TEST REPORT

Report Number: 15496249-E10V3

Applicant	:	APPLE INC. 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	:	A3257 (Parent) A3525, A3526, A3527 (Variants)
Brand	:	APPLE
FCC ID	:	BCG-E8950A (Parent) BCG-E8960A, BCG-E8961A, BCG-E8962A (Variants)
EUT Description	:	SMARTPHONE
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART E

Date Of Issue:
2025/08/13

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	2025-08-07	Initial Review	--
V2	2025-08-12	Addressed TCB Feedback on sections 8 and 9	Tony Li
V3	2025-08-13	Updated Maximum Output Power	Tony Li

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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	A3257 (Parent) A3525, A3526, A3527 (Variants)
Brand	APPLE
FCC ID	BCG-E8950A (Parent) BCG-E8960A, BCG-E8961A, BCG-E8962A (Variants)
EUT Description	SMARTPHONE
Serial Number	KQ2V66FV9N (Radiated) HVHHCY0001P0000YEE, HVHHHD0004U0000YE8 (Conducted)
Sample Receipt Date	2025/03/07
Date Tested	2025/03/31 TO 2025/08/11
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. This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released 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	1.3 (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, 5GNR2, IEEE 802.11a/b/g/n/ac/ax/be, Bluetooth (BT), Ultra-Wideband (UWB), Global Positioning 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.

6.2. DESCRIPTION OF AVAILABLE ANTENNAS

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	3.10	-6.90	0.50	2.48
5250 - 5350 UNII - 2a	3.50	-7.50	0.82	2.65
5500 - 5700 UNII - 2c	2.70	-4.80	0.40	2.75
5725 - 5825 UNII 3	2.30	-4.80	0.06	2.47

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 installed during testing was 23A258.

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6.4. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

5.2 GHz BAND

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.2 GHz band, 1TX			
5180-5240	802.11a	Covered by 802.11n HT20 1TX	
5180-5240	802.11n HT20	20.48	111.69
5190-5230	802.11n HT40	20.47	111.43
5180-5240	802.11ac VHT20	Covered by 802.11n HT20 1TX	
5190-5230	802.11ac VHT40	Covered by 802.11n HT40 1TX	
5210	802.11ac VHT80	16.97	49.77
5250	802.11ac VHT160	14.99	31.55
5180-5240	802.11be EHT20 SU	20.47	111.43
5180-5240	802.11be EHT20 Partial RU	15.09	32.28
5190-5230	802.11be EHT40 SU	20.45	110.92
5190-5230	802.11be EHT40 Partial RU	20.48	111.69
5210	802.11be EHT80 SU	16.97	49.77
5210	802.11be EHT80 Partial RU	18.46	70.15
5250	802.11be EHT160 SU	14.93	31.12
5250	802.11be EHT160 Partial RU	18.46	70.15
5.2 GHz band, 2TX			
5180-5240	802.11n HT20 CDD	21.27	133.97
5180-5240	802.11n HT20 SDM/STBC	Covered by 802.11n HT20 2TX CDD	
5190-5230	802.11n HT40 CDD	22.98	198.61
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	18.49	70.63
5210	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5250	802.11ac VHT160 CDD	16.95	49.55
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	17.95	62.37
5180-5240	802.11be EHT20 SDM	Covered by 802.11be EHT20 2TX CDD	
5190-5230	802.11be EHT40 SU CDD	22.96	197.70
5190-5230	802.11be EHT40 Partial RU CDD	21.49	140.93
5190-5230	802.11be EHT40 SDM	Covered by 802.11be EHT40 2TX CDD	
5210	802.11be EHT80 SU CDD	18.46	70.15
5210	802.11be EHT80 Partial RU CDD	19.97	99.31
5210	802.11be EHT80 SDM	Covered by 802.11be EHT80 2TX CDD	
5250	802.11be EHT160 SU CDD	16.94	49.43
5250	802.11be EHT160 Partial RU CDD	19.96	99.08
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	20.47	111.43
5270 - 5310	802.11n HT40	20.46	111.17
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	17.47	55.85
5250	802.11ac VHT160	14.99	31.55
5260 - 5320	802.11be EHT20 SU	20.48	111.69
5260 - 5320	802.11be EHT20 Partial RU	15.03	31.84
5270 - 5310	802.11be EHT40 SU	20.43	110.41
5270 - 5310	802.11be EHT40 Partial RU	20.46	111.17
5290	802.11be EHT80 SU	17.45	55.59
5290	802.11be EHT80 Partial RU	20.42	110.15
5250	802.11be EHT160 SU	14.93	31.12
5250	802.11be EHT160 Partial RU	18.46	70.15
5.3 GHz band, 2TX			
5260 - 5320	802.11n HT20 CDD	21.29	134.59
5260 - 5320	802.11n HT20 SDM/STBC	Covered by 802.11n HT20 2TX CDD	
5270 - 5310	802.11n HT40 CDD	22.97	198.15
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	19.42	87.50
5290	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5250	802.11ac VHT160 CDD	16.95	49.55
5250	802.11ac VHT160 SDM/STBC	Covered by 802.11ac VHT160 2TX CDD	
5260 - 5320	802.11be EHT20 SU CDD	21.36	136.77
5260 - 5320	802.11be EHT20 Partial RU CDD	17.89	61.52
5260 - 5320	802.11be EHT20 SDM	Covered by 802.11be EHT20 2TX CDD	
5270 - 5310	802.11be EHT40 SU CDD	22.94	196.79
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	18.95	78.52
5290	802.11be EHT80 Partial RU CDD	21.36	136.77
5290	802.11be EHT80 SDM	Covered by 802.11be EHT80 2TX CDD	
5250	802.11be EHT160 SU CDD	16.94	49.43
5250	802.11be EHT160 Partial RU CDD	19.96	99.08
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	20.45	110.92
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	15.92	39.08
5500-5720	802.11be EHT20 SU	20.45	110.92
5500-5720	802.11be EHT20 Partial RU	14.97	31.41
5510-5710	802.11be EHT40 SU	20.49	111.94
5530-5690	802.11be EHT40 Partial RU	20.49	111.94
5530-5690	802.11be EHT80 SU	20.46	111.17
5530-5690	802.11be EHT80 Partial RU	17.99	62.95
5570	802.11be EHT160 SU	15.98	39.63
5570	802.11be EHT160 Partial RU	18.42	69.50
5.6 GHz band, 2TX			
5500-5720	802.11n HT20 CDD	21.24	133.05
5500-5720	802.11n HT20 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5510-5710	802.11n HT40 CDD	22.98	198.61
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	22.97	198.15
5530-5690	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5570	802.11ac VHT160 CDD	17.92	61.94
5570	802.11ac VHT160 SDM/STBC	Covered by 802.11ac VHT160 2TX CDD	
5500-5720	802.11be EHT20 SU CDD	21.28	134.28
5500-5720	802.11be EHT20 Partial RU CDD	14.99	31.55
5500-5720	802.11be EHT20 SDM	Covered by 802.11be EHT20 2TX CDD	
5510-5710	802.11be EHT40 SU CDD	22.93	196.34
5510-5710	802.11be EHT40 Partial RU CDD	18.85	76.74
5510-5710	802.11be EHT40 SDM	Covered by 802.11be EHT40 2TX CDD	
5530-5690	802.11be EHT80 SU CDD	22.96	197.70
5530-5690	802.11be EHT80 Partial RU CDD	21.27	133.97
5530-5690	802.11be EHT80 SDM	Covered by 802.11be EHT80 2TX CDD	
5570	802.11be EHT160 SU CDD	17.99	62.95
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	20.46	111.17
5745-5825	802.11ac VHT20	Covered by 802.11n HT20 1TX	
5755-5795	802.11ac VHT40	Covered by 802.11n HT40 1TX	
5775	802.11ac VHT80	20.46	111.17
5745-5825	802.11be EHT20 SU	20.49	111.94
5745-5825	802.11be EHT20 Partial RU	20.49	111.94
5755-5795	802.11be EHT40 SU	20.46	111.17
5755-5795	802.11be EHT40 Partial RU	20.49	111.94
5775	802.11be EHT80 SU	20.44	110.66
5775	802.11be EHT80 Partial RU	20.47	111.43
5.8 GHz band, 2TX			
5745-5825	802.11n HT20 CDD	22.98	198.61
5745-5825	802.11n HT20 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5755-5795	802.11n HT40 CDD	23.00	199.53
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	22.97	198.15
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	22.99	199.07
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	22.97	198.15
5755-5795	802.11be EHT40 SDM	Covered by 802.11be EHT40 2TX CDD	
5775	802.11be EHT80 SU CDD	22.99	199.07
5775	802.11be EHT80 Partial RU CDD	22.95	197.24
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 and Portrait for 2TX, and Z (Portrait) orientation was the worst-case orientation for ANT 5.

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 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 selecting for test are as table shown below.

40MHz/80MHz/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 SISO (UNII-1)		Worst Case Tone MIMO		Worst Case Tone SISO (UNII-2a)		Worst Case Tone MIMO		Worst Case Tone SISO (UNII-2c)		Worst Case Tone MIMO		Worst Case Tone SISO (UNII-3)		Worst Case Tone MIMO	
				Low	Mid	High	Power	PSD	Power	PSD	Power	PSD	Power	PSD	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				X		X				
	52 + 26	70 ~ 81	70, 71, 72	70	71	72																
	106	53 ~ 54	53 ~ 54	53	--	54				X				X								
	106 + 26	82 ~ 89	82, 83	82	--	83																
	242	61	61	--	61	--																
	SU	--	--	--	--	--	X		X		X		X		X		X		X		X	
40	26	0 ~ 17	0 ~ 17	0	9	17		X														
	52	37 ~ 44	37 ~ 44	37	41	44				X		X		X						X		X
	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												X				
	242	61 ~ 61	61 ~ 62	61	--	62	X		X		X		X		X							
	484	65	65	--	65	--																
	SU	--	--	--	--	--	X		X		X		X		X		X		X		X	
80	26	0 ~ 36	0 ~ 36	0	17	36				X												
	52	37 ~ 52	37 ~ 52	37	45	52		X				X		X								
	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		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		X		X		X		X	
160	26	0 ~ 536	0 ~ 536	0	36	536																
	52	37 ~ 552	37 ~ 552	37	52	552		X		X		X		X		X		X				
	52 + 26	70 ~ 581	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 ~ 560	53 ~ 560	53	--	560																
	106 + 26	82 ~ 89	82, 85, 86, 89	82 (sb0)	89 (sb0)	89 (sb1)																
	242	61 ~ 564	61 ~ 564	61	62	564	X		X		X		X		X		X					
	484	65 ~ 566	65 ~ 566	65	--	566																
	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 ~ 567	67 ~ 567	67		567																
	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	568	568	--	568	--																
	SU	--	--	--	--	--	X		X		X		X		X		X					

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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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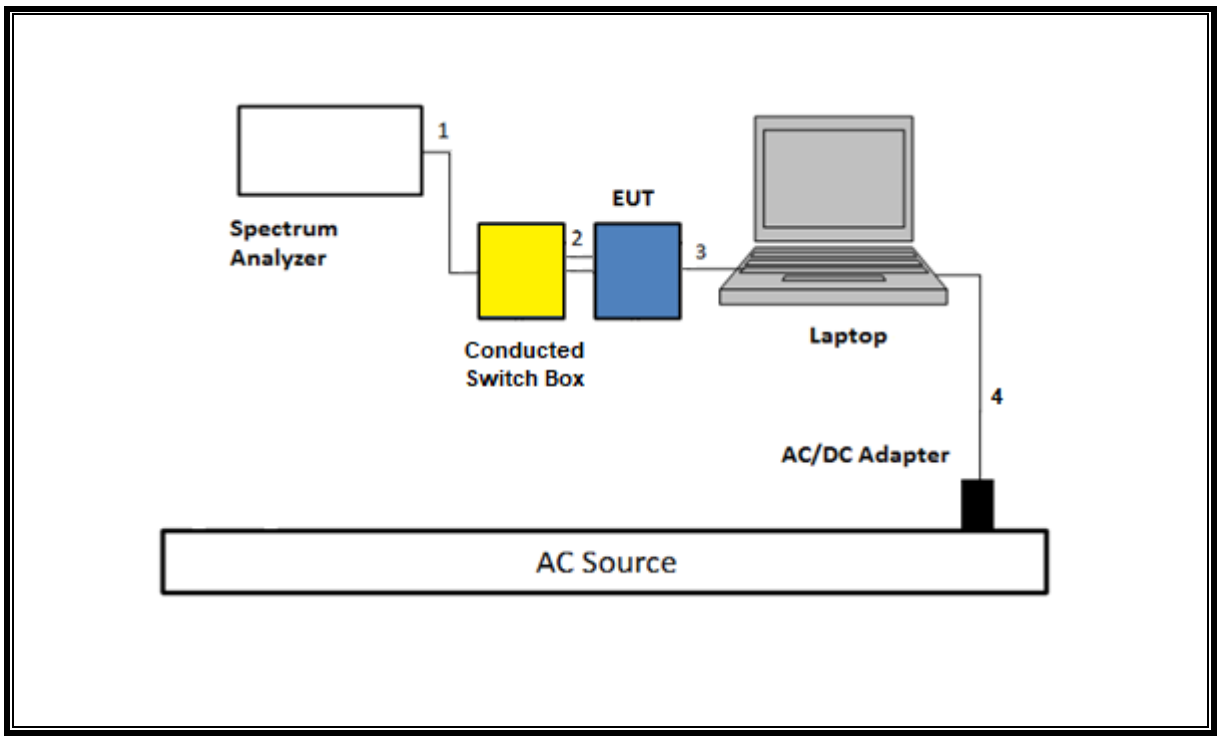
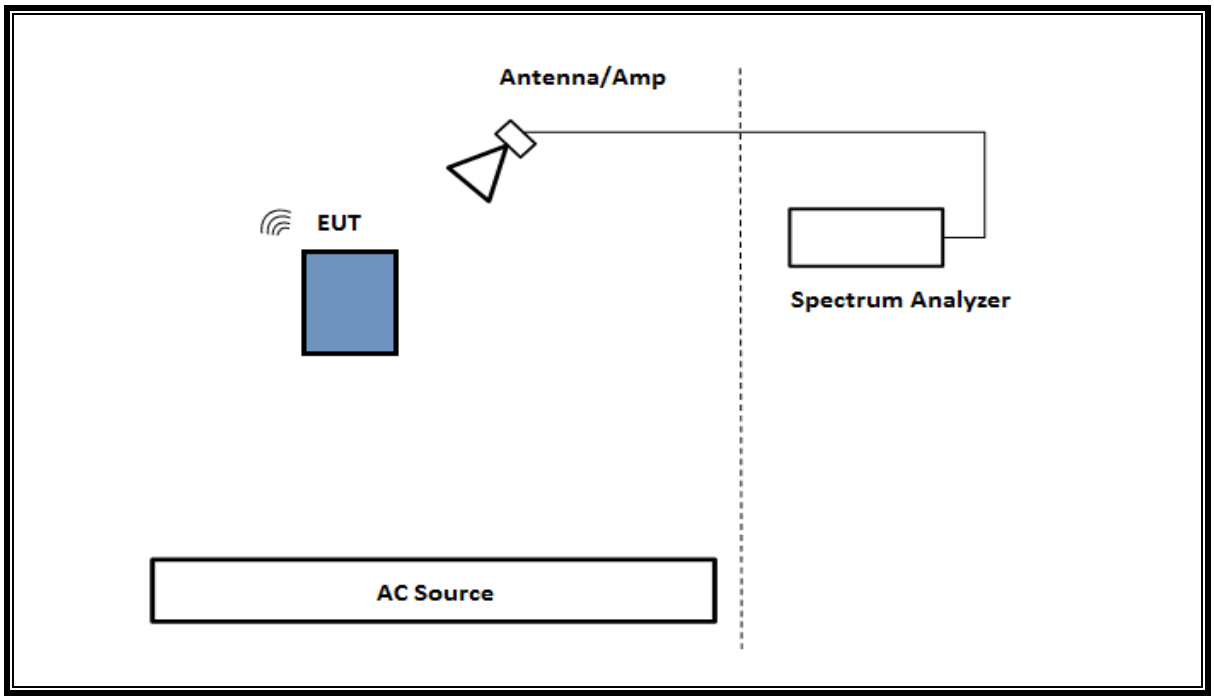
SETUP DIAGRAM FOR CONDUCTED TESTS



