



CERTIFICATION TEST REPORT

Report Number. : 12802195-E4V3

Applicant : Microsoft Corp.
One Microsoft Way
Redmond, WA 98052

Model : 1876

FCC ID : C3K1876

IC : 3048A-1876

EUT Description : Portable Computing Device

Test Standard(s) : FCC 47 CFR PART 15 SUBPART E
ISED RSS-247 ISSUE 2
ISED RSS-GEN ISSUE 5

Date Of Issue:
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REPORT REVISION HISTORY

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| V1 | 8/20/2019 | Initial Issue | --- |
| V2 | 9/5/2019 | Section 5.3: Frequency Band updated Section 5.5: Statement updated Section 9.2: Version number removed | Henry Lau |
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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Microsoft Corp.
One Microsoft Way
Redmond, WA 98052

EUT DESCRIPTION: Portable Computing Device

MODEL: 1876

SERIAL NUMBER: Conducted: 005764692553
Radiated: 024269592753

DATE TESTED: July 03, 2019 – August 04, 2019

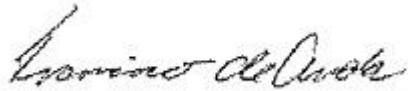
| APPLICABLE STANDARDS | |
|--------------------------|--------------|
| STANDARD | TEST RESULTS |
| CFR 47 Part 15 Subpart E | Complies |
| ISED RSS-247 Issue 2 | Complies |
| ISED RSS-GEN Issue 5 | Complies |

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, FCC 14-30, FCC KDB 662911 D01 v02r01, FCC KDB 905462 D02 v02/D03 v01r02/D06 v02, FCC KDB 789033 D02 v02r01, ANSI C63.10-2013, FCC 06-96, RSS-GEN Issue 5, and RSS-247 Issue 2.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, and 47658 Kato Road, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

| 47173 Benicia Street | 47266 Benicia Street | 47658 Kato Rd |
|------------------------------------|------------------------------------|---|
| <input type="checkbox"/> Chamber A | <input type="checkbox"/> Chamber D | <input checked="" type="checkbox"/> Chamber I |
| <input type="checkbox"/> Chamber B | <input type="checkbox"/> Chamber E | <input checked="" type="checkbox"/> Chamber J |
| <input type="checkbox"/> Chamber C | <input type="checkbox"/> Chamber F | <input type="checkbox"/> Chamber K |
| | <input type="checkbox"/> Chamber G | <input type="checkbox"/> Chamber L |
| | <input type="checkbox"/> Chamber H | <input type="checkbox"/> Chamber M |

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers above are covered under Industry Canada company address and respective code 2324A.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dB_uV/m) = Measured Voltage (dB_uV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dB_uV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dB_uV/m

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dB_uV) = Measured Voltage (dB_uV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.
36.5 dB_uV + 0 dB + 10.1 dB + 0 dB = 46.6 dB_uV

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

| PARAMETER | UNCERTAINTY |
|---|-------------|
| Worst Case Conducted Disturbance, 9KHz to 0.15 MHz | 3.84 dB |
| Worst Case Conducted Disturbance, 0.15 to 30 MHz | 3.65 dB |
| Worst Case Radiated Disturbance, 9KHz to 30 MHz | 2.52 dB |
| Worst Case Radiated Disturbance, 30 to 1000 MHz | 4.88 dB |
| Worst Case Radiated Disturbance, 1000 to 18000 MHz | 4.24 dB |
| Worst Case Radiated Disturbance, 18000 to 26000 MHz | 4.37 dB |
| Worst Case Radiated Disturbance, 26000 to 40000 MHz | 5.17 dB |

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. EUT DESCRIPTION

The EUT is a Portable Computing Device.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

5.2 GHz BAND

| Frequency Range (MHz) | Mode | Output Power (dBm) | Output Power (mW) |
|--------------------------|--------------------|--------------------|-------------------|
| 5.2 GHz band, 1TX | | | |
| 5180-5240 | 802.11a | 13.30 | 21.38 |
| 5180-5240 | 802.11n HT20 | 13.48 | 22.28 |
| 5190-5230 | 802.11n HT40 | 13.48 | 22.28 |
| 5210 | 802.11ac VHT80 | 13.31 | 21.43 |
| 5.2 GHz band, 2TX | | | |
| 5180-5240 | 802.11a CDD | 13.97 | 24.95 |
| 5180-5240 | 802.11n HT20 CDD | 14.69 | 29.44 |
| 5190-5230 | 802.11n HT40 CDD | 15.69 | 37.07 |
| 5210 | 802.11ac VHT80 CDD | 15.76 | 37.67 |

5.3 GHz BAND

| Frequency Range (MHz) | Mode | Output Power (dBm) | Output Power (mW) |
|--------------------------|--------------------|--------------------|-------------------|
| 5.3 GHz band, 2TX | | | |
| 5260 - 5320 | 802.11a | 19.92 | 98.17 |
| 5260 - 5320 | 802.11n HT20 CDD | 20.37 | 108.89 |
| 5270 - 5310 | 802.11n HT40 CDD | 19.85 | 96.61 |
| 5290 | 802.11ac VHT80 CDD | 18.32 | 67.92 |

5.6 GHz BAND

| Frequency Range (MHz) | Mode | Output Power (dBm) | Output Power (mW) |
|--------------------------|--------------------|--------------------------|----------------------|
| 5.6 GHz band, 2TX | | | |
| 5500-5720 | 802.11a CDD | 20.04 | 100.93 |
| 5500-5720 | 802.11n HT20 CDD | 20.73 | 118.30 |
| 5510-5710 | 802.11n HT40 CDD | 20.74 | 118.58 |
| 5530-5690 | 802.11ac VHT80 CDD | 19.15 | 82.22 |

5.8 GHz BAND

| Frequency Range (MHz) | Mode | Output Power (dBm) | Output Power (mW) |
|--------------------------|--------------------|--------------------------|----------------------|
| 5.8 GHz band, 2TX | | | |
| 5745-5825 | 802.11a | 21.72 | 148.59 |
| 5745-5825 | 802.11n HT20 CDD | 21.65 | 146.22 |
| 5755-5795 | 802.11n HT40 CDD | 19.72 | 93.76 |
| 5775 | 802.11ac VHT80 CDD | 18.69 | 73.96 |

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes two PIFA antennas, with a maximum gain of:

| Frequency (GHz) | Peak Antenna Gain (dBi) | |
|-----------------|-------------------------|---------|
| | Chain 1 | Chain 2 |
| 5150-5250 | 2.4 | 2.0 |
| 5250-5350 | 2.4 | 1.9 |
| 5470-5725 | 0.8 | 1.9 |
| 5725-5850 | 0.3 | 1.5 |

5.4. SOFTWARE AND FIRMWARE

The operating system installed on the EUT is Windows 10 Pro build 18362.19h1_release.190318-1202.

The Wifi Driver installed on the EUT is version 1.0.630.1.

The test utility software used during testing was QRCT v4.0.00108

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 1GHz, above 18GHz, and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

Band edge and radiated emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the highest power on low, middle and high channels.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, and four configurations with a keyboard at 45 degrees, 90 degrees, 180 degrees, and portrait, it was determined that 45 degrees (MIMO) and 90 degrees (SISO) with keyboard orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in 45 degrees (MIMO) and 90 degrees (SISO) with keyboard orientation.

For all modes except tests performed in the 5.2Ghz band, tests were performed with the EUT set at the 2Tx CDD mode with power setting equal to SISO modes as the worst case scenario thus MIMO is representative of SISO.

Worst-case data rates as provided by the client were:

802.11a mode: 6 Mbps
802.11n HT20mode: MCS0
802.11n HT40mode: MCS0
802.11ac VHT80 mode: MCS0

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

| Support Equipment List | | | | |
|----------------------------------|---------------|---------------|------------------|--------|
| Description | Manufacturer | Model | Serial Number | FCC ID |
| Keyboard | Microsoft | EV2BB01A | E2XEV2BB01A00042 | Doc |
| AC/DC Adapter | Microsoft | 1706 | 0C130J02JT396 | Doc |
| Laptop | Lenovo | 80S6 | YD03NTTF | Doc |
| AC/DC Adapter | Lenovo | ADLX45NCC3A | N/A | Doc |
| Ethernet to USB Adapter | Linksys | USB3GIGV1 | 15710S08405610 | Doc |
| USB Type C to USB Type A Adapter | Amazon Basics | L6LUC021-CS-R | N/A | N/A |
| USB Type C to Audio Jack | Sony | A1-0231 | N/A | N/A |
| Earphone | Sony | AG1100 | N/A | N/A |

I/O CABLES (CONDUCTED TEST)

| I/O Cable List | | | | | | |
|----------------|----------|----------------------|----------------|-------------|------------------|-------------------------|
| Cable No | Port | # of identical ports | Connector Type | Cable Type | Cable Length (m) | Remarks |
| 1 | AC | 1 | AC | Un-Shielded | 0.2 | to AC/DC Adapter |
| 2 | DC | 1 | DC | Shielded | 1 | to Laptop, to EUT |
| 3 | USB | 1 | Type C | Un-Shielded | 0.2 | USB-C to USB-A Adapter |
| 4 | USB | 1 | Type A | Un-shielded | 0.1 | USB-A to RJ45 converter |
| 5 | Ethernet | 1 | RJ45 | Un-shielded | >3m | Laptop to EUT |
| 6 | Antenna | 1 | SMA | Un-Shielded | 0.2 | to Analyzer |

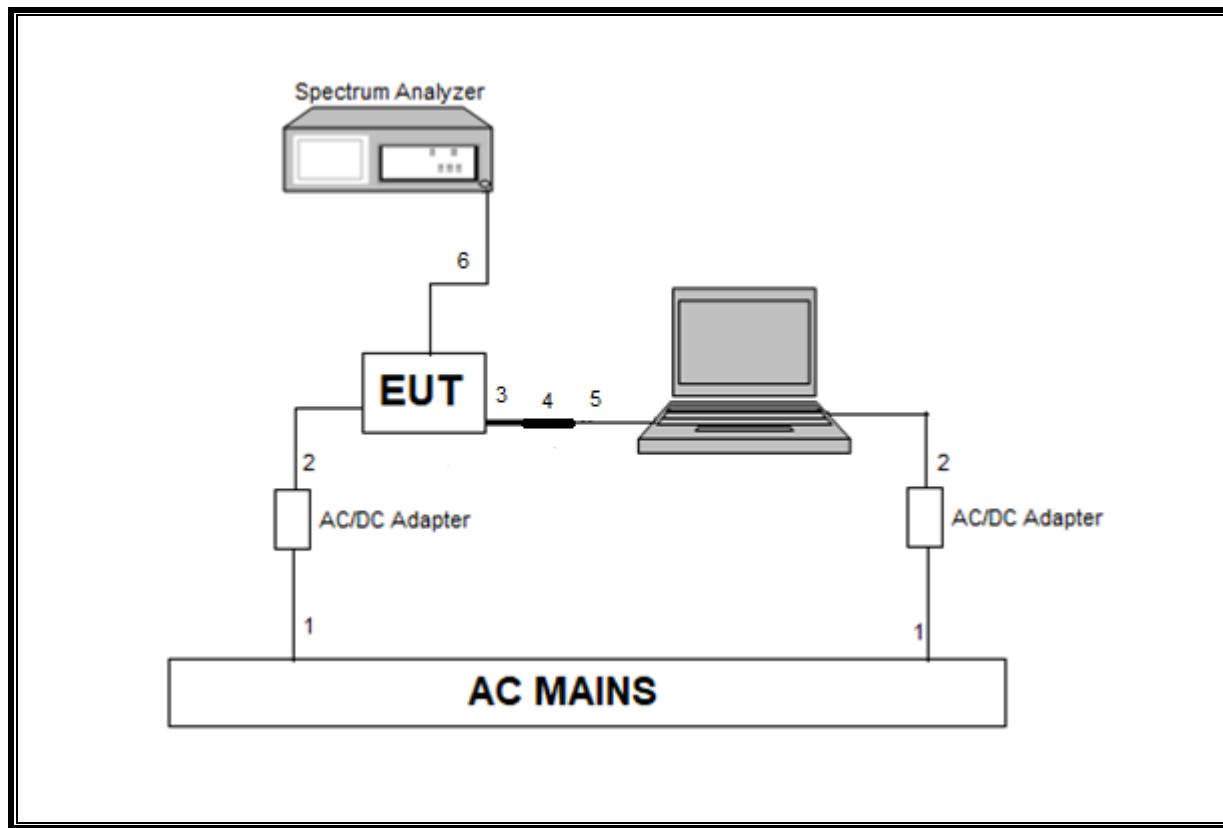
I/O CABLES (RADIATED AND CONDUCTED EMISSIONS)

| I/O Cable List | | | | | | |
|----------------|----------|----------------------|----------------|-------------|------------------|-------------------------------|
| Cable No | Port | # of identical ports | Connector Type | Cable Type | Cable Length (m) | Remarks |
| 1 | AC | 1 | Type C | Un-shielded | 0.2 | to AC/DC Adapter |
| 2 | DC | 1 | DC | Shielded | 1 | to Laptop, to EUT |
| 3 | USB | 1 | Type C | Un-shielded | 0.2 | USB-C to USB-A Adapter |
| 4 | USB | 1 | Type A | Un-shielded | 0.1 | USB-A to RJ45 converter |
| 5 | Ethernet | 1 | RJ45 | Un-shielded | >3 | Laptop to EUT |
| 6 | USB | 1 | Type C | Un-shielded | 0.1 | USB-C to Audio Jack converter |
| 7 | Earphone | 1 | 3.5mm | Un-shielded | 1 | EUT to earphone |

TEST SETUP

The EUT is connected to a test laptop during the tests. Test software exercised the radio card.

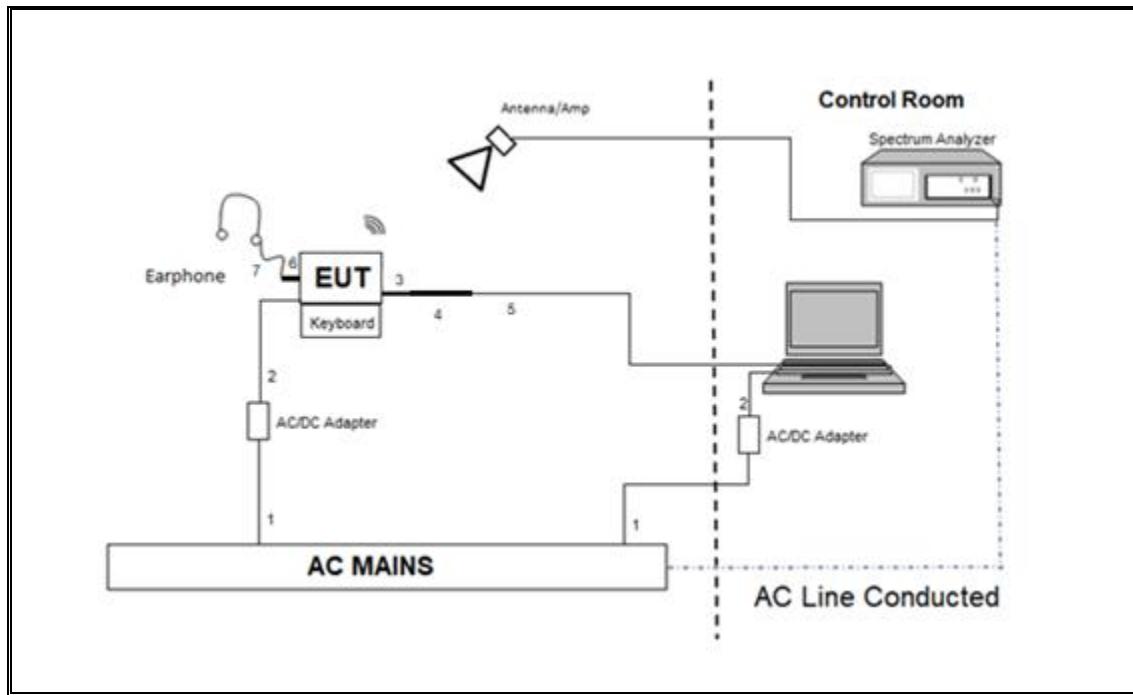
CONDUCTED TEST SETUP DIAGRAM



TEST SETUP

For conducted tests, the EUT was connected to a laptop. The test software exercises the radio.

