TEST REPORT

Report Number: 15496240-E10V2

Applicant	:	APPLE INC. 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	:	A3522
Brand	:	APPLE
FCC ID	:	BCG-E8957A
EUT Description	:	SMARTPHONE
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART E

Date Of Issue:
2025-08-05

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
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ACCREDITED
CERT #0751.05

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2025-08-04	Initial Review	--
V2	2025-08-05	Corrected Wrong Channel Number in Sections 9.2 and 9.5	David Collins

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1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE INC. 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	A3522
Brand	APPLE
FCC ID	BCG-E8957A (Variant) (Data Referenced from BCG-E8949A)
EUT Description	SMARTPHONE
Serial Number (Variant, A3522)	V24GPNR406 (Radiated) C07HG60000Q0000X9F (Conducted)
Serial Number (Reference, A3256)	FH1X2V50XV (Radiated) C07HC8000910000X9N (Conducted)
Sample Receipt Date	2025-06-04
Date Tested	2025-06-09 to 2025-07-11
Applicable Standards	CFR 47 Part 15 Subpart E
Test Results	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.

Approved & Released By:	Prepared & Reviewed By:
	
Richard Lee Staff Engineer UL Verification Services, Inc.	David Collins Senior Test Engineer UL Verification Services, Inc.

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2. TEST RESULT SUMMARY

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

Below is a list of the data provided by the customer:

1. Antenna gain and type (see section 6.2)
2. Cable loss (see section 6.2)

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 484596 D01
- *ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024
- KDB 414788 D01 Radiated Test Site v01r01

*Note: The use of ANSI C63.10-2020 + Cor. 1-2023 + C63.10a-2024 does not deviate from the testing procedures of ANSI C63.10-2020.

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 dB
Power Spectral Density	2.466 dB
Time Domain Measurements Using SA	3.39 %
RF Power Measurement Direct Method Using Power Meter	1.30 (Pk) 0.450 (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 cellular GSM, GPRS, EGPRS, WCDMA, LTE, 5GNR1, IEEE 802.11a/b/g/n/ac/ax/be, Bluetooth (BT), Ultra-Wideband (UWB), Global Positionin System (GPS), Near-Field Communication (NFC), Narrow-Band (NB) UNII, 802.15.4, 802.15.4ab-narrow Band (NB), Wireless Power Transfer (WPT) and Mobile Satellite Service (MSS) technologies. The rechargeable battery is not user accessible.

This report covers 5GHz band 802.11 a/n/ac/ax/be Wifi radio.

6.2. DESCRIPTION OF AVAILABLE ANTENNAS AND CABLE LOSS

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

Antenna Type is IFA.

Frequency Range (MHz)	Antenna 6 (dBi)	Antenna 5 (dBi)	Uncorrelated Chains (dBi)	Correlated Chains (dBi)
5150 - 5250 UNII - 1	-2.90	-6.20	-4.24	-1.38
5250 - 5350 UNII - 2a	-2.00	-6.40	-3.67	-0.91
5500 - 5700 UNII - 2c	0.80	-5.10	-1.22	1.35
5725 - 5825 UNII 3	2.00	-6.40	-0.42	1.79

Frequency Range (MHz)	Cable Loss	
	Antenna 6 (dB)	Antenna 5 (dB)
5150 - 5250 UNII - 1	-3.00	-2.60
5250 - 5350 UNII - 2a	-3.00	-2.60
5500 - 5700 UNII - 2c	-3.10	-2.70
5725 - 5825 UNII 3	-3.20	-2.80

The cables were used for RF antenna port tests that had been offset to the test equipment during testing.

6.3. SOFTWARE AND FIRMWARE

The EUT firmware is Luck23A256.

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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	20.38	109.14
5190-5230	802.11n HT40	20.42	110.15
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	17.48	55.98
5250	802.11ac VHT160	16.45	44.16
5180-5240	802.11be EHT20 SU	20.42	110.15
5180-5240	802.11be EHT20 Partial RU	12.47	17.66
5190-5230	802.11be EHT40 SU	20.43	110.41
5190-5230	802.11be EHT40 Partial RU	20.47	111.43
5210	802.11be EHT80 SU	16.98	49.89
5210	802.11be EHT80 Partial RU	17.96	62.52
5250	802.11be EHT160 SU	15.95	39.36
5250	802.11be EHT160 Partial RU	17.96	62.52
5.2 GHz band, 2TX			
5180-5240	802.11n HT20 CDD	21.39	137.72
5180-5240	802.11n HT20 SDM/STBC	Covered by 802.11n HT20 2TX CDD	
5190-5230	802.11n HT40 CDD	22.96	197.70
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	19.48	88.72
5210	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5250	802.11ac VHT160 CDD	18.47	70.31
5250	802.11ac VHT160 SDM/STBC	Covered by 802.11ac VHT160 2TX CDD	
5180-5240	802.11be EHT20 SU CDD	21.46	139.96
5180-5240	802.11be EHT20 Partial RU CDD	12.30	16.98
5180-5240	802.11be EHT20 SDM	Covered by 802.11be EHT20 2TX CDD	
5190-5230	802.11be EHT40 SU CDD	22.95	197.24
5190-5230	802.11be EHT40 Partial RU CDD	21.48	140.60
5190-5230	802.11be EHT40 SDM	Covered by 802.11be EHT40 2TX CDD	
5210	802.11be EHT80 SU CDD	18.93	78.16
5210	802.11be EHT80 Partial RU CDD	19.98	99.54
5210	802.11be EHT80 SDM	Covered by 802.11be EHT80 2TX CDD	
5250	802.11be EHT160 SU CDD	18.41	69.34
5250	802.11be EHT160 Partial RU CDD	19.89	97.50
5250	802.11be EHT160 SDM	Covered by 802.11be EHT80 2TX CDD	

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5.3 GHz BAND

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	20.44	110.66
5270 - 5310	802.11n HT40	20.47	111.43
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	16.98	49.89
5250	802.11ac VHT160	16.45	44.16
5260 - 5320	802.11be EHT20 SU	20.49	111.94
5260 - 5320	802.11be EHT20 Partial RU	15.09	32.28
5270 - 5310	802.11be EHT40 SU	20.43	110.41
5270 - 5310	802.11be EHT40 Partial RU	20.45	110.92
5290	802.11be EHT80 SU	16.47	44.36
5290	802.11be EHT80 Partial RU	17.98	62.81
5250	802.11be EHT160 SU	15.95	39.36
5250	802.11be EHT160 Partial RU	17.94	62.23
5.3 GHz band, 2TX			
5260 - 5320	802.11n HT20 CDD	21.38	137.40
5260 - 5320	802.11n HT20 SDM/STBC	Covered by 802.11n HT20 2TX CDD	
5270 - 5310	802.11n HT40 CDD	22.96	197.70
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	18.49	70.63
5290	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5250	802.11ac VHT160 CDD	18.47	70.31
5250	802.11ac VHT160 SDM/STBC	Covered by 802.11ac VHT160 2TX CDD	
5260 - 5320	802.11be EHT20 SU CDD	21.45	139.64
5260 - 5320	802.11be EHT20 Partial RU CDD	15.10	32.36
5260 - 5320	802.11be EHT20 SDM	Covered by 802.11be EHT20 2TX CDD	
5270 - 5310	802.11be EHT40 SU CDD	22.99	199.07
5270 - 5310	802.11be EHT40 Partial RU CDD	21.39	137.72
5270 - 5310	802.11be EHT40 SDM	Covered by 802.11be EHT40 2TX CDD	
5290	802.11be EHT80 SU CDD	18.45	69.98
5290	802.11be EHT80 Partial RU CDD	19.92	98.17
5290	802.11be EHT80 SDM	Covered by 802.11be EHT80 2TX CDD	
5250	802.11be EHT160 SU CDD	18.41	69.34
5250	802.11be EHT160 Partial RU CDD	19.94	98.63
5250	802.11be EHT160 SDM	Covered by 802.11be EHT160 2TX CDD	

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5.6 GHz BAND

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	20.47	111.43
5510-5710	802.11n HT40	20.46	111.17
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	20.49	111.94
5570	802.11ac VHT160	16.45	44.16
5500-5720	802.11be EHT20 SU	20.43	110.41
5500-5720	802.11be EHT20 Partial RU	15.29	33.81
5510-5710	802.11be EHT40 SU	20.44	110.66
5530-5690	802.11be EHT40 Partial RU	20.46	111.17
5530-5690	802.11be EHT80 SU	20.47	111.43
5530-5690	802.11be EHT80 Partial RU	20.49	111.94
5570	802.11be EHT160 SU	15.98	39.63
5570	802.11be EHT160 Partial RU	17.99	62.95
5.6 GHz band, 2TX			
5500-5720	802.11n HT20 CDD	21.34	136.14
5500-5720	802.11n HT20 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5510-5710	802.11n HT40 CDD	22.94	196.79
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	22.98	198.61
5530-5690	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5570	802.11ac VHT160 CDD	18.41	69.34
5570	802.11ac VHT160 SDM/STBC	Covered by 802.11ac VHT160 2TX CDD	
5500-5720	802.11be EHT20 SU CDD	21.47	140.28
5500-5720	802.11be EHT20 Partial RU CDD	15.09	32.28
5500-5720	802.11be EHT20 SDM	Covered by 802.11be EHT20 2TX CDD	
5510-5710	802.11be EHT40 SU CDD	22.96	197.70
5510-5710	802.11be EHT40 Partial RU CDD	21.49	140.93
5510-5710	802.11be EHT40 SDM	Covered by 802.11be EHT40 2TX CDD	
5530-5690	802.11be EHT80 SU CDD	22.95	197.24
5530-5690	802.11be EHT80 Partial RU CDD	21.28	134.28
5530-5690	802.11be EHT80 SDM	Covered by 802.11be EHT80 2TX CDD	
5570	802.11be EHT160 SU CDD	18.45	69.98
5570	802.11be EHT160 Partial RU CDD	19.97	99.31
5570	802.11be EHT160 SDM	Covered by 802.11be EHT160 2TX CDD	

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5.8 GHz BAND

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	20.49	111.94
5755-5795	802.11n HT40	20.48	111.69
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	20.48	111.69
5745-5825	802.11be EHT20 SU	20.49	111.94
5745-5825	802.11be EHT20 Partial RU	20.42	110.15
5755-5795	802.11be EHT40 SU	20.44	110.66
5755-5795	802.11be EHT40 Partial RU	20.44	110.66
5775	802.11be EHT80 SU	20.48	111.69
5775	802.11be EHT80 Partial RU	20.41	109.90
5.8 GHz band, 2TX			
5745-5825	802.11n HT20 CDD	22.97	198.15
5745-5825	802.11n HT20 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5755-5795	802.11n HT40 CDD	22.97	198.15
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	22.94	196.79
5775	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5745-5825	802.11be EHT20 SU CDD	22.97	198.15
5745-5825	802.11be EHT20 Partial RU CDD	22.98	198.61
5745-5825	802.11be EHT20 SDM	Covered by 802.11be EHT20 2TX CDD	
5755-5795	802.11be EHT40 SU CDD	22.99	199.07
5755-5795	802.11be EHT40 Partial RU CDD	22.96	197.70
5755-5795	802.11be EHT40 SDM	Covered by 802.11be EHT40 2TX CDD	
5775	802.11be EHT80 SU CDD	22.93	196.34
5775	802.11be EHT80 Partial RU CDD	22.99	199.07
5775	802.11be EHT80 SDM	Covered by 802.11be EHT80 2TX CDD	

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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 2TX.

802.11n 2TX and 802.11be 2TX modes were used to perform on radiated harmonic spurious final test to cover all SISO modes. Radiated power was tuned to maximum on 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 11a/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.

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
802.11be: EHT20/ EHT40/ EHT80/EHT160 RU, MRU, and SU mode: MCS11.

The modulation and bandwidth of 802.11a, 802.11ac, and 802.11n modes are similar at 20MHz, and the target power of 802.11a and 802.11ac modes are equal to or lower than that of 802.11n mode, so 802.11n mode is performed in the test to represent worst-case reporting.

The modulation and bandwidth of 802.11ax and 802.11be modes are similar at 20 MHz (40 MHz, 80 MHz, 160 MHz), and the target power of 802.11ax mode is equal to or lower than that of 802.11be mode, and the data rate of 802.11be mode is higher than 802.11ax mode, so 802.11be mode is performed in the test to represent worst-case reporting.

The target power of SDM mode is equal to or lower than that of CDD mode. CDD correlated antenna gain is also the worst-case, so CDD mode is performed in the test to represent worst-case reporting.

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After the investigation, the worst case of power and PSD modes selected for test are as follows shown in the table below.

40MHz/80/160MHz RU242T are covered by 20MHz SU/RU242T because they have the same tune up. Only those indexes with different tune up are set for test.

WIFI UNII 5G - 802.11be															
BW (MHz)	Tone (T)	RU Index	RU Index from Chipset support	Test RU Index based on the Chipset support			Worst Case Tone (UNII-1)		Worst Case Tone (UNII-2a)		Worst Case Tone (UNII-2c)		Worst Case Tone (UNII-3)	
				Low	Mid	High	Power	PSD	Power	PSD	Power	PSD	Power	PSD
20	26	0~8	0~8	0	4	8		X						X
	52	37~40	37~40	37	38	40				X		X		
	52+26	70~81	70, 71, 72	70	71	72								
	106	53~54	53~54	53	--	54								
	106+26	82~89	82, 83	82	--	83								
	242	61	61	--	61	--								
	SU	--	--	--	--	--	X		X		X		X	
40	26	0~17	0~17	0	9	17		X						
	52	37~44	37~44	37	41	44								
	52+26	70~81	70, 72, 72, 73, 74, 75	70	72	75								
	106	53~56	53~56	53	54	56								X
	106+26	82~89	82, 83, 84, 85	82	84	85								
	242	61~61	61~62	61	--	62	X			X		X		
	484	65	65	--	65	--								
	SU	--	--	--	--	--	X		X		X		X	
80	26	0~36	0~36	0	18	36								
	52	37~52	37~52	37	45	52								
	52+26	70~81	71,72,73,74,77,78,79,80	71	74	80								
	106	53~60	53~60	53	56	60								X
	106+26	82~89	82, 85, 86, 89	82	85	89								
	242	61~64	61~64	61	62	64		X		X		X		
	484	65~66	65~66	65	--	66								
	484+242	90, 91, 92, 93	90, 91, 92, 93	90	92	93								
	996	67	67	--	67	--								
	SU	--	--	--	--	--	X		X		X		X	
160	26	0~S36	0~S36	0	36	S36								
	52	37~S52	37~S52	37	52	S52								
	52+26	70~S81	sb0: 71,72,73,74,77,78,79,80 sb1: 71,72,73,74,77,78,79,80	71 (sb0)	80 (sb0)	80 (sb1)								
	106	53~S60	53~S60	53	--	S60								
	106+26	82~89	82, 85, 86, 89	82 (sb0)	89 (sb0)	89 (sb1)								
	242	61~S64	61~S64	61	62	S64		X		X		X		
	484	65~S66	65~S66	65	--	S66								
	484+242	sb0: 90, 91, 92, 93 sb1: 90, 91, 92, 93	sb0: 90, 91, 92, 93 sb1: 90, 91, 92, 93	90 (sb0)	93 (sb0)	93 (sb1)								
	996	67~S67	67~S67	67		S67								
	996+484	sb0: 94, 95 sb1: 94, 95	sb0: 94, 95 sb1: 94, 95	94 (sb0)	95 (sb0)	95 (sb1)								
	996+484+242	sb0: 96, 97, 98, 99 sb1: 96, 97, 98, 99	sb0: 96, 97, 98, 99 sb1: 96, 97, 98, 99	96 (sb0)	99 (sb0)	99 (sb1)								
	996x2	S68	S68	--	S68	--								
	SU	--	--	--	--	--	X		X		X			

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6.5.1. REUSE STATEMENT

The maximum output power for reference model A3256 (FCC ID: BCG-E8949A) and variant models A3522 (FCC ID: BCG-E8957A) are identical across all power tables for ANT6 and ANT5. The only difference is antenna gain increased on ANT6.

As there is no change in output power between parent model and variant model, all conducted data from the reference model is reused for this variant model. Spotchecks to verify output power is the same for the variant model compared reference model is included in Appendix A.

Radiated measurements are also reusing the reference model data for the antenna 5 SISO modes supported by spotchecks in Appendix A. Radiated measurements are repeated in full on the variant model for the band edge and spurious emissions in the 1 – 18GHz frequency range for the antenna 6 SISO modes and for the MIMO modes. After investigation, it was confirmed that the emissions remained the same as those for the reference model and were either below the noise floor (above 18GHz) or were limited to non-transmitter-related emissions (below 1GHz).

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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

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	Shielded	0.2	EUT Switch Box
3	USB-C	1	USB-C	Shielded	1.0	N/A
4	DC	1	DC	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	DC	1	DC	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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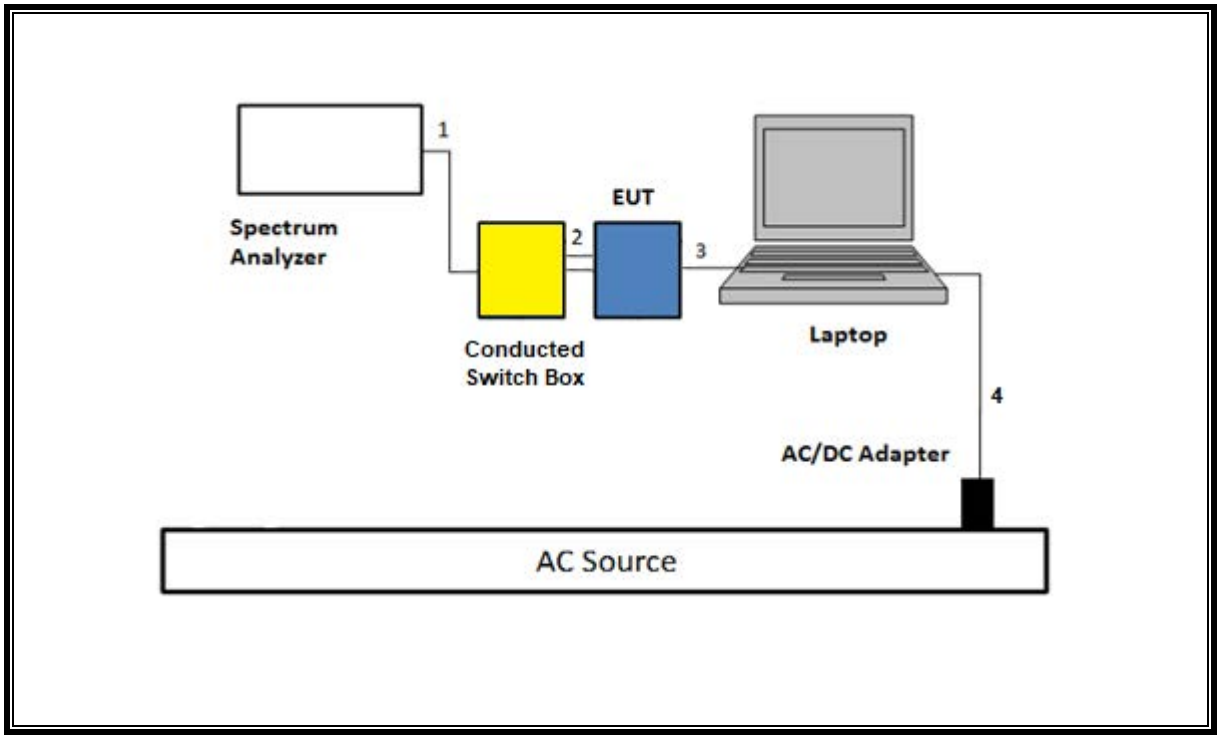
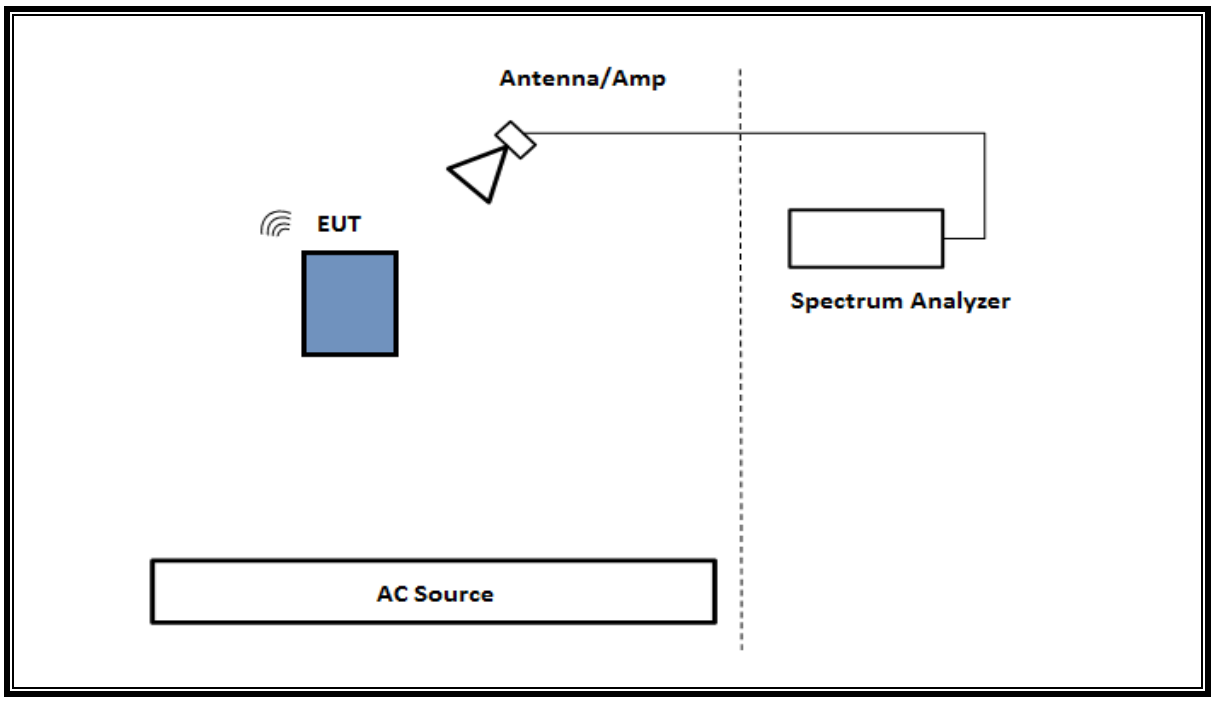
SETUP DIAGRAM FOR CONDUCTED TESTS