SETUP DIAGRAM FOR RADIATED TESTS Above 1 GHz



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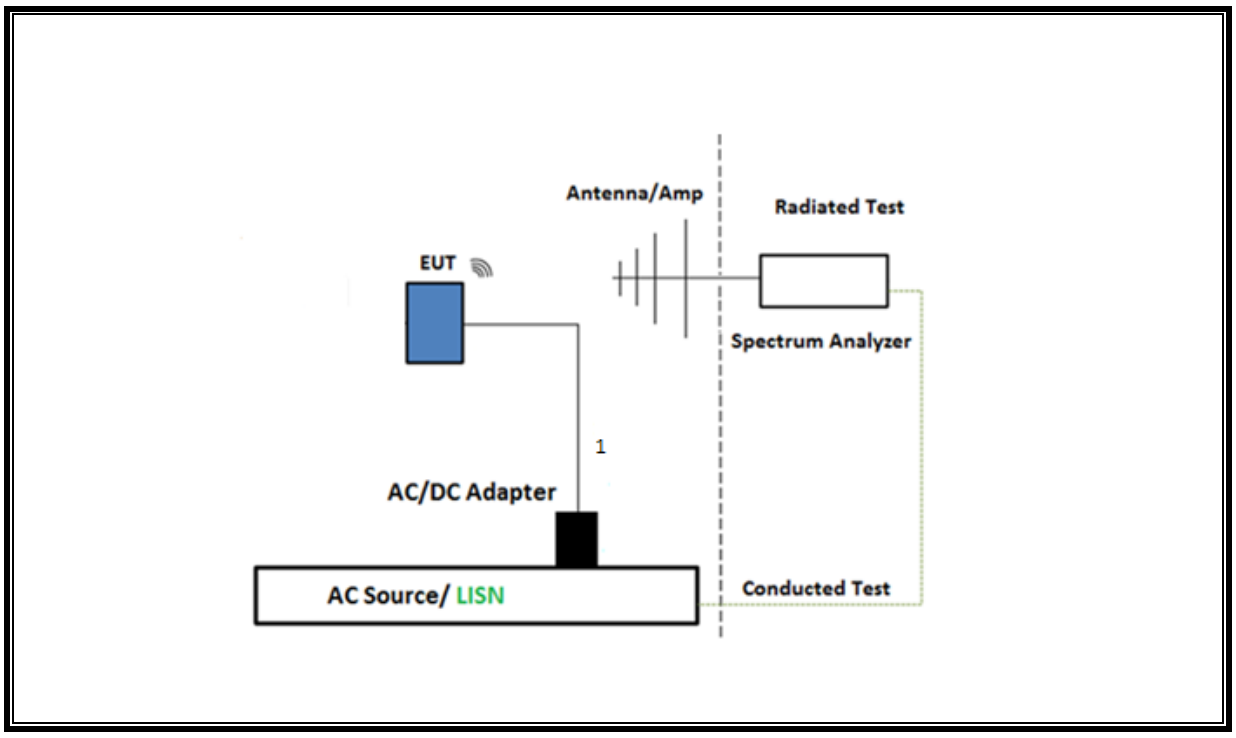
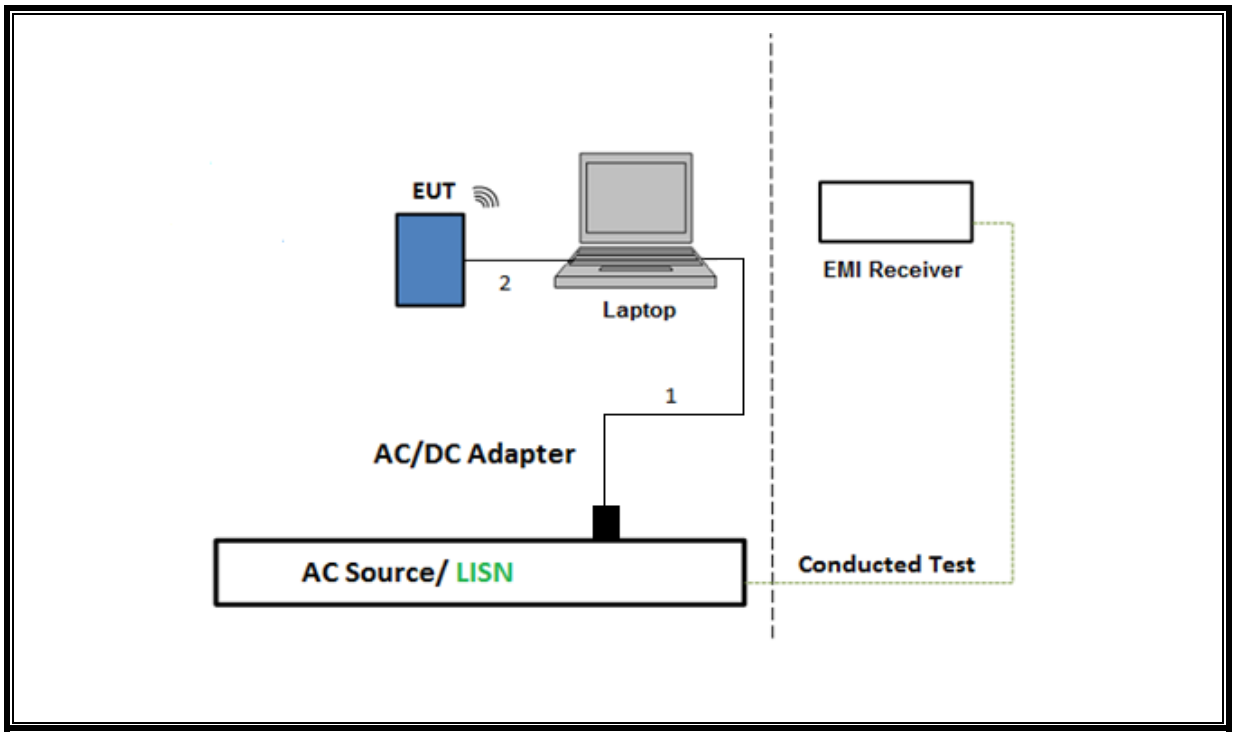
SETUP DIAGRAM FOR Below 1GHz and AC LINE CONDUCTED TEST



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 was 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	3117	226671	2026-02-28
RF Filter Box, 1-18GHz	UL-FR1	UL RATS 2.0	236726	2025-10-31
EMI Test Receiver	Rohde & Schwarz	ESW44	223460	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	3117	223084	2026-12-31
RF Filter Box, 1-18GHz	UL-FR1	Frankenstein	230878	2026-05-31
EMI Test Receiver	Rohde & Schwarz	ESW44	191428	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	84797	2026-10-31
RF Filter Box, 1-18GHz	UL-FR1	UL RATS 2.0	225079	2026-05-31
EMI Test Receiver	Rohde & Schwarz	ESW44	235670	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	200896	2027-03-31
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	3117	200897	2026-09-30
RF Filter Box, 1-18GHz	UL-FR1	Frankenstein	217255	2026-01-31
EMI Test Receiver	Rohde & Schwarz	ESW44	191430	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	80404	2025-08-31
RF Filter Box, 1-18GHz	UL-FR1	Rats 2.0	226781	2026-03-31
EMI Test Receiver	Rohde & Schwarz	ESW44	226078	2026-02-28
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	2026-02-28

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TEST EQUIPMENT LIST (cont.)				
Description	**Manufacturer**	**Model**	**ID Num**	**Cal Due**
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 30MHz – 2000MHz	Sunol Sciences Corp.	JB3	85150	2025-12-30
Link File, 3m, 9kHz-1000MHz Hybrid Path Loss	UL-FR1	Port 0 Factors	208807	2026-01-31
EMI TEST RECEIVER, with B8 option	Rohde & Schwarz	ESW44	169937	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	

*Testing was completed before calibration due date

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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 (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
HT20	--	MCS0	3.830	3.855	0.9935	99.35%	0.00	0.010
	--	MCS7	5.333	5.360	0.9950	99.50%	0.00	0.010
HT40	--	MCS0	4.595	4.620	0.9946	99.46%	0.00	0.010
	--	MCS7	3.860	3.885	0.9936	99.36%	0.00	0.010
VHT80	--	MCS0	5.087	5.113	0.9949	99.49%	0.00	0.010
	--	MCS9	2.061	2.085	0.9885	98.85%	0.00	0.010
VHT160	--	MCS0	5.293	5.313	0.9962	99.62%	0.00	0.010
	--	MCS9	1.052	1.077	0.9768	97.68%	0.10	0.951
EHT20	SU	MCS0	4.62	4.645	0.9946	99.46%	0.00	0.010
		MCS11	5.433	5.46	0.9951	99.51%	0.00	0.010
	26T	MCS0	2.029	2.072	0.9792	97.92%	0.09	0.493
		MCS11	2.027	2.072	0.9783	97.83%	0.10	0.493
	52T	MCS0	2.027	2.072	0.9783	97.83%	0.10	0.493
		MCS11	2.027	2.064	0.9821	98.21%	0.00	0.010
	106T	MCS0	6.1476	6.2377	0.9856	98.56%	0.00	0.010
		MCS11	2.029	2.075	0.9778	97.78%	0.10	0.493
EHT40	SU	MCS0	5.38	5.407	0.9950	99.50%	0.00	0.010
		MCS11	2.98	3.007	0.9910	99.10%	0.00	0.010
	26T	MCS0	2.027	2.08	0.9745	97.45%	0.11	0.493
		MCS11	2.029	2.064	0.9830	98.30%	0.00	0.010
	52T	MCS0	2.01	2.065	0.9734	97.34%	0.12	0.498
		MCS11	2.02315	2.06423	0.9801	98.01%	0.00	0.010
	106T	MCS0	2.029	2.072	0.9792	97.92%	0.09	0.493
		MCS11	2.029	2.067	0.9816	98.16%	0.00	0.010
	106 + 26T	MCS0	2.0252	2.0644	0.9810	98.10%	0.00	0.010
		MCS11	2.03	2.078	0.9769	97.69%	0.10	0.493
	242T	MCS0	2.027	2.064	0.9821	98.21%	0.00	0.010
		MCS11	2.027	2.072	0.9783	97.83%	0.10	0.493
EHT80	SU	MCS0	5.14	5.167	0.9948	99.48%	0.00	0.010
		MCS11	1.462	1.487	0.9832	98.32%	0.00	0.010
	26T	MCS0	2.027	2.072	0.9783	97.83%	0.10	0.493
		MCS11	2.029	2.067	0.9816	98.16%	0.00	0.010
	52T	MCS0	2.0252	2.07	0.9784	97.84%	0.10	0.494
		MCS11	2.025	2.075	0.9759	97.59%	0.11	0.494
	106T	MCS0	2.027	2.072	0.9783	97.83%	0.10	0.493
		MCS11	2.029	2.067	0.9816	98.16%	0.00	0.010
	242T	MCS0	2.027	2.064	0.9821	98.21%	0.00	0.010
		MCS11	2.027	2.072	0.9783	97.83%	0.10	0.493
EHT160	SU	MCS0	5.32	5.347	0.9950	99.50%	0.00	0.010
		MCS11	0.766	0.791	0.9684	96.84%	0.14	1.305
	52T	MCS0	2.025	2.07	0.9783	97.83%	0.10	0.494
		MCS11	2.025556	2.062778	0.9820	98.20%	0.00	0.010
	242T	MCS0	2.026	2.066	0.9806	98.06%	0.00	0.010
		MCS11	2.03	2.073	0.9793	97.93%	0.09	0.493

