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:
September 16, 2019

Prepared by:
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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
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
V3	9/16/2019	Section 8.5.9, 10, 11, 12: Straddle updated	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
☐ Chamber A	☐ Chamber D	☒ Chamber I
☐ Chamber B	☐ Chamber E	☒ Chamber J
☐ Chamber C	☐ Chamber F	☐ Chamber K
	☐ Chamber G	☐ Chamber L
	☐ Chamber H	☐ 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

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

MAINS CONDUCTED EMISSIONS
Where relevant, the following sample calculation is provided:
Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.
36.5 dBuV + 0 dB +10.1 dB+ 0 dB = 46.6 dBuV

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%.

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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

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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

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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

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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.

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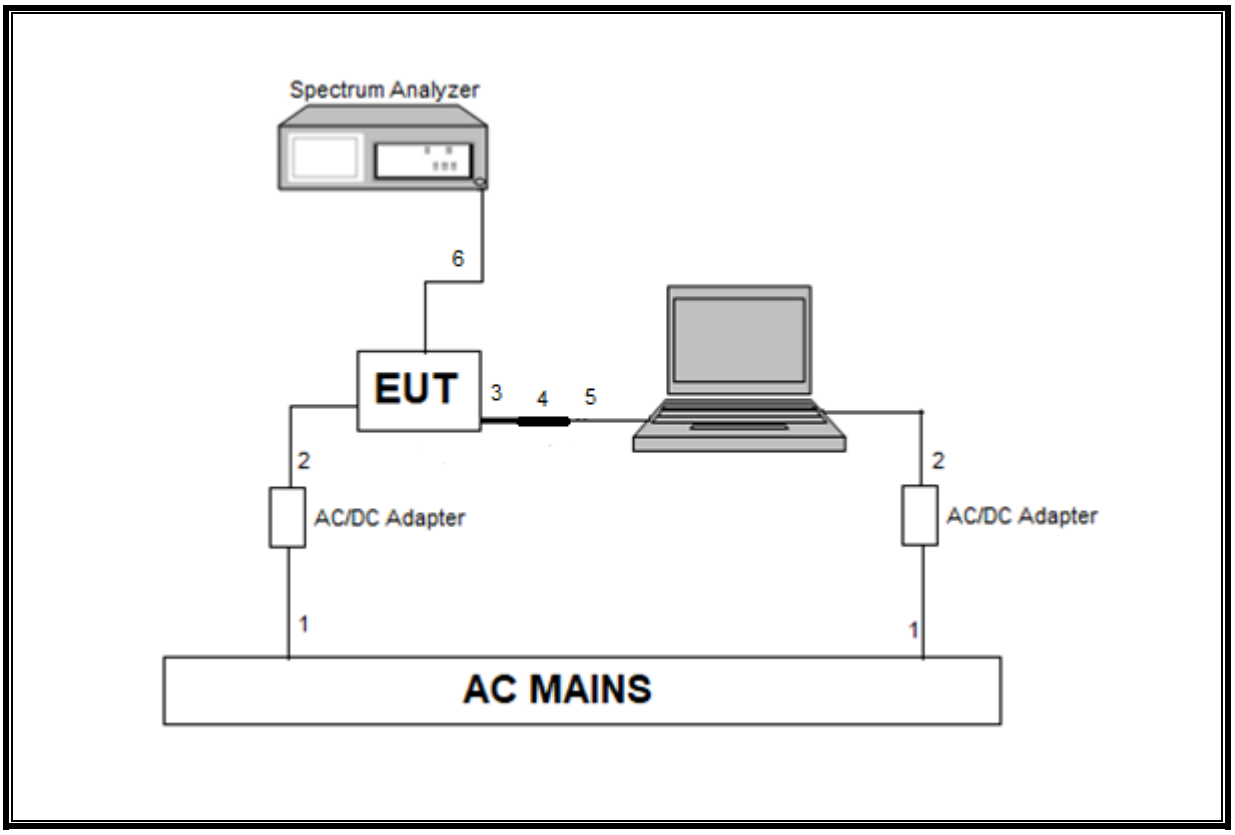
CONDCUTED TEST SETUP DIAGRAM



TEST SETUP

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

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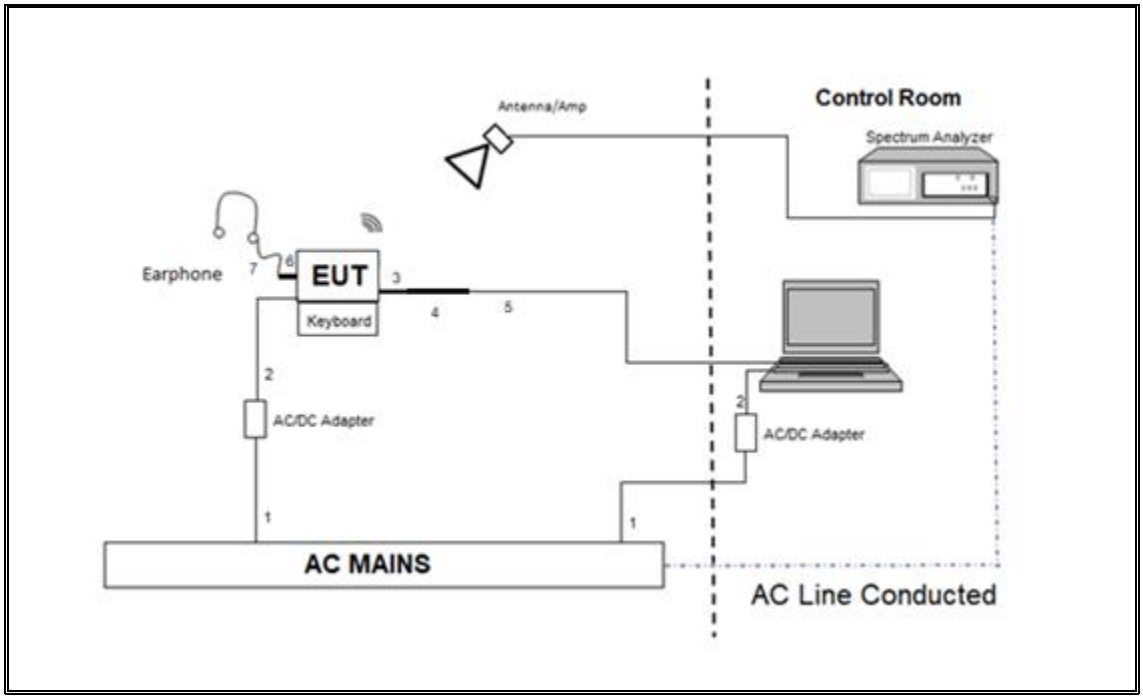
RADIATED AND AC LINE CONDUCTED EMISSIONS SETUP DIAGRAM



TEST SETUP

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

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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

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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	Amplical	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.

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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

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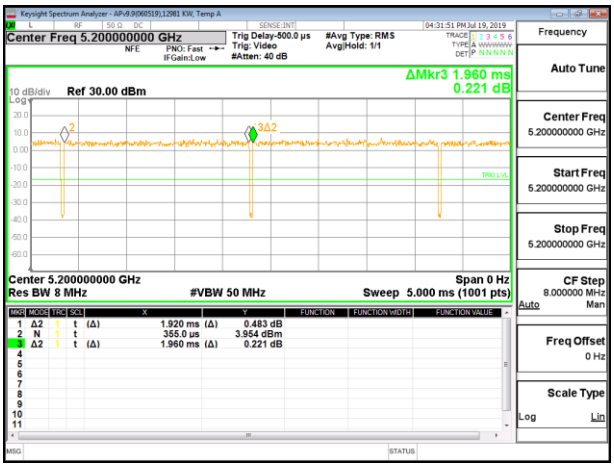
DUTY CYCLE PLOTS

DUTY CYCLE 802.11a MODE



DUTY CYCLE 802.11n HT20 MODE

DUTY CYCLE 802.11n HT40 MODE

DUTY CYCLE 802.11ac VHT80 MODE

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8.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

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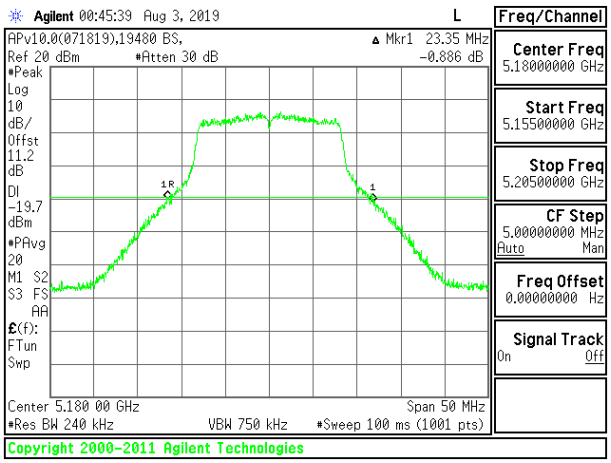
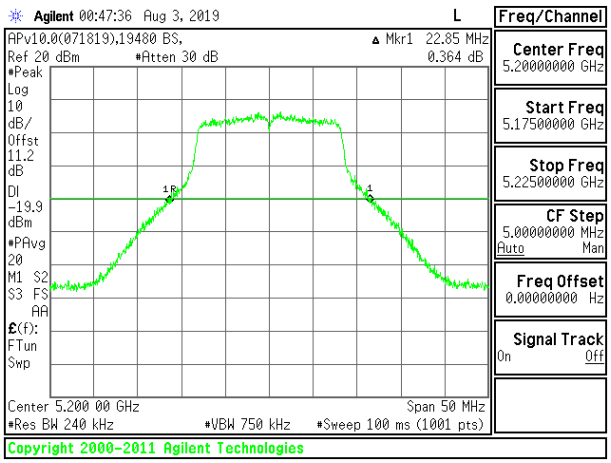
8.2.1. 802.11a MODE IN THE 5.2 GHz BAND

1TX Chain 1 MODE

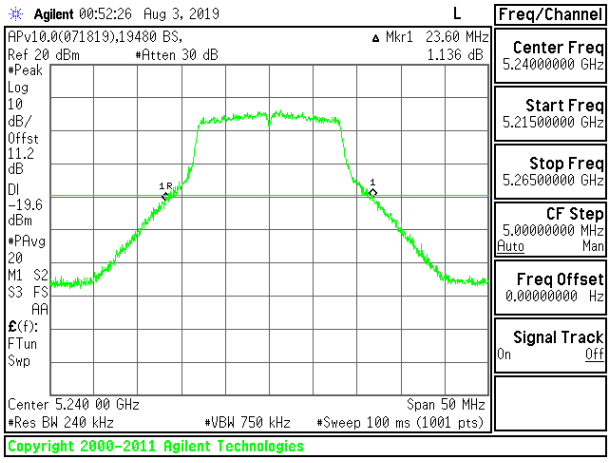
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	23.35
Mid	5200	22.85
High	5240	23.60



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

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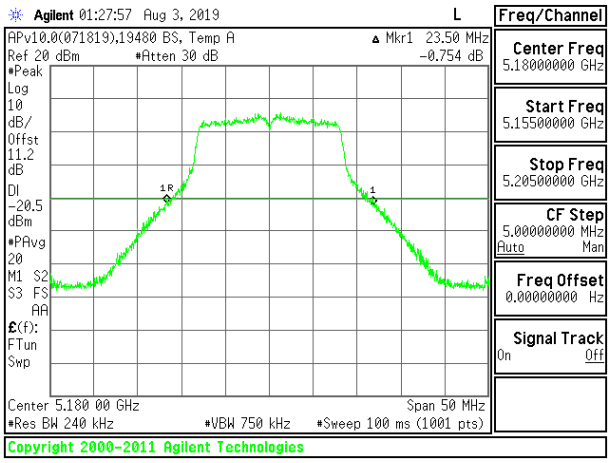
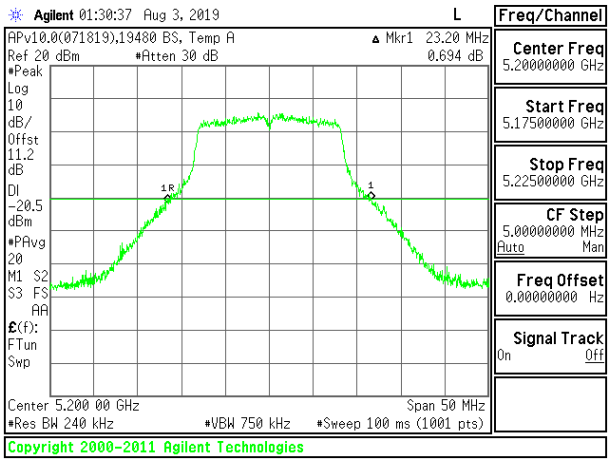
1TX Chain 2 MODE

