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## Report On

FCC Testing of the Sharp SHV32 Hex-band LTE (B1 / B3 / B5 / B17 / B26 / B28), Dual-band WCDMA (FDD I / V), Quad-band GSM (850/900/1800/1900) & AXGP (TDD41) multi mode Smart phone with Bluetooth, WLAN, SRD (NFC,FeliCa) and GPS  
In accordance with FCC 47 CFR Part 15E (RLAN)

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FCC ID: APYHRO00218

Document 75929719 Report 15 Issue 1

May 2015



Product Service

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**REPORT ON**

FCC Testing of the  
Sharp SHV32 Hex-band LTE (B1 / B3 / B5 / B17 / B26 / B28), Dual-  
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(NFC, FeliCa) and GPS  
In accordance with FCC 47 CFR Part 15E (RLAN)

Document 75929719 Report 15 Issue 1

May 2015

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**Simon Bennett**  
Authorised Signatory

**DATED**

18 May 2015

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**ENGINEERING STATEMENT**

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC 47 CFR Part 15E. The sample tested was found to comply with the requirements defined in the applied rules.

Test Engineer(s);

T Guy

M Russell



G Lawler

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## **SECTION 1**

### **REPORT SUMMARY**

FCC Testing of the  
Sharp SHV32 Hex-band LTE (B1 / B3 / B5 / B17 / B26 / B28), Dual-band WCDMA (FDD I / V),  
Quad-band GSM (850/900/1800/1900) & AXGP (TDD41) multi mode Smart phone with  
Bluetooth, WLAN, SRD (NFC,FeliCa) and GPS  
In accordance with FCC 47 CFR Part 15E (RLAN)



## 1.1 INTRODUCTION

The information contained in this report is intended to show the verification of FCC Testing of the Sharp SHV32 Hex-band LTE (B1 / B3 / B5 / B17 / B26 / B28), Dual-band WCDMA (FDD I / V), Quad-band GSM (850/900/1800/1900) & AXGP (TDD41) multi mode Smart phone with Bluetooth, WLAN, SRD (NFC,FeliCa) and GPS to the requirements of FCC 47 CFR Part 15E.

|                               |                                                                                                                                                     |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Objective                     | To perform FCC Testing to determine the Equipment Under Test's (EUT's) compliance with the Test Specification, for the series of tests carried out. |
| Manufacturer                  | Sharp Corporation                                                                                                                                   |
| Model Number(s)               | SHV32                                                                                                                                               |
| Serial Number(s)              | IMEI 004401115406825<br>IMEI 004401115406445                                                                                                        |
| Number of Samples Tested      | 2                                                                                                                                                   |
| Test Specification/Issue/Date | FCC 47 CFR Part 15E (2014)                                                                                                                          |
| Disposal                      | Held Pending Disposal                                                                                                                               |
| Reference Number              | Not Applicable                                                                                                                                      |
| Date                          | Not Applicable                                                                                                                                      |
| Order Number                  | 10477                                                                                                                                               |
| Date                          | 02 March 2015                                                                                                                                       |
| Start of Test                 | 17 April 2015                                                                                                                                       |
| Finish of Test                | 6 May 2015                                                                                                                                          |
| Name of Engineer(s)           | T Guy<br>M Russell<br>G Lawler                                                                                                                      |
| Related Document(s)           | KDB 789033 D02 General UNII Test Procedures New Rules v01<br>ETSI TR 100 028 (2001)<br>ANCI C63.10 (2009)                                           |



## 1.2 BRIEF SUMMARY OF RESULTS

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 15E is shown below.

| Section                          | Specification Clause         | Test Description               | Result | Comments/Base Standard |
|----------------------------------|------------------------------|--------------------------------|--------|------------------------|
| 802.11a                          |                              |                                |        |                        |
| 2.1                              | 15.207 and 15.407 (b)(6)     | AC Line Conducted Emissions    | Pass   |                        |
| 2.2                              | 15.407 (a)                   | 26 dB Bandwidth                | Pass   |                        |
| 2.3                              | 15.407 (a)(1)(2)             | Maximum Conducted Output Power | Pass   |                        |
| 2.4                              | 15.407 (a)(1)(iv) and (a)(2) | Peak Power Spectral Density    | Pass   |                        |
| 2.5                              | 15.407 (b) and 15.205        | Spurious Radiated Emissions    | Pass   |                        |
| 2.6                              | 15.407 (g)                   | Frequency Stability            | Pass   |                        |
| 2.7                              | 15.205                       | Restricted Band Edges          | Pass   |                        |
| 2.8                              | 15.407 (b)(1)(2)(3)(4)       | Authorised Band Edges          | Pass   |                        |
| 802.11n - 5 GHz 20 MHz Bandwidth |                              |                                |        |                        |
| 2.2                              | 15.407 (a)                   | 26 dB Bandwidth                | Pass   |                        |
| 2.3                              | 15.407 (a)(1)(2)             | Maximum Conducted Output Power | Pass   |                        |
| 2.4                              | 15.407 (a)(1)(iv) and (a)(2) | Peak Power Spectral Density    | Pass   |                        |
| 2.6                              | 15.407 (g)                   | Frequency Stability            | Pass   |                        |
| 2.7                              | 15.205                       | Restricted Band Edges          | Pass   |                        |
| 2.8                              | 15.407 (b)(1)(2)(3)(4)       | Authorised Band Edges          | Pass   |                        |



| Section                           | Specification Clause         | Test Description               | Result | Comments/Base Standard |
|-----------------------------------|------------------------------|--------------------------------|--------|------------------------|
| 802.11n - 5 GHz 40 MHz Bandwidth  |                              |                                |        |                        |
| 2.2                               | 15.407 (a)                   | 26 dB Bandwidth                | Pass   |                        |
| 2.3                               | 15.407 (a)(1)(2)             | Maximum Conducted Output Power | Pass   |                        |
| 2.4                               | 15.407 (a)(1)(iv) and (a)(2) | Peak Power Spectral Density    | Pass   |                        |
| 2.5                               | 15.407 (b) and 15.205        | Spurious Radiated Emissions    | Pass   |                        |
| 2.6                               | 15.407 (g)                   | Frequency Stability            | Pass   |                        |
| 2.7                               | 15.205                       | Restricted Band Edges          | Pass   |                        |
| 2.8                               | 15.407 (b(1)(2)(3)(4)        | Authorised Band Edges          | Pass   |                        |
| 802.11ac - 5 GHz 20 MHz Bandwidth |                              |                                |        |                        |
| 2.2                               | 15.407 (a)                   | 26 dB Bandwidth                | Pass   |                        |
| 2.3                               | 15.407 (a)(1)(2)             | Maximum Conducted Output Power | Pass   |                        |
| 2.4                               | 15.407 (a)(1)(iv) and (a)(2) | Peak Power Spectral Density    | Pass   |                        |
| 2.6                               | 15.407 (g)                   | Frequency Stability            | Pass   |                        |
| 2.7                               | 15.205                       | Restricted Band Edges          | Pass   |                        |
| 2.8                               | 15.407 (b(1)(2)(3)(4)        | Authorised Band Edges          | Pass   |                        |



| Section                           | Specification Clause         | Test Description               | Result | Comments/Base Standard |
|-----------------------------------|------------------------------|--------------------------------|--------|------------------------|
| 802.11ac - 5 GHz 40 MHz Bandwidth |                              |                                |        |                        |
| 2.2                               | 15.407 (a)                   | 26 dB Bandwidth                | Pass   |                        |
| 2.3                               | 15.407 (a)(1)(2)             | Maximum Conducted Output Power | Pass   |                        |
| 2.4                               | 15.407 (a)(5)                | Peak Power Spectral Density    | Pass   |                        |
| 2.5                               | 15.407 (b) and 15.205        | Spurious Radiated Emissions    | Pass   |                        |
| 2.6                               | 15.407 (g)                   | Frequency Stability            | Pass   |                        |
| 2.7                               | 15.205                       | Restricted Band Edges          | Pass   |                        |
| 2.8                               | 15.407 (b(1)(2)(3)(4)        | Authorised Band Edges          | Pass   |                        |
| 802.11ac - 5 GHz 80 MHz Bandwidth |                              |                                |        |                        |
| 2.2                               | 15.407 (a)                   | 26 dB Bandwidth                | Pass   |                        |
| 2.3                               | 15.407 (a)(1)(2)             | Maximum Conducted Output Power | Pass   |                        |
| 2.4                               | 15.407 (a)(1)(iv) and (a)(2) | Peak Power Spectral Density    | Pass   |                        |
| 2.6                               | 15.407 (g)                   | Frequency Stability            | Pass   |                        |
| 2.7                               | 15.205                       | Restricted Band Edges          | Pass   |                        |
| 2.8                               | 15.407 (b(1)(2)(3)(4)        | Authorised Band Edges          | Pass   |                        |



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### **1.3 PRODUCT TECHNICAL DESCRIPTION**

Please refer to the SHV32 Model Description Form.

### **1.4 PRODUCT INFORMATION**

#### **1.4.1 Technical Description**

The Equipment Under Test (EUT) was a Sharp SHV32 Hex-band LTE (B1 / B3 / B5 / B17 / B26 / B28), Dual-band WCDMA (FDD I / V), Quad-band GSM (850/900/1800/1900) & AXGP (TDD41) multi mode Smart phone with Bluetooth, WLAN, SRD (NFC,FeliCa) and GPS. A full technical description can be found in the manufacturer's documentation.

### **1.5 TEST CONDITIONS**

For all tests the EUT was set up in accordance with the relevant test standard and to represent typical operating conditions. Tests were applied with the EUT situated in a shielded enclosure.

The EUT was powered from a 4.0 V DC supply.

FCC Measurement Facility Registration Number  
90987 Octagon House, Fareham Test Laboratory

### **1.6 DEVIATIONS FROM THE STANDARD**

No deviations from the applicable test standard were made during testing.

### **1.7 MODIFICATION RECORD**

Modification 0 - No modifications were made to the test sample during testing.



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## **SECTION 2**

### **TEST DETAILS**

FCC Testing of the  
Sharp SHV32 Hex-band LTE (B1 / B3 / B5 / B17 / B26 / B28), Dual-band WCDMA (FDD I / V),  
Quad-band GSM (850/900/1800/1900) & AXGP (TDD41) multi mode Smart phone with  
Bluetooth, WLAN, SRD (NFC,FeliCa) and GPS  
In accordance with FCC 47 CFR Part 15E (RLAN)



Product Service

**2.1 AC LINE CONDUCTED EMISSIONS****2.1.1 Specification Reference**

FCC 47 CFR Part 15E, Clause 15.207 and 15.407 (b)(6)

**2.1.2 Equipment Under Test and Modification State**

SHV32 S/N: IMEI 004401115406825 - Modification State 0

**2.1.3 Date of Test**

25 April 2015

**2.1.4 Test Equipment Used**

The major items of test equipment used for the above tests are identified in Section 3.1.

**2.1.5 Test Procedure**

The test was performed in accordance with ANSI C63.10, clause 6.2.

**Remarks**

A mains supply cable of 1 m length was used to supply mains power to the EUT from the LISN.

All final measurements were assessed against the Class B emission limits in Clause 15.207 of FCC 47 CFR Part 15.

**2.1.6 Environmental Conditions**

|                     |        |
|---------------------|--------|
| Ambient Temperature | 20.5°C |
| Relative Humidity   | 33.0%  |



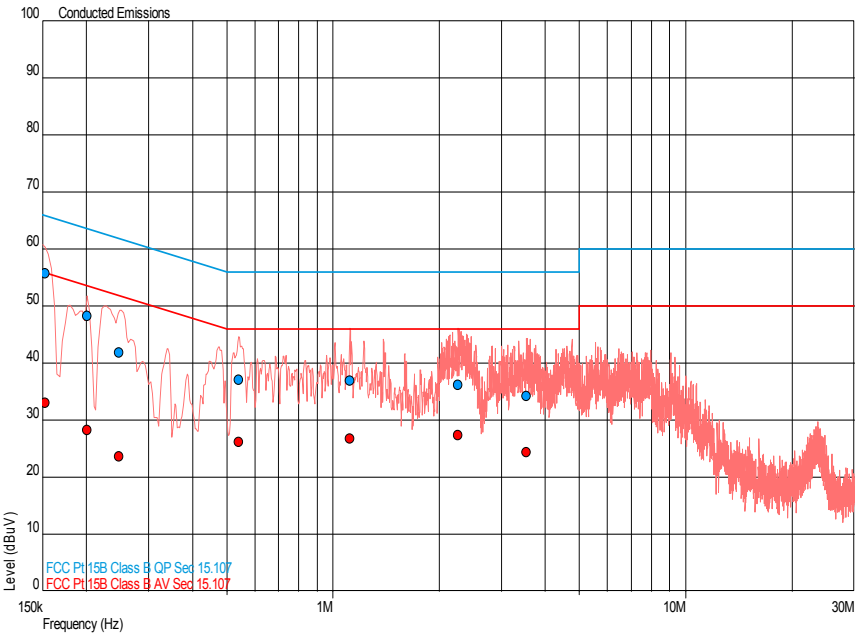
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2.1.7 Test Results

802.11a, Live Line, AC Line Conducted Emissions Result

| Frequency (MHz) | QP Level (dBμV) | QP Limit (dBμV) | QP Margin (dBμV) | AV Level (dBμV) | AV Limit (dBμV) | AV Margin (dBμV) |
|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|------------------|
| 0.153           | 55.7            | 65.8            | -10.1            | 33.1            | 55.8            | -22.7            |
| 0.200           | 48.3            | 63.6            | -15.3            | 28.3            | 53.6            | -25.3            |
| 0.247           | 41.9            | 61.8            | -19.9            | 23.7            | 51.8            | -28.2            |
| 0.541           | 37.1            | 56.0            | -18.9            | 26.2            | 46.0            | -19.8            |
| 1.115           | 36.9            | 56.0            | -19.1            | 26.8            | 46.0            | -19.2            |
| 2.264           | 36.2            | 56.0            | -19.8            | 27.4            | 46.0            | -18.6            |
| 3.538           | 34.2            | 56.0            | -21.8            | 24.5            | 46.0            | -21.5            |

802.11a, Live Line, AC Line Conducted Emissions Plot

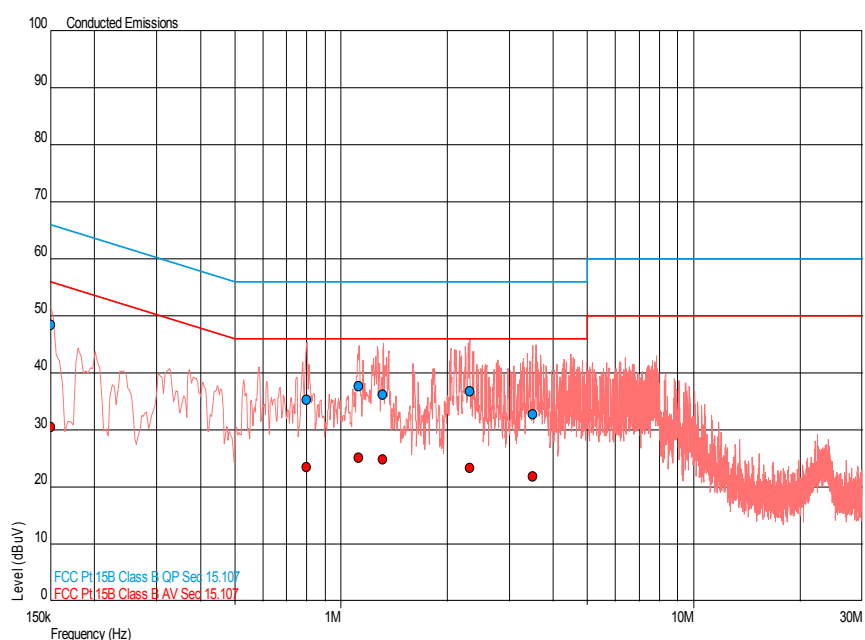




### 802.11a, Neutral Line, AC Line Conducted Emissions Result

| Frequency (MHz) | QP Level (dBμV) | QP Limit (dBμV) | QP Margin (dBμV) | AV Level (dBμV) | AV Limit (dBμV) | AV Margin (dBμV) |
|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|------------------|
| 0.151           | 48.4            | 66.0            | -17.6            | 30.6            | 56.0            | -25.4            |
| 0.797           | 35.2            | 56.0            | -20.8            | 23.5            | 46.0            | -22.5            |
| 1.123           | 37.7            | 56.0            | -18.3            | 25.1            | 46.0            | -20.9            |
| 1.316           | 36.2            | 56.0            | -19.8            | 24.8            | 46.0            | -21.2            |
| 2.313           | 36.8            | 56.0            | -19.2            | 23.4            | 46.0            | -22.6            |
| 3.494           | 32.7            | 56.0            | -23.3            | 21.9            | 46.0            | -24.1            |

### 802.11a, Neutral Line, AC Line Conducted Emissions Plot



### FCC 47 CFR Part 15, Limit Clause 15.207

| Frequency of Emission (MHz) | Conducted Limit (dBμV) |           |
|-----------------------------|------------------------|-----------|
|                             | Quasi-Peak             | Average   |
| 0.15 to 0.5                 | 66 to 56*              | 56 to 46* |
| 0.5 to 5                    | 56                     | 46        |
| 5 to 30                     | 60                     | 50        |

\*Decreases with the logarithm of the frequency.



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**2.2 26 dB BANDWIDTH****2.2.1 Specification Reference**

FCC 47 CFR Part 15E, Clause 15.407 (a)

**2.2.2 Equipment Under Test and Modification State**

SHV32 S/N: IMEI 004401115406445 - Modification State 0

**2.2.3 Date of Test**

7 May 2015

**2.2.4 Test Equipment Used**

The major items of test equipment used for the above tests are identified in Section 3.1.

**2.2.5 Test Procedure**

This test was performed in accordance with KDB 789033 D02 v01, Section II clause C.1.

**2.2.6 Environmental Conditions**

|                     |        |
|---------------------|--------|
| Ambient Temperature | 22.5°C |
| Relative Humidity   | 36.7%  |



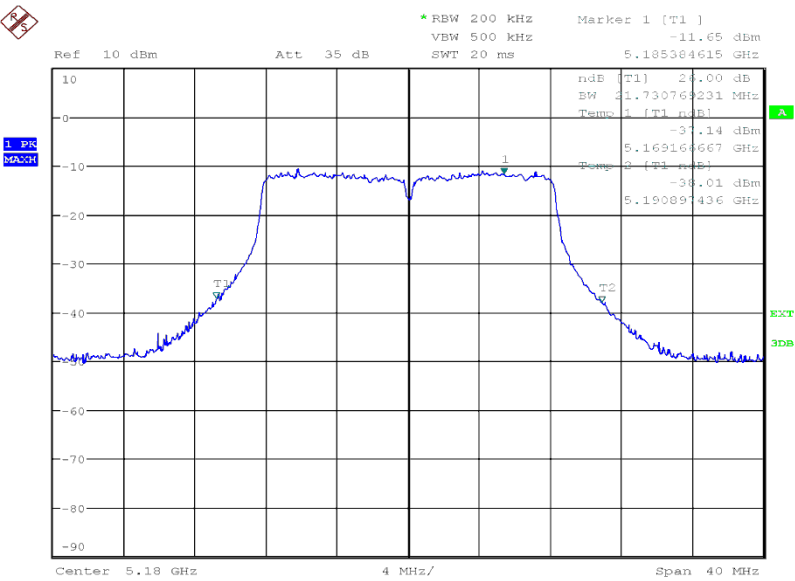
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2.2.7 Test Results

802.11a, OFDM, 36 Mbps, Frequency Band 1, 26 dB Bandwidth Results

|          |          |          |
|----------|----------|----------|
| 5180 MHz | 5200 MHz | 5240 MHz |
| MHz      | MHz      | MHz      |
| 21.73    | 21.03    | 21.03    |

802.11a, 5180 MHz, OFDM, 36 Mbps, Frequency Band 1, 26 dB Bandwidth Plot

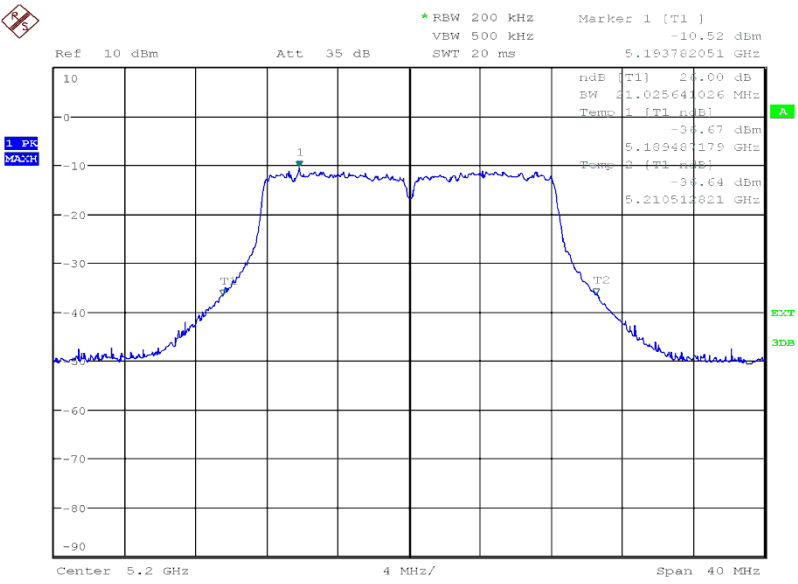


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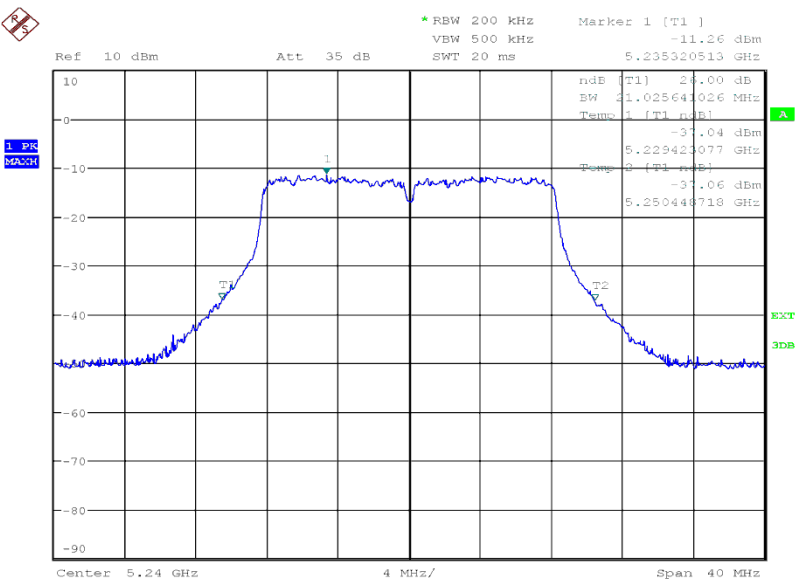
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802.11a, 5200 MHz, OFDM, 36 Mbps, Frequency Band 1, 26 dB Bandwidth Plot