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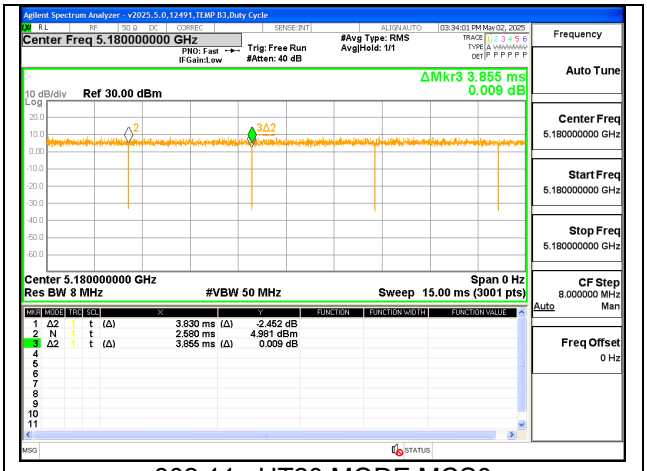
Mode	Tone (T)	Data Rate (Mbps)	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
HT20 SDM	--	MCS0	4.775	4.800	0.9948	99.48%	0.00	0.010
HT40 SDM	--	MCS0	5.053	5.080	0.9947	99.47%	0.00	0.010
VHT80 SDM	--	MCS0	5.293	5.32	0.9949	99.49%	0.00	0.010
VHT160 SDM	--	MCS0	5.4	5.427	0.9950	99.50%	0.00	0.010
EHT20 SDM	SU	MCS0	5.387	5.413	0.9952	99.52%	0.00	0.010
	106T	MCS0	6.023	6.1	0.9874	98.74%	0.00	0.010
EHT40 SDM	SU	MCS0	5.387	5.407	0.9963	99.63%	0.00	0.010
	52T	MCS0	2.027	2.072	0.9783	97.83%	0.10	0.493
	242T	MCS0	2.029	2.067	0.9816	98.16%	0.00	0.010
EHT80 SDM	SU	MCS0	5.327	5.353	0.9951	99.51%	0.00	0.010
	26T	MCS0	2.025	2.072	0.9773	97.73%	0.10	0.494
	242T	MCS0	2.029	2.064	0.9830	98.30%	0.00	0.010
EHT160 SDM	SU	MCS0	5.42	5.447	0.9950	99.50%	0.00	0.010
	52T	MCS0	2.018	2.07	0.9749	97.49%	0.11	0.496
	242T	MCS0	2.026	2.064	0.9816	98.16%	0.00	0.010

Note: There are 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

Plots included in the report are representative of the method and settings parameters used for the test.

ID:	32480	Date:	07/30/2025

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	23.22	22.48	18.0130	18.0210
	5200	40	22.68	22.49	18.0360	18.0180
	5220	44	22.83	22.80	17.9350	17.9170
	5240	48	22.89	22.63	18.0190	18.0050
HT40 (FCC)	5190	38	44.02	44.64	36.7440	36.6710
	5230	46	44.36	44.46	36.7810	36.7190
VHT80 (FCC)	5210	42	81.66	82.05	75.7490	75.8370
VHT160 (FCC)	5250 (Straddle)	50	168.50	168.90	155.1100	154.8300

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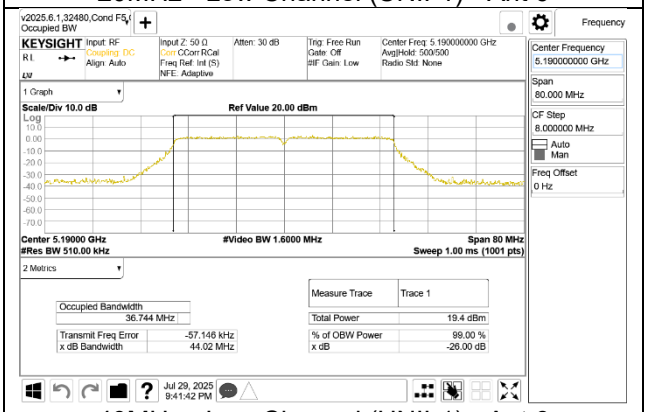
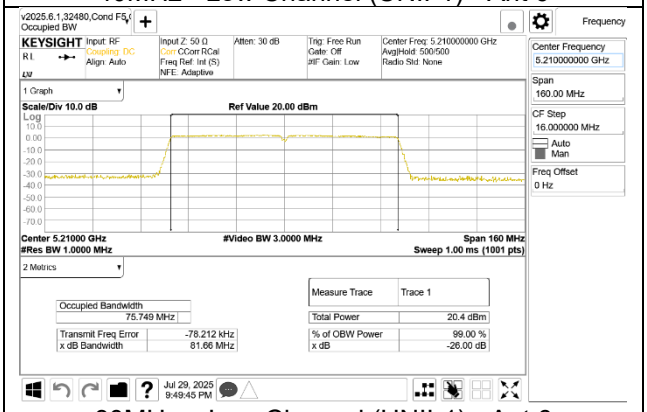
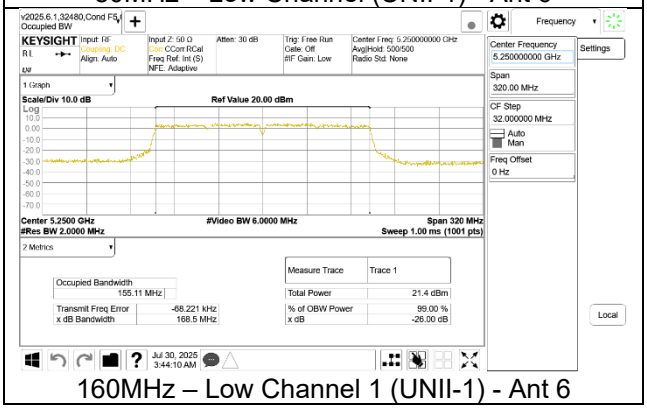
20MHz - Low Channel (UNII-1) - Ant 6



40MHz - Low Channel (UNII-1) - Ant 6



80MHz – Low Channel (UNII-1) - Ant 6



160MHz – Low Channel 1 (UNII-1) - Ant 6

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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	24.21	23.07	--	18.2340	18.0140	--
	5200	40	25.10	22.93	--	18.1720	17.9810	--
	5220	44	22.72	21.91	--	17.9010	17.8540	--
	5240	48	24.40	23.31	--	18.2010	17.9580	--
HT40 (FCC)	5190	38	45.46	44.88	--	37.4520	36.8770	--
	5230	46	45.00	44.94	--	37.3660	36.7620	--
VHT80 (FCC)	5210	42	86.96	86.79	--	77.3220	76.4370	--
VHT160 (FCC)	5250 (Straddle)	50	162.30	162.22	--	156.5400	155.9730	--

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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	23.31	22.34	18.6100	17.8810
	5300	60	23.50	22.66	18.1430	17.8940
	5320	64	24.00	22.88	18.1200	17.8890
HT40	5270	54	47.14	45.36	37.2540	36.6110
	5310	62	45.23	44.05	37.2690	36.6200
VHT80	5290	58	84.17	83.30	76.4530	76.3440
VHT160	5250 (Straddle)	50	168.50	168.90	155.1100	154.8300

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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	23.37	22.82	22.82	18.1250	17.9490	17.95
	5300	60	23.75	22.92	22.92	18.1610	17.9480	17.95
	5320	64	23.35	22.77	22.77	18.1190	17.8960	17.90
HT40	5270	54	45.73	44.48	44.48	37.2440	36.7240	36.7240
	5310	62	45.61	44.73	44.73	37.1800	36.7160	36.7160
VHT80	5290	58	160.00	159.40	159.40	77.3240	76.4400	76.4400
VHT160	5250 (Straddle)	50	162.30	162.22	162.22	156.54	155.97	155.9730

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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	22.78	22.39	18.0010	17.8400
	5580	116	22.97	22.25	17.9880	17.8360
	5700	140	22.64	22.35	18.0370	17.8310
	5720 (Straddle)	144	22.95	22.35	18.0300	17.8220
HT40	5510	102	44.13	44.76	36.7490	36.7950
	5550	110	44.31	44.31	36.7720	36.8220
	5670	134	44.20	44.75	36.7370	36.7940
	5710 (Straddle)	142	45.70	44.76	36.7910	36.7250
VHT80	5530	106	86.19	85.57	76.1840	76.1520
	5610	122	84.83	85.40	76.0930	76.1360
	5690 (Straddle)	138	85.08	85.92	76.0560	76.1350
VHT160	5570	114	163.02	162.49	155.7400	155.2900

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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	23.16	22.13	22.13	18.0890	17.9650	17.97
	5580	116	22.71	22.66	22.66	18.0000	17.8280	17.83
	5700	140	22.71	22.21	22.21	17.9820	17.8320	17.83
	5720 (Straddle)	144	22.74	22.19	22.19	17.9960	17.8350	17.84
HT40	5510	102	44.20	42.97	42.97	36.8890	36.4770	36.4770
	5550	110	44.74	43.21	43.21	36.7650	36.5220	36.5220
	5670	134	44.40	42.89	42.89	36.8140	36.5190	36.5190
	5710 (Straddle)	142	44.32	42.56	42.56	36.8180	36.4730	36.4730
VHT80	5530	106	85.24	83.78	83.78	76.0520	75.9010	75.9010
	5610	122	85.43	83.79	83.79	76.0370	76.0910	76.0370
	5690 (Straddle)	138	85.42	83.81	83.81	76.0370	75.9310	75.9310
VHT160	5570	114	163.50	162.70	162.70	154.7300	154.4600	154.4600

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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	23.56	23.04	18.1560	18.0230
	5785	157	23.21	22.75	18.1790	18.0340
	5825	165	23.14	22.71	18.1630	18.0560
HT40	5755	151	44.56	45.79	37.3690	36.5970
	5795	159	45.08	45.64	37.3920	36.7270
VHT80	5775	155	86.15	86.16	76.4940	76.3670

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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	23.54	23.70	18.1760	17.9250
	5785	157	23.74	22.92	18.1760	17.9600
	5825	165	23.44	22.69	18.1770	17.9460
HT40	5755	151	45.67	45.19	37.2880	36.7460
	5795	159	45.73	47.79	37.3330	36.7650
VHT80	5775	155	86.64	86.13	77.3860	76.4400

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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	--	23.06	22.93	19.1080	19.0820
			52T	37	21.67	21.37	18.4160	18.4290
				38	18.36	19.04	16.9240	16.8940
				40	20.51	20.72	18.1490	18.1840
	5200	40	SU	--	23.67	22.51	19.0920	19.0860
			52T	37	21.00	21.23	18.3450	18.3540
				38	19.02	19.05	16.9900	16.9500
				40	20.91	20.99	18.1690	18.2240
	5220	44	SU	--	21.97	22.47	19.0350	18.9430
			52T	37	21.23	21.14	18.3700	18.4440
				38	18.88	18.94	16.9970	16.9830
				40	20.66	20.58	18.2490	18.2411
	5240	48	SU	--	23.68	22.79	19.0160	19.0620
			52T	37	21.37	21.05	18.4060	18.3020
				38	18.83	18.77	16.9030	16.9620
				40	20.68	20.78	18.1640	18.2060
EHT40 (FCC)	5190	38	SU	--	44.06	44.93	38.0340	38.1260
			26T	0	21.04	20.79	18.6290	18.5220
				9	21.00	20.92	19.1050	19.0880
				17	21.44	20.41	18.7020	18.4800
			242T	61	23.12	23.11	19.1820	19.1200
	5230	46	SU	--	44.87	44.67	38.1690	38.1510
			26T	0	21.01	20.45	18.6220	18.5750
				9	20.83	21.11	19.2040	18.9700
				17	20.65	20.57	18.5590	18.5890
			242T	61	23.33	23.58	19.1270	19.1300
				62	23.53	22.94	19.1140	19.0620
EHT80 (FCC)	5210	42	SU	--	81.89	81.81	77.5170	77.4980
			52T	37	21.93	20.87	18.3700	18.2860
				45	21.24	21.53	18.0840	18.3180
				52	21.03	20.72	18.5410	18.1980
			242T	61	23.74	23.70	19.2140	19.1950
EHT160 (FCC)	5250 (Straddle)	50	SU	--	165.60	168.13	156.6000	154.9700
			52T	37	20.69	21.44	18.4470	18.2380
				52	21.09	21.33	18.4750	18.2530
				S52	21.28	21.72	18.4650	18.5050
			242T	61	23.15	23.46	19.2460	19.7470

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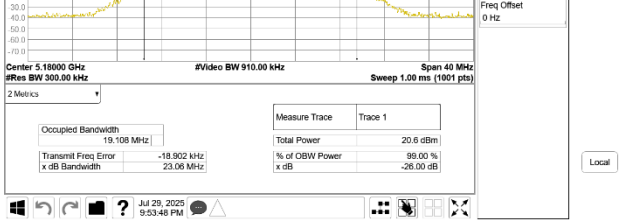
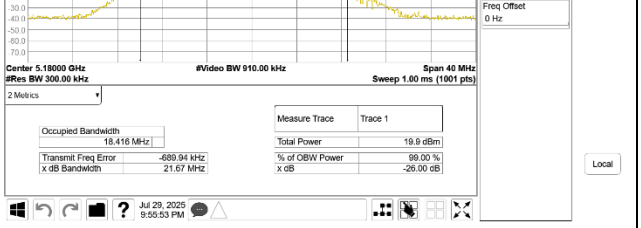
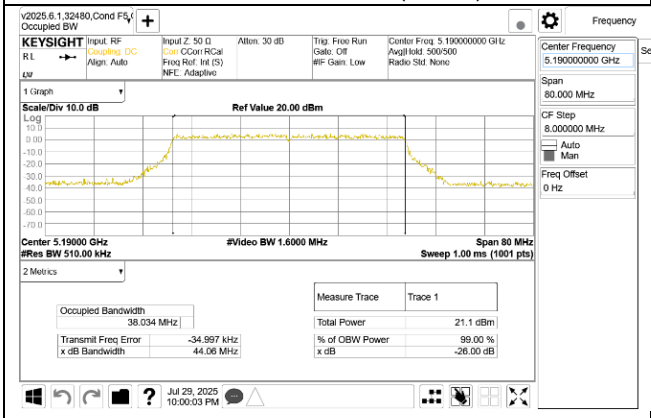