SETUP DIAGRAM FOR RADIATED TESTS Above 1 GHz



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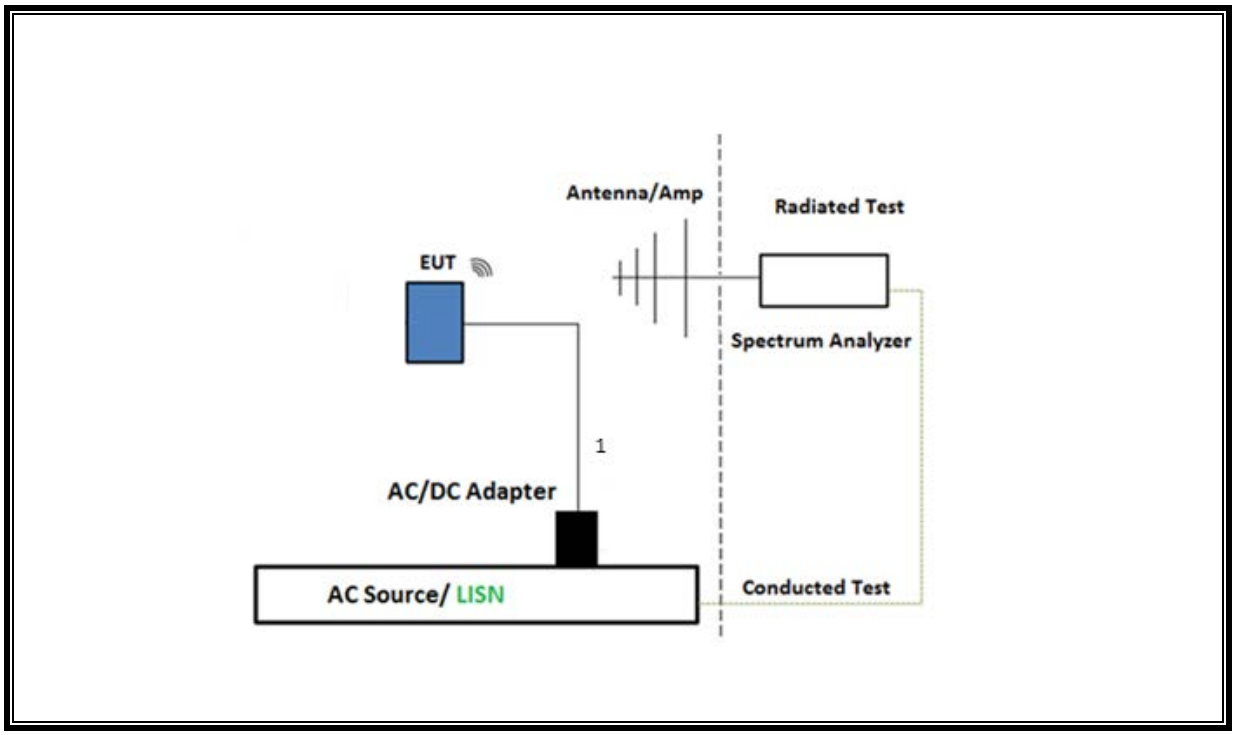
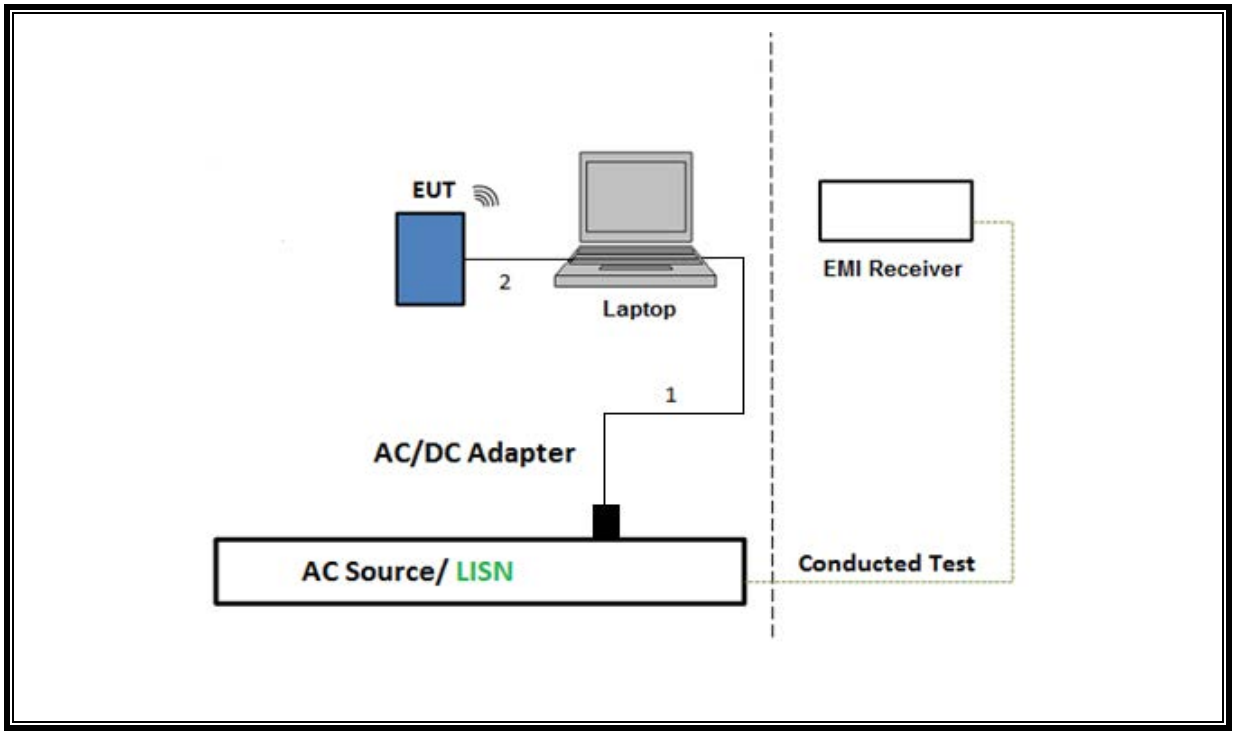
SETUP DIAGRAM FOR Below 1GHz and AC LINE CONDUCTED TEST



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 Section 6.2.

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

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8. TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**ID Num**	**Cal Due**
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	125179	2026-01-31
Spectrum Analyzer, PXA, Hz to 44GHz	Keysight Technologies Inc	N9030A	85313	2026-01-31
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A-544	90238	2025-07-31
Spectrum Analyzer, PXA, 2Hz to 26.5GHz	Keysight Technologies Inc	N9030B	259080	2026-04-30
RF Device, Switch	UL	CSB	220322	2025-10-30
RF Device, Switch	UL	CSB	262287	2026-04-30
Power Meter, P-series single channel	Keysight Technologies Inc	N1911A	90756	2026-01-31
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Keysight Technologies Inc	N1921A	90389	2026-01-31
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	226674	2027-3-31
RF Filter Box, 1-18GHz	UL-FR1	Rats 1.0	250156	2025-10-31
EMI Test Receiver	Rohde & Schwarz	ESW44	225683	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	41112	2026-10-31
RF Filter Box, 1-18GHz	UL-FR1	RATS 3.1	243707	2026-04-30
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	169927	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	79834	2026-07-31
RF Filter Box, 1-18GHz	UL-FR1	Frankenstein	237597	2025-10-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	169935	2026-02-27
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	80402	2025-07-31
RF Filter Box, 1-18GHz	UL-FR1	Frankenstein	216812	2026-01-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	230548	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	206808	2026-04-30
RF Filter Box, 1-18GHz	UL-FR1	Silver Box	197920	2026-03-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	225688	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	226672	2026-02-28
RF Filter Box, 1-18GHz	UL-FR1	Frankenstein	231876	2026-04-30
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	223459	2026-02-20
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	230300	2027-03-30
RF Filter Box, 1-18GHz	UL-FR1	RATS 2.0	225474	2025-10-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201502	2026-02-20
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	222741	2026-09-30
RF Filter Box, 1-18GHz	UL-FR1	Frankenstein	217521	2025-08-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	223461	2026-02-26

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TEST EQUIPMENT LIST (cont.)				
Description	**Manufacturer**	**Model**	**ID Num**	**Cal Due**
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	80707	2025-06-30
RF Filter Box, 1-18GHz	UL-FR1	Silver Box	171875	2026-03-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	245268	2026-02-28
Antenna, Passive Loop 100KHz - 30MHz	ELECTRO-METRICS	EM-6872	170016	2026-11-30
Antenna, Passive Loop 30Hz - 1MHz	ELECTRO-METRICS	EM-6871	170014	2026-11-30
Antenna, Broadband Hybrid 30 MHz - 2 or 3 GHz	Sunol Sciences Corp.	JB3	171863	2026-11-30
Link File, 3m, 9kHz-1000MHz Hybrid Path Loss	UL-FR1	Port 0 Factors	230919	2026-05-30
EMI Test Receiver	Rohde & Schwarz	ESW44	201502	2026-02-28
Antenna, Horn 18-26.5GHz	A.R.A	MWH-1826/B	81139	2025-08-31
Link File, RF Amplifier Assembly, 18-26.5GHz, 60dB Gain	Amplical	AMP18G26.5-60	220194	2026-04-29
Antenna, Horn 26.5-40GHz	A.R.A	MWH-2640/B	81105	2025-08-31
Link File, RF Amplifier Assembly, 26.5-40GHz, 65dB Gain	Amplical	AMP26G40-65	220193	2026-04-30
EMI Test Receiver	Rohde & Schwarz	ESW44	226078	2026-02-28

AC Line Conducted				
Description	**Manufacturer**	**Model**	**ID Num**	**Cal Due**
EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESR	171646	2026-02-28
LISN for Conducted Emissions CISPR-16	Fischer Custom Communications	FCC-LISN-50/250-25-2-01-480V	175765	2026-01-31
Transient Limiter	TE	TBFL1	207996	2025-09-30
UL AUTOMATION SOFTWARE				
Conducted Software	UL	Antenna Port	Ver 2022.8.16, 2024.2.23	
Conducted Software	UL	Station Tool	Ver 5.3, 6.0, 6.1	
Radiated Software	UL	UL EMC	Ver 9.5, May 1 , 2023	
AC Line Conducted Software	UL	UL EMC	Ver 9.5, Mar 3, 2023	

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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	Tone (T)	Data Rate (Mbps)	ON Time B	Period (msec)	Duty Cycle x	Duty Cycle (%)	Duty Cycle Correction Factor	1/B Minimum VBW
HT20	--	MCS0	0.983	1.009	0.9742	97.42%	0.11	1.017
	--	MCS7	0.133	0.160	0.8313	83.13%	0.80	7.519
HT40	--	MCS0	0.496	0.522	0.9502	95.02%	0.22	2.016
	--	MCS7	0.087	0.113	0.7699	76.99%	1.14	11.494
VHT80	--	MCS0	0.463	0.489	0.9468	94.68%	0.24	2.160
	--	MCS9	0.070	0.097	0.7216	72.16%	1.42	14.286
VHT160	--	MCS0	0.252	0.277	0.9097	90.97%	0.41	3.968
	--	MCS9	0.055	0.081	0.6790	67.90%	1.68	18.182
EHT20	SU	MCS0	0.835	0.860	0.9711	97.11%	0.13	1.197
		MCS11	0.121	0.146	0.8288	82.88%	0.82	8.264
	26T	MCS0	2.025	2.072	0.9773	97.73%	0.10	0.494
		MCS11	1.989	2.073	0.9595	95.95%	0.18	0.503
	52T	MCS0	2.028	2.068	0.9807	98.07%	0.00	0.010
		MCS11	1.936	2.080	0.9308	93.08%	0.31	0.517
EHT40	SU	MCS0	0.457	0.483	0.9460	94.60%	0.24	2.189
		MCS11	0.100	0.125	0.8000	80.00%	0.97	10.000
	26T	MCS0	2.028	2.065	0.9821	98.21%	0.00	0.010
		MCS11	1.944	2.072	0.9382	93.82%	0.28	0.514
	106T	MCS0	2.025	2.064	0.9811	98.11%	0.00	0.010
		MCS11	1.944	2.072	0.9382	93.82%	0.28	0.514
	242T	MCS0	2.028	2.065	0.9821	98.21%	0.00	0.010
		MCS11	2.000	2.072	0.9653	96.53%	0.15	0.500
EHT80	SU	MCS0	0.258	0.284	0.9085	90.85%	0.42	3.876
		MCS11	0.090	0.115	0.7826	78.26%	1.06	11.111
	106T	MCS0	2.025	2.063	0.9816	98.16%	0.00	0.010
		MCS11	1.991	2.068	0.9628	96.28%	0.16	0.502
	242T	MCS0	2.028	2.065	0.9821	98.21%	0.00	0.010
		MCS11	2.006	2.051	0.9781	97.81%	0.10	0.499
EHT160	SU	MCS0	0.168	0.194	0.8660	86.60%	0.62	5.952
		MCS11	0.082	0.108	0.7593	75.93%	1.20	12.195
	242T	MCS0	12.330	12.390	0.9952	99.52%	0.00	0.010
		MCS11	12.300	12.39	0.9927	99.27%	0.00	0.010

Mode	Tone (T)	Data Rate (Mbps)	ON Time B	Period (msec)	Duty Cycle x	Duty Cycle (%)	Duty Cycle Correction Factor	1/B Minimum VBW
HT20 SDM	--	MCS0	0.984	1.009	0.9756	97.56%	0.11	1.016
HT40 SDM	--	MCS0	0.496	0.521	0.9522	95.22%	0.21	2.015
VHT80 SDM	--	MCS0	0.256	0.281	0.9111	91.11%	0.40	3.905
VHT160	--	MCS0	0.152	0.177	0.8566	85.66%	0.67	6.592
EHT20 SDM	SU	MCS0	0.834	0.861	0.9686	96.86%	0.14	1.199
	26T	MCS0	2.028	2.065	0.9821	98.21%	0.00	0.010
EHT40 SDM	SU	MCS0	0.457	0.482	0.9489	94.89%	0.23	2.189
	26T	MCS0	2.028	2.074	0.9778	97.78%	0.10	0.493
	242T	MCS0	2.029	2.065	0.9826	98.26%	0.00	0.010
EHT80 SDM	SU	MCS0	0.257	0.283	0.9081	90.81%	0.42	3.891
	242T	MCS0	2.065	2.110	0.9787	97.87%	0.09	0.484
EHT160 SDM	SU	MCS0	0.166	0.194	0.8557	85.57%	0.68	6.024
	242T	MCS0	2.028	2.073	0.9783	97.83%	0.10	0.493

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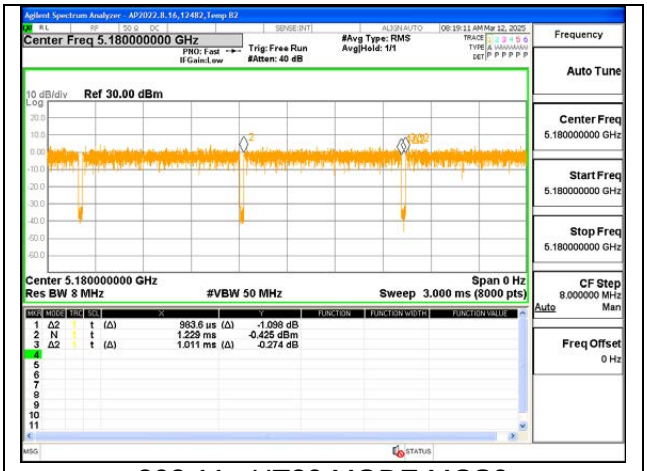
Note: There is the same duty cycle factor on 1TX and 2TX

DUTY CYCLE PLOTS



802.11n HT20 MODE MCS0

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9.2. 26 dB AND 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

ID:	19336, 28502	Date:	02/20/2025 – 03/24/2025

9.2.1. 802.11n/ac SISO MODE IN THE UNII-1 BAND

UNII-1 (SISO)	Frequency (MHz)	Channel Number	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
			Ant 6	Ant 5	Ant 6	Ant 5
HT20 (FCC)	5180	36	22.74	21.79	17.903	17.788
	5200	40	22.56	22.38	17.986	17.803
	5240	48	22.65	22.36	17.908	17.793
HT40 (FCC)	5190	38	43.99	42.62	36.703	36.425
	5230	46	44.05	41.87	36.711	36.548
VHT80 (FCC)	5210	42	84.31	84.96	75.909	76.035
VHT160 (FCC)	5250 (Straddle)	50	162.70	162.90	155.060	154.330

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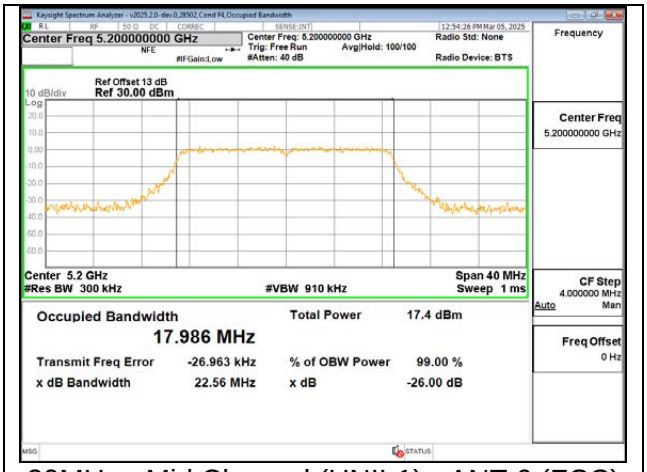

20MHz - Mid Channel (UNII-1) - ANT 6 (FCC)

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9.2.2. 802.11n/ac MIMO CDD MODE IN THE UNII-1 BAND

UNII-1 (MIMO CDD)	Frequency (MHz)	Channel Number	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
			Ant 6	Ant 5	Min BW	Ant 6	Ant 5	Min BW
HT20 (FCC)	5180	36	22.43	22.33	--	17.911	17.933	--
	5200	40	22.39	22.21	--	18.008	17.829	--
	5240	48	22.33	22.02	--	17.933	17.858	--
HT40 (FCC)	5190	38	43.48	42.94	--	36.722	36.495	--
	5230	46	43.85	42.39	--	36.640	36.448	--
VHT80 (FCC)	5210	42	85.70	82.72	--	76.085	75.941	--
VHT160 (FCC)	5250 (Straddle)	50	161.00	160.30	--	154.870	154.510	--

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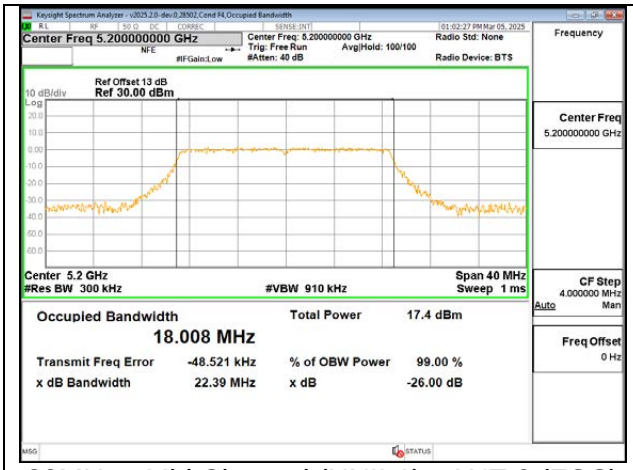
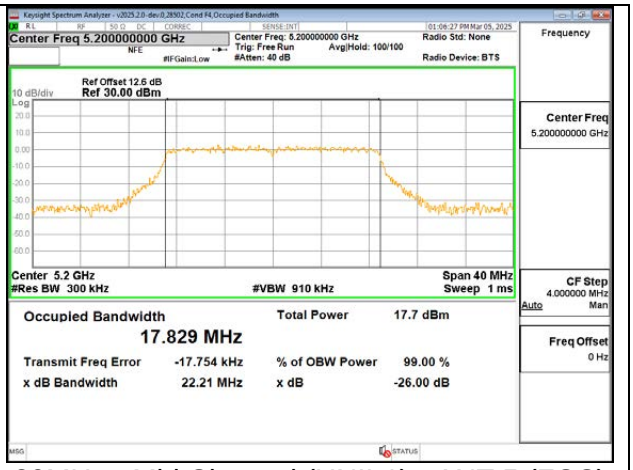


20MHz - Mid Channel (UNII-1) - ANT 6 (FCC)



20MHz - Mid Channel (UNII-1) - ANT 5 (FCC)

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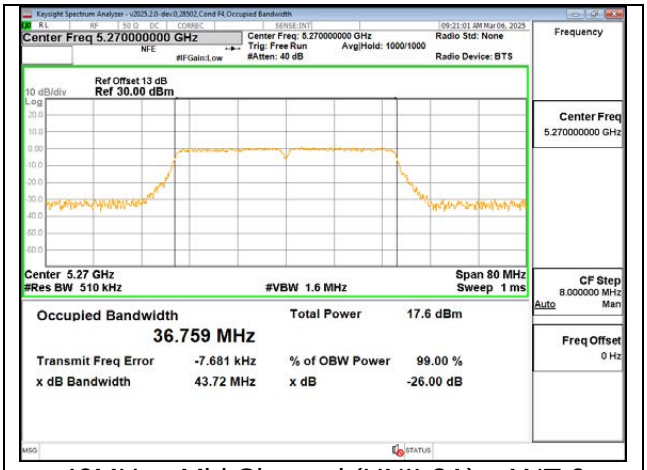
9.2.3. 802.11n/ac SISO MODE IN THE UNII-2A BAND

UNII-2A (SISO)	Frequency (MHz)	Channel Number	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
			Ant 6	Ant 5	Ant 6	Ant 5
HT20	5260	52	22.76	21.89	17.933	17.800
	5300	60	22.57	21.94	17.922	17.818
	5320	64	22.89	22.16	17.899	17.779
HT40	5270	54	43.72	43.17	36.759	36.473
	5310	62	44.94	42.86	36.747	36.452
VHT80	5290	58	99.61	85.25	76.234	76.194
VHT160	5250 (Straddle)	50	162.70	162.90	155.060	154.330



