TEST REPORT

Report Number. : 13129294-E4V3

Applicant	:	Microsoft Corporation One Microsoft Way Redmond, WA 98052-6399 USA
Model	:	1930
FCC ID	:	C3K1930
IC	:	3048A-1930
EUT Description	:	Phablet Device
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART E ISED RSS-247 ISSUE 2 ISED RSS-GEN ISSUE 5

Date Of Issue:
June 09, 2020

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
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TEL: (510) 319-4000
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NVLAP Lab code: 200065-0
NVLAP Lab code: 200246-0

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	5/4/2020	Initial Issue	---
V2	6/8/2020	Updated antenna name	Henry Lau
V3	6/6/2020	Updated EUT	Grace Rincand

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1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: Phablet Device

MODEL: 1930

SERIAL NUMBER: 900086500465, 900039701165 (Radiated)
901245700365(Conducted)

DATE TESTED: March 13, 2020 – April 15, 2020

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

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

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

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.

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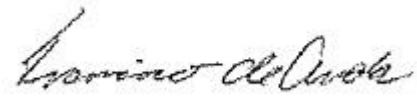
Approved & Released For
UL Verification Services Inc. By:



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2. TEST RESULT SUMMARY

FCC Clause	ISED Clause	Requirement	Result	Comment
See Comment		Duty Cycle**	Reporting purposes only	Per ANSI C63.10, Section 12.2.
See Comment	RSS-GEN 6.7	26dB BW/99% OBW*/ **	Reporting purposes only	Per ANSI C63.10 Sections 6.9.2 and 6.9.3
15.407 (e)	RSS-247 6.2.4.1	6 dB BW*	Compliant	None.
15.407 (a) (1-4), (h) (1)	RSS-247 6.2	Output Power*/ **	Compliant	None.
15.407 (a) (1-3, 5)	RSS-247 6.2	PSD*/ **	Compliant	None.
15.209, 15.205, 15.407 (b)	RSS-GEN 8.9, 8.10, RSS-247 6.2	Radiated Emissions**	Compliant	None.
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions**	Compliant	None.

*Testing performed at 47173 Benicia Street Fremont, California, 94538 USA facility.
**Testing performed at 12 Laboratory Dr., Research Triangle Park, NC 27709 U.S.A. facility.

3. TEST METHODOLOGY

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

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4. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 & 47266 Benicia Street, 47658 Kato Road, Fremont, California, USA, 12 Laboratory Drive, Research Triangle Park and 2800 Perimeter Park Dr, Suite B, Morrisville, North Carolina, USA. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

12 Laboratory Dr.	2800 Suite Perimeter Park Dr.
☐ Chamber A RTP	☒ North Chamber
☐ Chamber C RTP	☒ South Chamber

UL LLC (RTP) is accredited by NVLAP, Laboratory Code 200246-0

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

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5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	U_{Lab}
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.39 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.07 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.52 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	4.88 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.24 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.37 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.17 dB

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

5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:
Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

MAINS CONDUCTED EMISSIONS

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

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6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is a Phablet Device with 802.11 a/b/g/n/ac 2x2 WLAN, Bluetooth, Bluetooth LE, GSM, WCDMA, and LTE radios.

6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

5.2 GHz BAND

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.2 GHz band, 2TX			
5180-5240	802.11a Legacy	15.19	33.04
5180-5240	802.11n HT20	16.28	42.46
5190-5230	802.11n HT40	16.37	43.35
5210	802.11ac VHT80	16.18	41.50

5.3 GHz BAND

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.3 GHz band, 2TX			
5260 - 5320	802.11a Legacy	18.25	66.83
5260 - 5320	802.11n HT20	17.97	62.66
5270 - 5310	802.11n HT40	18.31	67.76
5290	802.11ac VHT80	18.17	65.61

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5.6 GHz BAND

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.6 GHz band, 2TX			
5500-5720	802.11a Legacy	15.40	34.67
5500-5720	802.11n HT20	15.39	34.59
5510-5710	802.11n HT40	15.86	38.55
5530-5690	802.11ac VHT80	15.77	37.76

5.8 GHz BAND

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.8 GHz band, 2TX			
5745-5825	802.11a Legacy	16.06	40.36
5745-5825	802.11n HT20	15.94	39.26
5755-5795	802.11n HT40	15.33	34.12
5775	802.11ac VHT80	15.13	32.58

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6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes PIFA antenna, with max gains of:

Frequency (GHz)	Peak Antenna Gain (dBi)	
	Antenna 1	Antenna 2
5150-5250	0.6	0.5
5250-5350	1.3	1.1
5470-5725	1.7	1.4
5725-5850	1.4	1.2

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was Android version 10, Build Number b1 developer-generic 2020.311.4.

The test utility software used during testing was QRCT v4.0-00123.

6.5. WORST-CASE CONFIGURATION AND MODE

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

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

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

The EUT was investigated in three orthogonal orientations X/Y/Z. Additionally, the EUT was investigated in four configurations with both screens: folded and closed/open 90 degrees/flat 180 degrees/folded and open. It was determined that the EUT in flat 180 degrees with X (Flatbed) orientation was worst-case orientation therefore all final radiated testing was performed with the EUT in 180 degrees flat at X(Flatbed)

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

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

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6.6 DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC/DC Adapter (Laptop)	Lenovo	ADLX45NCC2A	8SSA10E75794C1SG85N14BE	DoC
Laptop	Lenovo	Yoga 11e	R9-0R7KPR	DoC
AC/DC Adapter (EUT)	Microsoft	1847	0D13V05VTD9C	DoC

I/O CABLES (CONDUCTED & RADIATED COLOCATION)

I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	AC	1	AC	Un-Shielded	1	to AC/DC Adapter
2	DC	1	DC	Shielded	1	to Laptop
3	USB	1	Type C	Shielded	0.1	to EUT
4	Antenna	1	SMA	Un-Shielded	0.2	to Analyzer

I/O CABLES(RADIATED & AC LINE CONDUCTED)

I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	USB	1	Type C	Shielded	0.1	to EUT

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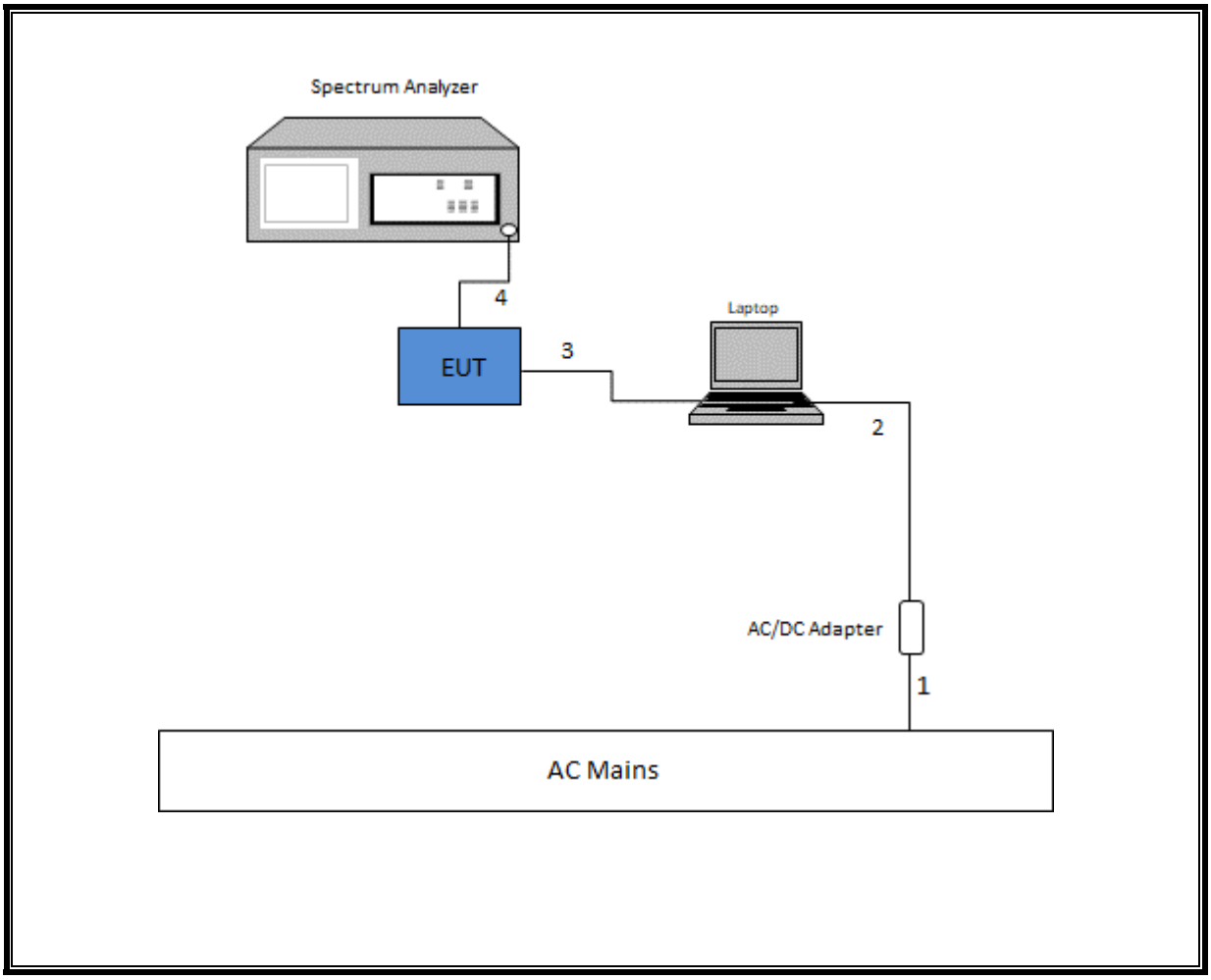
CONDUCTED TEST SETUP DIAGRAM

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



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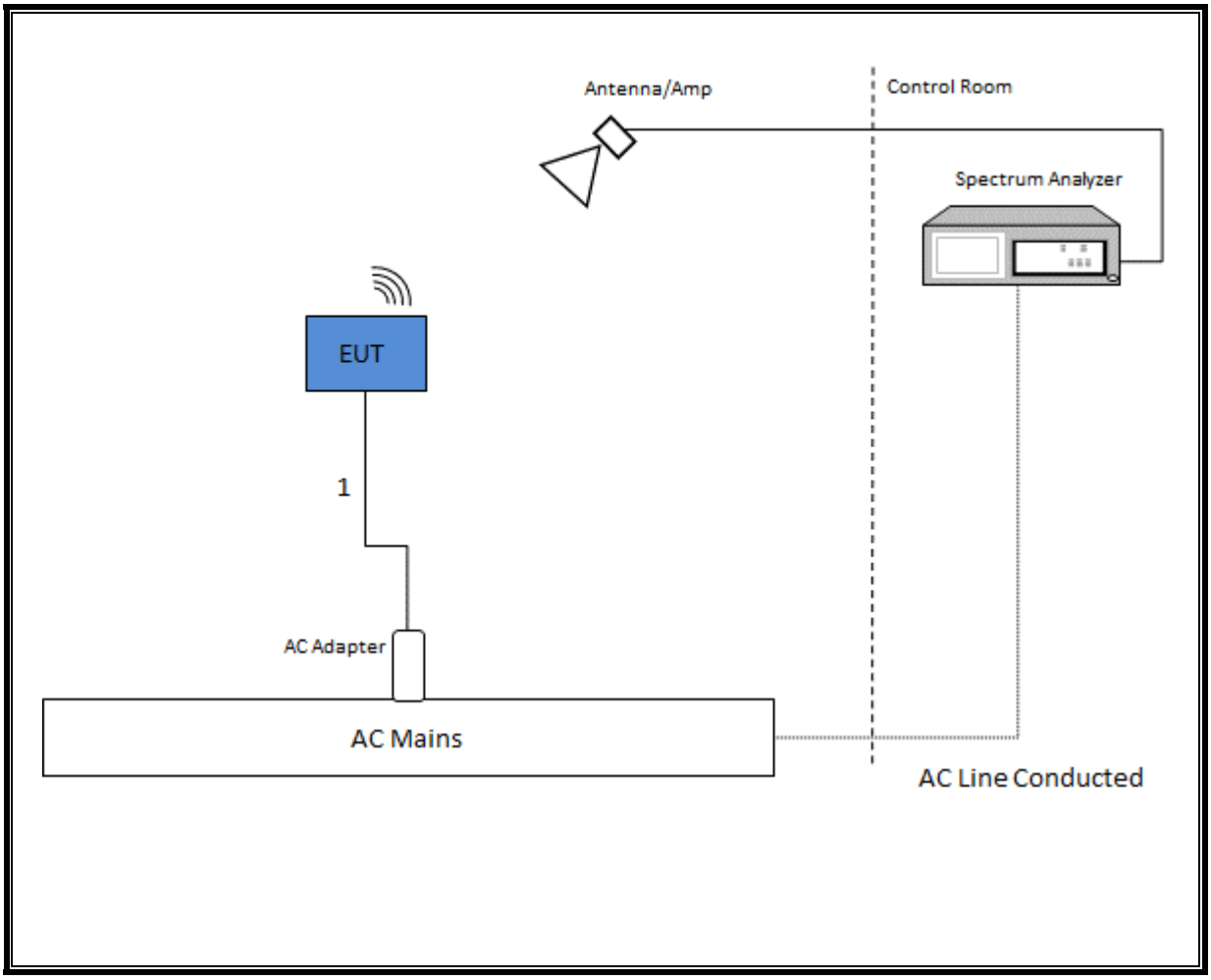
RADIATED AND AC LINE CONDUCTED TEST SETUP DIAGRAM

The EUT is connected to all support equipment. The test software exercises the radio. Support laptop was removed after EUT was configured for Radiated Testing



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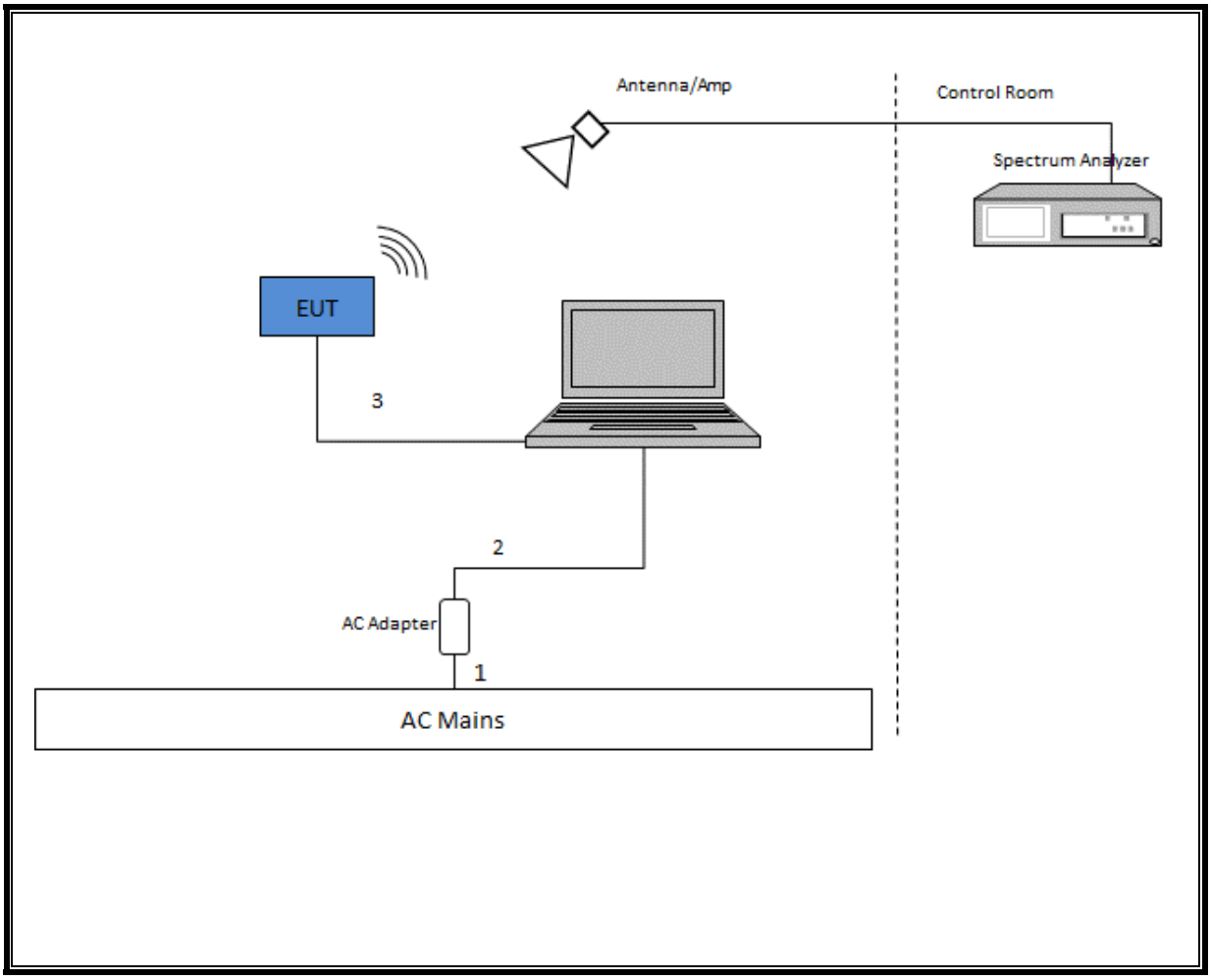
RADIATED COLOCATION TEST SETUP DIAGRAM (BLUETOOTH)

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



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7. MEASUREMENT METHOD

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

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

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

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

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

Power Spectral Density: KDB 789033 D02 v02r01, Section F

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

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

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

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

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8. TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Spectrum Analyzer, PSA, 3Hz to 44GHz	Keysight Technologies Inc	E4446A	T146	01/29/2021
Power Meter, P-series single channel	Keysight Technologies Inc	N1911A	T1264	01/21/2021
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Keysight Technologies Inc	N1921A	T1223	02/25/2020*
UL AUTOMATION SOFTWARE				
Antenna Port Software	UL	UL RF	Ver 2020.1.8	

*Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville - South Chamber)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	0.009-30MHz	**(Loop Ant.)**			
AT0079	Active Loop Antenna	ETS-Lindgren	6502	2019-08-08	2020-08-08
	30-1000 MHz				
AT0074	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2019-07-16	2020-07-16
	1-18 GHz				
AT0072	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2019-04-22	2020-04-22
	18-40 GHz				
AT0076	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2019-11-07	2020-11-07
AT0077	Horn Antenna, 26-40GHz	ARA	MWH-2640/B	2019-11-07	2020-11-07
	Gain-Loss Chains				
S-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2019-05-02	2020-05-02
S-SAC02	Gain-loss string: 25-1000MHz	Various	Various	2019-05-02	2020-05-02
S-SAC03	Gain-loss string: 1-18GHz	Various	Various	2020-03-17	2021-03-17
S-SAC04	Gain-loss string: 18-40GHz	Various	Various	2020-03-23	2021-03-23
	Receiver & Software				
SA0027	Spectrum Analyzer	Agilent	N9030A	2019-05-15	2020-05-15
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Additional Equipment used				
s/n 181474409	Environmental Meter	Fisher Scientific	15-077-963	2018-07-27	2020-07-27

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Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville - North Chamber)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	30-1000 MHz				
AT0073	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2019-08-08	2020-08-08
	1-18 GHz				
AT0069	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2019-05-15	2020-05-15
	Gain-Loss Chains				
N-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2019-05-02	2020-05-02
N-SAC02	Gain-loss string: 25-1000MHz	Various	Various	2019-05-02	2020-05-02
N-SAC03	Gain-loss string: 1-18GHz	Various	Various	2020-03-15	2021-03-15
	Receiver & Software				
SA0026 (Out of service @ noon on 03/28/2020)	Spectrum Analyzer	Agilent	N9030A	2019-03-19	2020-03-30*
SA0025 (In service @ noon on 03/28/2020)	Spectrum Analyzer	Agilent	N9030A	2020-03-17	2021-03-17
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Additional Equipment used				
s/n 181474341	Environmental Meter	Fisher Scientific	15-077-963	2018-07-27	2020-07-27
T959	Wideband Radio Communications Tester	Rohde and Schwartz	CMW500	2020-02-19	2021-02-19
T978	Wideband Radio Communications Tester	Rohde and Schwartz	CMW500	2020-02-20	2021-02-20
T374	Wideband Radio Communications Tester	Rohde and Schwartz	CMW500	2019-07-08	2020-07-08
HPF009	1GHz high-pass filter, 2W, F_{high} =10GHz	Micro-Tronics	HPM17672	2020-02-19	2021-02-19
HPF015	4GHz high-pass filter, 2W, F_{high} =18GHz	Micro-Tronics	HPM13351	2020-02-19	2021-02-19
LPF008	DC-1000MHz low-pass filter	Pasternack	PE8720	2020-02-19	2021-02-19
BRF001	900MHz notch filter, 2W, F_{high} =6GHz	Micro-Tronics	BRM50706	2020-02-19	2021-02-19

*Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

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Test Equipment Used - Wireless Conducted Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	Common Equipment				
	Conducted Room 2				
T177 (PRE0079253)	Spectrum Analyzer	Agilent Technologies	E4446A	2019-04-22	2020-04-22
PWM002 (PRE0137344)	RF Power Meter	Keysight Technologies	N1911A	2019-08-23	2020-08-23
PWS003 (PRE0126443)	Peak and Avg Power Sensor, 50MHz to 6GHz	Keysight Technologies	E9323A	2019-08-23	2020-08-23
76023 (EC0225)	Temp/Humid Chamber	Cincinnati Sub-Zero	ZPH-8-3.5-SCT/AC	2019-06-14	2020-06-14
SN 181474341	Environmental Meter	Fisher Scientific	15-077-963	2018-07-27	2020-07-27
76021	DC Regulated Power Supply	CircuitSpecialists .Com	CSI3005X5	N/A	N/A
SOFTEMI	EMC Software	UL	Version 10.3 (2019-09-24)	NA	NA

Test Equipment Used - Line-Conducted Emissions – Voltage (Morrisville – Conducted 1)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
CBL087	Coax cable, RG223, N-male to BNC-male, 20-ft.	Pasternack	PE3W06143-240	2020-03-26	2021-03-26
s/n 181562858	Environmental Meter	Fisher Scientific	14-650-118	2018-09-04	2020-09-04
LISN003	LISN, 50-ohm/50-uH, 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50-25-2-01-550V	2019-08-19	2020-08-19
75141 (PRE0101521)	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2019-08-20	2020-08-20
ATA222	Transient Limiter, 0.009-100MHz	Electro-Metrics	EM-7600	2020-03-26	2021-03-26
PS214	AC Power Source	Elgar	CW2501M (s/n 1523A02396)	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Miscellaneous (if needed)				
CDECABLE001	ANSI C63.4 1m extension cable.	UL	Per Annex B of ANSI C63.4	2019-07-10	2020-07-10

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9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor for PSD (dB)	Duty Cycle Correction Factor for Radiated (dB)	1/B Minimum VBW (kHz)
802.11a	2.065	2.100	0.983	98.33%	0.00	0.00	0.010
802.11n HT20	1.920	1.960	0.980	97.96%	0.09	0.18	0.521
802.11n HT40	0.945	0.985	0.959	95.94%	0.18	0.36	1.058
802.11ac VHT80	0.4636	0.500	0.927	92.66%	0.33	0.66	2.157

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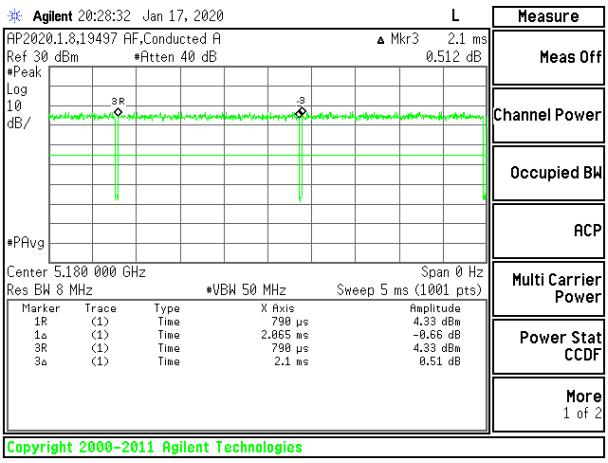
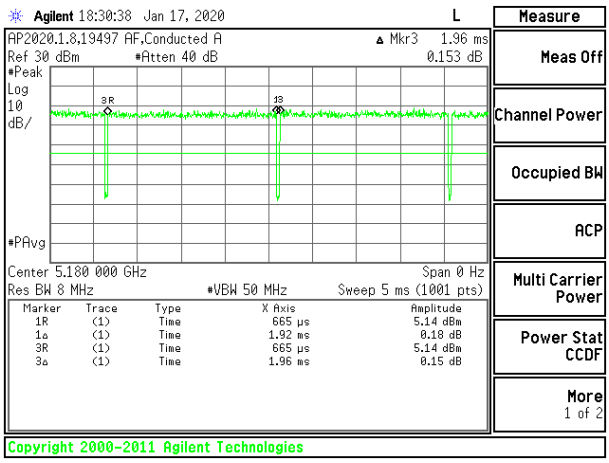
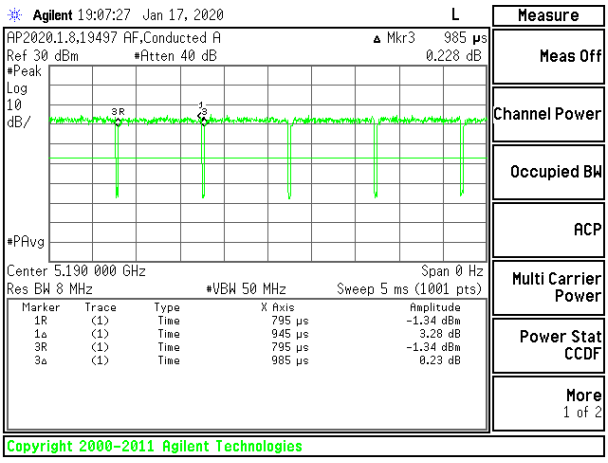
DUTY CYCLE PLOTS



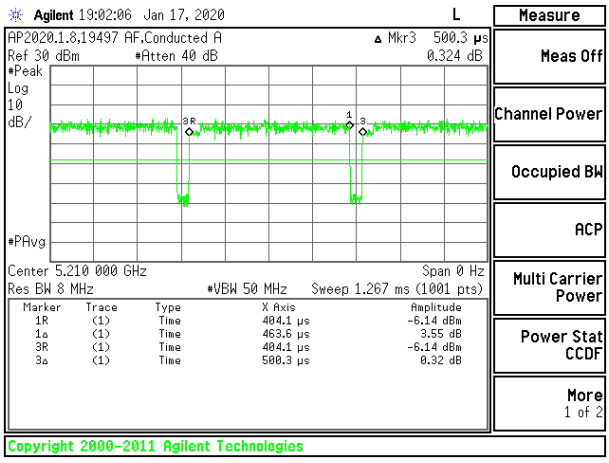
DUTY CYCLE 802.11a MODE



DUTY CYCLE 802.11n HT20 MODE



DUTY CYCLE 802.11n HT40 MODE



DUTY CYCLE 802.11ac VHT80 MODE

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9.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

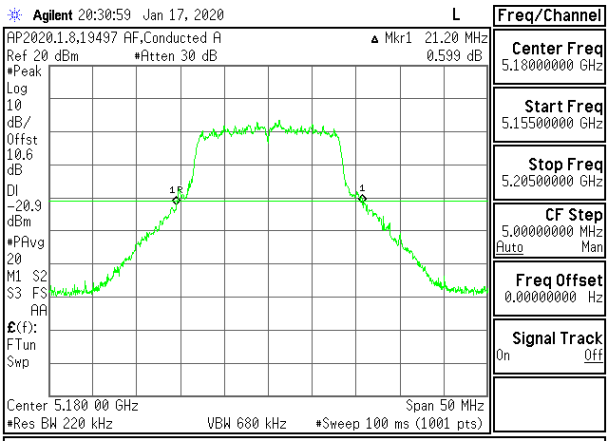
RESULTS

9.2.1. 802.11a MODE IN THE 5.2 GHz BAND

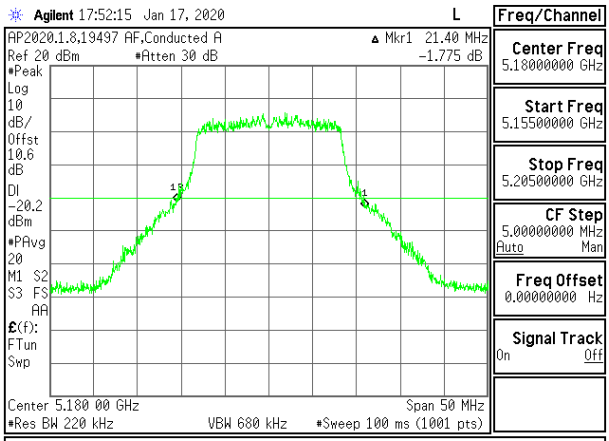
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5180	21.20	21.40
Mid	5200	21.15	20.75
High	5240	20.75	20.45

LOW CHANNEL



LOW CHANNEL ANTENNA 1



LOW CHANNEL ANTENNA 2

UL VERIFICATION SERVICES INC.
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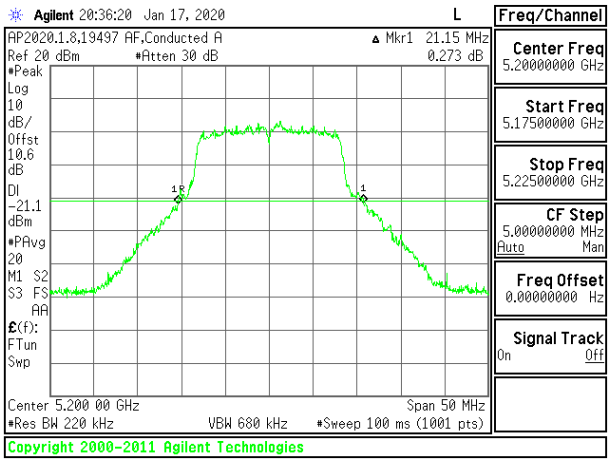
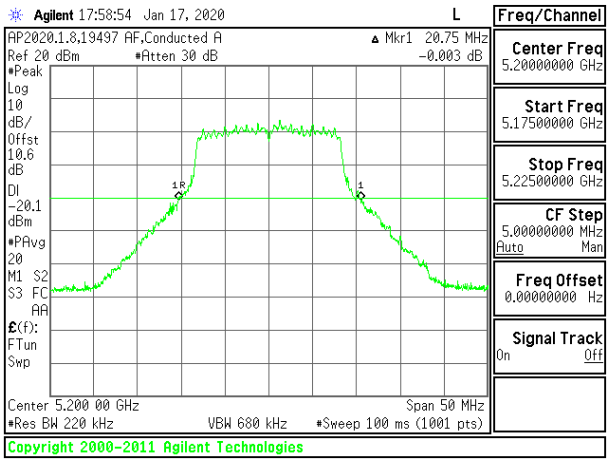
MID CHANNEL

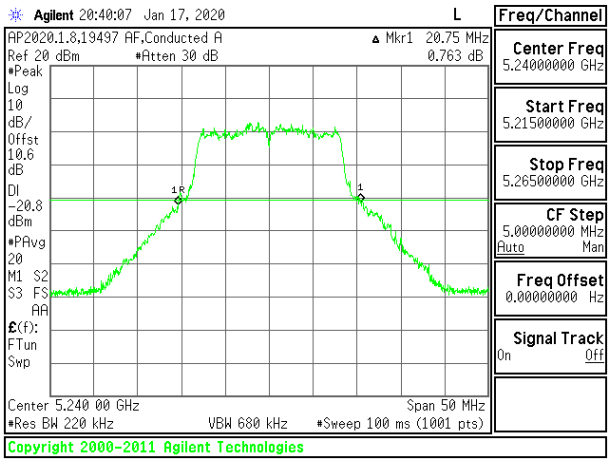


MID CHANNEL ANTENNA 1

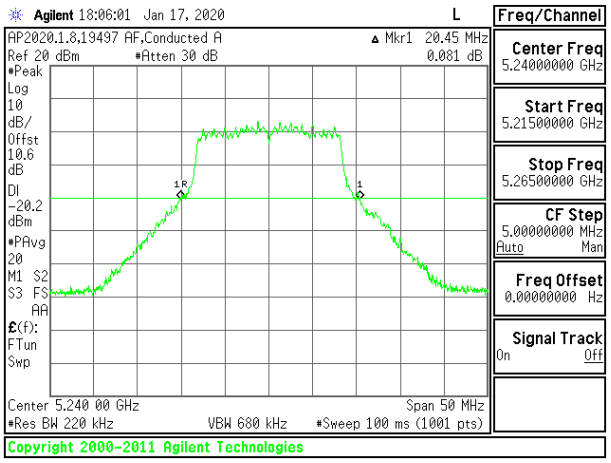


MID CHANNEL ANTENNA 2

HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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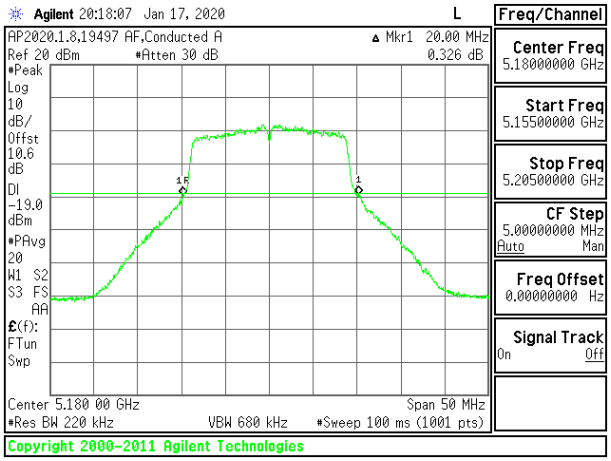
9.2.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

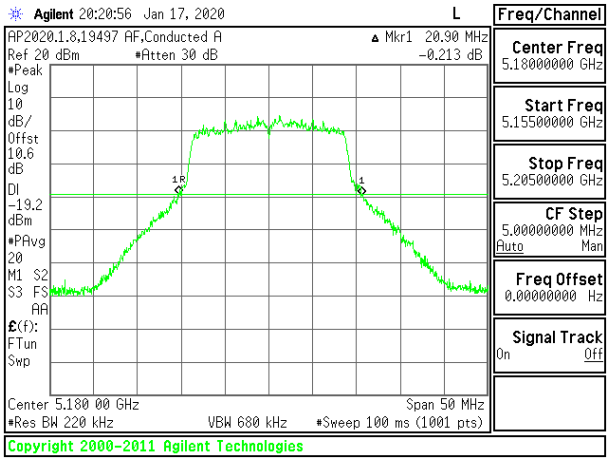
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5180	20.00	20.90
Mid	5200	21.40	21.20
High	5240	20.50	21.15

