING MODES

Tx 6Mbps Low Channel 52, 5260MHz

## DEVIATIONS FROM TEST STANDARD

None



# 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) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.213      | 26.1        | 19.7        | 45.8            | 63.1               | -17.2       |
| 0.180      | 27.5        | 19.7        | 47.2            | 64.5               | -17.2       |
| 16.024     | 22.7        | 19.6        | 42.3            | 60.0               | -17.7       |
| 0.161      | 27.9        | 19.7        | 47.6            | 65.4               | -17.8       |
| 0.504      | 18.1        | 19.8        | 37.9            | 56.0               | -18.1       |
| 0.169      | 27.1        | 19.7        | 46.8            | 65.0               | -18.2       |
| 16.554     | 22.0        | 19.6        | 41.6            | 60.0               | -18.4       |
| 0.661      | 17.7        | 19.8        | 37.5            | 56.0               | -18.5       |
| 0.598      | 17.6        | 19.8        | 37.4            | 56.0               | -18.6       |
| 0.620      | 17.6        | 19.8        | 37.4            | 56.0               | -18.6       |
| 16.289     | 21.7        | 19.6        | 41.3            | 60.0               | -18.7       |
| 15.771     | 21.3        | 19.6        | 40.9            | 60.0               | -19.1       |
| 0.150      | 27.1        | 19.6        | 46.7            | 66.0               | -19.3       |
| 17.080     | 20.9        | 19.6        | 40.5            | 60.0               | -19.5       |
| 16.812     | 20.7        | 19.6        | 40.3            | 60.0               | -19.7       |
| 16.991     | 20.4        | 19.6        | 40.0            | 60.0               | -20.0       |
| 15.498     | 20.1        | 19.6        | 39.7            | 60.0               | -20.3       |
| 0.534      | 15.7        | 19.8        | 35.5            | 56.0               | -20.5       |
| 0.572      | 15.7        | 19.8        | 35.5            | 56.0               | -20.5       |
| 0.448      | 16.0        | 19.8        | 35.8            | 56.9               | -21.1       |
| 0.587      | 15.1        | 19.8        | 34.9            | 56.0               | -21.1       |
| 0.385      | 17.2        | 19.8        | 37.0            | 58.2               | -21.2       |
| 15.241     | 19.2        | 19.6        | 38.8            | 60.0               | -21.2       |
| 15.927     | 19.0        | 19.6        | 38.6            | 60.0               | -21.4       |
| 0.672      | 14.6        | 19.8        | 34.4            | 56.0               | -21.6       |
| 17.341     | 18.7        | 19.6        | 38.3            | 60.0               | -21.7       |

Peak Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.213      | 26.1        | 19.7        | 45.8            | 53.1               | -7.2        |
| 0.180      | 27.5        | 19.7        | 47.2            | 54.5               | -7.2        |
| 16.024     | 22.7        | 19.6        | 42.3            | 50.0               | -7.7        |
| 0.161      | 27.9        | 19.7        | 47.6            | 55.4               | -7.8        |
| 0.504      | 18.1        | 19.8        | 37.9            | 46.0               | -8.1        |
| 0.169      | 27.1        | 19.7        | 46.8            | 55.0               | -8.2        |
| 16.554     | 22.0        | 19.6        | 41.6            | 50.0               | -8.4        |
| 0.661      | 17.7        | 19.8        | 37.5            | 46.0               | -8.5        |
| 0.598      | 17.6        | 19.8        | 37.4            | 46.0               | -8.6        |
| 0.620      | 17.6        | 19.8        | 37.4            | 46.0               | -8.6        |
| 16.289     | 21.7        | 19.6        | 41.3            | 50.0               | -8.7        |
| 15.771     | 21.3        | 19.6        | 40.9            | 50.0               | -9.1        |
| 0.150      | 27.1        | 19.6        | 46.7            | 56.0               | -9.3        |
| 17.080     | 20.9        | 19.6        | 40.5            | 50.0               | -9.5        |
| 16.812     | 20.7        | 19.6        | 40.3            | 50.0               | -9.7        |
| 16.991     | 20.4        | 19.6        | 40.0            | 50.0               | -10.0       |
| 15.498     | 20.1        | 19.6        | 39.7            | 50.0               | -10.3       |
| 0.534      | 15.7        | 19.8        | 35.5            | 46.0               | -10.5       |
| 0.572      | 15.7        | 19.8        | 35.5            | 46.0               | -10.5       |
| 0.448      | 16.0        | 19.8        | 35.8            | 46.9               | -11.1       |
| 0.587      | 15.1        | 19.8        | 34.9            | 46.0               | -11.1       |
| 0.385      | 17.2        | 19.8        | 37.0            | 48.2               | -11.2       |
| 15.241     | 19.2        | 19.6        | 38.8            | 50.0               | -11.2       |
| 15.927     | 19.0        | 19.6        | 38.6            | 50.0               | -11.4       |
| 0.672      | 14.6        | 19.8        | 34.4            | 46.0               | -11.6       |
| 17.341     | 18.7        | 19.6        | 38.3            | 50.0               | -11.7       |

## CONCLUSION

Pass



Tested By

|                   |                          |                    |            |
|-------------------|--------------------------|--------------------|------------|
| EUT:              | 444-2251                 | Work Order:        | FOCU0169   |
| Serial Number:    | 02EAF000061              | Date:              | 06/11/2014 |
| Customer:         | Summit Semiconductor LLC | Temperature:       | 24.1°C     |
| Attendees:        | None                     | Relative Humidity: | 42.9%      |
| Customer Project: | None                     | Bar. Pressure:     | 1012.3 mb  |
| Tested By:        | Brandon Hobbs            | Job Site:          | EV07       |
| Power:            | 110VAC/60Hz              | Configuration:     | FOCU0169-3 |

## TEST SPECIFICATIONS

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

## TEST PARAMETERS

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

## COMMENTS

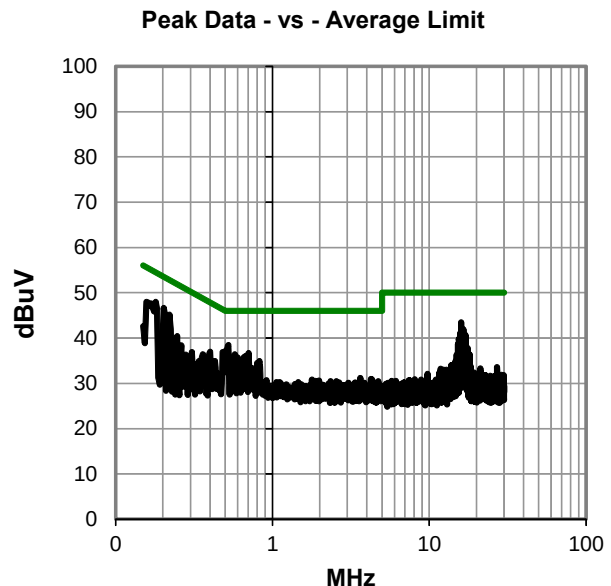
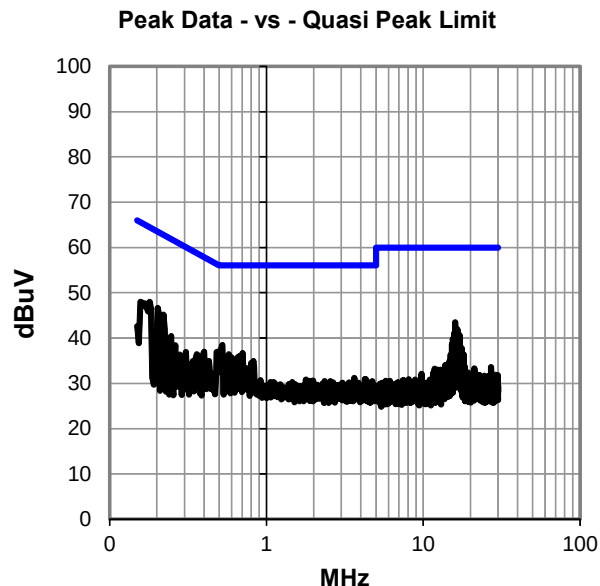
None

