

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

Product Name: Mini SIP Intercom

Trade Mark: 

Test Model: H501W-B

FCC ID: 2APPZ-H501W

Environmental Conditions

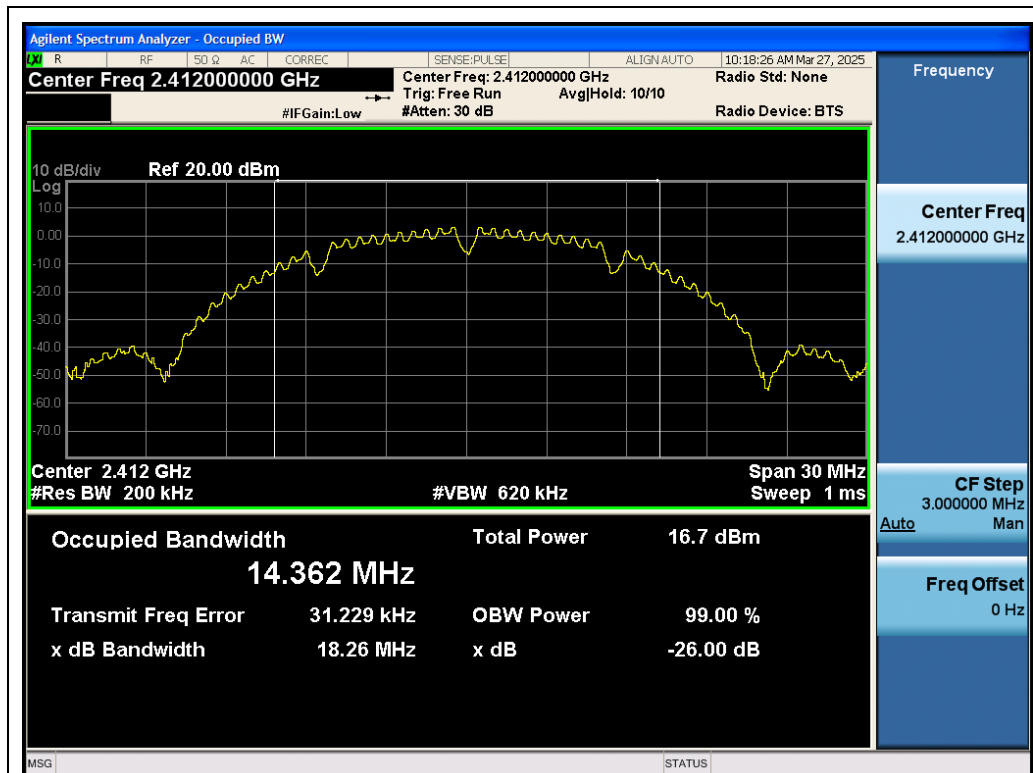
Temperature:	22℃
Relative Humidity:	51%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: 6dB Bandwidth Measurement

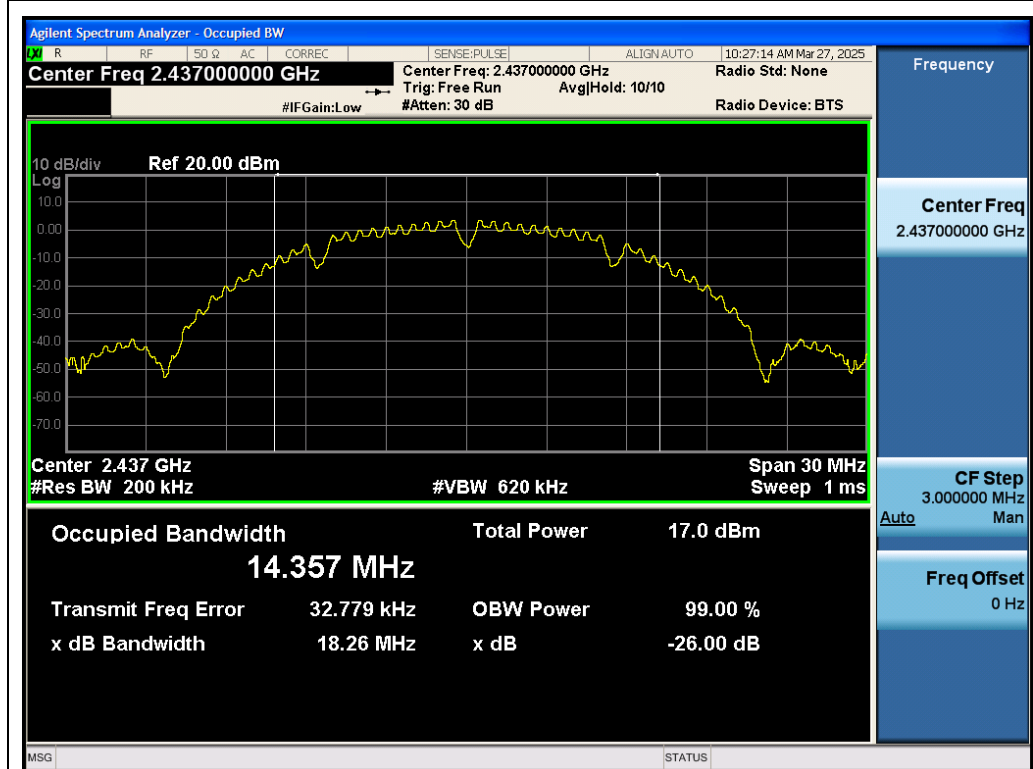
Test Result

Test Data of Occupied Bandwidth and DTS Bandwidth					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth	-6dB Bandwidth	Limits (MHz)	Pass or Fail
802.11b	2412	14.362	10.074	≥ 0.5	Pass
	2437	14.357	10.071	≥ 0.5	Pass
	2462	14.344	10.062	≥ 0.5	Pass
802.11g	2412	16.666	15.151	≥ 0.5	Pass
	2437	16.648	15.127	≥ 0.5	Pass
	2462	16.650	15.156	≥ 0.5	Pass
802.11n20	2412	17.831	15.158	≥ 0.5	Pass
	2437	17.840	15.160	≥ 0.5	Pass
	2462	17.828	15.154	≥ 0.5	Pass
802.11n40	2422	36.590	35.211	≥ 0.5	Pass
	2437	36.582	35.199	≥ 0.5	Pass
	2452	36.492	35.205	≥ 0.5	Pass
802.11ax20	2412	19.002	16.421	≥ 0.5	Pass
	2437	19.031	16.687	≥ 0.5	Pass
	2462	19.025	16.372	≥ 0.5	Pass
802.11ax40	2422	37.876	36.196	≥ 0.5	Pass
	2437	37.809	37.150	≥ 0.5	Pass
	2452	37.875	36.222	≥ 0.5	Pass

