



# TEST REPORT

**Report Number:** 13911916-E5V2

**Applicant :** APPLE INC.  
1 APPLE PARK WAY  
CUPERTINO, CA 95014, U.S.A.

**Model :** A2595 (Parent Mode, FULL Test)  
A2782, A2783, A2784, A2785 (Variant Models)

**FCC ID :** BCG-E4082A (Parent Model)  
BCG-E8064A, BCG-E4083A, BCG-E8076A (Variant Models)

**EUT Description :** SMARTPHONE

**Test Standard(s) :** FCC 47 CFR PART 15 SUBPART E

**Date of Issue:**  
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## REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	1/28/2022	Initial Issue	Francisco Guarnero
V2	2/7/2022	Address TCB's questions on cover page and page 9.	Chin Pang

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## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** APPLE INC.  
1 APPLE PARK WAY  
CUPERTINO, CA 95014, U.S.A.

**EUT DESCRIPTION:** SMARTPHONE

**MODEL:** A2595 (Parent Model)  
A2782, A2783, A2784, A2785 (Variant Models)

**BRAND:** APPLE

**FCC ID:** BCG-E4082A (Parent Model)  
BCG-E8064A, BCG-E4083A, BCG-E8076A (Variant Models)

**SERIAL NUMBER:** DT23CMFDH2

**SAMPLE RECEIPT DATE:** SEPTEMBER 15, 2021

**DATE TESTED:** SEPTEMBER 15, 2021 – JANUARY 27, 2022

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart E	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 A2LA, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For  
UL Verification Services Inc. By:



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UL Verification Services Inc.

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## 2. TEST RESULT SUMMARY

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for the validity of results after the integration of the data provided by the customer.

FCC Clause	Requirement	Result	Comment
See Comment	Duty Cycle	Reporting purposes only	Per ANSI C63.10, Section 12.2.
See Comment	26dB BW 99% OBW	Reporting purposes only	Per ANSI C63.10 Sections 6.9.2 and 6.9.3
15.407 (e)	6 dB BW	Complies	None.
15.407 (a) (1-4), (h) (1)	Output Power	Complies	None.
15.407 (a) (1-3, 5)	PSD	Complies	None.
15.209, 15.205, 15.407 (b)	Radiated Emissions	Complies	None.
15.207	AC Mains Conducted Emissions	Complies	None.

## 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 789033 D02 v02r01
- ANSI C63.10-2013
- KDB 414788 D01 Radiated Test Site v01r01

## 4. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by A2LA, certification #0751.05, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
<input checked="" type="checkbox"/>	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	550739
<input checked="" type="checkbox"/>	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA	US0104	22541	550739
<input checked="" type="checkbox"/>	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA	US0104	2324B	550739

## 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	3.78 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 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 (dB<sub>V/m</sub>) = Measured Voltage (dB<sub>uV</sub>) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

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

#### MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dB<sub>uV</sub>) = Measured Voltage (dB<sub>uV</sub>) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.

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

## 6. EQUIPMENT UNDER TEST

### 6.1. EUT DESCRIPTION

The Apple iPhone is a smartphone with multimedia functions (music, application support, and video), cellular GSM, GPRS, EGPRS, UMTS, LTE, 5G FR1, IEEE 802.11a/b/g/n/ac/ax, Bluetooth, GPS and NFC. All models support at least one UICC based SIM. The second SIM is an UICC based e-SIM (electronic SIM) in some models. China model has 1 p-SIM only. The device supports a built-in inductive charging receiver. The rechargeable battery is not user accessible.

Testing was performed on the parent model and is used to support the application for the parent and variants identified in this report based on the test plan submitted and approved via KDB inquiry by the FCC and by ISED-Canada.

The Model and FCC ID covered by this report includes:

Parent Model: A2595, FCC ID: BCG-E4082A

Variant Models: A2782, FCC ID: BCG-E8064A,  
A2783; FCC ID: BCG-E4083A  
A2784, A2785, FCC ID: BCG-E8076A,

### 6.2. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna Type is IFA.

The antennas' gains, as provided by the manufacturer, are as follows:

Frequency Range (GHz)	Antenna 6 (dBi)	Antenna 3 (dBi)
5150-5250	-1.4	-2.1
5250-5350	-2.1	-0.7
5500-5700	-1.3	-0.5
5725-5825	-1.6	-0.1

### 6.3. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was WiFi FW Version: 20.86.1.6.

## 6.4. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

### 5.2 GHz BAND (FCC)

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
<b>5.2 GHz band, 1TX</b>			
5180-5240	802.11a	Covered by 802.11n HT20 1TX	
5180-5240	802.11n HT20	19.48	88.72
5190-5230	802.11n HT40	20.22	105.20
5180-5240	802.11ac VHT20	Covered by 802.11n HT20 1TX	
5190-5230	802.11ac VHT40	Covered by 802.11n HT40 1TX	
5210	802.11ac VHT80	15.27	33.65
5180-5240	802.11ax HE20	19.74	94.19
5190-5230	802.11ax HE40	20.33	107.89
5210	802.11ax HE80	13.95	24.83
<b>5.2 GHz band, 2TX</b>			
5180-5240	802.11n HT20 CDD	19.55	90.16
5180-5240	802.11n HT20 SDM/STBC	Covered by 802.11n HT20 2TX CDD	
5190-5230	802.11n HT40 CDD	22.20	165.96
5190-5230	802.11n HT40 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5180-5240	802.11ac VHT20 SDM/STBC/CDD	Covered by 802.11n HT20 2TX CDD	
5190-5230	802.11ac VHT40 SDM/STBC/CDD	Covered by 802.11n HT40 2TX CDD	
5210	802.11ac VHT80 CDD	17.90	61.66
5210	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5180-5240	802.11ax HE20 OFDMA	19.71	93.54
5190-5230	802.11ax HE40 OFDMA	22.22	166.72
5210	802.11ax HE80 OFDMA	16.41	43.75

**5.3 GHz BAND (FCC)**

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
<b>5.3 GHz band, 1TX</b>			
5260 - 5320	802.11a	Covered by 802.11n HT20 1TX	
5260 - 5320	802.11n HT20	19.21	83.37
5270 - 5310	802.11n HT40	20.33	107.89
5260 - 5320	802.11ac VHT20	Covered by 802.11n HT20 1TX	
5270 - 5310	802.11ac VHT40	Covered by 802.11n HT40 1TX	
5290	802.11ac VHT80	15.88	38.73
5260 - 5320	802.11ax HE20	19.53	89.74
5270 - 5310	802.11ax HE40	20.30	107.15
5290	802.11ax HE80	14.34	27.16
<b>5.3 GHz band, 2TX</b>			
5260 - 5320	802.11n HT20 CDD	19.22	83.56
5260 - 5320	802.11n HT20 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5270 - 5310	802.11n HT40 CDD	22.22	166.72
5270 - 5310	802.11n HT40 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5260 - 5320	802.11ac VHT20 SDM/STBC/CDD	Covered by 802.11n HT20 2TX CDD	
5270 - 5310	802.11ac VHT40 SDM/STBC/CDD	Covered by 802.11n HT40 2TX CDD	
5290	802.11ac VHT80 CDD	18.40	69.18
5290	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5260 - 5320	802.11ax HE20 OFDMA	19.49	88.92
5270 - 5310	802.11ax HE40 OFDMA	22.20	165.96
5290	802.11ax HE80 OFDMA	16.70	46.77

**5.6 GHz BAND (FCC)**

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
<b>5.6 GHz band, 1TX</b>			
5500-5720	802.11a	Covered by 802.11n HT20 1TX	
5500-5720	802.11n HT20	19.24	83.95
5510-5710	802.11n HT40	20.30	107.15
5500-5720	802.11ac VHT20	Covered by 802.11n HT20 1TX	
5510-5710	802.11ac VHT40	Covered by 802.11n HT40 1TX	
5530-5690	802.11ac VHT80	21.40	138.04
5500-5720	802.11ax HE20	19.73	93.97
5510-5710	802.11ax HE40	20.35	108.39
5530-5690	802.11ax HE80	21.36	136.77
<b>5.6 GHz band, 2TX</b>			
5500-5720	802.11n HT20 CDD	19.48	88.72
5500-5720	802.11n HT20 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5510-5710	802.11n HT40 CDD	22.22	166.72
5510-5710	802.11n HT40 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5500-5720	802.11ac VHT20 SDM/STBC/CDD	Covered by 802.11n HT20 2TX CDD	
5510-5710	802.11ac VHT40 SDM/STBC/CDD	Covered by 802.11n HT40 2TX CDD	
5530-5690	802.11ac VHT80 CDD	22.70	186.21
5530-5690	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5500-5720	802.11ax HE20 OFDMA	19.71	93.54
5510-5710	802.11ax HE40 OFDMA	22.45	175.79
5530-5690	802.11ax HE80 OFDMA	22.66	184.50

**5.8 GHz BAND (FCC)**

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
<b>5.8 GHz band, 1TX</b>			
5745-5825	802.11a	Covered by 802.11n HT20 1TX	
5745-5825	802.11n HT20	21.30	134.90
5755-5795	802.11n HT40	20.24	105.68
5745-5825	802.11ac VHT20	Covered by 802.11n HT20 1TX	
5755-5795	802.11ac VHT40	Covered by 802.11n HT40 1TX	
5775	802.11ac VHT80	21.23	132.74
5745-5825	802.11ax HE20	21.33	135.83
5755-5795	802.11ax HE40	20.44	110.66
5775	802.11ax HE80	21.49	140.93
<b>5.8 GHz band, 2TX</b>			
5745-5825	802.11n HT20 CDD	24.22	264.24
5745-5825	802.11n HT20 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5755-5795	802.11n HT40 CDD	23.30	213.80
5755-5795	802.11n HT40 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5745-5825	802.11ac VHT20 STM/STBC/CDD	Covered by 802.11n HT20 2TX CDD	
5755-5795	802.11ac VHT40 STM/STBC/CDD	Covered by 802.11n HT40 2TX CDD	
5775	802.11ac VHT80 CDD	24.25	266.07
5775	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5745-5825	802.11ax HE20 OFDMA	24.29	268.53
5755-5795	802.11ax HE40 OFDMA	23.28	212.81
5775	802.11ax HE80 OFDMA	24.33	271.02

## 6.5. WORST-CASE CONFIGURATION AND MODE

The fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z on ANT 6, ANT 3 and 2TX. It was determined that Y (Landscape) orientation was the worst-case orientation for ANT 6, ANT3, and 2TX.

IEEE 802.11 ax modes were used to perform on radiated harmonic spurious final test to cover all modes since it has widest bandwidth modulation, highest power density and power tuned to maximum based on among all the modes. For testing purposes, radiated harmonics spurious below 1GHz, 1-18GHz L/M/H channels, 18-40GHz, and power line conducted emissions were performed with the EUT set at the 2TX CDD mode among the CDD/SDM modes with power setting equal or higher than FCC conducted SISO modes as worst-case scenario.

For Radiated band edge test all test modes have been investigated with power setting equal or higher than FCC conducted SISO modes as worst-case scenario.

Below 1GHz tests were performed with EUT connected to AC power adapter as the worst case; and for above 1GHz, the worst-case configuration reported was tested with EUT only. For AC line conducted emission, test was investigated with AC power adapter and with laptop. There were no emissions found below 30MHz within 20dB of the limit.

Simultaneous transmission with the bluetooth was investigated, and no noticeable emission was found.

The output power and psd for the IEEE 802.11 ax mode were investigated between all different tones, and we found that SU mode had the highest output power and the lowest tone had the highest PSD readings. And after investigation, antenna port conducted tests were performed on both SU and lowest tones; radiated spurious emission and radiated band edge tests were performed on full RU and lowest tones.

Low data rate was used to test on antenna port conducted tests and radiated spurious emissions since it has the highest maximum power. For radiated bandedge, the following are the worst-case data rates set for test:

802.11n HT20 mode: MCS7

802.11n HT40 mode: MCS7

802.11ac VHT80 mode: MCS9

802.11ax HE20/HE40/HE80 FULL Tones RU & 26 Tones RU: MCS11 and SU mode

There are two vendors of the WiFi/Bluetooth radio modules: Variant 1 and Variant 2. The WiFi/Bluetooth radio modules have the same mechanical outline (e.g., the same package dimension and pin-out layout), use the same on-board antenna matching circuit, have an identical antenna structure, and are built and tested to conform to the same specifications and to operate within the same tolerances. Baseline testing was performed on the two variants to determine the worst case on all conducted power and radiated emissions.

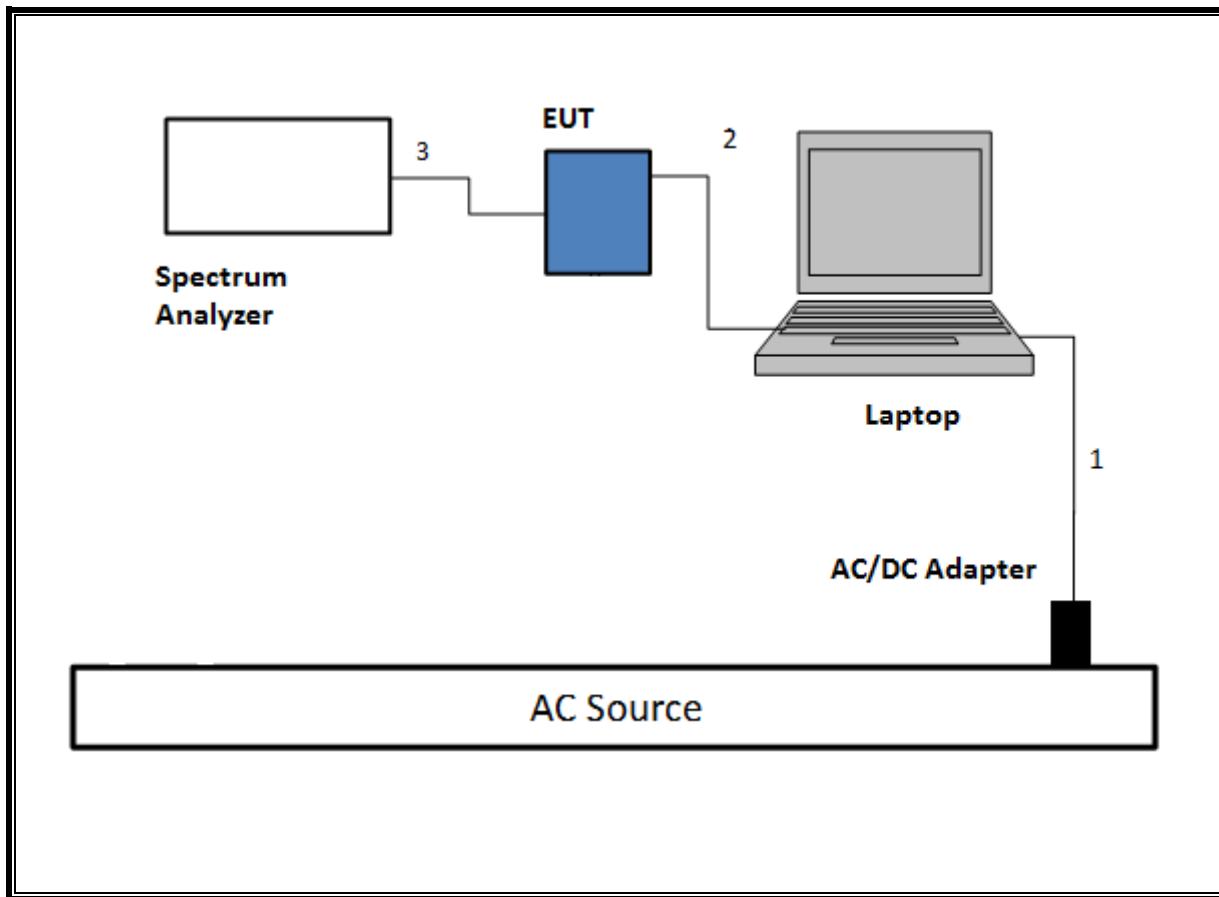
Baseline testing was performed on the two variants to determine the worst case on all conducted power and radiated emissions.

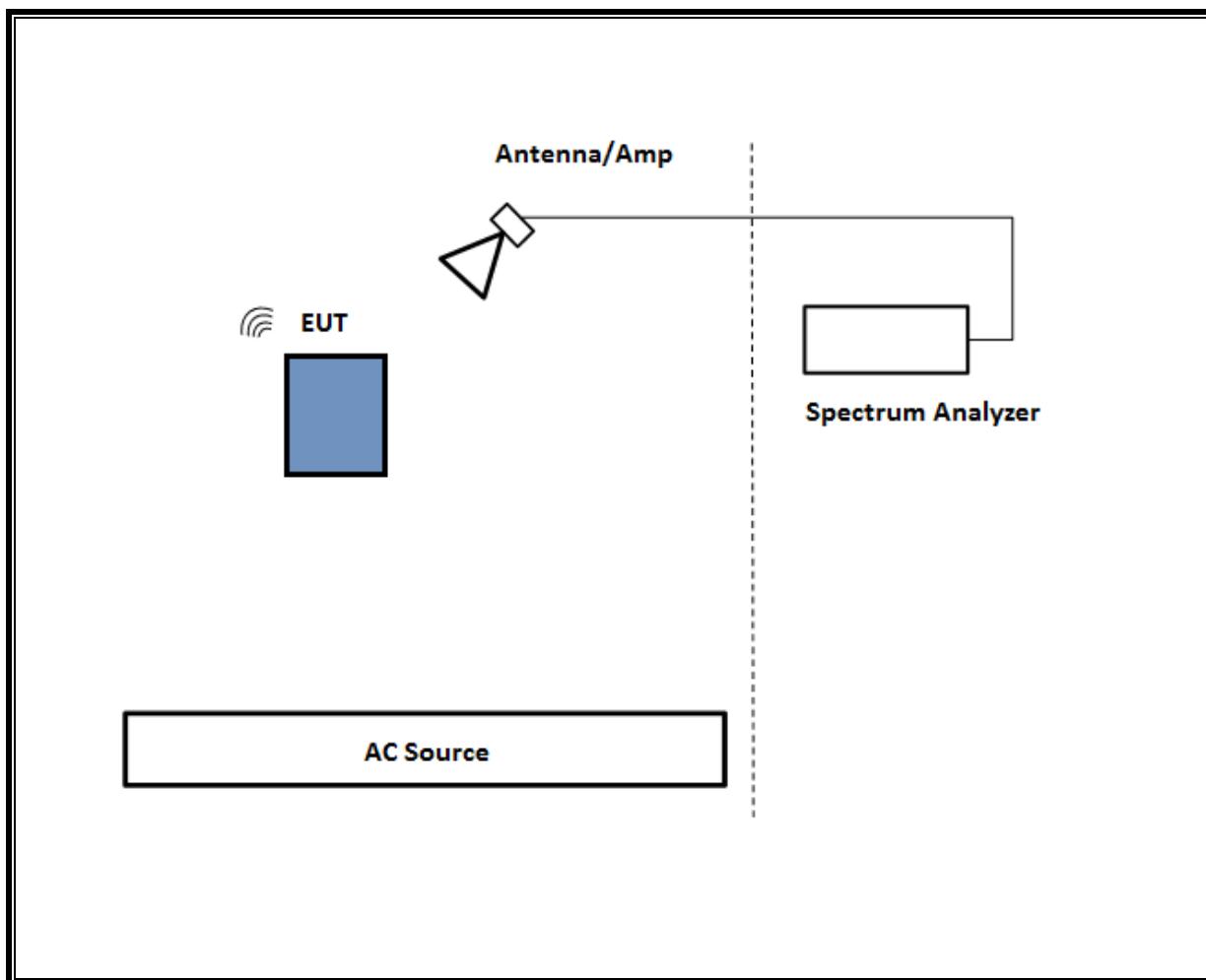
## 6.6. DESCRIPTION OF TEST SETUP

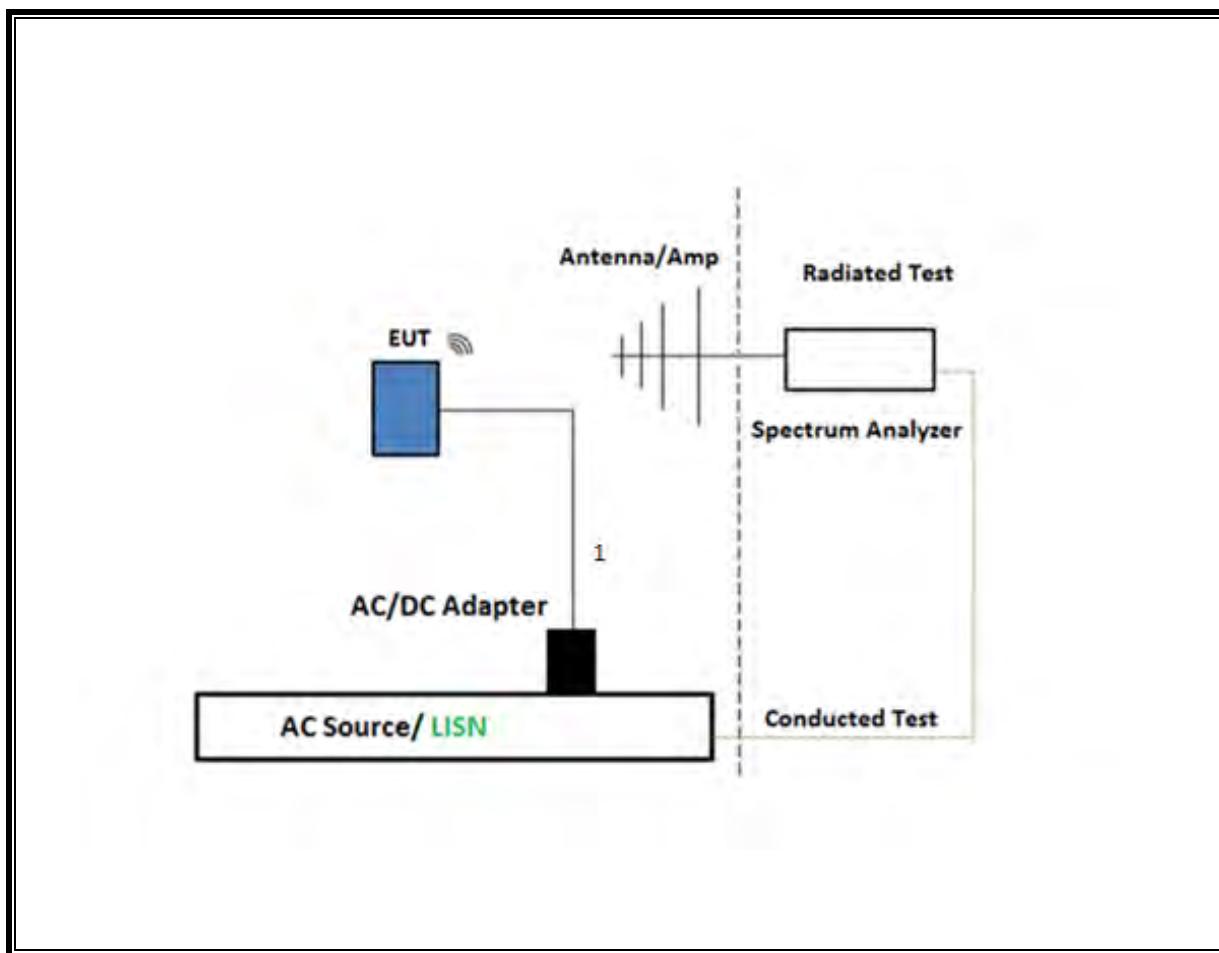
SUPPORT TEST EQUIPMENT					
Description	Manufacturer	Model	Serial Number		FCC ID/ DoC
Laptop	Apple	Macbook Pro	C02YL3ZMJHC8		BCGA1989
Laptop AC/DC adapter	Liteon Technology	A1424	NSW25679		DoC
EUT AC/DC adapter	Apple	A1720	C3D8417A7R93KVPA8		DoC
I/O CABLES (RF CONDUCTED TEST)					
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)
1	AC	1	AC	Un-shielded	2
2	USB	1	USB	Shielded	1.0
3	Antenna	1	SMA	Un-shielded	0.2
I/O CABLES (RF RADIATED AND AC LINE CONDUCTED TEST)					
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)
1	AC	1	AC	Un-shielded	2
2	USB	1	USB	Un-shielded	1

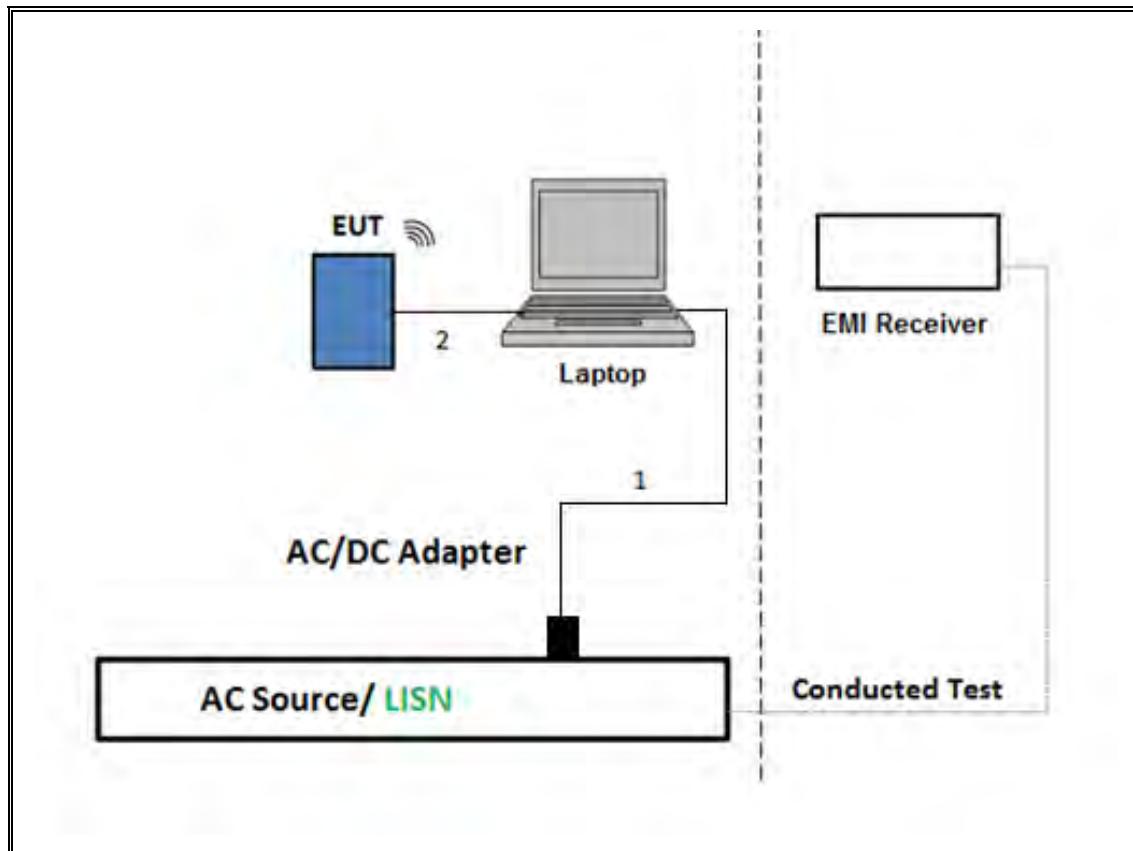
### TEST SETUP

The EUT setup is shown as below. Test software exercised the radio card.

**SETUP DIAGRAM FOR CONDUCTED TESTS**

**SETUP DIAGRAM FOR RADIATED TESTS ABOVE 1GHz**

**SETUP DIAGRAM FOR BELOW 1GHz and AC LINE CONDUCTED TEST**

**TEST SETUP- AC LINE CONDUCTED: LAPTOP CONFIGURATION**

## 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)

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

## 8. TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST					
Description	Manufacturer	Model	ID Num	Cal Due	Last Cal
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179372	02/22/2022	02/22/2021
RF Amplifier, 1-18GHz	MITEQ	AFS42-00101800-25-S-42	171460	11/01/2022	11/01/2021
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	206805	06/22/2022	06/22/2021
Antenna, Horn 1-18GHz	ETS Lindgren	3117	T712	03/22/2022	03/22/2021
Amplifier, 1 to 18GHz	AMPLICAL	AMP1G18-35	138301	03/30/2022	03/30/2021
Antenna, Horn 1-18GHz	ETS Lindgren	3117	PRE0078107	03/01/2022	03/01/2021
Amplifier, 1 to 18GHz	Miteq	AFS42-00101800-25-S-42	126912	10/13/2022	10/13/2021
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201501	02/23/2022	02/23/2021
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	PRE0213833	02/16/2022	02/16/2021
*RF Amplifier, 1-18GHz	AMPLICAL	AMP0.1G18-47-20	190323	12/03/2021	12/03/2020
Amplifier, 1 to 18GHz, 35dB	AMPLICAL	AMP1G18-35	T1571	10/27/2022	10/27/2021
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	206806	02/03/2022	02/03/2021
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201498	02/25/2022	02/25/2021
*Antenna, Horn 1-18GHz	ETS-Lindgren	3117	PRE0213831	12/03/2021	12/03/2020
*RF Amplifier, 1-18GHz	AMPLICAL	AMP0.1G18-47-20	172123	01/23/2022	01/23/2021
*RF Amplifier 1-18GHz, 45dB Min	AMPLICAL	AMP0.1G18-47-20	172122	12/31/2021	12/31/2020
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201499	02/26/2022	02/26/2021
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201500	02/26/2022	02/26/2021
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	204045	03/03/2022	03/03/2021
RF Amplifier, 30-1000MHz	Sonoma Instrument	310	T173	07/22/2022	07/22/2021
PXA Signal Analyzer	Agilent Technologies	N9030A	T906	01/27/2022	01/27/2021
*Antenna, Loop 9kHz-30MHz	ETS Lindgren	6502	T757	11/12/2021	11/12/2020
Antenna Horn 18 to 26.5GHz	ARA	MWH-1826/B	81140	04/22/2022	01/28/2021
Pre-Amp 18-26GHz	Agilent Technology	8449B	T404	04/19/2022	04/19/2021
*Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	T146	01/25/2022	01/25/2021
*Power Meter, P-series single channel	Keysight Technologies Inc	N1911A	T1271	01/20/2022	01/20/2021
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Keysight Technologies Inc	N1921A	90392	01/28/2022	01/28/2021
Antenna Horn 26-40GHz	ARA	MWH-2640	T90	05/03/2022	05/03/2021
*Amplifier, 26GHz to 40GHz	Miteq	TTA2640-35-HG	T1864	04/19/2022	04/19/2021

AC Line Conducted					
EMI Test Receiver	Rohde & Schwarz	ESR	T1436	02/19/2022	02/19/2021
*Power Cable, Line Conducted Emissions	UL	PR1	T861	10/27/2021	10/27/2020
*LISN for Conducted Emissions CISPR-16	FISCHER CUSTOM COMMUNICATIONS	FCC-LISN-50/250-25-2-01	PRE0186446	01/20/2022	01/20/2021
UL AUTOMATION SOFTWARE					
Radiated Software	UL	UL EMC	Ver 9.5, April 14, 2021		
Conducted Software	UL	UL EMC	21.4.21		
AC Line Conducted Software	UL	UL EMC	Ver 9.5, July 07, 2020		

Note: \*Testing is completed before equipment expiration date.

## 9. ANTENNA PORT TEST RESULTS

### 9.1. ON TIME AND DUTY CYCLE

#### LIMITS

None; for reporting purposes only.