RADIATED AND AC LINE CONDUCTED EMISSIONS SETUP DIAGRAM



TEST SETUP

For radiated tests: EUT is connected to all support equipment. The test software exercises the radio.

6. MEASUREMENT METHOD

On Time and Duty Cycle: KDB 789033 D02 v02r01, Section B.

6 dB Emission BW: KDB 789033 D02 v02r01, Section C.2

26 dB Emission BW: KDB 789033 D02 v02r01, Section C.1

99% Occupied BW: KDB 789033 D02 v02r01, Section D.

Conducted Output Power: KDB 789033 D02 v02r01, Section E.3.b (Method PM-G) and KDB 789033 D02 v02r01, Section E.2.b (Method SA-1)

Power Spectral Density: KDB 789033 D02 v02r01, Section F

Unwanted emissions in restricted bands: KDB 789033 D02 v02r01, Sections G.3, G.4, G.5, and G.6.

Unwanted emissions in non-restricted bands: KDB 789033 D02 v02r01, Sections G.3, G.4, and G.5.

AC Power Line Conducted Emissions: ANSI C63.10-2013, Section 6.2.

Radiated Spurious Emissions Below 30MHz: ANSI C63.10-2013 Section 6.4

7. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

| TEST EQUIPMENT LIST | | | | | |
|--|---------------------------------|-----------------|------------------------|------------|------------|
| Description | Manufacturer | Model | ID Num | Cal Due | Last Cal |
| Power Meter, P-series single channel | Agilent (Keysight) Technologies | N1911A | T1265 | 01/29/2020 | 01/29/2019 |
| Power Sensor, P-series, 50MHz to 18GHz, Wideband | Agilent (Keysight) Technologies | N1921A | T1227 | 02/05/2020 | 02/05/2019 |
| Antenna, Passive Loop 30Hz to 1MHz | ELETRO METRICS | EM-6871 | PRE0179465 | 05/31/2020 | 05/31/2019 |
| Antenna, Passive Loop 100kHz to 30MHz | ELETRO METRICS | EM-6872 | PRE0179467 | 05/31/2020 | 05/31/2019 |
| Antenna, Horn 1-18GHz | AR | AMPL-ATH1G18 | PRE0189055 | 04/20/2020 | 04/20/2019 |
| Amplifier, 1 to 18GHz, 35dB | AMPLICAL | AMP1G18-35 | T1571 | 05/28/2020 | 05/28/2019 |
| Hybrid Antenna, 30MHz to 3GHz | Sunol Sciences Corp. | JB3 | PRE0181575 | 08/01/2019 | 08/01/2018 |
| Amplifier, 9kHz to 1GHz, 32 dB | SONOMA INSTRUMENT | 310 | PRE0180174 | 06/01/2020 | 06/01/2019 |
| Antenna, Horn 18 to 26.5GHz | ARA | MWH-1826/B | PRE0182188 | 08/29/2019 | 08/29/2018 |
| Amplifier, 26 - 40GHz | AMPLICAL | AMP26G40-60 | PRE0181239 | 05/01/2020 | 05/01/2019 |
| Antenna, Horn 26.5 to 40GHz | A.R.A. | MWH-2640/B | PRE0182201 | 09/04/2019 | 09/04/2018 |
| Pre-Amp, 18-26.5GHz | Ampical | AMP18G26.5-60 | PRE0181238 | 05/01/2020 | 05/01/2019 |
| EMI Test Receiver | Rohde & Schwarz | ESW44 | PRE0179367 | 05/16/2020 | 05/16/2019 |
| Spectrum Analyzer, PSA, 3Hz to 44GHz | Agilent (Keysight) Technologies | E4440A | T200 | 01/28/2020 | 01/28/2019 |
| Spectrum Analyzer, PXA, 3Hz to 44GHz | Agilent (Keysight) Technologies | N9030A | T917 | 01/24/2020 | 01/24/2019 |
| AC Line Conducted | | | | | |
| EMI Receiver | Rohde & Schwarz | ESR | T1436 | 02/14/2020 | 02/14/2019 |
| LISN for Conducted Emissions CISPR-16 | FCC INC. | FCC LISN 50/250 | T1310 | 01/24/2020 | 01/24/2019 |
| Test Software List | | | | | |
| Radiated Software | UL | UL EMC | Ver 9.5, June 22, 2018 | | |
| Antenna Port Software | UL | UL RF | Ver 9.9, June 05, 2019 | | |
| AC Line Conducted Software | UL | UL EMC | Ver 9.5, May 26, 2015 | | |

NOTES:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

8. ANTENNA PORT TEST RESULTS

8.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

| Mode | ON Time B (msec) | Period (msec) | Duty Cycle x (linear) | Duty Cycle (%) | Duty Cycle Correction Factor (dB) | 1/B Minimum VBW (kHz) |
|----------------|------------------|---------------|-----------------------|----------------|-----------------------------------|-----------------------|
| 802.11a | 2.058 | 2.100 | 0.980 | 98.00% | 0.00 | 0.010 |
| 802.11n HT20 | 1.920 | 1.960 | 0.980 | 97.96% | 0.09 | 0.521 |
| 802.11n HT40 | 0.948 | 0.984 | 0.963 | 96.34% | 0.16 | 1.055 |
| 802.11ac VHT80 | 0.4627 | 0.500 | 0.925 | 92.54% | 0.34 | 2.161 |

DUTY CYCLE PLOTS



8.2. 26 dB BANDWIDTH

LIMITS

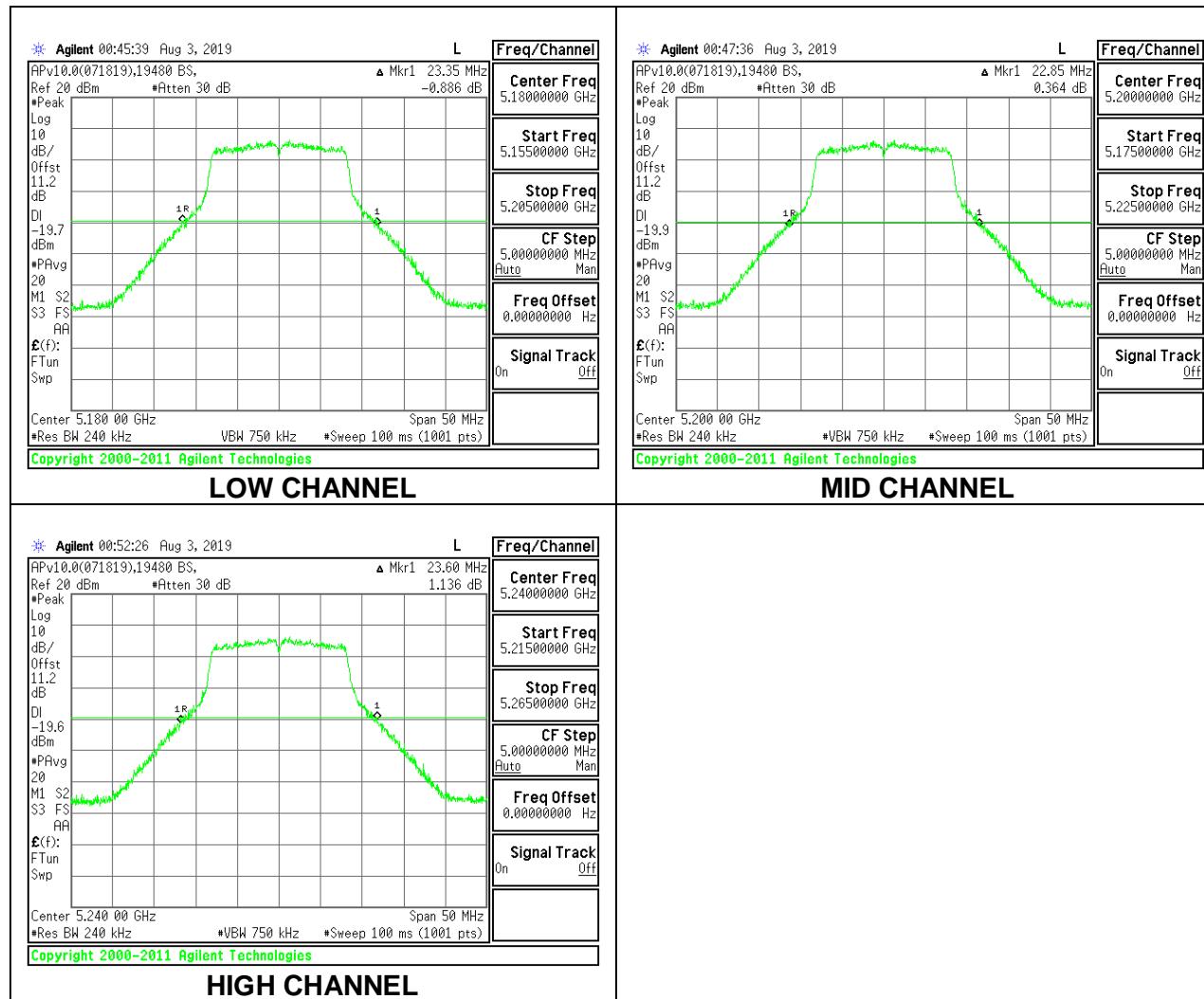
None; for reporting purposes only.

RESULTS

8.2.1. 802.11a MODE IN THE 5.2 GHz BAND

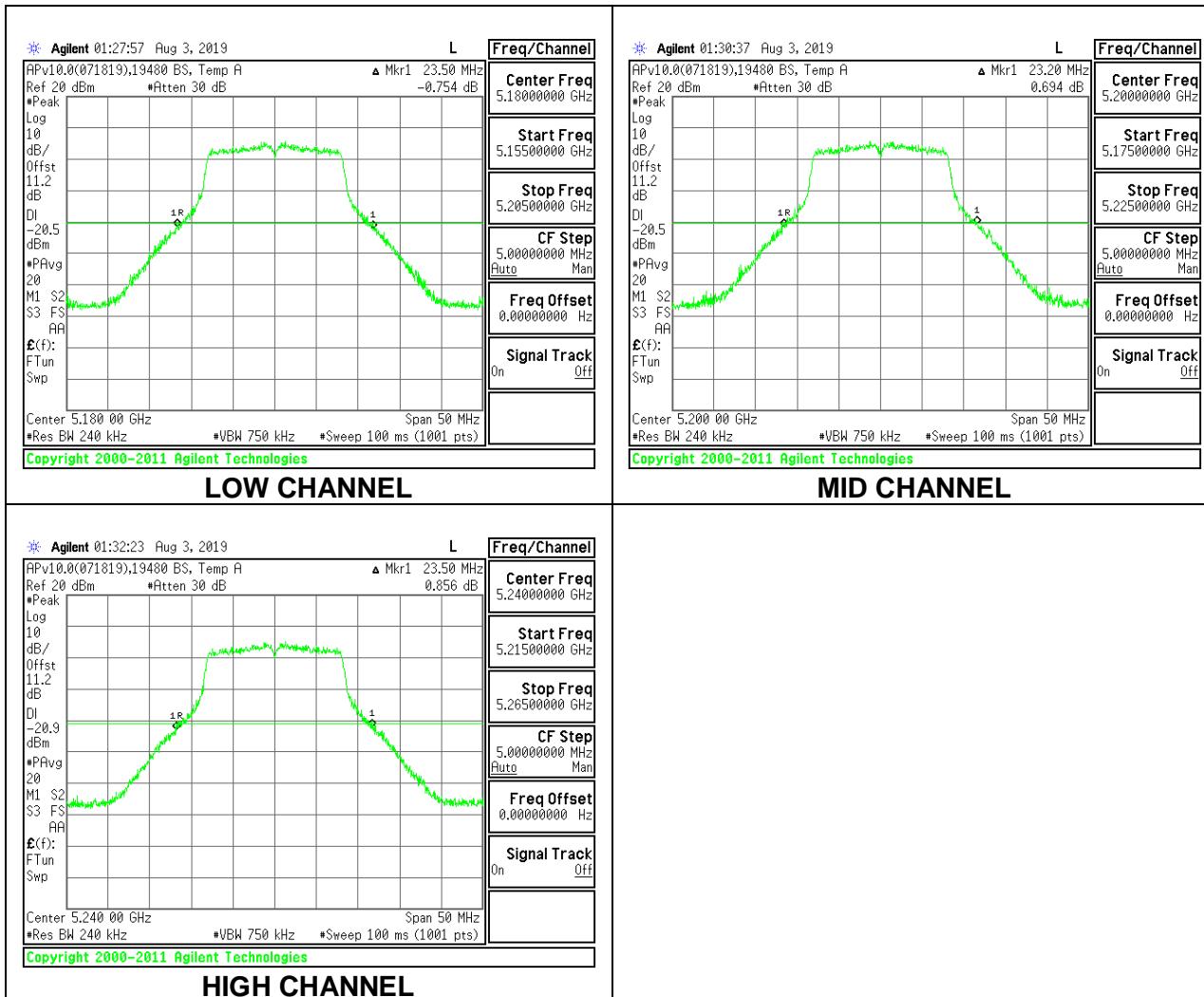
1TX Chain 1 MODE

| Channel | Frequency (MHz) | 26 dB Bandwidth (MHz) |
|---------|--------------------|--------------------------|
| Low | 5180 | 23.35 |
| Mid | 5200 | 22.85 |
| High | 5240 | 23.60 |



1TX Chain 2 MODE

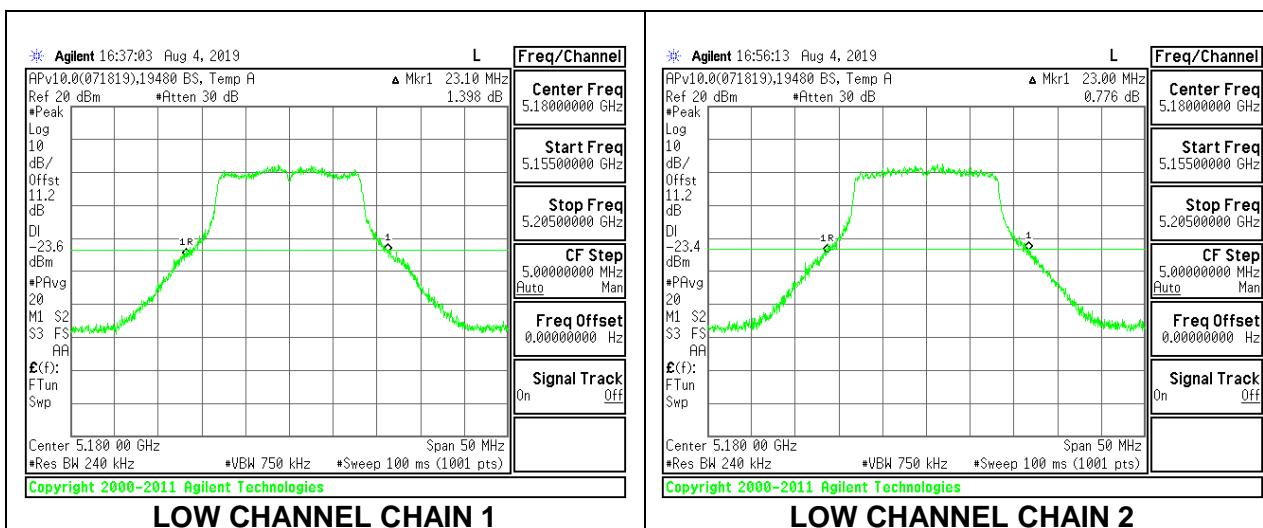
| Channel | Frequency (MHz) | 26 dB Bandwidth (MHz) |
|---------|--------------------|--------------------------|
| Low | 5180 | 23.50 |
| Mid | 5200 | 23.20 |
| High | 5240 | 23.50 |