40MHz - Mid Channel (UNII-2A) - ANT 6

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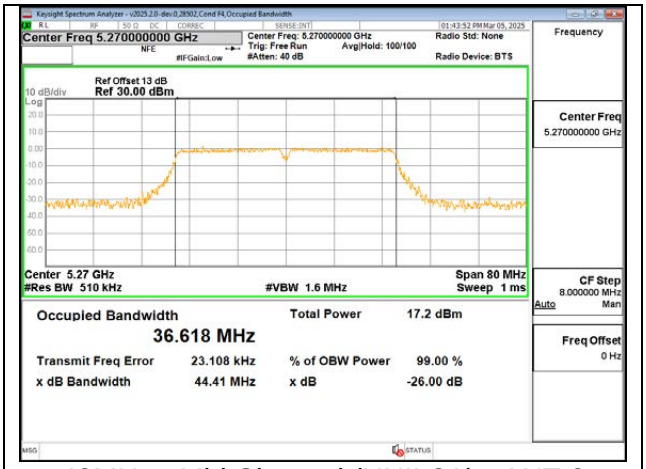
9.2.4. 802.11n/ac MIMO CDD MODE IN THE UNII-2A BAND

UNII-2A (MIMO CDD)	Frequency (MHz)	Channel Number	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
			Ant 6	Ant 5	Min BW	Ant 6	Ant 5	Min BW
HT20	5260	52	22.56	22.04	22.04	17.943	17.834	17.834
	5300	60	22.50	22.23	22.23	17.989	17.830	17.830
	5320	64	22.49	22.41	22.41	17.975	17.814	17.814
HT40	5270	54	44.41	42.67	42.67	36.618	36.420	36.420
	5310	62	44.51	43.52	43.52	36.740	36.514	36.514
VHT80	5290	58	86.12	82.39	82.39	76.133	76.093	76.093
VHT160	5250 (Straddle)	50	161.00	160.30	160.30	154.870	154.510	154.510



40MHz - Mid Channel (UNII-2A) - ANT 6

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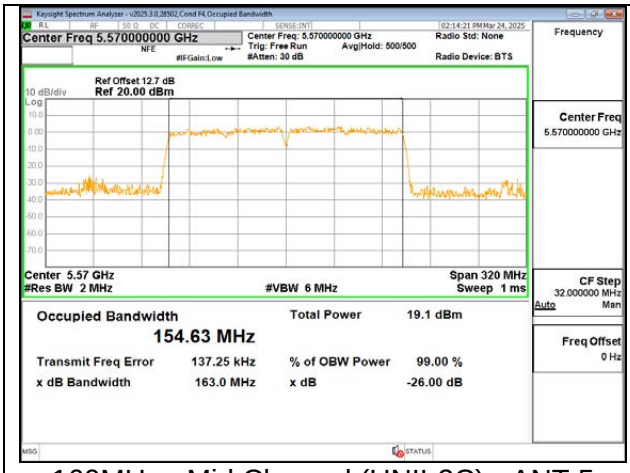
9.2.5. 802.11n/ac SISO MODE IN THE UNII-2C BAND

UNII-2C (SISO)	Frequency (MHz)	Channel Number	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
			Ant 6	Ant 5	Ant 6	Ant 5
HT20	5500	100	22.89	22.11	17.9690	17.8560
	5580	116	22.36	21.87	17.9570	17.8240
	5700	140	22.39	21.83	17.9240	17.7940
	5720 (Straddle)	144	22.11	21.50	17.9370	17.7930
HT40	5510	102	44.48	42.78	36.7590	36.5340
	5550	110	44.33	42.53	36.7370	36.4920
	5670	134	44.10	42.82	36.7470	36.4410
	5710 (Straddle)	142	44.08	42.81	36.7660	36.4920
VHT80	5530	106	83.51	87.56	76.0040	75.9400
	5610	122	85.81	85.42	75.9660	76.0200
	5690 (Straddle)	138	85.33	85.60	75.9510	76.0580
VHT160	5570	114	163.00	163.00	154.8000	154.6300



160MHz - Mid Channel (UNII-2C) - ANT 5

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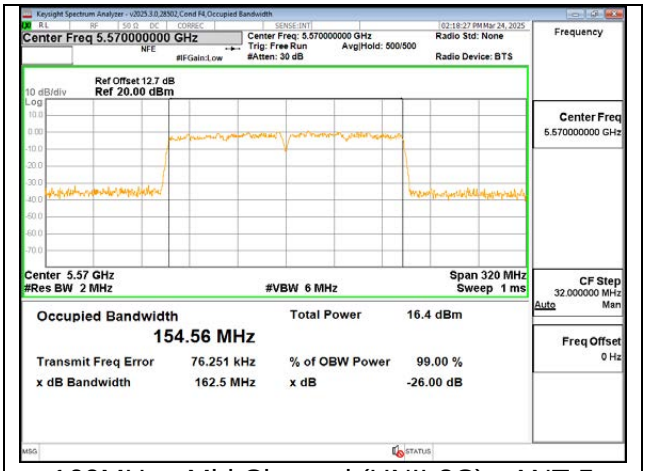
9.2.6. 802.11n/ac MIMO CDD MODE IN THE UNII-2C BAND

UNII-2C (MIMO CDD)	Frequency (MHz)	Channel Number	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
			Ant 6	Ant 5	Min BW	Ant 6	Ant 5	Min BW
HT20	5500	100	22.98	22.63	22.63	17.9860	17.8420	17.84
	5580	116	22.55	22.01	22.01	18.0090	17.8560	17.86
	5700	140	22.46	21.63	21.63	17.9630	17.8490	17.85
	5720 (Straddle)	144	22.71	22.14	22.14	17.9530	17.8220	17.82
HT40	5510	102	44.19	42.73	42.73	36.7180	36.5440	36.5440
	5550	110	44.63	43.41	43.41	36.7250	36.5980	36.5980
	5670	134	44.29	42.92	42.92	36.7860	36.5530	36.5530
	5710 (Straddle)	142	43.16	42.60	42.60	36.7030	36.5020	36.5020
VHT80	5530	106	83.87	83.46	83.46	75.9890	76.0990	75.9890
	5610	122	83.64	82.98	82.98	75.9560	76.0720	75.9560
	5690 (Straddle)	138	83.04	83.23	83.04	75.9400	75.9070	75.9070
VHT160	5570	114	163.30	162.50	162.50	154.8300	154.5600	154.5600



160MHz - Mid Channel (UNII-2C) - ANT 5

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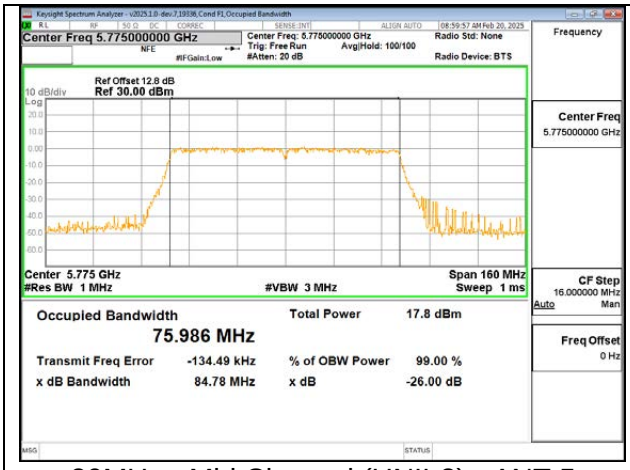
9.2.7. 802.11n/ac SISO MODE IN THE UNII-3 BAND

UNII-3 (SISO)	Frequency (MHz)	Channel Number	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
			Ant 6	Ant 5	Ant 6	Ant 5
HT20	5745	149	22.14	21.74	17.9010	17.8170
	5785	157	22.26	21.71	17.9130	17.7760
	5825	165	22.05	21.68	17.9090	17.8210
HT40	5755	151	44.20	42.67	36.6650	36.4120
	5795	159	43.95	42.62	36.6390	36.4400
VHT80	5775	155	84.93	84.78	76.0030	75.9860



80MHz - Mid Channel (UNII-3) - ANT 5

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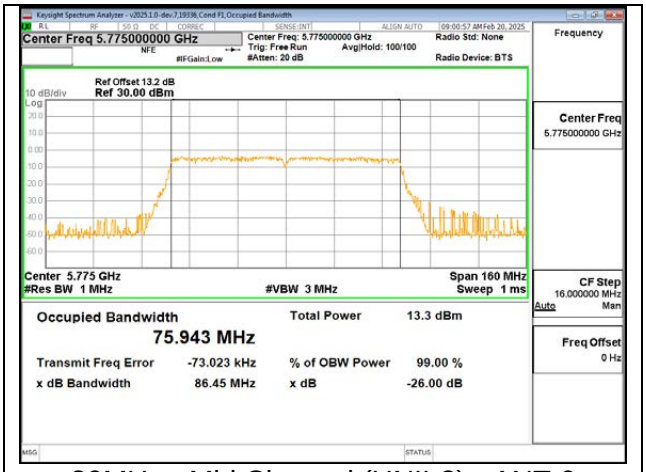
9.2.8. 802.11n/ac MIMO CDD MODE IN THE UNII-3 BAND

UNII-3 (MIMO CDD)	Frequency (MHz)	Channel Number	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
			Ant 6	Ant 5	Ant 6	Ant 5
HT20	5745	149	22.80	22.31	17.9190	17.8390
	5785	157	22.41	22.09	17.9450	17.8200
	5825	165	22.41	21.94	17.9810	17.8350
HT40	5755	151	44.92	42.41	36.6820	36.4320
	5795	159	44.64	43.11	36.6180	36.4800
VHT80	5775	155	86.45	83.13	75.9430	75.8660



80MHz - Mid Channel (UNII-3) - ANT 6

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9.2.9. 802.11be SISO MODE IN THE UNII-1 BAND

UNII-1 (SISO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					Ant 6	Ant 5	Ant 6	Ant 5
EHT20 (FCC)	5180	36	SU	--	22.41	21.69	19.0060	18.9930
			26T	0	20.46	20.39	18.5570	18.4470
				4	18.32	18.17	16.8830	16.7200
				8	20.41	20.50	18.4980	18.4400
	5200	40	SU	--	22.72	21.77	19.0080	19.0020
			26T	0	20.57	20.40	18.5780	18.4750
				4	18.17	18.14	16.8390	16.6720
				8	20.63	20.36	18.4820	18.3910
	5240	48	SU	--	22.49	22.10	19.0390	18.9900
			26T	0	20.29	20.46	18.6170	18.5250
				4	18.24	18.20	16.8940	16.7390
				8	20.27	20.20	18.4140	18.3740
EHT40 (FCC)	5190	38	SU	--	42.81	42.58	38.0430	37.9320
			26T	0	20.95	20.63	18.6040	18.5430
				9	21.26	21.15	19.1540	19.0140
				17	20.60	20.76	18.6240	18.5320
			242T	61	23.14	22.75	19.2240	19.0480
				62	22.73	22.57	19.0460	19.0670
	5230	46	SU	--	43.11	42.67	38.0310	37.9590
			26T	0	20.75	20.71	18.6690	18.4940
				9	21.22	21.37	19.0800	19.0240
				17	20.88	20.29	18.6420	18.5560
			242T	61	23.56	22.67	19.1600	19.0110
				62	23.29	22.68	19.1600	19.0420
EHT80 (FCC)	5210	42	SU	--	84.59	83.36	77.7750	77.6190
			242T	61	22.73	22.12	19.2220	19.1740
				62	22.99	23.45	19.2200	19.2820
				64	23.50	22.54	19.3570	19.1840
EHT160	5250 (Straddle)	50	SU	--	163.40	163.60	156.430	156.310
			242T	61	23.36	23.16	19.272	19.360
				62	42.08	42.00	37.152	37.304
				S64	23.18	23.04	19.289	19.553

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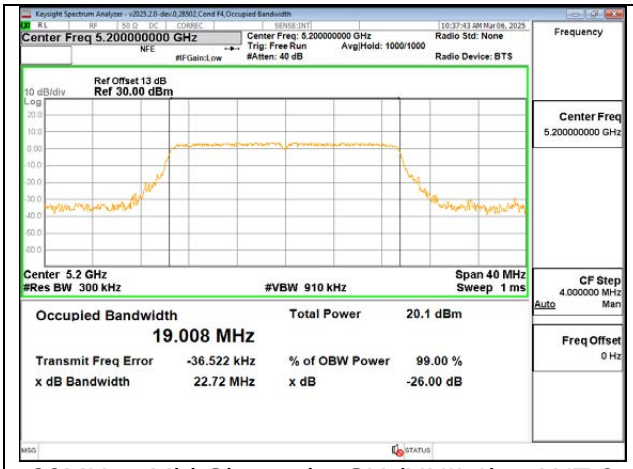
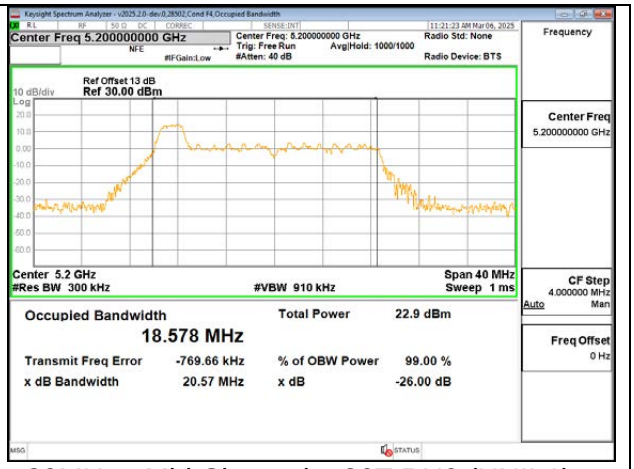
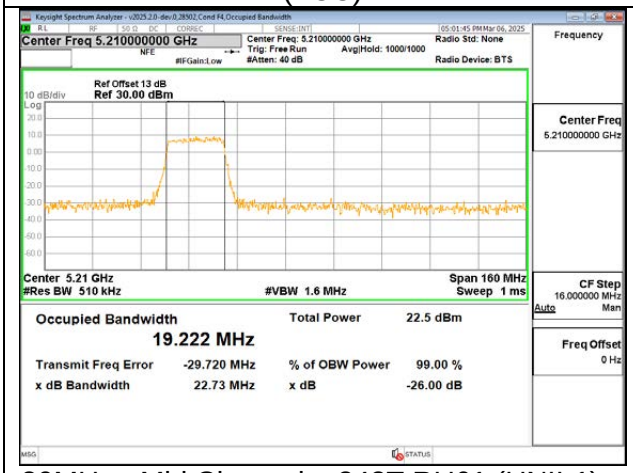


20MHz - Mid Channel – SU (UNII-1) – ANT 6 (FCC)



20MHz - Mid Channel – 26T RU0 (UNII-1) – ANT 6 (FCC)



80MHz - Mid Channel – 242T RU61 (UNII-1) – ANT 6 (FCC)

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9.2.10. 802.11be MIMO CDD MODE IN THE UNII-1 BAND

UNII-1 (MIMO CDD)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
					Ant 6	Ant 5	Min BW	Ant 6	ANT 5	Min BW
EHT20 (FCC)	5180	36	SU	--	22.53	22.19	--	19.028	19.079	--
			26T	0	20.65	20.43	--	18.627	18.483	--
				4	18.34	18.20	--	16.902	16.742	--
				8	20.57	19.98	--	18.457	18.344	--
	5200	40	SU	--	22.74	22.43	--	19.068	19.065	--
			26T	0	20.51	20.26	--	18.624	18.474	--
				4	18.26	18.19	--	16.874	16.734	--
				8	20.44	20.25	--	18.341	18.395	--
	5240	48	SU	--	22.69	22.18	--	19.044	19.020	--
			26T	0	20.40	20.57	--	18.550	18.494	--
				4	18.28	18.18	--	16.859	16.771	--
				8	20.69	20.17	--	18.525	18.392	--
EHT40 (FCC)	5190	38	SU	--	42.99	42.35	--	37.984	37.953	--
			26T	0	21.10	20.53	--	18.588	18.589	--
				9	21.20	20.80	--	19.139	19.019	--
				17	20.33	20.39	--	18.689	18.445	--
			242T	61	23.61	23.26	--	19.137	19.044	--
				62	23.67	23.57	--	19.149	19.032	--
	5230	46	SU	--	43.93	43.14	--	37.979	37.979	--
			26T	0	21.25	20.44	--	18.559	18.442	--
				9	21.48	21.25	--	19.088	19.017	--
				17	20.40	20.29	--	18.612	18.346	--
			242T	61	23.00	23.48	--	19.137	19.137	--
				62	23.37	23.04	--	19.110	19.148	--
EHT80 (FCC)	5210	42	SU	--	84.17	83.27	--	77.558	77.535	--
			242T	61	22.69	22.26	--	19.507	19.136	--
				62	23.28	22.60	--	19.242	19.242	--
				64	23.44	22.76	--	19.206	19.147	--
EHT160	5250 (Straddle)	50	SU	--	162.8	163.3	--	156.660	155.920	--
			242T	61	23.75	22.86	--	19.414	19.236	--
				62	41.39	41.47	--	36.760	36.922	--
				S64	23.69	23.53	--	19.448	19.304	--

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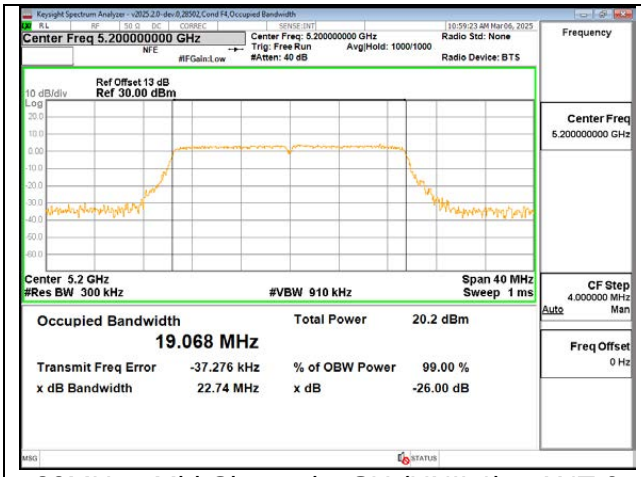
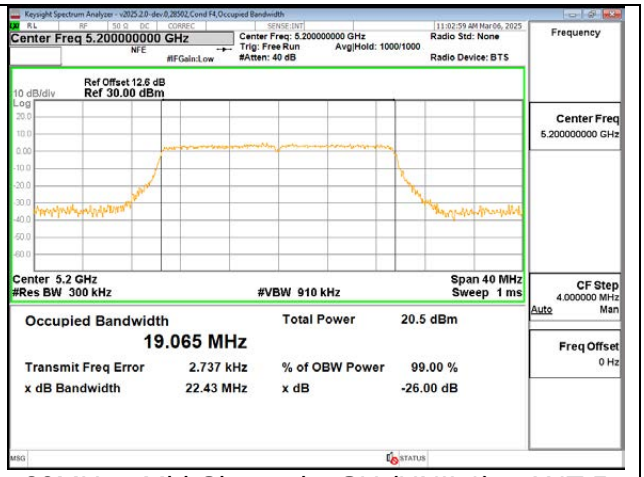
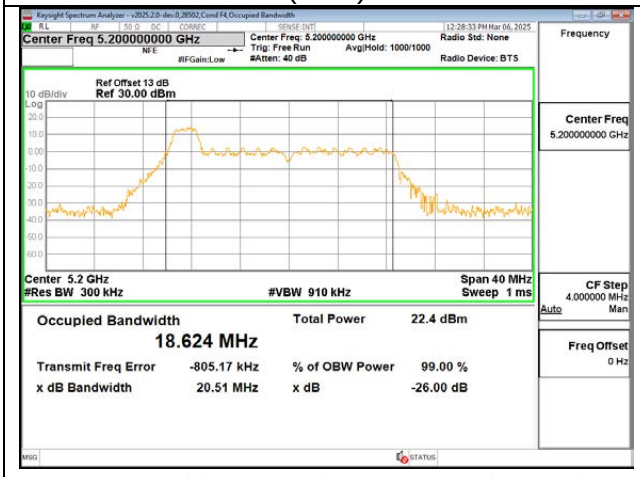


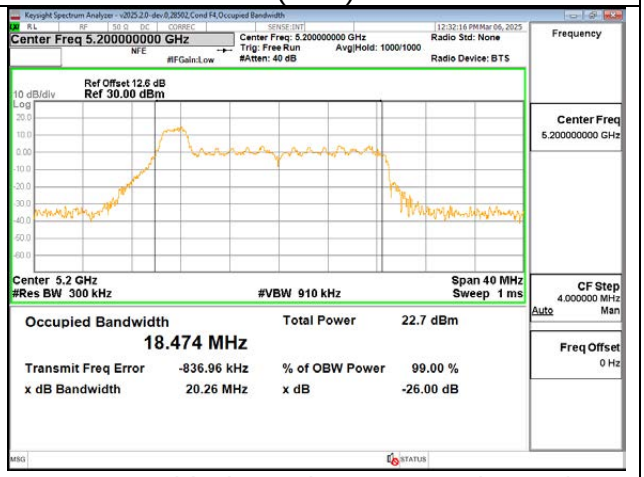
20MHz - Mid Channel – SU (UNII-1) – ANT 6 (FCC)



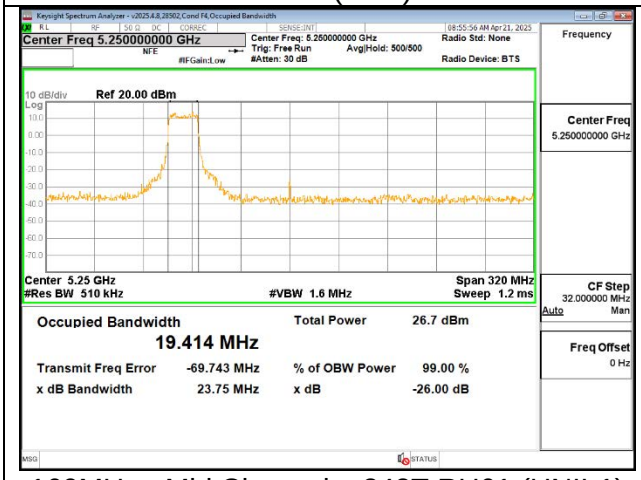
20MHz - Mid Channel – SU (UNII-1) – ANT 5 (FCC)



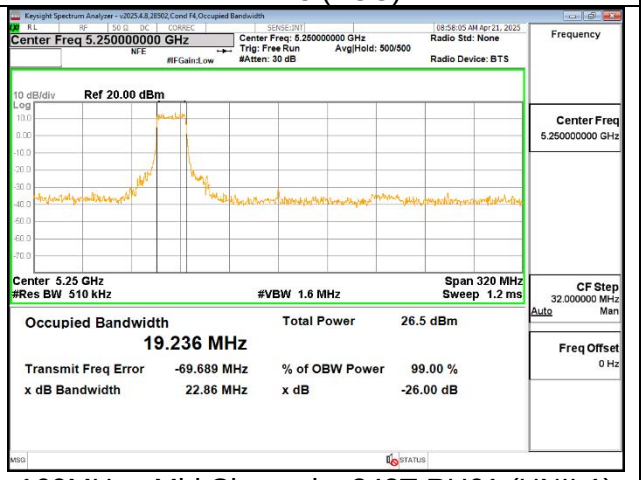
20MHz - Mid Channel – 26T RU0 (UNII-1) – ANT 6 (FCC)