Date: 7.MAY.2015 10:28:54

802.11a, 5240 MHz, OFDM, 36 Mbps, Frequency Band 1, 26 dB Bandwidth Plot



Date: 7.MAY.2015 10:29:28

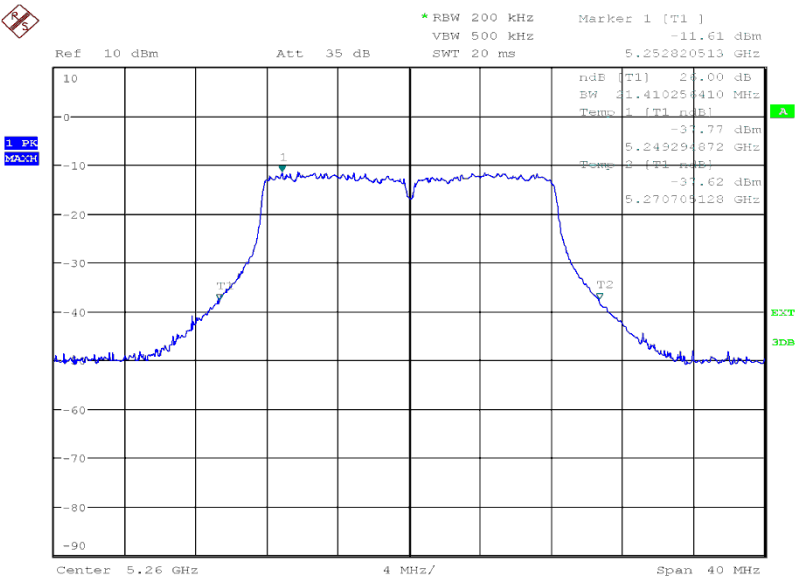


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802.11a, OFDM, 36 Mbps, Frequency Band 2, 26 dB Bandwidth Results

|          |          |          |
|----------|----------|----------|
| 5260 MHz | 5300 MHz | 5320 MHz |
| MHz      | MHz      | MHz      |
| 21.41    | 21.15    | 20.96    |

802.11a, 5260 MHz, OFDM, 36 Mbps, Frequency Band 2, 26 dB Bandwidth Plot

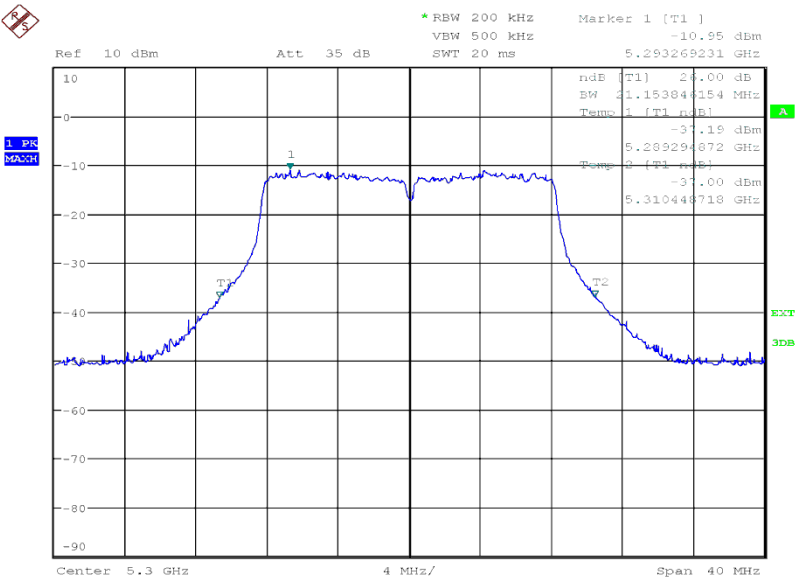


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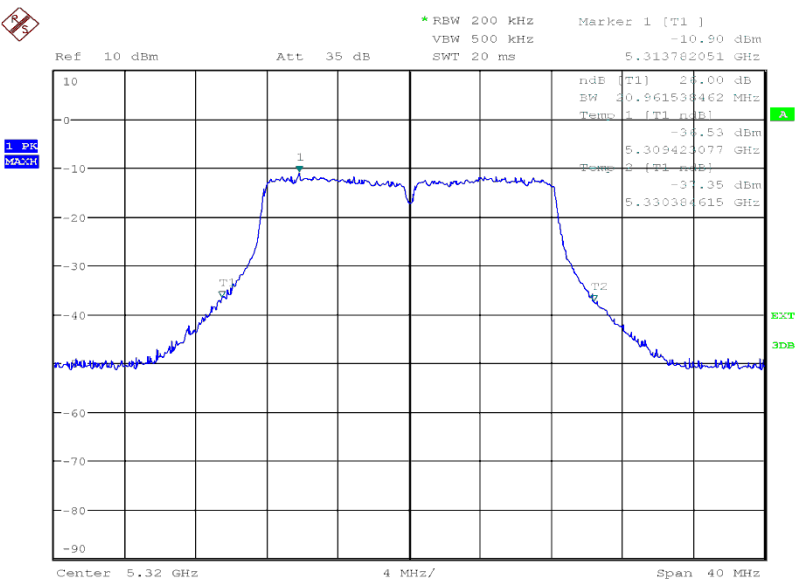
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802.11a, 5300 MHz, OFDM, 36 Mbps, Frequency Band 2, 26 dB Bandwidth Plot



Date: 7.MAY.2015 10:31:13

802.11a, 5320 MHz, OFDM, 36 Mbps, Frequency Band 2, 26 dB Bandwidth Plot



Date: 7.MAY.2015 10:31:50

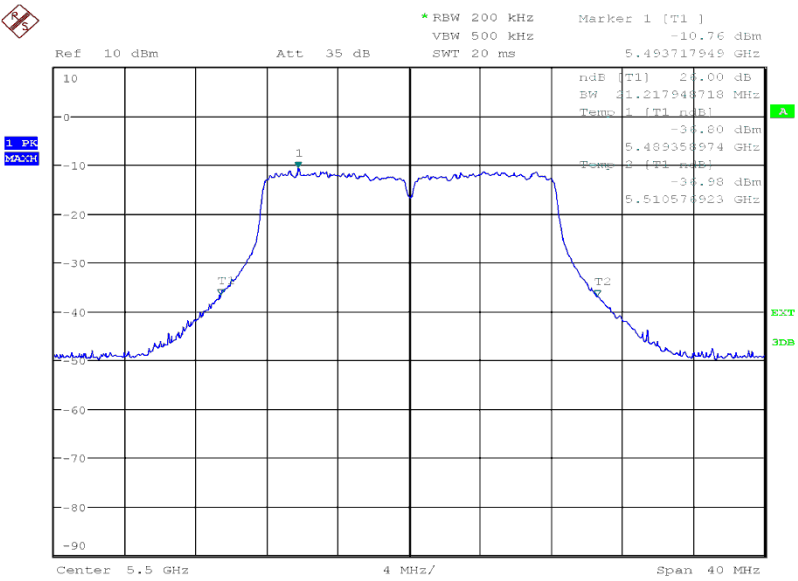


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802.11a, OFDM, 36 Mbps, Frequency Band 3, 26 dB Bandwidth Results

|          |          |          |
|----------|----------|----------|
| 5500 MHz | 5600 MHz | 5700 MHz |
| MHz      | MHz      | MHz      |
| 21.22    | 21.15    | 21.03    |

802.11a, 5500 MHz, OFDM, 36 Mbps, Frequency Band 3, 26 dB Bandwidth Plot

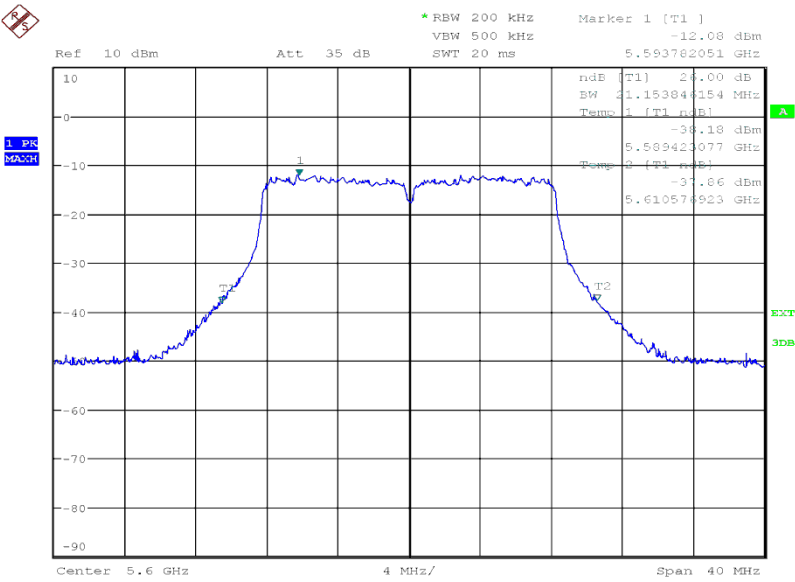


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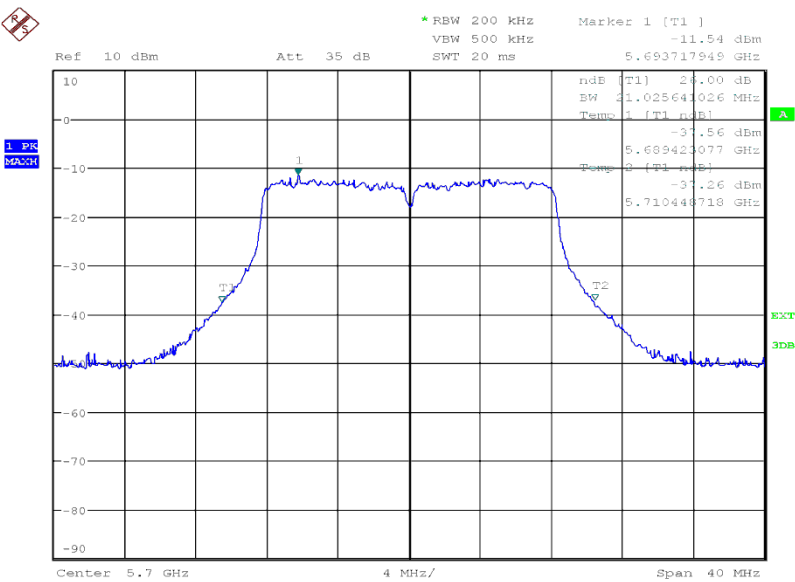
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802.11a, 5600 MHz, OFDM, 36 Mbps, Frequency Band 3, 26 dB Bandwidth Plot



Date: 7.MAY.2015 10:37:22

802.11a, 5700 MHz, OFDM, 36 Mbps, Frequency Band 3, 26 dB Bandwidth 3 Plot



Date: 7.MAY.2015 10:38:30

FCC 47 CFR Part 15, Limit Clause 15.407 (a)

No limit specified.

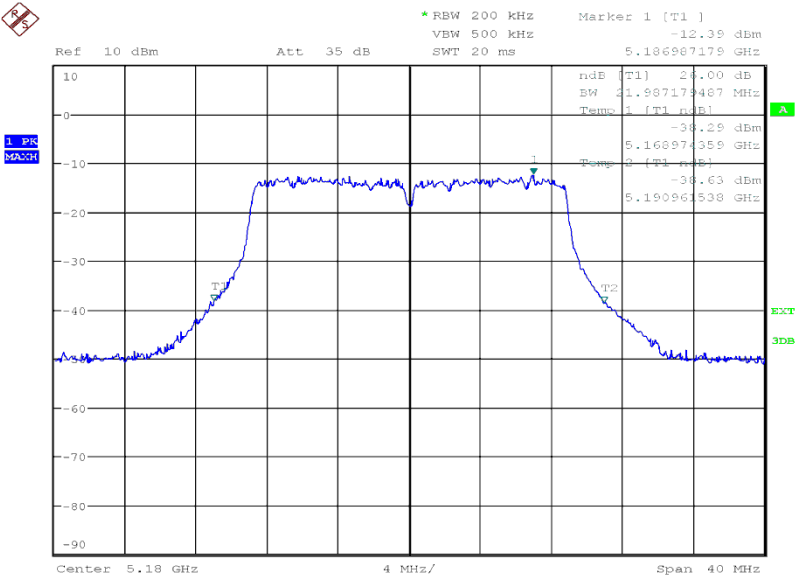


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802.11ac - 5 GHz 20 MHz Bandwidth, 64-QAM, MCS5, Frequency Band 1, 26 dB Bandwidth Results

|          |          |          |
|----------|----------|----------|
| 5180 MHz | 5200 MHz | 5240 MHz |
| MHz      | MHz      | MHz      |
| 21.99    | 22.05    | 22.18    |

802.11ac - 5 GHz 20 MHz Bandwidth, 5180 MHz, 64-QAM, MCS5, Frequency Band 1, 26 dB Bandwidth Plot

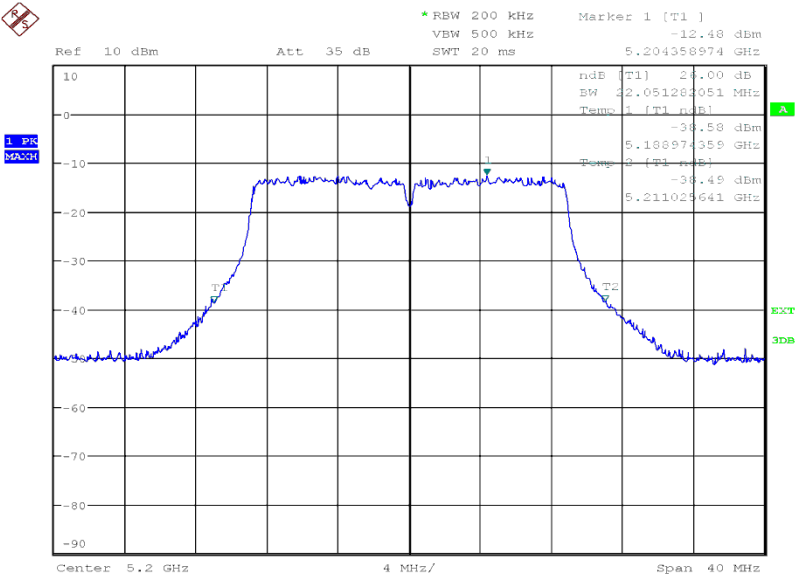


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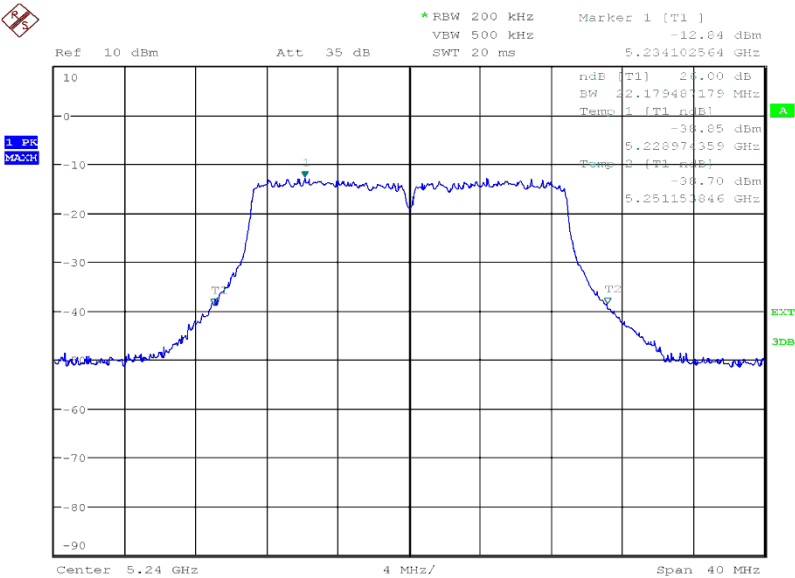
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802.11ac - 5 GHz 20 MHz Bandwidth, 5200 MHz, 64-QAM, MCS5, Frequency Band 1, 26 dB Bandwidth Plot



Date: 7.MAY.2015 10:51:08

802.11ac - 5 GHz 20 MHz Bandwidth, 5240 MHz, 64-QAM, MCS5, Frequency Band 1, 26 dB Bandwidth Plot



Date: 7.MAY.2015 10:51:43

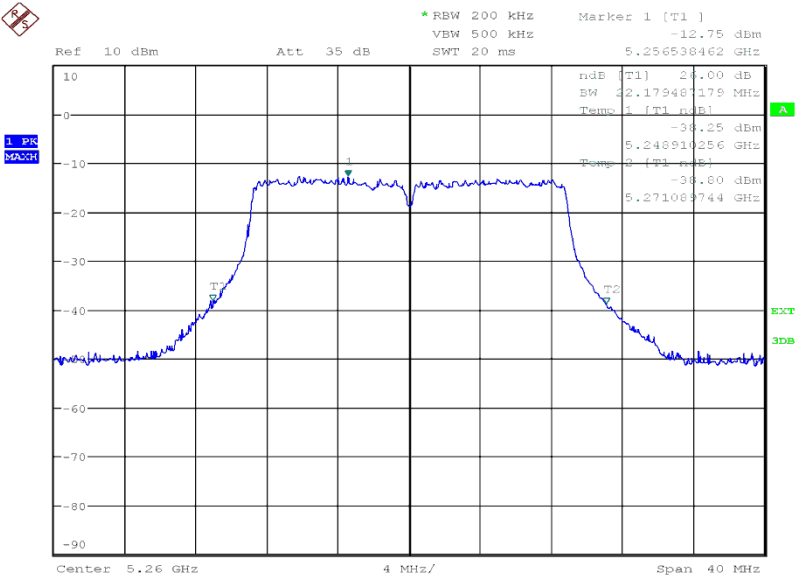


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802.11ac - 5 GHz 20 MHz Bandwidth, 64-QAM, MCS5, Frequency Band 2, 26 dB Bandwidth Results

|          |          |          |
|----------|----------|----------|
| 5260 MHz | 5300 MHz | 5320 MHz |
| MHz      | MHz      | MHz      |
| 22.18    | 21.99    | 21.92    |

802.11ac - 5 GHz 20 MHz Bandwidth, 5260 MHz, 64-QAM, MCS5, Frequency Band 2, 26 dB Bandwidth Plot

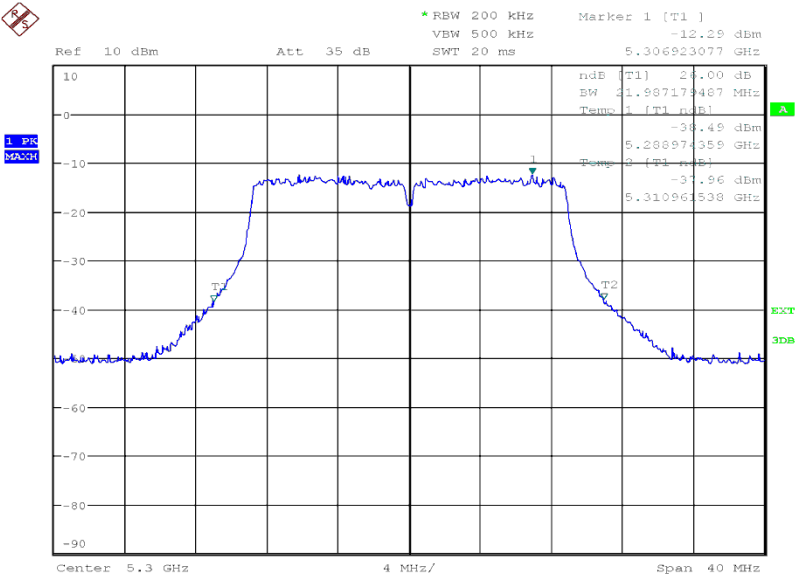


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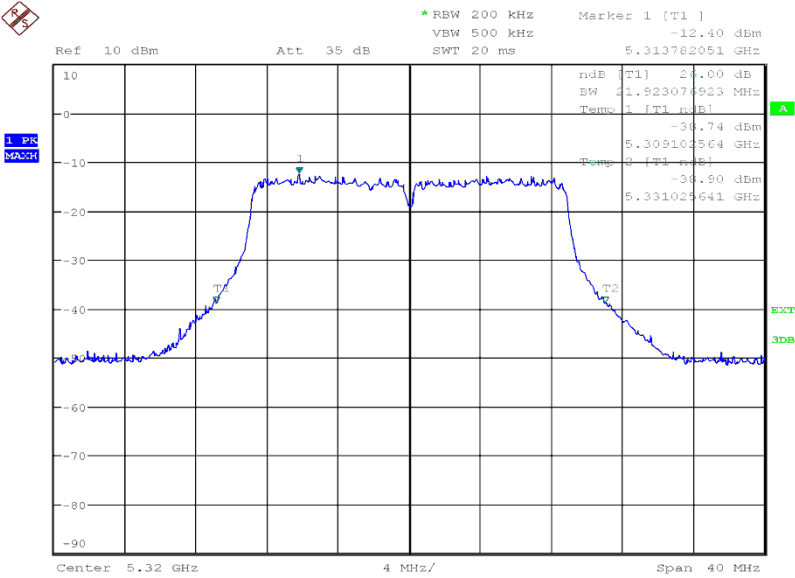
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802.11ac - 5 GHz 20 MHz Bandwidth, 5300 MHz, 64-QAM, MCS5, Frequency Band 2, 26 dB Bandwidth Plot



Date: 7.MAY.2015 10:53:09

802.11ac - 5 GHz 20 MHz Bandwidth, 5320 MHz, 64-QAM, MCS5, Frequency Band 2, 26 dB Bandwidth Plot



Date: 7.MAY.2015 10:53:47

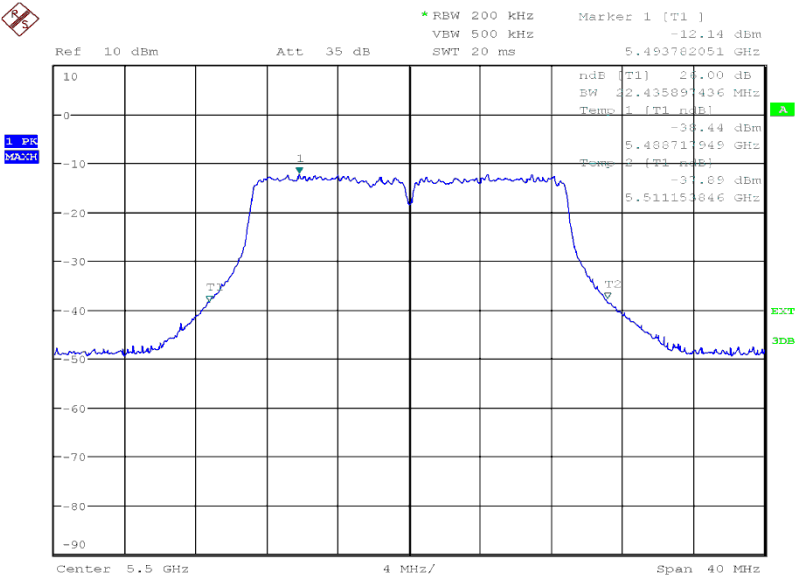


Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 64-QAM, MCS5, Frequency Band 3, 26 dB Bandwidth Results

|          |          |          |
|----------|----------|----------|
| 5500 MHz | 5600 MHz | 5700 MHz |
| MHz      | MHz      | MHz      |
| 22.44    | 22.11    | 22.31    |

