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08/29/2025

HP Inc.
1501 Old Page Mill Rd.
Palo Alto, CA 94304-1126
USA

Dear Samah Othman,

Enclosed is the EMC Wireless test report for compliance testing of the HP Inc. Model P033 as tested to the requirements of FCC 15.407 and RSS-247 Issue 3 for Intentional Radiators.

Thank you for using the services of Eurofins MET Labs. If you have any questions regarding these results or if MET can be of further service to you, please feel free to contact me.

Sincerely yours,
EUROFINS MET LABS

Nancy LaBrecque
Documentation Department

Reference: WIRA135001 – FCC407 RSS247 5GHz WiFi_R1

5GHz UNII Band WiFi Test Report
for the

HP Inc.
P033

Tested under
FCC 15.407 and RSS-247 Issue 3
For Intentional Radiators

Bryan Taylor, Wireless Team Lead
Electromagnetic Compatibility Lab

Nancy LaBrecque
Documentation Department

Engineering Statement: The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of the FCC Rules Part 15.247 under normal use and maintenance.

Matthew Hinojosa
EMC Manager, Austin Electromagnetic Compatibility Lab

Report Status Sheet

Revision	Report Date	Reason for Revision
∅	May 23, 2025	Initial Issue.
1	08/29/2025	TCB Review Comments

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List of Terms and Abbreviations

AC	**A**lternating **C**urrent
ACF	**A**ntenna **C**orrection **F**actor
Cal	**Cal**ibration
d	**M**easurement **D**istance
dB	**D**eci**b**els
dBµA	**D**eci**b**els above one **micro**amp
dBµV	**D**eci**b**els above one **micro**volt
dBµA/m	**D**eci**b**els above one **micro**amp **per m**eter
dBµV/m	**D**eci**b**els above one **micro**volt **per m**eter
DC	**D**irect **C**urrent
E	**E**lectric Field
DSL	**D**igital **S**ubscriber **L**ine
ESD	**E**lectro**s**tatic **D**ischarge
EUT	**E**quipment **U**nder **T**est
f	**F**requency
FCC	**F**ederal **C**ommunications **C**ommission
GRP	**G**round **R**eference **P**lane
H	Magnetic Field
HCP	**H**orizontal **C**oupling **P**lane
Hz	**H**ertz
IEC	**I**nternational **E**lectrotechnical **C**ommission
kHz	**K**ilo**h**ertz
kPa	**K**ilo**pa**scal
kV	**K**ilovolt
LISN	**L**ine **I**mpedance **S**tabilization **N**etwork
MHz	**M**ega**h**ertz
µH	**Micro**henry
µ	**Micro**farad
µs	**Micros**econds
PRF	**P**ulse **R**epetition **F**requency
RF	**R**adio **F**requency
RMS	**R**oot-**M**ean-**S**quare
TWT	**T**raveling **W**ave **T**ube
V/m	**V**olts **per m**eter
VCP	**V**ertical **C**oupling **P**lane

I. Executive Summary

A. Purpose of Test

An EMC evaluation was performed to determine compliance of the HP Inc. Model P033, with the requirements of FCC 15.407 and RSS-247 Issue 3. HP Inc. should retain a copy of this document which should be kept on file for at least two years after the manufacturing of the Model P033, has been **permanently** discontinued.

B. Executive Summary

The following tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC 15.407 and RSS-247 Issue 3, in accordance with HP Inc. purchase order number 9100415812. All tests were conducted using measurement procedures ANSI C63.4-2014 and ANSI C63.10-2013.

FCC Reference	Description	Results
§15.203	Antenna Requirement	Compliant
§15.407(b)(9)	Conducted Emission Limits	Compliant
§15.403(i)	26dB Occupied Bandwidth	Compliant
§15.407 (a)	Maximum Conducted Output Power	Compliant
§15.407 (a)	Maximum Power Spectral Density	Compliant
§15.407 (b)	Undesirable Emissions	Compliant
§15.407(g)	Frequency Stability	Compliant

Table 1. Executive Summary of FCC Part 15.407 ComplianceTesting

ISED Reference	Description	Results
RSS-Gen (8.7)	Conducted Emission Limits	Compliant
RSS-Gen (6.7)	99% Occupied Bandwidth	Compliant
RSS-247 (6.2)	26dB Occupied Bandwidth	Compliant
RSS-247 (6.2)	Maximum Conducted Output Power	Compliant
RSS-247 (6.2)	Effective Isotropic Radiated Power	Compliant
RSS-247 (6.2)	Maximum Power Spectral Density	Compliant
RSS-247 (6.2)	EIRP Spectral Density	Compliant
RSS-247 (6.2)	Undesirable Emissions	Compliant
RSS-247 (6.2)	Frequency Stability	Compliant

Table 2. Executive Summary of ISED ComplianceTesting

II. Equipment Configuration

A. Overview

Eurofins MET Labs was contracted by HP Inc. to perform testing on the Model P033, under HP Inc.'s purchase order number 9100415812.

This document describes the test setups, test methods, required test equipment, and the test limit criteria used to perform compliance testing of the HP Inc. Model P033.

The results obtained relate only to the item(s) tested.

Product Marketing Name Tested:	Poly Studio X52	
Model Number Tested:	P033	
FCCID:	M72-P033	
ICID:	1849C-P033	
EUT Specifications:	Primary Power: 100 – 230VAC	
	Frequency Range: 50Hz / 60Hz	
	Type of Modulations:	OFDM
	Equipment Code:	NII
	Antenna Gain[1]:	3.64dBi (Antenna Path 1) 3.64dBi (Antenna Path 2) Directional Gain = 3.64 + 10log(2) = 6.64dBi Note: the array gain was calculated per KDB 662911 D01 Section F.2.a.(i) for correlated signals with equal antenna gains.
	EUT Frequency Ranges:	U-NII-1: 5150 – 5250 MHz
		U-NII-2A: 5250 – 5350 MHz
		U-NII-2C: 5470 – 5725 MHz
		U-NII-3: 5725 – 5850 MHz
	Maximum Conducted Output Power:	U-NII-1: 11.66dBm
		U-NII-2A: 12.44dBm
		U-NII-2C: 13.36dBm
		U-NII-3: 10.12dBm
Analysis:	The results obtained relate only to the item(s) tested.	
Environmental Test Conditions:	Temperature: 15-35º C	
	Relative Humidity: 30-60%	
	Barometric Pressure: 860-1060 mbar	
Type of Filing:	Original	
Evaluated by:	Bryan Taylor	
Report Date(s):	May 23, 2025	

Figure 1. EUT Summary Table

[1] The antenna gain information was provided by HP Inc. at the time of testing.

Description	Model Number	Part Number	Serial Number	Rev #
Power Supply	065-1A120500B3	SM00754DG	1GBBL003T	N.A.
Poly Studio X52	OBAN50	2201-8749-001	822238671543FM	N.A.

Figure 2. EUT List

B. References

CFR 47, Part 15, Subpart E	Unlicensed National Information Infrastructure Devices (UNII)
RSS-247: Issue 3	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices
RSS-Gen: Issue 5	General Requirements for Compliance of Radio Apparatus
ANSI C63.4:2014	Methods and Measurements of Radio-Noise Emissions from Low-Voltage Electrical And Electronic Equipment in the Range of 9 kHz to 40 GHz
ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices
ISO/IEC 17025:2005	General Requirements for the Competence of Testing and Calibration Laboratories
ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices
789033 D02 General UNII Test Procedures New Rules v02	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E

Table 3. References

C. Test Site

All testing was performed at Eurofins MET Labs, Inc., 13501 McCallen Pass, Austin TX 78753. All equipment used in making physical determinations is accurate and bears recent traceability to the National Institute of Standards and Technology.

Radiated Emissions measurements were performed in a 10 meter semi-anechoic chamber (equivalent to an Open Area Test Site). In accordance with §2.948(a)(3), a complete site description is contained at Eurofins MET Labs.

ISED Lab Info:
CAB Identifier: US0004
Company Number: 2043D

FCC Lab Info:
Designation Number: US1127

D. Measurement Uncertainty

E. Test Method	F. Typical Expanded Uncertainty	G. K	H. Confidence Level
Occupied Bandwidth Measurements	±4.52 Hz	2	95%
Conducted Power Measurements	±2.74 dB	2	95%
Power Spectral Density Measurements	±2.74 dB	2	95%
Conducted Spurious Emissions	±2.80 dB	2	95%
Conducted Emissions (Mains)	±2.97 dB	2	95%
Radiated Spurious Emissions (9kHz – 1GHz)	±2.95 dB	2	95%
Radiated Spurious Emissions (1GHz - 40GHz)	±3.54 dB	2	95%

Table 4. Uncertainty Calculations Summary

I. Description of Test Sample

The HP Inc. model P033 (marketed as Poly Studio X52), is a video conferencing bar designed to act as a Video endpoint over LAN network. The device is powered an AC/DC mains adapter and contains 2.4GHz / 5GHz WiFi and Bluetooth radio interfaces.

Figure 3. Block Diagram of Test Configuration

J. Equipment Configuration

The EUT was set up as outlined in Figure 3. The laptop computer was used to send test commands to force the transmitters to operate in the appropriate test mode.

K. Support Equipment

Support equipment necessary for the operation and testing of the EUT is included in the following list.

Name/Description	Manufacturer	Model Number	Customer Supplied Calibration Data
4k Monitors	hp	1B9T0AA	N/A
4k Monitors	hp	1B9T0AA	N/A
BT Remote	Poly/ Remotec	BW7640UN	N/A
USB keyboard	hp	KU-0316	N/A
USB mouse	hp	672652-001	N/A
Laptop for content and pings	Dell	XPS 14	N/A
Router Cisco gigabit router	Cisco	RN042G	N/A
WIFI access point Cisco AIR Lap	Cisco	1142N-A-K9	N/A

Table 5. Support Equipment

L. Ports and Cabling Information

Port Name on EUT	Cable Description or reason for no cable	Qty	Length as tested (m)	Max Length (m)	Shielded? (Y/N)	Termination Box ID & Port Name
DC Power	DC Power Cable	1	2m	2m	No	AC/DC Power Adapter
USB-C	USB-C	1	10m	10m	Yes	Laptop Computer

Table 6. Ports and Cabling Information

M. Mode of Operation

The support laptop provided a direct means of controlling transmitter parameters. Unless otherwise stated or shown, all tests were performed at worst-case modulation and data rates on the following channels.

Transmit Band	Operating Mode	Worst Case Transmission Bandwidth	Channel Numbers Tested	Channel Frequencies Tested	Test Tool Power Setting
U-NII-1	802.11a	20MHz	36 / 40 / 48	5180MHz / 5200MHz / 5240MHz	10.5dBm
	802.11n	20MHz	36 / 40 / 48	5180MHz / 5200MHz / 5240MHz	10.5dBm
	802.11n (40)	40MHz	38 / 46	5190MHz / 5230MHz	10.5dBm
	802.11ac	80MHz	42	5210MHz	10.5dBm
	802.11ax	80MHz	42	5210MHz	10.5dBm
U-NII-2A	802.11a	20MHz	52 / 56 / 64	5260MHz / 5280MHz / 5320MHz	10.5dBm
	802.11n	20MHz	52 / 56 / 64	5260MHz / 5280MHz / 5320MHz	10.5dBm
	802.11n (40)	40MHz	54 / 62	5270MHz / 5310MHz	10.5dBm
	802.11ac	80MHz	58	5290MHz	10.5dBm
	802.11ax	80MHz	58	5290MHz	10.5dBm
U-NII-2A	802.11a	20MHz	100 / 120 / 144	5500MHz / 5600MHz / 5720MHz	10.5dBm
	802.11n	20MHz	100 / 120 / 144	5500MHz / 5600MHz / 5720MHz	10.5dBm
	802.11n (40)	40MHz	102 / 118 / 142	5510MHz / 5590MHz / 5710MHz	10.5dBm
	802.11ac	80MHz	106 / 122 / 138	5230MHz / 5610MHz / 5690MHz	10.5dBm
	802.11ax	80MHz	106 / 122 / 138	5230MHz / 5610MHz / 5690MHz	10.5dBm
U-NII-3	802.11a	20MHz	149 / 157 / 165	5745MHz / 5785MHz / 5825MHz	10.5dBm
	802.11n	20MHz	149 / 157 / 165	5745MHz / 5785MHz / 5825MHz	10.5dBm
	802.11n (40)	40MHz	151 / 159	5755MHz / 5780MHz	10.5dBm
	802.11ac	80MHz	155	5775MHz	10.5dBm
	802.11ax	80MHz	155	5775MHz	10.5dBm
Test Tool Name: WiFI_BT_DEBUG TOOL_v0.0.1.6					

Table 7. Test Channels Utilized

N. Method of Monitoring EUT Operation

A spectrum analyzer was used to confirm proper transmitter operation.

O. Modifications

a) Modifications to EUT

No modifications were made to the EUT.

b) Modifications to Test Standard

No modifications were made to the test standard.

P. Disposition of EUT

The test sample including all support equipment submitted to the Electro-Magnetic Compatibility Lab for testing was returned to HP Inc. upon completion of testing.

III. Electromagnetic Compatibility Criteria for Intentional Radiators

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.203 Antenna Requirement

Test Requirement: **§ 15.203:** An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

The structure and application of the EUT were analyzed to determine compliance with Section 15.203 of the Rules. Section 15.203 states that the subject device must meet at least one of the following criteria:

a.) Antenna must be permanently attached to the unit.

b.) Antenna must use a unique type of connector to attach to the EUT.

c.) Unit must be professionally installed. Installer shall be responsible for verifying that the correct antenna is employed with the unit.

Results: The EUT as tested is compliant the criteria of §15.203. The antenna is not accessible by the end user.

Test Engineer(s): Bryan Taylor

Test Date(s): 2/14/2025

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15. 407 26dB Bandwidth

Test Requirements: For purposes of this subpart the emission bandwidth shall be determined by measuring the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that are 26 dB down relative to the maximum level of the modulated carrier. Determination of the emissions bandwidth is based on the use of measurement instrumentation employing a peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

Test Procedure: The transmitter was set to low, mid, and high operating frequencies at the highest output power and connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measured with the spectrum analyzer using a RBW approximately equal to 1% of the total emission bandwidth, VBW > RBW. The 26 dB Bandwidth was measured and recorded.

Test Results The 26 dB Bandwidth was compliant with the requirements of this section. The worst-case tabular data for each UNII band is shown below. Due to the large number of individual plots for each measurement, they are contained in a separate appendix.

Test Engineer(s): Bryan Taylor

Test Date(s): 3/26/2025

U-NII SubBand 1 and 2A OBW	Port 1 (-26dB) (MHz)	Port 1 (99%) (MHz)	Port 2 (-26dB) (MHz)	Port 2 (99%) (MHz)
U-NII-1_5180MHz_Low Ch_36_20MHz BW_a-mode	19.283	16.570	19.453	16.591
U-NII-1_5200MHz_ mid Ch_40_20MHz BW_a-mode	19.538	16.653	19.562	16.695
U-NII-1_5240MHz_high Ch_48_20MHz BW_a-mode	19.173	16.580	19.456	16.714
U-NII-1_5180MHz_Low Ch_36_20MHz BW_n-mode	20.093	17.696	20.111	17.694
U-NII-1_5200MHz_ mid Ch_40_20MHz BW_n-mode	20.282	17.741	20.164	17.719
U-NII-1_5240MHz_high Ch_48_20MHz BW_n-mode	20.128	17.728	20.321	17.714
U-NII-1_5190MHz_Low Ch_38_40MHz BW_n-mode	40.164	36.140	40.233	36.279
U-NII-1_5230MHz_high Ch_46_40MHz BW_n-mode	40.198	36.233	40.344	36.168
U-NII-1_5210MHz_ mid Ch_42_80MHz BW_ac-mode	82.950	75.625	83.108	75.719
U-NII-1_5210MHz_mid Ch_42_80MHz BW_ax-mode	83.703	77.382	83.974	77.278
U-NII-2A_5260MHz_low Ch_52_20MHz BW_a-mode	19.459	16.717	19.389	16.584
U-NII-2A_5300MHz_mid Ch_60_20MHz BW_a-mode	19.473	16.599	19.733	16.582
U-NII-2A_5320MHz_High Ch_64_20MHz BW_a-mode	19.376	16.596	19.400	16.593
U-NII-2A_5260MHz_low Ch_52_20MHz BW_n-mode	20.106	17.766	20.517	17.721
U-NII-2A_5300MHz_mid Ch_60_20MHz BW_n-mode	20.476	17.735	20.453	17.690
U-NII-2A_5320MHz_High Ch_64_20MHz BW_n-mode	20.241	17.753	20.471	17.733
U-NII-2A_5270MHz_low Ch_54_40MHz BW_n-mode	40.164	36.289	39.984	36.219
U-NII-2A_5310MHz_High Ch_62_40MHz BW_n-mode	39.987	36.157	40.124	36.127
U-NII-2A_5290MHz_Mid Ch_58_80MHz BW_ac-mode	82.531	75.915	83.348	75.786
U-NII-2A_5290MHz_Mid Ch_58_80MHz BW_ax-mode	83.926	77.228	84.207	77.438

Table 8. Occupied Bandwidth, Test Results (UNII-1 and UNII 2A)

U-NII SubBand 2C OBW	Port 1 (-26dB) (MHz)	Port 1 (99%) (MHz)	Port 2 (-26dB) (MHz)	Port 2 (99%) (MHz)
U-NII-2C_5500MHz_Low Ch_100_20MHz BW_a-mode	21.62	16.57	21.73	16.58
U-NII-2C_5600MHz_Mid Ch_120_20MHz BW_a-mode	21.72	16.65	21.62	16.61
U-NII-2C_5720MHz_High Ch_144_20MHz BW_a-mode	21.86	16.73	21.90	16.64
U-NII-2C_5500MHz_Low Ch_100_20MHz BW_n-mode	22.31	17.80	22.20	18.27
U-NII-2C_5600MHz_Mid Ch_120_20MHz BW_n-mode	22.16	17.80	22.24	17.86
U-NII-2C_5720MHz_High Ch_144_20MHz BW_n-mode	22.24	17.76	22.38	17.88
U-NII-2C_5510MHz_Low Ch_102_40MHz BW_n-mode	44.30	36.46	44.26	36.33
U-NII-2C_5590MHz_Mid Ch_118_40MHz BW_n-mode	44.44	36.33	44.34	36.49
U-NII-2C_5710MHz_High Ch_142_40MHz BW_n-mode	44.65	36.31	43.95	36.34
U-NII-2C_5530MHz_Low Ch_106_80MHz BW_ac-mode	89.86	76.34	89.77	75.98
U-NII-2C_5610MHz_Mid Ch_122_80MHz BW_ac-mode	90.33	76.07	89.96	76.15
U-NII-2C_5690MHz_High Ch_138_80MHz BW_ac-mode	89.84	76.37	90.15	75.95
U-NII-2C_5530MHz_Low Ch_106_80MHz BW_ax-mode	90.69	77.75	90.86	77.67
U-NII-2C_5610MHz_Mid Ch_122_80MHz BW_ax-mode	90.85	77.28	90.69	77.96
U-NII-2C_5690MHz_High Ch_138_80MHz BW_ax-mode	90.34	77.69	90.51	77.43

Table 9. Occupied Bandwidth, Test Results (UNII-2C)

U-NII SubBand 3 OBW	Port 1 (-6dB) (MHz)	Port 1 (99%) (MHz)	Port 1 (-26dB) (MHz)	Port 2 (-6dB) (MHz)	Port 2 (99%) (MHz)	Port 2 (-26dB) (MHz)
U-NII-3_5745MHz_Low Ch_149_20MHz BW_a-mode	16.247	16.439	18.81	15.416	16.473	19.24
U-NII-3_5785MHz_Mid Ch_157_20MHz BW_a-mode	16.053	16.466	19.11	16.394	16.475	19.22
U-NII-3_5825MHz_High Ch_165_20MHz BW_a-mode	16.344	16.519	19.07	16.386	16.497	19.23
U-NII-3_5745MHz_Low Ch_149_20MHz BW_n-mode	23.923	17.740	25.20	16.927	17.690	25.19
U-NII-3_5785MHz_Mid Ch_157_20MHz BW_n-mode	17.052	17.664	25.08	20.702	17.739	25.21
U-NII-3_5825MHz_High Ch_165_20MHz BW_n-mode	21.879	17.720	25.16	23.292	17.749	25.23
U-NII-3_5755MHz_Low Ch_151_40MHz BW_n-mode	45.673	36.295	50.18	48.595	36.474	50.08
U-NII-3_5795MHz_High Ch_159_40MHz BW_n-mode	48.287	36.272	50.19	48.156	36.301	50.08
U-NII-3_5775MHz_Mid Ch_155_80MHz BW_ac-mode	98.708	76.056	101.81	97.419	76.211	101.70
U-NII-3_5775MHz_Mid Ch_155_80MHz BW_ax-mode	99.351	77.657	102.00	98.979	77.808	102.45

Table 10. Occupied Bandwidth, Test Results (UNII-3)

Electromagnetic Compatibility Criteria for Intentional Radiators

§15. 407(a) Maximum Conducted Output Power

Test Requirements:

§15.407(a)(1)(iv): For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

§15.407(a)(2): For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

§15.407(a)(3)(i): For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure:

The EUT was connected to a spectrum analyzer. Measurements were taken with the EUT set to transmit continuously on its low, mid, and high channels. Its power was measured according to measurement method SA-1, as described in ANSI C63.10. the maximum conducted power across all ports was calculated via the following formula:

Max Conducted Output Power, combined = 10 * log (10^(Port 1dBm/10) + 10^(Port2dBm))

Test Results:

The EUT as tested is compliant with the requirements of this section. The worst-case tabular data for each UNII band is shown below. Due to the large number of individual plots for each measurement, they are contained in a separate appendix.

Straddle channels which have transmissions that extend from U-NII-2C into the U-NII-3 band are presented in the U-NII-3 data table.

Test Engineer(s): Bryan Taylor

Test Date(s): 4/3/2025

Transmit Mode	Port 1 (dBm)	Port 2 (dBm)	Limit (dBm)	Port 1 Margin (dB)	Port 2 Margin (dB)
U-NII-1_5180MHz_Low Ch_36_20MHz BW_a-mode	8.50	8.37	30	21.5	21.63
U-NII-1_5200MHz_ mid Ch_40_20MHz BW_a-mode	8.45	8.48	30	21.55	21.52
U-NII-1_5240MHz_high Ch_48_20MHz BW_a-mode	8.37	8.43	30	21.63	21.57
U-NII-2A_5260MHz_low Ch_52_20MHz BW_a-mode	8.45	8.46	24	15.55	15.54
U-NII-2A_5280MHz_mid Ch_56_20MHz BW_a-mode	8.85	8.84	24	15.15	15.16
U-NII-2A_5320MHz_High Ch_64_20MHz BW_a-mode	9.63	9.65	24	14.37	14.35
U-NII-2C_5500MHz_Low Ch_100_20MHz BW_a-mode	8.83	7.98	24	15.17	16.02
U-NII-2C_5600MHz_Mid Ch_120_20MHz BW_a-mode	8.23	8.22	24	15.77	15.78
U-NII-2C_5720MHz_High Ch_144_20MHz BW_a-mode	8.00	8.81	24	16	15.19
U-NII-3_5745MHz_Low Ch_149_20MHz BW_a-mode	6.87	5.44	30	23.13	24.56
U-NII-3_5785MHz_Mid Ch_157_20MHz BW_a-mode	6.70	5.81	30	23.3	24.19
U-NII-3_5825MHz_High Ch_165_20MHz BW_a-mode	8.47	7.95	30	21.53	22.05

Table 11. Conducted Output Power, Test Results (SISO Modes)

U-NII SubBand 1 and 2A FCC PWR	Port 1 (dBm)	Port 2 (dBm)	Sum (dBm)	Limit (dBm)	Margin (dB)
U-NII-1_5180MHz_Low Ch_36_20MHz BW_n-mode	8.74	8.21	11.50	30	18.50
U-NII-1_5200MHz_ mid Ch_40_20MHz BW_n-mode	8.29	8.22	11.26	30	18.74
U-NII-1_5240MHz_high Ch_48_20MHz BW_n-mode	8.18	8.16	11.18	30	18.82
U-NII-1_5190MHz_Low Ch_38_40MHz BW_n-mode	8.25	8.18	11.22	30	18.78
U-NII-1_5230MHz_high Ch_46_40MHz BW_n-mode	8.65	8.53	11.60	30	18.40
U-NII-1_5210MHz_ mid Ch_42_80MHz BW_ac-mode	8.68	8.62	11.66	30	18.34
U-NII-1_5210MHz_mid Ch_42_80MHz BW_ax-mode	8.51	8.58	11.56	30	18.44
U-NII-2A_5260MHz_low Ch_52_20MHz BW_n-mode	8.31	8.32	11.32	24	12.68
U-NII-2A_5280MHz_mid Ch_56_20MHz BW_n-mode	8.58	8.65	11.63	24	12.37
U-NII-2A_5320MHz_High Ch_64_20MHz BW_n-mode	9.43	9.43	12.44	24	11.56
U-NII-2A_5270MHz_low Ch_54_40MHz BW_n-mode	8.65	8.75	11.71	24	12.29
U-NII-2A_5310MHz_High Ch_62_40MHz BW_n-mode	9.26	9.29	12.29	24	11.71
U-NII-2A_5290MHz_Mid Ch_58_80MHz BW_ac-mode	8.80	8.73	11.78	24	12.22
U-NII-2A_5290MHz_Mid Ch_58_80MHz BW_ax-mode	8.81	8.81	11.82	24	12.18

Table 12. Conducted Output Power, Test Results (MIMO Modes, UNII-1 and 2A)

U-NII SubBand 2C FCC PWR	Port 1 (dBm)	Port 2 (dBm)	Sum (dBm)	Limit (dBm)	Margin (dB)
U-NII-2C_5500MHz_Low Ch_100_20MHz BW_n-mode	7.77	7.75	10.77	24	13.23
U-NII-2C_5600MHz_Mid Ch_120_20MHz BW_n-mode	8.03	8.07	11.06	24	12.94
U-NII-2C_5720MHz_High Ch_144_20MHz BW_n-mode	8.35	8.34	11.36	24	12.64
U-NII-2C_5510MHz_Low Ch_102_40MHz BW_n-mode	8.03	7.66	10.86	24	13.14
U-NII-2C_5590MHz_Mid Ch_118_40MHz BW_n-mode	7.92	7.97	10.96	24	13.04
U-NII-2C_5710MHz_High Ch_142_40MHz BW_n-mode	8.54	8.66	11.61	24	12.39
U-NII-2C_5530MHz_Low Ch_106_80MHz BW_ac-mode	8.04	8.07	11.07	24	12.93
U-NII-2C_5610MHz_Mid Ch_122_80MHz BW_ac-mode	8.25	8.32	11.30	24	12.70
U-NII-2C_5690MHz_High Ch_138_80MHz BW_ac-mode	8.80	8.80	11.81	24	12.19
U-NII-2C_5530MHz_Low Ch_106_80MHz BW_ax-mode	10.33	10.38	13.36	24	10.64
U-NII-2C_5610MHz_Mid Ch_122_80MHz BW_ax-mode	10.06	9.49	12.79	24	11.21
U-NII-2C_5690MHz_High Ch_138_80MHz BW_ax-mode	7.97	8.45	11.22	24	12.78

Table 13. Conducted Output Power, Test Results (MIMO Modes, UNII-2C)

U-NII SubBand 3 PWR	Port 1 (dBm)	Port 2 (dBm)	Sum (dBm)	Limit (dBm)	Margin (dB)
U-NII-3_5745MHz_Low Ch_149_20MHz BW_n-mode	6.19	5.28	8.77	30	21.23
U-NII-3_5785MHz_Mid Ch_157_20MHz BW_n-mode	6.54	6.06	9.32	30	20.68
U-NII-3_5825MHz_High Ch_165_20MHz BW_n-mode	6.89	5.82	9.40	30	20.60
U-NII-3_5755MHz_Low Ch_151_40MHz BW_n-mode	7.17	6.10	9.68	30	20.32
U-NII-3_5795MHz_High Ch_159_40MHz BW_n-mode	7.13	7.09	10.12	30	19.88
U-NII-3_5775MHz_Mid Ch_155_80MHz BW_ac-mode	7.39	6.74	10.09	30	19.91
U-NII-3_5775MHz_Mid Ch_155_80MHz BW_ax-mode	7.42	6.82	10.14	30	19.86
Straddle Ch_ U-NII-2C_5720MHz_High Ch_144_20MHz BW_a-mode	0.43	1.08	3.78	30	26.22
Straddle Ch_ U-NII-2C_5720MHz_High Ch_144_20MHz BW_n-mode	1.06	1.09	4.08	30	25.92
Straddle Ch_ U-NII-2C_5710MHz_High Ch_142_40MHz BW_n-mode	-3.18	-3.20	-0.18	30	30.18
Straddle Ch_ U-NII-2C_5690MHz_High Ch_138_80MHz BW_ac-mode	-6.54	-6.61	-3.57	30	33.57
Straddle Ch_ U-NII-2C_5690MHz_High Ch_138_80MHz BW_ax-mode	-6.47	-6.47	-3.46	30	33.46

Table 14. Conducted Output Power, Test Results (MIMO Modes, UNII-3)

Electromagnetic Compatibility Criteria for Intentional Radiators

RSS-247 (6) Effective Isotropic Radiated Power (EIRP)

Test Requirements:

§6.2.1.1 (5150 – 5250MHz): For other devices, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 $\log_{10}$B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

§6.2.2.1 (5250 – 5350MHz): Devices, other than devices installed in vehicles, shall comply with the following:

- The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 $\log_{10}$B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

§6.2.3.1 (5470 – 5600MHz and 5650 – 5725MHz): The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 $\log_{10}$B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

Test Procedure:

The maximum sum conducted output power (across all transmit ports) was added to the antenna gain to arrive at the EIRP. The antenna gain used was the worst case directional gain calculated per KDB 662911 D01 for two equal gain antennas with correlated signals; 6.79dBi in this case.

Test Results:

The EUT as tested is compliant with the requirements of this section. The worst-case tabular data for each UNII band is shown below. Due to the large number of individual plots for each measurement, they are contained in a separate appendix.

Straddle channels which have transmissions that extend from U-NII-2C into the U-NII-3 band are presented in the U-NII-3 data table.

Test Engineer(s): Bryan Taylor

Test Date(s): 4/3/2025

U-NII SubBand 1 and 2A FCC PWR	Conducted Power Sum (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
U-NII-1_5180MHz_Low Ch_36_20MHz BW_a-mode	8.5	3.64	12.14	23	10.86
U-NII-1_5200MHz_ mid Ch_40_20MHz BW_a-mode	8.48	3.64	12.12	23	10.88
U-NII-1_5240MHz_high Ch_48_20MHz BW_a-mode	8.43	3.64	12.07	23	10.93
U-NII-1_5180MHz_Low Ch_36_20MHz BW_n-mode	11.5	6.64	18.14	23	4.86
U-NII-1_5200MHz_ mid Ch_40_20MHz BW_n-mode	11.26	6.64	17.9	23	5.1
U-NII-1_5240MHz_high Ch_48_20MHz BW_n-mode	11.18	6.64	17.82	23	5.18
U-NII-1_5190MHz_Low Ch_38_40MHz BW_n-mode	11.22	6.64	17.86	23	5.14
U-NII-1_5230MHz_high Ch_46_40MHz BW_n-mode	11.6	6.64	18.24	23	4.76
U-NII-1_5210MHz_ mid Ch_42_80MHz BW_ac-mode	11.66	6.64	18.3	23	4.7
U-NII-1_5210MHz_mid Ch_42_80MHz BW_ax-mode	11.56	6.64	18.2	30	11.8
U-NII-2A_5260MHz_low Ch_52_20MHz BW_a-mode	8.46	3.64	12.1	30	17.9
U-NII-2A_5280MHz_mid Ch_56_20MHz BW_a-mode	8.85	3.64	12.49	30	17.51
U-NII-2A_5320MHz_High Ch_64_20MHz BW_a-mode	9.65	3.64	13.29	30	16.71
U-NII-2A_5260MHz_low Ch_52_20MHz BW_n-mode	11.32	6.64	17.96	30	12.04
U-NII-2A_5280MHz_mid Ch_56_20MHz BW_n-mode	11.63	6.64	18.27	30	11.73
U-NII-2A_5320MHz_High Ch_64_20MHz BW_n-mode	12.44	6.64	19.08	30	10.92
U-NII-2A_5270MHz_low Ch_54_40MHz BW_n-mode	11.71	6.64	18.35	30	11.65
U-NII-2A_5310MHz_High Ch_62_40MHz BW_n-mode	12.29	6.64	18.93	30	11.07
U-NII-2A_5290MHz_Mid Ch_58_80MHz BW_ac-mode	11.78	6.64	18.42	23	4.58
U-NII-2A_5290MHz_Mid Ch_58_80MHz BW_ax-mode	11.82	6.64	18.46	23	4.54

Table 15. EIRP, Test Results (UNII-1 and 2A)

U-NII SubBand 2C FCC PWR	Conducted Power Sum (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
U-NII-2C_5500MHz_Low Ch_100_20MHz BW_a-mode	8.83	3.64	12.47	30	17.53
U-NII-2C_5600MHz_Mid Ch_120_20MHz BW_a-mode	8.23	3.64	11.87	30	18.13
U-NII-2C_5720MHz_High Ch_144_20MHz BW_a-mode	8.81	3.64	12.45	30	17.55
U-NII-2C_5500MHz_Low Ch_100_20MHz BW_n-mode	10.77	6.64	17.41	30	12.59
U-NII-2C_5600MHz_Mid Ch_120_20MHz BW_n-mode	11.06	6.64	17.7	30	12.3
U-NII-2C_5720MHz_High Ch_144_20MHz BW_n-mode	11.36	6.64	18	30	12
U-NII-2C_5510MHz_Low Ch_102_40MHz BW_n-mode	10.86	6.64	17.5	30	12.5
U-NII-2C_5590MHz_Mid Ch_118_40MHz BW_n-mode	10.96	6.64	17.6	30	12.4
U-NII-2C_5710MHz_High Ch_142_40MHz BW_n-mode	11.61	6.64	18.25	30	11.75
U-NII-2C_5530MHz_Low Ch_106_80MHz BW_ac-mode	11.07	6.64	17.71	30	12.29
U-NII-2C_5610MHz_Mid Ch_122_80MHz BW_ac-mode	11.3	6.64	17.94	30	12.06
U-NII-2C_5690MHz_High Ch_138_80MHz BW_ac-mode	11.81	6.64	18.45	30	11.55
U-NII-2C_5530MHz_Low Ch_106_80MHz BW_ax-mode	13.36	6.64	20	30	10
U-NII-2C_5610MHz_Mid Ch_122_80MHz BW_ax-mode	12.79	6.64	19.43	30	10.57
U-NII-2C_5690MHz_High Ch_138_80MHz BW_ax-mode	11.22	6.64	17.86	30	12.14

Table 16. EIRP, Test Results (UNII-2C)

U-NII SubBand 3 PWR	Conducted Power Sum (dBm)	Directional Array Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
U-NII-3_5745MHz_Low Ch_149_20MHz BW_a-mode	6.87	3.64	10.51	30	19.49
U-NII-3_5785MHz_Mid Ch_157_20MHz BW_a-mode	6.7	3.64	10.34	30	19.66
U-NII-3_5825MHz_High Ch_165_20MHz BW_a-mode	8.47	3.64	12.11	30	17.89
U-NII-3_5745MHz_Low Ch_149_20MHz BW_n-mode	8.77	6.64	15.41	30	14.59
U-NII-3_5785MHz_Mid Ch_157_20MHz BW_n-mode	9.32	6.64	15.96	30	14.04
U-NII-3_5825MHz_High Ch_165_20MHz BW_n-mode	9.4	6.64	16.04	30	13.96
U-NII-3_5755MHz_Low Ch_151_40MHz BW_n-mode	9.68	6.64	16.32	30	13.68
U-NII-3_5795MHz_High Ch_159_40MHz BW_n-mode	10.12	6.64	16.76	30	13.24
U-NII-3_5775MHz_Mid Ch_155_80MHz BW_ac-mode	10.09	6.64	16.73	30	13.27
U-NII-3_5775MHz_Mid Ch_155_80MHz BW_ax-mode	10.14	6.64	16.78	30	13.22
Straddle Ch_ U-NII-2C_5720MHz_High Ch_144_20MHz BW_a-mode	3.78	6.64	10.42	30	19.58
Straddle Ch_ U-NII-2C_5720MHz_High Ch_144_20MHz BW_n-mode	4.08	6.64	10.72	30	19.28
Straddle Ch_ U-NII-2C_5710MHz_High Ch_142_40MHz BW_n-mode	-0.18	6.64	6.46	30	23.54
Straddle Ch_ U-NII-2C_5690MHz_High Ch_138_80MHz BW_ac-mode	-3.57	6.64	3.07	30	26.93
Straddle Ch_ U-NII-2C_5690MHz_High Ch_138_80MHz BW_ax-mode	-3.46	6.64	3.18	30	26.82

Table 17. EIRP, Test Results (UNII-3)

Electromagnetic Compatibility Criteria for Intentional Radiators

§15.407(a)(1) Maximum Power Spectral Density

Test Requirements:

§15.407(a)(1)(iv): For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

§15.407(a)(2): For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

§15.407(a)(3)(i): For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure:

The EUT was connected to a spectrum analyzer. Measurements were taken with the EUT set to transmit continuously on its low, mid, and high channels. Its power was measured according KDB 789033 D02 General UNII Test Procedures v02.

Test Results:

The EUT as tested is compliant with the requirements of this section. The worst-case tabular data for each UNII band is shown below. Due to the large number of individual plots for each measurement, they are contained in a separate appendix.

Straddle channels which have transmissions that extend from U-NII-2C into the U-NII-3 band are presented in the U-NII-3 data table.

Test Engineer(s): Bryan Taylor

Test Date(s): 3/31/2025

U-NII SubBand 1 and 2A FCC SD	Port 1 (dBm)	Port 2 (dBm)	Sum (dBm)	Limit (dBm)	Margin (dB)
U-NII-1_5180MHz_Low Ch_36_20MHz BW_a-mode	-2.06	-2.49	0.74	11	10.26
U-NII-1_5200MHz_ mid Ch_40_20MHz BW_a-mode	-2.63	-2.70	0.35	11	10.65
U-NII-1_5240MHz_high Ch_48_20MHz BW_a-mode	-2.53	-2.45	0.52	11	10.48
U-NII-1_5180MHz_Low Ch_36_20MHz BW_n-mode	-2.41	-3.03	0.30	11	10.70
U-NII-1_5200MHz_ mid Ch_40_20MHz BW_n-mode	-3.08	-3.18	-0.12	11	11.12
U-NII-1_5240MHz_high Ch_48_20MHz BW_n-mode	-3.20	-3.27	-0.22	11	11.22
U-NII-1_5190MHz_Low Ch_38_40MHz BW_n-mode	-5.65	-6.08	-2.85	11	13.85
U-NII-1_5230MHz_high Ch_46_40MHz BW_n-mode	-5.68	-5.95	-2.80	11	13.80
U-NII-1_5210MHz_ mid Ch_42_80MHz BW_ac-mode	-8.83	-8.87	-5.84	11	16.84
U-NII-1_5210MHz_mid Ch_42_80MHz BW_ax-mode	-8.80	-8.88	-5.83	11	16.83
U-NII-2A_5260MHz_low Ch_52_20MHz BW_a-mode	-2.45	-2.46	0.56	11	10.44
U-NII-2A_5280MHz_mid Ch_56_20MHz BW_a-mode	-2.12	-2.07	0.91	11	10.09
U-NII-2A_5320MHz_High Ch_64_20MHz BW_a-mode	-1.25	-1.13	1.82	11	9.18
U-NII-2A_5260MHz_low Ch_52_20MHz BW_n-mode	-2.96	-3.05	0.00	11	11.00
U-NII-2A_5280MHz_mid Ch_56_20MHz BW_n-mode	-2.74	-2.68	0.30	11	10.70
U-NII-2A_5320MHz_High Ch_64_20MHz BW_n-mode	-1.92	-1.81	1.15	11	9.85
U-NII-2A_5270MHz_low Ch_54_40MHz BW_n-mode	-5.72	-5.71	-2.71	11	13.71
U-NII-2A_5310MHz_High Ch_62_40MHz BW_n-mode	-5.05	-5.00	-2.01	11	13.01
U-NII-2A_5290MHz_Mid Ch_58_80MHz BW_ac-mode	-8.72	-8.71	-5.71	11	16.71
U-NII-2A_5290MHz_Mid Ch_58_80MHz BW_ax-mode	-8.66	-8.79	-5.71	11	10.44

Table 18. Power Spectral Density, Test Results (UNII-1 and 2A)

U-NII SubBand 2C FCC SD	Port 1 (dBm)	Port 2 (dBm)	Sum (dBm)	Limit (dBm)	Margin (dB)
U-NII-2C_5500MHz_Low Ch_100_20MHz BW_a-mode	-2.01	-2.87	0.59	11	10.41
U-NII-2C_5600MHz_Mid Ch_120_20MHz BW_a-mode	-2.88	-2.85	0.15	11	10.85
U-NII-2C_5720MHz_High Ch_144_20MHz BW_a-mode	-2.96	-2.45	0.31	11	10.69
U-NII-2C_5500MHz_Low Ch_100_20MHz BW_n-mode	-3.57	-3.57	-0.56	11	11.56
U-NII-2C_5600MHz_Mid Ch_120_20MHz BW_n-mode	-3.40	-3.23	-0.31	11	11.31
U-NII-2C_5720MHz_High Ch_144_20MHz BW_n-mode	-2.92	-2.93	0.09	11	10.91
U-NII-2C_5510MHz_Low Ch_102_40MHz BW_n-mode	-6.35	-6.77	-3.54	11	14.54
U-NII-2C_5590MHz_Mid Ch_118_40MHz BW_n-mode	-6.42	-6.25	-3.32	11	14.32
U-NII-2C_5710MHz_High Ch_142_40MHz BW_n-mode	-5.71	-5.74	-2.71	11	13.71
U-NII-2C_5530MHz_Low Ch_106_80MHz BW_ac-mode	-9.44	-9.50	-6.46	11	17.46
U-NII-2C_5610MHz_Mid Ch_122_80MHz BW_ac-mode	-9.14	-9.17	-6.15	11	17.15
U-NII-2C_5690MHz_High Ch_138_80MHz BW_ac-mode	-8.90	-8.85	-5.87	11	16.87
U-NII-2C_5530MHz_Low Ch_106_80MHz BW_ax-mode	-7.12	-7.18	-4.14	11	15.14
U-NII-2C_5610MHz_Mid Ch_122_80MHz BW_ax-mode	-7.54	-8.07	-4.79	11	15.79
U-NII-2C_5690MHz_High Ch_138_80MHz BW_ax-mode	-9.49	-9.10	-6.28	11	17.28

Table 19. Power Spectral Density, Test Results (UNII-2C)

U-NII SubBand 3 SD	Port 1 (dBm)	Port 2 (dBm)	Sum (dBm)	Limit (dBm)	Margin dB
U-NII-3_5745MHz_Low Ch_149_20MHz BW_a-mode	-6.71	-8.25	-4.41	30	34.41
U-NII-3_5785MHz_Mid Ch_157_20MHz BW_a-mode	-7.20	-7.33	-4.26	30	34.26
U-NII-3_5825MHz_High Ch_165_20MHz BW_a-mode	-5.14	0.00	1.16	30	28.84
U-NII-3_5745MHz_Low Ch_149_20MHz BW_n-mode	-7.77	-8.65	-5.18	30	35.18
U-NII-3_5785MHz_Mid Ch_157_20MHz BW_n-mode	-7.34	-7.89	-4.60	30	34.6
U-NII-3_5825MHz_High Ch_165_20MHz BW_n-mode	-5.55	0.00	1.07	30	28.93
U-NII-3_5755MHz_Low Ch_151_40MHz BW_n-mode	-9.88	-10.56	-7.20	30	37.2
U-NII-3_5795MHz_High Ch_159_40MHz BW_n-mode	-8.43	-9.61	-5.97	30	35.97
U-NII-3_5775MHz_Mid Ch_155_80MHz BW_ac-mode	-13.02	-13.56	-10.27	30	40.27
U-NII-3_5775MHz_Mid Ch_155_80MHz BW_ax-mode	-12.75	-13.36	-10.03	30	40.03
Straddle Ch_ U-NII-2C_5720MHz_High Ch_144_20MHz BW_a-mode	-2.96	-2.45	0.31	30	29.69
Straddle Ch_ U-NII-2C_5720MHz_High Ch_144_20MHz BW_n-mode	-2.92	-2.93	0.09	30	29.91
Straddle Ch_ U-NII-2C_5710MHz_High Ch_142_40MHz BW_n-mode	-5.71	-5.74	-2.71	30	32.71
Straddle Ch_ U-NII-2C_5690MHz_High Ch_138_80MHz BW_ac-mode	-8.90	-8.85	-5.87	30	35.87
Straddle Ch_ U-NII-2C_5690MHz_High Ch_138_80MHz BW_ax-mode	-9.49	-9.10	-6.28	30	36.28

*The straddle channel results shown are the PSD measurements from the UNII-2C band which were measured with a 1MHz RBW. The actual PSD results for just the portion of the signal extending into the UNII-3 band would be lower (and pass with a higher margin) than the values shown in this table since they would be measured with a 500kHz RBW and compared to a higher limit (30dBm/500kHz for UNII-3 vs 11dBm/MHz for UNII-2C).