#### PROCEDURE

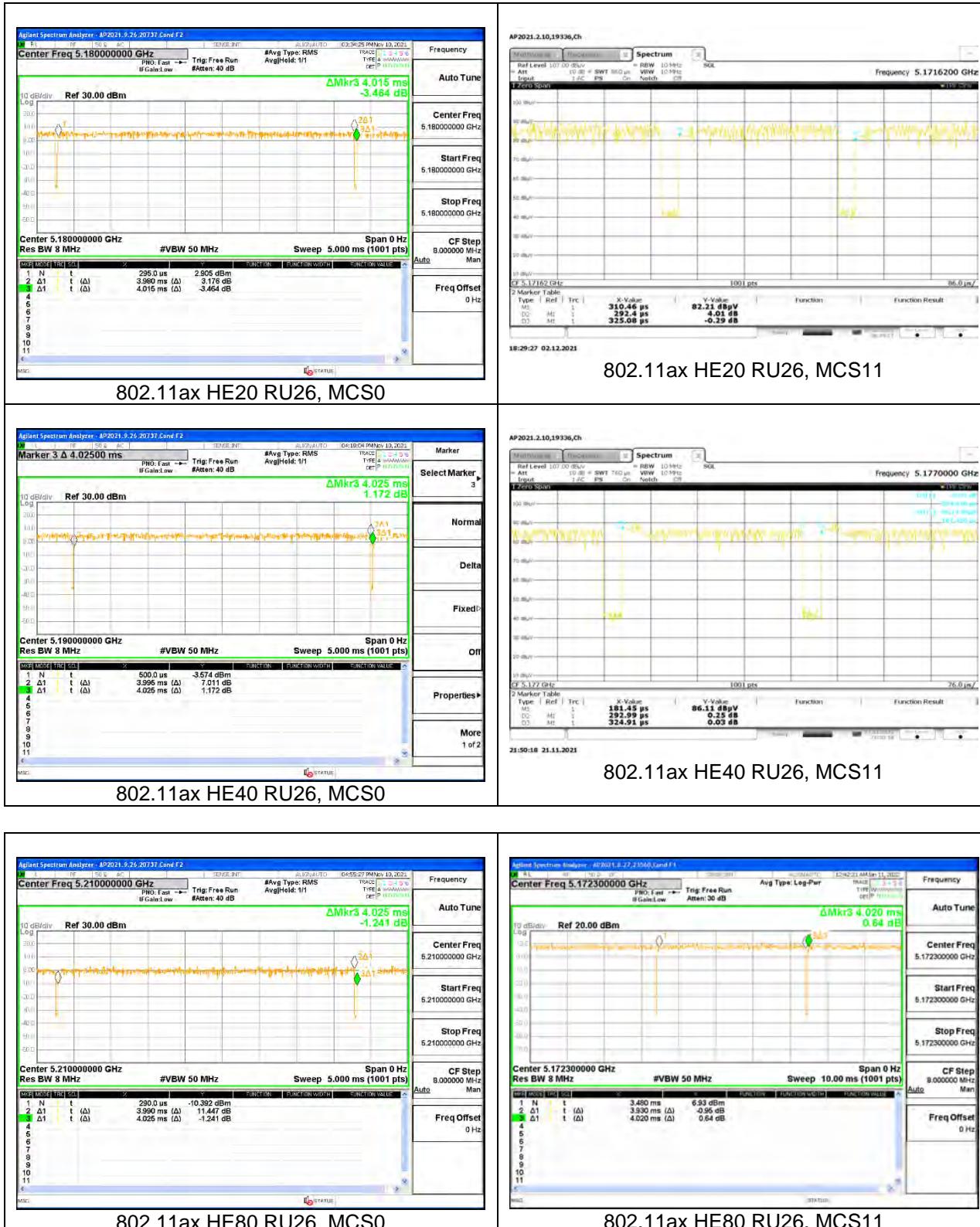
KDB 558074 Zero-Span Spectrum Analyzer Method.

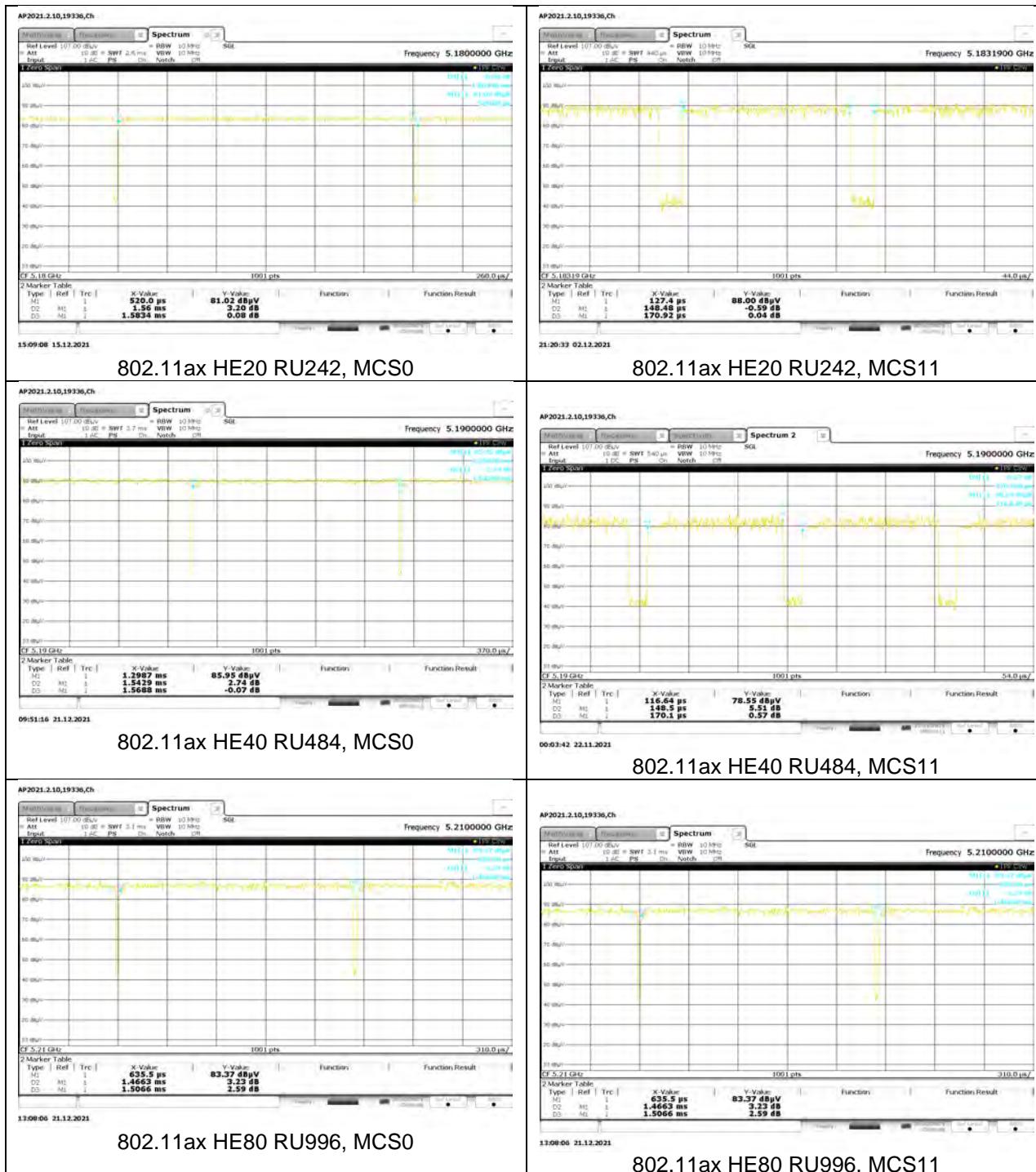
#### ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
<b>5GHz Band</b>						
802.11n HT20 MCS0	1.920	1.941	0.989	98.92%	0.00	0.010
802.11n HT20 MCS7	0.228	0.249	0.916	91.64%	0.38	4.386
802.11n HT40 MCS0	0.942	0.963	0.978	97.82%	0.10	1.062
802.11n HT40 MCS7	0.127	0.148	0.856	85.61%	0.67	7.881
802.11ac VHT80 MCS0	0.459	0.481	0.954	95.43%	0.20	2.179
802.11ac VHT80 MCS9	0.072	0.092	0.783	78.26%	1.06	13.889
802.11ax HE20 RU26, MCS0	3.980	4.015	0.991	99.13%	0.00	0.010
802.11ax HE20 RU26, MCS11	0.310	0.325	0.955	95.50%	0.20	3.221
802.11ax HE40 RU26, MCS0	3.995	4.025	0.993	99.25%	0.00	0.010
802.11ax HE40 RU26, MCS11	0.293	0.325	0.902	90.18%	0.45	3.413
802.11ax HE80 RU26, MCS0	3.990	4.025	0.991	99.13%	0.00	0.010
802.11ax HE80 RU26, MCS11	3.930	4.020	0.978	97.76%	0.10	0.254

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
<b>5GHz Band</b>						
802.11ax HE20 RU242, MCS0	1.560	1.583	0.985	98.52%	0.00	0.010
802.11ax HE20 RU242, MCS11	0.148	0.171	0.869	86.87%	0.61	6.735
802.11ax HE40 RU484, MCS0	1.543	1.569	0.983	98.35%	0.00	0.010
802.11ax HE40 RU484, MCS11	0.149	0.170	0.873	87.30%	0.59	6.734
802.11ax HE80 RU996, MCS0	1.466	1.507	0.973	97.33%	0.12	0.682
802.11ax HE80 RU996, MCS11	0.163	0.185	0.878	87.84%	0.56	6.154
802.11ax HE20 SU, MCS0	1.488	1.509	0.986	98.61%	0.00	0.010
802.11ax HE20 SU, MCS11	0.147	0.168	0.875	87.46%	0.58	6.826
802.11ax HE40 SU, MCS0	0.773	0.794	0.974	97.39%	0.11	1.294
802.11ax HE40 SU, MCS11	0.101	0.122	0.835	83.46%	0.79	9.862
802.11ax HE80 SU, MCS0	0.400	0.423	0.946	94.57%	0.24	2.499
802.11ax HE80 SU, MCS11	0.082	0.103	0.799	79.88%	0.98	12.165
802.11n HT20 SDM MCS0	0.992	1.013	0.979	97.95%	0.09	1.008
802.11n HT40 SDM MCS0	0.499	0.520	0.960	95.98%	0.18	2.003
802.11ac VHT80 SDM MCS0	0.256	0.278	0.921	92.07%	0.36	3.914
802.11ax HE20 RU26 SDM MCS0	3.923	4.006	0.979	97.93%	0.09	0.255
802.11ax HE40 RU26 SDM MCS0	3.968	4.031	0.984	98.44%	0.00	0.010
802.11ax HE80 RU26 SDM MCS0	3.938	4.031	0.977	97.69%	0.10	0.254
802.11ax HE20 SDM MCS0	0.780	0.800	0.974	97.41%	0.11	1.283
802.11ax HE40 SDM MCS0	0.421	0.443	0.951	95.06%	0.22	2.375
802.11ax HE80 SDM MCS0	0.238	0.261	0.914	91.38%	0.39	4.195

**DUTY CYCLE PLOTS**











Note: There are same duty cycle factor on 1TX and 2TX

## 9.2. 26 dB and 99% BANDWIDTH

### LIMITS

None; for reporting purposes only.

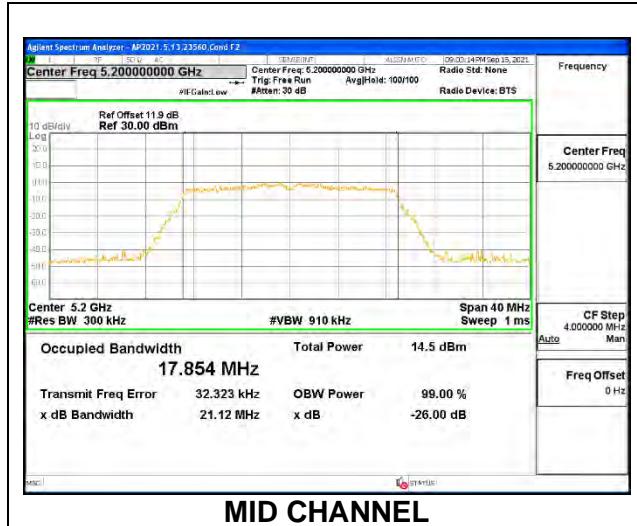
### RESULTS

ID:	23560	Date:	9/15/21
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### 9.2.1. 802.11n HT20 MODE IN THE 5.2 GHz BAND

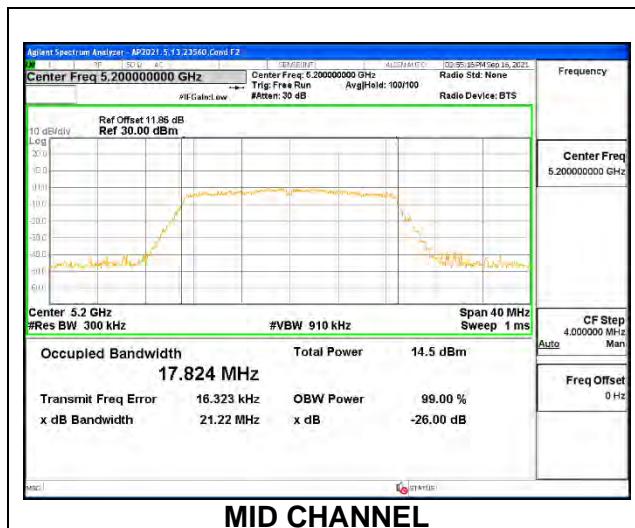
#### 1TX Antenna 6 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	21.40	18.042
Mid	5200	21.12	17.854
High	5240	21.33	17.958



## 1TX Antenna 3 MODE

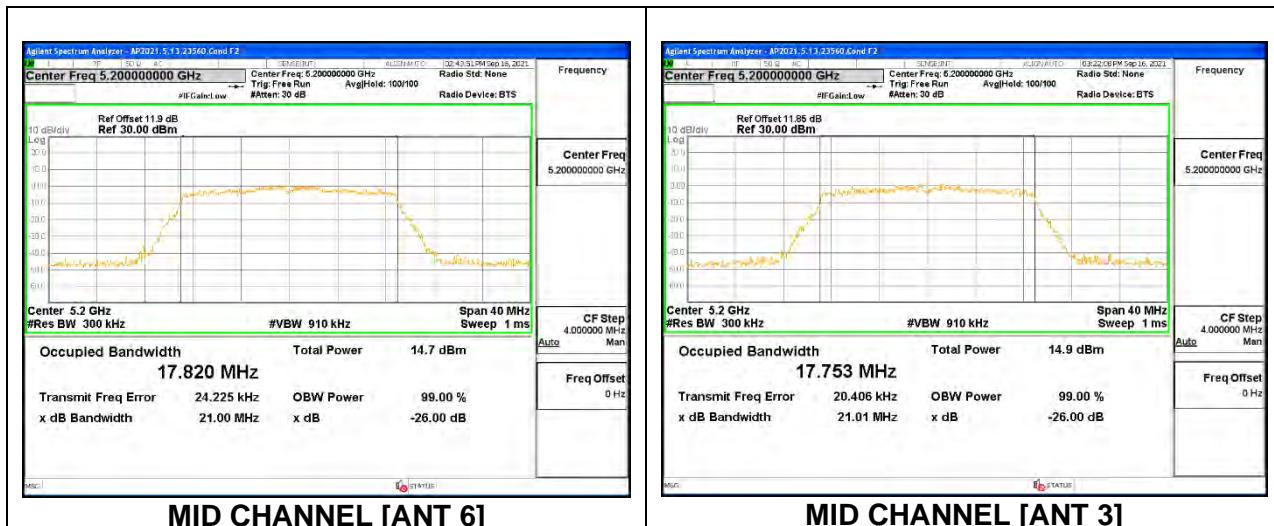
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	22.22	18.009
Mid	5200	21.22	17.824
High	5240	21.06	17.879



MID CHANNEL

### **2TX Antenna 6 + Antenna 3 CDD MODE**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5180	21.66	21.21	17.962	17.871
Mid	5200	21.00	21.01	17.820	17.753
High	5240	21.19	20.86	17.825	17.793

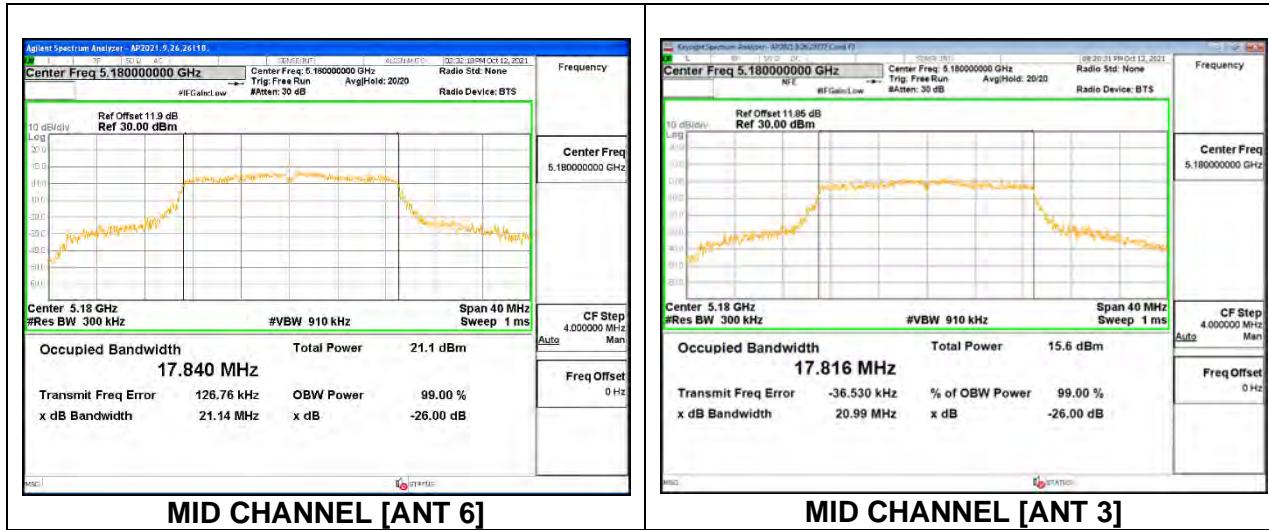


**MID CHANNEL [ANT 6]**

**MID CHANNEL [ANT 3]**

**2TX Antenna 6 + Antenna 3 SDM MODE**

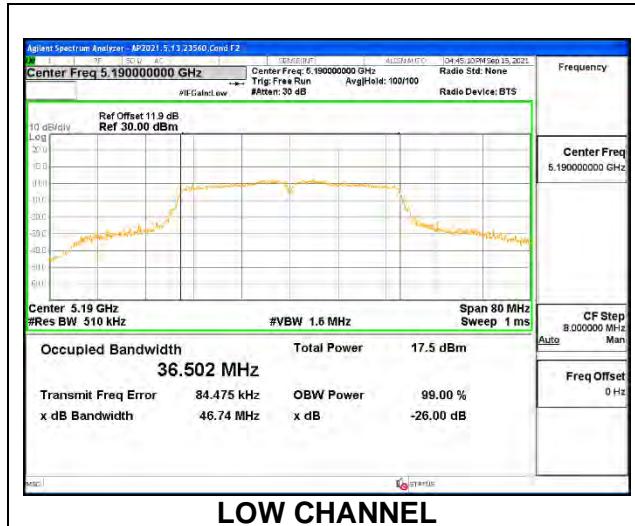
Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5180	21.14	20.99	17.840	17.816
Mid	5200	21.14	20.99	17.840	17.816
High	5240	20.67	20.35	17.733	17.691



## 9.2.2. 802.11n HT40 MODE IN THE 5.2 GHz BAND

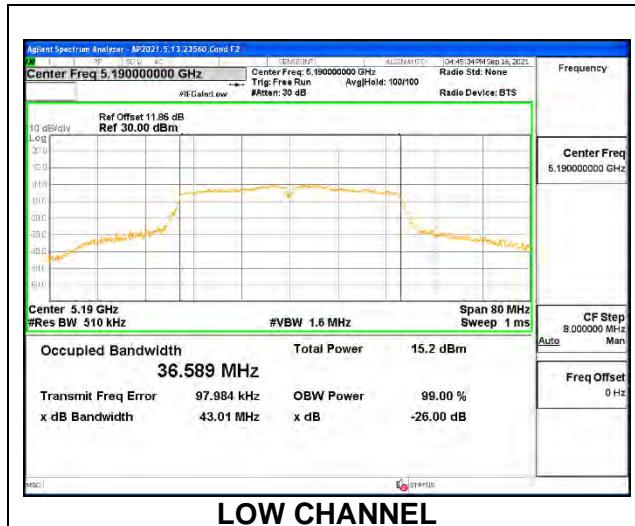
### 1TX Antenna 6 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	46.74	36.502
High	5230	41.16	36.488



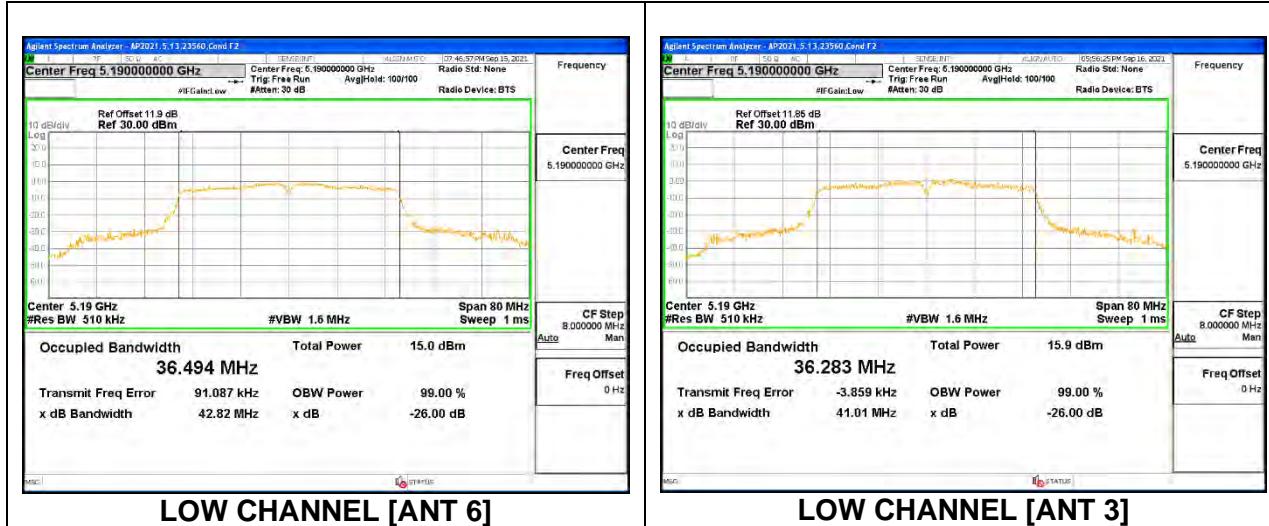
### 1TX Antenna 3 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	43.01	36.589
High	5230	41.27	36.347

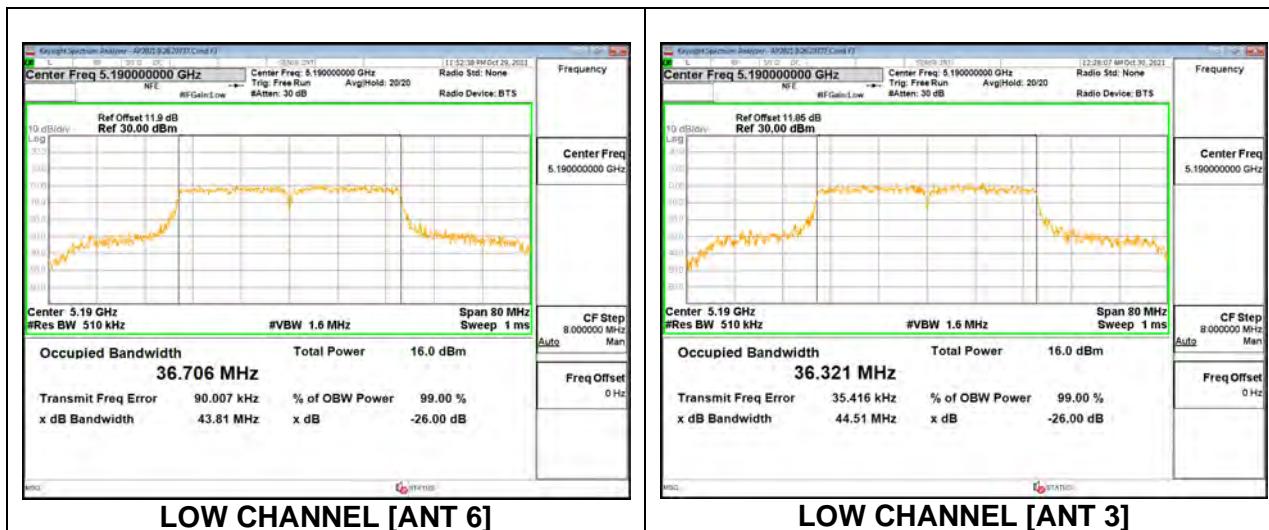


**2TX Antenna 6 + Antenna 3 CDD MODE**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5190	42.82	41.01	36.494	36.283
High	5230	41.05	40.30	36.382	36.220

**2TX Antenna 6 + Antenna 3 SDM MODE**

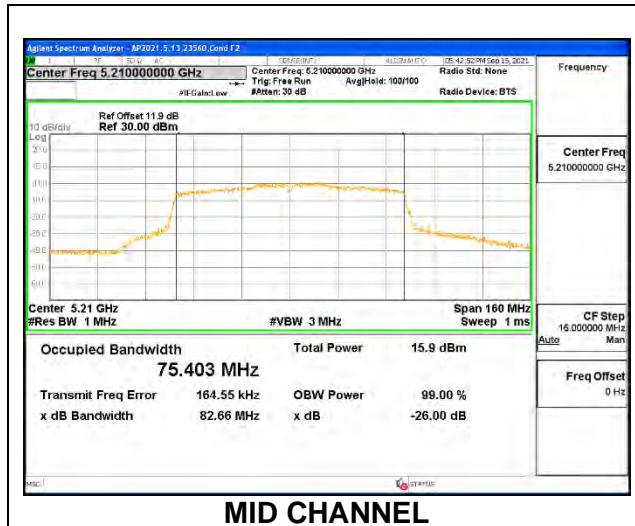
Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5190	43.81	44.51	36.706	36.321
High	5230	40.40	40.41	36.064	36.169



### 9.2.3. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

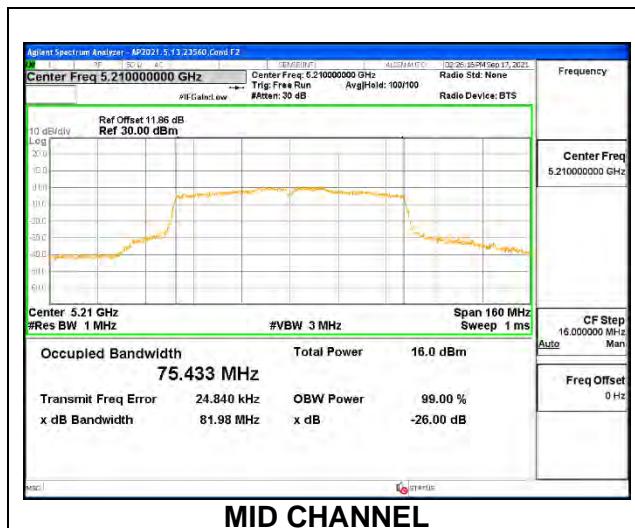
#### 1TX Antenna 6 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	82.66	75.403



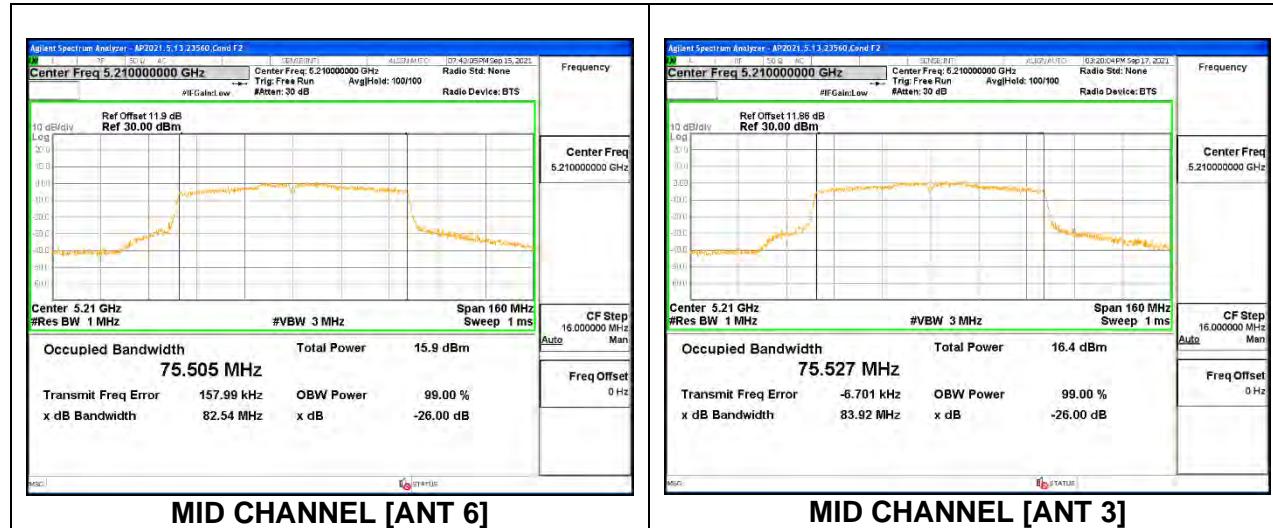
#### 1TX Antenna 3 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	81.98	75.433

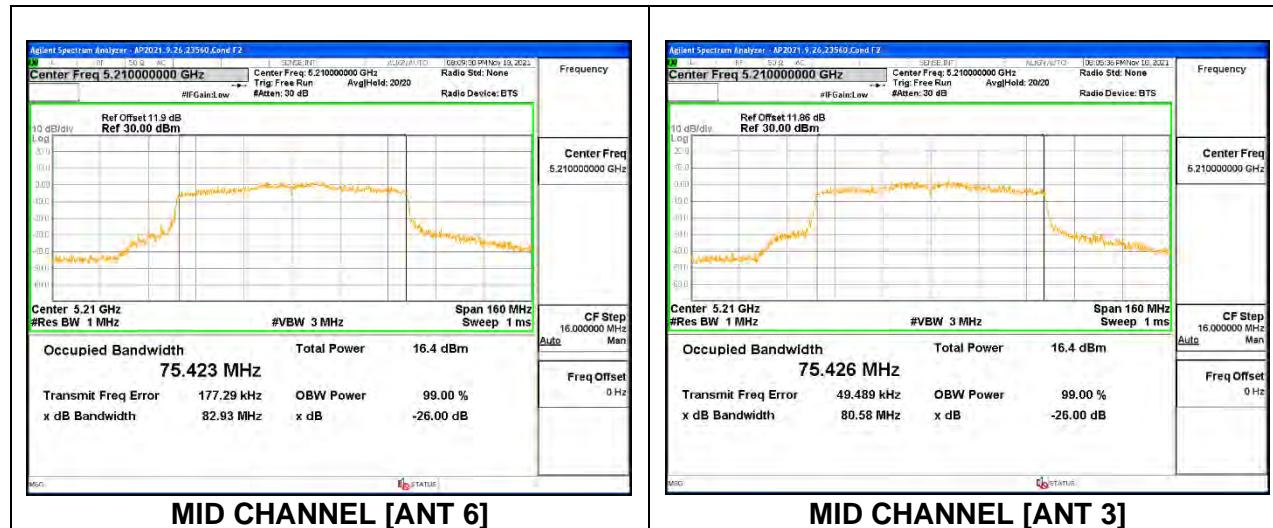


**2TX Antenna 6 + Antenna 3 CDD MODE**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Mid	5210	82.54	83.92	75.505	75.527

