



TEST REPORT

Report Number. : 13619076-E5V3

Applicant : DISH TECHNOLOGIES LLC
90 INVERNESS CIRCLE EAST
ENGLEWOOD, CO 80112, UNITED STATES

Model : D45

Brand : DISH

FCC ID : DKNRW33

EUT Description : TV SET TOP BOX

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

Date Of Issue:

June 07, 2021

Prepared by:

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NVLAP Lab code: 200065-0

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	5/6/2021	Initial Issue	---
V2	5/17/2021	Switched above 1G front and back photos to address TCB's questions. Updated Section 9.4 wordings on the result tables.	Tina Chu
V3	6/7/2021	Updated Section 6.3 to address TCB's question	Tina Chu

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: DISH TECHNOLOGIES LLC
90 INVERNESS CIRCLE EAST
ENGLEWOOD, CO 80112, UNITED STATES

EUT DESCRIPTION: TV SET TOP BOX

MODEL: D45

BRAND: DISH

SERIAL NUMBER: CONDUCTED: E4EXUH00015A
RADIATED: E4EXUH00018A

SAMPLE RECEIPT DATE: FEBRUARY 12, 2021

DATE TESTED: MARCH 24, 2021 to MAY 05, 2021

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.

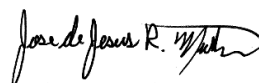
This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This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

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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) (1-3), (h) (1)	Output Power	Complies	None.
15.407 (a) (1-3)	PSD	Complies	None.
15.209, 15.205, 15.407 (b)	Radiated Emissions	Complies	None.
15.207	AC Mains Conducted Emissions	Complies	refer to UL Report number: 13619076-E4

Note: This report covers ax modes only

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,D03 v01
- FCC KDB 905462 D02 v02/D03 v01r02/D06 v02
- FCC KDB 789033 D02 v02r01,
- KDB 414788 D01 Radiated Test Site v01r01
- ANSI C63.10-2013

4. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0, 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 type="checkbox"/>	Building 1: 47173 Benicia Street Fremont, CA 94538, U.S.A	US0104	2324A	208313
<input type="checkbox"/>	Building 2: 47266 Benicia Street Fremont, CA 94538, U.S.A	US0104	22541	208313
<input checked="" type="checkbox"/>	Building 4: 47658 Kato Rd Fremont, CA 94538, U.S.A	US0104	2324B	208313

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	2.84 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 (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

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

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.

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

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is a TV Set Top Box with RF4CE Zigbee, BLE (2Mbps), BT and 5GHz 802.11a/n/ac/ax radios.

6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

5.2GHz BAND 802.11 ax MODE 3TX

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.2 GHz band, 3TX CDD			
5180-5240	802.11ax HE20 OFDMA, 242-Tones	20.06	101.39
	802.11ax HE20 OFDMA, 26-Tones	11.59	14.42
5190-5230	802.11ax HE40 OFDMA, 484-Tones	16.98	49.89
	802.11ax HE40 OFDMA, 26-Tones	11.54	14.26
5210	802.11ax HE80 OFDMA, 996-Tones	18.33	68.08
	802.11ax HE80 OFDMA, 26-Tones	10.09	10.21

5.3GHz BAND 802.11 ax MODE 3TX

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.3 GHz band, 3TX CDD			
5260-5320	802.11ax HE20 OFDMA, 242-Tones	20.17	103.99
	802.11ax HE20 OFDMA, 26-Tones	11.39	13.77
5270-5310	802.11ax HE40 OFDMA, 484-Tones	20.09	102.09
	802.11ax HE40 OFDMA, 26-Tones	11.40	13.80
5290	802.11ax HE80 OFDMA, 996-Tones	18.39	69.02
	802.11ax HE80 OFDMA, 26-Tones	10.06	10.14

5.6GHz BAND 802.11 ax MODE 3TX

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.6 GHz band, 3TX CDD			
5500-5720	802.11ax HE20 OFDMA, 242-Tones	20.14	103.28
	802.11ax HE20 OFDMA, 26-Tones	11.96	15.70
5510-5710	802.11ax HE40 OFDMA, 484-Tones	17.49	56.10
	802.11ax HE40 OFDMA, 26-Tones	11.96	15.70
5530-5690	802.11ax HE80 OFDMA, 996-Tones	15.41	34.75
	802.11ax HE80 OFDMA, 26-Tones	10.21	10.50

5.8GHz BAND 802.11 ax MODE 3TX

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.8 GHz band, 3TX CDD			
5745-5825	802.11ax HE20 OFDMA, 242-Tones	22.20	165.96
	802.11ax HE20 OFDMA, 26-Tones	11.79	15.10
5755-5795	802.11ax HE40 OFDMA, 484-Tones	22.18	165.20
	802.11ax HE40 OFDMA, 26-Tones	17.95	62.37
5775	802.11ax HE80 OFDMA, 996-Tones	23.44	220.80
	802.11ax HE80 OFDMA, 26-Tones	16.24	42.07

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

According to FCC KDB 662911 D03 v01, a measurement of directional gain of multi-antenna systems is allowed for compliance verification. Antenna gains are approved through manufacturers KDB. KDB reference can be found as part of the operational description.

The antenna(s) gain and type, as provided by the manufacturer' are as follows:

EUT uses three antennas for 3TX MIMO operation. The radio utilizes PCB Inverted F antennas.

Frequency Band	Uncorrelated Total Gain	Correlated Total Gain
5.15 to 5.25 GHz	2.5	6.9
5.25 to 5.35 GHz	3.2	7.7
5.47 to 5.725 GHz	3.2	7.8
5.725 to 5.85 GHz	2.9	7.6

Note: Antenna 1 ↔ Chain 0, Antenna 2 ↔ Chain 1, Antenna 3 ↔ Chain 2

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was Linux with MFG Driver

The test utility software used during testing was Mtool version 3.2.1.3

6.5. WORST-CASE CONFIGURATION AND MODE

Refer to UL Report number: 13619076-E4 for worst case radiated emissions below 30MHz, below 1GHz, above 18GHz, power line conducted emissions and BLE/BT + Zigbee + WLAN 5GHz simultaneous transmission test result.

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 3Tx MIMO mode with power setting equal to SISO modes as the worst case scenario thus MIMO is representative of SISO.

The output power and psd for the 802.11 ax mode were investigated between all different tones, and we found that the highest tone had the highest output power and lowest tone had the highest PSD readings. Therefore, full testing was performed on both the highest and lowest tones.

The EUT can only be setup in desktop orientation; therefore, all radiated testing was performed with the EUT in desktop orientation.

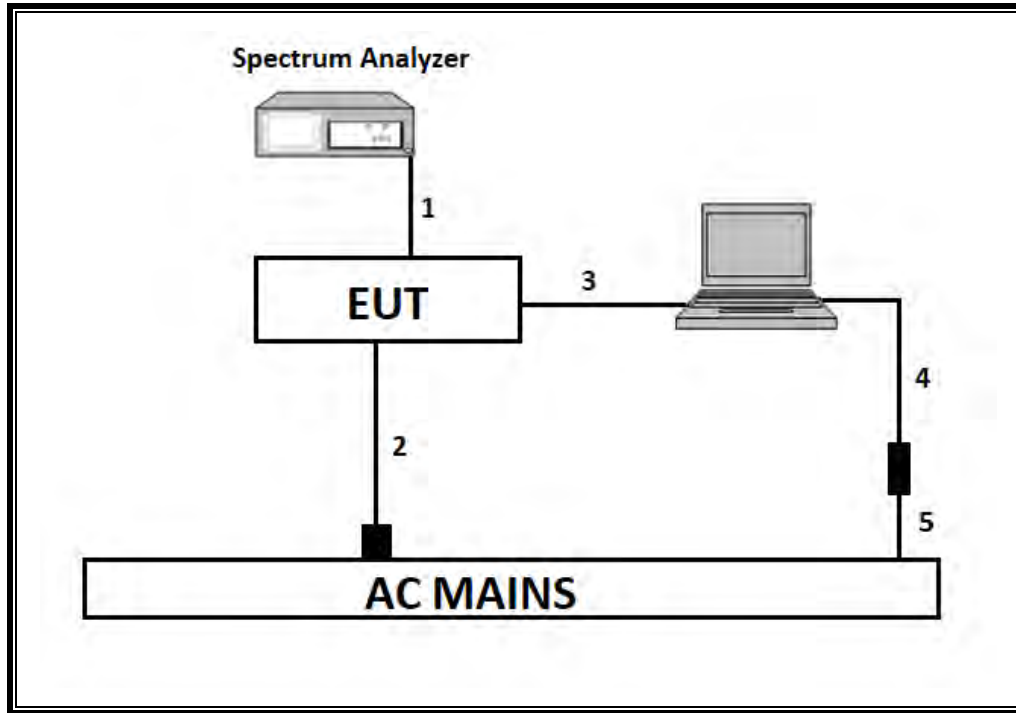
Worst-case data rates as provided by the client were:

802.11ax HE20mode: MCS0
802.11ax HE40mode: MCS0
802.11ax HE80mode: MCS0

6.6. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT						
Description	Manufacturer	Model	Serial Number	FCC ID/ DoC		
AC/DC Adapter (EUT)	NetBit	NBC25A120210VU	-	Doc		
Laptop(radiated test)	HP	EliteBook 740 G1	5CG4382SLC	DoC		
AC/DC Adapte(radiated test, laptop)	DELTA ELECTRONICS	HSTNN-DA40	WDWRT0AAR7AANI	DoC		
Router -1(radiated test)	D-Link	EBR-2310	F311388010596	Doc		
AC/DC Adapter (Router, radiated test)	D-Link	AF0605-B	-	Doc		
Laptop (conducted test)	HP	Elitebook 740	5CG43730V2	DoC		
AC/DC Adapter (Laptop, conducted test)	CHICONY Power Technology	HSTNN-CA40	A045R00DH	DoC		
Router-2(conducted test)	Netgear	R6250	3DK1337V0253E	PY312400219		
AC/DC Adapter (Router, conducted test)	Netgear	AD2025F10	3321074001	Doc		
Monitor	SCEPTRE	E248W-1920R	J07F248CCD8002	Doc		
AC/DC Adapter (Monitor)	BSY	BSYF120250U W	-	Doc		
USB Flash Drive	SanDisk	SDCZ60-016G	-	Doc		
I/O CABLES (CONDUCTED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Antenna	1	RF	Un-shielded	0.2	To spectrum analyzer
2	AC	1	Two Prong	Un-shielded	1	EUT to AC Mains
3	UART	1	USB	Shielded	1.5	EUT to Laptop
4	DC	1	DC	Un-shielded	1	AC Adapter to Laptop
5	AC	1	Two Prong	Un-shielded	1	AC Adapter to AC Mains
I/O CABLES (RADIATED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	1	Two Prong	Un-shielded	1	EUT to AC Mains
2	HDMI	1	HDMI	Shielded	2	EUT to Monitor/emulator
3	AC	1	Two Prong	Un-shielded	2.5	Monitor to AC Mains
4	RJ45	1	RJ45	Un-shielded	More than 3	EUT to Router
5	DC	1	AC-Two Prong	Un-shielded	2	Router adapter to AC Mains

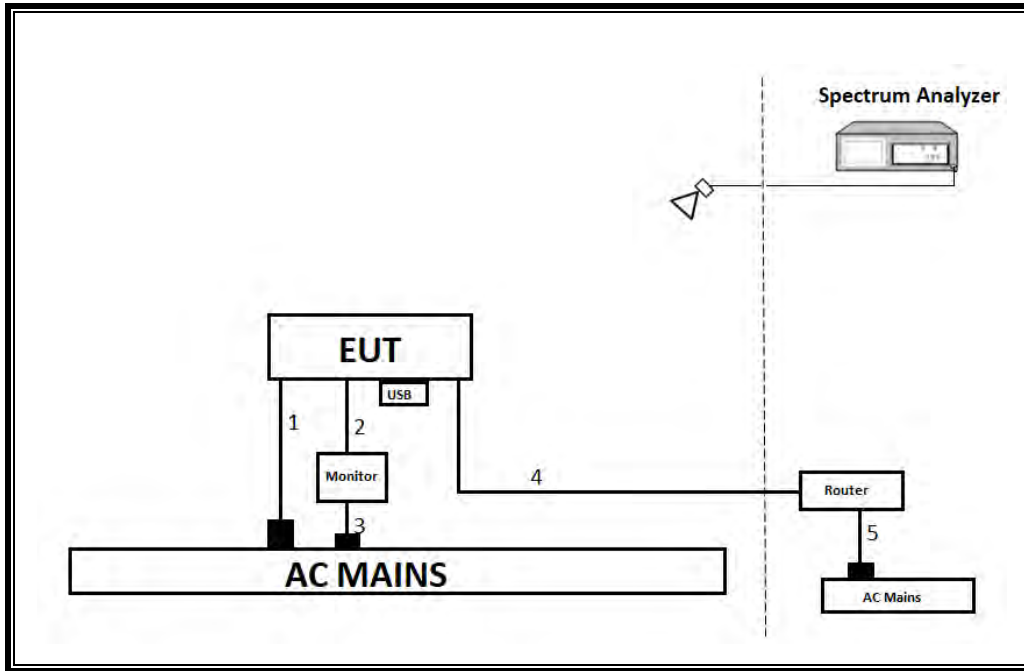
CONDUCTED TEST SETUP DIAGRAM



TEST SETUP

The EUT is connected to a test laptop by USB to UART cable adapter during the tests. Test software exercised the radio card.

RADIATED TEST SETUP DIAGRAM- 1GHz-18GHz



TEST SETUP

The EUT is connected to a test laptop by USB to UART cable adapter during the tests. Test software exercised the radio card.

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

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

Power Spectral Density: KDB 789033 D02 v02r01, Section F

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

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

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

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

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	ID Num	Cal Due	Last Cal
Amplifier, 1 - 18GHz	MITEQ	AFS42-00101800-25-S-42	T1568	*04/14/2021	04/14/2020
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	T344	05/26/2021	05/26/2020
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179376	02/21/2022	02/21/2021
Amplifier, 100MHz-18GHz	AMPLICAL	AMP0.1G18-47-20	PRE0197319	*05/04/2021	05/04/2020
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	T863	08/31/2021	08/31/2020
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179367	02/21/2022	02/21/2021
Spectrum Analyzer, PSA, 3Hz to 44GHz	Keysight Technologies Inc	E4446A	T123	01/22/2022	01/22/2021
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	T340	01/28/2022	01/28/2021
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Keysight Technologies Inc	N1921A	T1227	03/16/2022	03/16/2021
Power Sensor	Keysight Technologies Inc	N1911A	T1225	01/28/2022	01/28/2021
Power Meter, P-series single channel	Keysight Technologies Inc	N1911A	T1272	01/21/2022	01/21/2021
Test Software List					
Description	Manufacturer	Model	Version		
Radiated Software	UL	UL EMC	Rev 9.5, April 30, 2020		
Antenna Port Software	UL	UL RF	AP 2021.1.19/4.1/4.9, AP 2021.3.16		

*Test performed within calibration period.

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

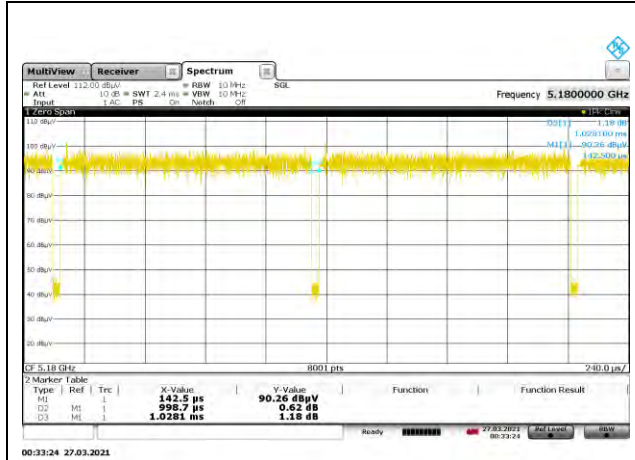
KDB 558074 D01 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

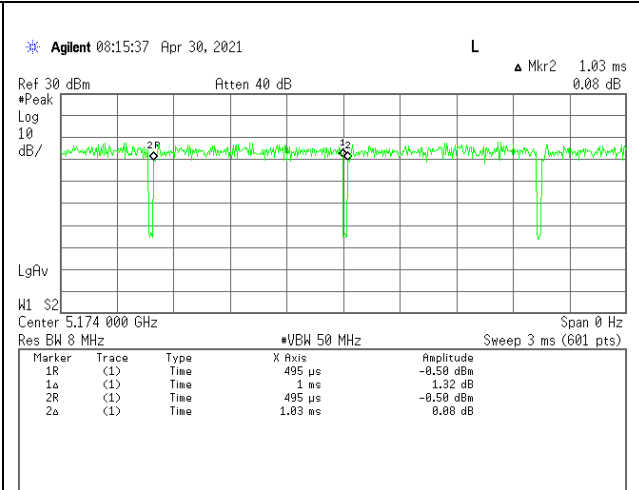
Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
802.11ax HE20 OFDMA, RU size 242T	0.999	1.028	0.971	97.14	0.13	1.001
802.11ax HE20 OFDMA, RU size 26T	1.000	1.030	0.971	97.09	0.13	1.000
802.11ax HE40 OFDMA, RU size 484T	0.999	1.028	0.971	97.14	0.13	1.001
802.11ax HE40 OFDMA, RU size 26T	1.000	1.030	0.971	97.09	0.13	1.000
802.11ax HE80 OFDMA, RU size 996T	0.999	1.028	0.971	97.14	0.13	1.001
802.11ax HE80 OFDMA, RU size 26T	0.995	1.025	0.971	97.07	0.13	1.005

DUTY CYCLE PLOTS

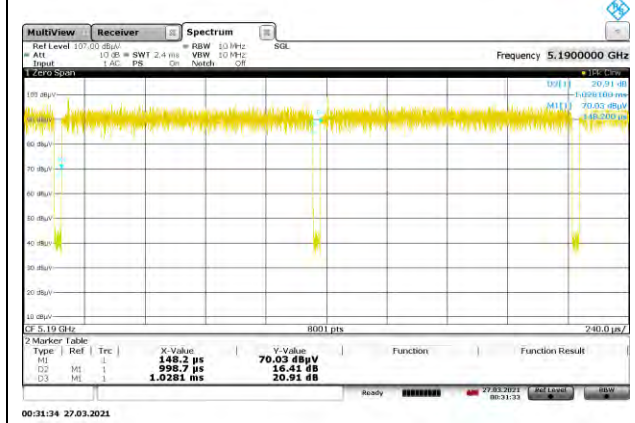
Test Engineer:	GA 12485, AF 19497
Test Date:	3/27/2021 & 4/30/2021



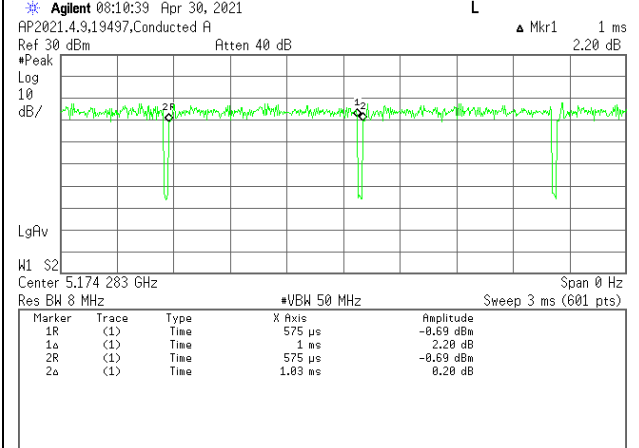
802.11ax HE20 OFDMA, RU size 242T MODE



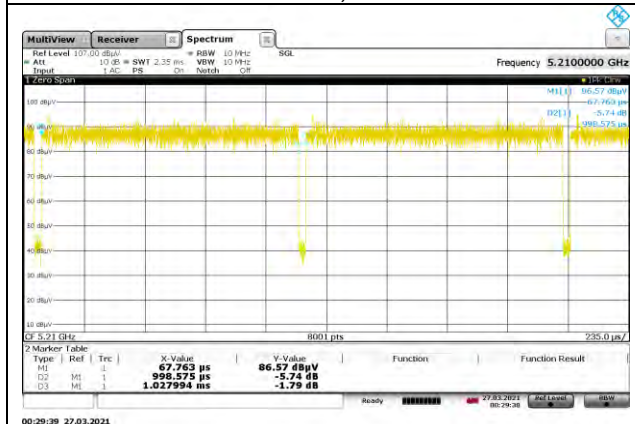
802.11ax HE20 OFDMA, RU size 26T MODE



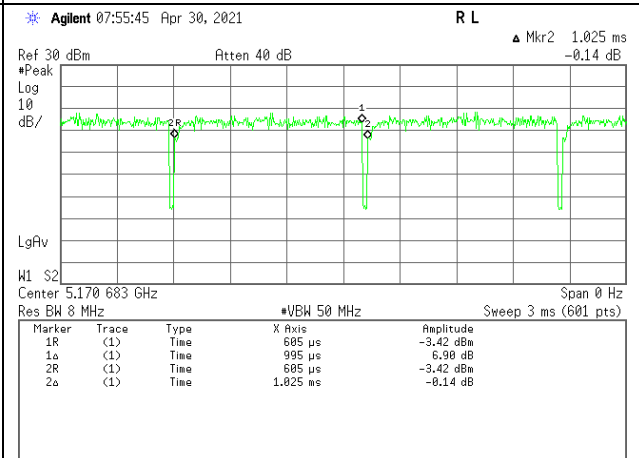
802.11ax HE40 OFDMA, RU size 484T MODE



802.11ax HE40 OFDMA, RU size 26T MODE



802.11ax HE80 OFDMA, RU size 996T MODE



802.11ax HE80 OFDMA, RU size 26T MODE

9.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

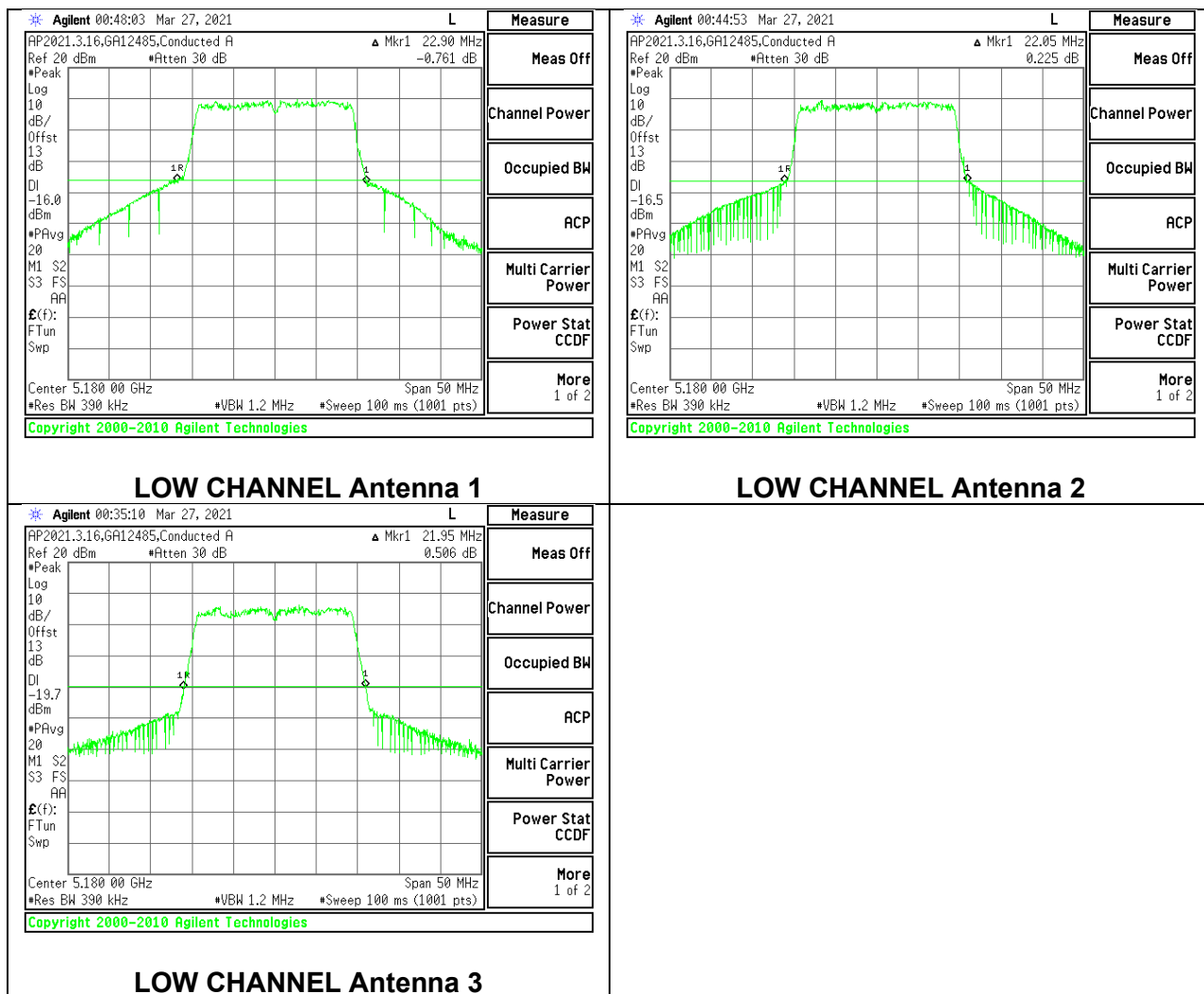
RESULTS

9.2.1. 802.11ax HE20 MODE 3TX IN THE 5.2GHz BAND

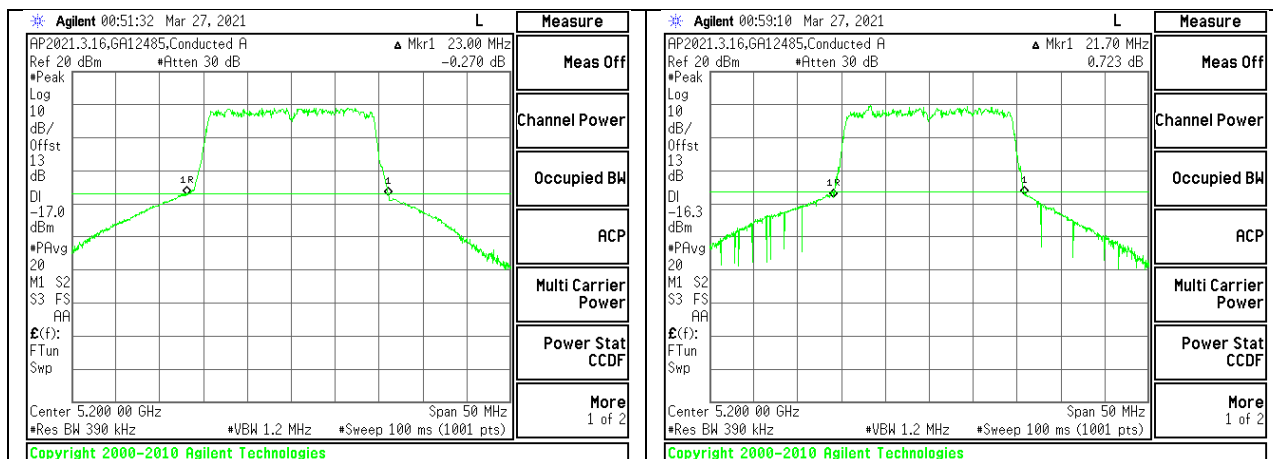
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 242-Tones, RU Index 61

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5180	22.90	22.05	21.95
Mid	5200	23.00	21.70	22.15
High	5240	22.15	21.65	22.10

LOW

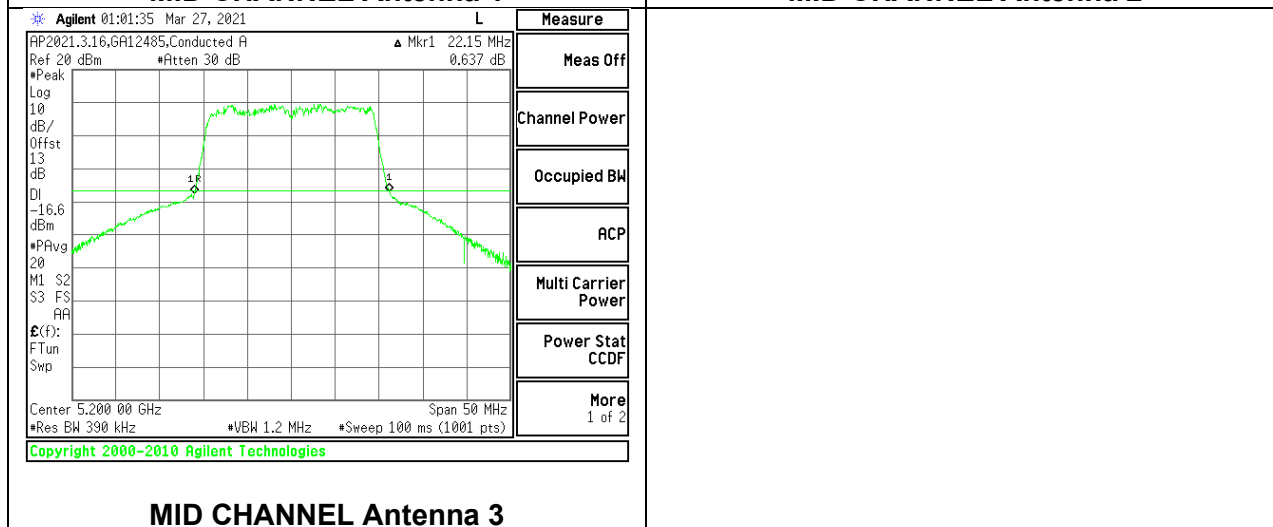


MID

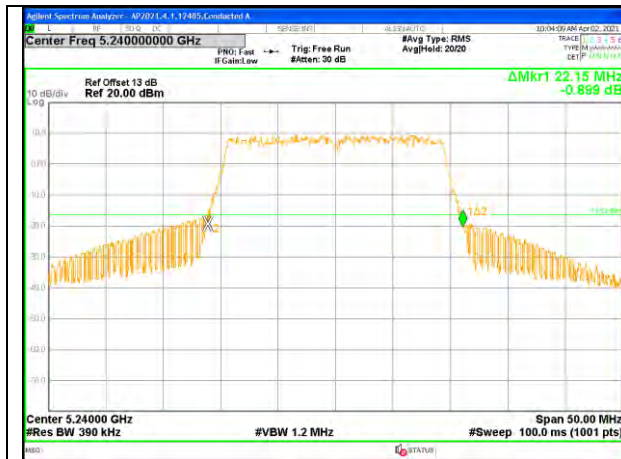


MID CHANNEL Antenna 1

MID CHANNEL Antenna 2



HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2

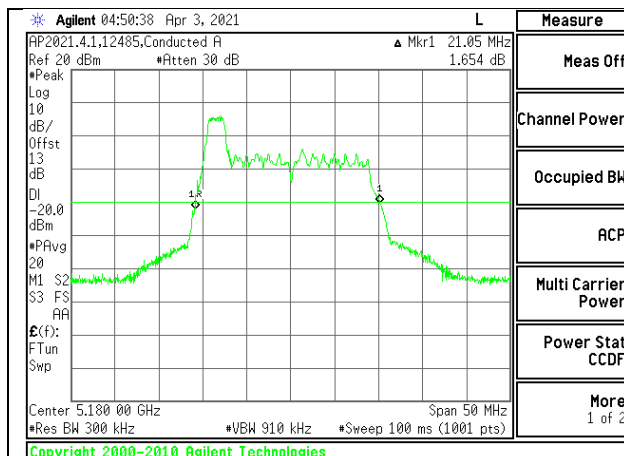


HIGH CHANNEL Antenna 3

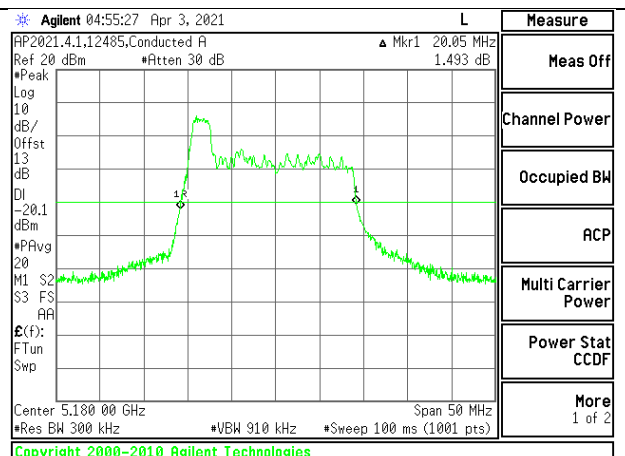
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5180	21.05	20.05	20.05
Mid	5200	21.00	20.05	19.95
High	5240	21.15	20.05	20.00