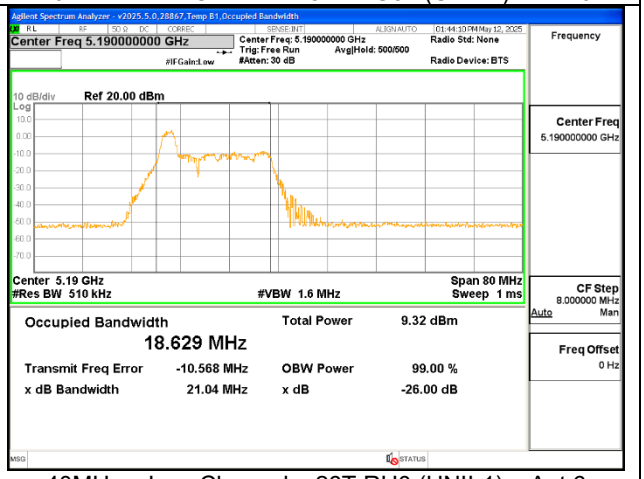
20MHz – Low Channel – SU (UNII-1) – Ant 6



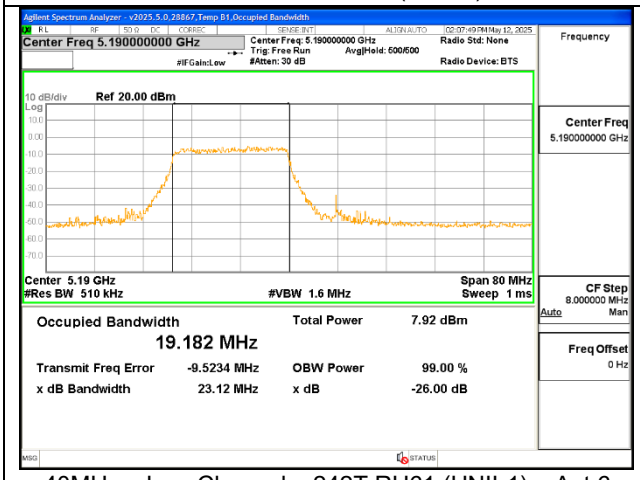
20MHz – Low Channel – 52T RU37 (UNII-1) – Ant 6



40MHz – Low Channel – SU (UNII-1) – Ant 6



40MHz – Low Channel – 26T RU0 (UNII-1) – Ant 6



40MHz – Low Channel – 242T RU61 (UNII-1) – Ant 6

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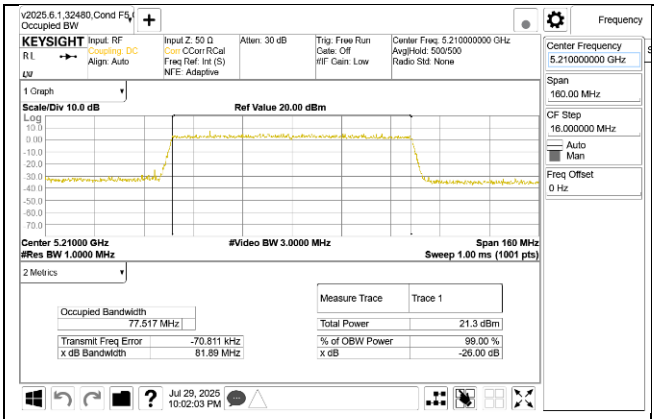
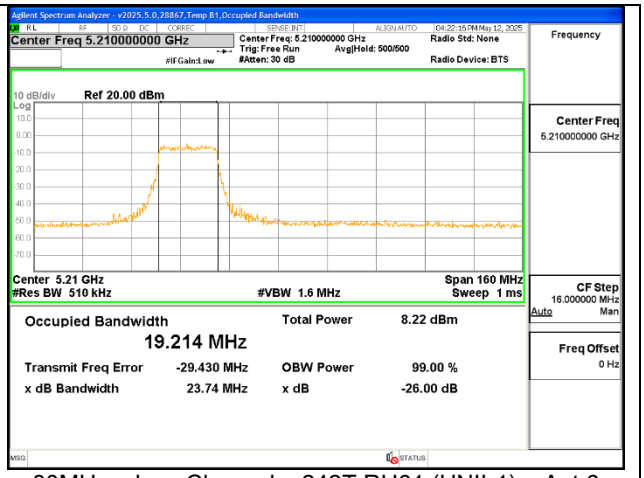
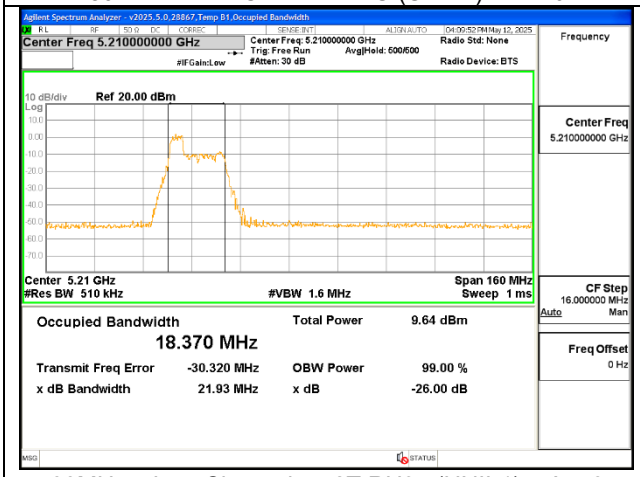


80MHz – Low Channel – SU (UNII-1) – Ant 6



80MHz – Low Channel – 242T RU61 (UNII-1) – Ant 6



80MHz – Low Channel – 52T RU37 (UNII-1) – Ant 6

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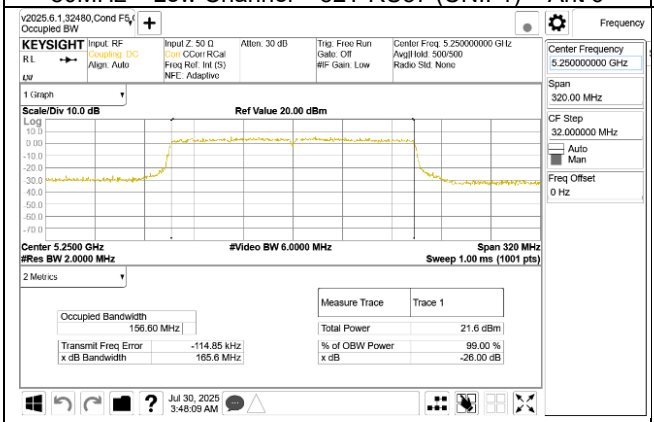
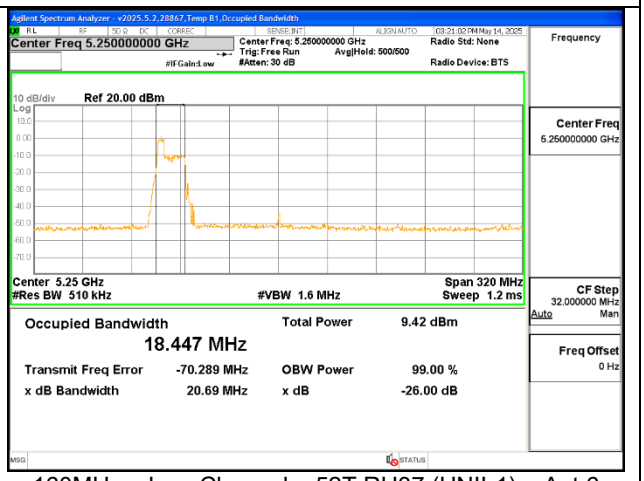


160MHz – Low Channel –SU (UNII-1) – Ant 6



160MHz – Low Channel – 52T RU37 (UNII-1) – Ant 6

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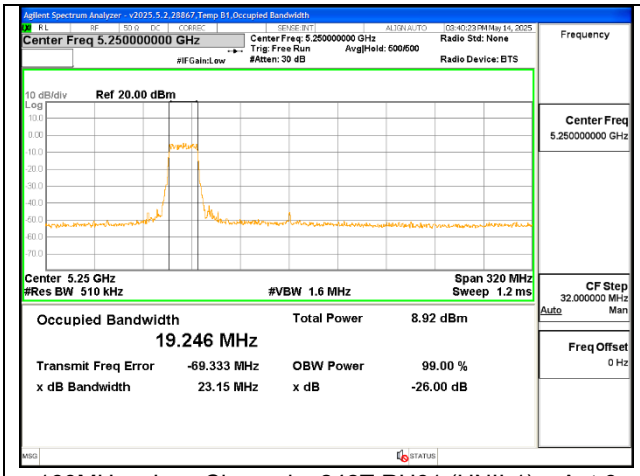

160MHz – Low Channel – 242T RU61 (UNII-1) – Ant 6

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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	--	23.43	22.47	--	19.1510	19.0850	--
			106T	53	21.86	20.78	--	18.1990	18.2060	--
				54	20.79	20.78	--	18.1200	18.1090	--
	5200	40	SU	--	23.75	23.24	--	19.1420	19.1150	--
			106T	53	21.96	20.37	--	18.2770	18.2490	--
				54	20.78	20.57	--	18.0430	18.0800	--
	5220	44	SU	--	22.55	21.29	--	19.0070	18.9840	--
			106T	53	21.58	20.52	--	18.2200	18.1310	--
				54	20.89	20.38	--	18.1180	18.0820	--
	5240	48	SU	--	23.54	22.60	--	19.1450	19.0830	--
			106T	53	21.43	20.79	--	18.1970	18.1890	--
				54	21.08	20.56	--	18.0280	18.0790	--
EHT40 (FCC)	5190	38	SU	--	47.03	46.37	--	38.1820	38.2200	--
			52T	37	21.36	21.23	--	18.3510	18.2140	--
				41	21.81	21.09	--	18.8030	18.7890	--
				44	20.58	20.96	--	18.2940	18.2790	--
			242T	61	23.30	23.49	--	19.2630	19.0580	--
	5230	46	SU	--	46.19	44.81	--	38.1230	38.1350	--
			52T	37	21.30	20.76	--	18.2840	18.1220	--
				41	21.87	21.04	--	18.8810	18.6530	--
				44	20.92	20.23	--	18.3590	18.2260	--
			242T	61	23.09	22.94	--	19.1280	19.1010	--
EHT80 (FCC)	5210	42	SU	--	83.41	82.19	--	78.2160	78.0570	--
			26T	0	21.31	20.35	--	18.7220	18.2910	--
				17	20.48	20.44	--	18.5110	18.3870	--
				36	20.61	20.76	--	18.4820	18.2680	--
			242T	61	23.41	22.85	--	19.1290	19.1710	--
EHT160 (FCC)	5250 (Straddle)	50	SU	--	162.31	162.13	--	157.89	156.76	--
			52T	37	21.44	20.84	--	18.306	18.273	--
				52	21.17	20.68	--	18.366	18.151	--
				S52	21.01	20.86	--	18.187	18.193	--
			242T	61	23.73	23.4	--	19.307	19.224	--
				S64	22.90	23.15	--	19.377	19.214	--

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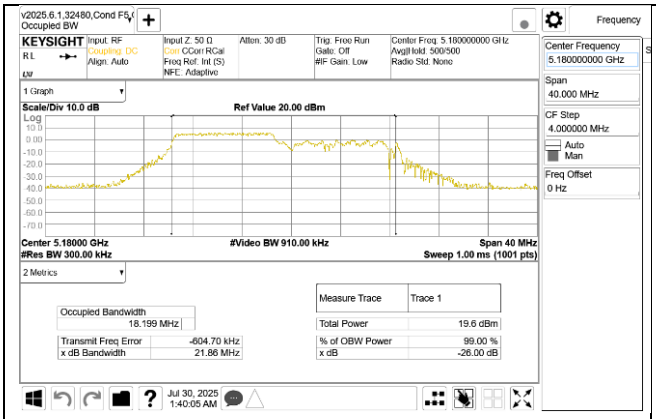
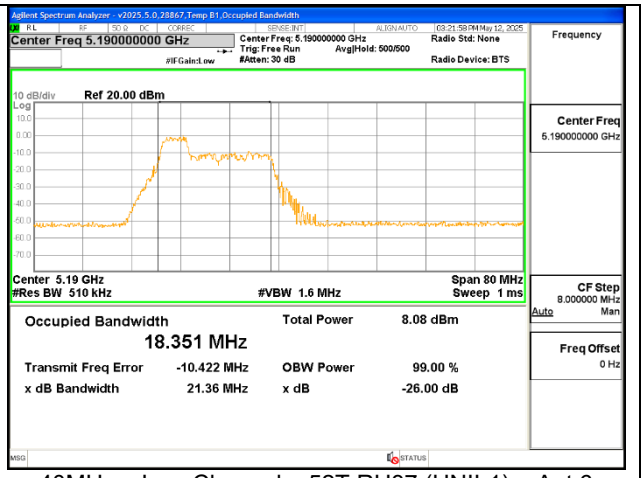
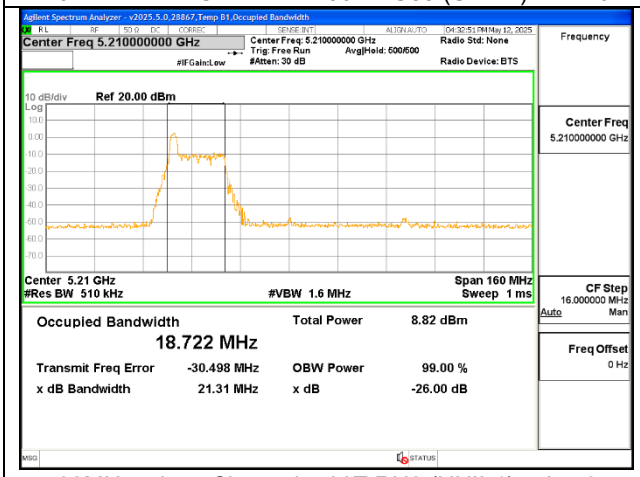


