

Appendix Test Data for WLAN(2. 4G) (Conducted Measurement)

Product Name: IP Phone

Trade Mark: 

Test Model: H601W

FCC ID: 2APPZ-H601W

Environmental Conditions

Temperature:	20.9℃
Relative Humidity:	41%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Max Zhang
NOTE	N/A

Appendix A: 6dB Bandwidth Measurement

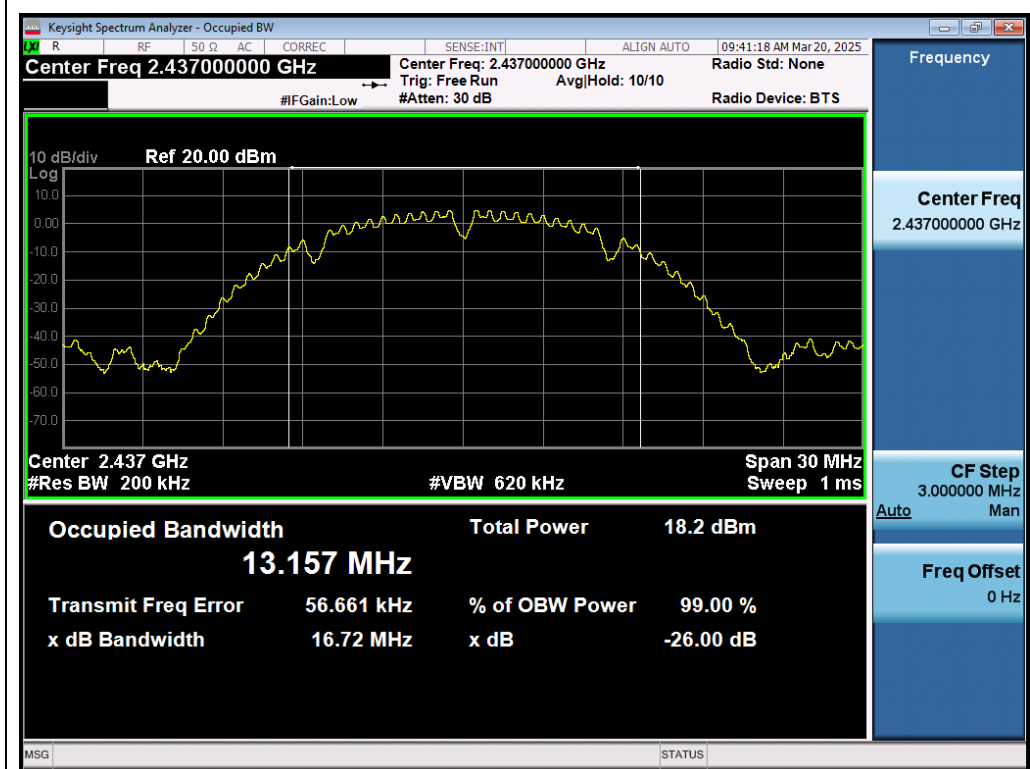
Test Result

Test Mode	Test Frequency (MHz)	99% Occupied Bandwidth (MHz)	DTS Bandwidth (MHz)	DTS Bandwidth Limits (MHz)	Result
802.11b	2412	13.115	8.113	≥0.5	Pass
	2437	13.157	9.088	≥0.5	Pass
	2462	13.101	9.083	≥0.5	Pass
802.11g	2412	16.653	16.035	≥0.5	Pass
	2437	16.674	15.799	≥0.5	Pass
	2462	16.679	16.331	≥0.5	Pass
802.11n20	2412	17.880	17.571	≥0.5	Pass
	2437	17.854	17.296	≥0.5	Pass
	2462	17.837	16.900	≥0.5	Pass
802.11n40	2422	36.362	36.422	≥0.5	Pass
	2437	36.400	36.067	≥0.5	Pass
	2452	36.339	34.815	≥0.5	Pass
802.11ax20	2412	11.88	20.30	≥0.5	Pass
	2437	11.62	20.44	≥0.5	Pass
	2462	11.61	20.06	≥0.5	Pass
802.11ax40	2422	11.77	21.77	≥0.5	Pass
	2437	11.64	20.44	≥0.5	Pass
	2452	11.59	20.19	≥0.5	Pass

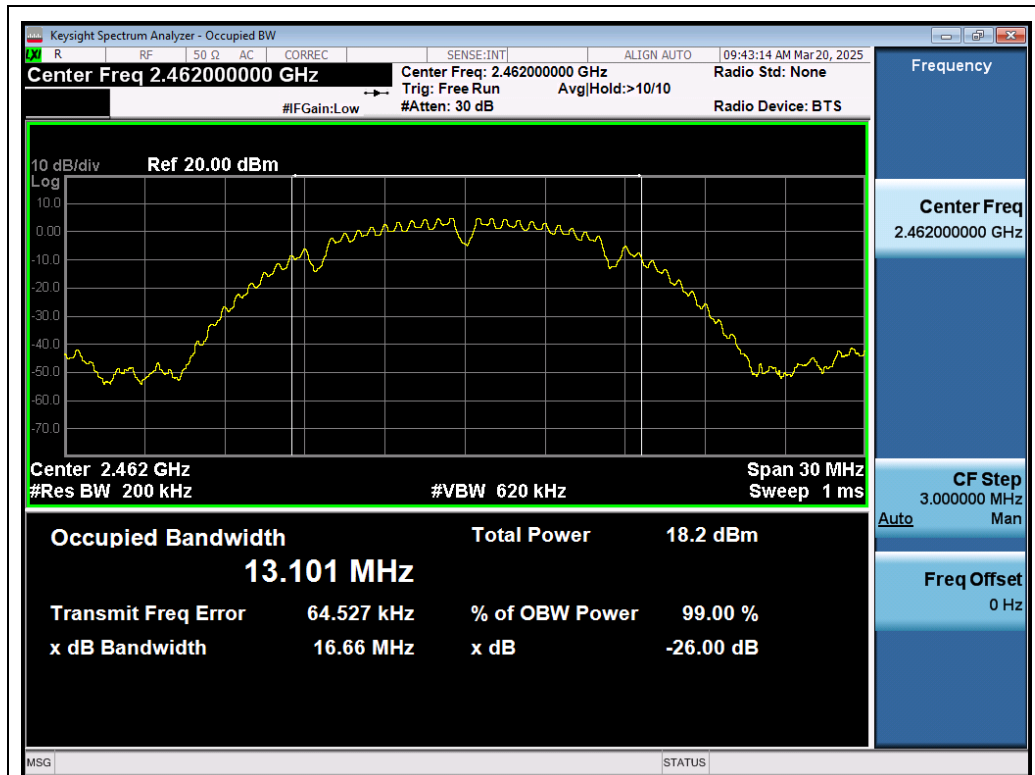
Test Graphs



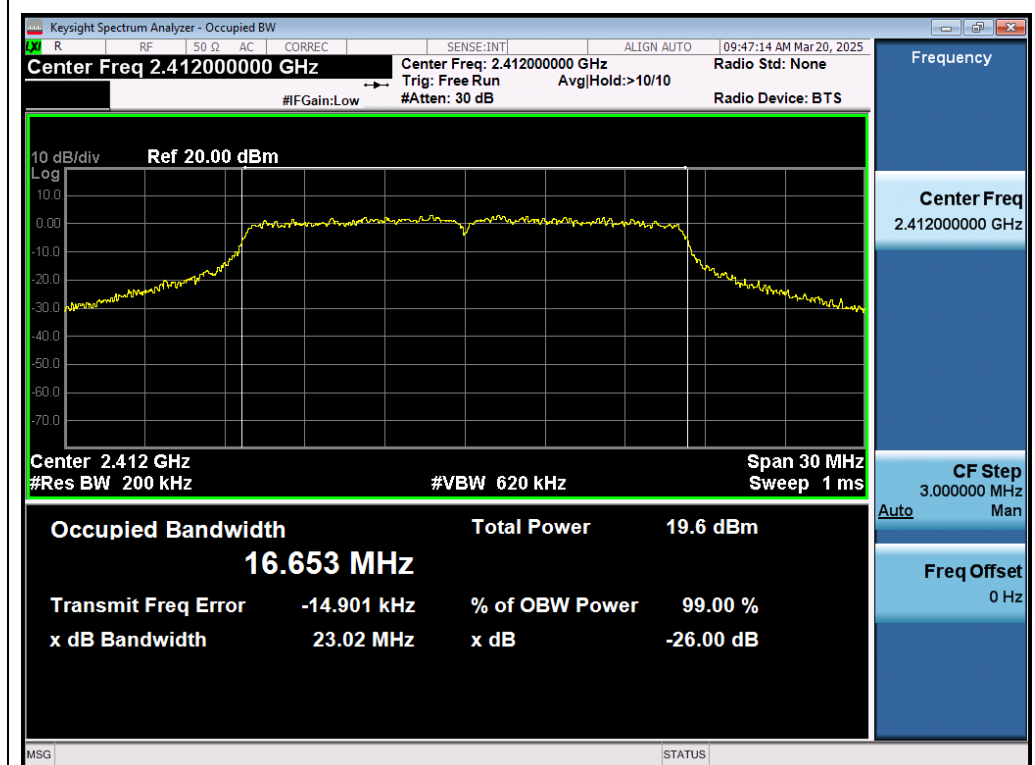
Test_Graph_802.11b_ANT1_2412_1Mbps_OBW



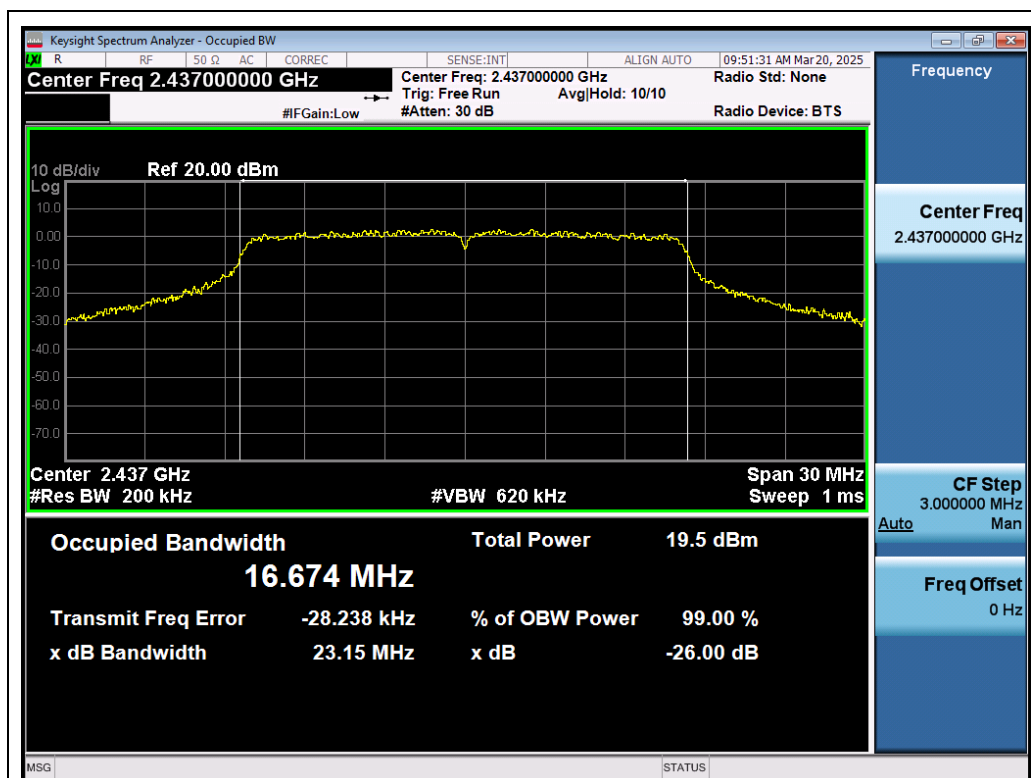
Test_Graph_802.11b_ANT1_2437_1Mbps_OBW



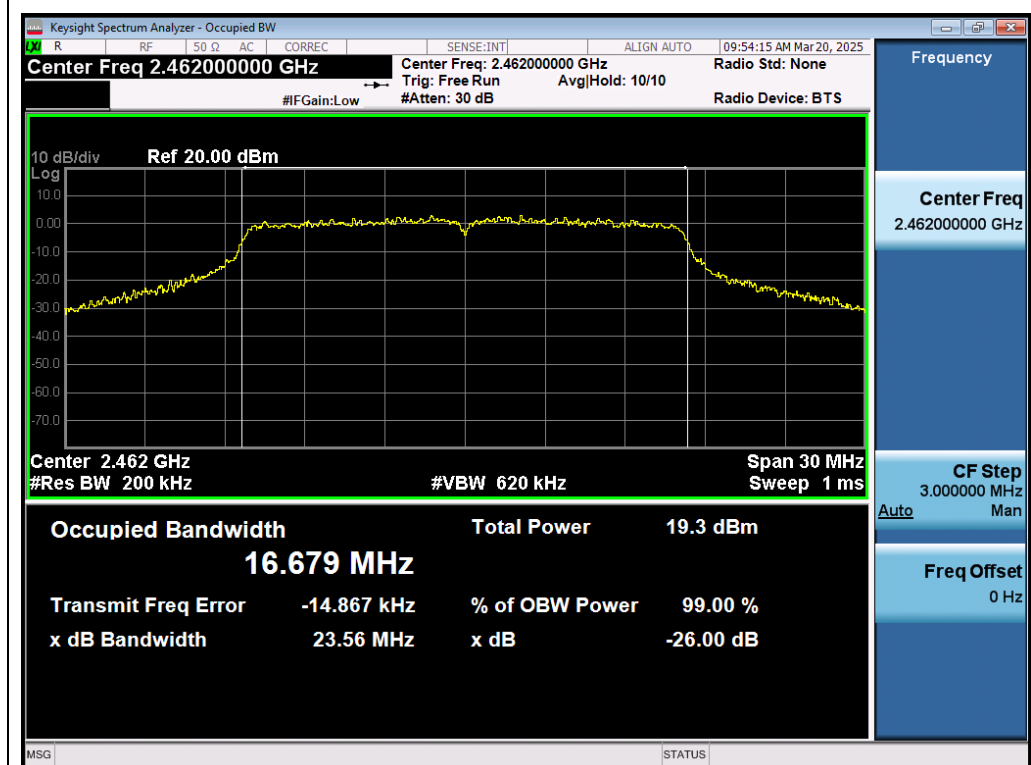
Test_Graph_802.11b_ANT1_2462_1Mbps_OBW



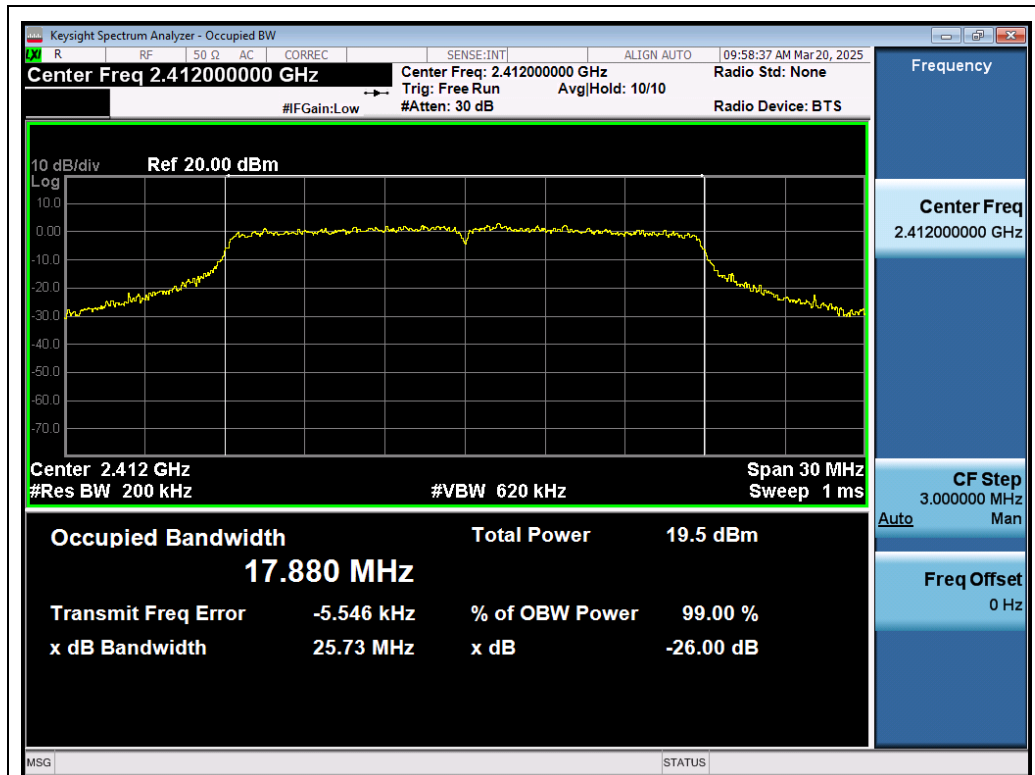
Test_Graph_802.11g_ANT1_2412_6Mbps_OBW



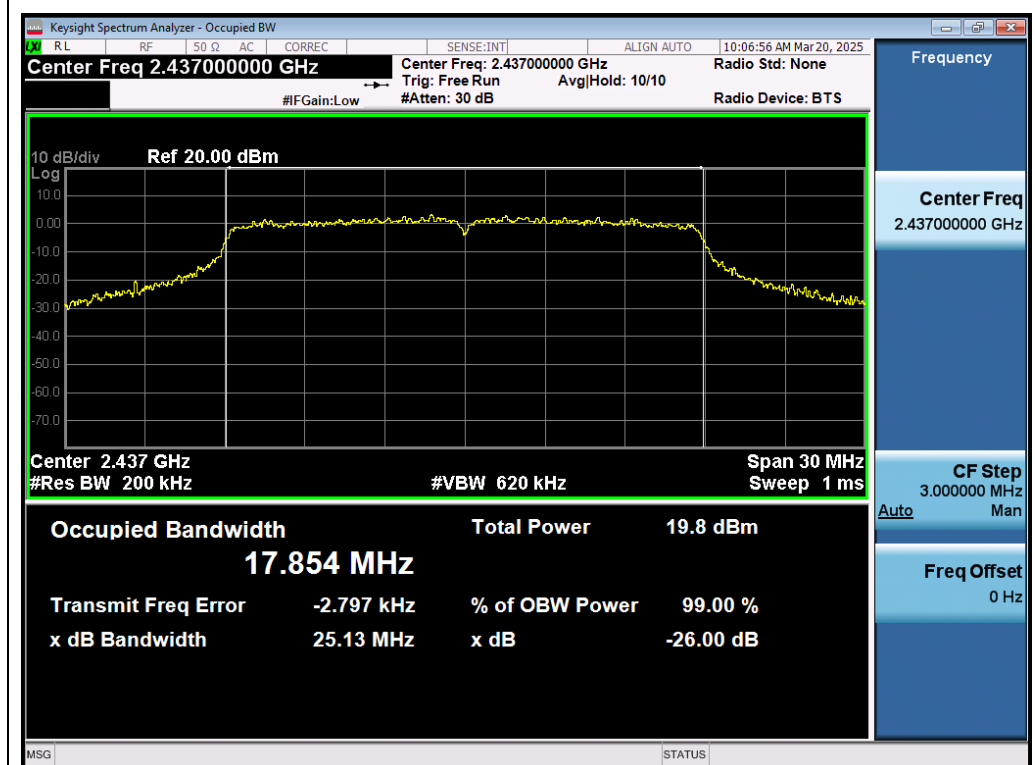
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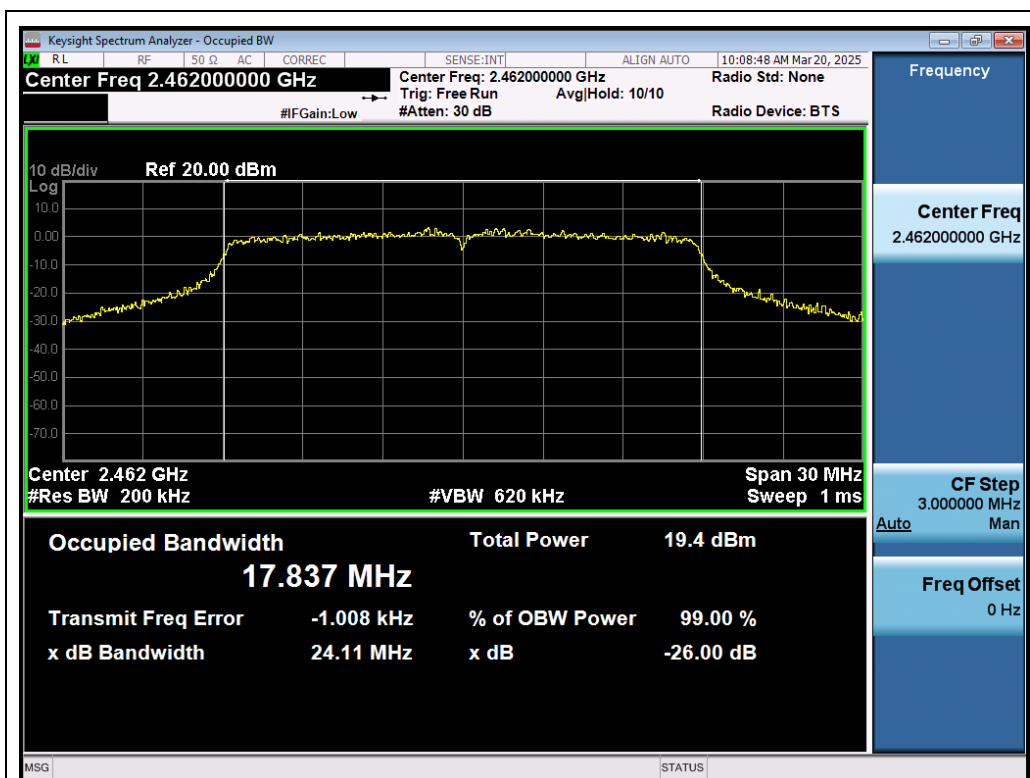
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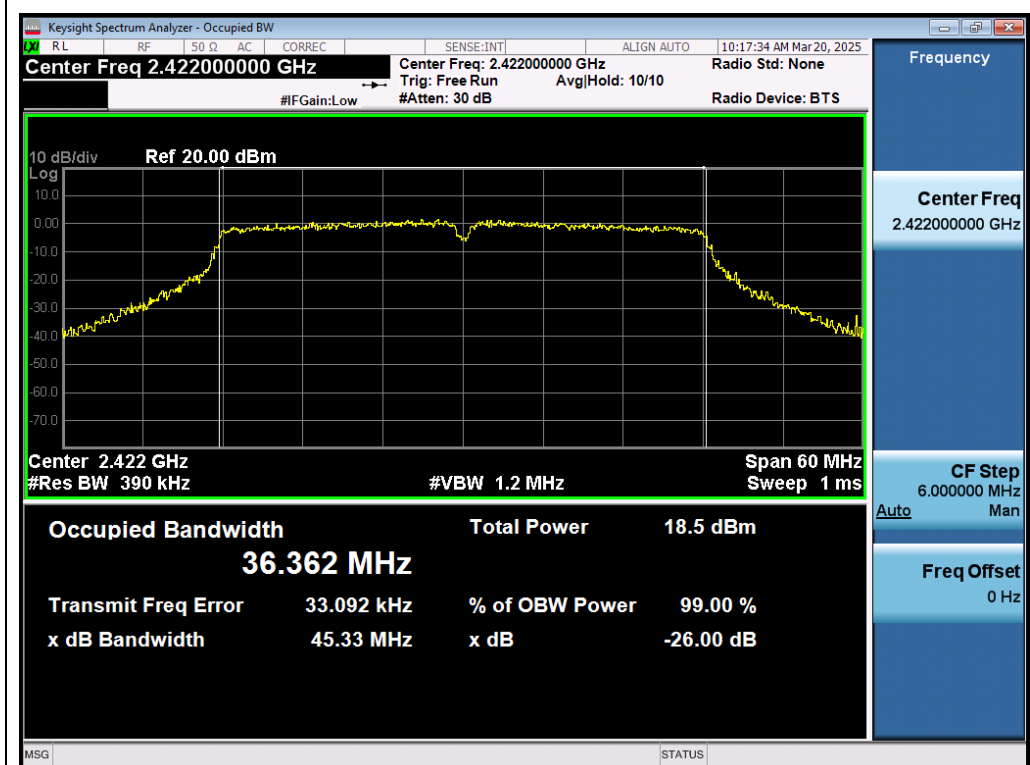
Test_Graph_802.11n20_ANT1_2412_MCS0_OBW