## EUT OPERATING MODES

Tx 6Mbps High Channel 64, 5320MHz

## DEVIATIONS FROM TEST STANDARD

None



# 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) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 16.024     | 23.9        | 19.6        | 43.5            | 60.0               | -16.5       |
| 0.202      | 26.9        | 19.7        | 46.6            | 63.5               | -16.9       |
| 0.523      | 18.7        | 19.8        | 38.5            | 56.0               | -17.5       |
| 0.157      | 28.3        | 19.7        | 48.0            | 65.6               | -17.6       |
| 0.221      | 25.4        | 19.7        | 45.1            | 62.8               | -17.6       |
| 16.547     | 22.3        | 19.6        | 41.9            | 60.0               | -18.1       |
| 15.760     | 21.5        | 19.6        | 41.1            | 60.0               | -18.9       |
| 16.812     | 21.3        | 19.6        | 40.9            | 60.0               | -19.1       |
| 0.706      | 16.9        | 19.8        | 36.7            | 56.0               | -19.3       |
| 17.069     | 21.0        | 19.6        | 40.6            | 60.0               | -19.4       |
| 0.482      | 17.1        | 19.8        | 36.9            | 56.3               | -19.4       |
| 16.282     | 21.0        | 19.6        | 40.6            | 60.0               | -19.4       |
| 17.024     | 20.9        | 19.6        | 40.5            | 60.0               | -19.5       |
| 0.575      | 16.6        | 19.8        | 36.4            | 56.0               | -19.6       |
| 0.676      | 16.3        | 19.8        | 36.1            | 56.0               | -19.9       |
| 16.991     | 20.2        | 19.6        | 39.8            | 60.0               | -20.2       |
| 15.498     | 20.2        | 19.6        | 39.8            | 60.0               | -20.2       |
| 0.657      | 16.0        | 19.8        | 35.8            | 56.0               | -20.2       |
| 0.601      | 15.9        | 19.8        | 35.7            | 56.0               | -20.3       |
| 0.549      | 15.7        | 19.8        | 35.5            | 56.0               | -20.5       |
| 0.400      | 17.2        | 19.8        | 37.0            | 57.9               | -20.9       |
| 0.825      | 15.2        | 19.7        | 34.9            | 56.0               | -21.1       |
| 0.616      | 15.0        | 19.8        | 34.8            | 56.0               | -21.2       |
| 15.230     | 19.1        | 19.6        | 38.7            | 60.0               | -21.3       |
| 0.247      | 20.7        | 19.7        | 40.4            | 61.9               | -21.4       |
| 0.799      | 14.8        | 19.7        | 34.5            | 56.0               | -21.5       |

Peak Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 16.024     | 23.9        | 19.6        | 43.5            | 50.0               | -6.5        |
| 0.202      | 26.9        | 19.7        | 46.6            | 53.5               | -6.9        |
| 0.523      | 18.7        | 19.8        | 38.5            | 46.0               | -7.5        |
| 0.157      | 28.3        | 19.7        | 48.0            | 55.6               | -7.6        |
| 0.221      | 25.4        | 19.7        | 45.1            | 52.8               | -7.6        |
| 16.547     | 22.3        | 19.6        | 41.9            | 50.0               | -8.1        |
| 15.760     | 21.5        | 19.6        | 41.1            | 50.0               | -8.9        |
| 16.812     | 21.3        | 19.6        | 40.9            | 50.0               | -9.1        |
| 0.706      | 16.9        | 19.8        | 36.7            | 46.0               | -9.3        |
| 17.069     | 21.0        | 19.6        | 40.6            | 50.0               | -9.4        |
| 0.482      | 17.1        | 19.8        | 36.9            | 46.3               | -9.4        |
| 16.282     | 21.0        | 19.6        | 40.6            | 50.0               | -9.4        |
| 17.024     | 20.9        | 19.6        | 40.5            | 50.0               | -9.5        |
| 0.575      | 16.6        | 19.8        | 36.4            | 46.0               | -9.6        |
| 0.676      | 16.3        | 19.8        | 36.1            | 46.0               | -9.9        |
| 16.991     | 20.2        | 19.6        | 39.8            | 50.0               | -10.2       |
| 15.498     | 20.2        | 19.6        | 39.8            | 50.0               | -10.2       |
| 0.657      | 16.0        | 19.8        | 35.8            | 46.0               | -10.2       |
| 0.601      | 15.9        | 19.8        | 35.7            | 46.0               | -10.3       |
| 0.549      | 15.7        | 19.8        | 35.5            | 46.0               | -10.5       |
| 0.400      | 17.2        | 19.8        | 37.0            | 47.9               | -10.9       |
| 0.825      | 15.2        | 19.7        | 34.9            | 46.0               | -11.1       |
| 0.616      | 15.0        | 19.8        | 34.8            | 46.0               | -11.2       |
| 15.230     | 19.1        | 19.6        | 38.7            | 50.0               | -11.3       |
| 0.247      | 20.7        | 19.7        | 40.4            | 51.9               | -11.4       |
| 0.799      | 14.8        | 19.7        | 34.5            | 46.0               | -11.5       |

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

|                   |                          |                    |            |
|-------------------|--------------------------|--------------------|------------|
| EUT:              | 444-2251                 | Work Order:        | FOCU0169   |
| Serial Number:    | 02EAF000061              | Date:              | 06/11/2014 |
| Customer:         | Summit Semiconductor LLC | Temperature:       | 24.1°C     |
| Attendees:        | None                     | Relative Humidity: | 42.9%      |
| Customer Project: | None                     | Bar. Pressure:     | 1012.3 mb  |
| Tested By:        | Brandon Hobbs            | Job Site:          | EV07       |
| Power:            | 110VAC/60Hz              | Configuration:     | FOCU0169-3 |

## TEST SPECIFICATIONS

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

## TEST PARAMETERS

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

## COMMENTS

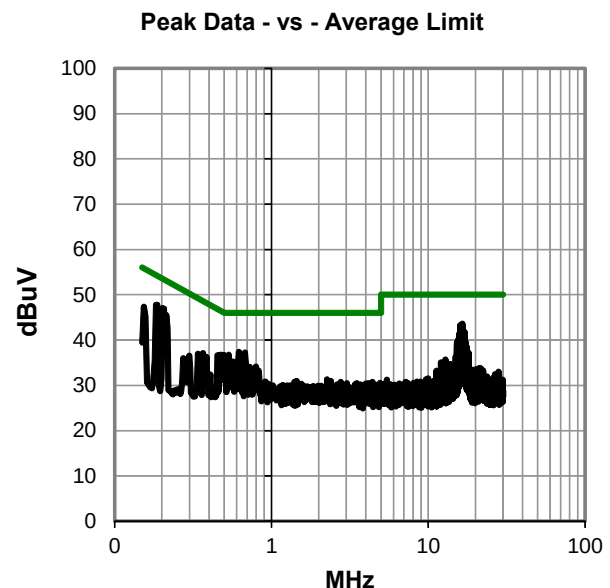
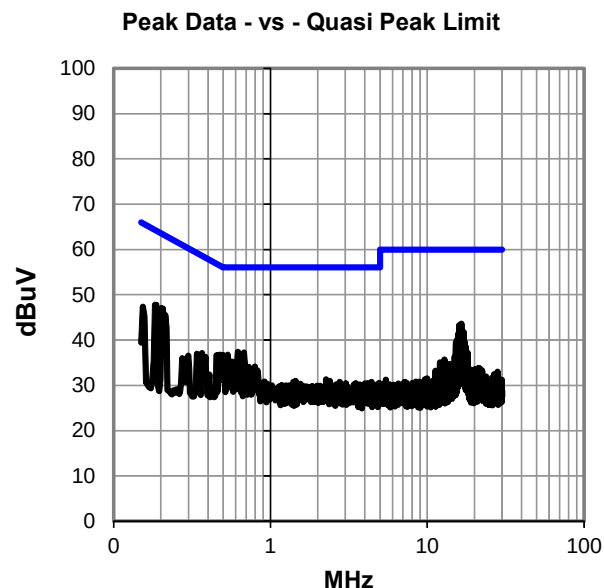
None

## EUT OPERATING MODES

Tx 6Mbps High Channel 64, 5320MHz

## DEVIATIONS FROM TEST STANDARD

None



# 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) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 16.543     | 24.0        | 19.6        | 43.6            | 60.0               | -16.4       |
| 0.202      | 27.3        | 19.7        | 47.0            | 63.5               | -16.5       |
| 0.184      | 28.0        | 19.7        | 47.7            | 64.3               | -16.6       |
| 16.282     | 23.7        | 19.6        | 43.3            | 60.0               | -16.7       |
| 16.024     | 23.7        | 19.6        | 43.3            | 60.0               | -16.7       |
| 0.213      | 25.8        | 19.7        | 45.5            | 63.1               | -17.5       |
| 17.069     | 22.2        | 19.6        | 41.8            | 60.0               | -18.2       |
| 16.812     | 22.2        | 19.6        | 41.8            | 60.0               | -18.2       |
| 0.154      | 27.7        | 19.7        | 47.4            | 65.8               | -18.4       |
| 17.017     | 21.9        | 19.6        | 41.5            | 60.0               | -18.5       |
| 16.991     | 21.8        | 19.6        | 41.4            | 60.0               | -18.6       |
| 15.760     | 21.8        | 19.6        | 41.4            | 60.0               | -18.6       |
| 0.620      | 17.6        | 19.8        | 37.4            | 56.0               | -18.6       |
| 0.680      | 17.5        | 19.8        | 37.3            | 56.0               | -18.7       |
| 0.534      | 17.0        | 19.8        | 36.8            | 56.0               | -19.2       |
| 0.501      | 16.9        | 19.8        | 36.7            | 56.0               | -19.3       |
| 0.475      | 17.0        | 19.8        | 36.8            | 56.4               | -19.6       |
| 0.490      | 16.6        | 19.8        | 36.4            | 56.2               | -19.8       |
| 16.043     | 20.6        | 19.6        | 40.2            | 60.0               | -19.8       |
| 15.924     | 20.6        | 19.6        | 40.2            | 60.0               | -19.8       |
| 15.491     | 20.4        | 19.6        | 40.0            | 60.0               | -20.0       |
| 0.456      | 16.9        | 19.8        | 36.7            | 56.8               | -20.1       |
| 17.330     | 20.0        | 19.6        | 39.6            | 60.0               | -20.4       |
| 15.226     | 19.9        | 19.6        | 39.5            | 60.0               | -20.5       |
| 0.564      | 15.4        | 19.8        | 35.2            | 56.0               | -20.8       |
| 15.976     | 19.2        | 19.6        | 38.8            | 60.0               | -21.2       |