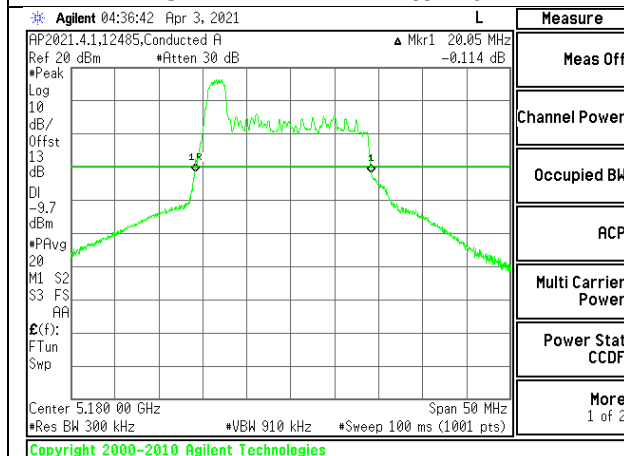
LOW



LOW CHANNEL Antenna 1

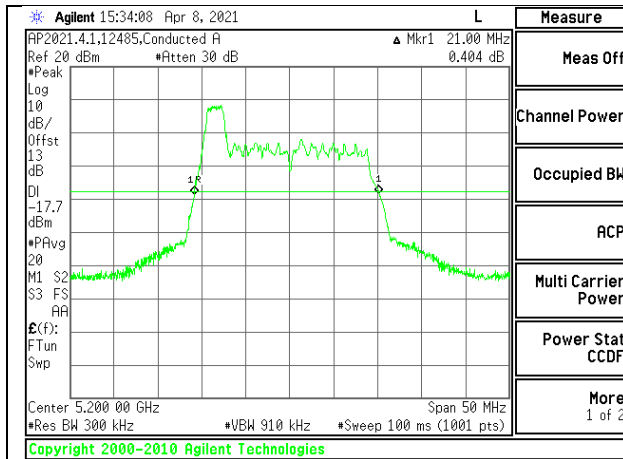


LOW CHANNEL Antenna 2

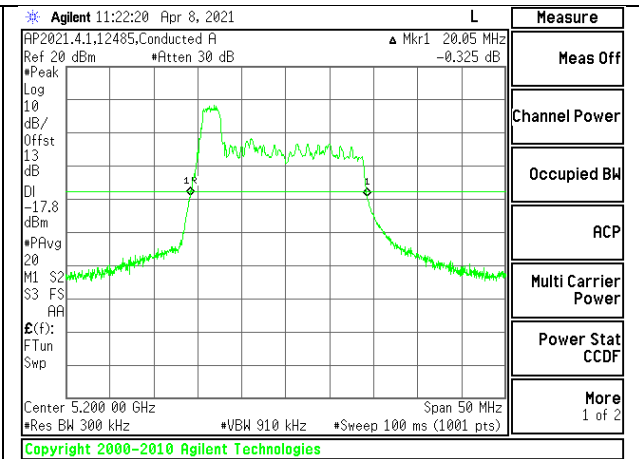


LOW CHANNEL Antenna 3

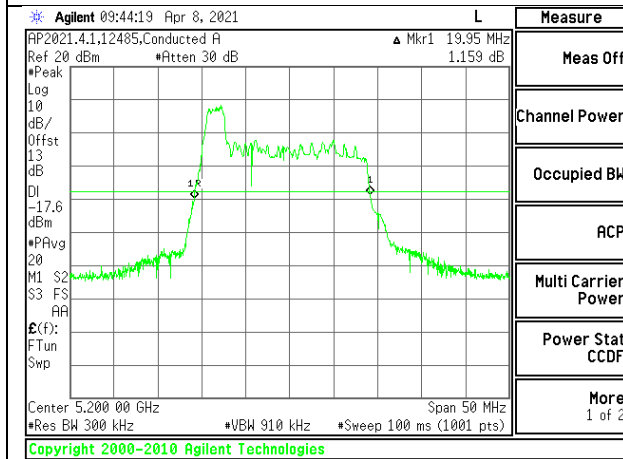
MID



MID CHANNEL Antenna 1

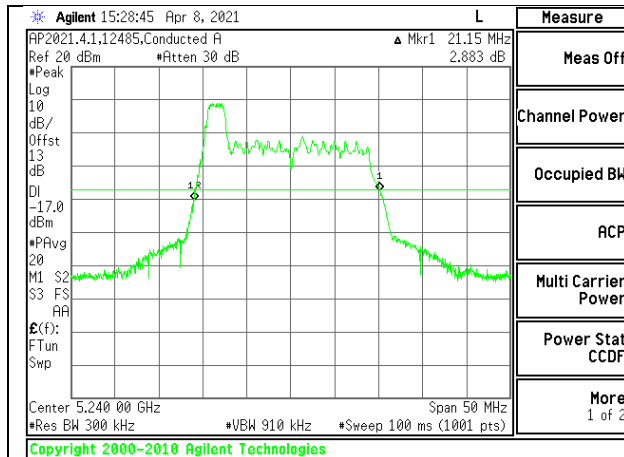


MID CHANNEL Antenna 2

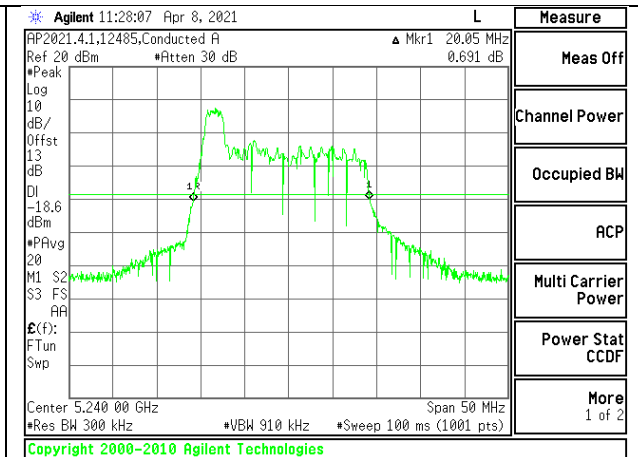


MID CHANNEL Antenna 3

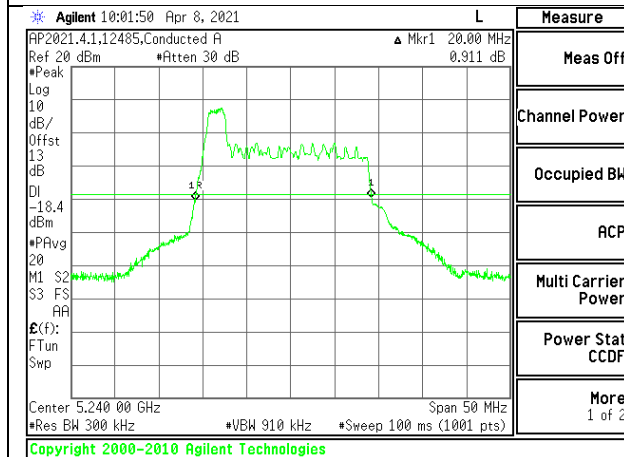
HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2

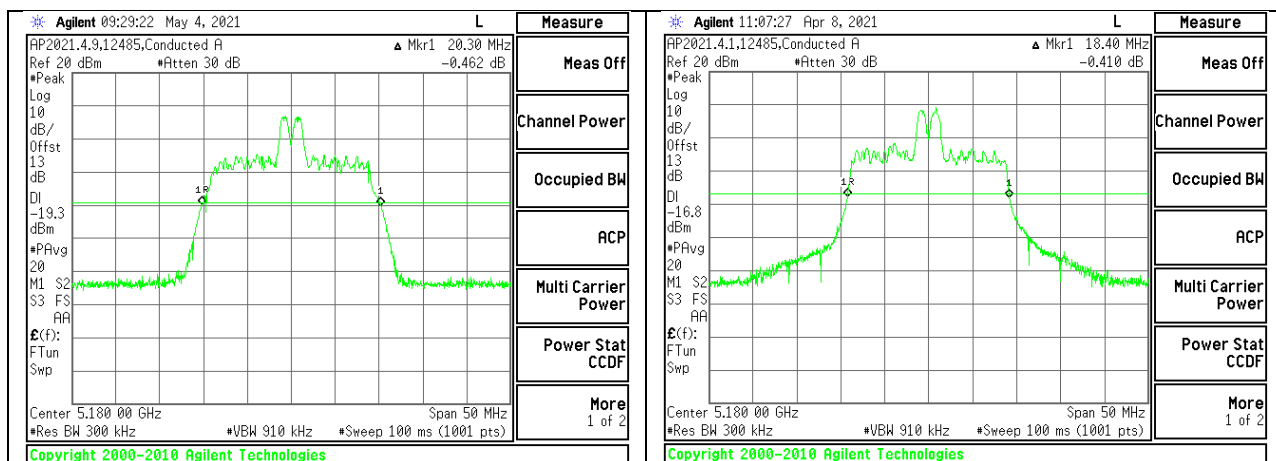


HIGH CHANNEL Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 4

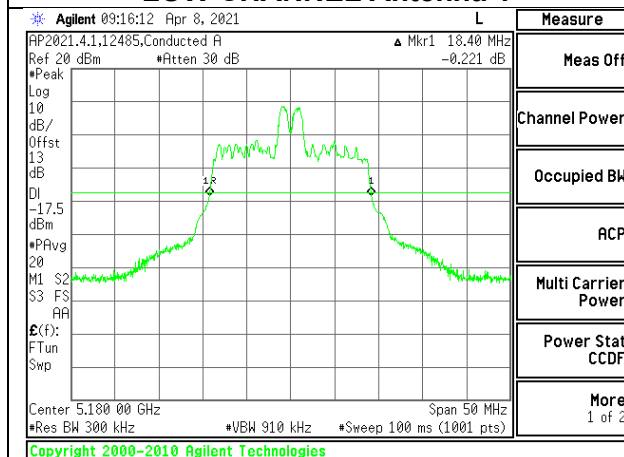
Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5180	20.30	18.40	18.40
Mid	5200	20.10	18.45	18.45
High	5240	20.20	18.45	18.40

LOW



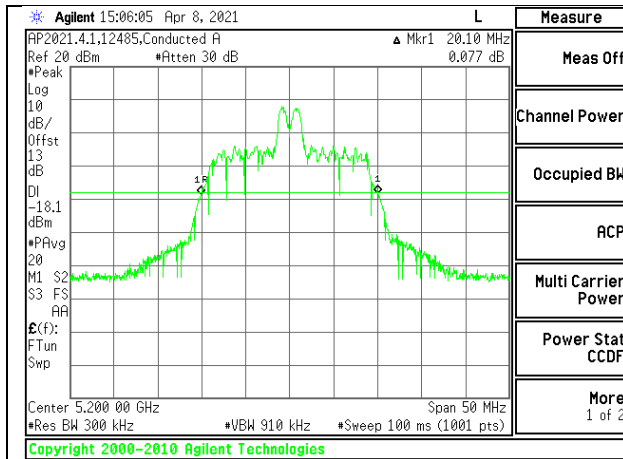
LOW CHANNEL Antenna 1

LOW CHANNEL Antenna 2

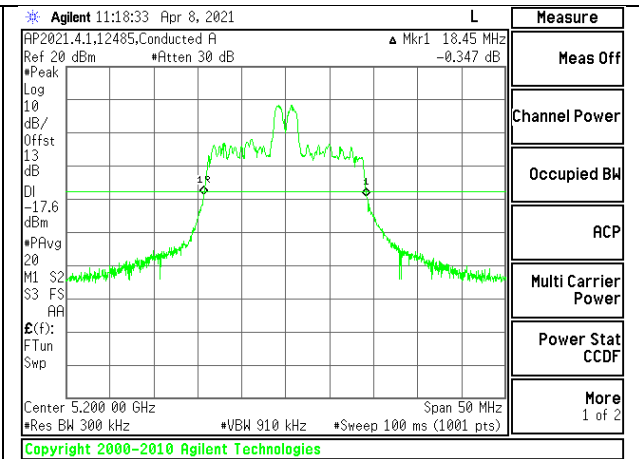


LOW CHANNEL Antenna 3

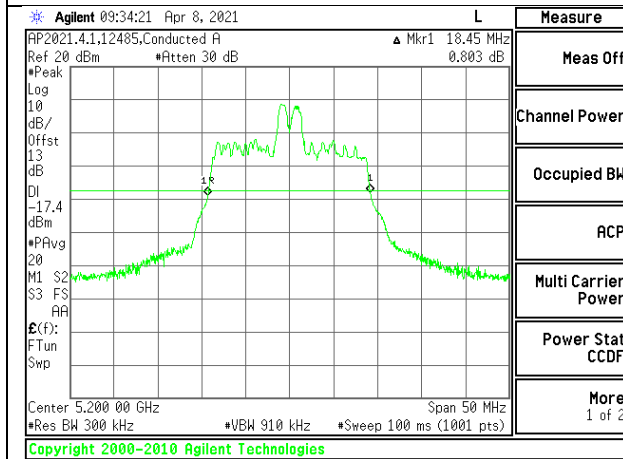
MID



MID CHANNEL Antenna 1

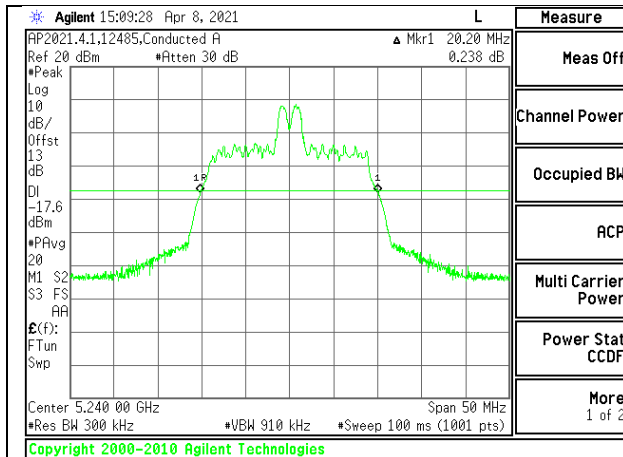


MID CHANNEL Antenna 2

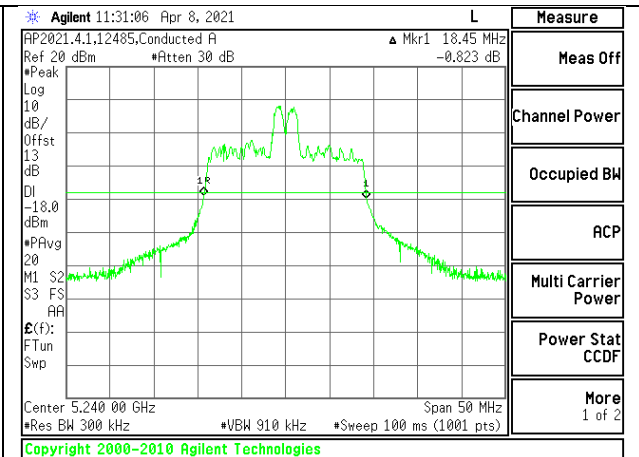


MID CHANNEL Antenna 3

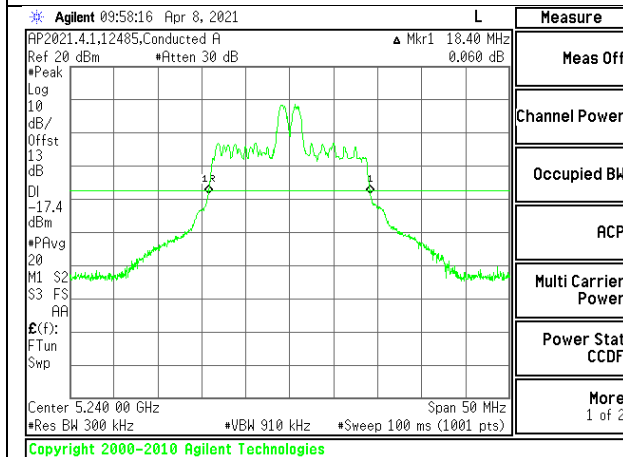
HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2

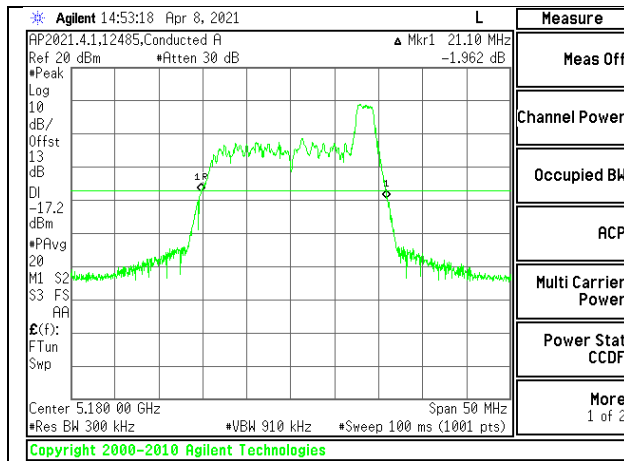


HIGH CHANNEL Antenna 3

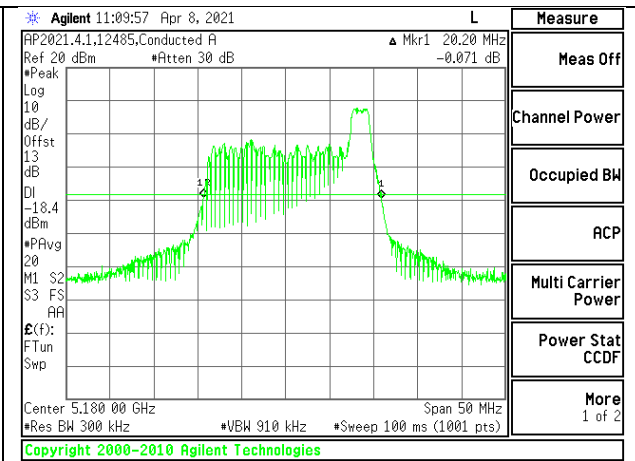
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 8

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5180	21.10	20.20	20.15
Mid	5200	21.05	20.05	20.15
High	5240	21.15	20.20	20.10

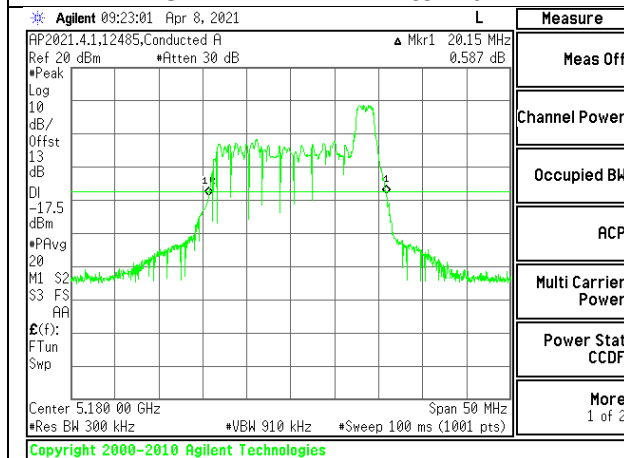
LOW



LOW CHANNEL Antenna 1

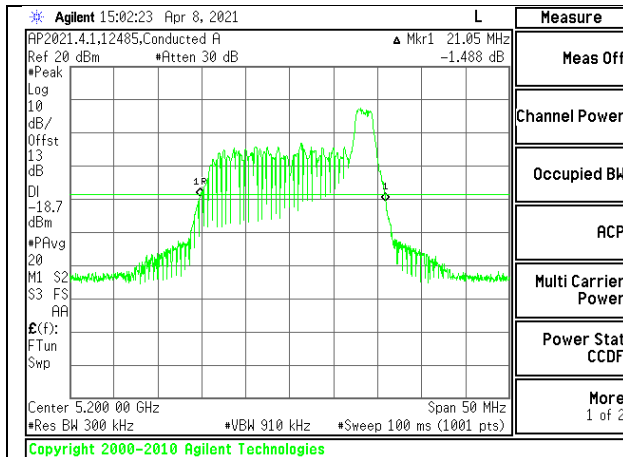


LOW CHANNEL Antenna 2

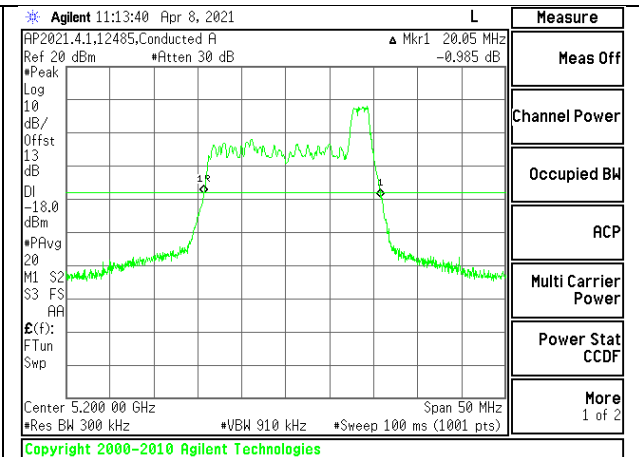


LOW CHANNEL Antenna 3

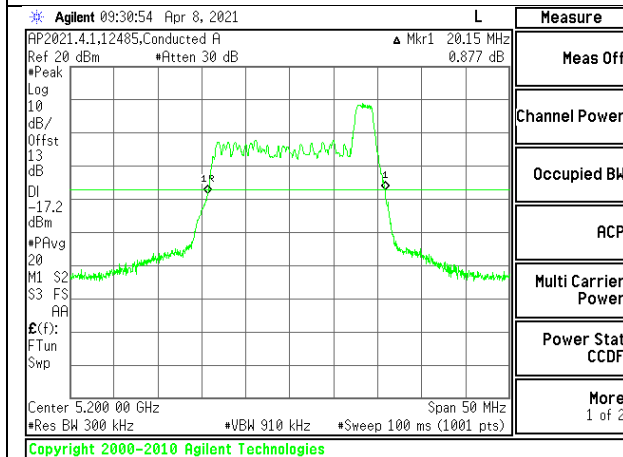
MID



MID CHANNEL Antenna 1

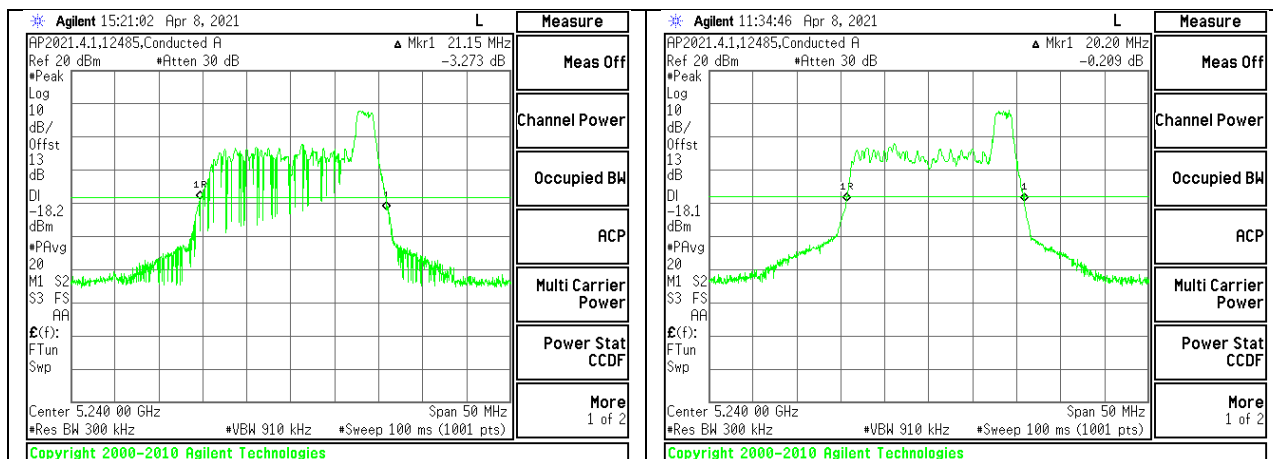


MID CHANNEL Antenna 2



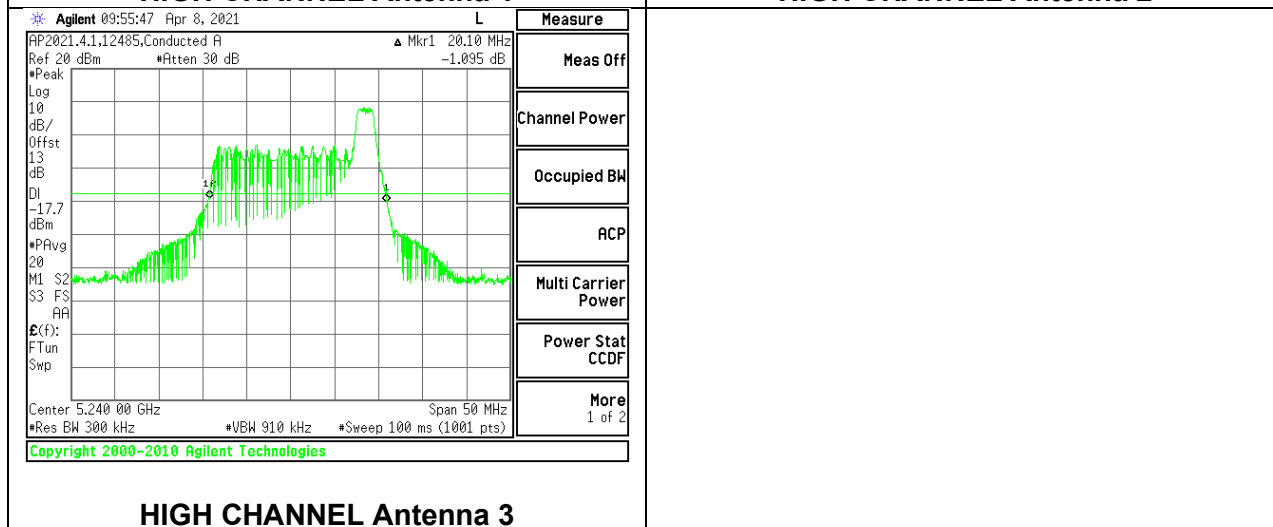
MID CHANNEL Antenna 3

HIGH



HIGH CHANNEL Antenna 1

HIGH CHANNEL Antenna 2



HIGH CHANNEL Antenna 3

9.2.2. 802.11ax HE40 MODE 3TX IN THE 5.2GHz BAND
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 484-Tones, RU Index 65

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5190	41.00	40.70	40.90
High	5230	41.10	40.70	40.90

LOW



LOW CHANNEL Antenna 1

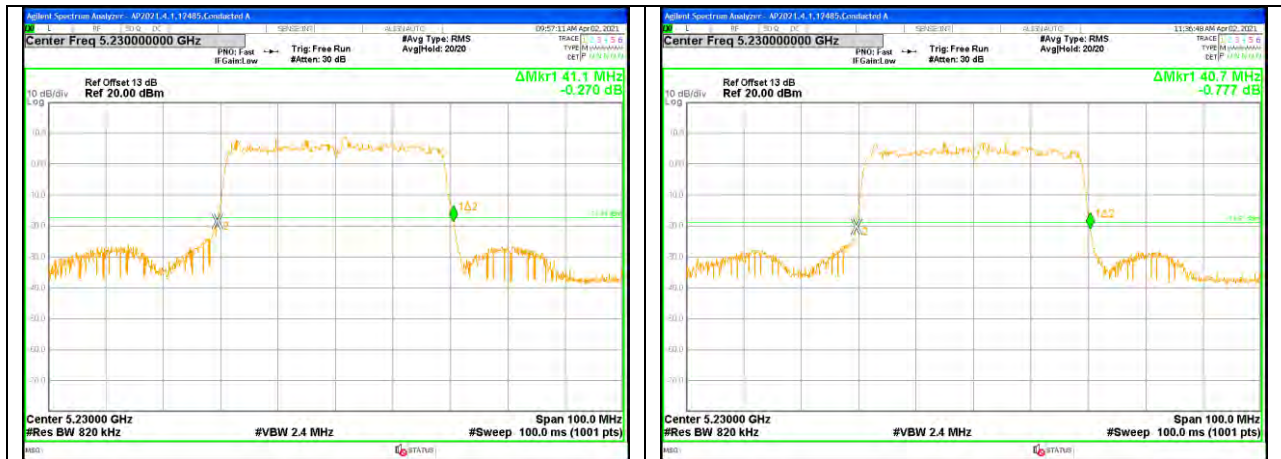


LOW CHANNEL Antenna 2



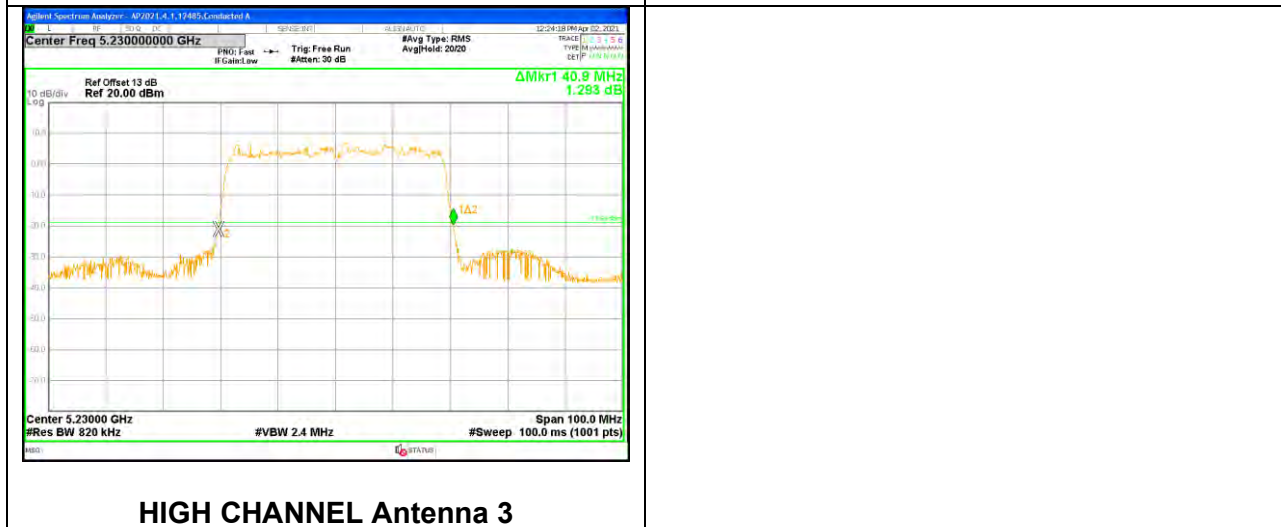
LOW CHANNEL Antenna 3

HIGH



HIGH CHANNEL Antenna 1

HIGH CHANNEL Antenna 2

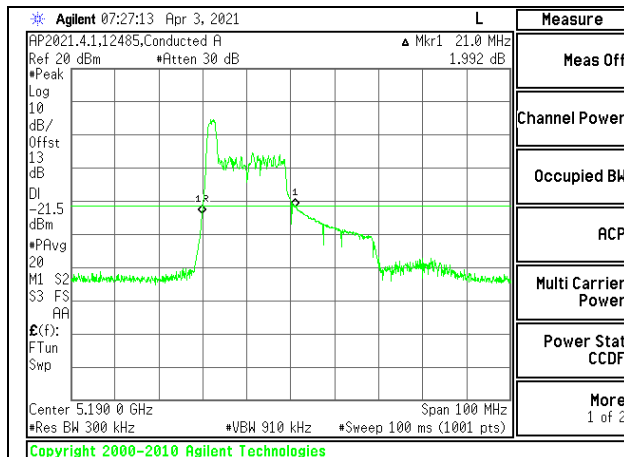


HIGH CHANNEL Antenna 3

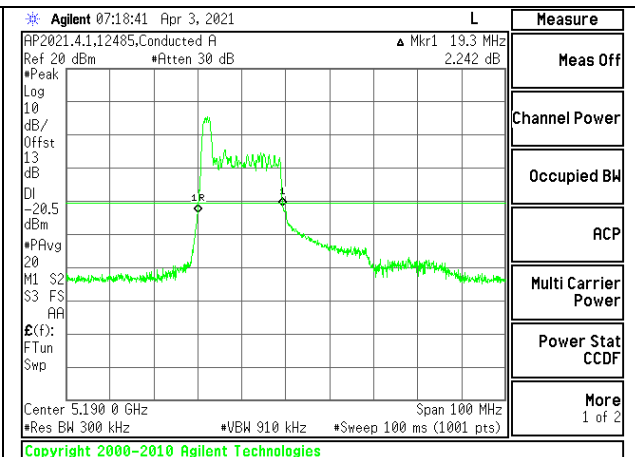
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5190	21.00	19.30	19.20
High	5230	20.80	19.20	19.30