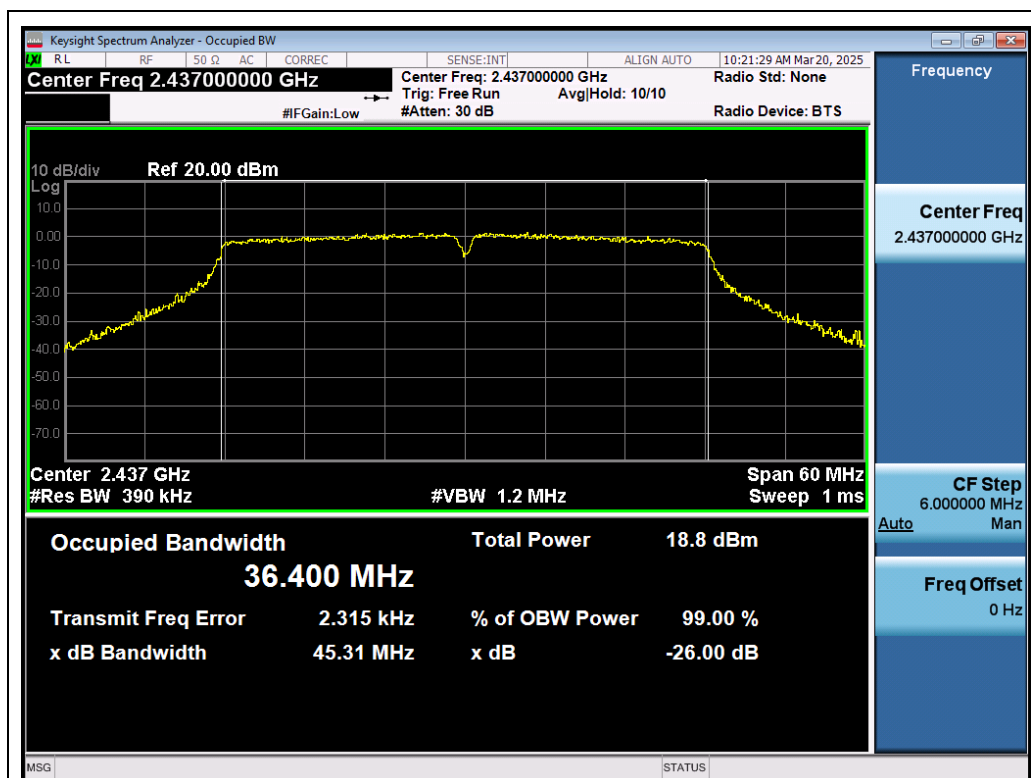
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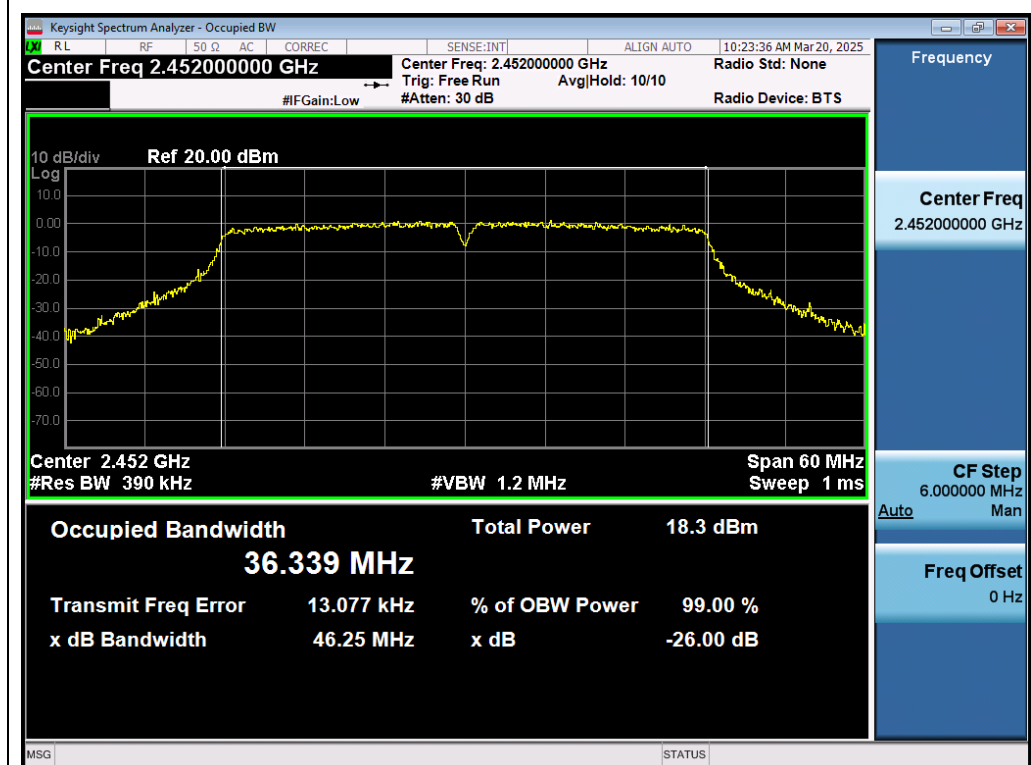
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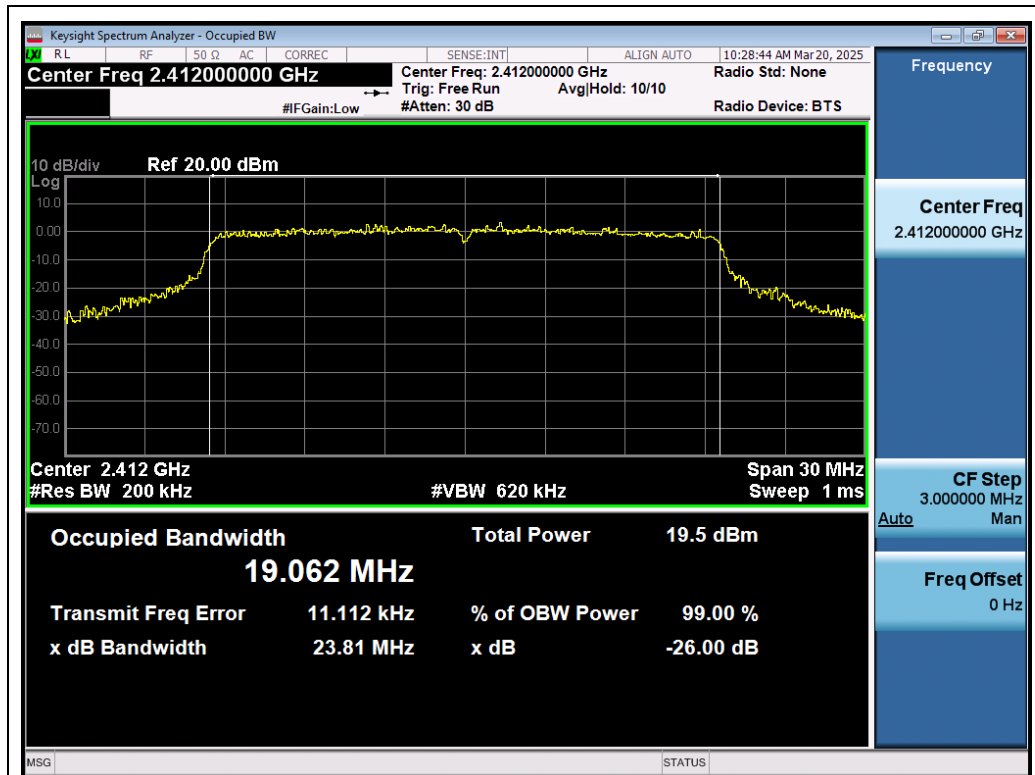
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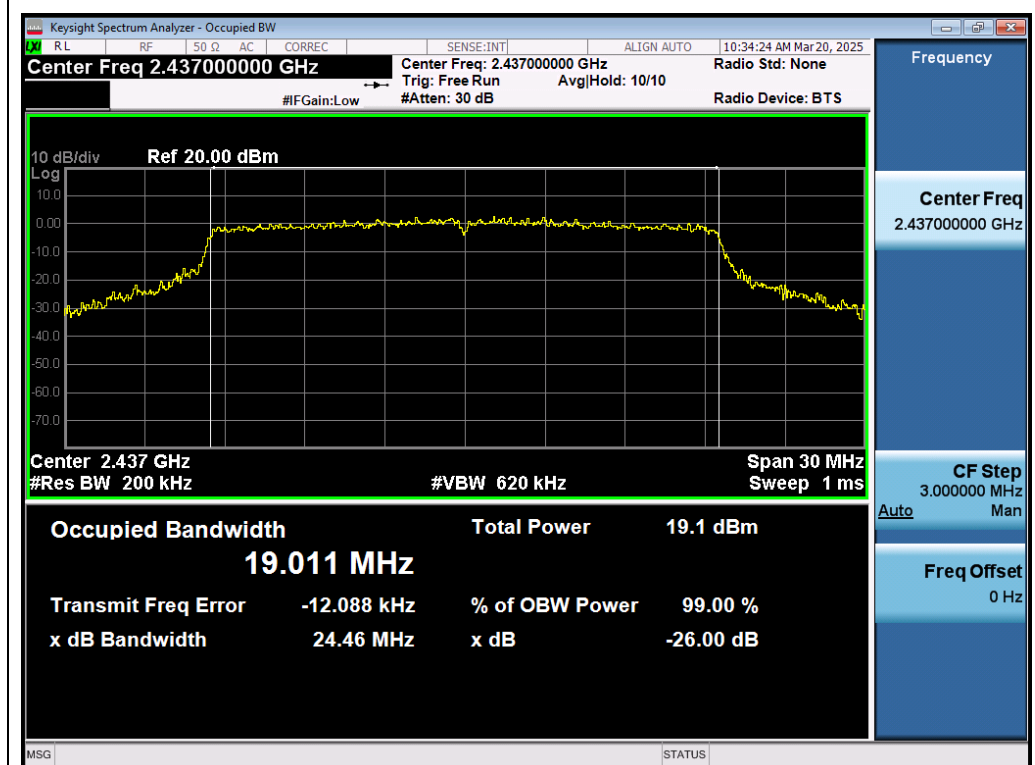
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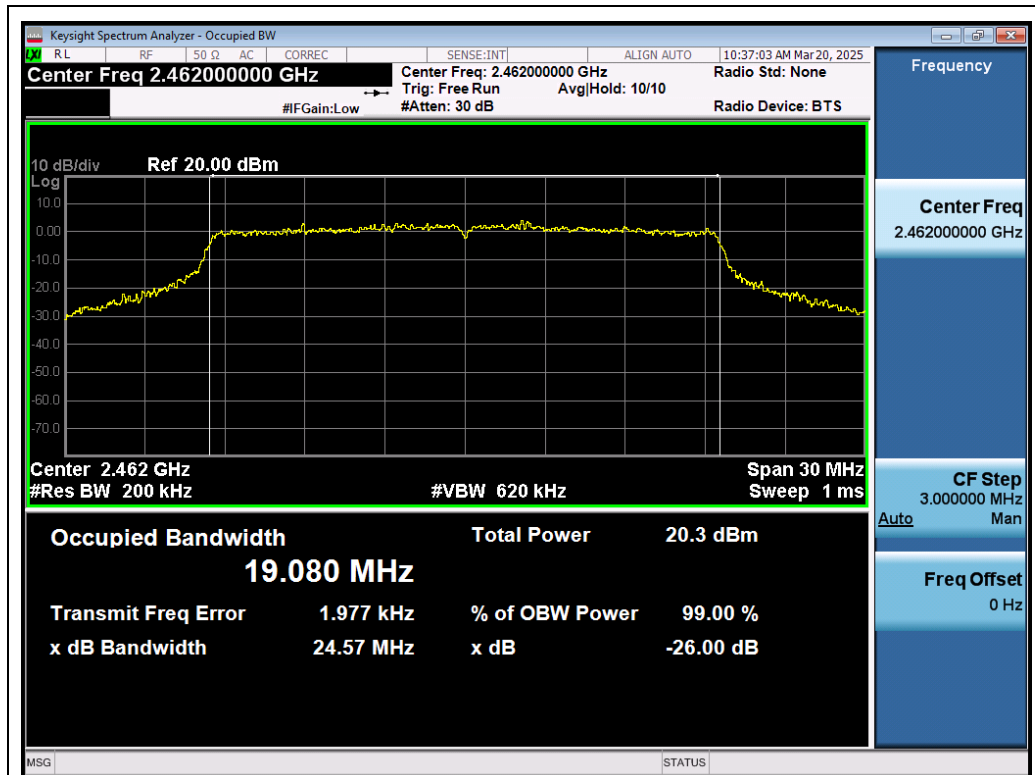
Test_Graph_802.11n40_ANT1_2452_MCS0_OBW



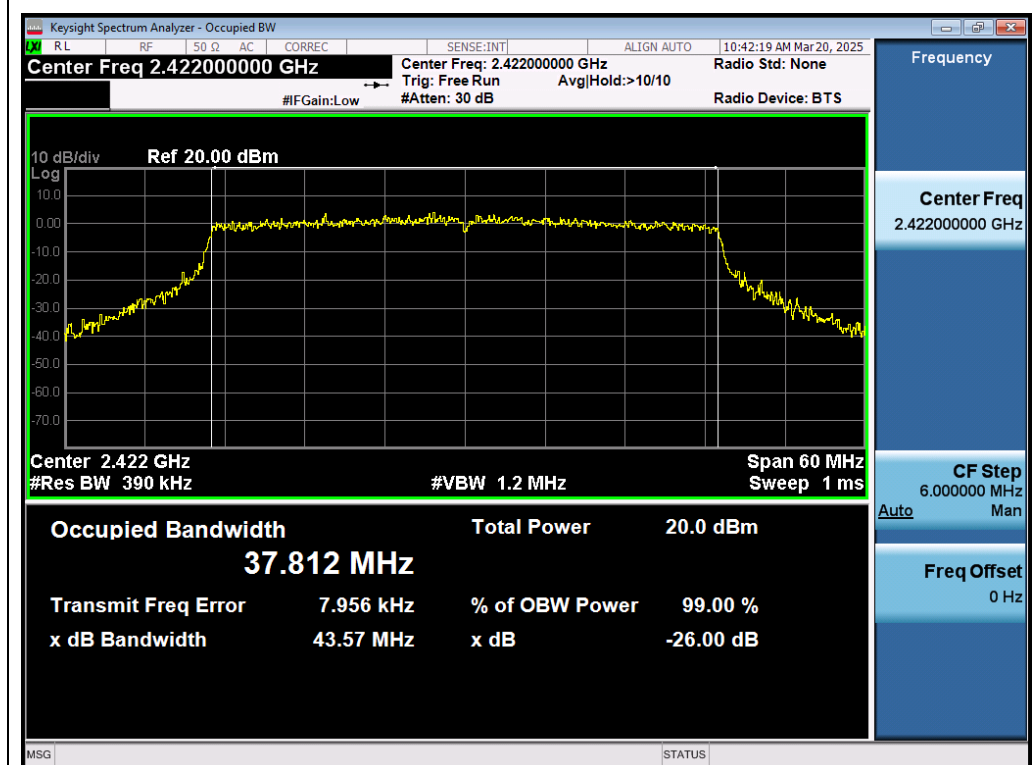
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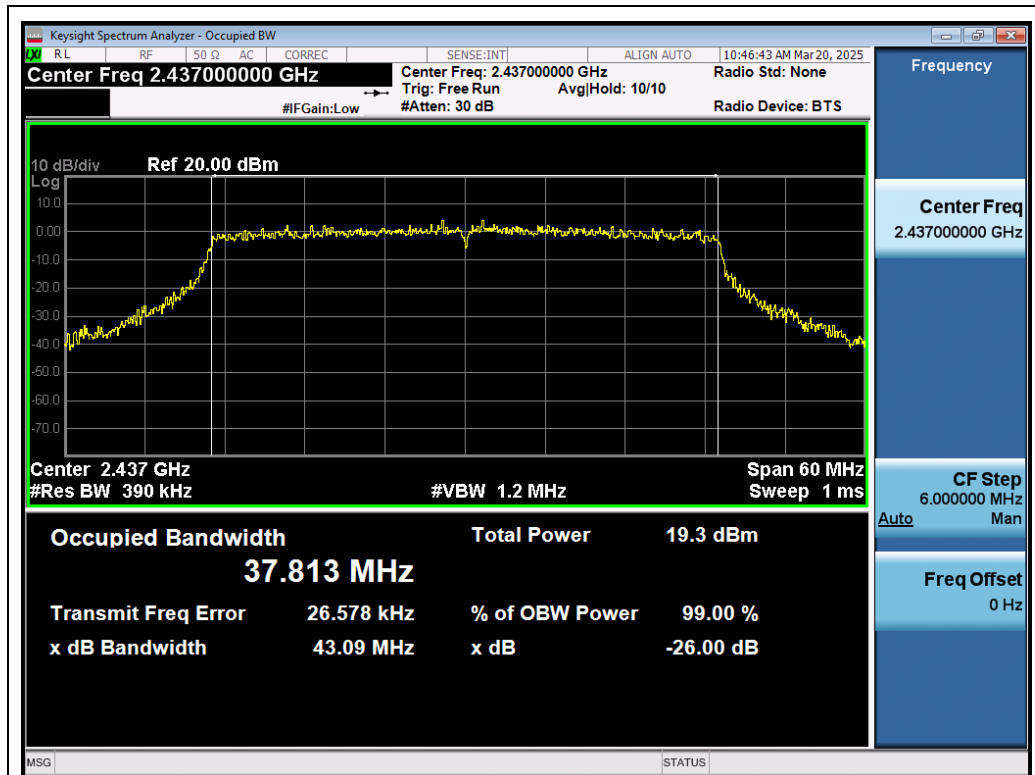
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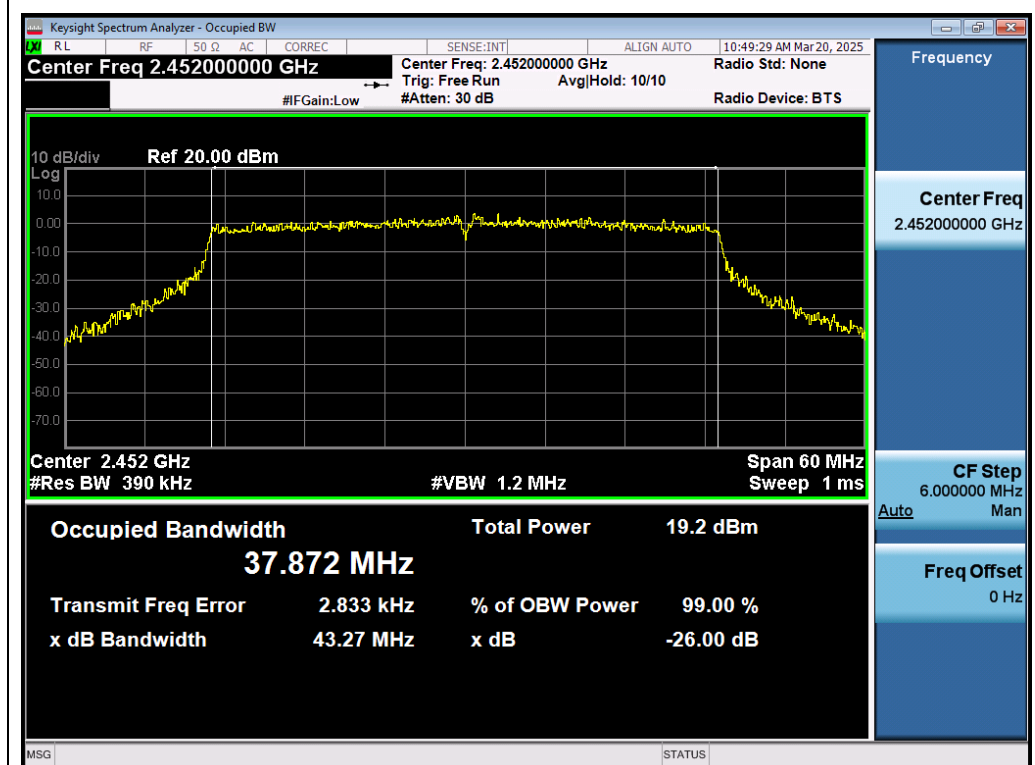
Test_Graph_802.11ax20_ANT1_2462_MCS0_OBW



Test_Graph_802.11ax40_ANT1_2422_MCS0_OBW



Test_Graph_802.11ax40_ANT1_2437_MCS0_OBW



Test_Graph_802.11ax40_ANT1_2452_MCS0_OBW



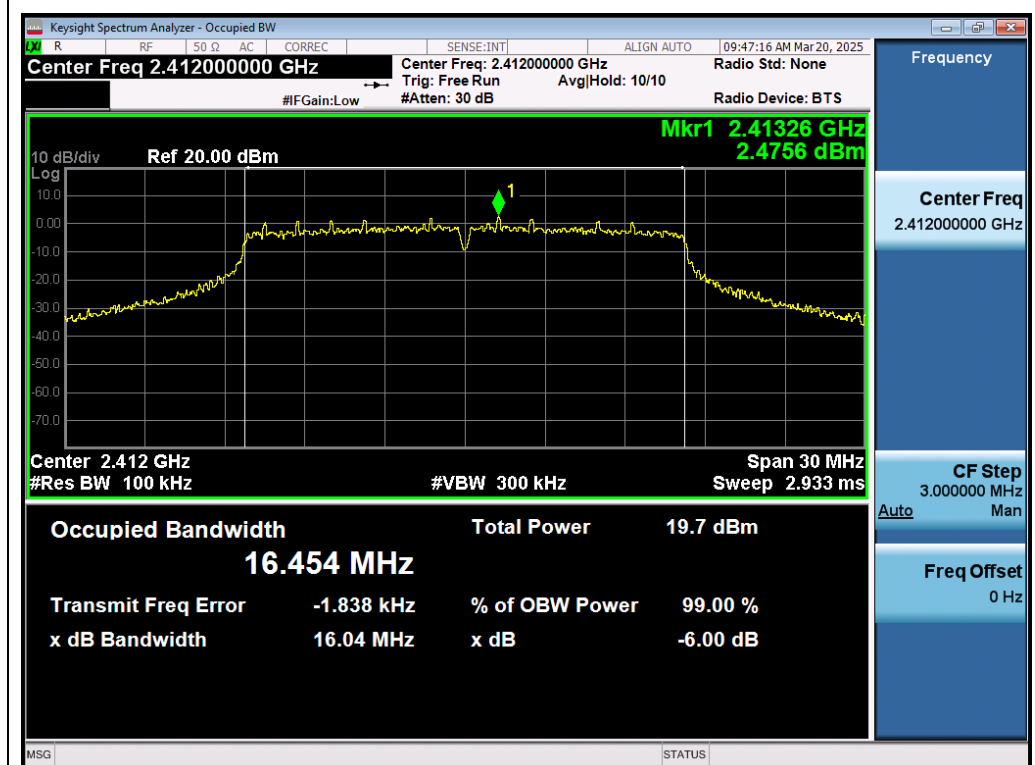
Test_Graph_802.11b_ANT1_2412_1Mbps_DTSBW