802.11ac - 5 GHz 20 MHz Bandwidth, 5500 MHz, 64-QAM, MCS5, Frequency Band 3, 26 dB Bandwidth Plot

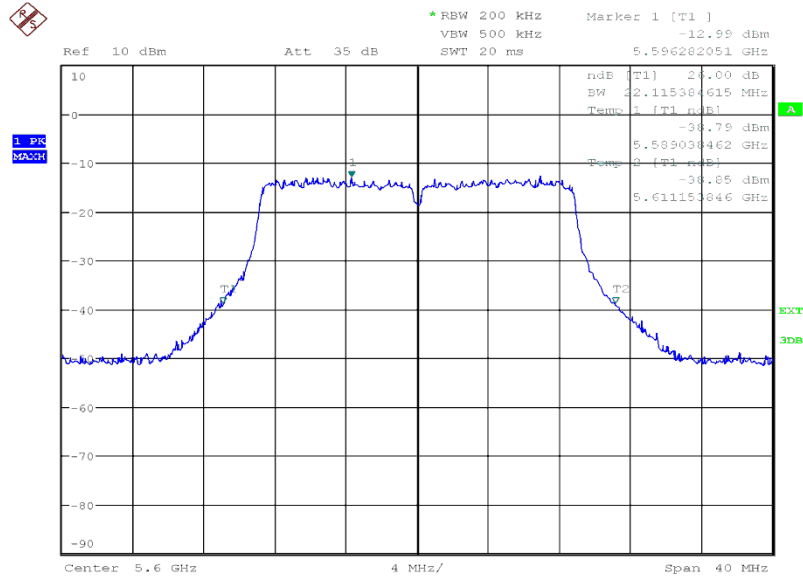


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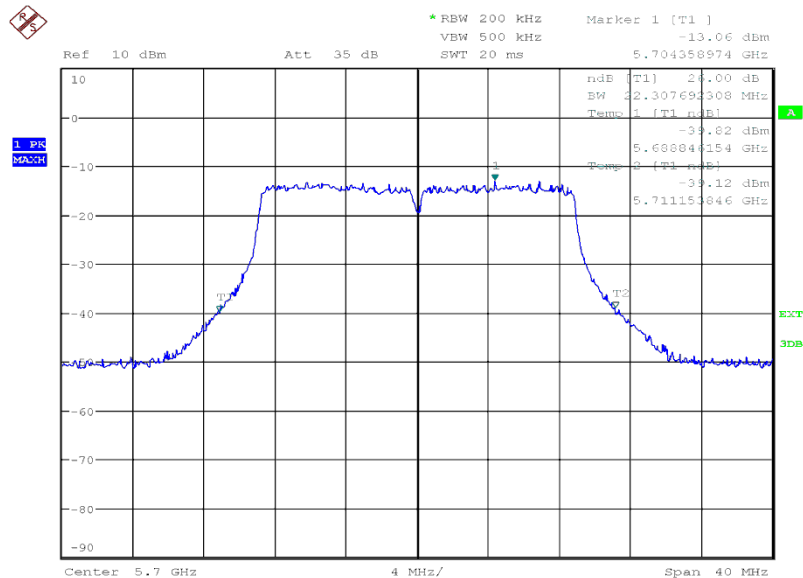
Product Service

### 802.11ac - 5 GHz 20 MHz Bandwidth, 5600 MHz, 64-QAM, MCS5, Frequency Band 3, 26 dB Bandwidth Plot



Date: 7.MAY.2015 11:10:11

### 802.11ac - 5 GHz 20 MHz Bandwidth, 5700 MHz, 64-QAM, MCS5, Frequency Band 3, 26 dB Bandwidth 3 Plot



Date: 7.MAY.2015 11:10:41

### FCC 47 CFR Part 15, Limit Clause 15.407 (a)

No limit specified.

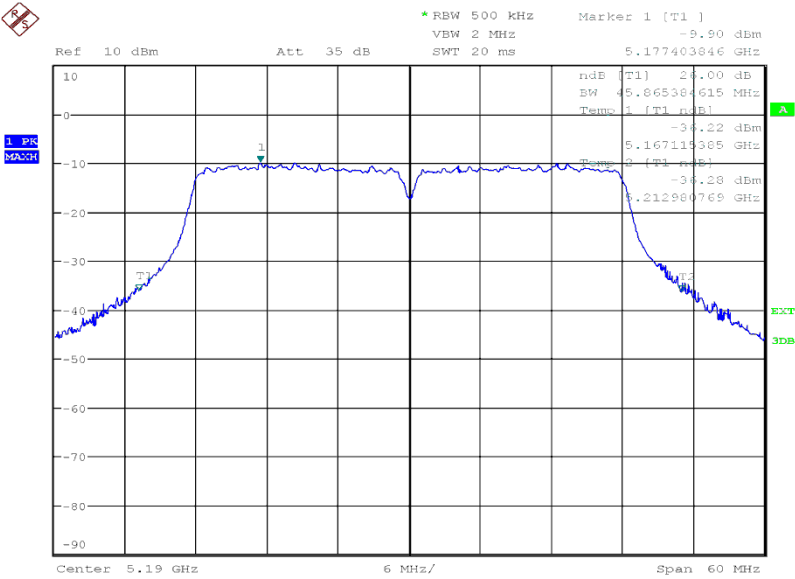


Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 16-QAM, MCS3, Frequency Band 1, 26 dB Bandwidth Results

|          |          |
|----------|----------|
| 5190 MHz | 5230 MHz |
| MHz      | MHz      |
| 45.87    | 44.81    |

802.11ac - 5 GHz 40 MHz Bandwidth, 5190 MHz, 16-QAM, MCS3, Frequency Band 1, 26 dB Bandwidth Plot

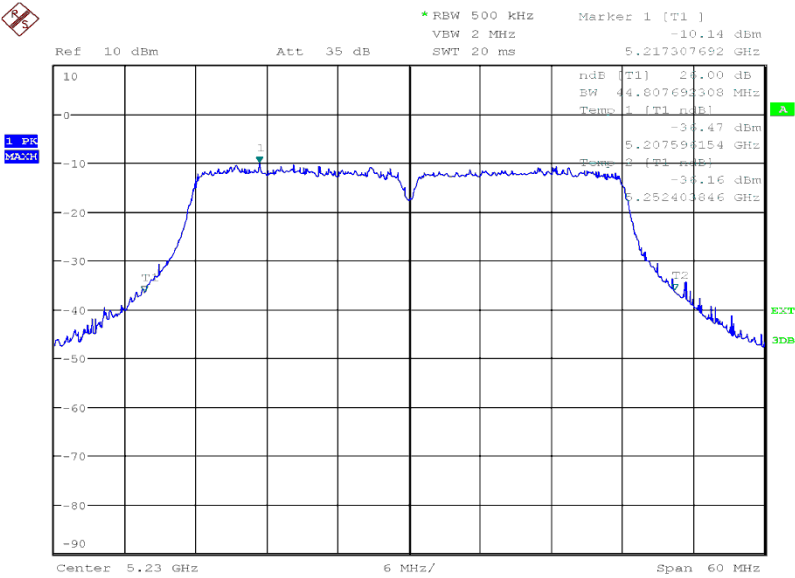


Date: 7.MAY.2015 11:28:18



Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5230 MHz, 16-QAM, MCS3, Frequency Band 1, 26 dB Bandwidth Plot



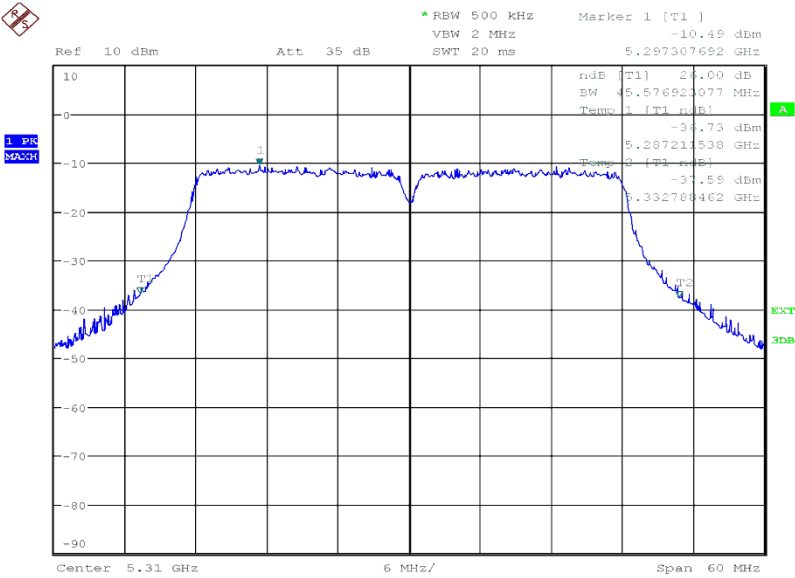
Date: 7.MAY.2015 11:29:01





Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5310 MHz, 16-QAM, MCS3, Frequency Band 2, 26 dB Bandwidth Plot



Date: 7.MAY.2015 11:30:28

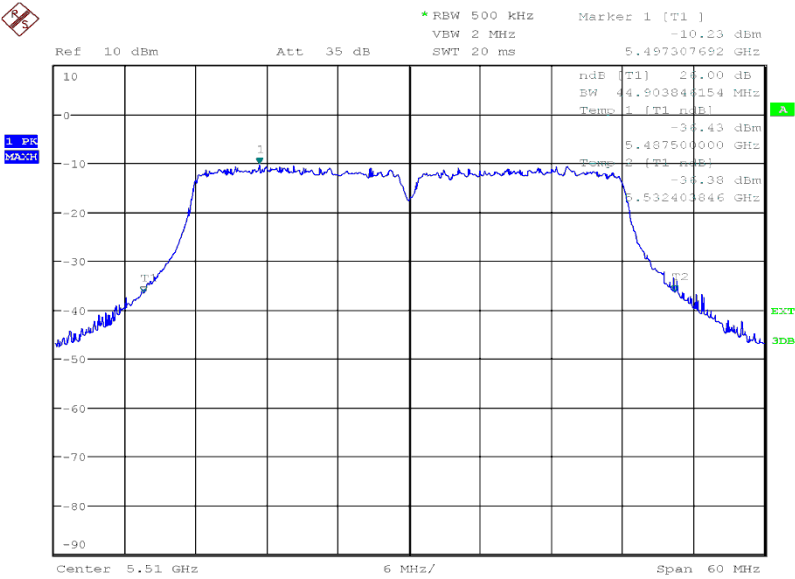


Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 16-QAM, MCS3, Frequency Band 3, 26 dB Bandwidth Results

|          |          |          |
|----------|----------|----------|
| 5510 MHz | 5590 MHz | 5670 MHz |
| MHz      | MHz      | MHz      |
| 44.90    | 45.10    | 45.00    |

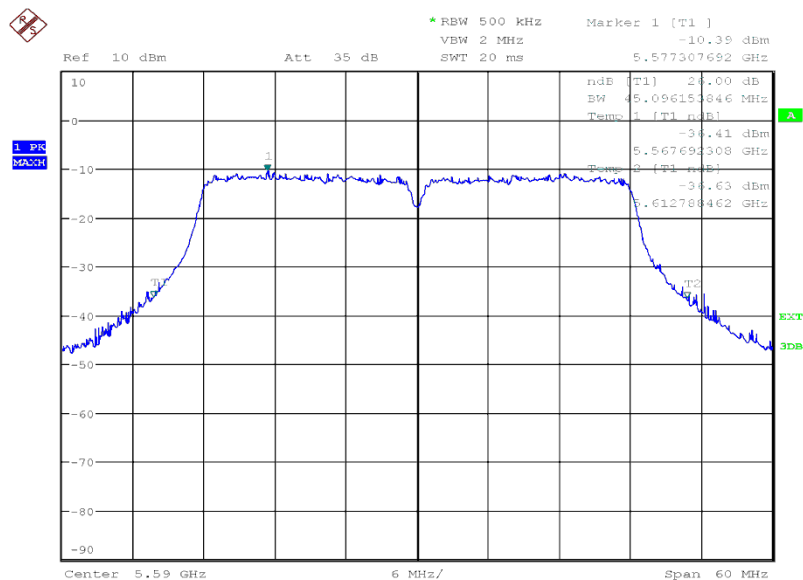
802.11ac - 5 GHz 40 MHz Bandwidth, 5510 MHz, 16-QAM, MCS3, Frequency Band 3, 26 dB Bandwidth Plot



Date: 7.MAY.2015 11:31:14

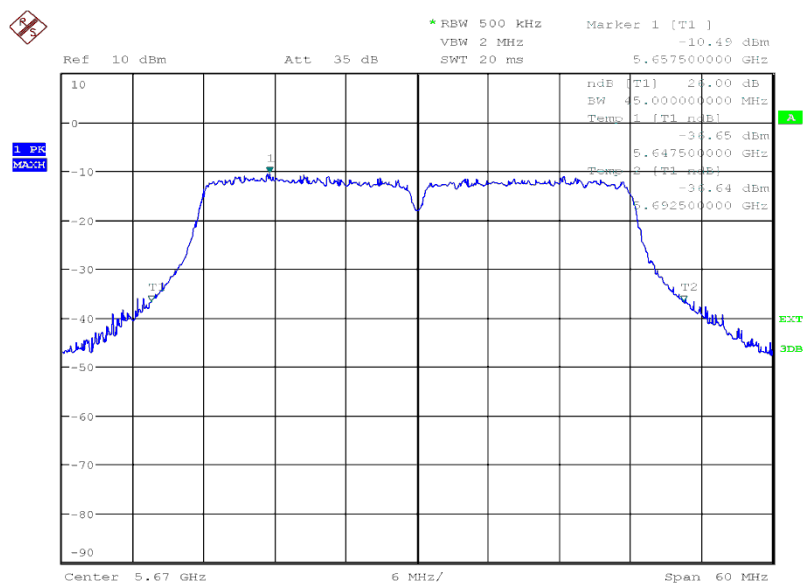
Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5590 MHz, 16-QAM, MCS3, Frequency Band 3, 26 dB Bandwidth Plot



Date: 7.MAY.2015 11:31:57

802.11ac - 5 GHz 40 MHz Bandwidth, 5670 MHz, 16-QAM, MCS3, Frequency Band 3, 26 dB Bandwidth 3 Plot



Date: 7.MAY.2015 11:35:41

## FCC 47 CFR Part 15, Limit Clause 15.407 (a)

No limit specified.

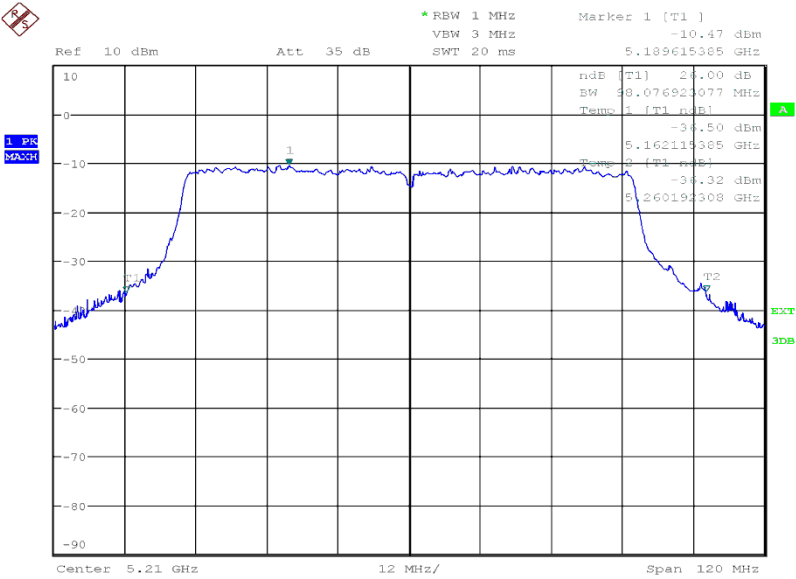


Product Service

802.11ac - 5 GHz 80 MHz Bandwidth, 256-QAM, MCS8, Frequency Band 1, 26 dB Bandwidth Results

|          |
|----------|
| 5210 MHz |
| MHz      |
| 98.08    |

802.11ac - 5 GHz 80 MHz Bandwidth, 5210 MHz, 256-QAM, MCS8, Frequency Band 1, 26 dB Bandwidth Plot



Date: 7.MAY.2015 11:39:13

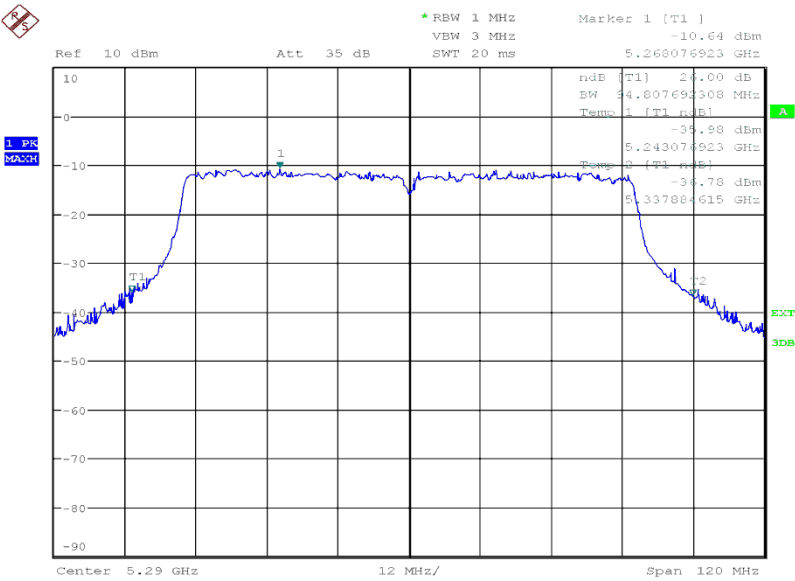


Product Service

802.11ac - 5 GHz 80 MHz Bandwidth, 256-QAM, MCS8, Frequency Band 2, 26 dB Bandwidth Results

|          |
|----------|
| 5290 MHz |
| MHz      |
| 94.81    |

802.11ac - 5 GHz 80 MHz Bandwidth, 5290 MHz, 256-QAM, MCS8, Frequency Band 2, 26 dB Bandwidth Plot



Date: 7.MAY.2015 11:39:57

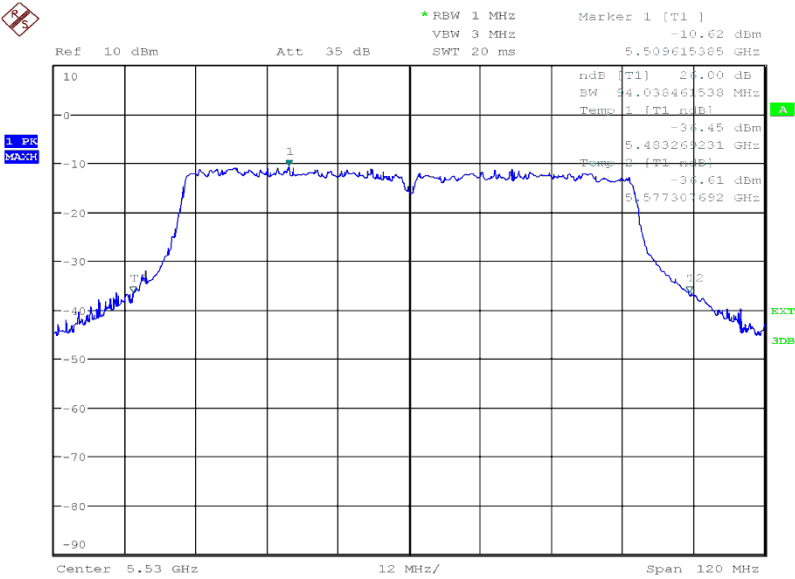


Product Service

802.11ac - 5 GHz 80 MHz Bandwidth, 256-QAM, MCS8, Frequency Band 3, 26 dB Bandwidth Results

|          |          |
|----------|----------|
| 5530 MHz | 5610 MHz |
| MHz      | MHz      |
| 94.04    | 94.04    |

802.11ac - 5 GHz 80 MHz Bandwidth, 5530 MHz, 256-QAM, MCS8, Frequency Band 3, 26 dB Bandwidth Plot

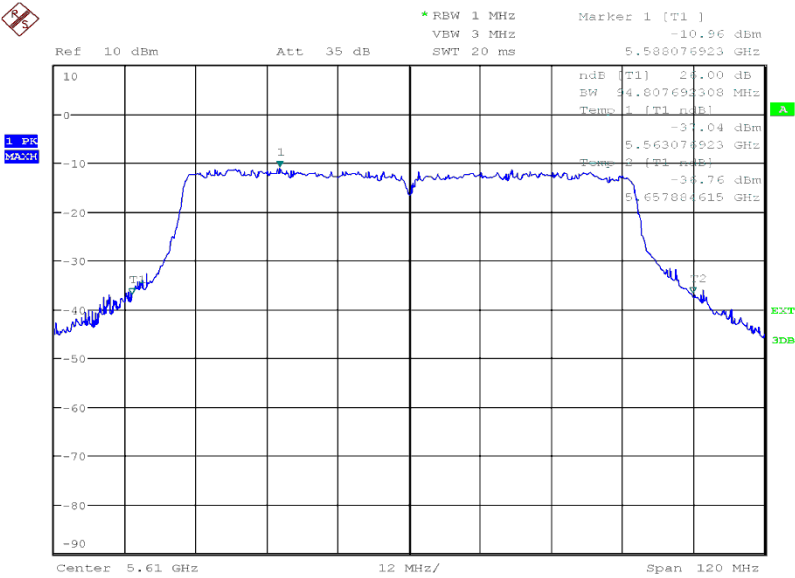


Date: 7.MAY.2015 11:41:00



Product Service

802.11ac - 5 GHz 80 MHz Bandwidth, 5610 MHz, 256-QAM, MCS8, Frequency Band 3, 26 dB Bandwidth 3 Plot



Date: 7.MAY.2015 11:41:36

FCC 47 CFR Part 15, Limit Clause 15.407 (a)

No limit specified.