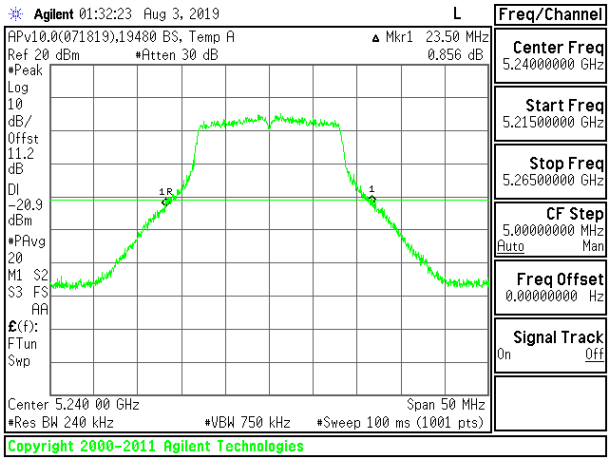
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	23.50
Mid	5200	23.20
High	5240	23.50



LOW CHANNEL



MID CHANNEL



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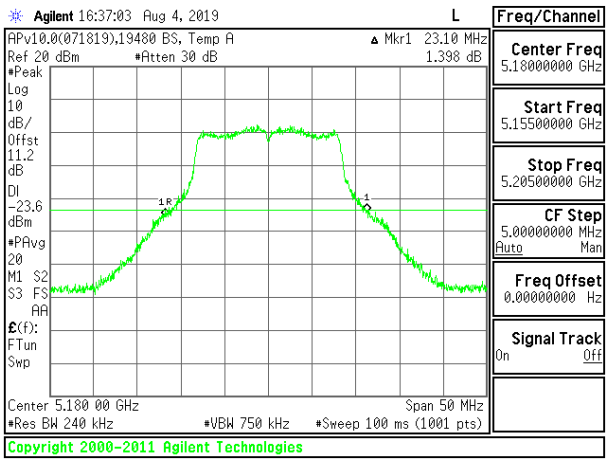
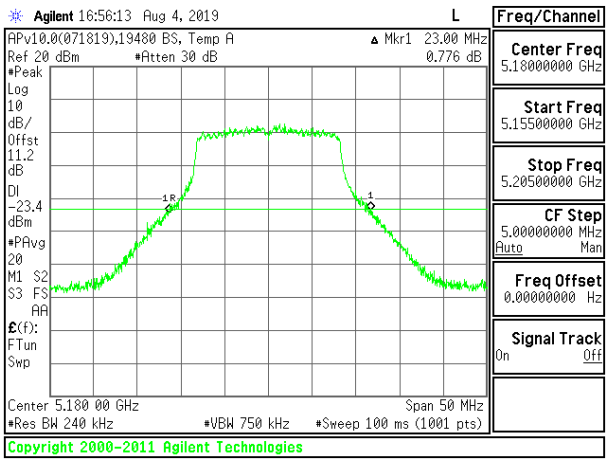
2TX Chain 1 + Chain 2 CDD MODE

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

LOW CHANNEL



LOW CHANNEL CHAIN 1



LOW CHANNEL CHAIN 2

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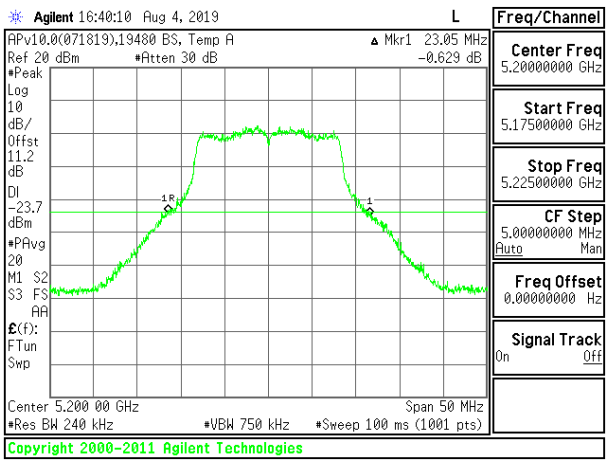
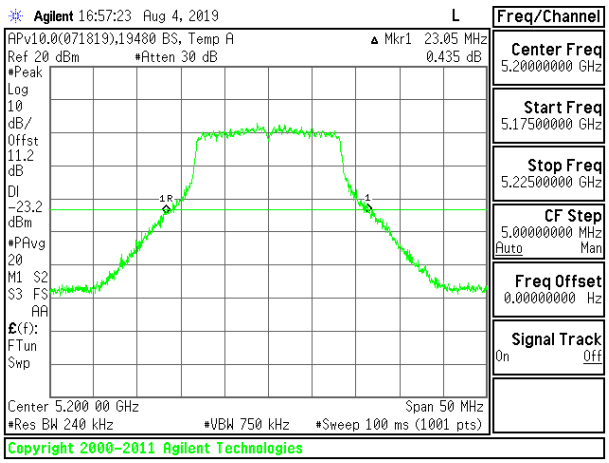
MID CHANNEL

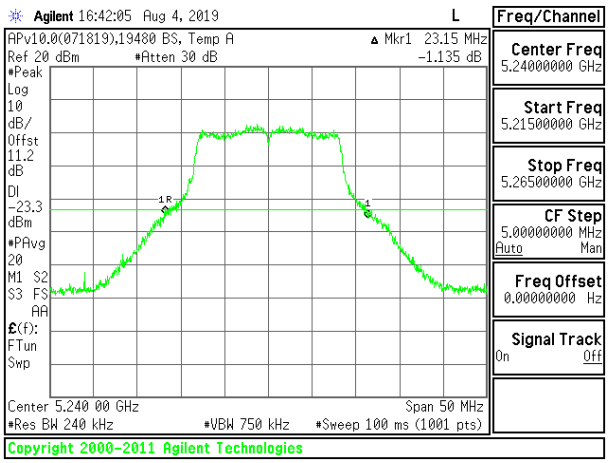


MID CHANNEL CHAIN 1

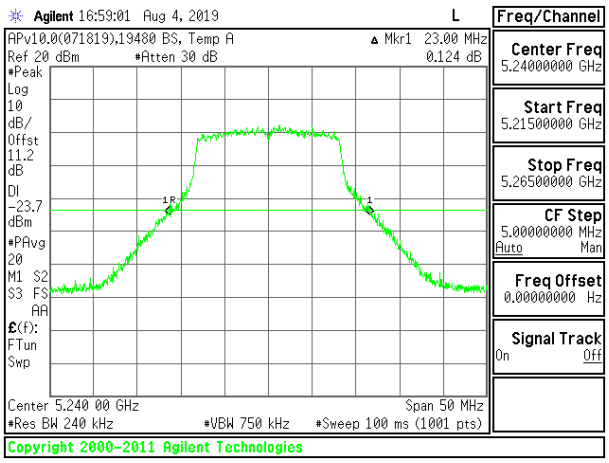


MID CHANNEL CHAIN 2

HIGH CHANNEL



HIGH CHANNEL CHAIN 1



HIGH CHANNEL CHAIN 2

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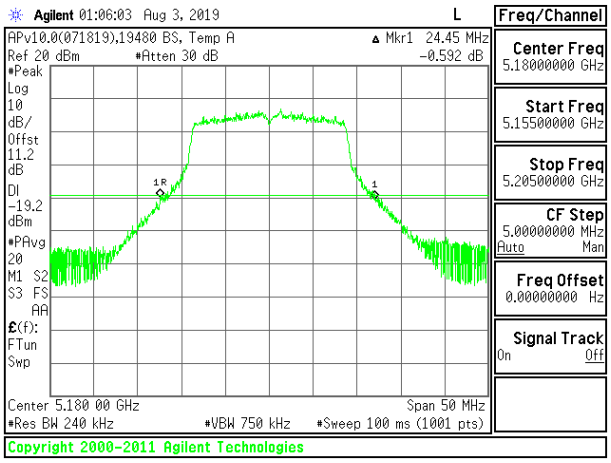
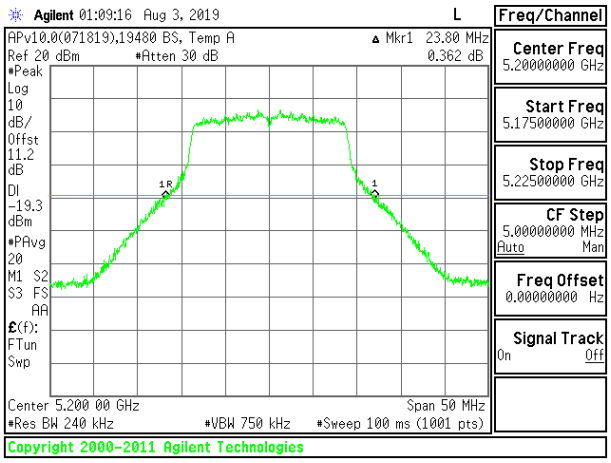
8.2.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

1TX Chain 1 MODE

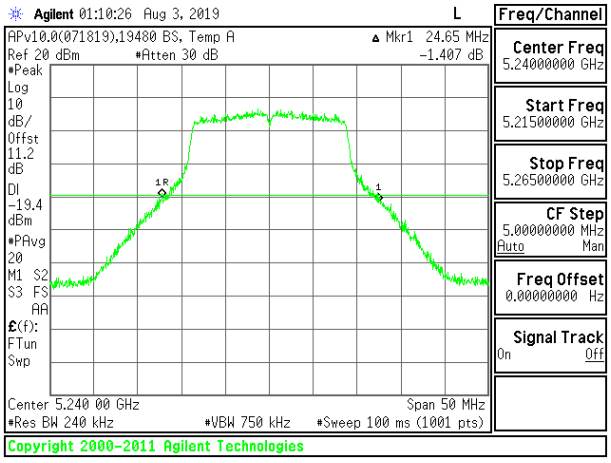
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	24.45
Mid	5200	23.80
High	5240	24.65



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

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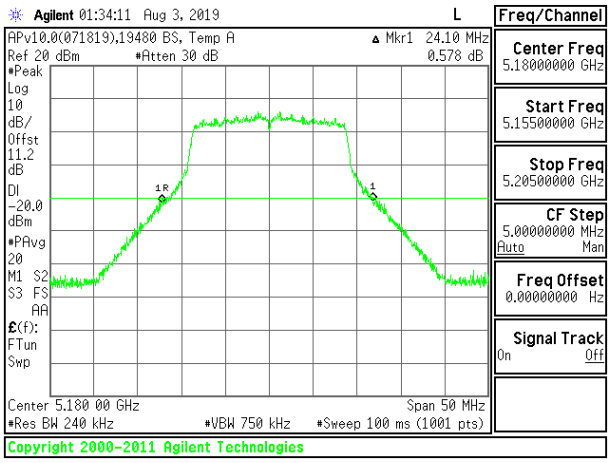
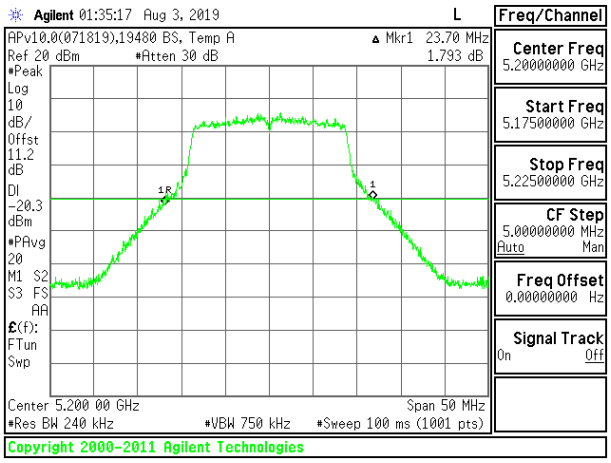
1TX Chain 2 MODE

