



CERTIFICATION TEST REPORT

Report Number. : 12935947-E4V4

Applicant : Microsoft Corporation
One Microsoft Way
Redmond, WA 98052-6399
USA

Model : 1872

FCC ID : C3K1872

IC : 3048A-1872

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

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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	8/29/2019	Initial Issue	--
V2	9/9/2019	Section 5.3: Antenna Gains updated Section 5.5: Statements updated & added Section 8.5: Antenna Gains updated Section 8.5.8: Output power updated Section 9.2: Table Updated Section 11: Statement added, Setup photos Removed	Henry Lau
V3	9/13/2019	Section 6: Statement updated Section 8.5.10, 11, 12, 13: Note added	Henry Lau
V4	9/16/2019	Section 8.5.10, 11, 12, 13: Updated added note	Eric Yu

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Microsoft Corporation
One Microsoft Way
Redmond, WA 98052-6399
USA

EUT DESCRIPTION: Portable Computing Device

MODEL: 1872

SERIAL NUMBER: 006404792757(Conducted)
013880192757(Conducted)
013885392757(Radiated)
014813492757(Radiated)

DATE TESTED: July 17, 2019 –August 15, 2019

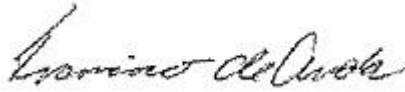
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart E	Complies
ISED RSS-247 Issue 2	Complies
ISED RSS-GEN Issue 5	Complies

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 Road
☐ 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

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)
 $36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$

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.
 $36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$

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%.

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, 2TX			
5180-5240	802.11a	12.70	18.62
5180-5240	802.11n HT20	16.18	41.50
5190-5230	802.11n HT40	17.58	57.28
5210	802.11ac VHT80	17.55	56.89
5250	802.11ac VHT160	16.93	49.32

5.3 GHz BAND

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.3 GHz band, 2TX			
5260 - 5320	802.11a	17.57	57.15
5260 - 5320	802.11n HT20	20.99	125.60
5270 - 5310	802.11n HT40	23.01	199.99
5290	802.11ac VHT80	17.44	55.46

5.6 GHz BAND

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.6 GHz band, 2TX			
5500-5720	802.11a	17.77	59.84
5500-5720	802.11n HT20	21.21	132.13
5510-5710	802.11n HT40	21.50	141.25
5530-5690	802.11ac VHT80	21.73	148.94
5570	802.11ac VHT160	15.99	39.72

5.8 GHz BAND

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.8 GHz band, 2TX			
5745-5825	802.11a	21.50	141.25
5745-5825	802.11n HT20	21.50	141.25
5755-5795	802.11n HT40	21.50	141.25
5775	802.11ac VHT80	21.94	156.31

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

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

Frequency (GHz)	Peak Antenna Gain (dBi)	
	Chain 0	Chain 1
5150-5250	6.0	3.0
5250-5350	7.8	3.5
5500-5700	8.0	4.0
5725-5850	8.3	4.6

NOTE:

Antenna 1 = Chain 0

Antenna 2 = Chain 1

5.4. SOFTWARE AND FIRMWARE

The operating system installed on the EUT is MTEOS 1.652.0.

The Wifi Driver installed on the EUT is version 99.0.43.8.

The test utility software used during testing was version 11.1916.0-09531

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 30MHz, 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. This includes 802.11ax modes.

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.

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

The EUT has one intended orientations, X; therefore, all final radiated testing was performed with the EUT in X orientation.

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

802.11a mode: 6 Mbps

802.11n HT20mode: HT8

802.11n HT40mode: HT8

802.11ac VHT80 mode: VHT0

802.11ac VHT160 mode: VHT0

EUT does not employ CDD for HT, VHT and HE rates. CDD is supported for legacy modes only.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC DC Adapter	Microsoft	1706	0C130J02T8396	DoC
USB Mouse	Microsoft	1113	X821908-002	DoC
USB Type C to Audio Jack	SONY	A1-0231	N/A	DoC
Earphone	SONY	AG1100	N/A	DoC
Earphone	SONY	AG1100	N/A	DoC

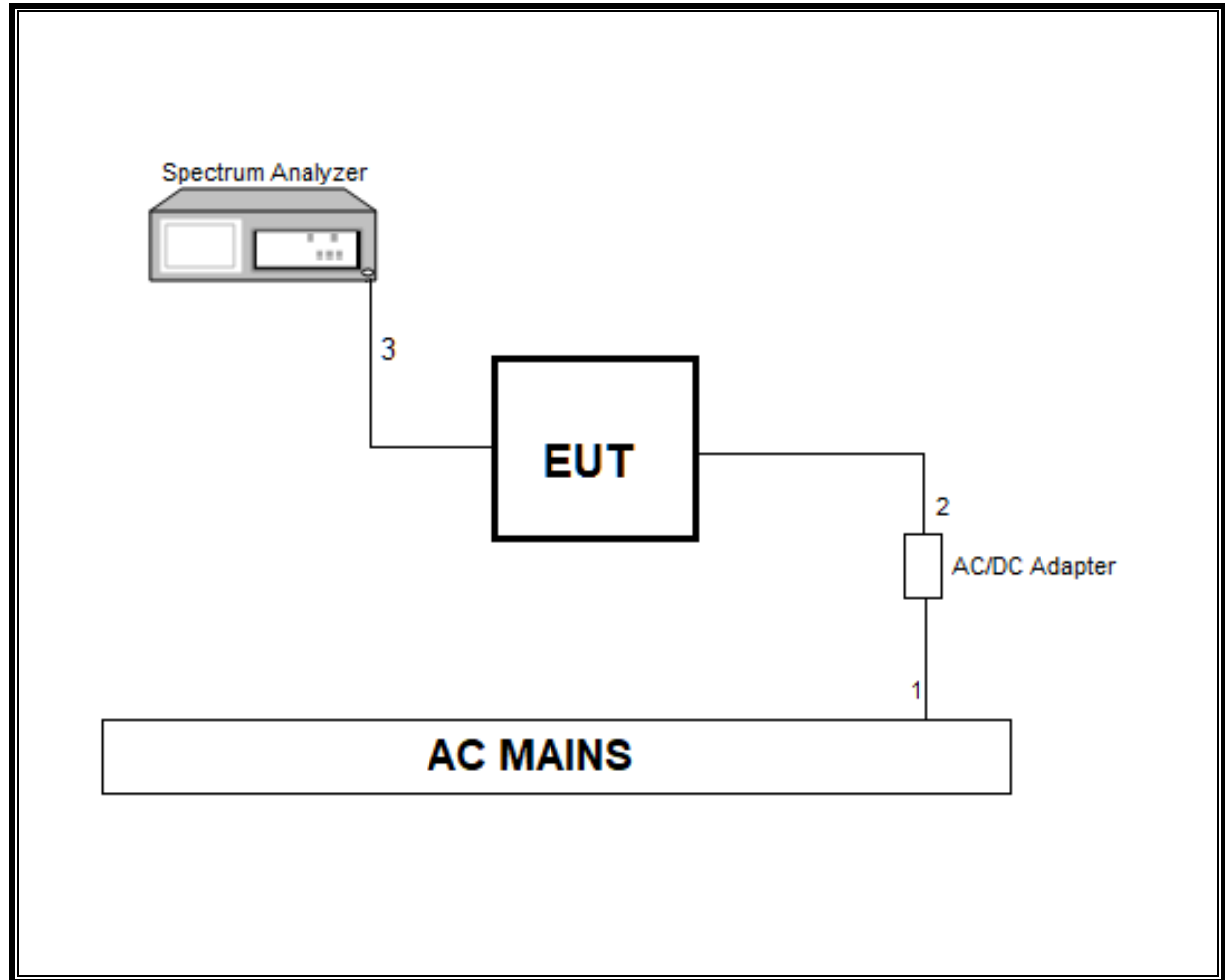
I/O CABLES (CONDUCTED TEST)

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 Adaptor
2	DC	1	DC	Shielded	1	to Laptop, to EUT
3	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 EUT
3	USB	1	Type A	Shielded	1.5	EUT TO Mouse
4	USB	1	Type C	Shielded	0.1	EUT to earphone AUX
5	earphone	1	3.5mm	Un-shielded	1	EUT to earphone

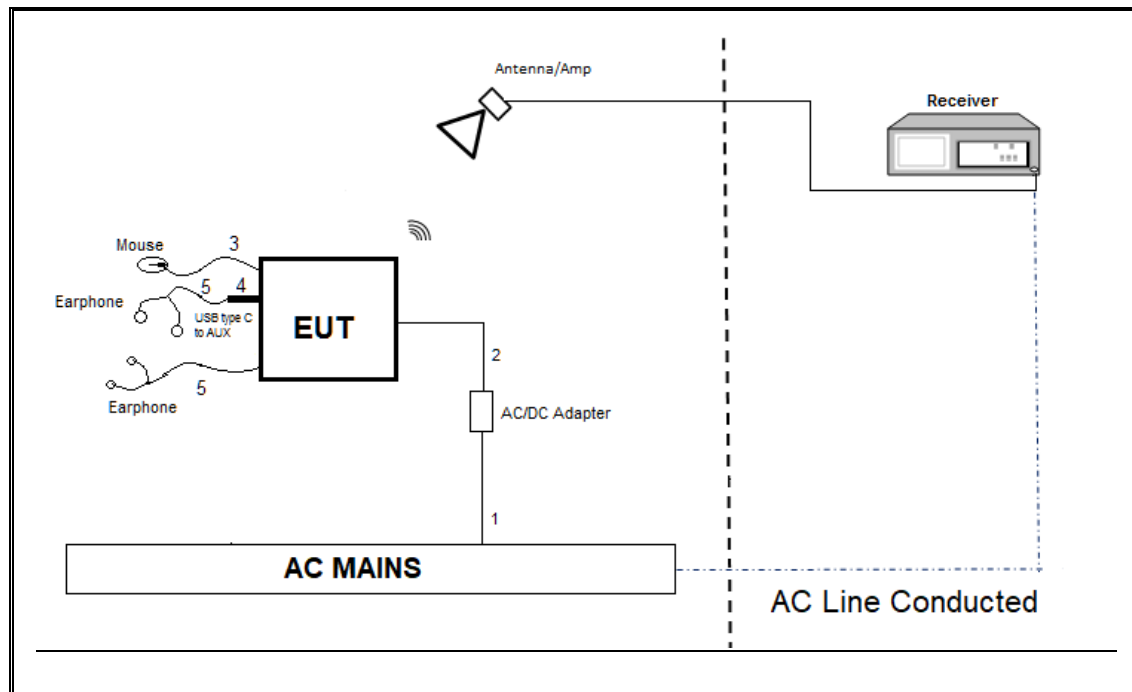
CONDUCTED TEST SETUP DIAGRAM



TEST SETUP

For conducted tests, 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)

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
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
Amplifier, 9KHz to 1GHz, 32dB	Sonoma Instrument	310	PRE0186650	12/13/2019	12/13/2018
Hybrid Antenna, 30MHz to 3GHz	Sunol Sciences Corp	JB3	PRE0184971	11/13/2019	11/13/2018
Amplifier, 9kHz to 1GHz, 32 dB	Sonoma Instrument	310	PRE0180175	06/29/2020	06/29/2019
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T120	07/10/2020	07/10/2019
Amplifier, 1 to18GHz	MITEQ	AFS42-00101800-25-S-42	T1568	06/18/2020	06/18/2019
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T862	06/05/2020	06/05/2019
Amplifier, 1 to18GHz	MITEQ	AFS42-00101800-25-S-42	PRE018078	08/01/2019	08/01/2018
Antenna, Horn 18 to 26.5GHz	ARA	MWH-1826/B	PRE0182188	08/29/2019	08/29/2018
Rf Amplifier, 18-26.5GHz, 60dB gain	Amplical	AMP18G26.5-60	PRE0181238	05/01/2020	05/01/2019
Antenna, Horn 26 to 40GHz	ARA	MWH-2640	T90	09/11/2019	09/11/2018
Pre-Amp, 26-40GHz	Amplical	AMP26G40-60	PRE0181238	05/01/2020	05/01/2019
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
EMI Test Receiver	Rohde & Schwarz	ESW44	PRE0179367	05/16/2020	05/16/2019
EMI Test Receiver	Rohde & Schwarz	ESW44	PRE0179372	02/16/2020	02/16/2019
EMI Test Receiver	Rohde & Schwarz	ESW44	PRE0179367	05/16/2020	05/16/2019
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T917	01/24/2020	01/24/2019
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T908	01/23/2020	01/23/2019
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 & Jan 11, 2019		
Antenna Port Software	UL	UL RF	Ver 9.7, May 7, 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 789033 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	3.977	4.033	0.986	98.61%	0.00	0.010
802.11n HT20	3.985	4.022	0.991	99.08%	0.00	0.010
802.11n HT40	3.973	4.015	0.990	98.95%	0.00	0.010
802.11ac VHT80	3.973	4.015	0.990	98.95%	0.00	0.010
802.11ac VHT160	2.790	2.832	0.985	98.52%	0.00	0.010