20MHz - Mid Channel – 26T RU0 (UNII-1) – ANT 5 (FCC)



160MHz - Mid Channel – 242T RU61 (UNII-1) – ANT 6 (FCC)



160MHz - Mid Channel – 242T RU61 (UNII-1) – ANT 5 (FCC)

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9.2.11. 802.11be SISO MODE IN THE UNII-2A BAND

UNII-2A (SISO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					Ant 6	Ant 5	Ant 6	Ant 5
EHT20	5260	52	SU	--	22.49	21.47	19.035	19.000
			52T	37	20.88	20.32	18.364	18.214
				38	18.84	18.27	16.923	16.804
				40	21.07	20.44	18.250	18.186
	5300	60	SU	--	22.20	22.41	19.049	19.024
			52T	37	21.05	20.63	18.381	18.206
				38	18.69	18.36	16.933	16.781
				40	20.78	20.30	18.222	18.133
	5320	64	SU	--	22.80	21.90	19.064	19.012
			52T	37	21.14	20.64	18.378	18.206
				38	18.77	18.32	16.931	16.800
				40	20.54	20.36	18.256	18.187
EHT40	5270	54	SU	--	43.11	42.43	37.985	37.915
			242T	61	22.89	22.71	19.175	19.103
				62	24.43	23.26	19.111	19.035
	5310	62	SU	--	43.52	43.21	37.972	37.935
			242T	61	23.03	23.03	19.222	19.034
				62	23.25	23.01	19.083	19.010
EHT80	5290	58	SU	--	83.65	83.40	77.628	77.447
			242T	61	22.85	22.95	19.247	19.145
				62	23.08	22.66	19.182	19.234
				64	22.94	22.92	19.162	19.238
EHT160	5250 (Straddle)	50	SU	--	163.40	163.60	156.430	156.310
			242T	61	23.36	23.16	19.272	19.360
				62	42.08	42.00	37.152	37.304
				S64	23.18	23.04	19.289	19.553

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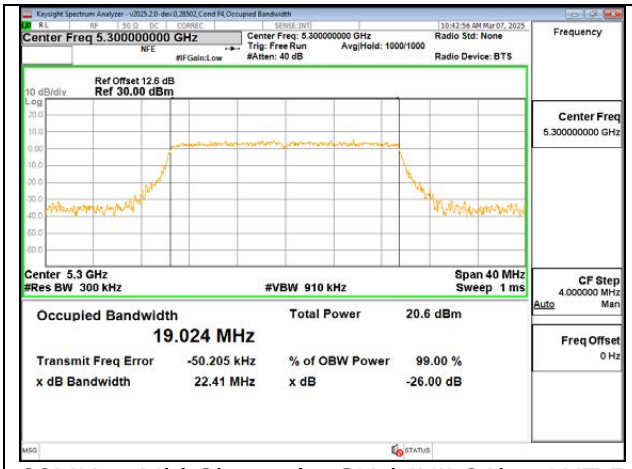
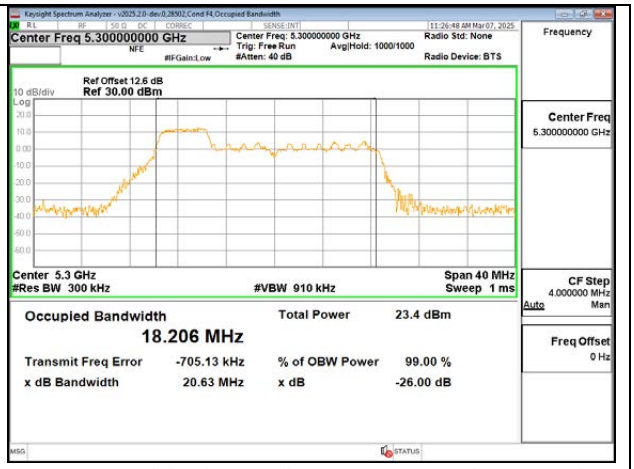
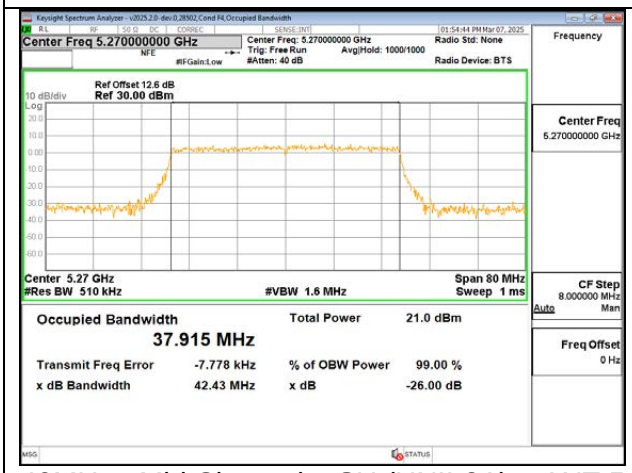


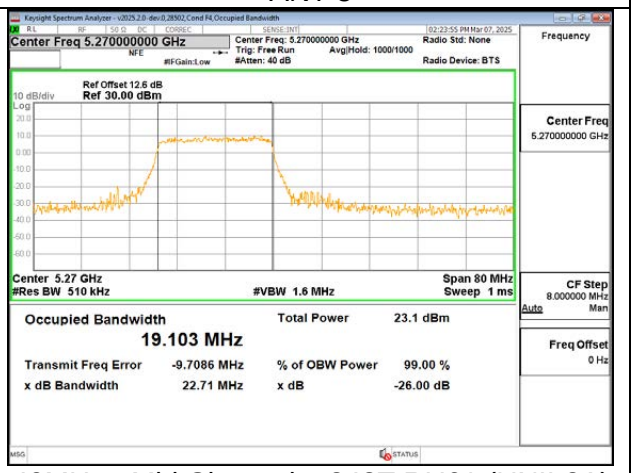
20MHz - Mid Channel – SU (UNII-2A) – ANT 5



20MHz - Mid Channel – 52T RU37 (UNII-2A) – ANT 5



40MHz - Mid Channel – SU (UNII-2A) – ANT 5



40MHz - Mid Channel – 242T RU61 (UNII-2A) – ANT 5

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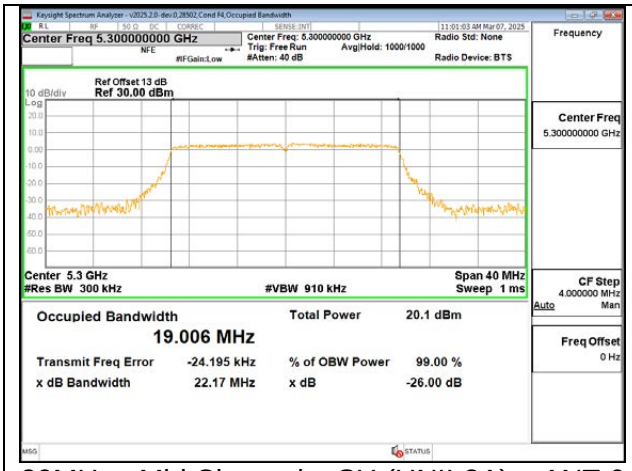
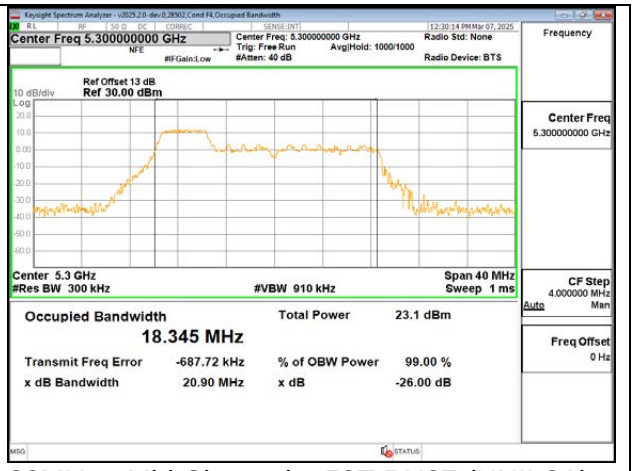
9.2.12. 802.11be MIMO CDD MODE IN THE UNII-2A BAND

UNII-2A (MIMO CDD)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
					Ant 6	Ant 5	Min BW	Ant 6	Ant 5	Min BW
EHT20	5260	52	SU	--	22.67	22.89	22.67	19.026	19.076	19.026
			52T	37	20.89	20.34	20.34	18.344	18.209	18.209
				38	18.82	18.82	18.82	16.941	16.941	16.941
				40	20.74	20.36	20.74	18.189	18.186	18.186
	5300	60	SU	--	22.17	22.01	22.01	19.006	19.027	19.006
			52T	37	20.90	20.48	20.48	18.345	18.202	18.202
				38	18.79	18.34	18.34	16.976	16.770	16.770
				40	20.73	20.73	20.73	18.204	18.204	18.204
	5320	64	SU	--	22.71	22.42	22.42	19.031	18.994	18.994
			52T	37	21.39	20.28	20.28	18.404	18.186	18.186
				38	18.89	18.34	18.34	16.921	16.818	16.818
				40	20.77	20.47	20.47	18.198	18.219	18.198
EHT40	5270	54	SU	--	43.53	42.81	42.81	37.975	37.984	37.975
			242T	61	23.49	22.71	22.71	19.179	19.116	19.116
				62	27.70	23.31	23.31	19.221	19.146	19.146
	5310	62	SU	--	43.32	42.63	42.63	38.026	37.991	37.991
			242T	61	23.37	22.76	22.76	19.165	19.059	19.059
				62	23.05	22.68	22.68	19.093	19.049	19.049
EHT80	5290	58	SU	--	84.56	83.32	83.32	77.636	77.644	77.636
			242T	61	22.98	22.57	22.57	19.410	19.090	19.090
				62	22.92	23.24	22.92	19.277	19.230	19.230
				64	22.82	22.49	22.49	19.290	19.136	19.136
EHT160	5250 (Straddle)	50	SU	--	162.8	163.3	162.8	156.660	155.920	155.920
			242T	61	23.75	22.86	22.86	19.414	19.236	19.236
				62	41.39	41.47	41.39	36.760	36.922	36.760
				S64	23.69	23.53	23.53	19.448	19.304	19.304



20MHz - Mid Channel – SU (UNII-2A) – ANT 6



20MHz - Mid Channel – 52T RU37 (UNII-2A) – ANT 6

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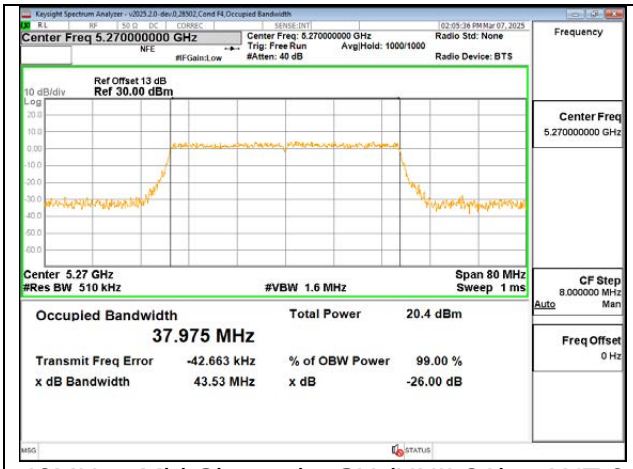
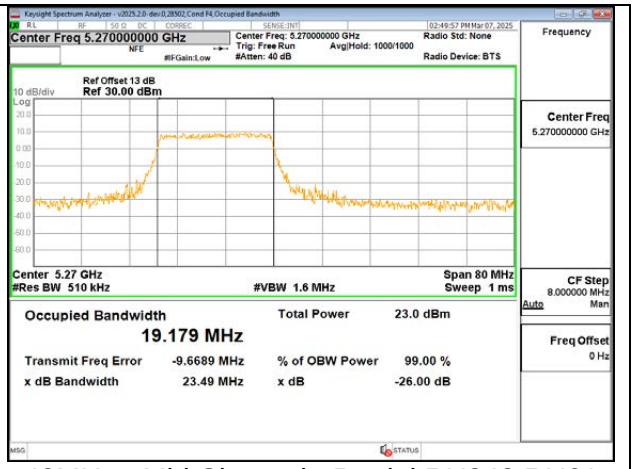


40MHz - Mid Channel – SU (UNII-2A) – ANT 6



40MHz - Mid Channel - Partial RU242 RU61 (UNII-2A) – ANT 6

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9.2.13. 802.11be SISO MODE IN THE UNII-2C BAND

UNII-2C (SISO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					Ant 6	Ant 5	Ant 6	Ant 5
EHT20	5500	100	SU	--	22.75	22.25	19.038	18.994
			52T	37	20.95	20.28	18.379	18.217
				38	18.87	18.44	16.980	16.773
				40	20.85	20.60	18.253	18.104
	5580	116	SU	--	22.88	22.20	19.050	19.008
			52T	37	21.00	20.37	18.370	18.197
				38	18.83	18.29	17.007	16.826
				40	20.62	20.54	18.269	18.226
	5700	140	SU	--	22.92	22.09	19.038	19.026
			52T	37	21.20	20.71	18.380	18.236
				38	18.82	18.41	16.936	16.829
				40	20.58	20.50	18.222	18.118
	5720 (Straddle)	144	SU	--	22.71	22.09	19.055	19.034
			52T	37	21.30	20.42	18.435	18.211
				38	18.80	18.27	16.780	16.742
				40	20.66	20.25	18.302	18.154
EHT40	5510	102	SU	--	44.46	43.74	38.042	38.023
			242T	61	23.54	23.83	19.130	19.127
				62	23.21	22.95	19.176	19.066
	5550	110	SU	--	44.56	43.29	38.042	38.000
			242T	61	23.40	24.44	19.156	19.120
				62	23.23	23.17	19.140	19.161
	5670	134	SU	--	44.24	43.48	37.982	37.906
			242T	61	23.97	23.25	19.143	19.104
				62	23.56	23.39	19.147	19.106
	5710 (Straddle)	142	SU	--	44.72	43.67	38.042	37.996
			242T	61	23.32	23.07	19.143	19.043
				62	23.63	23.12	19.076	19.096
EHT80	5530	106	SU	--	84.89	83.97	77.611	77.628
			242T	61	24.04	23.30	19.182	19.162
				62	23.18	23.41	19.273	19.156
				64	23.39	23.28	19.128	19.159
	5610	122	SU	--	85.91	84.00	77.579	77.694
			242T	61	23.37	23.02	19.260	19.134
				62	23.32	23.06	19.232	19.134
				64	23.18	23.35	19.137	19.158
	5690 (Straddle)	138	SU	--	84.56	83.83	77.687	77.425
			242T	61	23.67	23.06	19.168	19.186
				62	23.70	23.01	19.236	19.172
				64	24.09	23.36	19.276	19.213
EHT160	5570	114	SU	--	164.10	164.00	156.370	156.340
			242T	61	23.67	23.26	19.387	19.312
				62	41.66	41.56	36.986	36.803
				S64	24.02	23.32	19.299	19.201

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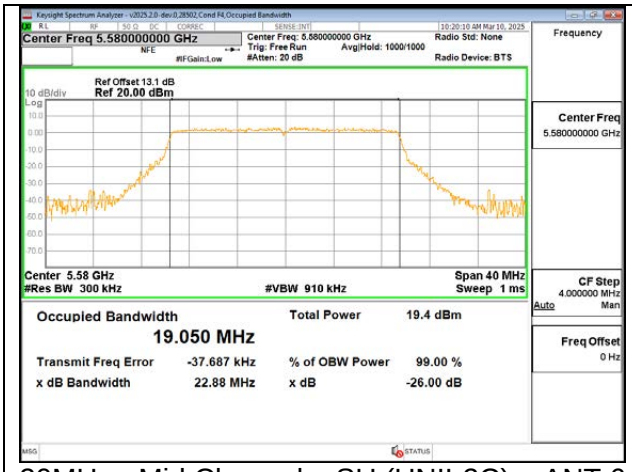
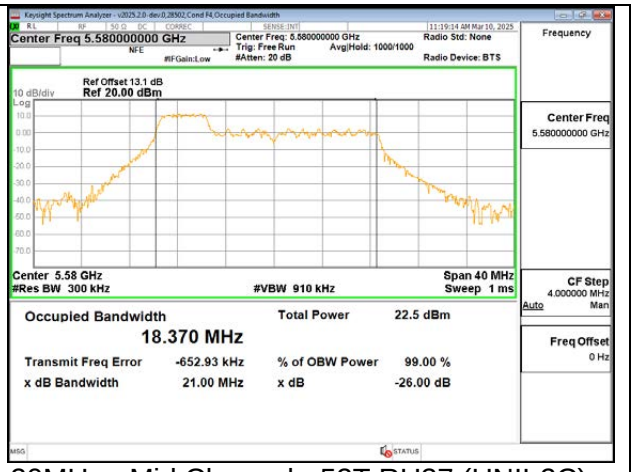
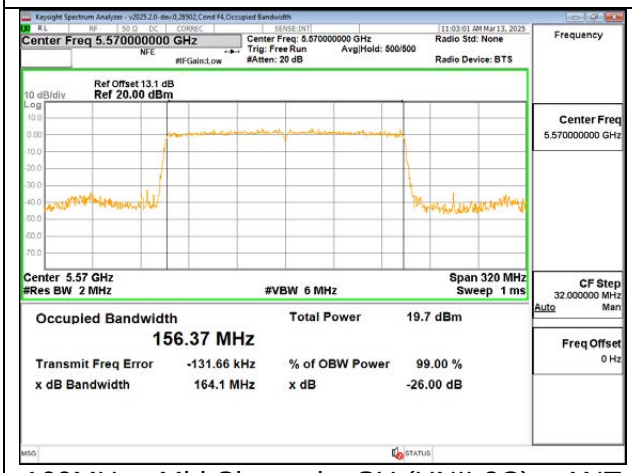


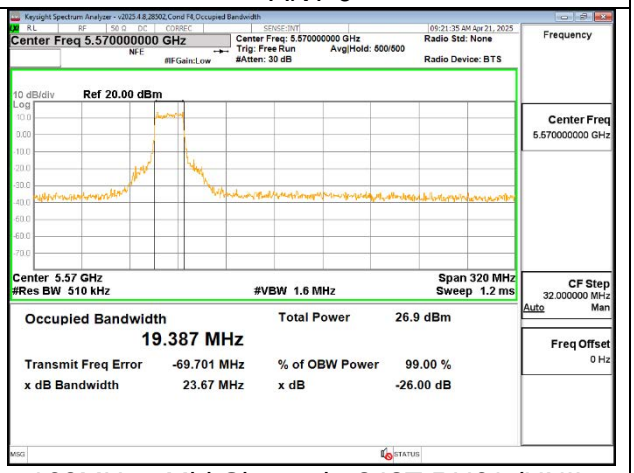
20MHz - Mid Channel – SU (UNII-2C) – ANT 6



20MHz - Mid Channel - 52T RU37 (UNII-2C) – ANT 6



160MHz - Mid Channel – SU (UNII-2C) – ANT 6



160MHz - Mid Channel - 242T RU61 (UNII-2C) – ANT 6

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9.2.14. 802.11be MIMO CDD MODE IN THE UNII-2C BAND

UNII-2C (MIMO CDD)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
					Ant 6	Ant 5	Min BW	Ant 6	Ant 5	Min BW
EHT20	5500	100	SU	--	22.72	22.46	22.46	19.050	18.998	18.998
			52T	37	20.93	20.52	20.52	18.381	18.208	18.208
				38	18.80	18.41	18.41	16.976	16.844	16.844
				40	20.74	20.74	20.74	18.254	18.254	18.254
	5580	116	SU	--	22.79	22.81	22.79	19.033	19.056	19.033
			52T	37	21.00	20.80	20.80	18.399	18.243	18.243
				38	18.87	18.48	18.48	16.988	16.860	16.860
				40	20.62	20.40	20.40	18.292	18.170	18.170
	5700	140	SU	--	22.94	22.54	22.54	19.018	19.048	19.018
			52T	37	20.97	20.55	20.55	18.395	18.237	18.237
				38	18.93	18.43	18.43	17.001	16.821	16.821
				40	20.86	20.51	20.51	18.251	18.249	18.249
	5720 (Straddle)	144	SU	--	22.72	22.57	22.57	19.051	19.021	19.021
			52T	37	21.04	20.45	20.45	18.432	18.237	18.237
				38	18.88	18.46	18.46	16.952	16.851	16.851
				40	20.96	20.65	20.65	18.244	18.174	18.174
EHT40	5510	102	SU	--	44.25	43.68	43.68	38.043	37.983	37.983
			242T	61	23.52	23.64	23.52	19.234	19.084	19.084
				62	23.00	23.26	23.00	19.126	19.034	19.034
	5550	110	SU	--	43.91	43.27	43.27	37.996	37.969	37.969
			242T	61	23.44	24.10	23.44	19.195	19.072	19.072
				62	23.16	23.14	23.14	19.117	19.096	19.096
	5670	134	SU	--	44.67	43.37	43.37	38.033	37.967	37.967
			242T	61	23.24	23.18	23.18	19.135	19.060	19.060
				62	23.40	23.10	23.10	19.117	18.995	18.995
	5710 (Straddle)	142	SU	--	43.60	43.40	43.40	38.010	37.965	37.965
			242T	61	23.67	23.36	23.36	19.152	19.162	19.152
				62	23.87	22.88	22.88	19.136	19.039	19.039
EHT80	5530	106	SU	--	84.39	84.42	84.39	77.557	77.584	77.557
			242T	61	23.48	23.40	23.40	19.238	19.119	19.119
				62	23.66	23.18	23.18	19.212	19.117	19.117
				64	23.66	23.14	23.14	19.226	19.120	19.120
	5610	122	SU	--	85.02	84.75	84.75	77.597	77.608	77.597
			242T	61	23.65	23.08	23.08	19.194	19.155	19.155
				62	23.75	23.06	23.06	19.130	19.254	19.130
				64	23.48	22.91	22.91	19.156	19.127	19.127
	5690 (Straddle)	138	SU	--	84.04	84.27	84.04	77.560	77.561	77.560
			242T	61	23.76	23.52	23.52	19.241	19.134	19.134
				62	23.71	23.51	23.51	19.281	19.176	19.176
				64	23.79	23.54	23.54	19.482	19.387	19.387
EHT160	5570	114	SU	--	164.5	163.9	163.9	156.540	156.210	156.210
			242T	61	23.56	23.22	23.22	19.304	19.238	19.238
				62	42.94	41.00	41.00	37.250	36.910	36.910
				S64	23.39	23.06	23.06	19.322	19.246	19.246