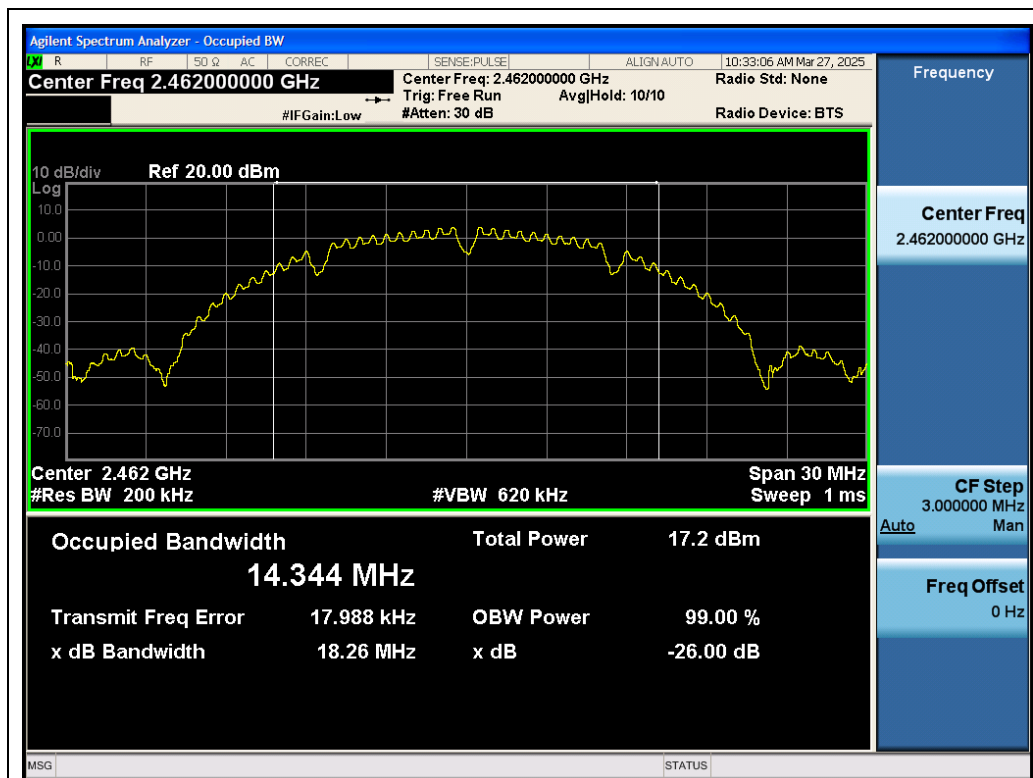
Test Graphs



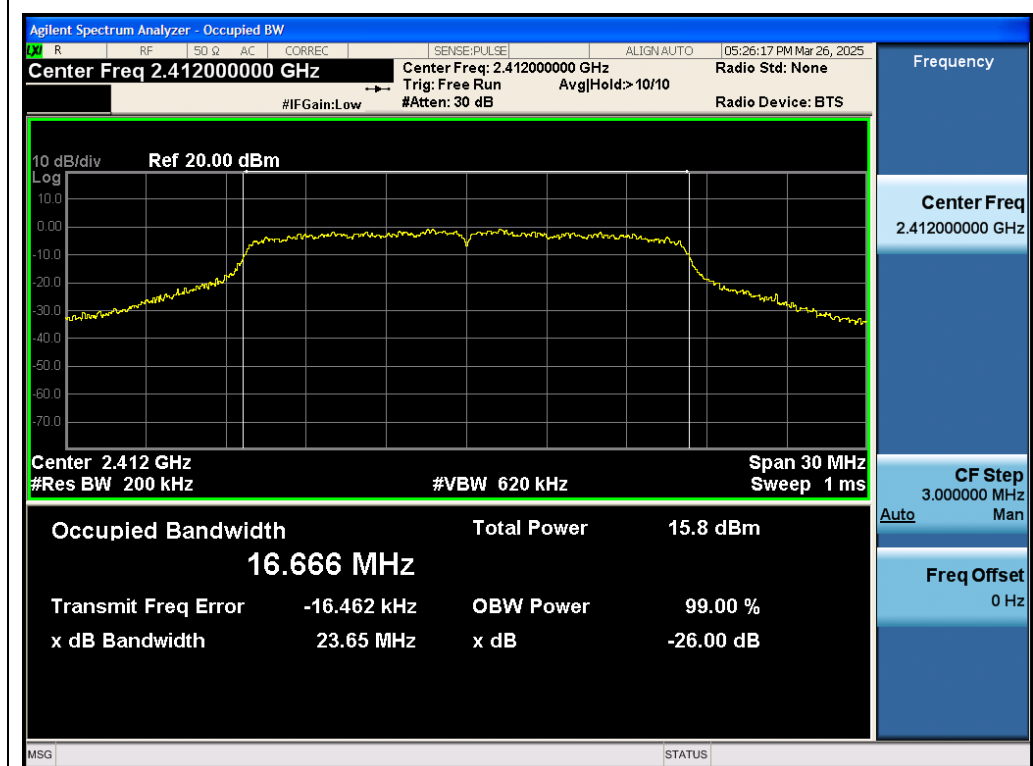
Test_Graph_802.11b_ANT2_2412_1Mbps_OBW



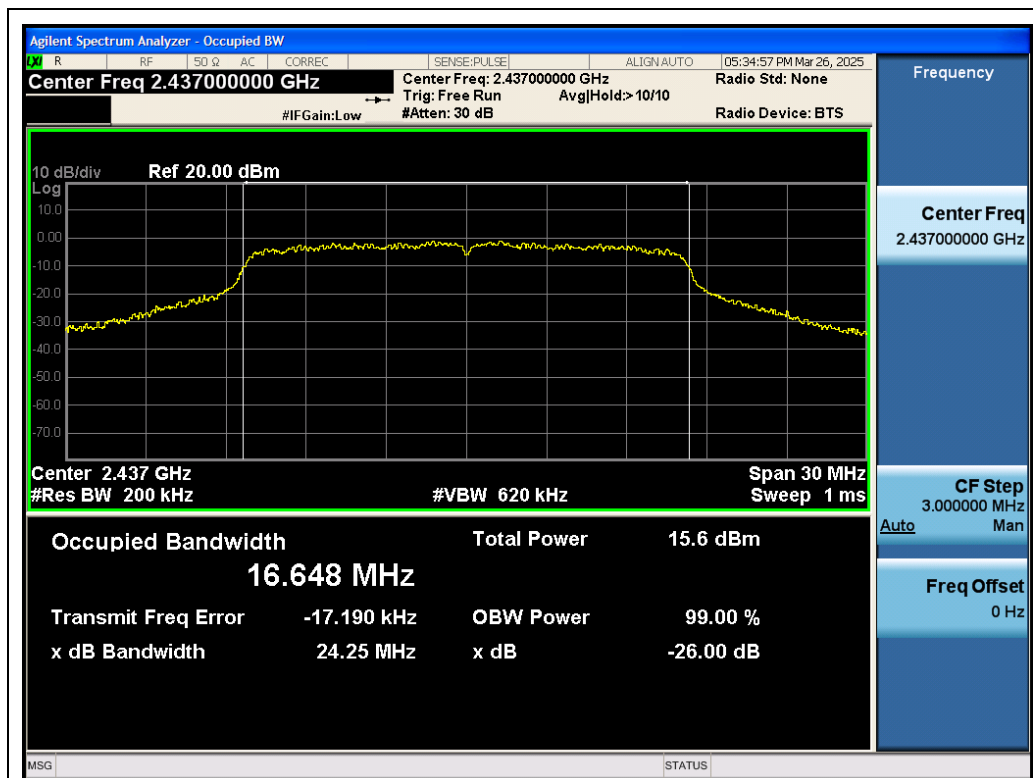
Test_Graph_802.11b_ANT2_2437_1Mbps_OBW



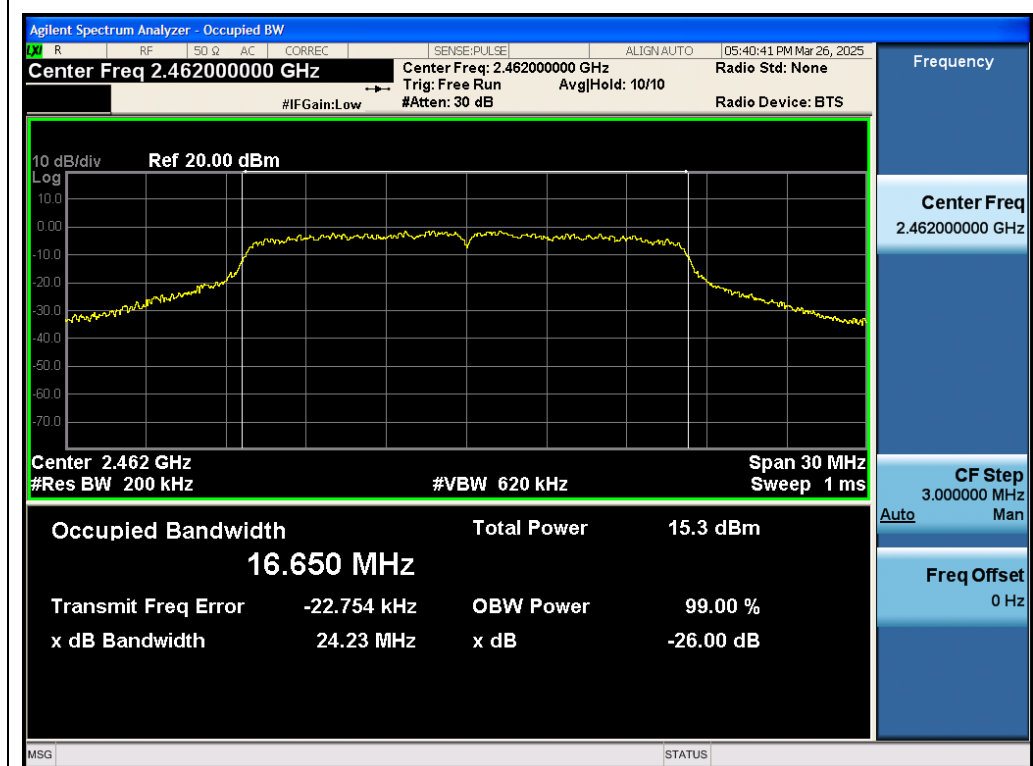
Test_Graph_802.11b_ANT2_2462_1Mbps_OBW



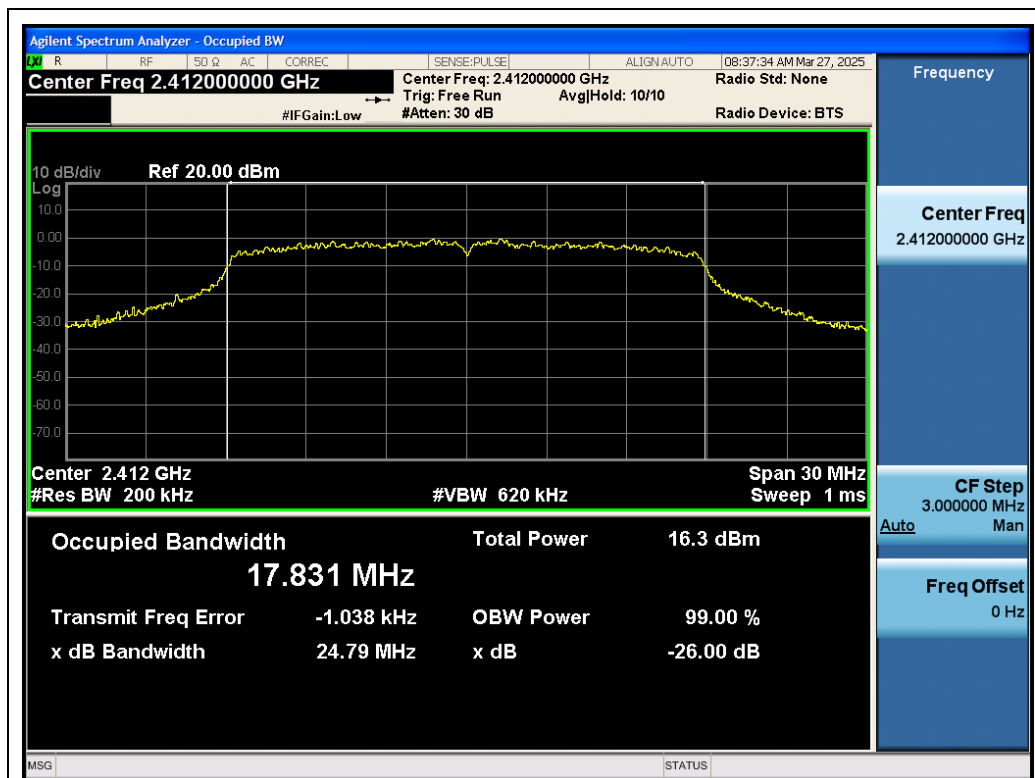
Test_Graph_802.11g_ANT2_2412_6Mbps_OBW



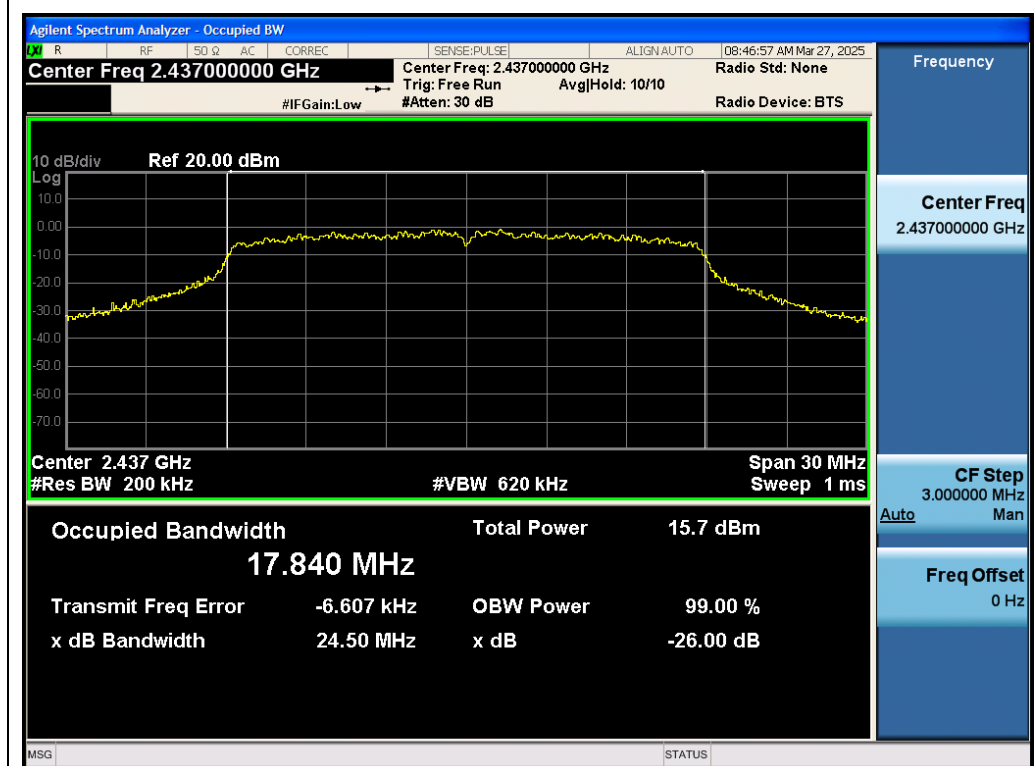
Test_Graph_802.11g_ANT2_2437_6Mbps_OBW



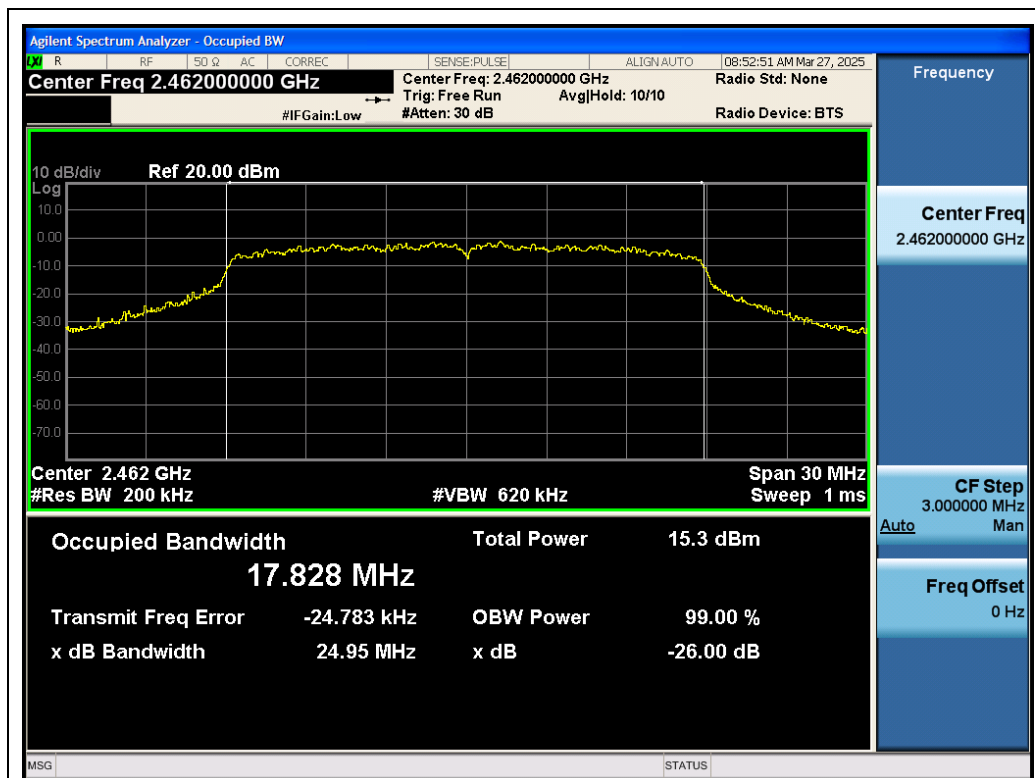
Test_Graph_802.11g_ANT2_2462_6Mbps_OBW



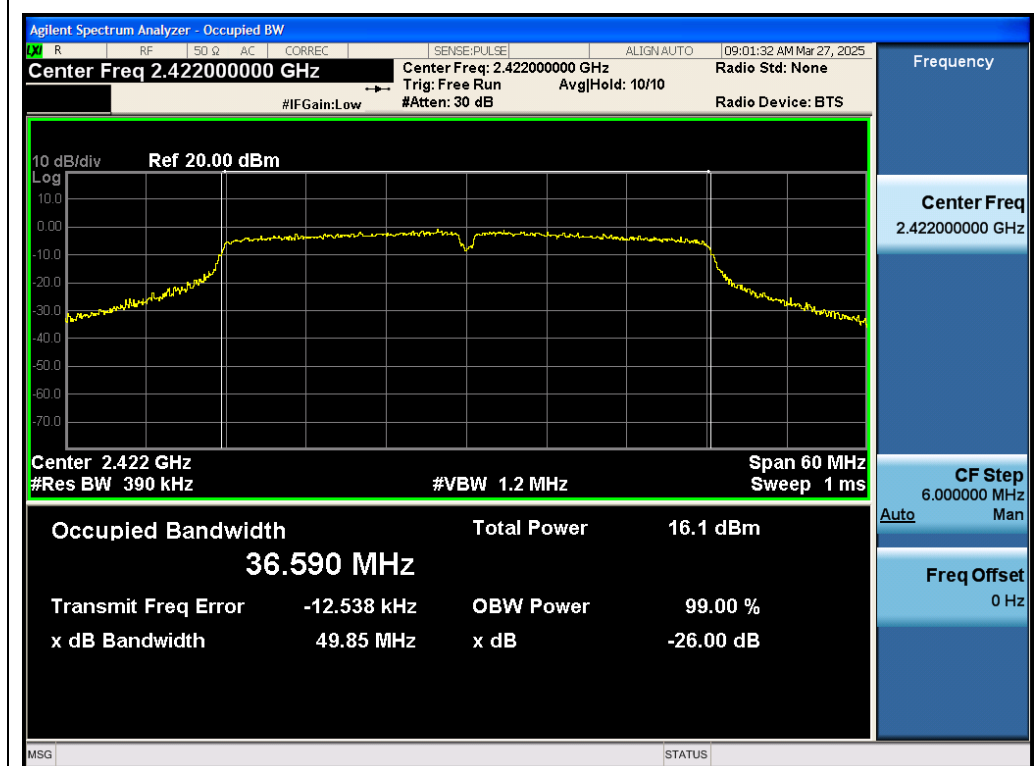
Test_Graph_802.11n20_ANT2_2412_MCS0_OBW



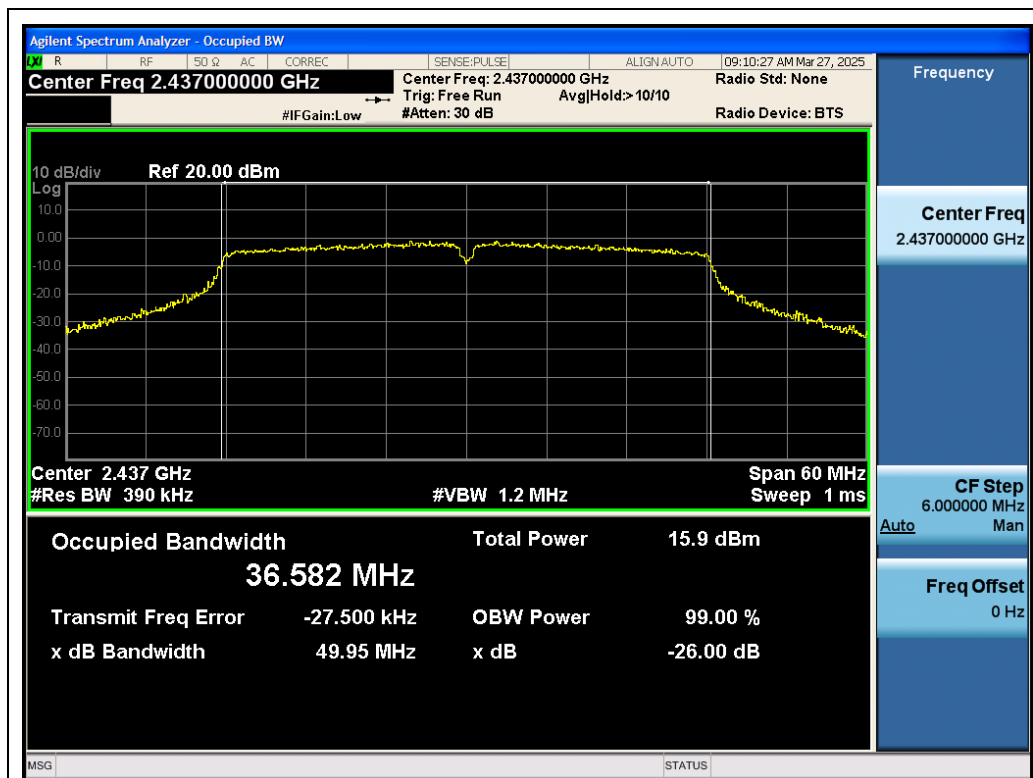
Test_Graph_802.11n20_ANT2_2437_MCS0_OBW



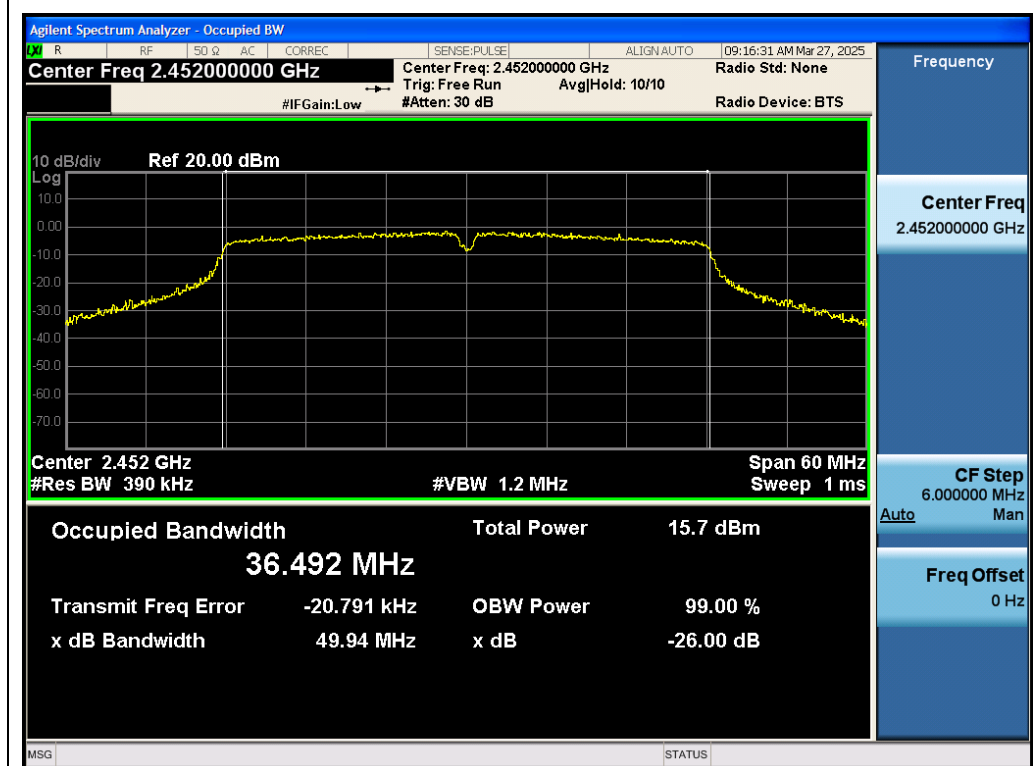
Test_Graph_802.11n20_ANT2_2462_MCS0_OBW



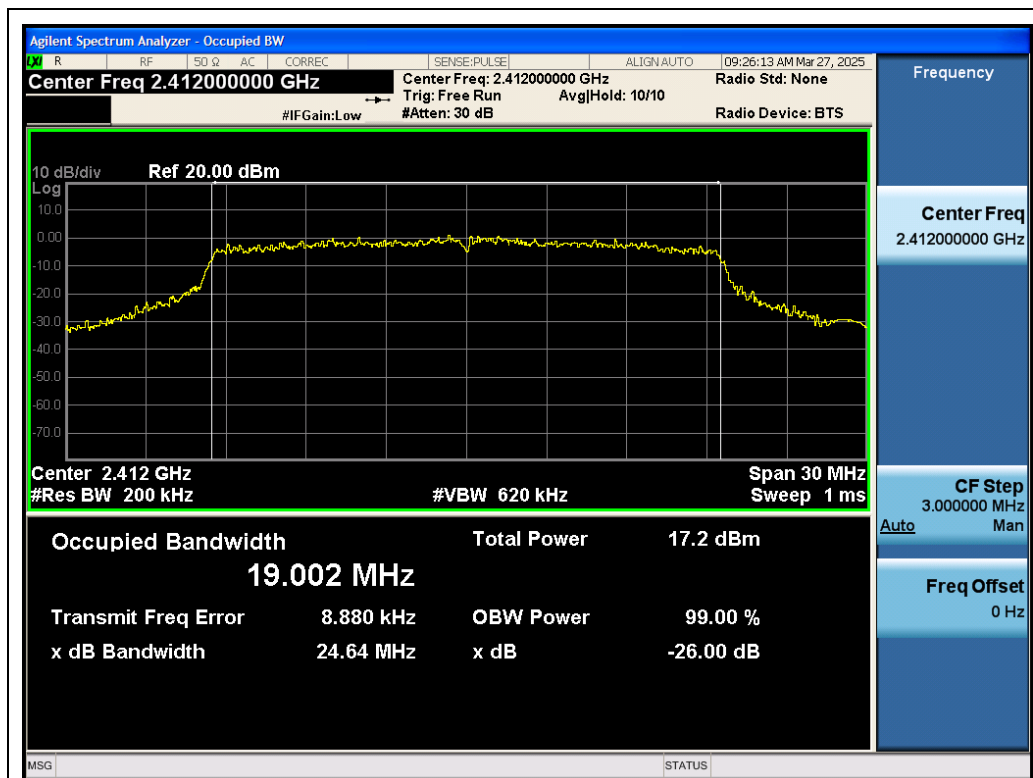
Test_Graph_802.11n40_ANT2_2422_MCS0_OBW



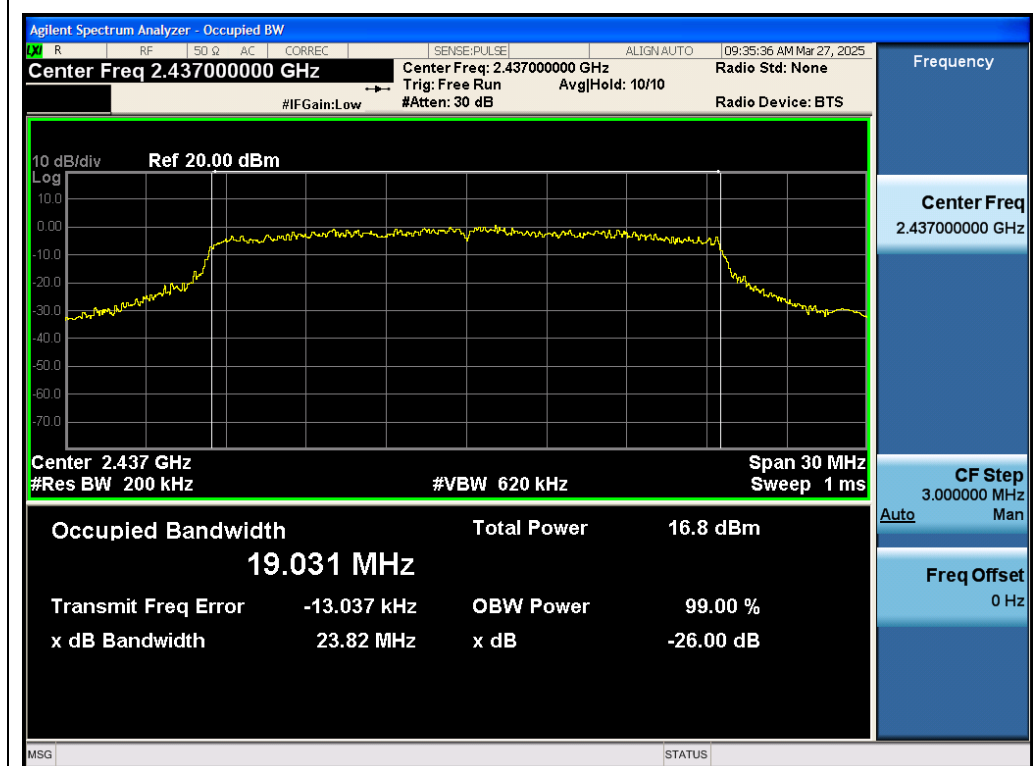
Test_Graph_802.11n40_ANT2_2437_MCS0_OBW



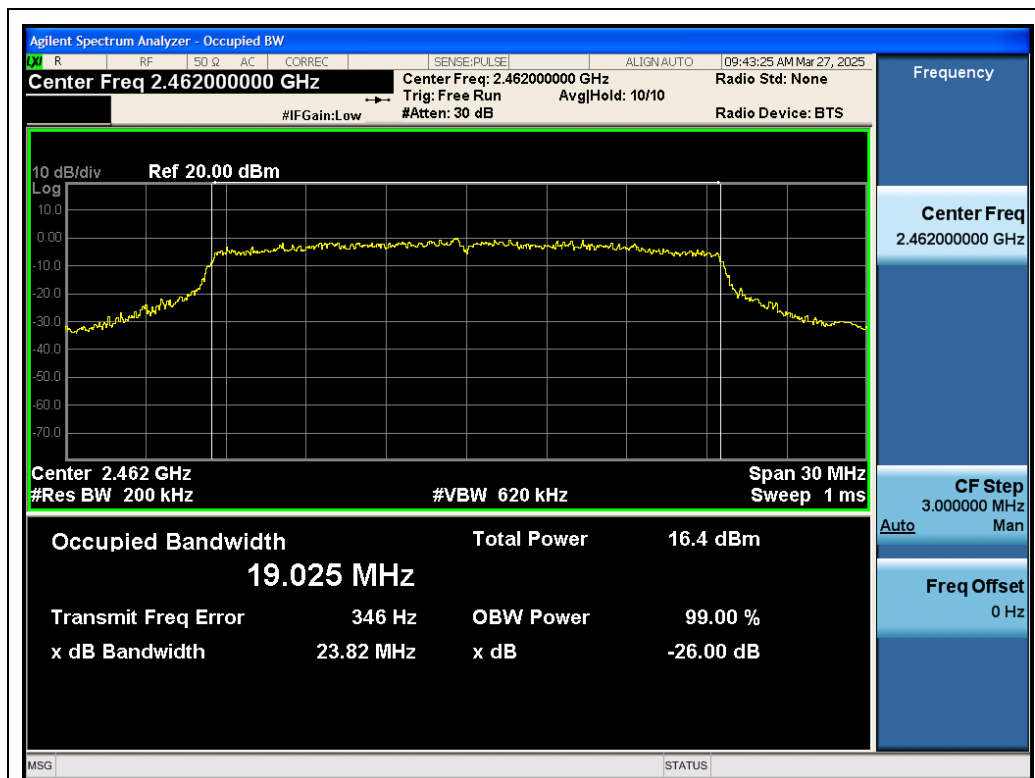
Test_Graph_802.11n40_ANT2_2452_MCS0_OBW



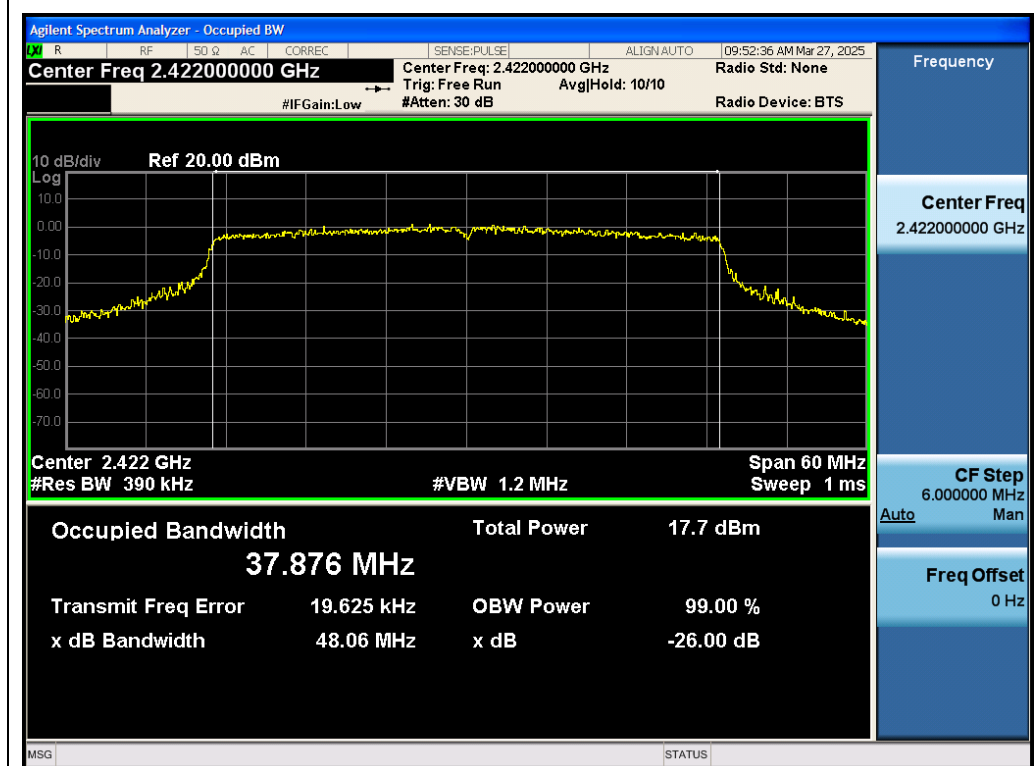
Test_Graph_802.11ax20_ANT2_2412_MCS0_OBW



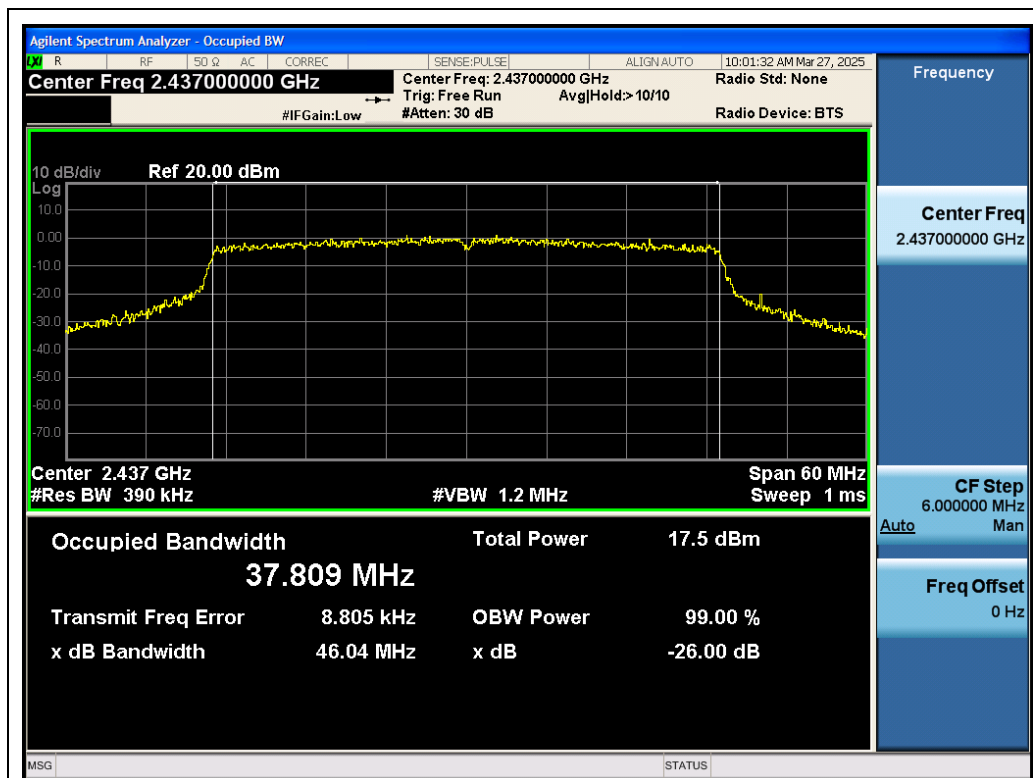
Test_Graph_802.11ax20_ANT2_2437_MCS0_OBW



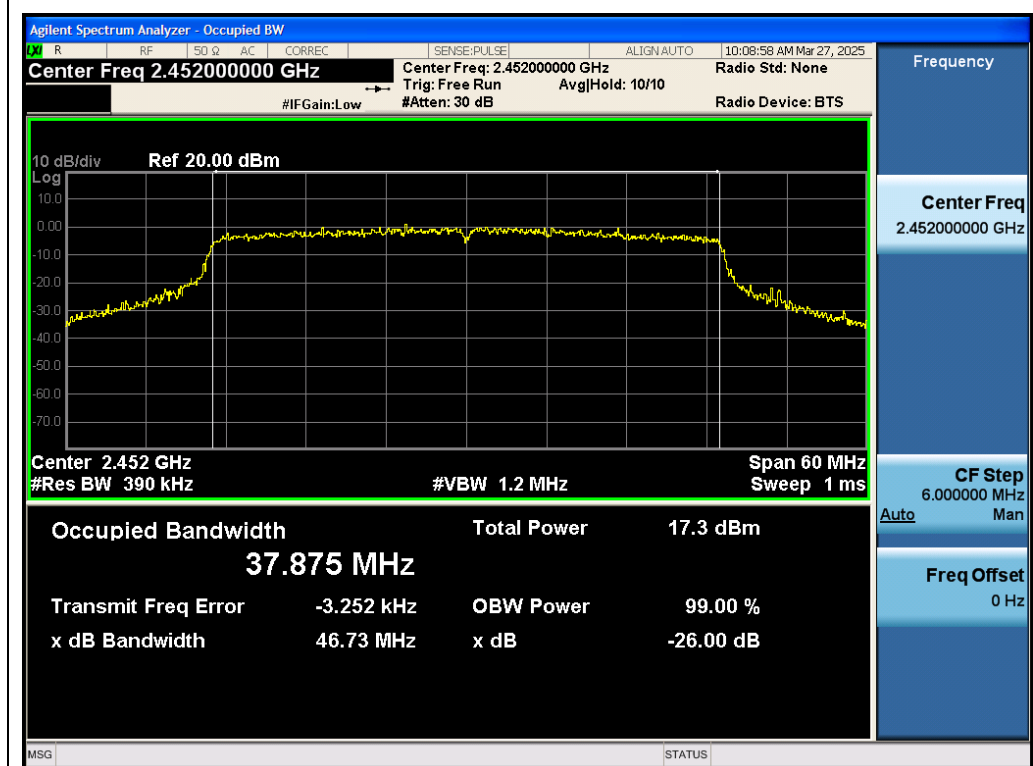
Test_Graph_802.11ax20_ANT2_2462_MCS0_OBW



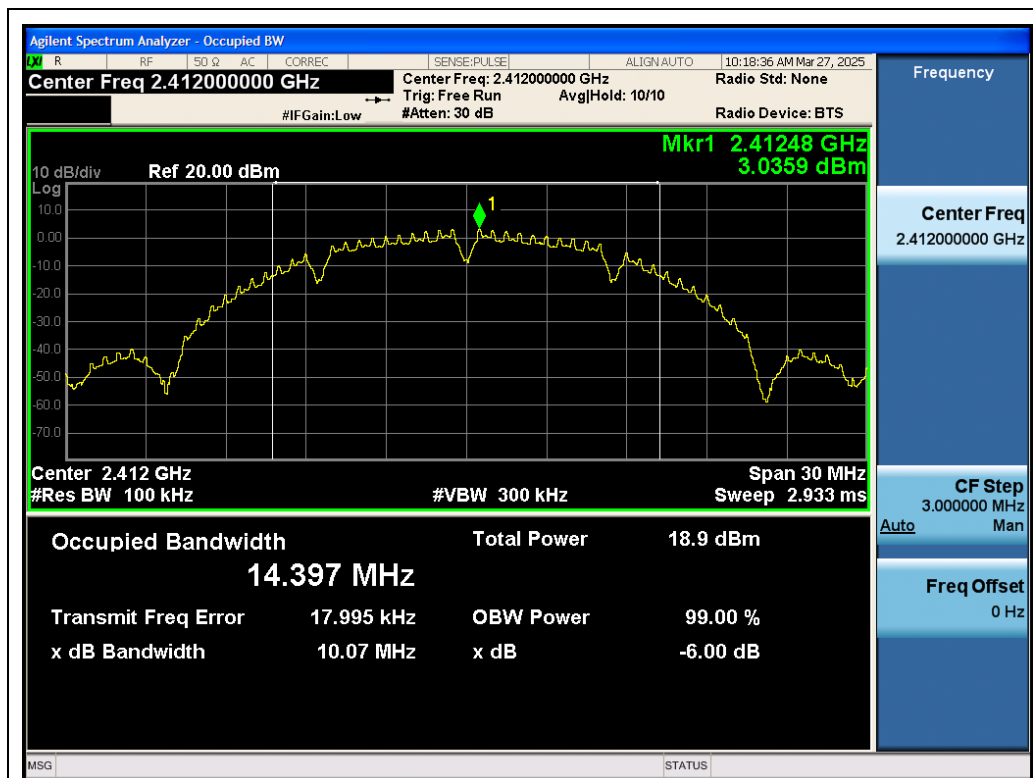
Test_Graph_802.11ax40_ANT2_2422_MCS0_OBW



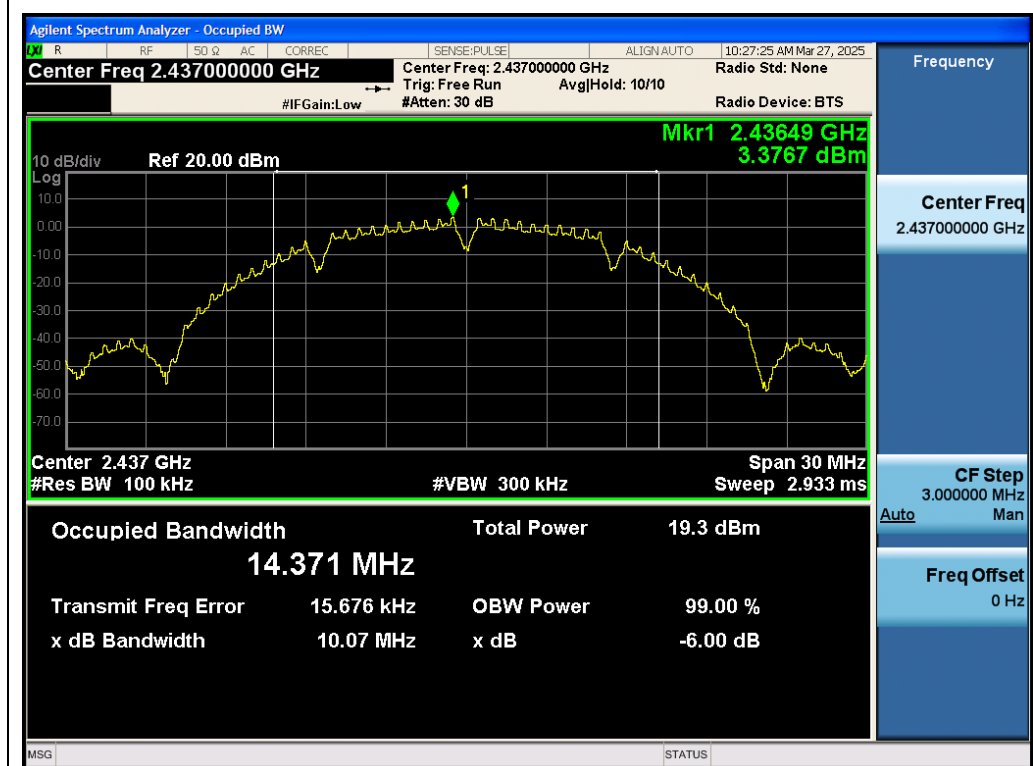
Test_Graph_802.11ax40_ANT2_2437_MCS0_OBW



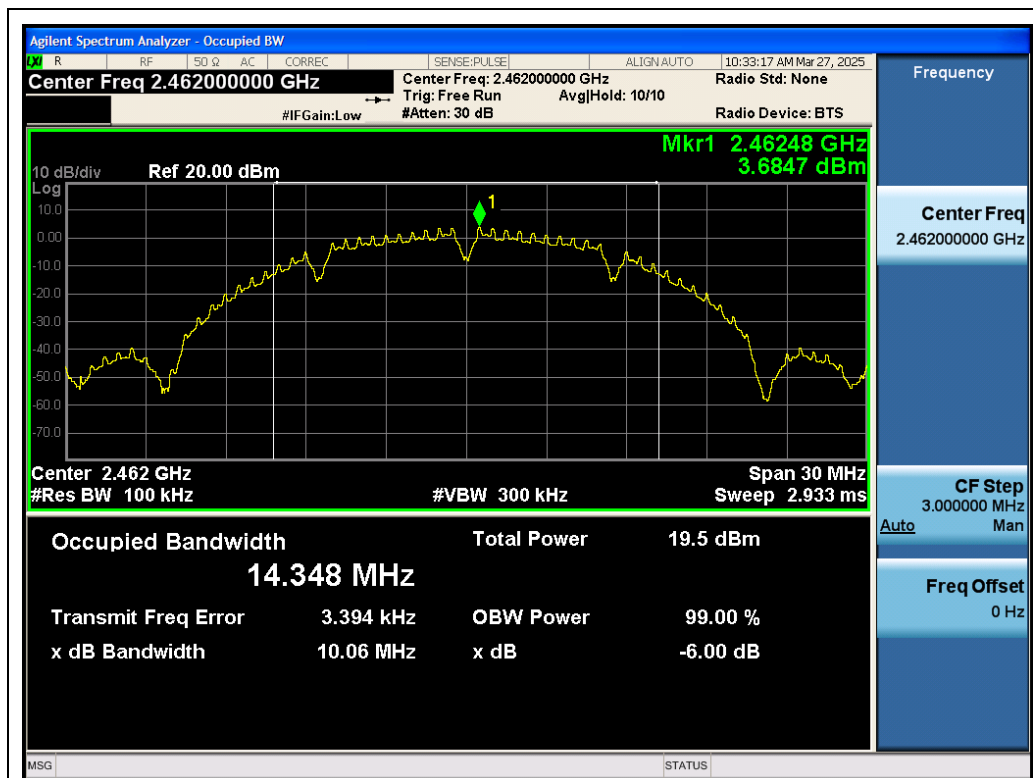
Test_Graph_802.11ax40_ANT2_2452_MCS0_OBW



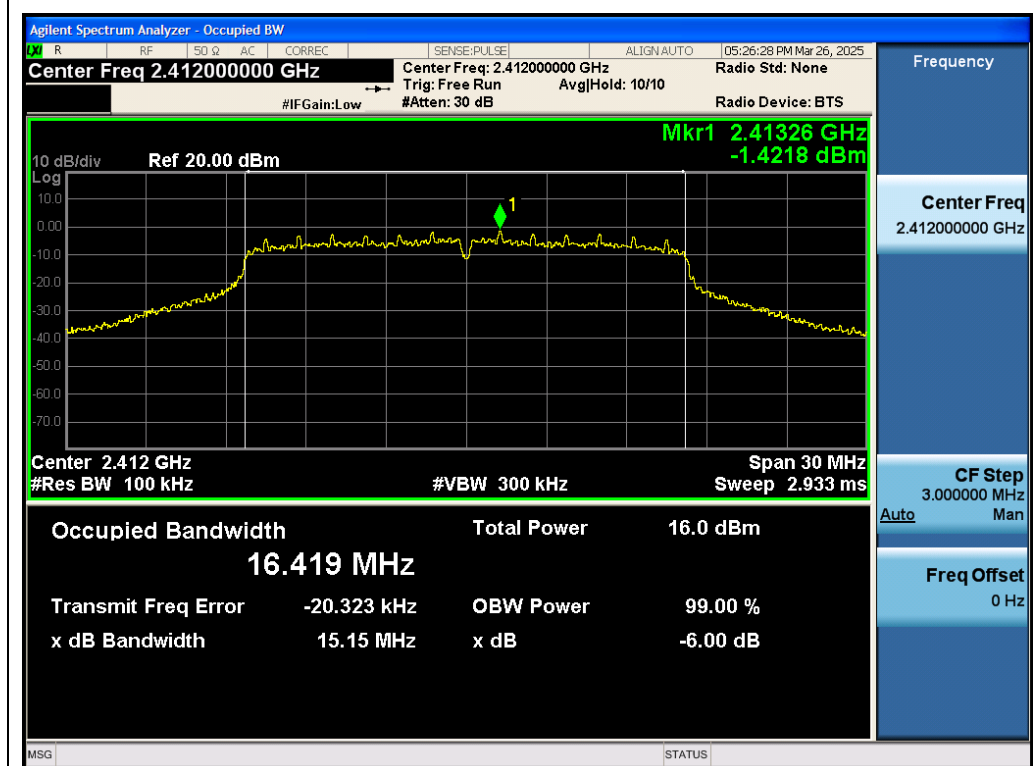
Test_Graph_802.11b_ANT2_2412_1Mbps_DTSSBW



