
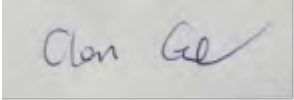


# RF TEST REPORT



Report No.: FCC\_RF\_SL16032501-SLX-009\_UNII  
Supersede Report No.:

|   |   |  |
|---|---|--|
| Applicant   | : | Abbott Point of Care, Inc  |
| Product Name  | : | SDIO Wireless Module   |
| Model No.   | : | SX-SDMAN   |
| Test Standard                                       | : | 47 CFR 15.407  |
| Test Method   | : | ANSI C63.10: 2013<br>789033 D02 General UNII Test Procedures New Rules v01 |
| FCC ID  | : | 2AAEX-SDABGN   |
| Dates of test                                       | : | 04/07/2016 – 06/03/2016  |
| Issue Date  | : | 06/16/2016   |
| Test Result   | : | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail     |
| Equipment complied with the specification [X]       |   |  |
| Equipment did not comply with the specification [ ] |   |  |

|  |  |
|--|--|
| This Test Report is Issued Under the Authority of:   |  |
|   |  |
| <b>Rachana Khanduri</b>  | <b>Chen Ge</b>   |
| Test Engineer  | Engineer Reviewer  |
| This test report may be reproduced in full only<br>Test result presented in this test report is applicable to the tested sample only |  |

Issued By:  
SIEMIC Laboratories  
775 Montague Expressway, Milpitas, 95035 CA



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## Laboratory Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

### Accreditations for Conformity Assessment

| Country/Region | Accreditation Body     | Scope                             |
|----------------|------------------------|-----------------------------------|
| USA            | FCC, A2LA              | EMC, RF/Wireless, Telecom         |
| Canada         | IC, A2LA, NIST         | EMC, RF/Wireless, Telecom         |
| Taiwan         | BSMI, NCC, NIST        | EMC, RF, Telecom, Safety          |
| Hong Kong      | OFTA, NIST             | RF/Wireless, Telecom              |
| Australia      | NATA, NIST             | EMC, RF, Telecom, Safety          |
| Korea          | KCC/RRA, NIST          | EMI, EMS, RF, Telecom, Safety     |
| Japan          | VCCI, JATE, TELEC, RFT | EMI, RF/Wireless, Telecom         |
| Mexico         | NOM, COFETEL, Caniety  | Safety, EMC, RF/Wireless, Telecom |
| Europe         | A2LA, NIST             | EMC, RF, Telecom, Safety          |
| Israel         | MOC, NIST              | EMC, RF, Telecom, Safety          |

### Accreditations for Product Certifications

| Country   | Accreditation Body | Scope                 |
|-----------|--------------------|-----------------------|
| USA       | FCC TCB, NIST      | EMC, RF, Telecom      |
| Canada    | IC FCB, NIST       | EMC, RF, Telecom      |
| Singapore | iDA, NIST          | EMC, RF, Telecom      |
| EU        | NB                 | EMC & R&TTE Directive |
| Japan     | MIC (RCB 208)      | RF, Telecom           |
| Hong Kong | OFTA (US002)       | RF, Telecom           |

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## 1 Report Revision History

| Report No.                     | Report Version | Description | Issue Date |
|--------------------------------|----------------|-------------|------------|
| FCC_RF_SL16032501-SLX-009_UNII | None           | Original    | 06/16/2016 |
|                                |                |             |            |
|                                |                |             |            |
|                                |                |             |            |
|                                |                |             |            |

## 2 Executive Summary

The purpose of this test program was to demonstrate compliance of following product

Company: Abbott Point of Care, Inc  
Product: SDIO Wireless Module  
Model: SX-SDMAN

against the current Stipulated Standards. The specified model product stated above has demonstrated compliance with the Stipulated Standard listed on 1<sup>st</sup> page.

## 3 Customer information

|                      |                                      |
|----------------------|--------------------------------------|
| Applicant Name       | Abbott Point of Care, Inc            |
| Applicant Address    | 400 College Road, Princeton NJ 08540 |
| Manufacturer Name    | Abbott Point of Care, Inc            |
| Manufacturer Address | 400 College Road, Princeton NJ 08540 |

## 4 Test site information

|                      |   |
|----------------------|---|
| Lab performing tests | SIEMIC Laboratories                         |
| Lab Address          | 775 Montague Expressway, Milpitas, CA 95035 |
| FCC Test Site No.    | 881796                                      |
| IC Test Site No.     | 4842D-2                                     |
| VCCI Test Site No.   | A0133                                       |

## 5 Modification

| Index | Item | Description | Note |
|-------|------|-------------|------|
| -     | -    | -           | -    |
|       |      |             |      |
|       |      |             |      |
|       |      |             |      |
|       |      |             |      |

## 6 EUT Information

### 6.1 EUT Description

|                           |                      |
|---------------------------|----------------------|
| Product Name              | SDIO Wireless Module |
| Model No.                 | SX-SDMAN             |
| Serial No.                | N/A                  |
| Input Power               | AC 100-120V, 50/60Hz |
| Power Adapter Manu/Model  | US115-05             |
| Power Adapter SN          | C01-0175140          |
| Hardware version          | N/A                  |
| Software version          | N/A                  |
| Test Software version     | N/A                  |
| Date of EUT received      | 04/01/2016           |
| Equipment Class/ Category | UNII                 |
| Clock Frequencies         | N/A                  |
| Port/Connectors           | USB                  |

### 6.2 Radio Description

| Radio Type             | 802.11a  | 802.11n-20M  | 802.11n-40M  |
|------------------------|--|--|--|
| Operating Frequency    | 5180-5240MHz<br>5260-5320MHz<br>5500-5700MHz<br>5745-5825MHz | 5180-5240MHz<br>5260-5320MHz<br>5500-5700MHz<br>5745-5825MHz | 5190-5230MHz<br>5270-5310MHz<br>5510-5670MHz<br>5755-5795MHz |
| Modulation             | OFDM (BPSK, QPSK, 16QAM, 64QAM)                              | OFDM (BPSK, QPSK, 16QAM, 64QAM)                              | OFDM (BPSK, QPSK, 16QAM, 64QAM)                              |
| Channel Spacing        | 20MHz  | 20MHz (5GHz)   | 40MHz  |
| Number of Channels     | 24   | 24 (5GHz)  | 11 (5GHz)  |
| Antenna Type           | Embedded antenna - Ethertronics                              |  |  |
| Antenna Gain           | 2 dBi (2.4 GHz), 2.5 dBi (5 GHz)                             |  |  |
| Antenna Connector Type | U.FL connector   |  |  |
| Remarks                | 2.4GHz and 5GHz Radio does not transmit simultaneously       |  |  |

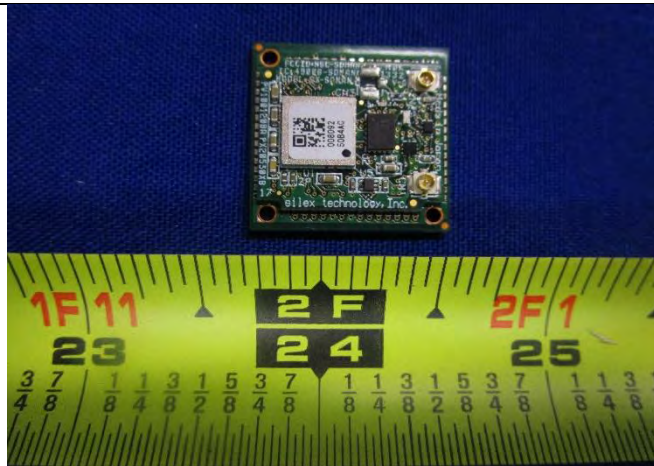
#### EUT Power Setting

| 5.2 GHz   |           |      |                |
|-----------|-----------|------|----------------|
| Test mode | Freq(MHz) | CH   | Power settings |
| 802.11a   | 5180      | Low  | 14             |
|           | 5200      | Mid  | 14             |
|           | 5240      | High | 14             |
| 802.11n20 | 5180      | Low  | 13             |
|           | 5200      | Mid  | 14             |
|           | 5240      | High | 14             |
| 802.11n40 | 5190      | Low  | 9.5            |
|           | 5230      | High | 14             |

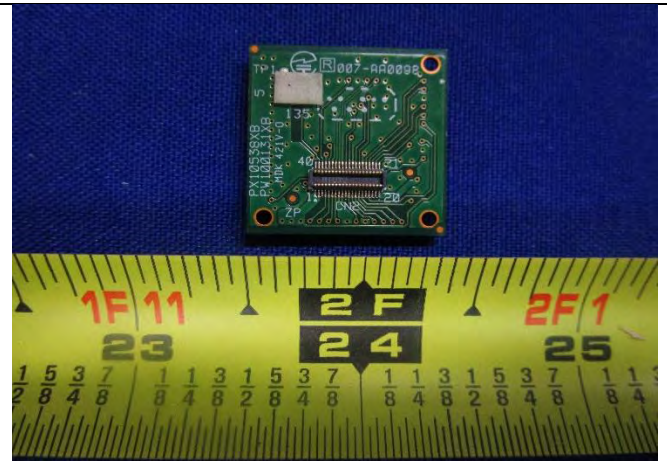
| 5.8 GHz   |           |      |                |
|-----------|-----------|------|----------------|
| Test mode | Freq(MHz) | CH   | Power settings |
| 802.11a   | 5745      | Low  | 13             |
|           | 5785      | Mid  | 13             |
|           | 5825      | High | 13             |
| 802.11n20 | 5745      | Low  | 13             |
|           | 5785      | Mid  | 13             |
|           | 5825      | High | 13             |
| 802.11n40 | 5755      | Low  | 13             |
|           | 5795      | High | 13             |



### 6.3 EUT Photo



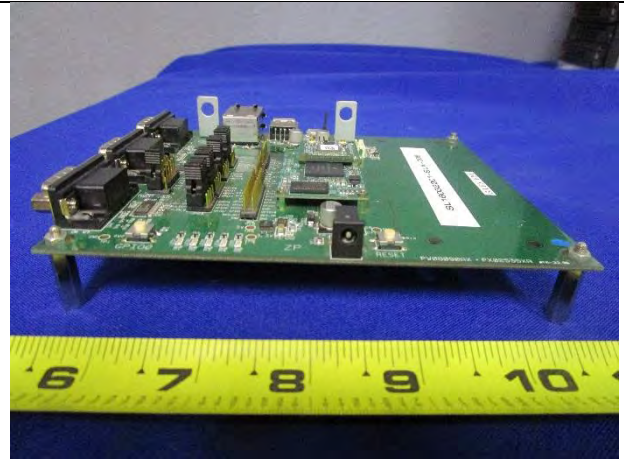
EUT - Top View



EUT - Bottom View



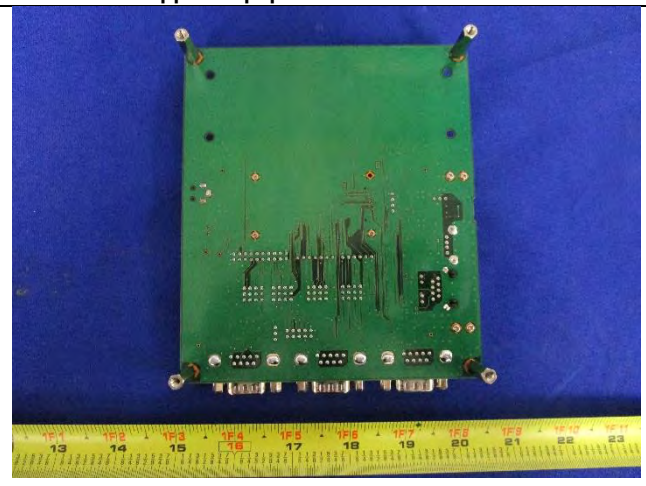
Support Equipment Board - Front View



Support Equipment Board - Rear View



Support Equipment Board - Top View

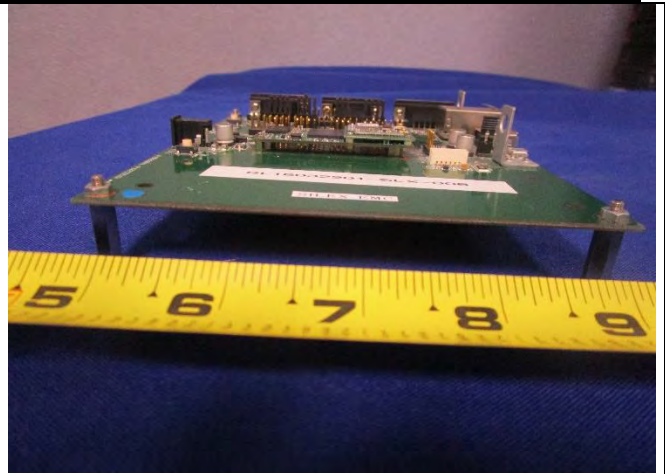


Support Equipment Board - Bottom View

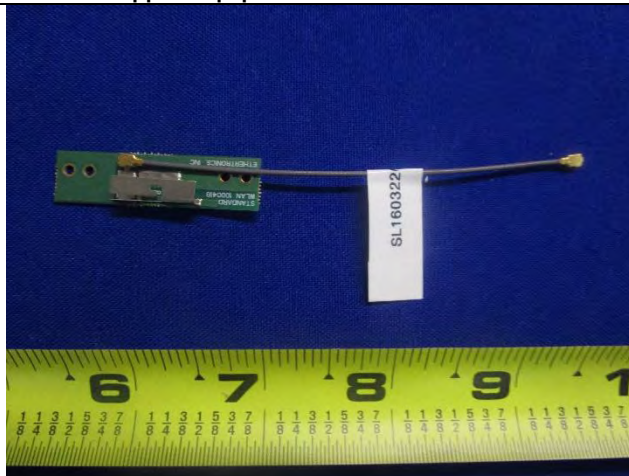




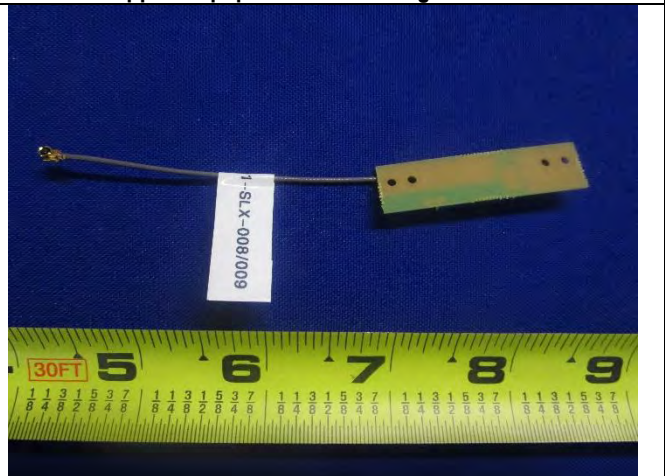
**Support Equipment Board – Left Side View**



**Support Equipment Board – Right Side View**



**Antenna Top View**



**Antenna Bottom View**



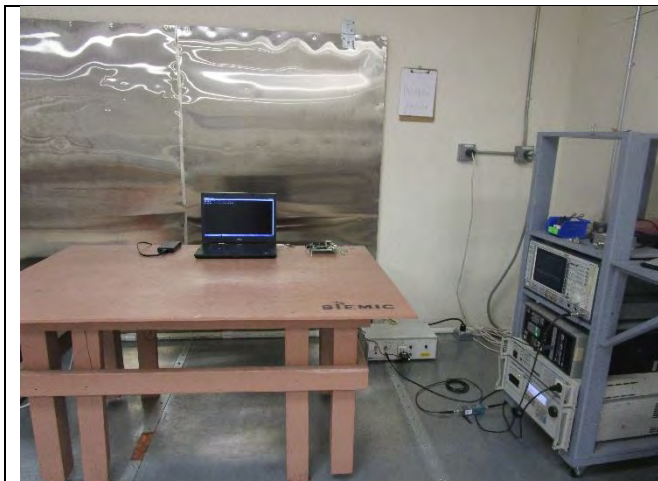
**Support Equipment Power Supply Top View**



**Support Equipment Power Supply Bottom View**



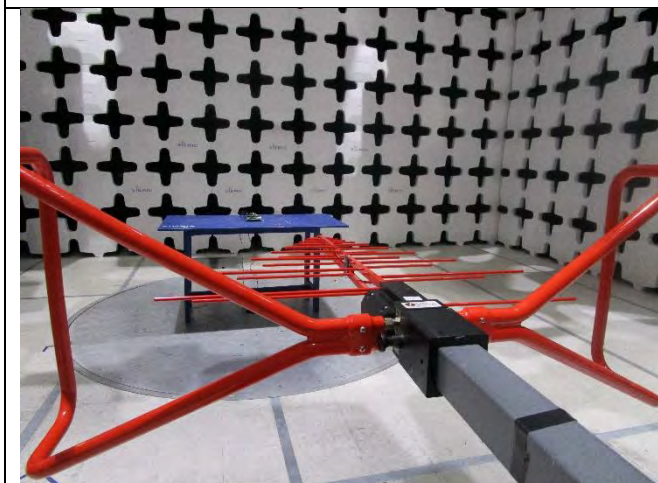
## 6.4 EUT Test Setup Photos



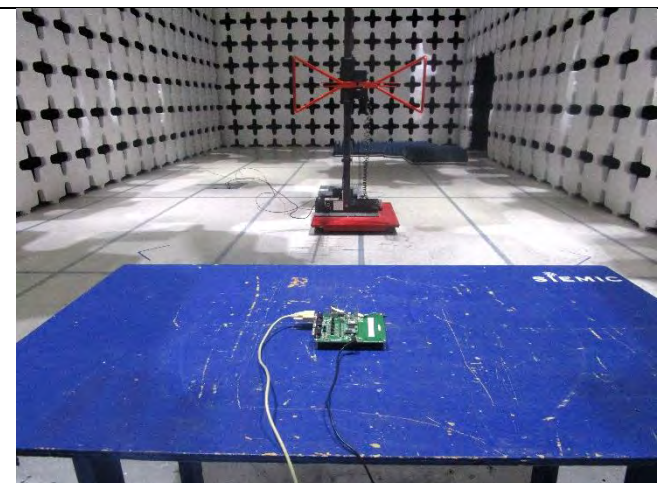
AC Line Conducted Emissions – Front View



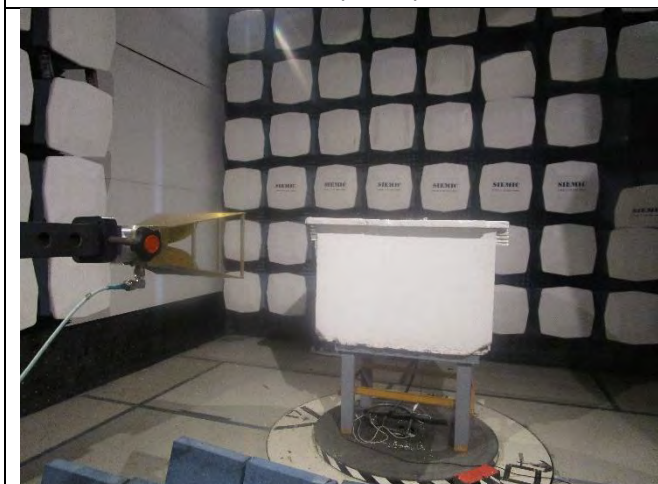
AC Line Conducted Emissions – Rear View



Radiated Emissions (<1GHz) – Front View



Radiated Emissions (<1GHz) – Rear View



Radiated Emissions (>1GHz) – Front View



Radiated Emissions (>1GHz) – Rear View

## 7 Supporting Equipment/Software and cabling Description

### 7.1 Supporting Equipment

| Item | Supporting Equipment Description | Model           | Serial Number | Manufacturer | Note |
|------|----------------------------------|-----------------|---------------|--------------|------|
| 1    | Laptop                           | Lattitude/E6510 | N/A           | Dell         | -    |
|      |                                  |                 |               |              |      |
|      |                                  |                 |               |              |      |