**2TX Antenna 6 + Antenna 3 SDM MODE**

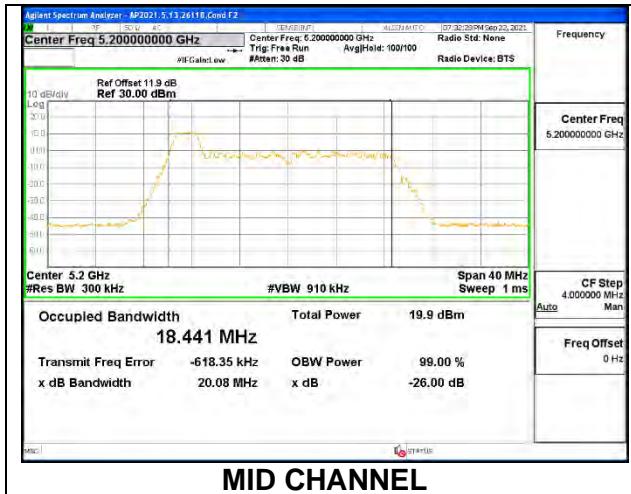
Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Mid	5210	82.93	80.58	75.423	75.426



#### **9.2.4. 802.11ax HE20 MODE IN THE 5.2 GHz BAND**

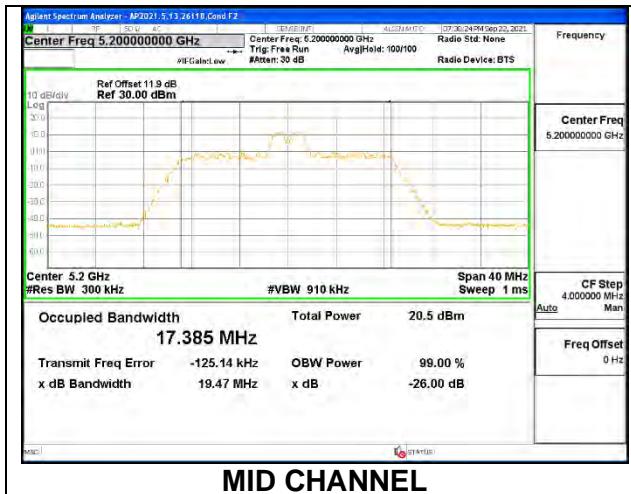
## 1TX Antenna 6 MODE: 26 Tones, RU Index 0

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	20.23	18.483
Mid	5200	20.08	18.441
High	5240	20.09	18.409



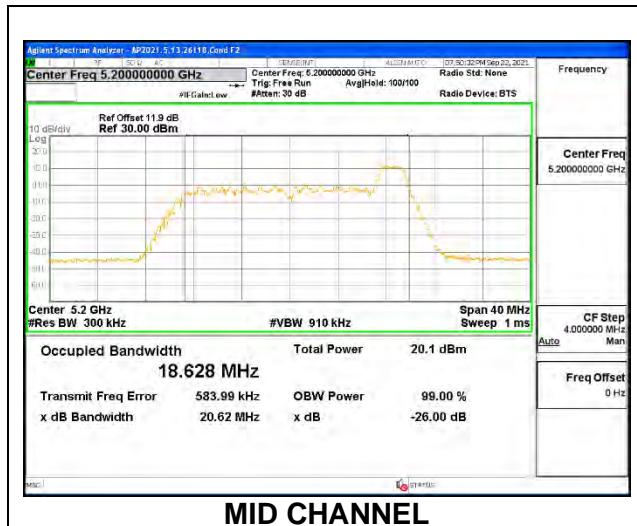
## **1TX Antenna 6 MODE: 26 Tones, RU Index 4**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	19.14	17.262
Mid	5200	19.47	17.385
High	5240	19.43	17.241

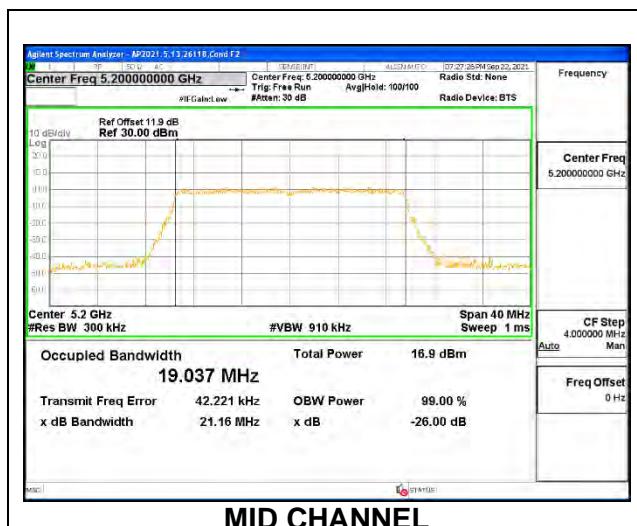


**1TX Antenna 6 MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	20.62	18.712
Mid	5200	20.62	18.628
High	5240	20.48	18.733

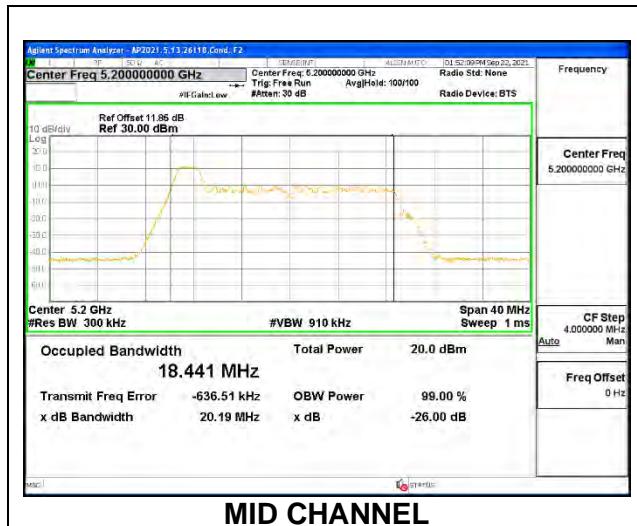
**1TX Antenna 6 MODE: SU Mode**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	23.49	19.079
Mid	5200	21.16	19.037
High	5240	21.34	19.159



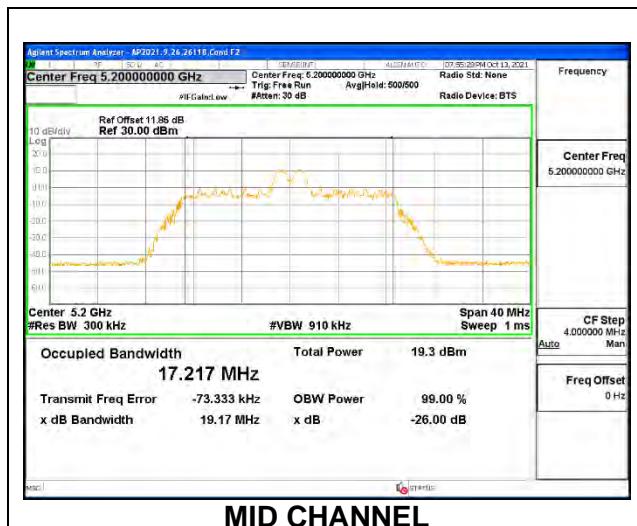
**1TX Antenna 3 MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	20.03	18.415
Mid	5200	20.19	18.441
High	5240	20.08	18.430



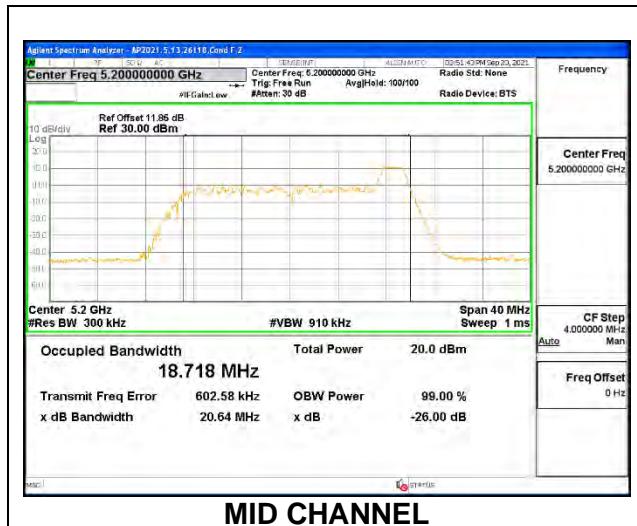
**1TX Antenna 3 MODE: 26 Tones, RU Index 4**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	19.37	17.409
Mid	5200	19.17	17.217
High	5240	19.44	17.312



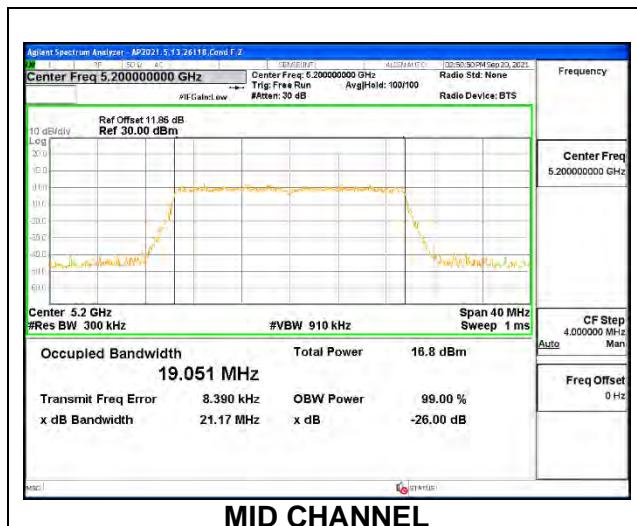
**1TX Antenna 3 MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	20.63	18.752
Mid	5200	20.64	18.718
High	5240	20.80	18.773



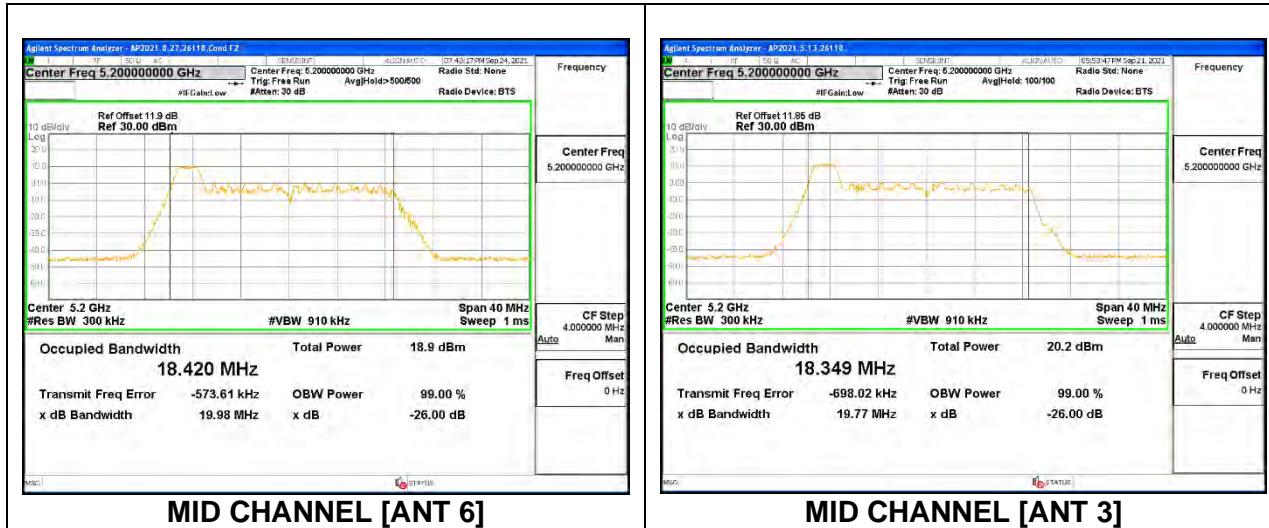
## **1TX Antenna 3 MODE: SU Mode**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	22.62	19.096
Mid	5200	21.17	19.051
High	5240	21.20	19.064

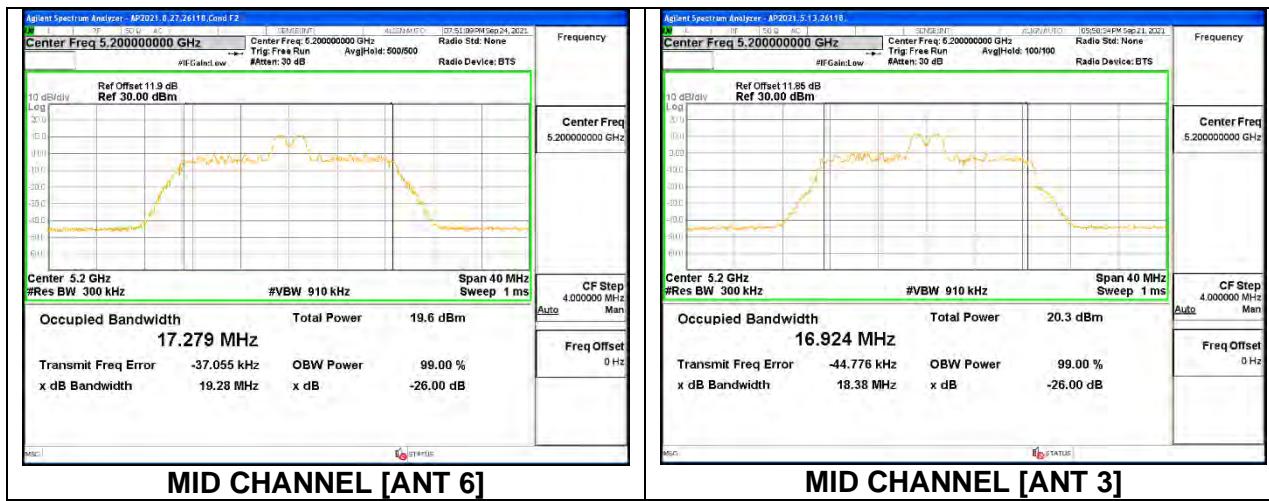


**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5180	20.04	19.73	18.439	18.326
Mid	5200	19.98	19.77	18.420	18.349
High	5240	20.21	19.64	18.424	18.315

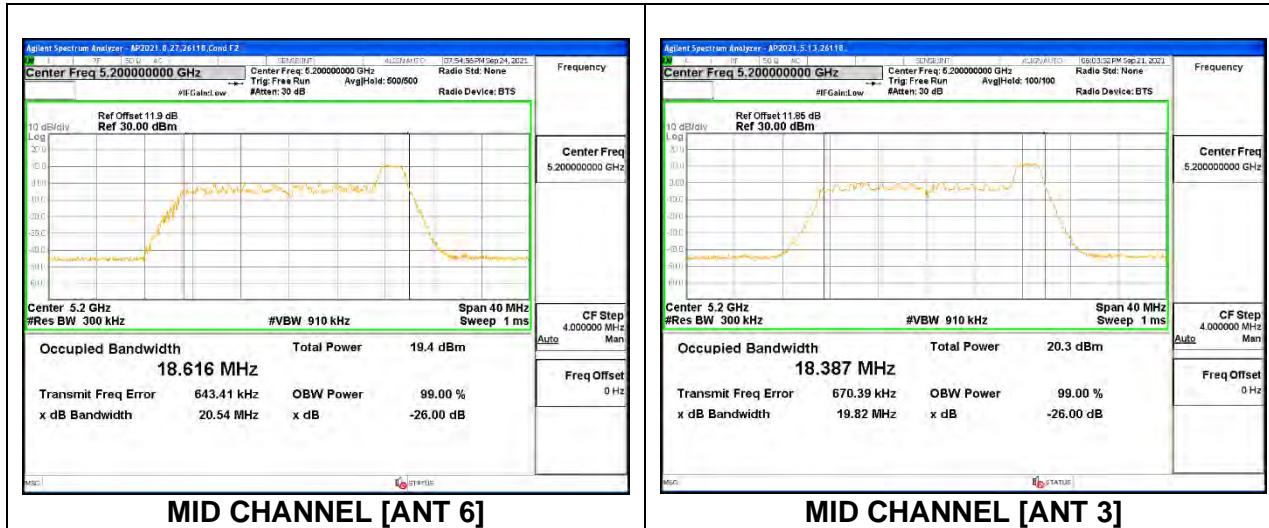
**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 4**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5180	19.33	18.16	17.273	16.863
Mid	5200	19.28	18.38	17.279	16.924
High	5240	19.30	18.34	17.224	16.965

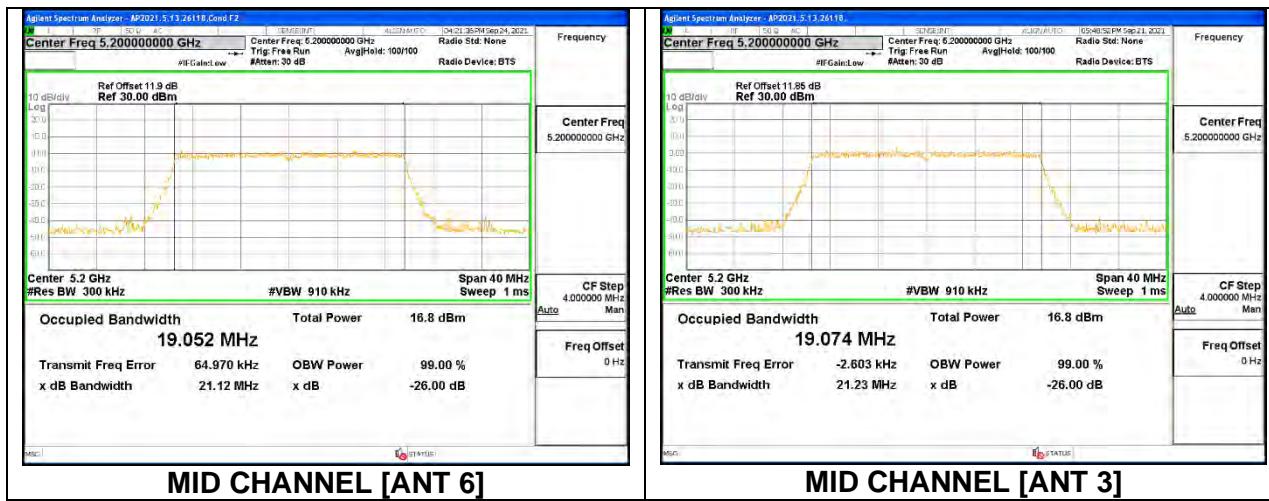


**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5180	20.57	19.71	18.674	18.348
Mid	5200	20.54	19.82	18.616	18.387
High	5240	20.50	19.82	18.652	18.434

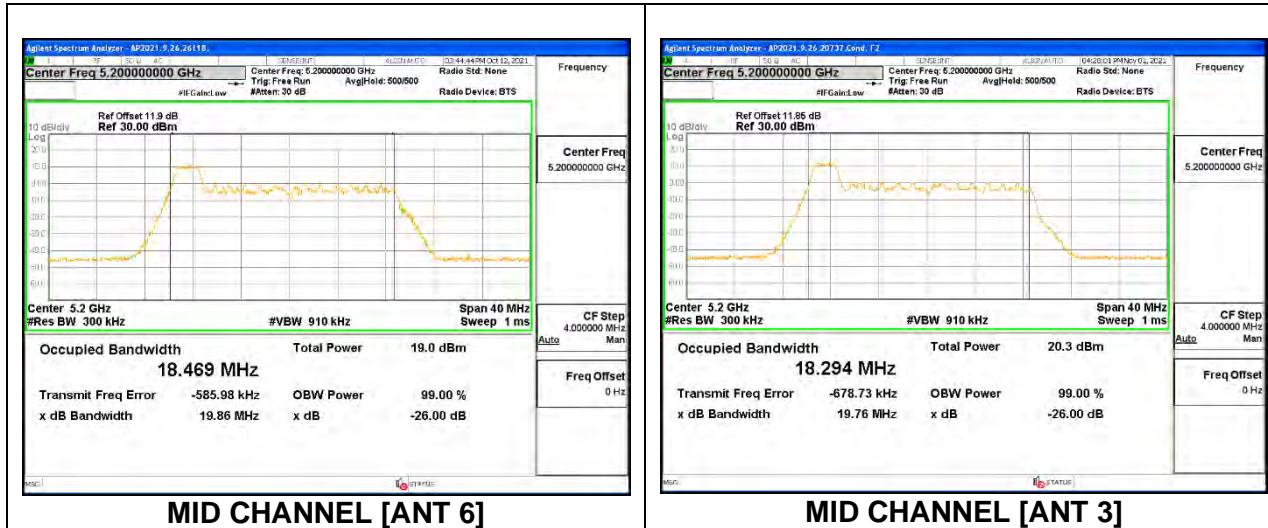
**2TX Antenna 6 + Antenna 3 OFDMA MODE: SU Mode**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5180	22.69	21.81	19.182	19.118
Mid	5200	21.12	21.23	19.052	19.074
High	5240	21.17	21.20	19.047	19.107

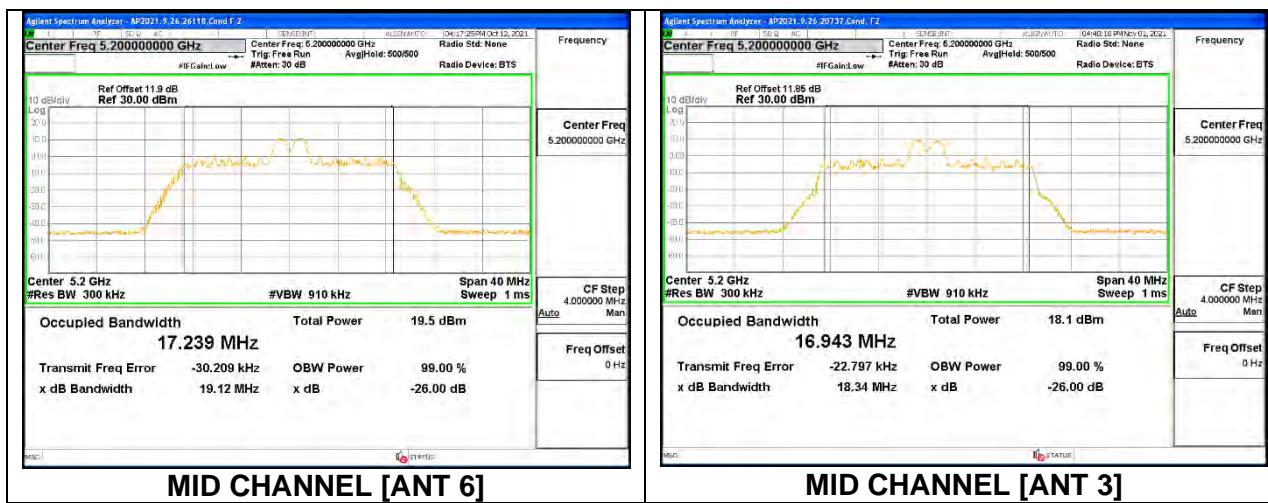


**2TX Antenna 6 + Antenna 3 SDM MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5180	20.11	19.76	18.398	18.344
Mid	5200	19.86	19.76	18.469	18.294
High	5240	19.96	19.82	18.379	18.322

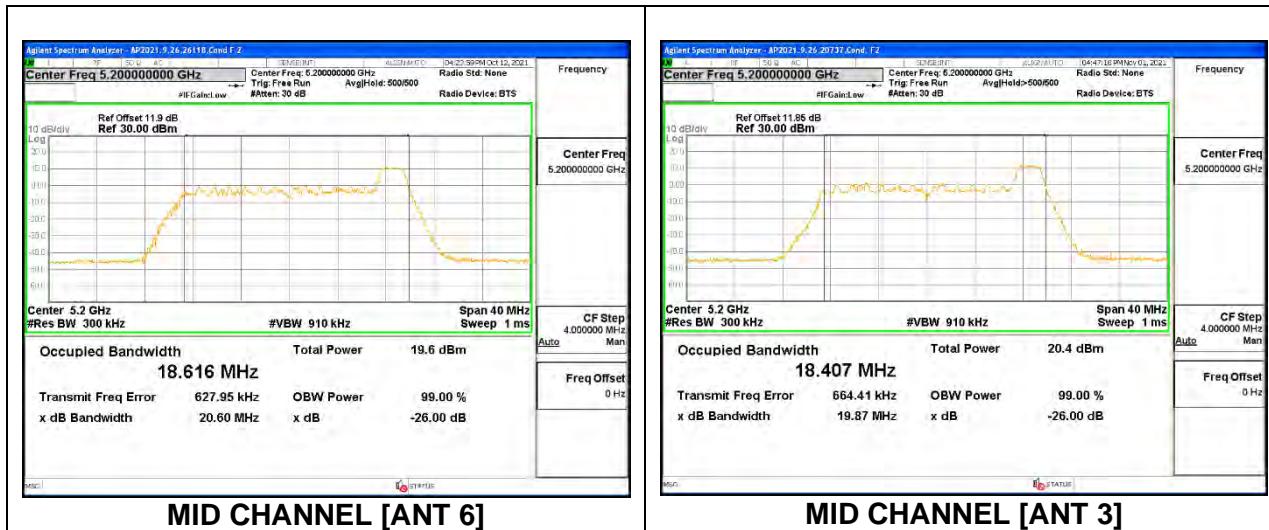
**2TX Antenna 6 + Antenna 3 SDM MODE: 26 Tones, RU Index 4**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5180	19.16	18.25	17.280	16.977
Mid	5200	19.12	18.34	17.239	16.943
High	5240	19.15	18.29	17.212	16.950

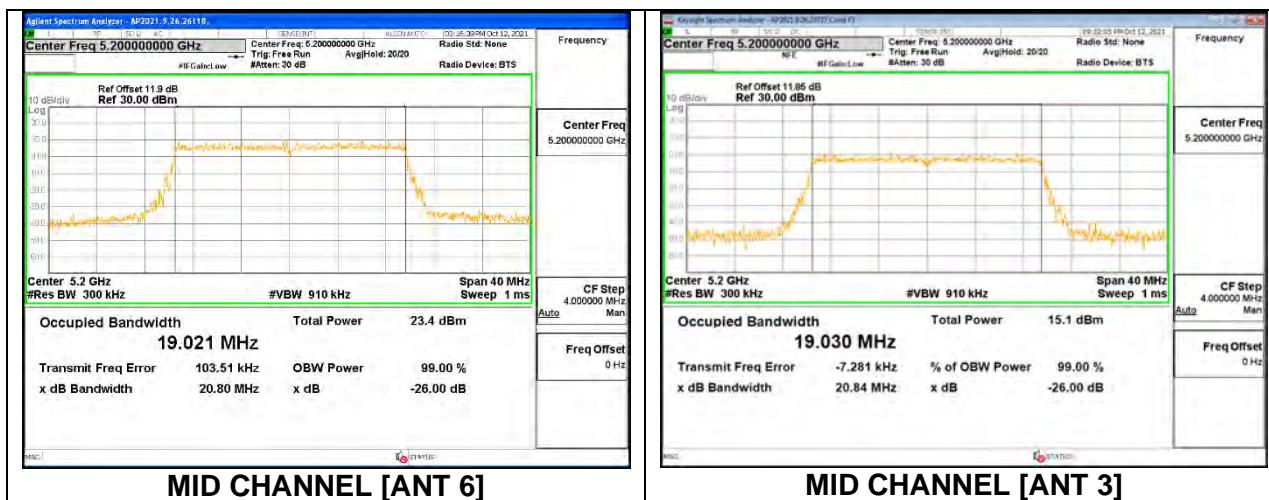


**2TX Antenna 6 + Antenna 3 SDM MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5180	20.61	19.67	18.647	18.253
Mid	5200	20.60	19.87	18.616	18.407
High	5240	20.57	19.70	18.635	18.366

**2TX Antenna 6 + Antenna 3 SDM MODE: SU Mode**

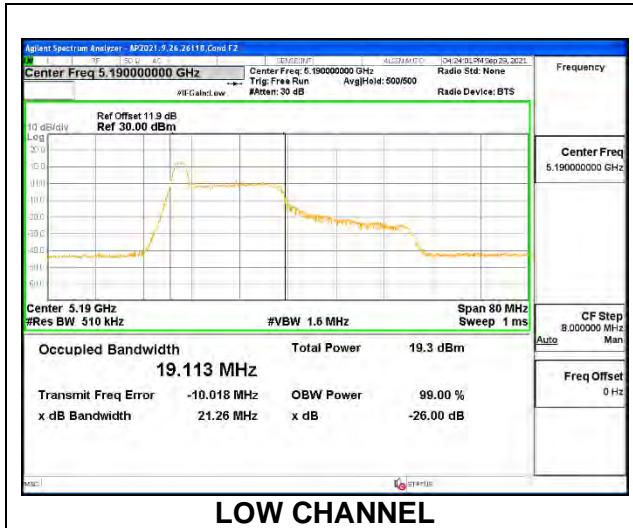
Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5180	21.49	21.60	19.045	18.995
Mid	5200	20.80	20.84	19.021	19.030
High	5240	21.39	20.81	19.081	19.060



## 9.2.5. 802.11ax HE40 MODE IN THE 5.2 GHz BAND

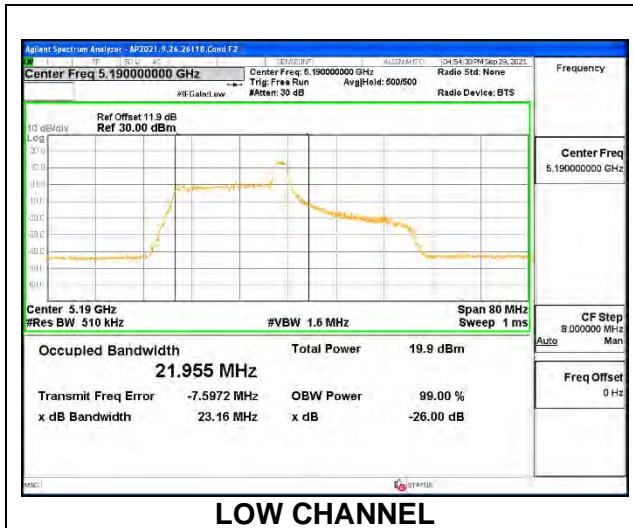
### 1TX Antenna 6 MODE: 26 Tones, RU Index 0

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	21.26	19.113
High	5230	20.54	18.782



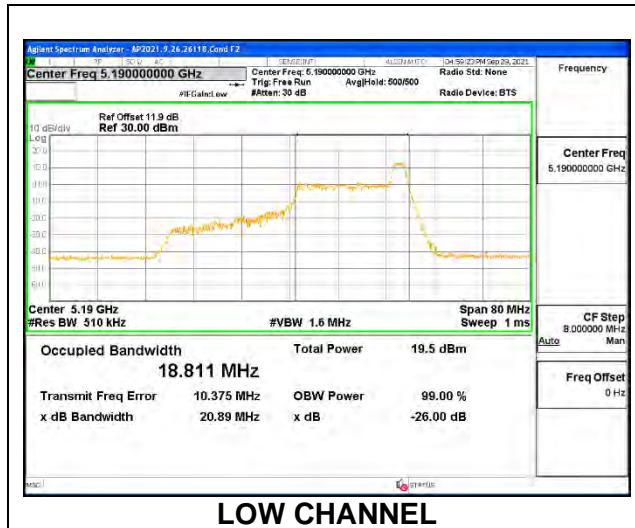
### 1TX Antenna 6 MODE: 26 Tones, RU Index 8

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	23.16	21.955
High	5230	23.94	21.929

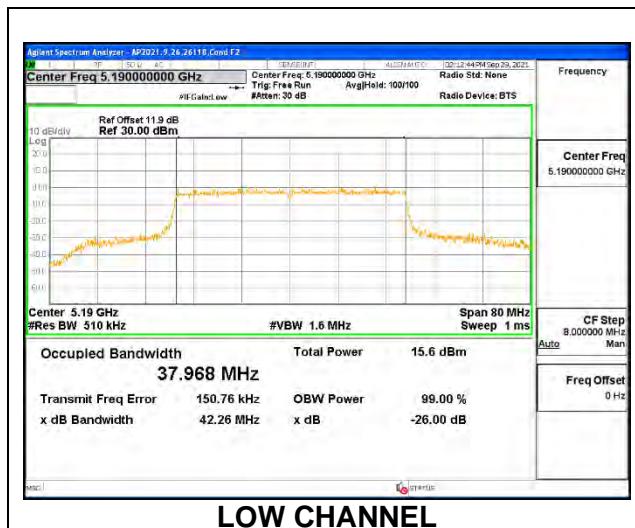


**1TX Antenna 6 MODE: 26 Tones, RU Index 17**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	20.89	18.811
High	5230	20.81	18.965