LOW CHANNEL

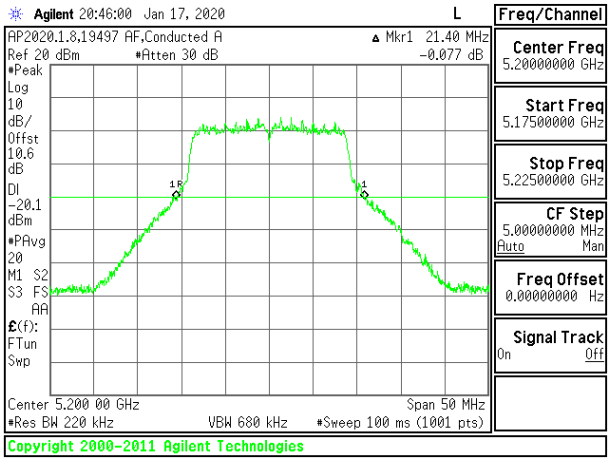


LOW CHANNEL ANTENNA 1

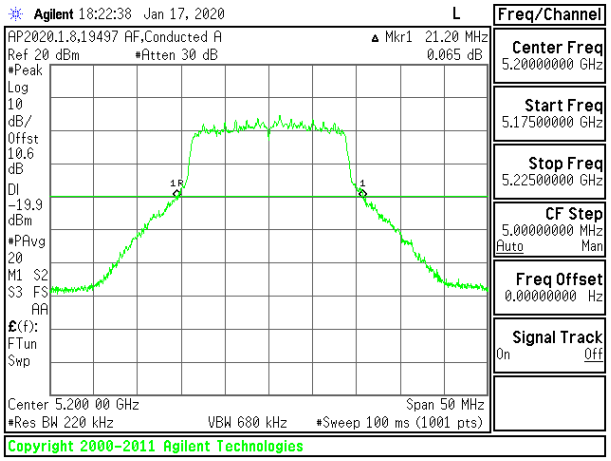


LOW CHANNEL ANTENNA 2

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

UL VERIFICATION SERVICES INC.
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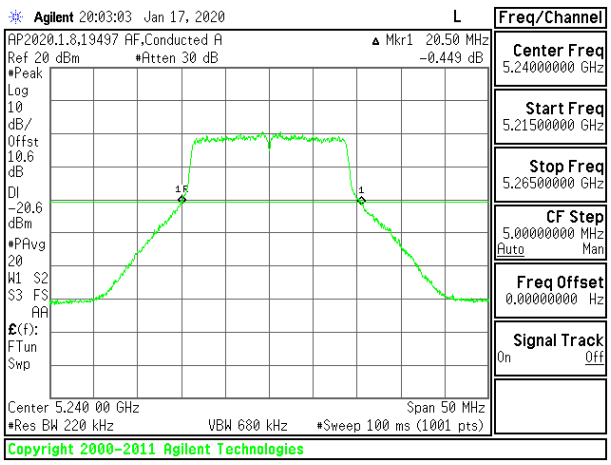
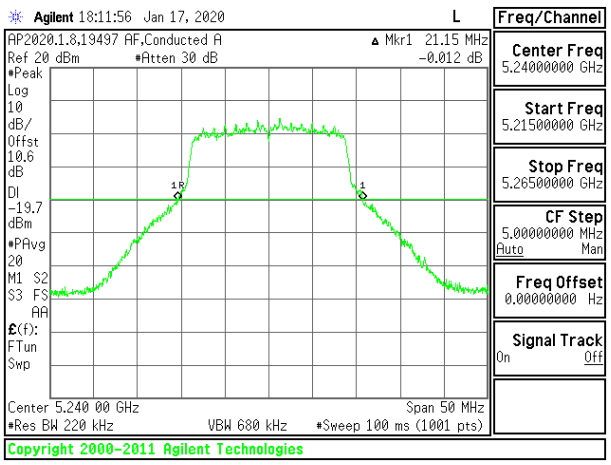
HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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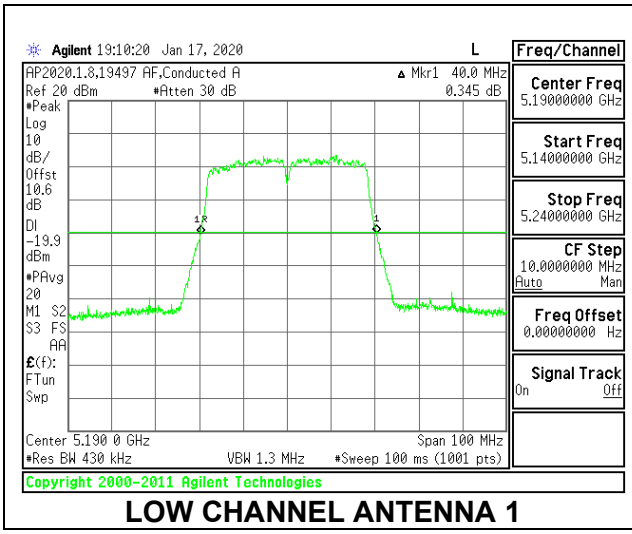
9.2.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

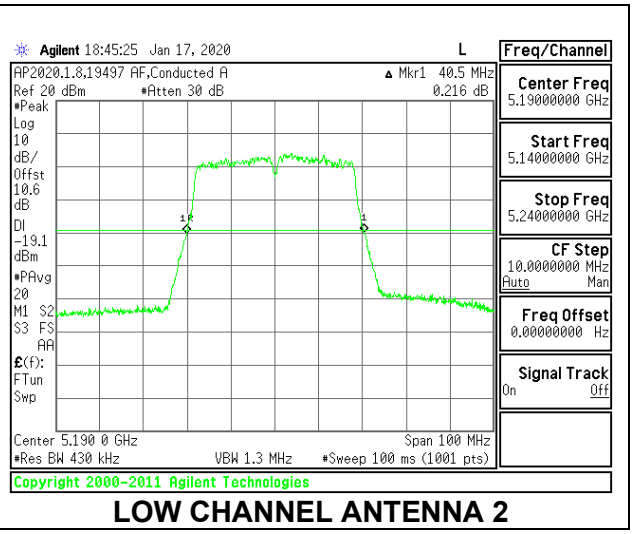
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5190	40.00	40.50
High	5230	40.50	40.20

LOW CHANNEL

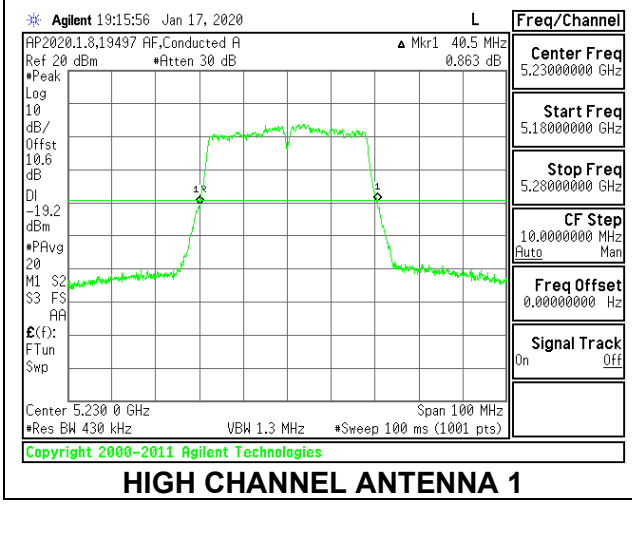


LOW CHANNEL ANTENNA 1

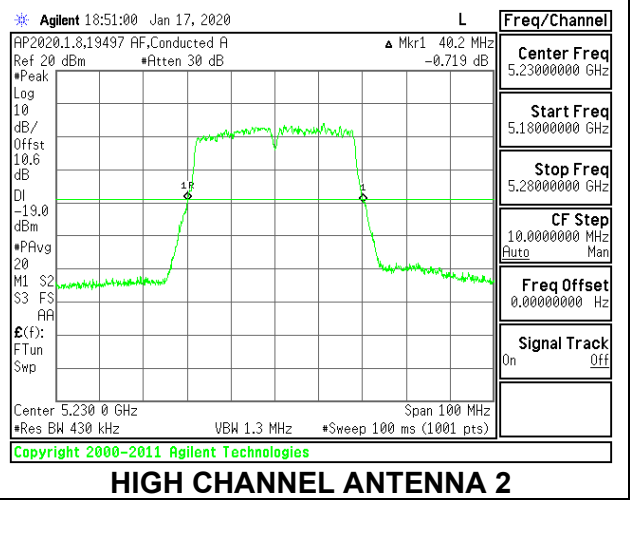


LOW CHANNEL ANTENNA 2

HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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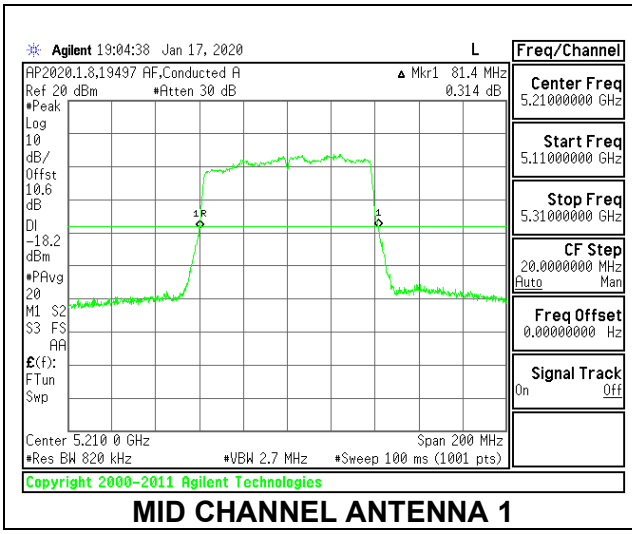
9.2.4. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

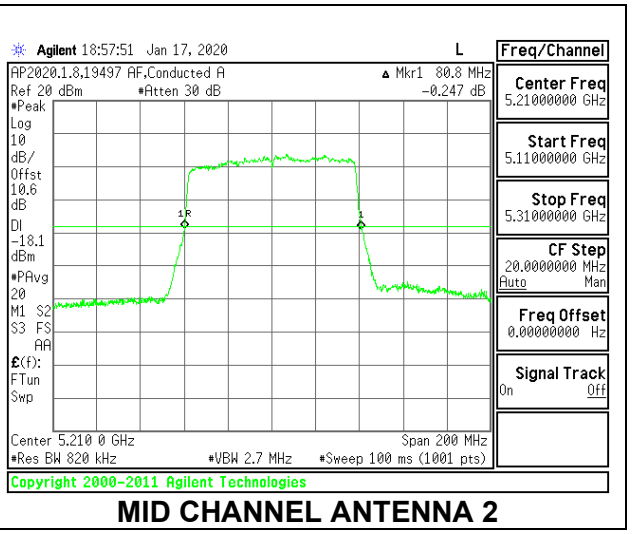
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Mid	5210	81.40	80.80

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

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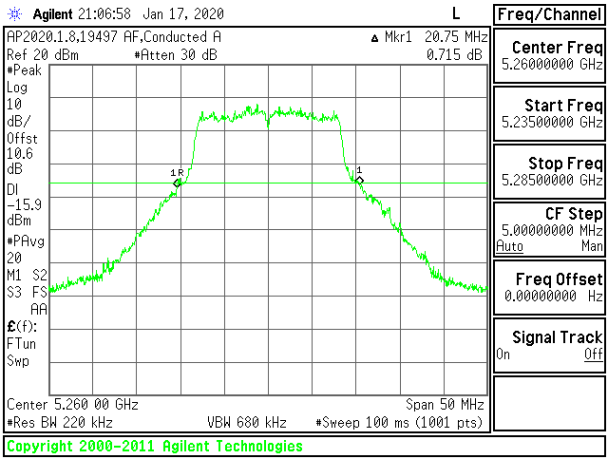
9.2.5. 802.11a MODE IN THE 5.3 GHz BAND

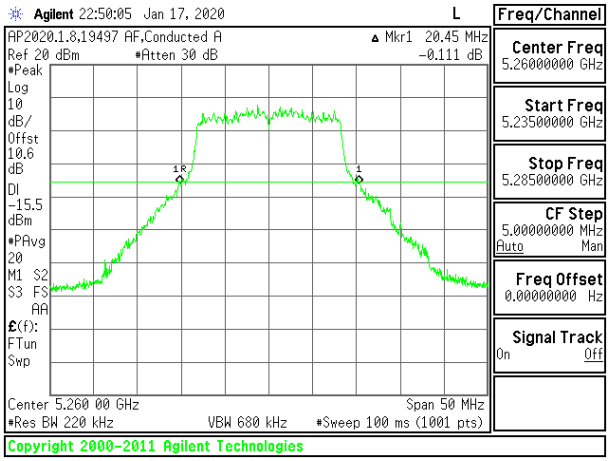
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5260	20.75	20.45
Mid	5300	20.80	20.65
High	5320	20.85	20.35

LOW CHANNEL

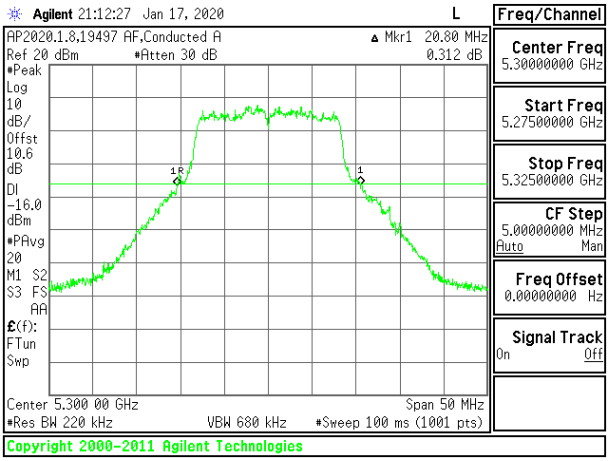


LOW CHANNEL ANTENNA 1

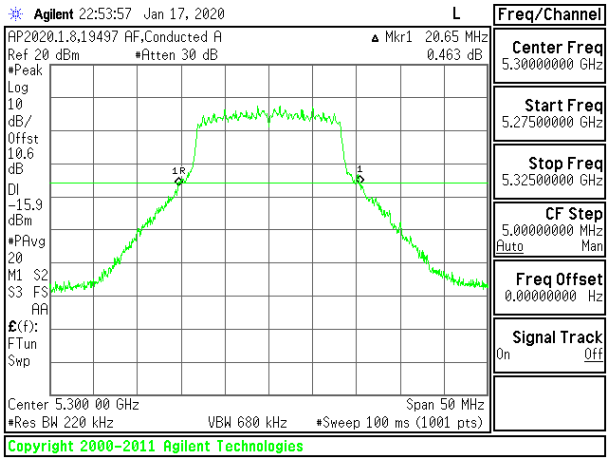


LOW CHANNEL ANTENNA 2

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

UL VERIFICATION SERVICES INC.
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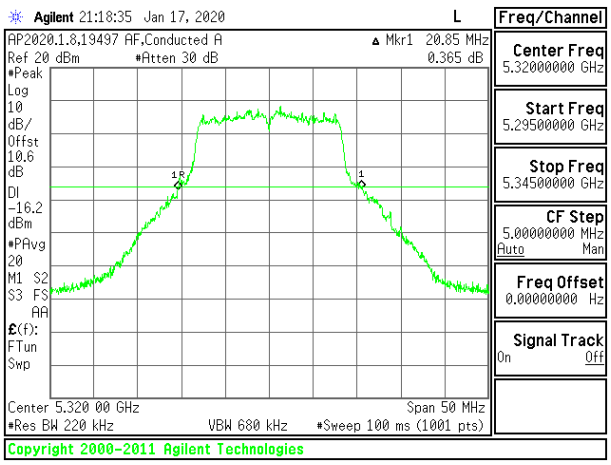
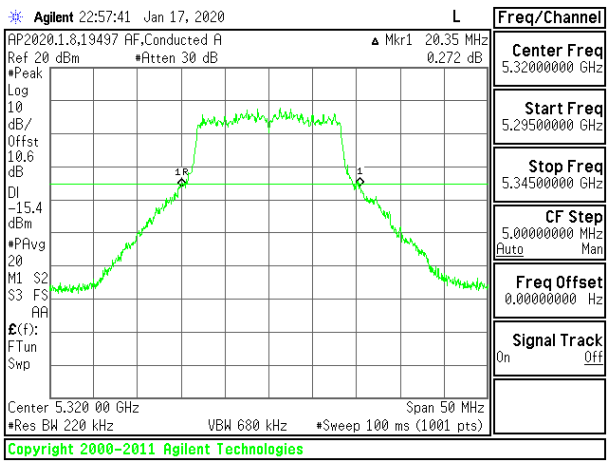
HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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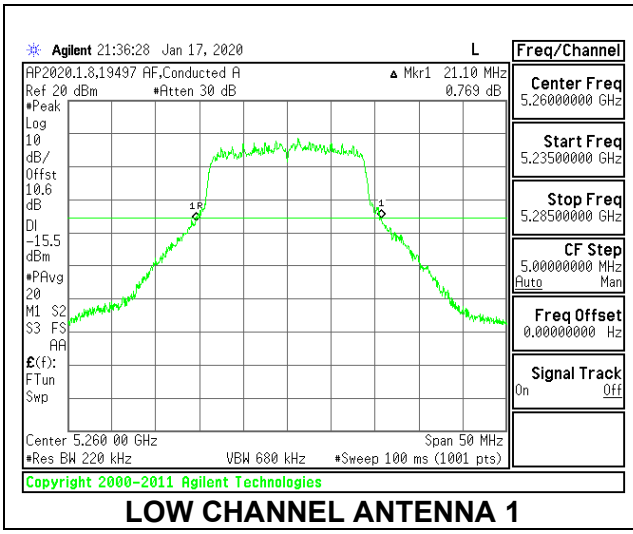
9.2.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

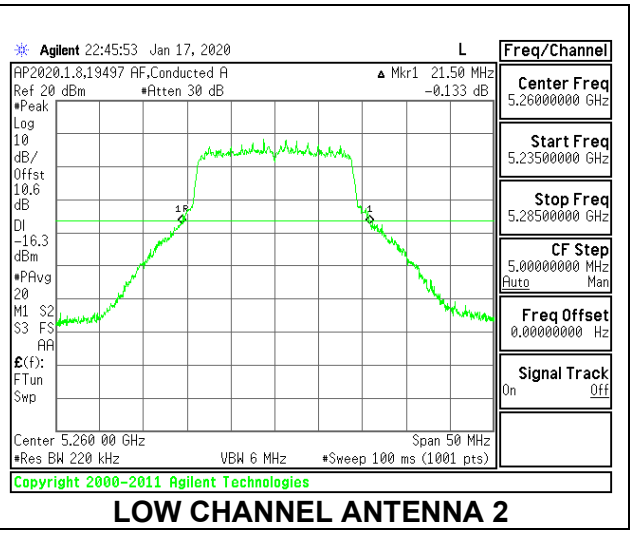
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5260	21.10	21.50
Mid	5300	21.15	21.05
High	5320	21.60	21.50

LOW CHANNEL

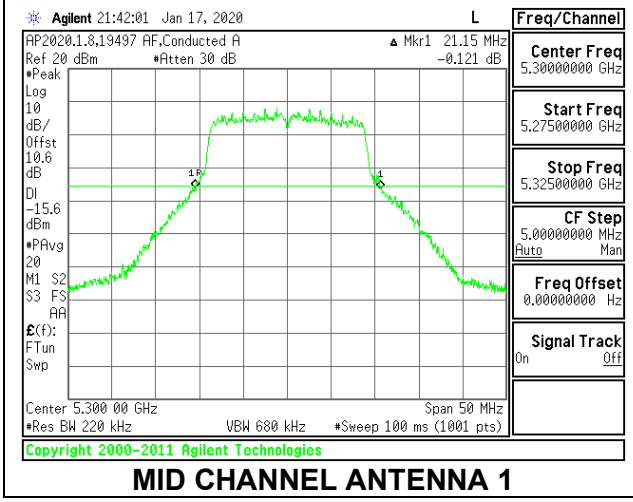


LOW CHANNEL ANTENNA 1

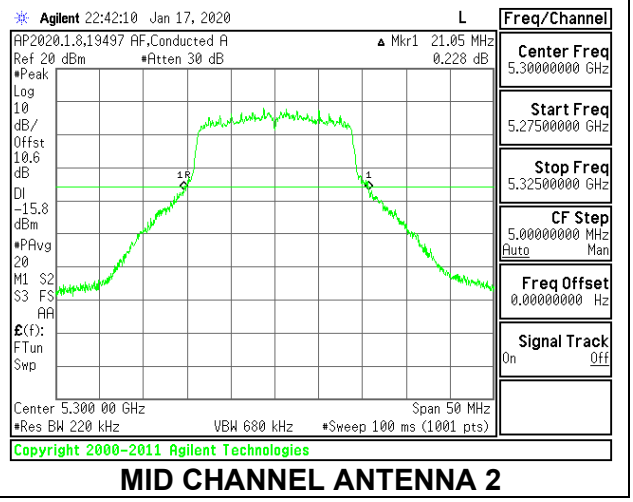


LOW CHANNEL ANTENNA 2

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

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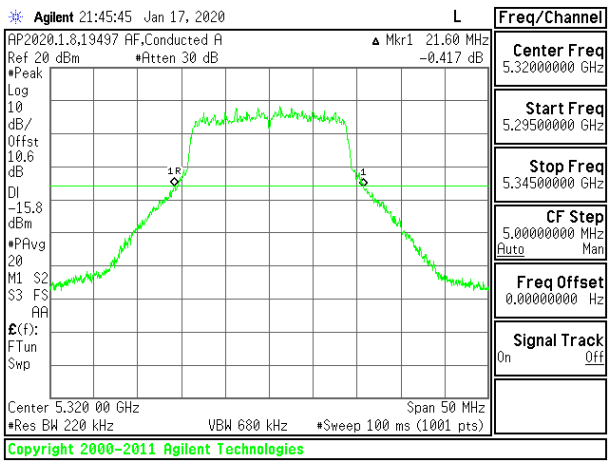
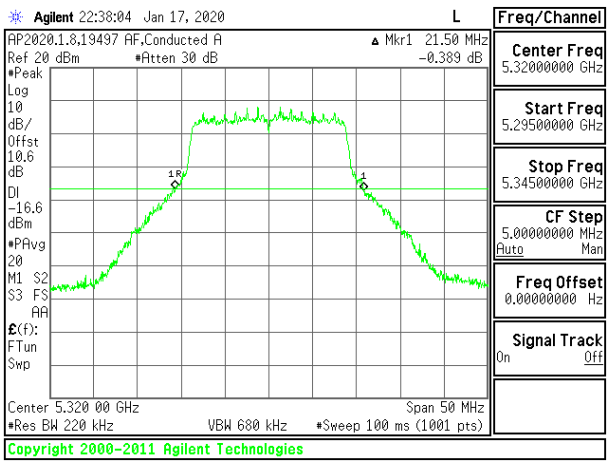
HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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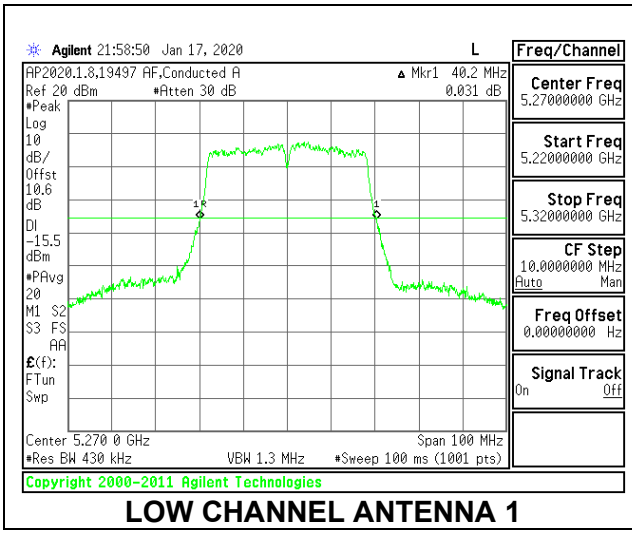
9.2.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

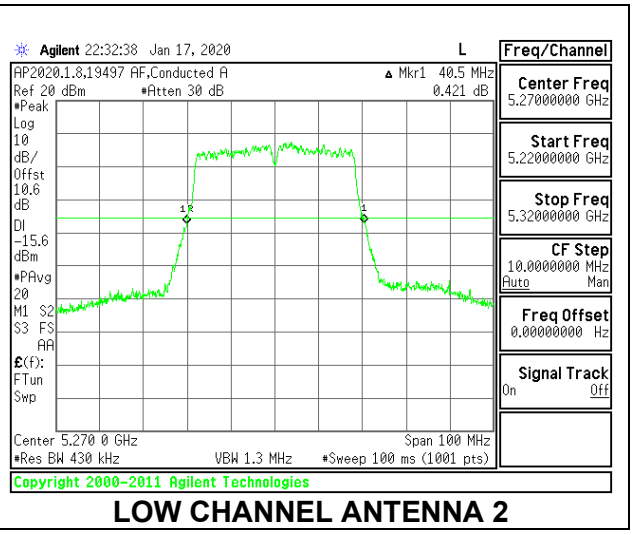
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5270	40.20	40.50
High	5310	40.20	39.50

LOW CHANNEL

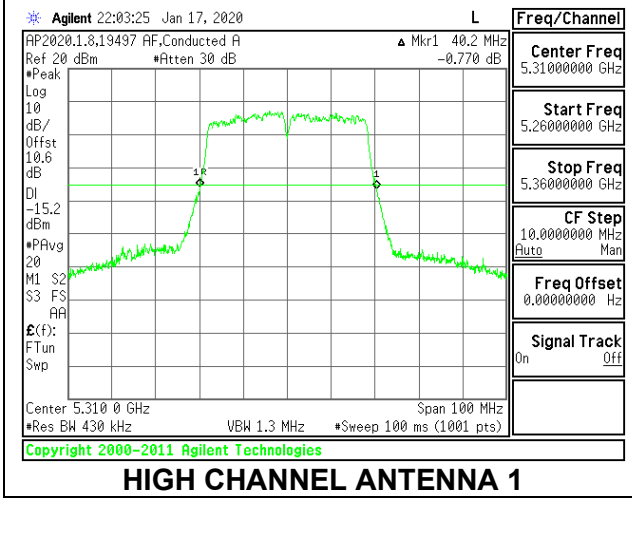


LOW CHANNEL ANTENNA 1

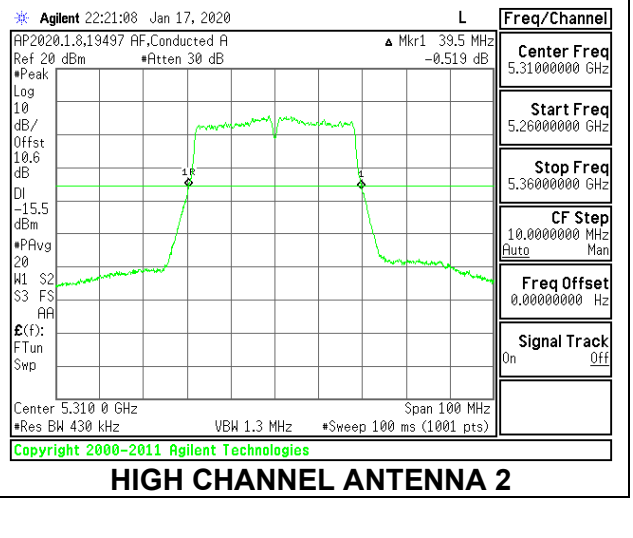


LOW CHANNEL ANTENNA 2

HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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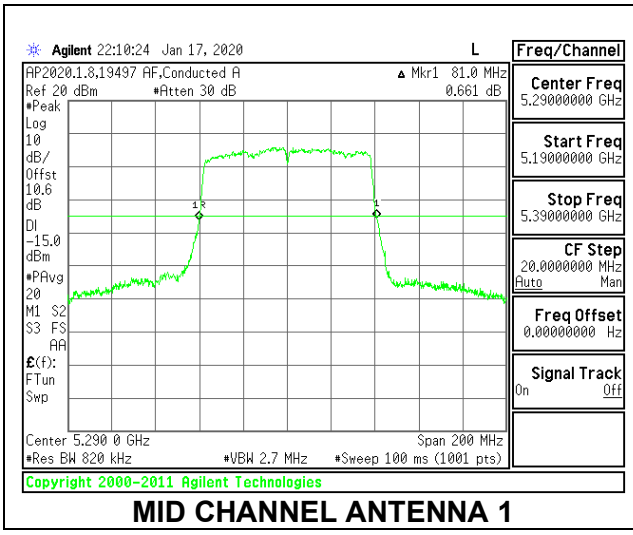
9.2.8. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

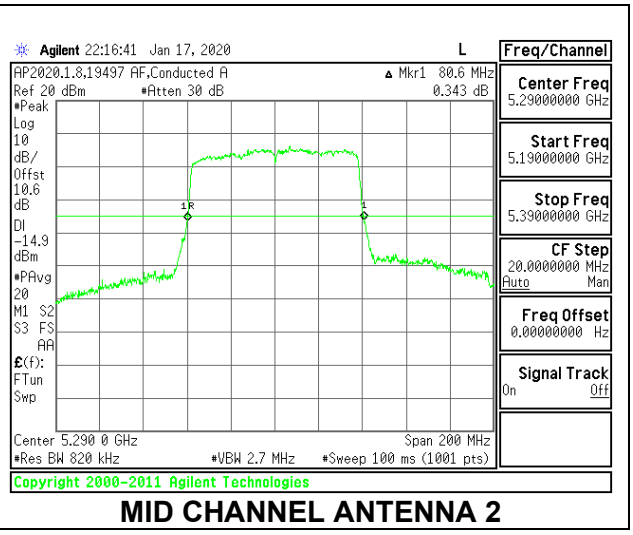
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Mid	5290	81.00	80.60

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

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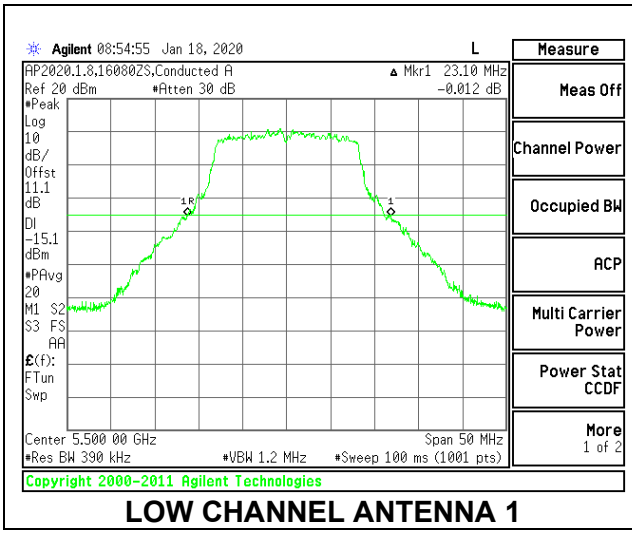
9.2.9. 802.11a MODE IN THE 5.6 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

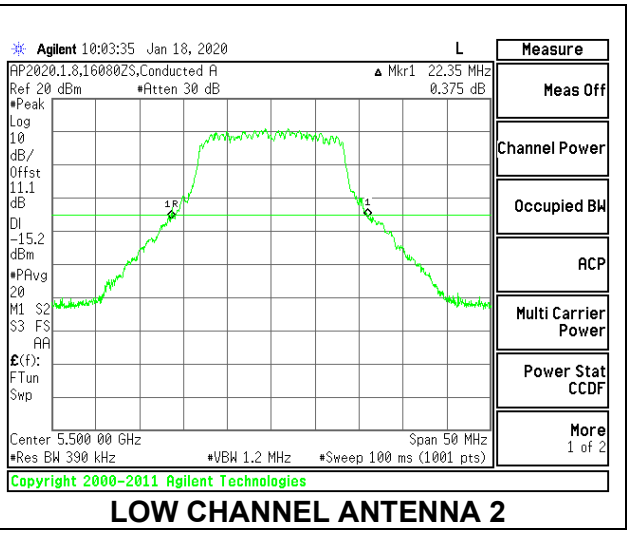
Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5500	23.10	22.35
Mid	5580	23.15	22.35
High	5700	23.15	22.20
144	5720	23.80	23.70
144	5720*	16.90	16.85

*Portion of UNII 2C Band

LOW CHANNEL

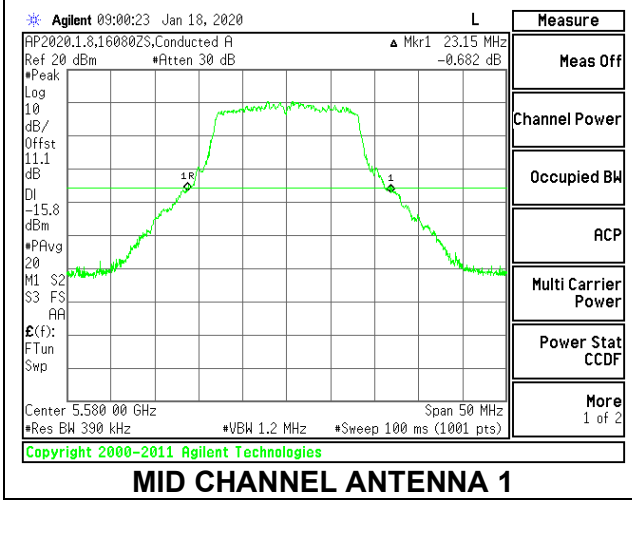


LOW CHANNEL ANTENNA 1

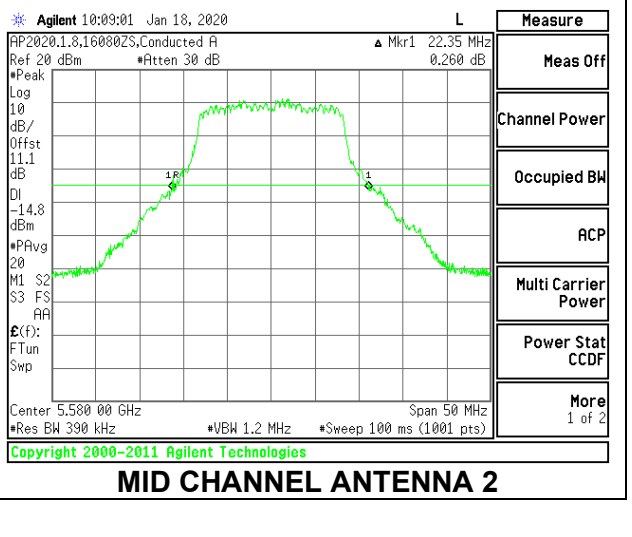


LOW CHANNEL ANTENNA 2

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

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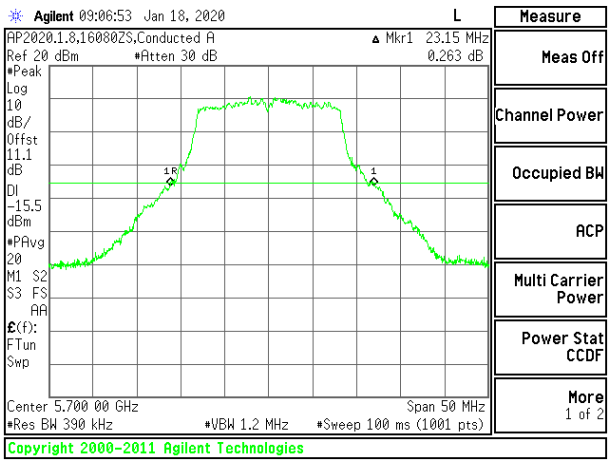
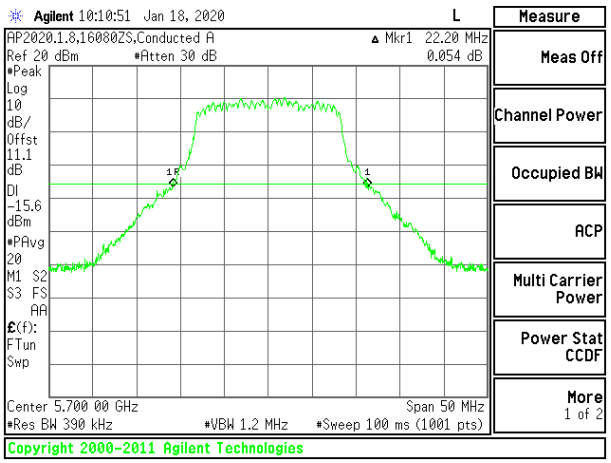
HIGH CHANNEL

