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# FCC RADIO TEST REPORT

| | |
|---|---|
| Applicant's company | **Arcadyan Technology Corporation** |
| Applicant Address | No.8, Sec.2, Guangfu Rd., Hsinchu, 30071 Taiwan |
| FCC ID | **RAX-AIOS4-0F** |
| Manufacturer's company | **Arcadyan Technology Corporation** |
| Manufacturer Address | No.8, Sec.2, Guangfu Rd., Hsinchu, 30071 Taiwan |

| | |
|---|---|
| Product Name | HEOS 4.X Platform Module |
| Brand Name | Arcadyan |
| Model No. | AIOS4.0S, AIOS4.0V, AIOS4.0R, AIOS4.0F |
| Test Rule Part(s) | 47 CFR FCC Part 15 Subpart E § 15.407 |
| Test Freq. Range | 5150 ~ 5350MHz / 5470 ~ 5725MHz / 5725 ~ 5850 MHz |
| Received Date | Jul. 22, 2015 |
| Final Test Date | Sep. 08, 2015 |
| Submission Type | Original Equipment |

## Statement

**Test result included is for the IEEE 802.11n and IEEE 802.11a/ac of the product.**

The test result in this report refers exclusively to the presented test model / sample.

Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.

The measurements and test results shown in this test report were made in accordance with the procedures and found in compliance with the limit given in **ANSI C63.10-2013**, **47 CFR FCC Part 15 Subpart E, KDB789033 D02 v01, KDB662911 D01 v02r01, KDB644545 D03 v01.**

The test equipment used to perform the test is calibrated and traceable to NML/ROC.

Testing Laboratory
1190

# Table of Contents

# History of This Test Report

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|---|---|---|---|
| FR581110AD | Rev. 01 | Initial issue of report | Sep. 24, 2015 |
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# 1. VERIFICATION OF COMPLIANCE

| | | |
|---|---|---|
| Product Name | : | HEOS 4.X Platform Module |
| Brand Name | : | Arcadyan |
| Model No. | : | AIOS4.0S, AIOS4.0V, AIOS4.0R, AIOS4.0F |
| Applicant | : | Arcadyan Technology Corporation |
| Test Rule Part(s) | : | 47 CFR FCC Part 15 Subpart E § 15.407 |

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Jul. 22, 2015 would like to declare that the tested sample has been evaluated and found to be in compliance with the tested rule parts. The data recorded as well as the test configuration specified is true and accurate for showing the sample's EMC nature.

Sam Chen
SPORTON INTERNATIONAL INC.

# 2. SUMMARY OF THE TEST RESULT

| Applied Standard: 47 CFR FCC Part 15 Subpart E | | | | |
|---|---|---|---|---|
| **Part** | **Rule Section** | **Description of Test** | **Result** | **Under Limit** |
| 4.1 | 15.207 | AC Power Line Conducted Emissions | Complies | 14.16 dB |
| 4.2 | 15.407(a) | 26dB Spectrum Bandwidth and 99% Occupied Bandwidth | Complies | - |
| 4.3 | 15.407(e) | 6dB Spectrum Bandwidth | Complies | - |
| 4.4 | 15.407(a) | Maximum Conducted Output Power | Complies | 0.51 dB |
| 4.5 | 15.407(a) | Power Spectral Density | Complies | 0.01 dB |
| 4.6 | 15.407(b) | Radiated Emissions | Complies | 3.01 dB |
| 4.7 | 15.407(b) | Band Edge Emissions | Complies | 1.01 dB |
| 4.8 | 15.407(g) | Frequency Stability | Complies | - |
| 4.9 | 15.203 | Antenna Requirements | Complies | - |

# 3. GENERAL INFORMATION

## 3.1. Product Details

| Items | Description |
|---|---|
| Product Type | WLAN (2TX, 2RX) |
| Radio Type | Intentional Transceiver |
| Power Type | From host system |
| Modulation | IEEE 802.11a: OFDM<br>IEEE 802.11n/ac: see the below table |
| Data Modulation | IEEE 802.11a/n: OFDM (BPSK / QPSK / 16QAM / 64QAM)<br>IEEE 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM) |
| Data Rate (Mbps) | IEEE 802.11a: OFDM (6/9/12/18/24/36/48/54)<br>IEEE 802.11n/ac: see the below table |
| Frequency Range | 5150 ~ 5350MHz / 5470 ~ 5725MHz / 5725 ~ 5850 MHz |
| Channel Number | 25 for 20MHz bandwidth ; 12 for 40MHz bandwidth<br>6 for 80MHz bandwidth |
| Channel Band Width (99%) | For Radio: R0<br>For non-beamforming function:<br>Band 1:<br>IEEE 802.11a: 17.11 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 17.97 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 37.05 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 76.41 MHz<br>Band 2:<br>IEEE 802.11a: 16.93 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 17.80 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 37.34 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 76.12 MHz<br>Band 3:<br>IEEE 802.11a: 18.06 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 17.89 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 42.93 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 85.65 MHz<br>Band 4:<br>IEEE 802.11a: 19.54 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 19.02 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 37.05 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 76.41 MHz |

| | |
|---|---|
| | For beamforming function:<br>Band 1:<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 18.14 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 37.19 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 75.83 MHz<br>Band 2:<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 18.06 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 36.90 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 75.83 MHz<br>Band 3:<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 18.06 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 40.91 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 82.76 MHz<br>Band 4:<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 18.49 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 36.90 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 75.83 MHz<br>For Radio: R1<br>For non-beamforming function:<br>Band 1:<br>IEEE 802.11a: 19.19 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 18.15 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 37.34 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 76.12 MHz<br>Band 4:<br>IEEE 802.11a: 17.19 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 17.80 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 37.05 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 76.41 MHz<br>For beamforming function:<br>Band 1:<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 18.15 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 36.90 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 75.83 MHz<br>Band 4:<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 18.15 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 36.90 MHz<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 75.83 MHz |

| | |
|---|---|
| Maximum Conducted Output Power | For Radio: R0<br>For non-beamforming function:<br>Band 1:<br>IEEE 802.11a: 23.32 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 23.31 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 22.02 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 15.14 dBm<br>Band 2:<br>IEEE 802.11a: 23.32 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 23.30 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 23.48 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 19.73 dBm<br>Band 3:<br>IEEE 802.11a: 23.30 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 23.28 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 23.31 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 23.44 dBm<br>Band 4:<br>IEEE 802.11a: 21.69 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 24.87 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 20.83 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 16.59 dBm<br>For beamforming function:<br>Band 1:<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 22.82 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 22.78 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 15.76 dBm<br>Band 2:<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 22.82 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 22.72 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 19.73 dBm<br>Band 3:<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 22.81 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 22.77 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 22.80 dBm<br>Band 4:<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 23.75 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 20.83 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 15.97 dBm |

| | |
|---|---|
| | For Radio: R1<br>For non-beamforming function:<br>Band 1:<br>IEEE 802.11a: 23.82 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 23.85 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 22.28 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 13.87 dBm<br>Band 4:<br>IEEE 802.11a: 22.52 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 22.62 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 20.82 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 16.38 dBm<br>For beamforming function:<br>Band 1:<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 23.85 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 22.28 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 14.59 dBm<br>Band 4:<br>IEEE 802.11ac MCS0/Nss1 (VHT20): 22.62 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT40): 21.26 dBm<br>IEEE 802.11ac MCS0/Nss1 (VHT80): 16.38 dBm |
| Carrier Frequencies | Please refer to section 3.4 |
| Antenna | Please refer to section 3.3 |

| Items | Description | |
|---|---|---|
| Communication Mode | ☒ IP Based (Load Based) | ☐ Frame Based |
| TPC Function | ☒ With TPC | ☐ Without TPC |
| Weather Band (5600~5650MHz) | ☒ With 5600~5650MHz | ☐ Without 5600~5650MHz |
| Beamforming Function | ☒ With beamforming | ☐ Without beamforming |
| Operating Mode | ☐ Outdoor access point | |
| | ☐ Indoor access point | |
| | ☐ Fixed point-to-point access points | |
| | ☒ Indoor mobile devices | |

Note: The product has beamforming function for 802.11n/ac in 5GHz band.

**Antenna and Band width**

| Antenna | Two (TX) | | |
|---|---|---|---|
| Band width Mode | 20 MHz | 40 MHz | 80 MHz |
| IEEE 802.11a | V | X | X |
| IEEE 802.11n | V | V | X |
| IEEE 802.11ac | V | V | V |

**IEEE 11n/ac Spec.**

| Protocol | Number of Transmit Chains (NTX) | Data Rate / MCS |
|---|---|---|
| 802.11n (HT20) | 2 | MCS 0-15 |
| 802.11n (HT40) | 2 | MCS 0-15 |
| 802.11ac (VHT20) | 2 | MCS 0-9/Nss1-2 |
| 802.11ac (VHT40) | 2 | MCS 0-9/Nss1-2 |
| 802.11ac (VHT80) | 2 | MCS 0-9/Nss1-2 |

Note 1: IEEE Std. 802.11n modulation consists of HT20 and HT40 (HT: High Throughput). Then EUT supports HT20 and HT40.

Note 2: IEEE Std. 802.11ac modulation consists of VHT20, VHT40, VHT80 and VHT160 (VHT: Very High Throughput). Then EUT supports VHT20, VHT40 and VHT80.

Note 3: Modulation modes consist of below configuration:
HT20/HT40: IEEE 802.11n, VHT20/VHT40/VHT80: IEEE 802.11ac

## 3.2. Accessories

N/A

## 3.3. Table for Filed Antenna

| Radio | Set | Brand | P/N | Type | Connector | Gain (dBi) | |
|---|---|---|---|---|---|---|---|
| | | | | | | 2.4GHz | 5GHz |
| R0 | 1 | Airgain | N2420DG3-T2L-PK1-G30U | PIFA | I-PEX | 3.10 | 3.66 |
| | 2 | Airgain | N2420DG3-T2L-PK1-G100U | PIFA | I-PEX | 3.10 | 3.66 |
| | 3 | Airgain | N2420DG3-T2L-PK1-G600U | PIFA | I-PEX | 3.10 | 3.66 |
| | 4 | Airgain | N2425D-T2L-PK1-G30U | PIFA | I-PEX | 1.90 | 3.50 |
| | 5 | Airgain | N2425D-T2R-PK1-G150U | PIFA | I-PEX | 1.90 | 3.50 |
| | 6 | Airgain | N2425D-T2R-PK1-G30U | PIFA | I-PEX | 1.90 | 3.50 |
| | 7 | Airgain | N2425D-T2R-PK1-G500U | PIFA | I-PEX | 1.90 | 3.50 |
| R1 | 8 | Airgain | N5X20B-T2L-PK1-G100U | PIFA | I-PEX | - | 2.90 |
| | 9 | Airgain | N5X20B-T2L-PK1-G600U | PIFA | I-PEX | - | 2.90 |
| Radio | Set | Brand | Model No. | Type | Connector | Gain (dBi) | |
| | | | | | | 2.4GHz | 5GHz |
| R0/ R1 | 10 | Arcadyan | WN9722A-DM | Dipole | I-PEX | 2.94 | 3.19 |
| | 11 | Arcadyan | WN9722A-DM-300mm | Dipole | I-PEX | 2.76 | 2.63 |
| | 12 | Arcadyan | WN9722A-DM-500mm | Dipole | I-PEX | 1.99 | 2.59 |

Note: 1. The EUT has twelve sets of antenna, and each set contains two antennas.

2. For Conducted measurement, only the highest gain antennas "set 1 for Radio: R0, set 10 for Radio: R1" was tested and recorded in the report.

3. For Radiated measurement:

(1) For Radio: R0, because set 1~7 are the same type antennas, only the higher gain antennas "set 1" was tested and recorded in the report.

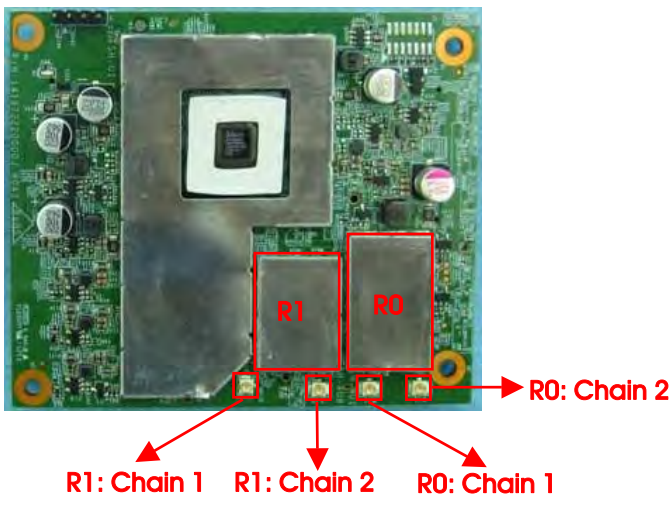
(2) For Radio: R1, because set 8~9 are the same type antennas, only the higher gain antennas "set 8" was tested and recorded in the report.

(3) For Radio: R0 and R1, because set 10~12 are the same type antennas, only the higher gain antennas "set 10" was tested and recorded in the report.

3. The EUT has two radios, Radio: R0 supports Bluetooth / 2.4GHz WLAN / 5GHz WLAN band 1~4 function, Radio: R1 supports 5GHz WLAN band 1, 4 function.

4. For WLAN function (Radio: R0, Radio: R1): Chain 1 and Chain 2 could transmit/receive simultaneously.

5. For Bluetooth function (Radio: R0): Only Chain 1 could transmit/receive simultaneously.



## 3.4. Table for Carrier Frequencies

There are three bandwidth systems.

For 20MHz bandwidth systems, use Channel 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 144, 149, 153, 157, 161, 165.

For 40MHz bandwidth systems, use Channel 38, 46, 54, 62, 102, 110, 118, 126, 134, 142, 151, 159.

For 80MHz bandwidth systems, use Channel 42, 58, 106, 122, 138, 155.

| Frequency Band | Channel No. | Frequency | Channel No. | Frequency |
|---|---|---|---|---|
| 5150~5250 MHz Band 1 | 36 | 5180 MHz | 44 | 5220 MHz |
| | 38 | 5190 MHz | 46 | 5230 MHz |
| | 40 | 5200 MHz | 48 | 5240 MHz |
| | 42 | 5210 MHz | - | - |
| 5250~5350 MHz Band 2 | 52 | 5260 MHz | 60 | 5300 MHz |
| | 54 | 5270 MHz | 62 | 5310 MHz |
| | 56 | 5280 MHz | 64 | 5320 MHz |
| | 58 | 5290 MHz | - | - |
| 5470~5725 MHz Band 3 | 100 | 5500 MHz | 124 | 5620 MHz |
| | 102 | 5510 MHz | 126 | 5630 MHz |
| | 104 | 5520 MHz | 128 | 5640 MHz |
| | 106 | 5530 MHz | 132 | 5660 MHz |
| | 108 | 5540 MHz | 134 | 5670 MHz |
| | 110 | 5550 MHz | 136 | 5680 MHz |
| | 112 | 5560 MHz | 138 | 5690 MHz |
| | 116 | 5580 MHz | 140 | 5700 MHz |
| | 118 | 5590 MHz | 142 | 5710 MHz |
| | 120 | 5600 MHz | 144 | 5720 MHz |
| | 122 | 5610 MHz | - | - |
| 5725~5850 MHz Band 4 | 149 | 5745 MHz | 157 | 5785 MHz |
| | 151 | 5755 MHz | 159 | 5795 MHz |
| | 153 | 5765 MHz | 161 | 5805 MHz |
| | 155 | 5775 MHz | 165 | 5825 MHz |

## 3.5. Table for Test Modes

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

For Radio: R0

| Test Items | Mode | | Data Rate | Channel | Chain |
|---|---|---|---|---|---|
| AC Power Conducted Emission | Normal Link | | - | - | - |
| Max. Conducted Output Power | 11a/BPSK | Band 1~4 | 6Mbps | 36/40/48/52/60/64/100/116/140/144/149/157/165 | 1+2 |
| | 11ac VHT20 | Band 1~4 | MCS0/Nss1 | 36/40/48/52/60/64/100/116/140/144/149/157/165 | 1+2 |
| | 11ac VHT40 | Band 1~4 | MCS0/Nss1 | 38/46/54/62/102/110/134/142/151/159 | 1+2 |
| | 11ac VHT80 | Band 1~4 | MCS0/Nss1 | 42/58/106/122/138/155 | 1+2 |
| Power Spectral Density | 11a/BPSK | Band 1~4 | 6Mbps | 36/40/48/52/60/64/100/116/140/144/149/157/165 | 1+2 |
| | 11ac VHT20 | Band 1~4 | MCS0/Nss1 | 36/40/48/52/60/64/100/116/140/144/149/157/165 | 1+2 |
| | 11ac VHT40 | Band 1~4 | MCS0/Nss1 | 38/46/54/62/102/110/134/142/151/159 | 1+2 |
| | 11ac VHT80 | Band 1~4 | MCS0/Nss1 | 42/58/106/122/138/155 | 1+2 |
| 26dB Spectrum Bandwidth & 99% Occupied Bandwidth Measurement | 11a/BPSK | Band 1~4 | 6Mbps | 36/40/48/52/60/64/100/116/140/144/149/157/165 | 1+2 |
| | 11ac VHT20 | Band 1~4 | MCS0/Nss1 | 36/40/48/52/60/64/100/116/140/144/149/157/165 | 1+2 |
| | 11ac VHT40 | Band 1~4 | MCS0/Nss1 | 38/46/54/62/102/110/134/142/151/159 | 1+2 |
| | 11ac VHT80 | Band 1~4 | MCS0/Nss1 | 42/58/106/122/138/155 | 1+2 |
| 6dB Spectrum Bandwidth Measurement | 11a/BPSK | Band 4 | 6Mbps | 144/149/157/165 | 1+2 |
| | 11ac VHT20 | Band 4 | MCS0/Nss1 | 144/149/157/165 | 1+2 |
| | 11ac VHT40 | Band 4 | MCS0/Nss1 | 142/151/159 | 1+2 |

| | | | | | |
|---|---|---|---|---|---|
| | 11ac VHT80 | Band 4 | MCS0/Nss1 | 138/155 | 1+2 |
| Radiated Emission Below 1GHz | Normal Link | | - | - | - |
| Radiated Emission Above 1GHz | 11a/BPSK | Band 1~4 | 6Mbps | 36/40/48/52/60/64/100/116/140/144/149/157/165 | 1+2 |
| | 11ac VHT20 | Band 1~4 | MCS0/Nss1 | 36/40/48/52/60/64/100/116/140/144/149/157/165 | 1+2 |
| | 11ac VHT40 | Band 1~4 | MCS0/Nss1 | 38/46/54/62/102/110/134/142/151/159 | 1+2 |
| | 11ac VHT80 | Band 1~4 | MCS0/Nss1 | 42/58/106/122/138/155 | 1+2 |
| Band Edge Emission | 11a/BPSK | Band 1~4 | 6Mbps | 36/40/48/52/60/64/100/116/140/144/149/157/165 | 1+2 |
| | 11ac VHT20 | Band 1~4 | MCS0/Nss1 | 36/40/48/52/60/64/100/116/140/144/149/157/165 | 1+2 |
| | 11ac VHT40 | Band 1~4 | MCS0/Nss1 | 38/46/54/62/102/110/134/142/151/159 | 1+2 |
| | 11ac VHT80 | Band 1~4 | MCS0/Nss1 | 42/58/106/122/138/155 | 1+2 |
| Frequency Stability | 20 MHz | Band 1~4 | - | 40/60/116/157 | 2 |
| | 40 MHz | Band 1~4 | - | 38/62/110/151 | 2 |
| | 80 MHz | Band 1~4 | - | 42/58/106/155 | 2 |

Note: 1. VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.

2. There are two functions of EUT, one is beamforming function, and the other is non-beamforming function for for 802.11n/ac. All test results were recorded in the report.

For Radio: R1

| Test Items | Mode | | Data Rate | Channel | Chain |
|---|---|---|---|---|---|
| AC Power Conducted Emission | Normal Link | | - | - | - |
| Max. Conducted Output Power | 11a/BPSK | Band 1, 4 | 6Mbps | 36/40/48/149/157/165 | 1+2 |
| | 11ac VHT20 | Band 1, 4 | MCS0/Nss1 | 36/40/48/149/157/165 | 1+2 |
| | 11ac VHT40 | Band 1, 4 | MCS0/Nss1 | 38/46/151/159 | 1+2 |
| | 11ac VHT80 | Band 1, 4 | MCS0/Nss1 | 42/155 | 1+2 |
| Power Spectral Density | 11a/BPSK | Band 1, 4 | 6Mbps | 36/40/48/149/157/165 | 1+2 |
| | 11ac VHT20 | Band 1, 4 | MCS0/Nss1 | 36/40/48/149/157/165 | 1+2 |
| | 11ac VHT40 | Band 1, 4 | MCS0/Nss1 | 38/46/151/159 | 1+2 |
| | 11ac VHT80 | Band 1, 4 | MCS0/Nss1 | 42/155 | 1+2 |
| 26dB Spectrum Bandwidth & 99% Occupied Bandwidth Measurement | 11a/BPSK | Band 1, 4 | 6Mbps | 36/40/48/149/157/165 | 1+2 |
| | 11ac VHT20 | Band 1, 4 | MCS0/Nss1 | 36/40/48/149/157/165 | 1+2 |
| | 11ac VHT40 | Band 1, 4 | MCS0/Nss1 | 38/46/151/159 | 1+2 |
| | 11ac VHT80 | Band 1, 4 | MCS0/Nss1 | 42/155 | 1+2 |
| 6dB Spectrum Bandwidth Measurement | 11a/BPSK | Band 4 | 6Mbps | 149/157/165 | 1+2 |
| | 11ac VHT20 | Band 4 | MCS0/Nss1 | 149/157/165 | 1+2 |
| | 11ac VHT40 | Band 4 | MCS0/Nss1 | 151/159 | 1+2 |
| | 11ac VHT80 | Band 4 | MCS0/Nss1 | 155 | 1+2 |
| Radiated Emission Below 1GHz | Normal Link | | - | - | - |
| Radiated Emission Above 1GHz | 11a/BPSK | Band 1, 4 | 6Mbps | 36/40/48/149/157/165 | 1+2 |
| | 11ac VHT20 | Band 1, 4 | MCS0/Nss1 | 36/40/48/149/157/165 | 1+2 |
| | 11ac VHT40 | Band 1, 4 | MCS0/Nss1 | 38/46/151/159 | 1+2 |
| | 11ac VHT80 | Band 1, 4 | MCS0/Nss1 | 42/155 | 1+2 |
| Band Edge Emission | 11a/BPSK | Band 1, 4 | 6Mbps | 36/40/48/149/157/165 | 1+2 |
| | 11ac VHT20 | Band 1, 4 | MCS0/Nss1 | 36/40/48/149/157/165 | 1+2 |
| | 11ac VHT40 | Band 1, 4 | MCS0/Nss1 | 38/46/151/159 | 1+2 |
| | 11ac VHT80 | Band 1, 4 | MCS0/Nss1 | 42/155 | 1+2 |
| Frequency Stability | 20 MHz | Band 1, 4 | - | 40/157 | 2 |
| | 40 MHz | Band 1, 4 | - | 38/151 | 2 |
| | 80 MHz | Band 1, 4 | - | 42/155 | 2 |

Note: 1. VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.

2. There are two functions of EUT, one is beamforming function, and the other is non-beamforming function for for 802.11n/ac. All test results were recorded in the report.

The following test modes were performed for all tests:

| AC Power Line Conducted Emissions test | |
|---|---|
| Test Mode | Normal Link |
| 1 | EUT - Radio: R0 (Bluetooth + 2.4GHz WLAN function) with set 1 antenna + Radio: R1 (5GHz WLAN function) with set 8 antenna |
| 2 | EUT - Radio: R0 (Bluetooth + 5GHz WLAN function) with set 1 antenna + Radio: R1 (5GHz WLAN function) with set 8 antenna |
| Mode 2 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3 will follow this same test mode. | |
| 3 | EUT - Radio: R0 (Bluetooth + 5GHz WLAN function) with set 10 antenna + Radio: R1 (5GHz WLAN function) with set 10 antenna |
| Mode 3 generated the worst test result, so it was recorded in this report. | |

| Radiated Emission below 1GHz test | |
|---|---|
| Test Mode | Normal Link |
| 1 | Place EUT in Y axis - Radio: R0 (Bluetooth + 2.4GHz WLAN function) with set 1 antenna + Radio: R1 (5GHz WLAN function) with set 8 antenna |
| 2 | Place EUT in Z axis - Radio: R0 (Bluetooth + 2.4GHz WLAN function) with set 1 antenna + Radio: R1 (5GHz WLAN function) with set 8 antenna |
| Mode 2 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3 will follow this same test mode. | |
| 3 | Place EUT in Z axis - Radio: R0 (Bluetooth + 5GHz WLAN function) with set 1 antenna + Radio: R1 (5GHz WLAN function) with set 8 antenna |
| Mode 2 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4 will follow this same test mode. | |
| 4 | Place EUT in Z axis - Radio: R0 (Bluetooth + 2.4GHz WLAN function) with set 10 antenna + Radio: R1 (5GHz WLAN function) with set 10 antenna |
| Mode 2 generated the worst test result, so it was recorded in this report. | |

| Radiated Emission above1GHz test | |
|---|---|
| Test Mode | CTX |
| 1 | Place EUT in X axis - Radio: R0 with set 1 antenna |
| 2 | Place EUT in Y axis - Radio: R0 with set 1 antenna |
| 3 | Place EUT in Z axis - Radio: R0 with set 1 antenna |
| Mode 1 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4 will follow this same test mode. | |
| 4 | Place EUT in X axis - Radio: R0 with set 10 antenna |
| 5 | Place EUT in X axis - Radio: R1 with set 8 antenna |
| 6 | Place EUT in Y axis - Radio: R1 with set 8 antenna |
| 7 | Place EUT in Z axis - Radio: R1 with set 8 antenna |
| Mode 5 has been evaluated to be the worst case among Mode 5~7, thus measurement for Mode 8 will follow this same test mode. | |
| 8 | Place EUT in X axis - Radio: R1 with set 10 antenna |
| Mode 1, Mode 4, Mode 5 and Mode 8 has been evaluated to be the worst case after evaluating. Consequently, measurement will follow this same test mode. | |

| Co-location MPE and Radiated Emission Co-location test |
|---|
| The EUT could be applied with Radio: R0 (Bluetooth + 2.4GHz WLAN) + Radio: R1 (5GHz WLAN) Mode and Radio: R0 (Bluetooth + 5GHz WLAN) + Radio: R1 (5GHz WLAN) Mode; therefore Co-location Maximum Permissible Exposure (Please refer to FA581110AA) and Radiated Emission Co-location (please refer to Appendix C) tests are added for simultaneously transmit between Radio: R0 (Bluetooth + 2.4GHz WLAN) + Radio: R1 (5GHz WLAN) Mode and Radio: R0 (Bluetooth + 5GHz WLAN) + Radio: R1 (5GHz WLAN) Mode. |

## 3.6. Table for Testing Locations

| Test Site Location | | | | | |
|---|---|---|---|---|---|
| Address: | No.8, Lane 724, Bo-ai St., Jhubei City, Hsinchu County 302, Taiwan, R.O.C. | | | | |
| TEL: | 886-3-656-9065 | | | | |
| FAX: | 886-3-656-9085 | | | | |
| **Test Site No.** | **Site Category** | **Location** | **FCC Reg. No.** | **IC File No.** | **VCCI Reg. No** |
| 03CH01-CB | SAC | Hsin Chu | 262045 | IC 4086D | - |
| CO01-CB | Conduction | Hsin Chu | 262045 | IC 4086D | - |
| TH01-CB | OVEN Room | Hsin Chu | - | - | - |

Open Area Test Site (OATS); Semi Anechoic Chamber (SAC).

## 3.7. Table for Multiple Listing

The EUT has four model numbers which are identical to each other in all aspects except for the following table:

| Model No. | Description |
|---|---|
| AIOS4.0S | All the models are identical, the difference model for difference model number as marketing strategy. |
| AIOS4.0V | |
| AIOS4.0R | |
| AIOS4.0F | |

From the above models, model: AIOS4.0S was selected as representative model for the test and its data was recorded in this report.

## 3.8. Table for Radio

The EUT has two radios, the information as following table:

| Radio | Operate Mode | Function | CPU | Antenna |
|---|---|---|---|---|
| R0 | Slave without radar detection (STA mode) | Bluetooth / 2.4GHz WLAN / 5GHz WLAN band 1~4 | 1G / 1.25G | Set 1~7, 10~12 |
| R1 | Master (AP mode) | 5GHz WLAN band 1, 4 | 1G / 1.25G | Set 8~12 |

Note: CPU 1.25G covers CPU 1G, due to it is the highest CPU speed.

## 3.9. Table for Supporting Units

**For Test Site No: 03CH01-CB (below 1GHz)**

| Support Unit | Brand | Model | FCC ID |
|---|---|---|---|
| Wireless ac AP | Netgear | R6300V2 | PY313200227 |
| Anritsu | BT base station | MT8852B | N/A |
| Notebook | DELL | E4300 | DoC |
| Notebook | DELL | E4300 | DoC |
| Notebook | DELL | E4300 | DoC |
| Test fixture | Arcadyan | WN9722A-DM Test Jig | N/A |

**For Test Site No: 03CH01-CB (above1GHz)**

For non-beamforming function:

| Support Unit | Brand | Model | FCC ID |
|---|---|---|---|
| Notebook | DELL | E4300 | DoC |
| Test fixture | Arcadyan | WN9722A-DM Test Jig | N/A |

For beamforming function:

For Radio: R0

| Support Unit | Brand | Model | FCC ID |
|---|---|---|---|
| Notebook | DELL | E4300 | DoC |
| Notebook | DELL | E4300 | DoC |
| Wireless ac AP | Netgear | R7000 | PY313200233 |
| Test fixture | Arcadyan | WN9722A-DM Test Jig | N/A |

For Radio: R1

| Support Unit | Brand | Model | FCC ID |
|---|---|---|---|
| Notebook | DELL | E4300 | DoC |
| Notebook | DELL | E4300 | DoC |
| RX Device | Broadcom | Bcm4366 | DoC |
| Test fixture | Arcadyan | WN9722A-DM Test Jig | N/A |

**For Test Site No: CO01-CB**

| Support Unit | Brand | Model | FCC ID |
|---|---|---|---|
| AP Router | Planex | GW-AP54SGX | KA220030603014-1 |
| Anritsu | BT base station | MT8852B | N/A |
| Notebook | DELL | E4300 | DoC |
| Notebook | DELL | E4300 | DoC |
| Notebook | DELL | E4300 | DoC |
| Test fixture | Arcadyan | WN9722A-DM Test Jig | N/A |

**For Test Site No: TH01-CB**

| Support Unit | Brand | Model | FCC ID |
|---|---|---|---|
| Notebook | DELL | E4300 | DoC |
| Test fixture | Arcadyan | WN9722A-DM Test Jig | N/A |

## 3.10. Table for Parameters of Test Software Setting

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

For Radio: R0

| Test Function | Non-beamforming function | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Software Version | Mtool 2.0.1.6 | | | | | | | | | | | | |
| Mode | Test Frequency (MHz) | | | | | | | | | | | | |
| | NCB: 20MHz | | | | | | | | | | | | |
| | 5180 MHz | 5200 MHz | 5240 MHz | 5260 MHz | 5300 MHz | 5320 MHz | 5500 MHz | 5580 MHz | 5700 MHz | 5720 MHz | 5745 MHz | 5785 MHz | 5825 MHz |
| 802.11a | 66 | 75 | 74 | 81 | 81 | 75 | 74 | 84 | 71 | 83 | 71 | 84 | 74 |
| 802.11ac MCS0/Nss1 VHT20 | 67 | 75 | 74 | 81 | 81 | 76 | 74 | 84 | 69 | 85 | 69 | 90 | 76 |
| Mode | NCB: 40MHz | | | | | | | | | | | | |
| 802.11ac MCS0/Nss1 VHT40 | 5190 MHz | 5230 MHz | 5270 MHz | 5310 MHz | 5510 MHz | 5550 MHz | 5670 MHz | 5710 MHz | 5755 MHz | 5795 MHz | | | |
| | 38 | 67 | 79 | 66 | 53 | 79 | 67 | 83 | 46 | 69 | | | |
| Mode | NCB: 80MHz | | | | | | | | | | | | |
| 802.11ac MCS0/Nss1 VHT80 | 5210 MHz | | 5290 MHz | | 5530 MHz | | 5610 MHz | | 5690 MHz | | 5775 MHz | | |
| | 39 | | 66 | | 57 | | 77 | | 86 | | 54 | | |

| Test Function | Beamforming function | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Software Version | DOS | | | | | | | | | | | | |
| Mode | Test Frequency (MHz) | | | | | | | | | | | | |
| | NCB: 20MHz | | | | | | | | | | | | |
| | 5180 MHz | 5200 MHz | 5240 MHz | 5260 MHz | 5300 MHz | 5320 MHz | 5500 MHz | 5580 MHz | 5700 MHz | 5720 MHz | 5745 MHz | 5785 MHz | 5825 MHz |
| 802.11ac MCS0/Nss1 VHT20 | 66 | 74 | 73 | 79 | 80 | 74 | 74 | 83 | 69 | 86 | 68 | 88 | 75 |
| Mode | NCB: 40MHz | | | | | | | | | | | | |
| 802.11ac MCS0/Nss1 VHT40 | 5190 MHz | 5230 MHz | 5270 MHz | 5310 MHz | 5510 MHz | 5550 MHz | 5670 MHz | 5710 MHz | 5755 MHz | 5795 MHz | | | |
| | 37 | 70 | 76 | 65 | 51 | 77 | 66 | 81 | 46 | 69 | | | |
| Mode | NCB: 80MHz | | | | | | | | | | | | |
| 802.11ac MCS0/Nss1 VHT80 | 5210 MHz | | 5290 MHz | | 5530 MHz | | 5610 MHz | | 5690 MHz | | 5775 MHz | | |
| | 41 | | 66 | | 60 | | 80 | | 84 | | 51 | | |

For Radio: R1

| Test Function | Non-beamforming function | | | | | |
|---|---|---|---|---|---|---|
| Test Software Version | Mtool 2.0.1.6 | | | | | |
| Mode | Test Frequency (MHz) | | | | | |
| | NCB: 20MHz | | | | | |
| | 5180 MHz | 5200 MHz | 5240 MHz | 5745 MHz | 5785 MHz | 5825 MHz |
| 802.11a | 70 | 80 | 78 | 71 | 78 | 76 |
| 802.11ac MCS0/Nss1 VHT20 | 68 | 78 | 80 | 66 | 79 | 69 |
| Mode | NCB: 40MHz | | | | | |
| 802.11ac MCS0/Nss1 VHT40 | 5190 MHz | | 5230 MHz | | 5755 MHz | 5795 MHz |
| | 42 | | 71 | | 48 | 68 |
| Mode | NCB: 80MHz | | | | | |
| 802.11ac MCS0/Nss1 VHT80 | 5210 MHz | | | | 5775 MHz | |
| | 38 | | | | 52 | |

| Test Function | Beamforming function | | | | | |
|---|---|---|---|---|---|---|
| Test Software Version | DOS | | | | | |
| Mode | Test Frequency (MHz) | | | | | |
| | NCB: 20MHz | | | | | |
| | 5180 MHz | 5200 MHz | 5240 MHz | 5745 MHz | 5785 MHz | 5825 MHz |
| 802.11ac MCS0/Nss1 VHT20 | 64 | 75 | 80 | 66 | 79 | 69 |
| Mode | NCB: 40MHz | | | | | |
| 802.11ac MCS0/Nss1 VHT40 | 5190 MHz | | 5230 MHz | | 5755 MHz | 5795 MHz |
| | 39 | | 71 | | 50 | 69 |
| Mode | NCB: 80MHz | | | | | |
| 802.11ac MCS0/Nss1 VHT80 | 5210 MHz | | | | 5775 MHz | |
| | 41 | | | | 52 | |

## 3.11. EUT Operation during Test

**For non-beamforming function:**

The EUT was programmed to be in continuously transmitting mode.

**For beamforming function:**

For Radio: R0

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

During the test, the following programs under WIN XP were executed.

The program was executed as follows:

1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under DOS.
3. Executed "Lantest.exe " to link with the remote workstation to receive and transmit packet by Wireless ac AP and transmit duty cycle no less 98%

For Radio: R1

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

During the test, the following programs under WIN XP were executed.

The program was executed as follows:

1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under DOS.
3. Executed "Lantest.exe " to link with the remote workstation to receive and transmit packet by RX Device and transmit duty cycle no less 98%

## 3.12. Duty Cycle

For non-beamforming function:

For Radio: R0 / Mode 1 (PIFA antenna)

| Mode | On Time (ms) | On+Off Time (ms) | Duty Cycle (%) | Duty Factor (dB) | 1/T Minimum VBW (kHz) |
|---|---|---|---|---|---|
| 802.11a | 2.052 | 2.090 | 98.18 | 0.08 | 0.01 |
| 802.11ac MCS0/Nss1 VHT20 | 1.921 | 1.955 | 98.26 | 0.08 | 0.01 |
| 802.11ac MCS0/Nss1 VHT40 | 0.913 | 0.971 | 94.03 | 0.27 | 1.10 |
| 802.11ac MCS0/Nss1 VHT80 | 0.429 | 0.476 | 90.13 | 0.45 | 2.33 |

For Radio: R0 / Mode 4 (Dipole antenna)

| Mode | On Time (ms) | On+Off Time (ms) | Duty Cycle (%) | Duty Factor (dB) | 1/T Minimum VBW (kHz) |
|---|---|---|---|---|---|
| 802.11a | 2.050 | 2.090 | 98.09 | 0.08 | 0.01 |
| 802.11ac MCS0/Nss1 VHT20 | 1.923 | 1.955 | 98.36 | 0.07 | 0.01 |
| 802.11ac MCS0/Nss1 VHT40 | 0.928 | 0.966 | 96.07 | 0.17 | 1.08 |
| 802.11ac MCS0/Nss1 VHT80 | 0.428 | 0.488 | 87.70 | 0.57 | 2.34 |

For Radio: R1 / Mode 5 (PIFA antenna)

| Mode | On Time (ms) | On+Off Time (ms) | Duty Cycle (%) | Duty Factor (dB) | 1/T Minimum VBW (kHz) |
|---|---|---|---|---|---|
| 802.11a | 2.060 | 2.090 | 98.56 | 0.06 | 0.01 |
| 802.11ac MCS0/Nss1 VHT20 | 1.920 | 1.950 | 98.46 | 0.07 | 0.01 |
| 802.11ac MCS0/Nss1 VHT40 | 0.921 | 0.966 | 95.34 | 0.21 | 1.09 |
| 802.11ac MCS0/Nss1 VHT80 | 0.430 | 0.493 | 87.22 | 0.59 | 2.33 |

For Radio: R1 / Mode 8 (Dipole antenna)

| Mode | On Time (ms) | On+Off Time (ms) | Duty Cycle (%) | Duty Factor (dB) | 1/T Minimum VBW (kHz) |
|---|---|---|---|---|---|
| 802.11a | 2.038 | 2.076 | 98.17 | 0.08 | 0.01 |
| 802.11ac MCS0/Nss1 VHT20 | 1.916 | 1.950 | 98.26 | 0.08 | 0.01 |
| 802.11ac MCS0/Nss1 VHT40 | 0.908 | 0.953 | 95.28 | 0.21 | 1.10 |
| 802.11ac MCS0/Nss1 VHT80 | 0.429 | 0.486 | 88.27 | 0.54 | 2.33 |

For beamforming function:

For Radio: R0 / Mode 1 (PIFA antenna)

| Mode | On Time (ms) | On+Off Time (ms) | Duty Cycle (%) | Duty Factor (dB) | 1/T Minimum VBW (kHz) |
|---|---|---|---|---|---|
| 802.11ac MCS0/Nss1 VHT20 | 5.409 | 5.505 | 98.26 | 0.08 | 0.01 |
| 802.11ac MCS0/Nss1 VHT40 | 5.176 | 6.250 | 82.82 | 0.82 | 0.19 |
| 802.11ac MCS0/Nss1 VHT80 | 5.313 | 5.433 | 97.79 | 0.10 | 0.19 |

For Radio: R0 / Mode 4 (Dipole antenna)

| Mode | On Time (ms) | On+Off Time (ms) | Duty Cycle (%) | Duty Factor (dB) | 1/T Minimum VBW (kHz) |
|---|---|---|---|---|---|
| 802.11ac MCS0/Nss1 VHT20 | 5.400 | 5.780 | 93.43% | 0.30 | 0.19 |
| 802.11ac MCS0/Nss1 VHT40 | 5.150 | 5.460 | 94.32% | 0.25 | 0.19 |
| 802.11ac MCS0/Nss1 VHT80 | 5.290 | 5.631 | 93.94% | 0.27 | 0.19 |

For Radio: R1 / Mode 5 (PIFA antenna)

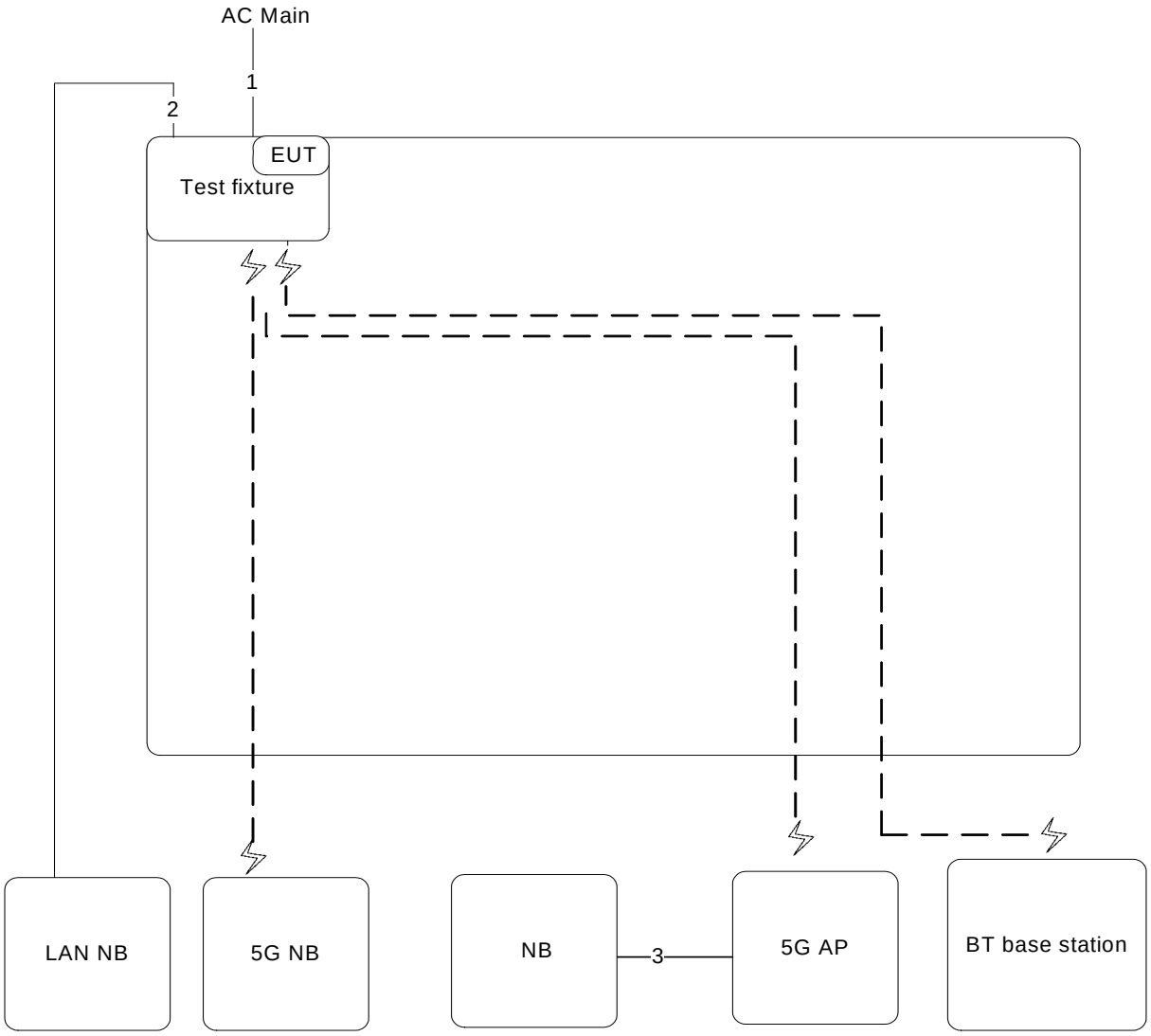
| Mode | On Time (ms) | On+Off Time (ms) | Duty Cycle (%) | Duty Factor (dB) | 1/T Minimum VBW (kHz) |
|---|---|---|---|---|---|
| 802.11ac MCS0/Nss1 VHT20 | 5.394 | 5.510 | 97.91 | 0.09 | 0.19 |
| 802.11ac MCS0/Nss1 VHT40 | 5.205 | 5.328 | 97.69 | 0.10 | 0.19 |
| 802.11ac MCS0/Nss1 VHT80 | 5.240 | 5.380 | 97.40 | 0.11 | 0.19 |

For Radio: R1 / Mode 8 (Dipole antenna)

| Mode | On Time (ms) | On+Off Time (ms) | Duty Cycle (%) | Duty Factor (dB) | 1/T Minimum VBW (kHz) |
|---|---|---|---|---|---|
| 802.11ac MCS0/Nss1 VHT20 | 5.433 | 6.442 | 84.34% | 0.74 | 0.18 |
| 802.11ac MCS0/Nss1 VHT40 | 5.176 | 5.481 | 94.44% | 0.25 | 0.19 |
| 802.11ac MCS0/Nss1 VHT80 | 5.304 | 5.433 | 97.63% | 0.10 | 0.19 |

## 3.13. Test Configurations

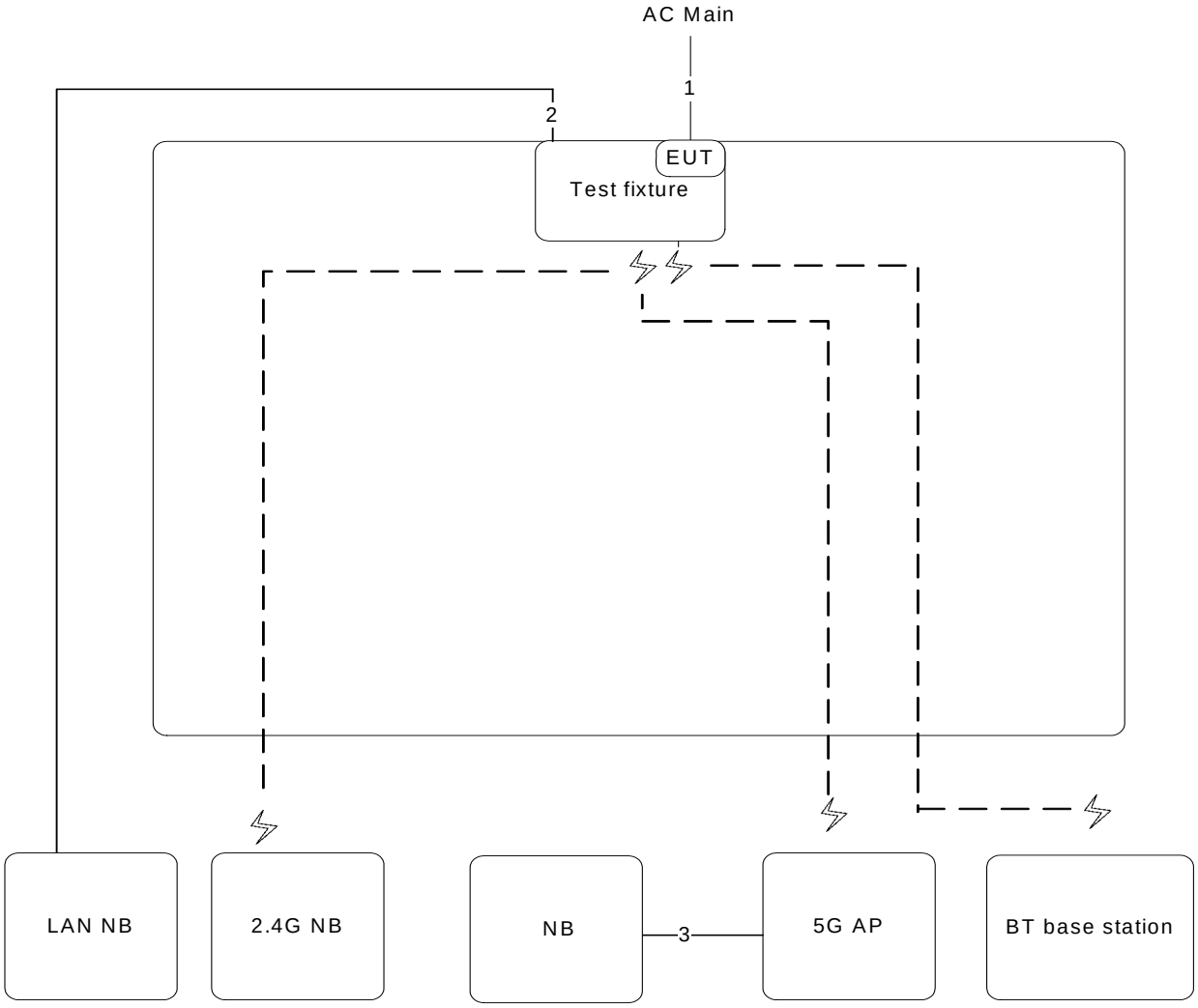
### 3.13.1. AC Power Line Conduction Emissions Test Configuration




| Item | Connection | Shielded | Length |
|---|---|---|---|
| 1 | Power cable | No | 1.5m |
| 2 | RJ-45 cable | No | 10m |
| 3 | RJ-45 cable | No | 1.5m |

### 3.13.2. Radiation Emissions Test Configuration

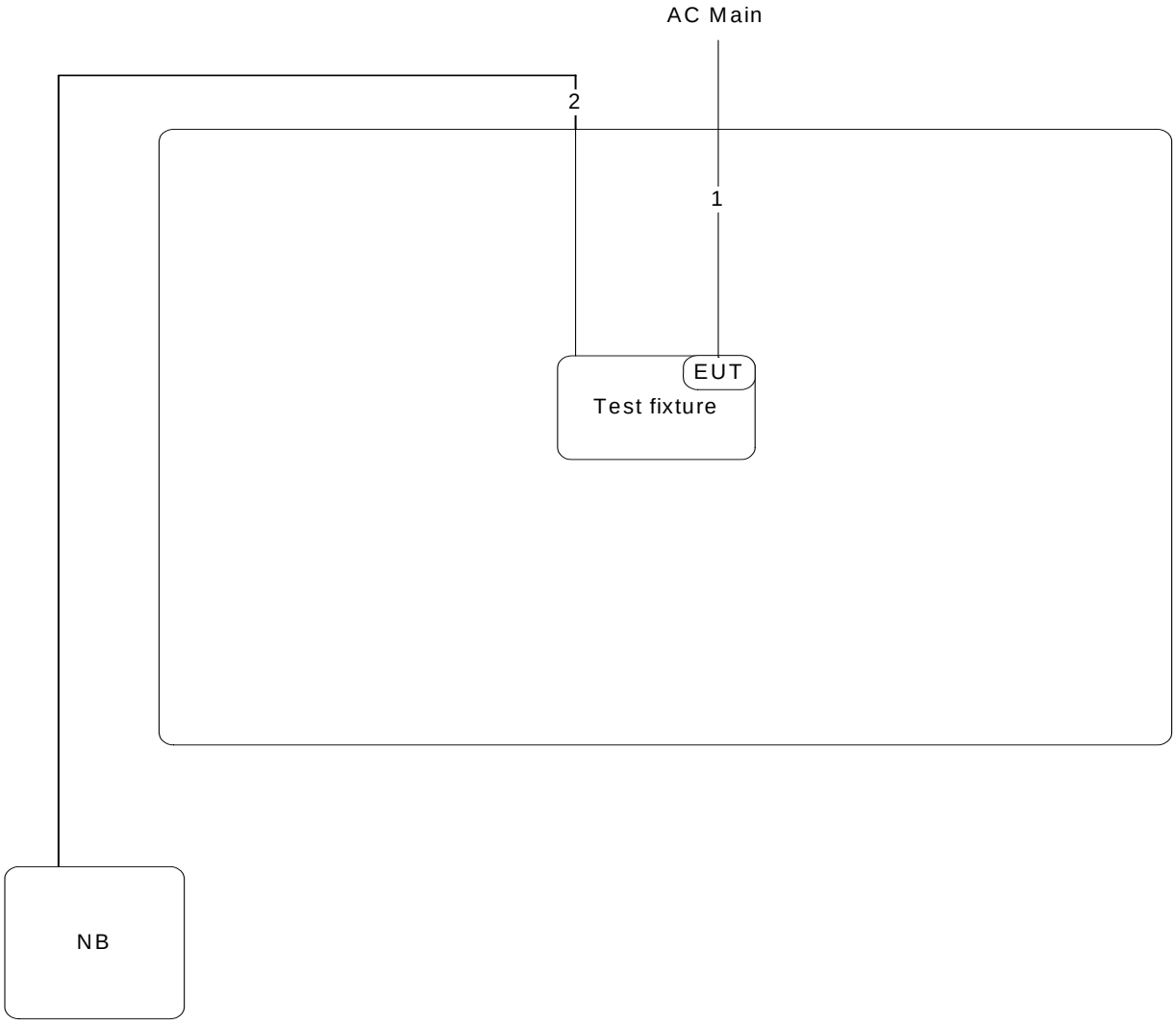
Test Configuration: 30MHz~1GHz




| Item | Connection | Shielded | Length |
|---|---|---|---|
| 1 | Power cable | No | 1.5m |
| 2 | RJ-45 cable | No | 10m |
| 3 | RJ-45 cable | No | 1.5m |

Test Configuration: above 1GHz

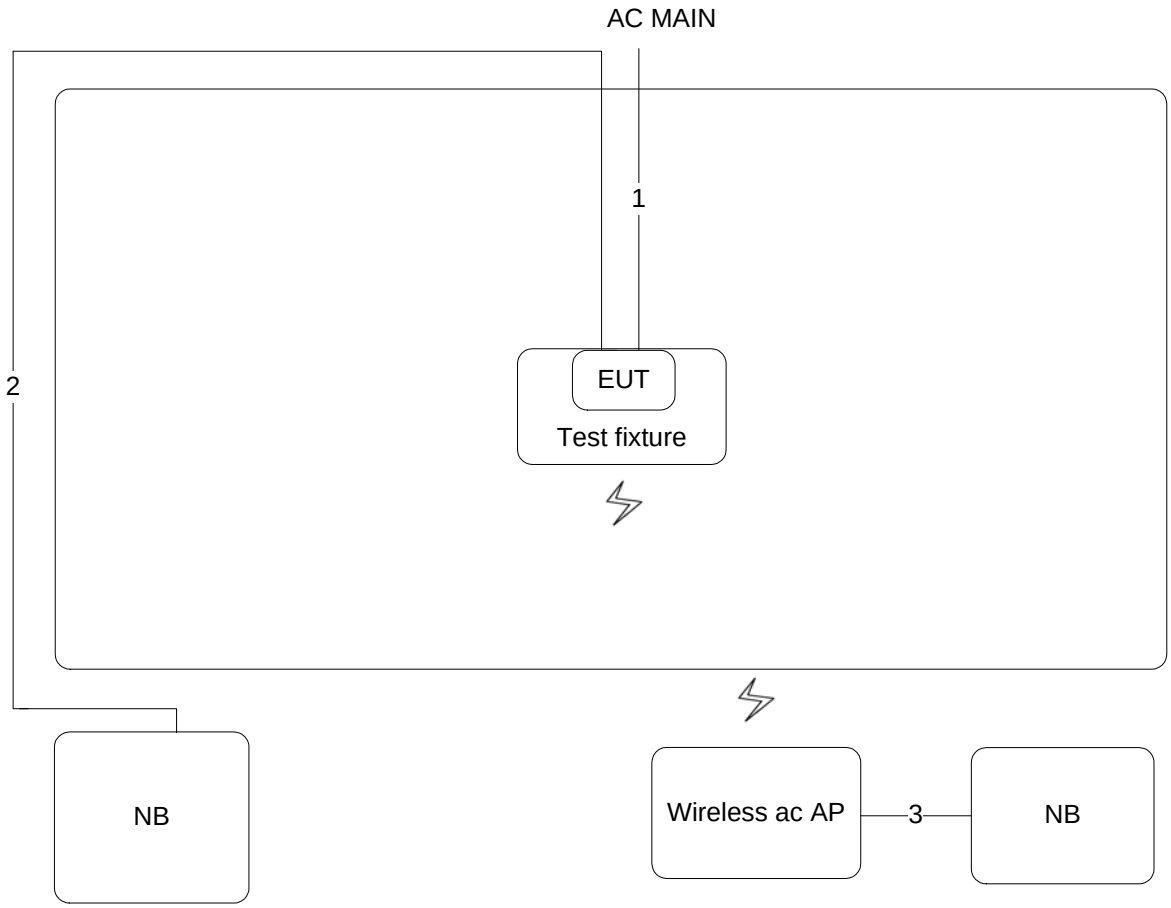
For non-beamforming function:




| Item | Connection | Shielded | Length |
|---|---|---|---|
| 1 | Power cable | No | 1.5m |
| 2 | RJ-45 cable | No | 10m |

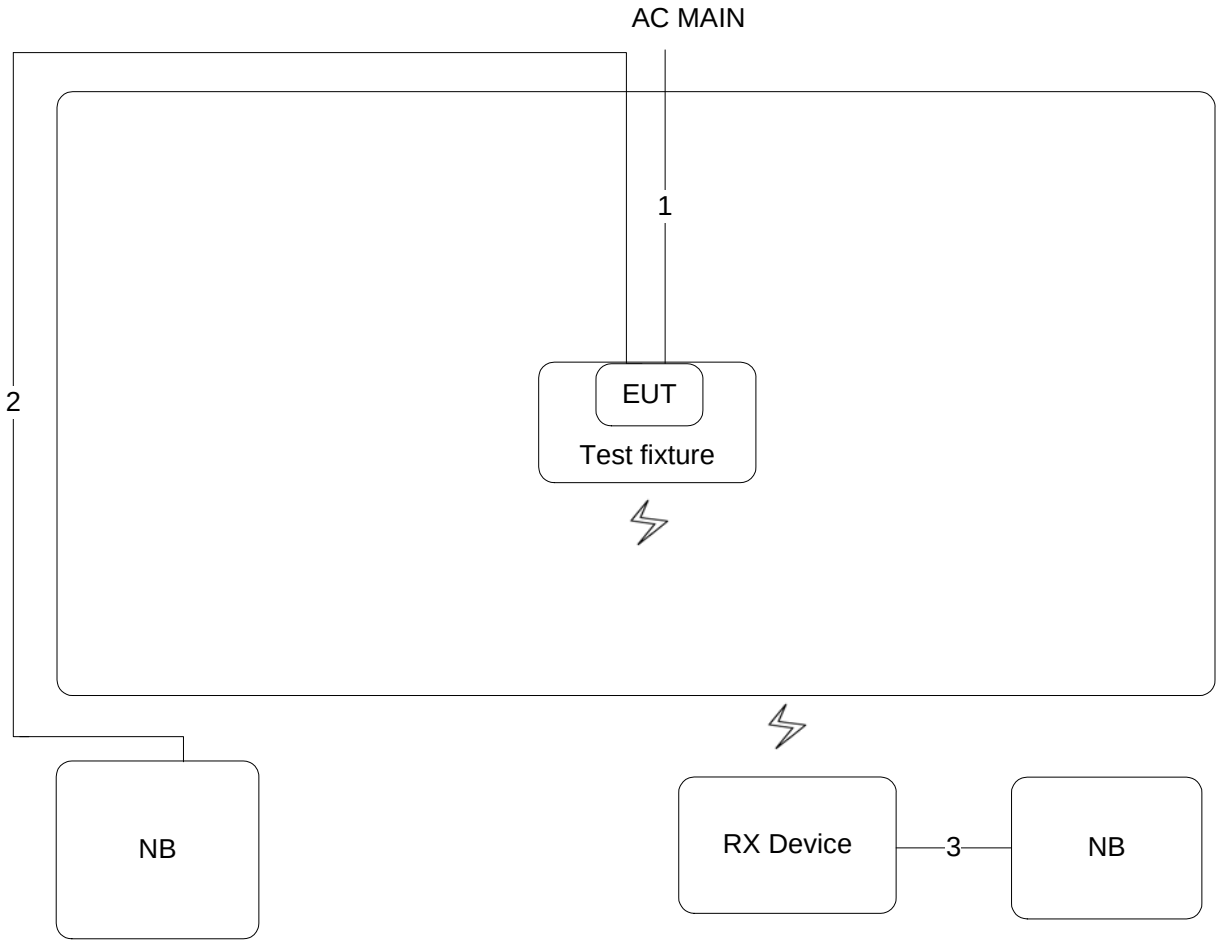
For beamforming function:

For Radio: R0




| Item | Connection | Shielded | Length |
|---|---|---|---|
| 1 | Power cable | No | 1.5m |
| 2 | RJ-45 cable | No | 10m |
| 3 | RJ-45 cable | No | 10m |

For Radio: R1




| Item | Connection | Shielded | Length |
|---|---|---|---|
| 1 | Power cable | No | 1.5m |
| 2 | RJ-45 cable | No | 10m |
| 3 | RJ-45 cable | No | 10m |

# 4. TEST RESULT

## 4.1. AC Power Line Conducted Emissions Measurement

### 4.1.1. Limit

For this product that is designed to connect to the 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 below limits table.

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

### 4.1.2. Measuring Instruments and Setting

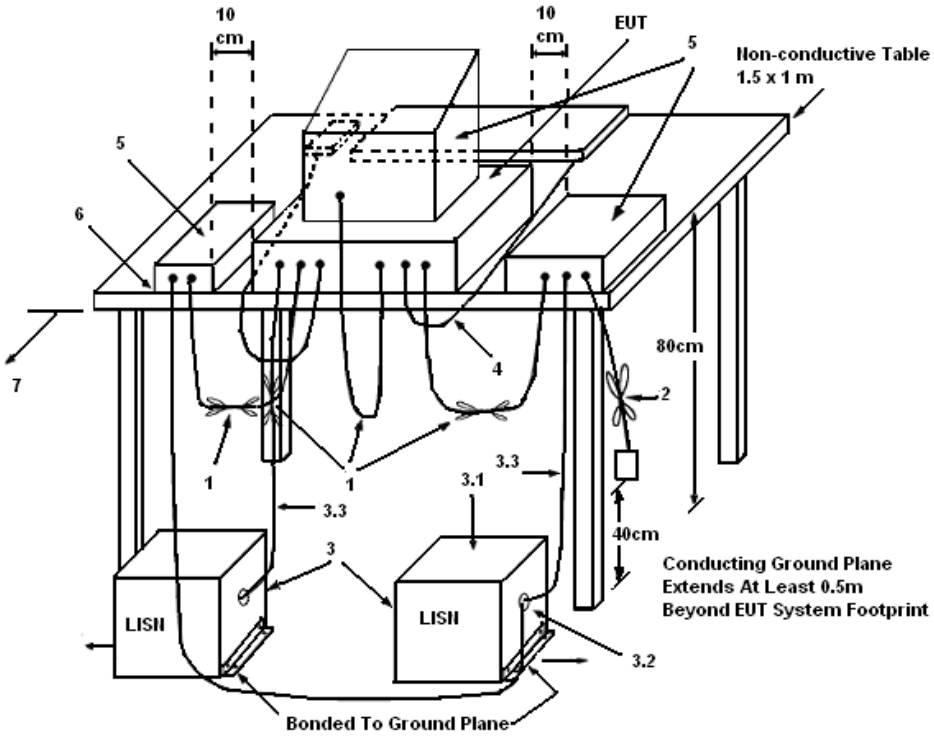
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

| Receiver Parameters | Setting |
|---|---|
| Attenuation | 10 dB |
| Start Frequency | 0.15 MHz |
| Stop Frequency | 30 MHz |
| IF Bandwidth | 9 kHz |

### 4.1.3. Test Procedures

1. Configure the EUT according to ANSI C63.10. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
4. The frequency range from 150 kHz to 30 MHz was searched.
5. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. The measurement has to be done between each power line and ground at the power terminal.

### 4.1.4. Test Setup Layout




LEGEND:

(1) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

(2) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

(3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω. LISN can be placed on top of, or immediately beneath, reference ground plane.

(3.1) All other equipment powered from additional LISN(s).

(3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.

(3.3) LISN at least 80 cm from nearest part of EUT chassis.

(4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.

(5) Non-EUT components of EUT system being tested.

(6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.

(7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

### 4.1.5. Test Deviation

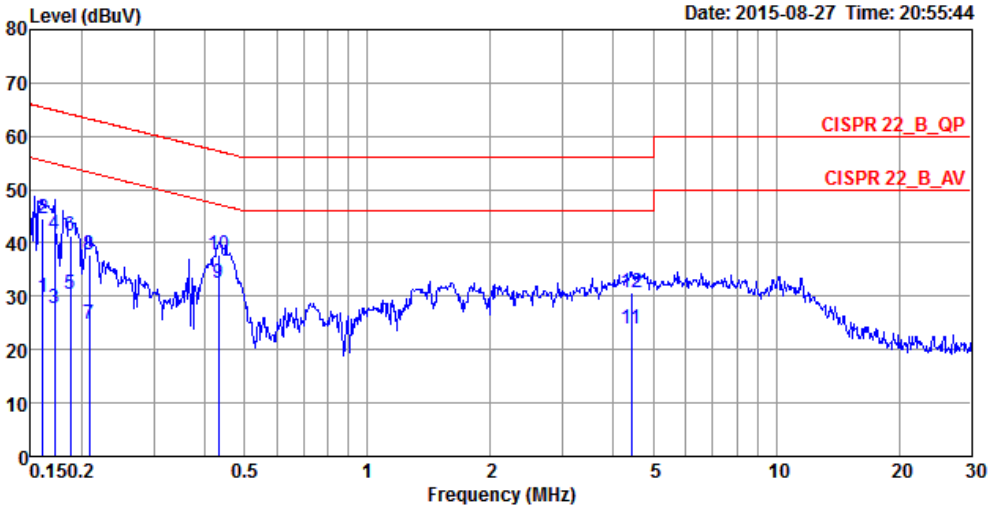
There is no deviation with the original standard.

### 4.1.6. EUT Operation during Test

The EUT was placed on the test table and programmed in normal function.

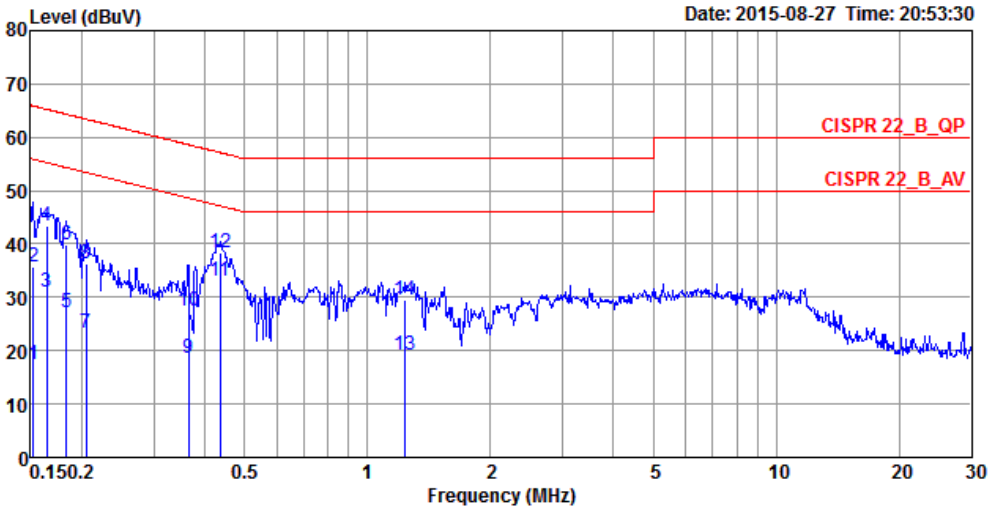
### 4.1.7. Results of AC Power Line Conducted Emissions Measurement

| Temperature | 25°C | Humidity | 52% |
|---|---|---|---|
| Test Engineer | Kane Liu | Phase | Line |
| Configuration | Normal Link | Test Mode | Mode 3 |




| | Freq | Level | Over Limit | Limit Line | Read Level | LISN Factor | Cable Loss | Pol/Phase | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dBuV | dBuV | dB | dB | | |
| 1 | 0.1607 | 29.94 | -25.49 | 55.43 | 19.99 | 9.93 | 0.02 | LINE | Average |
| 2 | 0.1607 | 44.46 | -20.97 | 65.43 | 34.51 | 9.93 | 0.02 | LINE | QP |
| 3 | 0.1712 | 27.77 | -27.13 | 54.90 | 17.82 | 9.93 | 0.02 | LINE | Average |
| 4 | 0.1712 | 41.56 | -23.34 | 64.90 | 31.61 | 9.93 | 0.02 | LINE | QP |
| 5 | 0.1874 | 30.54 | -23.61 | 54.15 | 20.59 | 9.93 | 0.02 | LINE | Average |
| 6 | 0.1874 | 41.33 | -22.82 | 64.15 | 31.38 | 9.93 | 0.02 | LINE | QP |
| 7 | 0.2083 | 24.70 | -28.57 | 53.27 | 14.75 | 9.93 | 0.02 | LINE | Average |
| 8 | 0.2083 | 37.65 | -25.62 | 63.27 | 27.70 | 9.93 | 0.02 | LINE | QP |
| 9 | 0.4328 | 32.55 | -14.65 | 47.20 | 22.58 | 9.93 | 0.04 | LINE | Average |
| 10 | 0.4328 | 37.83 | -19.37 | 57.20 | 27.86 | 9.93 | 0.04 | LINE | QP |
| 11 | 4.4305 | 23.88 | -22.12 | 46.00 | 13.76 | 10.04 | 0.08 | LINE | Average |
| 12 | 4.4305 | 30.67 | -25.33 | 56.00 | 20.55 | 10.04 | 0.08 | LINE | QP |

| Temperature | 25°C | Humidity | 52% |
|---|---|---|---|
| Test Engineer | Kane Liu | Phase | Neutral |
| Configuration | Normal Link | Test Mode | Mode 3 |




| | Freq | Level | Over Limit | Limit Line | Read Level | LISN Factor | Cable Loss | Pol/Phase | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dBuV | dBuV | dB | dB | | |
| 1 | 0.1524 | 17.43 | -38.44 | 55.87 | 7.63 | 9.78 | 0.02 | NEUTRAL | Average |
| 2 | 0.1524 | 35.64 | -30.23 | 65.87 | 25.84 | 9.78 | 0.02 | NEUTRAL | QP |
| 3 | 0.1641 | 31.10 | -24.15 | 55.25 | 21.30 | 9.78 | 0.02 | NEUTRAL | Average |
| 4 | 0.1641 | 43.28 | -21.97 | 65.25 | 33.48 | 9.78 | 0.02 | NEUTRAL | QP |
| 5 | 0.1835 | 27.02 | -27.31 | 54.33 | 17.21 | 9.79 | 0.02 | NEUTRAL | Average |
| 6 | 0.1835 | 40.00 | -24.33 | 64.33 | 30.19 | 9.79 | 0.02 | NEUTRAL | QP |
| 7 | 0.2050 | 23.37 | -30.03 | 53.40 | 13.56 | 9.79 | 0.02 | NEUTRAL | Average |
| 8 | 0.2050 | 36.37 | -27.03 | 63.40 | 26.56 | 9.79 | 0.02 | NEUTRAL | QP |
| 9 | 0.3653 | 18.63 | -29.98 | 48.61 | 8.80 | 9.79 | 0.04 | NEUTRAL | Average |
| 10 | 0.3653 | 27.33 | -31.28 | 58.61 | 17.50 | 9.79 | 0.04 | NEUTRAL | QP |
| 11 | 0.4351 | 32.99 | -14.16 | 47.15 | 23.16 | 9.79 | 0.04 | NEUTRAL | Average |
| 12 | 0.4351 | 38.32 | -18.83 | 57.15 | 28.49 | 9.79 | 0.04 | NEUTRAL | QP |

Note:

Level = Read Level + LISN Factor + Cable Loss.

## 4.2. 26dB Bandwidth and 99% Occupied Bandwidth Measurement

### 4.2.1. Limit

No restriction limits.

### 4.2.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

| 26dB Bandwidth | |
|---|---|
| **Spectrum Parameters** | **Setting** |
| Attenuation | Auto |
| Span Frequency | > 26dB Bandwidth |
| RBW | Approximately 1% of the emission bandwidth |
| VBW | VBW > RBW |
| Detector | Peak |
| Trace | Max Hold |
| Sweep Time | Auto |
| **99% Occupied Bandwidth** | |
| **Spectrum Parameters** | **Setting** |
| Span | 1.5 times to 5.0 times the OBW |
| RBW | 1 % to 5 % of the OBW |
| VBW | ≥ 3 x RBW |
| Detector | Peak |
| Trace | Max Hold |

### 4.2.3. Test Procedures

For Radiated 26dB Bandwidth and 99% Occupied Bandwidth Measurement:

1. The transmitter was radiated to the spectrum analyzer in peak hold mode.
2. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

### 4.2.4. Test Setup Layout

For Radiated 26dB Bandwidth and 99% Occupied Bandwidth Measurement:

This test setup layout is the same as that shown in section 4.6.4.

### 4.2.5. Test Deviation

There is no deviation with the original standard.