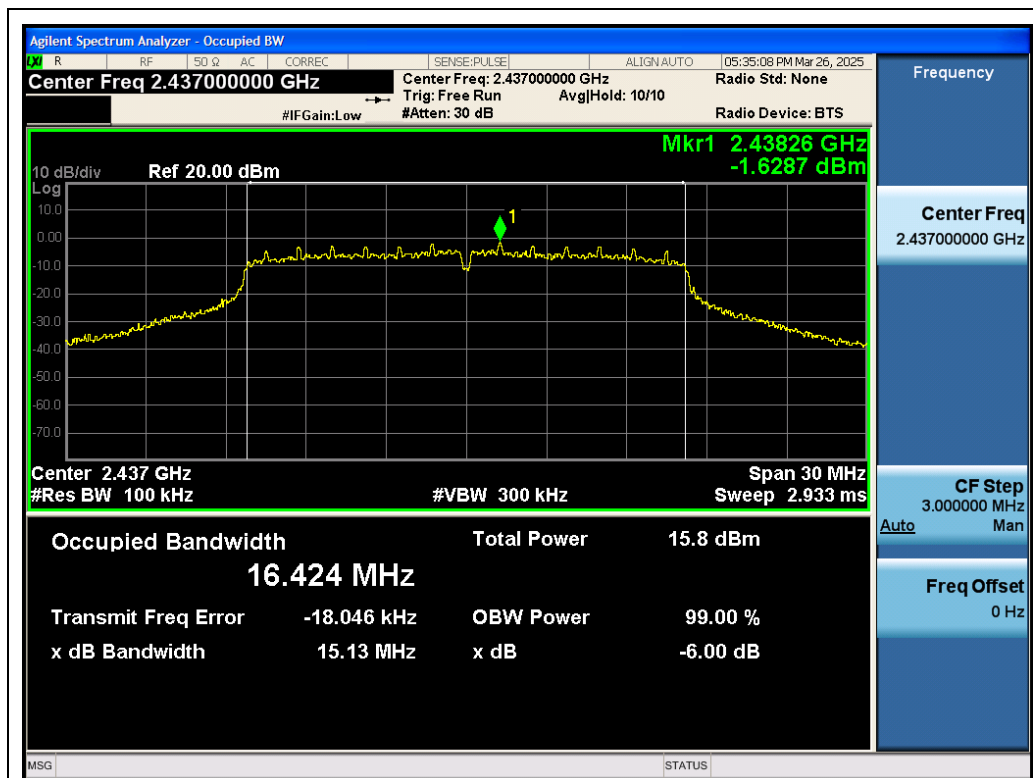
Test_Graph_802.11b_ANT2_2437_1Mbps_DTSSBW



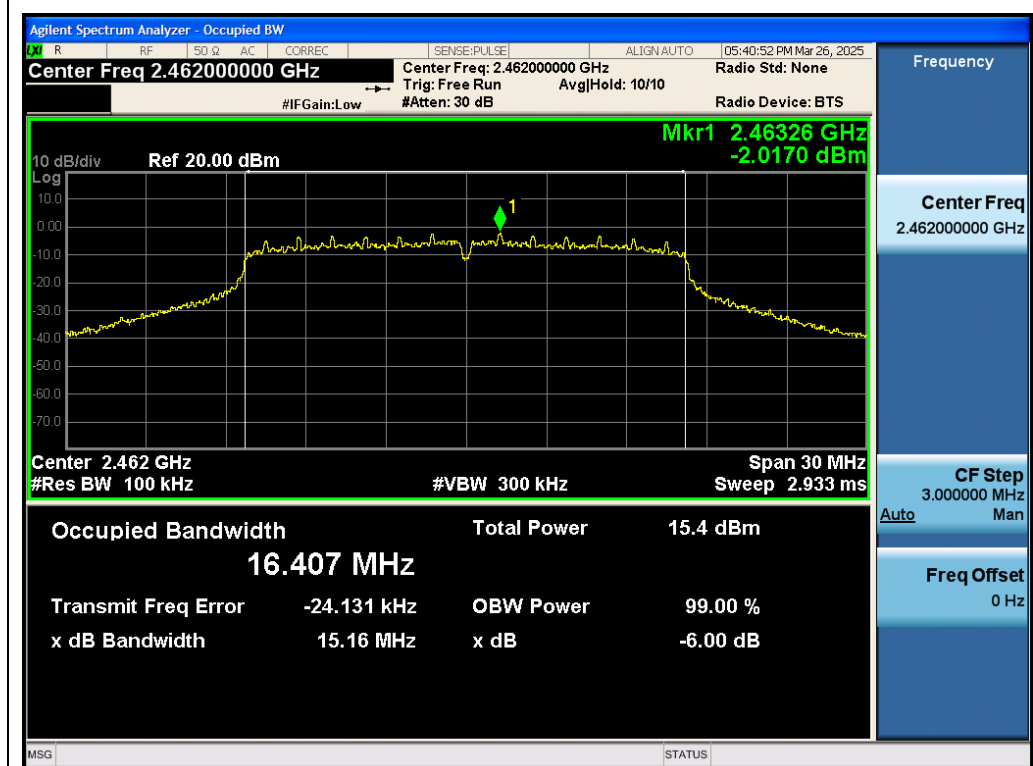
Test_Graph_802.11b_ANT2_2462_1Mbps_DTSBW



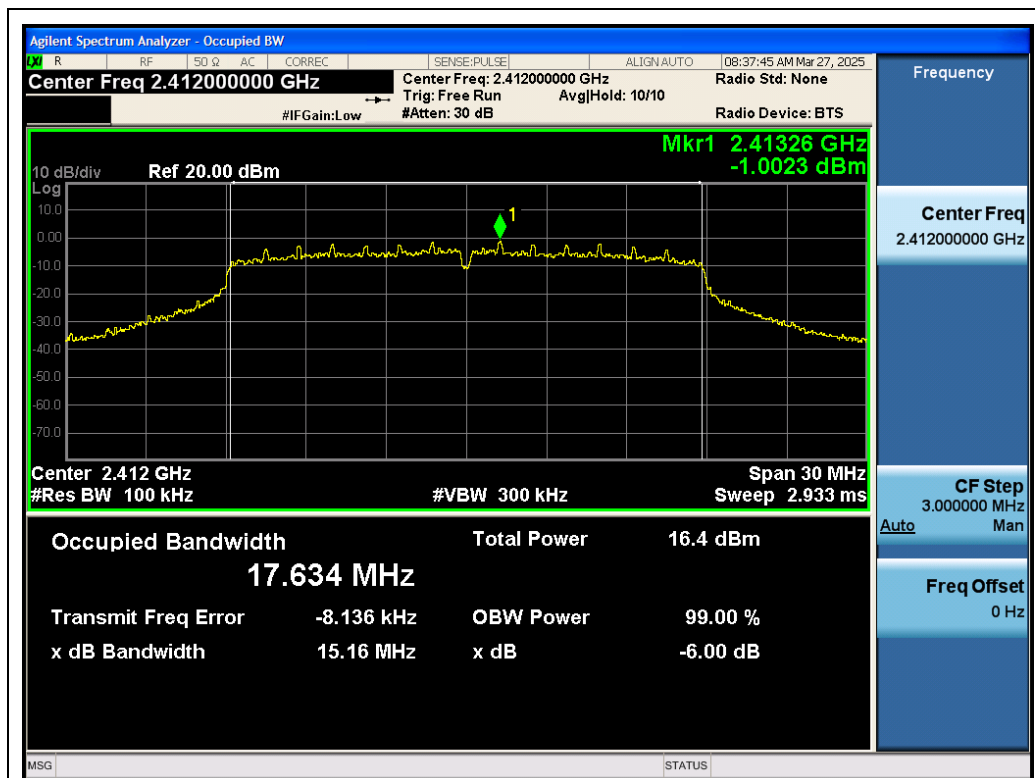
Test_Graph_802.11g_ANT2_2412_6Mbps_DTSBW



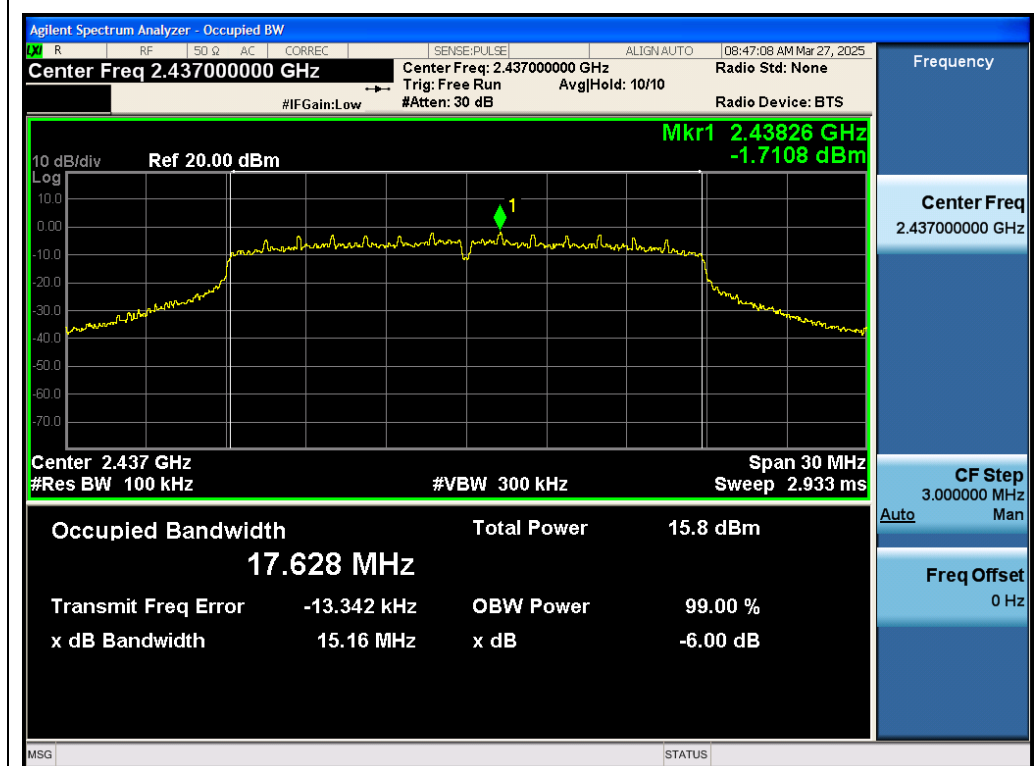
Test_Graph_802.11g_ANT2_2437_6Mbps_DTSBW



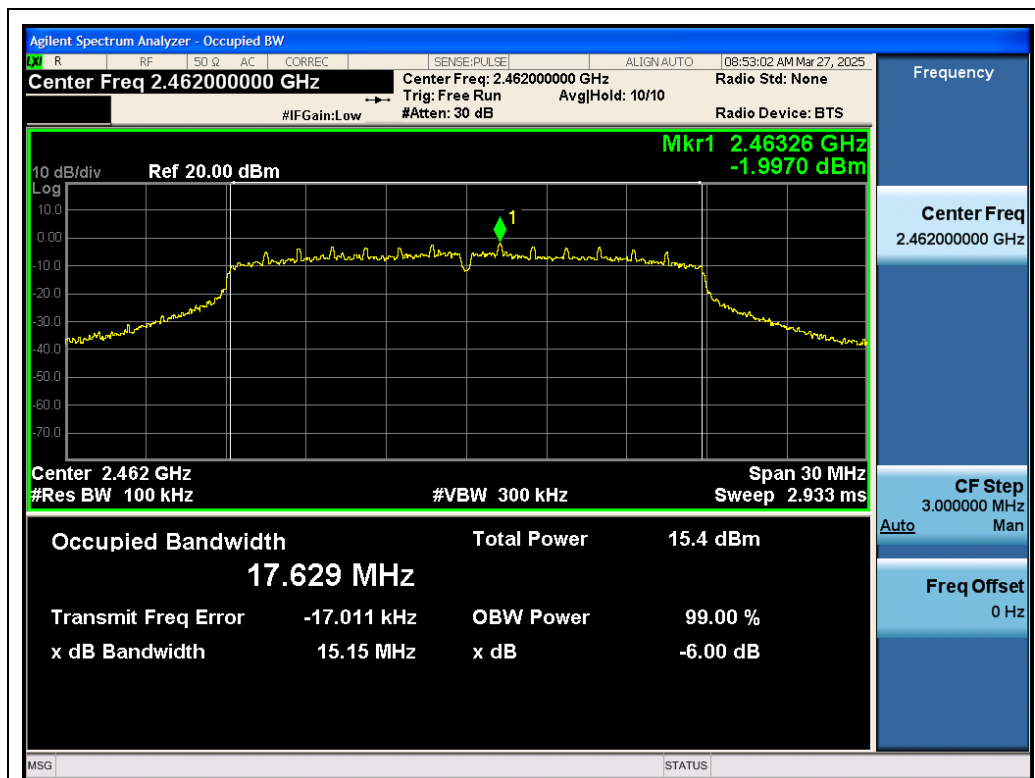
Test_Graph_802.11g_ANT2_2462_6Mbps_DTSBW



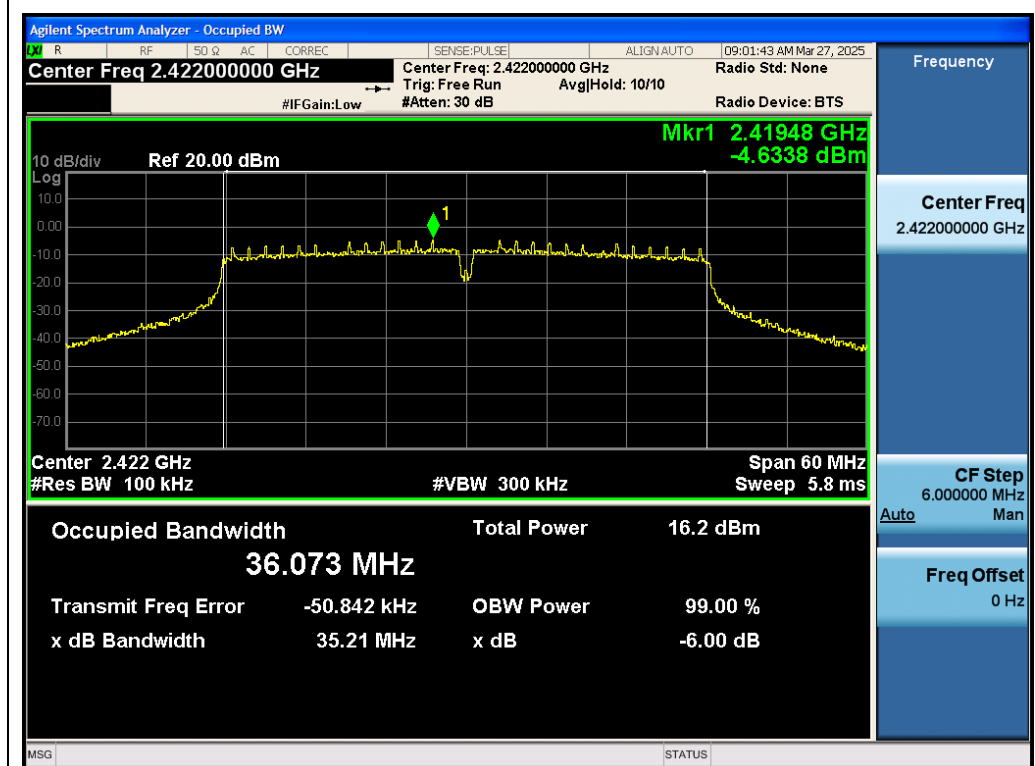
Test_Graph_802.11n20_ANT2_2412_MCS0_DTSBW



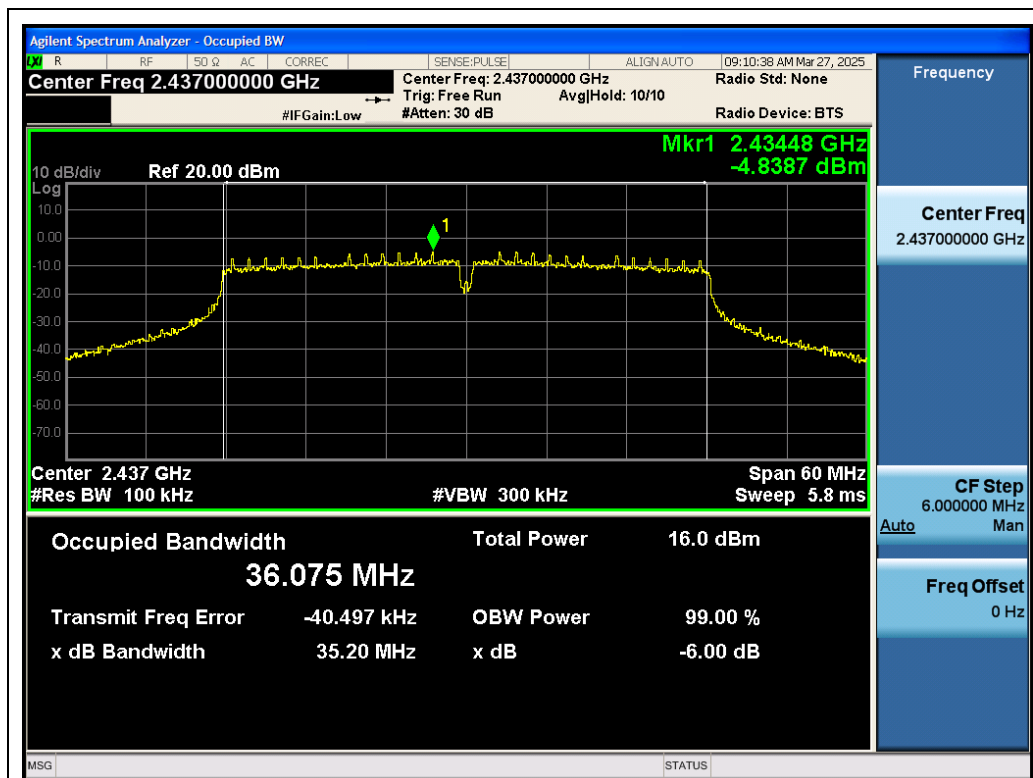
Test_Graph_802.11n20_ANT2_2437_MCS0_DTSBW



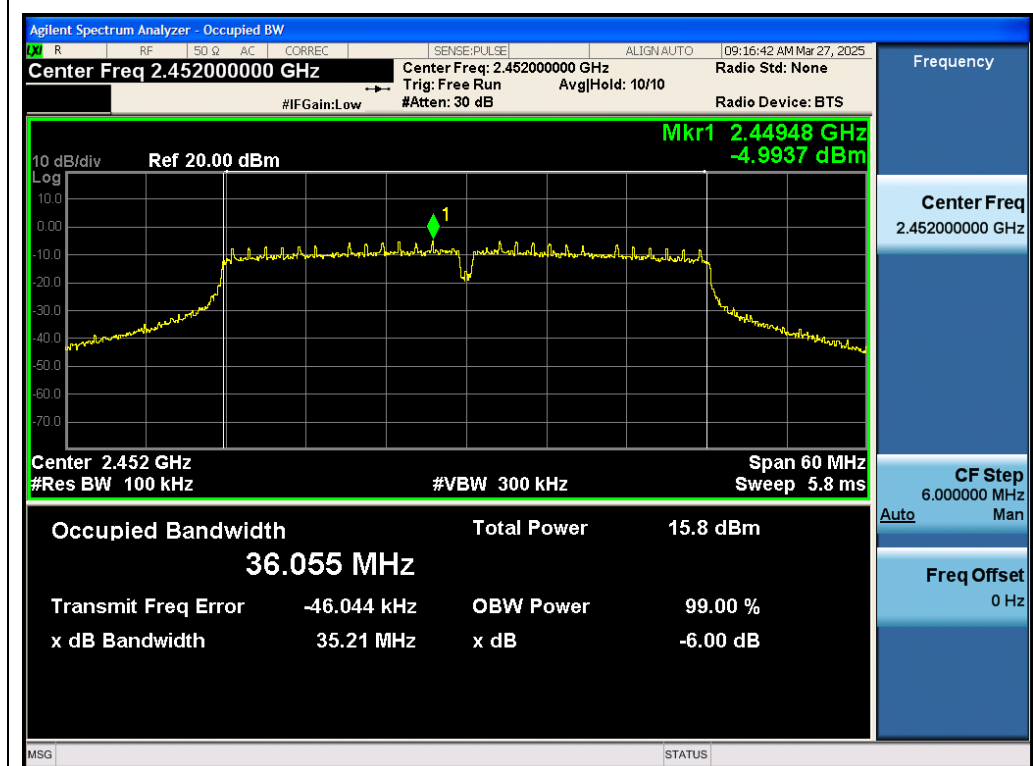
Test_Graph_802.11n20_ANT2_2462_MCS0_DTSBW



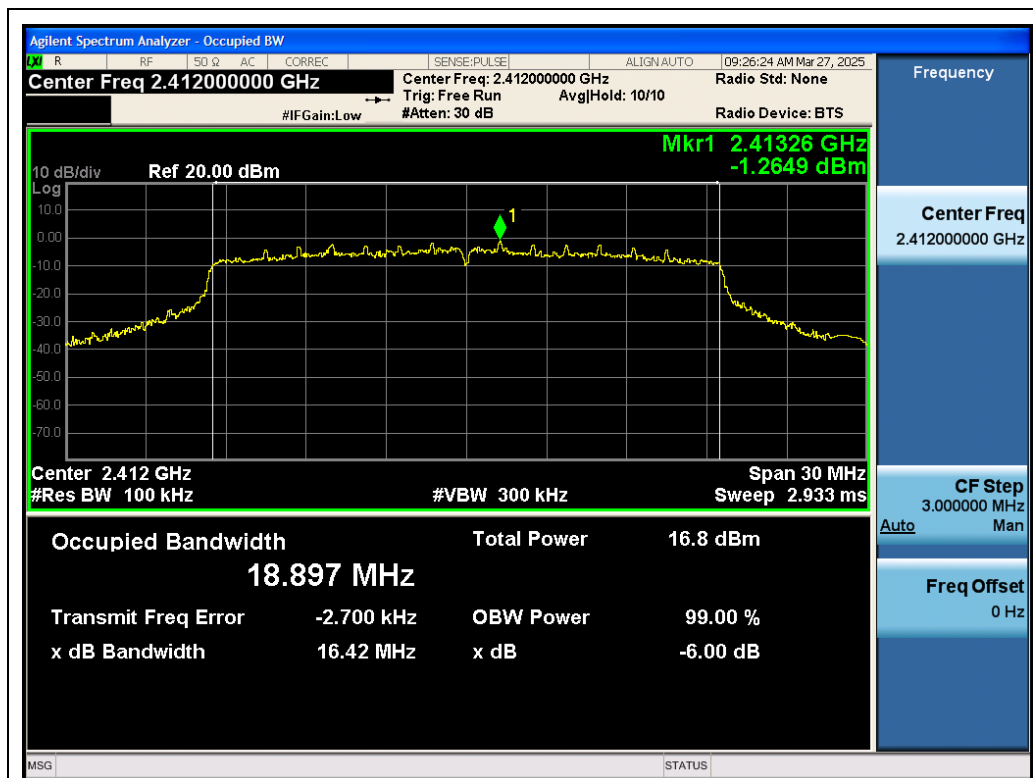
Test_Graph_802.11n40_ANT2_2422_MCS0_DTSBW



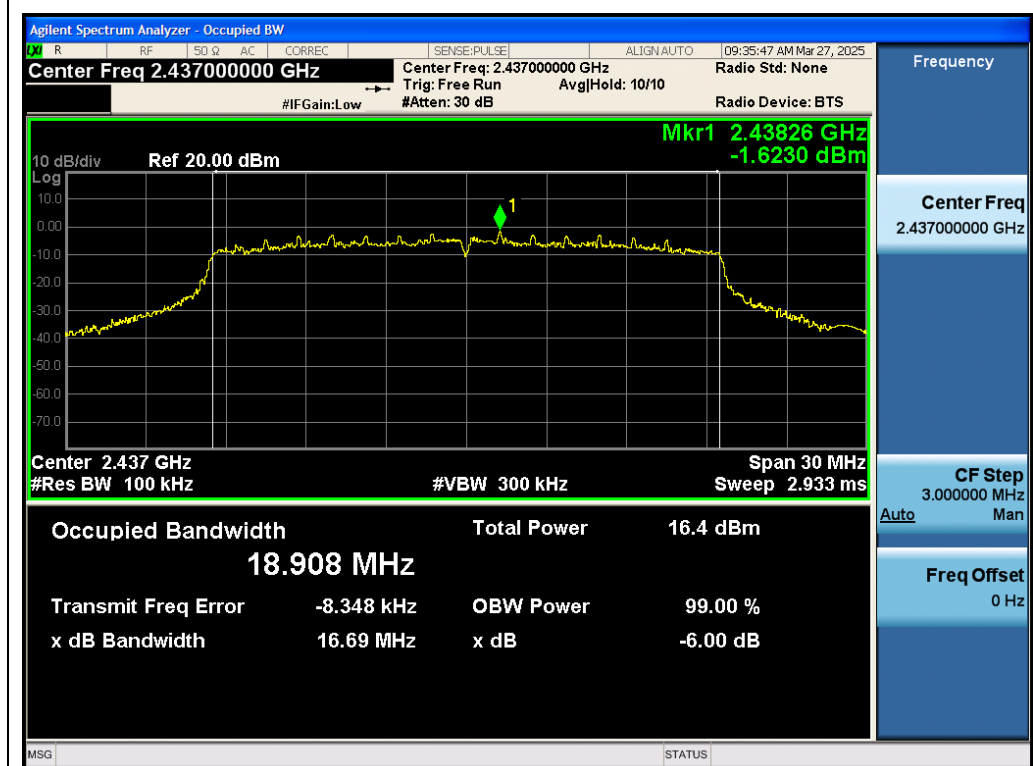
Test_Graph_802.11n40_ANT2_2437_MCS0_DTSBW



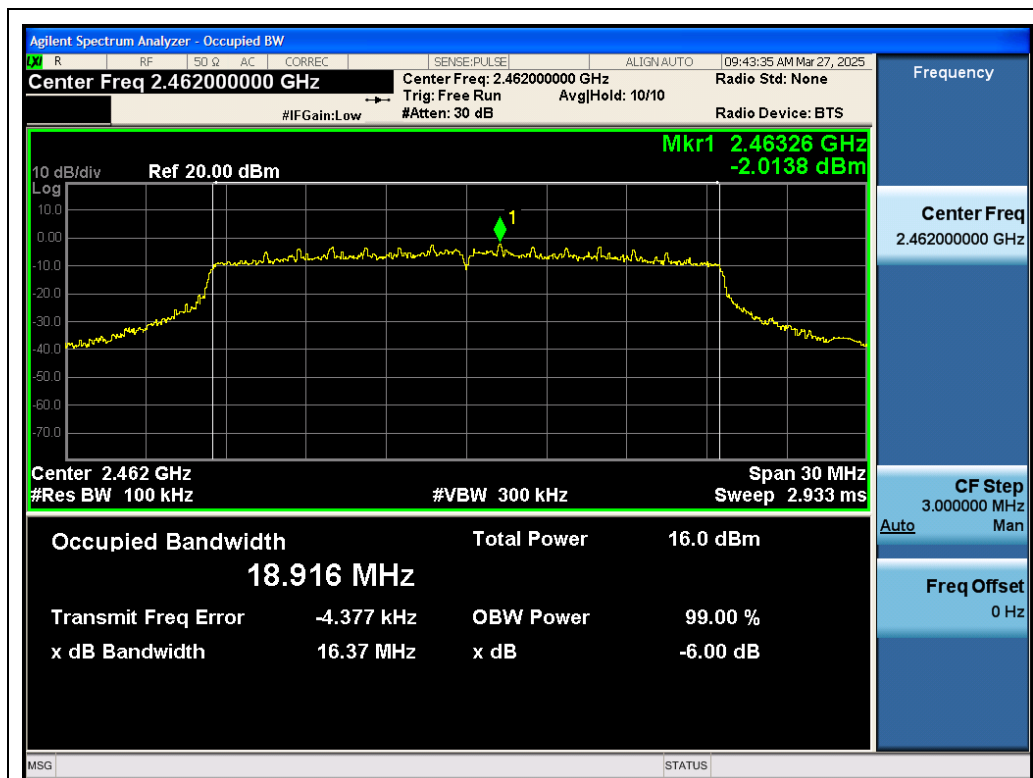
Test_Graph_802.11n40_ANT2_2452_MCS0_DTSBW