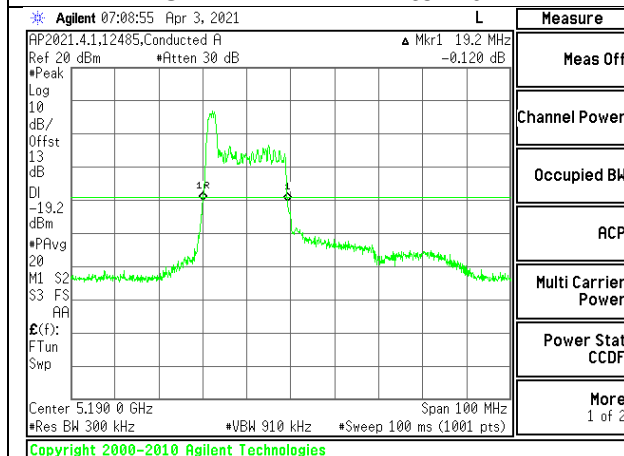
LOW



LOW CHANNEL Antenna 1

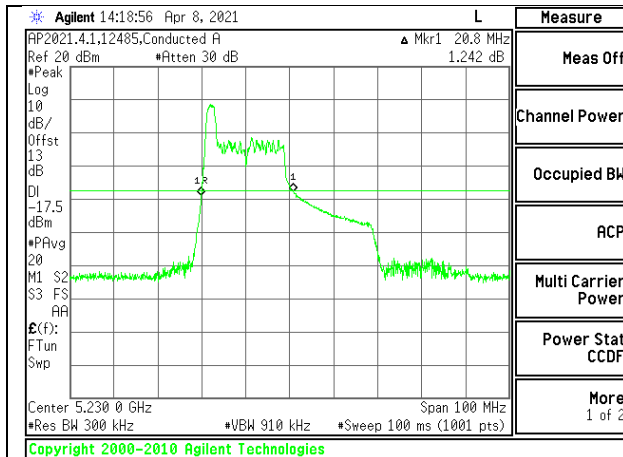


LOW CHANNEL Antenna 2

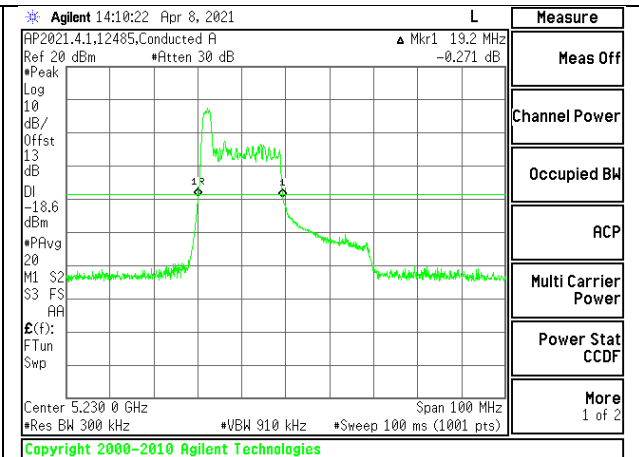


LOW CHANNEL Antenna 3

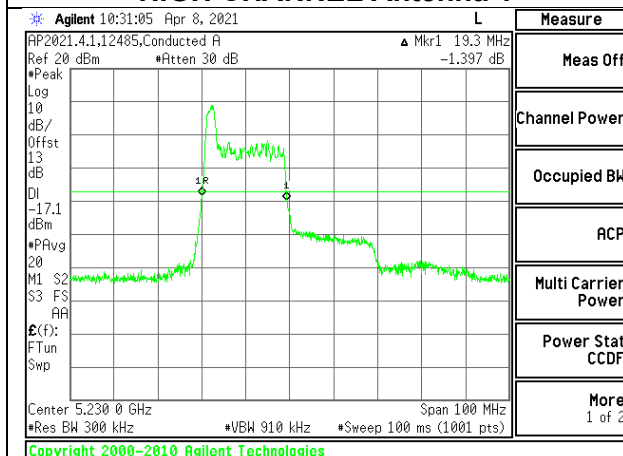
HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2

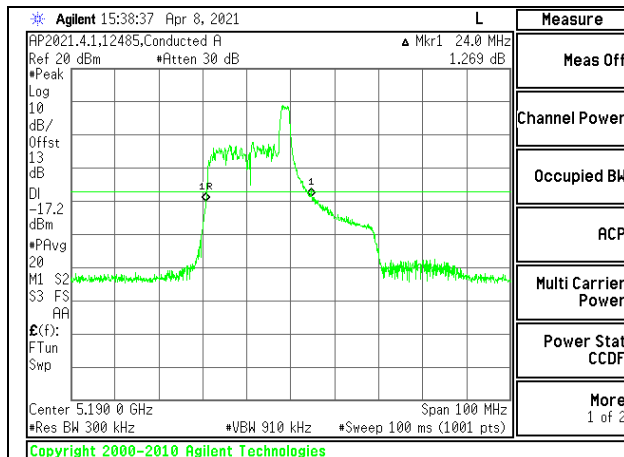


HIGH CHANNEL Antenna 3

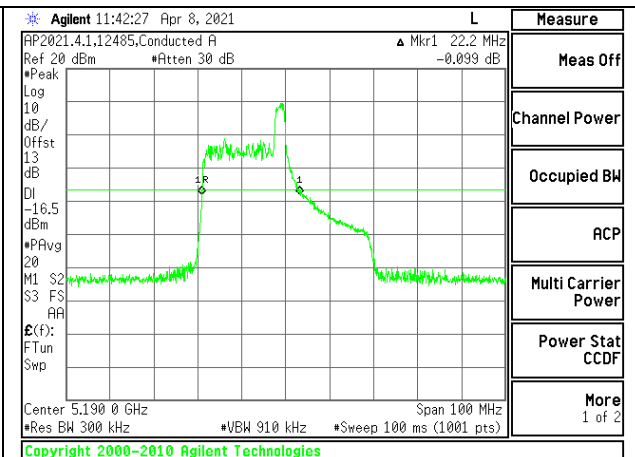
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 8

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5190	24.00	22.20	22.70
High	5230	23.10	22.20	22.70

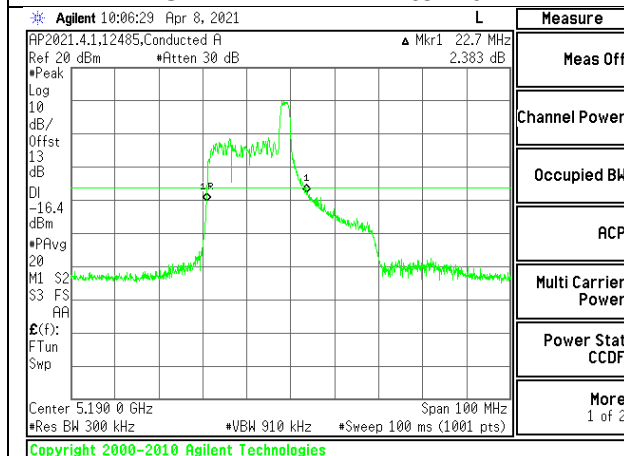
LOW



LOW CHANNEL Antenna 1

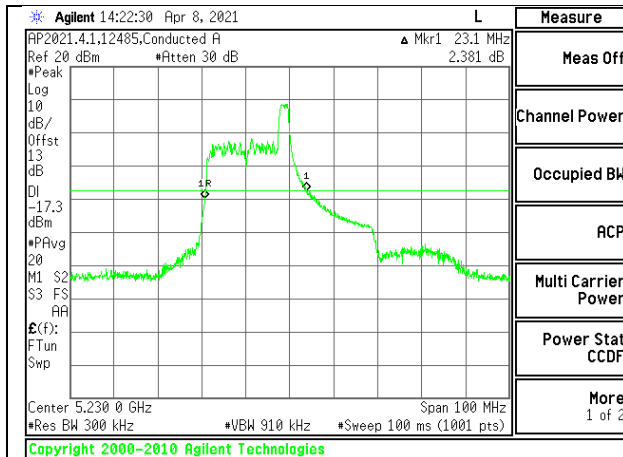


LOW CHANNEL Antenna 2

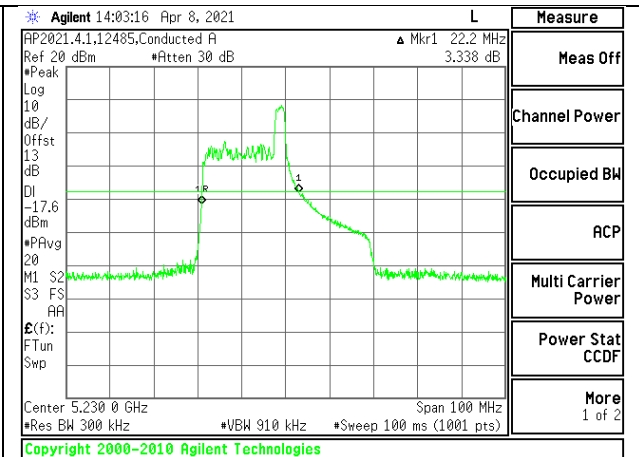


LOW CHANNEL Antenna 3

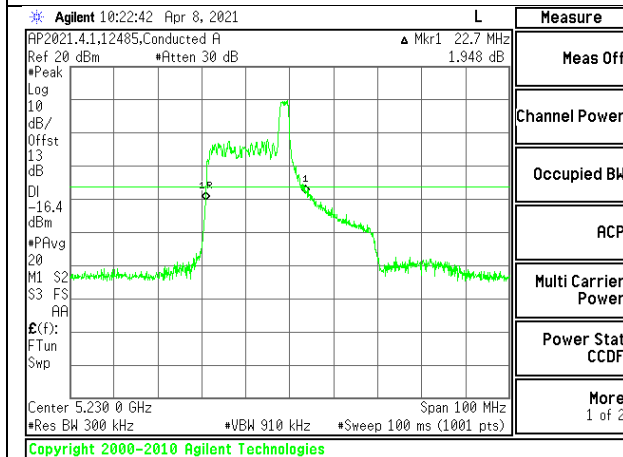
HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2

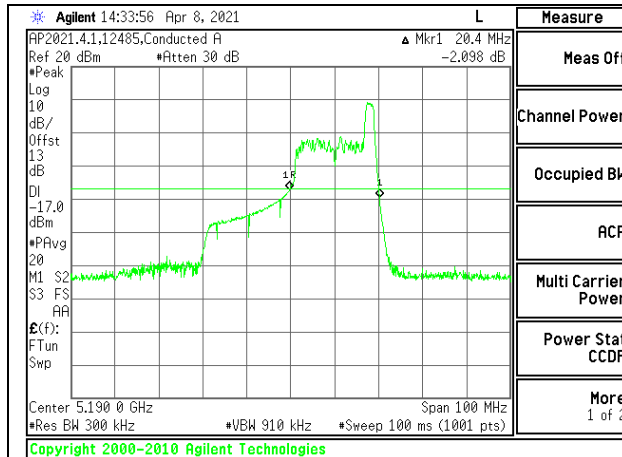


HIGH CHANNEL Antenna 3

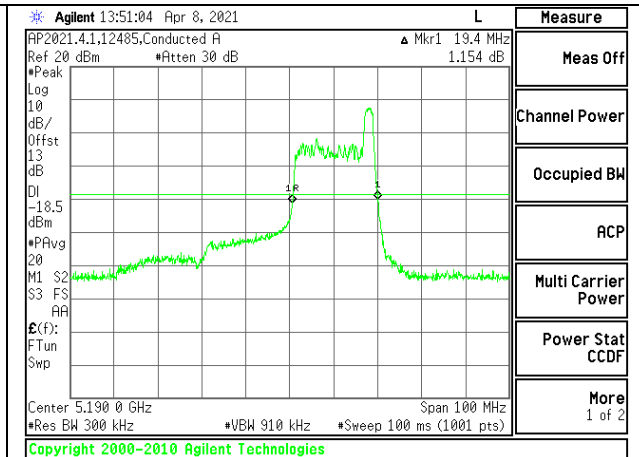
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 17

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5190	20.40	19.40	19.40
High	5230	20.50	19.40	19.30

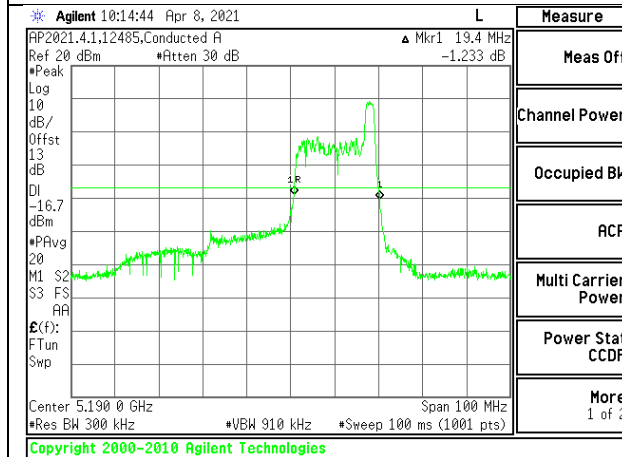
LOW



LOW CHANNEL Antenna 1

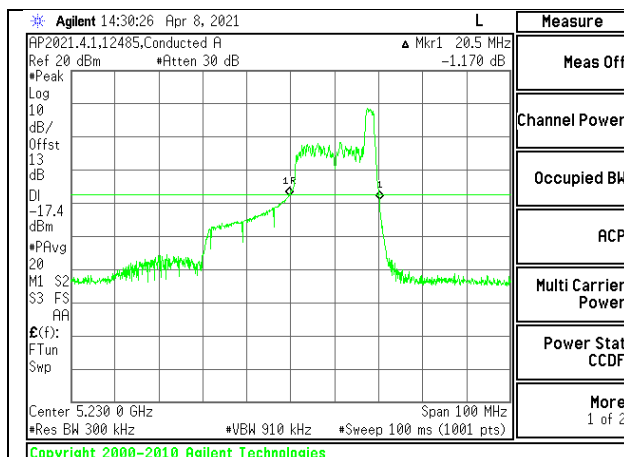


LOW CHANNEL Antenna 2

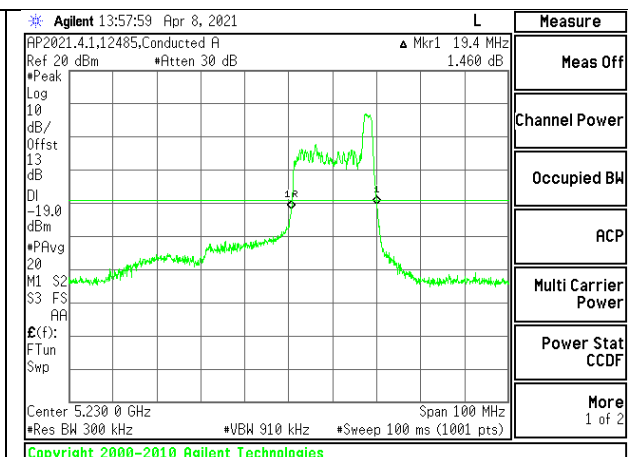


LOW CHANNEL Antenna 3

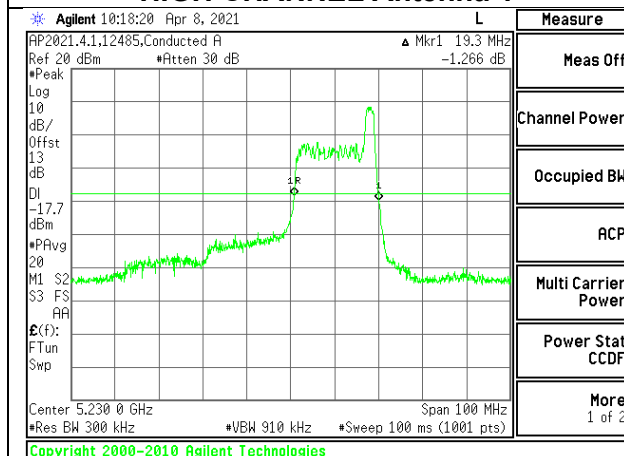
HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2

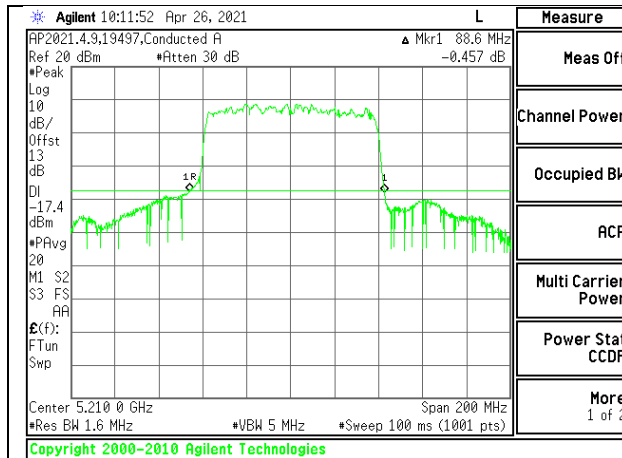


HIGH CHANNEL Antenna 3

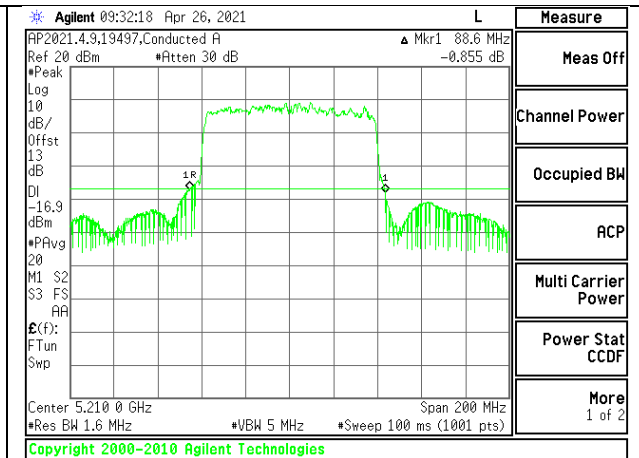
9.2.3. 802.11ax HE80 MODE 3TX IN THE 5.2GHz BAND
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 996-Tones, RU Index 67

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Mid	5210	88.60	88.60	86.80

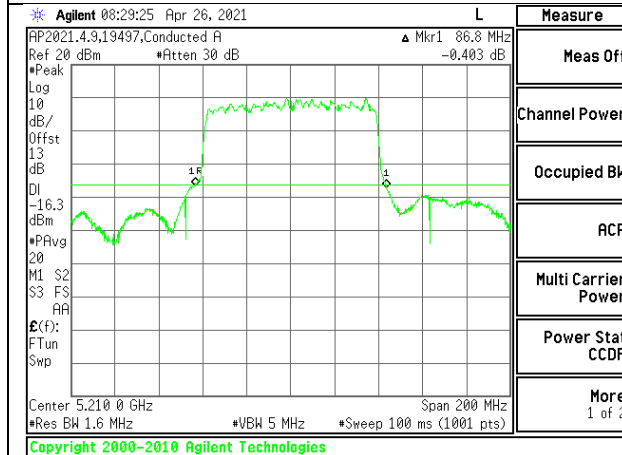
MID



MID CHANNEL Antenna 1



MID CHANNEL Antenna 2

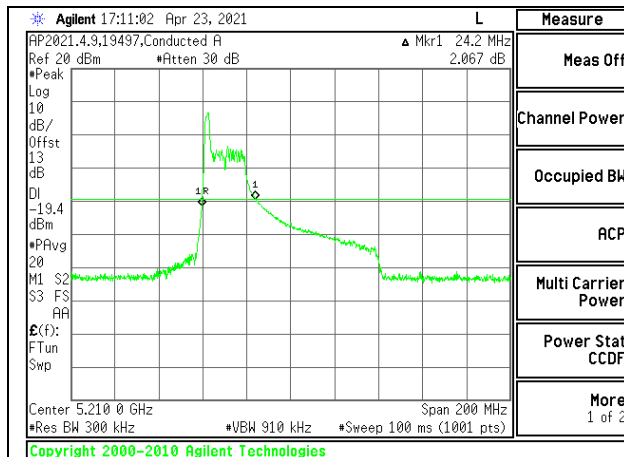


MID CHANNEL Antenna 3

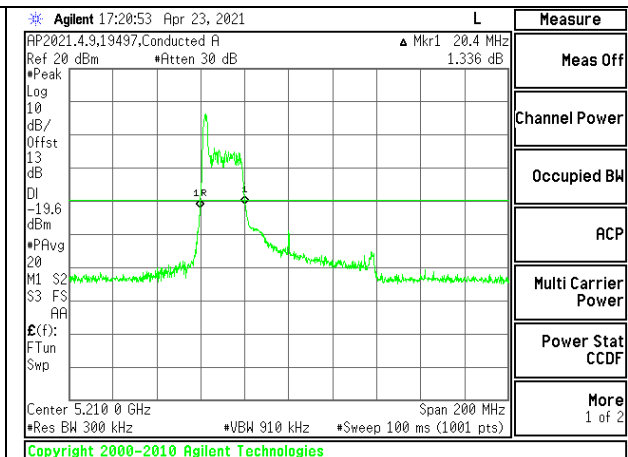
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Mid	5210	24.20	20.40	20.00

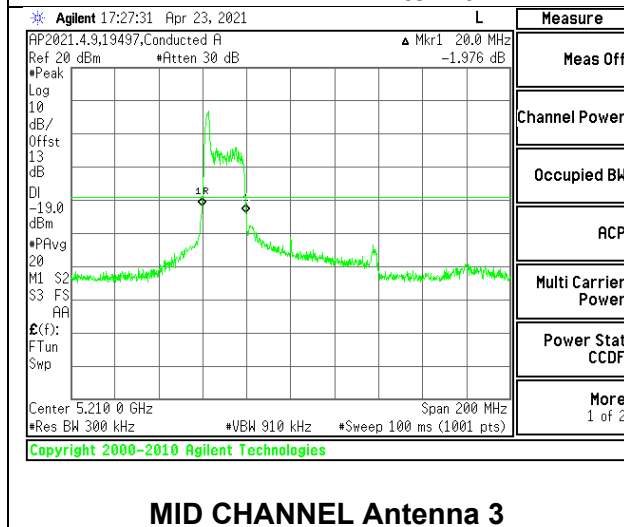
MID



MID CHANNEL Antenna 1



MID CHANNEL Antenna 2

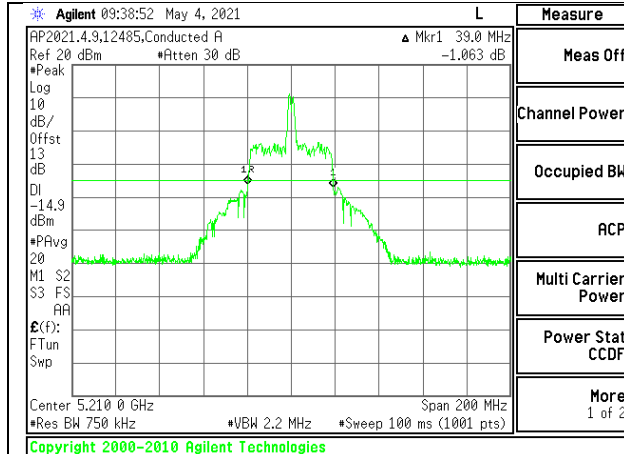


MID CHANNEL Antenna 3

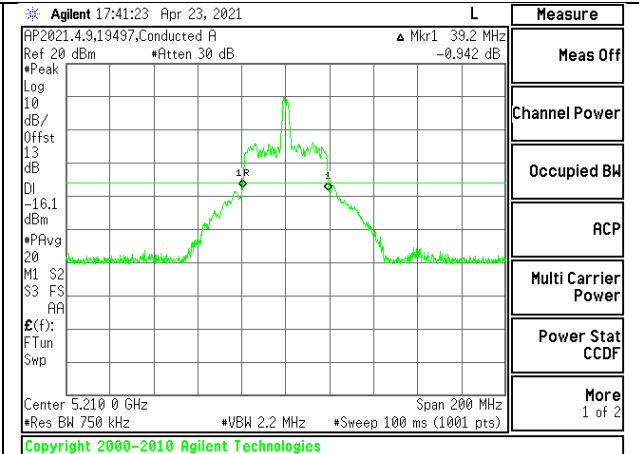
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 18

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Mid	5210	39.00	39.20	39.20

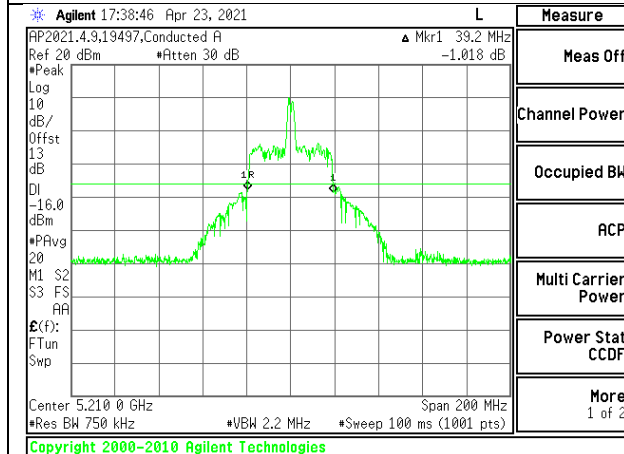
MID



MID CHANNEL Antenna 1



MID CHANNEL Antenna 2

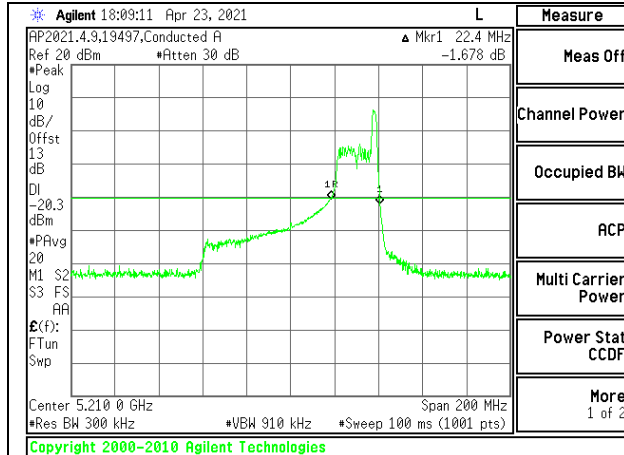


MID CHANNEL Antenna 3

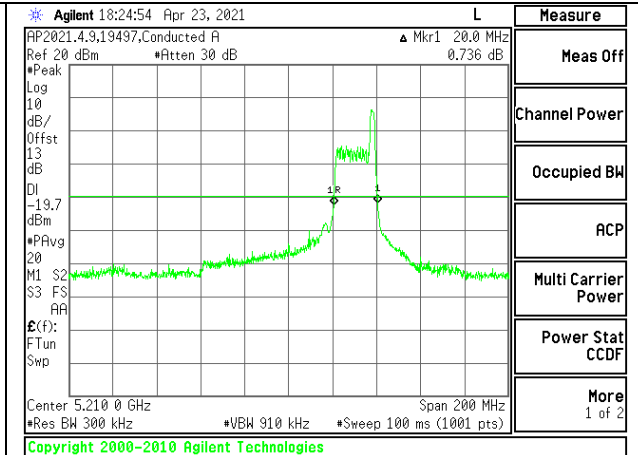
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 36

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Mid	5210	22.40	20.00	20.00

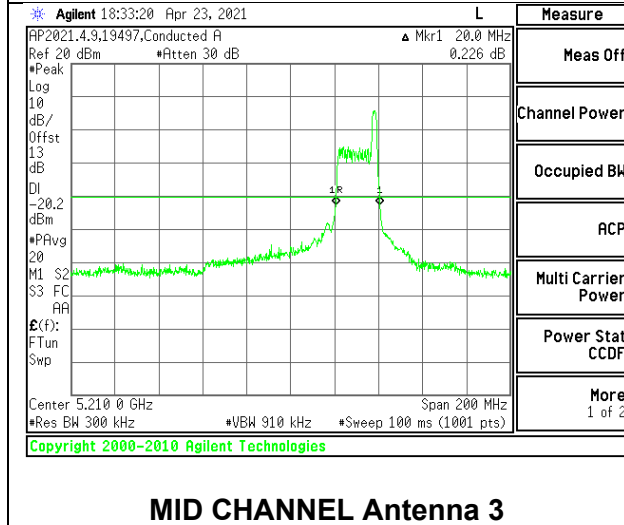
MID



MID CHANNEL Antenna 1



MID CHANNEL Antenna 2



MID CHANNEL Antenna 3

9.2.4. 802.11ax HE20 MODE 3TX IN THE 5.3GHz BAND
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 242-Tones, RU Index 61

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5260	22.10	21.70	22.30
Mid	5300	22.30	21.75	22.15
High	5320	22.25	21.70	22.00

LOW



LOW CHANNEL Antenna 1

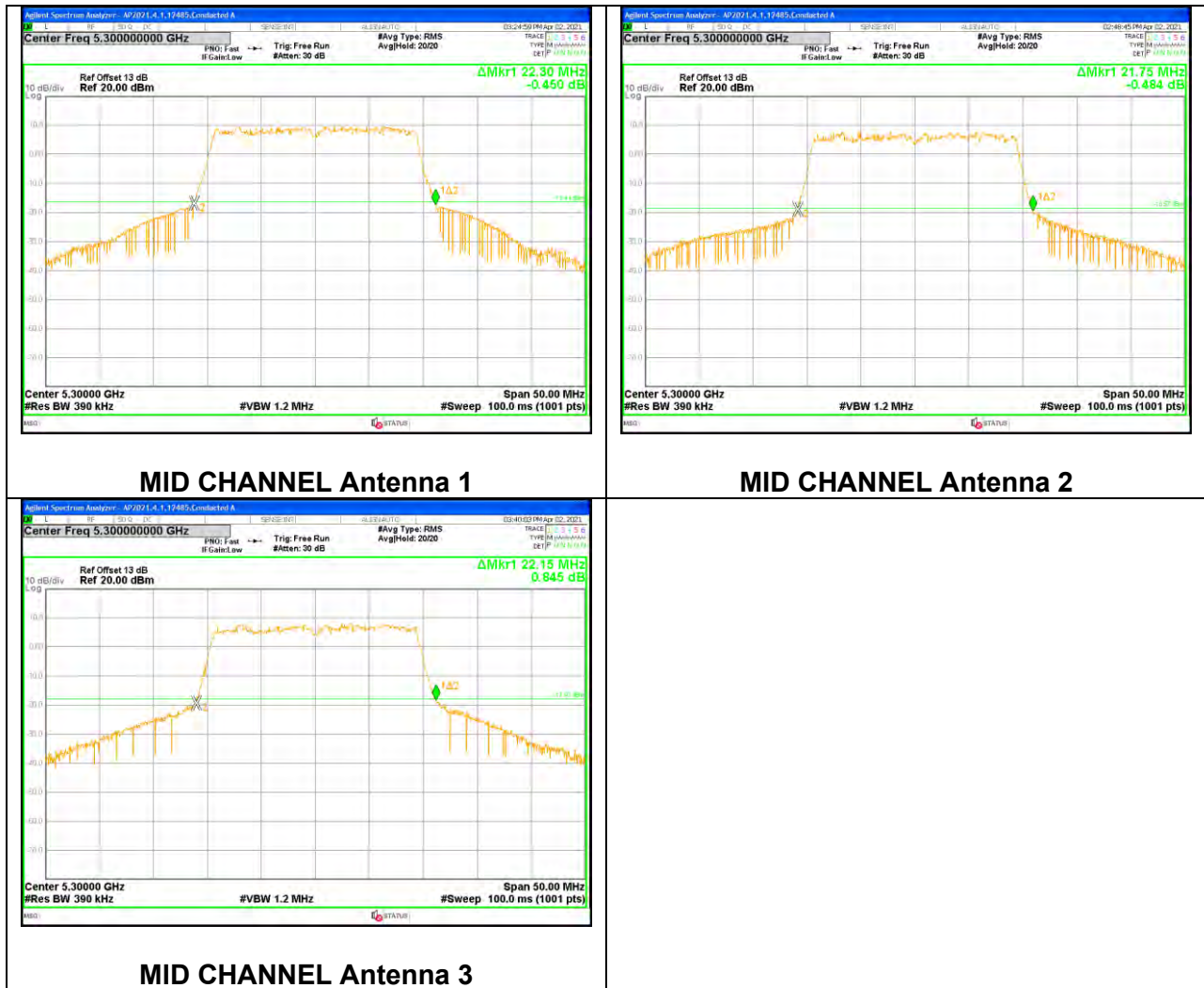


LOW CHANNEL Antenna 2



LOW CHANNEL Antenna 3

MID



HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2

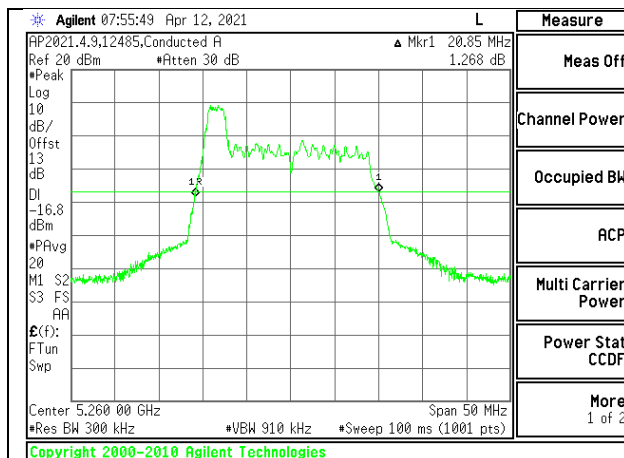


HIGH CHANNEL Antenna 3

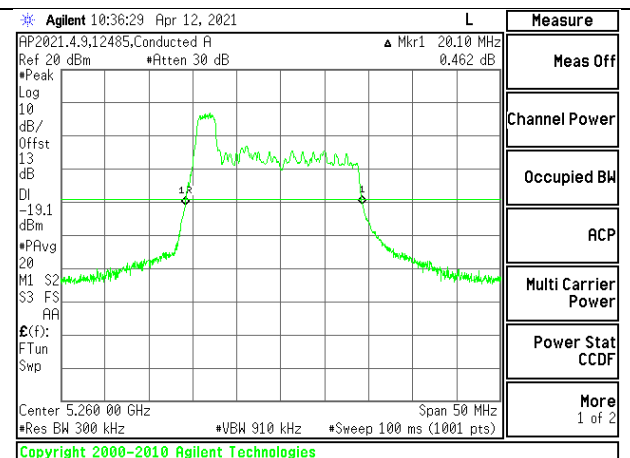
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5260	20.85	20.10	20.00
Mid	5300	20.00	19.95	20.05
High	5320	20.95	20.05	20.10