### 4.2.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

## 4.2.7. Test Result of 26dB Bandwidth and 99% Occupied Bandwidth

For Radio: R0

| Temperature | 25°C | Humidity | 60% |
|---|---|---|---|
| Test Engineer | Eddie Weng / Nick Peng | Test Function | Non-beamforming function |

| Mode | Frequency | 26dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) |
|---|---|---|---|
| 802.11a | 5180 MHz | 21.13 | 16.67 |
| | 5200 MHz | 21.30 | 17.11 |
| | 5240 MHz | 25.48 | 16.41 |
| | 5260 MHz | 20.43 | 16.41 |
| | 5300 MHz | 21.13 | 16.93 |
| | 5320 MHz | 21.30 | 16.67 |
| | 5500 MHz | 21.30 | 16.67 |
| | 5580 MHz | 31.39 | 18.06 |
| | 5700 MHz | 21.48 | 16.67 |
| | 5745 MHz | 21.30 | 16.67 |
| | 5785 MHz | 32.43 | 19.54 |
| | 5825 MHz | 21.30 | 16.76 |
| 802.11ac MCS0/Nss1 VHT20 | 5180 MHz | 21.65 | 17.80 |
| | 5200 MHz | 21.48 | 17.97 |
| | 5240 MHz | 23.04 | 17.19 |
| | 5260 MHz | 22.96 | 17.11 |
| | 5300 MHz | 21.57 | 17.80 |
| | 5320 MHz | 21.48 | 17.80 |
| | 5500 MHz | 21.57 | 17.89 |
| | 5580 MHz | 32.78 | 17.37 |
| | 5700 MHz | 21.57 | 17.80 |
| | 5745 MHz | 21.48 | 17.80 |
| | 5785 MHz | 36.96 | 19.02 |
| | 5825 MHz | 21.48 | 17.89 |

| Mode | Frequency | 26dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) |
|---|---|---|---|
| 802.11ac MCS0/Nss1 VHT40 | 5190 MHz | 40.87 | 37.05 |
| | 5230 MHz | 40.73 | 37.05 |
| | 5270 MHz | 58.26 | 37.34 |
| | 5310 MHz | 41.01 | 37.05 |
| | 5510 MHz | 40.87 | 36.90 |
| | 5550 MHz | 75.51 | 37.34 |
| | 5670 MHz | 41.16 | 37.05 |
| | 5755 MHz | 40.87 | 37.05 |
| | 5795 MHz | 40.87 | 36.90 |
| 802.11ac MCS0/Nss1 VHT80 | 5210 MHz | 82.03 | 76.41 |
| | 5290 MHz | 81.45 | 76.12 |
| | 5530 MHz | 81.74 | 76.41 |
| | 5610 MHz | 85.51 | 76.70 |
| | 5775 MHz | 82.03 | 76.41 |

Straddle Channel

| Mode | Frequency | 26dB BW (MHz) | 99% OBW (MHz) | 26dB BW F1 (MHz) | 99% OBW T1 (MHz) | UNII 2C 26dB BW (MHz) | UNII 3 26dB BW (MHz) | UNII 2C 99% BW (MHz) | UNII 3 99% BW (MHz) |
|---|---|---|---|---|---|---|---|---|---|
| 802.11a | 5720 MHz | 28.96 | 18.06 | 5706.17 | 5711.06 | 18.83 | 10.13 | 13.94 | 4.12 |
| 802.11ac MCS0/Nss1 VHT20 | 5720 MHz | 40.17 | 18.76 | 5700.35 | 5710.71 | 24.65 | 15.52 | 14.29 | 4.46 |
| 802.11ac MCS0/Nss1 VHT40 | 5710 MHz | 99.86 | 57.16 | 5660.00 | 5682.07 | 65.00 | 34.86 | 42.93 | 14.23 |
| 802.11ac MCS0/Nss1 VHT80 | 5690 MHz | 189.86 | 105.07 | 5597.25 | 5639.35 | 127.75 | 62.10 | 85.65 | 19.41 |

For Radio: R0

| Temperature | 25°C | Humidity | 60% |
|---|---|---|---|
| Test Engineer | Eddie Weng / Nick Peng | Test Function | Beamforming function |

| Mode | Frequency | 26dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) |
|---|---|---|---|
| 802.11ac MCS0/Nss1 VHT20 | 5180 MHz | 21.65 | 18.06 |
| | 5200 MHz | 21.73 | 18.14 |
| | 5240 MHz | 19.13 | 17.45 |
| | 5260 MHz | 19.13 | 17.53 |
| | 5300 MHz | 21.56 | 18.06 |
| | 5320 MHz | 21.91 | 18.06 |
| | 5500 MHz | 21.65 | 18.06 |
| | 5580 MHz | 30.00 | 17.71 |
| | 5700 MHz | 21.65 | 18.06 |
| | 5745 MHz | 21.82 | 18.06 |
| | 5785 MHz | 29.39 | 18.49 |
| | 5825 MHz | 21.56 | 17.97 |
| 802.11ac MCS0/Nss1 VHT40 | 5190 MHz | 40.87 | 36.75 |
| | 5230 MHz | 49.56 | 37.19 |
| | 5270 MHz | 41.01 | 36.90 |
| | 5310 MHz | 40.87 | 36.61 |
| | 5510 MHz | 40.58 | 36.75 |
| | 5550 MHz | 56.52 | 37.19 |
| | 5670 MHz | 41.01 | 36.75 |
| | 5755 MHz | 40.72 | 36.90 |
| | 5795 MHz | 41.01 | 36.75 |
| 802.11ac MCS0/Nss1 VHT80 | 5210 MHz | 81.44 | 75.83 |
| | 5290 MHz | 81.73 | 75.83 |
| | 5530 MHz | 82.02 | 75.83 |
| | 5610 MHz | 135.94 | 76.41 |
| | 5775 MHz | 82.02 | 75.83 |

Straddle Channel

| Mode | Frequency | 26dB BW (MHz) | 99% OBW (MHz) | 26dB BW F1 (MHz) | 99% OBW T1 (MHz) | UNII 2C 26dB BW (MHz) | UNII 3 26dB BW (MHz) | UNII 2C 99% BW (MHz) | UNII 3 99% BW (MHz) |
|---|---|---|---|---|---|---|---|---|---|
| 802.11ac MCS0/Nss1 VHT20 | 5720 MHz | 34.61 | 18.75 | 5703.30 | 5710.62 | 21.70 | 12.91 | 14.38 | 4.37 |
| 802.11ac MCS0/Nss1 VHT40 | 5710 MHz | 97.83 | 53.97 | 5661.16 | 5684.09 | 63.84 | 33.98 | 40.91 | 13.06 |
| 802.11ac MCS0/Nss1 VHT80 | 5690 MHz | 188.41 | 99.27 | 5599.57 | 5642.24 | 125.44 | 62.97 | 82.76 | 16.51 |

For Radio: R1

| Temperature | 25°C | Humidity | 60% |
|---|---|---|---|
| Test Engineer | Eddie Weng | Test Function | Non-beamforming function |

| Mode | Frequency | 26dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) |
|---|---|---|---|
| 802.11a | 5180 MHz | 21.30 | 16.76 |
| | 5200 MHz | 31.74 | 19.19 |
| | 5240 MHz | 31.13 | 16.85 |
| | 5745 MHz | 21.30 | 16.76 |
| | 5785 MHz | 21.22 | 17.19 |
| | 5825 MHz | 21.22 | 16.93 |
| 802.11ac MCS0/Nss1 VHT20 | 5180 MHz | 21.65 | 17.71 |
| | 5200 MHz | 26.26 | 18.15 |
| | 5240 MHz | 37.83 | 18.06 |
| | 5745 MHz | 21.39 | 17.63 |
| | 5785 MHz | 21.57 | 17.80 |
| | 5825 MHz | 21.74 | 17.71 |
| 802.11ac MCS0/Nss1 VHT40 | 5190 MHz | 40.87 | 36.90 |
| | 5230 MHz | 45.80 | 37.34 |
| | 5755 MHz | 41.16 | 37.05 |
| | 5795 MHz | 41.01 | 37.05 |
| 802.11ac MCS0/Nss1 VHT80 | 5210 MHz | 81.74 | 76.12 |
| | 5775 MHz | 81.74 | 76.41 |

For Radio: R1

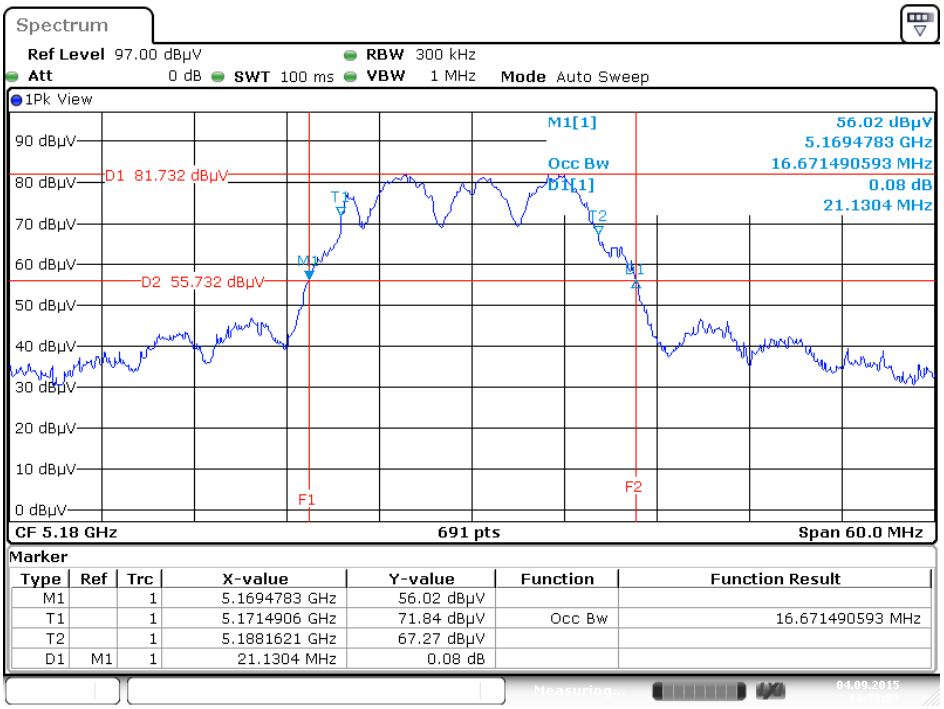
| Temperature | 25°C | Humidity | 60% |
|---|---|---|---|
| Test Engineer | Eddie Weng | Test Function | Beamforming function |

| Mode | Frequency | 26dB Bandwidth (MHz) | 99% Occupied Bandwidth (MHz) |
|---|---|---|---|
| 802.11ac MCS0/Nss1 VHT20 | 5180 MHz | 21.83 | 17.97 |
| | 5200 MHz | 21.91 | 18.15 |
| | 5240 MHz | 33.74 | 17.89 |
| | 5745 MHz | 21.57 | 18.06 |
| | 5785 MHz | 21.74 | 18.15 |
| | 5825 MHz | 21.83 | 18.15 |
| 802.11ac MCS0/Nss1 VHT40 | 5190 MHz | 40.73 | 36.76 |
| | 5230 MHz | 46.09 | 36.90 |
| | 5755 MHz | 40.87 | 36.61 |
| | 5795 MHz | 41.01 | 36.90 |
| 802.11ac MCS0/Nss1 VHT80 | 5210 MHz | 81.74 | 75.83 |
| | 5775 MHz | 81.74 | 75.83 |

For Radio: R0

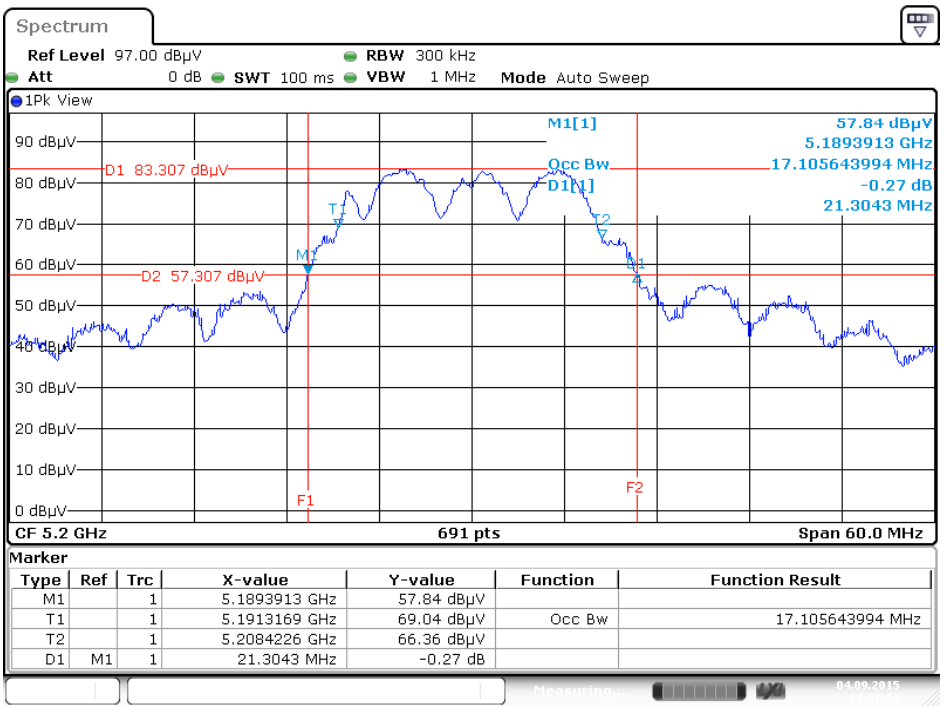
For non-beamforming function:

**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5180 MHz**



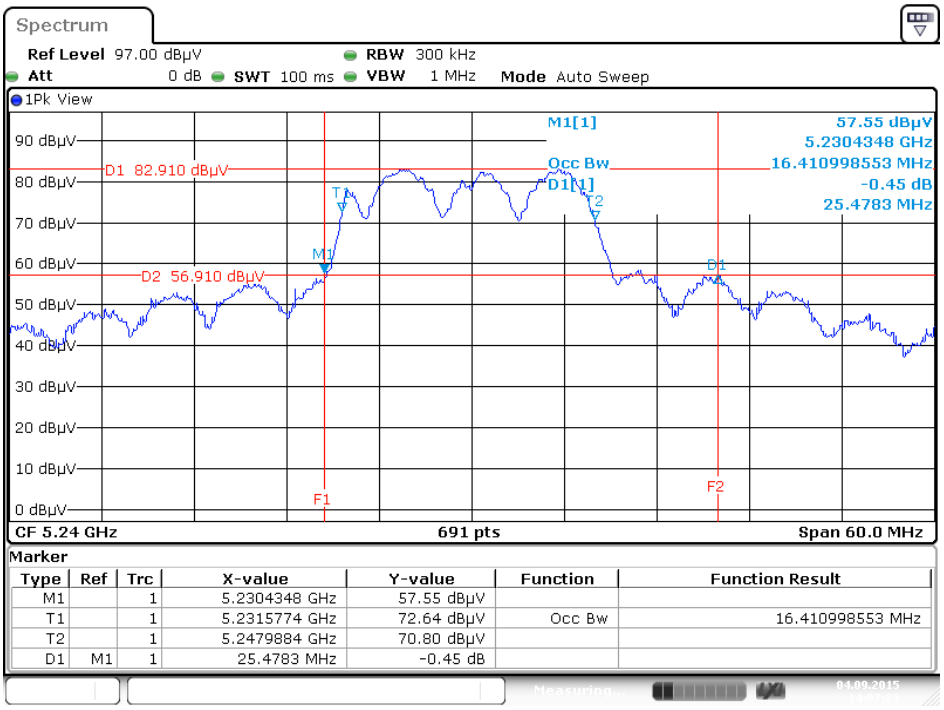

Date: 4.SEP.2015 14:08:23

**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5200 MHz**



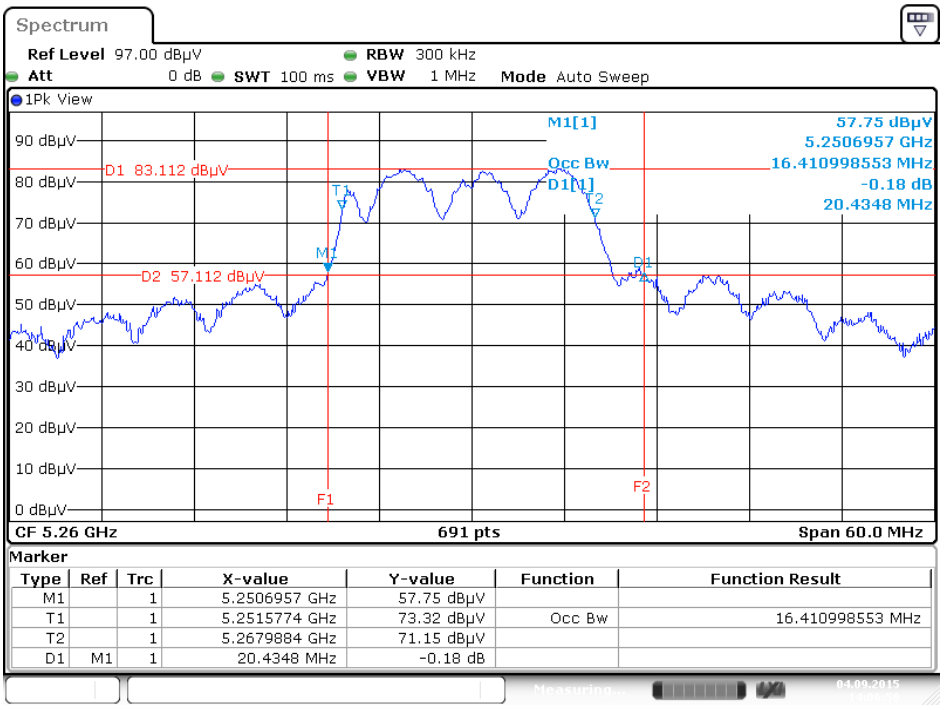

Date: 4.SEP.2015 14:07:55

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5240 MHz



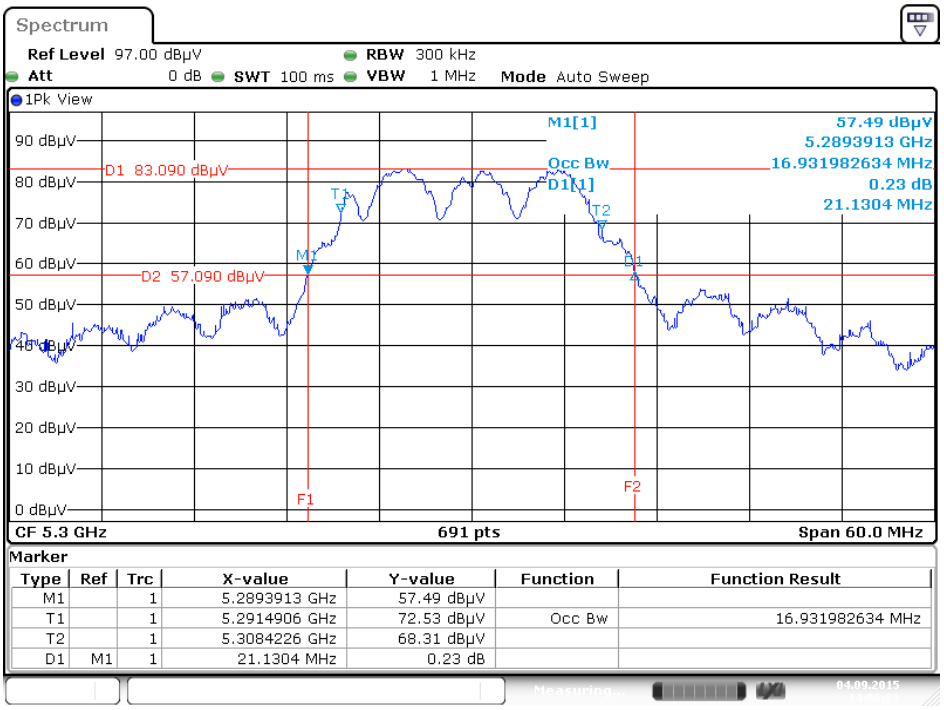

Date: 4.SEP.2015 14:07:22

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5260 MHz



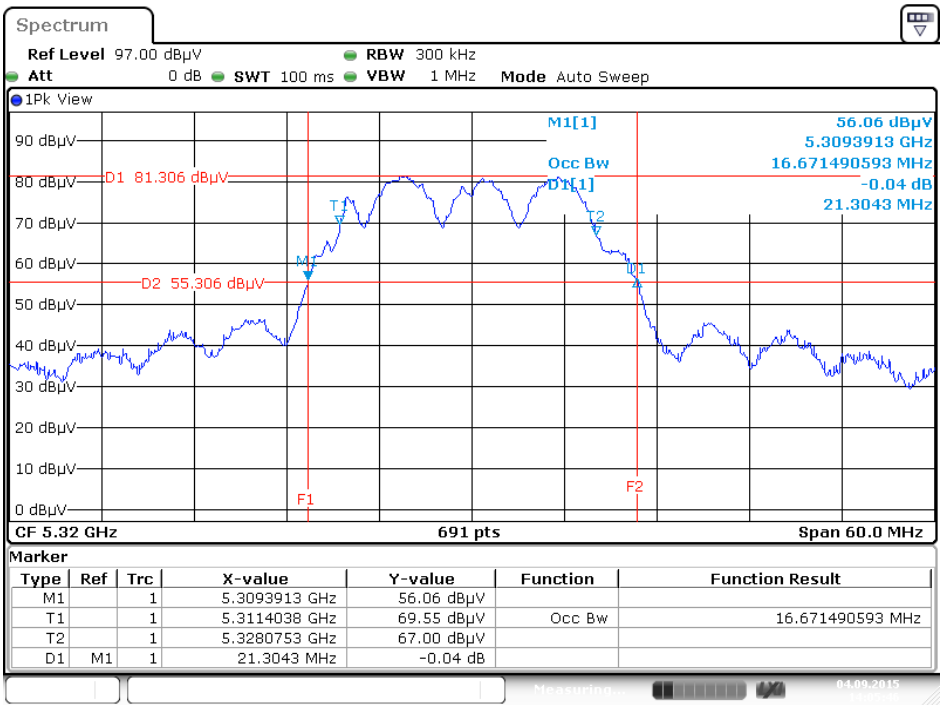

Date: 4.SEP.2015 14:06:51

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5300 MHz



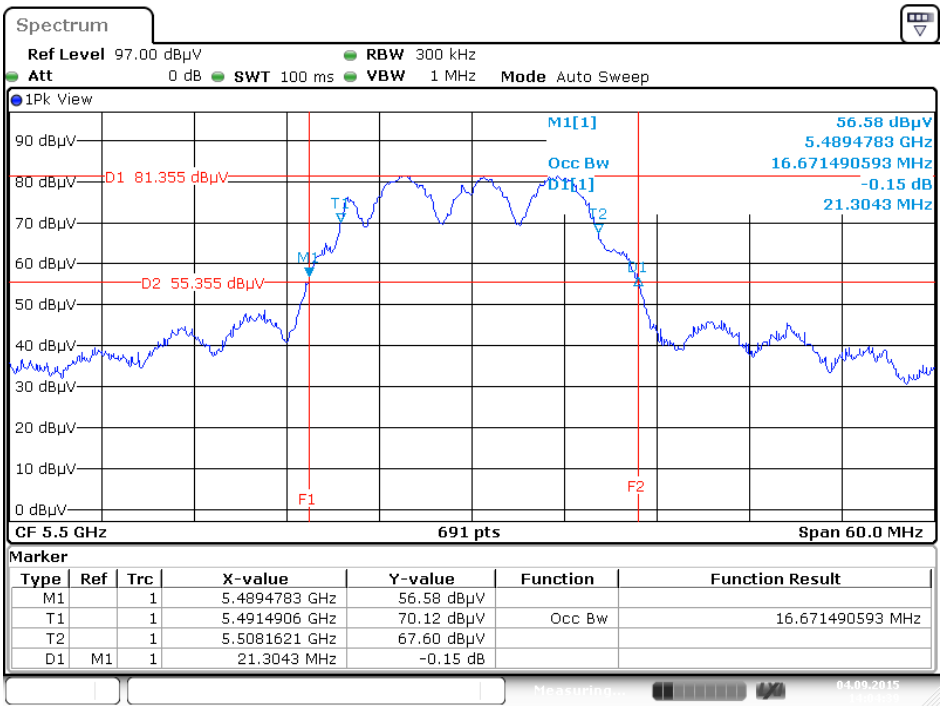

Date: 4.SEP.2015 14:06:23

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5320 MHz



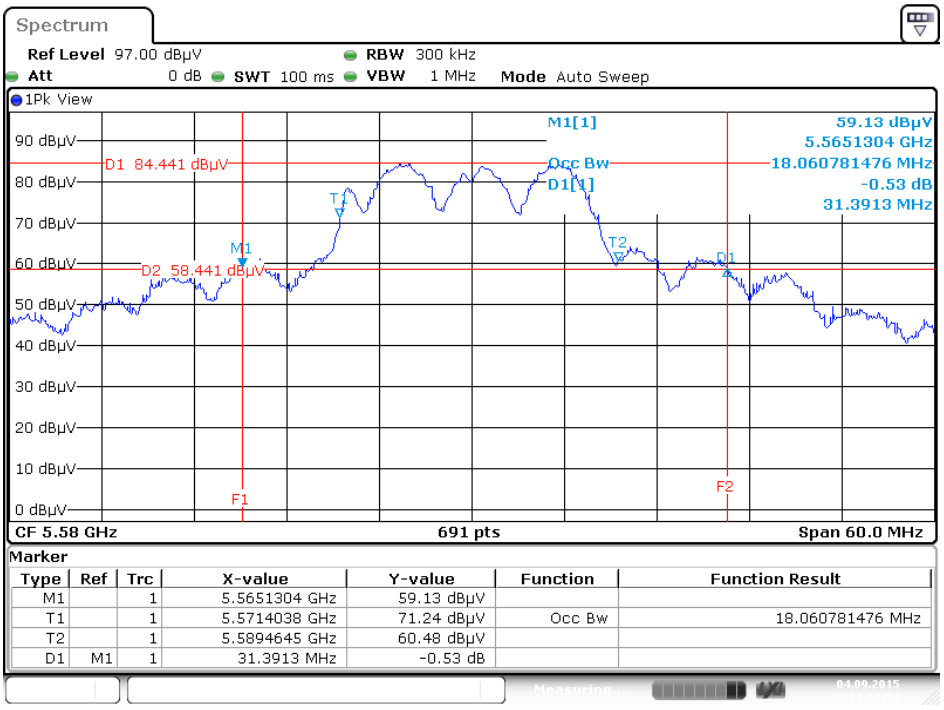

Date: 4.SEP.2015 14:05:47

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5500 MHz



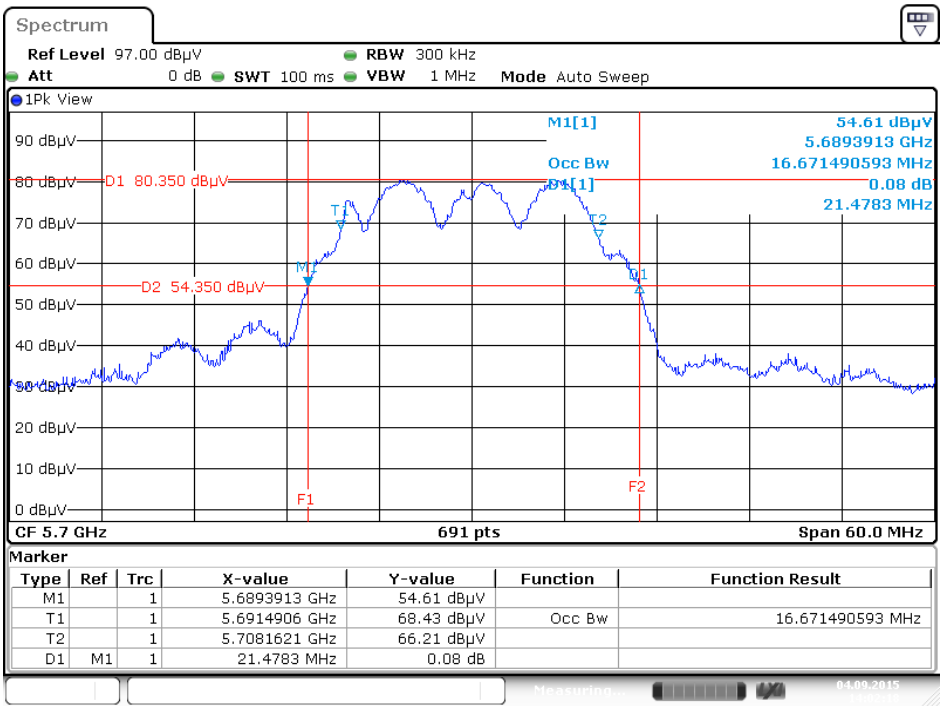

Date: 4.SEP.2015 14:04:40

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5580 MHz



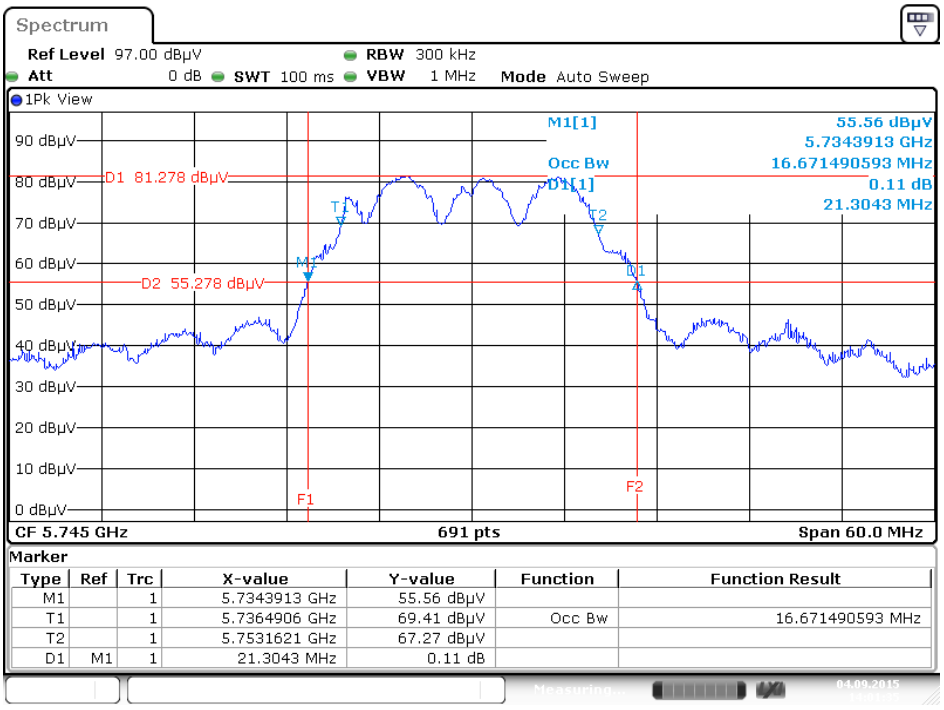

Date: 4.SEP.2015 14:02:54

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5700 MHz



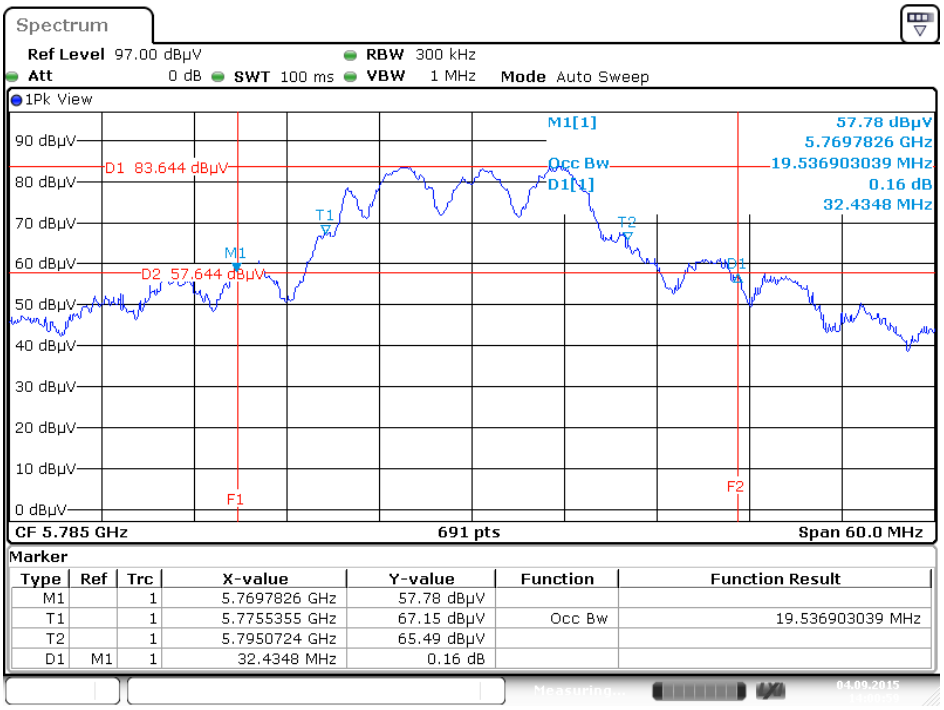

Date: 4.SEP.2015 14:02:19

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5745 MHz



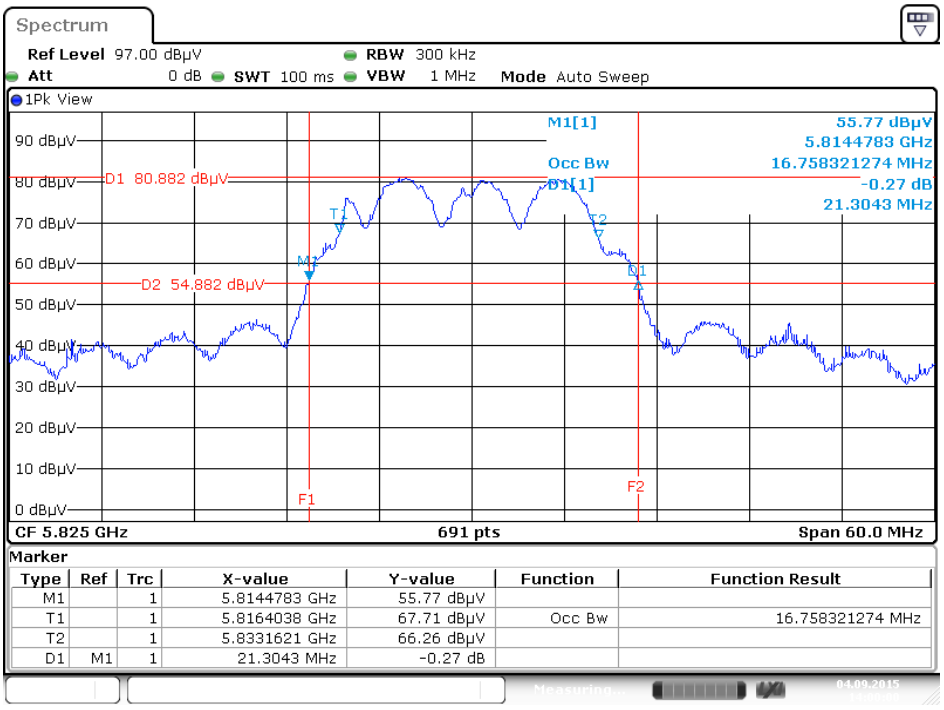

Date: 4.SEP.2015 14:01:35

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5785 MHz



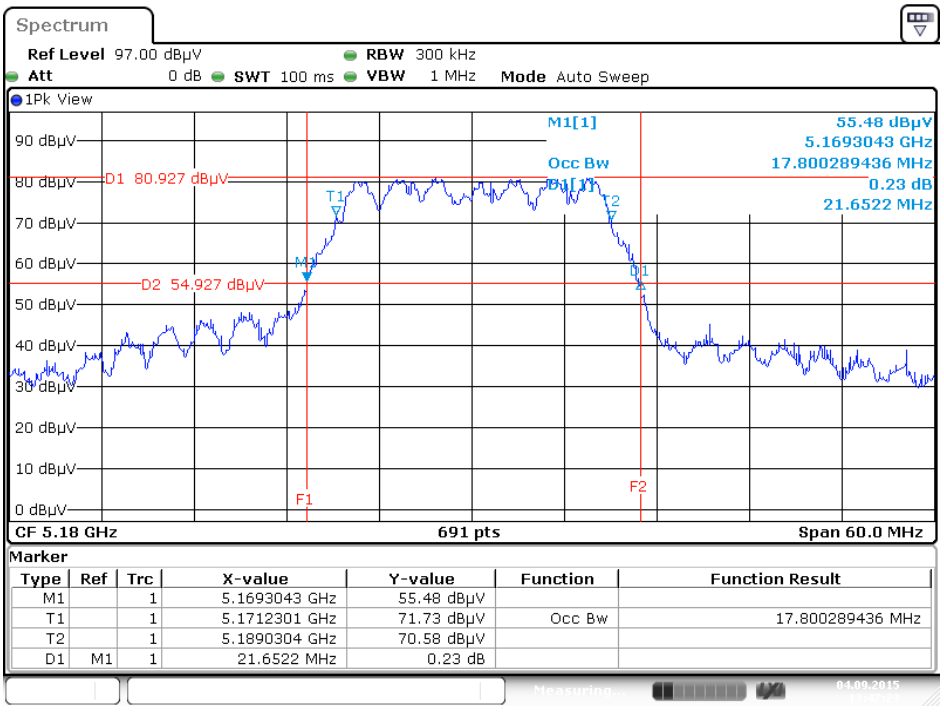

Date: 4.SEP.2015 14:00:59

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5825 MHz



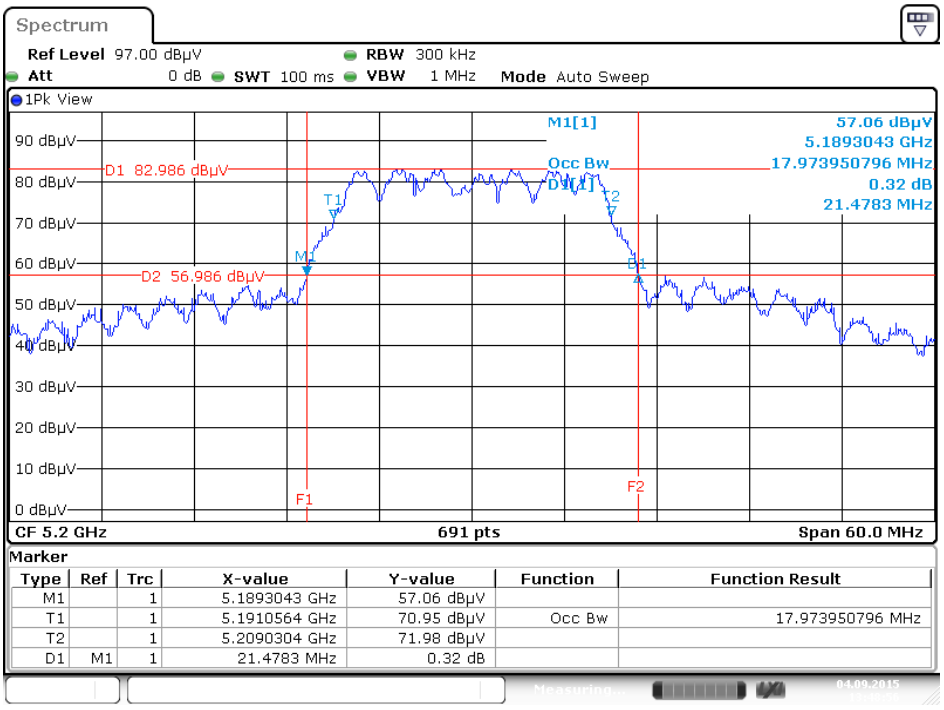

Date: 4.SEP.2015 14:00:01

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5180 MHz



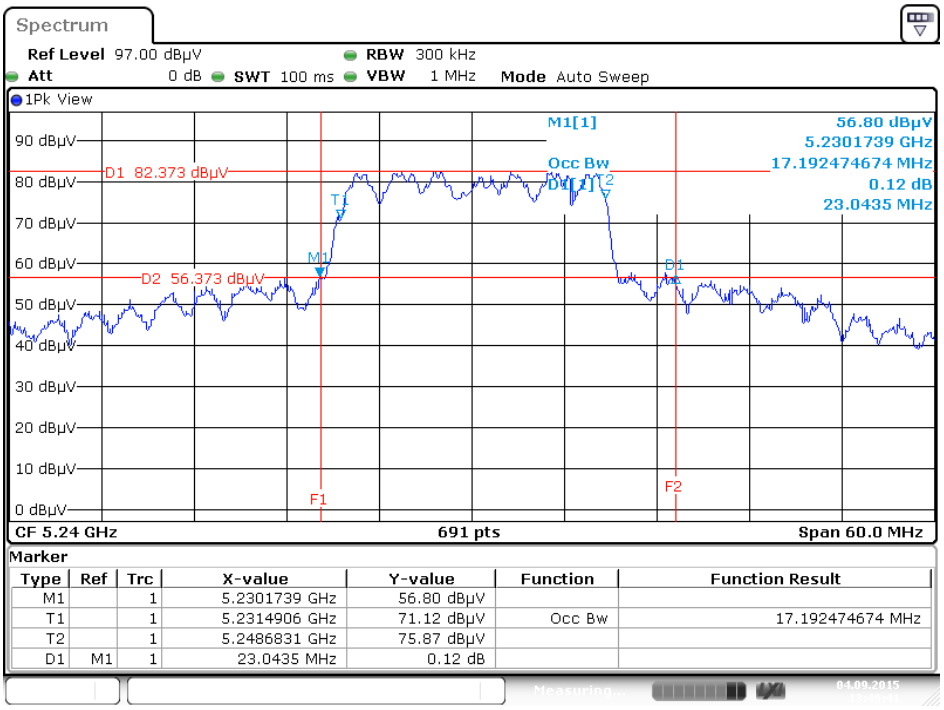

Date: 4.SEP.2015 13:47:23

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5200 MHz



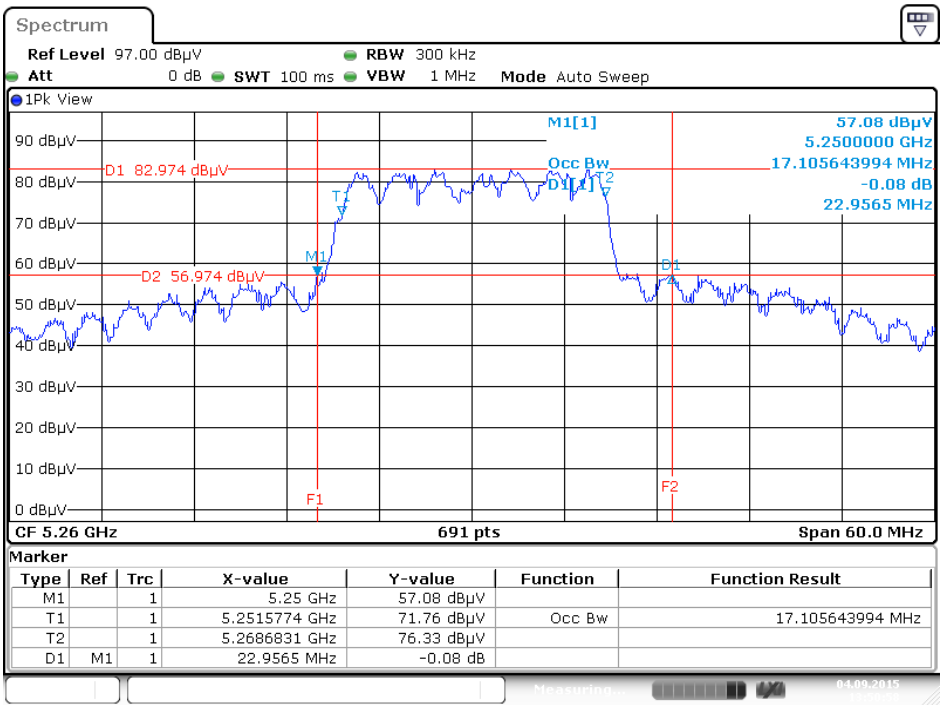

Date: 4.SEP.2015 13:48:57

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5240 MHz



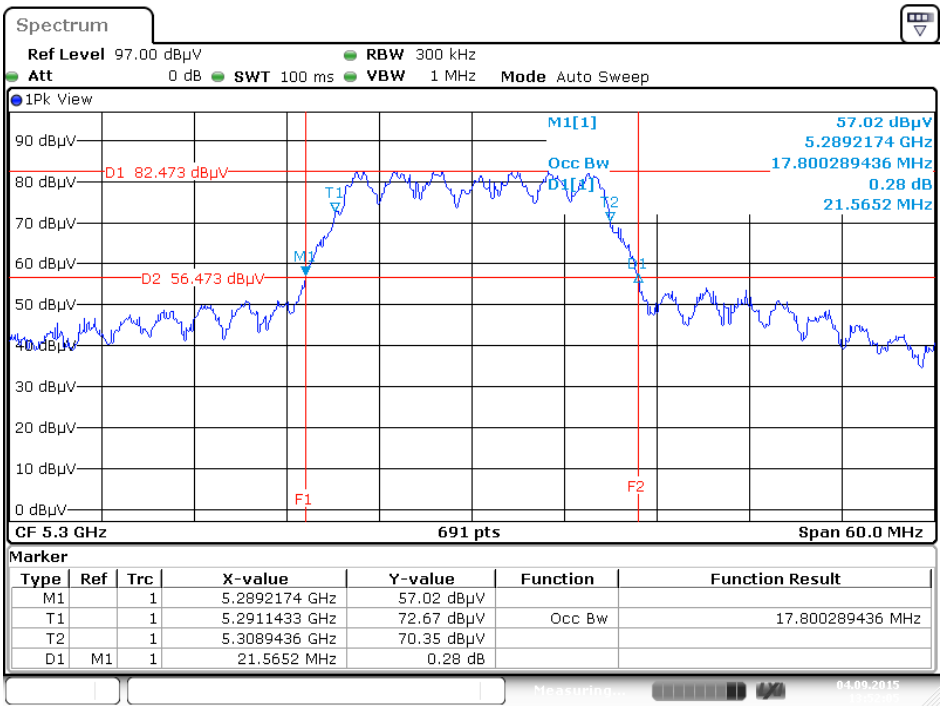

Date: 4.SEP.2015 13:49:41

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5260 MHz



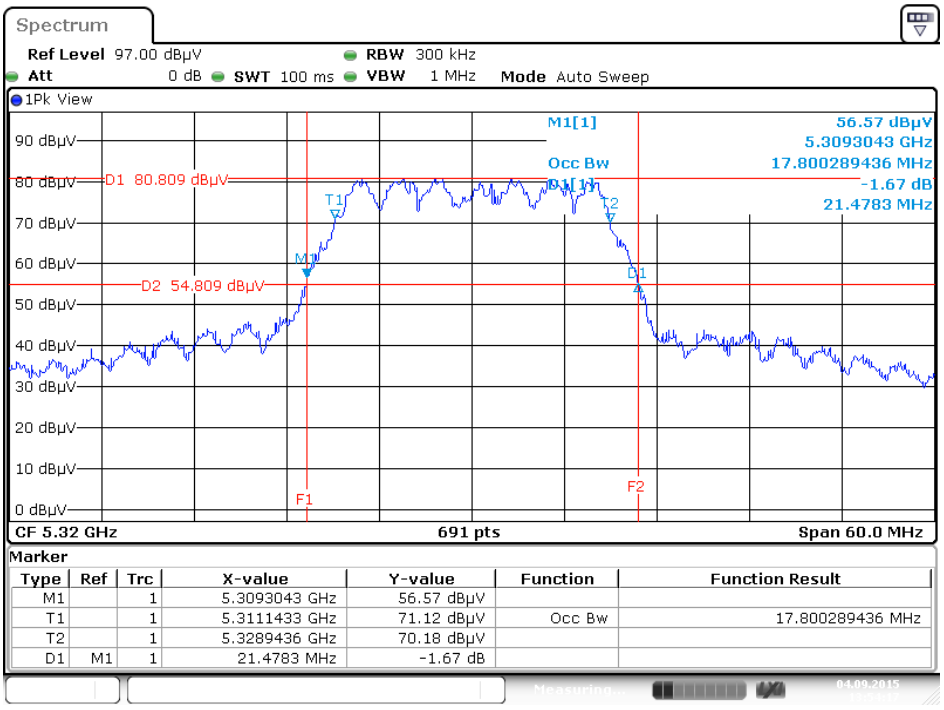

Date: 4.SEP.2015 13:50:58

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5300 MHz



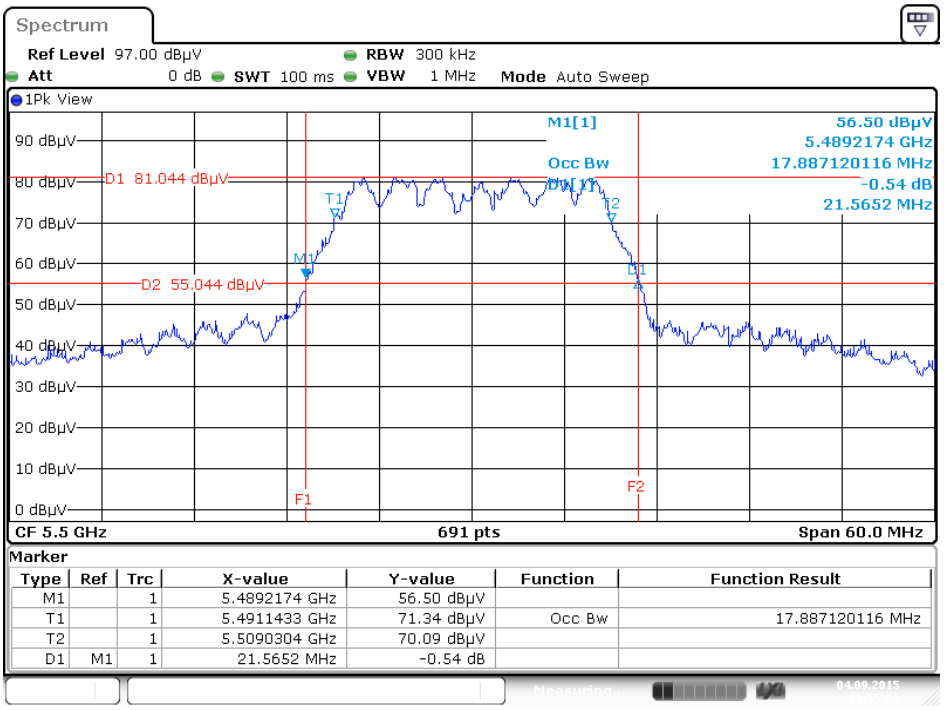

Date: 4.SEP.2015 13:52:05

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5320 MHz



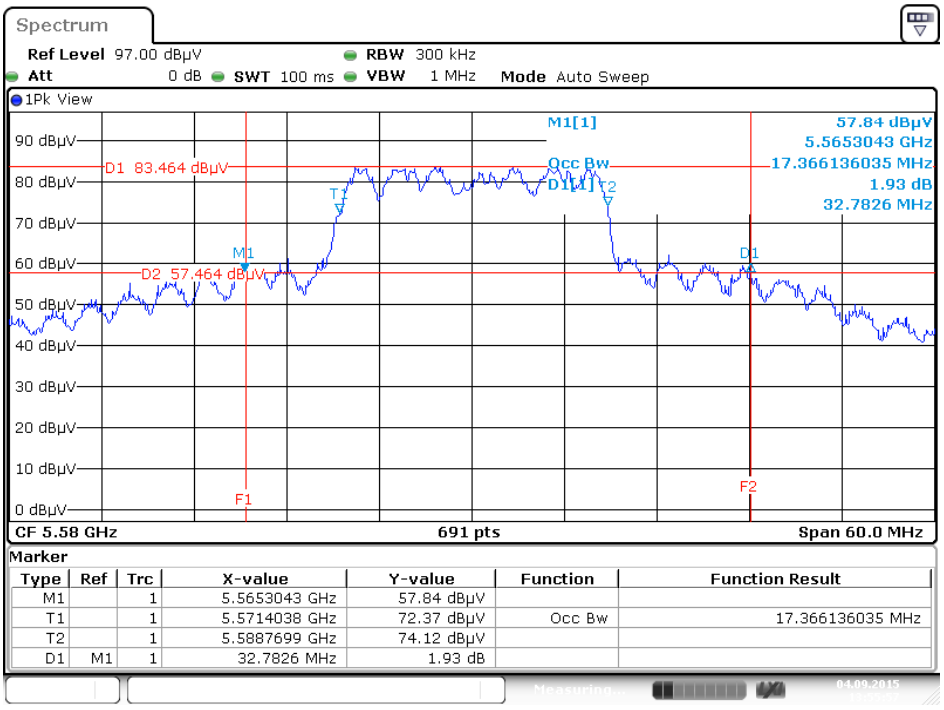

Date: 4.SEP.2015 13:54:16

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5500 MHz



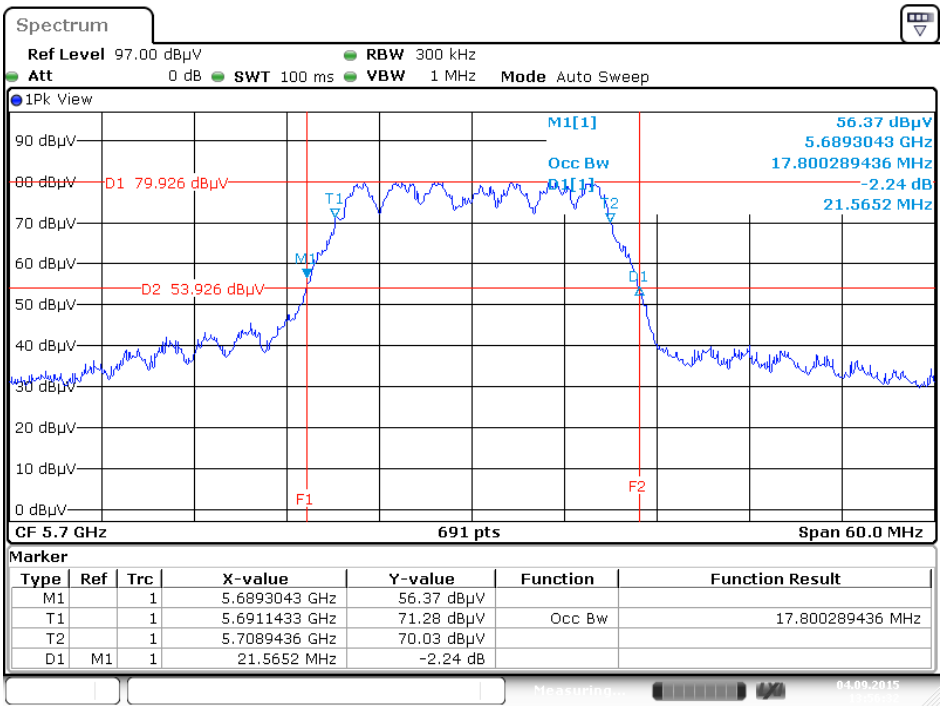

Date: 4.SEP.2015 13:55:06

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5580 MHz



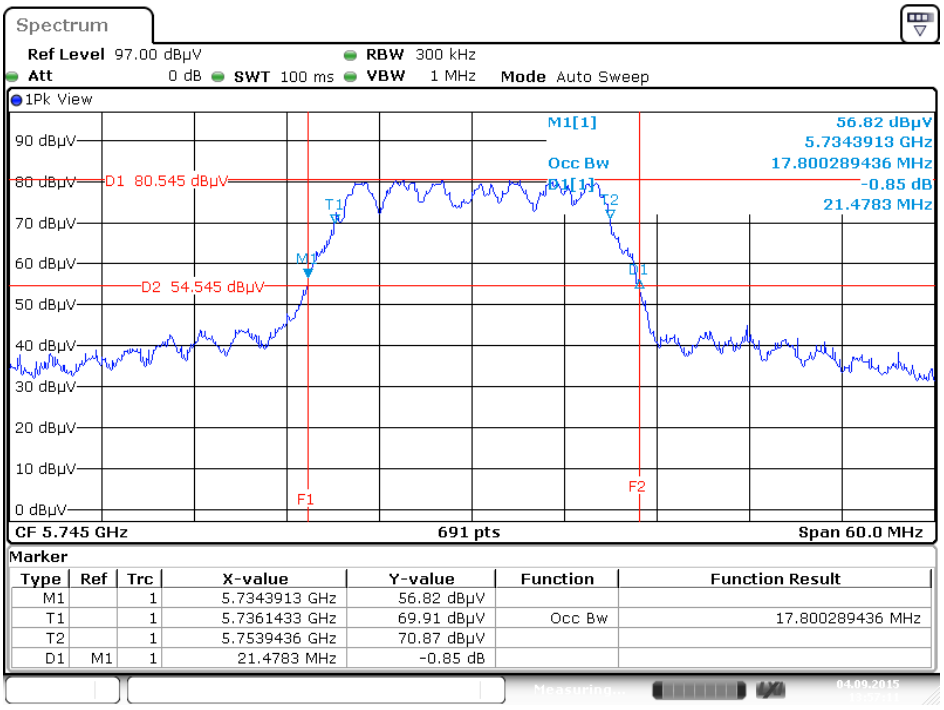

Date: 4.SEP.2015 13:55:57

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5700 MHz



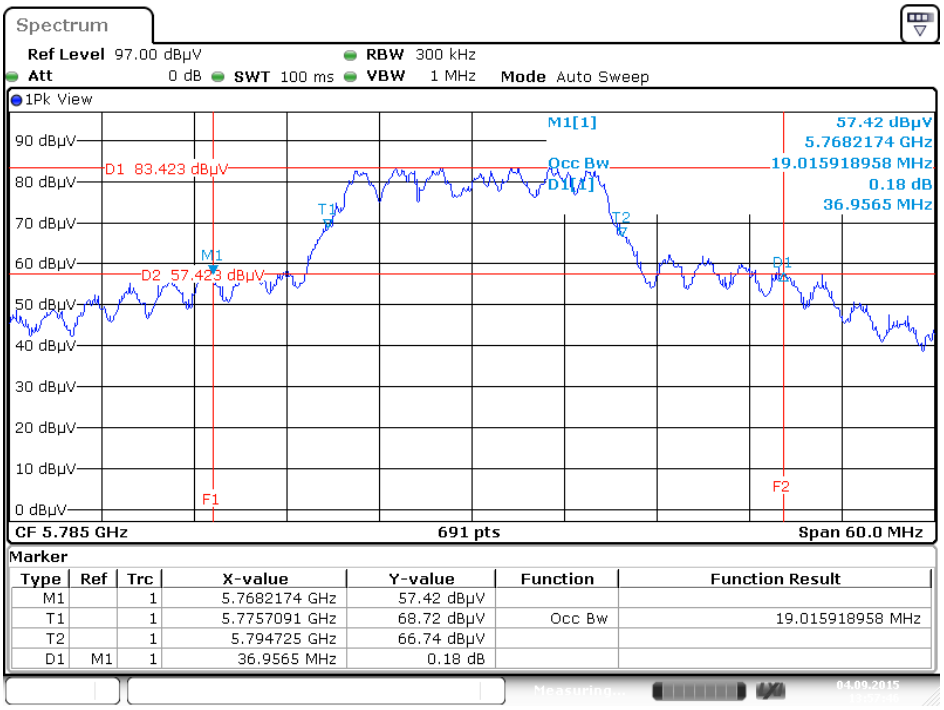

Date: 4.SEP.2015 13:56:32

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5745 MHz



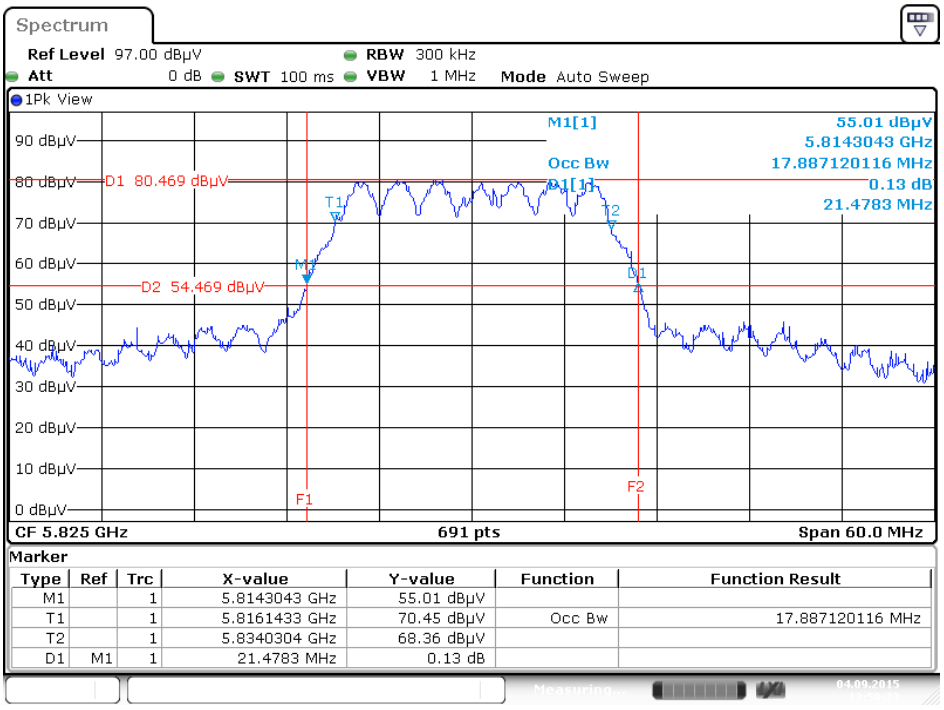

Date: 4.SEP.2015 13:57:11

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5785 MHz



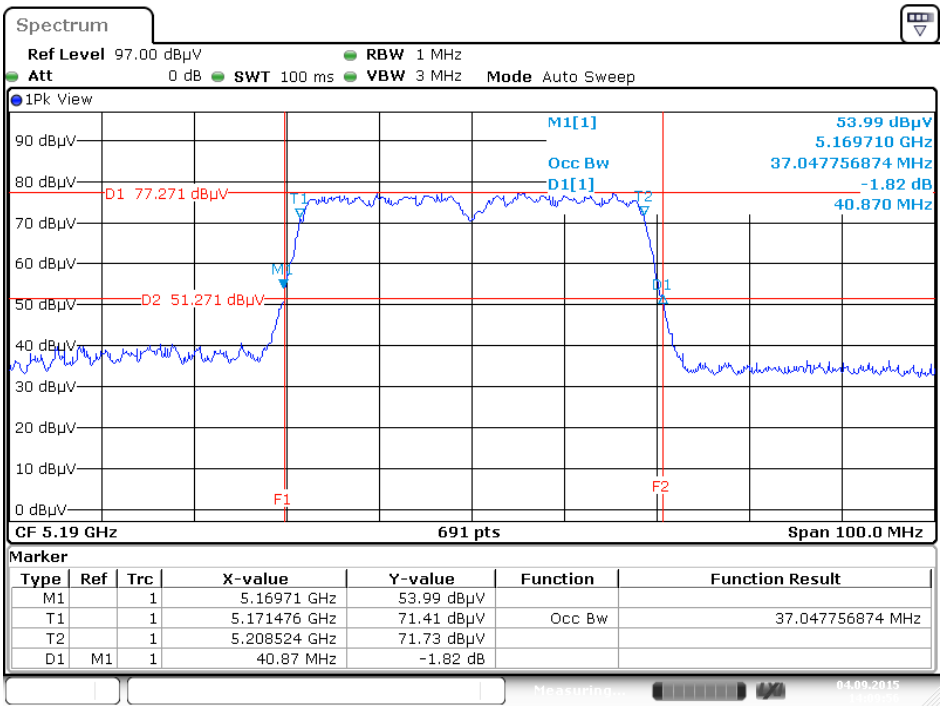

Date: 4.SEP.2015 13:57:46

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5825 MHz



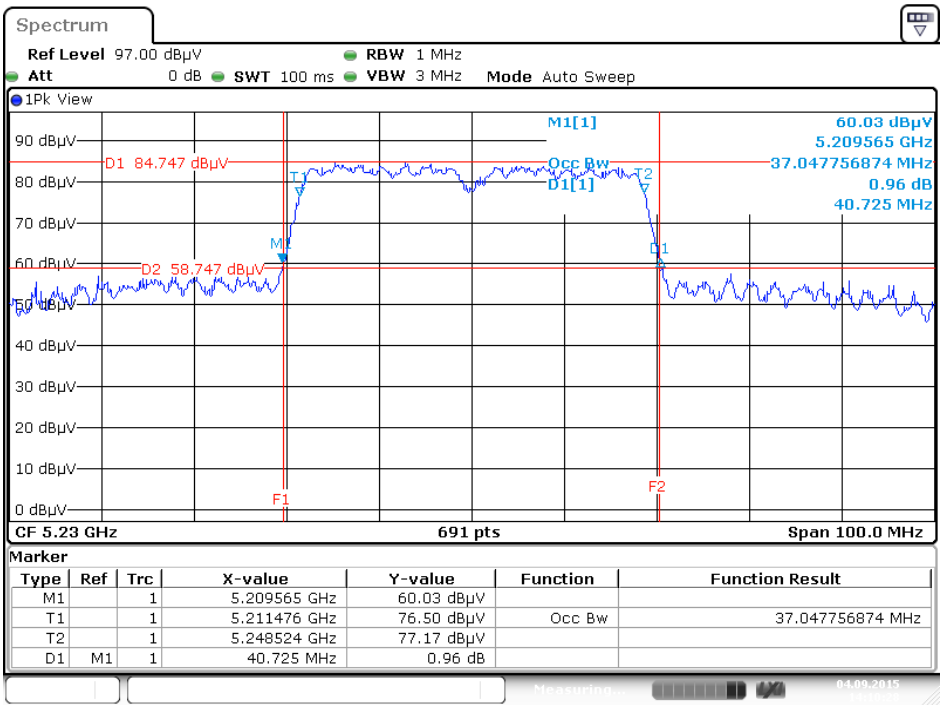

Date: 4.SEP.2015 13:58:23

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5190 MHz



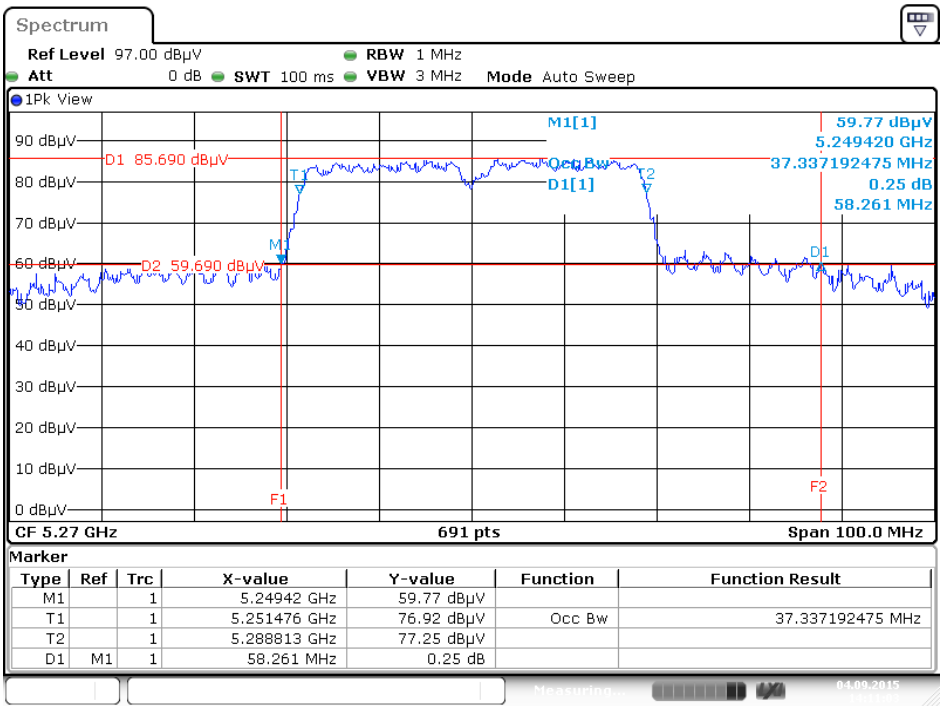

Date: 4.SEP.2015 14:09:56

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5230 MHz



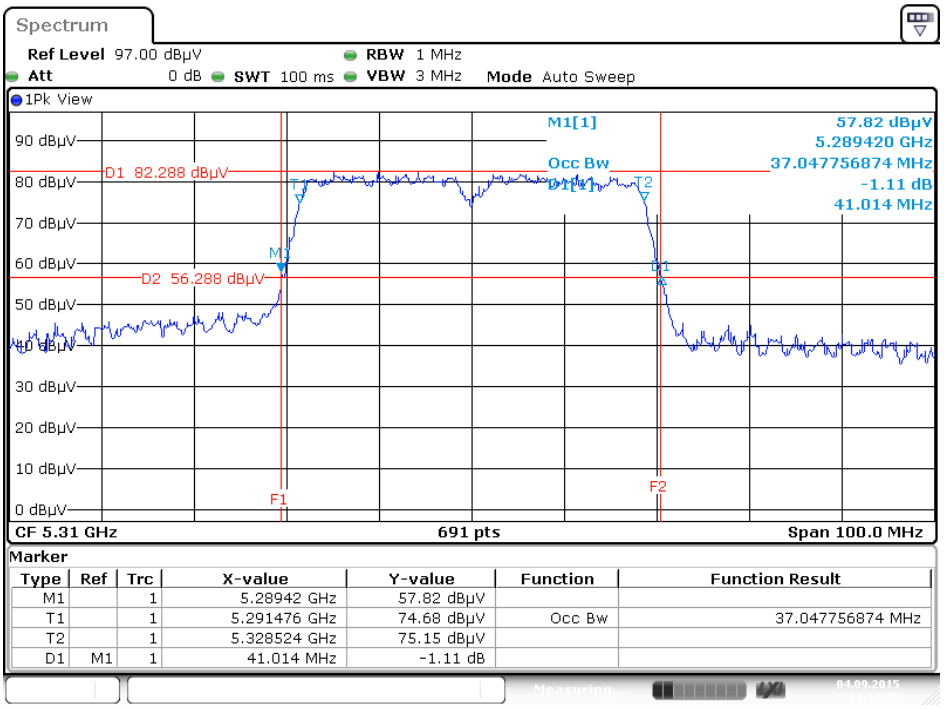

Date: 4.SEP.2015 14:10:28

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5270 MHz



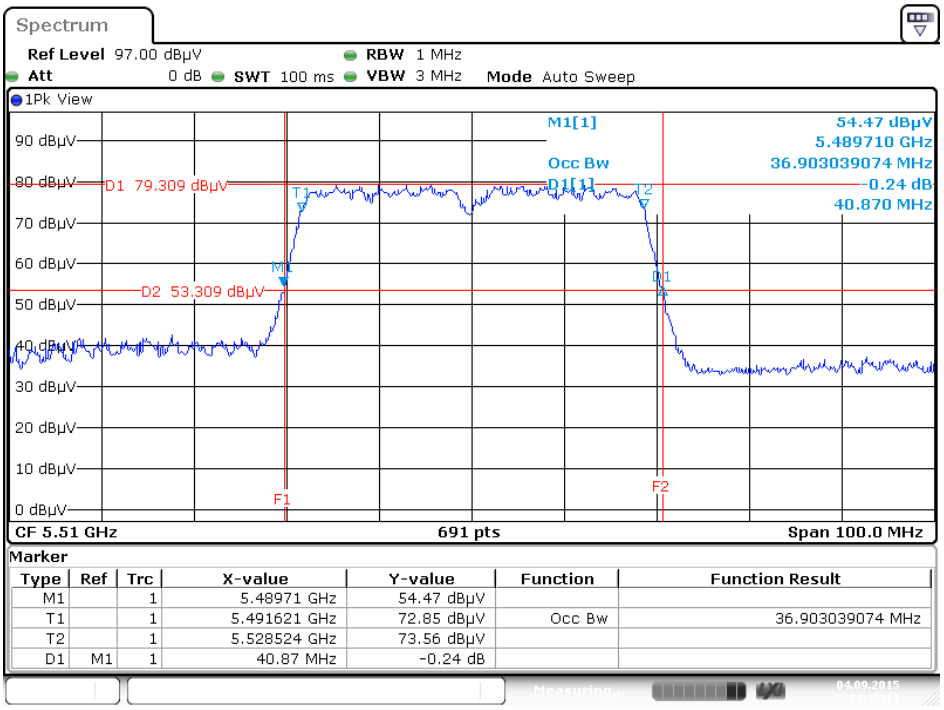

Date: 4.SEP.2015 14:11:03

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5310 MHz



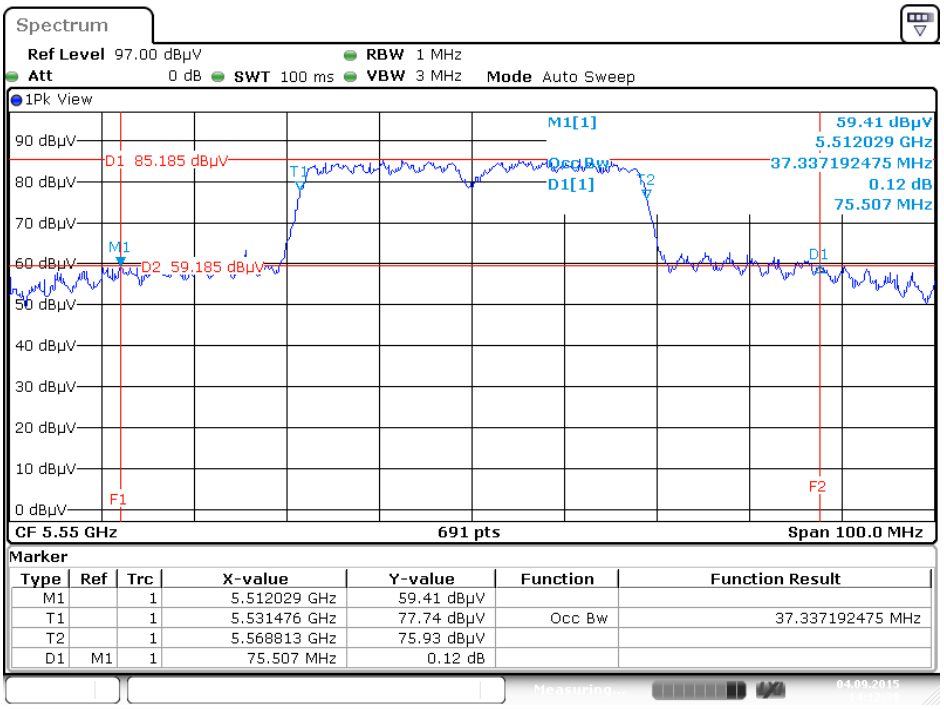

Date: 4.SEP.2015 14:11:35

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5510 MHz



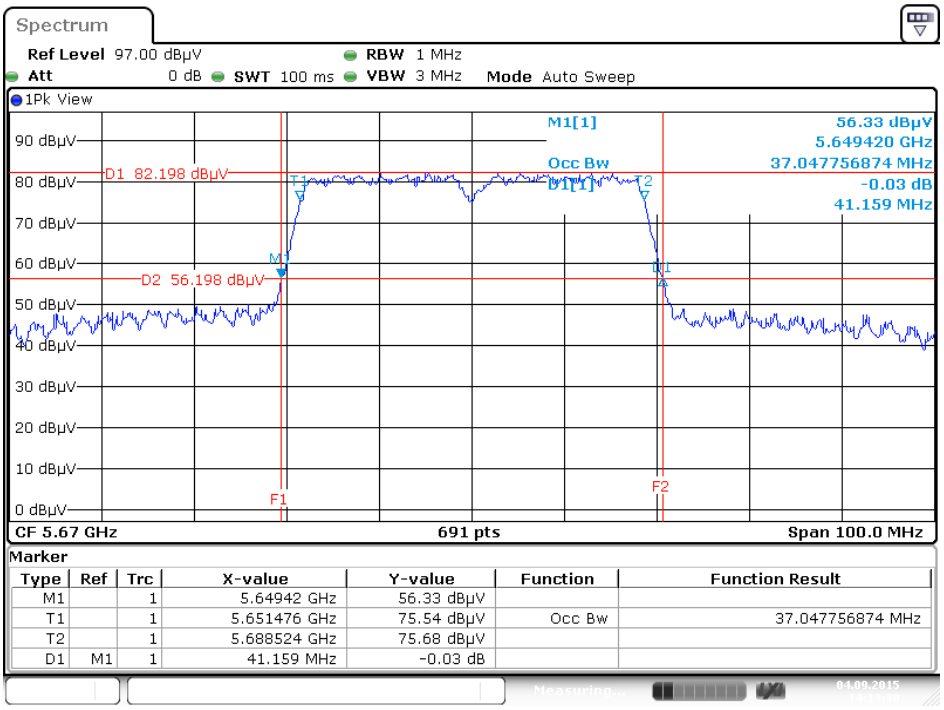

Date: 4.SEP.2015 14:12:11

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5550 MHz



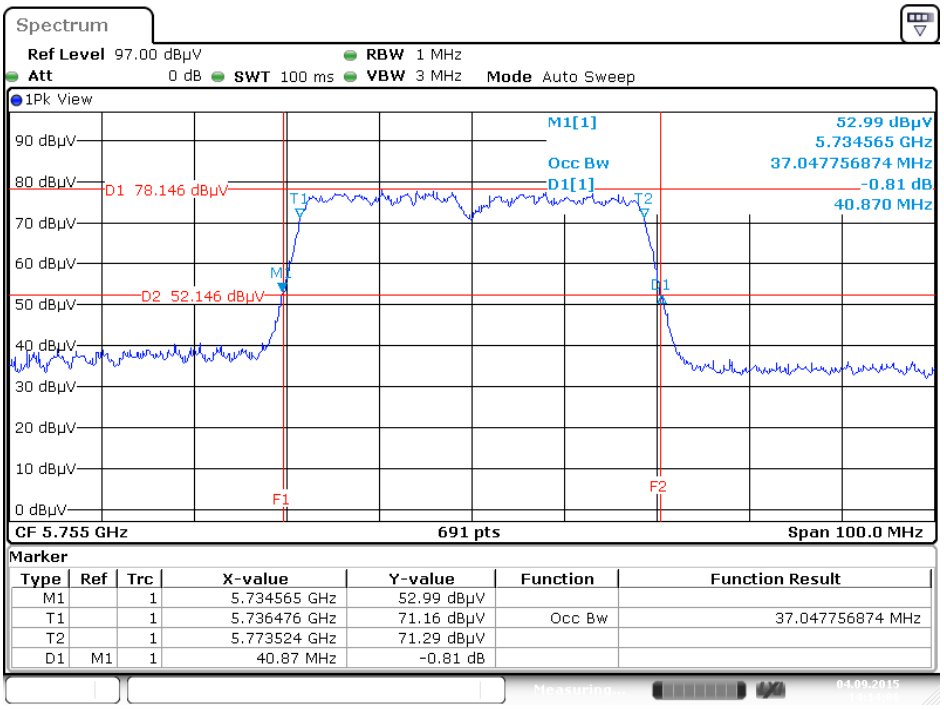

Date: 4.SEP.2015 14:12:38

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5670 MHz



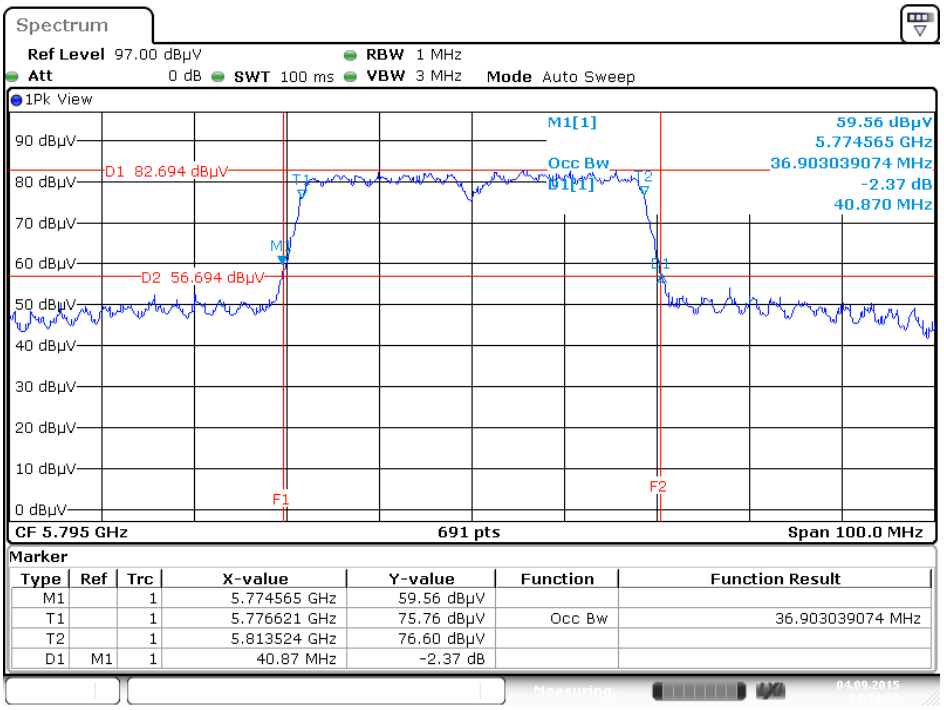

Date: 4.SEP.2015 14:13:30

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5755 MHz



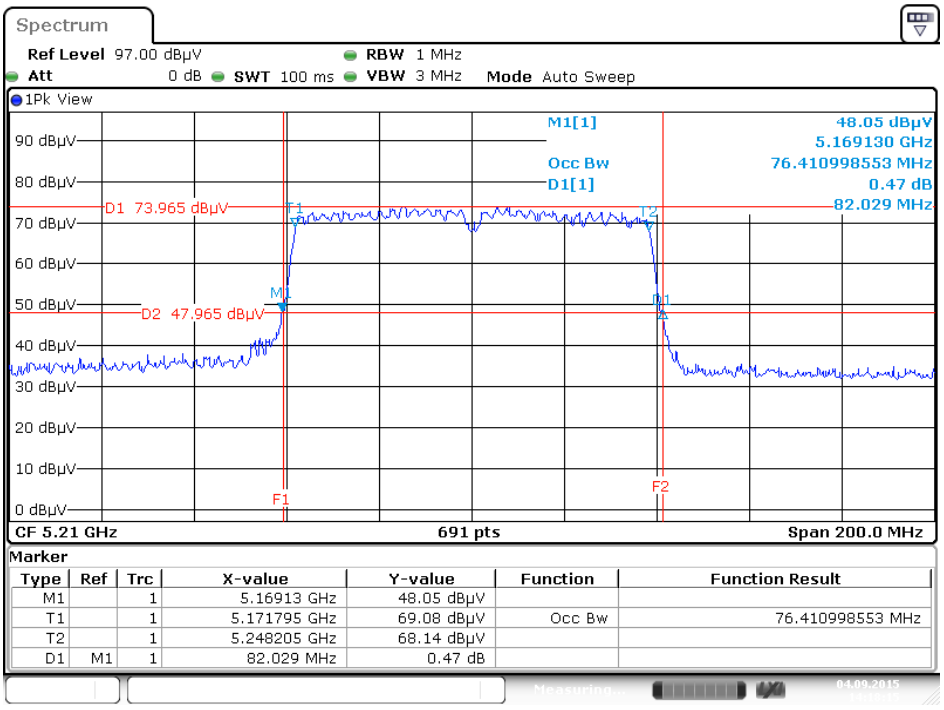

Date: 4.SEP.2015 14:14:06

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5795 MHz



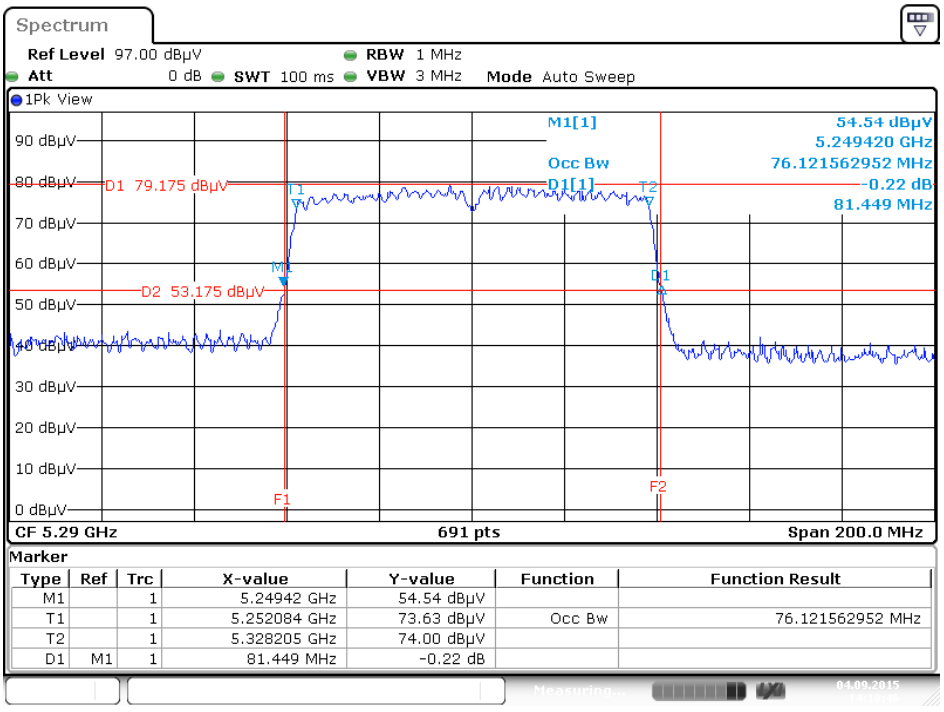

Date: 4.SEP.2015 14:14:37

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz



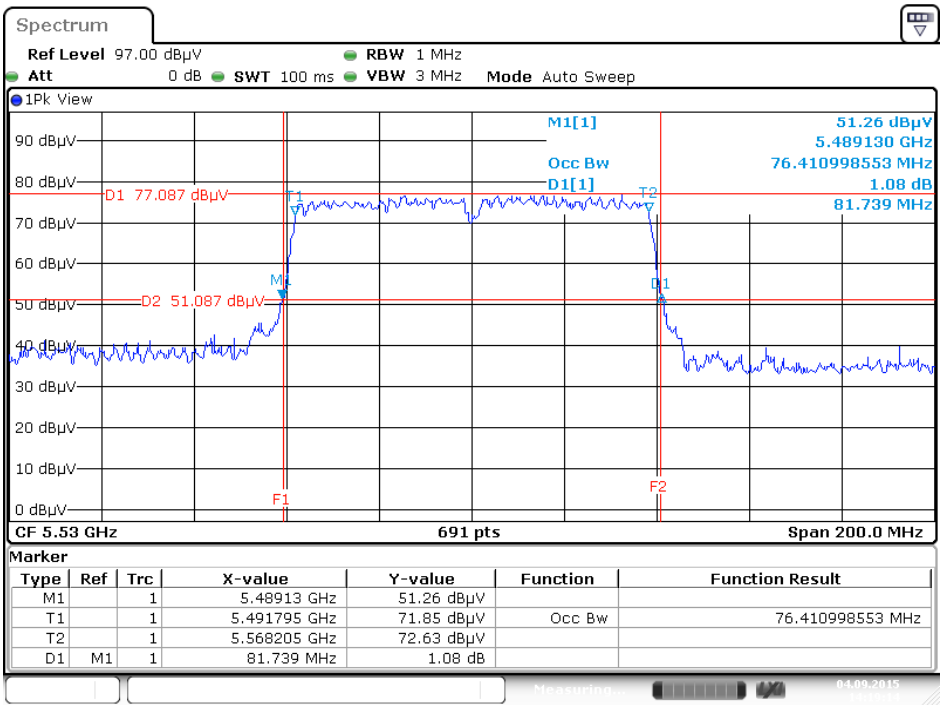

Date: 4.SEP.2015 14:18:15

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5290 MHz



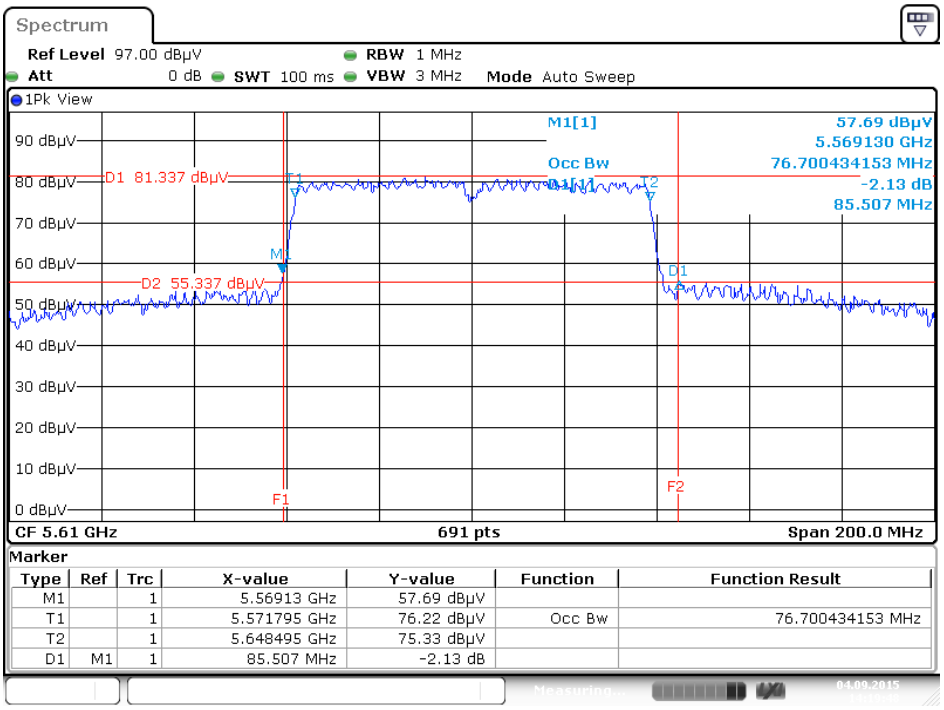

Date: 4.SEP.2015 14:18:46

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5530 MHz



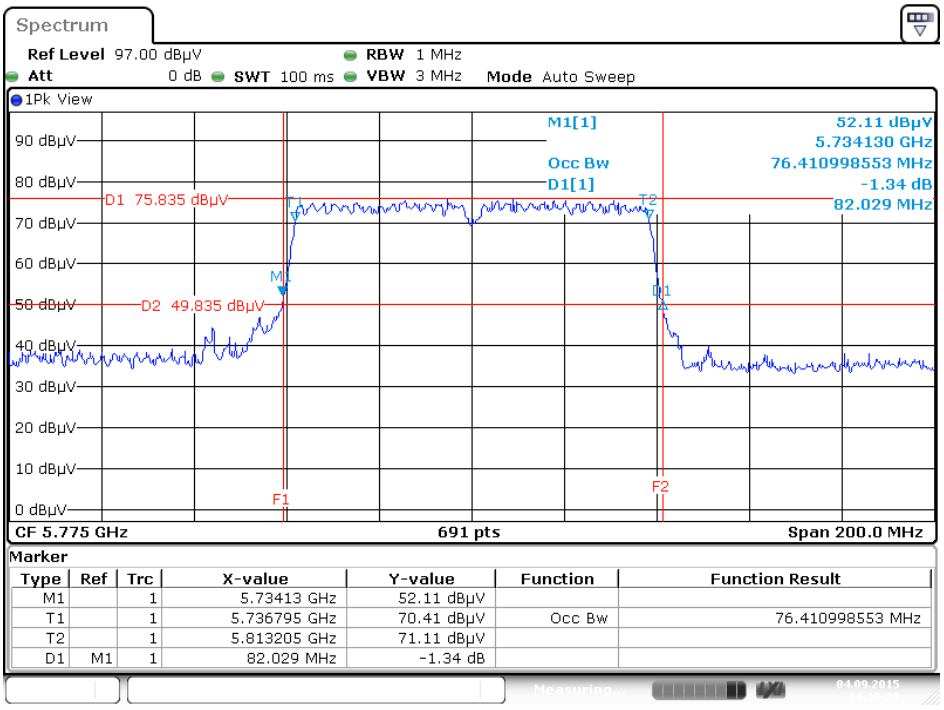

Date: 4.SEP.2015 14:19:14

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5610 MHz




Date: 4.SEP.2015 14:19:48

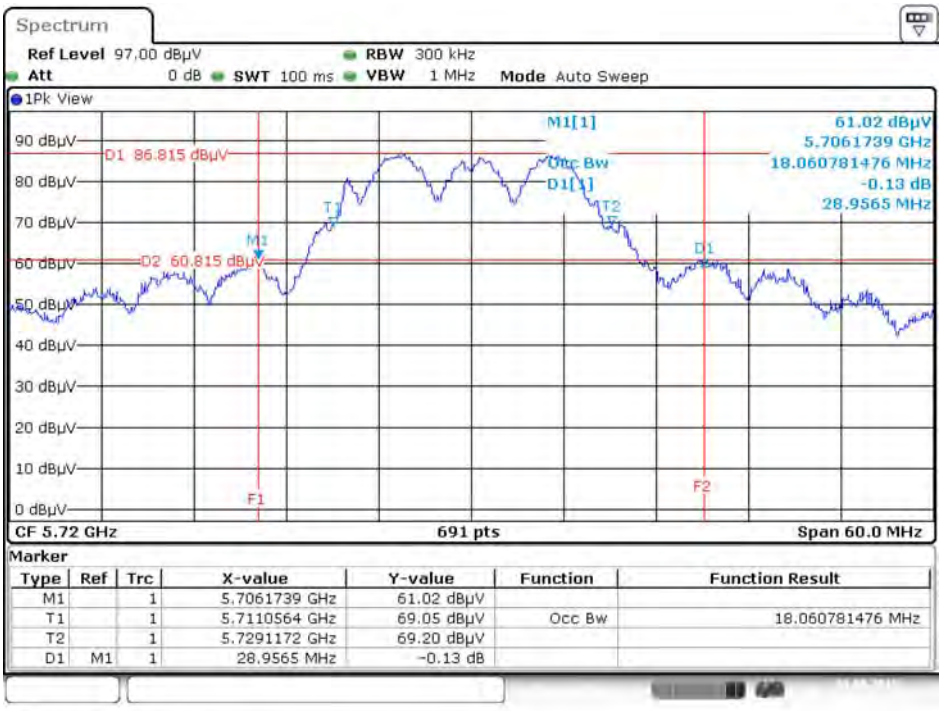
## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5775 MHz