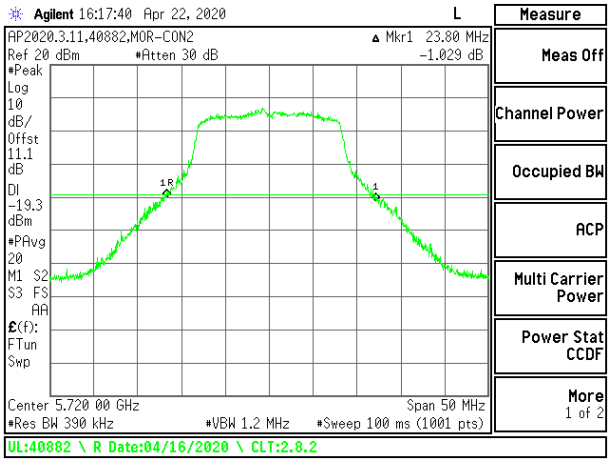


HIGH CHANNEL ANTENNA 1

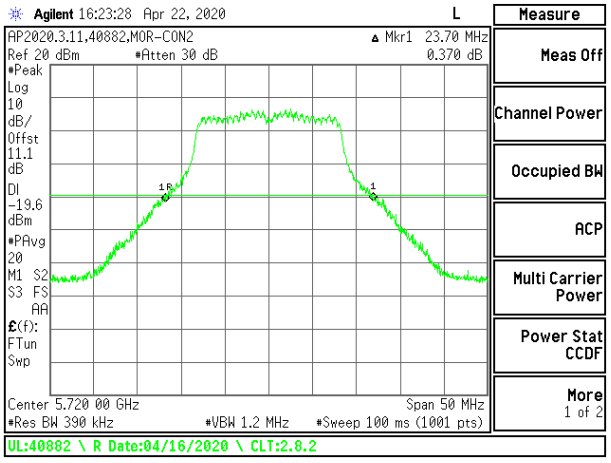


HIGH CHANNEL ANTENNA 2

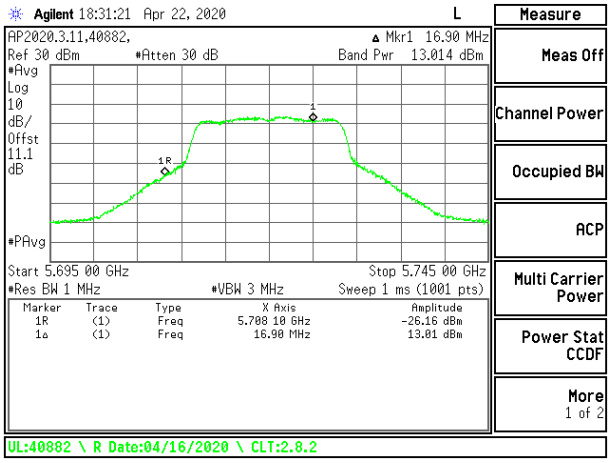
CHANNEL 144



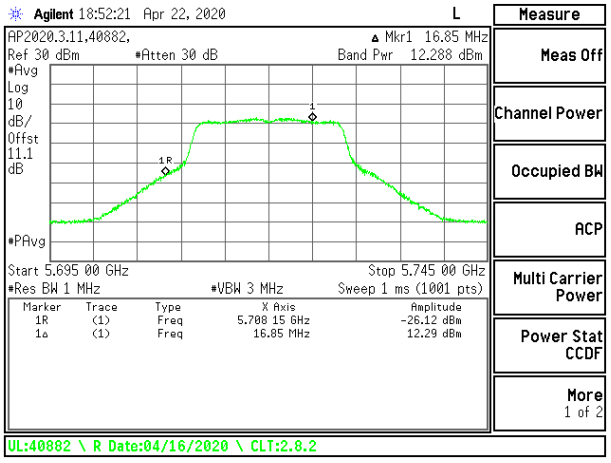
CHANNEL 144 ANTENNA 1



CHANNEL 144 ANTENNA 2



CHANNEL 144 ANTENNA 1 UNII 2-C



CHANNEL 144 ANTENNA 2 UNII 2-C

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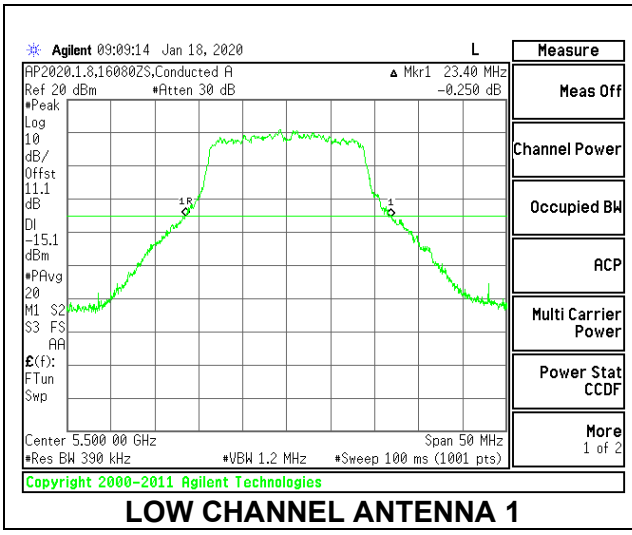
9.2.10. 802.11n HT20 MODE IN THE 5.6 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

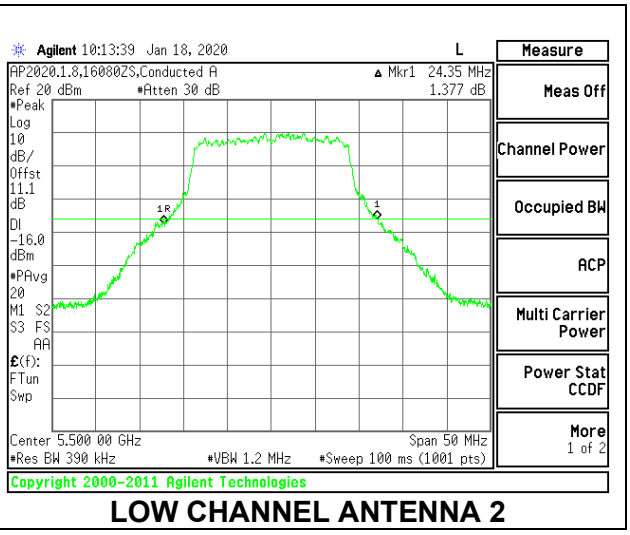
Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5500	23.40	24.35
Mid	5580	23.45	23.45
High	5700	23.40	23.25
144	5720	25.15	25.20
144	5720*	17.82	17.72

*Portion of UNII 2C Band

LOW CHANNEL

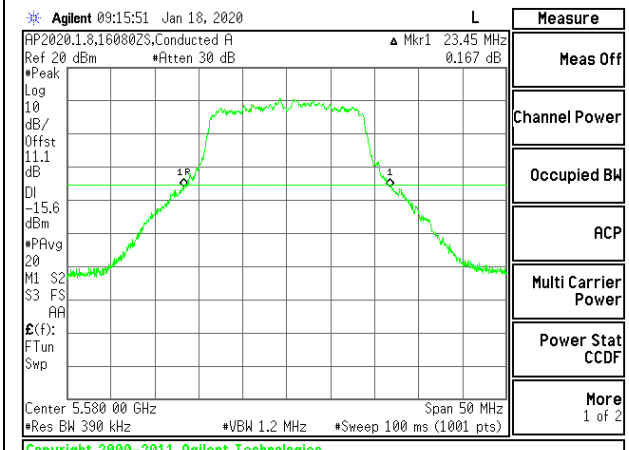


LOW CHANNEL ANTENNA 1

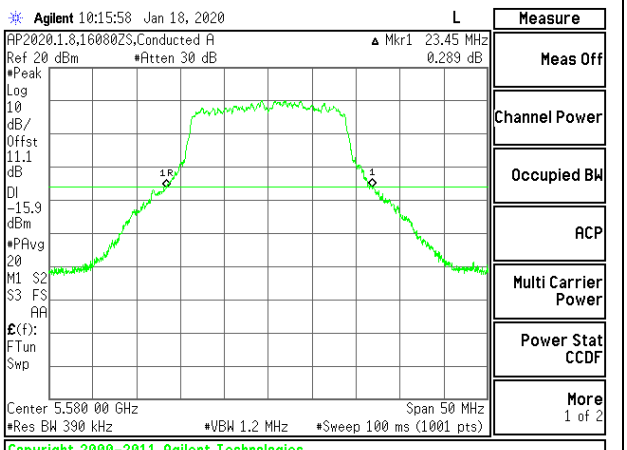


LOW CHANNEL ANTENNA 2

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

UL VERIFICATION SERVICES INC.
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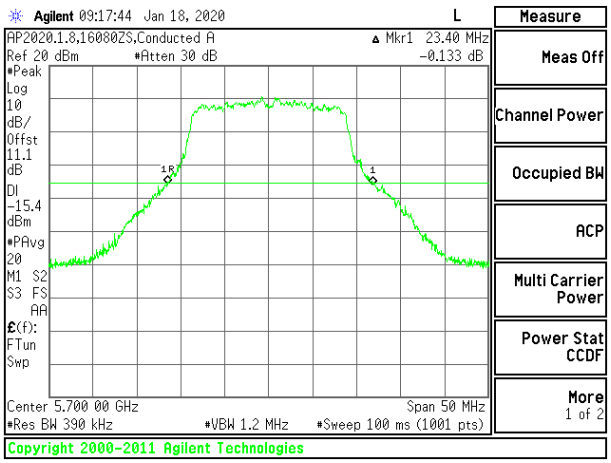
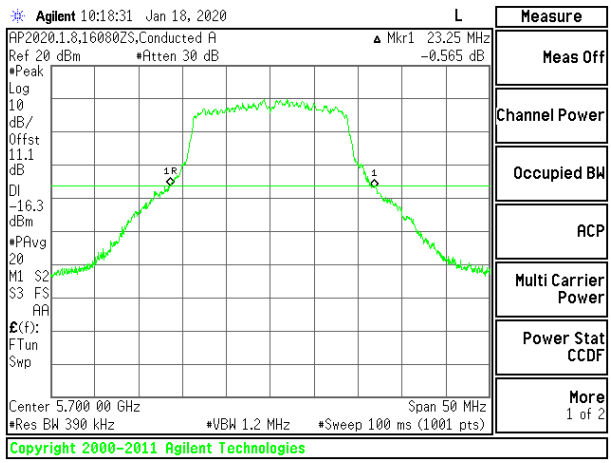
HIGH CHANNEL

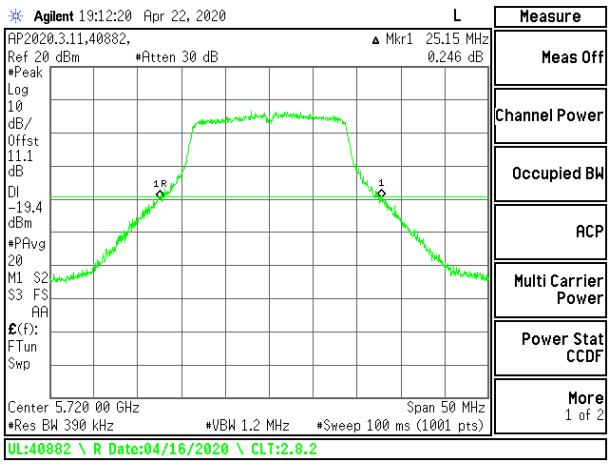


HIGH CHANNEL ANTENNA 1

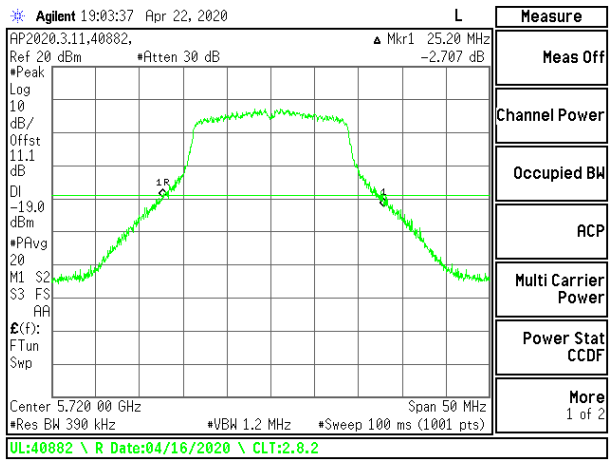


HIGH CHANNEL ANTENNA 2

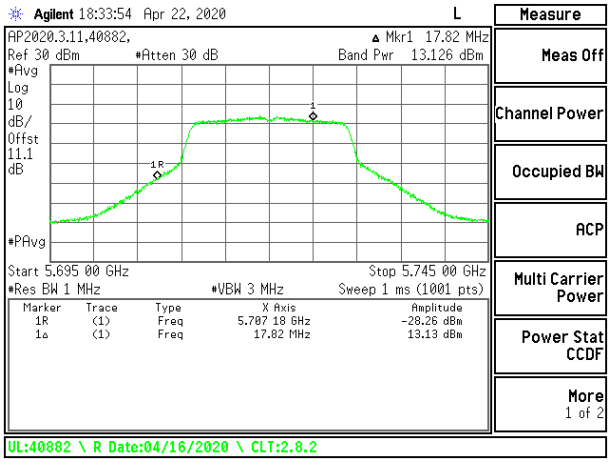
CHANNEL 144



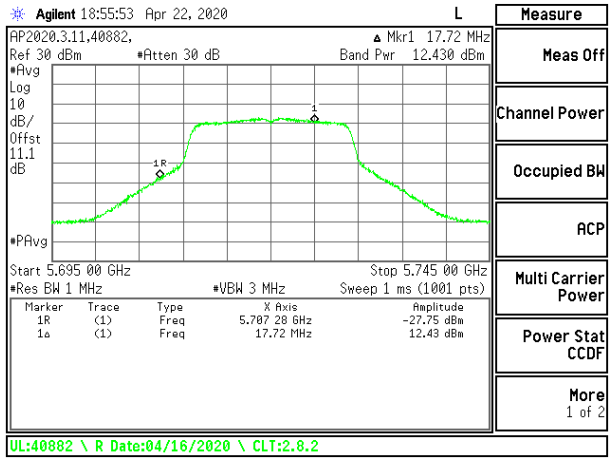
CHANNEL 144 ANTENNA 1



CHANNEL 144 ANTENNA 2



CHANNEL 144 ANTENNA 1 UNII 2-C



CHANNEL 144 ANTENNA 2 UNII 2-C

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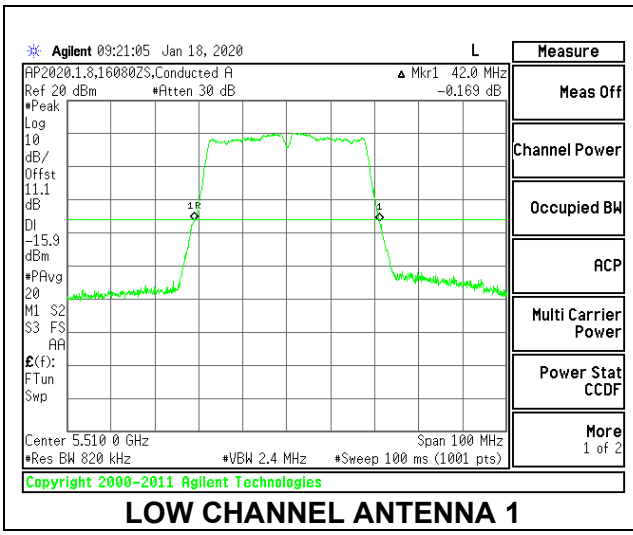
9.2.11. 802.11n HT40 MODE IN THE 5.6 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

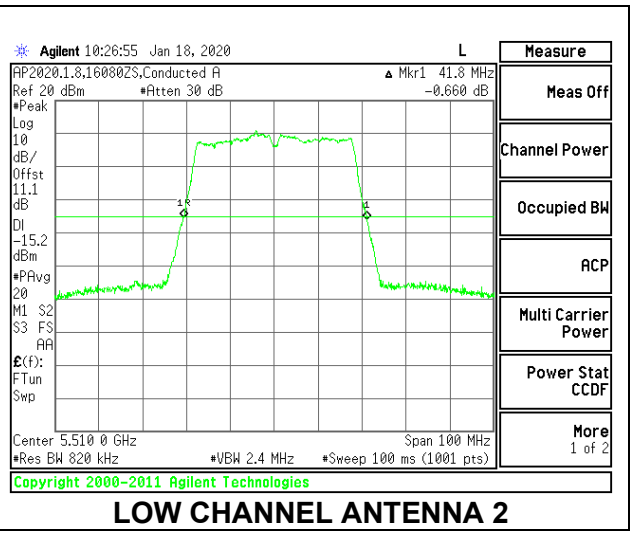
Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5510	42.00	41.80
Mid	5550	41.90	42.00
High	5670	42.00	42.00
142	5710	42.30	42.00
142	5710*	36.15	36.00

*Portion of UNII 2C Band

LOW CHANNEL

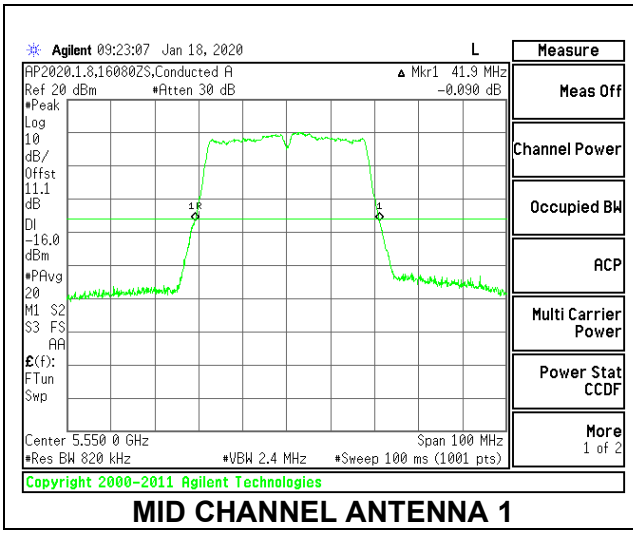


LOW CHANNEL ANTENNA 1

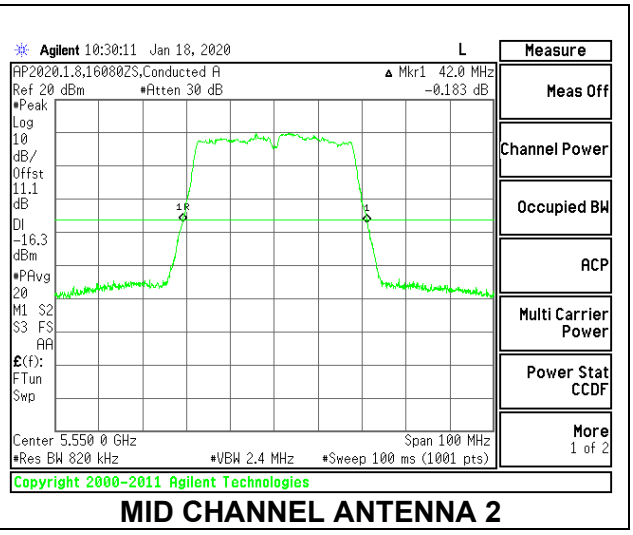


LOW CHANNEL ANTENNA 2

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

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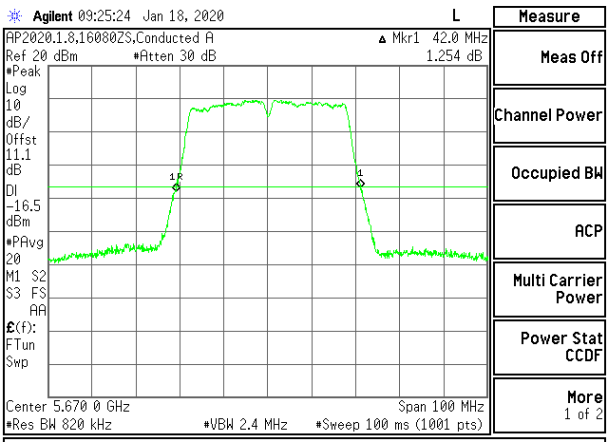
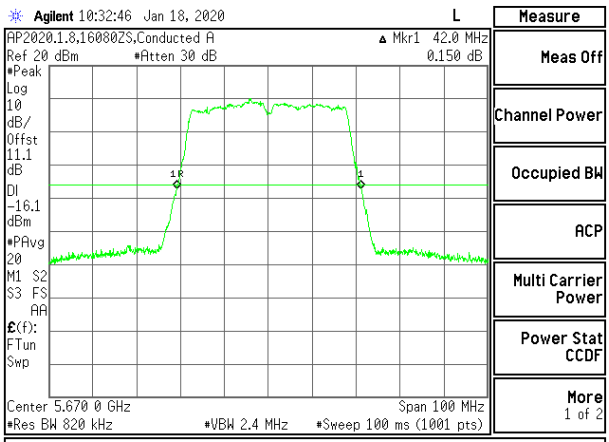
HIGH CHANNEL

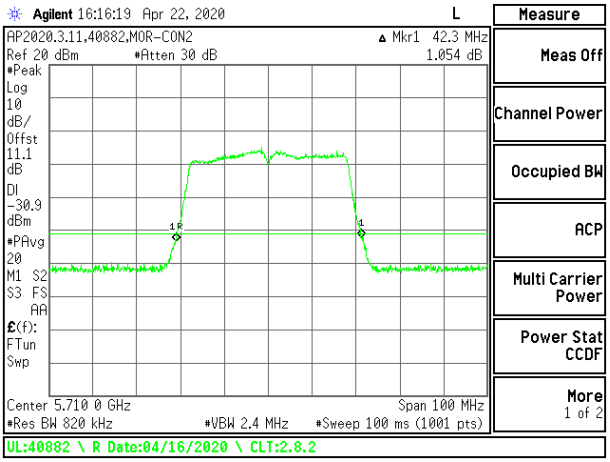


HIGH CHANNEL ANTENNA 1

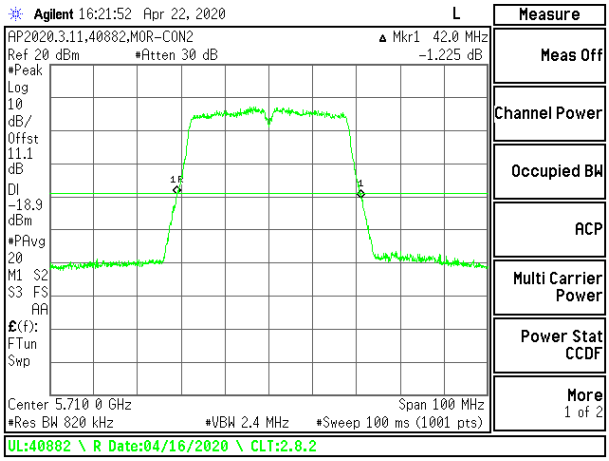


HIGH CHANNEL ANTENNA 2

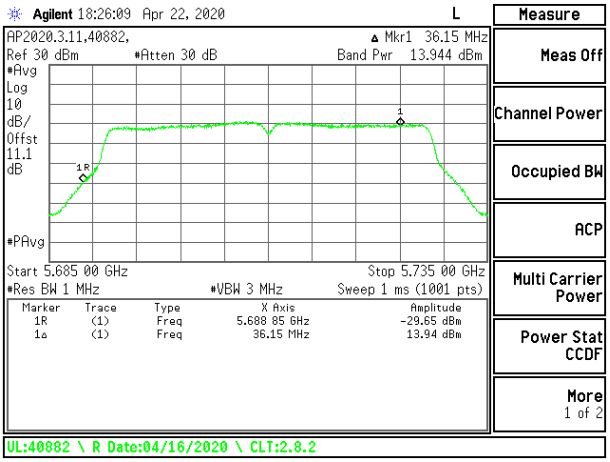
CHANNEL 142



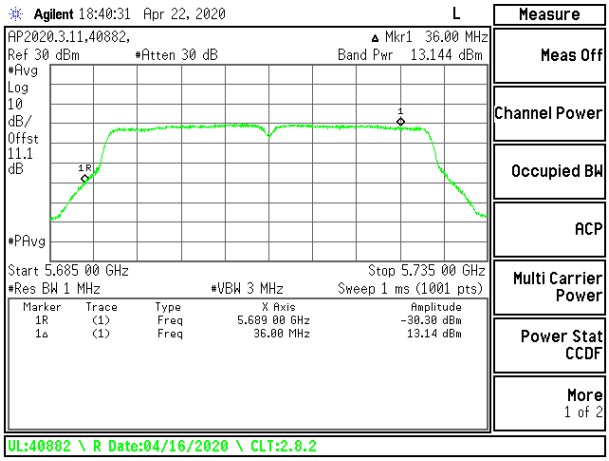
CHANNEL 142 ANTENNA 1



CHANNEL 142 ANTENNA 2



CHANNEL 142 ANTENNA 1 UNII 2C



CHANNEL 142 ANTENNA 2 UNII 2C

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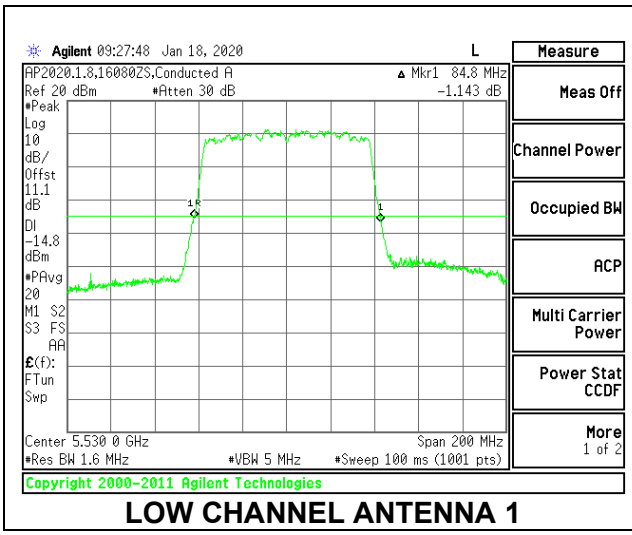
9.2.12. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

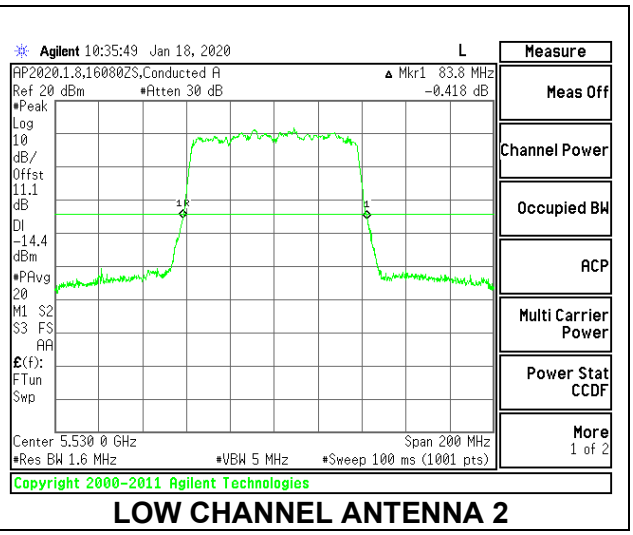
Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5530	84.80	83.80
High	5610	84.40	83.80
138	5690	85.00	84.80
138	5690*	77.50	77.40

*Portion of UNII 2C Band

LOW CHANNEL

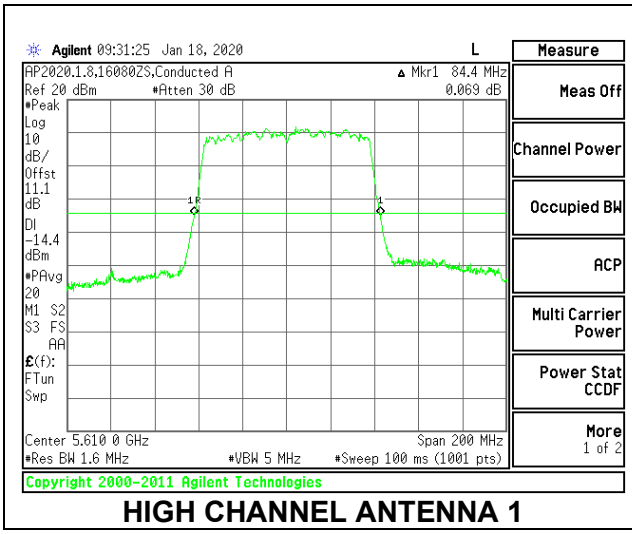


LOW CHANNEL ANTENNA 1

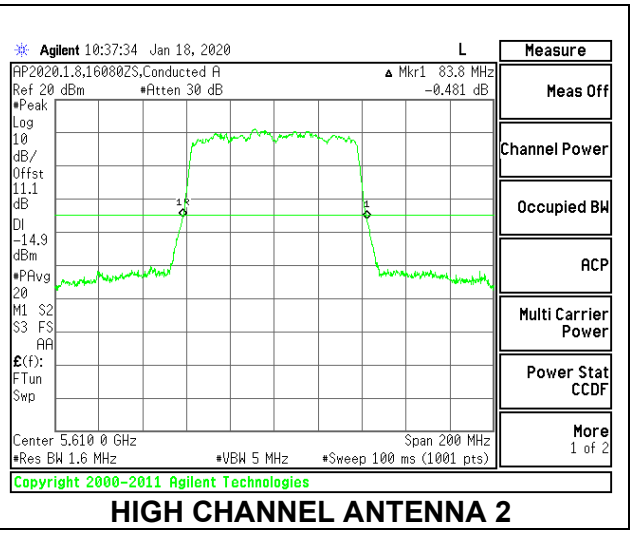


LOW CHANNEL ANTENNA 2

HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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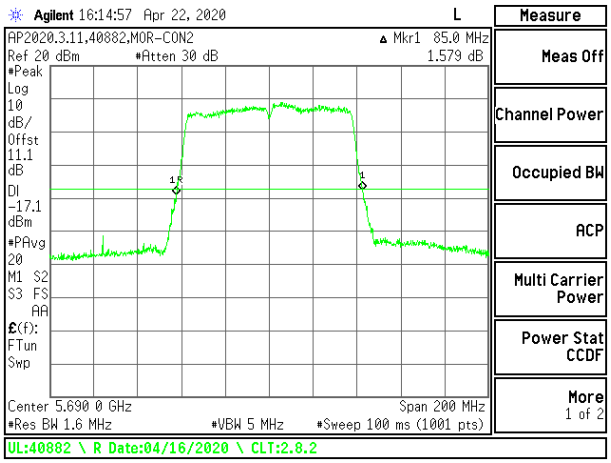
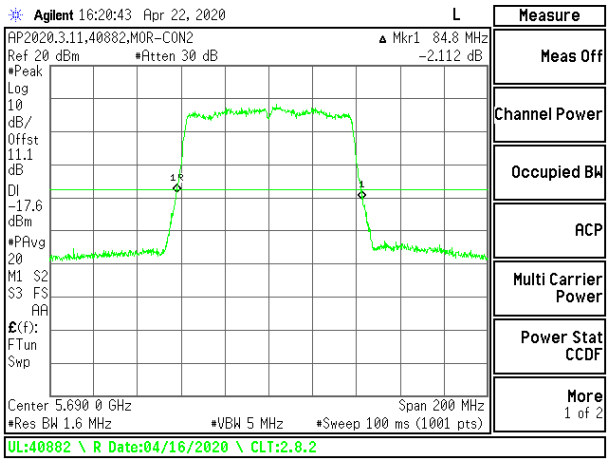
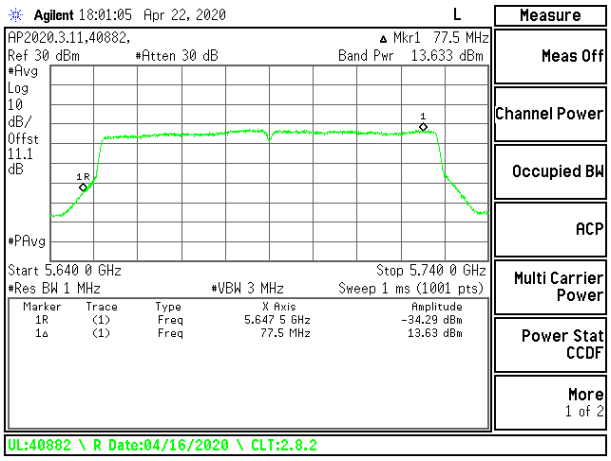
CHANNEL 138