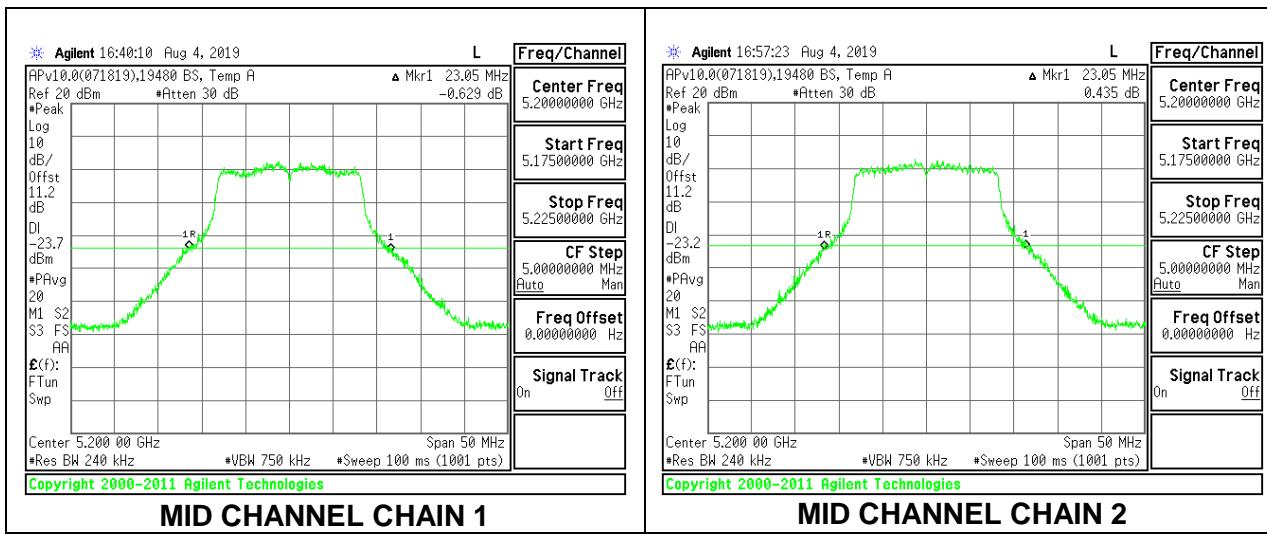
2TX Chain 1 + Chain 2 CDD MODE

| Channel | Frequency (MHz) | 26 dB Bandwidth | 26 dB Bandwidth |
|---------|--------------------|------------------|------------------|
| | | Chain 1 (MHz) | Chain 2 (MHz) |
| Low | 5180 | 23.10 | 23.00 |
| Mid | 5200 | 23.05 | 23.05 |
| High | 5240 | 23.15 | 23.00 |

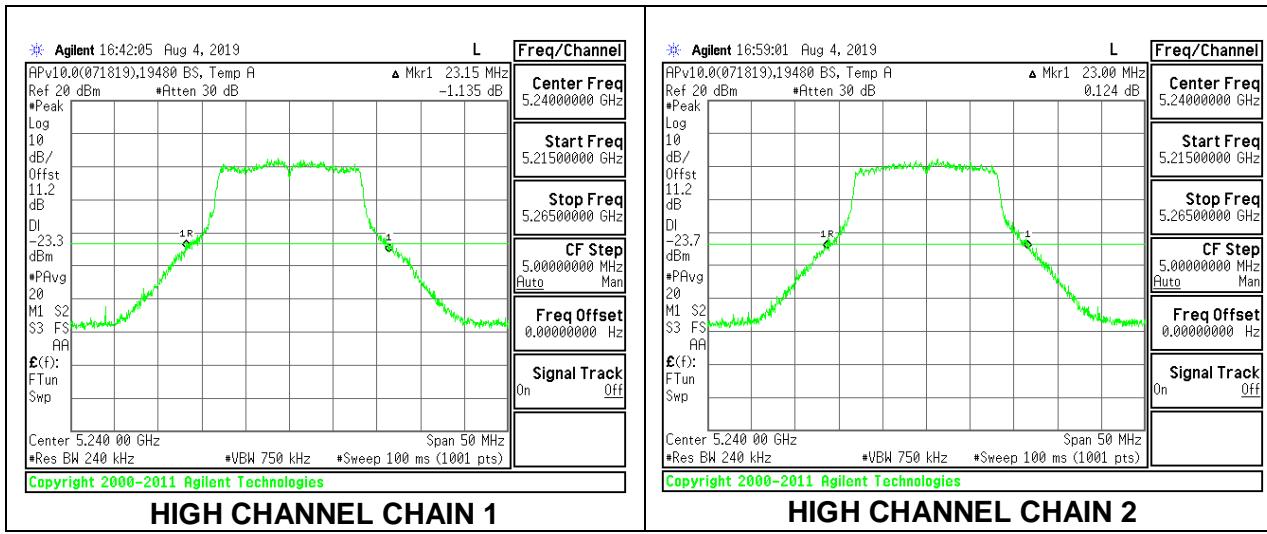
LOW CHANNEL



MID CHANNEL



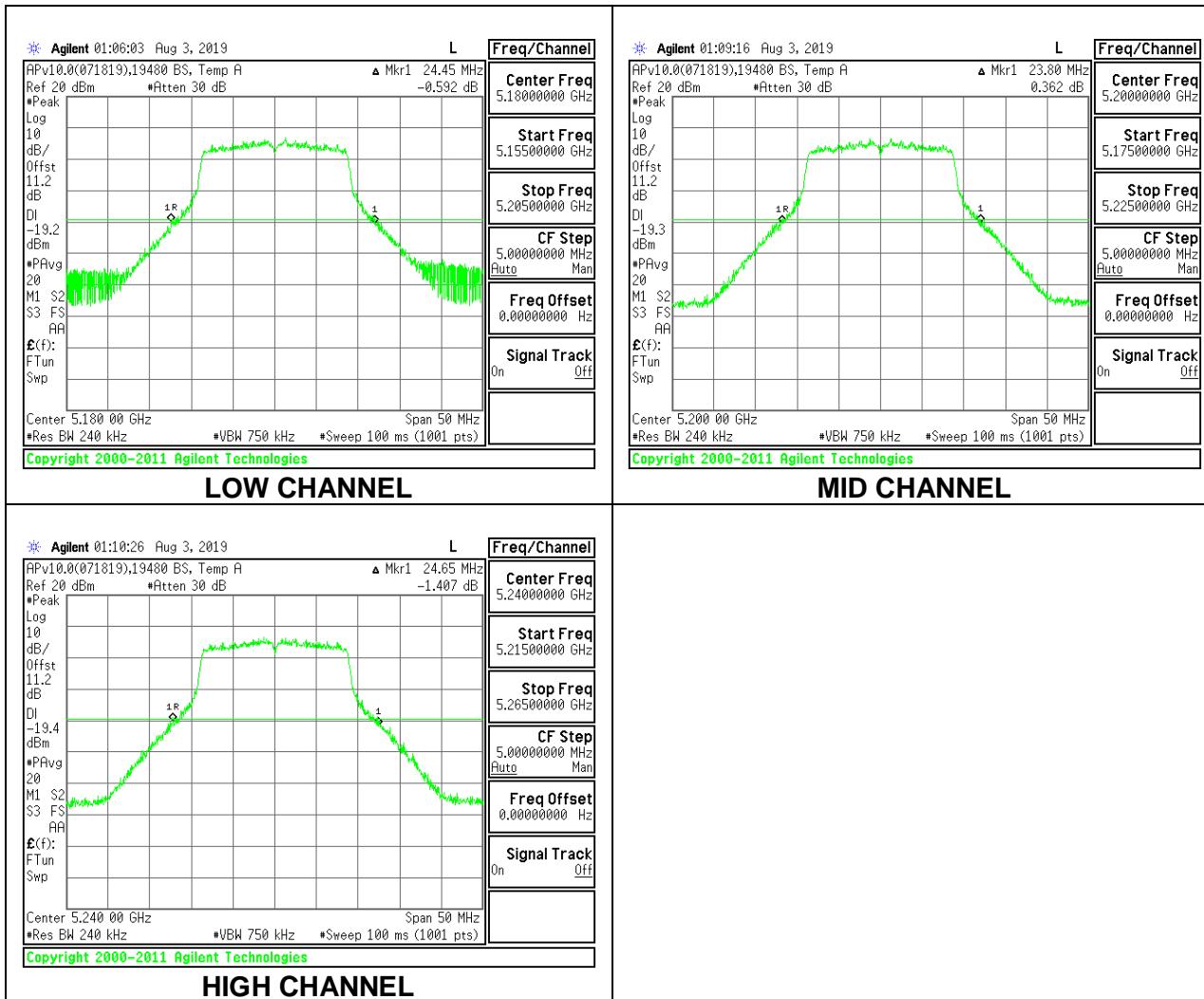
HIGH CHANNEL



8.2.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

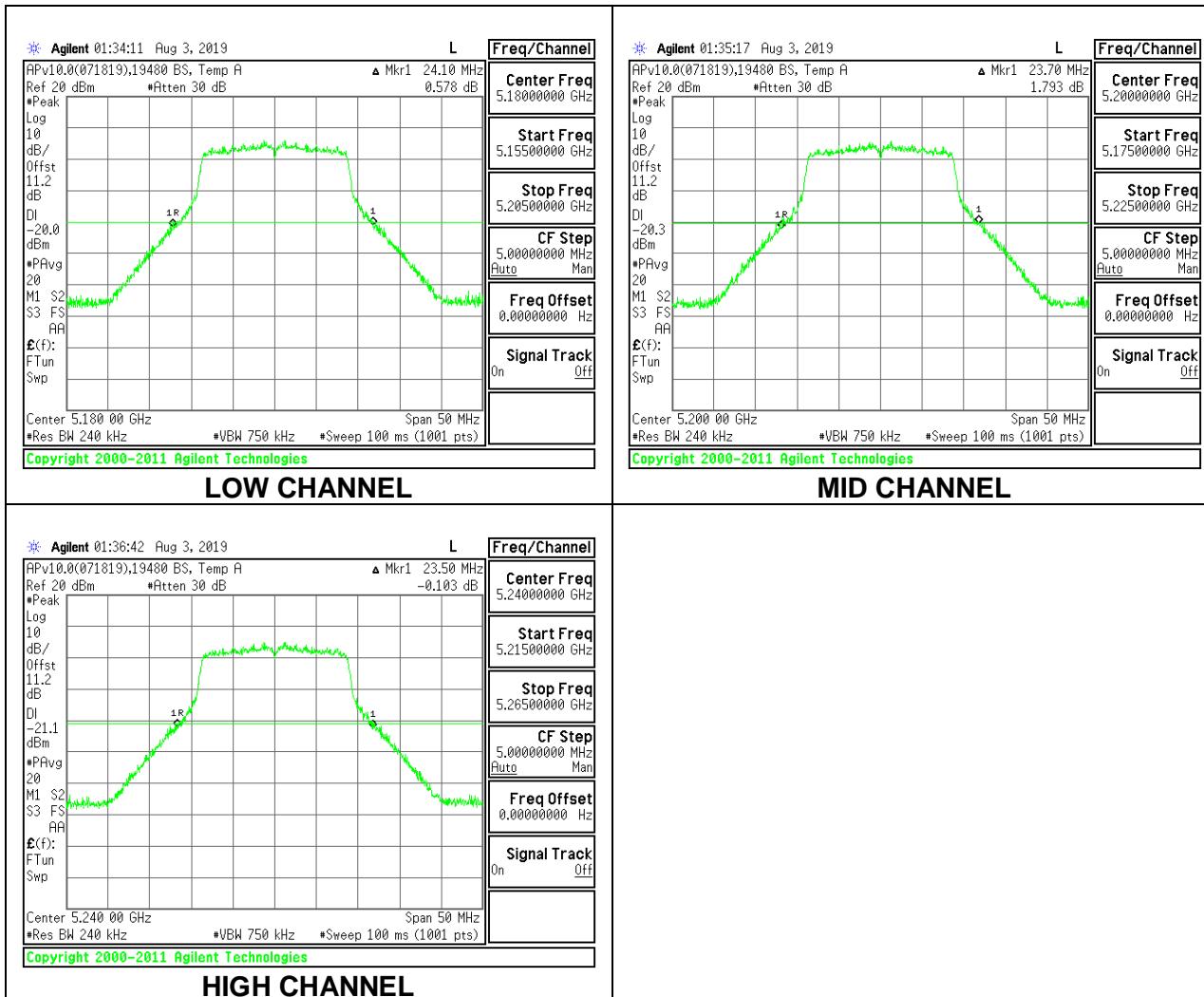
1TX Chain 1 MODE

| Channel | Frequency (MHz) | 26 dB Bandwidth (MHz) |
|---------|--------------------|--------------------------|
| Low | 5180 | 24.45 |
| Mid | 5200 | 23.80 |
| High | 5240 | 24.65 |



1TX Chain 2 MODE

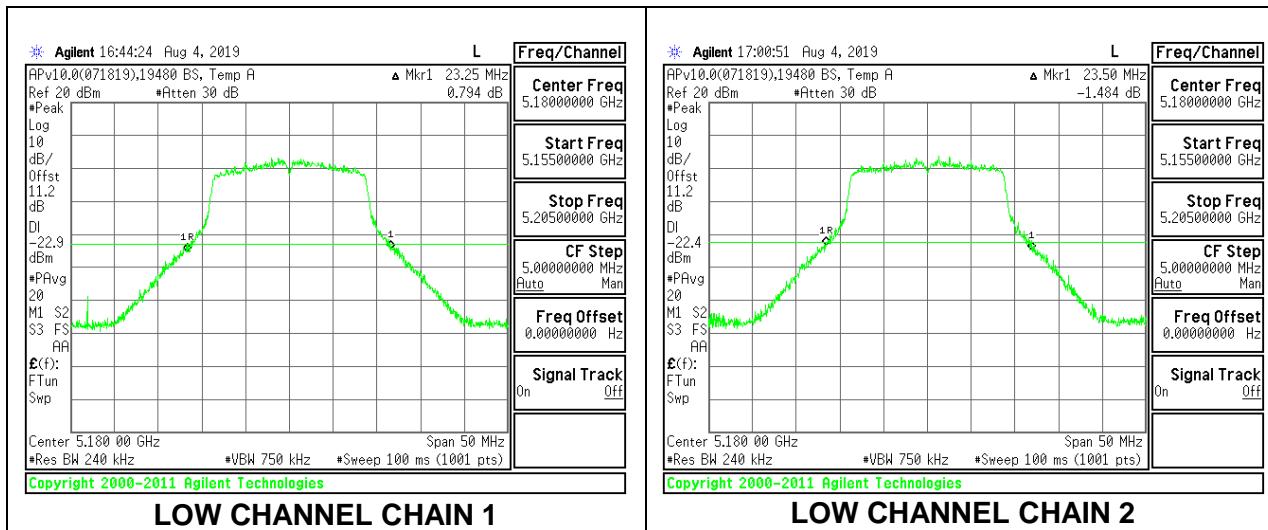
| Channel | Frequency (MHz) | 26 dB Bandwidth (MHz) |
|---------|--------------------|--------------------------|
| Low | 5180 | 24.10 |
| Mid | 5200 | 23.70 |
| High | 5240 | 23.50 |