Date: 4.SEP.2015 14:20:28

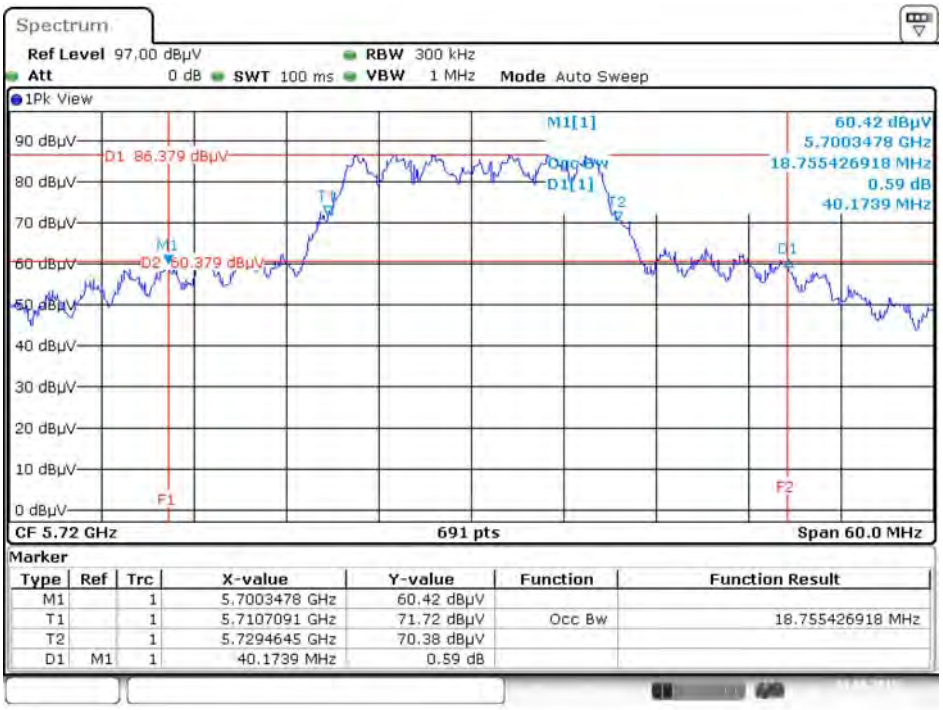
## Straddle Channel

### 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5720 MHz



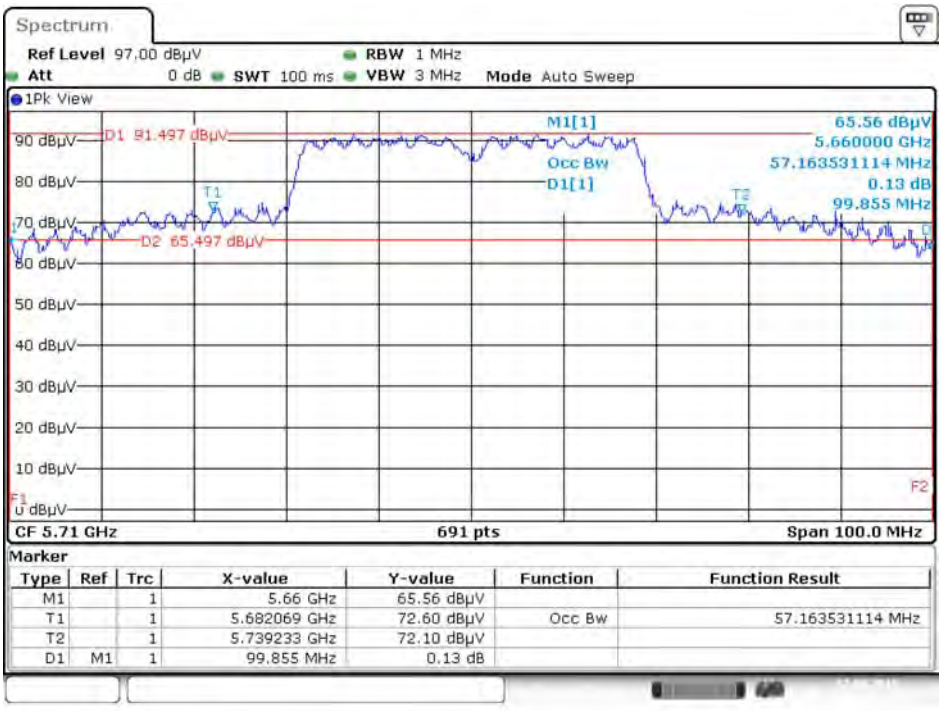

Date: 1.SEP.2015 02:26:49

### 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5720 MHz



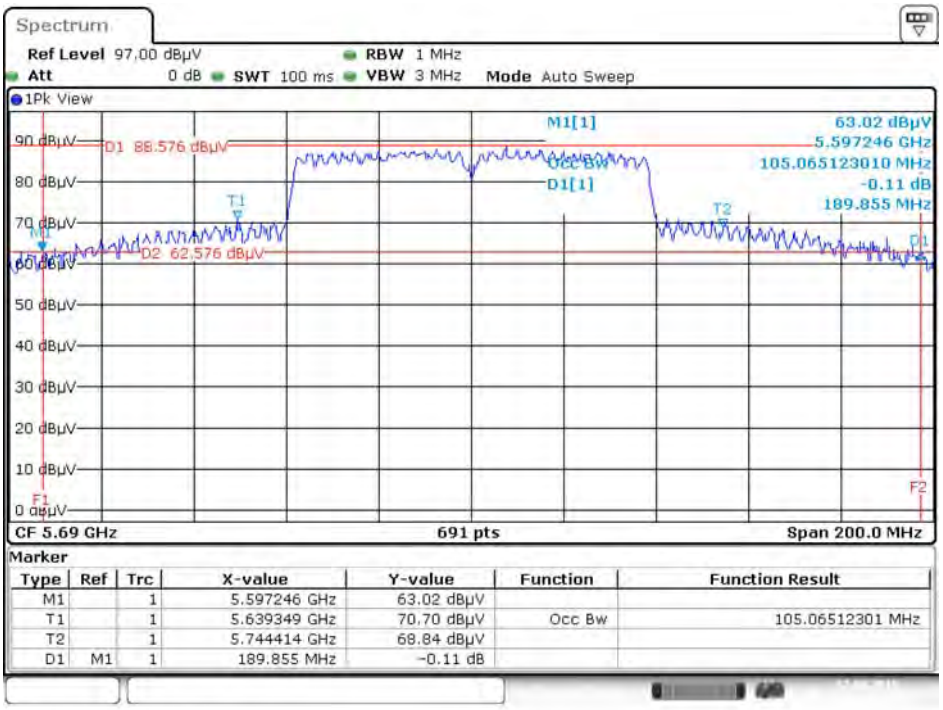

Date: 1.SEP.2015 02:29:54

**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5710 MHz**




Date: 22.AUG.2015 01:29:10

**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5690 MHz**

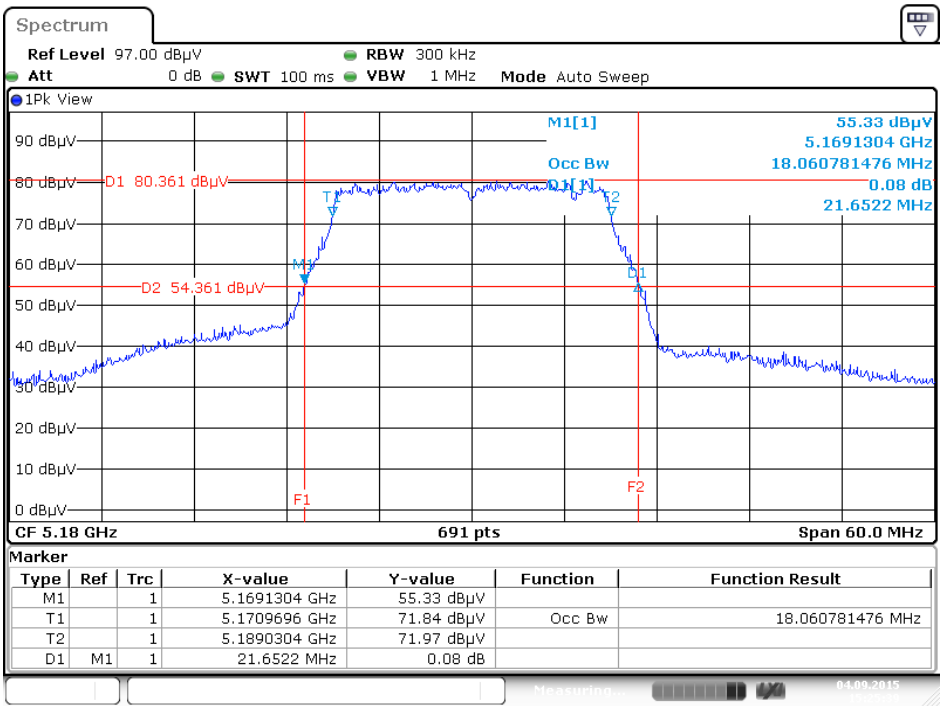



Date: 22.AUG.2015 01:26:46

For Radio: R0

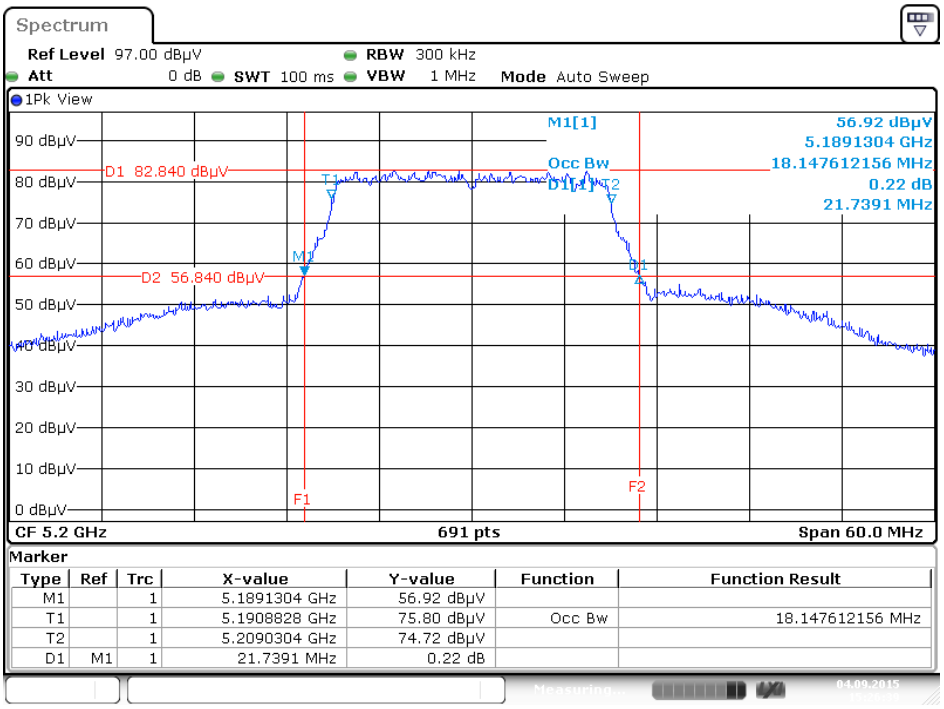
For beamforming function:

**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5180 MHz**



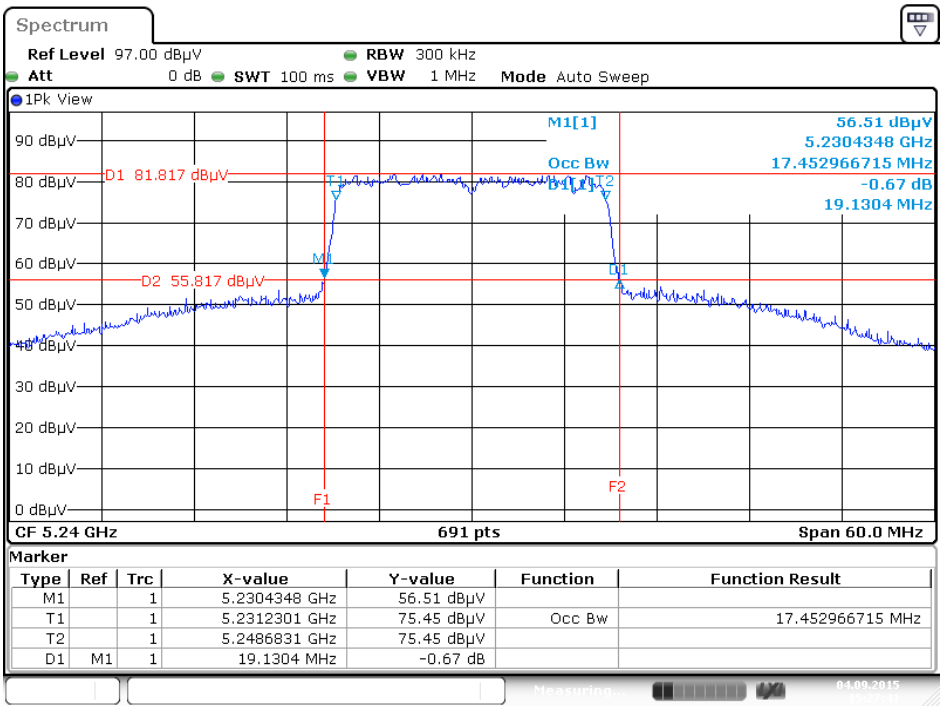

Date: 4.SEP.2015 15:25:39

**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5200 MHz**



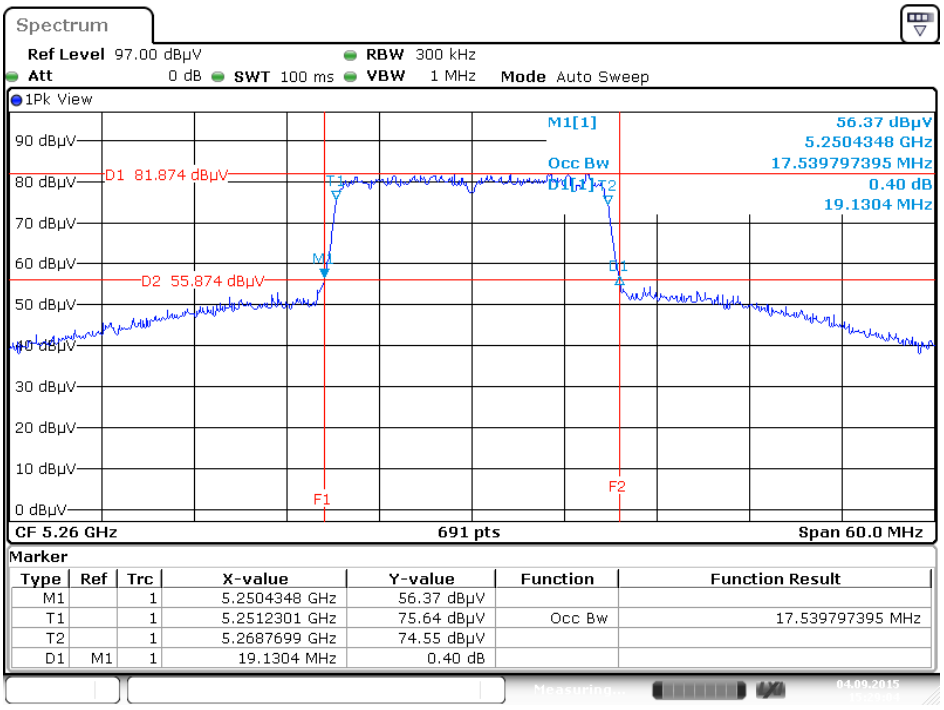

Date: 4.SEP.2015 15:26:39

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5240 MHz



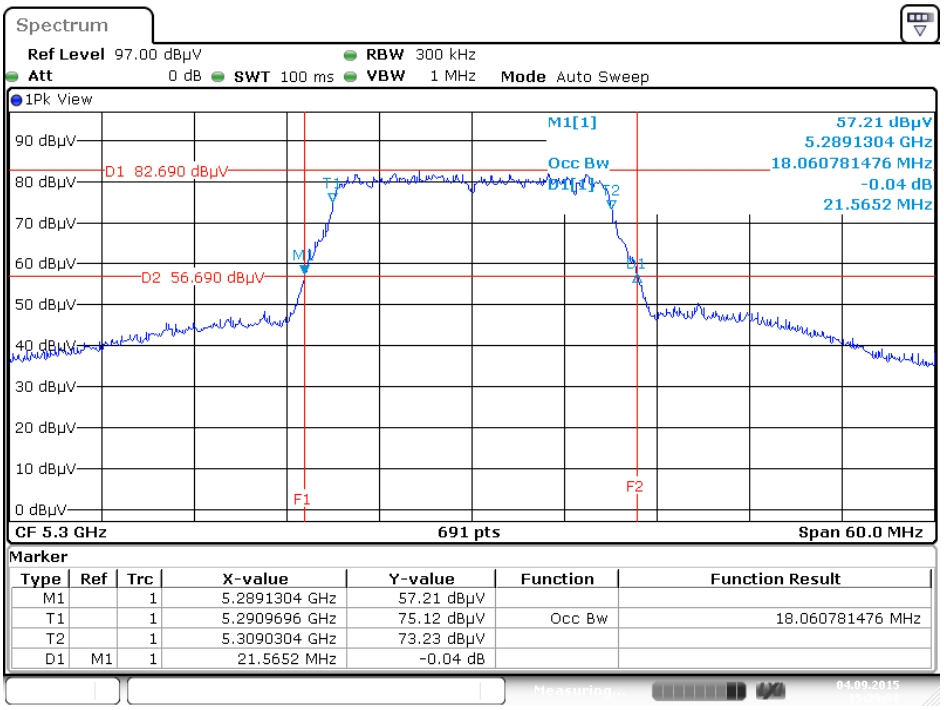

Date: 4.SEP.2015 15:27:41

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5260 MHz



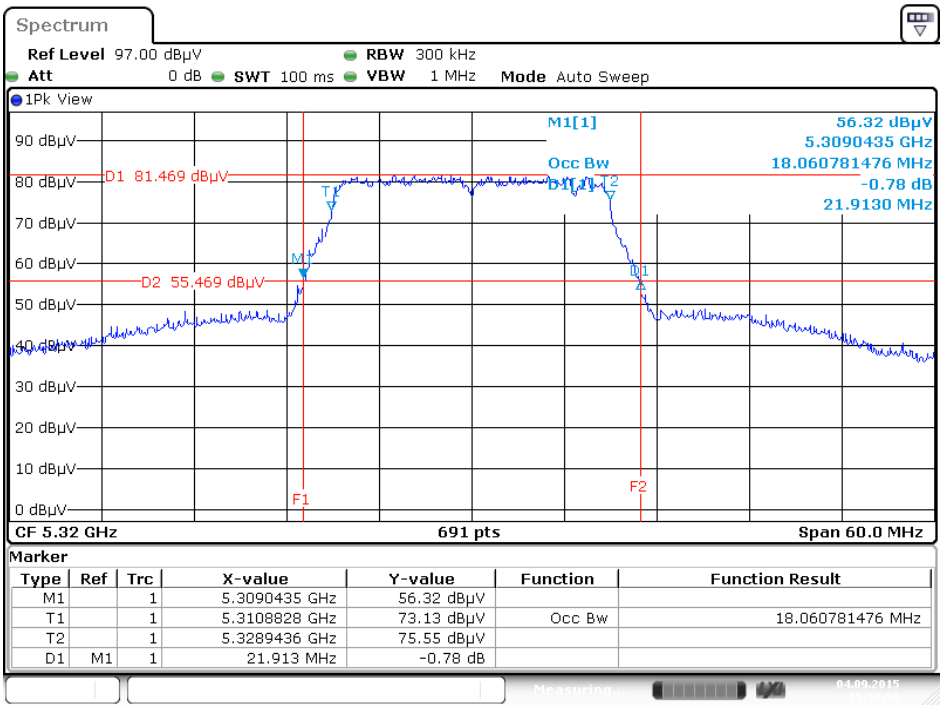

Date: 4.SEP.2015 15:29:04

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5300 MHz



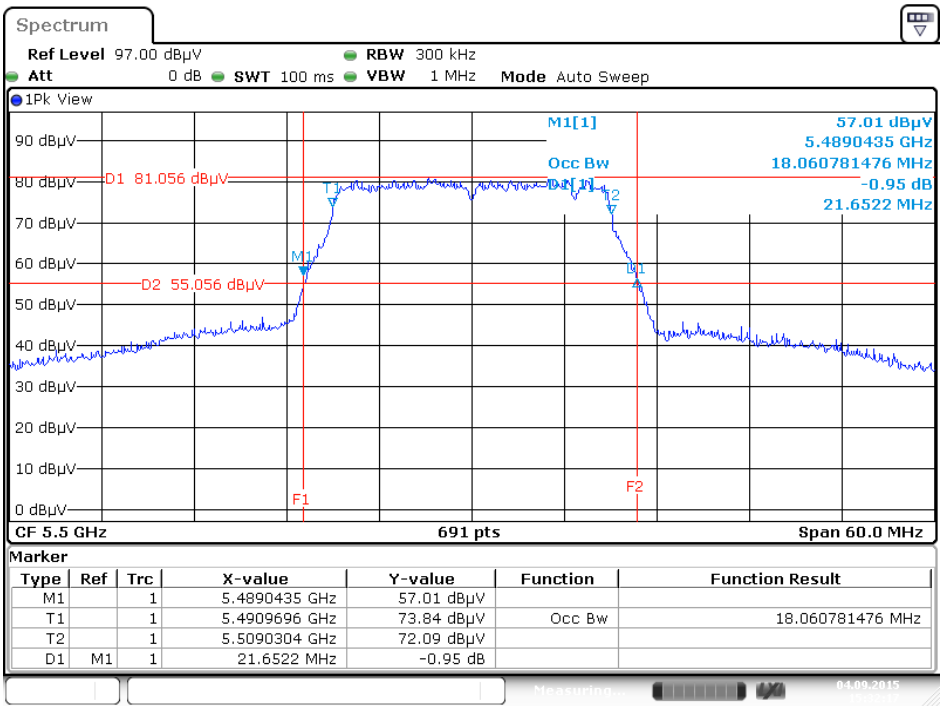

Date: 4.SEP.2015 15:29:37

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5320 MHz



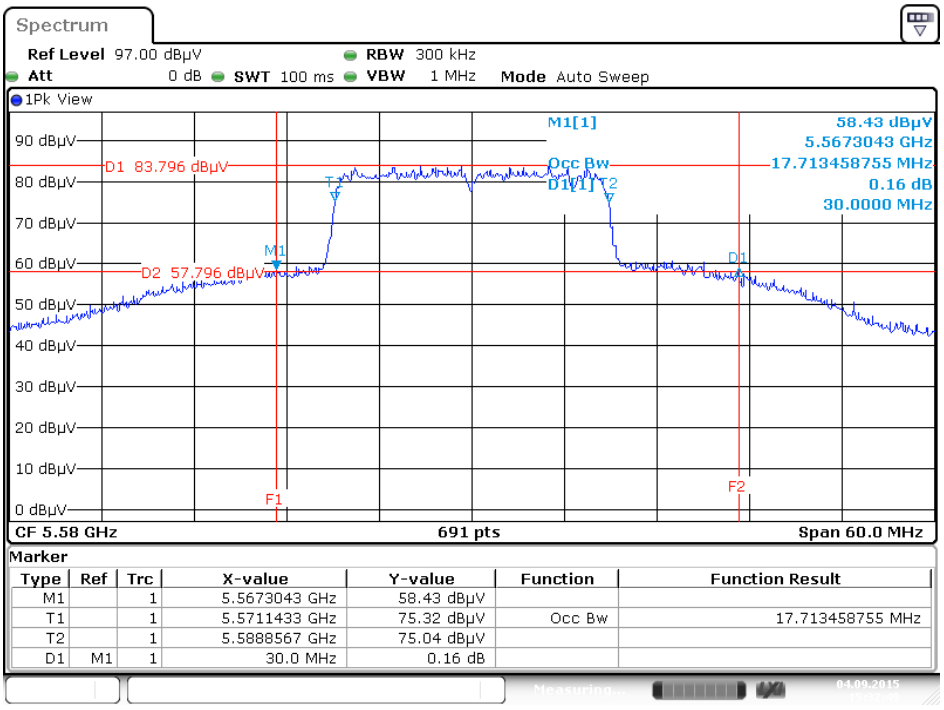

Date: 4.SEP.2015 15:30:56

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5500 MHz



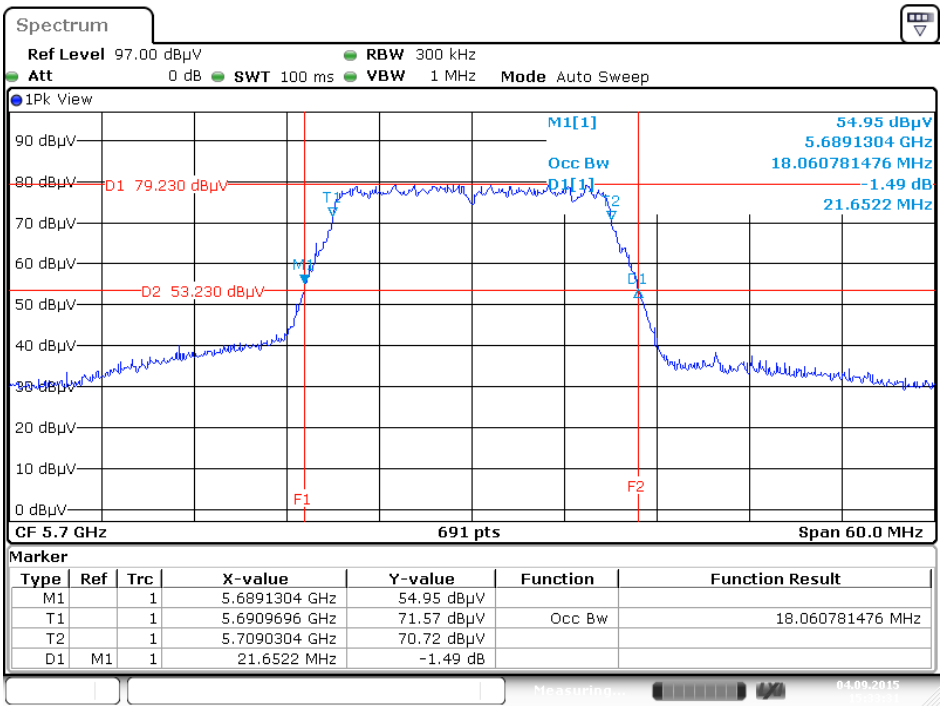

Date: 4.SEP.2015 15:32:17

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5580 MHz



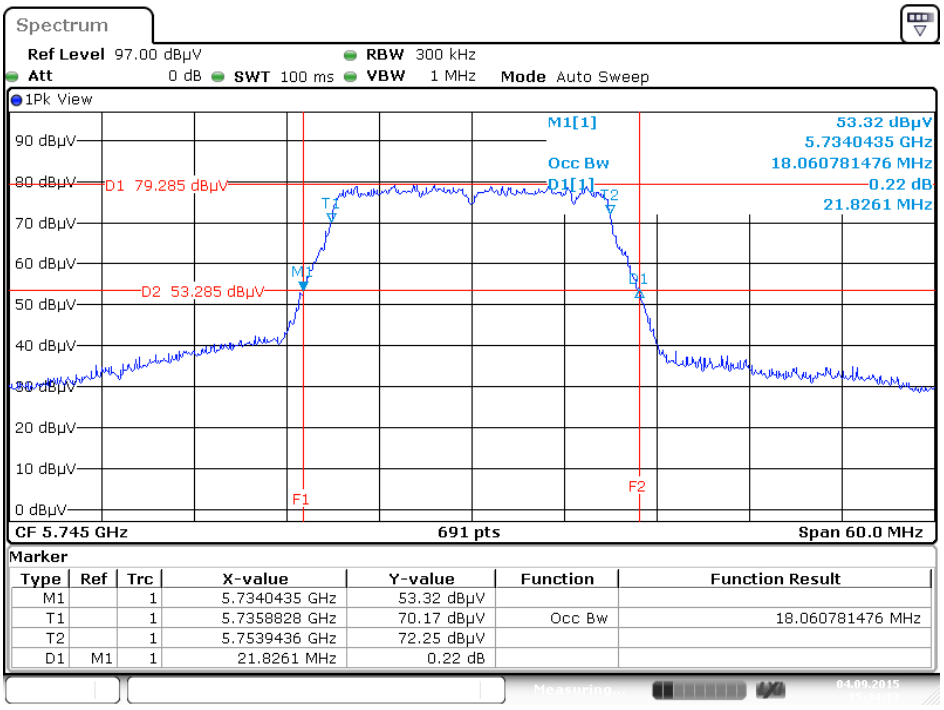

Date: 4.SEP.2015 15:32:50

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5700 MHz



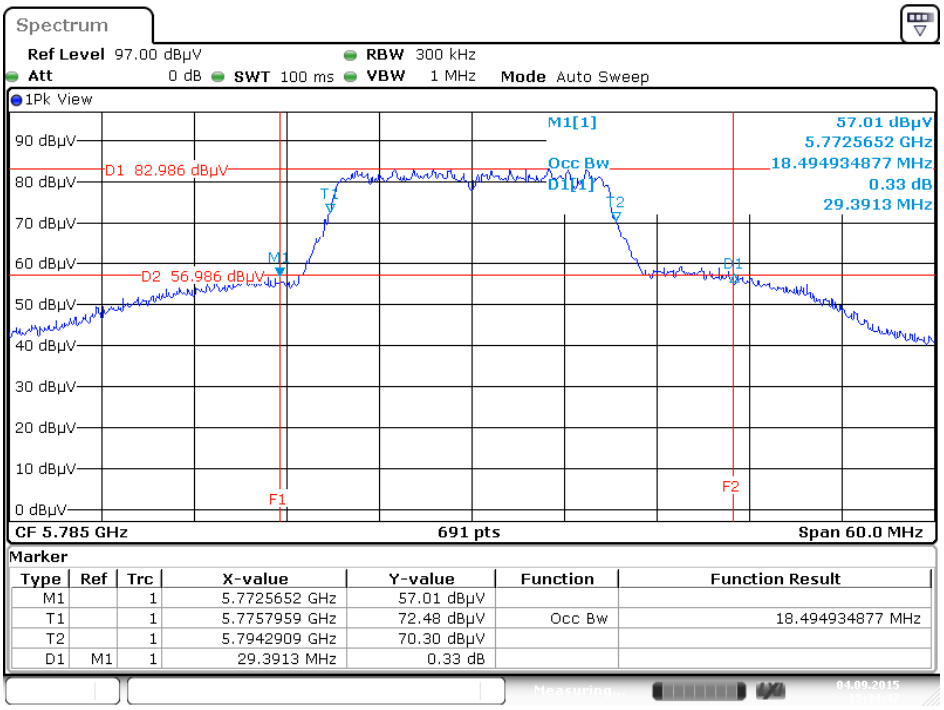

Date: 4.SEP.2015 15:33:31

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5745 MHz



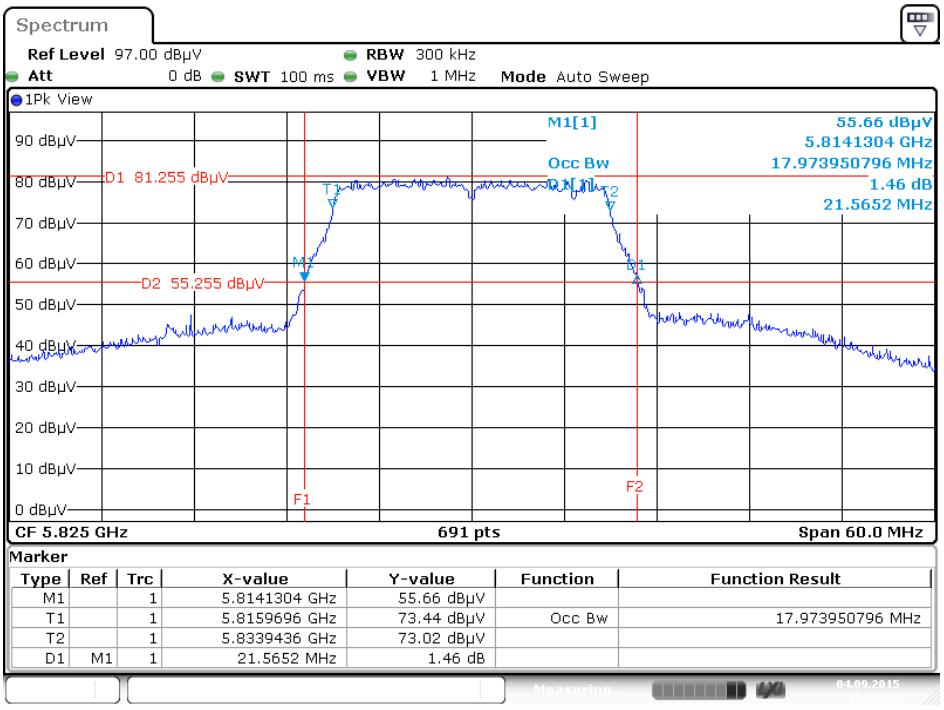

Date: 4.SEP.2015 15:34:13

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5785 MHz



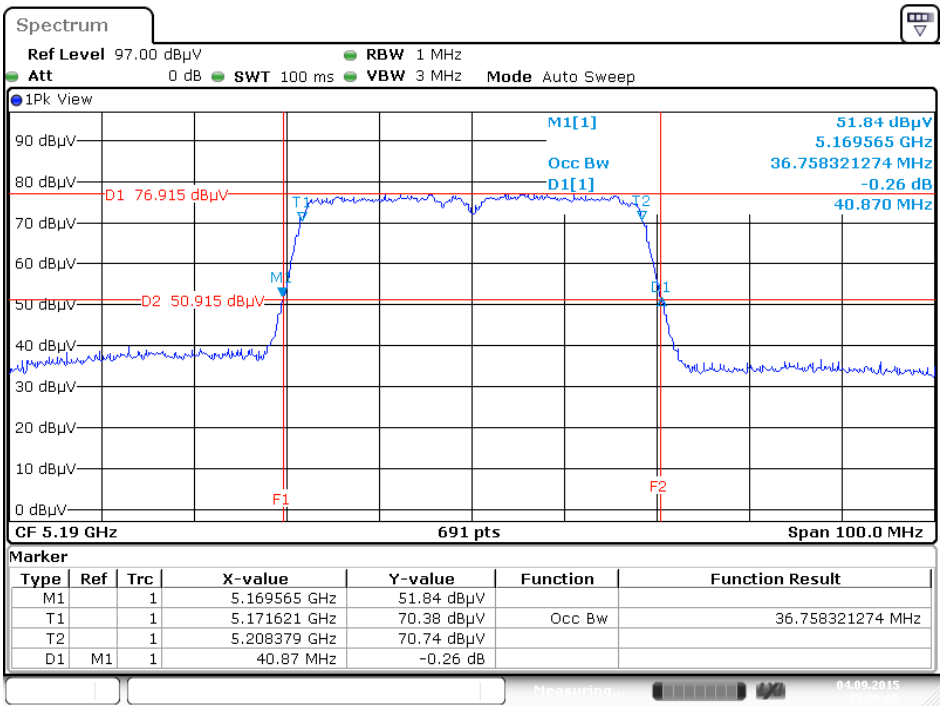

Date: 4.SEP.2015 15:34:48

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5825 MHz



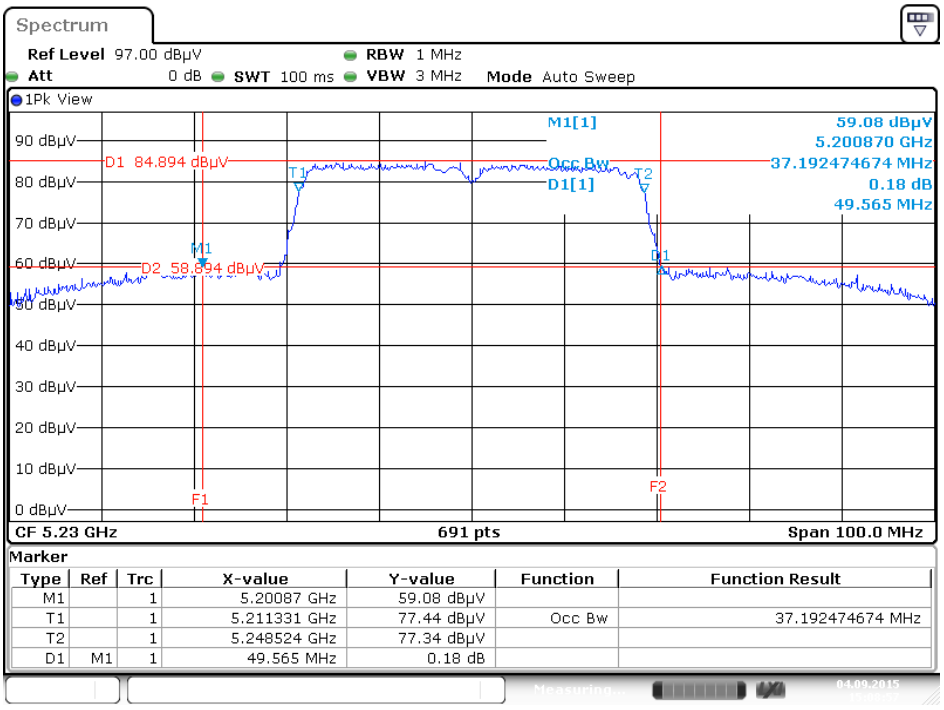

Date: 4.SEP.2015 15:35:26

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5190 MHz



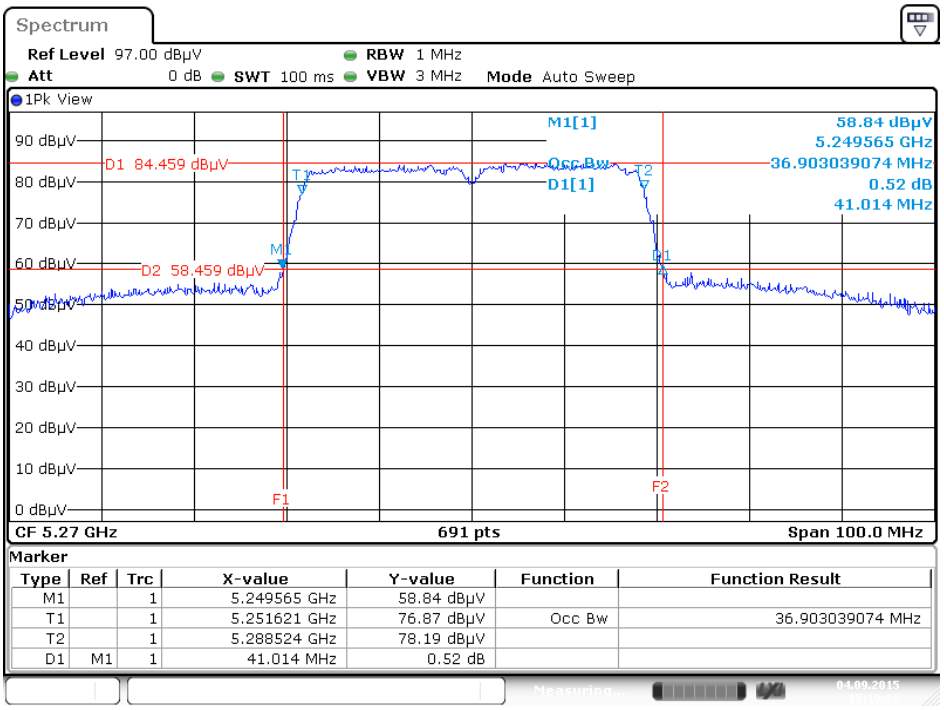

Date: 4.SEP.2015 15:08:05

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5230 MHz



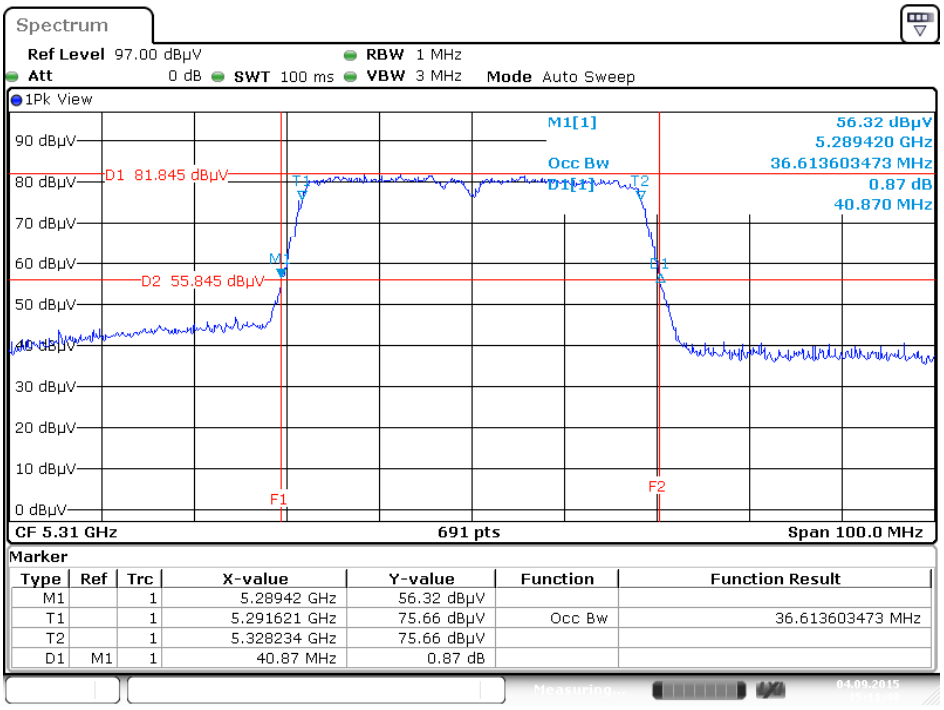

Date: 4.SEP.2015 15:08:57

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5270 MHz



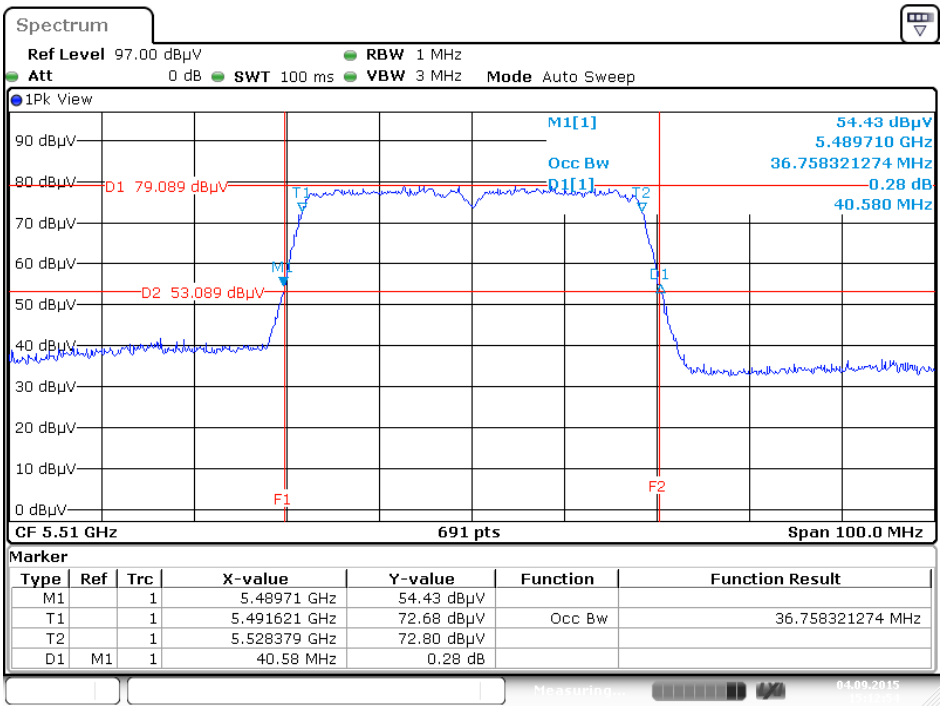

Date: 4.SEP.2015 15:10:26

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5310 MHz



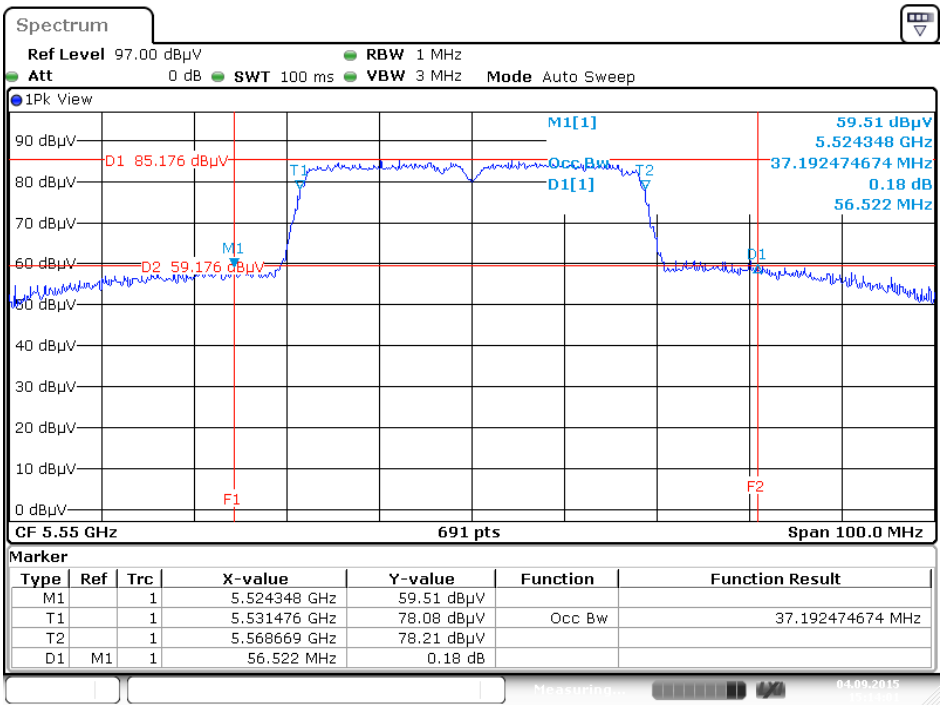

Date: 4.SEP.2015 15:11:48

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5510 MHz



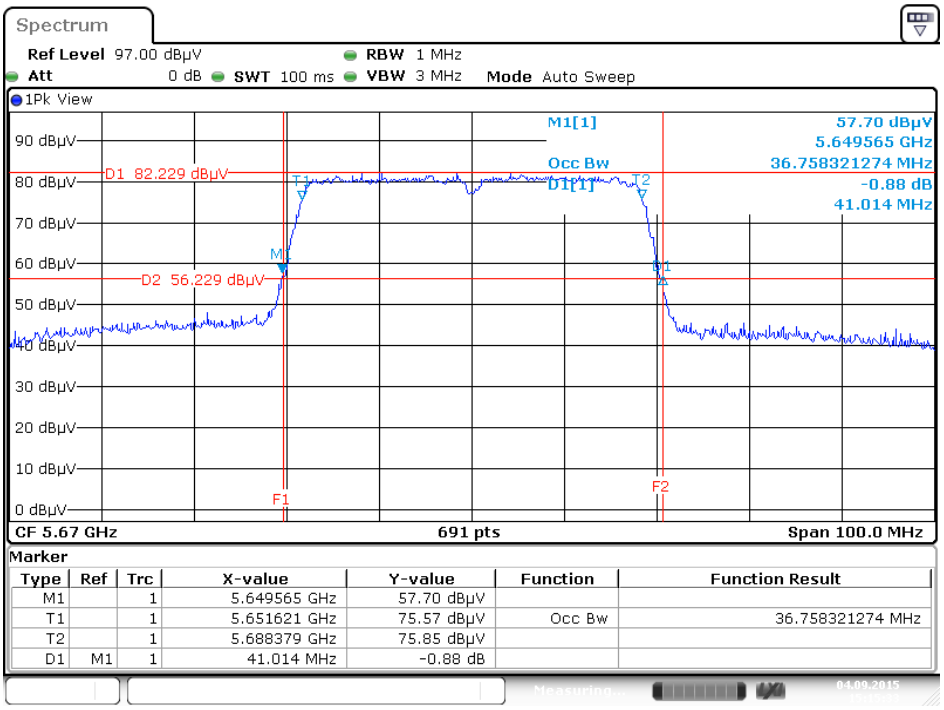

Date: 4.SEP.2015 15:12:54

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5550 MHz



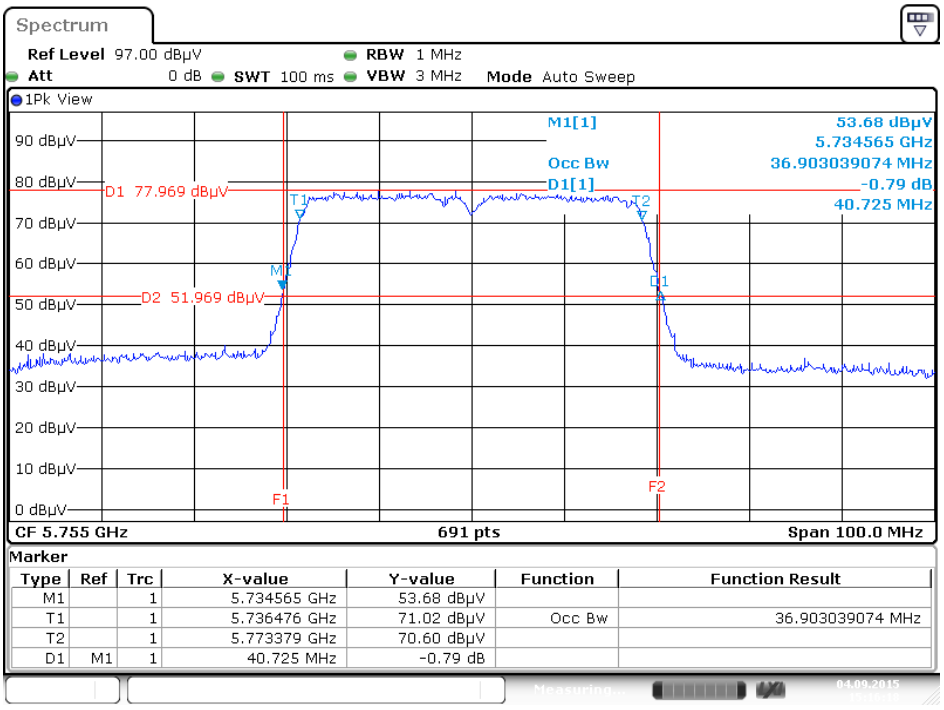

Date: 4.SEP.2015 15:14:01

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5670 MHz



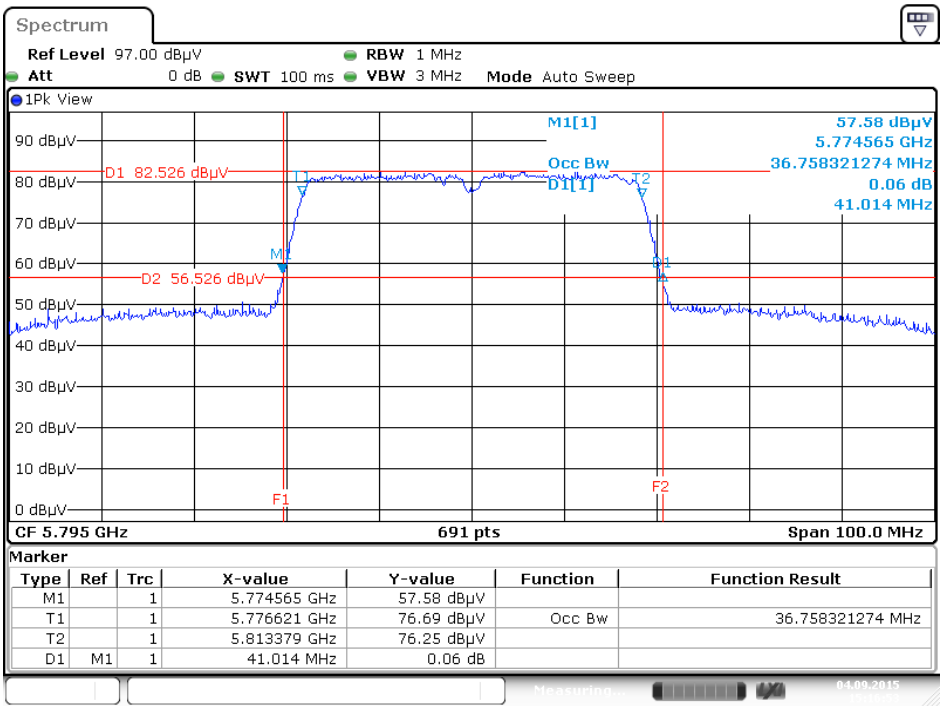

Date: 4.SEP.2015 15:15:33

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5755 MHz



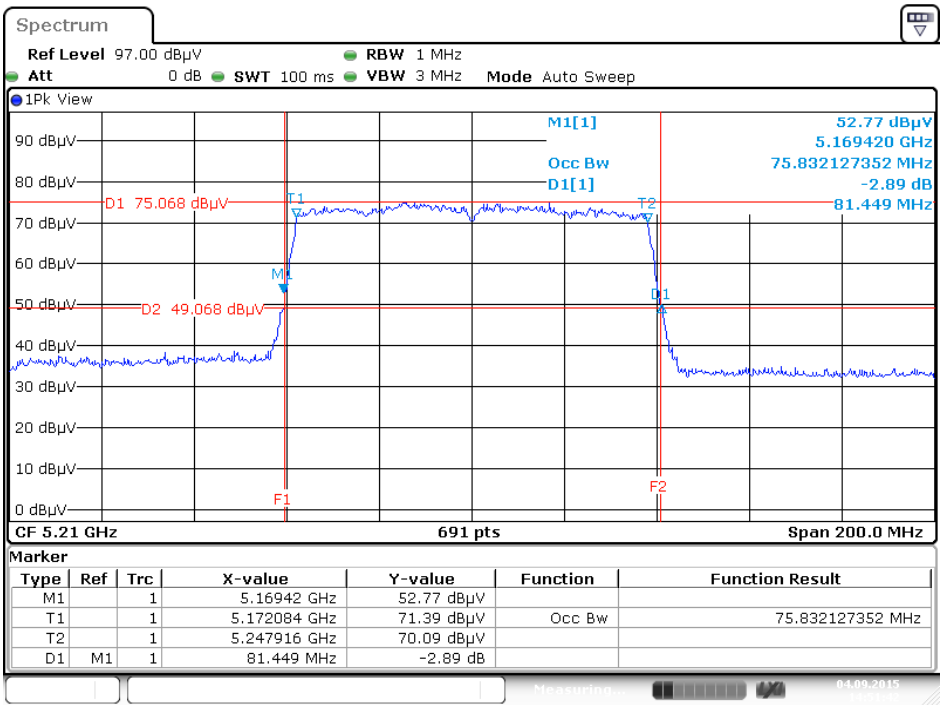

Date: 4.SEP.2015 15:16:18

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5795 MHz



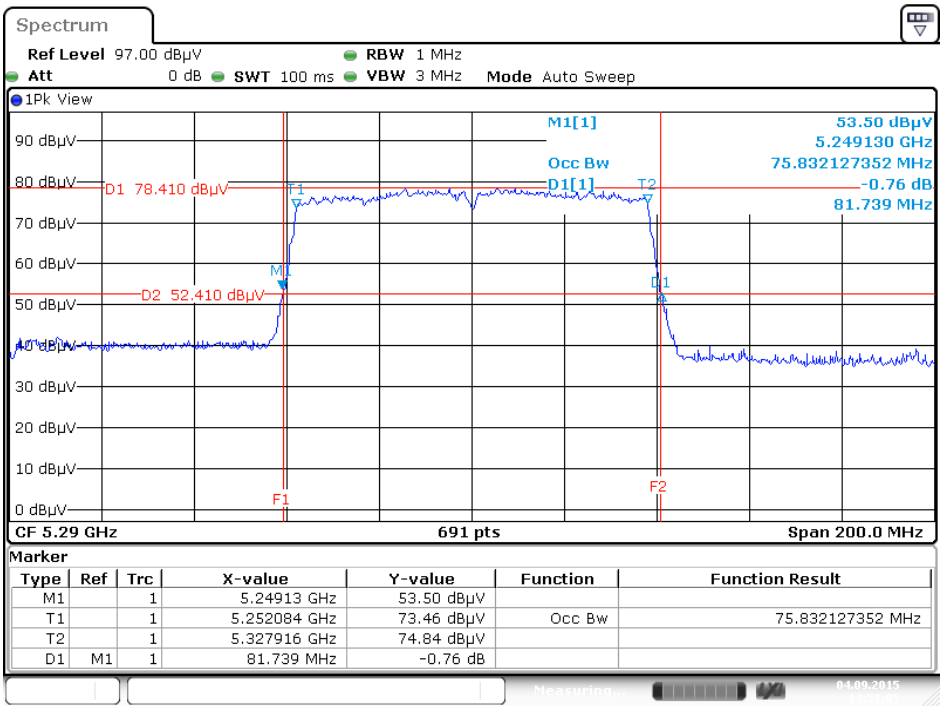

Date: 4.SEP.2015 15:16:54

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz



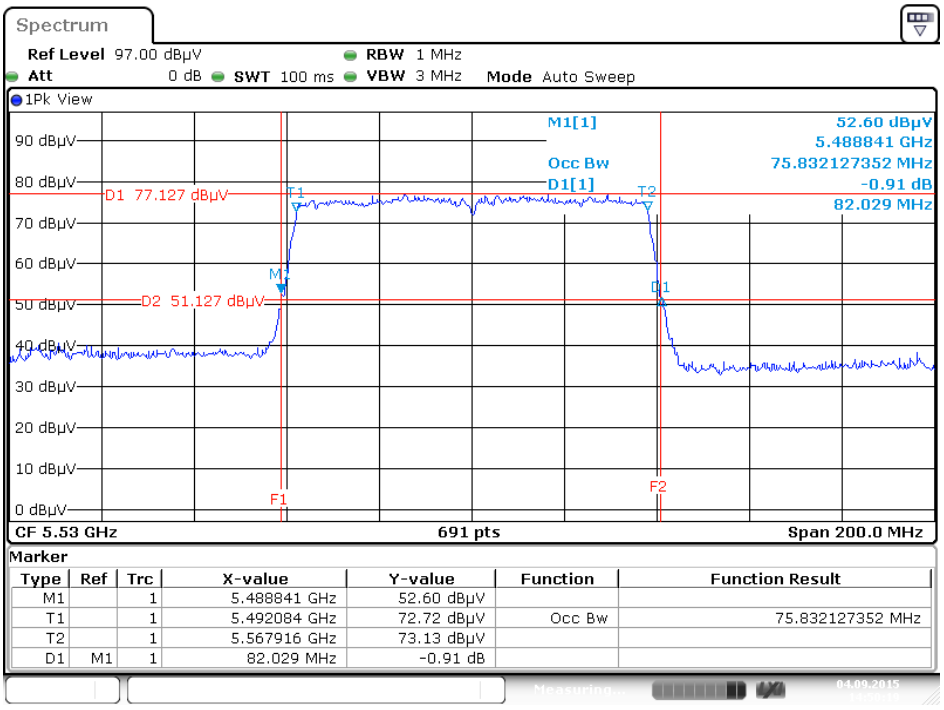

Date: 4.SEP.2015 14:51:43

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5290 MHz



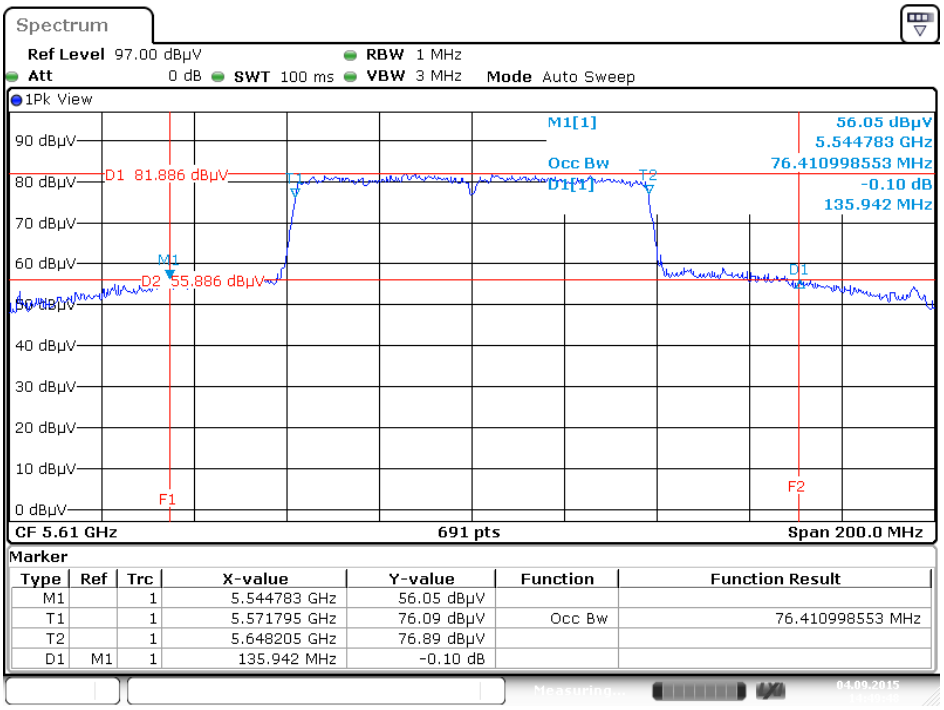

Date: 4.SEP.2015 14:51:05

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5530 MHz



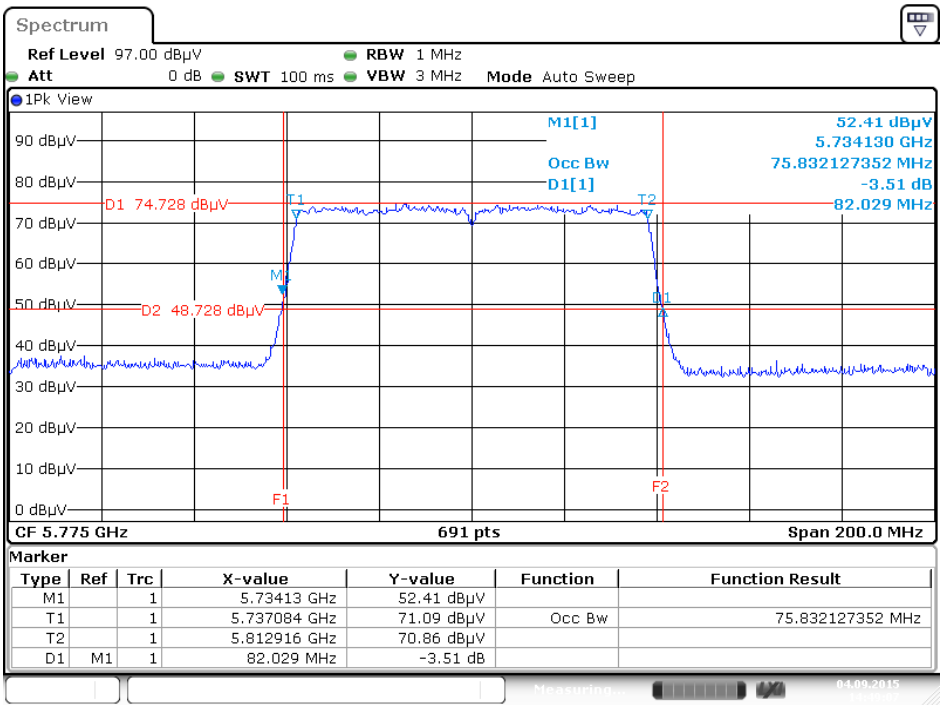

Date: 4.SEP.2015 14:50:19

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5610 MHz




Date: 4.SEP.2015 14:49:47

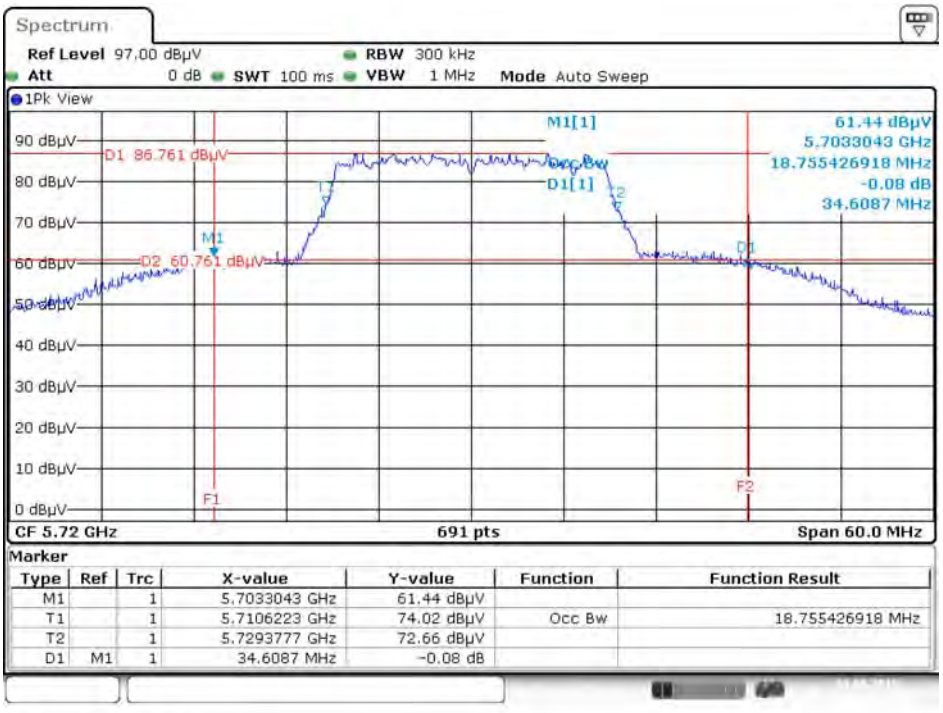
## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5775 MHz




Date: 4.SEP.2015 14:49:08

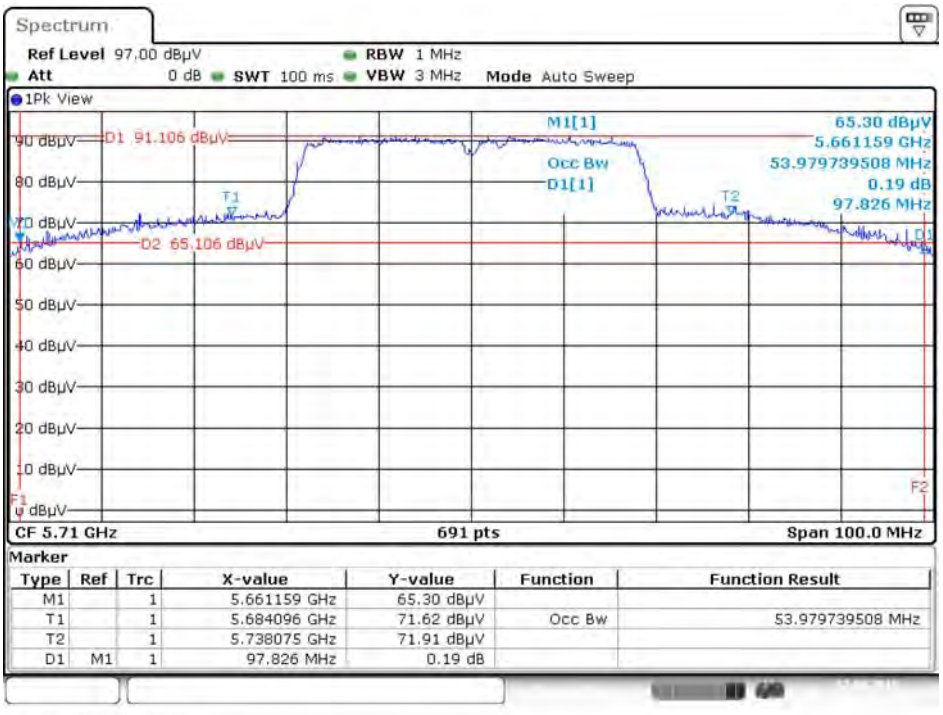
Straddle Channel

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5720 MHz



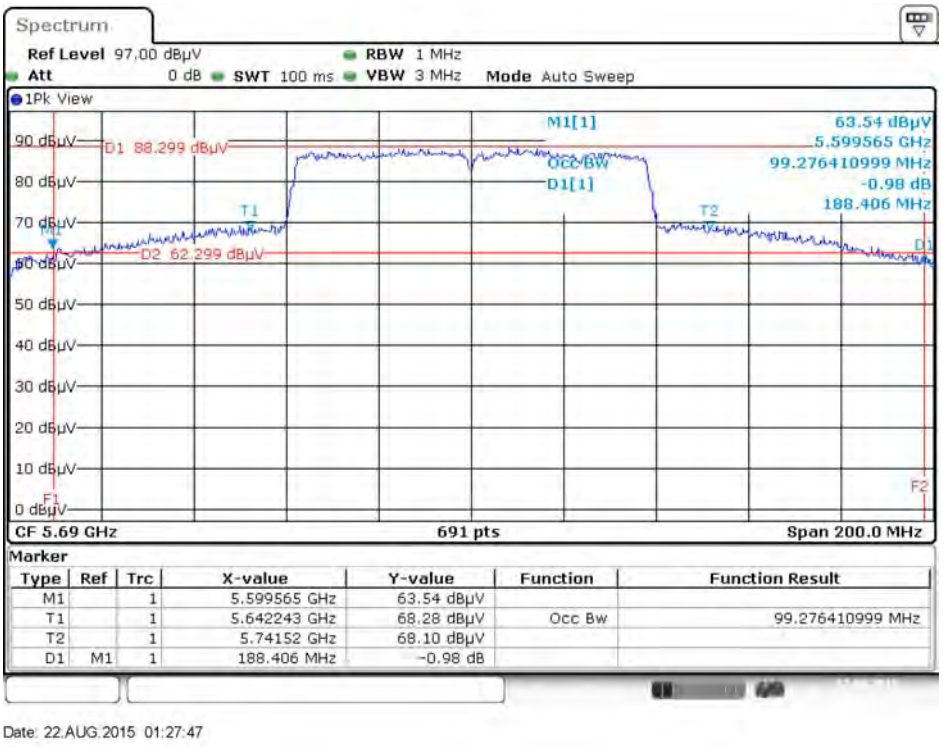

Date: 1.SEP.2015 02:33:33

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5710 MHz




Date: 22.AUG.2015 01:28:42

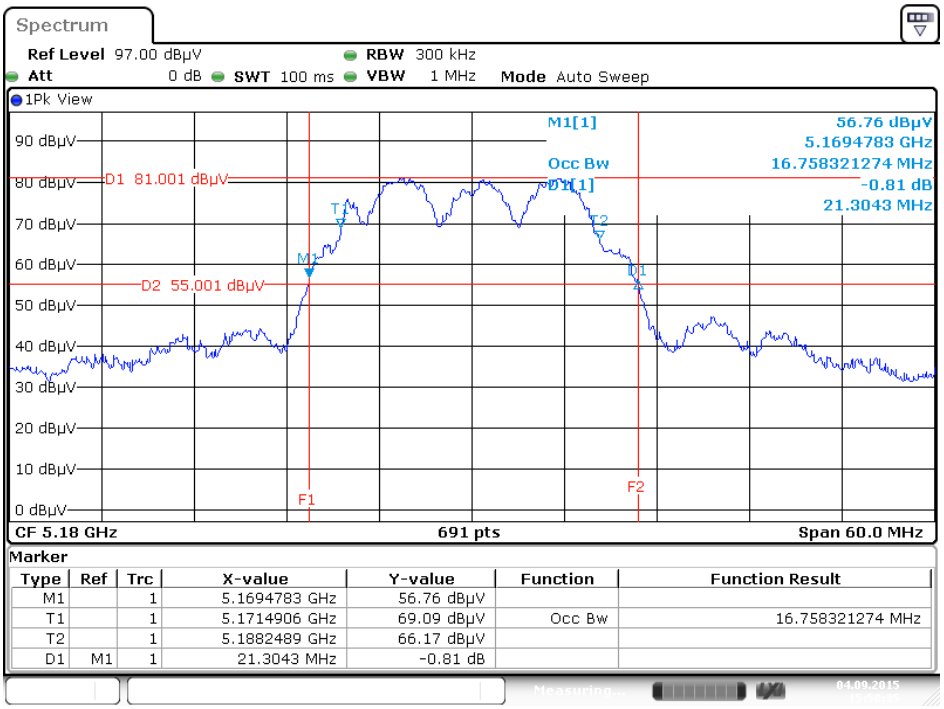
**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5690 MHz**