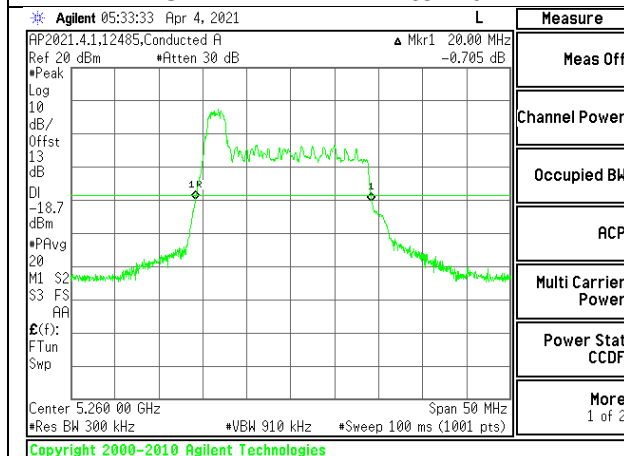
LOW



LOW CHANNEL Antenna 1

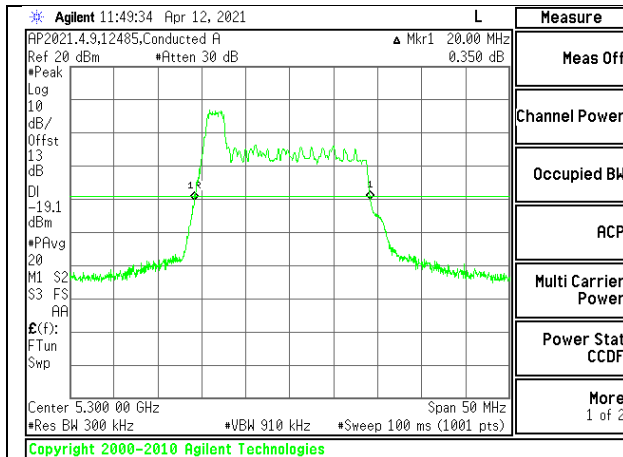


LOW CHANNEL Antenna 2

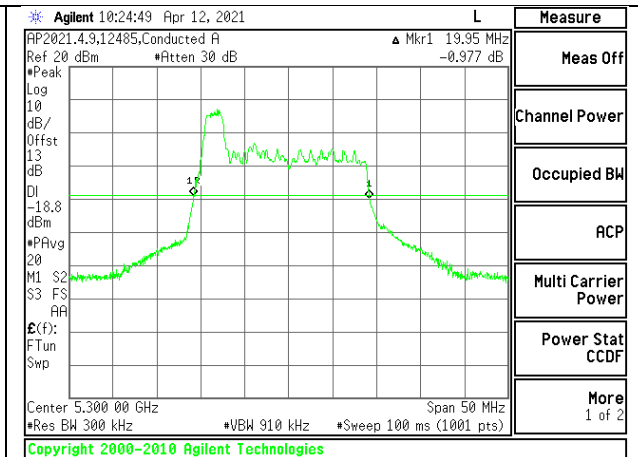


LOW CHANNEL Antenna 3

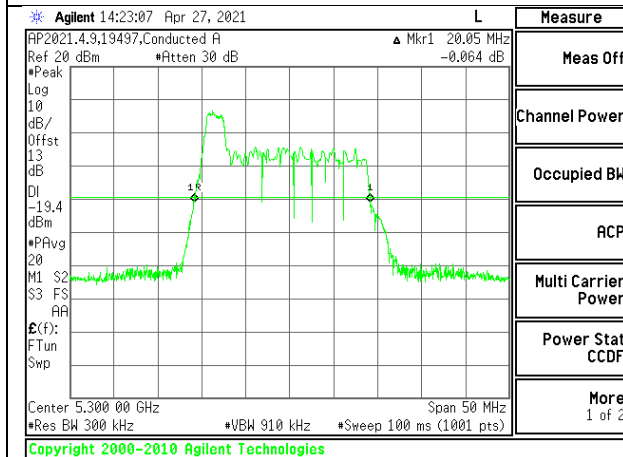
MID



MID CHANNEL Antenna 1

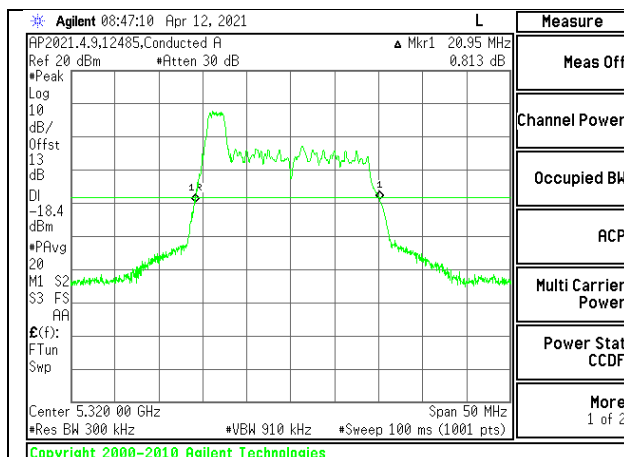


MID CHANNEL Antenna 2

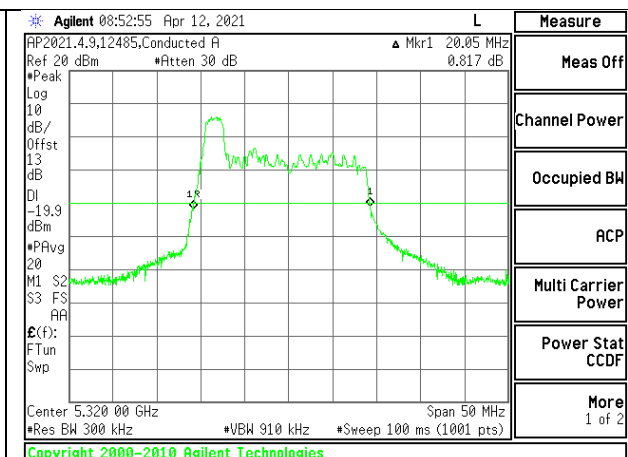


MID CHANNEL Antenna 3

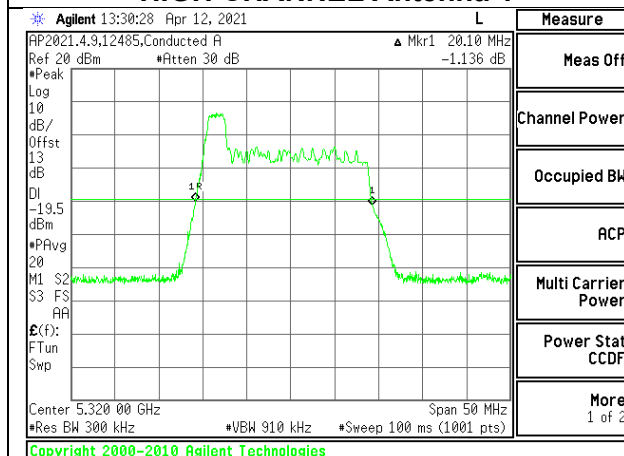
HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2

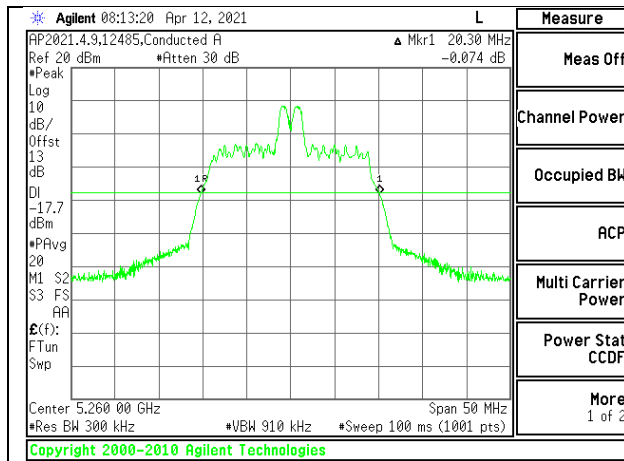


HIGH CHANNEL Antenna 3

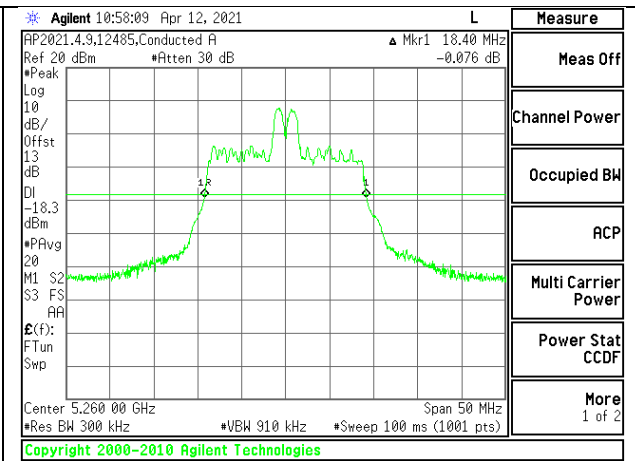
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 4

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5260	20.30	18.40	18.45
Mid	5300	20.30	18.45	18.45
High	5320	20.25	18.45	18.45

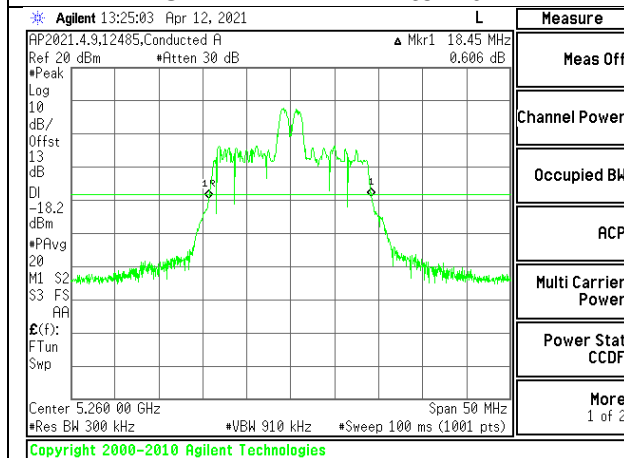
LOW



LOW CHANNEL Antenna 1

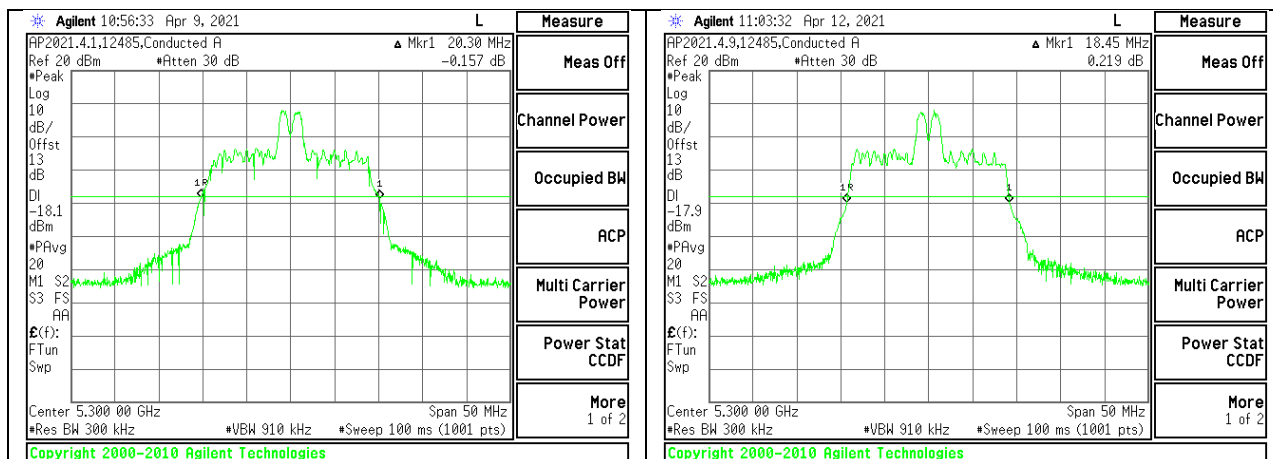


LOW CHANNEL Antenna 2



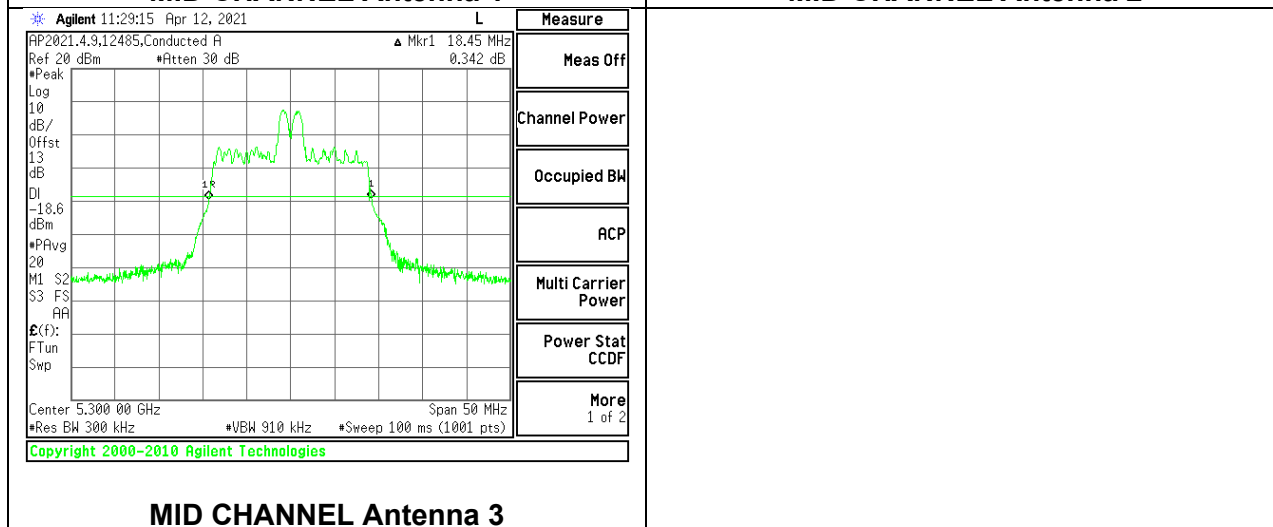
LOW CHANNEL Antenna 3

MID

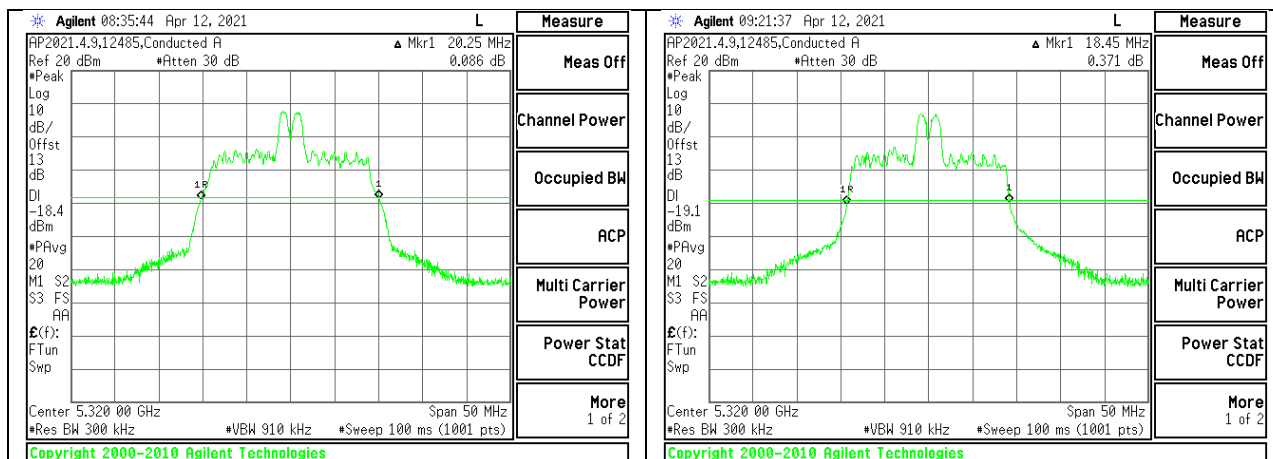


MID CHANNEL Antenna 1

MID CHANNEL Antenna 2

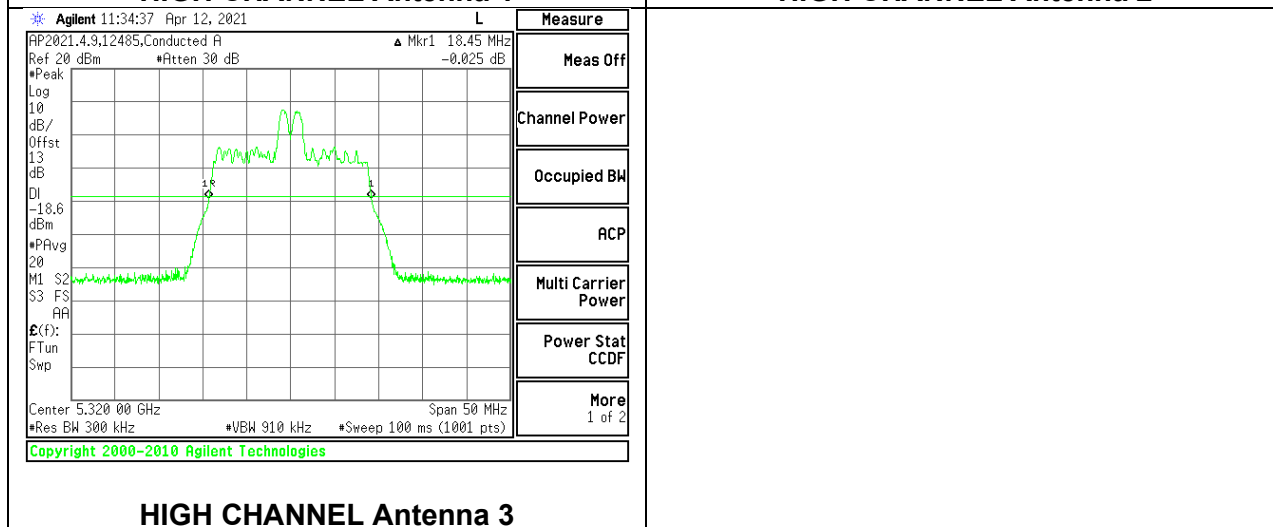


HIGH



HIGH CHANNEL Antenna 1

HIGH CHANNEL Antenna 2

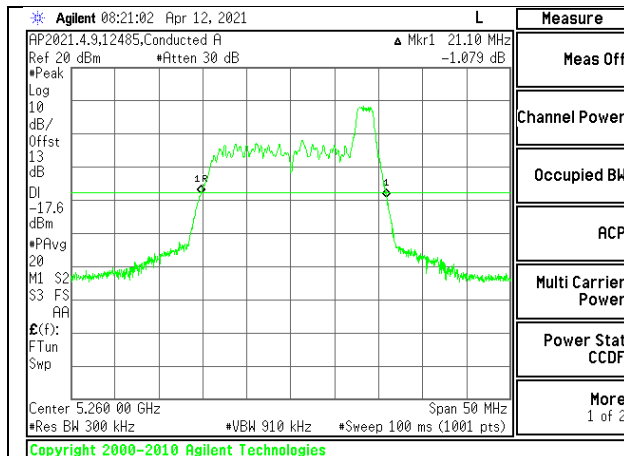


HIGH CHANNEL Antenna 3

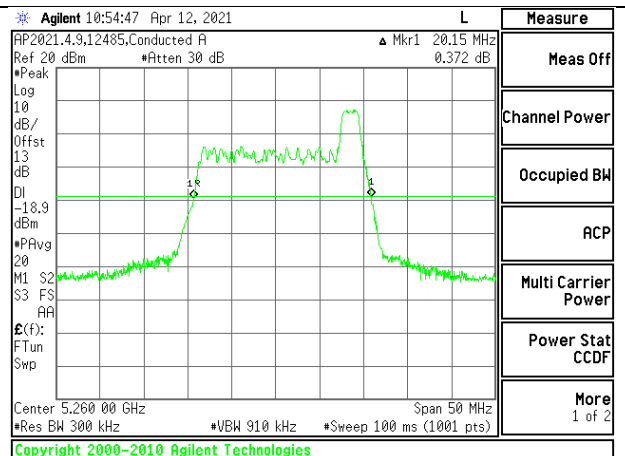
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 8

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5260	21.10	20.15	20.10
Mid	5300	21.10	20.10	20.10
High	5320	20.00	20.05	20.20

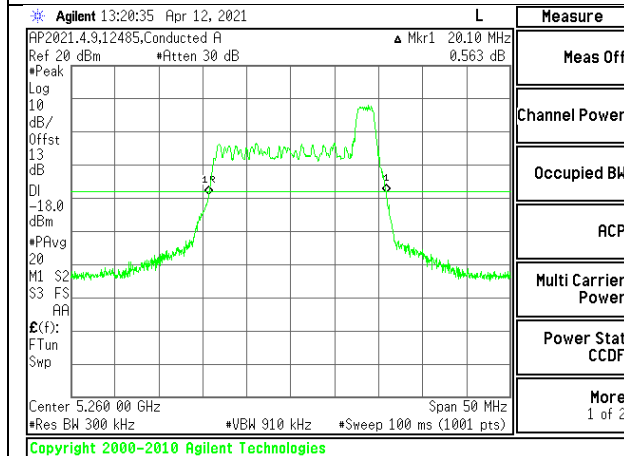
LOW



LOW CHANNEL Antenna 1

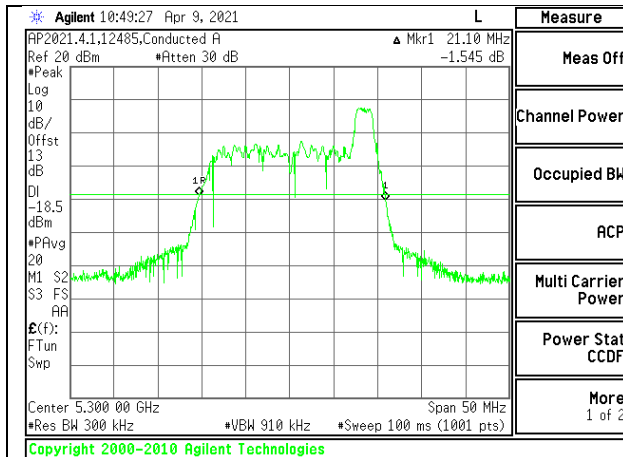


LOW CHANNEL Antenna 2

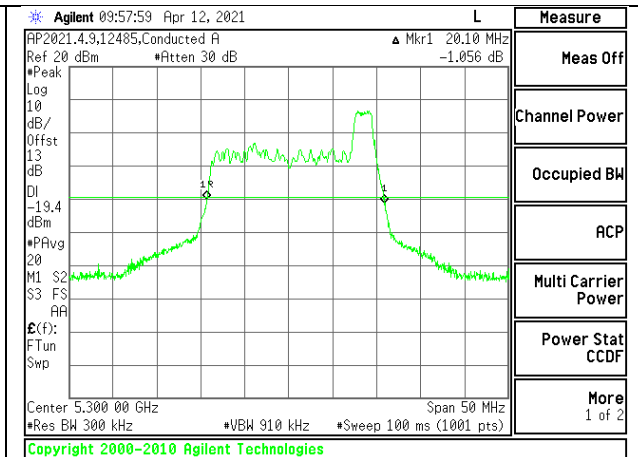


LOW CHANNEL Antenna 3

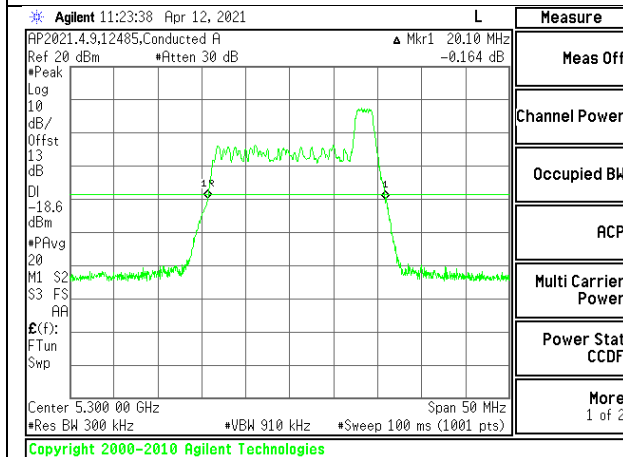
MID



MID CHANNEL Antenna 1

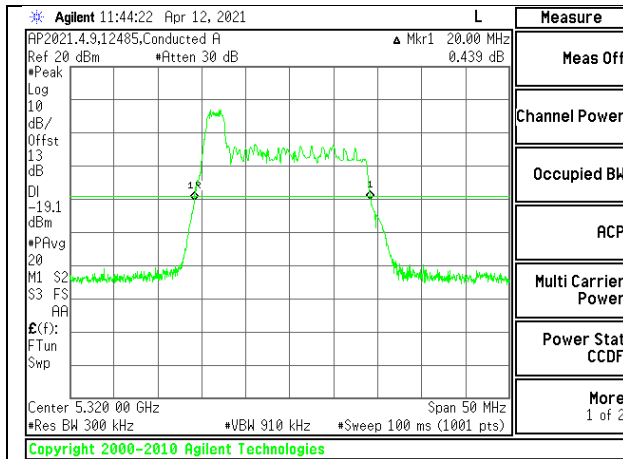


MID CHANNEL Antenna 2

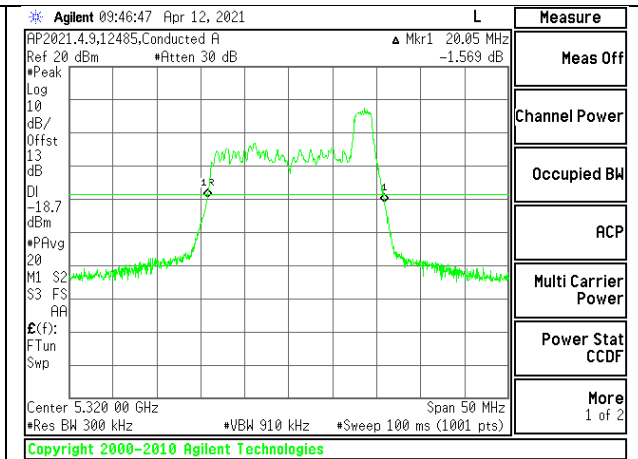


MID CHANNEL Antenna 3

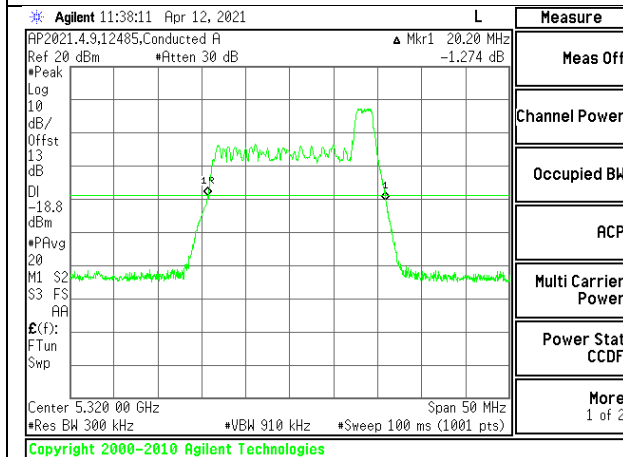
HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2

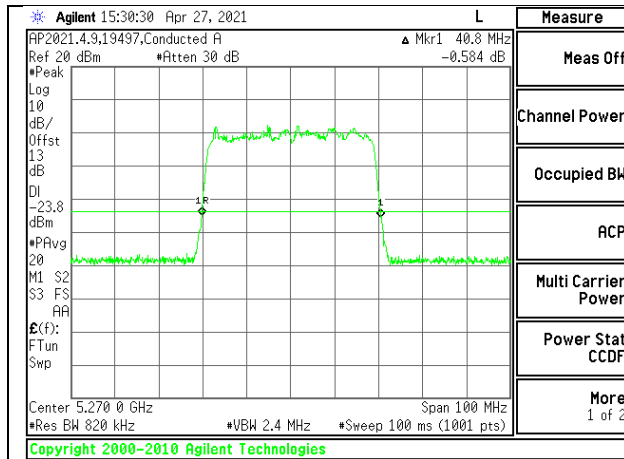


HIGH CHANNEL Antenna 3

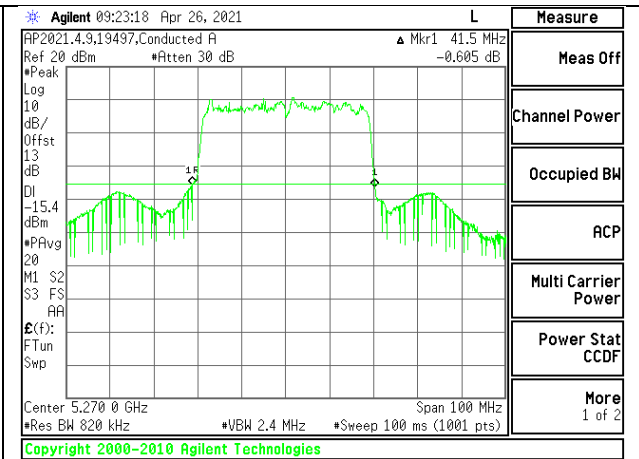
9.2.5. 802.11ax HE40 MODE 3TX IN THE 5.3GHz BAND
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 484-Tones, RU Index 65

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5270	40.80	41.50	40.80
High	5310	41.20	40.60	40.90

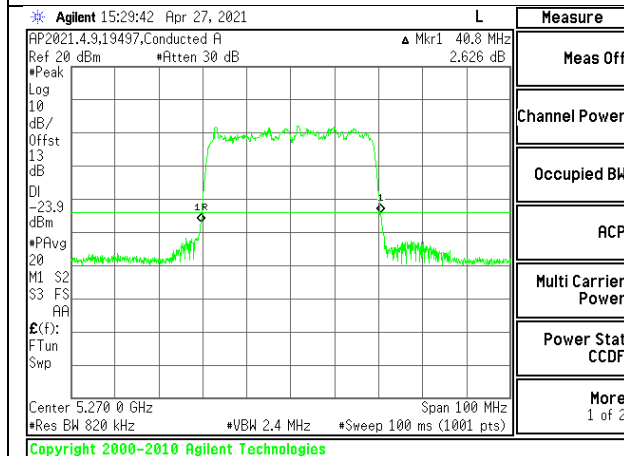
LOW



LOW CHANNEL Antenna 1



LOW CHANNEL Antenna 2

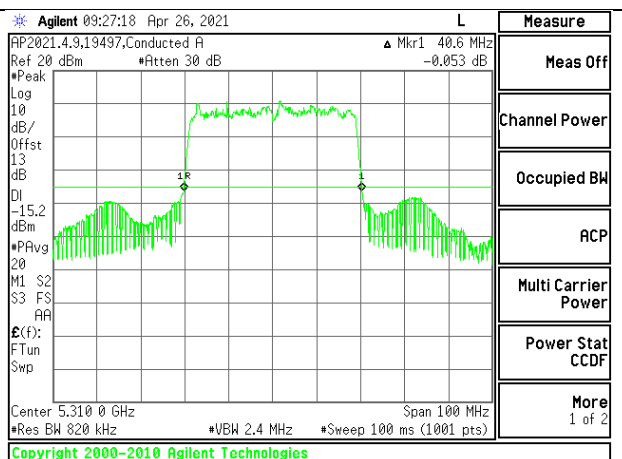


LOW CHANNEL Antenna 3

HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2

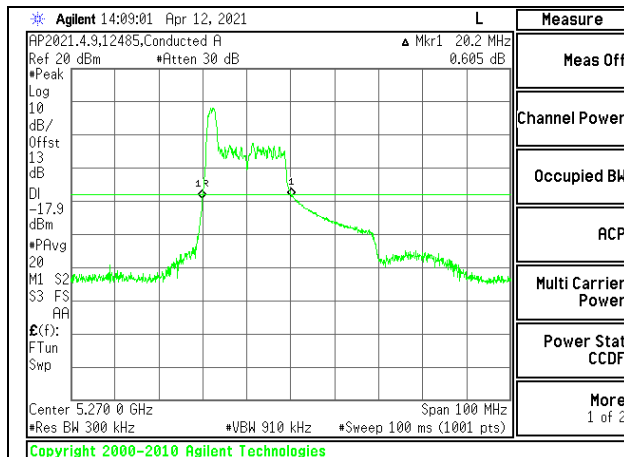


HIGH CHANNEL Antenna 3

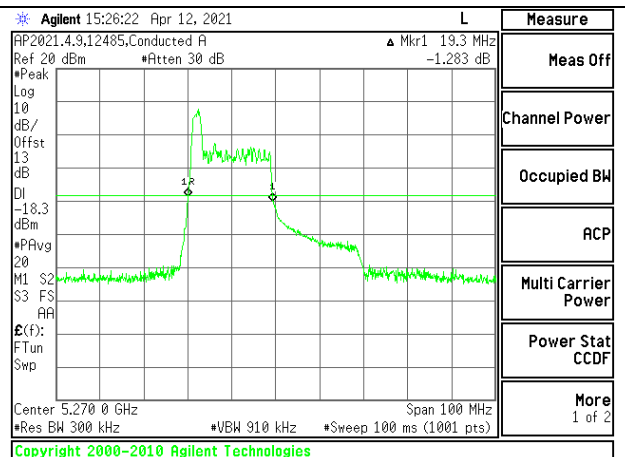
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5270	20.20	19.30	19.40
High	5310	20.40	19.30	19.50