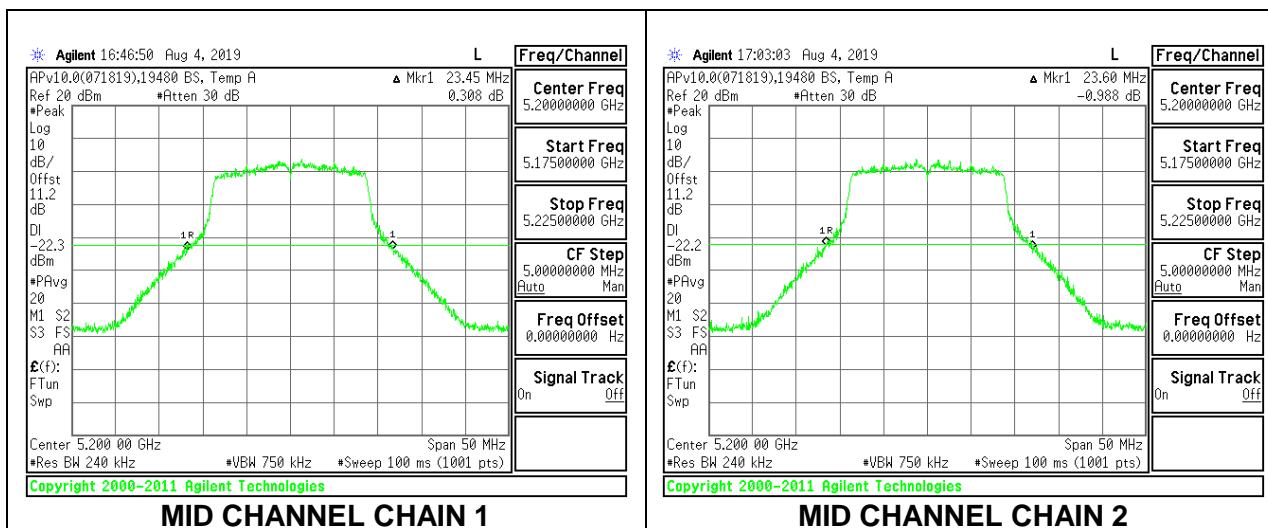
2TX Chain 1 + Chain 2 CDD MODE

| Channel | Frequency (MHz) | 26 dB Bandwidth Chain 1 (MHz) | 26 dB Bandwidth Chain 2 (MHz) |
|---------|--------------------|-------------------------------------|-------------------------------------|
| Low | 5180 | 23.25 | 23.50 |
| Mid | 5200 | 23.45 | 23.60 |
| High | 5240 | 23.40 | 23.45 |

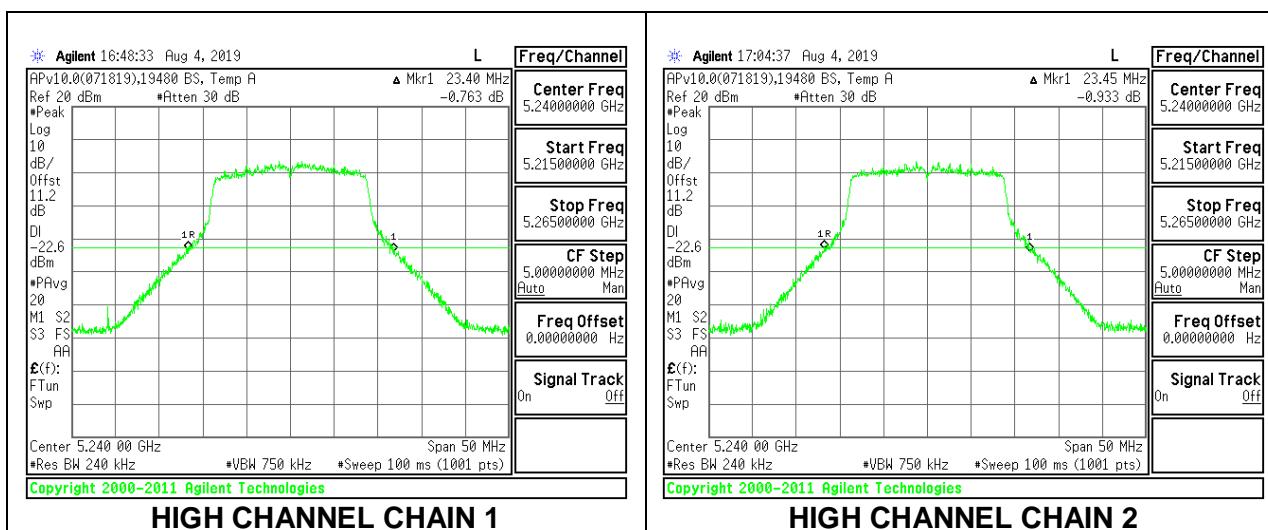
LOW CHANNEL



MID CHANNEL



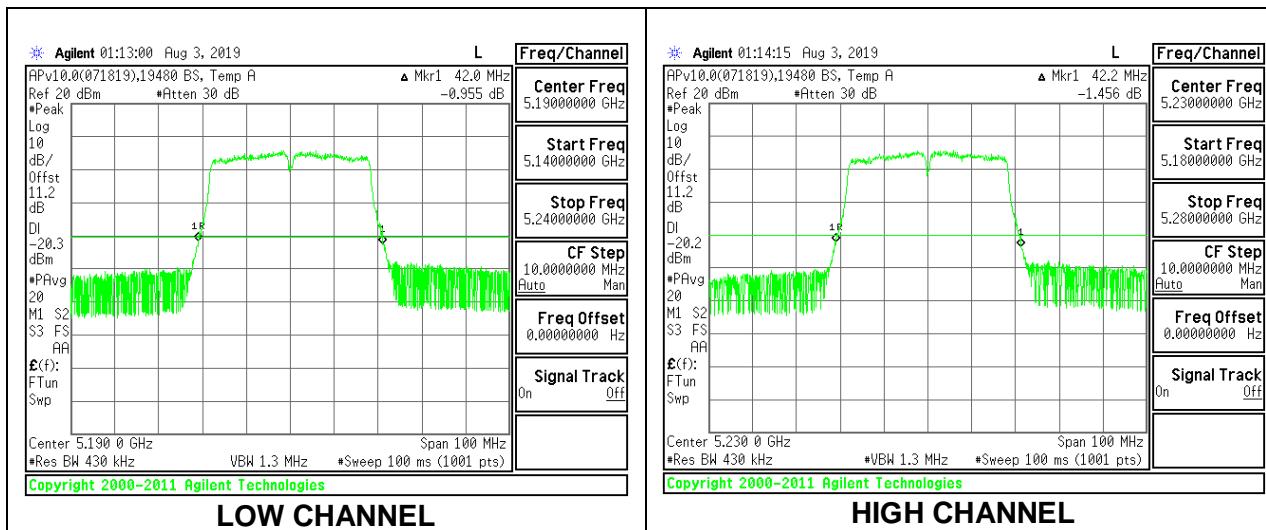
HIGH CHANNEL



8.2.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

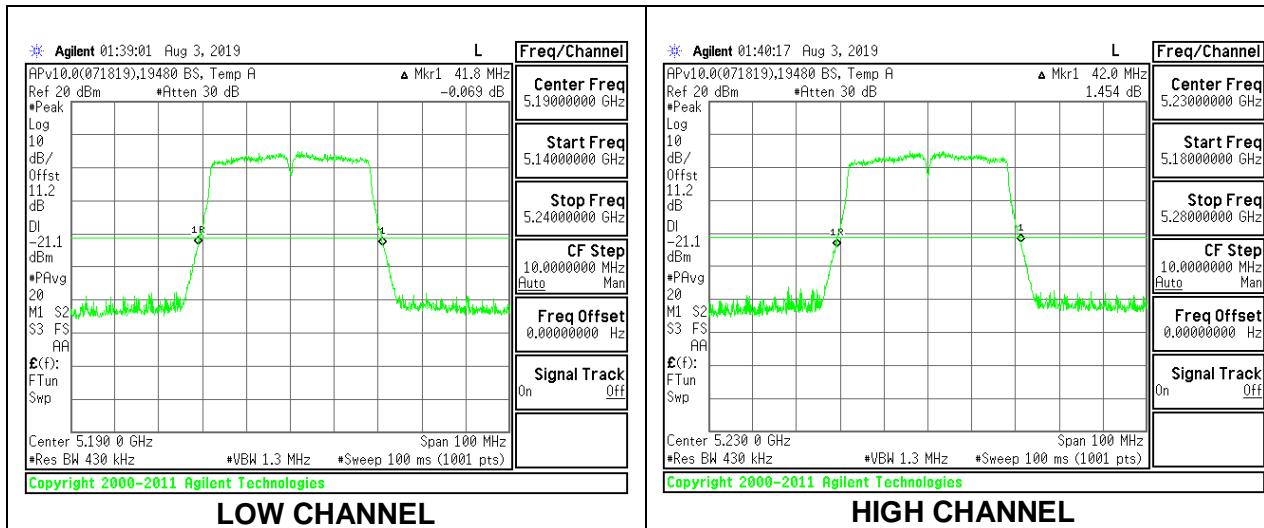
1TX Chain 1 MODE

| Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
|---------|--------------------|-------------------------|
| Low | 5190 | 42.00 |
| High | 5230 | 42.20 |



1TX Chain 2 MODE

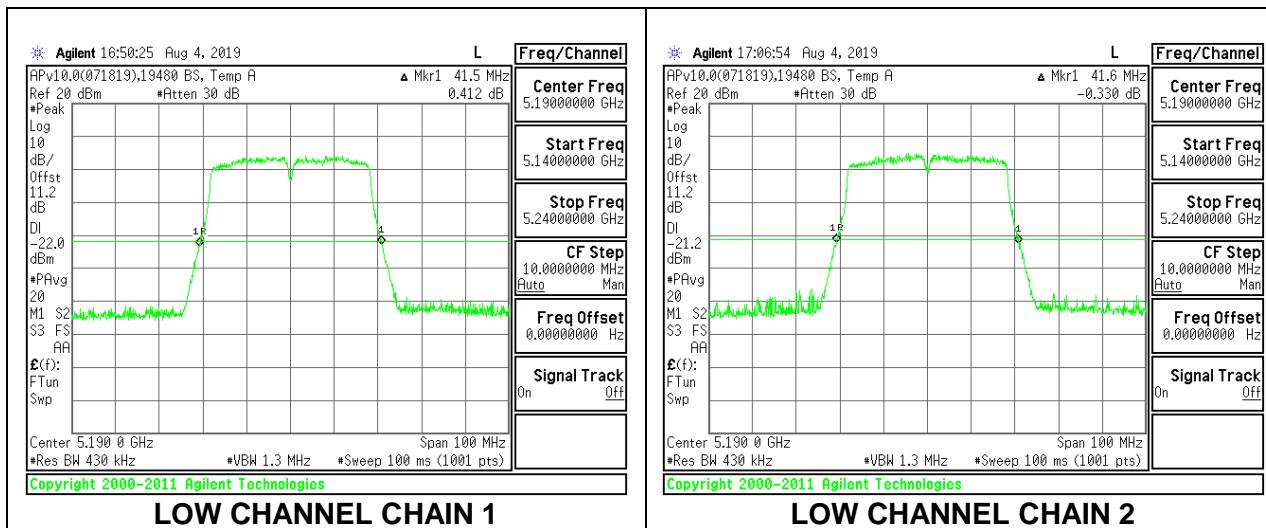
| Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
|---------|--------------------|-------------------------|
| Low | 5190 | 41.80 |
| High | 5230 | 42.00 |



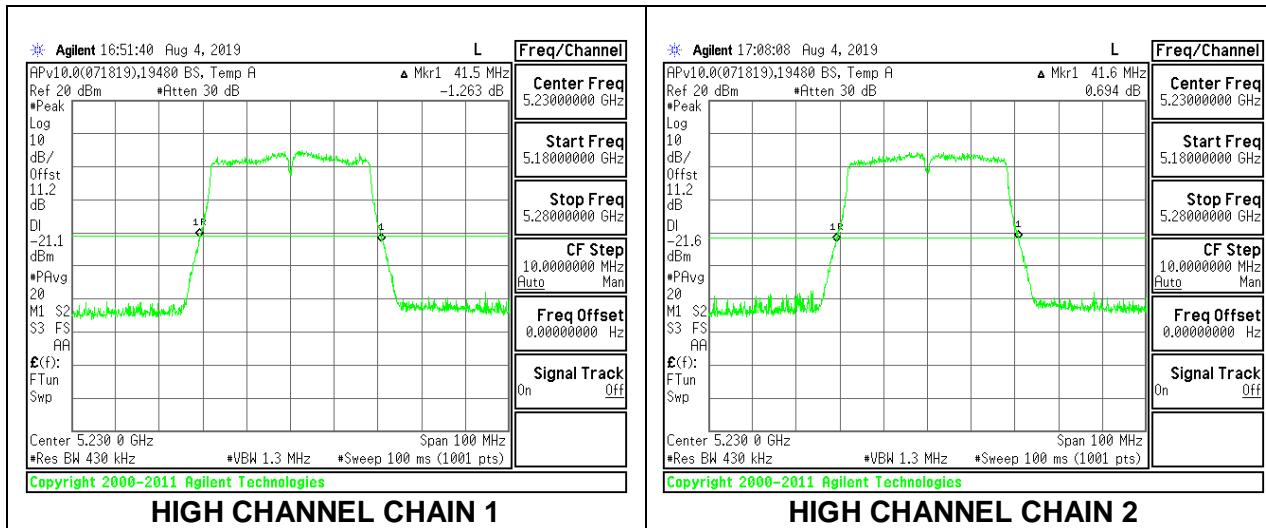
2TX Chain 1 + Chain 2 CDD MODE

| Channel | Frequency (MHz) | 26 dB Bandwidth Chain 1 (MHz) | 26 dB Bandwidth Chain 2 (MHz) |
|---------|--------------------|-------------------------------------|-------------------------------------|
| Low | 5190 | 41.50 | 41.60 |
| High | 5230 | 41.50 | 41.60 |

LOW CHANNEL



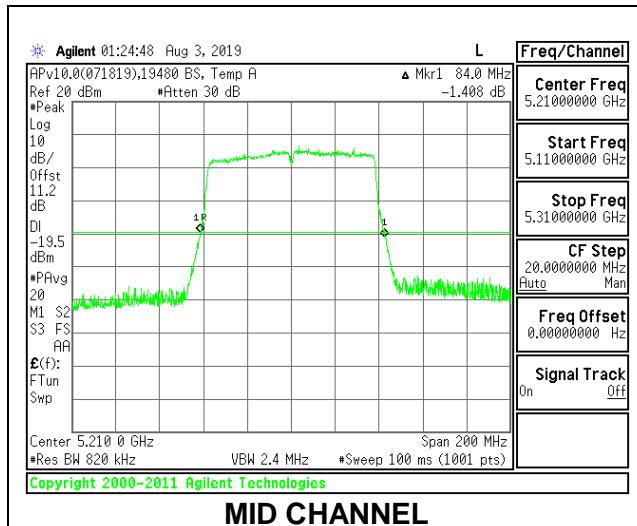
HIGH CHANNEL



8.2.4. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

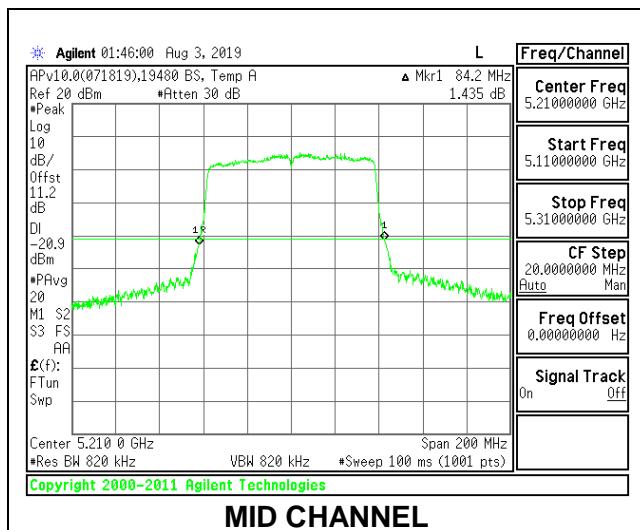
1TX Chain 1 MODE

| Channel | Frequency (MHz) | 26 dB Bandwidth (MHz) |
|---------|--------------------|--------------------------|
| Mid | 5210 | 84.00 |