Results

DUTY CYCLE PLOTS



8.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

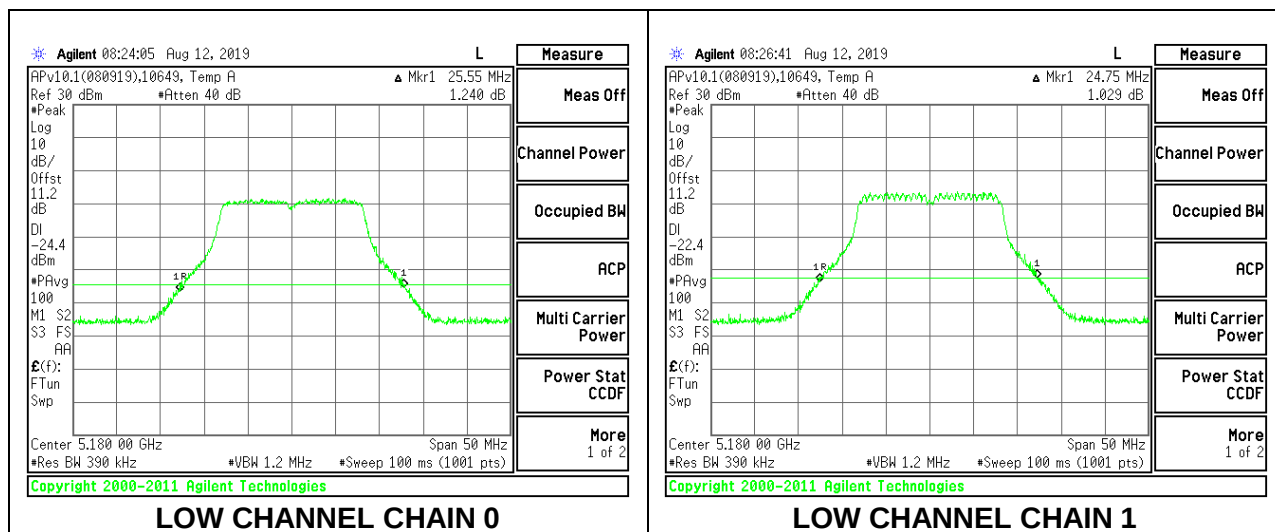
RESULTS

8.2.1. 802.11a MODE IN THE 5.2 GHz BAND

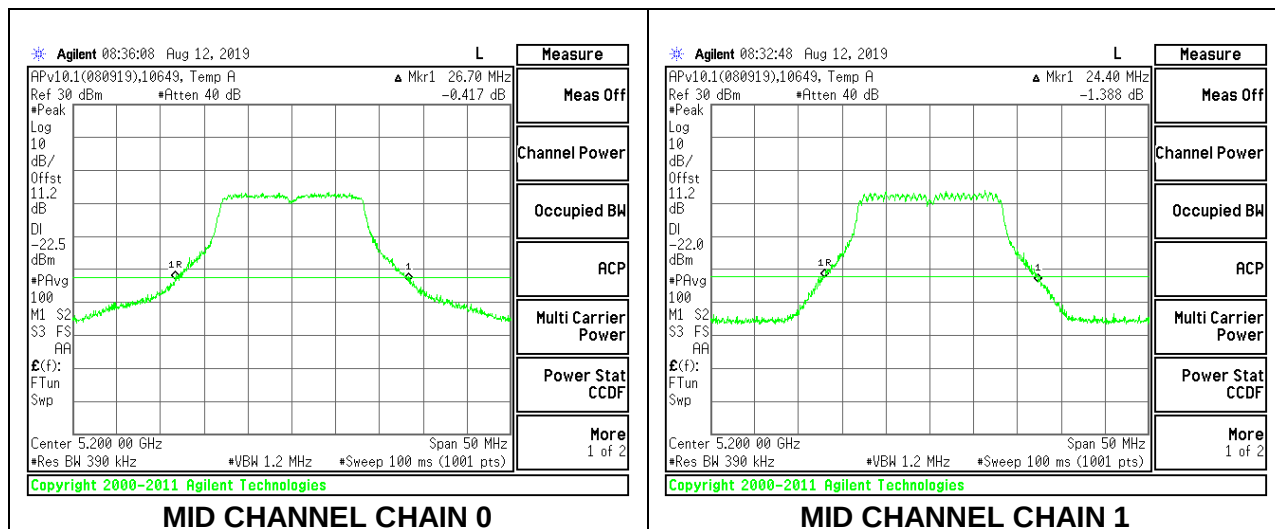
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5180	25.55	24.75
Mid	5200	26.70	24.40
High	5240	25.45	25.60

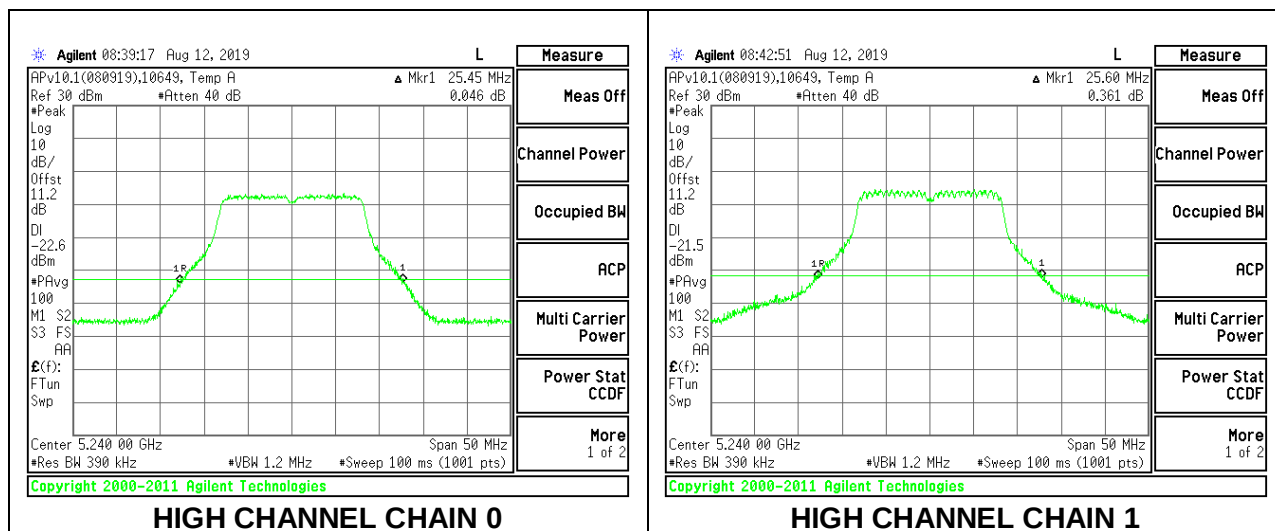
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

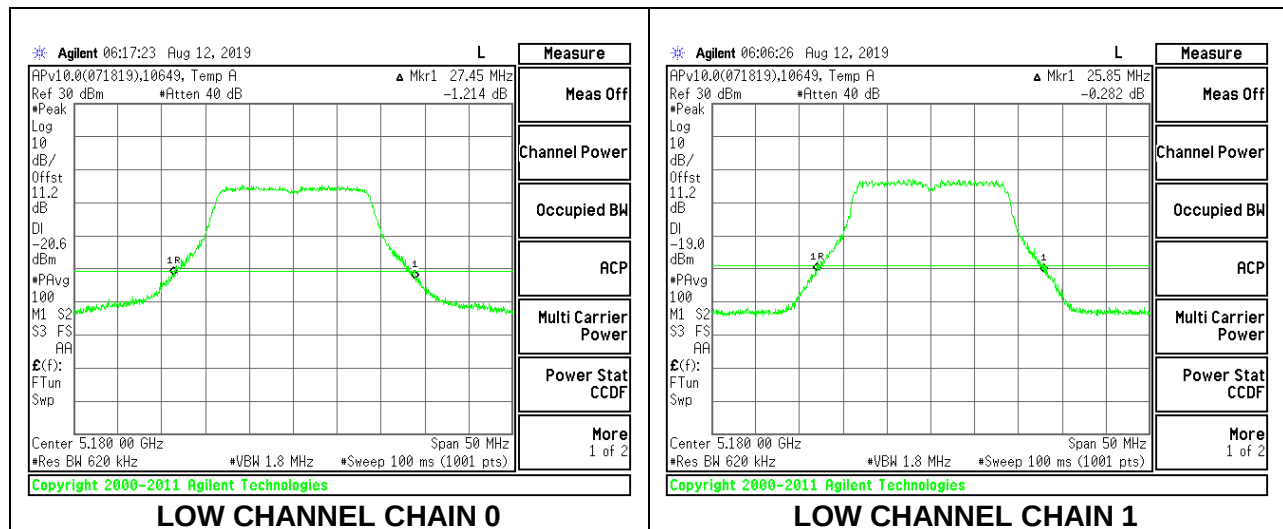


8.2.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

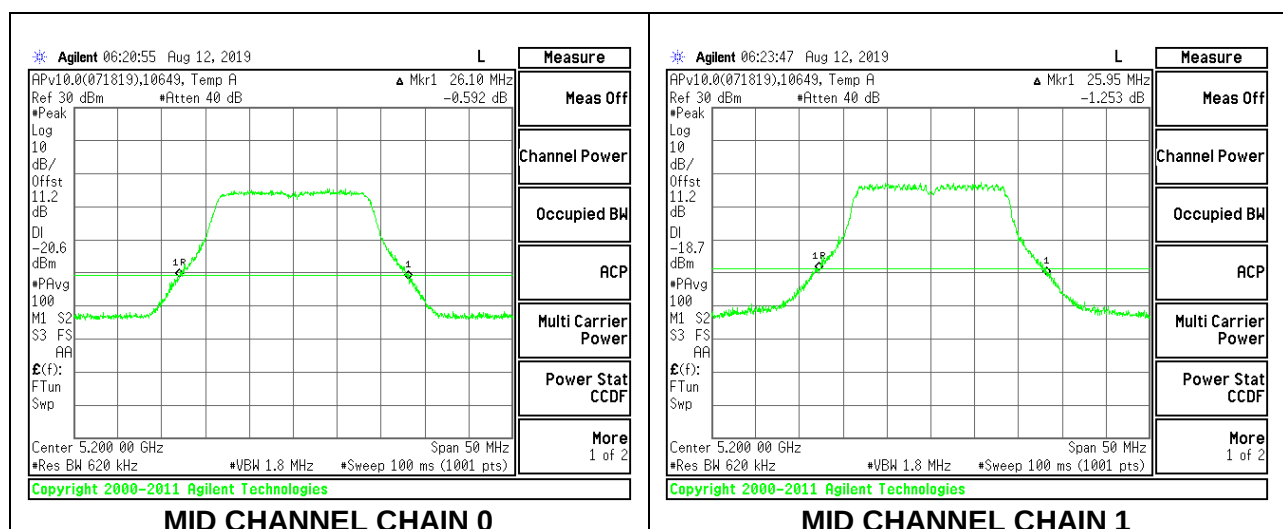
2TX Antenna 1 + Antenna 2 SDM MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5180	27.45	25.85
Mid	5200	26.10	25.95
High	5240	25.95	25.35

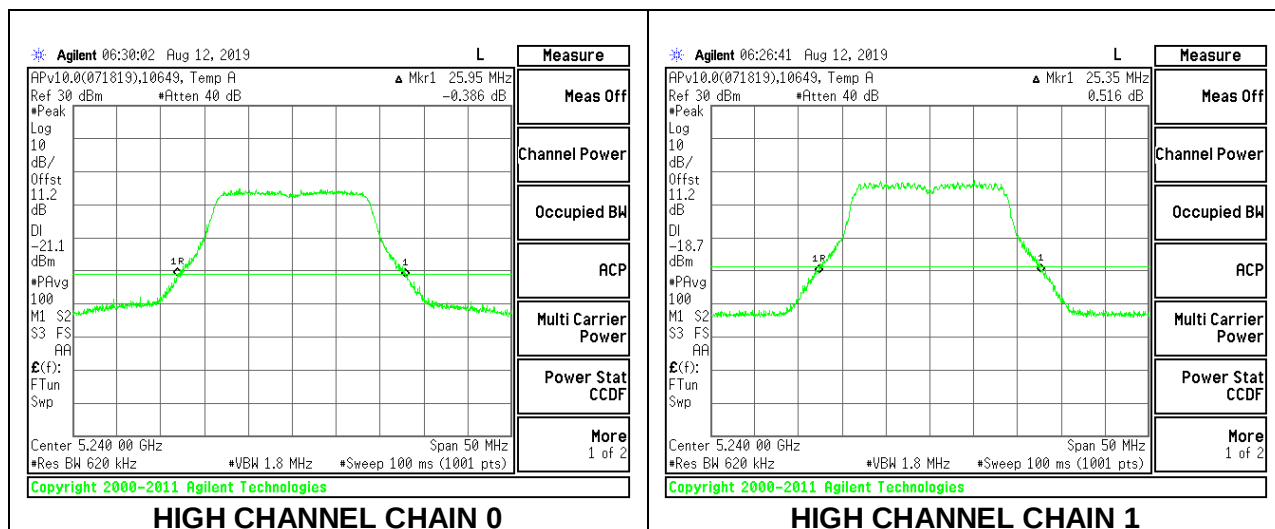
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

