TEST REPORT

Report Number : 14523740-E8V3

Applicant	:	APPLE INC. 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A
Model	:	A2848
Brand	:	APPLE
FCC ID	:	BCG-E8435A
EUT Description	:	SMARTPHONE
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART E

Date Of Issue:
August 02, 2023

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538 U.S.A.
TEL: (510) 319-4000
FAX: (510) 661-0888

ACCREDITED
CERT #0751.05

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	7/7/2023	Initial Issue	Chin Pang
V2	7/24/2023	Addressed TCB Feedback on Section 6.4, 6.5, 8, and 9	Tony Li
V3	08/02/2023	Address section 9.4	Chin Pang

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TABLE OF CONTENTS

UL VERIFICATION SERVICES INC.
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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: SMRTPHONE

MODEL: A2848

BRAND: APPLE

SERIAL NUMBER: C07GQU0010S00003PJ (Conducted)
C07GTH0012C00003PJ (Conducted)
LVMPXQW46R (Radiated)

SAMPLE RECEIPT DATE: FEBRUARY 14, 2023

DATE TESTED: FEBRUARY 14, 2023 – JULY 25, 2023

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.

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Approved & Released For
UL Verification Services Inc. By:

Chin Pang
Senior Lab Engineer
Consumer Technology Division
UL Verification Services Inc.

Prepared By:

Tony Li
Senior Test Engineer
Consumer Technology Division
UL Verification Services Inc.

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2. TEST RESULT SUMMARY

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.

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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
- FCC KDB 644545 D03 v01
- 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
☒	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	550739
☒	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA			
☐	Building 3: 843 Auburn Court, Fremont, CA 94538 USA			
☐	Building 4: 47658 Kato Rd, Fremont, CA 94538 USA			
☐	Building 5: 47670 Kato Rd, Fremont, CA 94538 USA			

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5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

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

5.2. DECISION RULES

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

5.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	U_{LAB}
Conducted Antenna Port Emission Measurement	1.94
Power Spectral Density	2.466
Time Domain Measurements Using SA	3.39
RF Power Measurement Direct Method Using Power Meter	0.450 (Peak), 1.3 (Ave)
Radio Frequency (Spectrum Analyzer)	141.16 Hz
Occupied Bandwidth	1.2%
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%.

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5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

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

MAINS CONDUCTED EMISSIONS

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

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6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The Apple iPhone is a smartphone with multimedia functions (music, application support, and video),cellular GSM, GPRS, EGPRS, UMTS, LTE, 5G, IEEE 802.11a/b/g/n/ac/ax, Bluetooth, Ultra-Wideband, GPS, NFC, NB UNII, 802.15.4, 802.15.4ab-NB and MSS technologies. The rechargeable battery is not user accessible.

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 5 (dBi)
5150-5250	-3.4	-6.0
5250-5350	-3.2	-6.0
5500-5700	-4.5	-3.7
5725-5825	-5.2	-3.6

6.3. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was 23_10_663

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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)
5.2 GHz band, 1TX			
5180-5240	802.11a	Covered by 802.11n HT20 1TX	
5180-5240	802.11n HT20	19.48	88.72
5190-5230	802.11n HT40	20.47	111.43
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	17.49	56.10
5180-5240	802.11ax HE20	19.45	88.10
5190-5230	802.11ax HE40	20.45	110.92
5210	802.11ax HE80	16.98	49.89
5.2 GHz band, 2TX			
5180-5240	802.11n HT20 CDD	19.45	88.10
5180-5240	802.11n HT20 SDM/STBC	Covered by 802.11n HT20 2TX CDD	
5190-5230	802.11n HT40 CDD	21.98	157.76
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	19.47	88.51
5210	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5180-5240	802.11ax HE20 OFDMA	19.47	88.51
5180-5240	802.11ax HE20 SDM	Covered by 802.11ax HE20 OFDMA	
5190-5230	802.11ax HE40 OFDMA	21.99	158.12
5190-5230	802.11ax HE40 SDM	Covered by 802.11ax HE40 OFDMA	
5210	802.11ax HE80 OFDMA	18.90	77.62
5210	802.11ax HE80 SDM	Covered by 802.11ax HE80 OFDMA	

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5.3 GHz BAND (FCC)

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.3 GHz band, 1TX			
5260 - 5320	802.11a	Covered by 802.11n HT20 1TX	
5260 - 5320	802.11n HT20	19.48	88.72
5270 - 5310	802.11n HT40	20.41	109.90
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	16.93	49.32
5250	802.11ac VHT160	16.47	44.36
5260 - 5320	802.11ax HE20	19.45	88.10
5270 - 5310	802.11ax HE40	20.44	110.66
5290	802.11ax HE80	16.45	44.16
5250	802.11ax HE160	15.94	39.26
5.3 GHz band, 2TX			
5260 - 5320	802.11n HT20 CDD	19.47	88.51
5260 - 5320	802.11n HT20 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5270 - 5310	802.11n HT40 CDD	21.91	155.24
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	18.43	69.66
5290	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5250	802.11ac VHT160 CDD	18.43	69.66
5250	802.11ac VHT160 SDM/STBC	Covered by 802.11ac VHT160 2TX CDD	
5260 - 5320	802.11ax HE20 OFDMA	19.48	88.72
5260 - 5320	802.11ax HE20 SDM	Covered by 802.11ax HE20 OFDMA	
5270 - 5310	802.11ax HE40 OFDMA	21.96	157.04
5270 - 5310	802.11ax HE40 SDM	Covered by 802.11ax HE40 OFDMA	
5290	802.11ax HE80 OFDMA	18.46	70.15
5290	802.11ax HE80 SDM	Covered by 802.11ax HE80 OFDMA	
5250	802.11ax HE160 OFDMA	18.49	70.63
5250	802.11ax HE160 SDM	Covered by 802.11ax HE160 OFDMA	

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5.6 GHz BAND (FCC)

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.6 GHz band, 1TX			
5500-5720	802.11a	Covered by 802.11n HT20 1TX	
5500-5720	802.11n HT20	19.48	88.72
5510-5710	802.11n HT40	20.47	111.43
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	20.45	110.92
5570	802.11ac VHT160	15.95	39.36
5500-5720	802.11ax HE20	19.46	88.31
5510-5710	802.11ax HE40	20.46	111.17
5530-5690	802.11ax HE80	20.46	111.17
5570	802.11ax HE160	15.95	39.36
5.6 GHz band, 2TX			
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	21.95	156.68
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	22.95	197.24
5530-5690	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5570	802.11ac VHT160 CDD	17.93	62.09
5570	802.11ac VHT160 SDM/STBC	Covered by 802.11ac VHT160 2TX CDD	
5500-5720	802.11ax HE20 OFDMA	19.50	89.13
5500-5720	802.11ax HE20 SDM	Covered by 802.11ax HE20 OFDMA	
5510-5710	802.11ax HE40 OFDMA	21.97	157.40
5510-5710	802.11ax HE40 SDM	Covered by 802.11ax HE40 OFDMA	
5530-5690	802.11ax HE80 OFDMA	22.97	198.15
5530-5690	802.11ax HE80 SDM	Covered by 802.11ax HE80 OFDMA	
5570	802.11ax HE160 OFDMA	18.42	69.50
5570	802.11ax HE160 SDM	Covered by 802.11ax HE160 OFDMA	

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5.8 GHz BAND (FCC)

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.8 GHz band, 1TX			
5745-5825	802.11a	Covered by 802.11n HT20 1TX	
5745-5825	802.11n HT20	20.97	125.03
5755-5795	802.11n HT40	20.46	111.17
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	20.45	110.92
5745-5825	802.11ax HE20	20.96	124.74
5755-5795	802.11ax HE40	20.48	111.69
5775	802.11ax HE80	20.45	110.92
5.8 GHz band, 2TX			
5745-5825	802.11n HT20 CDD	23.96	248.89
5745-5825	802.11n HT20 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5755-5795	802.11n HT40 CDD	23.46	221.82
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	23.40	218.78
5775	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5745-5825	802.11ax HE20 OFDMA	23.99	250.61
5745-5825	802.11ax HE20 SDM	Covered by 802.11ax HE20 OFDMA	
5755-5795	802.11ax HE40 OFDMA	23.46	221.82
5755-5795	802.11ax HE40 SDM	Covered by 802.11ax HE40 OFDMA	
5775	802.11ax HE80 OFDMA	23.47	222.33
5775	802.11ax HE80 SDM	Covered by 802.11ax HE80 OFDMA	

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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 5 and 2TX. It was determined that Y (Landscape) orientation was the worst-case orientation for ANT 6, ANT 5, and Portrait for 2TX.

802.11n 2TX and 802.11ax 2TX modes were used to perform on radiated harmonic spurious final test to cover all SISO modes. Max power was 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 baseline investigation SU mode had the highest output power and the lowest tone, RU26 on 5.2 and 5.8GHz band had the highest PSD readings, and for 5.3 and 5.6GHz band, RU106 are the worst case. Therefore, antenna port conducted and radiated tests were performed on 5.2 & 5.8 GHz band at SU, RU26 Tones and 5.3 and 5.6 GHz band at SU , RU106 tones.

With same power on Full RU and SU higher data rate, investigation were performed on both band edge to determine the worst case, and SU mode was determined to be the worst case.

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 band edge, 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
802.11ac VHT160 mode MCS9
802.11ax (5.2G & 5.8G bands): HE20/HE40/HE80 RU 26 Tones and SU mode: MCS11.
802.11ax (5.3G & 5.6G bands) – Unsupported RU26): HE20/HE40/HE80/HE160 RU 106 Tones and SU mode: MCS11.

Note: In the Radiated Plots and emissions data, ANT0=ANT6 and ANT1=ANT5.

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6.6. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT						
Description		**Manufacturer**	**Model**	**Serial Number**		**FCC ID/ DoC**
Laptop		Apple	Macbook Pro	C02VD7SAHV22		BCGA1708
Laptop AC/DC adapter		Liteon Technology	A1424	NSW25679		DoC
EUT AC/DC adapter		Apple	A1720	C3D8417A7R93KVPA8		DoC
Conducted Switch Box		UL	n/a	208281		N/A
10dB Fixed Attenuator, 2 Watts Up to 26.5 GHz		Pasternack Enterprises	PE7024-10	236358		N/A
I/O CABLES (RF CONDUCTED TEST)						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	SMA	1	SMA	Shielded	0.75	To spectrum Analyzer
2	Antenna	2	SMA	Un-shielded	0.2	To Conducted Switch Box
3	USB-C	1	USB-C	Shielded	1.0	N/A
4	AC	1	AC	Un-shielded	2	N/A
I/O CABLES (RF RADIATED AND AC LINE CONDUCTED TEST)						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	AC	1	AC	Un-shielded	2	N/A
2	USB	1	USB	Shielded	1	N/A

TEST SETUP

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

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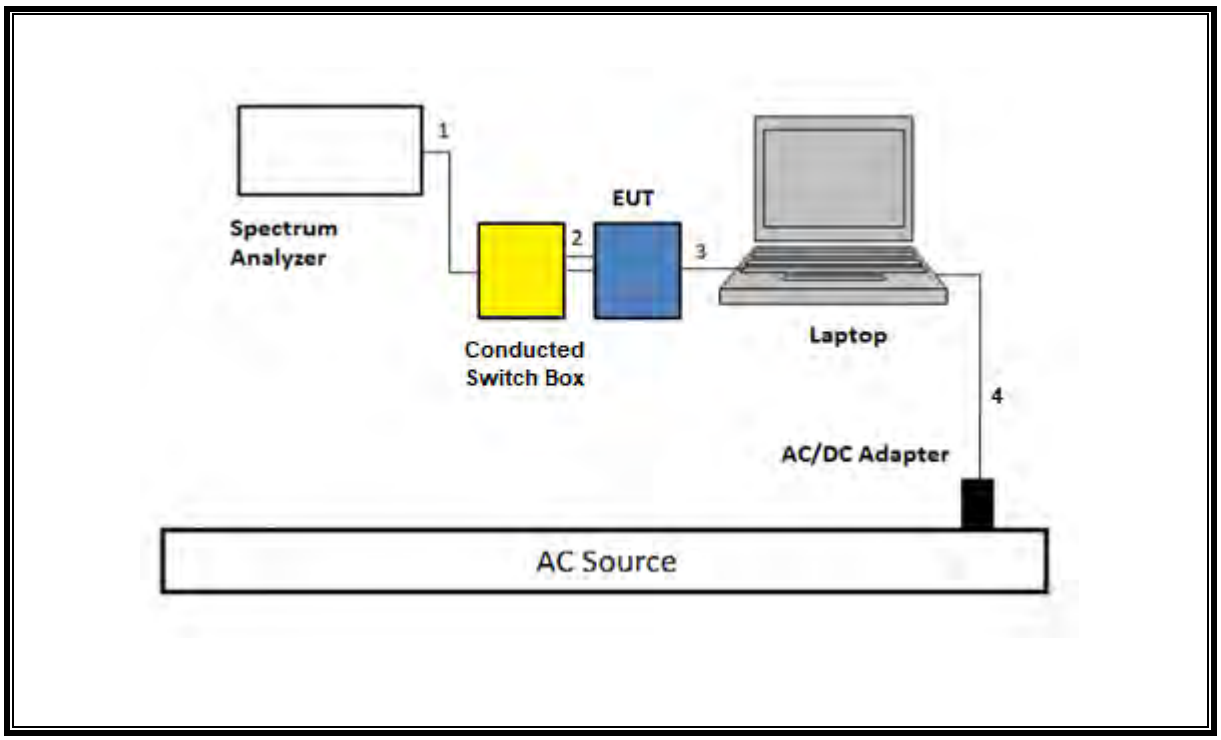
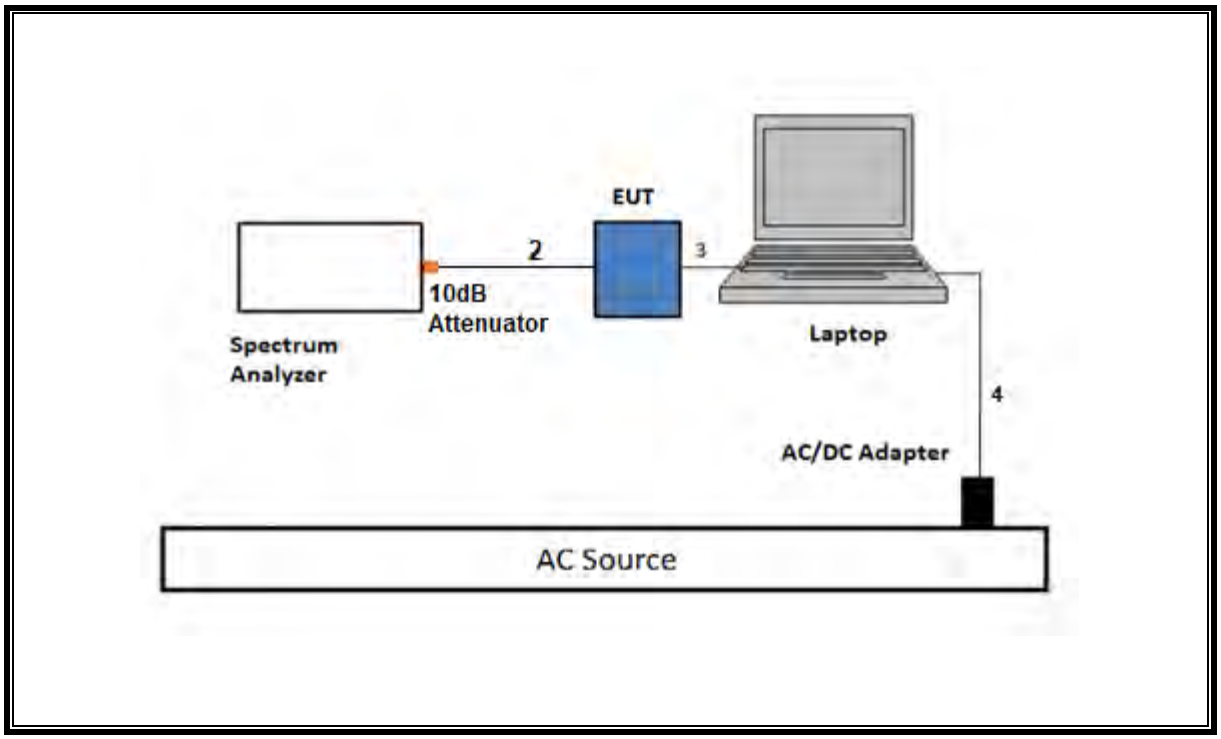
SETUP DIAGRAM FOR CONDUCTED TESTS





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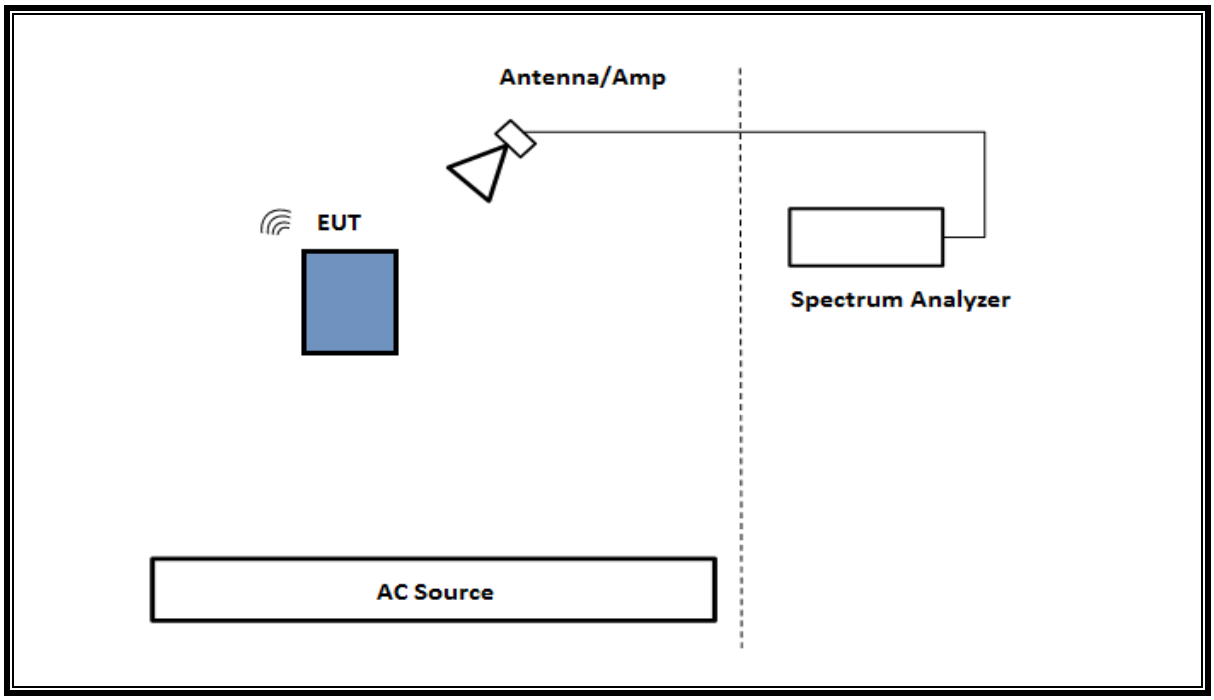
SETUP DIAGRAM FOR RADIATED TESTS Above 1 GHz



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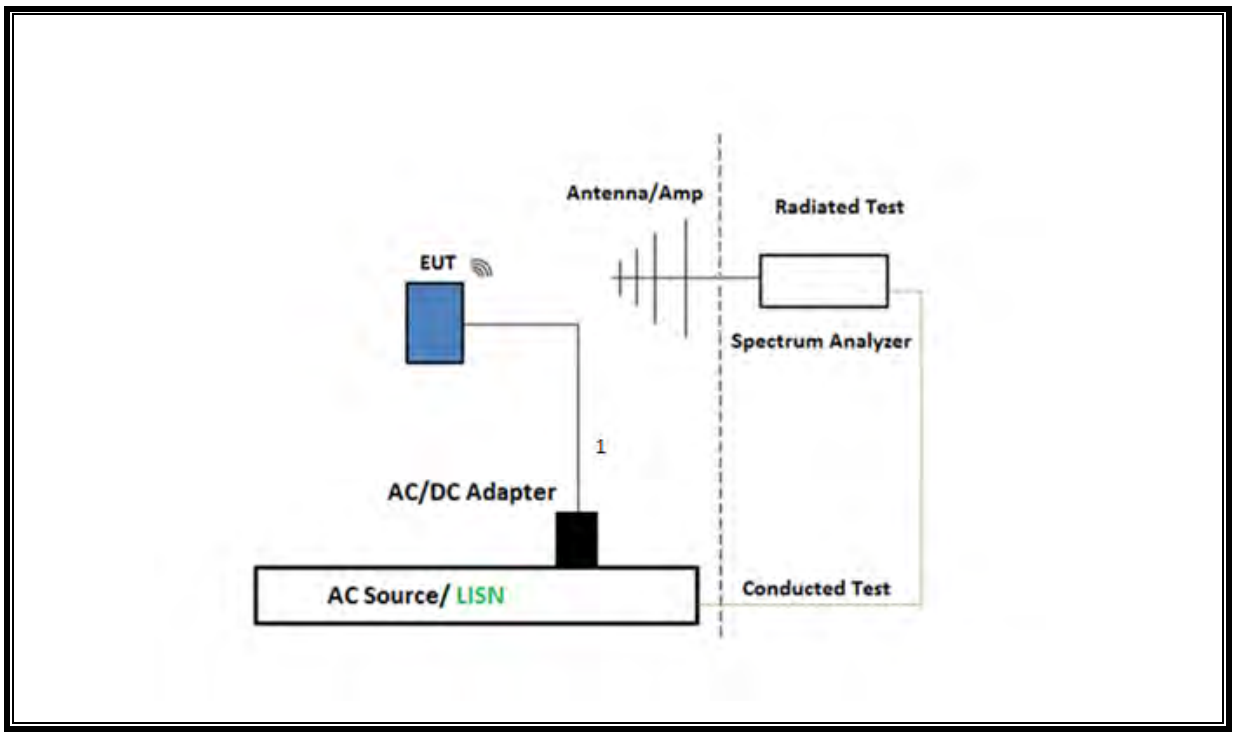
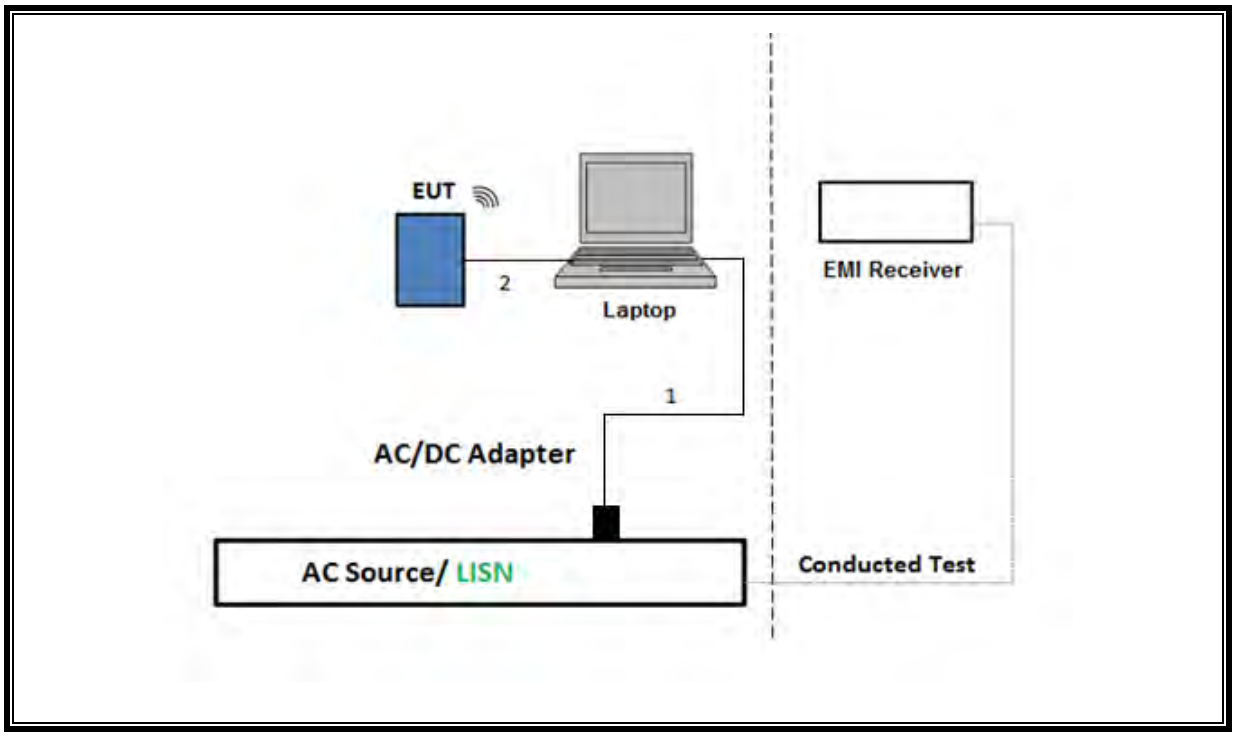
SETUP DIAGRAM FOR Below 1GHz and AC LINE CONDUCTED TEST



TEST SETUP- AC LINE CONDUCTED: LAPTOP CONFIGURATION



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7. MEASUREMENT METHOD

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

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

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

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

Conducted Output Power: KDB 789033 D02 v02r01

Power Spectral Density: KDB 789033 D02 v02r01, Section F

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

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

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

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

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8. TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST					
Description	**Manufacturer**	**Model**	**ID Num**	**Cal Due**	**Last Cal**
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	204041	08/24/2023	08/24/2022
Spectrum Analyzer, PSA, 3Hz to 26.5GHz	Keysight Technologies Inc	E4440A	81311	02/29/2024	02/23/2023
*Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	80397	02/28/2024	02/23/2023
*Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	85214	02/28/2024	02/23/2023
*Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A-544	87738	02/28/2024	02/23/2023
*Conducted Switch Box	N/A	CSB	221008	06/21/2023	06/21/2022
10dB Fixed Attenuator, 2 Watts Up to 26.5 GHz	Pasternack Enterprises	PE7024-10	236358	Verified/Characterized before use	
10dB Fixed Attenuator, 2 Watts Up to 26.5 GHz	Pasternack Enterprises	PE7024-10	236355	Verified/Characterized before use	
Power Meter, P-series single channel	Keysight Technologies Inc	N1911A	90756	01/31/2024	01/24/2023
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Keysight Technologies Inc	N1921A	90389	01/31/2024	01/24/2023
*Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	206807	02/28/2024	02/28/2023
*RF Filter Box, 1-18GHz, 12 Port.	UL-FR1	Frankenstein	230878	02/29/2024	02/29/2023
*EMI TEST RECEIVER	Rohde & Schwarz	ESW44	191428	02/29/2024	02/29/2023
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	230299	01/12/2024	01/12/2023
*RF Filter Box, 1-18GHz, 12 Port.	UL-FR1	Frankenstein	231874	04/19/2023	04/19/2022
*EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179372	02/20/2024	02/20/2023
*Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	230300	01/12/2024	01/12/2023
*RF Filter Box, 1-18GHz, 12 Port.	UL-FR1	Frankenstein	231875	04/19/2023	04/19/2022
*EMI TEST RECEIVER	Rohde & Schwarz	ESW44	170063	02/29/2024	02/29/2023
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	226672	01/09/2024	01/09/2023
*RF Filter Box, 1-18GHz, 12 Port.	UL-FR1	Frankenstein	225079	04/29/2024	04/29/2023
*EMI TEST RECEIVER	Rohde & Schwarz	ESW44	235670	04/30/2023	04/30/2022
*Antenna, Broadband Hybrid, 30MHz to 3GHz	SunAR rf motion	JB3	235174	04/30/2023	04/30/2022
*Amplifier 9 KHz - 1 GHz	SONOMA INSTRUMENT	310N	230310	02/02/2024	02/02/2023
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	222741	08/31/2023	08/31/2022
*RF Filter Box, 1-18GHz	UL-FR1	n/a	171875	05/31/2023	05/31/2022
*EMI TEST RECEIVER	Rohde & Schwarz	ESW44	230547	02/29/2024	02/29/2023

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TEST EQUIPMENT LIST (cont.)					
Description	**Manufacturer**	**Model**	**ID Num**	**Cal Due**	**Last Cal**
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	80404	08/08/2023	08/08/2023
RF Filter Box, 1-18GHz, 12 Port	UL-FR1	Frankenstein	216812	09/17/2023	09/17/2022
*EMI TEST RECEIVER	Rohde & Schwarz	ESW44	230548	02/29/2024	02/29/2023
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	84797	09/20/2023	09/20/2022
*RF Filter Box, 1-18GHz	UL-FR1	NA	171389	05/31/2023	05/31/2022
*EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201497	02/29/2024	02/29/2023
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	226673	01/09/2024	01/09/2023
*RF Filter Box, 1-18GHz, 17 Ports	UL-FR1	RATS 2	226781	04/30/2023	04/30/2022
*EMI TEST RECEIVER	Rohde & Schwarz	ESW44	169935	02/29/2024	02/29/2023
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	200784	01/31/2024	01/31/2023
RF Filter Box, 1-18GHz, 12 Port	UL-FR1	Frankenstein	220095	01/31/2024	01/31/2023
*EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201500	02/29/2024	02/29/2023
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	41112	10/07/2023	10/07/2022
*RF Filter Box, 1-18GHz, 12 Port.	UL-FR1	Frankenstein	231249	02/29/2024	02/29/2023
*EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201499	02/29/2024	02/29/2023
*Antenna, Horn 18 to 26.5GHz	A.R.A.	MWH-1826/B	172353	06/30/2024	06/30/2023
*Antenna, Horn 26.5 to 40GHz	A.R.A.	MWH-2640/B	172367	06/30/2024	06/30/2023
*Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	80707	05/31/2024	05/31/2023
*RF Filter Box, 1-18GHz, 17 Ports	UL-FR1	RATS 2	225474	03/31/2024	03/31/2023
*EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201502	02/29/2024	02/29/2023
*Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	80402	07/31/2023	07/31/2022
*RF Filter Box, 1-18GHz, 17 Ports	UL-FR1	RATS 2	225575	03/03/2024	03/03/2023
*EMI TEST RECEIVER	Rohde & Schwarz	ESW44	223461	02/29/2024	02/29/2023
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	226671	01/09/2024	01/09/2023
*RF Filter Box, 1-18GHz, 17 Ports	UL-FR1	RATS 2	226779	03/05/2024	03/05/2023
*EMI TEST RECEIVER	Rohde & Schwarz	ESW44	226078	02/29/2024	02/29/2023

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AC Line Conducted					
*EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESR	93091	02/29/2024	03/29/2023
LISN for Conducted Emissions CISPR-16	FISCHER CUSTOM COMMUNICATIONS	FCC-LISN-50/250-25-2-01-480V	175764	01/31/2024	01/31/2023
Transient Limiter	TE	TBFL1	207996	07/15/2023	07/15/2022

UL AUTOMATION SOFTWARE			
Radiated Software	UL	UL EMC	Ver 9.5, May 1 , 2023
Conducted Software	UL	UL EMC	2020.8.16
AC Line Conducted Software	UL	UL EMC	Ver 9.5, Mar 3, 2023

*Testing was completed before calibration due date and/or after calibration was completed.