For Radio: R1

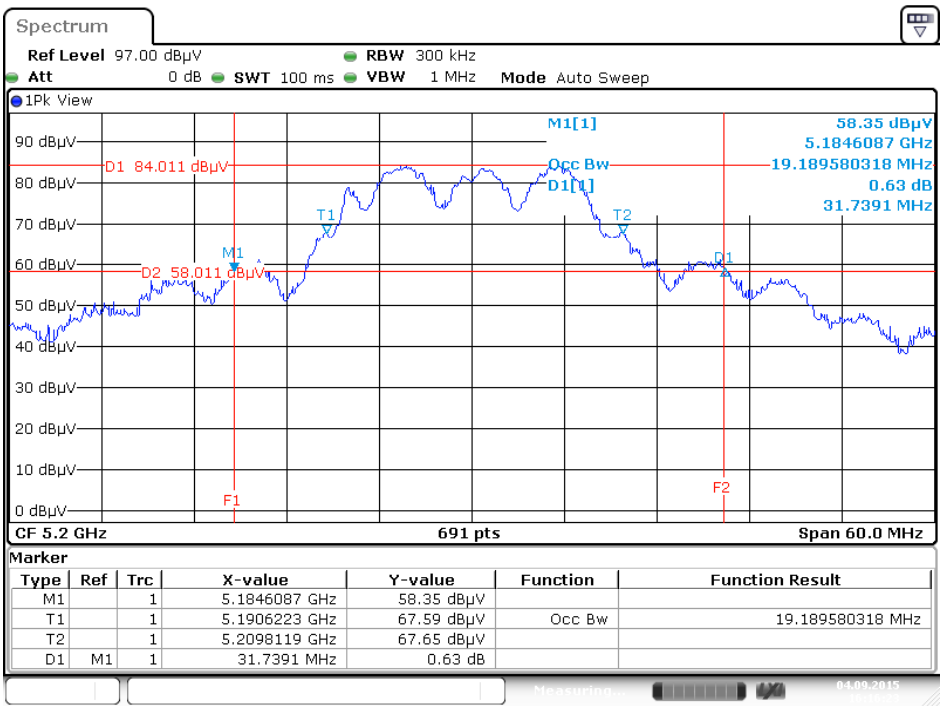
For non-beamforming function:

**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5180 MHz**



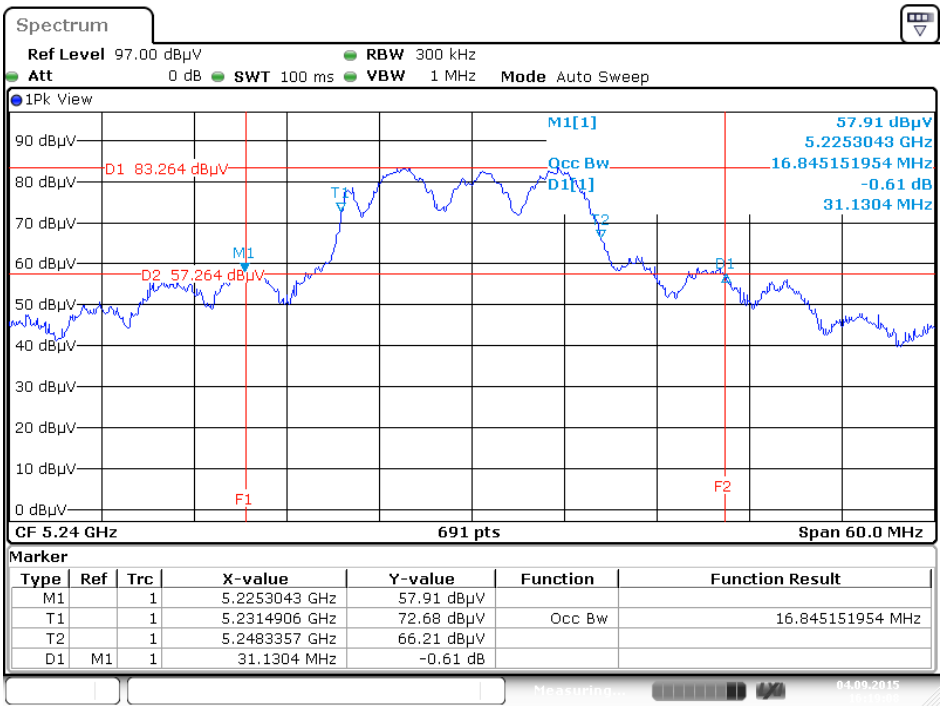

Date: 4.SEP.2015 15:58:35

**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5200 MHz**



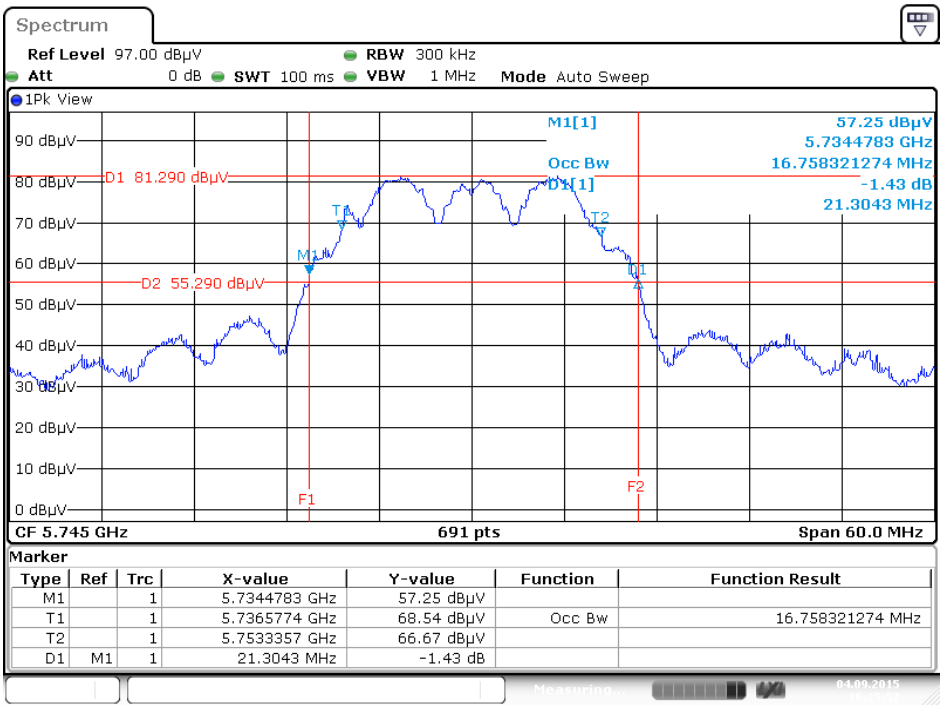

Date: 4.SEP.2015 16:16:24

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5240 MHz



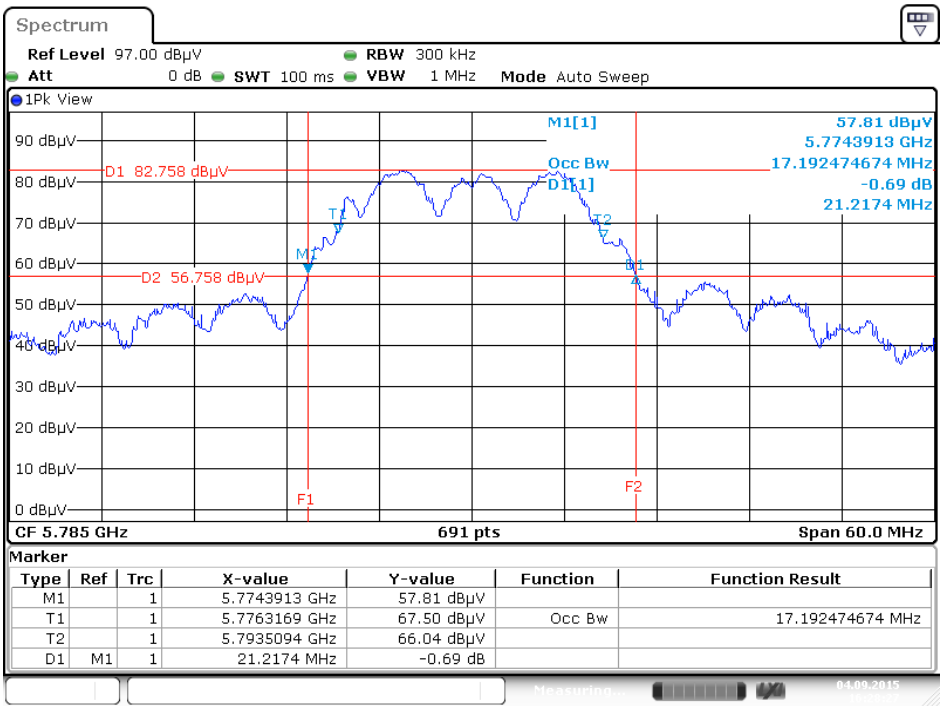

Date: 4.SEP.2015 16:19:08

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5745 MHz



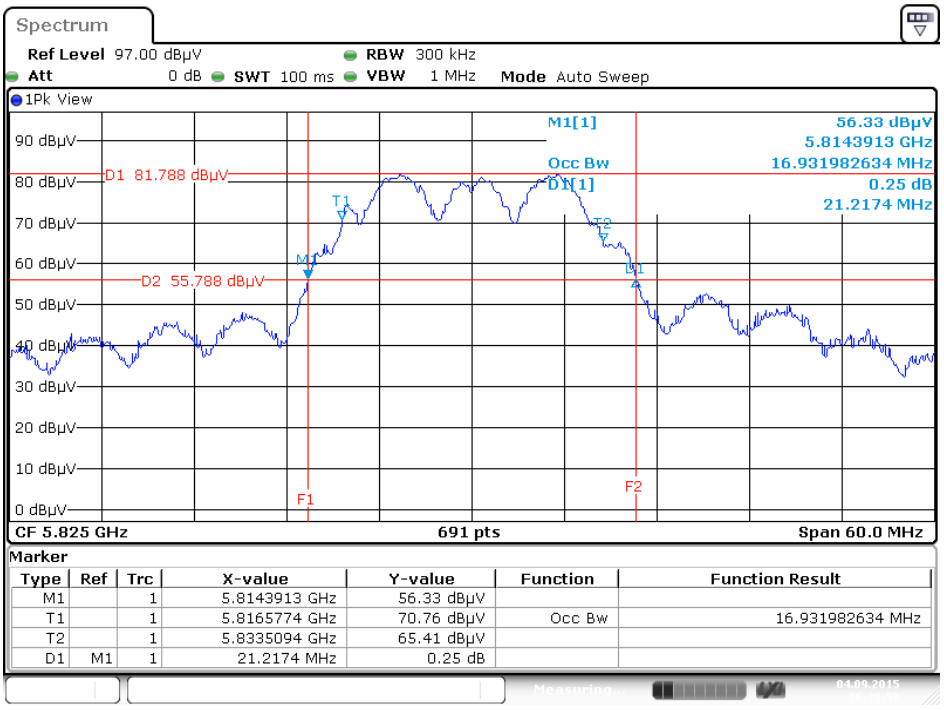

Date: 4.SEP.2015 16:25:52

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5785 MHz



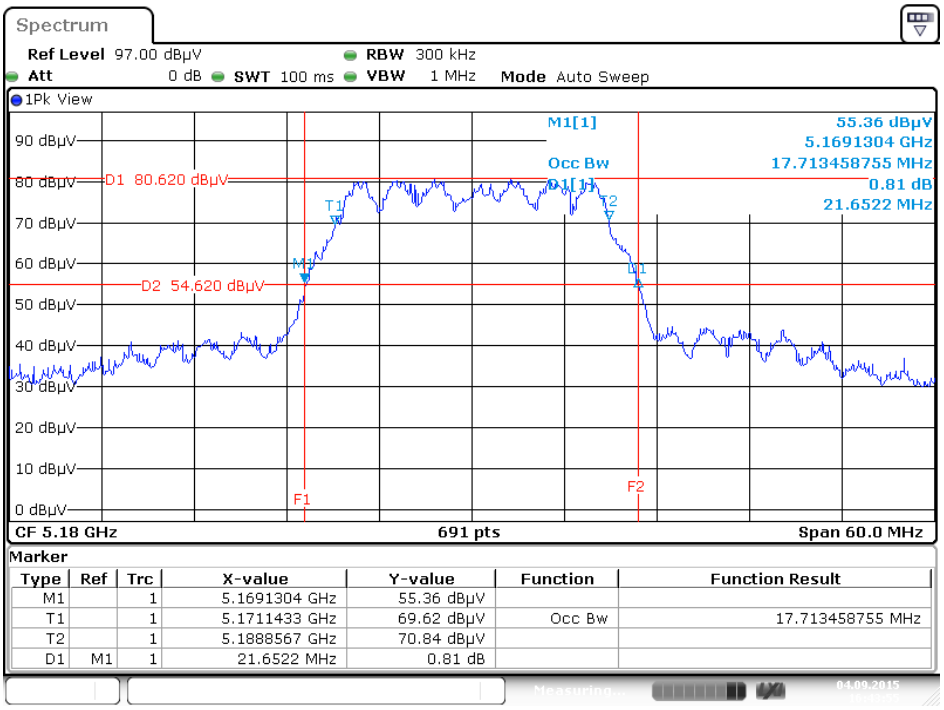

Date: 4.SEP.2015 16:28:27

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5825 MHz



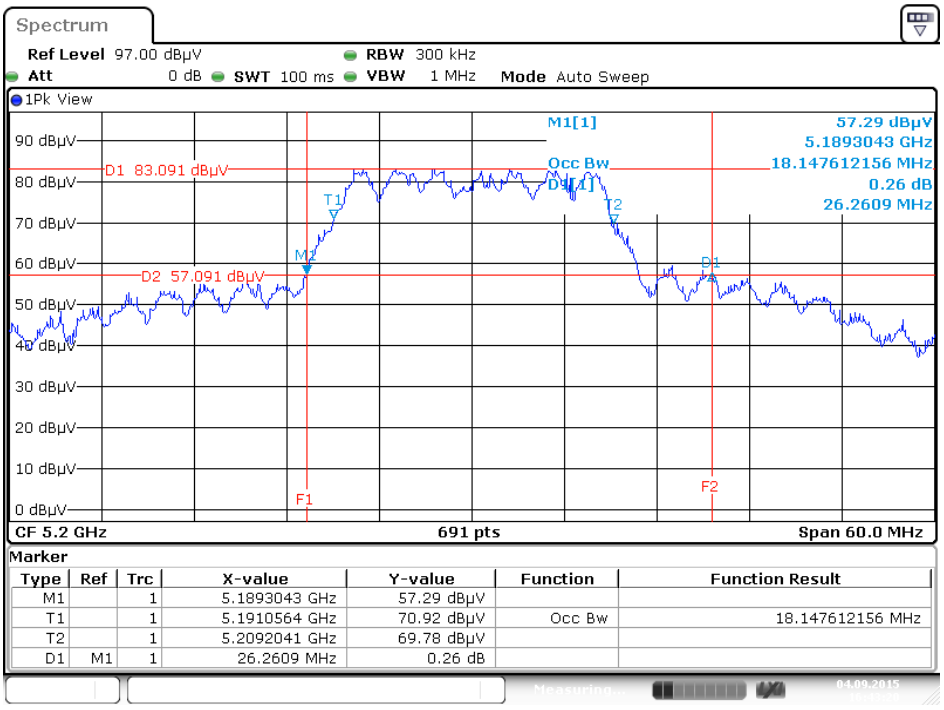

Date: 4.SEP.2015 16:28:59

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5180 MHz



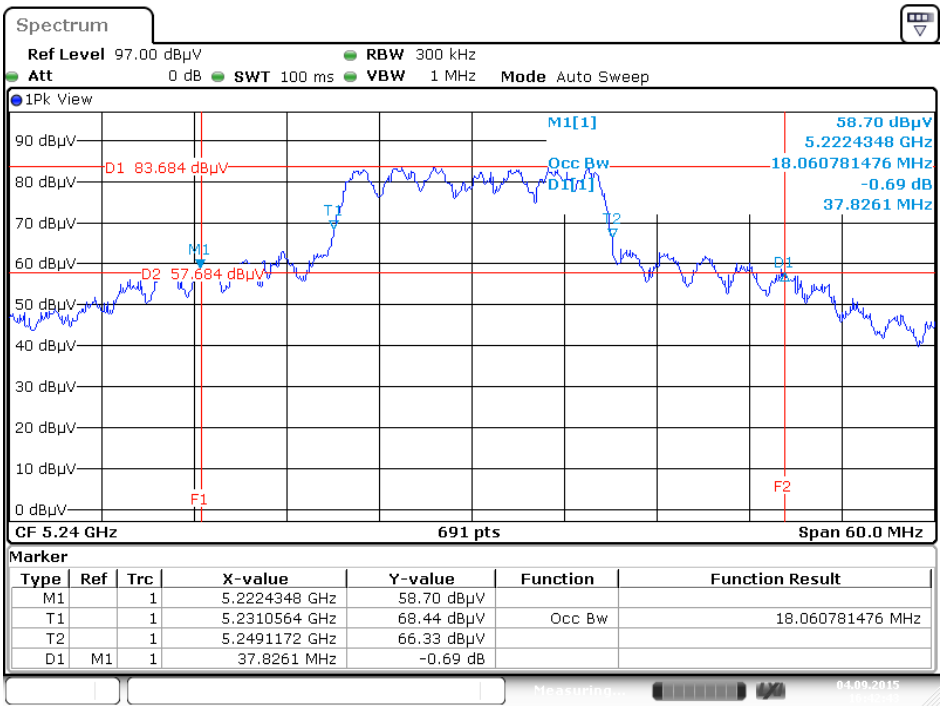

Date: 4.SEP.2015 16:43:55

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5200 MHz



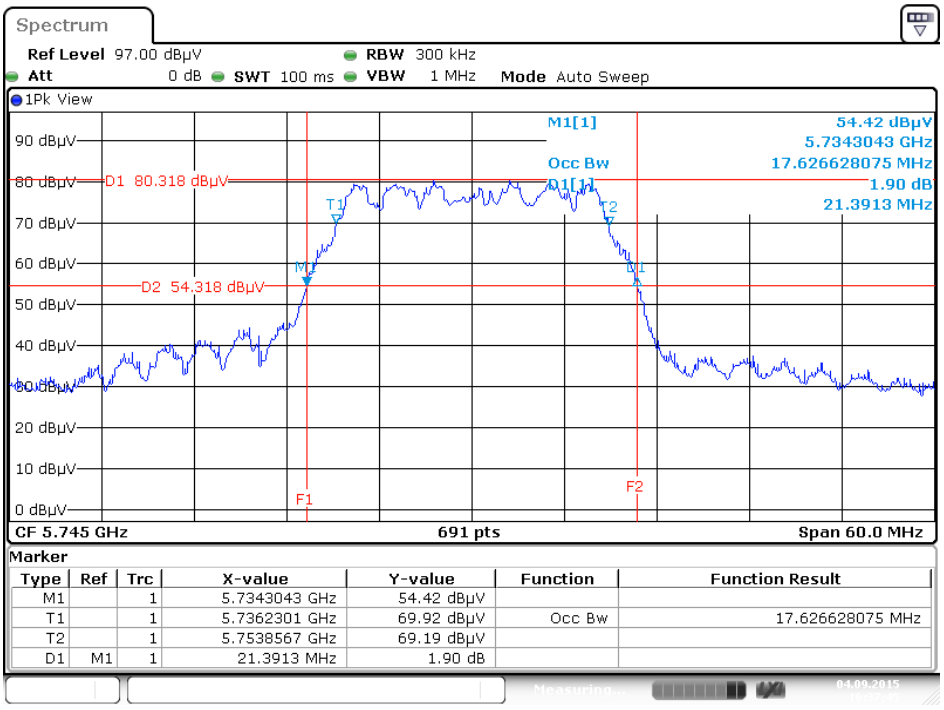

Date: 4.SEP.2015 16:43:20

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5240 MHz



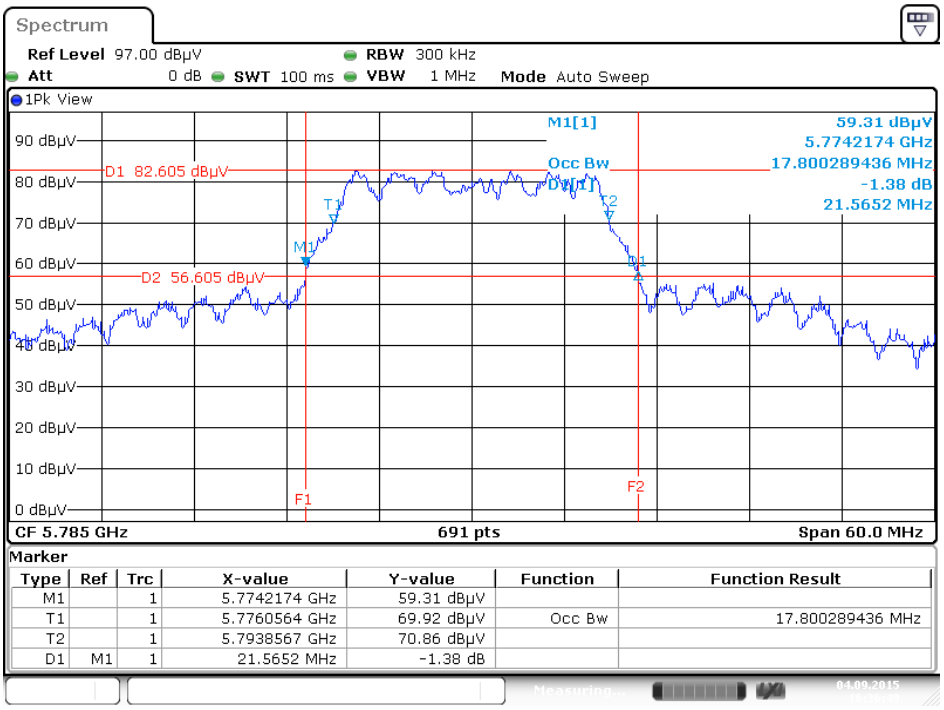

Date: 4.SEP.2015 16:42:43

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5745 MHz



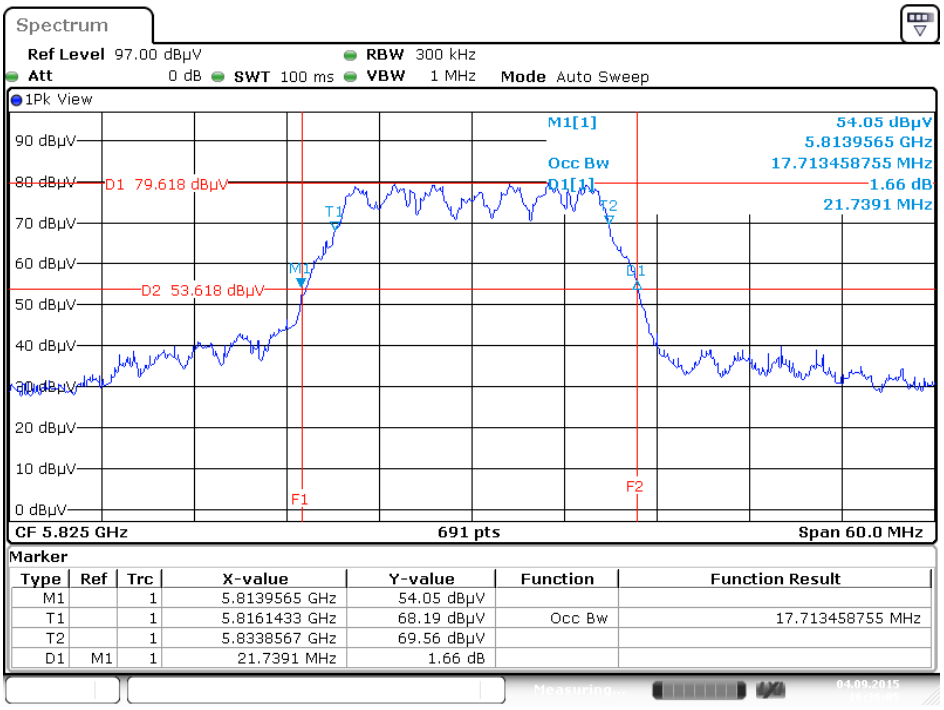

Date: 4.SEP.2015 16:37:46

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5785 MHz



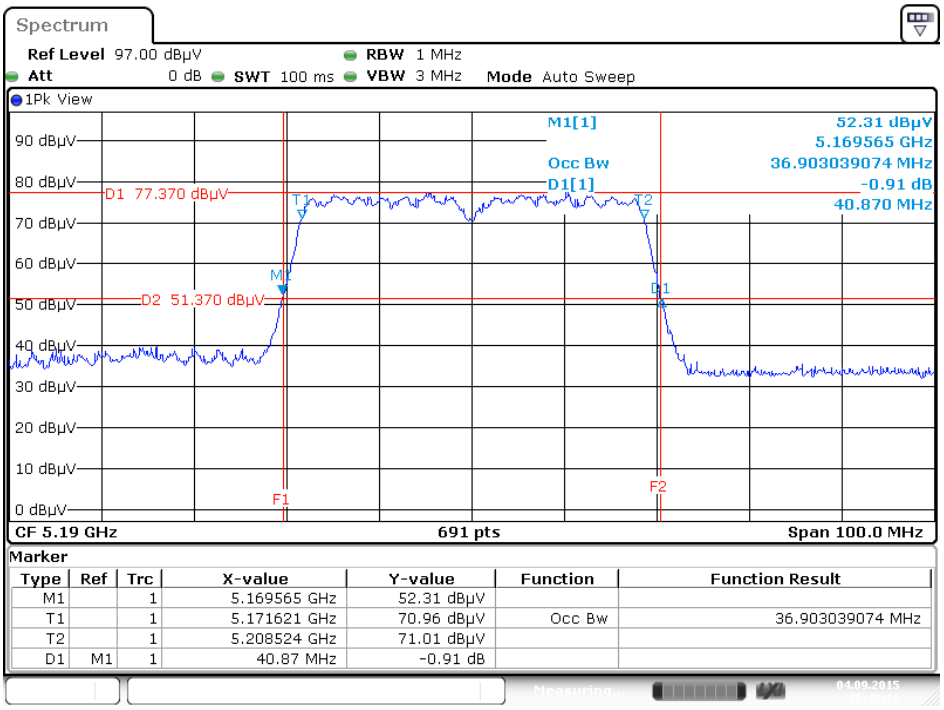

Date: 4.SEP.2015 16:36:49

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5825 MHz



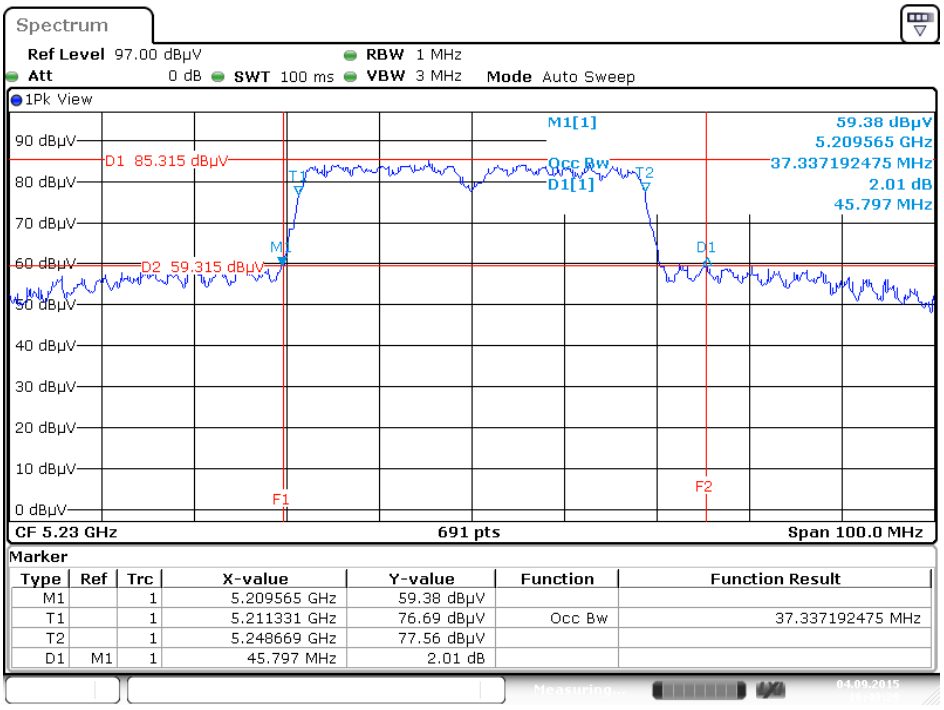

Date: 4.SEP.2015 16:36:05

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5190 MHz



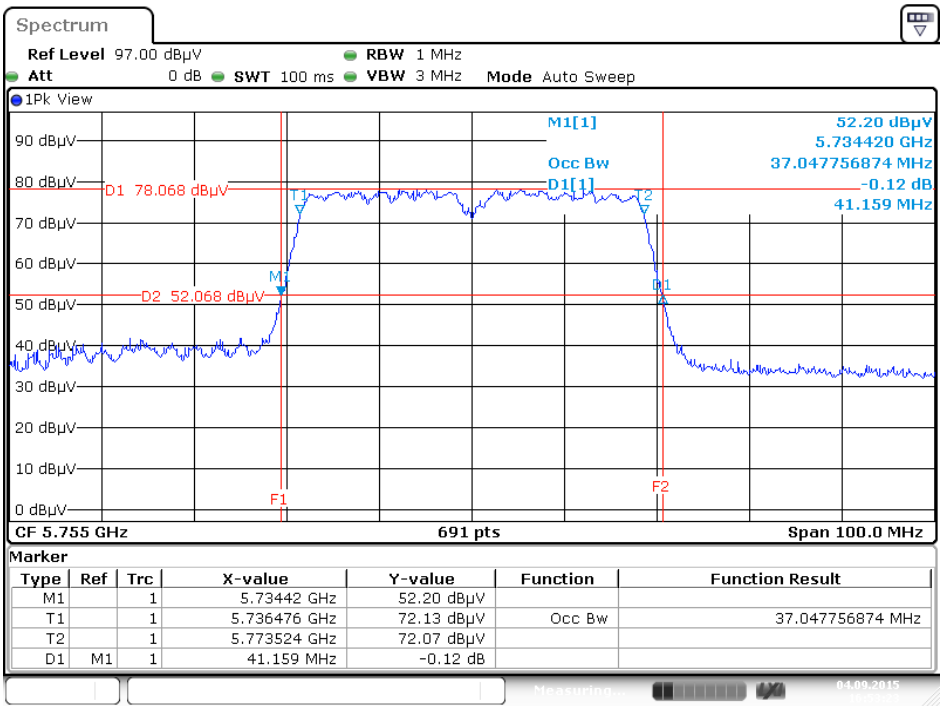

Date: 4.SEP.2015 16:48:16

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5230 MHz



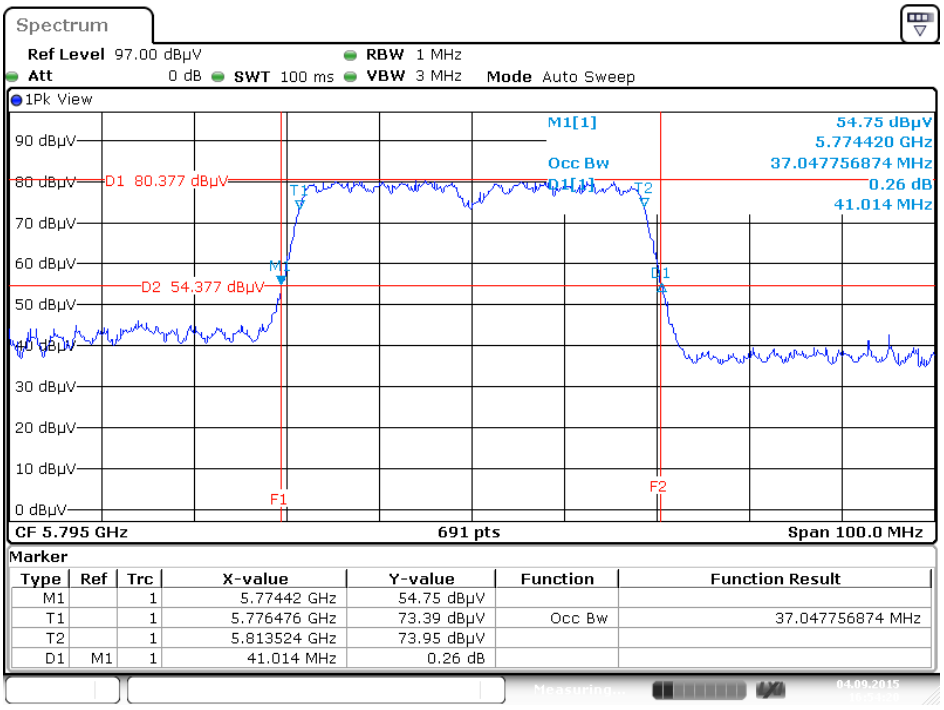

Date: 4.SEP.2015 16:49:29

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5755 MHz



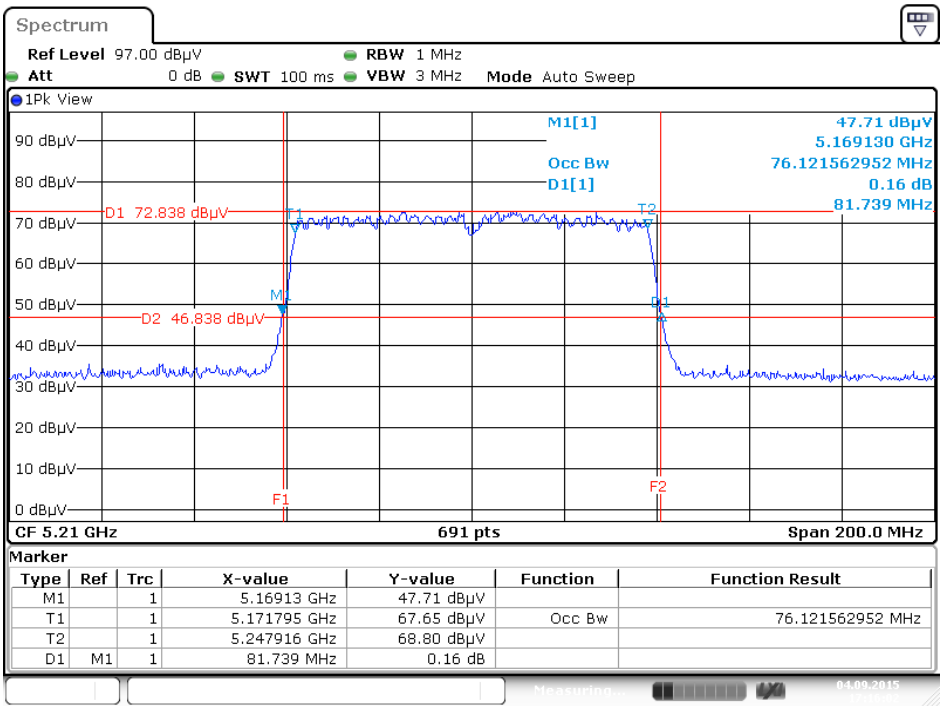

Date: 4.SEP.2015 16:53:23

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5795 MHz



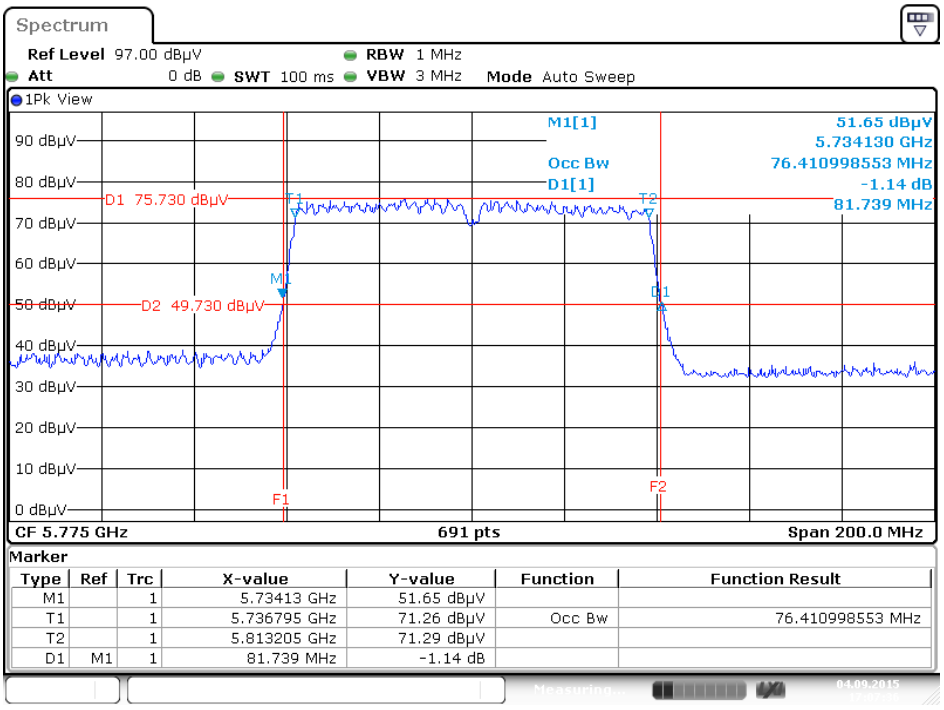

Date: 4.SEP.2015 16:54:20

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz




Date: 4.SEP.2015 17:16:02

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5775 MHz

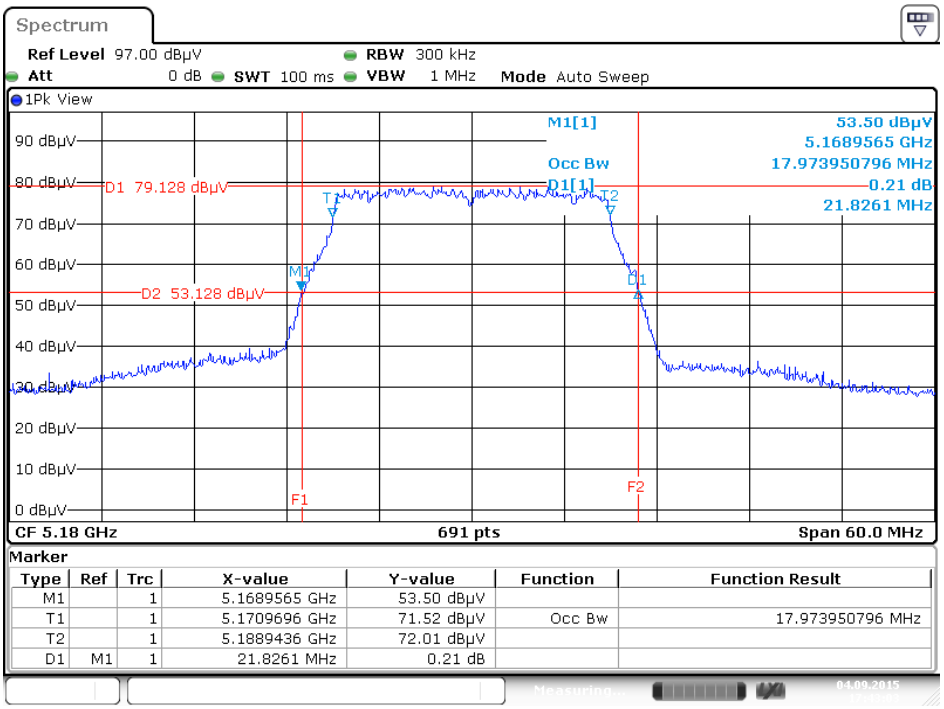



Date: 4.SEP.2015 17:07:36

For Radio: R1

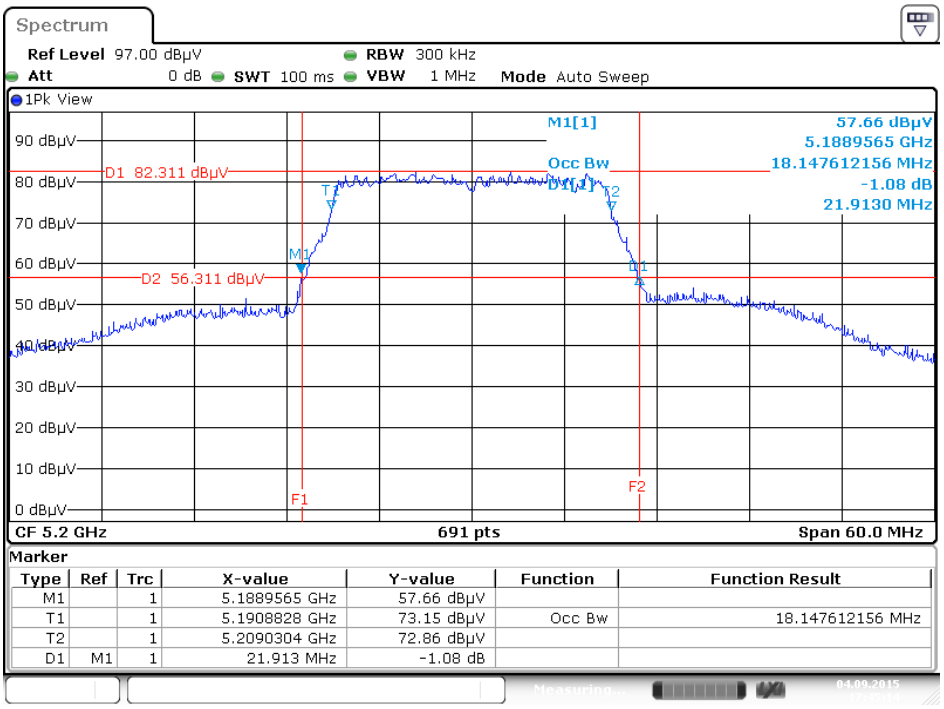
For beamforming function:

**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5180 MHz**



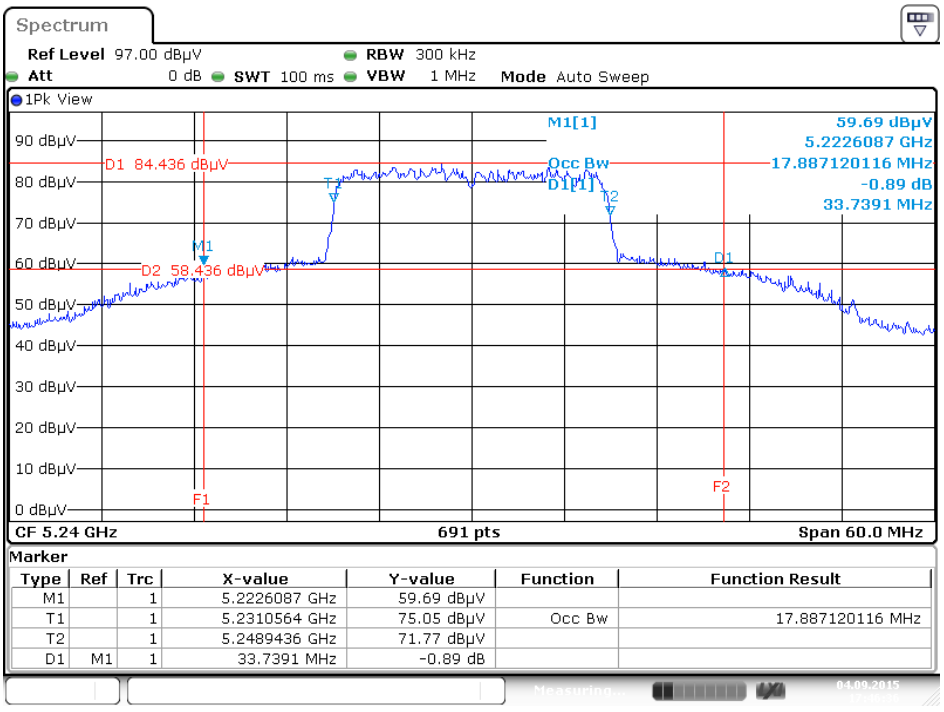

Date: 4.SEP.2015 17:43:03

**26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5200 MHz**



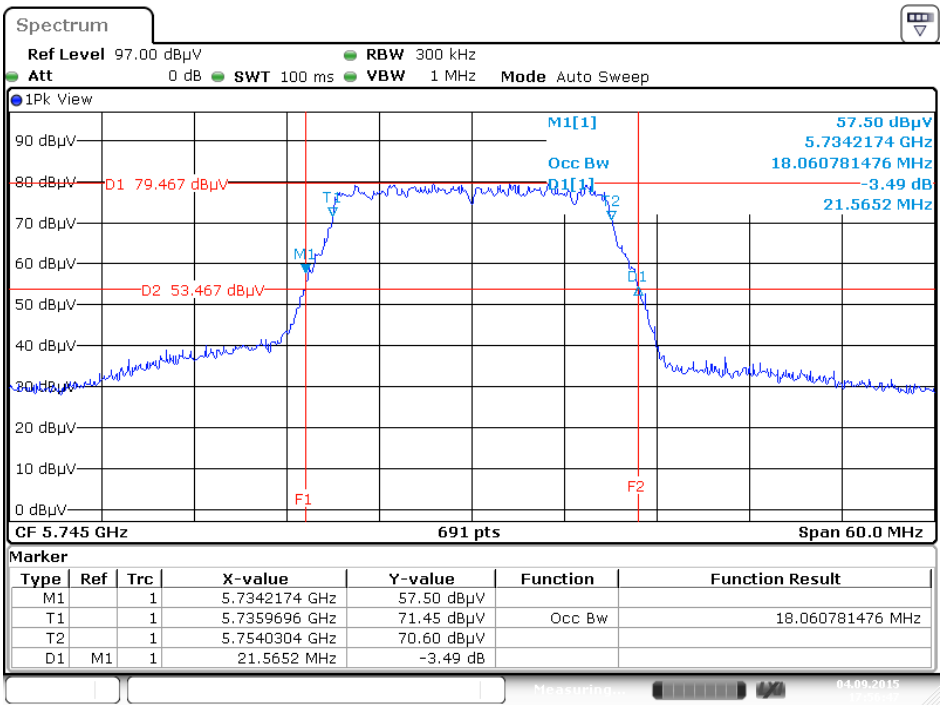

Date: 4.SEP.2015 17:45:15

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5240 MHz



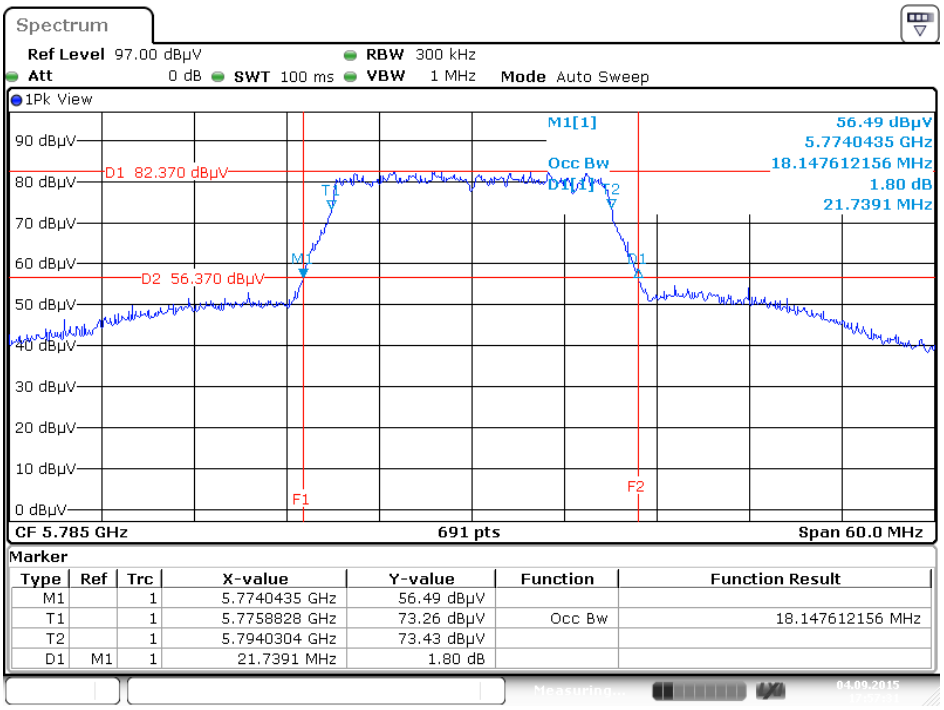

Date: 4.SEP.2015 17:46:37

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5745 MHz



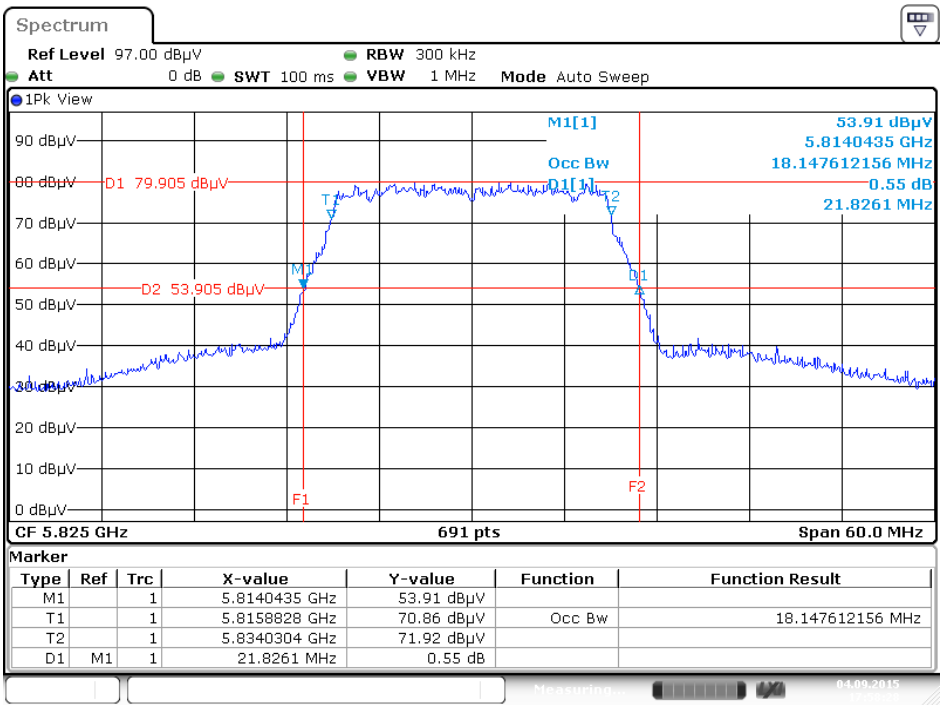

Date: 4.SEP.2015 17:56:46

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5785 MHz



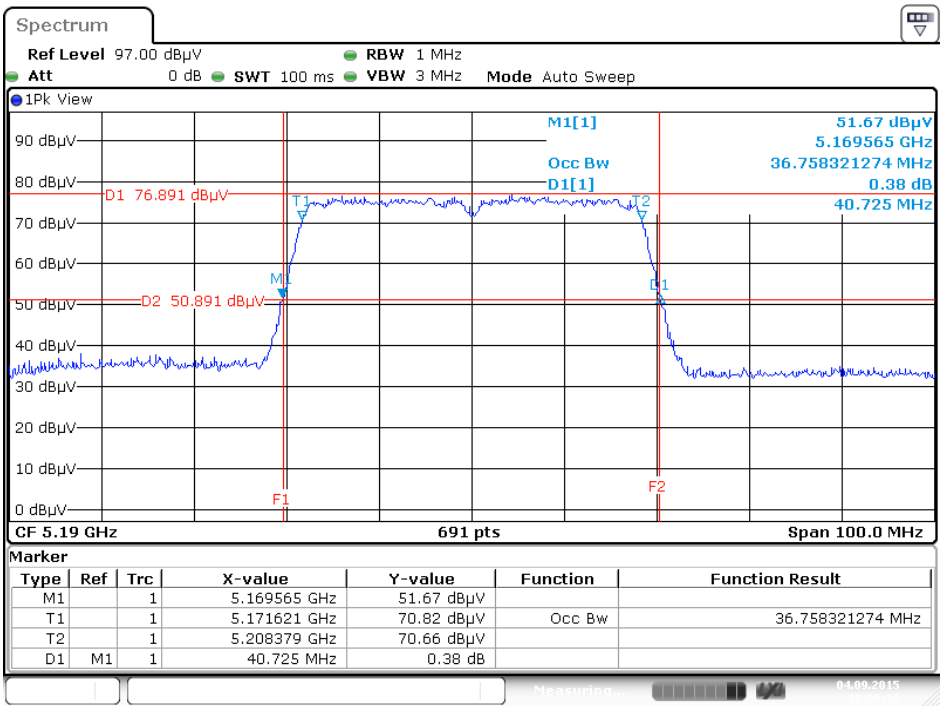

Date: 4.SEP.2015 17:57:31

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5825 MHz



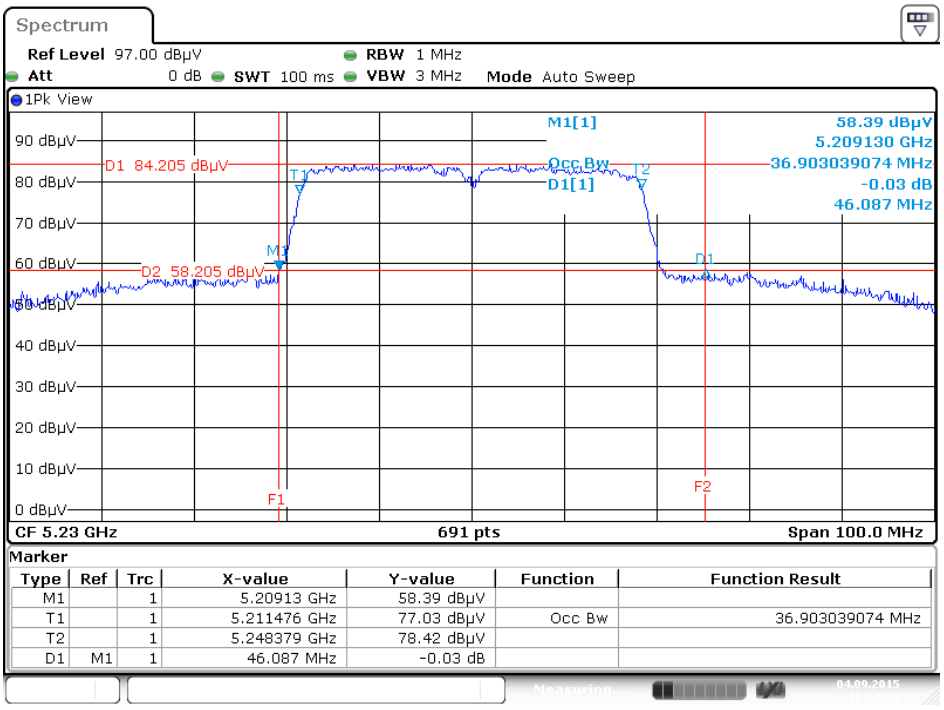

Date: 4.SEP.2015 17:58:28

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5190 MHz



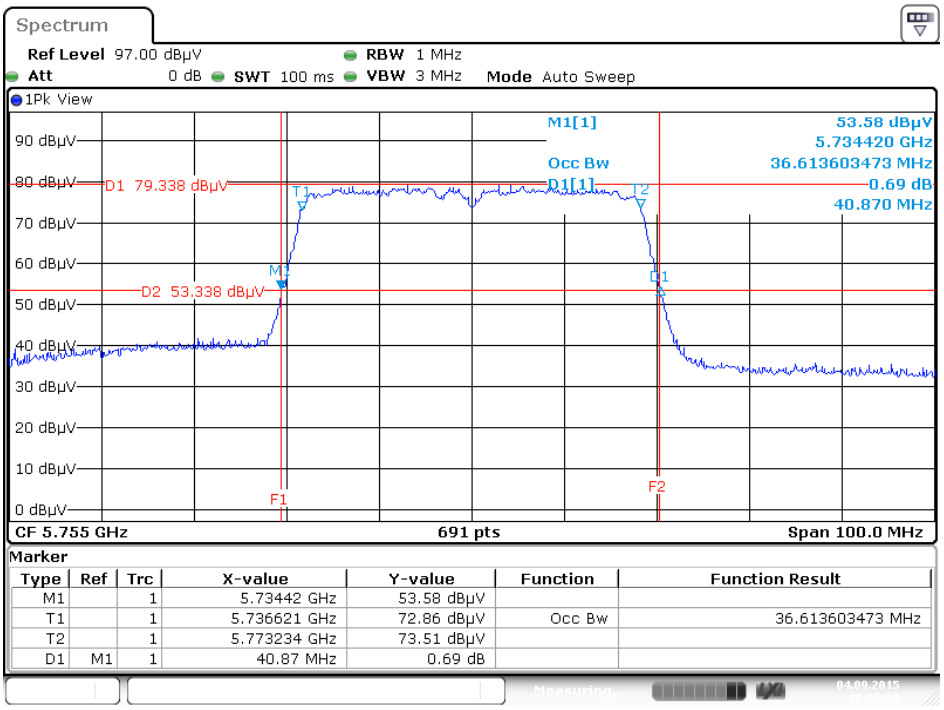

Date: 4.SEP.2015 18:06:30

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5230 MHz



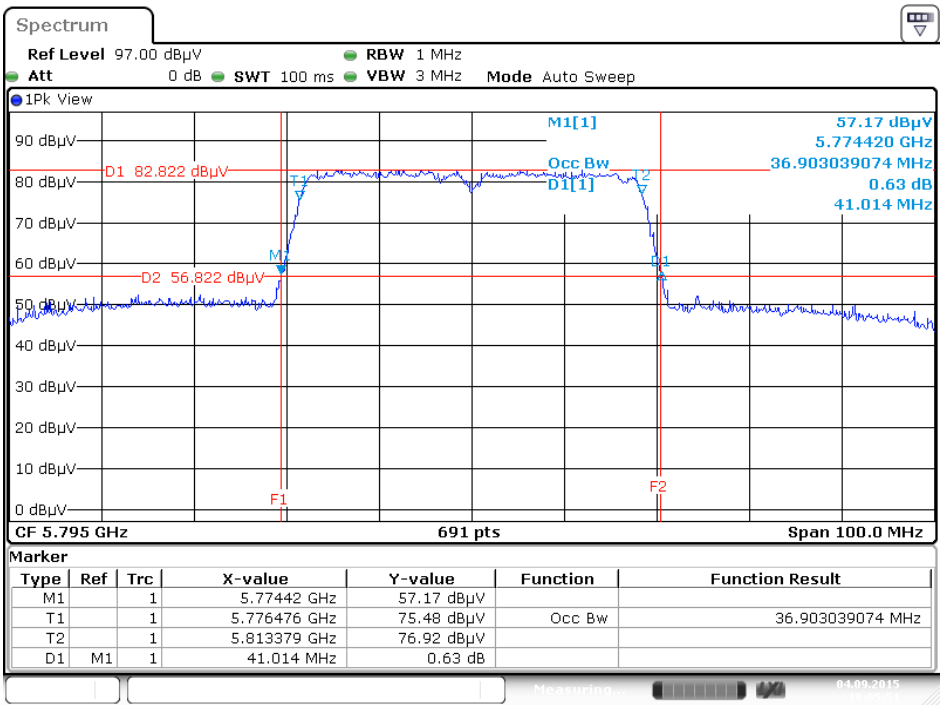

Date: 4.SEP.2015 18:07:06

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5755 MHz



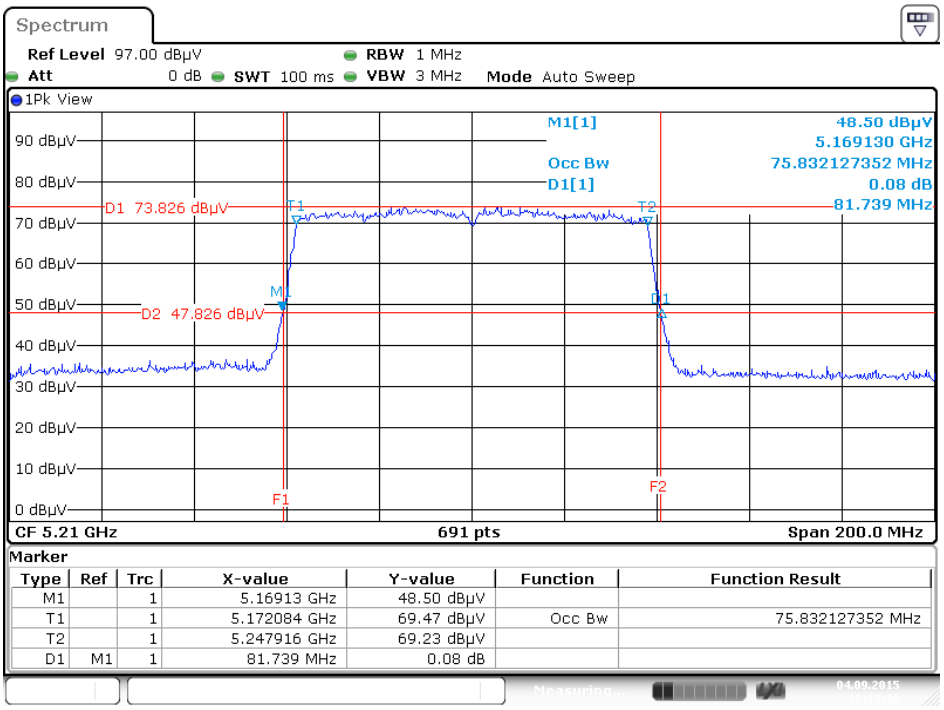

Date: 4.SEP.2015 18:05:09

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5795 MHz



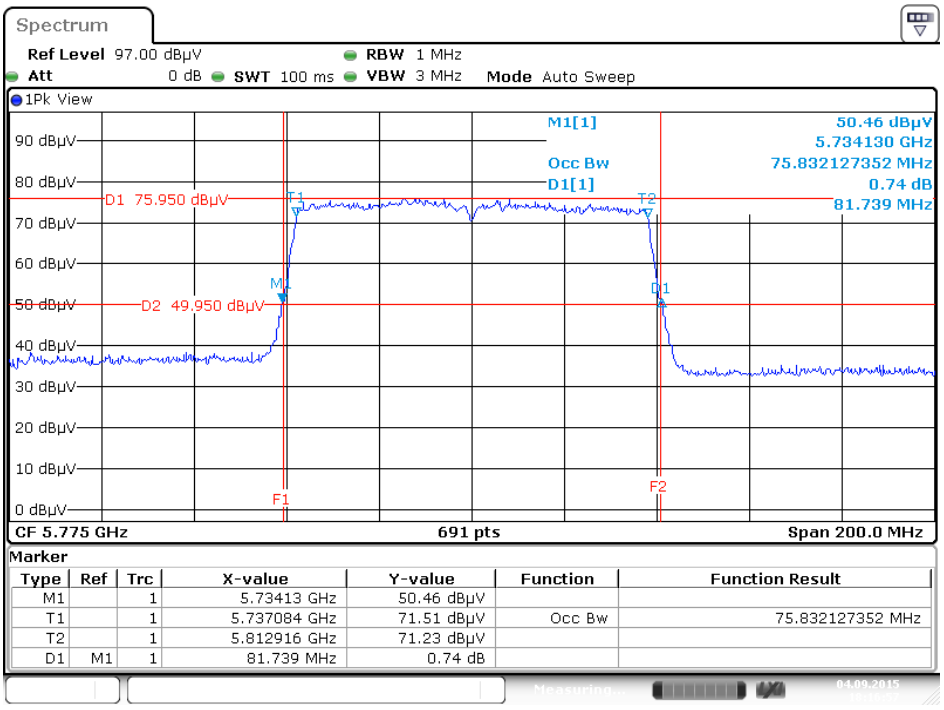

Date: 4.SEP.2015 18:05:52

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz




Date: 4.SEP.2015 18:13:35

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5775 MHz




Date: 4.SEP.2015 18:16:58

## 4.3. 6dB Spectrum Bandwidth Measurement

### 4.3.1. Limit

For digital modulation systems, the minimum 6dB bandwidth shall be at least 500 kHz.

### 4.3.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer.

| 6dB Spectrum Bandwidth | |
|---|---|
| **Spectrum Parameters** | **Setting** |
| Attenuation | Auto |
| Span Frequency | > 6dB Bandwidth |
| RBW | 100kHz |
| VBW | ≥ 3 x RBW |
| Detector | Peak |
| Trace | Max Hold |
| Sweep Time | Auto |

### 4.3.3. Test Procedures

For Radiated 6dB Bandwidth Measurement:

1. The transmitter was radiated to the spectrum analyzer in peak hold mode.
2. Test was performed in accordance with KDB789033 D02 v01 for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - section (C) Emission Bandwidth.
3. Multiple antenna system was performed in accordance with KDB662911 D01 v02r01 Emissions Testing of Transmitters with Multiple Outputs in the Same Band.
4. Measured the spectrum width with power higher than 6dB below carrier.

### 4.3.4. Test Setup Layout

For Radiated 6dB Bandwidth Measurement:

This test setup layout is the same as that shown in section 4.6.4.

### 4.3.5. Test Deviation

There is no deviation with the original standard.

### 4.3.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

## 4.3.7. Test Result of 6dB Spectrum Bandwidth

For Radio: R0

| Temperature | 25°C | Humidity | 60% |
|---|---|---|---|
| Test Engineer | Eddie Weng / Nick Peng | Test Function | Non-beamforming function |

| Mode | Frequency | 6dB Bandwidth (MHz) | Min. Limit (kHz) | Test Result |
|---|---|---|---|---|
| 802.11a | 5745 MHz | 12.35 | 500 | Complies |
| | 5785 MHz | 12.17 | 500 | Complies |
| | 5825 MHz | 14.78 | 500 | Complies |
| 802.11ac MCS0/Nss1 VHT20 | 5745 MHz | 15.77 | 500 | Complies |
| | 5785 MHz | 15.71 | 500 | Complies |
| | 5825 MHz | 16.12 | 500 | Complies |
| 802.11ac MCS0/Nss1 VHT40 | 5755 MHz | 35.71 | 500 | Complies |
| | 5795 MHz | 35.83 | 500 | Complies |
| 802.11ac MCS0/Nss1 VHT80 | 5775 MHz | 75.65 | 500 | Complies |

Straddle Channel

| Mode | Frequency | 6dB BW (MHz) | 6dB BW M1 (MHz) | UNII 3 BW (MHz) | Min. Limit (kHz) | Test Result |
|---|---|---|---|---|---|---|
| 802.11a | 5720 MHz | 12.35 | 5714.32 | 1.67 | 500 | Complies |
| 802.11ac MCS0/Nss1 VHT20 | 5720 MHz | 16.00 | 5712.12 | 3.12 | 500 | Complies |
| 802.11ac MCS0/Nss1 VHT40 | 5710 MHz | 36.06 | 5692.15 | 3.20 | 500 | Complies |
| 802.11ac MCS0/Nss1 VHT80 | 5690 MHz | 72.75 | 5654.93 | 2.68 | 500 | Complies |

For Radio: R0

| Temperature | 25°C | Humidity | 60% |
|---|---|---|---|
| Test Engineer | Eddie Weng / Nick Peng | Test Function | Beamforming function |

| Mode | Frequency | 6dB Bandwidth (MHz) | Min. Limit (kHz) | Test Result |
|---|---|---|---|---|
| 802.11ac MCS0/Nss1 VHT20 | 5745 MHz | 17.56 | 500 | Complies |
| | 5785 MHz | 15.94 | 500 | Complies |
| | 5825 MHz | 17.33 | 500 | Complies |
| 802.11ac MCS0/Nss1 VHT40 | 5755 MHz | 35.59 | 500 | Complies |
| | 5795 MHz | 35.82 | 500 | Complies |
| 802.11ac MCS0/Nss1 VHT80 | 5775 MHz | 75.07 | 500 | Complies |

Straddle Channel

| Mode | Frequency | 6dB BW (MHz) | 6dB BW M1 (MHz) | UNII 3 BW (MHz) | Min. Limit (kHz) | Test Result |
|---|---|---|---|---|---|---|
| 802.11ac MCS0/Nss1 VHT20 | 5720 MHz | 16.63 | 5711.77 | 3.40 | 500 | Complies |
| 802.11ac MCS0/Nss1 VHT40 | 5710 MHz | 35.24 | 5692.49 | 2.73 | 500 | Complies |
| 802.11ac MCS0/Nss1 VHT80 | 5690 MHz | 72.75 | 5654.93 | 2.68 | 500 | Complies |

For Radio: R1

| Temperature | 25°C | Humidity | 60% |
|---|---|---|---|
| Test Engineer | Eddie Weng | Test Function | Non-beamforming function |

| Mode | Frequency | 6dB Bandwidth (MHz) | Min. Limit (kHz) | Test Result |
|---|---|---|---|---|
| 802.11a | 5745 MHz | 12.93 | 500 | Complies |
| | 5785 MHz | 12.58 | 500 | Complies |
| | 5825 MHz | 12.58 | 500 | Complies |
| 802.11ac MCS0/Nss1 VHT20 | 5745 MHz | 16.06 | 500 | Complies |
| | 5785 MHz | 16.06 | 500 | Complies |
| | 5825 MHz | 15.71 | 500 | Complies |
| 802.11ac MCS0/Nss1 VHT40 | 5755 MHz | 35.36 | 500 | Complies |
| | 5795 MHz | 35.83 | 500 | Complies |
| 802.11ac MCS0/Nss1 VHT80 | 5775 MHz | 72.75 | 500 | Complies |

For Radio: R1

| Temperature | 25°C | Humidity | 60% |
|---|---|---|---|
| Test Engineer | Eddie Weng | Test Function | Beamforming function |

| Mode | Frequency | 6dB Bandwidth (MHz) | Min. Limit (kHz) | Test Result |
|---|---|---|---|---|
| 802.11ac MCS0/Nss1 VHT20 | 5745 MHz | 17.57 | 500 | Complies |
| | 5785 MHz | 17.51 | 500 | Complies |
| | 5825 MHz | 16.35 | 500 | Complies |
| 802.11ac MCS0/Nss1 VHT40 | 5755 MHz | 35.01 | 500 | Complies |
| | 5795 MHz | 35.13 | 500 | Complies |
| 802.11ac MCS0/Nss1 VHT80 | 5775 MHz | 74.78 | 500 | Complies |

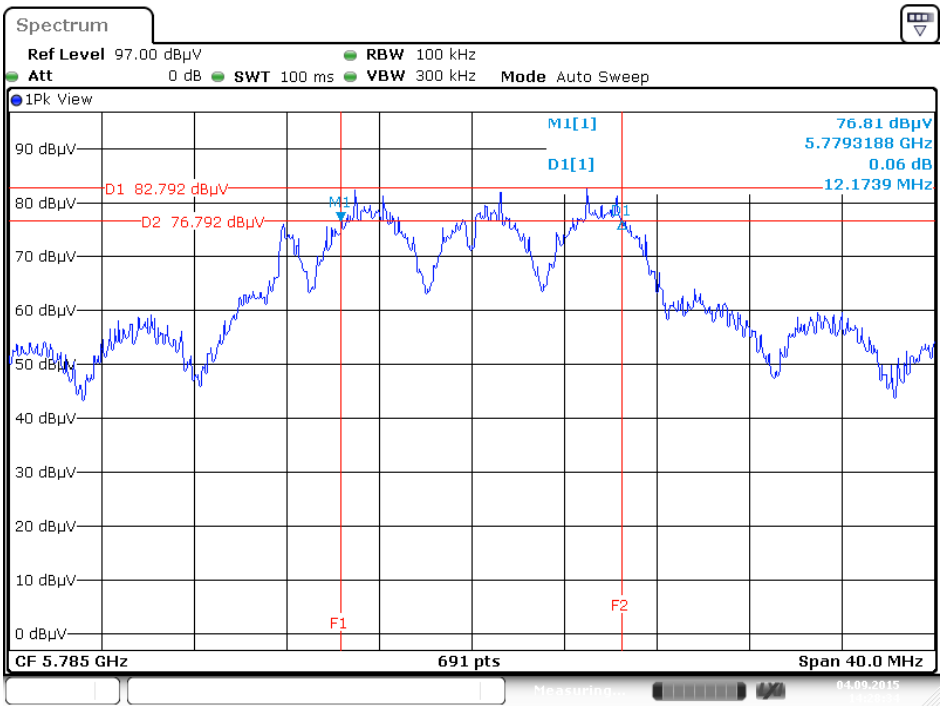
Note: All the test values were listed in the report.

For plots, only the channel with worse result was shown.