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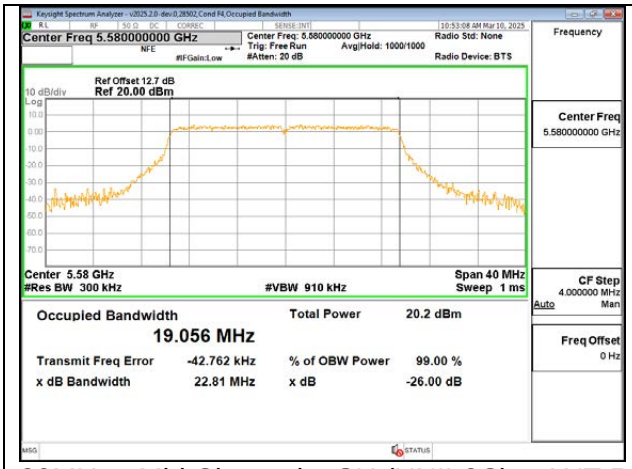
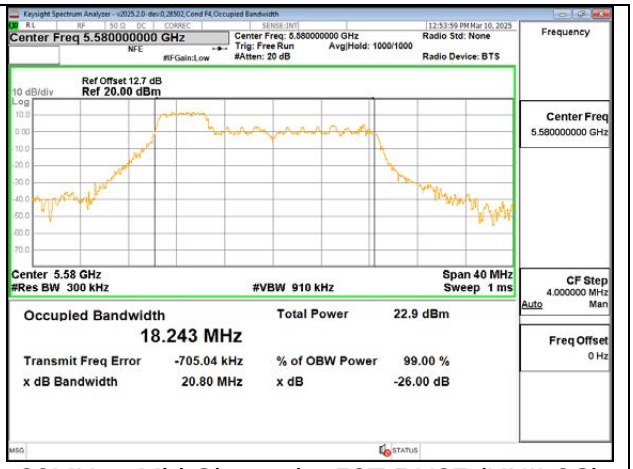
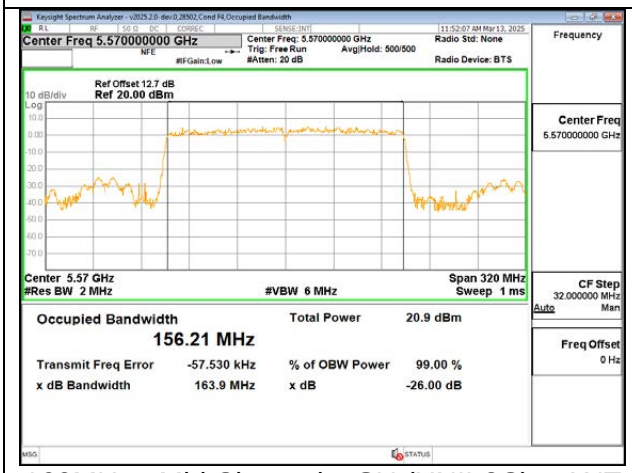


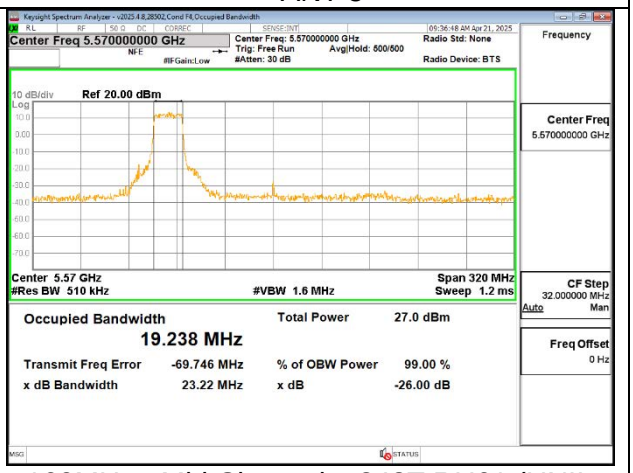
20MHz - Mid Channel – SU (UNII-2C) – ANT 5



20MHz - Mid Channel – 52T RU37 (UNII-2C) – ANT 5



160MHz - Mid Channel – SU (UNII-2C) – ANT 5



160MHz - Mid Channel – 242T RU61 (UNII-2C) – ANT 5

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9.2.15. 802.11be SISO MODE IN THE UNII-3 BAND

UNII-3 (SISO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					Ant 6	Ant 5	Ant 6	Ant 5
EHT20	5745	149	SU	--	22.91	22.20	19.029	19.010
			26T	0	20.23	20.16	18.602	18.427
				4	18.32	18.19	16.883	16.667
				8	20.31	20.09	18.431	18.399
	5785	157	SU	--	22.85	22.63	19.020	18.985
			26T	0	20.21	20.06	18.558	18.371
				4	18.34	18.20	16.890	16.715
				8	20.31	20.29	18.520	18.445
	5825	165	SU	--	22.60	22.11	19.073	18.992
			26T	0	20.35	20.49	18.601	18.476
				4	18.41	17.45	16.818	16.131
				8	20.42	20.18	18.426	18.437
EHT40	5755	151	SU	--	43.51	42.62	38.045	37.961
			106T	53	22.01	21.16	18.035	17.533
				54	21.36	20.92	18.385	18.458
				56	21.92	21.34	18.306	17.978
	5795	159	SU	--	44.03	43.32	37.979	37.978
			106T	53	21.38	21.16	18.152	17.876
				54	21.47	20.99	18.603	18.495
				56	21.55	20.87	17.975	17.995
EHT80	5775	155	SU	--	84.97	83.63	77.548	77.625
			106T	53	21.92	21.34	18.306	17.978
				56	21.10	21.47	17.577	18.212
				60	20.57	21.68	17.795	18.199

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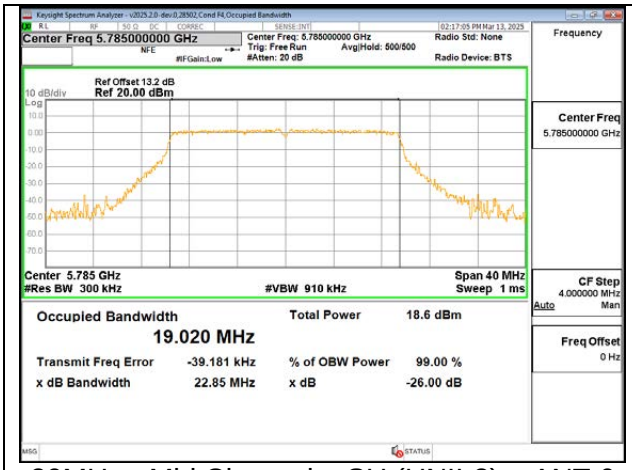
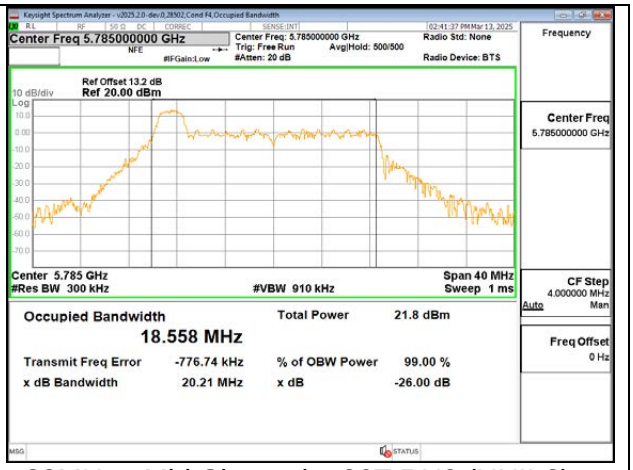
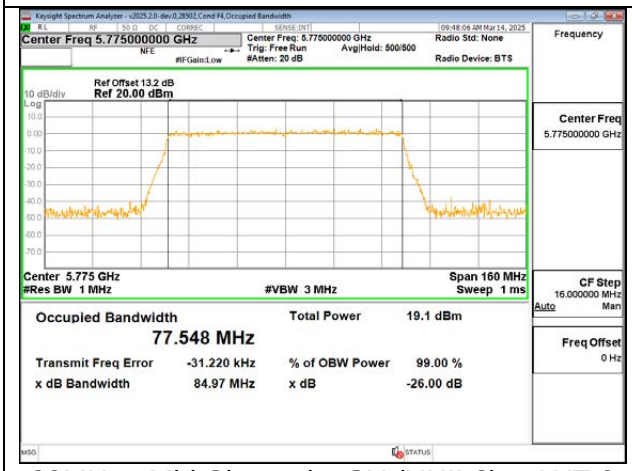


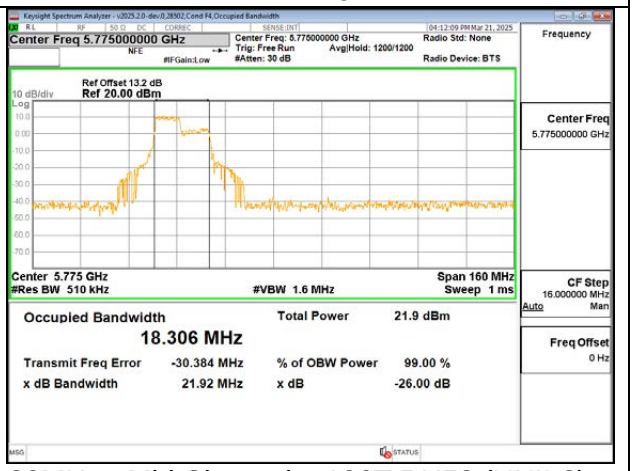
20MHz - Mid Channel – SU (UNII-3) – ANT 6



20MHz - Mid Channel – 26T RU0 (UNII-3) – ANT 6



80MHz - Mid Channel – SU (UNII-3) – ANT 6



80MHz - Mid Channel – 106T RU53 (UNII-3) – ANT 6

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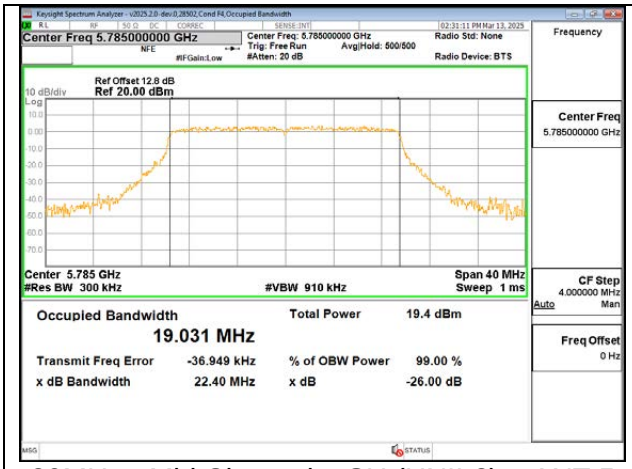
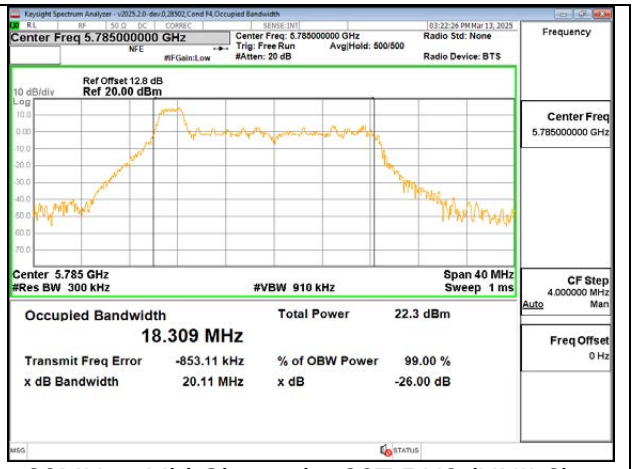
9.2.16. 802.11be MIMO CDD MODE IN THE UNII-3 BAND

UNII-3 (MIMO CDD)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					Ant 6	Ant 5	Ant 6	Ant 5
EHT20	5745	149	SU	--	22.96	22.98	19.027	19.093
			26T	0	20.63	20.19	18.539	18.021
				4	17.87	18.04	16.701	16.779
				8	20.35	20.16	18.523	18.177
	5785	157	SU	--	22.84	22.40	19.064	19.031
			26T	0	20.29	20.11	18.517	18.309
				4	18.19	18.11	16.812	16.678
				8	20.25	20.18	18.309	18.498
	5825	165	SU	--	22.72	22.34	19.018	19.009
			26T	0	20.62	20.48	18.585	18.487
				4	18.26	18.17	16.970	16.643
				8	20.52	20.40	18.465	18.463
EHT40	5755	151	SU	--	43.72	43.80	38.089	37.964
			106T	53	22.29	21.86	18.105	17.947
				54	21.48	21.29	18.733	18.395
				56	20.62	20.89	17.482	18.027
	5795	159	SU	--	44.11	43.46	38.002	37.993
			106T	53	22.36	21.46	18.052	17.955
				54	21.36	21.61	18.626	18.410
				56	21.32	20.78	18.038	17.924
EHT80	5775	155	SU	--	85.21	84.91	77.583	77.647
			106T	53	22.40	23.17	18.313	18.161
				56	21.69	20.67	18.068	17.860
				60	22.17	22.49	18.373	18.065



20MHz - Mid Channel – SU (UNII-3) – ANT 5



20MHz - Mid Channel – 26T RU0 (UNII-3) – ANT 5

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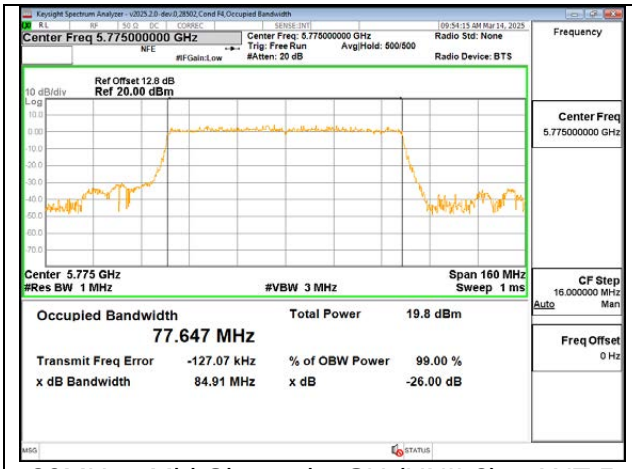
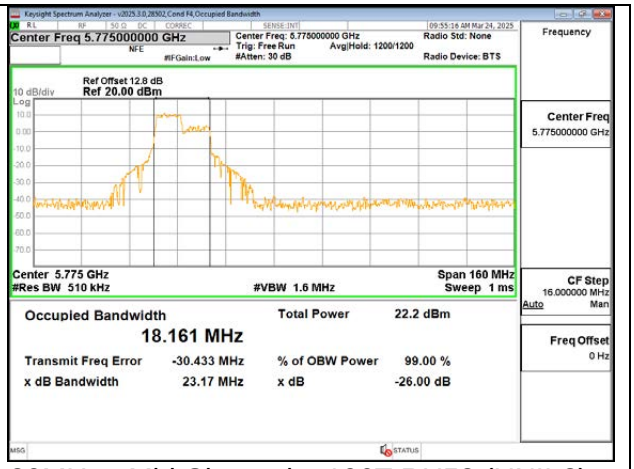


80MHz - Mid Channel – SU (UNII-3) – ANT 5



80MHz - Mid Channel – 106T RU53 (UNII-3) – ANT 5

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9.3. BANDWIDTH VERIFICATION OF CHANNEL PUNCTURING IN THE DFS BANDS

LIMITS

When a 20 MHz portion is punctured the remaining emissions do not bleed into the notched channel, i.e., 26 dB or 99% bandwidth is contained outside of the notched band.

RESULTS

ID:	28498	**Date:**	5/16/2025

UL VERIFICATION SERVICES INC.
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9.3.1. 802.11be EHT80 SISO MODE

EHT80	SISO	Frequency (MHz)	Channel Number	Tone	Puncturing Pattern	Full Channel			Left Bandwidth	Right Bandwidth
						Bandwidth (MHz)		Chan Punc >26dB? Yes = Pass No = Fail	99% BW (MHz)	
						26dB	99% BW			
UNII-2a	ANT6	5290	58	484+242	1	60.61	58.285	Yes		
					2	79.77	77.236	Yes	19.38	37.9690
					4	81.97	77.704	Yes	38.26	19.3970
					8	62.73	58.693	Yes		
UNII-2c		5530	106	484+242	1	60.57	58.079	Yes		
					2	80.03	77.783	Yes	19.31	37.8500
					4	80.03	77.528	Yes	38.04	19.3160
					8	62.65	58.339	Yes		
		5610	122		1	61.06	58.213	Yes		
					2	79.76	77.771	Yes	19.16	38.0340
					4	79.96	77.520	Yes	38.02	19.3310
					8	62.23	58.389	Yes		
		5690 (Straddle)	138		1	63.54	58.152	Yes		
					2	80.37	77.611	Yes	19.08	38.2650
					4	80.92	77.302	Yes	37.87	19.3400
					8	60.52	58.463	Yes		
UNII-2a	ANT5	5290	58	484+242	1	60.67	58.521	Yes		
					2	81.45	77.648	Yes	19.33	38.0370
					4	80.35	77.069	Yes	37.75	19.3280
					8	60.71	57.874	Yes		
UNII-2c		5530	106	484+242	1	60.77	57.465	Yes		
					2	80.89	77.600	Yes	19.20	38.2240
					4	81.22	77.969	Yes	38.38	19.2470
					8	61.45	58.187	Yes		
		5610	122		1	60.66	58.320	Yes		
					2	79.97	77.678	Yes	19.36	38.1300
					4	79.73	78.022	Yes	37.93	19.2950
					8	60.53	58.268	Yes		
		5690 (Straddle)	138		1	61.03	58.394	Yes		
					2	80.07	77.004	Yes	19.13	38.4320
					4	81.09	77.498	Yes	38.22	19.3850
					8	61.54	58.389	Yes		

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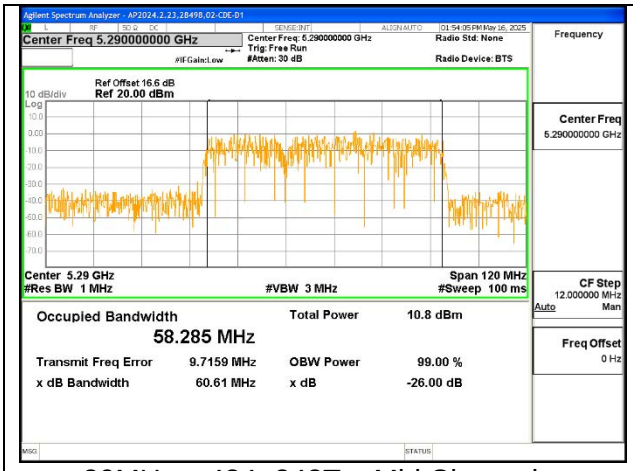
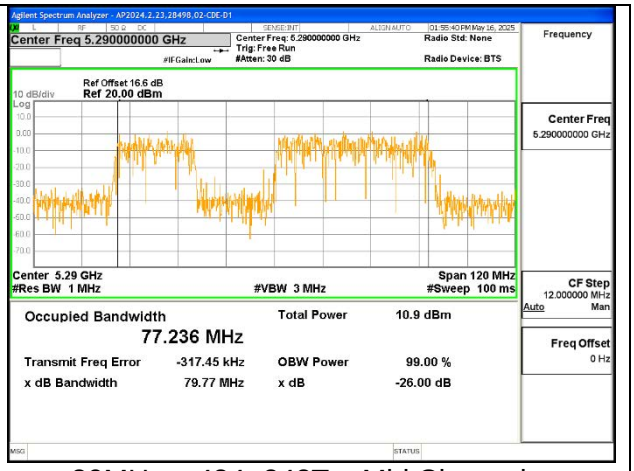
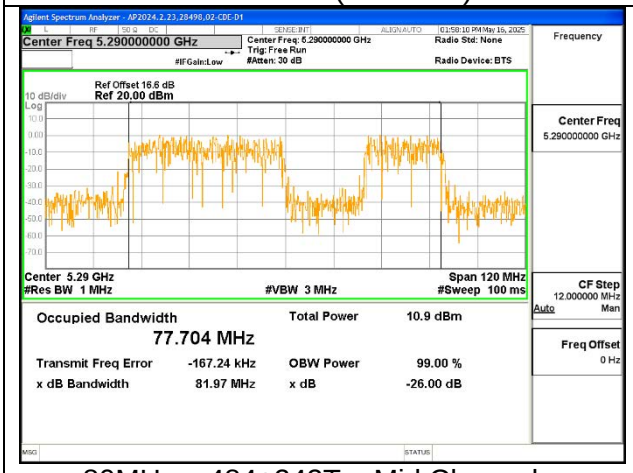


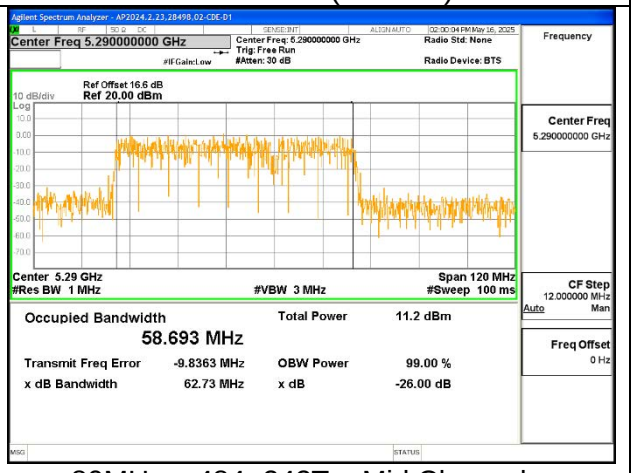
80MHz – 484+242T – Mid Channel – Puncture Pattern 1 – (UNII-2As) – ANT 6



80MHz – 484+242T – Mid Channel – Puncture Pattern 2 – (UNII-2A) – ANT 6



80MHz – 484+242T – Mid Channel – Puncture Pattern 4 – (UNII-2A) – ANT 6



80MHz – 484+242T – Mid Channel – Puncture Pattern 8 – (UNII-2A) – ANT 6

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9.3.2. 802.11be EHT80 MIMO CDD MODE