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9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
5GHz Band						
802.11n HT20 MCS0	1.920	1.940	0.990	98.97%	0.00	0.010
802.11n HT20 MCS7	0.228	0.250	0.912	91.20%	0.40	4.386
802.11n HT40 MCS0	0.944	0.964	0.979	97.89%	0.09	1.060
802.11n HT40 MCS7	0.128	0.149	0.856	85.57%	0.68	7.843
802.11ac VHT80 MCS0	0.460	0.482	0.954	95.37%	0.21	2.176
802.11ac VHT80 MCS9	0.060	0.082	0.726	72.63%	1.39	16.750
802.11ac VHT160 MCS0	1.139	1.160	0.982	98.19%	0.00	0.010
802.11ac VHT160 MCS11	0.062	0.072	0.854	85.36%	0.69	16.181
802.11ax HE20 RU26, MCS0	3.992	4.029	0.991	99.08%	0.00	0.010
802.11ax HE20 RU26, MCS11	0.293	0.329	0.891	89.06%	0.50	3.413
802.11ax HE20 RU106, MCS0	3.516	3.553	0.990	98.96%	0.00	0.010
802.11ax HE20 RU106, MCS11	0.260	0.287	0.906	90.59%	0.43	3.846
802.11ax HE40 RU26, MCS0	3.965	4.008	0.989	98.93%	0.00	0.010
802.11ax HE40 RU26, MCS11	0.292	0.328	0.890	89.02%	0.50	3.425
802.11ax HE40 RU106, MCS0	3.515	3.554	0.989	98.90%	0.00	0.010
802.11ax HE40 RU106, MCS11	0.263	0.299	0.880	87.96%	0.56	3.802
802.11ax HE80 RU26, MCS0	3.975	4.029	0.987	98.66%	0.00	0.010
802.11ax HE80 RU26, MCS11	0.283	0.329	0.860	86.02%	0.65	3.534
802.11ax HE80 RU106, MCS0	3.516	3.553	0.990	98.96%	0.00	0.010
802.11ax HE80 RU106, MCS11	0.263	0.299	0.880	87.96%	0.56	3.802
802.11ax HE160 RU26, MCS0	3.969	4.029	0.985	98.51%	0.00	0.010
802.11ax HE160 RU26, MCS11	0.292	0.328	0.890	89.02%	0.50	3.425
802.11ax HE160 RU106, MCS0	3.518	3.554	0.990	98.99%	0.00	0.010
802.11ax HE160 RU106, MCS11	0.264	0.299	0.883	88.29%	0.54	3.788

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Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
5GHz Band						
802.11ax HE20 SU, MCS0	1.487	1.509	0.985	98.54%	0.00	0.010
802.11ax HE20 SU, MCS11	0.146	0.168	0.872	87.16%	0.60	6.849
802.11ax HE40 SU, MCS0	0.772	0.794	0.972	97.22%	0.12	1.296
802.11ax HE40 SU, MCS11	0.101	0.123	0.822	82.15%	0.85	9.921
802.11ax HE80 SU, MCS0	0.401	0.423	0.946	94.64%	0.24	2.497
802.11ax HE80 SU, MCS11	0.082	0.105	0.782	78.20%	1.07	12.225
802.11ax HE160 SU, MCS0	0.232	0.252	0.918	91.80%	0.37	4.318
802.11ax HE160 SU, MCS11	0.069	0.089	0.771	77.10%	1.13	14.556

DUTY CYCLE PLOTS

802.11n HT20 MODE MCS0

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

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9.2. 26 dB AND 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

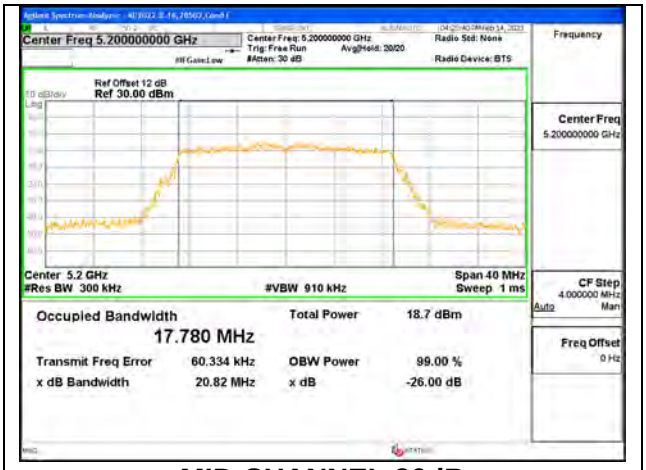
RESULTS

ID:	28502/26118	Date:	5/24/2023

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	21.27	17.8130
Mid	5200	20.82	17.7800
High	5240	20.88	17.7260



MID CHANNEL 26dB

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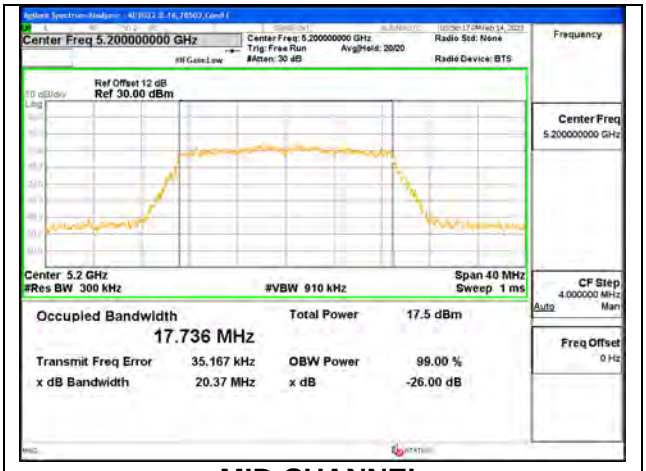
1TX Antenna 5 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	21.20	17.7990
Mid	5200	20.37	17.7360
High	5240	21.10	17.7800



MID CHANNEL

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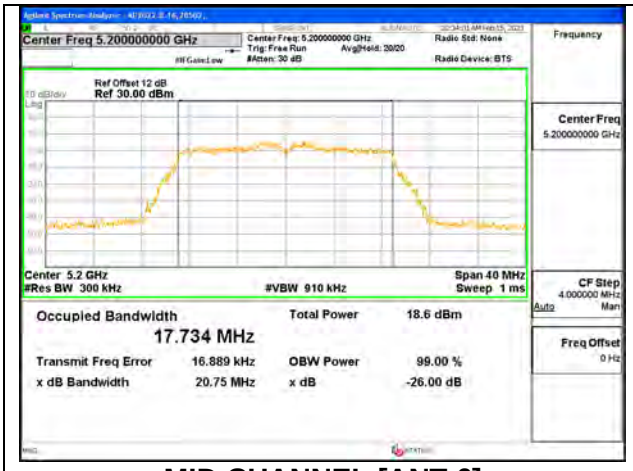
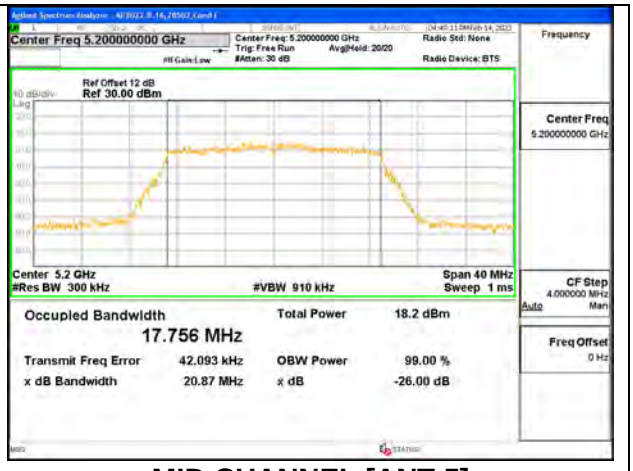
2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5180	21.72	21.72	17.8620	17.8260
Mid	5200	20.75	20.87	17.7340	17.7560
High	5240	20.88	20.55	17.7960	17.7350



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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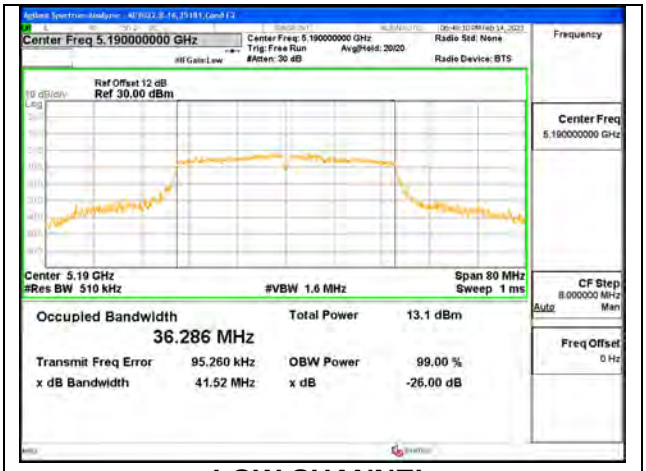
9.2.2. 802.11n HT40 MODE IN THE 5.2 GHz BAND

1TX Antenna 6 MODE

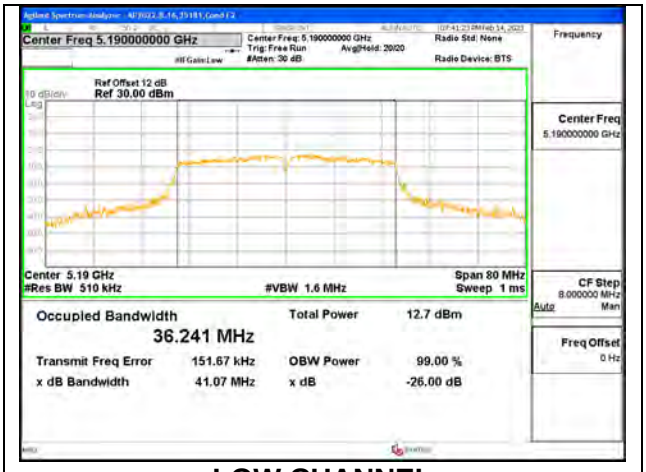
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	41.52	36.2860
High	5230	40.99	36.1460



LOW CHANNEL

1TX Antenna 5 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	41.07	36.2410
High	5230	40.30	36.0940



LOW CHANNEL

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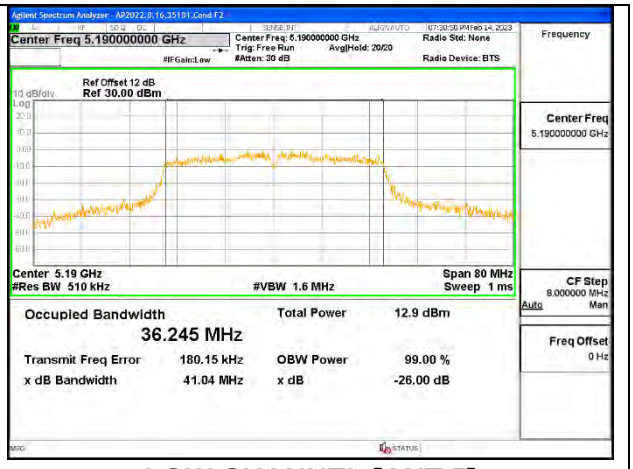
2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5190	41.40	41.04	36.2240	36.2450
High	5230	40.73	40.53	36.1810	36.1210

LOW CHANNEL [ANT 6]



LOW CHANNEL [ANT 5]

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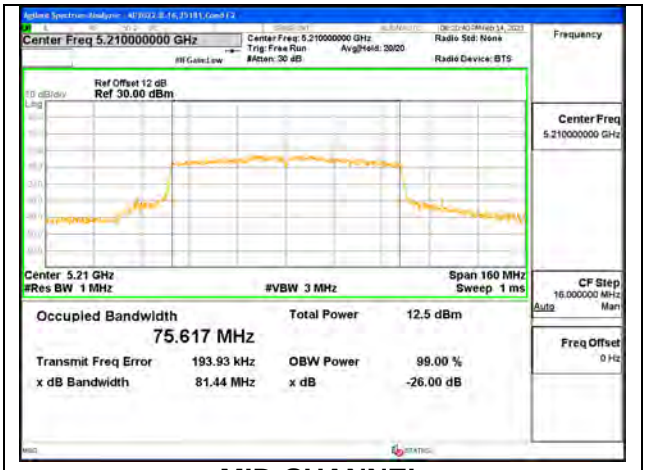
9.2.3. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

1TX Antenna 6 MODE

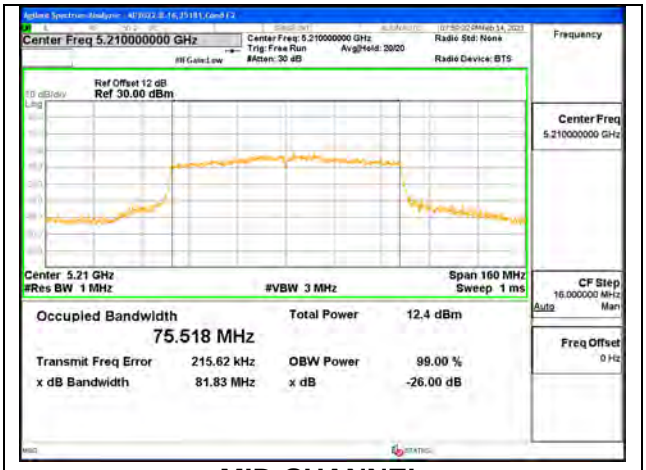
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	81.44	75.6170



MID CHANNEL

1TX Antenna 5 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	81.83	75.5180



MID CHANNEL

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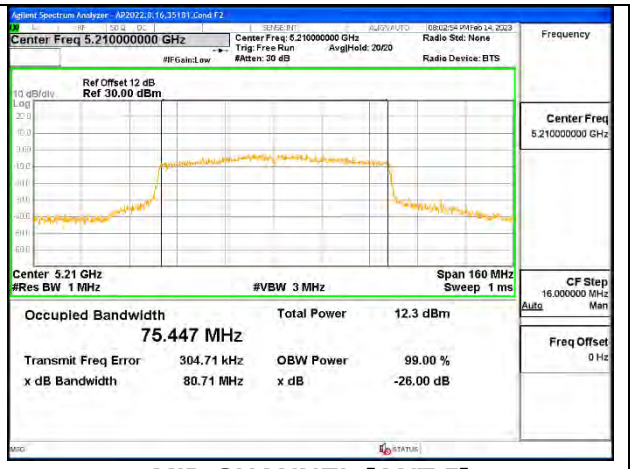
2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5210	84.00	80.71	75.5700	75.4470

MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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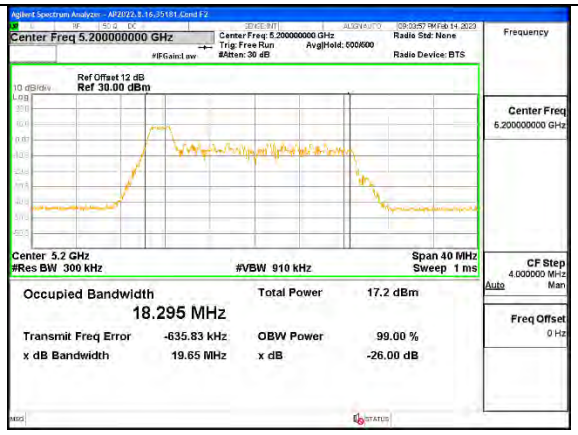
9.2.4. 802.11ax HE20 MODE IN THE 5.2 GHz BAND

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

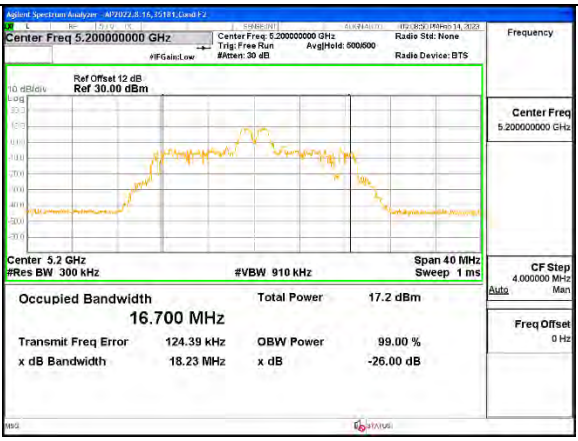
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	19.64	18.2470
Mid	5200	19.65	18.2950
High	5240	19.75	18.2120



MID CHANNEL

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

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	18.08	16.5650
Mid	5200	18.23	16.7000
High	5240	18.45	16.7710



MID CHANNEL

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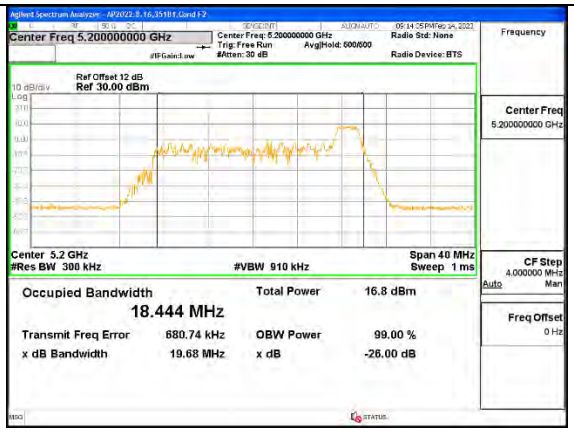
1TX Antenna 6 MODE: 26 Tones, RU Index 8

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	20.05	18.4880
Mid	5200	19.68	18.4440
High	5240	20.20	18.3480



MID CHANNEL

1TX Antenna 6 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	20.85	18.9570
Mid	5200	20.83	18.9470
High	5240	20.85	18.8950

MID CHANNEL

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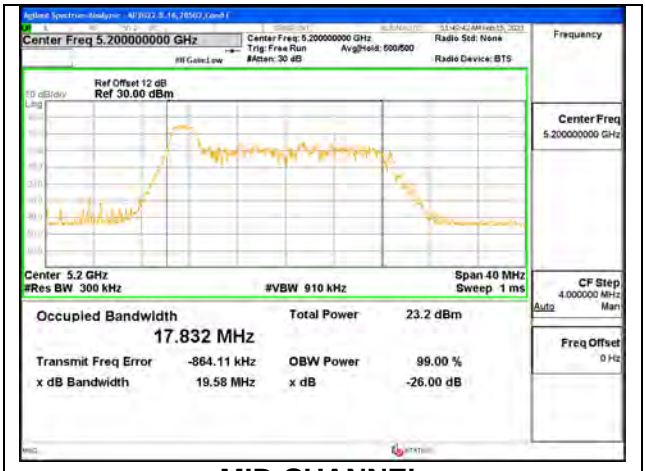
1TX Antenna 5 MODE: 26 Tones, RU Index 0

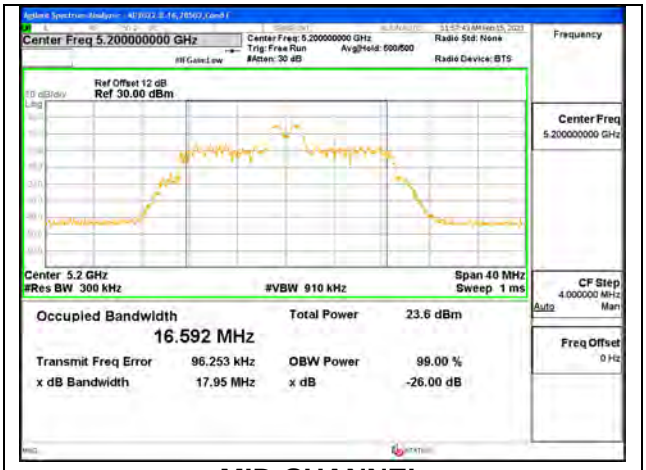
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	19.59	18.2540
Mid	5200	19.58	17.8320
High	5240	19.70	18.2090



MID CHANNEL

1TX Antenna 5 MODE: 26 Tones, RU Index 4

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	18.38	16.2910
Mid	5200	17.95	16.5920
High	5240	18.27	16.7880



MID CHANNEL

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

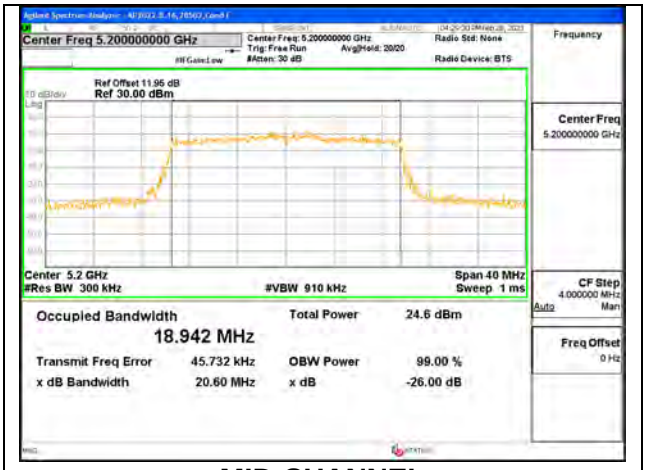
1TX Antenna 5 MODE: 26 Tones, RU Index 8

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	20.00	18.2450
Mid	5200	19.17	17.8950
High	5240	19.97	18.3600

MID CHANNEL

1TX Antenna 5 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5180	20.65	18.9760
Mid	5200	20.60	18.9420
High	5240	20.97	18.8450

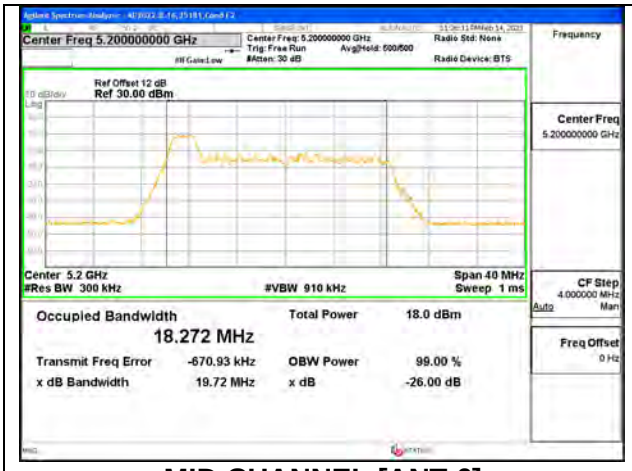


MID CHANNEL

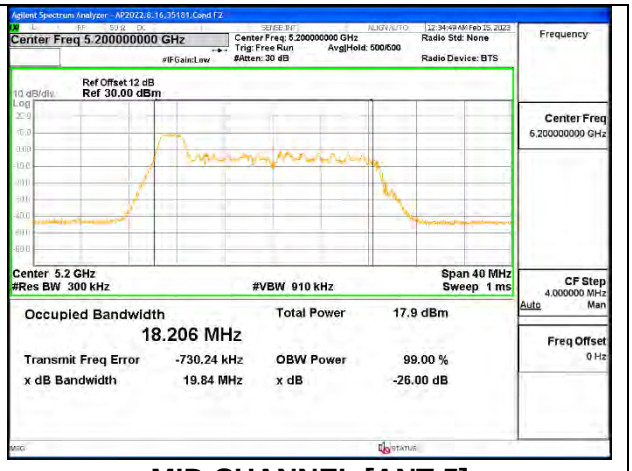
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5180	19.56	19.80	18.1360	18.2570
Mid	5200	19.72	19.84	18.2720	18.2060
High	5240	19.76	19.78	18.2740	18.1650



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 4

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5180	18.48	18.00	16.7410	16.6020
Mid	5200	18.45	17.74	16.6280	15.9510
High	5240	18.09	17.37	16.9790	16.0770

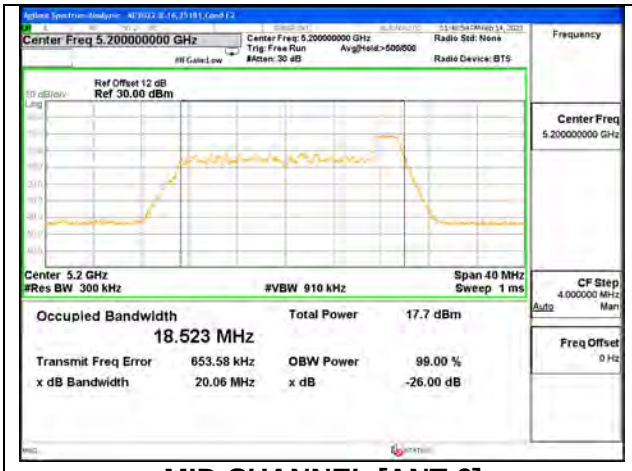
MID CHANNEL [ANT 6]

MID CHANNEL [ANT 5]

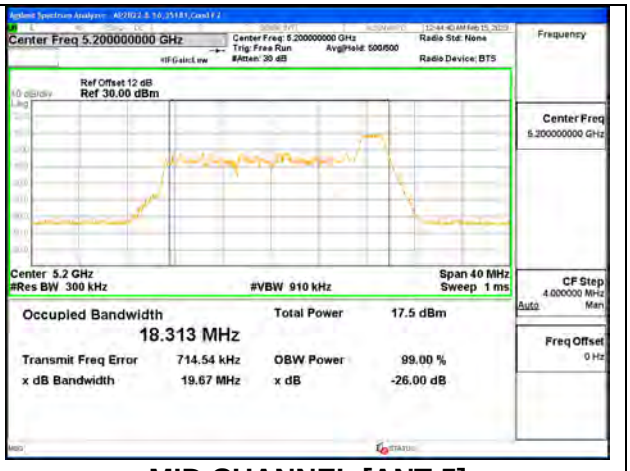
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 8

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5180	20.01	19.52	18.2000	18.2360
Mid	5200	20.06	19.67	18.5230	18.3130
High	5240	19.96	19.01	18.4590	17.9150



MID CHANNEL [ANT 6]

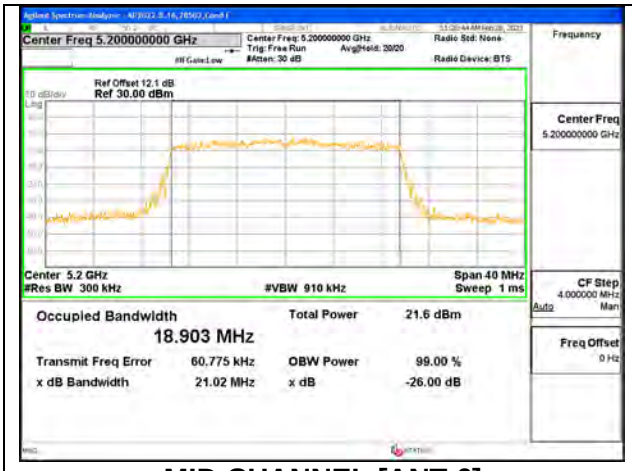


MID CHANNEL [ANT 5]

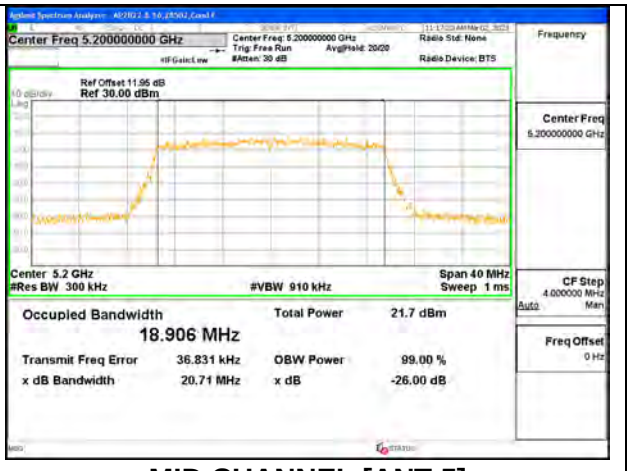
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5180	21.16	21.06	18.8830	18.9500
Mid	5200	21.02	20.71	18.9030	18.9060
High	5240	20.63	20.45	19.0110	18.9140



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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

9.2.5. 802.11ax HE40 MODE IN THE 5.2 GHz BAND

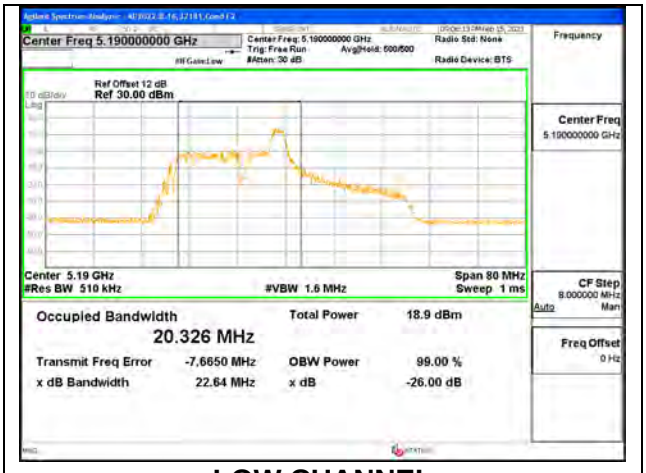
1TX Antenna 6 MODE: 26 Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	19.88	18.2230
High	5230	20.13	18.4110

LOW CHANNEL

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

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	22.64	20.3260
High	5230	24.03	21.1780



LOW CHANNEL

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

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

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	19.76	18.4810
High	5230	20.57	18.5650

LOW CHANNEL

1TX Antenna 6 MODE: SU Mode

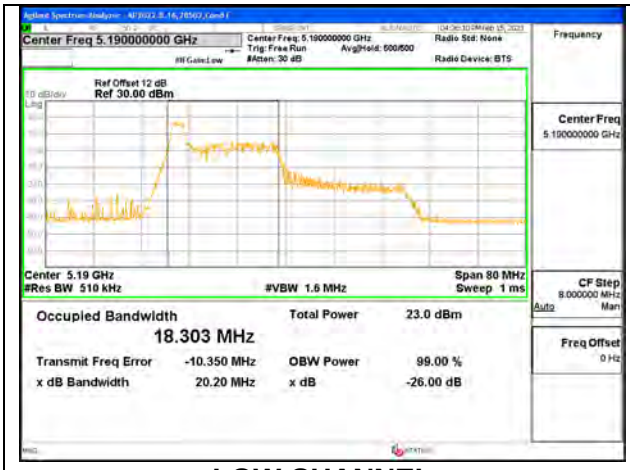
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	41.08	37.8100
High	5230	40.83	37.7840

LOW CHANNEL

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

1TX Antenna 5 MODE: 26 Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	20.20	18.3030
High	5230	19.86	18.3950



LOW CHANNEL

1TX Antenna 5 MODE: 26 Tones, RU Index 8

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	23.33	21.4400
High	5230	22.18	20.9200

LOW CHANNEL

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

1TX Antenna 5 MODE: 26 Tones, RU Index 17

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	21.11	18.1100
High	5230	20.01	17.8420

LOW CHANNEL

1TX Antenna 5 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5190	40.19	37.7560
High	5230	40.71	37.8490

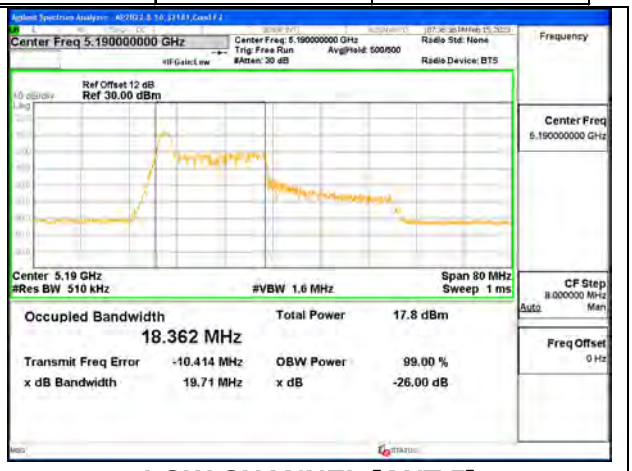
LOW CHANNEL

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

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5190	19.59	19.71	18.3180	18.3620
High	5230	20.04	19.51	18.3980	18.1940

LOW CHANNEL [ANT 6]



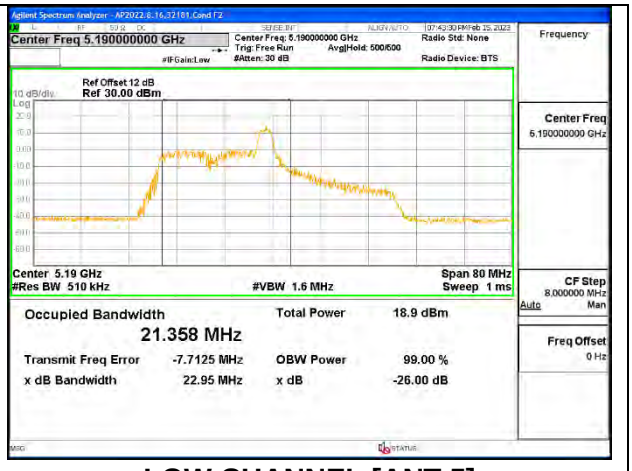
LOW CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 8

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5190	23.96	22.95	21.4440	21.3580
High	5230	23.23	23.30	20.9540	21.3000

LOW CHANNEL [ANT 6]