### 7.2 Cabling Description

| Name | Connection Start |          | Connection Stop |          | Length / shielding Info |            | Note |
|------|------------------|----------|-----------------|----------|-------------------------|------------|------|
|      | From             | I/O Port | To              | I/O Port | Length (m)              | Shielding  |      |
| USB  | EUT              | I/O Port | Laptop          | USB      | 2                       | Unshielded | -    |
|      |                  |          |                 |          |                         |            |      |

### 7.3 Test Software Description

| Test Item  | Software      | Description  |
|------------|---------------|--|
| RF Testing | Tera Term Pro | Set the EUT to transmit continuously in diferent test mode |
|            |               |  |
|            |               |  |

## 8 Test Summary

| Test Item                      | Test standard |           | Test Method/Procedure   | Pass / Fail  |
|--------------------------------|---------------|-----------|---|--|
| Restricted Band of Operation   | FCC           | 15.205    | ANSI C63.10 – 2013<br>789033 D02 General UNII Test Procedures New Rules v01 | <input checked="" type="checkbox"/> Pass<br><input type="checkbox"/> N/A |
| AC Conducted Emissions Voltage | FCC           | 15.207(a) | ANSI C63.10 – 2013  | <input checked="" type="checkbox"/> Pass<br><input type="checkbox"/> N/A |

| Test Item                                 | Test standard   |                               | Test Method/Procedure   | Pass / Fail  |
|---|---|-------------------------------|---|--|
| 26 & 6 dB Emission Bandwidth              | FCC   | 15.407 (a) (2)                | 789033 D02 General UNII Test Procedures New Rules v01                       | <input checked="" type="checkbox"/> Pass<br><input type="checkbox"/> N/A |
| Maximum conducted Output Power            | FCC   | 15.407 (a) (2)                | 789033 D02 General UNII Test Procedures New Rules v01                       | <input checked="" type="checkbox"/> Pass<br><input type="checkbox"/> N/A |
| Power reduction (Antenna Gain > 6 dBi)    | FCC   | 15.407 (a) (2)                | -   | <input checked="" type="checkbox"/> Pass<br><input type="checkbox"/> N/A |
| Band Edge and Radiated Spurious Emissions | FCC   | 15.407(b)(2),<br>15.407(b)(6) | ANSI C63.10 – 2013<br>789033 D02 General UNII Test Procedures New Rules v01 | <input checked="" type="checkbox"/> Pass<br><input type="checkbox"/> N/A |
| Power Spectral Density                    | FCC   | 15.407 (a) (2)                | 789033 D02 General UNII Test Procedures New Rules v01                       | <input checked="" type="checkbox"/> Pass<br><input type="checkbox"/> N/A |
| User Manual                               | FCC   | -                             | -   | <input checked="" type="checkbox"/> Pass<br><input type="checkbox"/> N/A |
| Remark                                    | 1. All measurement uncertainties are not taken into consideration for all presented test result.<br>2. The applicant shall ensure frequency stability by showing that an emission is maintained within the band of operation under all normal operating conditions as specified in the user's manual. |                               |   |  |

## 9 Measurement Uncertainty

| Emissions                                 |                 |   |               |
|---|-----------------|---|---------------|
| Test Item                                 | Frequency Range | Description   | Uncertainty   |
| AC Conducted Emissions                    | 150KHz – 30MHz  | Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2                                 | ±3.5dB        |
| Band Edge and Radiated Spurious Emissions | 30MHz – 1GHz    | Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m) | +5.6dB/-4.5dB |
| Band Edge and Radiated Spurious Emissions | 1GHz – 40GHz    | Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m) | +4.3dB/-4.1dB |

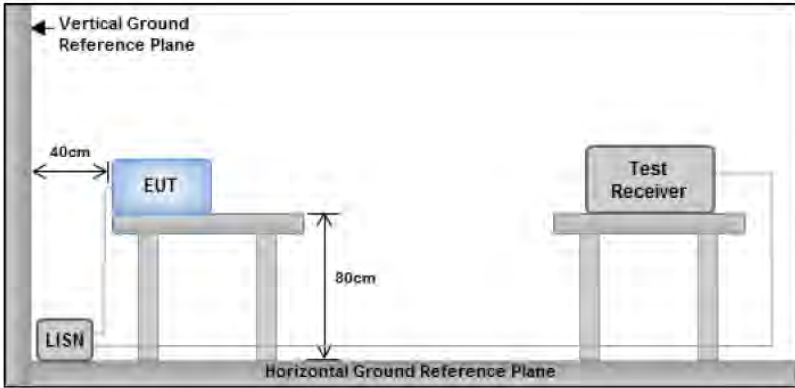


## 10 Measurements, Examination and Derived Results

### 10.1 Conducted Emissions

#### Conducted Emission Limit

| Frequency ranges (MHz) | Limit (dBuV) |         |
|------------------------|--------------|---------|
|                        | QP           | Average |
| 0.15 ~ 0.5             | 66 – 56      | 56 – 46 |
| 0.5 ~ 5                | 56           | 46      |
| 5 ~ 30                 | 60           | 50      |

| Spec         | Item | Requirement   | Applicable                          |
|--------------|------|---|-------------------------------------|
| 47CFR§15.207 | a)   | For Low-power radio-frequency devices that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 $\mu$ H/50 ohms line impedance stabilization network (LISN). The lower limit applies at the boundary between the frequency ranges.   | <input checked="" type="checkbox"/> |
| Test Setup   |      |  <p>Note: 1. Support units were connected to second LISN.<br/>2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes</p>   |                                     |
| Procedure    |      | <ul style="list-style-type: none"> <li>- The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table, as shown in Annex B.</li> <li>- The power supply for the EUT was fed through a 50<math>\Omega</math>/50<math>\mu</math>H EUT LISN, connected to filtered mains.</li> <li>- The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable.</li> <li>- All other supporting equipment was powered separately from another main supply.</li> </ul> |                                     |
| Remark       |      | EUT was tested at 120VAC, 60Hz  |                                     |
| Result       |      | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail  |                                     |

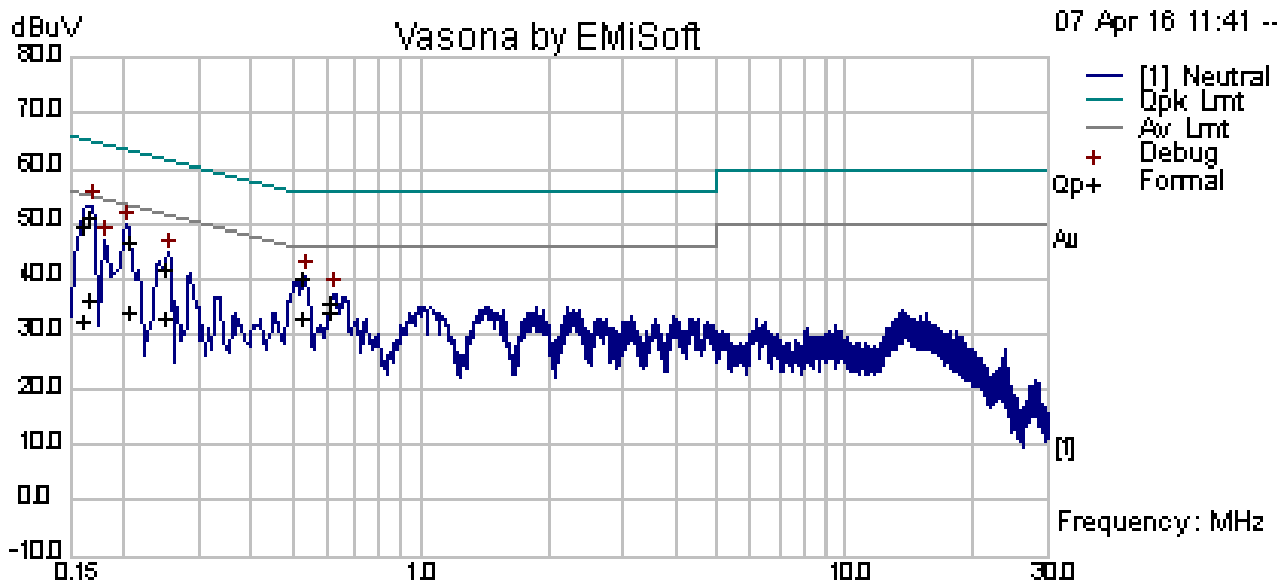
Test Data    ☒ Yes      ☐ N/A

Test Plot    ☒ Yes (See below)      ☐ N/A

Test was done by **Rachana Khanduri** at **Conducted Emission Test Site**.

## Conducted Emission Test Results

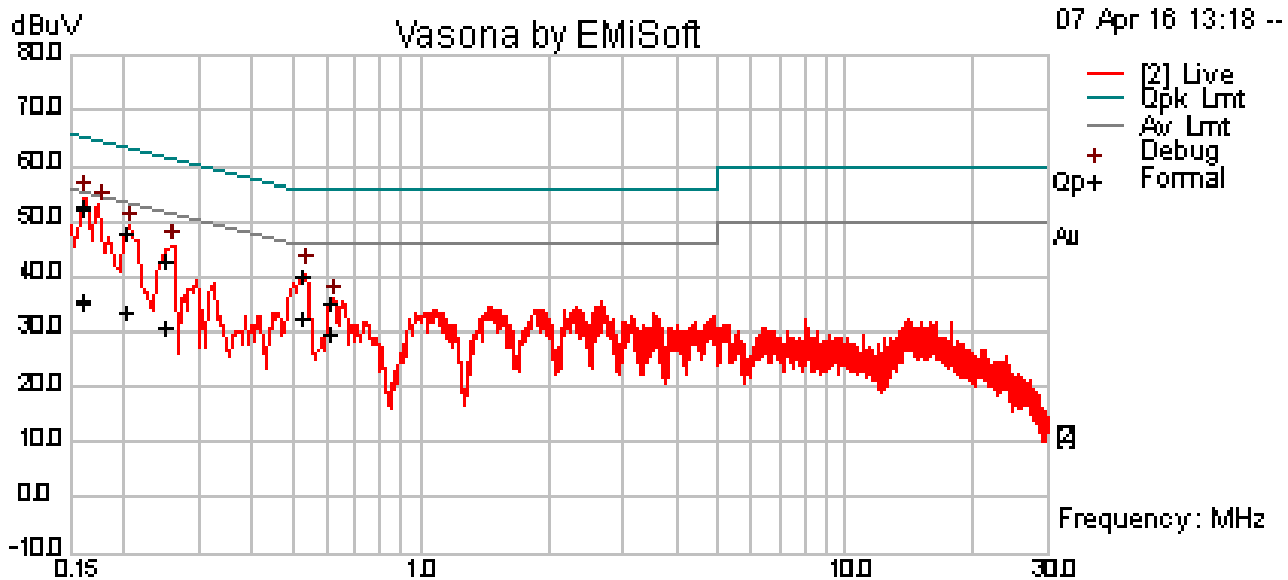
|                           |                     |      |         |   |
|---------------------------|---------------------|------|---------|---|
| Test specification:       | Conducted Emissions |      |         |   |
| Environmental Conditions: | Temp(°C):           | 21   | Result: | <input checked="" type="checkbox"/> Pass<br><br><input type="checkbox"/> Fail |
|                           | Humidity (%):       | 42   |         |   |
|                           | Atmospheric(mbar):  | 1021 |         |   |
| Mains Power:              | 120Vac, 60Hz        |      |         |   |
| Tested by:                | Rachana Khanduri    |      |         |   |
| Test Date:                | 04/07/2016          |      |         |   |
| Remarks                   | AC Line @ Neutral   |      |         |   |



Neutral Plot at 120Vac, 60Hz

| Frequency (MHz) | Raw (dBuV) | Cable Loss (dB) | Factors (dB) | Level (dBuV) | Measurement Type | Line    | Limit (dBuV) | Margin (dB) | Pass /Fail |
|-----------------|------------|-----------------|--------------|--------------|------------------|---------|--------------|-------------|------------|
| 0.16            | 37.97      | 10.00           | 1.68         | 49.66        | Quasi Peak       | Neutral | 65.52        | -15.86      | Pass       |
| 0.20            | 35.35      | 10.00           | 1.29         | 46.64        | Quasi Peak       | Neutral | 63.44        | -16.80      | Pass       |
| 0.52            | 29.29      | 10.01           | 0.67         | 39.97        | Quasi Peak       | Neutral | 56.00        | -16.03      | Pass       |
| 0.25            | 31.04      | 10.00           | 1.07         | 42.11        | Quasi Peak       | Neutral | 61.83        | -19.71      | Pass       |
| 0.17            | 39.51      | 10.00           | 1.61         | 51.12        | Quasi Peak       | Neutral | 65.20        | -14.09      | Pass       |
| 0.61            | 25.20      | 10.01           | 0.64         | 35.85        | Quasi Peak       | Neutral | 56.00        | -20.15      | Pass       |
| 0.16            | 20.55      | 10.00           | 1.68         | 32.24        | Average          | Neutral | 55.52        | -23.28      | Pass       |
| 0.20            | 23.01      | 10.00           | 1.29         | 34.29        | Average          | Neutral | 53.44        | -19.14      | Pass       |
| 0.52            | 22.29      | 10.01           | 0.67         | 32.97        | Average          | Neutral | 46.00        | -13.03      | Pass       |
| 0.25            | 21.79      | 10.00           | 1.07         | 32.86        | Average          | Neutral | 51.83        | -18.97      | Pass       |
| 0.17            | 24.79      | 10.00           | 1.61         | 36.40        | Average          | Neutral | 55.20        | -18.80      | Pass       |
| 0.61            | 23.62      | 10.01           | 0.64         | 34.26        | Average          | Neutral | 46.00        | -11.74      | Pass       |

|                           |                     |      |         |   |
|---------------------------|---------------------|------|---------|---|
| Test specification:       | Conducted Emissions |      |         |   |
| Environmental Conditions: | Temp(°C):           | 21   | Result: | <input checked="" type="checkbox"/> Pass<br><br><input type="checkbox"/> Fail |
|                           | Humidity (%):       | 42   |         |   |
|                           | Atmospheric(mbar):  | 1021 |         |   |
| Mains Power:              | 120Vac, 60Hz        |      |         |   |
| Tested by:                | Rachana Khanduri    |      |         |   |
| Test Date:                | 04/07/2016          |      |         |   |
| Remarks                   | AC Line @ Line      |      |         |   |




Line Plot at 120Vac, 60Hz

| Frequency (MHz) | Raw (dBuV) | Cable Loss (dB) | Factors (dB) | Level (dBuV) | Measurement Type | Line | Limit (dBuV) | Margin (dB) | Pass /Fail |
|-----------------|------------|-----------------|--------------|--------------|------------------|------|--------------|-------------|------------|
| 0.16            | 41.28      | 10.00           | 1.66         | 52.94        | Quasi Peak       | Live | 65.41        | -12.47      | Pass       |
| 0.20            | 36.45      | 10.00           | 1.30         | 47.75        | Quasi Peak       | Live | 63.51        | -15.75      | Pass       |
| 0.52            | 29.68      | 10.01           | 0.67         | 40.35        | Quasi Peak       | Live | 56.00        | -15.65      | Pass       |
| 0.25            | 31.79      | 10.00           | 1.06         | 42.85        | Quasi Peak       | Live | 61.74        | -18.90      | Pass       |
| 0.61            | 24.44      | 10.01           | 0.64         | 35.09        | Quasi Peak       | Live | 56.00        | -20.91      | Pass       |
| 0.16            | 24.03      | 10.00           | 1.66         | 35.69        | Average          | Live | 55.41        | -19.72      | Pass       |
| 0.20            | 22.45      | 10.00           | 1.30         | 33.75        | Average          | Live | 53.51        | -19.76      | Pass       |
| 0.52            | 21.65      | 10.01           | 0.67         | 32.33        | Average          | Live | 46.00        | -13.67      | Pass       |
| 0.25            | 20.00      | 10.00           | 1.06         | 31.06        | Average          | Live | 51.74        | -20.68      | Pass       |
| 0.61            | 19.34      | 10.01           | 0.64         | 29.99        | Average          | Live | 46.00        | -16.01      | Pass       |

Note: The results above show only the worst case.

## 10.2 26 dB Bandwidth & 6 dB Bandwidth

### Requirement(s):

| Spec           | Item   | Requirement  | Applicable   |
|----------------|--|--|--|
| § 15.407       | -  | 99% BW: Report only for reference.   | <input checked="" type="checkbox"/>  |
|                | a) (2)   | 26 dB Emission BW: Report only for power limit calculation.  | <input checked="" type="checkbox"/>  |
|                | e)   | Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz. | <input checked="" type="checkbox"/>  |
| Test Setup     |   |  |  |
| Test Procedure | <p>789033 D02 General UNII Test Procedures New Rules v01</p> <p><u>26dB Emission bandwidth measurement procedure (Other than 5.725-5.85 GHz)</u></p> <ul style="list-style-type: none"> <li>- Allow the trace to stabilize.</li> <li>- Use the spectrum analyzer built-in measurement function to determine the 26dB BW. <ul style="list-style-type: none"> <li>o Set RBW = around 1% of emission bandwidth</li> <li>o Set VBW &gt; RBW</li> <li>o Detector = Peak</li> <li>o Trace mode = max hold</li> </ul> </li> <li>- Capture the plot.</li> <li>- Repeat above steps for different test channel and other modulation type.</li> </ul> <p><u>6 dB Minimum emission bandwidth measurement procedure (for 5.725-5.85 GHz)</u></p> <ul style="list-style-type: none"> <li>- Allow the trace to stabilize.</li> <li>- Use the spectrum analyzer built-in measurement function to determine the 6dB BW. <ul style="list-style-type: none"> <li>o Set RBW = 100 KHz</li> <li>o Set VBW ≥ 3 x RBW</li> <li>o Detector = Peak</li> <li>o Trace mode = max hold</li> <li>o Sweep = auto couple</li> </ul> </li> <li>- Capture the plot.</li> <li>- Repeat above steps for different test channel and other modulation type.</li> </ul> |  |  |
| Test Date      | 04/07/2016   | Environmental condition  | Temperature 22°C<br>Relative Humidity 38%<br>Atmospheric Pressure 1020mbar |
| Remark         | None   |  |  |
| Result         | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail   |  |  |

**Test Data**    ☒ Yes      ☐ N/A  
**Test Plot**    ☒ Yes      ☐ N/A

Test was done by **Rachana Khanduri** at **RF Test Site**.