1TX Chain 2 MODE

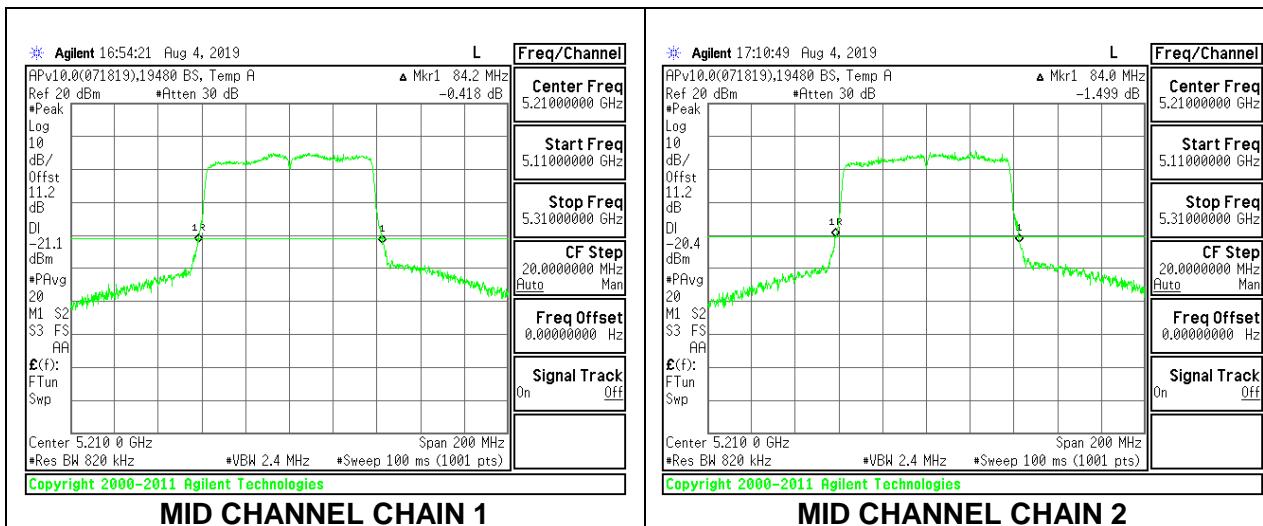
| Channel | Frequency | 26 dB Bandwidth |
|---------|-----------|-----------------|
| | (MHz) | (MHz) |
| Mid | 5210 | 84.20 |



2TX Chain 1 + Chain 2 CDD MODE

| Channel | Frequency (MHz) | 26 dB Bandwidth Chain 1 (MHz) | 26 dB Bandwidth Chain 2 (MHz) |
|---------|--------------------|-------------------------------------|-------------------------------------|
| Mid | 5210 | 84.20 | 84.00 |

MID CHANNEL

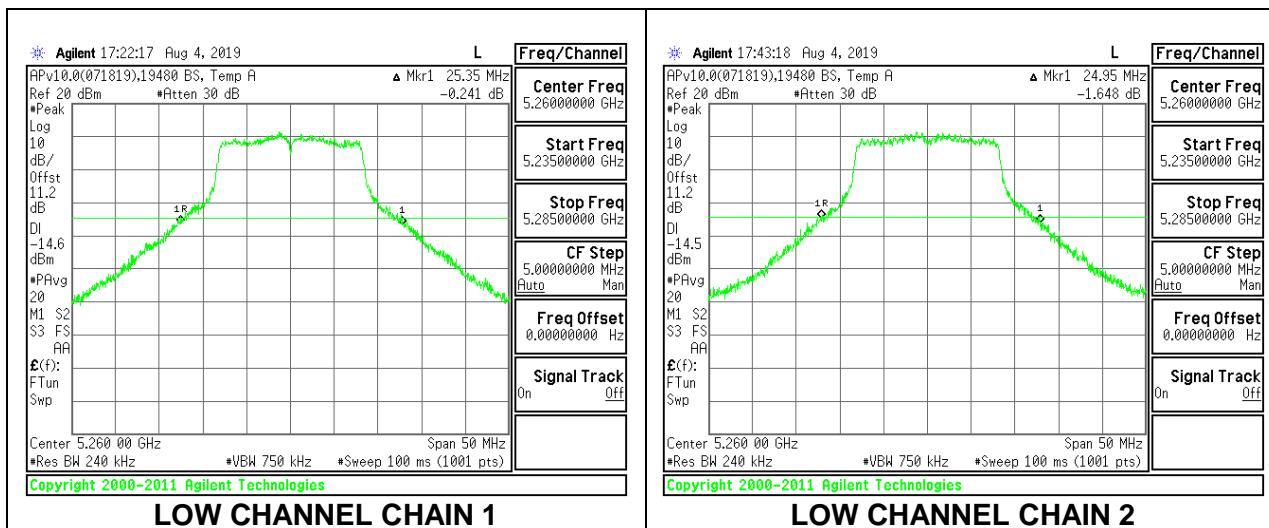


8.2.5. 802.11a MODE IN THE 5.3 GHz BAND

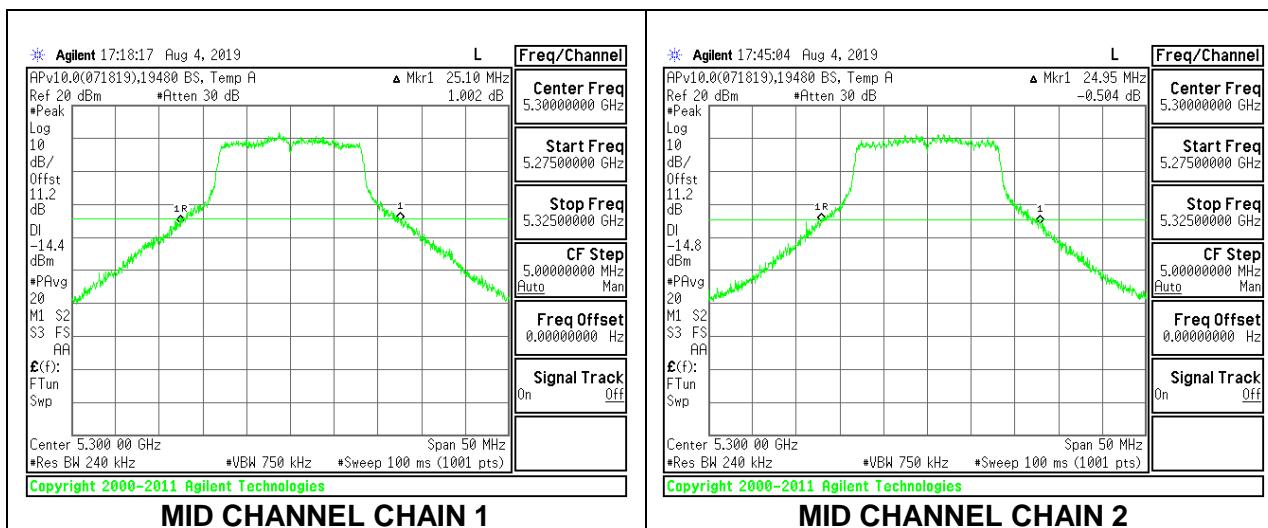
2TX Chain 1 + Chain 2 CDD MODE

| Channel | Frequency (MHz) | 26 dB Bandwidth Chain 1 (MHz) | 26 dB Bandwidth Chain 2 (MHz) |
|---------|--------------------|-------------------------------------|-------------------------------------|
| Low | 5260 | 25.35 | 24.95 |
| Mid | 5300 | 25.10 | 24.95 |
| High | 5320 | 25.30 | 24.90 |

LOW CHANNEL



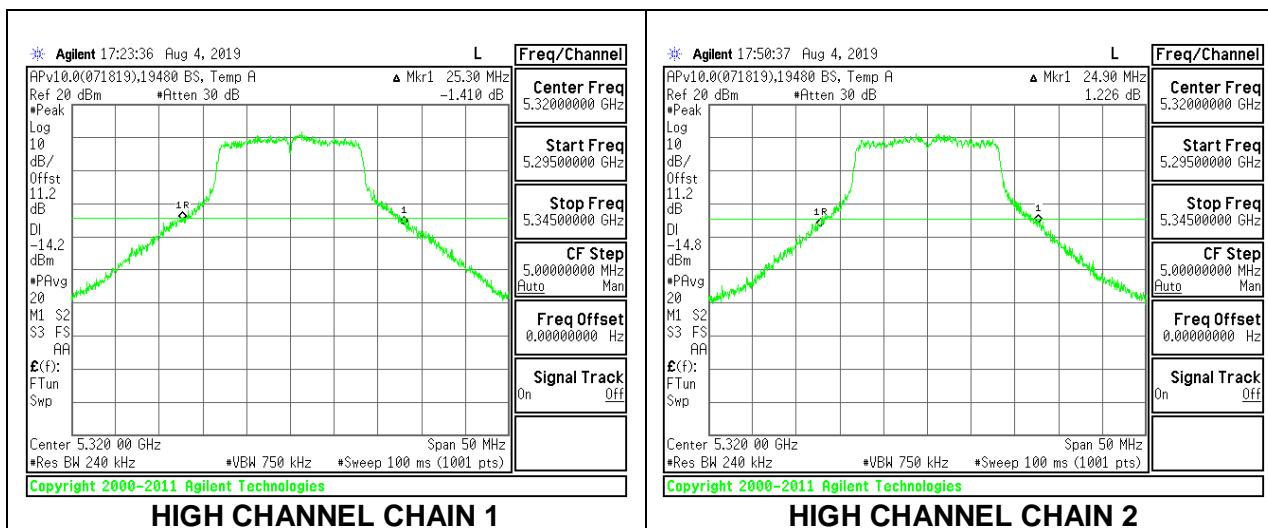
MID CHANNEL



MID CHANNEL CHAIN 1

MID CHANNEL CHAIN 2

HIGH CHANNEL



HIGH CHANNEL CHAIN 1

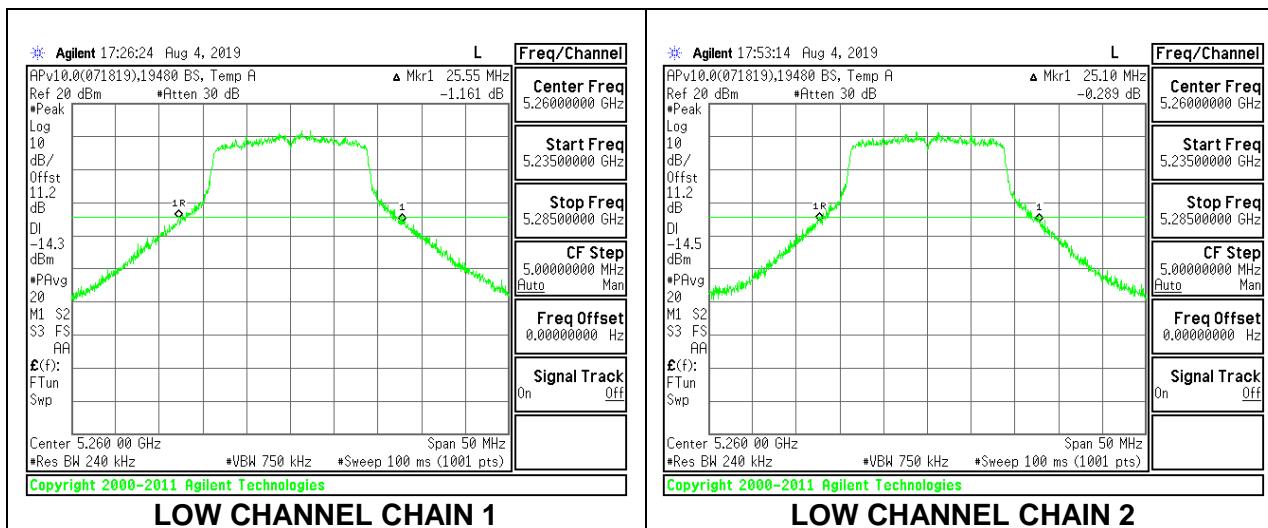
HIGH CHANNEL CHAIN 2

8.2.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

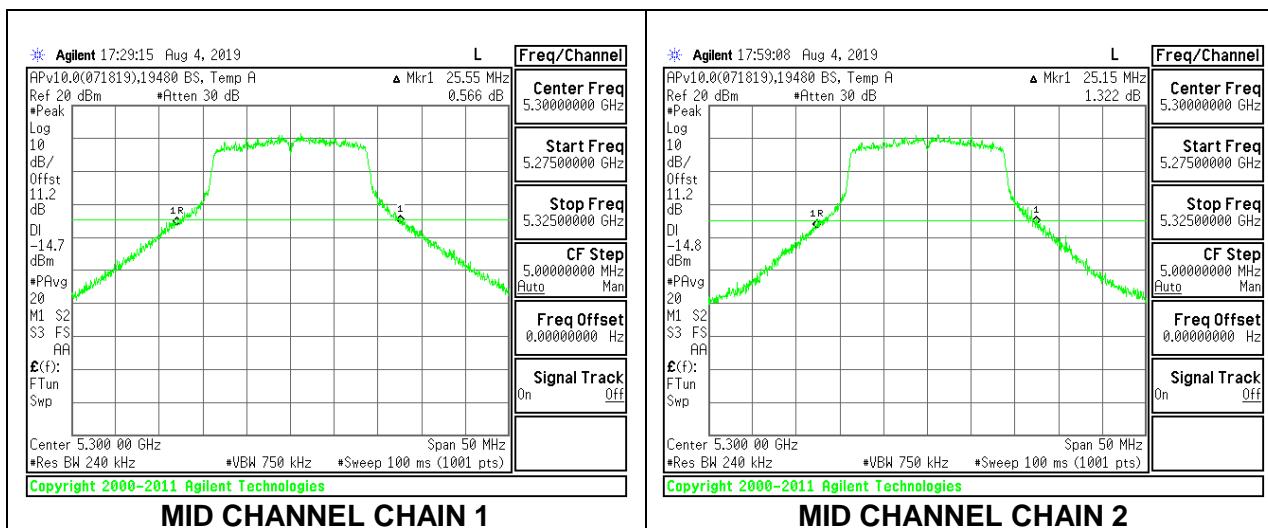
2TX Chain 1 + Chain 2 CDD MODE

| Channel | Frequency (MHz) | 26 dB Bandwidth Chain 1 (MHz) | 26 dB Bandwidth Chain 2 (MHz) |
|---------|--------------------|-------------------------------------|-------------------------------------|
| Low | 5260 | 25.55 | 25.10 |
| Mid | 5300 | 25.55 | 25.15 |
| High | 5320 | 25.75 | 25.05 |