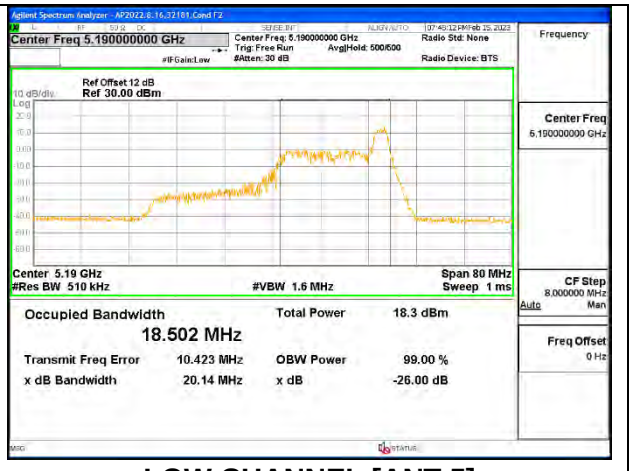
LOW CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 17

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5190	20.60	20.14	18.7010	18.5020
High	5230	20.38	20.61	18.4960	18.4760

LOW CHANNEL [ANT 6]

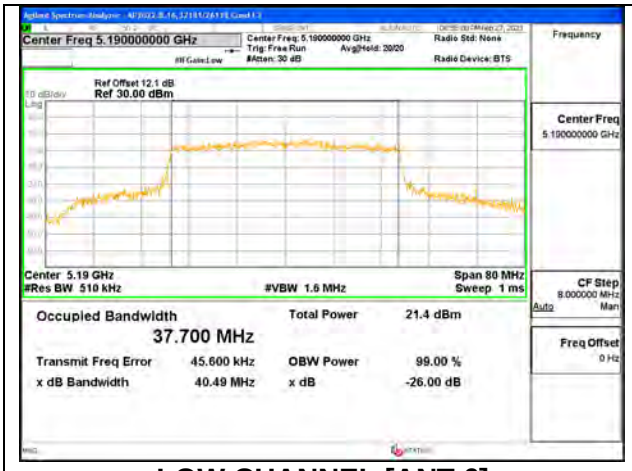


LOW CHANNEL [ANT 5]

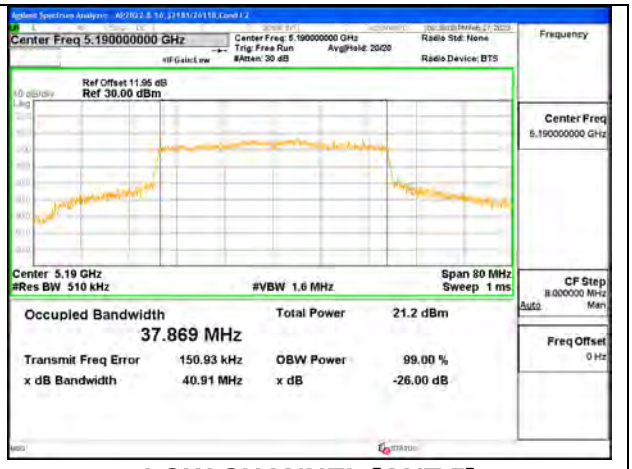
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5190	40.49	40.91	37.7000	37.8690
High	5230	39.94	40.47	37.6570	37.7200



LOW CHANNEL [ANT 6]



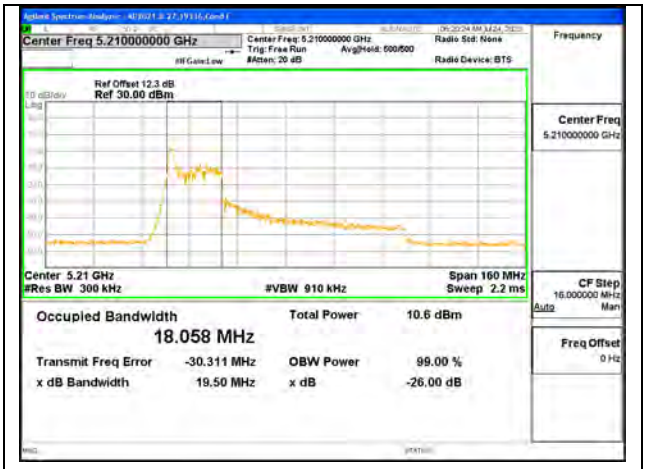
LOW CHANNEL [ANT 5]

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

9.2.6. 802.11ax HE80 MODE IN THE 5.2 GHz BAND

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

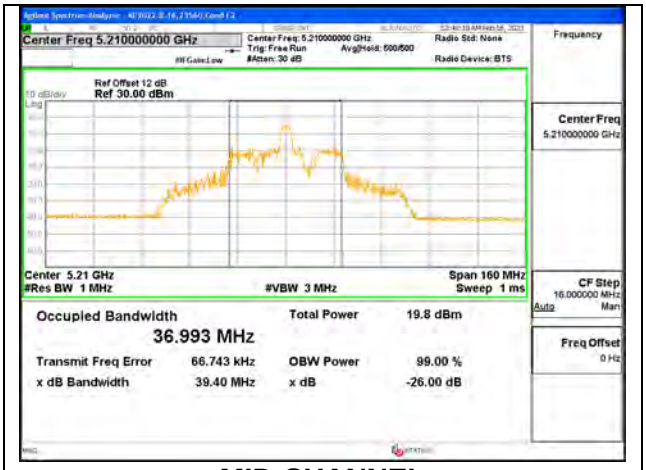
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	19.50	18.0580



MID CHANNEL

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

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	39.40	36.9930

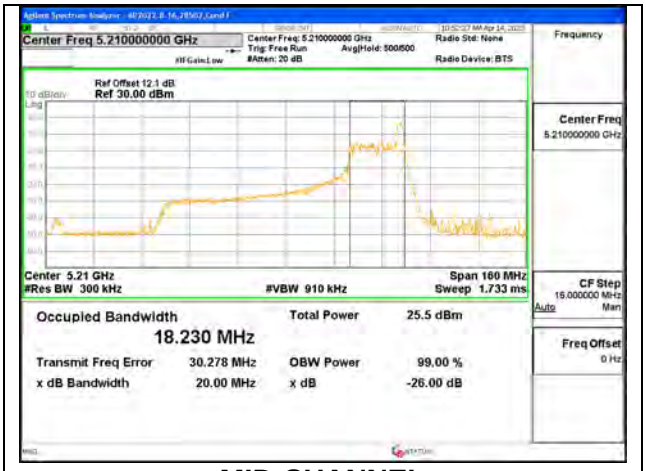


MID CHANNEL

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

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

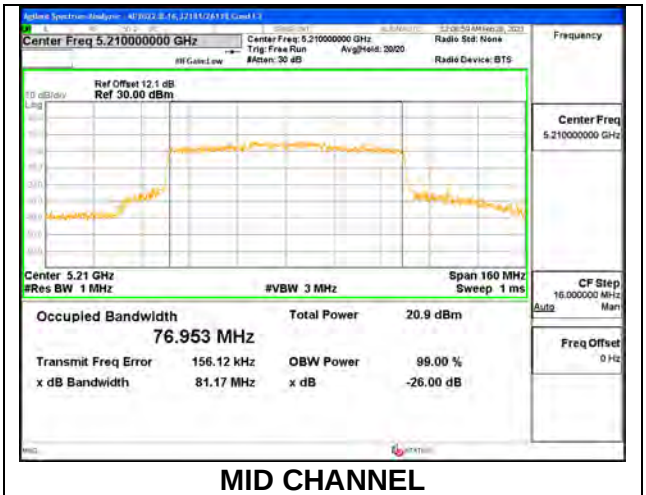
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	20.00	18.2300



MID CHANNEL

1TX Antenna 6 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	81.17	76.9530



MID CHANNEL

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

1TX Antenna 5 MODE: 26 Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	19.70	18.1480

MID CHANNEL

1TX Antenna 5 MODE: 26 Tones, RU Index 18

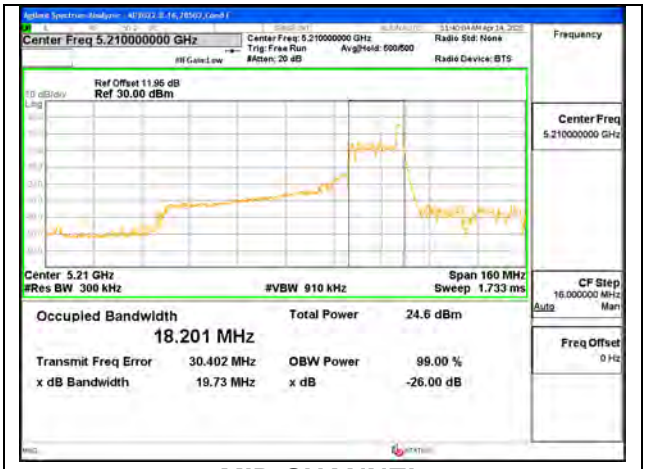
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	39.43	36.7400

MID CHANNEL

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

1TX Antenna 5 MODE: 26 Tones, RU Index 36

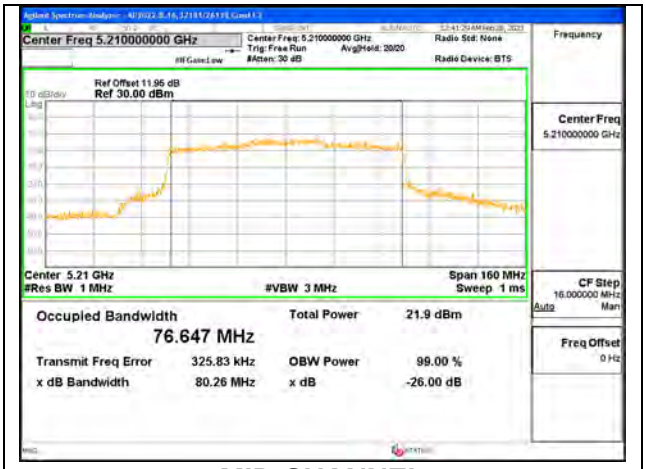
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	19.73	18.2010



MID CHANNEL

1TX Antenna 5 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5210	80.26	76.6470



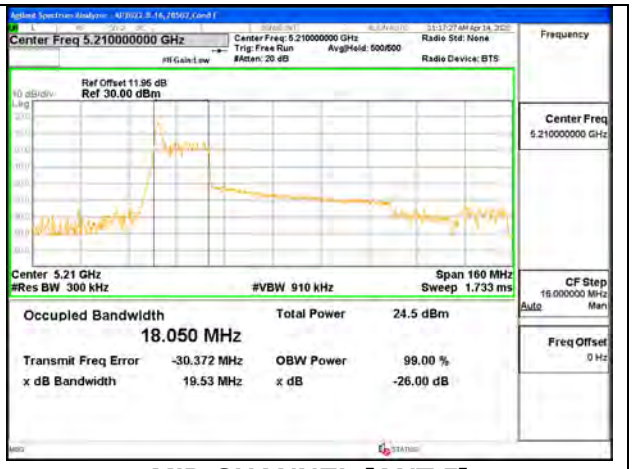
MID CHANNEL

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

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5210	19.41	19.53	17.6950	18.0500

MID CHANNEL [ANT 6]



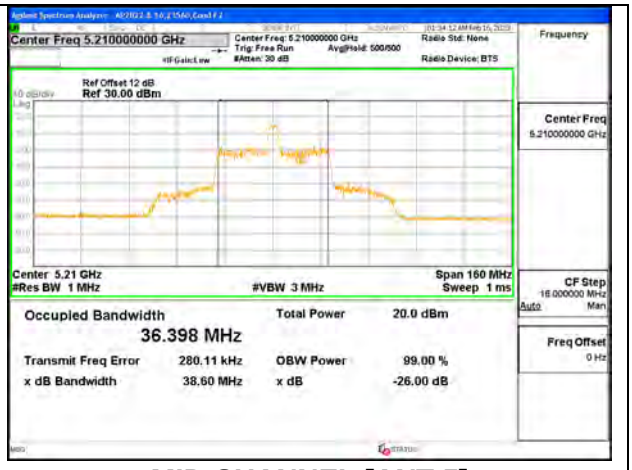
MID CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 18

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5210	38.79	38.60	36.4170	36.3980

MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 36

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5210	18.62	19.26	17.4080	17.6460

MID CHANNEL [ANT 6]

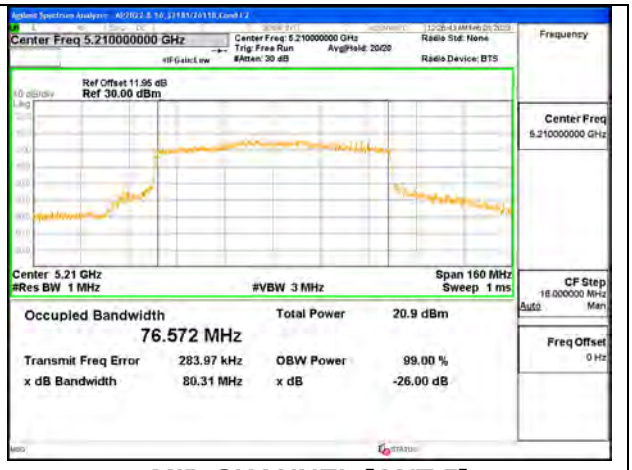
MID CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5210	80.66	80.31	77.1580	76.5720

MID CHANNEL [ANT 6]



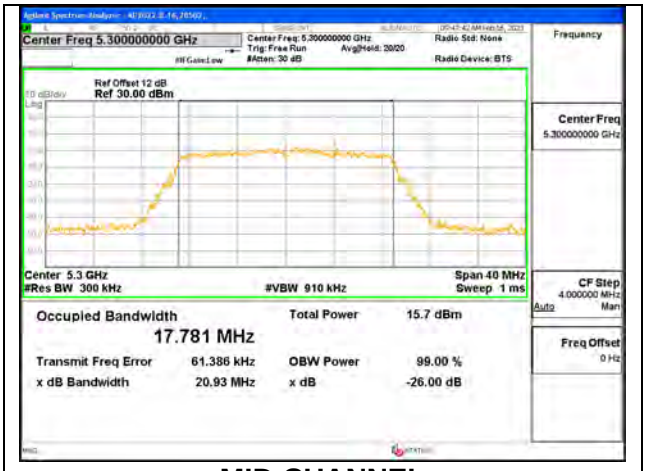
MID CHANNEL [ANT 5]

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

9.2.7. 802.11n HT20 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE

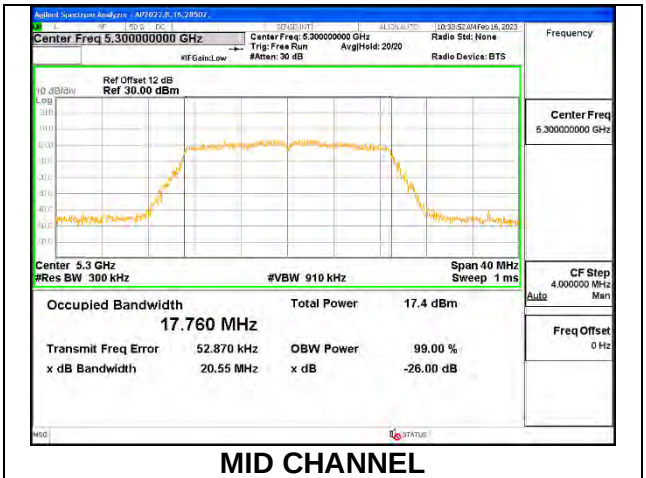
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	20.85	17.6980
Mid	5300	20.93	17.7810
High	5320	21.01	17.8160



MID CHANNEL

1TX Antenna 5 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	20.81	17.7240
Mid	5300	20.55	17.7600
High	5320	21.30	17.8440

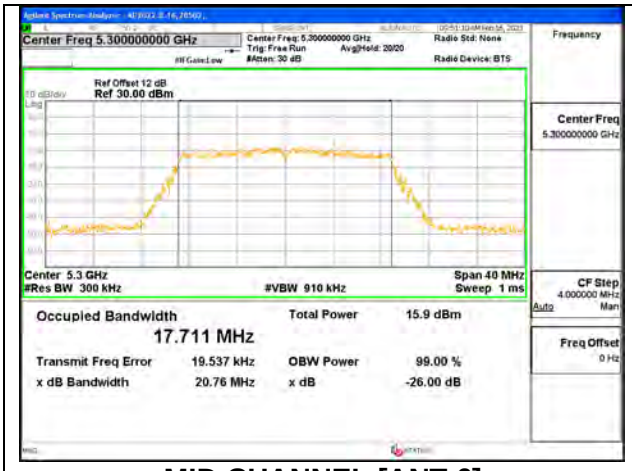


MID CHANNEL

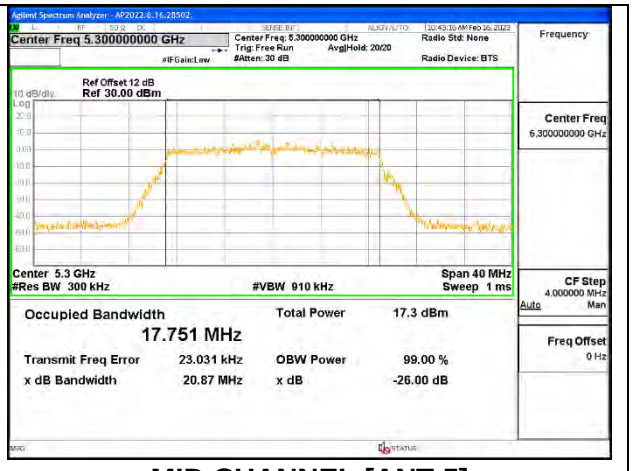
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5260	20.68	20.48	17.6940	17.7540
Mid	5300	20.88	20.87	17.7110	17.7510
High	5320	21.88	21.03	17.8450	17.9060



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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

9.2.8. 802.11n HT40 MODE IN THE 5.3 GHz BAND

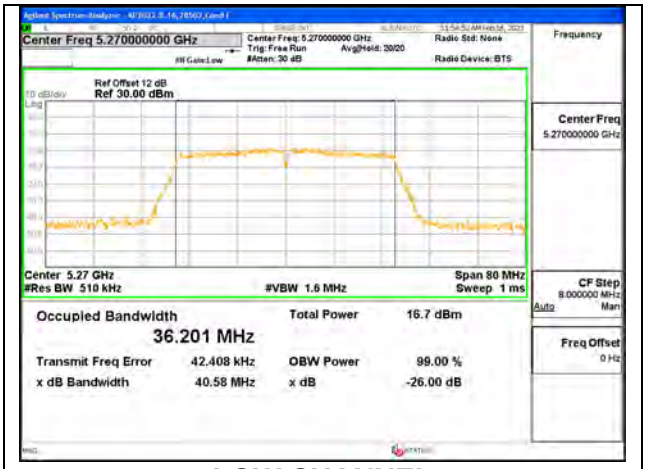
1TX Antenna 6 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	40.45	36.1550
High	5310	41.90	36.2160

LOW CHANNEL

1TX Antenna 5 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	40.58	36.2010
High	5310	40.50	36.2350



LOW CHANNEL

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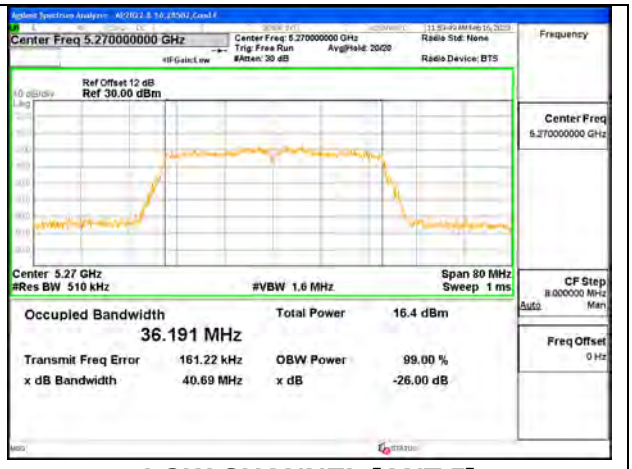
2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5270	40.57	40.69	36.1000	36.1910
High	5310	41.47	41.20	36.2610	36.1600

LOW CHANNEL [ANT 6]



LOW CHANNEL [ANT 5]

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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	84.55	75.4680

MID CHANNEL

1TX Antenna 5 MODE

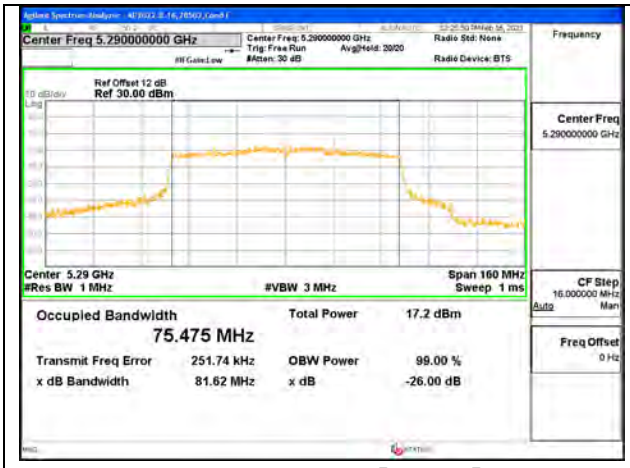
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99& Bandwidth (MHz)
Mid	5290	87.70	75.4780

MID CHANNEL

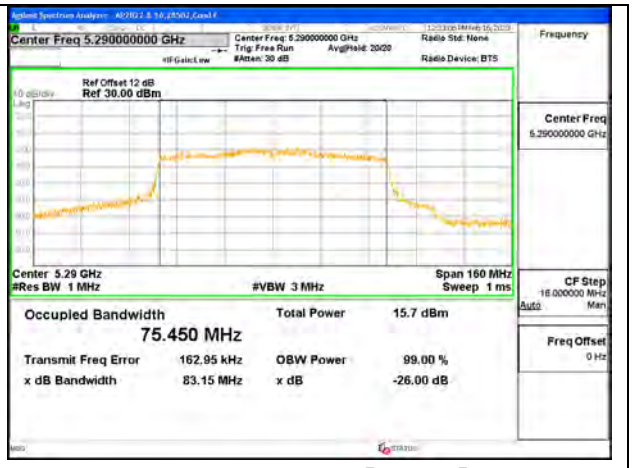
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5290	81.62	83.15	75.4750	75.4500



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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9.2.10. 802.11ac VHT160 MODE IN THE 5.3 GHz BAND

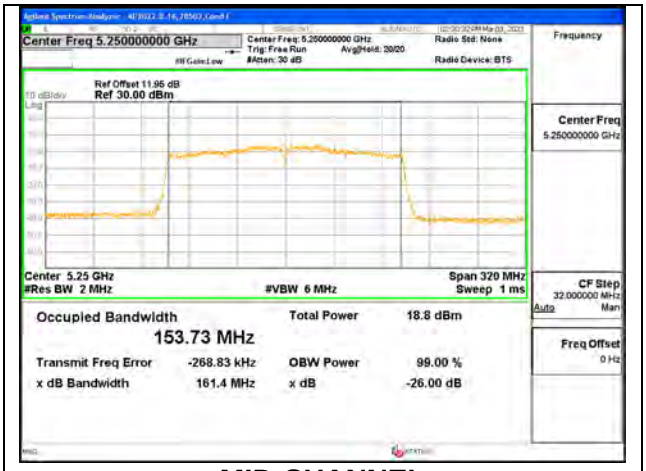
1TX Antenna 6 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99& Bandwidth (MHz)
Mid	5250	163.30	154.4900

MID CHANNEL

1TX Antenna 5 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99& Bandwidth (MHz)
Mid	5250	161.40	153.7300



MID CHANNEL

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2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5250	162.20	161.10	154.5700	153.9100

MID CHANNEL [ANT 6]

MID CHANNEL [ANT 5]

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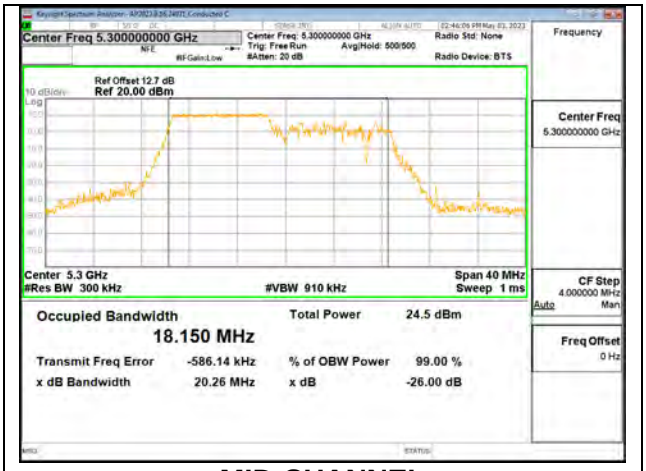
9.2.11. 802.11ax HE20 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE: 106 Tones, RU Index 53

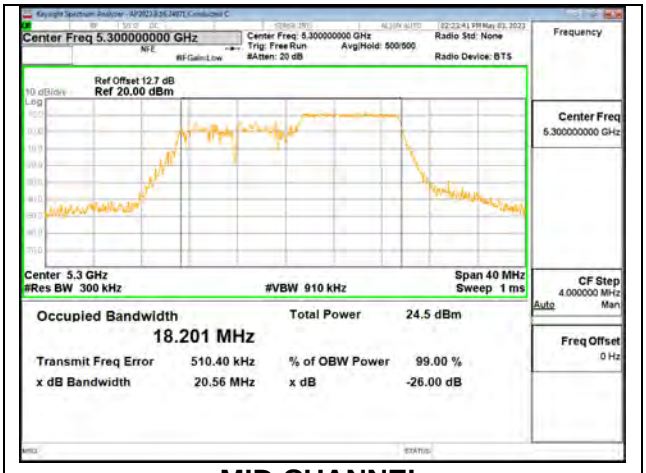
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	20.26	18.137
Mid	5300	20.26	18.150
High	5320	20.06	18.092



MID CHANNEL

1TX Antenna 6 MODE: 106 Tones, RU Index 54

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	20.66	18.1100
Mid	5300	20.56	18.2010
High	5320	20.85	18.1390



MID CHANNEL

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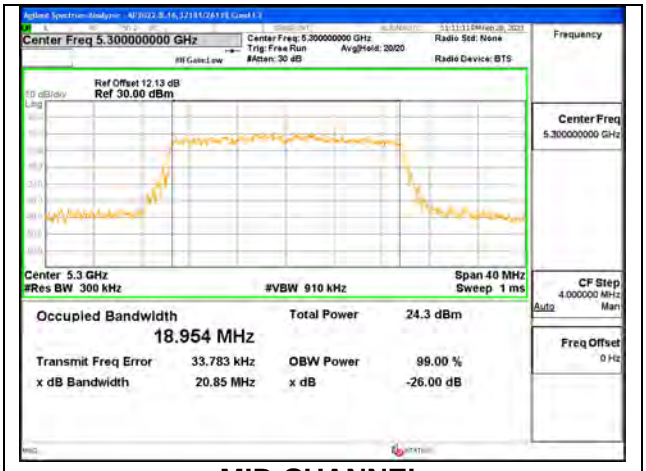
1TX Antenna 6 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	20.84	18.9020
Mid	5300	20.85	18.9540
High	5320	21.22	18.9510



MID CHANNEL

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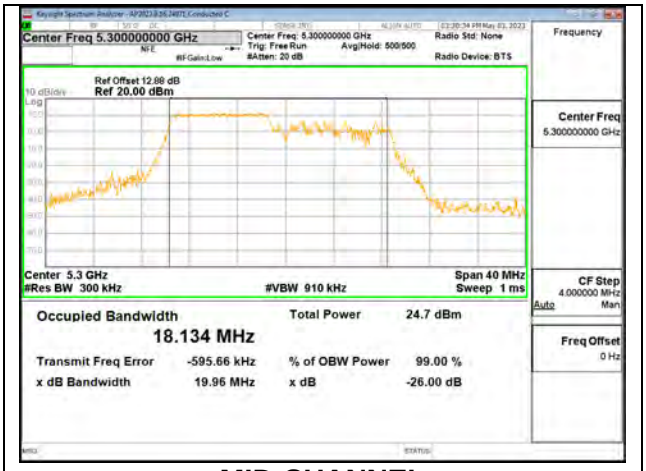
1TX Antenna 5 MODE: 106 Tones, RU Index 53

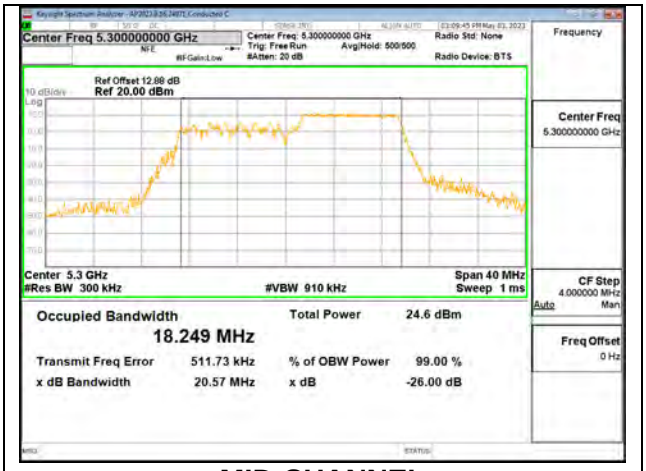
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	20.31	18.0240
Mid	5300	19.96	18.1340
High	5320	20.29	18.1180



MID CHANNEL

1TX Antenna 5 MODE: 106 Tones, RU Index 54

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	20.70	18.2510
Mid	5300	20.57	18.2490
High	5320	20.42	18.1040



MID CHANNEL

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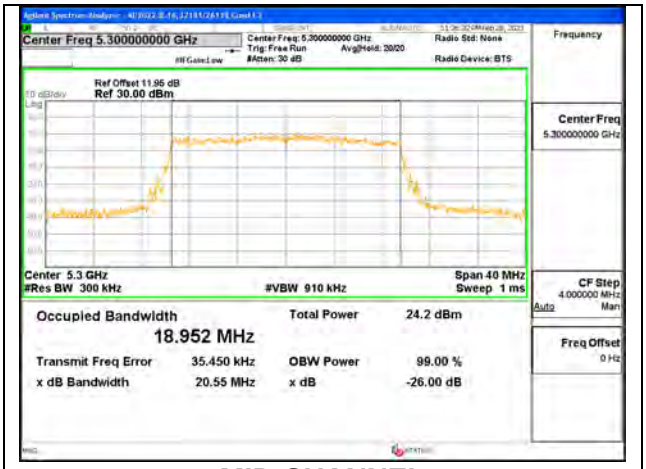
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

1TX Antenna 5 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5260	20.80	18.9840
Mid	5300	20.55	18.9520
High	5320	21.10	19.0050



MID CHANNEL

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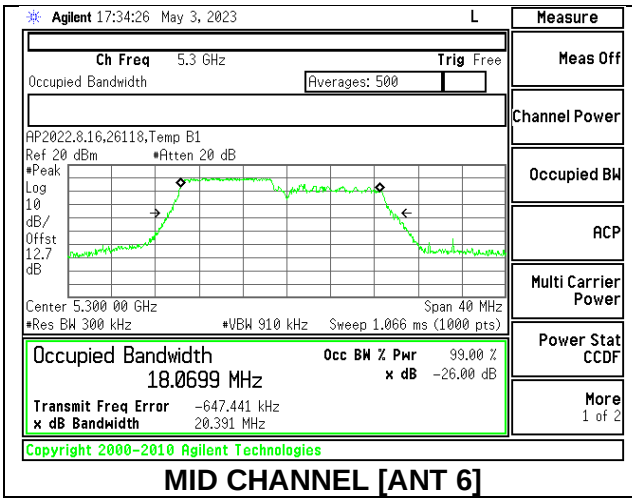
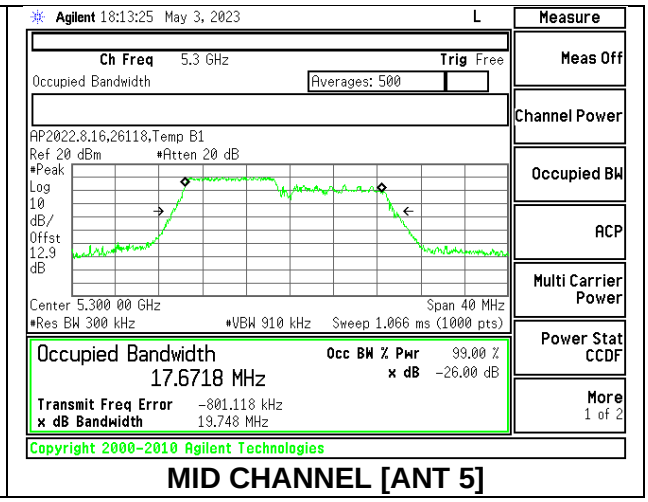
2TX Antenna 6 + Antenna 5 CDD MODE: 103 Tones, RU Index 53