Peak Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 16.543     | 24.0        | 19.6        | 43.6            | 50.0               | -6.4        |
| 0.202      | 27.3        | 19.7        | 47.0            | 53.5               | -6.5        |
| 0.184      | 28.0        | 19.7        | 47.7            | 54.3               | -6.6        |
| 16.282     | 23.7        | 19.6        | 43.3            | 50.0               | -6.7        |
| 16.024     | 23.7        | 19.6        | 43.3            | 50.0               | -6.7        |
| 0.213      | 25.8        | 19.7        | 45.5            | 53.1               | -7.5        |
| 17.069     | 22.2        | 19.6        | 41.8            | 50.0               | -8.2        |
| 16.812     | 22.2        | 19.6        | 41.8            | 50.0               | -8.2        |
| 0.154      | 27.7        | 19.7        | 47.4            | 55.8               | -8.4        |
| 17.017     | 21.9        | 19.6        | 41.5            | 50.0               | -8.5        |
| 16.991     | 21.8        | 19.6        | 41.4            | 50.0               | -8.6        |
| 15.760     | 21.8        | 19.6        | 41.4            | 50.0               | -8.6        |
| 0.620      | 17.6        | 19.8        | 37.4            | 46.0               | -8.6        |
| 0.680      | 17.5        | 19.8        | 37.3            | 46.0               | -8.7        |
| 0.534      | 17.0        | 19.8        | 36.8            | 46.0               | -9.2        |
| 0.501      | 16.9        | 19.8        | 36.7            | 46.0               | -9.3        |
| 0.475      | 17.0        | 19.8        | 36.8            | 46.4               | -9.6        |
| 0.490      | 16.6        | 19.8        | 36.4            | 46.2               | -9.8        |
| 16.043     | 20.6        | 19.6        | 40.2            | 50.0               | -9.8        |
| 15.924     | 20.6        | 19.6        | 40.2            | 50.0               | -9.8        |
| 15.491     | 20.4        | 19.6        | 40.0            | 50.0               | -10.0       |
| 0.456      | 16.9        | 19.8        | 36.7            | 46.8               | -10.1       |
| 17.330     | 20.0        | 19.6        | 39.6            | 50.0               | -10.4       |
| 15.226     | 19.9        | 19.6        | 39.5            | 50.0               | -10.5       |
| 0.564      | 15.4        | 19.8        | 35.2            | 46.0               | -10.8       |
| 15.976     | 19.2        | 19.6        | 38.8            | 50.0               | -11.2       |

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

|                   |                          |                    |            |
|-------------------|--------------------------|--------------------|------------|
| EUT:              | 444-2251                 | Work Order:        | FOCU0169   |
| Serial Number:    | 02EAF000061              | Date:              | 06/11/2014 |
| Customer:         | Summit Semiconductor LLC | Temperature:       | 24.1°C     |
| Attendees:        | None                     | Relative Humidity: | 42.9%      |
| Customer Project: | None                     | Bar. Pressure:     | 1012.3 mb  |
| Tested By:        | Brandon Hobbs            | Job Site:          | EV07       |
| Power:            | 110VAC/60Hz              | Configuration:     | FOCU0169-3 |

## TEST SPECIFICATIONS

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

## TEST PARAMETERS

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

## COMMENTS

None

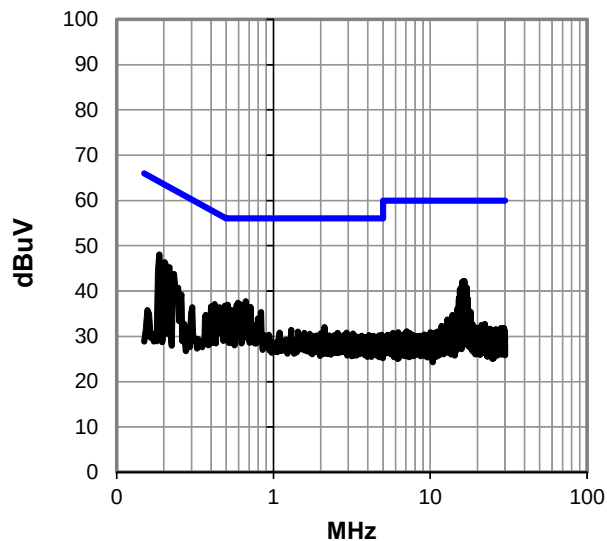
## EUT OPERATING MODES

Tx 6Mbps Low Channel 100, 5500MHz

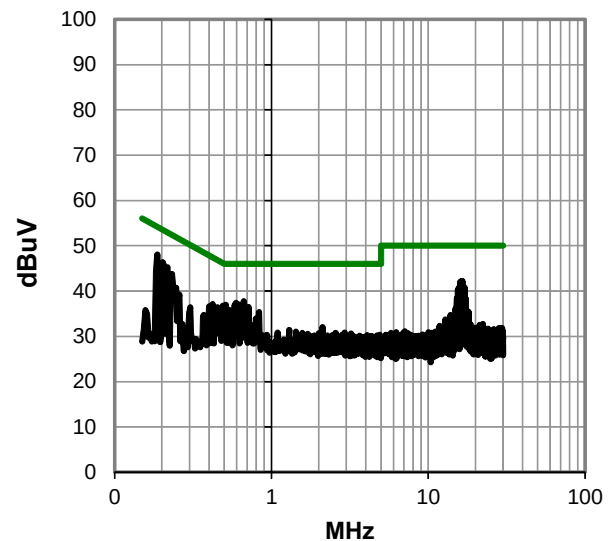
## DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



# POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #9

Peak Data - vs - Quasi Peak Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.187      | 28.3        | 19.7        | 48.0            | 64.2               | -16.1       |
| 0.202      | 26.6        | 19.7        | 46.3            | 63.5               | -17.2       |
| 0.217      | 25.5        | 19.7        | 45.2            | 62.9               | -17.7       |
| 16.539     | 22.6        | 19.6        | 42.2            | 60.0               | -17.8       |
| 16.274     | 22.6        | 19.6        | 42.2            | 60.0               | -17.8       |
| 16.017     | 22.4        | 19.6        | 42.0            | 60.0               | -18.0       |
| 0.665      | 18.0        | 19.8        | 37.8            | 56.0               | -18.2       |
| 0.594      | 17.6        | 19.8        | 37.4            | 56.0               | -18.6       |
| 0.232      | 24.0        | 19.7        | 43.7            | 62.4               | -18.6       |
| 0.616      | 17.3        | 19.8        | 37.1            | 56.0               | -18.9       |
| 0.512      | 17.2        | 19.8        | 37.0            | 56.0               | -19.0       |
| 0.583      | 17.2        | 19.8        | 37.0            | 56.0               | -19.0       |
| 17.065     | 21.2        | 19.6        | 40.8            | 60.0               | -19.2       |
| 15.752     | 21.2        | 19.6        | 40.8            | 60.0               | -19.2       |
| 0.490      | 17.0        | 19.8        | 36.8            | 56.2               | -19.4       |
| 16.797     | 20.9        | 19.6        | 40.5            | 60.0               | -19.5       |
| 0.713      | 16.7        | 19.8        | 36.5            | 56.0               | -19.5       |
| 15.487     | 20.8        | 19.6        | 40.4            | 60.0               | -19.6       |
| 16.998     | 20.3        | 19.6        | 39.9            | 60.0               | -20.1       |
| 0.684      | 16.1        | 19.8        | 35.9            | 56.0               | -20.1       |
| 0.542      | 16.0        | 19.8        | 35.8            | 56.0               | -20.2       |
| 0.422      | 17.3        | 19.8        | 37.1            | 57.4               | -20.3       |
| 0.463      | 16.5        | 19.8        | 36.3            | 56.6               | -20.3       |
| 0.557      | 15.8        | 19.8        | 35.6            | 56.0               | -20.4       |
| 0.452      | 16.6        | 19.8        | 36.4            | 56.8               | -20.4       |
| 0.531      | 15.6        | 19.8        | 35.4            | 56.0               | -20.6       |