LOW CHANNEL



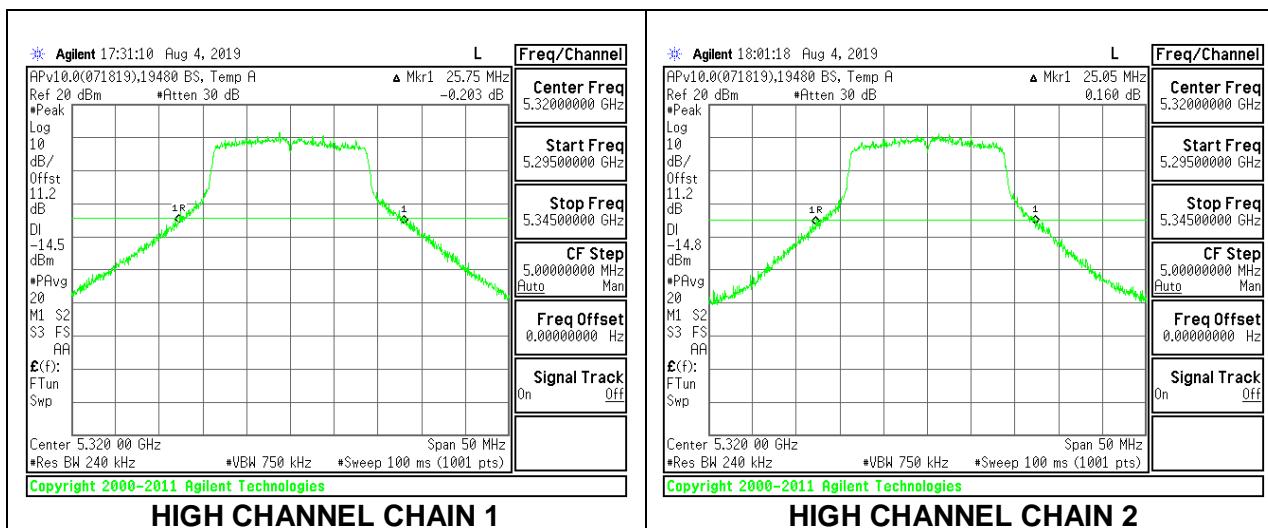
MID CHANNEL



MID CHANNEL CHAIN 1

MID CHANNEL CHAIN 2

HIGH CHANNEL



HIGH CHANNEL CHAIN 1

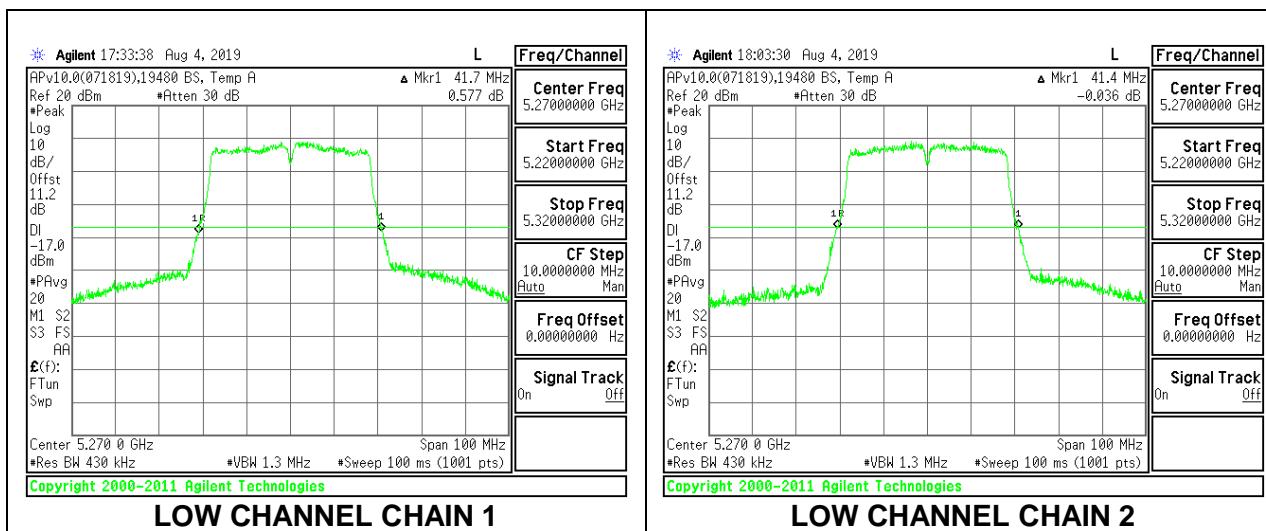
HIGH CHANNEL CHAIN 2

8.2.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

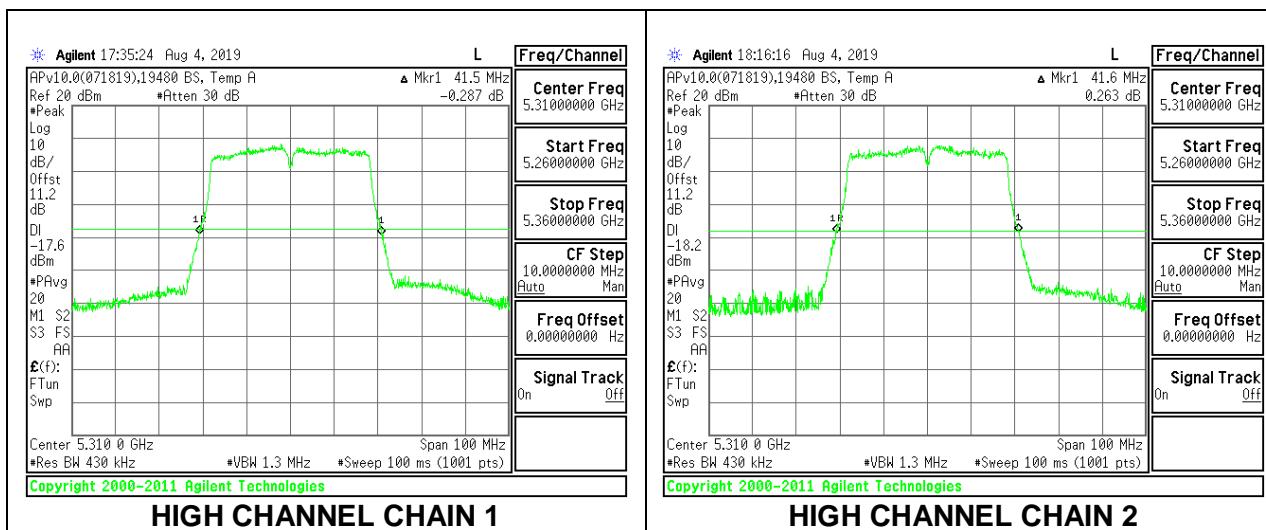
2TX Chain 1 + Chain 2 CDD MODE

| Channel | Frequency (MHz) | 26 dB Bandwidth Chain 1 (MHz) | 26 dB Bandwidth Chain 2 (MHz) |
|---------|--------------------|-------------------------------------|-------------------------------------|
| Low | 5270 | 41.70 | 41.40 |
| High | 5310 | 41.50 | 41.60 |

LOW CHANNEL



HIGH CHANNEL

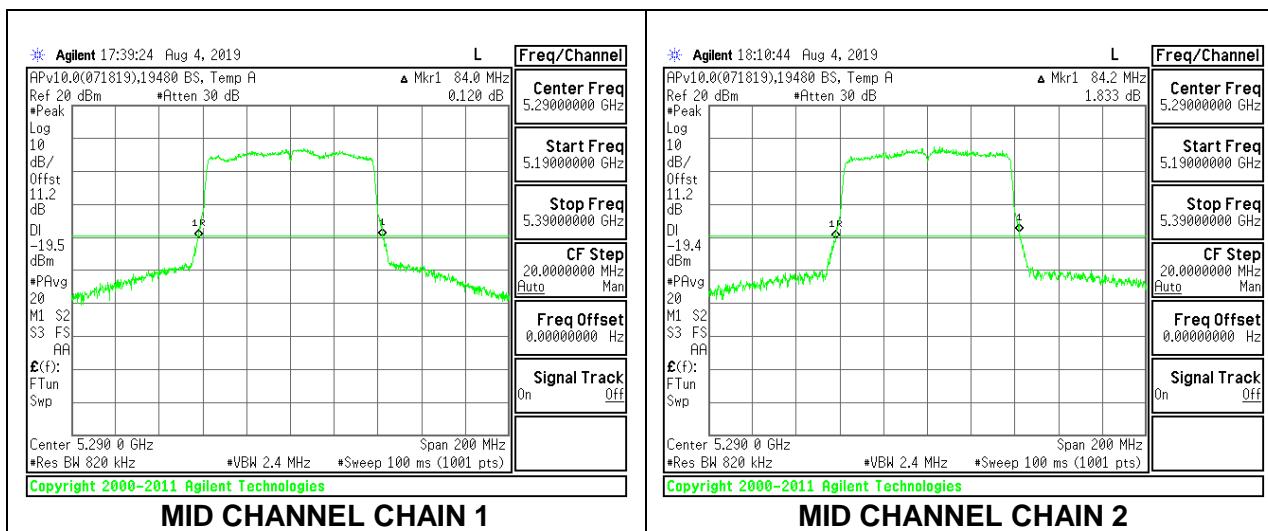


8.2.8. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

2TX Chain 1 + Chain 2 CDD MODE

| Channel | Frequency (MHz) | 26 dB Bandwidth Chain 1 (MHz) | 26 dB Bandwidth Chain 2 (MHz) |
|---------|--------------------|-------------------------------------|-------------------------------------|
| Mid | 5290 | 84.00 | 84.20 |

MID CHANNEL

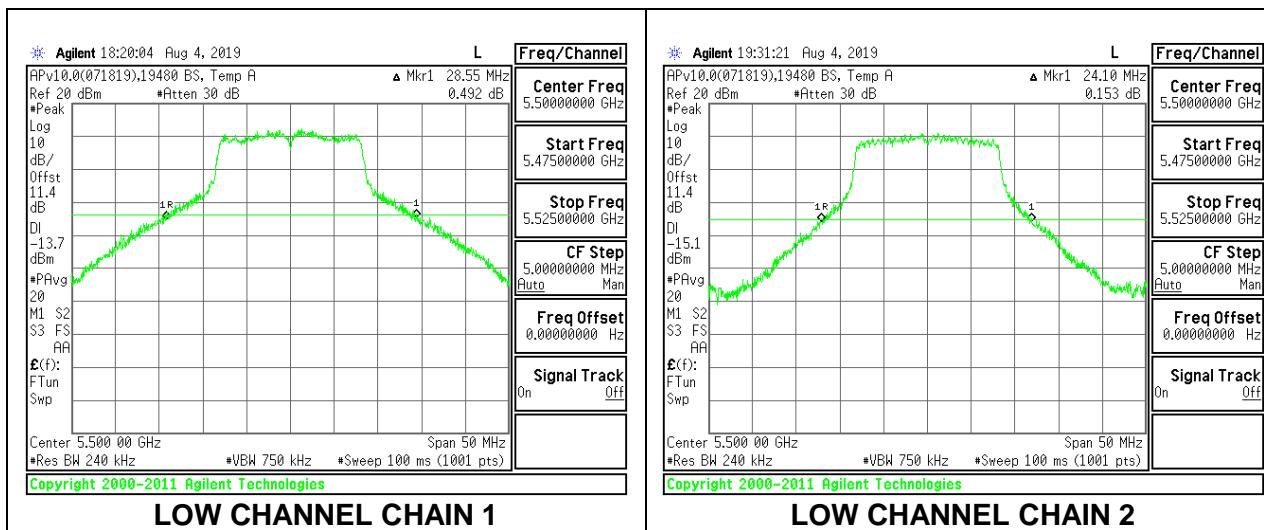


8.2.9. 802.11a MODE IN THE 5.6 GHz BAND

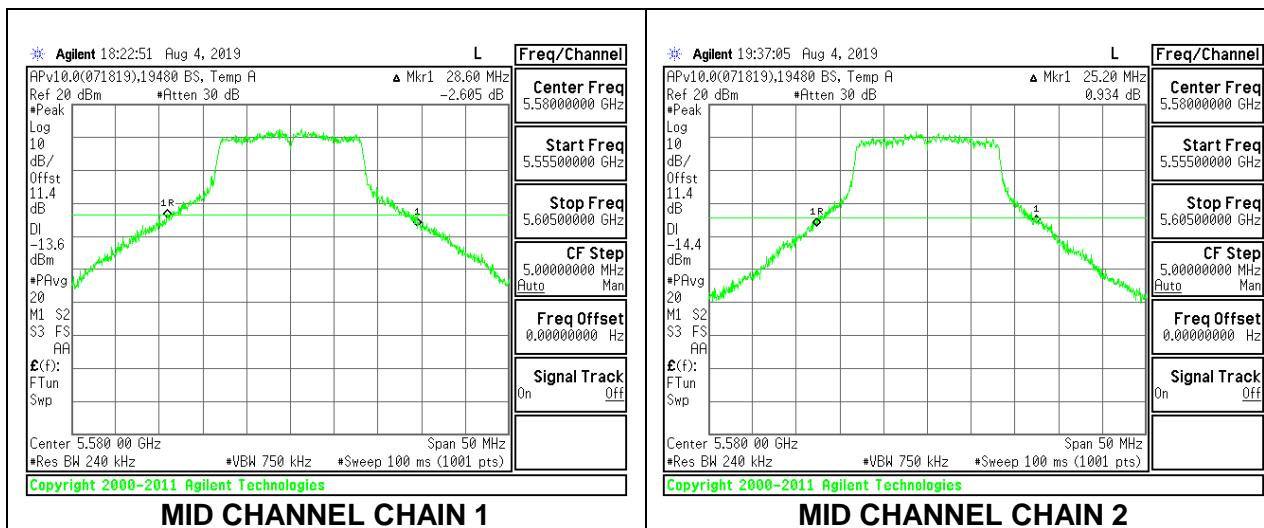
2TX Chain 1 + Chain 2 CDD MODE

| Channel | Frequency (MHz) | 26 dB Bandwidth Chain 1 (MHz) | 26 dB Bandwidth Chain 2 (MHz) |
|---------|--------------------|-------------------------------------|-------------------------------------|
| Low | 5500 | 28.55 | 24.10 |
| Mid | 5580 | 28.60 | 25.20 |
| High | 5700 | 28.55 | 25.85 |
| 144 | 5720 | 24.20 | 23.95 |