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5260	20.44	20.03	18.1596	17.8518
Mid	5300	20.39	19.74	18.0699	17.6718
High	5320	20.35	20.17	18.0824	18.0318



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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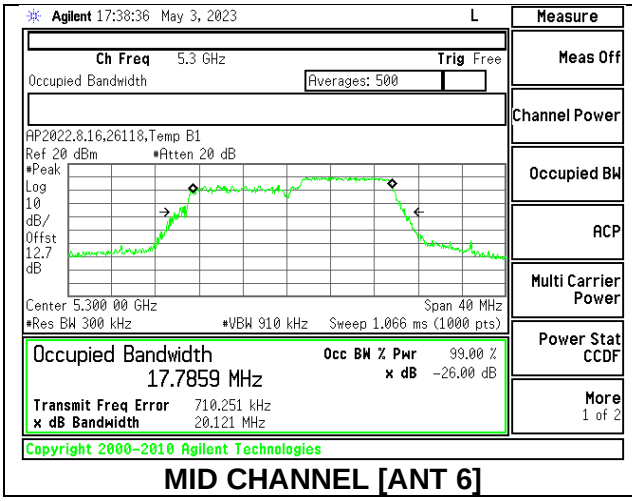
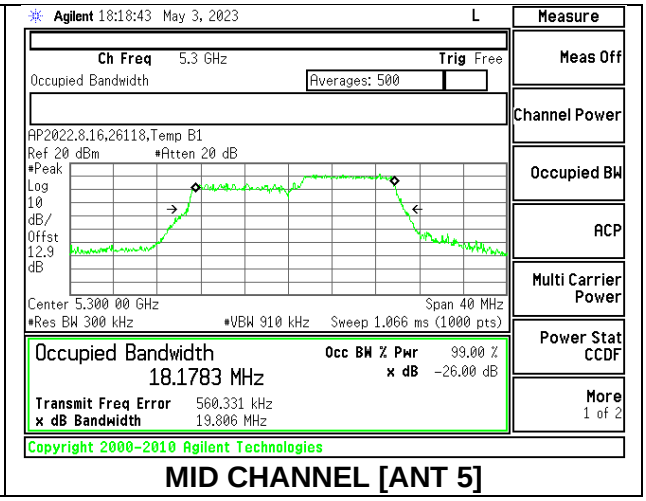
2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 54

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5260	20.79	19.99	18.2200	18.1478
Mid	5300	20.12	19.80	17.7859	18.1783
High	5320	20.74	19.74	18.2331	18.1515



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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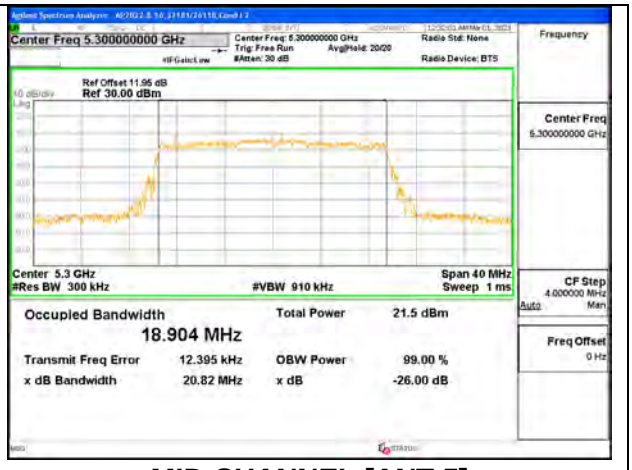
2TX Antenna 6 + Antenna 5 CDD MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5260	20.77	20.89	18.9490	18.9420
Mid	5300	20.82	20.82	18.9510	18.9040
High	5320	20.85	21.23	19.0420	18.9650

MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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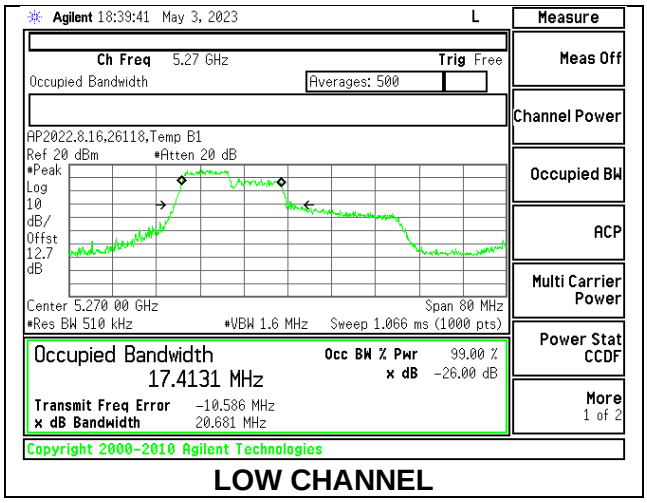
9.2.12. 802.11ax HE40 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE: 106 Tones, RU Index 53

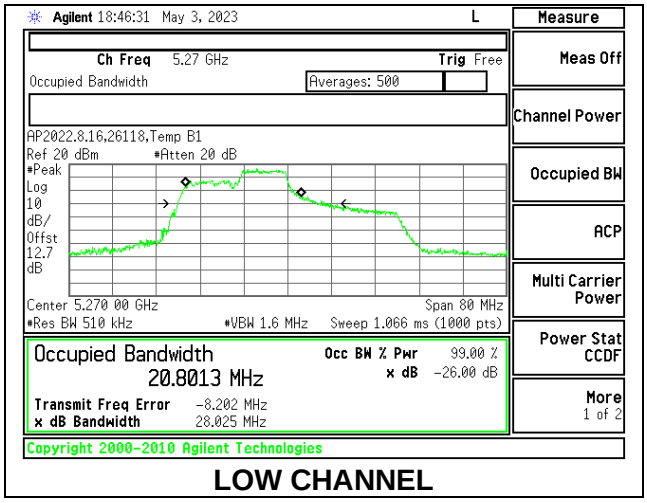
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	20.68	17.4131
High	5310	21.51	17.8559



LOW CHANNEL

1TX Antenna 6 MODE: 106 Tones, RU Index 54

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	28.02	20.8013
High	5310	26.77	19.5319



LOW CHANNEL

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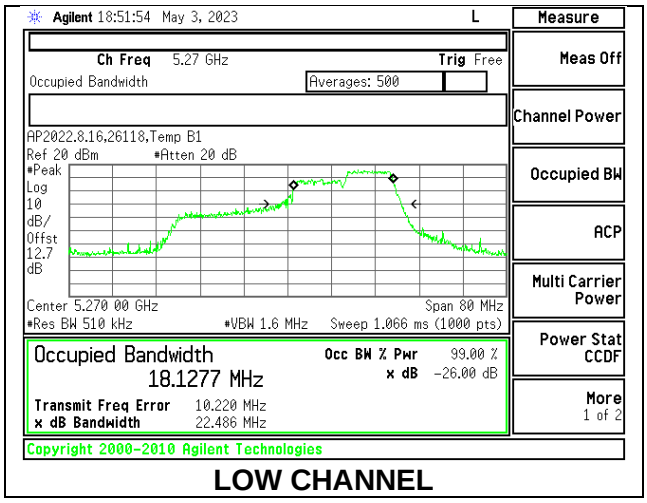
1TX Antenna 6 MODE: 106 Tones, RU Index 56

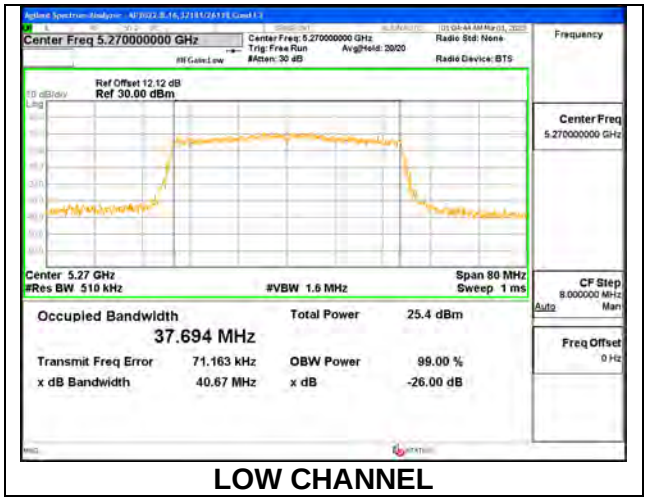
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	22.48	18.1277
High	5310	22.93	18.2500



LOW CHANNEL

1TX Antenna 6 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	40.67	37.6940
High	5310	41.74	37.6700



LOW CHANNEL

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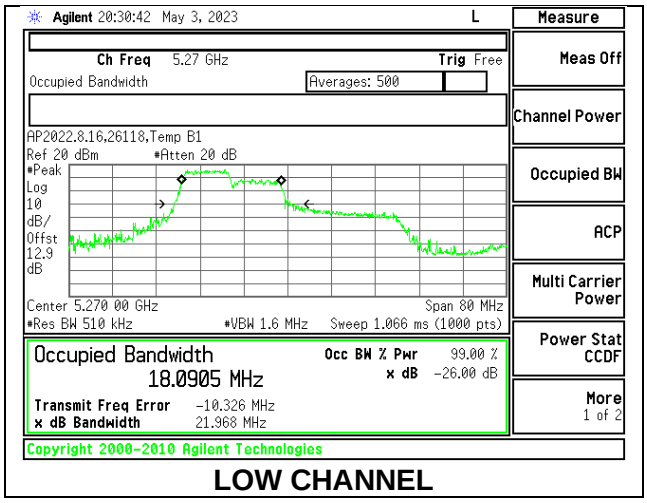
1TX Antenna 5 MODE: 106 Tones, RU Index 53

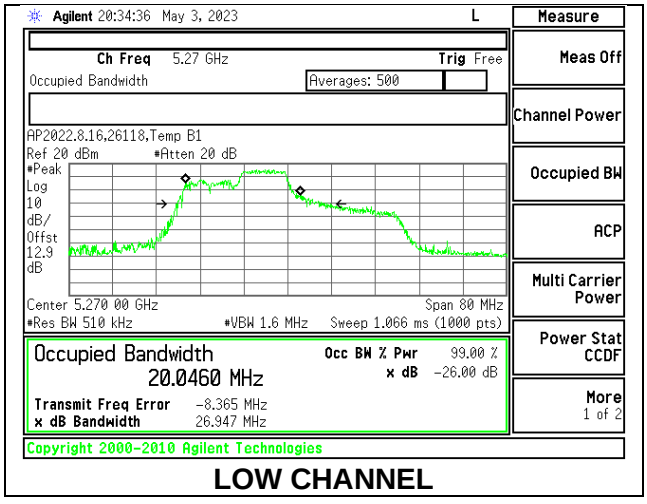
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	21.96	18.0905
High	5310	21.71	18.0057



LOW CHANNEL

1TX Antenna 5 MODE: 106 Tones, RU Index 54

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	26.94	20.0460
High	5310	25.54	19.1726



LOW CHANNEL

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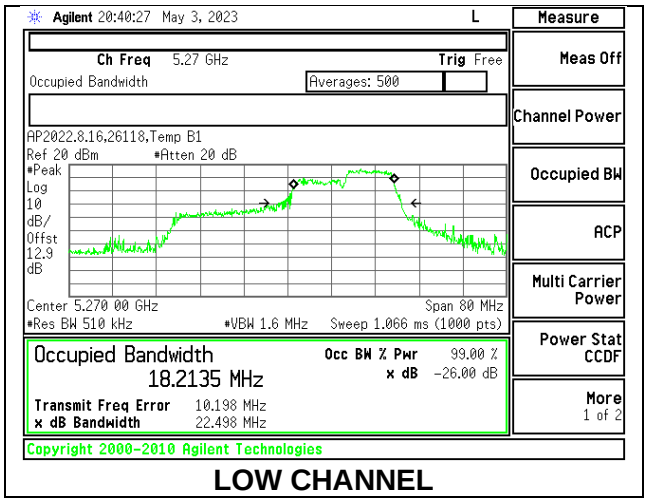
1TX Antenna 5 MODE: 106 Tones, RU Index 56

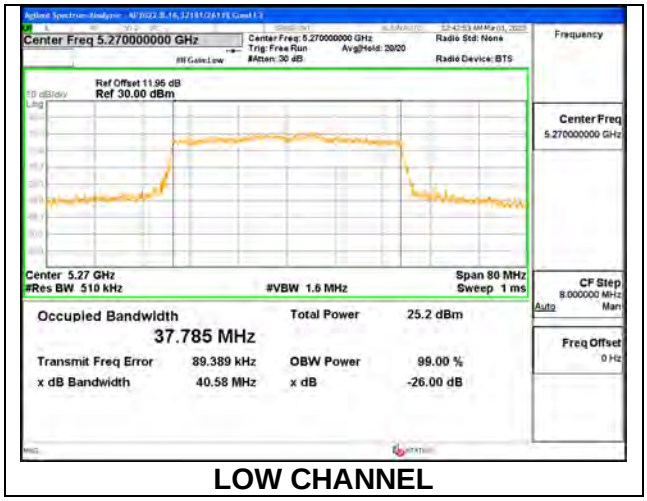
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	22.49	18.2135
High	5310	22.88	18.4245



LOW CHANNEL

1TX Antenna 5 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5270	40.58	37.7850
High	5310	41.59	37.7770



LOW CHANNEL

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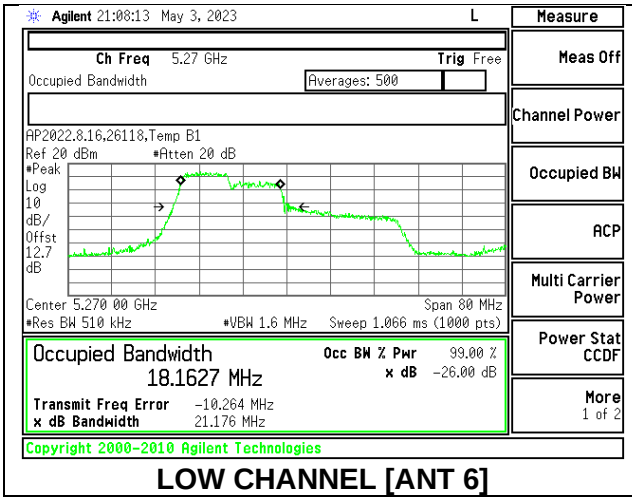
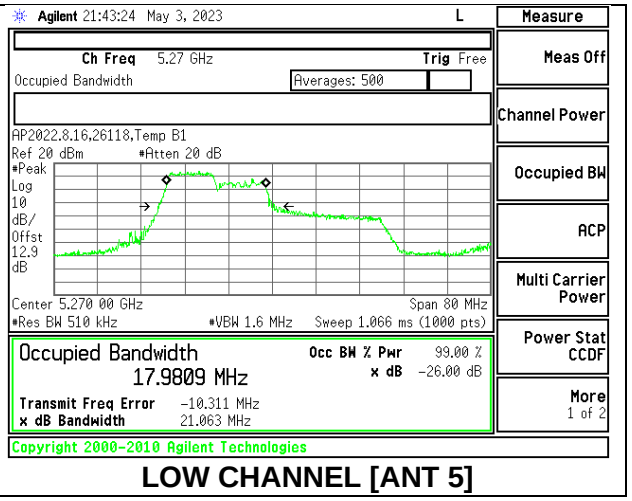
2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 53

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5270	21.17	21.06	18.1627	17.9809
High	5310	20.41	20.33	16.2382	17.3185



LOW CHANNEL [ANT 6]



LOW CHANNEL [ANT 5]

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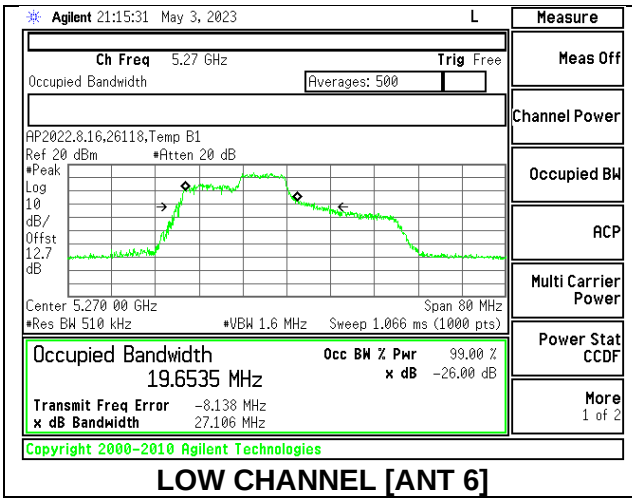
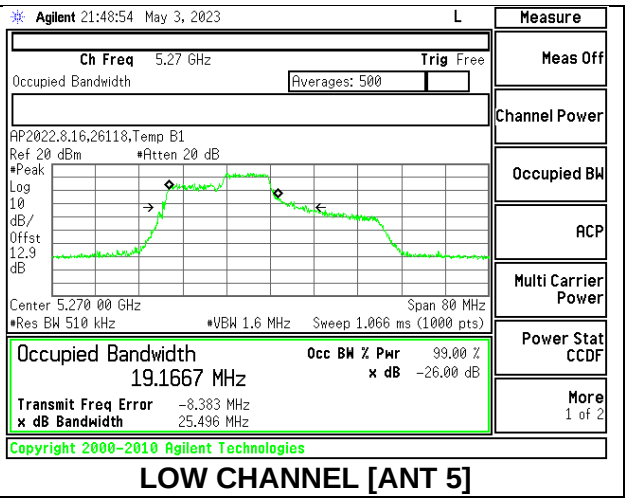
2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 54

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5270	27.10	25.49	19.6535	19.1667
High	5310	28.97	25.86	20.6391	18.5252



LOW CHANNEL [ANT 6]



LOW CHANNEL [ANT 5]

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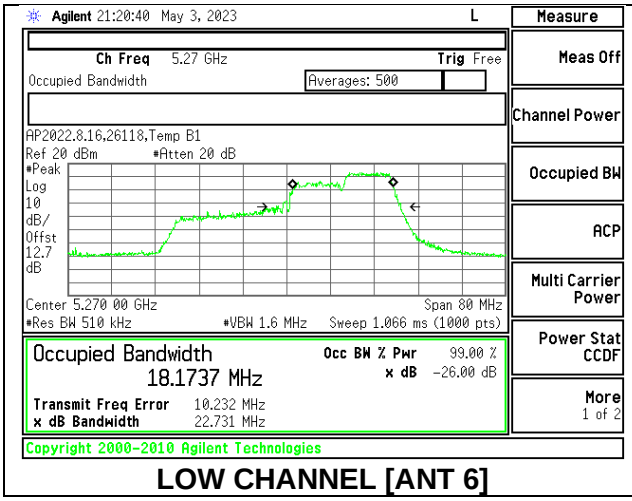
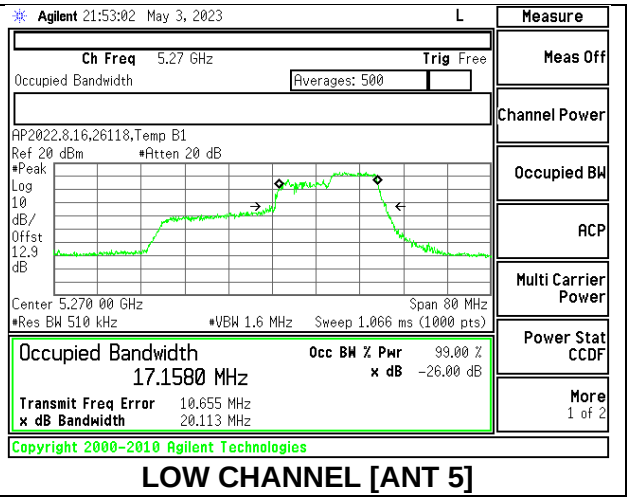
2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 56

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5270	22.73	20.11	18.1737	17.1580
High	5310	22.45	21.18	18.3126	17.8601



LOW CHANNEL [ANT 6]



LOW CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5270	39.92	39.68	37.6480	37.7840
High	5310	39.69	40.24	37.6900	37.7600

LOW CHANNEL [ANT 6]

LOW CHANNEL [ANT 5]

UL VERIFICATION SERVICES INC.
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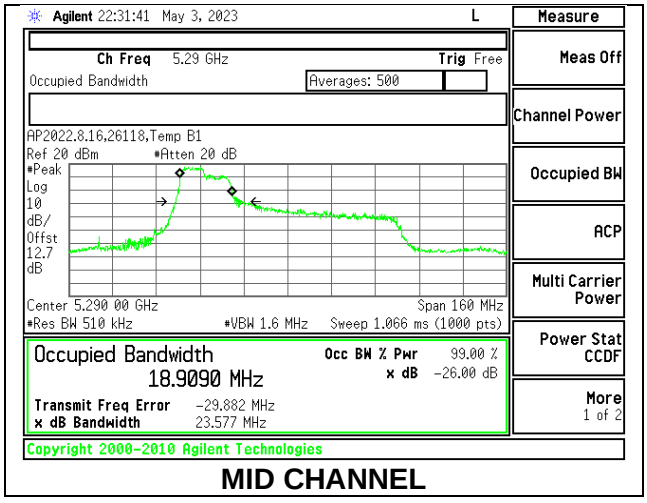
9.2.13. 802.11ax HE80 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE: 106 Tones, RU Index 53

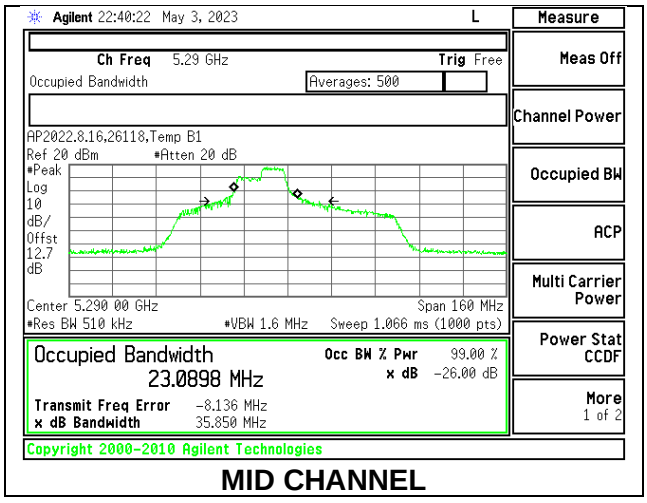
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	23.58	18.9090



MID CHANNEL

1TX Antenna 6 MODE: 106 Tones, RU Index 56

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	35.85	23.0898

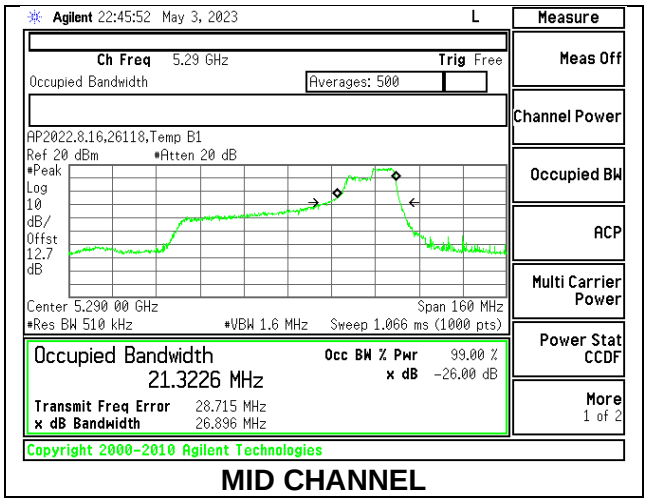


MID CHANNEL

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

1TX Antenna 6 MODE: 106 Tones, RU Index 60

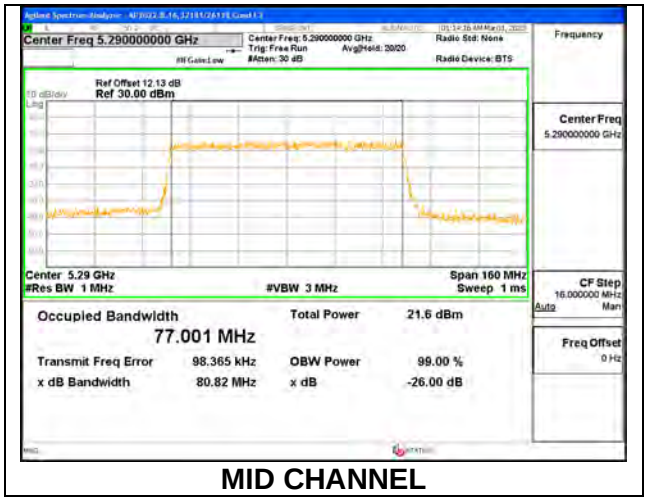
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	26.90	21.3226



MID CHANNEL

1TX Antenna 6 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	80.82	77.0010

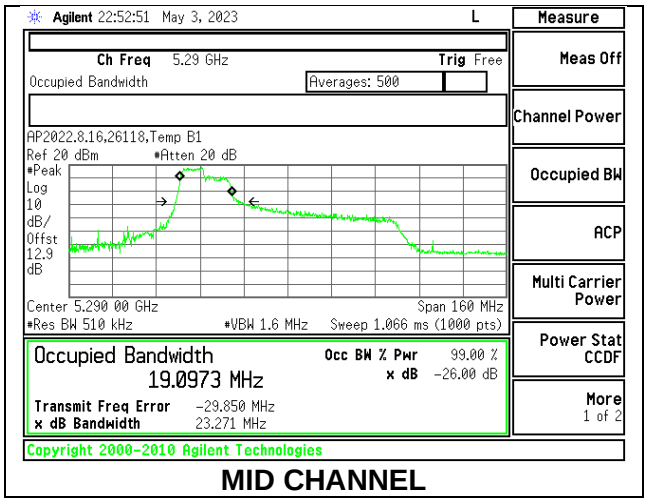


MID CHANNEL

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

1TX Antenna 5 MODE: 106 Tones, RU Index 53

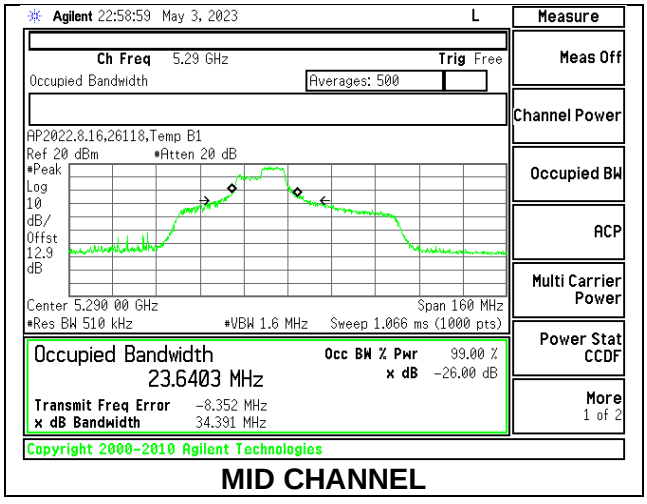
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	23.27	19.0973



MID CHANNEL

1TX Antenna 5 MODE: 106 Tones, RU Index 56

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	34.39	23.6403

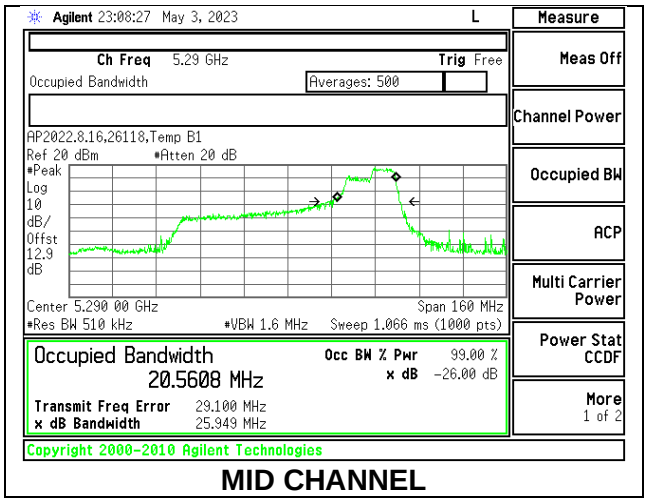


MID CHANNEL

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

1TX Antenna 5 MODE: 106 Tones, RU Index 60

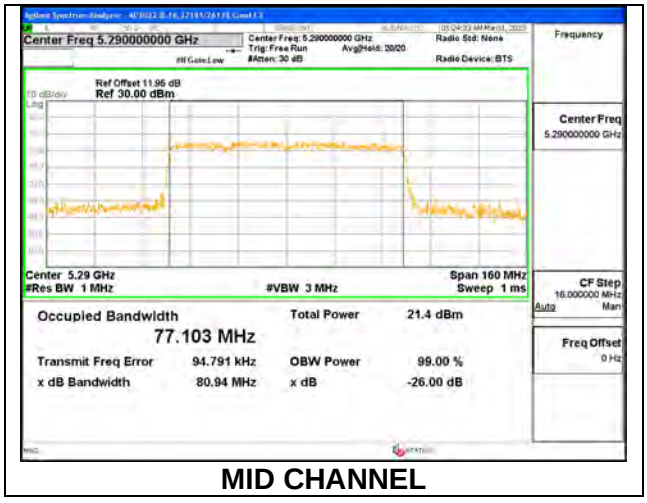
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	25.94	20.5608



MID CHANNEL

1TX Antenna 5 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5290	80.94	77.1030

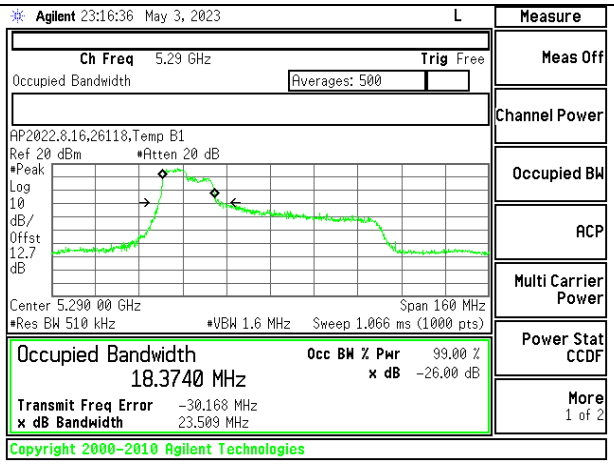


MID CHANNEL

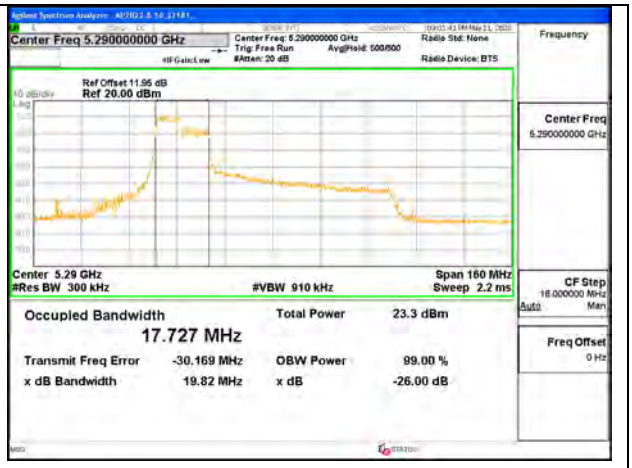
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 53

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5290	23.51	19.82	18.3740	17.7270



MID CHANNEL [ANT 6]

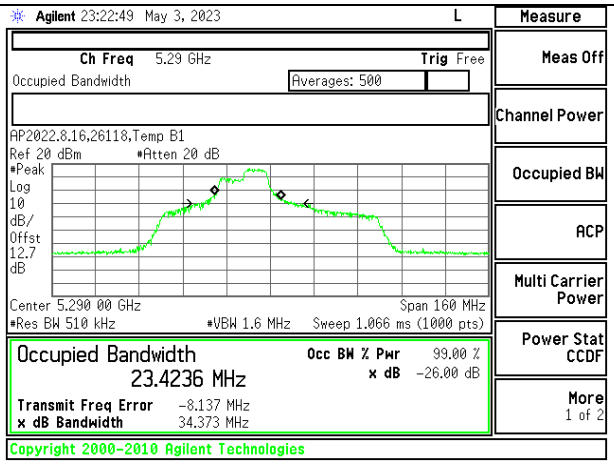


MID CHANNEL [ANT 5]