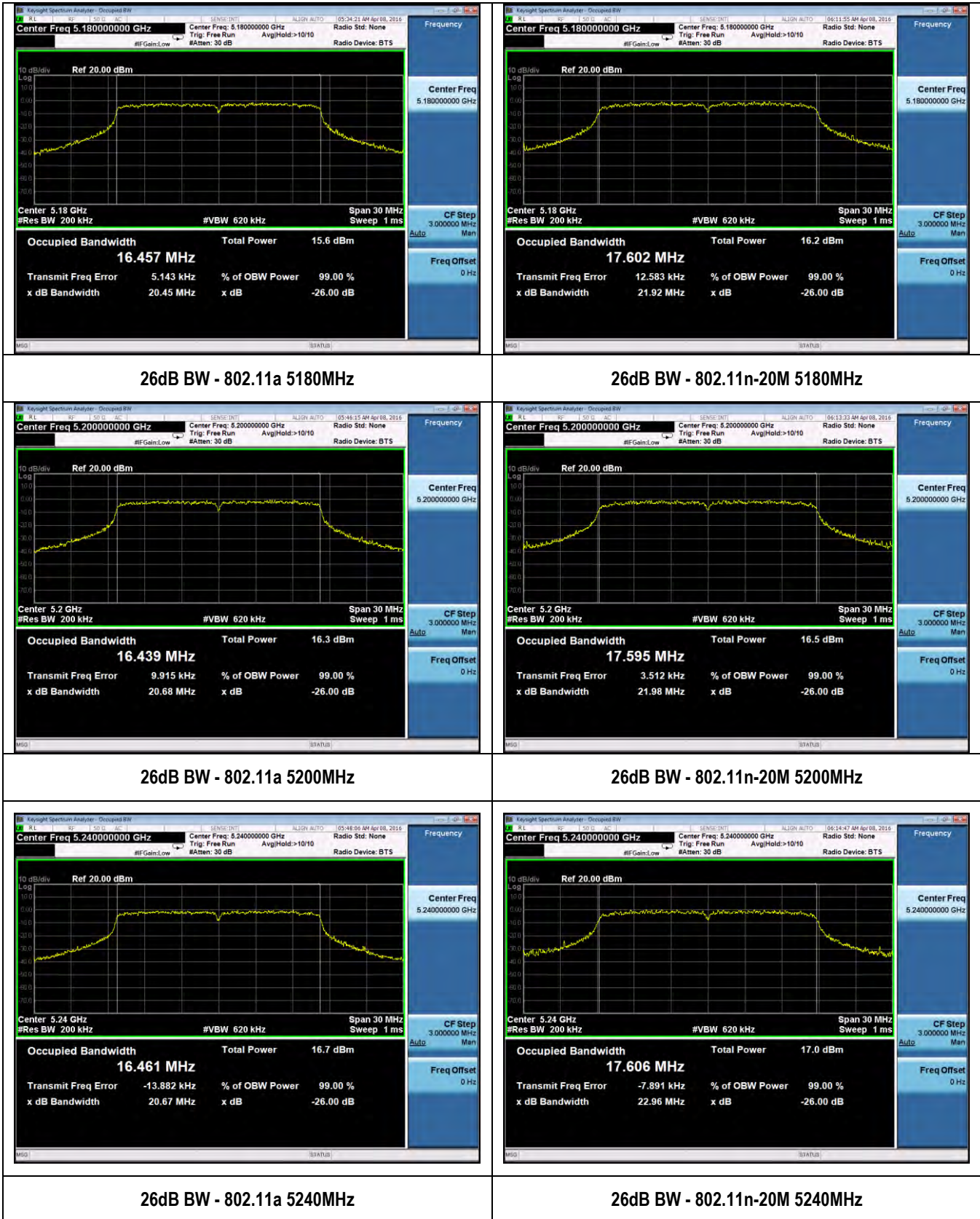
**26dB Bandwidth measurement result :**

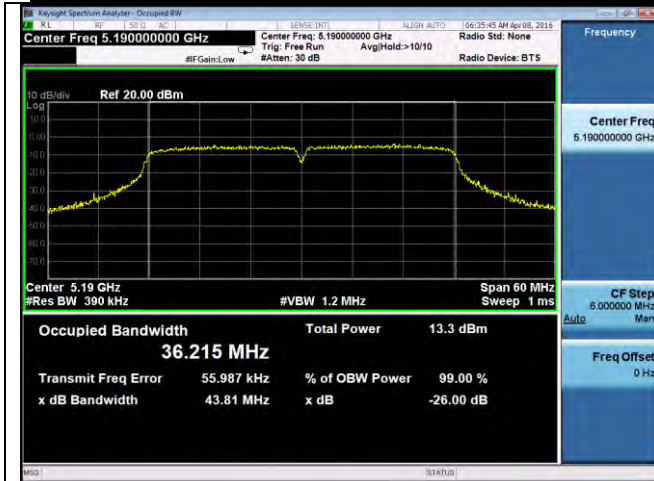
| Type    | Test mode  | Freq (MHz) | CH   | Result (MHz) | Limit (MHz) | Result |
|---------|------------|------------|------|--------------|-------------|--------|
| 26dB BW | 802.11a    | 5180       | Low  | 20.45        | -           | -      |
|         |            | 5200       | Mid  | 20.68        | -           | -      |
|         |            | 5240       | High | 20.67        | -           | -      |
|         | 802.11n-20 | 5180       | Low  | 21.92        | -           | -      |
|         |            | 5200       | Mid  | 21.98        | -           | -      |
|         |            | 5240       | High | 22.96        | -           | -      |
|         | 802.11n-40 | 5190       | Low  | 43.81        | -           | -      |
|         |            | 5230       | High | 45.76        | -           | -      |

**6dB Bandwidth measurement result for 5.8GHz**

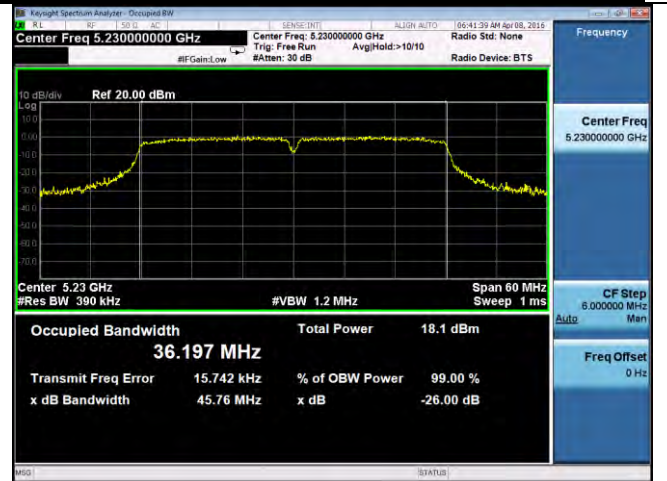
| Type   | Test mode  | Freq (MHz) | CH   | Result (MHz) | Limit (MHz) | Result |
|--------|------------|------------|------|--------------|-------------|--------|
| 6dB BW | 802.11a    | 5745       | Low  | 16.45        | ≥0.5        | Pass   |
|        |            | 5785       | Mid  | 16.44        | ≥0.5        | Pass   |
|        |            | 5825       | High | 16.43        | ≥0.5        | Pass   |
|        | 802.11n-20 | 5745       | Low  | 17.03        | ≥0.5        | Pass   |
|        |            | 5785       | Mid  | 16.95        | ≥0.5        | Pass   |
|        |            | 5825       | High | 16.88        | ≥0.5        | Pass   |
|        | 802.11n-40 | 5755       | Low  | 35.52        | ≥0.5        | Pass   |
|        |            | 5795       | High | 35.80        | ≥0.5        | Pass   |

## 26dB Bandwidth Test Plots





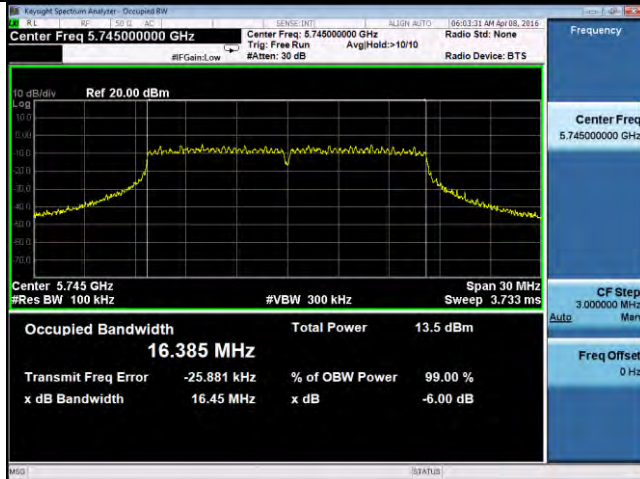
26dB BW - 802.11n40 5190MHz



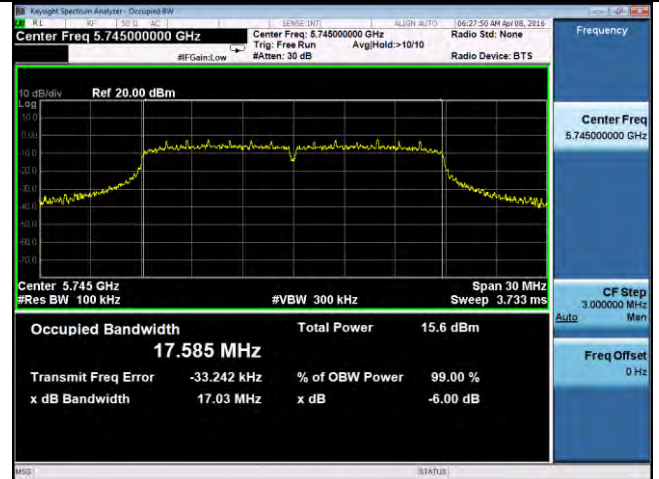
26dB BW - 802.11n-40M 5230MHz



### 6dB Bandwidth Test Plots



6dB BW 802.11a 5745MHz



6dB BW 802.11n-20M 5745MHz



6dB BW 802.11a 5785MHz



6dB BW 802.11n-20M 5785MHz

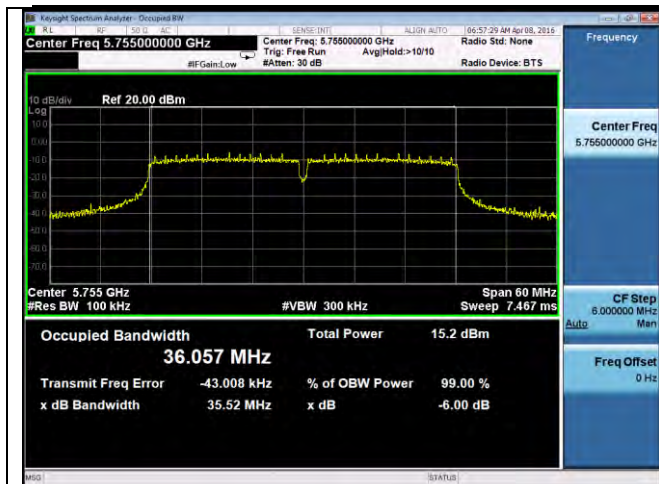


6dB BW 802.11a 5825MHz

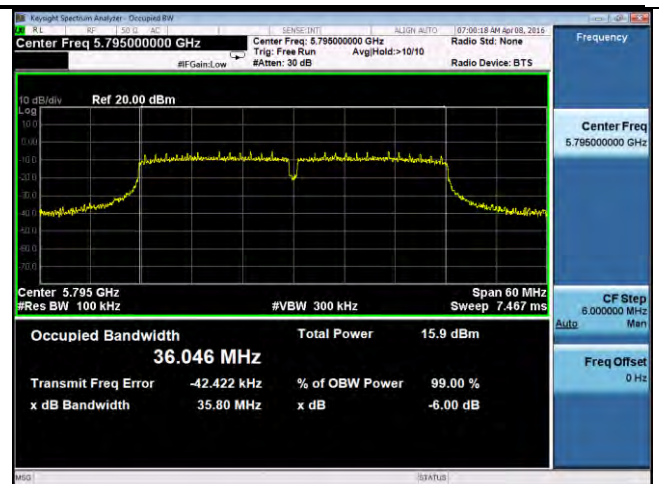


6dB BW 802.11n-20M 5825MHz





6dB BW 802.11n-40M 5755MHz



6dB BW 802.11n40 5795MHz

### 10.3 Output Power

#### Requirement(s):

| Spec     | Item       | Requirement   | Applicable                          |
|----------|------------|---|-------------------------------------|
| § 15.407 | a)(1)(i)   | For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).   | <input type="checkbox"/>            |
|          | a)(1)(ii)  | For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi.   | <input checked="" type="checkbox"/> |
|          | a)(1)(iii) | For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. | <input type="checkbox"/>            |
|          | a)(1)(iv)  | For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi.  | <input type="checkbox"/>            |
|          | a)(2)      | For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz.  | <input checked="" type="checkbox"/> |
|          | a)(3)      | For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.  | <input checked="" type="checkbox"/> |

#### Test Setup



#### Test Procedure

789033 D02 General UNII Test Procedures New Rules v01

##### Measurement using a Power Meter (PM)

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

- Connect EUT's RF output power to power meter
- Set EUT to be continuous transmission mode
- Measurement the average output power using power meter and record the result
- Repeat above steps for different test channel and other modulation type.

|           |  |                         |  |                         |
|-----------|--|-------------------------|--|-------------------------|
| Test Date | 04/07/2016   | Environmental condition | Temperature<br>Relative Humidity<br>Atmospheric Pressure | 21°C<br>40%<br>1019mbar |
| Remark    | -  |                         |  |                         |
| Result    | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail |                         |  |                         |

Test Data    ☒ Yes                      ☐ N/A

Test Plot    ☐ Yes (See below)                      ☒ N/A

Test was done by **Rachana Khanduri** at **RF Test Site**.

**Output Power measurement result :**

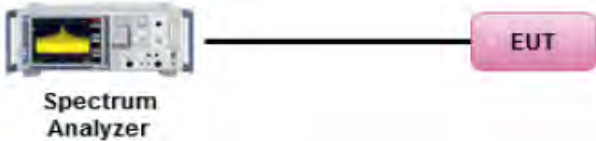
| 5.2 GHz   |           |      |                       |         |                               |             |        |
|-----------|-----------|------|-----------------------|---------|-------------------------------|-------------|--------|
| Test mode | Freq(MHz) | CH   | Conducted Power (dBm) |         | Highest Conducted Power (dBm) | Limit (dBm) | Result |
|           |           |      | Chain 1               | Chain 2 |                               |             |        |
| 802.11a   | 5180      | Low  | 9.87                  | 10.40   | 10.40                         | 30          | pass   |
|           | 5200      | Mid  | 10.05                 | 10.45   | 10.45                         | 30          | pass   |
|           | 5240      | High | 10.25                 | 10.79   | 10.79                         | 30          | pass   |
| 802.11n20 | 5180      | Low  | 10.52                 | 10.83   | 10.83                         | 30          | pass   |
|           | 5200      | Mid  | 10.68                 | 10.86   | 10.86                         | 30          | pass   |
|           | 5240      | High | 10.85                 | 11.80   | 11.80                         | 30          | pass   |
| 802.11n40 | 5190      | Low  | 7.99                  | 7.56    | 7.99                          | 30          | pass   |
|           | 5230      | High | 12.53                 | 11.75   | 12.53                         | 30          | pass   |

| 5.8 GHz   |           |      |                       |         |                               |             |        |
|-----------|-----------|------|-----------------------|---------|-------------------------------|-------------|--------|
| Test mode | Freq(MHz) | CH   | Conducted Power (dBm) |         | Highest Conducted Power (dBm) | Limit (dBm) | Result |
|           |           |      | Chain 1               | Chain 2 |                               |             |        |
| 802.11a   | 5745      | Low  | 7.42                  | 8.65    | 8.65                          | 30          | Pass   |
|           | 5785      | Mid  | 9.18                  | 9.78    | 9.78                          | 30          | Pass   |
|           | 5825      | High | 9.47                  | 10.13   | 10.13                         | 30          | Pass   |
| 802.11n20 | 5745      | Low  | 10.37                 | 11.36   | 11.36                         | 30          | Pass   |
|           | 5785      | Mid  | 11.53                 | 12.07   | 12.07                         | 30          | Pass   |
|           | 5825      | High | 11.59                 | 12.53   | 12.53                         | 30          | Pass   |
| 802.11n40 | 5755      | Low  | 10.93                 | 11.83   | 11.83                         | 30          | Pass   |
|           | 5795      | High | 11.22                 | 11.96   | 11.96                         | 30          | Pass   |

Note: Chain 1 and Chain 2 does not transmit simultaneously.

## 10.4 Peak Spectral Density

### Requirement(s):

| Spec           | Item  | Requirement  | Applicable   |
|----------------|---|--|--|
| § 15.407       | a)(1)(i)  | For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. | <input type="checkbox"/>   |
|                | a)(1)(ii)   | For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.  | <input checked="" type="checkbox"/>  |
|                | a)(2)   | For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.                  | <input checked="" type="checkbox"/>  |
|                | a)(3)   | For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.   | <input checked="" type="checkbox"/>  |
| Test Setup     |    |  |  |
| Test Procedure | <p>789033 D02 General UNII Test Procedures New Rules v01, II.F. Method SA-1</p> <p><u>Maximum spectral density measurement procedure</u></p> <ul style="list-style-type: none"> <li>- Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.</li> <li>- Set RBW = 1 MHz</li> <li>- Set VBW ≥ 3 MHz</li> <li>- Detector = RMS.</li> <li>- Sweep time = auto couple.</li> <li>- Trace mode = max hold.</li> <li>- Trace average at least 100 traces in power averaging</li> <li>- Use the peak marker function to determine the maximum amplitude level within the RBW.</li> </ul> <p>Apply correction to the result if different RBW is used.</p> |  |  |
| Test Date      | 04/07/2016  | Environmental condition  | Temperature 22°C<br>Relative Humidity 42%<br>Atmospheric Pressure 1020mbar |
| Remark         | -   |  |  |
| Result         | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail  |  |  |

Test Data    ☒ Yes                      ☐ N/A

Test Plot    ☒ Yes (See below)                      ☐ N/A

Test was done by **Rachana Khanduri** at **RF Test Site**.