Peak Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.187      | 28.3        | 19.7        | 48.0            | 54.2               | -6.1        |
| 0.202      | 26.6        | 19.7        | 46.3            | 53.5               | -7.2        |
| 0.217      | 25.5        | 19.7        | 45.2            | 52.9               | -7.7        |
| 16.539     | 22.6        | 19.6        | 42.2            | 50.0               | -7.8        |
| 16.274     | 22.6        | 19.6        | 42.2            | 50.0               | -7.8        |
| 16.017     | 22.4        | 19.6        | 42.0            | 50.0               | -8.0        |
| 0.665      | 18.0        | 19.8        | 37.8            | 46.0               | -8.2        |
| 0.594      | 17.6        | 19.8        | 37.4            | 46.0               | -8.6        |
| 0.232      | 24.0        | 19.7        | 43.7            | 52.4               | -8.6        |
| 0.616      | 17.3        | 19.8        | 37.1            | 46.0               | -8.9        |
| 0.512      | 17.2        | 19.8        | 37.0            | 46.0               | -9.0        |
| 0.583      | 17.2        | 19.8        | 37.0            | 46.0               | -9.0        |
| 17.065     | 21.2        | 19.6        | 40.8            | 50.0               | -9.2        |
| 15.752     | 21.2        | 19.6        | 40.8            | 50.0               | -9.2        |
| 0.490      | 17.0        | 19.8        | 36.8            | 46.2               | -9.4        |
| 16.797     | 20.9        | 19.6        | 40.5            | 50.0               | -9.5        |
| 0.713      | 16.7        | 19.8        | 36.5            | 46.0               | -9.5        |
| 15.487     | 20.8        | 19.6        | 40.4            | 50.0               | -9.6        |
| 16.998     | 20.3        | 19.6        | 39.9            | 50.0               | -10.1       |
| 0.684      | 16.1        | 19.8        | 35.9            | 46.0               | -10.1       |
| 0.542      | 16.0        | 19.8        | 35.8            | 46.0               | -10.2       |
| 0.422      | 17.3        | 19.8        | 37.1            | 47.4               | -10.3       |
| 0.463      | 16.5        | 19.8        | 36.3            | 46.6               | -10.3       |
| 0.557      | 15.8        | 19.8        | 35.6            | 46.0               | -10.4       |
| 0.452      | 16.6        | 19.8        | 36.4            | 46.8               | -10.4       |
| 0.531      | 15.6        | 19.8        | 35.4            | 46.0               | -10.6       |

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

|                   |                          |                    |            |
|-------------------|--------------------------|--------------------|------------|
| EUT:              | 444-2251                 | Work Order:        | FOCU0169   |
| Serial Number:    | 02EAF000061              | Date:              | 06/11/2014 |
| Customer:         | Summit Semiconductor LLC | Temperature:       | 24.1°C     |
| Attendees:        | None                     | Relative Humidity: | 42.9%      |
| Customer Project: | None                     | Bar. Pressure:     | 1012.3 mb  |
| Tested By:        | Brandon Hobbs            | Job Site:          | EV07       |
| Power:            | 110VAC/60Hz              | Configuration:     | FOCU0169-3 |

## TEST SPECIFICATIONS

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

## TEST PARAMETERS

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

## COMMENTS

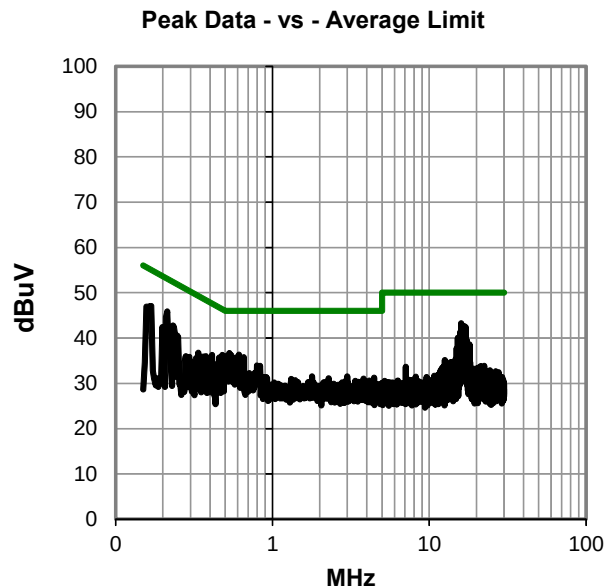
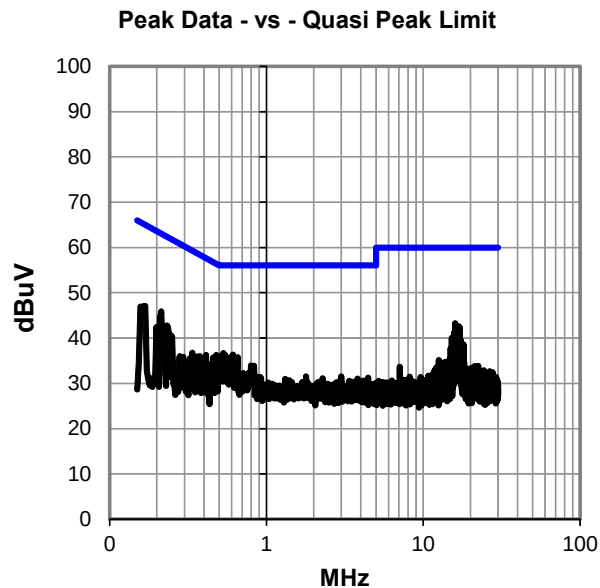
None

## EUT OPERATING MODES

Tx 6Mbps Low Channel 100, 5500MHz

## DEVIATIONS FROM TEST STANDARD

None



# POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #10

Peak Data - vs - Quasi Peak Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 16.010     | 23.7        | 19.6        | 43.3            | 60.0               | -16.7       |
| 16.274     | 23.2        | 19.6        | 42.8            | 60.0               | -17.2       |
| 0.213      | 26.1        | 19.7        | 45.8            | 63.1               | -17.2       |
| 16.800     | 23.0        | 19.6        | 42.6            | 60.0               | -17.4       |
| 17.062     | 22.8        | 19.6        | 42.4            | 60.0               | -17.6       |
| 16.536     | 22.7        | 19.6        | 42.3            | 60.0               | -17.7       |
| 0.169      | 27.3        | 19.7        | 47.0            | 65.0               | -18.0       |
| 17.021     | 22.2        | 19.6        | 41.8            | 60.0               | -18.2       |
| 15.748     | 21.7        | 19.6        | 41.3            | 60.0               | -18.7       |
| 16.980     | 21.3        | 19.6        | 40.9            | 60.0               | -19.1       |
| 0.531      | 16.9        | 19.8        | 36.7            | 56.0               | -19.3       |
| 0.613      | 16.6        | 19.8        | 36.4            | 56.0               | -19.6       |
| 0.232      | 23.0        | 19.7        | 42.7            | 62.4               | -19.6       |
| 15.226     | 20.5        | 19.6        | 40.1            | 60.0               | -19.9       |
| 0.504      | 16.2        | 19.8        | 36.0            | 56.0               | -20.0       |
| 0.478      | 16.5        | 19.8        | 36.3            | 56.4               | -20.1       |
| 15.484     | 20.3        | 19.6        | 39.9            | 60.0               | -20.1       |
| 15.931     | 20.2        | 19.6        | 39.8            | 60.0               | -20.2       |
| 0.657      | 16.0        | 19.8        | 35.8            | 56.0               | -20.2       |
| 17.327     | 20.0        | 19.6        | 39.6            | 60.0               | -20.4       |
| 15.946     | 20.0        | 19.6        | 39.6            | 60.0               | -20.4       |
| 0.221      | 22.6        | 19.7        | 42.3            | 62.8               | -20.4       |
| 0.631      | 15.3        | 19.8        | 35.1            | 56.0               | -20.9       |
| 0.456      | 15.9        | 19.8        | 35.7            | 56.8               | -21.1       |
| 0.572      | 15.0        | 19.8        | 34.8            | 56.0               | -21.2       |
| 0.199      | 22.7        | 19.7        | 42.4            | 63.7               | -21.2       |