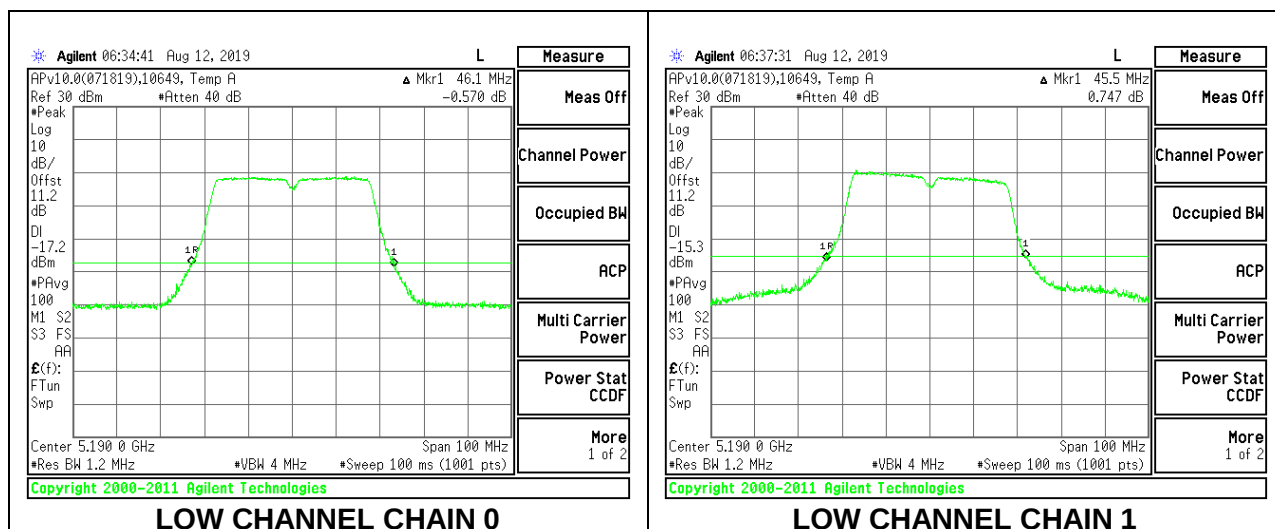


8.2.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

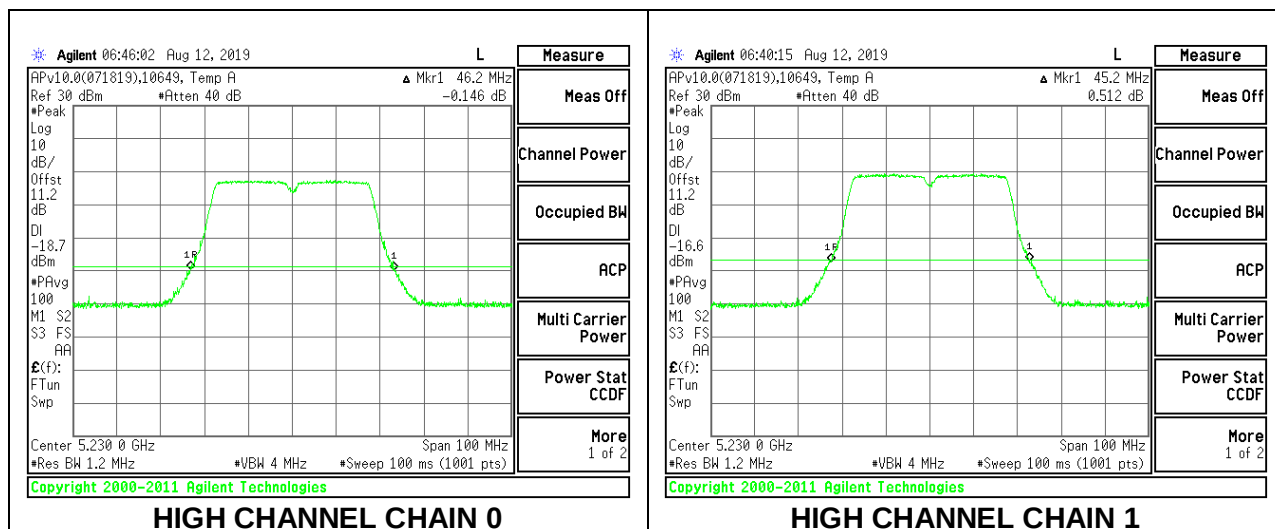
2TX Antenna 1 + Antenna 2 SDM MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5190	46.10	45.50
High	5230	46.20	45.20

LOW CHANNEL



HIGH CHANNEL

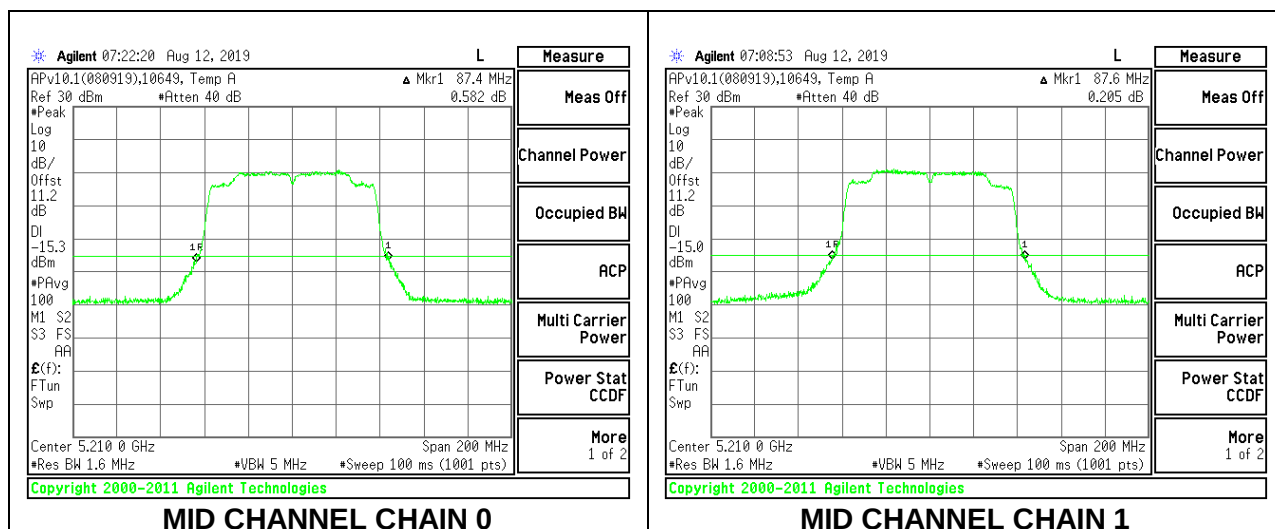


8.2.4. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

2TX Antenna 1 + Antenna 2 SDM MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Mid	5210	87.40	87.60

MID CHANNEL

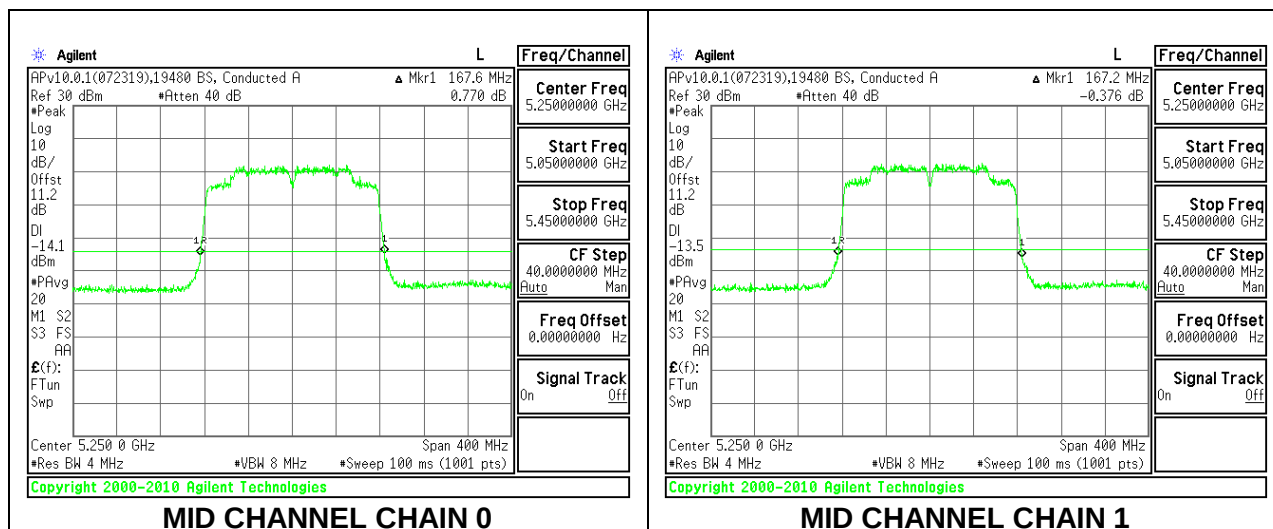


8.2.5. 802.11ac VHT160 MODE IN THE 5.2 GHz BAND

2TX Antenna 1 + Antenna 2 SDM MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Mid	5250	167.60	167.20

MID CHANNEL

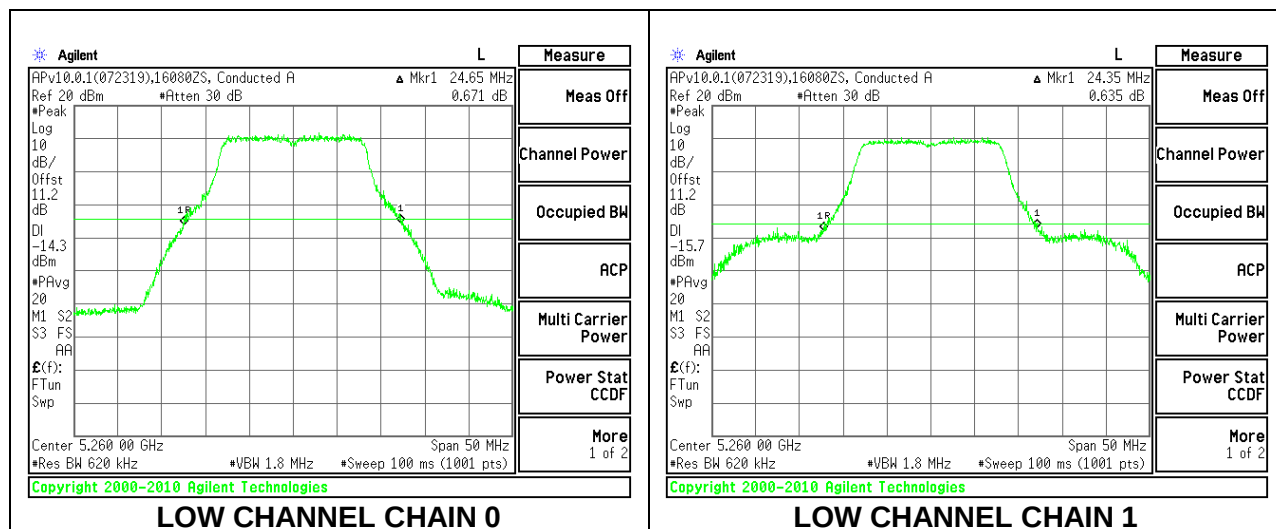


8.2.6. 802.11a MODE IN THE 5.3 GHz BAND

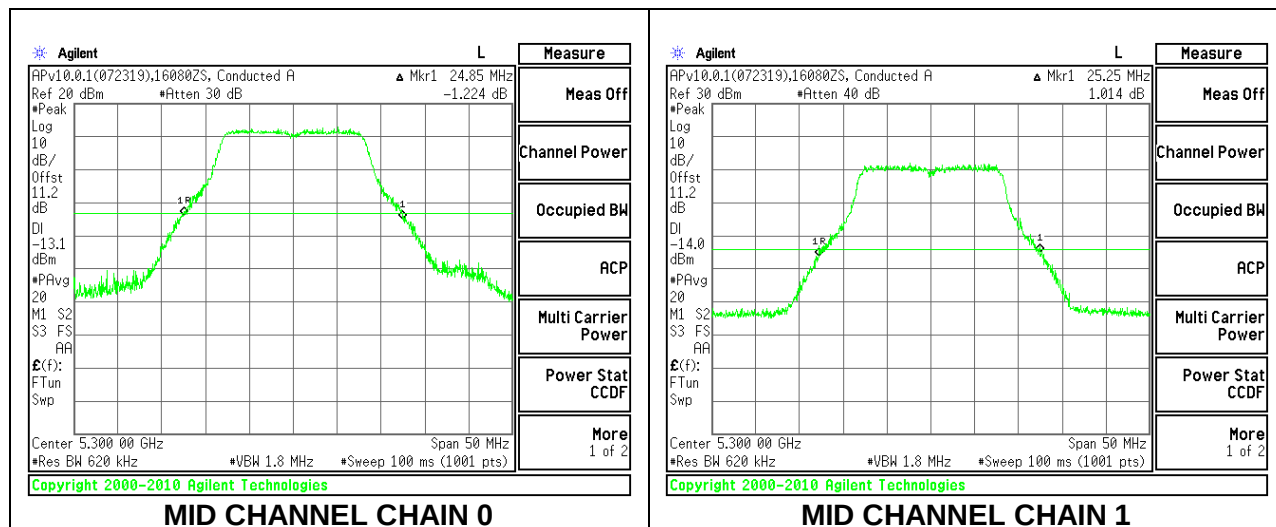
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5260	24.65	24.35
Mid	5300	24.85	25.25
High	5320	25.40	26.15

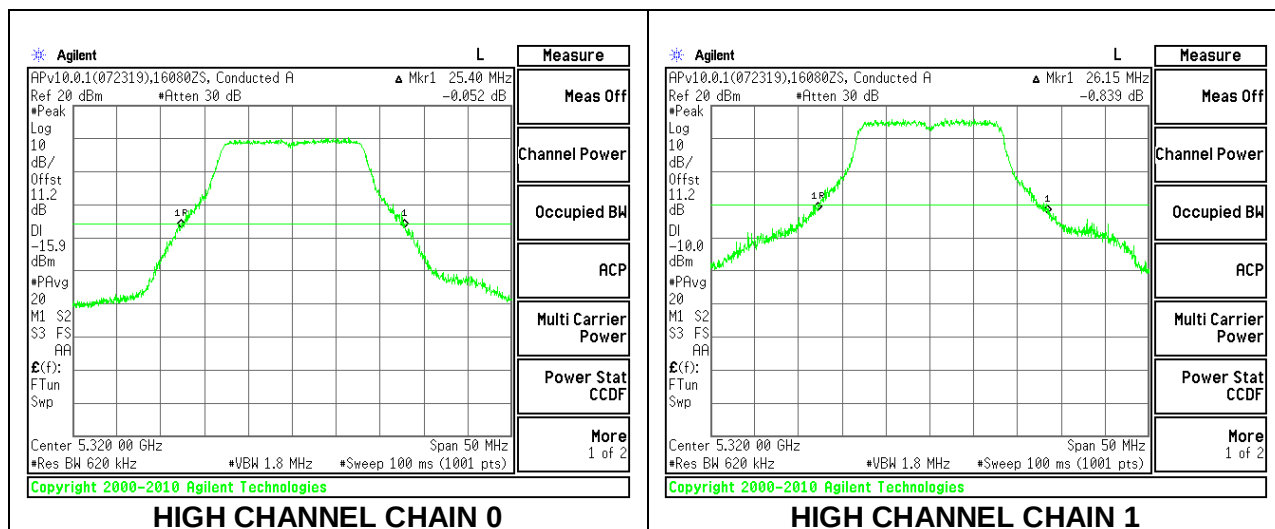
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