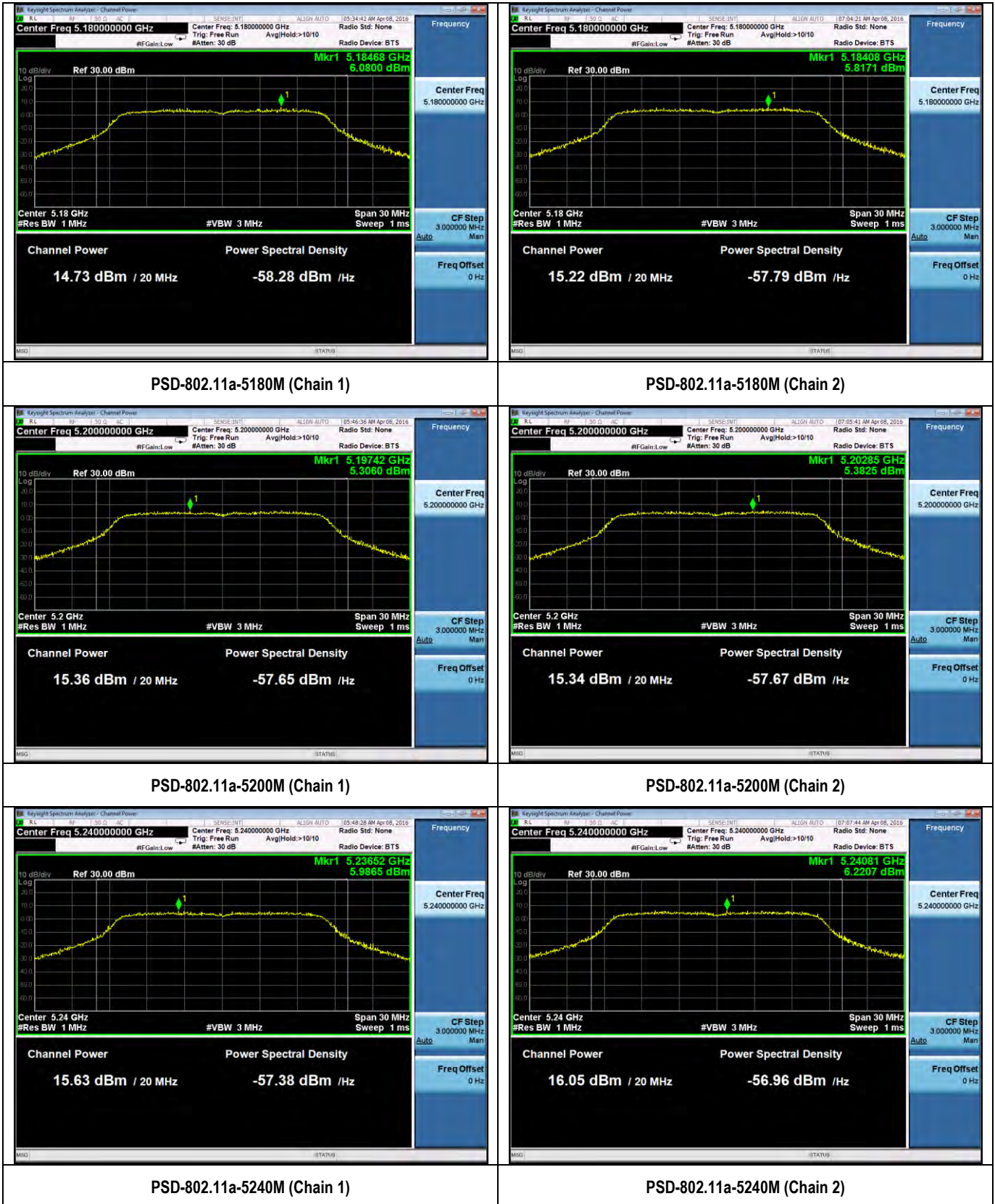
**PSD measurement results:**

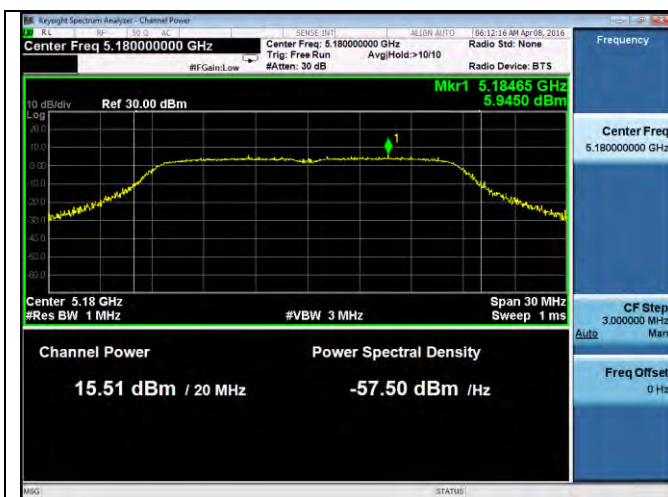
| 5.2 GHz   |           |      |                         |         |                                 |                 |        |
|-----------|-----------|------|-------------------------|---------|---------------------------------|-----------------|--------|
| Test mode | Freq(MHz) | CH   | Conducted PSD (dBm/MHz) |         | Highest Conducted PSD (dBm/MHz) | Limit (dBm/MHz) | Result |
|           |           |      | Chain 1                 | Chain 2 |                                 |                 |        |
| 802.11a   | 5180      | Low  | 6.08                    | 5.82    | 6.08                            | 17              | Pass   |
|           | 5200      | Mid  | 5.31                    | 5.38    | 5.38                            | 17              | Pass   |
|           | 5240      | High | 5.99                    | 6.22    | 6.22                            | 17              | Pass   |
| 802.11n20 | 5180      | Low  | 5.95                    | 5.69    | 5.95                            | 17              | Pass   |
|           | 5200      | Mid  | 5.72                    | 5.15    | 5.72                            | 17              | Pass   |
|           | 5240      | High | 5.83                    | 5.79    | 5.83                            | 17              | Pass   |
| 802.11n40 | 5190      | Low  | -0.46                   | -1.06   | -0.46                           | 17              | Pass   |
|           | 5230      | High | 4.47                    | 3.24    | 4.47                            | 17              | Pass   |

| 5.8 GHz      |           |  |                            |         |                       |                   |                            |                    |        |
|--------------|-----------|--|----------------------------|---------|-----------------------|-------------------|----------------------------|--------------------|--------|
| Test mode    | Freq(MHz) | CH                                       | Conducted PSD (dBm/100KHz) |         | Highest Conducted PSD | Correction Factor | Corrected PSD (dBm/500KHz) | Limit (dBm/500KHz) | Result |
|              |           |  | Chain 1                    | Chain 2 |                       |                   |                            |                    |        |
| 802.11a      | 5745      | Low                                      | -4.46                      | -3.85   | -3.85                 | 6.99              | 3.14                       | 30                 | Pass   |
|              | 5785      | Mid                                      | -3.47                      | -3.01   | -3.01                 | 6.99              | 3.98                       | 30                 | Pass   |
|              | 5825      | High                                     | -3.07                      | 2.52    | 2.52                  | 6.99              | 9.51                       | 30                 | Pass   |
| 802.11n20    | 5745      | Low                                      | -1.25                      | -0.60   | -0.60                 | 6.99              | 6.39                       | 30                 | Pass   |
|              | 5785      | Mid                                      | -1.33                      | 0.21    | 0.21                  | 6.99              | 7.20                       | 30                 | Pass   |
|              | 5825      | High                                     | -0.06                      | 1.05    | 1.05                  | 6.99              | 8.04                       | 30                 | Pass   |
| 802.11n40    | 5755      | Low                                      | -4.09                      | -12.17  | -4.09                 | 6.99              | 2.90                       | 30                 | Pass   |
|              | 5795      | High                                     | -3.30                      | -11.59  | -3.30                 | 6.99              | 3.69                       | 30                 | Pass   |
| <b>*Note</b> |           | BW correction factor = 10log(500kHz/RBW) |                            |         |                       |                   |                            |                    |        |

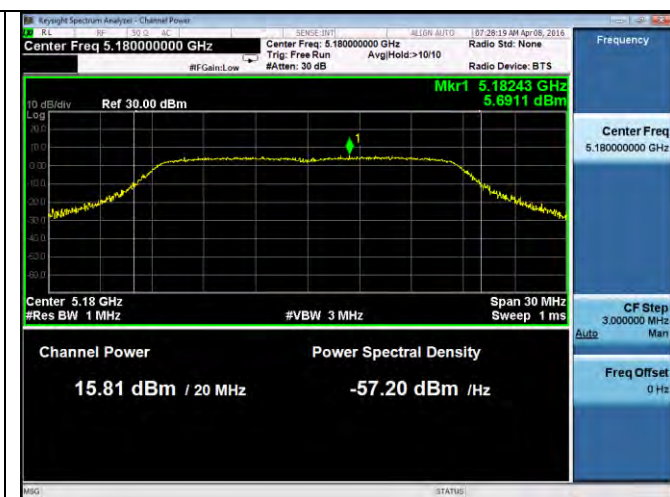
Note: Chain 1 and Chain 2 does not transmit simultaneously.

## Test Plots

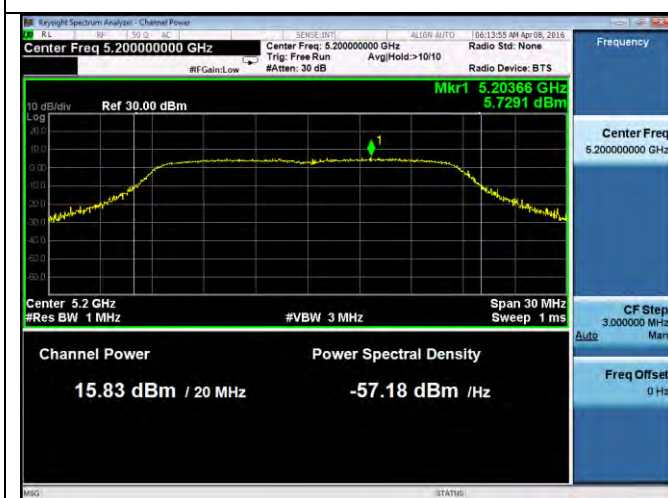




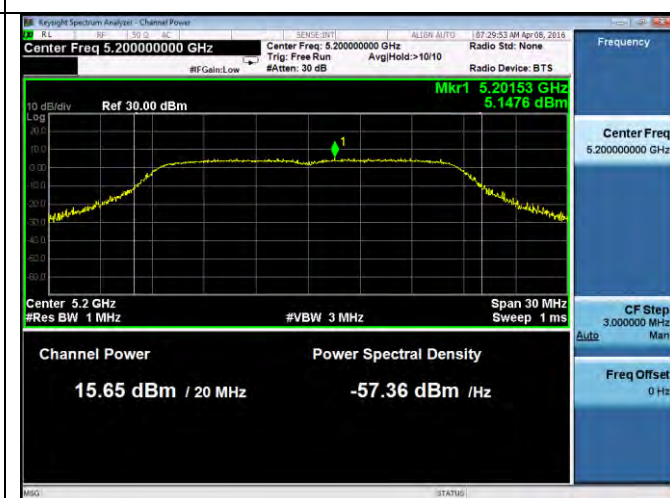
PSD-802.11n-20M-5180M (Chain 1)



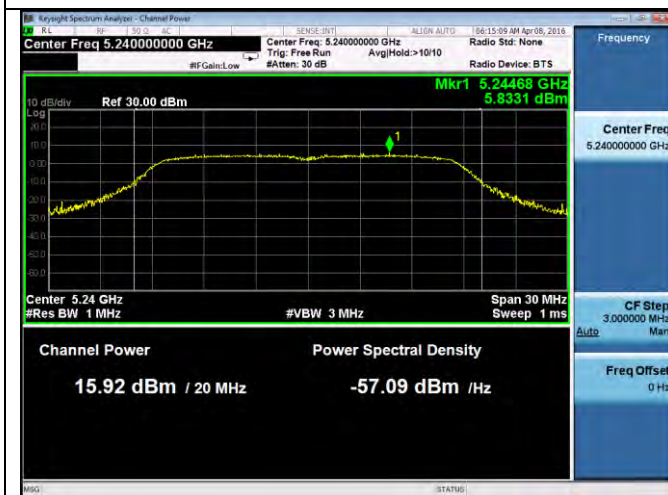
PSD-802.11n-20M-5180M (Chain 2)



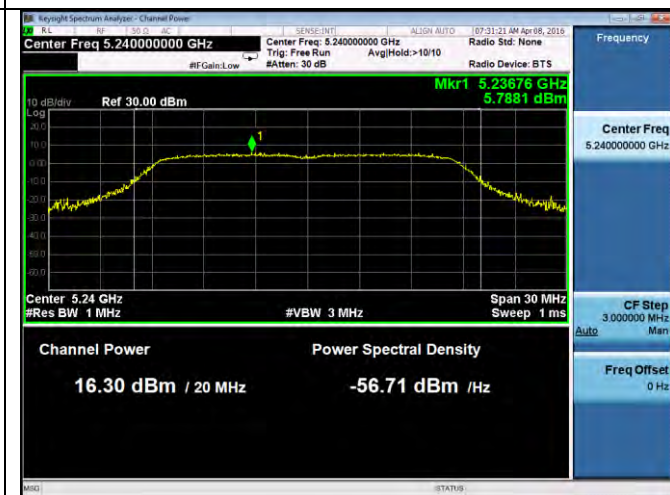
PSD-802.11n-20M-5200M (Chain 1)



PSD-802.11n-20M-5200M (Chain 2)

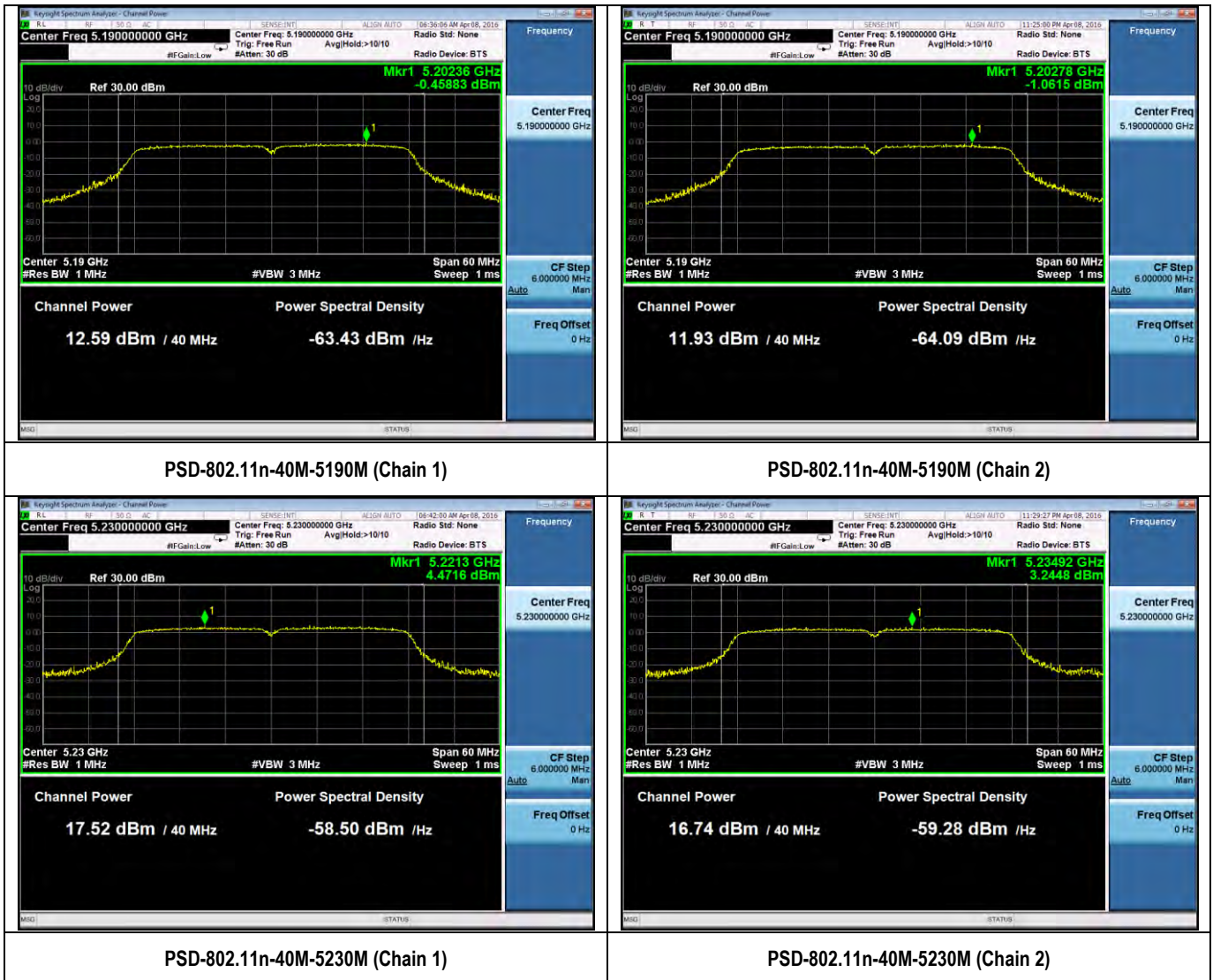


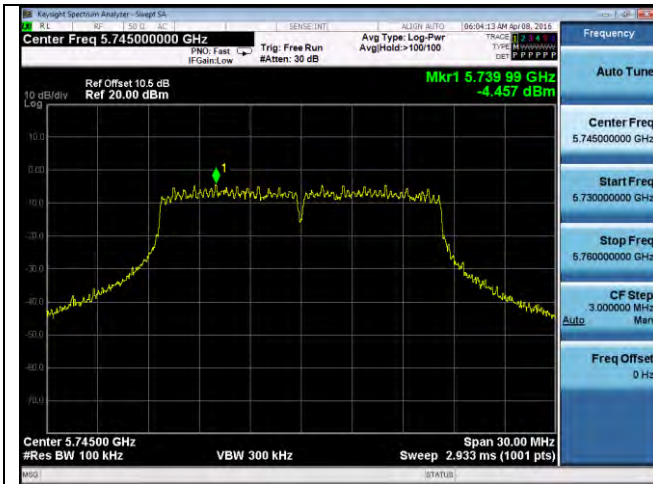
PSD-802.11n-20M-5240M (Chain 1)



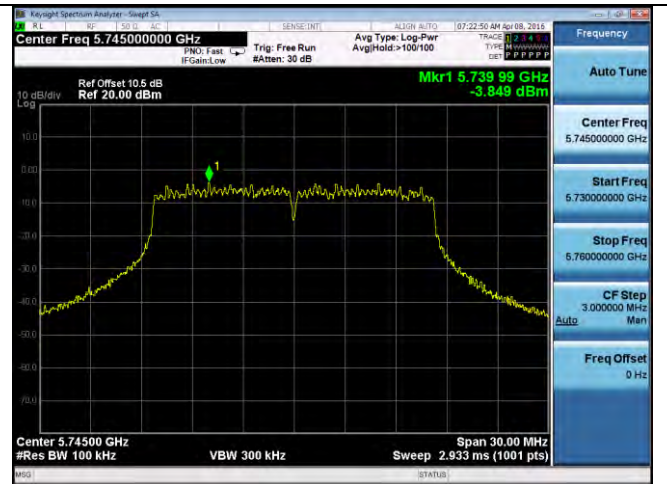
PSD-802.11n-20M-5240M (Chain 2)