20MHz – Low Channel – 106T RU53 (UNII-1) – Ant 6



40MHz – Low Channel – 52T RU37 (UNII-1) – Ant 6



80MHz – Low Channel – 26T RU0 (UNII-1) – Ant 6

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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	--	23.09	22.55	19.0700	19.0640
			52T	37	21.12	21.05	18.3840	18.1910
				38	18.89	18.89	16.9690	16.8740
				40	20.42	20.57	18.1000	18.1100
	5300	60	SU	--	23.10	22.32	19.0650	19.1000
			52T	37	21.10	20.94	18.3610	18.3670
				38	18.69	18.74	16.9840	16.8470
				40	20.53	20.61	17.9990	18.1150
	5320	64	SU	--	23.62	22.53	19.0980	19.0620
			52T	37	20.80	21.09	18.3740	18.4010
				38	18.53	18.76	16.9500	16.9910
				40	20.93	20.46	18.2890	18.2050
EHT40	5270	54	SU	--	44.67	44.01	38.2340	38.0310
			52T	37	20.94	21.00	18.1920	18.2630
				41	21.88	21.52	18.7450	18.8830
				44	20.57	20.84	18.3390	18.2260
			242T	61	23.57	23.12	19.1240	19.1540
				62	23.62	23.46	19.0990	19.0680
	5310	62	SU	--	45.45	44.82	38.2420	38.1040
			52T	37	20.82	21.41	18.3850	18.3540
				41	21.09	21.72	18.8320	18.8540
				44	21.12	20.69	18.3270	18.3490
			242T					
				62	23.61	23.32	19.0780	19.0760
EHT80	5290	58	SU	--	84.56	84.01	78.2700	77.8800
			52T	37	21.63	21.27	18.2970	18.3100
				45	21.28	20.98	18.2150	18.2890
				52	20.73	20.70	18.3030	18.3150
			242T	61	23.09	24.21	19.2410	19.1560
				62	23.48	23.20	19.2490	19.1690
EHT160	5250 (Straddle)	50	SU	--	165.60	165.28	156.6000	156.1740
			52T	37	20.69	21.44	18.4470	18.2380
				52	21.09	21.33	18.4750	18.2530
				S52	21.28	21.72	18.4650	18.5050
			242T	61	23.15	23.46	19.2460	19.7470
				S64	23.41	23.51	19.4030	19.4140

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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	--	22.83	22.20	22.20	18.9860	19.0680	18.9860
			106T	53	21.50	20.34	20.34	18.2460	18.1530	18.1530
				54	21.30	20.70	20.70	18.0290	18.0650	18.0290
	5300	60	SU	--	22.92	22.52	22.52	19.0860	18.9990	18.9990
			106T	53	21.99	20.47	20.47	18.1300	18.1250	18.1250
				54	21.00	20.69	20.69	18.1770	18.0510	18.0510
	5320	64	SU	--	22.47	22.39	22.39	19.0610	19.0190	19.0190
			106T	53	21.63	20.90	20.90	18.0750	18.0960	18.0750
				54	21.03	20.93	20.93	18.1230	18.0260	18.0260
EHT40	5270	54	SU	--	43.85	43.79	43.79	38.0060	38.0340	38.0060
			52T	37	21.22	20.57	20.57	18.3440	18.2520	18.2520
				41	20.91	20.65	20.65	18.8910	18.5950	18.5950
				44	20.93	20.59	20.59	18.2690	18.2240	18.2240
			242T	61	23.15	22.98	22.98	19.1650	19.0550	19.0550
				62	23.30	22.34	22.34	19.1620	19.0260	19.0260
	5310	62	SU	--	43.80	43.03	43.03	38.0390	37.9930	37.9930
			52T	37	20.76	20.75	20.75	18.2180	18.0470	18.0470
				41	21.89	21.05	21.05	18.8090	18.7490	18.7490
				44	21.13	20.76	20.76	18.3450	18.1980	18.1980
			242T							
				62	23.43	22.76	22.76	19.0610	19.2080	19.0610
EHT80	5290	58	SU	--	85.31	84.85	84.85	77.6430	77.4550	77.4550
			52T	37	20.66	20.48	20.48	18.3700	18.0630	18.0630
				45	20.89	21.22	20.89	18.3080	18.0890	18.0890
				52	20.94	20.93	20.93	18.5320	18.2630	18.2630
			242T	61	23.25	22.70	22.70	19.2100	19.0780	19.0780
				62	23.41	23.14	23.14	19.1380	19.1500	19.1380
EHT160	5250 (Straddle)	50	SU	--	164.40	164.30	164.30	156.3	155.98	155.98
			52T	37	21.44	20.84	20.84	18.306	18.273	18.273
				52	21.17	20.68	20.68	18.366	18.151	18.151
				S52	21.01	20.86	20.86	18.187	18.193	18.187
			242T	61	23.73	23.40	23.40	19.307	19.224	19.224
				S64	22.90	23.15	22.90	19.377	19.214	19.214

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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	--	23.01	23.01	19.0450	19.0800
			52T	37	20.86	21.18	18.4080	18.3950
				38	18.54	18.80	17.0330	16.9770
				40	20.76	20.68	18.2890	18.1930
	5580	116	SU	--	22.87	22.97	19.0530	18.9840
			52T	37	21.32	21.23	18.3790	18.4100
				38	18.67	18.86	16.8840	17.0060
				40	20.30	20.45	18.1790	18.2400
	5700	140	SU	--	22.93	23.32	19.0290	19.0730
			52T	37	21.09	20.80	18.4240	18.3260
				38	18.94	18.97	16.9410	16.1550
				40	20.63	20.40	18.1960	18.3140
	5720 (Straddle)	144	SU	--	22.90	23.25	19.0150	19.0640
			52T	37	20.92	20.88	18.3560	18.3650
				38	18.67	18.96	17.0150	16.9230
				40	20.42	20.65	18.3060	18.2730
EHT40	5510	102	SU	--	43.62	43.74	36.0310	37.9910
			106T	53	21.91	21.78	17.9860	18.1810
				54	21.09	20.98	18.4760	18.3340
				56	21.24	21.17	18.037	18.0670
			242T	61	23.31	22.90	19.071	19.0570
	5550	110	SU	--	43.78	44.08	38.1080	38.0380
			106T	53	21.58	21.71	18.0820	18.1110
				54	21.12	20.95	18.6400	18.0350
				56	20.92	21.50	17.94	17.9880
			242T	61	23.54	23.46	19.078	19.1770
				62	23.15	23.22	19.112	19.0910
	5670	134	SU	--	44.10	43.49	38.0180	38.0260
			106T	53	22.29	22.25	18.0630	18.0740
				54	21.15	21.38	18.5610	18.6810
				56	21.16	20.80	18.1540	18.0700
			242T	61	23.39	23.21	19.0590	19.0950
				62	22.94	24.09	19.0580	19.0880
	5710 (Straddle)	142	SU	--	44.18	43.74	38.0530	38.0440
			106T	53	21.92	21.49	18.0950	18.1960
				54	21.41	21.86	18.5720	18.5990
				56	21.39	21.24	18.0570	18.0640
			242T	61	23.14	23.73	19.1000	19.1880

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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
EHT80	5530	106	SU	--	85.16	86.27	77.6460	77.6650
			106T	53	21.60	22.25	18.1100	18.1480
				56	21.40	21.10	18.0580	17.9890
				60	20.87	21.32	18.1570	18.1320
	5610	122	SU	--	84.50	85.92	77.6520	77.6230
			106T	53	21.88	20.86	17.9930	18.1170
				56	21.40	21.54	17.9540	18.1590
				60	21.11	21.48	17.8980	18.1320
	5690 (Straddle)	138	SU	--	84.68	84.91	77.6150	77.6600
			106T	53	21.65	21.86	17.8270	18.1370
				56	21.29	21.02	18.0370	18.1500
				60	21.12	21.31	18.1400	17.9840
EHT160	5570	114	SU	--	163.80	164.13	156.5400	156.6000
			52T	37	21.08	20.97	18.6410	18.3200
				52	21.20	21.06	18.4430	18.4010
				S52	20.84	21.01	18.3020	18.2300
			242T	61	23.84	22.94	19.3170	19.3360

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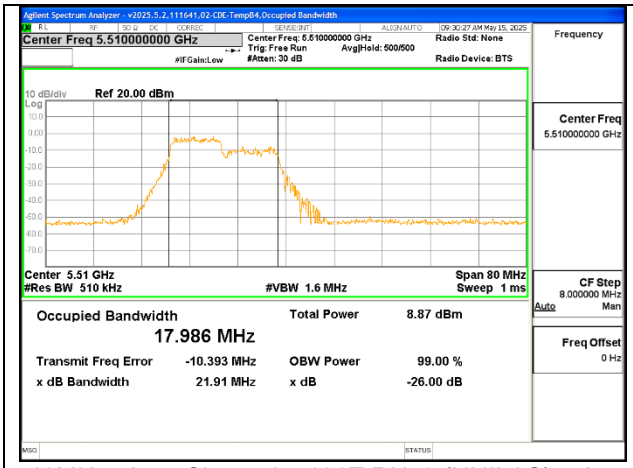
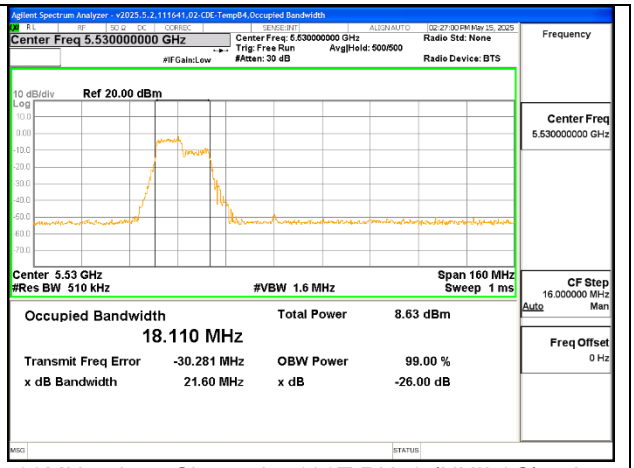


40MHz - Low Channel – 106T RU53 (UNII-2C) – Ant 6



80MHz - Low Channel – 106T RU53 (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	--	22.51	22.91	22.51	19.0590	19.0320	19.0320
			52T	37	21.19	20.47	20.47	17.9630	18.1700	17.9630
				38	18.86	18.41	18.41	16.9770	16.8440	16.8440
				40	20.46	20.05	20.05	18.1110	18.1640	18.1110
	5580	116	SU	--	22.88	22.18	22.18	19.0960	19.0130	19.0130
			52T	37	21.31	20.59	20.59	18.2900	18.2720	18.2720
				38	19.03	18.26	18.26	16.8060	16.9240	16.8060
				40	20.75	20.19	20.19	18.2880	17.7940	17.7940
	5700	140	SU	--	23.05	22.22	22.22	19.0550	18.9940	18.9940
			52T	37	21.25	20.37	20.37	18.3210	18.2380	18.2380
				38	18.87	18.29	18.29	16.9740	16.7470	16.7470
				40	20.35	20.41	20.35	18.1110	18.0960	18.0960
	5720 (Straddle)	144	SU	--	22.75	22.33	22.33	19.0230	18.9950	18.9950
			52T	37	20.96	20.59	20.59	18.3720	18.1730	18.1730
				38	18.67	18.42	18.42	16.8430	16.7880	16.7880
				40	20.92	20.25	20.25	18.2780	18.2600	18.2600
EHT40	5510	102	SU	--	43.20	43.42	43.20	38.0050	37.9610	37.9610
			106 + 26T	82	21.72	20.75	20.75	17.9190	17.8560	17.8560
				84	22.16	21.65	21.65	18.5980	18.4140	18.4140
				85	21.12	20.36	20.36	18.0030	17.9570	17.9570
	5550	110	SU	--	43.38	43.22	43.22	38.0420	38.0100	38.0100
			106 + 26T	82	22.00	21.07	21.07	18.0230	17.8300	17.8300
				84	21.97	21.57	21.57	18.5370	18.4650	18.4650
				85	21.38	20.74	20.74	17.9290	17.9260	17.9260
	5670	134	SU	--	43.76	42.73	42.73	37.9800	37.9730	37.9730
			106 + 26T	82	21.89	21.18	21.18	18.0680	17.8880	17.8880
				84	22.48	21.78	21.78	18.5700	18.4670	18.4670
				85	21.29	20.77	20.77	17.9590	17.9360	17.9360
	5710 (Straddle)	142	SU	--	43.43	43.52	43.43	38.0060	38.0020	38.0020
			106 + 26T	82	22.56	20.68	20.68	18.0230	17.8750	17.8750
				84	22.69	21.18	21.18	18.5940	18.3970	18.3970
				85	21.41	20.48	20.48	17.9980	17.9670	17.9670
EHT80	5530	106	SU	--	85.50	84.50	84.50	77.5550	77.5630	77.5550
			242T	61	23.32	23.27	23.27	19.2530	19.0700	19.0700
	5610	122	SU	--	85.07	84.01	84.01	77.5770	77.5800	77.5770
			242T	61	23.48	23.67	23.48	19.2920	19.1010	19.1010
				64	23.37	22.74	22.74	19.4090	19.1440	19.1440
	5690 (Straddle)	138	SU	--	85.03	84.12	84.12	77.6210	77.5140	77.5140
			242T	61	22.98	23.38	22.98	19.1610	19.1740	19.1610
				62	23.16	23.11	23.11	19.3100	19.1370	19.1370
				64	23.39	23.06	23.06	19.1510	19.1270	19.1270
EHT160	5570	114	SU	--	164.00	164.20	164.00	156.340	155.990	155.990
			52T	37	21.55	21.02	21.02	18.534	18.221	18.221
				52	21.12	20.95	20.95	18.492	18.224	18.224
				S52	20.87	20.95	20.87	18.568	18.208	18.208
			242T	61	23.68	23.43	23.43	19.338	19.429	19.338