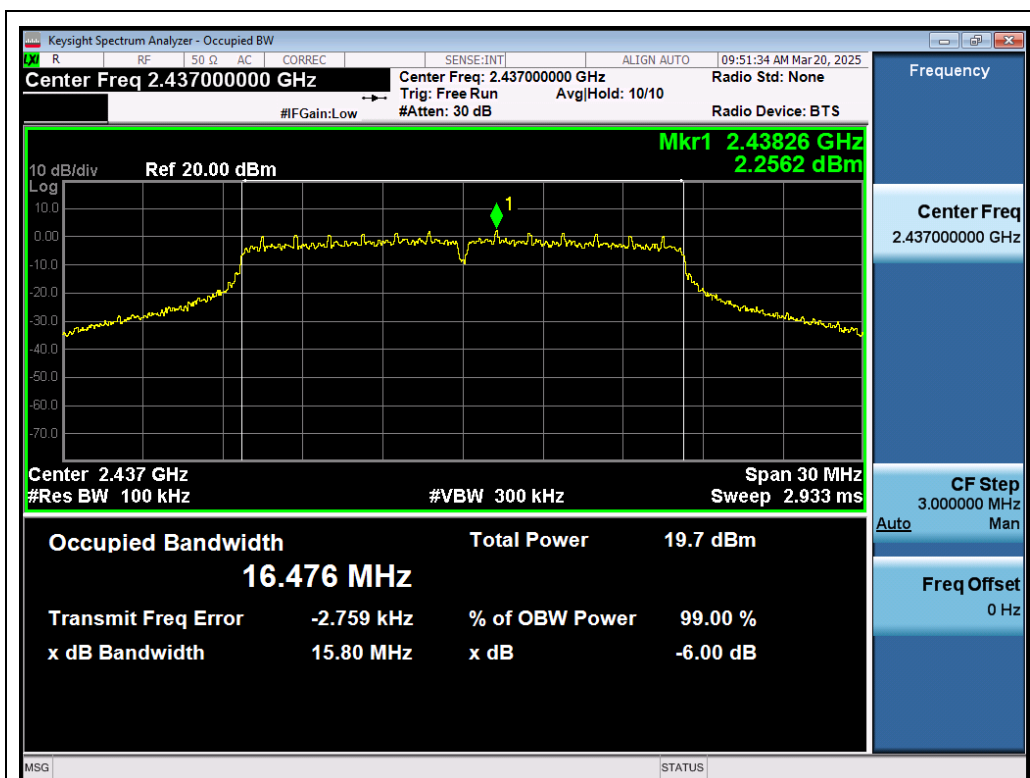
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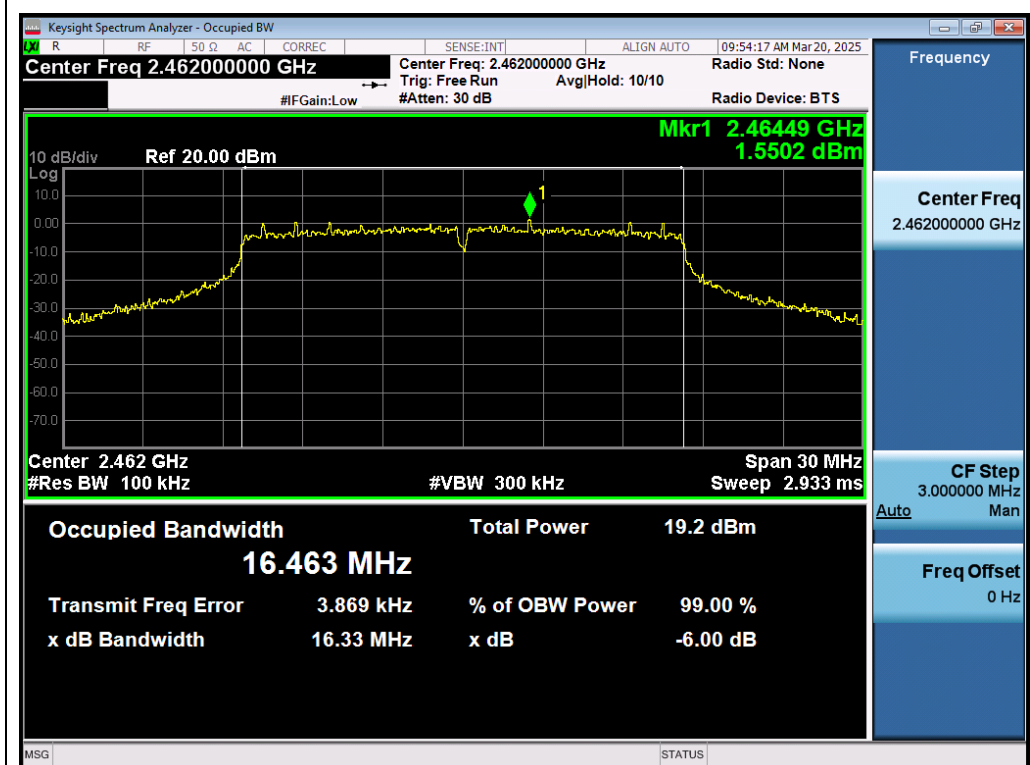
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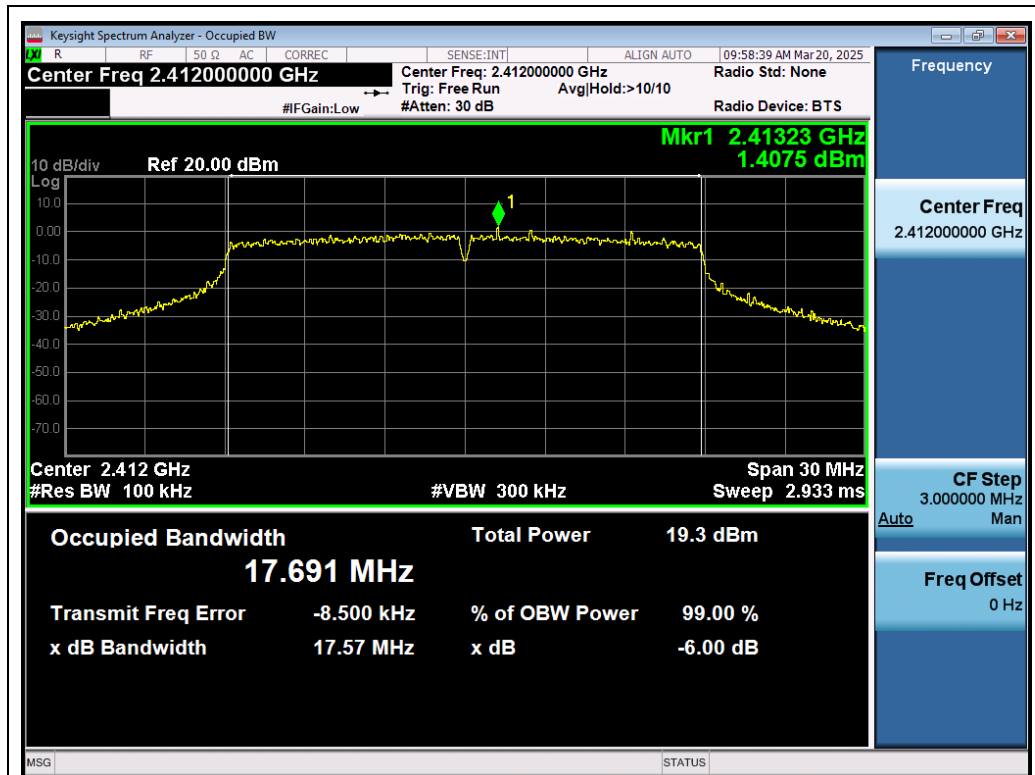
Test_Graph_802.11g_ANT1_2412_6Mbps_DTSBW



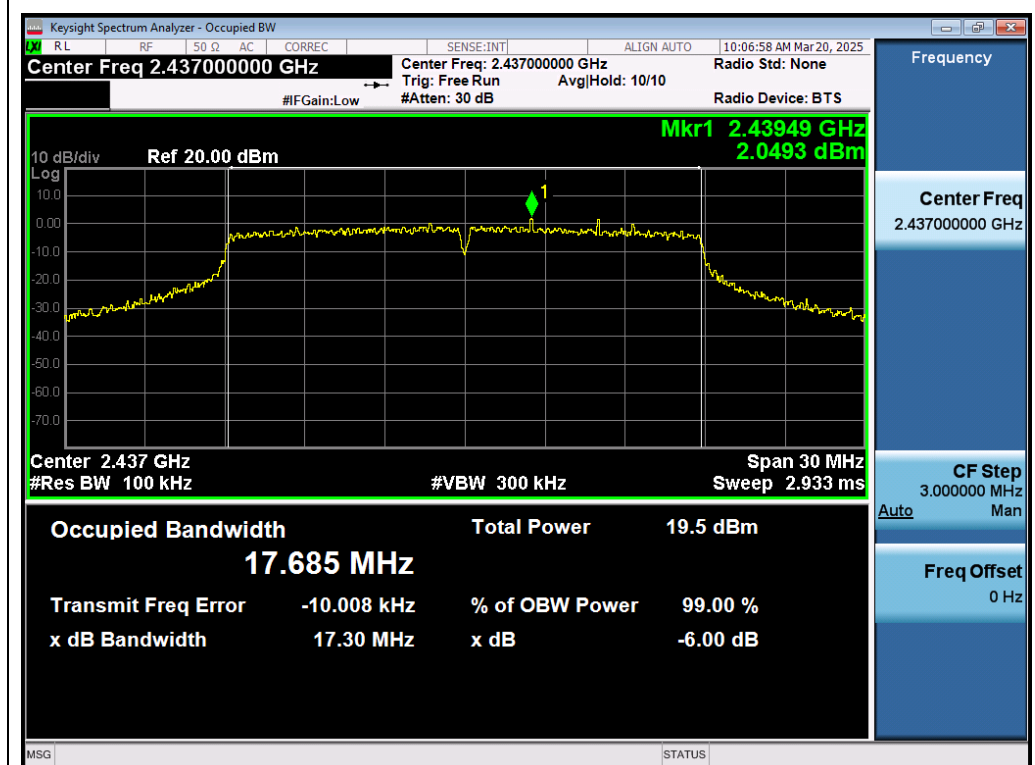
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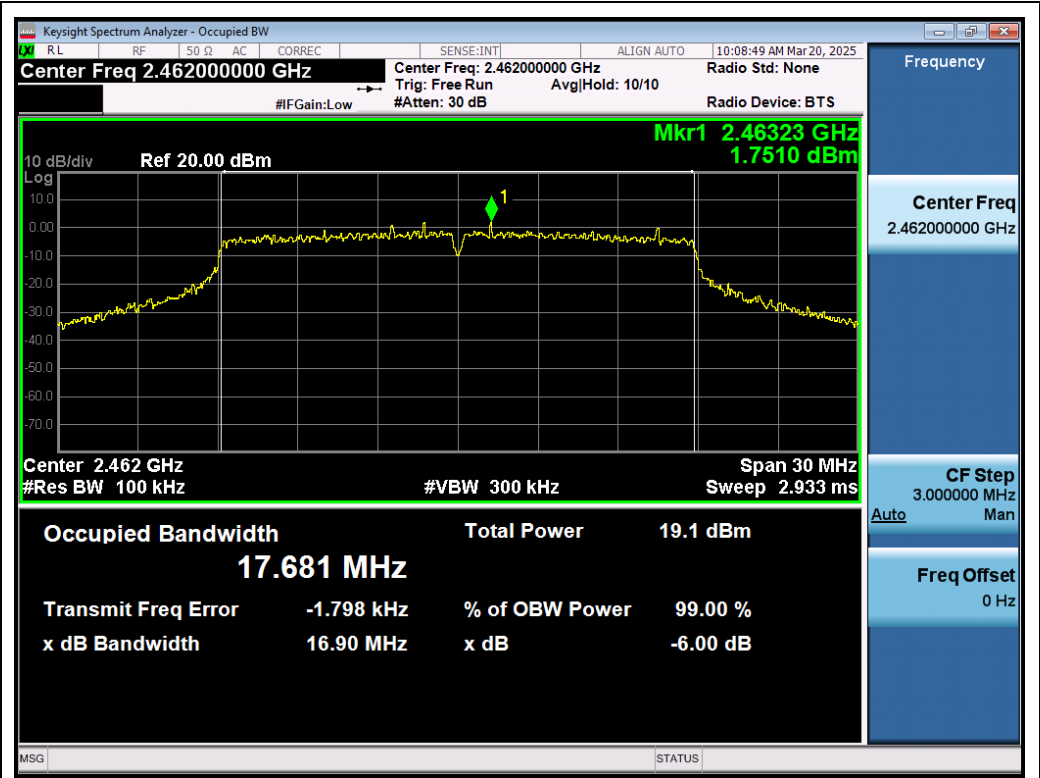
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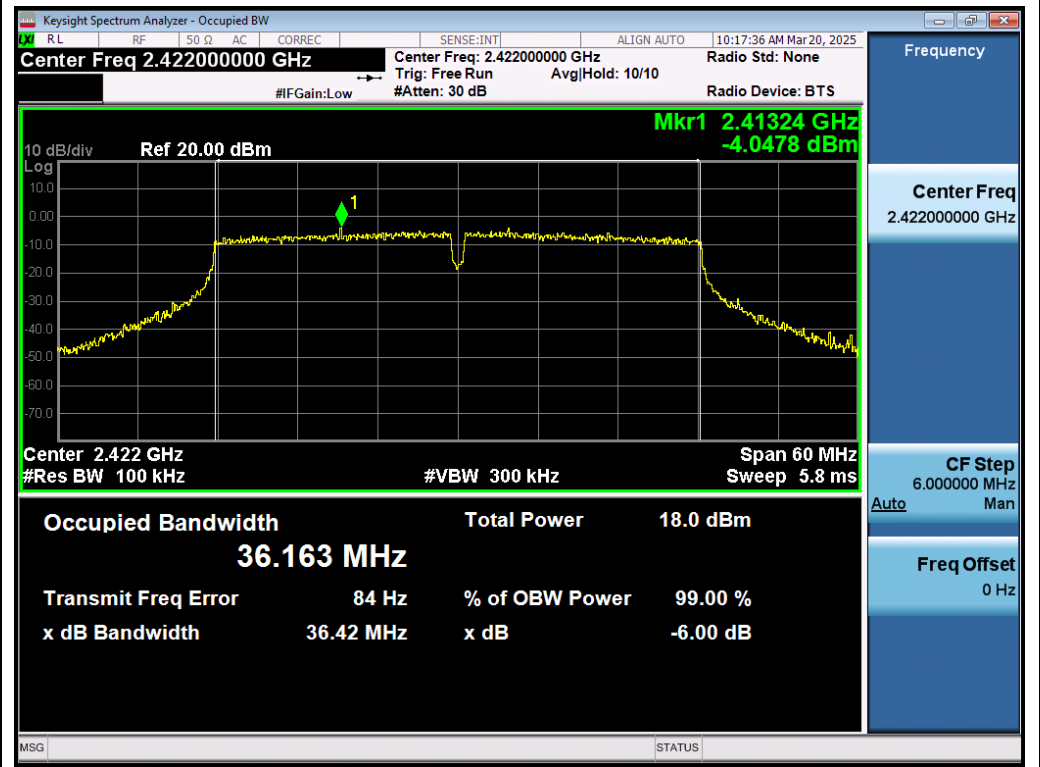
Test_Graph_802.11n20_ANT1_2412_MCS0_DTSBW



Test_Graph_802.11n20_ANT1_2437_MCS0_DTSBW



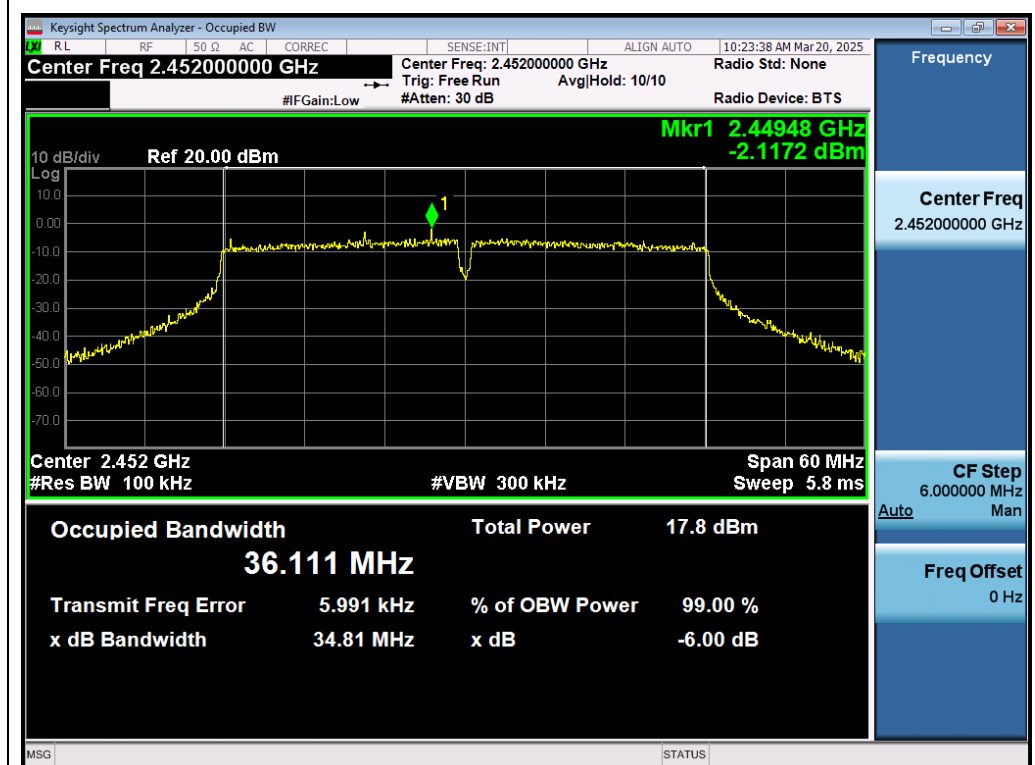
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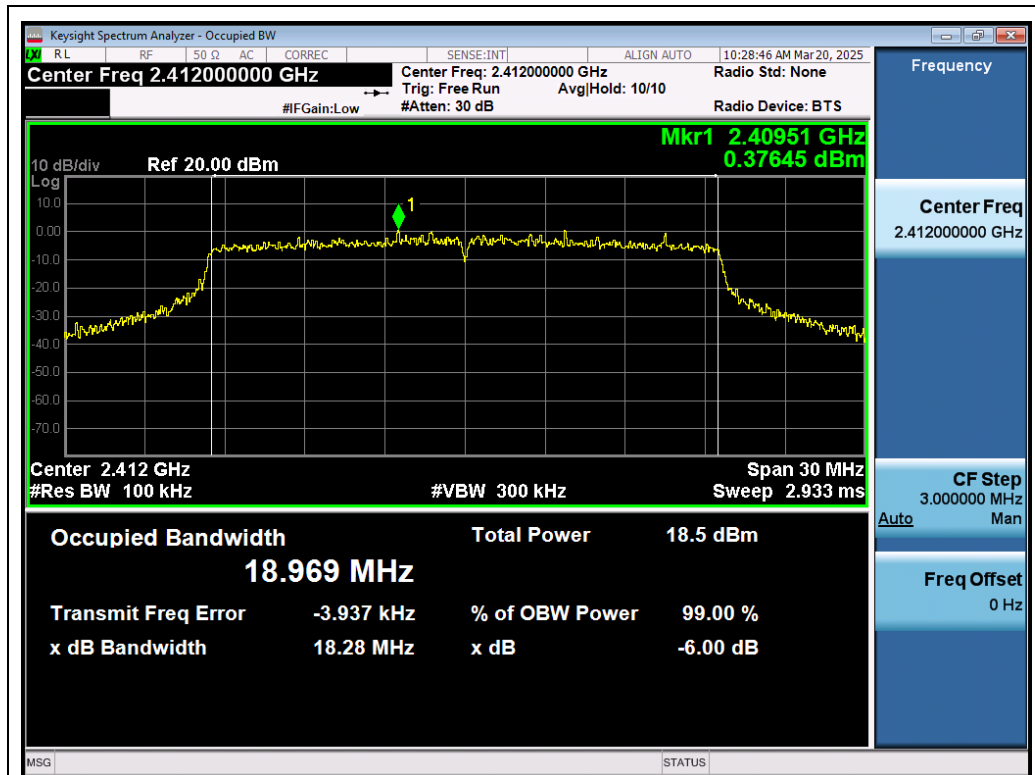
Test_Graph_802.11n40_ANT1_2422_MCS0_DTSBW



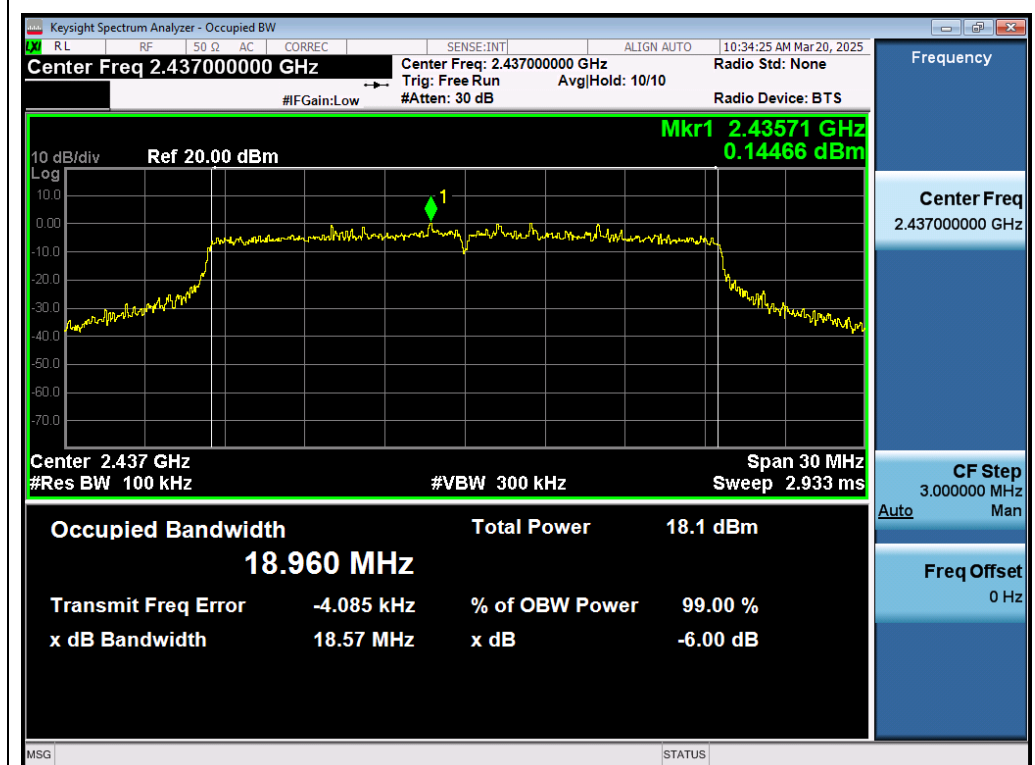
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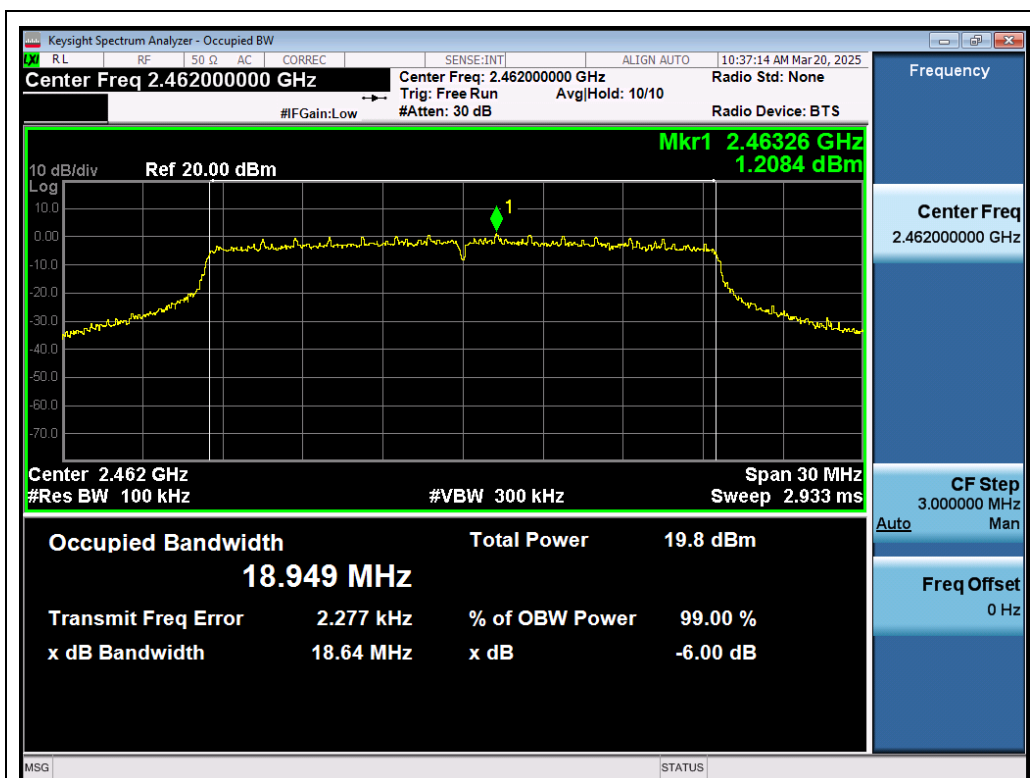
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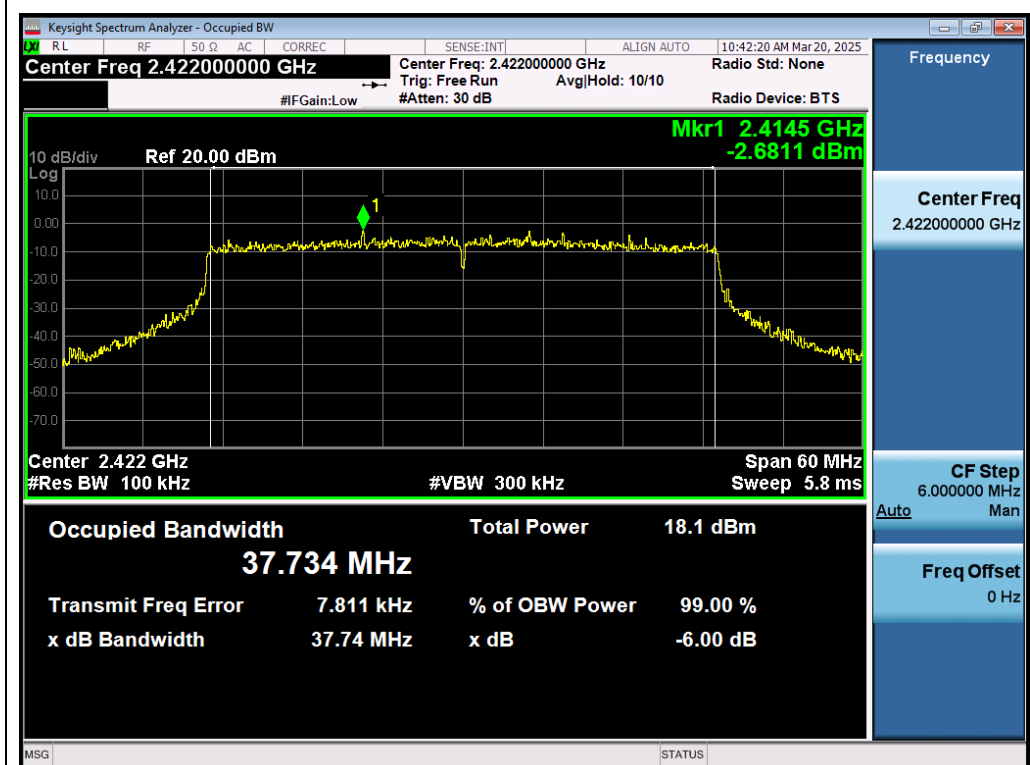
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Test_Graph_802.11ax20_ANT1_2437_MCS0_DTSBW