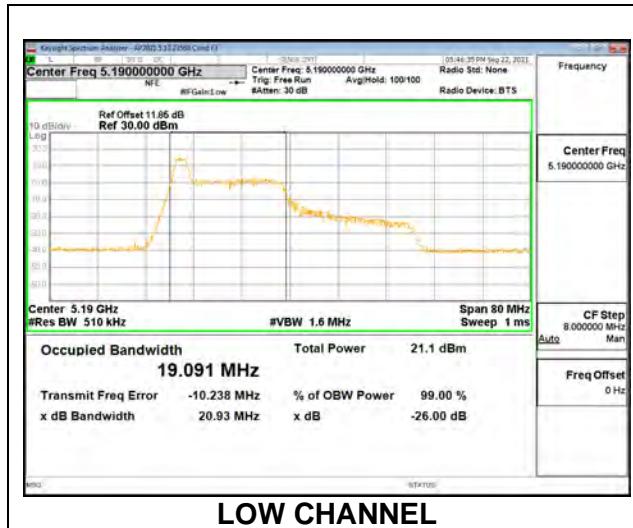
**LOW CHANNEL****1TX Antenna 6 MODE: SU Mode**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	42.26	37.968
High	5230	41.07	37.953

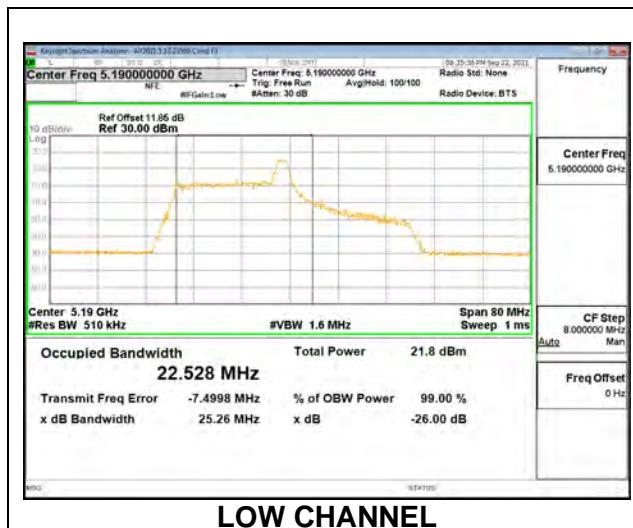
**LOW CHANNEL**

**1TX Antenna 3 MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	20.93	19.091
High	5230	20.93	18.860

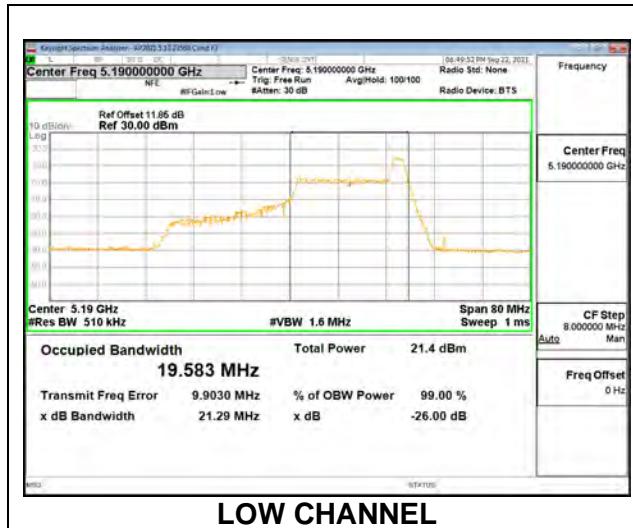
**LOW CHANNEL****1TX Antenna 3 MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	25.26	22.528
High	5230	23.72	22.444

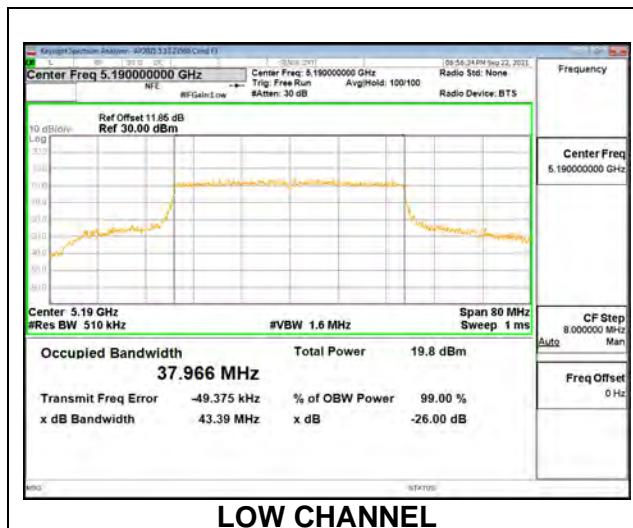
**LOW CHANNEL**

1TX Antenna 3 MODE: 26 Tones, RU Index 17

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	21.29	19.583
High	5230	20.95	19.061

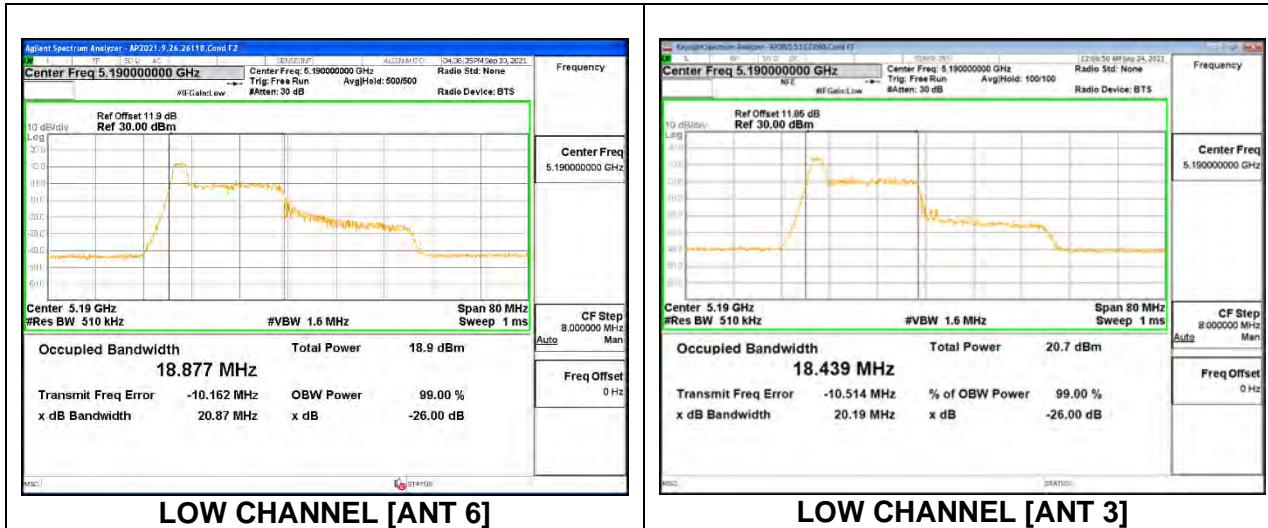
**LOW CHANNEL**1TX Antenna 3 MODE: SU Mode

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	43.39	37.966
High	5230	40.98	37.930

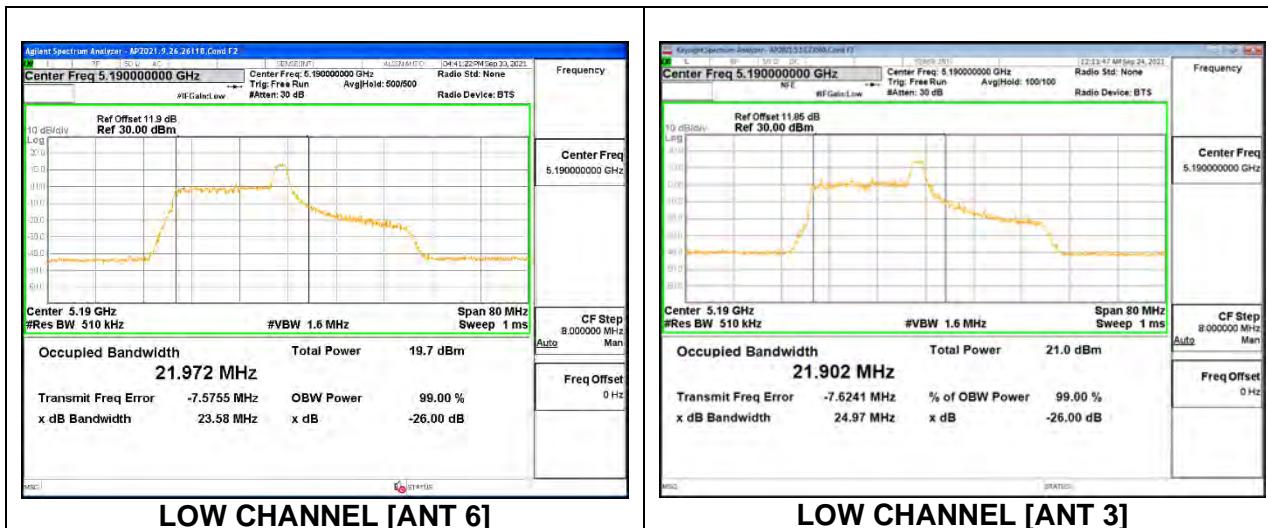
**LOW CHANNEL**

**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5190	20.87	20.19	18.877	18.439
High	5230	20.79	20.16	18.876	18.394

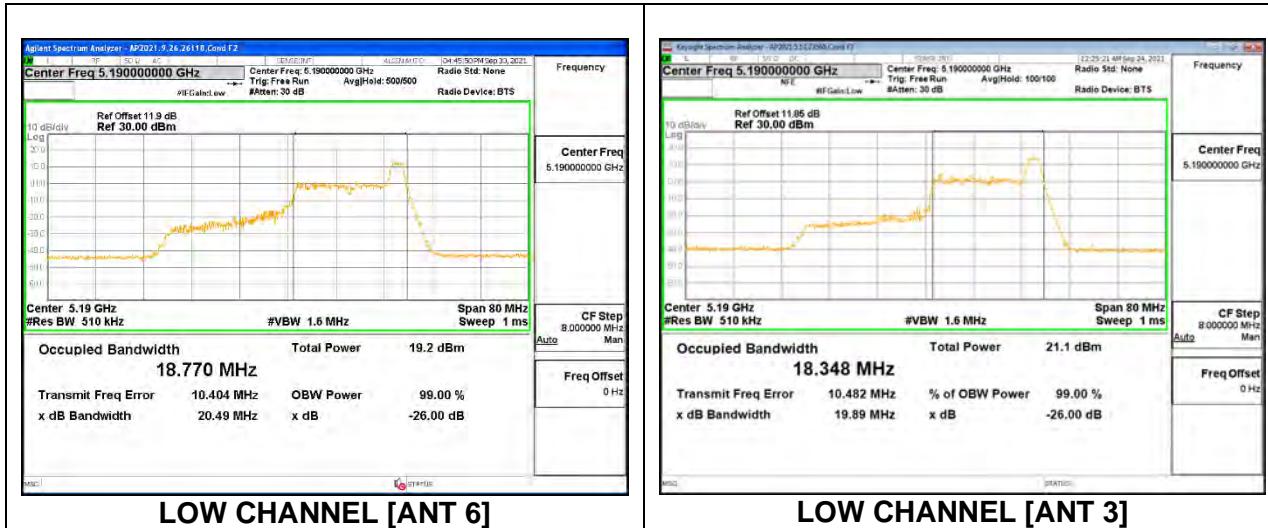
**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5190	23.58	24.97	21.972	21.902
High	5230	23.58	22.74	22.102	21.475

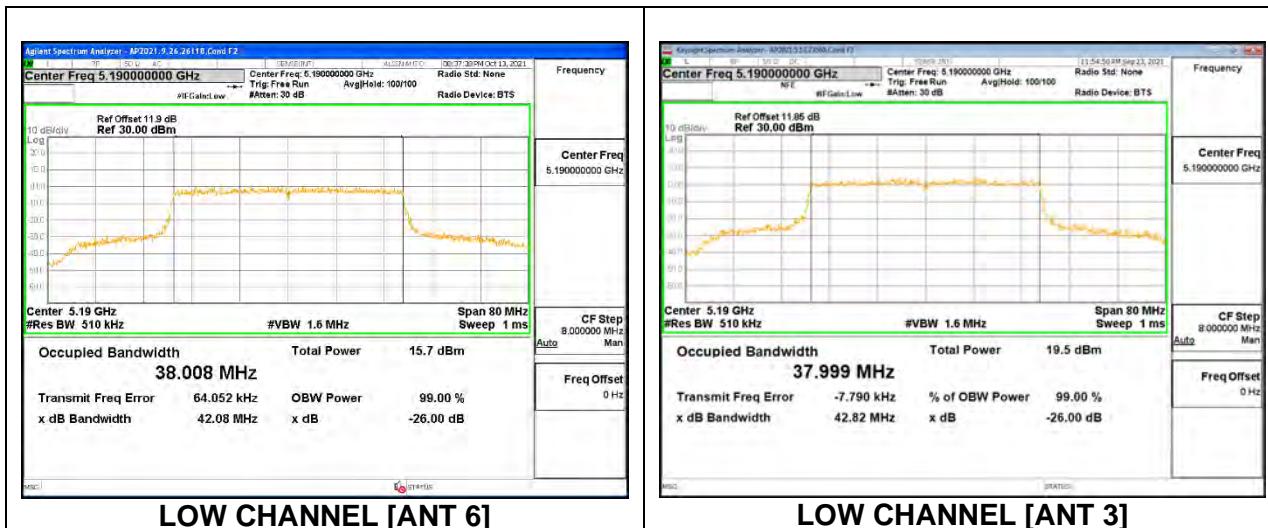


**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 17**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5190	20.49	19.89	18.770	18.348
High	5230	20.73	19.87	18.964	18.439

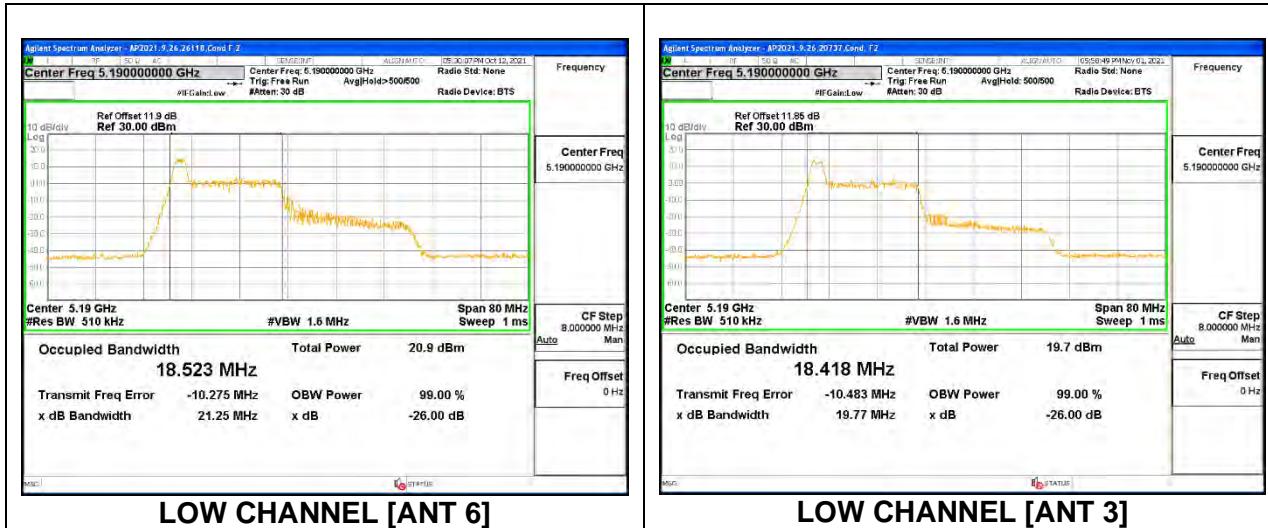
**2TX Antenna 6 + Antenna 3 OFDMA MODE: SU Mode**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5190	42.08	42.82	38.008	37.999
High	5230	40.93	40.94	37.888	37.985

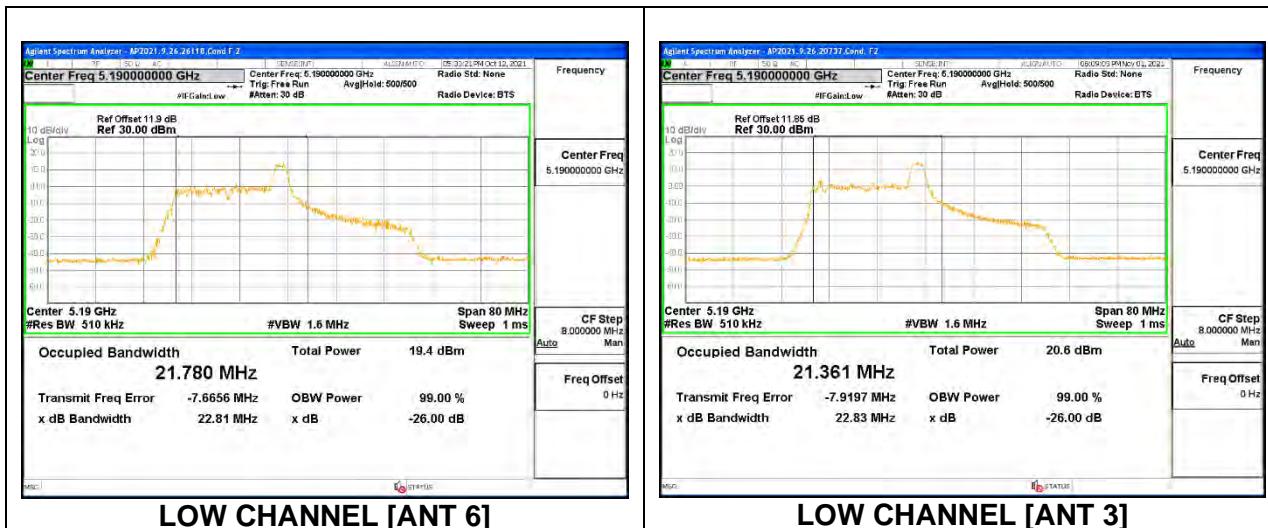


**2TX Antenna 6 + Antenna 3 SDM MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5190	21.25	19.77	18.523	18.418
High	5230	20.89	20.11	19.031	18.295

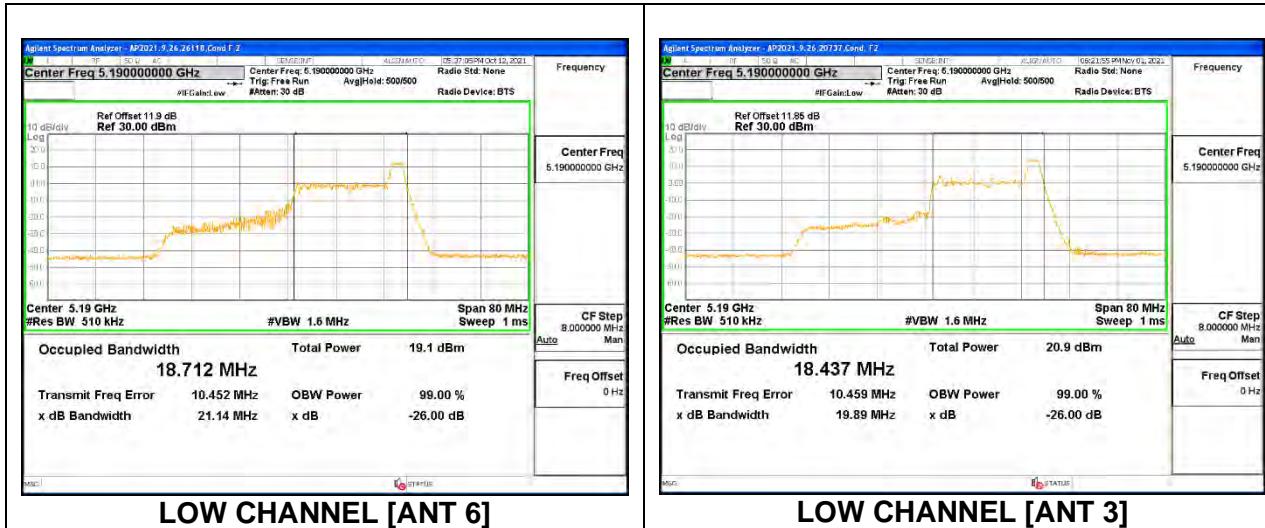
**2TX Antenna 6 + Antenna 3 SDM MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5190	22.81	22.83	21.780	21.361
High	5230	22.87	23.14	21.756	21.438

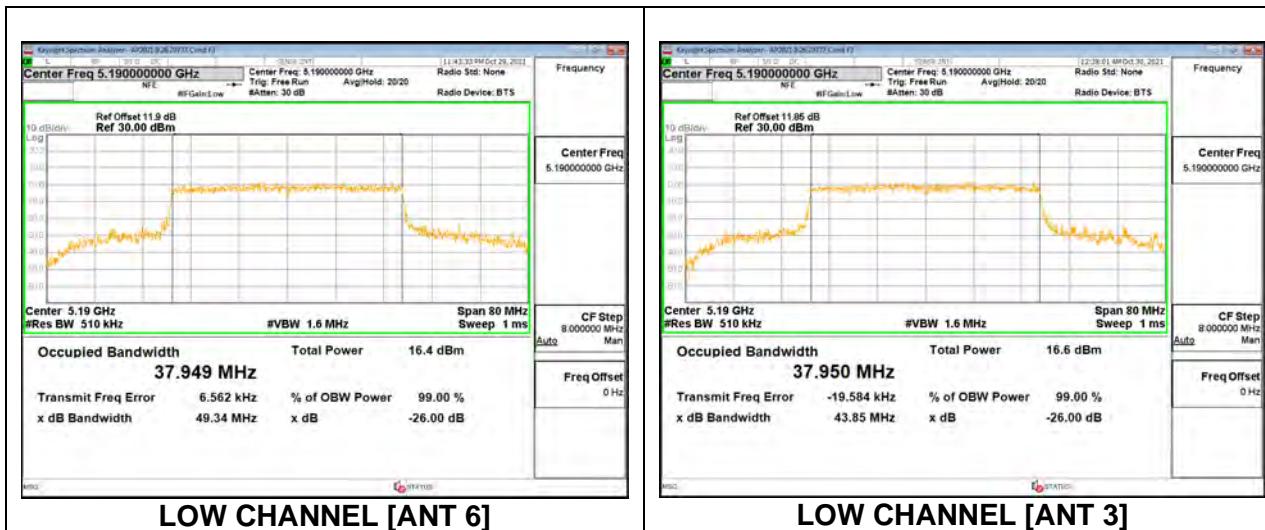


**2TX Antenna 6 + Antenna 3 SDM MODE: 26 Tones, RU Index 17**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5190	21.14	19.89	18.712	18.437
High	5230	20.65	19.95	18.865	18.499

**2TX Antenna 6 + Antenna 3 SDM MODE: SU Mode**

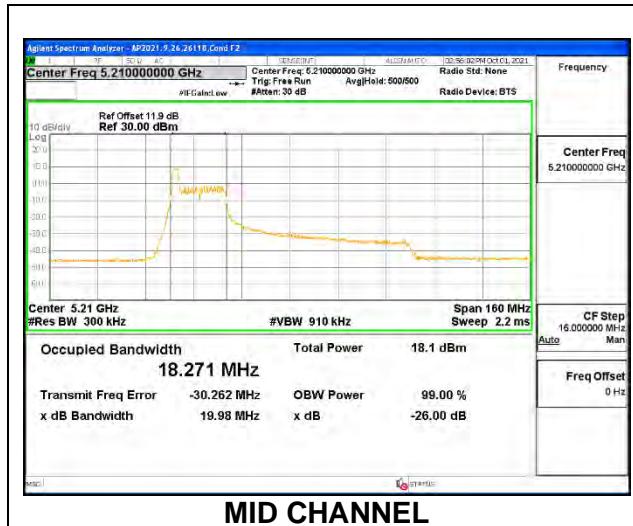
Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5190	49.34	43.85	37.949	37.950
High	5230	41.09	40.93	37.925	37.893



## 9.2.6. 802.11ax HE80 MODE IN THE 5.2 GHz BAND

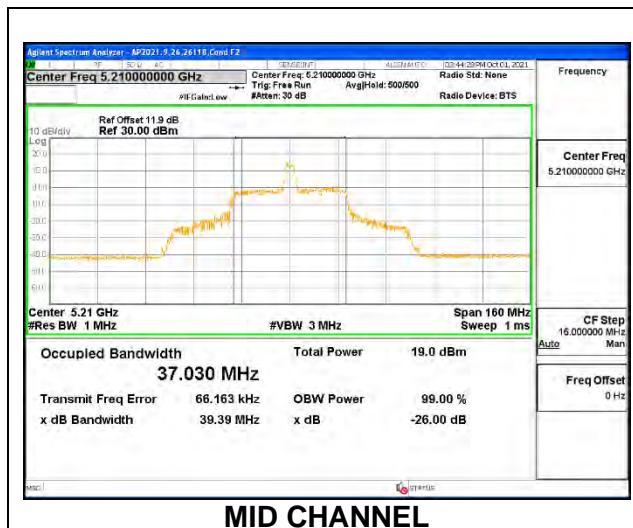
### 1TX Antenna 6 MODE: 26 Tones, RU Index 0

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	19.98	18.271



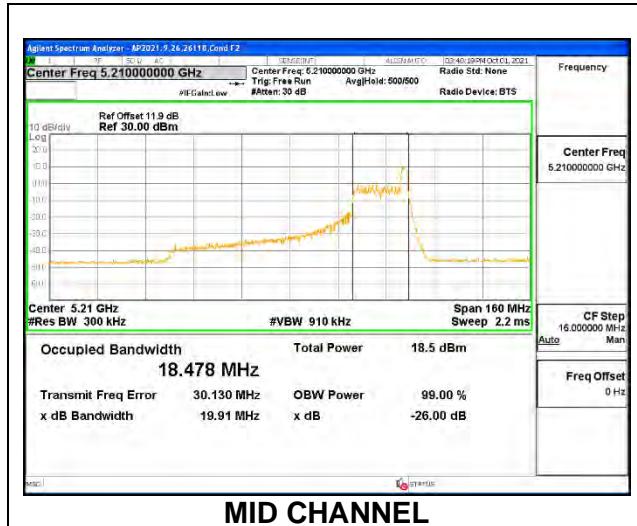
### 1TX Antenna 6 MODE: 26 Tones, RU Index 18

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	39.39	37.030

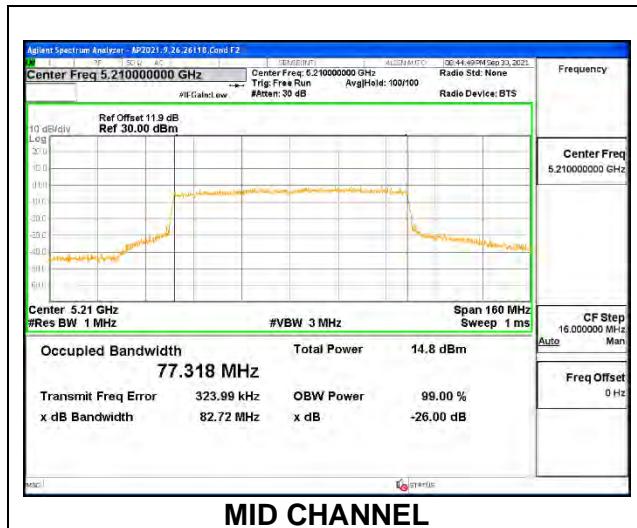


**1TX Antenna 6 MODE: 26 Tones, RU Index 36**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	19.91	18.478

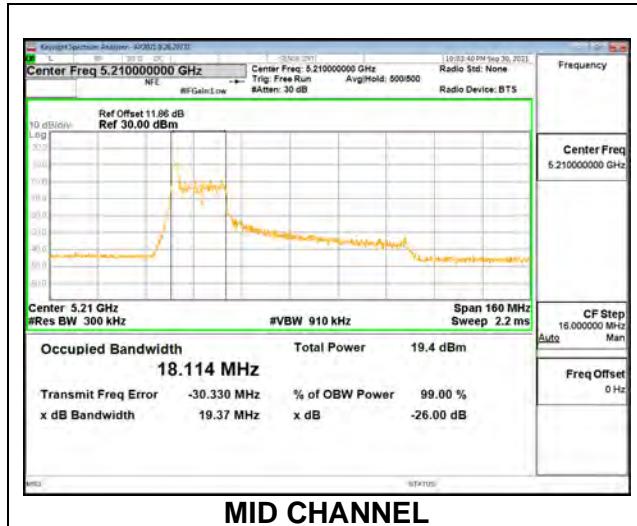
**1TX Antenna 6 MODE: SU Mode**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	82.72	77.318

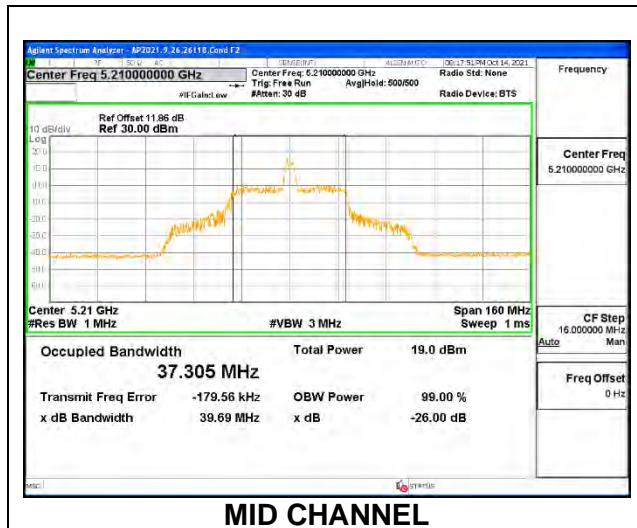


**1TX Antenna 3 MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	19.37	18.114

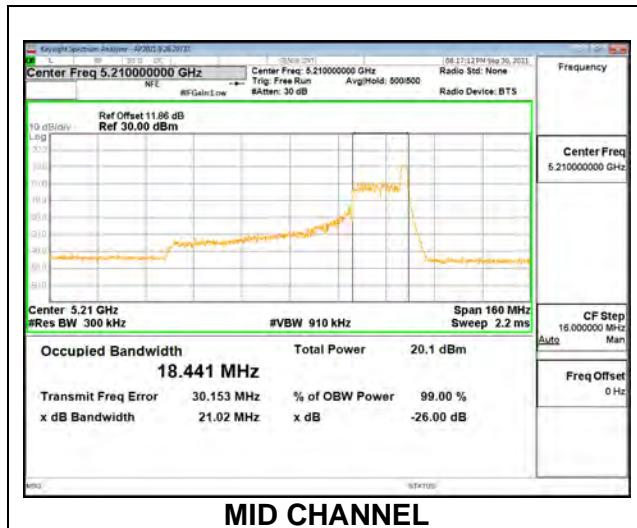
**1TX Antenna 3 MODE: 26 Tones, RU Index 18**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	39.69	37.305