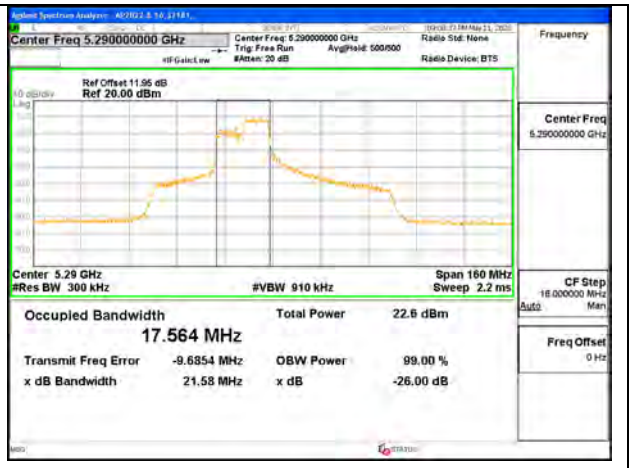
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 56

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5290	34.37	21.58	23.4236	17.5640



MID CHANNEL [ANT 6]

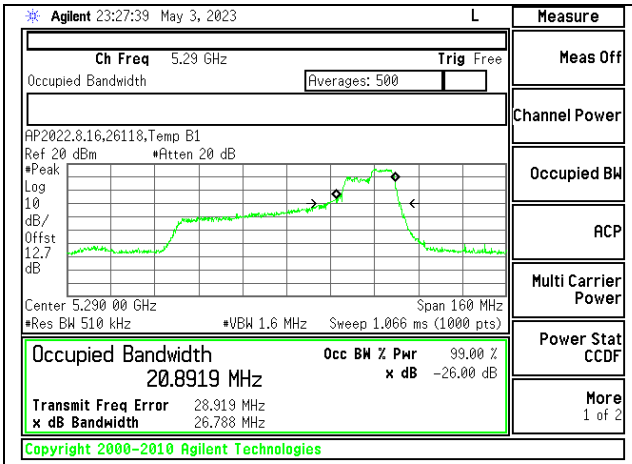


MID CHANNEL [ANT 5]

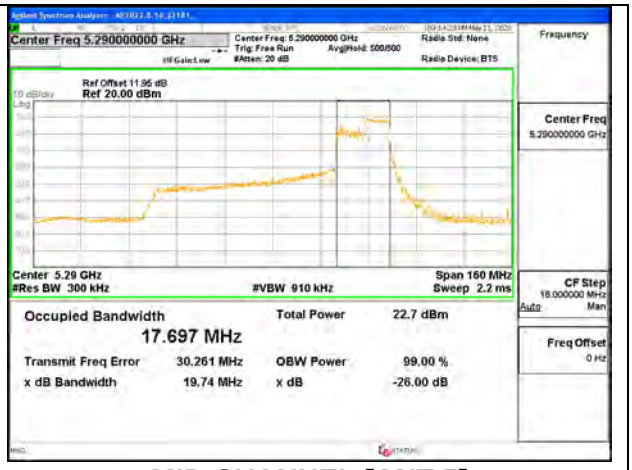
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 60

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5290	26.79	19.74	20.8919	17.6979



MID CHANNEL [ANT 6]

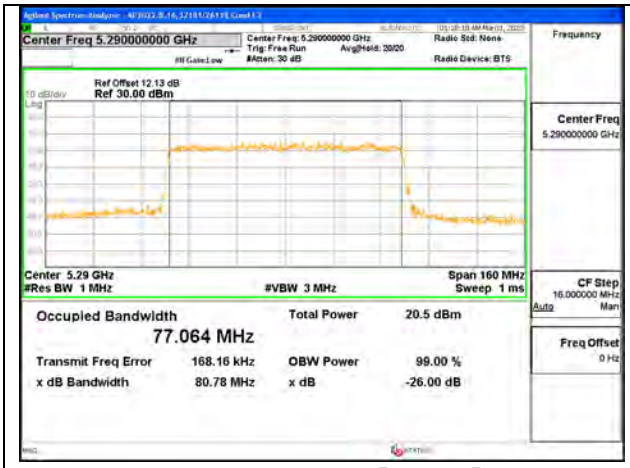


MID CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5290	80.78	80.82	77.0640	77.0150



MID CHANNEL [ANT 6]

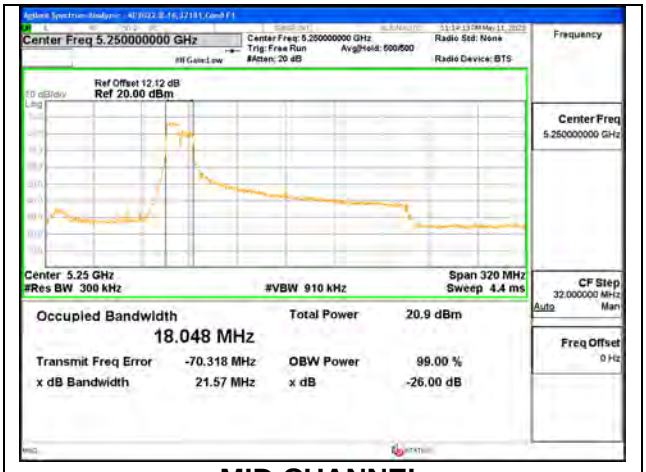
MID CHANNEL [ANT 5]

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

9.2.14. 802.11ax HE160 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE: 106 Tones, RU Index 53

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5250	21.57	18.0480



MID CHANNEL

1TX Antenna 6 MODE: 106 Tones, RU Index 60

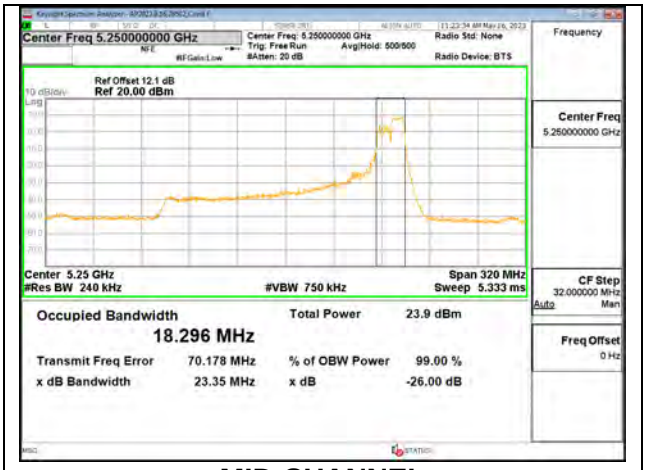
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5250	22.95	18.4550

MID CHANNEL

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

1TX Antenna 6 MODE: 106 Tones, RU Index S60

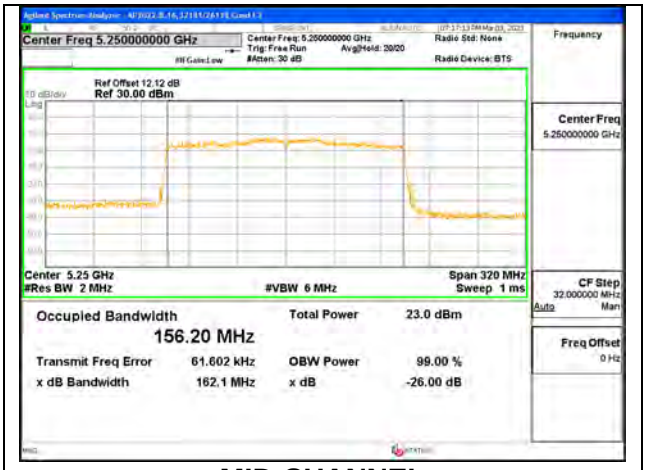
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5250	23.35	18.2960



MID CHANNEL

1TX Antenna 6 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5250	162.10	156.2000

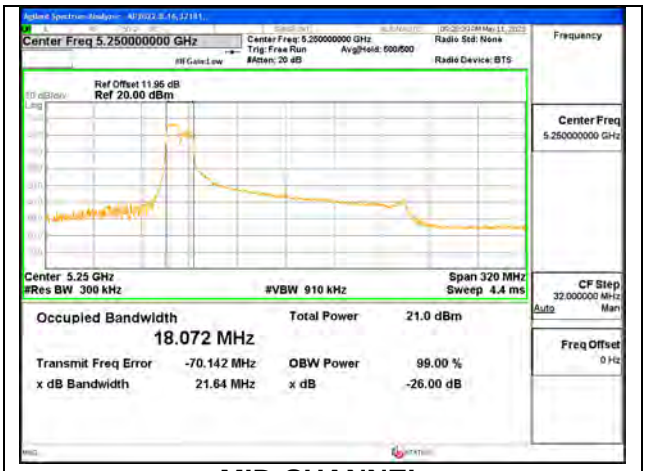


MID CHANNEL

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

1TX Antenna 5 MODE: 106 Tones, RU Index 53

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5250	21.64	18.0720



MID CHANNEL

1TX Antenna 5 MODE: 106 Tones, RU Index 60

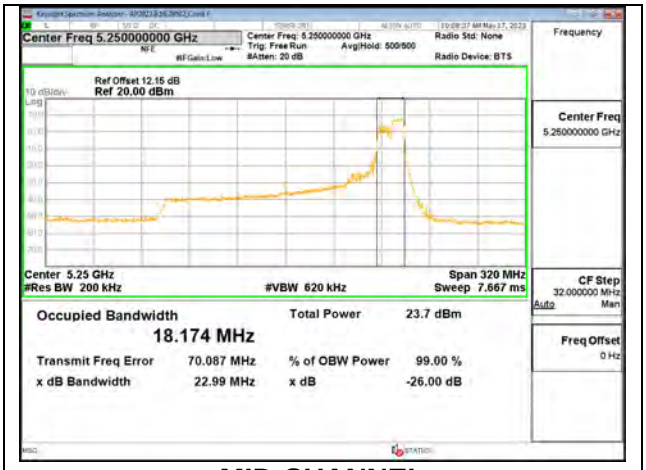
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5250	23.65	18.5710

MID CHANNEL

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

1TX Antenna 5 MODE: 106 Tones, RU Index S60

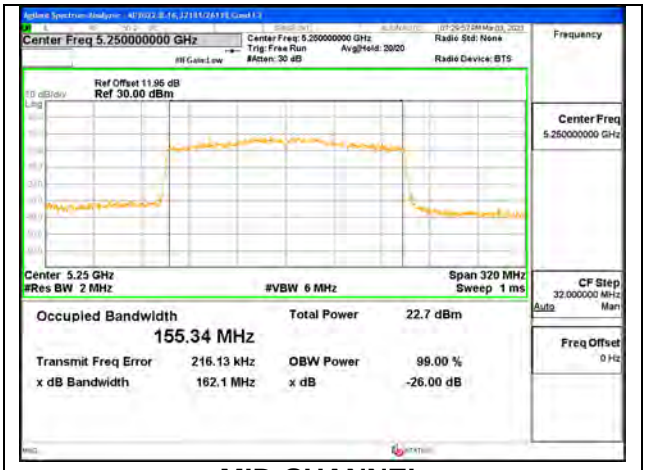
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5250	22.99	18.1740



MID CHANNEL

1TX Antenna 5 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5250	162.10	155.3400



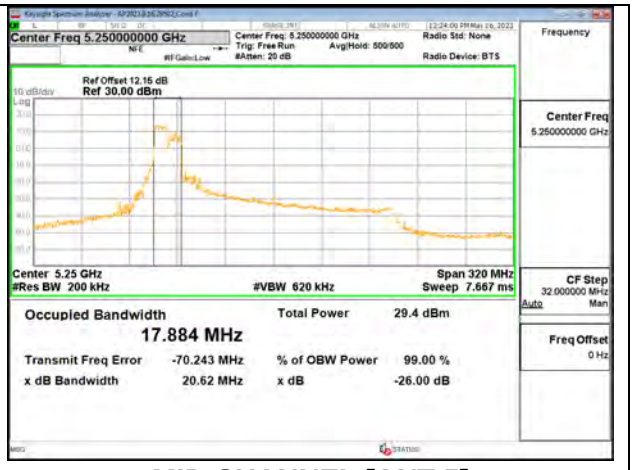
MID CHANNEL

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

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 53

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5250	21.77	20.62	17.9300	17.8840

MID CHANNEL [ANT 6]



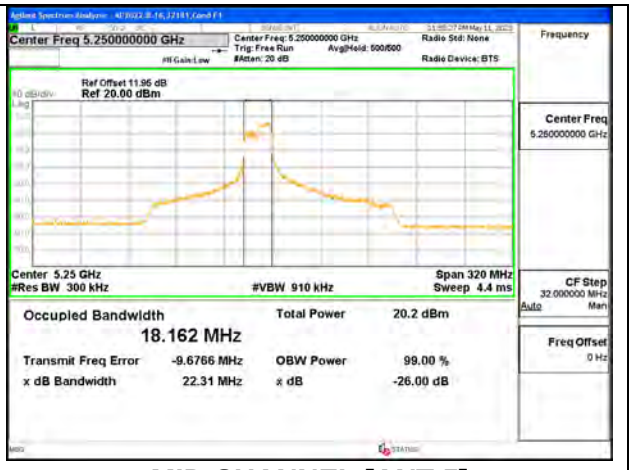
MID CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 60

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5250	24.07	22.31	18.5000	18.1620

MID CHANNEL [ANT 6]

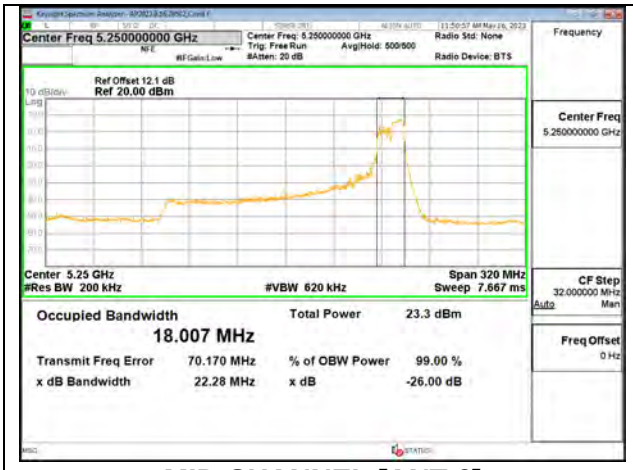


MID CHANNEL [ANT 5]

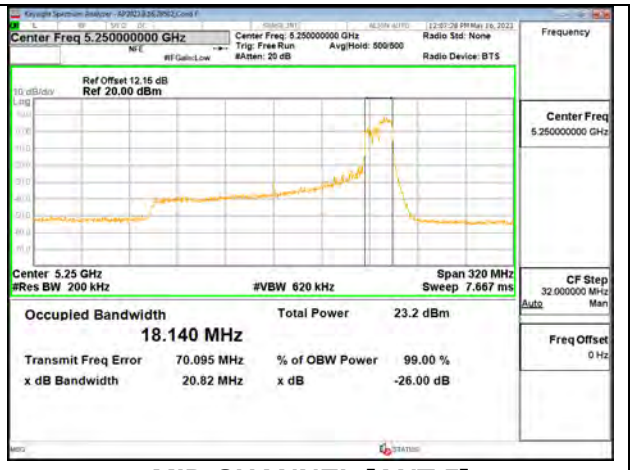
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index S60

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5250	22.28	20.82	18.0070	18.1400



MID CHANNEL [ANT 6]

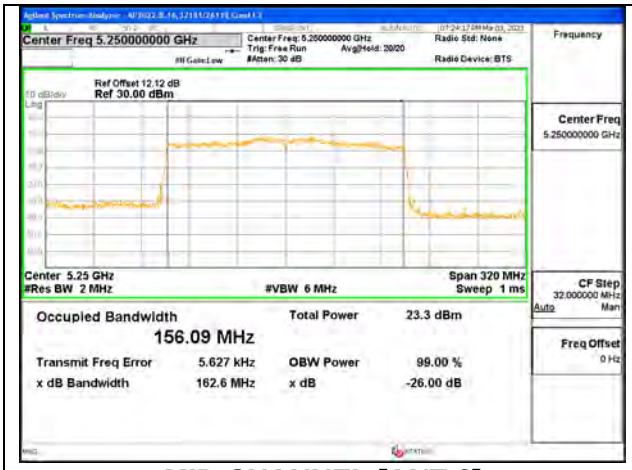


MID CHANNEL [ANT 5]

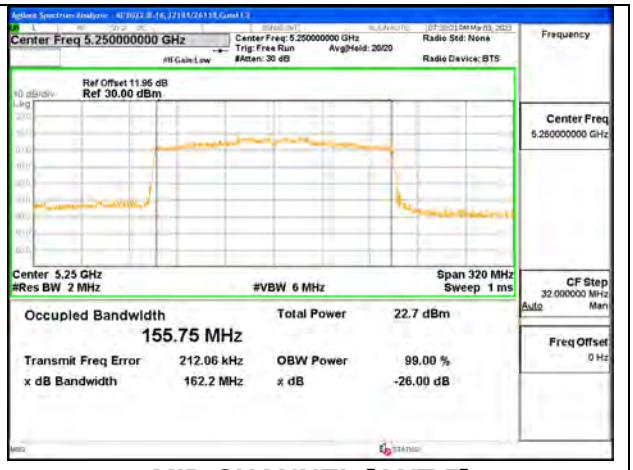
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5250	162.60	162.20	156.0900	155.7500



MID CHANNEL [ANT 6]



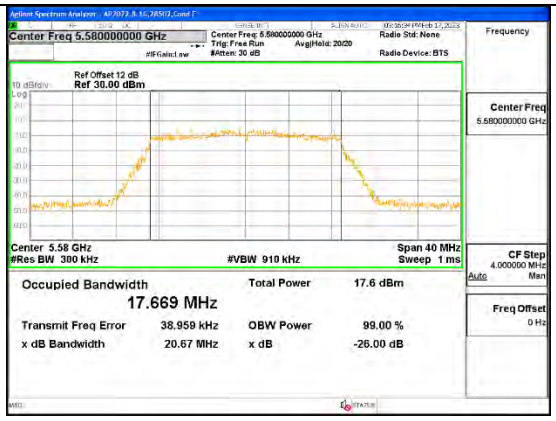
MID CHANNEL [ANT 5]

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

9.2.15. 802.11n HT20 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

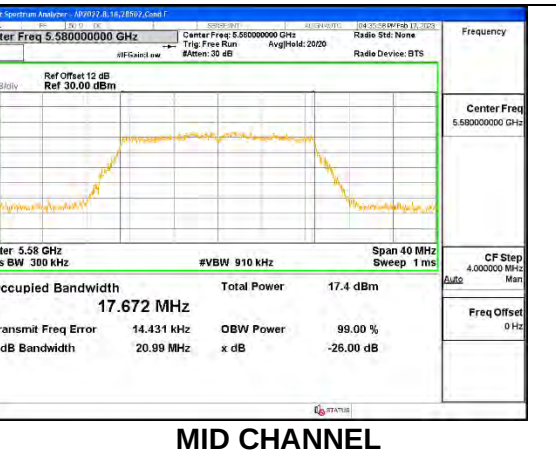
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	21.52	17.7950
Mid	5580	20.67	17.6690
High	5700	21.50	17.8380
144	5720	20.83	17.6880



MID CHANNEL

1TX Antenna 5 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	21.63	17.8680
Mid	5580	20.99	17.6720
High	5700	20.90	17.8110
144	5720	20.65	17.7700

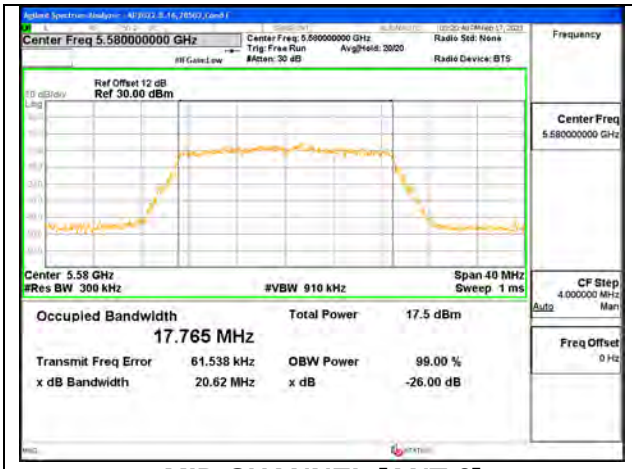


MID CHANNEL

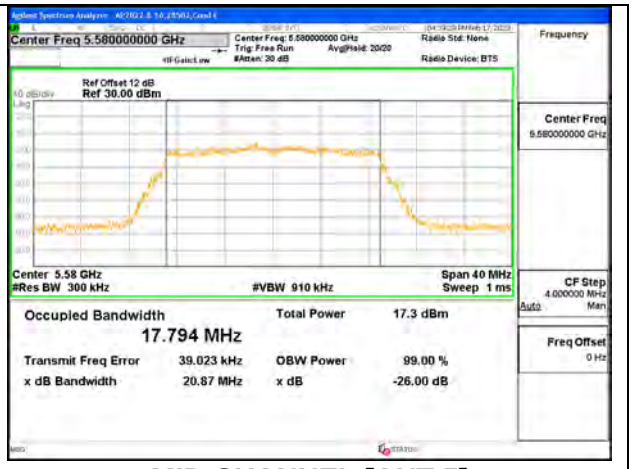
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5500	20.47	20.49	17.7620	17.7430
Mid	5580	20.62	20.87	17.7650	17.7940
High	5700	20.62	21.83	17.8120	17.8250
144	5720	20.45	20.60	17.7300	17.6890



MID CHANNEL [ANT 6]



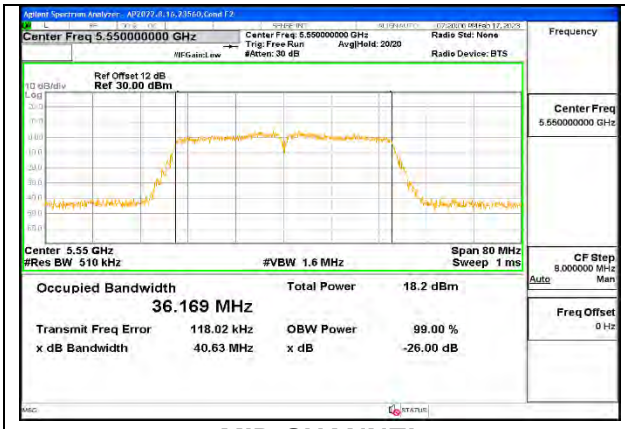
MID CHANNEL [ANT 5]

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

9.2.16. 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	41.56	36.2870
Mid	5550	40.63	36.1690
High	5670	41.42	36.2460
142	5710	40.95	36.2170



MID CHANNEL

1TX Antenna 5 MODE

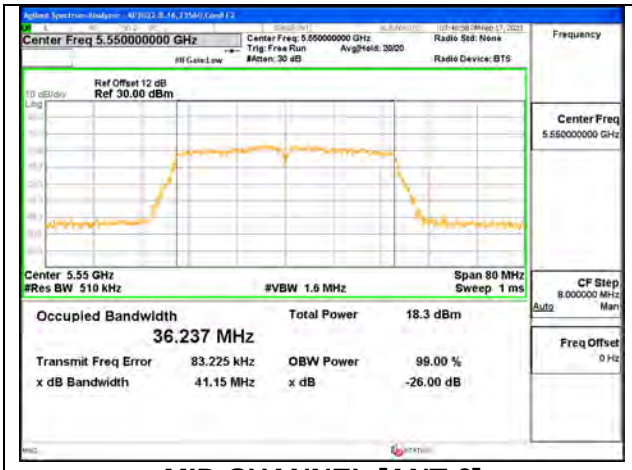
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	45.45	36.2260
Mid	5550	40.62	36.1660
High	5670	41.03	36.3020
142	5710	40.90	36.1430

MID CHANNEL

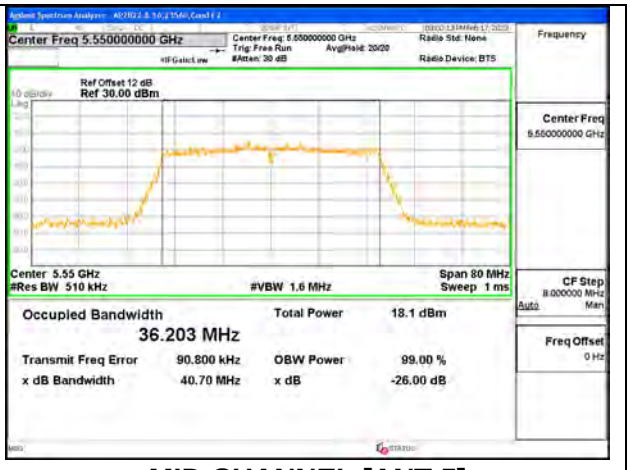
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5510	41.69	41.37	36.2120	36.1700
Mid	5550	41.15	40.70	36.2370	36.2030
High	5670	43.05	40.81	36.2570	36.3370
142	5710	40.92	40.10	36.1880	36.2450



MID CHANNEL [ANT 6]



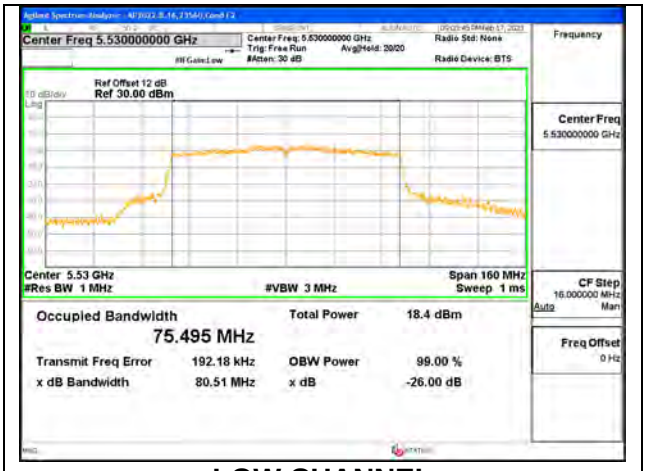
MID CHANNEL [ANT 5]

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

9.2.17. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

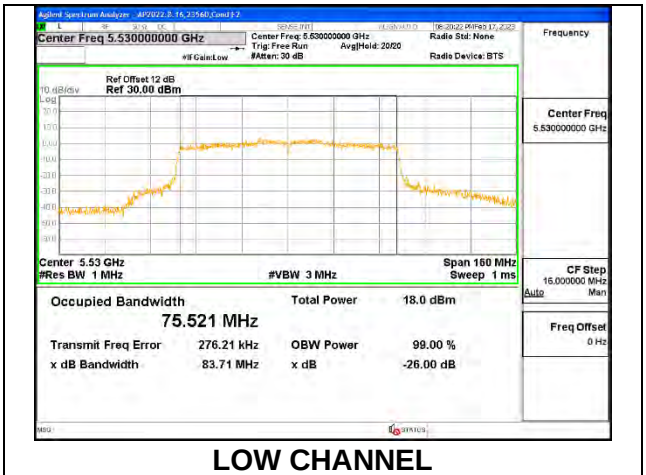
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5530	80.51	75.4950
High	5610	81.33	75.5900
138	5690	80.80	75.4200



LOW CHANNEL

1TX Antenna 5 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5530	83.71	75.5210
High	5610	81.32	75.4790
138	5690	79.93	75.5470



LOW CHANNEL

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

2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5530	83.60	80.85	75.4890	75.5370
High	5610	82.06	80.64	75.5670	75.7760
138	5690	80.26	80.07	75.5590	75.5490

LOW CHANNEL [ANT 6]

LOW CHANNEL [ANT 5]

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

9.2.18. 802.11ac VHT160 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5570	162.10	154.7000

MID CHANNEL

1TX Antenna 5 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5570	161.90	154.3700

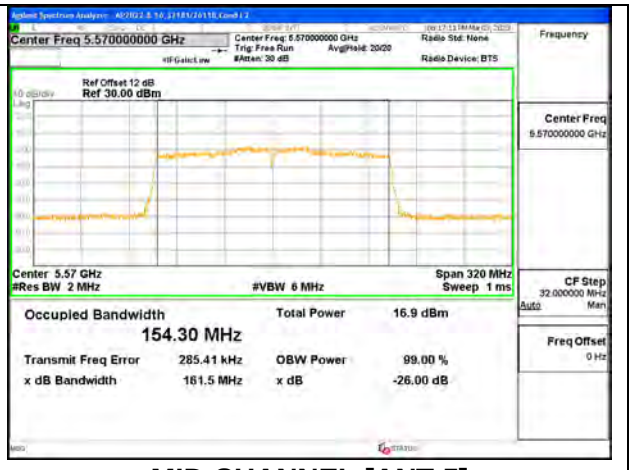
MID CHANNEL

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

2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5570	162.80	161.50	154.7400	154.3000

MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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

9.2.19. 802.11ax HE20 MODE IN THE 5.6 GHz BAND

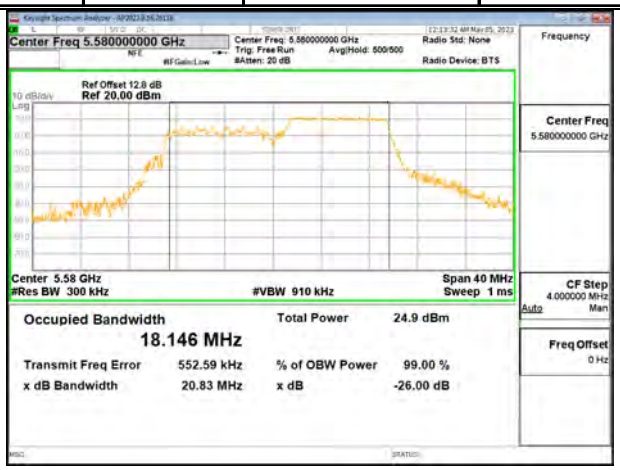
1TX Antenna 6 MODE: 106 Tones, RU Index 53

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	20.42	18.0940
Mid	5580	20.43	18.1470
High	5700	20.51	18.1920
144	5720	20.48	18.1860

MID CHANNEL

1TX Antenna 6 MODE: 106 Tones, RU Index 54

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	20.79	18.2180
Mid	5580	20.83	18.1460
High	5700	20.82	18.2390
144	5720	20.80	18.2590

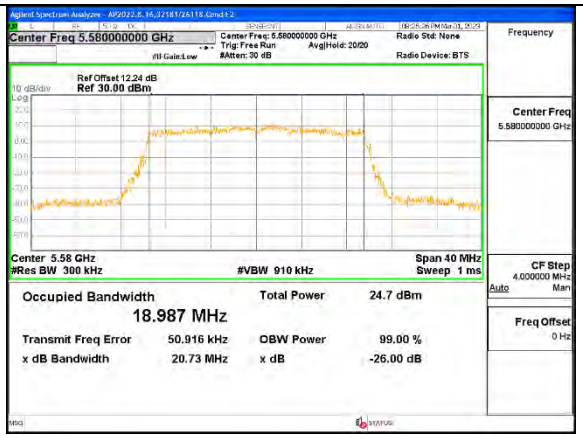


MID CHANNEL

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

1TX Antenna 6 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	20.83	18.9360
Mid	5580	20.73	18.9870
High	5700	21.14	18.8620
144	5720	20.73	18.9890

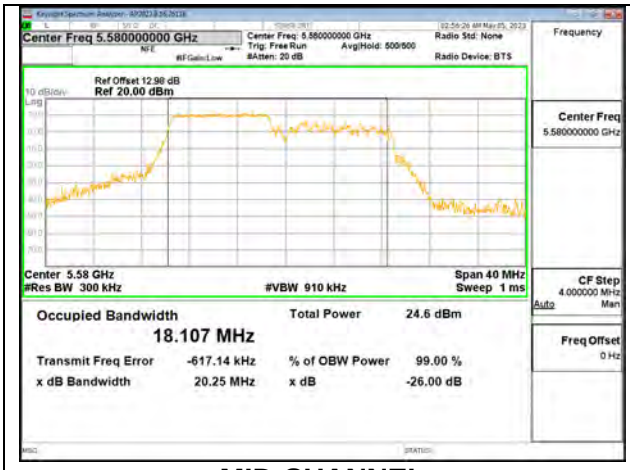


MID CHANNEL

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

1TX Antenna 5 MODE: 106 Tones, RU Index 53

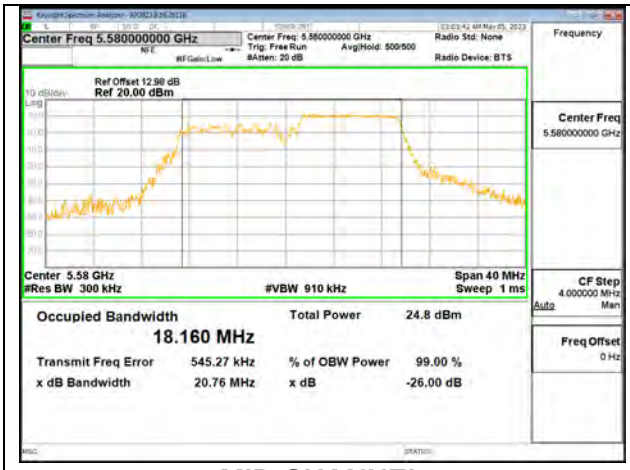
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	20.30	18.1720
Mid	5580	20.25	18.1070
High	5700	20.47	18.2210
144	5720	20.32	18.1700