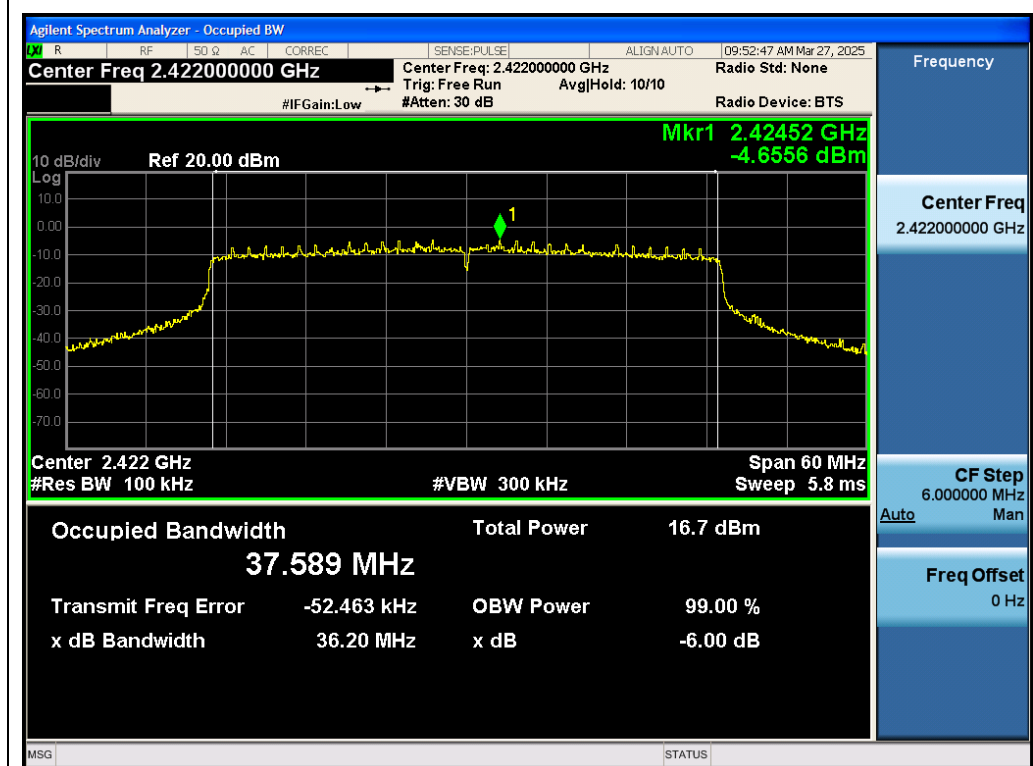
Test_Graph_802.11ax20_ANT2_2412_MCS0_DTSBW



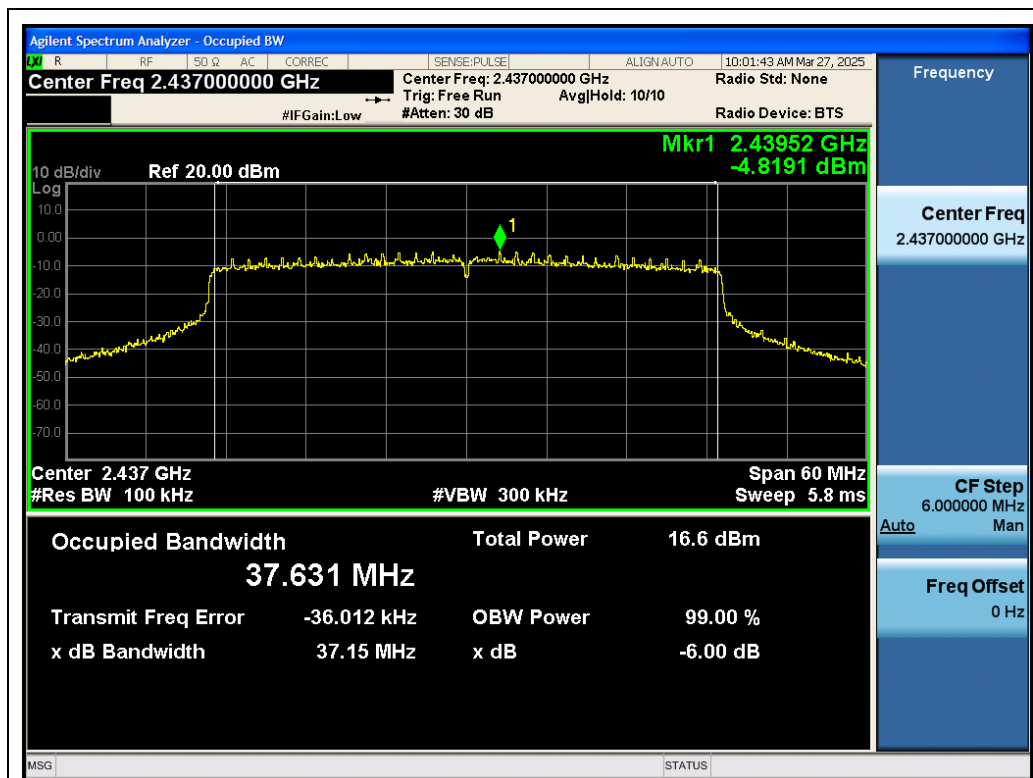
Test_Graph_802.11ax20_ANT2_2437_MCS0_DTSBW



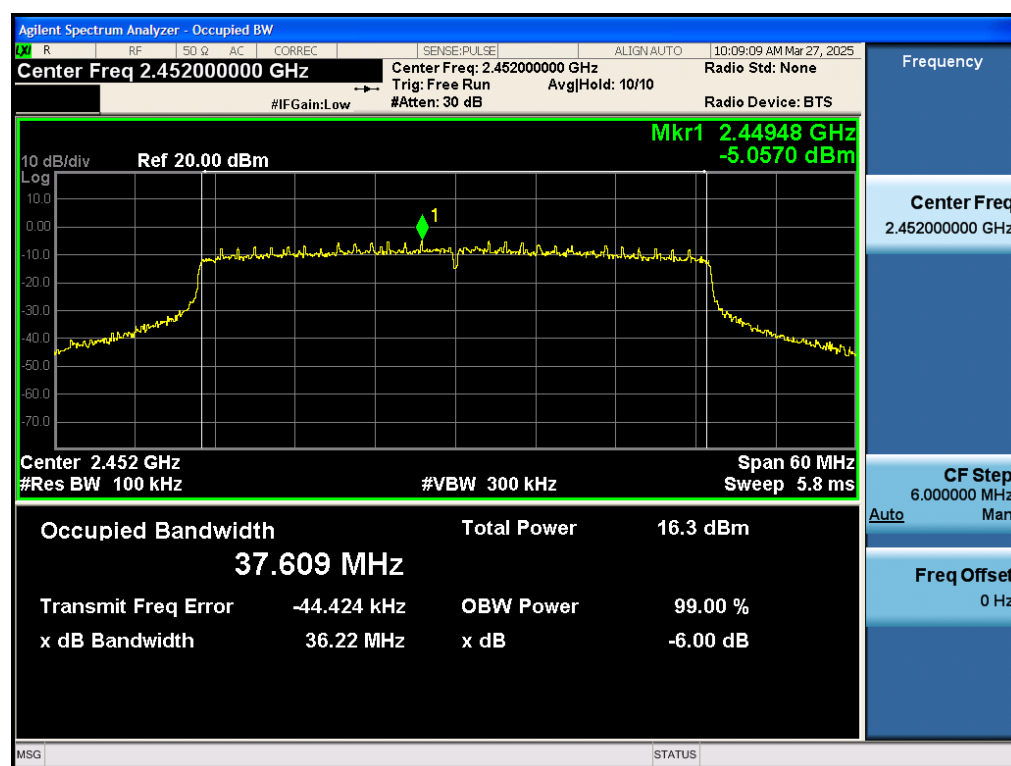
Test_Graph_802.11ax20_ANT2_2462_MCS0_DTSBW



Test_Graph_802.11ax40_ANT2_2422_MCS0_DTSBW



Test_Graph_802.11ax40_ANT2_2437_MCS0_DTSBW



Test_Graph_802.11ax40_ANT2_2452_MCS0_DTSBW

Appendix B: Maximum Average conducted output power

Test Result

Test Data of Conducted Output Power					
Test Mode	Test Frequency	Average Power (dBm)	Peak Power (dBm)	Limits (dBm)	Result
802.11b	2412	11.25	14.04	≤ 30	Pass
	2437	11.78	14.35	≤ 30	Pass
	2462	11.89	14.50	≤ 30	Pass
802.11g	2412	8.73	16.60	≤ 30	Pass
	2437	8.60	16.40	≤ 30	Pass
	2462	8.07	15.94	≤ 30	Pass
802.11n20	2412	8.89	16.68	≤ 30	Pass
	2437	8.42	16.11	≤ 30	Pass
	2462	7.96	15.67	≤ 30	Pass
802.11n40	2422	8.53	16.66	≤ 30	Pass
	2437	8.45	16.47	≤ 30	Pass
	2452	8.17	16.23	≤ 30	Pass
802.11ax20	2412	8.84	18.07	≤ 30	Pass
	2437	8.24	17.65	≤ 30	Pass
	2462	8.18	17.12	≤ 30	Pass
802.11ax40	2422	10.06	17.97	≤ 30	Pass
	2437	8.41	17.83	≤ 30	Pass
	2452	8.13	17.51	≤ 30	Pass

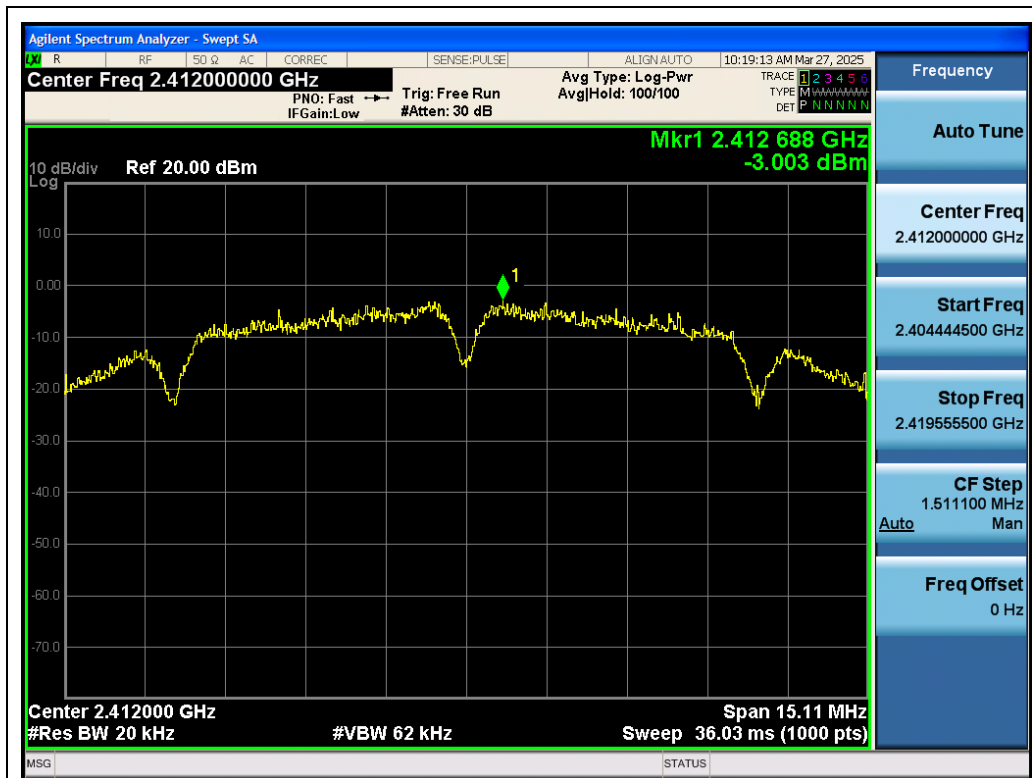
Note: The Duty Cycle Factor is compensated in the result.

Appendix C: Maximum Average power spectral density

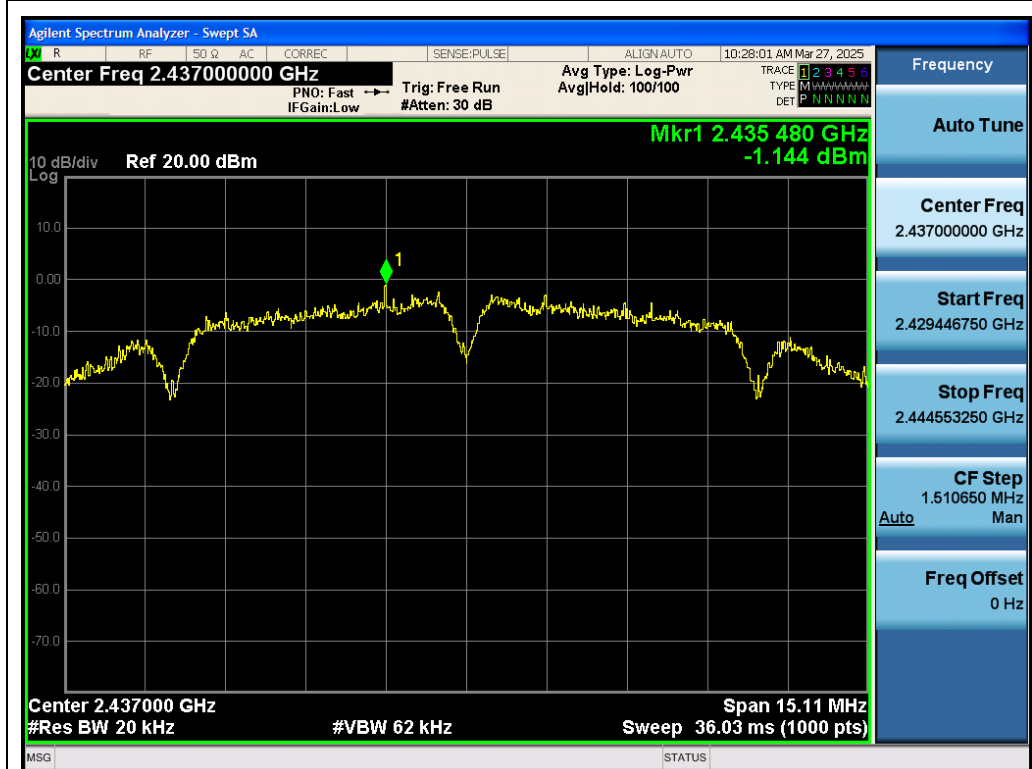
Test Result

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	-3.003	-11.242	≤ 8	Pass
	2437	-1.144	-9.383	≤ 8	Pass
	2462	-0.877	-9.116	≤ 8	Pass
802.11g	2412	-6.767	-15.006	≤ 8	Pass
	2437	-7.167	-15.406	≤ 8	Pass
	2462	-7.610	-15.849	≤ 8	Pass
802.11n20	2412	-6.962	-15.201	≤ 8	Pass
	2437	-7.732	-15.971	≤ 8	Pass
	2462	-8.020	-16.259	≤ 8	Pass
802.11n40	2422	-10.538	-18.777	≤ 8	Pass
	2437	-10.833	-19.072	≤ 8	Pass
	2452	-11.457	-19.696	≤ 8	Pass
802.11ax20	2412	-9.344	-17.583	≤ 8	Pass
	2437	-9.402	-17.641	≤ 8	Pass
	2462	-9.976	-18.215	≤ 8	Pass
802.11ax40	2422	-11.283	-19.522	≤ 8	Pass
	2437	-12.159	-20.398	≤ 8	Pass
	2452	-12.242	-20.481	≤ 8	Pass