For Radio: R0

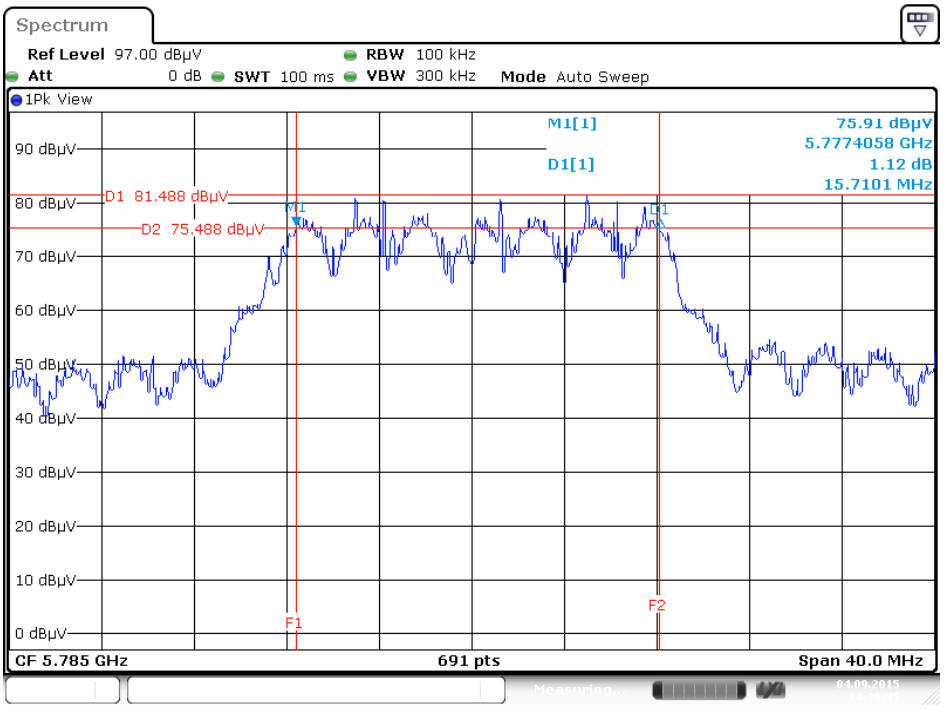
For non-beamforming function:

**6 dB Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5785 MHz**



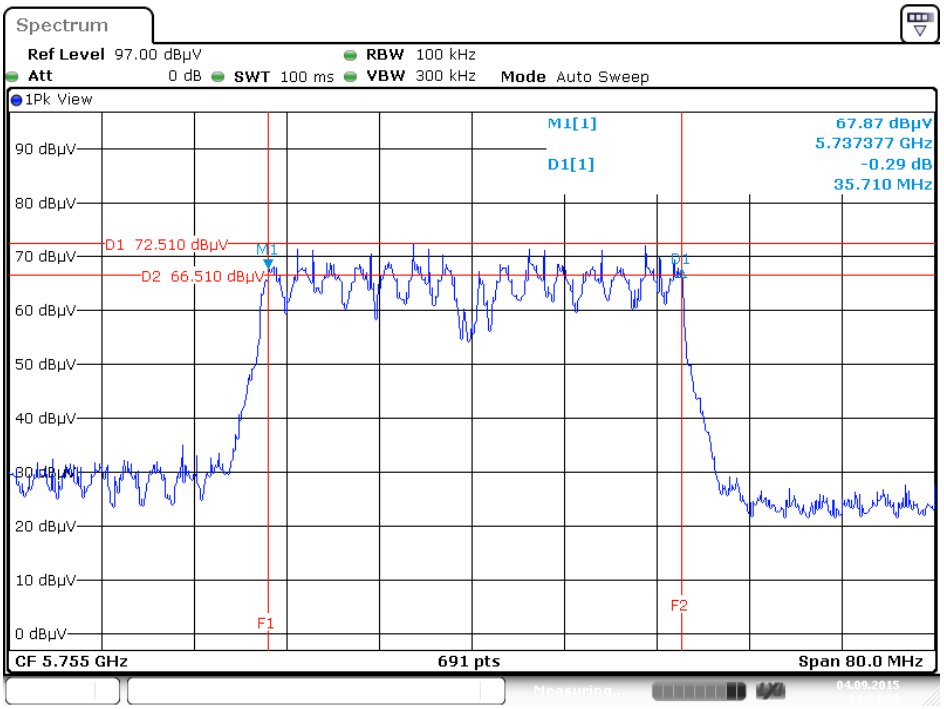

Date: 4.SEP.2015 14:28:34

**6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5785 MHz**



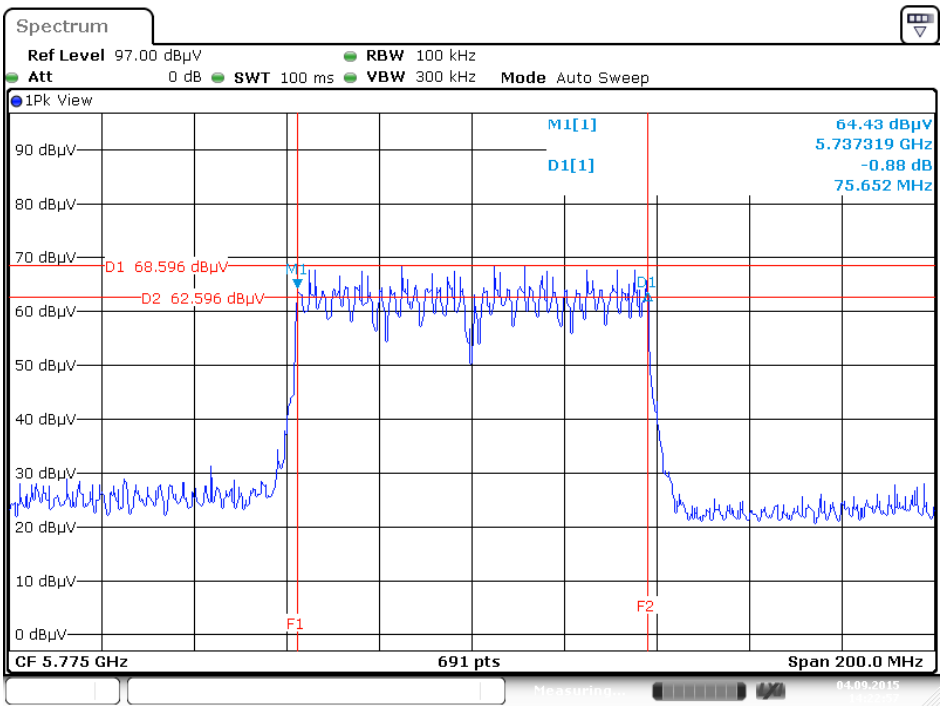

Date: 4.SEP.2015 14:26:45

## 6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5755 MHz




Date: 4.SEP.2015 14:24:05

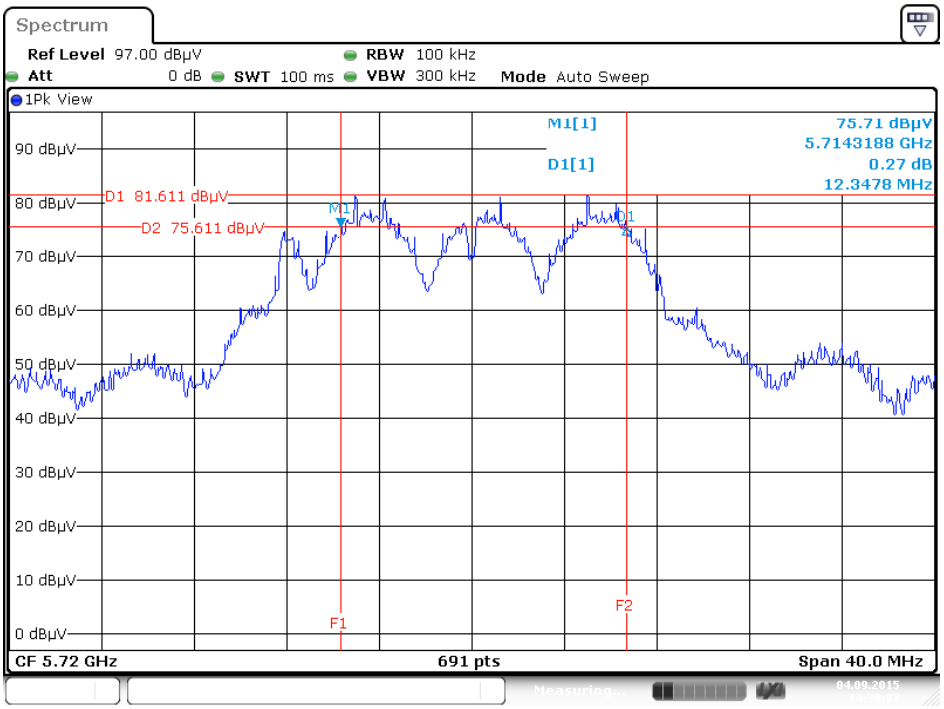
## 6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5775 MHz




Date: 4.SEP.2015 14:22:57

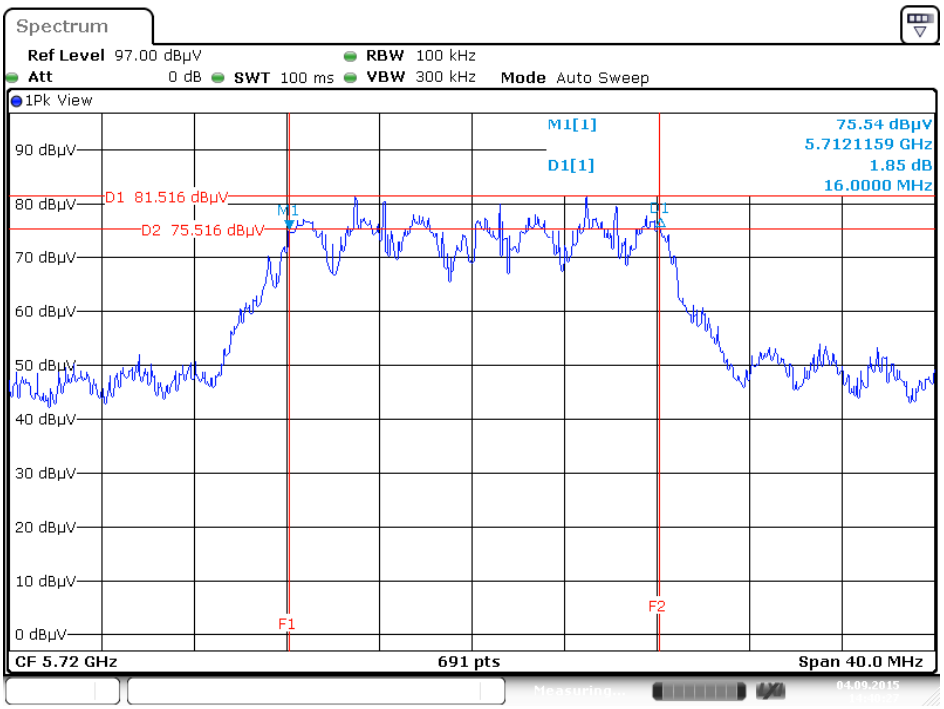
## Straddle Channel

### 6 dB Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5720 MHz



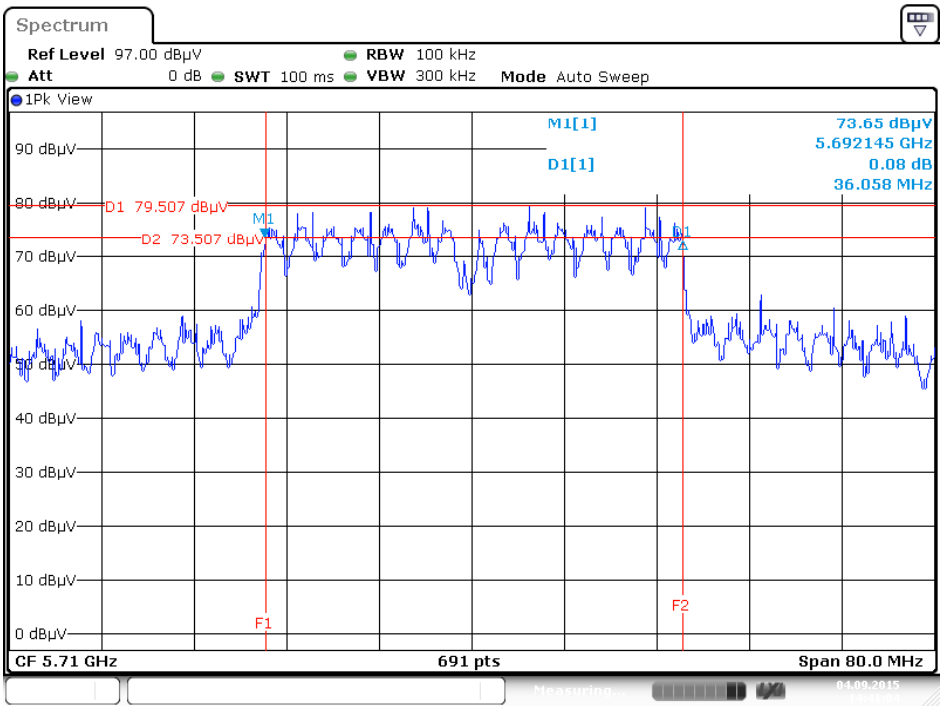

Date: 4.SEP.2015 14:39:07

### 6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5720 MHz



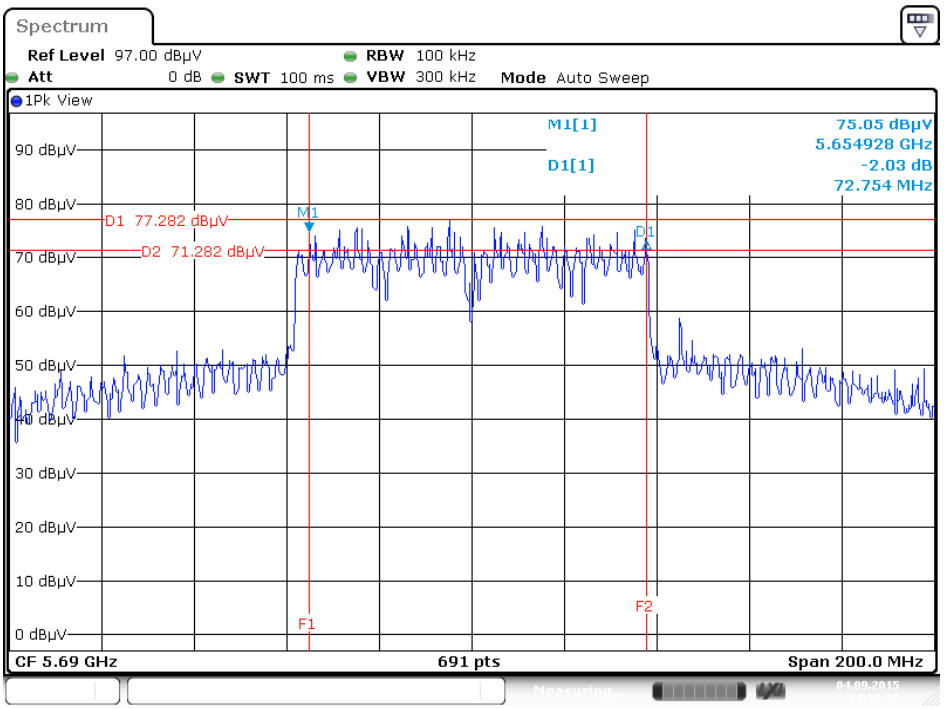

Date: 4.SEP.2015 14:40:27

## 6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5710 MHz




Date: 4.SEP.2015 14:41:05

## 6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5690 MHz

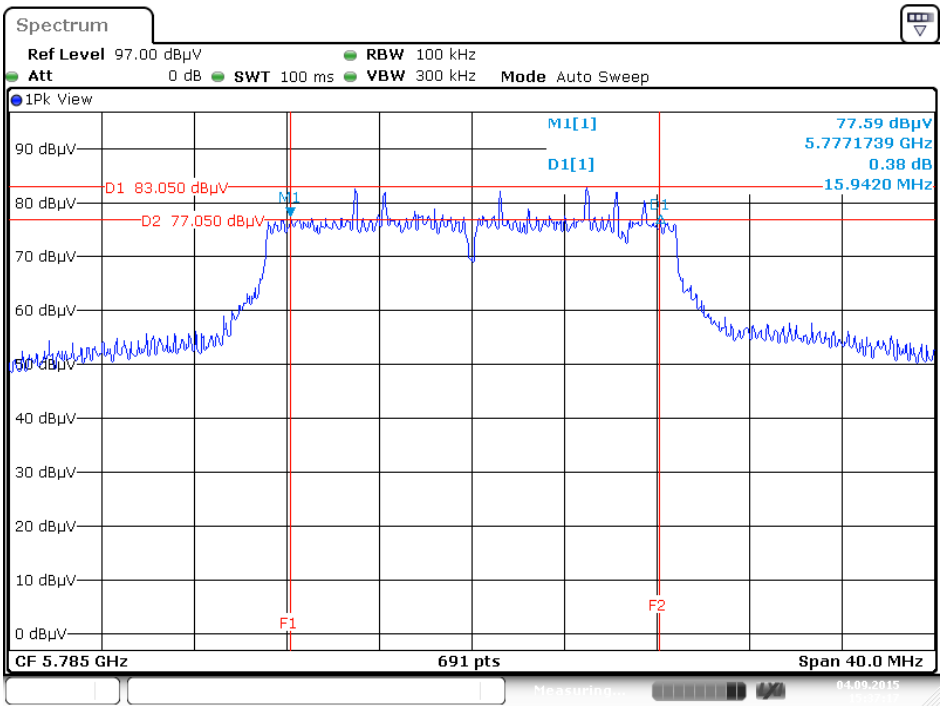



Date: 4.SEP.2015 14:42:30

For Radio: R0

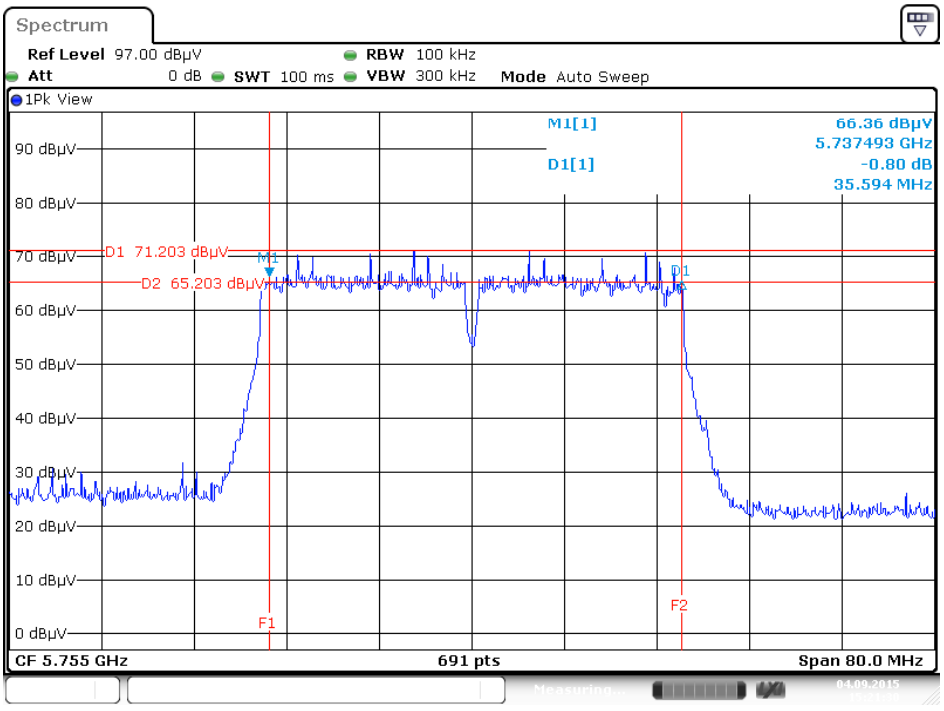
For beamforming function:

**6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5785 MHz**



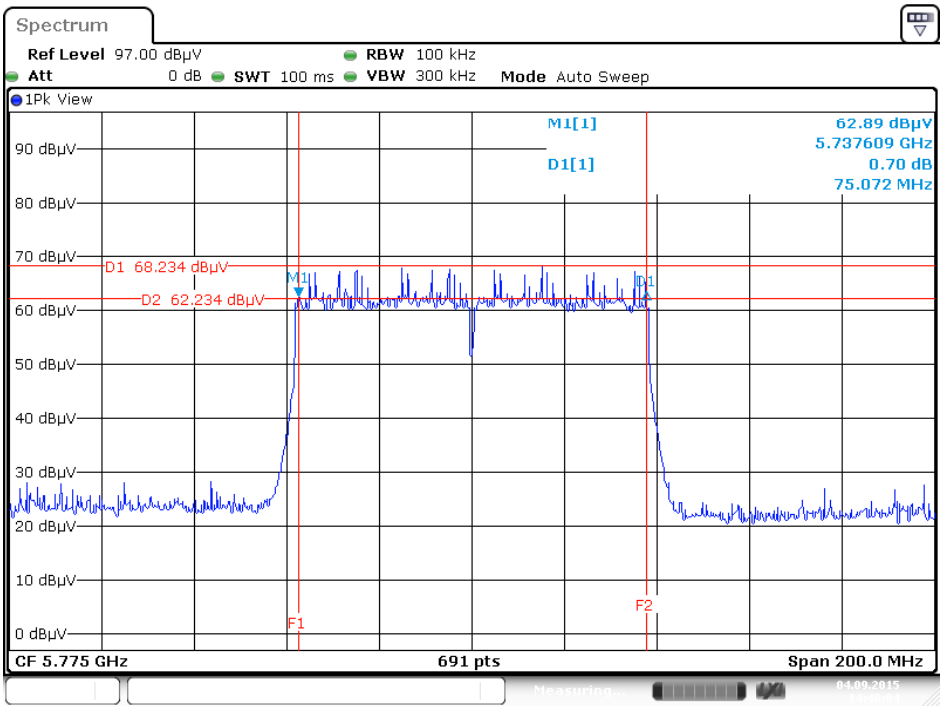

Date: 4.SEP.2015 15:37:17

**6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5755 MHz**




Date: 4.SEP.2015 15:21:31

## 6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5775 MHz

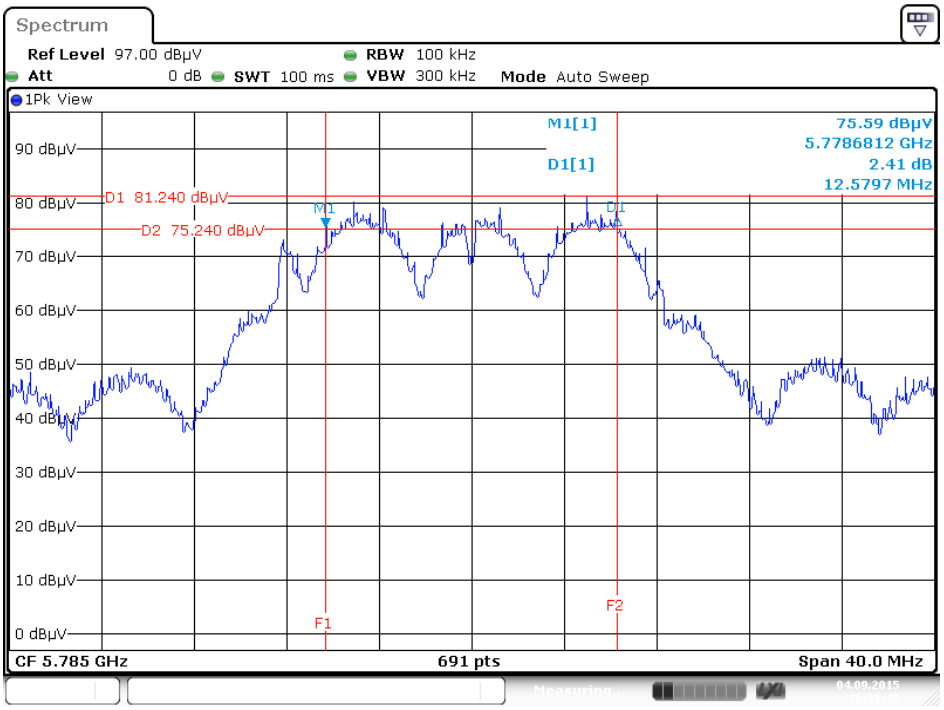



Date: 4.SEP.2015 14:48:05

For Radio: R1

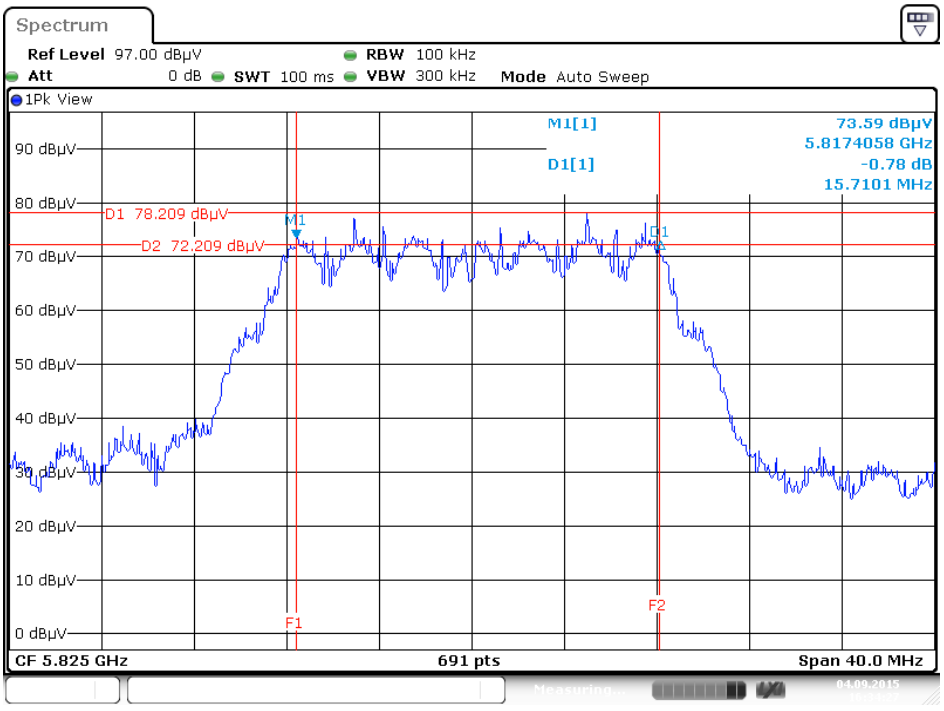
For non-beamforming function:

**6 dB Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5785 MHz**



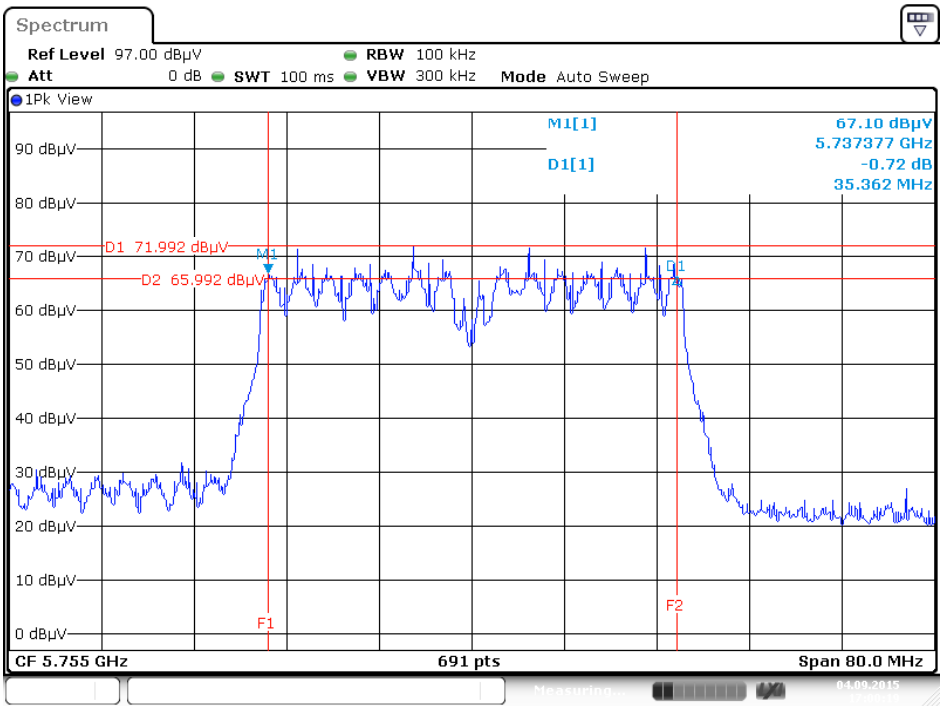

Date: 4.SEP.2015 16:31:50

**6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5825 MHz**



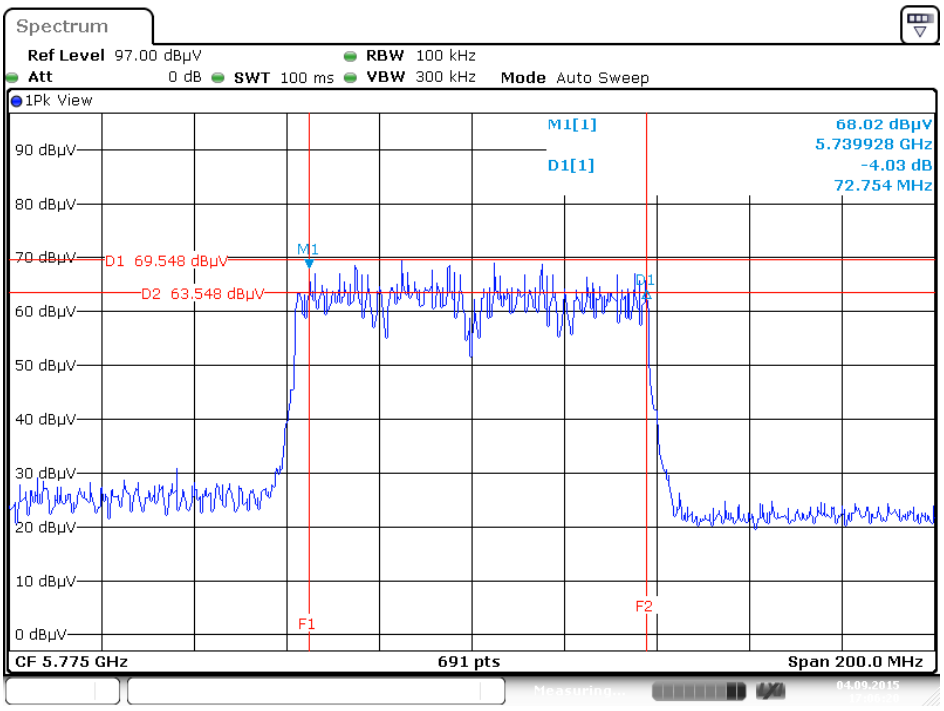

Date: 4.SEP.2015 16:34:28

## 6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5755 MHz




Date: 4.SEP.2015 17:00:19

## 6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5775 MHz

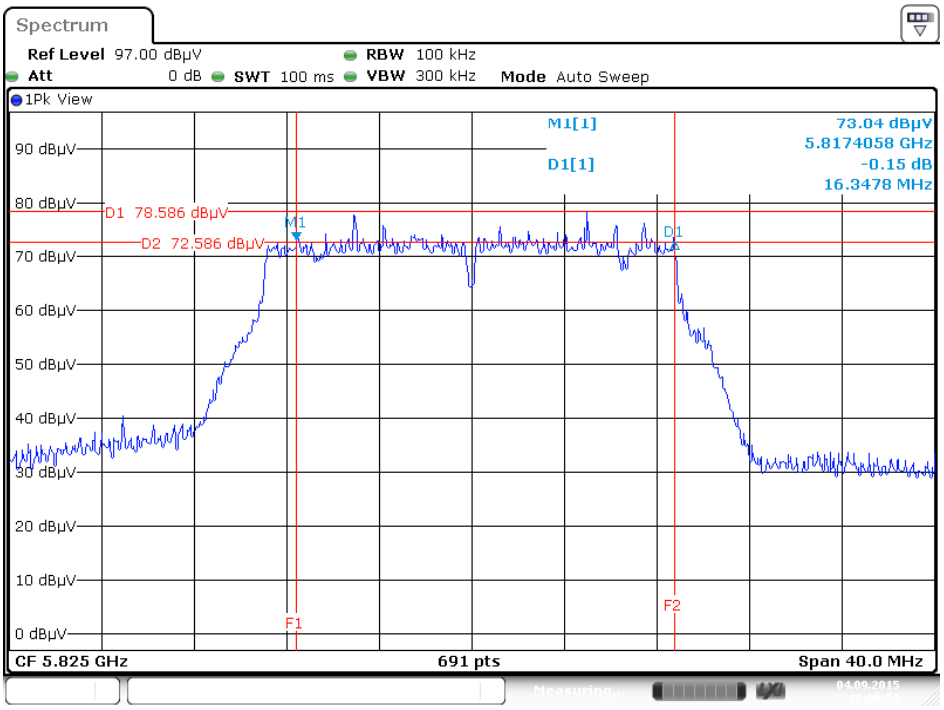



Date: 4.SEP.2015 17:06:20

For Radio: R1

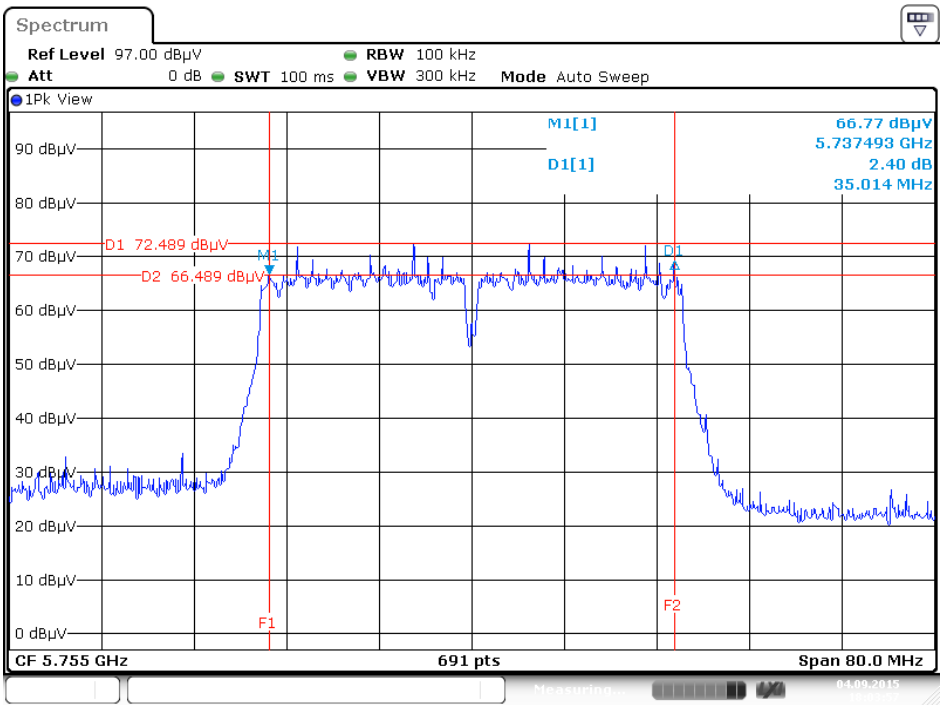
For beamforming function:

**6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5825 MHz**



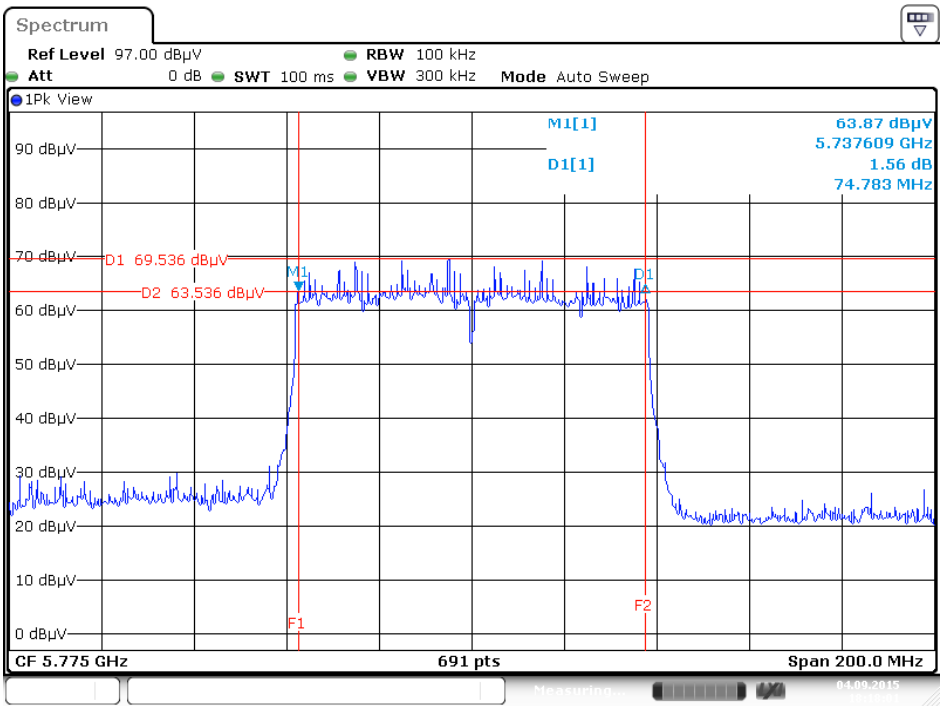

Date: 4.SEP.2015 18:00:53

**6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5755 MHz**




Date: 4.SEP.2015 18:03:57

## 6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5775 MHz




Date: 4.SEP.2015 18:18:01

## 4.4. Maximum Conducted Output Power Measurement

### 4.4.1. Limit

| Frequency Band | | | Limit |
|---|---|---|---|
| ☒ | 5.15~5.25 GHz | | |
| | Operating Mode | | |
| | ☐ | Outdoor access point | The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 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). |
| | ☒ | Indoor access point for Radio: R1 | The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. |
| | ☐ | Fixed point-to-point access points | The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). 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. |
| | ☒ | Mobile and portable client devices for Radio: R0 | The maximum conducted output power over the frequency band of operation shall not exceed 250 mW (24dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. |

| | | |
|---|---|---|
| ☒ | 5.25-5.35 GHz | The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. |
| ☒ | 5.470-5.725 GHz | |
| ☒ | 5.725~5.85 GHz | The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. |

### 4.4.2. Measuring Instruments and Setting

**For straddle channel:**

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

| Spectrum Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Span Frequency | Encompass the entire emissions bandwidth (EBW) of the signal |
| RBW | 1000 kHz |
| VBW | 3000 kHz |
| Detector | RMS |
| Trace | Average Sweep count 100 |
| Sweep Time | Auto |

**For other channel:**

Please refer to section 5 of equipments list in this report. The following table is the setting of the power meter.

| Power Meter Parameter | Setting |
|---|---|
| Detector | AVERAGE |

### 4.4.3. Test Procedures

**For straddle channel:**

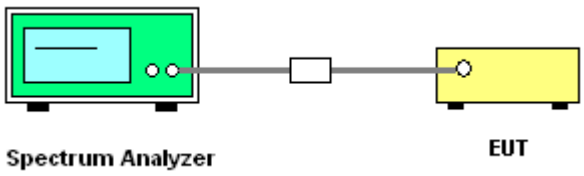
1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Test was performed in accordance with FCC Public Notice DA 02-2138, August 30, 2002.

**For other channel:**

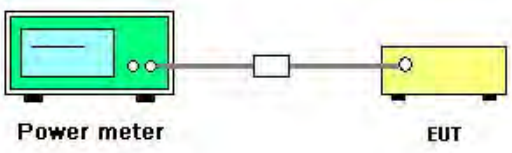
1. The transmitter output (antenna port) was connected to the power meter.
2. Test was performed in accordance with KDB789033 D02 v01 for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - section (E) Maximum conducted output power =>3. Measurement using a Power Meter (PM) =>b) Method PM-G (Measurement using a gated RF average power meter).
3. Multiple antenna systems was performed in accordance with KDB662911 D01 v02r01 Emissions Testing of Transmitters with Multiple Outputs in the Same Band.
4. When measuring maximum conducted output power with multiple antenna systems,add every result of the values by mathematic formula.

### 4.4.4. Test Setup Layout

**For straddle channel:**




**For other channel:**




### 4.4.5. Test Deviation

There is no deviation with the original standard.

### 4.4.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

## 4.4.7. Test Result of Maximum Conducted Output Power

For Radio: R0

| Temperature | 25°C | Humidity | 60% |
|---|---|---|---|
| Test Engineer | Eddie Weng / Nick Peng | Test Function | Non-beamforming function |
| Test Date | For straddle channel: Aug. 22, 2015 / Sep. 01, 2015 | | |
| | For other channel: Aug. 22, 2015~Sep. 08, 2015 | | |

| Mode | Frequency | Conducted Power (dBm) | | | Max. Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| | | Chain 1 | Chain 2 | Total | | |
| 802.11a | 5180 MHz | 17.67 | 18.66 | 21.20 | 24.00 | Complies |
| | 5200 MHz | 19.89 | 20.69 | 23.32 | 24.00 | Complies |
| | 5240 MHz | 20.21 | 20.35 | 23.29 | 24.00 | Complies |
| | 5260 MHz | 20.29 | 20.33 | 23.32 | 24.00 | Complies |
| | 5300 MHz | 20.36 | 20.24 | 23.31 | 24.00 | Complies |
| | 5320 MHz | 18.85 | 18.63 | 21.75 | 24.00 | Complies |
| | 5500 MHz | 18.74 | 18.06 | 21.42 | 24.00 | Complies |
| | 5580 MHz | 20.41 | 20.17 | 23.30 | 24.00 | Complies |
| | 5700 MHz | 17.52 | 16.72 | 20.15 | 24.00 | Complies |
| | 5745 MHz | 18.04 | 17.22 | 20.66 | 30.00 | Complies |
| | 5785 MHz | 19.20 | 18.08 | 21.69 | 30.00 | Complies |
| | 5825 MHz | 19.24 | 17.56 | 21.49 | 30.00 | Complies |
| 802.11ac MCS0/Nss1 VHT20 | 5180 MHz | 17.96 | 18.59 | 21.30 | 24.00 | Complies |
| | 5200 MHz | 19.89 | 20.67 | 23.31 | 24.00 | Complies |
| | 5240 MHz | 20.08 | 20.48 | 23.29 | 24.00 | Complies |
| | 5260 MHz | 20.35 | 20.22 | 23.30 | 24.00 | Complies |
| | 5300 MHz | 20.31 | 20.17 | 23.25 | 24.00 | Complies |
| | 5320 MHz | 18.93 | 18.72 | 21.84 | 24.00 | Complies |
| | 5500 MHz | 18.57 | 17.79 | 21.21 | 24.00 | Complies |
| | 5580 MHz | 20.56 | 19.95 | 23.28 | 24.00 | Complies |
| | 5700 MHz | 16.91 | 16.05 | 19.51 | 24.00 | Complies |
| | 5745 MHz | 17.48 | 16.40 | 19.98 | 30.00 | Complies |
| | 5785 MHz | 22.04 | 21.68 | 24.87 | 30.00 | Complies |
| | 5825 MHz | 19.65 | 17.86 | 21.86 | 30.00 | Complies |

| Mode | Frequency | Conducted Power (dBm) | | | Max. Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| | | Chain 1 | Chain 2 | Total | | |
| 802.11ac MCS0/Nss1 VHT40 | 5190 MHz | 11.83 | 12.21 | 15.03 | 24.00 | Complies |
| | 5230 MHz | 18.55 | 19.42 | 22.02 | 24.00 | Complies |
| | 5270 MHz | 20.62 | 20.32 | 23.48 | 24.00 | Complies |
| | 5310 MHz | 17.29 | 16.81 | 20.07 | 24.00 | Complies |
| | 5510 MHz | 14.23 | 13.62 | 16.95 | 24.00 | Complies |
| | 5550 MHz | 20.22 | 19.45 | 22.86 | 24.00 | Complies |
| | 5670 MHz | 16.96 | 16.16 | 19.59 | 24.00 | Complies |
| | 5755 MHz | 13.16 | 11.85 | 15.56 | 30.00 | Complies |
| | 5795 MHz | 18.42 | 17.12 | 20.83 | 30.00 | Complies |
| 802.11ac MCS0/Nss1 VHT80 | 5210 MHz | 11.74 | 12.48 | 15.14 | 24.00 | Complies |
| | 5290 MHz | 16.78 | 16.65 | 19.73 | 24.00 | Complies |
| | 5530 MHz | 13.53 | 13.71 | 16.63 | 24.00 | Complies |
| | 5610 MHz | 18.69 | 17.48 | 21.14 | 24.00 | Complies |
| | 5775 MHz | 14.16 | 12.91 | 16.59 | 30.00 | Complies |

Straddle Channel

| Mode | Frequency | Conducted Power (dBm) | | | Max. Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| | | Chain 1 | Chain 2 | Total | | |
| 802.11a | 5720 MHz (UNII 2C) | 19.14 | 17.84 | 21.55 | 23.75 | Complies |
| | 5720 MHz (UNII 3) | 12.98 | 11.68 | 15.39 | 30.00 | Complies |
| 802.11ac MCS0/Nss1 VHT20 | 5720 MHz (UNII 2C) | 19.58 | 18.18 | 21.95 | 24.00 | Complies |
| | 5720 MHz (UNII 3) | 13.92 | 12.53 | 16.29 | 30.00 | Complies |
| 802.11ac MCS0/Nss1 VHT40 | 5710 MHz (UNII 2C) | 20.78 | 19.75 | 23.31 | 24.00 | Complies |
| | 5710 MHz (UNII 3) | 10.34 | 9.59 | 12.99 | 30.00 | Complies |
| 802.11ac MCS0/Nss1 VHT80 | 5690 MHz (UNII 2C) | 21.00 | 19.78 | 23.44 | 24.00 | Complies |
| | 5690 MHz (UNII 3) | 7.19 | 6.05 | 9.67 | 30.00 | Complies |

Note: The power limit=24dBm or 11+10*log(B)

The power limit of 11a 5720MHz (UNII 2C)=11+10*log(18.83)=23.75dBm<24dBm, so the limit=23.75dBm

For Radio: R0

| Temperature | 25°C | Humidity | 60% |
|---|---|---|---|
| Test Engineer | Eddie Weng / Nick Peng | Test Function | Beamforming function |
| Test Date | For straddle channel: Aug. 22, 2015 / Sep. 01, 2015 | | |
| | For other channel: Aug. 22, 2015~Sep. 08, 2015 | | |

| Mode | Frequency | Conducted Power (dBm) | | | Max. Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| | | Chain 1 | Chain 2 | Total | | |
| 802.11ac MCS0/Nss1 VHT20 | 5180 MHz | 17.74 | 18.35 | 21.07 | 23.33 | Complies |
| | 5200 MHz | 19.47 | 20.12 | 22.82 | 23.33 | Complies |
| | 5240 MHz | 19.54 | 20.04 | 22.81 | 23.33 | Complies |
| | 5260 MHz | 19.64 | 19.76 | 22.71 | 23.33 | Complies |
| | 5300 MHz | 19.95 | 19.67 | 22.82 | 23.33 | Complies |
| | 5320 MHz | 18.43 | 18.46 | 21.46 | 23.33 | Complies |
| | 5500 MHz | 18.57 | 17.79 | 21.21 | 23.33 | Complies |
| | 5580 MHz | 20.07 | 19.52 | 22.81 | 23.33 | Complies |
| | 5700 MHz | 16.91 | 16.05 | 19.51 | 23.33 | Complies |
| | 5745 MHz | 17.27 | 16.15 | 19.76 | 29.33 | Complies |
| | 5785 MHz | 21.17 | 20.26 | 23.75 | 29.33 | Complies |
| | 5825 MHz | 19.42 | 17.57 | 21.60 | 29.33 | Complies |
| 802.11ac MCS0/Nss1 VHT40 | 5190 MHz | 11.67 | 12.18 | 14.94 | 23.33 | Complies |
| | 5230 MHz | 19.31 | 20.18 | 22.78 | 23.33 | Complies |
| | 5270 MHz | 19.84 | 19.58 | 22.72 | 23.33 | Complies |
| | 5310 MHz | 16.87 | 16.61 | 19.75 | 23.33 | Complies |
| | 5510 MHz | 13.72 | 13.15 | 16.45 | 23.33 | Complies |
| | 5550 MHz | 19.79 | 19.09 | 22.46 | 23.33 | Complies |
| | 5670 MHz | 16.41 | 16.18 | 19.31 | 23.33 | Complies |
| | 5755 MHz | 13.16 | 11.85 | 15.56 | 29.33 | Complies |
| | 5795 MHz | 18.42 | 17.12 | 20.83 | 29.33 | Complies |
| 802.11ac MCS0/Nss1 VHT80 | 5210 MHz | 12.34 | 13.12 | 15.76 | 23.33 | Complies |
| | 5290 MHz | 16.78 | 16.65 | 19.73 | 23.33 | Complies |
| | 5530 MHz | 14.97 | 14.43 | 17.72 | 23.33 | Complies |
| | 5610 MHz | 19.73 | 18.91 | 22.35 | 23.33 | Complies |
| | 5775 MHz | 13.49 | 12.36 | 15.97 | 29.33 | Complies |

Note: $Directional\ Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.67dBi >6dBi.

1. For band 1~3 power limit=24 – (6.67 – 6)=23.33dBm.
2. For band 4 power limit=30 – (6.67 – 6)=29.33dBm.

**Straddle Channel**

| Mode | Frequency | Conducted Power (dBm) | | | Max. Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| | | Chain 1 | Chain 2 | Total | | |
| 802.11ac MCS0/Nss1 VHT20 | 5720 MHz (UNII 2C) | 19.77 | 18.46 | 22.17 | 23.33 | Complies |
| | 5720 MHz (UNII 3) | 14.11 | 12.81 | 16.52 | 29.33 | Complies |
| 802.11ac MCS0/Nss1 VHT40 | 5710 MHz (UNII 2C) | 20.31 | 19.12 | 22.77 | 23.33 | Complies |
| | 5710 MHz (UNII 3) | 9.81 | 8.94 | 12.41 | 29.33 | Complies |
| 802.11ac MCS0/Nss1 VHT80 | 5690 MHz (UNII 2C) | 20.30 | 19.21 | 22.80 | 23.33 | Complies |
| | 5690 MHz (UNII 3) | 6.30 | 5.40 | 8.88 | 29.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.67dBi >6dBi.

1. (UNII 2C) power limit=24 – (6.67 – 6)=23.33dBm.
2. (UNII 3) power limit=30 – (6.67 – 6)=29.33dBm.

For Radio: R1

| Temperature | 25°C | Humidity | 60% |
|---|---|---|---|
| Test Engineer | Eddie Weng | Test Function | Non-beamforming function |
| Test Date | Aug. 22, 2015~Sep. 08, 2015 | | |

| Mode | Frequency | Conducted Power (dBm) | | | Max. Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| | | Chain 1 | Chain 2 | Total | | |
| 802.11a | 5180 MHz | 17.32 | 18.85 | 21.16 | 30.00 | Complies |
| | 5200 MHz | 19.65 | 21.72 | 23.82 | 30.00 | Complies |
| | 5240 MHz | 19.61 | 20.75 | 23.23 | 30.00 | Complies |
| | 5745 MHz | 17.33 | 18.25 | 20.82 | 30.00 | Complies |
| | 5785 MHz | 19.26 | 19.74 | 22.52 | 30.00 | Complies |
| | 5825 MHz | 18.48 | 19.21 | 21.87 | 30.00 | Complies |
| 802.11ac MCS0/Nss1 VHT20 | 5180 MHz | 16.77 | 18.23 | 20.57 | 30.00 | Complies |
| | 5200 MHz | 19.38 | 20.76 | 23.13 | 30.00 | Complies |
| | 5240 MHz | 20.03 | 21.52 | 23.85 | 30.00 | Complies |
| | 5745 MHz | 16.33 | 17.29 | 19.85 | 30.00 | Complies |
| | 5785 MHz | 19.32 | 19.89 | 22.62 | 30.00 | Complies |
| | 5825 MHz | 16.71 | 17.69 | 20.24 | 30.00 | Complies |
| 802.11ac MCS0/Nss1 VHT40 | 5190 MHz | 11.28 | 12.97 | 15.22 | 30.00 | Complies |
| | 5230 MHz | 18.42 | 19.98 | 22.28 | 30.00 | Complies |
| | 5755 MHz | 12.59 | 13.57 | 16.12 | 30.00 | Complies |
| | 5795 MHz | 17.42 | 18.16 | 20.82 | 30.00 | Complies |
| 802.11ac MCS0/Nss1 VHT80 | 5210 MHz | 9.92 | 11.64 | 13.87 | 30.00 | Complies |
| | 5775 MHz | 13.03 | 13.68 | 16.38 | 30.00 | Complies |

For Radio: R1

| Temperature | 25°C | Humidity | 60% |
|---|---|---|---|
| Test Engineer | Eddie Weng | Test Function | Beamforming function |
| Test Date | Aug. 22, 2015~Sep. 08, 2015 | | |

| Mode | Frequency | Conducted Power (dBm) | | | Max. Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| | | Chain 1 | Chain 2 | Total | | |
| 802.11ac MCS0/Nss1 VHT20 | 5180 MHz | 15.49 | 16.93 | 19.28 | 29.80 | Complies |
| | 5200 MHz | 18.55 | 20.21 | 22.47 | 29.80 | Complies |
| | 5240 MHz | 20.03 | 21.52 | 23.85 | 29.80 | Complies |
| | 5745 MHz | 16.33 | 17.29 | 19.85 | 29.80 | Complies |
| | 5785 MHz | 19.32 | 19.89 | 22.62 | 29.80 | Complies |
| | 5825 MHz | 16.71 | 17.69 | 20.24 | 29.80 | Complies |
| 802.11ac MCS0/Nss1 VHT40 | 5190 MHz | 10.65 | 12.32 | 14.58 | 29.80 | Complies |
| | 5230 MHz | 18.42 | 19.98 | 22.28 | 29.80 | Complies |
| | 5755 MHz | 13.21 | 14.18 | 16.73 | 29.80 | Complies |
| | 5795 MHz | 17.81 | 18.65 | 21.26 | 29.80 | Complies |
| 802.11ac MCS0/Nss1 VHT80 | 5210 MHz | 10.69 | 12.31 | 14.59 | 29.80 | Complies |
| | 5775 MHz | 13.03 | 13.68 | 16.38 | 29.80 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.20dBi >6dBi, so limit=30 – (6.20 – 6)=29.80dBm.

Note: All the test values were listed in the report.

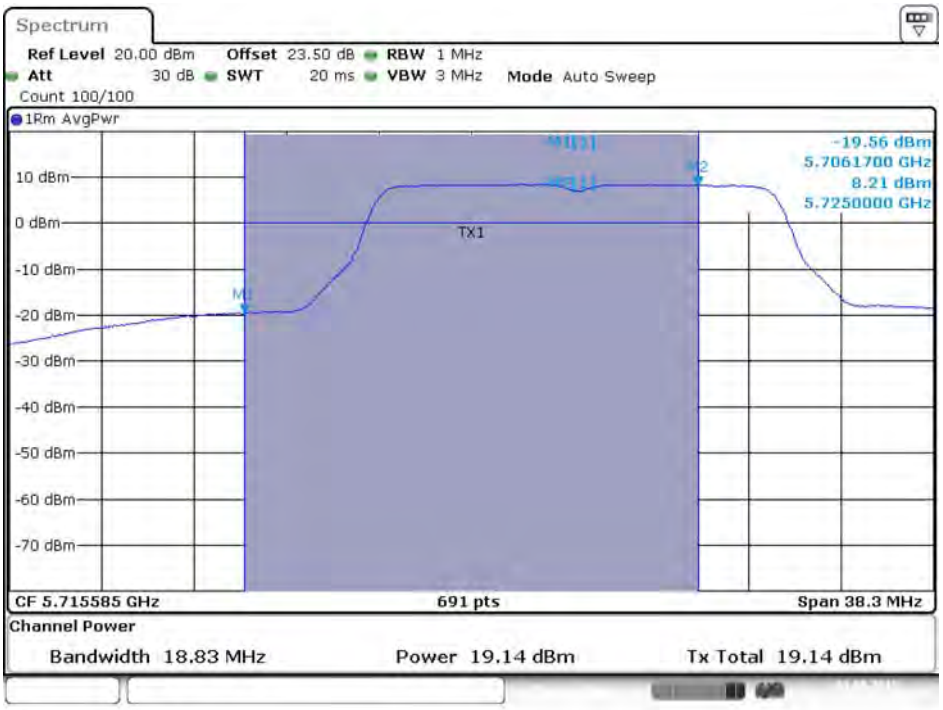
For plots, only the straddle channel result was shown.

For Radio: R0

For non-beamforming function:

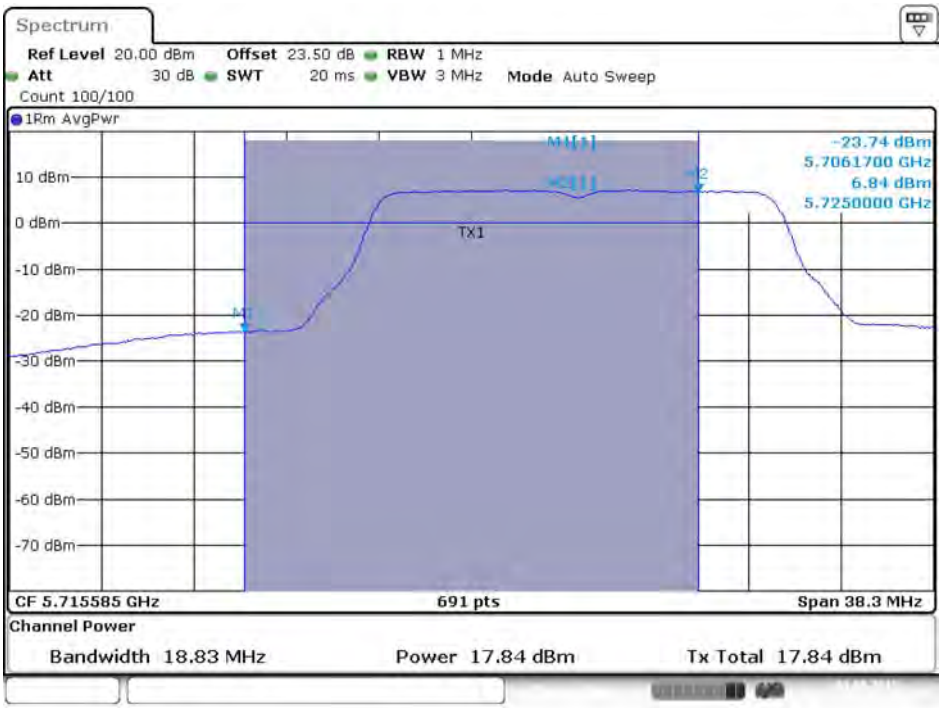
**Straddle Channel**

**Conducted Output Power Plot on Configuration IEEE 802.11a / Chain 1 / 5720 MHz (UNII 2C)**



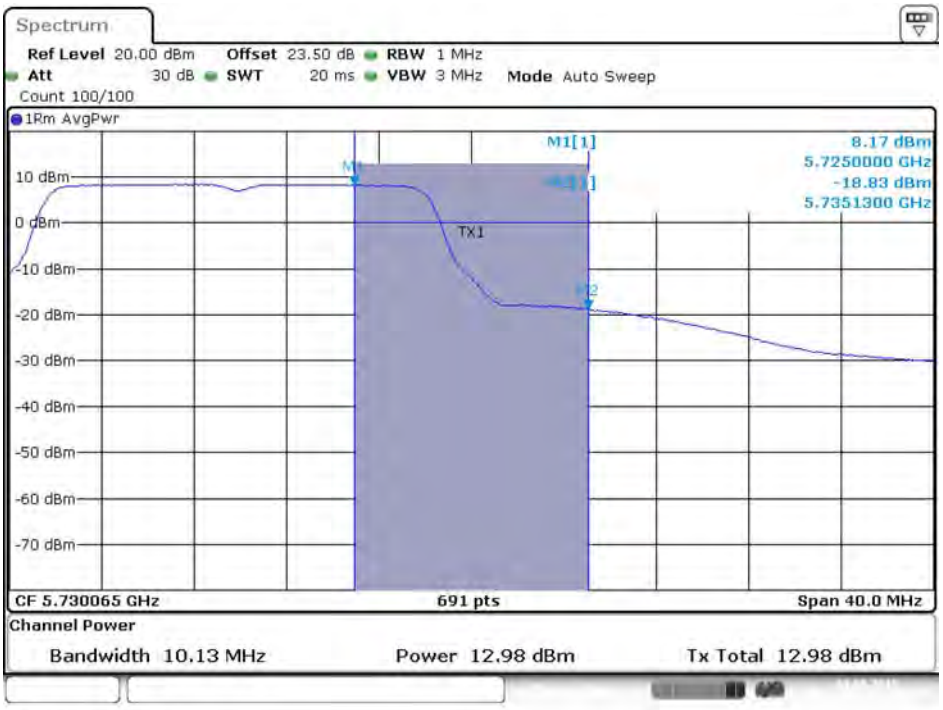

Date: 1.SEP.2015 02:57:45

**Conducted Output Power Plot on Configuration IEEE 802.11a / Chain 2 / 5720 MHz (UNII 2C)**



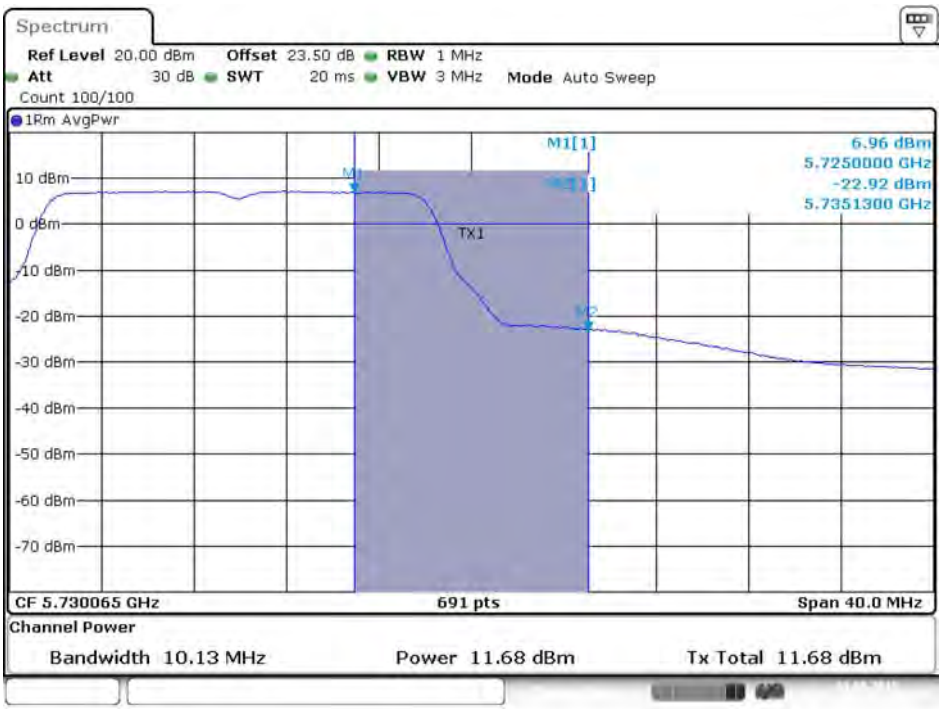

Date: 1.SEP.2015 02:57:52

## Conducted Output Power Plot on Configuration IEEE 802.11a / Chain 1 / 5720 MHz (UNII 3)



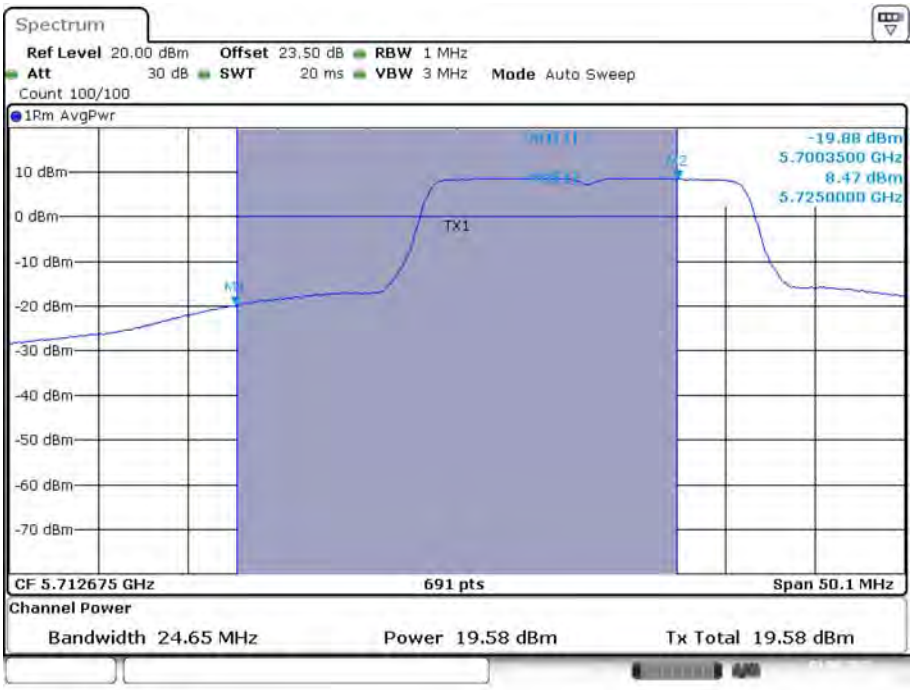

Date: 1.SEP.2015 02:57:48

## Conducted Output Power Plot on Configuration IEEE 802.11a / Chain 2 / 5720 MHz (UNII 3)



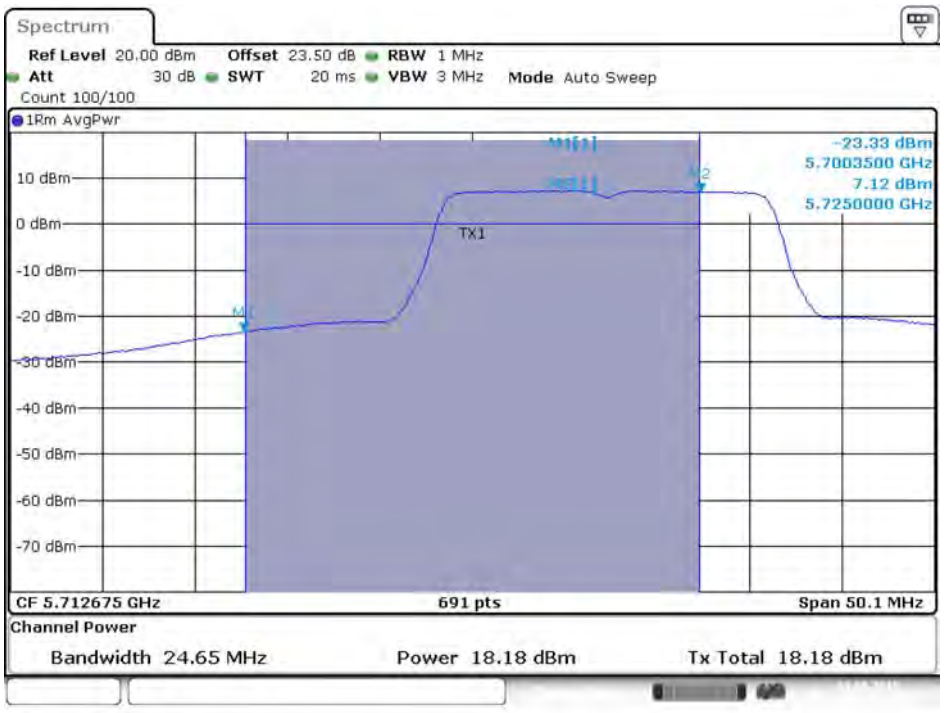

Date: 1.SEP.2015 02:57:55

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 / 5720 MHz (UNII 2C)**



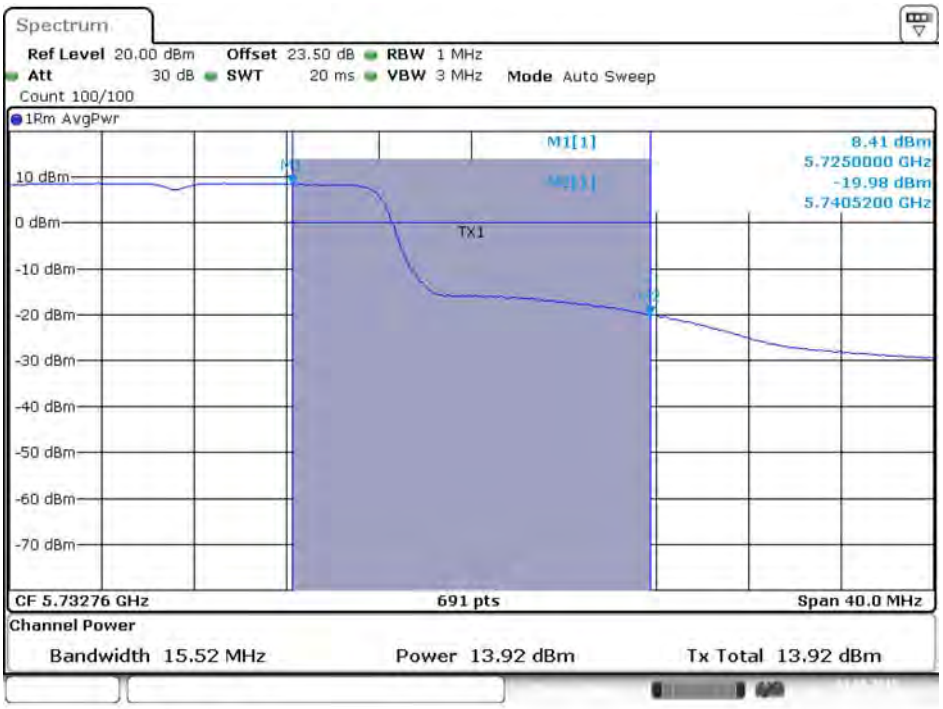

Date: 1.SEP.2015 03:17:27

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5720 MHz (UNII 2C)**



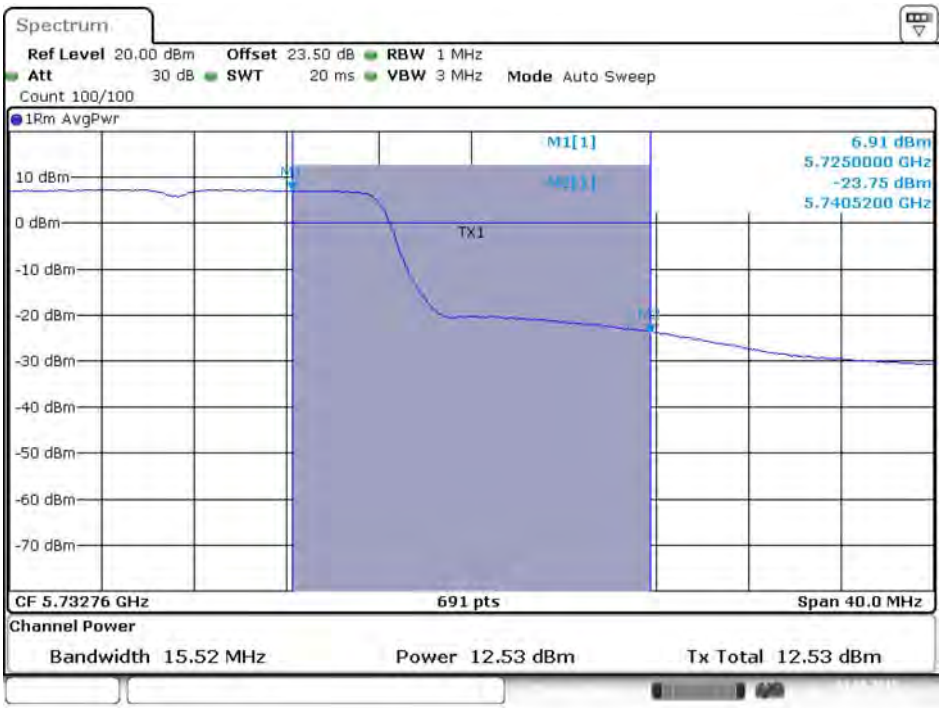

Date: 1.SEP.2015 03:17:34

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 / 5720 MHz (UNII 3)**



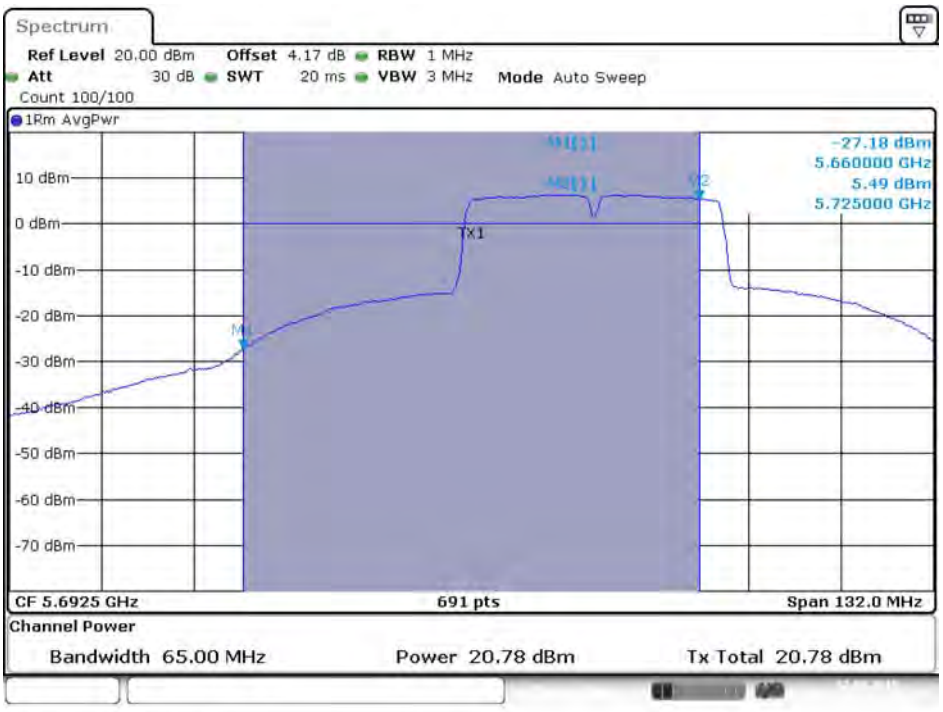

Date: 1.SEP.2015 03:17:31

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5720 MHz (UNII 3)**



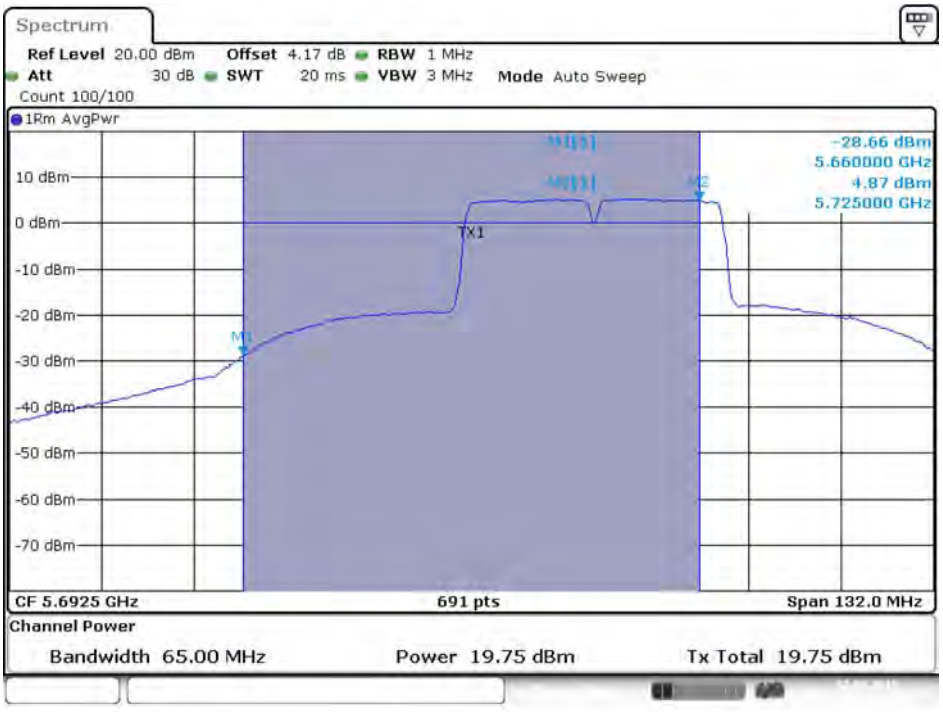

Date: 1.SEP.2015 03:17:38

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 / 5710 MHz (UNII 2C)**



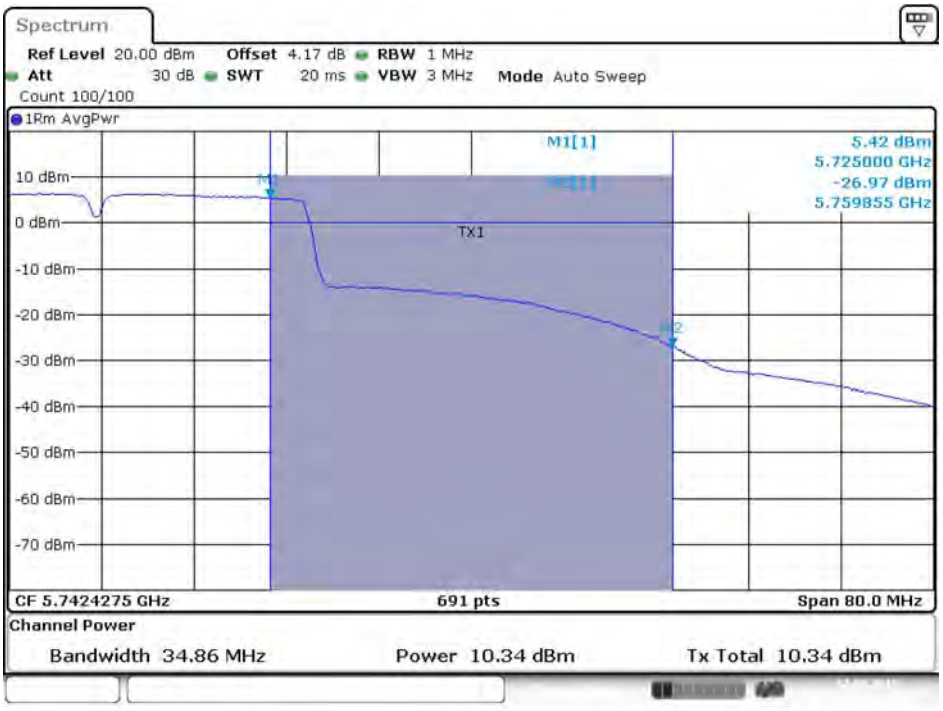

Date: 22.AUG.2015 02:18:07

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5710 MHz (UNII 2C)**



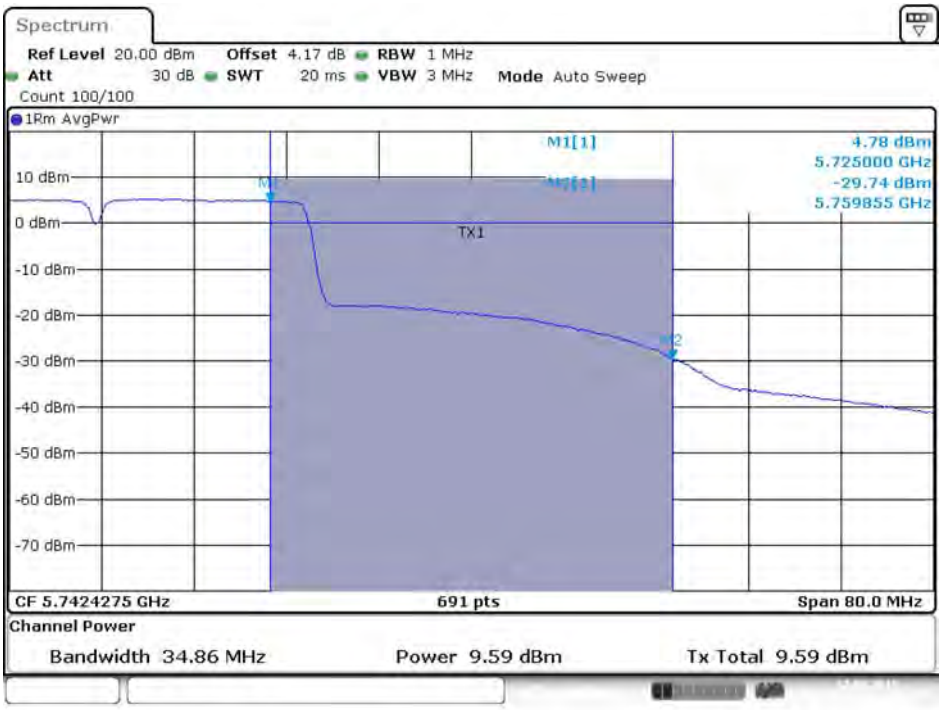

Date: 22.AUG.2015 02:18:14

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 / 5710 MHz (UNII 3)**



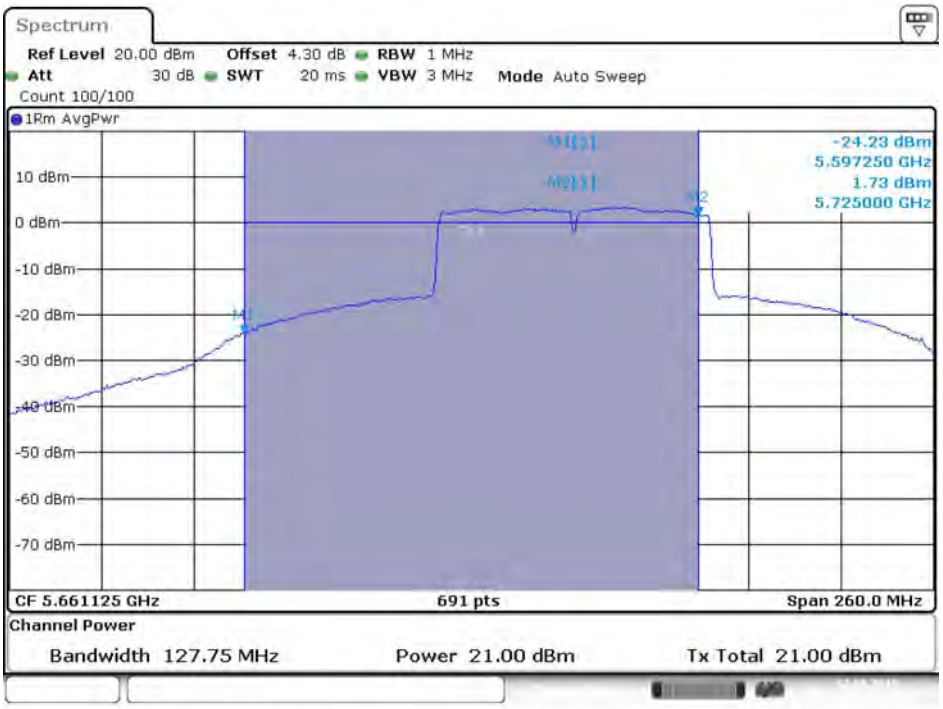

Date: 22.AUG.2015 02:18:10

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5710 MHz (UNII 3)**



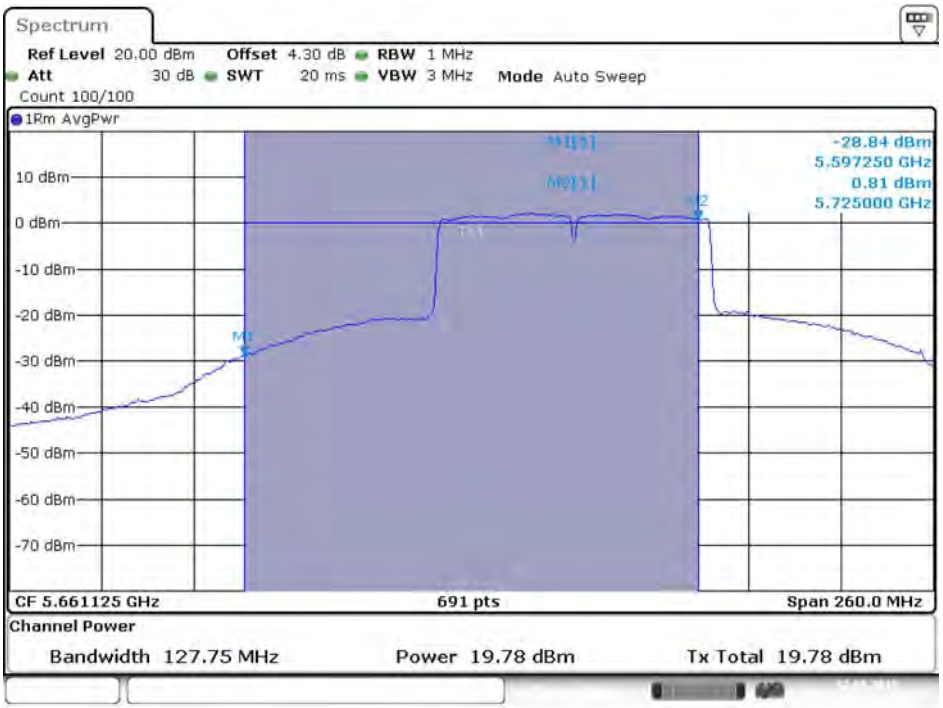

Date: 22.AUG.2015 02:18:17

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 / 5690 MHz (UNII 2C)**



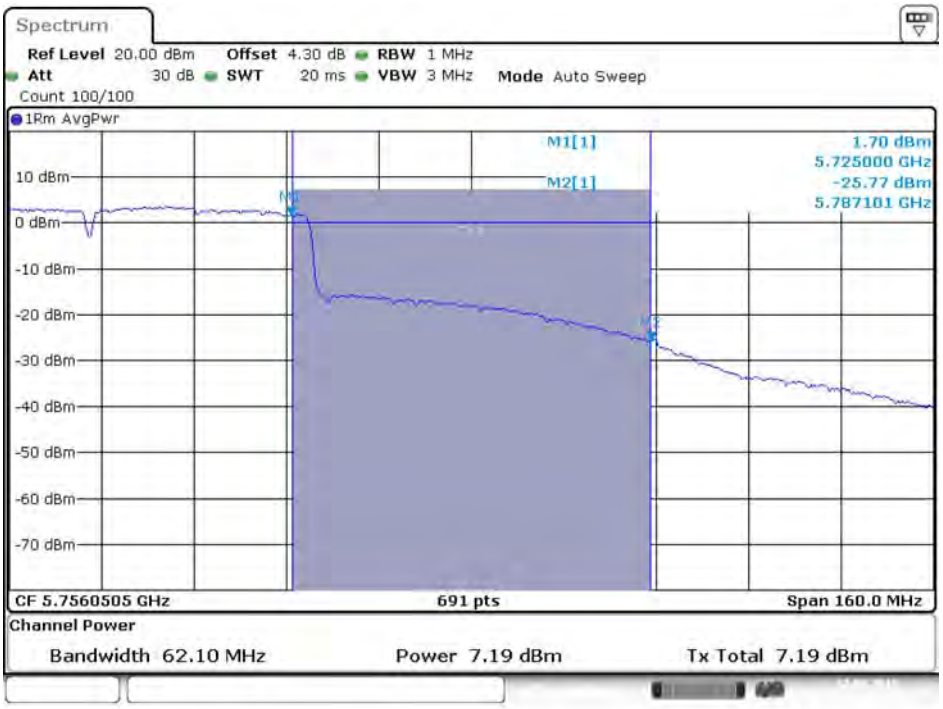

Date: 22.AUG.2015 01:57:56

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2 / 5690 MHz (UNII 2C)**



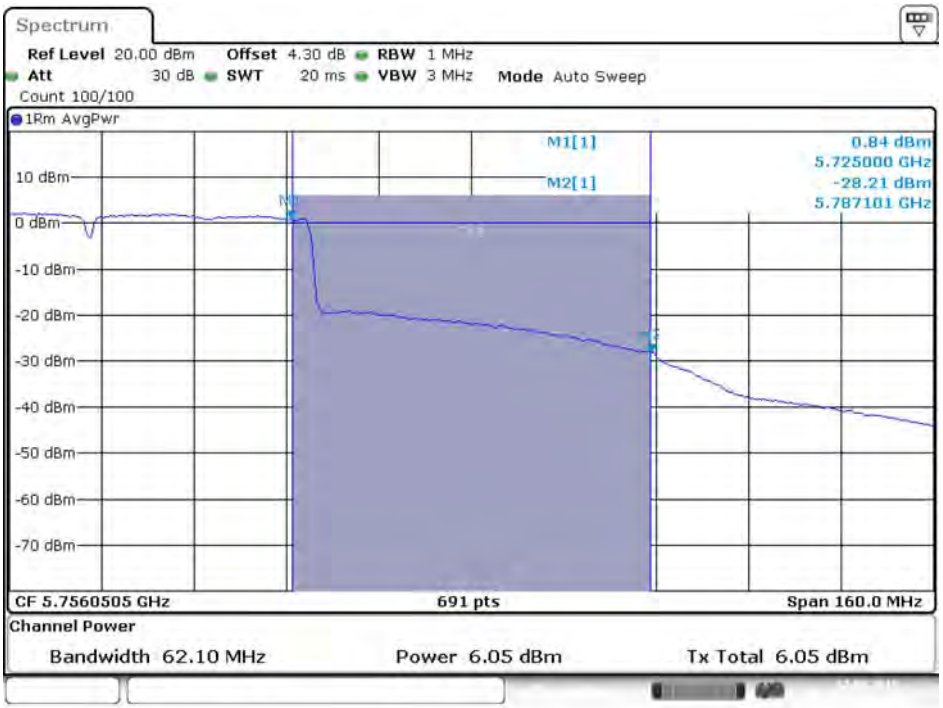

Date: 22.AUG.2015 01:58:03

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 / 5690 MHz (UNII 3)**




Date: 22.AUG.2015 01:57:59

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2 / 5690 MHz (UNII 3)**



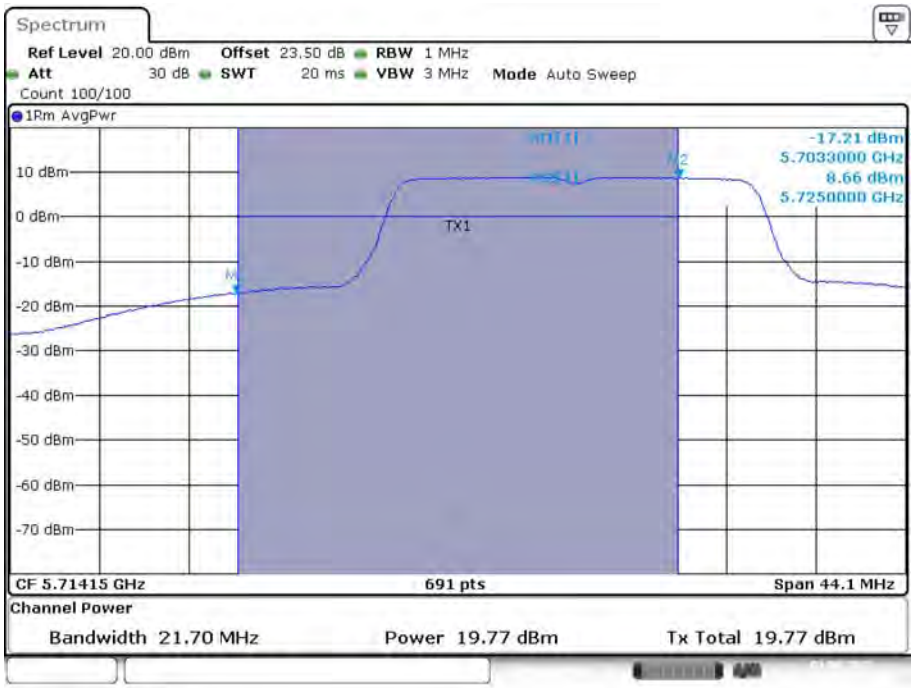

Date: 22.AUG.2015 01:58:06

For Radio: R0

For beamforming function:

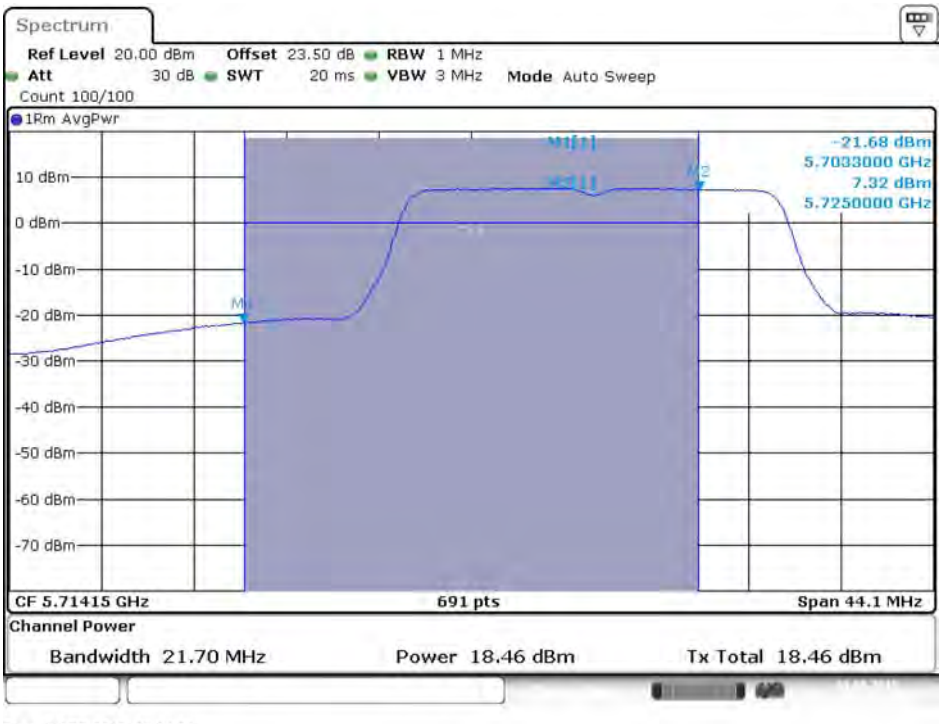
**Straddle Channel**

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 / 5720 MHz (UNII 2C)**



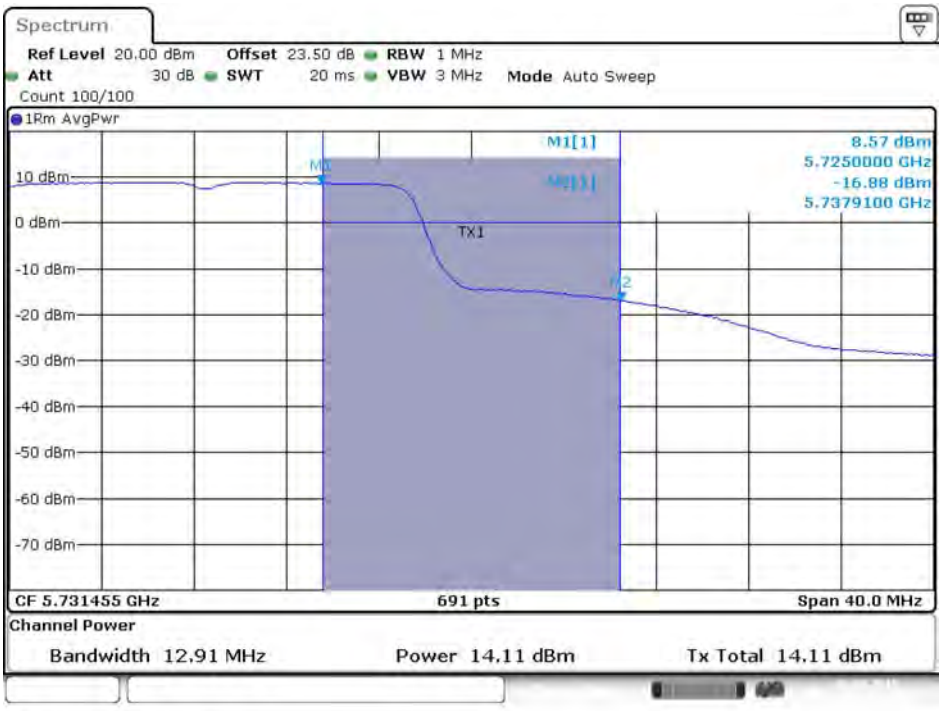

Date: 1.SEP.2015 03:34:52

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5720 MHz (UNII 2C)**




Date: 1.SEP.2015 03:34:59

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 / 5720 MHz (UNII 3)**

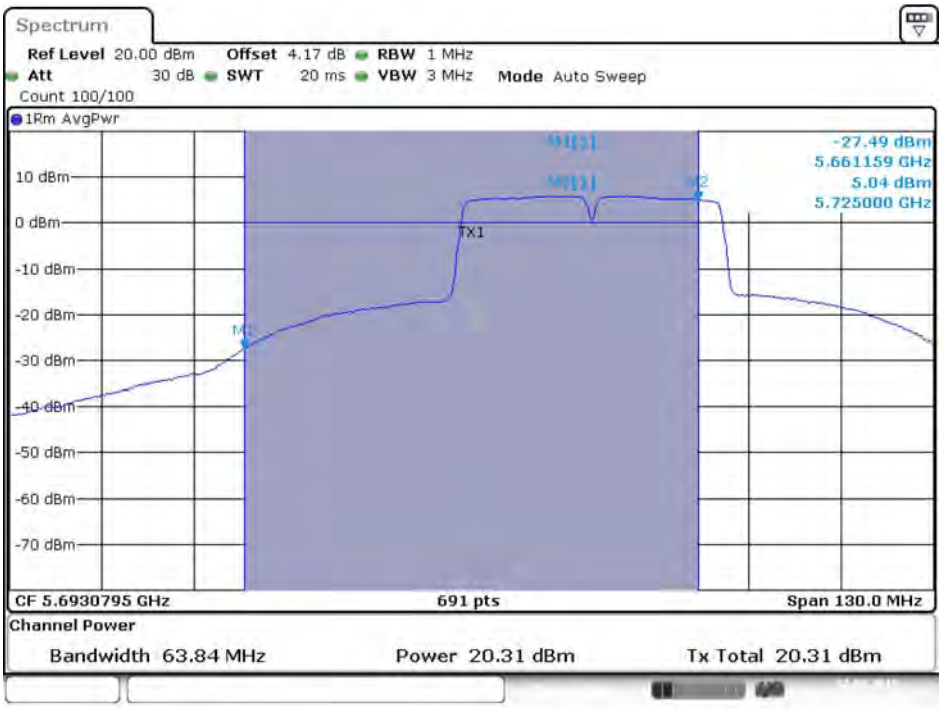



Date: 1.SEP.2015 03:34:56

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5720 MHz (UNII 3)**

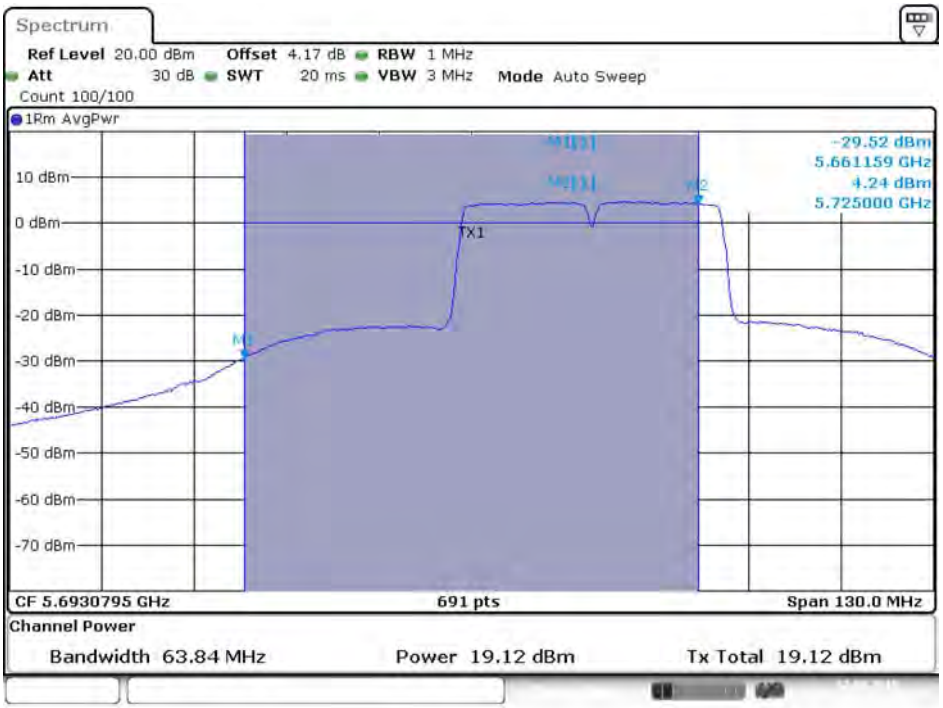

Date: 1.SEP.2015 03:35:03

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 / 5710 MHz (UNII 2C)**



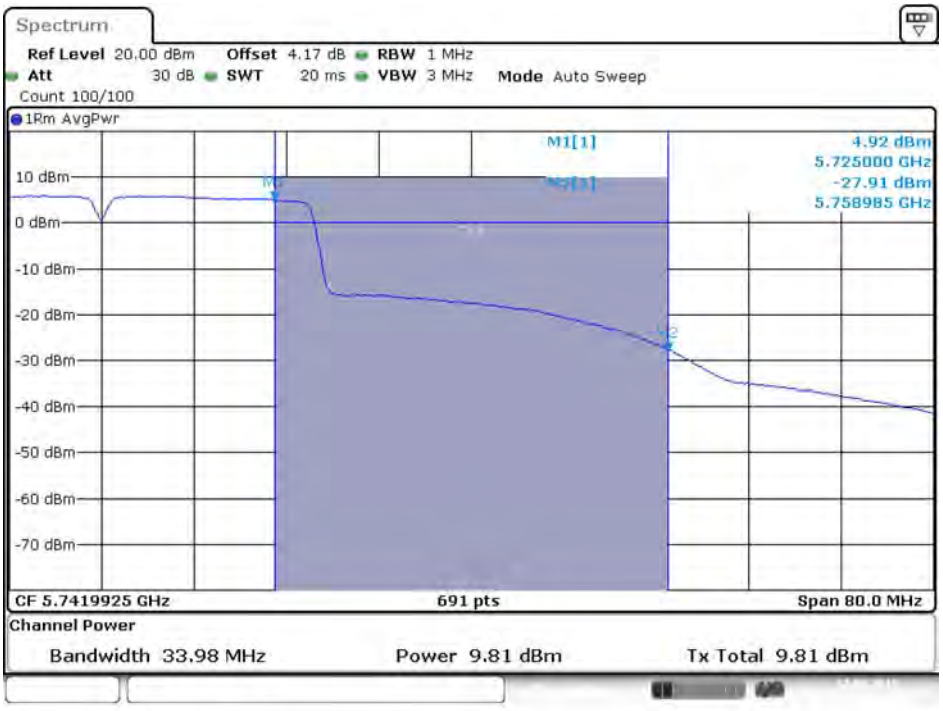

Date: 22.AUG.2015 02:22:57

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5710 MHz (UNII 2C)**



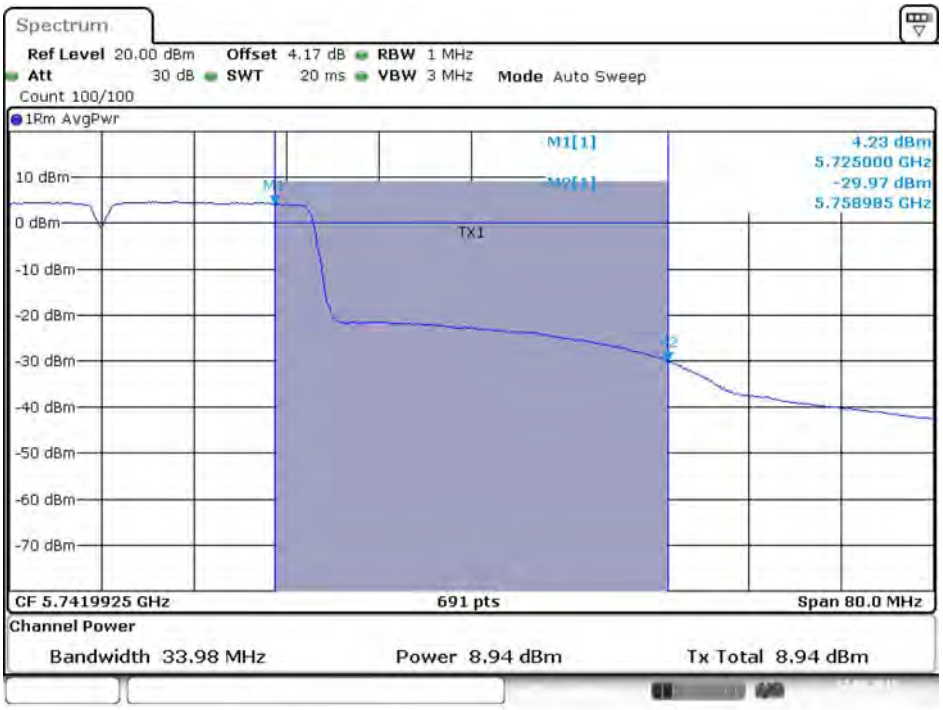

Date: 22.AUG.2015 02:23:04

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 / 5710 MHz (UNII 3)**



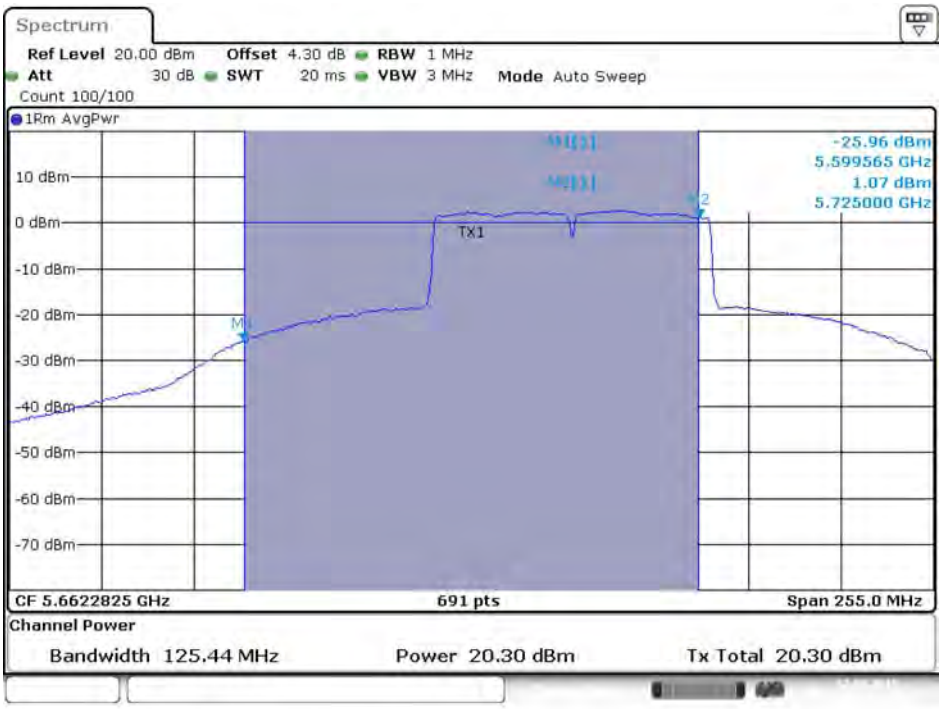

Date: 22.AUG.2015 02:23:00

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5710 MHz (UNII 3)**



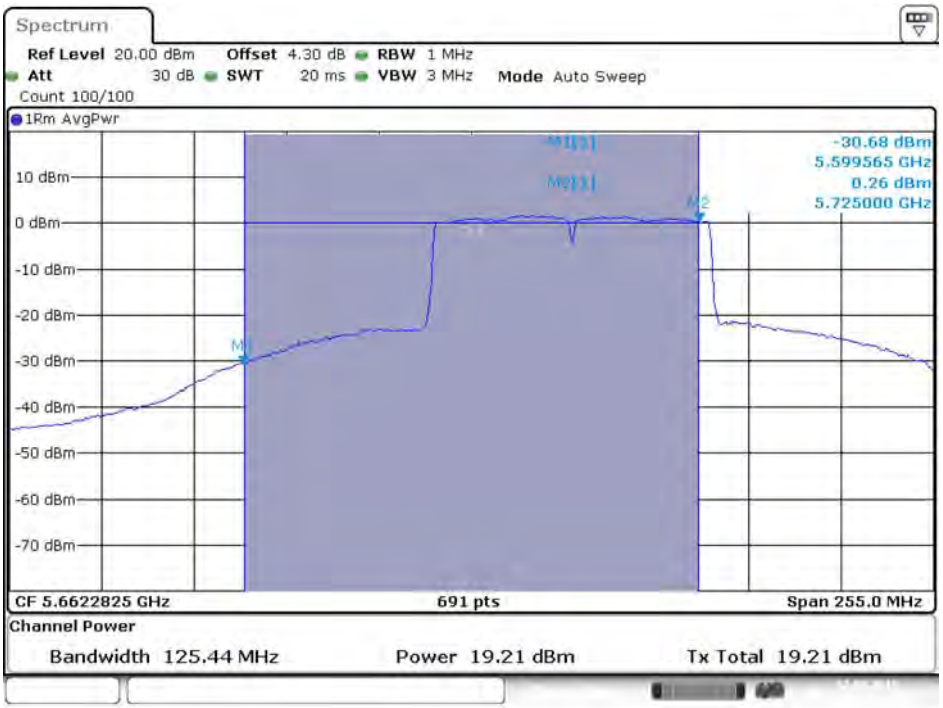

Date: 22.AUG.2015 02:23:07

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 / 5690 MHz (UNII 2C)**



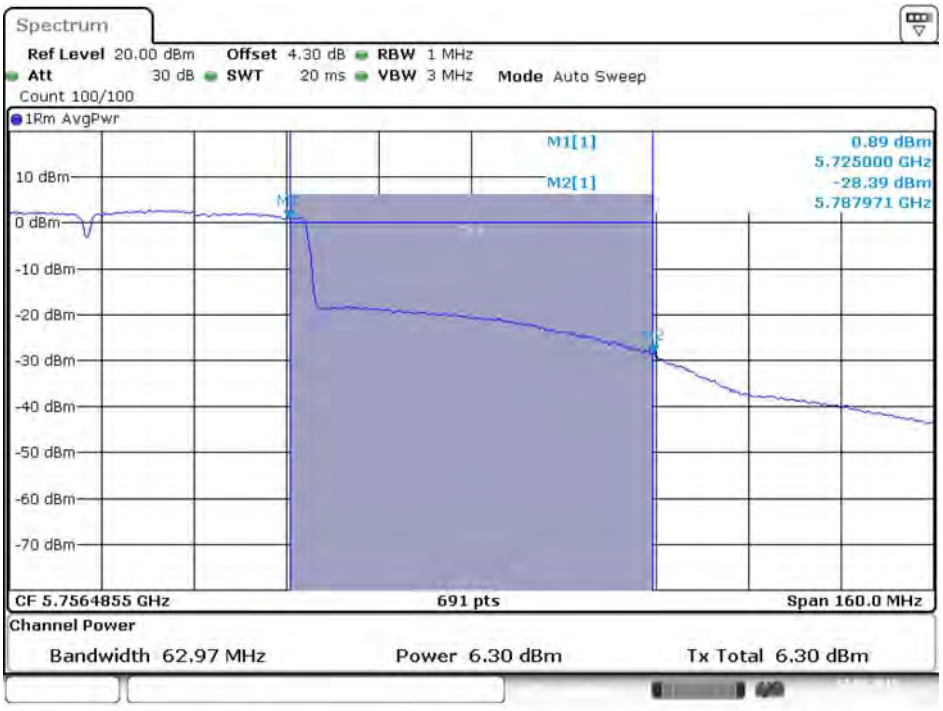

Date: 22.AUG.2015 02:11:03

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2 / 5690 MHz (UNII 2C)**



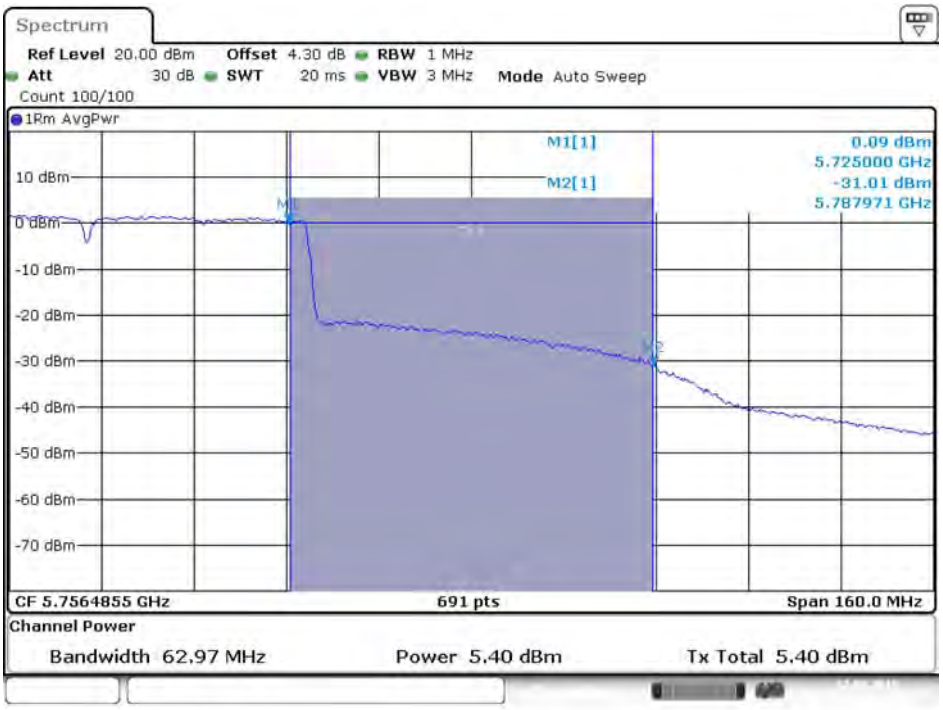

Date: 22.AUG.2015 02:11:10

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 / 5690 MHz (UNII 3)**




Date: 22.AUG.2015 02:11:06

**Conducted Output Power Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2 / 5690 MHz (UNII 3)**




Date: 22.AUG.2015 02:11:13

## 4.5. Power Spectral Density Measurement

### 4.5.1. Limit

The following table is power spectral density limits and decrease power density limit rule refer to section 4.4.1.

| Frequency Band | | | Limit |
|---|---|---|---|
| ☒ | 5.15~5.25 GHz | | |
| | Operating Mode | | |
| | ☐ | Outdoor access point | 17 dBm/MHz |
| | ☒ | Indoor access point for Radio: R1 | 17 dBm/MHz |
| | ☐ | Fixed point-to-point access points | 17 dBm/MHz |
| | ☒ | Mobile and portable client devices for Radio: R0 | 11 dBm/MHz |
| ☒ | 5.25-5.35 GHz | | 11 dBm/MHz |
| ☒ | 5.470-5.725 GHz | | 11 dBm/MHz |
| ☒ | 5.725~5.85 GHz | | 30 dBm/500kHz |

### 4.5.2. Measuring Instruments and Setting

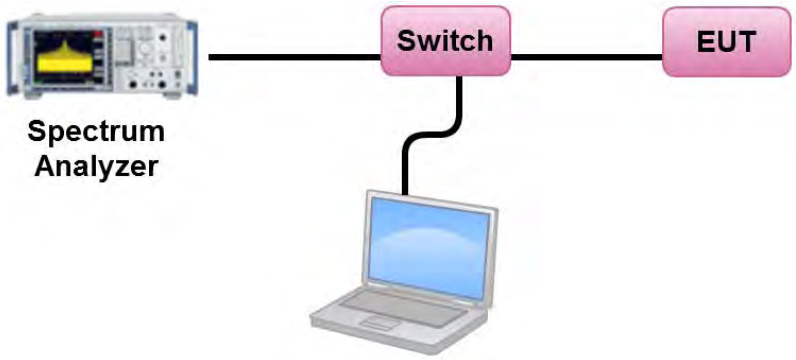
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

| Spectrum Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Span Frequency | Encompass the entire emissions bandwidth (EBW) of the signal |
| RBW | 1000 kHz |
| VBW | 3000 kHz |
| Detector | RMS |
| Trace | AVERAGE |
| Sweep Time | Auto |
| Trace Average | 100 times |
| Note: If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement. | |

### 4.5.3. Test Procedures

1. The transmitter output (antenna port) was connected RF switch to the spectrum analyzer.
2. Test was performed in accordance with KDB789033 D02 v01 for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - section (F) Maximum Power Spectral Density (PSD).
3. Multiple antenna systems was performed in accordance KDB662911 D01 v02r01 in-Band Power Spectral Density (PSD) Measurements (a) Measure and sum the spectra across the outputs.
4. When measuring first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3 and so on up to the Nth output to obtain the value for the first frequency bin of the summed spectrum. The summed spectrum value for each of the other frequency bins is computed in the same way.
5. For 5.725~5.85 GHz, the measured result of PSD level must add 10log(500kHz/RBW) and the final result should ≤ 30 dBm.

### 4.5.4. Test Setup Layout




### 4.5.5. Test Deviation

There is no deviation with the original standard.

### 4.5.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

## 4.5.7. Test Result of Power Spectral Density

For Radio: R0

| Temperature | 25°C | Humidity | 60% |
|---|---|---|---|
| Test Engineer | Eddie Weng / Nick Peng | Test Date | Aug. 22, 2015~Sep. 08, 2015 |
| Test Function | Non-beamforming function | | |

**Configuration IEEE 802.11a / Chain 1 + Chain 2**

| Channel | Frequency | Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Result |
|---|---|---|---|---|
| 36 | 5180 MHz | 8.00 | 10.33 | Complies |
| 40 | 5200 MHz | 10.32 | 10.33 | Complies |
| 48 | 5240 MHz | 10.25 | 10.33 | Complies |
| 52 | 5260 MHz | 10.27 | 10.33 | Complies |
| 60 | 5300 MHz | 10.22 | 10.33 | Complies |
| 64 | 5320 MHz | 8.63 | 10.33 | Complies |
| 100 | 5500 MHz | 8.43 | 10.33 | Complies |
| 116 | 5580 MHz | 10.19 | 10.33 | Complies |
| 140 | 5700 MHz | 7.05 | 10.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.67dBi >6dBi, so limit=11 – (6.67 – 6)=10.33dBm/MHz.

| Channel | Frequency | Power Density (dBm/MHz) | 10log(500kHz/RBW) Factor (dB) | Power Density (dBm/500kHz) | Power Density Limit (dBm/500kHz) | Result |
|---|---|---|---|---|---|---|
| 149 | 5745 MHz | 7.66 | -3.01 | 4.65 | 29.33 | Complies |
| 157 | 5785 MHz | 11.43 | -3.01 | 8.42 | 29.33 | Complies |
| 165 | 5825 MHz | 8.36 | -3.01 | 5.35 | 29.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ = 6.67dBi >6dBi, so limit=30 – (6.67 – 6)=29.33dBm/500kHz.

Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

| Channel | Frequency | Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Result |
|---|---|---|---|---|
| 36 | 5180 MHz | 8.43 | 10.33 | Complies |
| 40 | 5200 MHz | 10.30 | 10.33 | Complies |
| 48 | 5240 MHz | 10.23 | 10.33 | Complies |
| 52 | 5260 MHz | 10.29 | 10.33 | Complies |
| 60 | 5300 MHz | 10.25 | 10.33 | Complies |
| 64 | 5320 MHz | 8.99 | 10.33 | Complies |
| 100 | 5500 MHz | 8.12 | 10.33 | Complies |
| 116 | 5580 MHz | 10.26 | 10.33 | Complies |
| 140 | 5700 MHz | 6.46 | 10.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.67dBi >6dBi, so limit=11 – (6.67 – 6)=10.33dBm/MHz.

| Channel | Frequency | Power Density (dBm/MHz) | 10log(500kHz/RBW) Factor (dB) | Power Density (dBm/500kHz) | Power Density Limit (dBm/500kHz) | Result |
|---|---|---|---|---|---|---|
| 149 | 5745 MHz | 6.79 | -3.01 | 3.78 | 29.33 | Complies |
| 157 | 5785 MHz | 11.79 | -3.01 | 8.78 | 29.33 | Complies |
| 165 | 5825 MHz | 8.72 | -3.01 | 5.71 | 29.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ = 6.67dBi >6dBi, so limit=30 – (6.67 – 6)=29.33dBm/500kHz.

Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

| Channel | Frequency | Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Result |
|---|---|---|---|---|
| 38 | 5190 MHz | -0.42 | 10.33 | Complies |
| 46 | 5230 MHz | 7.23 | 10.33 | Complies |
| 54 | 5270 MHz | 7.30 | 10.33 | Complies |
| 62 | 5310 MHz | 3.88 | 10.33 | Complies |
| 102 | 5510 MHz | 0.87 | 10.33 | Complies |
| 110 | 5550 MHz | 6.69 | 10.33 | Complies |
| 134 | 5670 MHz | 3.38 | 10.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.67dBi >6dBi, so limit=11 – (6.67 – 6)=10.33dBm/MHz.

| Channel | Frequency | Power Density (dBm/MHz) | 10log(500kHz/RBW) Factor (dB) | Power Density (dBm/500kHz) | Power Density Limit (dBm/500kHz) | Result |
|---|---|---|---|---|---|---|
| 151 | 5755 MHz | -0.69 | -3.01 | -3.70 | 29.33 | Complies |
| 159 | 5795 MHz | 4.71 | -3.01 | 1.70 | 29.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ = 6.67dBi >6dBi, so limit=30 – (6.67 – 6)=29.33dBm/500kHz.

Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

| Channel | Frequency | Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Result |
|---|---|---|---|---|
| 42 | 5210 MHz | -3.42 | 10.33 | Complies |
| 58 | 5290 MHz | 0.64 | 10.33 | Complies |
| 106 | 5530 MHz | -1.33 | 10.33 | Complies |
| 122 | 5610 MHz | 3.73 | 10.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.67dBi >6dBi, so limit=11 – (6.67 – 6)=10.33dBm/MHz.

| Channel | Frequency | Power Density (dBm/MHz) | 10log(500kHz/RBW) Factor (dB) | Power Density (dBm/500kHz) | Power Density Limit (dBm/500kHz) | Result |
|---|---|---|---|---|---|---|
| 155 | 5775 MHz | -2.79 | -3.01 | -5.80 | 29.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ = 6.67dBi >6dBi, so limit=30 – (6.67 – 6)=29.33dBm/500kHz.

Straddle Channel / Chain 1 + Chain 2

| Mode | Frequency | Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Result |
|---|---|---|---|---|
| 802.11a | 5720 MHz (UNII 2C) | 9.38 | 10.33 | Complies |
| 802.11ac MCS0/Nss1 VHT20 | 5720 MHz (UNII 2C) | 9.57 | 10.33 | Complies |
| 802.11ac MCS0/Nss1 VHT40 | 5710 MHz (UNII 2C) | 8.88 | 10.33 | Complies |
| 802.11ac MCS0/Nss1 VHT80 | 5690 MHz (UNII 2C) | 5.73 | 10.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.67dBi >6dBi, so limit=11 – (6.67 – 6)=10.33dBm/MHz.

| Channel | Frequency | Power Density (dBm/MHz) | 10log(500kHz/RBW) Factor (dB) | Power Density (dBm/500kHz) | Power Density Limit (dBm/500kHz) | Result |
|---|---|---|---|---|---|---|
| 802.11a | 5720 MHz (UNII 3) | 9.16 | -3.01 | 6.15 | 29.33 | Complies |
| 802.11ac MCS0/Nss1 VHT20 | 5720 MHz (UNII 3) | 9.39 | -3.01 | 6.38 | 29.33 | Complies |
| 802.11ac MCS0/Nss1 VHT40 | 5710 MHz (UNII 3) | 8.23 | -3.01 | 5.22 | 29.33 | Complies |
| 802.11ac MCS0/Nss1 VHT80 | 5690 MHz (UNII 3) | 4.42 | -3.01 | 1.41 | 29.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ = 6.67dBi >6dBi, so limit=30 – (6.67 – 6)=29.33dBm/500kHz.

For Radio: R0

| Temperature | 25°C | Humidity | 60% |
|---|---|---|---|
| Test Engineer | Eddie Weng / Nick Peng | Test Date | Aug. 22, 2015~Sep. 08, 2015 |
| Test Function | Beamforming function | | |

**Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2**

| Channel | Frequency | Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Result |
|---|---|---|---|---|
| 36 | 5180 MHz | 7.91 | 10.33 | Complies |
| 40 | 5200 MHz | 9.69 | 10.33 | Complies |
| 48 | 5240 MHz | 9.69 | 10.33 | Complies |
| 52 | 5260 MHz | 9.57 | 10.33 | Complies |
| 60 | 5300 MHz | 9.73 | 10.33 | Complies |
| 64 | 5320 MHz | 8.36 | 10.33 | Complies |
| 100 | 5500 MHz | 8.12 | 10.33 | Complies |
| 116 | 5580 MHz | 9.73 | 10.33 | Complies |
| 140 | 5700 MHz | 6.46 | 10.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.67dBi >6dBi, so limit=11 – (6.67 – 6)=10.33dBm/MHz.

| Channel | Frequency | Power Density (dBm/MHz) | 10log(500kHz/RBW) Factor (dB) | Power Density (dBm/500kHz) | Power Density Limit (dBm/500kHz) | Result |
|---|---|---|---|---|---|---|
| 149 | 5745 MHz | 6.60 | -3.01 | 3.59 | 29.33 | Complies |
| 157 | 5785 MHz | 11.86 | -3.01 | 8.85 | 29.33 | Complies |
| 165 | 5825 MHz | 8.55 | -3.01 | 5.54 | 29.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ = 6.67dBi >6dBi, so limit=30 – (6.67 – 6)=29.33dBm/500kHz.

Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

| Channel | Frequency | Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Result |
|---|---|---|---|---|
| 38 | 5190 MHz | -1.20 | 10.33 | Complies |
| 46 | 5230 MHz | 6.72 | 10.33 | Complies |
| 54 | 5270 MHz | 6.64 | 10.33 | Complies |
| 62 | 5310 MHz | 3.68 | 10.33 | Complies |
| 102 | 5510 MHz | 0.40 | 10.33 | Complies |
| 110 | 5550 MHz | 6.33 | 10.33 | Complies |
| 134 | 5670 MHz | 3.09 | 10.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.67dBi >6dBi, so limit=11 – (6.67 – 6)=10.33dBm/MHz.

| Channel | Frequency | Power Density (dBm/MHz) | 10log(500kHz/RBW) Factor (dB) | Power Density (dBm/500kHz) | Power Density Limit (dBm/500kHz) | Result |
|---|---|---|---|---|---|---|
| 151 | 5755 MHz | -0.69 | -3.01 | -3.70 | 29.33 | Complies |
| 159 | 5795 MHz | 4.71 | -3.01 | 1.70 | 29.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ = 6.67dBi >6dBi, so limit=30 – (6.67 – 6)=29.33dBm/500kHz.

Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

| Channel | Frequency | Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Result |
|---|---|---|---|---|
| 42 | 5210 MHz | -3.42 | 10.33 | Complies |
| 58 | 5290 MHz | 0.64 | 10.33 | Complies |
| 106 | 5530 MHz | -1.33 | 10.33 | Complies |
| 122 | 5610 MHz | 3.21 | 10.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.67dBi >6dBi, so limit=11 – (6.67 – 6)=10.33dBm/MHz.

| Channel | Frequency | Power Density (dBm/MHz) | 10log(500kHz/RBW) Factor (dB) | Power Density (dBm/500kHz) | Power Density Limit (dBm/500kHz) | Result |
|---|---|---|---|---|---|---|
| 155 | 5775 MHz | -3.21 | -3.01 | -6.22 | 29.33 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ = 6.67dBi >6dBi, so limit=30 – (6.67 – 6)=29.33dBm/500kHz.

Straddle Channel / Chain 1 + Chain 2

| Mode | Frequency | Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Result |
|---|---|---|---|---|
| 802.11ac MCS0/Nss1 VHT20 | 5720 MHz (UNII 2C) | 9.73 | 10.33 | Complies |
| 802.11ac MCS0/Nss1 VHT40 | 5710 MHz (UNII 2C) | 8.32 | 10.33 | Complies |
| 802.11ac MCS0/Nss1 VHT80 | 5690 MHz (UNII 2C) | 5.07 | 10.33 | Complies |

Note: $Directional\ Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.67dBi >6dBi, so limit=11 – (6.67 – 6)=10.33dBm/MHz.

| Channel | Frequency | Power Density (dBm/MHz) | 10log(500kHz/RBW) Factor (dB) | Power Density (dBm/500kHz) | Power Density Limit (dBm/500kHz) | Result |
|---|---|---|---|---|---|---|
| 802.11ac MCS0/Nss1 VHT20 | 5720 MHz (UNII 3) | 9.57 | -3.01 | 6.56 | 29.33 | Complies |
| 802.11ac MCS0/Nss1 VHT40 | 5710 MHz (UNII 3) | 7.66 | -3.01 | 4.65 | 29.33 | Complies |
| 802.11ac MCS0/Nss1 VHT80 | 5690 MHz (UNII 3) | 3.77 | -3.01 | 0.76 | 29.33 | Complies |

Note: $Directional\ Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ = 6.67dBi >6dBi, so limit=30 – (6.67 – 6)=29.33dBm/500kHz.

For Radio: R1

| Temperature | 25°C | Humidity | 60% |
|---|---|---|---|
| Test Engineer | Eddie Weng | Test Date | Aug. 22, 2015~Sep. 08, 2015 |
| Test Function | Non-beamforming function | | |

**Configuration IEEE 802.11a / Chain 1 + Chain 2**

| Channel | Frequency | Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Result |
|---|---|---|---|---|
| 36 | 5180 MHz | 8.12 | 16.80 | Complies |
| 40 | 5200 MHz | 10.64 | 16.80 | Complies |
| 48 | 5240 MHz | 10.14 | 16.80 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.20dBi >6dBi, so limit=17 – (6.20 – 6)=16.80dBm/MHz.

| Channel | Frequency | Power Density (dBm/MHz) | 10log(500kHz/RBW) Factor (dB) | Power Density (dBm/500kHz) | Power Density Limit (dBm/500kHz) | Result |
|---|---|---|---|---|---|---|
| 149 | 5745 MHz | 7.79 | -3.01 | 4.78 | 29.80 | Complies |
| 157 | 5785 MHz | 9.45 | -3.01 | 6.44 | 29.80 | Complies |
| 165 | 5825 MHz | 8.67 | -3.01 | 5.66 | 29.80 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ = 6.20dBi >6dBi, so limit=30 – (6.20 – 6)=29.80dBm/500kHz.

**Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2**

| Channel | Frequency | Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Result |
|---|---|---|---|---|
| 36 | 5180 MHz | 7.42 | 16.80 | Complies |
| 40 | 5200 MHz | 9.93 | 16.80 | Complies |
| 48 | 5240 MHz | 10.70 | 16.80 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.20dBi >6dBi, so limit=17 – (6.20 – 6)=16.80dBm/MHz.

| Channel | Frequency | Power Density (dBm/MHz) | 10log(500kHz/RBW) Factor (dB) | Power Density (dBm/500kHz) | Power Density Limit (dBm/500kHz) | Result |
|---|---|---|---|---|---|---|
| 149 | 5745 MHz | 6.80 | -3.01 | 3.79 | 29.80 | Complies |
| 157 | 5785 MHz | 9.48 | -3.01 | 6.47 | 29.80 | Complies |
| 165 | 5825 MHz | 7.09 | -3.01 | 4.08 | 29.80 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ = 6.20dBi >6dBi, so limit=30 – (6.20 – 6)=29.80dBm/500kHz.

**Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2**

| Channel | Frequency | Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Result |
|---|---|---|---|---|
| 38 | 5190 MHz | -0.83 | 16.80 | Complies |
| 46 | 5230 MHz | 6.23 | 16.80 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.20dBi >6dBi, so limit=17 – (6.20 – 6)=16.80dBm/MHz.

| Channel | Frequency | Power Density (dBm/MHz) | 10log(500kHz/RBW) Factor (dB) | Power Density (dBm/500kHz) | Power Density Limit (dBm/500kHz) | Result |
|---|---|---|---|---|---|---|
| 151 | 5755 MHz | 0.09 | -3.01 | -2.92 | 29.80 | Complies |
| 159 | 5795 MHz | 4.66 | -3.01 | 1.65 | 29.80 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ = 6.20dBi >6dBi, so limit=30 – (6.20 – 6)=29.80dBm/500kHz.

**Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2**

| Channel | Frequency | Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Result |
|---|---|---|---|---|
| 42 | 5210 MHz | -4.99 | 16.80 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.20dBi >6dBi, so limit=17 – (6.20 – 6)=16.80dBm/MHz.

| Channel | Frequency | Power Density (dBm/MHz) | 10log(500kHz/RBW) Factor (dB) | Power Density (dBm/500kHz) | Power Density Limit (dBm/500kHz) | Result |
|---|---|---|---|---|---|---|
| 155 | 5775 MHz | -2.57 | -3.01 | -5.58 | 29.80 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ = 6.20dBi >6dBi, so limit=30 – (6.20 – 6)=29.80dBm/500kHz.

For Radio: R1

| Temperature | 25°C | Humidity | 60% |
|---|---|---|---|
| Test Engineer | Eddie Weng | Test Date | Aug. 22, 2015~Sep. 08, 2015 |
| Test Function | Beamforming function | | |

**Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2**

| Channel | Frequency | Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Result |
|---|---|---|---|---|
| 36 | 5180 MHz | 7.34 | 16.80 | Complies |
| 40 | 5200 MHz | 9.41 | 16.80 | Complies |
| 48 | 5240 MHz | 10.70 | 16.80 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.20dBi >6dBi, so limit=17 – (6.20 – 6)=16.80dBm/MHz.

| Channel | Frequency | Power Density (dBm/MHz) | 10log(500kHz/RBW) Factor (dB) | Power Density (dBm/500kHz) | Power Density Limit (dBm/500kHz) | Result |
|---|---|---|---|---|---|---|
| 149 | 5745 MHz | 6.80 | -3.01 | 3.79 | 29.80 | Complies |
| 157 | 5785 MHz | 9.48 | -3.01 | 6.47 | 29.80 | Complies |
| 165 | 5825 MHz | 7.09 | -3.01 | 4.08 | 29.80 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ = 6.20dBi >6dBi, so limit=30 – (6.20 – 6)=29.80dBm/500kHz.

**Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2**

| Channel | Frequency | Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Result |
|---|---|---|---|---|
| 38 | 5190 MHz | -1.33 | 16.80 | Complies |
| 46 | 5230 MHz | 6.23 | 16.80 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.20dBi >6dBi, so limit=17 – (6.20 – 6)=16.80dBm/MHz.

| Channel | Frequency | Power Density (dBm/MHz) | 10log(500kHz/RBW) Factor (dB) | Power Density (dBm/500kHz) | Power Density Limit (dBm/500kHz) | Result |
|---|---|---|---|---|---|---|
| 151 | 5755 MHz | 0.75 | -3.01 | -2.26 | 29.80 | Complies |
| 159 | 5795 MHz | 5.17 | -3.01 | 2.16 | 29.80 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ = 6.20dBi >6dBi, so limit=30 – (6.20 – 6)=29.80dBm/500kHz.

**Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2**

| Channel | Frequency | Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Result |
|---|---|---|---|---|
| 42 | 5210 MHz | -4.38 | 16.80 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =6.20dBi >6dBi, so limit=17 – (6.20 – 6)=16.80dBm/MHz.

| Channel | Frequency | Power Density (dBm/MHz) | 10log(500kHz/RBW) Factor (dB) | Power Density (dBm/500kHz) | Power Density Limit (dBm/500kHz) | Result |
|---|---|---|---|---|---|---|
| 155 | 5775 MHz | -2.57 | -3.01 | -5.58 | 29.80 | Complies |

Note: $Directional\,Gain = 10\log\left[\frac{\sum_{j=1}^{Nss}\left\{\sum_{K=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ = 6.20dBi >6dBi, so limit=30 – (6.20 – 6)=29.80dBm/500kHz.

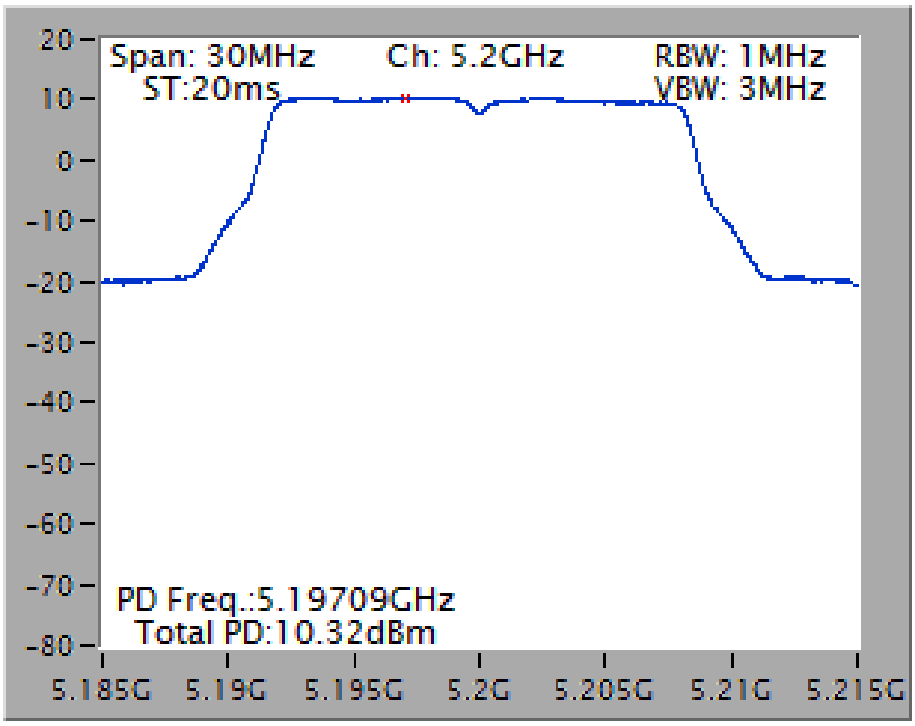
Note: All the test values were listed in the report.

For plots, only the channel with worse result was shown.

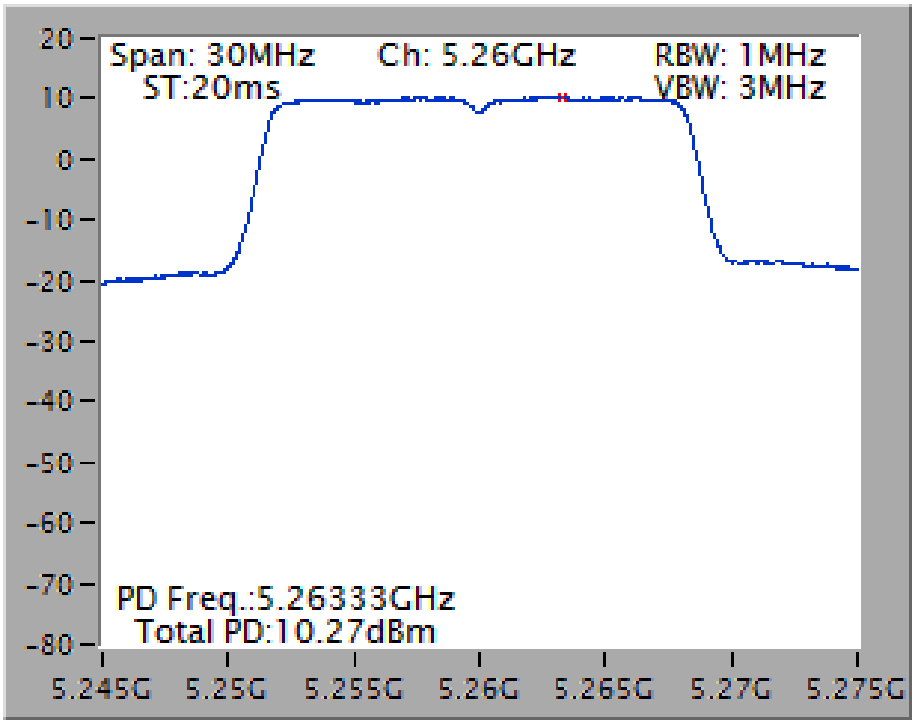
For Radio: R0

For non-beamforming function:

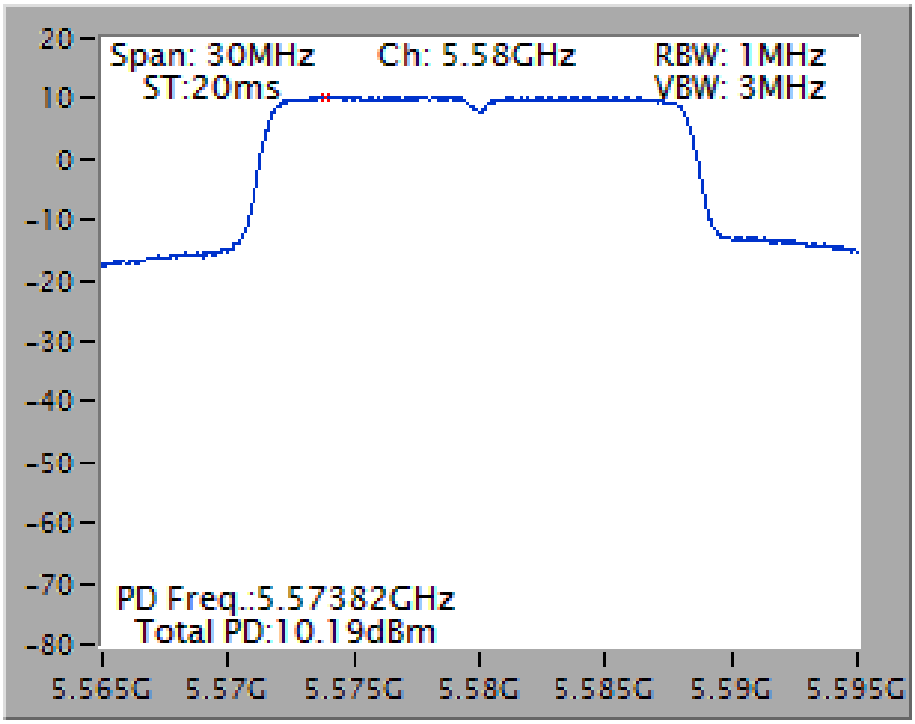
**Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5200 MHz**



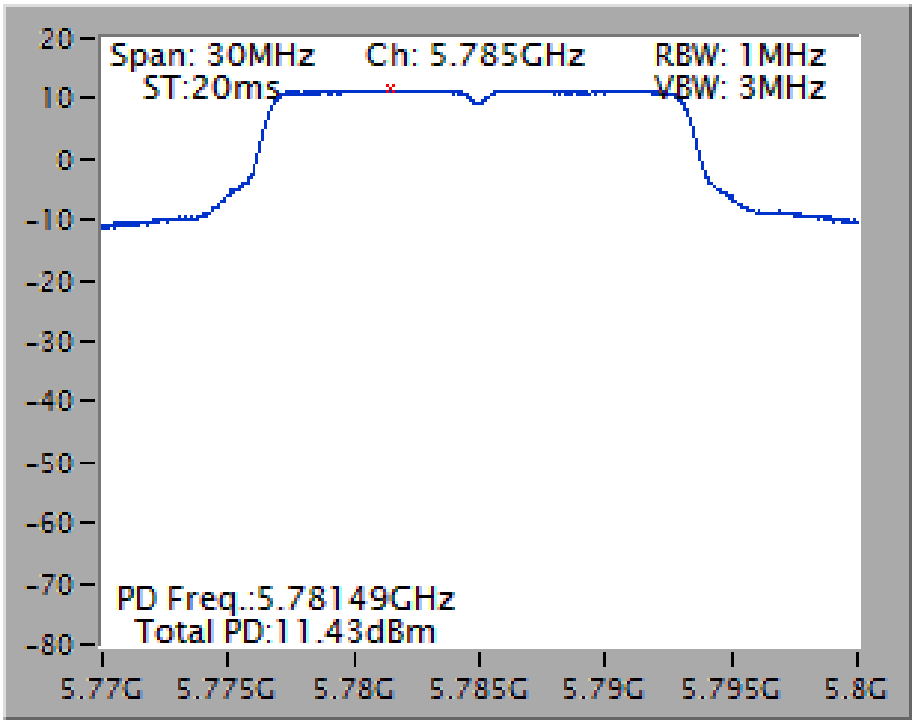

**Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5260 MHz**



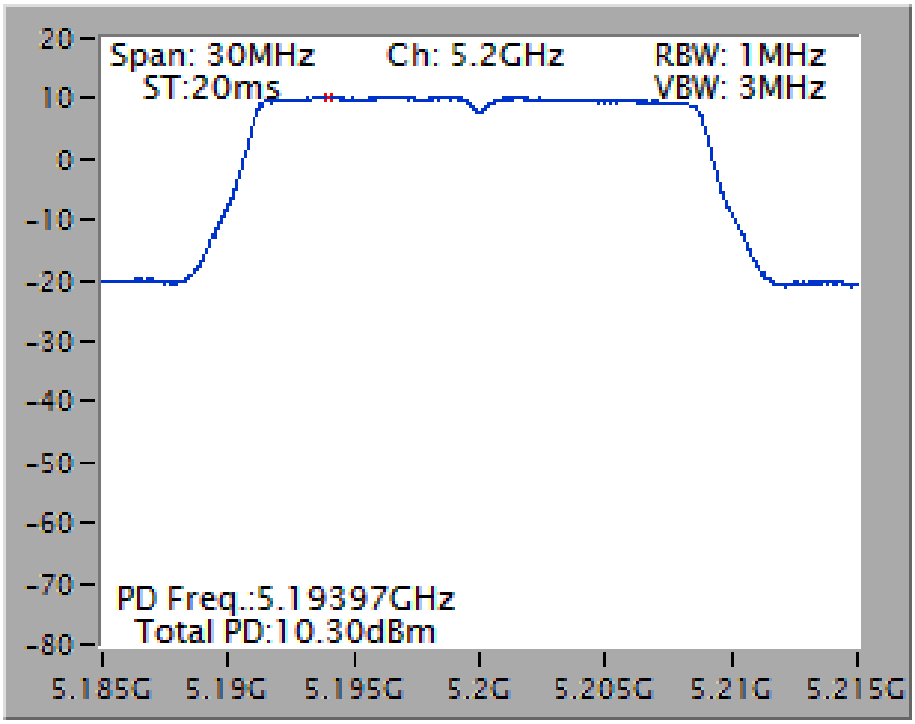
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5580 MHz



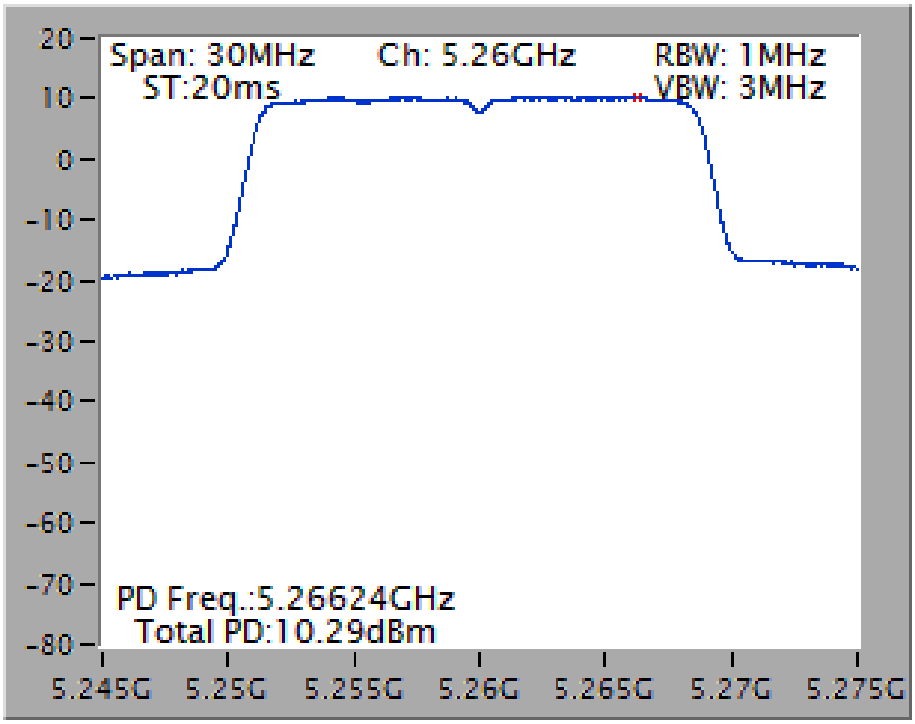

Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5785 MHz



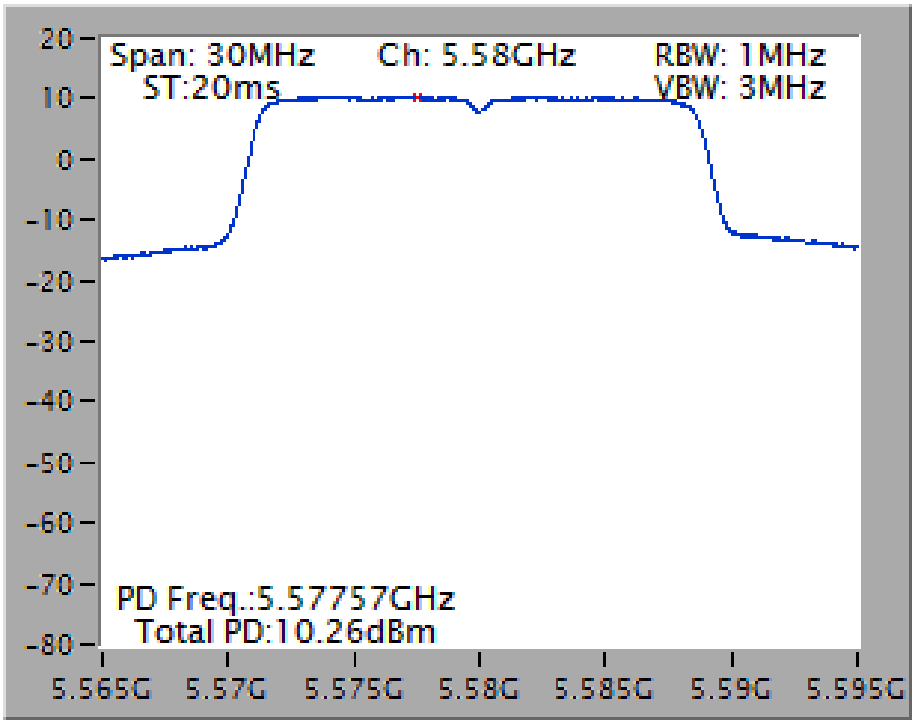
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5200 MHz**



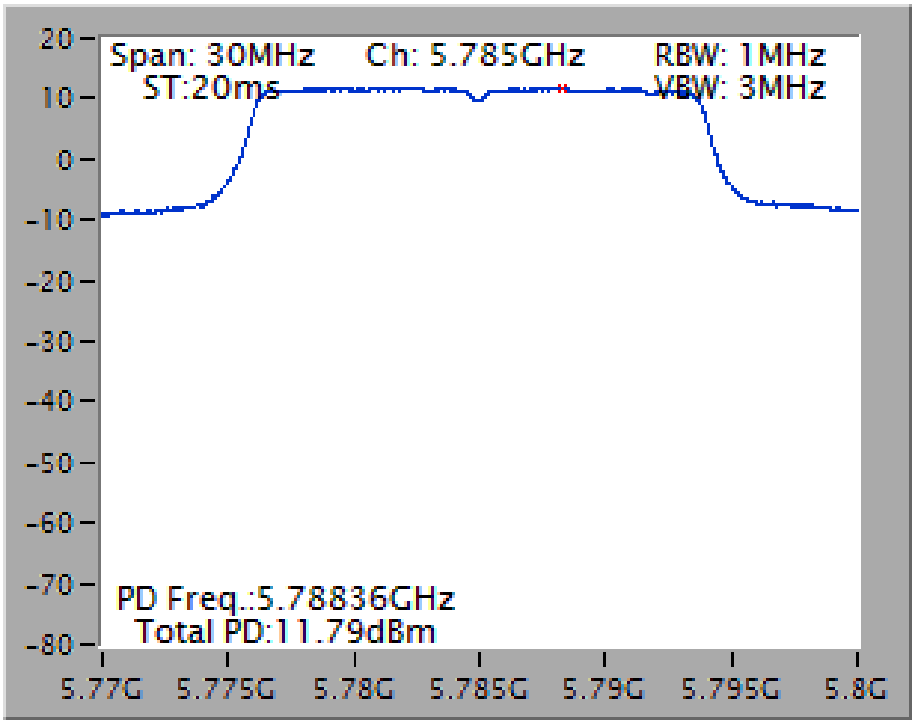

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5260 MHz**



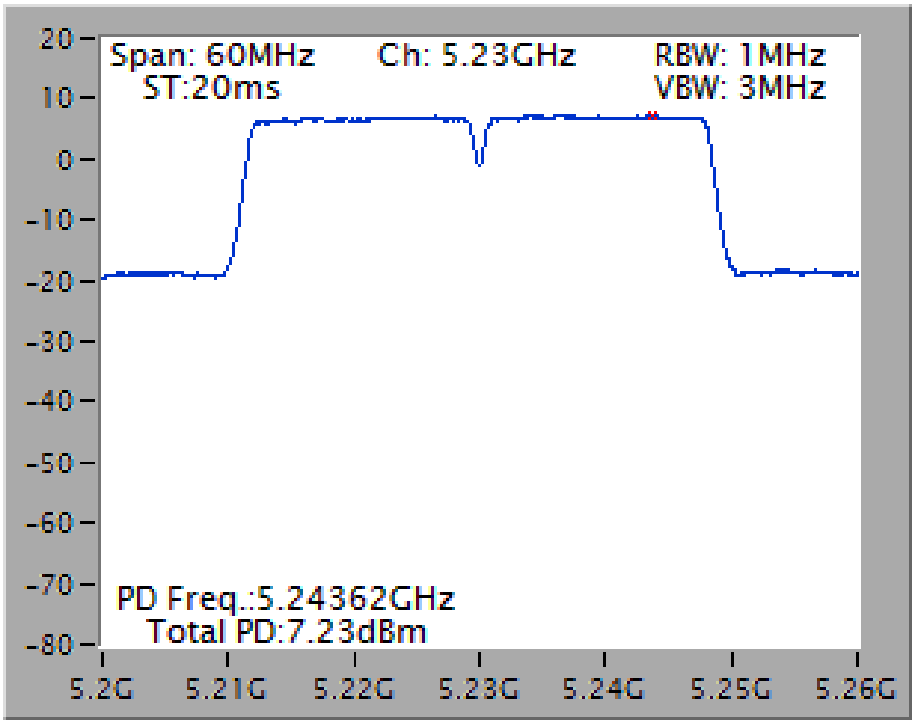
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5580 MHz**



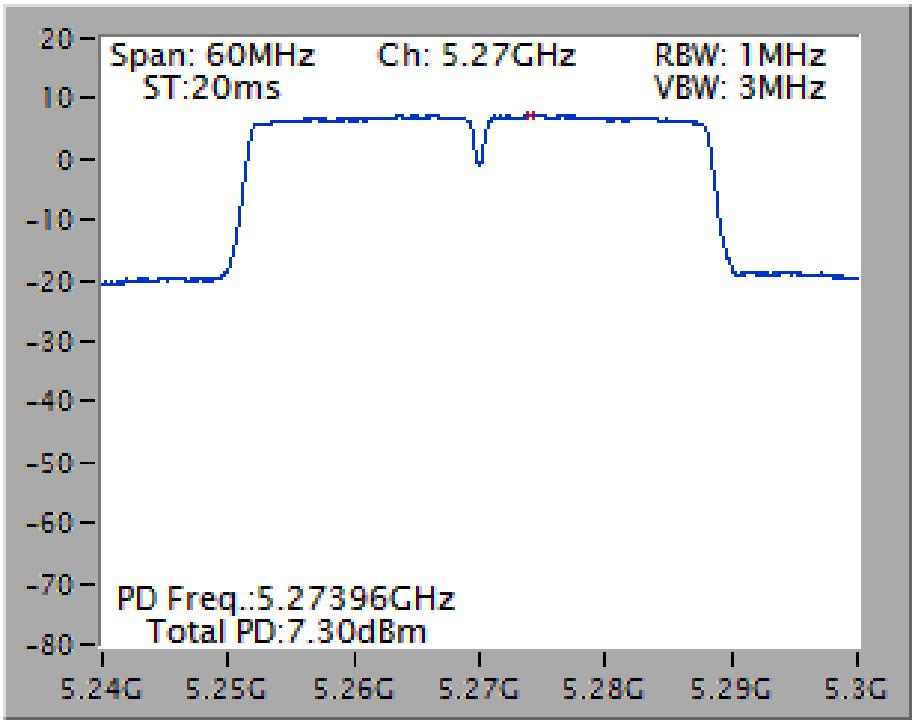

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5785 MHz**



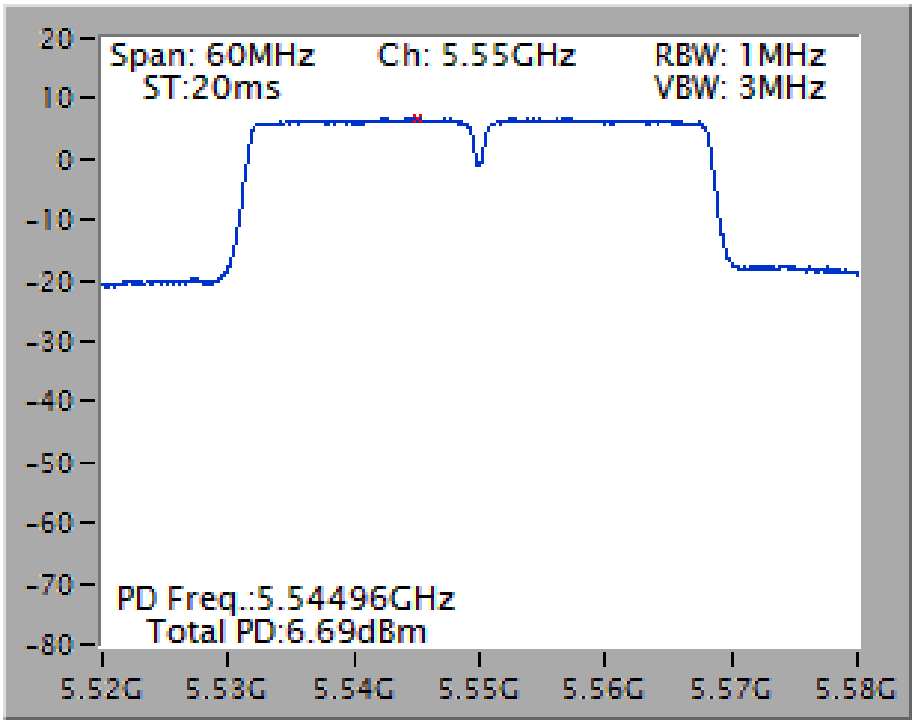
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5230 MHz**



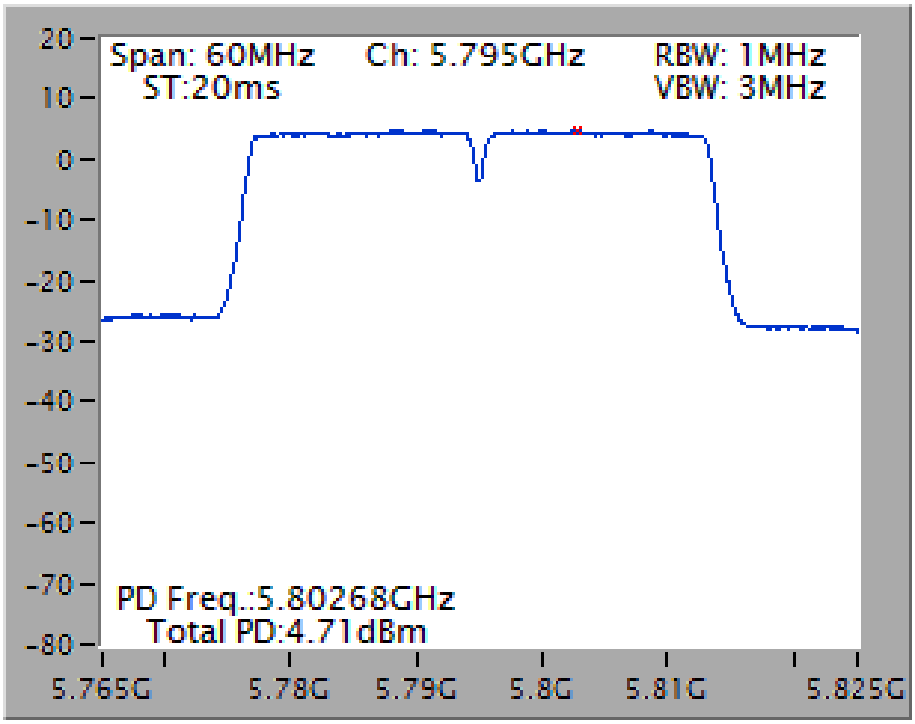

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5270 MHz**



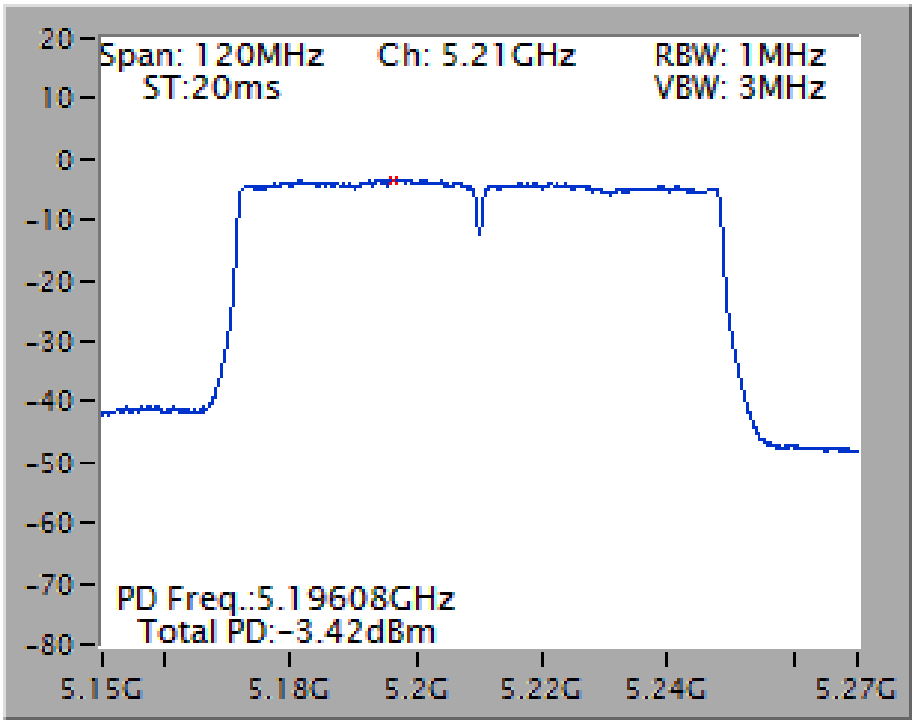
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5550 MHz**