MID CHANNEL

1TX Antenna 5 MODE: 106 Tones, RU Index 54

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	20.77	18.1950
Mid	5580	20.76	18.1600
High	5700	20.72	18.1210
144	5720	20.67	18.1570

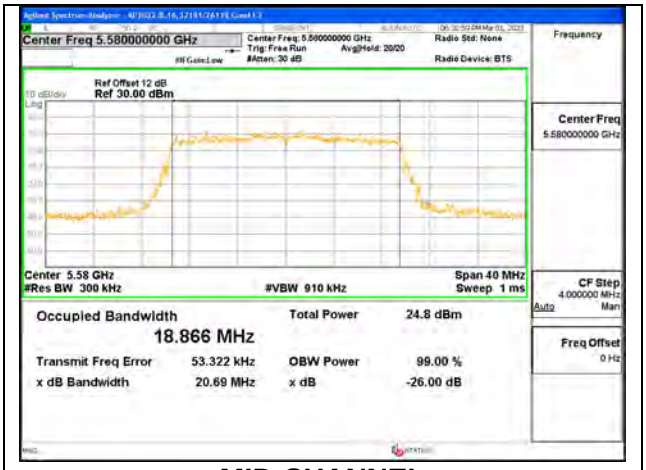


MID CHANNEL

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

1TX Antenna 5 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5500	21.08	18.9530
Mid	5580	20.69	18.8660
High	5700	21.04	18.9240
144	5720	20.38	18.9010

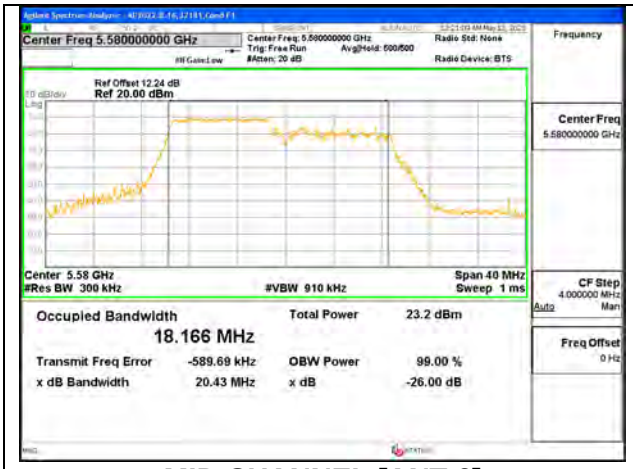


MID CHANNEL

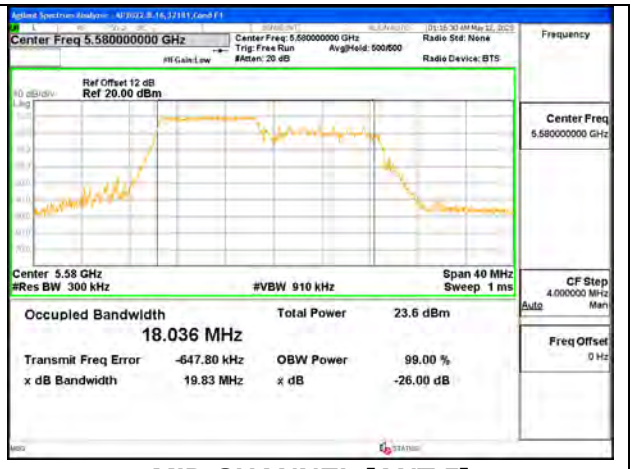
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 53

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5500	20.28	19.84	18.2060	18.0500
Mid	5580	20.43	19.83	18.1660	18.0360
High	5700	20.53	20.16	18.1220	17.9950
144	5720	20.01	20.21	18.1680	18.0560



MID CHANNEL [ANT 6]

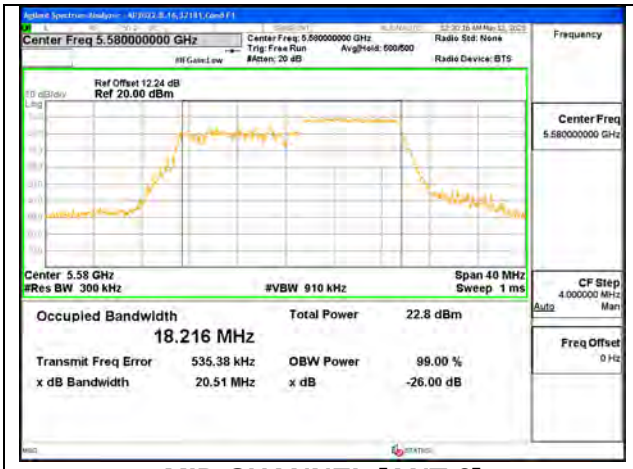


MID CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 54

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5500	20.74	19.79	18.2090	17.9970
Mid	5580	20.51	19.82	18.2160	18.1500
High	5700	20.91	20.10	17.9530	18.0050
144	5720	20.74	19.70	18.2480	18.0690



MID CHANNEL [ANT 6]

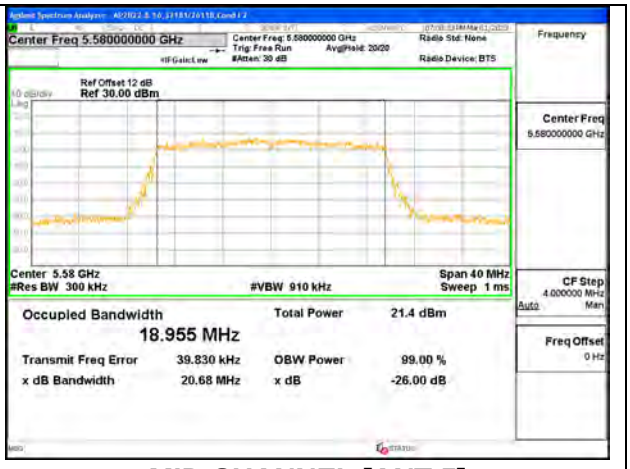
MID CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5500	20.81	21.23	18.9850	18.8870
Mid	5580	20.38	20.68	18.9500	18.9550
High	5700	21.42	20.79	18.9700	18.9420
144	5720	20.55	21.06	18.9080	18.9300

MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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

9.2.20. 802.11ax HE40 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE: 106 Tones, RU Index 53

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	21.61	18.0060
Mid	5550	21.10	18.0040
High	5670	21.92	17.9980
142	5710	21.78	18.0000

MID CHANNEL

1TX Antenna 6 MODE: 106 Tones, RU Index 54

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	26.29	19.8080
Mid	5550	25.90	20.0630
High	5670	27.09	19.8430
142	5710	26.90	19.8340

MID CHANNEL

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

1TX Antenna 6 MODE: 106 Tones, RU Index 56

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	22.37	18.0420
Mid	5550	21.43	18.1240
High	5670	22.63	18.1500
142	5710	22.74	17.9040

MID CHANNEL

1TX Antenna 6 MODE: SU Mode

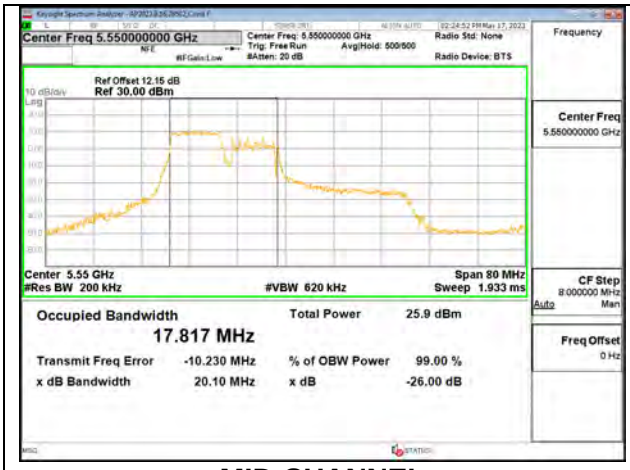
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	41.60	37.7620
Mid	5550	40.56	37.7630
High	5670	40.05	37.7140
142	5710	40.67	37.6840

MID CHANNEL

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

1TX Antenna 5 MODE: 106 Tones, RU Index 53

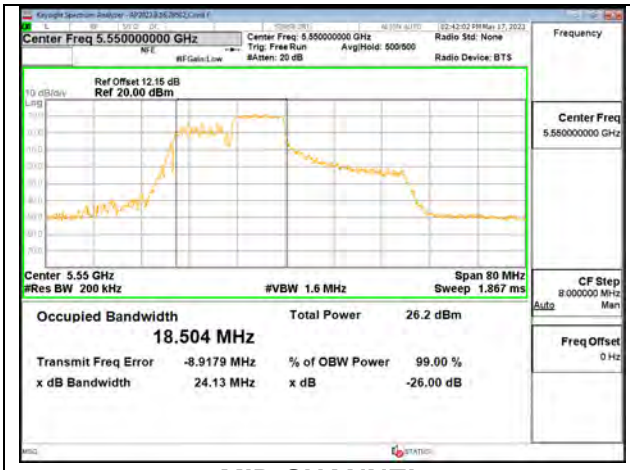
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	22.07	18.0000
Mid	5550	20.10	17.8170
High	5670	20.79	17.7960
142	5710	20.55	17.7100



MID CHANNEL

1TX Antenna 5 MODE: 106 Tones, RU Index 54

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	26.68	19.8960
Mid	5550	24.13	18.5040
High	5670	22.99	18.8020
142	5710	24.02	18.9120

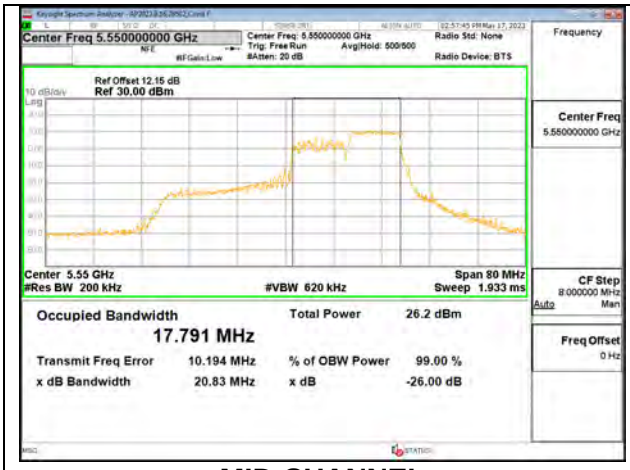


MID CHANNEL

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

1TX Antenna 5 MODE: 106 Tones, RU Index 56

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	22.65	18.0520
Mid	5550	20.83	17.7910
High	5670	20.85	17.8120
142	5710	20.58	17.8750



MID CHANNEL

1TX Antenna 5 MODE: SU Mode

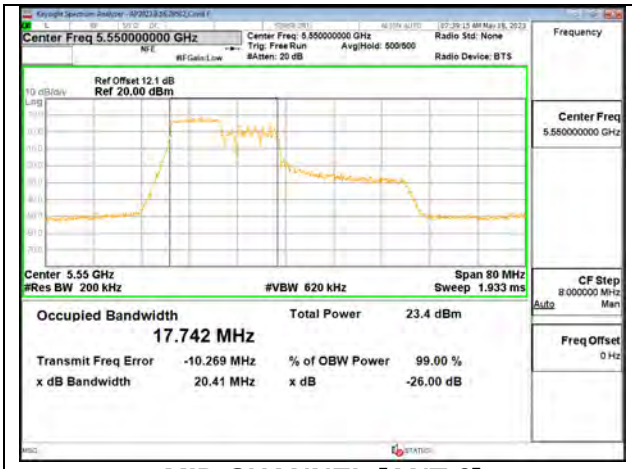
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5510	40.53	37.7680
Mid	5550	40.46	37.6980
High	5670	40.53	37.7300
142	5710	40.12	37.7180

MID CHANNEL

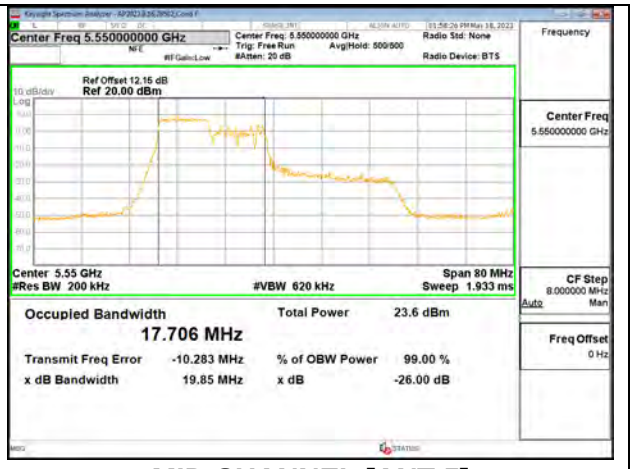
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 53

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5510	20.58	19.71	17.7670	17.7510
Mid	5550	20.41	19.85	17.7420	17.7060
High	5670	20.60	20.54	17.7990	17.5380
142	5710	20.56	19.96	17.8360	17.6520



MID CHANNEL [ANT 6]

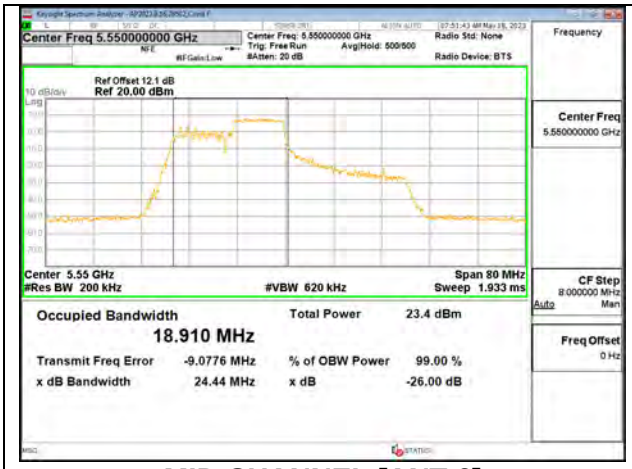


MID CHANNEL [ANT 5]

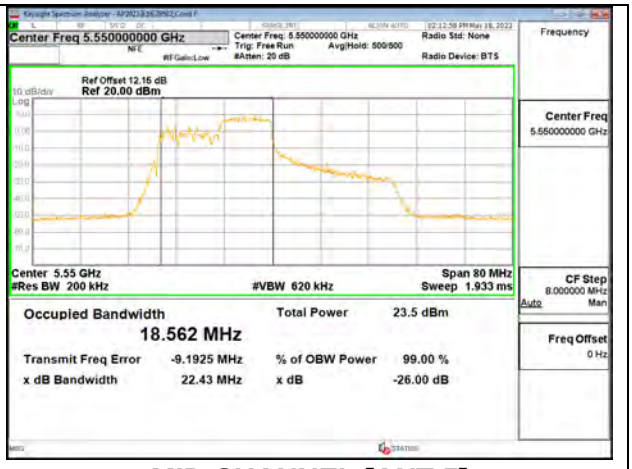
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 54

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5510	24.91	22.55	18.9480	18.5650
Mid	5550	24.44	22.43	18.9100	18.5620
High	5670	25.24	22.37	18.8290	18.4190
142	5710	24.07	23.18	18.6290	18.6950



MID CHANNEL [ANT 6]

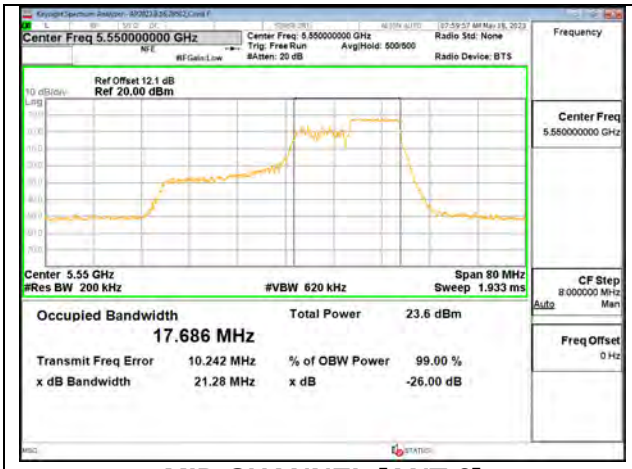


MID CHANNEL [ANT 5]

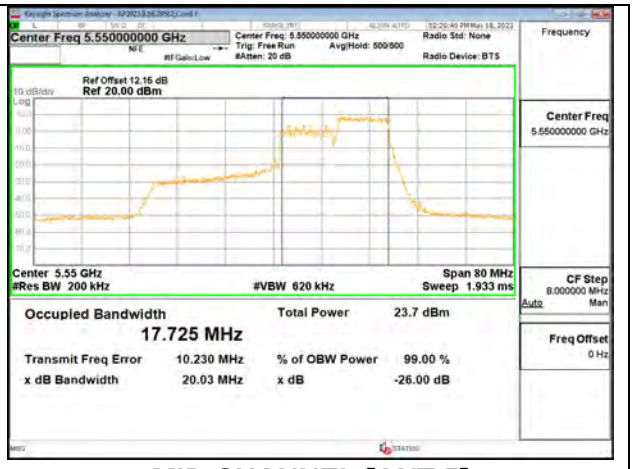
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 56

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5510	20.70	19.88	17.8810	17.7120
Mid	5550	21.28	20.13	17.6860	17.7250
High	5670	21.06	20.14	17.8890	17.8550
142	5710	20.74	19.86	17.3860	17.7850



MID CHANNEL [ANT 6]



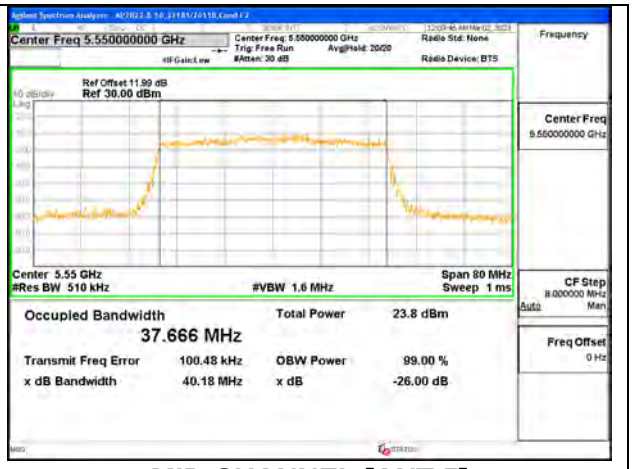
MID CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5510	40.61	41.28	37.6450	37.7600
Mid	5550	40.60	40.18	37.7600	37.6660
High	5670	40.59	40.57	37.8170	37.7620
142	5710	40.06	40.80	37.7450	37.7980

MID CHANNEL [ANT 6]



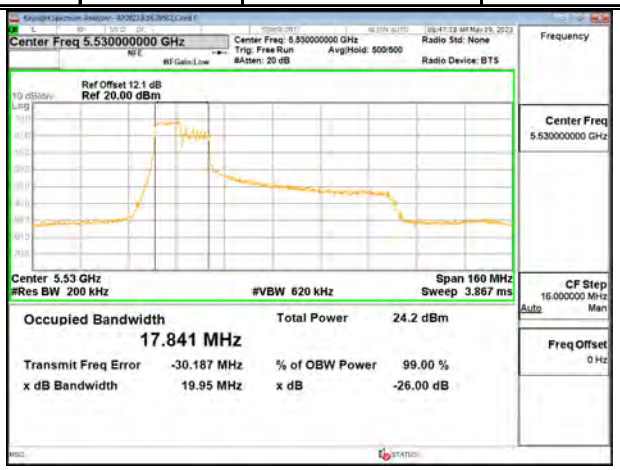
MID CHANNEL [ANT 5]

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

9.2.21. 802.11ax HE80 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE: 106 Tones, RU Index 53

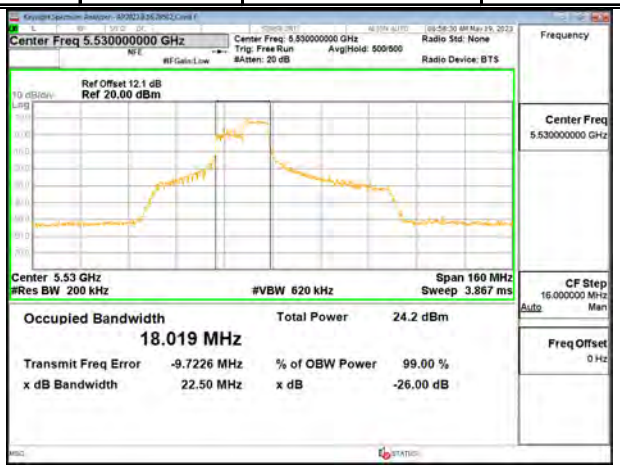
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5530	19.95	17.8410
High	5610	19.49	17.7410
138	5690	19.56	17.7350



LOW CHANNEL

1TX Antenna 6 MODE: 106 Tones, RU Index 56

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5530	22.50	18.0190
High	5610	23.22	17.9620
138	5690	23.16	18.0140

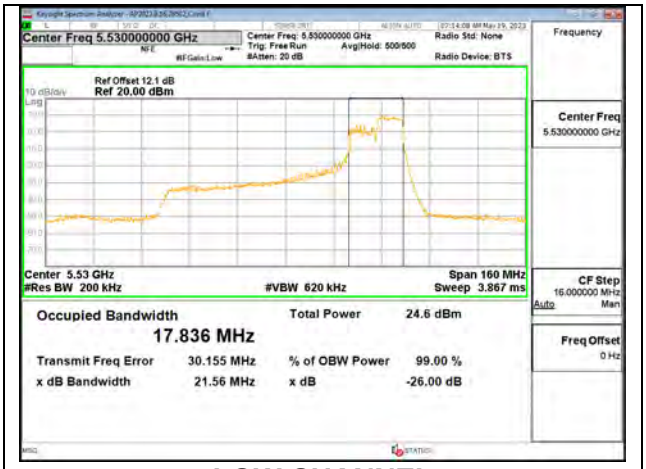


LOW CHANNEL

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

1TX Antenna 6 MODE: 106 Tones, RU Index 60

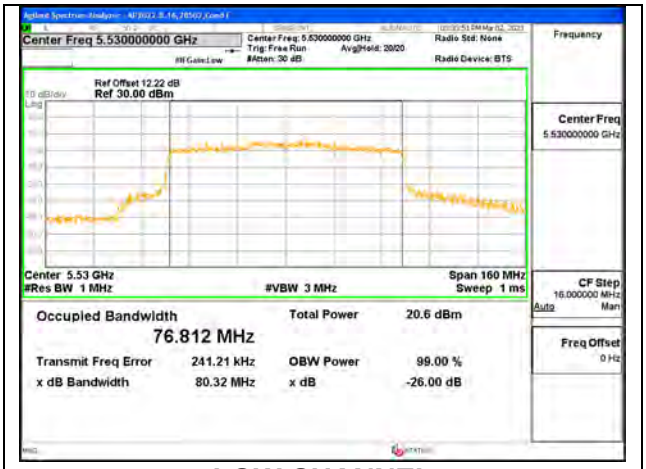
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5530	21.56	17.8360
High	5610	21.03	17.8170
138	5690	20.30	17.8340



LOW CHANNEL

1TX Antenna 6 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5530	80.32	76.8120
High	5610	80.14	76.9600
138	5690	80.54	76.8000

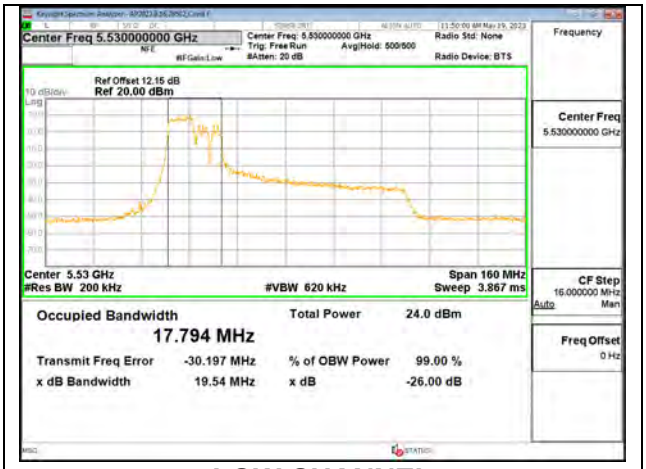


LOW CHANNEL

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

1TX Antenna 5 MODE: 106 Tones, RU Index 53

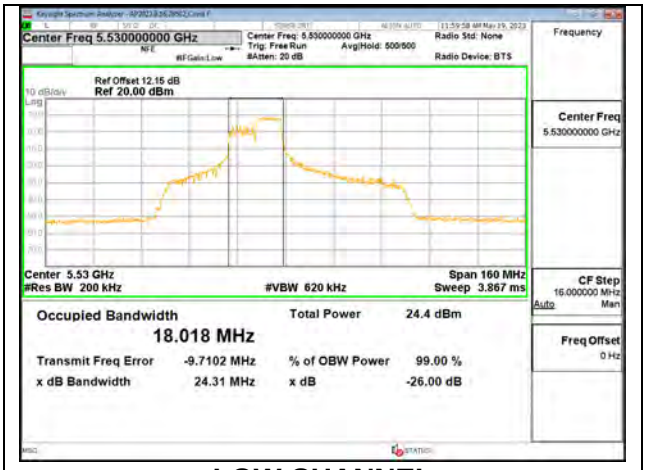
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5530	19.54	17.7940
High	5610	19.56	17.7870
138	5690	19.68	17.7090



LOW CHANNEL

1TX Antenna 5 MODE: 106 Tones, RU Index 56

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5530	24.31	18.0180
High	5610	23.70	18.0140
138	5690	19.64	17.7230

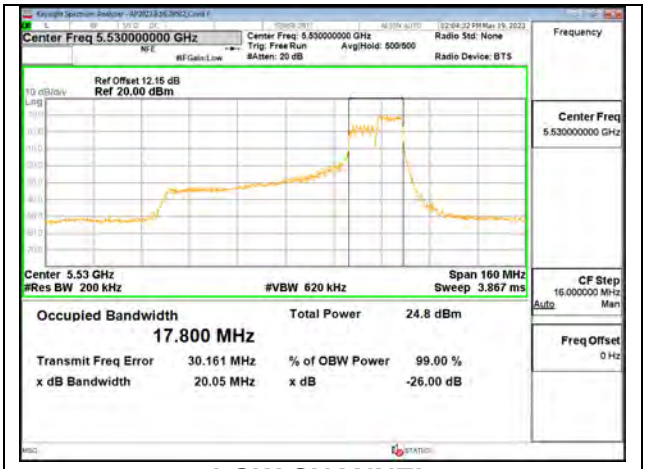


LOW CHANNEL

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

1TX Antenna 5 MODE: 106 Tones, RU Index 60

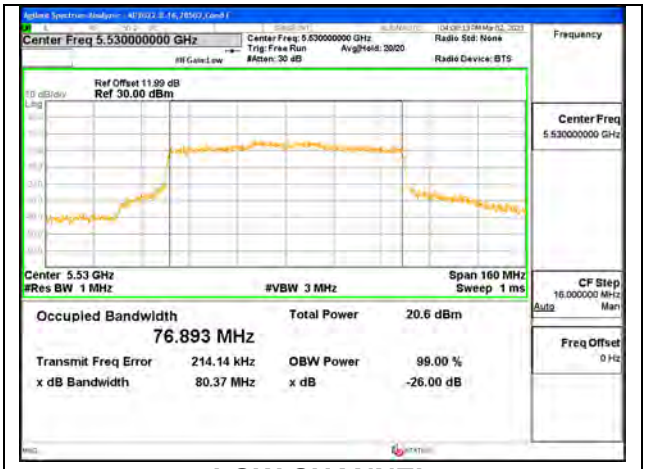
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5530	20.05	17.8000
High	5610	21.20	17.3020
138	5690	20.55	17.5130



LOW CHANNEL

1TX Antenna 5 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5530	80.37	76.8930
High	5610	82.96	76.7470
138	5690	80.48	77.2030



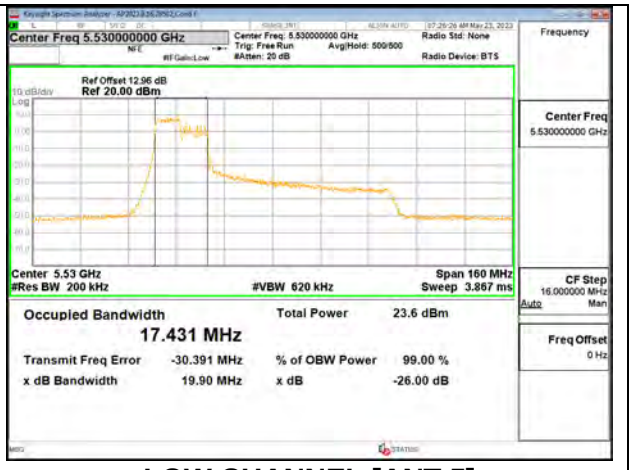
LOW CHANNEL

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

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 53

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5530	20.47	19.90	17.8810	17.4310
High	5610	17.74	19.95	16.7350	17.7430
138	5690	19.15	19.85	17.8500	17.7380

LOW CHANNEL [ANT 6]

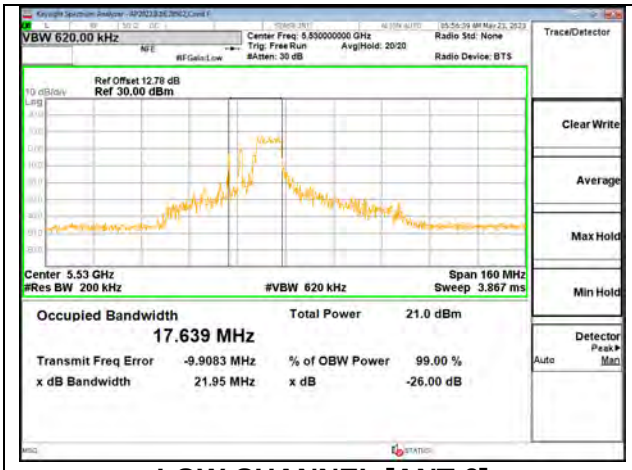


LOW CHANNEL [ANT 5]

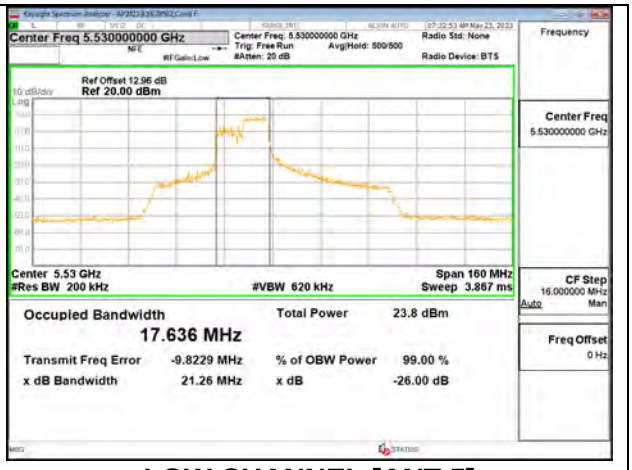
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 56

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5530	21.95	21.26	17.6390	17.6360
High	5610	19.89	21.57	17.5820	17.5720
138	5690	24.04	22.23	17.5140	17.5170



LOW CHANNEL [ANT 6]

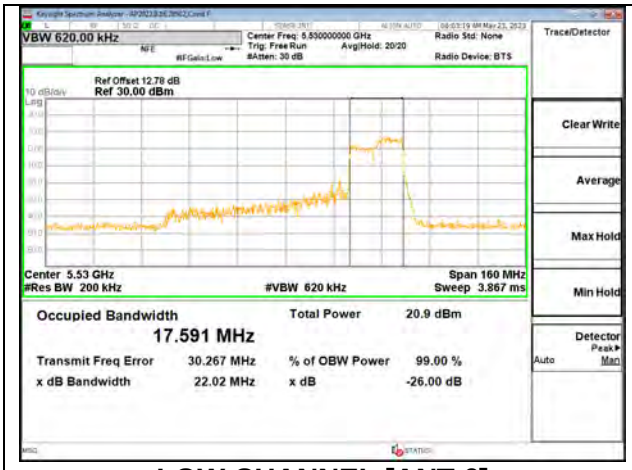


LOW CHANNEL [ANT 5]