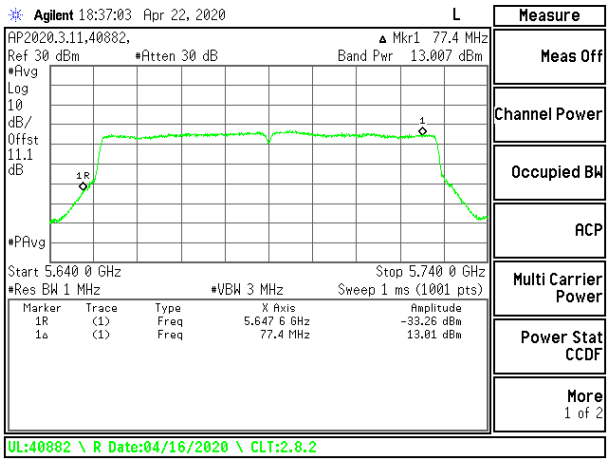
CHANNEL 138 ANTENNA 1



CHANNEL 138 ANTENNA 2



CHANNEL 138 ANTENNA 1 UNII 2C



CHANNEL 138 ANTENNA 2 UNII 2C

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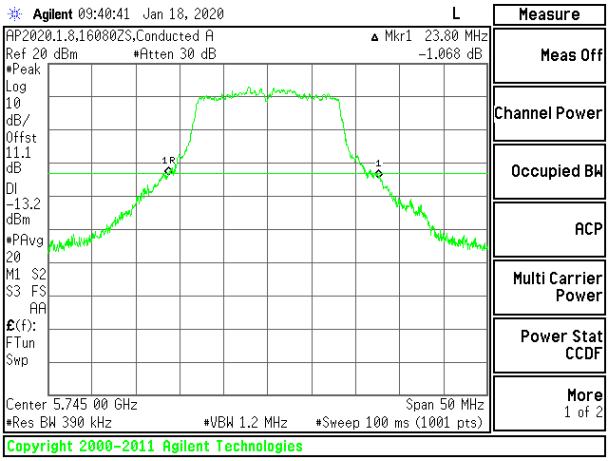
9.2.13. 802.11a MODE IN THE 5.8 GHz BAND

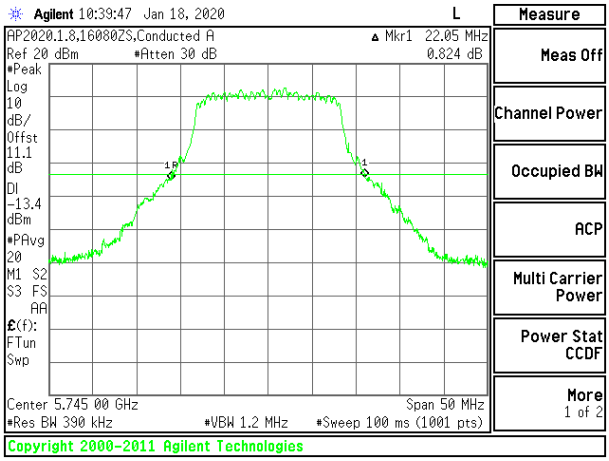
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5745	23.80	22.05
Mid	5785	23.85	22.40
High	5825	24.15	22.80

LOW CHANNEL

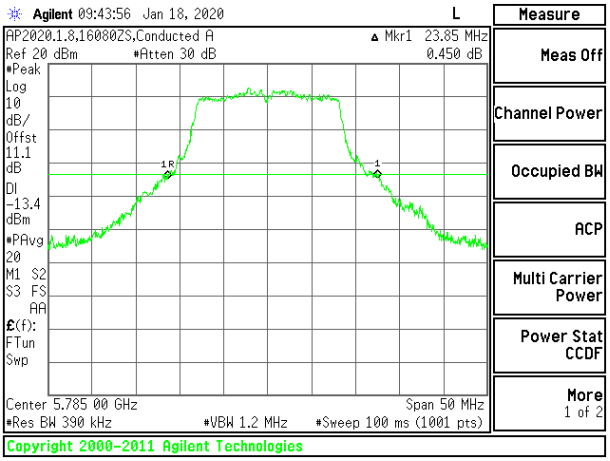


LOW CHANNEL ANTENNA 1

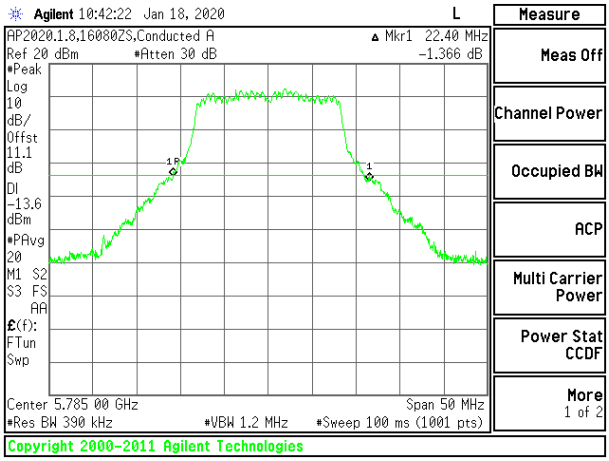


LOW CHANNEL ANTENNA 2

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

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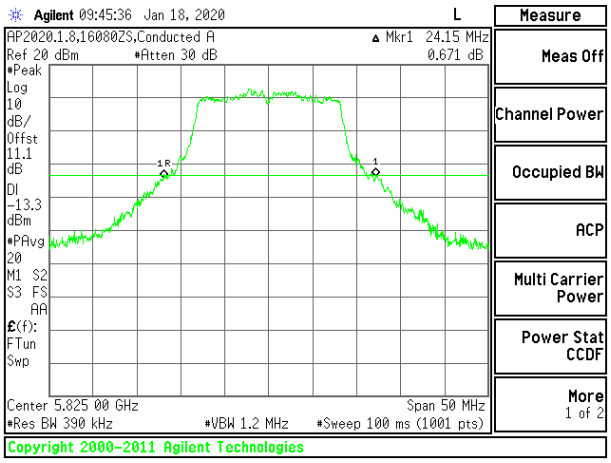
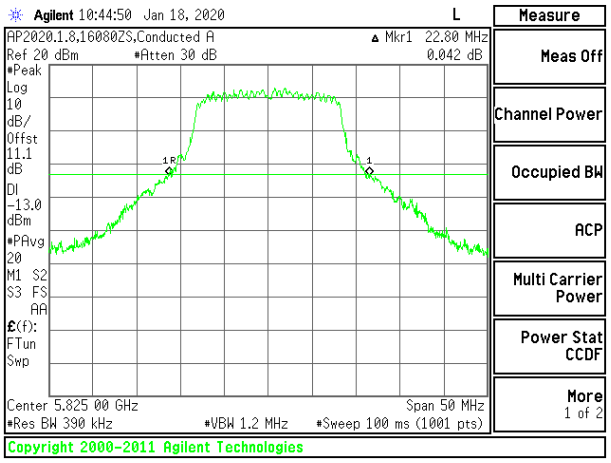
HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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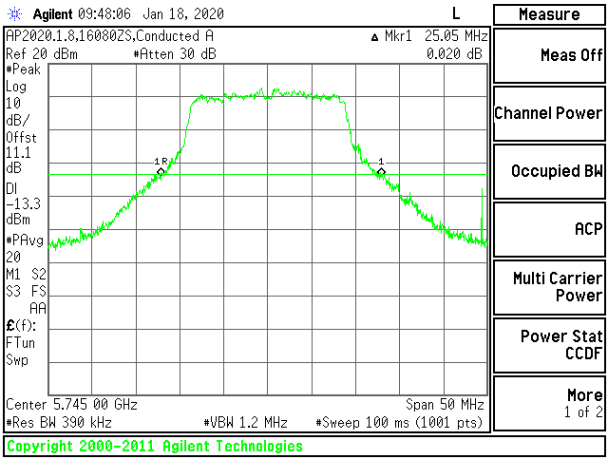
9.2.14. 802.11n HT20 MODE IN THE 5.8 GHz BAND

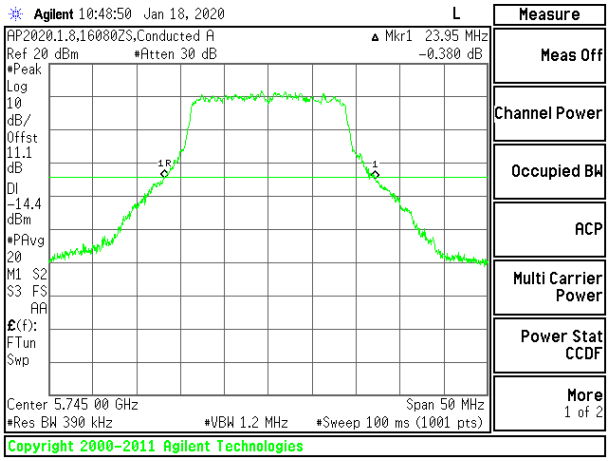
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5745	25.05	23.95
Mid	5785	25.70	24.10
High	5825	26.35	25.50

LOW CHANNEL

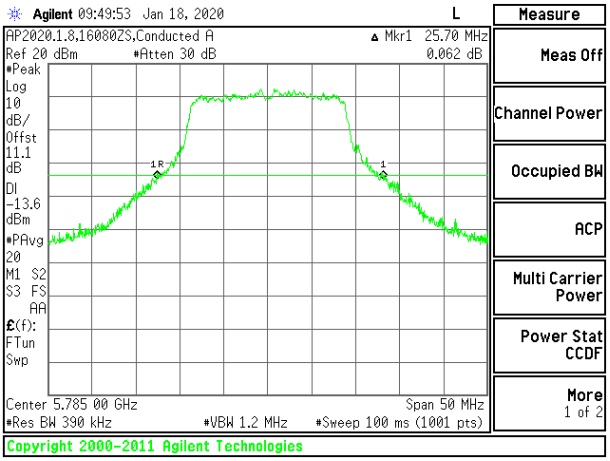


LOW CHANNEL ANTENNA 1

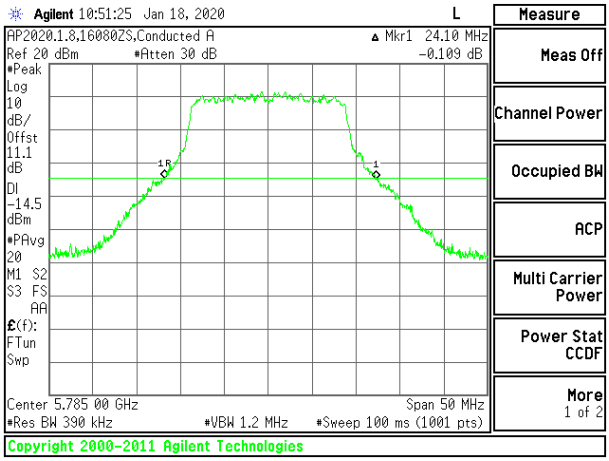


LOW CHANNEL ANTENNA 2

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

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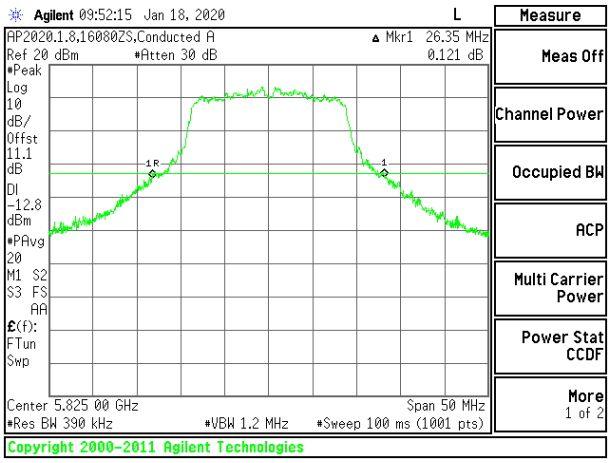
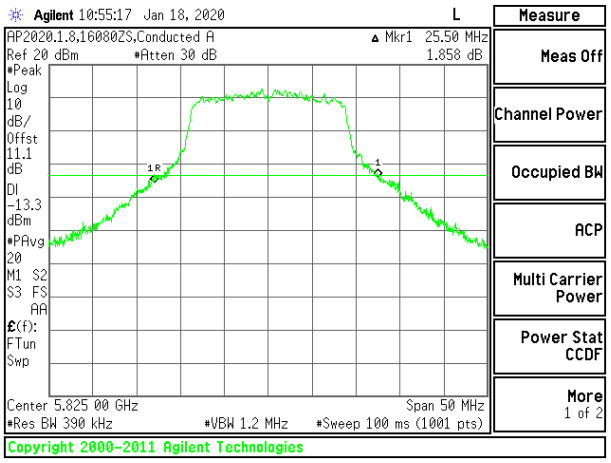
HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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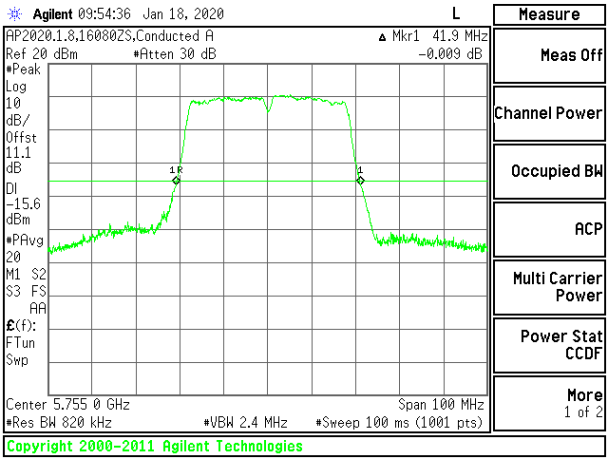
9.2.15. 802.11n HT40 MODE IN THE 5.8 GHz BAND

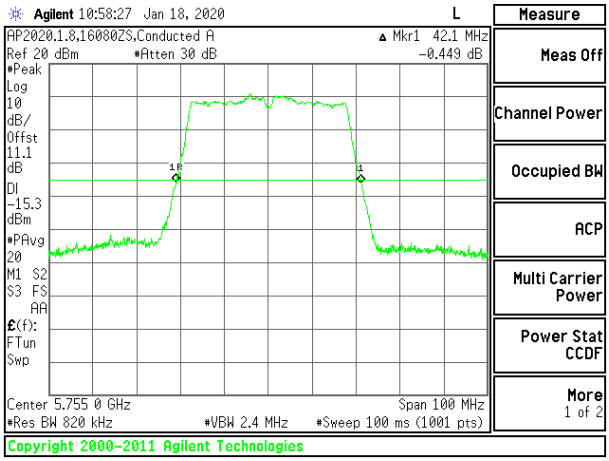
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Low	5755	41.90	42.10
High	5795	42.00	42.10

LOW CHANNEL

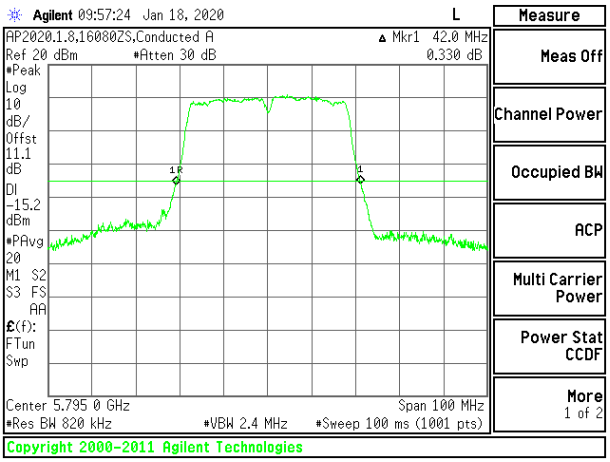


LOW CHANNEL ANTENNA 1

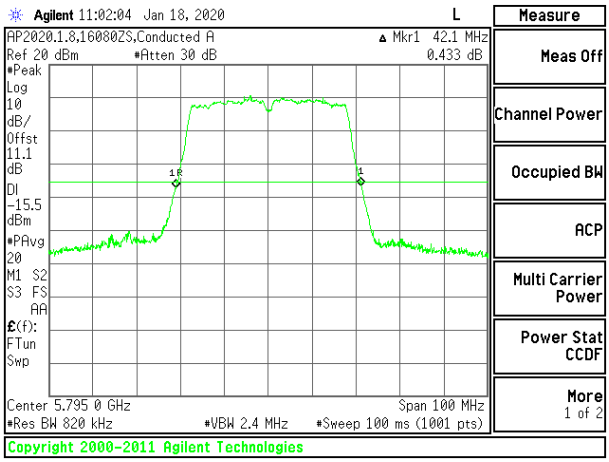


LOW CHANNEL ANTENNA 2

HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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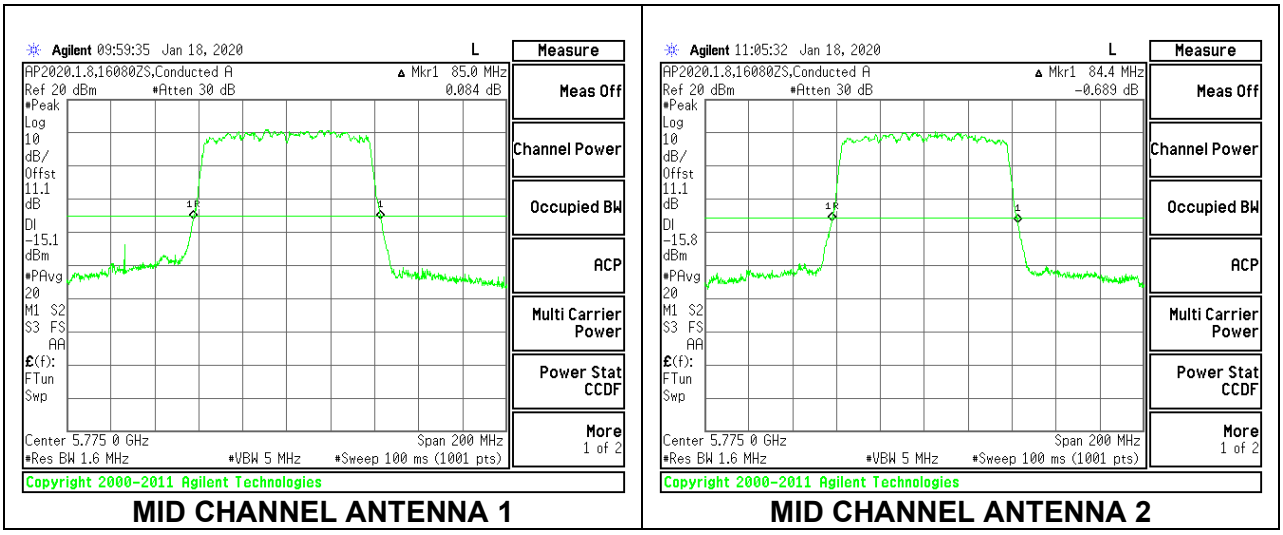
9.2.16. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)
Mid	5775	85.00	84.40

MID CHANNEL



MID CHANNEL ANTENNA 1 **MID CHANNEL ANTENNA 2**

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9.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

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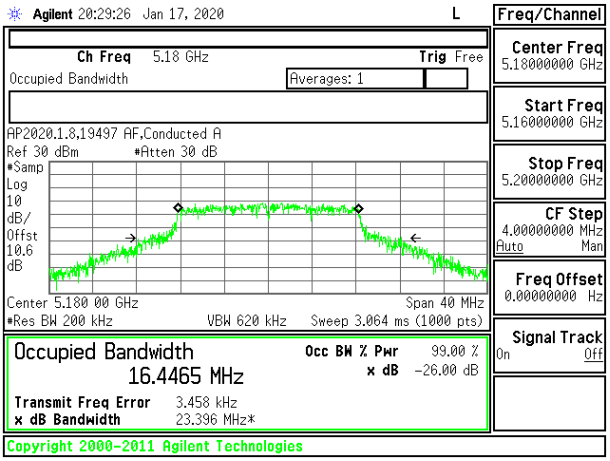
9.3.1. 802.11a MODE IN THE 5.2 GHz BAND

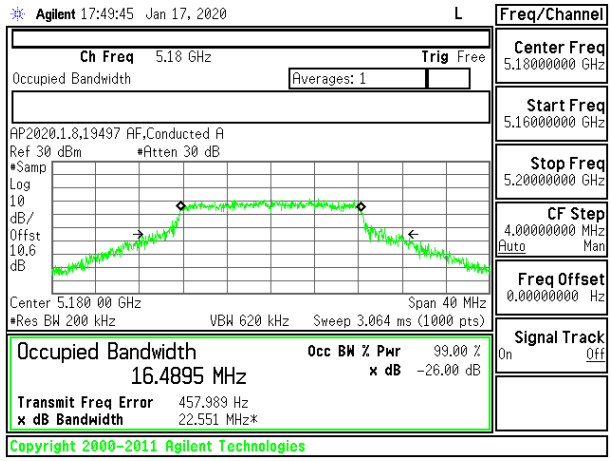
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low	5180	16.447	16.489
Mid	5200	16.345	16.501
High	5240	16.453	16.473

LOW CHANNEL

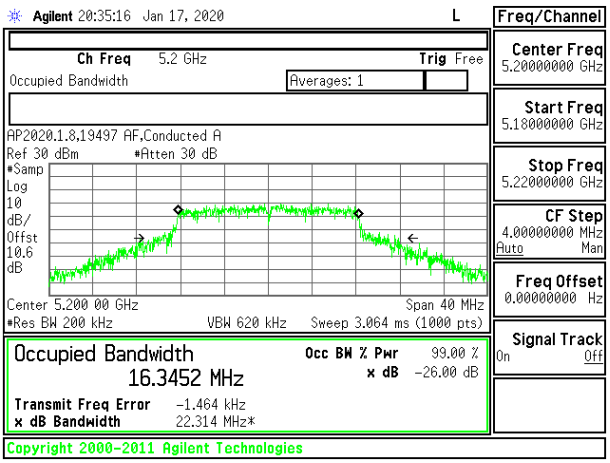


LOW CHANNEL ANTENNA 1

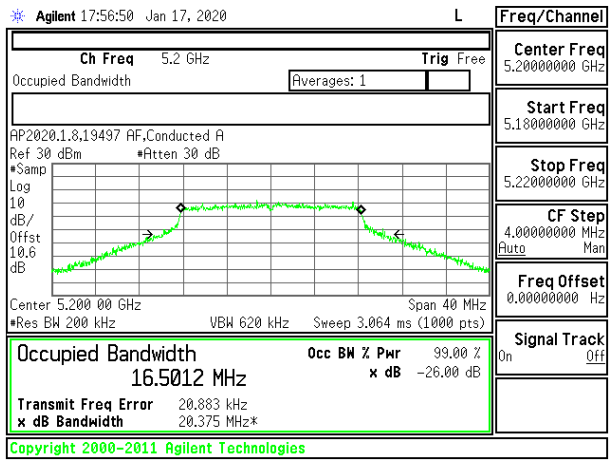


LOW CHANNEL ANTENNA 2

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

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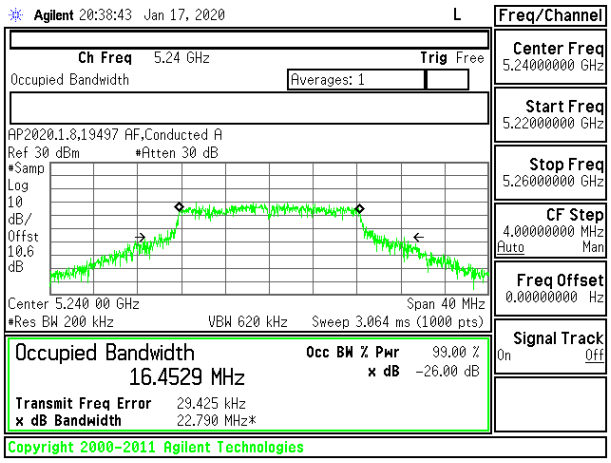
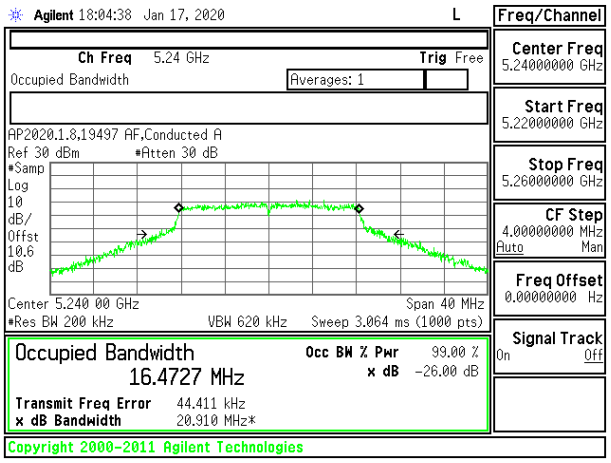
HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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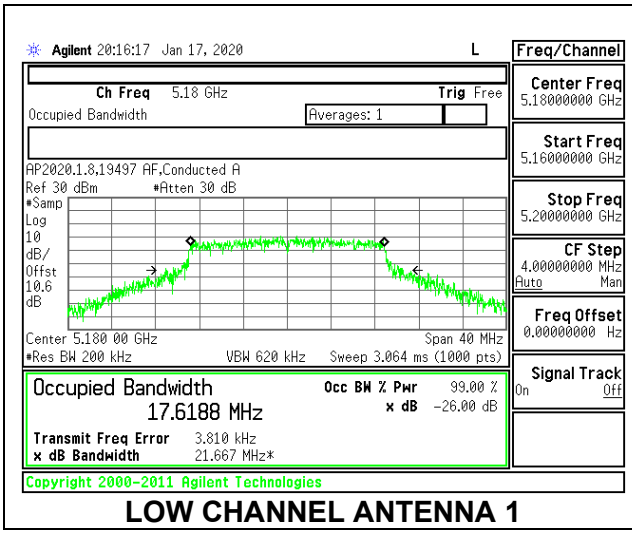
9.3.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

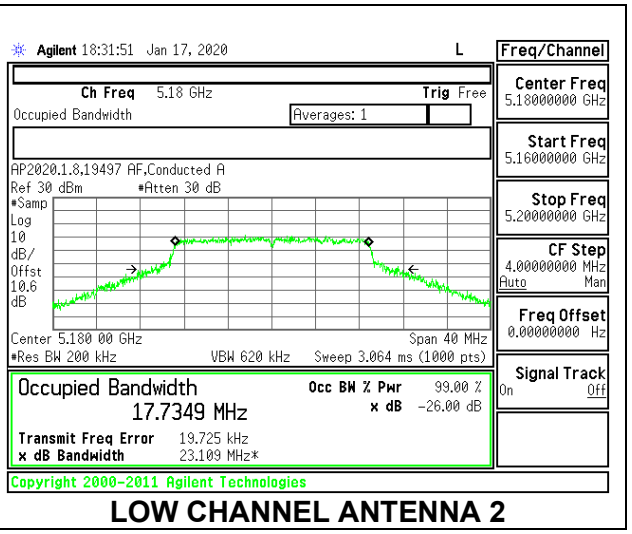
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low	5180	17.619	17.735
Mid	5200	17.776	17.657
High	5240	17.718	17.642

LOW CHANNEL

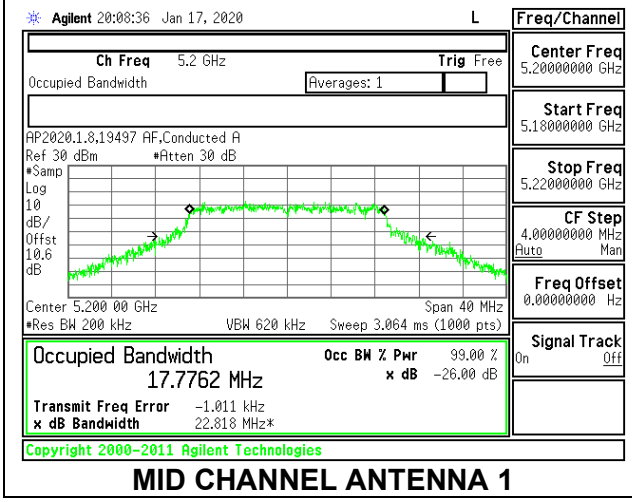


LOW CHANNEL ANTENNA 1

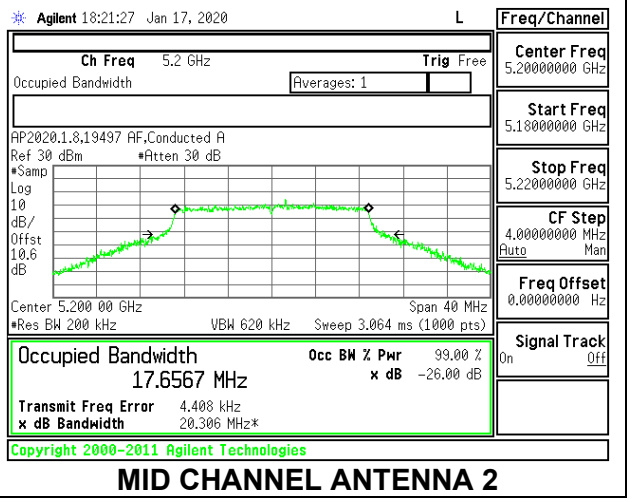


LOW CHANNEL ANTENNA 2

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

UL VERIFICATION SERVICES INC.
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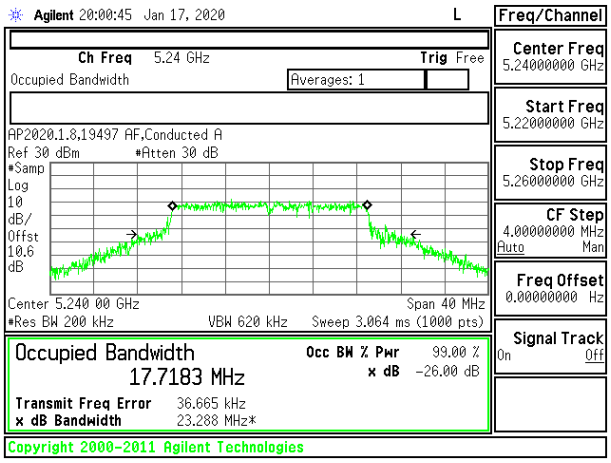
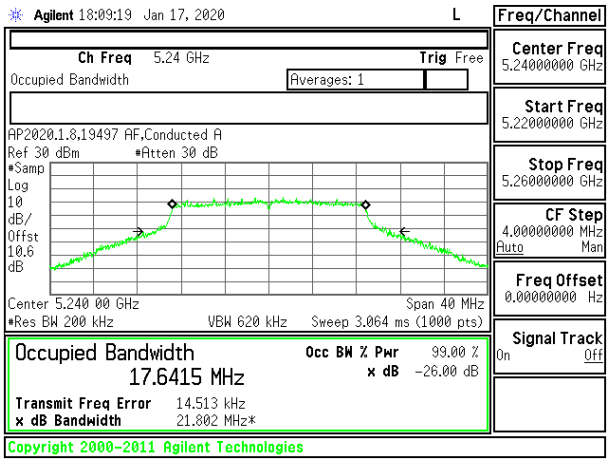
HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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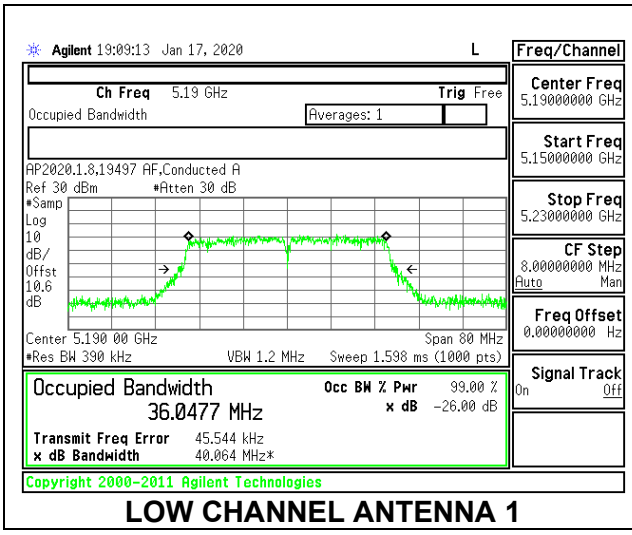
9.3.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

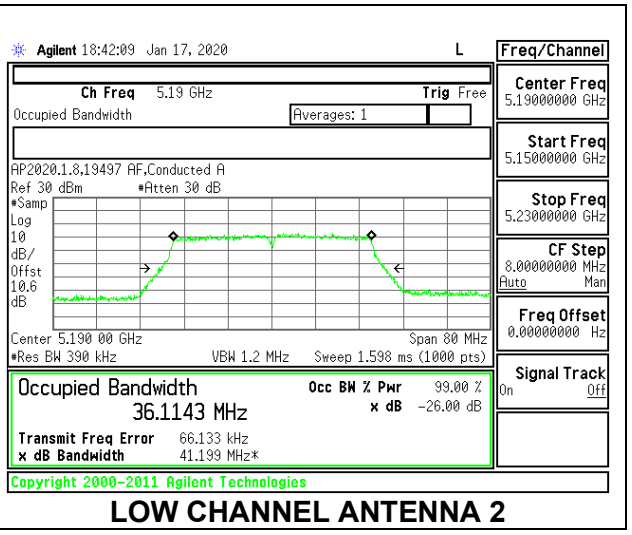
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low	5190	36.048	36.114
High	5230	36.172	36.093

LOW CHANNEL

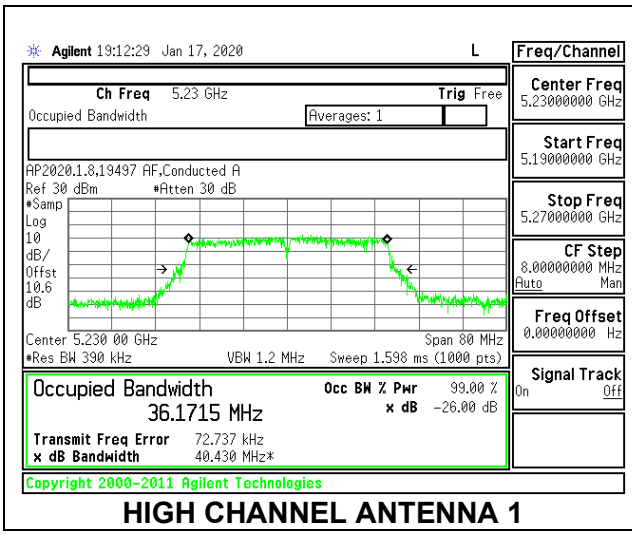


LOW CHANNEL ANTENNA 1

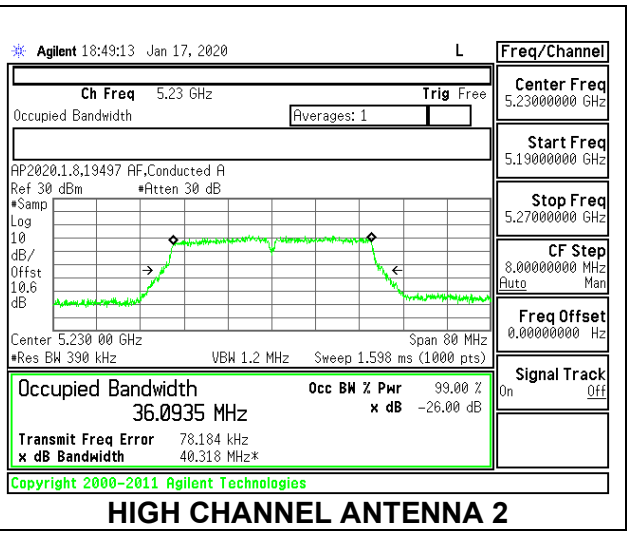


LOW CHANNEL ANTENNA 2

HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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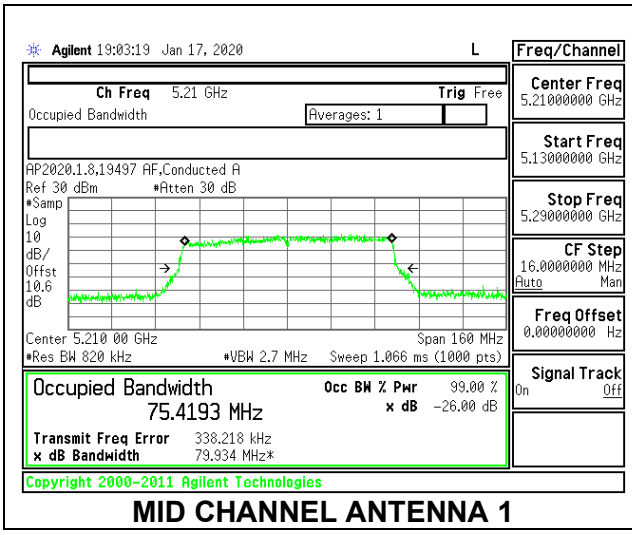
9.3.4. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