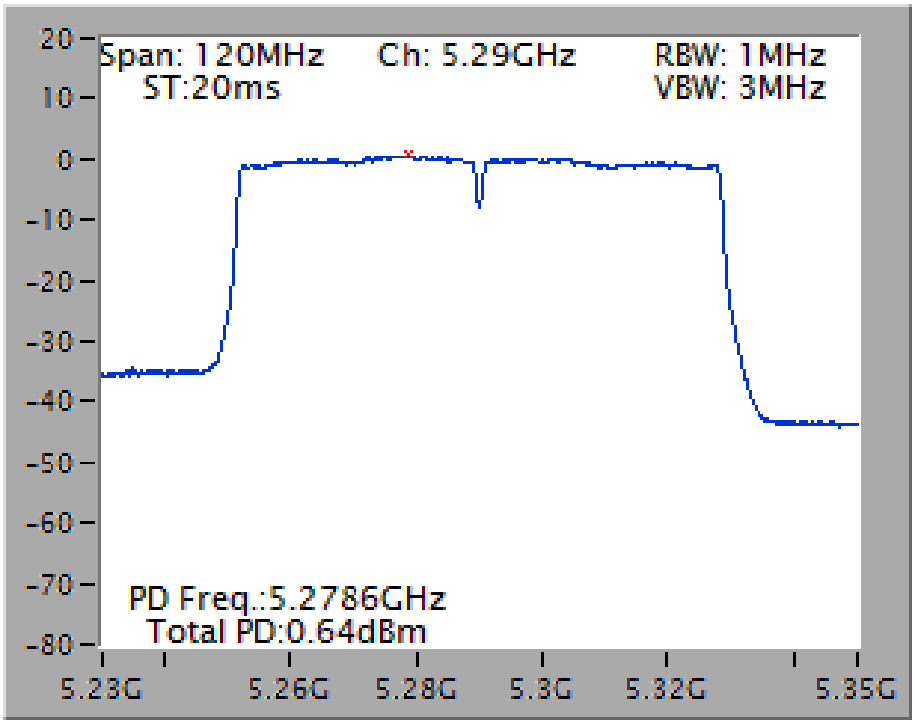

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5795 MHz**



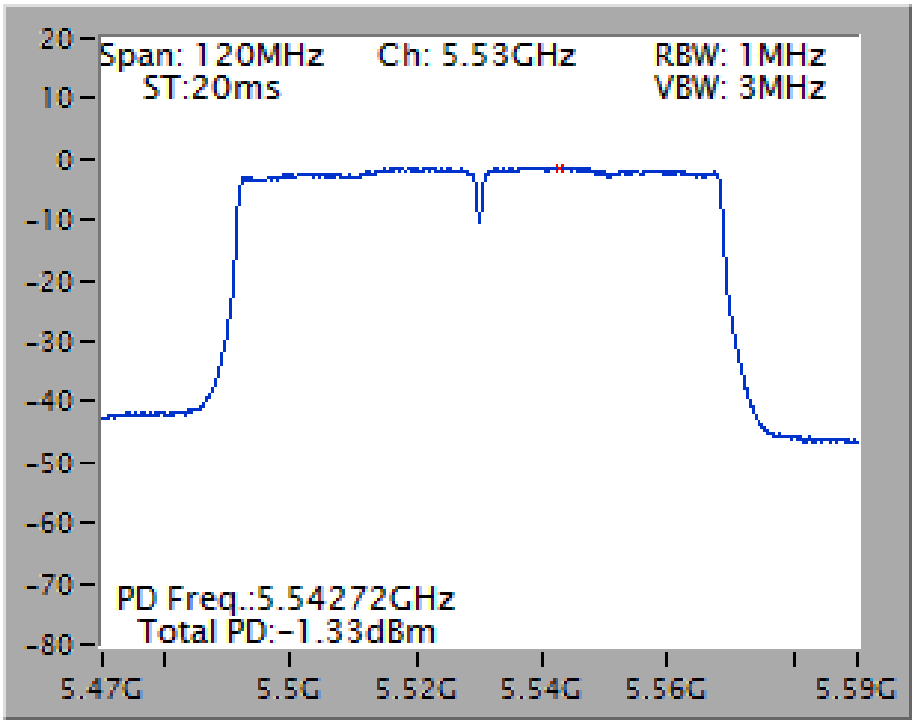
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz**



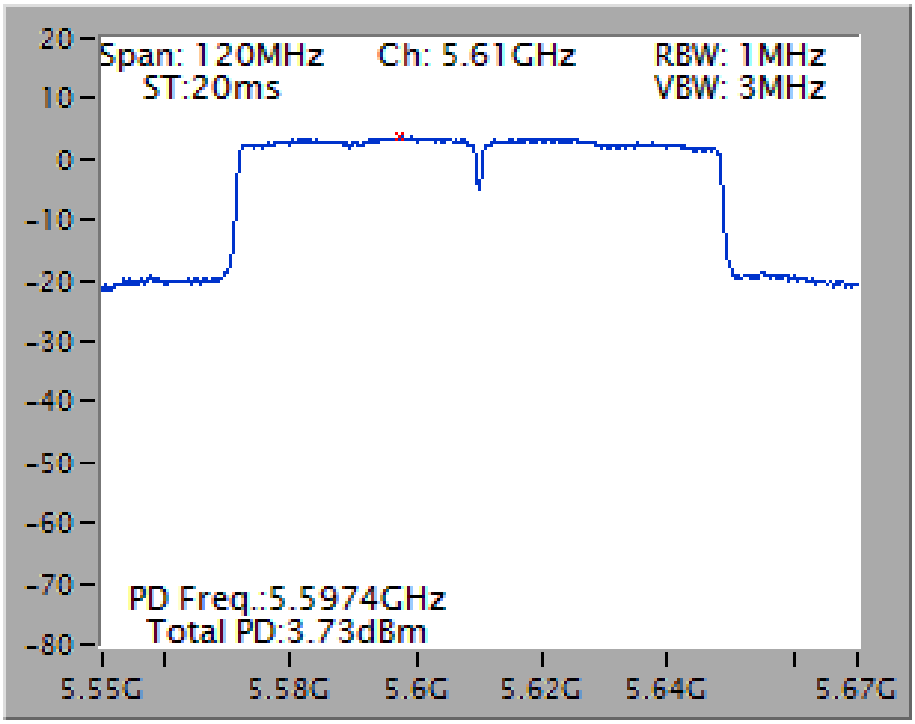

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5290 MHz**



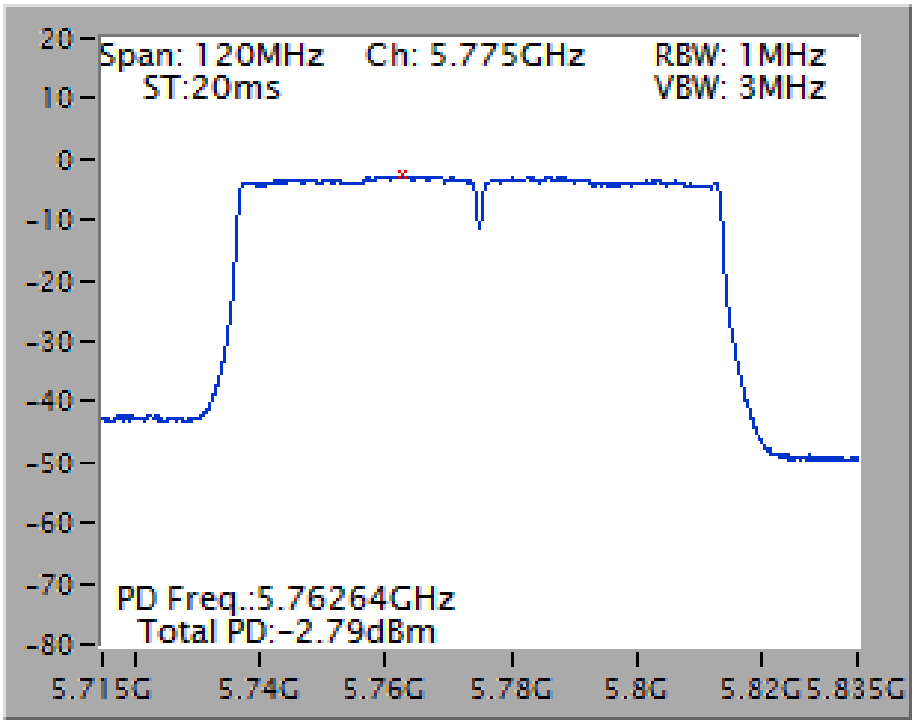
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5530 MHz**




**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5610 MHz**

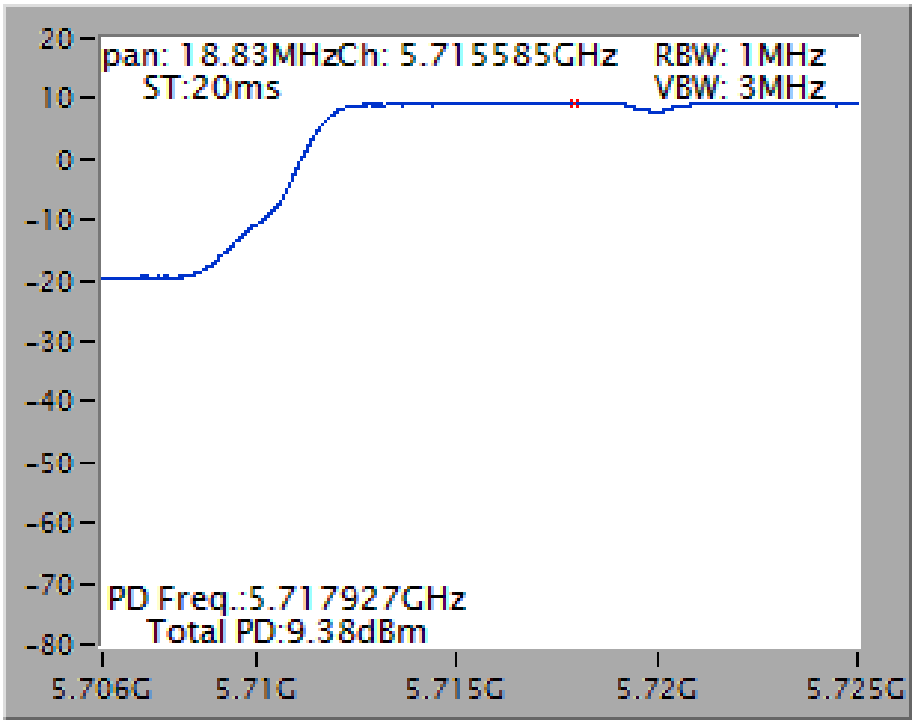


**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5775 MHz**

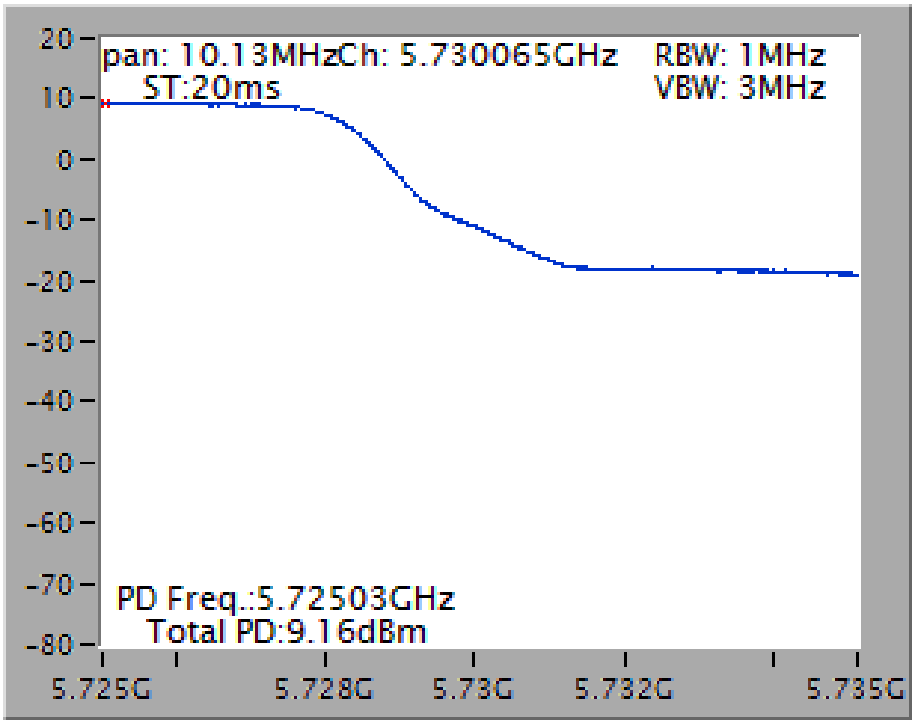


**Straddle Channel**

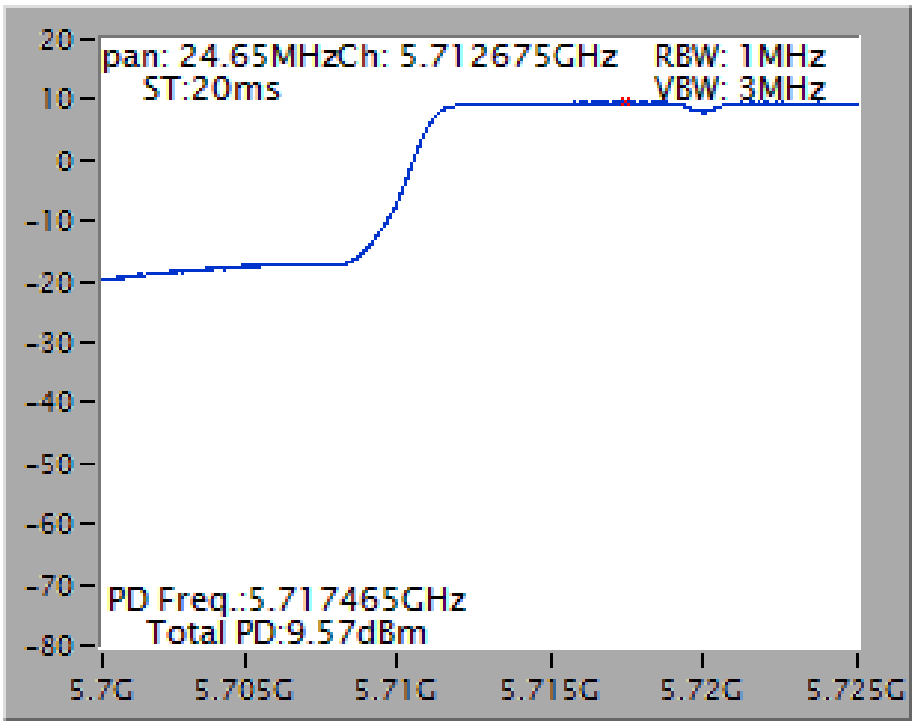
**Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2/ 5720 MHz (UNII 2C)**



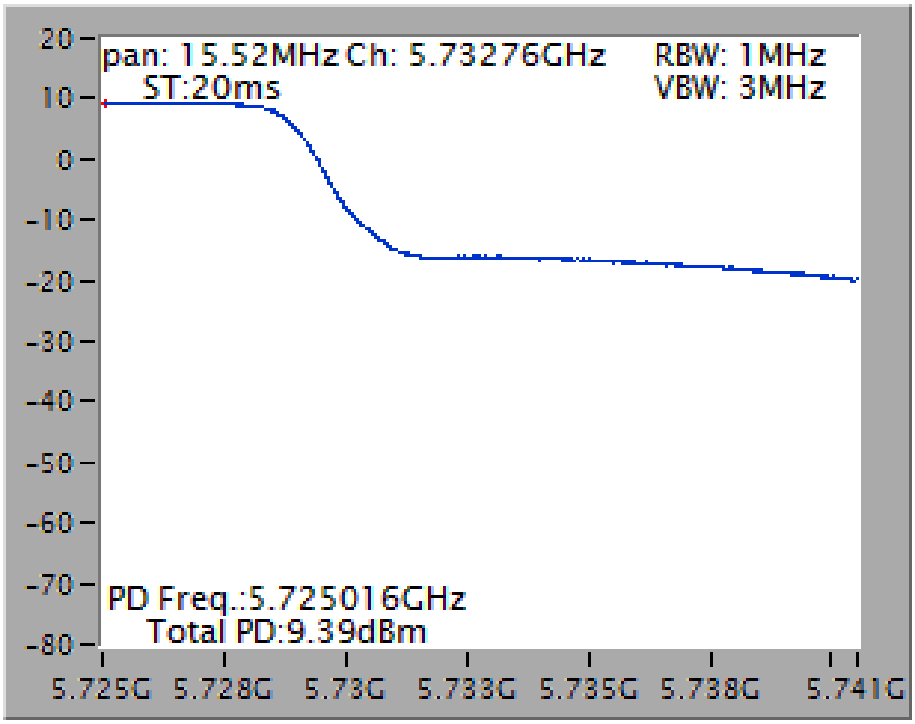

**Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5720 MHz (UNII 3)**



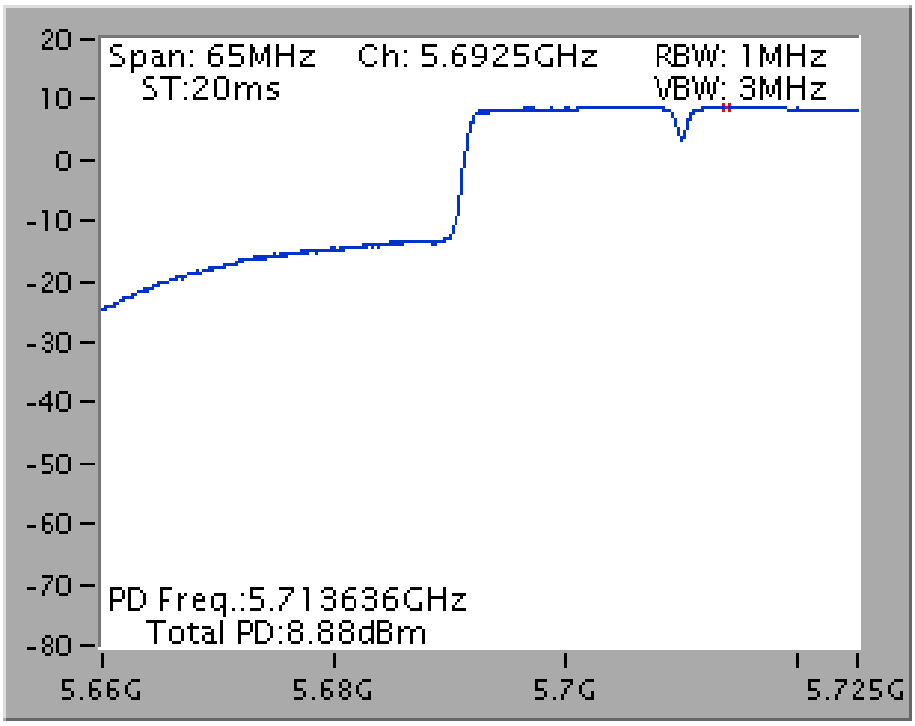
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5720 MHz (UNII 2C)**



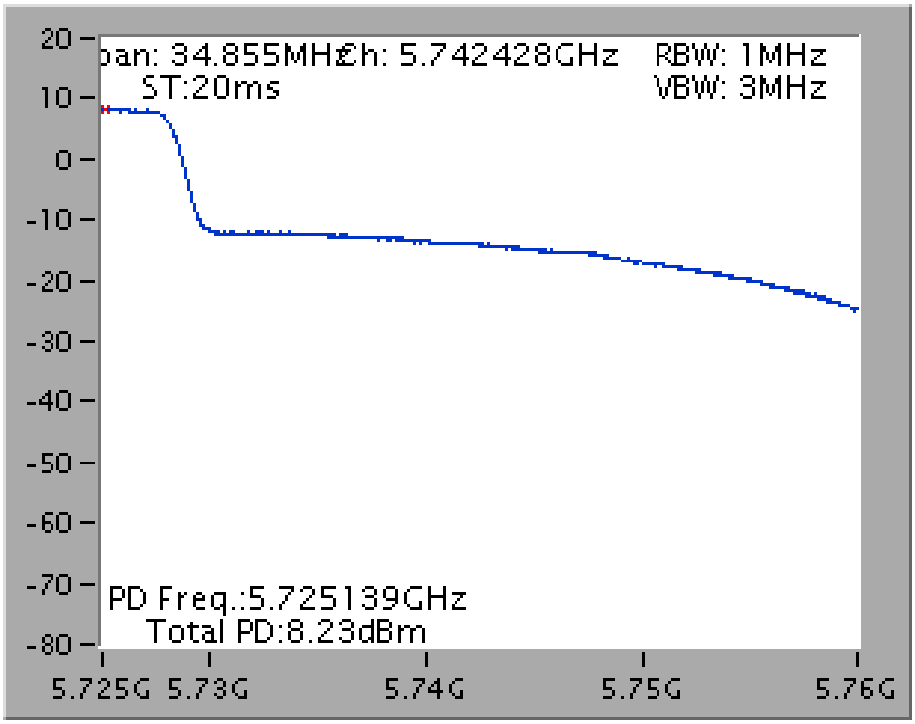

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5720 MHz (UNII 3)**



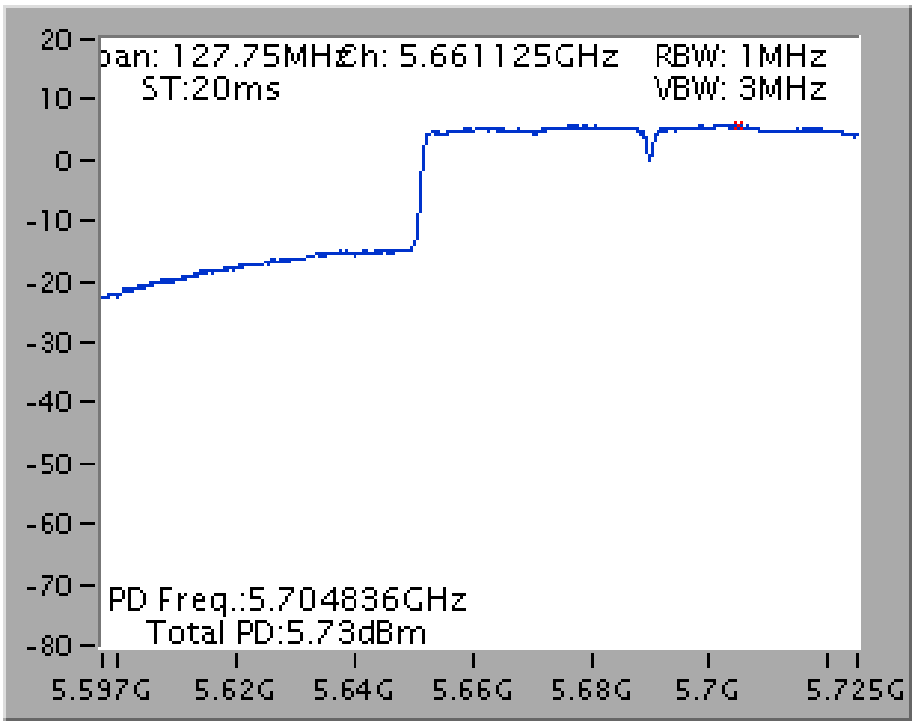
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5710 MHz (UNII 2C)**



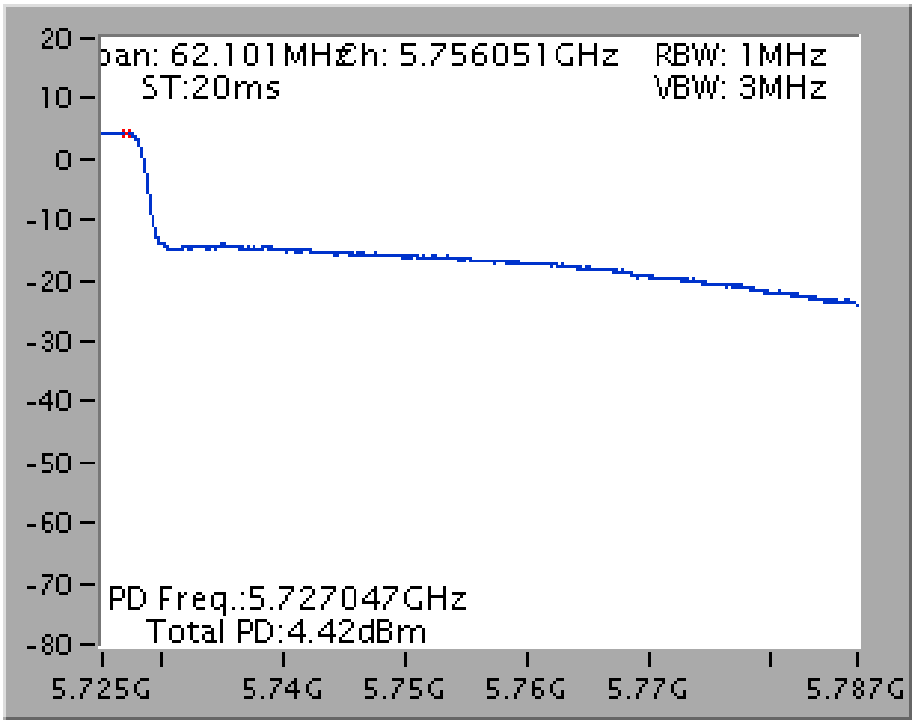

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5710 MHz (UNII 3)**



**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5690 MHz (UNII 2C)**



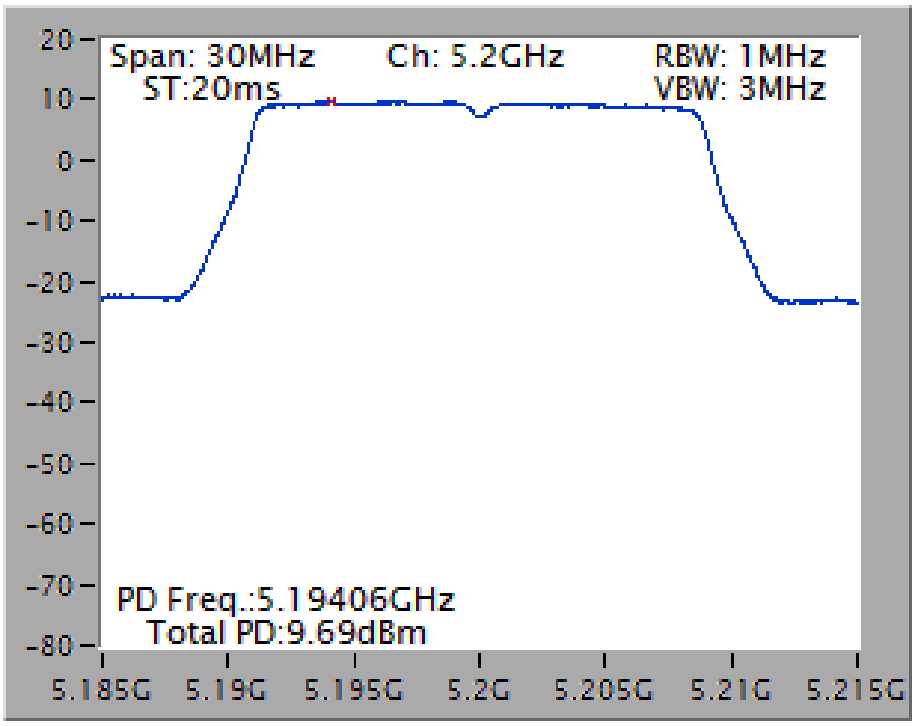

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5690 MHz (UNII 3)**



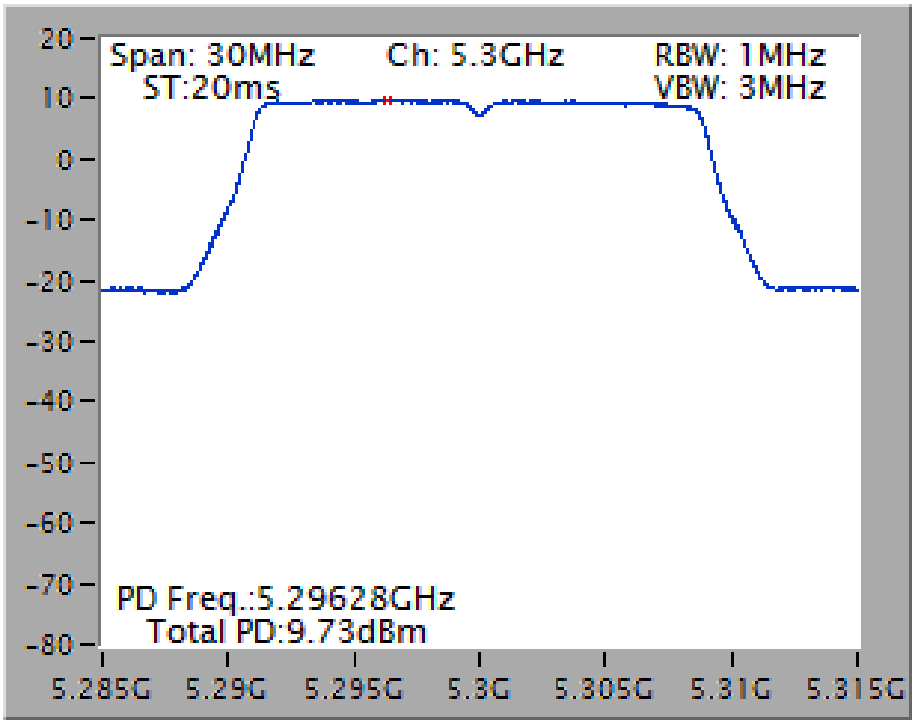
For Radio: R0

For beamforming function:

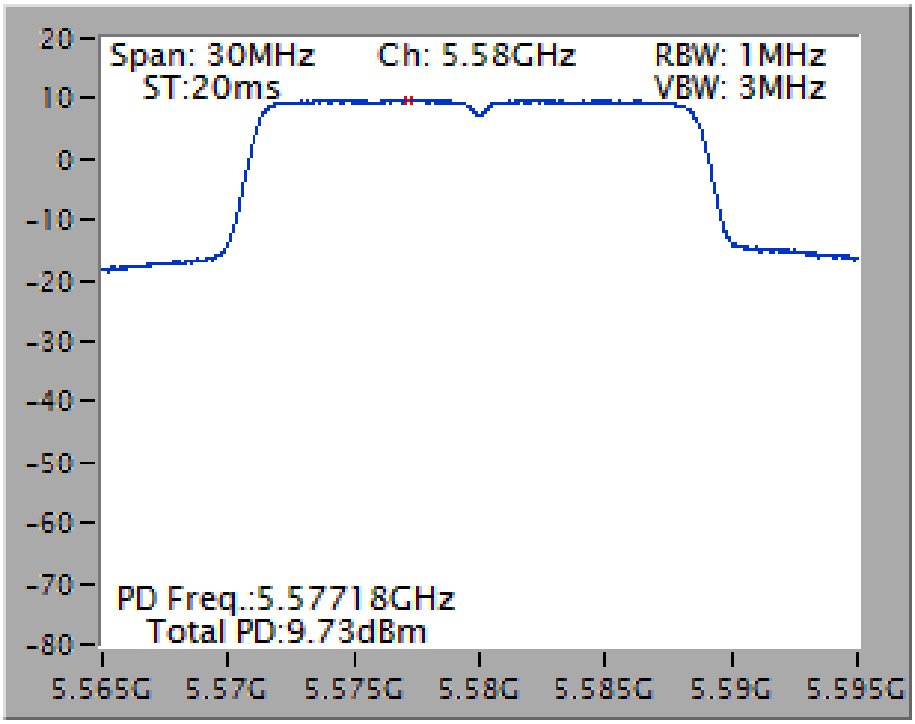
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5200 MHz**



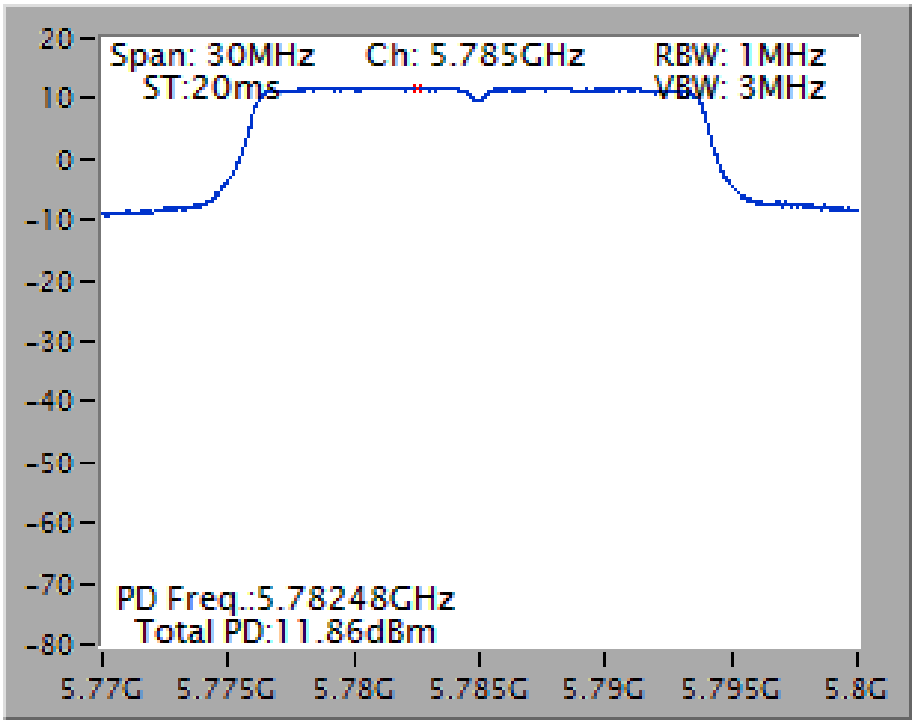

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5300 MHz**



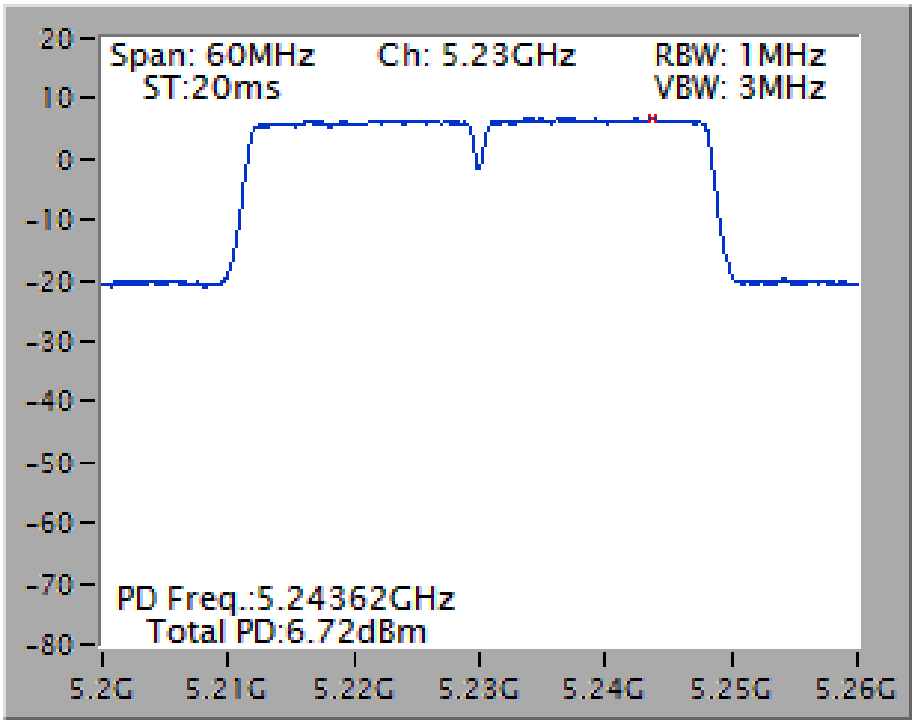
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5580 MHz**



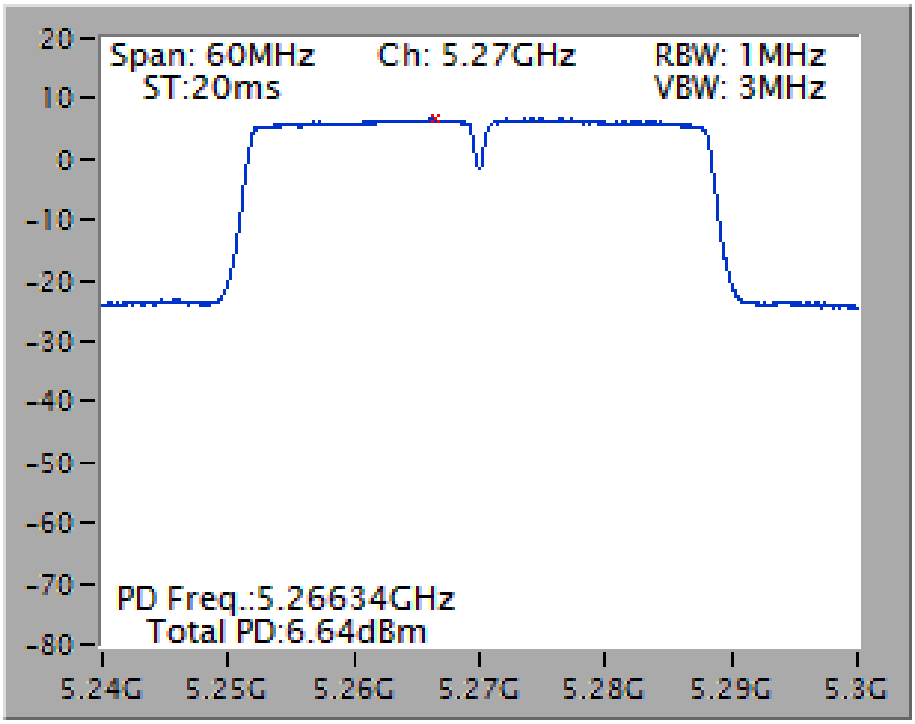

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5785 MHz**



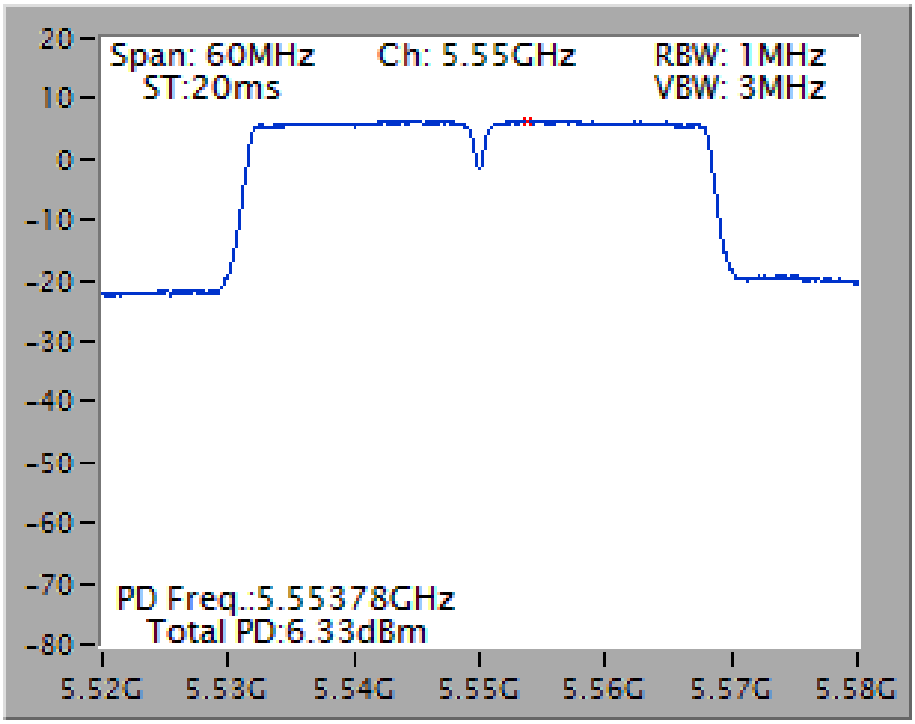
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5230 MHz**



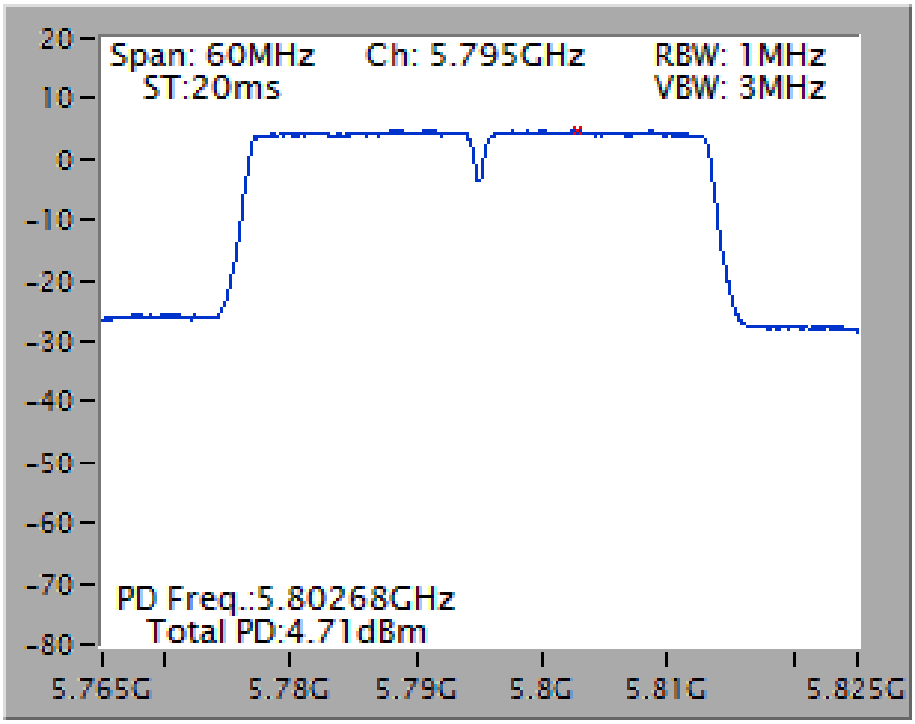

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5270 MHz**



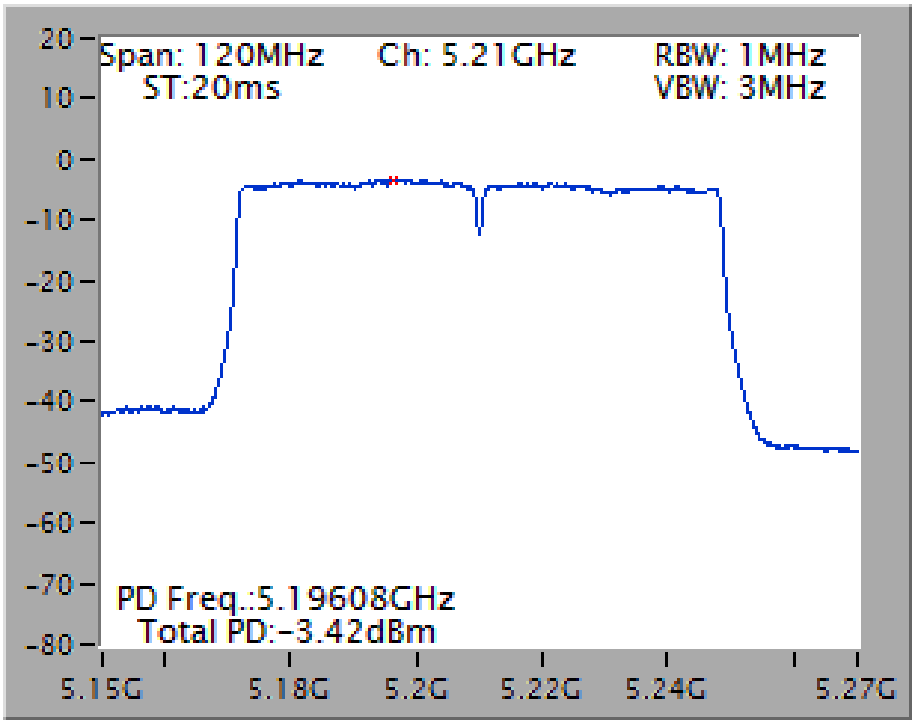
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5550 MHz**



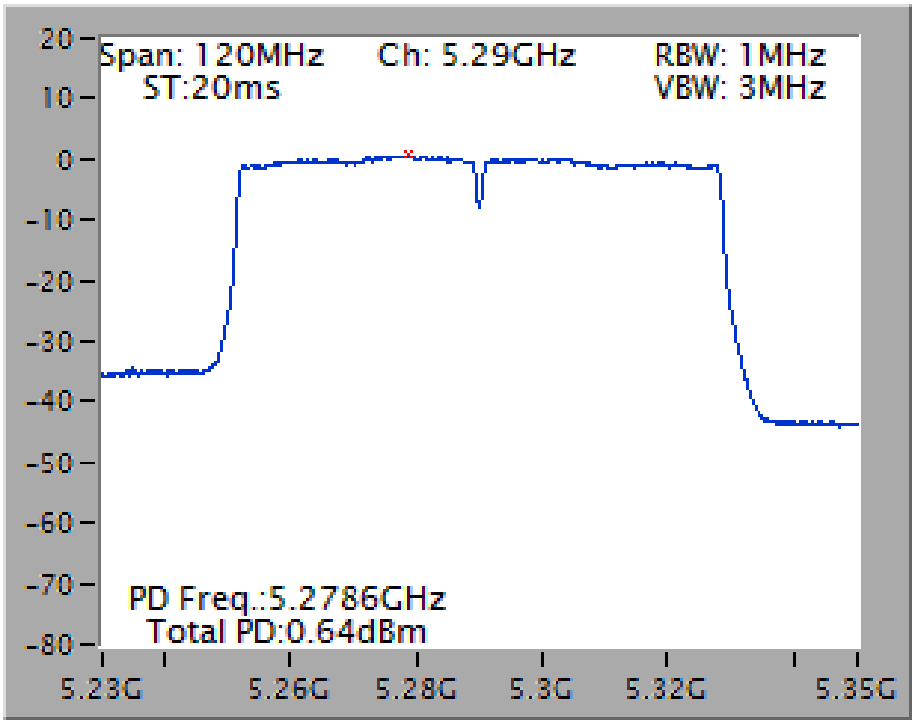

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5795 MHz**



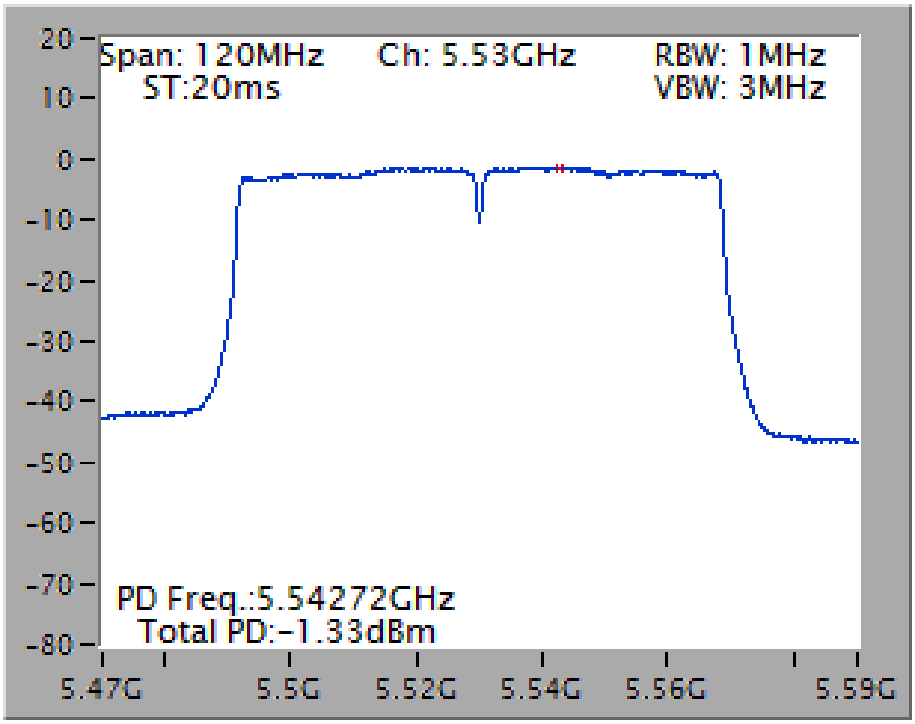
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz**



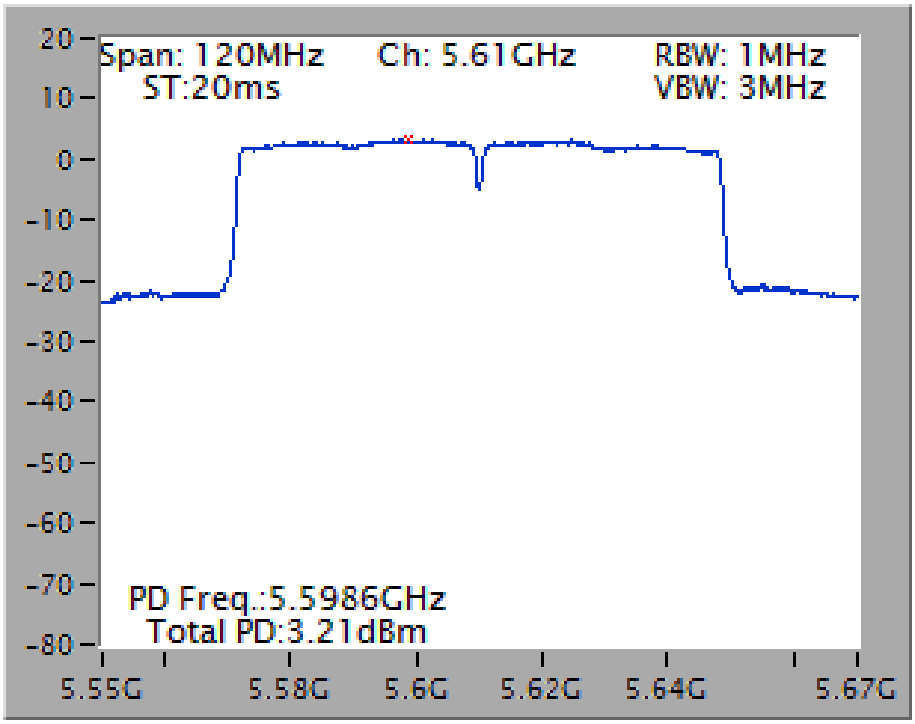

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5290 MHz**



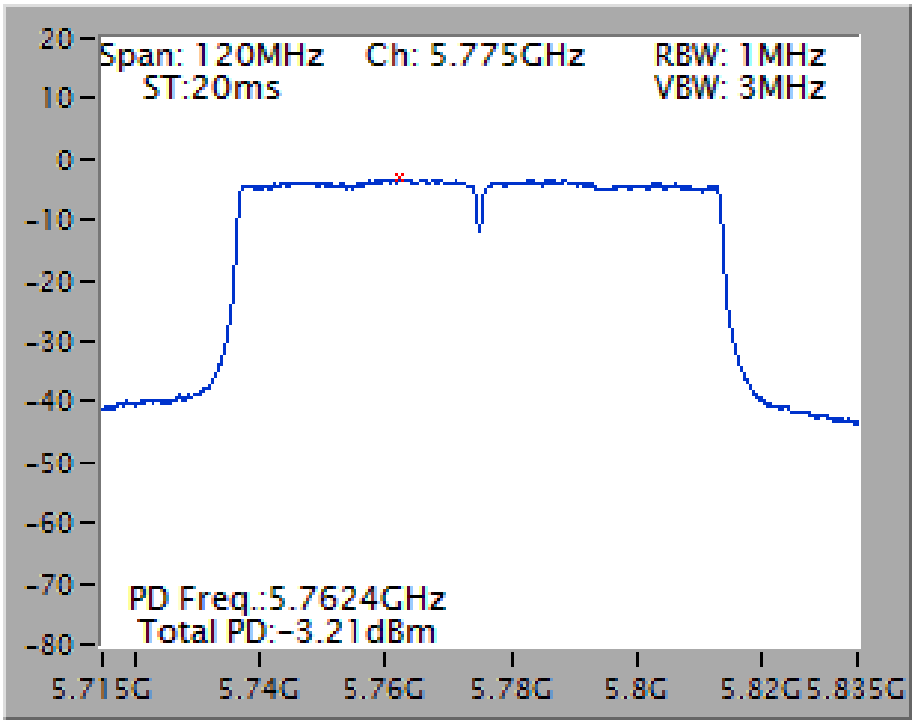
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5530 MHz**




**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5610 MHz**

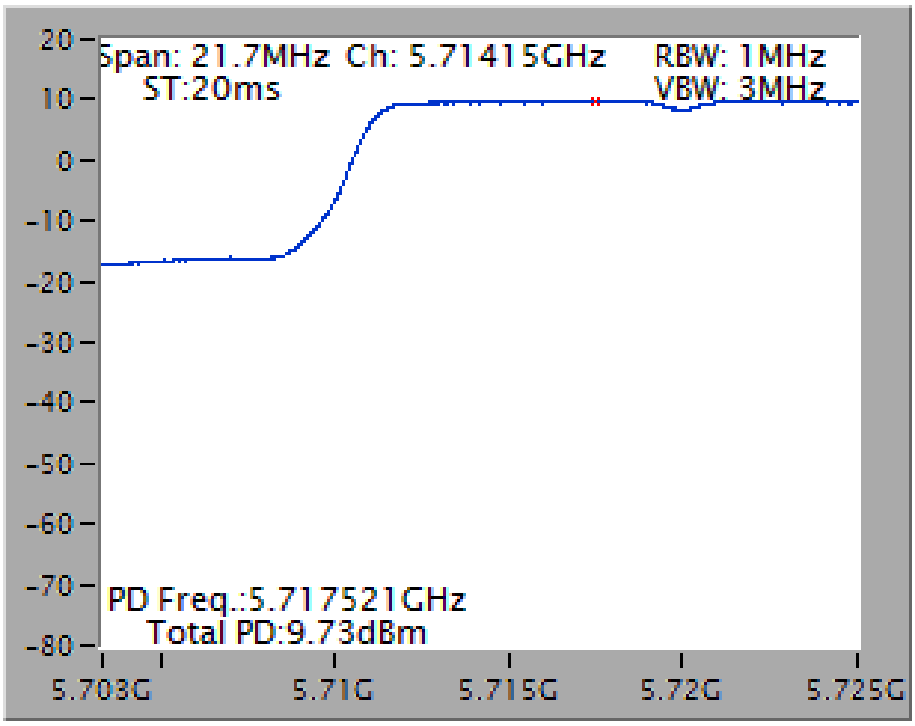


**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5775 MHz**

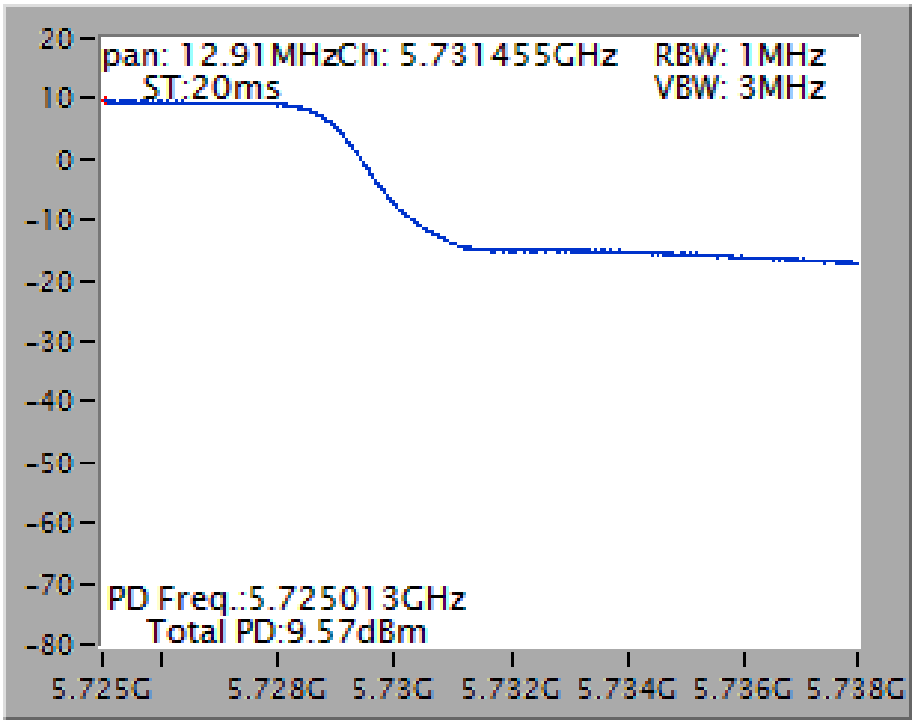


**Straddle Channel**

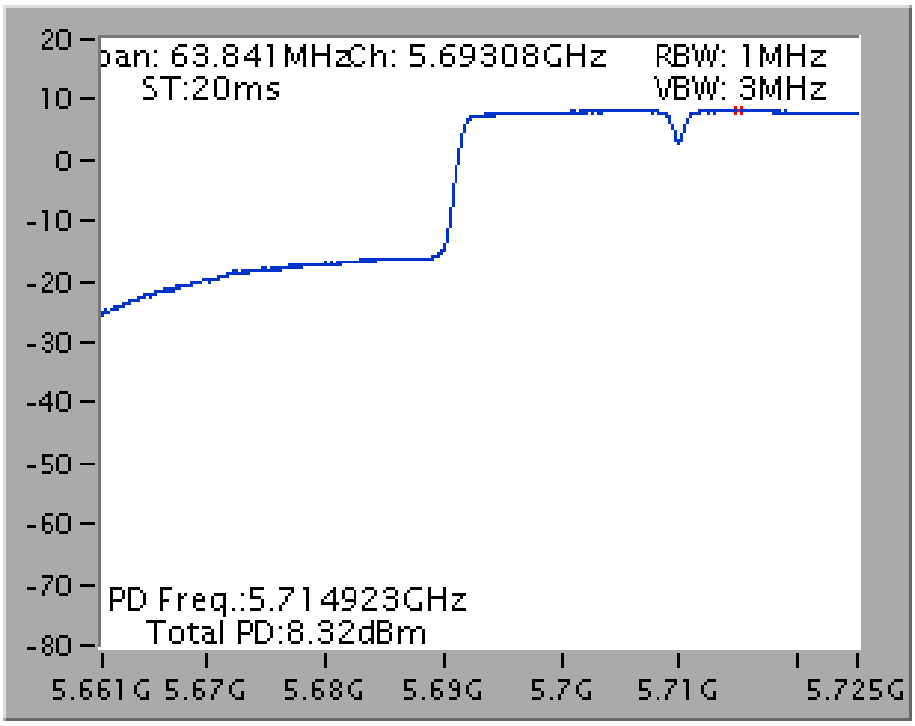
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5720 MHz (UNII 2C)**



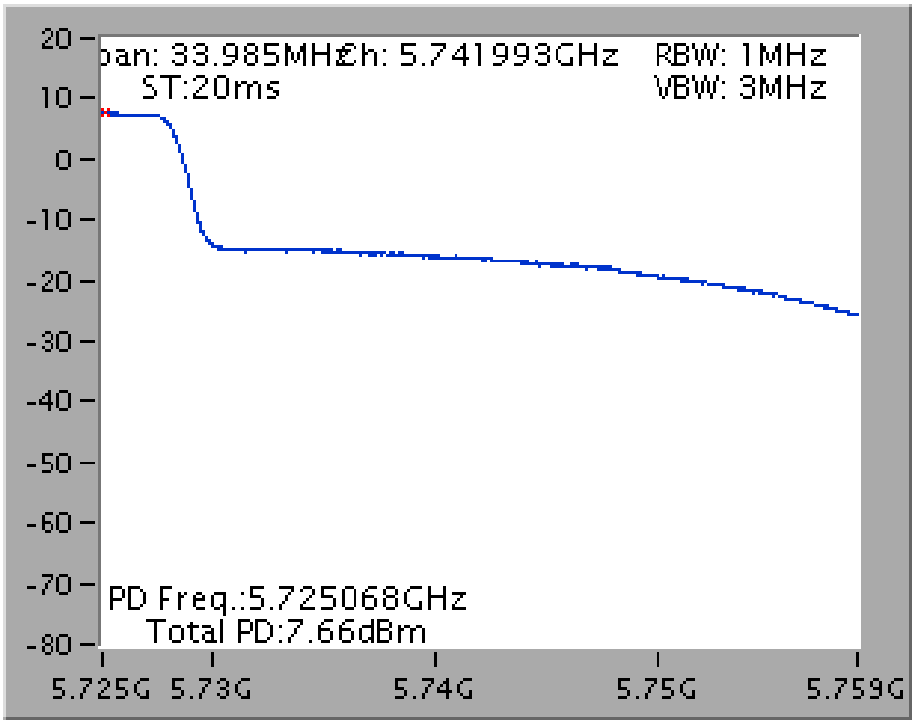

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5720 MHz (UNII 3)**



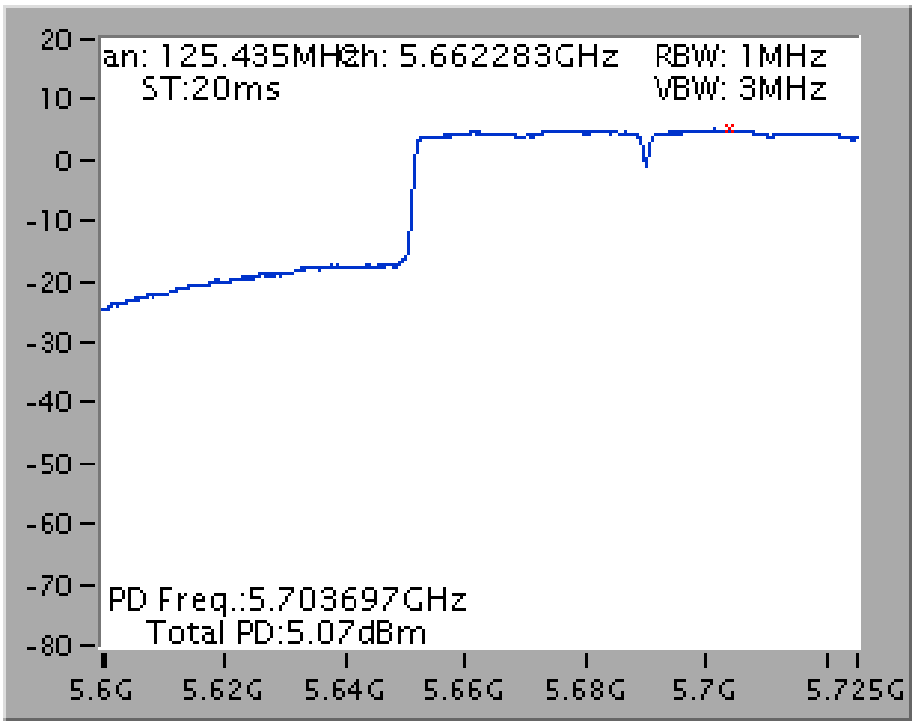
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5710 MHz (UNII 2C)**



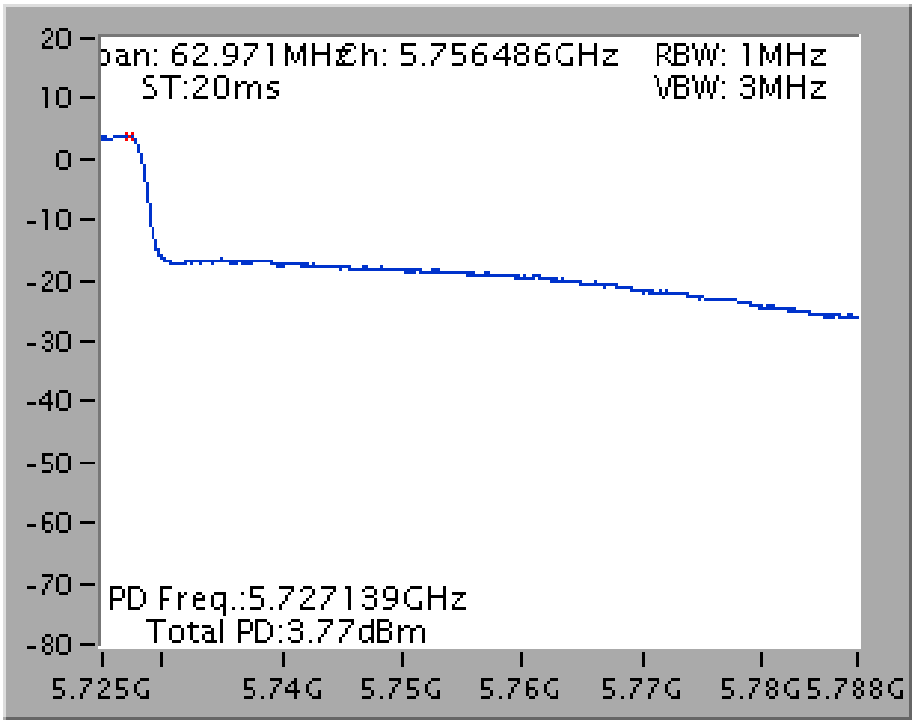

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5710 MHz (UNII 3)**



**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5690 MHz (UNII 2C)**



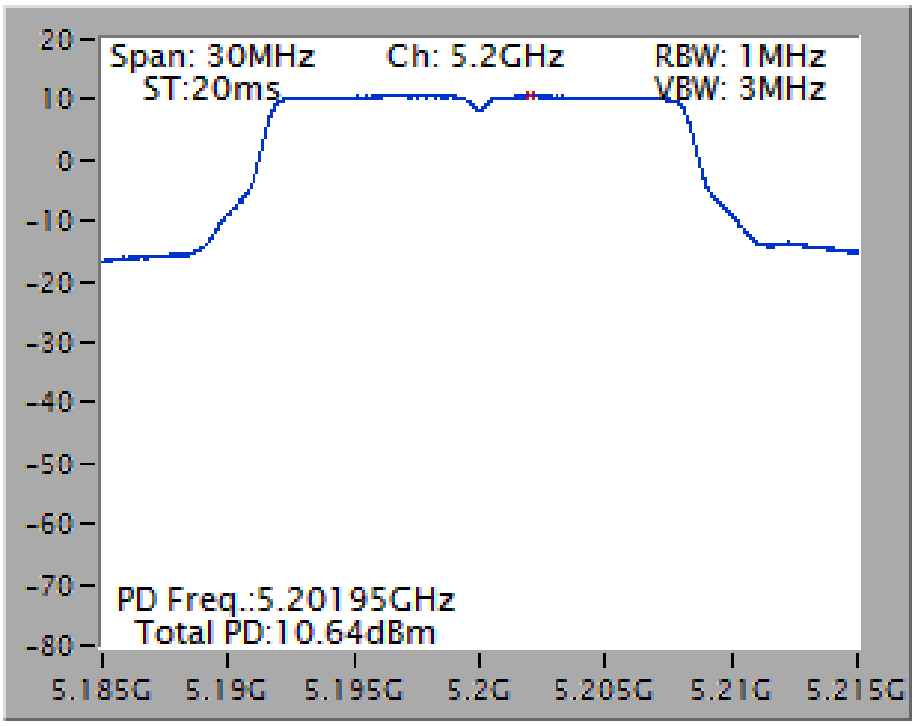

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5690 MHz (UNII 3)**



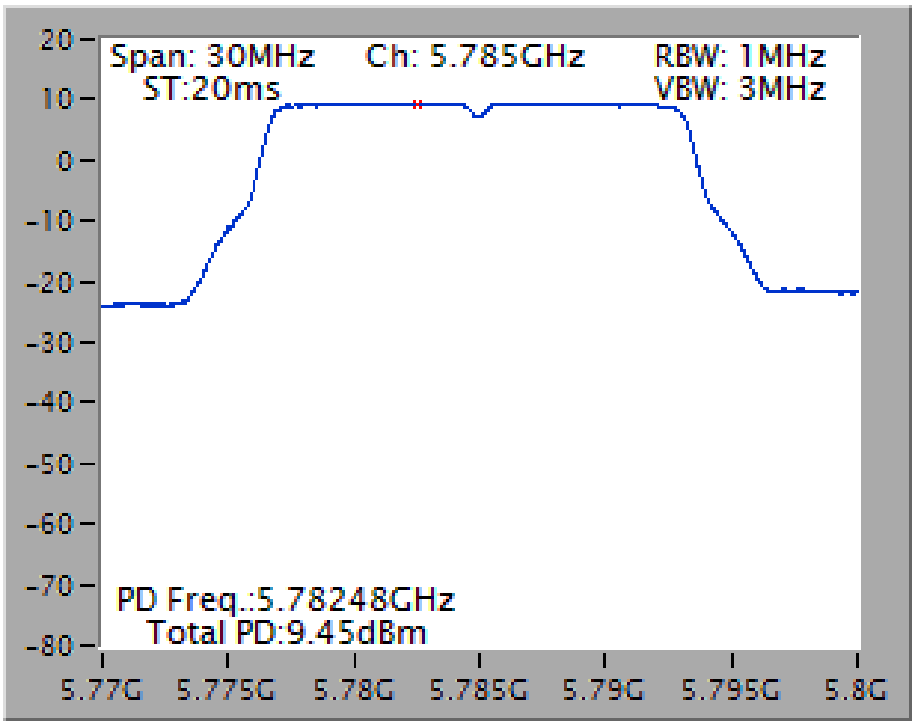
For Radio: R1

For non-beamforming function:

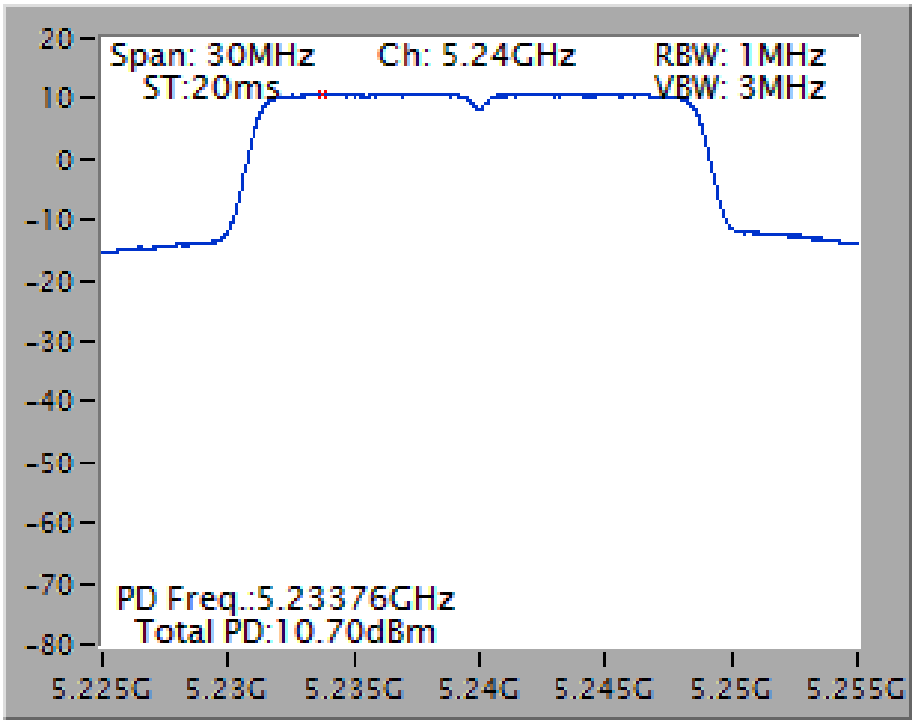
**Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5200 MHz**



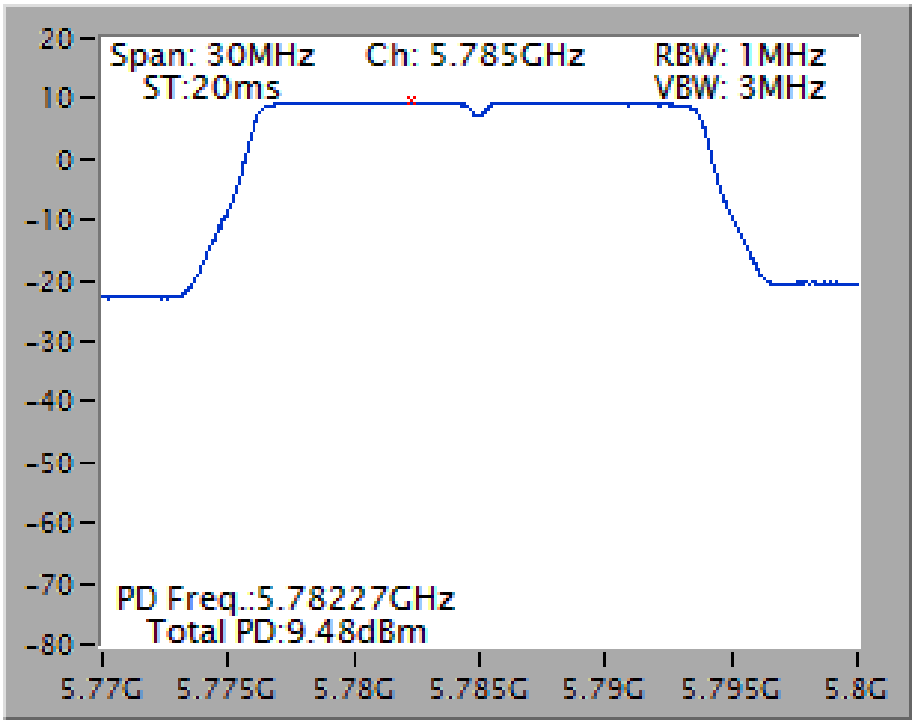

**Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5785 MHz**



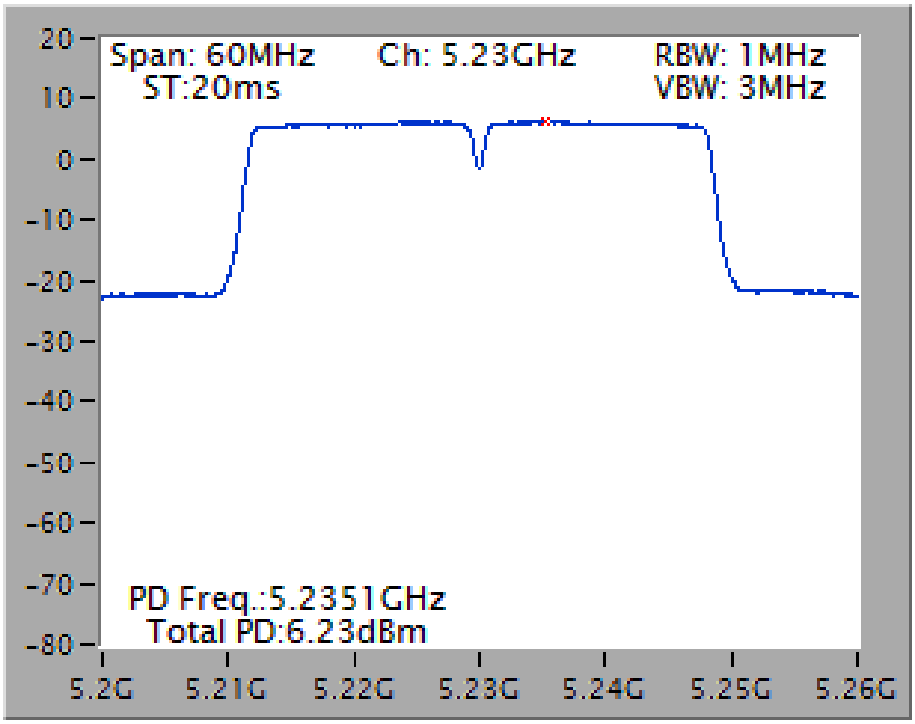
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5240 MHz**



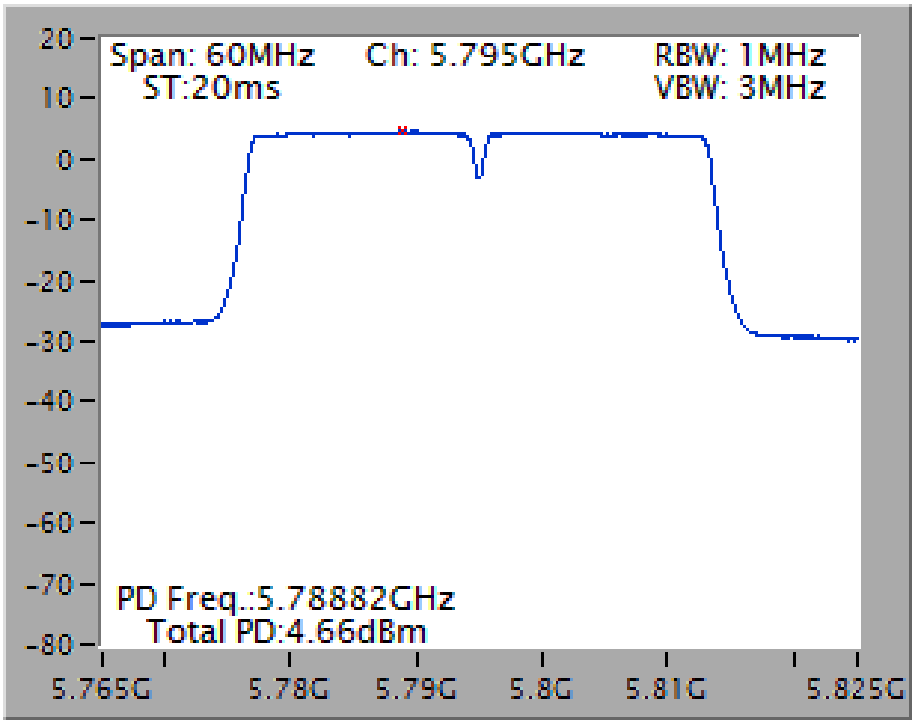

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5785 MHz**



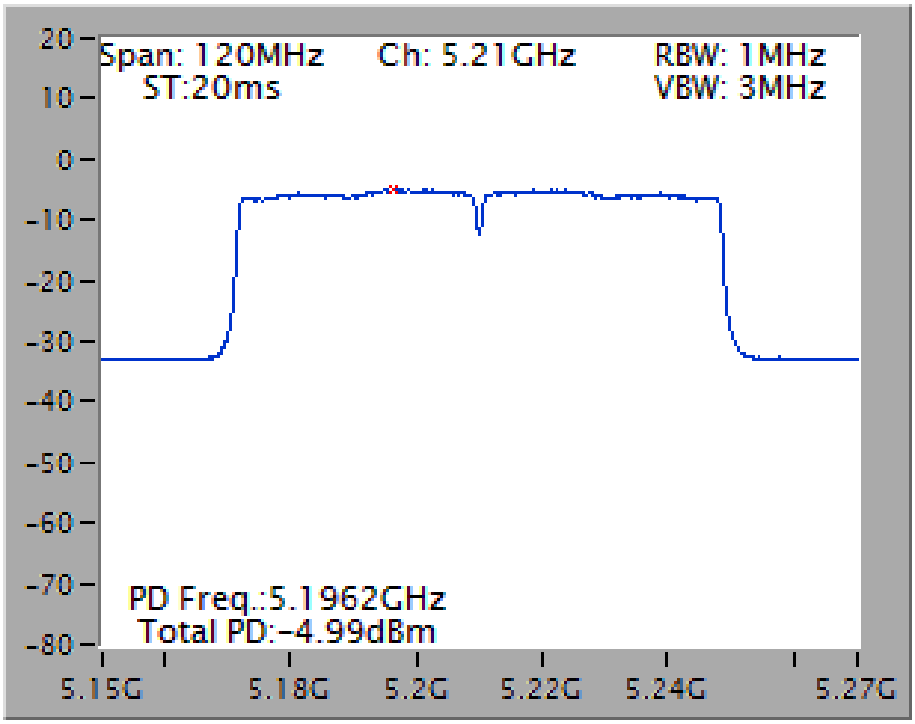
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5230 MHz**