Table 20. Power Spectral Density, Test Results (UNII-3)

Electromagnetic Compatibility Criteria for Intentional Radiators

RSS-247 (6) EIRP Spectral Density

Test Requirements: **§6.2.1.1 (5150 – 5250MHz):** For other devices, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 $\log_{10}$B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

Test Procedure: The maximum summed conducted power spectral density (across all transmit ports) was added to the antenna gain to arrive at the EIRP spectral density. The antenna gain used was the worst case directional gain calculated per KDB 662911 D01 for two equal gain antennas with correlated signals; 6.79dBi in this case.

Test Results: The EUT as tested is compliant with the requirements of this section. The worst-case tabular data is shown below. Due to the large number of individual plots for each measurement, they are contained in a separate appendix.

RSS-247 does not contain ***EIRP*** spectral density limits for the 5.25-5.35GHz, 5.47-5.725GHz, and 5.725-5.850GHz bands. Therefore only EIRP spectral density for the 5.150 – 5.250GHz band is reported.

Test Engineer(s): Bryan Taylor

Test Date(s): 3/31/2025

U-NII SubBand 1	Conducted Power Spectral Density Sum (dBm)	Antenna Gain (dBi)	EIRP Spectral Density (dBm)	Limit (dBm)	Margin dB
U-NII-1_5180MHz_Low Ch_36_20MHz BW_a-mode	0.74	6.64	7.38	10	2.62
U-NII-1_5200MHz_ mid Ch_40_20MHz BW_a-mode	0.35	6.64	6.99	10	3.01
U-NII-1_5240MHz_high Ch_48_20MHz BW_a-mode	0.52	6.64	7.16	10	2.84
U-NII-1_5180MHz_Low Ch_36_20MHz BW_n-mode	0.30	6.64	6.94	10	3.06
U-NII-1_5200MHz_ mid Ch_40_20MHz BW_n-mode	-0.12	6.64	6.52	10	3.48
U-NII-1_5240MHz_high Ch_48_20MHz BW_n-mode	-0.22	6.64	6.42	10	3.58
U-NII-1_5190MHz_Low Ch_38_40MHz BW_n-mode	-2.85	6.64	3.79	10	6.21
U-NII-1_5230MHz_high Ch_46_40MHz BW_n-mode	-2.80	6.64	3.84	10	6.16
U-NII-1_5210MHz_ mid Ch_42_80MHz BW_ac-mode	-5.84	6.64	0.8	10	9.2
U-NII-1_5210MHz_mid Ch_42_80MHz BW_ax-mode	-5.83	6.64	0.81	10	9.19

Table 21. EIRP Spectral Density, Test Results (UNII-1)

Electromagnetic Compatibility Criteria for Intentional Radiators

§15.407(b)(1 – 4, 9, 10) Undesirable Emissions

Test Requirements:

§ 15.407(b)(1): For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.

§ 15.407(b)(2): For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

§ 15.407(b)(3): For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz

§ 15.407(b)(4): For transmitters operating solely in the 5.725-5.850 GHz band:

All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge

§ 15.407(b)(9): Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in Section 15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in Section 15.207.

§ 15.407(b)(10): The provisions of Section 15.205 of this part apply to intentional radiators operating under this section.

Test Procedure:

Unwanted emission measurements were performed per ANSI C63.10: 2013. The emissions measurements were performed in a 10m semi-anechoic chamber. The EUT was placed on a non-conducting table on a turntable in a chamber. The turntable was rotated 360 degrees, the EUT was oriented through its three orthogonal axes, and the receive antenna height was varied in order to maximize emissions. The -27dBm/MHz limit was converted to field strength using the formula shown in ANSI C63.27 Section 12.7.2

E[dBuV/m] = EIRP[dBm} + 95.2 (for a measurement distance of 3m)

Test Results:

The EUT was compliant with the requirements of this section. The worst-case tabular data for each UNII band is shown below.

Test Engineer(s):

Bryan Taylor, Sergio Gutierrez, An Dang, Frank Hernandez

Test Date(s):

2/13/2025 - 2/14/2025

Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
0.091	41.67	108.39	66.71	11.68	H	0.091	157.9	1	Pass
0.094	40.93	108.12	67.18	11.54	V	0.094	225	1	Pass
0.101	44.27	107.55	63.29	11.27	H	0.101	161.2	1	Pass
0.105	40.47	107.18	66.71	11.32	V	0.105	255.3	1	Pass
0.506	45.41	73.62	28.21	11.31	H	0.506	157.3	1	Pass
0.506	44.87	73.62	28.74	11.31	V	0.506	64.7	1	Pass

Figure 4. Worst Case Cabinet Radiation, Below 30MHz (UNII-1)

Frequency [MHz]	QPK Level [dBµV/m]	QPK Limit [dBµV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
74.430	6.24	29.55	23.31	-12.21	V	266.4	1.18	120.000	Pass
120.000	17.75	33.07	15.32	-6.77	V	5.8	1.12	120.000	Pass
120.030	14.40	33.07	18.67	-6.37	H	18.3	3.26	120.000	Pass
240.030	15.09	35.57	20.48	-7.56	H	248.6	2.67	120.000	Pass
240.030	21.54	35.57	14.03	-7.36	V	94.2	1.25	120.000	Pass
251.730	9.86	35.57	25.71	-7.78	H	189.3	2.58	120.000	Pass

Figure 5. Worst Case Cabinet Radiation, Below 1GHz (UNII-1)

Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Result
15,600.000	45.78	74.00	28.22	32.92	54.00	21.08	0.35	H	197.9	1.04	Pass
15,600.000	45.77	74.00	28.23	33.15	54.00	20.85	0.35	V	69.2	1.12	Pass
20,794.000	55.92	74.00	18.08	44.36	54.00	9.64	12.56	H	83.3	3.69	Pass
20,803.625	55.52	74.00	18.48	44.51	54.00	9.49	12.55	V	187.6	2.51	Pass
22,767.125	51.21	74.00	22.79	39.66	54.00	14.34	14.02	H	96.3	3.49	Pass
23,839.625	51.18	74.00	22.82	40.01	54.00	13.99	14.48	V	218.3	3.23	Pass
23,856.813	51.60	74.00	22.40	39.74	54.00	14.26	14.45	H	264.7	1.5	Pass
31,209.625	54.07	74.00	19.93	42.47	54.00	11.53	16.58	H	352.4	1.48	Pass
31,241.250	53.59	74.00	20.41	42.55	54.00	11.45	16.63	V	95.5	3.32	Pass
36,430.500	52.10	74.00	21.90	40.88	54.00	13.12	15.92	H	248.1	1.6	Pass

Figure 6. Worst Case Cabinet Radiation, Above 1GHz (UNII-1)

Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
0.093	42.70	108.24	65.54	11.59	H	47.3	1	0.200	Pass
0.094	40.85	108.17	67.32	11.56	V	49.6	1	0.200	Pass
0.101	43.45	107.56	64.11	11.27	H	227.1	1	0.200	Pass
0.501	46.16	73.69	27.54	11.27	H	308.8	1	9.000	Pass
0.510	45.71	73.54	27.83	11.35	V	189.3	1	9.000	Pass
2.189	33.37	69.54	36.17	11.69	H	194.7	1	9.000	Pass

Figure 7. Worst Case Cabinet Radiation, Below 30MHz (UNII-2A)

Frequency [MHz]	QPK Level [dBµV/m]	QPK Limit [dBµV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
120.000	15.73	33.07	17.34	-6.37	H	40.6	3.79	120.000	Pass
120.030	15.62	33.07	17.45	-6.77	V	225.3	1.03	120.000	Pass
171.360	12.01	33.07	21.06	-8.28	V	326.9	1.53	120.000	Pass
172.050	9.99	33.07	23.08	-8.34	H	211.2	3.73	120.000	Pass
241.980	15.90	35.57	19.67	-7.36	V	102	1.15	120.000	Pass
243.750	9.03	35.57	26.54	-7.57	H	66	2.91	120.000	Pass

Figure 8. Worst Case Cabinet Radiation, Below 1GHz (UNII-2A)

Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB] Error! Bookmark not defined.	Polarization	Azimuth [deg]	Antenna Height [m]	Result
15,840.000	45.27	74.00	28.73	32.45	54.00	21.55	0.44	H	250.6	2.95	Pass
15,840.000	46.76	74.00	27.24	33.70	54.00	20.30	0.44	V	65	1.03	Pass
21,114.375	55.60	74.00	18.40	44.07	54.00	9.93	12.12	H	92.6	3.69	Pass
21,115.063	56.82	74.00	17.18	45.16	54.00	8.84	12.12	V	266.7	3.5	Pass
23,812.125	51.51	74.00	22.49	39.99	54.00	14.01	14.52	H	222.4	2.51	Pass
23,902.875	51.91	74.00	22.09	40.12	54.00	13.88	14.38	V	207.3	3.5	Pass
31,479.813	54.29	74.00	19.71	42.76	54.00	11.24	16.72	V	342.2	1.01	Pass
31,483.250	54.34	74.00	19.66	42.84	54.00	11.16	16.73	H	53.2	2.29	Pass
31,697.750	53.85	74.00	20.15	42.37	54.00	11.63	16.35	V	124.4	4	Pass

Figure 9. Worst Case Cabinet Radiation, Above 1GHz (UNII-2A)

Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
0.092	42.72	108.35	65.63	11.67	H	285.3	1	0.200	Pass
0.109	39.63	106.88	67.25	11.37	V	281.4	1	0.200	Pass
0.501	45.74	73.69	27.95	11.27	H	333.7	1	9.000	Pass
0.510	45.50	73.54	28.04	11.35	V	39.1	1	9.000	Pass
2.171	32.18	69.54	37.36	11.69	V	243.6	1	9.000	Pass
2.180	31.37	69.54	38.17	11.69	H	97.1	1	9.000	Pass

Figure 10. Worst Case Cabinet Radiation, Below 30MHz (UNII-2C)

Frequency [MHz]	QPK Level [dBµV/m]	QPK Limit [dBµV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
38.220	9.61	29.55	19.94	-6.53	V	173.6	3.23	120.000	Pass
120.000	16.34	33.07	16.73	-6.77	V	349.4	2.22	120.000	Pass
240.030	15.91	35.57	19.66	-7.36	V	90.3	1.08	120.000	Pass
251.790	12.57	35.57	23.00	-7.48	V	177.5	1.09	120.000	Pass
254.070	14.33	35.57	21.24	-7.36	V	168.8	1.03	120.000	Pass
270.330	14.97	35.57	20.60	-5.96	H	74	3.97	120.000	Pass
276.480	11.33	35.57	24.24	-5.91	H	81.4	3.69	120.000	Pass

Figure 11. Worst Case Cabinet Radiation, Below 1GHz (UNII-2C)

Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB] Error! Bookmark not defined.	Polarization	Azimuth [deg]	Antenna Height [m]	Result
11,159.500	45.17	74.00	28.83	32.07	54.00	21.93	-1.99	V	130.9	3.08	Pass
11,160.000	46.71	74.00	27.29	33.69	54.00	20.31	-1.99	H	78.7	3.34	Pass
22,320.250	56.15	74.00	17.85	44.19	54.00	9.81	13.43	V	200	3.8	Pass
23,706.938	51.64	74.00	22.36	39.79	54.00	14.21	14.51	H	351.7	2.39	Pass
23,972.313	51.57	74.00	22.43	40.33	54.00	13.67	14.48	V	146.7	3.49	Pass
31,570.563	54.04	74.00	19.96	42.37	54.00	11.63	16.84	V	180.5	3.49	Pass
31,586.375	54.28	74.00	19.72	42.75	54.00	11.25	16.86	H	217.6	2.5	Pass
36,481.375	52.96	74.00	21.04	40.85	54.00	13.15	15.81	H	350.2	2.4	Pass

Figure 12. Worst Case Cabinet Radiation, Above 1GHz (UNII-2C)

Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
0.091	41.67	108.39	66.72	11.68	V	177.6	1	0.200	Pass
0.092	40.66	108.37	67.71	11.67	H	293.4	1	0.200	Pass
0.104	41.08	107.31	66.23	11.30	H	241.5	1	0.200	Pass
0.107	39.14	107.05	67.92	11.34	V	123.1	1	0.200	Pass
0.506	45.77	73.62	27.85	11.31	V	127.8	1	9.000	Pass
0.510	46.12	73.54	27.42	11.35	H	66.5	1	9.000	Pass

Figure 13. Worst Case Cabinet Radiation, Below 30MHz (UNII-3)

Frequency [MHz]	QPK Level [dBµV/m]	QPK Limit [dBµV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
74.370	5.90	29.55	23.65	-12.21	V	246.6	3.82	120.000	Pass
75.030	1.58	29.55	27.97	-12.62	H	96.1	3.65	120.000	Pass
120.000	19.15	33.07	13.92	-6.77	V	4.3	1.06	120.000	Pass
120.030	15.52	33.07	17.55	-6.37	H	36.8	3.78	120.000	Pass
241.260	16.64	35.57	18.93	-7.36	V	96.2	0.99	120.000	Pass
257.880	9.33	35.57	26.24	-7.48	H	335.7	2.95	120.000	Pass

Figure 14. Worst Case Cabinet Radiation, Below 1GHz (UNII-3)

Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB] Error! Bookmark not defined.	Polarization	Azimuth [deg]	Antenna Height [m]	Result
11,570.000	56.13	74.00	17.87	42.54	54.00	11.46	-1.51	H	67.4	2.5	Pass
11,570.000	49.66	74.00	24.34	36.20	54.00	17.80	-1.51	V	87.3	1.49	Pass
22,320.250	56.15	74.00	17.85	44.19	54.00	9.81	13.43	V	200	3.8	Pass
23,706.938	51.64	74.00	22.36	39.79	54.00	14.21	14.51	H	351.7	2.39	Pass
23,972.313	51.57	74.00	22.43	40.33	54.00	13.67	14.48	V	146.7	3.49	Pass
31,570.563	54.04	74.00	19.96	42.37	54.00	11.63	16.84	V	180.5	3.49	Pass
31,586.375	54.28	74.00	19.72	42.75	54.00	11.25	16.86	H	217.6	2.5	Pass
36,481.375	52.96	74.00	21.04	40.85	54.00	13.15	15.81	H	350.2	2.4	Pass

Figure 15. Worst Case Cabinet Radiation, Above 1GHz (UNII-3)

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.407(g) Frequency Stability

Test Requirements: Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

Test Results: The EUT was compliant with the requirements of this section. TX emission is maintained within the band of operation under all conditions of normal operation.

IV. Test Equipment

Test Equipment

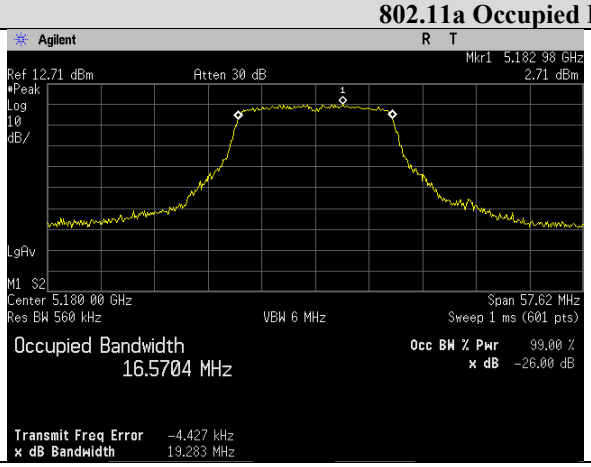
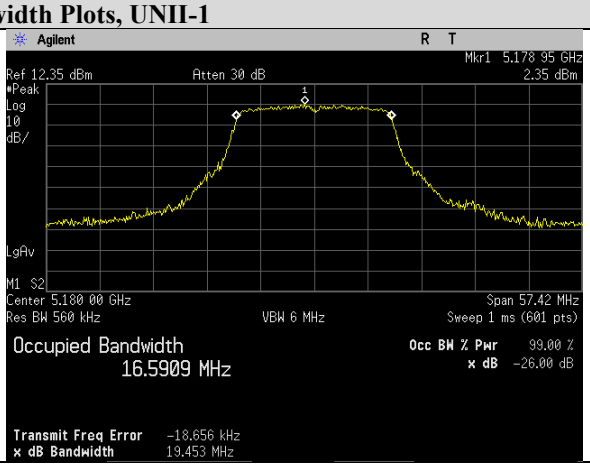
Calibrated test equipment utilized during testing was maintained in a current state of calibration per the requirements of ISO/IEC 17025:2017.

MET Asset #	Description	Manufacturer	Model	Last Cal Date	Cal Due Date
MY46180897	Spectrum Analyzer	Keysight	E4448A	08/28/2024	08/28/2025
1A1250	Receiver	Rohde & Schwarz	ESW44	04/08/2024	04/08/2025
1A1176	Active Loop Antenna (9KHz-30MHz)	ETS-Lindgren	6502	08/22/2024	08/22/2026
1A1147	Bi-Log Antenna	Suno Sciences Corp	JB3	04/06/2023	04/06/2025
1A1047	Horn Antenna	ETS - Lindgren	3117	06/26/2024	06/26/2025
1A1161	Horn Antenna (18GHz – 40GHz)	ETS Lindgren	3116C	08/01/2024	08/01/2026
1A1099	Generator	Com-Power	CGO-51000	See Note	
1A1088	Preamplifier	Rohde & Schwarz	TS-PR1	See Note	
1A1044	Generator	Com-Power	CG-520	See Note	
1A1073	Multi Device Controller	ETS	2090	See Note	
1A1074	System Controller	Panasonic	WV-CU101	See Note	
1A1080	Multi-Device	ETS	2090	See Note	
1A1180	Preamplifier	Miteq	AMF-7D-01001800-22-10P	See Note	

Table 22. Test Equipment List

Note: Functionally tested equipment is verified using calibrated instrumentation at the time of testing.

I. Occupied Bandwidth Plots

802.11a Occupied Bandwidth Plots, UNII-1	
	
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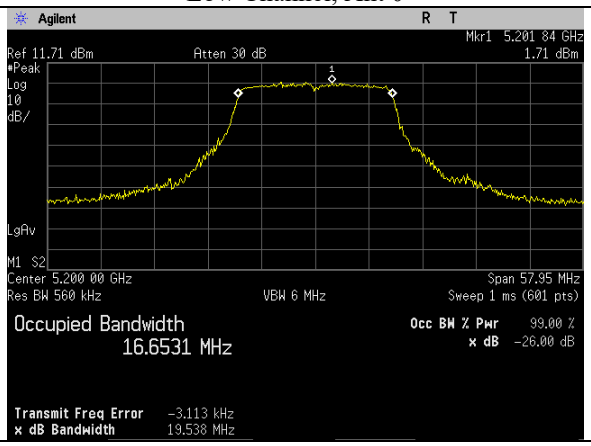
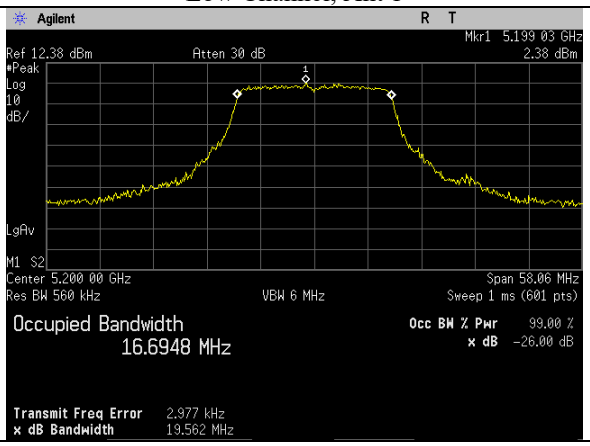
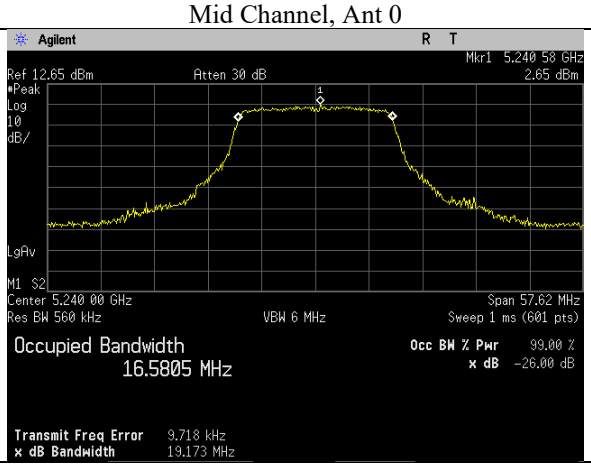
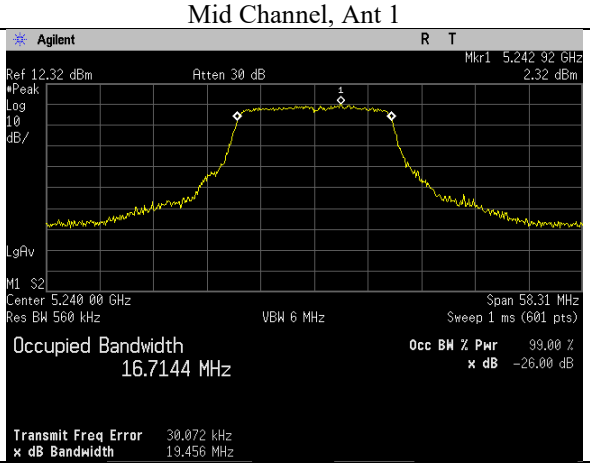
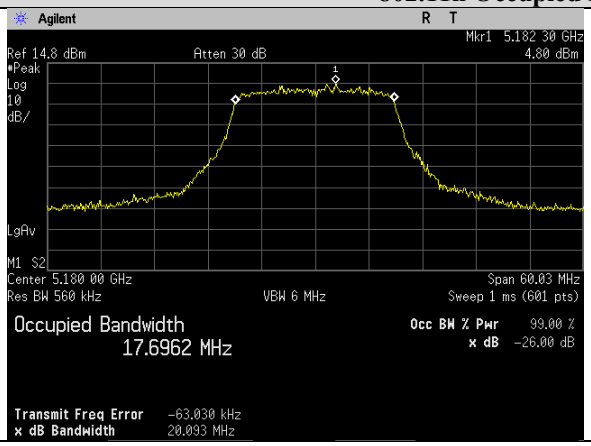
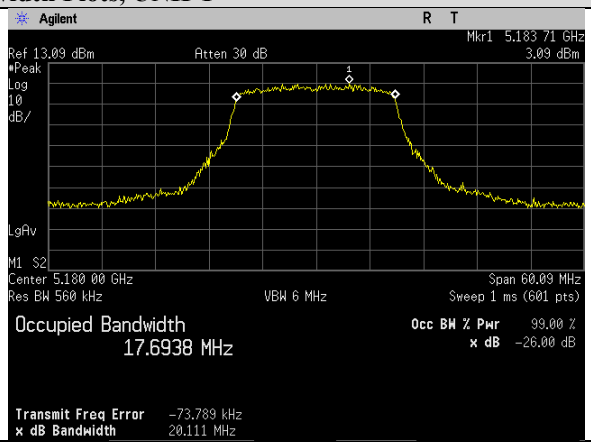
	
Mid Channel, Ant 0	Mid Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

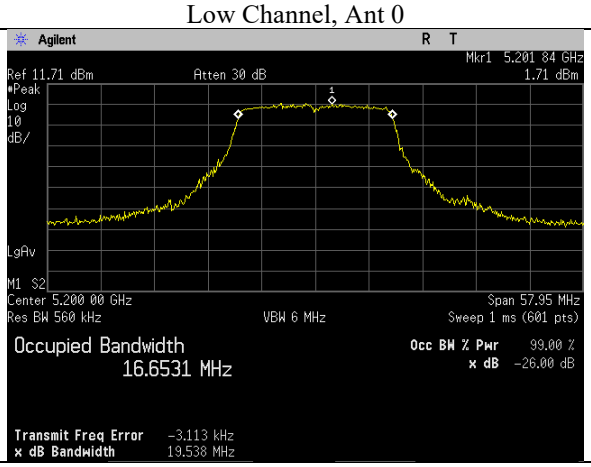
802.11n Occupied Bandwidth Plots, UNII-1



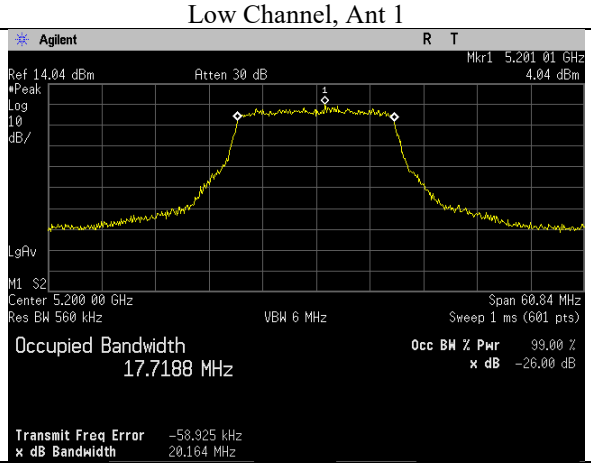
Low Channel, Ant 0



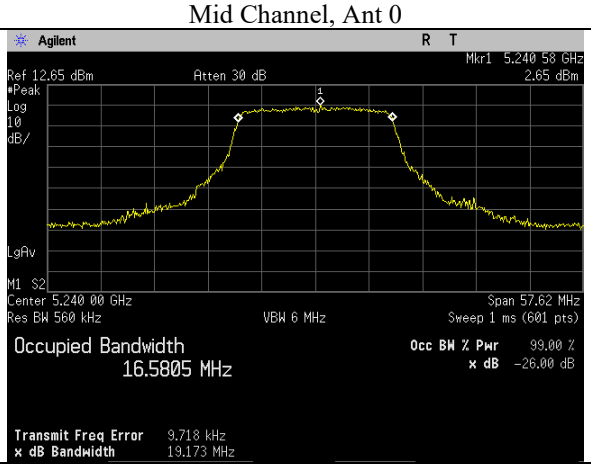
Low Channel, Ant 1



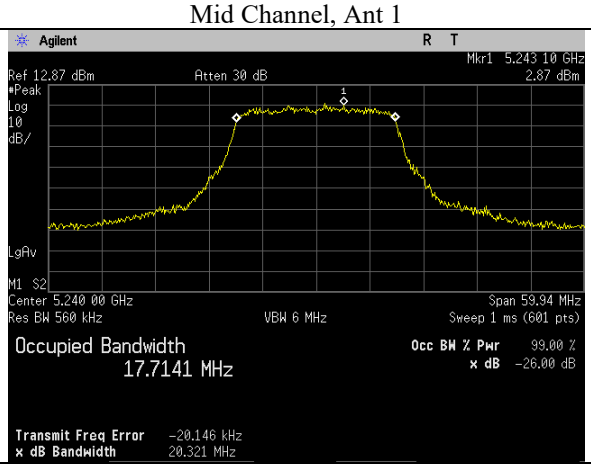
Mid Channel, Ant 0



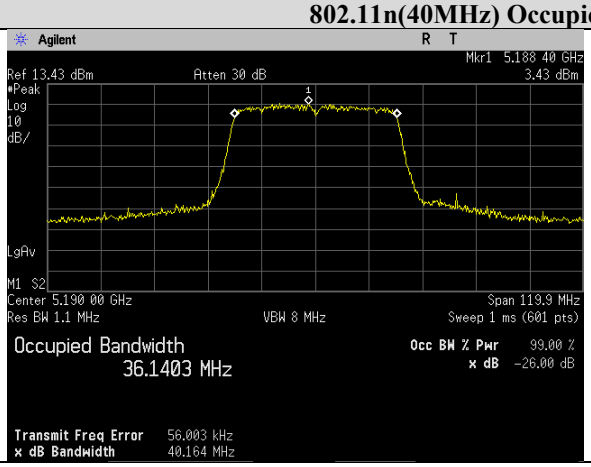
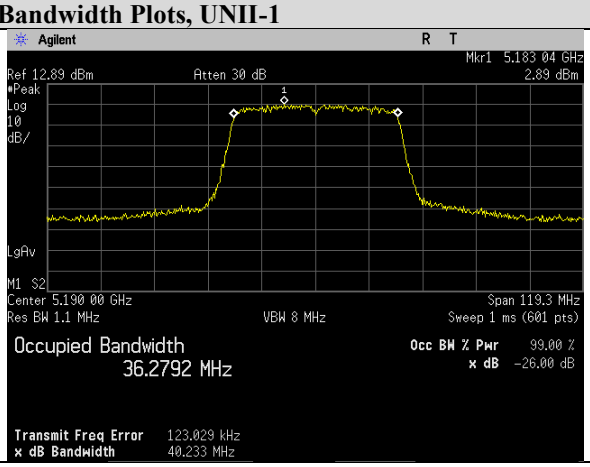
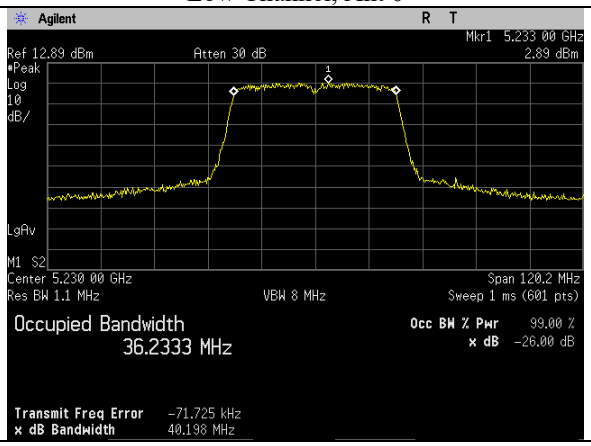
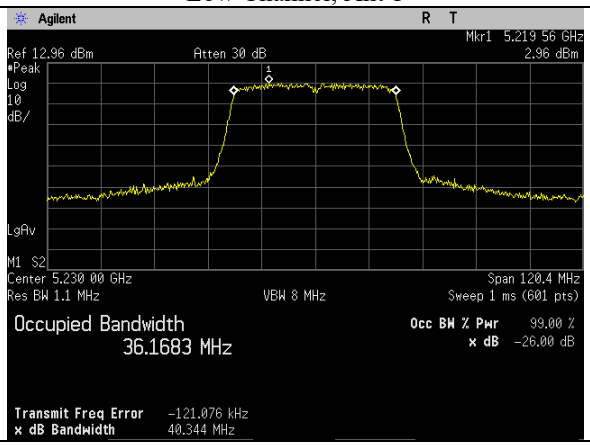
Mid Channel, Ant 1

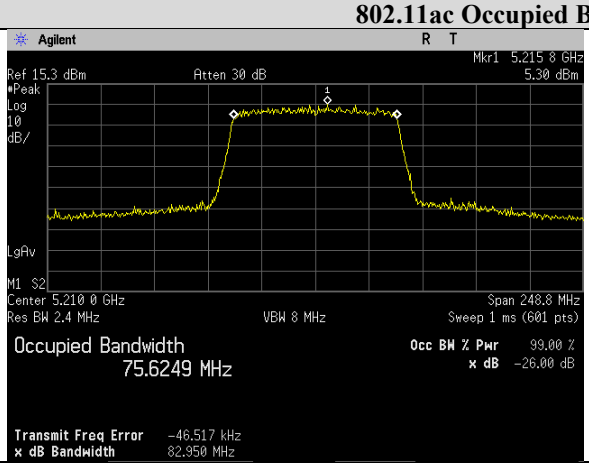
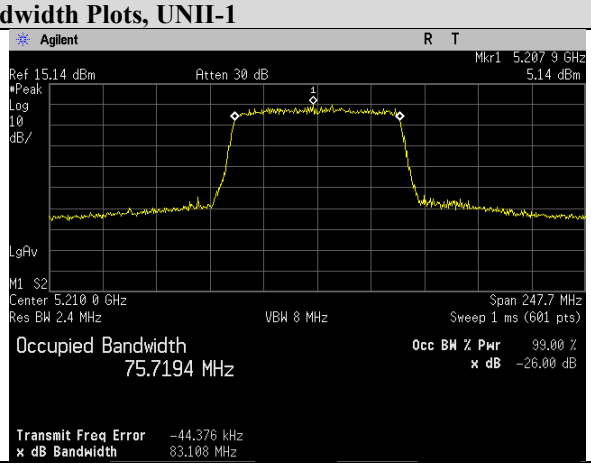


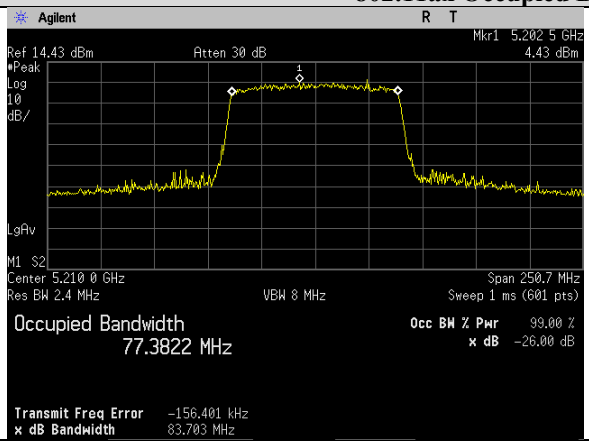
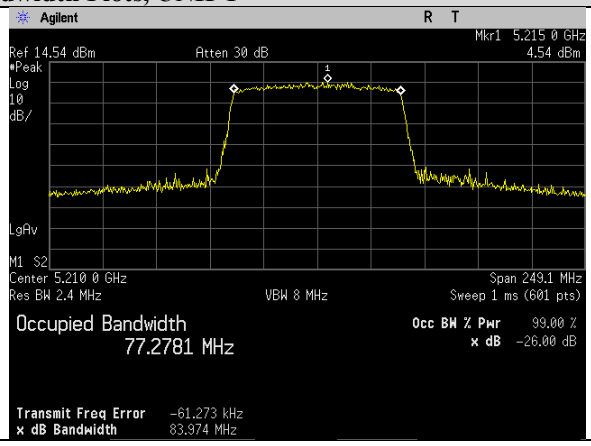
High Channel, Ant 0

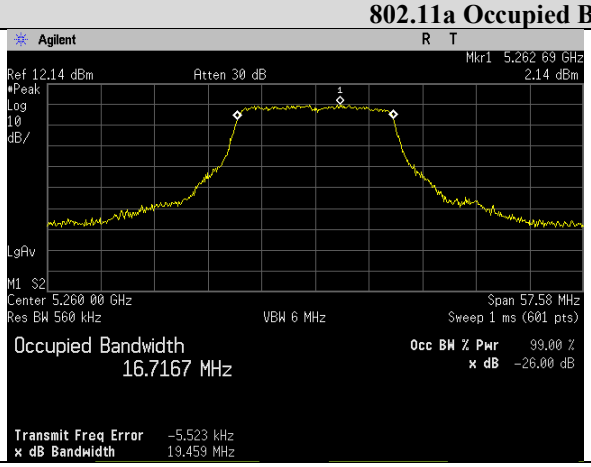
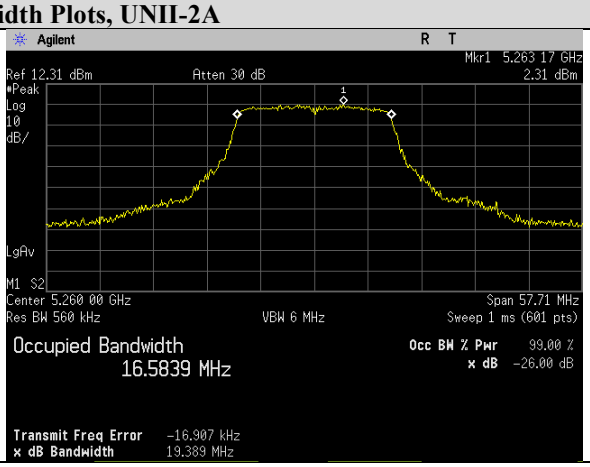
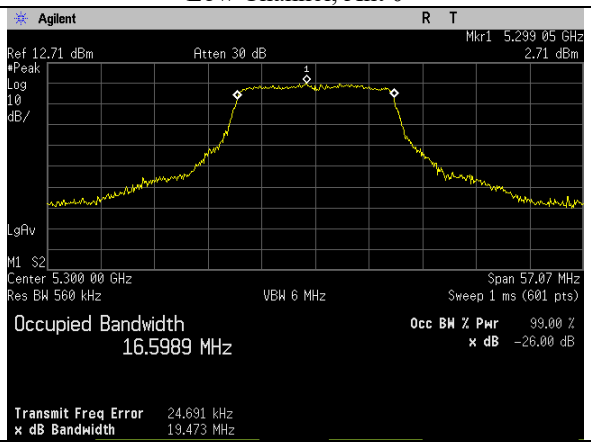
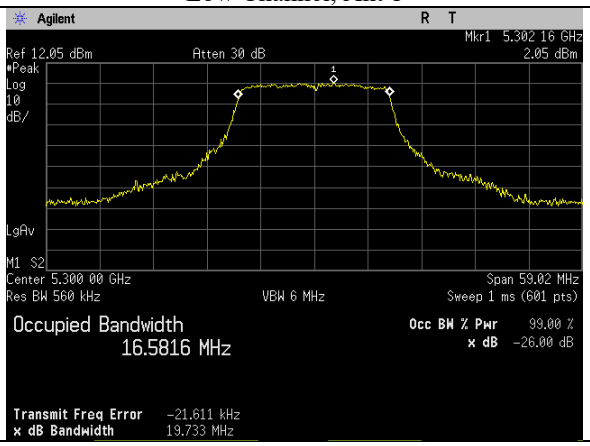
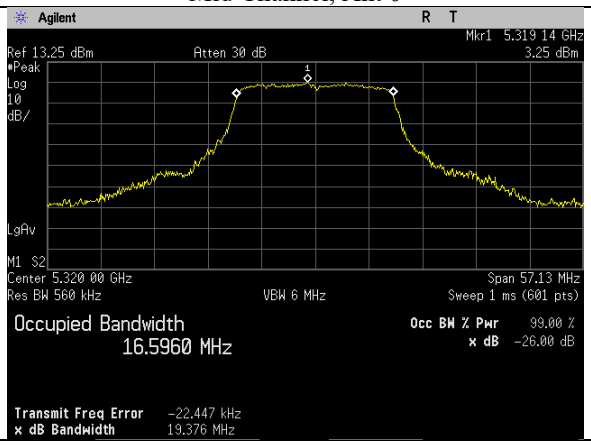
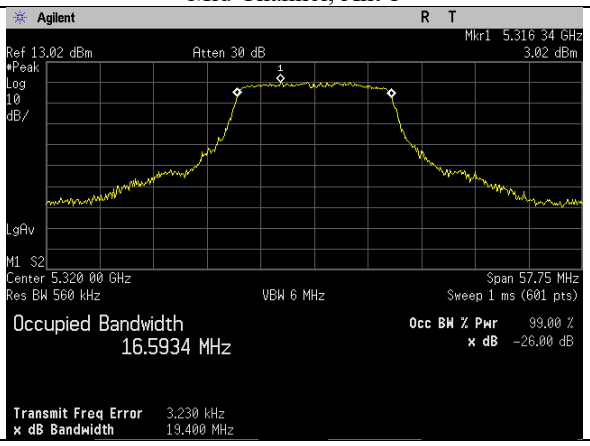


High Channel, Ant 1

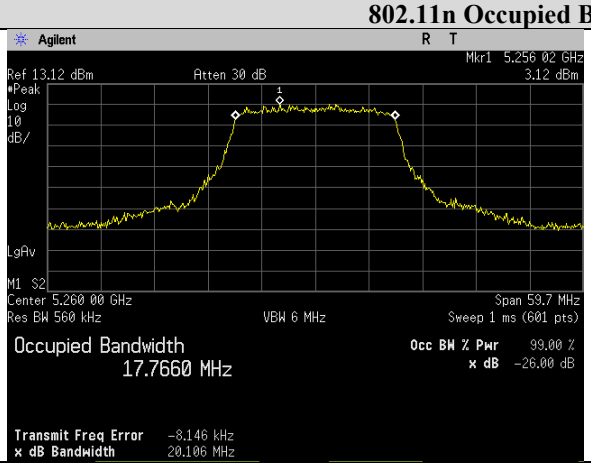
802.11n(40MHz) Occupied Bandwidth Plots, UNII-1	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

802.11ac Occupied Bandwidth Plots, UNII-1	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