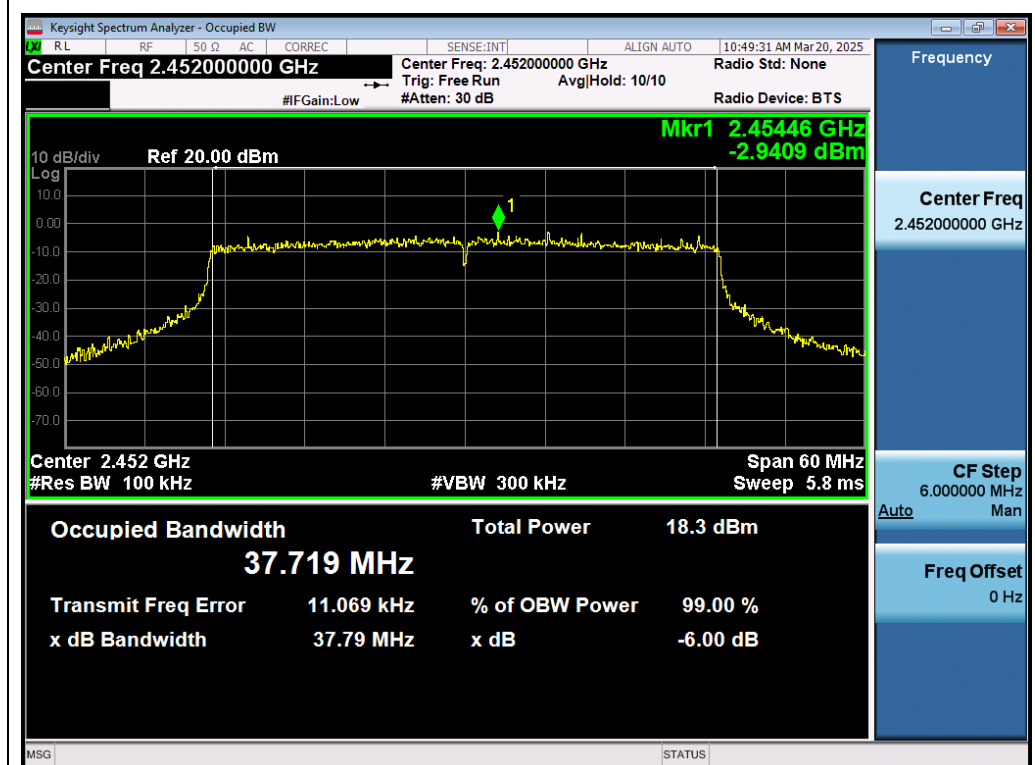
Test_Graph_802.11ax20_ANT1_2462_MCS0_DTSBW



Test_Graph_802.11ax40_ANT1_2422_MCS0_DTSBW



Test_Graph_802.11ax40_ANT1_2437_MCS0_DTSBW



Test_Graph_802.11ax40_ANT1_2452_MCS0_DTSBW

Appendix B: Maximum Average conducted output power

Test Result

Test Data of Conducted Output Power					
Test Mode	Test Frequency (MHz)	Average Power (dBm)	Peak Power (dBm)	Limits (dBm)	Result
802.11b	2412	13.22	15.64	≤ 30	Pass
	2437	12.88	15.51	≤ 30	Pass
	2462	12.92	15.56	≤ 30	Pass
802.11g	2412	12.97	20.97	≤ 30	Pass
	2437	12.84	20.50	≤ 30	Pass
	2462	12.79	20.45	≤ 30	Pass
802.11n20	2412	13.00	20.66	≤ 30	Pass
	2437	13.20	20.87	≤ 30	Pass
	2462	12.70	20.33	≤ 30	Pass
802.11n40	2422	11.78	19.96	≤ 30	Pass
	2437	11.73	19.85	≤ 30	Pass
	2452	11.57	19.31	≤ 30	Pass
802.11ax20	2412	11.88	20.30	≤ 30	Pass
	2437	11.62	20.44	≤ 30	Pass
	2462	11.61	20.06	≤ 30	Pass
802.11ax40	2422	11.77	21.77	≤ 30	Pass
	2437	11.64	20.44	≤ 30	Pass
	2452	11.59	20.19	≤ 30	Pass

Note: The Duty Cycle Factor is compensated in the result.

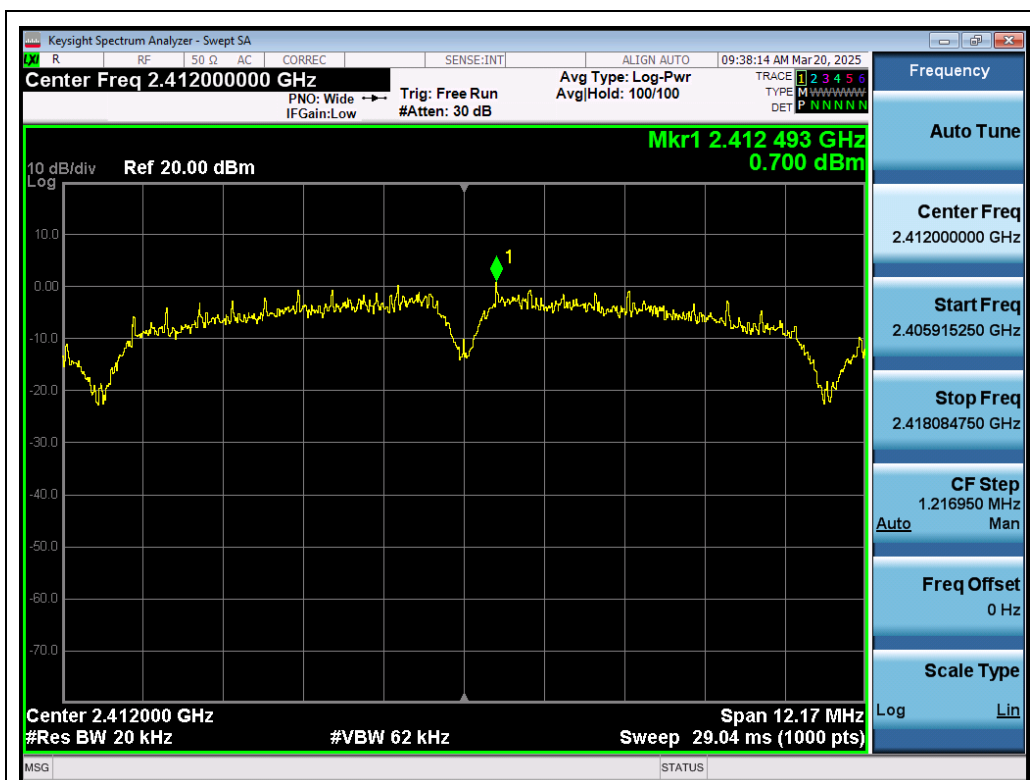
Appendix C: Maximum Average power spectral density

Test Result

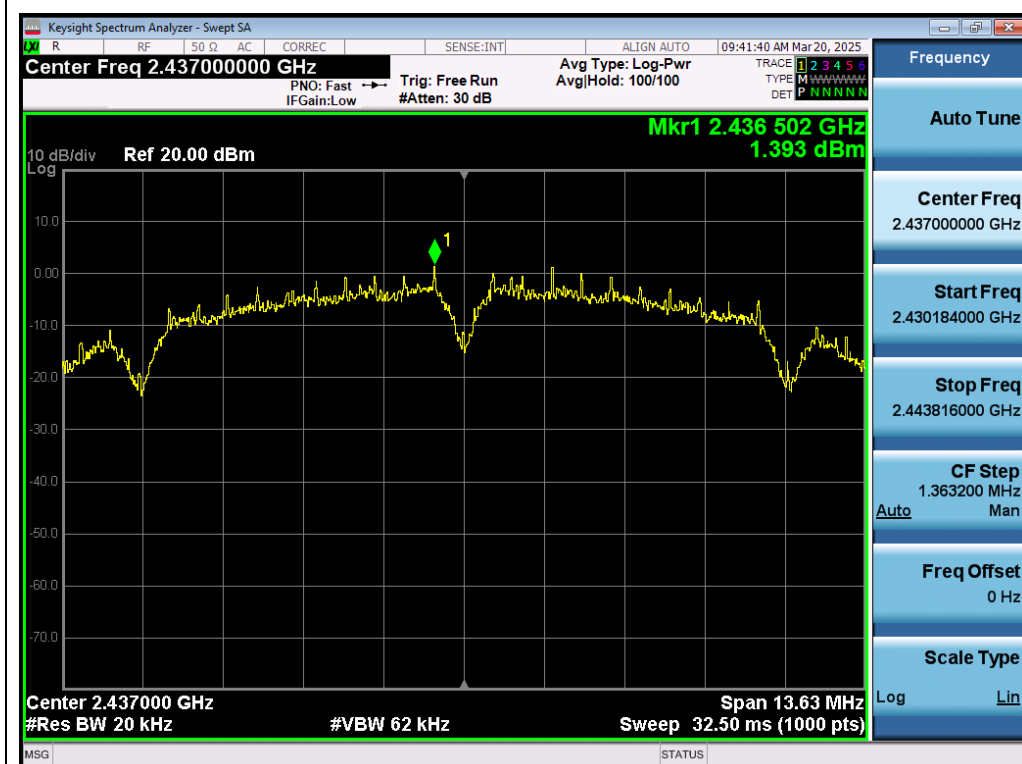
Test Data of Conducted Output Power Spectral Density					
Test Mode	Test Frequency (MHz)	Power Spectral density (dBm/20kHz)	Power Spectral density (dBm/3kHz)	Limit (dBm/3kHz)	Result
802.11b	2412	0.700	-7.539	≤8	Pass
	2437	1.393	-6.846	≤8	Pass
	2462	1.369	-6.87	≤8	Pass
802.11g	2412	-3.047	-11.286	≤8	Pass
	2437	-4.020	-12.259	≤8	Pass
	2462	-3.937	-12.176	≤8	Pass
802.11n20	2412	-4.156	-12.395	≤8	Pass
	2437	-3.105	-11.344	≤8	Pass
	2462	-4.041	-12.28	≤8	Pass
802.11n40	2422	-8.117	-16.356	≤8	Pass
	2437	-7.844	-16.083	≤8	Pass
	2452	-8.327	-16.566	≤8	Pass
802.11ax20	2412	-6.543	-14.782	≤8	Pass
	2437	-5.732	-13.971	≤8	Pass
	2462	-7.038	-15.277	≤8	Pass
802.11ax40	2422	-8.292	-16.531	≤8	Pass
	2437	-9.595	-17.834	≤8	Pass
	2452	-9.381	-17.62	≤8	Pass

Note: Power density(dBm/3kHz) = Power density(dBm/20kHz) – 10*log(20/3).

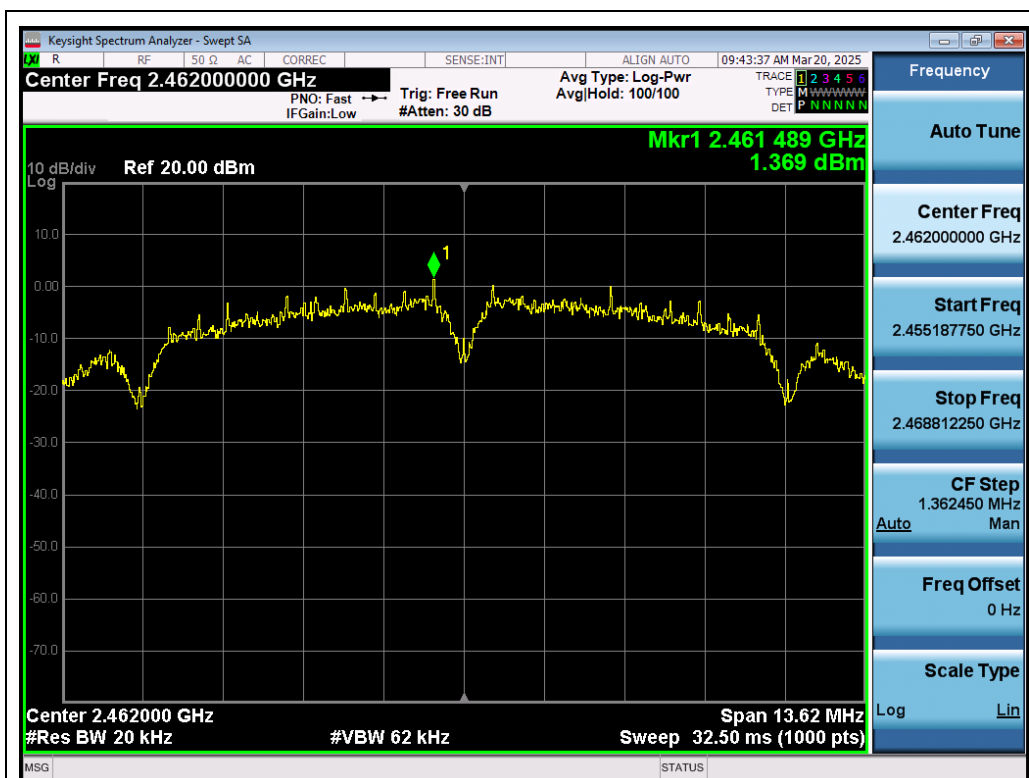
Test Graphs



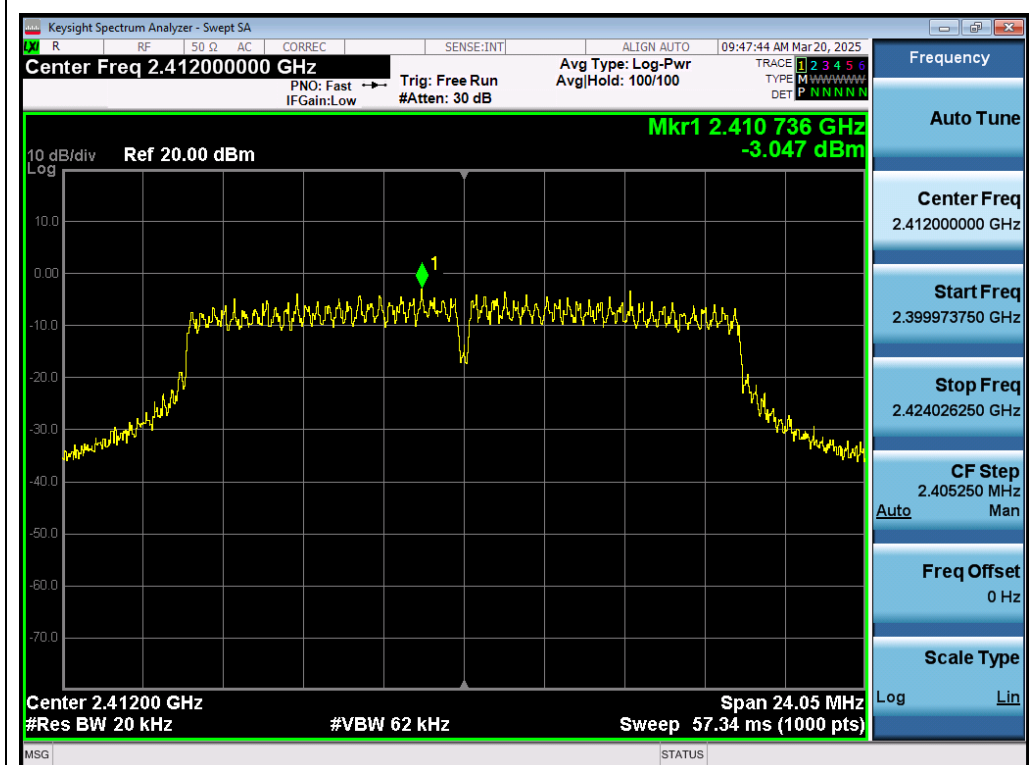
Test_Graph_802.11b_ANT1_2412_1Mbps_PSD



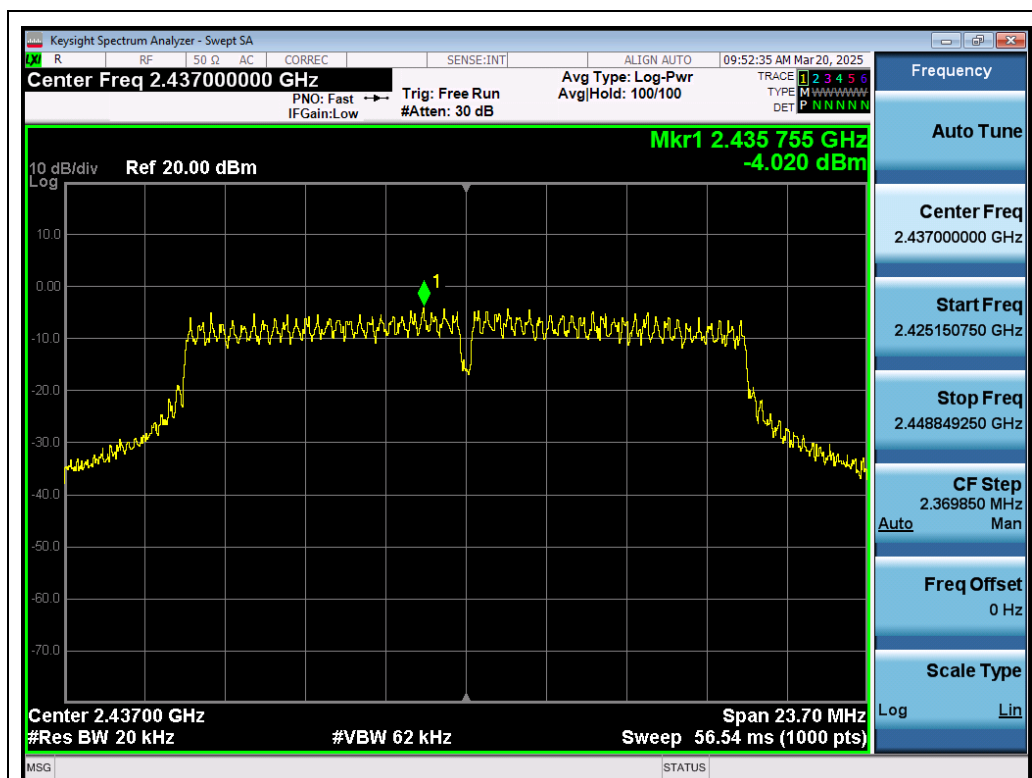
Test_Graph_802.11b_ANT1_2437_1Mbps_PSD



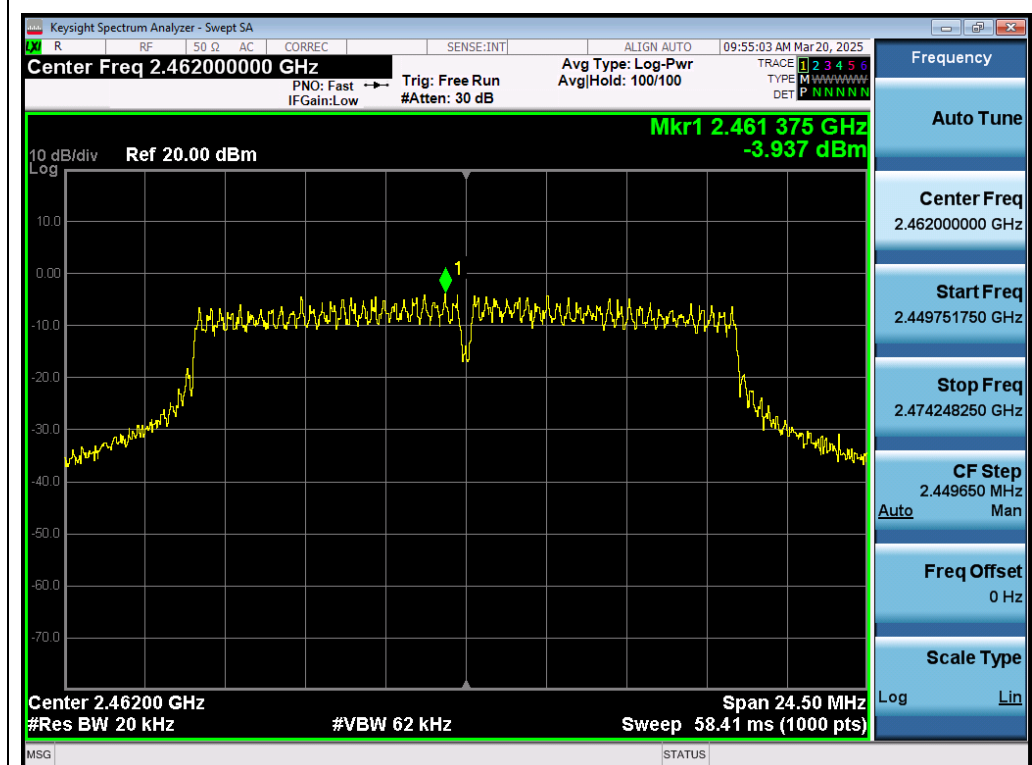
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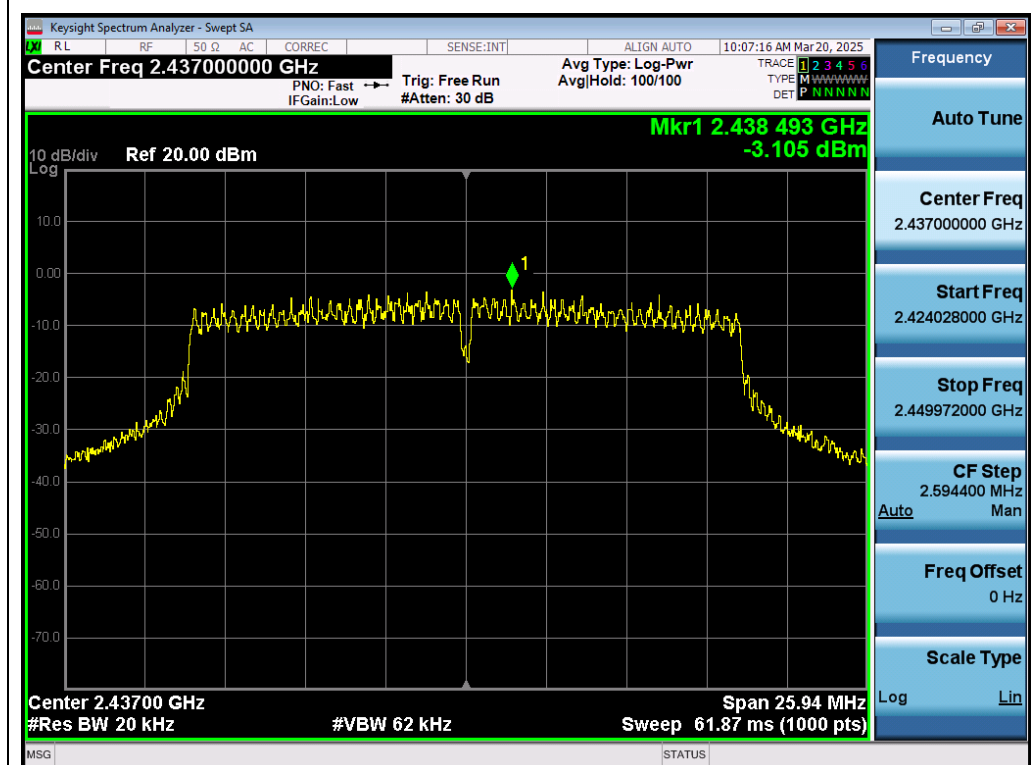
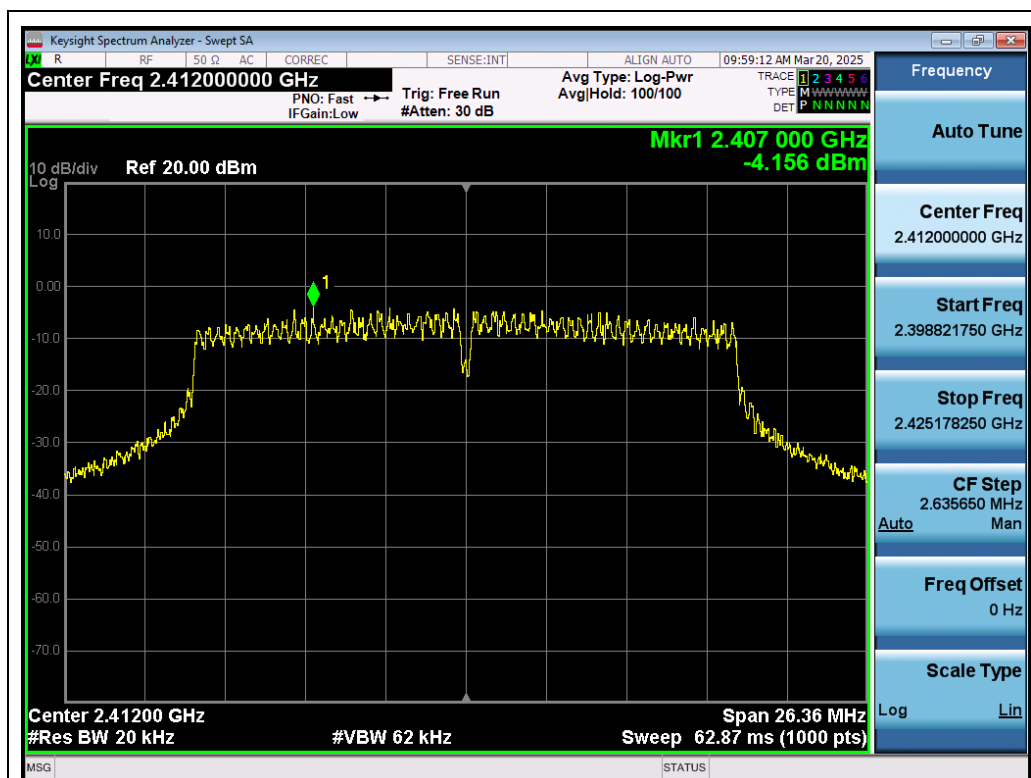
Test_Graph_802.11g_ANT1_2412_6Mbps_PSD