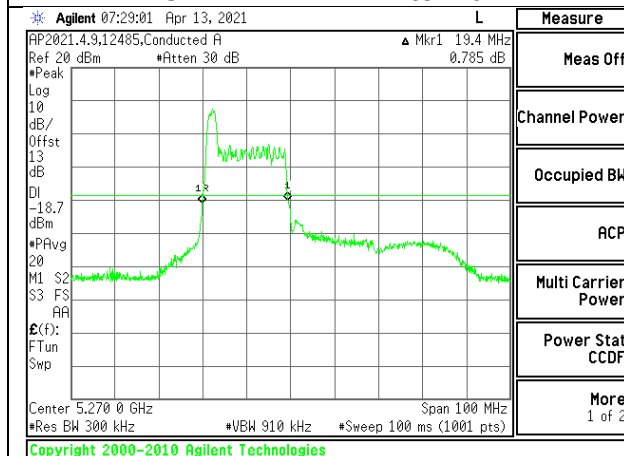
LOW



LOW CHANNEL Antenna 1

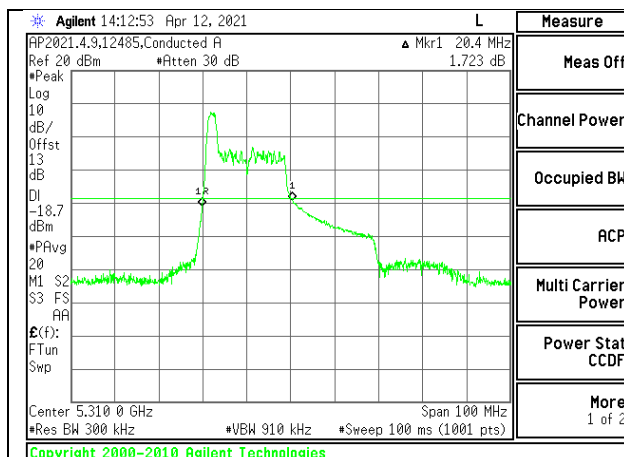


LOW CHANNEL Antenna 2

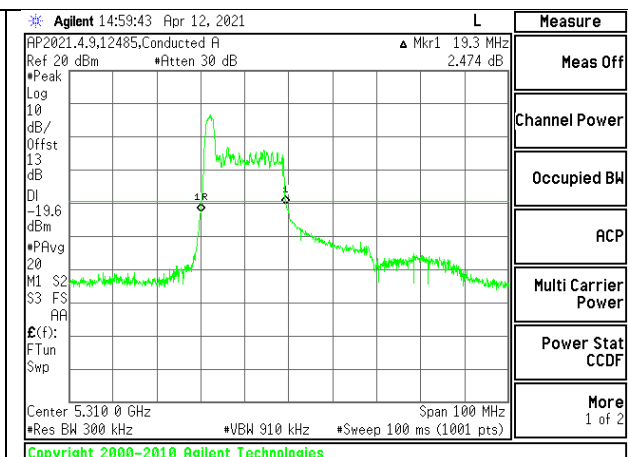


LOW CHANNEL Antenna 3

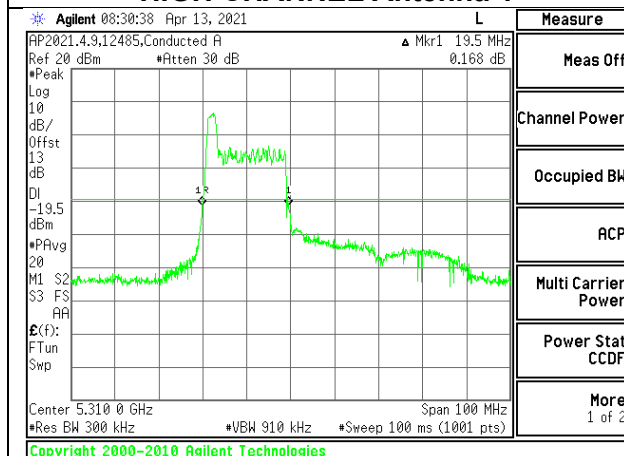
HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2

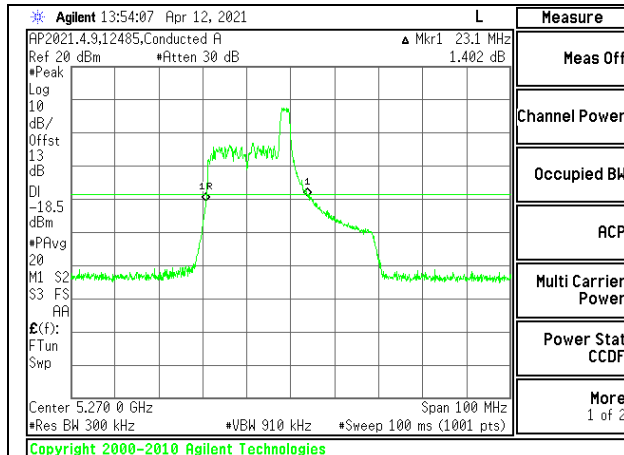


HIGH CHANNEL Antenna 3

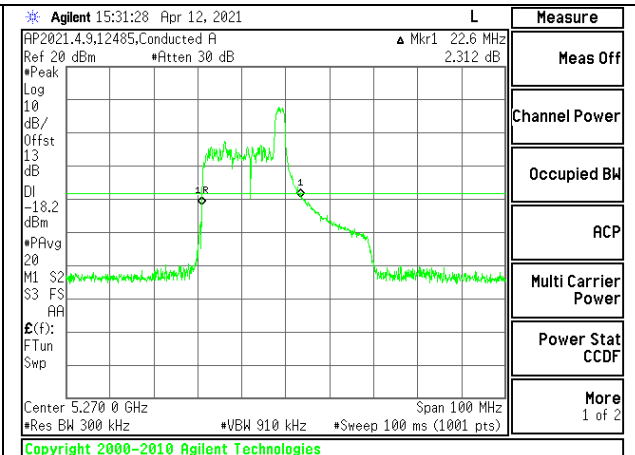
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 8

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5270	23.10	22.60	22.50
High	5310	23.00	22.50	22.30

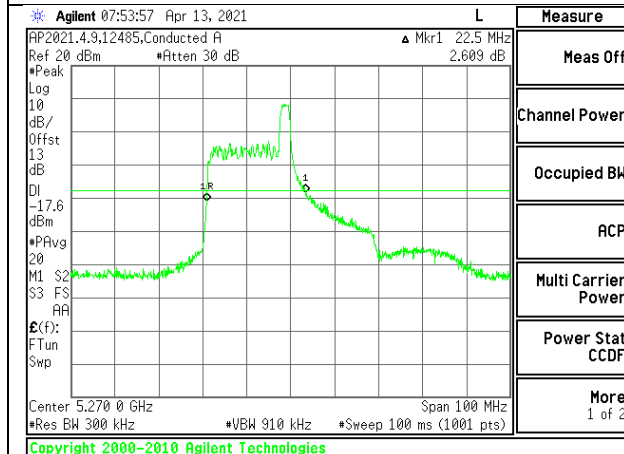
LOW



LOW CHANNEL Antenna 1

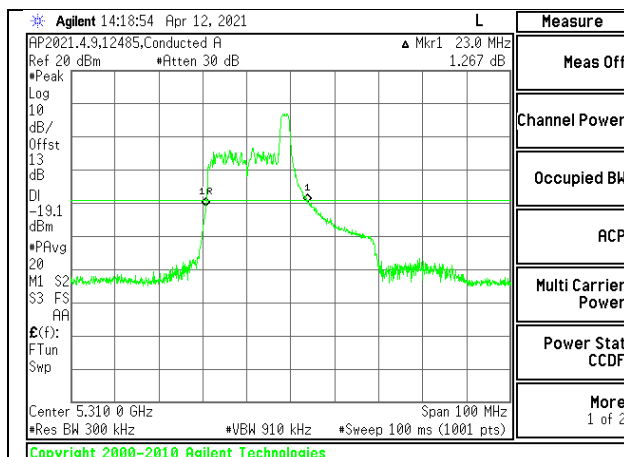


LOW CHANNEL Antenna 2

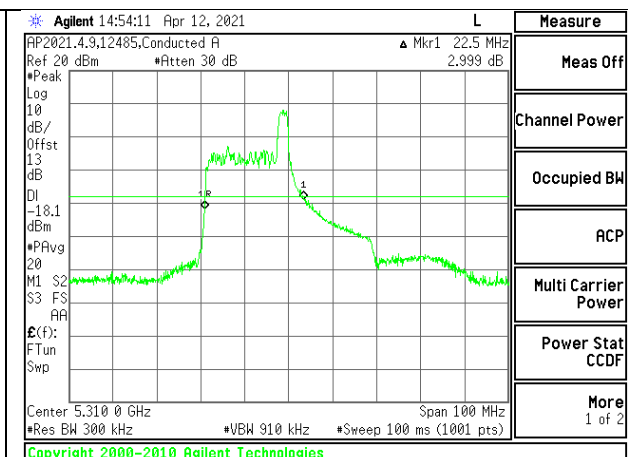


LOW CHANNEL Antenna 3

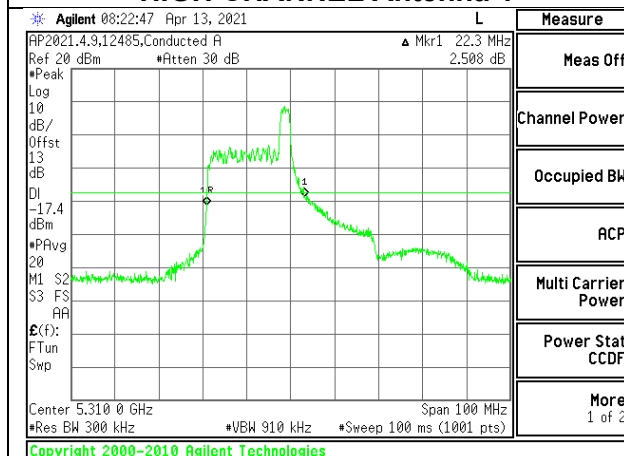
HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2

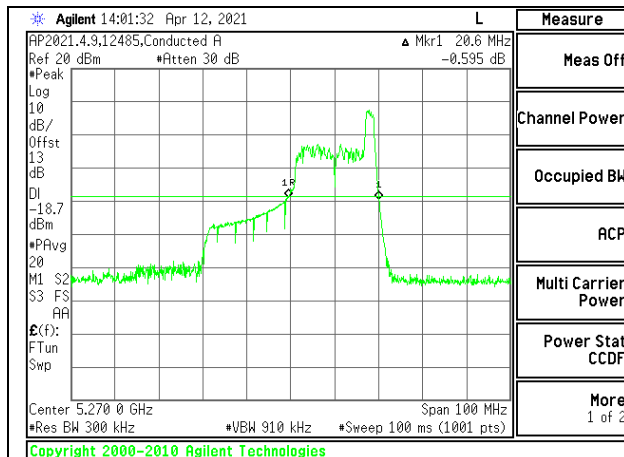


HIGH CHANNEL Antenna 3

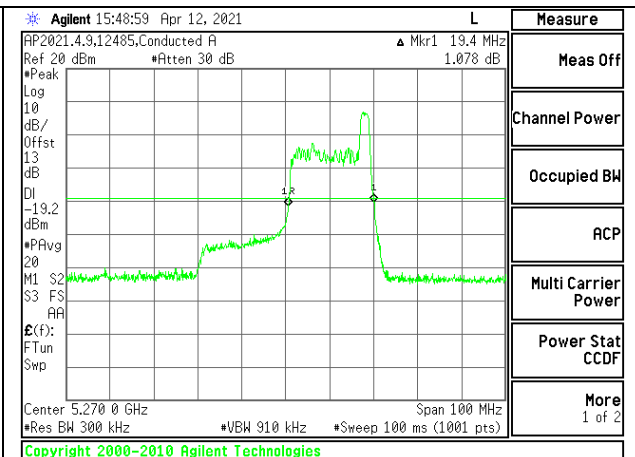
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 17

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5270	20.60	19.40	19.20
High	5310	20.60	19.40	19.20

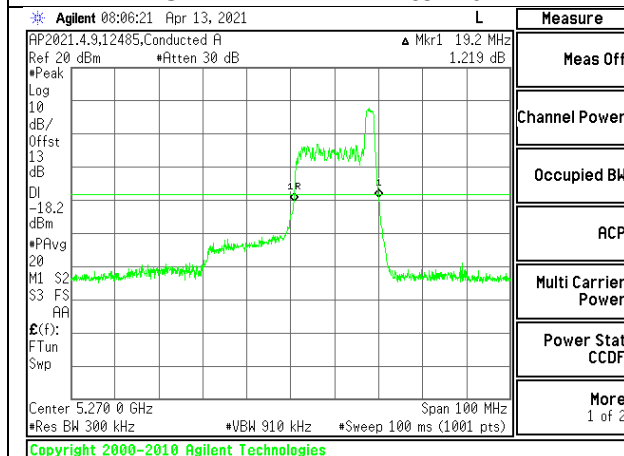
LOW



LOW CHANNEL Antenna 1

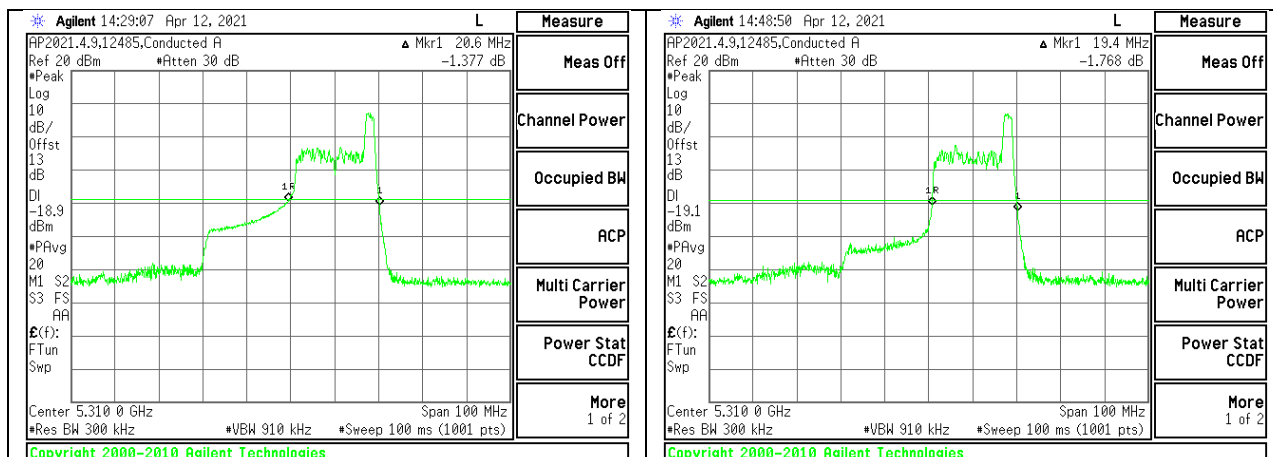


LOW CHANNEL Antenna 2



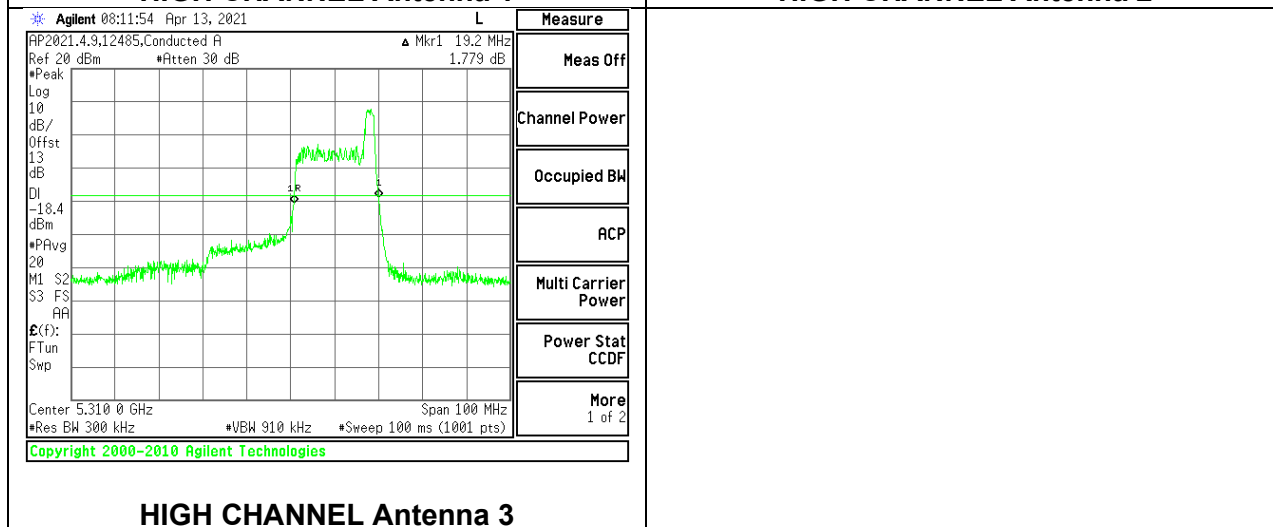
LOW CHANNEL Antenna 3

HIGH



HIGH CHANNEL Antenna 1

HIGH CHANNEL Antenna 2

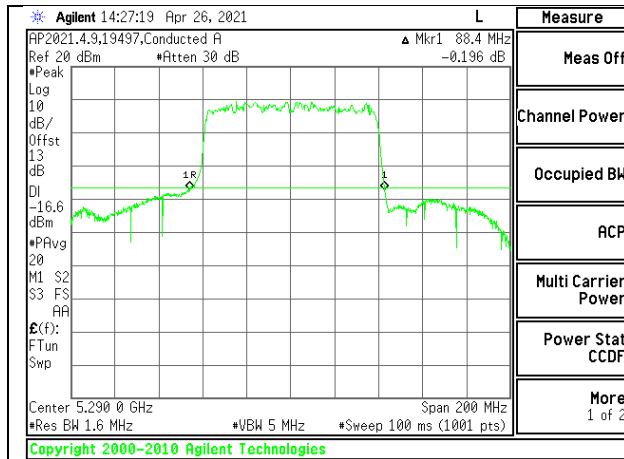


HIGH CHANNEL Antenna 3

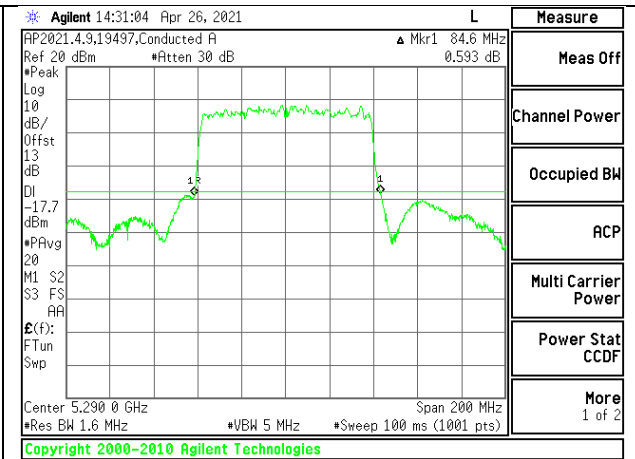
9.2.6. 802.11ax HE80 MODE 3TX IN THE 5.3GHz BAND
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 996-Tones, RU Index 67

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Mid	5290	88.40	84.60	83.40

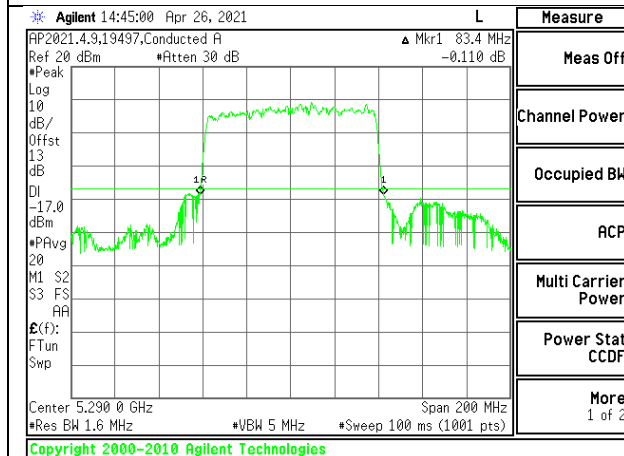
MID



MID CHANNEL Antenna 1



MID CHANNEL Antenna 2

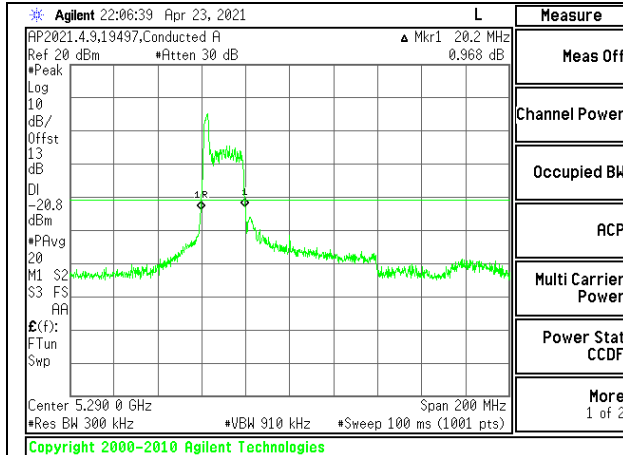


MID CHANNEL Antenna 3

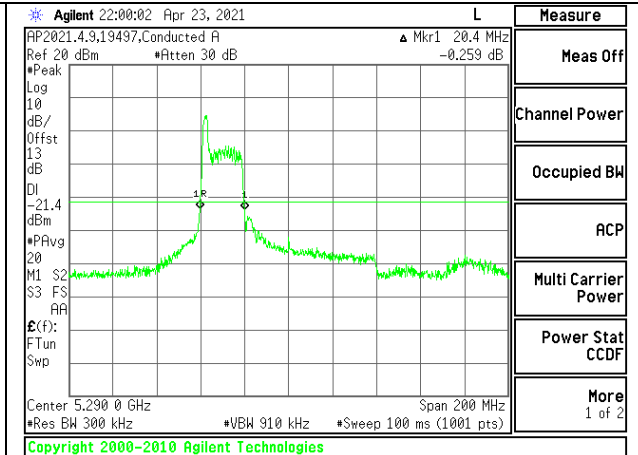
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Mid	5290	20.20	20.40	20.20

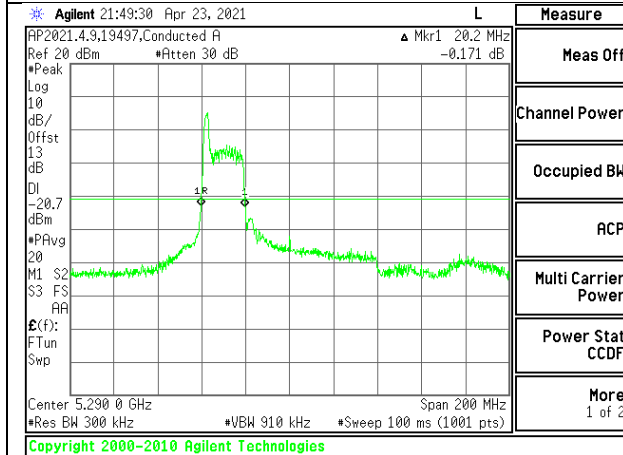
MID



MID CHANNEL Antenna 1



MID CHANNEL Antenna 2

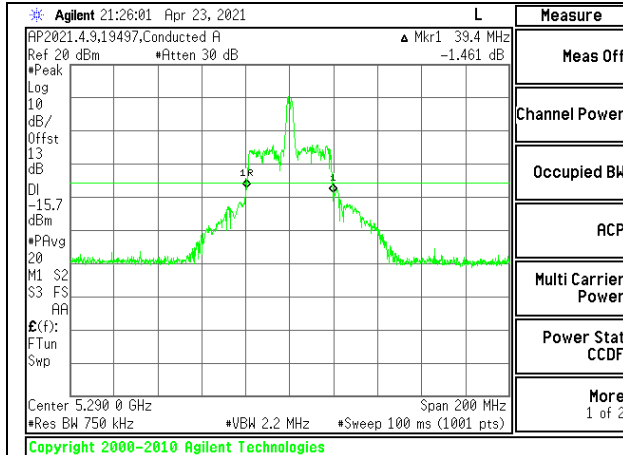


MID CHANNEL Antenna 3

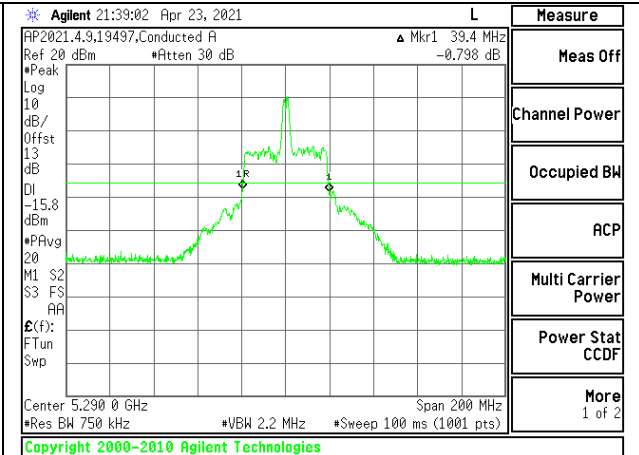
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 18

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Mid	5290	39.40	39.40	39.40

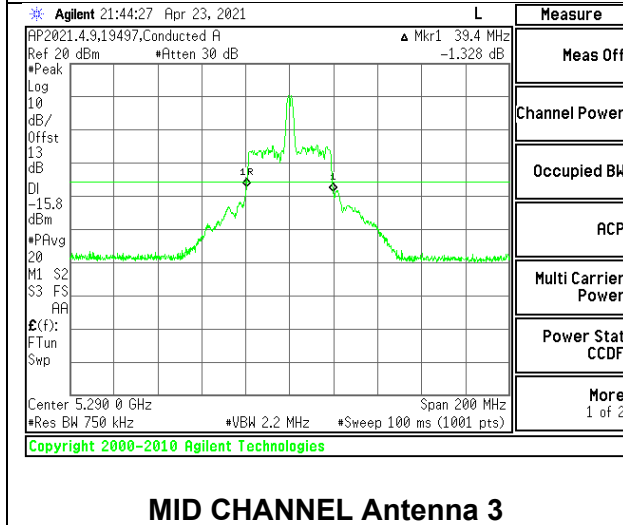
MID



MID CHANNEL Antenna 1



MID CHANNEL Antenna 2

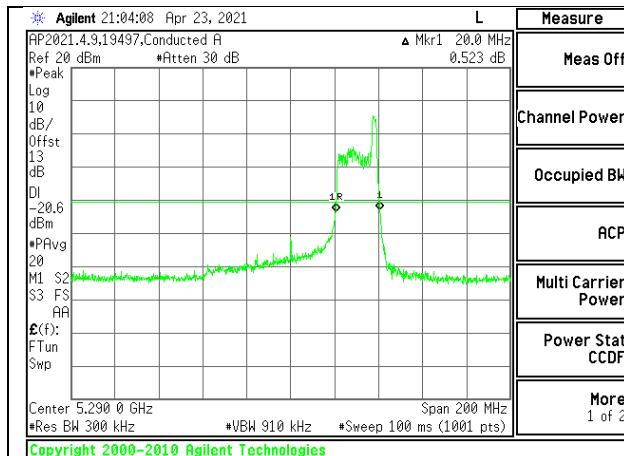


MID CHANNEL Antenna 3

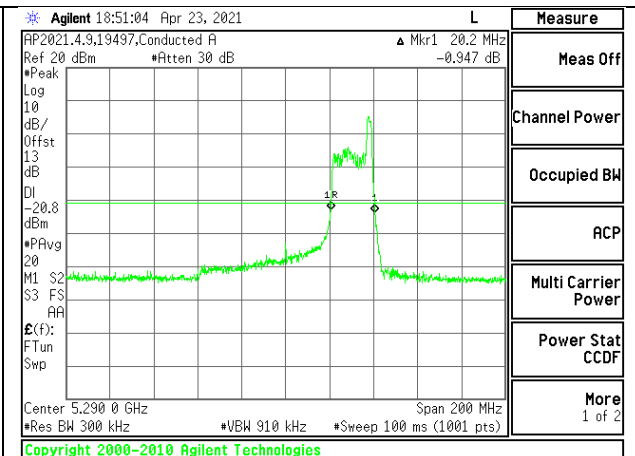
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 36

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Mid	5290	20.00	20.20	20.00

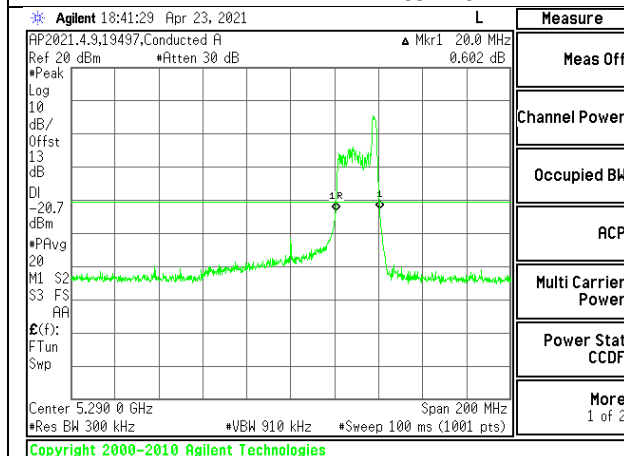
MID



MID CHANNEL Antenna 1



MID CHANNEL Antenna 2

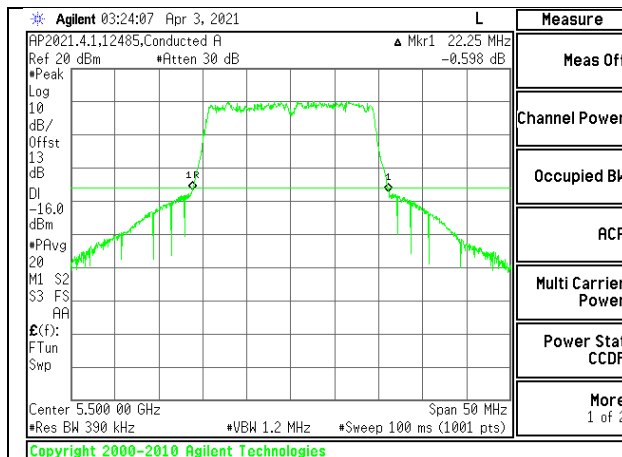


MID CHANNEL Antenna 3

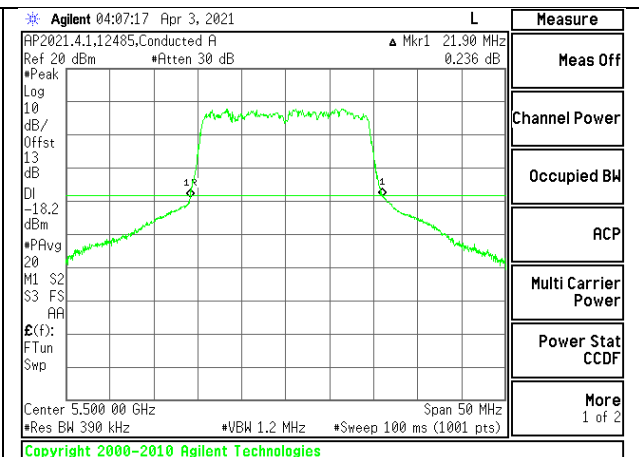
9.2.7. 802.11ax HE20 MODE 3TX IN THE 5.6GHZ BAND
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 242-Tones, RU Index 61

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5500	22.25	21.90	22.00
Mid	5580	22.35	21.95	22.10
High	5700	22.30	21.80	22.15
144	5720	22.25	22.00	22.15