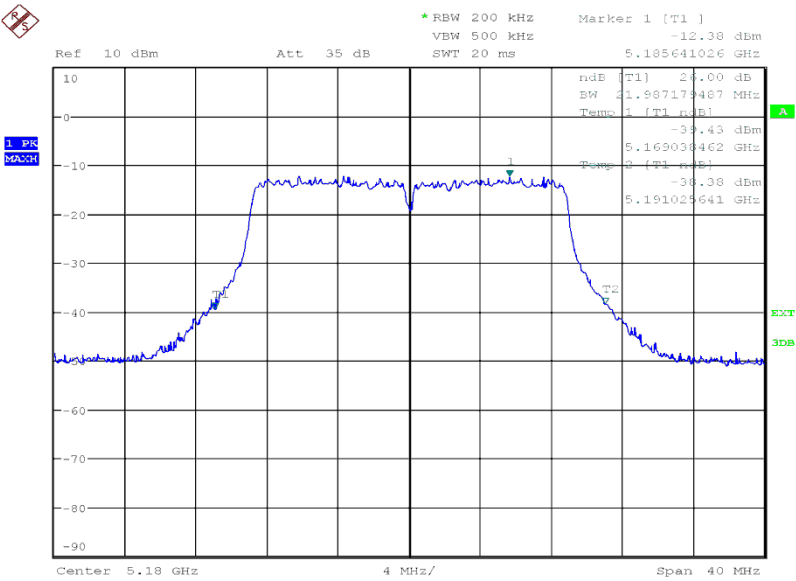


Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 64-QAM, MCS5, Frequency Band 1, 26 dB Bandwidth  
Results

|          |          |          |
|----------|----------|----------|
| 5180 MHz | 5200 MHz | 5240 MHz |
| MHz      | MHz      | MHz      |
| 21.99    | 21.99    | 21.86    |

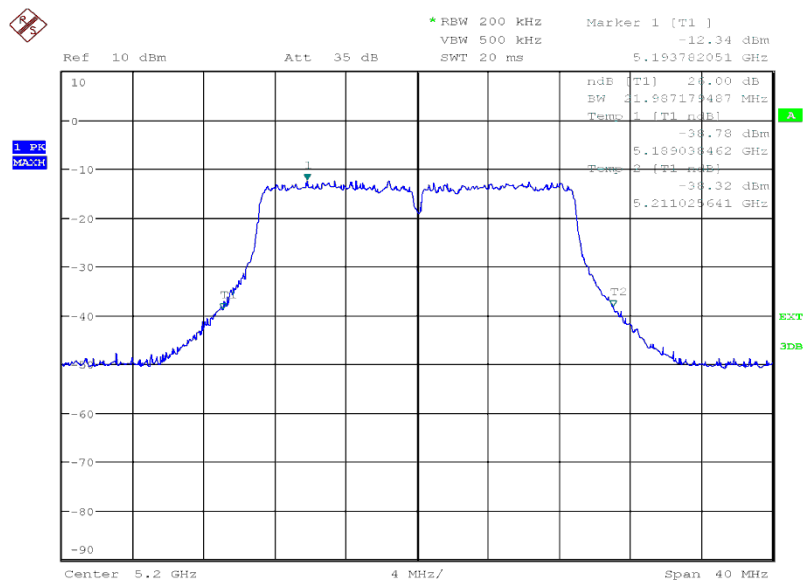
802.11n - 5 GHz 20 MHz Bandwidth, 5180 MHz, 64-QAM, MCS5, Frequency Band 1, 26 dB  
Bandwidth Plot



Date: 7.MAY.2015 10:39:40

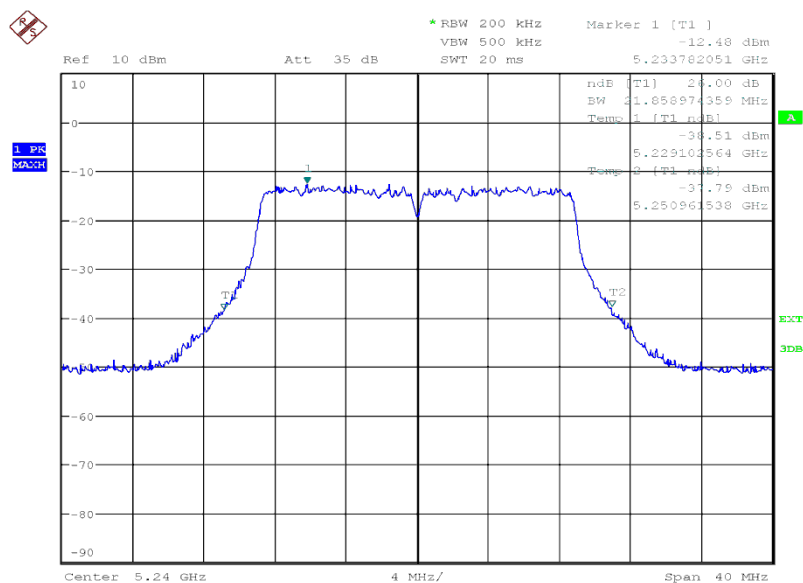


802.11n - 5 GHz 20 MHz Bandwidth, 5200 MHz, 64-QAM, MCS5, Frequency Band 1, 26 dB Bandwidth Plot



Date: 7.MAY.2015 10:40:29

802.11n - 5 GHz 20 MHz Bandwidth, 5240 MHz, 64-QAM, MCS5, Frequency Band 1, 26 dB Bandwidth Plot



Date: 7.MAY.2015 10:41:02

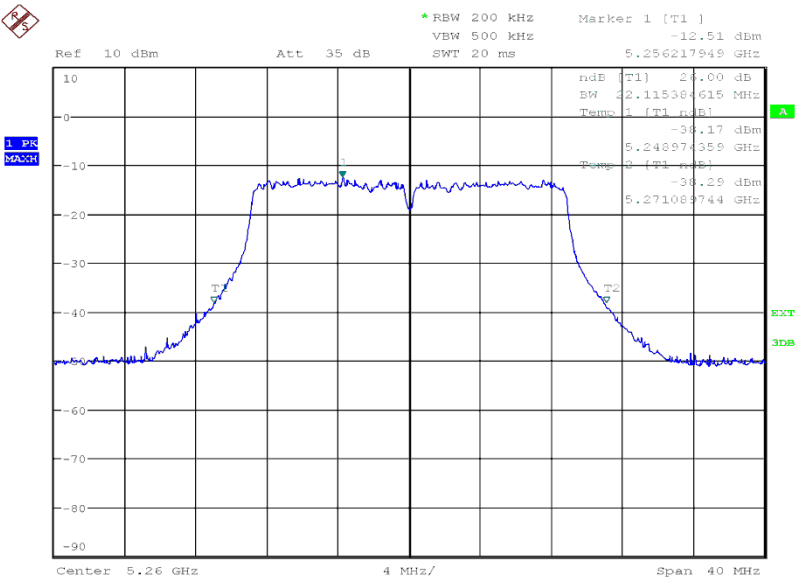


Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 64-QAM, MCS5, Frequency Band 2, 26 dB Bandwidth  
Results

|          |          |          |
|----------|----------|----------|
| 5260 MHz | 5300 MHz | 5320 MHz |
| MHz      | MHz      | MHz      |
| 22.12    | 22.12    | 22.18    |

802.11n - 5 GHz 20 MHz Bandwidth, 5260 MHz, 64-QAM, MCS5, Frequency Band 2, 26 dB  
Bandwidth Plot

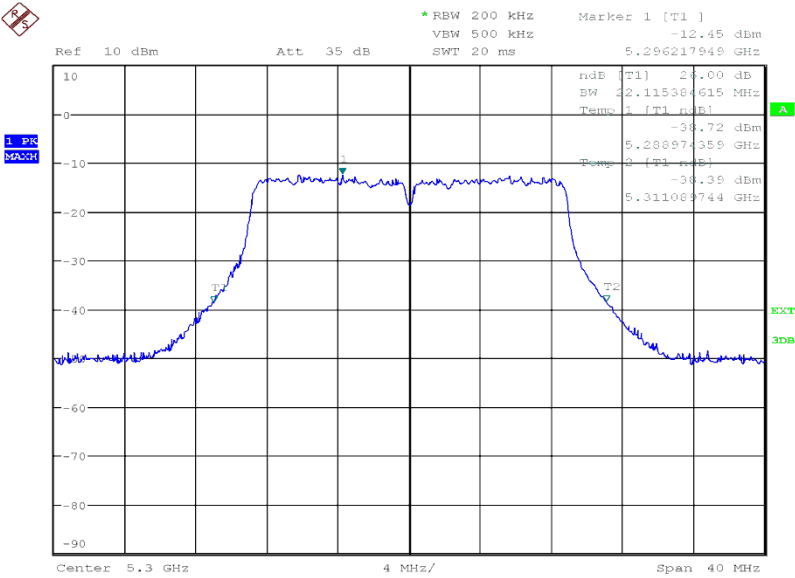


Date: 7.MAY.2015 10:41:50



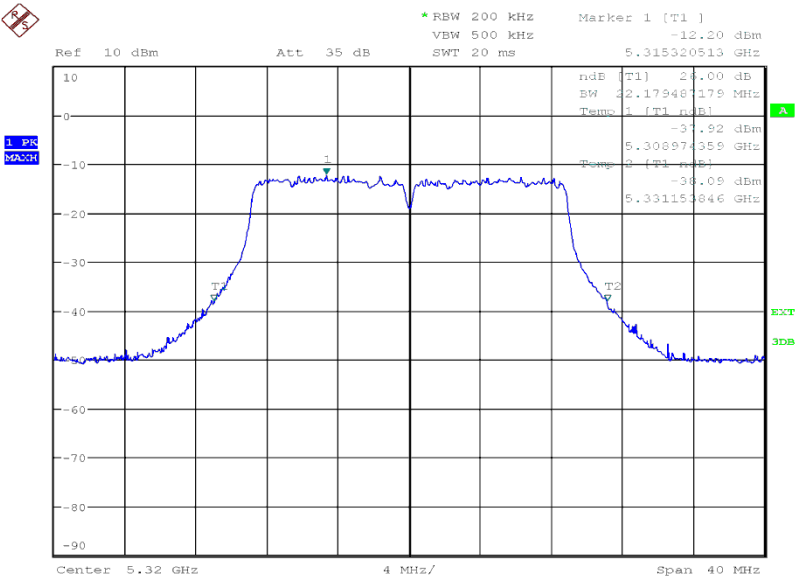
Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 5300 MHz, 64-QAM, MCS5, Frequency Band 2, 26 dB Bandwidth Plot



Date: 7.MAY.2015 10:42:45

802.11n - 5 GHz 20 MHz Bandwidth, 5320 MHz, 64-QAM, MCS5, Frequency Band 2, 26 dB Bandwidth Plot



Date: 7.MAY.2015 10:45:21

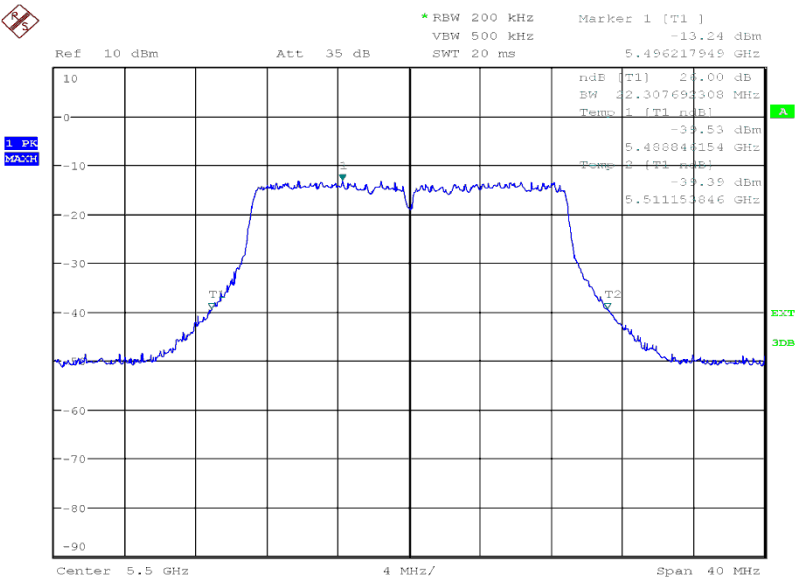


Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 64-QAM, MCS5, Frequency Band 3, 26 dB Bandwidth Results

|          |          |          |
|----------|----------|----------|
| 5500 MHz | 5600 MHz | 5700 MHz |
| MHz      | MHz      | MHz      |
| 22.31    | 22.05    | 22.12    |

802.11n - 5 GHz 20 MHz Bandwidth, 5500 MHz, 64-QAM, MCS5, Frequency Band 3, 26 dB Bandwidth Plot

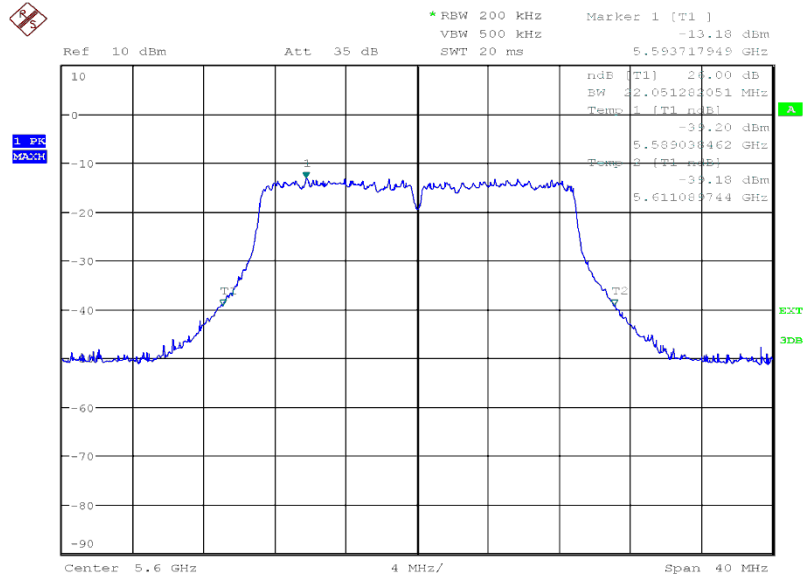


Date: 7.MAY.2015 10:46:08



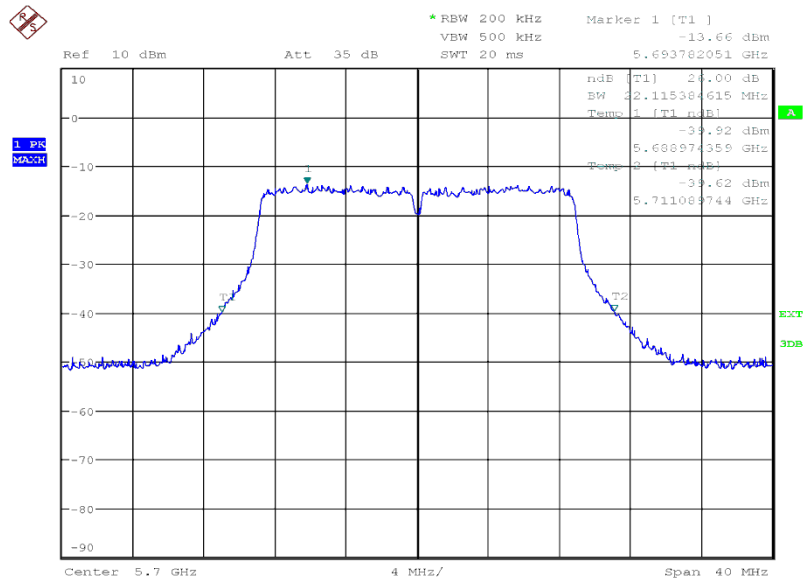
Product Service

### 802.11n - 5 GHz 20 MHz Bandwidth, 5600 MHz, 64-QAM, MCS5, Frequency Band 3, 26 dB Bandwidth Plot



Date: 7.MAY.2015 10:46:46

### 802.11n - 5 GHz 20 MHz Bandwidth, 5700 MHz, 64-QAM, MCS5, Frequency Band 3, 26 dB Bandwidth 3 Plot



Date: 7.MAY.2015 10:47:28

### FCC 47 CFR Part 15, Limit Clause 15.407 (a)

No limit specified.

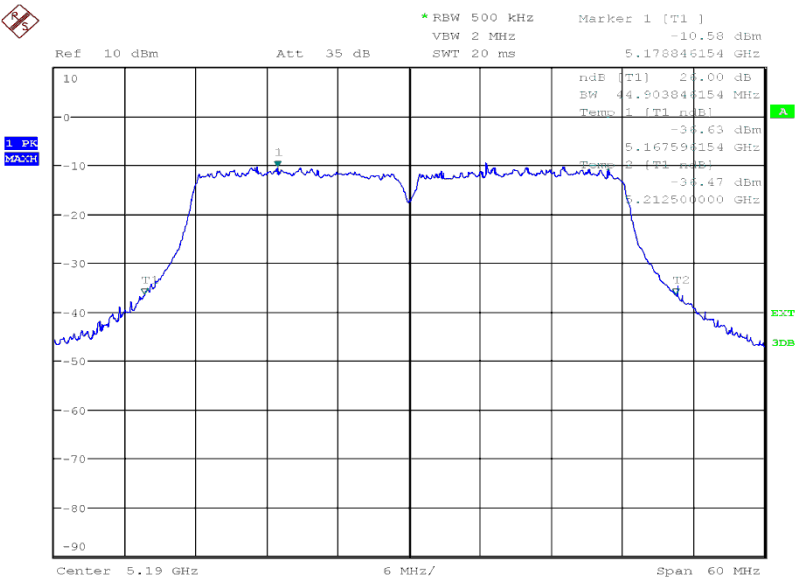


Product Service

802.11n - 5 GHz 40 MHz Bandwidth, 64-QAM, MCS5, Frequency Band 1, 26 dB Bandwidth  
Results

|          |          |
|----------|----------|
| 5190 MHz | 5230 MHz |
| MHz      | MHz      |
| 44.90    | 44.81    |

802.11n - 5 GHz 40 MHz Bandwidth, 5190 MHz, 64-QAM, MCS5, Frequency Band 1, 26 dB  
Bandwidth Plot

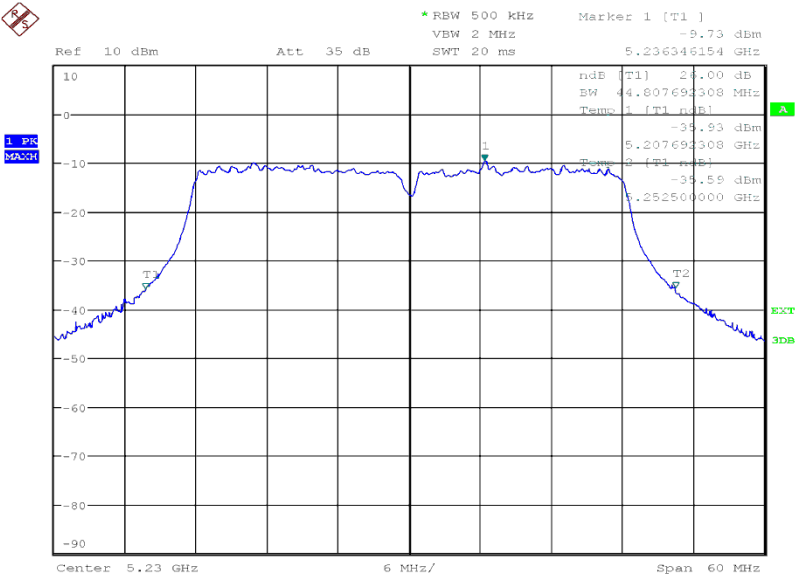


Date: 7.MAY.2015 11:11:51



Product Service

802.11n - 5 GHz 40 MHz Bandwidth, 5230 MHz, 64-QAM, MCS5, Frequency Band 1, 26 dB Bandwidth Plot



Date: 7.MAY.2015 11:18:11

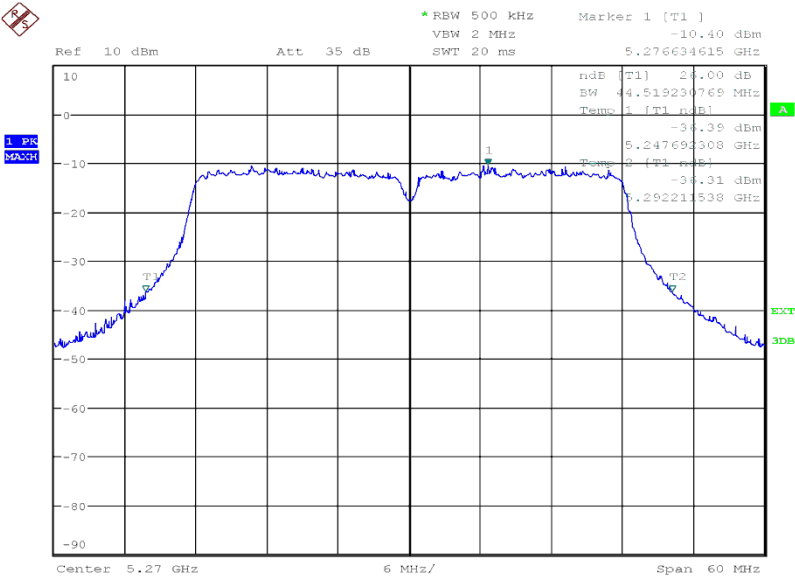


Product Service

802.11n - 5 GHz 40 MHz Bandwidth, 64-QAM, MCS5, Frequency Band 2, 26 dB Bandwidth  
Results

|          |          |
|----------|----------|
| 5270 MHz | 5310 MHz |
| MHz      | MHz      |
| 44.52    | 44.13    |

802.11n - 5 GHz 40 MHz Bandwidth, 5270 MHz, 64-QAM, MCS5, Frequency Band 2, 26 dB  
Bandwidth Plot

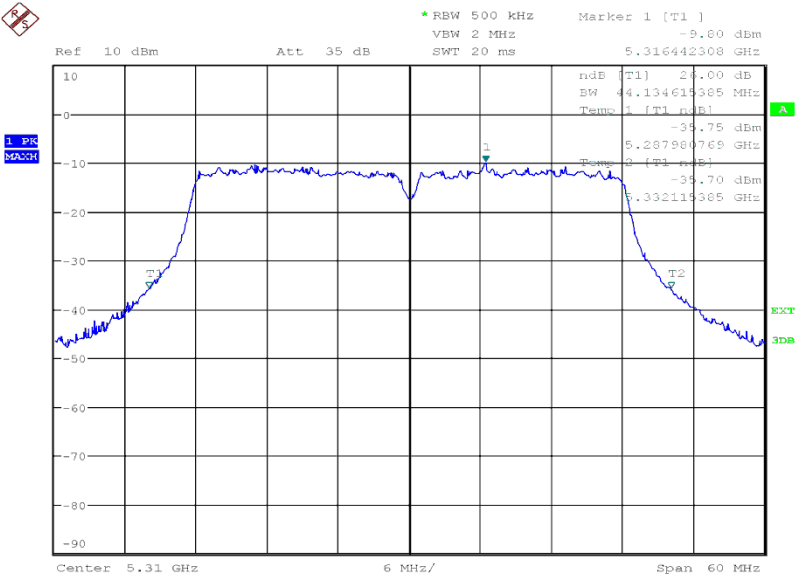


Date: 7.MAY.2015 11:18:45



Product Service

802.11n - 5 GHz 40 MHz Bandwidth, 5310 MHz, 64-QAM, MCS5, Frequency Band 2, 26 dB Bandwidth Plot