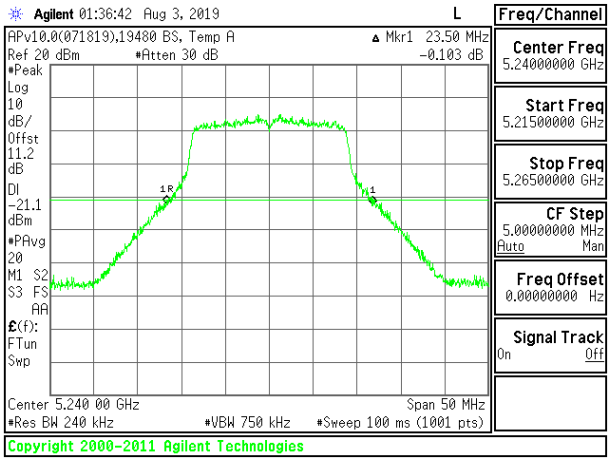
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	24.10
Mid	5200	23.70
High	5240	23.50



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

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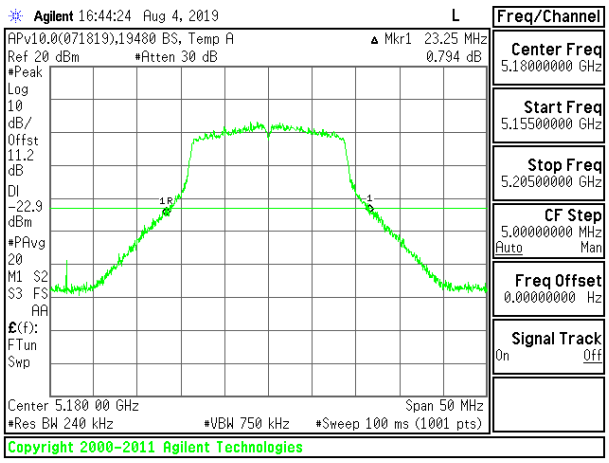
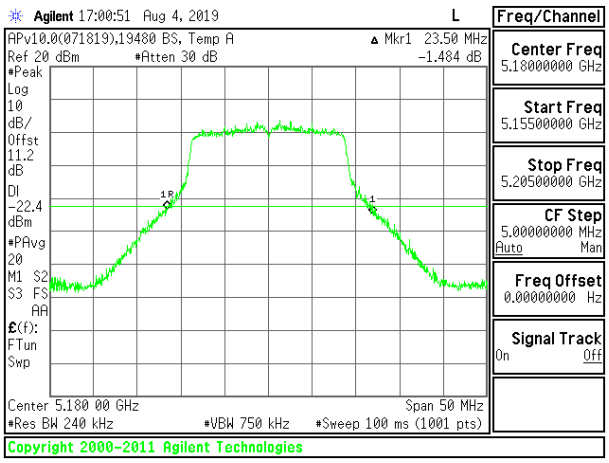
2TX Chain 1 + Chain 2 CDD MODE

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



LOW CHANNEL CHAIN 1



LOW CHANNEL CHAIN 2

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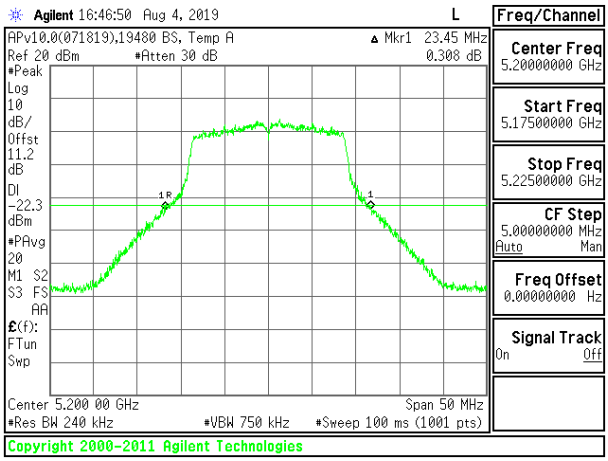
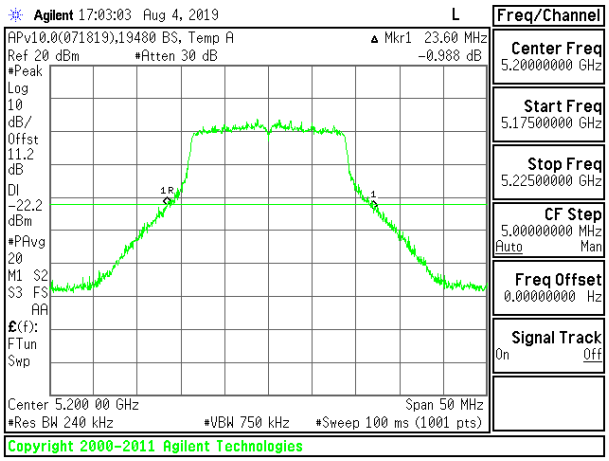
MID CHANNEL

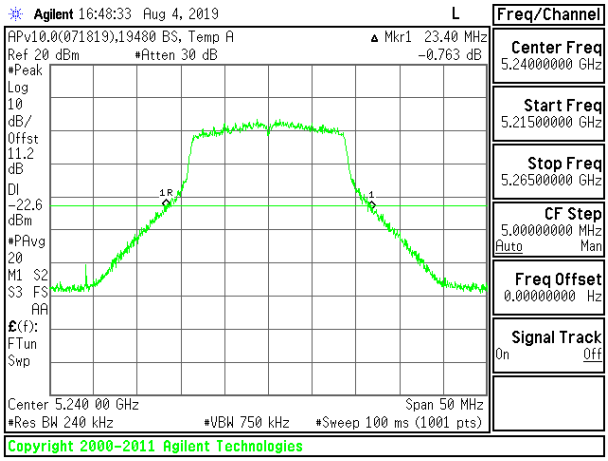


MID CHANNEL CHAIN 1

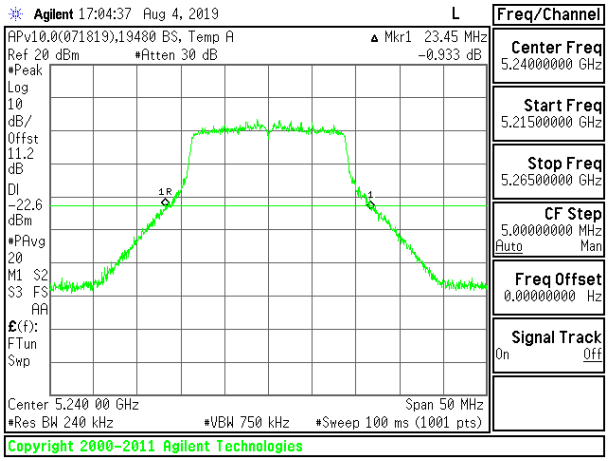


MID CHANNEL CHAIN 2

HIGH CHANNEL



HIGH CHANNEL CHAIN 1



HIGH CHANNEL CHAIN 2

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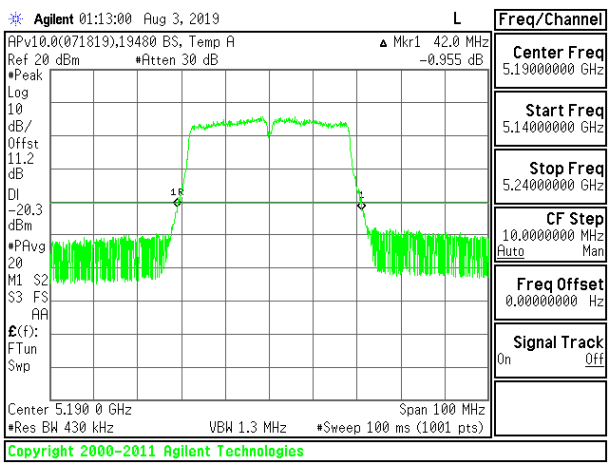
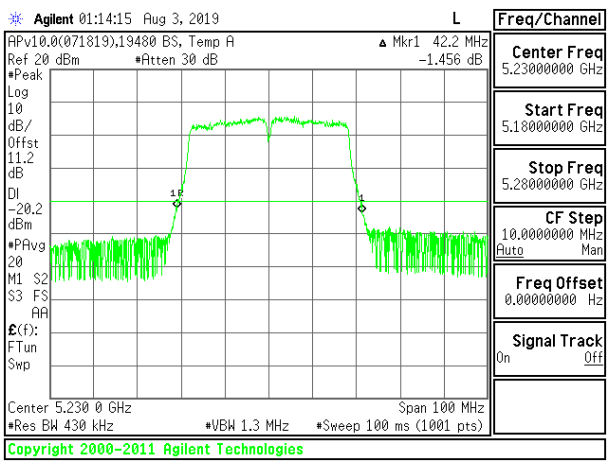
8.2.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

1TX Chain 1 MODE

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



LOW CHANNEL



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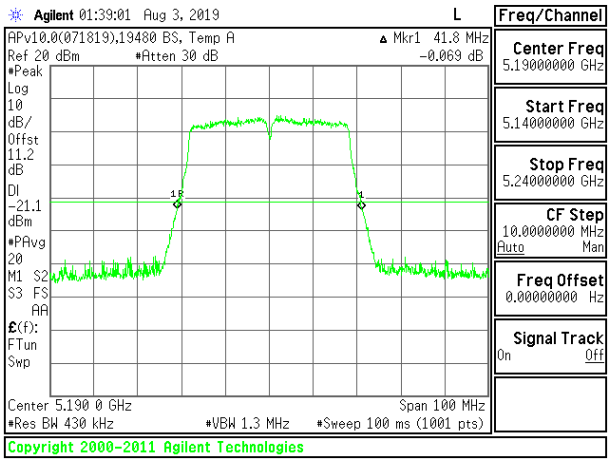
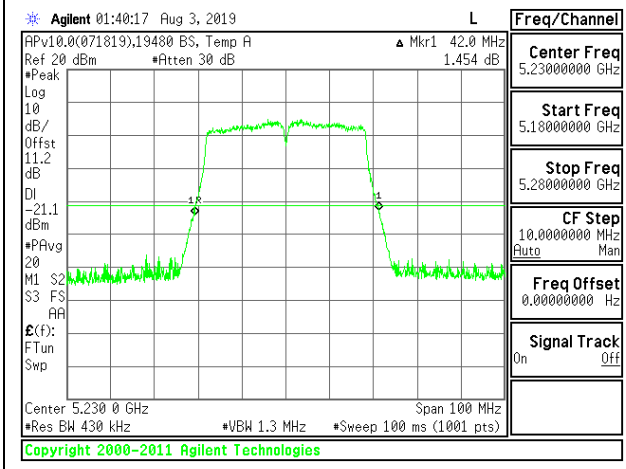
1TX Chain 2 MODE

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



LOW CHANNEL



HIGH CHANNEL

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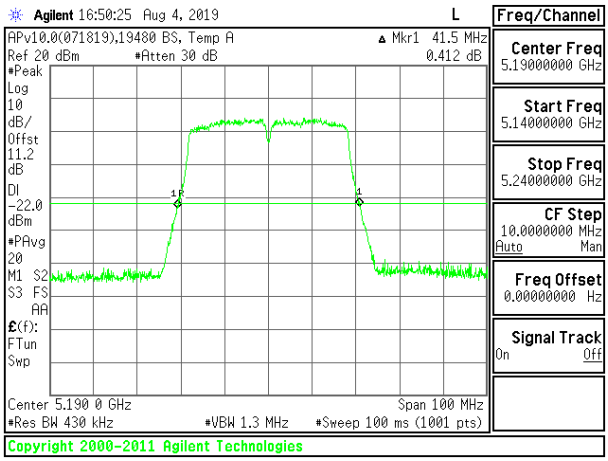
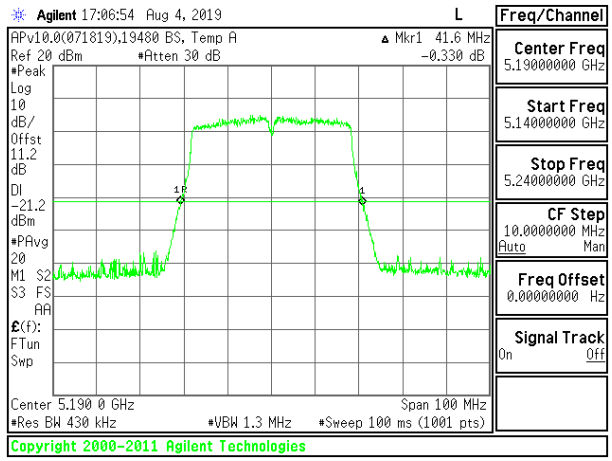
2TX Chain 1 + Chain 2 CDD MODE