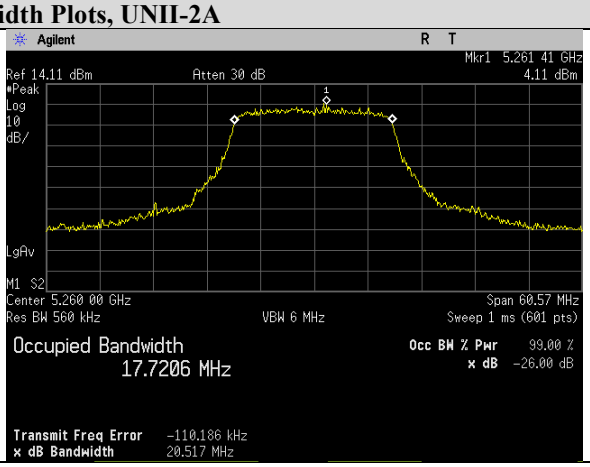
802.11ax Occupied Bandwidth Plots, UNII-1	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

802.11a Occupied Bandwidth Plots, UNII-2A	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
Mid Channel, Ant 0	Mid Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

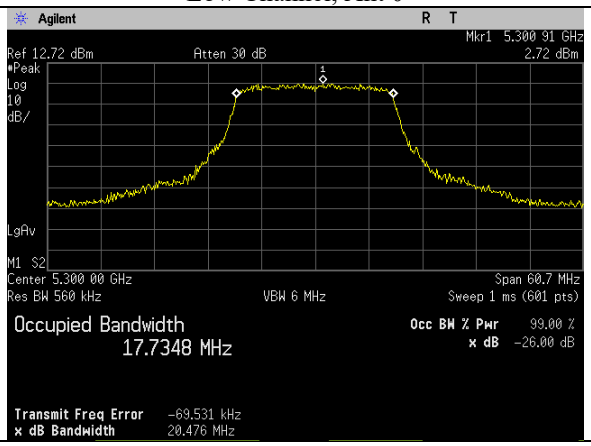
802.11n Occupied Bandwidth Plots, UNII-2A



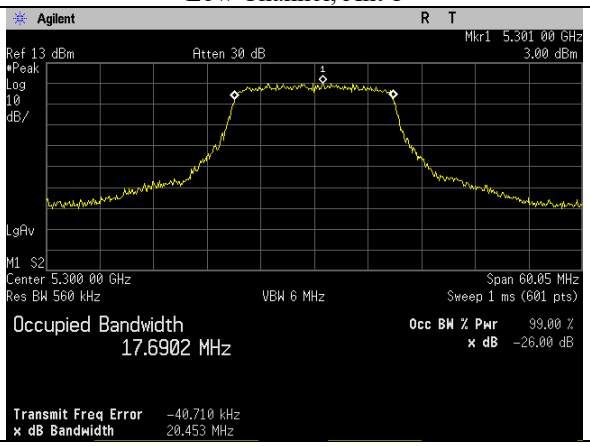
Low Channel, Ant 0



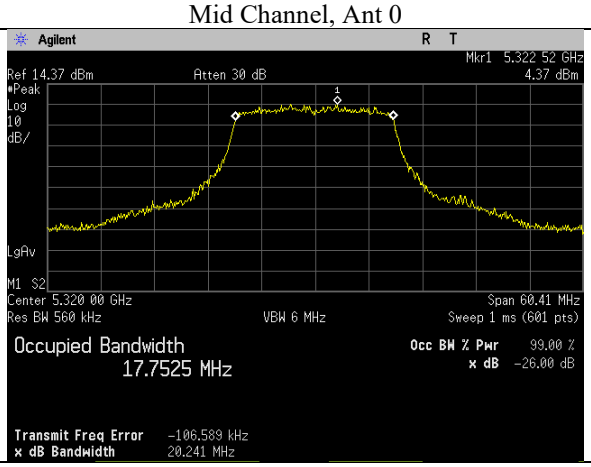
Low Channel, Ant 1



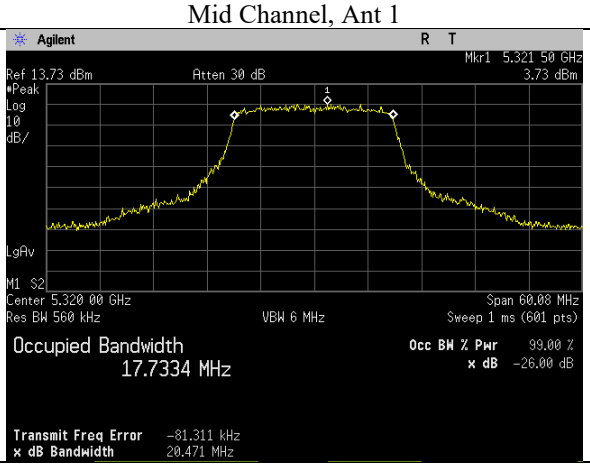
Mid Channel, Ant 0



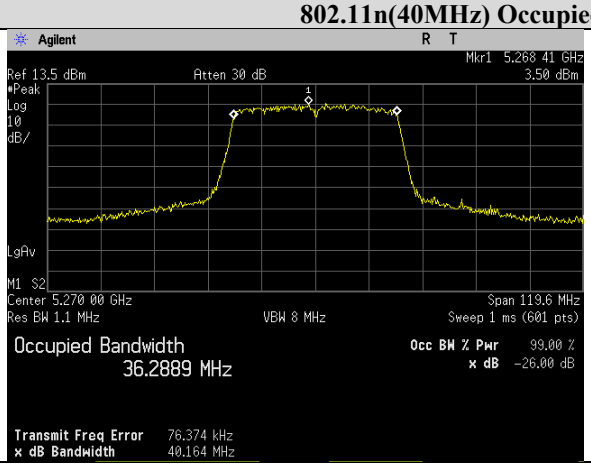
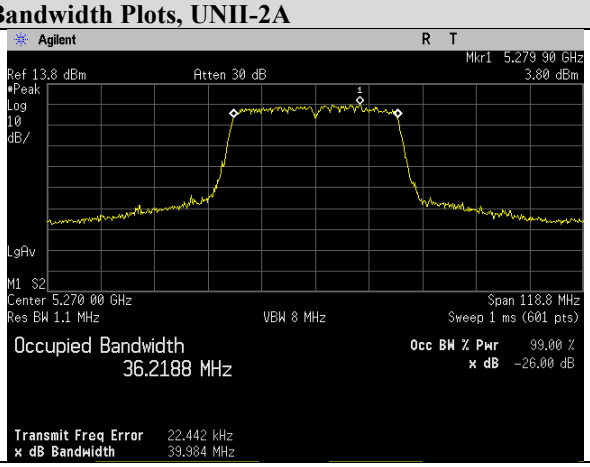
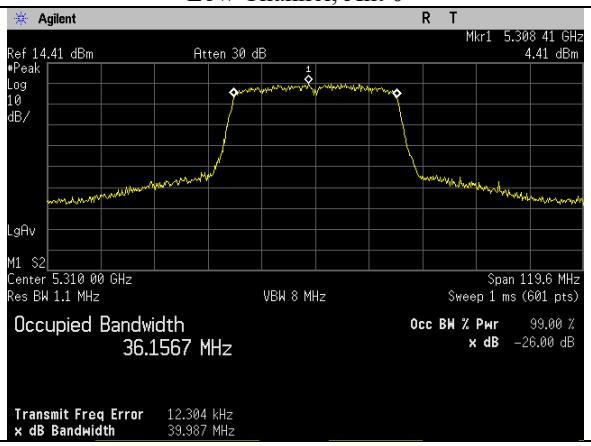
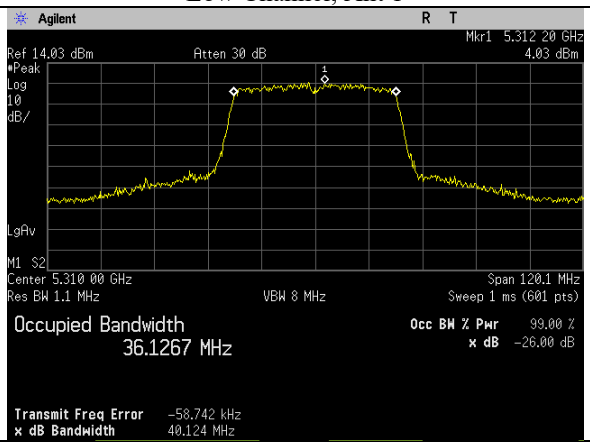
Mid Channel, Ant 1

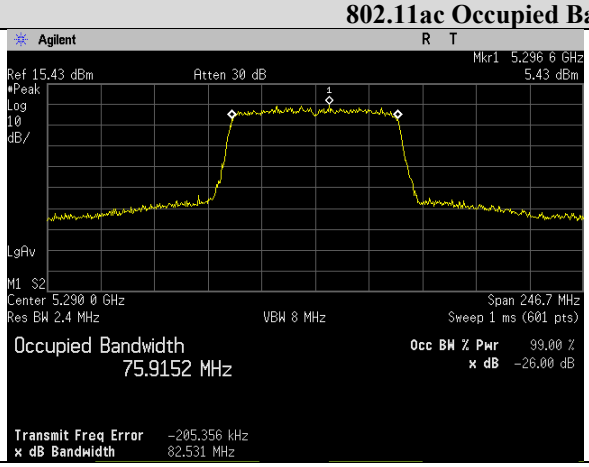
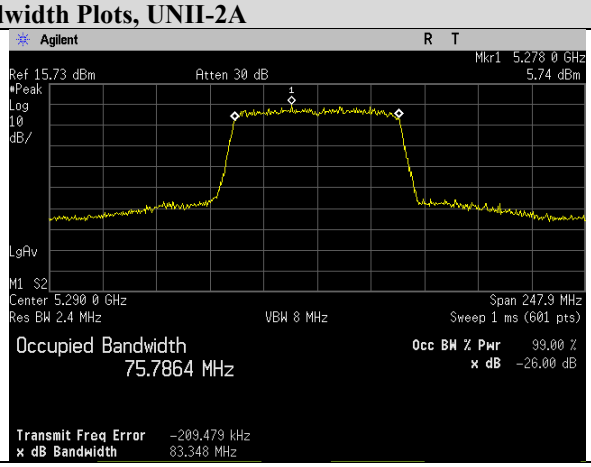


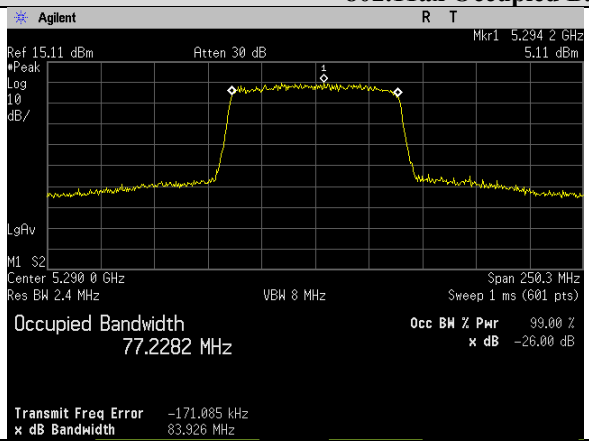
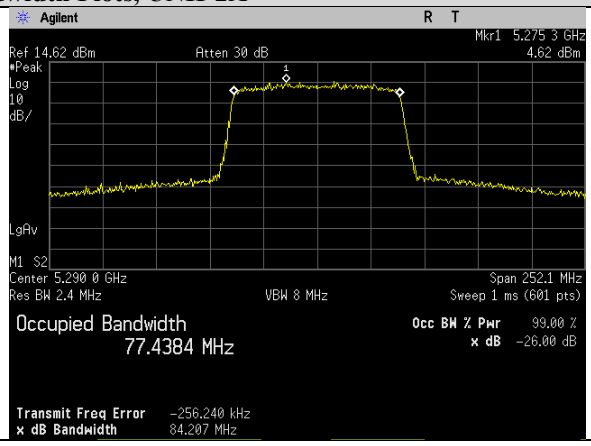
High Channel, Ant 0



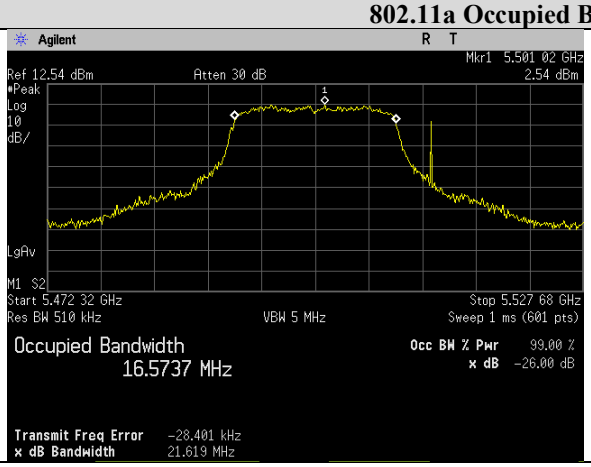
High Channel, Ant 1

802.11n(40MHz) Occupied Bandwidth Plots, UNII-2A	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

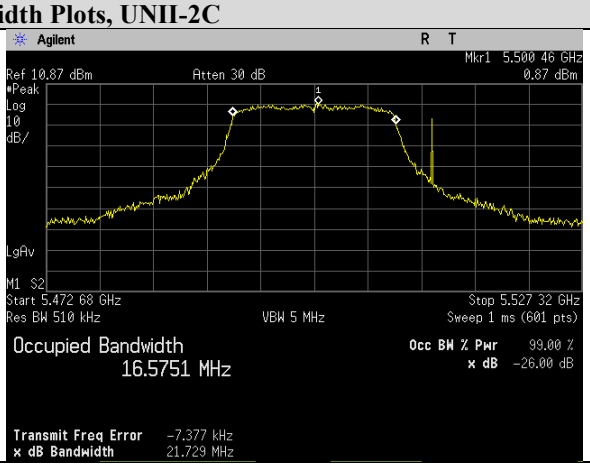
802.11ac Occupied Bandwidth Plots, UNII-2A	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

802.11ax Occupied Bandwidth Plots, UNII-2A	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

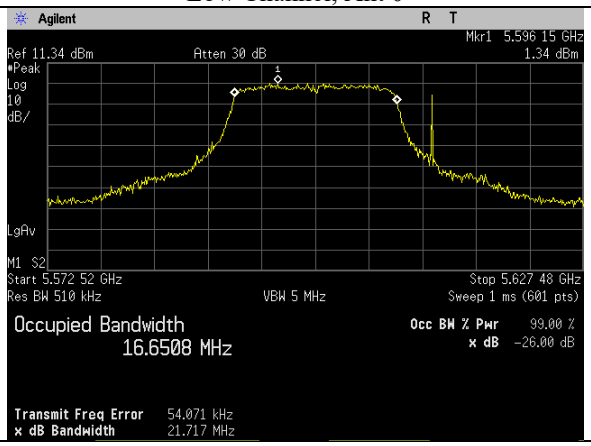
802.11a Occupied Bandwidth Plots, UNII-2C



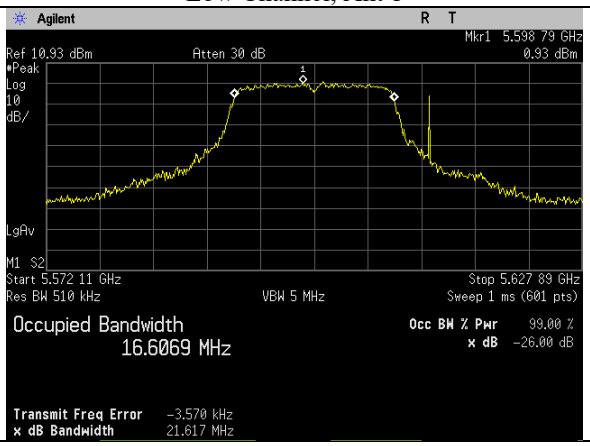
Low Channel, Ant 0



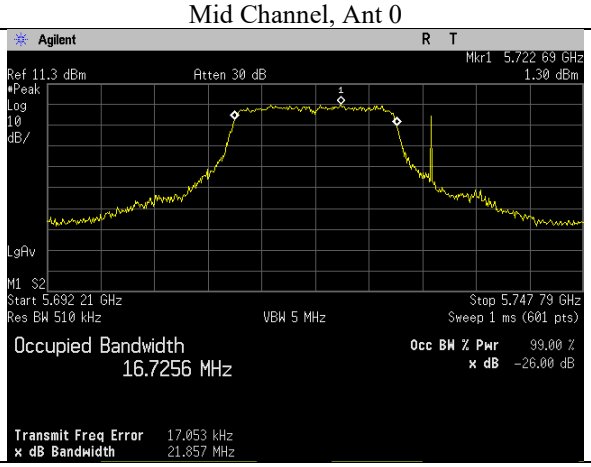
Low Channel, Ant 1



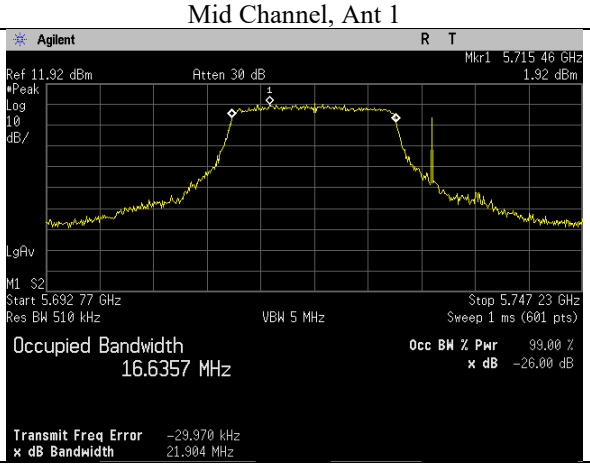
Mid Channel, Ant 0



Mid Channel, Ant 1

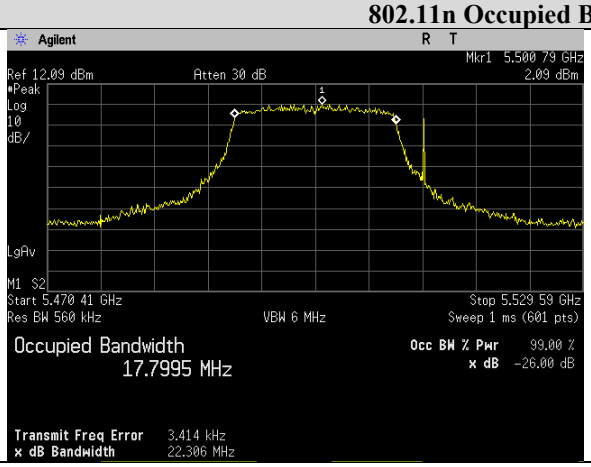


High Channel, Ant 0

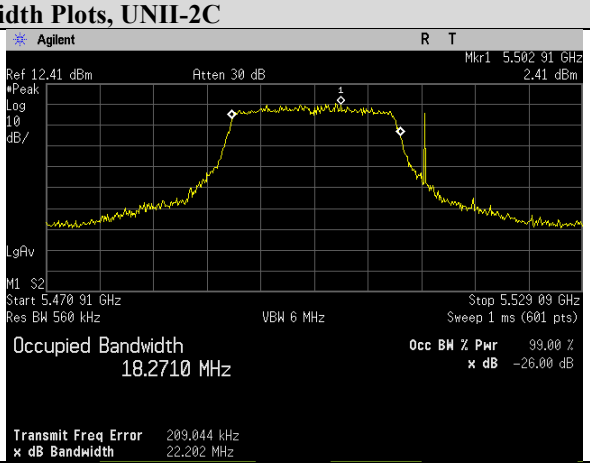


High Channel, Ant 1

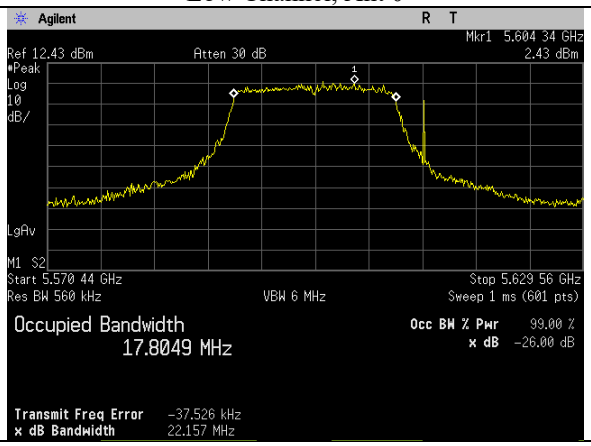
802.11n Occupied Bandwidth Plots, UNII-2C



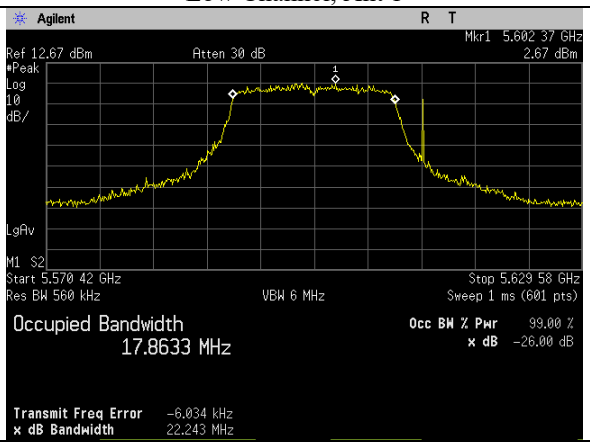
Low Channel, Ant 0



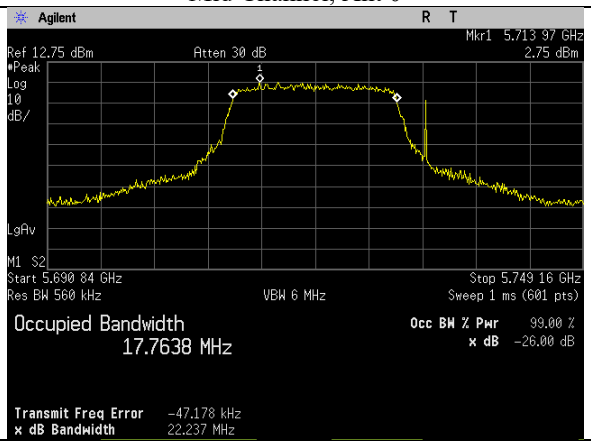
Low Channel, Ant 1



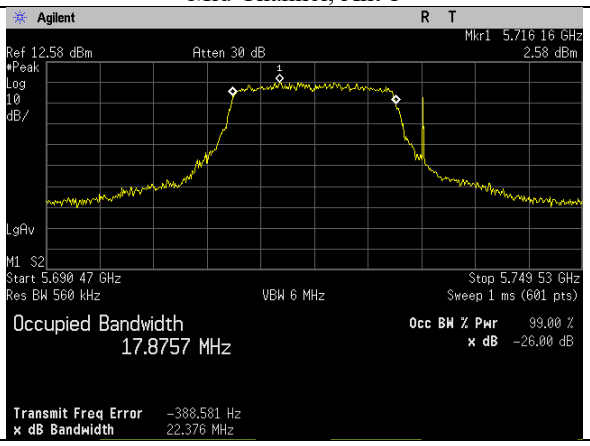
Mid Channel, Ant 0



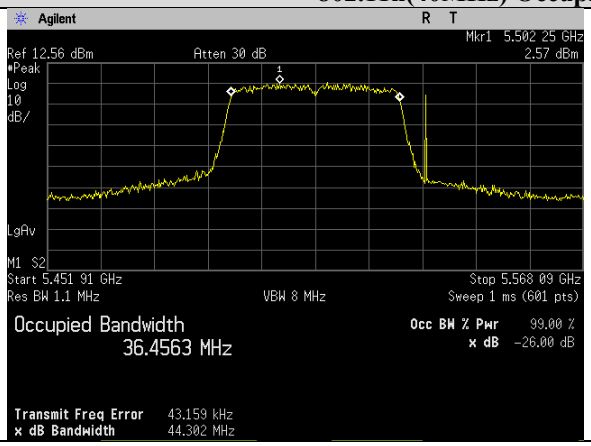
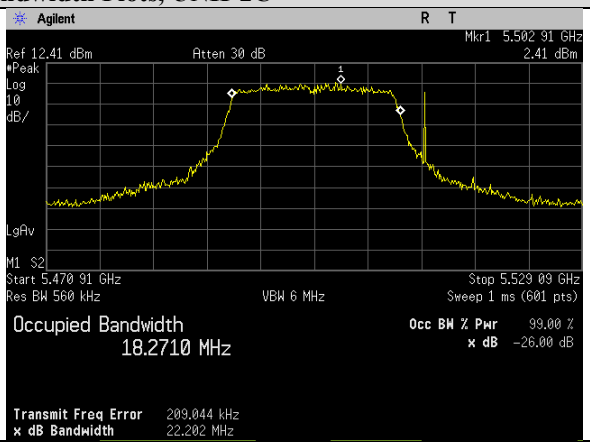
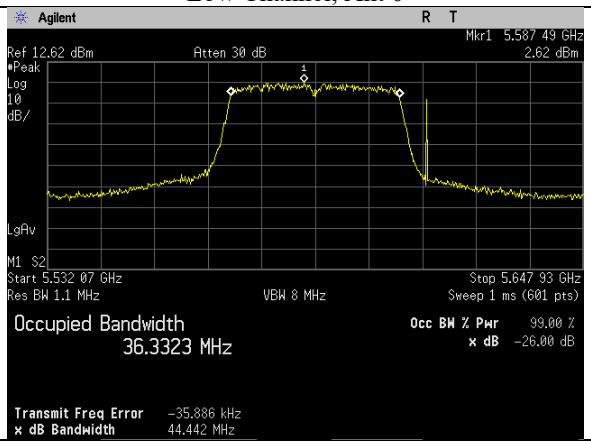
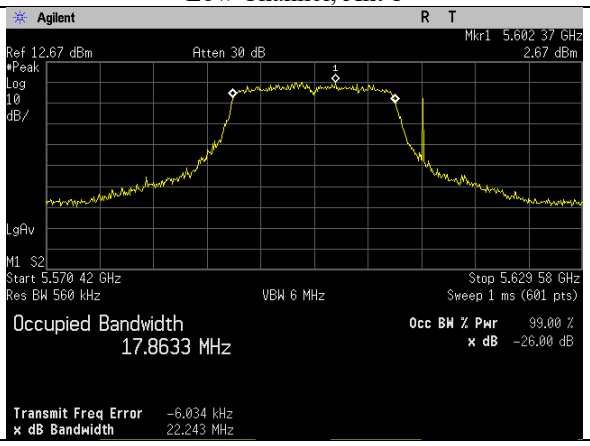
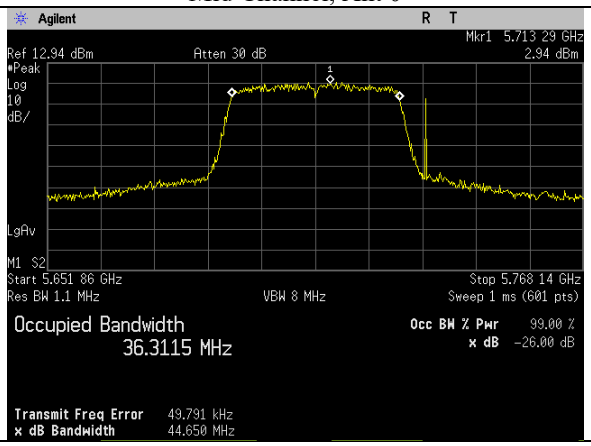
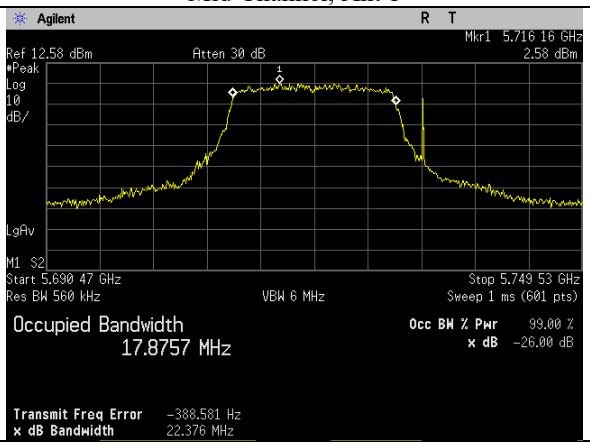
Mid Channel, Ant 1



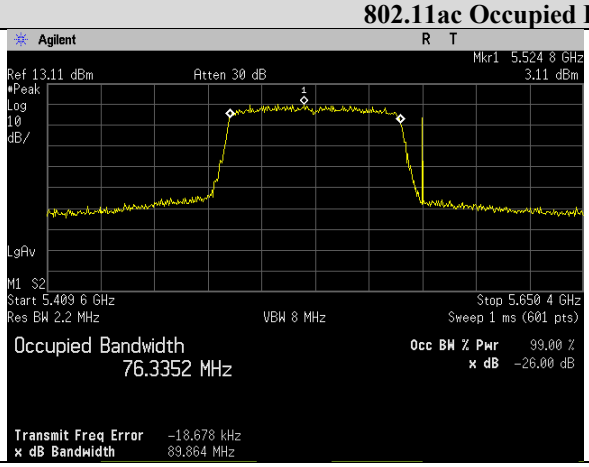
High Channel, Ant 0



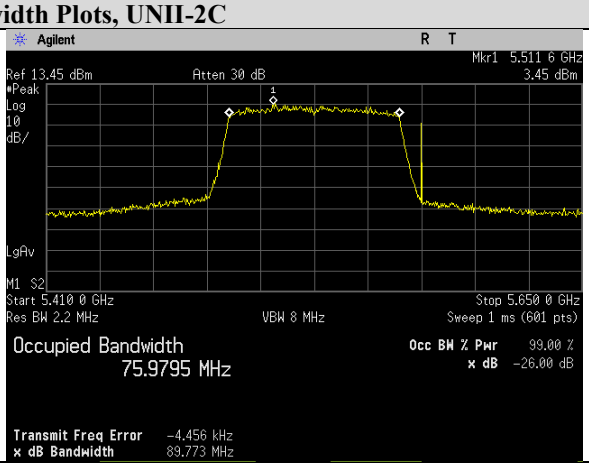
High Channel, Ant 1

802.11n(40MHz) Occupied Bandwidth Plots, UNII-2C	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
Mid Channel, Ant 0	Mid Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

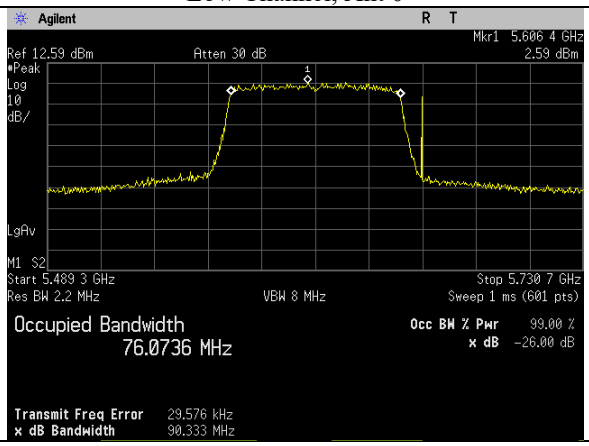
802.11ac Occupied Bandwidth Plots, UNII-2C



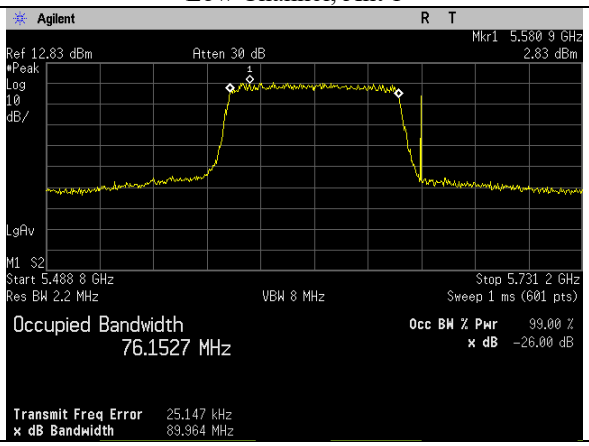
Low Channel, Ant 0



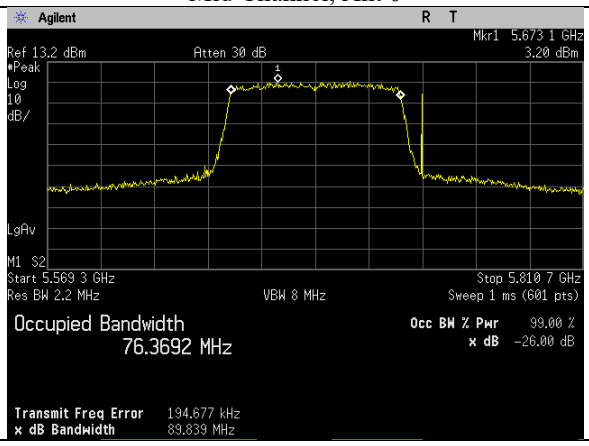
Low Channel, Ant 1



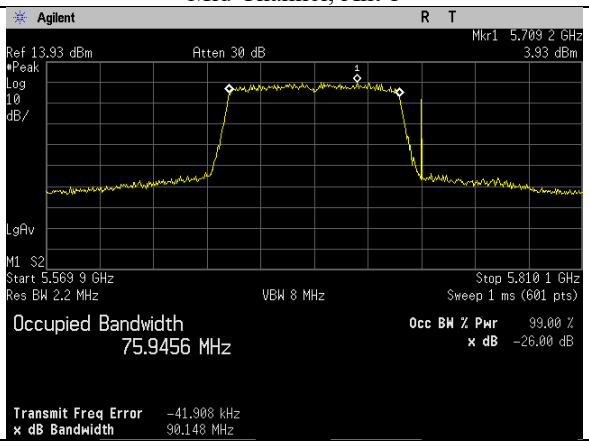
Mid Channel, Ant 0



Mid Channel, Ant 1

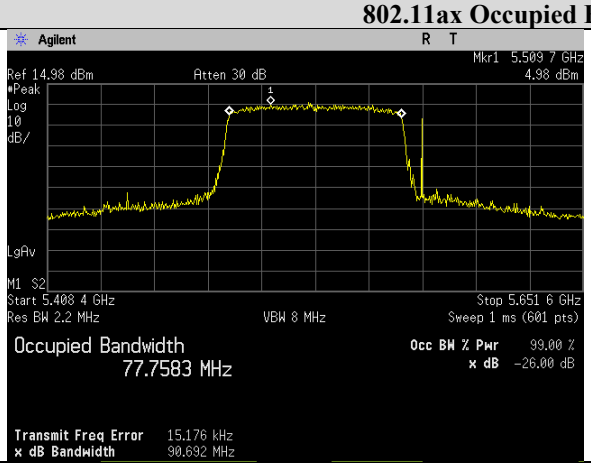


High Channel, Ant 0

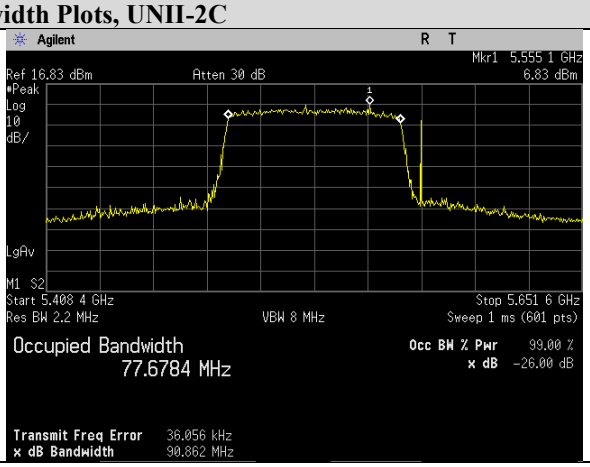


High Channel, Ant 1

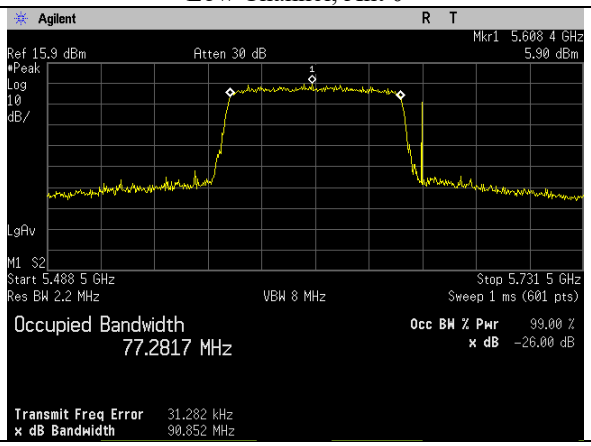
802.11ax Occupied Bandwidth Plots, UNII-2C



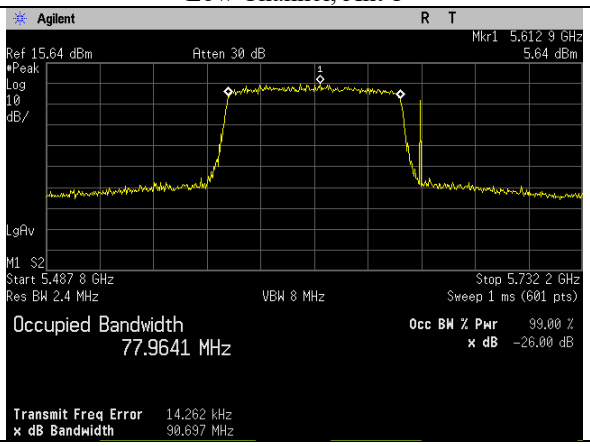
Low Channel, Ant 0



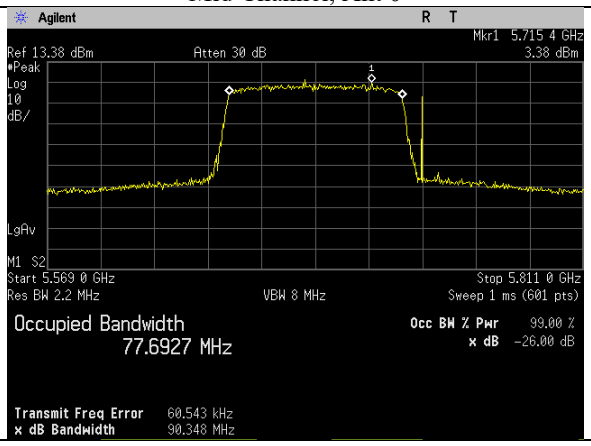
Low Channel, Ant 1



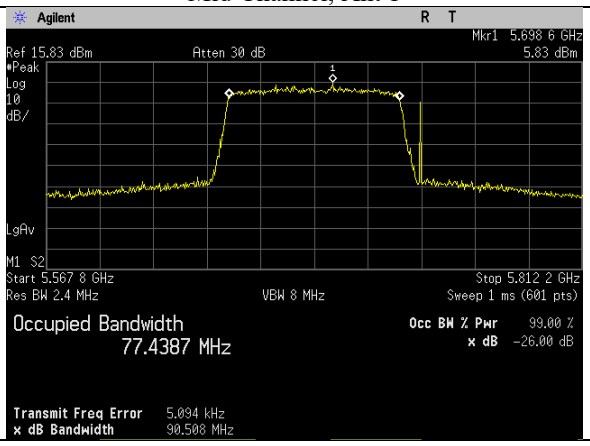
Mid Channel, Ant 0



Mid Channel, Ant 1

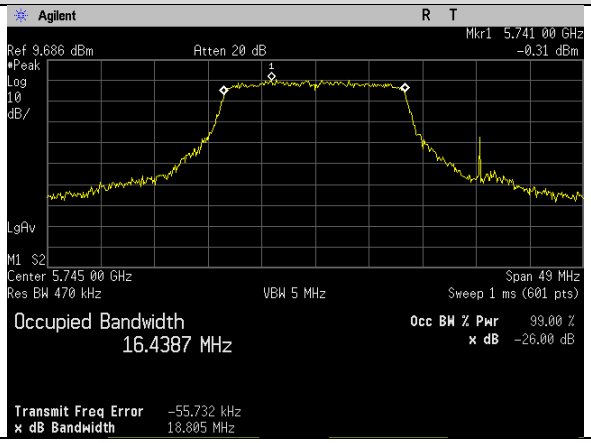


High Channel, Ant 0

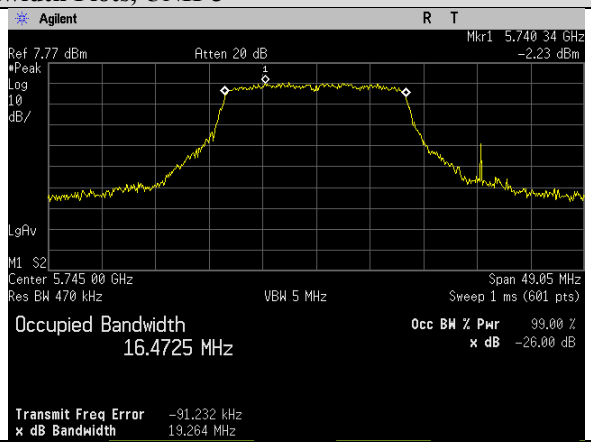


High Channel, Ant 1

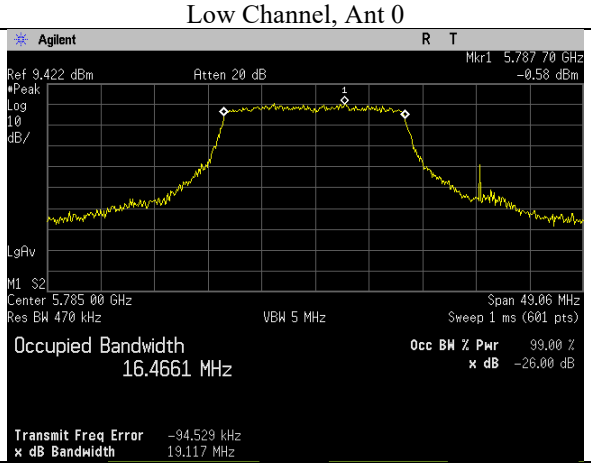
802.11a 99% / 26dB Bandwidth Plots, UNII-3