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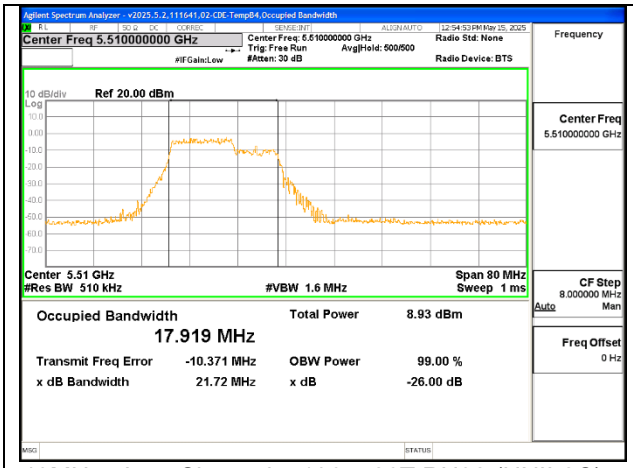

40MHz - Low Channel – 106 + 26T RU82 (UNII-2C) – Ant 6

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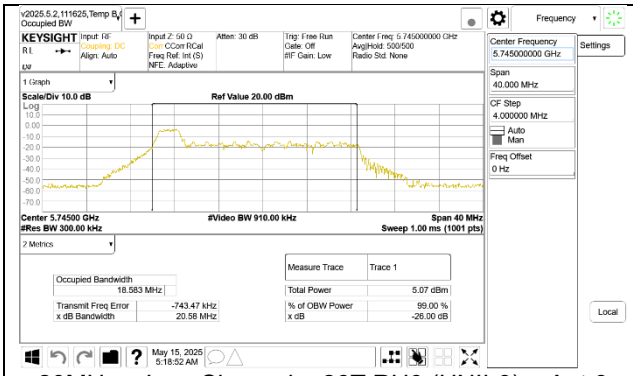
9.2.15. 802.11be SISO MODE IN THE UNII-3 BAND

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	--	23.65	23.06	19.1210	19.0830
			26T	0	20.58	20.51	18.5830	18.5760
				4	18.15	18.21	16.7300	16.6950
				8	20.27	20.49	18.5520	18.4040
	5785	157	SU	--	23.36	22.80	19.0760	19.0660
			26T	0	20.29	20.54	18.5100	18.6190
				4	18.38	18.30	16.8690	16.8860
				8	20.46	20.28	18.3950	18.4490
	5825	165	SU	--	23.48	22.62	19.0870	19.0720
			26T	0	20.64	20.78	18.6970	18.6310
				4	18.20	18.41	16.8890	16.8830
				8	20.66	20.41	18.5730	18.3980
EHT40	5755	151	SU	--	43.68	43.61	38.0280	38.0370
			52T	37	21.02	21.55	18.3190	18.3800
				41	20.95	21.41	18.7660	18.8140
				44	20.79	20.93	18.2990	18.2720
	5795	159	SU	--	44.34	43.97	38.0470	38.0640
			52T	37	21.16	21.42	18.2650	18.1900
				41	21.42	21.99	18.8280	18.8680
				44	20.63	20.73	18.3230	18.1730
EHT80	5775	155	SU	--	84.11	85.48	77.7260	77.6410
			106T	53	21.59	21.95	18.0880	18.1940
				56	20.75	21.04	18.1950	18.1690
				60	20.87	21.36	17.9550	18.1870



20MHz – Low Channel – 26T RU0 (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	--	23.31	23.05	19.0550	19.0890
			26T	0	20.85	20.05	18.6060	18.4810
				4	18.16	18.00	16.8800	16.6600
				8	20.48	20.23	18.5360	18.4220
	5785	157	SU	--	23.19	22.95	19.0970	19.0800
			26T	0	20.69	20.34	18.5510	18.4820
				4	18.27	18.16	16.9060	16.5910
				8	20.35	20.43	18.3790	18.4060
	5825	165	SU	--	23.26	23.13	19.1100	19.0730
			26T	0	20.58	20.27	18.6270	18.4400
				4	18.31	18.02	16.6700	16.6790
				8	20.18	20.03	18.4270	18.4110
EHT40	5755	151	SU	--	44.22	43.47	38.0020	38.0590
			52T	37	21.67	20.33	18.2790	18.1660
				41	21.15	20.84	18.9390	18.5820
				44	20.63	20.65	18.2390	18.2090
	5795	159	SU	--	44.58	43.62	38.0390	37.9950
			52T	37	21.46	21.04	18.3760	18.1100
				41	21.30	20.94	18.7950	18.7480
				44	20.76	20.75	18.2680	18.2030
EHT80	5775	155	SU	--	84.91	84.00	77.6580	77.4870
			106T	53	21.64	20.92	18.0380	17.9990
				56	21.63	20.92	17.9780	17.8790
				60	21.13	20.86	18.0640	17.9010

UL VERIFICATION SERVICES INC.
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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:**	2025-06-27 – 2025-07-02

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	60.70	58.484	Yes		
					2	80.14	77.685	Yes	19.33	38.1420
					4	80.35	77.941	Yes	38.18	19.2530
					8	61.26	58.523	Yes		
UNII-2c		5530	106	484+242	1	60.74	58.415	Yes		
					2	79.97	77.825	Yes	19.18	38.1690
					4	79.87	77.782	Yes	38.09	19.2840
					8	60.76	58.625	Yes		
		5610	122		1	60.78	58.688	Yes		
					2	80.03	77.507	Yes	19.29	38.2850
					4	79.96	77.626	Yes	38.02	19.3430
					8	60.71	58.347	Yes		
		5690 (Straddle)	138		1	60.55	58.356	Yes		
					2	79.75	77.889	Yes	19.30	38.2280
					4	80.62	77.381	Yes	37.92	19.3050
					8	61.26	58.560	Yes		
UNII-2a	ANT5	5290	58	484+242	1	60.47	58.262	Yes		
					2	80.46	77.765	Yes	19.30	38.1700
					4	80.18	77.330	Yes	37.81	19.2910
					8	61.19	58.708	Yes		
UNII-2c		5530	106	484+242	1	60.74	58.001	Yes		
					2	80.20	77.617	Yes	19.16	38.1650
					4	79.88	77.609	Yes	38.14	19.3770
					8	61.03	58.178	Yes		
		5610	122		1	60.69	58.091	Yes		
					2	80.32	77.952	Yes	19.25	38.0350
					4	80.12	77.810	Yes	38.04	19.3400
					8	60.76	58.435	Yes		
		5690 (Straddle)	138		1	60.66	58.696	Yes		
					2	81.06	77.739	Yes	19.30	38.1850
					4	80.33	77.493	Yes	38.01	19.2220
					8	60.58	58.286	Yes		

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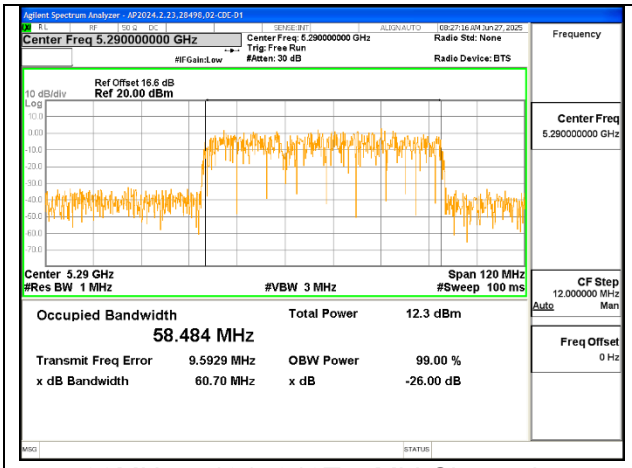
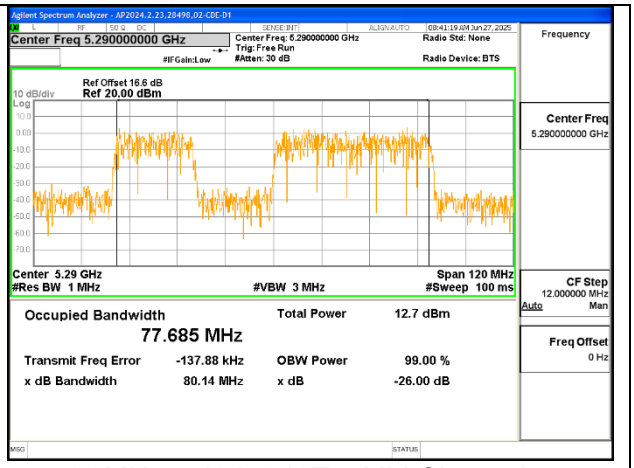
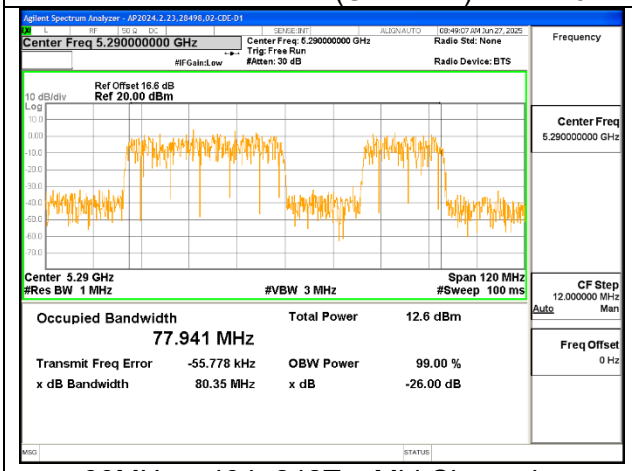


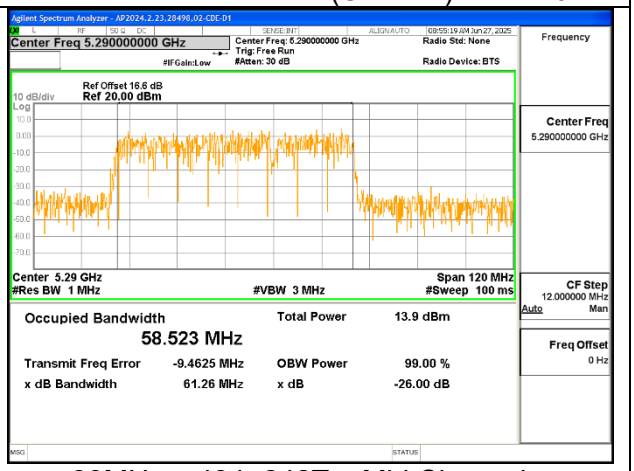
80MHz – 484+242T – Mid Channel – Puncture Pattern 1 – (UNII-2As) – ANT 6



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	60.56	58.39	Yes		
					2	80.15	77.88	Yes	19.28	38.2120
					4	79.97	77.88	Yes	38.25	19.1250
					8	60.60	58.35	Yes		
UNII-2c		5530	106	484+242	1	60.68	58.74	Yes		
					2	79.77	77.46	Yes	19.26	38.2420
					4	80.01	78.11	Yes	37.96	19.0830
					8	61.47	58.56	Yes		
		5610	122		1	60.47	58.36	Yes		
					2	79.63	77.85	Yes	19.23	38.0690
					4	80.06	77.54	Yes	37.85	19.4300
					8	60.61	58.23	Yes		
		5690 (Straddle)	138		1	60.75	58.23	Yes		
					2	80.14	78.07	Yes	19.06	38.1270
					4	80.76	77.60	Yes	38.13	19.2340
					8	61.46	58.59	Yes		
UNII-2a	ANT5	5290	58	484+242	1	60.96	58.52	Yes		
					2	80.01	77.29	Yes	19.33	38.0520
					4	80.11	77.60	Yes	38.24	19.2590
					8	60.57	57.89	Yes		
UNII-2c		5530	106	484+242	1	60.68	58.53	Yes		
					2	79.92	77.60	Yes	19.30	38.1930
					4	79.59	77.60	Yes	38.15	19.1850
					8	61.20	58.13	Yes		
		5610	122		1	60.64	58.38	Yes		
					2	79.95	77.56	Yes	19.25	37.8090
					4	80.23	77.97	Yes	37.91	19.2890
					8	60.50	58.45	Yes		
		5690 (Straddle)	138		1	60.66	57.88	Yes		
					2	79.88	77.86	Yes	19.32	38.2700
					4	79.92	77.43	Yes	37.79	19.3250
					8	60.75	58.40	Yes		