Test Graphs



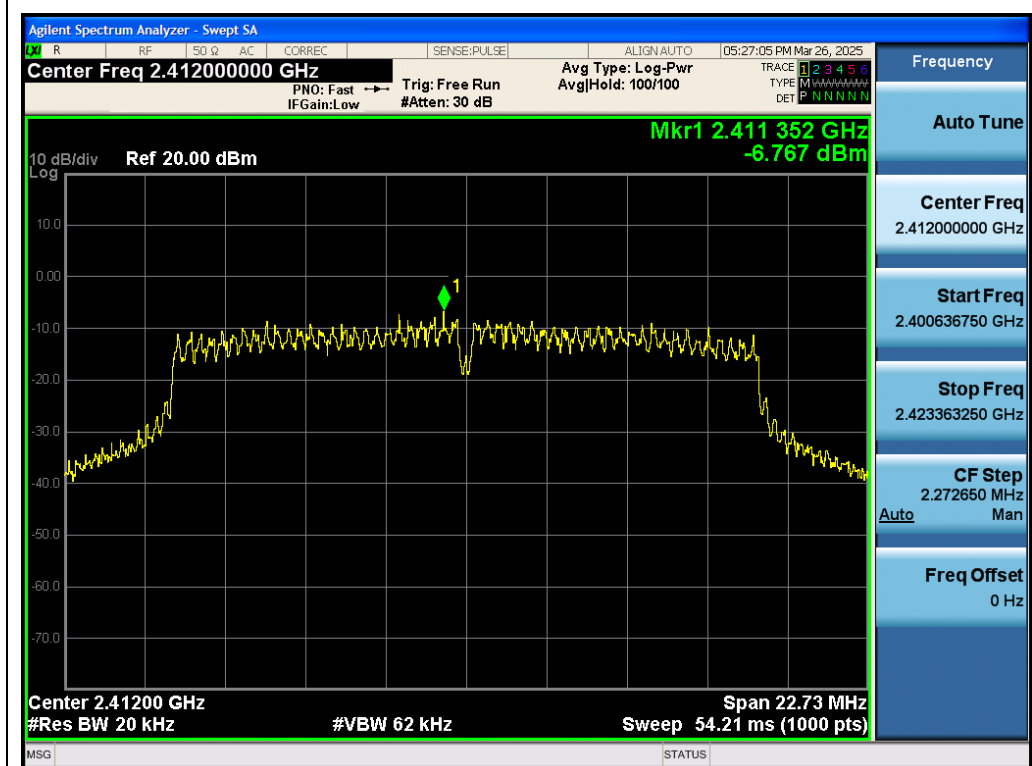
Test_Graph_802.11b_ANT2_2412_1Mbps_PSD



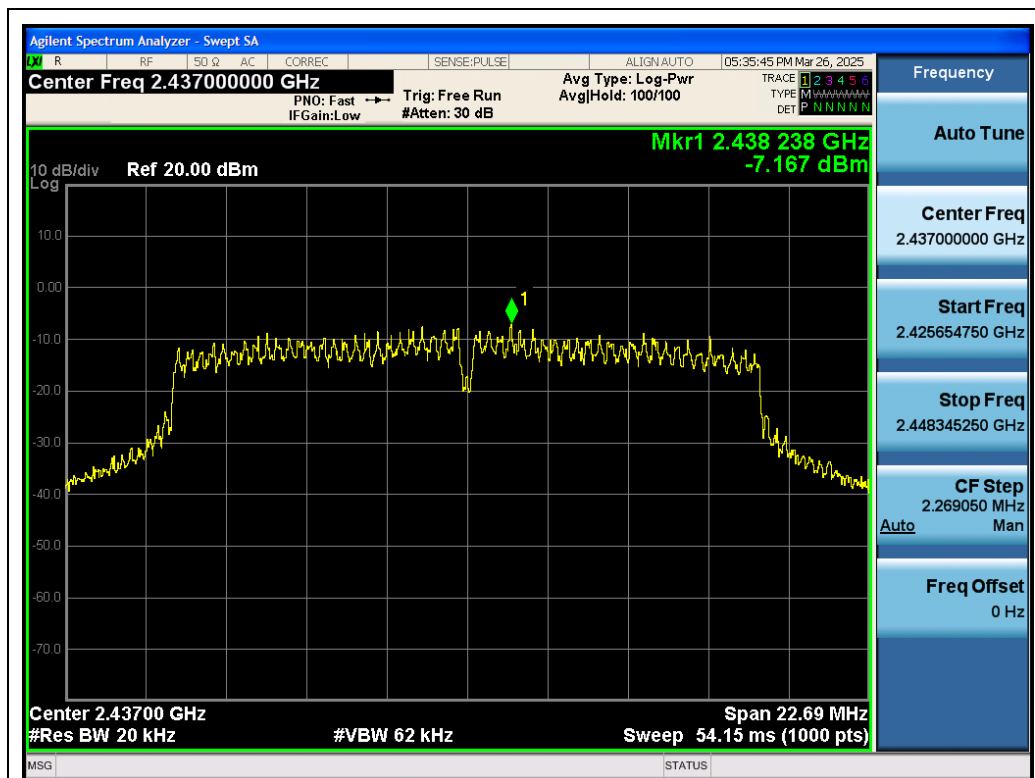
Test_Graph_802.11b_ANT2_2437_1Mbps_PSD



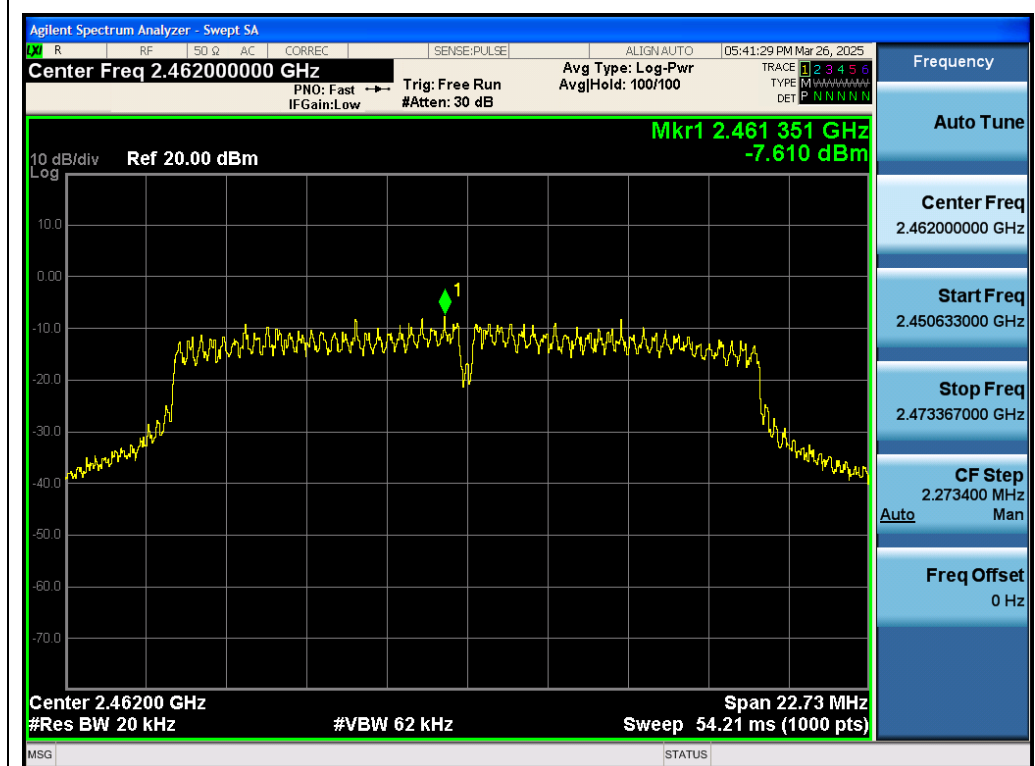
Test_Graph_802.11b_ANT2_2462_1Mbps_PSD



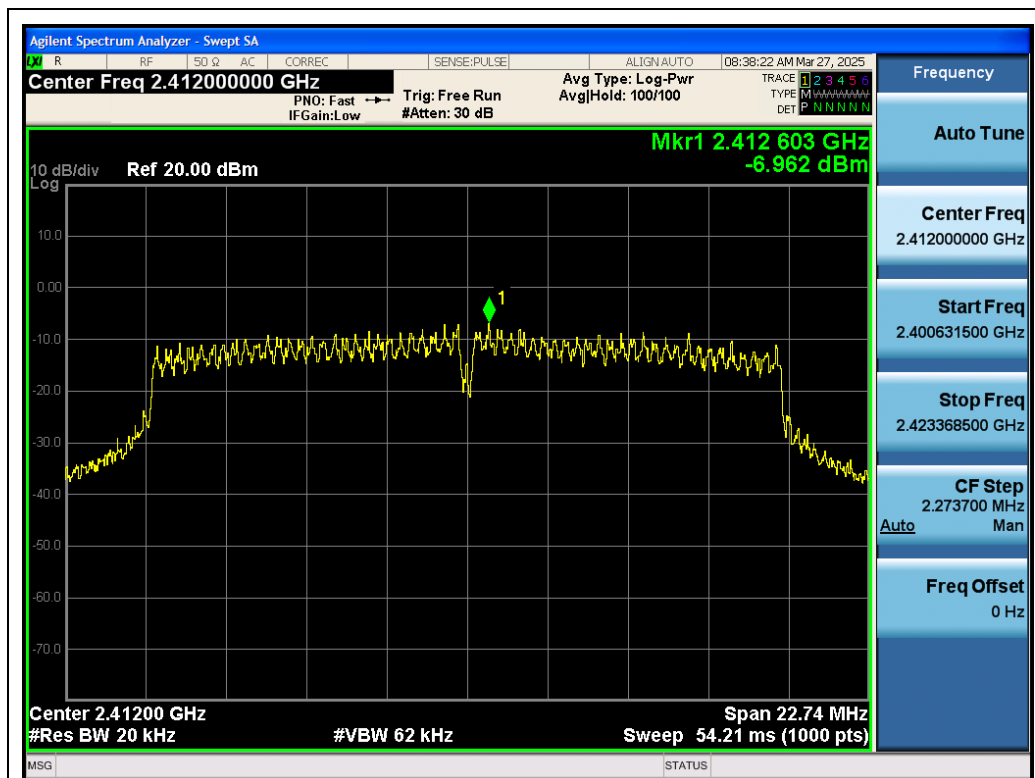
Test_Graph_802.11g_ANT2_2412_6Mbps_PSD



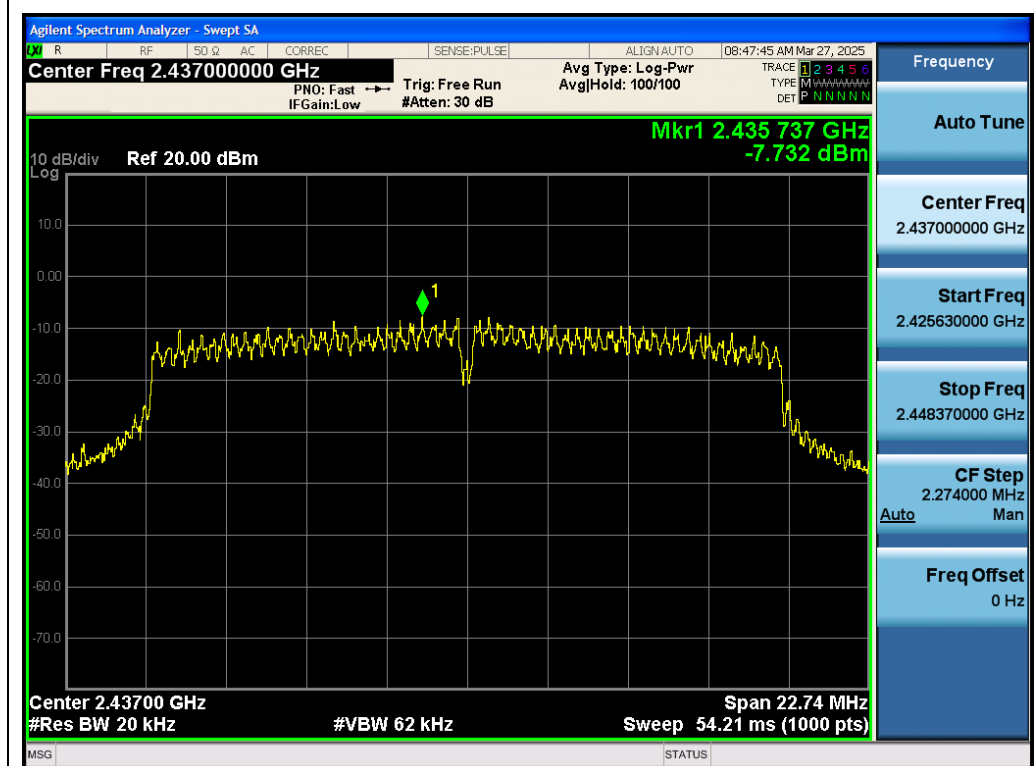
Test_Graph_802.11g_ANT2_2437_6Mbps_PSD



Test_Graph_802.11g_ANT2_2462_6Mbps_PSD

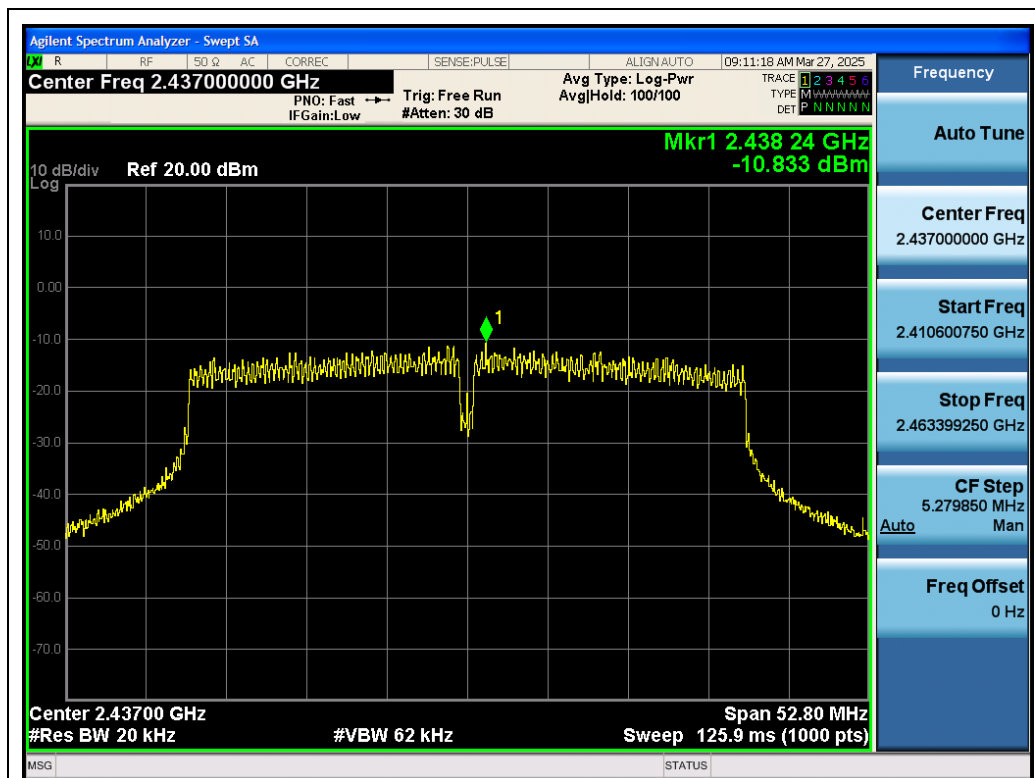


Test_Graph_802.11n20_ANT2_2412_MCS0_PSD

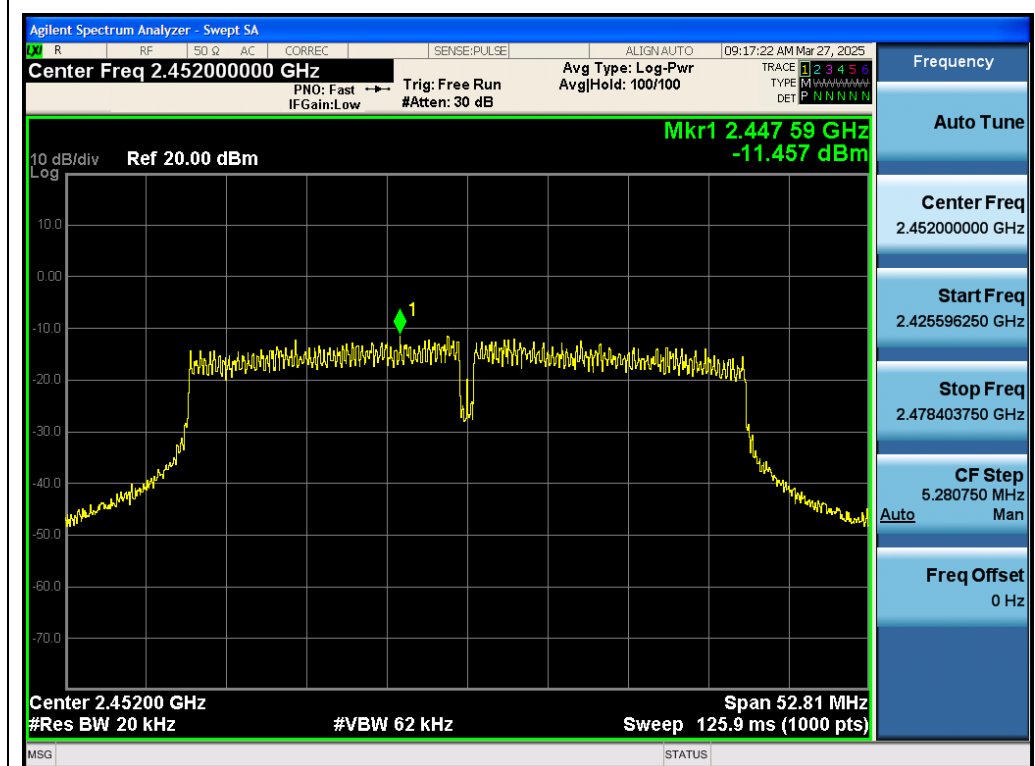


Test_Graph_802.11n20_ANT2_2437_MCS0_PSD





Test_Graph_802.11n40_ANT2_2437_MCS0_PSD



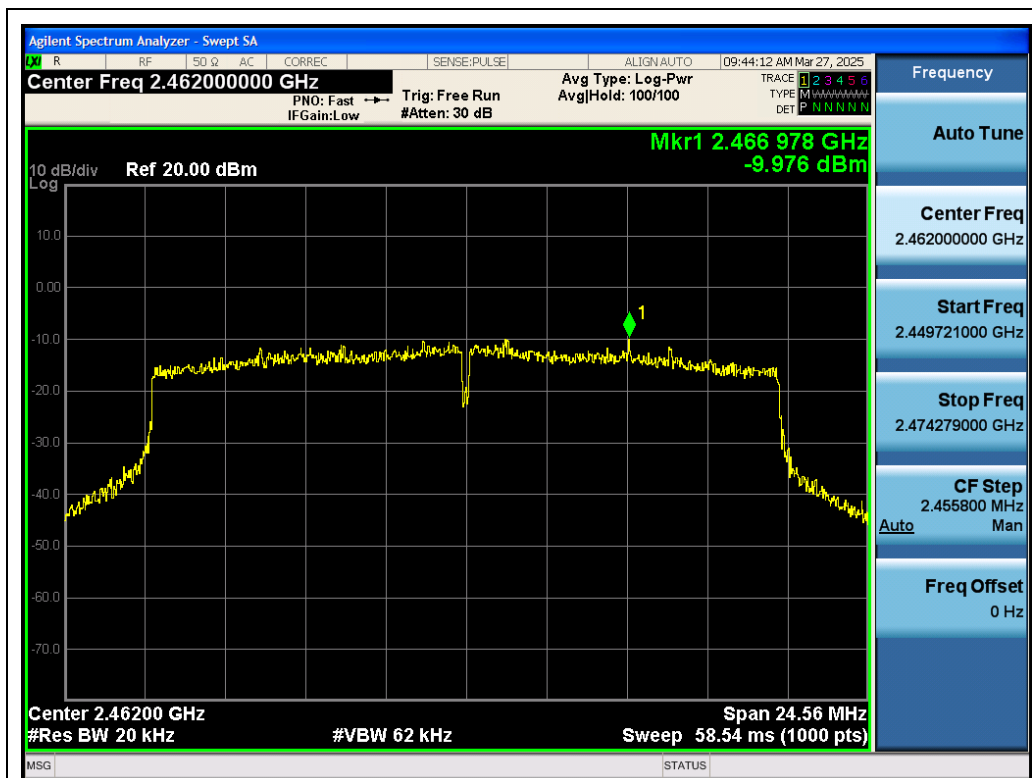
Test_Graph_802.11n40_ANT2_2452_MCS0_PSD



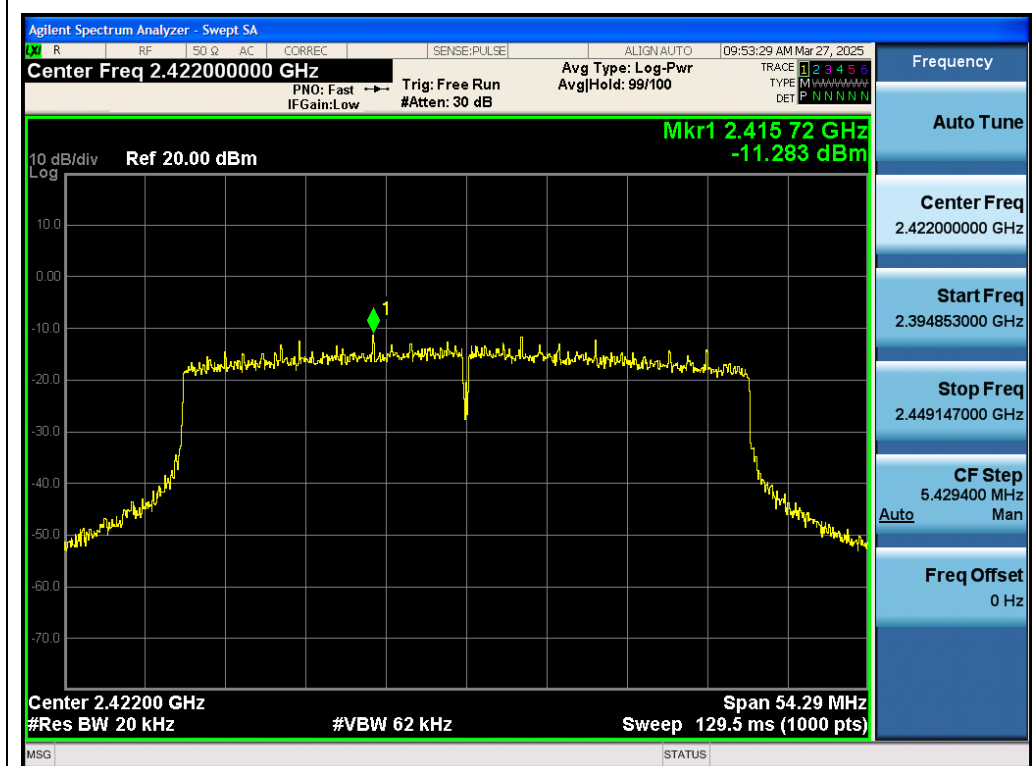
Test_Graph_802.11ax20_ANT2_2412_MCS0_PSD



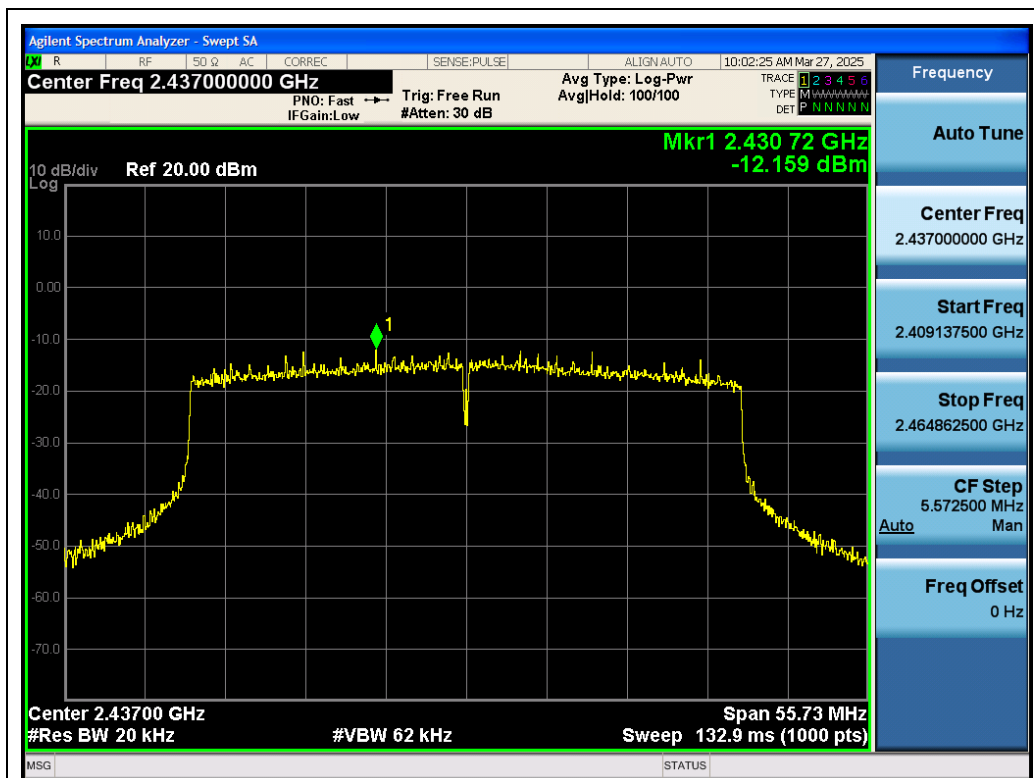
Test_Graph_802.11ax20_ANT2_2437_MCS0_PSD



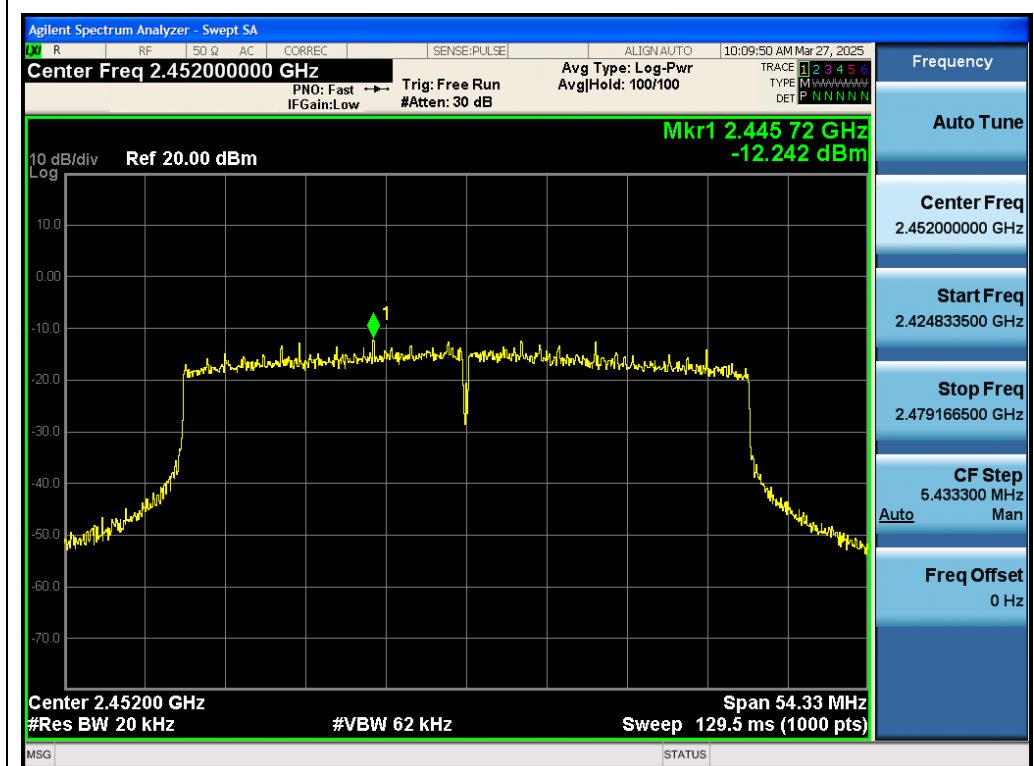
Test_Graph_802.11ax20_ANT2_2462_MCS0_PSD



Test_Graph_802.11ax40_ANT2_2422_MCS0_PSD



Test_Graph_802.11ax40_ANT2_2437_MCS0_PSD



Test_Graph_802.11ax40_ANT2_2452_MCS0_PSD

Appendix D: Band edge measurements

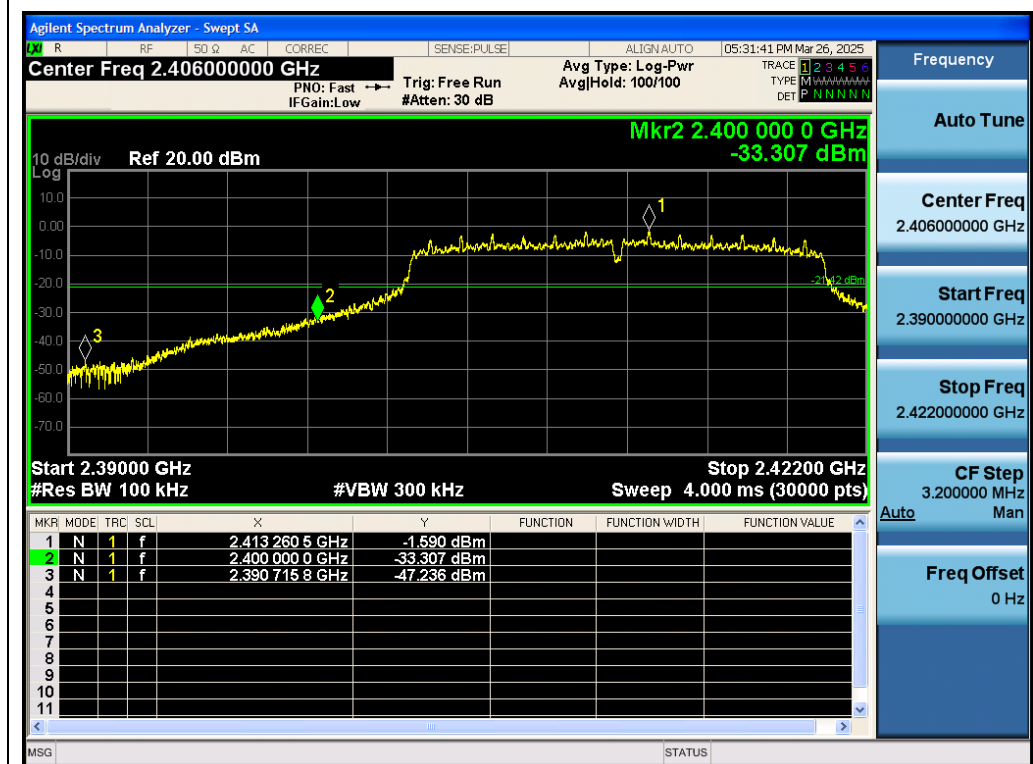
Test Result

Test Mode	Antenna	Ch. Name	Frequency. [MHz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	Low	2412	-4.20	-42.588	≤-16.96	PASS
11G	Ant1	Low	2412	-6.96	-33.307	≤-21.42	PASS
11N20SISO	Ant1	Low	2412	-5.42	-30.753	≤-21.00	PASS
11N40SISO	Ant1	Low	2422	-10.72	-34.586	≤-24.63	PASS
11AX20SISO	Ant1	Low	2412	-5.64	-33.392	≤-21.27	PASS
11AX40SISO	Ant1	Low	2422	-10.50	-35.928	≤-24.66	PASS

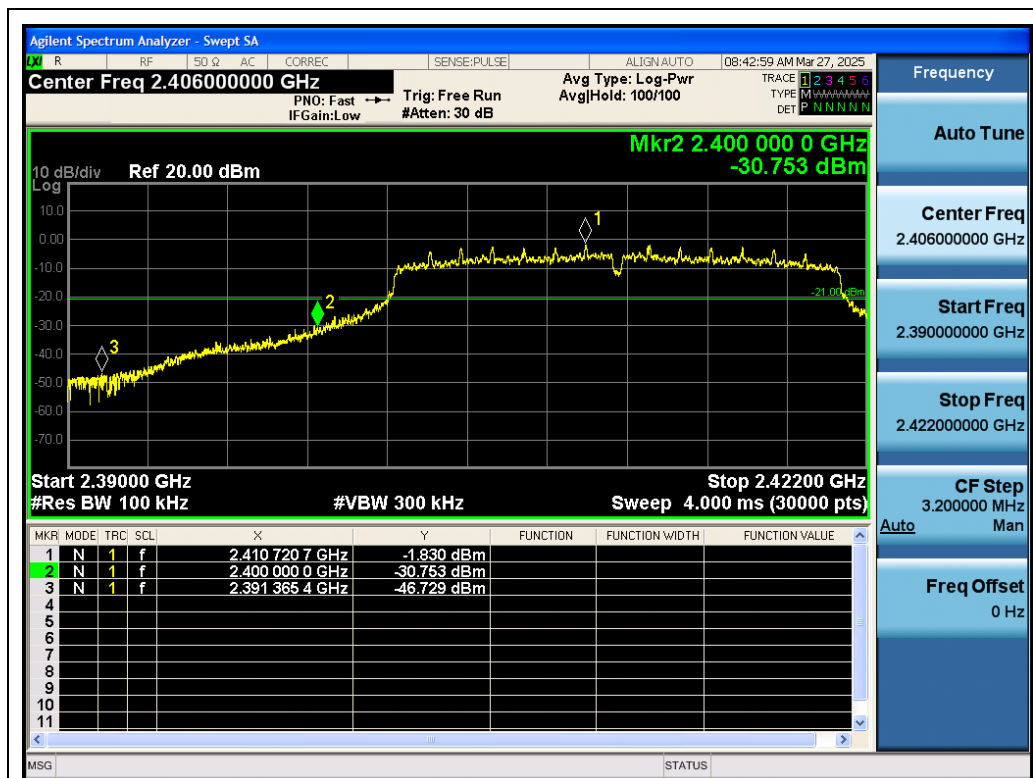
Test Graphs



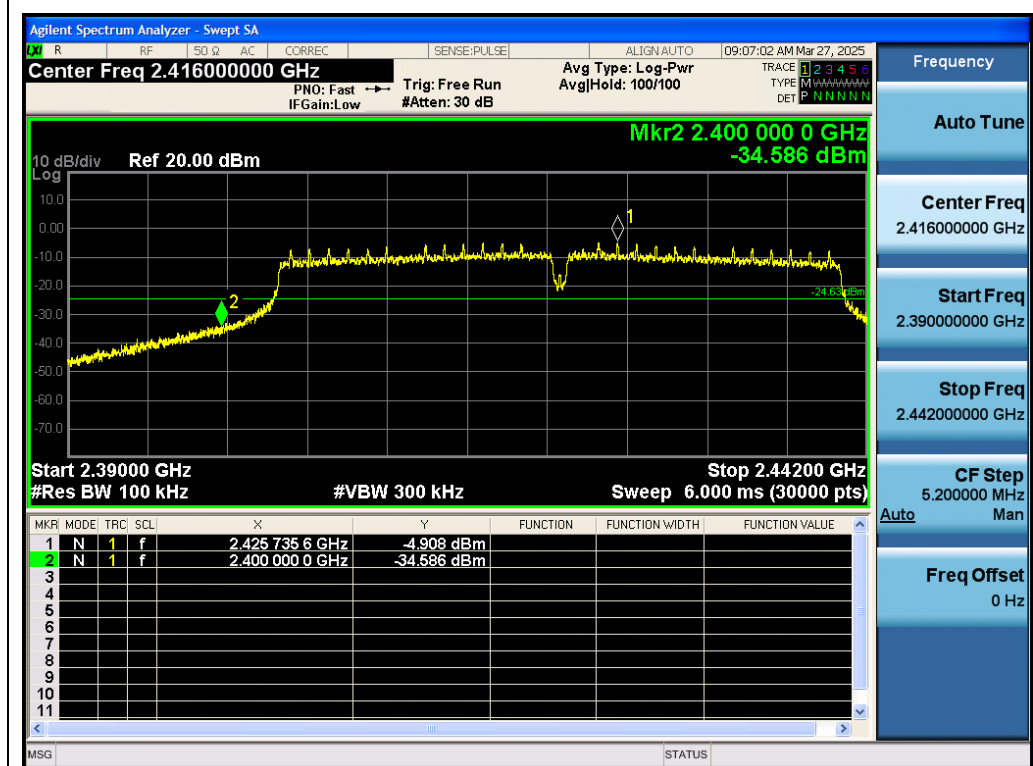
Test_Graph_802.11b_ANT2_2412_1Mbps_Lower Band Edge Emissions



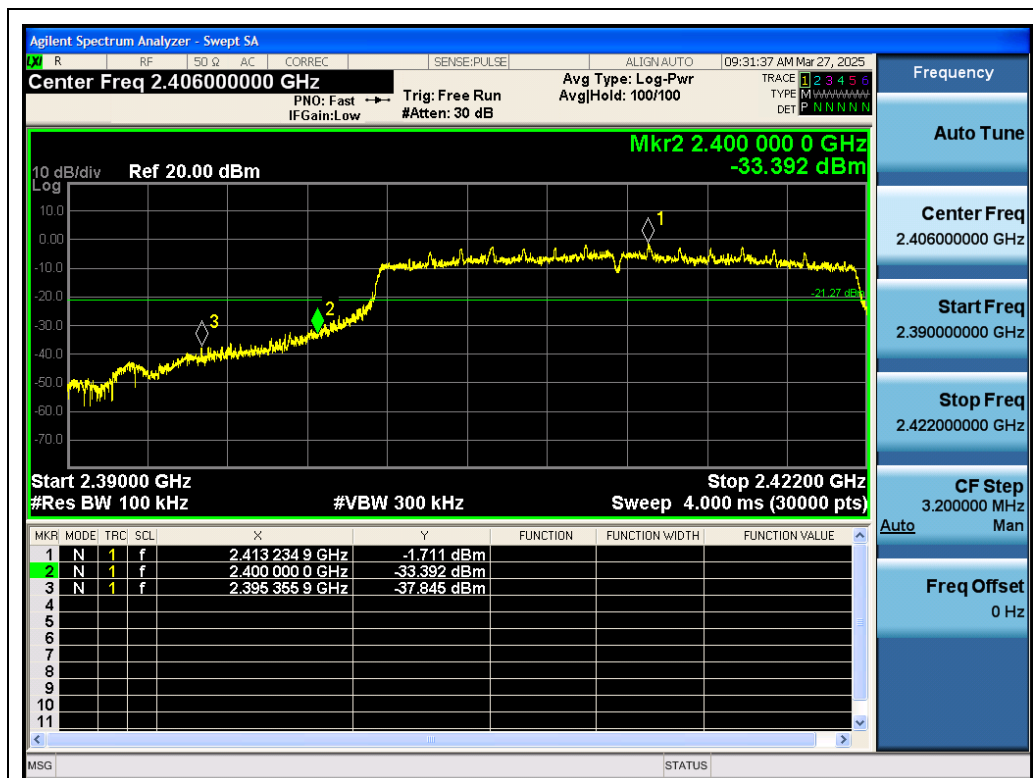
Test_Graph_802.11g_ANT2_2412_6Mbps_Lower Band Edge Emissions