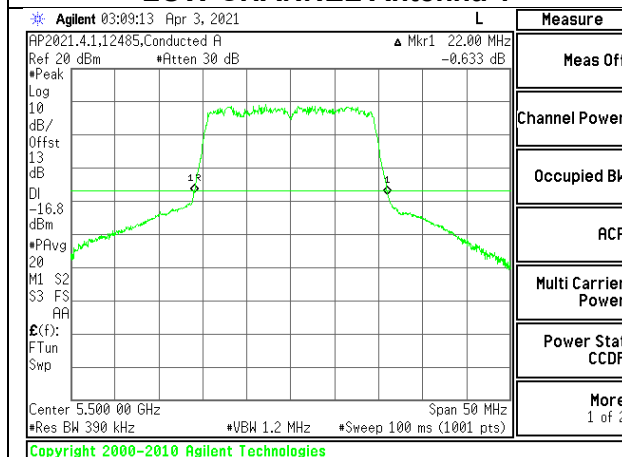
LOW



LOW CHANNEL Antenna 1

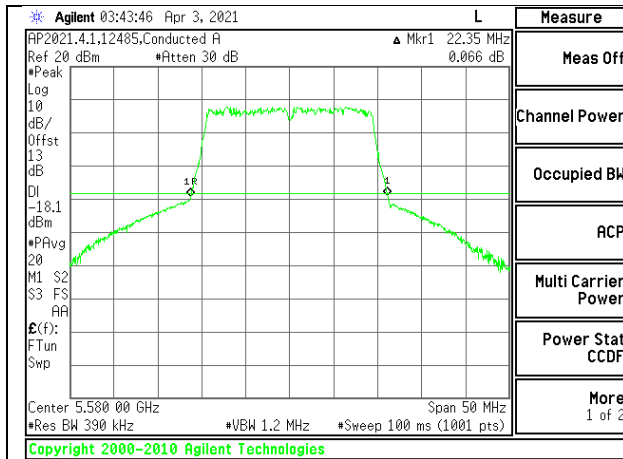


LOW CHANNEL Antenna 2

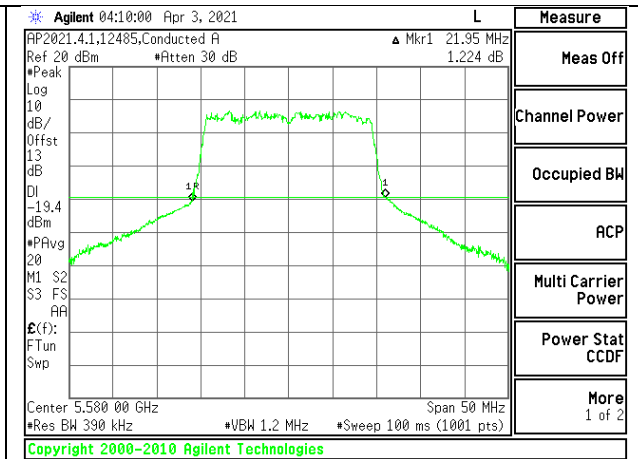


LOW CHANNEL Antenna 3

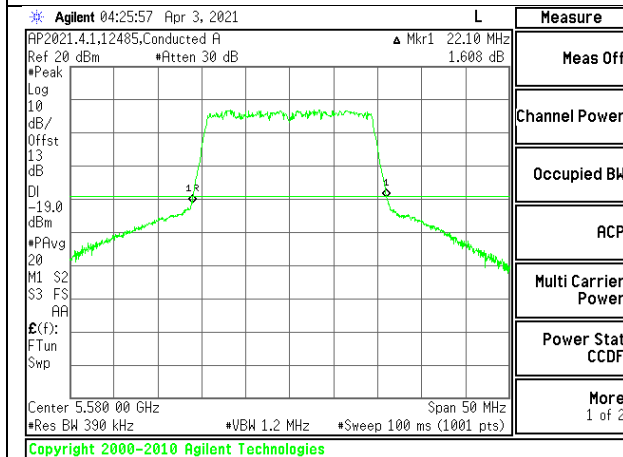
MID



MID CHANNEL Antenna 1

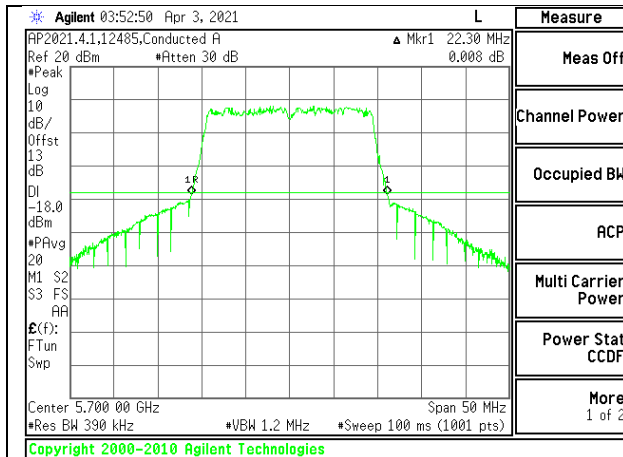


MID CHANNEL Antenna 2

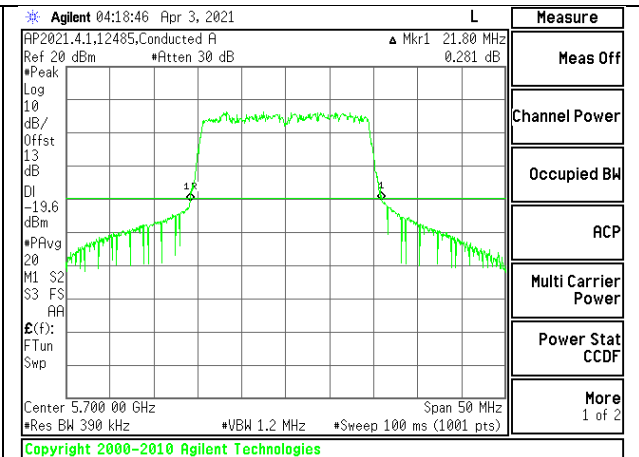


MID CHANNEL Antenna 3

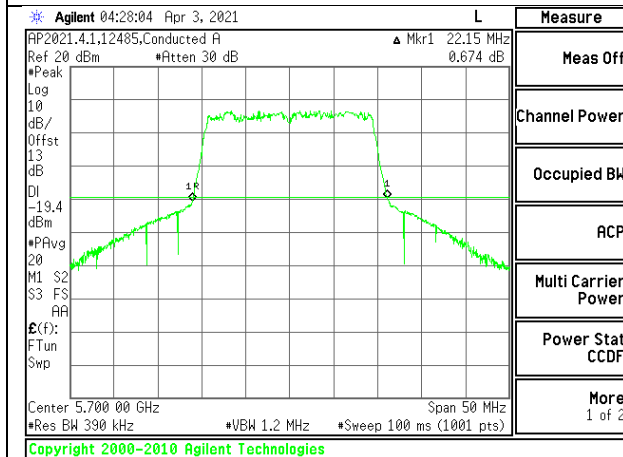
HIGH



HIGH CHANNEL Antenna 1

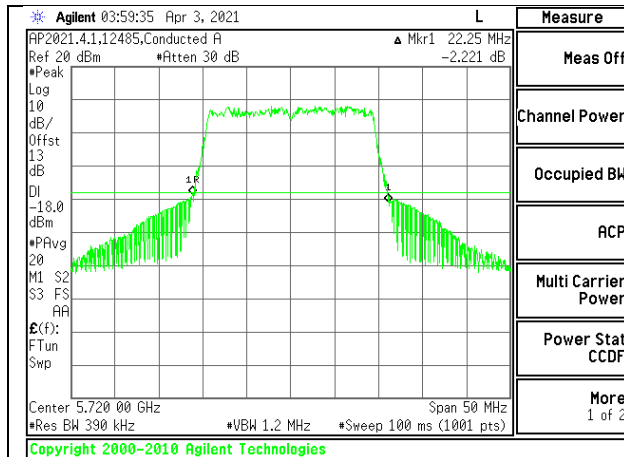


HIGH CHANNEL Antenna 2

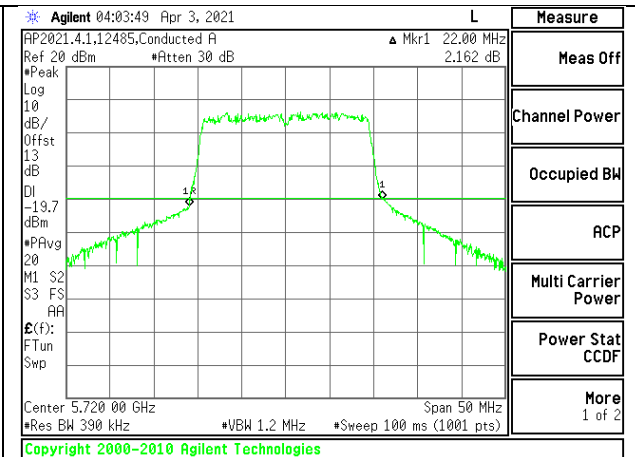


HIGH CHANNEL Antenna 3

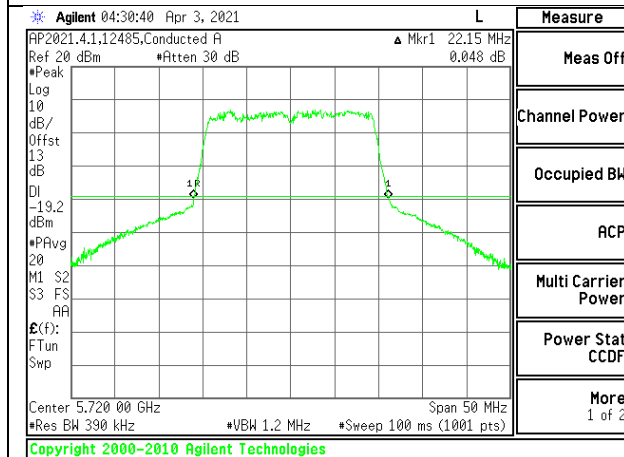
CHANNEL 144



CHANNEL 144 Antenna 1



CHANNEL 144 Antenna 2

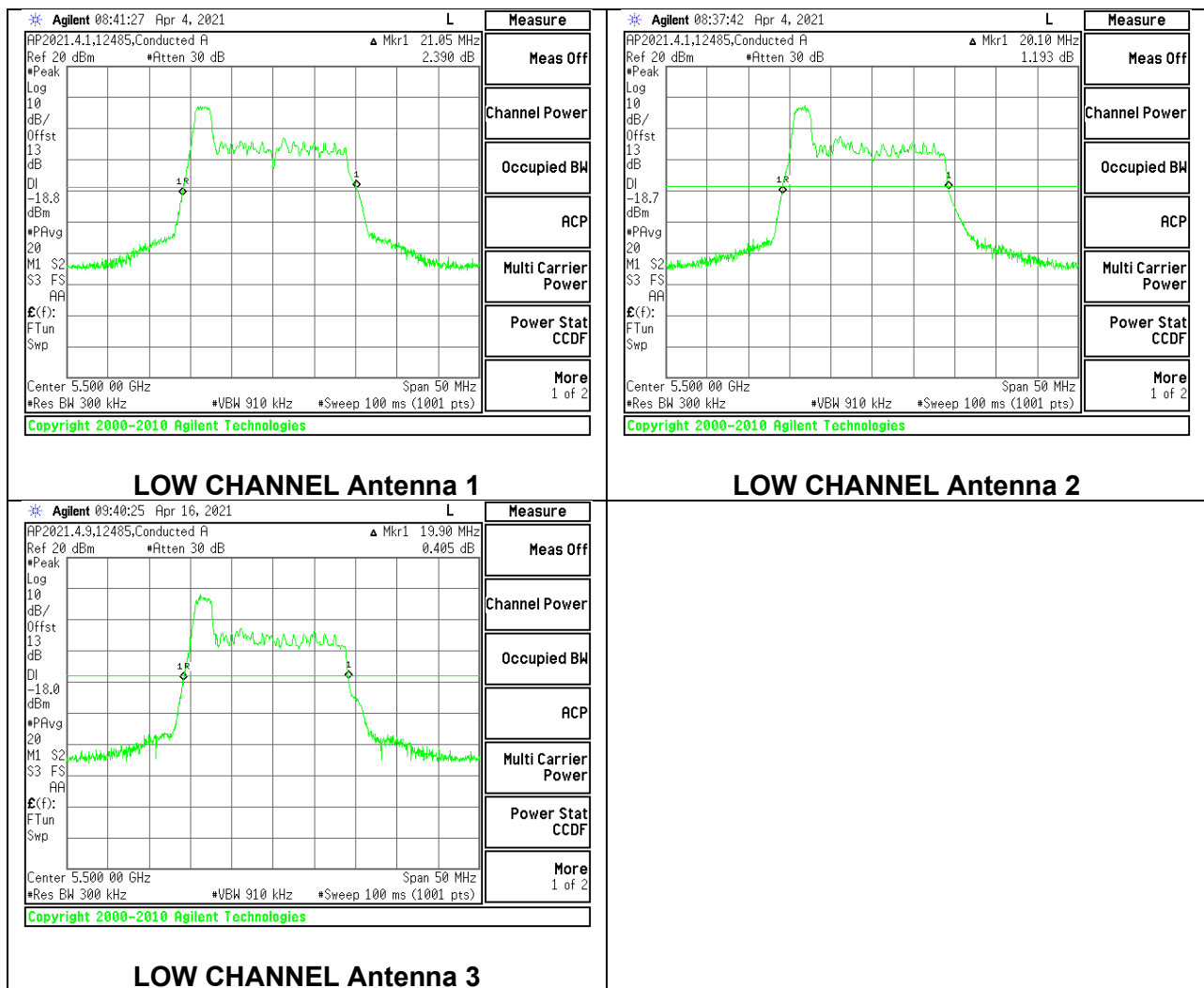


CHANNEL 144 Antenna 3

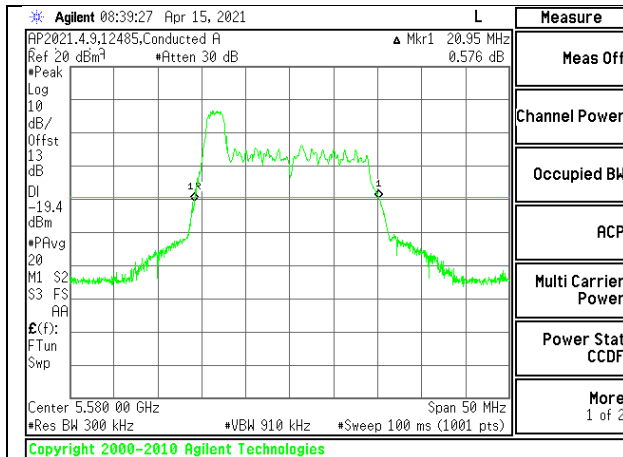
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth		
		Antenna 1 (MHz)	Antenna 2 (MHz)	Antenna 3 (MHz)
Low	5500	21.05	20.10	19.90
Mid	5580	20.95	20.00	19.95
High	5700	21.05	20.05	20.00
144	5720	19.95	20.00	20.00

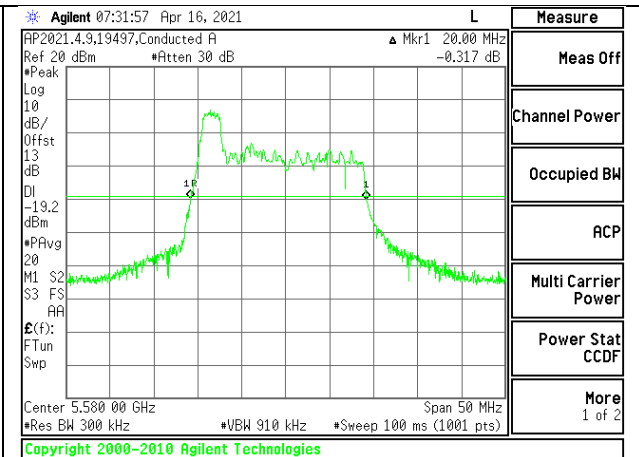
LOW



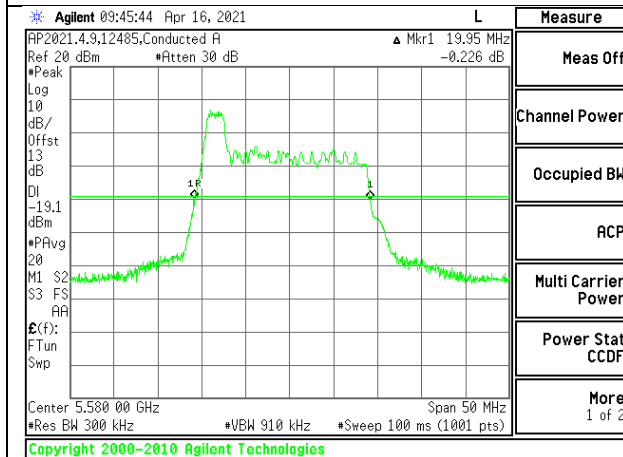
MID



MID CHANNEL Antenna 1

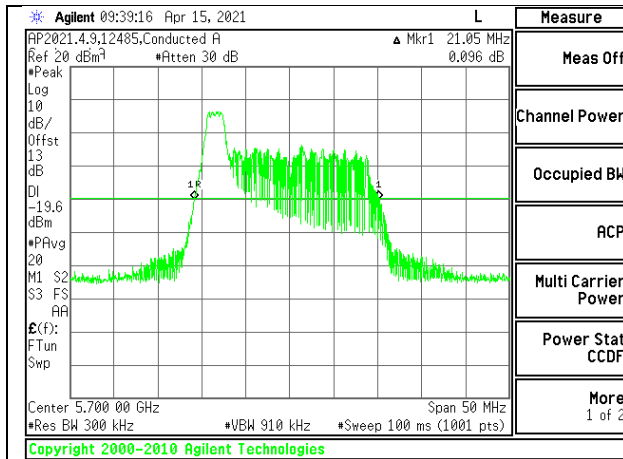


MID CHANNEL Antenna 2

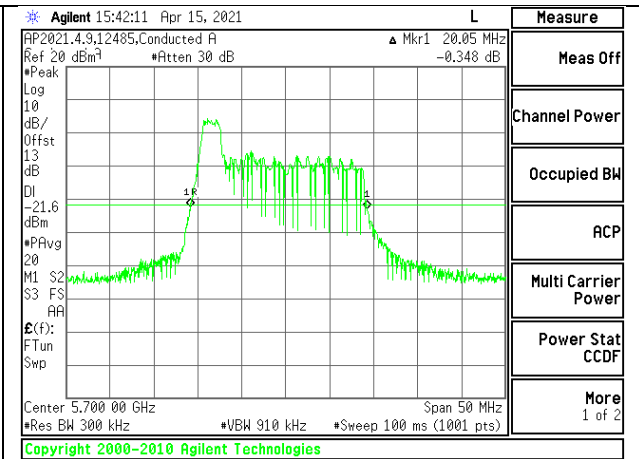


MID CHANNEL Antenna 3

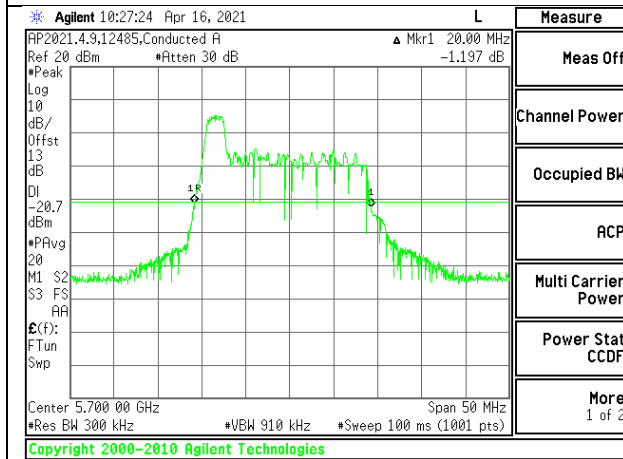
HIGH



HIGH CHANNEL Antenna 1

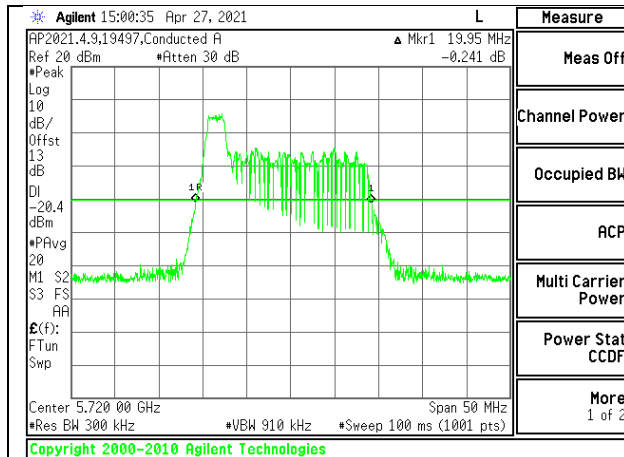


HIGH CHANNEL Antenna 2

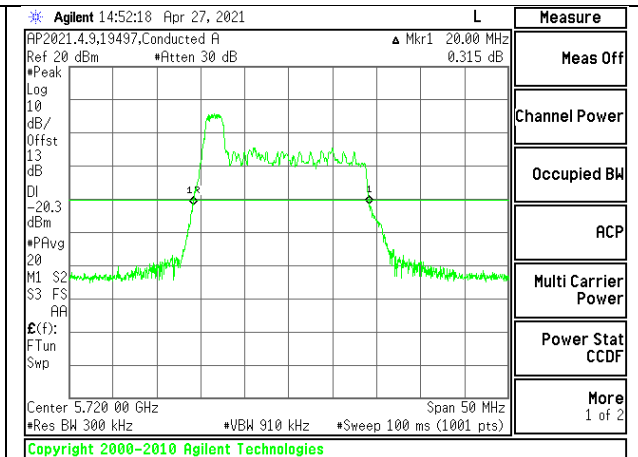


HIGH CHANNEL Antenna 3

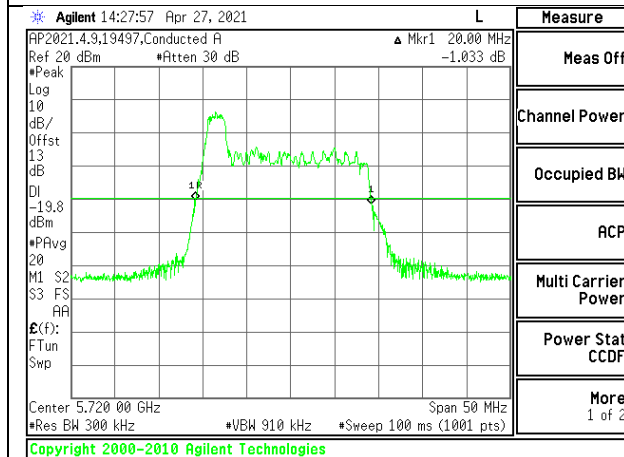
CHANNEL 144



CHANNEL 144 Antenna 1



CHANNEL 144 Antenna 2

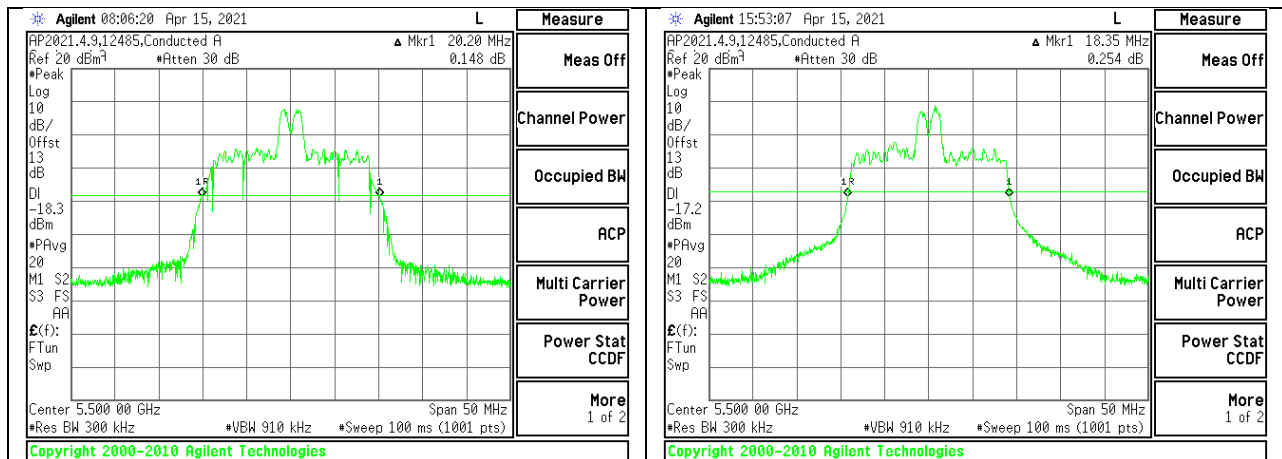


CHANNEL 144 Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 4

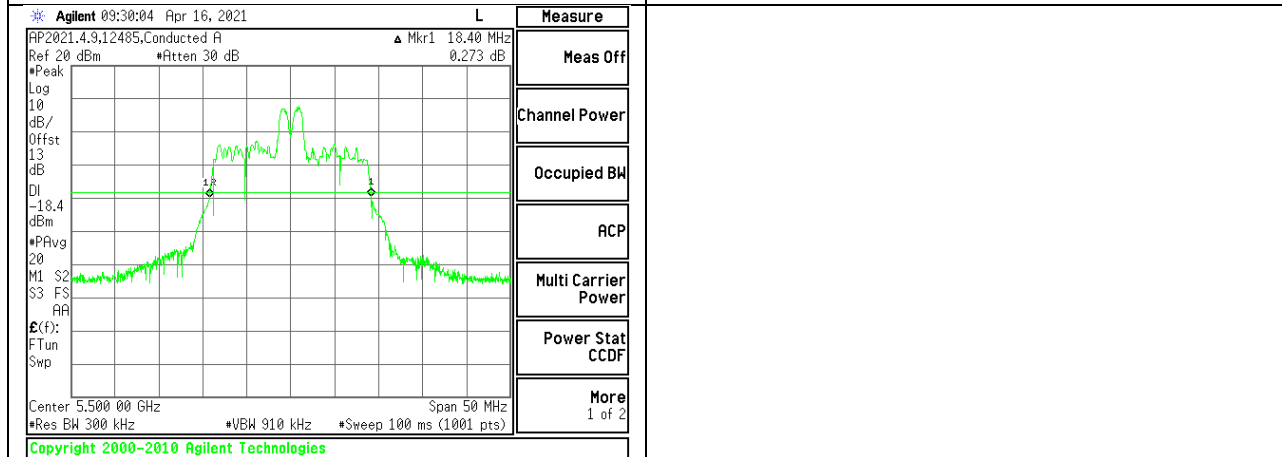
Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5500	20.20	18.35	18.40
Mid	5580	20.35	18.30	18.45
High	5700	20.25	18.35	18.45
144	5720	18.45	18.45	18.50