Peak Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 16.010     | 23.7        | 19.6        | 43.3            | 50.0               | -6.7        |
| 16.274     | 23.2        | 19.6        | 42.8            | 50.0               | -7.2        |
| 0.213      | 26.1        | 19.7        | 45.8            | 53.1               | -7.2        |
| 16.800     | 23.0        | 19.6        | 42.6            | 50.0               | -7.4        |
| 17.062     | 22.8        | 19.6        | 42.4            | 50.0               | -7.6        |
| 16.536     | 22.7        | 19.6        | 42.3            | 50.0               | -7.7        |
| 0.169      | 27.3        | 19.7        | 47.0            | 55.0               | -8.0        |
| 17.021     | 22.2        | 19.6        | 41.8            | 50.0               | -8.2        |
| 15.748     | 21.7        | 19.6        | 41.3            | 50.0               | -8.7        |
| 16.980     | 21.3        | 19.6        | 40.9            | 50.0               | -9.1        |
| 0.531      | 16.9        | 19.8        | 36.7            | 46.0               | -9.3        |
| 0.613      | 16.6        | 19.8        | 36.4            | 46.0               | -9.6        |
| 0.232      | 23.0        | 19.7        | 42.7            | 52.4               | -9.6        |
| 15.226     | 20.5        | 19.6        | 40.1            | 50.0               | -9.9        |
| 0.504      | 16.2        | 19.8        | 36.0            | 46.0               | -10.0       |
| 0.478      | 16.5        | 19.8        | 36.3            | 46.4               | -10.1       |
| 15.484     | 20.3        | 19.6        | 39.9            | 50.0               | -10.1       |
| 15.931     | 20.2        | 19.6        | 39.8            | 50.0               | -10.2       |
| 0.657      | 16.0        | 19.8        | 35.8            | 46.0               | -10.2       |
| 17.327     | 20.0        | 19.6        | 39.6            | 50.0               | -10.4       |
| 15.946     | 20.0        | 19.6        | 39.6            | 50.0               | -10.4       |
| 0.221      | 22.6        | 19.7        | 42.3            | 52.8               | -10.4       |
| 0.631      | 15.3        | 19.8        | 35.1            | 46.0               | -10.9       |
| 0.456      | 15.9        | 19.8        | 35.7            | 46.8               | -11.1       |
| 0.572      | 15.0        | 19.8        | 34.8            | 46.0               | -11.2       |
| 0.199      | 22.7        | 19.7        | 42.4            | 53.7               | -11.2       |

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

|                   |                          |                    |            |
|-------------------|--------------------------|--------------------|------------|
| EUT:              | 444-2251                 | Work Order:        | FOCU0169   |
| Serial Number:    | 02EAF000061              | Date:              | 06/11/2014 |
| Customer:         | Summit Semiconductor LLC | Temperature:       | 24.1°C     |
| Attendees:        | None                     | Relative Humidity: | 42.9%      |
| Customer Project: | None                     | Bar. Pressure:     | 1012.3 mb  |
| Tested By:        | Brandon Hobbs            | Job Site:          | EV07       |
| Power:            | 110VAC/60Hz              | Configuration:     | FOCU0169-3 |

## TEST SPECIFICATIONS

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

## TEST PARAMETERS

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

## COMMENTS

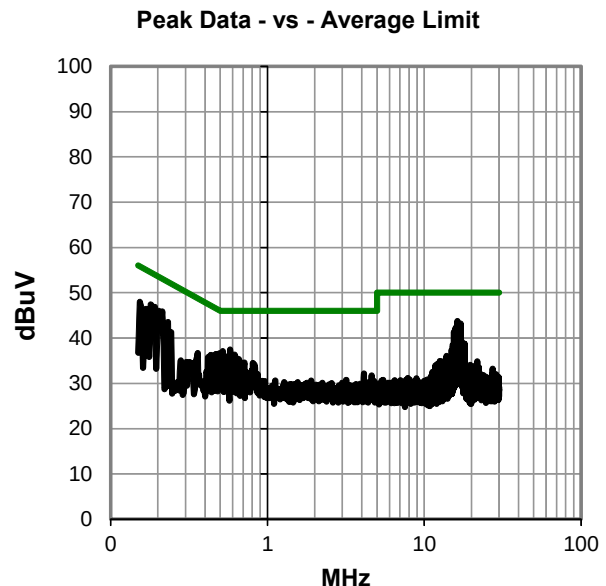
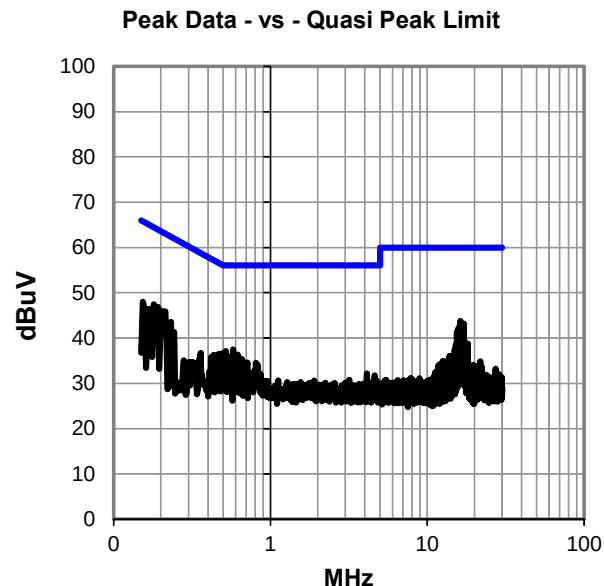
None

## EUT OPERATING MODES

Tx 6Mbps Mid Channel 116, 5580MHz

## DEVIATIONS FROM TEST STANDARD

None



# 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) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 16.271     | 24.2        | 19.6        | 43.8            | 60.0               | -16.2       |
| 16.532     | 23.7        | 19.6        | 43.3            | 60.0               | -16.7       |
| 17.054     | 23.6        | 19.6        | 43.2            | 60.0               | -16.8       |
| 0.180      | 27.7        | 19.7        | 47.4            | 64.5               | -17.0       |
| 0.213      | 26.1        | 19.7        | 45.8            | 63.1               | -17.2       |
| 0.202      | 26.3        | 19.7        | 46.0            | 63.5               | -17.5       |
| 16.006     | 22.8        | 19.6        | 42.4            | 60.0               | -17.6       |
| 0.154      | 28.3        | 19.7        | 48.0            | 65.8               | -17.8       |
| 16.994     | 22.5        | 19.6        | 42.1            | 60.0               | -17.9       |
| 15.745     | 22.5        | 19.6        | 42.1            | 60.0               | -17.9       |
| 16.793     | 22.0        | 19.6        | 41.6            | 60.0               | -18.4       |
| 0.579      | 17.7        | 19.8        | 37.5            | 56.0               | -18.5       |
| 0.169      | 26.7        | 19.7        | 46.4            | 65.0               | -18.6       |
| 15.484     | 21.8        | 19.6        | 41.4            | 60.0               | -18.6       |
| 0.232      | 23.8        | 19.7        | 43.5            | 62.4               | -18.8       |
| 0.519      | 17.3        | 19.8        | 37.1            | 56.0               | -18.9       |
| 15.924     | 21.2        | 19.6        | 40.8            | 60.0               | -19.2       |
| 0.616      | 16.6        | 19.8        | 36.4            | 56.0               | -19.6       |
| 17.091     | 20.7        | 19.6        | 40.3            | 60.0               | -19.7       |
| 17.017     | 20.6        | 19.6        | 40.2            | 60.0               | -19.8       |
| 0.467      | 16.7        | 19.8        | 36.5            | 56.6               | -20.1       |
| 0.534      | 16.1        | 19.8        | 35.9            | 56.0               | -20.1       |
| 0.542      | 16.1        | 19.8        | 35.9            | 56.0               | -20.1       |
| 0.657      | 15.6        | 19.8        | 35.4            | 56.0               | -20.6       |
| 17.323     | 19.7        | 19.6        | 39.3            | 60.0               | -20.7       |
| 0.240      | 21.6        | 19.7        | 41.3            | 62.1               | -20.8       |