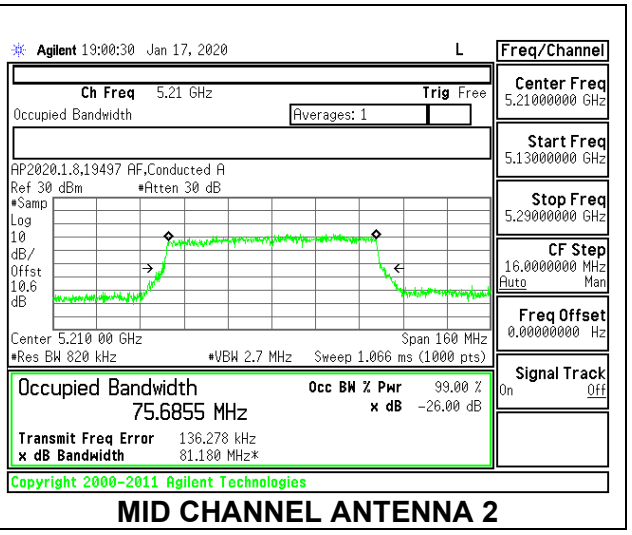
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Mid	5210	75.419	75.686

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

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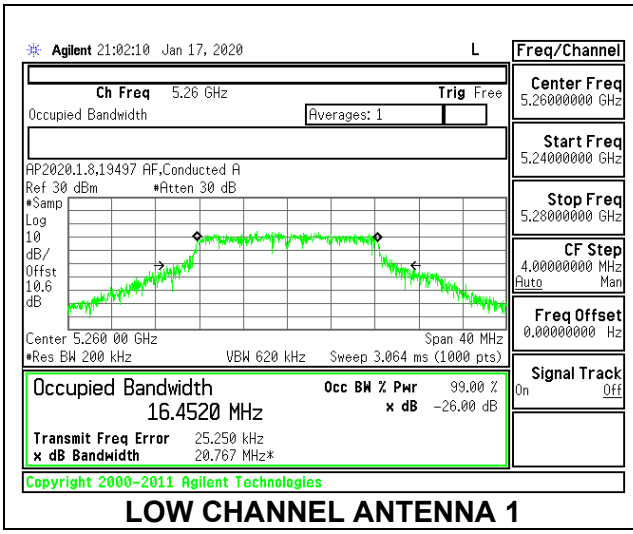
9.3.5. 802.11a MODE IN THE 5.3 GHz BAND

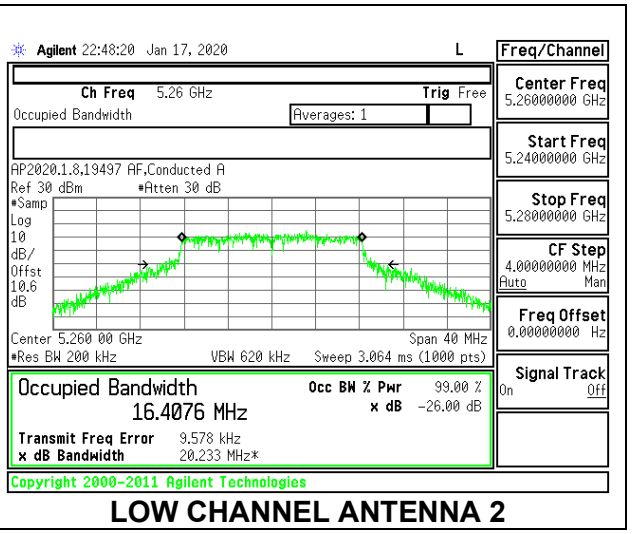
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low	5260	16.452	16.408
Mid	5300	16.409	16.453
High	5320	16.396	16.524

LOW CHANNEL

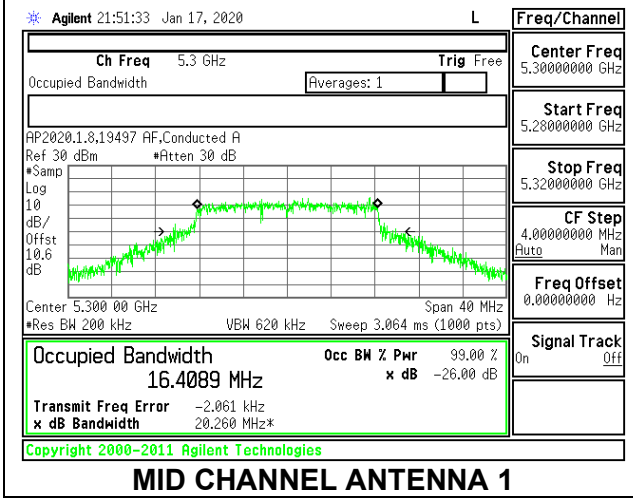


LOW CHANNEL ANTENNA 1

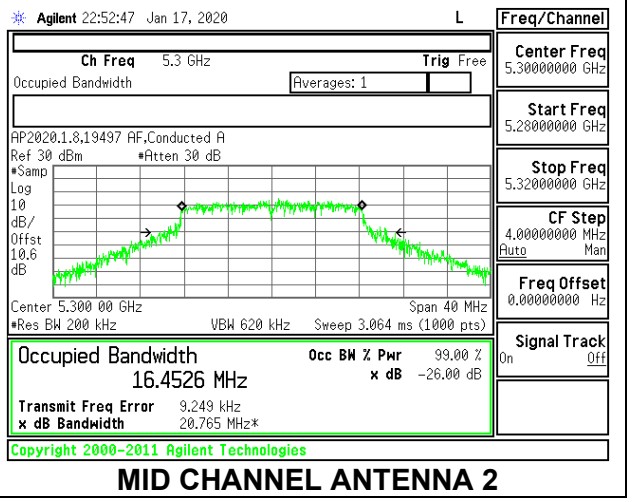


LOW CHANNEL ANTENNA 2

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

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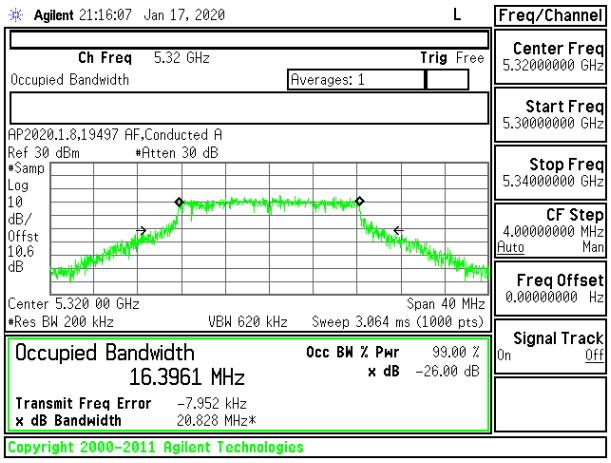
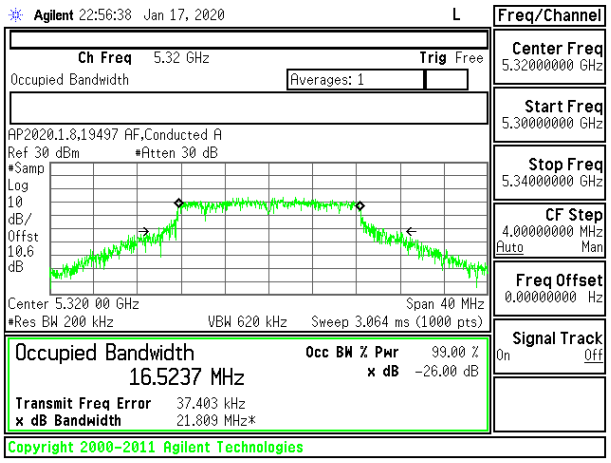
HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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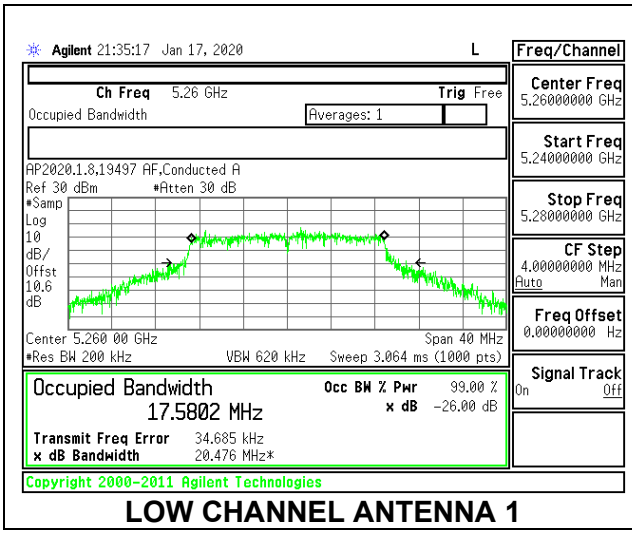
9.3.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

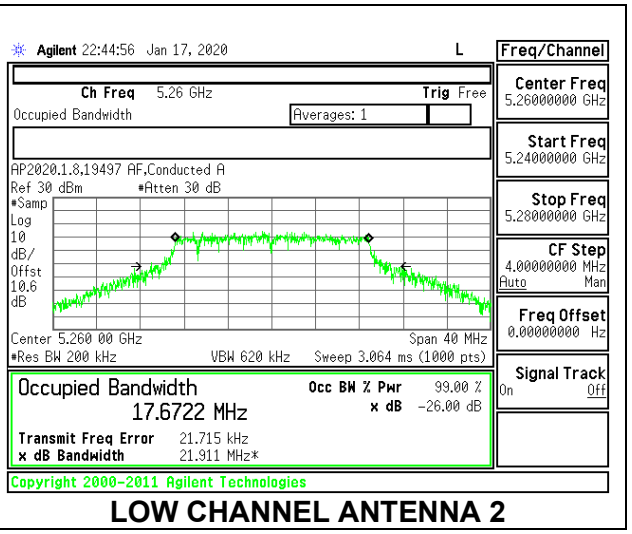
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low	5260	17.580	17.672
Mid	5300	17.693	17.590
High	5320	17.640	17.709

LOW CHANNEL

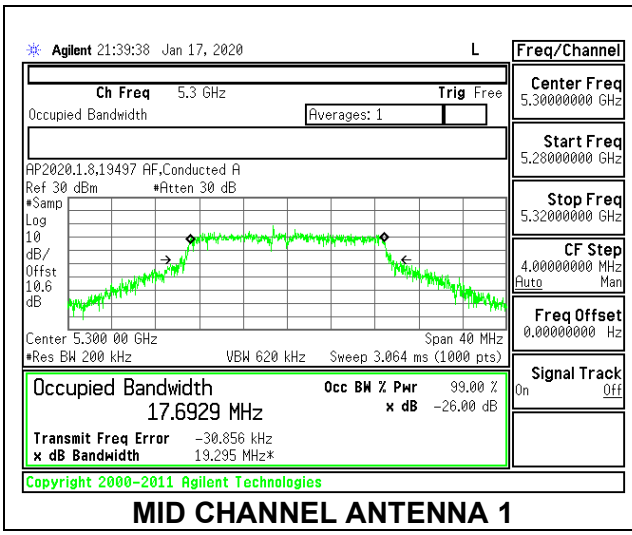


LOW CHANNEL ANTENNA 1

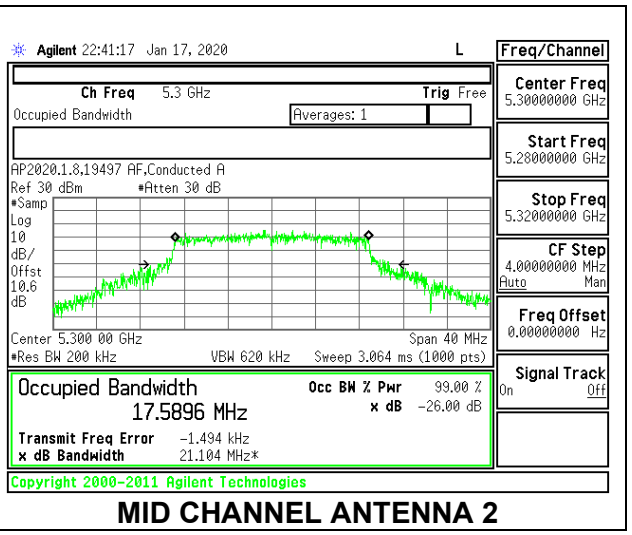


LOW CHANNEL ANTENNA 2

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

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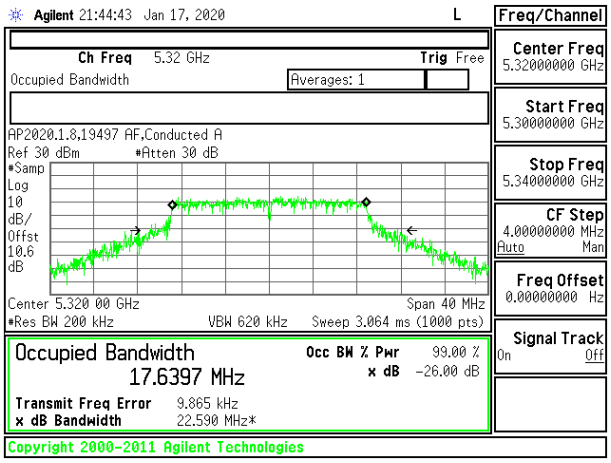
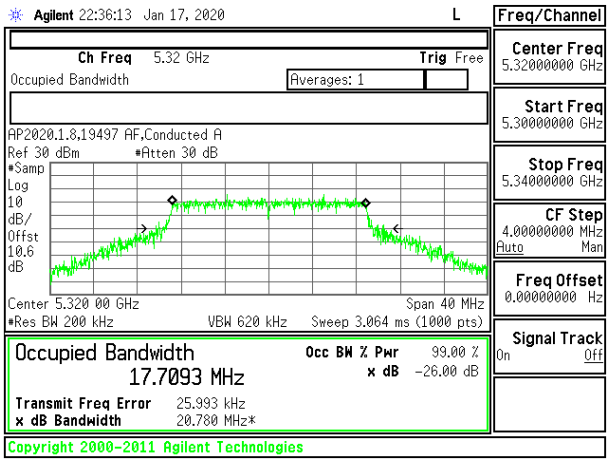
HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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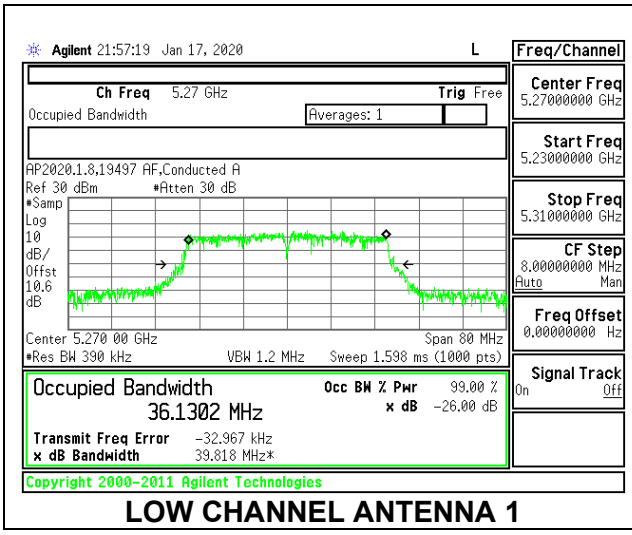
9.3.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

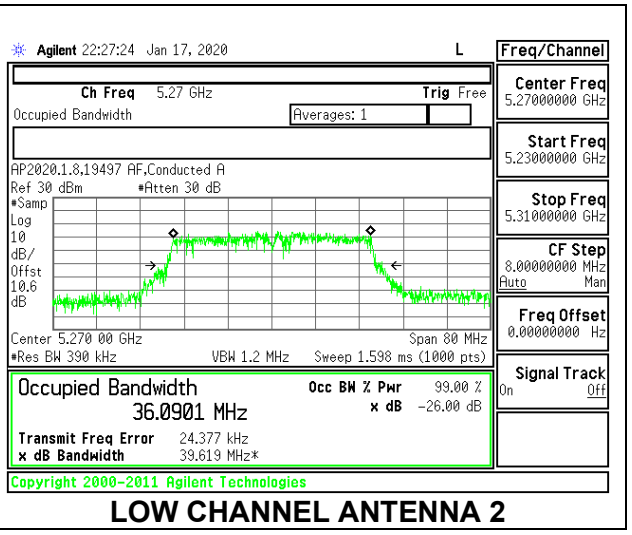
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low	5270	36.130	36.090
High	5310	36.055	36.119

LOW CHANNEL

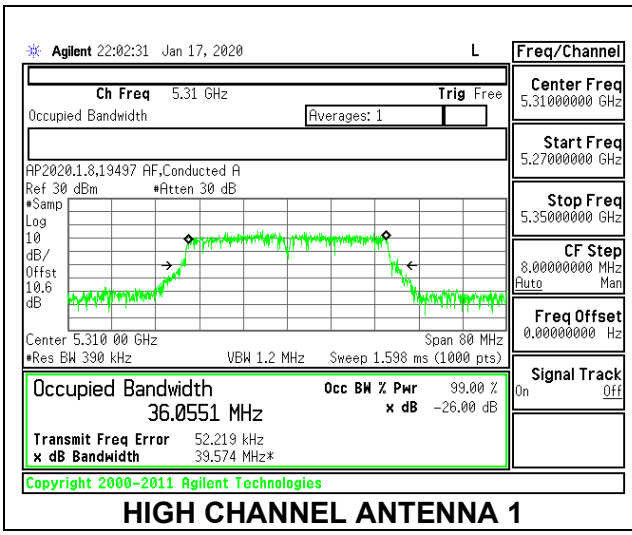


LOW CHANNEL ANTENNA 1

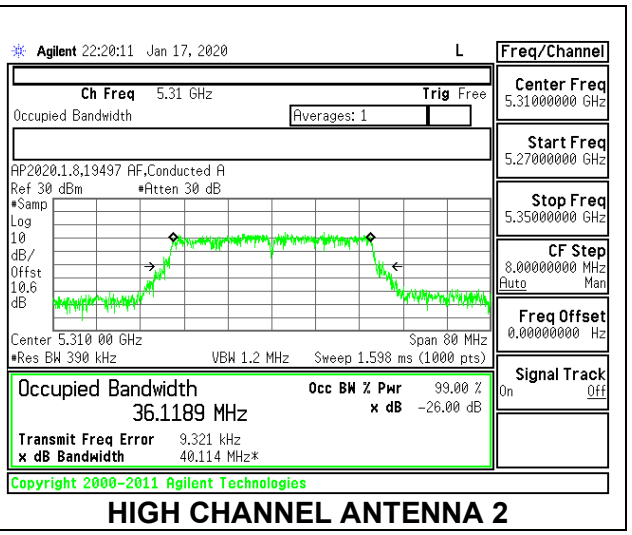


LOW CHANNEL ANTENNA 2

HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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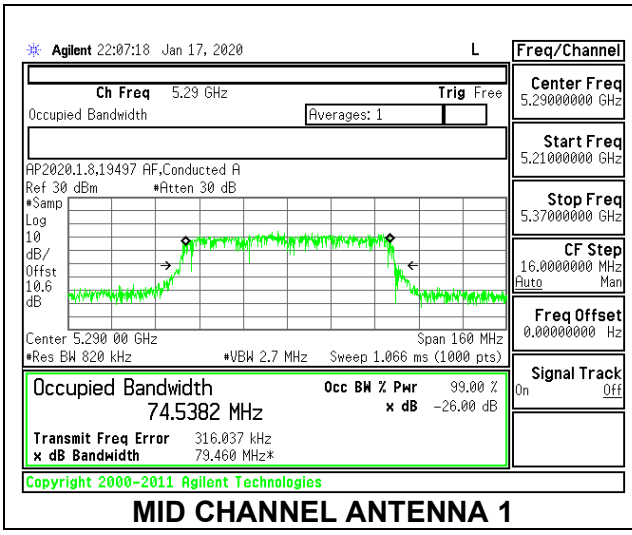
9.3.8. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

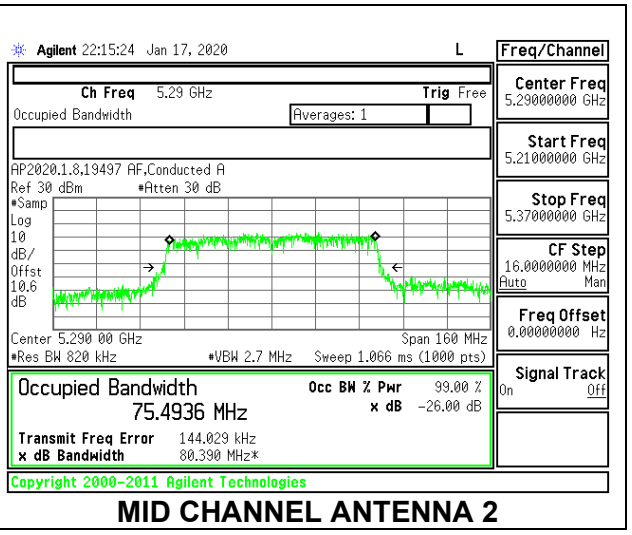
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Mid	5290	74.538	75.494

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

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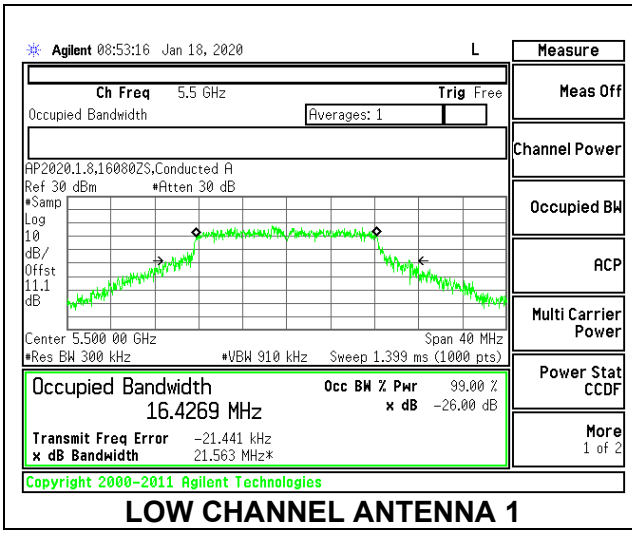
9.3.9. 802.11a MODE IN THE 5.6 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

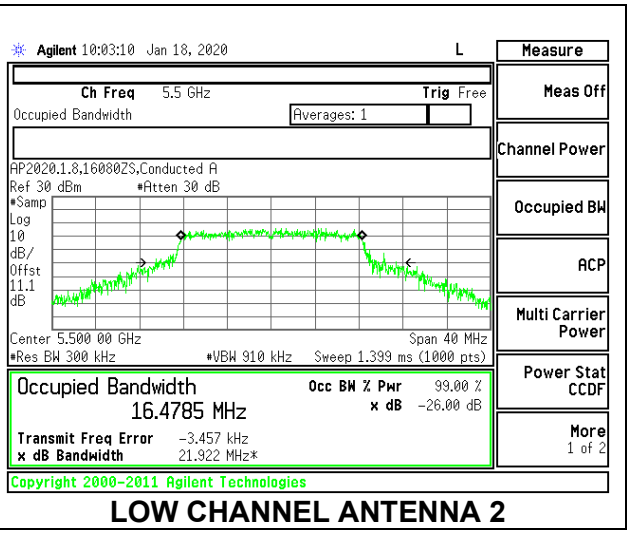
Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low	5500	16.427	16.479
Mid	5580	16.496	16.520
High	5700	16.494	16.465
144	5720	16.533	16.536
144	5720*	13.260	13.260

*Portion of UNII 2C Band

LOW CHANNEL

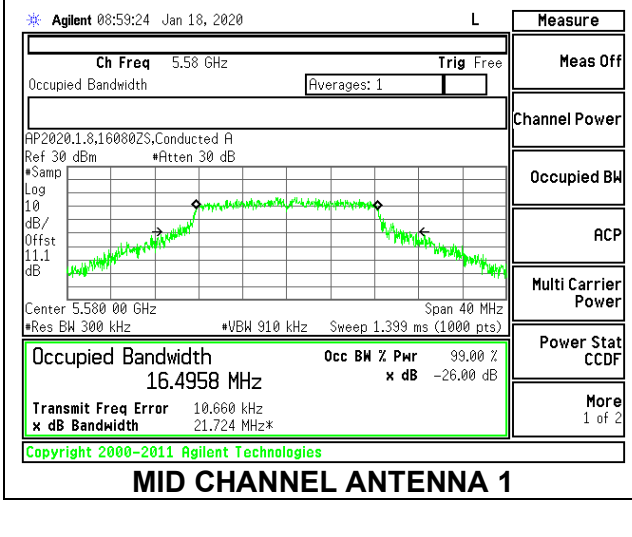


LOW CHANNEL ANTENNA 1

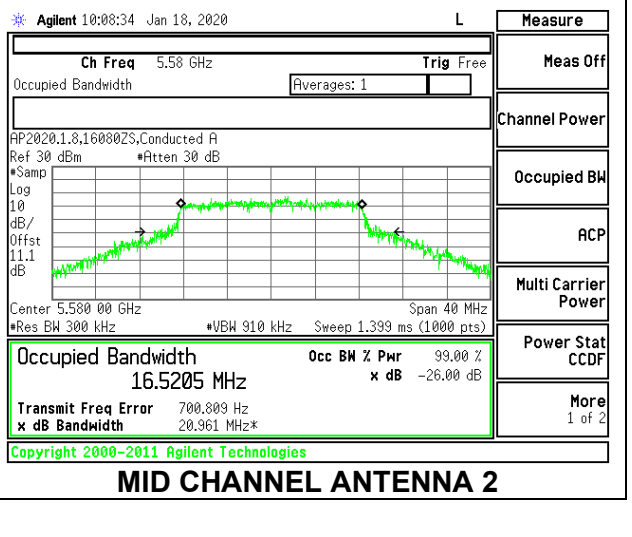


LOW CHANNEL ANTENNA 2

MID CHANNEL



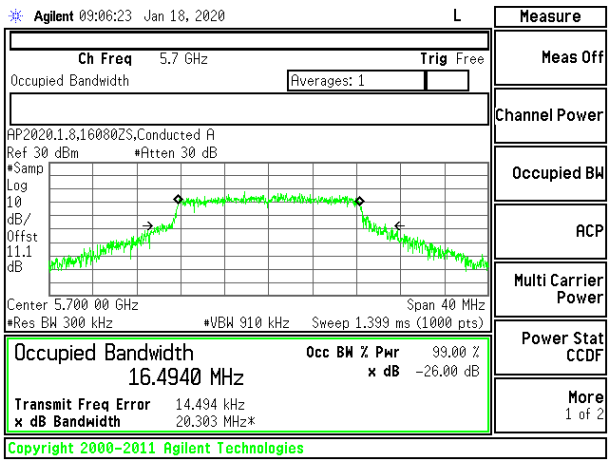
MID CHANNEL ANTENNA 1



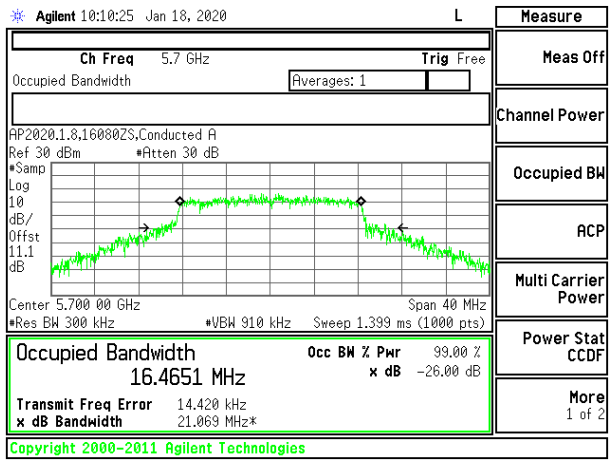
MID CHANNEL ANTENNA 2

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

HIGH CHANNEL

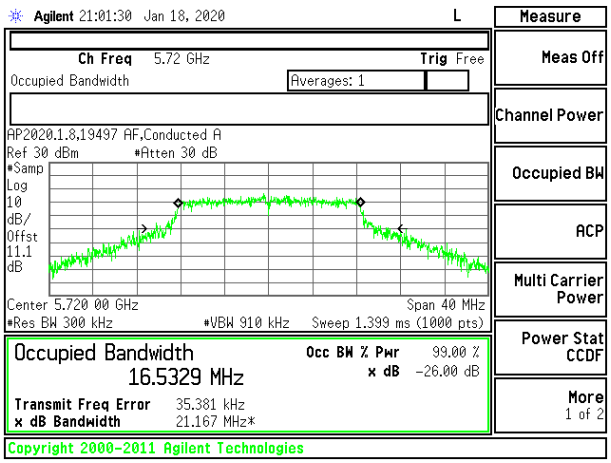


HIGH CHANNEL ANTENNA 1

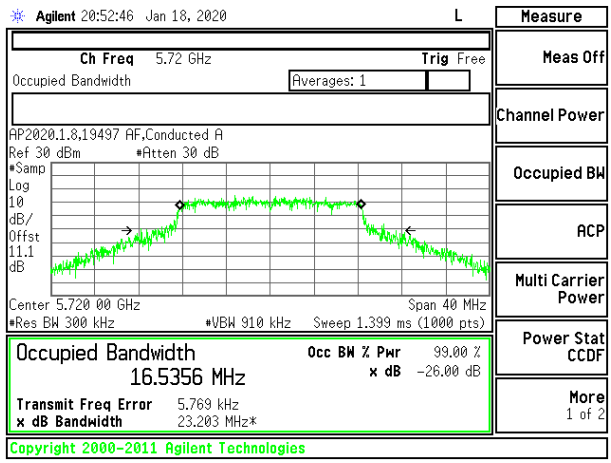


HIGH CHANNEL ANTENNA 2

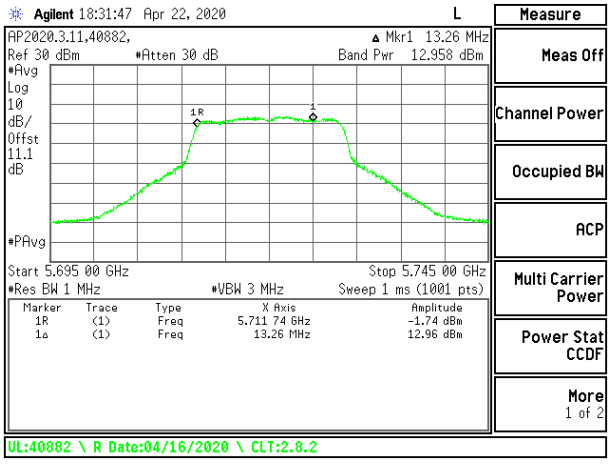
CHANNEL 144



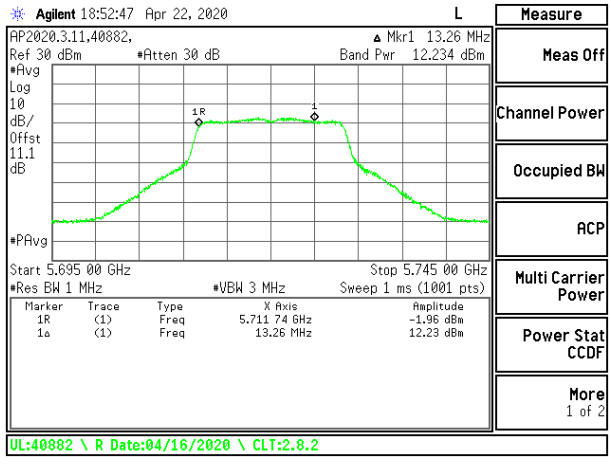
CHANNEL 144 ANTENNA 1



CHANNEL 144 ANTENNA 2



CHANNEL 144 ANTENNA 1 UNII 2C



CHANNEL 144 ANTENNA 2 UNII 2C

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47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

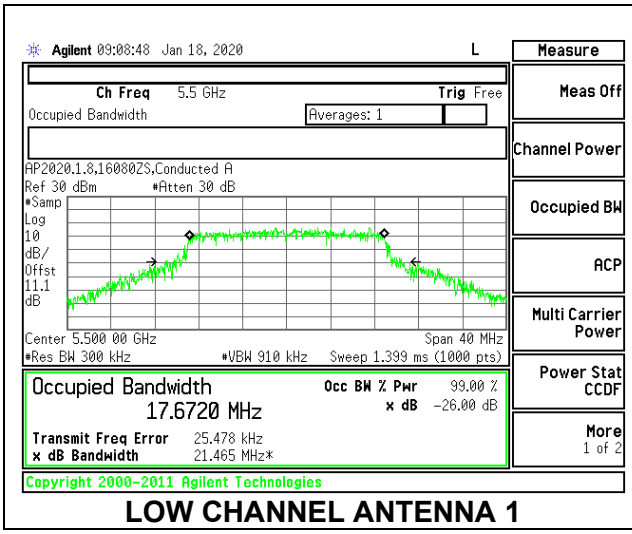
9.3.10. 802.11n HT20 MODE IN THE 5.6 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

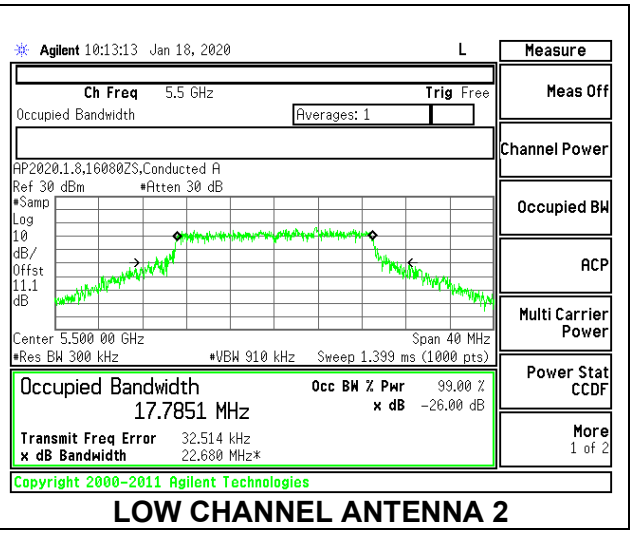
Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low	5500	17.672	17.785
Mid	5580	17.681	17.647
High	5700	17.740	17.638
144	5720	17.744	17.614
144	5720*	13.920	13.890