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

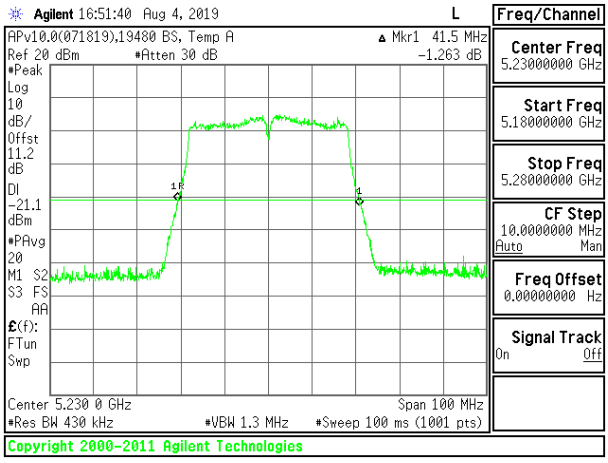


LOW CHANNEL CHAIN 1

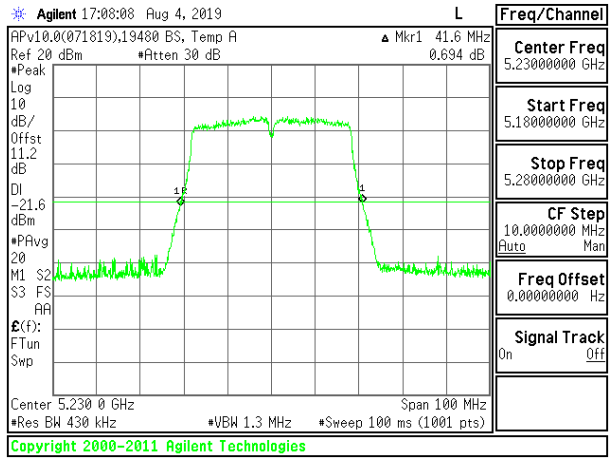


LOW CHANNEL CHAIN 2

HIGH CHANNEL



HIGH CHANNEL CHAIN 1



HIGH CHANNEL CHAIN 2

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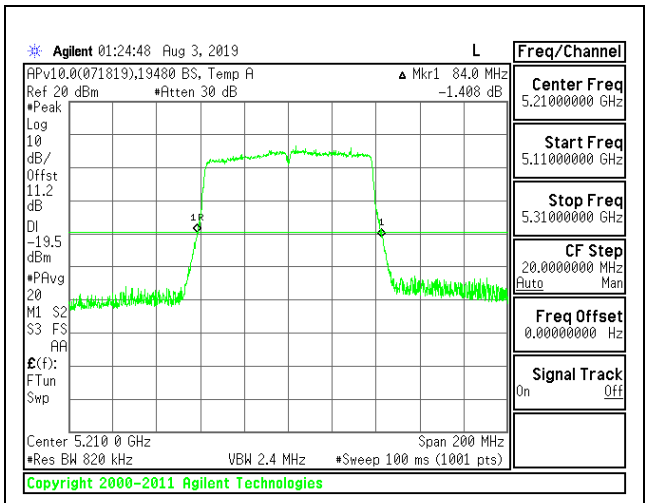
8.2.4. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

1TX Chain 1 MODE

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



MID CHANNEL

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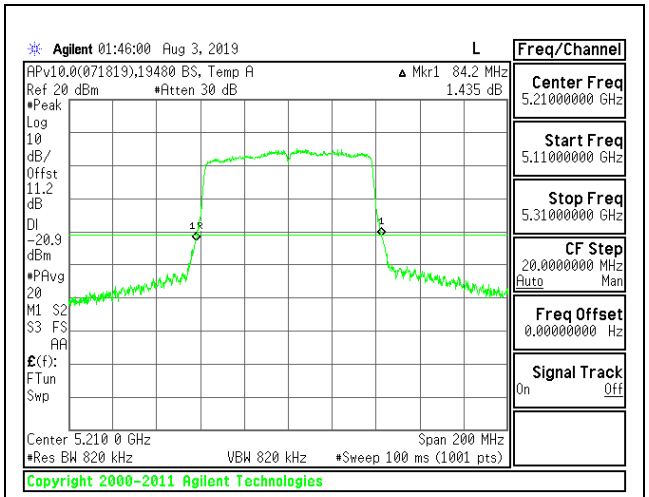
1TX Chain 2 MODE

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



MID CHANNEL

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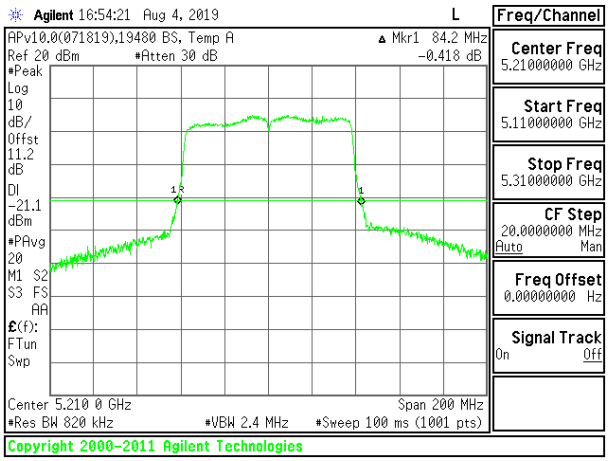
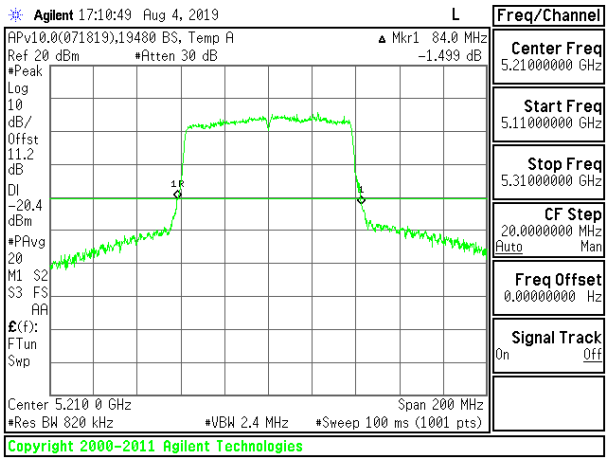
2TX Chain 1 + Chain 2 CDD MODE

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

MID CHANNEL



MID CHANNEL CHAIN 1



MID CHANNEL CHAIN 2

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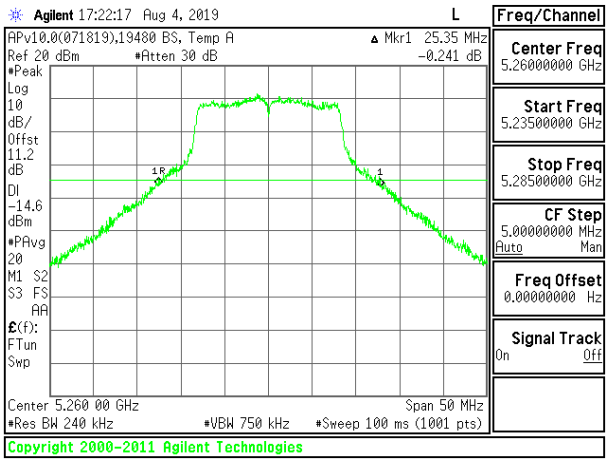
8.2.5. 802.11a MODE IN THE 5.3 GHz BAND

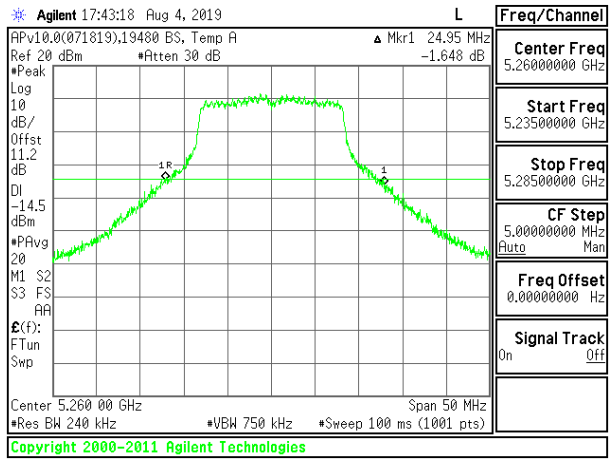
2TX Chain 1 + Chain 2 CDD MODE

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



LOW CHANNEL CHAIN 1



LOW CHANNEL CHAIN 2

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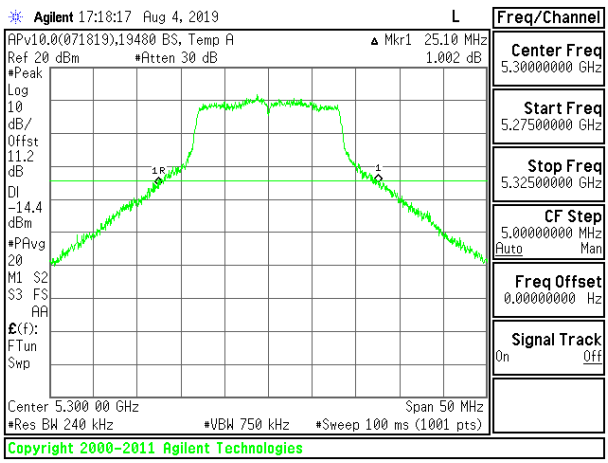
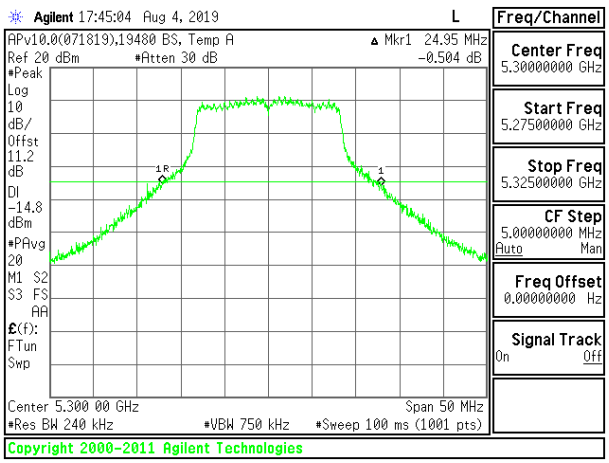
MID CHANNEL