Peak Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 16.271     | 24.2        | 19.6        | 43.8            | 50.0               | -6.2        |
| 16.532     | 23.7        | 19.6        | 43.3            | 50.0               | -6.7        |
| 17.054     | 23.6        | 19.6        | 43.2            | 50.0               | -6.8        |
| 0.180      | 27.7        | 19.7        | 47.4            | 54.5               | -7.0        |
| 0.213      | 26.1        | 19.7        | 45.8            | 53.1               | -7.2        |
| 0.202      | 26.3        | 19.7        | 46.0            | 53.5               | -7.5        |
| 16.006     | 22.8        | 19.6        | 42.4            | 50.0               | -7.6        |
| 0.154      | 28.3        | 19.7        | 48.0            | 55.8               | -7.8        |
| 16.994     | 22.5        | 19.6        | 42.1            | 50.0               | -7.9        |
| 15.745     | 22.5        | 19.6        | 42.1            | 50.0               | -7.9        |
| 16.793     | 22.0        | 19.6        | 41.6            | 50.0               | -8.4        |
| 0.579      | 17.7        | 19.8        | 37.5            | 46.0               | -8.5        |
| 0.169      | 26.7        | 19.7        | 46.4            | 55.0               | -8.6        |
| 15.484     | 21.8        | 19.6        | 41.4            | 50.0               | -8.6        |
| 0.232      | 23.8        | 19.7        | 43.5            | 52.4               | -8.8        |
| 0.519      | 17.3        | 19.8        | 37.1            | 46.0               | -8.9        |
| 15.924     | 21.2        | 19.6        | 40.8            | 50.0               | -9.2        |
| 0.616      | 16.6        | 19.8        | 36.4            | 46.0               | -9.6        |
| 17.091     | 20.7        | 19.6        | 40.3            | 50.0               | -9.7        |
| 17.017     | 20.6        | 19.6        | 40.2            | 50.0               | -9.8        |
| 0.467      | 16.7        | 19.8        | 36.5            | 46.6               | -10.1       |
| 0.534      | 16.1        | 19.8        | 35.9            | 46.0               | -10.1       |
| 0.542      | 16.1        | 19.8        | 35.9            | 46.0               | -10.1       |
| 0.657      | 15.6        | 19.8        | 35.4            | 46.0               | -10.6       |
| 17.323     | 19.7        | 19.6        | 39.3            | 50.0               | -10.7       |
| 0.240      | 21.6        | 19.7        | 41.3            | 52.1               | -10.8       |

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

|                   |                          |                    |            |
|-------------------|--------------------------|--------------------|------------|
| EUT:              | 444-2251                 | Work Order:        | FOCU0169   |
| Serial Number:    | 02EAF000061              | Date:              | 06/11/2014 |
| Customer:         | Summit Semiconductor LLC | Temperature:       | 24.1°C     |
| Attendees:        | None                     | Relative Humidity: | 42.9%      |
| Customer Project: | None                     | Bar. Pressure:     | 1012.3 mb  |
| Tested By:        | Brandon Hobbs            | Job Site:          | EV07       |
| Power:            | 110VAC/60Hz              | Configuration:     | FOCU0169-3 |

## TEST SPECIFICATIONS

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

## TEST PARAMETERS

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

## COMMENTS

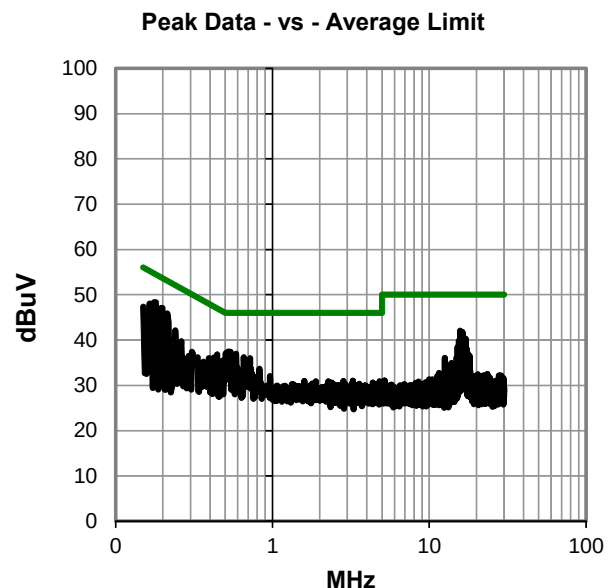
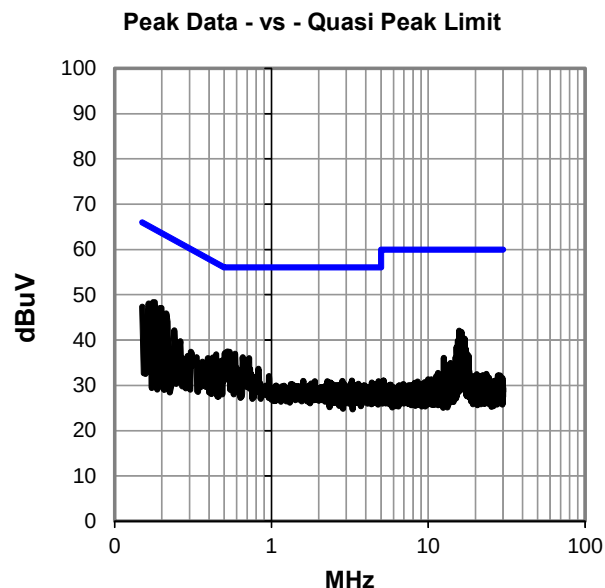
None

## EUT OPERATING MODES

Tx 6Mbps Mid Channel 116, 5580MHz

## DEVIATIONS FROM TEST STANDARD

None



# 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) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.180      | 28.6        | 19.7        | 48.3            | 64.5               | -16.1       |
| 0.195      | 27.3        | 19.7        | 47.0            | 63.8               | -16.8       |
| 0.165      | 28.3        | 19.7        | 48.0            | 65.2               | -17.2       |
| 0.213      | 26.1        | 19.7        | 45.8            | 63.1               | -17.2       |
| 15.741     | 22.5        | 19.6        | 42.1            | 60.0               | -17.9       |
| 16.263     | 22.2        | 19.6        | 41.8            | 60.0               | -18.2       |
| 0.523      | 17.7        | 19.8        | 37.5            | 56.0               | -18.5       |
| 0.538      | 17.6        | 19.8        | 37.4            | 56.0               | -18.6       |
| 0.150      | 27.7        | 19.6        | 47.3            | 66.0               | -18.7       |
| 16.002     | 21.6        | 19.6        | 41.2            | 60.0               | -18.8       |
| 0.504      | 17.3        | 19.8        | 37.1            | 56.0               | -18.9       |
| 0.587      | 17.2        | 19.8        | 37.0            | 56.0               | -19.0       |
| 16.524     | 20.9        | 19.6        | 40.5            | 60.0               | -19.5       |
| 16.789     | 20.8        | 19.6        | 40.4            | 60.0               | -19.6       |
| 17.054     | 20.7        | 19.6        | 40.3            | 60.0               | -19.7       |
| 0.657      | 16.4        | 19.8        | 36.2            | 56.0               | -19.8       |
| 0.240      | 22.4        | 19.7        | 42.1            | 62.1               | -20.0       |
| 0.721      | 16.2        | 19.8        | 36.0            | 56.0               | -20.0       |
| 17.021     | 20.3        | 19.6        | 39.9            | 60.0               | -20.1       |
| 15.484     | 20.3        | 19.6        | 39.9            | 60.0               | -20.1       |
| 0.445      | 17.0        | 19.8        | 36.8            | 57.0               | -20.2       |
| 0.691      | 15.7        | 19.8        | 35.5            | 56.0               | -20.5       |
| 16.972     | 19.8        | 19.6        | 39.4            | 60.0               | -20.6       |
| 0.493      | 15.7        | 19.8        | 35.5            | 56.1               | -20.6       |
| 0.557      | 15.3        | 19.8        | 35.1            | 56.0               | -20.9       |
| 0.672      | 15.3        | 19.8        | 35.1            | 56.0               | -20.9       |

Peak Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.180      | 28.6        | 19.7        | 48.3            | 54.5               | -6.1        |
| 0.195      | 27.3        | 19.7        | 47.0            | 53.8               | -6.8        |
| 0.165      | 28.3        | 19.7        | 48.0            | 55.2               | -7.2        |
| 0.213      | 26.1        | 19.7        | 45.8            | 53.1               | -7.2        |
| 15.741     | 22.5        | 19.6        | 42.1            | 50.0               | -7.9        |
| 16.263     | 22.2        | 19.6        | 41.8            | 50.0               | -8.2        |
| 0.523      | 17.7        | 19.8        | 37.5            | 46.0               | -8.5        |
| 0.538      | 17.6        | 19.8        | 37.4            | 46.0               | -8.6        |
| 0.150      | 27.7        | 19.6        | 47.3            | 56.0               | -8.7        |
| 16.002     | 21.6        | 19.6        | 41.2            | 50.0               | -8.8        |
| 0.504      | 17.3        | 19.8        | 37.1            | 46.0               | -8.9        |
| 0.587      | 17.2        | 19.8        | 37.0            | 46.0               | -9.0        |
| 16.524     | 20.9        | 19.6        | 40.5            | 50.0               | -9.5        |
| 16.789     | 20.8        | 19.6        | 40.4            | 50.0               | -9.6        |
| 17.054     | 20.7        | 19.6        | 40.3            | 50.0               | -9.7        |
| 0.657      | 16.4        | 19.8        | 36.2            | 46.0               | -9.8        |
| 0.240      | 22.4        | 19.7        | 42.1            | 52.1               | -10.0       |
| 0.721      | 16.2        | 19.8        | 36.0            | 46.0               | -10.0       |
| 17.021     | 20.3        | 19.6        | 39.9            | 50.0               | -10.1       |
| 15.484     | 20.3        | 19.6        | 39.9            | 50.0               | -10.1       |
| 0.445      | 17.0        | 19.8        | 36.8            | 47.0               | -10.2       |
| 0.691      | 15.7        | 19.8        | 35.5            | 46.0               | -10.5       |
| 16.972     | 19.8        | 19.6        | 39.4            | 50.0               | -10.6       |
| 0.493      | 15.7        | 19.8        | 35.5            | 46.1               | -10.6       |
| 0.557      | 15.3        | 19.8        | 35.1            | 46.0               | -10.9       |
| 0.672      | 15.3        | 19.8        | 35.1            | 46.0               | -10.9       |