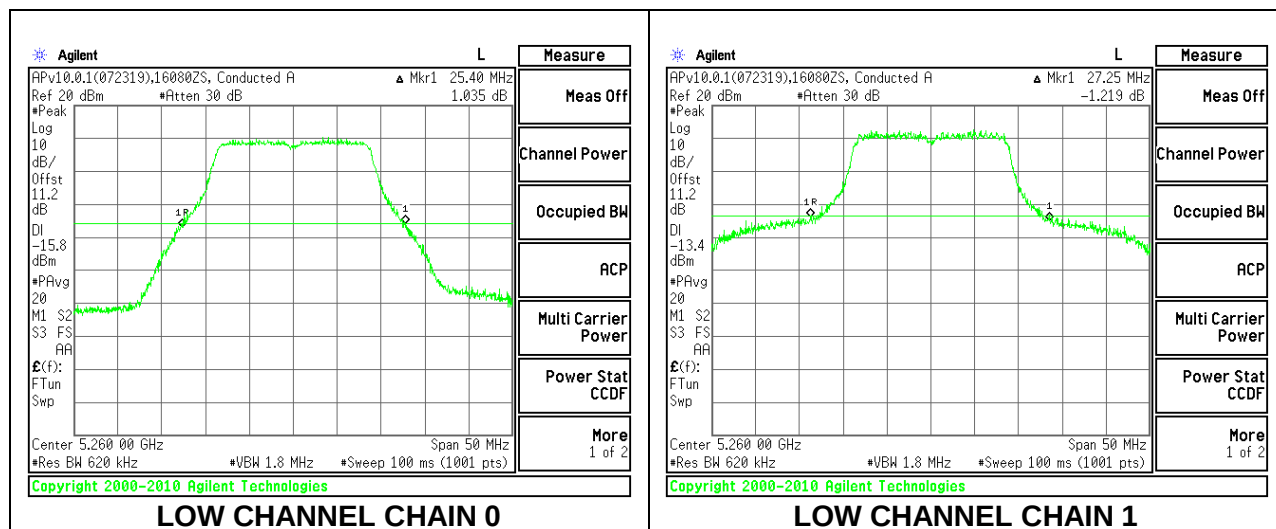


8.2.7. 802.11n HT20 MODE IN THE 5.3 GHz BAND

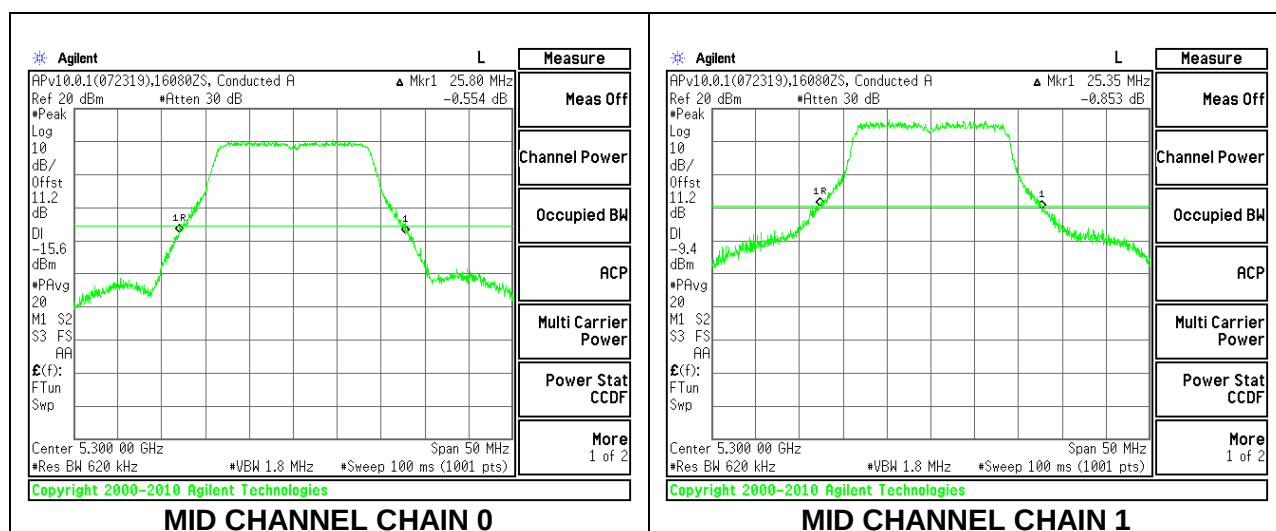
2TX Antenna 1 + Antenna 2 SDM MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5260	25.40	27.25
Mid	5300	25.80	25.35
High	5320	25.80	24.40

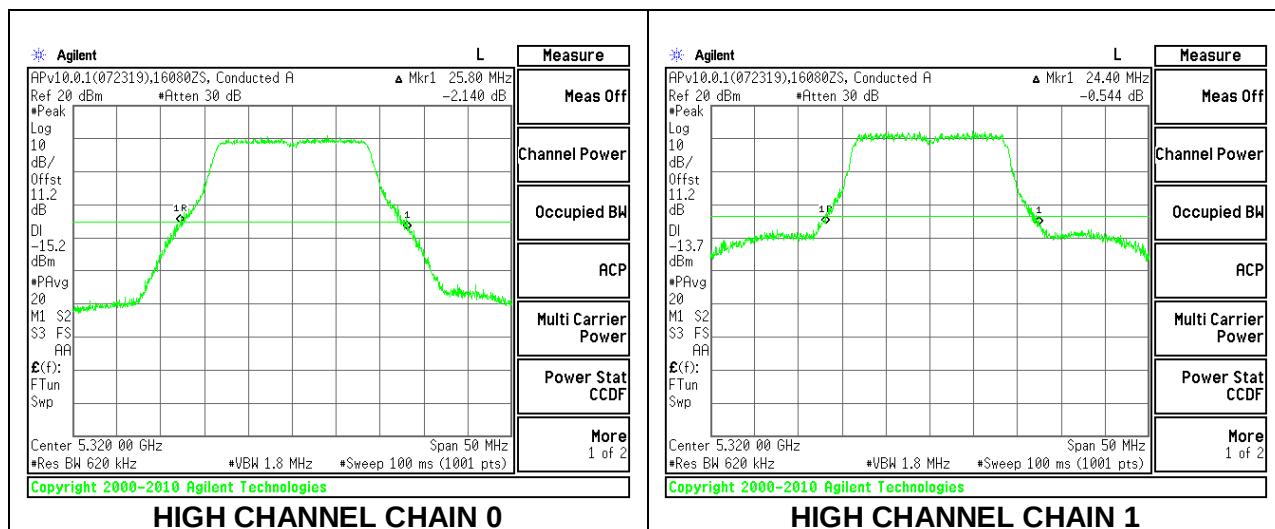
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

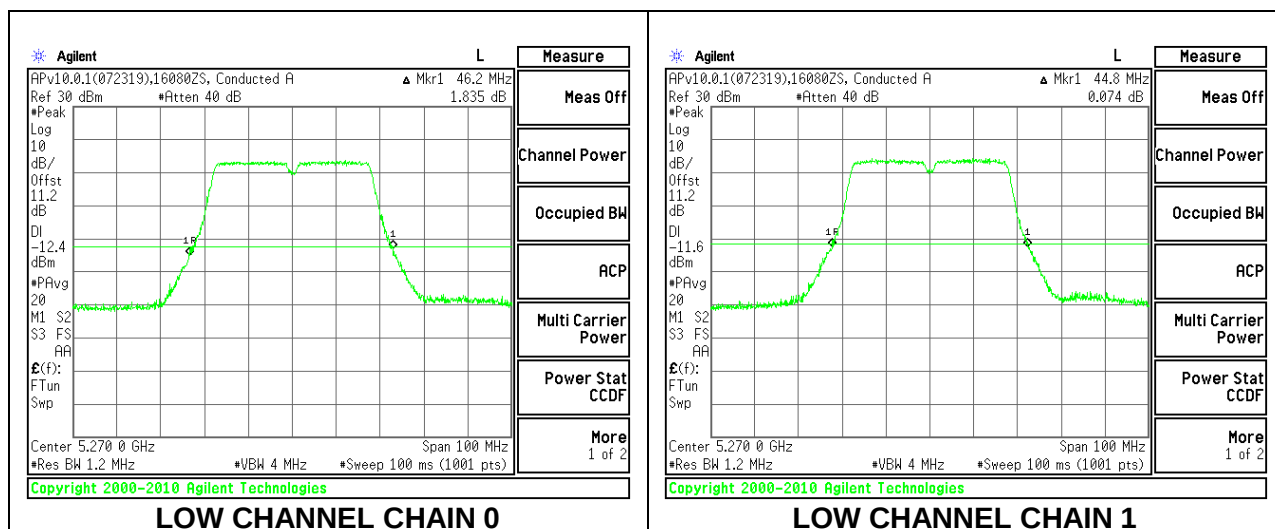


8.2.8. 802.11n HT40 MODE IN THE 5.3 GHz BAND

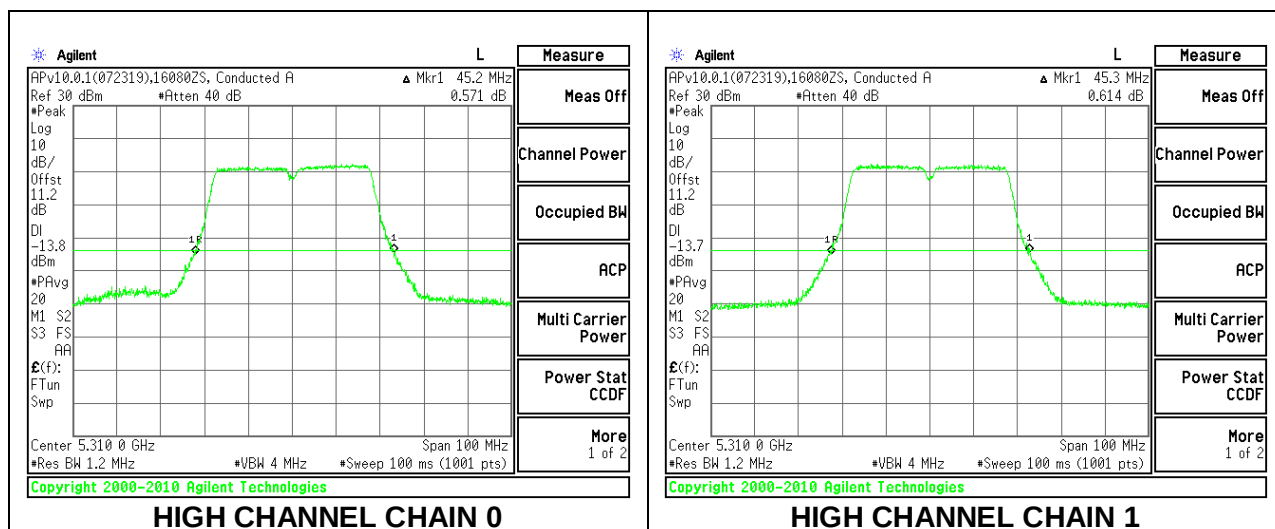
2TX Antenna 1 + Antenna 2 SDM MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5270	46.20	44.80
High	5310	45.20	45.30

LOW CHANNEL



HIGH CHANNEL

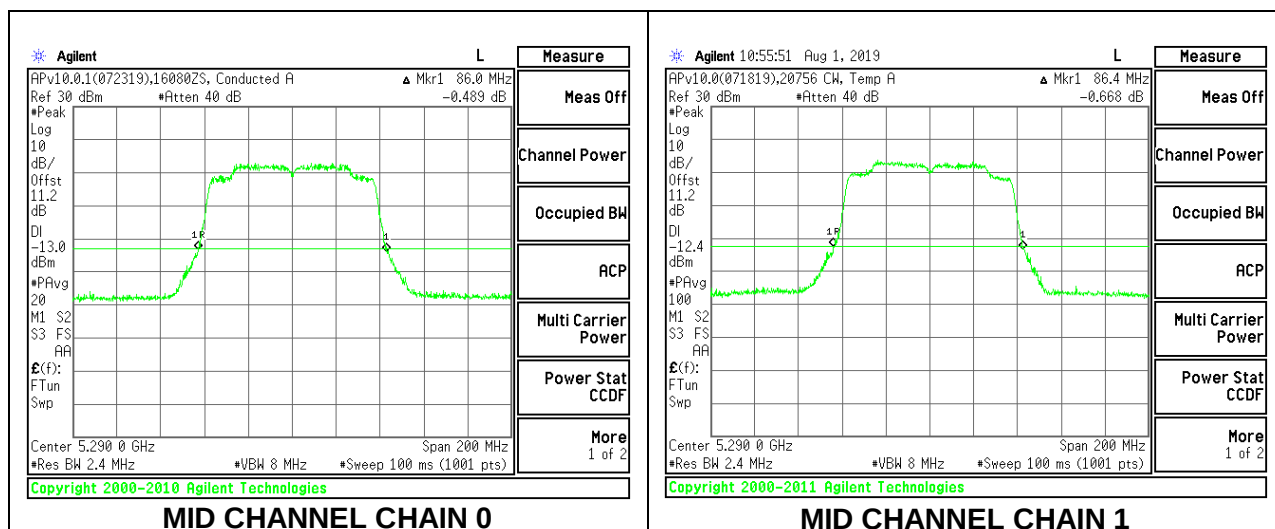


8.2.9. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

2TX Antenna 1 + Antenna 2 SDM MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Mid	5290	86.00	86.40