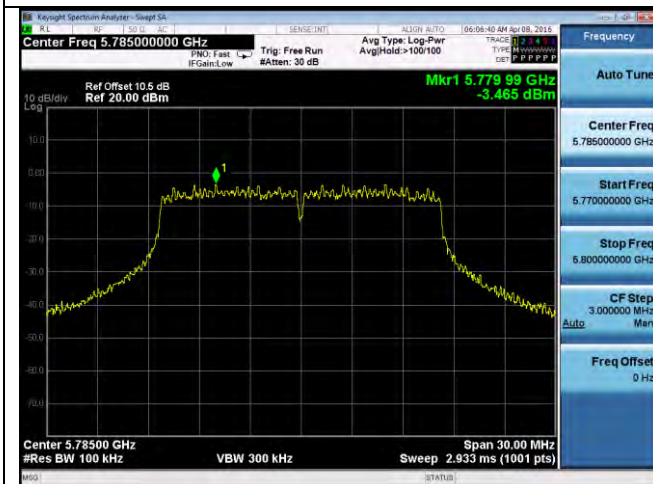




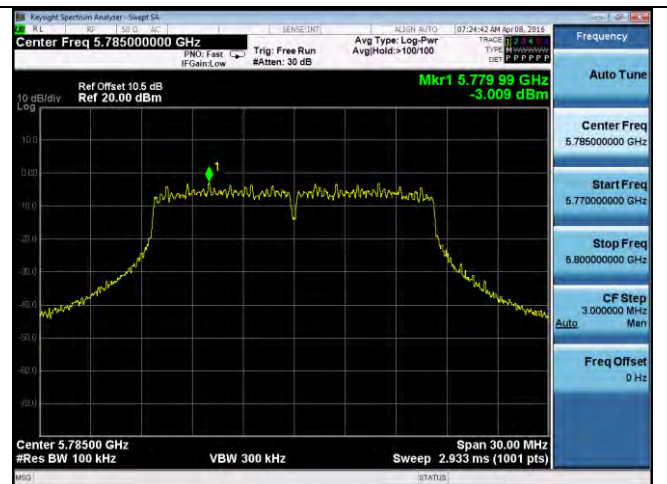
PSD-802.11a 5745MHz Chain 1



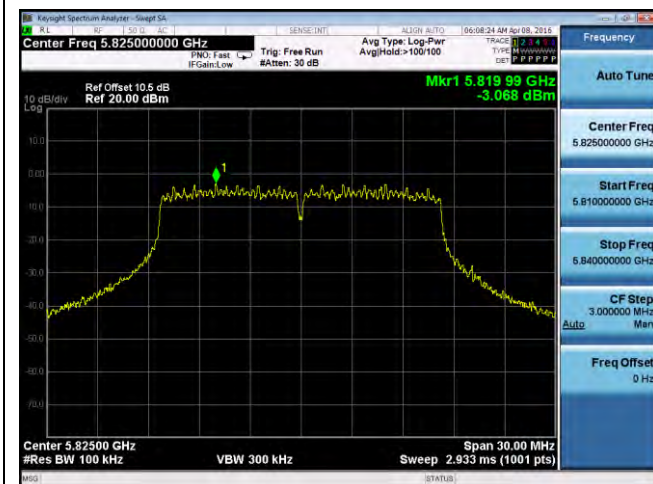
PSD-802.11a 5745MHz Chain 2



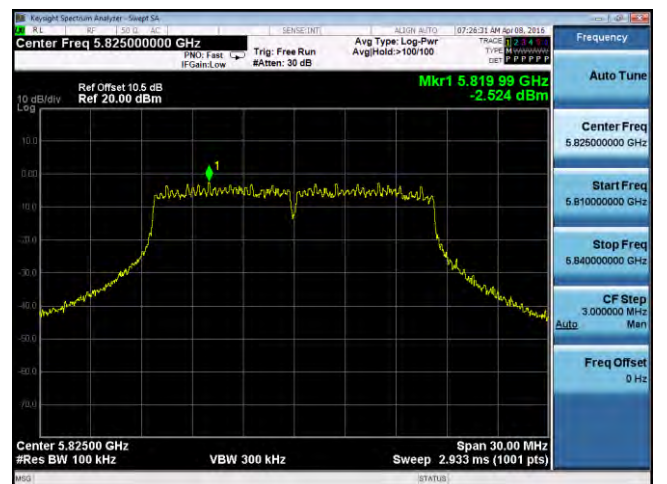
PSD-802.11a 5785MHz Chain 1



PSD-802.11a 5785MHz Chain 2

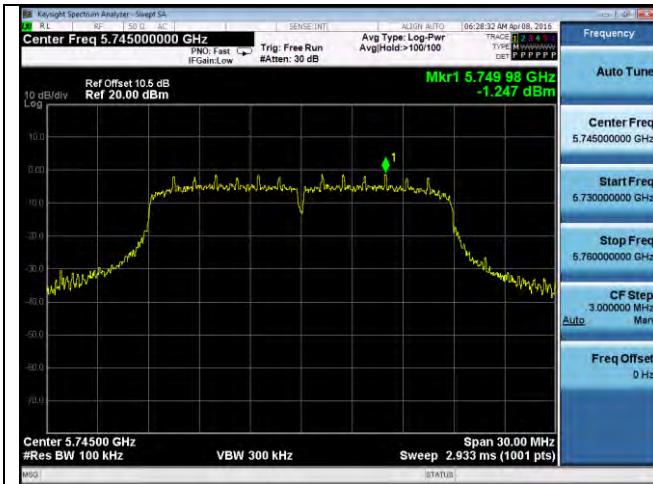


PSD-802.11a 5825MHz Chain 1

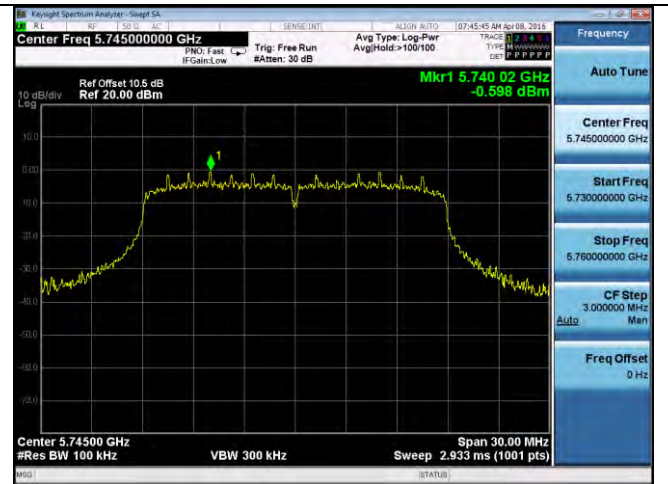


PSD-802.11a 5825MHz Chain 2

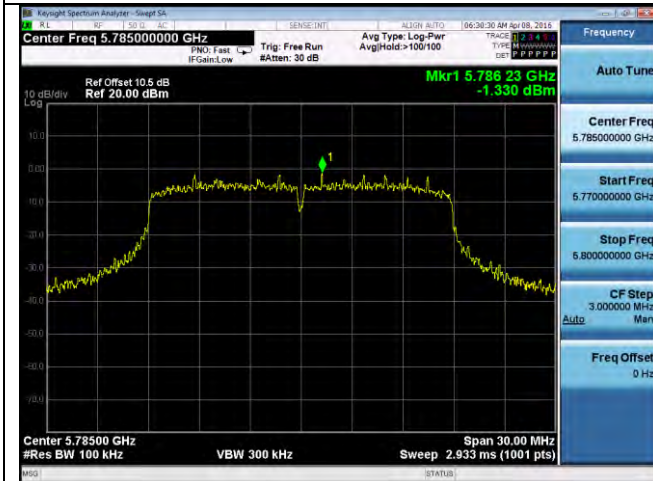




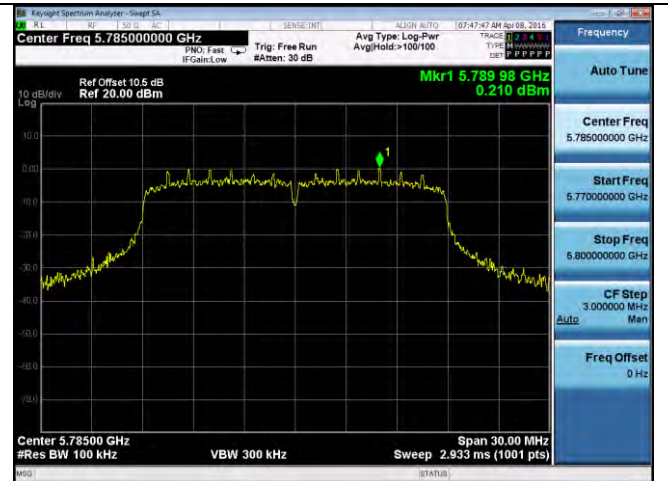
PSD-802.11n-20M 5745MHz Chain 1



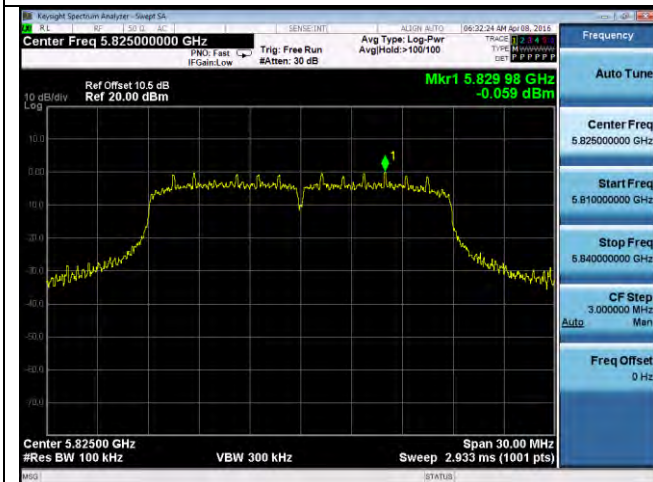
PSD-802.11n-20M 5745MHz Chain 2



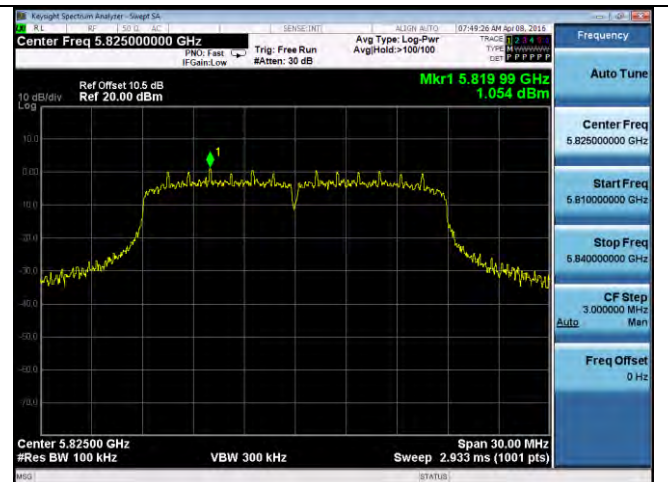
PSD-802.11n-20M 5785MHz Chain 1



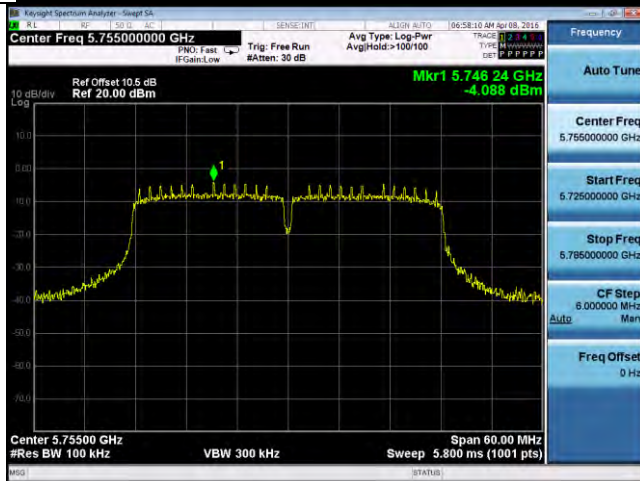
PSD-802.11n-20M 5785MHz Chain 2



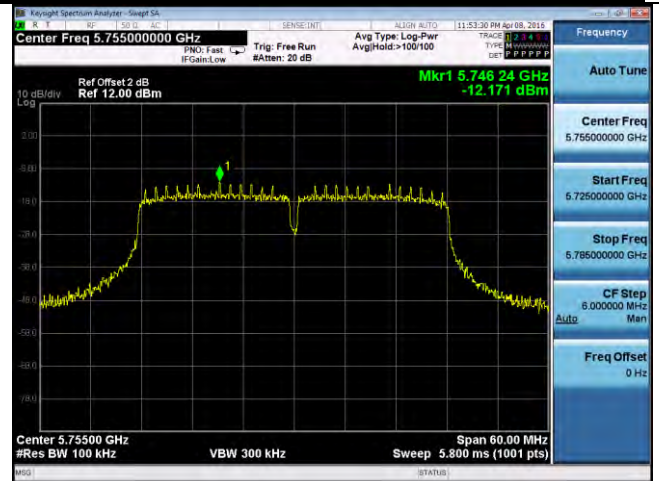
PSD-802.11n-20M 5825MHz Chain 1



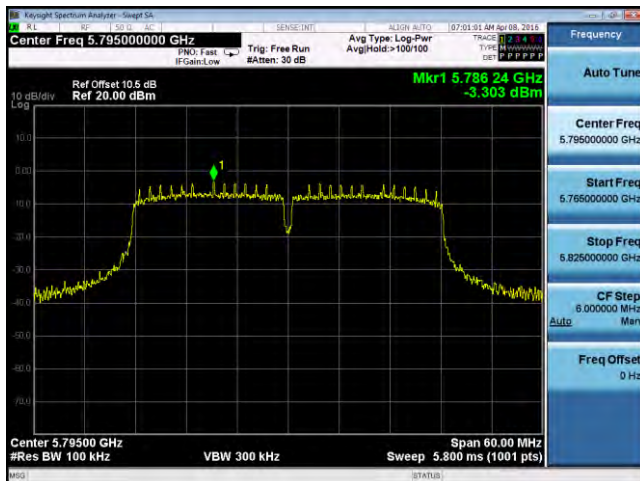
PSD-802.11n-20M 5825MHz Chain 1



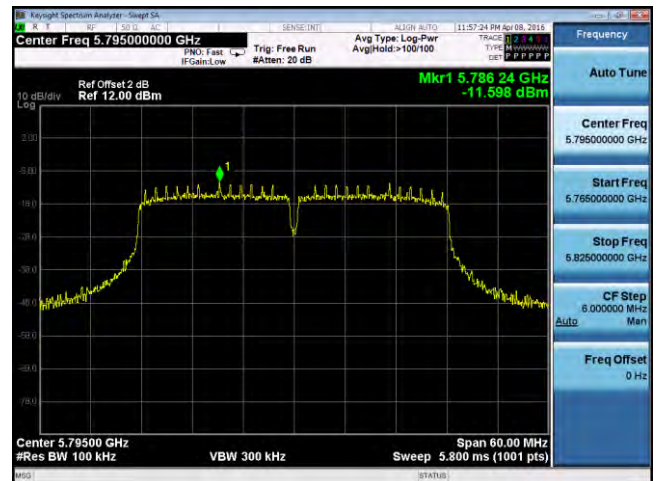
PSD-802.11n40-5755 MHz Chain 1



PSD-802.11n40-5755 MHz Chain 2



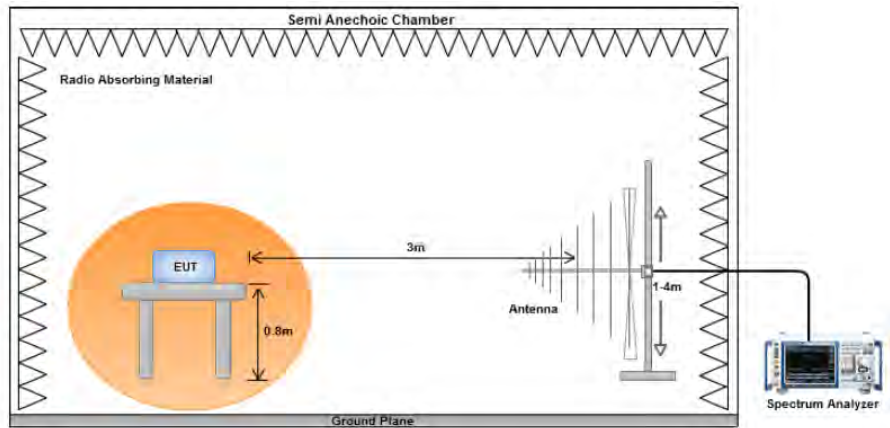
PSD-802.11n40-5795 MHz Chain 1



PSD-802.11n40-5795 MHz Chain 2

## 10.5 Radiated Emissions below 1GHz

### Requirement(s):

| Spec                              | Requirement  | Applicable            |                       |         |     |          |     |         |     |           |     |              |
|-----------------------------------|--|-----------------------|-----------------------|---------|-----|----------|-----|---------|-----|-----------|-----|--------------|
| 47CFR§<br>15.407(b)<br>15.209 (a) | <p>Except higher limit as specified elsewhere in other section, the emissions from the low-power radio-frequency devices shall not exceed the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges</p> <table><tr><th>Frequency range (MHz)</th><th>Field Strength (uV/m)</th></tr><tr><td>30 – 88</td><td>100</td></tr><tr><td>88 – 216</td><td>150</td></tr><tr><td>216 960</td><td>200</td></tr><tr><td>Above 960</td><td>500</td></tr></table>   | Frequency range (MHz) | Field Strength (uV/m) | 30 – 88 | 100 | 88 – 216 | 150 | 216 960 | 200 | Above 960 | 500 | <div>☒</div> |
| Frequency range (MHz)             | Field Strength (uV/m)  |                       |                       |         |     |          |     |         |     |           |     |              |
| 30 – 88                           | 100  |                       |                       |         |     |          |     |         |     |           |     |              |
| 88 – 216                          | 150  |                       |                       |         |     |          |     |         |     |           |     |              |
| 216 960                           | 200  |                       |                       |         |     |          |     |         |     |           |     |              |
| Above 960                         | 500  |                       |                       |         |     |          |     |         |     |           |     |              |
| Test Setup                        |   |                       |                       |         |     |          |     |         |     |           |     |              |
| Procedure                         | <div><div>1.</div><div>The EUT was switched on and allowed to warm up to its normal operating condition.</div></div> <div><div>2.</div><div>The test was carried out at the selected frequency points obtained from the EUT characterisation. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner:<div><div>a.</div><div>Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen.</div></div><div><div>b.</div><div>The EUT was then rotated to the direction that gave the maximum emission.</div></div><div><div>c.</div><div>Finally, the antenna height was adjusted to the height that gave the maximum emission.</div></div></div></div> <div><div>3.</div><div>A Quasi-peak measurement was then made for that frequency point.</div></div> <div><div>4.</div><div>Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.</div></div> |                       |                       |         |     |          |     |         |     |           |     |              |
| Remark                            | Both horizontal and vertical polarities were investigated. The results show only the worst case.   |                       |                       |         |     |          |     |         |     |           |     |              |
| Result                            | <div><div>☒ Pass</div><div>☐ Fail</div></div>  |                       |                       |         |     |          |     |         |     |           |     |              |