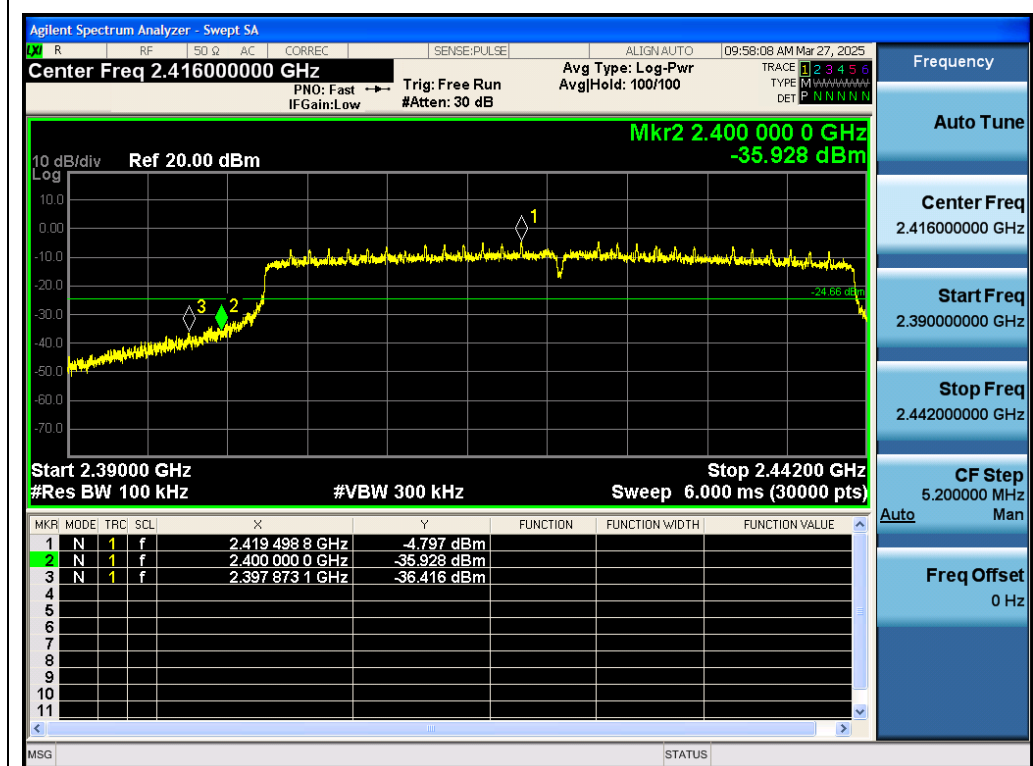
Test_Graph_802.11n20_ANT2_2412_MCS0_Lower Band Edge Emissions



Test_Graph_802.11n40_ANT2_2422_MCS0_Lower Band Edge Emissions



Test_Graph_802.11ax20_ANT2_2412_MCS0_Lower Band Edge Emissions



Test_Graph_802.11ax40_ANT2_2422_MCS0_Lower Band Edge Emissions

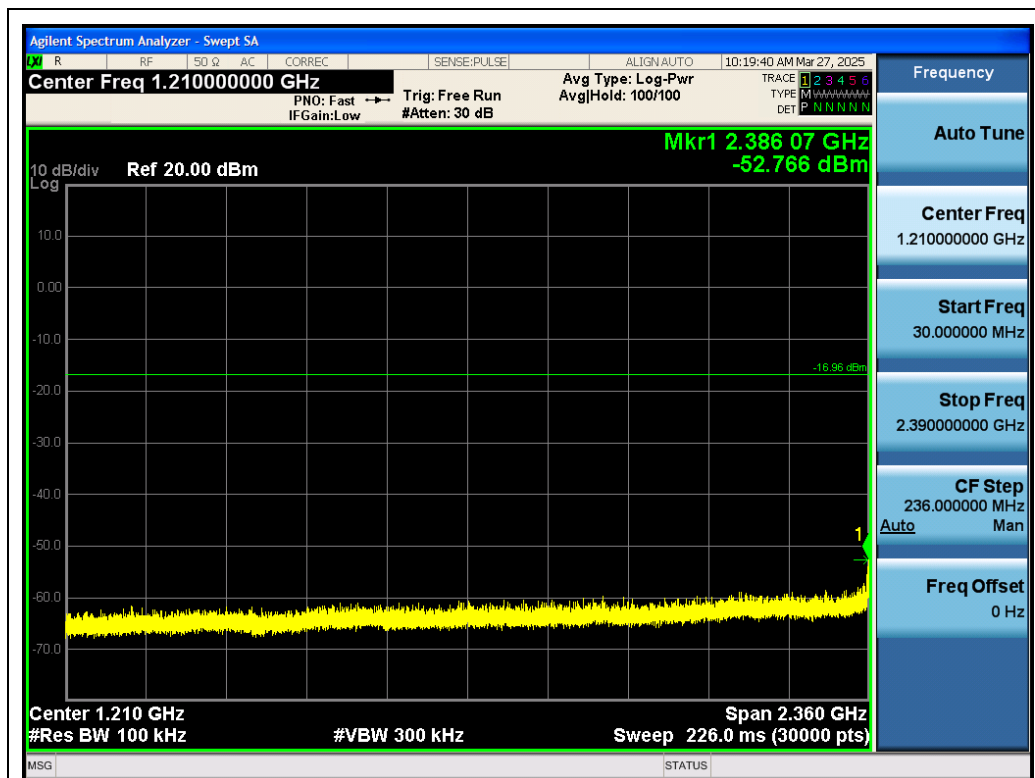
Appendix E: Conducted Spurious Emission

Test Result

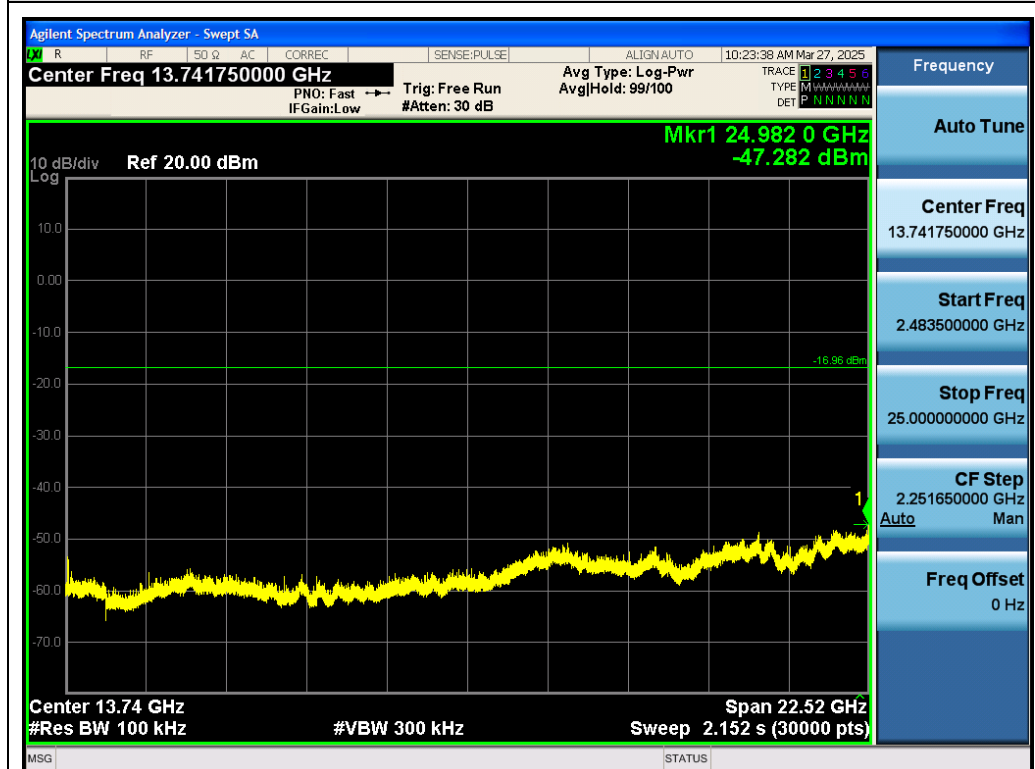
Test Mode	Antenna	Frequency [MHz]	Freq. Range [Mhz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	0~Reference	3.04	3.04	---	PASS
11B	Ant1	2412	30~2390	3.04	-52.766	≤-16.96	PASS
11B	Ant1	2412	2483.5~25000	3.04	-47.282	≤-16.96	PASS
11B	Ant1	2437	0~Reference	3.38	3.38	---	PASS
11B	Ant1	2437	30~2400	3.38	-55.800	≤-16.62	PASS
11B	Ant1	2437	2483.5~25000	3.38	-47.081	≤-16.62	PASS
11B	Ant1	2462	0~Reference	3.68	3.68	---	PASS
11B	Ant1	2462	30~2400	3.68	-56.743	≤-16.32	PASS
11B	Ant1	2462	2500~25000	3.68	-46.169	≤16.32	PASS
11G	Ant1	2412	0~Reference	-1.42	-1.42	---	PASS
11G	Ant1	2412	30~2390	-1.42	-48.465	≤-21.42	PASS
11G	Ant1	2412	2483.5~25000	-1.42	-46.662	≤-21.42	PASS
11G	Ant1	2437	0~Reference	-1.63	-1.63	---	PASS
11G	Ant1	2437	30~2400	-1.63	-53.345	≤-21.63	PASS
11G	Ant1	2437	2483.5~25000	-1.63	-47.926	≤-21.63	PASS
11G	Ant1	2462	0~Reference	-2.02	-2.02	---	PASS
11G	Ant1	2462	30~2400	-2.02	-55.258	≤-22.02	PASS
11G	Ant1	2462	2500~25000	-2.02	-48.158	≤-22.02	PASS
11N20SISO	Ant1	2412	0~Reference	-1.00	-1.00	---	PASS
11N20SISO	Ant1	2412	30~2390	-1.00	-46.712	≤-21.00	PASS
11N20SISO	Ant1	2412	2483.5~25000	-1.00	-48.171	≤-21.00	PASS
11N20SISO	Ant1	2437	0~Reference	-1.71	-1.71	---	PASS
11N20SISO	Ant1	2437	30~2400	-1.71	-53.514	≤-21.71	PASS
11N20SISO	Ant1	2437	2483.5~25000	-1.71	-48.190	≤-21.71	PASS
11N20SISO	Ant1	2462	0~Reference	-2.00	-2.00	---	PASS
11N20SISO	Ant1	2462	30~2400	-2.00	-54.102	≤-22.00	PASS
11N20SISO	Ant1	2462	2500~25000	-2.00	-47.943	≤-22.00	PASS
11N40SISO	Ant1	2422	0~Reference	-4.63	-4.63	---	PASS
11N40SISO	Ant1	2422	30~2390	-4.63	-46.346	≤-24.63	PASS
11N40SISO	Ant1	2422	2483.5~25000	-4.63	-47.981	≤-24.63	PASS
11N40SISO	Ant1	2437	0~Reference	-4.84	-4.84	---	PASS
11N40SISO	Ant1	2437	30~2400	-4.84	-51.445	≤-24.84	PASS
11N40SISO	Ant1	2437	2483.5~25000	-4.84	-47.431	≤-24.84	PASS
11N40SISO	Ant1	2452	0~Reference	-4.99	-4.99	---	PASS
11N40SISO	Ant1	2452	30~2400	-4.99	-53.110	≤-24.99	PASS
11N40SISO	Ant1	2452	2500~25000	-4.99	-47.973	≤-24.99	PASS
11AX20SISO	Ant1	2412	0~Reference	-1.27	-1.27	---	PASS
11AX20SISO	Ant1	2412	30~2390	-1.27	-48.174	≤-21.27	PASS
11AX20SISO	Ant1	2412	2483.5~25000	-1.27	-47.097	≤-21.27	PASS
11AX20SISO	Ant1	2437	0~Reference	-1.62	-1.62	---	PASS

11AX20SISO	Ant1	2437	30~2400	-1.62	-52.218	≤ -21.62	PASS
11AX20SISO	Ant1	2437	2483.5~25000	-1.62	-48.045	≤ -21.62	PASS
11AX20SISO	Ant1	2462	0~Reference	-2.01	-2.01	---	PASS
11AX20SISO	Ant1	2462	30~2400	-2.01	-54.181	≤ -22.01	PASS
11AX20SISO	Ant1	2462	2500~25000	-2.01	-47.174	≤ -22.01	PASS
11AX40SISO	Ant1	2422	0~Reference	-4.66	-4.66	---	PASS
11AX40SISO	Ant1	2422	30~2390	-4.66	-46.707	≤ -24.66	PASS
11AX40SISO	Ant1	2422	2483.5~25000	-4.66	-48.415	≤ -24.66	PASS
11AX40SISO	Ant1	2437	0~Reference	-4.82	-4.82	---	PASS
11AX40SISO	Ant1	2437	30~2400	-4.82	-47.651	≤ -24.82	PASS
11AX40SISO	Ant1	2437	2483.5~25000	-4.82	-46.906	≤ -24.82	PASS
11AX40SISO	Ant1	2452	0~Reference	-5.06	-5.06	---	PASS
11AX40SISO	Ant1	2452	30~2400	-5.06	-54.114	≤ -25.06	PASS
11AX40SISO	Ant1	2452	2500~25000	-5.06	-47.744	≤ -25.06	PASS

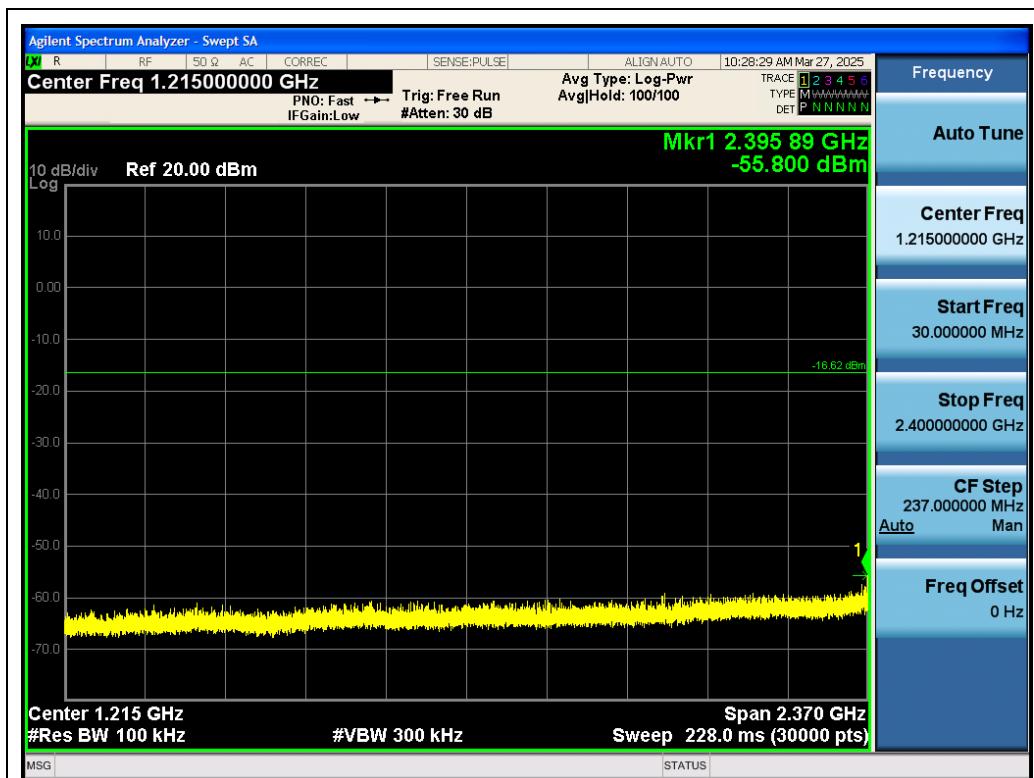
Test Graphs



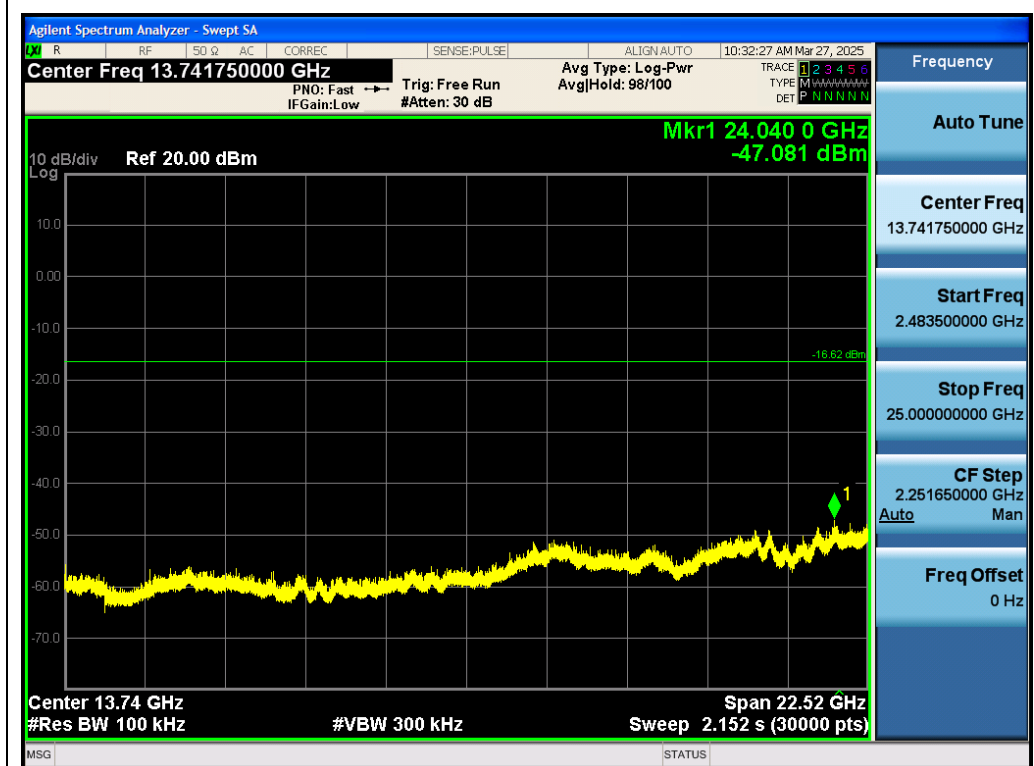
Test_Graph_802.11b_ANT2_2412_1Mbps_Lower Band Emissions



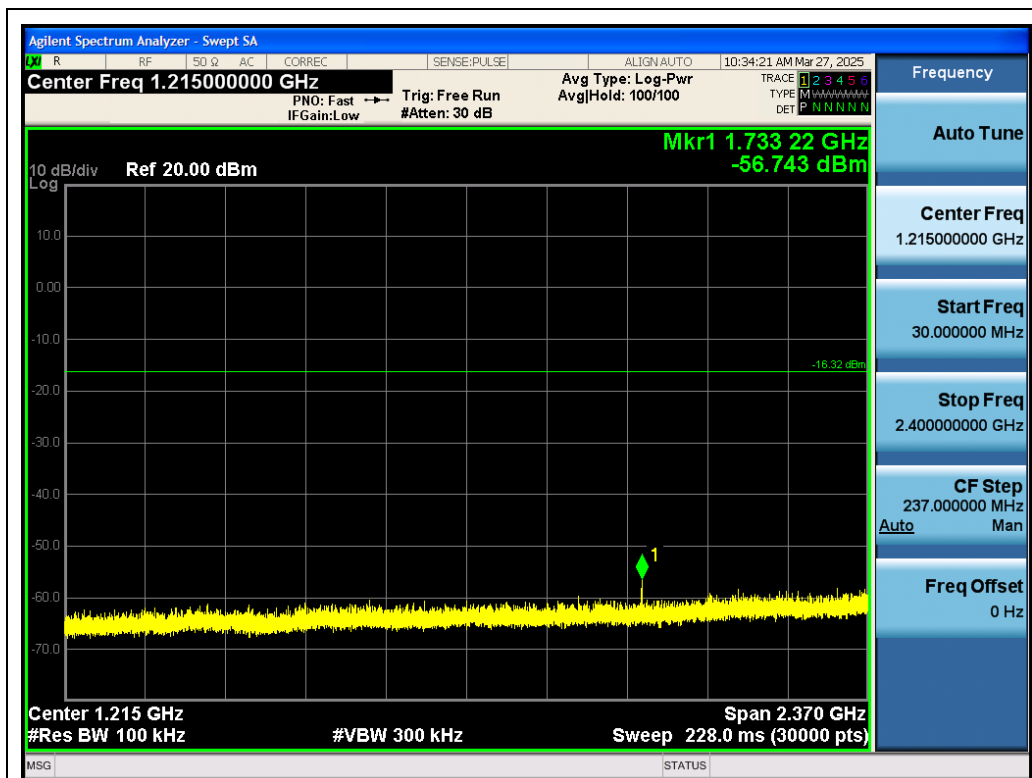
Test_Graph_802.11b_ANT2_2412_1Mbps_Higher Band Emissions



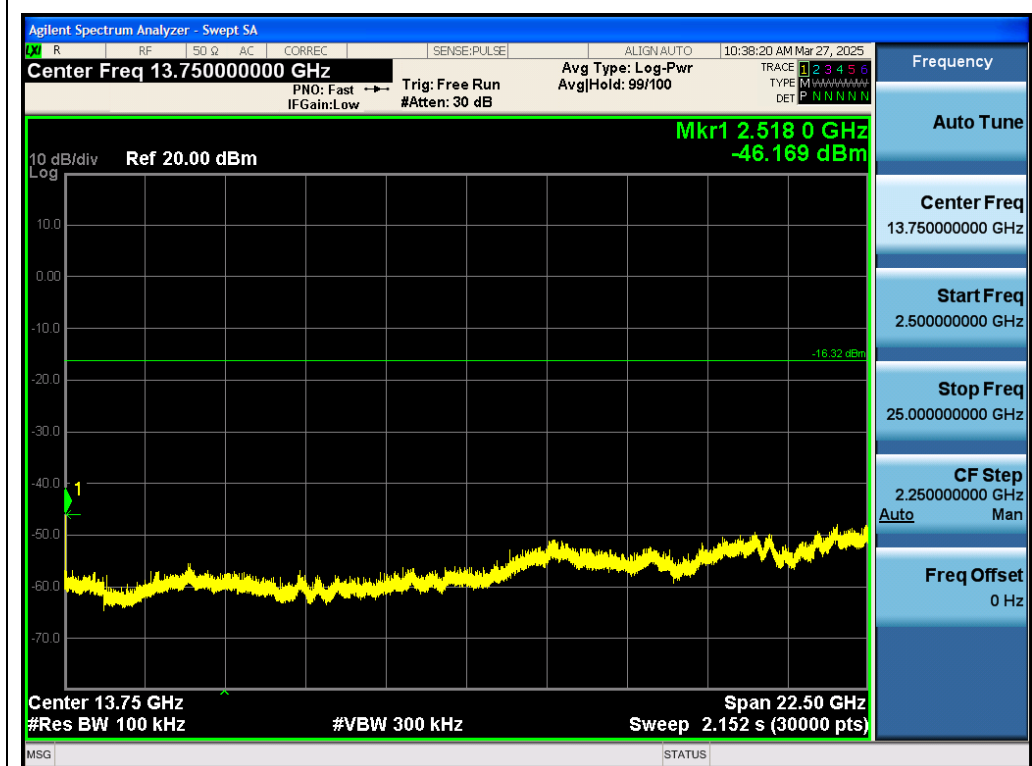
Test_Graph_802.11b_ANT2_2437_1Mbps_Lower Band Emissions



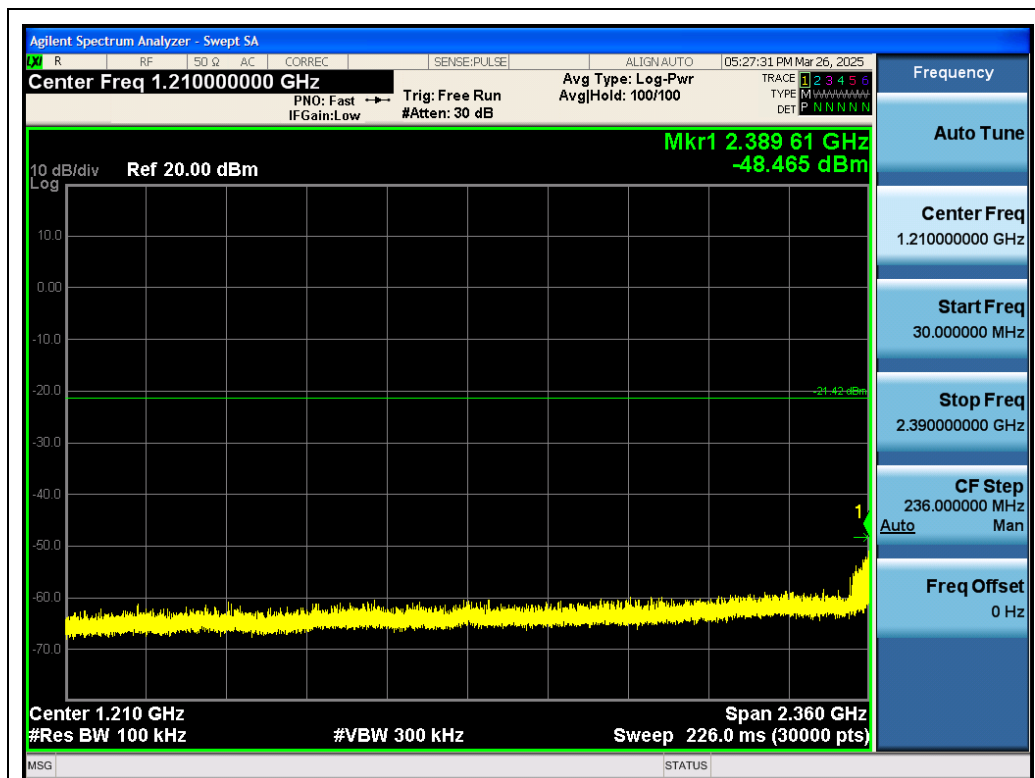
Test_Graph_802.11b_ANT2_2437_1Mbps_Higher Band Emissions



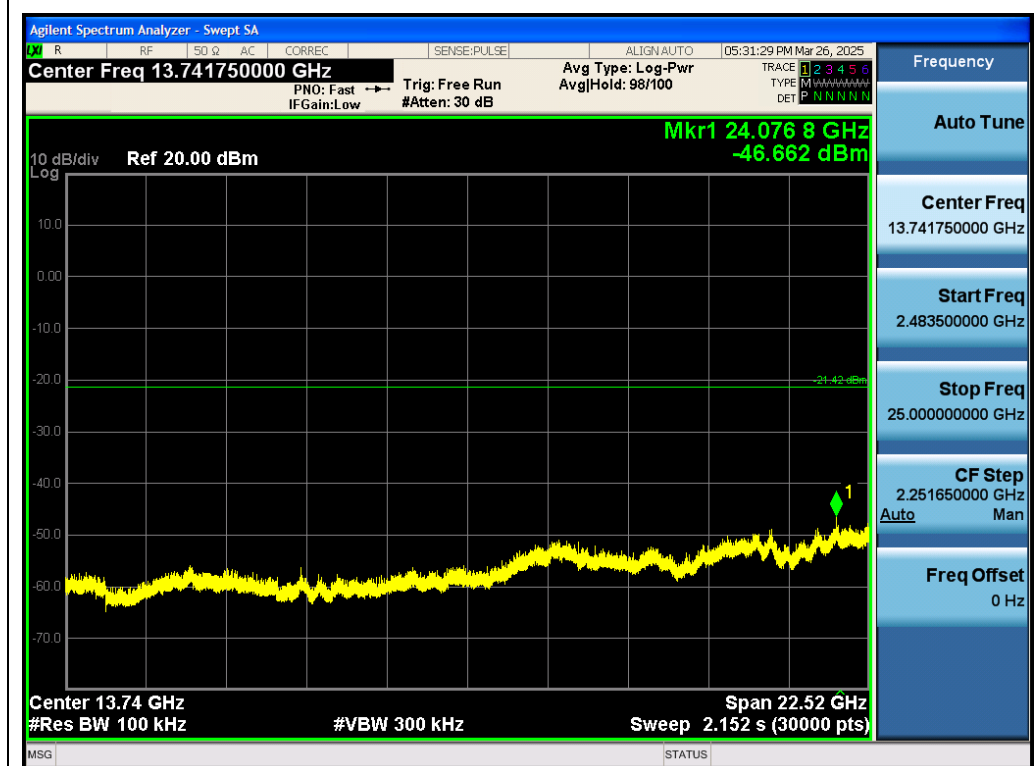
Test_Graph_802.11b_ANT2_2462_1Mbps_Lower Band Emissions