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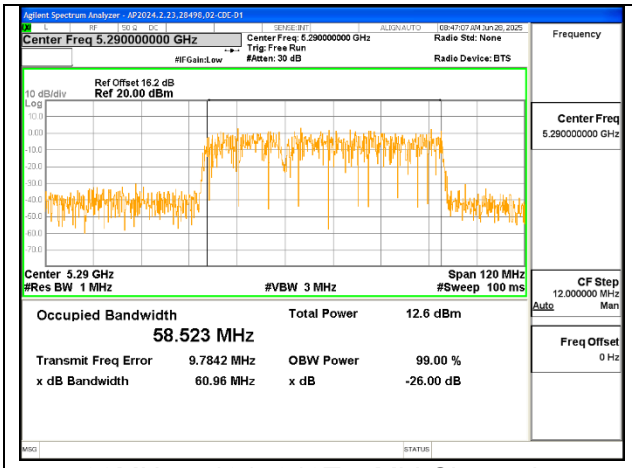
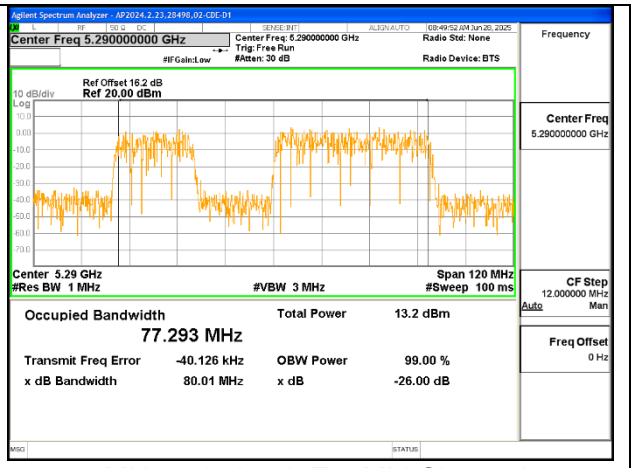
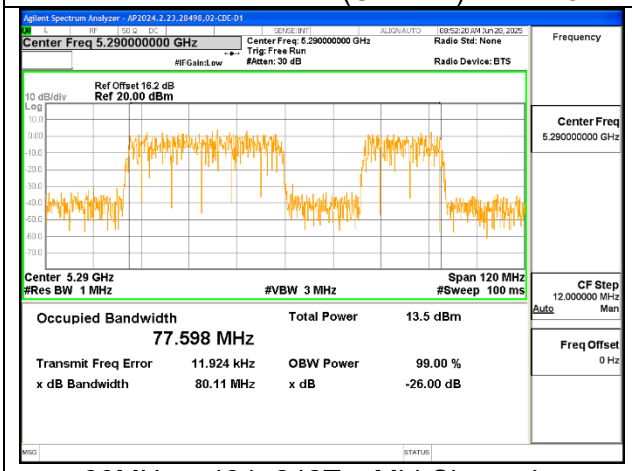


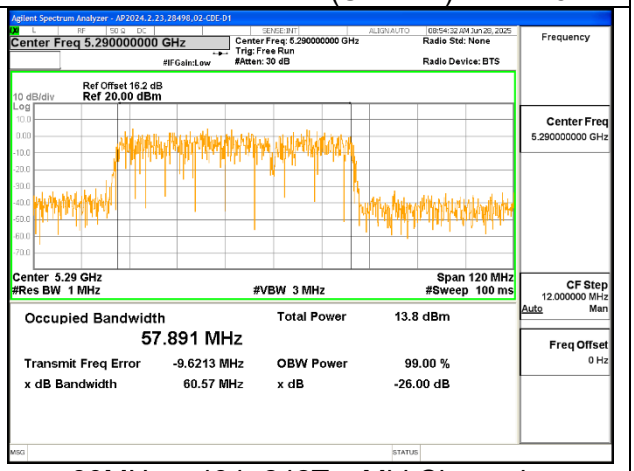
80MHz – 484+242T – Mid Channel – Puncture Pattern 1 – (UNII-2A) – ANT 5



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	99% BW (MHz)	
						26dB	99% BW			
UNII-2a	ANT6	5250 (Straddle)	50	996+484	3	122.20	117.37	Yes		
					12	161.10	156.46	Yes	38.77	78.1250
					48	162.20	157.22	Yes	77.88	39.0350
					192	121.60	117.41	Yes		
				996+484+242	1	143.00	136.81	Yes		
					2	160.90	156.18	Yes	20.35	116.9900
					4	162.10	155.96	Yes	38.83	98.0190
					8	161.50	156.30	Yes	59.32	77.9720
					16	161.50	157.19	Yes	77.99	59.1880
					32	161.90	157.17	Yes	98.12	38.9120
					64	161.70	156.94	Yes	116.68	20.0580
					128	141.80	136.50	Yes		
UNII-2c		5570	114	996+484	3	121.10	117.15	Yes		
					12	161.70	156.64	Yes	38.75	78.0290
					48	161.20	157.07	Yes	78.07	38.7590
					192	121.90	117.11	Yes		
				996+484+242	1	142.10	137.46	Yes		
					2	161.50	156.38	Yes	20.23	117.1300
					4	161.30	157.30	Yes	39.01	98.3810
					8	161.10	157.13	Yes	59.03	77.5530
					16	161.80	157.17	Yes	77.69	59.1200
					32	161.50	156.85	Yes	98.74	38.6450
					64	161.40	156.74	Yes	117.85	20.0840
					128	142.50	137.39	Yes		
UNII-2a	ANT5	5250 (Straddle)	50	996+484	3	121.50	117.57	Yes		
					12	161.60	156.90	Yes	38.61	78.1560
					48	161.50	156.50	Yes	77.60	38.9470
					192	121.30	117.30	Yes		
				996+484+242	1	141.40	137.15	Yes		
					2	162.10	156.27	Yes	20.43	117.6500
					4	161.20	156.75	Yes	39.02	98.9230
					8	161.90	156.57	Yes	58.93	77.6880
					16	160.30	156.76	Yes	77.49	59.5540
					32	160.60	156.81	Yes	97.59	39.0770
					64	162.00	156.18	Yes	118.02	20.2260
					128	143.20	136.85	Yes		
UNII-2c		5570	114	996+484	3	120.80	116.84	Yes		
					12	161.70	157.10	Yes	38.62	77.8950
					48	161.30	157.12	Yes	77.96	39.0560
					192	121.30	117.49	Yes		
				996+484+242	1	141.60	137.28	Yes		
					2	161.60	156.88	Yes	20.22	117.5700
					4	161.80	156.46	Yes	38.99	98.6170
					8	161.60	157.17	Yes	58.97	77.7920
					16	161.50	157.89	Yes	78.44	59.3630
					32	160.90	156.14	Yes	97.85	38.8180
					64	161.40	156.36	Yes	117.56	20.4100
					128	141.70	137.75	Yes		

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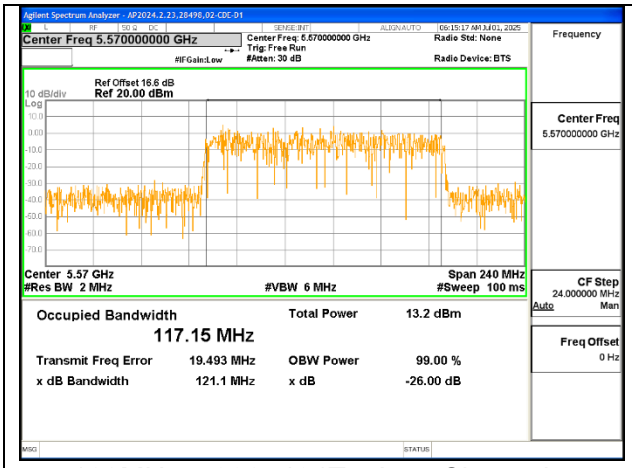
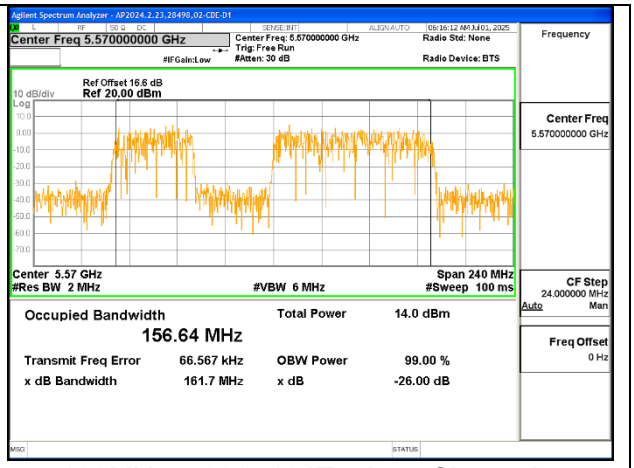
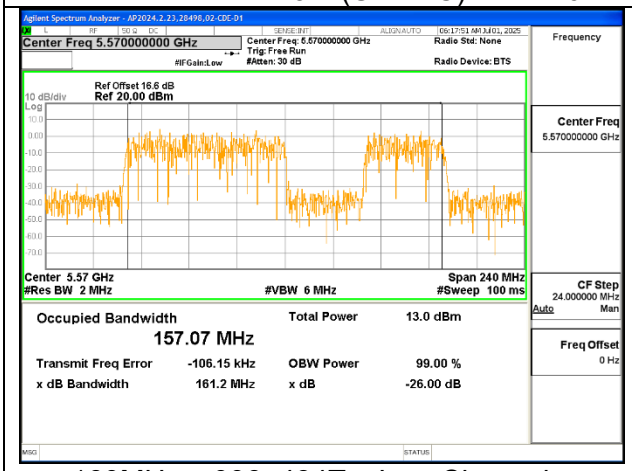


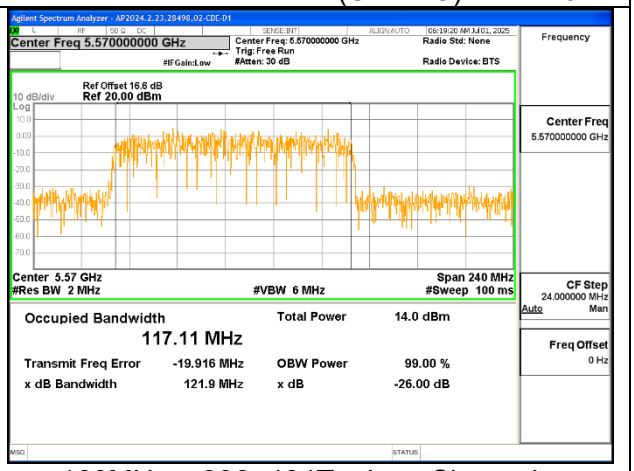
160MHz – 996+484T – Low Channel – Puncture Pattern 3 – (UNII-2C) – ANT 6



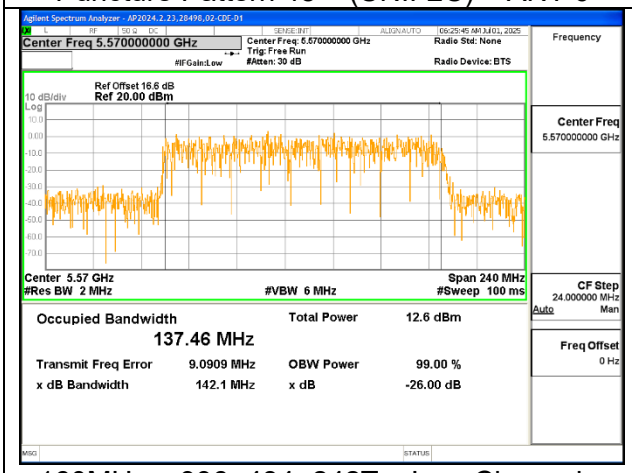
160MHz – 996+484T – Low Channel – Puncture Pattern 12 – (UNII-2C) – ANT 6



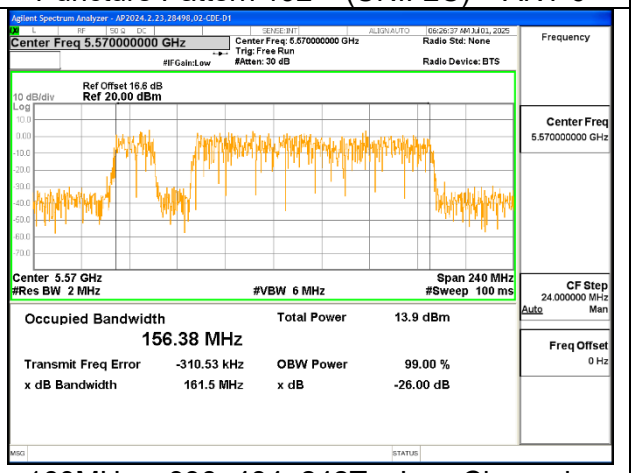
160MHz – 996+484T – Low Channel – Puncture Pattern 48 – (UNII-2C) – ANT 6