Date: 7.MAY.2015 11:19:29

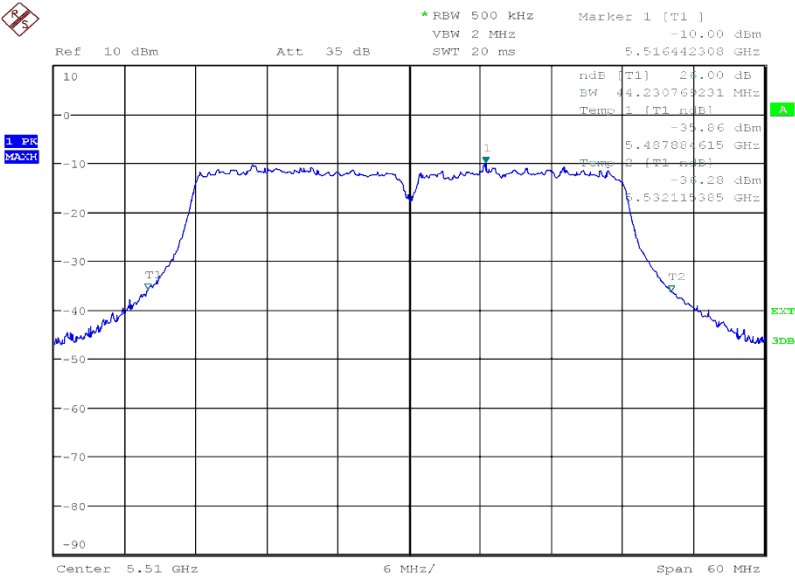


Product Service

802.11n - 5 GHz 40 MHz Bandwidth, 64-QAM, MCS5, Frequency Band 3, 26 dB Bandwidth  
Results

|          |          |          |
|----------|----------|----------|
| 5510 MHz | 5590 MHz | 5670 MHz |
| MHz      | MHz      | MHz      |
| 44.23    | 44.52    | 44.42    |

802.11n - 5 GHz 40 MHz Bandwidth, 5510 MHz, 64-QAM, MCS5, Frequency Band 3, 26 dB  
Bandwidth Plot

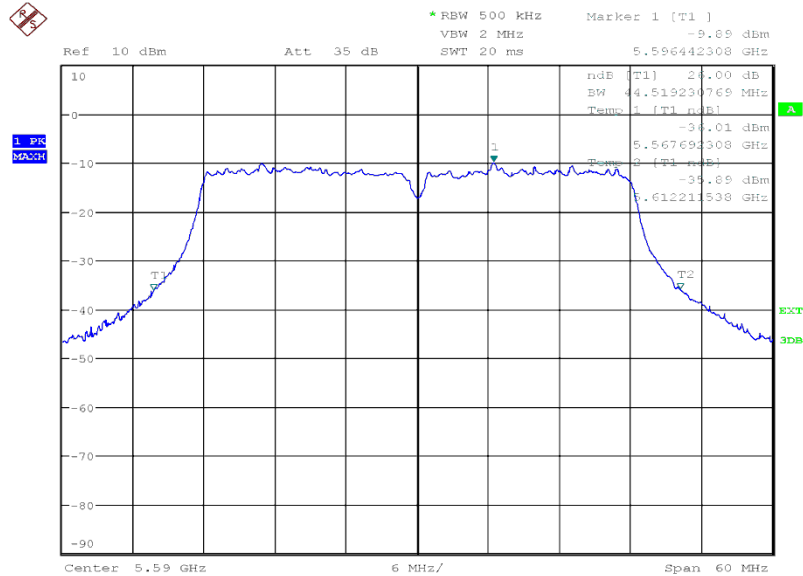


Date: 7.MAY.2015 11:20:48



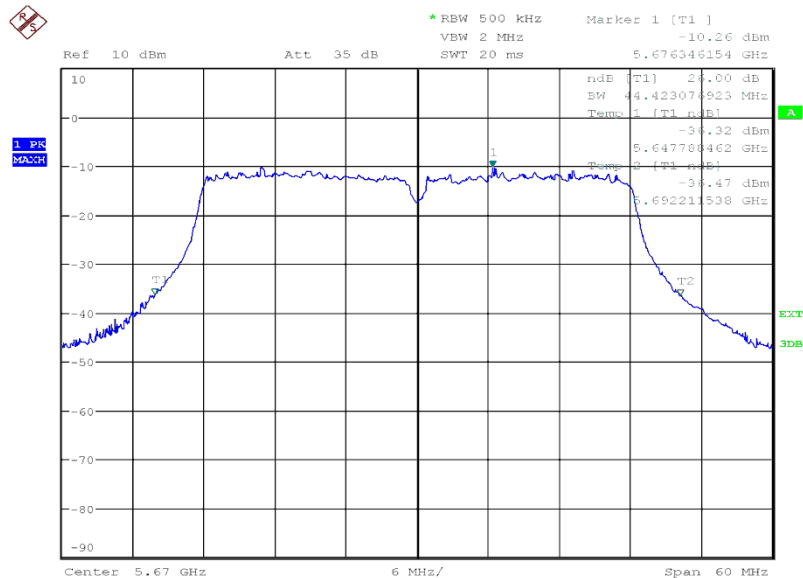
Product Service

### 802.11n - 5 GHz 40 MHz Bandwidth, 5590 MHz, 64-QAM, MCS5, Frequency Band 3, 26 dB Bandwidth Plot



Date: 7.MAY.2015 11:23:03

### 802.11n - 5 GHz 40 MHz Bandwidth, 5670 MHz, 64-QAM, MCS5, Frequency Band 3, 26 dB Bandwidth 3 Plot



Date: 7.MAY.2015 11:24:18

### FCC 47 CFR Part 15, Limit Clause 15.407 (a)

No limit specified.



Product Service

**2.3 MAXIMUM CONDUCTED OUTPUT POWER****2.3.1 Specification Reference**

FCC 47 CFR Part 15E, Clause 15.407 (a)(1)(2)

**2.3.2 Equipment Under Test and Modification State**

SHV32 S/N: IMEI 004401115406445 - Modification State 0

**2.3.3 Date of Test**

17 April 2015, 20 April 2015 & 21 April 2015

**2.3.4 Test Equipment Used**

The major items of test equipment used for the above tests are identified in Section 3.1.

**2.3.5 Test Procedure**

This test was performed in accordance with KDB 789033 D02 v01, Section II clause E.3b Method PM-G.

**Remarks**

For modes where simultaneous transmission on multiple antenna outputs are supported, the procedure defined in KDB 662911 D01 v02r01, clause E.2.b was used to sum the spectra across the outputs.

**2.3.6 Environmental Conditions**

|                     |        |
|---------------------|--------|
| Ambient Temperature | 22.7°C |
| Relative Humidity   | 28.5%  |



### 2.3.7 Test Results

#### 802.11a, 5180 MHz, OFDM, 9 Mbps, Frequency Band 1, Maximum Conducted Output Power Results

| 5180 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 10.23    | 9.85   | N/A         | 10.54  | 9.66   | N/A         |

#### 802.11a, 5200 MHz, OFDM, 9 Mbps, Frequency Band 1, Maximum Conducted Output Power Results

| 5200 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 10.12    | 9.76   | N/A         | 10.28  | 9.46   | N/A         |

#### 802.11a, 5240 MHz, OFDM, 9 Mbps, Frequency Band 1, Maximum Conducted Output Power Results

| 5240 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 10.00    | 9.51   | N/A         | 10.00  | 8.93   | N/A         |

#### 802.11a, 5260 MHz, OFDM, 9 Mbps, Frequency Band 2, Maximum Conducted Output Power Results

| 5260 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 10.14    | 9.66   | N/A         | 10.33  | 9.25   | N/A         |

#### 802.11a, 5300 MHz, OFDM, 9 Mbps, Frequency Band 12 Maximum Conducted Output Power Results

| 5300 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 10.07    | 9.49   | N/A         | 10.16  | 8.89   | N/A         |



Product Service

802.11a, 5320 MHz, OFDM, 9 Mbps, Frequency Band 2, Maximum Conducted Output Power Results

| 5320 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 10.08    | 9.41   | N/A         | 10.19  | 8.73   | N/A         |

802.11a, 5500 MHz, OFDM, 9 Mbps, Frequency Band 3, Maximum Conducted Output Power Results

| 5500 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 10.37    | 9.59   | N/A         | 10.89  | 9.10   | N/A         |

802.11a, 5600 MHz, OFDM, 9 Mbps, Frequency Band 3, Maximum Conducted Output Power Results

| 5600 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 10.51    | 9.79   | N/A         | 11.25  | 9.53   | N/A         |

802.11a, 5700 MHz, OFDM, 9 Mbps, Frequency Band 3, Maximum Conducted Output Power Results

| 5700 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 10.25    | 9.59   | N/A         | 10.59  | 9.10   | N/A         |

Remarks

Port A = ANT-0 and Port B = ANT-1

FCC 47 CFR Part 15, Limit Clause 15.407 (a)(1)(2)(3)

| Frequency Band (MHz) | Limit                                 |
|----------------------|---------------------------------------|
| 5150 to 5250         | Lesser of 250 mW                      |
| 5250 to 5350         | Lesser of 250 mW or 11 dBm + 10 log B |
| 5470 to 5725         | Lesser of 250 mW or 11 dBm + 10 log B |
| 5725 to 5825         | ≤1 W                                  |

Note: "B" = 26 dB Bandwidth (MHz).



802.11ac - 5 GHz 20 MHz Bandwidth, 5180 MHz, 64-QAM, MCS0, Frequency Band 1,  
Maximum Conducted Output Power Results

| 5180 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.81     | 8.40   | 11.62       | 7.60   | 6.92   | 14.52       |

802.11ac - 5 GHz 20 MHz Bandwidth, 5200 MHz, 64-QAM, MCS0, Frequency Band 1,  
Maximum Conducted Output Power Results

| 5200 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.66     | 8.02   | 11.36       | 7.35   | 6.34   | 13.68       |

802.11ac - 5 GHz 20 MHz Bandwidth, 5240 MHz, 64-QAM, MCS0, Frequency Band 1,  
Maximum Conducted Output Power Results

| 5240 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.45     | 8.05   | 11.26       | 7.00   | 6.38   | 13.38       |

802.11ac - 5 GHz 20 MHz Bandwidth, 5260 MHz, 64-QAM, MCS0, Frequency Band 2,  
Maximum Conducted Output Power Results

| 5260 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.77     | 8.25   | 11.53       | 7.53   | 6.68   | 14.22       |

802.11ac - 5 GHz 20 MHz Bandwidth, 5300 MHz, 64-QAM, MCS0, Frequency Band 12  
Maximum Conducted Output Power Results

| 5300 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.74     | 8.15   | 11.47       | 7.48   | 6.53   | 14.01       |



Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5320 MHz, 64-QAM, MCS0, Frequency Band 2,  
Maximum Conducted Output Power Results

| 5320 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.34     | 8.16   | 11.26       | 6.82   | 6.55   | 13.37       |

802.11ac - 5 GHz 20 MHz Bandwidth, 5500 MHz, 64-QAM, MCS0, Frequency Band 3,  
Maximum Conducted Output Power Results

| 5500 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.97     | 8.32   | 11.67       | 7.89   | 6.79   | 14.68       |

802.11ac - 5 GHz 20 MHz Bandwidth, 5600 MHz, 64-QAM, MCS0, Frequency Band 3,  
Maximum Conducted Output Power Results

| 5600 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.91     | 8.34   | 11.64       | 7.78   | 6.82   | 14.60       |

802.11ac - 5 GHz 20 MHz Bandwidth, 5700 MHz, 64-QAM, MCS0, Frequency Band 3,  
Maximum Conducted Output Power Results

| 5700 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.78     | 8.23   | 11.52       | 7.55   | 6.65   | 14.20       |

Remarks

Port A = ANT-0 and Port B = ANT-1

FCC 47 CFR Part 15, Limit Clause 15.407 (a)(1)(2)(3)

| Frequency Band (MHz) | Limit                                 |
|----------------------|---------------------------------------|
| 5150 to 5250         | Lesser of 250 mW                      |
| 5250 to 5350         | Lesser of 250 mW or 11 dBm + 10 log B |
| 5470 to 5725         | Lesser of 250 mW or 11 dBm + 10 log B |
| 5725 to 5825         | Lesser of 1 W                         |

Note: "B" = 26 dB Bandwidth (MHz).



802.11ac - 5 GHz 40 MHz Bandwidth, 5190 MHz, 16-QAM, MCS0, Frequency Band 1,  
Maximum Conducted Output Power Results

| 5190 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.17     | 8.92   | 12.06       | 8.26   | 7.80   | 16.06       |

802.11ac - 5 GHz 40 MHz Bandwidth, 5230 MHz, 16-QAM, MCS0, Frequency Band 1,  
Maximum Conducted Output Power Results

| 5230 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.79     | 8.62   | 11.72       | 7.57   | 7.28   | 14.85       |

802.11ac - 5 GHz 40 MHz Bandwidth, 5270 MHz, 16-QAM, MCS0, Frequency Band 2,  
Maximum Conducted Output Power Results

| 5270 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.21     | 8.75   | 12.00       | 8.34   | 7.50   | 15.84       |

802.11ac - 5 GHz 40 MHz Bandwidth, 5310 MHz, 16-QAM, MCS0, Frequency Band 2,  
Maximum Conducted Output Power Results

| 5310 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.02     | 8.66   | 11.85       | 7.98   | 7.35   | 15.33       |

802.11ac - 5 GHz 40 MHz Bandwidth, 5510 MHz, 16-QAM, MCS0, Frequency Band 3,  
Maximum Conducted Output Power Results

| 5510 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.28     | 8.74   | 12.03       | 8.47   | 7.48   | 15.95       |



Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5590 MHz, 16-QAM, MCS0, Frequency Band 3,  
Maximum Conducted Output Power Results

| 5590 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.44     | 8.87   | 12.17       | 8.79   | 7.71   | 16.50       |

802.11ac - 5 GHz 40 MHz Bandwidth, 5670 MHz, 16-QAM, MCS0, Frequency Band 3,  
Maximum Conducted Output Power Results

| 5670 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.04     | 8.83   | 11.95       | 8.02   | 7.64   | 15.66       |

Remarks

Port A = ANT-0 and Port B = ANT-1

FCC 47 CFR Part 15, Limit Clause 15.407 (a)(1)(2)

| Frequency Band (MHz) | Limit                                 |
|----------------------|---------------------------------------|
| 5150 to 5250         | Lesser of 250 mW                      |
| 5250 to 5350         | Lesser of 250 mW or 11 dBm + 10 log B |
| 5470 to 5725         | Lesser of 250 mW or 11 dBm + 10 log B |
| 5725 to 5825         | ≤1 W                                  |

Note: "B" = 26 dB Bandwidth (MHz).



Product Service

802.11ac - 5 GHz 80 MHz Bandwidth, 5210 MHz, 256-QAM, MCS0, Frequency Band 1,  
Maximum Conducted Output Power Results

| 5210 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.49     | 8.27   | 11.39       | 7.06   | 6.71   | 13.78       |

802.11ac - 5 GHz 80 MHz Bandwidth, 5290 MHz, 256-QAM, MCS0, Frequency Band 2,  
Maximum Conducted Output Power Results

| 5290 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.78     | 8.33   | 11.57       | 7.55   | 6.81   | 14.36       |

802.11ac - 5 GHz 80 MHz Bandwidth, 5530 MHz, 256-QAM, MCS0, Frequency Band 3,  
Maximum Conducted Output Power Results

| 5530 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.51     | 8.06   | 11.30       | 7.10   | 6.40   | 13.49       |

802.11ac - 5 GHz 80 MHz Bandwidth, 5610 MHz, 256-QAM, MCS0, Frequency Band 3,  
Maximum Conducted Output Power Results

| 5610 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.80     | 8.29   | 11.56       | 7.59   | 6.75   | 14.33       |

Remarks

Port A = ANT-0 and Port B = ANT-1

FCC 47 CFR Part 15, Limit Clause 15.407 (a)(1)(2)(3)

| Frequency Band (MHz) | Limit                                 |
|----------------------|---------------------------------------|
| 5150 to 5250         | Lesser of 250 mW                      |
| 5250 to 5350         | Lesser of 250 mW or 11 dBm + 10 log B |
| 5470 to 5725         | Lesser of 250 mW or 11 dBm + 10 log B |
| 5725 to 5825         | ≤1 W                                  |

Note: "B" = 26 dB Bandwidth (MHz).



Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 5180 MHz, 64-QAM, MCS0, Frequency Band 1, Maximum Conducted Output Power Results

| 5180 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.11     | 8.38   | 11.77       | 8.15   | 6.89   | 15.03       |

802.11n - 5 GHz 20 MHz Bandwidth, 5200 MHz, 64-QAM, MCS0, Frequency Band 1, Maximum Conducted Output Power Results

| 5200 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.93     | 8.02   | 11.51       | 7.82   | 6.34   | 14.15       |

802.11n - 5 GHz 20 MHz Bandwidth, 5240 MHz, 64-QAM, MCS0, Frequency Band 1, Maximum Conducted Output Power Results

| 5240 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.58     | 8.04   | 11.33       | 7.21   | 6.37   | 13.58       |

802.11n - 5 GHz 20 MHz Bandwidth, 5260 MHz, 64-QAM, MCS0, Frequency Band 2, Maximum Conducted Output Power Results

| 5260 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.67     | 8.30   | 11.50       | 7.36   | 6.76   | 14.12       |

802.11n - 5 GHz 20 MHz Bandwidth, 5300 MHz, 64-QAM, MCS0, Frequency Band 12 Maximum Conducted Output Power Results

| 5300 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.03     | 8.17   | 11.63       | 8.00   | 6.56   | 14.56       |



Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 5320 MHz, 64-QAM, MCS0, Frequency Band 2, Maximum Conducted Output Power Results

| 5320 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.82     | 7.96   | 11.42       | 7.62   | 6.25   | 13.87       |

802.11n - 5 GHz 20 MHz Bandwidth, 5500 MHz, 64-QAM, MCS0, Frequency Band 3, Maximum Conducted Output Power Results

| 5500 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.18     | 8.36   | 11.80       | 8.28   | 6.85   | 15.13       |

802.11n - 5 GHz 20 MHz Bandwidth, 5600 MHz, 64-QAM, MCS0, Frequency Band 3, Maximum Conducted Output Power Results

| 5600 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.14     | 8.36   | 11.78       | 8.20   | 6.85   | 15.06       |

802.11n - 5 GHz 20 MHz Bandwidth, 5700 MHz, 64-QAM, MCS0, Frequency Band 3, Maximum Conducted Output Power Results

| 5700 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.03     | 8.25   | 11.67       | 8.00   | 6.68   | 14.68       |

Remarks

Port A = ANT-0 and Port B = ANT-1

FCC 47 CFR Part 15, Limit Clause 15.407 (a)(1)(2)(3)

| Frequency Band (MHz) | Limit                                 |
|----------------------|---------------------------------------|
| 5150 to 5250         | Lesser of 250 mW                      |
| 5250 to 5350         | Lesser of 250 mW or 11 dBm + 10 log B |
| 5470 to 5725         | Lesser of 250 mW or 11 dBm + 10 log B |
| 5725 to 5825         | ≤1 W                                  |

Note: "B" = 26 dB Bandwidth (MHz).



Product Service

802.11n - 5 GHz 40 MHz Bandwidth, 5190 MHz, 64-QAM, MCS0, Frequency Band 1, Maximum Conducted Output Power Results

| 5190 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.16     | 8.99   | 12.09       | 8.24   | 7.93   | 16.17       |

802.11n - 5 GHz 40 MHz Bandwidth, 5230 MHz, 64-QAM, MCS0, Frequency Band 1, Maximum Conducted Output Power Results

| 5230 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 8.80     | 8.69   | 11.76       | 7.59   | 7.40   | 14.98       |

802.11n - 5 GHz 40 MHz Bandwidth, 5270 MHz, 64-QAM, MCS0, Frequency Band 2, Maximum Conducted Output Power Results

| 5270 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.21     | 8.80   | 12.02       | 8.34   | 7.59   | 15.92       |

802.11n - 5 GHz 40 MHz Bandwidth, 5310 MHz, 64-QAM, MCS0, Frequency Band 2, Maximum Conducted Output Power Results

| 5310 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.05     | 8.71   | 11.89       | 8.04   | 7.43   | 15.47       |

802.11n - 5 GHz 40 MHz Bandwidth, 5510 MHz, 64-QAM, MCS0, Frequency Band 3, Maximum Conducted Output Power Results

| 5510 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.25     | 8.77   | 12.03       | 8.41   | 7.53   | 15.95       |



Product Service

802.11n - 5 GHz 40 MHz Bandwidth, 5590 MHz, 64-QAM, MCS0, Frequency Band 3, Maximum Conducted Output Power Results

| 5590 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.43     | 8.87   | 12.17       | 8.77   | 7.71   | 16.48       |

802.11n - 5 GHz 40 MHz Bandwidth, 5670 MHz, 64-QAM, MCS0, Frequency Band 3, Maximum Conducted Output Power Results

| 5670 MHz |        |             |        |        |             |
|----------|--------|-------------|--------|--------|-------------|
| dBm      |        |             | mW     |        |             |
| Port A   | Port B | Total Power | Port A | Port B | Total Power |
| 9.00     | 8.83   | 11.93       | 7.94   | 7.64   | 15.58       |

Remarks

Port A = ANT-0 and Port B = ANT-1

FCC 47 CFR Part 15, Limit Clause 15.407 (a)(1)(2)(3)

| Frequency Band (MHz) | Limit                                 |
|----------------------|---------------------------------------|
| 5150 to 5250         | Lesser of 250 mW                      |
| 5250 to 5350         | Lesser of 250 mW or 11 dBm + 10 log B |
| 5470 to 5725         | Lesser of 250 mW or 11 dBm + 10 log B |
| 5725 to 5825         | ≤1 W                                  |

Note: "B" = 26 dB Bandwidth (MHz).



Product Service

**2.4 PEAK POWER SPECTRAL DENSITY****2.4.1 Specification Reference**

FCC 47 CFR Part 15E, Clause 15.407 (a)(1)(iv) and (a)(2)

**2.4.2 Equipment Under Test and Modification State**

SHV32 S/N: IMEI 004401115406445 - Modification State 0

**2.4.3 Date of Test**

5 May 2015 & 6 May 2015

**2.4.4 Test Equipment Used**

The major items of test equipment used for the above tests are identified in Section 3.1.

**2.4.5 Test Procedure**

This test was performed in accordance with KDB 789033 D02 v01, Section II clause F, (SA-2 Alternative).

Remarks

Duty cycle correction was included in the reference level offset.

For modes which support simultaneous transmission - KDB 662911 D01, v02r01, clause E.2 was used to sum and add the total power spectral density.