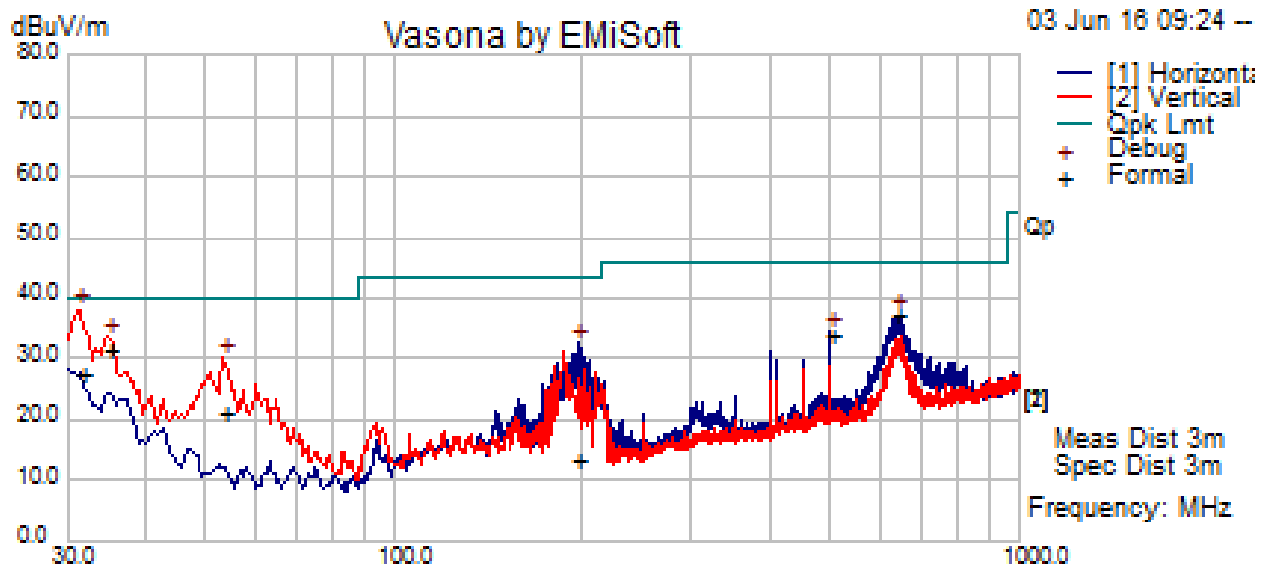
**Test Data** ☒ Yes (See below) ☐ N/A

**Test Plot** ☒ Yes (See below) ☐ N/A

**Test was done by** *Rachana Khanduri at 10m Chamber.*

## Radiated Emission Test Results (Below 1GHz)

|                           |                    |      |        |      |
|---------------------------|--------------------|------|--------|------|
| Test specification        | Below 1GHz         |      |        |      |
| Environmental Conditions: | Temp (°C):         | 25.7 | Result | Pass |
|                           | Humidity (%)       | 29   |        |      |
|                           | Atmospheric (mPa): | 1021 |        |      |
| Mains Power:              | 110VAC, 60Hz       |      |        |      |
| Tested by:                | Rachana Khanduri   |      |        |      |
| Test Date:                | 06/03/2016         |      |        |      |
| Remarks:                  | 5.2GHz 11n40 5230  |      |        |      |



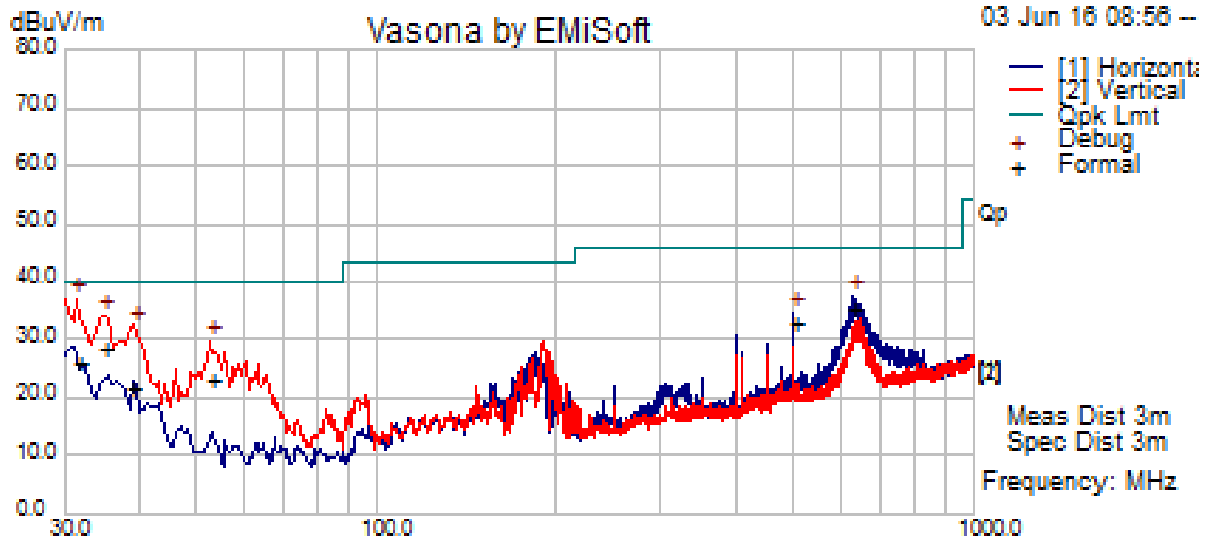
## Quasi Max Measurement

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 31.66         | 43.92    | 0.84       | -17.14 | 27.62        | Quasi Max        | V   | 250.00 | 36.00   | 40.00        | -12.38    | Pass       |
| 35.05         | 50.56    | 0.85       | -20.02 | 31.39        | Quasi Max        | V   | 102.00 | 33.00   | 40.00        | -8.61     | Pass       |
| 639.65        | 52.56    | 3.93       | -19.30 | 37.18        | Quasi Max        | H   | 133.00 | 339.00  | 46.02        | -8.84     | Pass       |
| 53.46         | 50.51    | 1.13       | -30.49 | 21.15        | Quasi Max        | V   | 105.00 | 347.00  | 40.00        | -18.85    | Pass       |
| 196.31        | 38.21    | 2.08       | -26.92 | 13.36        | Quasi Max        | H   | 318.00 | 117.00  | 43.52        | -30.16    | Pass       |
| 499.99        | 51.70    | 3.52       | -21.59 | 33.63        | Quasi Max        | H   | 184.00 | 347.00  | 46.02        | -12.39    | Pass       |

Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.



|                           |                        |      |        |      |
|---------------------------|------------------------|------|--------|------|
| Test specification        | Below 1GHz             |      |        |      |
| Environmental Conditions: | Temp (°C):             | 25.7 | Result | Pass |
|                           | Humidity (%)           | 29   |        |      |
|                           | Atmospheric (mPa):     | 1021 |        |      |
| Mains Power:              | 110VAC, 60Hz           |      |        |      |
| Tested by:                | Rachana Khanduri       |      |        |      |
| Test Date:                | 06/03/2016             |      |        |      |
| Remarks:                  | 5.8GHz 11n-40M 5795MHz |      |        |      |



### Quasi Max Measurement

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 31.59         | 42.38    | 0.84       | -17.08 | 26.14        | Quasi Max        | V   | 234.00 | 27.00   | 40.00        | -13.86    | Pass       |
| 35.07         | 47.83    | 0.85       | -20.03 | 28.65        | Quasi Max        | V   | 104.00 | 270.00  | 40.00        | -11.35    | Pass       |
| 39.05         | 43.66    | 0.93       | -23.08 | 21.52        | Quasi Max        | V   | 126.00 | 327.00  | 40.00        | -18.48    | Pass       |
| 629.36        | 51.31    | 3.91       | -19.81 | 35.41        | Quasi Max        | H   | 149.00 | 183.00  | 46.02        | -10.61    | Pass       |
| 53.00         | 52.44    | 1.13       | -30.44 | 23.13        | Quasi Max        | V   | 114.00 | 339.00  | 40.00        | -16.87    | Pass       |
| 500.02        | 50.93    | 3.52       | -21.59 | 32.86        | Quasi Max        | H   | 179.00 | 340.00  | 46.02        | -13.16    | Pass       |

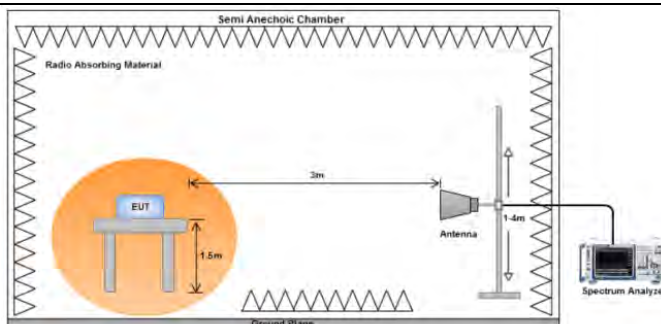
Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.

## 10.6 Radiated Spurious Emissions above 1GHz

### Requirement(s):

| Spec                                    | Item | Requirement  | Applicable                          |
|---|------|--|-------------------------------------|
| 47CFR§<br>15.407(b)(2),<br>15.407(b)(6) | (1)  | For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.   | <input checked="" type="checkbox"/> |
|   | (2)  | For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band. | <input checked="" type="checkbox"/> |
|   | (3)  | For transmitters operating in the 5.47-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.   | <input checked="" type="checkbox"/> |
|   | (4)  | For transmitters operating in the 5.725-5.825 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz.   | <input checked="" type="checkbox"/> |
|   | (5)  | Restricted band, emission must also comply with the radiated emission limits specified in 15.209   | <input checked="" type="checkbox"/> |

### Test Setup



### Procedure

- The EUT was switched on and allowed to warm up to its normal operating condition.
- The test was carried out at the selected frequency points obtained from the EUT characterisation. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner:
  - Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen.
  - The EUT was then rotated to the direction that gave the maximum emission.
  - Finally, the antenna height was adjusted to the height that gave the maximum emission.
- An average measurement was then made for that frequency point.
- Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.

### Remark

Both horizontal and vertical polarities were investigated. The results show only the worst case.

### Result

☒ Pass ☐ Fail

**Test Data** ☒ Yes (See below) ☐ N/A

**Test Plot** ☒ Yes (See below) ☐ N/A

**Test was done by** *Rachana Khanduri* **at** *3m Chamber*.

## Radiated Emission Test Results (Above 1GHz)

### 802.11a – 5180MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 17989.27      | 47.40    | 9.47       | -3.24  | 53.63        | Peak Max         | H   | 215.00 | 0.00    | 74.00        | -20.37    | Pass       |
| 1535.78       | 71.88    | 4.77       | -29.18 | 47.47        | Peak Max         | H   | 111.00 | 248.00  | 74.00        | -26.53    | Pass       |
| 1943.63       | 63.63    | 4.76       | -27.87 | 40.52        | Peak Max         | H   | 218.00 | 234.00  | 74.00        | -33.49    | Pass       |
| 17989.27      | 36.14    | 9.47       | -3.24  | 42.37        | Average Max      | H   | 215.00 | 0.00    | 54.00        | -11.63    | Pass       |
| 1535.78       | 69.55    | 4.77       | -29.18 | 45.14        | Average Max      | H   | 111.00 | 248.00  | 54.00        | -8.86     | Pass       |
| 1943.63       | 52.43    | 4.76       | -27.87 | 29.31        | Average Max      | H   | 218.00 | 234.00  | 54.00        | -24.69    | Pass       |

### 802.11a – 5200MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 17895.39      | 48.50    | 9.46       | -3.09  | 54.87        | Peak Max         | V   | 131.00 | 150.00  | 74.00        | -19.13    | Pass       |
| 1535.91       | 69.56    | 4.77       | -29.18 | 45.15        | Peak Max         | V   | 186.00 | 4.00    | 74.00        | -28.85    | Pass       |
| 1943.86       | 63.13    | 4.76       | -27.87 | 40.03        | Peak Max         | H   | 218.00 | 361.00  | 74.00        | -33.97    | Pass       |
| 17895.39      | 36.94    | 9.46       | -3.09  | 43.31        | Average Max      | V   | 131.00 | 150.00  | 54.00        | -10.69    | Pass       |
| 1535.91       | 66.90    | 4.77       | -29.18 | 42.49        | Average Max      | V   | 186.00 | 4.00    | 54.00        | -11.51    | Pass       |
| 1943.86       | 49.61    | 4.76       | -27.87 | 26.51        | Average Max      | H   | 218.00 | 361.00  | 54.00        | -27.49    | Pass       |

### 802.11a – 5240MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 9502.06       | 51.13    | 7.84       | -10.36 | 48.61        | Peak Max         | V   | 240.00 | 156.00  | 74.00        | -25.39    | Pass       |
| 1535.90       | 68.79    | 4.77       | -29.18 | 44.38        | Peak Max         | V   | 102.00 | 5.00    | 74.00        | -29.62    | Pass       |
| 2131.92       | 60.25    | 5.10       | -25.48 | 39.86        | Peak Max         | H   | 236.00 | 100.00  | 74.00        | -34.14    | Pass       |
| 9502.06       | 39.21    | 7.84       | -10.36 | 36.69        | Average Max      | V   | 240.00 | 156.00  | 54.00        | -17.31    | Pass       |
| 1535.90       | 66.28    | 4.77       | -29.18 | 41.87        | Average Max      | V   | 102.00 | 5.00    | 54.00        | -12.13    | Pass       |
| 2131.92       | 48.54    | 5.10       | -25.48 | 28.16        | Average Max      | H   | 236.00 | 100.00  | 54.00        | -25.85    | Pass       |

### 802.11n20 – 5180MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 17549.27      | 48.00    | 9.42       | -3.68  | 53.74        | Peak Max         | H   | 154.00 | 54.00   | 74.00        | -20.26    | Pass       |
| 1535.92       | 70.01    | 4.77       | -29.18 | 45.60        | Peak Max         | H   | 121.00 | 221.00  | 74.00        | -28.40    | Pass       |
| 1944.25       | 64.03    | 4.76       | -27.86 | 40.93        | Peak Max         | H   | 237.00 | 201.00  | 74.00        | -33.07    | Pass       |
| 17549.27      | 36.25    | 9.42       | -3.68  | 41.99        | Average Max      | H   | 154.00 | 54.00   | 54.00        | -12.01    | Pass       |
| 1535.92       | 68.38    | 4.77       | -29.18 | 43.97        | Average Max      | H   | 121.00 | 221.00  | 54.00        | -10.04    | Pass       |
| 1944.25       | 50.77    | 4.76       | -27.86 | 27.67        | Average Max      | H   | 237.00 | 201.00  | 54.00        | -26.33    | Pass       |

#### 802.11n20 – 5200MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 17831.19      | 48.81    | 9.45       | -3.37  | 54.89        | Peak Max         | H   | 121.00 | 85.00   | 74.00        | -19.11    | Pass       |
| 1535.98       | 68.83    | 4.77       | -29.18 | 44.42        | Peak Max         | V   | 186.00 | 0.00    | 74.00        | -29.58    | Pass       |
| 1736.78       | 56.69    | 4.76       | -28.49 | 32.96        | Peak Max         | H   | 222.00 | 253.00  | 74.00        | -41.04    | Pass       |
| 17831.19      | 37.02    | 9.45       | -3.37  | 43.10        | Average Max      | H   | 121.00 | 85.00   | 54.00        | -10.90    | Pass       |
| 1535.98       | 66.70    | 4.77       | -29.18 | 42.29        | Average Max      | V   | 186.00 | 0.00    | 54.00        | -11.71    | Pass       |
| 1736.78       | 44.74    | 4.76       | -28.49 | 21.02        | Average Max      | H   | 222.00 | 253.00  | 54.00        | -32.99    | Pass       |

#### 802.11n20 – 5240MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 17709.64      | 48.15    | 9.44       | -3.11  | 54.47        | Peak Max         | V   | 233.00 | 53.00   | 74.00        | -19.53    | Pass       |
| 1535.96       | 67.93    | 4.77       | -29.18 | 43.52        | Peak Max         | V   | 183.00 | 0.00    | 74.00        | -30.48    | Pass       |
| 1944.83       | 63.46    | 4.76       | -27.85 | 40.37        | Peak Max         | H   | 229.00 | 304.00  | 74.00        | -33.64    | Pass       |
| 17709.64      | 36.37    | 9.44       | -3.11  | 42.69        | Average Max      | V   | 233.00 | 53.00   | 54.00        | -11.31    | Pass       |
| 1535.96       | 65.92    | 4.77       | -29.18 | 41.51        | Average Max      | V   | 183.00 | 0.00    | 54.00        | -12.49    | Pass       |
| 1944.83       | 46.89    | 4.76       | -27.85 | 23.80        | Average Max      | H   | 229.00 | 304.00  | 54.00        | -30.20    | Pass       |

#### 802.11n40 – 5190MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 17932.65      | 48.49    | 9.46       | -3.13  | 54.82        | Peak Max         | H   | 154.00 | 319.00  | 74.00        | -19.18    | Pass       |
| 8663.28       | 50.32    | 7.61       | -10.84 | 47.09        | Peak Max         | V   | 165.00 | 285.00  | 74.00        | -26.91    | Pass       |
| 1535.76       | 69.01    | 4.77       | -29.18 | 44.60        | Peak Max         | H   | 246.00 | 18.00   | 74.00        | -29.40    | Pass       |
| 17932.65      | 37.30    | 9.46       | -3.13  | 43.63        | Average Max      | H   | 154.00 | 319.00  | 54.00        | -10.37    | Pass       |
| 8663.28       | 38.57    | 7.61       | -10.84 | 35.34        | Average Max      | V   | 165.00 | 285.00  | 54.00        | -18.66    | Pass       |
| 1535.76       | 66.59    | 4.77       | -29.18 | 42.18        | Average Max      | H   | 246.00 | 18.00   | 54.00        | -11.82    | Pass       |

#### 802.11n40 – 5230MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 17898.10      | 48.85    | 9.46       | -3.08  | 55.23        | Peak Max         | V   | 102.00 | 0.00    | 74.00        | -18.77    | Pass       |
| 9191.15       | 49.18    | 7.75       | -10.44 | 46.48        | Peak Max         | V   | 197.00 | 160.00  | 74.00        | -27.52    | Pass       |
| 1536.01       | 67.30    | 4.77       | -29.18 | 42.89        | Peak Max         | V   | 173.00 | 151.00  | 74.00        | -31.11    | Pass       |
| 17898.10      | 36.98    | 9.46       | -3.08  | 43.36        | Average Max      | V   | 102.00 | 0.00    | 54.00        | -10.64    | Pass       |
| 9191.15       | 37.90    | 7.75       | -10.44 | 35.20        | Average Max      | V   | 197.00 | 160.00  | 54.00        | -18.80    | Pass       |
| 1536.01       | 65.53    | 4.77       | -29.18 | 41.12        | Average Max      | V   | 173.00 | 151.00  | 54.00        | -12.88    | Pass       |



#### 802.11a – 5745MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 17841.24      | 48.43    | 9.45       | -3.33  | 54.56        | Peak Max         | H   | 215.00 | 92.00   | 74.00        | -19.44    | Pass       |
| 1535.86       | 71.07    | 4.77       | -29.18 | 46.66        | Peak Max         | V   | 169.00 | 150.00  | 74.00        | -27.34    | Pass       |
| 1944.86       | 63.66    | 4.76       | -27.85 | 40.57        | Peak Max         | H   | 236.00 | 205.00  | 74.00        | -33.43    | Pass       |
| 17841.24      | 37.24    | 9.45       | -3.33  | 43.36        | Average Max      | H   | 215.00 | 92.00   | 54.00        | -10.64    | Pass       |
| 1535.86       | 69.32    | 4.77       | -29.18 | 44.91        | Average Max      | V   | 169.00 | 150.00  | 54.00        | -9.10     | Pass       |
| 1944.86       | 51.97    | 4.76       | -27.85 | 28.88        | Average Max      | H   | 236.00 | 205.00  | 54.00        | -25.12    | Pass       |