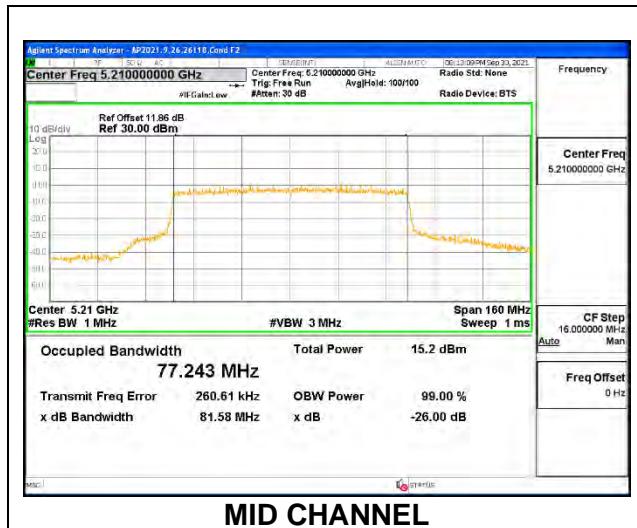


**1TX Antenna 3 MODE: 26 Tones, RU Index 36**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	21.02	18.441

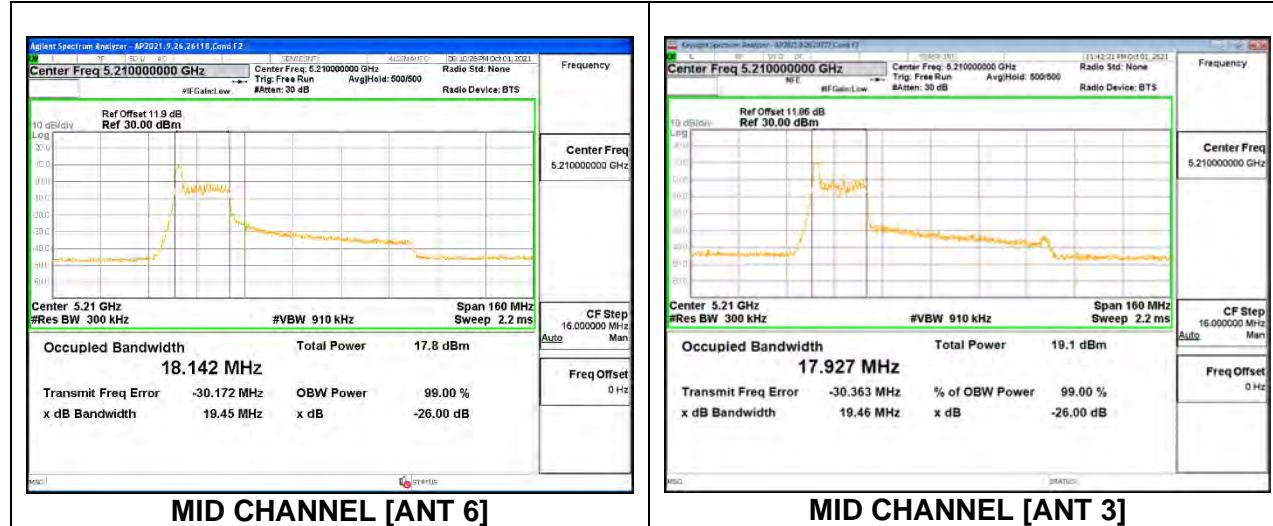
**1TX Antenna 3 MODE: SU Mode**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	81.58	77.243

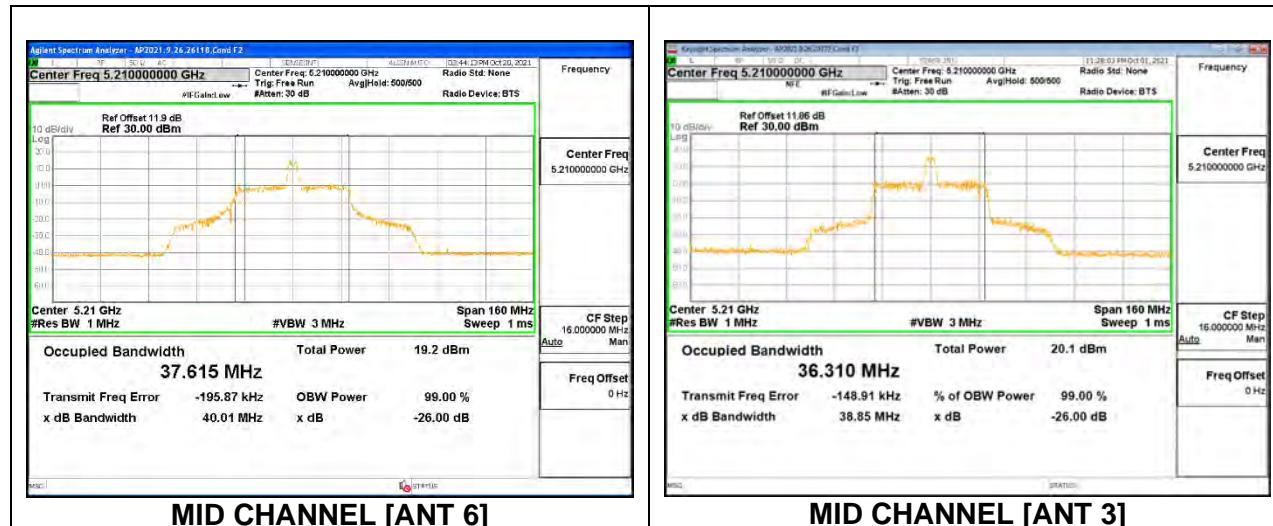


**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Mid	5210	19.45	19.46	18.142	17.927

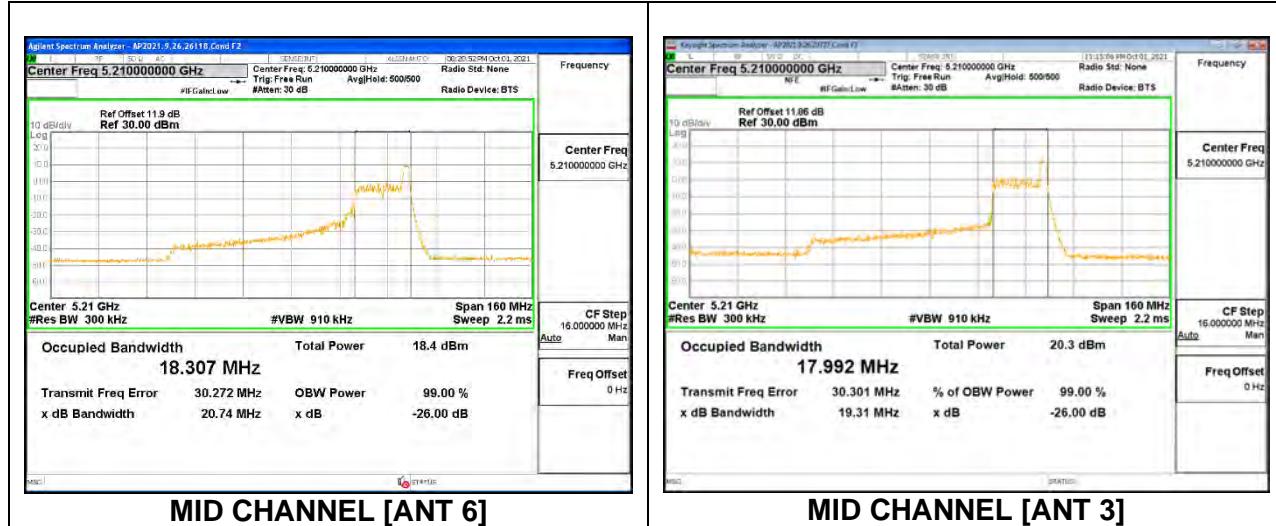
**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 18**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Mid	5210	40.01	38.85	37.615	36.310

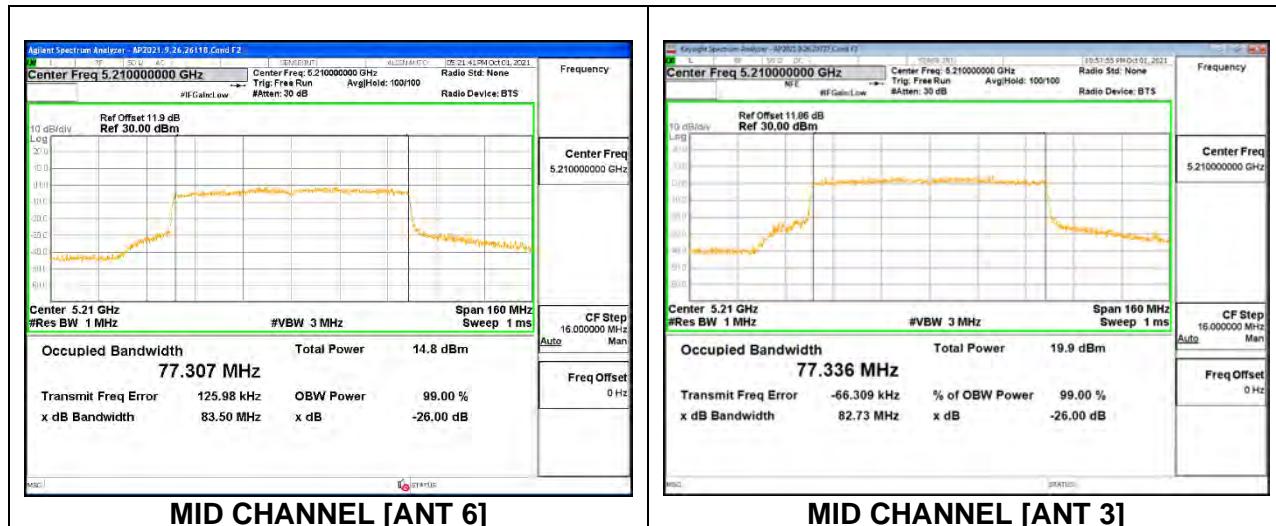


**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 36**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Mid	5210	20.74	19.31	18.307	17.992

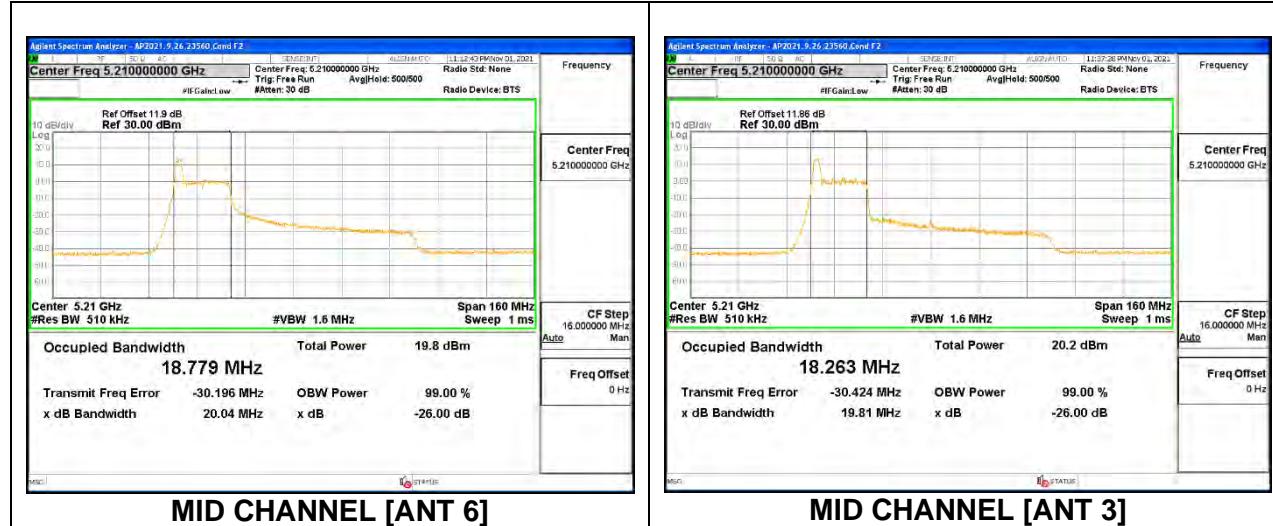
**2TX Antenna 6 + Antenna 3 OFDMA MODE: SU Mode**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Mid	5210	83.50	82.73	77.307	77.336

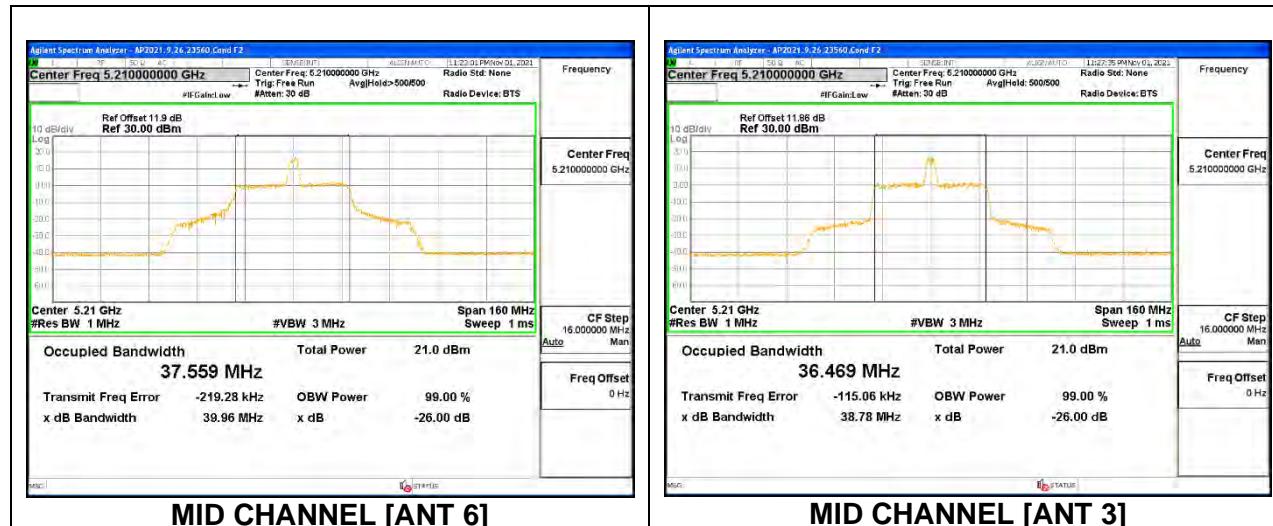


**2TX Antenna 6 + Antenna 3 SDM MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Mid	5210	20.04	19.81	18.779	18.263

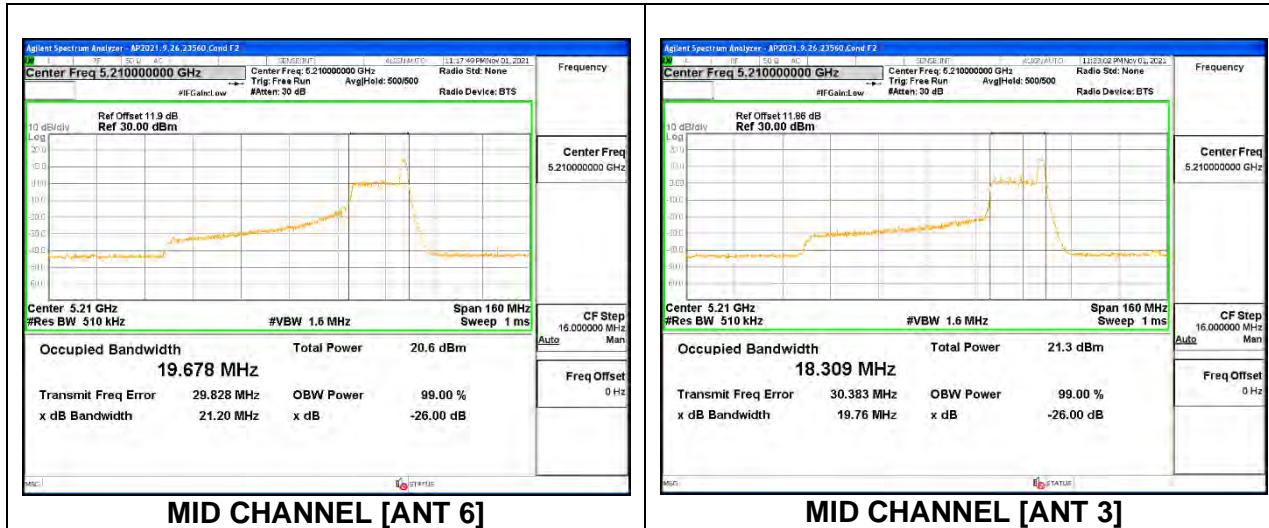
**2TX Antenna 6 + Antenna 3 SDM MODE: 26 Tones, RU Index 18**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Mid	5210	39.96	38.78	37.559	36.469



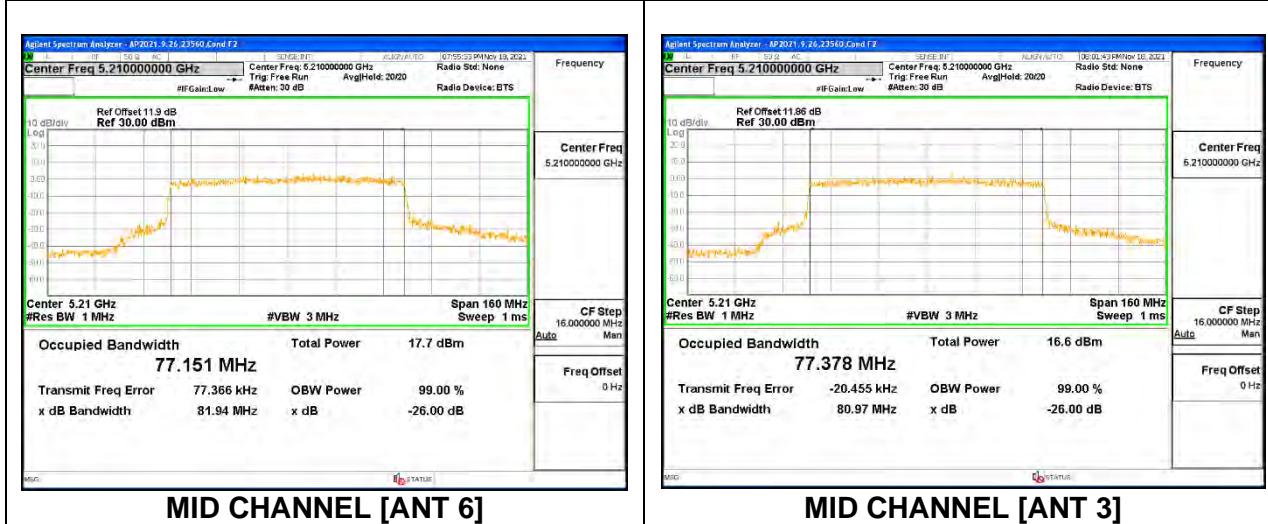
**2TX Antenna 6 + Antenna 3 SDM MODE: 26 Tones, RU Index 36**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Mid	5210	21.20	19.76	19.678	18.309



2TX Antenna 6 + Antenna 3 SDM MODE: SU

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Mid	5210	81.94	80.97	77.151	77.378



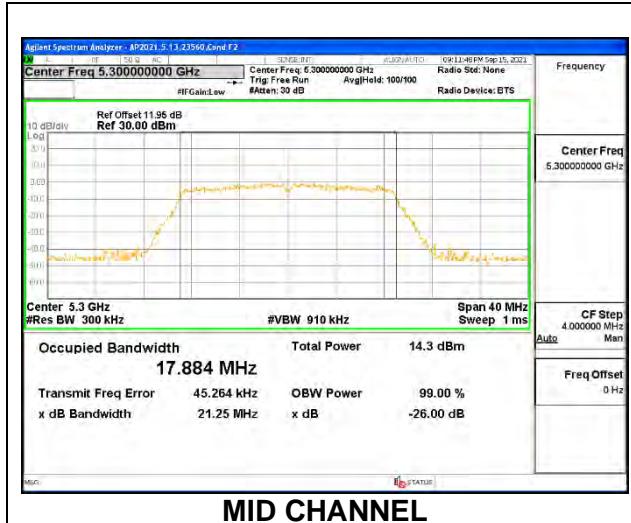
MID CHANNEL [ANT 6]

MID CHANNEL [ANT 3]

## 9.2.7. 802.11n HT20 MODE IN THE 5.3 GHz BAND

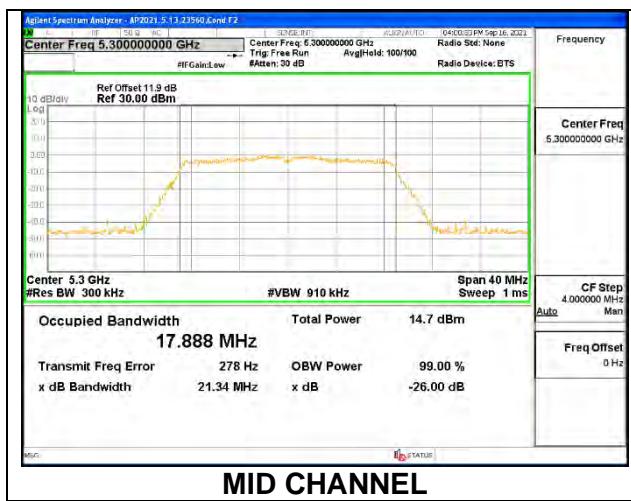
### 1TX Antenna 6 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	20.97	17.863
Mid	5300	21.25	17.884
High	5320	22.39	17.941



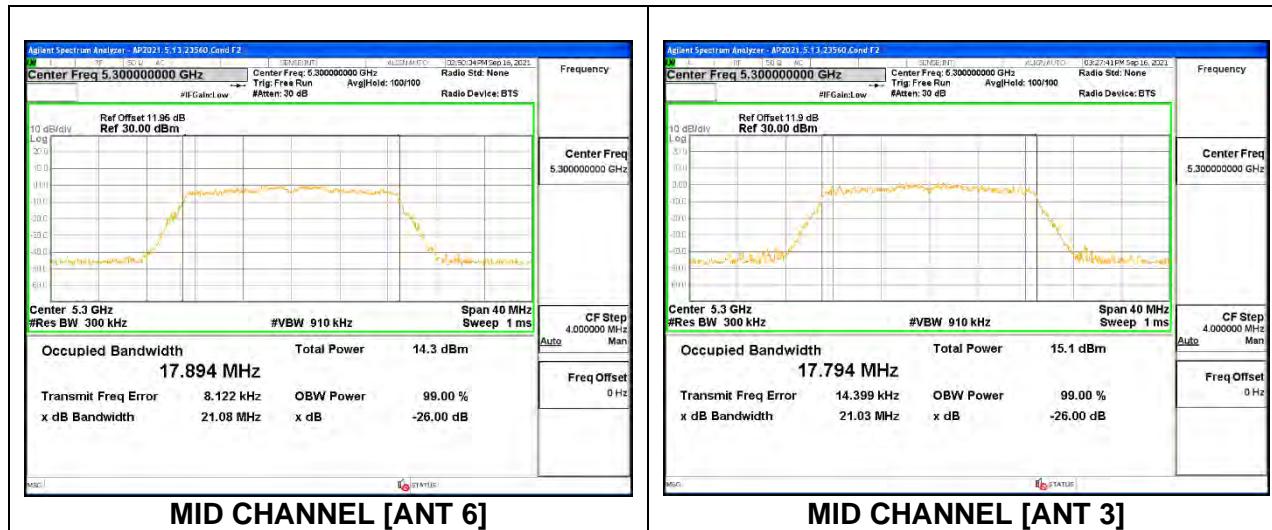
### 1TX Antenna 3 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	21.22	17.840
Mid	5300	21.34	17.888
High	5320	21.52	17.982



**2TX Antenna 6 + Antenna 3 CDD MODE**

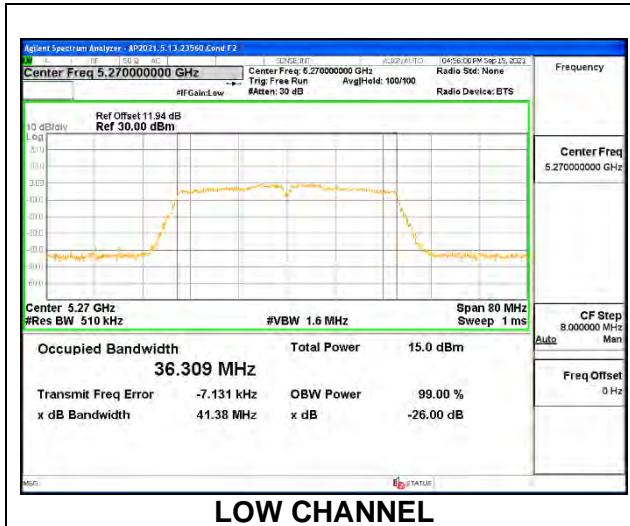
Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5260	21.01	20.79	17.830	17.815
Mid	5300	21.08	21.03	17.894	17.794
High	5320	22.15	21.71	17.983	17.833



## 9.2.8. 802.11n HT40 MODE IN THE 5.3 GHz BAND

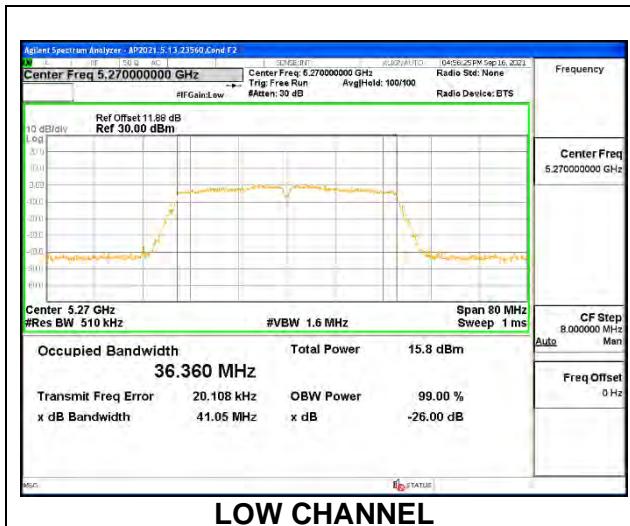
### 1TX Antenna 6 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	41.38	36.309
High	5310	43.57	36.536



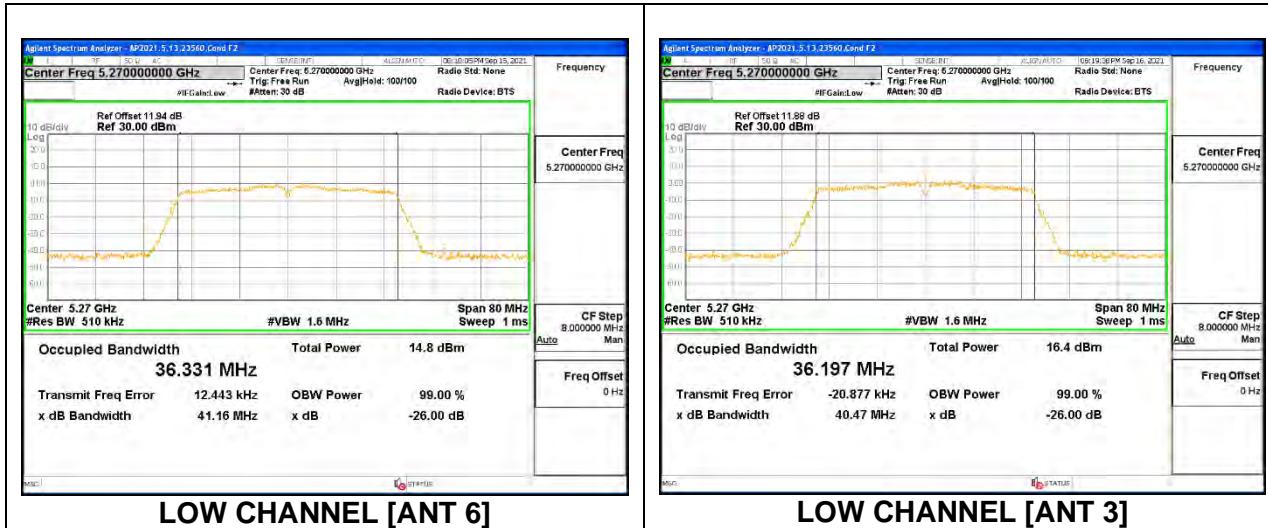
### 1TX Antenna 3 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	41.05	36.360
High	5310	43.34	36.539



**2TX Antenna 6 + Antenna 3 CDD MODE**

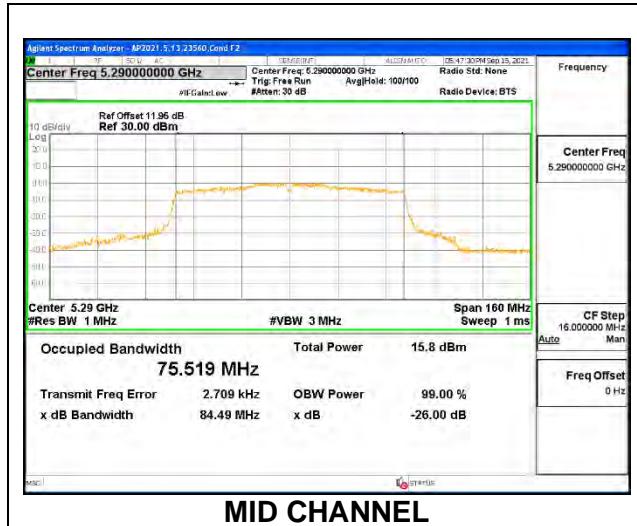
Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5270	41.16	40.47	36.331	36.197
High	5310	43.86	41.47	36.517	36.306



## 9.2.9. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

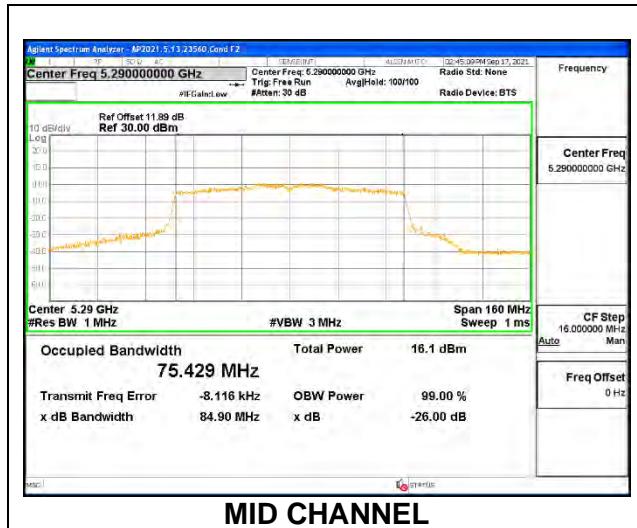
### 1TX Antenna 6 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	84.49	75.519



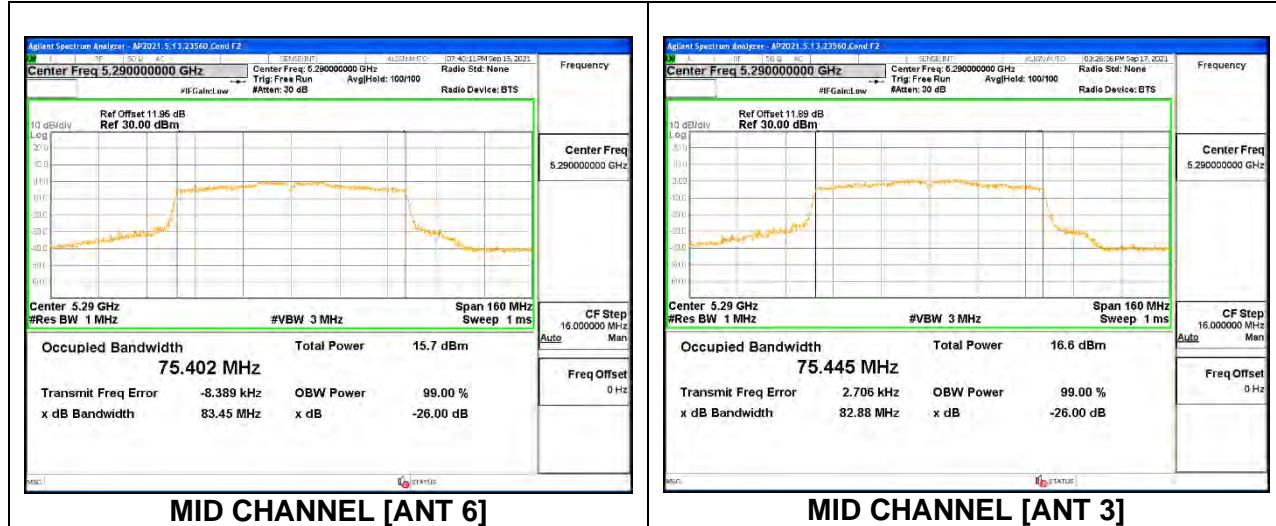
### 1TX Antenna 3 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	84.90	75.429