**2.4.6 Environmental Conditions**

|                     |        |
|---------------------|--------|
| Ambient Temperature | 22.5°C |
| Relative Humidity   | 31.5%  |



Product Service

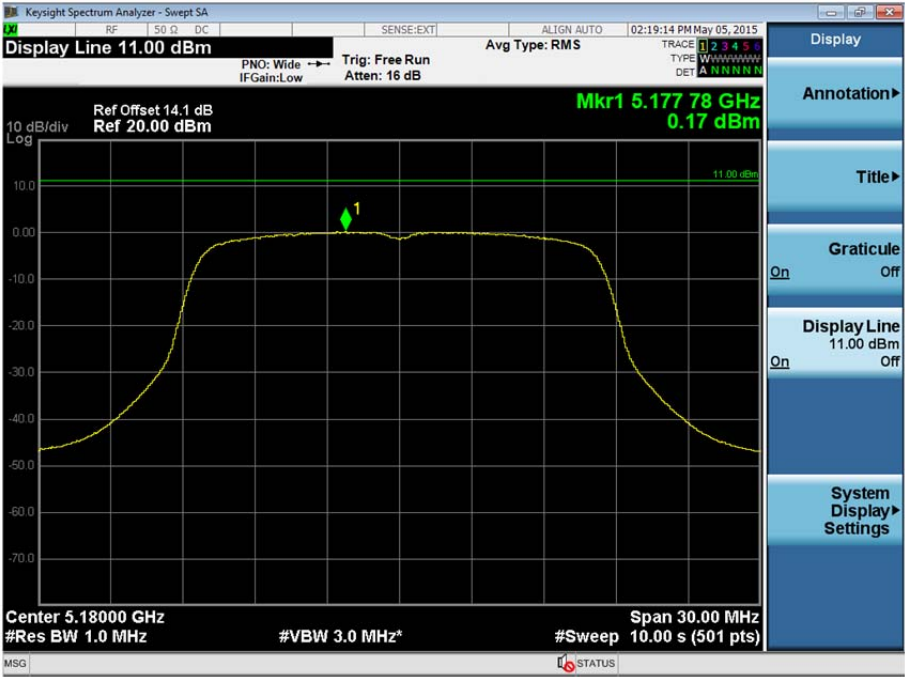
2.4.7 Test Results

Duty cycle : 93.79 %

802.11a, 5180 MHz, OFDM, 9 Mbps, Frequency Band 1, Peak Power Spectral Density Results

| 5180 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| 0.17     | -0.46  | N/A         |

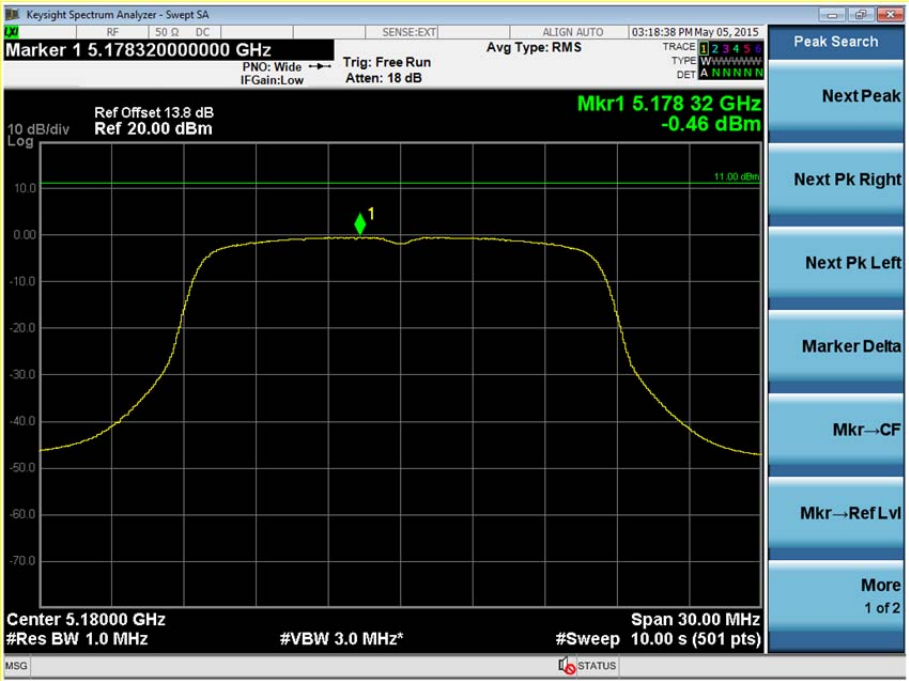
802.11a, 5180 MHz, OFDM, 9 Mbps, Frequency Band 1, Port A, Peak Power Spectral Density Plot





Product Service

802.11a, 5180 MHz, OFDM, 9 Mbps, Frequency Band 1, Port B, Peak Power Spectral Density Plot



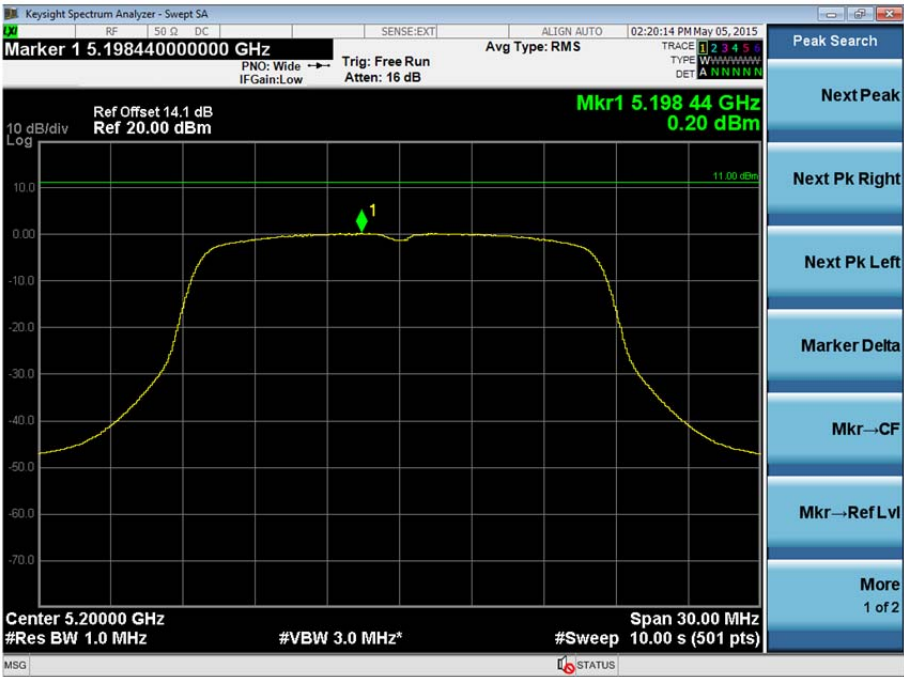


Product Service

802.11a, 5200 MHz, OFDM, 9 Mbps, Frequency Band 1, Peak Power Spectral Density Results

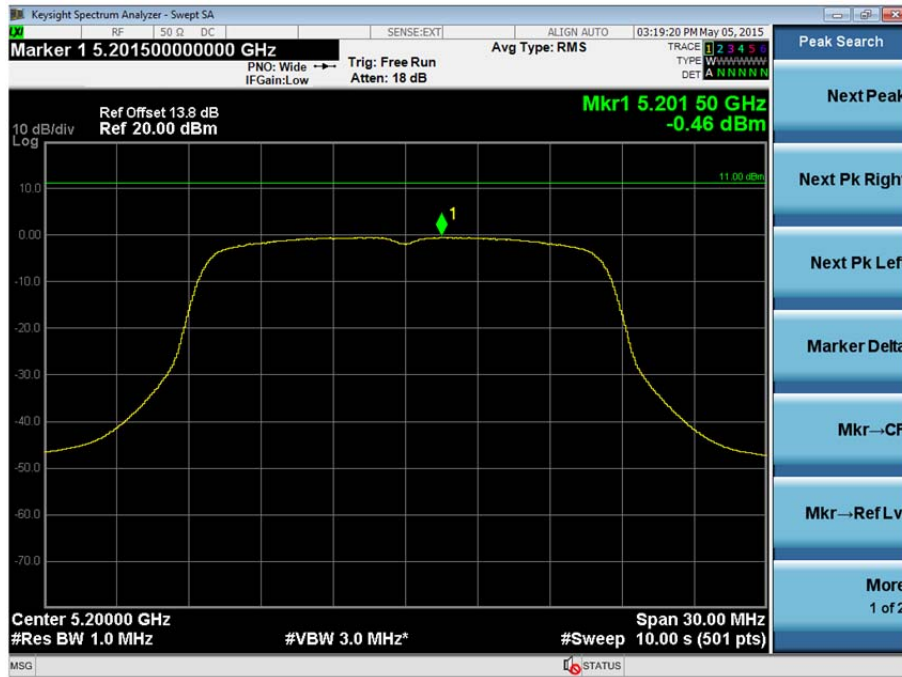
| 5200 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| 0.20     | -0.46  | N/A         |

802.11a, 5200 MHz, OFDM, 9 Mbps, Frequency Band 1, Port A, Peak Power Spectral Density Plot



Product Service

### 802.11a, 5200 MHz, OFDM, 9 Mbps, Frequency Band 1, Port B, Peak Power Spectral Density Plot



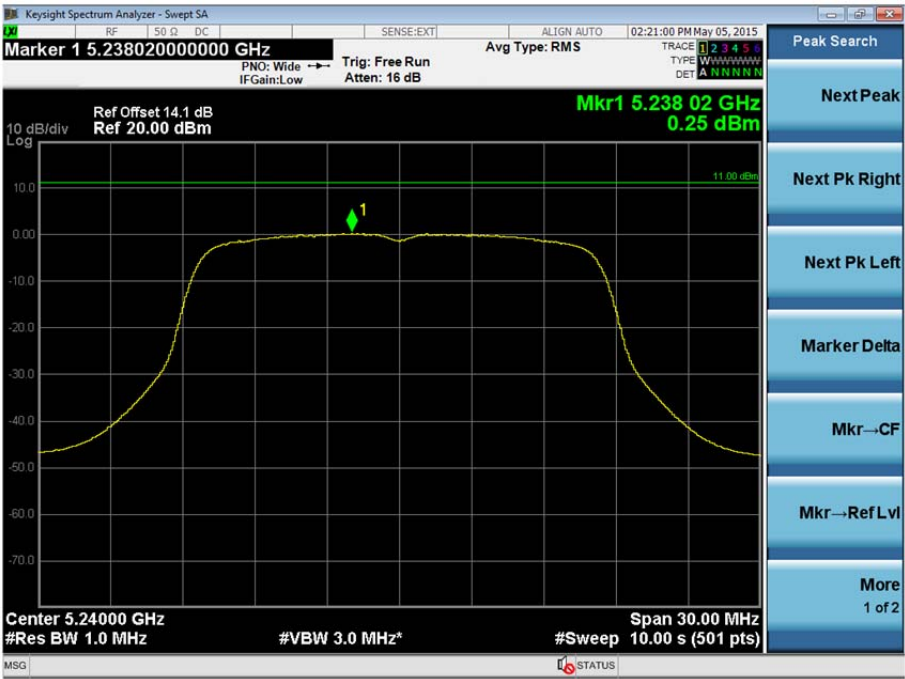


Product Service

802.11a, 5240 MHz, OFDM, 9 Mbps, Frequency Band 1, Peak Power Spectral Density Results

| 5240 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| 0.25     | -0.49  | N/A         |

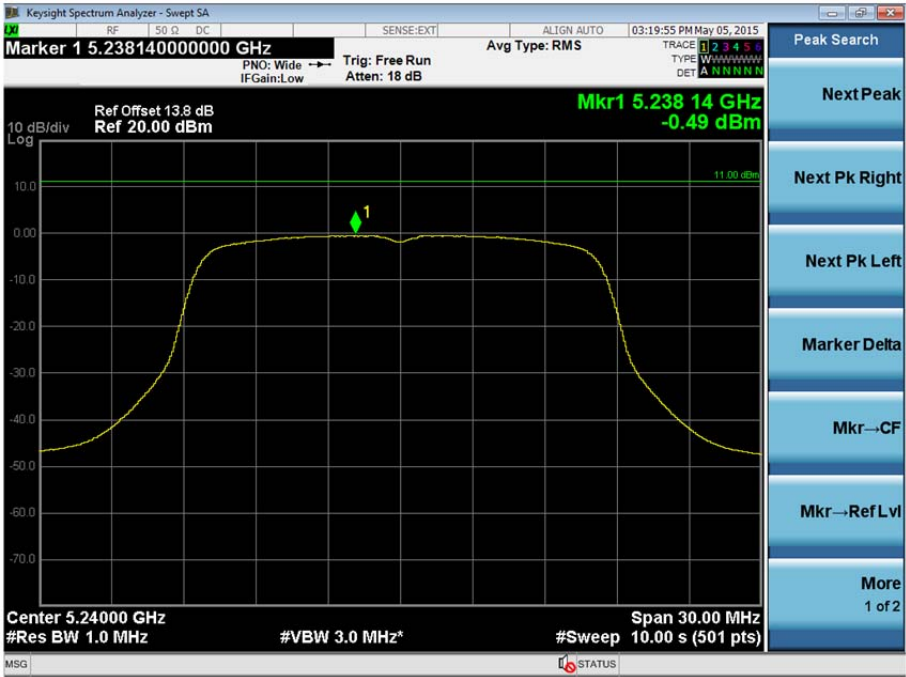
802.11a, 5240 MHz, OFDM, 9 Mbps, Frequency Band 1, Peak Power Spectral Density Plot





Product Service

802.11a, 5240 MHz, OFDM, 9 Mbps, Frequency Band 1, Peak Power Spectral Density Plot



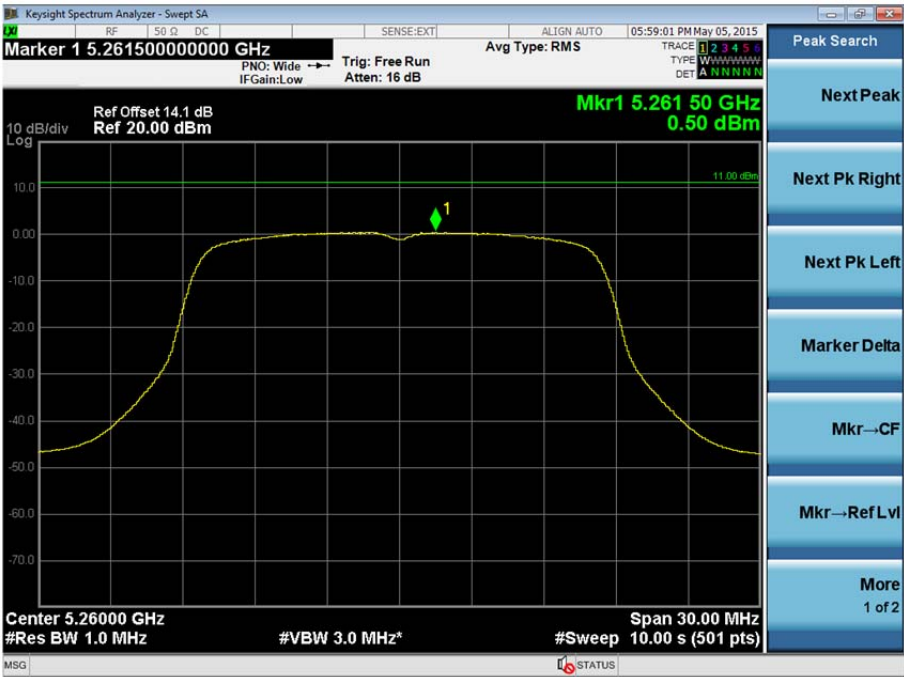


Product Service

802.11a, 5260 MHz, OFDM, 9 Mbps, Frequency Band 2, Peak Power Spectral Density Results

| 5260 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| 0.50     | -0.34  | N/A         |

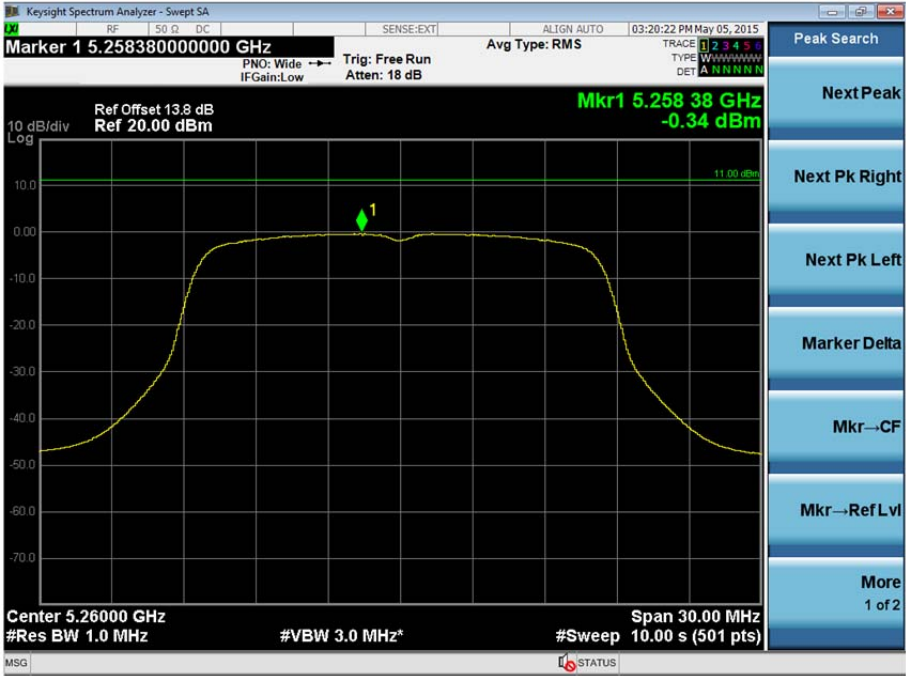
802.11a, 5260 MHz, OFDM, 9 Mbps, Frequency Band 2, Port A, Peak Power Spectral Density Plot





Product Service

802.11a, 5260 MHz, OFDM, 9 Mbps, Frequency Band 2, Port B, Peak Power Spectral Density Plot



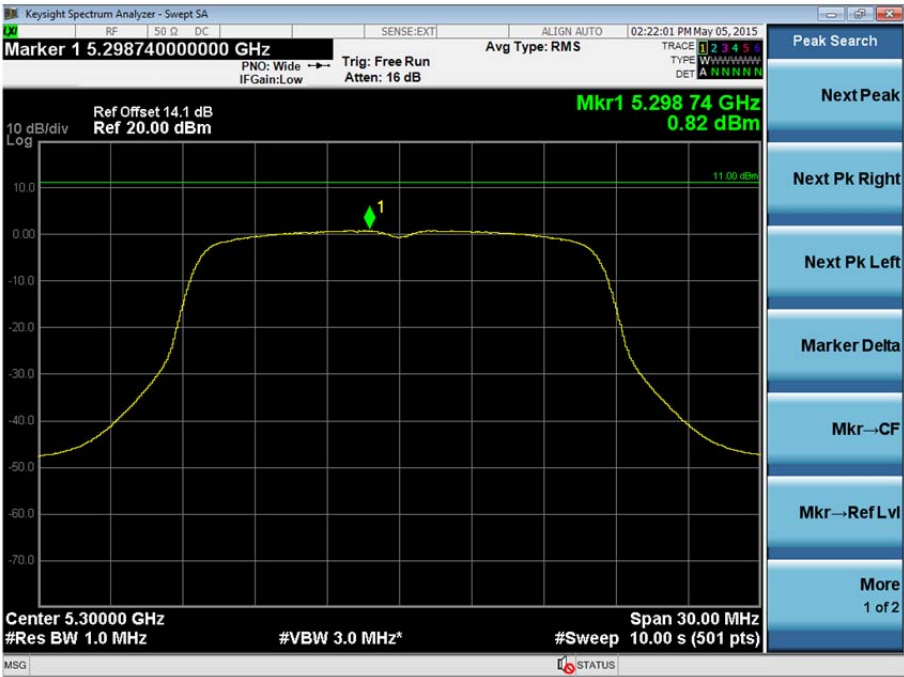


Product Service

802.11a, 5300 MHz, OFDM, 9 Mbps, Frequency Band 2, Peak Power Spectral Density Results

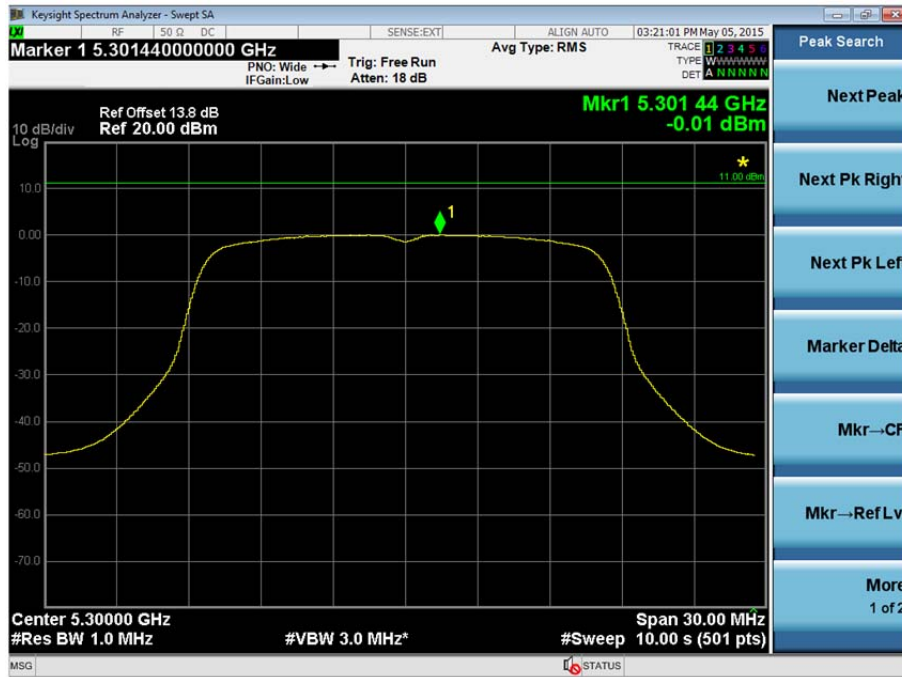
| 5300 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| 0.82     | -0.01  | N/A         |

802.11a, 5300 MHz, OFDM, 9 Mbps, Frequency Band 2, Port A, Peak Power Spectral Density Plot



Product Service

802.11a, 5300 MHz, OFDM, 9 Mbps, Frequency Band 2, Port B, Peak Power Spectral Density Plot



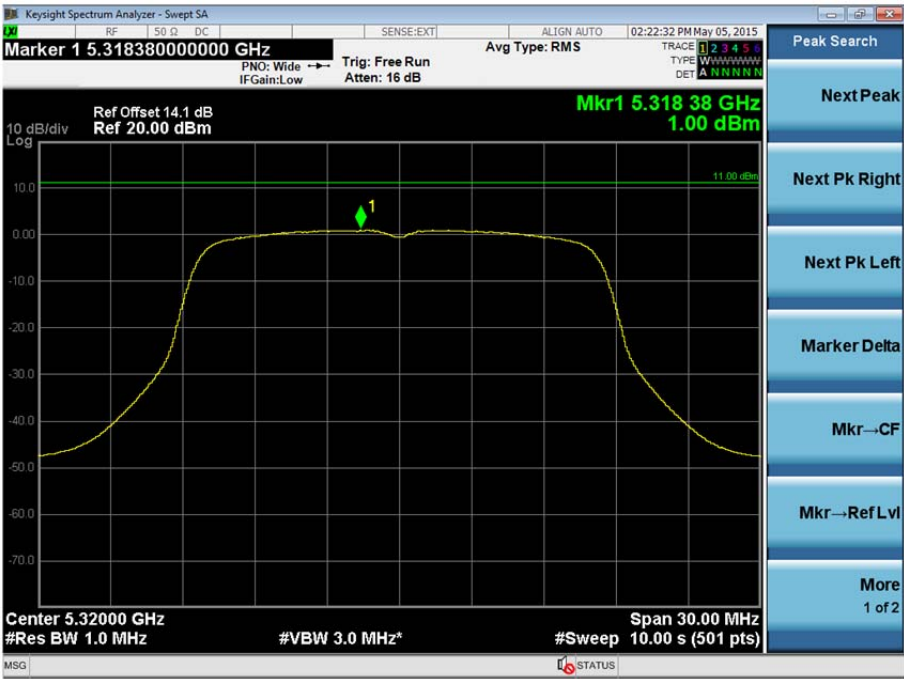


Product Service

802.11a, 5320 MHz, OFDM, 9 Mbps, Frequency Band 2, Peak Power Spectral Density Results

| 5320 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| 1.00     | 0.14   | N/A         |