EHT80	MIMO (CDD)	Frequency (MHz)	Channel Number	Tone	Puncturing Pattern	Full Channel			Left Bandwidth	Right Bandwidth
						Bandwidth (MHz)		Chan Punc >26dB? Yes = Pass No = Fail	99% BW (MHz)	
						26dB	99% BW			
UNII-2a	ANT6	5290	58	484+242	1	62.74	59.15	Yes		
					2	80.06	77.94	Yes	19.29	38.0300
					4	80.16	77.13	Yes	38.01	19.3190
					8	64.67	58.20	Yes		
UNII-2c		5530	106	484+242	1	60.58	58.53	Yes		
					2	81.29	77.95	Yes	19.34	38.1520
					4	79.94	77.32	Yes	37.89	19.2010
					8	61.31	58.18	Yes		
		5610	122		1	60.40	58.57	Yes		
					2	79.92	77.71	Yes	19.27	38.0750
					4	80.20	77.09	Yes	38.04	19.3900
					8	60.78	58.32	Yes		
		5690 (Straddle)	138		1	61.16	58.42	Yes		
					2	80.30	77.05	Yes	19.41	38.0800
					4	81.44	77.79	Yes	38.15	19.3630
					8	61.58	58.25	Yes		
UNII-2a	ANT5	5290	58	484+242	1	62.53	58.12	Yes		
					2	79.93	78.09	Yes	19.38	37.8490
					4	81.20	77.76	Yes	38.08	19.3580
					8	60.79	57.94	Yes		
UNII-2c		5530	106	484+242	1	60.73	58.53	Yes		
					2	79.91	77.67	Yes	19.23	38.2740
					4	80.20	77.12	Yes	38.07	19.3000
					8	60.65	58.25	Yes		
		5610	122		1	62.11	58.49	Yes		
					2	80.95	77.94	Yes	19.15	38.1780
					4	81.36	77.85	Yes	37.95	19.4010
					8	61.04	58.31	Yes		
		5690 (Straddle)	138		1	60.25	58.03	Yes		
					2	80.13	77.65	Yes	19.28	38.2480
					4	79.87	77.68	Yes	38.18	19.3470
					8	60.57	58.56	Yes		

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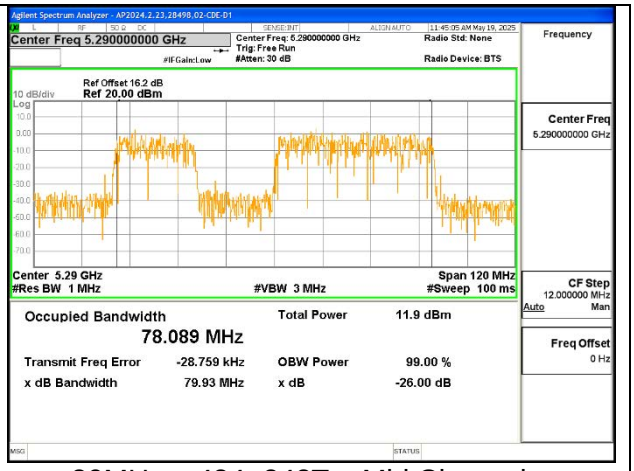
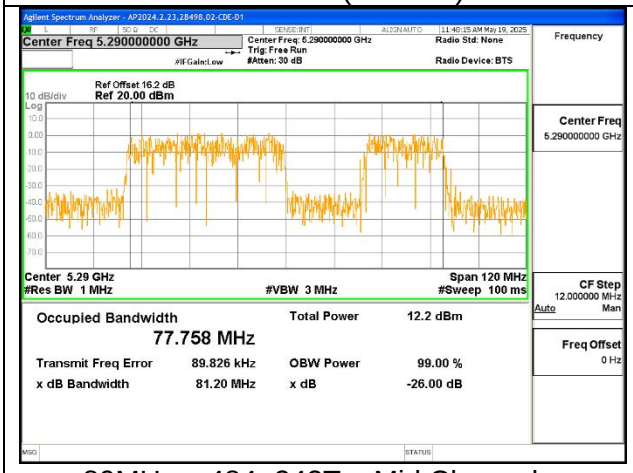
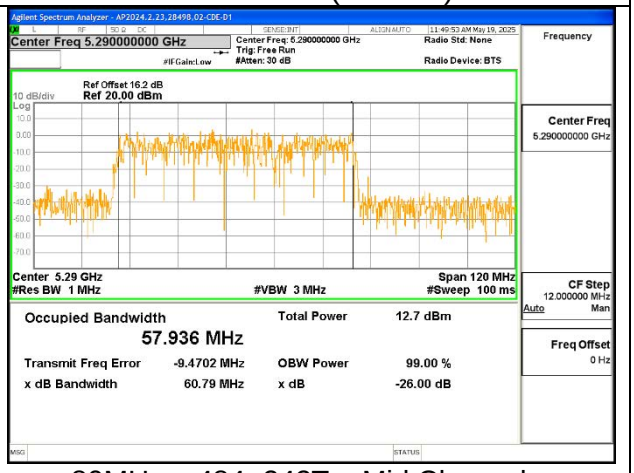
80MHz – 484+242T – Mid Channel – Puncture Pattern 1 – (UNII-2A) – ANT 5



80MHz – 484+242T – Mid Channel – Puncture Pattern 2 – (UNII-2A) – ANT 5



80MHz – 484+242T – Mid Channel – Puncture Pattern 4 – (UNII-2A) – ANT 5



80MHz – 484+242T – Mid Channel – Puncture Pattern 8 – (UNII-2A) – ANT 5

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9.3.3. 802.11be EHT160 SISO MODE

EHT160	SISO	Frequency (MHz)	Channel Number	Tone	Puncturing Pattern	Full Channel			Left Bandwidth	Right Bandwidth
						Bandwidth (MHz)		Chan Punc >26dB? Yes = Pass No = Fail		
						26dB	99% BW		99% BW (MHz)	
UNII-2a	ANT6	5250 (Straddle)	50	996+484	3	123.00	117.47	Yes		
					12	161.90	157.13	Yes	38.82	78.1550
					48	161.50	156.99	Yes	77.85	39.1530
					192	122.00	117.54	Yes		
				996+484+242	1	142.80	137.47	Yes		
					2	160.70	156.57	Yes	20.18	117.8100
					4	161.60	156.56	Yes	38.62	98.4390
					8	161.30	156.78	Yes	59.22	78.2480
					16	160.80	157.44	Yes	77.24	58.9410
					32	161.40	157.13	Yes	98.36	38.8250
					64	161.60	156.72	Yes	117.20	20.0840
					128	143.10	137.63	Yes		
UNII-2c		5570	114	996+484	3	120.70	117.49	Yes		
					12	162.10	157.05	Yes	38.81	78.0020
					48	162.00	157.29	Yes	78.15	38.7980
					192	121.60	116.73	Yes		
				996+484+242	1	141.80	138.14	Yes		
					2	161.80	155.56	Yes	20.15	117.0500
					4	161.90	156.80	Yes	39.03	97.9850
					8	162.40	156.88	Yes	58.63	77.6880
					16	161.90	156.70	Yes	78.02	58.9800
					32	161.60	157.06	Yes	98.63	38.9340
					64	162.60	155.56	Yes	117.26	20.0450
					128	144.00	137.30	Yes		
UNII-2a	ANT5	5250 (Straddle)	50	996+484	3	121.70	117.94	Yes		
					12	162.10	156.86	Yes	38.88	78.3050
					48	161.60	156.83	Yes	78.21	38.9000
					192	122.40	117.04	Yes		
				996+484+242	1	142.20	137.46	Yes		
					2	162.10	156.71	Yes	20.37	117.8500
					4	161.20	157.22	Yes	38.97	98.8700
					8	161.60	156.46	Yes	58.95	76.9840
					16	162.30	156.81	Yes	77.45	59.0720
					32	161.80	156.56	Yes	97.93	39.0490
					64	161.70	155.68	Yes	118.34	20.3060
					128	142.60	136.79	Yes		
UNII-2c		5570	114	996+484	3	121.50	116.27	Yes		
					12	162.00	157.26	Yes	38.55	77.7660
					48	161.30	155.29	Yes	77.89	39.0120
					192	121.20	117.10	Yes		
				996+484+242	1	142.00	137.94	Yes		
					2	161.20	156.72	Yes	20.21	117.6600
					4	161.30	156.55	Yes	38.83	98.8800
					8	161.80	157.47	Yes	59.26	77.5810
					16	161.80	157.62	Yes	78.56	59.3610
					32	161.40	156.44	Yes	97.62	38.9790
					64	161.40	157.07	Yes	118.24	20.3870
					128	142.20	138.00	Yes		

160MHz – 996+484T – Mid Channel – Puncture Pattern 3 – (UNII-2C) – ANT 6

160MHz – 996+484T – Mid Channel – Puncture Pattern 12 – (UNII-2C) – ANT 6

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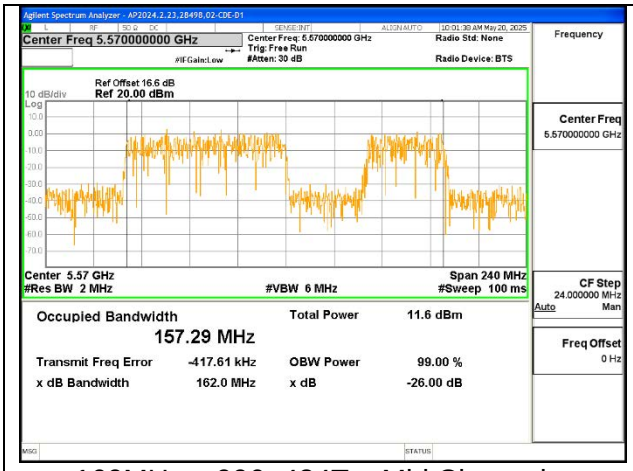
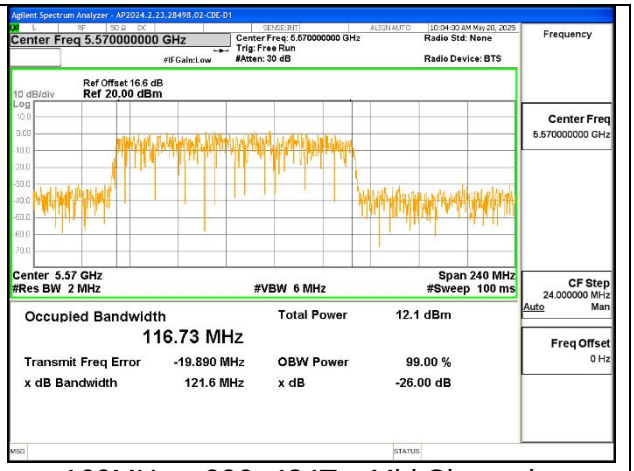
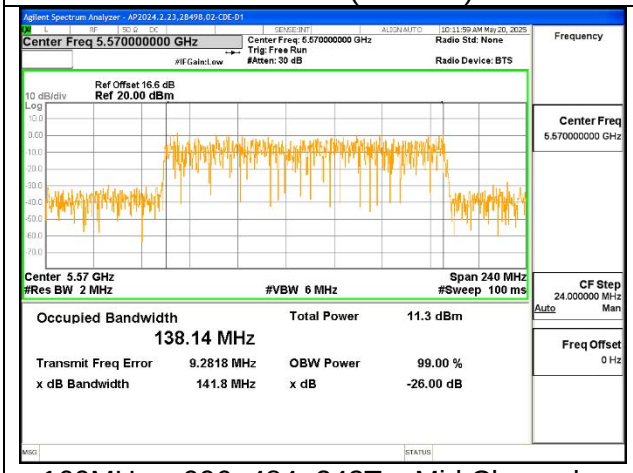


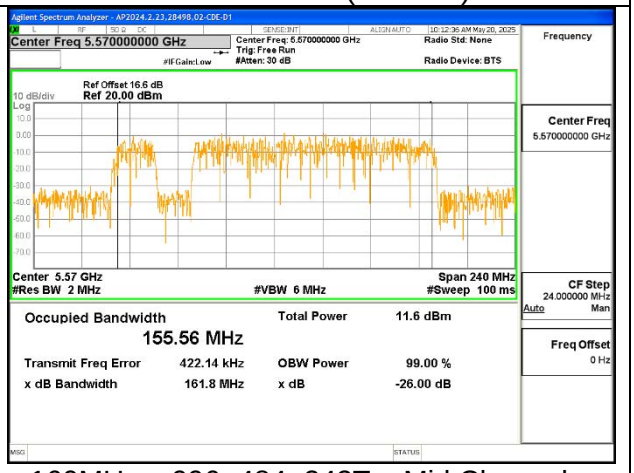
160MHz – 996+484T – Mid Channel – Puncture Pattern 48 – (UNII-2C) – ANT 6



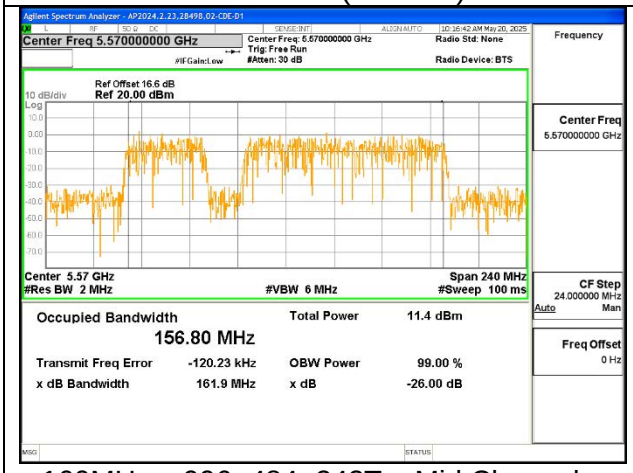
160MHz – 996+484T – Mid Channel – Puncture Pattern 192 – (UNII-2C) – ANT 6



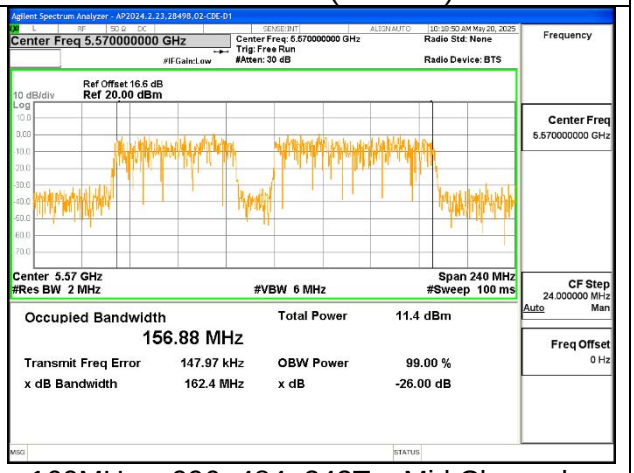
160MHz – 996+484+242T – Mid Channel – Puncture Pattern 1 – (UNII-2C) – ANT 6



160MHz – 996+484+242T – Mid Channel – Puncture Pattern 2 – (UNII-2C) – ANT 6



160MHz – 996+484+242T – Mid Channel – Puncture Pattern 4 – (UNII-2C) – ANT 6



160MHz – 996+484+242T – Mid Channel – Puncture Pattern 8 – (UNII-2C) – ANT 6

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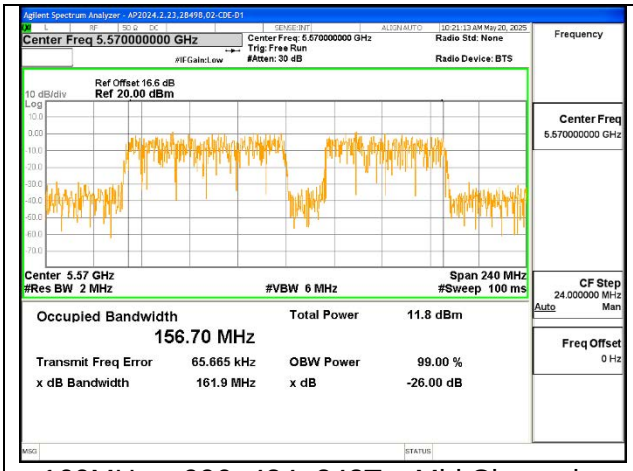
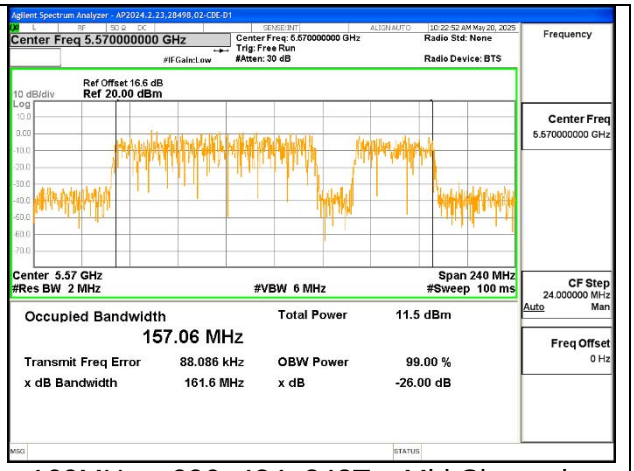
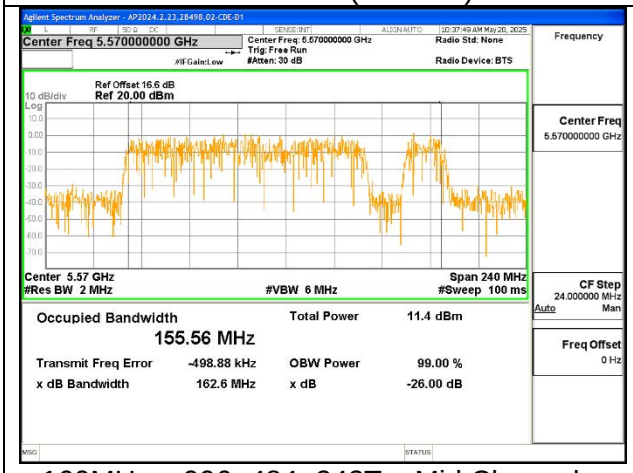


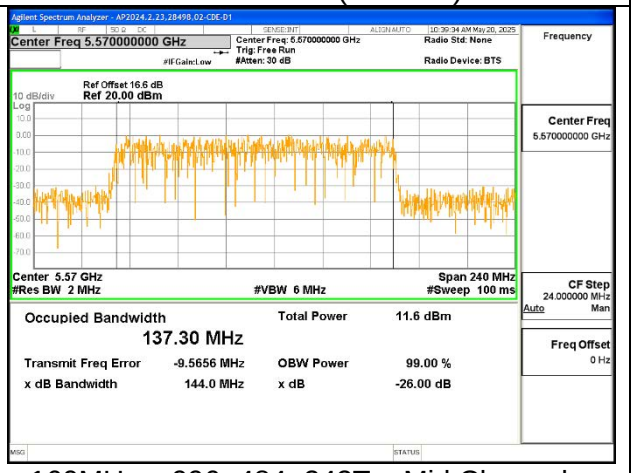
160MHz – 996+484+242T – Mid Channel – Puncture Pattern 16 – (UNII-2C) – ANT 6



160MHz – 996+484+242T – Mid Channel – Puncture Pattern 32 – (UNII-2C) – ANT 6



160MHz – 996+484+242T – Mid Channel – Puncture Pattern 64 – (UNII-2C) – ANT 6



160MHz – 996+484+242T – Mid Channel – Puncture Pattern 128 – (UNII-2C) – ANT 6

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9.3.4. 802.11be EHT160 MIMO CDD MODE

EHT160	MIMO (CDD)	Frequency (MHz)	Channel Number	Tone	Puncturing Pattern	Full Channel			Left Bandwidth	Right Bandwidth
						Bandwidth (MHz)		Chan Punc >26dB? Yes = Pass No = Fail	99% BW (MHz)	
						26dB	99% BW			
UNII-2a	ANT6	5250 (Straddle)	50	996+484	3	120.70	117.22	Yes		
					12	161.60	157.02	Yes	38.66	77.2500
					48	161.60	156.98	Yes	77.34	38.8970
					192	122.40	116.71	Yes		
				996+484+242	1	142.60	137.59	Yes		
					2	161.70	155.47	Yes	20.35	117.7100
					4	161.60	157.45	Yes	38.80	98.6090
					8	162.80	157.01	Yes	58.90	77.4840
					16	161.60	156.62	Yes	77.76	59.1100
					32	161.40	156.87	Yes	98.53	39.0360
					64	162.50	155.80	Yes	117.25	20.3560
					128	142.20	137.40	Yes		
		5570	114	996+484	3	122.10	116.74	Yes		
					12	162.80	157.17	Yes	39.00	77.8030
					48	161.30	156.30	Yes	78.32	38.7250
					192	121.50	117.41	Yes		
				996+484+242	1	142.60	137.78	Yes		
					2	161.40	157.18	Yes	20.43	116.7800
					4	161.60	156.20	Yes	38.74	98.6050
					8	161.70	157.27	Yes	59.06	77.2260
					16	161.70	156.80	Yes	77.63	59.0080
					32	161.90	156.78	Yes	97.98	38.7650
					64	162.00	156.67	Yes	116.24	20.2490
					128	142.10	137.08	Yes		
UNII-2a	ANT5	5250 (Straddle)	50	996+484	3	121.60	117.16	Yes		
					12	161.30	156.73	Yes	38.91	77.8450
					48	162.50	157.39	Yes	77.91	38.7940
					192	121.40	117.58	Yes		
				996+484+242	1	141.90	136.19	Yes		
					2	161.30	155.42	Yes	20.11	117.1100
					4	161.10	156.50	Yes	38.90	98.5950
					8	162.70	156.42	Yes	59.13	78.0830
					16	161.60	156.40	Yes	77.91	58.9830
					32	161.90	155.51	Yes	98.05	38.9320
					64	161.40	156.35	Yes	117.13	20.3670
					128	142.20	137.01	Yes		
		5570	114	996+484	3	121.90	117.64	Yes		
					12	162.60	157.26	Yes	38.54	77.7870
					48	161.90	156.78	Yes	77.57	39.1180
					192	121.90	117.64	Yes		
				996+484+242	1	141.80	136.42	Yes		
					2	161.60	156.25	Yes	20.14	117.7100
					4	161.20	157.74	Yes	39.20	98.0150
					8	161.20	157.01	Yes	59.13	77.6770
					16	162.30	157.14	Yes	77.90	59.2440
					32	161.40	157.19	Yes	98.43	38.9140
					64	161.40	156.84	Yes	117.50	20.5110
					128	142.10	137.80	Yes		