**2TX Antenna 6 + Antenna 3 CDD MODE**

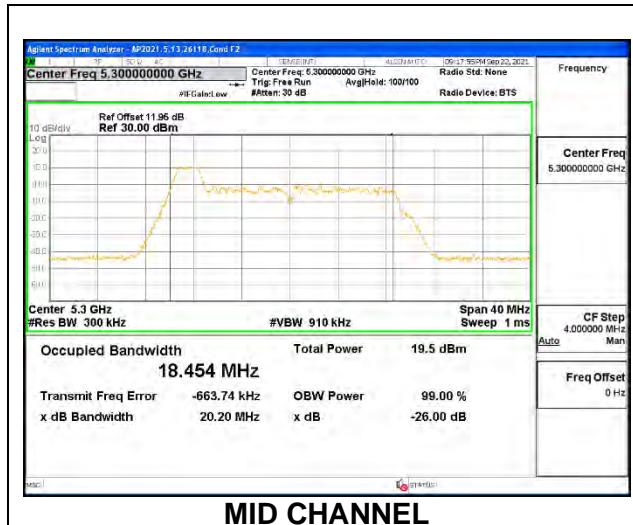
Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Mid	5290	83.45	82.88	75.402	75.445



### 9.2.10. 802.11ax HE20 MODE IN THE 5.3 GHz BAND

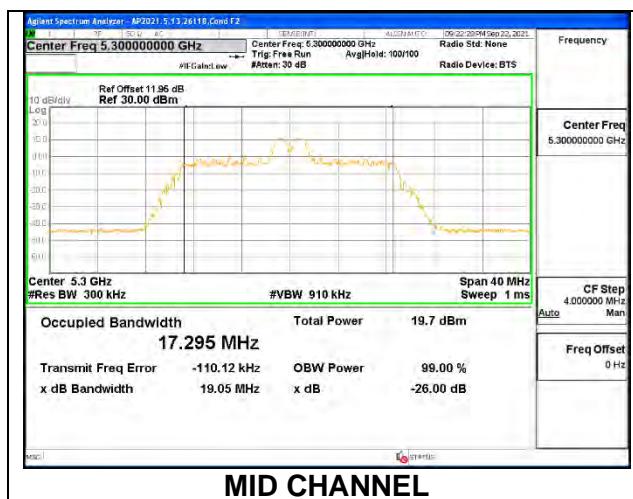
#### 1TX Antenna 6 MODE: 26 Tones, RU Index 0

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	20.29	18.471
Mid	5300	20.20	18.454
High	5320	20.03	18.422



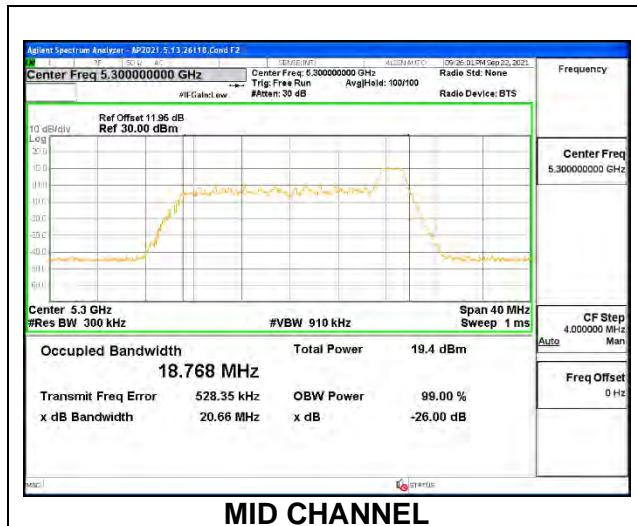
#### 1TX Antenna 6 MODE: 26 Tones, RU Index 4

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	19.29	17.378
Mid	5300	19.05	17.295
High	5320	19.33	17.380

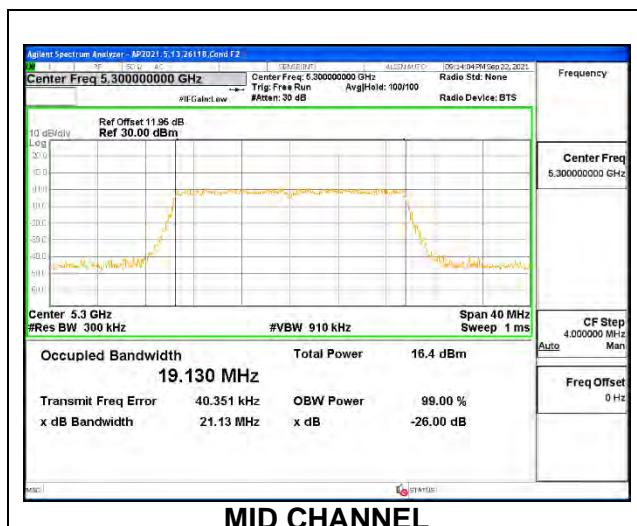


**1TX Antenna 6 MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	20.62	18.650
Mid	5300	20.66	18.768
High	5320	20.74	18.766

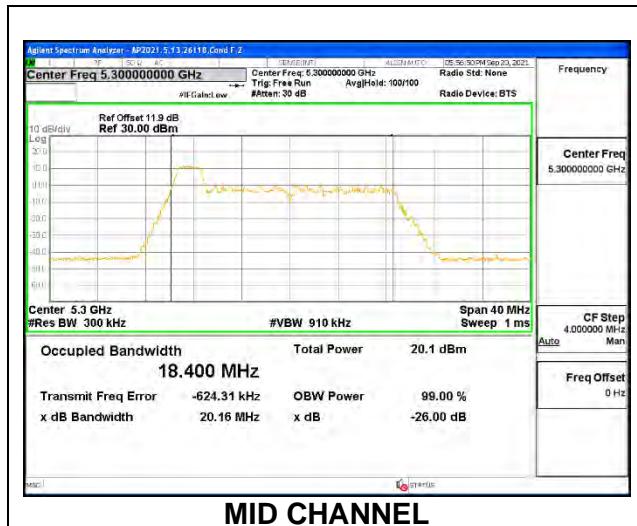
**1TX Antenna 6 MODE: SU Mode**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	21.26	19.058
Mid	5300	21.13	19.130
High	5320	22.31	19.110

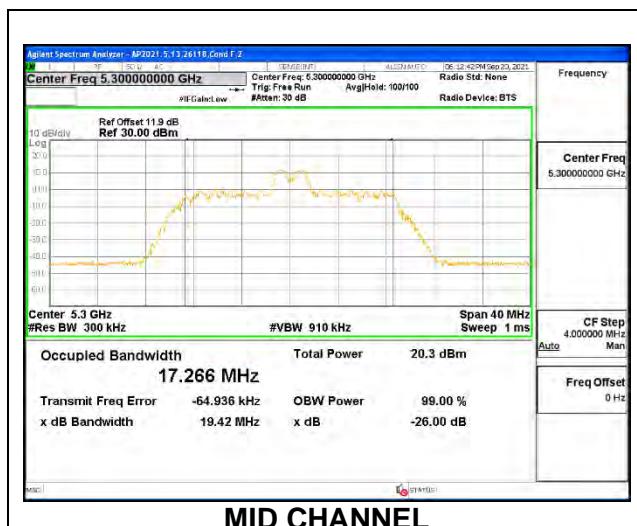


**1TX Antenna 3 MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	20.18	18.412
Mid	5300	20.16	18.400
High	5320	20.15	18.401

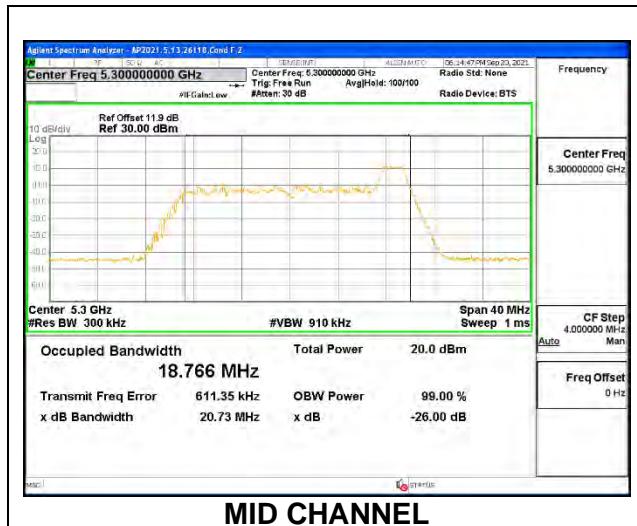
**1TX Antenna 3 MODE: 26 Tones, RU Index 4**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	19.46	17.358
Mid	5300	19.42	17.266
High	5320	19.39	17.354

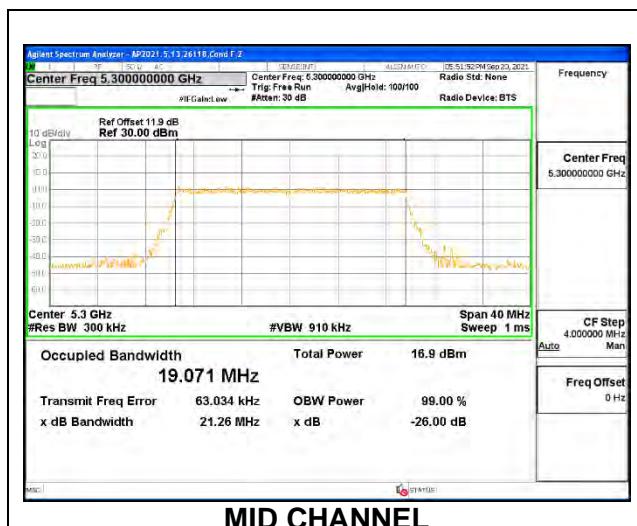


**1TX Antenna 3 MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	20.78	18.762
Mid	5300	20.73	18.766
High	5320	20.15	18.741

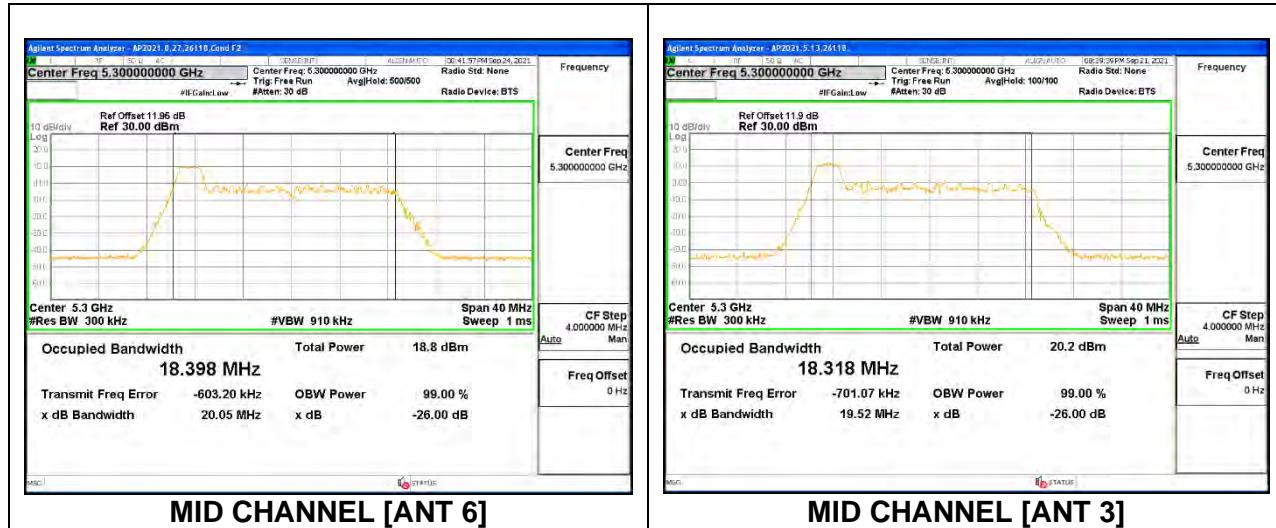
**1TX Antenna 3 MODE: SU Mode**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	21.13	19.080
Mid	5300	21.26	19.071
High	5320	21.62	19.166

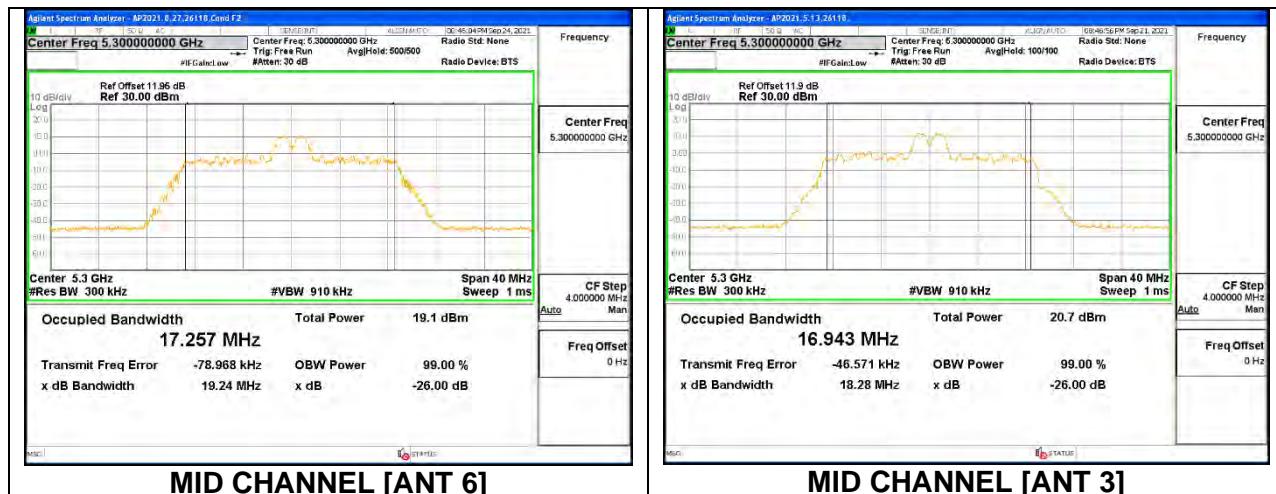


**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5260	20.07	19.79	18.417	18.346
Mid	5300	20.05	19.52	18.398	18.318
High	5320	19.94	19.79	18.382	18.346

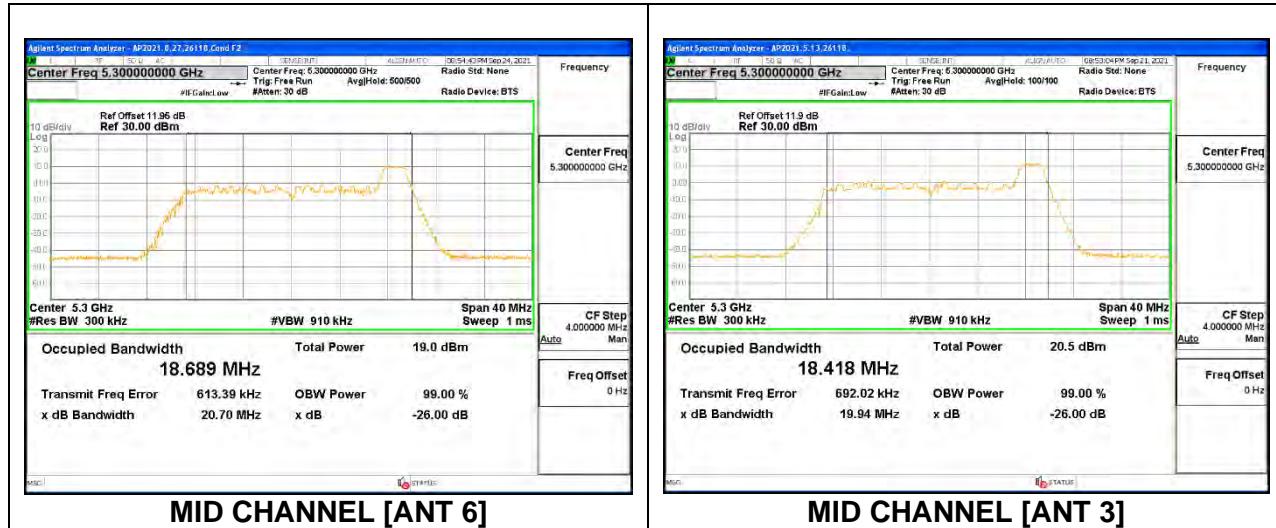
**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 4**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5260	19.34	18.36	17.210	16.993
Mid	5300	19.24	18.28	17.257	16.943
High	5320	19.11	18.34	17.303	16.923

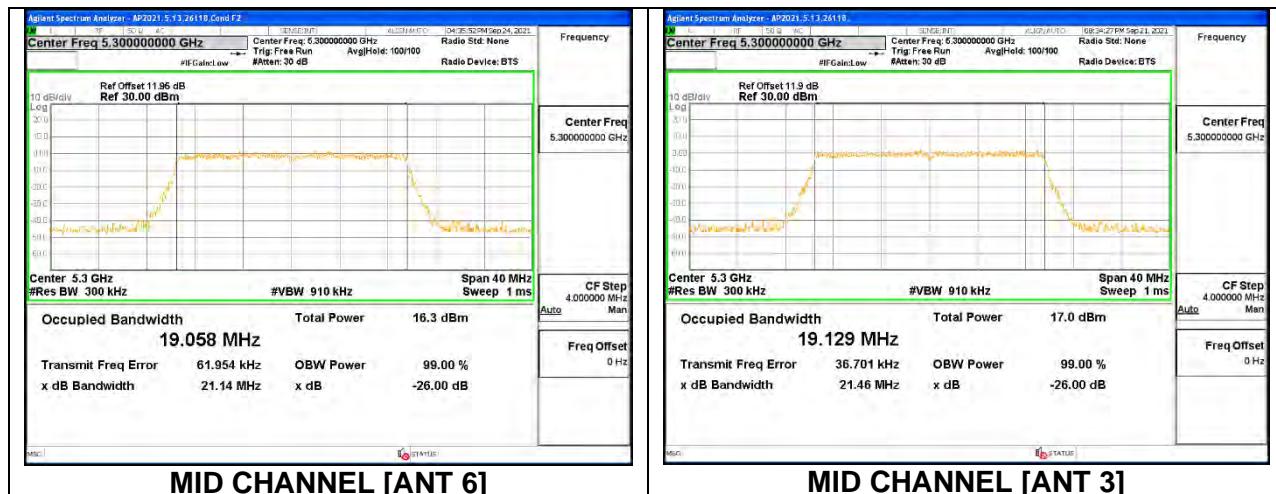


**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5260	20.70	19.78	18.668	18.435
Mid	5300	20.70	19.94	18.689	18.418
High	5320	20.60	19.81	18.602	18.400

**2TX Antenna 6 + Antenna 3 OFDMA MODE: SU Mode**

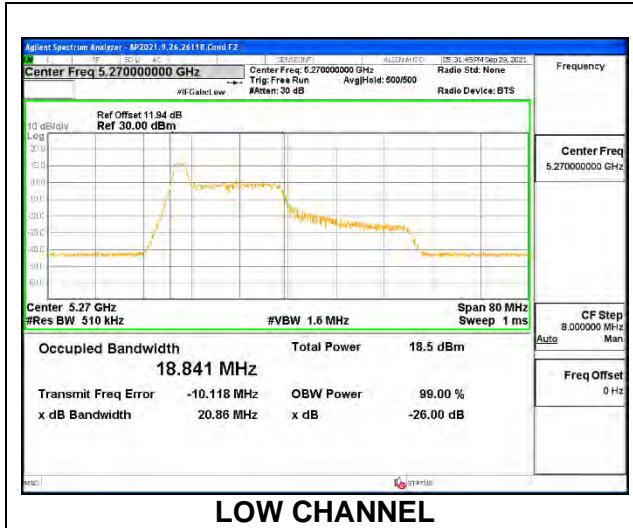
Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5260	21.37	21.11	19.086	19.066
Mid	5300	21.14	21.46	19.058	19.129
High	5320	21.37	21.64	19.100	19.118



### 9.2.11. 802.11ax HE40 MODE IN THE 5.3 GHz BAND

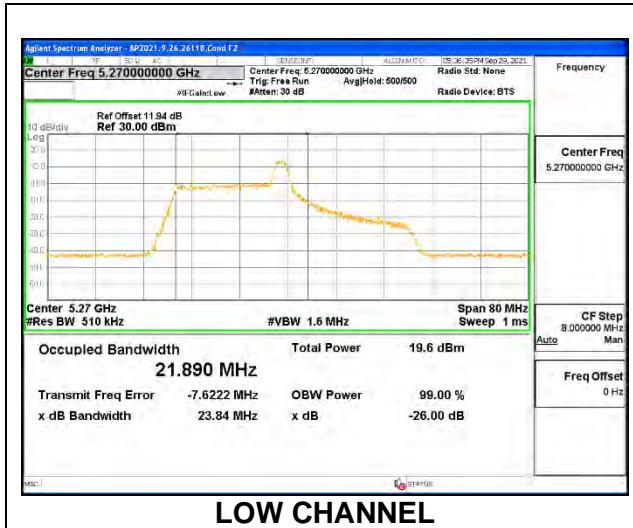
#### 1TX Antenna 6 MODE: 26 Tones, RU Index 0

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	20.86	18.841
High	5310	20.74	18.706



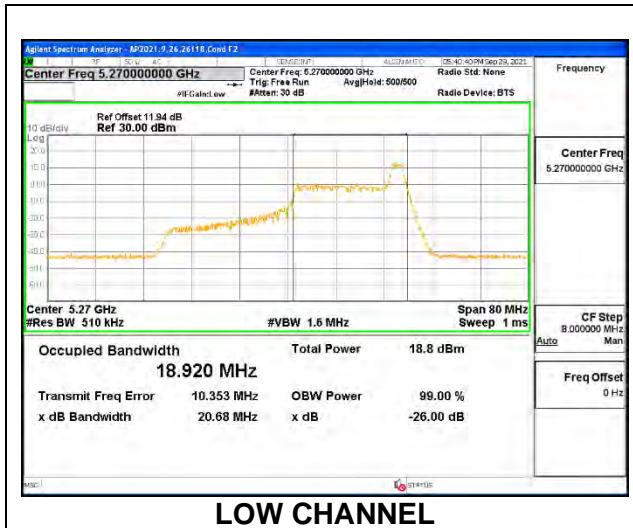
#### 1TX Antenna 6 MODE: 26 Tones, RU Index 8

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	23.84	21.890
High	5310	23.96	21.787

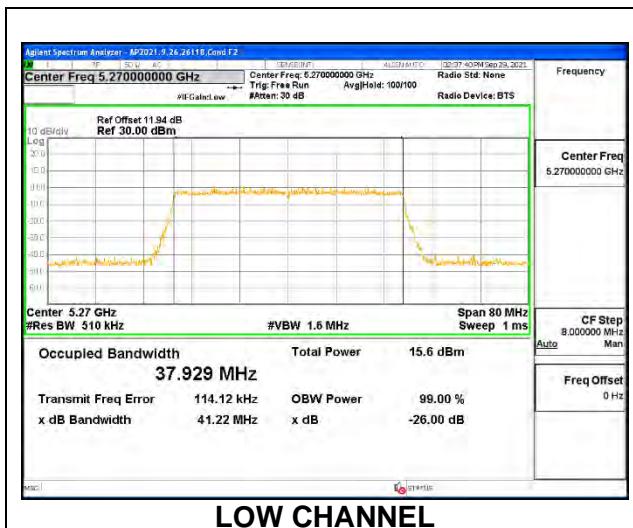


**1TX Antenna 6 MODE: 26 Tones, RU Index 17**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	20.68	18.920
High	5310	20.95	18.954

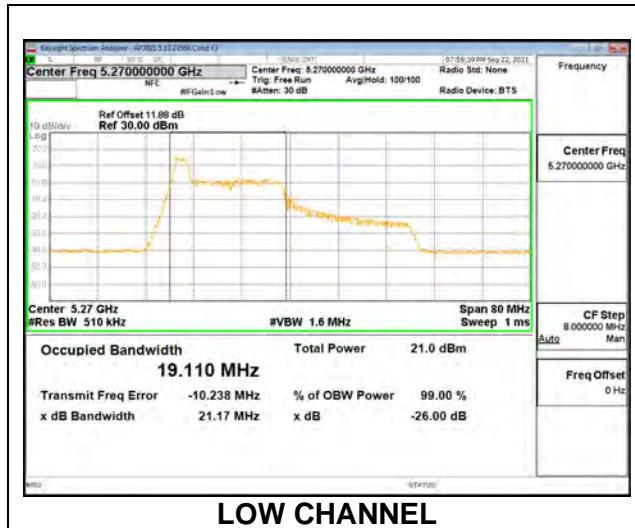
**1TX Antenna 6 MODE: SU Mode**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	41.22	37.929
High	5310	41.71	38.076

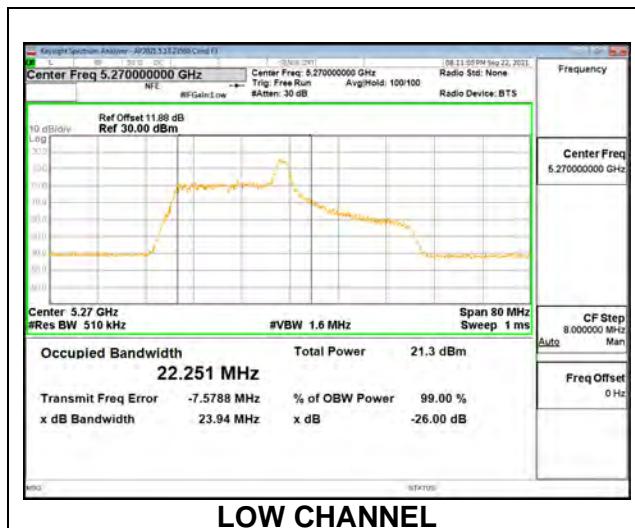


**1TX Antenna 3 MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	21.17	19.110
High	5310	21.33	19.155

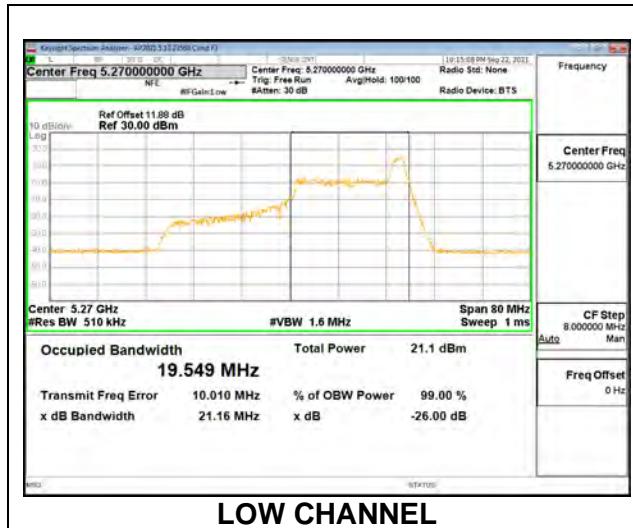
**1TX Antenna 3 MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	23.94	22.251
High	5310	24.86	22.040

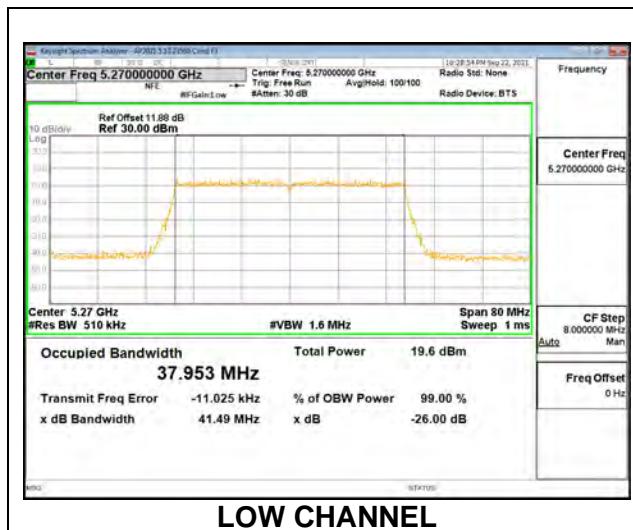


1TX Antenna 3 MODE: 26 Tones, RU Index 17

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	21.16	19.549
High	5310	21.48	19.270

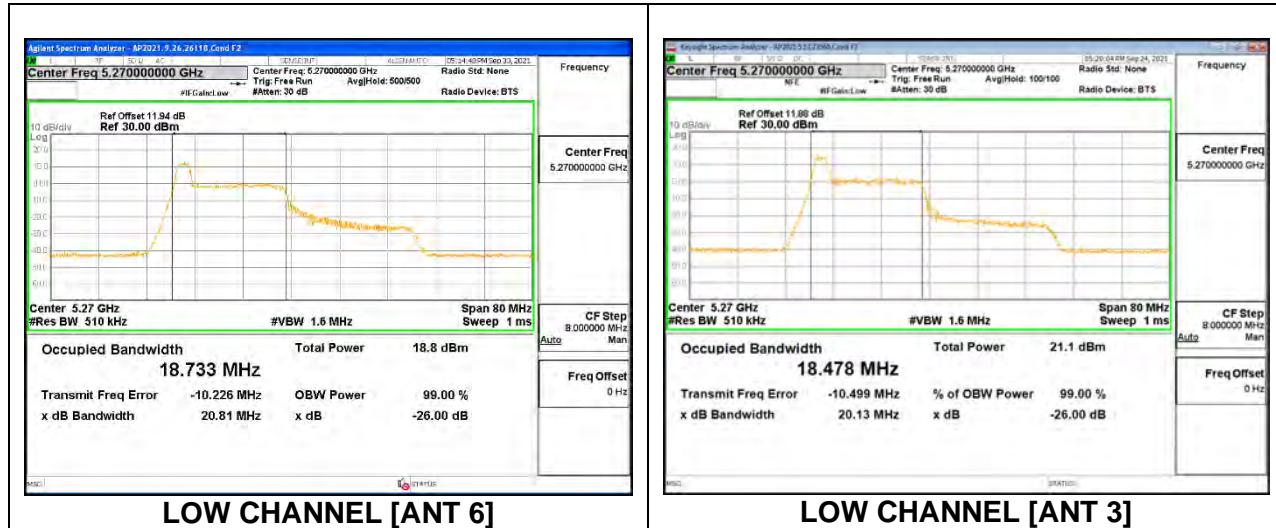
1TX Antenna 3 MODE: SU Mode

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	41.49	37.953
High	5310	43.13	38.033

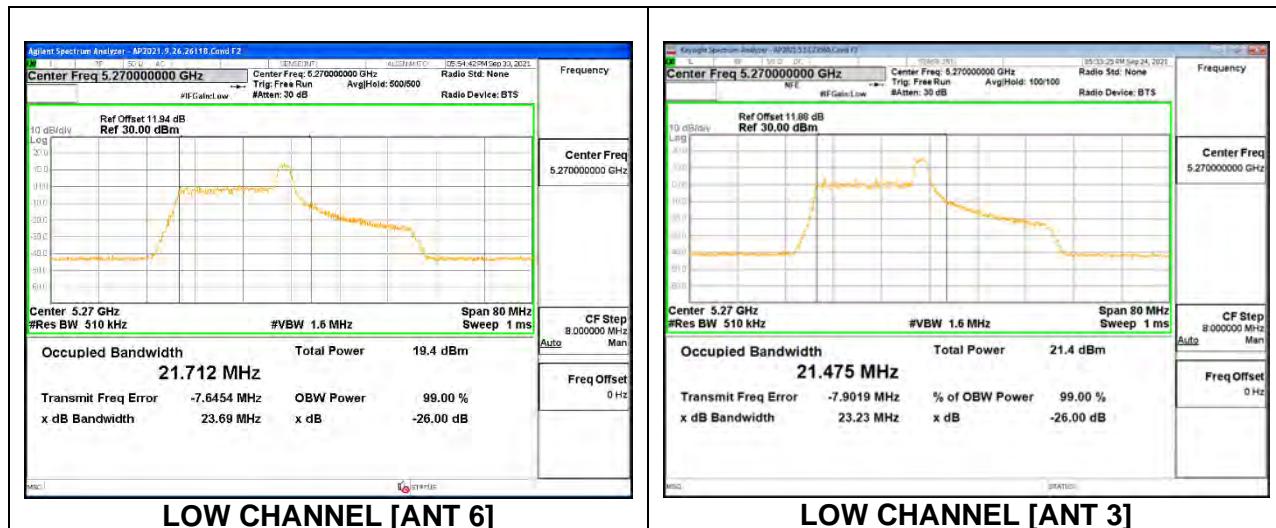


**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5270	20.81	20.13	18.733	18.478
High	5310	20.95	20.37	18.832	18.339