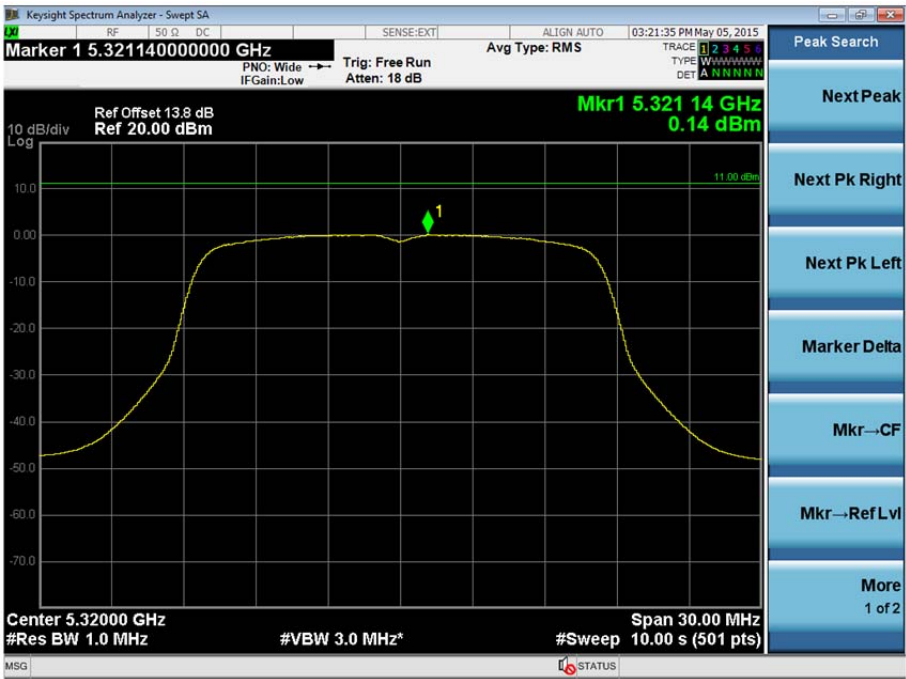
802.11a, 5320 MHz, OFDM, 9 Mbps, Frequency Band 2, Peak Power Spectral Density Plot





Product Service

802.11a, 5320 MHz, OFDM, 9 Mbps, Frequency Band 2, Peak Power Spectral Density Plot



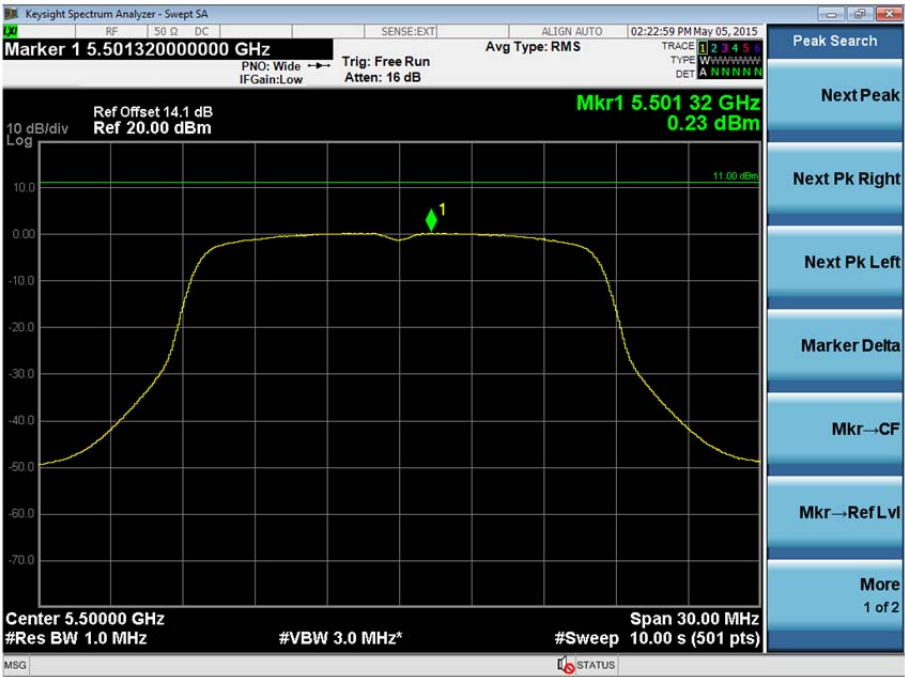


Product Service

802.11a, 5500 MHz, OFDM, 9 Mbps, Frequency Band 3, Peak Power Spectral Density Results

| 5500 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| 0.23     | -0.59  | N/A         |

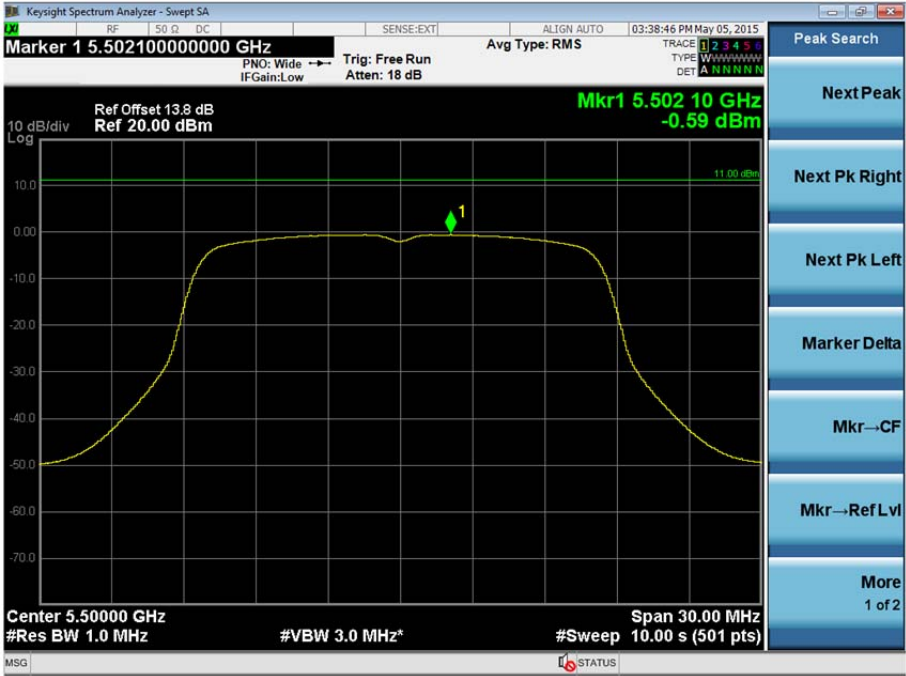
802.11a, 5500 MHz, OFDM, 9 Mbps, Frequency Band 3, Port A, Peak Power Spectral Density Plot





Product Service

802.11a, 5500 MHz, OFDM, 9 Mbps, Frequency Band 3, Port B, Peak Power Spectral Density Plot





Product Service

802.11a, 5600 MHz, OFDM, 9 Mbps, Frequency Band 3, Peak Power Spectral Density Results

| 5600 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| 0.87     | -0.31  | N/A         |

802.11a, 5600 MHz, OFDM, 9 Mbps, Frequency Band 3, Port A, Peak Power Spectral Density Plot





Product Service

802.11a, 5600 MHz, OFDM, 9 Mbps, Frequency Band 3, Port B, Peak Power Spectral Density Plot



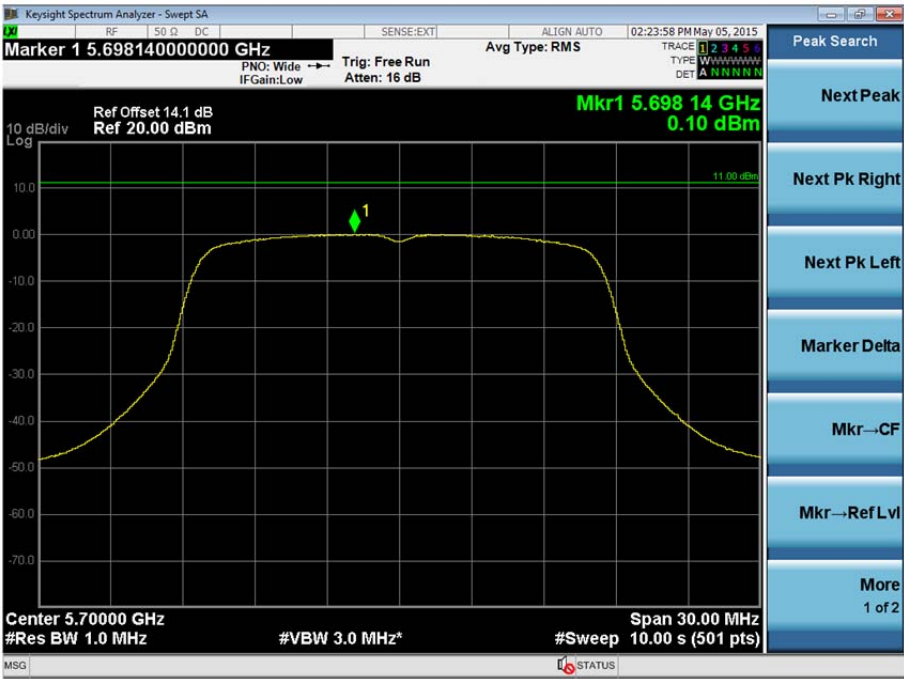


Product Service

802.11a, 5700 MHz, OFDM, 9 Mbps, Frequency Band 3, Peak Power Spectral Density Results

| 5700 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| 0.10     | -0.86  | N/A         |

802.11a, 5700 MHz, OFDM, 9 Mbps, Frequency Band 3, Peak Power Spectral Density Plot





802.11a does not support simultaneous transmission from multiple antenna outputs therefore no 'total' power is specified.

FCC 47 CFR Part 15, Limit Clause 15.407 (a)(1)(2)(3)

| Frequency Band (MHz) | Limit             |
|----------------------|-------------------|
| 5150 to 5250         | ≤11 dBm /1 MHz    |
| 5250 to 5350         | ≤11 dBm / 1 MHz   |
| 5470 to 5725         | ≤11 dBm / 1 MHz   |
| 5725 to 5825         | ≤30 dBm / 500 kHz |



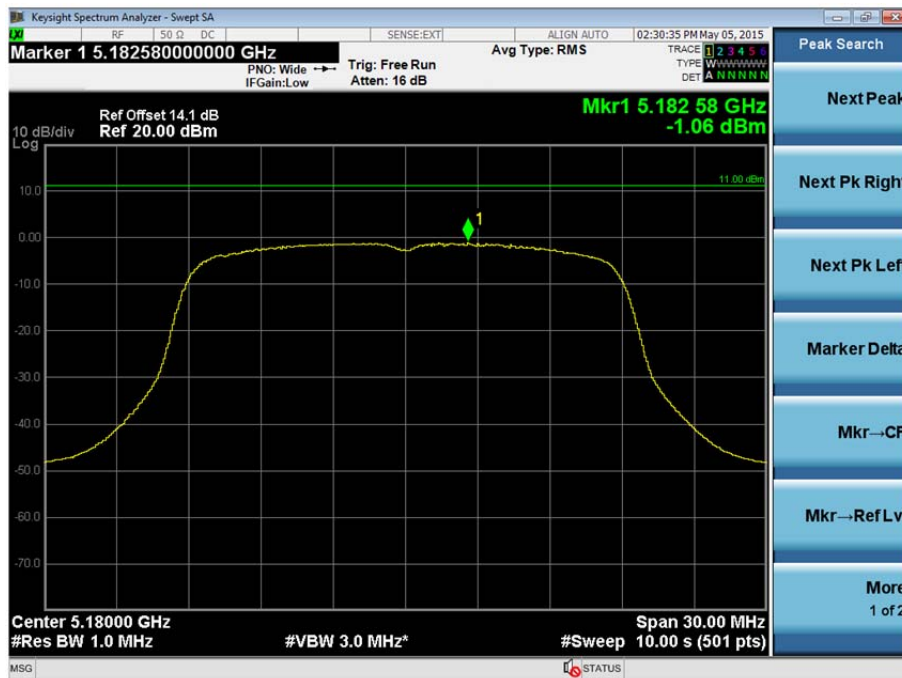
Product Service

Duty cycle : 94.50%

802.11ac - 5 GHz 20 MHz Bandwidth, 5180 MHz, 64-QAM, MCS0, Frequency Band 1, Peak Power Spectral Density Results

| 5180 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -1.06    | -1.69  | 1.65        |

802.11ac - 5 GHz 20 MHz Bandwidth, 5180 MHz, 64-QAM, MCS0, Frequency Band 1, Port A, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5180 MHz, 64-QAM, MCS0, Frequency Band 1, Port B, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5200 MHz, 64-QAM, MCS0, Frequency Band 1, Peak Power Spectral Density Results

| 5200 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -1.06    | -1.65  | 1.67        |

802.11ac - 5 GHz 20 MHz Bandwidth, 5200 MHz, 64-QAM, MCS0, Frequency Band 1, Port A, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5200 MHz, 64-QAM, MCS0, Frequency Band 1, Port B,  
Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5240 MHz, 64-QAM, MCS0, Frequency Band 1, Peak Power Spectral Density Results

| 5240 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -1.22    | -1.53  | 1.64        |

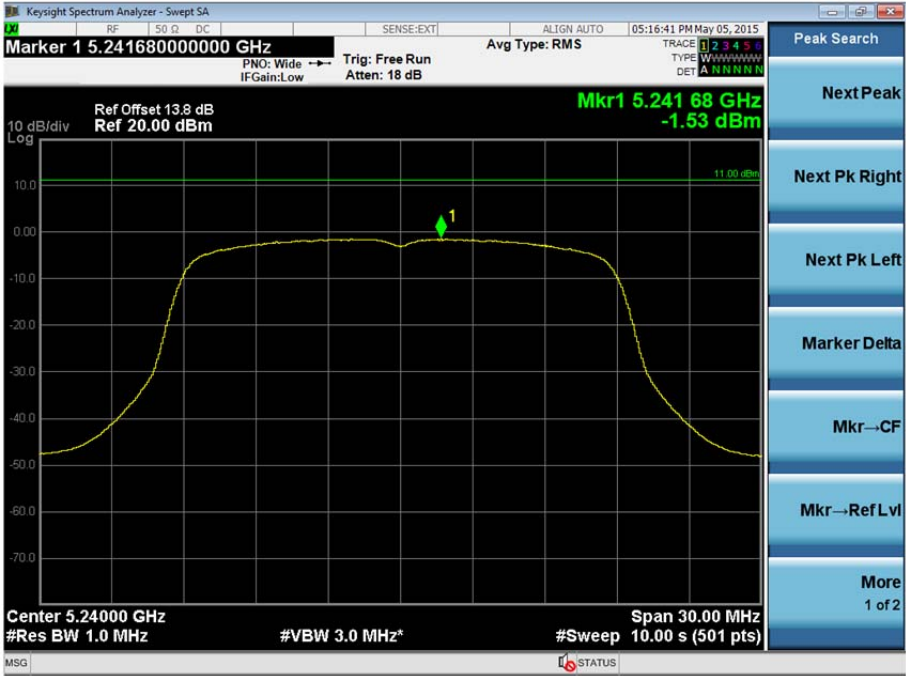
802.11ac - 5 GHz 20 MHz Bandwidth, 5240 MHz, 64-QAM, MCS0, Frequency Band 1, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5240 MHz, 64-QAM, MCS0, Frequency Band 1, Peak Power Spectral Density Plot



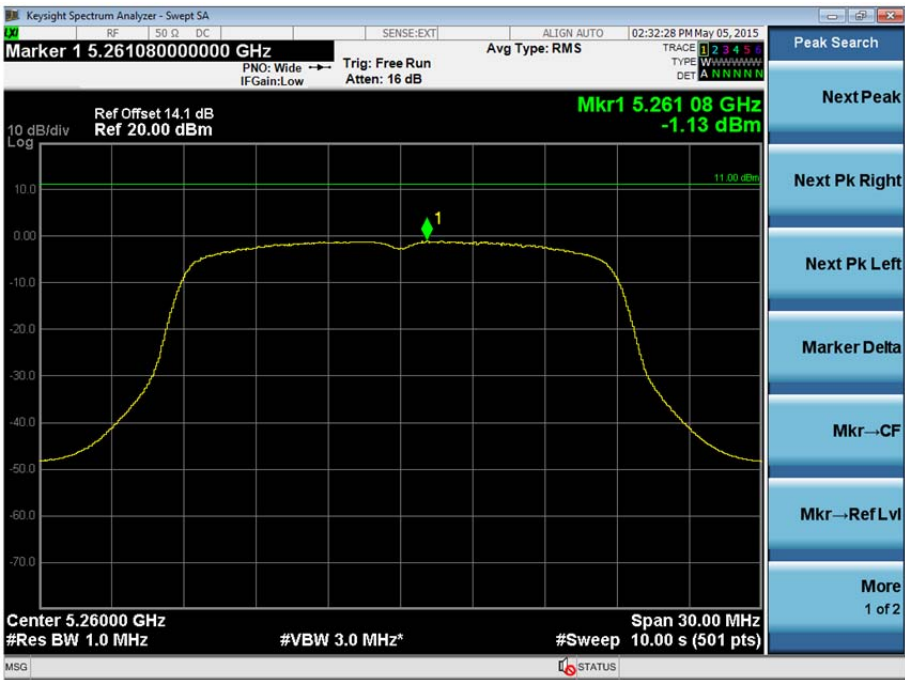


Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5260 MHz, 64-QAM, MCS0, Frequency Band 2, Peak Power Spectral Density Results

| 5260 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -1.13    | -1.62  | 1.64        |

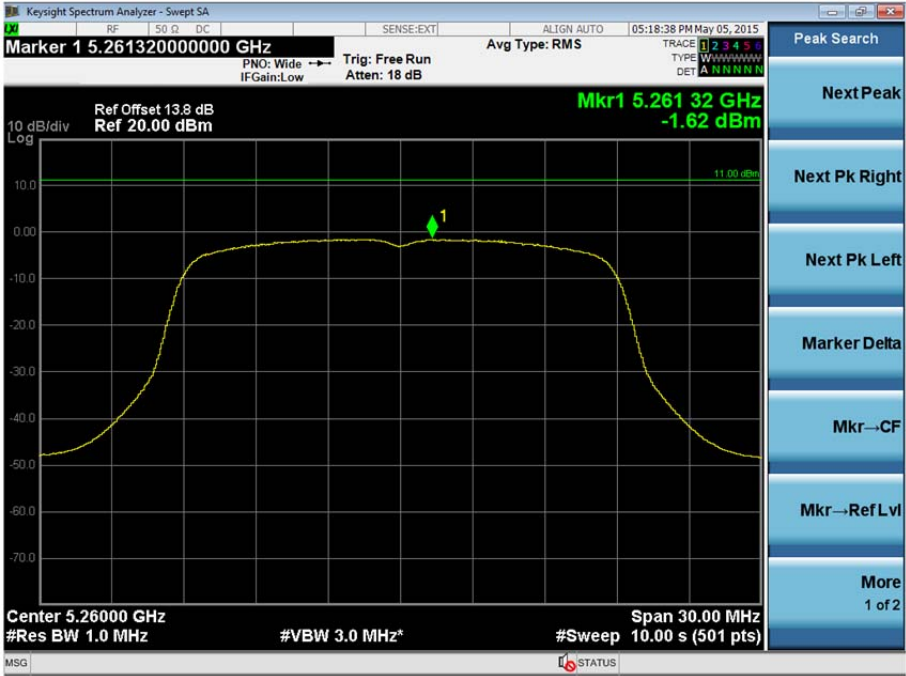
802.11ac - 5 GHz 20 MHz Bandwidth, 5260 MHz, 64-QAM, MCS0, Frequency Band 2, Port A, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5260 MHz, 64-QAM, MCS0, Frequency Band 2, Port B,  
Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5300 MHz, 64-QAM, MCS0, Frequency Band 2, Peak Power Spectral Density Results

| 5300 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -0.50    | -1.11  | 2.22        |

802.11ac - 5 GHz 20 MHz Bandwidth, 5300 MHz, 64-QAM, MCS0, Frequency Band 2, Port A, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5300 MHz, 64-QAM, MCS0, Frequency Band 2, Port B,  
Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5320 MHz, 64-QAM, MCS0, Frequency Band 2, Peak Power Spectral Density Results

| 5320 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -0.38    | -1.10  | 2.29        |

802.11ac - 5 GHz 20 MHz Bandwidth, 5320 MHz, 64-QAM, MCS0, Frequency Band 2, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5320 MHz, 64-QAM, MCS0, Frequency Band 2, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5500 MHz, 64-QAM, MCS0, Frequency Band 3, Peak Power Spectral Density Results

| 5500 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -1.07    | -1.73  | 1.62        |

802.11ac - 5 GHz 20 MHz Bandwidth, 5500 MHz, 64-QAM, MCS0, Frequency Band 3, Port A, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5500 MHz, 64-QAM, MCS0, Frequency Band 3, Port B,  
Peak Power Spectral Density Plot