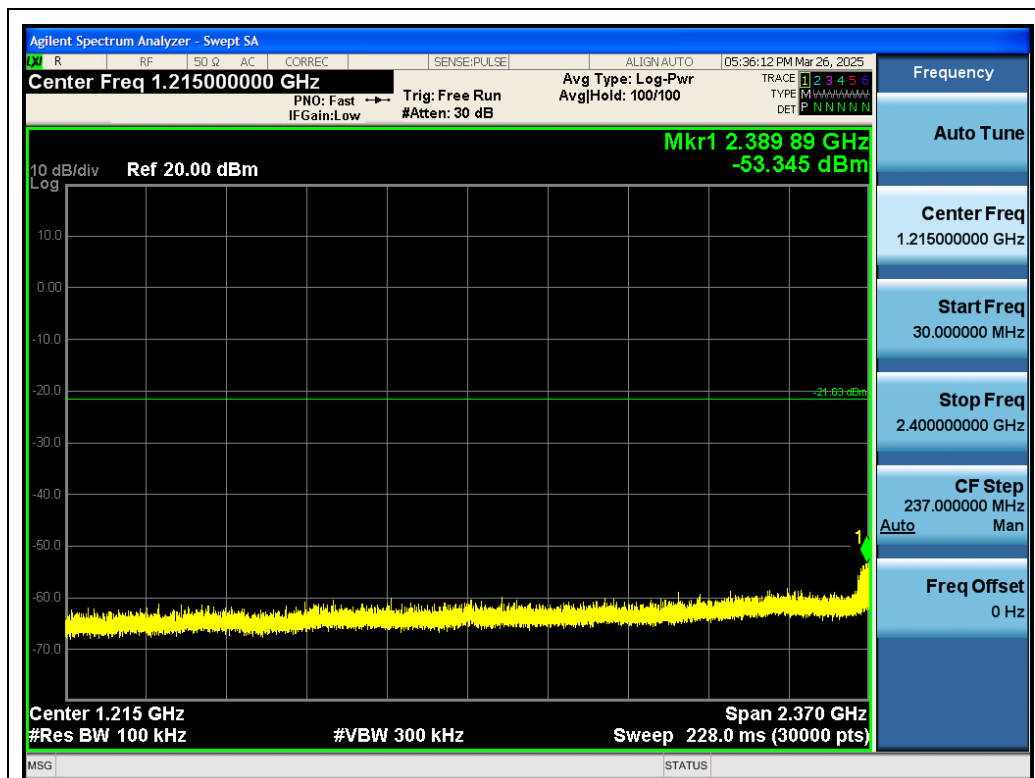
Test_Graph_802.11b_ANT2_2462_1Mbps_Higher Band Emissions



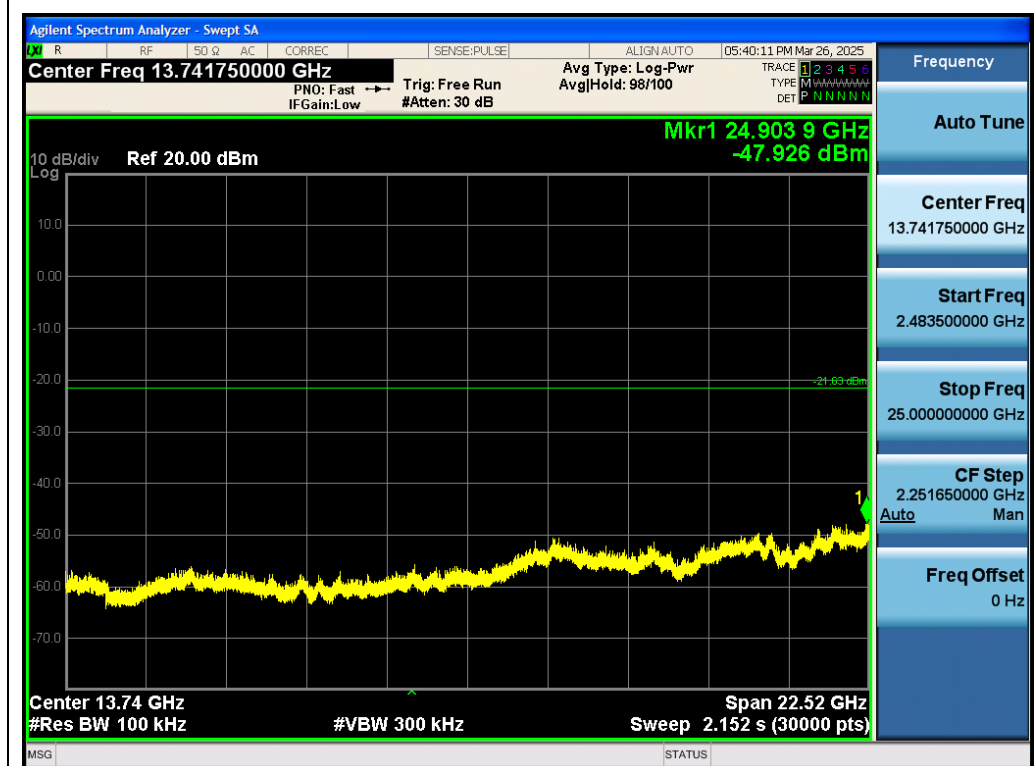
Test_Graph_802.11g_ANT2_2412_6Mbps_Lower Band Emissions



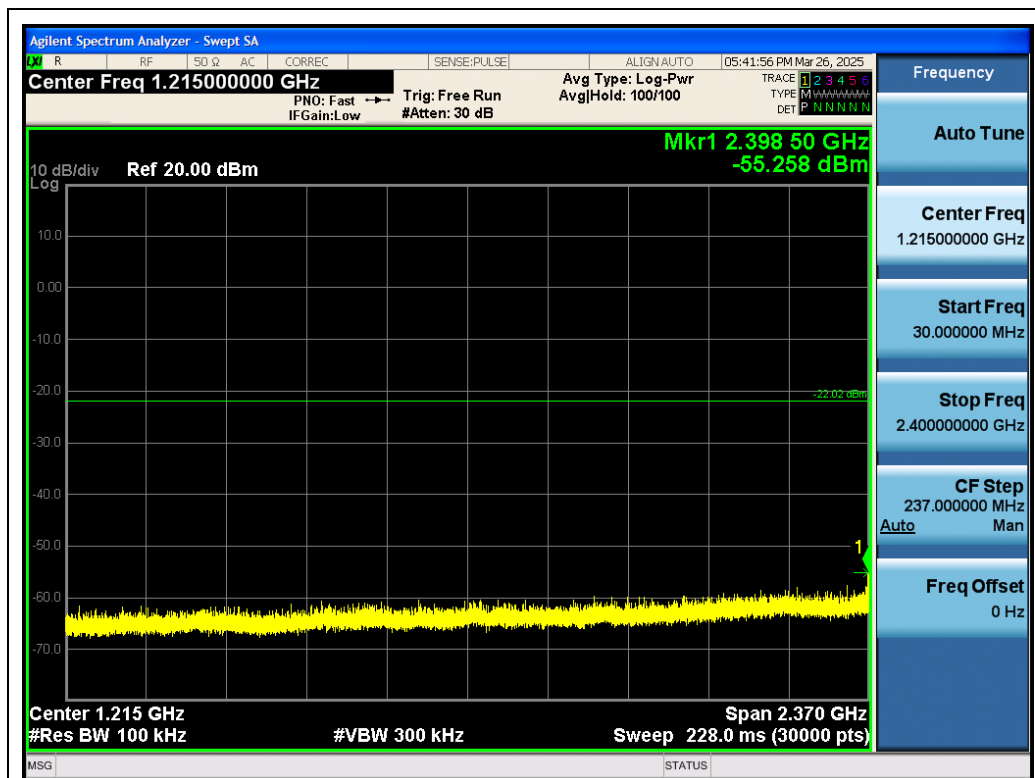
Test_Graph_802.11g_ANT2_2412_6Mbps_Higher Band Emissions



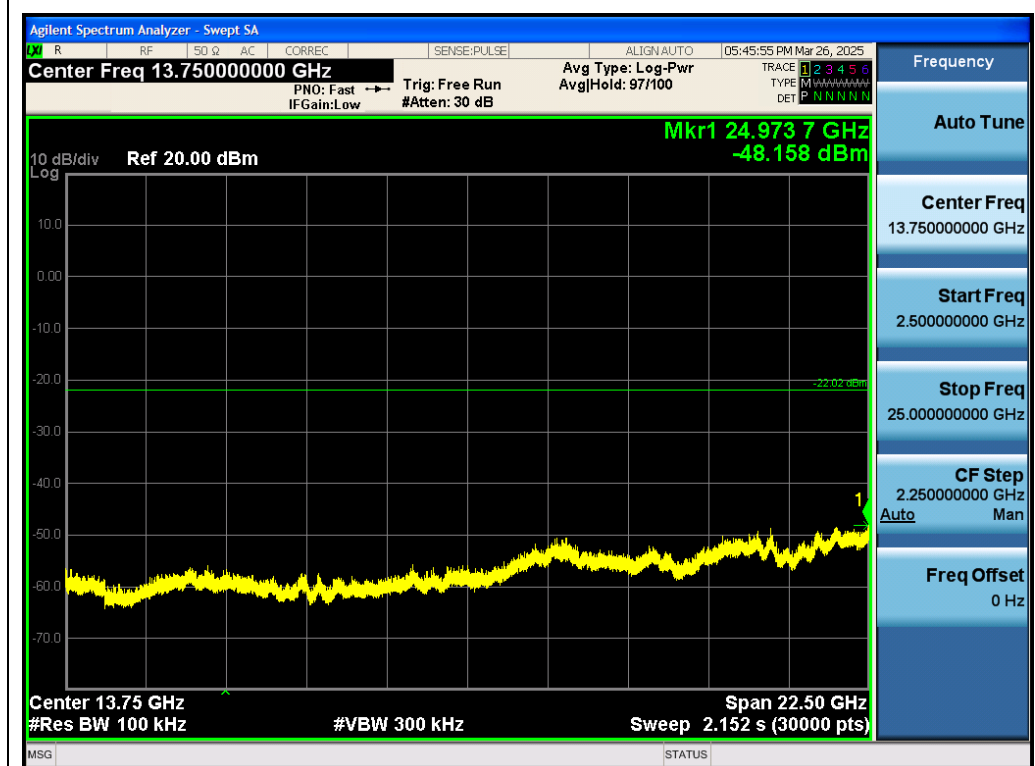
Test_Graph_802.11g_ANT2_2437_6Mbps_Lower Band Emissions



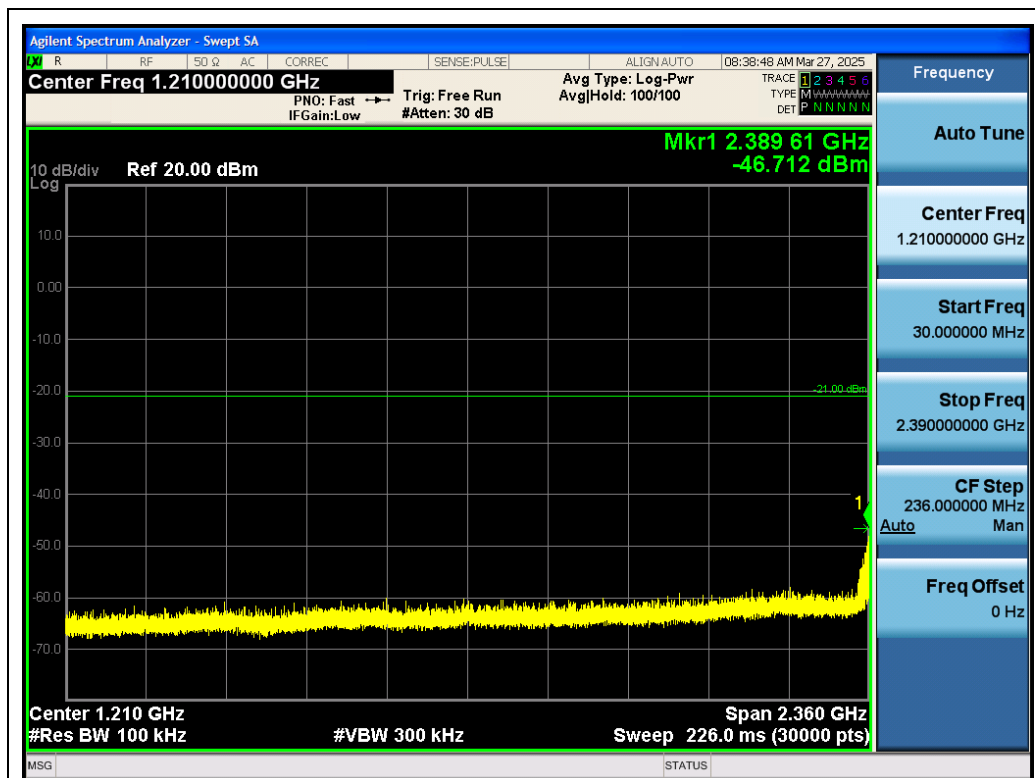
Test_Graph_802.11g_ANT2_2437_6Mbps_Higher Band Emissions



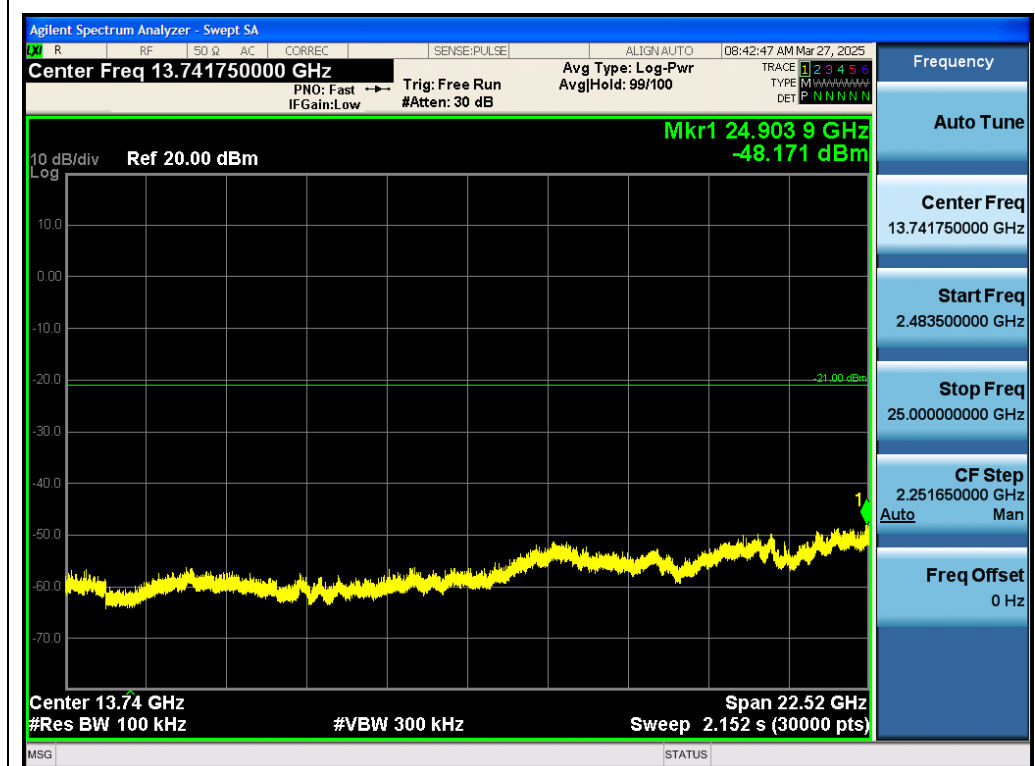
Test_Graph_802.11g_ANT2_2462_6Mbps_Lower Band Emissions



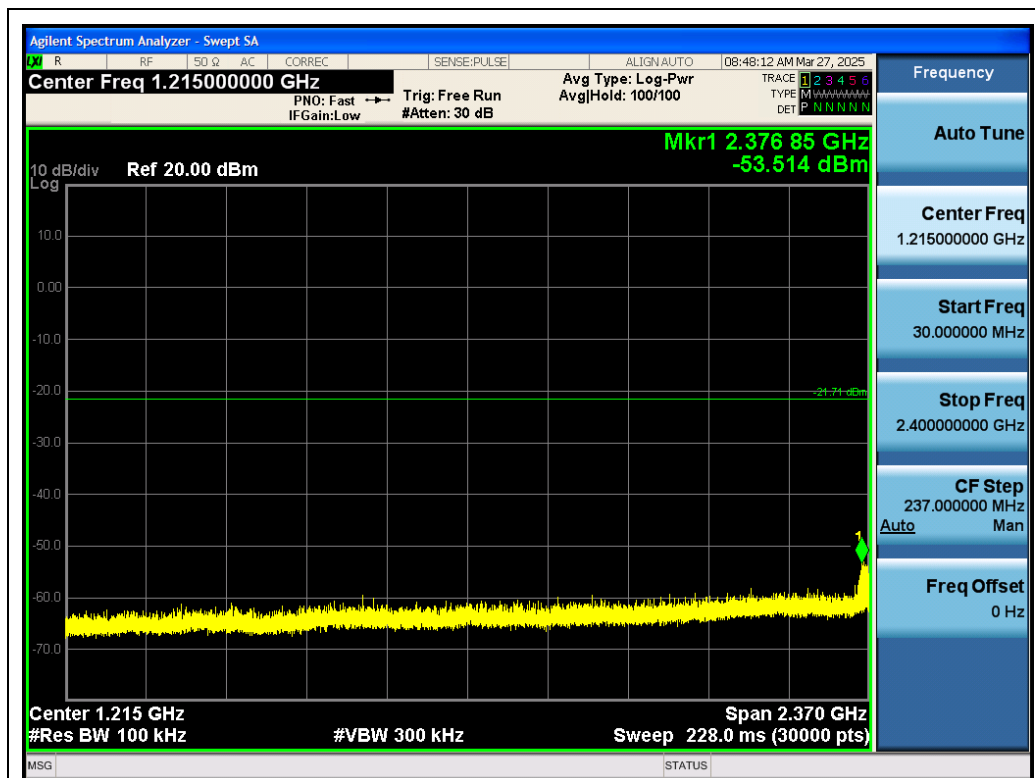
Test_Graph_802.11g_ANT2_2462_6Mbps_Higher Band Emissions



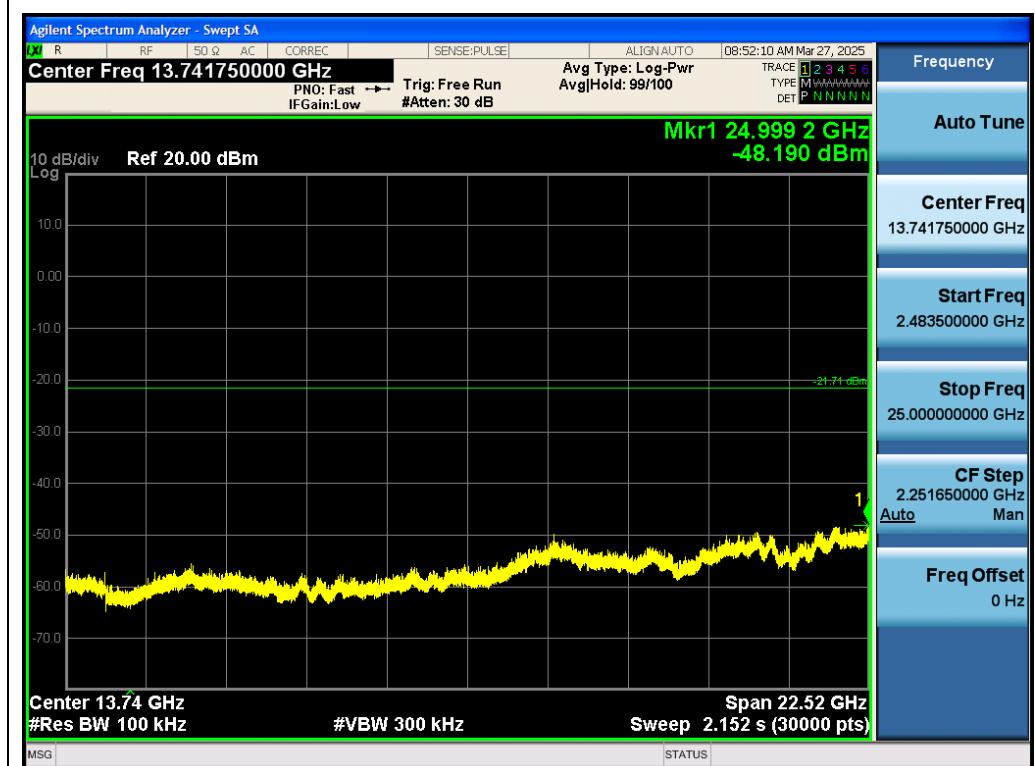
Test_Graph_802.11n20_ANT2_2412_MCS0_Lower Band Emissions



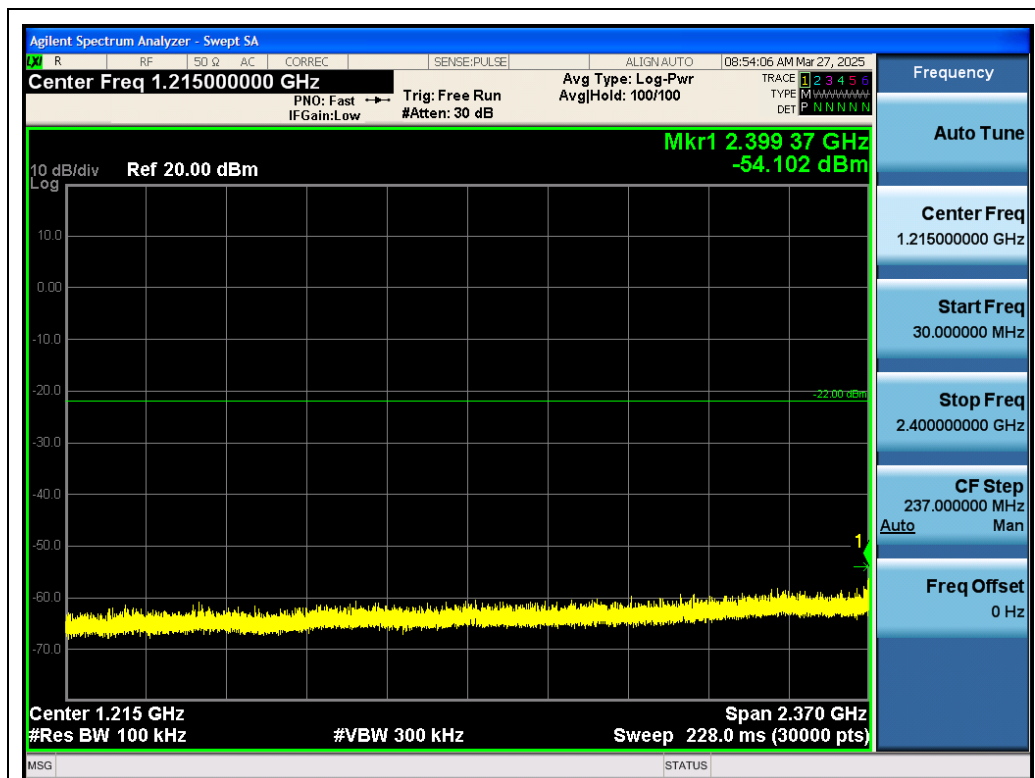
Test_Graph_802.11n20_ANT2_2412_MCS0_Higher Band Emissions



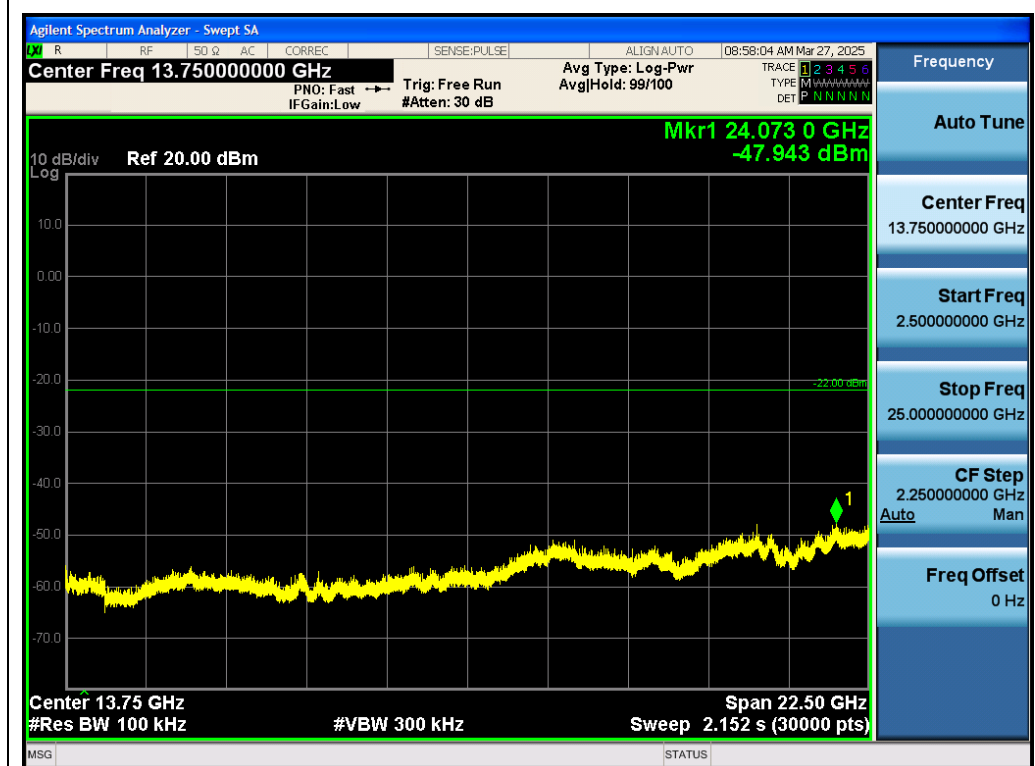
Test_Graph_802.11n20_ANT2_2437_MCS0_Lower Band Emissions



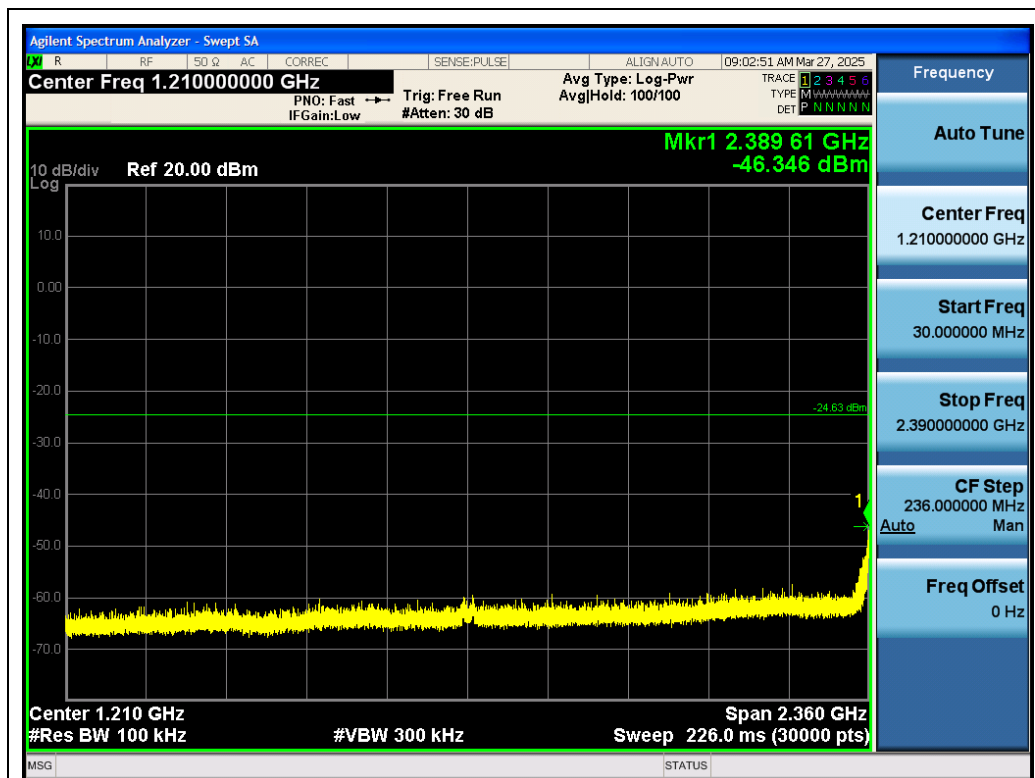
Test_Graph_802.11n20_ANT2_2437_MCS0_Higher Band Emissions