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

|                   |                          |                    |            |
|-------------------|--------------------------|--------------------|------------|
| EUT:              | 444-2251                 | Work Order:        | FOCU0169   |
| Serial Number:    | 02EAF000061              | Date:              | 06/11/2014 |
| Customer:         | Summit Semiconductor LLC | Temperature:       | 24.1°C     |
| Attendees:        | None                     | Relative Humidity: | 42.9%      |
| Customer Project: | None                     | Bar. Pressure:     | 1012.3 mb  |
| Tested By:        | Brandon Hobbs            | Job Site:          | EV07       |
| Power:            | 110VAC/60Hz              | Configuration:     | FOCU0169-3 |

## TEST SPECIFICATIONS

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

## TEST PARAMETERS

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

## COMMENTS

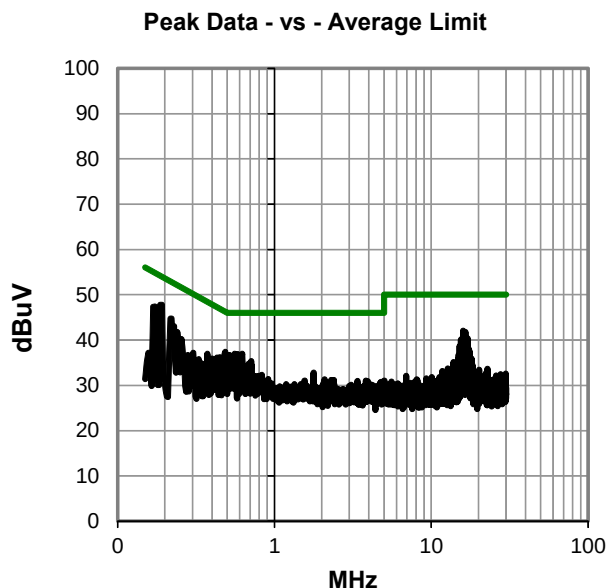
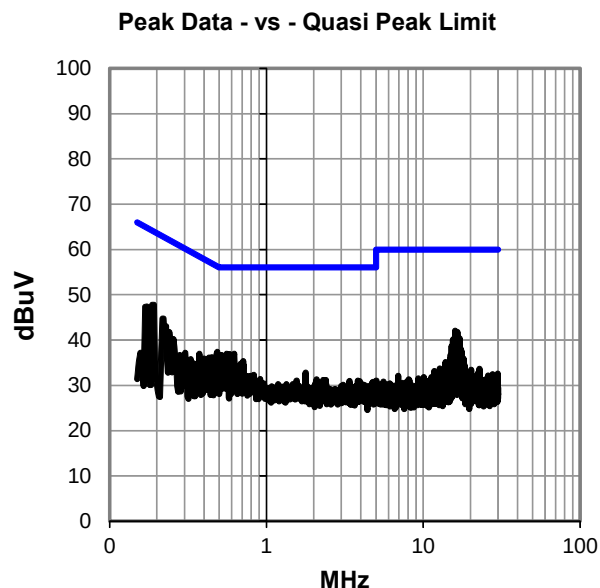
None

## EUT OPERATING MODES

Tx 6Mbps High Channel 140, 5700MHz

## DEVIATIONS FROM TEST STANDARD

None



# 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) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.187      | 28.0        | 19.7        | 47.7            | 64.2               | -16.4       |
| 0.172      | 27.7        | 19.7        | 47.4            | 64.8               | -17.4       |
| 15.998     | 22.5        | 19.6        | 42.1            | 60.0               | -17.9       |
| 0.221      | 25.0        | 19.7        | 44.7            | 62.8               | -18.0       |
| 16.528     | 22.2        | 19.6        | 41.8            | 60.0               | -18.2       |
| 0.486      | 17.6        | 19.8        | 37.4            | 56.2               | -18.8       |
| 0.557      | 17.2        | 19.8        | 37.0            | 56.0               | -19.0       |
| 0.624      | 17.2        | 19.8        | 37.0            | 56.0               | -19.0       |
| 0.583      | 17.1        | 19.8        | 36.9            | 56.0               | -19.1       |
| 0.516      | 16.9        | 19.8        | 36.7            | 56.0               | -19.3       |
| 16.267     | 21.0        | 19.6        | 40.6            | 60.0               | -19.4       |
| 0.228      | 23.3        | 19.7        | 43.0            | 62.5               | -19.5       |
| 17.050     | 20.8        | 19.6        | 40.4            | 60.0               | -19.6       |
| 15.737     | 20.8        | 19.6        | 40.4            | 60.0               | -19.6       |
| 15.476     | 20.5        | 19.6        | 40.1            | 60.0               | -19.9       |
| 0.531      | 16.0        | 19.8        | 35.8            | 56.0               | -20.2       |
| 0.240      | 22.0        | 19.7        | 41.7            | 62.1               | -20.4       |
| 16.789     | 19.8        | 19.6        | 39.4            | 60.0               | -20.6       |
| 0.710      | 15.6        | 19.8        | 35.4            | 56.0               | -20.6       |
| 0.448      | 16.4        | 19.8        | 36.2            | 56.9               | -20.7       |
| 16.991     | 19.5        | 19.6        | 39.1            | 60.0               | -20.9       |
| 0.430      | 16.3        | 19.8        | 36.1            | 57.3               | -21.2       |
| 0.684      | 15.0        | 19.8        | 34.8            | 56.0               | -21.2       |
| 15.924     | 19.1        | 19.6        | 38.7            | 60.0               | -21.3       |
| 15.215     | 19.1        | 19.6        | 38.7            | 60.0               | -21.3       |
| 0.601      | 14.9        | 19.8        | 34.7            | 56.0               | -21.3       |

Peak Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.187      | 28.0        | 19.7        | 47.7            | 54.2               | -6.4        |
| 0.172      | 27.7        | 19.7        | 47.4            | 54.8               | -7.4        |
| 15.998     | 22.5        | 19.6        | 42.1            | 50.0               | -7.9        |
| 0.221      | 25.0        | 19.7        | 44.7            | 52.8               | -8.0        |
| 16.528     | 22.2        | 19.6        | 41.8            | 50.0               | -8.2        |
| 0.486      | 17.6        | 19.8        | 37.4            | 46.2               | -8.8        |
| 0.557      | 17.2        | 19.8        | 37.0            | 46.0               | -9.0        |
| 0.624      | 17.2        | 19.8        | 37.0            | 46.0               | -9.0        |
| 0.583      | 17.1        | 19.8        | 36.9            | 46.0               | -9.1        |
| 0.516      | 16.9        | 19.8        | 36.7            | 46.0               | -9.3        |
| 16.267     | 21.0        | 19.6        | 40.6            | 50.0               | -9.4        |
| 0.228      | 23.3        | 19.7        | 43.0            | 52.5               | -9.5        |
| 17.050     | 20.8        | 19.6        | 40.4            | 50.0               | -9.6        |
| 15.737     | 20.8        | 19.6        | 40.4            | 50.0               | -9.6        |
| 15.476     | 20.5        | 19.6        | 40.1            | 50.0               | -9.9        |
| 0.531      | 16.0        | 19.8        | 35.8            | 46.0               | -10.2       |
| 0.240      | 22.0        | 19.7        | 41.7            | 52.1               | -10.4       |
| 16.789     | 19.8        | 19.6        | 39.4            | 50.0               | -10.6       |
| 0.710      | 15.6        | 19.8        | 35.4            | 46.0               | -10.6       |
| 0.448      | 16.4        | 19.8        | 36.2            | 46.9               | -10.7       |
| 16.991     | 19.5        | 19.6        | 39.1            | 50.0               | -10.9       |
| 0.430      | 16.3        | 19.8        | 36.1            | 47.3               | -11.2       |
| 0.684      | 15.0        | 19.8        | 34.8            | 46.0               | -11.2       |
| 15.924     | 19.1        | 19.6        | 38.7            | 50.0               | -11.3       |
| 15.215     | 19.1        | 19.6        | 38.7            | 50.0               | -11.3       |
| 0.601      | 14.9        | 19.8        | 34.7            | 46.0               | -11.3       |