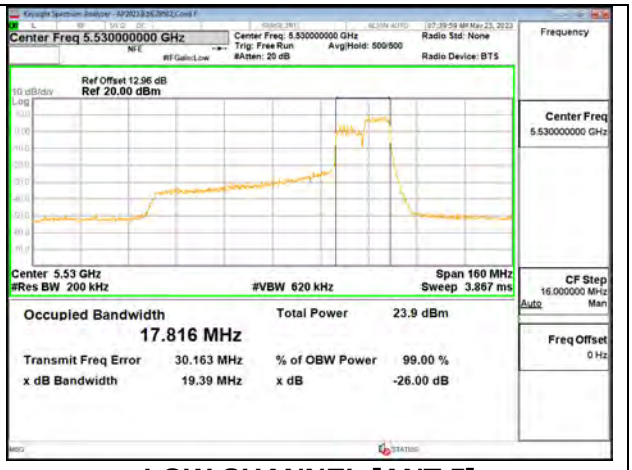
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 60

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5530	22.02	19.39	17.5910	17.8160
High	5610	18.44	19.27	17.1260	17.6620
138	5690	20.38	19.20	17.8490	17.4730



LOW CHANNEL [ANT 6]



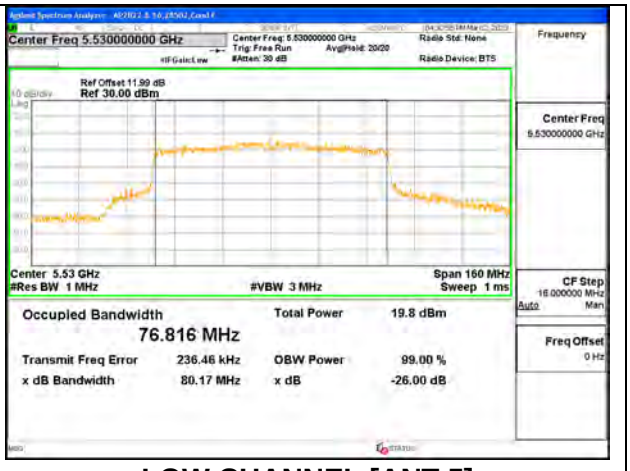
LOW CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5530	80.44	80.17	76.7090	76.8160
High	5610	81.64	80.82	76.9320	76.8800
138	5690	80.18	80.77	76.8560	76.8500

LOW CHANNEL [ANT 6]



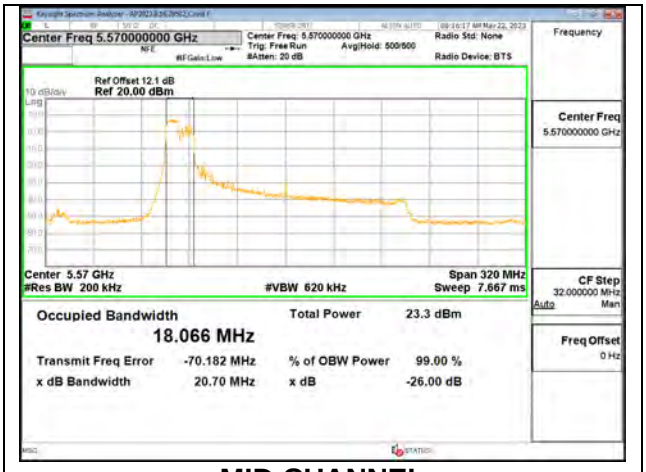
LOW CHANNEL [ANT 5]

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

9.2.22. 802.11ax HE160 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE: 106 Tones, RU Index 53

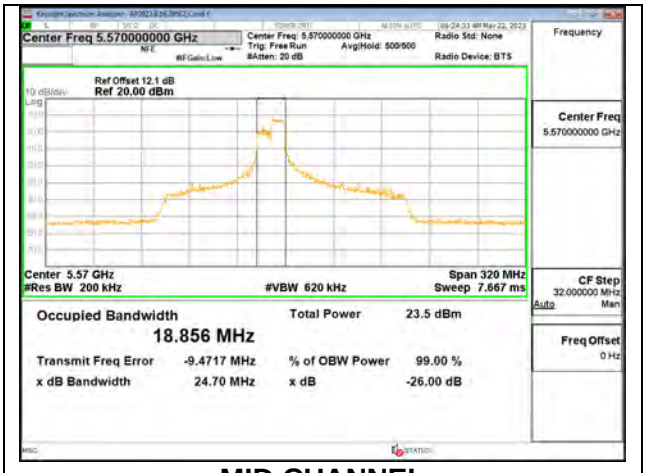
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5570	20.70	18.0660



MID CHANNEL

1TX Antenna 6 MODE: 106 Tones, RU Index 60

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5570	24.70	18.8560

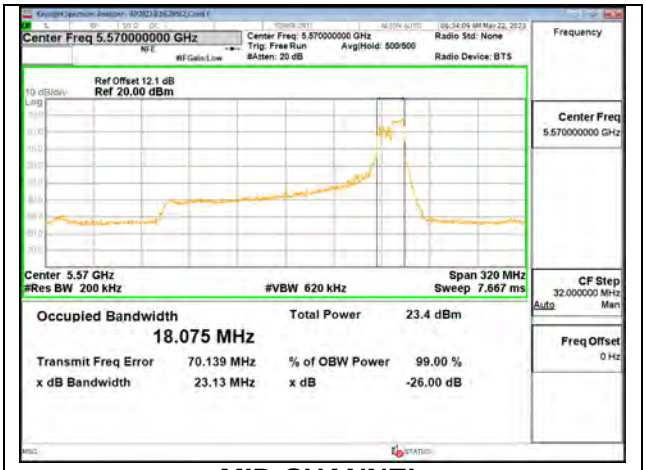


MID CHANNEL

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

1TX Antenna 6 MODE: 106 Tones, RU Index S60

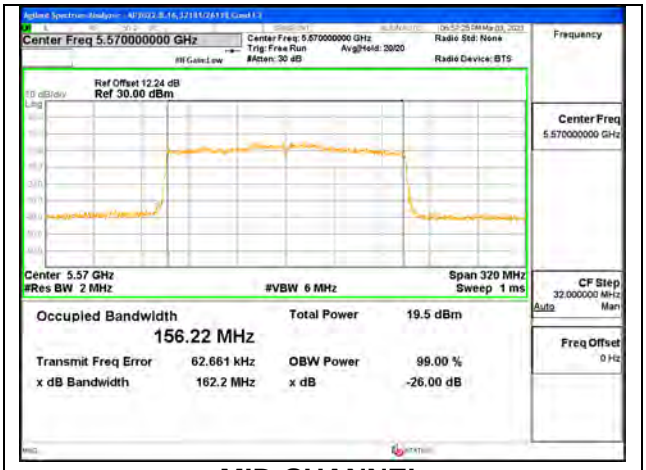
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5570	23.13	18.0750



MID CHANNEL

1TX Antenna 6 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5570	162.20	156.2200

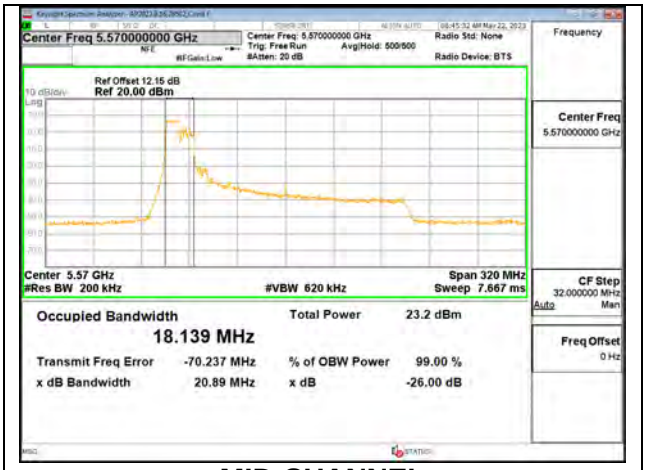


MID CHANNEL

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

1TX Antenna 5 MODE: 106 Tones, RU Index 53

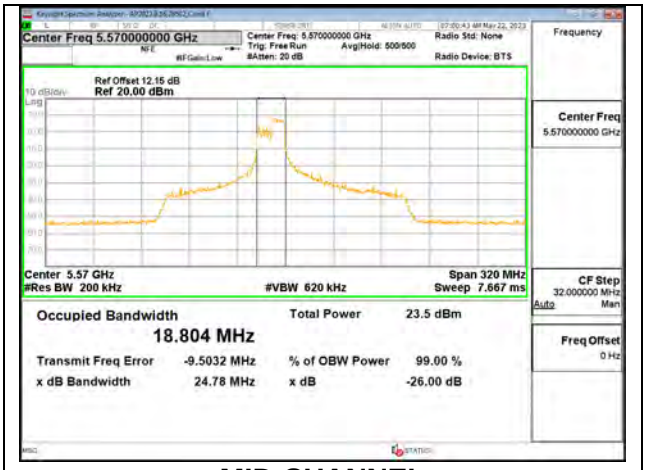
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5570	20.89	18.1390



MID CHANNEL

1TX Antenna 5 MODE: 106 Tones, RU Index 60

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5570	24.78	18.8040

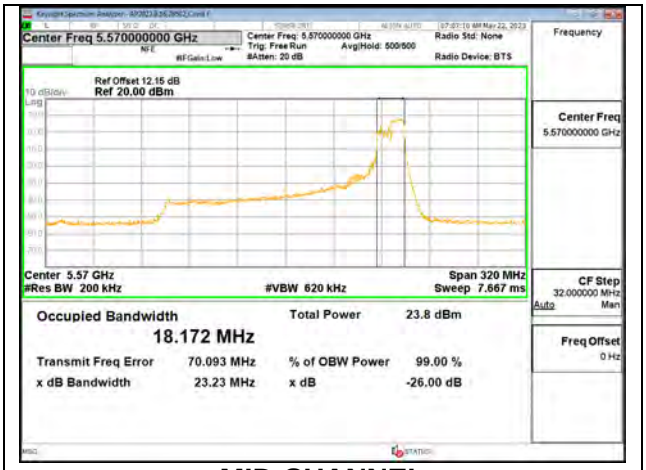


MID CHANNEL

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

1TX Antenna 5 MODE: 106 Tones, RU Index S60

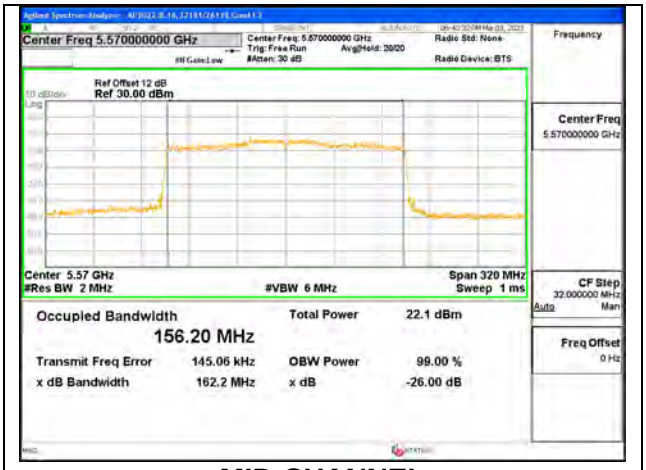
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5570	23.23	18.1720



MID CHANNEL

1TX Antenna 5 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5570	162.20	156.2000

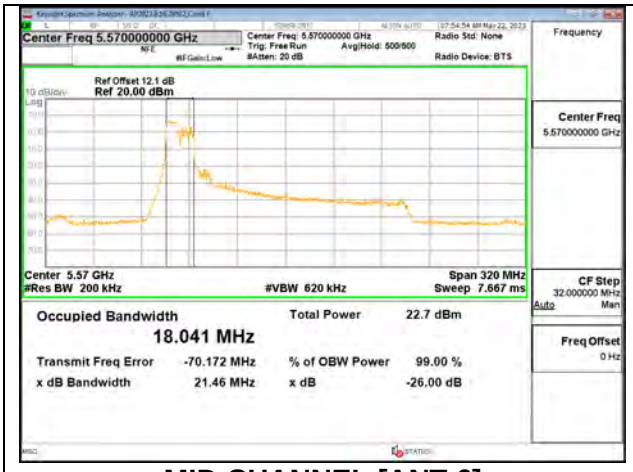


MID CHANNEL

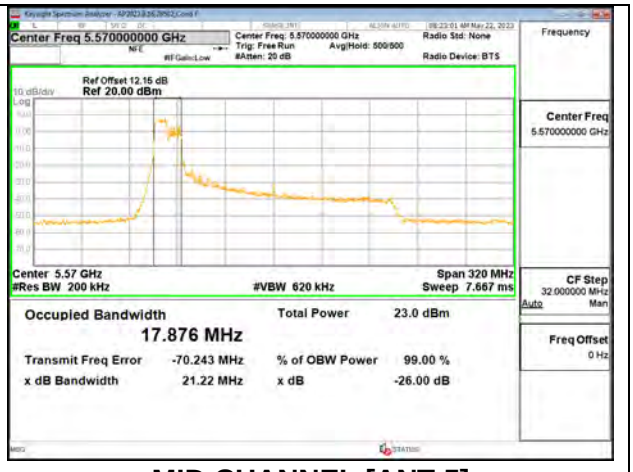
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 53

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5570	21.46	21.22	18.0410	17.8760



MID CHANNEL [ANT 6]

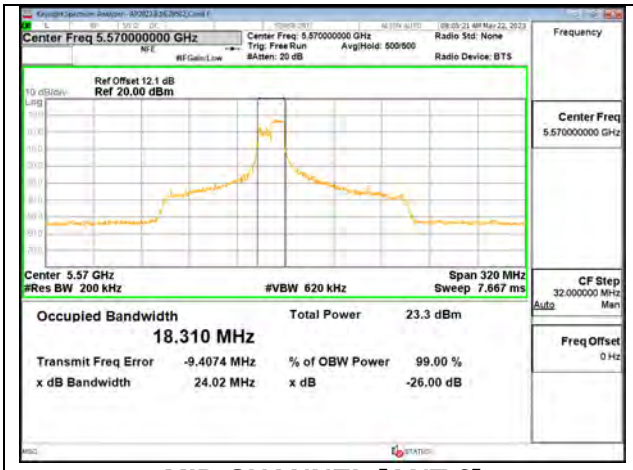


MID CHANNEL [ANT 5]

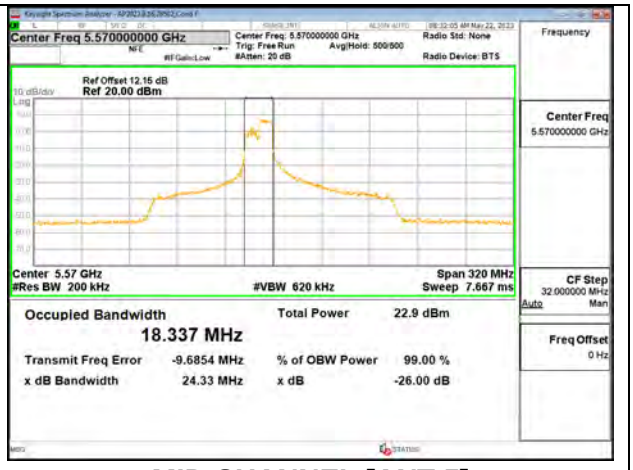
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index 60

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5570	24.02	24.33	18.3100	18.3370



MID CHANNEL [ANT 6]

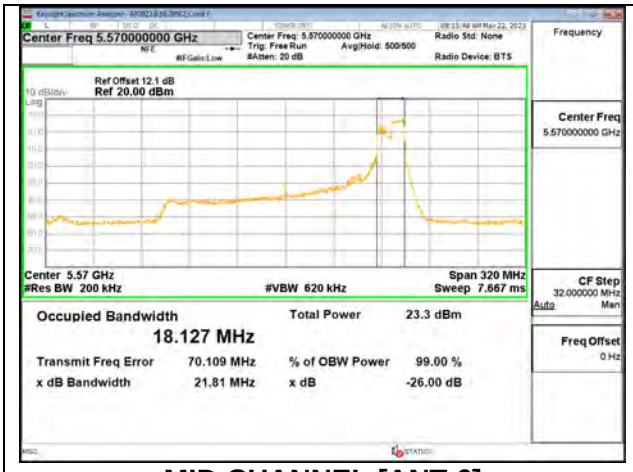


MID CHANNEL [ANT 5]

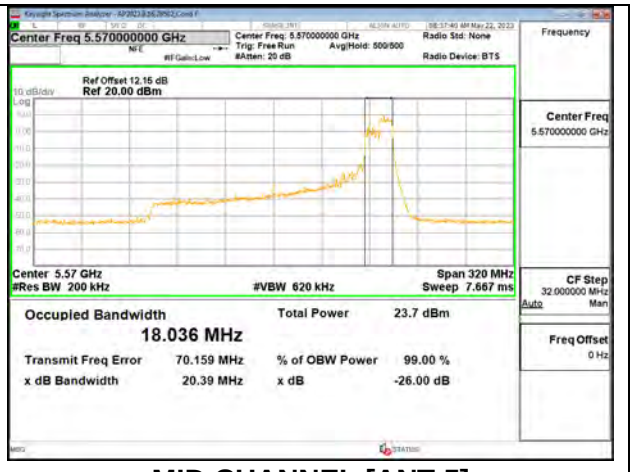
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 106 Tones, RU Index S60

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5570	21.81	20.39	18.1270	18.0360



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5570	162.40	162.60	155.8700	156.0400

MID CHANNEL [ANT 6]

MID CHANNEL [ANT 5]

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

9.2.23. 802.11n HT20 MODE IN THE 5.8 GHz BAND

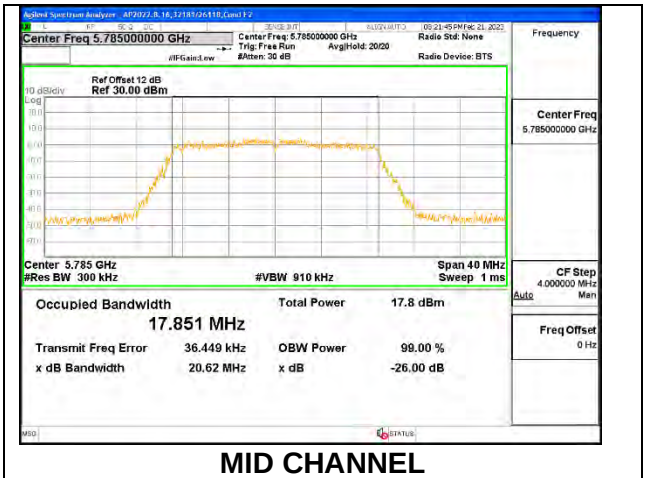
1TX Antenna 6 MODE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5745	20.67	17.7730
Mid	5785	20.82	17.8400
High	5825	20.57	17.6820

MID CHANNEL

1TX Antenna 5 MODE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5745	20.99	17.7810
Mid	5785	20.62	17.8510
High	5825	21.03	17.7290

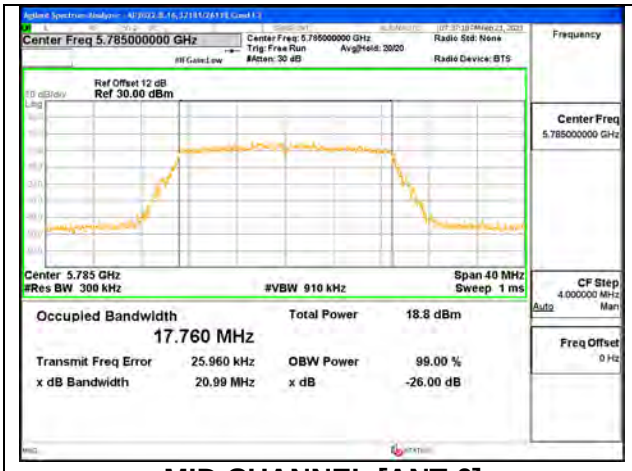


MID CHANNEL

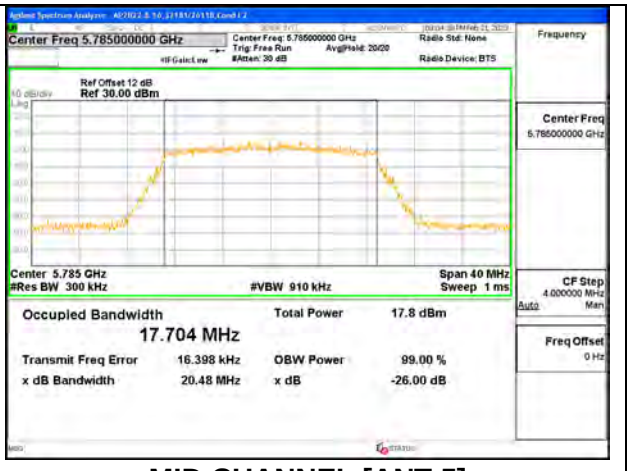
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5745	20.53	20.63	17.7210	17.7820
Mid	5785	20.99	20.48	17.7600	17.7040
High	5825	20.66	20.66	17.7620	17.7750



MID CHANNEL [ANT 6]



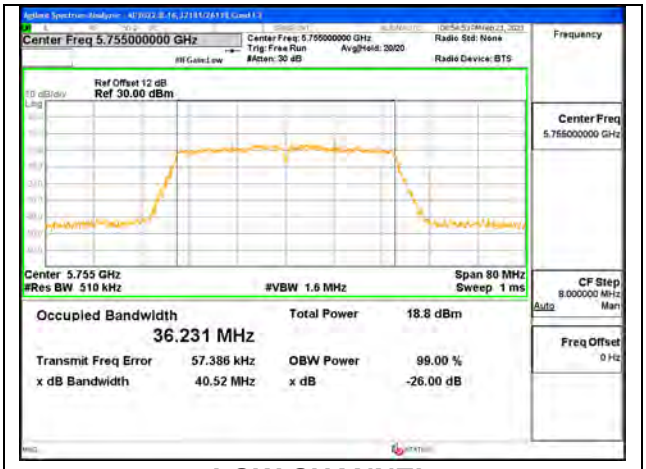
MID CHANNEL [ANT 5]

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

9.2.24. 802.11n HT40 MODE IN THE 5.8 GHz BAND

1TX Antenna 6 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5755	40.52	36.2310
High	5795	40.88	36.2020



LOW CHANNEL

1TX Antenna 5 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5755	40.78	36.3810
High	5795	40.71	36.2850

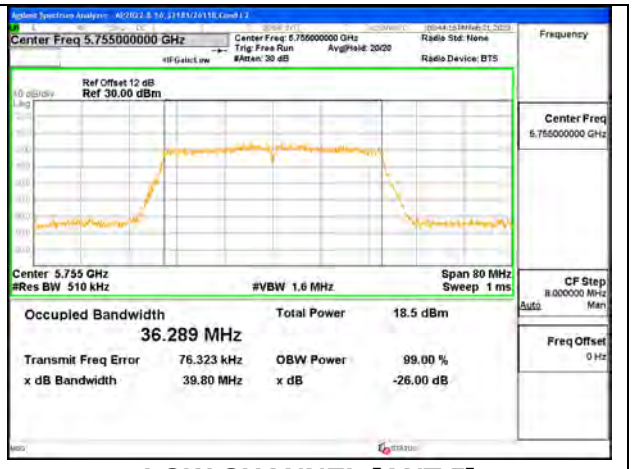
LOW CHANNEL

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

2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5755	40.51	39.80	36.1970	36.2890
High	5795	40.80	39.84	36.1470	36.1880

LOW CHANNEL [ANT 6]



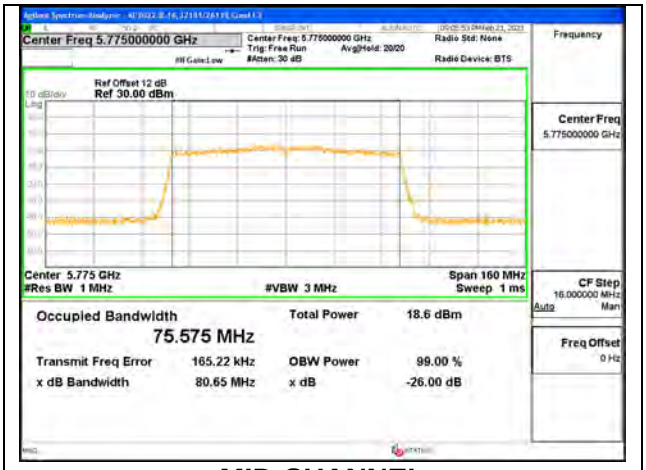
LOW CHANNEL [ANT 5]

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

9.2.25. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

1TX Antenna 6 MODE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5775	80.65	75.5750



MID CHANNEL

1TX Antenna 5 MODE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5775	80.84	75.5340

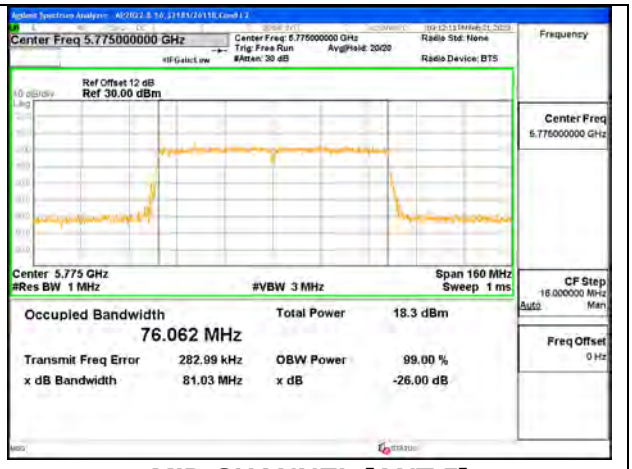
MID CHANNEL

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

2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	26dB Bandwidth Antenna 6 (MHz)	26dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5775	80.63	81.03	75.9930	76.0620

MID CHANNEL [ANT 6]



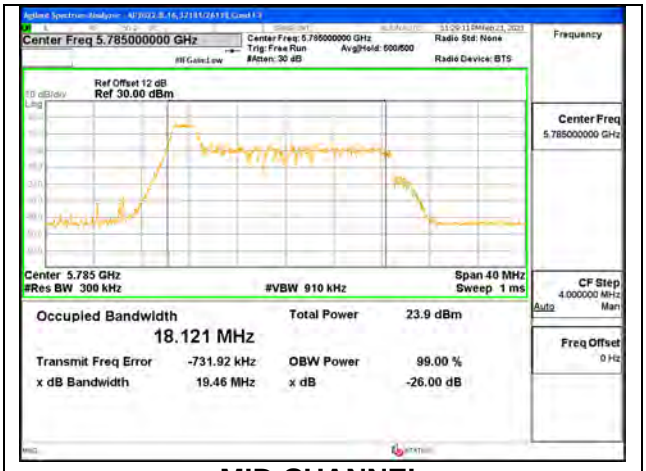
MID CHANNEL [ANT 5]

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

9.2.26. 802.11ax HE20 MODE IN THE 5.8 GHz BAND

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

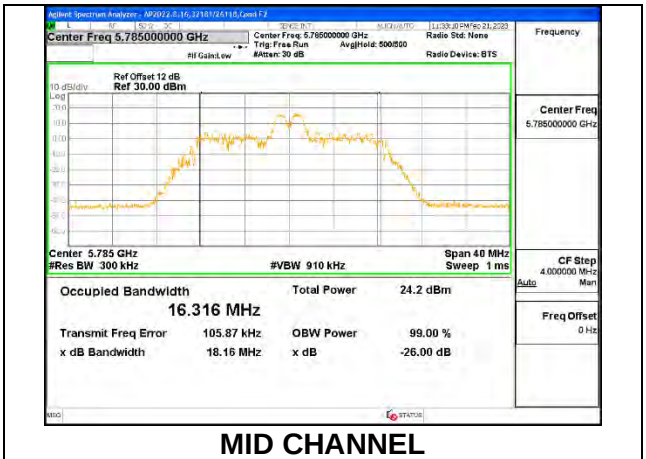
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5745	19.77	18.3130
Mid	5785	19.46	18.1210
High	5825	19.72	18.1720



MID CHANNEL

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

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5745	18.51	16.7430
Mid	5785	18.16	16.3160
High	5825	18.31	16.7750



MID CHANNEL

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

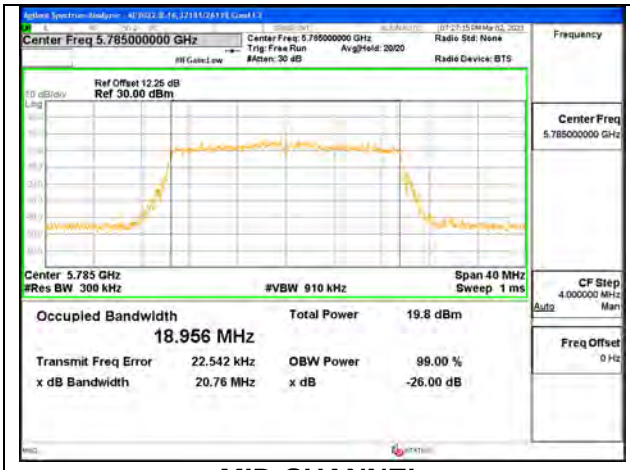
1TX Antenna 6 MODE: 26 Tones, RU Index 8

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5745	19.95	18.2750
Mid	5785	19.87	18.4730
High	5825	20.12	18.2440

MID CHANNEL

1TX Antenna 6 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5745	20.54	18.9860
Mid	5785	20.76	18.9560
High	5825	20.79	18.9230

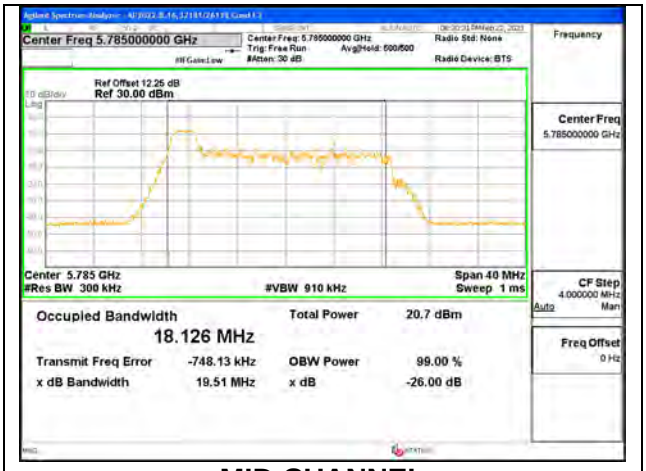


MID CHANNEL

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

1TX Antenna 5 MODE: 26 Tones, RU Index 0

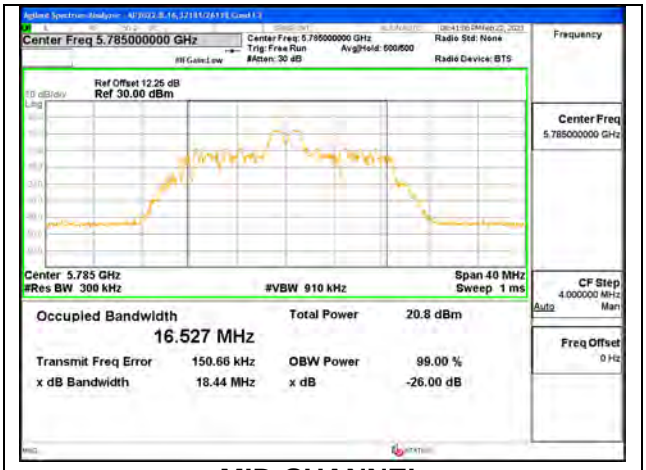
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5745	19.71	18.2290
Mid	5785	19.51	18.1260
High	5825	19.63	18.0790



MID CHANNEL

1TX Antenna 5 MODE: 26 Tones, RU Index 4

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5745	18.37	16.9970
Mid	5785	18.44	16.5270
High	5825	17.98	16.6110