#### 802.11a – 5785MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 17851.23      | 48.76    | 9.45       | -3.28  | 54.93        | Peak Max         | H   | 235.00 | 309.00  | 74.00        | -19.07    | Pass       |
| 1535.84       | 70.95    | 4.77       | -29.18 | 46.54        | Peak Max         | V   | 160.00 | 149.00  | 74.00        | -27.46    | Pass       |
| 1944.29       | 62.92    | 4.76       | -27.86 | 39.81        | Peak Max         | H   | 164.00 | 86.00   | 74.00        | -34.19    | Pass       |
| 17851.23      | 37.04    | 9.45       | -3.28  | 43.22        | Average Max      | H   | 235.00 | 309.00  | 54.00        | -10.79    | Pass       |
| 1535.84       | 69.18    | 4.77       | -29.18 | 44.77        | Average Max      | V   | 160.00 | 149.00  | 54.00        | -9.23     | Pass       |
| 1944.29       | 51.65    | 4.76       | -27.86 | 28.55        | Average Max      | H   | 164.00 | 86.00   | 54.00        | -25.45    | Pass       |

#### 802.11a – 5825MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 17674.15      | 48.41    | 9.43       | -3.19  | 54.65        | Peak Max         | H   | 146.00 | 59.00   | 74.00        | -19.35    | Pass       |
| 1535.81       | 69.45    | 4.77       | -29.18 | 45.04        | Peak Max         | V   | 173.00 | 153.00  | 74.00        | -28.96    | Pass       |
| 3883.39       | 57.14    | 6.80       | -19.51 | 44.43        | Peak Max         | H   | 101.00 | 128.00  | 74.00        | -29.57    | Pass       |
| 17674.15      | 36.85    | 9.43       | -3.19  | 43.09        | Average Max      | H   | 146.00 | 59.00   | 54.00        | -10.91    | Pass       |
| 1535.81       | 67.57    | 4.77       | -29.18 | 43.16        | Average Max      | V   | 173.00 | 153.00  | 54.00        | -10.84    | Pass       |
| 3883.39       | 52.11    | 6.80       | -19.51 | 39.40        | Average Max      | H   | 101.00 | 128.00  | 54.00        | -14.60    | Pass       |

#### 802.11n20 – 5745MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 11491.78      | 51.79    | 8.54       | -8.09  | 52.24        | Peak Max         | V   | 245.00 | 15.00   | 74.00        | -21.76    | Pass       |
| 1535.98       | 67.91    | 4.77       | -29.18 | 43.50        | Peak Max         | H   | 121.00 | 217.00  | 74.00        | -30.50    | Pass       |
| 1942.27       | 59.81    | 4.76       | -27.89 | 36.68        | Peak Max         | H   | 236.00 | 305.00  | 74.00        | -37.32    | Pass       |
| 11491.78      | 39.11    | 8.54       | -8.09  | 39.56        | Average Max      | V   | 245.00 | 15.00   | 54.00        | -14.44    | Pass       |
| 1535.98       | 65.85    | 4.77       | -29.18 | 41.44        | Average Max      | H   | 121.00 | 217.00  | 54.00        | -12.56    | Pass       |
| 1942.27       | 48.57    | 4.76       | -27.89 | 25.44        | Average Max      | H   | 236.00 | 305.00  | 54.00        | -28.57    | Pass       |

#### 802.11n20 – 5785MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 11566.28      | 55.05    | 8.57       | -8.04  | 55.57        | Peak Max         | V   | 208.00 | 266.00  | 74.00        | -18.43    | Pass       |
| 1535.95       | 67.31    | 4.77       | -29.18 | 42.90        | Peak Max         | V   | 176.00 | 5.00    | 74.00        | -31.10    | Pass       |
| 4922.60       | 49.37    | 7.07       | -16.97 | 39.47        | Peak Max         | V   | 236.00 | 15.00   | 74.00        | -34.53    | Pass       |
| 11566.28      | 42.34    | 8.57       | -8.04  | 42.87        | Average Max      | V   | 208.00 | 266.00  | 54.00        | -11.13    | Pass       |
| 1535.95       | 65.30    | 4.77       | -29.18 | 40.89        | Average Max      | V   | 176.00 | 5.00    | 54.00        | -13.11    | Pass       |
| 4922.60       | 38.56    | 7.07       | -16.97 | 28.65        | Average Max      | V   | 236.00 | 15.00   | 54.00        | -25.35    | Pass       |

#### 802.11n20 – 5825MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 17648.20      | 48.16    | 9.43       | -3.31  | 54.28        | Peak Max         | H   | 245.00 | 339.00  | 74.00        | -19.72    | Pass       |
| 1535.95       | 66.42    | 4.77       | -29.18 | 42.01        | Peak Max         | H   | 123.00 | 218.00  | 74.00        | -31.99    | Pass       |
| 1944.93       | 63.23    | 4.76       | -27.85 | 40.13        | Peak Max         | H   | 162.00 | 68.00   | 74.00        | -33.87    | Pass       |
| 17648.20      | 36.57    | 9.43       | -3.31  | 42.69        | Average Max      | H   | 245.00 | 339.00  | 54.00        | -11.31    | Pass       |
| 1535.95       | 64.68    | 4.77       | -29.18 | 40.27        | Average Max      | H   | 123.00 | 218.00  | 54.00        | -13.73    | Pass       |
| 1944.93       | 44.79    | 4.76       | -27.85 | 21.69        | Average Max      | H   | 162.00 | 68.00   | 54.00        | -32.31    | Pass       |

#### 802.11n40 – 5755MHz

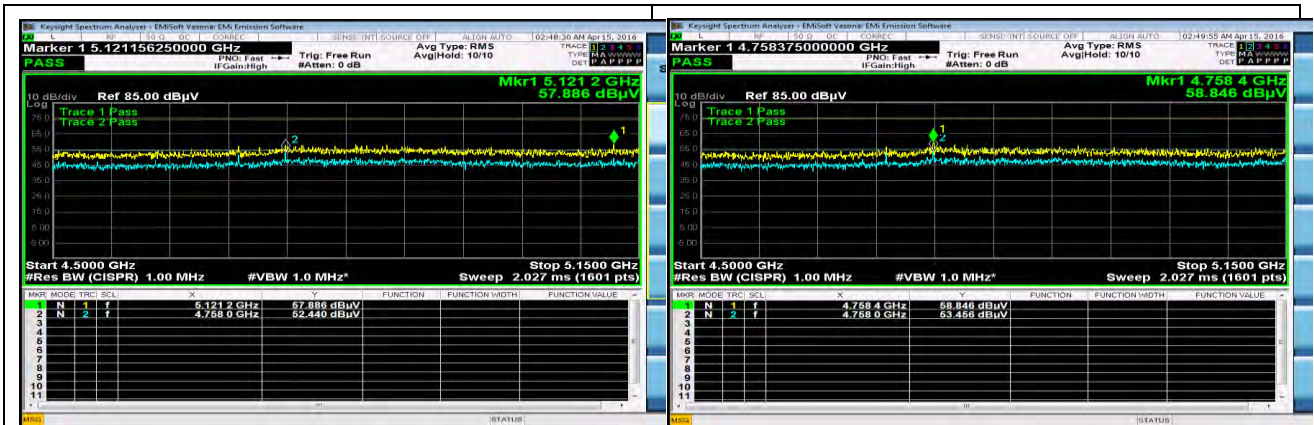
| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 17665.47      | 48.41    | 9.43       | -3.23  | 54.61        | Peak Max         | H   | 213.00 | 25.00   | 74.00        | -19.39    | Pass       |
| 1535.90       | 66.98    | 4.77       | -29.18 | 42.57        | Peak Max         | V   | 186.00 | 5.00    | 74.00        | -31.43    | Pass       |
| 2130.94       | 62.75    | 5.10       | -25.48 | 42.37        | Peak Max         | H   | 232.00 | 190.00  | 74.00        | -31.63    | Pass       |
| 17665.47      | 36.98    | 9.43       | -3.23  | 43.18        | Average Max      | H   | 213.00 | 25.00   | 54.00        | -10.82    | Pass       |
| 1535.90       | 64.84    | 4.77       | -29.18 | 40.43        | Average Max      | V   | 186.00 | 5.00    | 54.00        | -13.57    | Pass       |
| 2130.94       | 52.31    | 5.10       | -25.48 | 31.93        | Average Max      | H   | 232.00 | 190.00  | 54.00        | -22.07    | Pass       |

#### 802.11n40 – 5795MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 17910.86      | 49.75    | 9.46       | -3.09  | 56.11        | Peak Max         | V   | 154.00 | 266.00  | 74.00        | -17.89    | Pass       |
| 1536.01       | 65.99    | 4.77       | -29.18 | 41.58        | Peak Max         | V   | 176.00 | 5.00    | 74.00        | -32.42    | Pass       |
| 2133.19       | 58.97    | 5.10       | -25.49 | 38.59        | Peak Max         | V   | 169.00 | 225.00  | 74.00        | -35.41    | Pass       |
| 17910.86      | 37.23    | 9.46       | -3.09  | 43.60        | Average Max      | V   | 154.00 | 266.00  | 54.00        | -10.40    | Pass       |
| 1536.01       | 63.95    | 4.77       | -29.18 | 39.54        | Average Max      | V   | 176.00 | 5.00    | 54.00        | -14.46    | Pass       |
| 2133.19       | 43.25    | 5.10       | -25.49 | 22.86        | Average Max      | V   | 169.00 | 225.00  | 54.00        | -31.14    | Pass       |

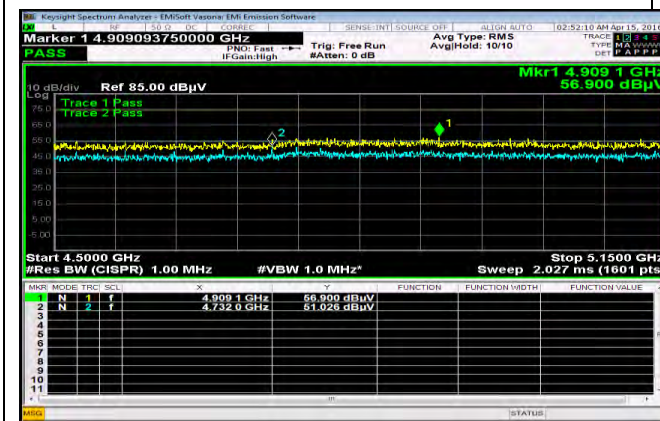
Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.

## Restricted Band Measurement Plots:



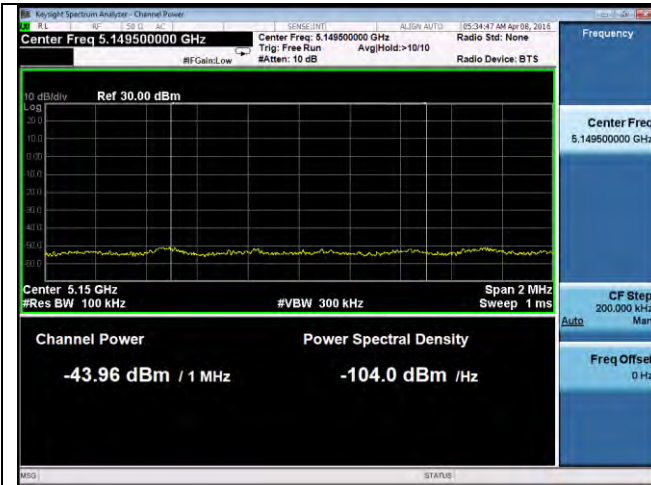
Lower Band 802.11a 5180MHz

Lower Band 802.11n-20M 5180MHz

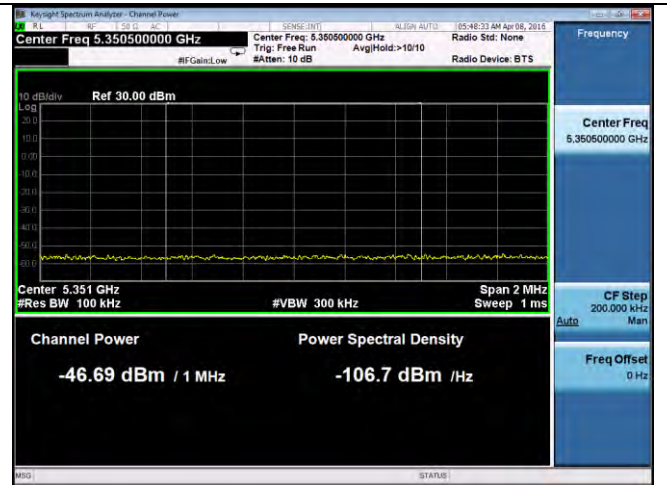


Lower Band 802.11n-40M 5190MHz

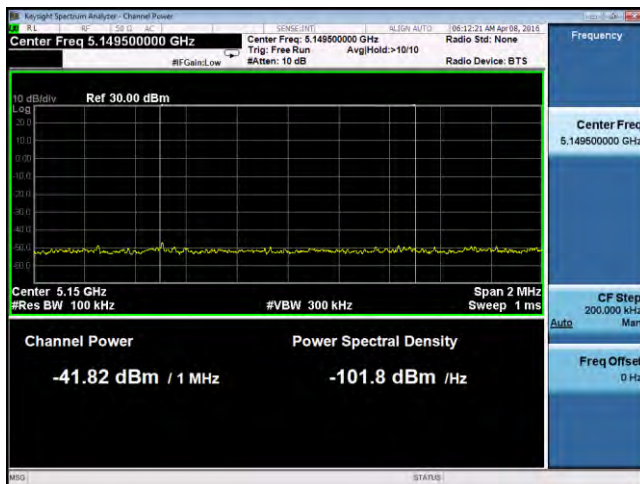
## Conducted Band Edge Measurement Plots (Plot shows only worst case of both chains)



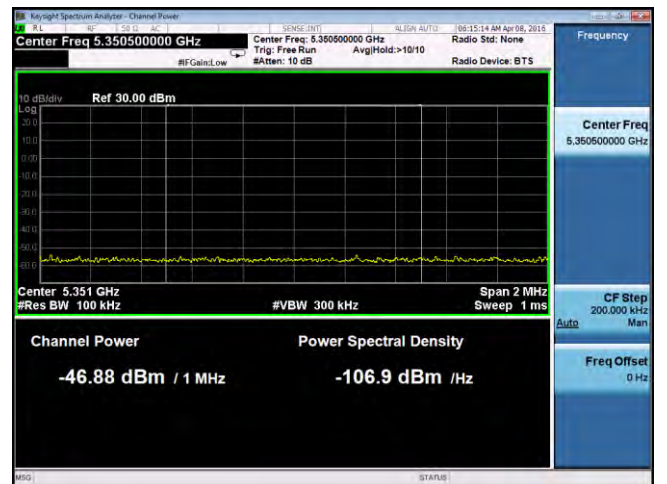
**Band Edge-802.11a 5180 MHz (Limit: -27dBm/MHz eirp)**



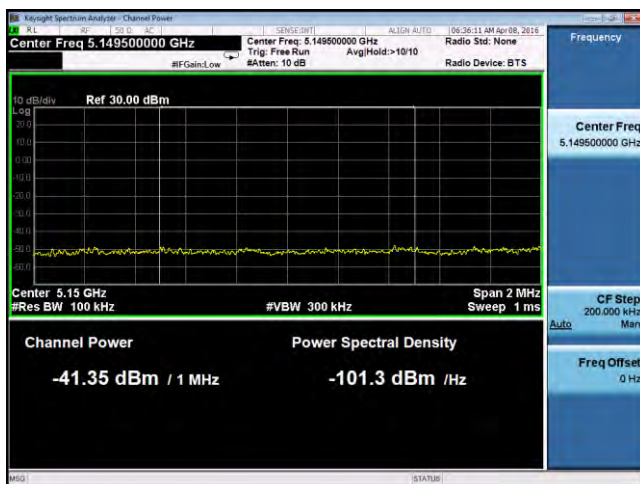
**Band Edge-802.11a 5240 MHz (Limit: -27dBm/MHz eirp)**



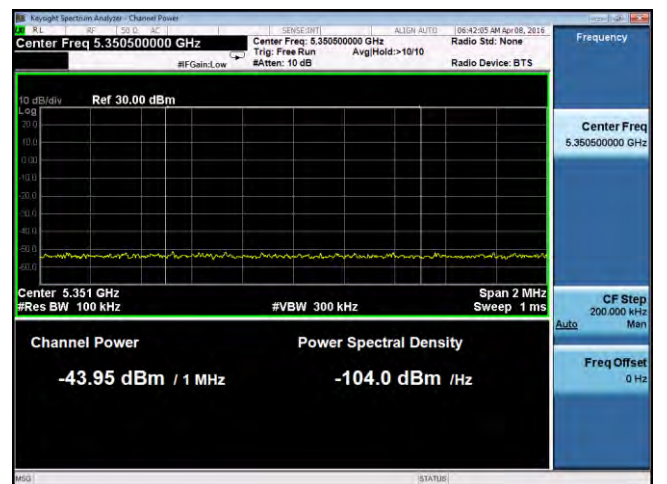
**Band Edge-802.11n20 5180 MHz (Limit: -27dBm/MHz eirp)**