MID CHANNEL

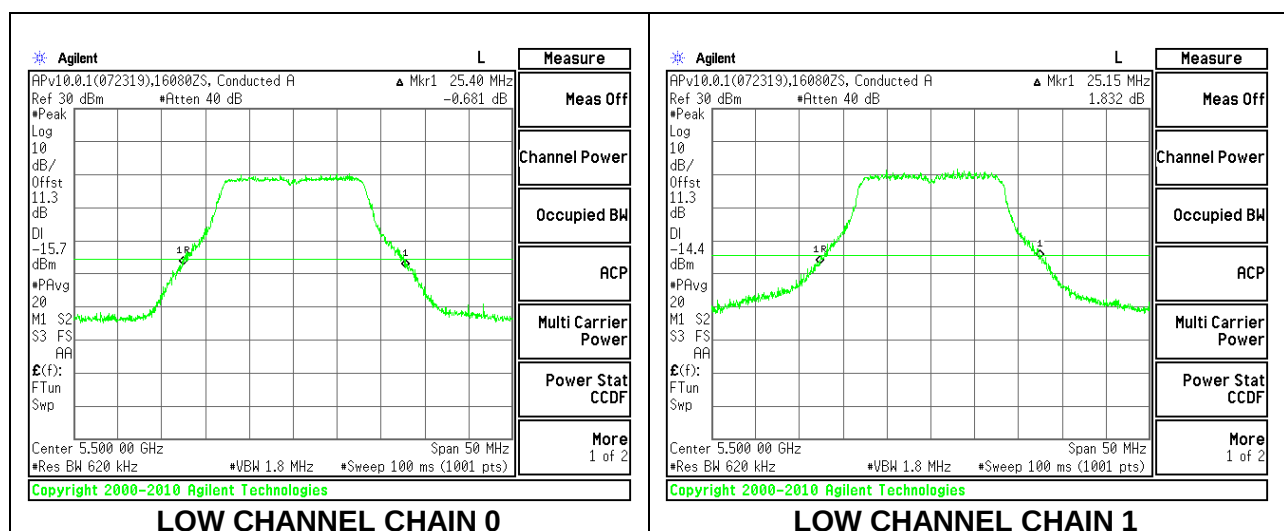


8.2.10. 802.11a MODE IN THE 5.6 GHz BAND

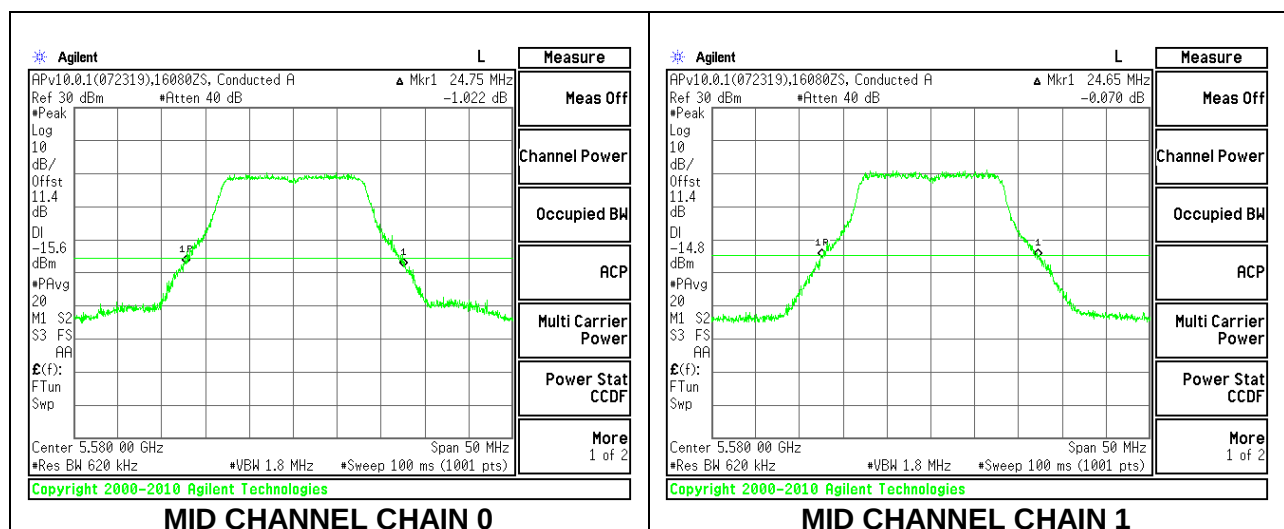
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5500	25.40	25.15
Mid	5580	24.75	24.65
High	5700	25.30	25.05
144	5720	25.20	24.70

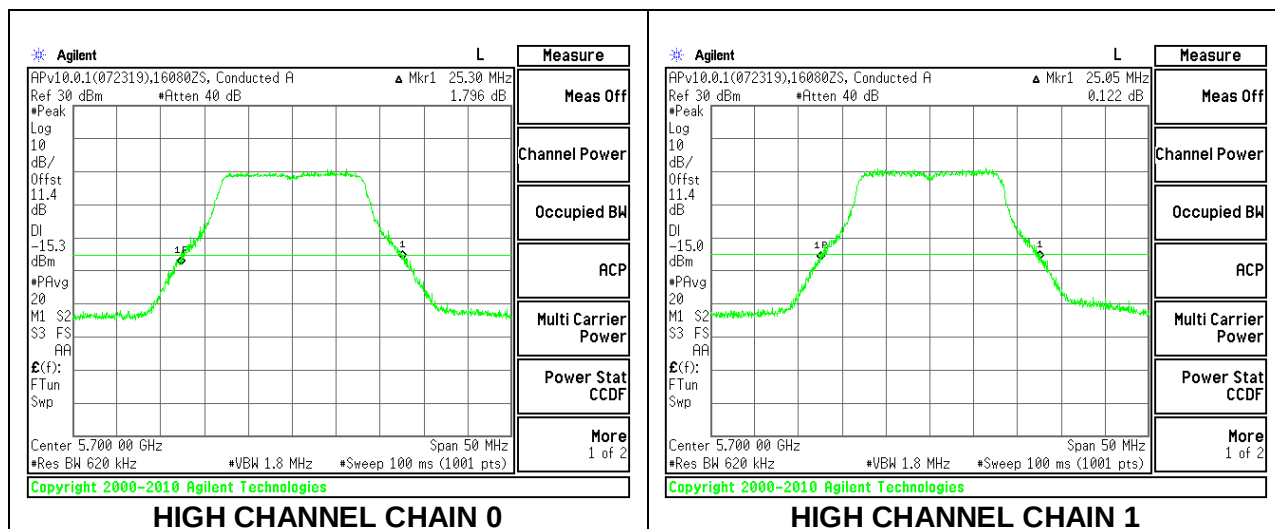
LOW CHANNEL



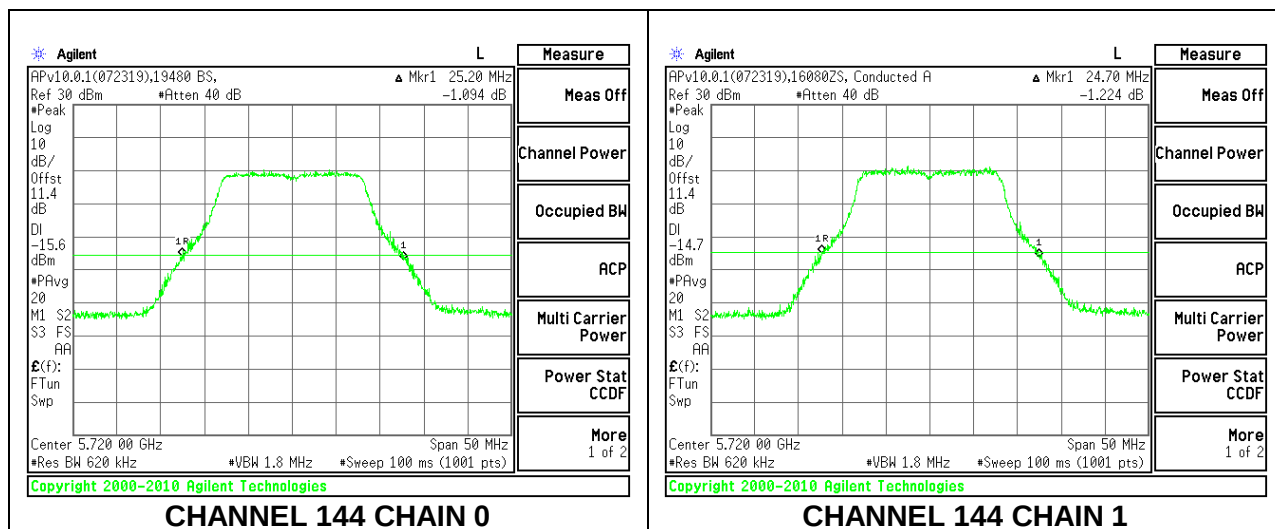
MID CHANNEL



HIGH CHANNEL



CHANNEL 144

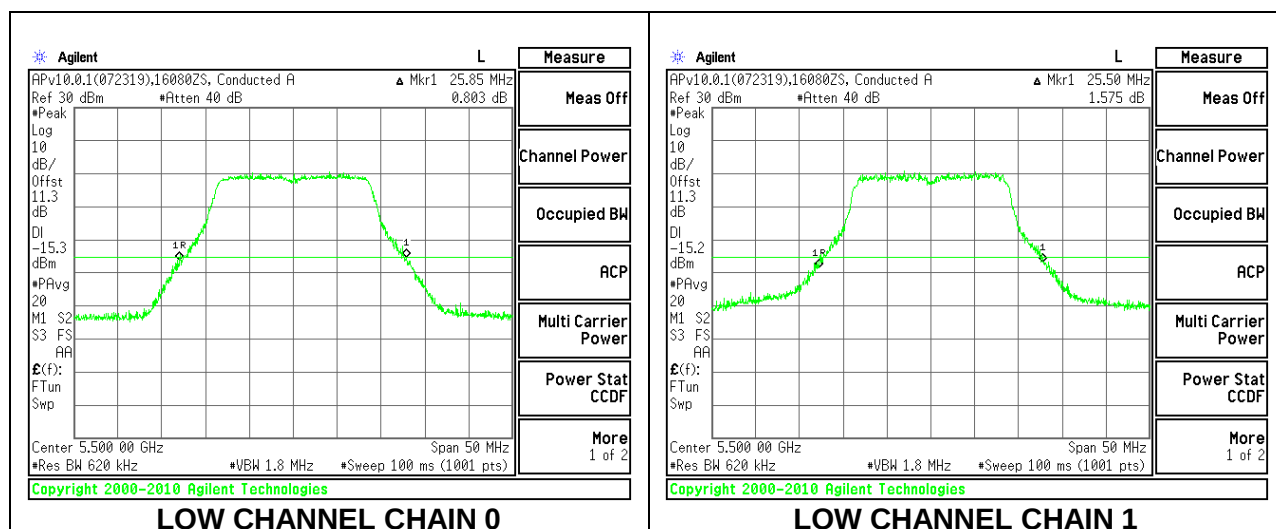


8.2.11. 802.11n HT20 MODE IN THE 5.6 GHz BAND

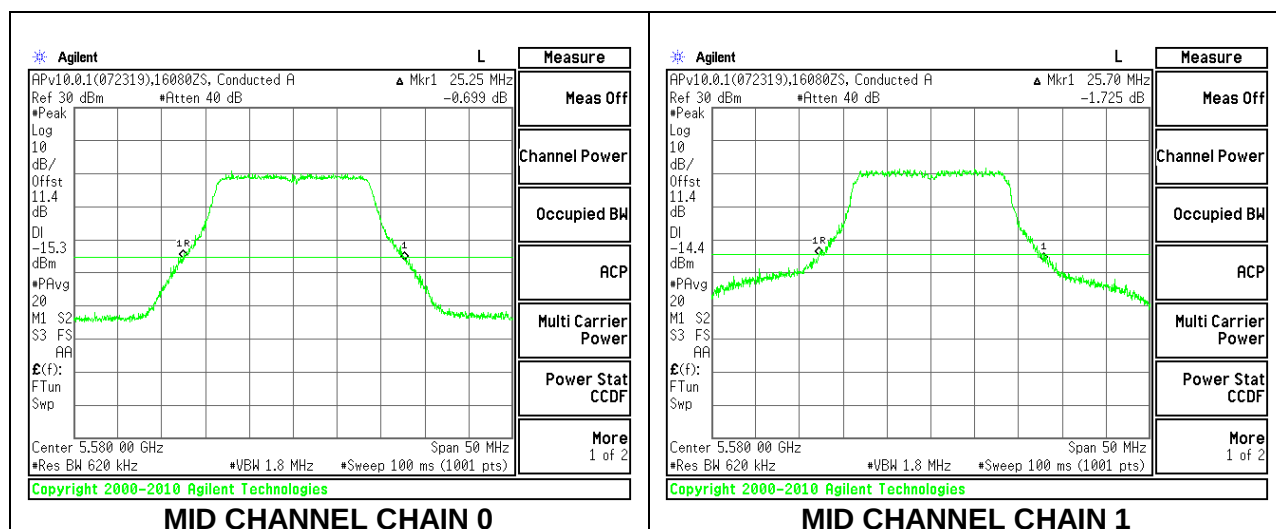
2TX Antenna 1 + Antenna 2 SDM MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5500	25.85	25.50
Mid	5580	25.25	25.70
High	5700	26.80	25.30
144	5720	25.85	25.45

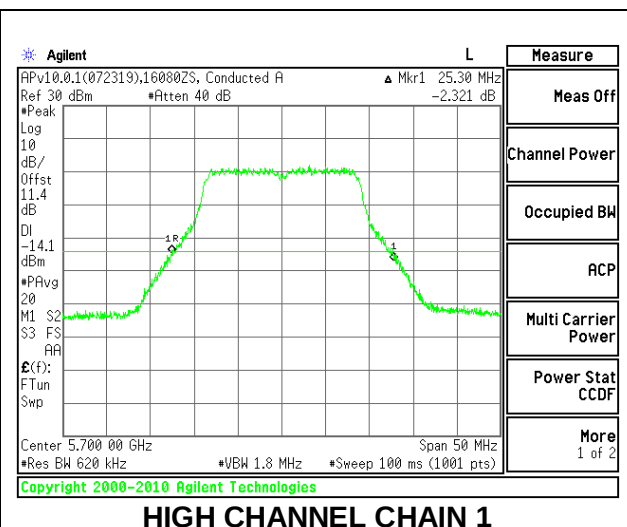
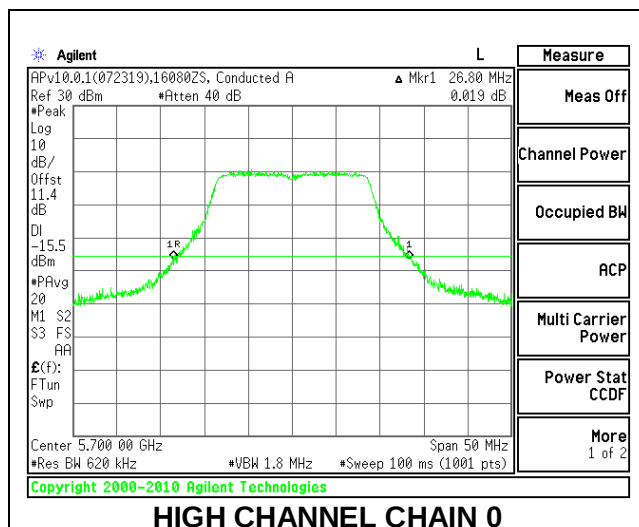
LOW CHANNEL