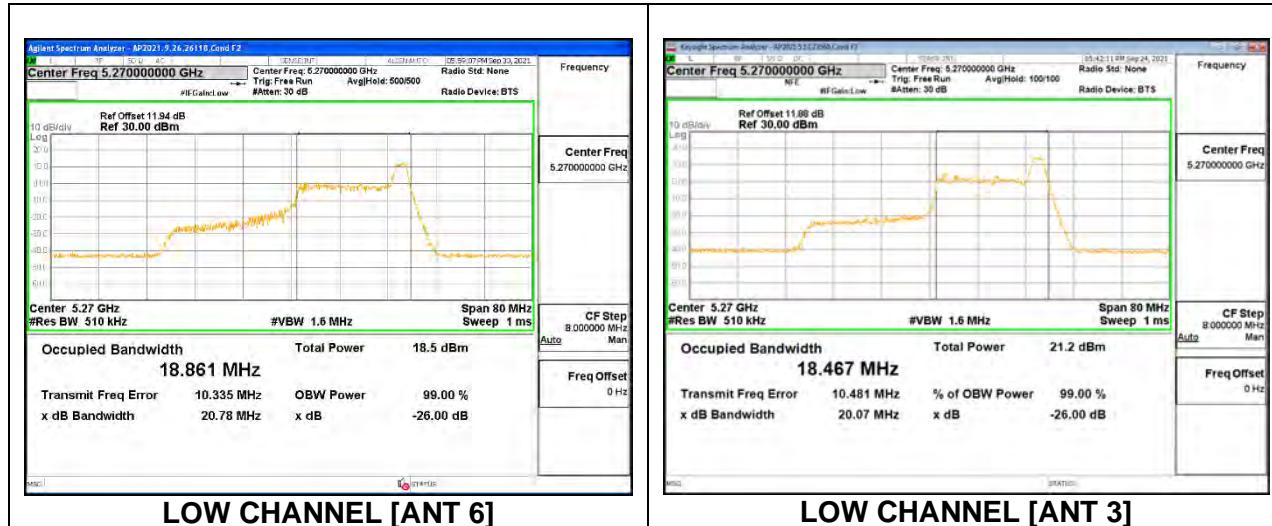
**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5270	23.69	23.23	21.712	21.475
High	5310	23.33	23.46	21.658	21.210

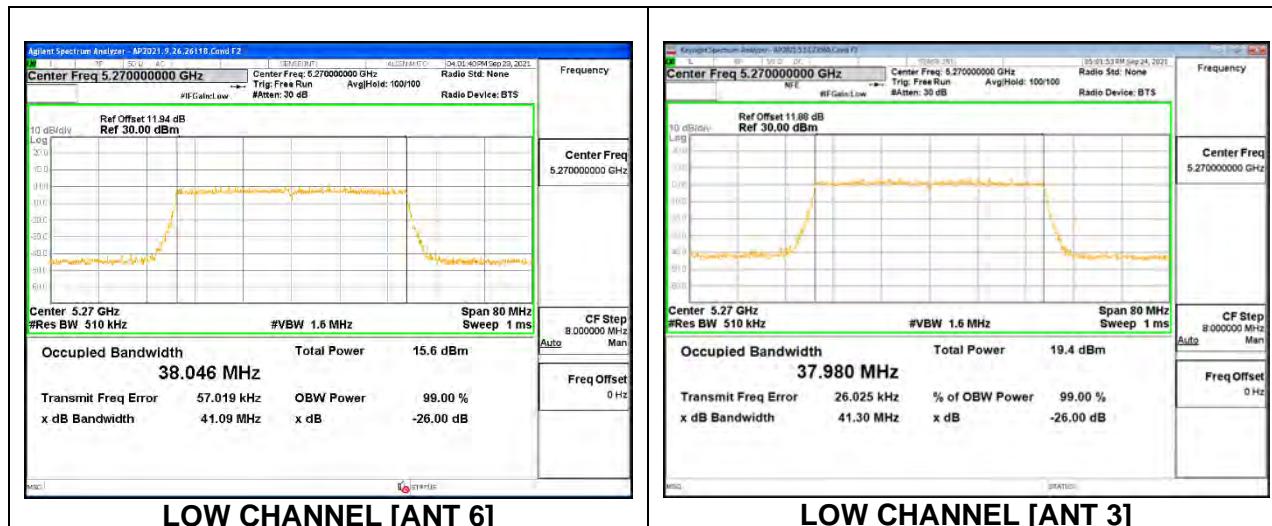


**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 17**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5270	20.78	20.07	18.861	18.467
High	5310	21.32	19.78	19.078	18.353

**2TX Antenna 6 + Antenna 3 OFDMA MODE: SU Mode**

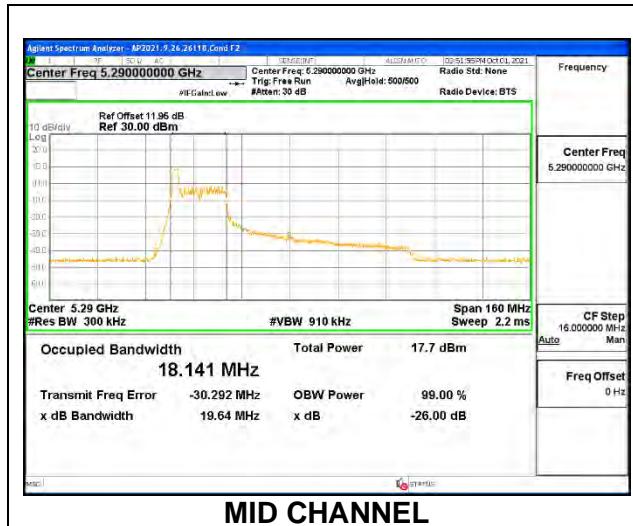
Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5270	41.09	41.30	38.046	37.980
High	5310	42.26	42.75	38.024	38.014



### 9.2.12. 802.11ax HE80 MODE IN THE 5.3 GHz BAND

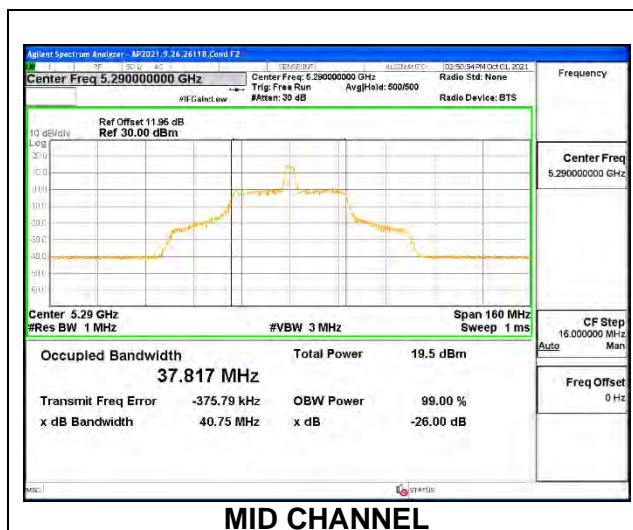
#### 1TX Antenna 6 MODE: 26 Tones, RU Index 0

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	19.64	18.141



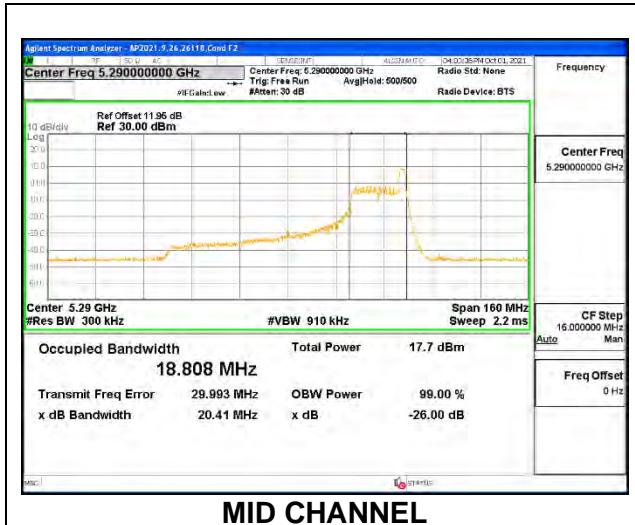
#### 1TX Antenna 6 MODE: 26 Tones, RU Index 18

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	40.75	37.817

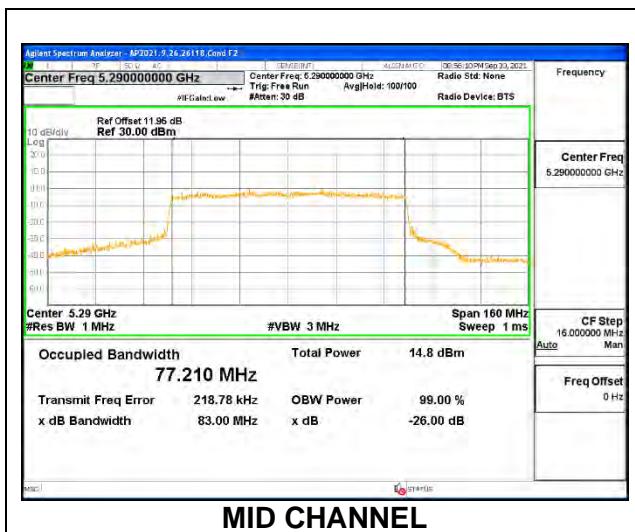


**1TX Antenna 6 MODE: 26 Tones, RU Index 36**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	20.41	18.808

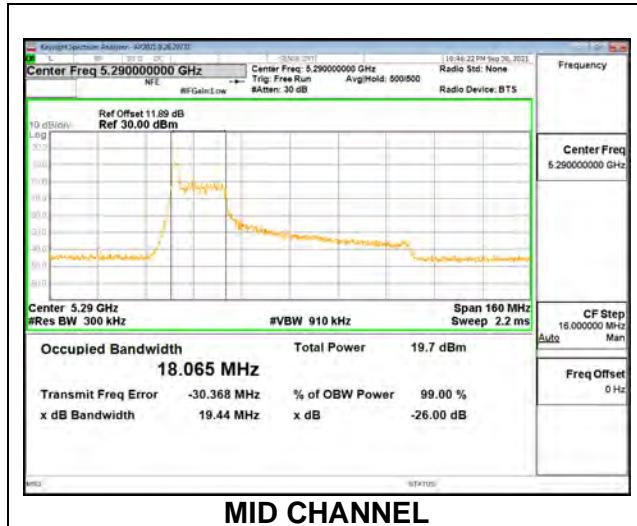
**1TX Antenna 6 MODE: SU Mode**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	83	77.210

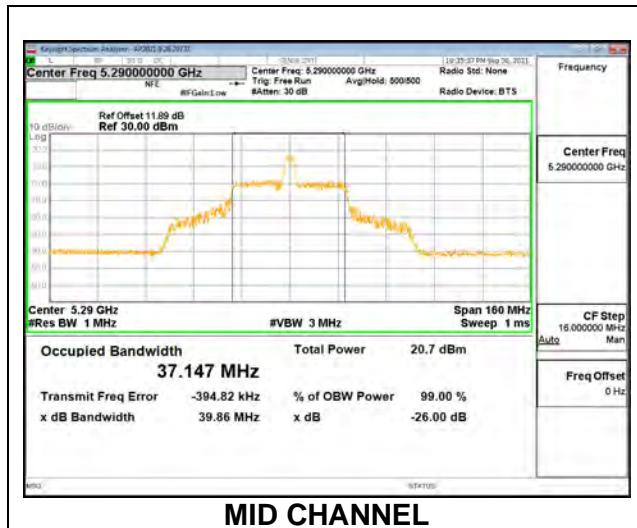


**1TX Antenna 3 MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	19.44	18.065

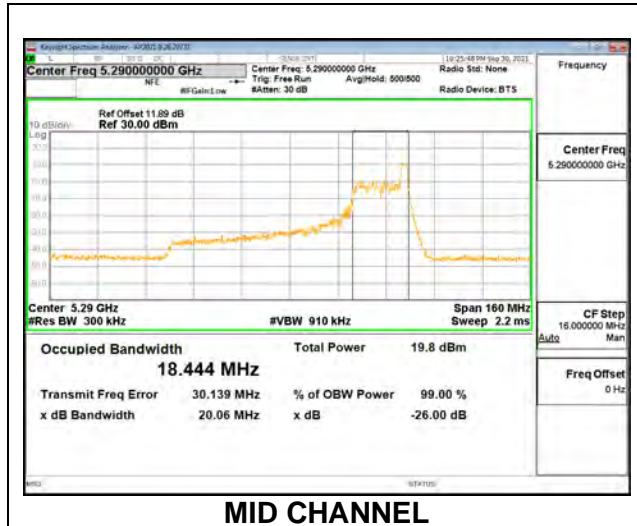
**1TX Antenna 3 MODE: 26 Tones, RU Index 18**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	39.86	37.147

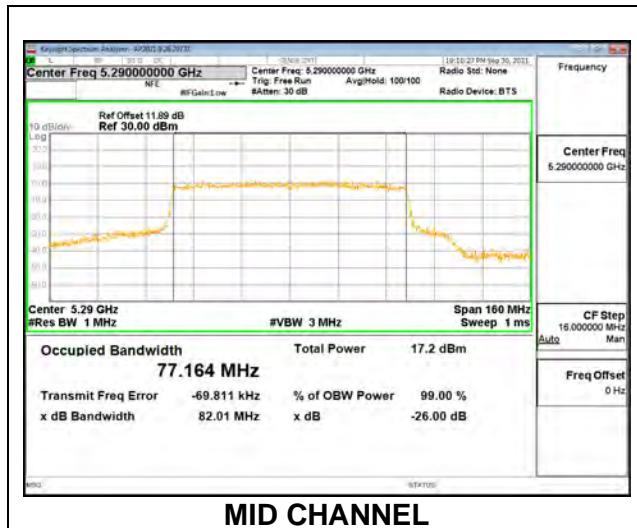


**1TX Antenna 3 MODE: 26 Tones, RU Index 36**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	20.06	18.444

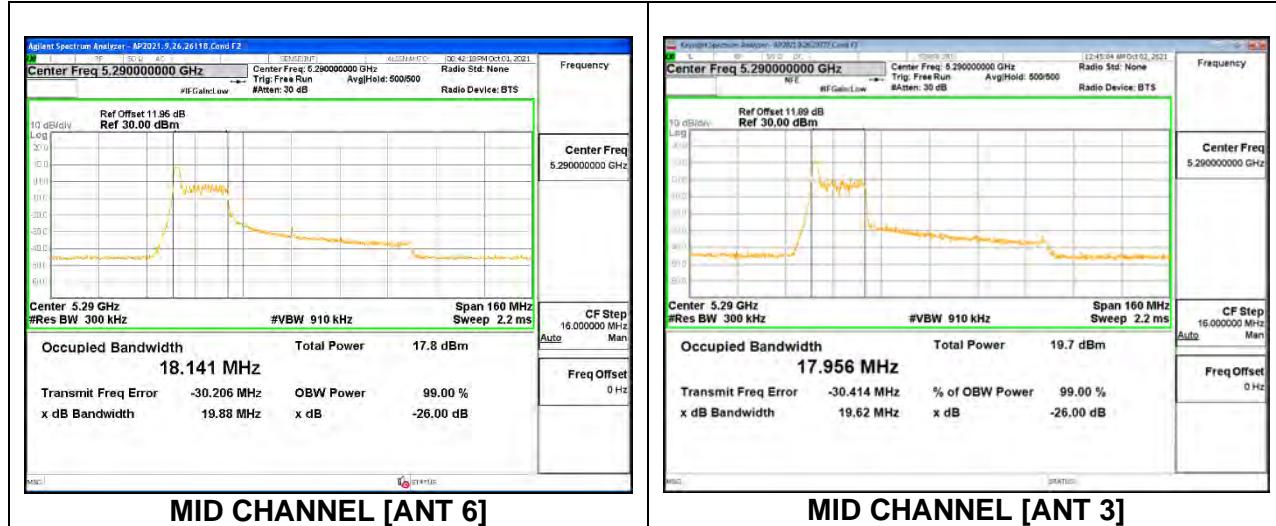
**1TX Antenna 3 MODE: SU Mode**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	82.01	77.164

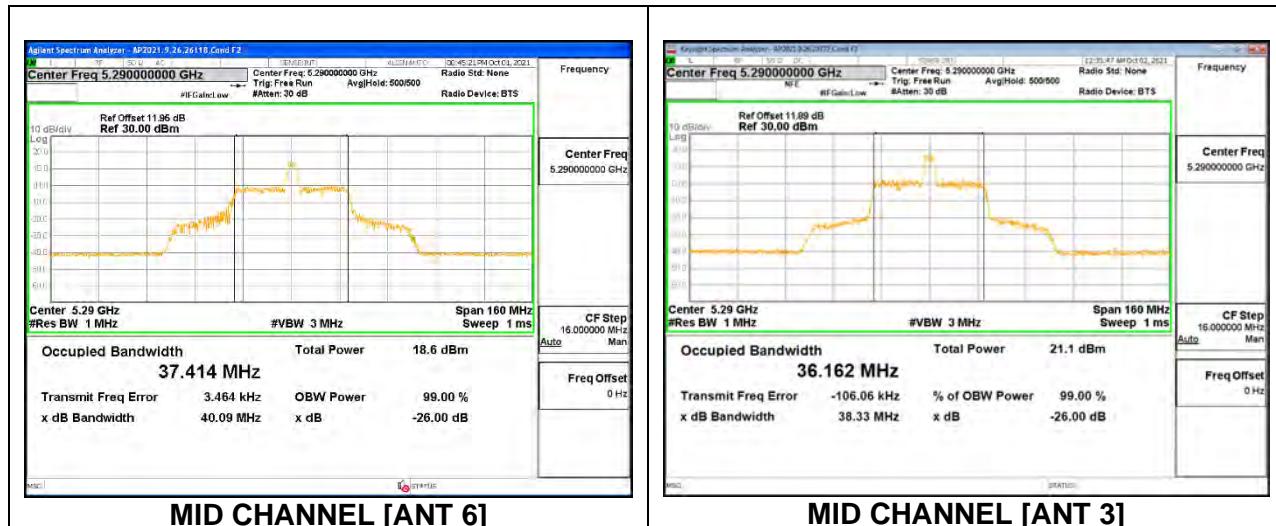


**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Mid	5290	19.88	19.62	18.141	17.956

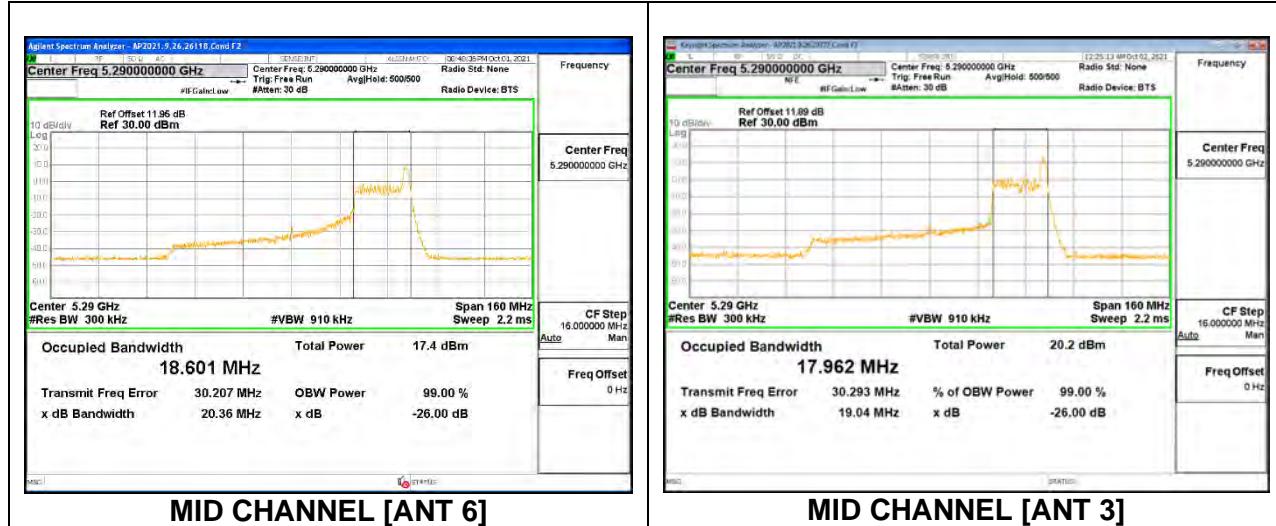
**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 18**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Mid	5290	40.09	38.33	37.414	36.162

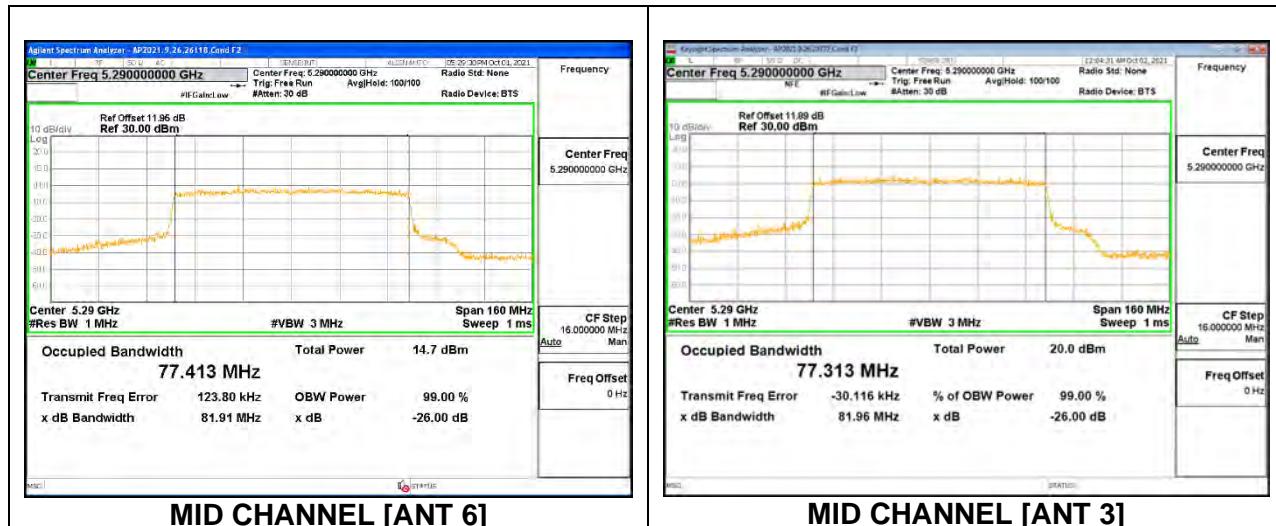


**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 36**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Mid	5290	20.36	19.04	18.601	17.962

**2TX Antenna 6 + Antenna 3 OFDMA MODE: SU Mode**

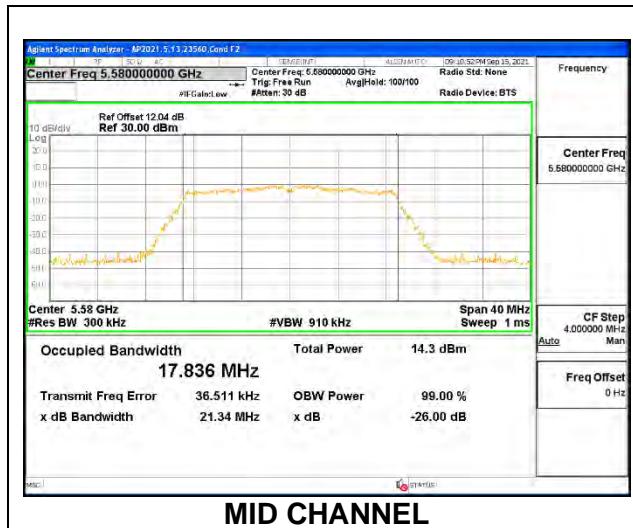
Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Mid	5290	81.91	81.96	77.413	77.313



### 9.2.13. 802.11n HT20 MODE IN THE 5.6 GHz BAND

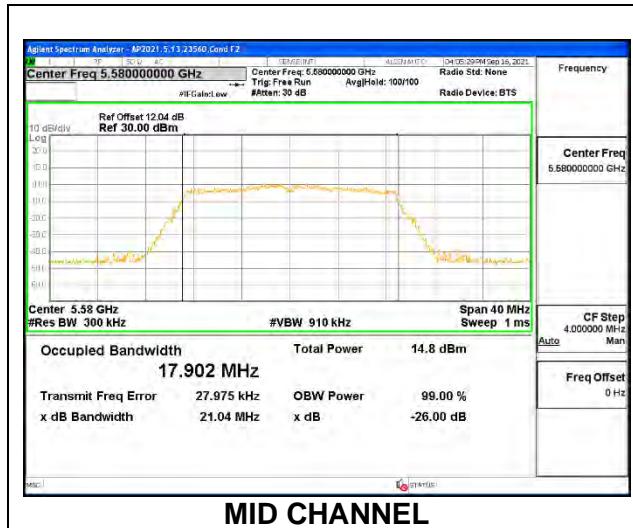
#### 1TX Antenna 6 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	21.28	17.973
Mid	5580	21.34	17.836
High	5700	22.92	18.015
144	5720	20.99	17.866



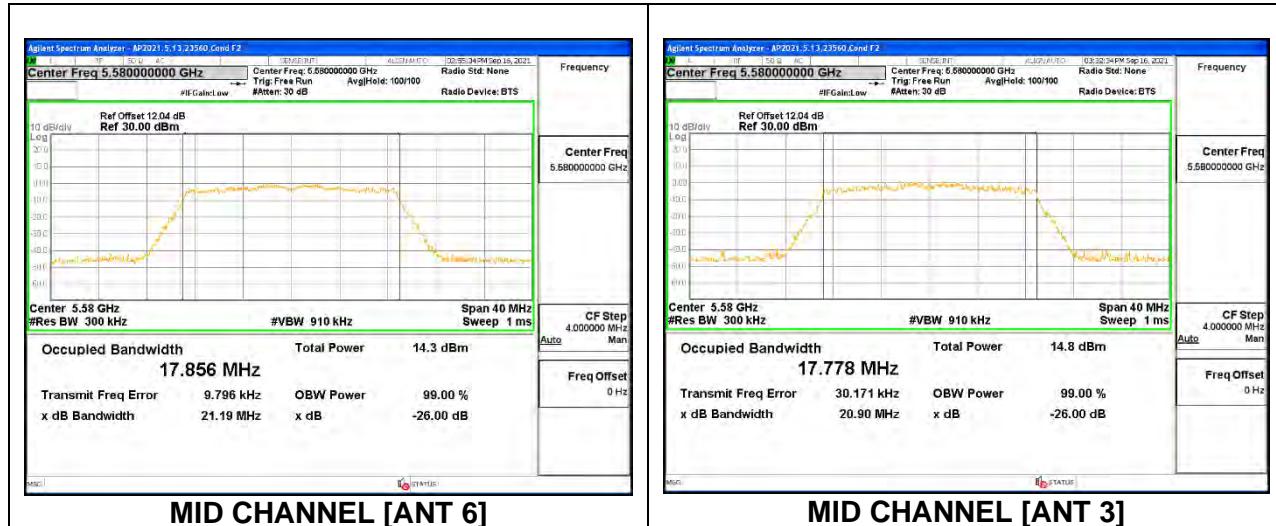
**1TX Antenna 3 MODE**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	22.26	17.966
Mid	5580	21.04	17.902
High	5700	22.39	18.051
144	5720	21.07	17.914



**2TX Antenna 6 + Antenna 3 CDD MODE**

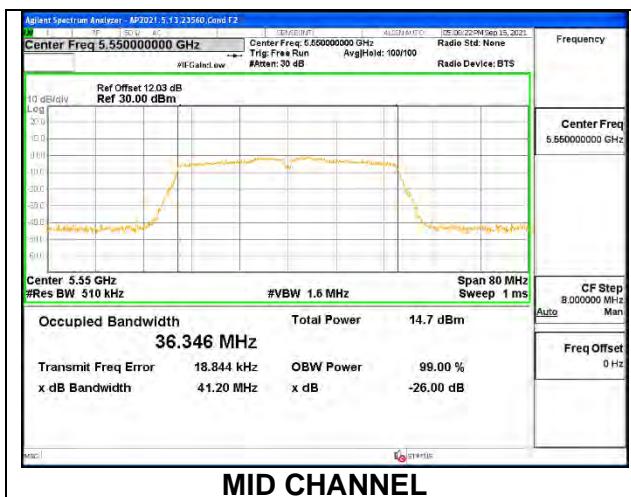
Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5500	22.90	21.38	17.999	17.871
Mid	5580	21.19	20.90	17.856	17.778
High	5700	21.40	21.81	17.966	17.886
144	5720	20.94	21.05	17.872	17.774



#### **9.2.14. 802.11n HT40 MODE IN THE 5.6 GHz BAND**

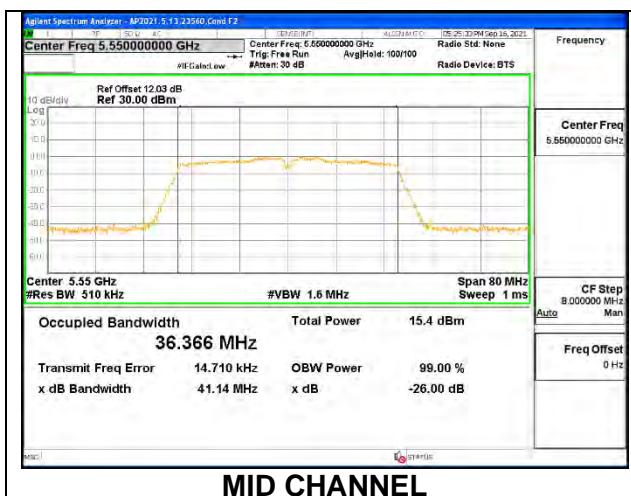
## **1TX Antenna 6 MODE**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	45.79	36.493
Mid	5550	41.20	36.346
High	5670	42.00	36.554
142	5710	41.42	36.266



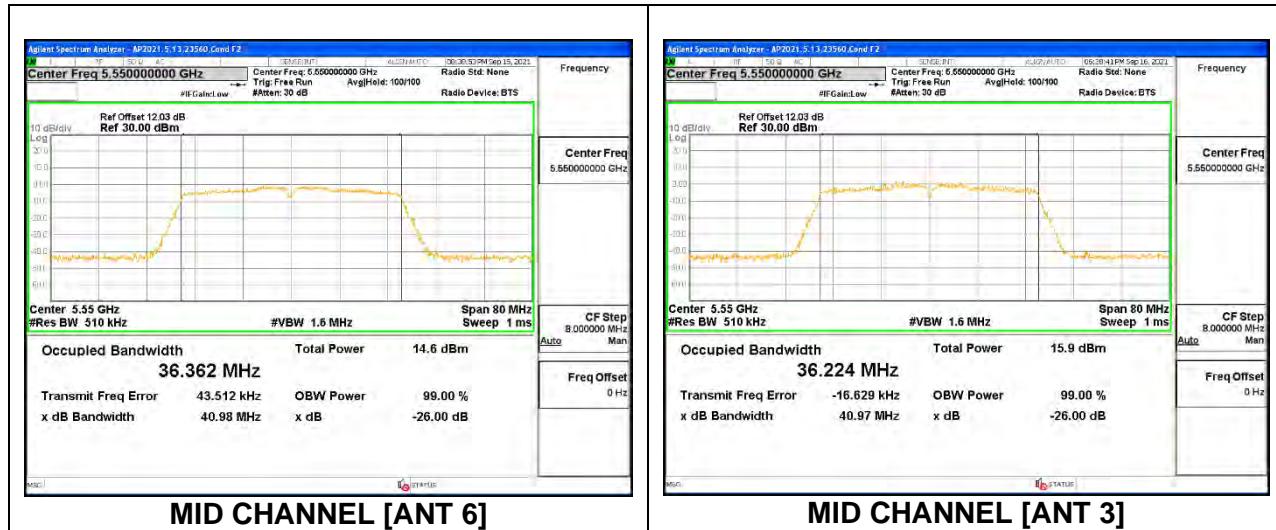
## **1TX Antenna 3 MODE**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	45.31	36.562
Mid	5550	41.14	36.366
High	5670	45.07	36.580
142	5710	40.85	36.399