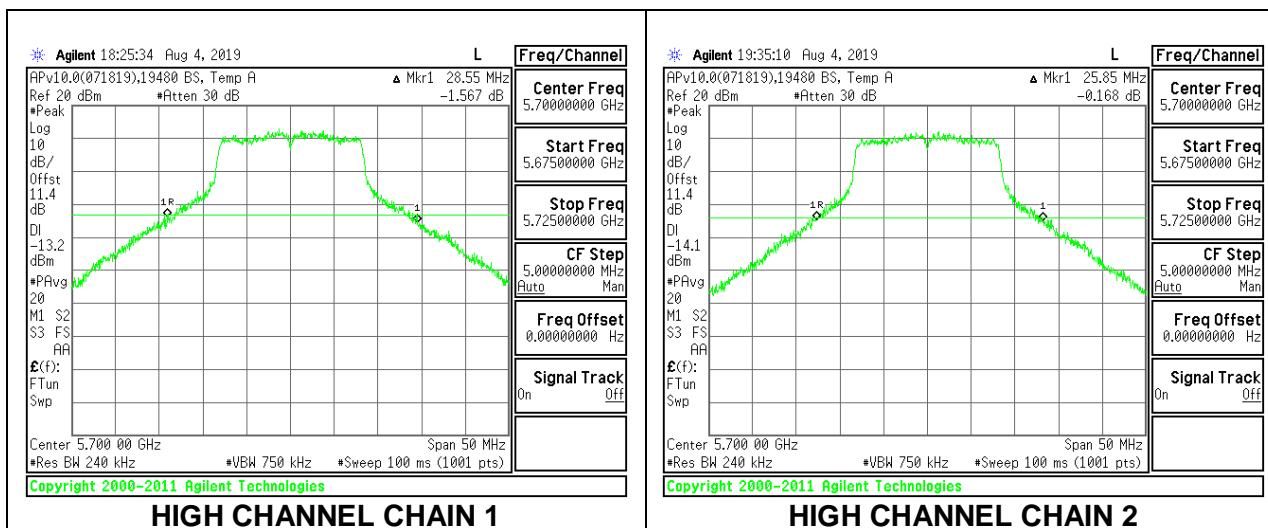
LOW CHANNEL



MID CHANNEL



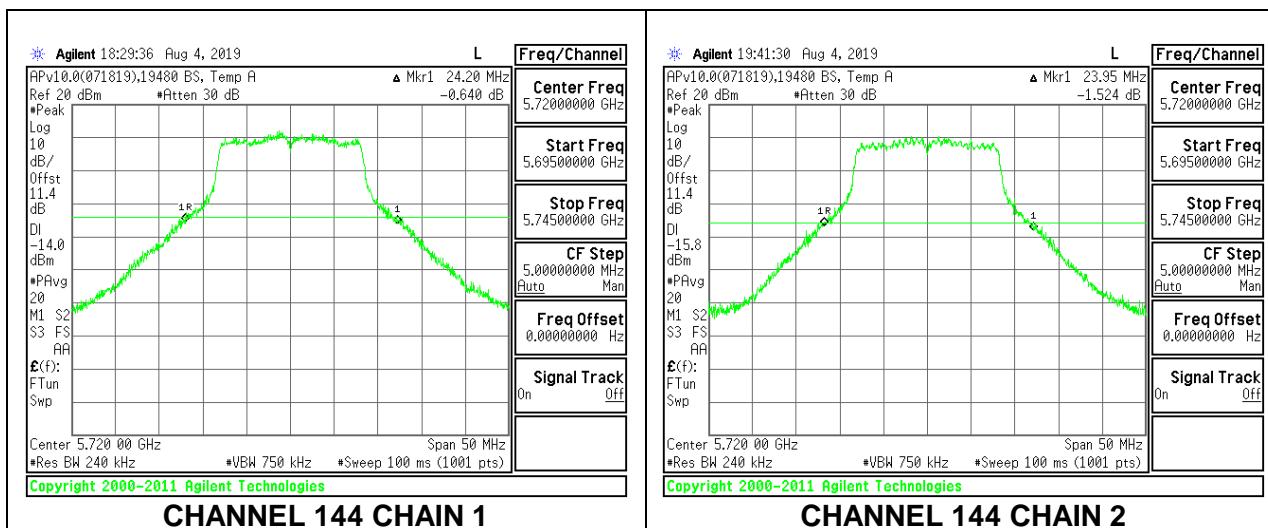
HIGH CHANNEL



HIGH CHANNEL CHAIN 1

HIGH CHANNEL CHAIN 2

CHANNEL 144



CHANNEL 144 CHAIN 1

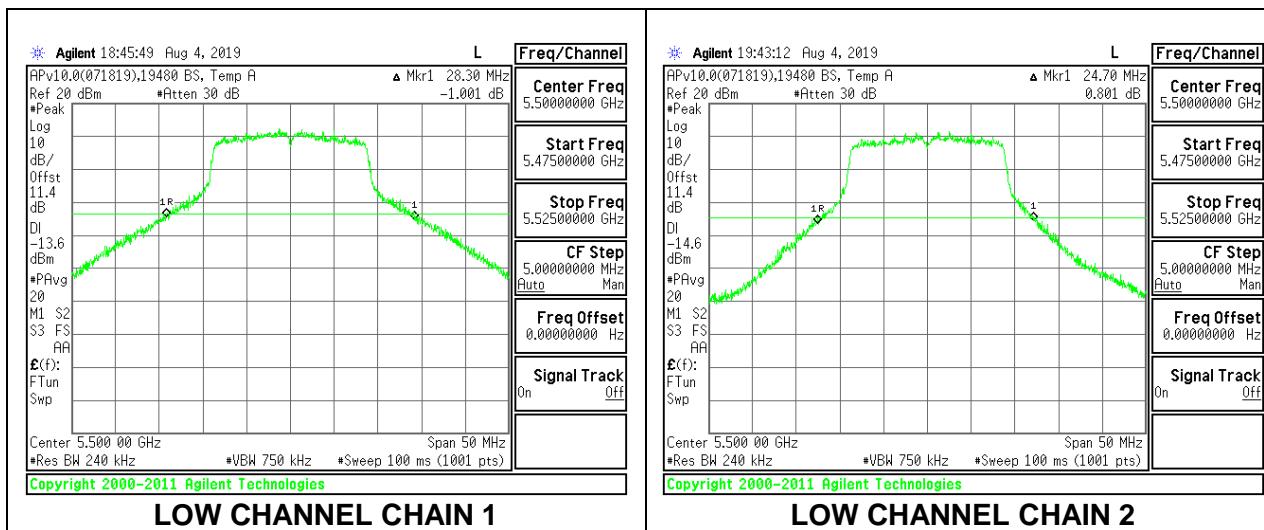
CHANNEL 144 CHAIN 2

8.2.10. 802.11n HT20 MODE IN THE 5.6 GHz BAND

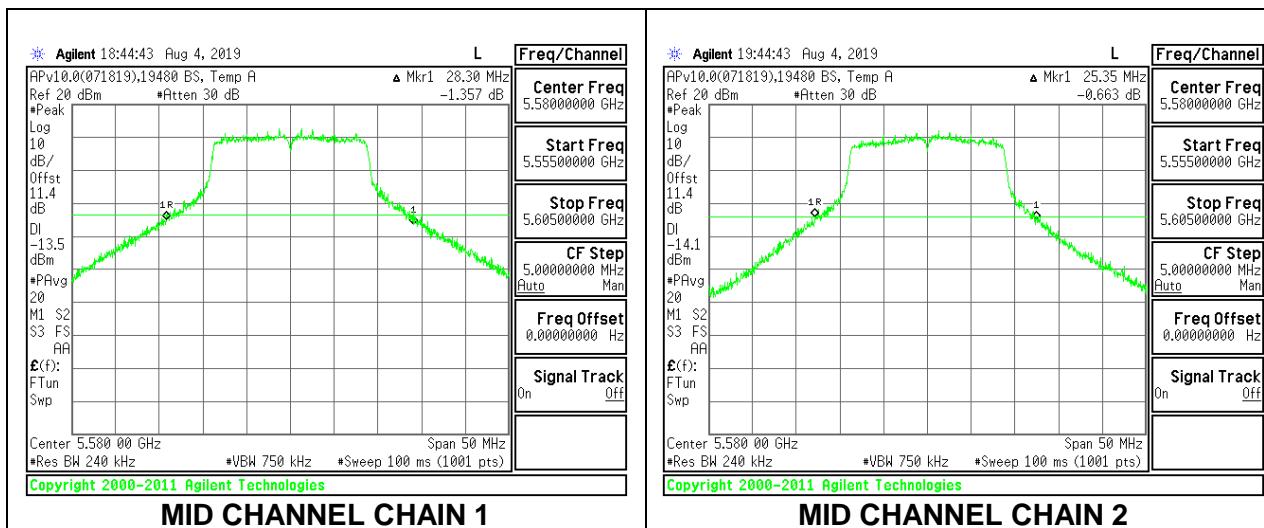
2TX Chain 1 + Chain 2 CDD MODE

| Channel | Frequency (MHz) | 26 dB Bandwidth Chain 1 (MHz) | 26 dB Bandwidth Chain 2 (MHz) |
|---------|--------------------|-------------------------------------|-------------------------------------|
| Low | 5500 | 28.30 | 24.70 |
| Mid | 5580 | 28.30 | 25.35 |
| High | 5700 | 27.70 | 25.90 |
| 144 | 5720 | 24.60 | 24.55 |

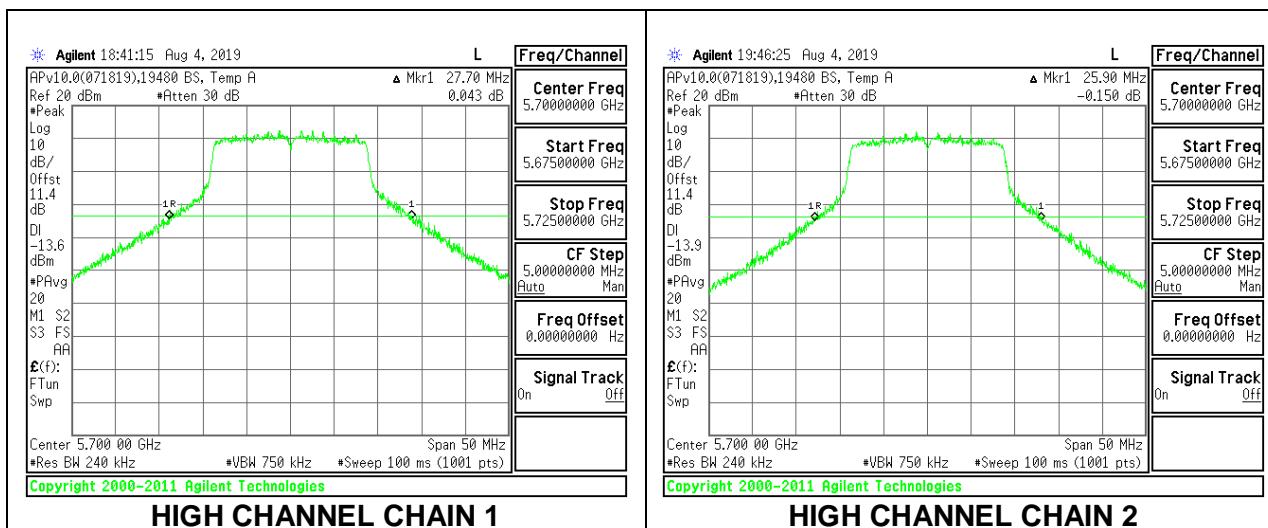
LOW CHANNEL



MID CHANNEL



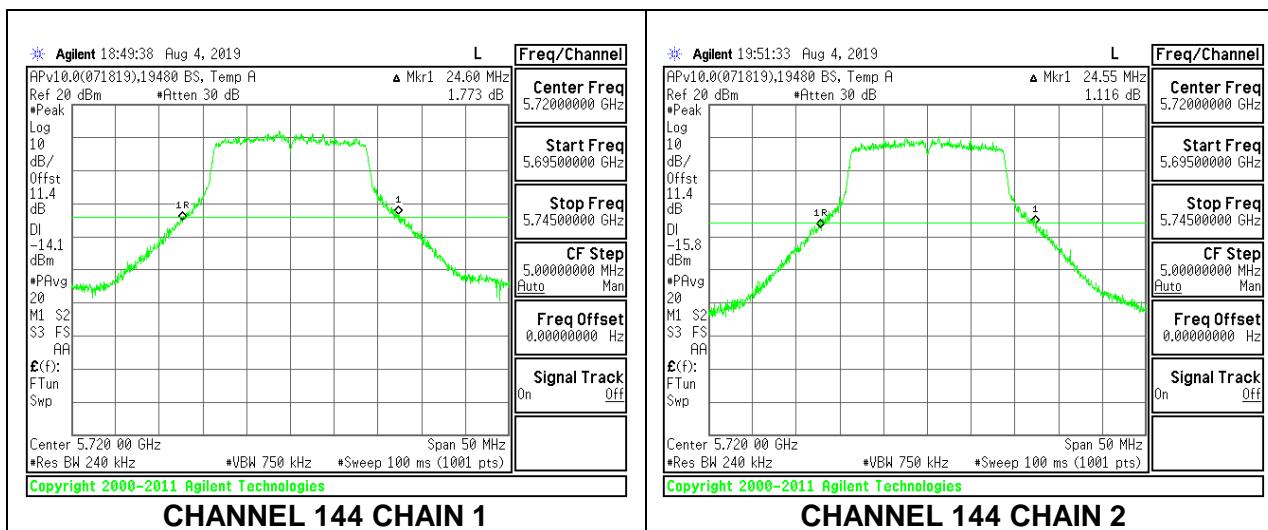
HIGH CHANNEL



HIGH CHANNEL CHAIN 1

HIGH CHANNEL CHAIN 2

CHANNEL 144



CHANNEL 144 CHAIN 1

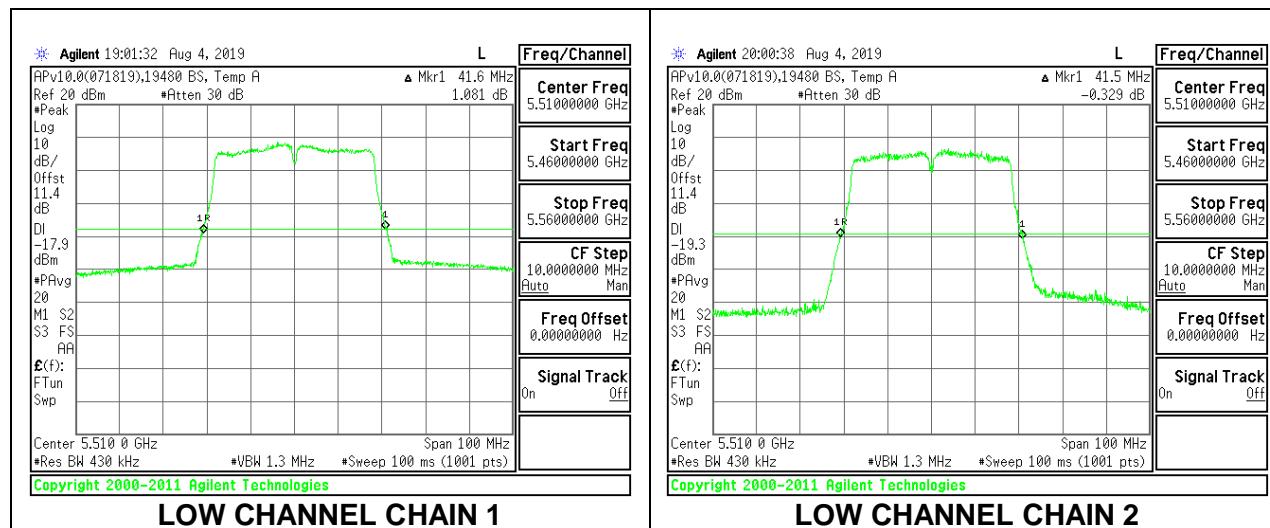
CHANNEL 144 CHAIN 2

8.2.11. 802.11n HT40 MODE IN THE 5.6 GHz BAND

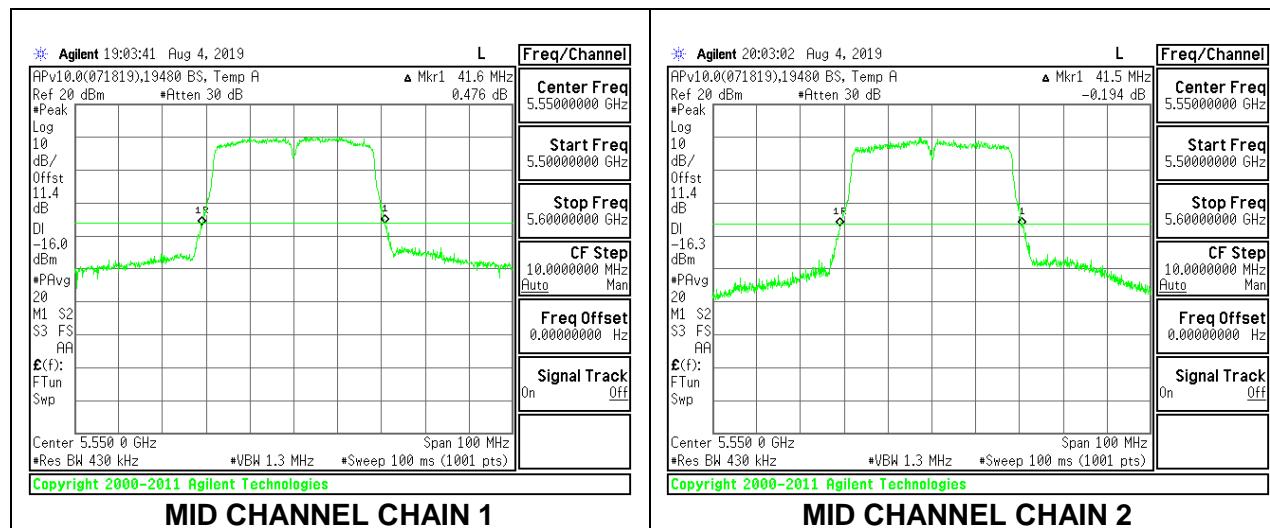
2TX Chain 1 + Chain 2 CDD MODE

| Channel | Frequency (MHz) | 26 dB Bandwidth Chain 1 (MHz) | 26 dB Bandwidth Chain 2 (MHz) |
|---------|-----------------|-------------------------------|-------------------------------|
| Low | 5510 | 41.60 | 41.50 |
| Mid | 5550 | 41.60 | 41.50 |
| High | 5670 | 41.70 | 41.50 |
| 142 | 5710 | 41.80 | 41.70 |