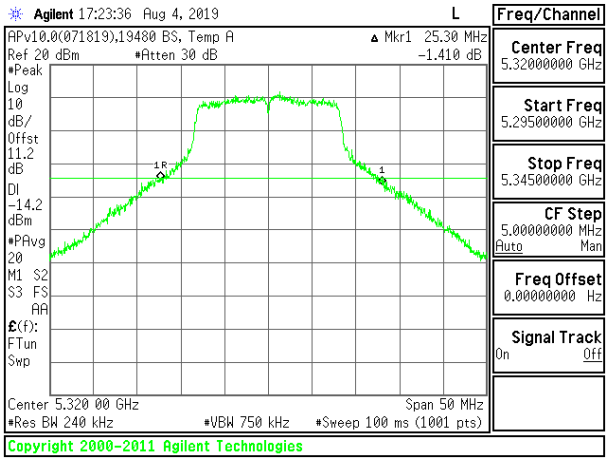


MID CHANNEL CHAIN 1

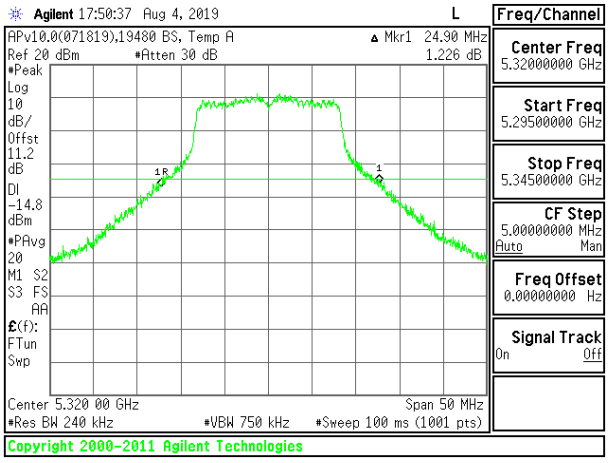


MID CHANNEL CHAIN 2

HIGH CHANNEL



HIGH CHANNEL CHAIN 1



HIGH CHANNEL CHAIN 2

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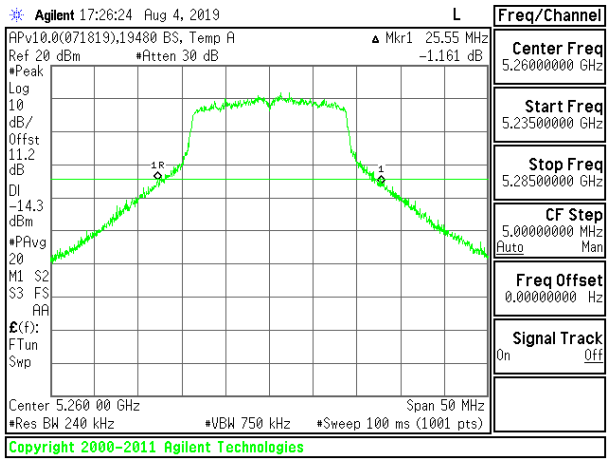
8.2.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

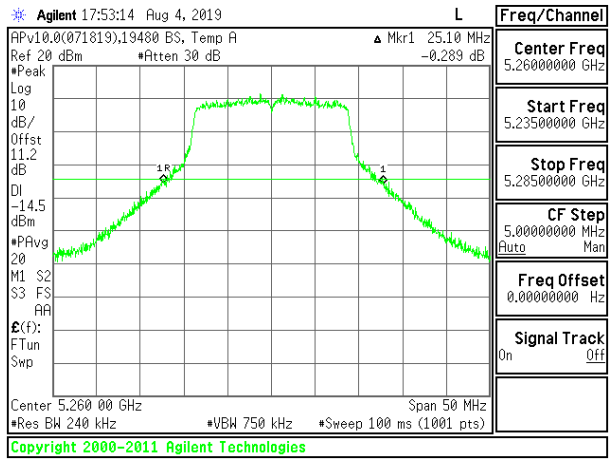
2TX Chain 1 + Chain 2 CDD MODE

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



LOW CHANNEL CHAIN 1



LOW CHANNEL CHAIN 2

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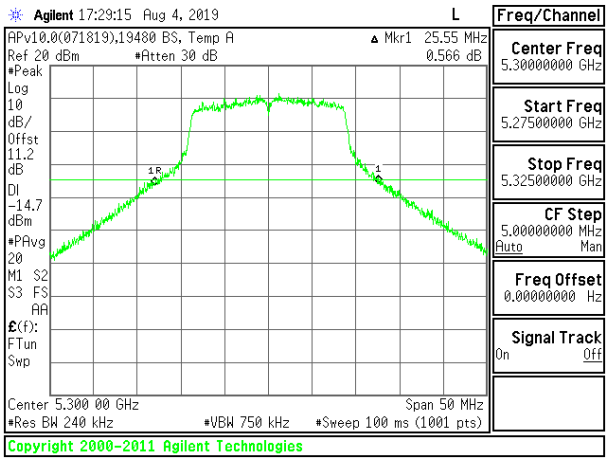
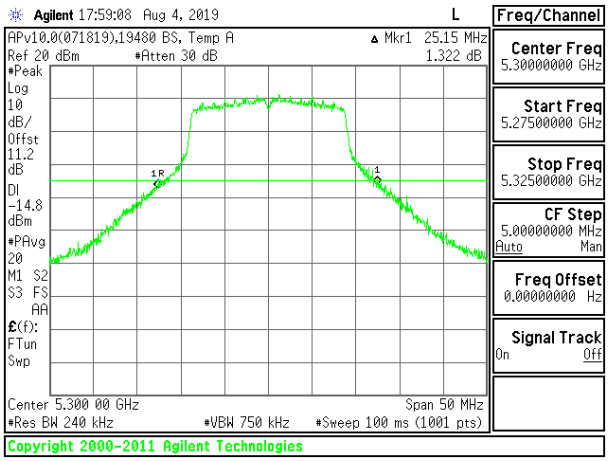
MID CHANNEL

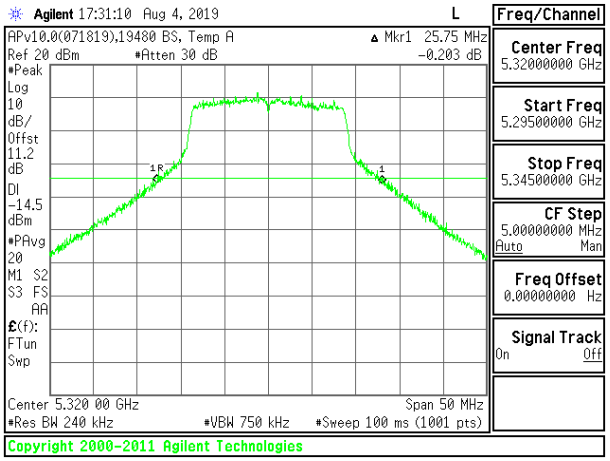


MID CHANNEL CHAIN 1

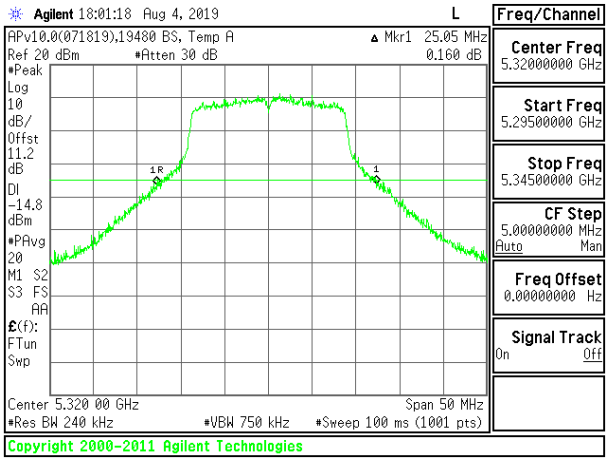


MID CHANNEL CHAIN 2

HIGH CHANNEL



HIGH CHANNEL CHAIN 1



HIGH CHANNEL CHAIN 2

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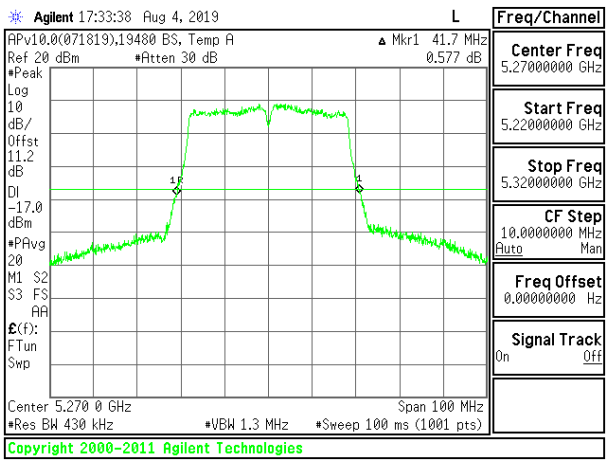
8.2.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

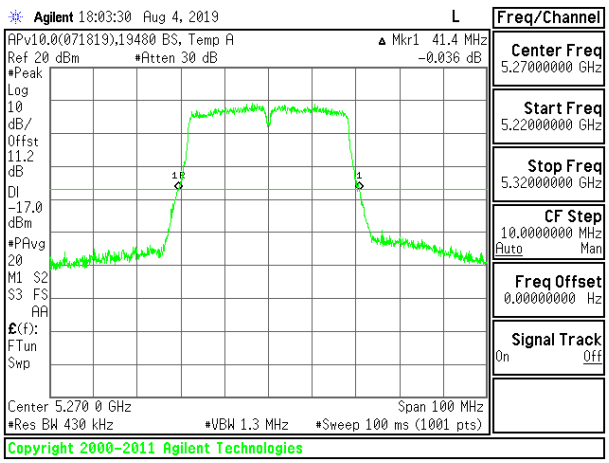
2TX Chain 1 + Chain 2 CDD MODE

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

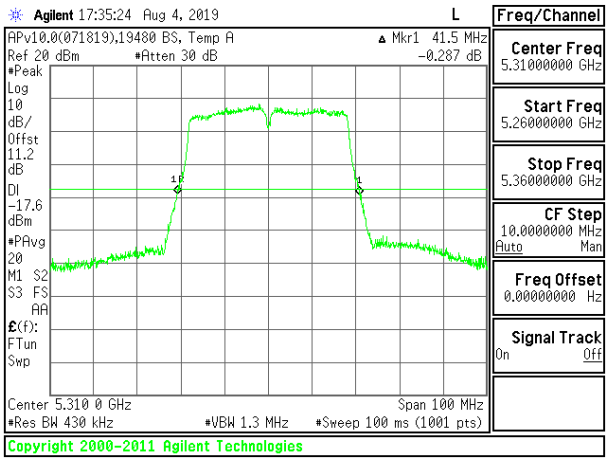


LOW CHANNEL CHAIN 1

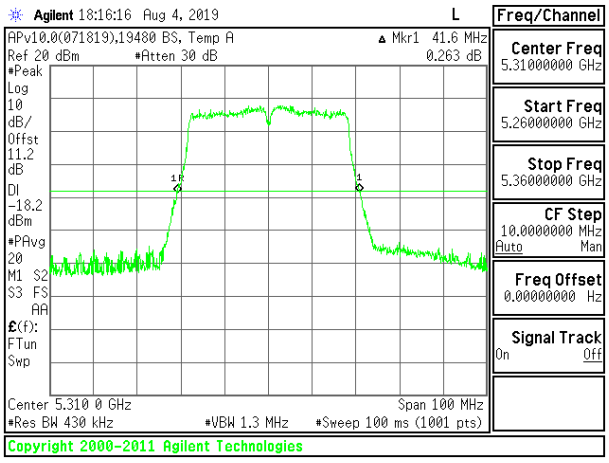


LOW CHANNEL CHAIN 2

HIGH CHANNEL



HIGH CHANNEL CHAIN 1



HIGH CHANNEL CHAIN 2

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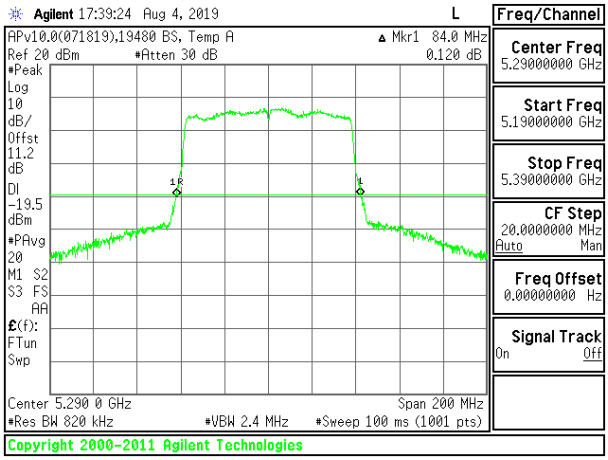
8.2.8. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