*Portion of UNII 2C Band

LOW CHANNEL

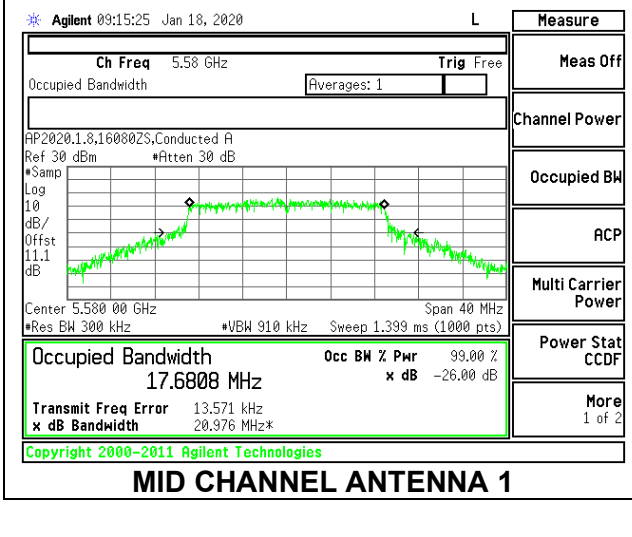


LOW CHANNEL ANTENNA 1

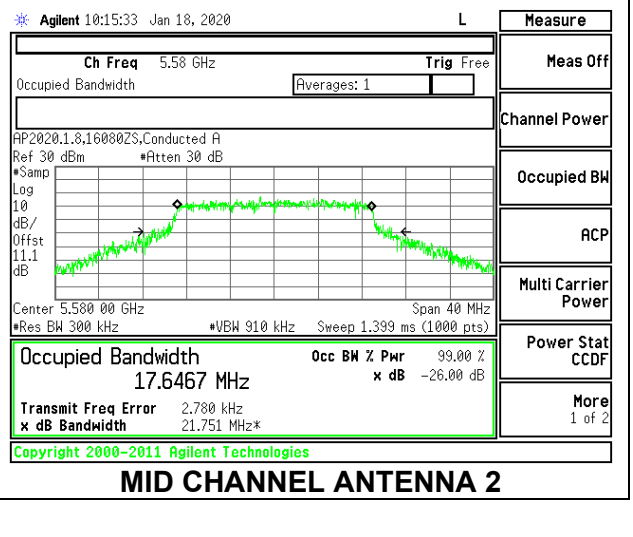


LOW CHANNEL ANTENNA 2

MID CHANNEL



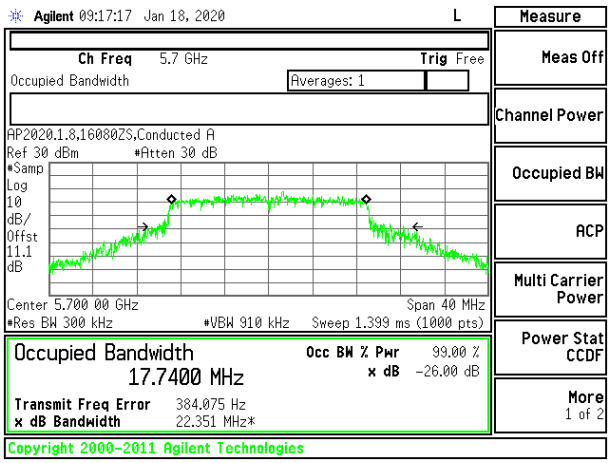
MID CHANNEL ANTENNA 1



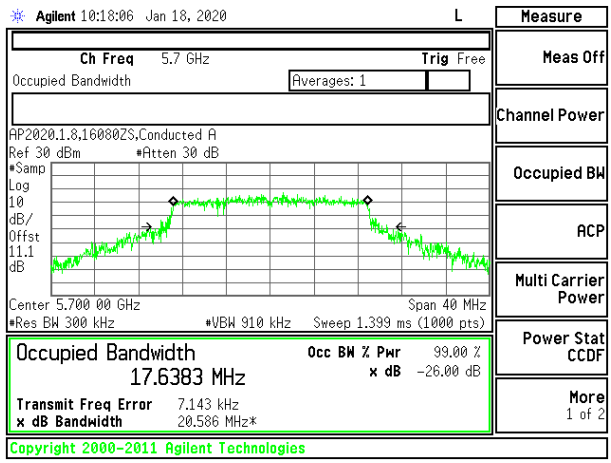
MID CHANNEL ANTENNA 2

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

HIGH CHANNEL

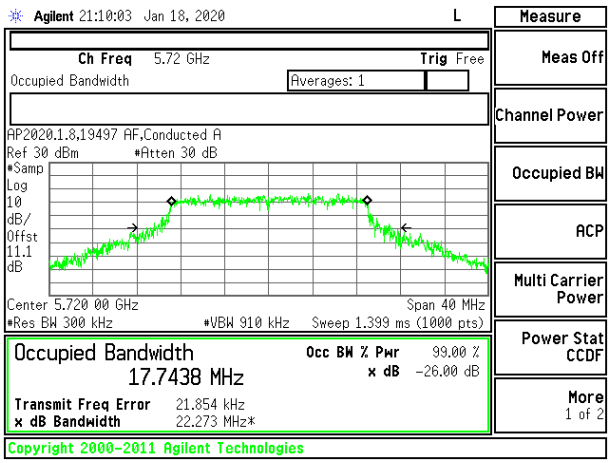


HIGH CHANNEL ANTENNA 1

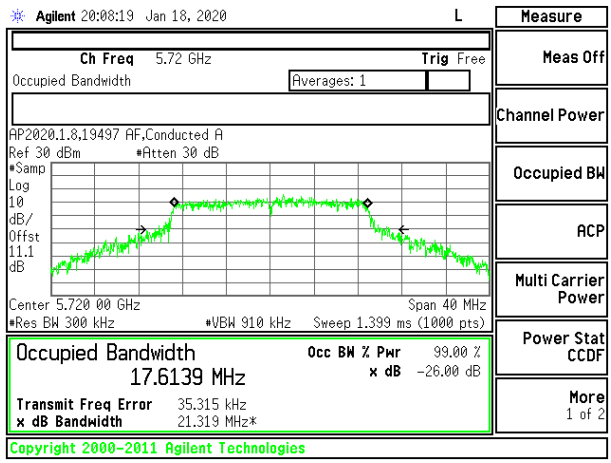


HIGH CHANNEL ANTENNA 2

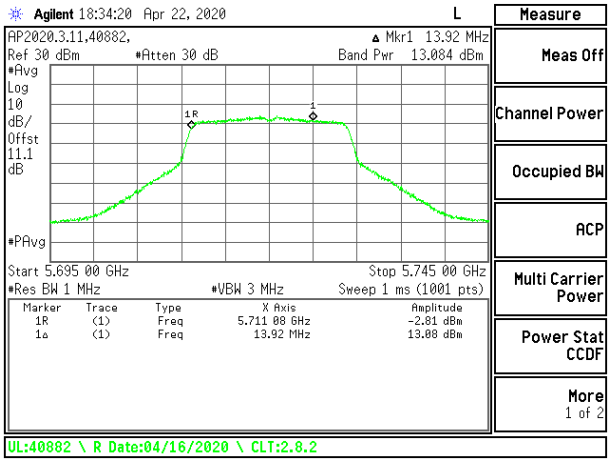
CHANNEL 144



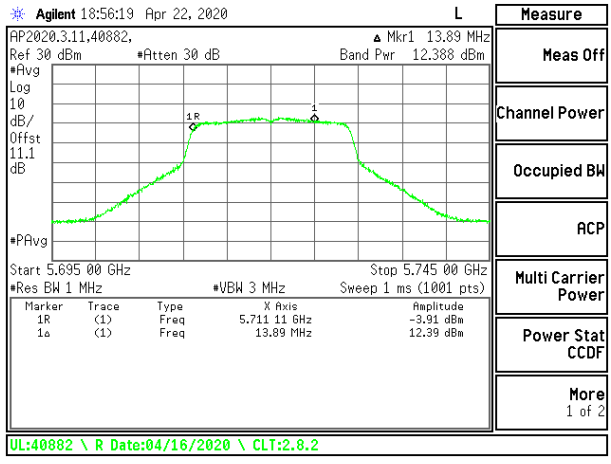
CHANNEL 144 ANTENNA 1



CHANNEL 144 ANTENNA 2



CHANNEL 144 ANTENNA 1 UNII 2C



CHANNEL 144 ANTENNA 2 UNII 2C

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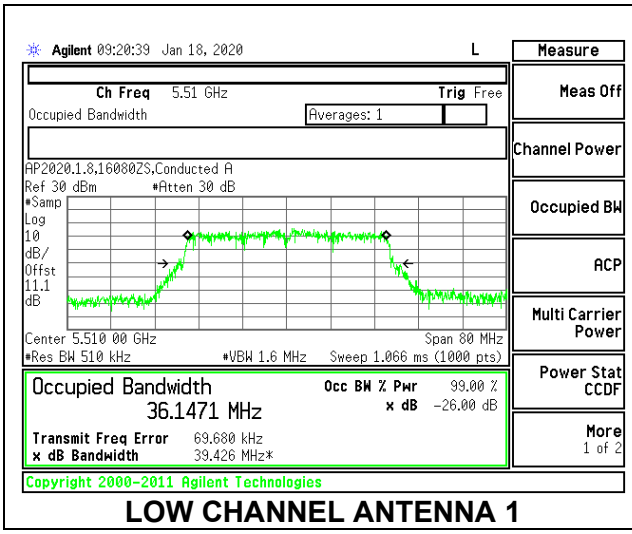
9.3.11. 802.11n HT40 MODE IN THE 5.6 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

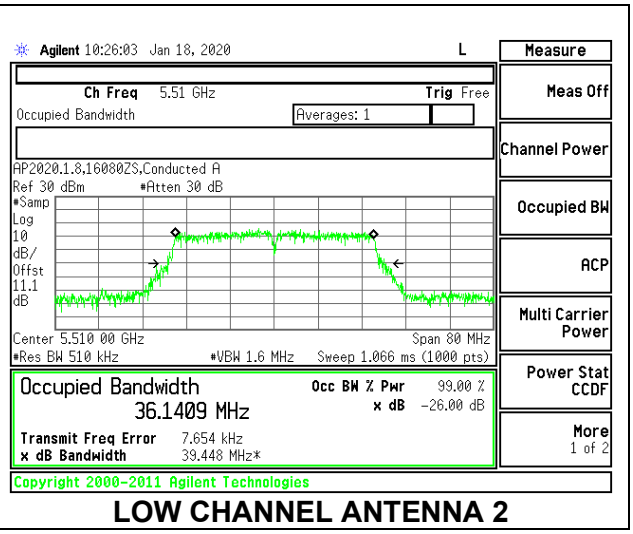
Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low	5510	36.147	36.141
Mid	5550	36.127	36.165
High	5670	36.096	36.088
142	5710	36.074	36.045
142	5710*	33.120	33.100

*Portion of UNII 2C

LOW CHANNEL

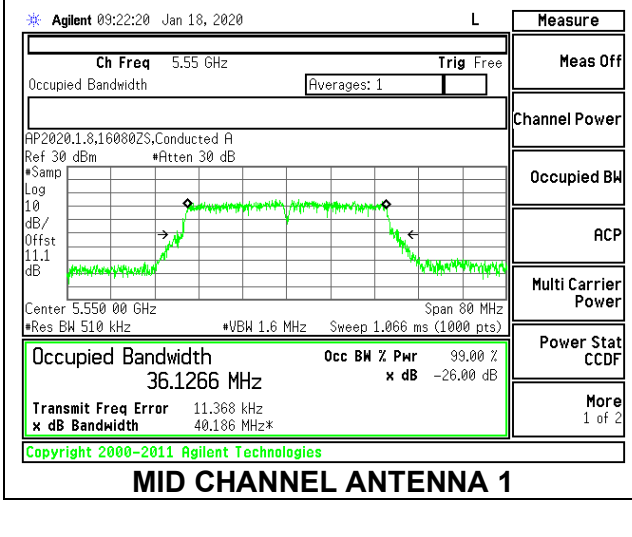


LOW CHANNEL ANTENNA 1

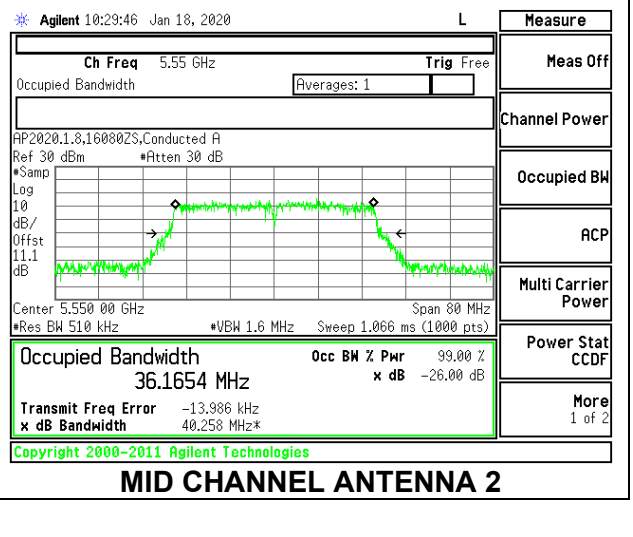


LOW CHANNEL ANTENNA 2

MID CHANNEL



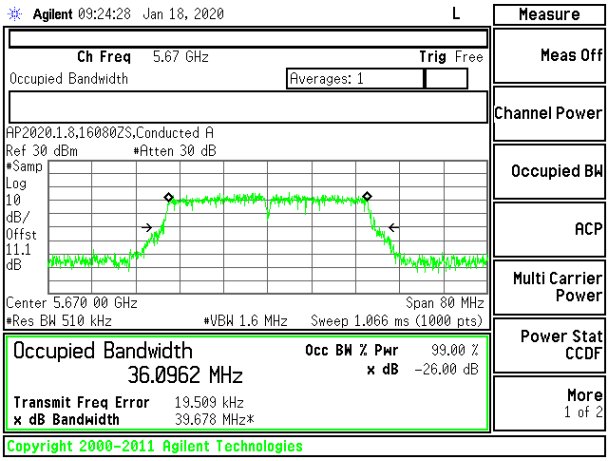
MID CHANNEL ANTENNA 1



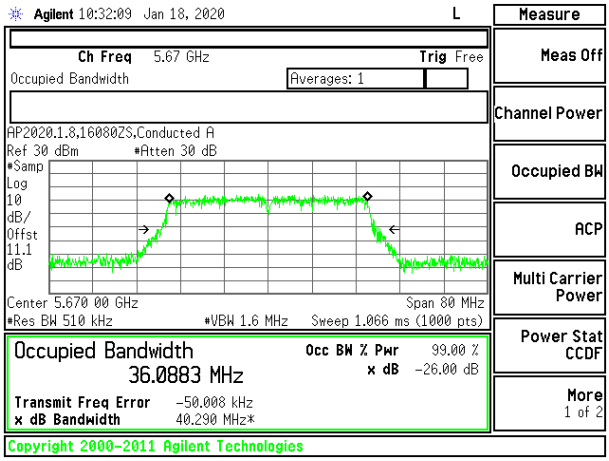
MID CHANNEL ANTENNA 2

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

HIGH CHANNEL

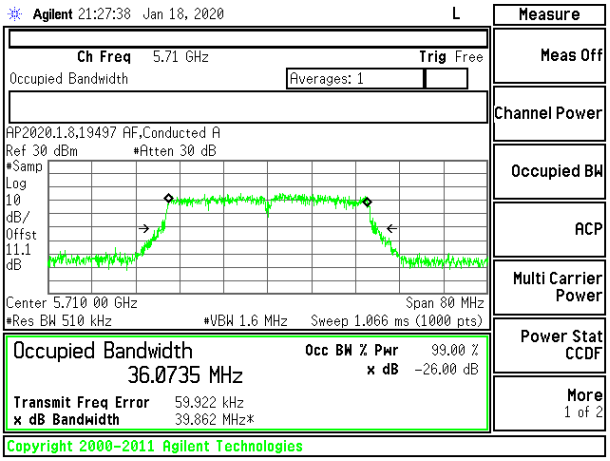


HIGH CHANNEL ANTENNA 1

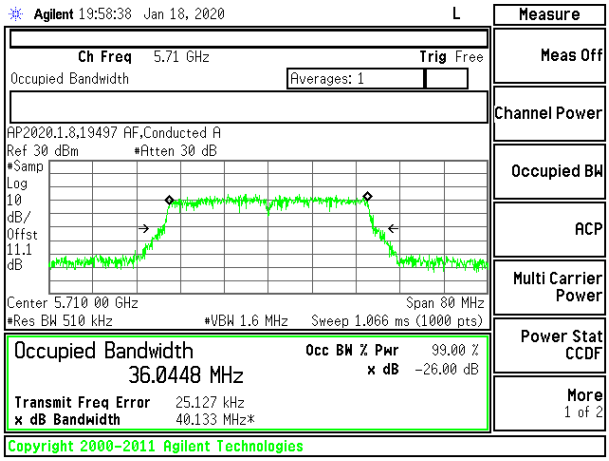


HIGH CHANNEL ANTENNA 2

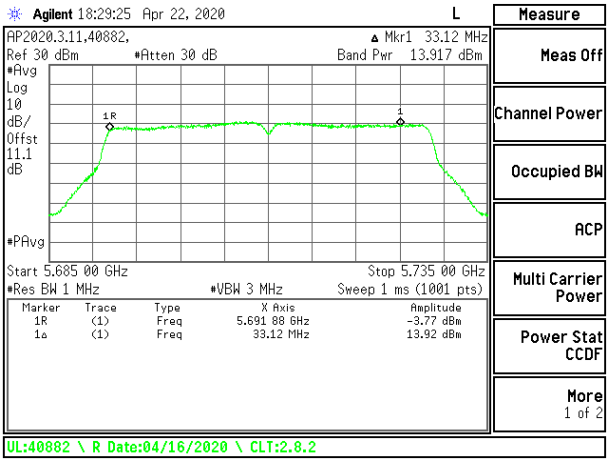
CHANNEL 142



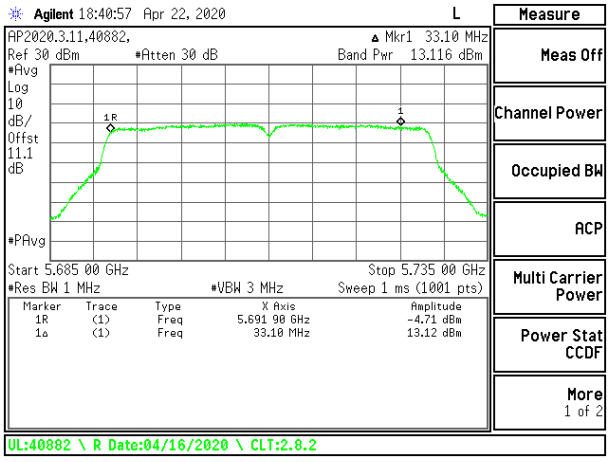
CHANNEL 142 ANTENNA 1



CHANNEL 142 ANTENNA 2



CHANNEL 142 ANTENNA 1 UNII 2C



CHANNEL 142 ANTENNA 2 UNII 2C

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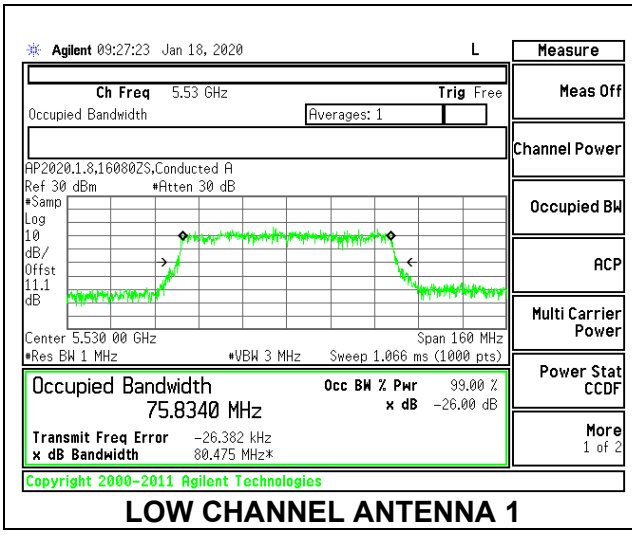
9.3.12. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

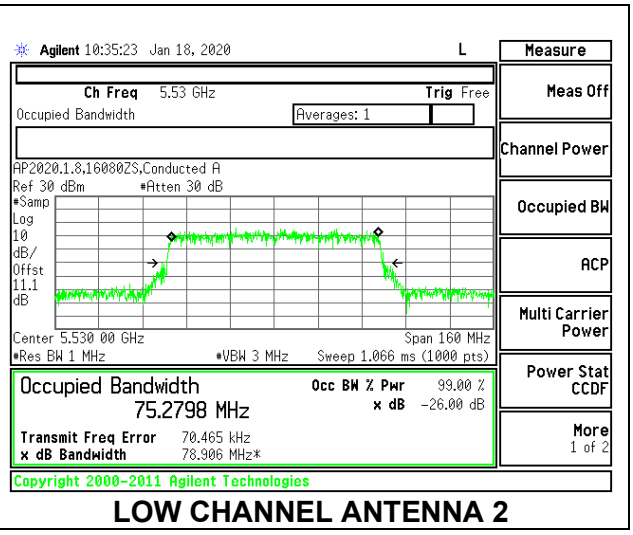
Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low	5530	75.834	75.280
High	5610	75.708	75.555
138	5690	75.710	75.667
138	5690*	72.700	72.700

*Portion of UNII 2C

LOW CHANNEL

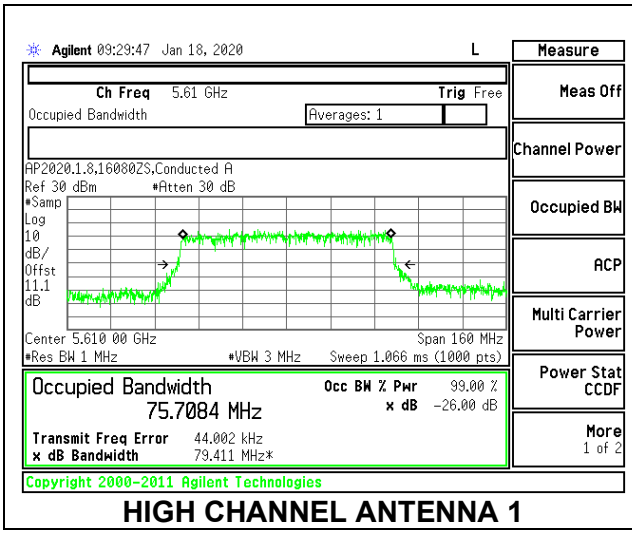


LOW CHANNEL ANTENNA 1

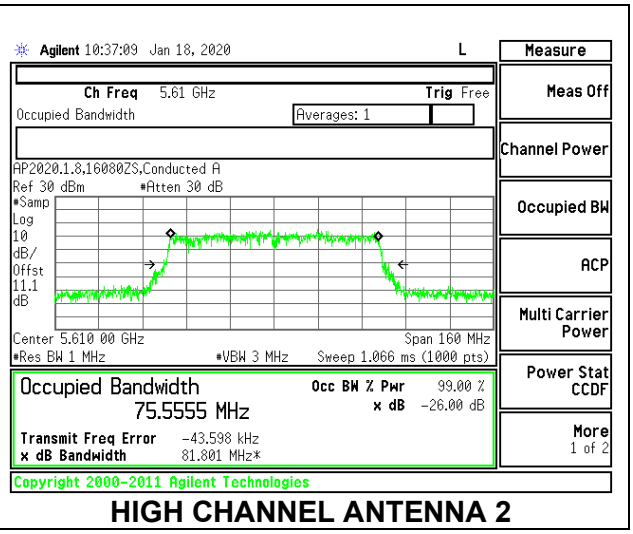


LOW CHANNEL ANTENNA 2

HIGH CHANNEL



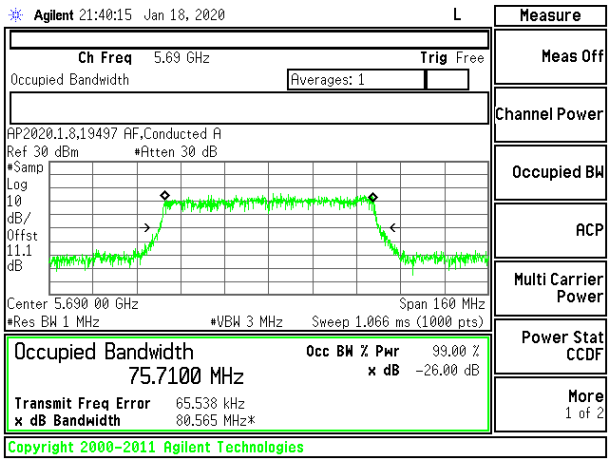
HIGH CHANNEL ANTENNA 1



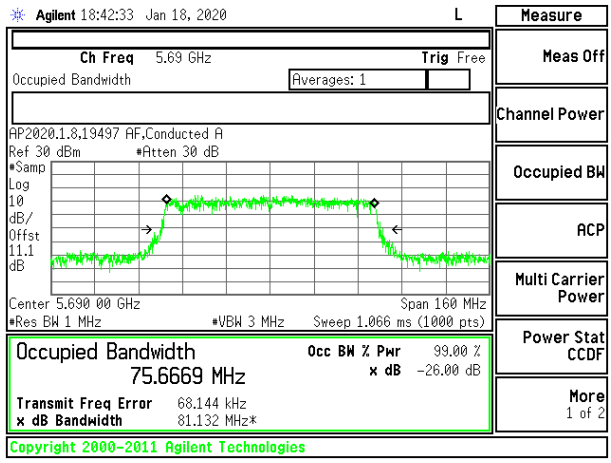
HIGH CHANNEL ANTENNA 2

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

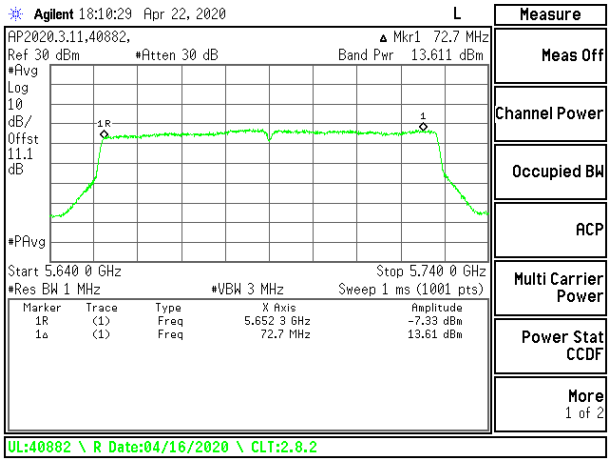
CHANNEL 138



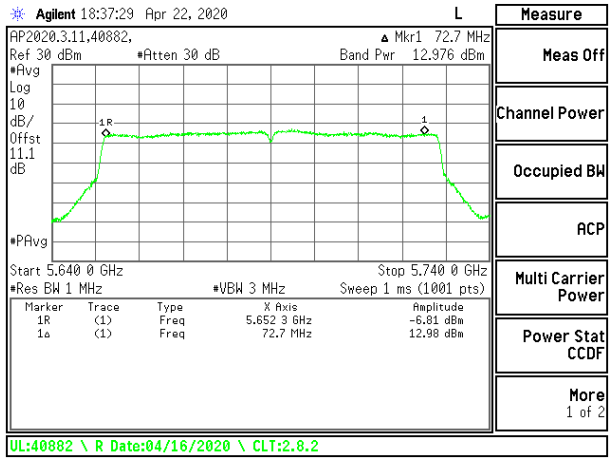
CHANNEL 138 ANTENNA 1



CHANNEL 138 ANTENNA 2



CHANNEL 138 ANTENNA 1 UNII 2C



CHANNEL 138 ANTENNA 2 UNII 2C

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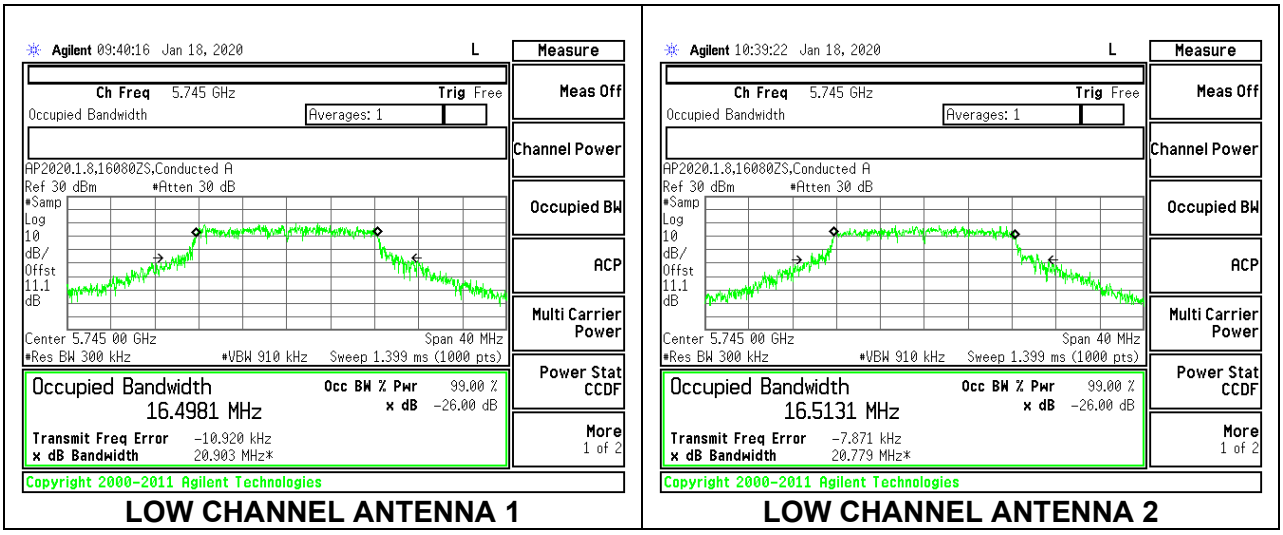
9.3.13. 802.11a MODE IN THE 5.8 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

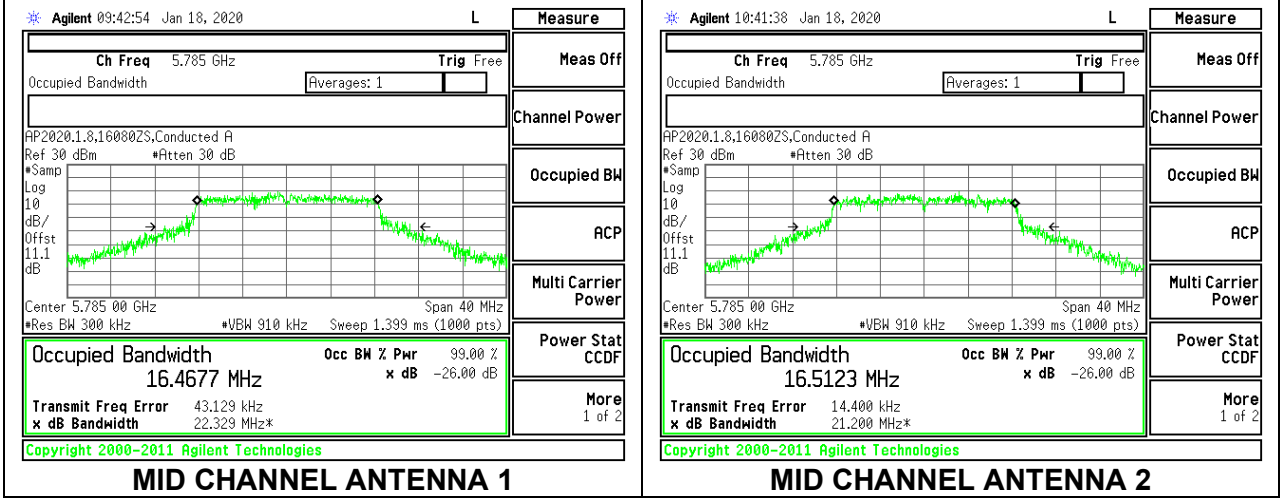
Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low	5745	16.498	16.513
Mid	5785	16.468	16.512
High	5825	16.489	16.479

LOW CHANNEL



LOW CHANNEL ANTENNA 1 **LOW CHANNEL ANTENNA 2**

MID CHANNEL



MID CHANNEL ANTENNA 1 **MID CHANNEL ANTENNA 2**

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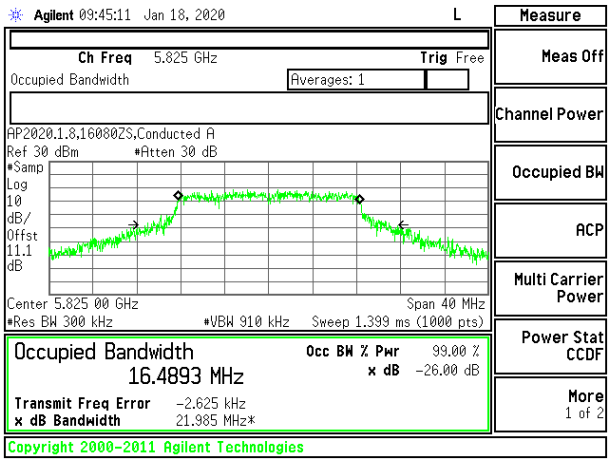
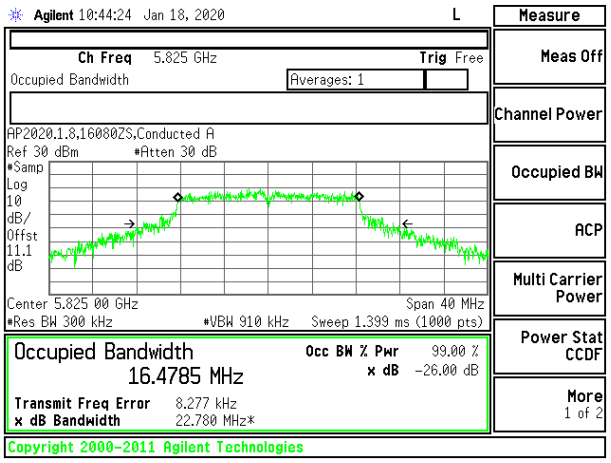
HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