LOW



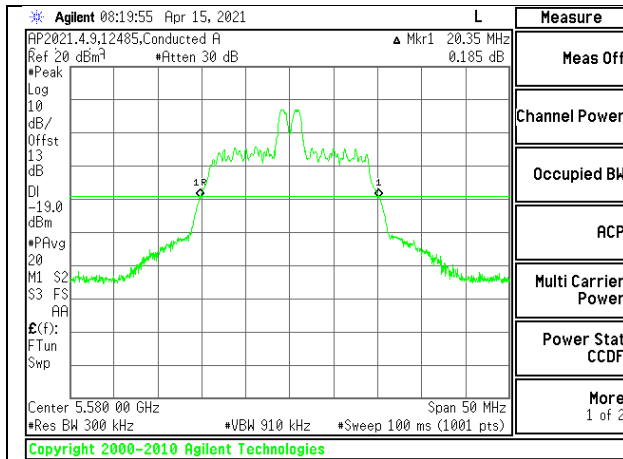
LOW CHANNEL Antenna 1

LOW CHANNEL Antenna 2

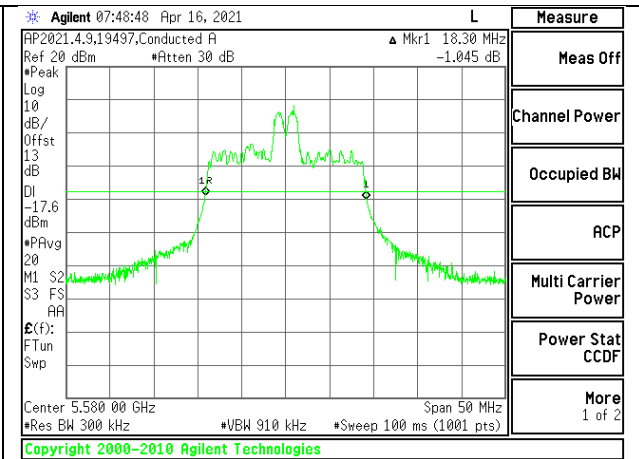


LOW CHANNEL Antenna 3

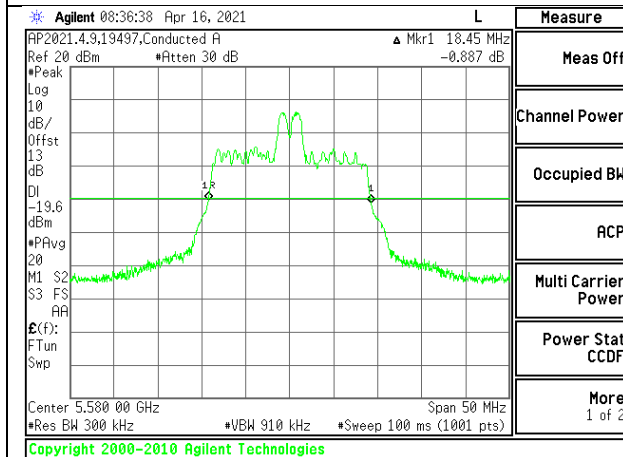
MID



MID CHANNEL Antenna 1

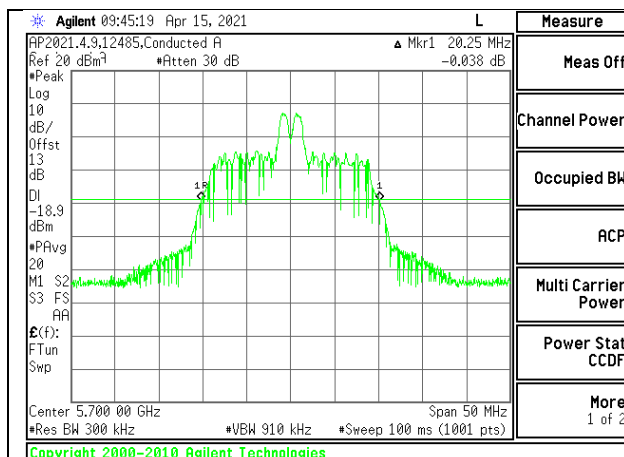


MID CHANNEL Antenna 2

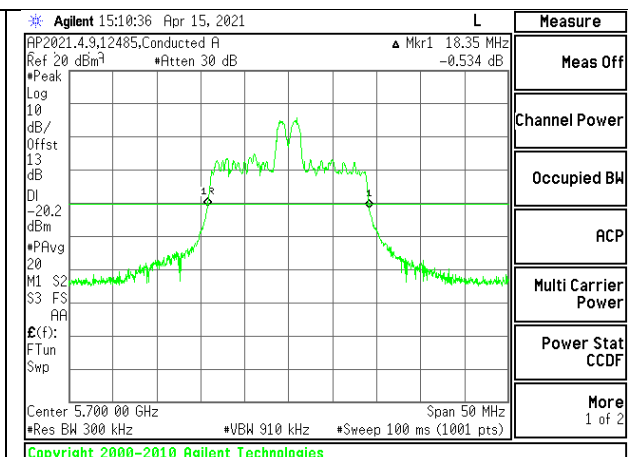


MID CHANNEL Antenna 3

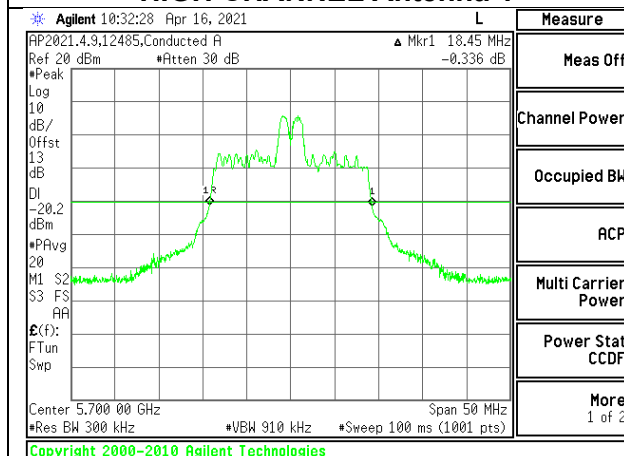
HIGH



HIGH CHANNEL Antenna 1

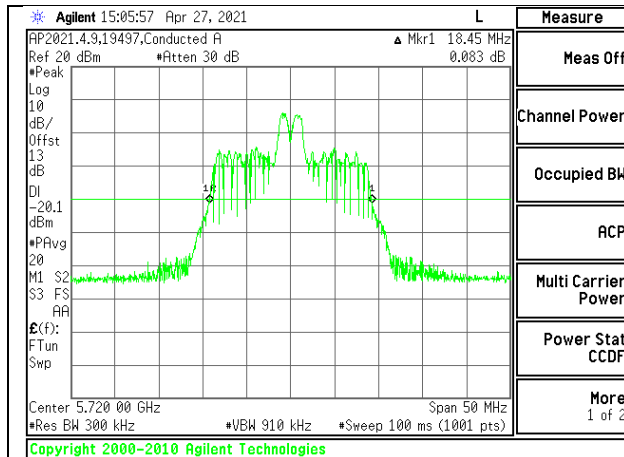


HIGH CHANNEL Antenna 2

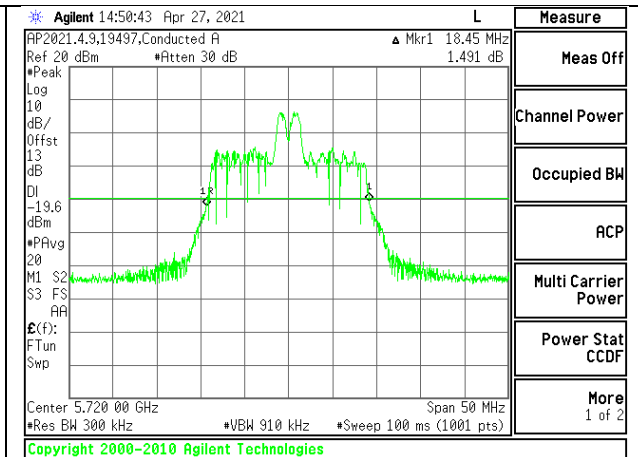


HIGH CHANNEL Antenna 3

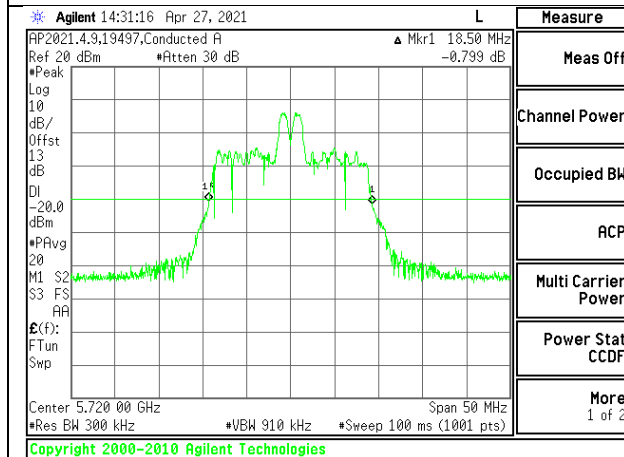
CHANNEL 144



CHANNEL 144 Antenna 1



CHANNEL 144 Antenna 2

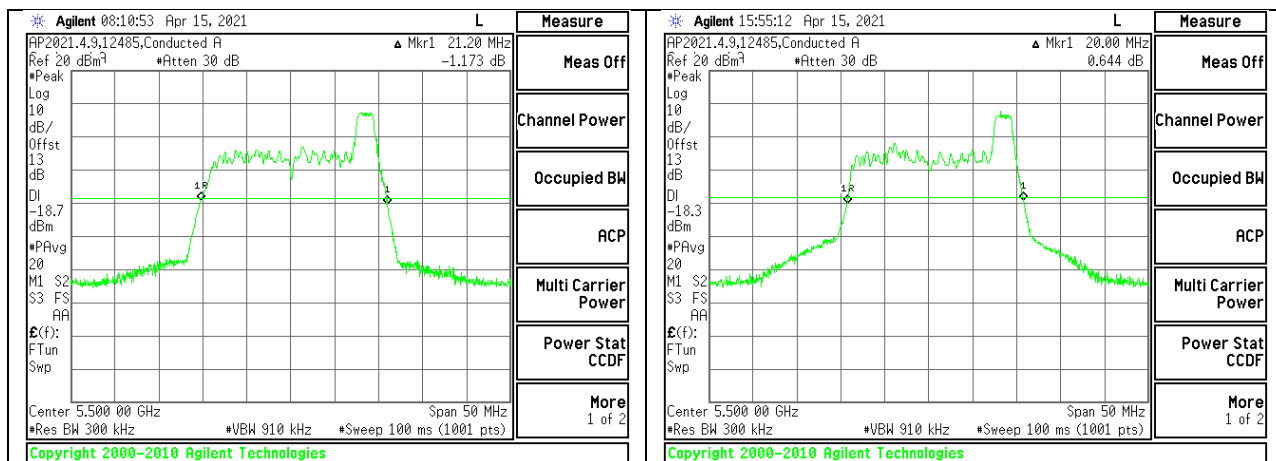


CHANNEL 144 Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 8

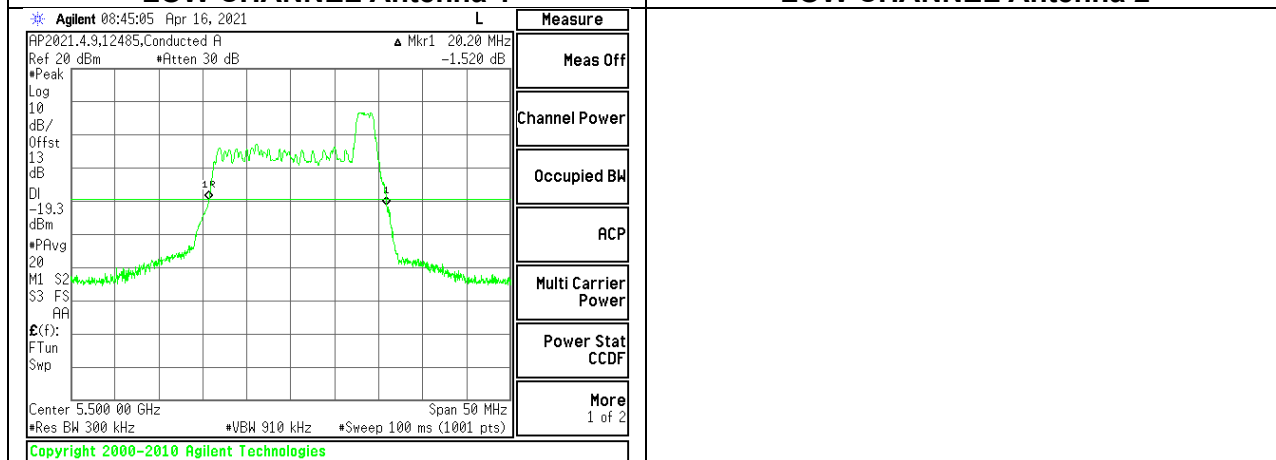
Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5500	21.20	20.00	20.20
Mid	5580	21.20	20.15	20.20
High	5700	21.05	20.05	20.00
144	5720	20.05	20.15	20.00

LOW



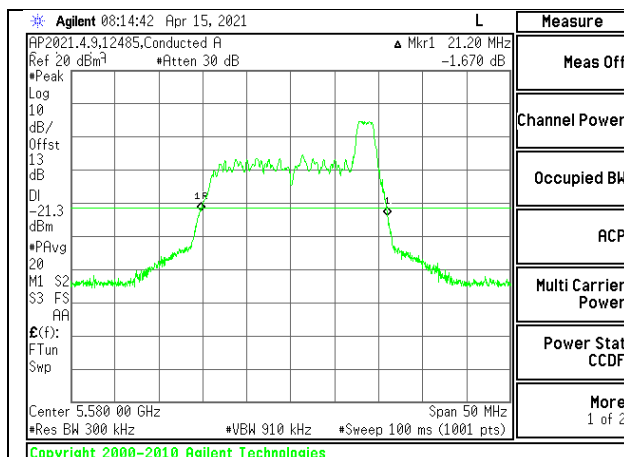
LOW CHANNEL Antenna 1

LOW CHANNEL Antenna 2

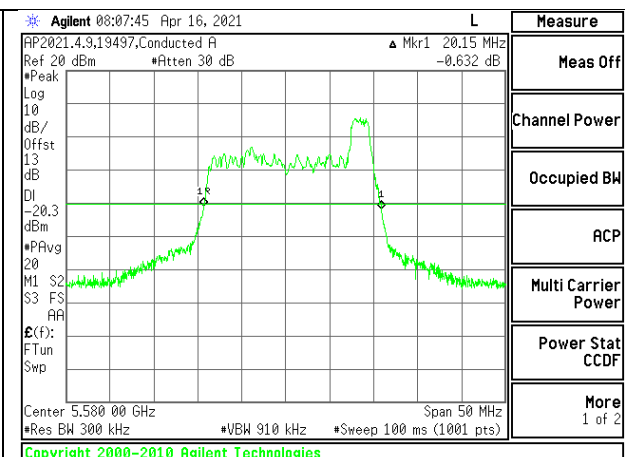


LOW CHANNEL Antenna 3

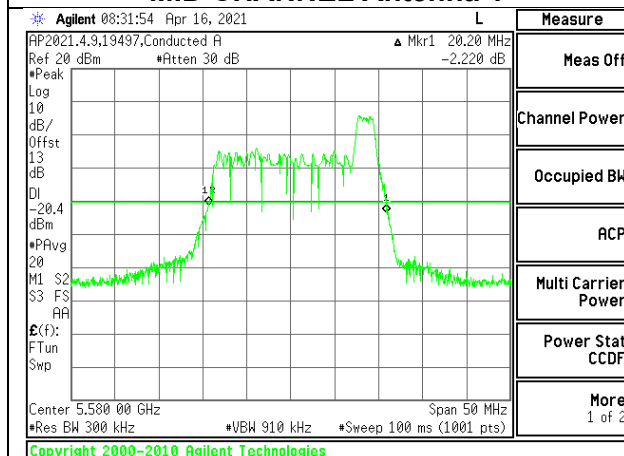
MID



MID CHANNEL Antenna 1

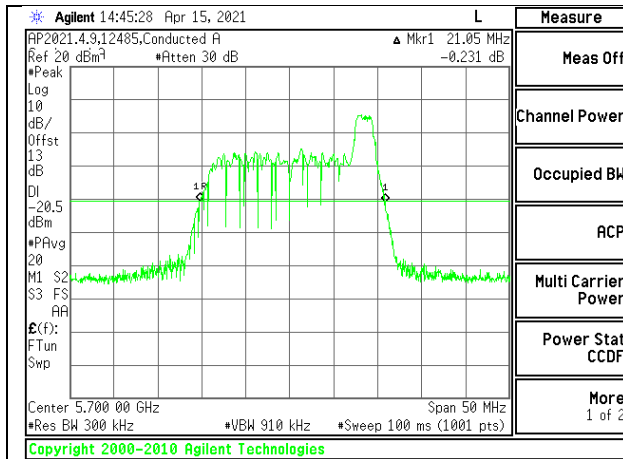


MID CHANNEL Antenna 2

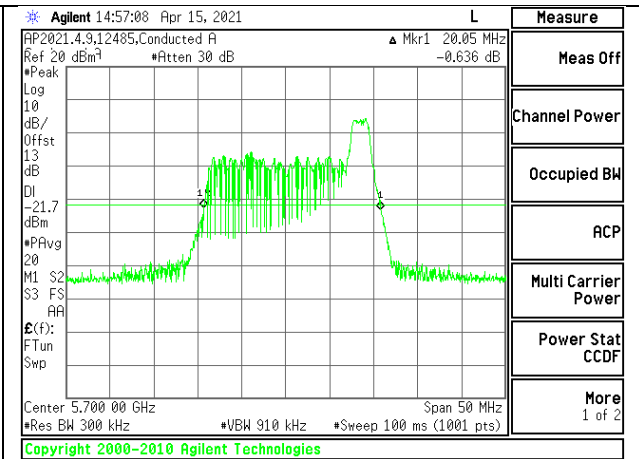


MID CHANNEL Antenna 3

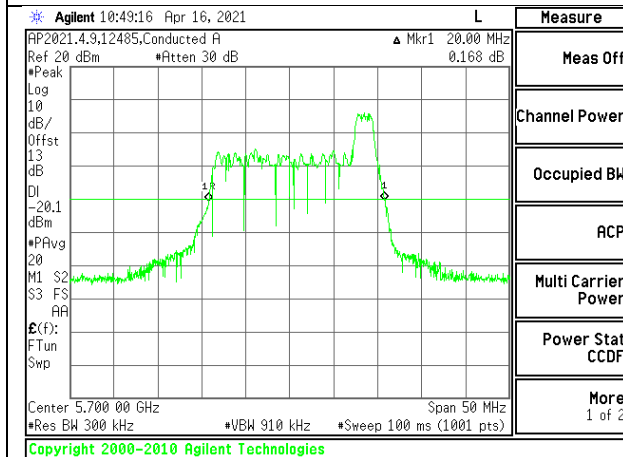
HIGH



HIGH CHANNEL Antenna 1

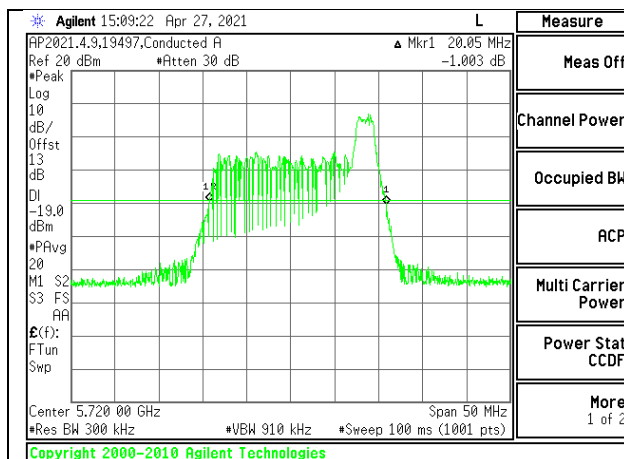


HIGH CHANNEL Antenna 2

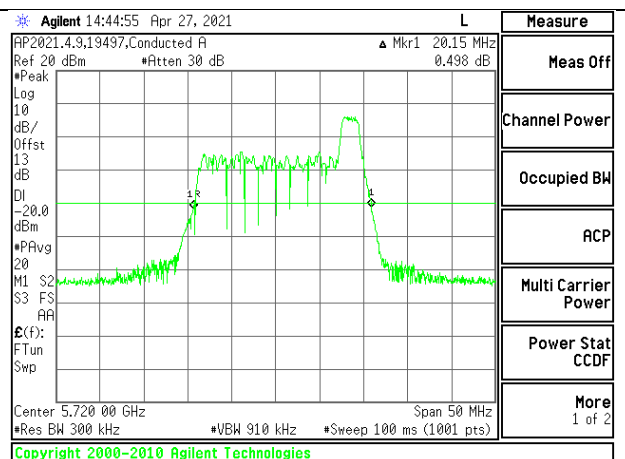


HIGH CHANNEL Antenna 3

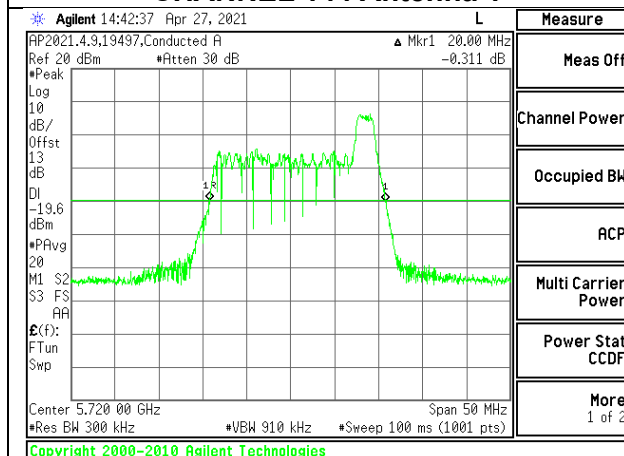
CHANNEL 144



CHANNEL 144 Antenna 1



CHANNEL 144 Antenna 2

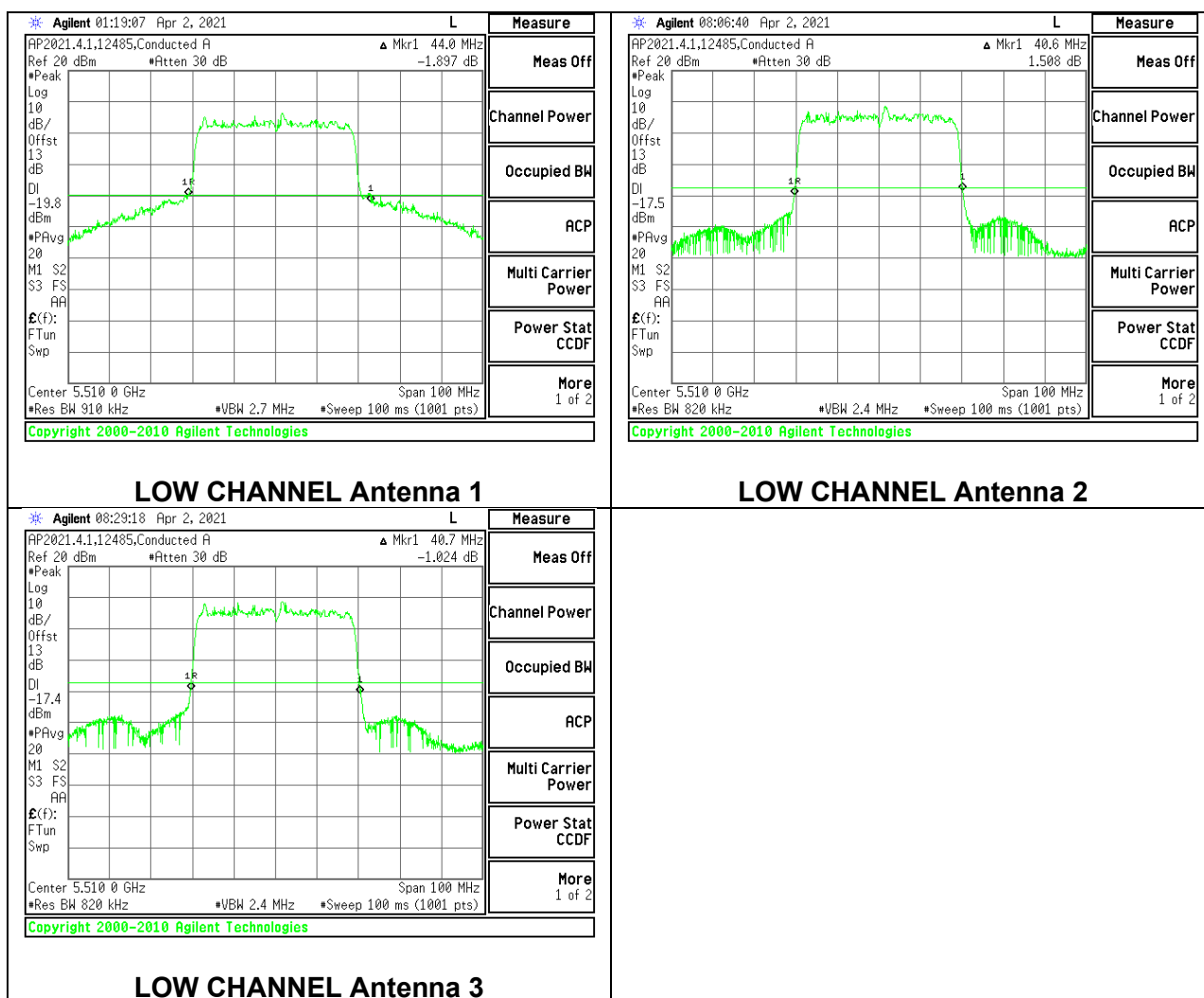


CHANNEL 144 Antenna 3

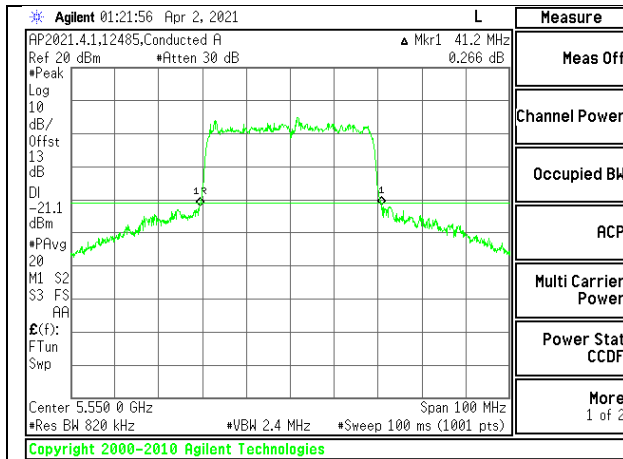
9.2.8. 802.11ax HE40 MODE 3TX IN THE 5.6GHz BAND
3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 484-Tones, RU Index 65

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5510	44.00	40.60	40.70
Mid	5550	41.20	40.70	40.80
High	5670	41.10	40.70	40.80
142	5710	41.00	40.60	40.70

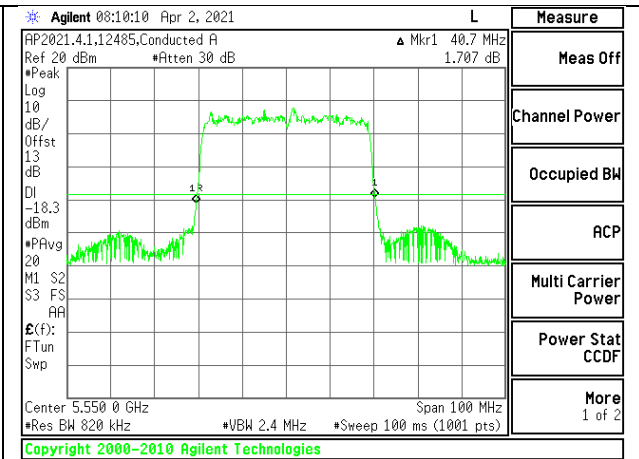
LOW



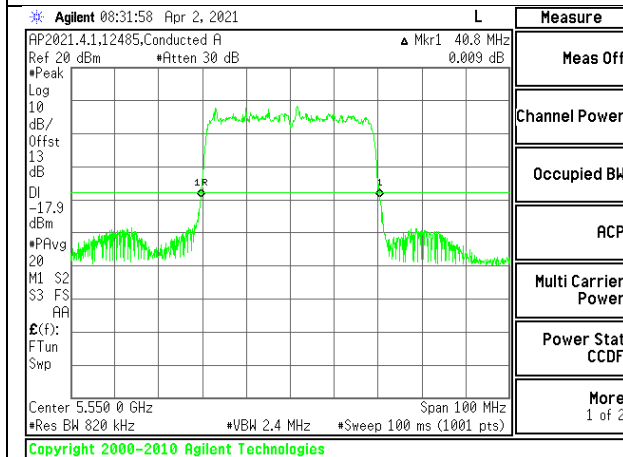
MID



MID CHANNEL Antenna 1

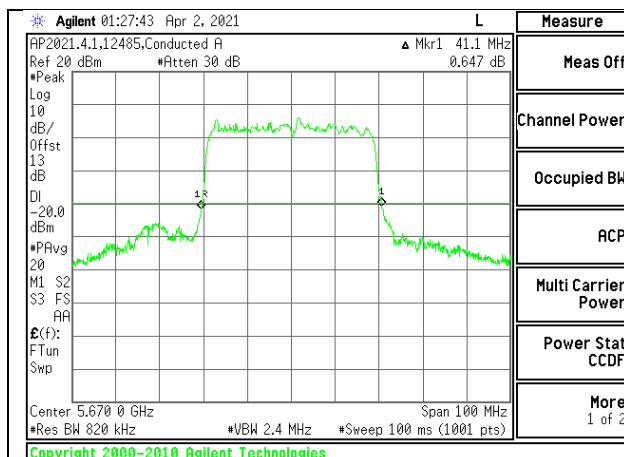


MID CHANNEL Antenna 2

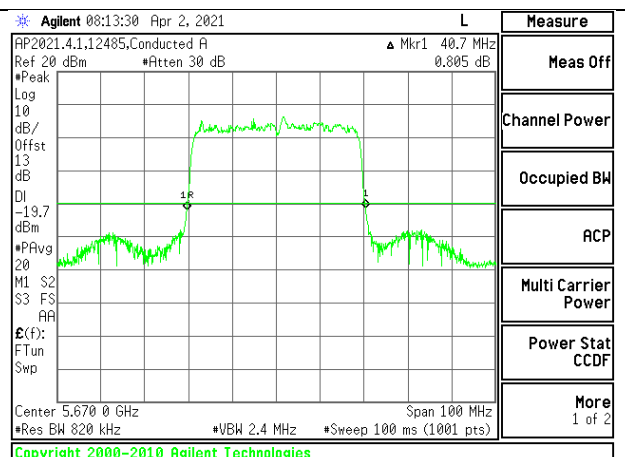


MID CHANNEL Antenna 3

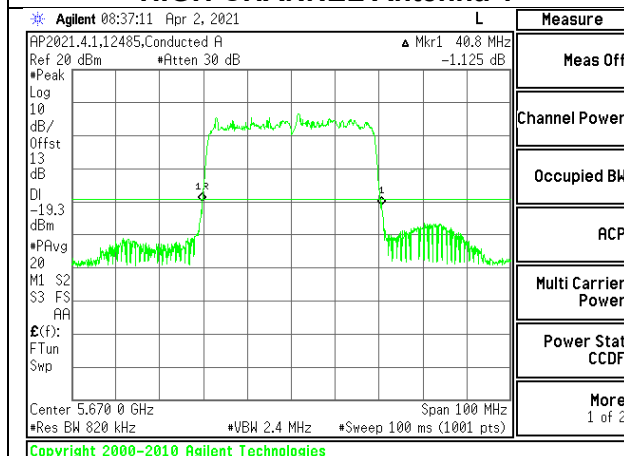
HIGH



HIGH CHANNEL Antenna 1

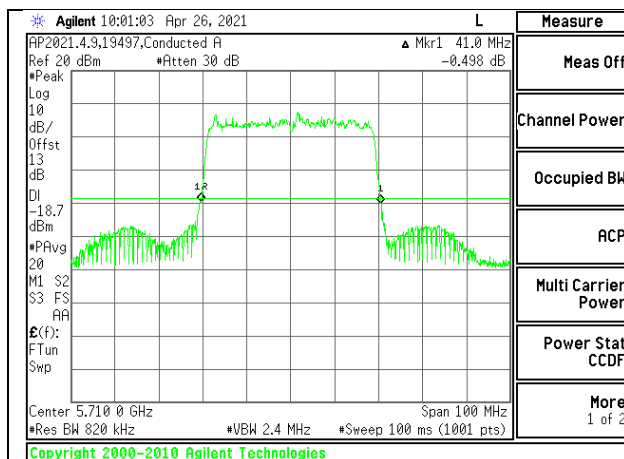


HIGH CHANNEL Antenna 2

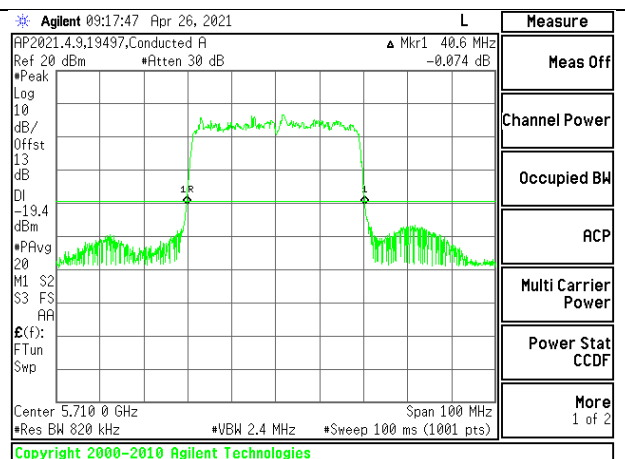


HIGH CHANNEL Antenna 3

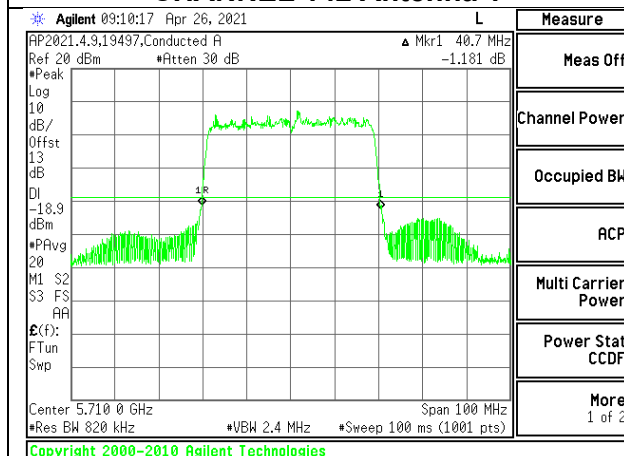
CHANNEL 142



CHANNEL 142 Antenna 1



CHANNEL 142 Antenna 2

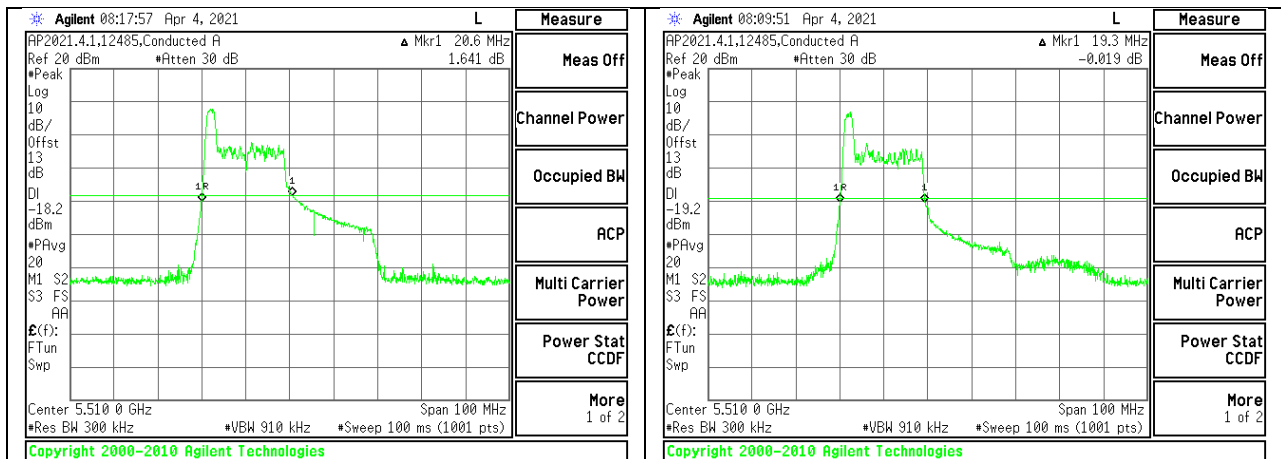


CHANNEL 142 Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 0

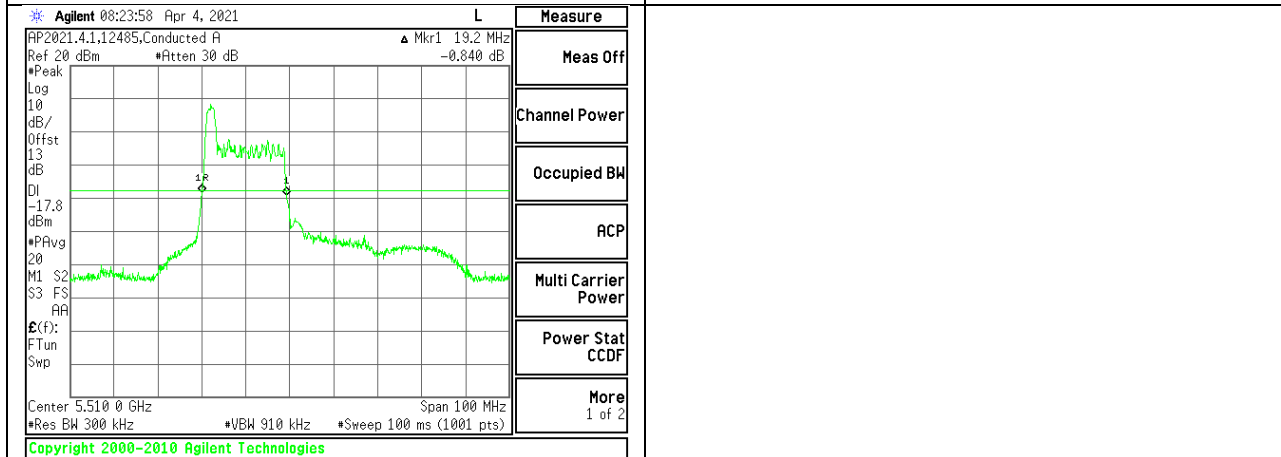
Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5510	20.60	19.30	19.20
Mid	5550	21.20	19.30	19.20
High	5670	20.70	19.50	19.30
142	5710	20.50	19.30	19.40