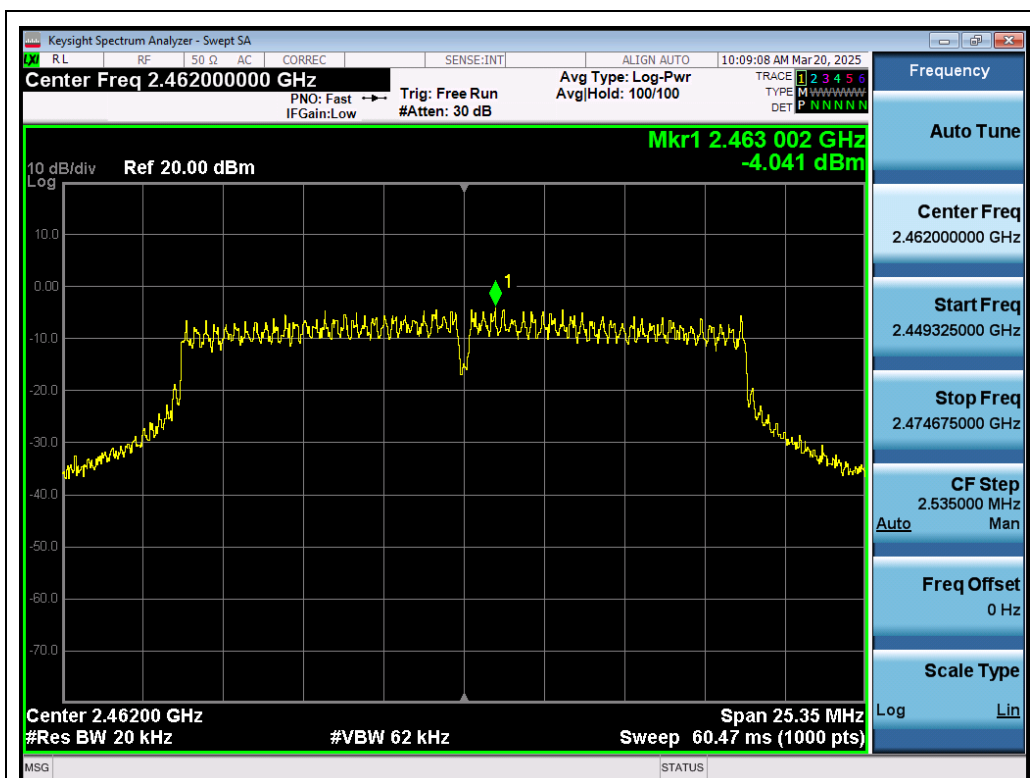


Test_Graph_802.11g_ANT1_2437_6Mbps_PSD

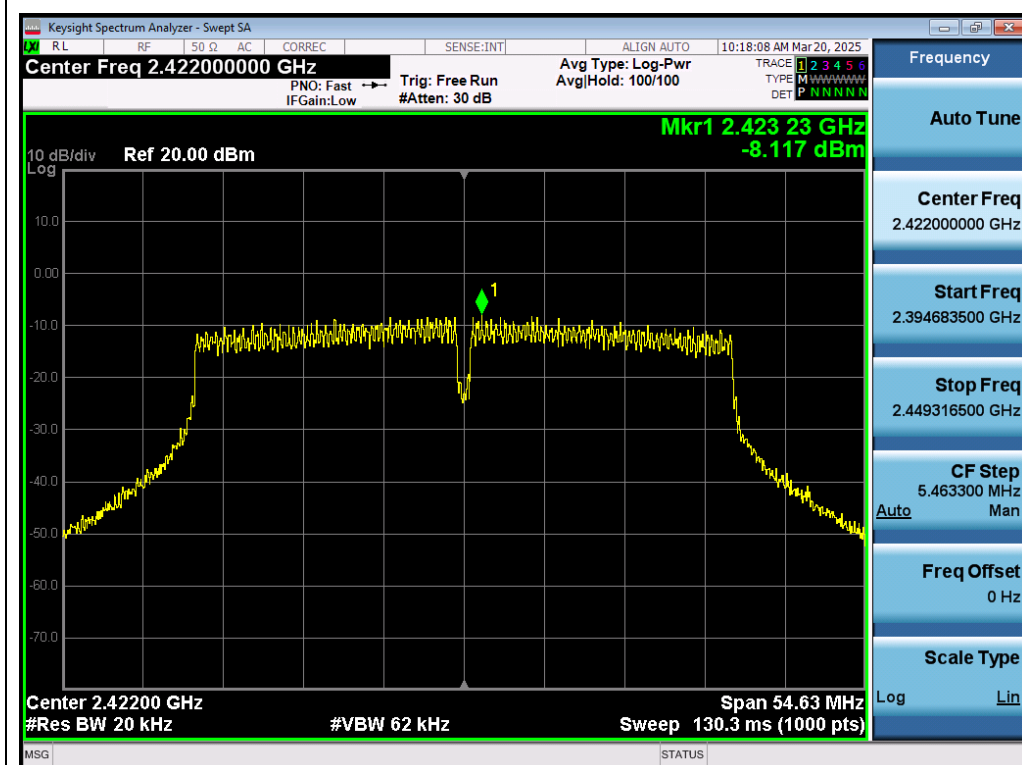


Test_Graph_802.11g_ANT1_2462_6Mbps_PSD

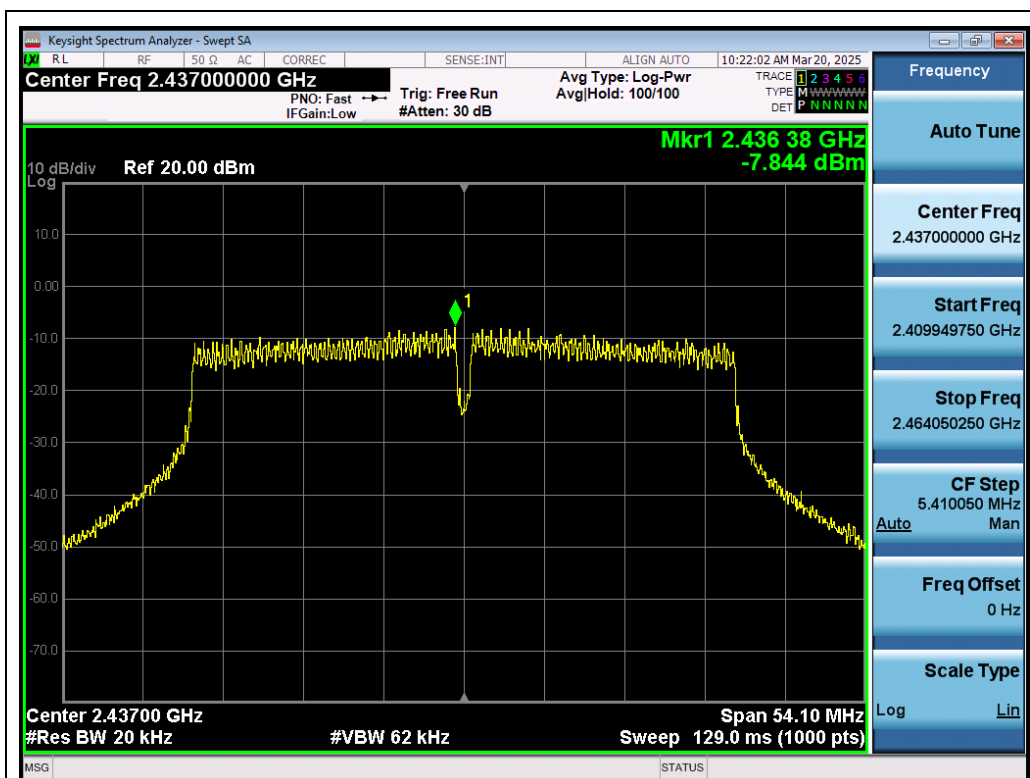




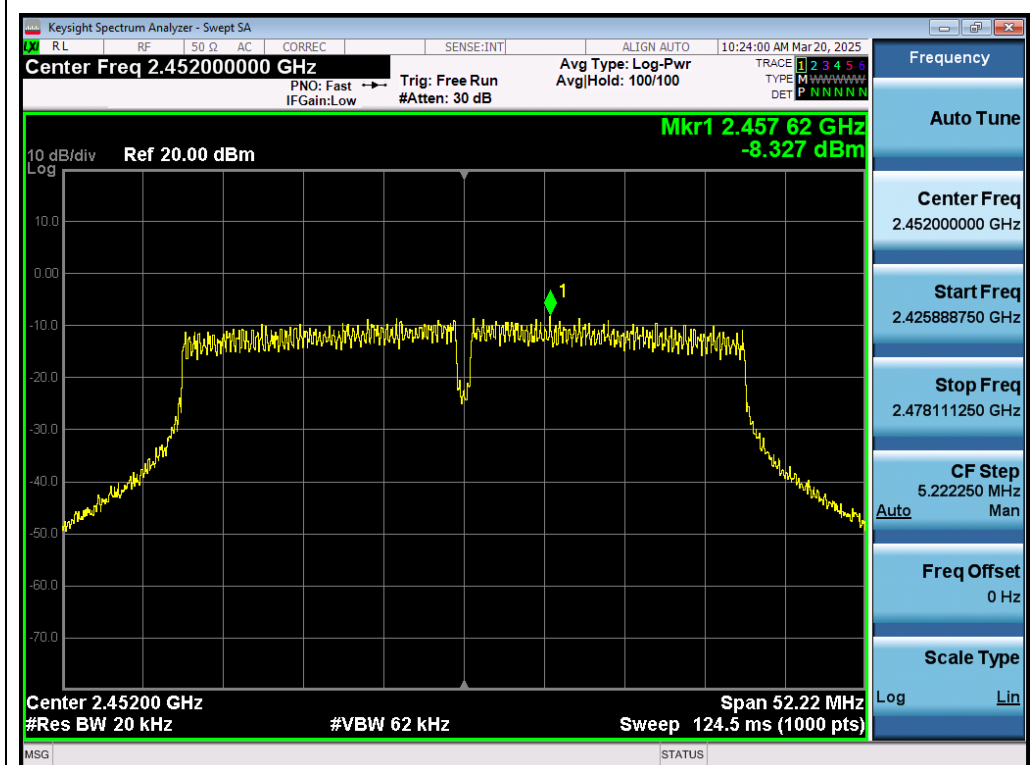
Test_Graph_802.11n20_ANT1_2462_MCS0_PSD



Test_Graph_802.11n40_ANT1_2422_MCS0_PSD



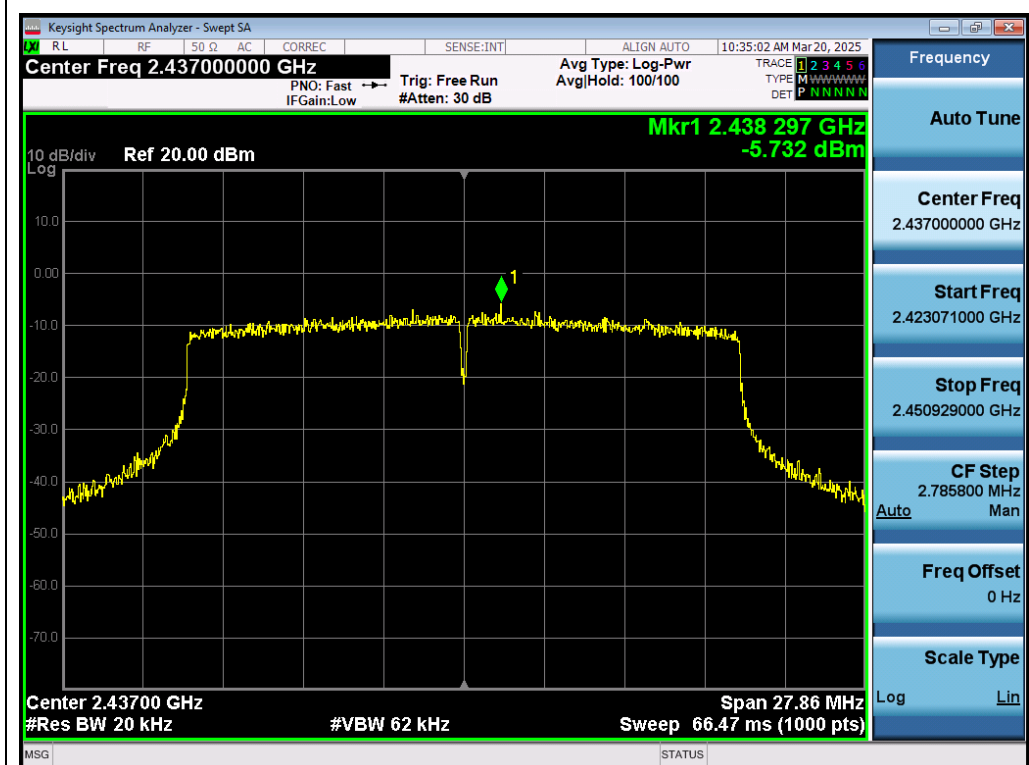
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Test_Graph_802.11n40_ANT1_2452_MCS0_PSD



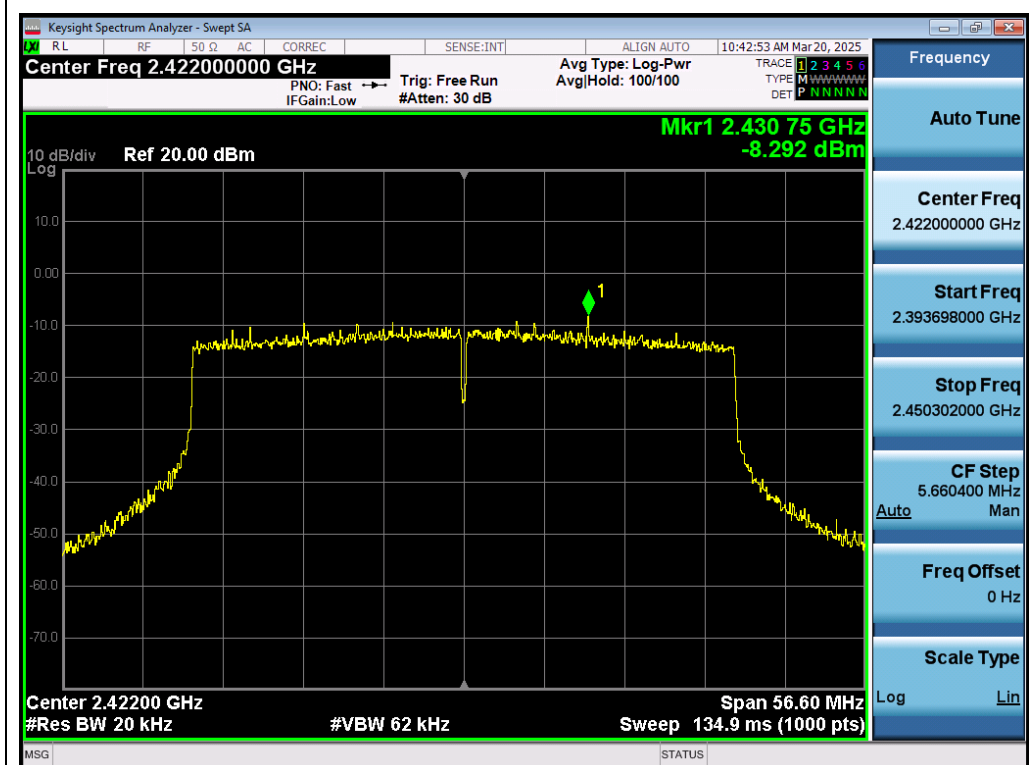
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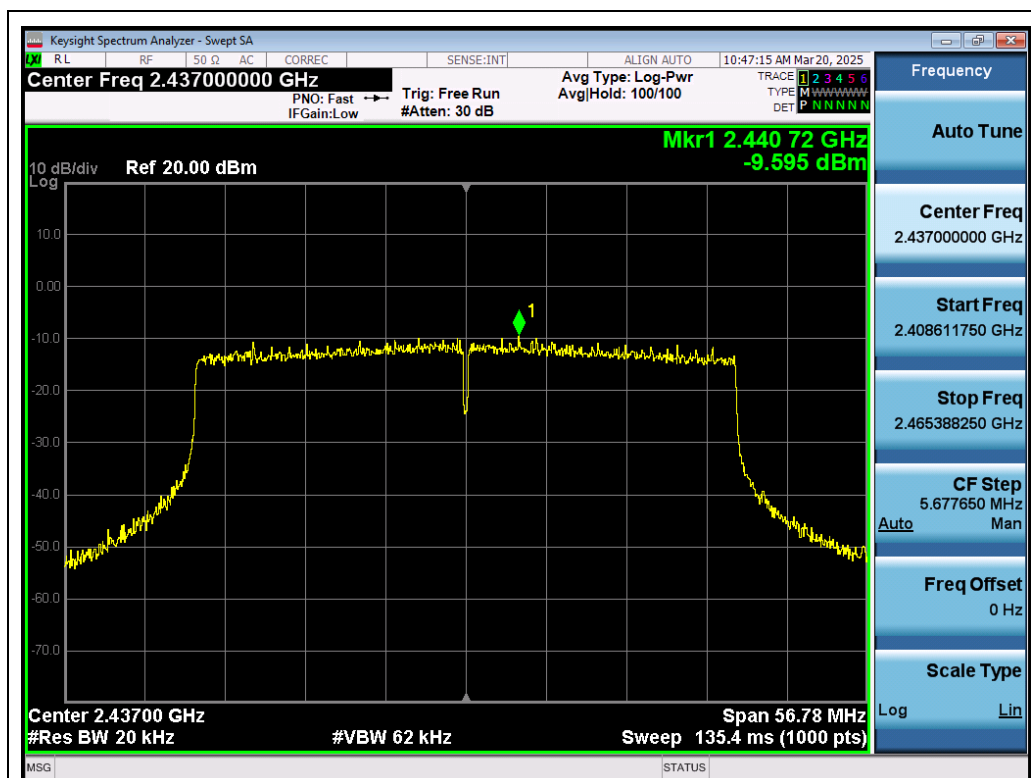
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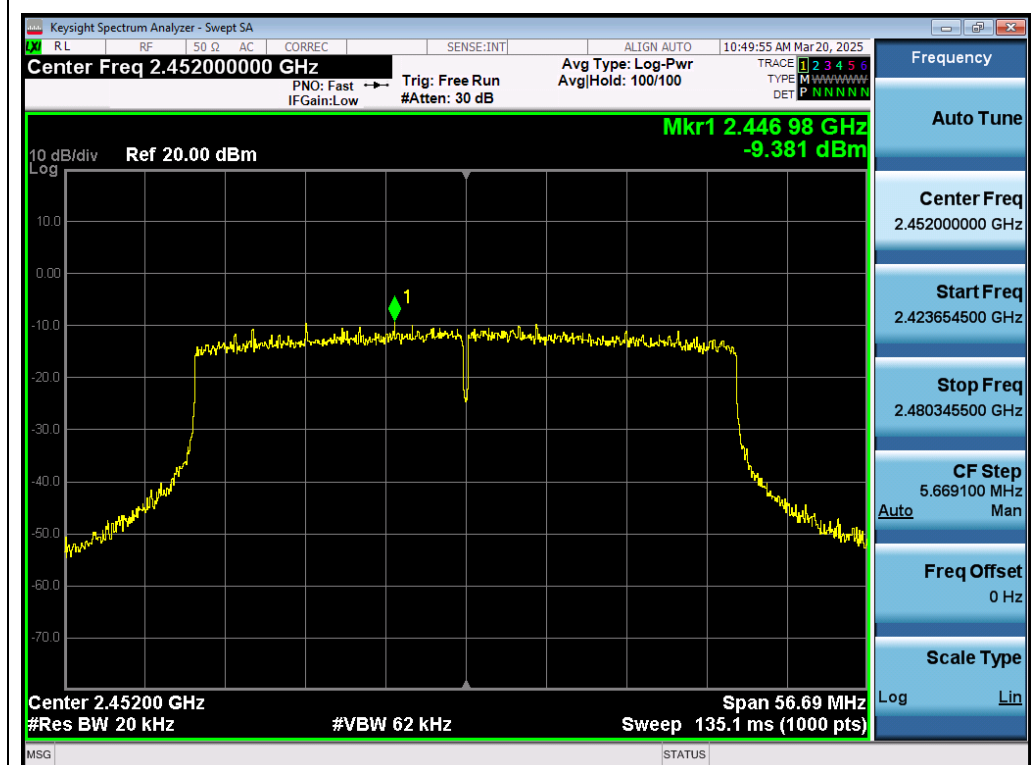
Test_Graph_802.11ax20_ANT1_2462_MCS0_PSD



Test_Graph_802.11ax40_ANT1_2422_MCS0_PSD



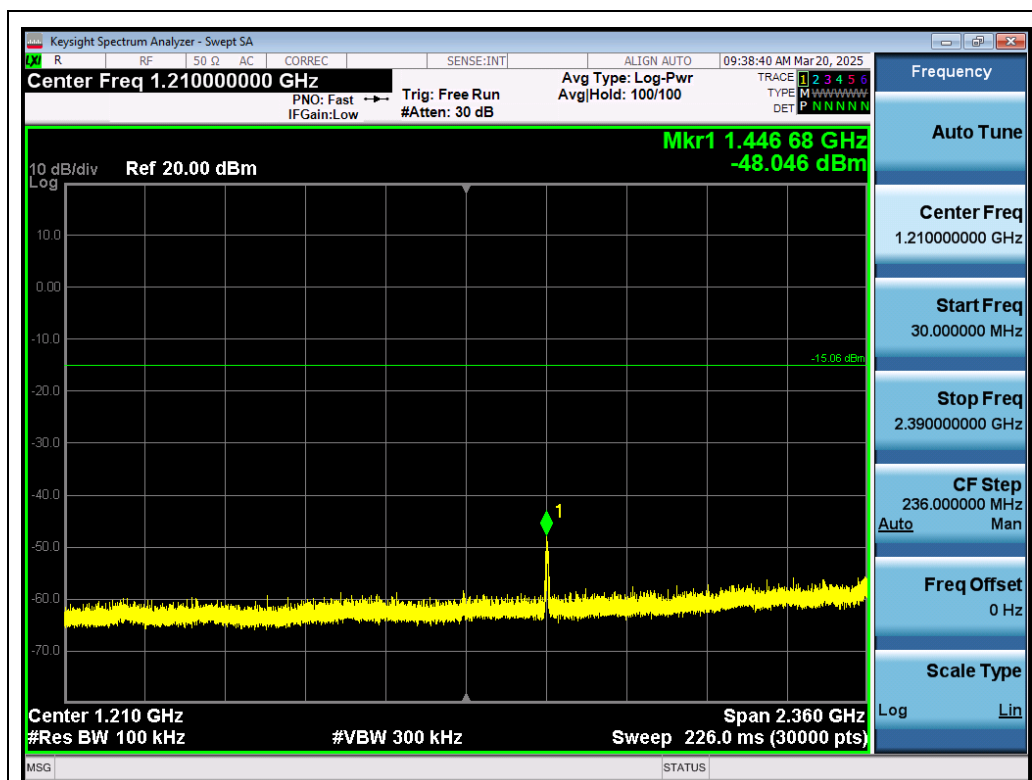
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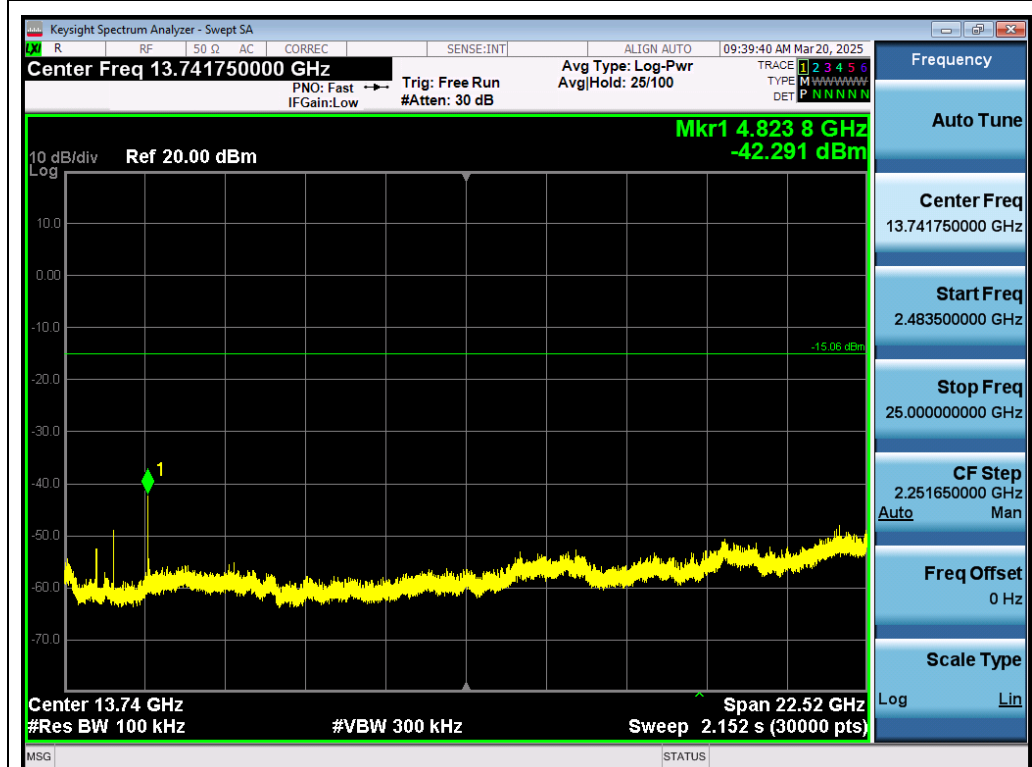
Test_Graph_802.11ax40_ANT1_2452_MCS0_PSD