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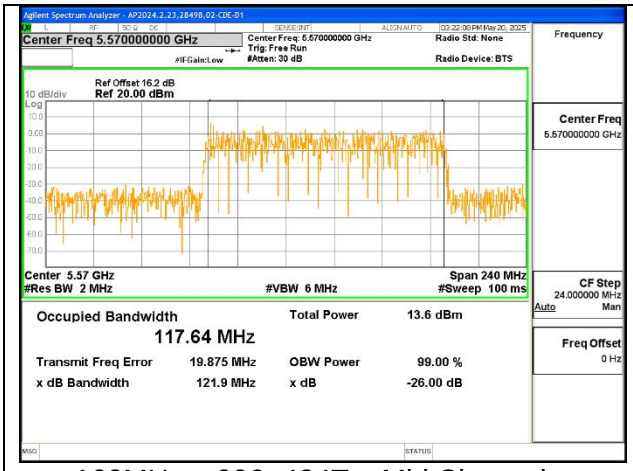
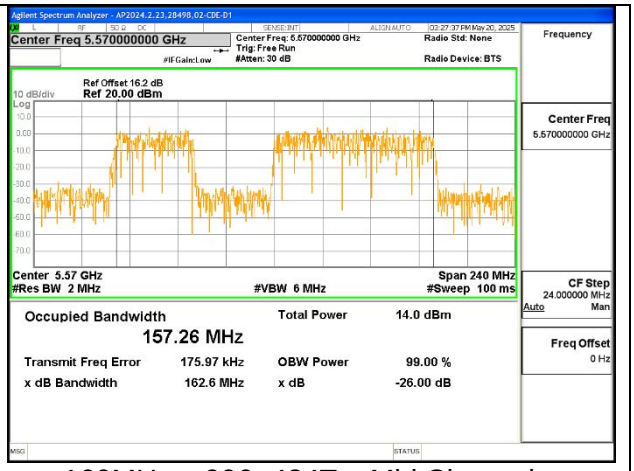
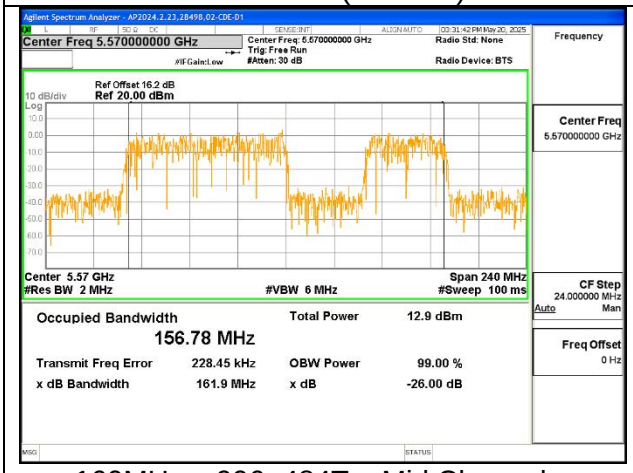


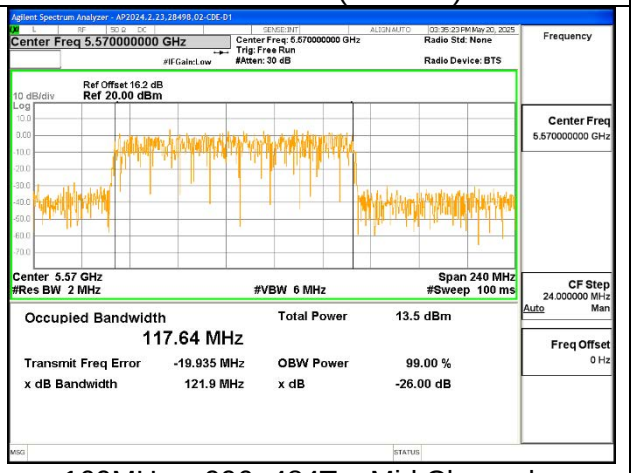
160MHz – 996+484T – Mid Channel – Puncture Pattern 3 – (UNII-2C) – ANT 5



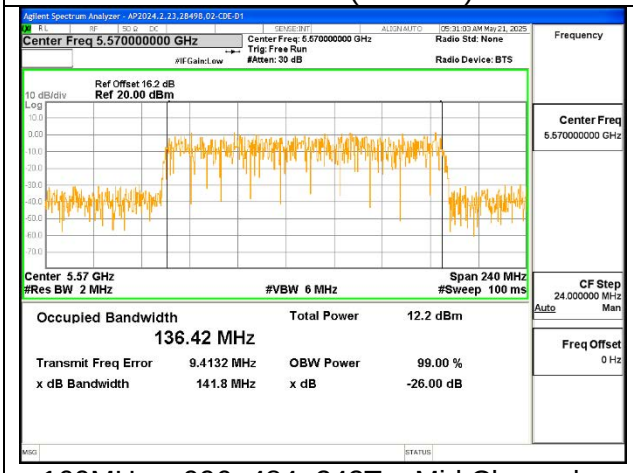
160MHz – 996+484T – Mid Channel – Puncture Pattern 12 – (UNII-2C) – ANT 5



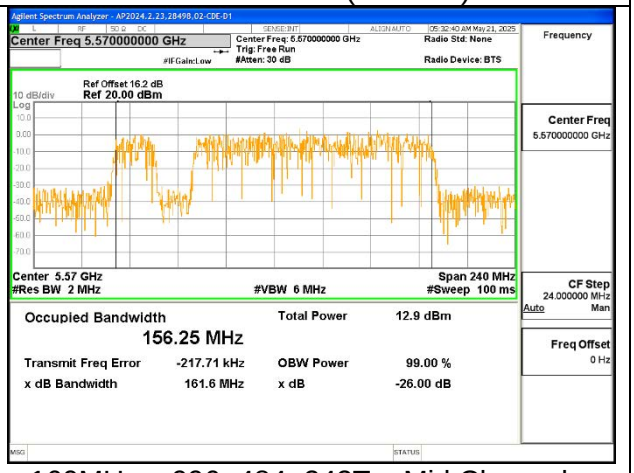
160MHz – 996+484T – Mid Channel – Puncture Pattern 48 – (UNII-2C) – ANT 5



160MHz – 996+484T – Mid Channel – Puncture Pattern 192 – (UNII-2C) – ANT 5



160MHz – 996+484+242T – Mid Channel – Puncture Pattern 1 – (UNII-2C) – ANT 5



160MHz – 996+484+242T – Mid Channel – Puncture Pattern 2 – (UNII-2C) – ANT 5

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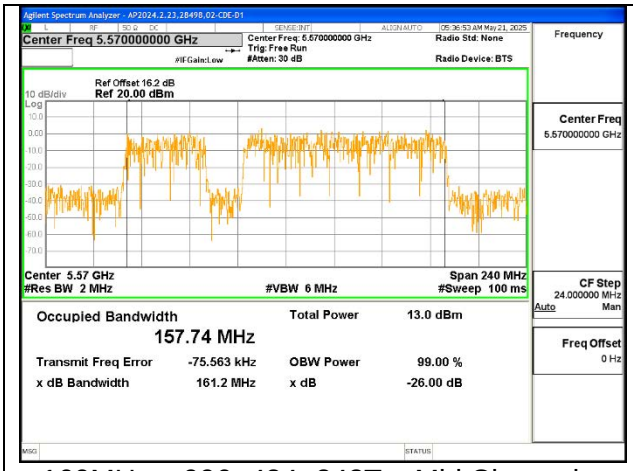
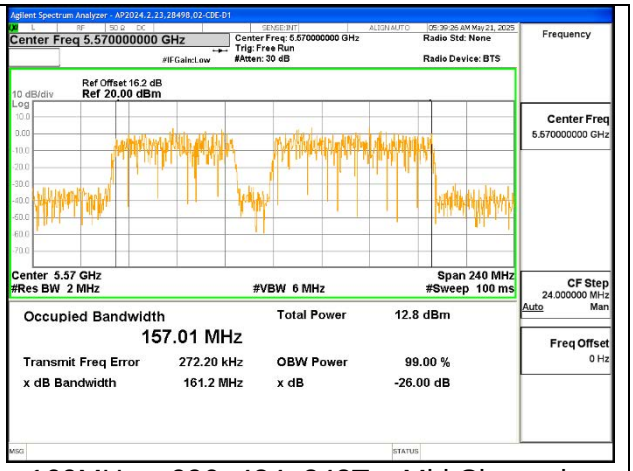
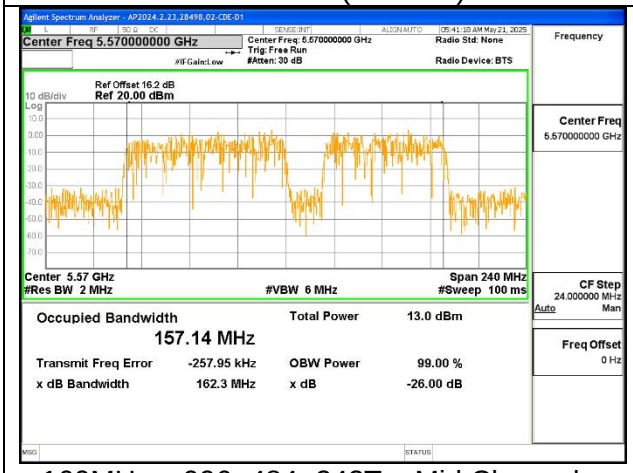


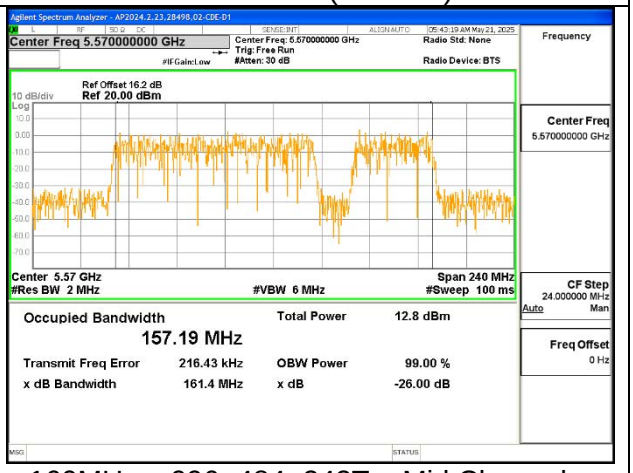
160MHz – 996+484+242T – Mid Channel – Puncture Pattern 4 – (UNII-2C) – ANT 5



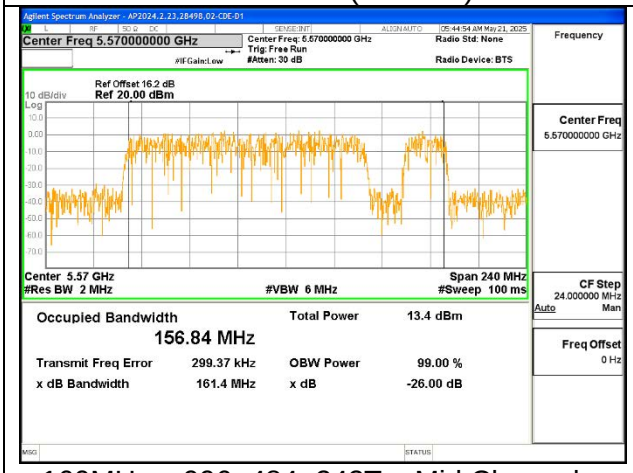
160MHz – 996+484+242T – Mid Channel – Puncture Pattern 8 – (UNII-2C) – ANT 5



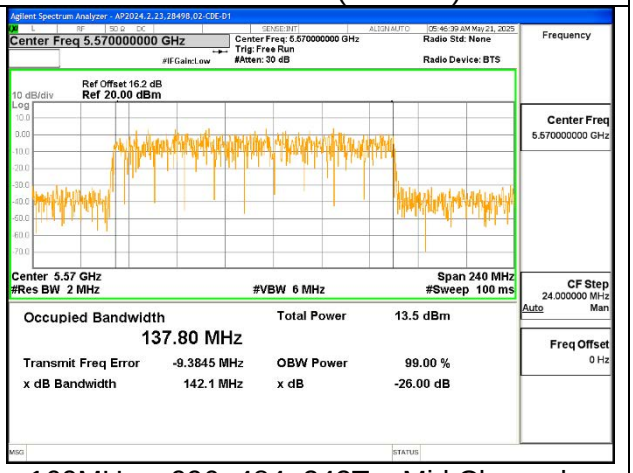
160MHz – 996+484+242T – Mid Channel – Puncture Pattern 16 – (UNII-2C) – ANT 5



160MHz – 996+484+242T – Mid Channel – Puncture Pattern 32 – (UNII-2C) – ANT 5



160MHz – 996+484+242T – Mid Channel – Puncture Pattern 64 – (UNII-2C) – ANT 5



160MHz – 996+484+242T – Mid Channel – Puncture Pattern 128 – (UNII-2C) – ANT 5

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9.4. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

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

RESULTS

For 6dB bandwidth measurements, the 802.11be EHT20 was tested at 26T as a worst-case scenario. For straddle channels, 52T was tested as the worst-case as 26T is not supported.

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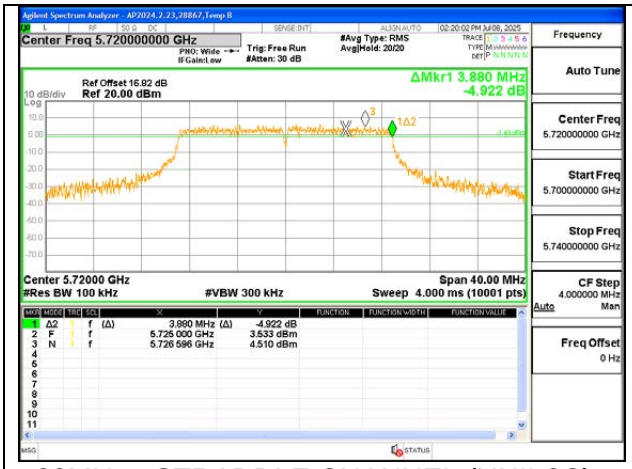
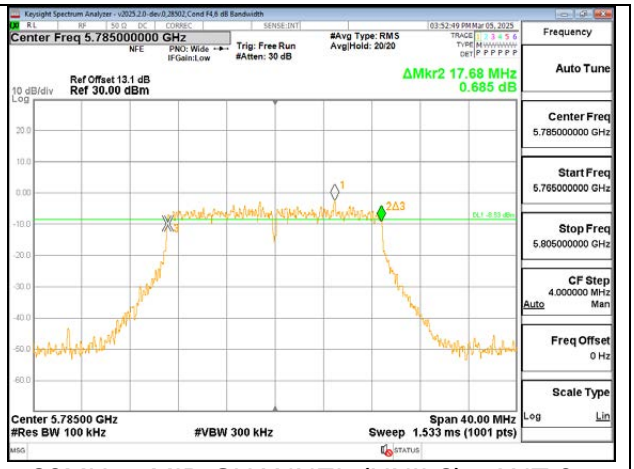
9.4.1. 802.11n/ac SISO MODE IN THE 5.8 GHz BAND

UNII-3 (SISO)	Frequency (MHz)	Channel Number	6 dB BW (MHz)	
			Ant 6	Ant 5
HT20	5720 (Straddle)	144	3.88	3.79
	5745	149	17.36	17.68
	5785	157	17.68	17.76
	5825	165	17.68	17.56
HT40	5710 (Straddle)	142	3.29	3.26
	5755	151	36.56	36.56
	5795	159	36.48	35.84
VHT80	5690 (Straddle)	138	3.18	3.16
	5775	155	75.36	76.16



20MHz - STRADDLE CHANNEL (UNII-2C) - ANT 6 - HT20



20MHz - MID CHANNEL (UNII-3) - ANT 6 - HT20

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9.4.2. 802.11n/ac MIMO CDD MODE IN THE 5.8 GHz BAND

UNII-3 (MIMO CDD)	Frequency (MHz)	Channel Number	6 dB BW (MHz)	
			Ant 6	Ant 5
HT20	5720 (Straddle)	144	3.84	3.86
	5745	149	17.64	17.68
	5785	157	17.76	17.60
	5825	165	17.68	17.60
HT40	5710 (Straddle)	142	3.25	3.25
	5755	151	36.56	36.48
	5795	159	36.40	36.40
VHT80	5690 (Straddle)	138	3.24	3.26
	5775	155	76.64	76.00

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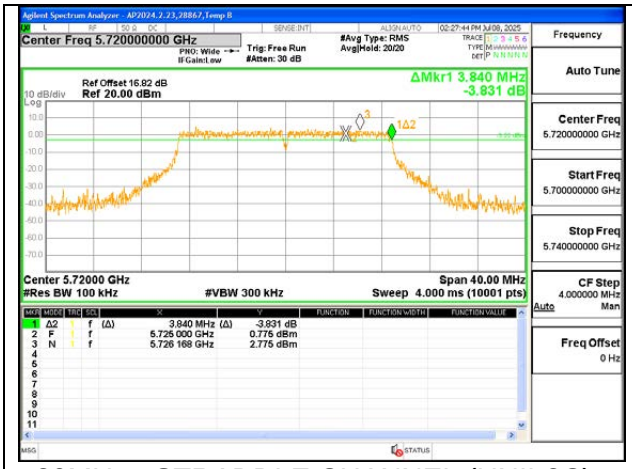
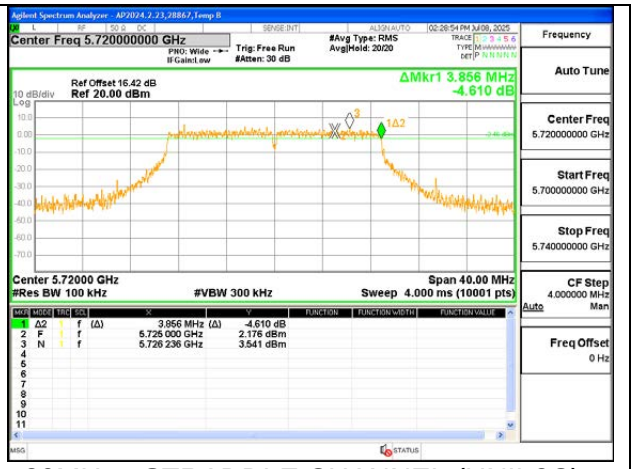
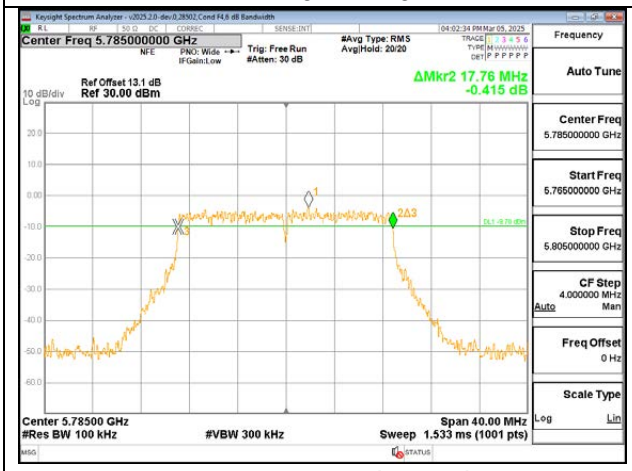


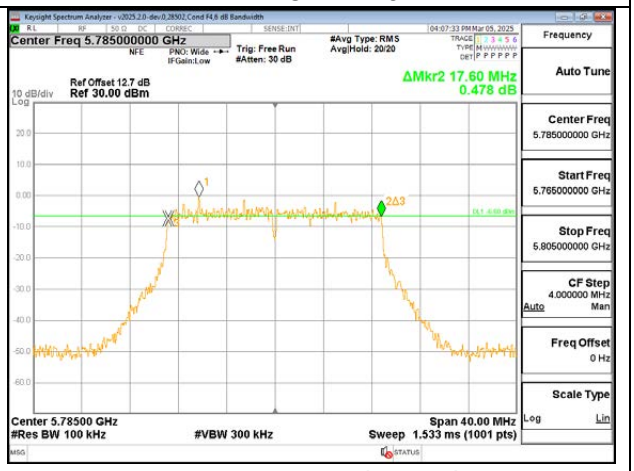
20MHz - STRADDLE CHANNEL (UNII-2C) - ANT 6 - HT20



20MHz - STRADDLE CHANNEL (UNII-2C) - ANT 5 - HT20



20MHz - MID CHANNEL (UNII-3) - ANT 6 - HT20



20MHz - MID CHANNEL (UNII-3) - ANT 5 - HT20

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9.4.3. 802.11be SISO MODE IN THE 5.8 GHz BAND

UNII-3 (SISO)	Frequency (MHz)	Channel Number	Tone	RU Index	6 dB BW (MHz)	
					Ant 6	Ant 5
EHT20	5720 (Straddle)	144	SU	--	--	--
			52T			
				40	4.02	4.40
	5745	149	SU	--	--	--
			26T	0	2.04	2.08
				4	2.64	2.68
				8	2.08	2.08
	5785	157	SU	--	--	--
			26T	0	2.04	2.08
				4	2.56	2.64
				8	2.12	2.12
	5825	165	SU	--	--	--
			26T	0	2.08	2.00
				4	2.68	2.72
				8	2.16	2.16
EHT40	5710 (Straddle)	142	SU	--	--	--
			52T			
				44	4.01	3.98
	5755	151	SU	--	--	--
			26T	0	2.24	2.16
				9	2.16	2.24
				17	2.16	2.16
	5795	159	SU	--	--	--
			26T	0	2.24	2.16
				9	2.24	2.08
				17	2.16	2.16
EHT80	5690 (Straddle)	138	SU	--	--	--
			52T			
				52	3.96	3.94
	5775	155	SU	--	--	--
			26T	0	2.24	2.40
				17	2.88	2.88
				36	2.24	2.24