**2TX Antenna 6 + Antenna 3 CDD MODE**

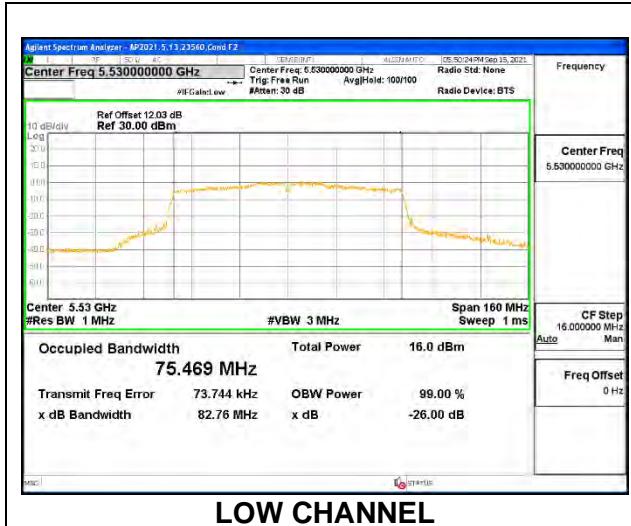
Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5510	45.54	41.73	36.595	36.320
Mid	5550	40.98	40.97	36.362	36.224
High	5670	44.68	41.78	36.558	36.344
144	5710	40.93	40.55	36.316	36.255



### 9.2.15. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

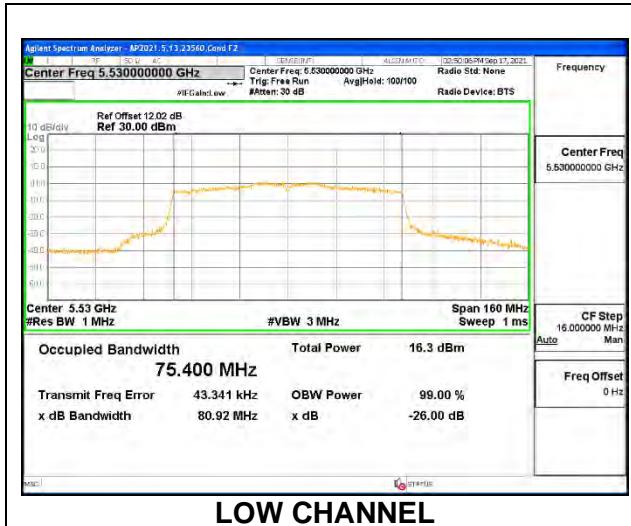
#### 1TX Antenna 6 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5530	82.76	75.469
High	5610	83.59	75.416
138	5690	81.42	75.392



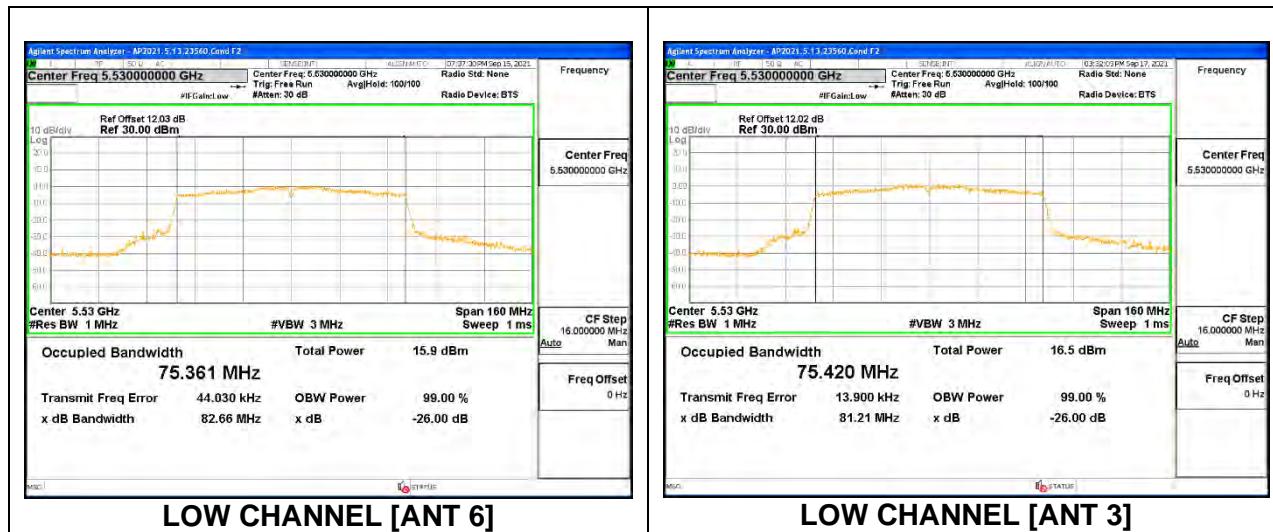
#### 1TX Antenna 3 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5530	80.92	75.400
High	5610	83.70	75.440
138	5690	81.44	75.420



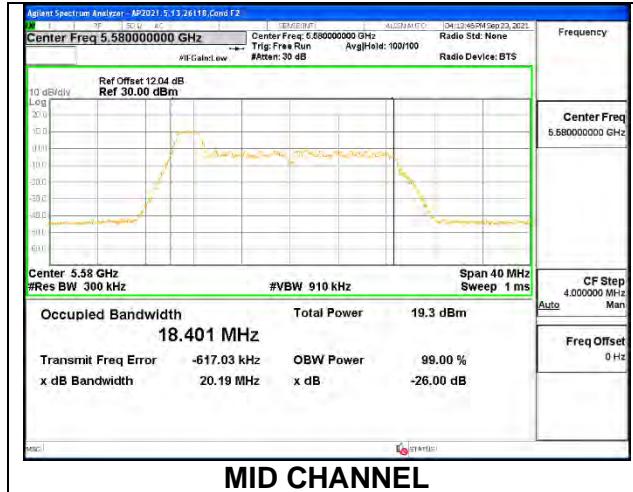
**2TX Antenna 6 + Antenna 3 CDD MODE**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5530	82.66	81.21	75.361	75.420
High	5610	83.44	83.67	75.391	75.444
138	5690	81.61	81.02	75.644	75.328

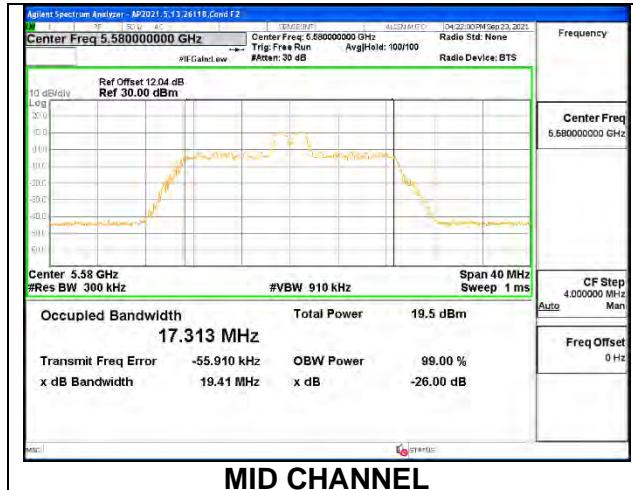


**9.2.16. 802.11ax HE20 MODE IN THE 5.6 GHz BAND**  
**1TX Antenna 6 MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	20.15	18.473
Mid	5580	20.19	18.401
High	5700	20.14	18.466
144	5720	20.07	18.416

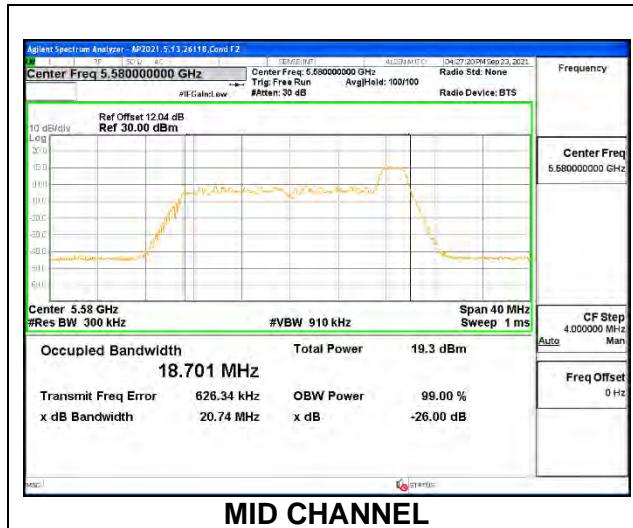
**MID CHANNEL****1TX Antenna 6 MODE: 26 Tones, RU Index 4**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	19.31	17.360
Mid	5580	19.41	17.313
High	5700	19.19	17.324
144	5720	19.27	17.327

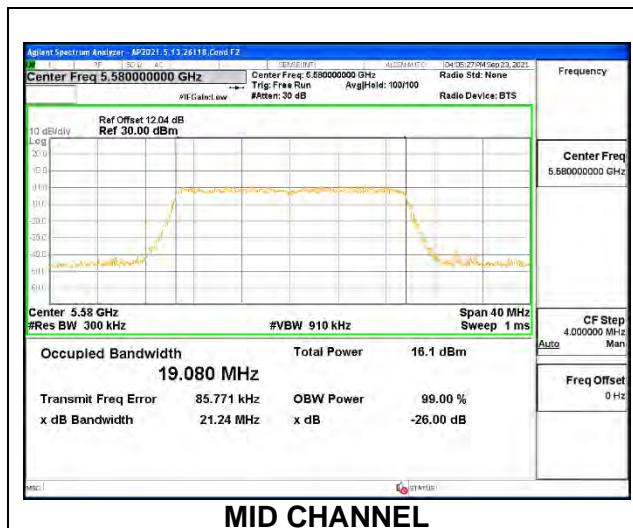
**MID CHANNEL**

**1TX Antenna 6 MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	20.80	18.711
Mid	5580	20.74	18.701
High	5700	20.65	18.700
144	5720	20.40	18.669

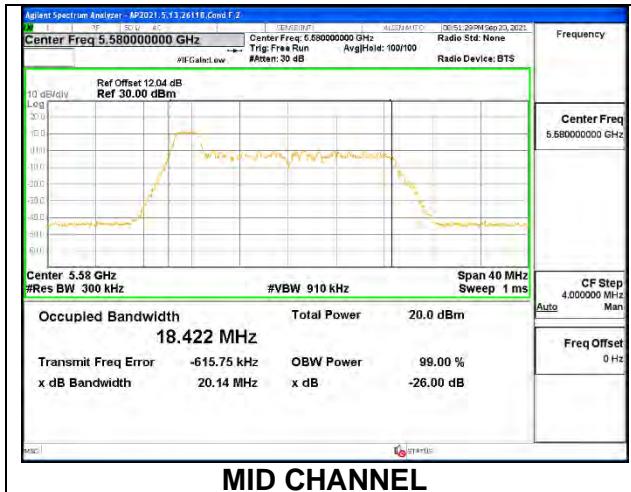
**1TX Antenna 6 MODE: SU Mode**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	20.99	19.088
Mid	5580	21.24	19.080
High	5700	26.27	19.061
144	5720	21.28	19.037

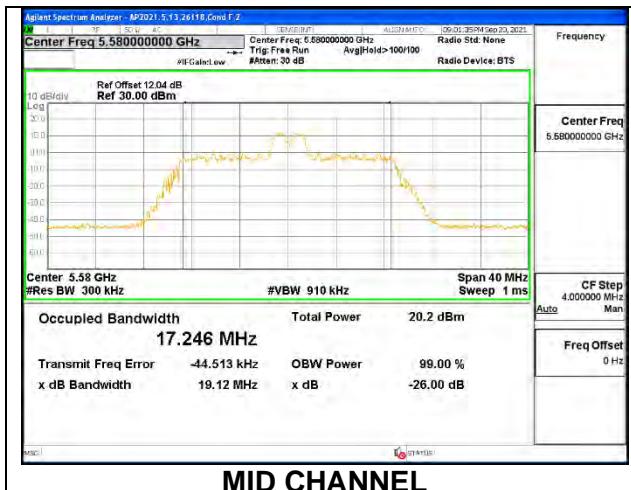


**1TX Antenna 3 MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	19.98	18.403
Mid	5580	20.14	18.422
High	5700	20.12	18.448
144	5720	20.14	18.355

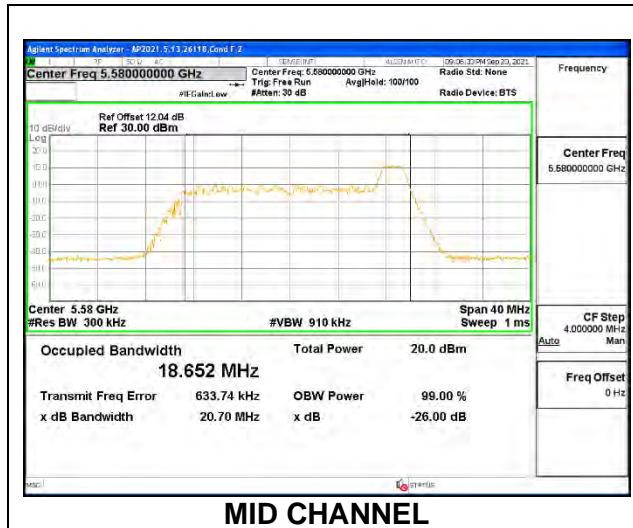
**1TX Antenna 3 MODE: 26 Tones, RU Index 4**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	19.41	17.356
Mid	5580	19.12	17.246
High	5700	19.48	17.267
144	5720	19.40	17.310

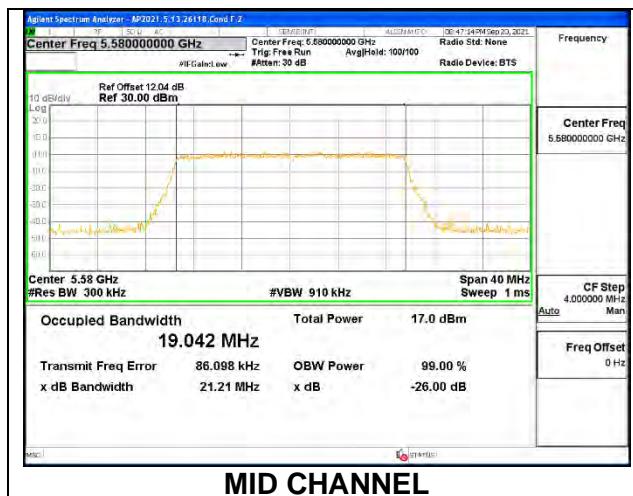


**1TX Antenna 3 MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	20.59	18.663
Mid	5580	20.70	18.652
High	5700	20.47	18.595
144	5720	20.63	18.662

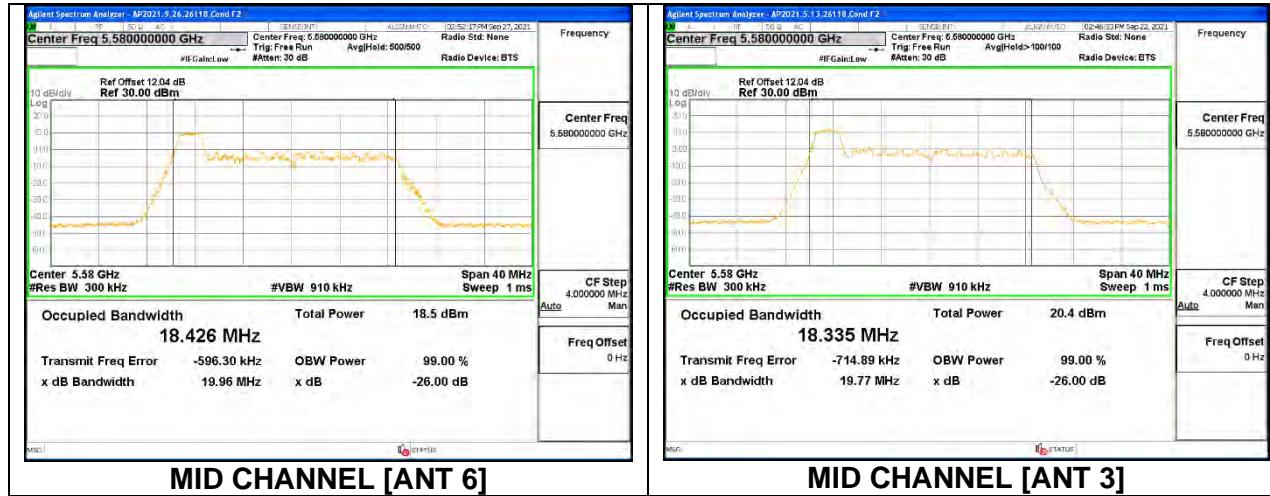
**1TX Antenna 3 MODE: SU Mode**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	22.02	19.110
Mid	5580	21.21	19.042
High	5700	21.72	19.052
144	5720	21.07	17.914

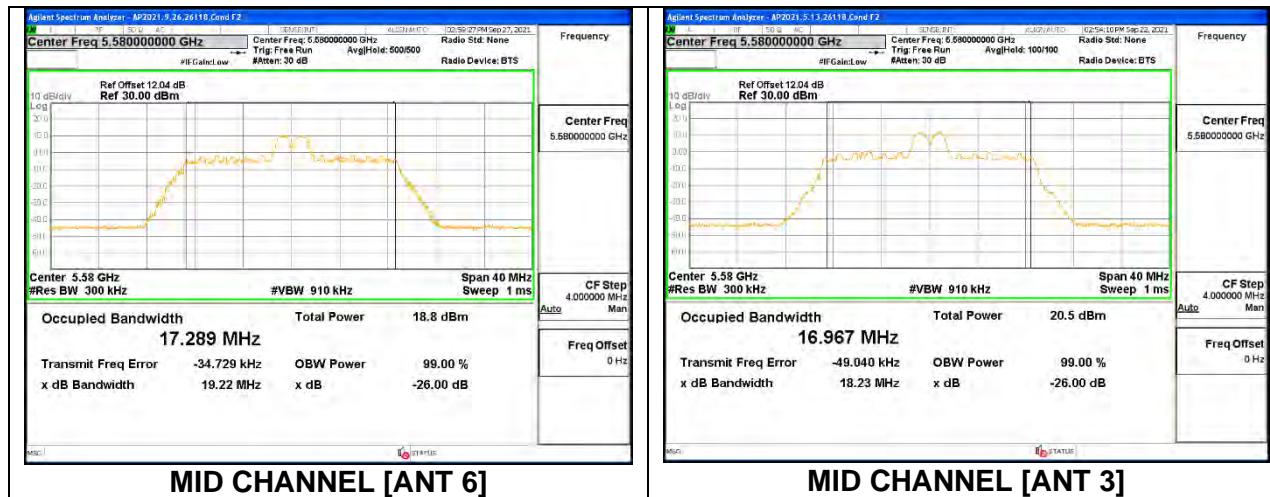


**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5500	20.05	19.75	18.415	18.330
Mid	5580	19.96	19.77	18.426	18.335
High	5700	20.00	19.69	18.464	18.359
144	5720	19.96	19.82	18.322	19.138

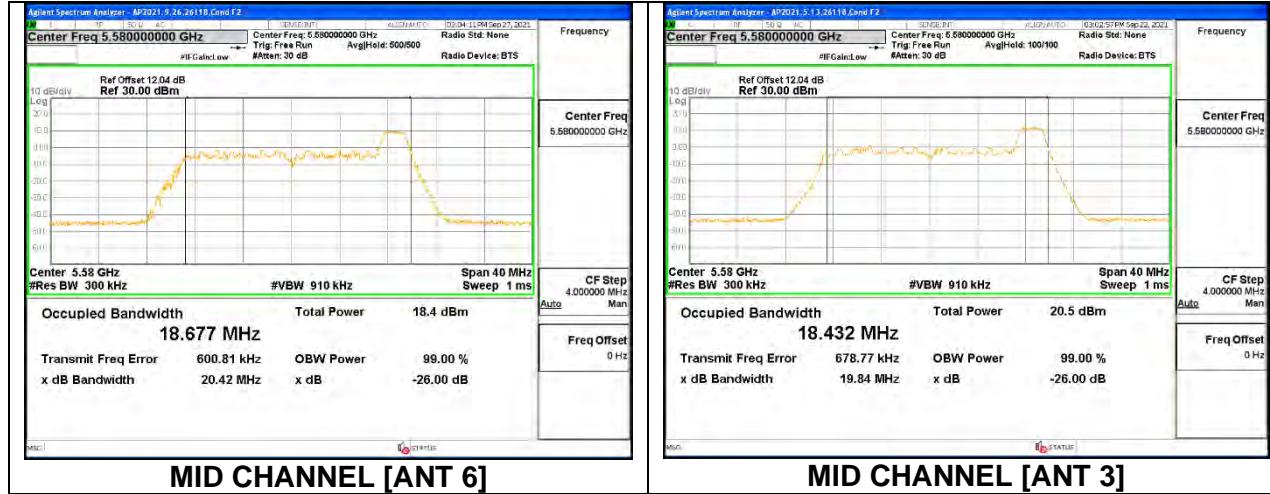
**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 4**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5500	19.22	18.25	17.225	16.942
Mid	5580	19.22	18.23	17.289	16.967
High	5700	19.29	18.30	17.376	16.981
144	5720	19.31	18.33	17.313	16.990

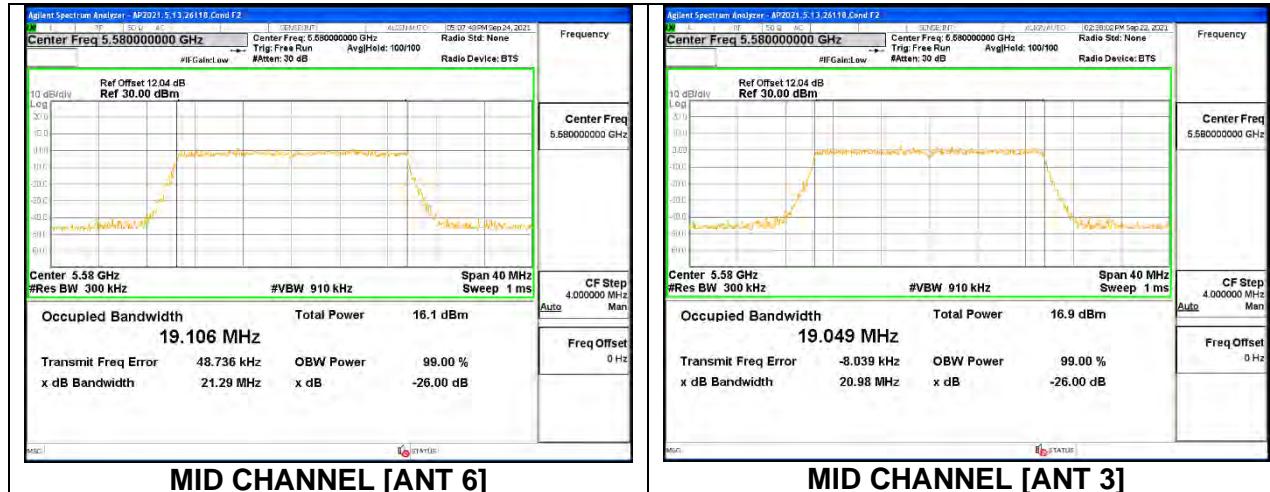


**2TX Antenna 6 + Antenna 3 OFDMA MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5500	20.56	19.84	18.606	18.390
Mid	5580	20.42	19.84	18.677	18.432
High	5700	20.59	19.84	18.681	18.330
144	5720	20.65	19.93	18.645	18.366

**2TX Antenna 6 + Antenna 3 OFDMA MODE: SU Mode**

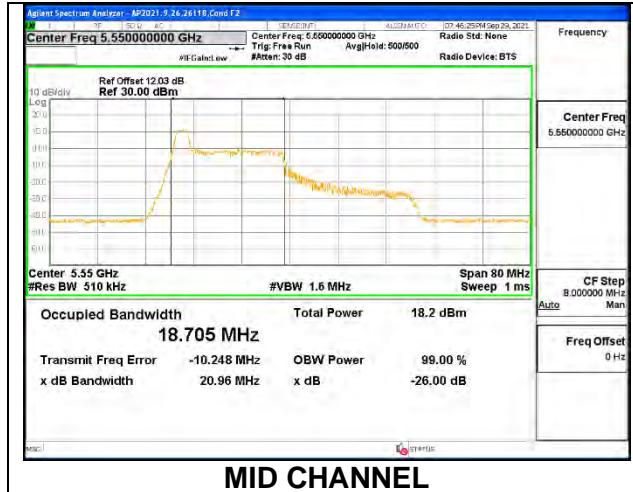
Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 3 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 3 (MHz)
Low	5500	22.00	21.66	19.145	19.095
Mid	5580	21.29	20.98	19.106	19.049
High	5700	21.42	22.85	19.058	19.149
144	5720	21.13	21.58	19.080	19.138



### 9.2.17. 802.11ax HE40 MODE IN THE 5.6 GHz BAND

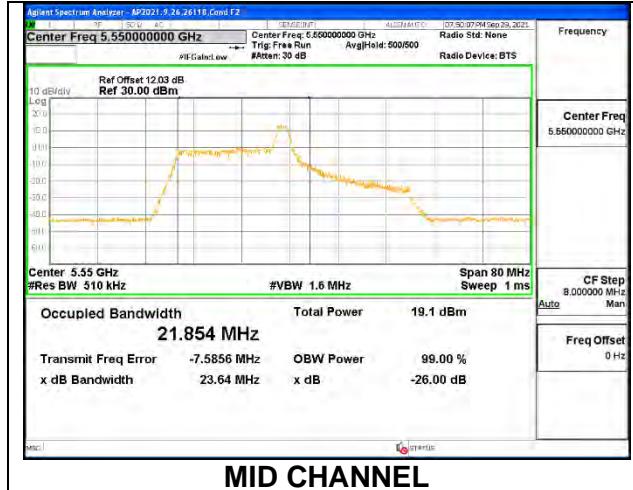
**1TX Antenna 6 MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	21.11	18.732
Mid	5550	20.96	18.705
High	5670	20.47	18.769
142	5710	20.93	18.834



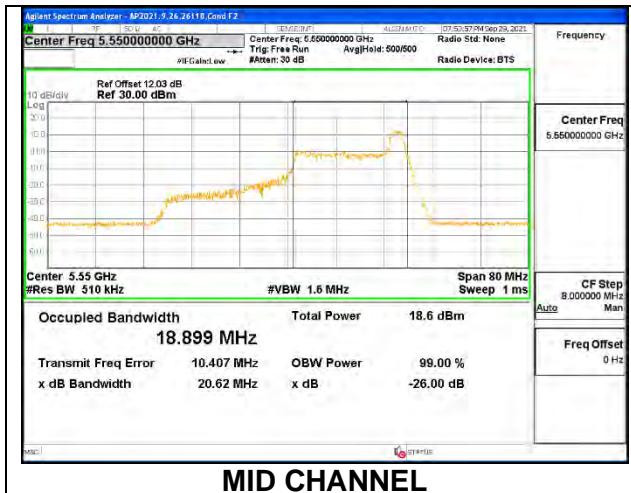
**1TX Antenna 6 MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	23.36	21.445
Mid	5550	23.64	21.854
High	5670	23.45	21.722
142	5710	23.23	21.718

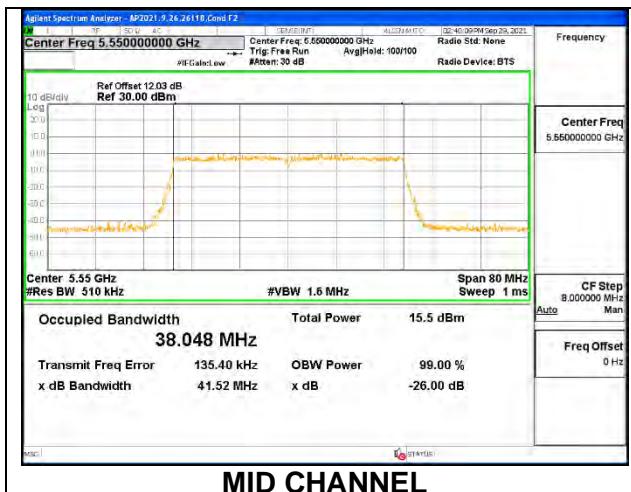


**1TX Antenna 6 MODE: 26 Tones, RU Index 17**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	20.73	19.012
Mid	5550	20.62	18.899
High	5670	20.81	19.062
142	5710	21.25	19.009

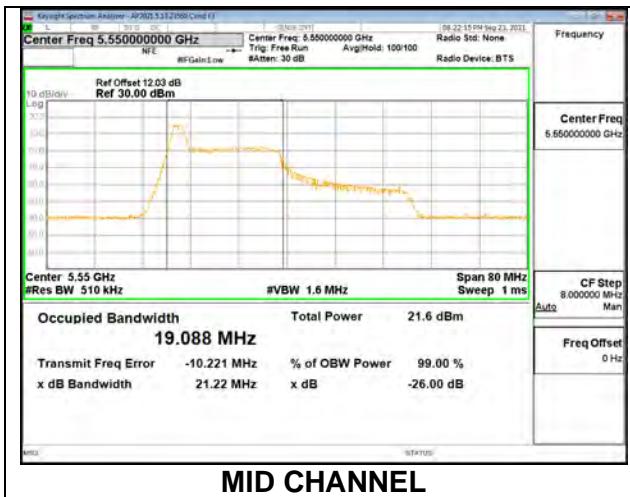
**1TX Antenna 6 MODE: SU Mode**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	43.66	38.012
Mid	5550	41.52	38.048
High	5670	42.52	38.085
142	5710	41.21	38.072

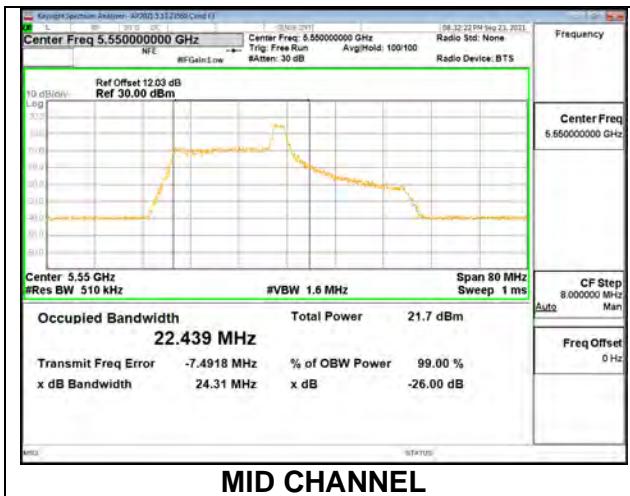


**1TX Antenna 3 MODE: 26 Tones, RU Index 0**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	21.07	18.870
Mid	5550	21.22	19.088
High	5670	21.33	18.777
142	5710	20.42	18.925

**MID CHANNEL****1TX Antenna 3 MODE: 26 Tones, RU Index 8**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	23.31	22.173
Mid	5550	24.31	22.439
High	5670	23.90	22.029
142	5710	23.66	22.342

**MID CHANNEL**