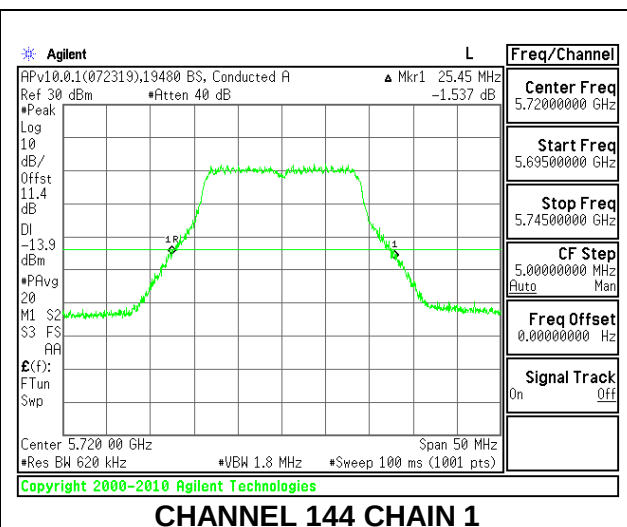
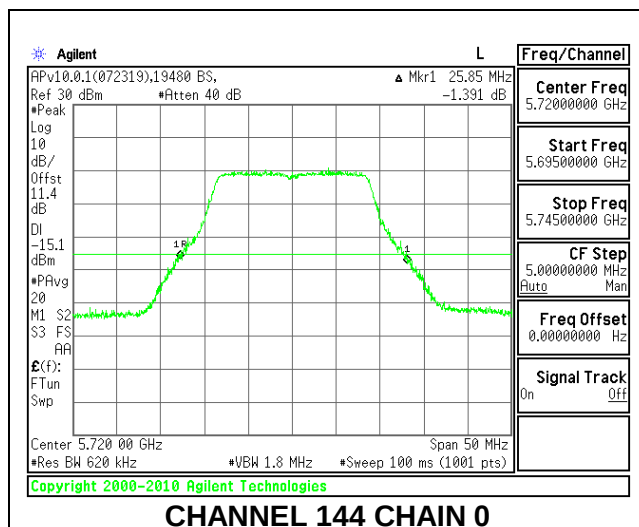
MID CHANNEL



HIGH CHANNEL



CHANNEL 144

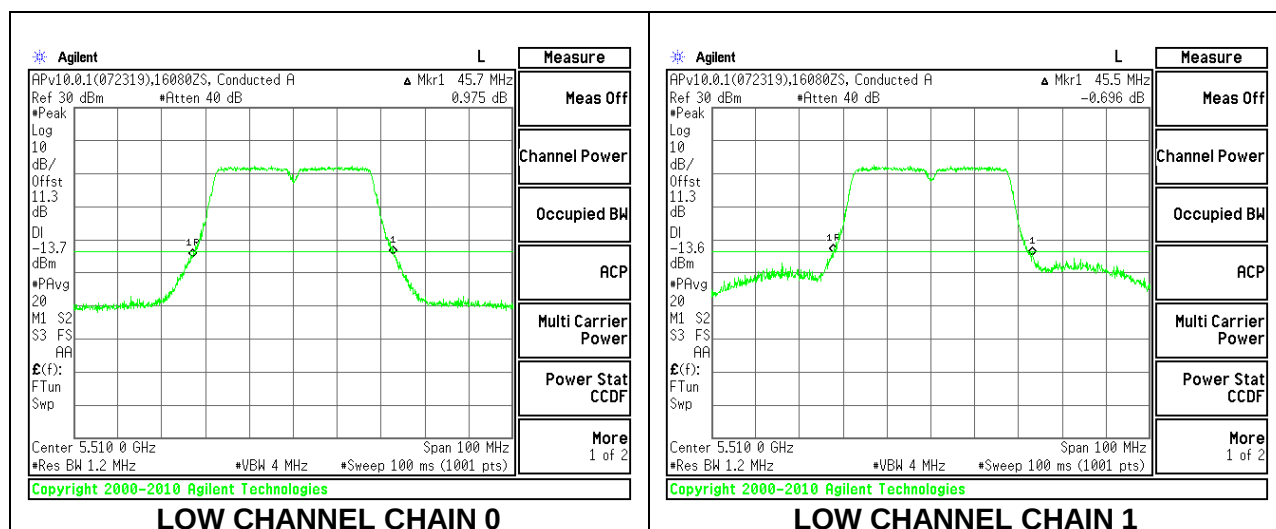


8.2.12. 802.11n HT40 MODE IN THE 5.6 GHz BAND

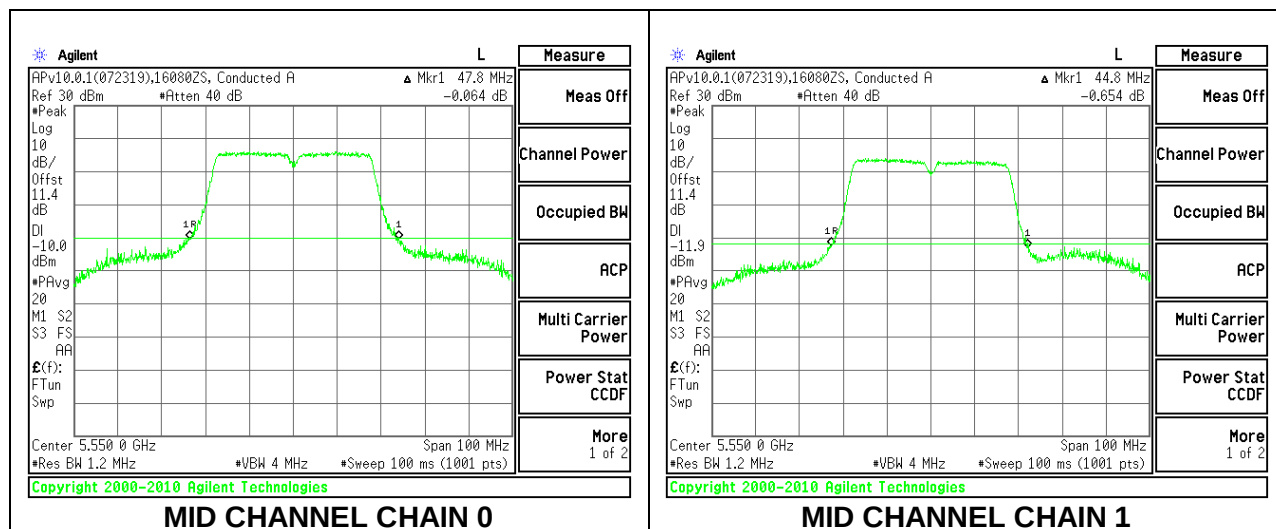
2TX Antenna 1 + Antenna 2 SDM MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5510	45.70	45.50
Mid	5550	47.80	44.80
High	5670	45.40	45.40
142	5710	47.90	47.60

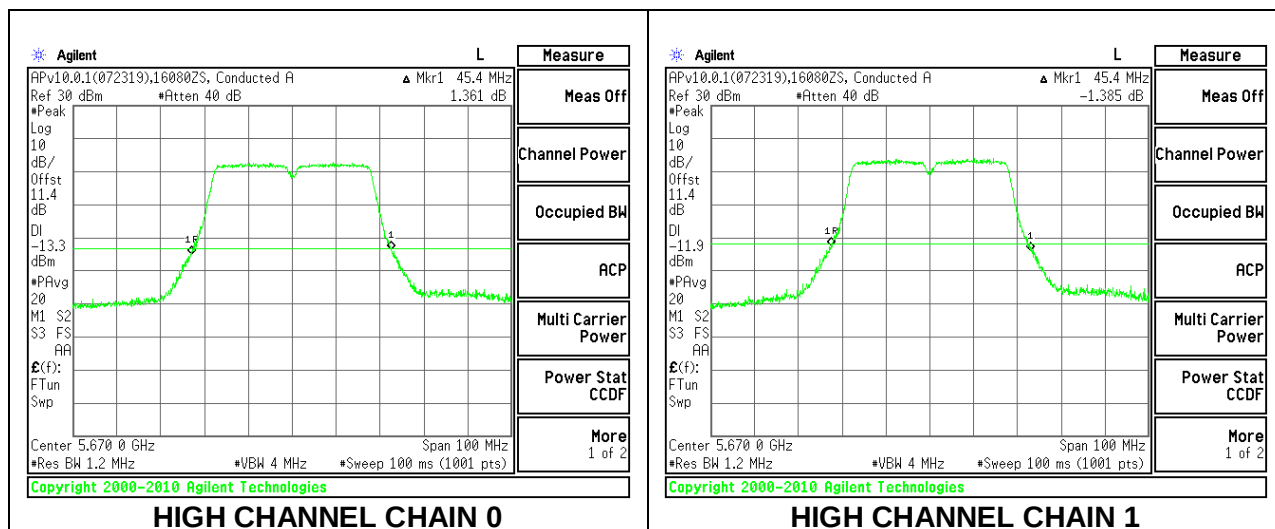
LOW CHANNEL



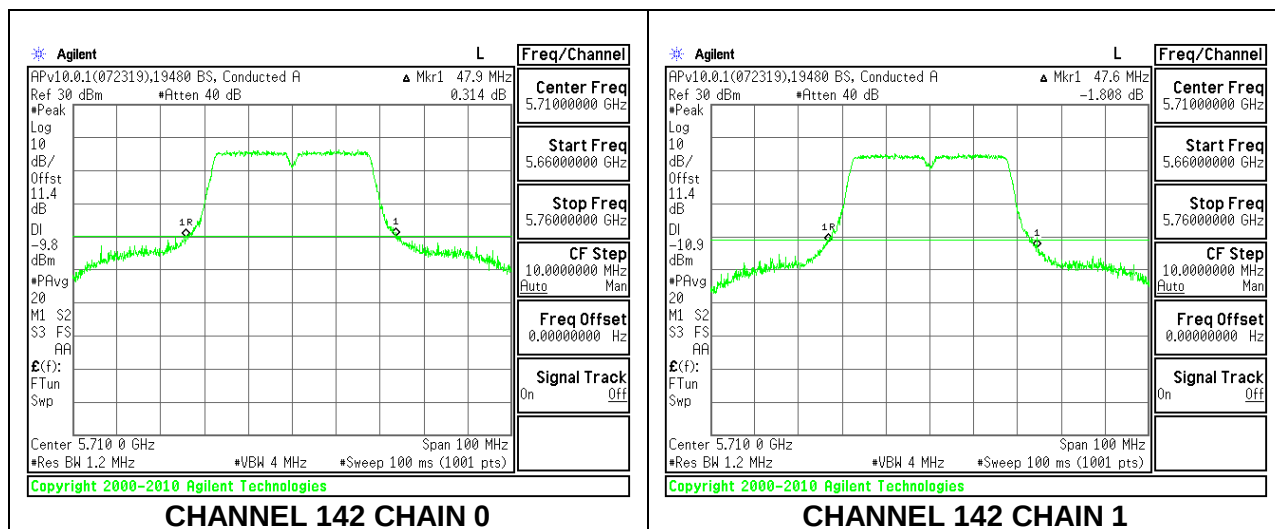
MID CHANNEL



HIGH CHANNEL



CHANNEL 142

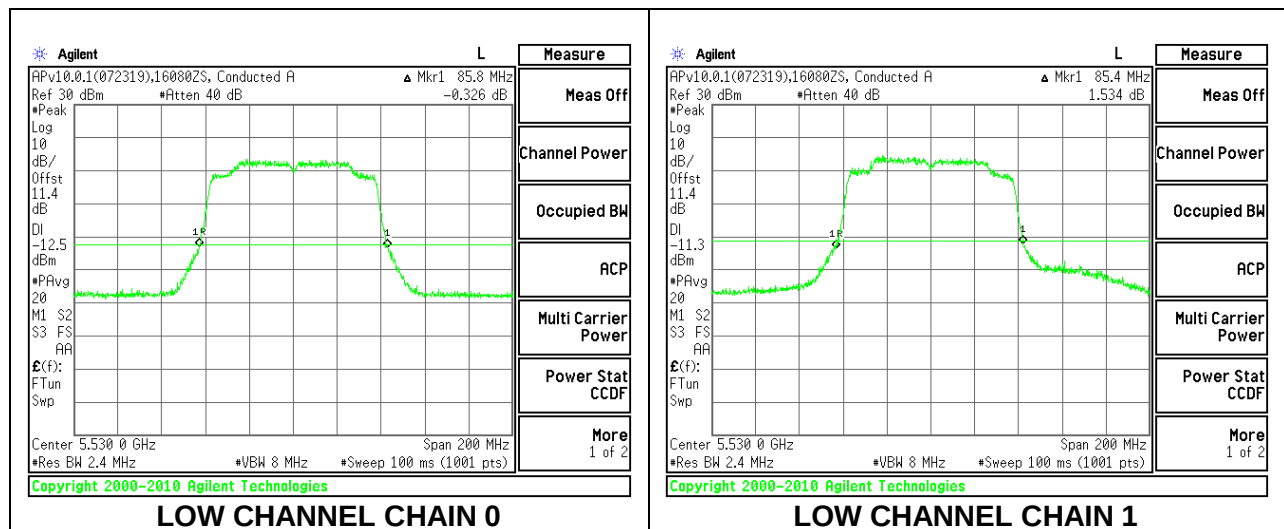


8.2.13. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

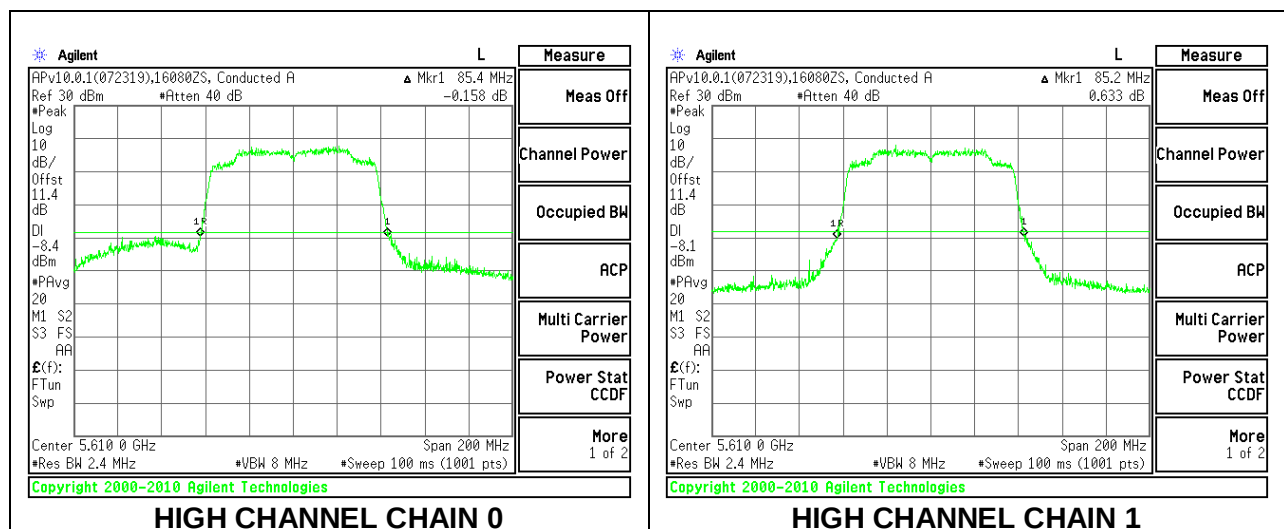
2TX Antenna 1 + Antenna 2 SDM MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5530	85.80	85.40
High	5610	85.40	85.20
138	5690	86.60	85.80