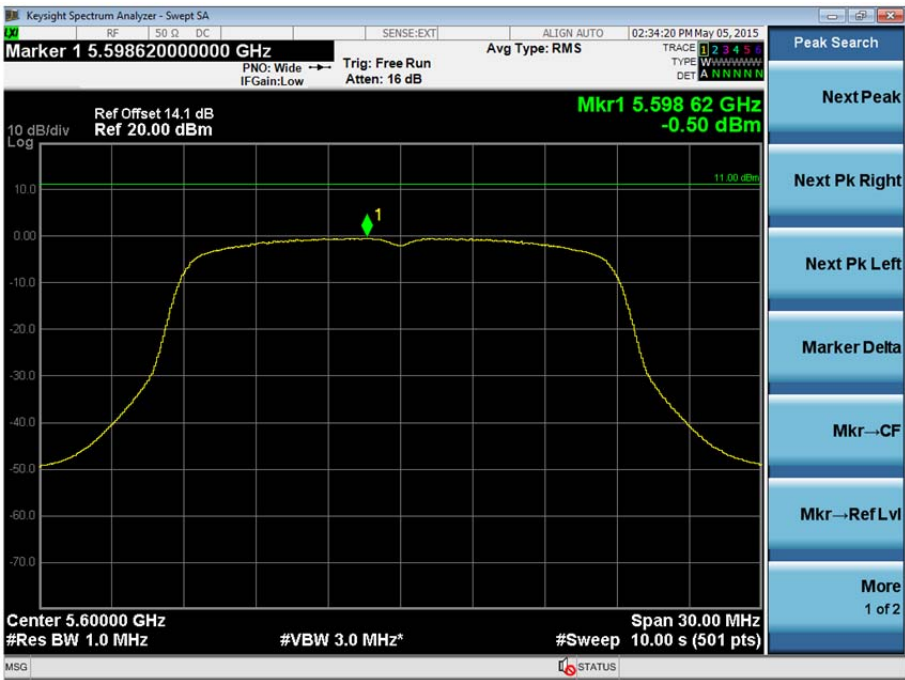


Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5600 MHz, 64-QAM, MCS0, Frequency Band 3, Peak Power Spectral Density Results

| 5600 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -0.50    | -1.32  | 2.12        |

802.11ac - 5 GHz 20 MHz Bandwidth, 5600 MHz, 64-QAM, MCS0, Frequency Band 3, Port A, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5600 MHz, 64-QAM, MCS0, Frequency Band 3, Port B,  
Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5700 MHz, 64-QAM, MCS0, Frequency Band 3, Peak Power Spectral Density Results

| 5700 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -1.30    | -2.07  | 1.34        |

802.11ac - 5 GHz 20 MHz Bandwidth, 5700 MHz, 64-QAM, MCS0, Frequency Band 3, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 20 MHz Bandwidth, 5700 MHz, 64-QAM, MCS0, Frequency Band 3, Peak Power Spectral Density Plot



Remarks

Port A = ANT-0 and Port B = ANT-1

FCC 47 CFR Part 15, Limit Clause 15.407 (a)(1)(2)(3)

| Frequency Band (MHz) | Limit             |
|----------------------|-------------------|
| 5150 to 5250         | ≤11 dBm / 1 MHz   |
| 5250 to 5350         | ≤11 dBm / 1 MHz   |
| 5470 to 5725         | ≤11 dBm / 1 MHz   |
| 5725 to 5825         | ≤30 dBm / 500 kHz |



Product Service

Duty cycle : 90.60%

802.11ac - 5 GHz 40 MHz Bandwidth, 5190 MHz, 16-QAM, MCS0, Frequency Band 1, Peak Power Spectral Density Results

| 5190 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -3.98    | -4.31  | -1.13       |

802.11ac - 5 GHz 40 MHz Bandwidth, 5190 MHz, 16-QAM, MCS0, Frequency Band 1, Port A, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5190 MHz, 16-QAM, MCS0, Frequency Band 1, Port B, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5230 MHz, 16-QAM, MCS0, Frequency Band 1, Peak Power Spectral Density Results

| 5230 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -4.04    | -4.25  | -1.13       |

802.11ac - 5 GHz 40 MHz Bandwidth, 5230 MHz, 16-QAM, MCS0, Frequency Band 1, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5230 MHz, 16-QAM, MCS0, Frequency Band 1, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5270 MHz, 16-QAM, MCS0, Frequency Band 2, Peak Power Spectral Density Results

| 5270 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -3.93    | -4.13  | -1.02       |

802.11ac - 5 GHz 40 MHz Bandwidth, 5270 MHz, 16-QAM, MCS0, Frequency Band 2, Port A, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5270 MHz, 16-QAM, MCS0, Frequency Band 2, Port B, Peak Power Spectral Density Plot



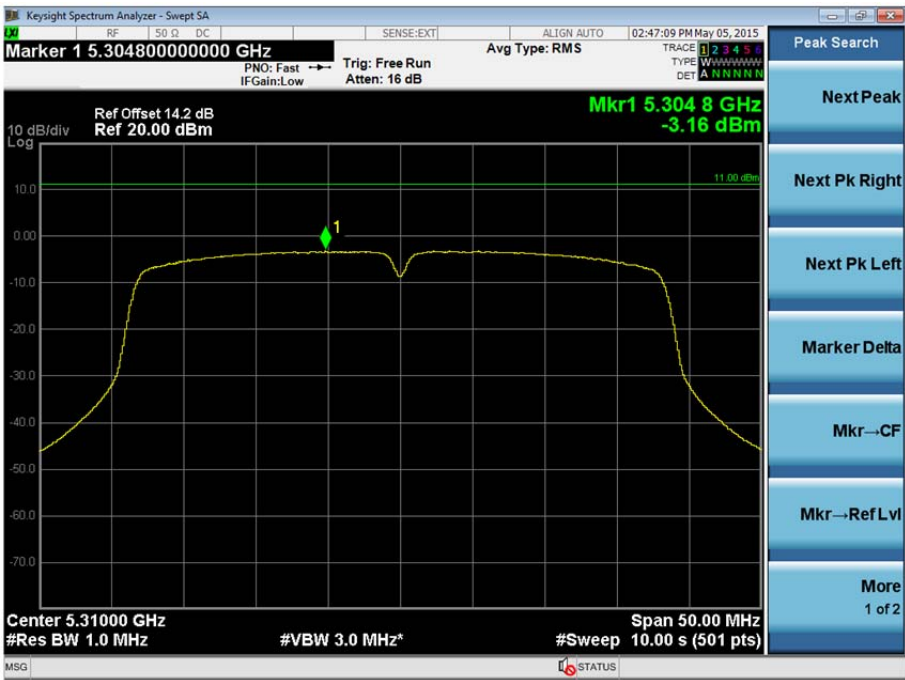


Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5310 MHz, 16-QAM, MCS0, Frequency Band 2, Peak Power Spectral Density Results

| 5310 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -3.16    | -3.79  | -0.45       |

802.11ac - 5 GHz 40 MHz Bandwidth, 5310 MHz, 16-QAM, MCS0, Frequency Band 2, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5310 MHz, 16-QAM, MCS0, Frequency Band 2, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5510 MHz, 16-QAM, MCS0, Frequency Band 3, Peak Power Spectral Density Results

| 5510 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -3.80    | -4.35  | -1.06       |

802.11ac - 5 GHz 40 MHz Bandwidth, 5510 MHz, 16-QAM, MCS0, Frequency Band 3, Port A, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5510 MHz, 16-QAM, MCS0, Frequency Band 3, Port B, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5590 MHz, 16-QAM, MCS0, Frequency Band 3, Peak Power Spectral Density Results

| 5590 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -3.27    | -3.99  | -0.60       |

802.11ac - 5 GHz 40 MHz Bandwidth, 5590 MHz, 16-QAM, MCS0, Frequency Band 3, Port A, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5590 MHz, 16-QAM, MCS0, Frequency Band 3, Port B,  
Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5670 MHz, 16-QAM, MCS0, Frequency Band 3, Peak Power Spectral Density Results

| 5670 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -3.78    | -4.32  | -1.03       |

802.11ac - 5 GHz 40 MHz Bandwidth, 5670 MHz, 16-QAM, MCS0, Frequency Band 3, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 40 MHz Bandwidth, 5670 MHz, 16-QAM, MCS0, Frequency Band 3, Peak Power Spectral Density Plot



Remarks

Port A = ANT-0 and Port B = ANT-1

FCC 47 CFR Part 15, Limit Clause 15.407 (a)(1)(2)(3)

| Frequency Band (MHz) | Limit             |
|----------------------|-------------------|
| 5150 to 5250         | ≤11 dBm / 1 MHz   |
| 5250 to 5350         | ≤11 dBm / 1 MHz   |
| 5470 to 5725         | ≤11 dBm / 1 MHz   |
| 5725 to 5825         | ≤30 dBm / 500 kHz |



Product Service

Duty cycle : 81.72%

802.11ac - 5 GHz 80 MHz Bandwidth, 5210 MHz, 256-QAM, MCS0, Frequency Band 1, Peak Power Spectral Density Results

| 5210 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -7.23    | -7.59  | -4.40       |

802.11ac - 5 GHz 80 MHz Bandwidth, 5210 MHz, 256-QAM, MCS0, Frequency Band 1, Port A, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 80 MHz Bandwidth, 5210 MHz, 256-QAM, MCS0, Frequency Band 1, Port B,  
Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 80 MHz Bandwidth, 5290 MHz, 256-QAM, MCS0, Frequency Band 2, Peak Power Spectral Density Results

| 5290 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -6.77    | -7.11  | -3.93       |

802.11ac - 5 GHz 80 MHz Bandwidth, 5290 MHz, 256-QAM, MCS0, Frequency Band 2, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 80 MHz Bandwidth, 5290 MHz, 256-QAM, MCS0, Frequency Band 2, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 80 MHz Bandwidth, 5530 MHz, 256-QAM, MCS0, Frequency Band 3, Peak Power Spectral Density Results

| 5530 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -6.79    | -7.48  | -4.11       |

802.11ac - 5 GHz 80 MHz Bandwidth, 5530 MHz, 256-QAM, MCS0, Frequency Band 3, Port A, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 80 MHz Bandwidth, 5530 MHz, 256-QAM, MCS0, Frequency Band 3, Port B, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 80 MHz Bandwidth, 5610 MHz, 256-QAM, MCS0, Frequency Band 3, Peak Power Spectral Density Results

| 5610 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -7.43    | -7.19  | -4.30       |

802.11ac - 5 GHz 80 MHz Bandwidth, 5610 MHz, 256-QAM, MCS0, Frequency Band 3, Peak Power Spectral Density Plot





Product Service

802.11ac - 5 GHz 80 MHz Bandwidth, 5610 MHz, 256-QAM, MCS0, Frequency Band 3, Peak Power Spectral Density Plot



Remarks

Port A = ANT-0 and Port B = ANT-1

FCC 47 CFR Part 15, Limit Clause 15.407 (a)(1)(2)(3)

| Frequency Band (MHz) | Limit             |
|----------------------|-------------------|
| 5150 to 5250         | ≤11 dBm / 1 MHz   |
| 5250 to 5350         | ≤11 dBm / 1 MHz   |
| 5470 to 5725         | ≤11 dBm / 1 MHz   |
| 5725 to 5825         | ≤30 dBm / 500 kHz |



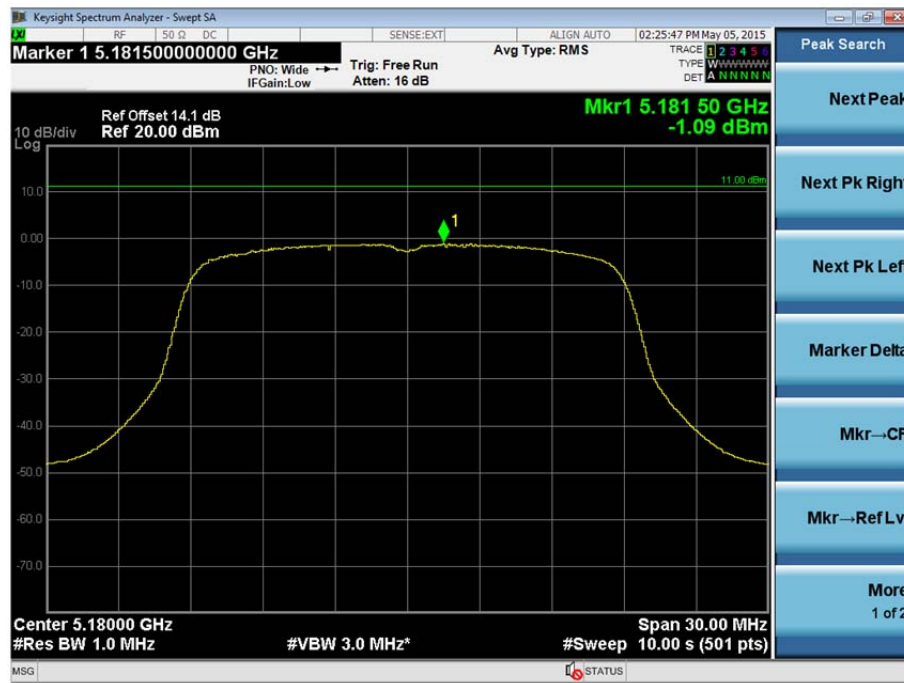
Product Service

Duty cycle : 94.95%

802.11n - 5 GHz 20 MHz Bandwidth, 5180 MHz, 64-QAM, MCS0, Frequency Band 1, Peak Power Spectral Density Results

| 5180 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -1.09    | -1.73  | 1.61        |

802.11n - 5 GHz 20 MHz Bandwidth, 5180 MHz, 64-QAM, MCS0, Frequency Band 1, Port A, Peak Power Spectral Density Plot





Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 5180 MHz, 64-QAM, MCS0, Frequency Band 1, Port B,  
Peak Power Spectral Density Plot





Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 5200 MHz, 64-QAM, MCS0, Frequency Band 1, Peak Power Spectral Density Results

| 5200 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -1.12    | -1.83  | 1.55        |

802.11n - 5 GHz 20 MHz Bandwidth, 5200 MHz, 64-QAM, MCS0, Frequency Band 1, Port A, Peak Power Spectral Density Plot





Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 5200 MHz, 64-QAM, MCS0, Frequency Band 1, Port B,  
Peak Power Spectral Density Plot



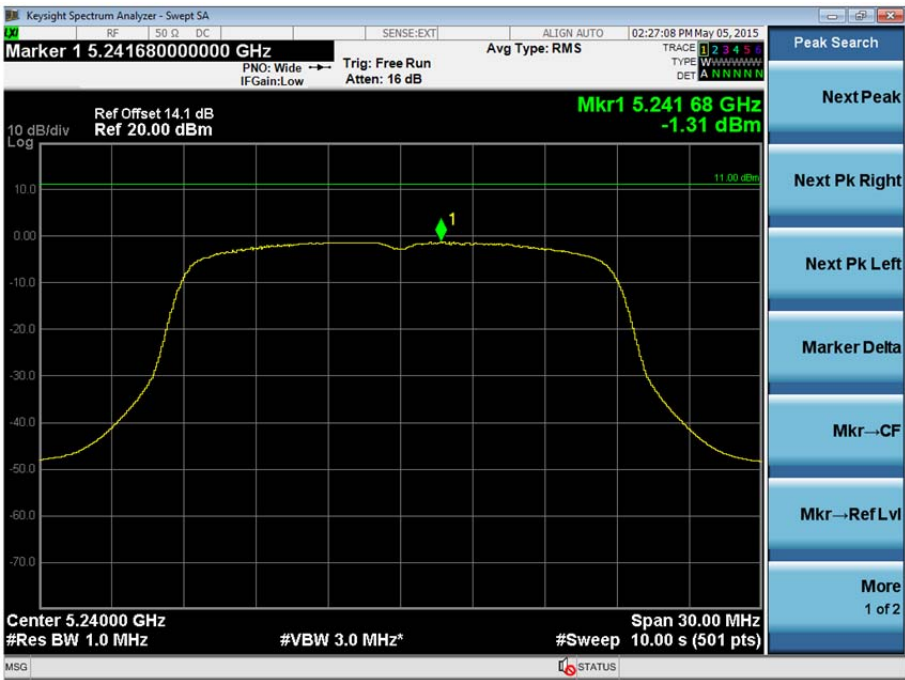


Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 5240 MHz, 64-QAM, MCS0, Frequency Band 1, Peak Power Spectral Density Results

| 5240 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -1.31    | -1.78  | 1.47        |

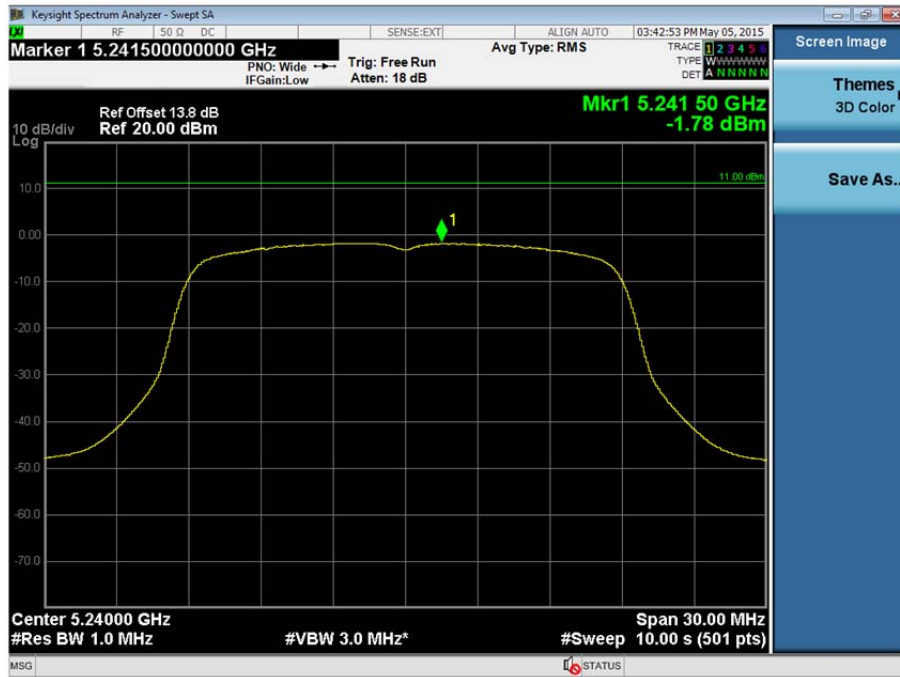
802.11n - 5 GHz 20 MHz Bandwidth, 5240 MHz, 64-QAM, MCS0, Frequency Band 1, Peak Power Spectral Density Plot





Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 5240 MHz, 64-QAM, MCS0, Frequency Band 1, Peak Power Spectral Density Plot



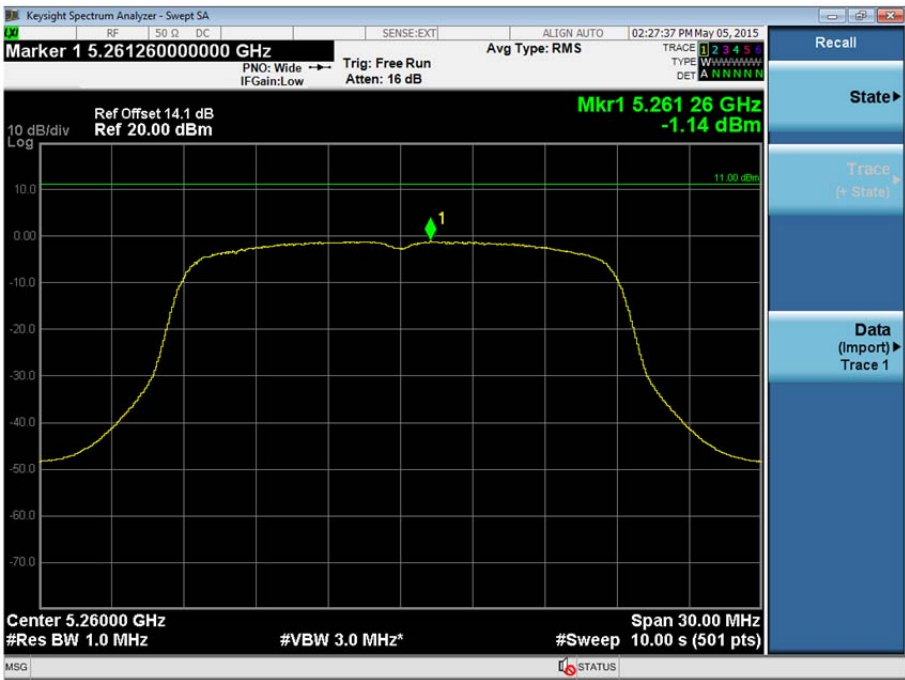


Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 5260 MHz, 64-QAM, MCS0, Frequency Band 2, Peak Power Spectral Density Results

| 5260 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -1.14    | -1.71  | 1.59        |

802.11n - 5 GHz 20 MHz Bandwidth, 5260 MHz, 64-QAM, MCS0, Frequency Band 2, Port A, Peak Power Spectral Density Plot





Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 5260 MHz, 64-QAM, MCS0, Frequency Band 2, Port B, Peak Power Spectral Density Plot



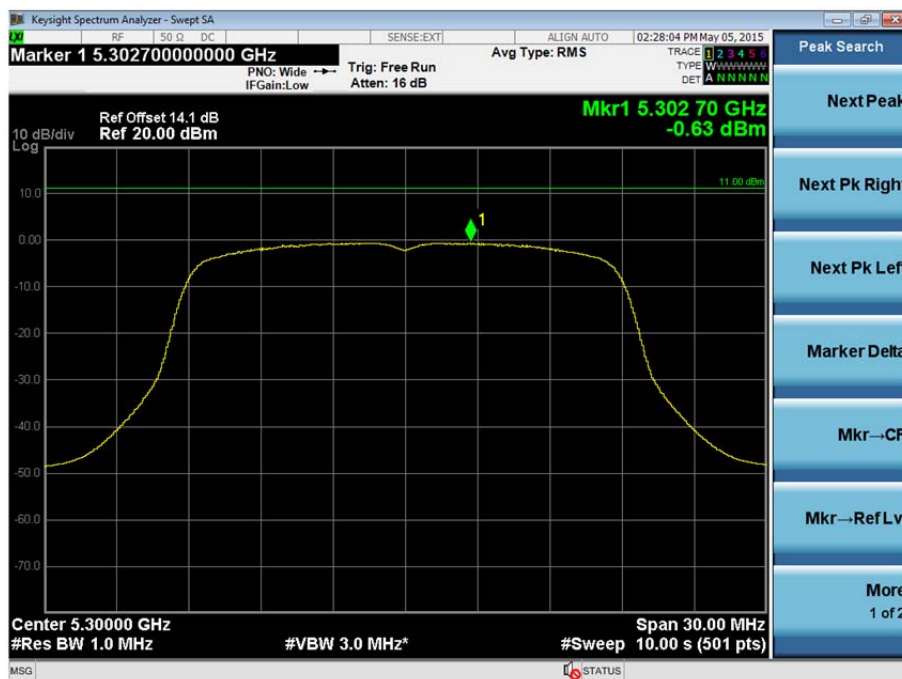


Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 5300 MHz, 64-QAM, MCS0, Frequency Band 2, Peak Power Spectral Density Results

| 5300 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -0.63    | -1.19  | 2.11        |

802.11n - 5 GHz 20 MHz Bandwidth, 5300 MHz, 64-QAM, MCS0, Frequency Band 2, Port A, Peak Power Spectral Density Plot





Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 5300 MHz, 64-QAM, MCS0, Frequency Band 2, Port B,  
Peak Power Spectral Density Plot





Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 5320 MHz, 64-QAM, MCS0, Frequency Band 2, Peak Power Spectral Density Results

| 5320 MHz |        |             |
|----------|--------|-------------|
| dBm      |        |             |
| Port A   | Port B | Total Power |
| -0.49    | -1.21  | 2.18        |

802.11n - 5 GHz 20 MHz Bandwidth, 5320 MHz, 64-QAM, MCS0, Frequency Band 2, Peak Power Spectral Density Plot