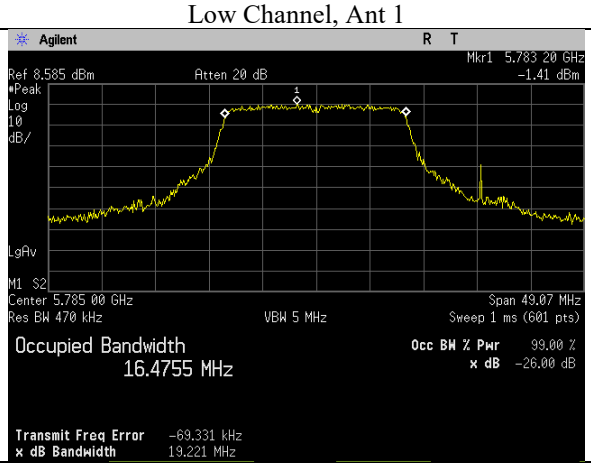
Low Channel, Ant 0



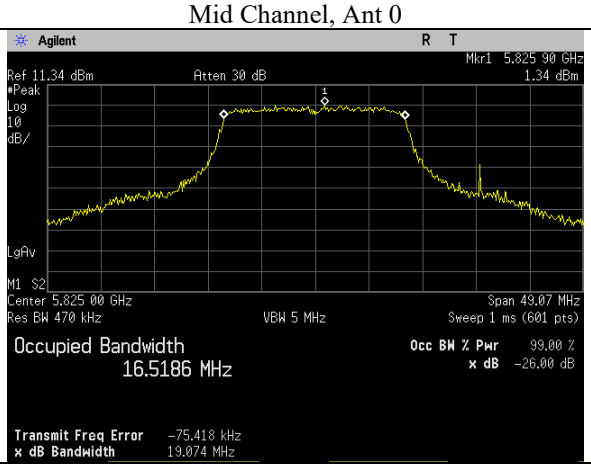
Low Channel, Ant 1



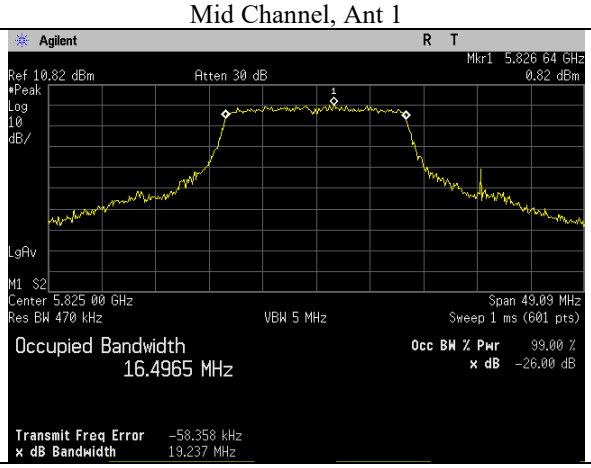
Mid Channel, Ant 0



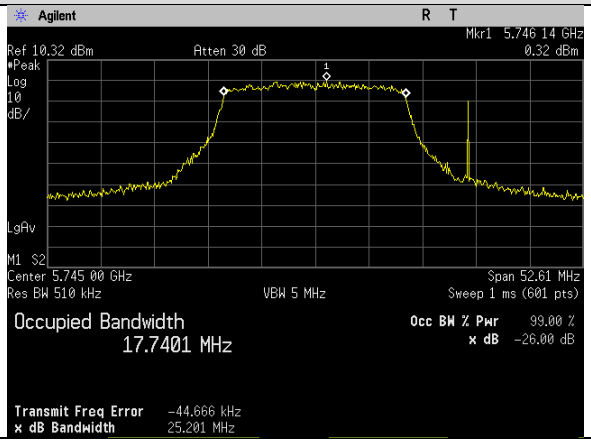
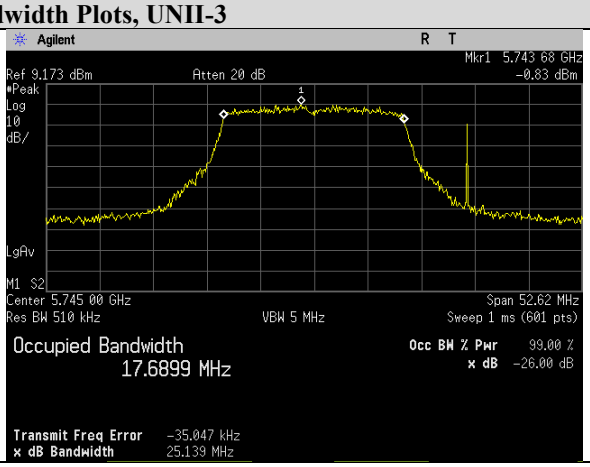
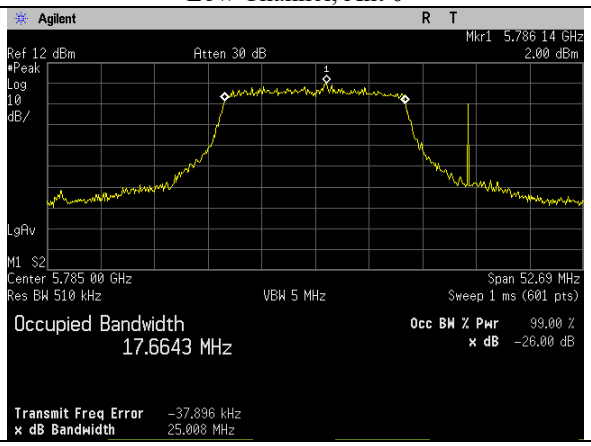
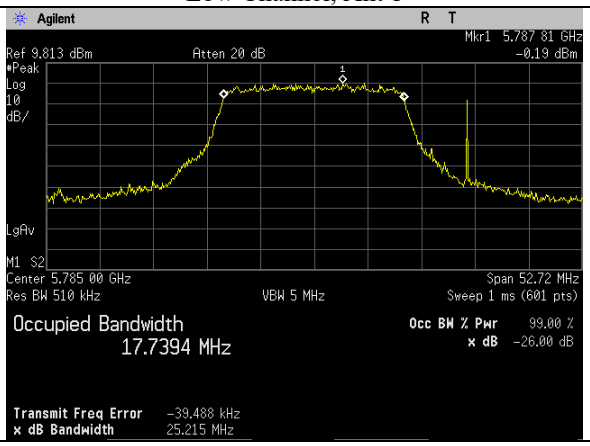
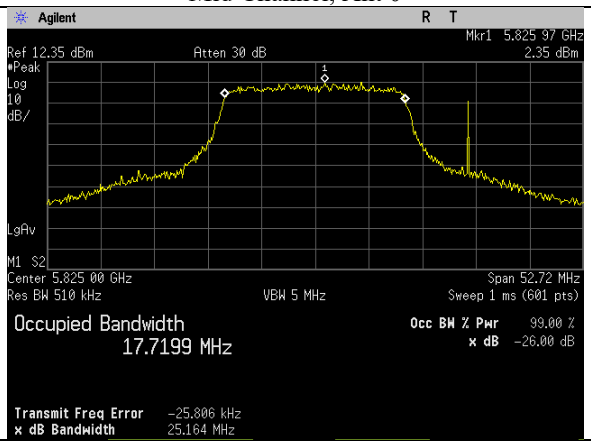
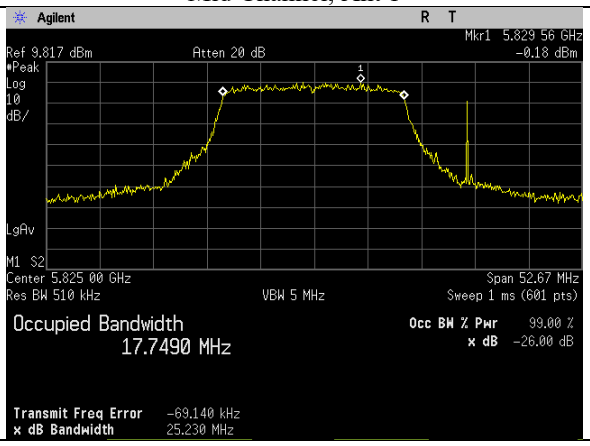
Mid Channel, Ant 1

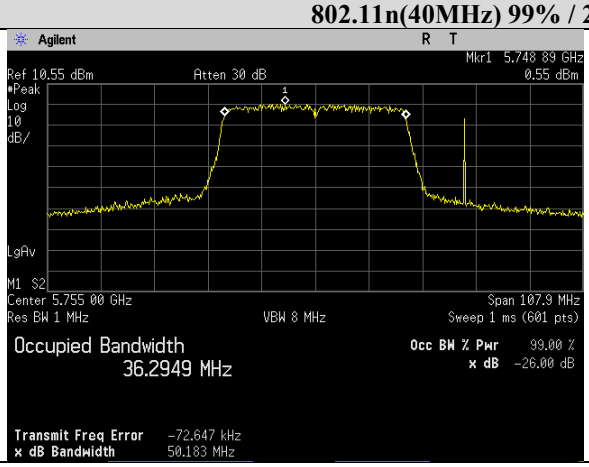
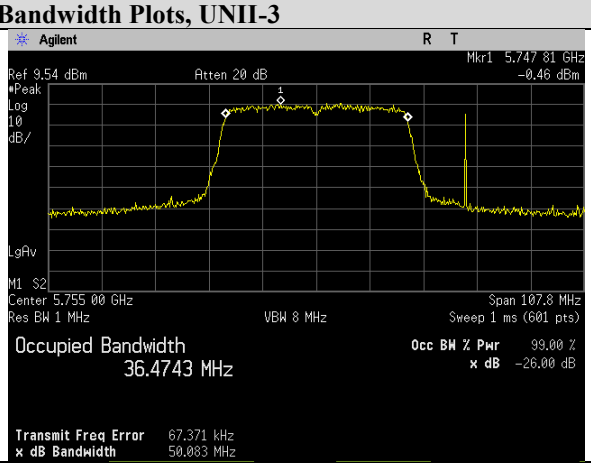
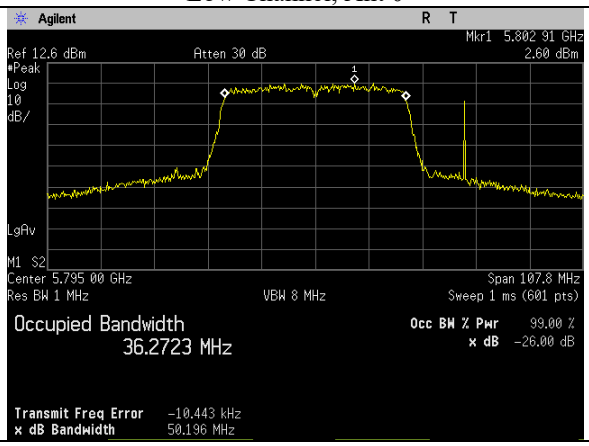
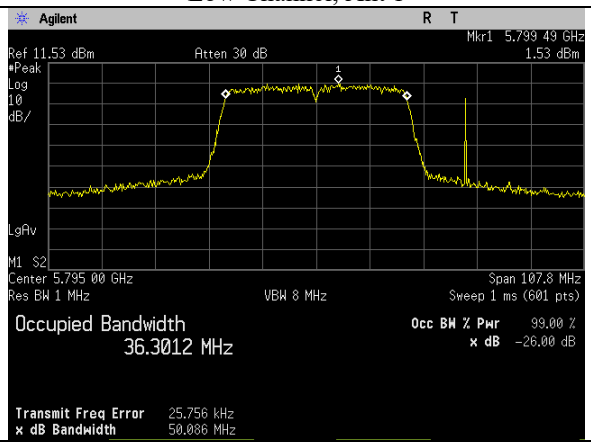


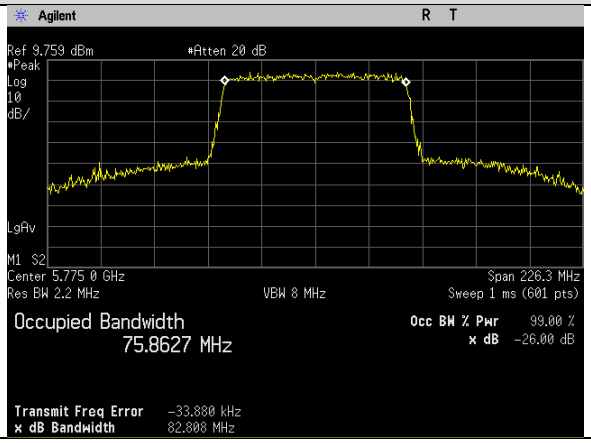
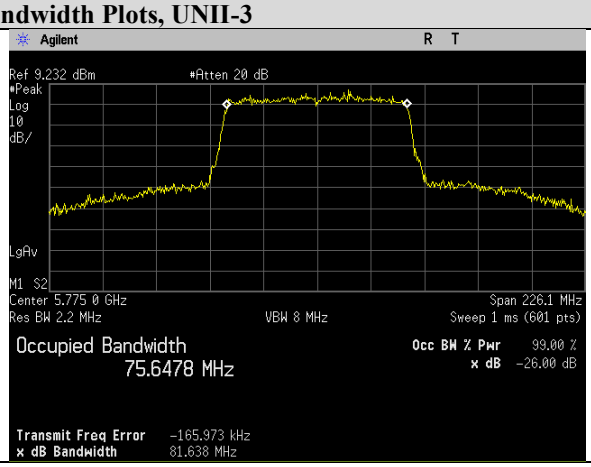
High Channel, Ant 0

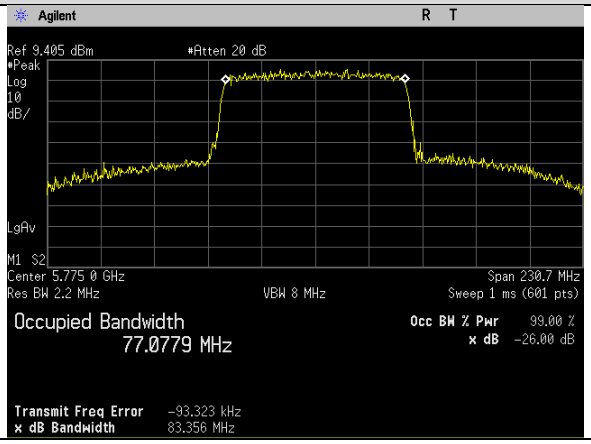
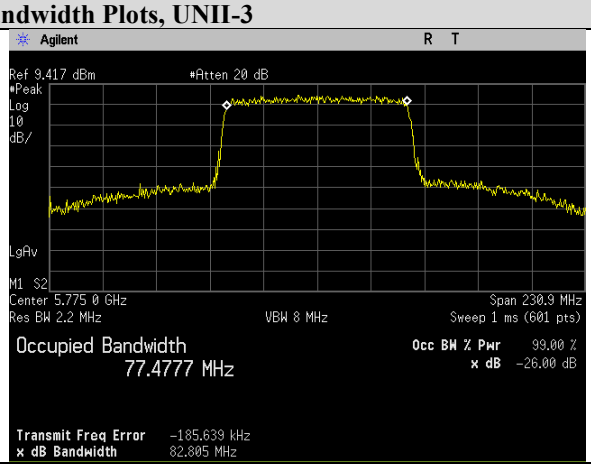


High Channel, Ant 1

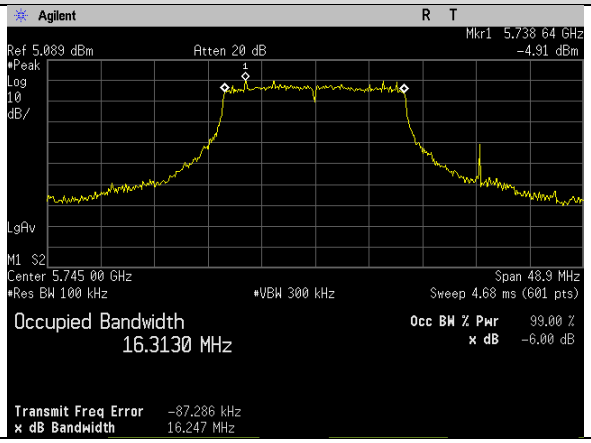
802.11n 99% / 26dB Bandwidth Plots, UNII-3	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
Mid Channel, Ant 0	Mid Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

802.11n(40MHz) 99% / 26dB Bandwidth Plots, UNII-3	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

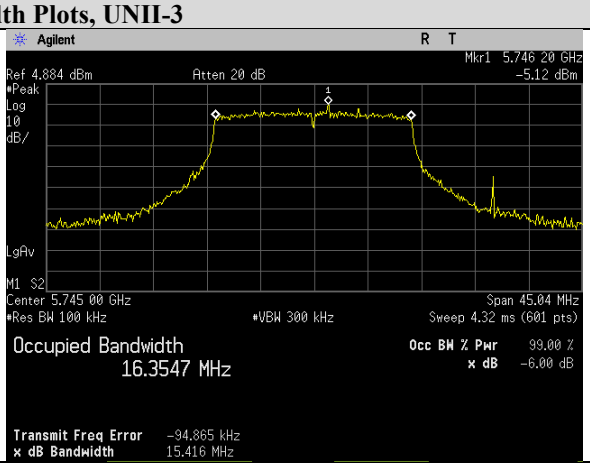
802.11ac 99% / 26dB Bandwidth Plots, UNII-3	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

802.11ax 99% / 26dB Bandwidth Plots, UNII-3	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

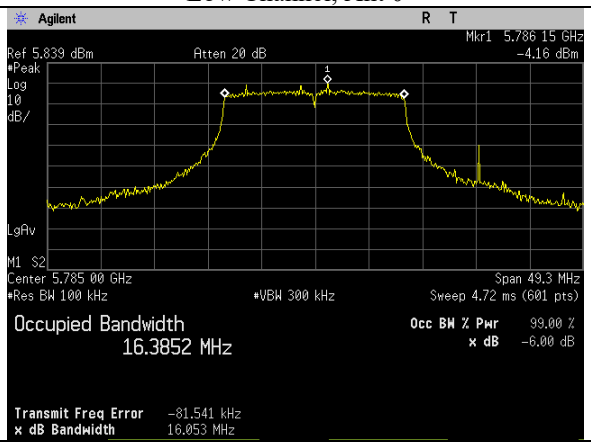
802.11a -6dB Bandwidth Plots, UNII-3



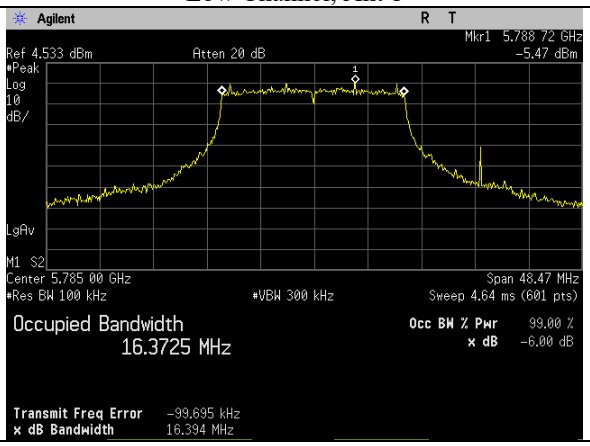
Low Channel, Ant 0



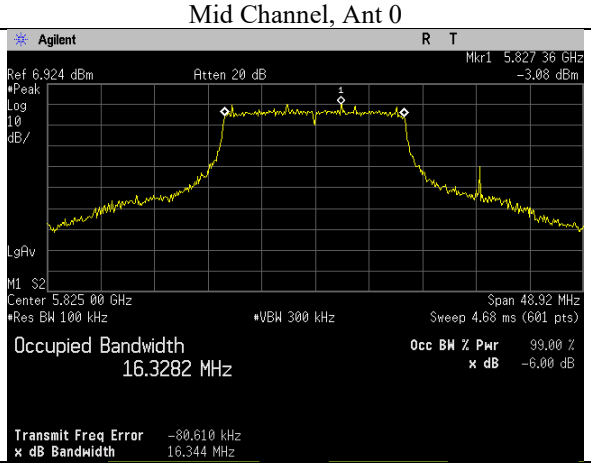
Low Channel, Ant 1



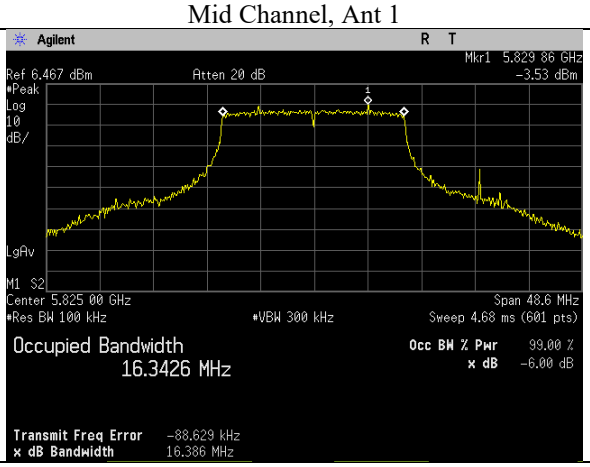
Mid Channel, Ant 0



Mid Channel, Ant 1

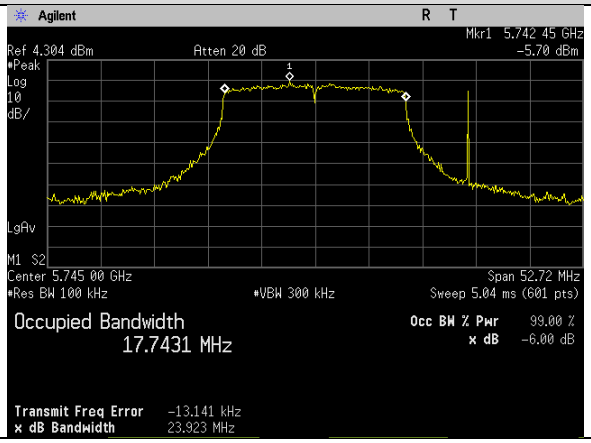


High Channel, Ant 0

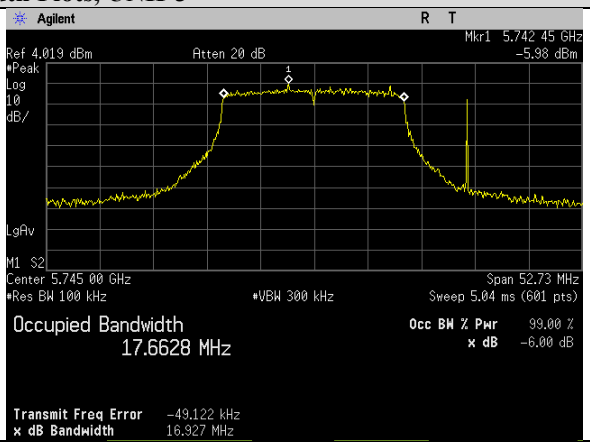


High Channel, Ant 1

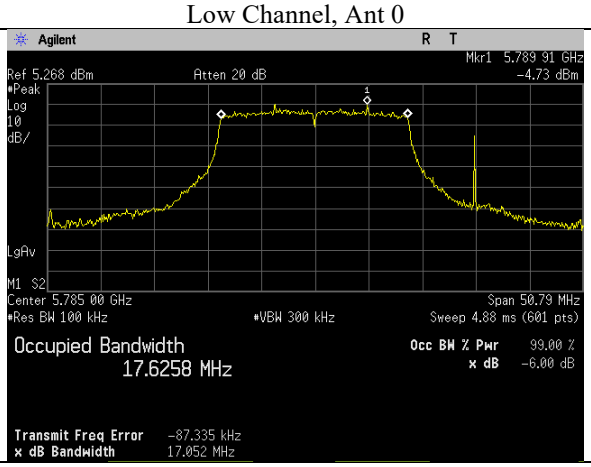
802.11n -6dB Bandwidth Plots, UNII-3



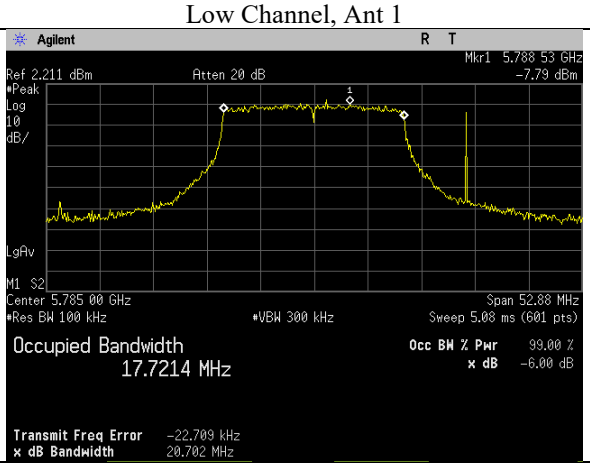
Low Channel, Ant 0



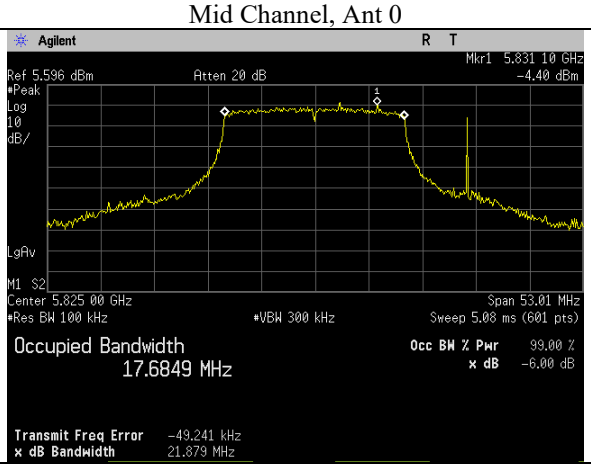
Low Channel, Ant 1



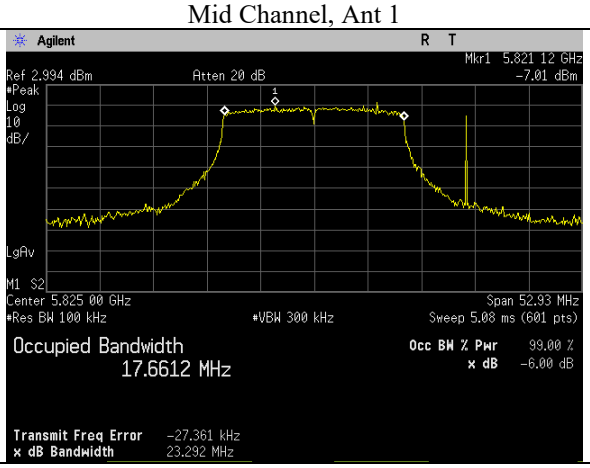
Mid Channel, Ant 0



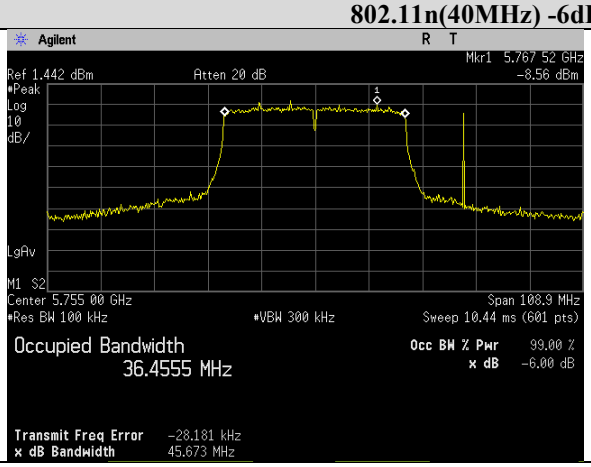
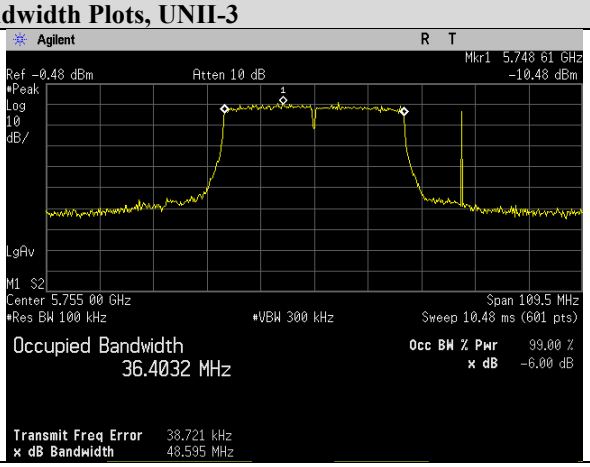
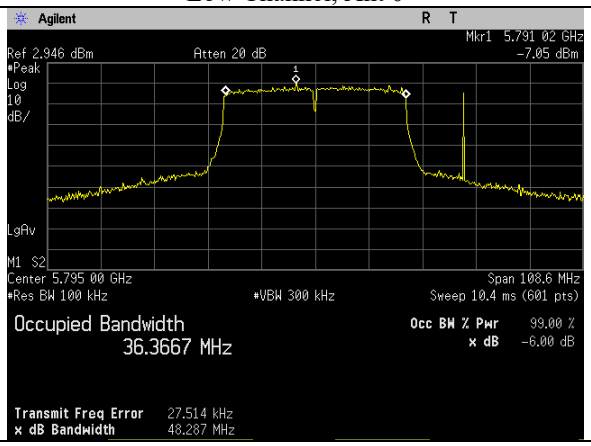
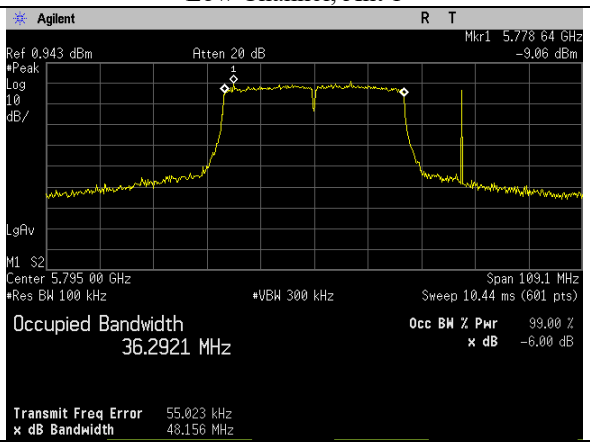
Mid Channel, Ant 1

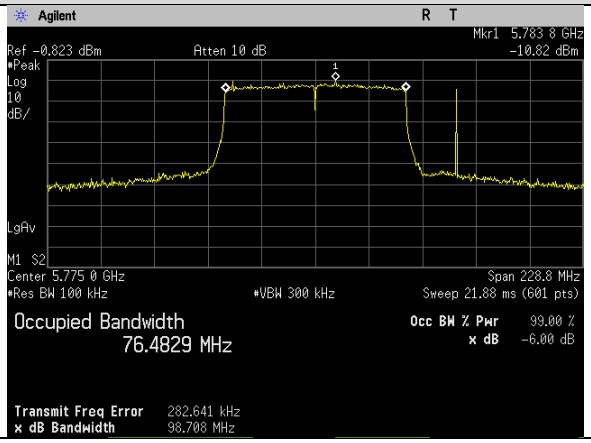
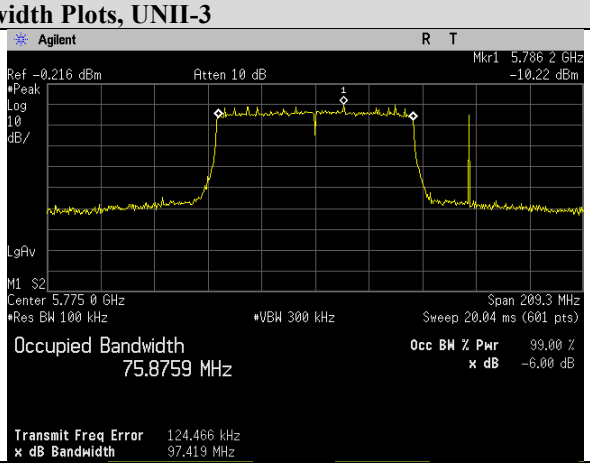


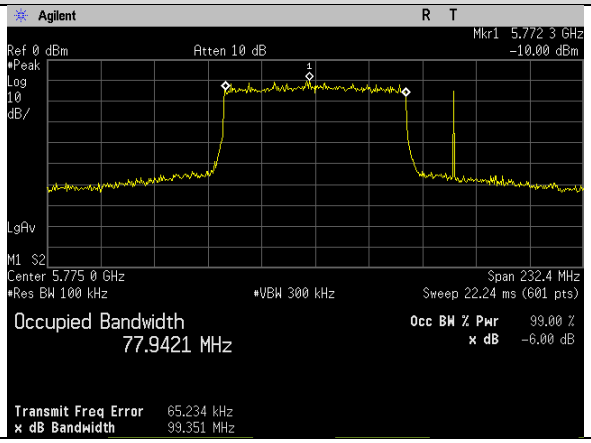
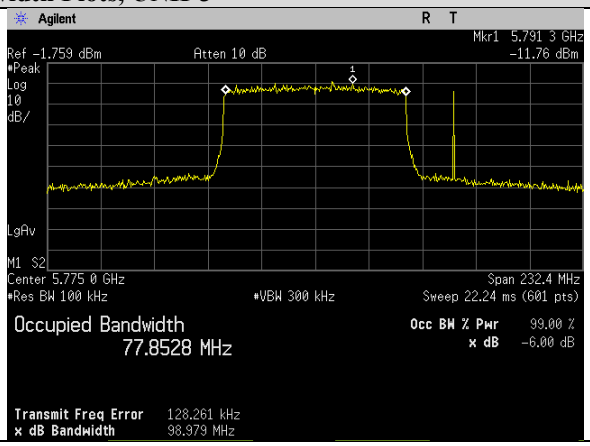
High Channel, Ant 0



High Channel, Ant 1

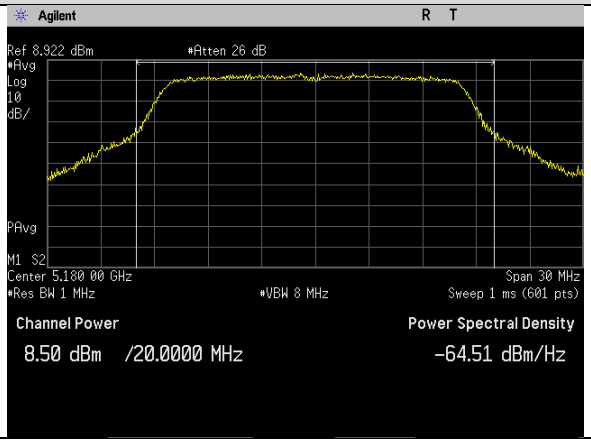
802.11n(40MHz) -6dB Bandwidth Plots, UNII-3	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

802.11ac -6dB Bandwidth Plots, UNII-3	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

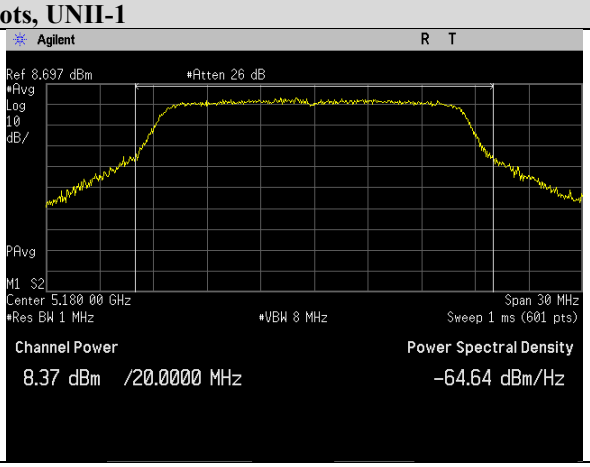
802.11ax -6dB Bandwidth Plots, UNII-3	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

II. Output Power Plots

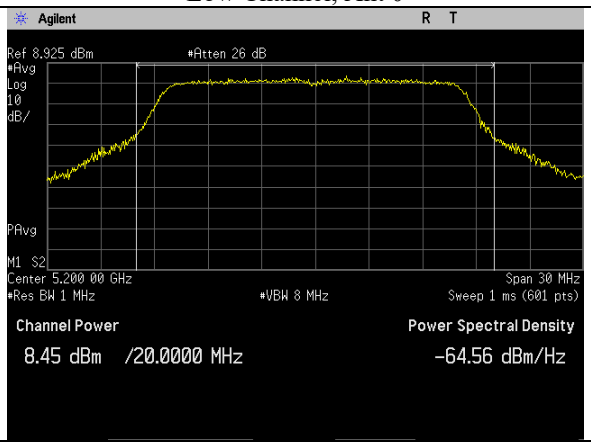
802.11a Power Plots, UNII-1



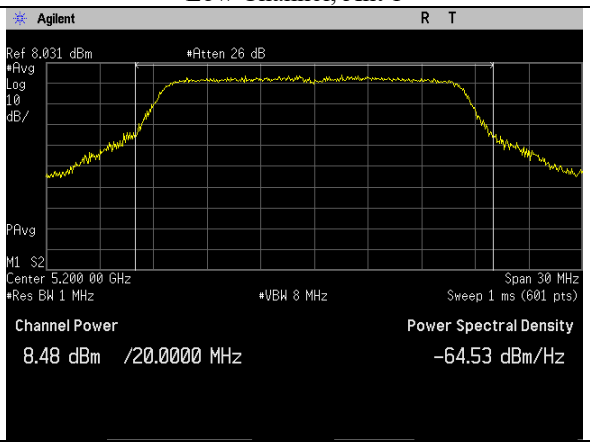
Low Channel, Ant 0



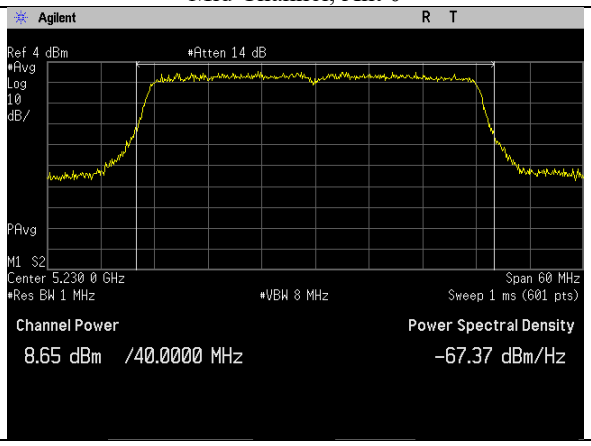
Low Channel, Ant 1



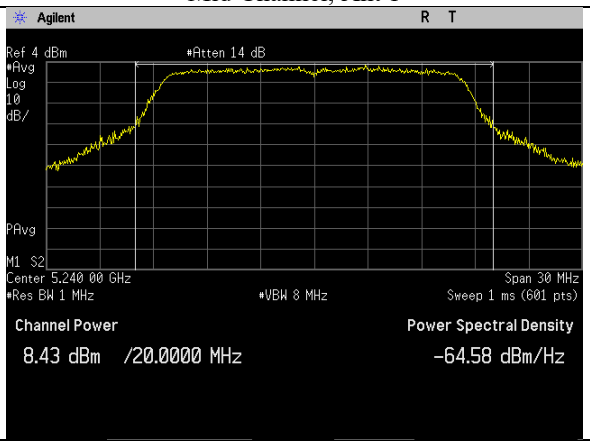
Mid Channel, Ant 0



Mid Channel, Ant 1

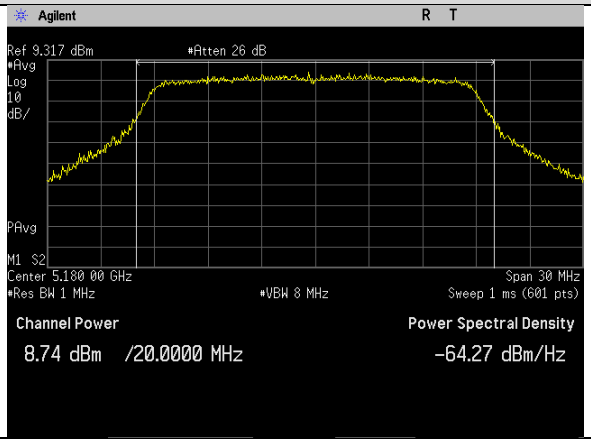


High Channel, Ant 0

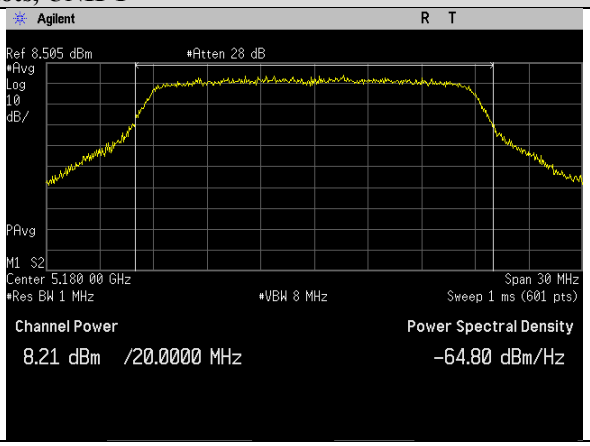


High Channel, Ant 1

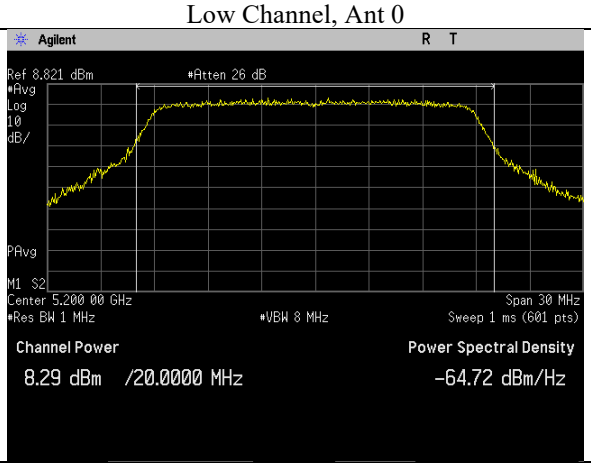
802.11n Power Plots, UNII-1



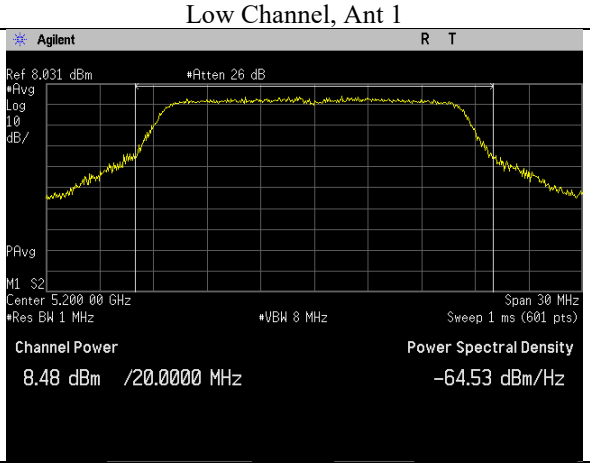
Low Channel, Ant 0



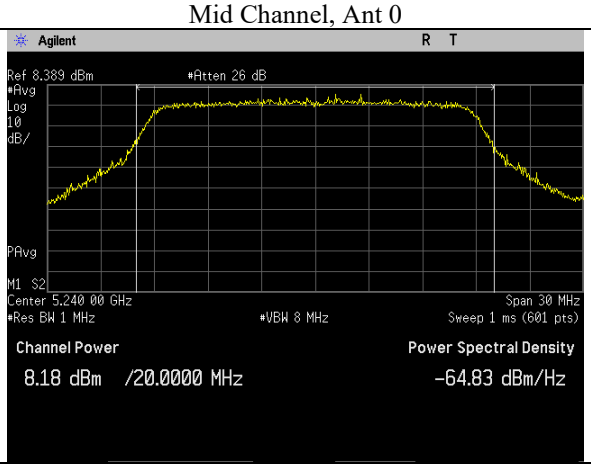
Low Channel, Ant 1



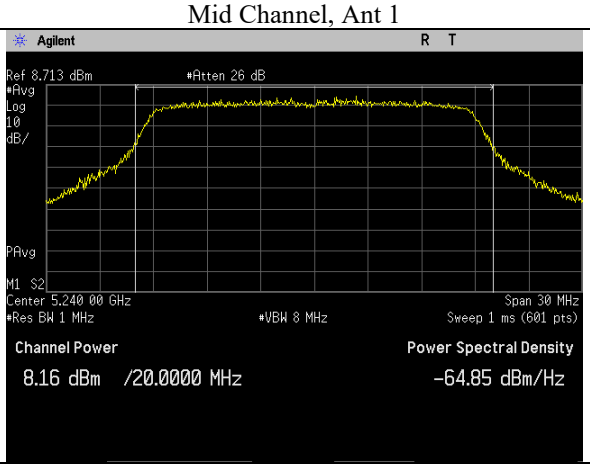
Mid Channel, Ant 0



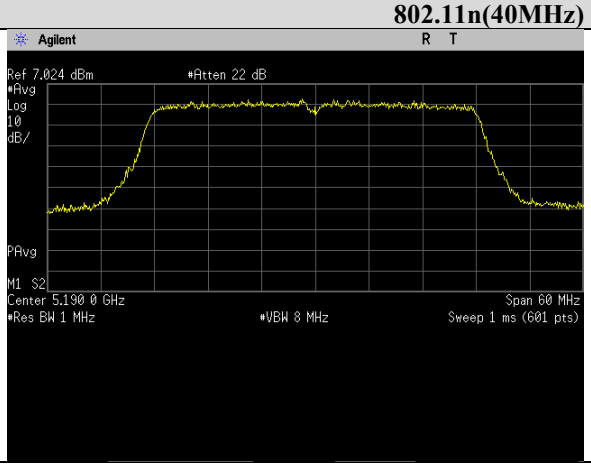
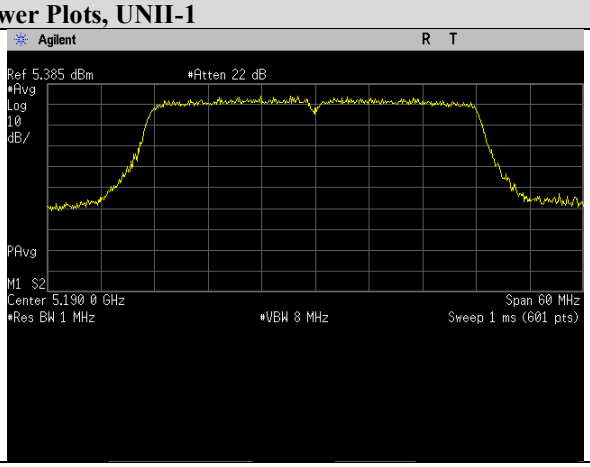
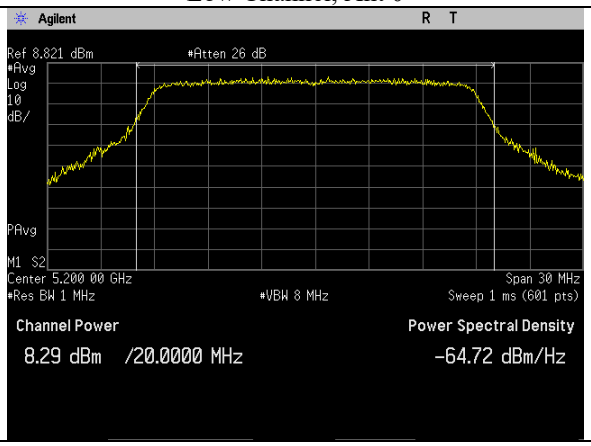
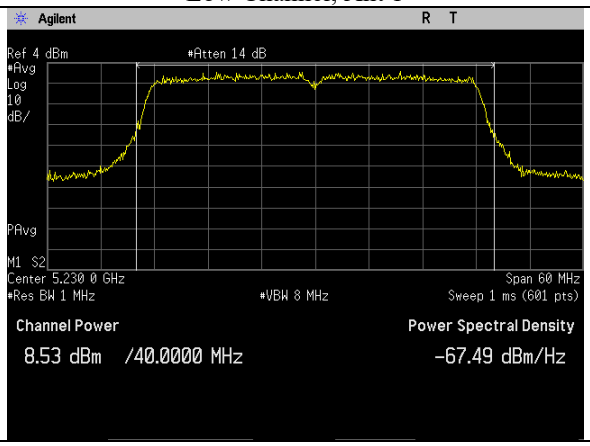
Mid Channel, Ant 1