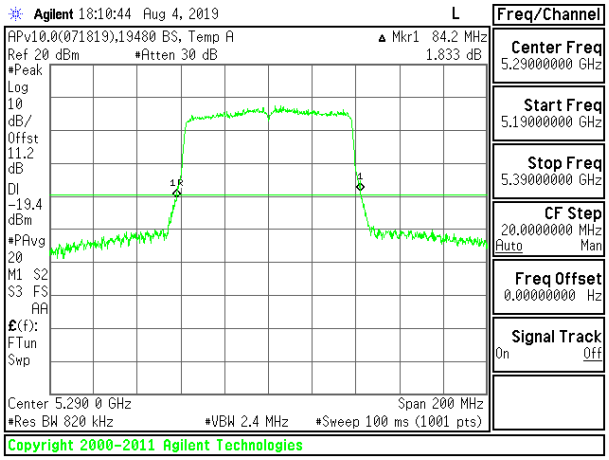
2TX Chain 1 + Chain 2 CDD MODE

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

MID CHANNEL



MID CHANNEL CHAIN 1



MID CHANNEL CHAIN 2

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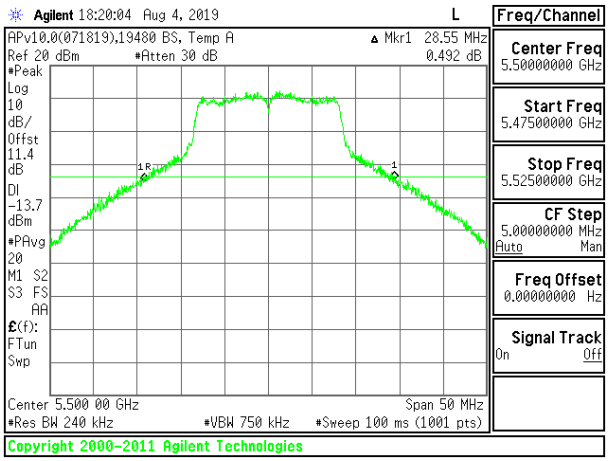
8.2.9. 802.11a MODE IN THE 5.6 GHz BAND

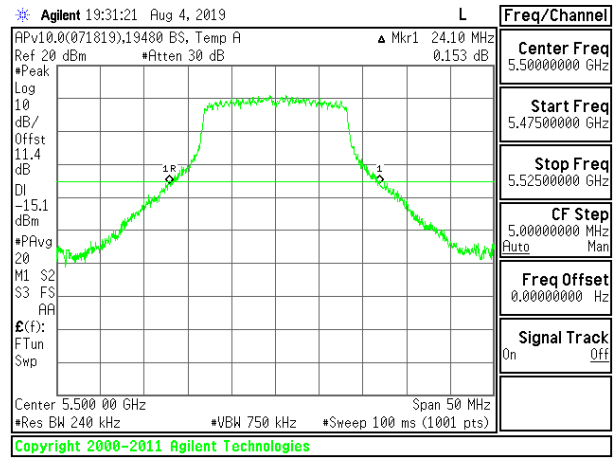
2TX Chain 1 + Chain 2 CDD MODE

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

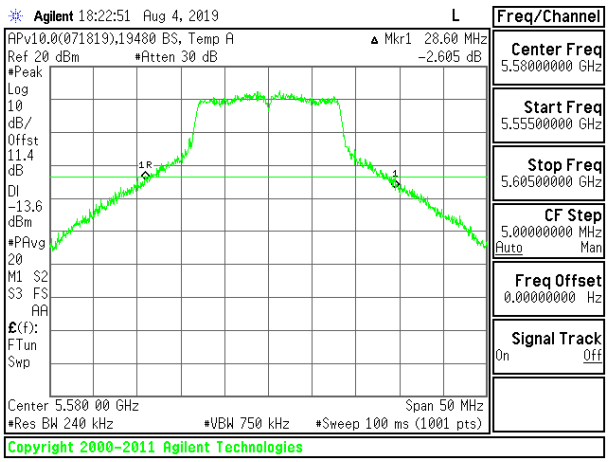


LOW CHANNEL CHAIN 1

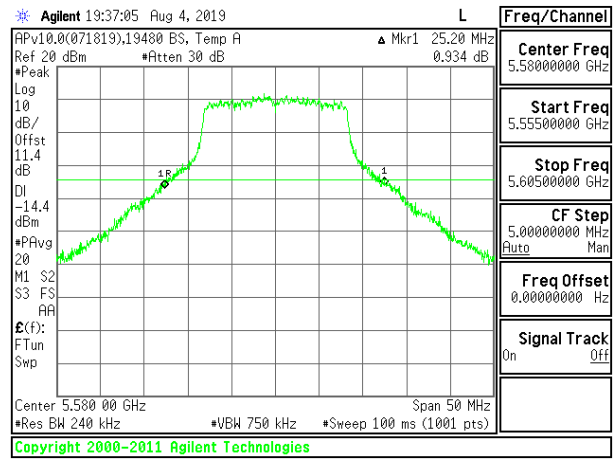


LOW CHANNEL CHAIN 2

MID CHANNEL



MID CHANNEL CHAIN 1



MID CHANNEL CHAIN 2

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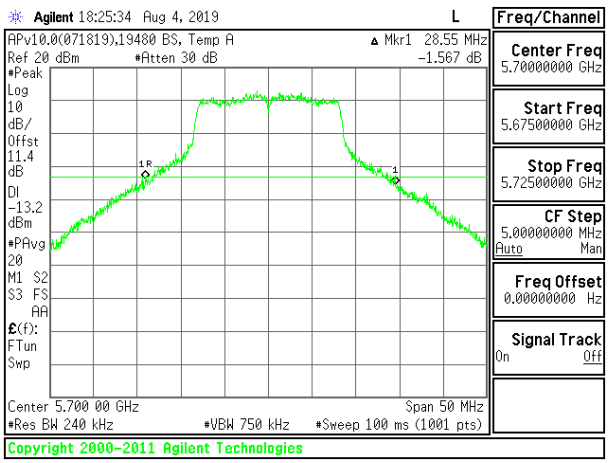
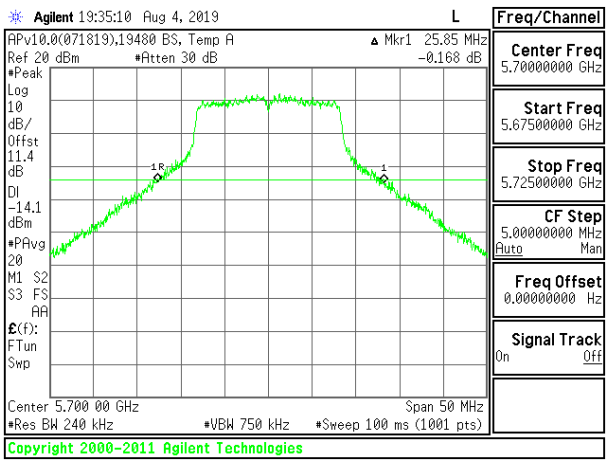
HIGH CHANNEL

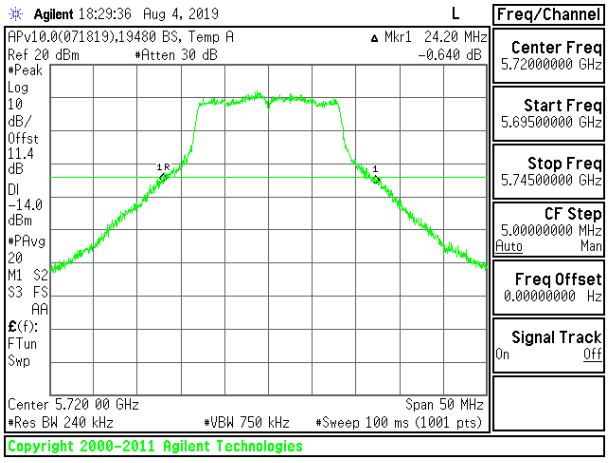


HIGH CHANNEL CHAIN 1

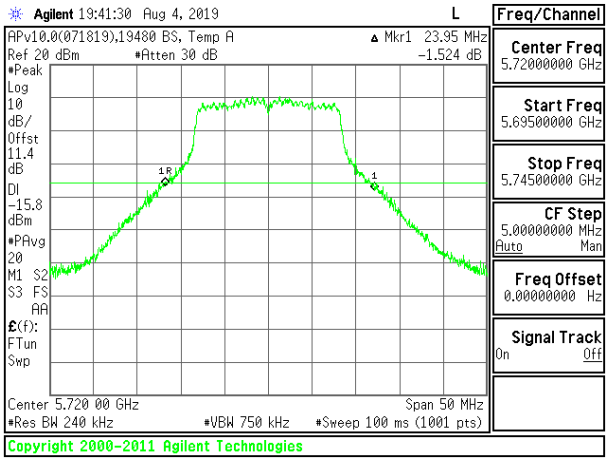


HIGH CHANNEL CHAIN 2

CHANNEL 144



CHANNEL 144 CHAIN 1



CHANNEL 144 CHAIN 2

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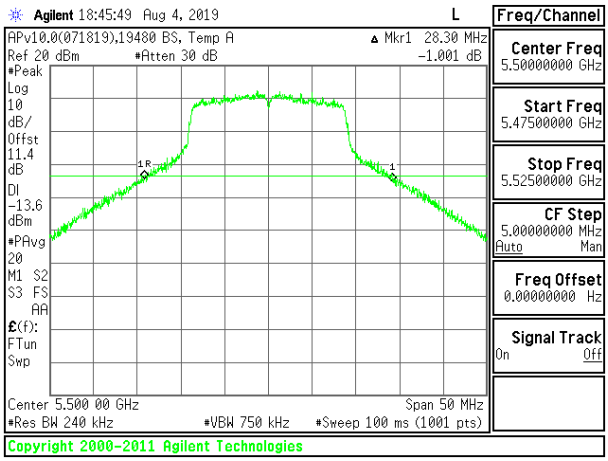
8.2.10. 802.11n HT20 MODE IN THE 5.6 GHz BAND