Appendix D: Conducted Spurious Emission and Band edge measurements

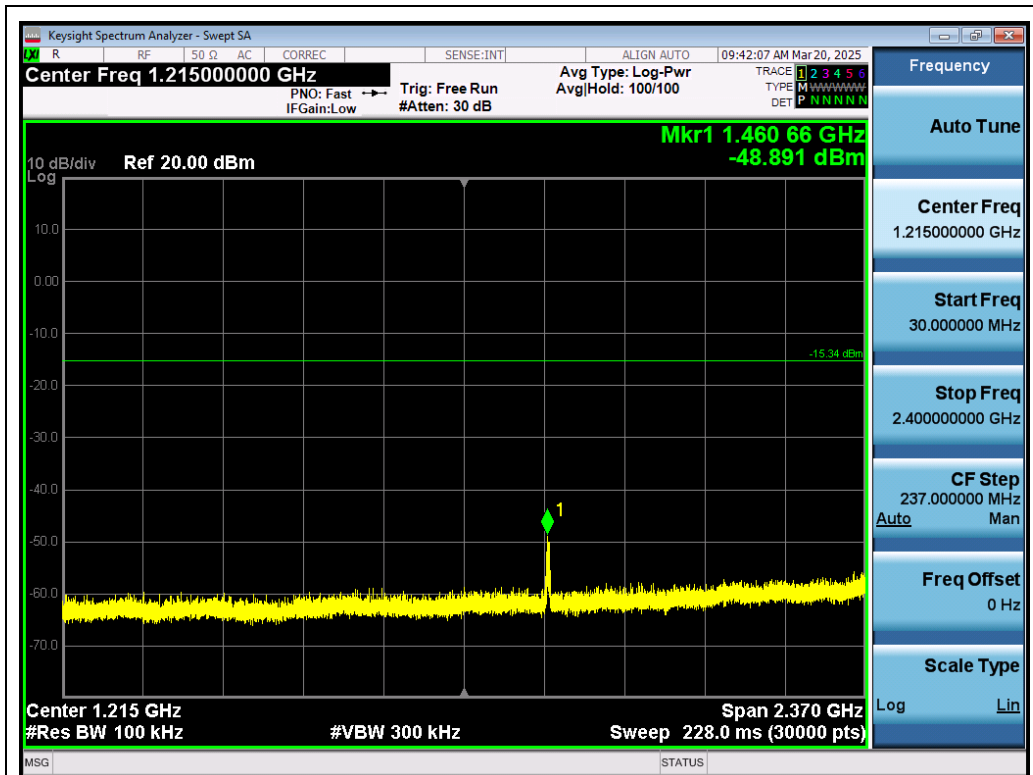
Test Result



Test_Graph_802.11b_ANT1_2412_1Mbps_Lower Band Emissions



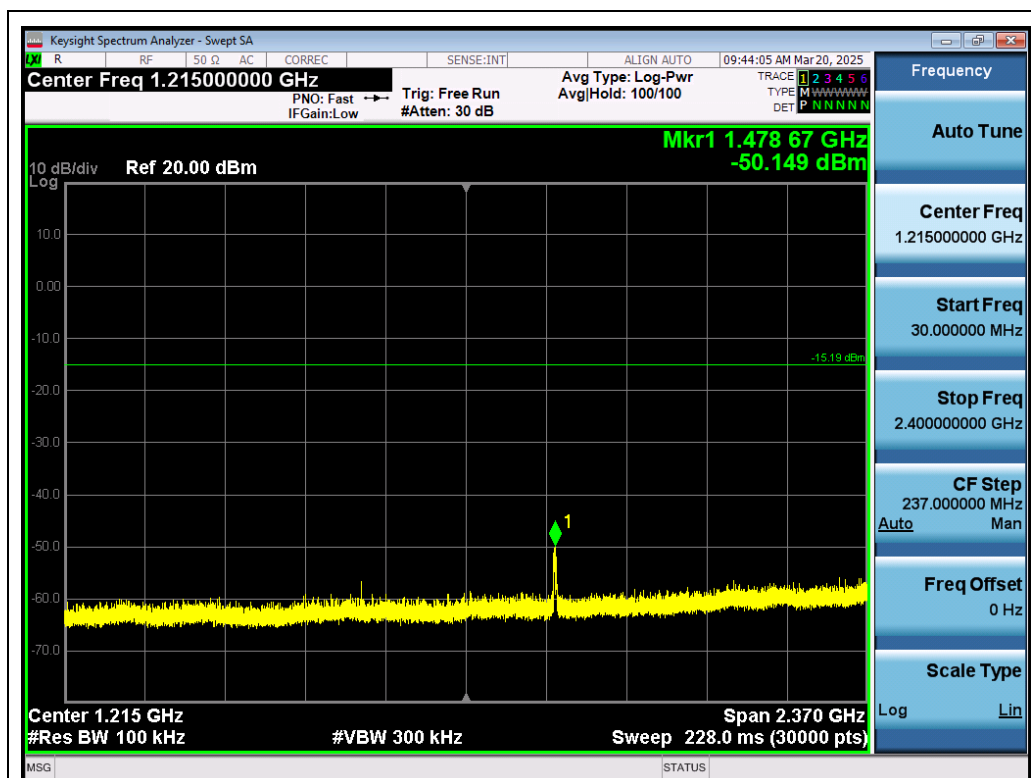
Test_Graph_802.11b_ANT1_2412_1Mbps_Higher Band Emissions



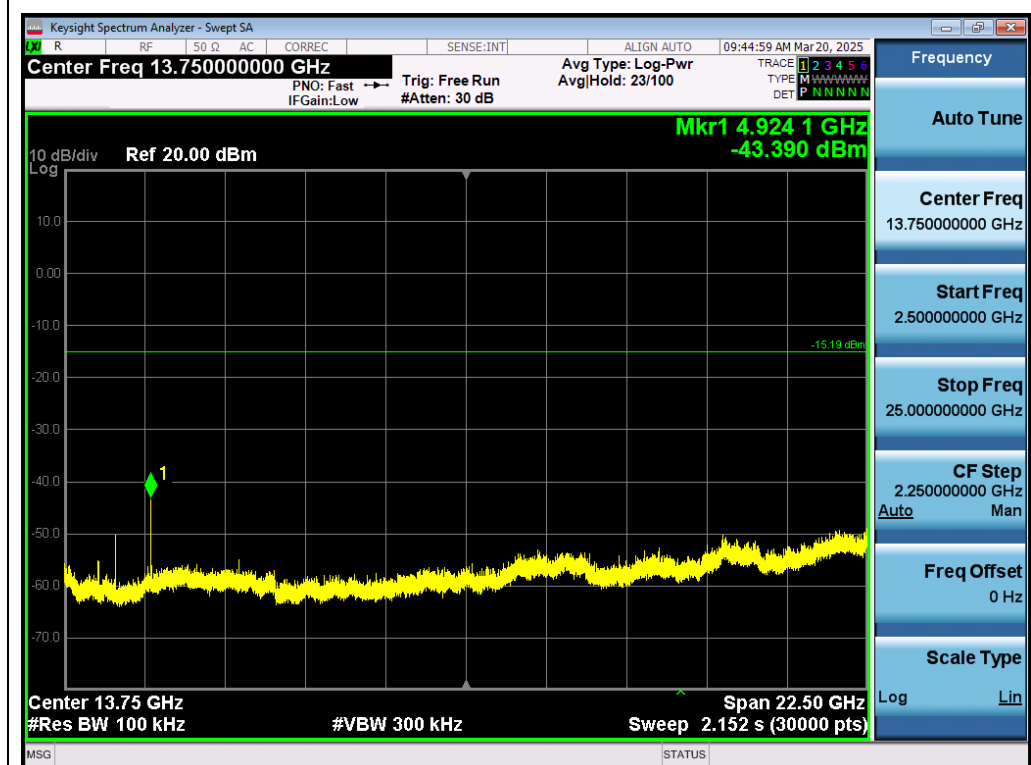
Test_Graph_802.11b_ANT1_2437_1Mbps_Lower Band Emissions



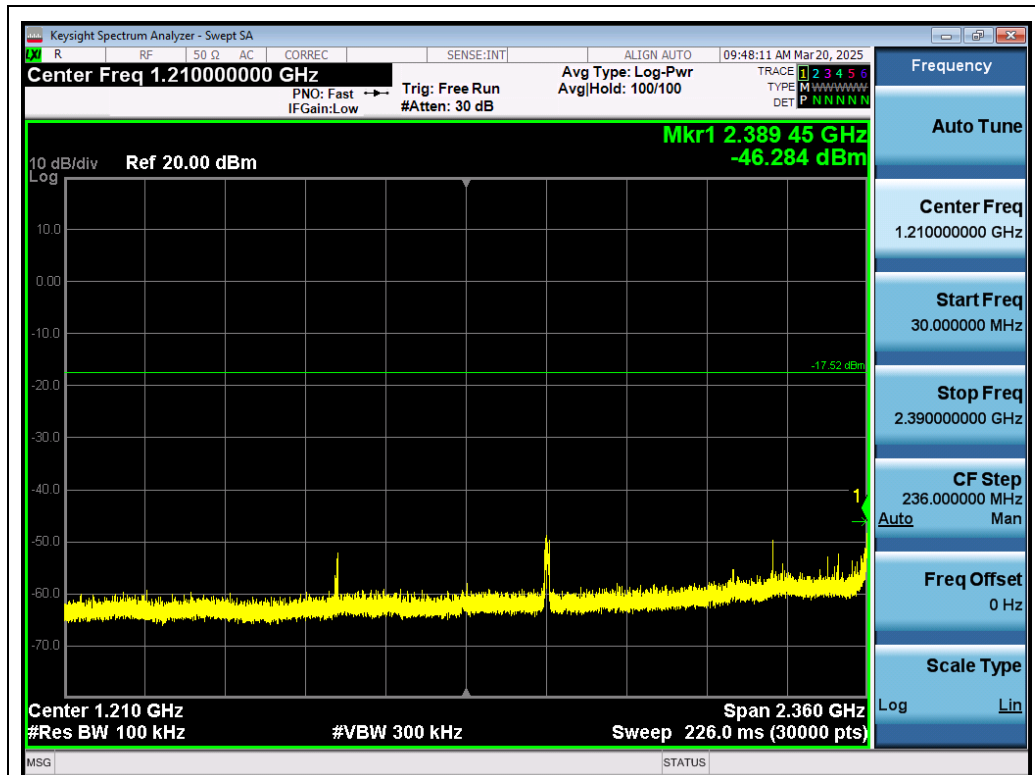
Test_Graph_802.11b_ANT1_2437_1Mbps_Higher Band Emissions



Test_Graph_802.11b_ANT1_2462_1Mbps_Lower Band Emissions



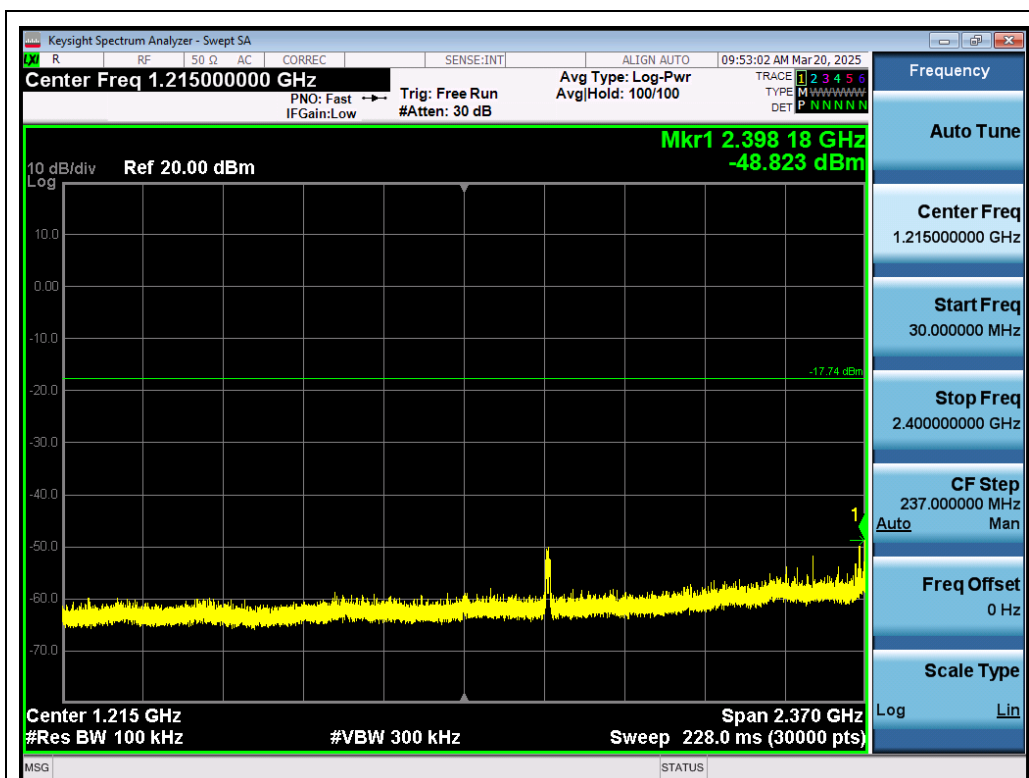
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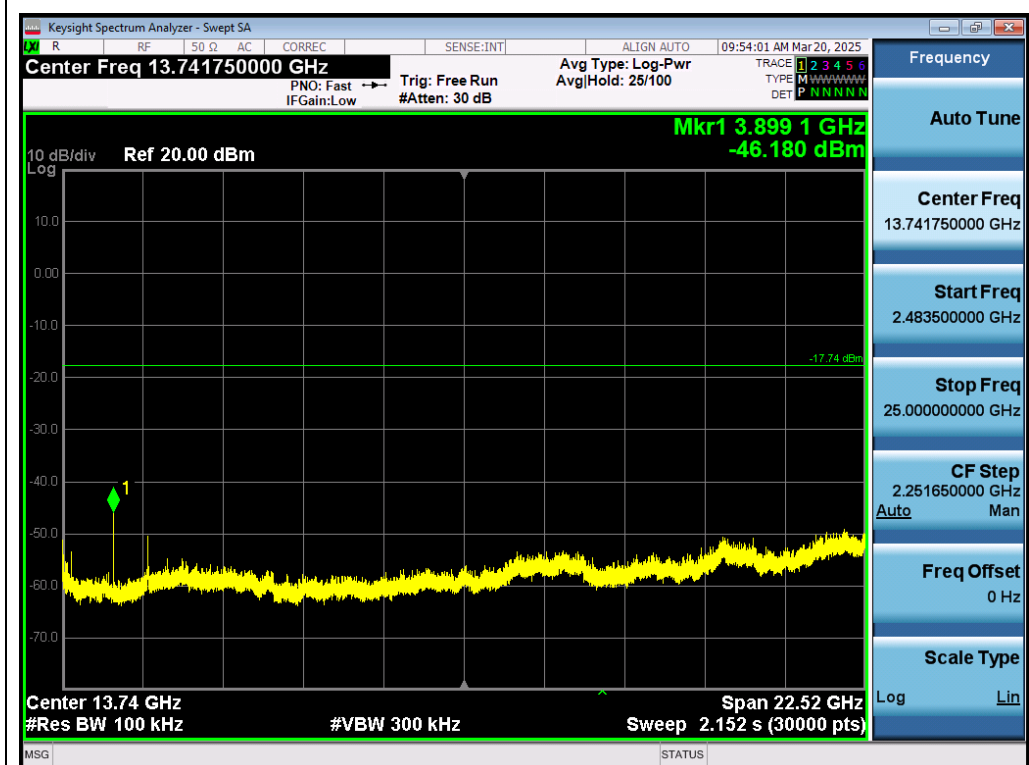
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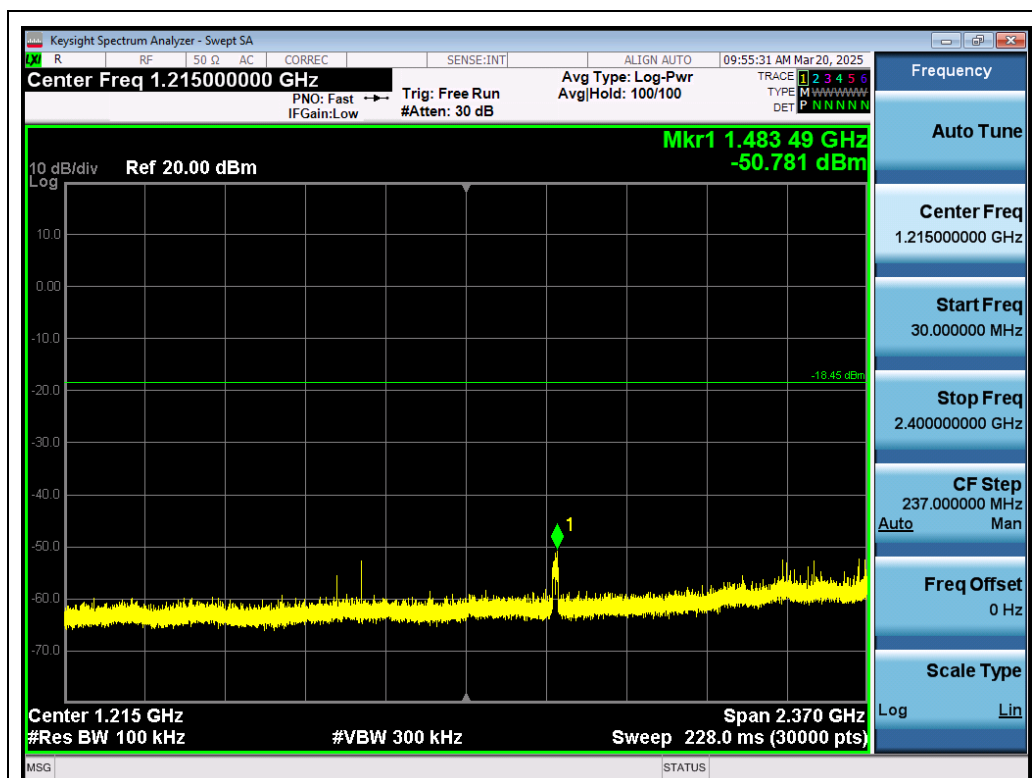
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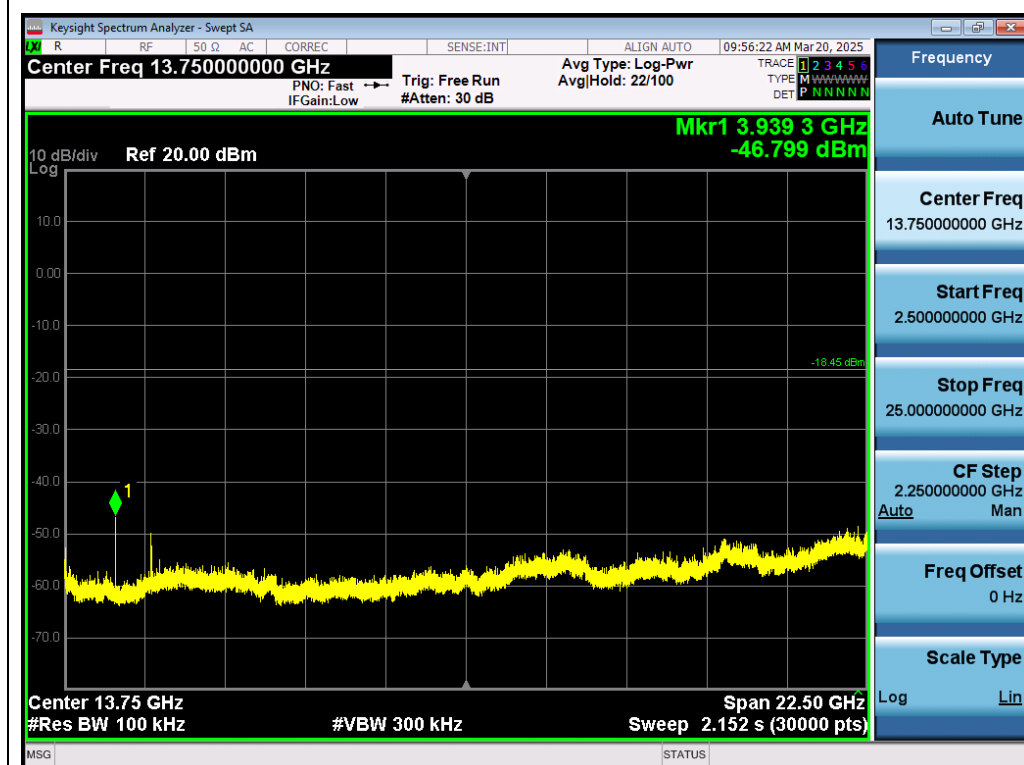
Test_Graph_802.11g_ANT1_2437_6Mbps_Lower Band Emissions