UL VERIFICATION SERVICES INC.
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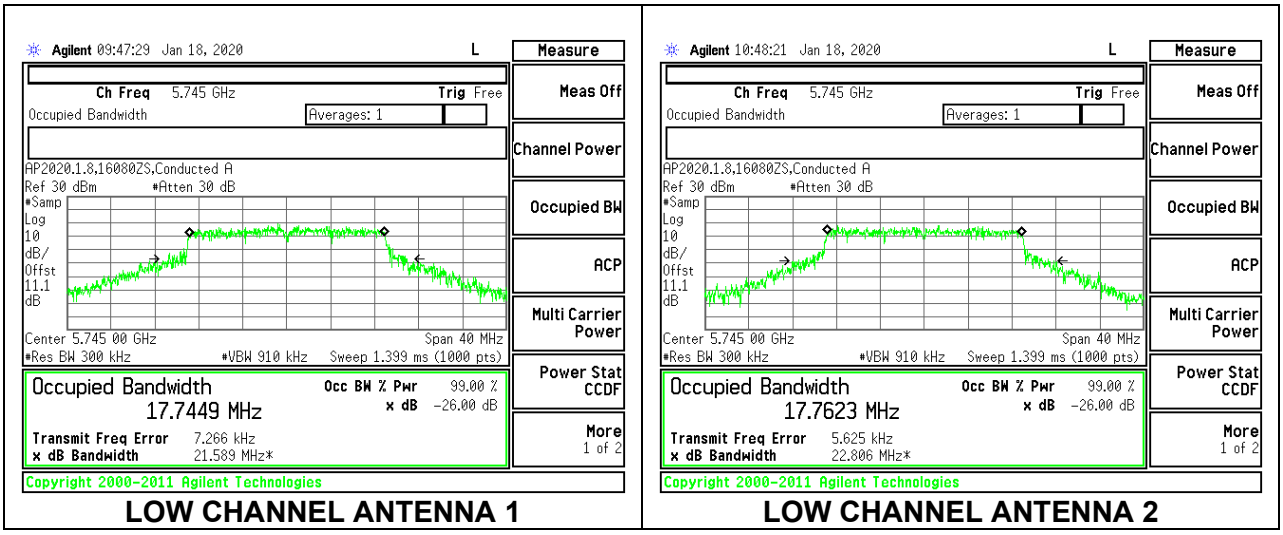
9.3.14. 802.11n HT20 MODE IN THE 5.8 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

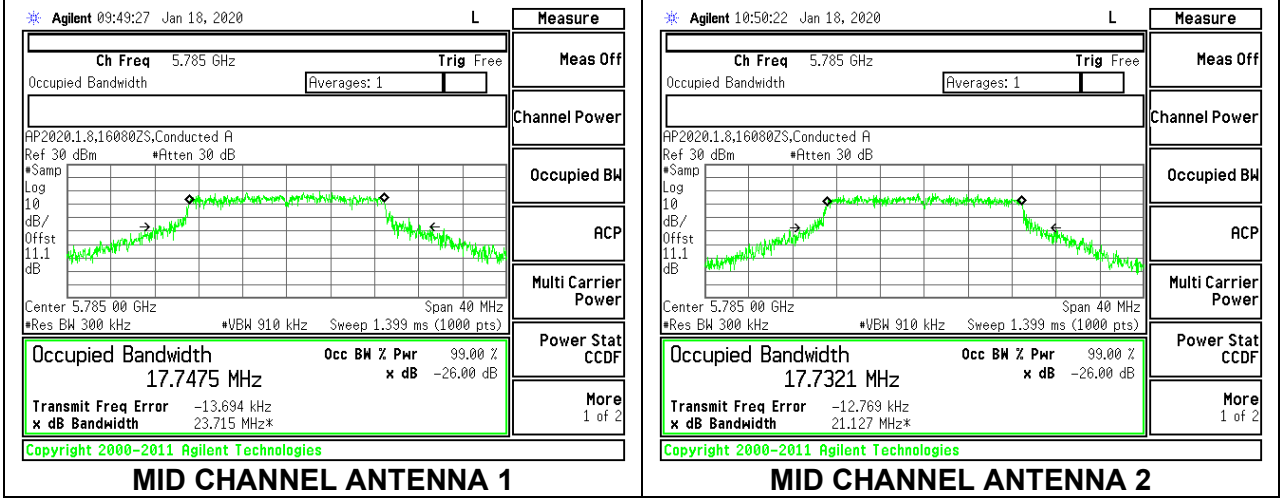
Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low	5745	17.745	17.762
Mid	5785	17.747	17.732
High	5825	17.718	17.610

LOW CHANNEL



LOW CHANNEL ANTENNA 1 **LOW CHANNEL ANTENNA 2**

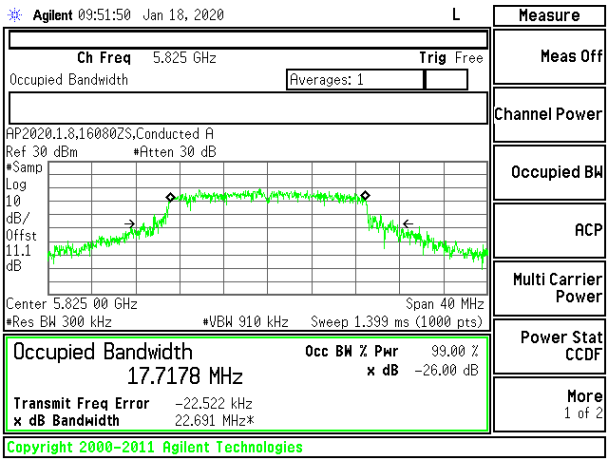
MID CHANNEL



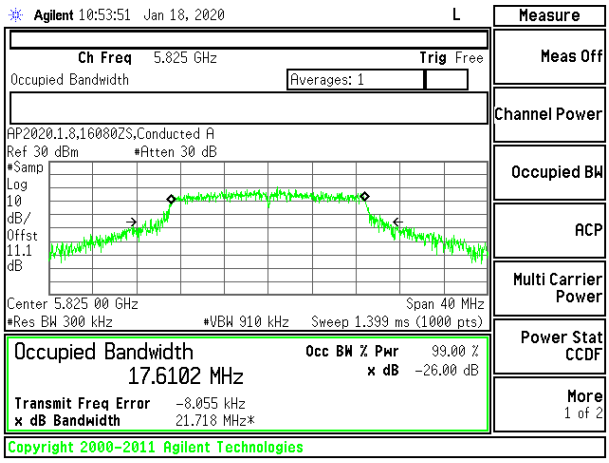
MID CHANNEL ANTENNA 1 **MID CHANNEL ANTENNA 2**

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

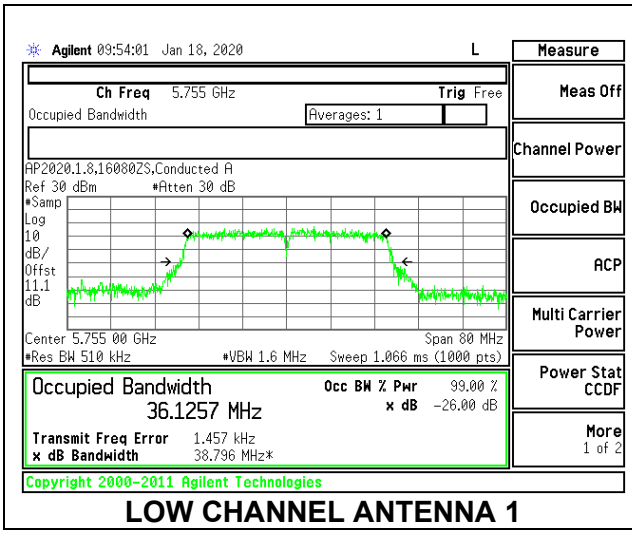
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

9.3.15. 802.11n HT40 MODE IN THE 5.8 GHz BAND

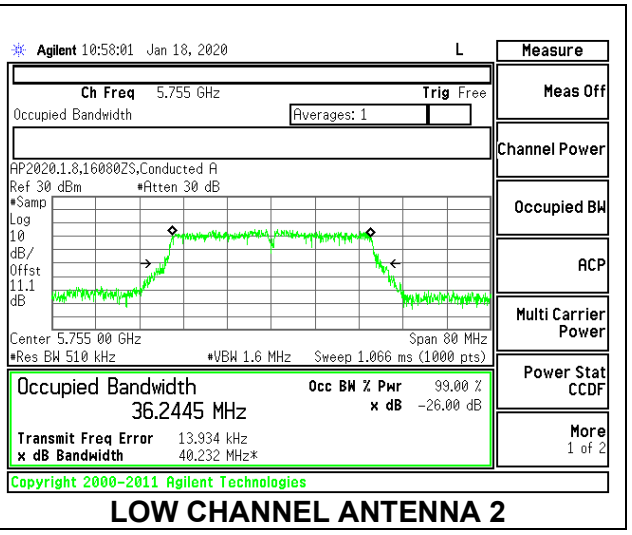
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low	5755	36.126	36.245
High	5795	36.099	36.145

LOW CHANNEL

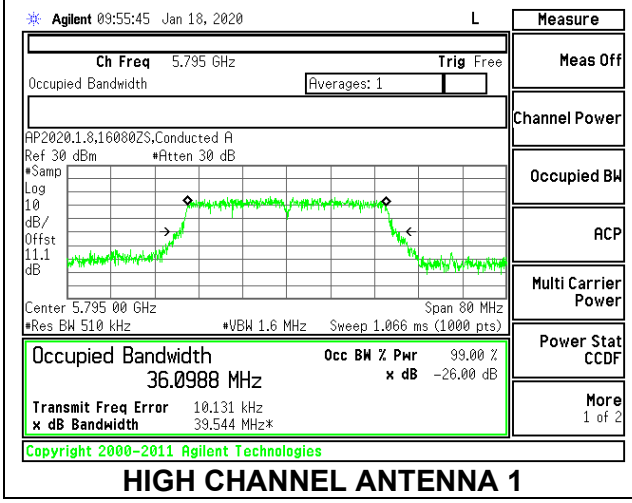


LOW CHANNEL ANTENNA 1

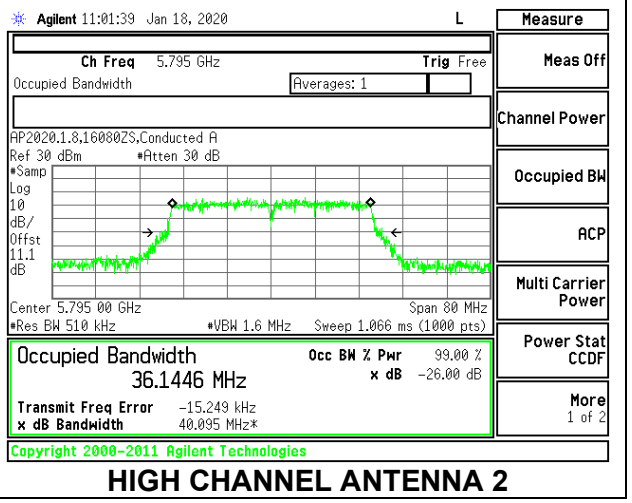


LOW CHANNEL ANTENNA 2

HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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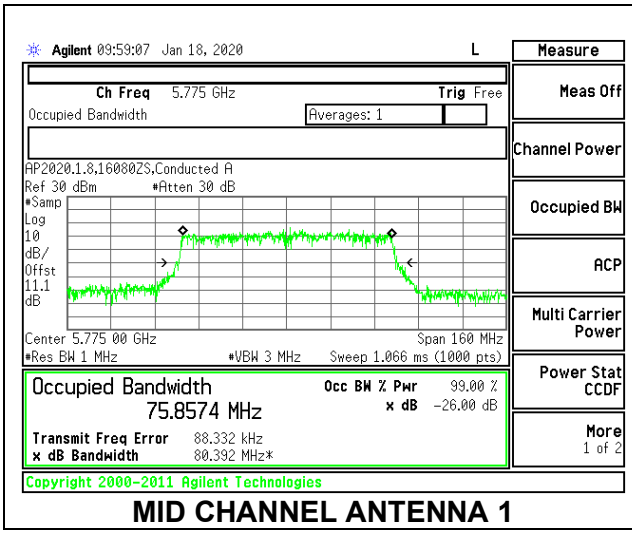
9.3.16. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

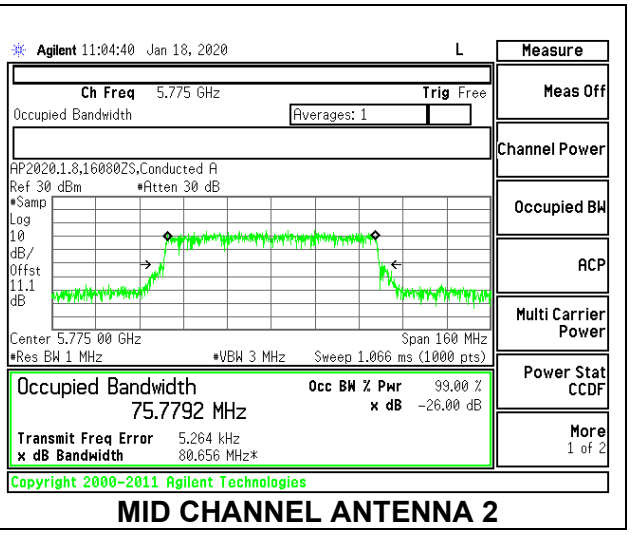
2TX Antenna 1 + Antenna 2 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Mid	5775	75.857	75.779

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

UL VERIFICATION SERVICES INC.
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9.4. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

RSS-247 6.2.4.1

The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

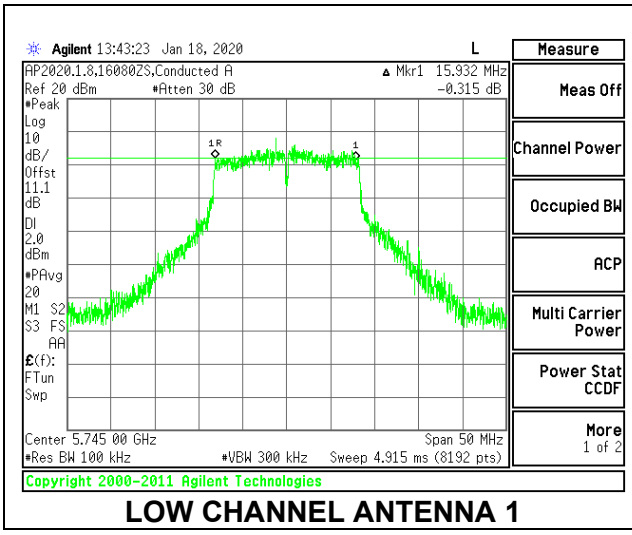
9.4.1. 802.11a MODE IN THE 5.8 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

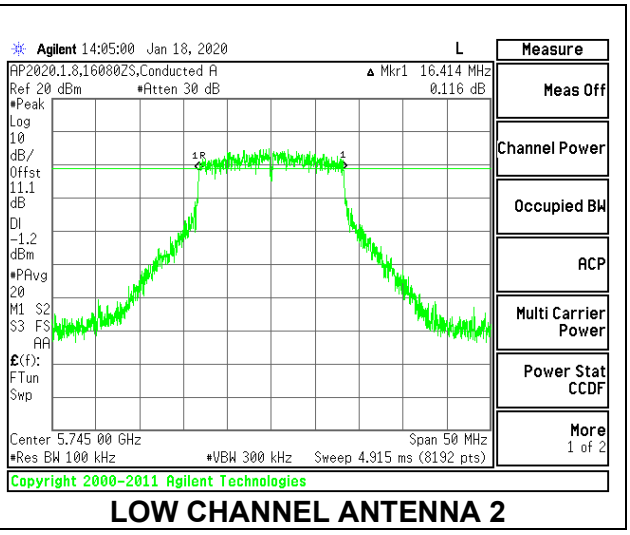
Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 2 (MHz)	Minimum Limit (MHz)
Low	5745	15.932	16.414	0.5
Mid	5785	16.347	16.317	0.5
High	5825	15.859	16.420	0.5
144	5720*	3.186	3.241	0.5

*Portion in UNII-3 Band

LOW CHANNEL

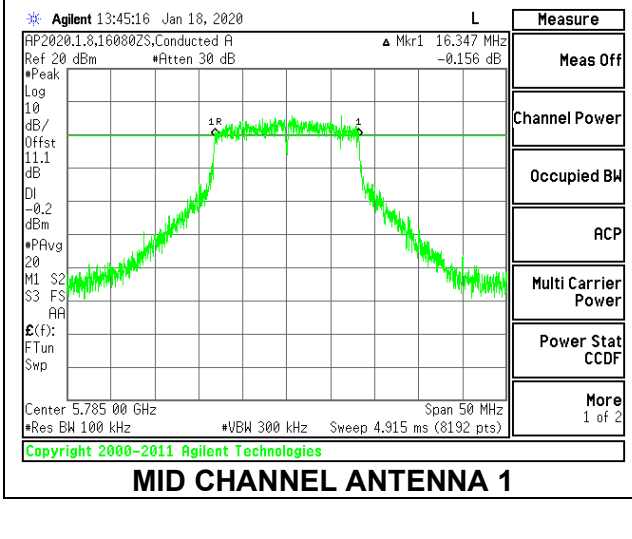


LOW CHANNEL ANTENNA 1

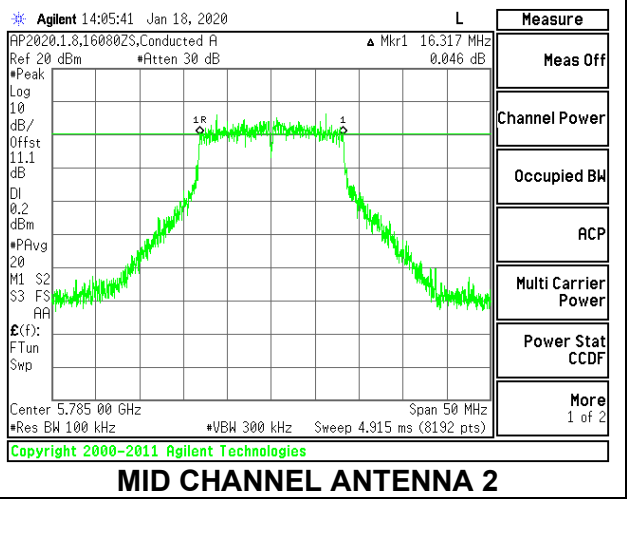


LOW CHANNEL ANTENNA 2

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

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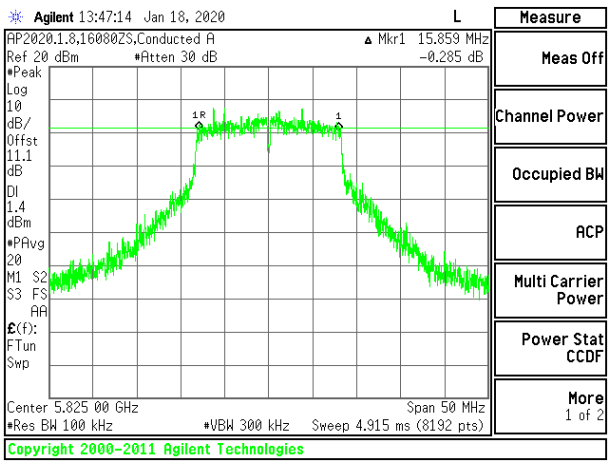
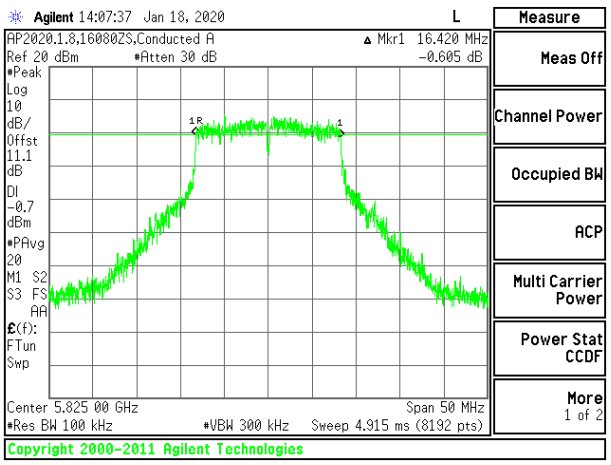
HIGH CHANNEL

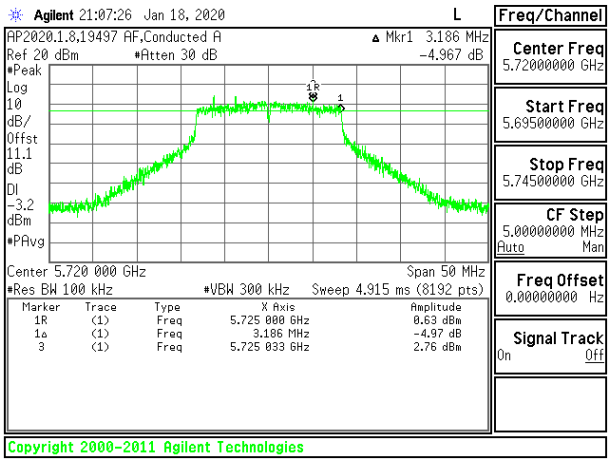


HIGH CHANNEL ANTENNA 1

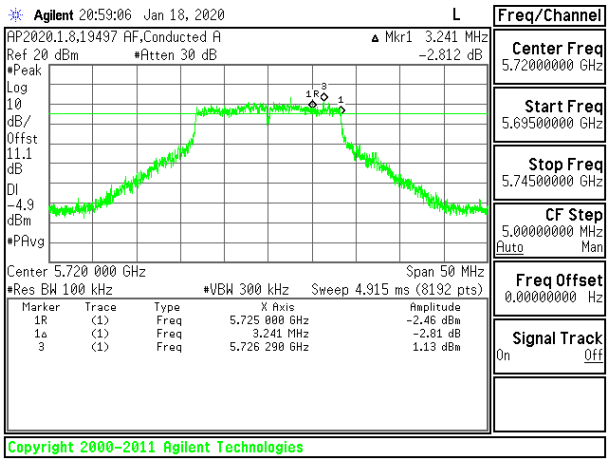


HIGH CHANNEL ANTENNA 2

CHANNEL 144



CHANNEL 144 ANTENNA 1



CHANNEL 144 ANTENNA 2

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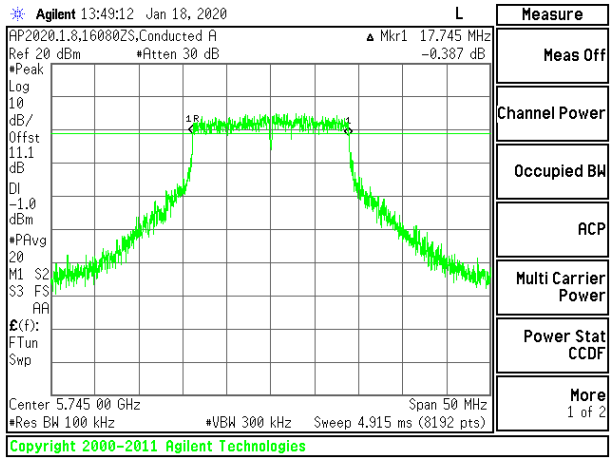
9.4.2. 802.11n HT20 MODE IN THE 5.8 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

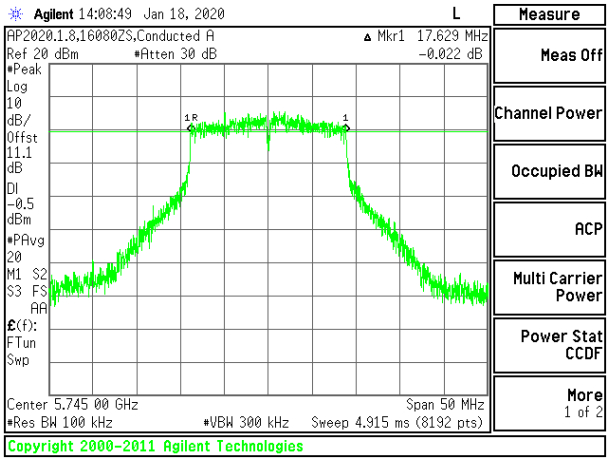
Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 2 (MHz)	Minimum Limit (MHz)
Low	5745	17.745	17.629	0.5
Mid	5785	16.781	17.702	0.5
High	5825	17.538	17.592	0.5
144	5720*	3.907	3.870	0.5

*Portion in UNII-3 Band

LOW CHANNEL

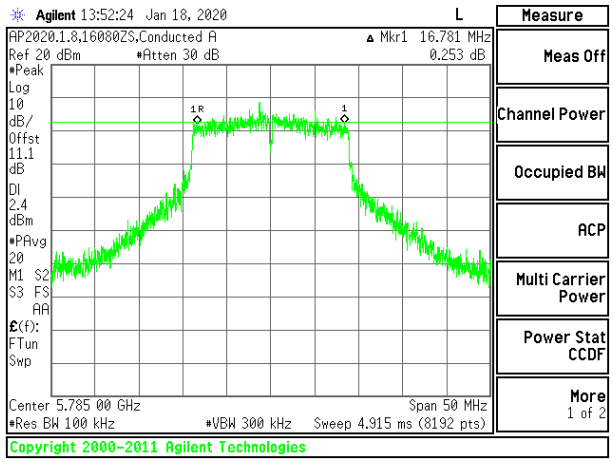


LOW CHANNEL ANTENNA 1

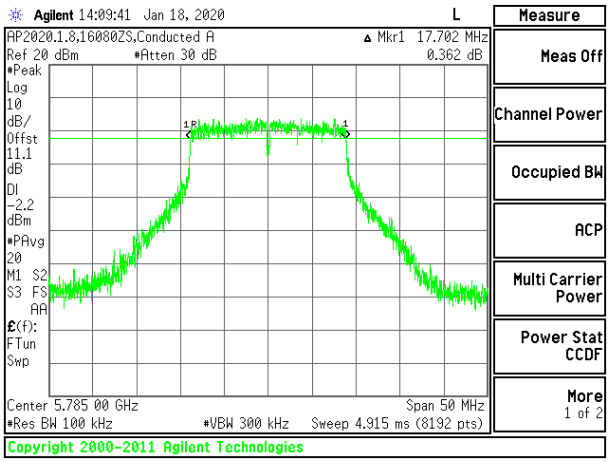


LOW CHANNEL ANTENNA 2

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

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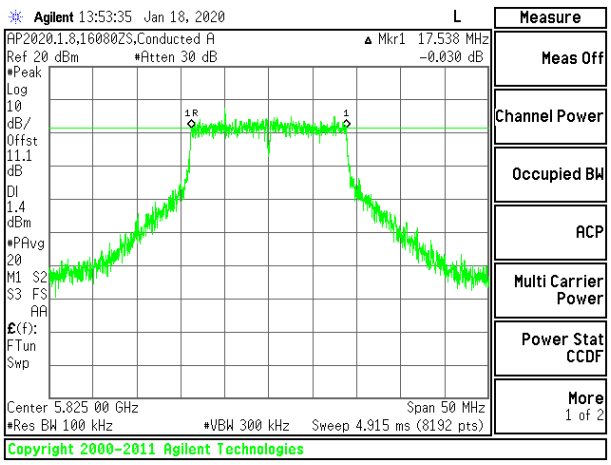
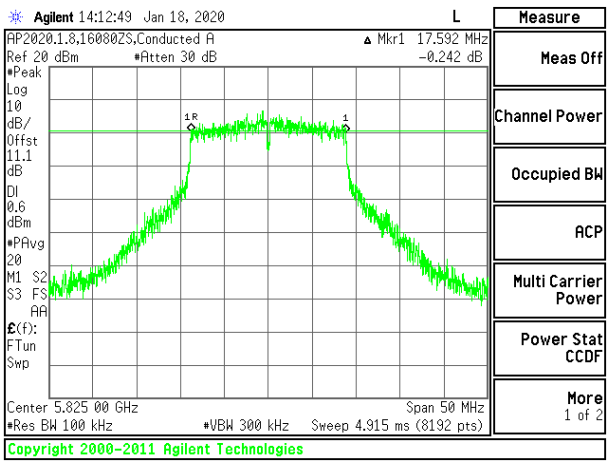
HIGH CHANNEL

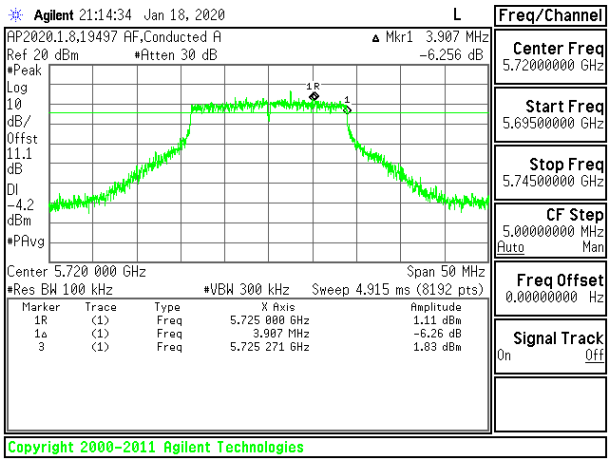


HIGH CHANNEL ANTENNA 1

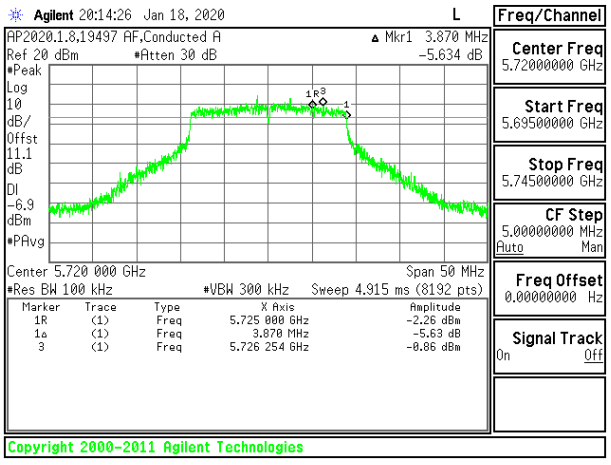


HIGH CHANNEL ANTENNA 2

CHANNEL 144



CHANNEL 144 ANTENNA 1



CHANNEL 144 ANTENNA 2

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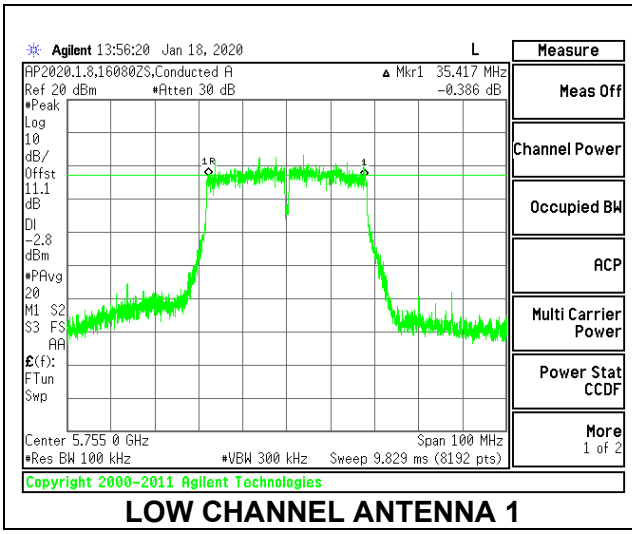
9.4.3. 802.11n HT40 MODE IN THE 5.8 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

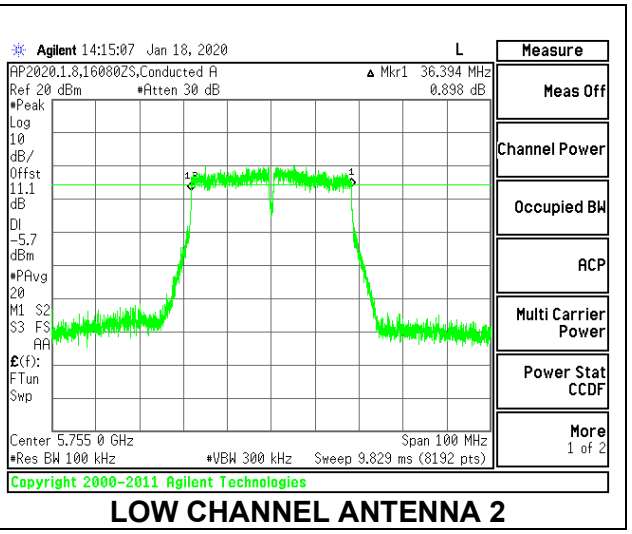
Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 2 (MHz)	Minimum Limit (MHz)
Low	5755	35.417	36.394	0.5
High	5795	36.320	36.333	0.5
142	5710	3.284	3.150	0.5