**Band Edge-802.11n20 5240 MHz (Limit: -27dBm/MHz eirp)**

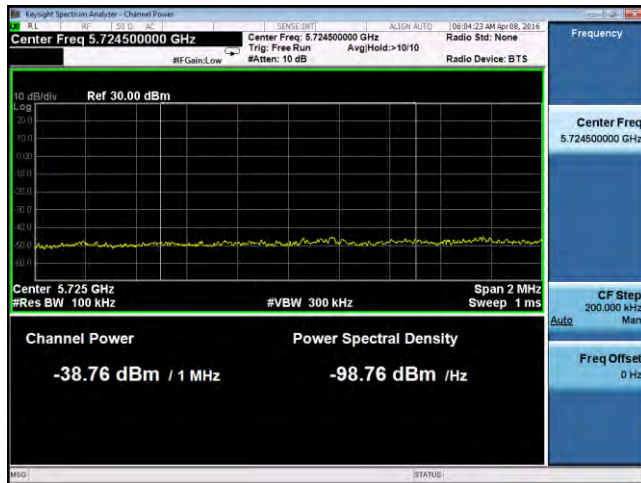


**Band Edge-802.11n40 5190 MHz (Limit: -27dBm/MHz eirp)**

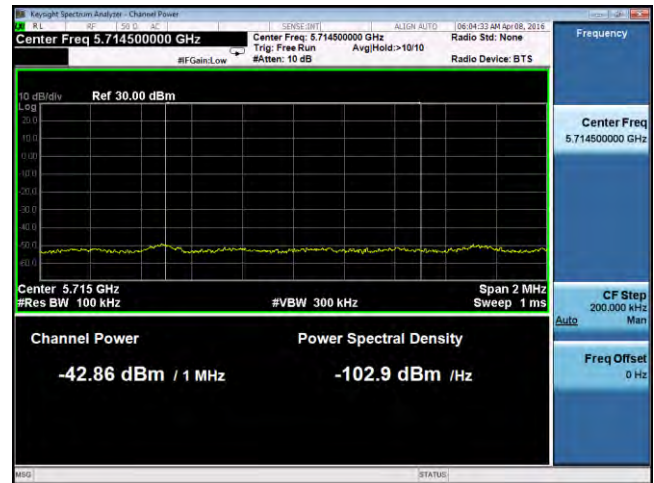


**Band Edge-802.11n40 5230 MHz (Limit: -27dBm/MHz eirp)**

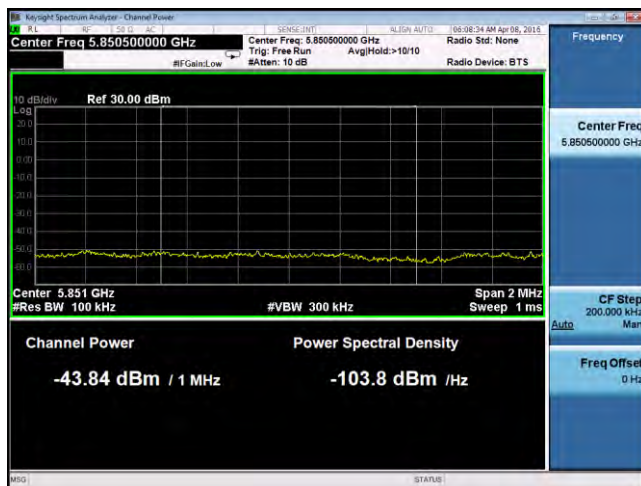




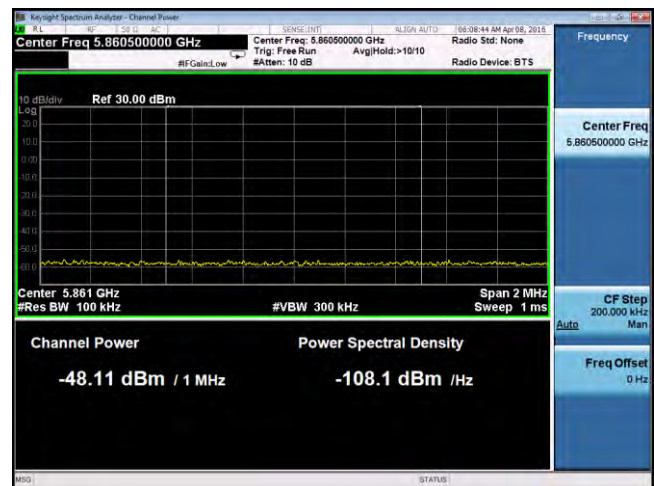
5.8GHz Band Edge-802.11a 5745 MHz (Limit: -17 eirp)



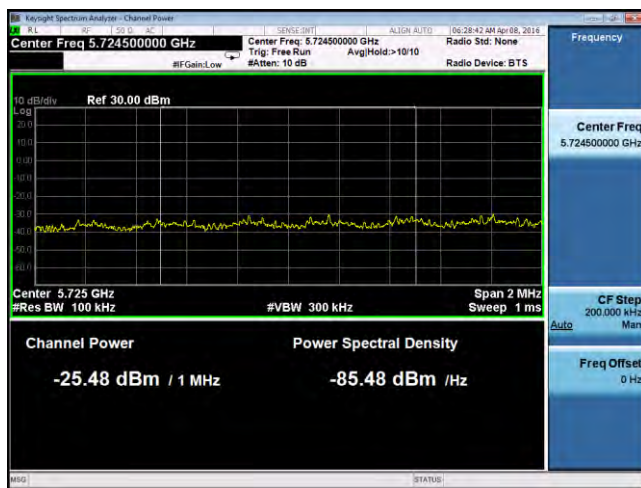
5.8GHz Band Edge-802.11a 5745 MHz (Limit: -27 eirp)



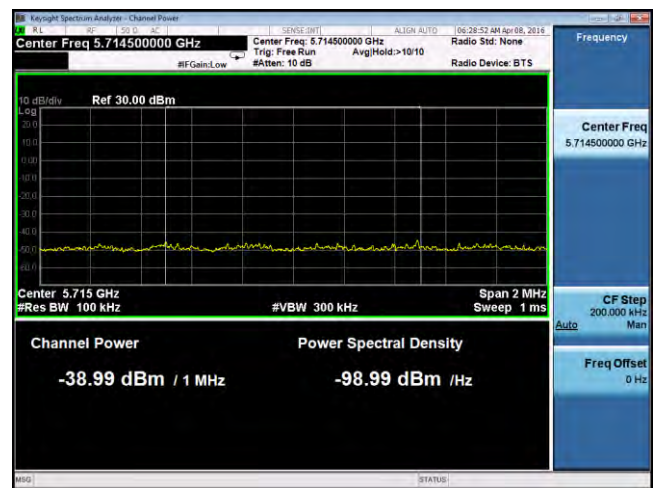
5.8GHz Band Edge-802.11a 5825 MHz (Limit: -17 eirp)



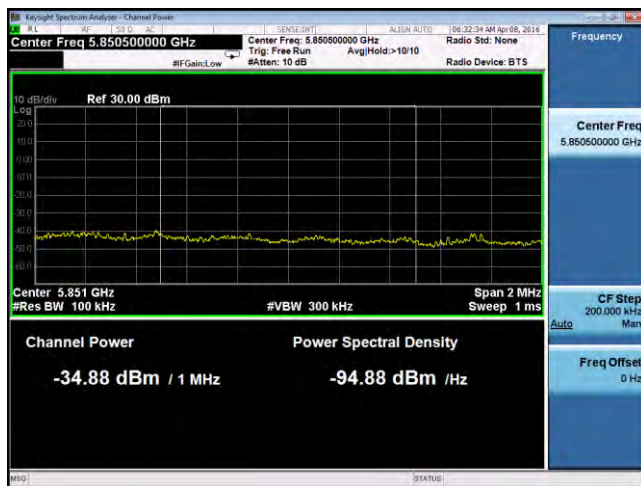
5.8GHz Band Edge-802.11a 5825 MHz (Limit: -27 eirp)



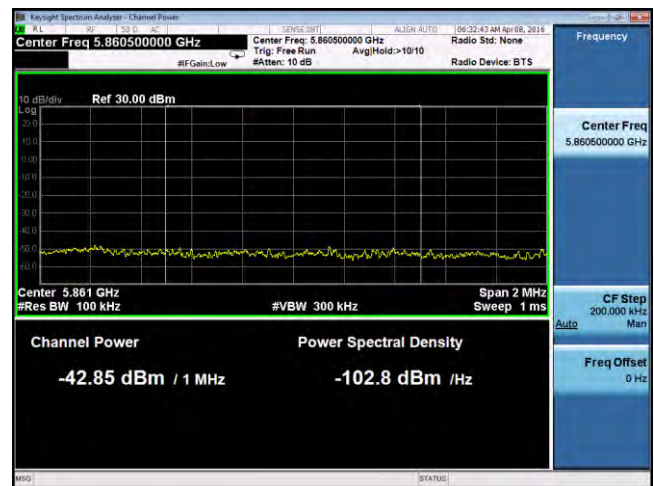
5.8GHz Band Edge-802.11n20 5745 MHz (Limit: -17 eirp)



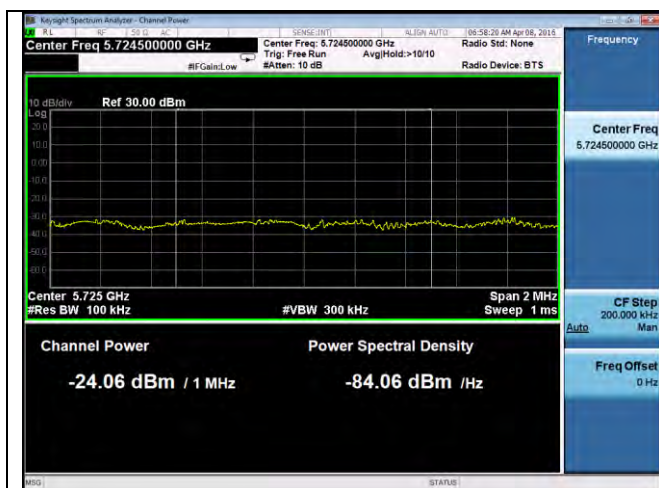
5.8GHz Band Edge-802.11n20 5745 MHz (Limit: -27 eirp)



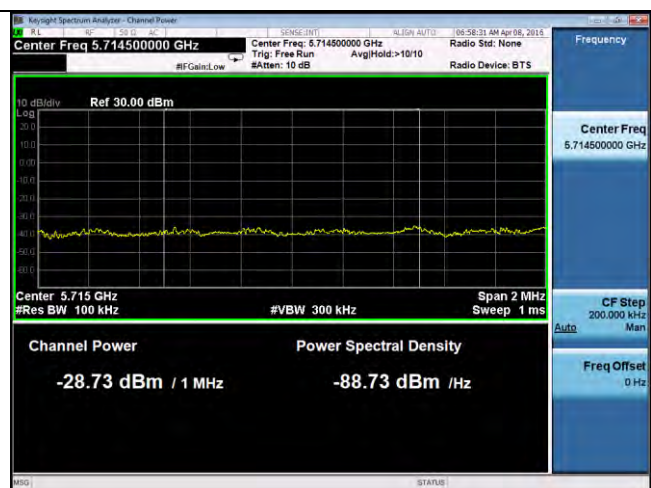
5.8GHz Band Edge-802.11n20 5825 MHz (Limit: -17 eirp)



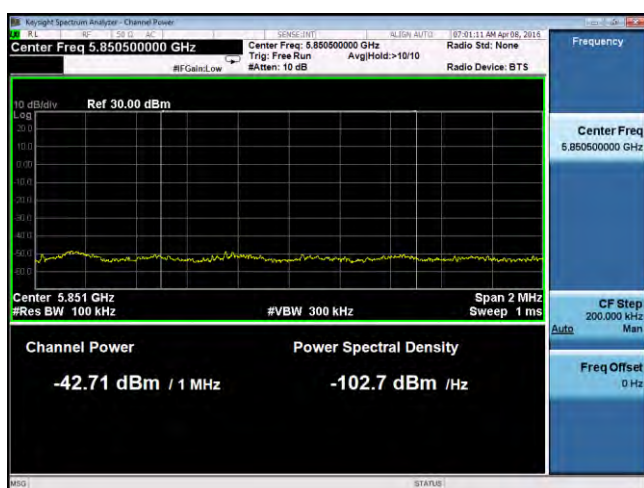
5.8GHz Band Edge-802.11n20 5825 MHz (Limit: -27 eirp)



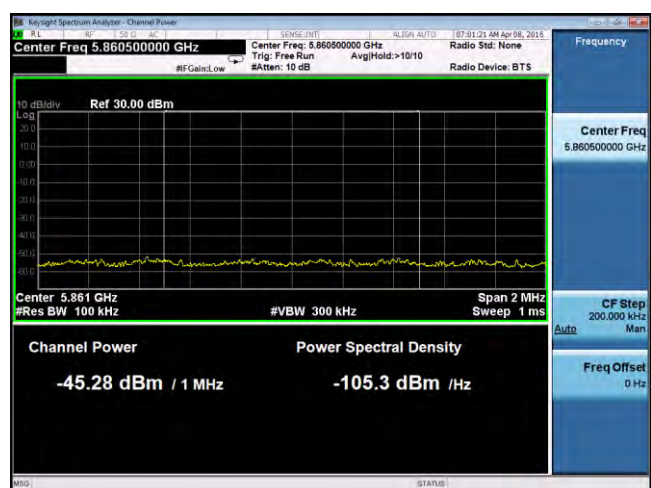
5.8GHz Band Edge-802.11n40 5755 MHz (Limit: -17 eirp)



5.8GHz Band Edge-802.11n40 5755 MHz (Limit: -27 eirp)



5.8GHz Band Edge-802.11n40 5795 MHz (Limit: -17 eirp)



5.8GHz Band Edge-802.11n40 5795 MHz (Limit: -27 eirp)

















Note: The results above show only the worst case. Antenna gain = 4.9 dBi.








## Annex A. TEST INSTRUMENT

| Instrument                      | Model    | Serial #   | Cal Date   | Cal Cycle | Cal Due    | In use                              |
|---------------------------------|----------|------------|------------|-----------|------------|-------------------------------------|
| <b>Conducted Emissions</b>      |          |            |            |           |            |                                     |
| R & S Receiver                  | ESIB 40  | 100179     | 06/03/2015 | 1 Year    | 06/03/2016 | <input checked="" type="checkbox"/> |
| CHASE LISN                      | MN2050B  | 1018       | 08/07/2015 | 1 Year    | 08/07/2016 | <input checked="" type="checkbox"/> |
| <b>Radiated Emissions</b>       |          |            |            |           |            |                                     |
| R & S Receiver                  | ESL6     | 100178     | 05/27/2015 | 1 Year    | 05/27/2016 | <input checked="" type="checkbox"/> |
| R & S Receiver                  | ESIB 40  | 100179     | 06/03/2015 | 1 Year    | 06/03/2016 | <input checked="" type="checkbox"/> |
| Pre-Amplifier (1-26.5GHz)       | 8449B    | 3008A00715 | 03/30/2016 | 1 Year    | 03/30/2017 | <input checked="" type="checkbox"/> |
| Preamplifier (100KHz-7GHz)      | LPA-6-30 | 11140711   | 02/10/2016 | 1 Year    | 02/10/2017 | <input checked="" type="checkbox"/> |
| ETS-Lingren Loop Antenna        | 6512     | 00049120   | 08/20/2015 | 1 Year    | 08/20/2016 | <input type="checkbox"/>            |
| Bi-Log antenna (30MHz~2GHz)     | JB1      | A030702    | 08/15/2015 | 1 Year    | 08/15/2016 | <input checked="" type="checkbox"/> |
| Horn Antenna (1-26.5GHz)        | 3115     | 10SL0059   | 08/25/2015 | 1 Year    | 08/25/2016 | <input checked="" type="checkbox"/> |
| 3 Meters SAC                    | 3M       | N/A        | 10/30/2015 | 1 Year    | 10/30/2016 | <input checked="" type="checkbox"/> |
| 10 Meters SAC                   | 10M      | N/A        | 05/06/2015 | 1 Year    | 05/06/2016 | <input checked="" type="checkbox"/> |
| <b>RF Conducted Measurement</b> |          |            |            |           |            |                                     |
| Spectrum Analyzer               | N9010A   | MY50210206 | 10/27/2015 | 1 Year    | 10/27/2016 | <input checked="" type="checkbox"/> |
| R & S Receiver                  | ESIB 40  | 100179     | 06/03/2015 | 1 Year    | 06/03/2016 | <input checked="" type="checkbox"/> |
| Test Equity Environment Chamber | 1007H    | 61201      | 07/28/2015 | 1 Year    | 07/28/2016 | <input checked="" type="checkbox"/> |
| USB RF Power Sensor             | 7002-006 | 159860     | 09/22/2015 | 1 Year    | 09/22/2016 | <input checked="" type="checkbox"/> |



## Annex B. SIEMIC Accreditation

| Accreditations                          | Document  | Scope / Remark  |
|---|---|---|
| ISO 17025 (A2LA)                        |    | Please see the documents for the detailed scope   |
| ISO Guide 65 (A2LA)                     |    | Please see the documents for the detailed scope   |
| TCB Designation                         |   | A1, A2, A3, A4, B1, B2, B3, B4, C   |
| FCC DoC Accreditation                   |    | FCC Declaration of Conformity Accreditation   |
| FCC Site Registration                   |    | 3 meter site  |
| FCC Site Registration                   |    | 10 meter site   |
| IC Site Registration                    |    | 3 meter site  |
| IC Site Registration                    |    | 10 meter site   |
| EU NB                                   |    | <b>Radio &amp; Telecommunications Terminal Equipment:</b><br>EN45001 – EN ISO/IEC 17025 |
|   |    | <b>Electromagnetic Compatibility:</b><br>EN45001 – EN ISO/IEC 17025                     |
| Singapore iDA<br>CB(Certification Body) |   | Phase I, Phase II   |
| Vietnam MIC<br>CAB Accreditation        |    | Please see the document for the detailed scope  |
| Hong Kong OFCA                          |    | (Phase II) OFCA Foreign Certification Body for Radio and Telecom                        |
|   |    | (Phase I) Conformity Assessment Body for Radio and Telecom                              |
| Industry Canada CAB                     |    | <b>Radio:</b> Scope A – All Radio Standard Specification in Category I                  |
|   |    | <b>Telecom:</b> CS-03 Part I, II, V, VI, VII, VIII                                      |

|  |   |  |
|--|---|--|
| Japan Recognized Certification<br>Body Designation |    | <p><b>Radio:</b> A1. Terminal equipment for purpose of calling</p> <p><b>Telecom:</b> B1. Specified radio equipment specified in Article 38-2, Paragraph 1, Item 1 of the Radio Law</p>  |
| Korea CAB Accreditation                            |    | <p><b>EMI:</b> KCC Notice 2008-39, RRL Notice 2008-3: CA Procedures for EMI<br/>KN22: Test Method for EMI</p> <p><b>EMS:</b> KCC Notice 2008-38, RRL Notice 2008-4: CA Procedures for EMS<br/>KN24, KN61000-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11: Test Method for EMS</p> <p><b>Radio:</b> RRL Notice 2008-26, RRL Notice 2008-2, RRL Notice 2008-10, RRL Notice 2007-49, RRL Notice 2007-20, RRL Notice 2007-21, RRL Notice 2007-80, RRL Notice 2004-68</p> <p><b>Telecom:</b> President Notice 20664, RRL Notice 2007-30, RRL Notice 2008-7 with attachments 1, 3, 5, 6; President Notice 20664, RRL Notice 2008-7 with attachment 4</p> |
| Taiwan NCC CAB Recognition                         |    | LP0002, PSTN01, ADSL01, ID0002, IS6100, CNS14336, PLMN07, PLMN01, PLMN08   |
| Taiwan BSMI CAB Recognition                        |  | CNS 13438  |
| Japan VCCI   |  | <p>R-3083: Radiation 3 meter site</p> <p>C-3421: Main Ports Conducted Interference Measurement</p> <p>T-1597: Telecommunication Ports Conducted Interference Measurement</p>   |
| Australia CAB Recognition                          |  | <p><b>EMC:</b> AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR22, AS/NZS 61000.6.3, AS/NZS 61000.6.4</p> <p><b>Radio communications:</b> AS/NZS 4281, AS/NZS 4268, AS/NZS 4280.1, AS/NZS 4280.2, AS/NZS 4295, AS/NZS 4582, AS/NZS 4583, AS/NZS 4769.1, AS/NZS 4769.2, AS/NZS 4770, AS/NZS 4771</p> <p><b>Telecommunications:</b> AS/ACIF S002:05, AS/ACIF S003:06, AS/ACIF S004:06 AS/ACIF S006:01, AS/ACIF S016:01, AS/ACIF S031:01, AS/ACIF S038:01, AS/ACIF S040:01, AS/ACIF S041:05, AS/ACIF S043.2:06, AS/ACIF S60950.1</p>  |
| Australia NATA Recognition                         |  | AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S016, AS/ACIF S031, AS/ACIF S038, AS/ACIF S040, AS/ACIF S041, AS/ACIF S043.2   |