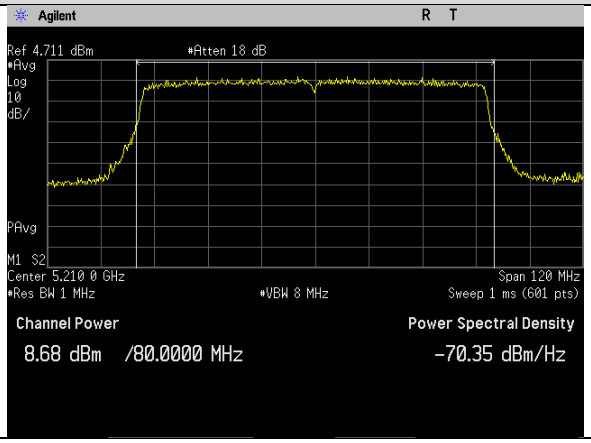
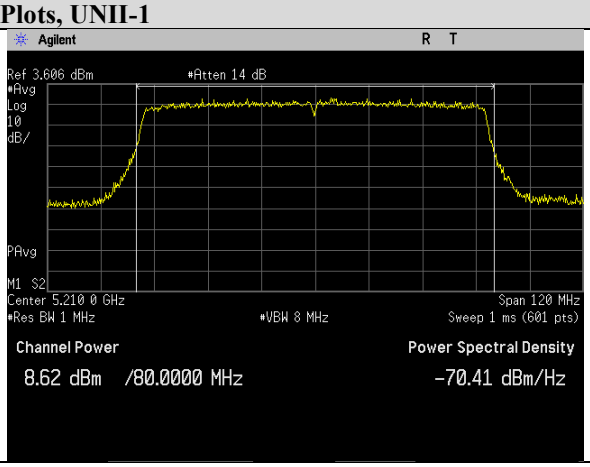


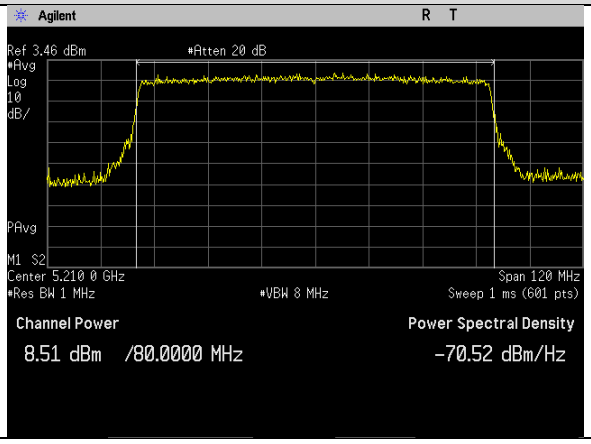
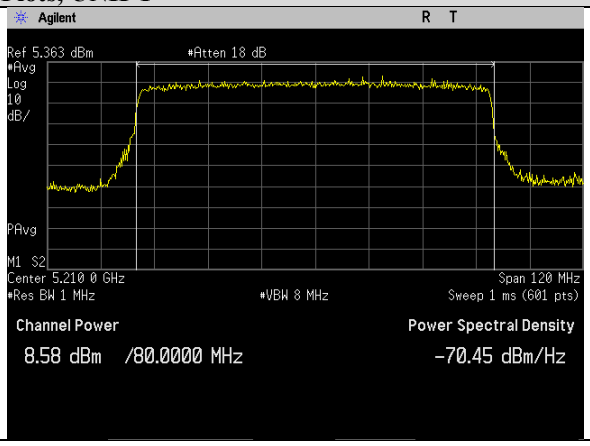
High Channel, Ant 0



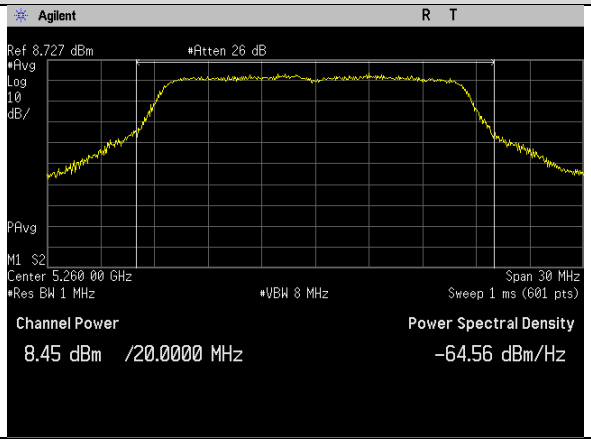
High Channel, Ant 1

802.11n(40MHz) Power Plots, UNII-1	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

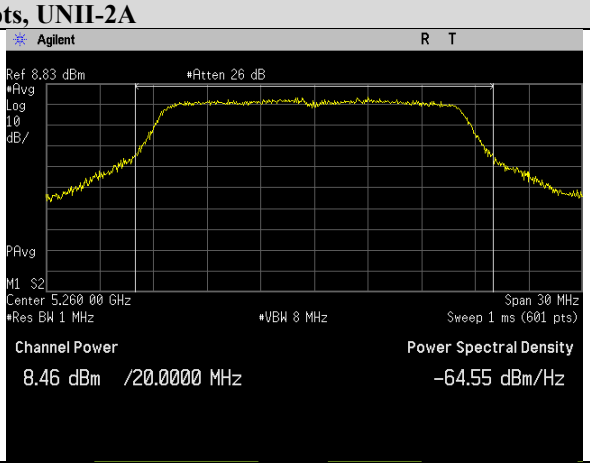
802.11ac Power Plots, UNII-1	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

802.11ax Power Plots, UNII-1	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

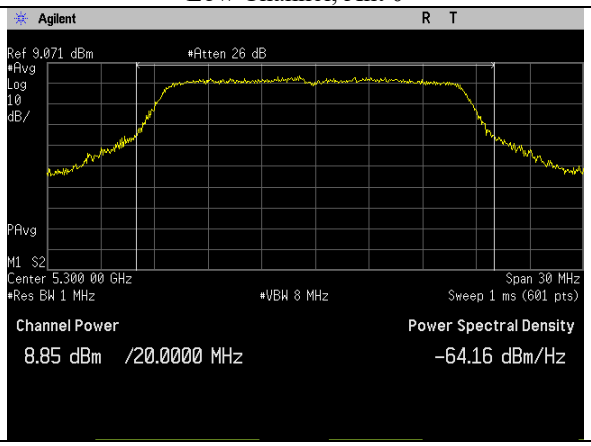
802.11a Power Plots, UNII-2A



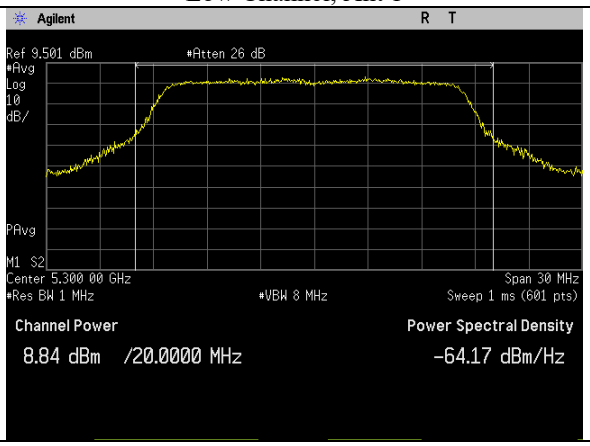
Low Channel, Ant 0



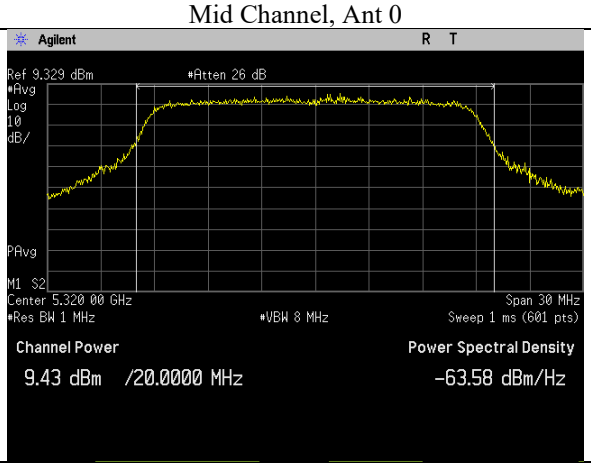
Low Channel, Ant 1



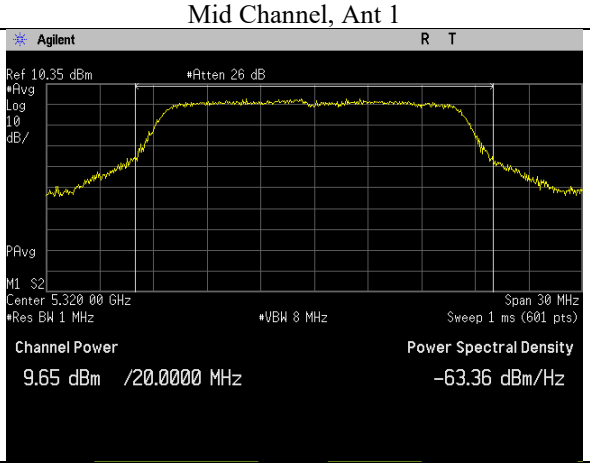
Mid Channel, Ant 0



Mid Channel, Ant 1

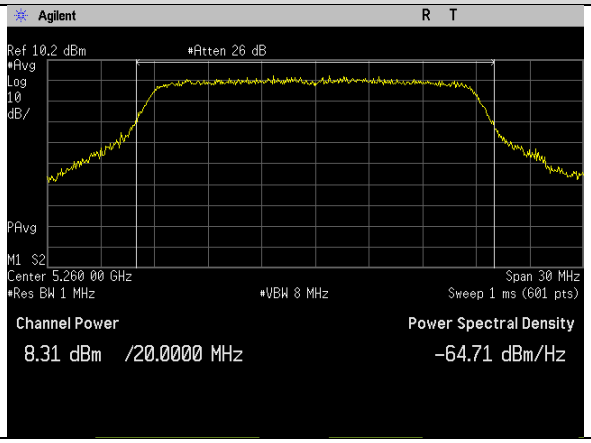


High Channel, Ant 0

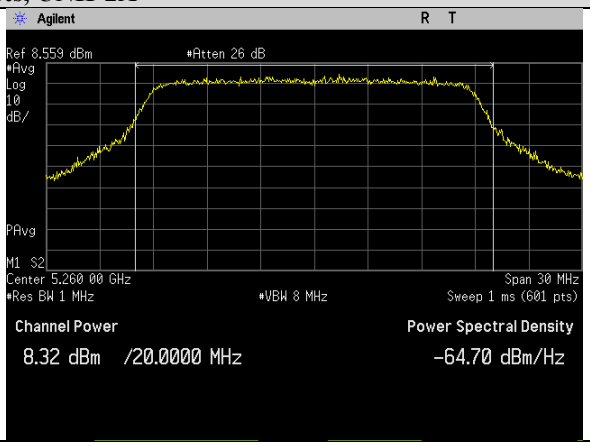


High Channel, Ant 1

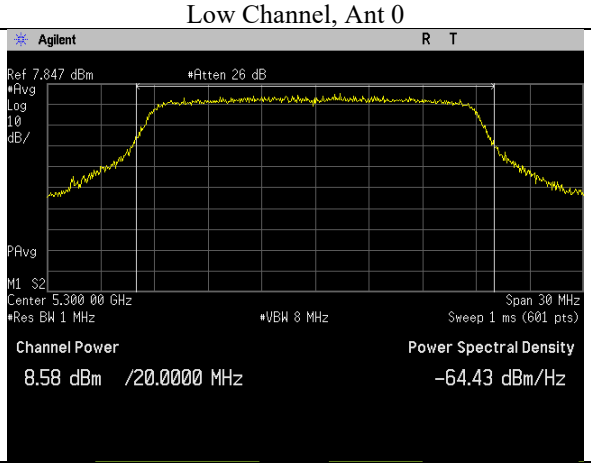
802.11n Power Plots, UNII-2A



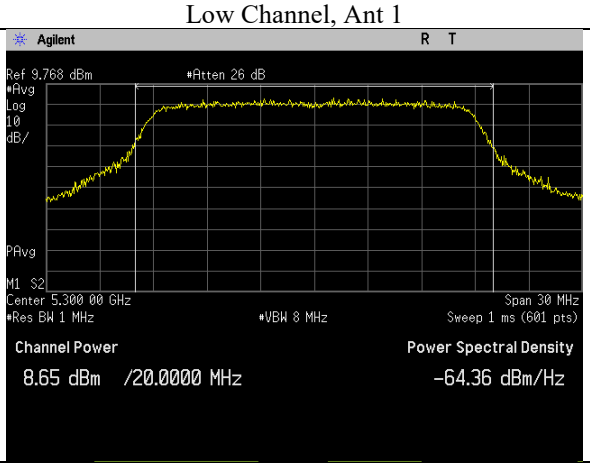
Low Channel, Ant 0



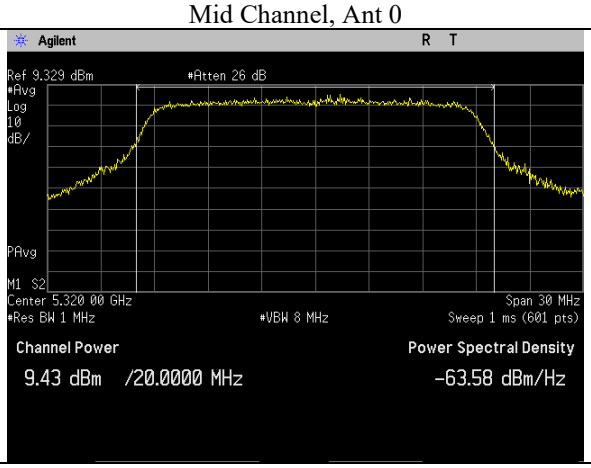
Low Channel, Ant 1



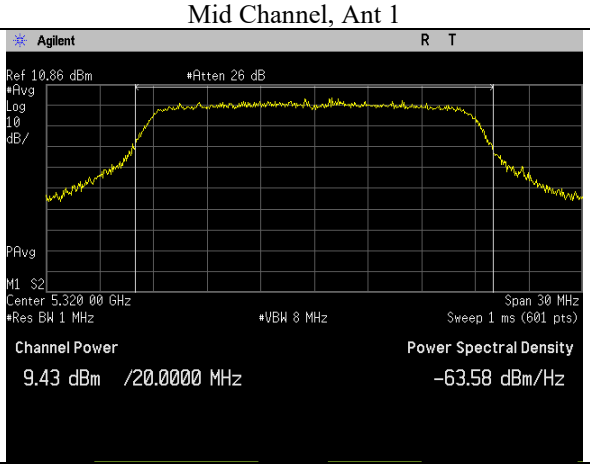
Mid Channel, Ant 0



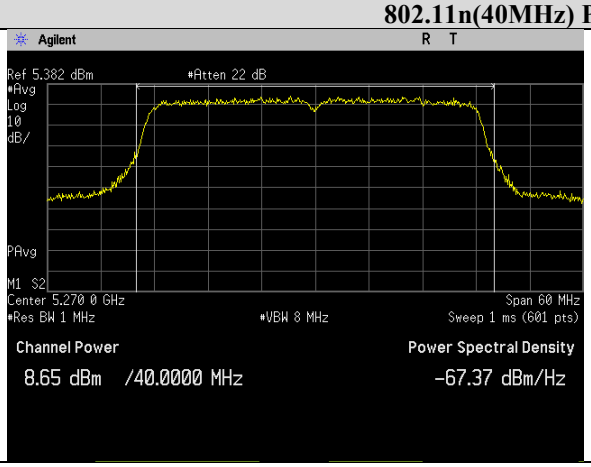
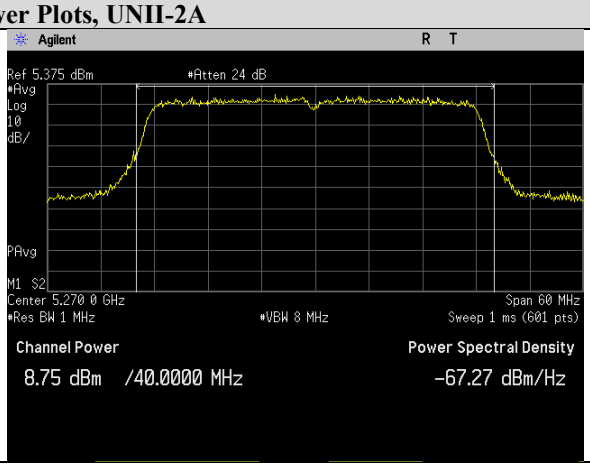
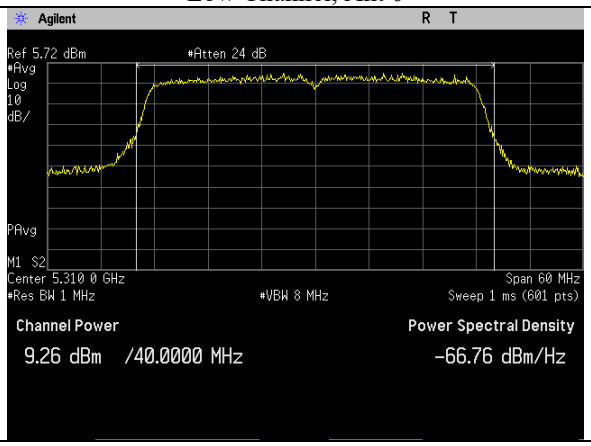
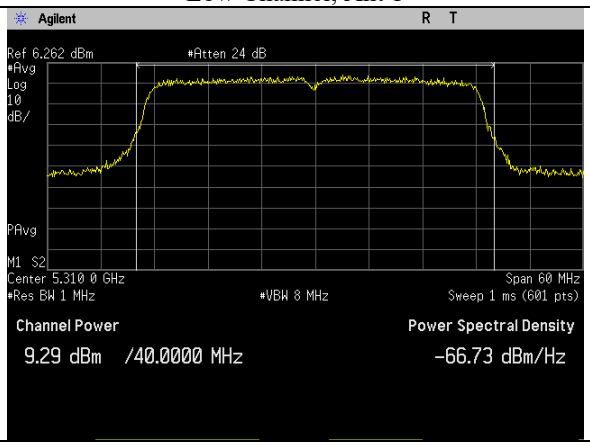
Mid Channel, Ant 1

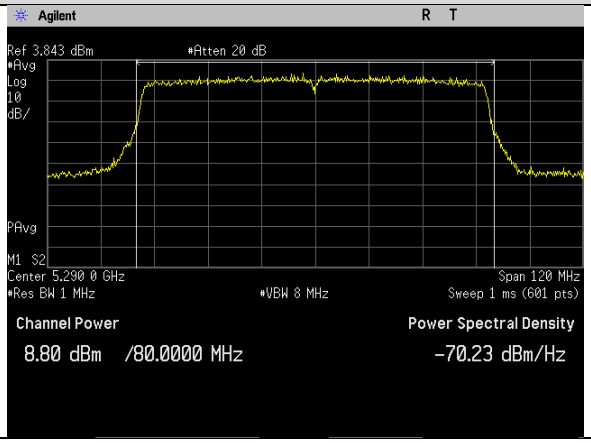
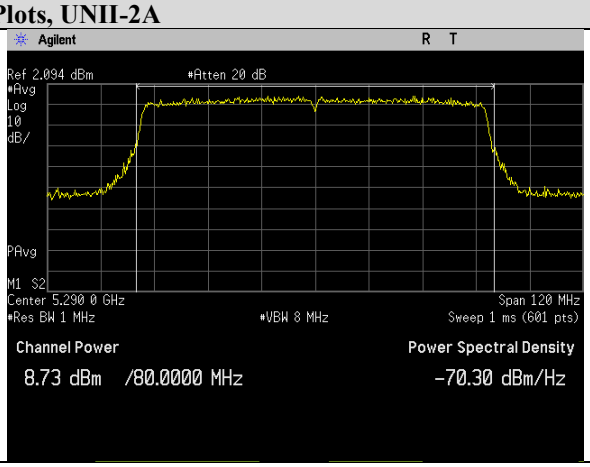


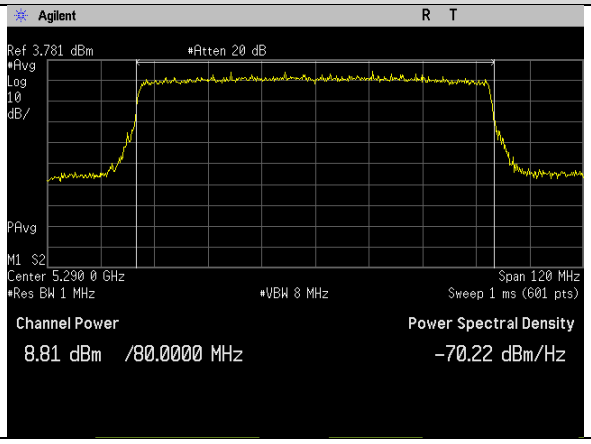
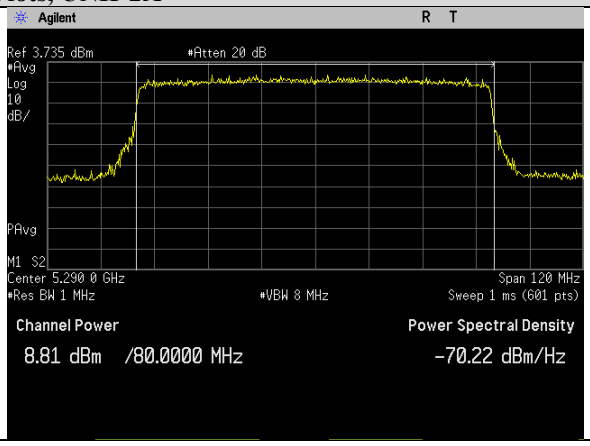
High Channel, Ant 0



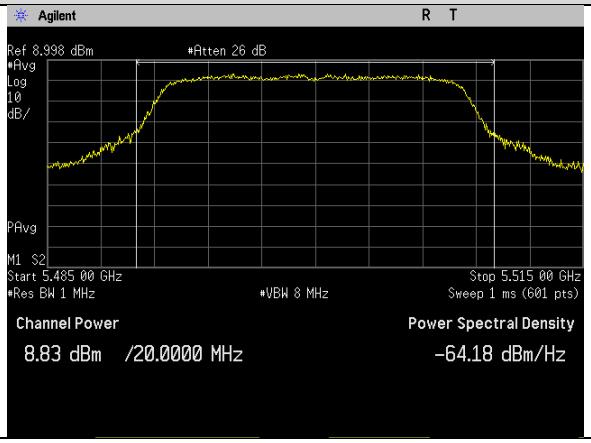
High Channel, Ant 1

802.11n(40MHz) Power Plots, UNII-2A	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

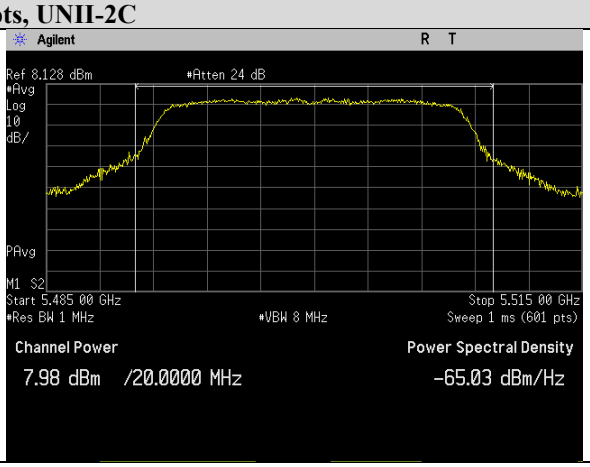
802.11ac Power Plots, UNII-2A	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

802.11ax Power Plots, UNII-2A	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

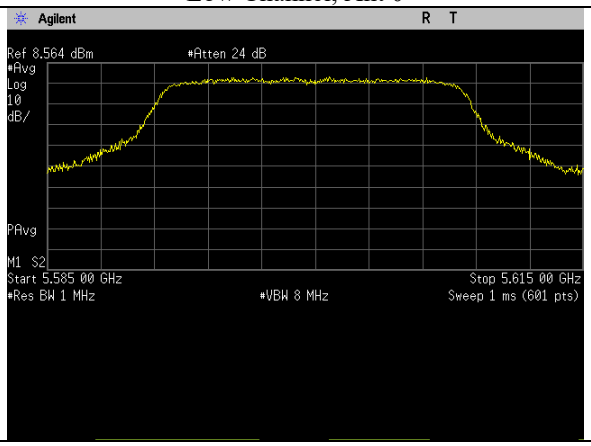
802.11a Power Plots, UNII-2C



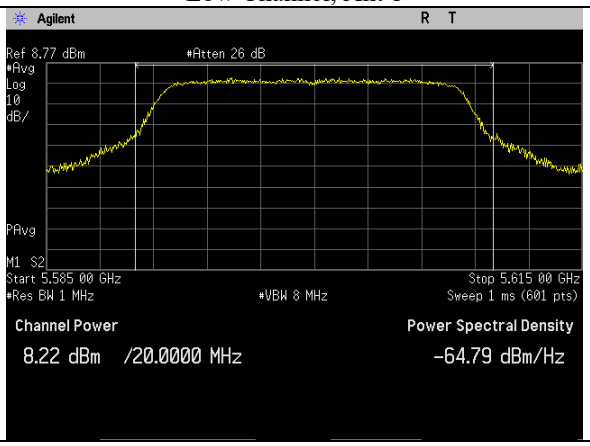
Low Channel, Ant 0



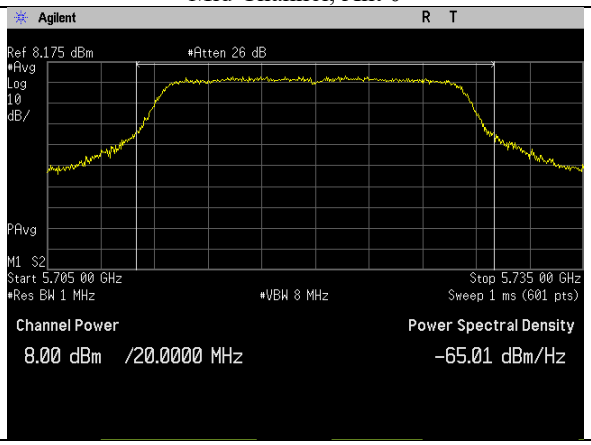
Low Channel, Ant 1



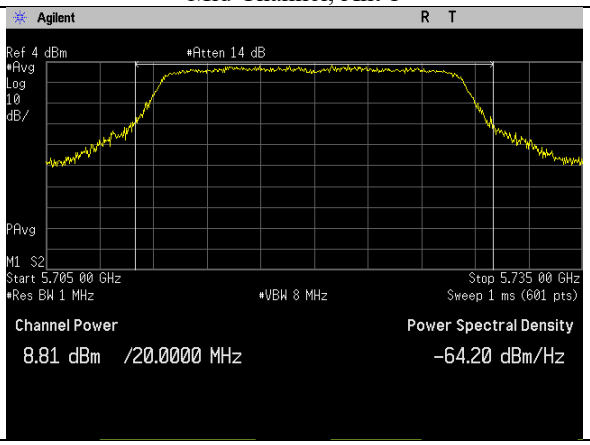
Mid Channel, Ant 0



Mid Channel, Ant 1

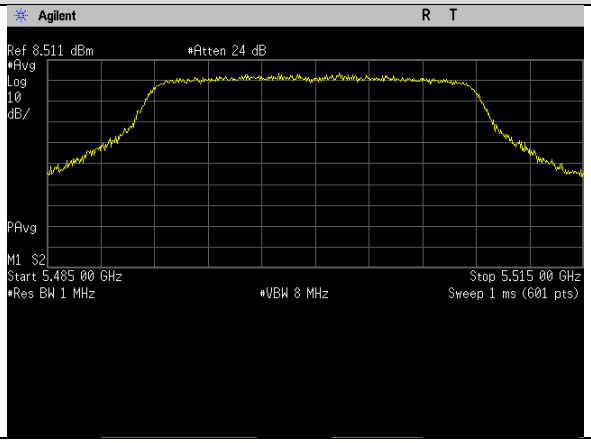


High Channel, Ant 0

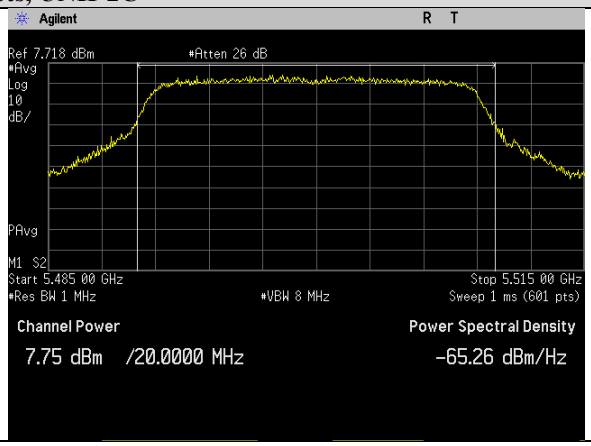


High Channel, Ant 1

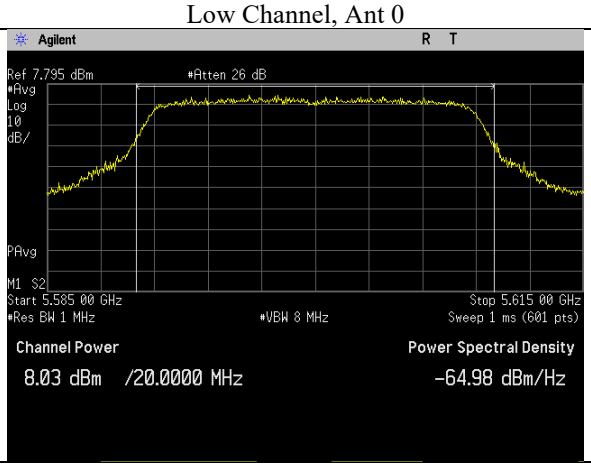
802.11n Power Plots, UNII-2C



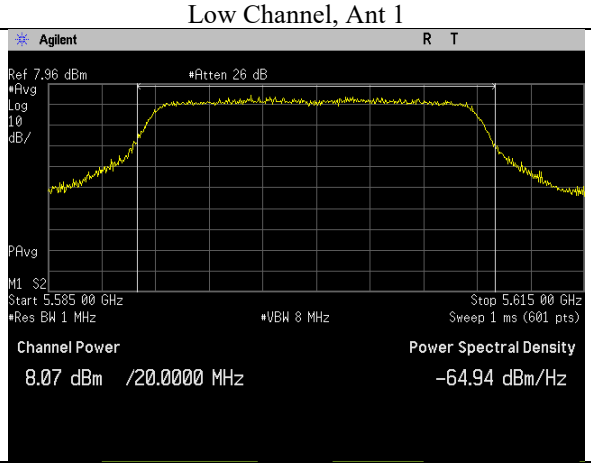
Low Channel, Ant 0



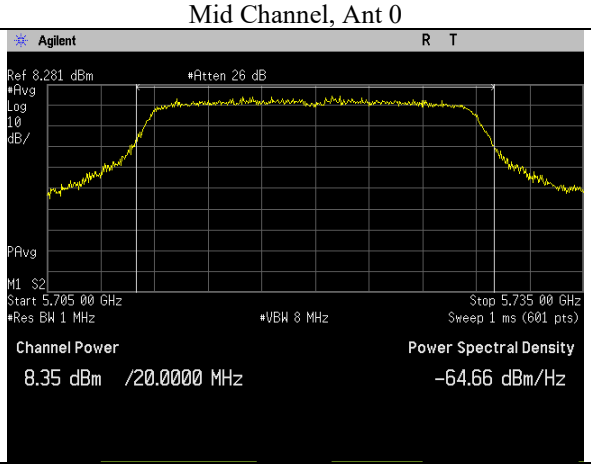
Low Channel, Ant 1



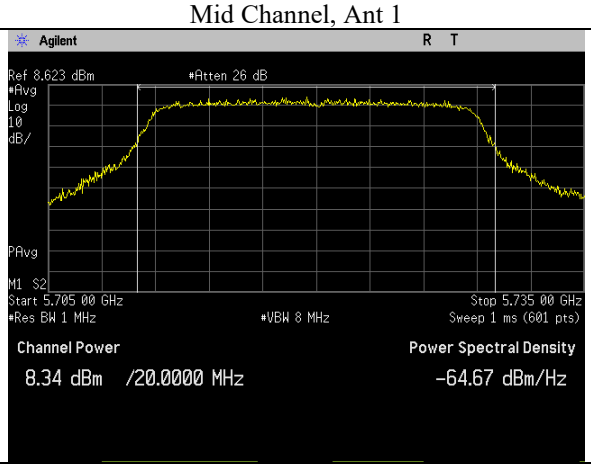
Mid Channel, Ant 0



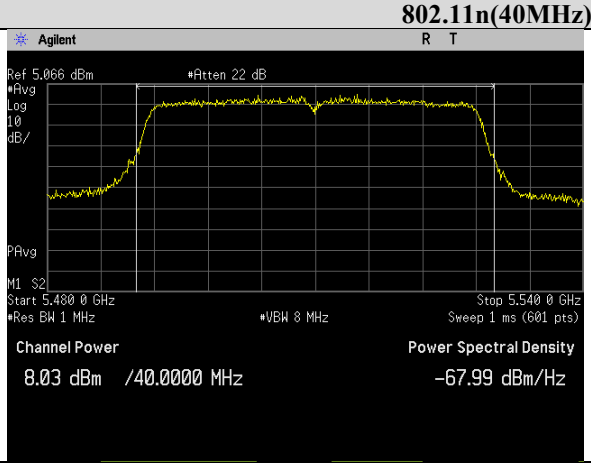
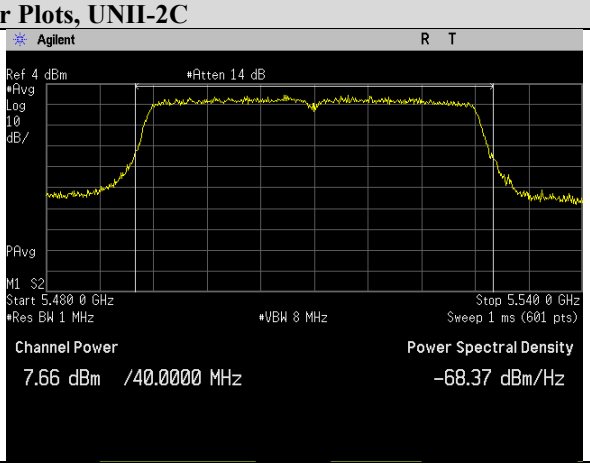
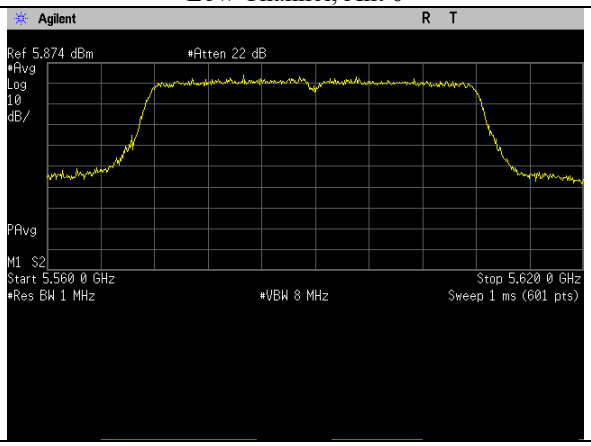
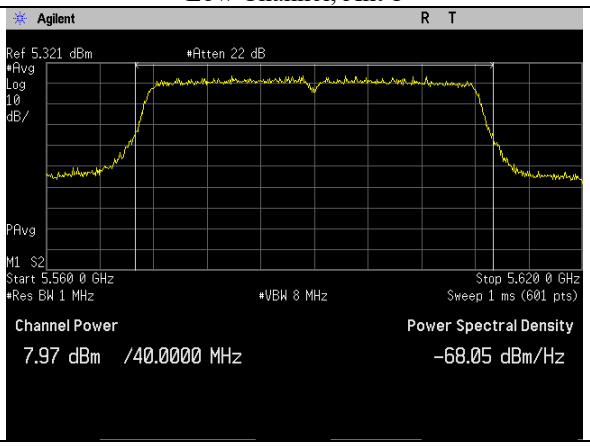
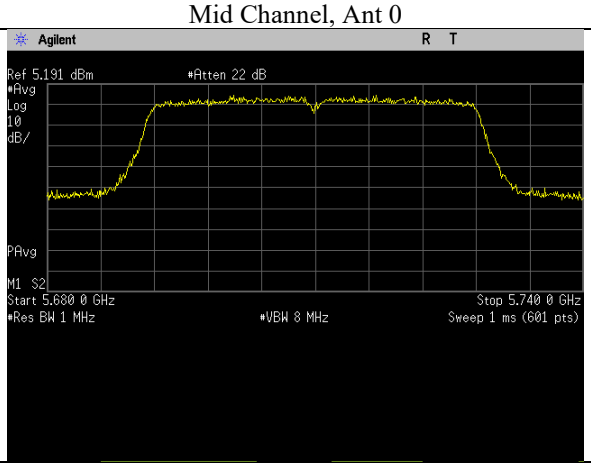
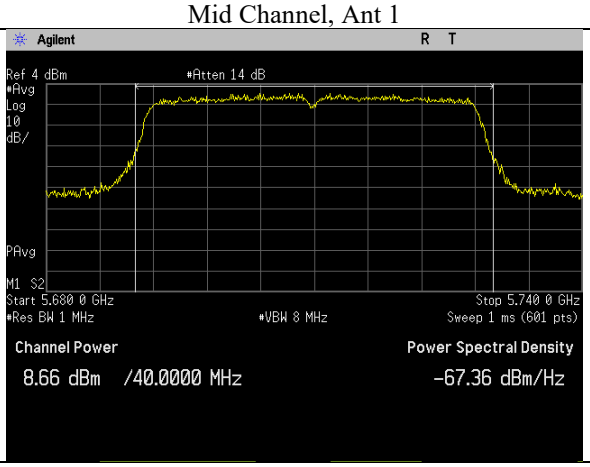
Mid Channel, Ant 1