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

|                   |                          |                    |            |
|-------------------|--------------------------|--------------------|------------|
| EUT:              | 444-2251                 | Work Order:        | FOCU0169   |
| Serial Number:    | 02EAF000061              | Date:              | 06/11/2014 |
| Customer:         | Summit Semiconductor LLC | Temperature:       | 24.1°C     |
| Attendees:        | None                     | Relative Humidity: | 42.9%      |
| Customer Project: | None                     | Bar. Pressure:     | 1012.3 mb  |
| Tested By:        | Brandon Hobbs            | Job Site:          | EV07       |
| Power:            | 110VAC/60Hz              | Configuration:     | FOCU0169-3 |

## TEST SPECIFICATIONS

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

## TEST PARAMETERS

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

## COMMENTS

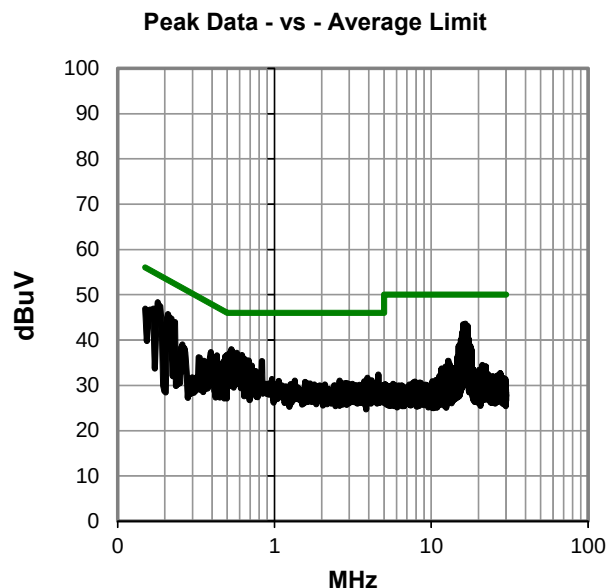
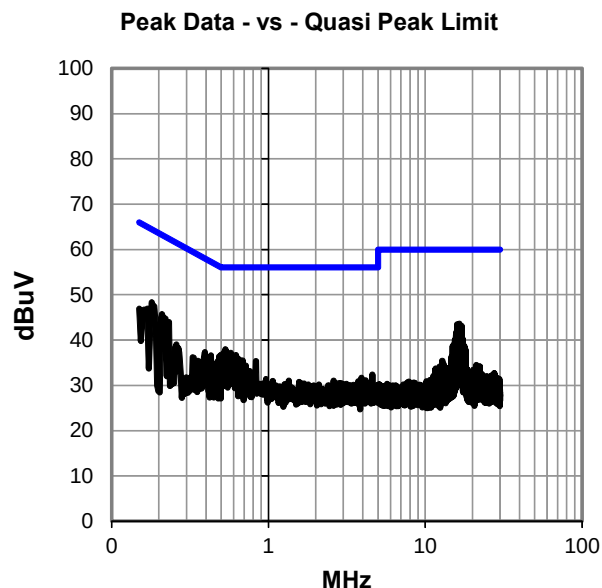
None

## EUT OPERATING MODES

Tx 6Mbps High Channel 140, 5700MHz

## DEVIATIONS FROM TEST STANDARD

None



# 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) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.180      | 28.6        | 19.7        | 48.3            | 64.5               | -16.1       |
| 16.524     | 24.0        | 19.6        | 43.6            | 60.0               | -16.4       |
| 15.998     | 23.9        | 19.6        | 43.5            | 60.0               | -16.5       |
| 17.047     | 23.5        | 19.6        | 43.1            | 60.0               | -16.9       |
| 16.789     | 23.3        | 19.6        | 42.9            | 60.0               | -17.1       |
| 0.210      | 26.0        | 19.7        | 45.7            | 63.2               | -17.5       |
| 16.260     | 22.9        | 19.6        | 42.5            | 60.0               | -17.5       |
| 0.531      | 18.2        | 19.8        | 38.0            | 56.0               | -18.0       |
| 0.169      | 27.2        | 19.7        | 46.9            | 65.0               | -18.1       |
| 15.737     | 22.1        | 19.6        | 41.7            | 60.0               | -18.3       |
| 0.232      | 24.2        | 19.7        | 43.9            | 62.4               | -18.4       |
| 16.987     | 21.9        | 19.6        | 41.5            | 60.0               | -18.5       |
| 0.523      | 17.6        | 19.8        | 37.4            | 56.0               | -18.6       |
| 0.575      | 17.4        | 19.8        | 37.2            | 56.0               | -18.8       |
| 0.150      | 27.3        | 19.6        | 46.9            | 66.0               | -19.1       |
| 0.501      | 17.0        | 19.8        | 36.8            | 56.0               | -19.2       |
| 17.021     | 21.1        | 19.6        | 40.7            | 60.0               | -19.3       |
| 0.620      | 16.9        | 19.8        | 36.7            | 56.0               | -19.3       |
| 17.312     | 20.7        | 19.6        | 40.3            | 60.0               | -19.7       |
| 0.486      | 16.6        | 19.8        | 36.4            | 56.2               | -19.8       |
| 15.480     | 20.5        | 19.6        | 40.1            | 60.0               | -19.9       |
| 0.639      | 16.2        | 19.8        | 36.0            | 56.0               | -20.0       |
| 0.654      | 15.9        | 19.8        | 35.7            | 56.0               | -20.3       |
| 15.954     | 20.0        | 19.6        | 39.6            | 60.0               | -20.4       |
| 0.594      | 15.7        | 19.8        | 35.5            | 56.0               | -20.5       |
| 0.684      | 15.7        | 19.8        | 35.5            | 56.0               | -20.5       |

Peak Data - vs - Average Limit

| Freq (MHz) | Amp. (dBuV) | Factor (dB) | Adjusted (dBuV) | Spec. Limit (dBuV) | Margin (dB) |
|------------|-------------|-------------|-----------------|--------------------|-------------|
| 0.180      | 28.6        | 19.7        | 48.3            | 54.5               | -6.1        |
| 16.524     | 24.0        | 19.6        | 43.6            | 50.0               | -6.4        |
| 15.998     | 23.9        | 19.6        | 43.5            | 50.0               | -6.5        |
| 17.047     | 23.5        | 19.6        | 43.1            | 50.0               | -6.9        |
| 16.789     | 23.3        | 19.6        | 42.9            | 50.0               | -7.1        |
| 0.210      | 26.0        | 19.7        | 45.7            | 53.2               | -7.5        |
| 16.260     | 22.9        | 19.6        | 42.5            | 50.0               | -7.5        |
| 0.531      | 18.2        | 19.8        | 38.0            | 46.0               | -8.0        |
| 0.169      | 27.2        | 19.7        | 46.9            | 55.0               | -8.1        |
| 15.737     | 22.1        | 19.6        | 41.7            | 50.0               | -8.3        |
| 0.232      | 24.2        | 19.7        | 43.9            | 52.4               | -8.4        |
| 16.987     | 21.9        | 19.6        | 41.5            | 50.0               | -8.5        |
| 0.523      | 17.6        | 19.8        | 37.4            | 46.0               | -8.6        |
| 0.575      | 17.4        | 19.8        | 37.2            | 46.0               | -8.8        |
| 0.150      | 27.3        | 19.6        | 46.9            | 56.0               | -9.1        |
| 0.501      | 17.0        | 19.8        | 36.8            | 46.0               | -9.2        |
| 17.021     | 21.1        | 19.6        | 40.7            | 50.0               | -9.3        |
| 0.620      | 16.9        | 19.8        | 36.7            | 46.0               | -9.3        |
| 17.312     | 20.7        | 19.6        | 40.3            | 50.0               | -9.7        |
| 0.486      | 16.6        | 19.8        | 36.4            | 46.2               | -9.8        |
| 15.480     | 20.5        | 19.6        | 40.1            | 50.0               | -9.9        |
| 0.639      | 16.2        | 19.8        | 36.0            | 46.0               | -10.0       |
| 0.654      | 15.9        | 19.8        | 35.7            | 46.0               | -10.3       |
| 15.954     | 20.0        | 19.6        | 39.6            | 50.0               | -10.4       |
| 0.594      | 15.7        | 19.8        | 35.5            | 46.0               | -10.5       |
| 0.684      | 15.7        | 19.8        | 35.5            | 46.0               | -10.5       |

## CONCLUSION

Pass



Tested By