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



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



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

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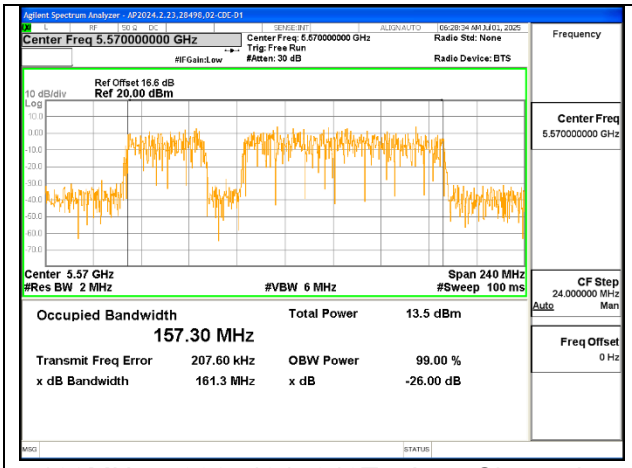
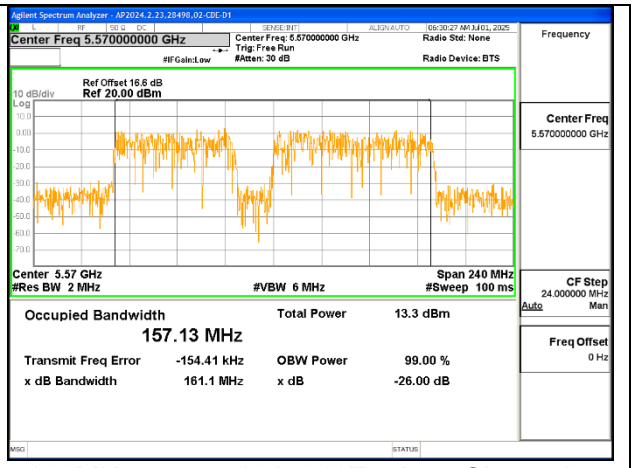
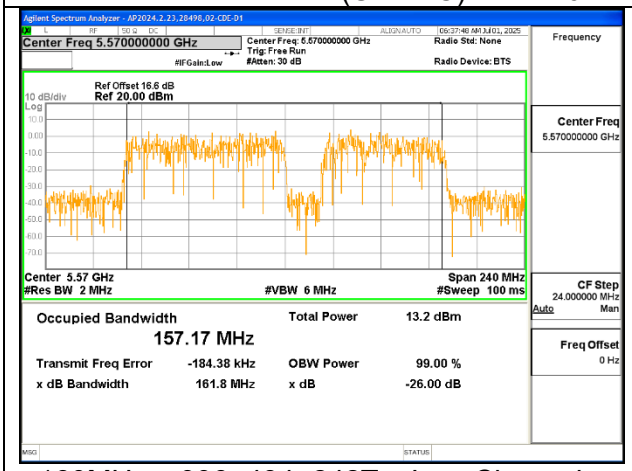


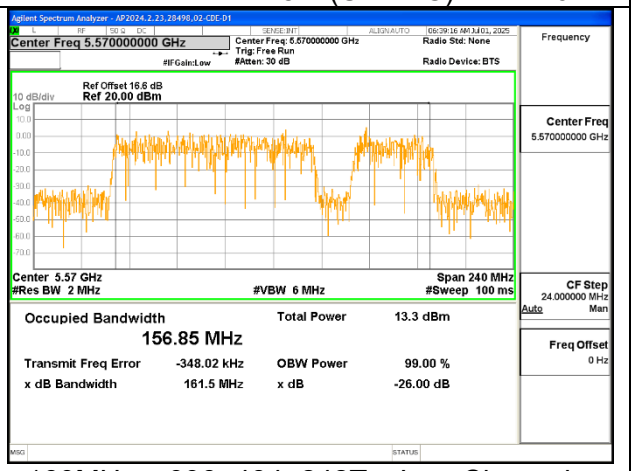
160MHz – 996+484+242T – Low Channel – Puncture Pattern 4 – (UNII-2C) – ANT 6



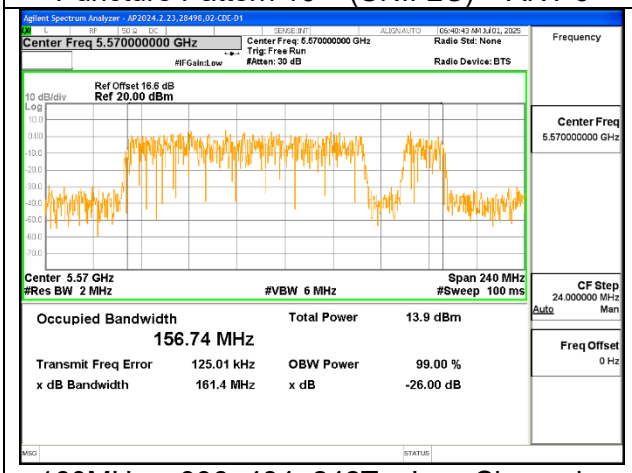
160MHz – 996+484+242T – Low Channel – Puncture Pattern 8 – (UNII-2C) – ANT 6



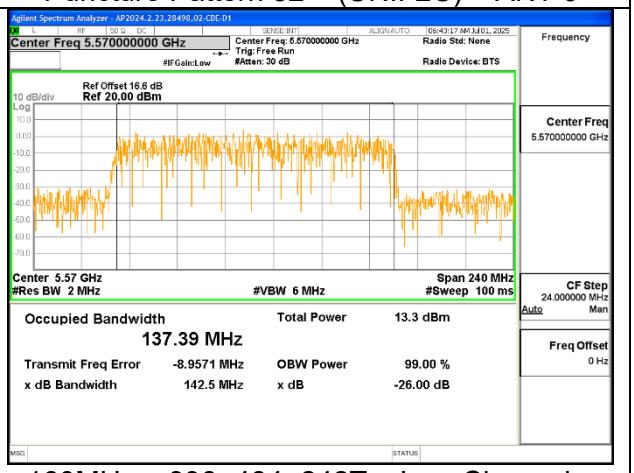
160MHz – 996+484+242T – Low Channel – Puncture Pattern 16 – (UNII-2C) – ANT 6



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



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



160MHz – 996+484+242T – Low 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	120.80	117.70	Yes		
					12	161.60	156.87	Yes	38.76	78.1000
					48	161.50	155.86	Yes	77.76	38.9110
					192	121.70	116.70	Yes		
				996+484+242	1	143.80	136.10	Yes		
					2	161.80	156.50	Yes	20.23	117.7800
					4	162.10	156.13	Yes	38.88	98.6320
					8	163.30	156.27	Yes	59.02	77.7030
					16	161.80	155.99	Yes	77.77	59.2210
					32	161.00	156.95	Yes	98.72	39.0610
					64	161.00	156.63	Yes	116.73	20.2550
					128	142.00	138.32	Yes		
		5570	114	996+484	3	122.00	117.17	Yes		
					12	161.60	157.43	Yes	39.07	77.9000
					48	161.50	157.62	Yes	78.34	39.0920
					192	121.10	116.92	Yes		
				996+484+242	1	142.50	137.49	Yes		
					2	161.00	156.17	Yes	20.32	117.5400
					4	161.50	156.83	Yes	38.70	98.2220
					8	161.60	156.85	Yes	59.32	77.4160
					16	162.30	156.77	Yes	78.18	59.3620
					32	162.00	156.86	Yes	98.13	38.8800
					64	161.40	156.62	Yes	118.10	20.3770
					128	141.70	137.67	Yes		
UNII-2a	ANT5	5250 (Straddle)	50	996+484	3	121.50	117.47	Yes		
					12	161.90	156.41	Yes	39.09	77.9400
					48	161.50	156.69	Yes	78.05	38.8870
					192	121.90	116.99	Yes		
				996+484+242	1	141.60	137.31	Yes		
					2	161.80	155.52	Yes	20.28	117.7900
					4	160.90	156.64	Yes	39.00	98.5930
					8	160.90	156.57	Yes	59.12	78.0280
					16	161.60	156.72	Yes	77.76	59.5080
					32	161.00	156.81	Yes	98.22	38.7580
					64	161.60	155.84	Yes	117.36	20.1240
					128	141.40	136.70	Yes		
		5570	114	996+484	3	121.50	117.77	Yes		
					12	161.60	156.49	Yes	39.10	78.1310
					48	161.30	156.96	Yes	77.90	38.5680
					192	121.70	117.28	Yes		
				996+484+242	1	142.30	136.70	Yes		
					2	161.20	156.49	Yes	20.19	117.4300
					4	161.40	157.39	Yes	39.01	98.1990
					8	161.50	157.13	Yes	59.41	77.5370
					16	161.20	156.77	Yes	77.96	59.1990
					32	161.60	156.66	Yes	98.47	38.9530
					64	162.30	157.05	Yes	117.64	20.3310
					128	142.50	137.77	Yes		

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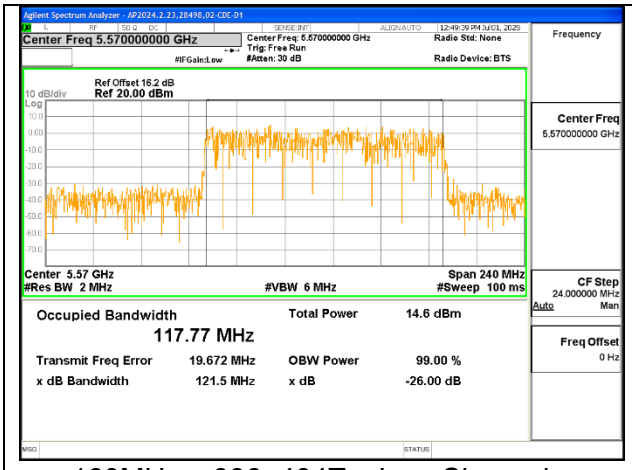
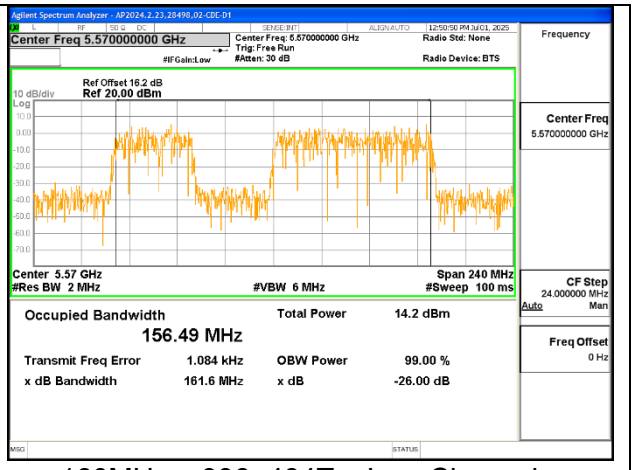
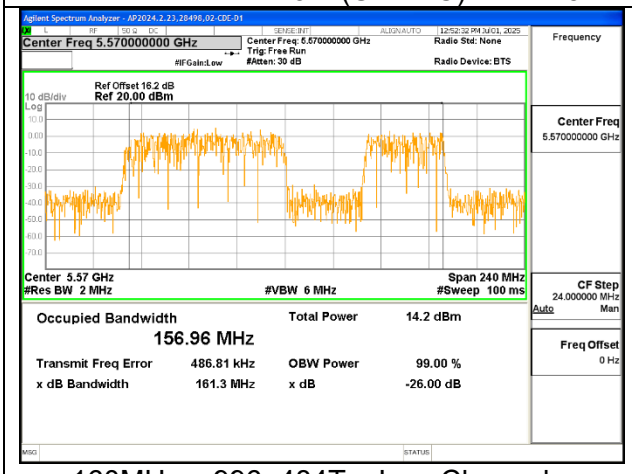


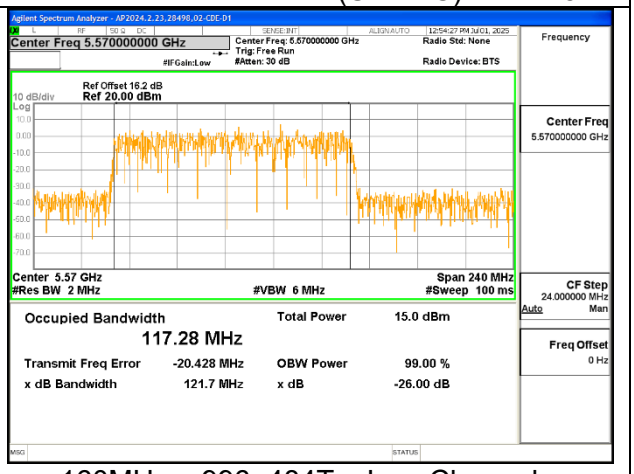
160MHz – 996+484T – Low Channel – Puncture Pattern 3 – (UNII-2C) – ANT 5



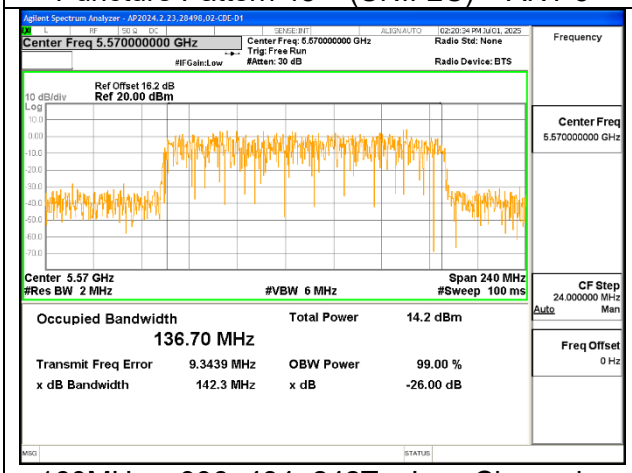
160MHz – 996+484T – Low Channel – Puncture Pattern 12 – (UNII-2C) – ANT 5



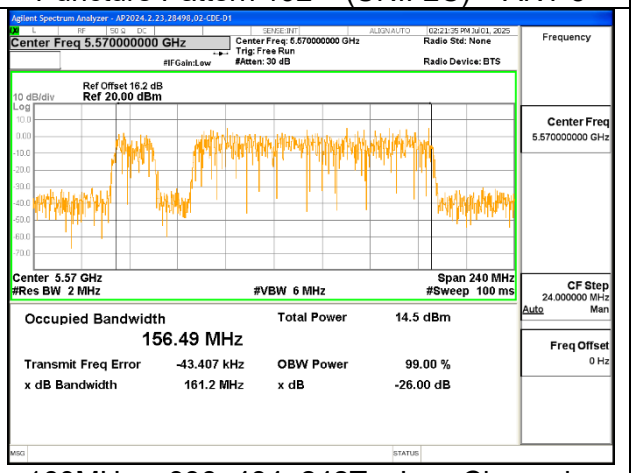
160MHz – 996+484T – Low Channel – Puncture Pattern 48 – (UNII-2C) – ANT 5



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



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



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

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