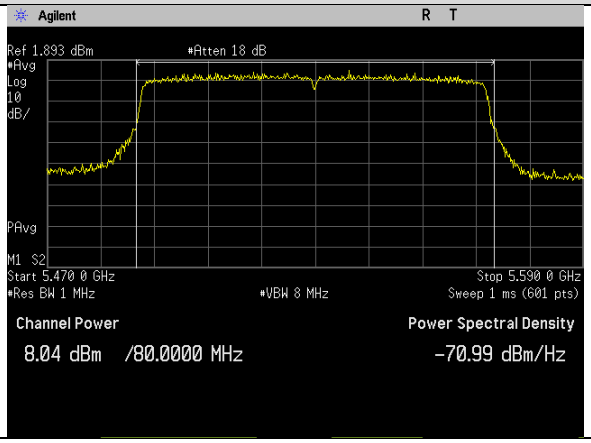
High Channel, Ant 0



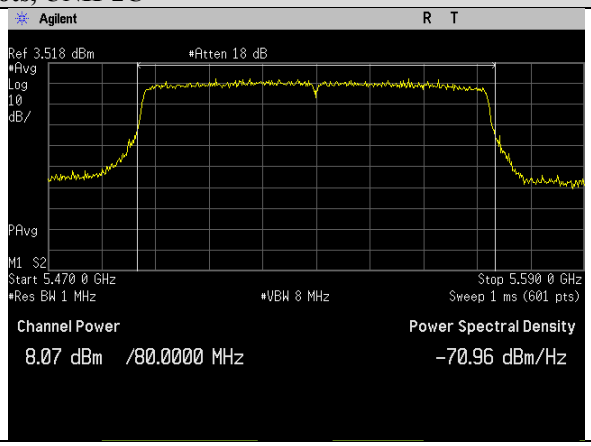
High Channel, Ant 1

802.11n(40MHz) Power Plots, UNII-2C	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
Mid Channel, Ant 0	Mid Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

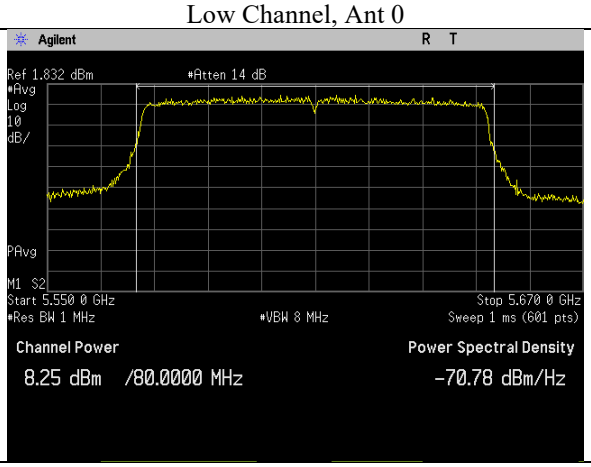
802.11ac Power Plots, UNII-2C



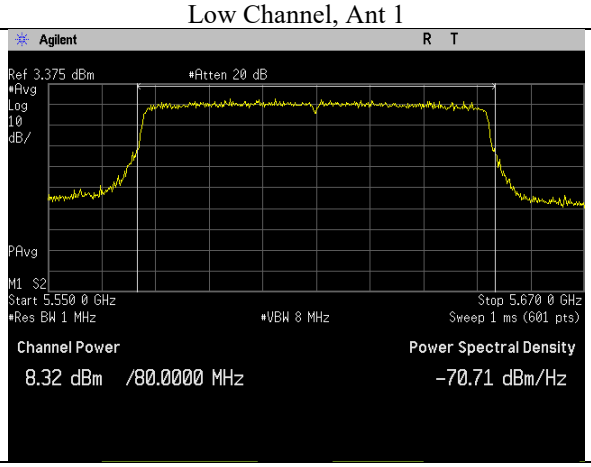
Low Channel, Ant 0



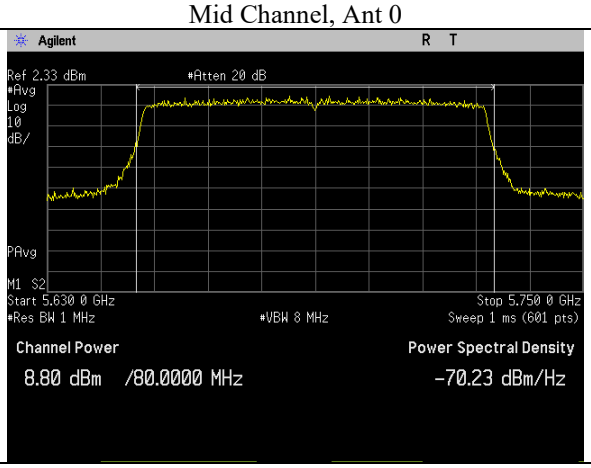
Low Channel, Ant 1



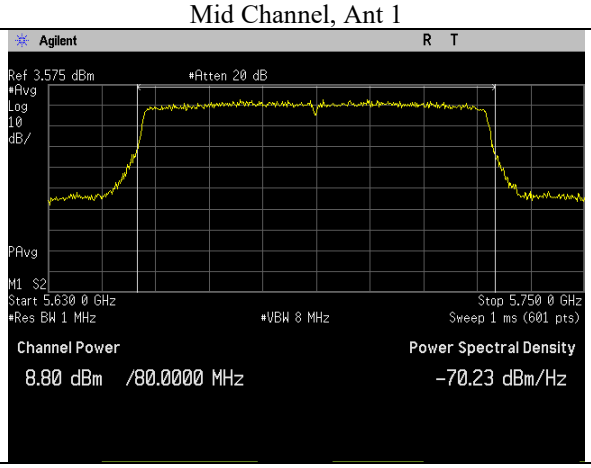
Mid Channel, Ant 0



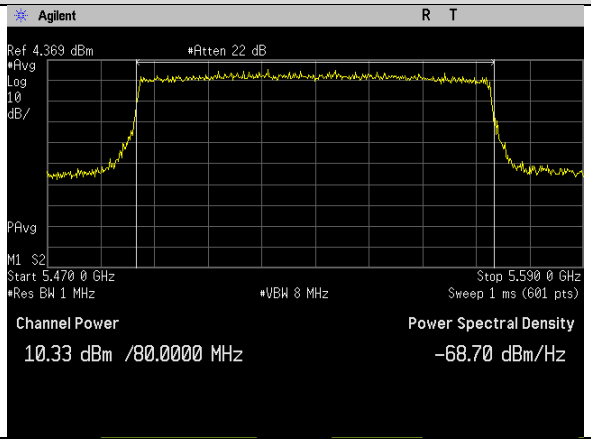
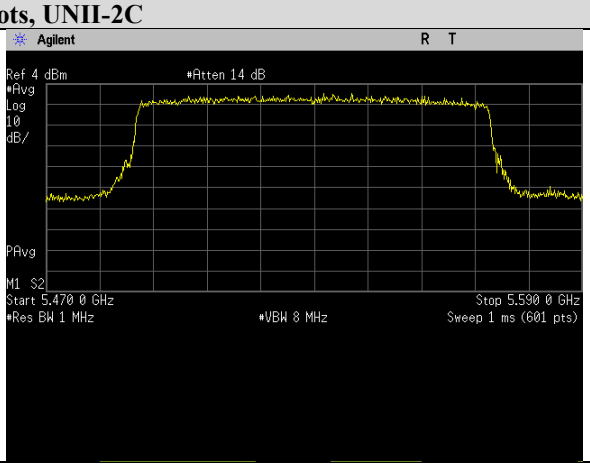
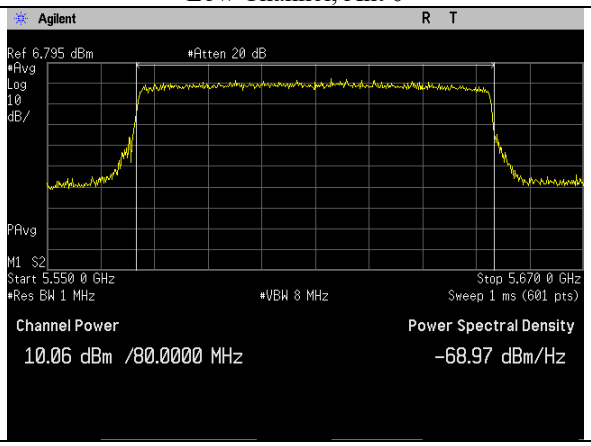
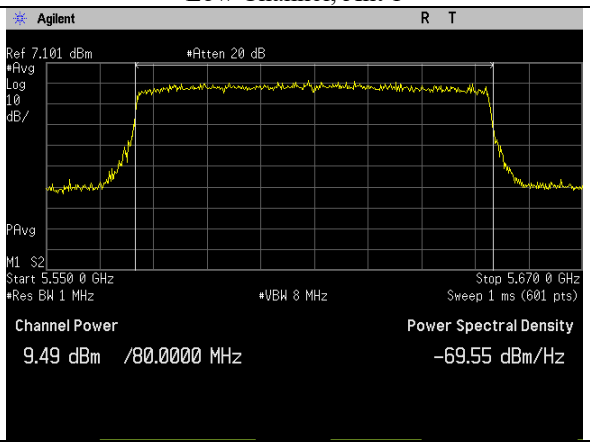
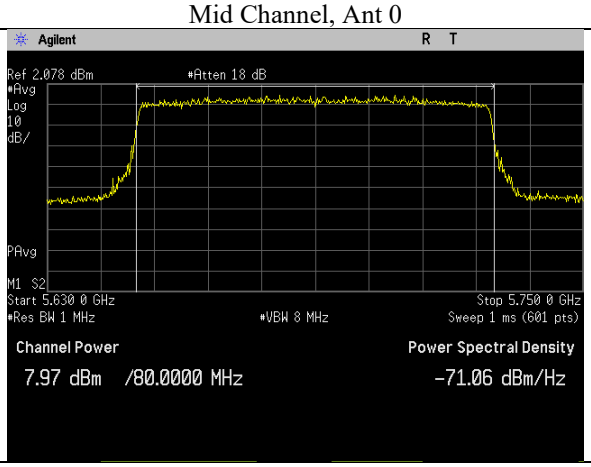
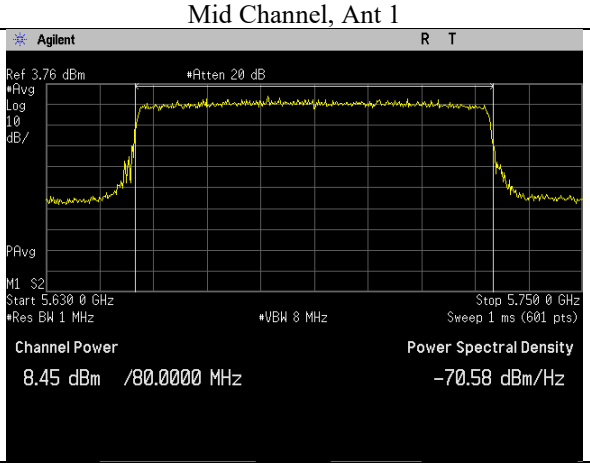
Mid Channel, Ant 1



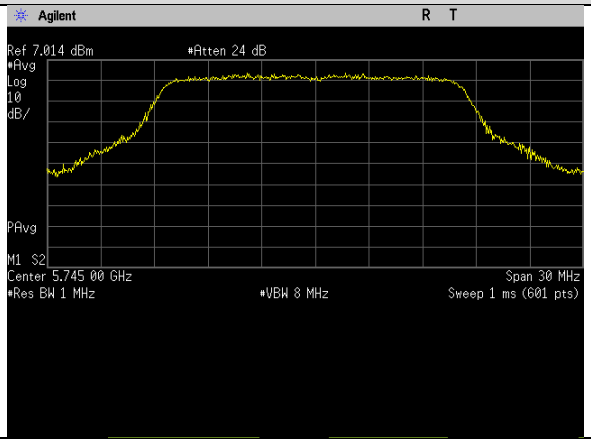
High Channel, Ant 0



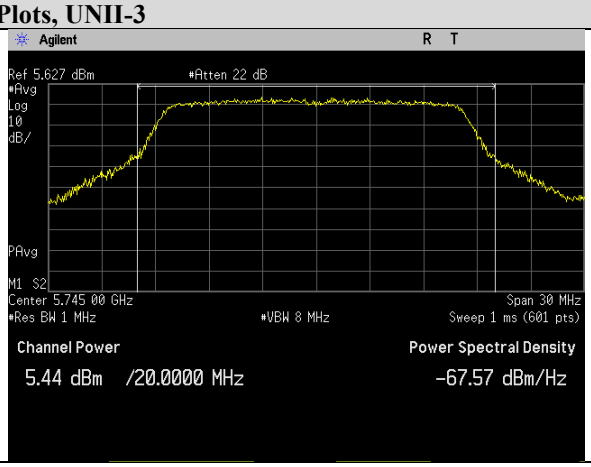
High Channel, Ant 1

802.11ax Power Plots, UNII-2C	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
Mid Channel, Ant 0	Mid Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

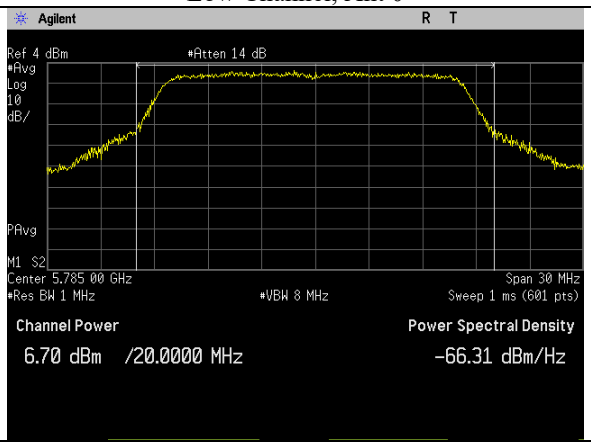
802.11a Power Plots, UNII-3



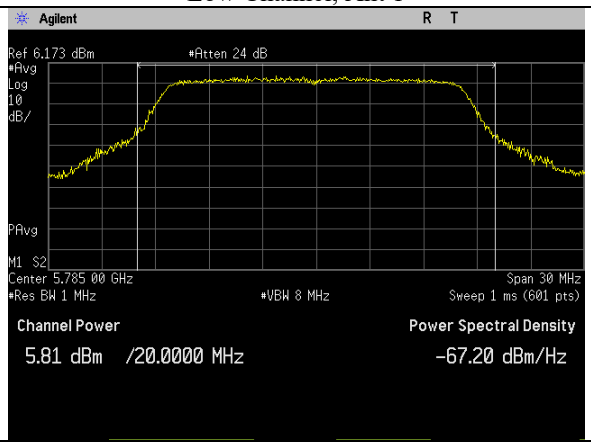
Low Channel, Ant 0



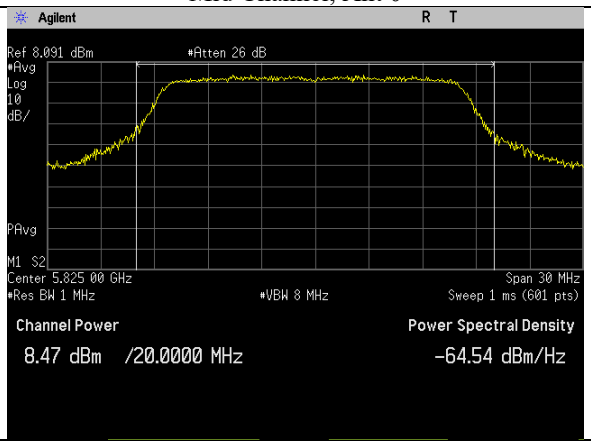
Low Channel, Ant 1



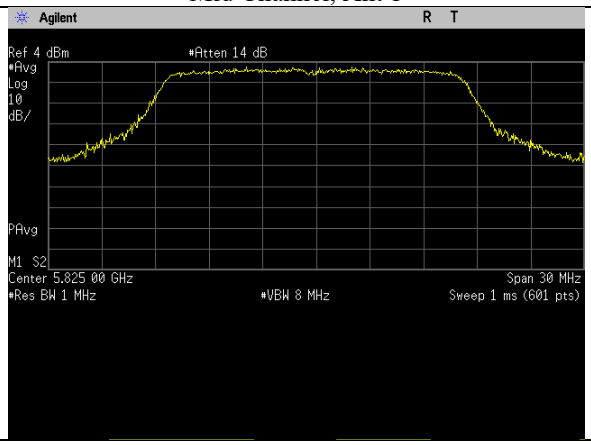
Mid Channel, Ant 0



Mid Channel, Ant 1

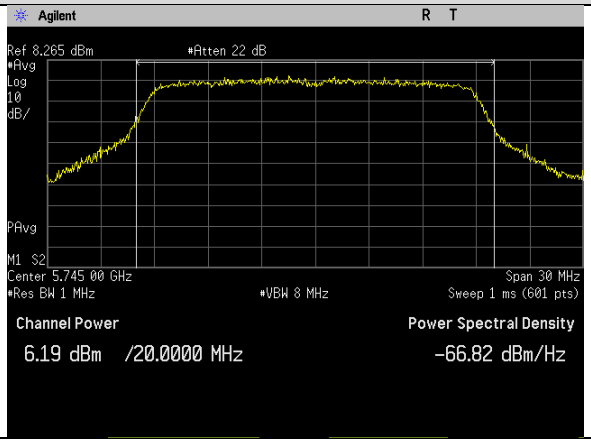


High Channel, Ant 0

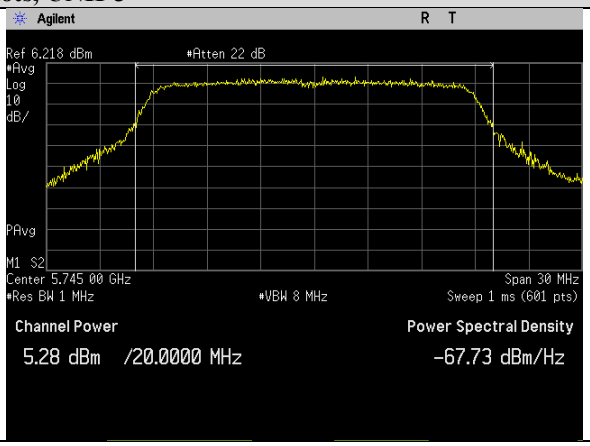


High Channel, Ant 1

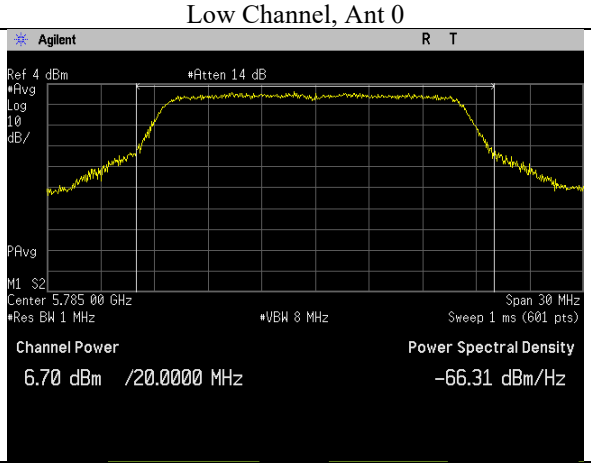
802.11n Power Plots, UNII-3



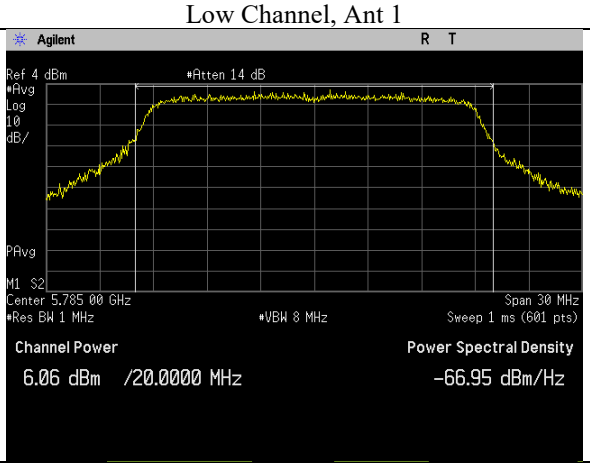
Low Channel, Ant 0



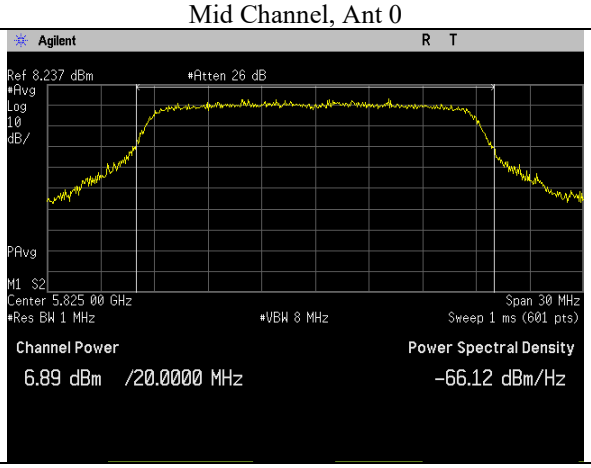
Low Channel, Ant 1



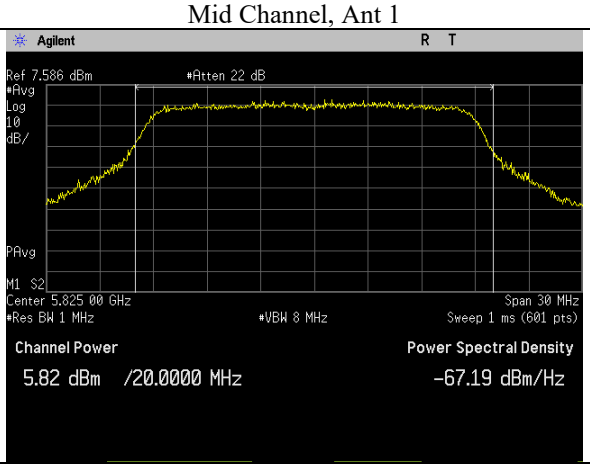
Mid Channel, Ant 0



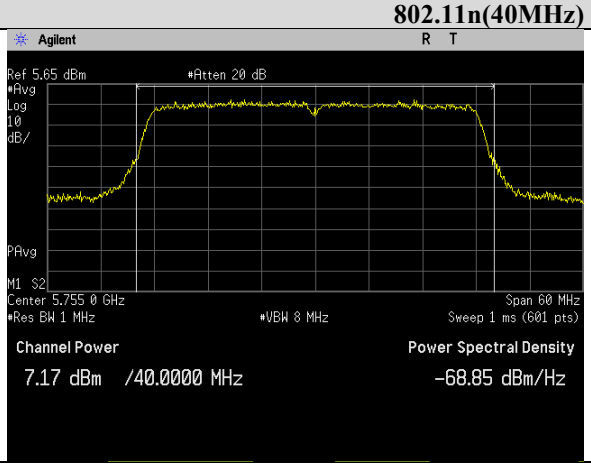
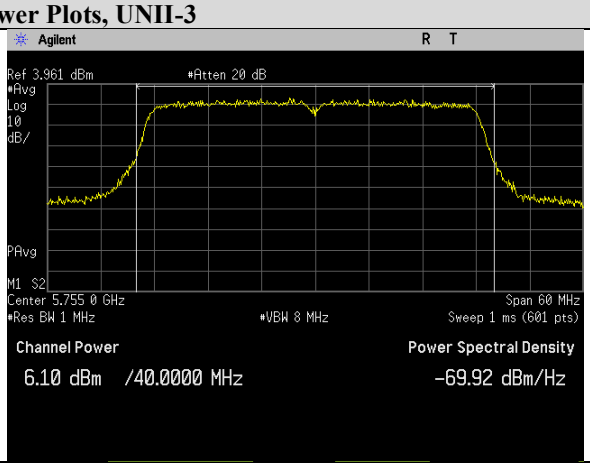
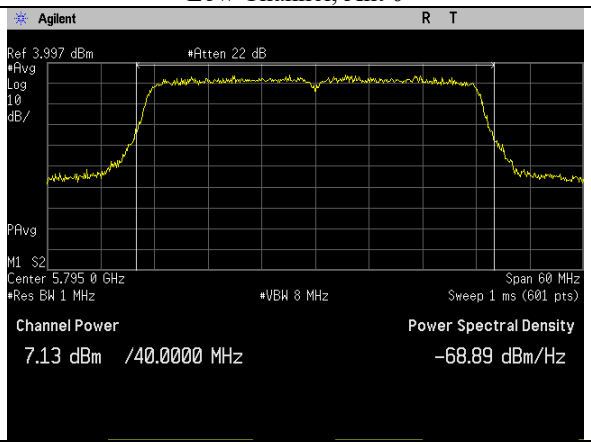
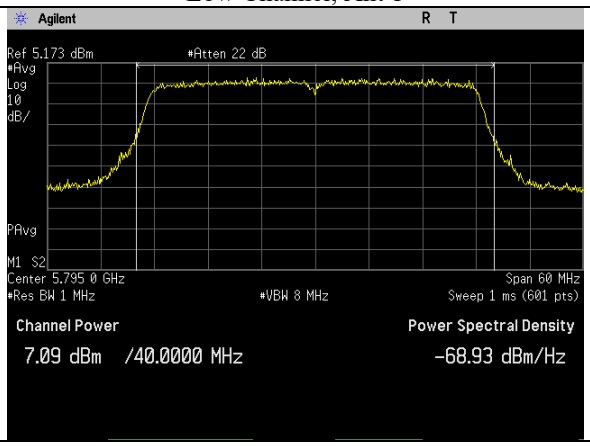
Mid Channel, Ant 1

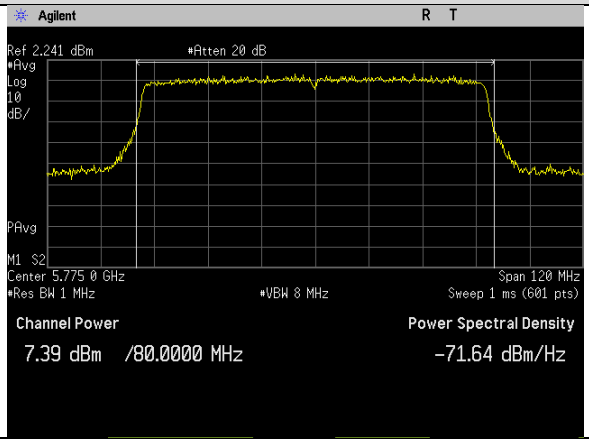
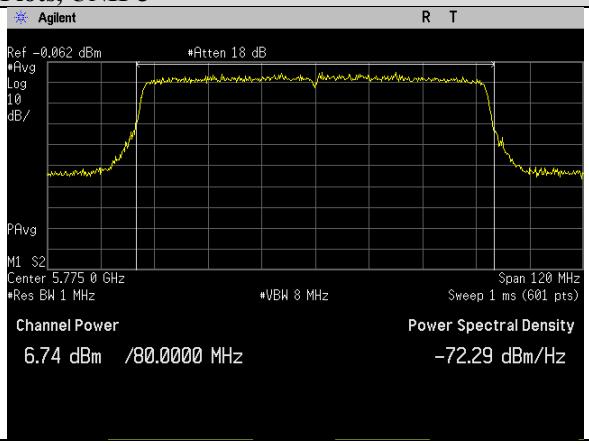


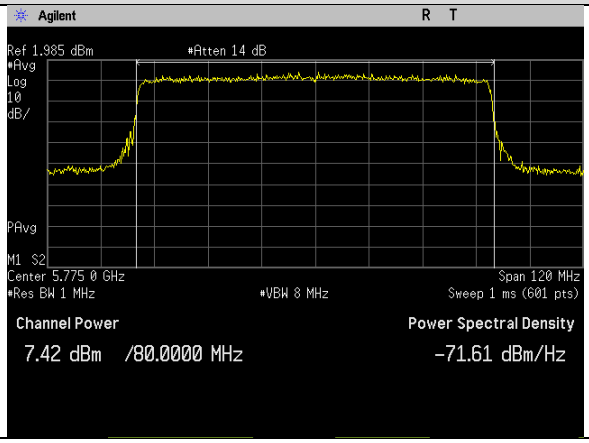
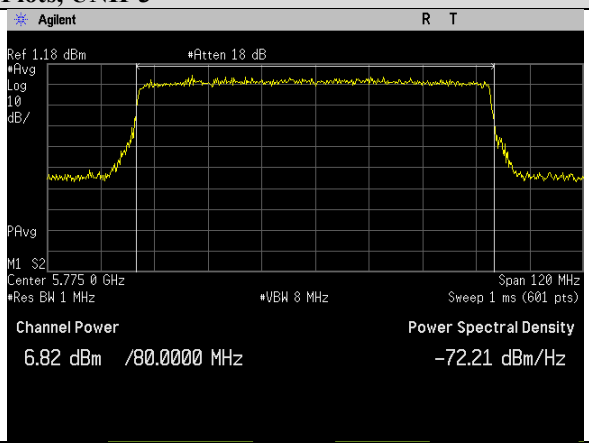
High Channel, Ant 0



High Channel, Ant 1

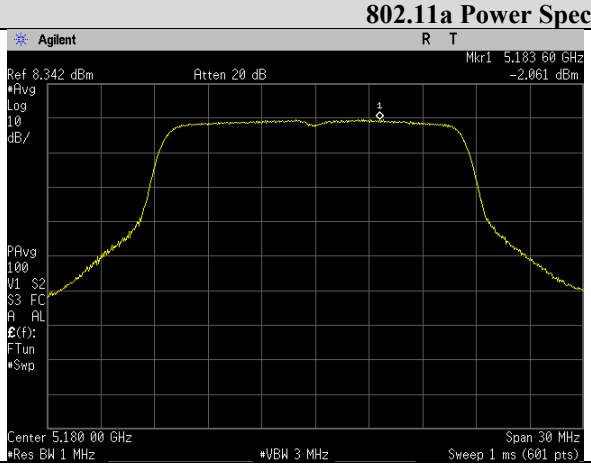
802.11n(40MHz) Power Plots, UNII-3	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

802.11ac Power Plots, UNII-3	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

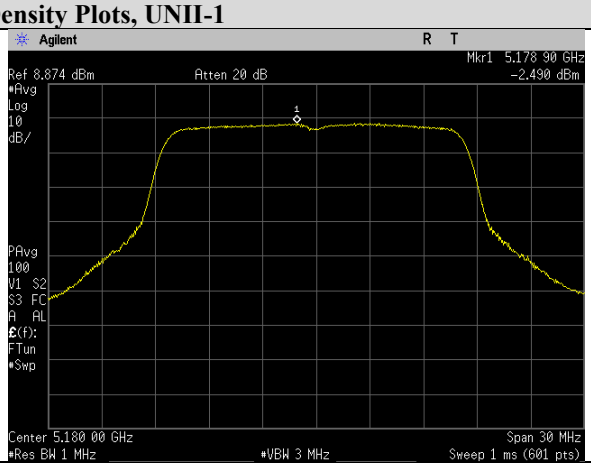
802.11ax Power Plots, UNII-3	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

III. Power Spectral Density Plots

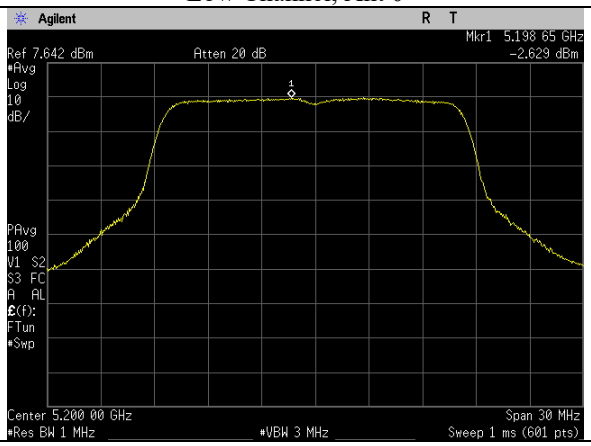
802.11a Power Spectral Density Plots, UNII-1



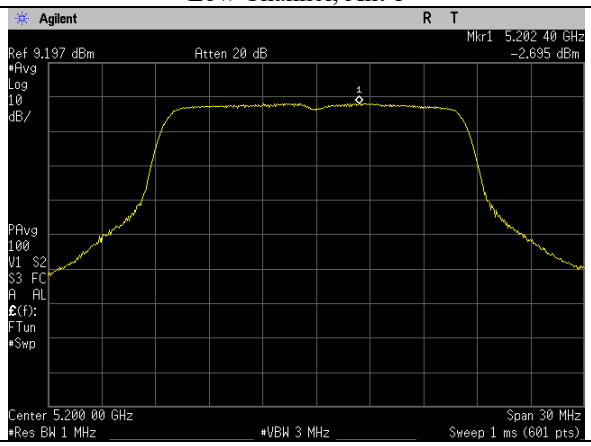
Low Channel, Ant 0



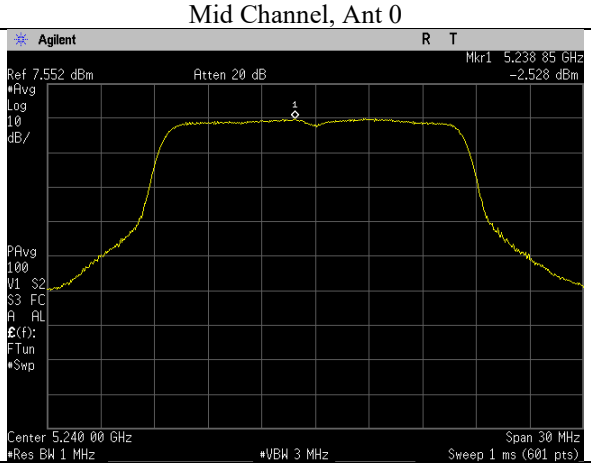
Low Channel, Ant 1



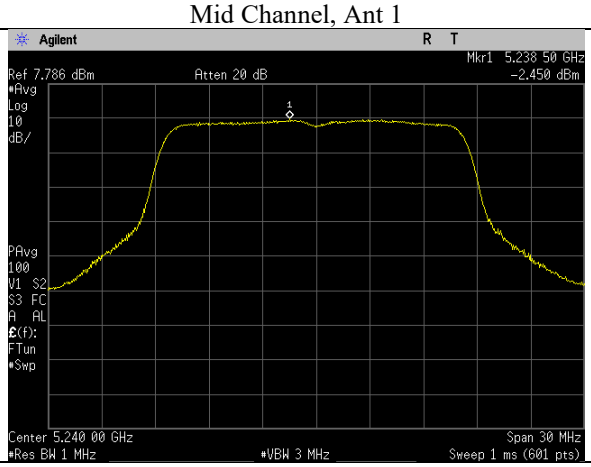
Mid Channel, Ant 0



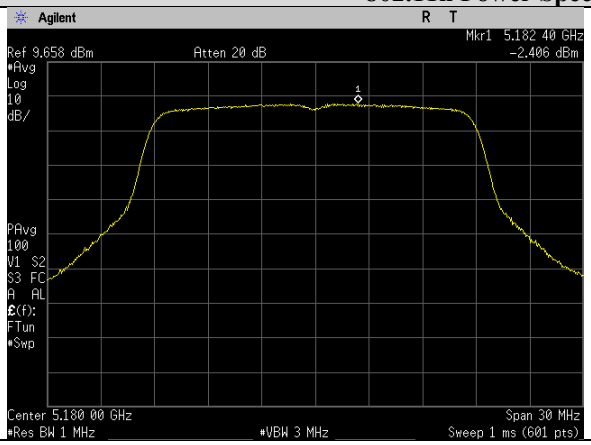
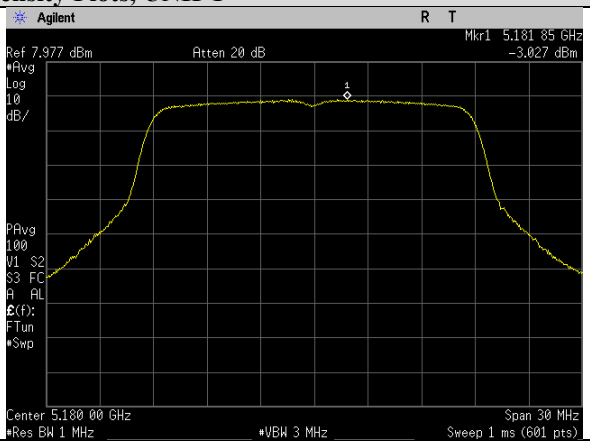
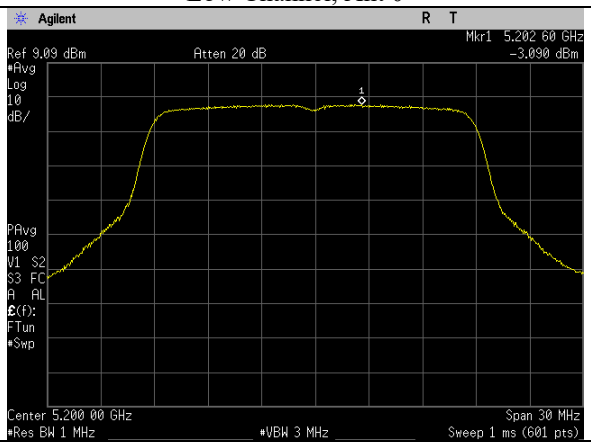
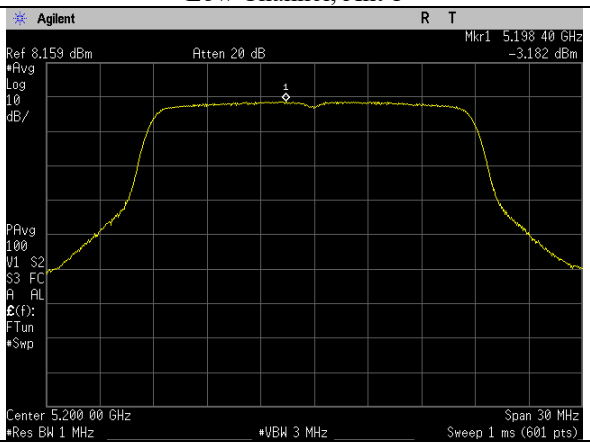
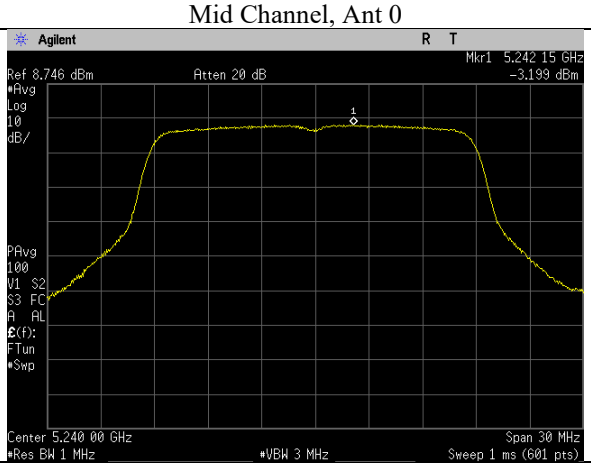
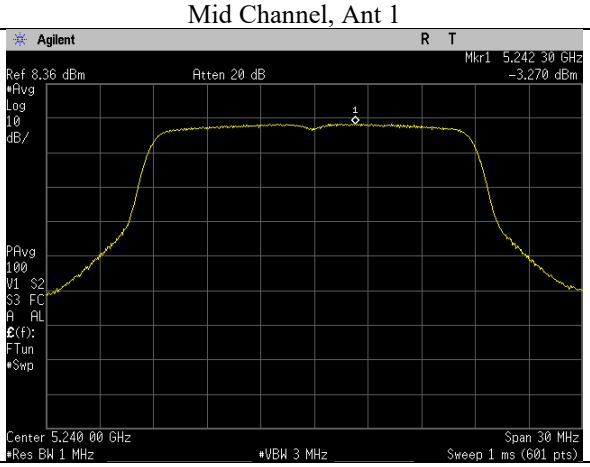
Mid Channel, Ant 1

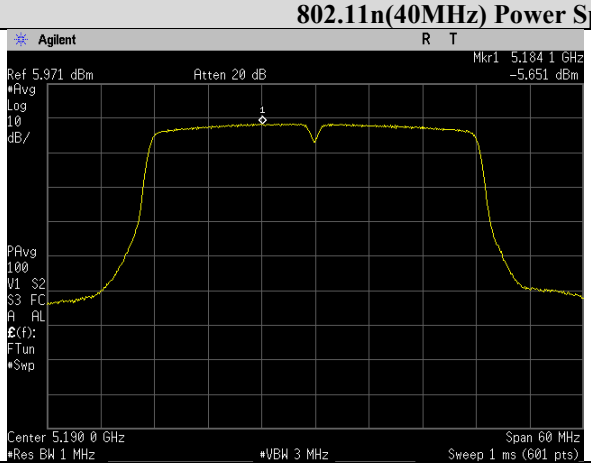
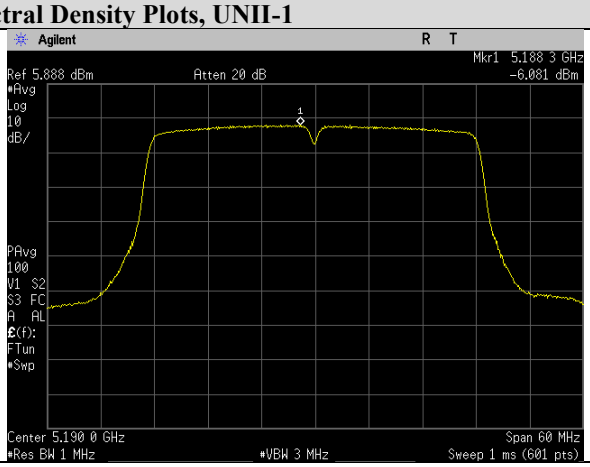
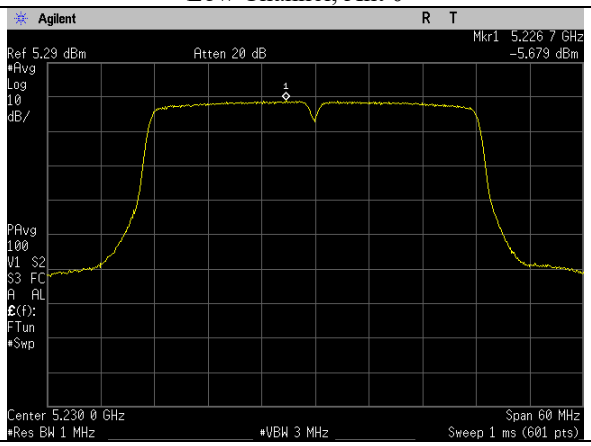
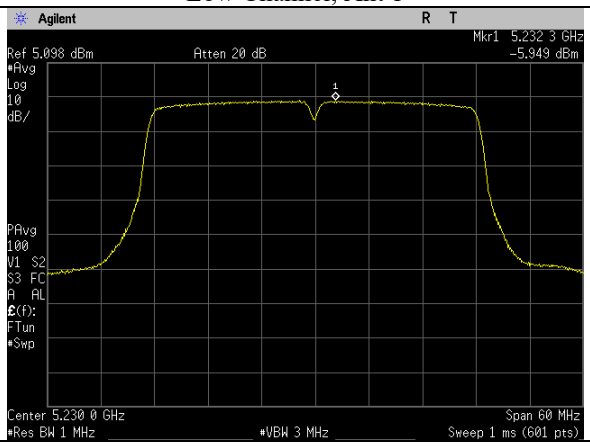