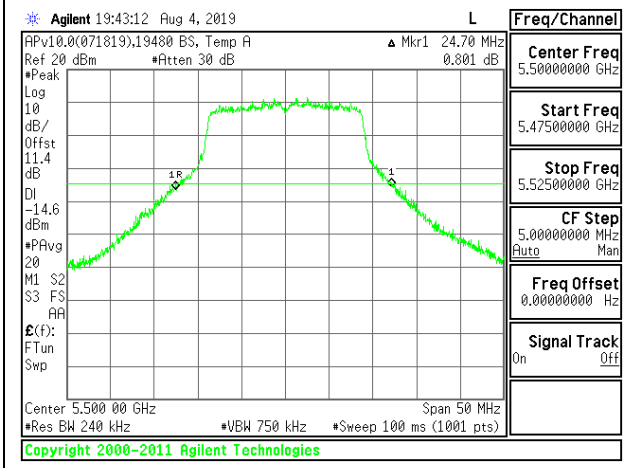
2TX Chain 1 + Chain 2 CDD MODE

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

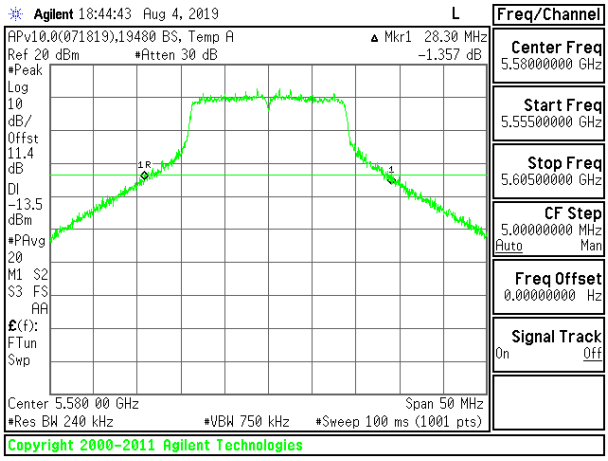


LOW CHANNEL CHAIN 1

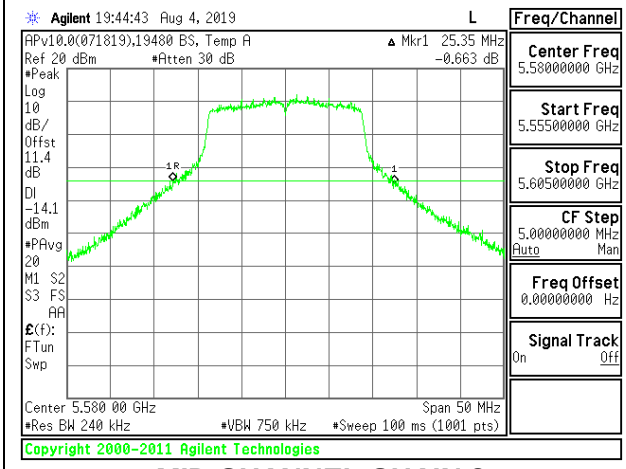


LOW CHANNEL CHAIN 2

MID CHANNEL



MID CHANNEL CHAIN 1



MID CHANNEL CHAIN 2

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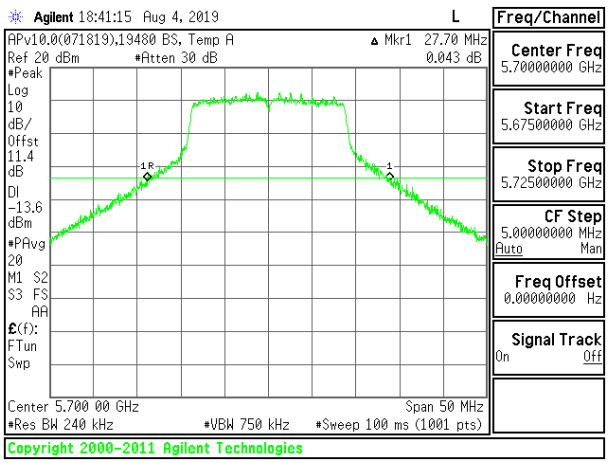
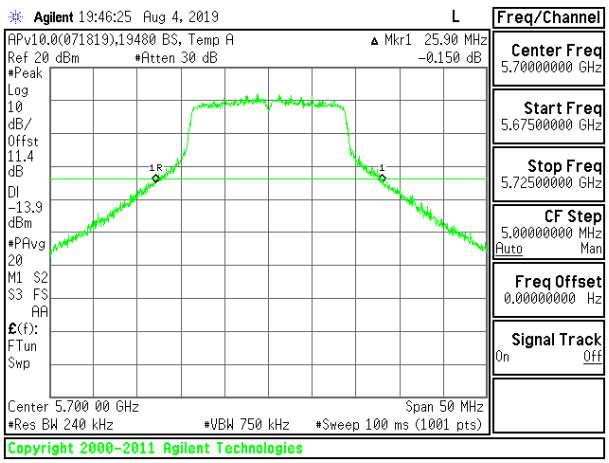
HIGH CHANNEL

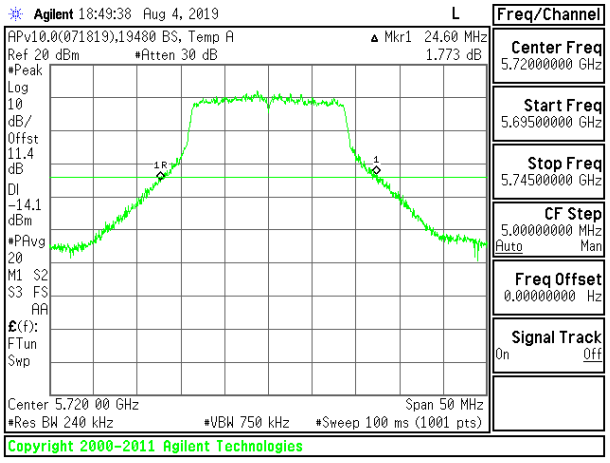


HIGH CHANNEL CHAIN 1

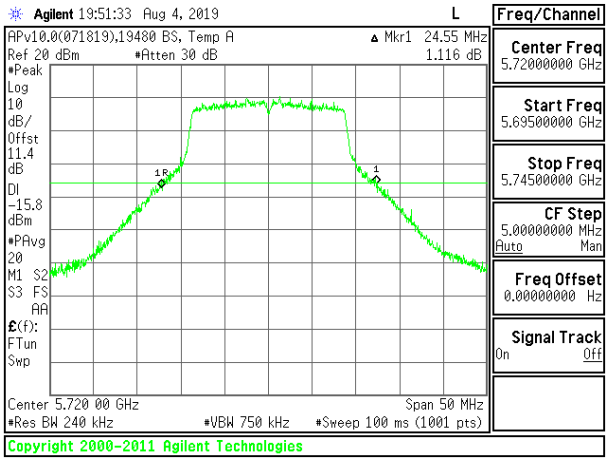


HIGH CHANNEL CHAIN 2

CHANNEL 144



CHANNEL 144 CHAIN 1



CHANNEL 144 CHAIN 2

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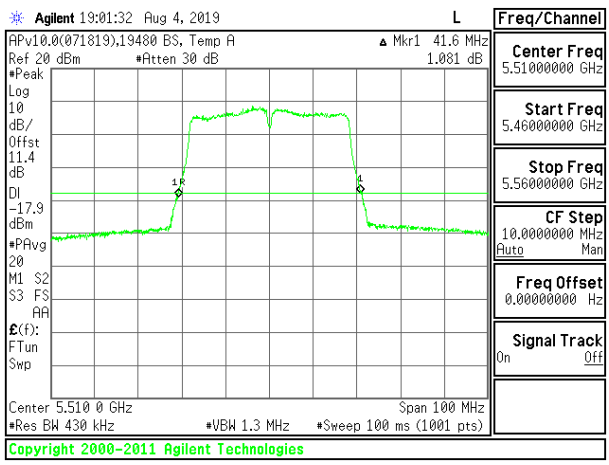
8.2.11. 802.11n HT40 MODE IN THE 5.6 GHz BAND

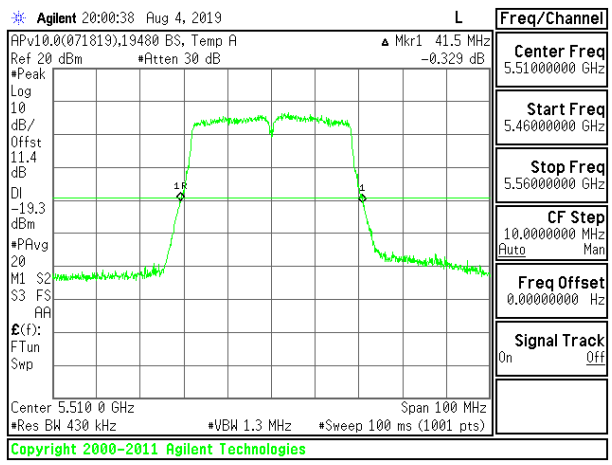
2TX Chain 1 + Chain 2 CDD MODE

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

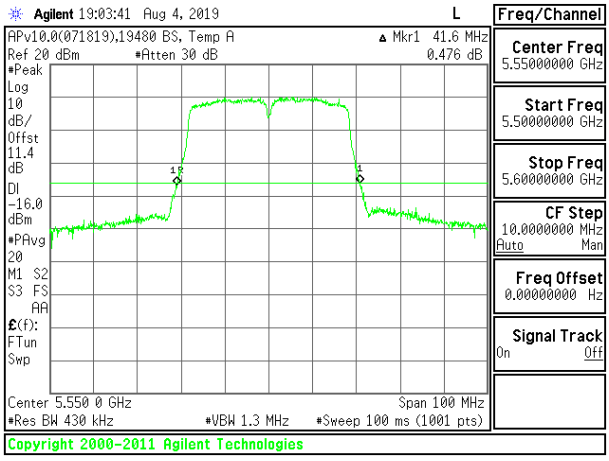


LOW CHANNEL CHAIN 1

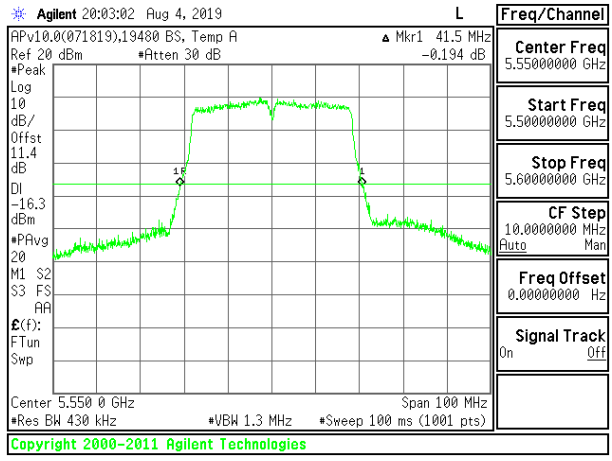


LOW CHANNEL CHAIN 2

MID CHANNEL



MID CHANNEL CHAIN 1



MID CHANNEL CHAIN 2

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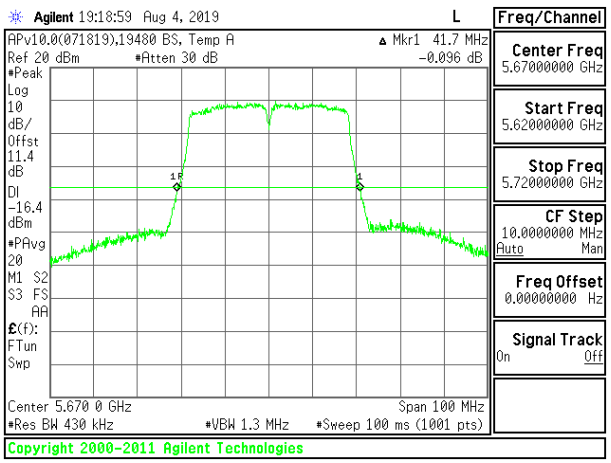
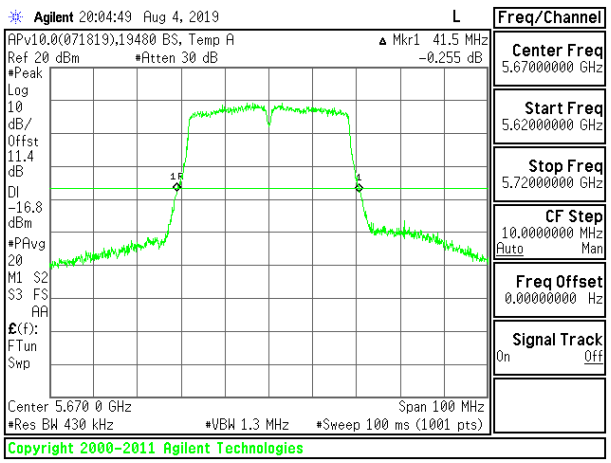
HIGH CHANNEL

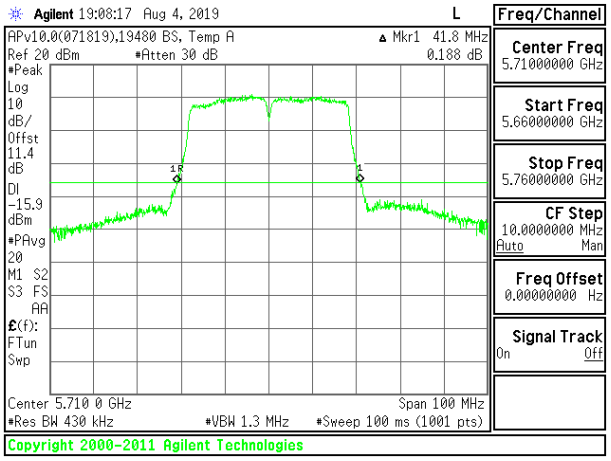


HIGH CHANNEL CHAIN 1

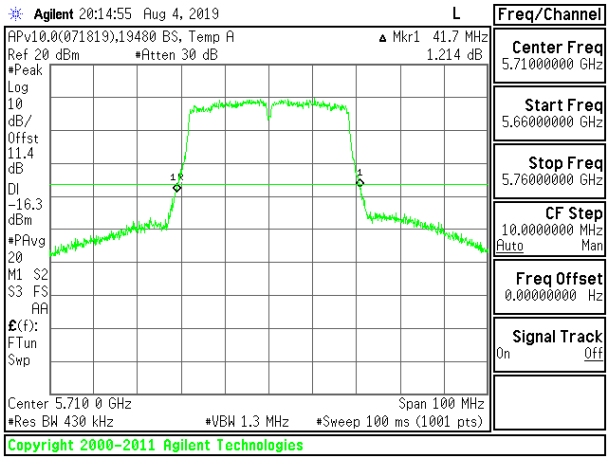


HIGH CHANNEL CHAIN 2

CHANNEL 142



CHANNEL 142 CHAIN 1



CHANNEL 142 CHAIN 2

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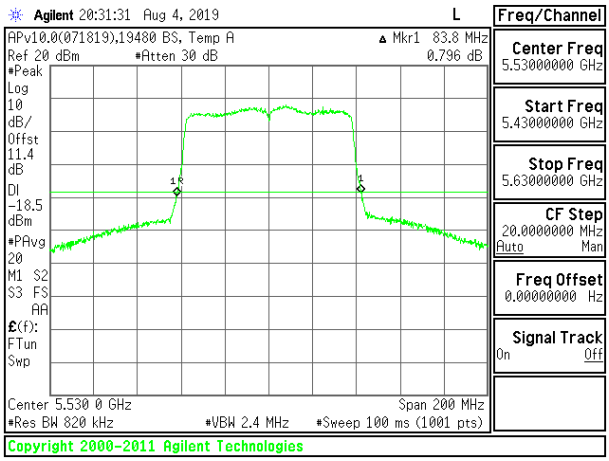
8.2.12. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