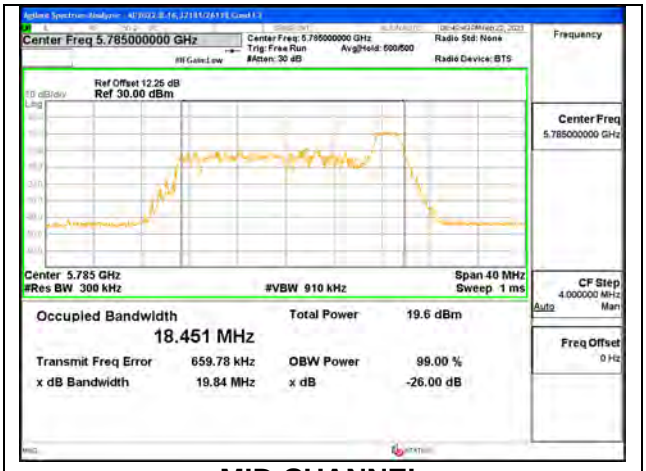


MID CHANNEL

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

1TX Antenna 5 MODE: 26 Tones, RU Index 8

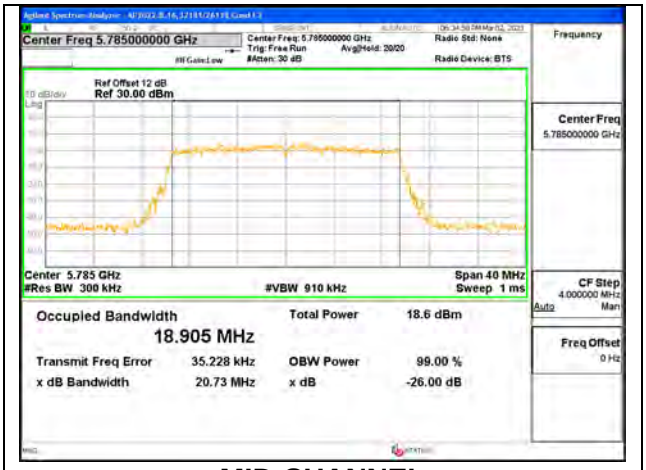
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5745	19.92	18.3500
Mid	5785	19.84	18.4510
High	5825	19.90	18.3520



MID CHANNEL

1TX Antenna 5 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5745	21.01	18.9230
Mid	5785	20.73	18.9050
High	5825	20.66	18.8930

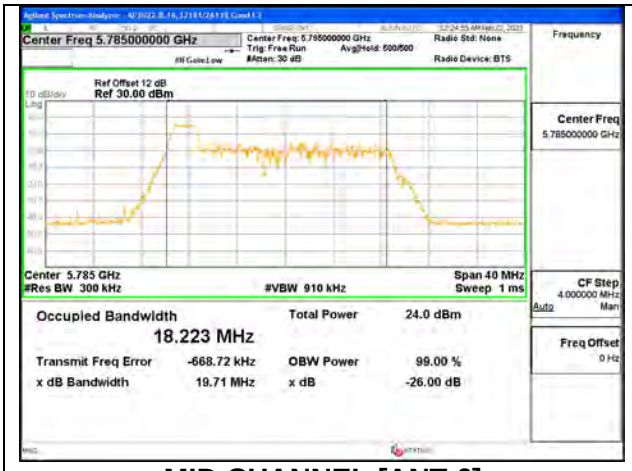


MID CHANNEL

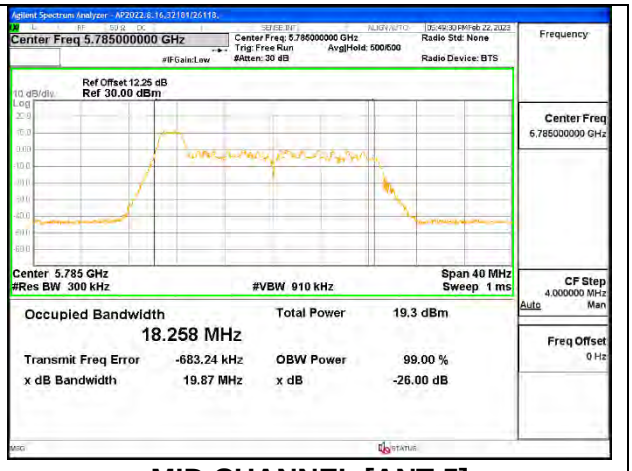
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5745	19.55	19.96	18.2010	18.0980
Mid	5785	19.71	19.87	18.2230	18.2580
High	5825	19.54	19.69	18.3090	18.1110



MID CHANNEL [ANT 6]



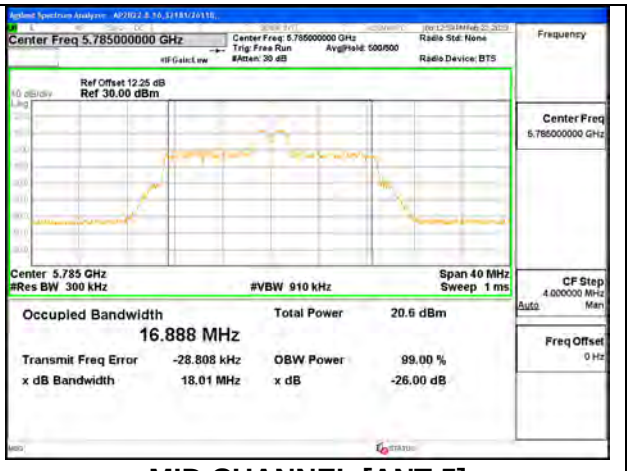
MID CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 4

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5745	17.88	18.17	16.2640	16.8260
Mid	5785	18.48	18.01	17.0350	16.8880
High	5825	18.42	18.08	16.8430	16.7750

MID CHANNEL [ANT 6]



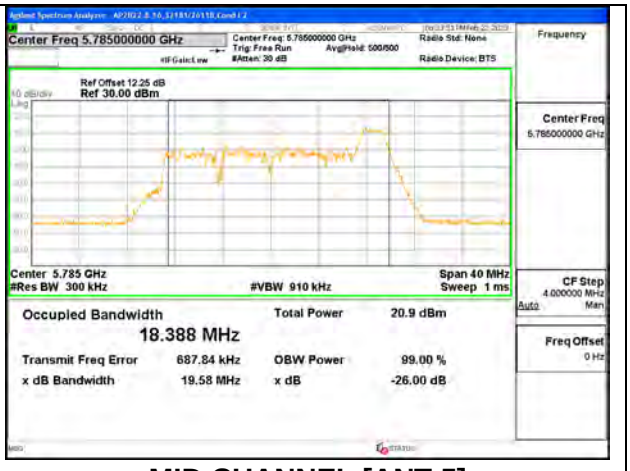
MID CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 8

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5745	19.94	19.48	18.3460	18.3340
Mid	5785	20.09	19.58	18.3160	18.3880
High	5825	20.07	19.70	18.3850	18.3560

MID CHANNEL [ANT 6]

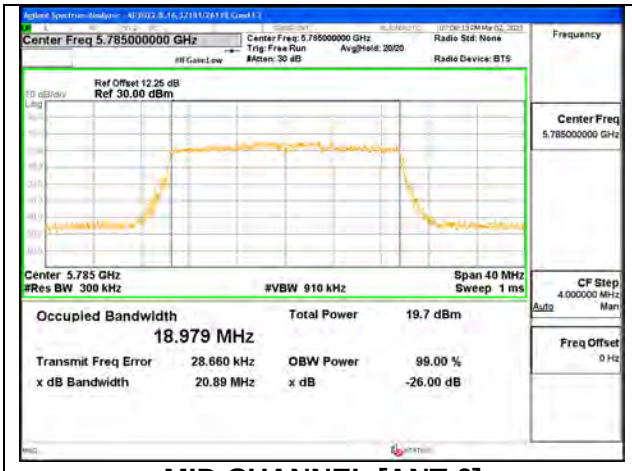


MID CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5745	20.67	21.04	18.8820	18.9080
Mid	5785	20.89	20.75	18.9790	18.9040
High	5825	20.80	20.63	18.8780	18.8820



MID CHANNEL [ANT 6]

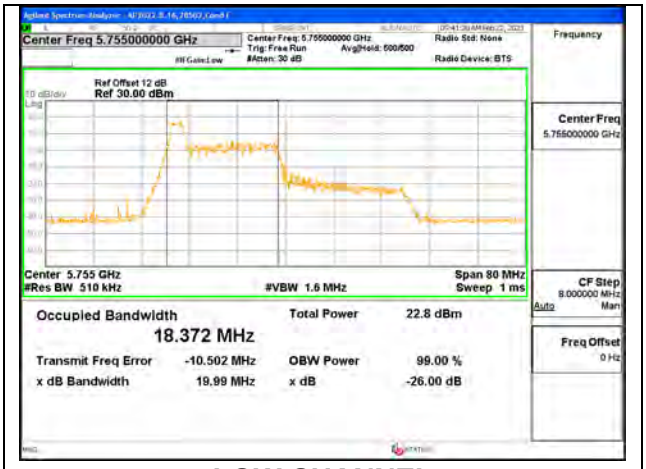
MID CHANNEL [ANT 5]

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

9.2.27. 802.11ax HE40 MODE IN THE 5.8 GHz BAND

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

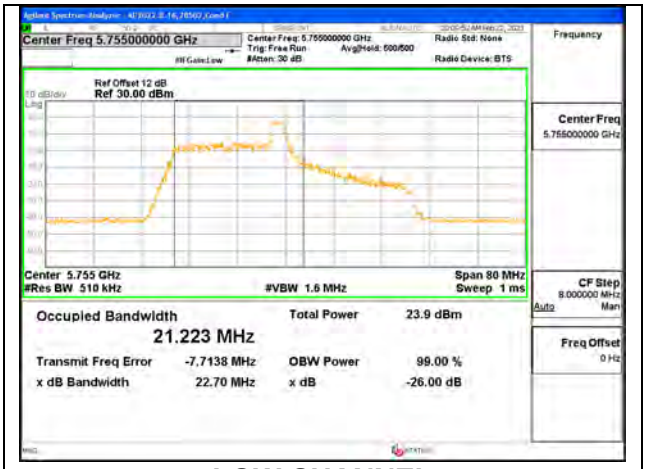
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5755	19.99	18.3720
High	5795	20.02	18.4170



LOW CHANNEL

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

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5755	22.70	21.2230
High	5795	23.75	21.1920

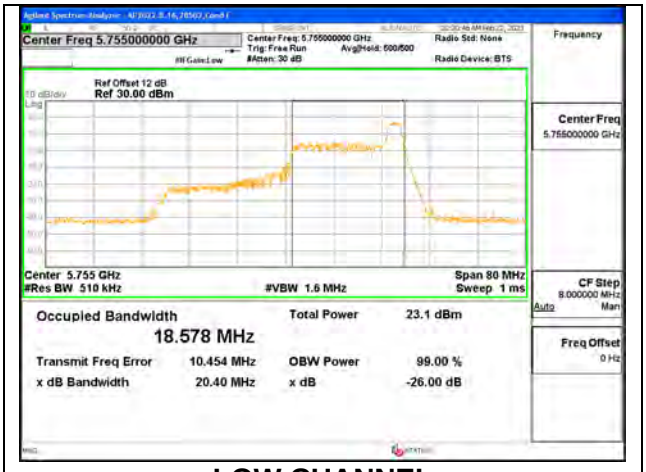


LOW CHANNEL

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

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

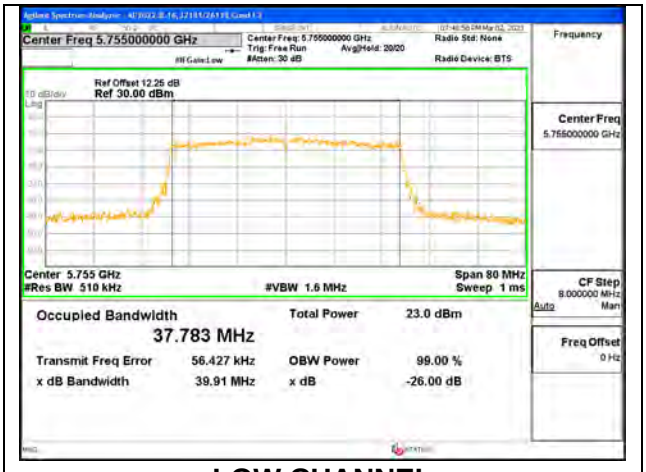
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5755	20.40	18.5780
High	5795	20.30	18.5770



LOW CHANNEL

1TX Antenna 6 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5755	39.91	37.7830
High	5795	40.82	37.7840



LOW CHANNEL

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

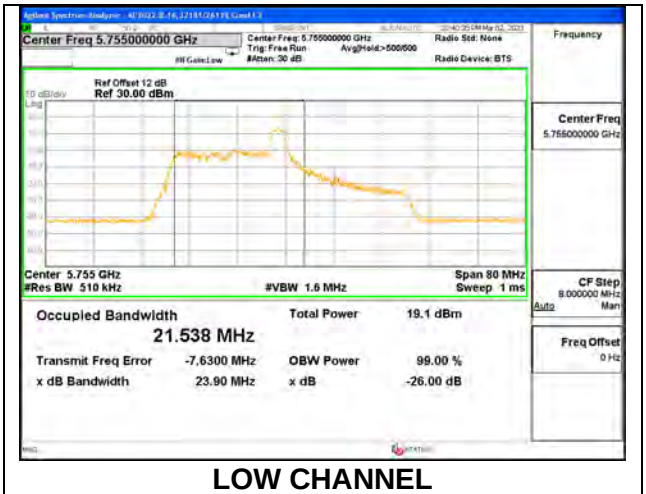
1TX Antenna 5 MODE: 26 Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5755	19.81	18.4380
High	5795	20.06	18.4440

LOW CHANNEL

1TX Antenna 5 MODE: 26 Tones, RU Index 8

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5755	23.90	21.5380
High	5795	23.07	21.4000



LOW CHANNEL

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

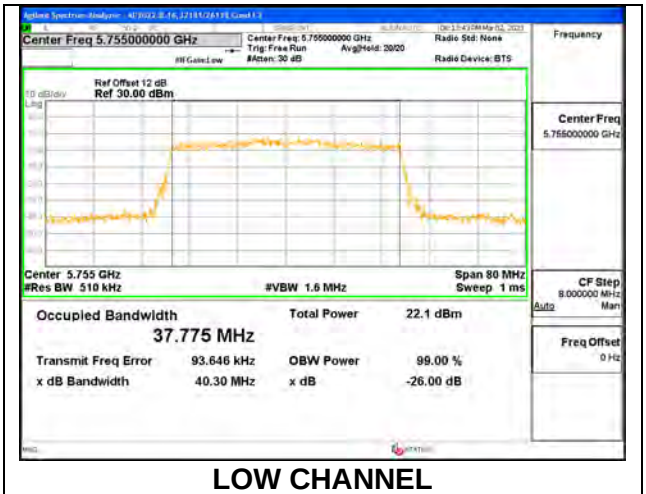
1TX Antenna 5 MODE: 26 Tones, RU Index 17

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5755	20.67	18.5150
High	5795	20.51	18.4090

LOW CHANNEL

1TX Antenna 5 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5755	40.30	37.7750
High	5795	40.80	37.8040



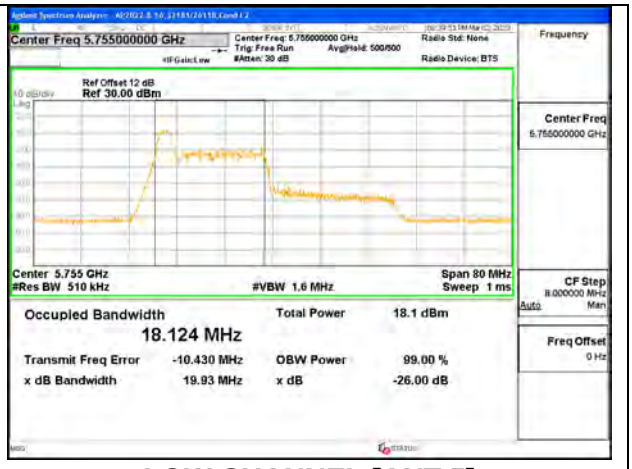
LOW CHANNEL

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

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5755	19.95	19.93	18.3980	18.1240
High	5795	19.72	19.88	18.3540	18.0660

LOW CHANNEL [ANT 6]

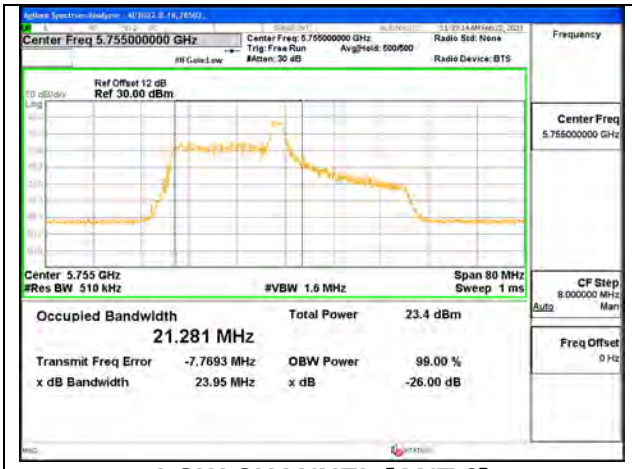


LOW CHANNEL [ANT 5]

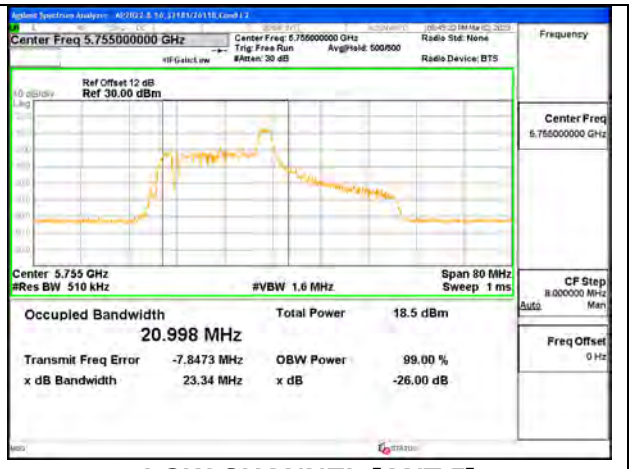
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 8

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5755	23.95	23.34	21.281.	20.9980
High	5795	23.26	22.64	20.9980	20.9440



LOW CHANNEL [ANT 6]



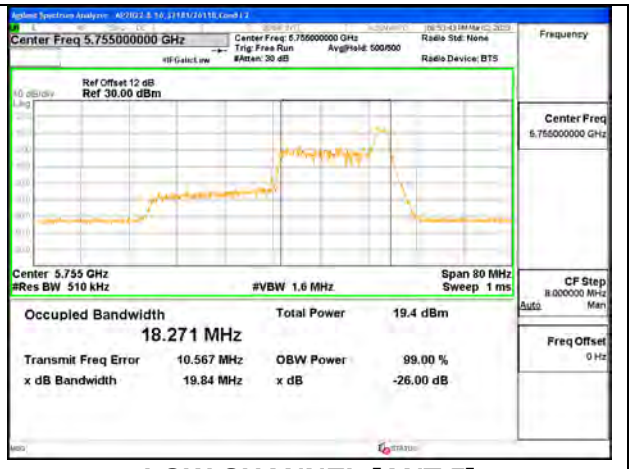
LOW CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 17

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5755	20.46	19.84	18.5370	18.2710
High	5795	20.30	19.65	18.6260	18.2900

LOW CHANNEL [ANT 6]



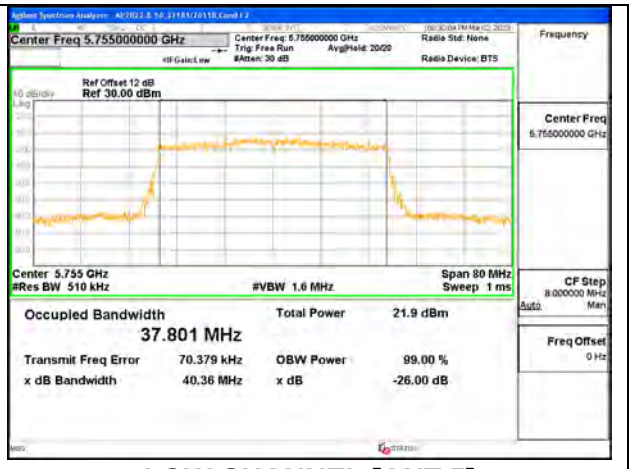
LOW CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5755	40.00	40.36	37.6610	37.8010
High	5795	40.32	39.99	37.8290	37.7530

LOW CHANNEL [ANT 6]



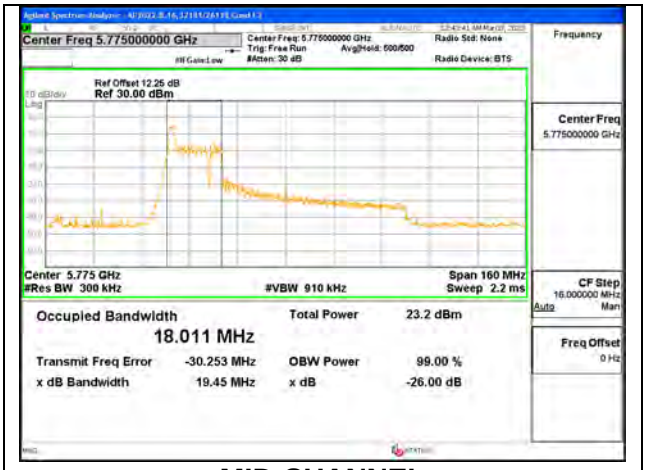
LOW CHANNEL [ANT 5]

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

9.2.28. 802.11ax HE80 MODE IN THE 5.8 GHz BAND

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

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5775	19.45	18.0110



MID CHANNEL

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

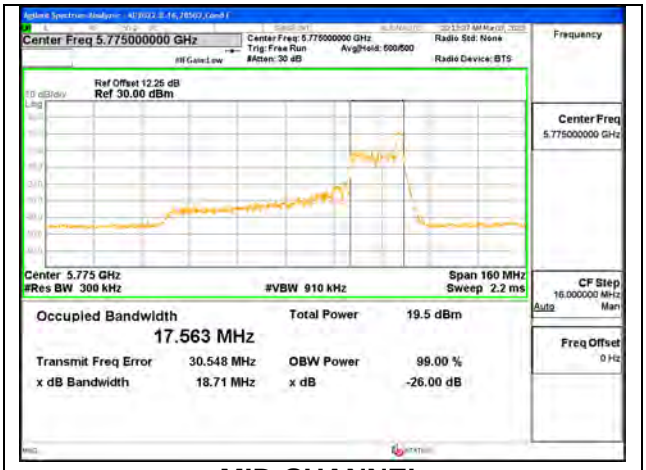
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5775	38.07	36.5440

MID CHANNEL

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

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

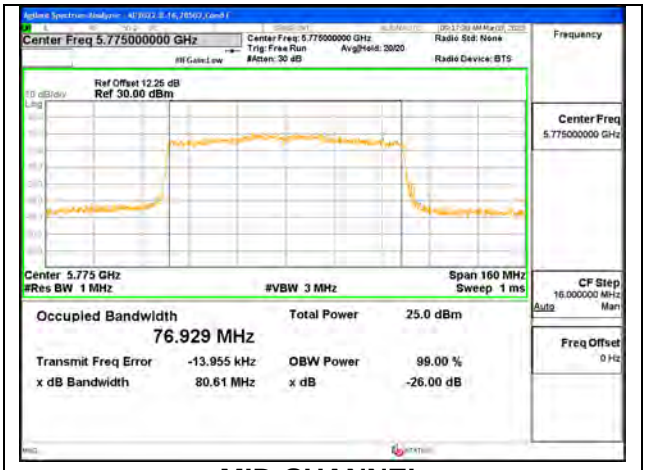
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5775	18.71	17.5630



MID CHANNEL

1TX Antenna 6 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5775	80.61	76.9290

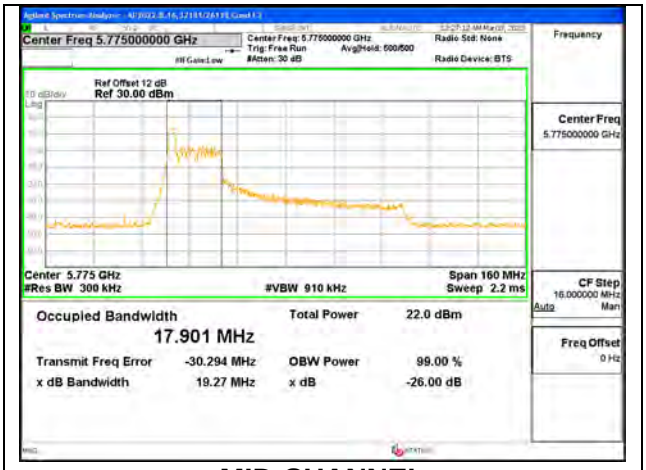


MID CHANNEL

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

1TX Antenna 5 MODE: 26 Tones, RU Index 0

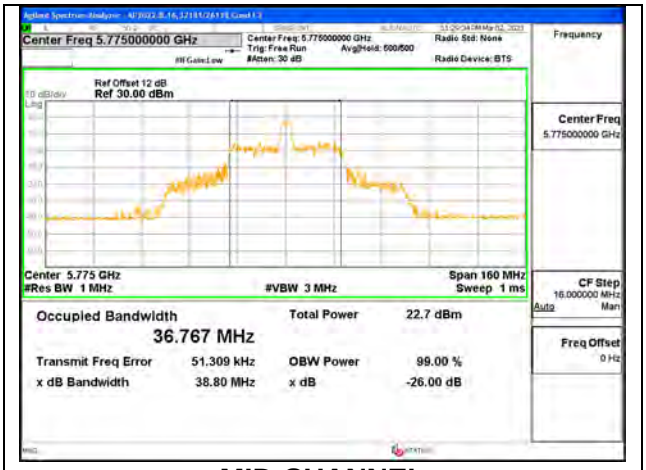
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5775	19.27	17.9010



MID CHANNEL

1TX Antenna 5 MODE: 26 Tones, RU Index 18

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5775	38.80	36.7670



MID CHANNEL

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

1TX Antenna 5 MODE: 26 Tones, RU Index 36

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5775	19.35	18.0760

MID CHANNEL

1TX Antenna 5 MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Mid	5775	80.93	77.1490

MID CHANNEL

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

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 0

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5775	19.21	19.34	18.0090	17.5950

MID CHANNEL [ANT 6]

MID CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 18

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5775	38.63	38.63	36.1960	36.4540

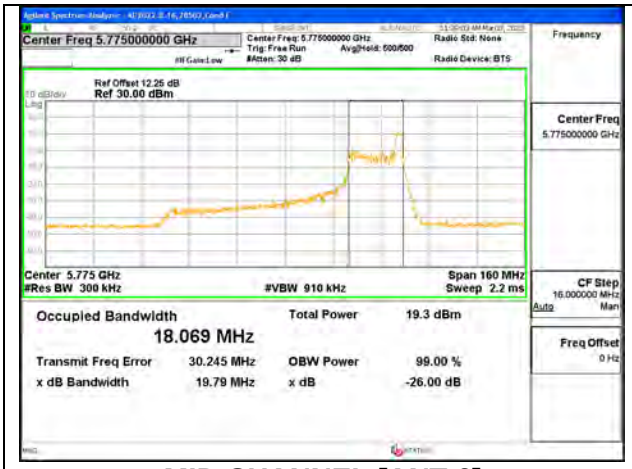
MID CHANNEL [ANT 6]

MID CHANNEL [ANT 5]

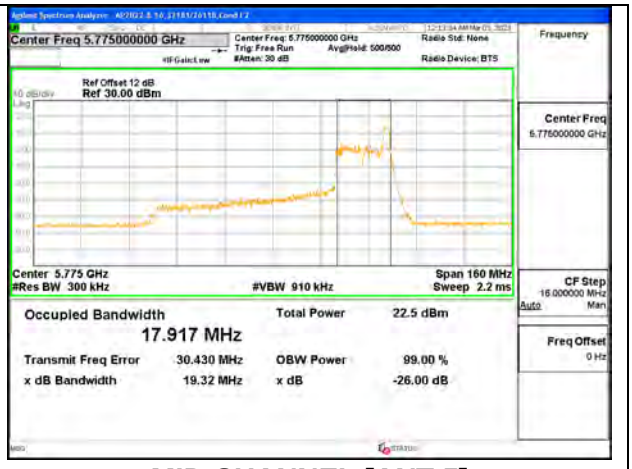
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 CDD MODE: 26 Tones, RU Index 36

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5775	19.79	19.32	18.0690	17.9170



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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

2TX Antenna 6 + Antenna 5 CDD MODE: SU Mode

Channel	Frequency (MHz)	26 dB Bandwidth Antenna 6 (MHz)	26 dB Bandwidth Antenna 5 (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5775	80.11	80.57	77.1410	76.8290

MID CHANNEL [ANT 6]

MID CHANNEL [ANT 5]

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9.3. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

RSS-247 6.2.4.1

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

RESULTS

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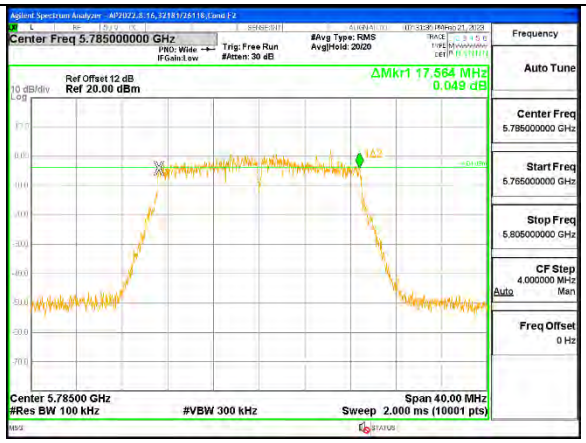
9.3.1. 802.11n HT20 MODE IN THE 5.8 GHz BAND

1TX Antenna 6 MODE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	17.172	0.5
Mid	5785	17.564	0.5
High	5825	17.588	0.5
144	5720	3.832	0.5



MID CHANNEL

1TX Antenna 5 MODE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	17.264	0.5
Mid	5785	17.584	0.5
High	5825	17.568	0.5
144	5720	3.796	0.5

MID CHANNEL

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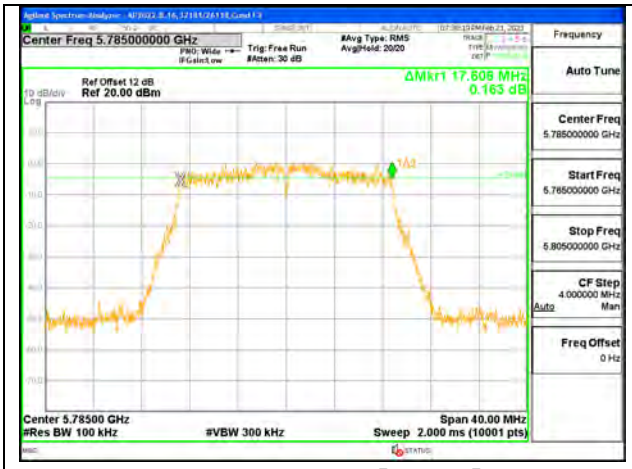
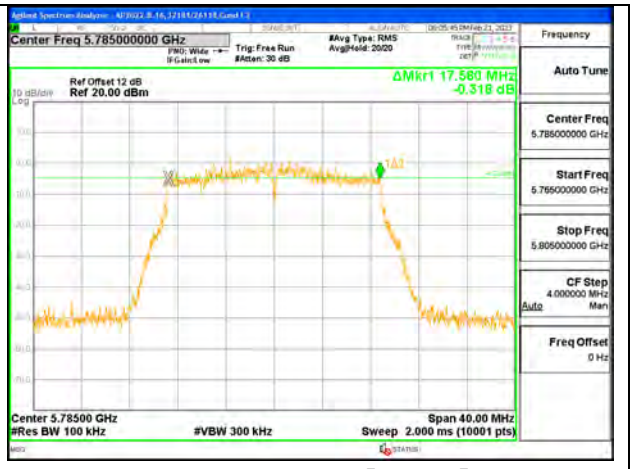
2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	6 dB Bandwidth Antenna 6 (MHz)	6 dB Bandwidth Antenna 5 (MHz)	Minimum Limit (MHz)
Low	5745	17.560	17.548	0.5
Mid	5785	17.608	17.580	0.5
High	5825	17.596	17.588	0.5
144	5720	3.916	3.768	0.5



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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