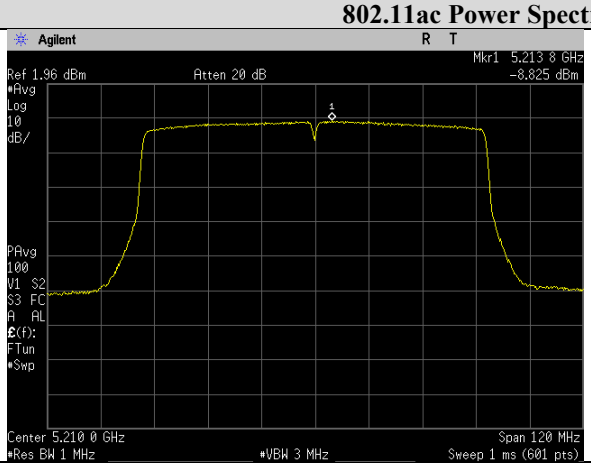
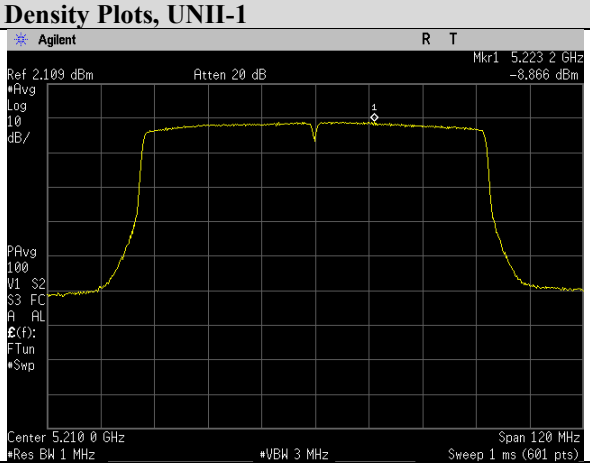
High Channel, Ant 0

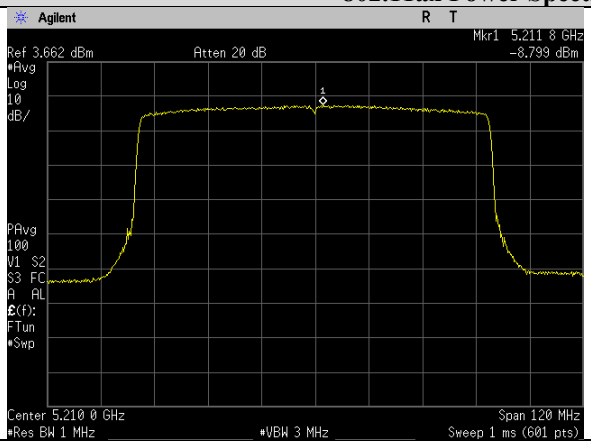
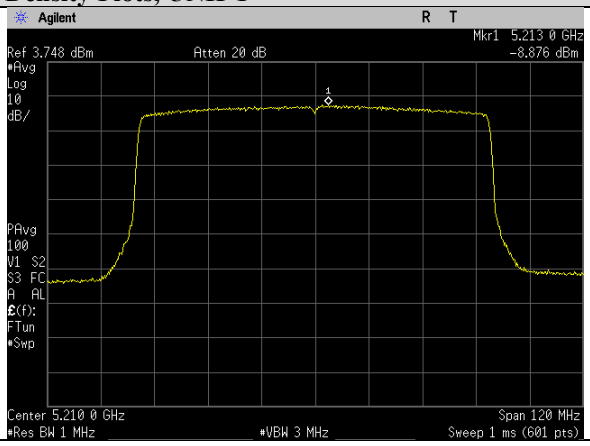


High Channel, Ant 1

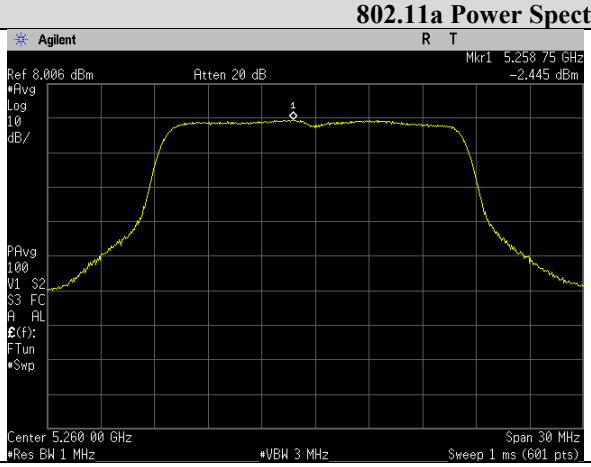
802.11n Power Spectral Density Plots, UNII-1	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
Mid Channel, Ant 0	Mid Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

802.11n(40MHz) Power Spectral Density Plots, UNII-1	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

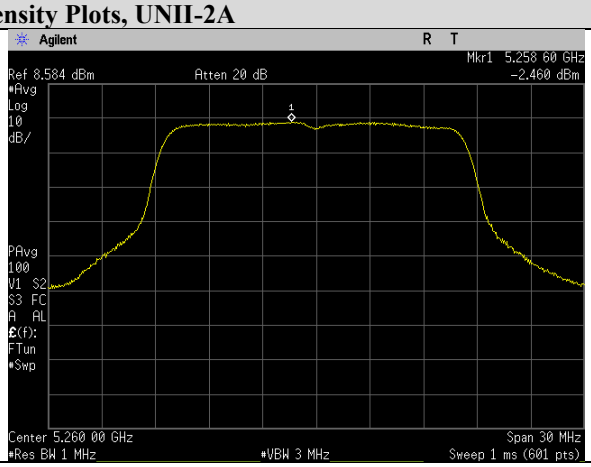
802.11ac Power Spectral Density Plots, UNII-1	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

802.11ax Power Spectral Density Plots, UNII-1	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

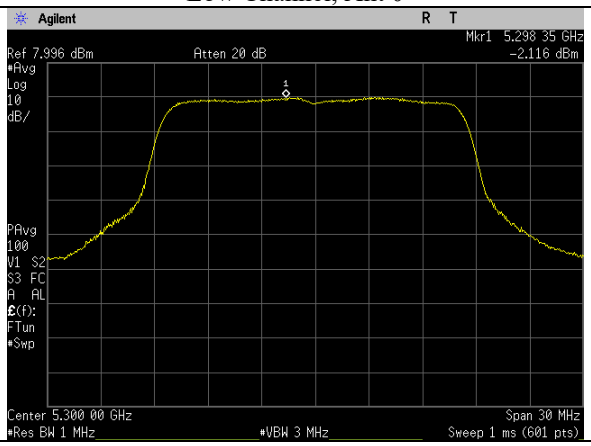
802.11a Power Spectral Density Plots, UNII-2A



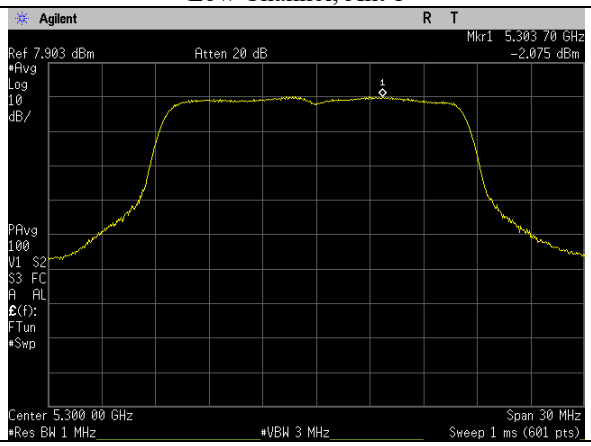
Low Channel, Ant 0



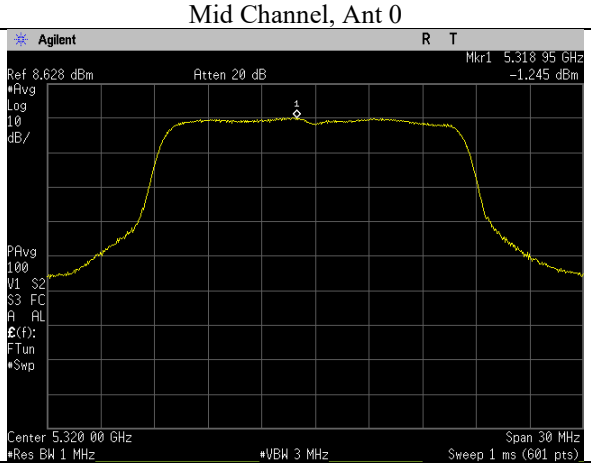
Low Channel, Ant 1



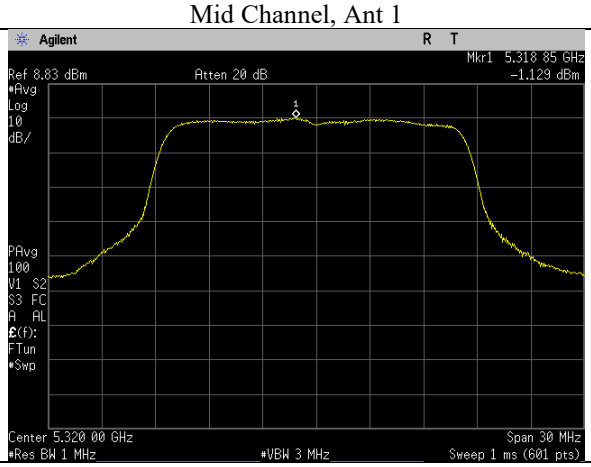
Mid Channel, Ant 0



Mid Channel, Ant 1

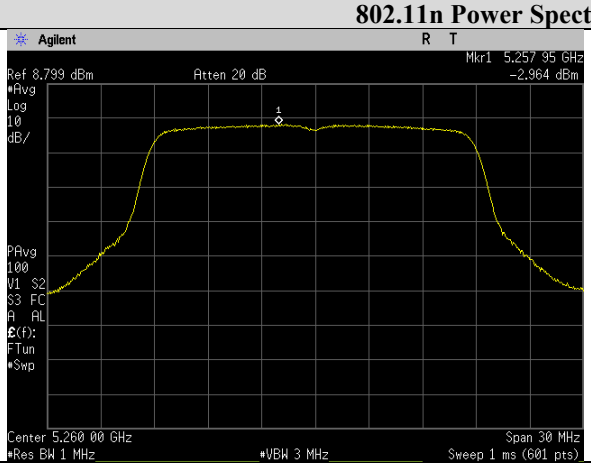


High Channel, Ant 0

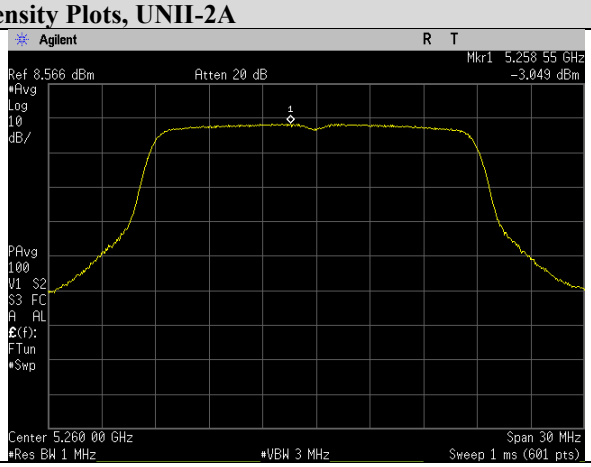


High Channel, Ant 1

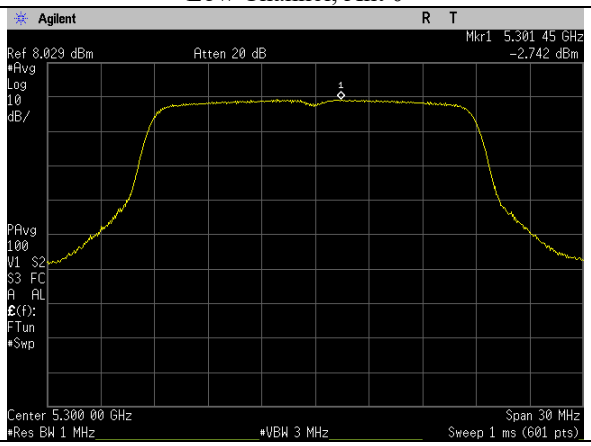
802.11n Power Spectral Density Plots, UNII-2A



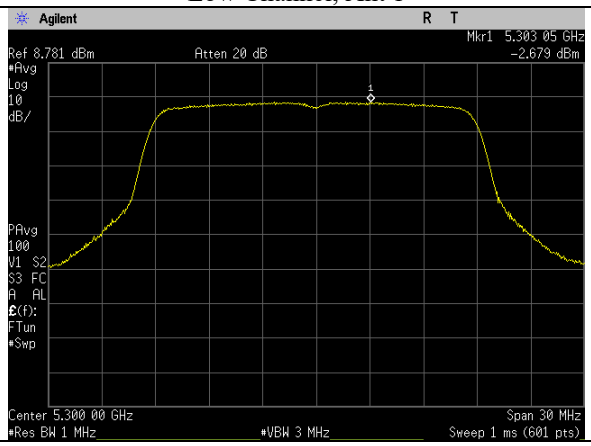
Low Channel, Ant 0



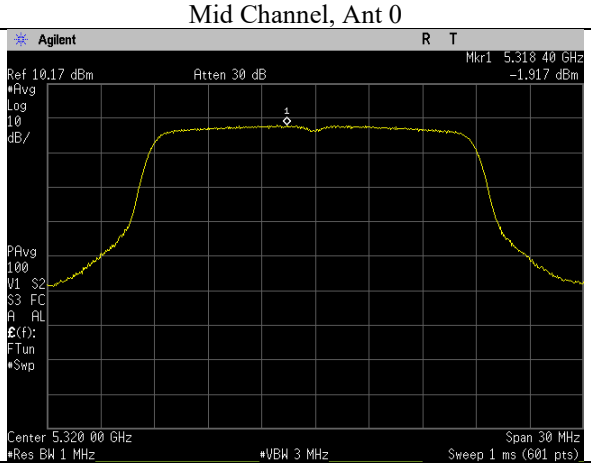
Low Channel, Ant 1



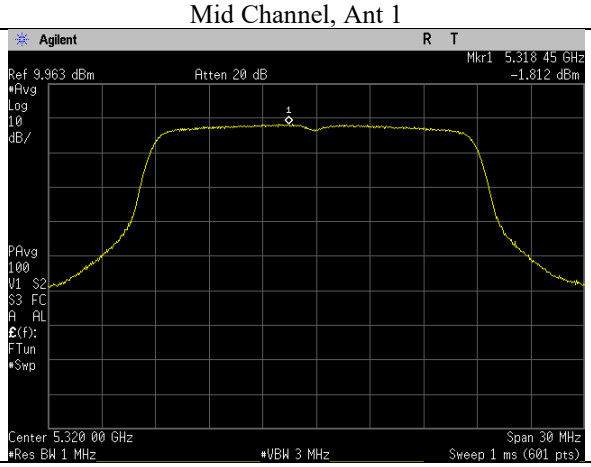
Mid Channel, Ant 0



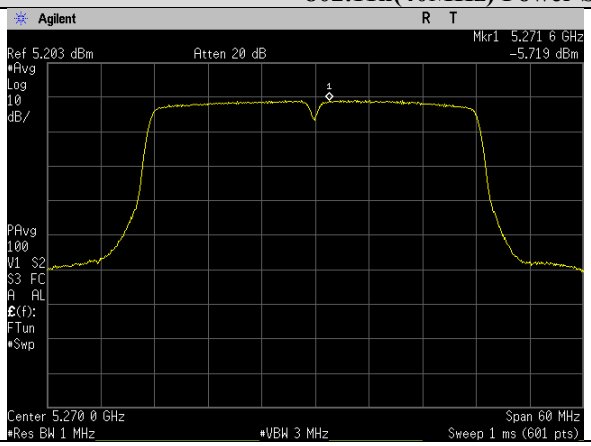
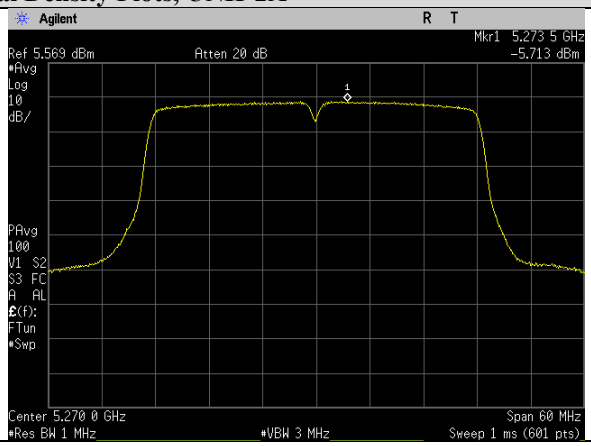
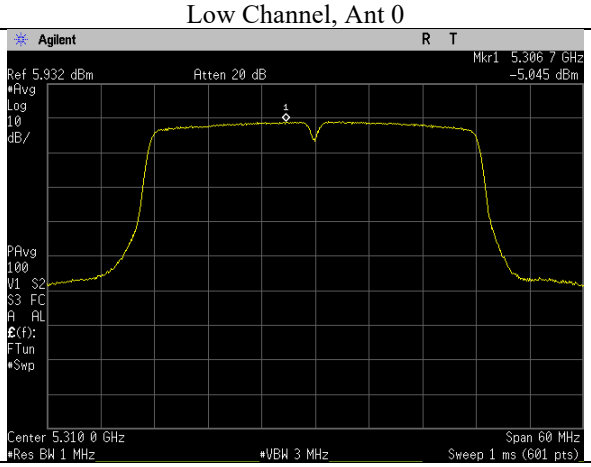
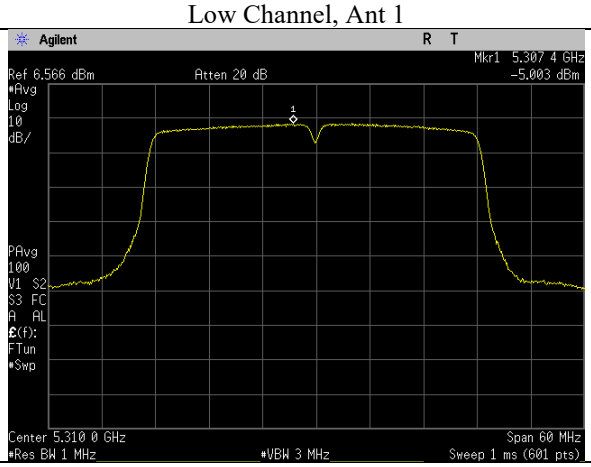
Mid Channel, Ant 1

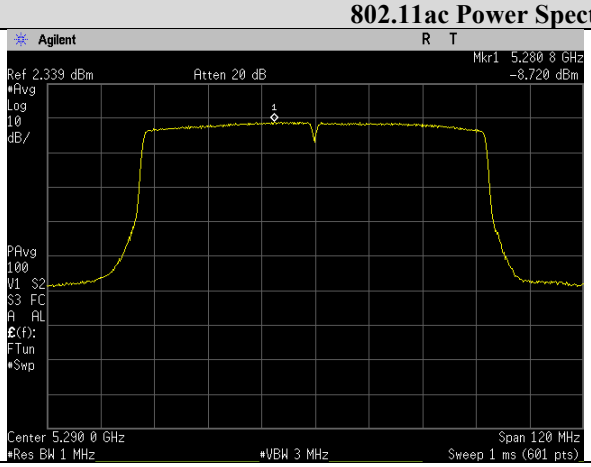
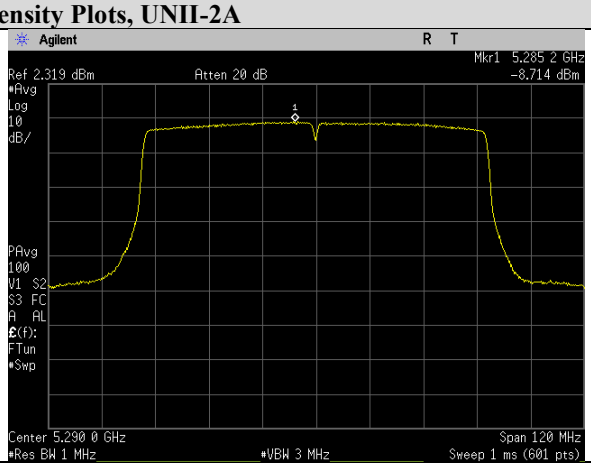


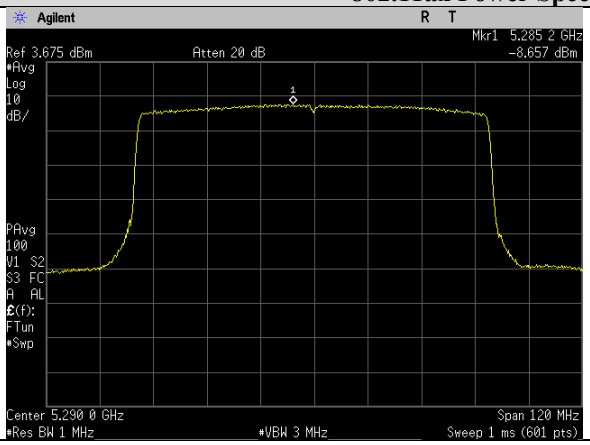
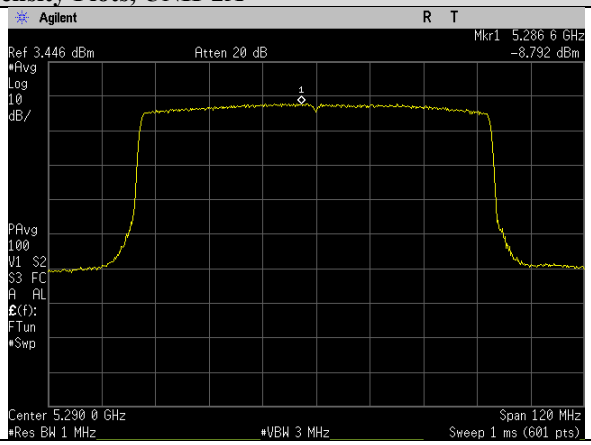
High Channel, Ant 0



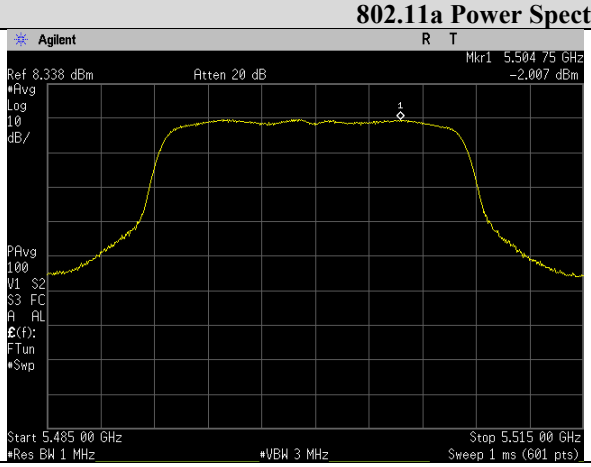
High Channel, Ant 1

802.11n(40MHz) Power Spectral Density Plots, UNII-2A	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

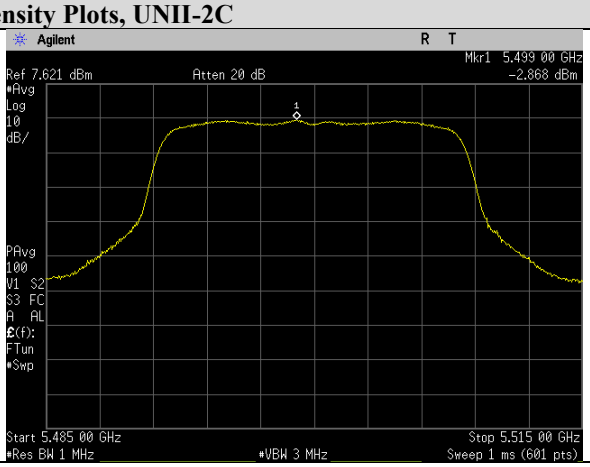
802.11ac Power Spectral Density Plots, UNII-2A	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

802.11ax Power Spectral Density Plots, UNII-2A	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

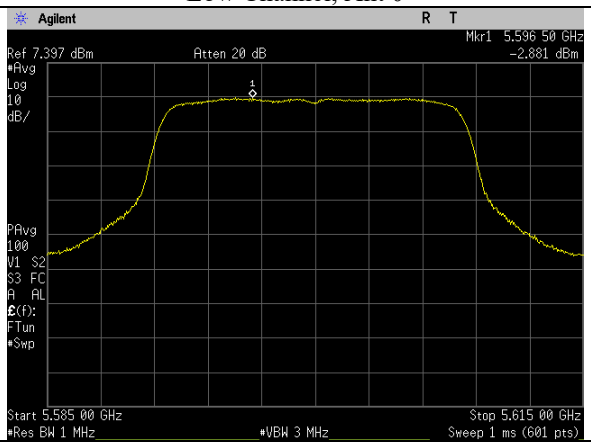
802.11a Power Spectral Density Plots, UNII-2C



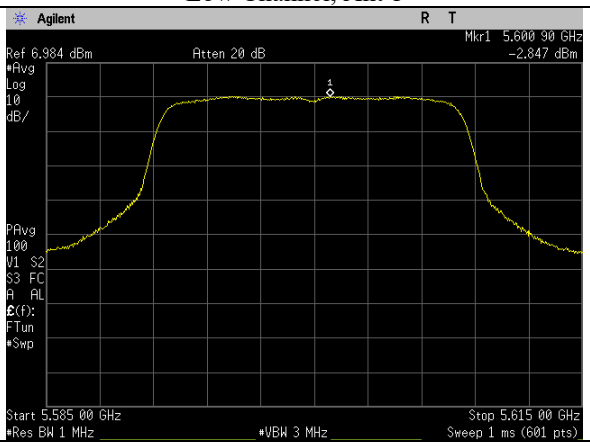
Low Channel, Ant 0



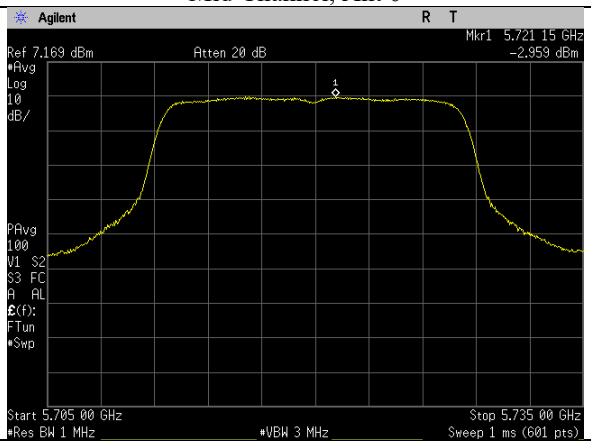
Low Channel, Ant 1



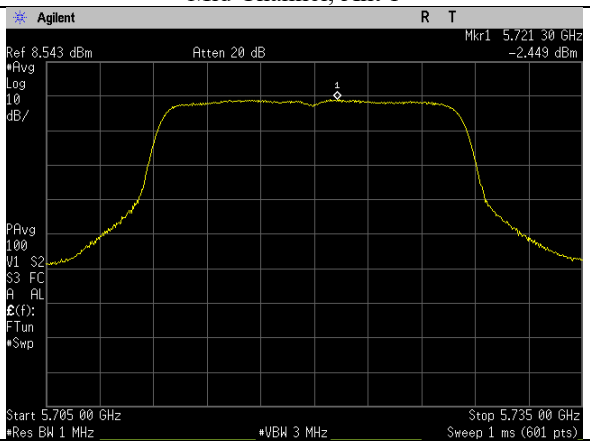
Mid Channel, Ant 0



Mid Channel, Ant 1

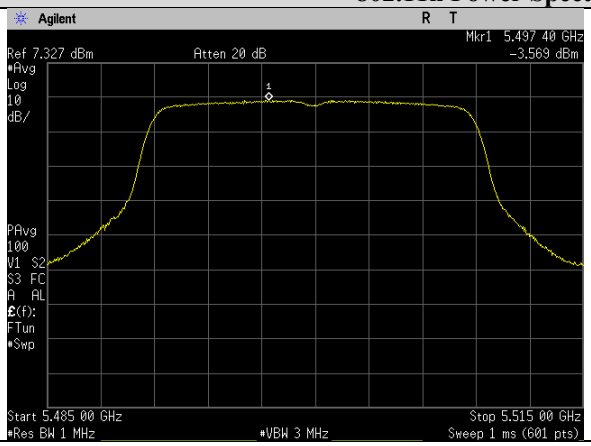


High Channel, Ant 0

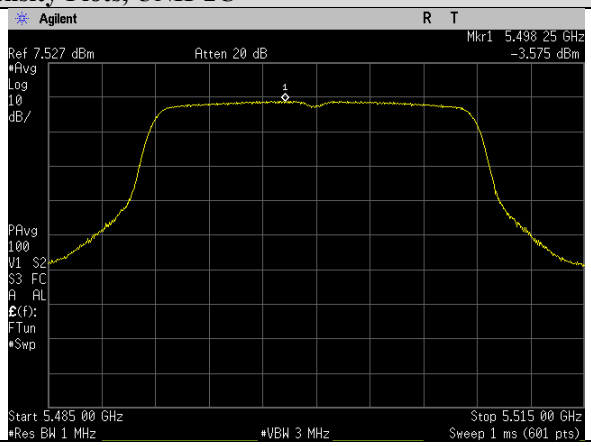


High Channel, Ant 1

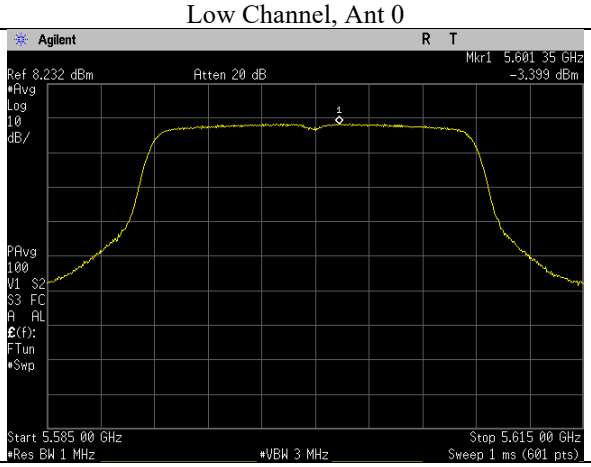
802.11n Power Spectral Density Plots, UNII-2C



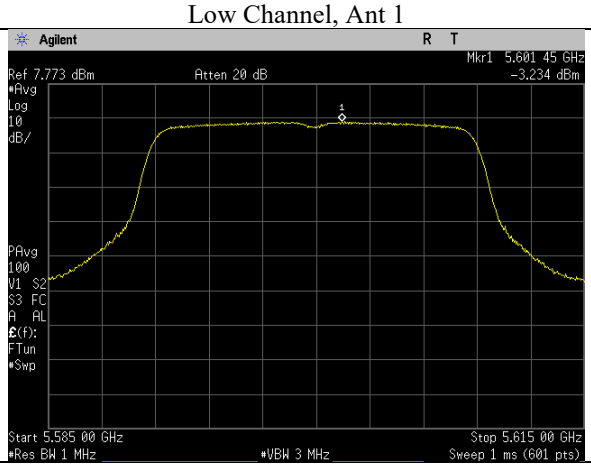
Low Channel, Ant 0



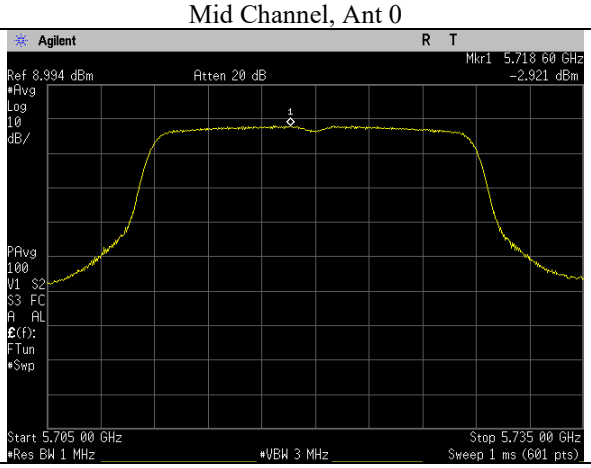
Low Channel, Ant 1



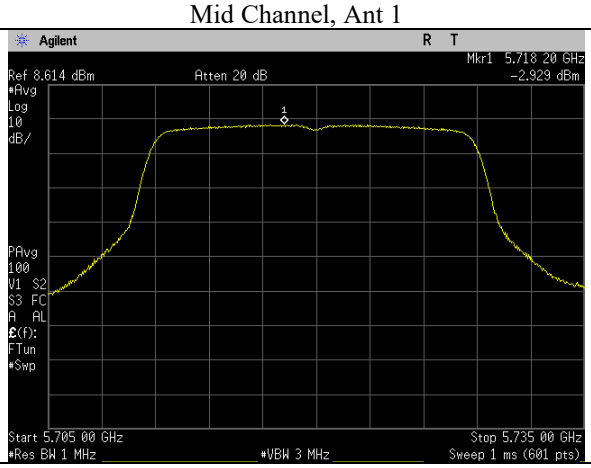
Mid Channel, Ant 0



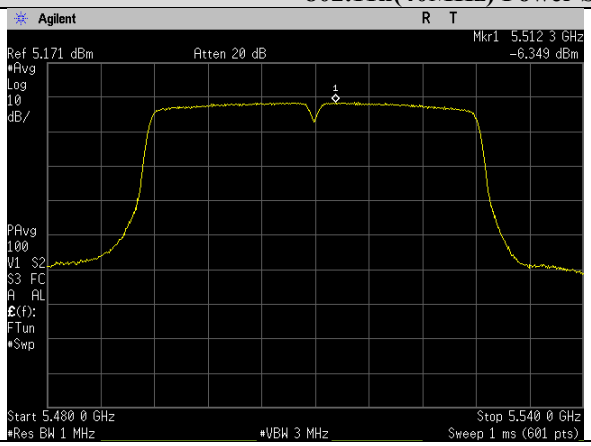
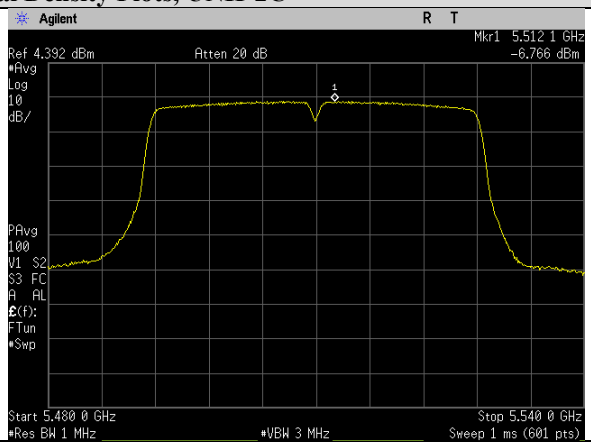
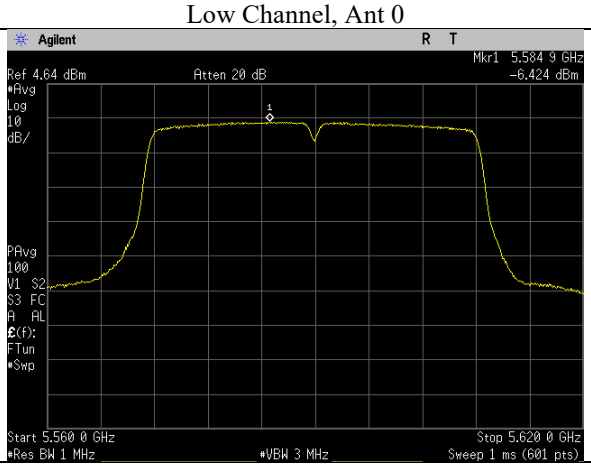
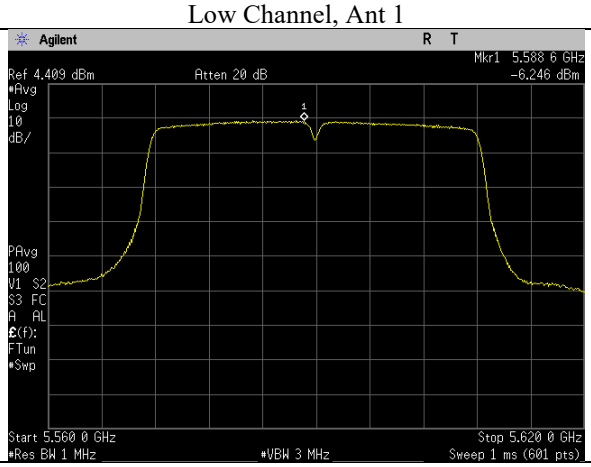
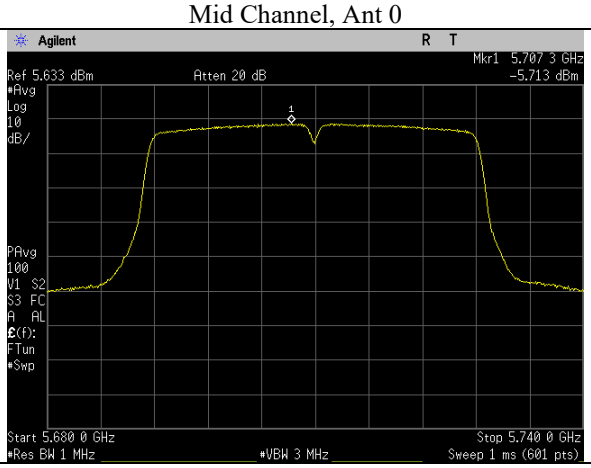
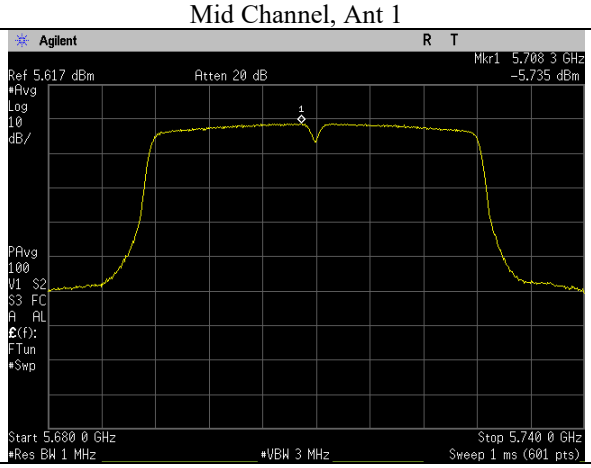
Mid Channel, Ant 1



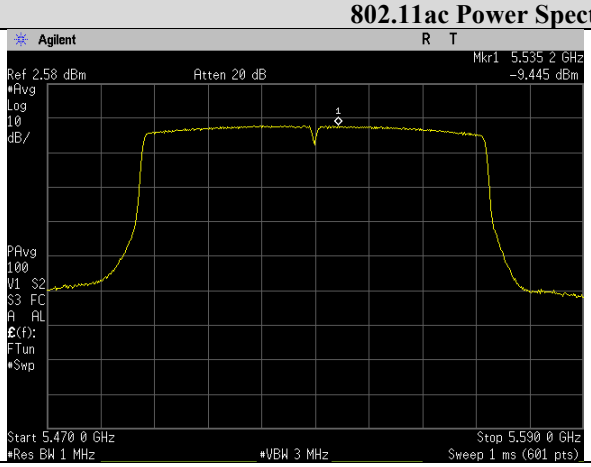
High Channel, Ant 0



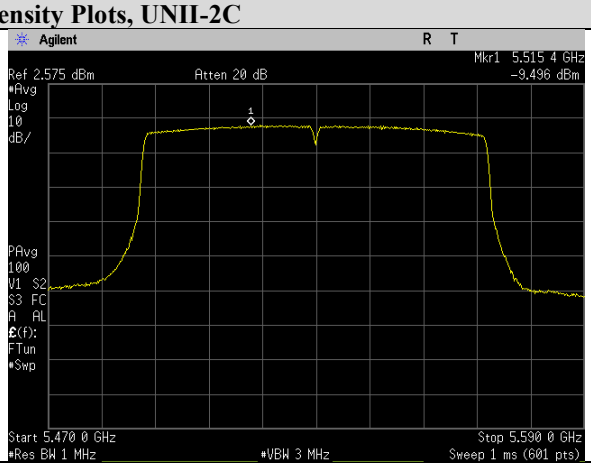
High Channel, Ant 1

802.11n(40MHz) Power Spectral Density Plots, UNII-2C	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
Mid Channel, Ant 0	Mid Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

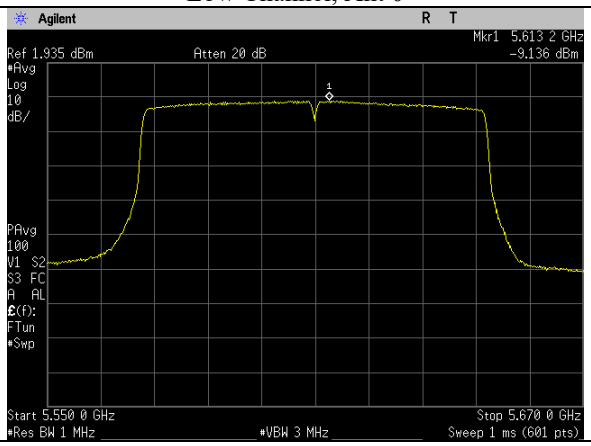
802.11ac Power Spectral Density Plots, UNII-2C