*Portion in UNII-3 Band

LOW CHANNEL

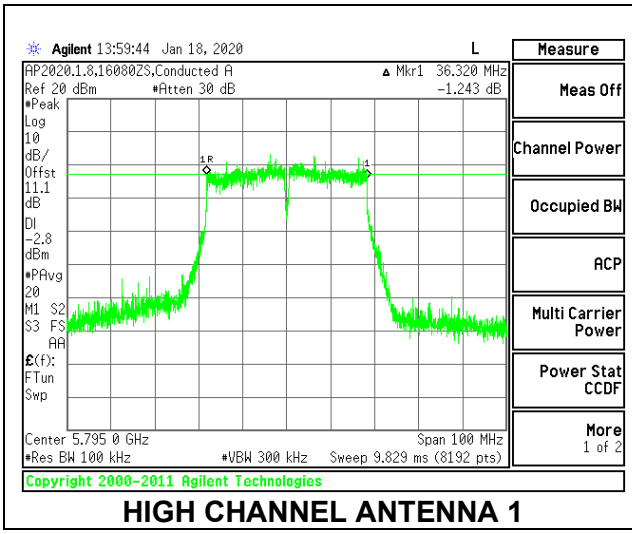


LOW CHANNEL ANTENNA 1

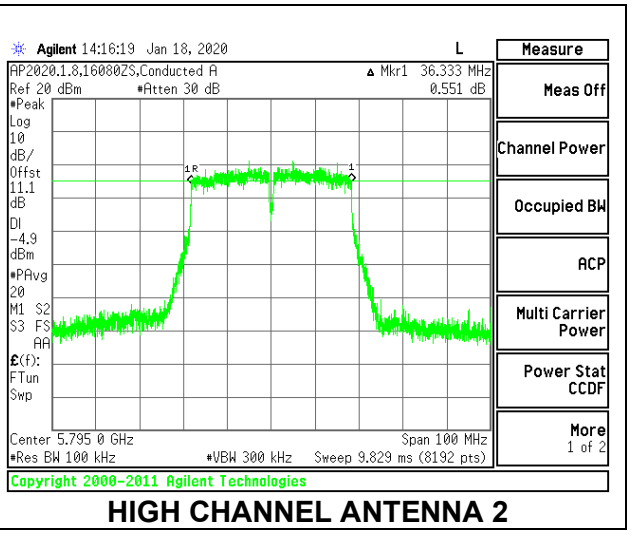


LOW CHANNEL ANTENNA 2

HIGH CHANNEL

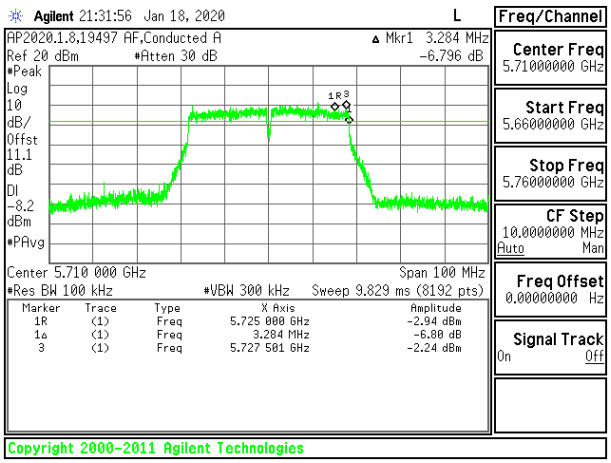


HIGH CHANNEL ANTENNA 1

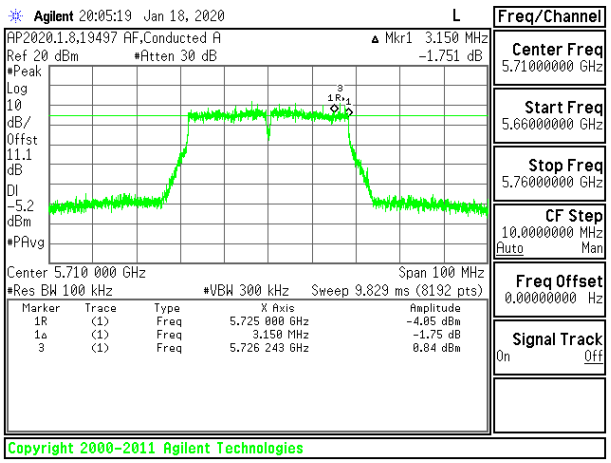


HIGH CHANNEL ANTENNA 2

CHANNEL 142



CHANNEL 142 ANTENNA 1



CHANNEL 142 ANTENNA 2

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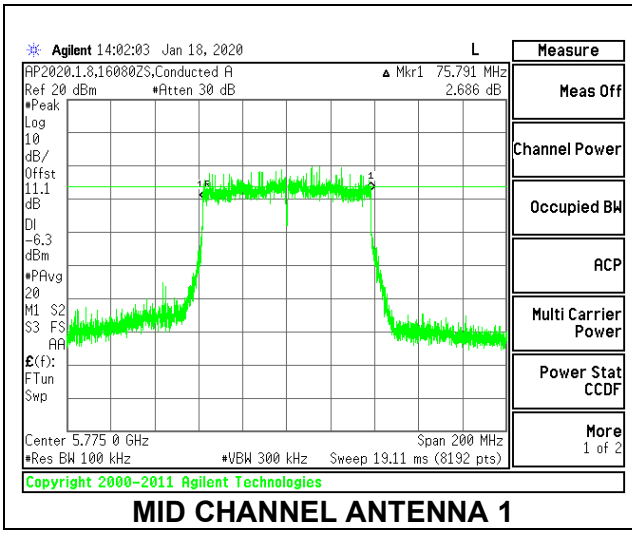
9.4.4. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

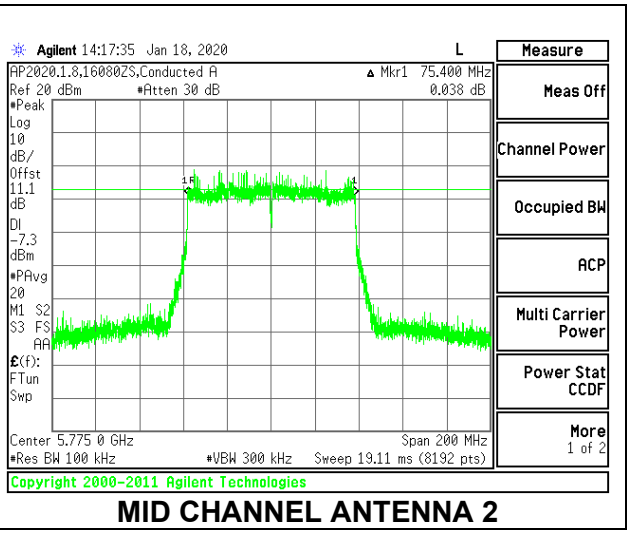
Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 2 (MHz)	Minimum Limit (MHz)
Mid	5775	75.791	75.400	0.5
138	5690*	3.223	3.272	0.5

*Portion in UNII-3 Band

MID CHANNEL

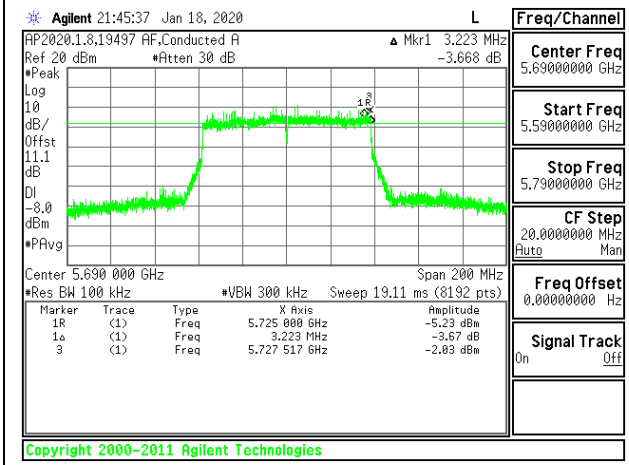


MID CHANNEL ANTENNA 1

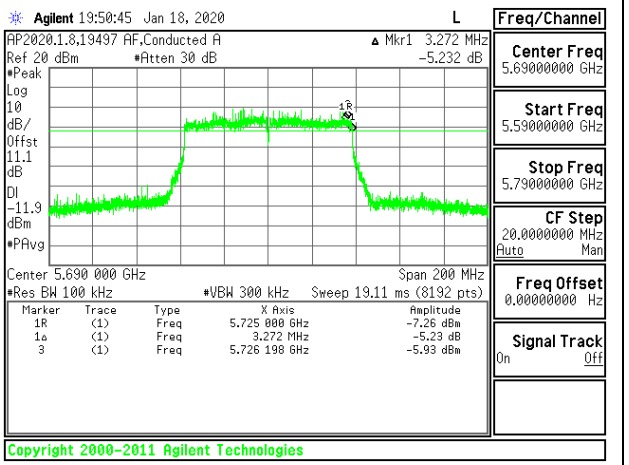


MID CHANNEL ANTENNA 2

CHANNEL 138



CHANNEL 138 ANTENNA 1



CHANNEL 138 ANTENNA 2

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9.5. OUTPUT POWER AND PSD

LIMITS

FCC §15.407

Band 5.15–5.25 GHz

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 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 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

(iv) For mobile and portable 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.

Bands 5.25-5.35 GHz and 5.47-5.725 GHz

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.

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Band 5.725-5.85 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.

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RSS-247

Band 5.15-5.25 GHz
The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B, 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.

Band 5.25-5.35 GHz
The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, 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.

Bands 5.47-5.6 GHz and 5.65-5.725 GHz
The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, 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.

Band 5.725-5.85 GHz
The maximum conducted output power shall not exceed 1 W. The 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 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 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.

TEST PROCEDURE

The measurement method used for output power is KDB 789033 D02 v02r01, Section E.3.b (Method PM-G) and for straddles channels KDB 789033 D02 v02r01, Section E.2.b (Method SA-1) was used.

The measurement method used for power spectral density is KDB 789033 D02 v02r01, Section F

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DIRECTIONAL ANTENNA GAIN

For 2 TX:

Tx chains are uncorrelated for power and correlated for PSD due to the device supporting CDD in all MIMO modes. The directional gains are as follows:

Band (GHz)	Ant 1 Antenna Gain (dBi)	Ant 2 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
5.2	0.60	0.50	0.55	3.56
5.3	1.30	1.10	1.20	4.21
5.6	1.70	1.40	1.55	4.56
5.8	1.40	1.20	1.30	4.31

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RESULTS

9.5.1. 802.11a MODE IN THE 5.2 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE (FCC+IC) MOBILE

Test Engineer:	40882 JC
Test Date:	04/15/2020

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)
Low	5180	16.4470	0.55	3.56
Mid	5200	16.3450	0.55	3.56
High	5240	16.4530	0.55	3.56

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED EIRP Limit (dBm)	Max ISED Power (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/ 1MHz)	ISED eirp PSD Limit (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)
Low	5180	24.00	22.16	21.61	21.61	11.00	10.00	6.44
Mid	5200	24.00	22.13	21.58	21.58	11.00	10.00	6.44
High	5240	24.00	22.16	21.61	21.61	11.00	10.00	6.44

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 1 Meas Power (dBm)	Ant 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	12.30	12.05	15.19	21.61	-6.42
Mid	5200	12.07	12.04	15.07	21.58	-6.52
High	5240	12.05	12.01	15.04	21.61	-6.57

PSD Results

Channel	Frequency (MHz)	Ant 1 Meas PSD (dBm/ 1MHz)	Ant 2 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5180	2.21	2.12	5.18	6.44	-1.26
Mid	5200	2.16	2.06	5.12	6.44	-1.32
High	5240	2.33	2.05	5.20	6.44	-1.24

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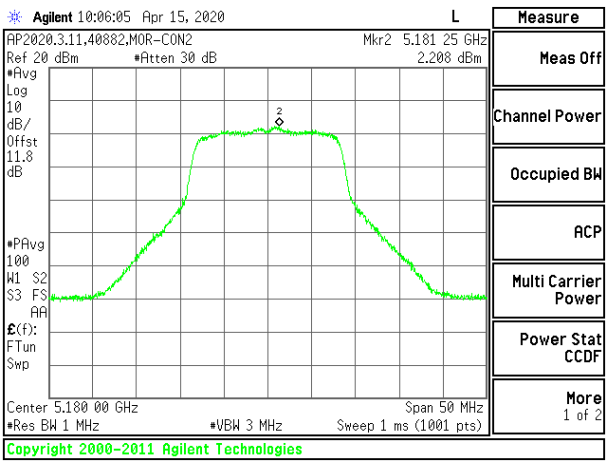
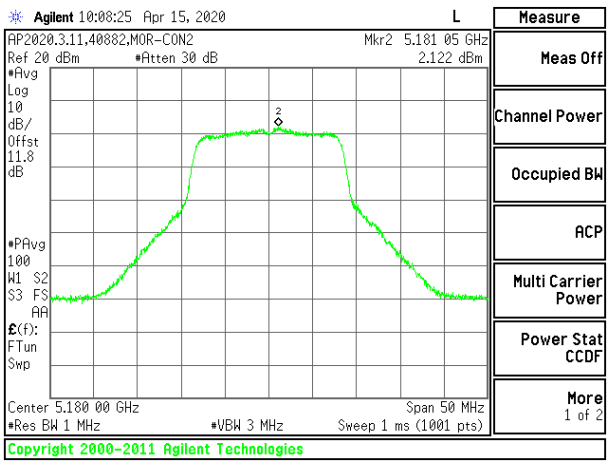
LOW CHANNEL

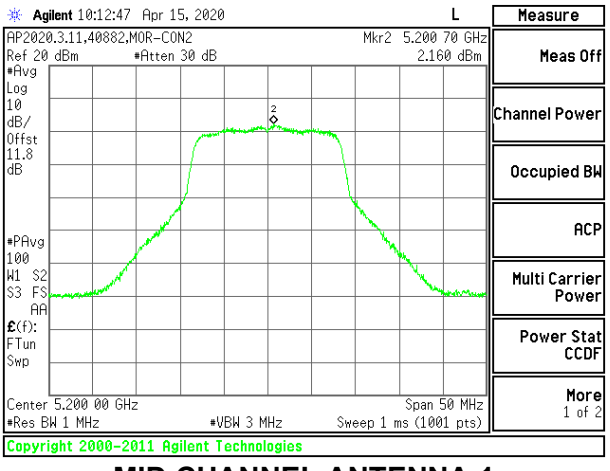


LOW CHANNEL ANTENNA 1

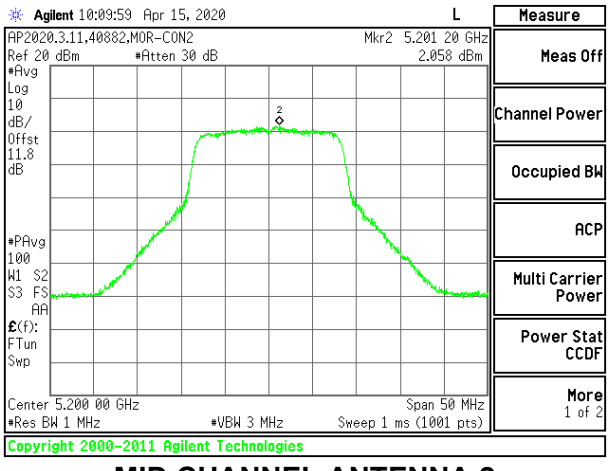


LOW CHANNEL ANTENNA 2

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

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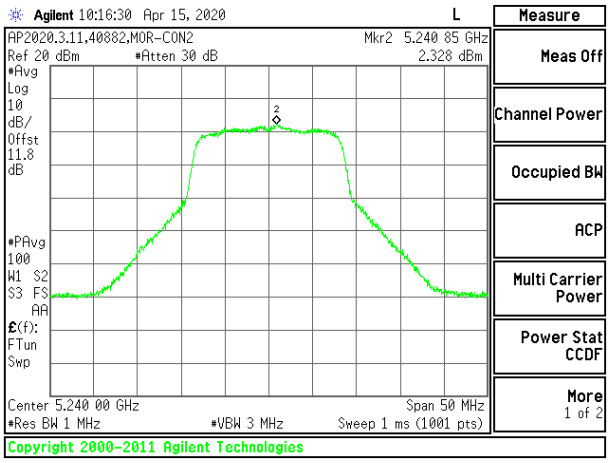
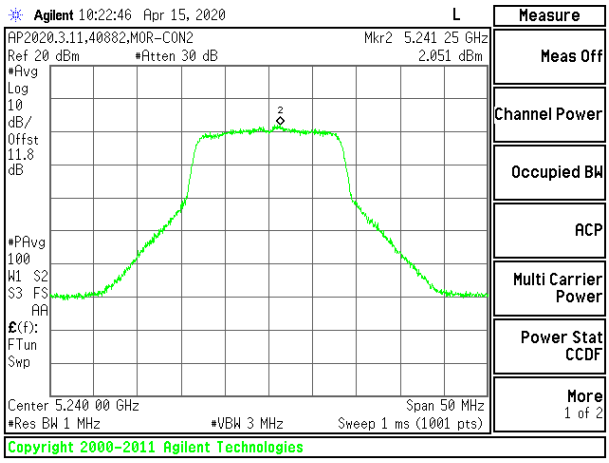
HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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9.5.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE (FCC+IC) MOBILE

Test Engineer:	40882 JC
Test Date:	04/15/2020

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)
Low	5180	17.619	0.55	3.56
Mid	5200	17.657	0.55	3.56
High	5240	17.642	0.55	3.56

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED EIRP Limit (dBm)	Max ISED Power (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/ 1MHz)	ISED eirp PSD Limit (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)
Low	5180	24.00	22.46	21.91	21.91	11.00	10.00	6.44
Mid	5200	24.00	22.47	21.92	21.92	11.00	10.00	6.44
High	5240	24.00	22.47	21.92	21.92	11.00	10.00	6.44

Duty Cycle CF (dB)	0.09	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 1 Meas Power (dBm)	Ant 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	13.12	13.14	16.14	21.91	-5.77
Mid	5200	13.38	13.15	16.28	21.92	-5.64
High	5240	12.82	12.81	15.83	21.92	-6.09

PSD Results

Channel	Frequency (MHz)	Ant 1 Meas PSD (dBm/ 1MHz)	Ant 2 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5180	2.13	2.39	5.36	6.44	-1.08
Mid	5200	1.97	2.37	5.28	6.44	-1.16
High	5240	1.95	2.44	5.30	6.44	-1.14

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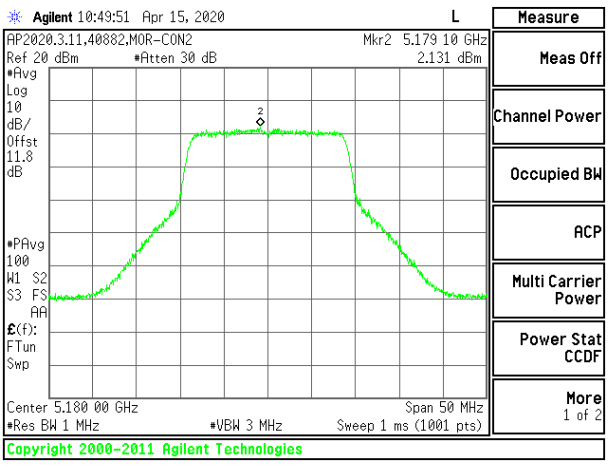
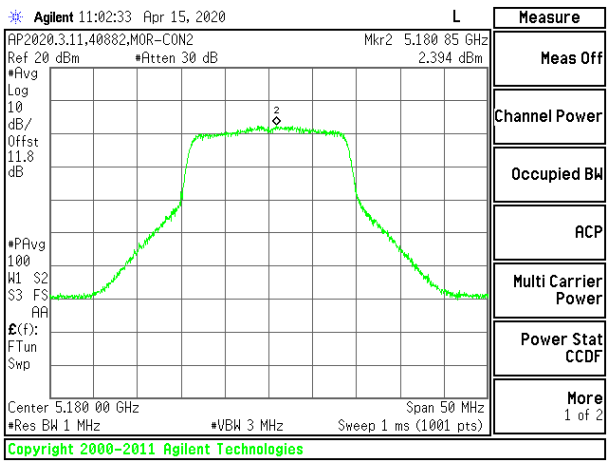
LOW CHANNEL

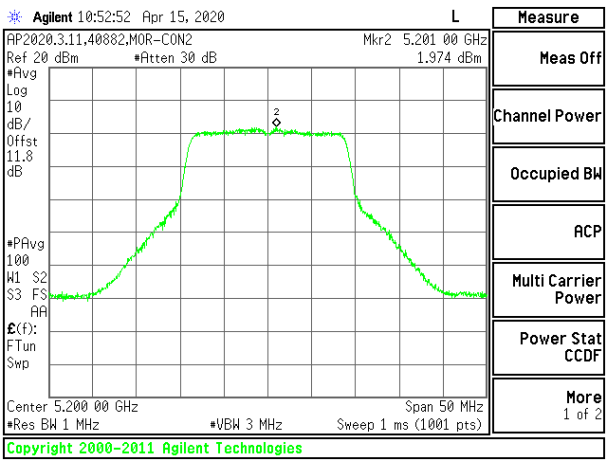


LOW CHANNEL ANTENNA 1

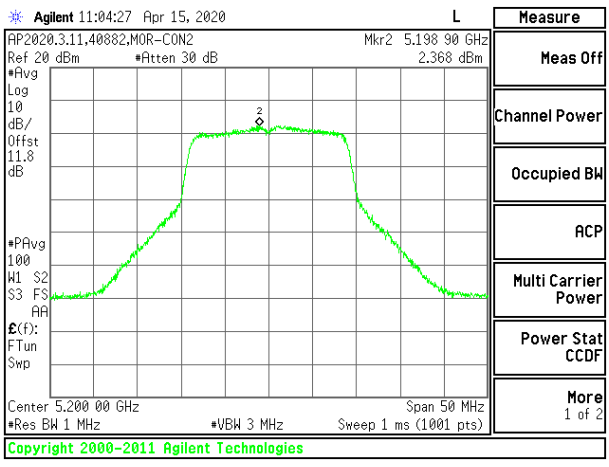


LOW CHANNEL ANTENNA 2

MID CHANNEL



MID CHANNEL ANTENNA 1



MID CHANNEL ANTENNA 2

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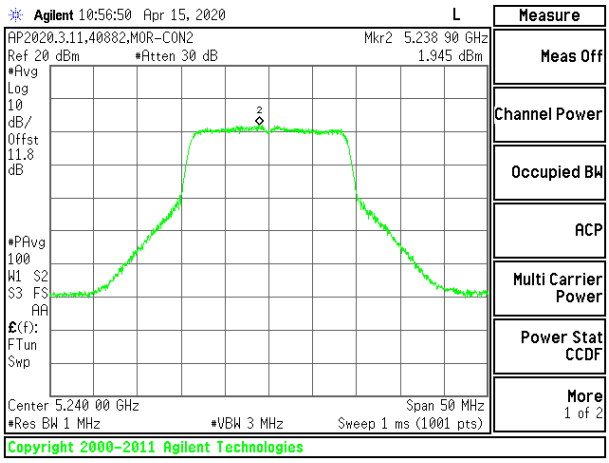
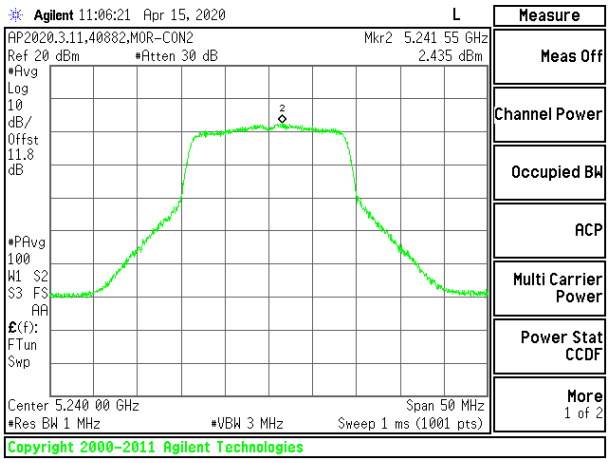
HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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9.5.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE (FCC+IC) MOBILE

Test Engineer:	40882 JC
Test Date:	04/15/2020

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)
Low	5190	36.048	0.55	3.56
High	5230	36.093	0.55	3.56

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED EIRP Limit (dBm)	Max ISED Power (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/ 1MHz)	ISED eirp PSD Limit (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)
Low	5190	24.00	23.00	22.45	22.45	11.00	10.00	6.44
High	5230	24.00	23.00	22.45	22.45	11.00	10.00	6.44

Duty Cycle CF (dB)	0.18	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 1 Meas Power (dBm)	Ant 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	13.16	12.87	16.03	22.45	-6.42
High	5230	13.40	13.32	16.37	22.45	-6.08

PSD Results

Channel	Frequency (MHz)	Ant 1 Meas PSD (dBm/ 1MHz)	Ant 2 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5190	0.78	1.16	4.17	6.44	-2.27
High	5230	1.60	0.79	4.40	6.44	-2.04

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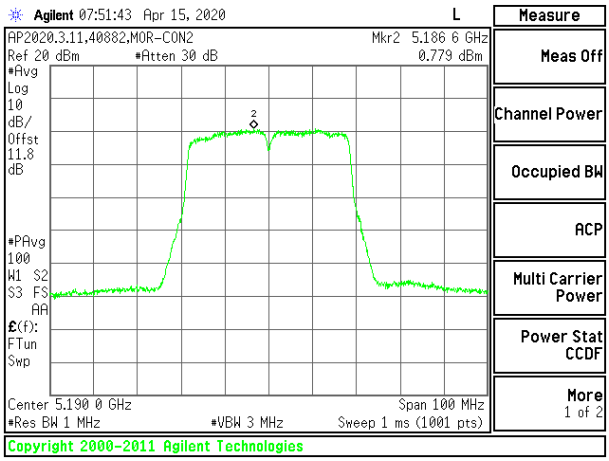
LOW CHANNEL



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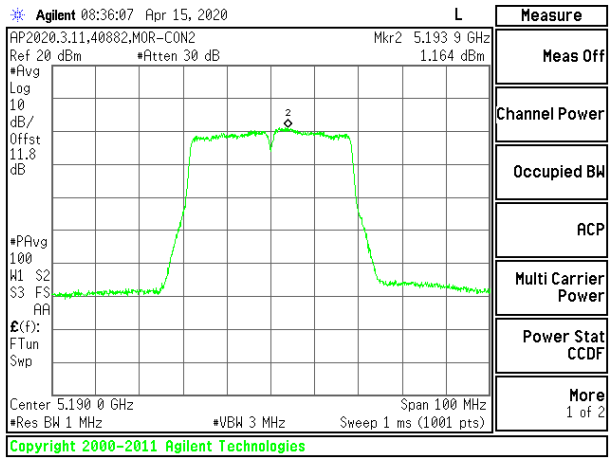
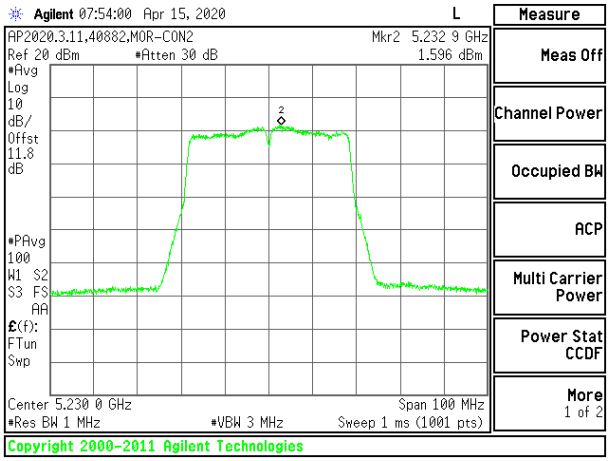
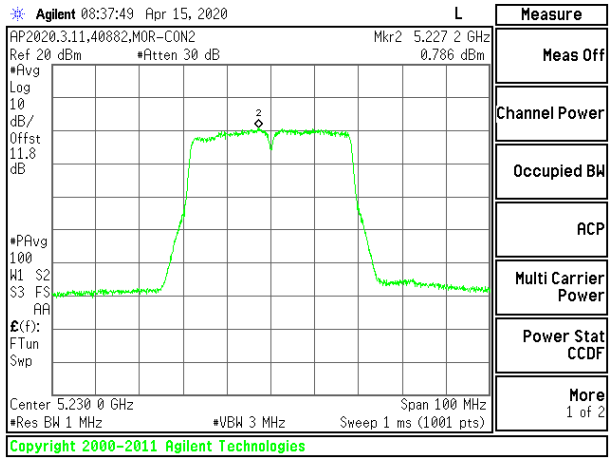


LOW CHANNEL ANTENNA 2

HIGH CHANNEL



HIGH CHANNEL ANTENNA 1



HIGH CHANNEL ANTENNA 2

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9.5.4. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE (FCC+IC) MOBILE

Test Engineer:	40882 JC
Test Date:	04/15/2020

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)
Mid	5210	75.419	0.55	3.56

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	ISED EIRP Limit (dBm)	Max ISED Power (dBm)	Power Limit (dBm)	FCC PSD Limit (dBm/ 1MHz)	ISED eirp PSD Limit (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)
Mid	5210	24.00	23.00	22.45	22.45	11.00	10.00	6.44

Duty Cycle CF (dB)	0.33	**Included in Calculations of Corr'd Power & PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 1 Meas Power (dBm)	Ant 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5210	13.01	13.32	16.18	22.45	-6.27

PSD Results

Channel	Frequency (MHz)	Ant 1 Meas PSD (dBm/ 1MHz)	Ant 2 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Mid	5210	-2.18	-2.68	0.92	6.44	-5.52

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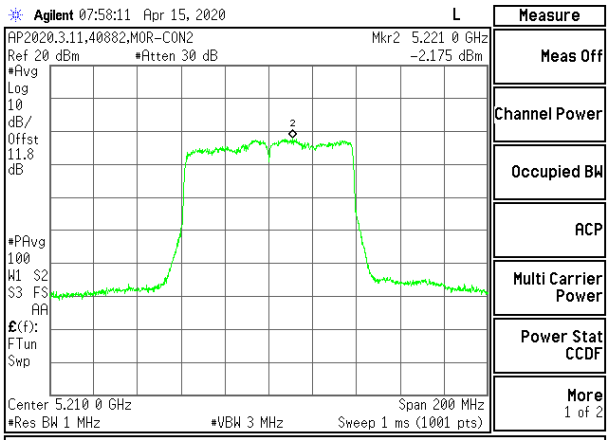
MID CHANNEL



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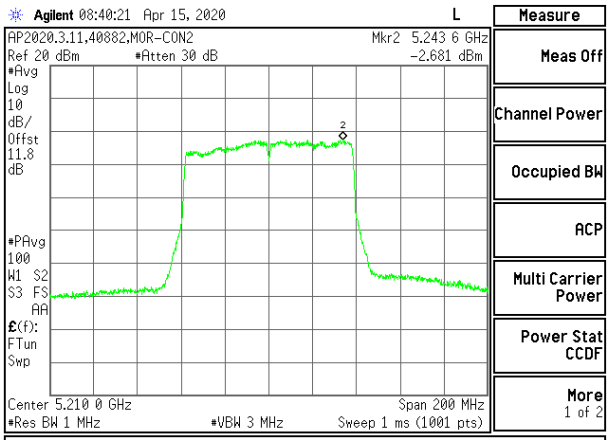

MID CHANNEL ANTENNA 2

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9.5.5. 802.11a MODE IN THE 5.3 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE (FCC)

Test Engineer:	19497 AF & 40882 JC
Test Date:	03/13/2020 & 4/15/2020

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5260	20.45	1.20	4.21	24.00	11.00
Mid	5300	20.65	1.20	4.21	24.00	11.00
High	5320	20.35	1.20	4.21	24.00	11.00

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 1 Meas Power (dBm)	Ant 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	15.09	14.64	17.88	24.00	-6.12
Mid	5300	15.12	15.35	18.25	24.00	-5.75
High	5320	15.05	15.24	18.16	24.00	-5.84

PSD Results

Channel	Frequency (MHz)	Ant 1 Meas PSD (dBm/1MHz)	Ant 2 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5260	6.27	6.24	9.27	11.00	-1.73
Mid	5300	6.44	6.44	9.45	11.00	-1.55
High	5320	6.62	6.40	9.52	11.00	-1.48

PSD Results were performed at an output power that is greater than the measured output power thus worst case and provides margin to the limit.

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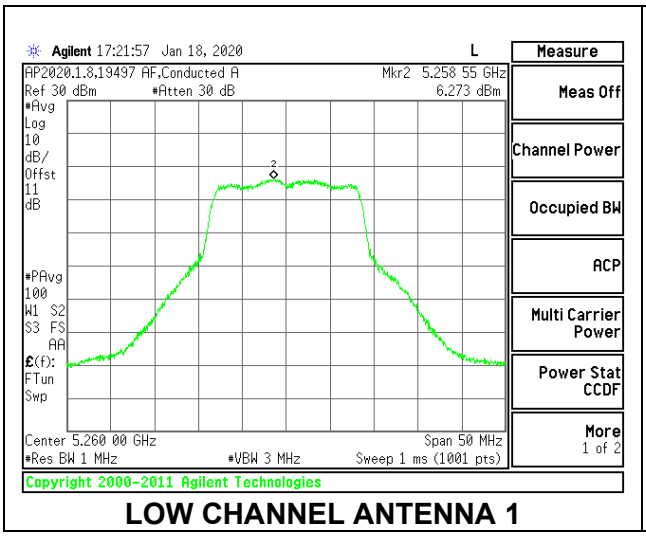
LOW CHANNEL



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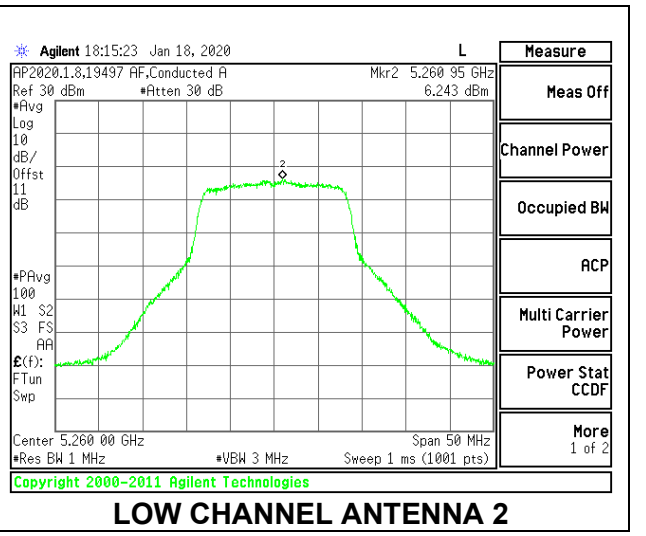
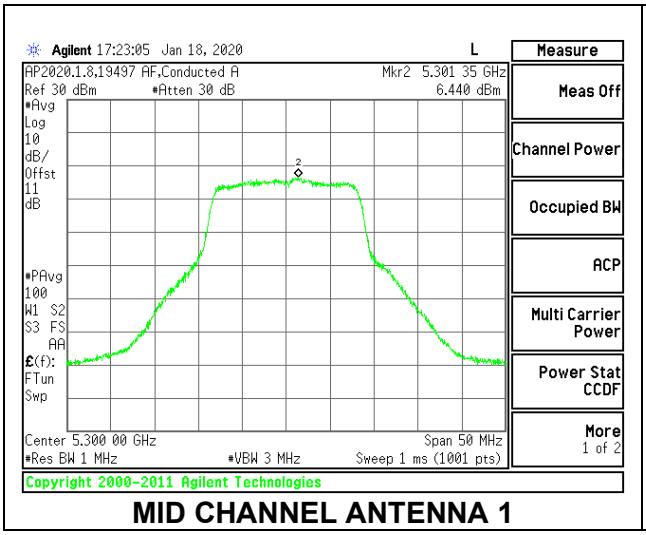


LOW CHANNEL ANTENNA 2

MID CHANNEL



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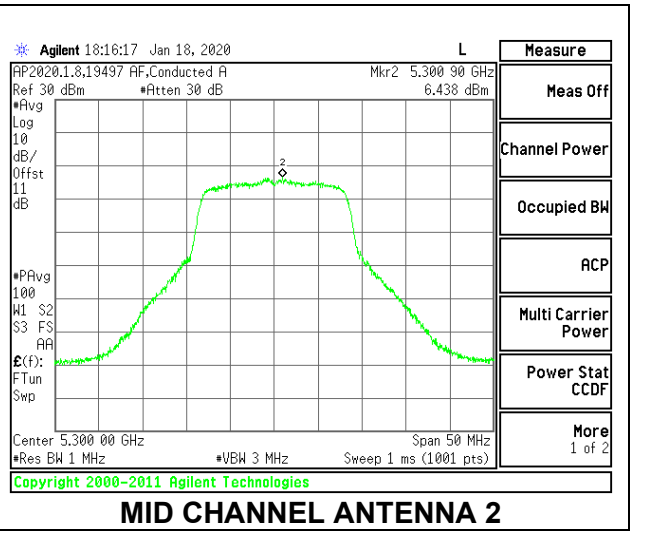

MID CHANNEL ANTENNA 2

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