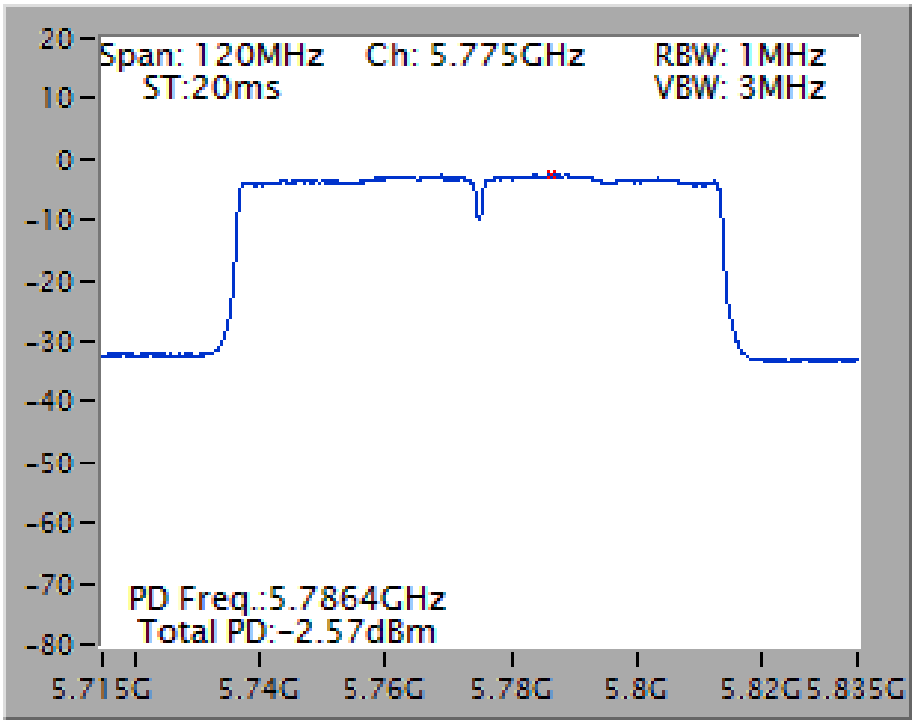

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5795 MHz**



**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz**



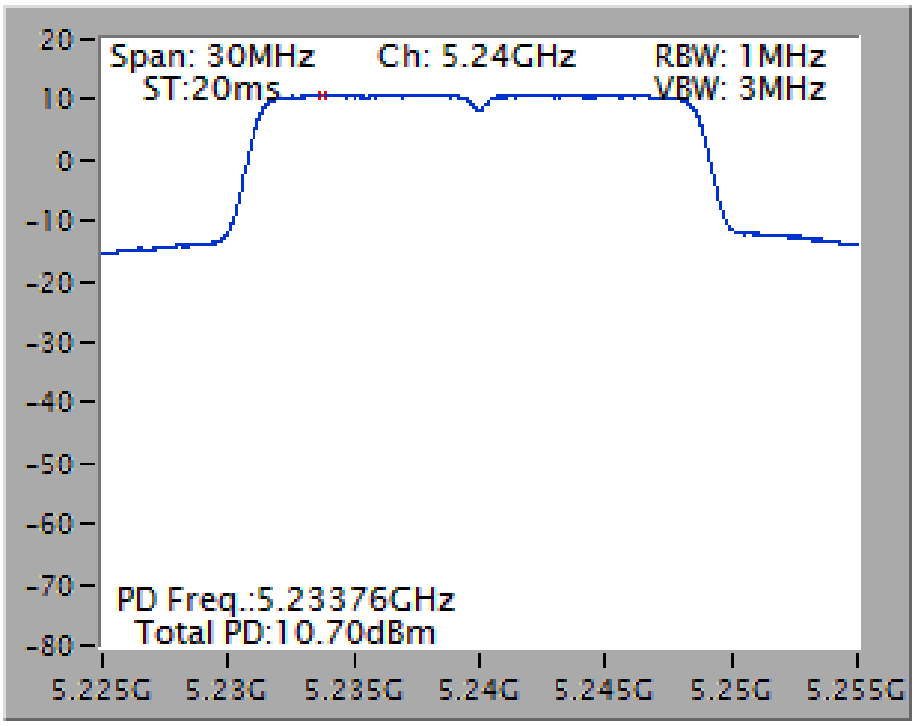

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5775 MHz**



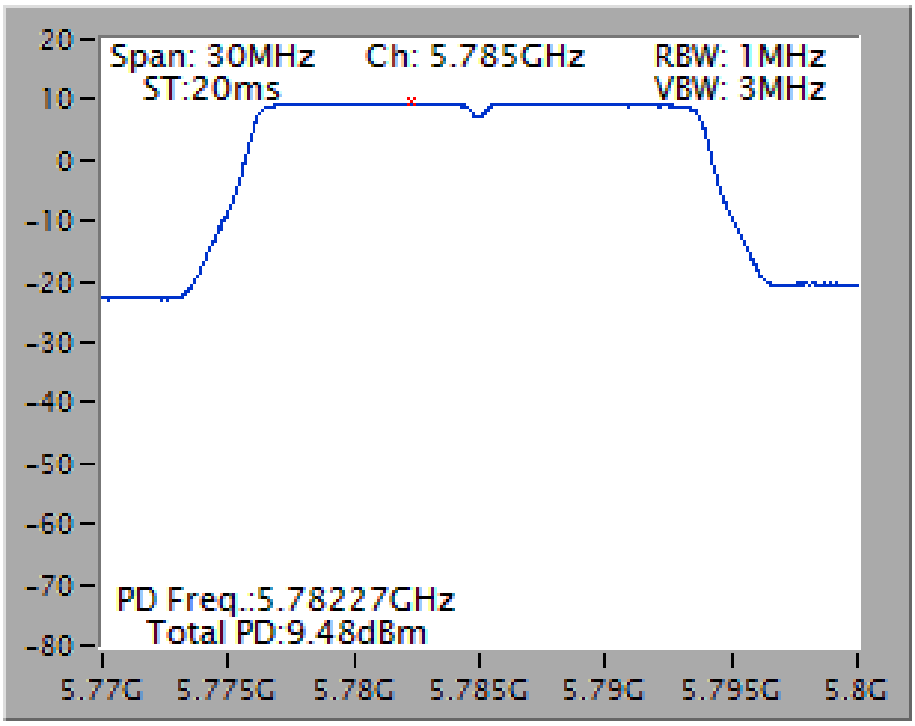
For Radio: R1

For beamforming function:

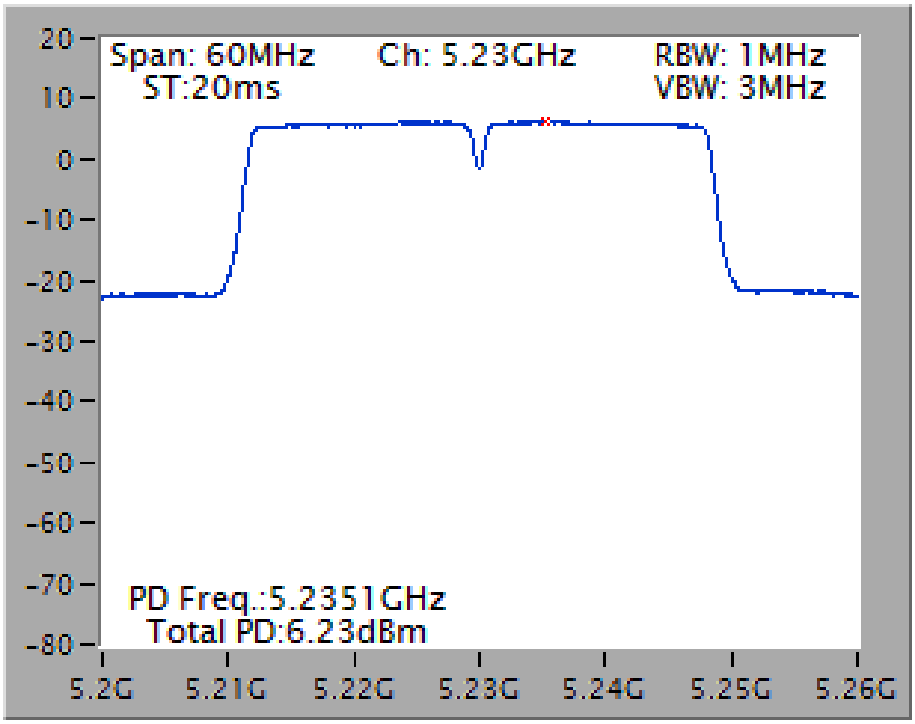
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5240 MHz**



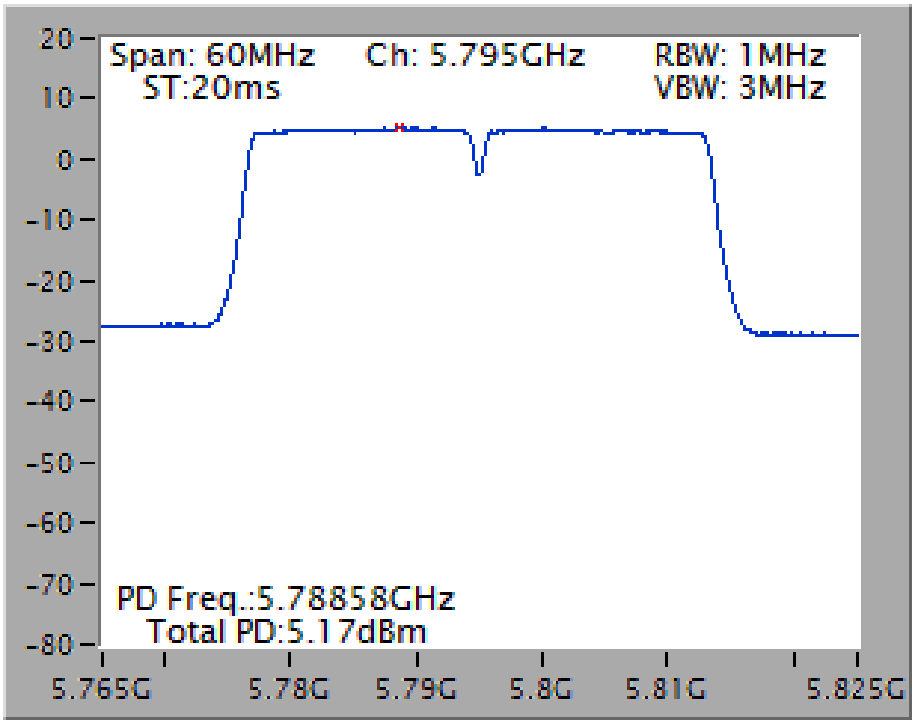

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5785 MHz**



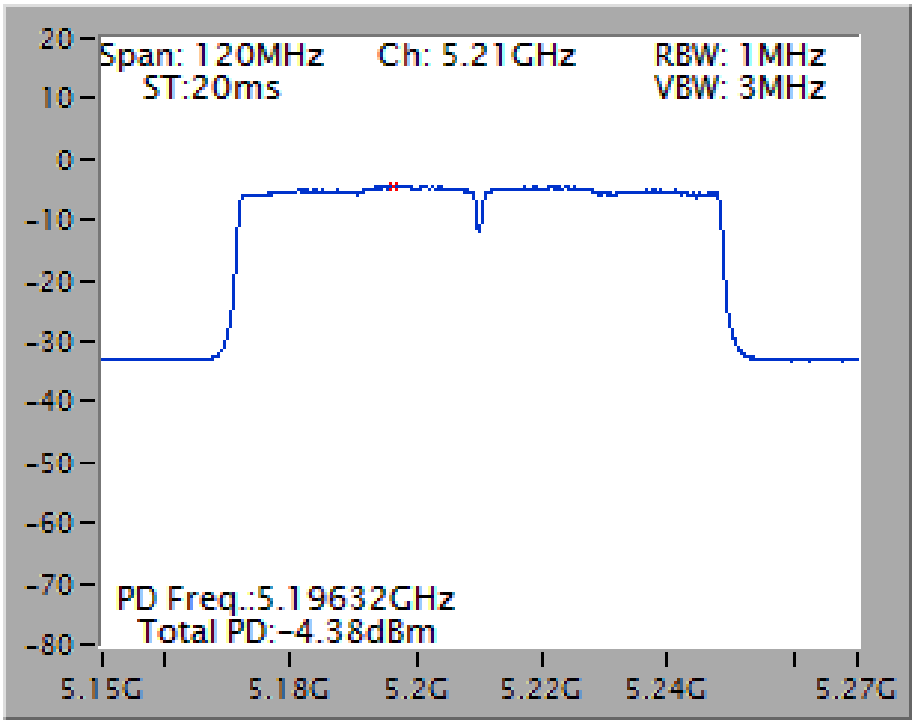
**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5230 MHz**



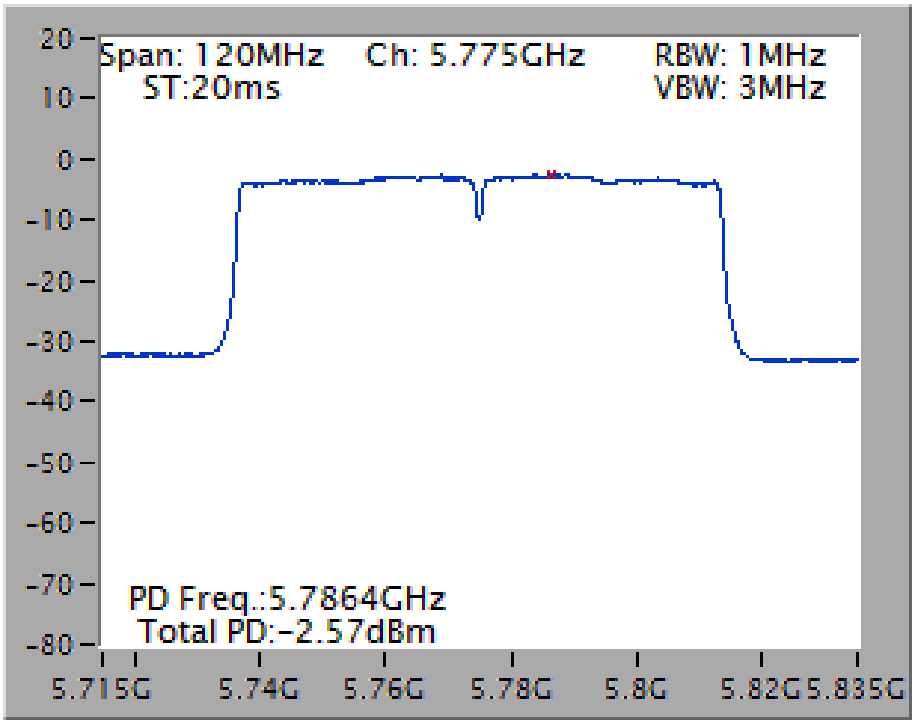

**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5795 MHz**



**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz**




**Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5775 MHz**



## 4.6. Radiated Emissions Measurement

### 4.6.1. Limit

For transmitters operating in the 5.15-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

For transmitters operating in the 5.470-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

For transmitters operating in the 5.725-5.85 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 e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.

In addition, In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

| Frequencies (MHz) | Field Strength (micorvolts/meter) | Measurement Distance (meters) |
|---|---|---|
| 0.009~0.490 | 2400/F(kHz) | 300 |
| 0.490~1.705 | 24000/F(kHz) | 30 |
| 1.705~30.0 | 30 | 30 |
| 30~88 | 100 | 3 |
| 88~216 | 150 | 3 |
| 216~960 | 200 | 3 |
| Above 960 | 500 | 3 |

### 4.6.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer and receiver.

| Spectrum Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Start Frequency | 1000 MHz |
| Stop Frequency | 40 GHz |
| RBW / VBW (Emission in restricted band) | 1MHz / 3MHz for Peak,<br>1MHz / 1/T for Average |
| RBW / VBW (Emission in non-restricted band) | 1MHz / 3MHz for peak |

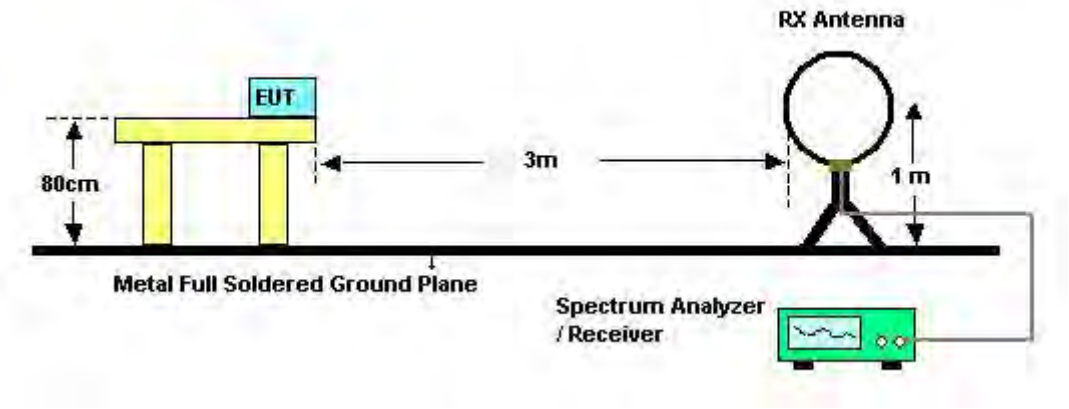
| Receiver Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Start ~ Stop Frequency | 9kHz~150kHz / RBW 200Hz for QP |
| Start ~ Stop Frequency | 150kHz~30MHz / RBW 9kHz for QP |
| Start ~ Stop Frequency | 30MHz~1000MHz / RBW 120kHz for QP |

### 4.6.3. Test Procedures

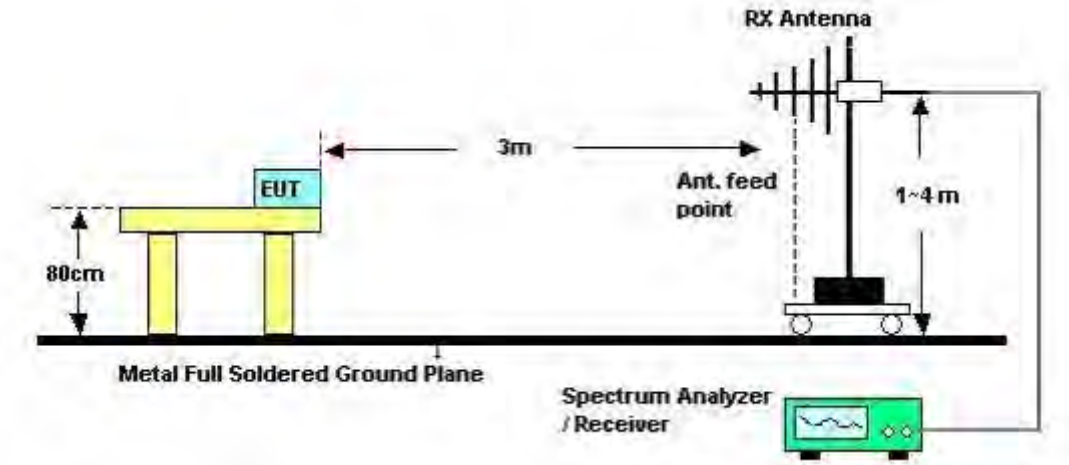
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 1m & 3m far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and 3MHz RBW for peak reading. Then 1MHz RBW and 1/T VBW for average reading in spectrum analyzer.
7. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
8. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
9. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

## 4.6.4. Test Setup Layout

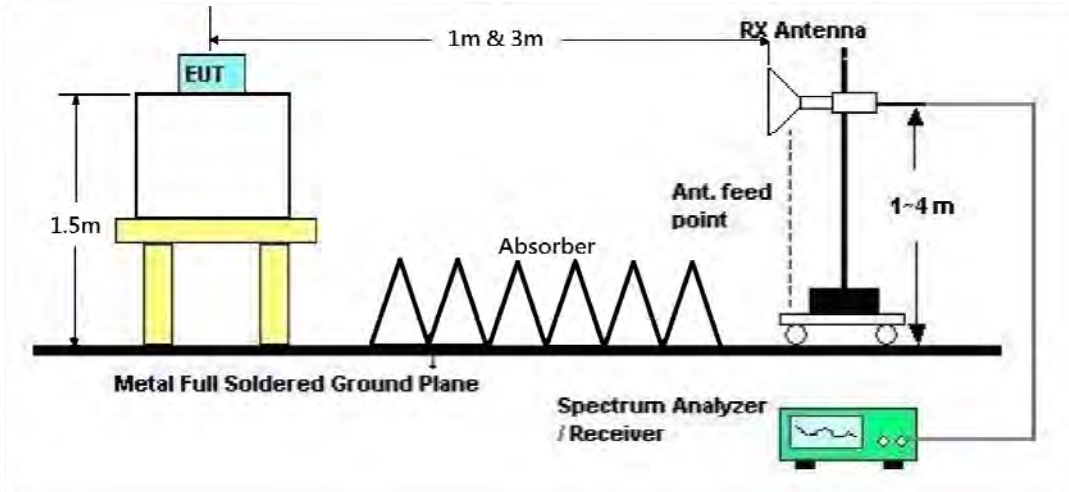
### For Radiated Emissions: 9kHz ~30MHz




### For Radiated Emissions: 30MHz~1GHz




### For Radiated Emissions: Above 1GHz



### 4.6.5. Test Deviation

There is no deviation with the original standard.

### 4.6.6. EUT Operation during Test

For non-beamforming function:

The EUT was programmed to be in continuously transmitting mode.

For beamforming function:

The EUT was programmed to be in beamforming transmitting mode.

### 4.6.7. Results of Radiated Emissions (9kHz~30MHz)

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | Normal Link |
| Test Date | Sep. 02, 2015 | Test Mode | Mode 2 |

| Freq. (MHz) | Level (dBuV) | Over Limit (dB) | Limit Line (dBuV) | Remark |
|---|---|---|---|---|
| - | - | - | - | See Note |

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

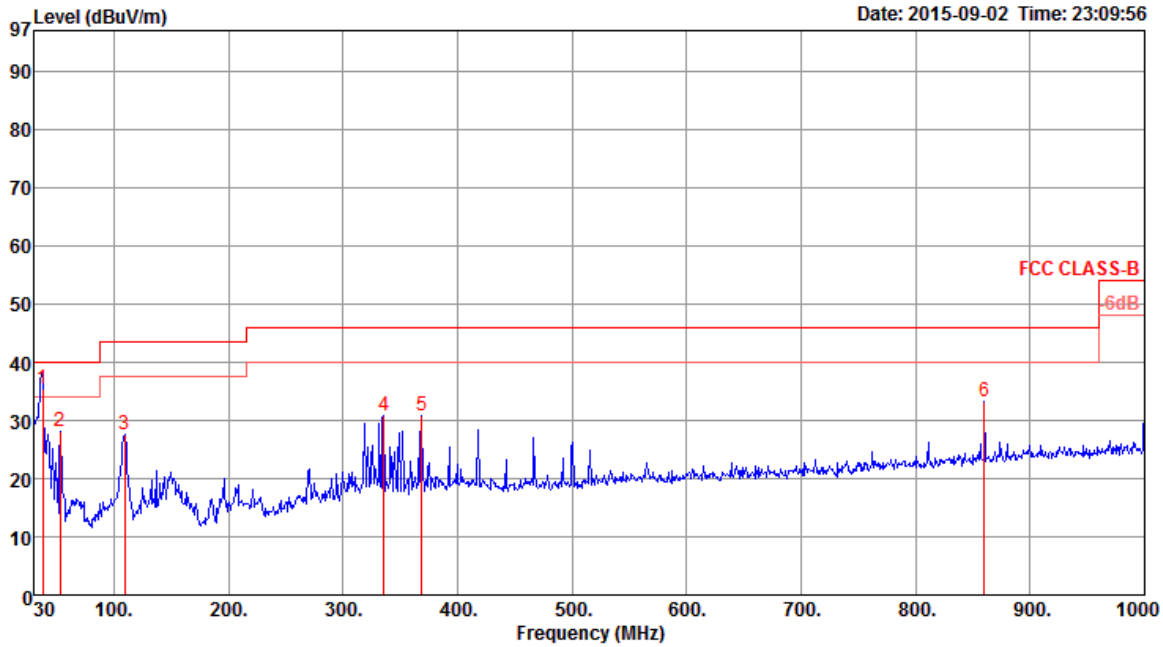
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

## 4.6.8. Results of Radiated Emissions (30MHz~1GHz)

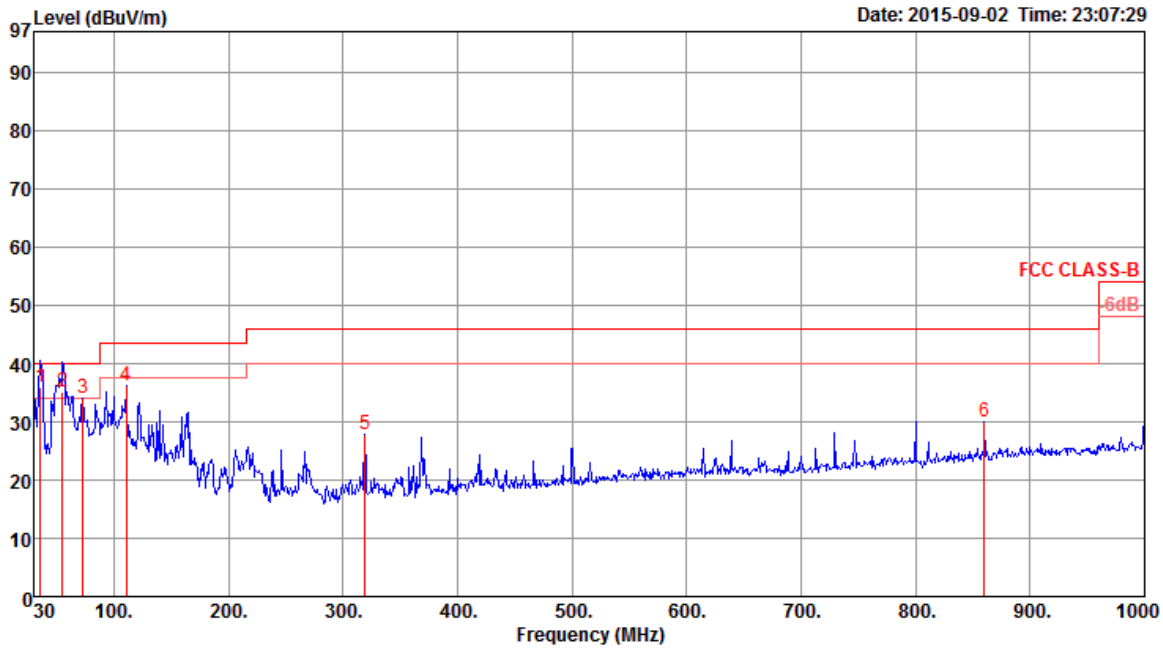
| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | Normal Link |
| Test Mode | Mode 2 | | |

*Horizontal*




| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | Remark | A/Pos | T/Pos | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | | cm | deg | |
| 1 | 37.76 | 35.38 | 40.00 | -4.62 | 46.86 | 0.68 | 15.46 | 27.62 | QP | 111 | 254 | HORIZONTAL |
| 2 | 53.28 | 28.18 | 40.00 | -11.82 | 47.28 | 0.85 | 8.51 | 28.46 | Peak | 100 | 360 | HORIZONTAL |
| 3 | 109.54 | 27.43 | 43.50 | -16.07 | 42.14 | 1.23 | 12.30 | 28.24 | Peak | 100 | 360 | HORIZONTAL |
| 4 | 335.55 | 30.75 | 46.00 | -15.25 | 41.59 | 2.08 | 14.82 | 27.74 | Peak | 100 | 360 | HORIZONTAL |
| 5 | 368.53 | 30.87 | 46.00 | -15.13 | 41.01 | 2.17 | 15.68 | 27.99 | Peak | 100 | 360 | HORIZONTAL |
| 6 | 860.32 | 33.27 | 46.00 | -12.73 | 36.42 | 3.41 | 21.48 | 28.04 | Peak | 100 | 360 | HORIZONTAL |

*Vertical*




| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | Remark | A/Pos | T/Pos | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | | cm | deg | |
| 1 | 35.82 | 35.99 | 40.00 | -4.01 | 46.11 | 0.69 | 16.62 | 27.43 | QP | 116 | 322 | VERTICAL |
| 2 | 55.22 | 35.24 | 40.00 | -4.76 | 54.80 | 0.84 | 8.05 | 28.45 | QP | 112 | 344 | VERTICAL |
| 3 | 72.68 | 33.91 | 40.00 | -6.09 | 54.33 | 0.95 | 7.02 | 28.39 | Peak | 400 | 0 | VERTICAL |
| 4 | 110.51 | 36.33 | 43.50 | -7.17 | 50.99 | 1.24 | 12.33 | 28.23 | Peak | 400 | 0 | VERTICAL |
| 5 | 319.06 | 27.75 | 46.00 | -18.25 | 38.91 | 2.06 | 14.40 | 27.62 | Peak | 400 | 0 | VERTICAL |
| 6 | 860.32 | 29.91 | 46.00 | -16.09 | 33.06 | 3.41 | 21.48 | 28.04 | Peak | 400 | 0 | VERTICAL |

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

## 4.6.9. Results for Radiated Emissions (1GHz~40GHz)

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11a CH 36 / Chain 1 + Chain 2 |
| Test Date | Aug. 19, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15539.68 | 57.91 | 74.00 | -16.09 | 40.89 | 12.58 | 38.14 | 33.70 | 152 | 292 | Peak | HORIZONTAL |
| 2 | 15540.64 | 44.97 | 54.00 | -9.03 | 27.95 | 12.58 | 38.14 | 33.70 | 152 | 292 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15530.29 | 57.53 | 74.00 | -16.47 | 40.51 | 12.58 | 38.14 | 33.70 | 150 | 304 | Peak | VERTICAL |
| 2 | 15542.24 | 45.25 | 54.00 | -8.75 | 28.23 | 12.58 | 38.14 | 33.70 | 150 | 304 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11a CH 40 / Chain 1 + Chain 2 |
| Test Date | Aug. 19, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15591.70 | 57.89 | 74.00 | -16.11 | 41.00 | 12.58 | 38.06 | 33.75 | 154 | 269 | Peak | HORIZONTAL |
| 2 | 15607.53 | 44.73 | 54.00 | -9.27 | 27.90 | 12.58 | 38.03 | 33.78 | 154 | 269 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15592.18 | 44.91 | 54.00 | -9.09 | 28.02 | 12.58 | 38.06 | 33.75 | 153 | 281 | Average | VERTICAL |
| 2 | 15607.37 | 57.72 | 74.00 | -16.28 | 40.89 | 12.58 | 38.03 | 33.78 | 153 | 281 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11a CH 48 / Chain 1 + Chain 2 |
| Test Date | Aug. 19, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15724.74 | 44.98 | 54.00 | -9.02 | 28.45 | 12.57 | 37.84 | 33.88 | 156 | 248 | Average | HORIZONTAL |
| 2 | 15728.30 | 57.83 | 74.00 | -16.17 | 41.32 | 12.57 | 37.84 | 33.90 | 156 | 248 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15710.19 | 57.97 | 74.00 | -16.03 | 41.41 | 12.57 | 37.87 | 33.88 | 155 | 259 | Peak | VERTICAL |
| 2 | 15711.15 | 44.92 | 54.00 | -9.08 | 28.36 | 12.57 | 37.87 | 33.88 | 155 | 259 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11a CH 52 / Chain 1 + Chain 2 |
| Test Date | Aug. 19, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15776.89 | 47.06 | 54.00 | -6.94 | 30.66 | 12.57 | 37.76 | 33.93 | 264 | 134 | Average | HORIZONTAL |
| 2 | 15787.44 | 60.08 | 74.00 | -13.92 | 43.73 | 12.57 | 37.73 | 33.95 | 264 | 134 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15770.54 | 58.12 | 74.00 | -15.88 | 41.72 | 12.57 | 37.76 | 33.93 | 157 | 279 | Peak | VERTICAL |
| 2 | 15782.85 | 45.01 | 54.00 | -8.99 | 28.66 | 12.57 | 37.73 | 33.95 | 157 | 279 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11a CH 60 / Chain 1 + Chain 2 |
| Test Date | Aug. 19, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10594.23 | 42.24 | 54.00 | -11.76 | 27.31 | 10.16 | 38.40 | 33.63 | 150 | 252 | Average | HORIZONTAL |
| 2 | 10609.71 | 56.21 | 74.00 | -17.79 | 41.24 | 10.19 | 38.40 | 33.62 | 150 | 252 | Peak | HORIZONTAL |
| 3 | 15895.74 | 57.77 | 74.00 | -16.23 | 41.68 | 12.57 | 37.57 | 34.05 | 151 | 224 | Peak | HORIZONTAL |
| 4 | 15898.49 | 44.73 | 54.00 | -9.27 | 28.64 | 12.57 | 37.57 | 34.05 | 151 | 224 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10590.13 | 55.68 | 74.00 | -18.32 | 40.75 | 10.16 | 38.40 | 33.63 | 154 | 250 | Peak | VERTICAL |
| 2 | 10592.37 | 42.25 | 54.00 | -11.75 | 27.32 | 10.16 | 38.40 | 33.63 | 154 | 250 | Average | VERTICAL |
| 3 | 15891.38 | 58.54 | 74.00 | -15.46 | 42.45 | 12.57 | 37.57 | 34.05 | 153 | 234 | Peak | VERTICAL |
| 4 | 15901.25 | 44.51 | 54.00 | -9.49 | 28.45 | 12.57 | 37.54 | 34.05 | 153 | 234 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11a CH 64 / Chain 1 + Chain 2 |
| Test Date | Aug. 19, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10640.09 | 44.61 | 54.00 | -9.39 | 29.60 | 10.21 | 38.40 | 33.60 | 158 | 191 | Average | HORIZONTAL |
| 2 | 10640.13 | 57.92 | 74.00 | -16.08 | 42.91 | 10.21 | 38.40 | 33.60 | 158 | 191 | Peak | HORIZONTAL |
| 3 | 15953.88 | 44.49 | 54.00 | -9.51 | 28.57 | 12.56 | 37.46 | 34.10 | 160 | 211 | Average | HORIZONTAL |
| 4 | 15967.72 | 57.39 | 74.00 | -16.61 | 41.50 | 12.56 | 37.46 | 34.13 | 160 | 211 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10635.90 | 42.30 | 54.00 | -11.70 | 27.29 | 10.21 | 38.40 | 33.60 | 149 | 238 | Average | VERTICAL |
| 2 | 10643.21 | 55.16 | 74.00 | -18.84 | 40.15 | 10.21 | 38.40 | 33.60 | 149 | 238 | Peak | VERTICAL |
| 3 | 15954.52 | 44.53 | 54.00 | -9.47 | 28.61 | 12.56 | 37.46 | 34.10 | 147 | 222 | Average | VERTICAL |
| 4 | 15956.12 | 56.94 | 74.00 | -17.06 | 41.05 | 12.56 | 37.46 | 34.13 | 147 | 222 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11a CH 100 / Chain 1 + Chain 2 |
| Test Date | Aug. 19, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10993.59 | 56.16 | 74.00 | -17.84 | 40.59 | 10.55 | 38.40 | 33.38 | 156 | 168 | Peak | HORIZONTAL |
| 2 | 11000.51 | 42.63 | 54.00 | -11.37 | 27.06 | 10.55 | 38.40 | 33.38 | 156 | 168 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10994.74 | 55.68 | 74.00 | -18.32 | 40.11 | 10.55 | 38.40 | 33.38 | 157 | 180 | Peak | VERTICAL |
| 2 | 11001.63 | 42.62 | 54.00 | -11.38 | 27.05 | 10.55 | 38.40 | 33.38 | 157 | 180 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11a CH 116 / Chain 1 + Chain 2 |
| Test Date | Aug. 19, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11158.75 | 65.40 | 74.00 | -8.60 | 49.61 | 10.60 | 38.57 | 33.38 | 279 | 117 | Peak | HORIZONTAL |
| 2 | 11159.46 | 50.93 | 54.00 | -3.07 | 35.14 | 10.60 | 38.57 | 33.38 | 279 | 117 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11159.55 | 49.42 | 54.00 | -4.58 | 33.63 | 10.60 | 38.57 | 33.38 | 281 | 129 | Average | VERTICAL |
| 2 | 11159.78 | 64.96 | 74.00 | -9.04 | 49.17 | 10.60 | 38.57 | 33.38 | 281 | 129 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11a CH 140 / Chain 1 + Chain 2 |
| Test Date | Aug. 19, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11396.51 | 56.63 | 74.00 | -17.37 | 40.51 | 10.69 | 38.80 | 33.37 | 155 | 126 | Peak | HORIZONTAL |
| 2 | 11402.50 | 43.49 | 54.00 | -10.51 | 27.37 | 10.69 | 38.80 | 33.37 | 155 | 126 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11390.19 | 56.91 | 74.00 | -17.09 | 40.82 | 10.68 | 38.78 | 33.37 | 156 | 146 | Peak | VERTICAL |
| 2 | 11397.98 | 43.62 | 54.00 | -10.38 | 27.50 | 10.69 | 38.80 | 33.37 | 156 | 146 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11a CH 144 / Chain 1 + Chain 2 |
| Test Date | Aug. 19, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11439.13 | 65.94 | 74.00 | -8.06 | 49.79 | 10.69 | 38.83 | 33.37 | 141 | 176 | Peak | HORIZONTAL |
| 2 | 11439.62 | 50.91 | 54.00 | -3.09 | 34.76 | 10.69 | 38.83 | 33.37 | 141 | 176 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11438.94 | 65.94 | 74.00 | -8.06 | 49.79 | 10.69 | 38.83 | 33.37 | 269 | 126 | Peak | VERTICAL |
| 2 | 11439.42 | 50.99 | 54.00 | -3.01 | 34.84 | 10.69 | 38.83 | 33.37 | 269 | 126 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11a CH 149 / Chain 1 + Chain 2 |
| Test Date | Aug. 19, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11491.38 | 56.53 | 74.00 | -17.47 | 40.31 | 10.71 | 38.88 | 33.37 | 166 | 285 | Peak | HORIZONTAL |
| 2 | 11493.21 | 43.89 | 54.00 | -10.11 | 27.67 | 10.71 | 38.88 | 33.37 | 166 | 285 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11492.53 | 44.19 | 54.00 | -9.81 | 27.97 | 10.71 | 38.88 | 33.37 | 171 | 268 | Average | VERTICAL |
| 2 | 11493.30 | 56.97 | 74.00 | -17.03 | 40.74 | 10.72 | 38.88 | 33.37 | 171 | 268 | Peak | VERTICAL |

| Temperature | 24℃ | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11a CH 157 / Chain 1 + Chain 2 |
| Test Date | Aug. 19, 2015 / Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11568.99 | 66.80 | 74.00 | -7.20 | 50.49 | 10.75 | 38.94 | 33.38 | 209 | 112 | Peak | HORIZONTAL |
| 2 | 11569.66 | 50.98 | 54.00 | -3.02 | 34.67 | 10.75 | 38.94 | 33.38 | 209 | 112 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11570.80 | 50.05 | 54.00 | -3.95 | 33.74 | 10.76 | 38.94 | 33.39 | 176 | 113 | Average | VERTICAL |
| 2 | 11575.61 | 65.82 | 74.00 | -8.18 | 49.51 | 10.76 | 38.94 | 33.39 | 176 | 113 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11a CH 165 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11646.11 | 47.68 | 54.00 | -6.32 | 31.31 | 10.79 | 38.98 | 33.40 | 152 | 108 | Average | HORIZONTAL |
| 2 | 11646.59 | 60.78 | 74.00 | -13.22 | 44.40 | 10.81 | 38.98 | 33.41 | 152 | 108 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11650.67 | 48.85 | 54.00 | -5.15 | 32.46 | 10.81 | 38.99 | 33.41 | 145 | 129 | Average | VERTICAL |
| 2 | 11655.67 | 61.38 | 74.00 | -12.62 | 44.99 | 10.81 | 38.99 | 33.41 | 145 | 129 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15527.45 | 58.43 | 74.00 | -15.57 | 41.41 | 12.58 | 38.14 | 33.70 | 151 | 195 | Peak | HORIZONTAL |
| 2 | 15537.45 | 45.60 | 54.00 | -8.40 | 28.58 | 12.58 | 38.14 | 33.70 | 151 | 195 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15544.13 | 45.72 | 54.00 | -8.28 | 28.72 | 12.58 | 38.12 | 33.70 | 152 | 176 | Average | VERTICAL |
| 2 | 15547.79 | 58.68 | 74.00 | -15.32 | 41.71 | 12.58 | 38.12 | 33.73 | 152 | 176 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15606.25 | 45.42 | 54.00 | -8.58 | 28.59 | 12.58 | 38.03 | 33.78 | 160 | 137 | Average | HORIZONTAL |
| 2 | 15614.66 | 58.15 | 74.00 | -15.85 | 41.34 | 12.58 | 38.01 | 33.78 | 160 | 137 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15592.98 | 61.00 | 74.00 | -13.00 | 44.11 | 12.58 | 38.06 | 33.75 | 190 | 135 | Peak | VERTICAL |
| 2 | 15593.46 | 46.90 | 54.00 | -7.10 | 30.01 | 12.58 | 38.06 | 33.75 | 190 | 135 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15716.06 | 45.65 | 54.00 | -8.35 | 29.12 | 12.57 | 37.84 | 33.88 | 161 | 217 | Average | HORIZONTAL |
| 2 | 15719.18 | 58.77 | 74.00 | -15.23 | 42.24 | 12.57 | 37.84 | 33.88 | 161 | 217 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15706.97 | 58.62 | 74.00 | -15.38 | 42.06 | 12.57 | 37.87 | 33.88 | 164 | 192 | Peak | VERTICAL |
| 2 | 15716.11 | 45.74 | 54.00 | -8.26 | 29.21 | 12.57 | 37.84 | 33.88 | 164 | 192 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 52 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15767.26 | 45.24 | 54.00 | -8.76 | 28.84 | 12.57 | 37.76 | 33.93 | 160 | 58 | Average | HORIZONTAL |
| 2 | 15773.51 | 58.31 | 74.00 | -15.69 | 41.91 | 12.57 | 37.76 | 33.93 | 160 | 58 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15769.38 | 58.36 | 74.00 | -15.64 | 41.96 | 12.57 | 37.76 | 33.93 | 159 | 36 | Peak | VERTICAL |
| 2 | 15777.45 | 45.34 | 54.00 | -8.66 | 28.96 | 12.57 | 37.76 | 33.95 | 159 | 36 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 60 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10586.63 | 43.21 | 54.00 | -10.79 | 28.28 | 10.16 | 38.40 | 33.63 | 157 | 96 | Average | HORIZONTAL |
| 2 | 10596.78 | 55.70 | 74.00 | -18.30 | 40.77 | 10.16 | 38.40 | 33.63 | 157 | 96 | Peak | HORIZONTAL |
| 3 | 15893.99 | 45.36 | 54.00 | -8.64 | 29.27 | 12.57 | 37.57 | 34.05 | 159 | 114 | Average | HORIZONTAL |
| 4 | 15914.86 | 57.97 | 74.00 | -16.03 | 41.95 | 12.56 | 37.54 | 34.08 | 159 | 114 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10589.47 | 56.89 | 74.00 | -17.11 | 41.96 | 10.16 | 38.40 | 33.63 | 158 | 270 | Peak | VERTICAL |
| 2 | 10599.66 | 43.45 | 54.00 | -10.55 | 28.52 | 10.16 | 38.40 | 33.63 | 158 | 270 | Average | VERTICAL |
| 3 | 15898.80 | 44.99 | 54.00 | -9.01 | 28.90 | 12.57 | 37.57 | 34.05 | 161 | 290 | Average | VERTICAL |
| 4 | 15901.73 | 57.45 | 74.00 | -16.55 | 41.39 | 12.57 | 37.54 | 34.05 | 161 | 290 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 64 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10631.92 | 43.00 | 54.00 | -11.00 | 27.99 | 10.21 | 38.40 | 33.60 | 157 | 89 | Average | HORIZONTAL |
| 2 | 10652.02 | 55.99 | 74.00 | -18.01 | 40.94 | 10.24 | 38.40 | 33.59 | 157 | 89 | Peak | HORIZONTAL |
| 3 | 15947.79 | 44.98 | 54.00 | -9.02 | 29.04 | 12.56 | 37.48 | 34.10 | 153 | 112 | Average | HORIZONTAL |
| 4 | 15961.25 | 57.19 | 74.00 | -16.81 | 41.30 | 12.56 | 37.46 | 34.13 | 153 | 112 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10625.48 | 43.23 | 54.00 | -10.77 | 28.26 | 10.19 | 38.40 | 33.62 | 156 | 113 | Average | VERTICAL |
| 2 | 10627.93 | 55.48 | 74.00 | -18.52 | 40.47 | 10.21 | 38.40 | 33.60 | 156 | 113 | Peak | VERTICAL |
| 3 | 15953.65 | 57.56 | 74.00 | -16.44 | 41.64 | 12.56 | 37.46 | 34.10 | 154 | 97 | Peak | VERTICAL |
| 4 | 15963.75 | 44.87 | 54.00 | -9.13 | 28.98 | 12.56 | 37.46 | 34.13 | 154 | 97 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 100 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10990.72 | 57.56 | 74.00 | -16.44 | 41.99 | 10.55 | 38.40 | 33.38 | 161 | 130 | Peak | HORIZONTAL |
| 2 | 11007.98 | 43.27 | 54.00 | -10.73 | 27.68 | 10.55 | 38.42 | 33.38 | 161 | 130 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10992.74 | 56.44 | 74.00 | -17.56 | 40.87 | 10.55 | 38.40 | 33.38 | 158 | 109 | Peak | VERTICAL |
| 2 | 11014.62 | 43.56 | 54.00 | -10.44 | 27.96 | 10.56 | 38.42 | 33.38 | 158 | 109 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 116 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11159.52 | 66.01 | 54.00 | 12.01 | 50.22 | 10.60 | 38.57 | 33.38 | 224 | 115 | Average | HORIZONTAL |
| 2 | 11159.78 | 50.98 | 54.00 | -3.02 | 35.19 | 10.60 | 38.57 | 33.38 | 224 | 115 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11159.38 | 50.55 | 54.00 | -3.45 | 34.76 | 10.60 | 38.57 | 33.38 | 215 | 147 | Average | VERTICAL |
| 2 | 11164.28 | 62.42 | 74.00 | -11.58 | 46.62 | 10.61 | 38.57 | 33.38 | 215 | 147 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 140 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11391.12 | 57.29 | 74.00 | -16.71 | 41.20 | 10.68 | 38.78 | 33.37 | 183 | 168 | Peak | HORIZONTAL |
| 2 | 11394.10 | 43.71 | 54.00 | -10.29 | 27.61 | 10.69 | 38.78 | 33.37 | 183 | 168 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11392.47 | 57.21 | 74.00 | -16.79 | 41.11 | 10.69 | 38.78 | 33.37 | 178 | 140 | Peak | VERTICAL |
| 2 | 11397.28 | 44.10 | 54.00 | -9.90 | 27.98 | 10.69 | 38.80 | 33.37 | 178 | 140 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 144 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11439.84 | 50.71 | 54.00 | -3.29 | 34.56 | 10.69 | 38.83 | 33.37 | 165 | 120 | Average | HORIZONTAL |
| 2 | 11442.21 | 65.89 | 54.00 | 11.89 | 49.74 | 10.69 | 38.83 | 33.37 | 165 | 120 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11439.49 | 50.99 | 54.00 | -3.01 | 34.84 | 10.69 | 38.83 | 33.37 | 191 | 145 | Average | VERTICAL |
| 2 | 11441.51 | 65.46 | 74.00 | -8.54 | 49.31 | 10.69 | 38.83 | 33.37 | 191 | 145 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11487.44 | 60.70 | 74.00 | -13.30 | 44.48 | 10.71 | 38.88 | 33.37 | 172 | 119 | Peak | HORIZONTAL |
| 2 | 11492.50 | 47.40 | 54.00 | -6.60 | 31.18 | 10.71 | 38.88 | 33.37 | 172 | 119 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11491.63 | 46.95 | 54.00 | -7.05 | 30.73 | 10.71 | 38.88 | 33.37 | 168 | 144 | Average | VERTICAL |
| 2 | 11496.99 | 60.51 | 74.00 | -13.49 | 44.28 | 10.72 | 38.88 | 33.37 | 168 | 144 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11570.32 | 50.78 | 54.00 | -3.22 | 34.47 | 10.76 | 38.94 | 33.39 | 176 | 134 | Average | HORIZONTAL |
| 2 | 11575.22 | 66.09 | 74.00 | -7.91 | 49.78 | 10.76 | 38.94 | 33.39 | 176 | 134 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11572.76 | 50.04 | 54.00 | -3.96 | 33.73 | 10.76 | 38.94 | 33.39 | 184 | 107 | Average | VERTICAL |
| 2 | 11573.01 | 64.77 | 74.00 | -9.23 | 48.46 | 10.76 | 38.94 | 33.39 | 184 | 107 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11650.13 | 61.38 | 74.00 | -12.62 | 45.00 | 10.81 | 38.98 | 33.41 | 178 | 129 | Peak | HORIZONTAL |
| 2 | 11650.29 | 47.63 | 54.00 | -6.37 | 31.25 | 10.81 | 38.98 | 33.41 | 178 | 129 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11650.00 | 46.99 | 54.00 | -7.01 | 30.61 | 10.81 | 38.98 | 33.41 | 164 | 144 | Average | VERTICAL |
| 2 | 11654.97 | 59.95 | 74.00 | -14.05 | 43.56 | 10.81 | 38.99 | 33.41 | 164 | 144 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15576.06 | 45.28 | 54.00 | -8.72 | 28.36 | 12.58 | 38.09 | 33.75 | 164 | 99 | Average | HORIZONTAL |
| 2 | 15579.17 | 58.19 | 74.00 | -15.81 | 41.30 | 12.58 | 38.06 | 33.75 | 164 | 99 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15570.48 | 45.43 | 54.00 | -8.57 | 28.49 | 12.58 | 38.09 | 33.73 | 167 | 113 | Average | VERTICAL |
| 2 | 15577.15 | 58.12 | 74.00 | -15.88 | 41.20 | 12.58 | 38.09 | 33.75 | 167 | 113 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15684.26 | 57.95 | 74.00 | -16.05 | 41.32 | 12.58 | 37.90 | 33.85 | 153 | 70 | Peak | HORIZONTAL |
| 2 | 15698.78 | 45.51 | 54.00 | -8.49 | 28.91 | 12.58 | 37.87 | 33.85 | 153 | 70 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15691.67 | 45.30 | 54.00 | -8.70 | 28.67 | 12.58 | 37.90 | 33.85 | 160 | 85 | Average | VERTICAL |
| 2 | 15691.89 | 58.84 | 74.00 | -15.16 | 42.21 | 12.58 | 37.90 | 33.85 | 160 | 85 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 54 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15805.74 | 44.78 | 54.00 | -9.22 | 28.49 | 12.57 | 37.70 | 33.98 | 150 | 61 | Average | HORIZONTAL |
| 2 | 15815.38 | 57.45 | 74.00 | -16.55 | 41.16 | 12.57 | 37.70 | 33.98 | 150 | 61 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15800.90 | 45.01 | 54.00 | -8.99 | 28.69 | 12.57 | 37.70 | 33.95 | 127 | 105 | Average | VERTICAL |
| 2 | 15819.52 | 57.22 | 74.00 | -16.78 | 40.95 | 12.57 | 37.68 | 33.98 | 127 | 105 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 62 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10621.47 | 55.82 | 74.00 | -18.18 | 40.85 | 10.19 | 38.40 | 33.62 | 164 | 114 | Peak | HORIZONTAL |
| 2 | 10625.61 | 42.90 | 54.00 | -11.10 | 27.93 | 10.19 | 38.40 | 33.62 | 164 | 114 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10617.50 | 56.43 | 74.00 | -17.57 | 41.46 | 10.19 | 38.40 | 33.62 | 154 | 64 | Peak | VERTICAL |
| 2 | 10622.12 | 42.80 | 54.00 | -11.20 | 27.83 | 10.19 | 38.40 | 33.62 | 154 | 64 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 102 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11020.32 | 43.01 | 54.00 | -10.99 | 27.41 | 10.56 | 38.42 | 33.38 | 153 | 188 | Average | HORIZONTAL |
| 2 | 11029.55 | 56.04 | 74.00 | -17.96 | 40.43 | 10.56 | 38.43 | 33.38 | 153 | 188 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11014.49 | 56.53 | 74.00 | -17.47 | 40.93 | 10.56 | 38.42 | 33.38 | 157 | 163 | Peak | VERTICAL |
| 2 | 11015.77 | 43.15 | 54.00 | -10.85 | 27.55 | 10.56 | 38.42 | 33.38 | 157 | 163 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 110 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11097.53 | 42.98 | 54.00 | -11.02 | 27.28 | 10.58 | 38.50 | 33.38 | 153 | 192 | Average | HORIZONTAL |
| 2 | 11102.95 | 56.92 | 74.00 | -17.08 | 41.22 | 10.58 | 38.50 | 33.38 | 153 | 192 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11093.04 | 55.73 | 74.00 | -18.27 | 40.03 | 10.58 | 38.50 | 33.38 | 160 | 167 | Peak | VERTICAL |
| 2 | 11099.17 | 43.38 | 54.00 | -10.62 | 27.68 | 10.58 | 38.50 | 33.38 | 160 | 167 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 134 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11340.16 | 56.07 | 74.00 | -17.93 | 40.05 | 10.66 | 38.73 | 33.37 | 149 | 245 | Peak | HORIZONTAL |
| 2 | 11345.06 | 43.47 | 54.00 | -10.53 | 27.42 | 10.67 | 38.75 | 33.37 | 149 | 245 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11349.10 | 43.64 | 54.00 | -10.36 | 27.59 | 10.67 | 38.75 | 33.37 | 153 | 199 | Average | VERTICAL |
| 2 | 11349.94 | 56.88 | 74.00 | -17.12 | 40.83 | 10.67 | 38.75 | 33.37 | 153 | 199 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 142 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11414.81 | 50.64 | 54.00 | -3.36 | 34.50 | 10.69 | 38.82 | 33.37 | 126 | 174 | Average | HORIZONTAL |
| 2 | 11417.44 | 65.10 | 74.00 | -8.90 | 48.96 | 10.69 | 38.82 | 33.37 | 126 | 174 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11414.58 | 49.15 | 54.00 | -4.85 | 33.01 | 10.69 | 38.82 | 33.37 | 272 | 125 | Average | VERTICAL |
| 2 | 11419.81 | 63.78 | 74.00 | -10.22 | 47.64 | 10.69 | 38.82 | 33.37 | 272 | 125 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11502.08 | 43.98 | 54.00 | -10.02 | 27.73 | 10.72 | 38.90 | 33.37 | 153 | 110 | Average | HORIZONTAL |
| 2 | 11509.52 | 56.63 | 74.00 | -17.37 | 40.38 | 10.72 | 38.90 | 33.37 | 153 | 110 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11500.64 | 57.37 | 74.00 | -16.63 | 41.12 | 10.72 | 38.90 | 33.37 | 157 | 131 | Peak | VERTICAL |
| 2 | 11519.65 | 43.73 | 54.00 | -10.27 | 27.47 | 10.73 | 38.91 | 33.38 | 157 | 131 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11590.26 | 47.01 | 54.00 | -6.99 | 30.69 | 10.76 | 38.95 | 33.39 | 181 | 133 | Average | HORIZONTAL |
| 2 | 11592.85 | 60.29 | 74.00 | -13.71 | 43.97 | 10.76 | 38.95 | 33.39 | 181 | 133 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11589.20 | 57.19 | 74.00 | -16.81 | 40.87 | 10.76 | 38.95 | 33.39 | 145 | 93 | Peak | VERTICAL |
| 2 | 11596.57 | 43.76 | 54.00 | -10.24 | 27.43 | 10.78 | 38.95 | 33.40 | 145 | 93 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15623.43 | 58.08 | 74.00 | -15.92 | 41.27 | 12.58 | 38.01 | 33.78 | 162 | 162 | Peak | HORIZONTAL |
| 2 | 15631.44 | 44.74 | 54.00 | -9.26 | 27.98 | 12.58 | 37.98 | 33.80 | 162 | 162 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15624.90 | 44.70 | 54.00 | -9.30 | 27.91 | 12.58 | 38.01 | 33.80 | 181 | 139 | Average | VERTICAL |
| 2 | 15624.97 | 57.48 | 74.00 | -16.52 | 40.69 | 12.58 | 38.01 | 33.80 | 181 | 139 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15864.39 | 58.00 | 74.00 | -16.00 | 41.84 | 12.57 | 37.62 | 34.03 | 138 | 128 | Peak | HORIZONTAL |
| 2 | 15877.88 | 44.72 | 54.00 | -9.28 | 28.59 | 12.57 | 37.59 | 34.03 | 138 | 128 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15865.16 | 58.60 | 74.00 | -15.40 | 42.44 | 12.57 | 37.62 | 34.03 | 146 | 144 | Peak | VERTICAL |
| 2 | 15868.43 | 44.59 | 54.00 | -9.41 | 28.46 | 12.57 | 37.59 | 34.03 | 146 | 144 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11059.71 | 43.00 | 54.00 | -11.00 | 27.34 | 10.57 | 38.47 | 33.38 | 157 | 207 | Average | HORIZONTAL |
| 2 | 11066.12 | 55.95 | 74.00 | -18.05 | 40.28 | 10.58 | 38.47 | 33.38 | 157 | 207 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11060.99 | 56.78 | 74.00 | -17.22 | 41.11 | 10.58 | 38.47 | 33.38 | 161 | 180 | Peak | VERTICAL |
| 2 | 11063.65 | 42.95 | 54.00 | -11.05 | 27.28 | 10.58 | 38.47 | 33.38 | 161 | 180 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT80 CH 122 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11220.51 | 56.37 | 74.00 | -17.63 | 40.50 | 10.63 | 38.62 | 33.38 | 150 | 277 | Peak | HORIZONTAL |
| 2 | 11227.08 | 43.01 | 54.00 | -10.99 | 27.13 | 10.63 | 38.63 | 33.38 | 150 | 277 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11213.21 | 42.84 | 54.00 | -11.16 | 26.97 | 10.63 | 38.62 | 33.38 | 157 | 260 | Average | VERTICAL |
| 2 | 11226.41 | 56.51 | 74.00 | -17.49 | 40.63 | 10.63 | 38.63 | 33.38 | 157 | 260 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT80 CH 138 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11384.84 | 49.23 | 54.00 | -4.77 | 33.14 | 10.68 | 38.78 | 33.37 | 121 | 177 | Average | HORIZONTAL |
| 2 | 11389.78 | 62.11 | 74.00 | -11.89 | 46.02 | 10.68 | 38.78 | 33.37 | 121 | 177 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11387.15 | 46.90 | 54.00 | -7.10 | 30.81 | 10.68 | 38.78 | 33.37 | 148 | 127 | Average | VERTICAL |
| 2 | 11389.58 | 59.74 | 74.00 | -14.26 | 43.65 | 10.68 | 38.78 | 33.37 | 148 | 127 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT80 CH 155 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Non-beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11541.09 | 55.93 | 74.00 | -18.07 | 39.66 | 10.73 | 38.92 | 33.38 | 139 | 143 | Peak | HORIZONTAL |
| 2 | 11544.01 | 43.44 | 54.00 | -10.56 | 27.17 | 10.73 | 38.92 | 33.38 | 139 | 143 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11540.42 | 56.71 | 74.00 | -17.29 | 40.44 | 10.73 | 38.92 | 33.38 | 134 | 161 | Peak | VERTICAL |
| 2 | 11552.05 | 43.18 | 54.00 | -10.82 | 26.88 | 10.75 | 38.93 | 33.38 | 134 | 161 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 36 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15533.27 | 58.34 | 74.00 | -15.66 | 41.32 | 12.58 | 38.14 | 33.70 | 172 | 239 | Peak | HORIZONTAL |
| 2 | 15539.97 | 45.61 | 54.00 | -8.39 | 28.59 | 12.58 | 38.14 | 33.70 | 172 | 239 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15539.68 | 45.65 | 54.00 | -8.35 | 28.63 | 12.58 | 38.14 | 33.70 | 169 | 223 | Average | VERTICAL |
| 2 | 15547.72 | 58.65 | 74.00 | -15.35 | 41.65 | 12.58 | 38.12 | 33.70 | 169 | 223 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 40 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15592.47 | 58.79 | 74.00 | -15.21 | 41.90 | 12.58 | 38.06 | 33.75 | 176 | 152 | Peak | HORIZONTAL |
| 2 | 15609.10 | 45.11 | 54.00 | -8.89 | 28.28 | 12.58 | 38.03 | 33.78 | 176 | 152 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15604.10 | 45.18 | 54.00 | -8.82 | 28.35 | 12.58 | 38.03 | 33.78 | 183 | 181 | Average | VERTICAL |
| 2 | 15609.65 | 58.16 | 74.00 | -15.84 | 41.33 | 12.58 | 38.03 | 33.78 | 183 | 181 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 48 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15718.43 | 59.44 | 74.00 | -14.56 | 42.91 | 12.57 | 37.84 | 33.88 | 166 | 144 | Peak | HORIZONTAL |
| 2 | 15720.99 | 45.53 | 54.00 | -8.47 | 29.00 | 12.57 | 37.84 | 33.88 | 166 | 144 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15714.46 | 58.32 | 74.00 | -15.68 | 41.79 | 12.57 | 37.84 | 33.88 | 174 | 161 | Peak | VERTICAL |
| 2 | 15722.44 | 45.28 | 54.00 | -8.72 | 28.75 | 12.57 | 37.84 | 33.88 | 174 | 161 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 52 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15781.99 | 45.51 | 54.00 | -8.49 | 29.16 | 12.57 | 37.73 | 33.95 | 164 | 125 | Average | HORIZONTAL |
| 2 | 15782.05 | 59.59 | 74.00 | -14.41 | 43.24 | 12.57 | 37.73 | 33.95 | 164 | 125 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15781.38 | 45.28 | 54.00 | -8.72 | 28.90 | 12.57 | 37.76 | 33.95 | 167 | 149 | Average | VERTICAL |
| 2 | 15785.87 | 59.24 | 74.00 | -14.76 | 42.89 | 12.57 | 37.73 | 33.95 | 167 | 149 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 60 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10594.04 | 56.37 | 74.00 | -17.63 | 41.44 | 10.16 | 38.40 | 33.63 | 176 | 127 | Peak | HORIZONTAL |
| 2 | 10598.65 | 43.02 | 54.00 | -10.98 | 28.09 | 10.16 | 38.40 | 33.63 | 176 | 127 | Average | HORIZONTAL |
| 3 | 15891.19 | 44.85 | 54.00 | -9.15 | 28.76 | 12.57 | 37.57 | 34.05 | 178 | 143 | Average | HORIZONTAL |
| 4 | 15901.96 | 57.41 | 74.00 | -16.59 | 41.35 | 12.57 | 37.54 | 34.05 | 178 | 143 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10591.73 | 56.00 | 74.00 | -18.00 | 41.07 | 10.16 | 38.40 | 33.63 | 179 | 186 | Peak | VERTICAL |
| 2 | 10599.68 | 43.25 | 54.00 | -10.75 | 28.32 | 10.16 | 38.40 | 33.63 | 179 | 186 | Average | VERTICAL |
| 3 | 15898.21 | 58.01 | 74.00 | -15.99 | 41.92 | 12.57 | 37.57 | 34.05 | 181 | 161 | Peak | VERTICAL |
| 4 | 15904.90 | 44.89 | 54.00 | -9.11 | 28.87 | 12.56 | 37.54 | 34.08 | 181 | 161 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 64 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10630.77 | 42.65 | 54.00 | -11.35 | 27.64 | 10.21 | 38.40 | 33.60 | 166 | 104 | Average | HORIZONTAL |
| 2 | 10647.31 | 56.37 | 74.00 | -17.63 | 41.36 | 10.21 | 38.40 | 33.60 | 166 | 104 | Peak | HORIZONTAL |
| 3 | 15952.24 | 58.36 | 74.00 | -15.64 | 42.44 | 12.56 | 37.46 | 34.10 | 167 | 121 | Peak | HORIZONTAL |
| 4 | 15953.72 | 44.39 | 54.00 | -9.61 | 28.47 | 12.56 | 37.46 | 34.10 | 167 | 121 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10633.30 | 42.85 | 54.00 | -11.15 | 27.84 | 10.21 | 38.40 | 33.60 | 174 | 109 | Average | VERTICAL |
| 2 | 10649.62 | 56.26 | 74.00 | -17.74 | 41.25 | 10.21 | 38.40 | 33.60 | 174 | 109 | Peak | VERTICAL |
| 3 | 15956.92 | 58.66 | 74.00 | -15.34 | 42.77 | 12.56 | 37.46 | 34.13 | 170 | 96 | Peak | VERTICAL |
| 4 | 15960.32 | 44.67 | 54.00 | -9.33 | 28.78 | 12.56 | 37.46 | 34.13 | 170 | 96 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 100 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10992.82 | 55.54 | 74.00 | -18.46 | 39.97 | 10.55 | 38.40 | 33.38 | 164 | 136 | Peak | HORIZONTAL |
| 2 | 10999.84 | 42.94 | 54.00 | -11.06 | 27.37 | 10.55 | 38.40 | 33.38 | 164 | 136 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10994.94 | 55.86 | 74.00 | -18.14 | 40.29 | 10.55 | 38.40 | 33.38 | 165 | 122 | Peak | VERTICAL |
| 2 | 11008.94 | 43.16 | 54.00 | -10.84 | 27.56 | 10.56 | 38.42 | 33.38 | 165 | 122 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 116 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11158.65 | 50.99 | 54.00 | -3.01 | 35.20 | 10.60 | 38.57 | 33.38 | 177 | 123 | Average | HORIZONTAL |
| 2 | 11160.38 | 67.29 | 74.00 | -6.71 | 51.50 | 10.60 | 38.57 | 33.38 | 177 | 123 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11158.40 | 63.17 | 74.00 | -10.83 | 47.38 | 10.60 | 38.57 | 33.38 | 192 | 148 | Peak | VERTICAL |
| 2 | 11158.72 | 50.46 | 54.00 | -3.54 | 34.67 | 10.60 | 38.57 | 33.38 | 192 | 148 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 140 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11400.13 | 43.44 | 54.00 | -10.56 | 27.32 | 10.69 | 38.80 | 33.37 | 174 | 132 | Average | HORIZONTAL |
| 2 | 11406.79 | 56.76 | 74.00 | -17.24 | 40.64 | 10.69 | 38.80 | 33.37 | 174 | 132 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11392.31 | 56.25 | 74.00 | -17.75 | 40.15 | 10.69 | 38.78 | 33.37 | 175 | 147 | Peak | VERTICAL |
| 2 | 11392.53 | 43.67 | 54.00 | -10.33 | 27.57 | 10.69 | 38.78 | 33.37 | 175 | 147 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 144 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11433.46 | 67.62 | 74.00 | -6.38 | 51.47 | 10.69 | 38.83 | 33.37 | 170 | 122 | Peak | HORIZONTAL |
| 2 | 11439.78 | 50.93 | 54.00 | -3.07 | 34.78 | 10.69 | 38.83 | 33.37 | 170 | 122 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11438.69 | 66.61 | 74.00 | -7.39 | 50.46 | 10.69 | 38.83 | 33.37 | 197 | 150 | Peak | VERTICAL |
| 2 | 11439.68 | 50.68 | 54.00 | -3.32 | 34.53 | 10.69 | 38.83 | 33.37 | 197 | 150 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 149 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11480.10 | 43.53 | 54.00 | -10.47 | 27.32 | 10.71 | 38.87 | 33.37 | 171 | 118 | Average | HORIZONTAL |
| 2 | 11487.69 | 56.09 | 74.00 | -17.91 | 39.87 | 10.71 | 38.88 | 33.37 | 171 | 118 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11482.63 | 43.68 | 54.00 | -10.32 | 27.46 | 10.71 | 38.88 | 33.37 | 168 | 132 | Average | VERTICAL |
| 2 | 11486.25 | 56.81 | 74.00 | -17.19 | 40.59 | 10.71 | 38.88 | 33.37 | 168 | 132 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 157 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11573.61 | 50.91 | 54.00 | -3.09 | 34.60 | 10.76 | 38.94 | 33.39 | 286 | 135 | Average | HORIZONTAL |
| 2 | 11573.75 | 66.39 | 74.00 | -7.61 | 50.08 | 10.76 | 38.94 | 33.39 | 286 | 135 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11571.88 | 64.78 | 74.00 | -9.22 | 48.47 | 10.76 | 38.94 | 33.39 | 165 | 146 | Peak | VERTICAL |
| 2 | 11580.14 | 50.18 | 54.00 | -3.82 | 33.87 | 10.76 | 38.94 | 33.39 | 165 | 146 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT20 CH 165 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11650.58 | 47.18 | 54.00 | -6.82 | 30.79 | 10.81 | 38.99 | 33.41 | 195 | 143 | Average | HORIZONTAL |
| 2 | 11653.13 | 59.63 | 74.00 | -14.37 | 43.24 | 10.81 | 38.99 | 33.41 | 195 | 143 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11652.79 | 59.05 | 74.00 | -14.95 | 42.66 | 10.81 | 38.99 | 33.41 | 234 | 149 | Peak | VERTICAL |
| 2 | 11654.57 | 46.67 | 54.00 | -7.33 | 30.28 | 10.81 | 38.99 | 33.41 | 234 | 149 | Average | VERTICAL |

| Temperature | 24℃ | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 38 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15561.97 | 58.24 | 74.00 | -15.76 | 41.30 | 12.58 | 38.09 | 33.73 | 168 | 169 | Peak | HORIZONTAL |
| 2 | 15562.98 | 45.29 | 54.00 | -8.71 | 28.35 | 12.58 | 38.09 | 33.73 | 168 | 169 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15561.35 | 58.26 | 74.00 | -15.74 | 41.32 | 12.58 | 38.09 | 33.73 | 165 | 157 | Peak | VERTICAL |
| 2 | 15577.07 | 45.52 | 54.00 | -8.48 | 28.60 | 12.58 | 38.09 | 33.75 | 165 | 157 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 46 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15690.48 | 45.18 | 54.00 | -8.82 | 28.55 | 12.58 | 37.90 | 33.85 | 164 | 173 | Average | HORIZONTAL |
| 2 | 15697.93 | 58.14 | 74.00 | -15.86 | 41.54 | 12.58 | 37.87 | 33.85 | 164 | 173 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15679.90 | 58.10 | 74.00 | -15.90 | 41.47 | 12.58 | 37.90 | 33.85 | 166 | 156 | Peak | VERTICAL |
| 2 | 15703.80 | 45.20 | 54.00 | -8.80 | 28.64 | 12.57 | 37.87 | 33.88 | 166 | 156 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 54 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15802.26 | 44.75 | 54.00 | -9.25 | 28.43 | 12.57 | 37.70 | 33.95 | 164 | 203 | Average | HORIZONTAL |
| 2 | 15809.04 | 57.79 | 74.00 | -16.21 | 41.50 | 12.57 | 37.70 | 33.98 | 164 | 203 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15802.69 | 57.54 | 74.00 | -16.46 | 41.22 | 12.57 | 37.70 | 33.95 | 162 | 188 | Peak | VERTICAL |
| 2 | 15805.19 | 44.77 | 54.00 | -9.23 | 28.48 | 12.57 | 37.70 | 33.98 | 162 | 188 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 62 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10615.91 | 56.27 | 74.00 | -17.73 | 41.30 | 10.19 | 38.40 | 33.62 | 157 | 266 | Peak | HORIZONTAL |
| 2 | 10626.39 | 42.79 | 54.00 | -11.21 | 27.78 | 10.21 | 38.40 | 33.60 | 157 | 266 | Average | HORIZONTAL |
| 3 | 15924.23 | 44.59 | 54.00 | -9.41 | 28.60 | 12.56 | 37.51 | 34.08 | 159 | 245 | Average | HORIZONTAL |
| 4 | 15940.91 | 57.49 | 74.00 | -16.51 | 41.55 | 12.56 | 37.48 | 34.10 | 159 | 245 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 10609.33 | 42.89 | 54.00 | -11.11 | 27.92 | 10.19 | 38.40 | 33.62 | 162 | 218 | Average | VERTICAL |
| 2 | 10609.57 | 55.33 | 74.00 | -18.67 | 40.36 | 10.19 | 38.40 | 33.62 | 162 | 218 | Peak | VERTICAL |
| 3 | 15923.37 | 57.22 | 74.00 | -16.78 | 41.23 | 12.56 | 37.51 | 34.08 | 160 | 231 | Peak | VERTICAL |
| 4 | 15933.51 | 44.51 | 54.00 | -9.49 | 28.54 | 12.56 | 37.51 | 34.10 | 160 | 231 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 102 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11006.11 | 42.93 | 54.00 | -11.07 | 27.34 | 10.55 | 38.42 | 33.38 | 154 | 302 | Average | HORIZONTAL |
| 2 | 11010.38 | 55.89 | 74.00 | -18.11 | 40.29 | 10.56 | 38.42 | 33.38 | 154 | 302 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11009.13 | 43.26 | 54.00 | -10.74 | 27.66 | 10.56 | 38.42 | 33.38 | 155 | 284 | Average | VERTICAL |
| 2 | 11014.71 | 56.68 | 74.00 | -17.32 | 41.08 | 10.56 | 38.42 | 33.38 | 155 | 284 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 110 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11088.94 | 42.91 | 54.00 | -11.09 | 27.23 | 10.58 | 38.48 | 33.38 | 156 | 295 | Average | HORIZONTAL |
| 2 | 11110.24 | 56.20 | 74.00 | -17.80 | 40.48 | 10.58 | 38.52 | 33.38 | 156 | 295 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11085.67 | 55.33 | 74.00 | -18.67 | 39.65 | 10.58 | 38.48 | 33.38 | 153 | 317 | Peak | VERTICAL |
| 2 | 11086.88 | 43.12 | 54.00 | -10.88 | 27.44 | 10.58 | 38.48 | 33.38 | 153 | 317 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 134 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11344.09 | 43.34 | 54.00 | -10.66 | 27.31 | 10.67 | 38.73 | 33.37 | 159 | 294 | Average | HORIZONTAL |
| 2 | 11353.99 | 56.83 | 74.00 | -17.17 | 40.78 | 10.67 | 38.75 | 33.37 | 159 | 294 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11342.55 | 43.55 | 54.00 | -10.45 | 27.52 | 10.67 | 38.73 | 33.37 | 158 | 278 | Average | VERTICAL |
| 2 | 11354.66 | 56.33 | 74.00 | -17.67 | 40.28 | 10.67 | 38.75 | 33.37 | 158 | 278 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 142 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11419.90 | 68.19 | 74.00 | -5.81 | 52.05 | 10.69 | 38.82 | 33.37 | 277 | 118 | Peak | HORIZONTAL |
| 2 | 11420.29 | 50.50 | 54.00 | -3.50 | 34.36 | 10.69 | 38.82 | 33.37 | 277 | 118 | Average | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11431.06 | 50.37 | 54.00 | -3.63 | 34.22 | 10.69 | 38.83 | 33.37 | 201 | 144 | Average | VERTICAL |
| 2 | 11433.94 | 64.02 | 74.00 | -9.98 | 47.87 | 10.69 | 38.83 | 33.37 | 201 | 144 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 151 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11502.45 | 43.36 | 54.00 | -10.64 | 27.11 | 10.72 | 38.90 | 33.37 | 156 | 157 | Average | HORIZONTAL |
| 2 | 11502.69 | 57.09 | 74.00 | -16.91 | 40.84 | 10.72 | 38.90 | 33.37 | 156 | 157 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11503.37 | 43.68 | 54.00 | -10.32 | 27.43 | 10.72 | 38.90 | 33.37 | 155 | 138 | Average | VERTICAL |
| 2 | 11512.16 | 56.41 | 74.00 | -17.59 | 40.16 | 10.72 | 38.90 | 33.37 | 155 | 138 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT40 CH 159 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11577.31 | 43.34 | 54.00 | -10.66 | 27.03 | 10.76 | 38.94 | 33.39 | 159 | 183 | Average | HORIZONTAL |
| 2 | 11591.06 | 57.02 | 74.00 | -16.98 | 40.70 | 10.76 | 38.95 | 33.39 | 159 | 183 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11593.37 | 57.28 | 74.00 | -16.72 | 40.96 | 10.76 | 38.95 | 33.39 | 157 | 170 | Peak | VERTICAL |
| 2 | 11602.36 | 43.66 | 54.00 | -10.34 | 27.32 | 10.78 | 38.96 | 33.40 | 157 | 170 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT80 CH 42 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15616.63 | 44.59 | 54.00 | -9.41 | 27.78 | 12.58 | 38.01 | 33.78 | 163 | 209 | Average | HORIZONTAL |
| 2 | 15628.32 | 57.91 | 74.00 | -16.09 | 41.12 | 12.58 | 38.01 | 33.80 | 163 | 209 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15635.43 | 57.63 | 74.00 | -16.37 | 40.87 | 12.58 | 37.98 | 33.80 | 161 | 195 | Peak | VERTICAL |
| 2 | 15640.43 | 44.59 | 54.00 | -9.41 | 27.83 | 12.58 | 37.98 | 33.80 | 161 | 195 | Average | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT80 CH 58 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15874.33 | 44.14 | 54.00 | -9.86 | 28.01 | 12.57 | 37.59 | 34.03 | 166 | 238 | Average | HORIZONTAL |
| 2 | 15875.53 | 57.00 | 74.00 | -17.00 | 40.87 | 12.57 | 37.59 | 34.03 | 166 | 238 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 15873.51 | 44.47 | 54.00 | -9.53 | 28.34 | 12.57 | 37.59 | 34.03 | 164 | 222 | Average | VERTICAL |
| 2 | 15877.69 | 57.02 | 74.00 | -16.98 | 40.89 | 12.57 | 37.59 | 34.03 | 164 | 222 | Peak | VERTICAL |

| Temperature | 24°C | Humidity | 61% |
|---|---|---|---|
| Test Engineer | Kenneth Huang | Configurations | IEEE 802.11ac MCS0/Nss1 VHT80 CH 106 / Chain 1 + Chain 2 |
| Test Date | Aug. 20, 2015 | Test Function | Beamforming function |
| Test Mode | For Radio: R0 / Mode 1 (PIFA antenna) | | |

*Horizontal*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11060.67 | 42.09 | 54.00 | -11.91 | 26.42 | 10.58 | 38.47 | 33.38 | 166 | 267 | Average | HORIZONTAL |
| 2 | 11073.17 | 54.86 | 74.00 | -19.14 | 39.18 | 10.58 | 38.48 | 33.38 | 166 | 267 | Peak | HORIZONTAL |

*Vertical*

| | Freq | Level | Limit Line | Over Limit | Read Level | Cable Loss | Antenna Factor | Preamp Factor | A/Pos | T/Pos | Remark | Pol/Phase |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | | |
| 1 | 11051.20 | 54.91 | 74.00 | -19.09 | 39.27 | 10.57 | 38.45 | 33.38 | 167 | 252 | Peak | VERTICAL |
| 2 | 11060.24 | 42.30 | 54.00 | -11.70 | 26.63 | 10.58 | 38.47 | 33.38 | 167 | 252 | Average | VERTICAL |