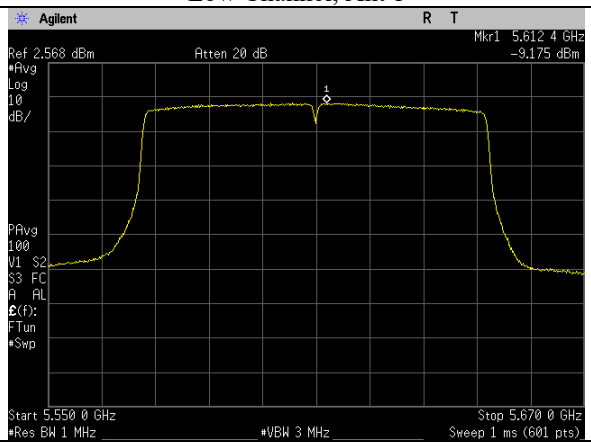
Low Channel, Ant 0



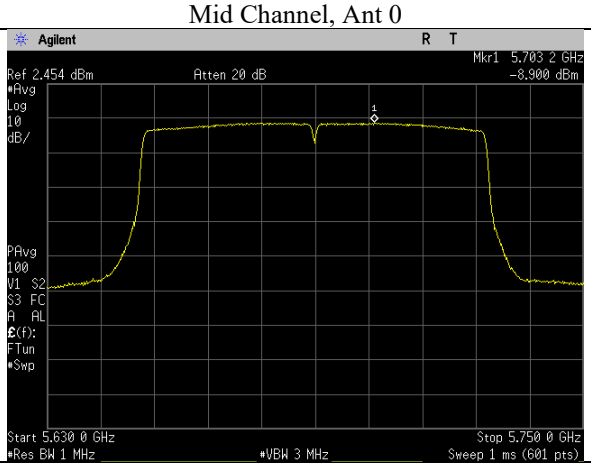
Low Channel, Ant 1



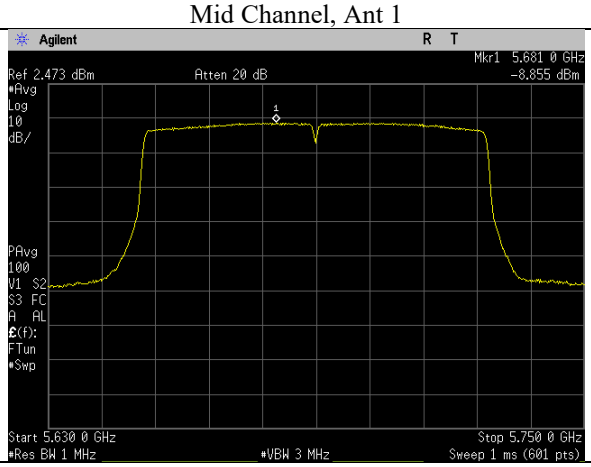
Mid Channel, Ant 0



Mid Channel, Ant 1

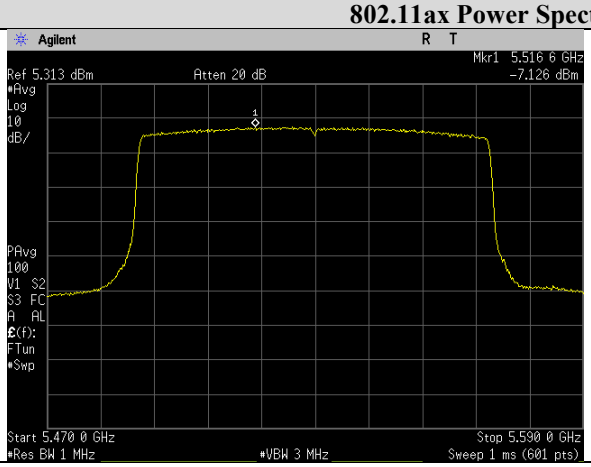


High Channel, Ant 0

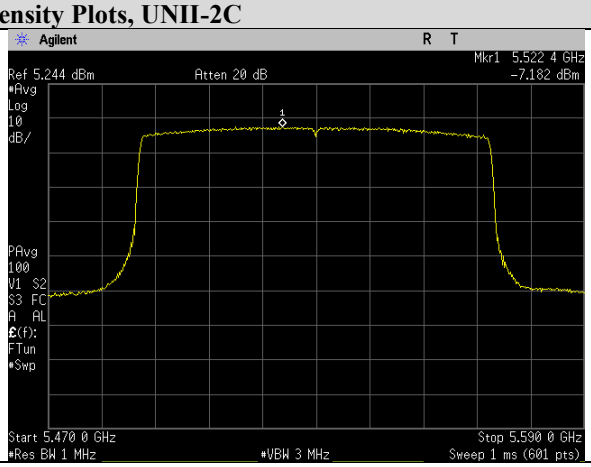


High Channel, Ant 1

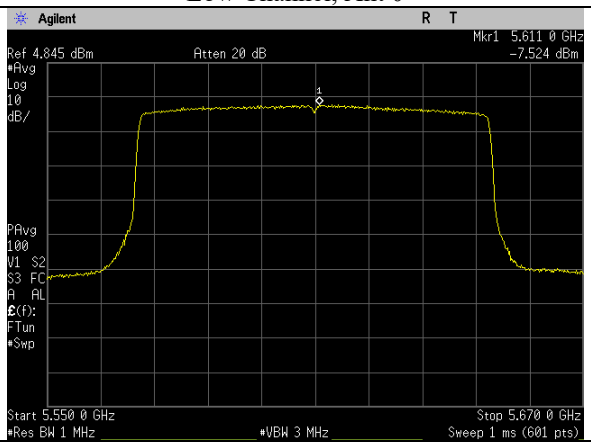
802.11ax Power Spectral Density Plots, UNII-2C



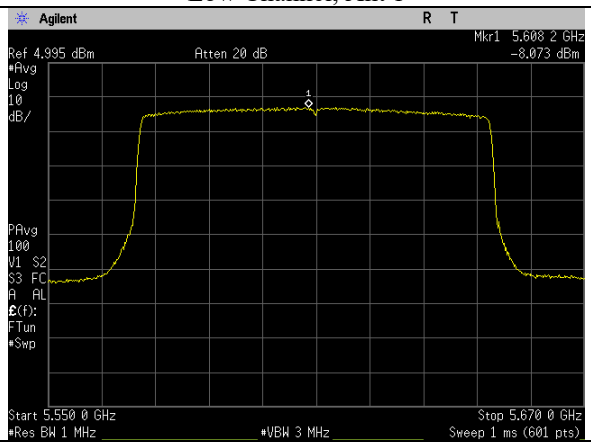
Low Channel, Ant 0



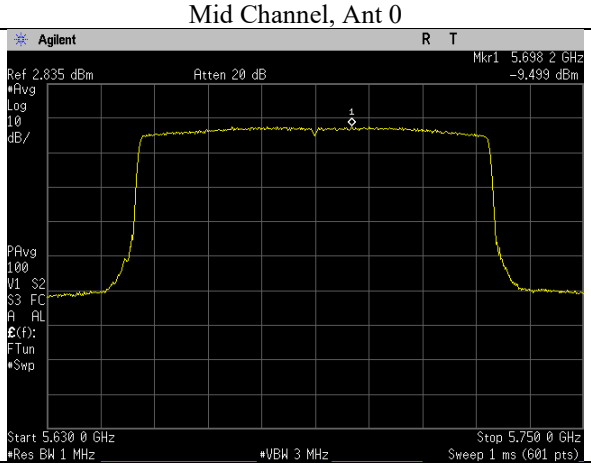
Low Channel, Ant 1



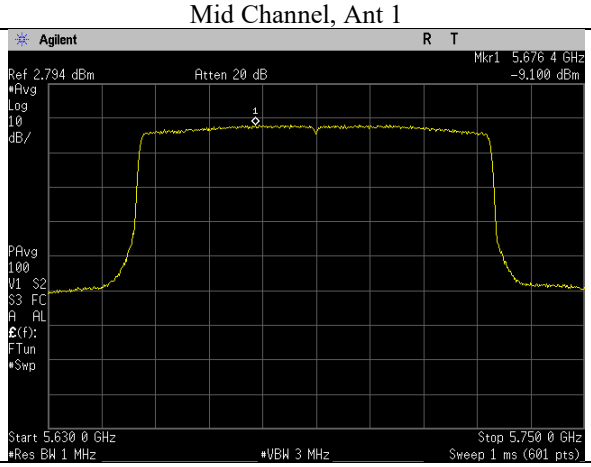
Mid Channel, Ant 0



Mid Channel, Ant 1

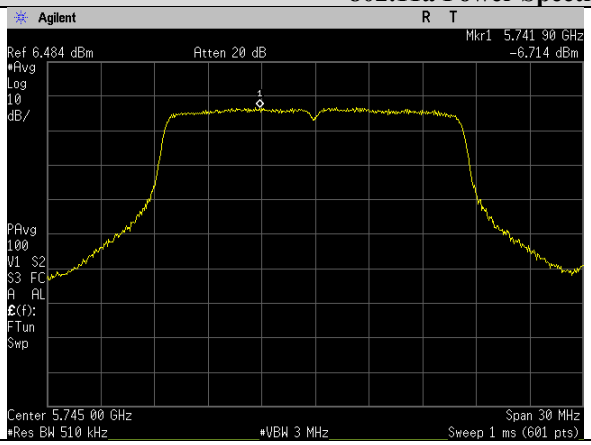


High Channel, Ant 0

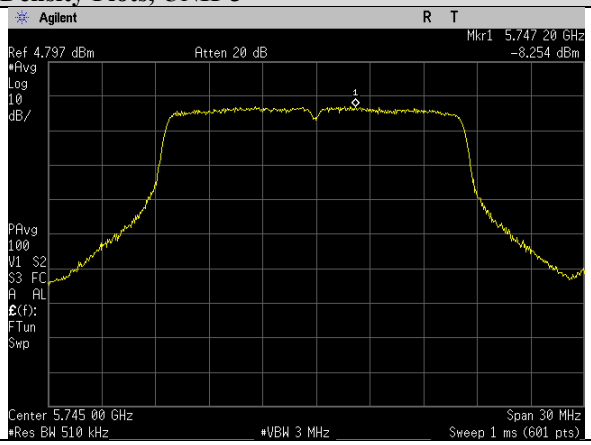


High Channel, Ant 1

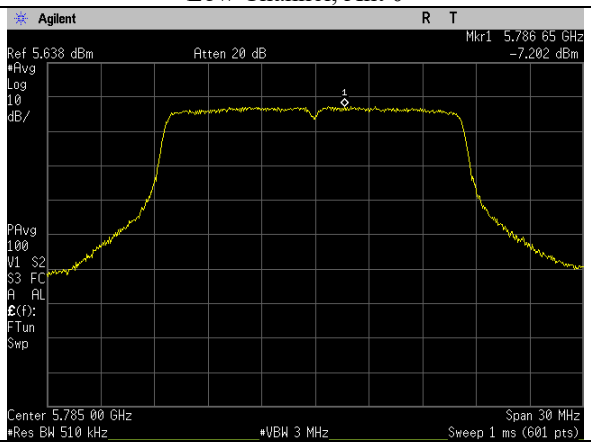
802.11a Power Spectral Density Plots, UNII-3



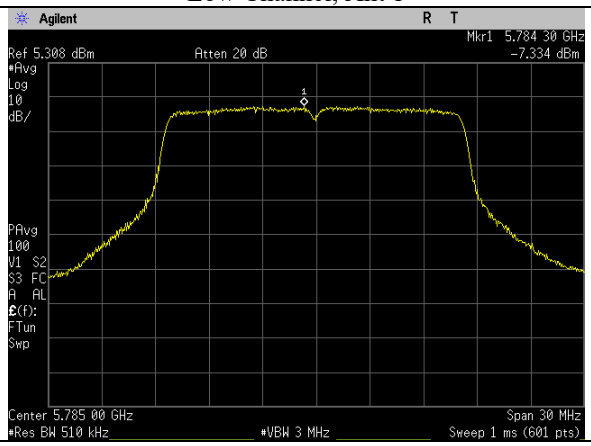
Low Channel, Ant 0



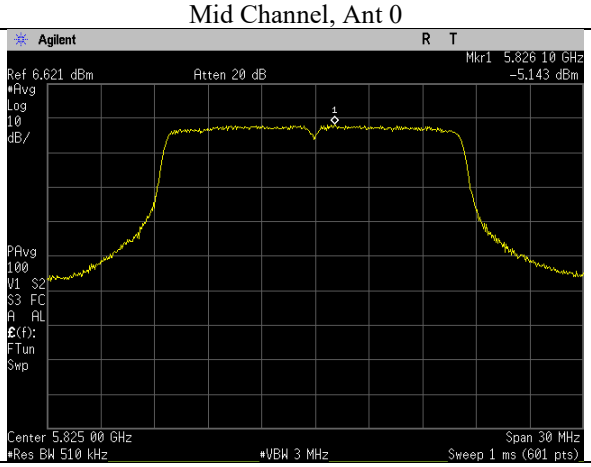
Low Channel, Ant 1



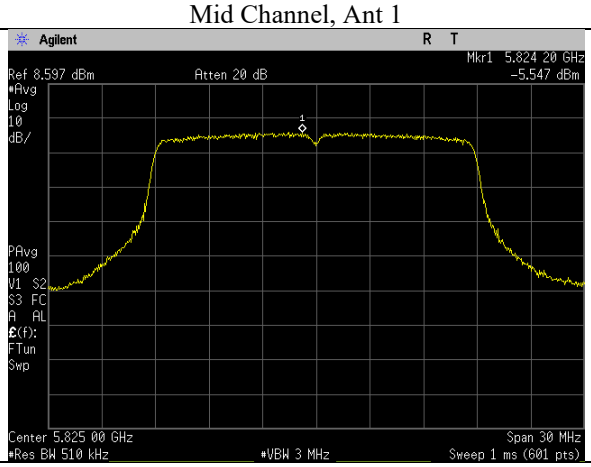
Mid Channel, Ant 0



Mid Channel, Ant 1

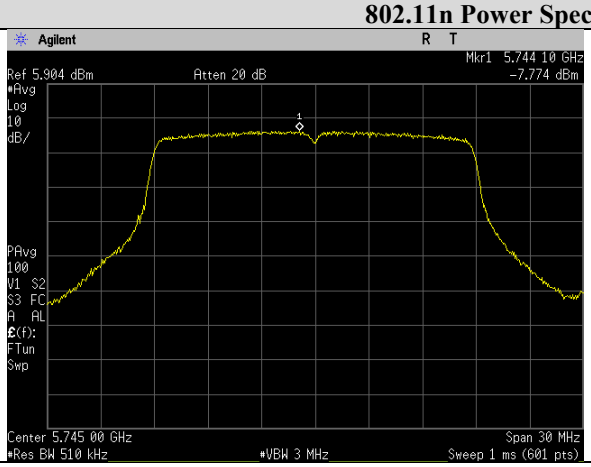


High Channel, Ant 0

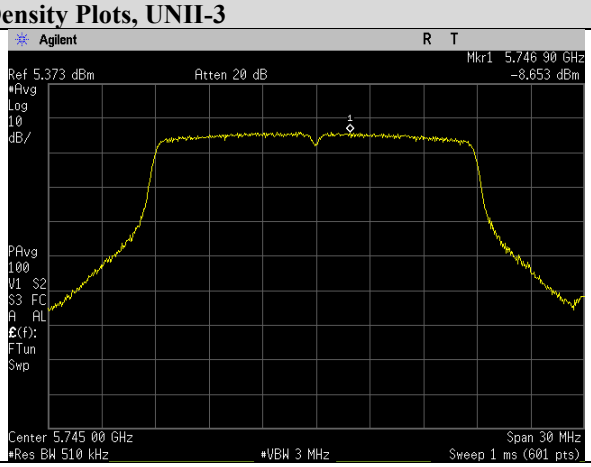


High Channel, Ant 1

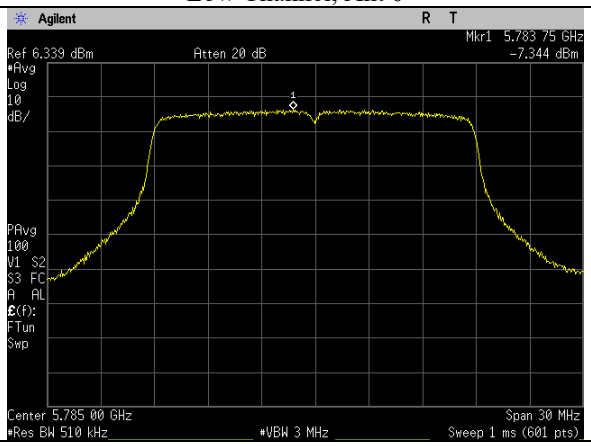
802.11n Power Spectral Density Plots, UNII-3



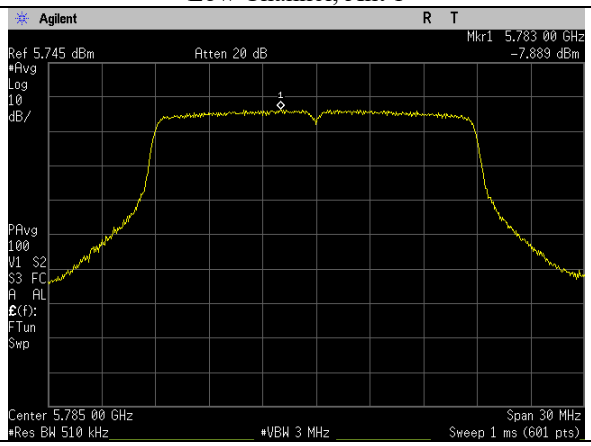
Low Channel, Ant 0



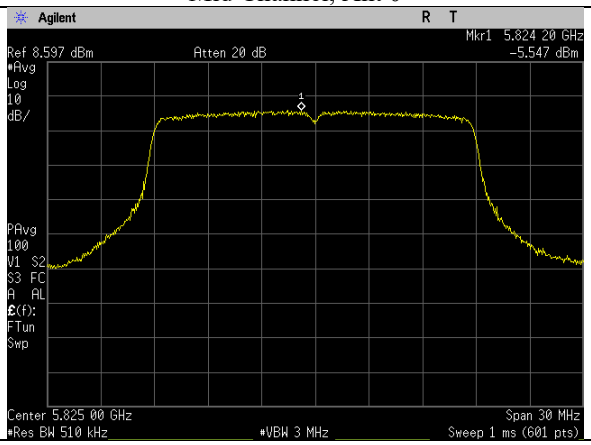
Low Channel, Ant 1



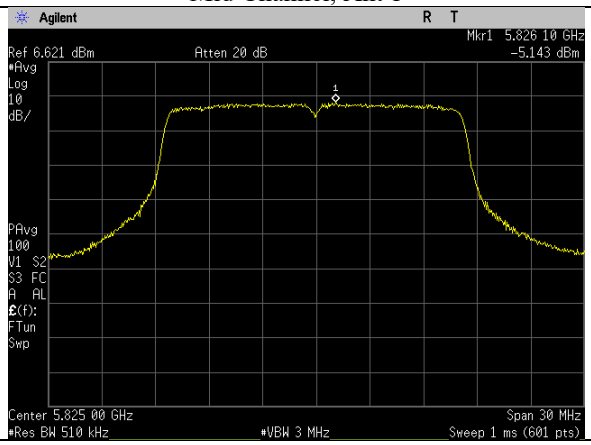
Mid Channel, Ant 0



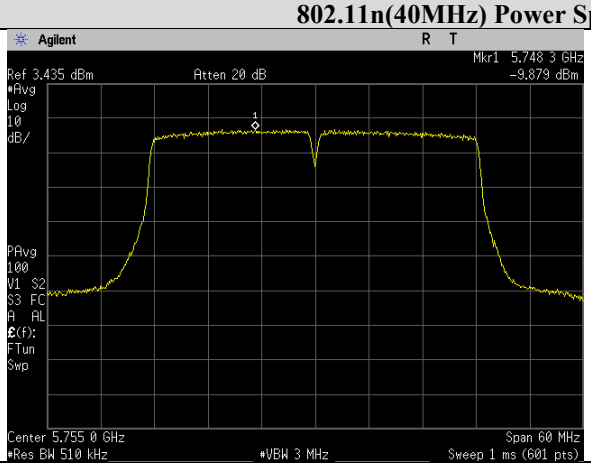
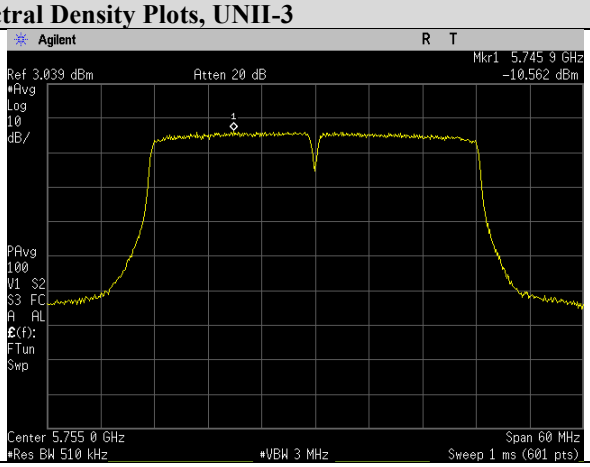
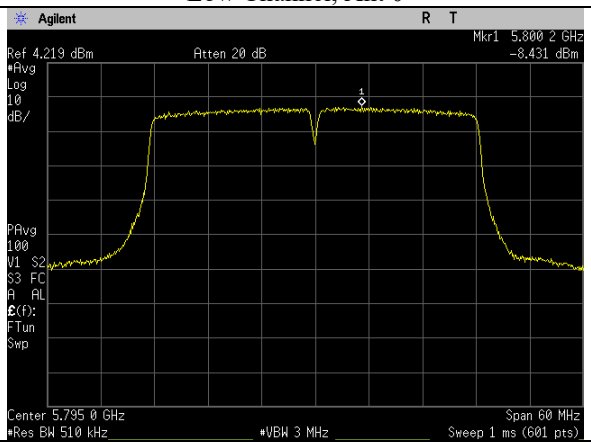
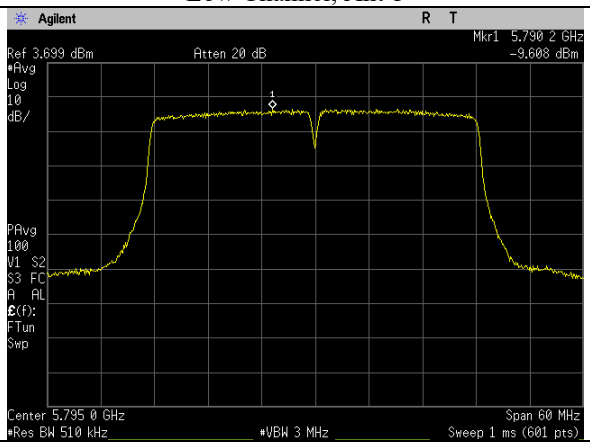
Mid Channel, Ant 1

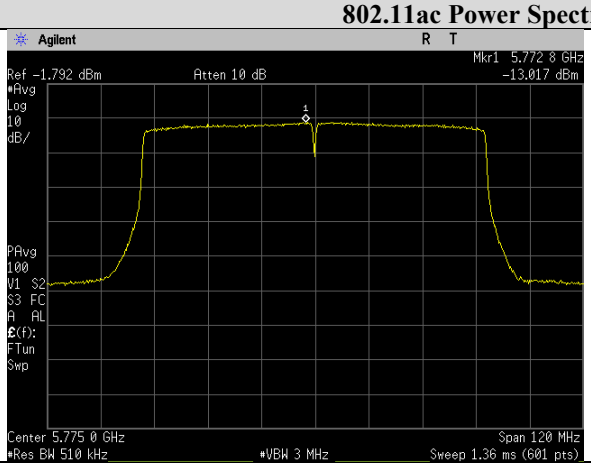
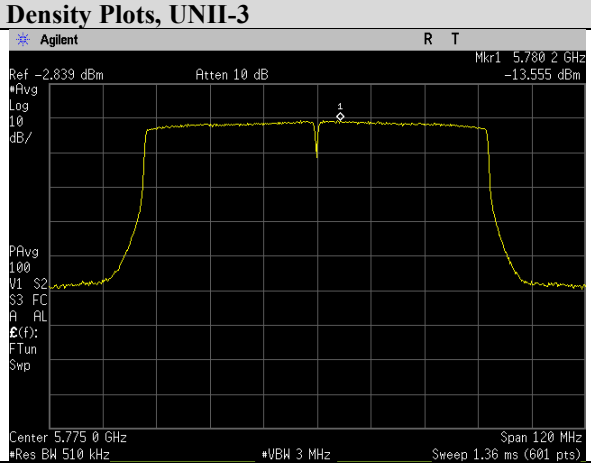


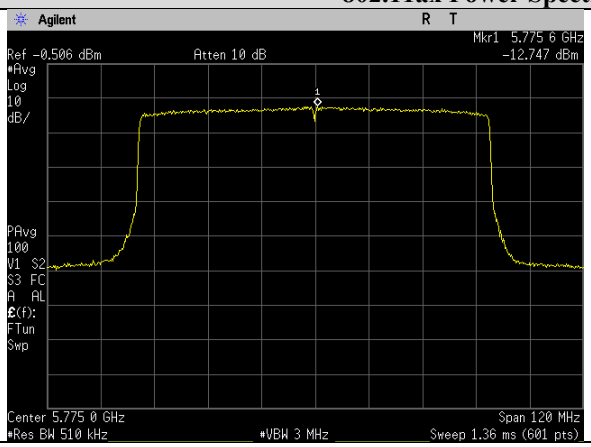
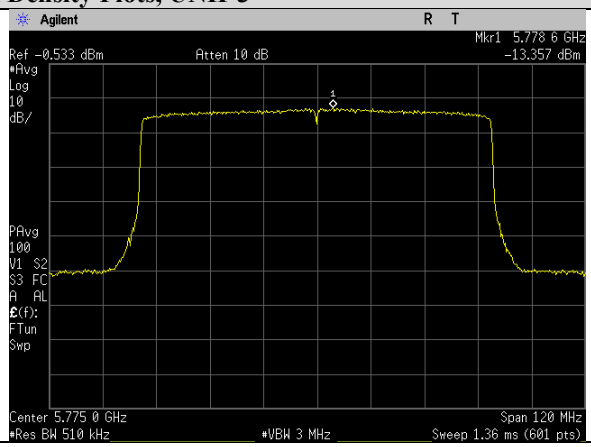
High Channel, Ant 0



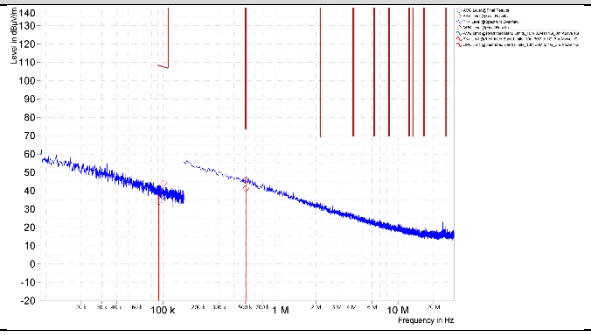
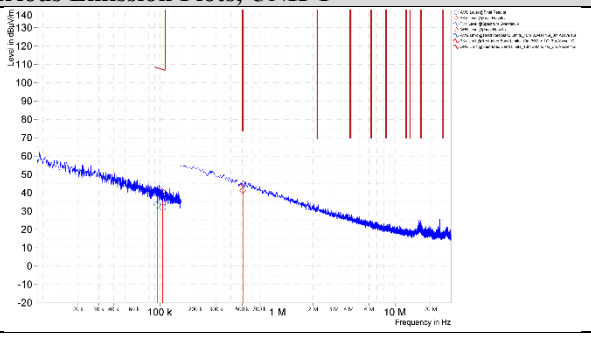
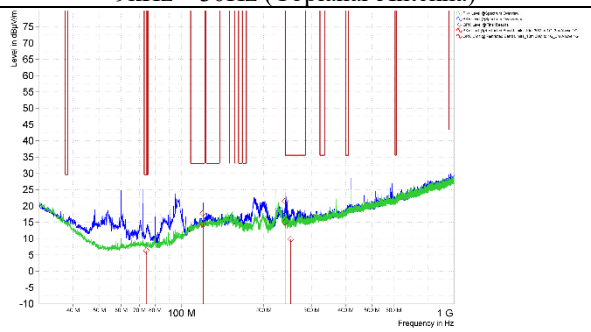
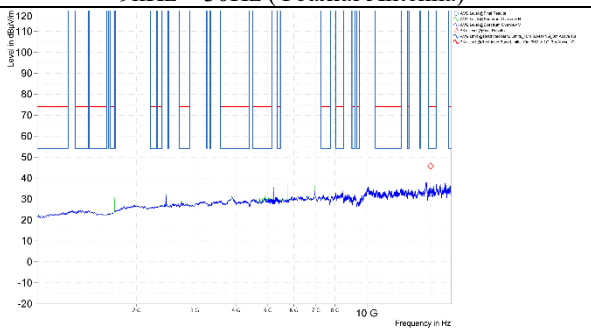
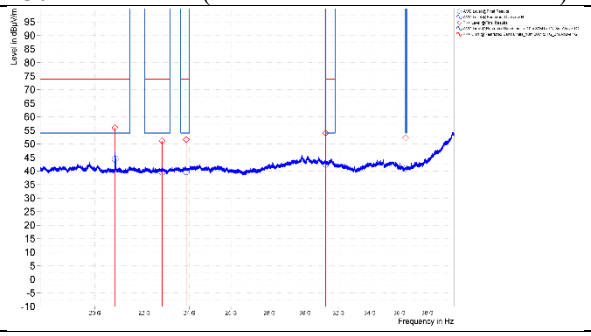
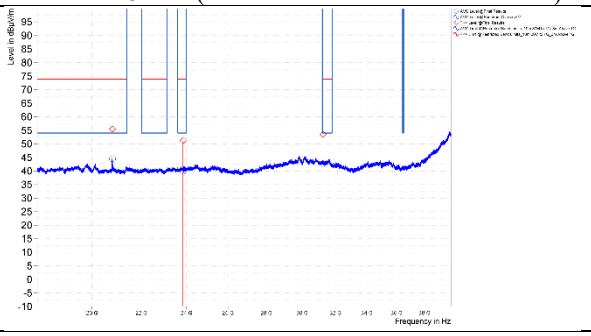
High Channel, Ant 1

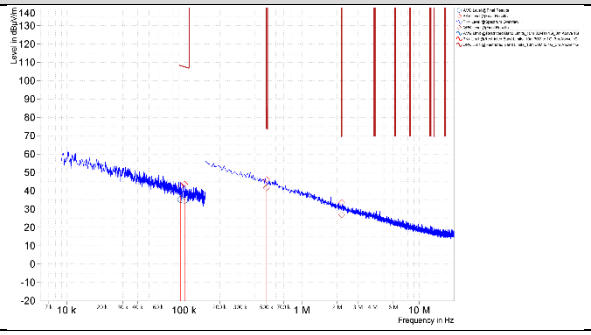
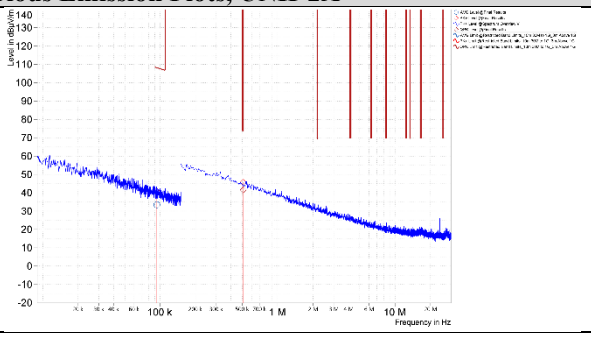
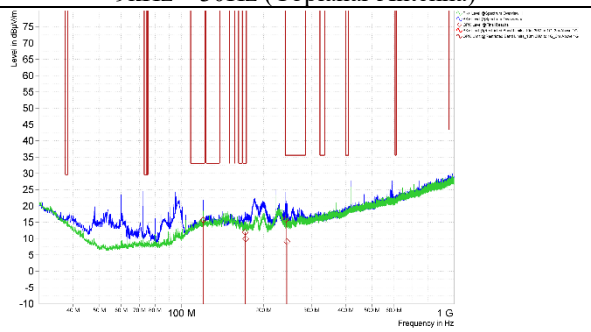
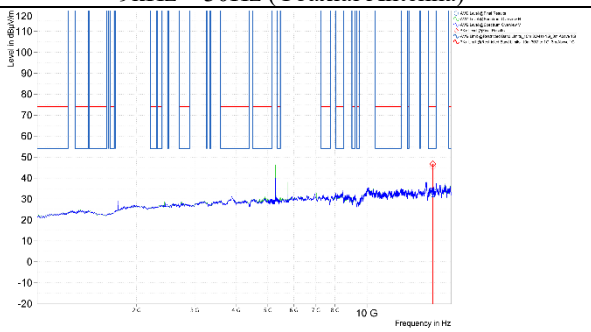
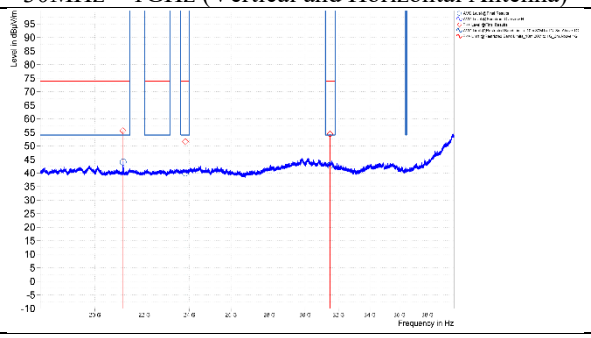
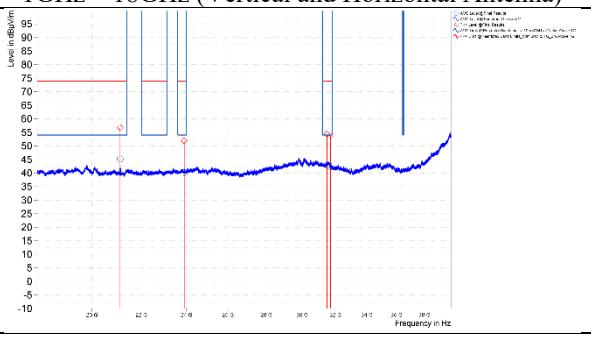
802.11n(40MHz) Power Spectral Density Plots, UNII-3	
	
Low Channel, Ant 0	Low Channel, Ant 1
	
High Channel, Ant 0	High Channel, Ant 1

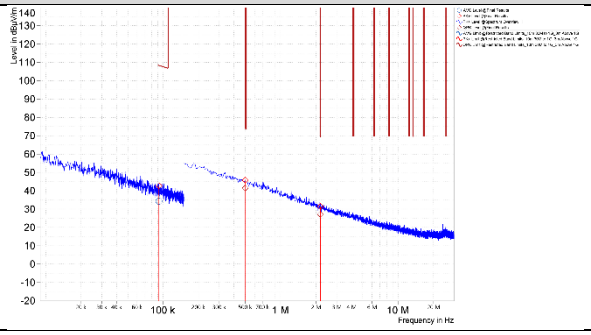
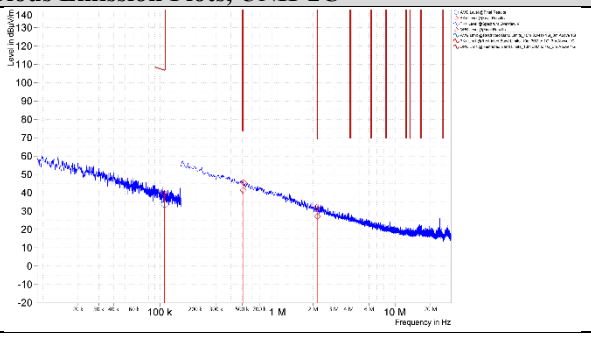
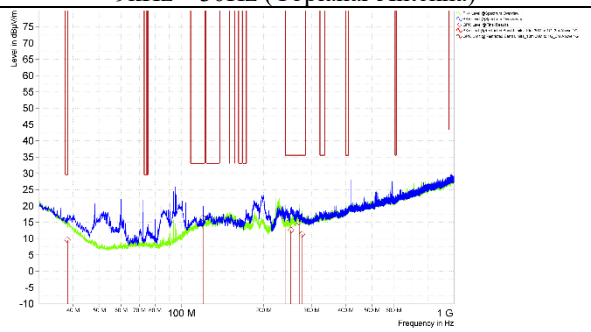
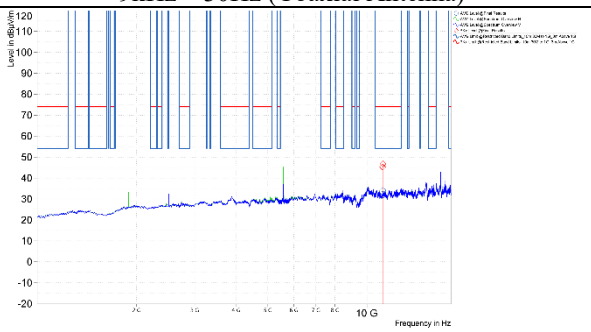
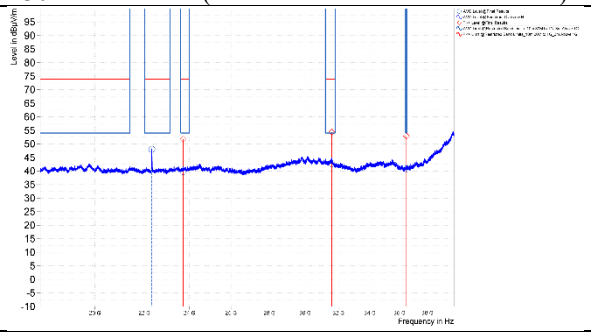
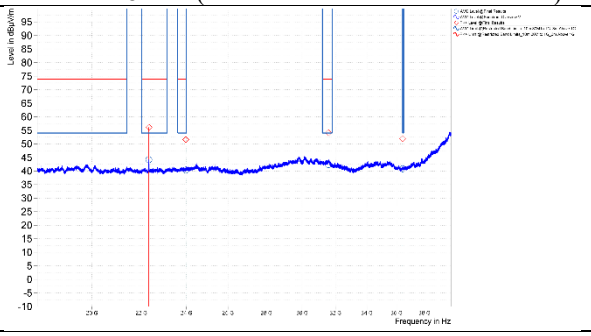
802.11ac Power Spectral Density Plots, UNII-3	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

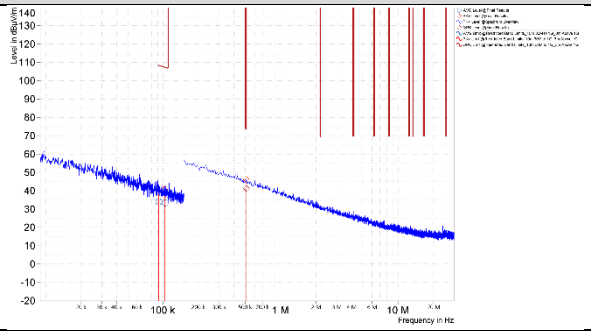
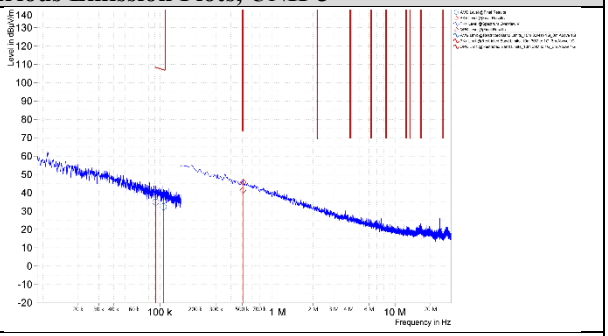
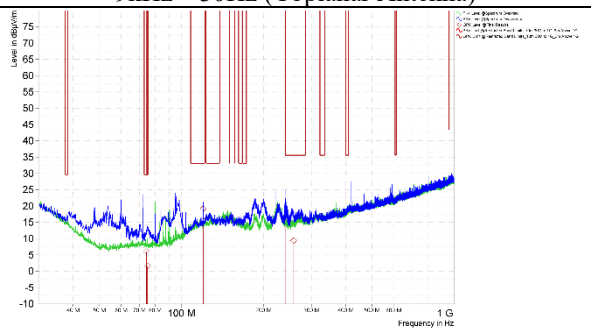
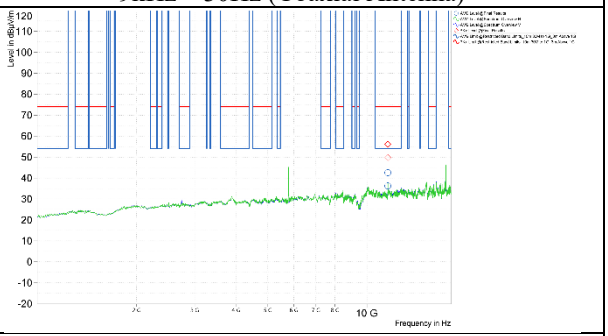
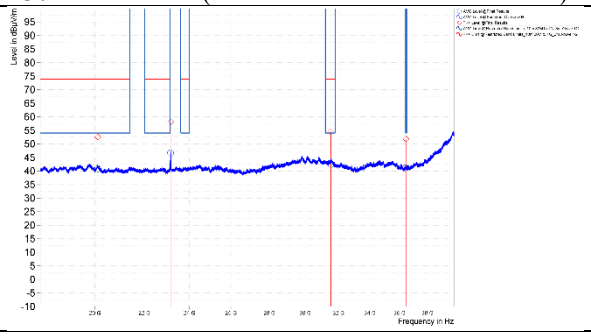
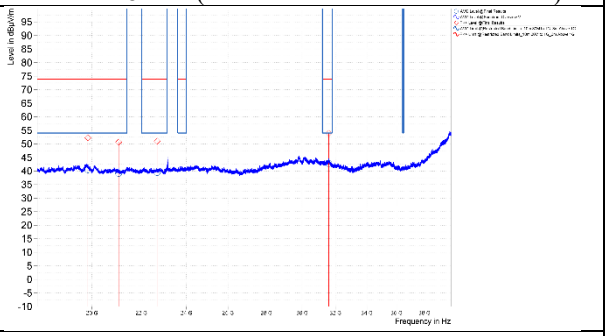
802.11ax Power Spectral Density Plots, UNII-3	
	
Mid Channel, Ant 0	Mid Channel, Ant 1

V. Restricted Band Emissions Plots

Worst Case Restricted Band Spurious Emission Plots, UNII-1	
	
9kHz – 30Hz (Coplanar Antenna)	9kHz – 30Hz (Coaxial Antenna)
	
30MHz – 1GHz (Vertical and Horizontal Antenna)	1GHz – 18GHz (Vertical and Horizontal Antenna)
	
18GHz – 40GHz (Vertical Antenna)	18GHz – 40GHz (Horizontal Antenna)

Worst Case Restricted Band Spurious Emission Plots, UNII-2A	
	
9kHz – 30Hz (Coplanar Antenna)	9kHz – 30Hz (Coaxial Antenna)
	
30MHz – 1GHz (Vertical and Horizontal Antenna)	1GHz – 18GHz (Vertical and Horizontal Antenna)
	
18GHz – 40GHz (Vertical Antenna)	18GHz – 40GHz (Horizontal Antenna)

Worst Case Restricted Band Spurious Emission Plots, UNII-2C	
	
9kHz – 30Hz (Coplanar Antenna)	9kHz – 30Hz (Coaxial Antenna)
	
30MHz – 1GHz (Vertical and Horizontal Antenna)	1GHz – 18GHz (Vertical and Horizontal Antenna)
	
18GHz – 40GHz (Vertical Antenna)	18GHz – 40GHz (Horizontal Antenna)

Worst Case Restricted Band Spurious Emission Plots, UNII-3	
	
9kHz – 30Hz (Coplanar Antenna)	9kHz – 30Hz (Coaxial Antenna)
	
30MHz – 1GHz (Vertical and Horizontal Antenna)	1GHz – 18GHz (Vertical and Horizontal Antenna)
	
18GHz – 40GHz (Vertical Antenna)	18GHz – 40GHz (Horizontal Antenna)

End of Report