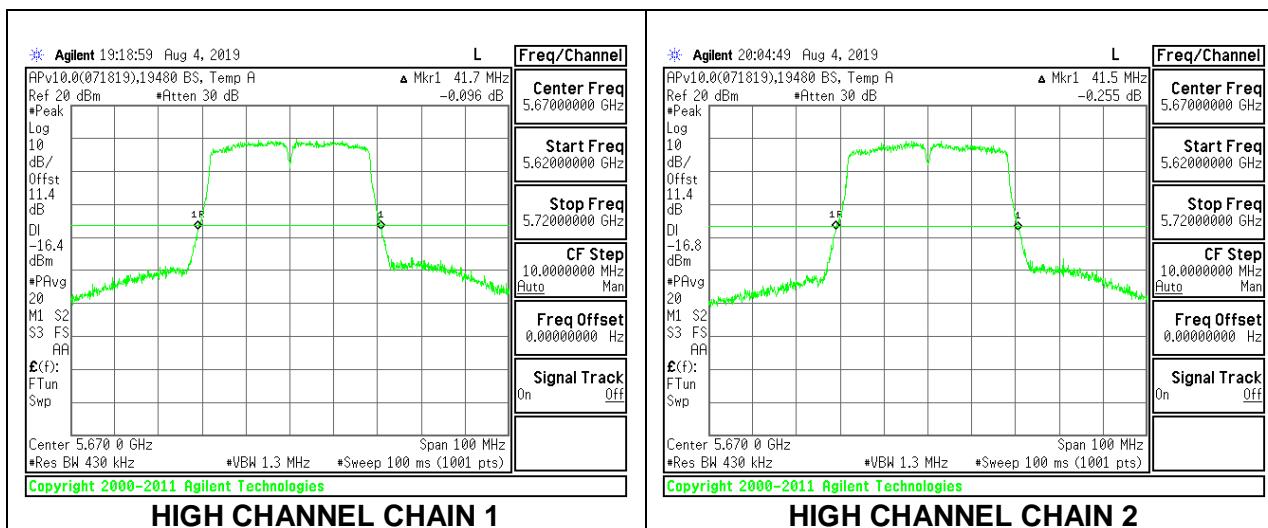
LOW CHANNEL



MID CHANNEL



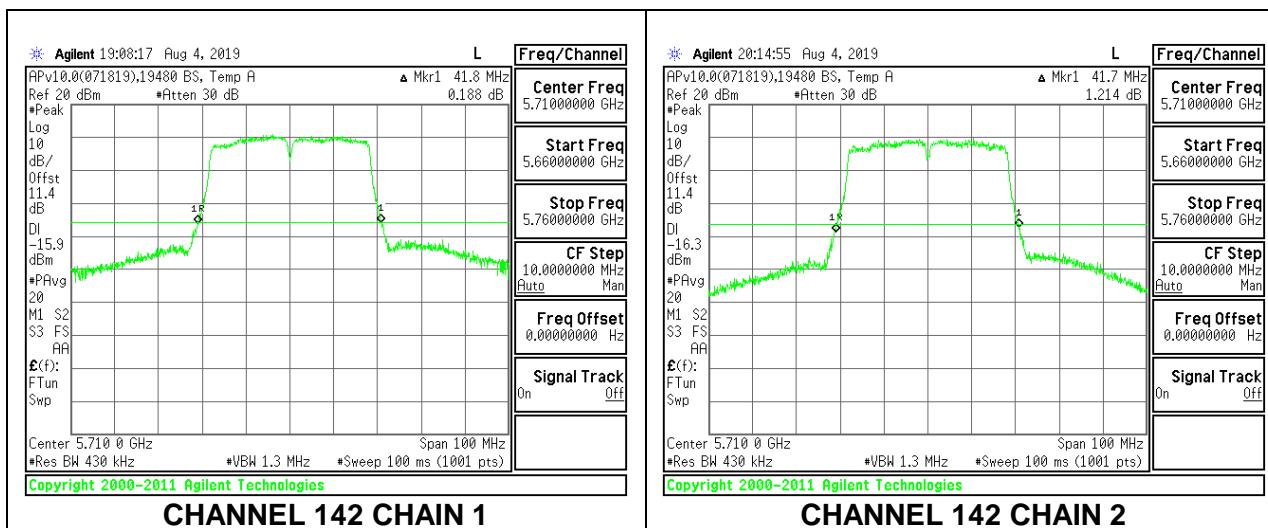
HIGH CHANNEL



HIGH CHANNEL CHAIN 1

HIGH CHANNEL CHAIN 2

CHANNEL 142



CHANNEL 142 CHAIN 1

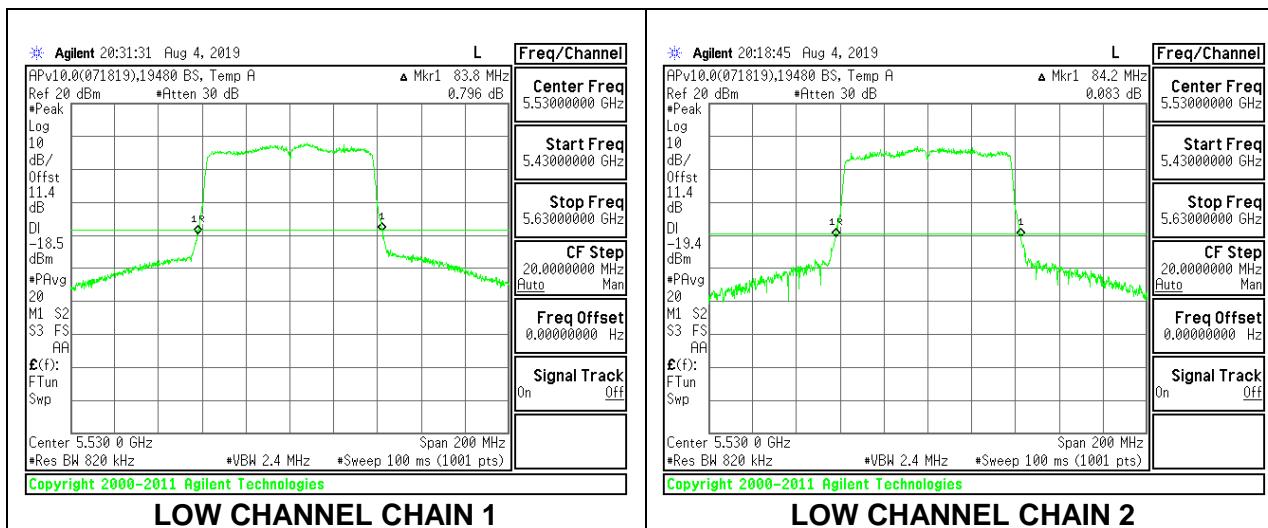
CHANNEL 142 CHAIN 2

8.2.12. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

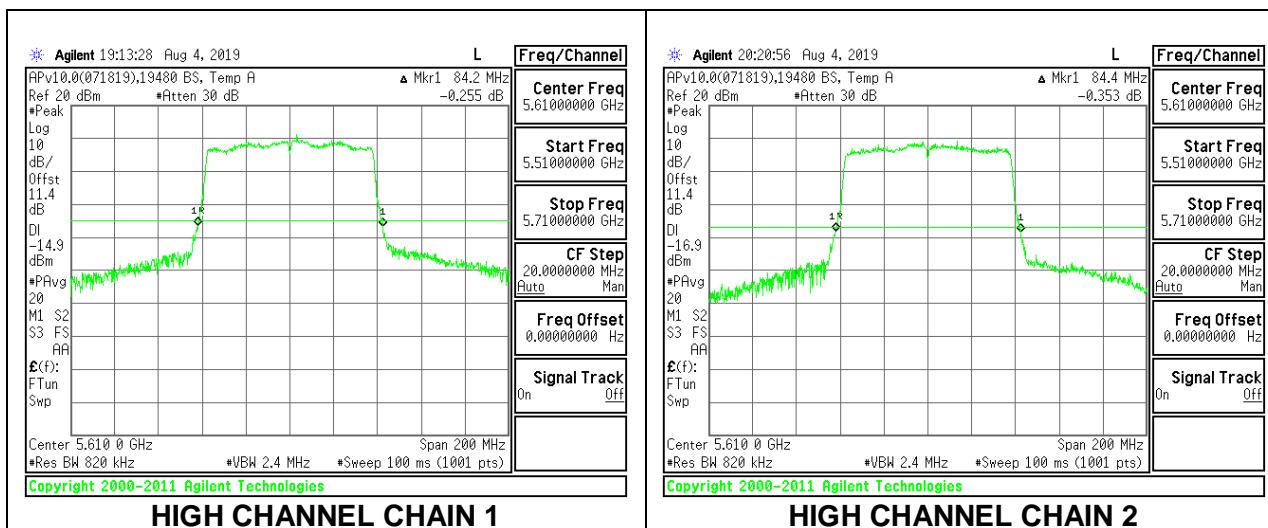
2TX Chain 1 + Chain 2 CDD MODE

| Channel | Frequency (MHz) | 26 dB Bandwidth Chain 1 (MHz) | 26 dB Bandwidth Chain 2 (MHz) |
|---------|--------------------|-------------------------------------|-------------------------------------|
| Low | 5530 | 83.80 | 84.20 |
| High | 5610 | 84.20 | 84.40 |
| 138 | 5690 | 84.00 | 84.00 |

LOW CHANNEL



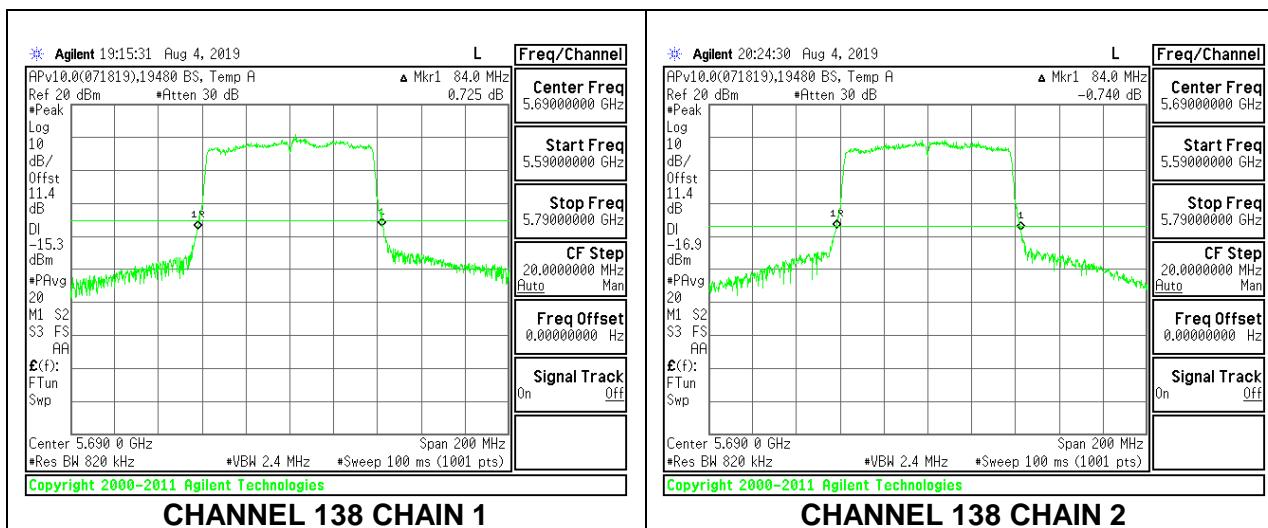
HIGH CHANNEL



HIGH CHANNEL CHAIN 1

HIGH CHANNEL CHAIN 2

CHANNEL 138



CHANNEL 138 CHAIN 1

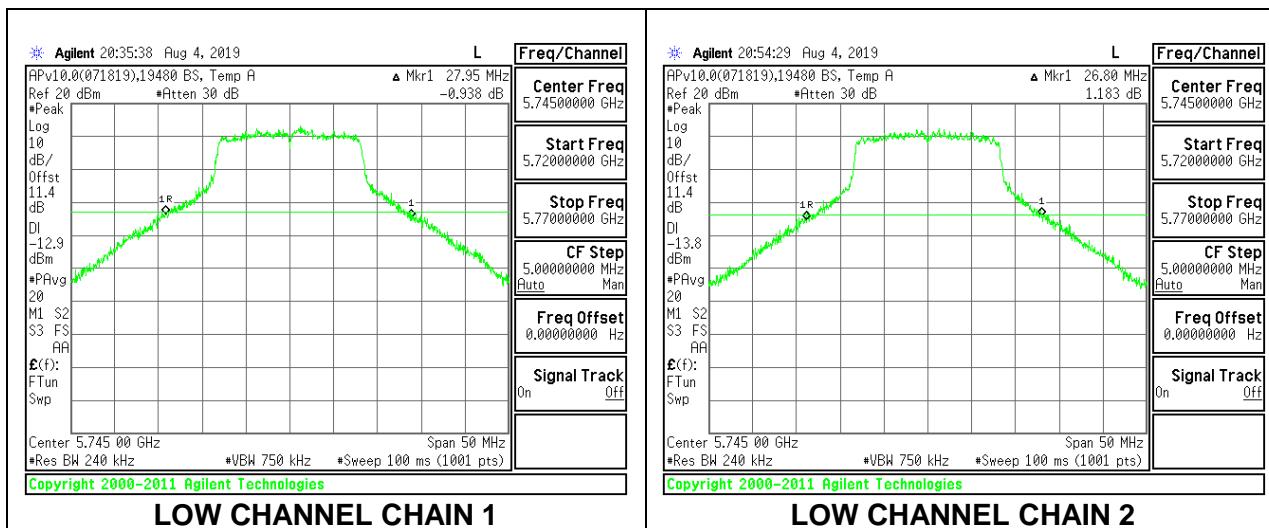
CHANNEL 138 CHAIN 2

8.2.13. 802.11a MODE IN THE 5.8 GHz BAND

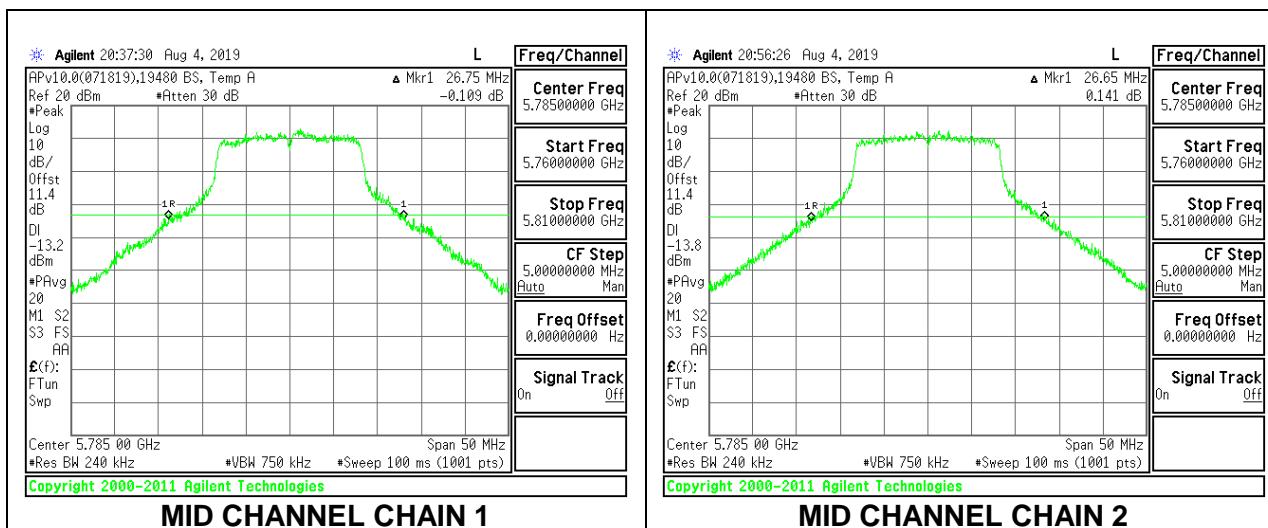
2TX Chain 1 + Chain 2 CDD MODE

| Channel | Frequency (MHz) | 26 dB Bandwidth Chain 1 (MHz) | 26 dB Bandwidth Chain 2 (MHz) |
|---------|-----------------|-------------------------------|-------------------------------|
| Low | 5745 | 27.95 | 26.80 |
| Mid | 5785 | 26.75 | 26.65 |
| High | 5825 | 27.35 | 27.00 |

LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