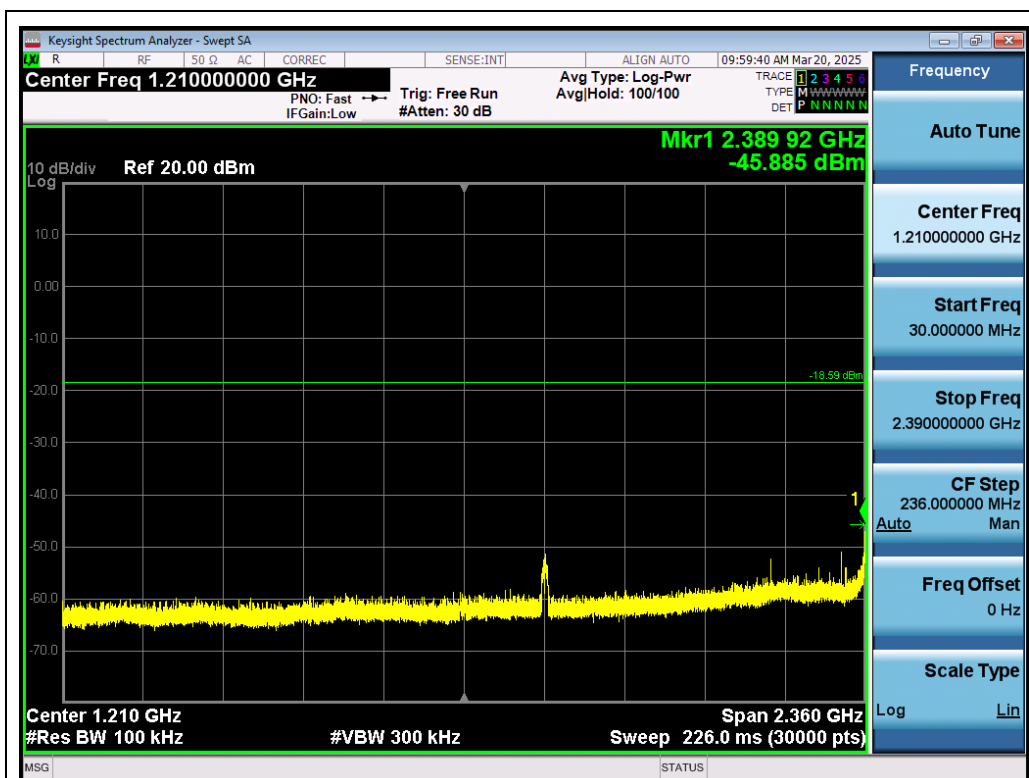
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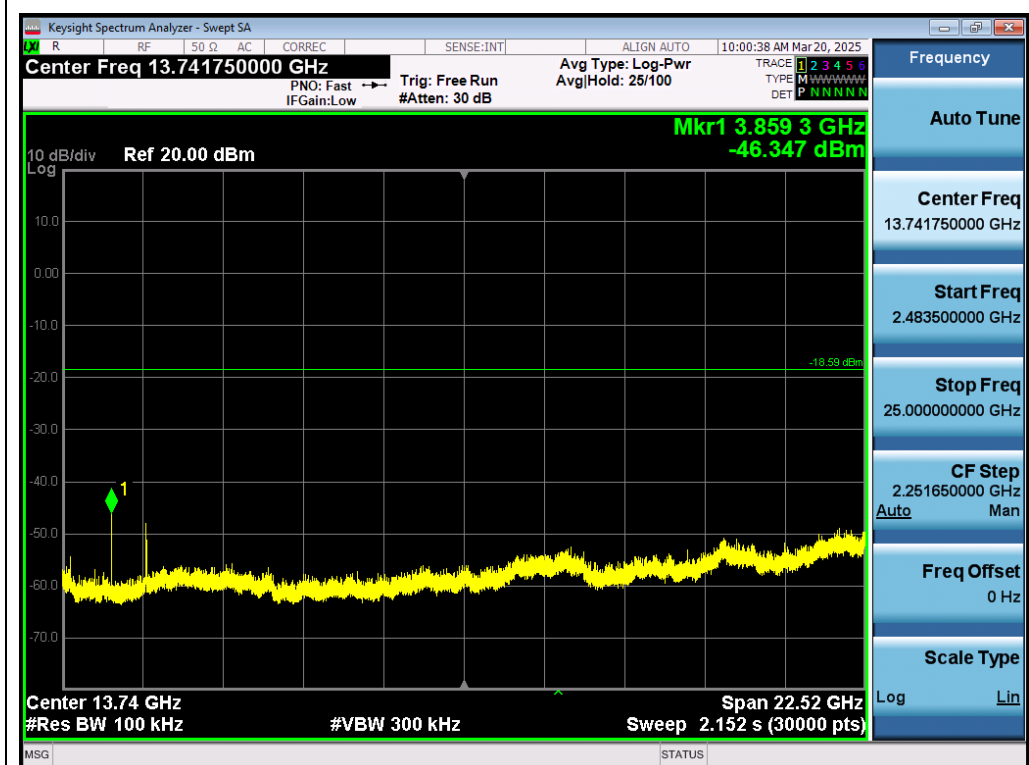
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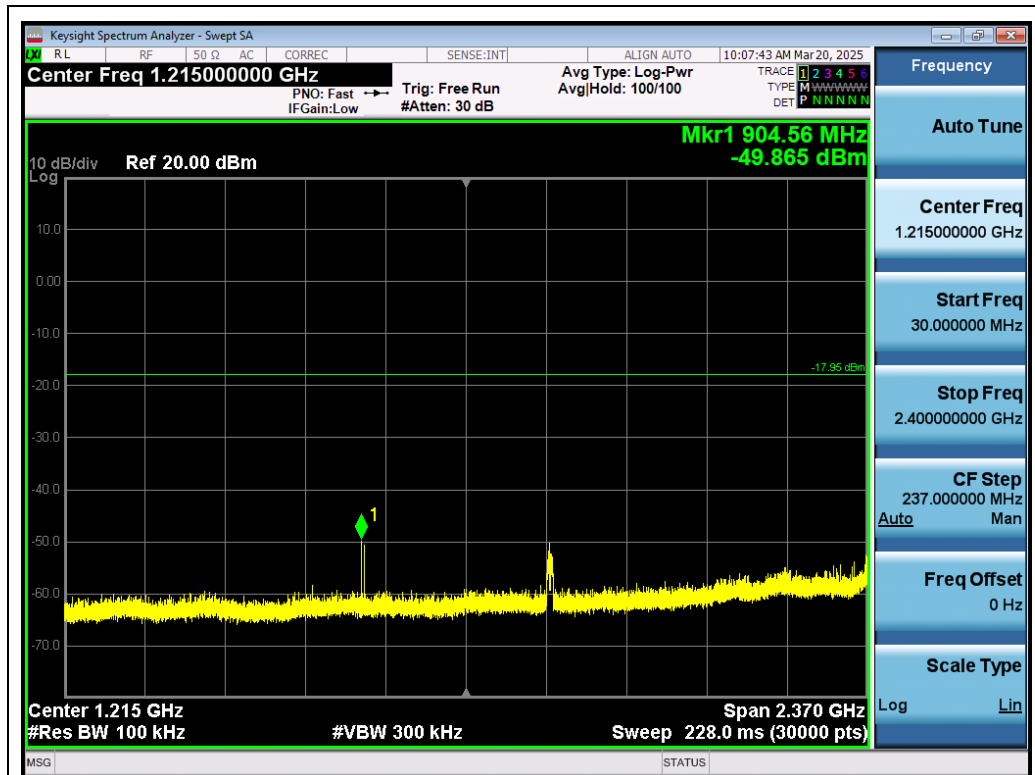
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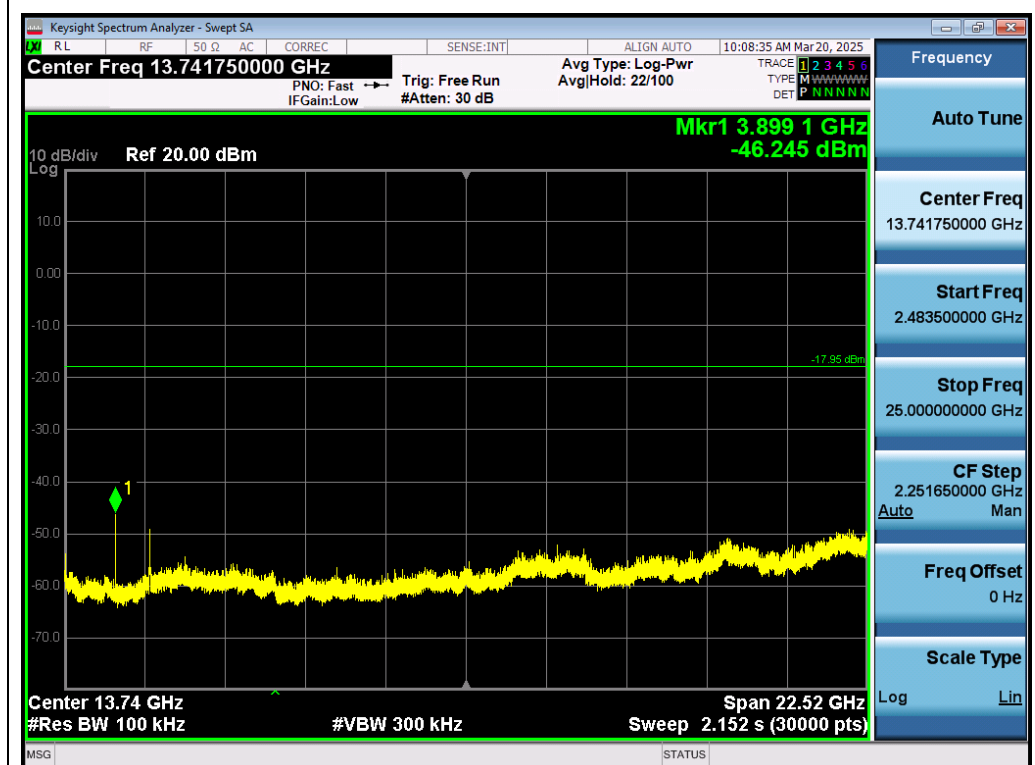
Test_Graph_802.11n20_ANT1_2412_MCS0_Lower Band Emissions



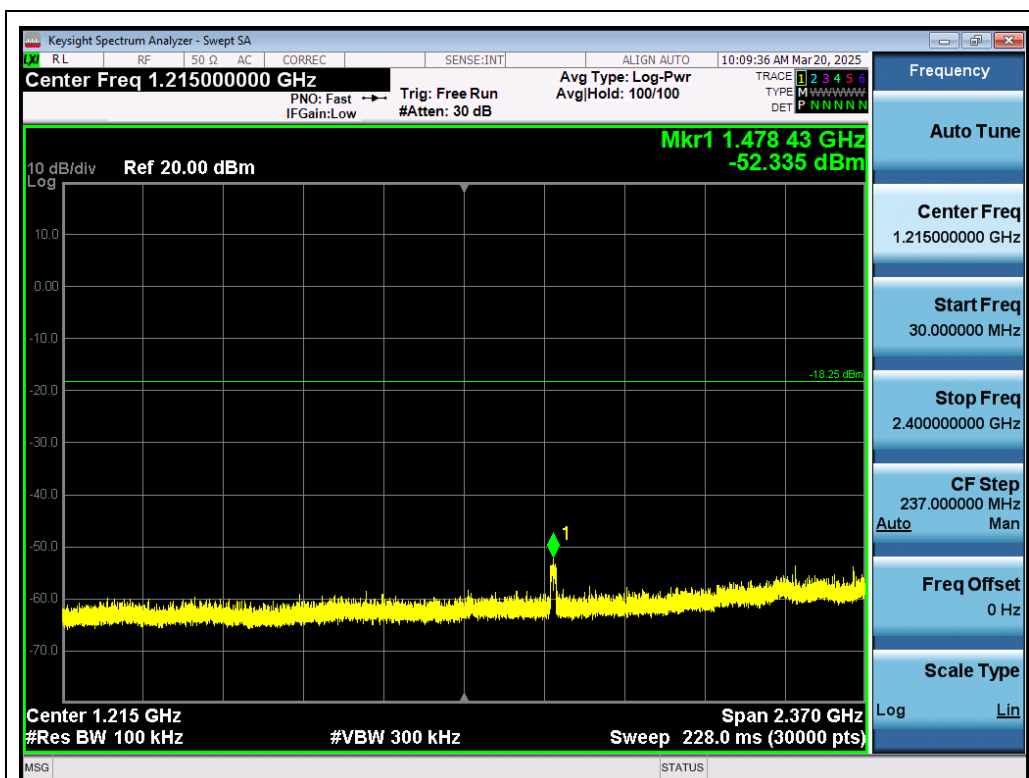
Test_Graph_802.11n20_ANT1_2412_MCS0_Higher Band Emissions



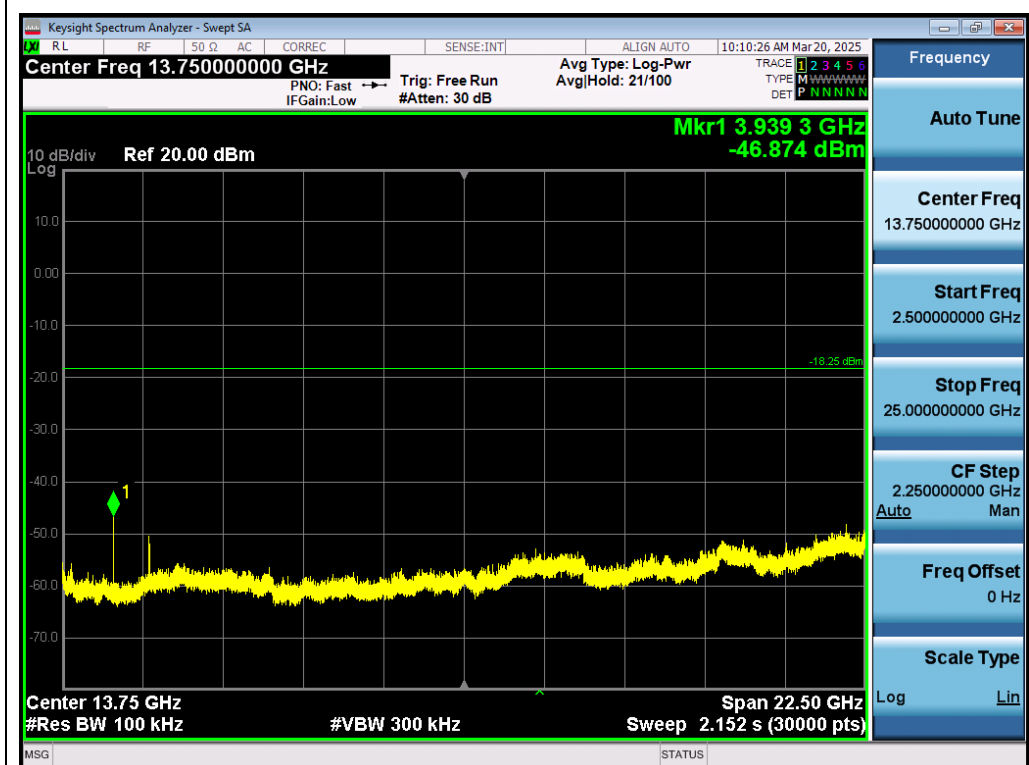
Test_Graph_802.11n20_ANT1_2437_MCS0_Lower Band Emissions



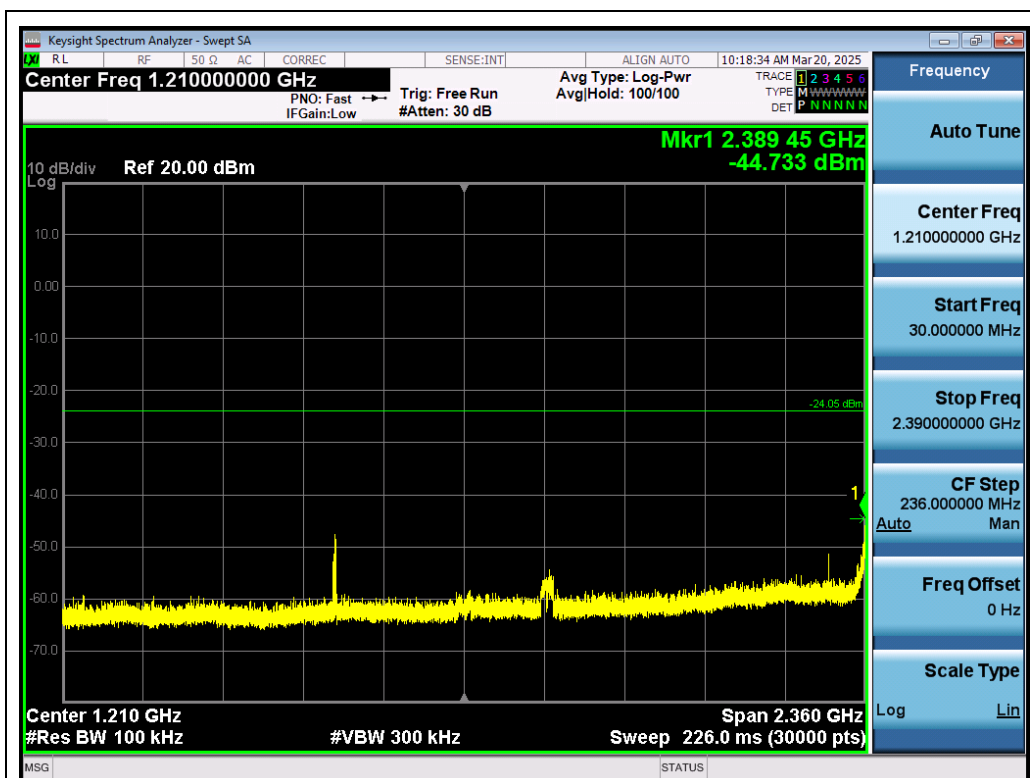
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Test_Graph_802.11n20_ANT1_2462_MCS0_Lower Band Emissions



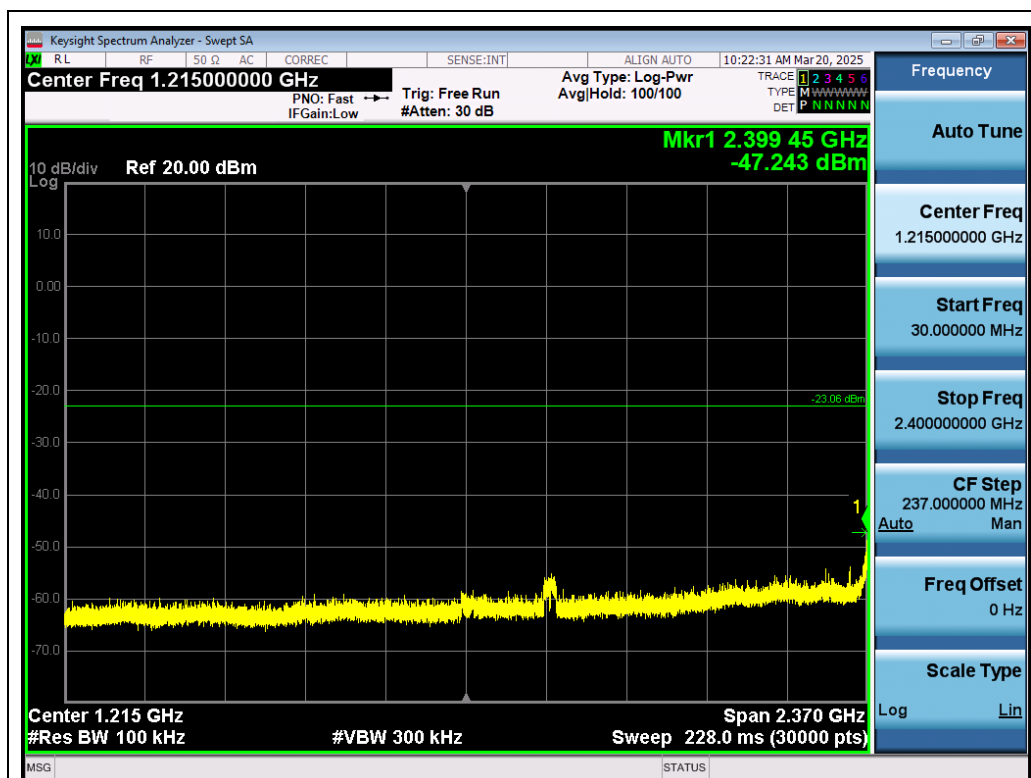
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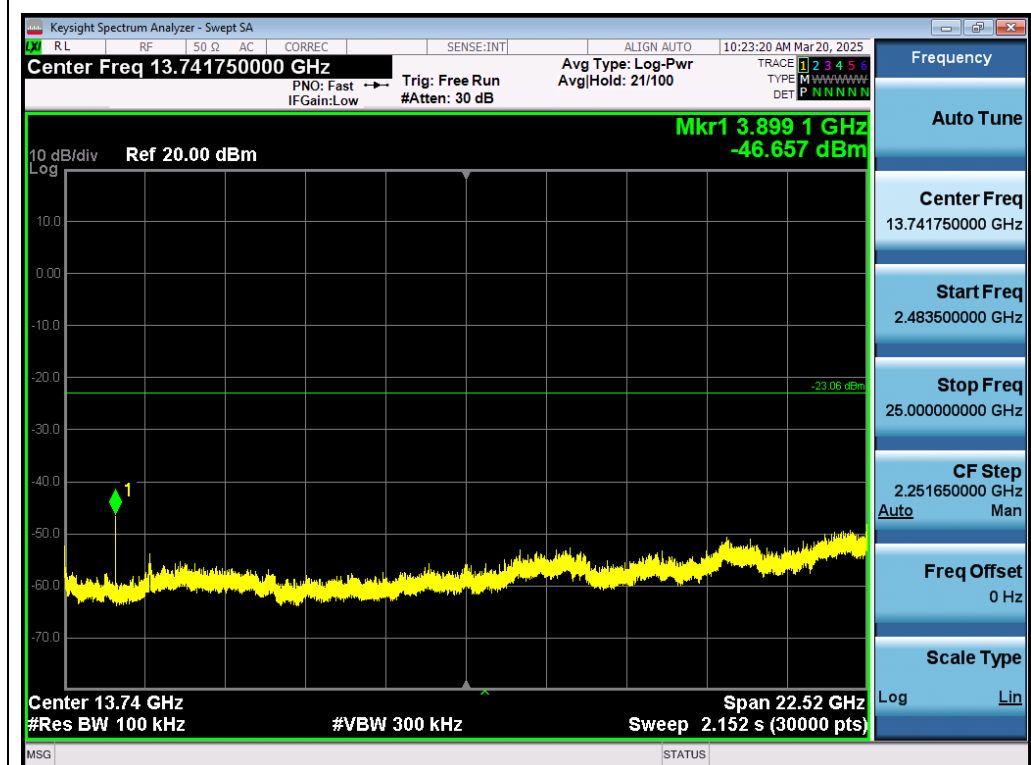
Test_Graph_802.11n40_ANT1_2422_MCS0_Lower Band Emissions



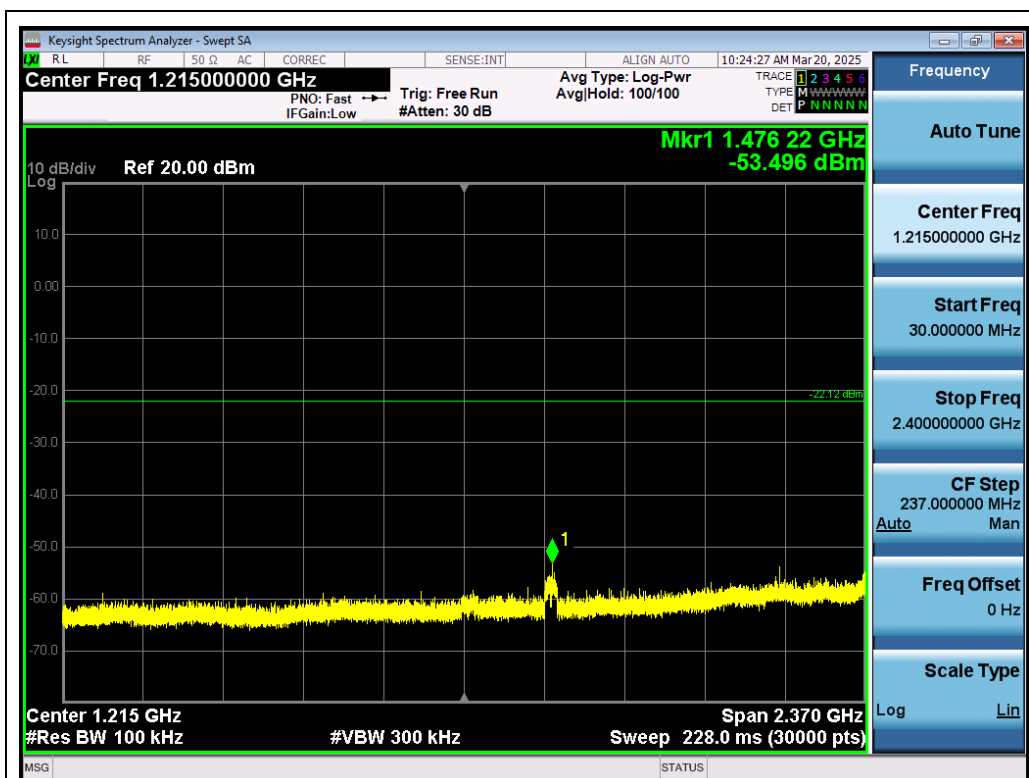
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Test_Graph_802.11n40_ANT1_2437_MCS0_Lower Band Emissions