LOW



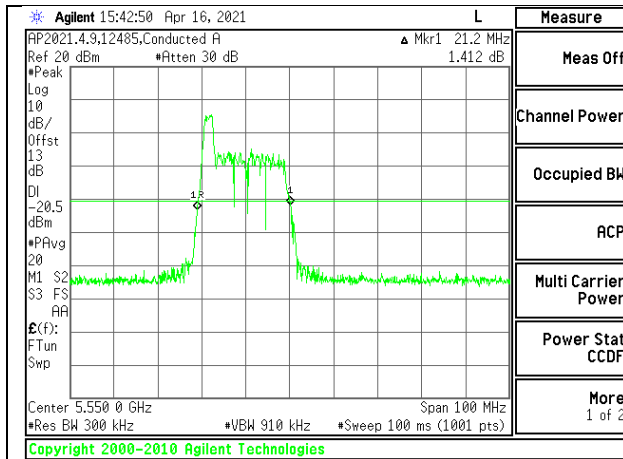
LOW CHANNEL Antenna 1

LOW CHANNEL Antenna 2

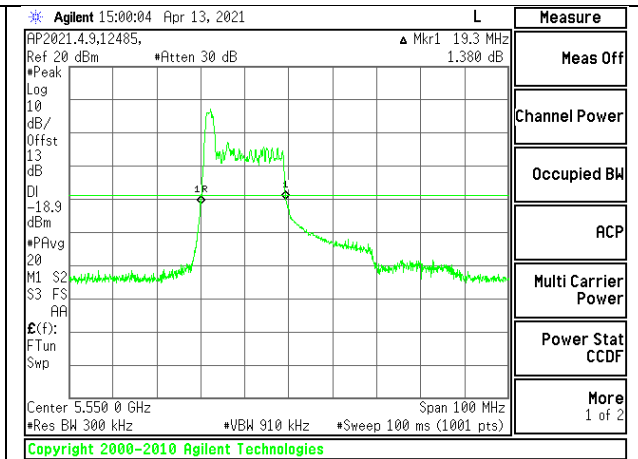


LOW CHANNEL Antenna 3

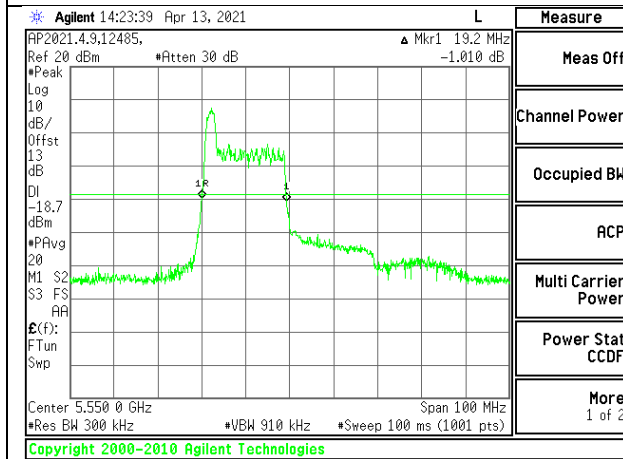
MID



MID CHANNEL Antenna 1

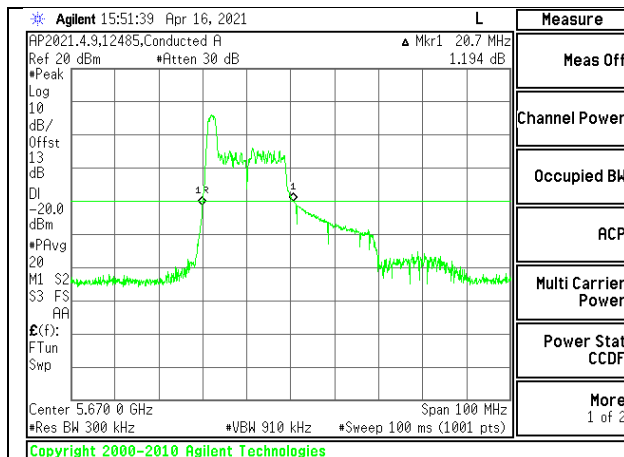


MID CHANNEL Antenna 2

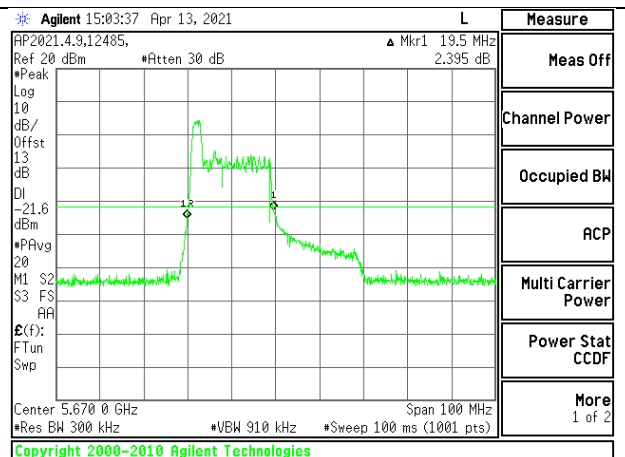


MID CHANNEL Antenna 3

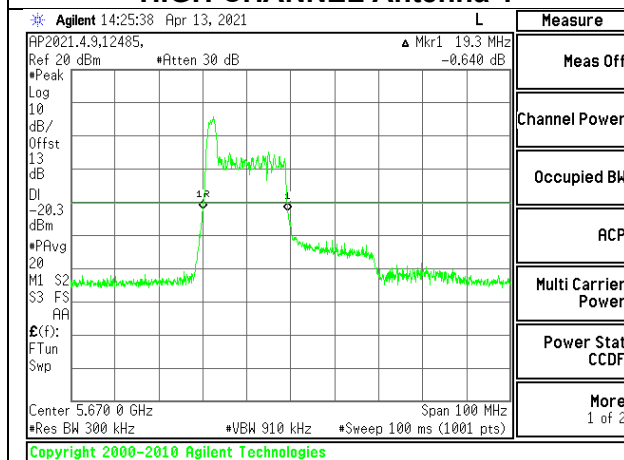
HIGH



HIGH CHANNEL Antenna 1

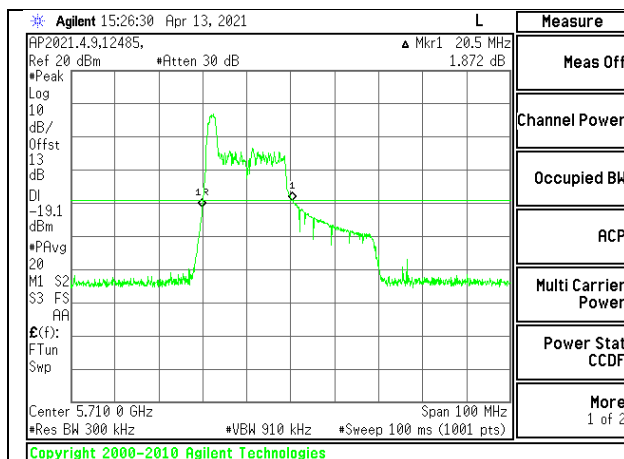


HIGH CHANNEL Antenna 2

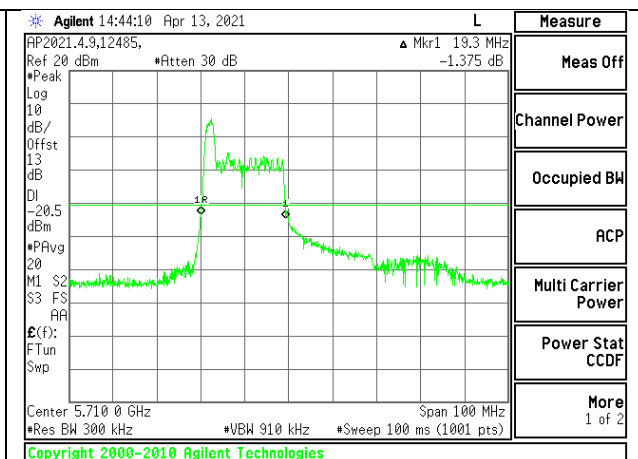


HIGH CHANNEL Antenna 3

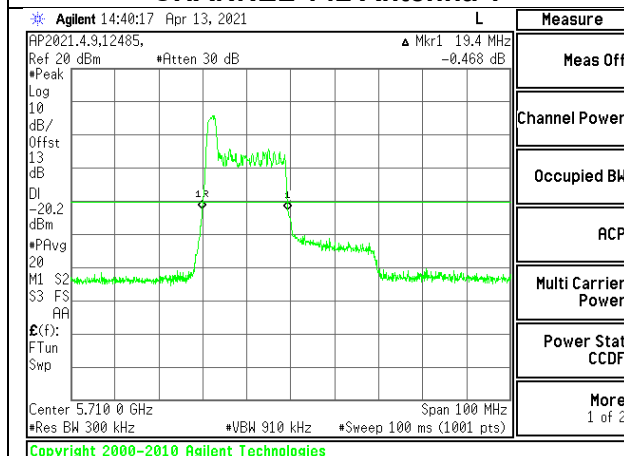
CHANNEL 142



CHANNEL 142 Antenna 1



CHANNEL 142 Antenna 2

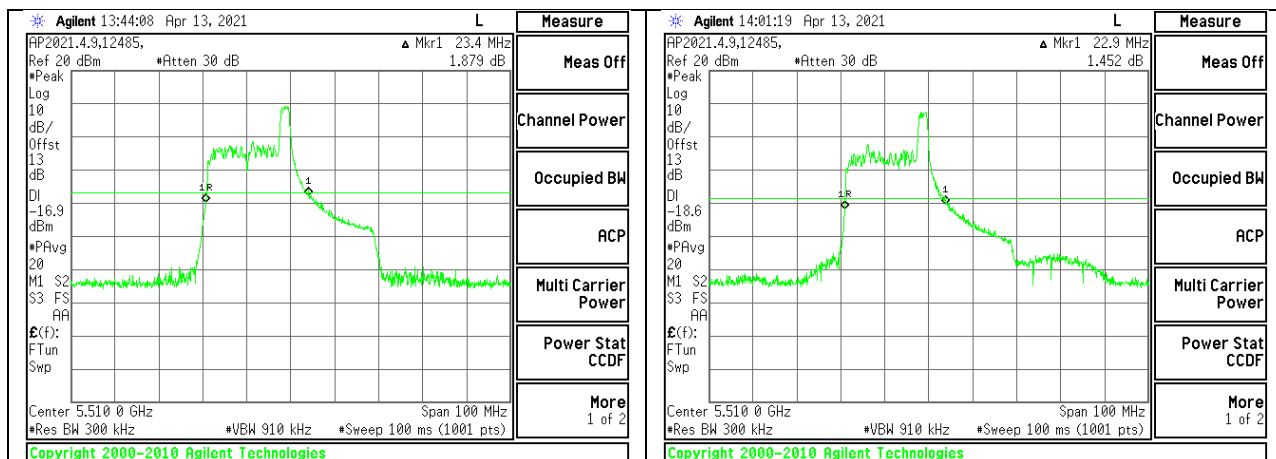


CHANNEL 142 Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 8

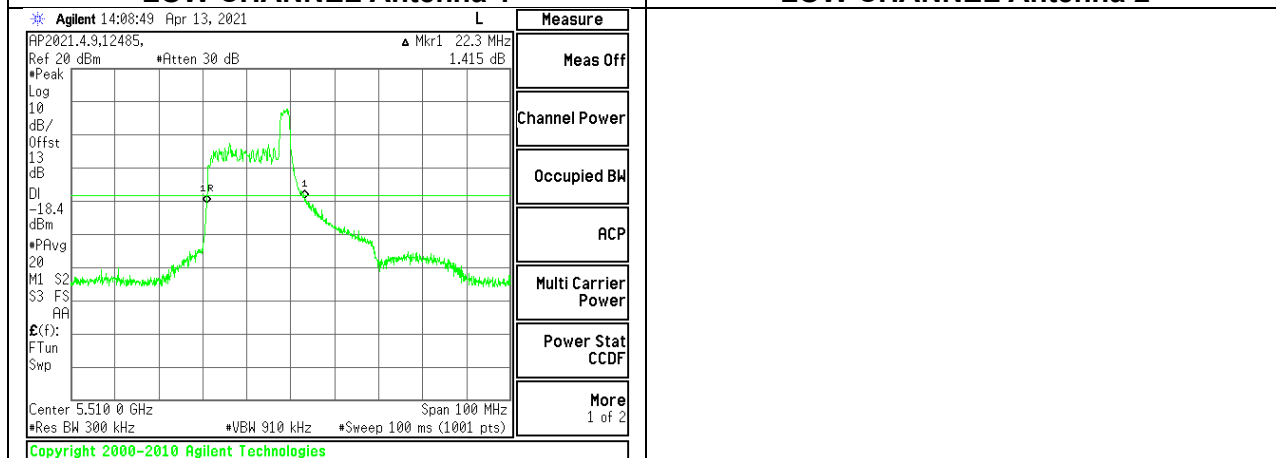
Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5510	23.40	22.90	22.30
Mid	5550	23.90	22.50	22.90
High	5670	23.30	22.50	23.10
142	5710	23.00	23.30	22.30

LOW



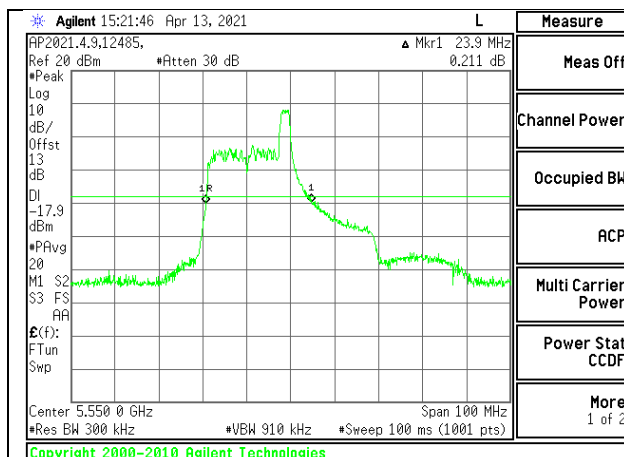
LOW CHANNEL Antenna 1

LOW CHANNEL Antenna 2

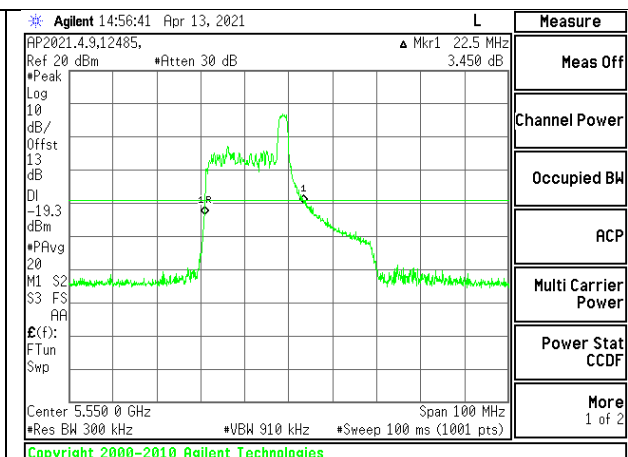


LOW CHANNEL Antenna 3

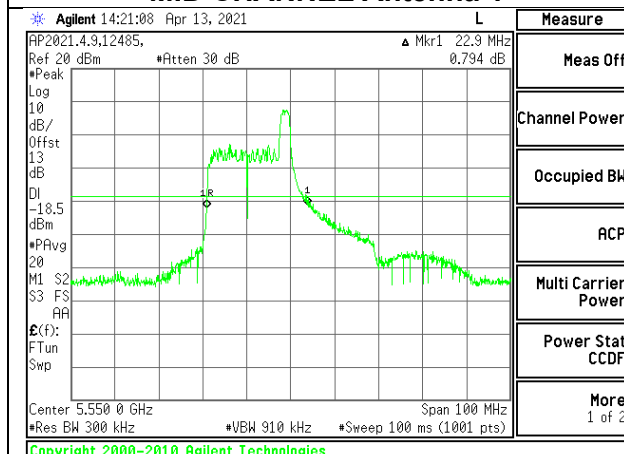
MID



MID CHANNEL Antenna 1

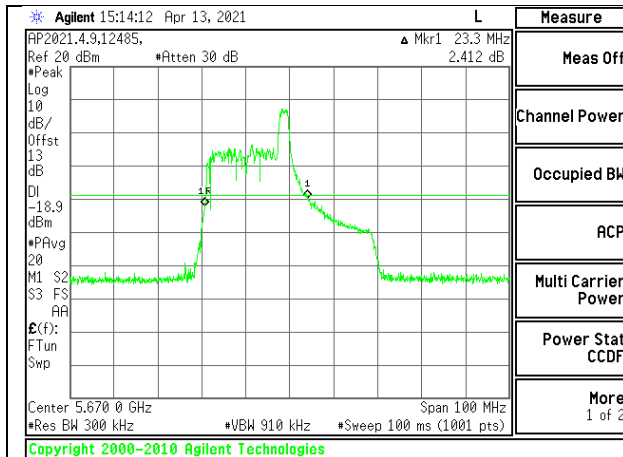


MID CHANNEL Antenna 2

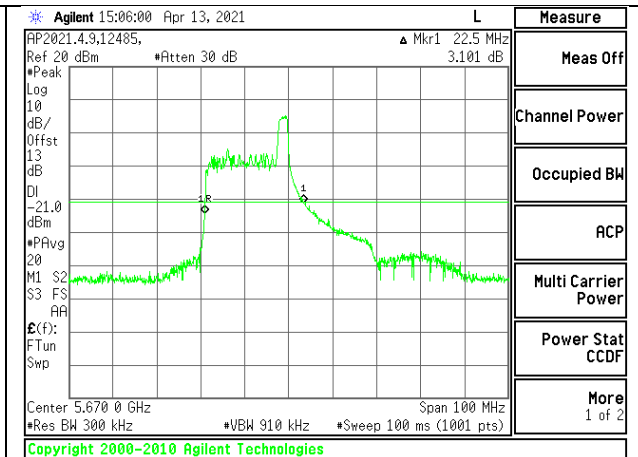


MID CHANNEL Antenna 3

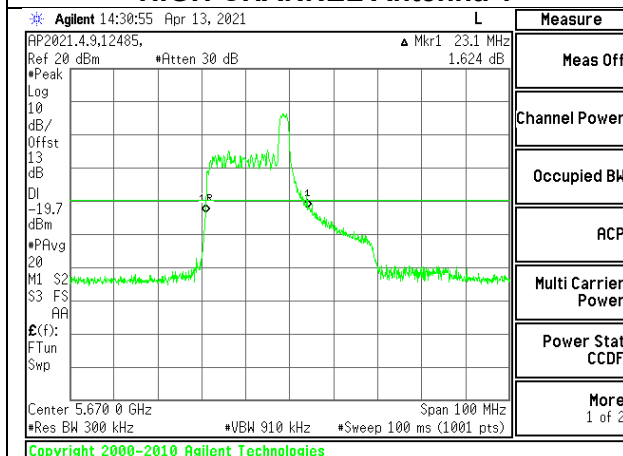
HIGH



HIGH CHANNEL Antenna 1

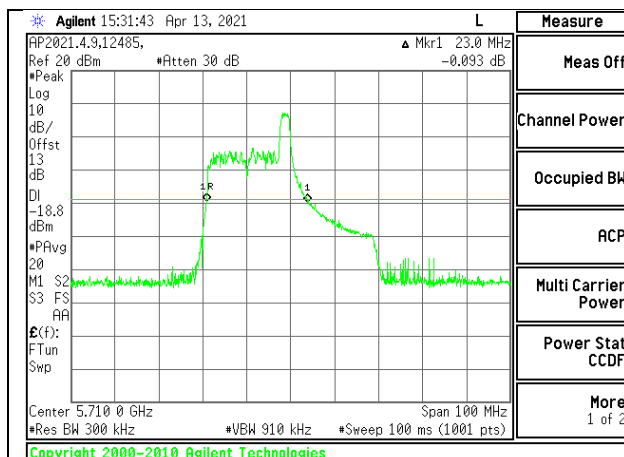


HIGH CHANNEL Antenna 2

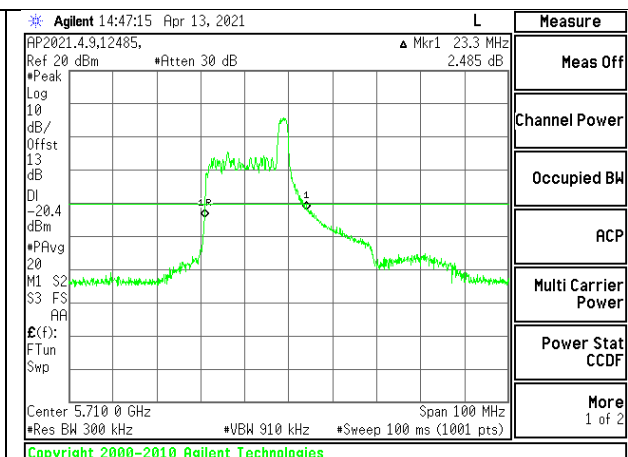


HIGH CHANNEL Antenna 3

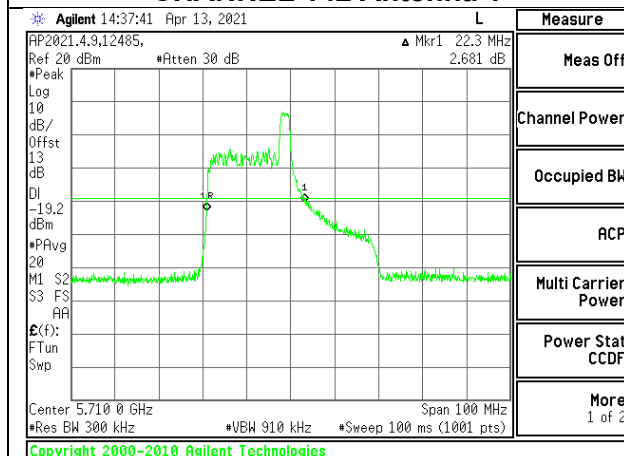
CHANNEL 142



CHANNEL 142 Antenna 1



CHANNEL 142 Antenna 2

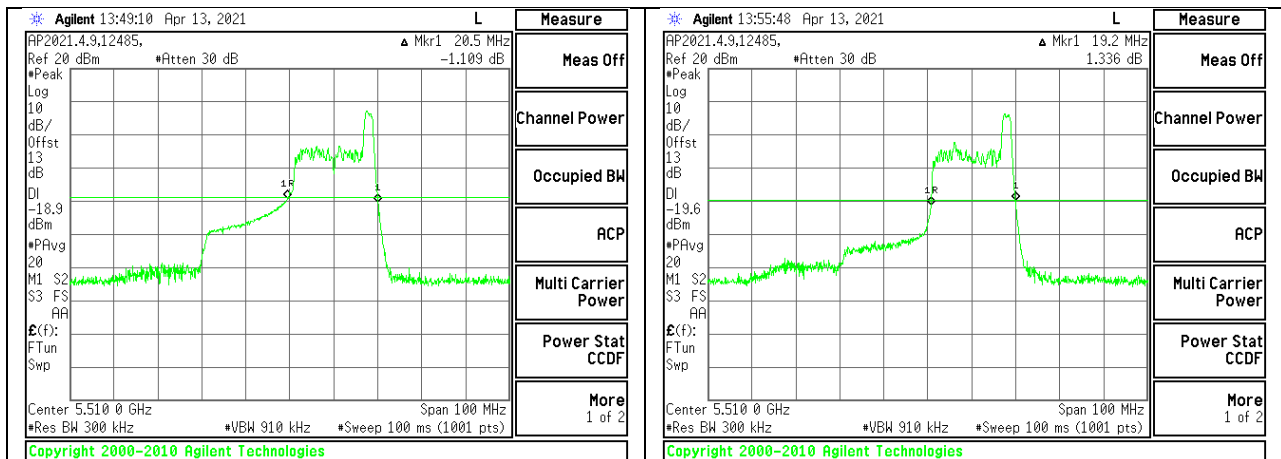


CHANNEL 142 Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 17

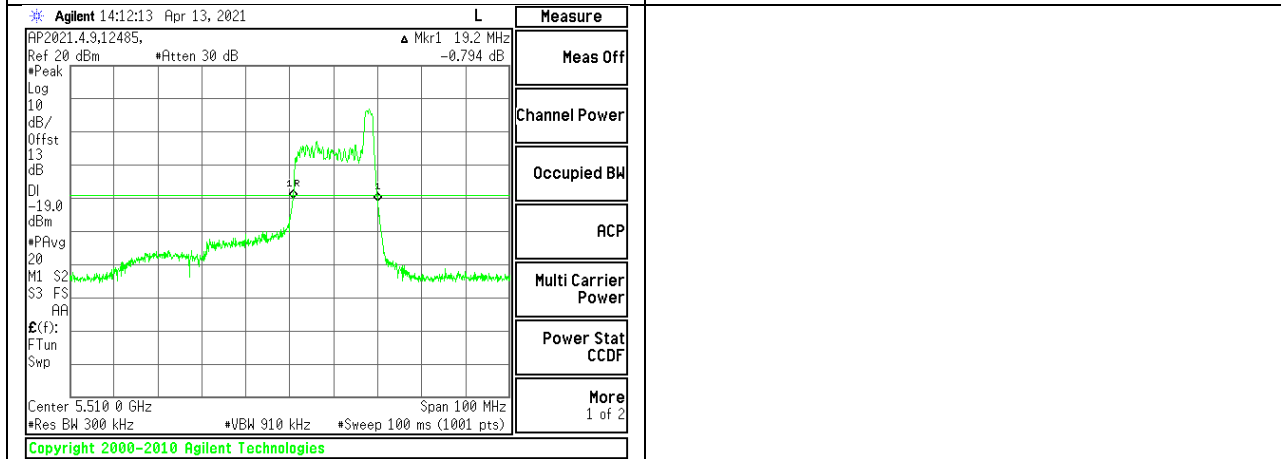
Channel	Frequency (MHz)	26 dB Bandwidth Antenna 1 (MHz)	26 dB Bandwidth Antenna 2 (MHz)	26 dB Bandwidth Antenna 3 (MHz)
Low	5510	20.50	19.20	19.20
Mid	5550	20.50	19.40	19.20
High	5670	20.40	19.20	19.20
142	5710	20.60	19.30	19.30

LOW



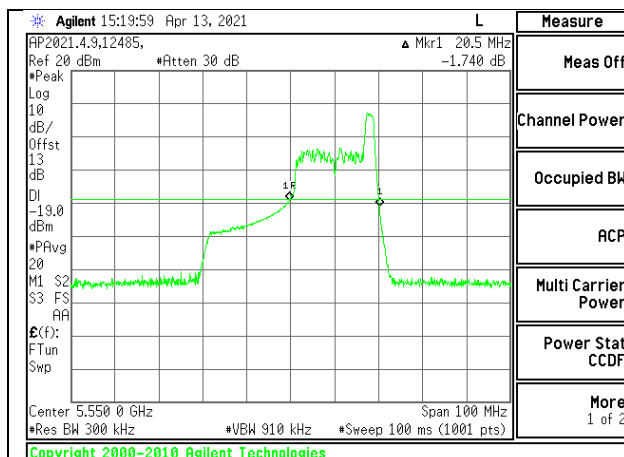
LOW CHANNEL Antenna 1

LOW CHANNEL Antenna 2

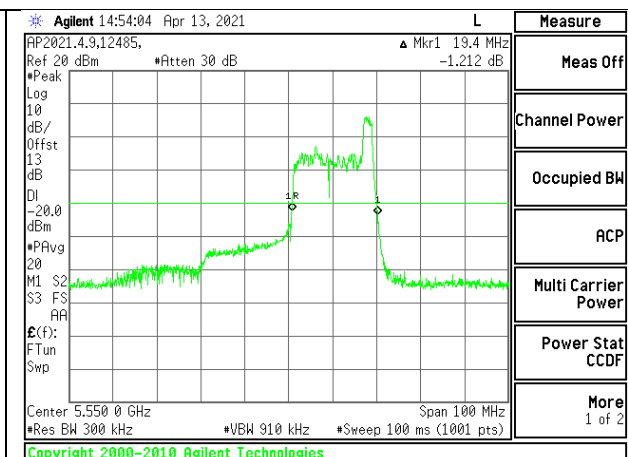


LOW CHANNEL Antenna 3

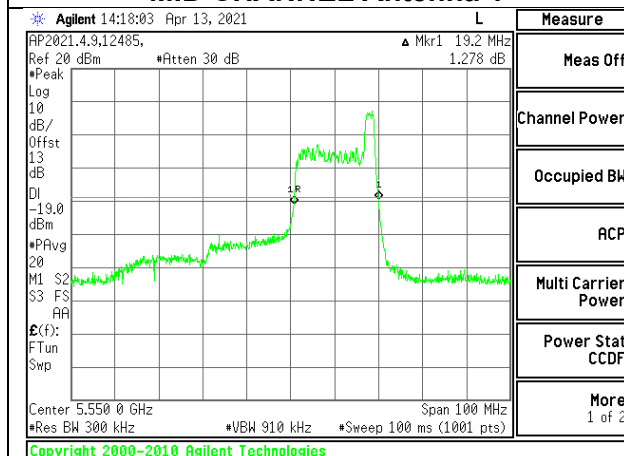
MID



MID CHANNEL Antenna 1

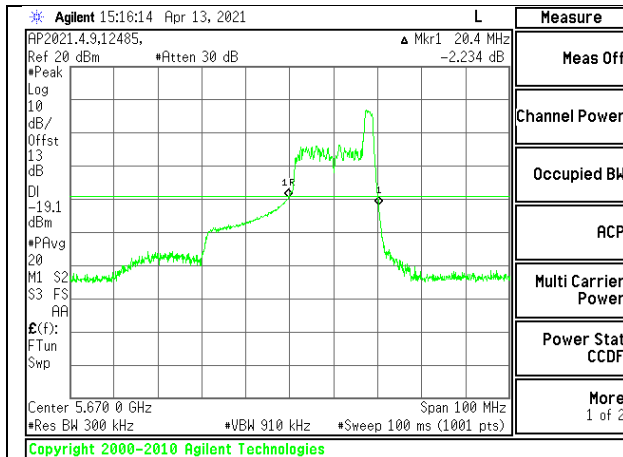


MID CHANNEL Antenna 2

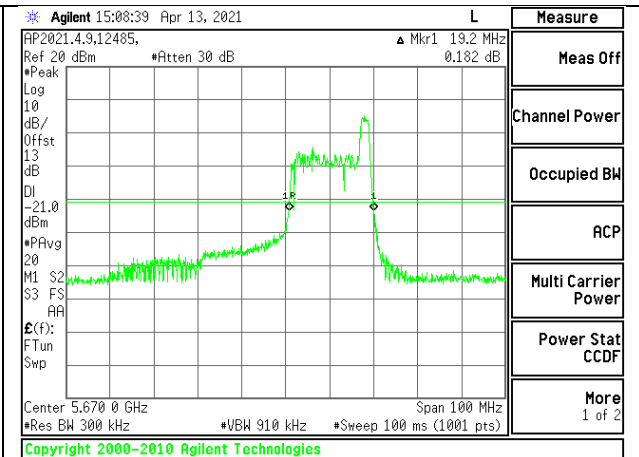


MID CHANNEL Antenna 3

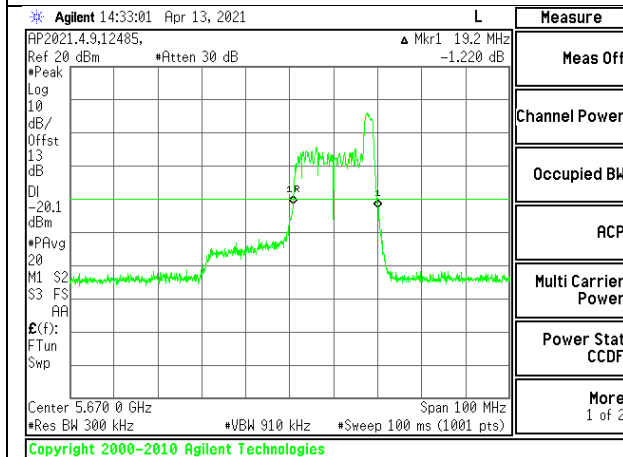
HIGH



HIGH CHANNEL Antenna 1

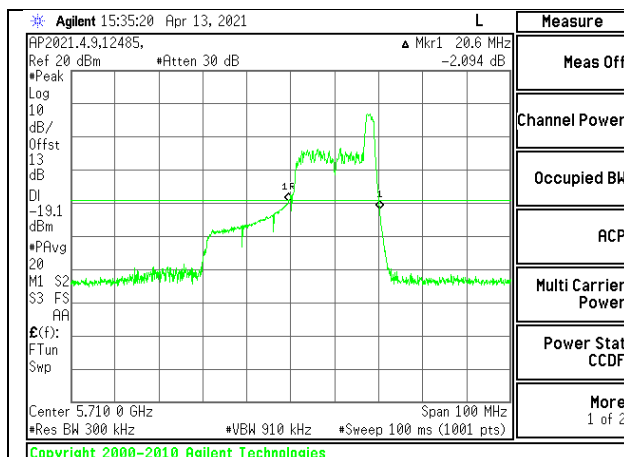


HIGH CHANNEL Antenna 2

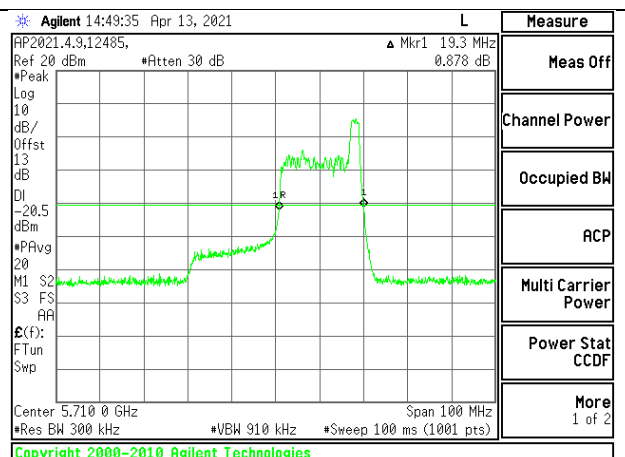


HIGH CHANNEL Antenna 3

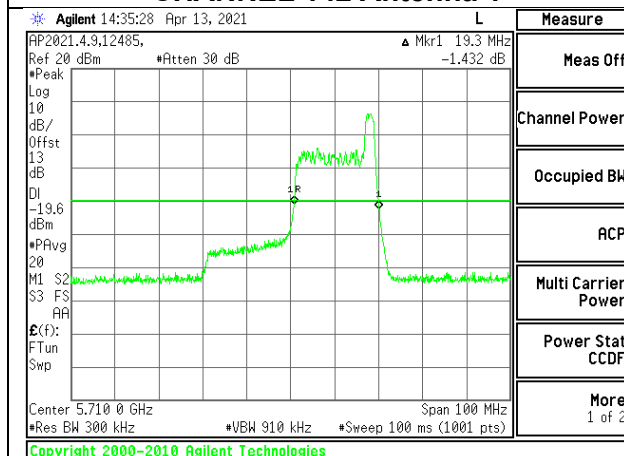
CHANNEL 142



CHANNEL 142 Antenna 1



CHANNEL 142 Antenna 2



CHANNEL 142 Antenna 3