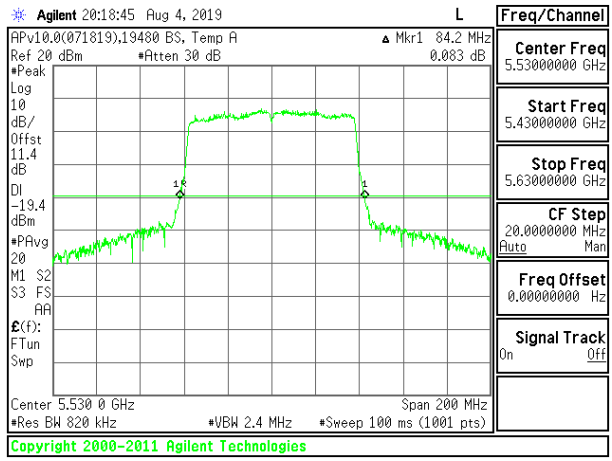
2TX Chain 1 + Chain 2 CDD MODE

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



LOW CHANNEL CHAIN 1



LOW CHANNEL CHAIN 2

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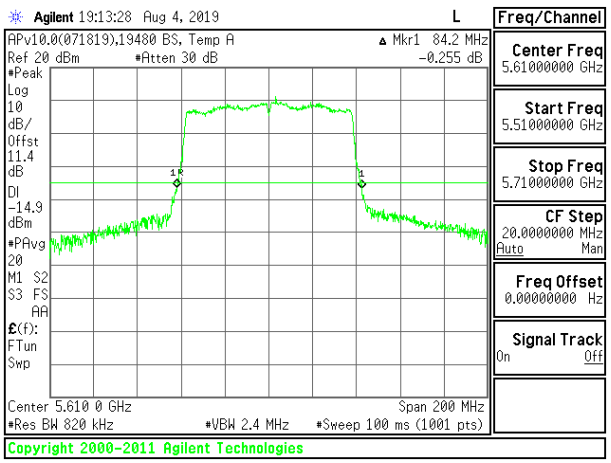
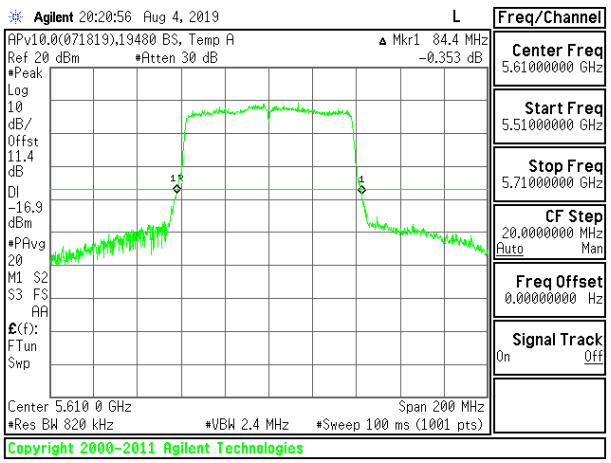
HIGH CHANNEL

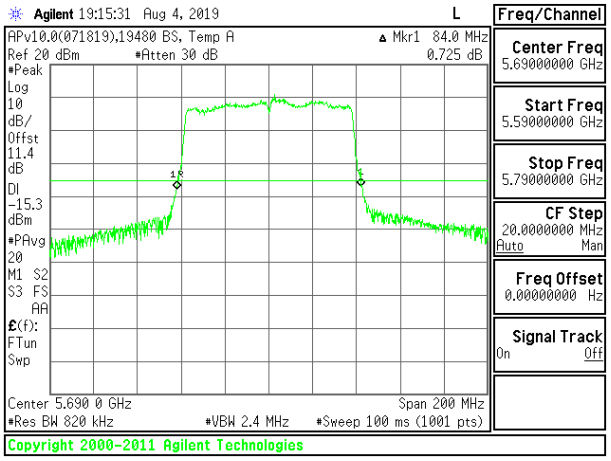


HIGH CHANNEL CHAIN 1

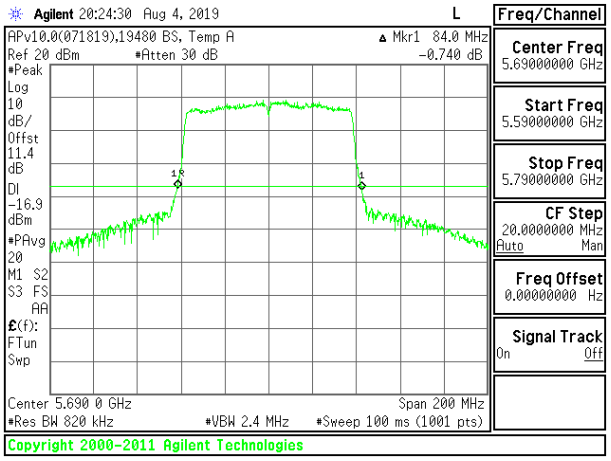


HIGH CHANNEL CHAIN 2

CHANNEL 138



CHANNEL 138 CHAIN 1



CHANNEL 138 CHAIN 2

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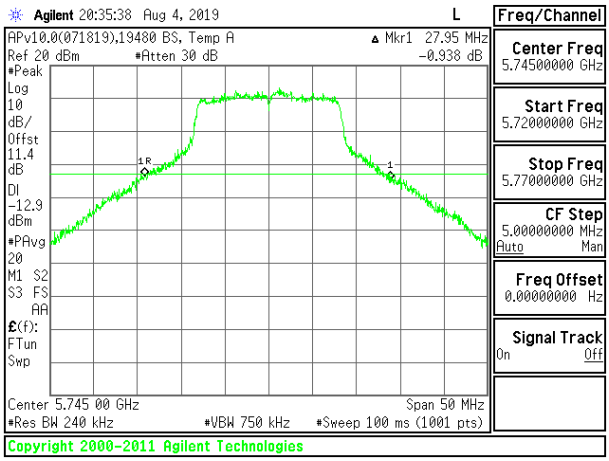
8.2.13. 802.11a MODE IN THE 5.8 GHz BAND

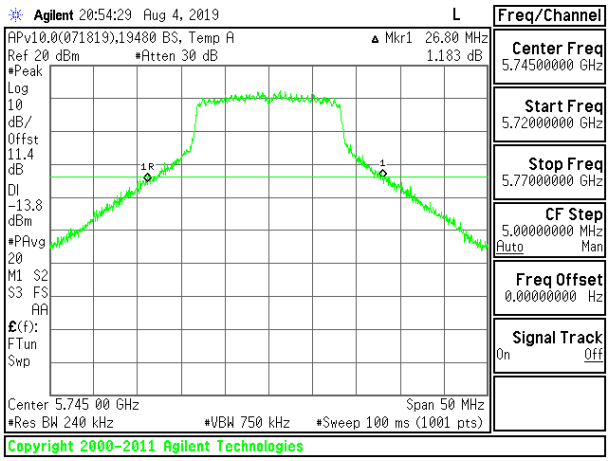
2TX Chain 1 + Chain 2 CDD MODE

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



LOW CHANNEL CHAIN 1



LOW CHANNEL CHAIN 2

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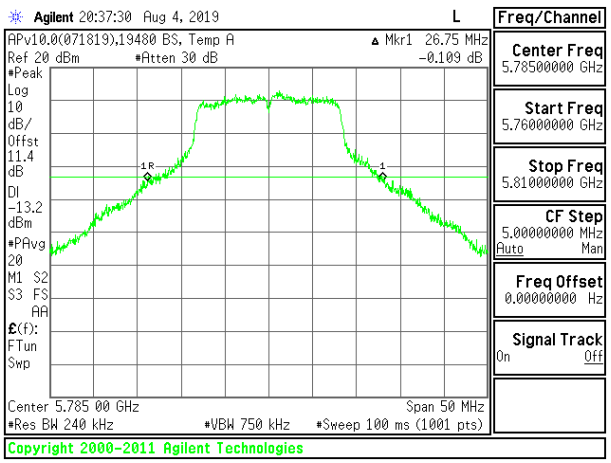
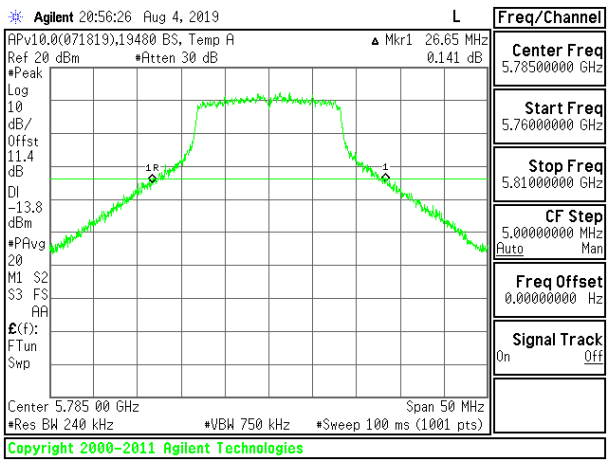
MID CHANNEL

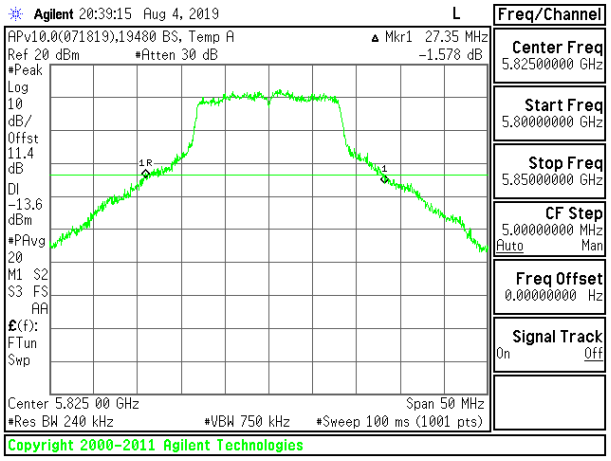


MID CHANNEL CHAIN 1

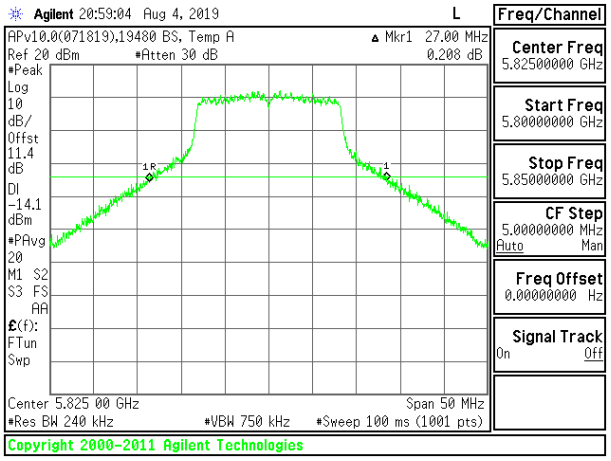


MID CHANNEL CHAIN 2

HIGH CHANNEL



HIGH CHANNEL CHAIN 1



HIGH CHANNEL CHAIN 2

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