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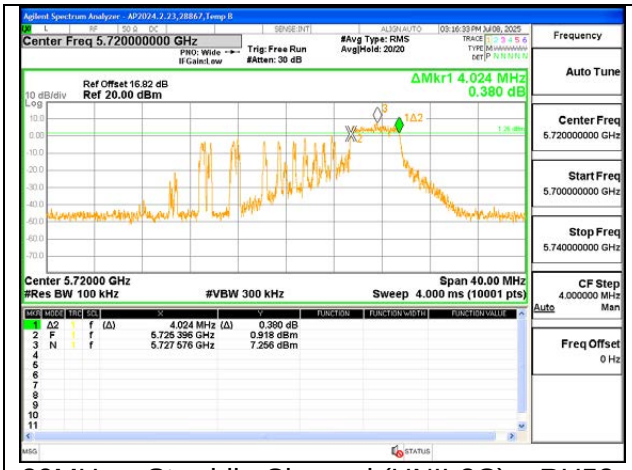
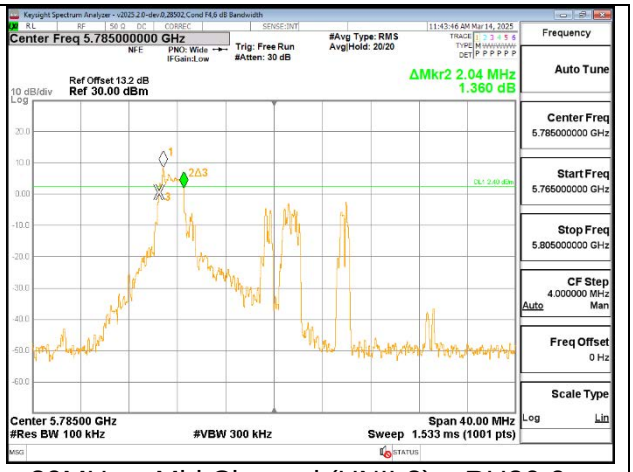


20MHz – Straddle Channel (UNII-2C) – RU52-40 – ANT 6



20MHz – Mid Channel (UNII-3) – RU26-0 – ANT 6

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9.4.4. 802.11be MIMO CDD MODE IN THE 5.8 GHz BAND

UNII-3 (MIMO CDD)	Frequency (MHz)	Channel Number	Tone	RU Index	6 dB BW (MHz)	
					Ant 6	Ant 5
EHT20	5720 (Straddle)	144	SU	--	--	--
			52T			
				40	4.41	4.43
	5745	149	SU	--	--	--
			26T	0	2.04	2.08
				4	2.64	2.64
				8	2.04	2.08
	5785	157	SU	--	--	--
			26T	0	2.08	2.00
				4	2.68	2.68
				8	2.04	2.04
	5825	165	SU	--	--	--
			26T	0	2.04	2.08
				4	2.64	2.60
				8	2.04	2.08
EHT40	5710 (Straddle)	142	SU	--	--	--
			52T			
				44	3.94	3.98
	5755	151	SU	--	--	--
			26T	0	2.16	2.16
				9	2.08	2.24
				17	2.16	2.16
	5795	159	SU	--	--	--
			26T	0	2.16	2.16
				9	2.16	2.16
				17	2.16	2.16
EHT80	5690 (Straddle)	138	SU	--	--	--
			52T			
				52	3.99	3.96
	5775	155	SU	--	--	--
			26T	0	2.40	2.40
				18	2.88	2.88
				36	2.24	2.40

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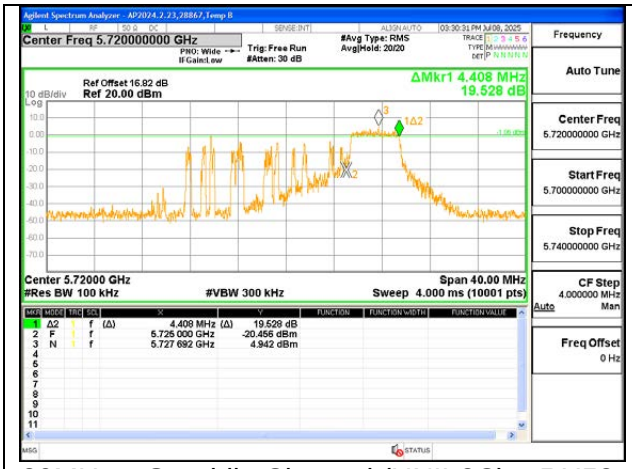
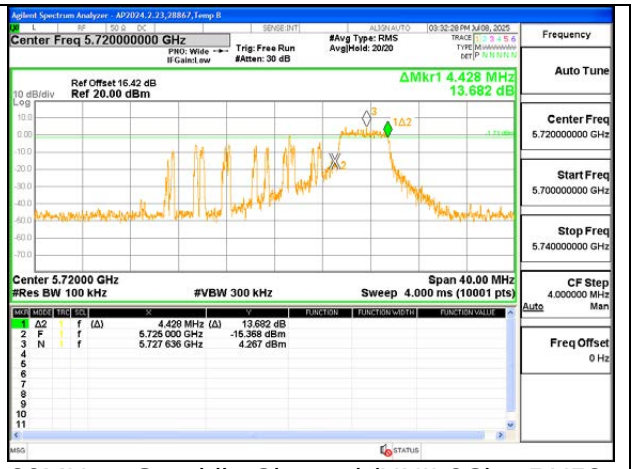
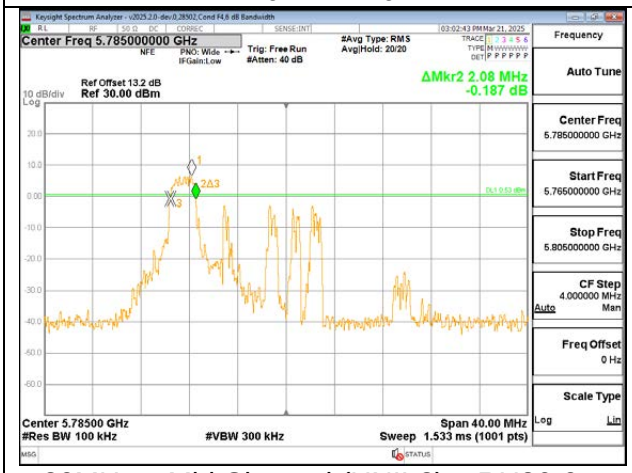


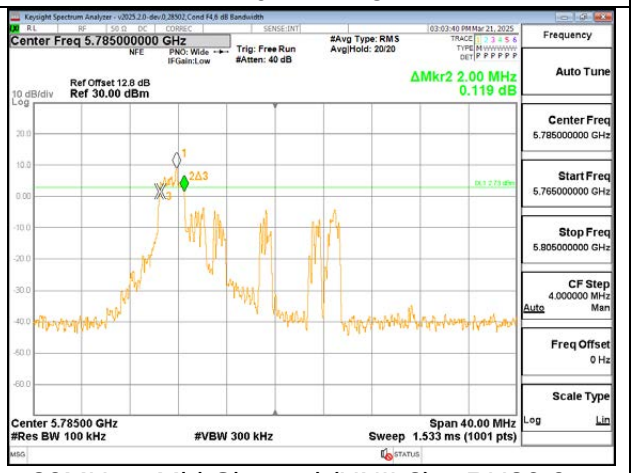
20MHz – Straddle Channel (UNII-2C) – RU52-40 – ANT 6



20MHz – Straddle Channel (UNII-2C) – RU52-40 – ANT 5



20MHz – Mid Channel (UNII-3) – RU26-0 – ANT 6



20MHz – Mid Channel (UNII-3) – RU26-0 – ANT 5

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9.5. OUTPUT POWER AND PSD

LIMITS

FCC §15.407

Band 5.15–5.25 GHz

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

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

Band 5.725-5.85 GHz

The maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

TEST PROCEDURE

The measurement method used for output power is KDB 789033 D02 v02r01, Section E.3.b (Method PM-G).

The measurement method used for power spectral density is KDB 789033 D02 v02r01, Section F.
For all straddle channels, full bandwidth power and PSD/MHz are reported in the 5.6GHz section because the combined 5.6GHz and 5.8GHz power and PSD/MHz already passed the worst-case 5.6GHz power and 5.8 GHz PSD/500kHz limits.

11n HT20 and 11ax HE20 and 11be EHT20 straddle channel 26dB bandwidth= (26dB BW/2)+5
11n HT20 and 11ax HE20 and 11be EHT20 straddle channel 99% bandwidth= (99% BW/2)+5

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DIRECTIONAL ANTENNA GAIN

For 1 TX:
There is only one transmitter output therefore the directional gain is equal to the antenna gain.

For 2 TX:

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

Band (GHz)	ANT6 Gain (dBi)	ANT5 Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
5.2	-2.90	-6.20	-4.24	-1.38
5.3	-2.00	-6.40	-3.67	-0.91
5.6	0.80	-5.10	-1.22	1.35
5.8	2.00	-6.40	-0.42	1.79

DIRECTIONAL GAIN CALCULATION:

ANSI C63.10 section 14.6.3

Uncorrelated directional gain=10*LOG((10^(Ant6/10)+10^(Ant5/10))/2)
Correlated directional Gain=10*LOG(((10^(Ant6/20)+10^(Ant5/20))^2)/2)

Sample Calculation at 5.2GHz Band:

ANT 6=-2.90, ANT 5=-6.20

Uncorrelated Antenna gain=10log[(10^(=-2.90/10)+10^(-6.20/10))/2]=-4.24dBi

Correlated Antenna gain=10log[(10^(=-2.90/20)+10^(-6.20/20))^2)/2]=-1.38dBi

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Output Power Calculation:

1Tx
Total corr'd power = Ant6

Sample Calculation at 5.2GHz Band (Low Channel SU):
ANT 6 Power = 18.46 dBm (Gated Power)

Total corr'd power = 18.46 dBm

2Tx
Total corr'd power = 10*LOG(10^(Ant6/10)+10^(Ant5/10))

Sample Calculation at 5.2GHz Band CDD (Low Channel SU):
Ant6 Power = 17.45 dBm, Ant5 Power = 17.40

Total corr'd power =10*LOG(10^(17.45/10)+10^(17.40/10)) = 20.44 dBm

PSD Calculation:

1Tx
Total corr'd PSD = DCCF + Ant6

Sample Calculation at 5.2GHz Band (Low Channel SU):
Ant6 PSD= 6.967 dBm/MHz

Total corr'd PSD = 0.13 + 6.967 = 7.097 dBm/MHz

2Tx
Total corr'd PSD = (10*LOG(10^((DCCF +Ant6)/10)+10^((DCCF+Ant5)/10)))

Sample Calculation at 5.2GHz Band CDD (Low Channel SU):
Ant6 PSD = 6.865 dBm/MHz, Ant5 PSD = 6.489 dBm/MHz

Total corr'd PSD = (10*LOG(10^((0.13+(6.865))/10)+10^((0.13+(6.489))/10)))
= 9.821 dBm/MHz

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9.5.1. 802.11n/ac SISO MODE IN THE UNII-1 BAND

UNII-1 (SISO)	20MHz	40MHz	80MHz	160MHz
DCCF (MCS0) (dB)	0.11	0.22	0.24	0.41
Ant 6 (dBi)	-2.90			
Ant 5 (dBi)	-6.20			

UNII-2A (SISO)	
Straddle Channel	
Ant 6 (dBi)	-2.00
Ant 5 (dBi)	-6.40

UNII-1 (SISO)	Freq (MHz)	Ch. #	Minimum Bandwidth (MHz)		Power Limit (dBm)		Output Power (Gated) (dBm)		Total Corrected Power (dBm)		PSD Limit (dBm/MHz)		PSD (dBm/MHz)		Total Corrected PSD (dBm/MHz)	
			Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5
HT20 (FCC)	5180	36	--		24	24	18.83	18.94	18.83	18.94	11	11	7.480	8.023	7.590	8.133
	5200	40					19.98	20.33	19.98	20.33			8.535	9.888	8.645	9.998
	5240	48					19.75	20.38	19.75	**20.38**			8.644	10.097	8.754	10.207
HT40 (FCC)	5190	38	--		24	24	17.29	17.44	17.29	17.44	11	11	3.073	3.751	3.293	3.971
	5230	46					19.81	20.42	19.81	**20.42**			5.807	7.087	6.027	7.307
VHT80 (FCC)	5210	42	--		24	24	17.48	17.44	**17.48**	17.44	11	11	0.286	0.899	0.526	1.139
VHT160 (FCC)	5250 (Straddle)	50	--		24	24	15.47	16.45	15.47	**16.45**	11	11	-3.585	-2.966	-3.175	-2.556

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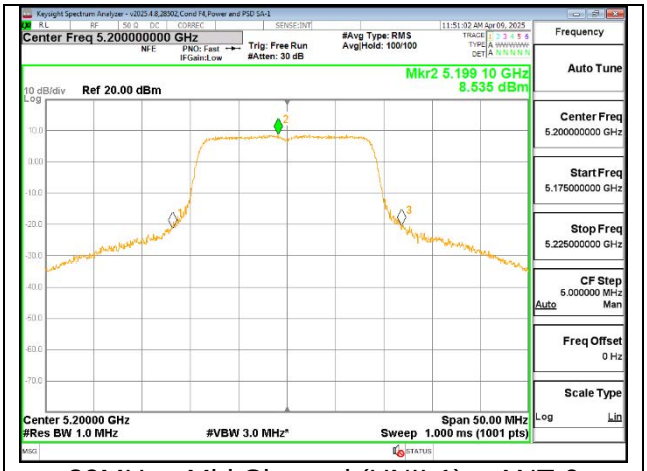
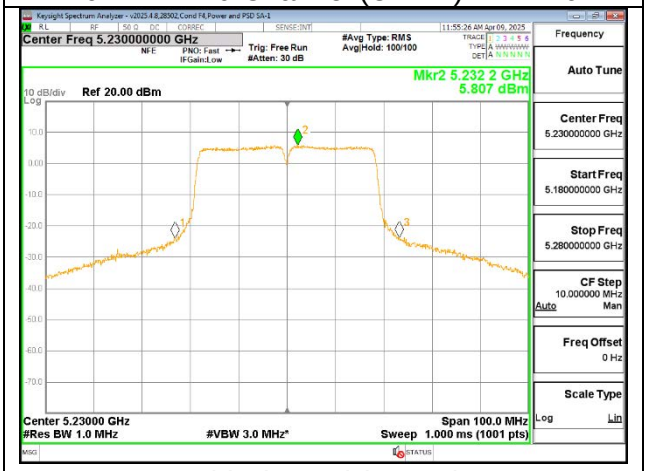
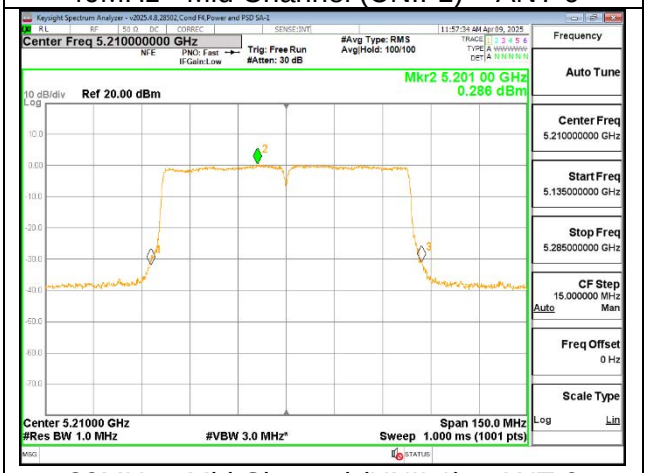


20MHz - Mid Channel (UNII-1) – ANT 6



40MHz - Mid Channel (UNII-1) – ANT 6



80MHz - Mid Channel (UNII-1) – ANT 6

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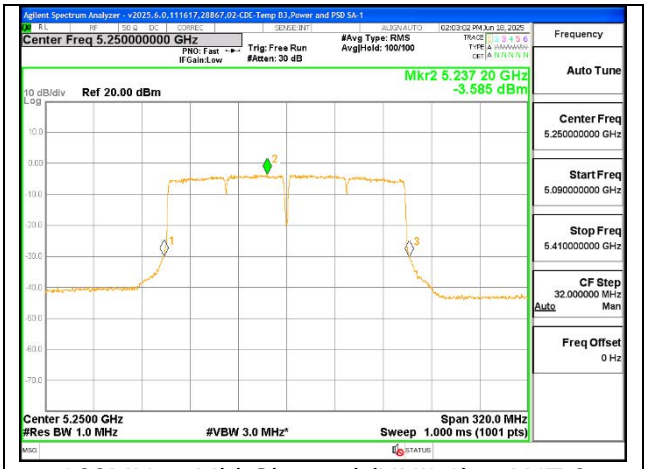

160MHz - Mid Channel (UNII-1) – ANT 6

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9.5.2. 802.11n/ac MIMO CDD MODE IN THE UNII-1 BAND

UNII-1 (MIMO CDD)	20MHz	40MHz	80MHz	160MHz
DCCF (MCS0) (dB)	0.11	0.22	0.24	0.41
Un-Correlated Gain (dBi)	-4.24			
Correlated Gain (dBi)	-1.38			

UNII-2A (MIMO CDD)	
Straddle Channel	
Un-Correlated Gain (dBi)	-3.67
Correlated Gain (dBi)	-0.91

UNII-1 (MIMO CDD)	Freq (MHz)	Ch. #	Min BW (MHz)	Power Limit (dBm)	Output Power (Gated) (dBm)		Total MIMO Corrected Power (dBm)	PSD Limit (dBm/MHz)	PSD (dBm/MHz)		Total MIMO Corrected PSD (dBm/MHz)
					Ant 6	Ant 5			Ant 6	Ant 5	
HT20 (FCC)	5180	36	--	24	17.42	17.47	20.46	11	6.715	6.471	9.715
	5200	40			18.33	18.34	21.35		7.574	7.752	10.784
	5240	48			18.38	18.38	**21.39**		7.466	7.657	10.683
HT40 (FCC)	5190	38	--	24	15.96	15.99	18.99	11	2.419	2.968	5.932
	5230	46			19.92	19.97	**22.96**		6.754	7.125	10.174
VHT80 (FCC)	5210	42	--	24	16.47	16.46	**19.48**	11	0.701	0.960	4.083
VHT160 (FCC)	5250 (Straddle)	50	--	24	15.42	15.49	**18.47**	11	-4.080	-3.929	-0.584

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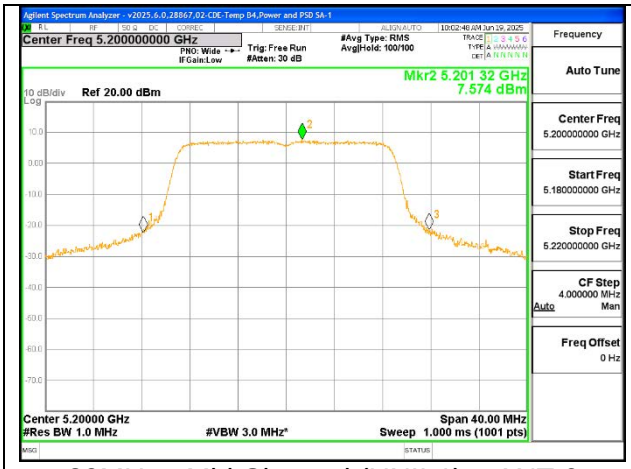
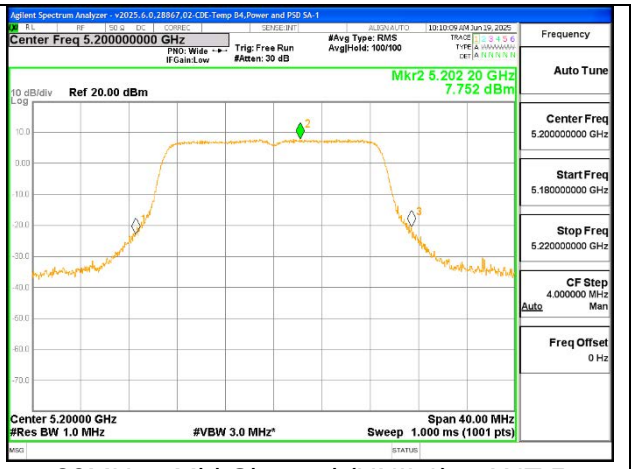
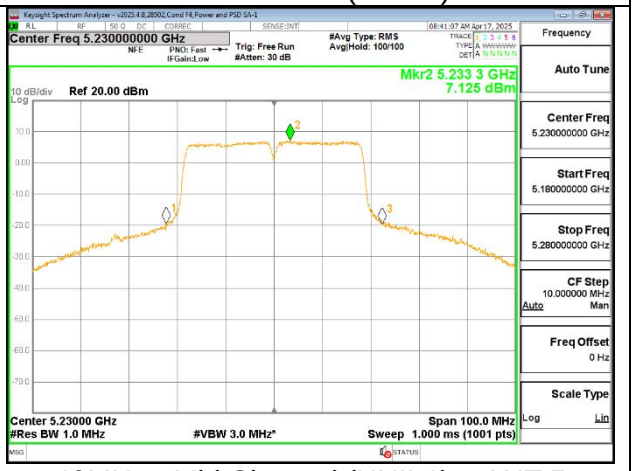


20MHz - Mid Channel (UNII-1) – ANT 6

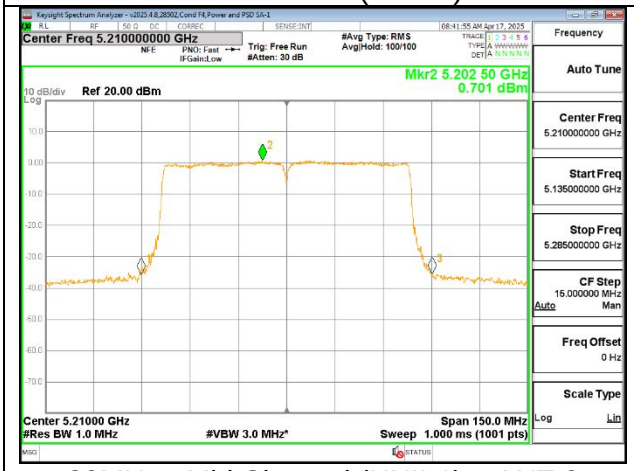


20MHz - Mid Channel (UNII-1) – ANT 5

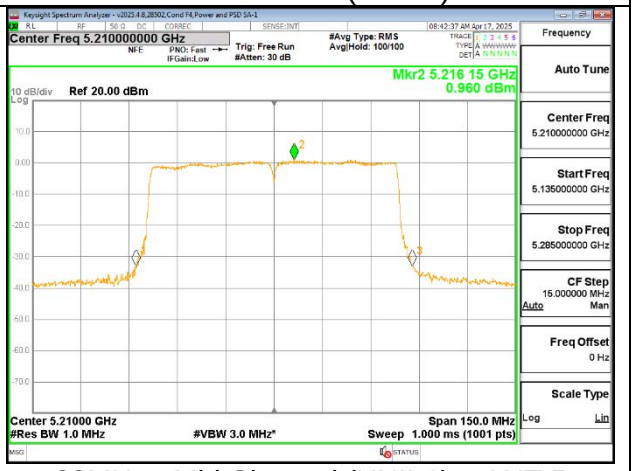
40MHz - Mid Channel (UNII-1) – ANT 6



40MHz - Mid Channel (UNII-1) – ANT 5



80MHz - Mid Channel (UNII-1) – ANT 6



80MHz - Mid Channel (UNII-1) – ANT 5

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