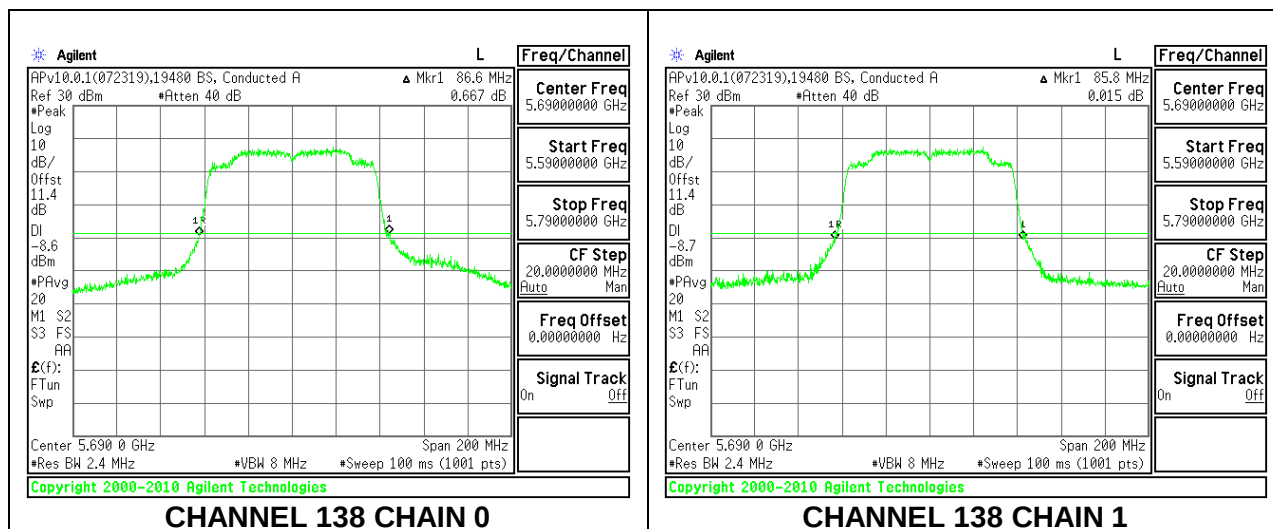
LOW CHANNEL



HIGH CHANNEL



CHANNEL 138

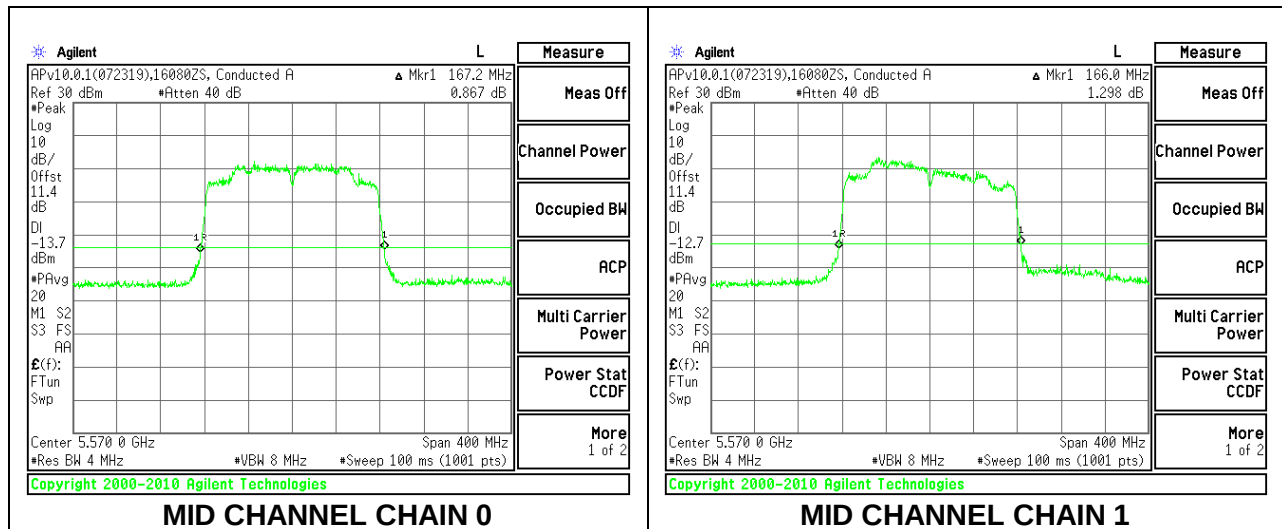


8.2.14. 802.11ac VHT160 MODE IN THE 5.6 GHZ BAND

2TX Antenna 1 + Antenna 2 SDM MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Mid	5570	167.20	166.00

MID CHANNEL

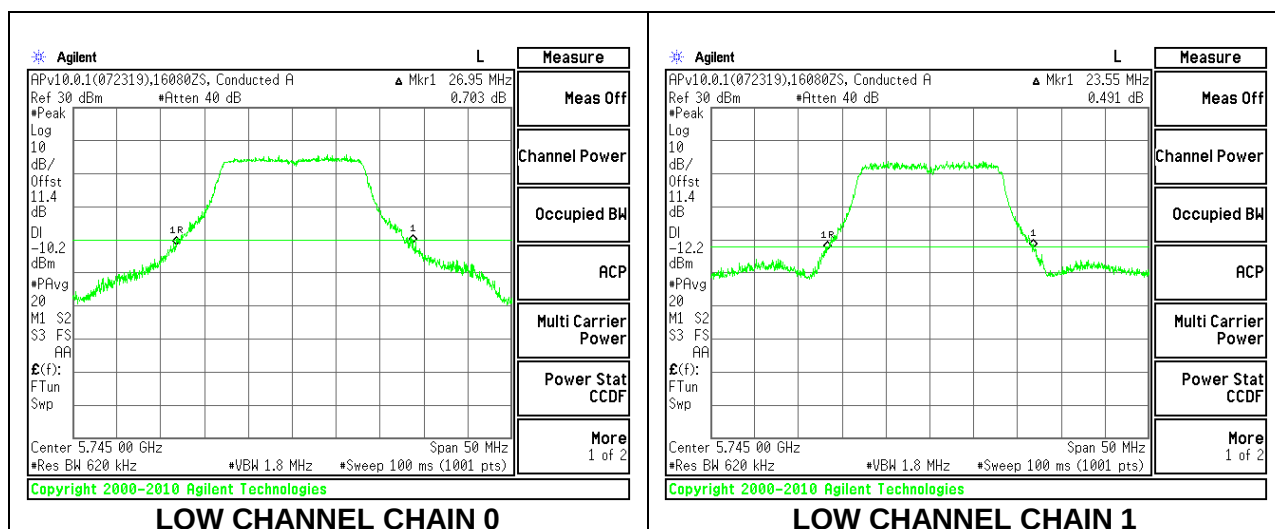


8.2.15. 802.11a MODE IN THE 5.8 GHz BAND

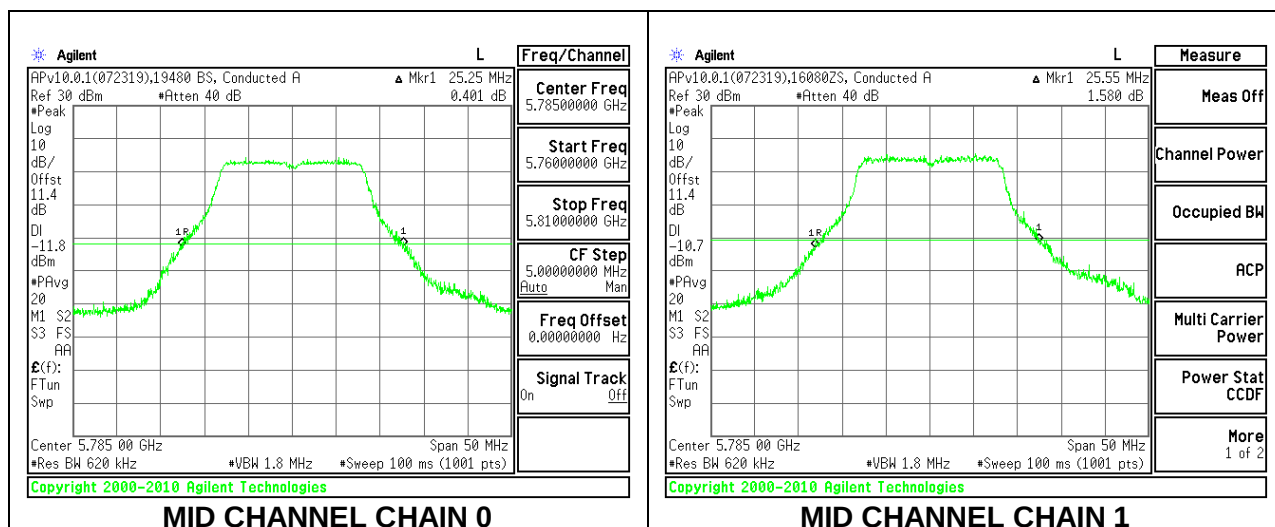
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5745	26.95	23.55
Mid	5785	25.25	25.55
High	5825	25.50	25.90

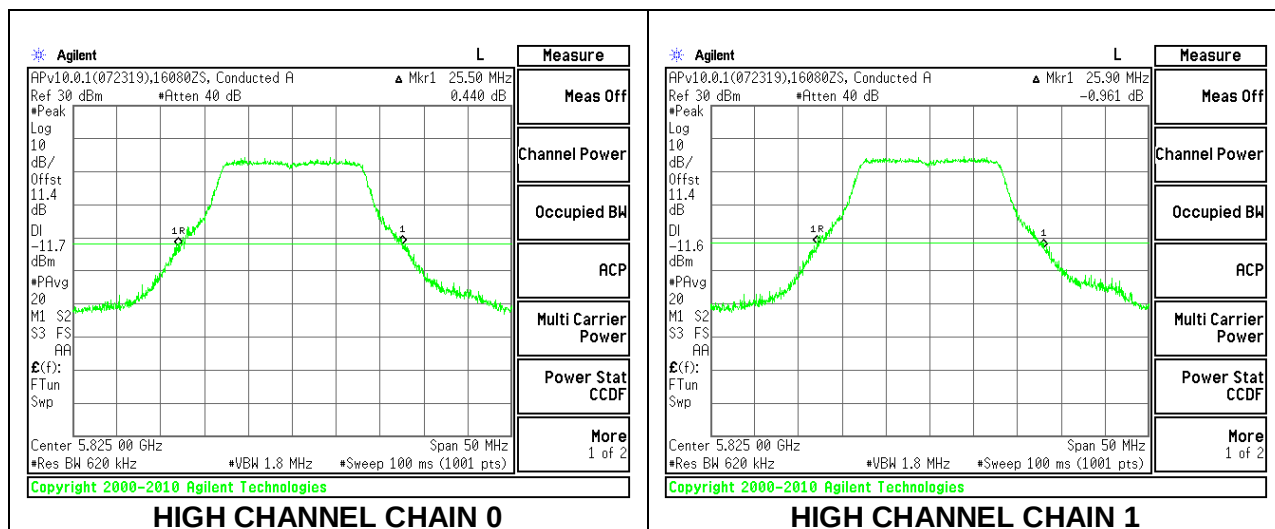
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