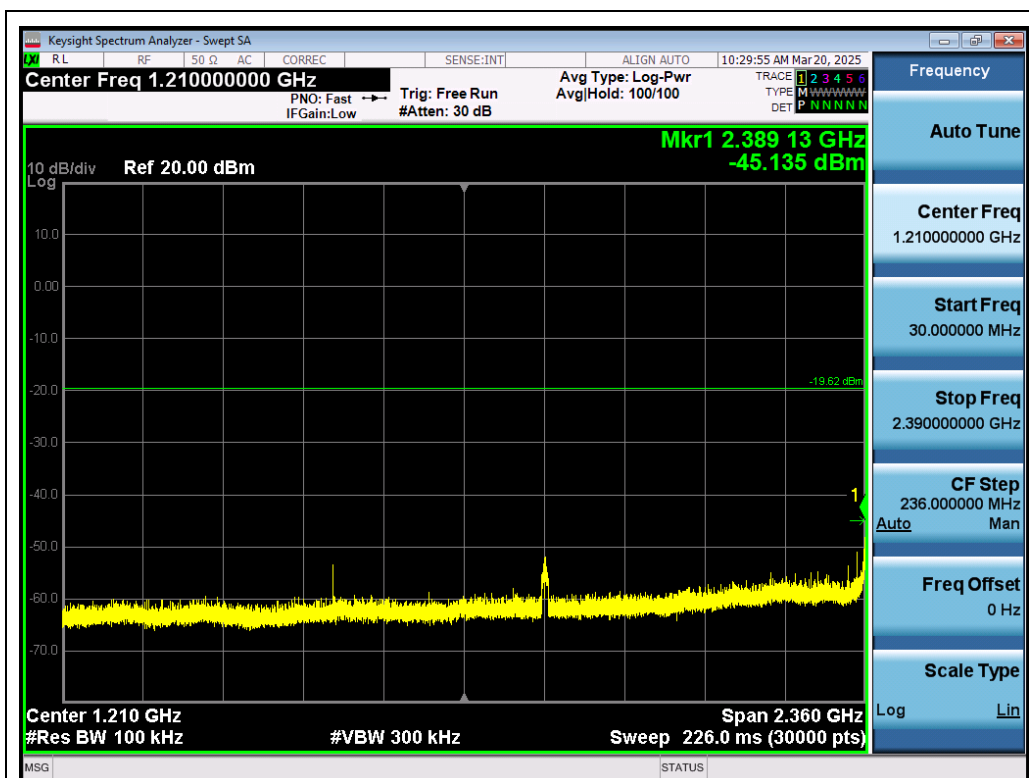
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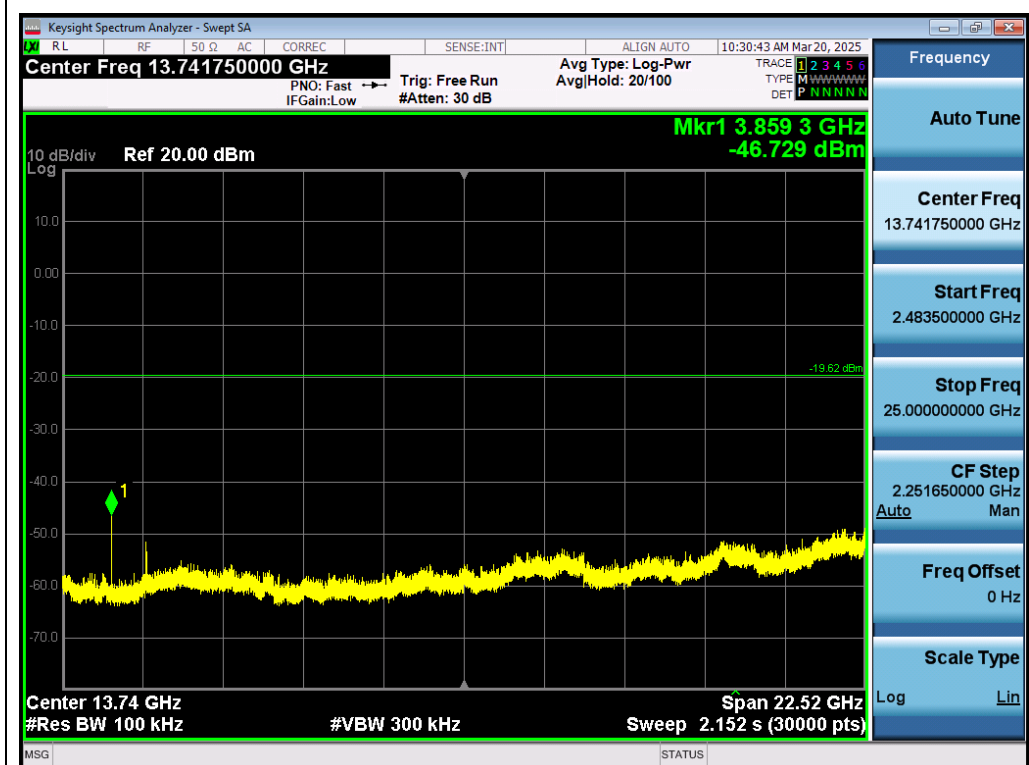
Test_Graph_802.11n40_ANT1_2452_MCS0_Lower Band Emissions



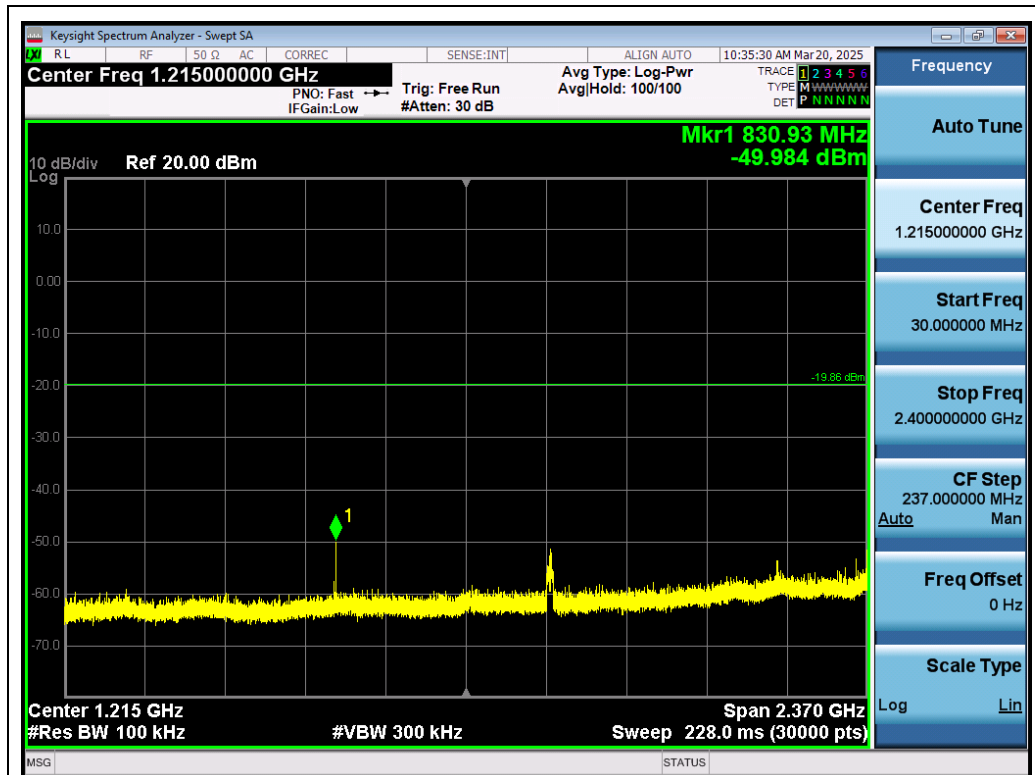
Test_Graph_802.11n40_ANT1_2452_MCS0_Higher Band Emissions



Test_Graph_802.11ax20_ANT1_2412_MCS0_Lower Band Emissions



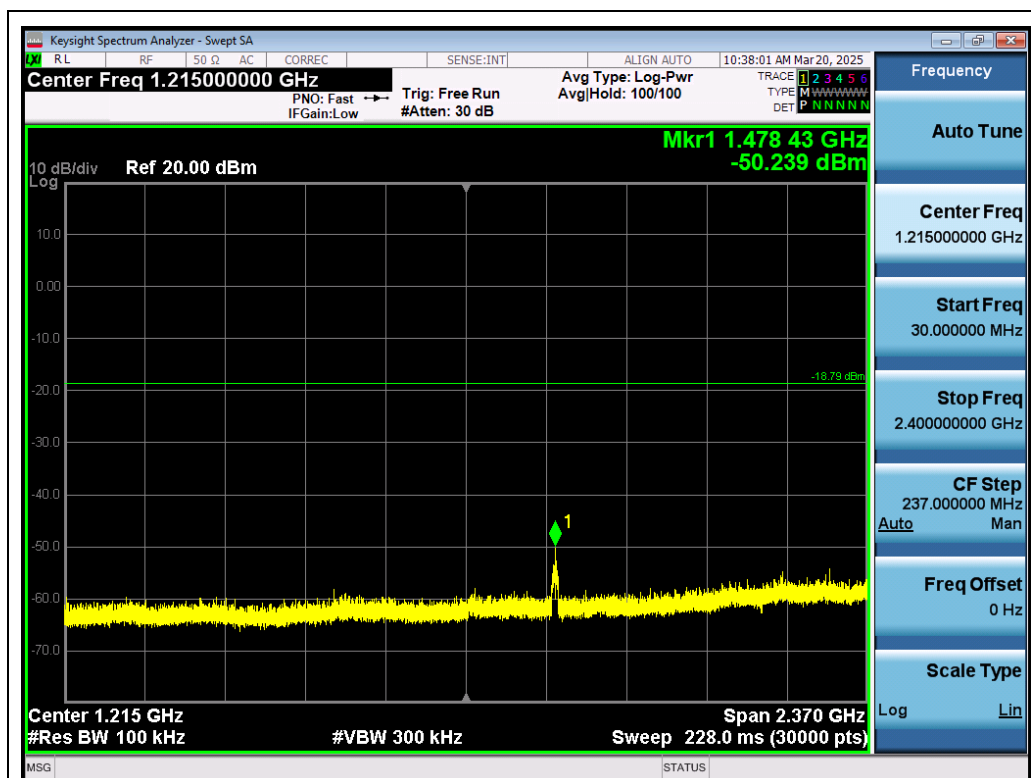
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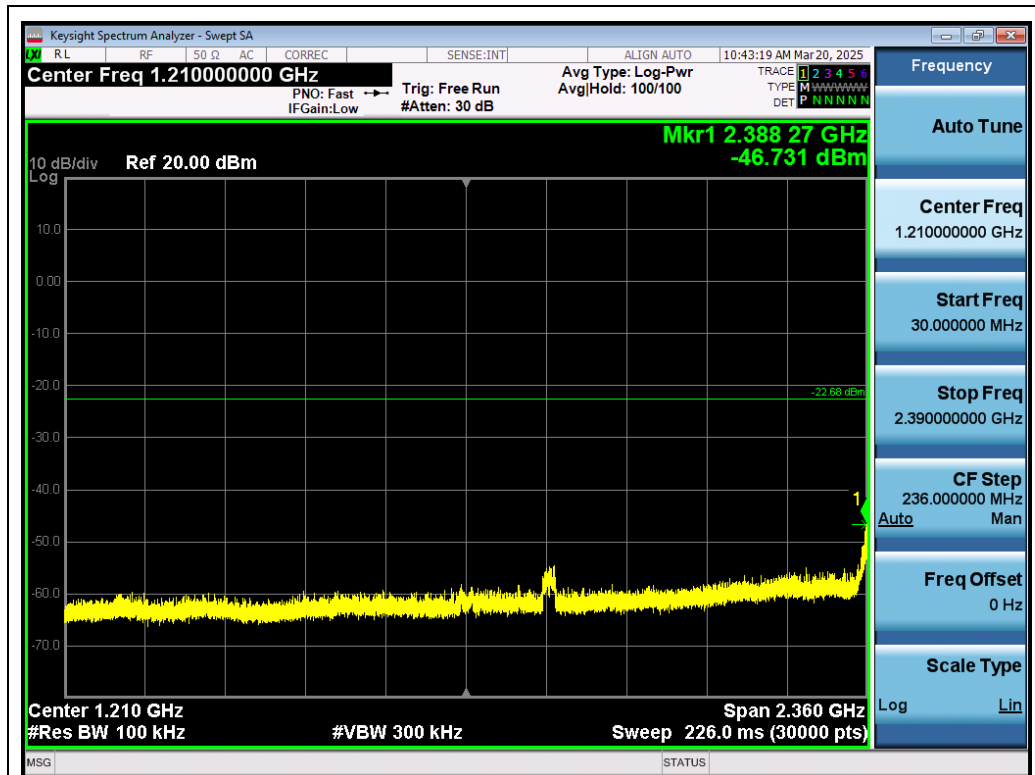


Test_Graph_802.11ax20_ANT1_2437_MCS0_Lower Band Emissions



Test_Graph_802.11ax20_ANT1_2437_MCS0_Higher Band Emissions

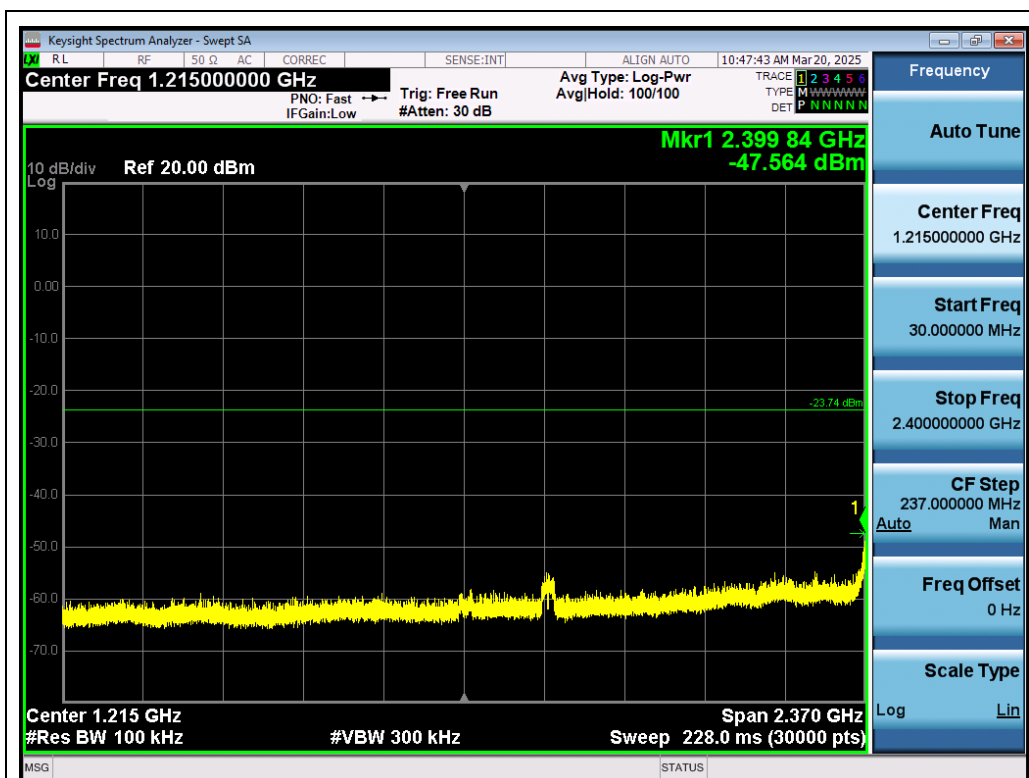




Test_Graph_802.11ax40_ANT1_2422_MCS0_Lower Band Emissions



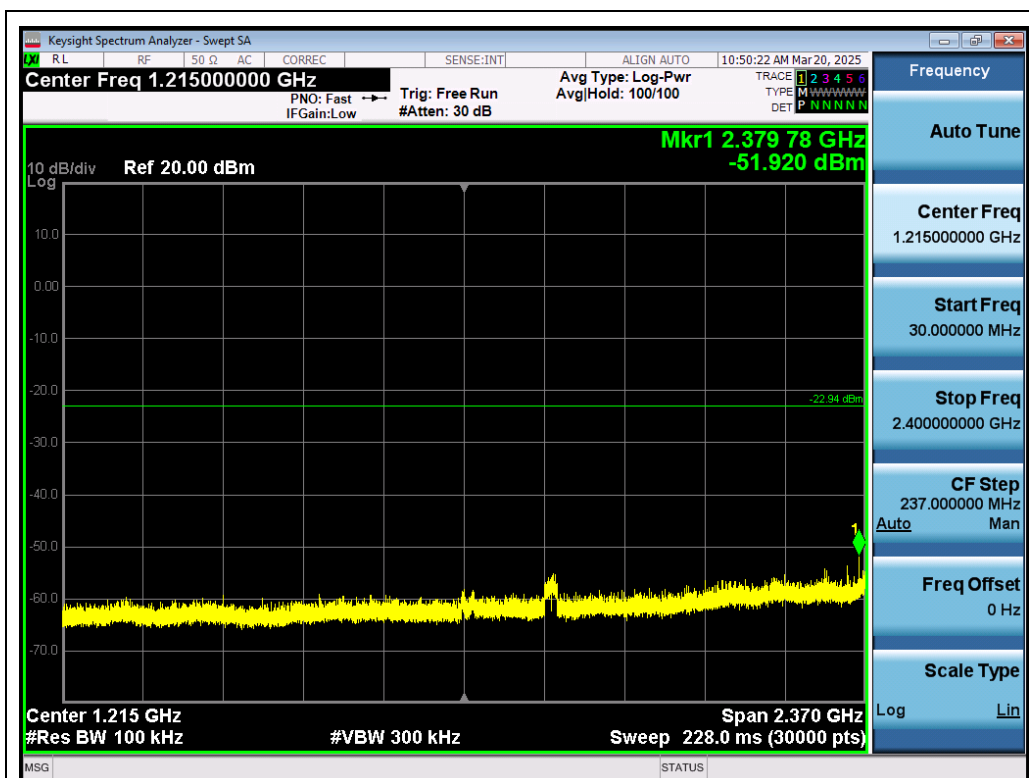
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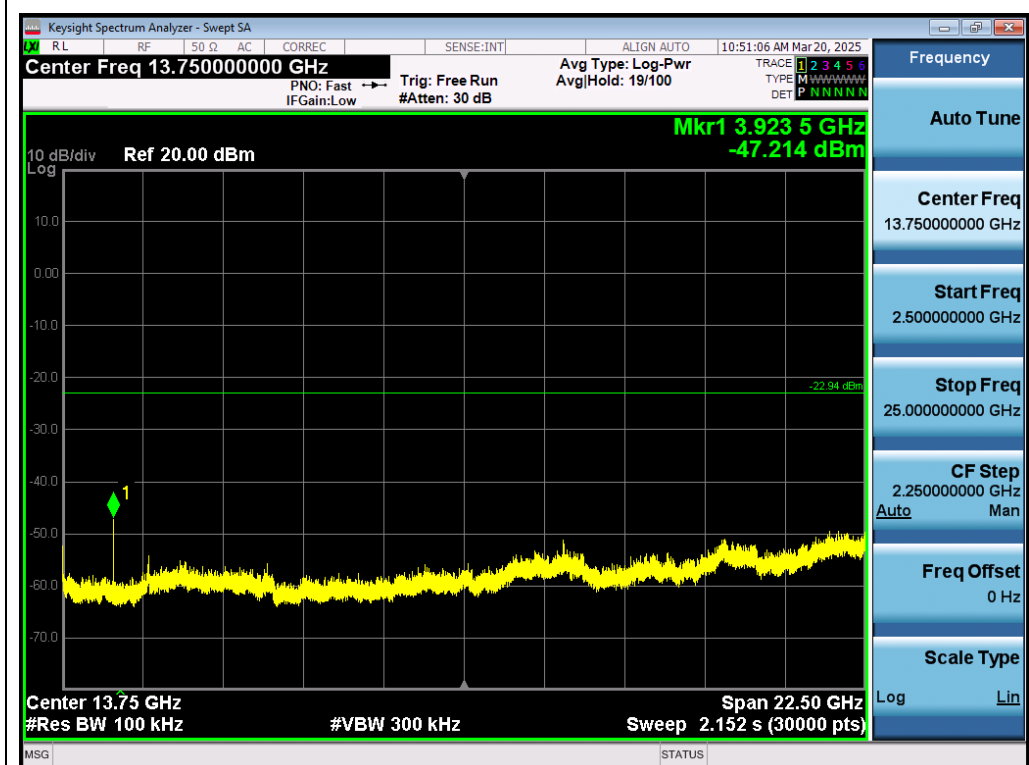
Test_Graph_802.11ax40_ANT1_2437_MCS0_Lower Band Emissions



Test_Graph_802.11ax40_ANT1_2437_MCS0_Higher Band Emissions



Test_Graph_802.11ax40_ANT1_2452_MCS0_Lower Band Emissions



Test_Graph_802.11ax40_ANT1_2452_MCS0_Higher Band Emissions

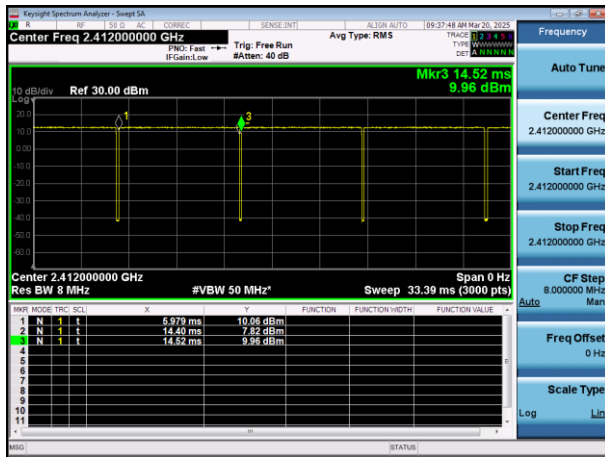
Appendix E: Duty Cycle

Test Result

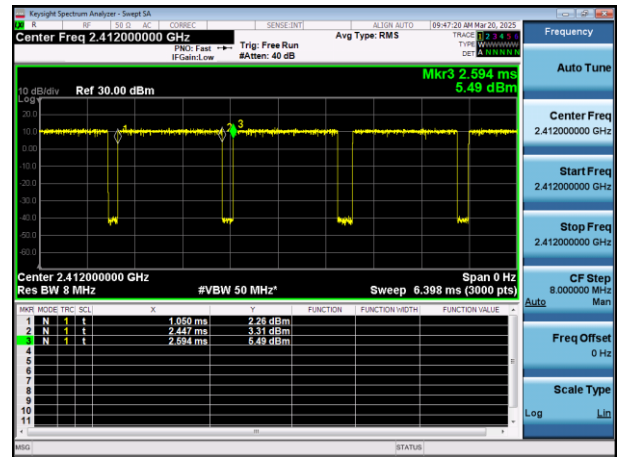
Operating mode	Data rates (Mbps)	Duty Cycle (%)	Duty Cycle Factor (dB)
IEEE 802.11b	1	98.60	0.06
IEEE 802.11g	6	90.48	0.43
IEEE 802.11n-HT20	MCS0	95.56	0.20
IEEE 802.11n-HT40	MCS0	97.18	0.12
IEEE 802.11ax-HE20	MCS0	95.70	0.19
IEEE 802.11ax-HE40	MCS0	96.92	0.14

Test Graphs

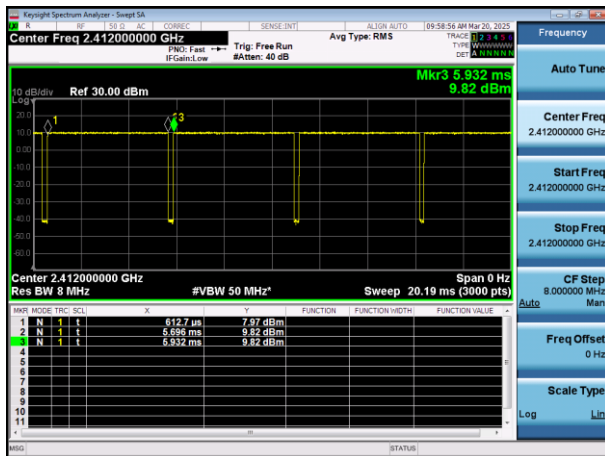
IEEE 802.11b



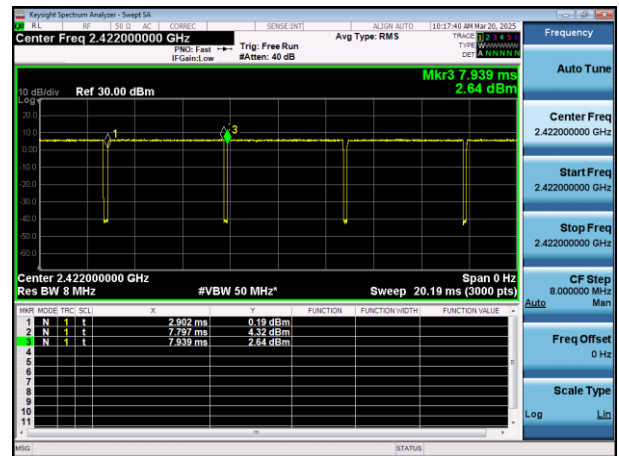
IEEE 802.11g



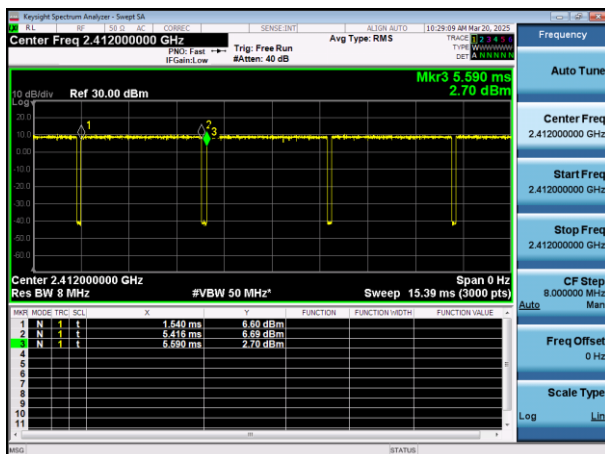
IEEE 802.11n-HT20



IEEE 802.11n-HT40



IEEE 802.11ax-HE20



IEEE 802.11ax-HE40