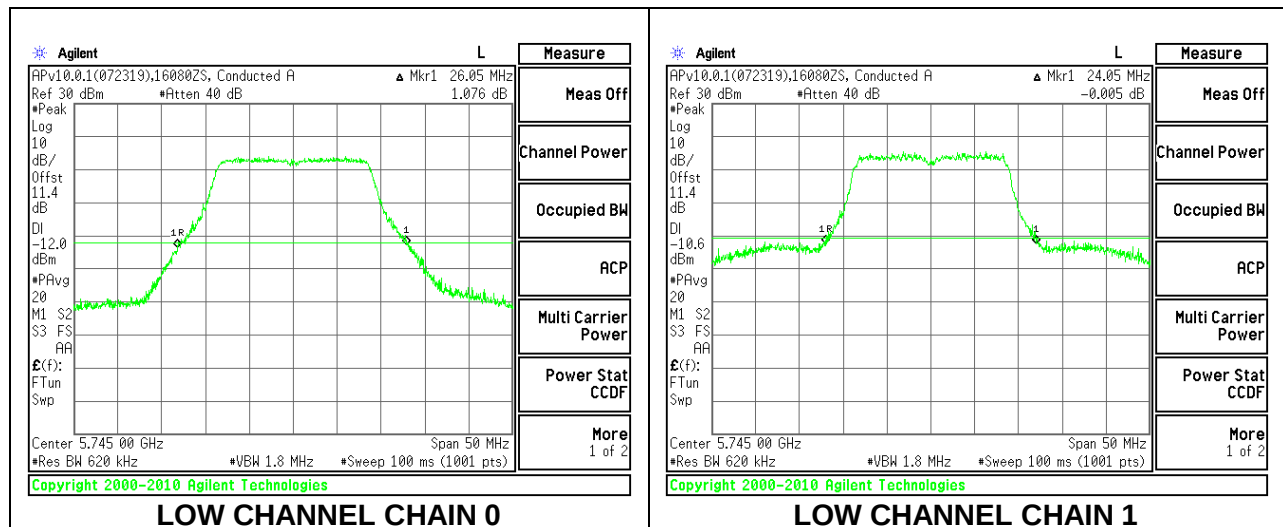


8.2.16. 802.11n HT20 MODE IN THE 5.8 GHz BAND

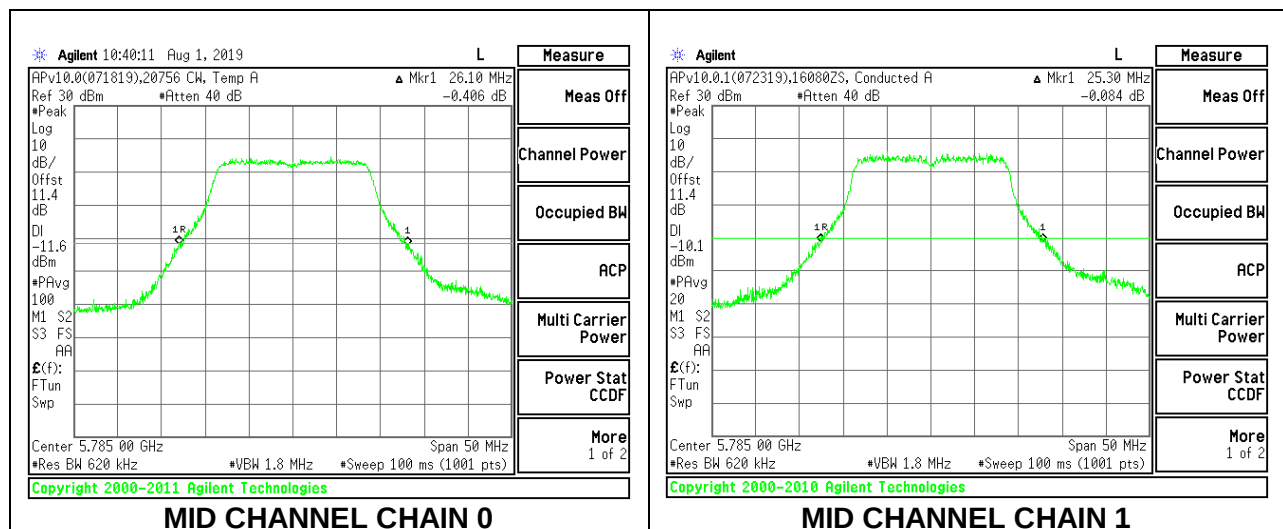
2TX Antenna 1 + Antenna 2 SDM MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5745	26.05	24.05
Mid	5785	26.10	25.30
High	5825	25.95	30.90

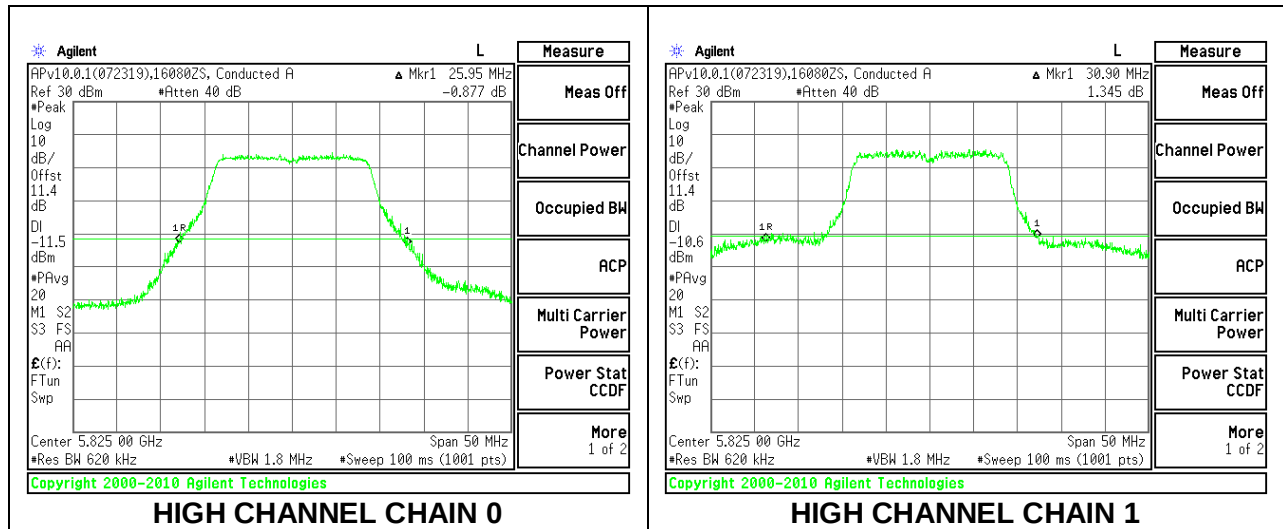
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

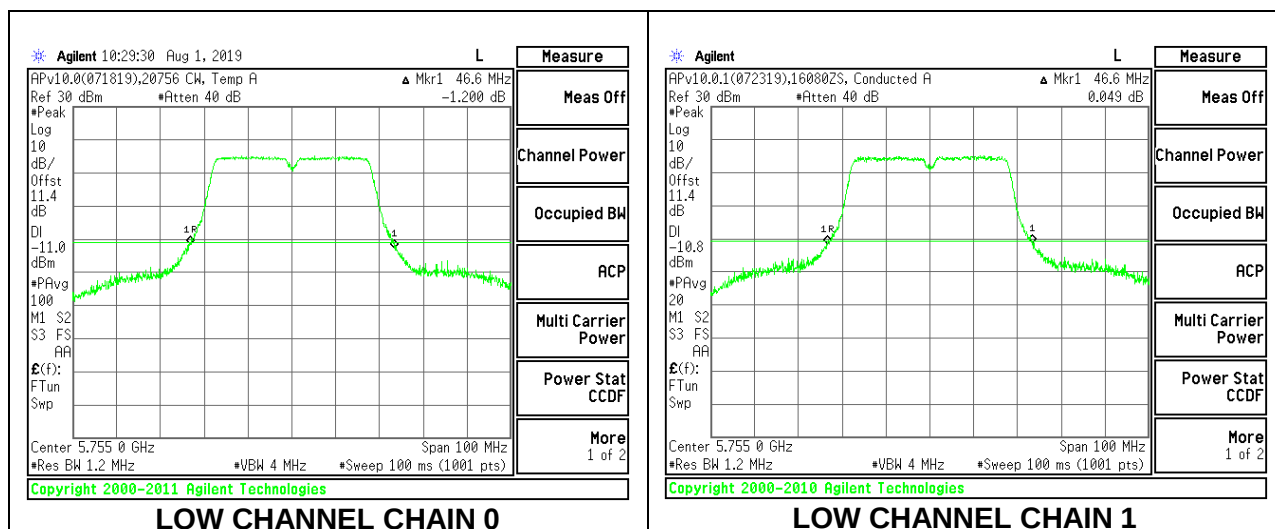


8.2.17. 802.11n HT40 MODE IN THE 5.8 GHz BAND

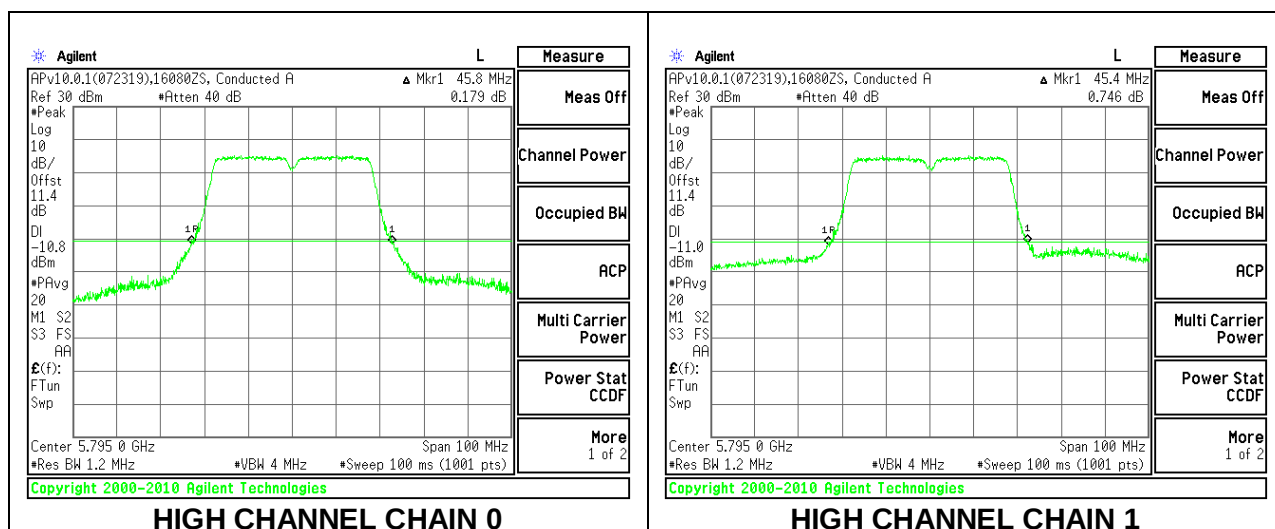
2TX Antenna 1 + Antenna 2 SDM MODE

Channel	Frequency	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5755	46.60	46.60
High	5795	45.80	45.40

LOW CHANNEL



HIGH CHANNEL

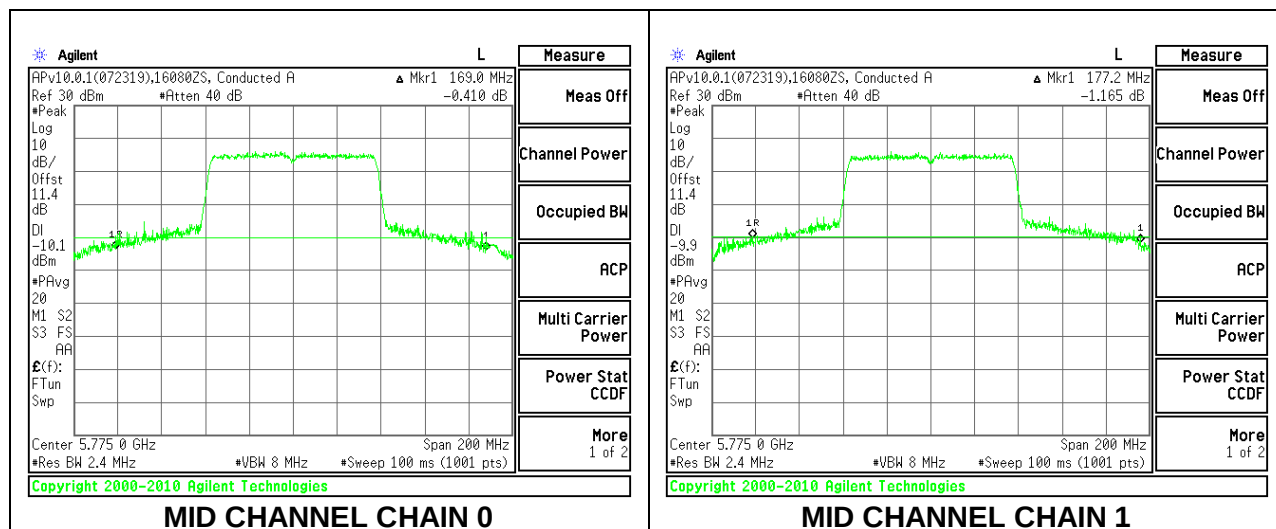


8.2.18. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

2TX Antenna 1 + Antenna 2 SDM MODE

Channel	Frequency	26 dB Bandwidth Antenna 1	26 dB Bandwidth Antenna 2
	(MHz)	(MHz)	(MHz)
Mid	5775	169.00	177.20

MID CHANNEL



8.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

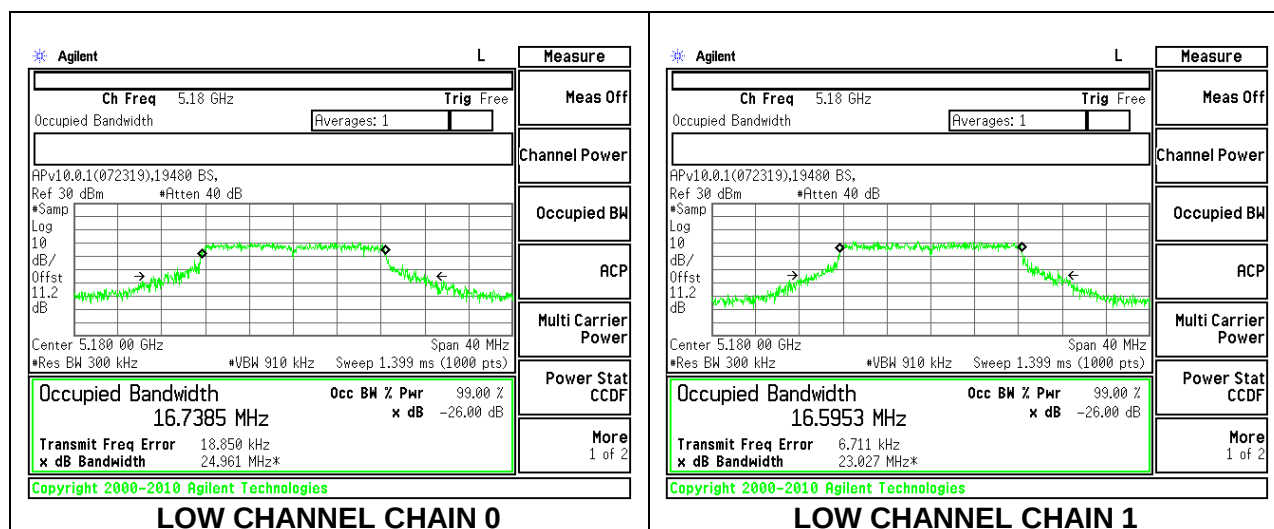
RESULTS

8.3.1. 802.11a MODE IN THE 5.2 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low	5180	16.739	16.595
Mid	5200	16.696	16.682
High	5240	16.690	16.651

LOW CHANNEL



MID CHANNEL