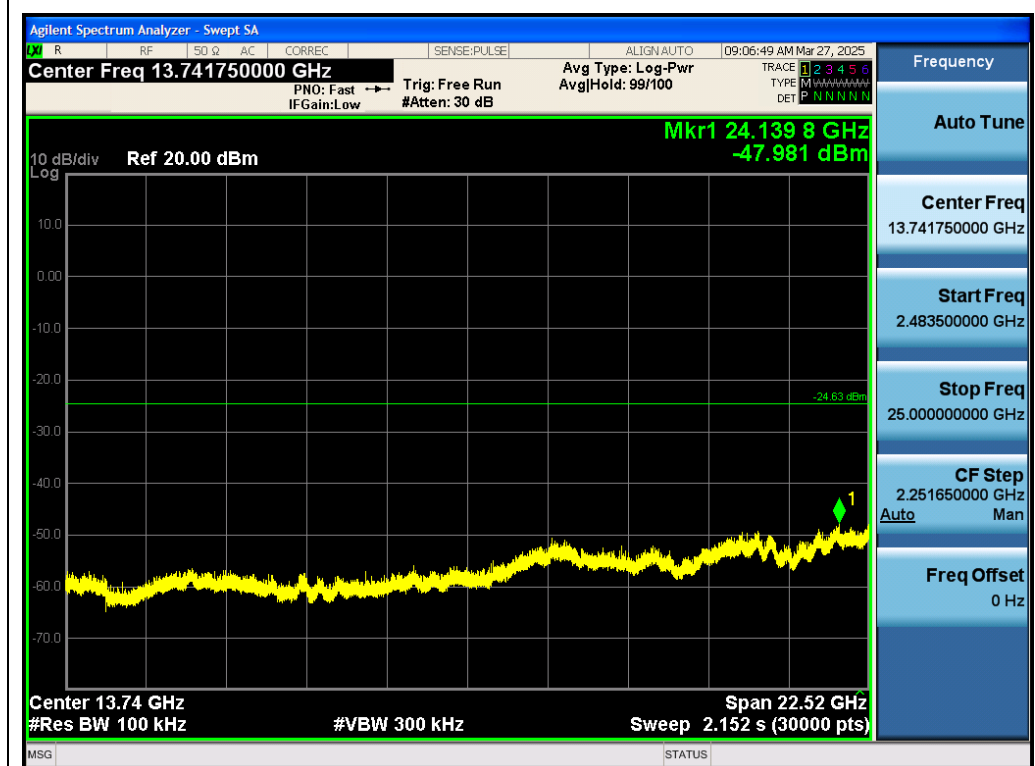
Test_Graph_802.11n20_ANT2_2462_MCS0_Lower Band Emissions



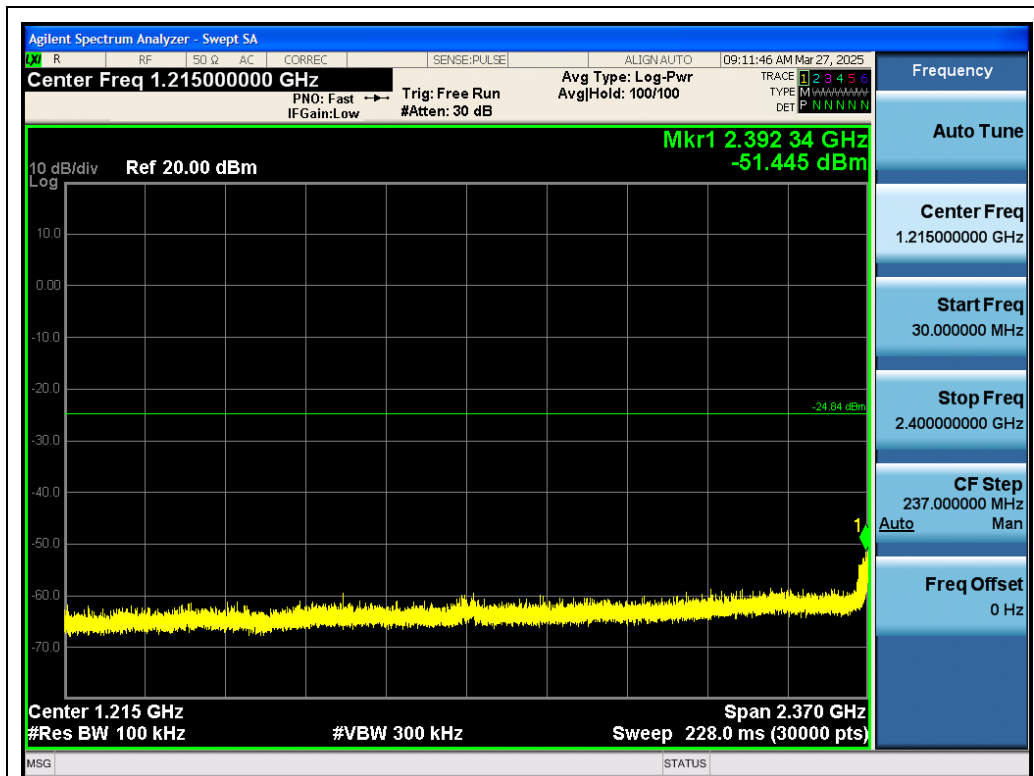
Test_Graph_802.11n20_ANT2_2462_MCS0_Higher Band Emissions



Test_Graph_802.11n40_ANT2_2422_MCS0_Lower Band Emissions



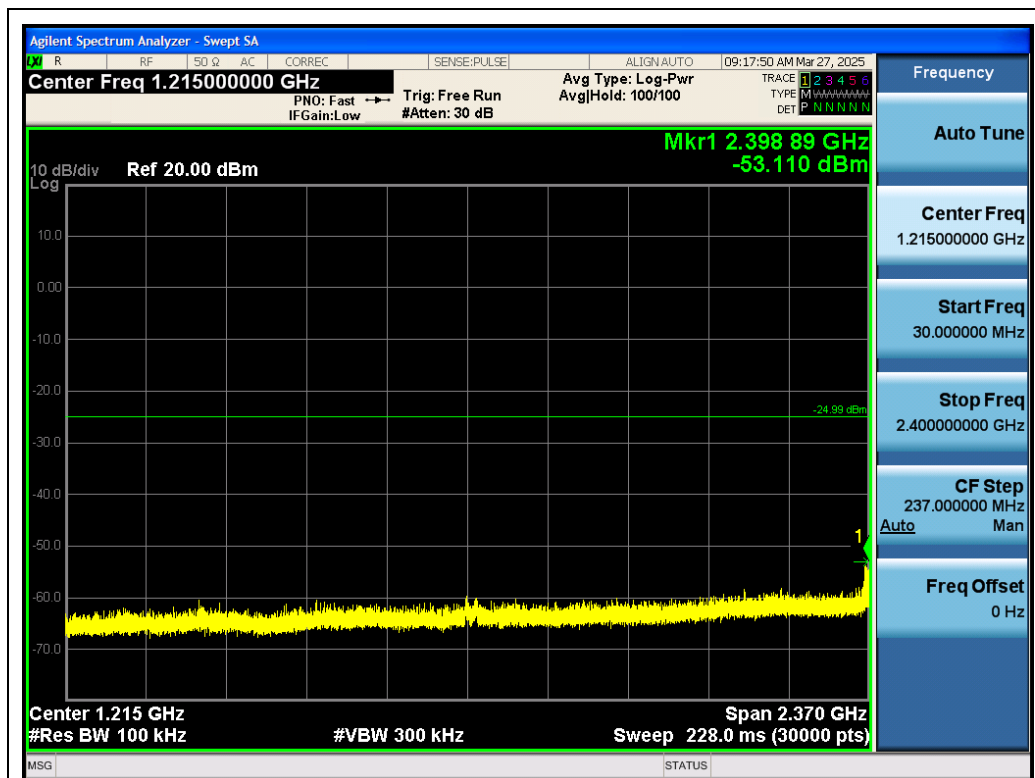
Test_Graph_802.11n40_ANT2_2422_MCS0_Higher Band Emissions



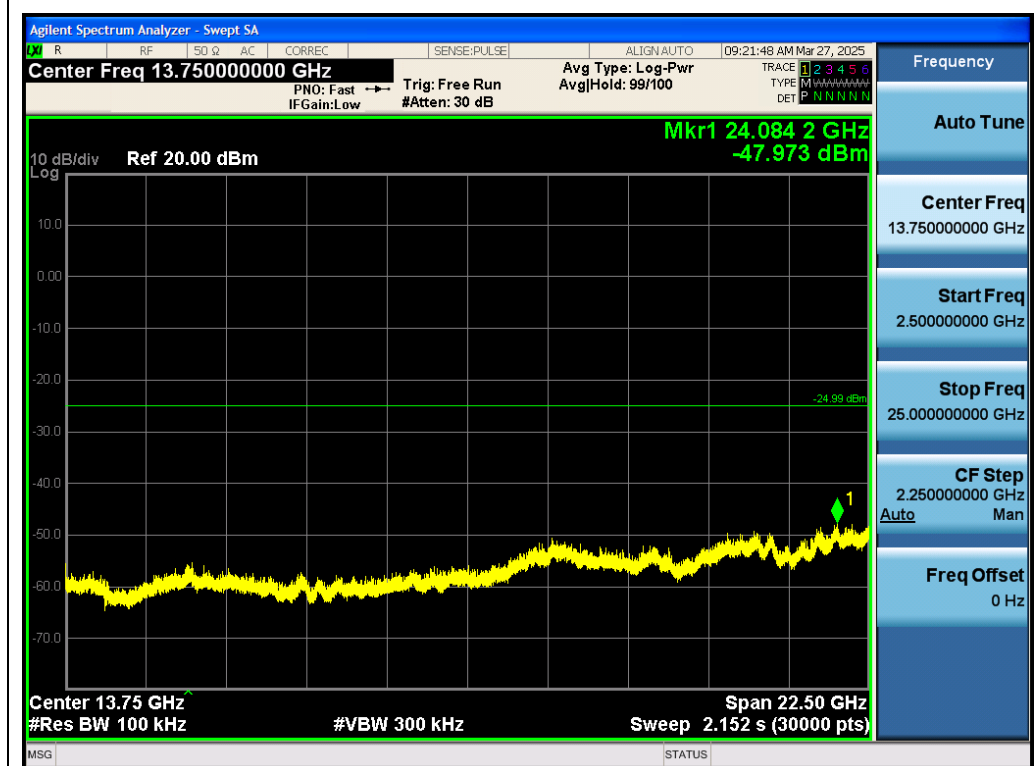
Test_Graph_802.11n40_ANT2_2437_MCS0_Lower Band Emissions



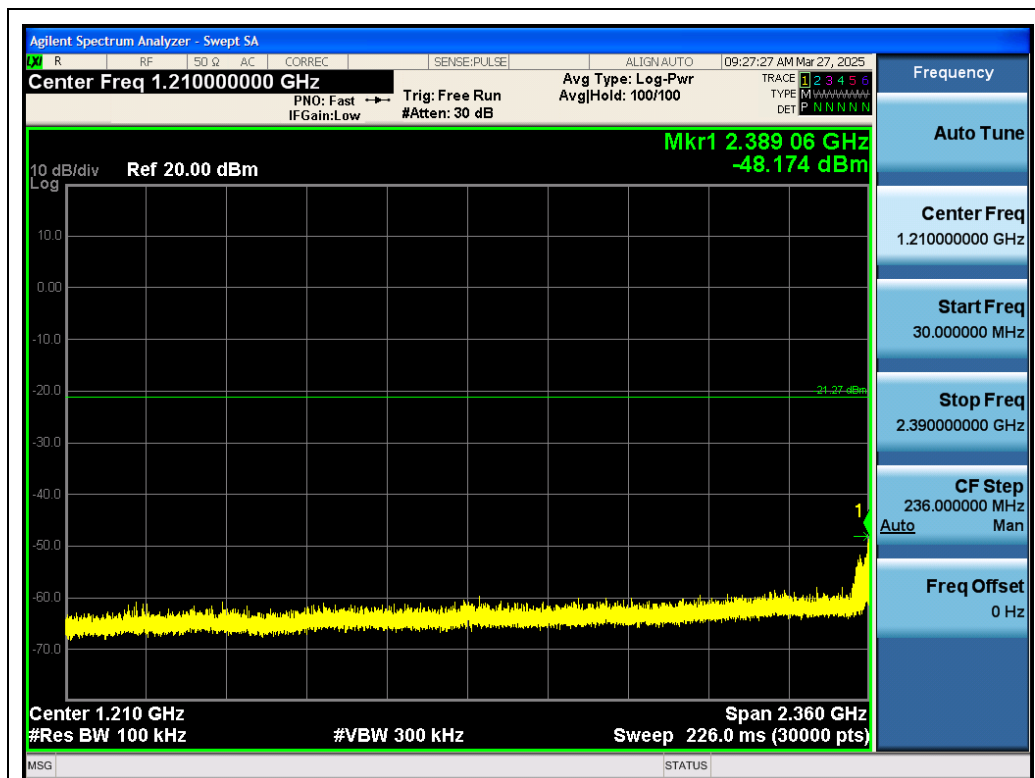
Test_Graph_802.11n40_ANT2_2437_MCS0_Higher Band Emissions



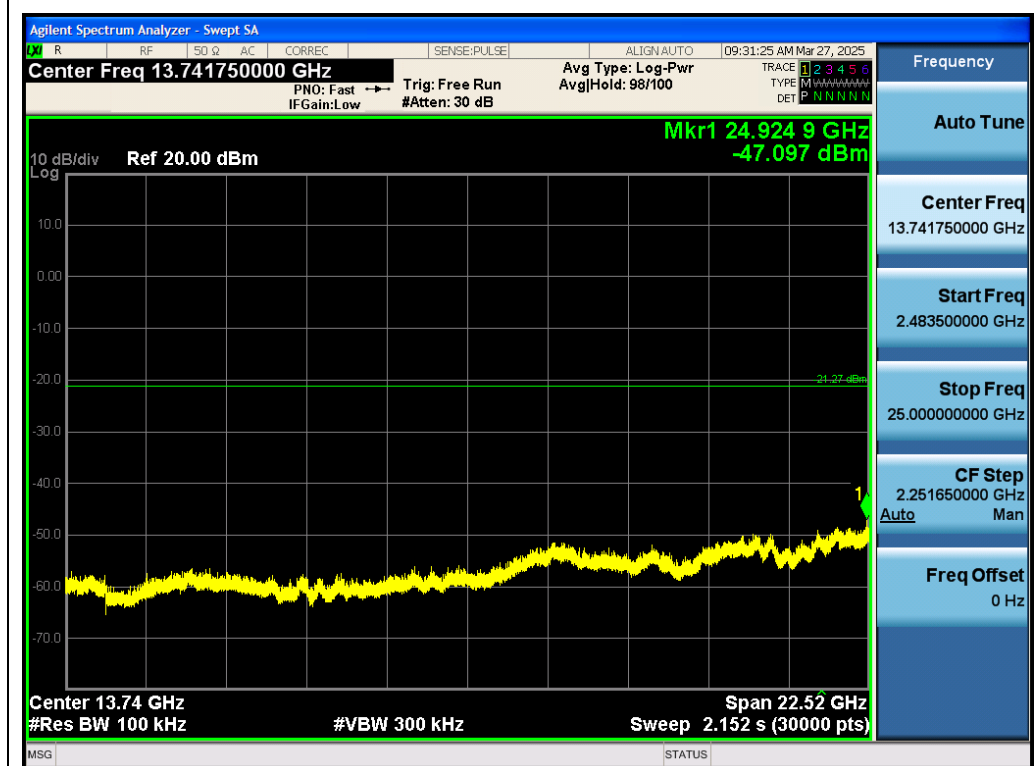
Test_Graph_802.11n40_ANT2_2452_MCS0_Lower Band Emissions



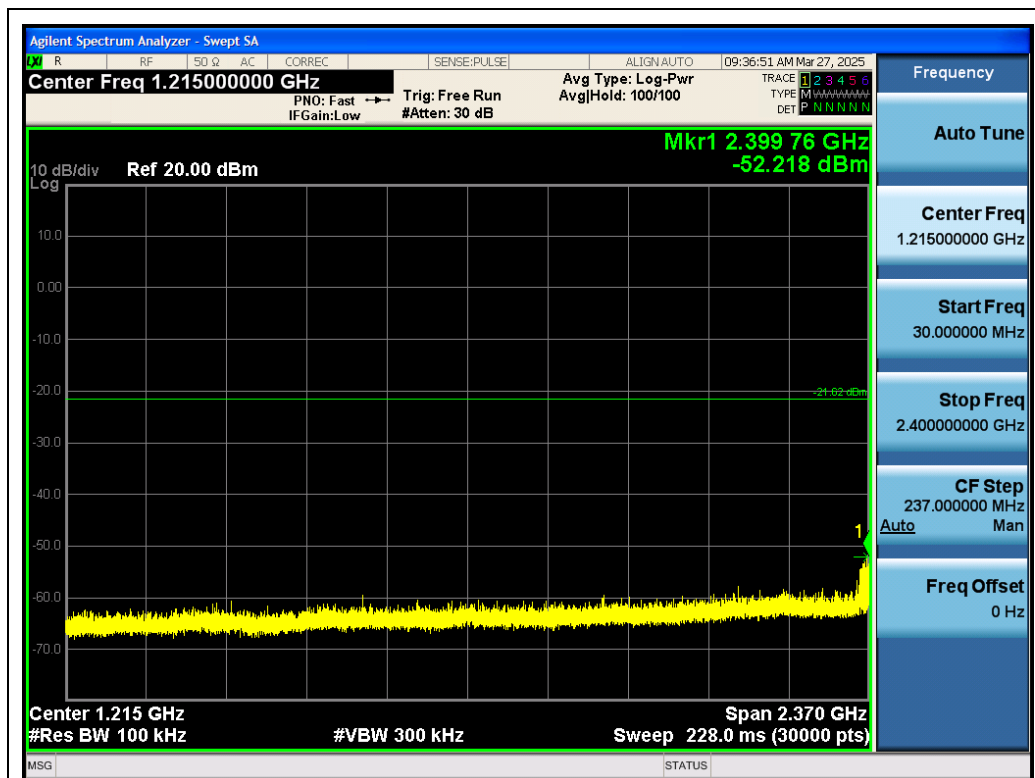
Test_Graph_802.11n40_ANT2_2452_MCS0_Higher Band Emissions



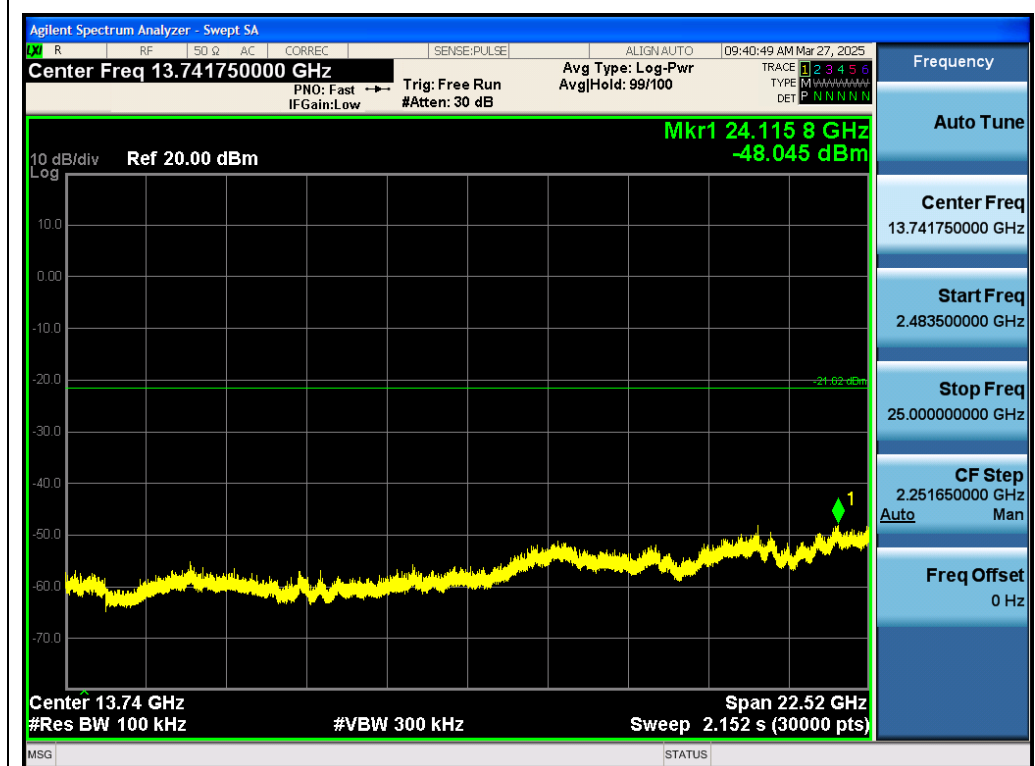
Test_Graph_802.11ax20_ANT2_2412_MCS0_Lower Band Emissions



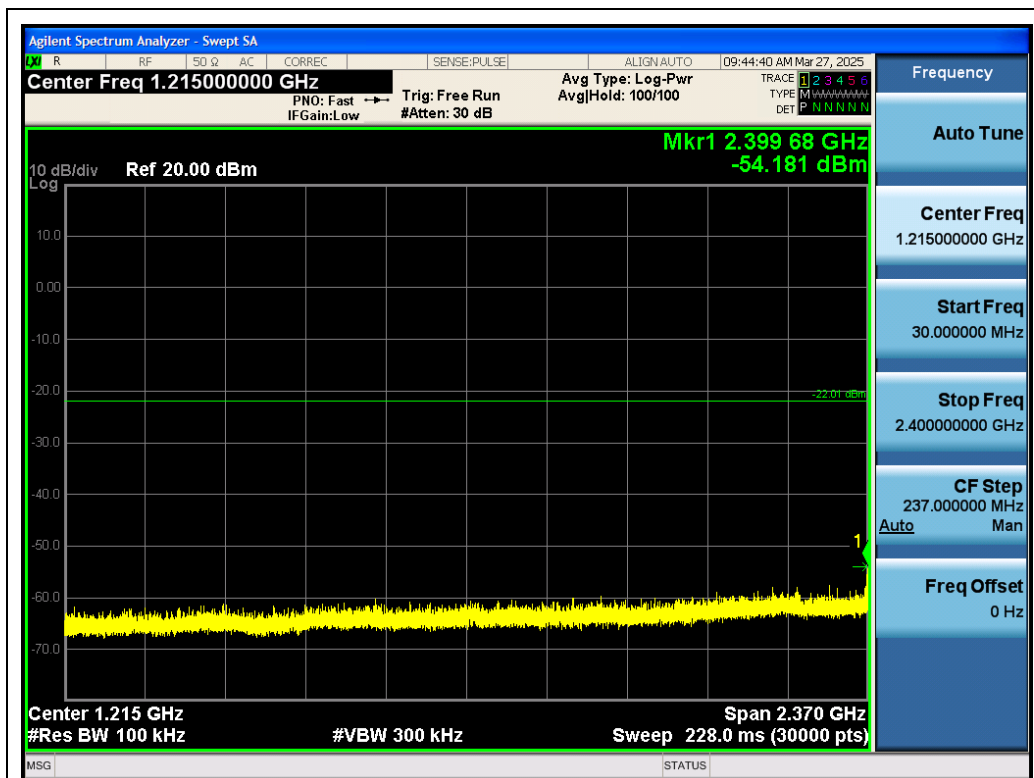
Test_Graph_802.11ax20_ANT2_2412_MCS0_Higher Band Emissions



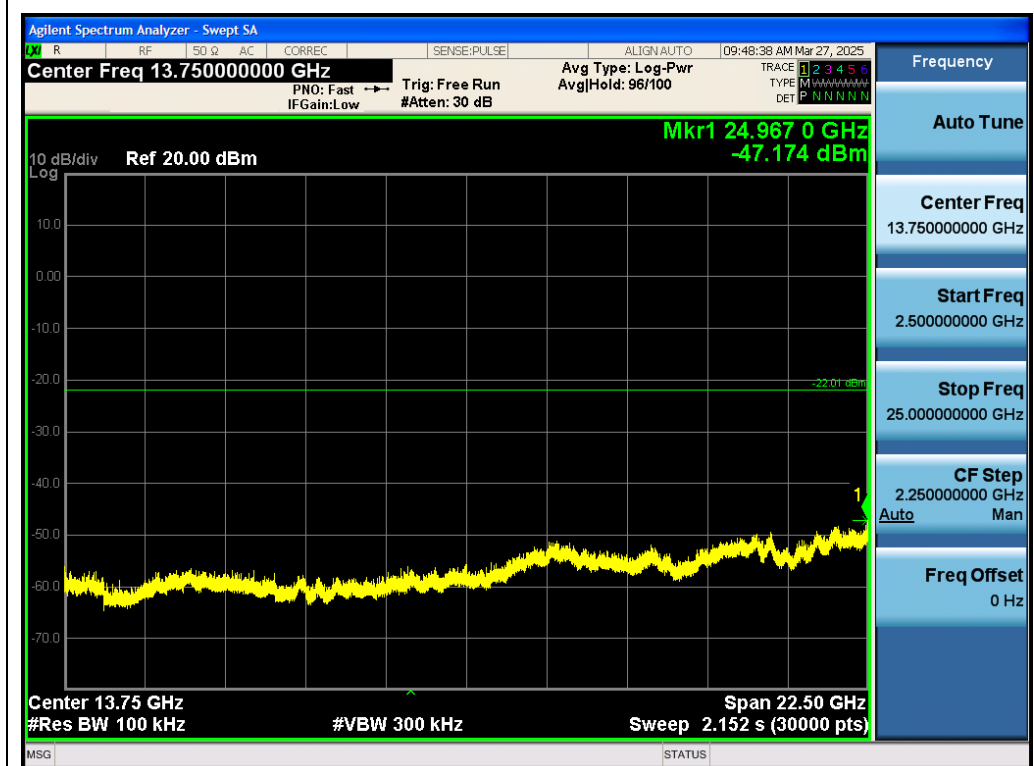
Test_Graph_802.11ax20_ANT2_2437_MCS0_Lower Band Emissions



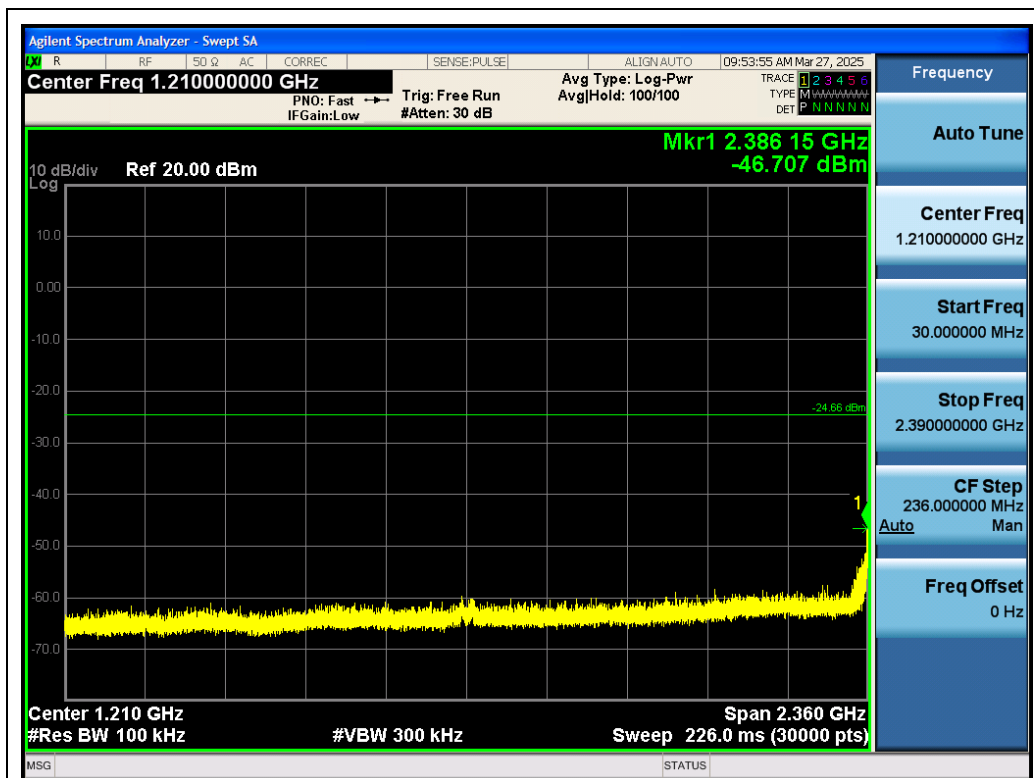
Test_Graph_802.11ax20_ANT2_2437_MCS0_Higher Band Emissions



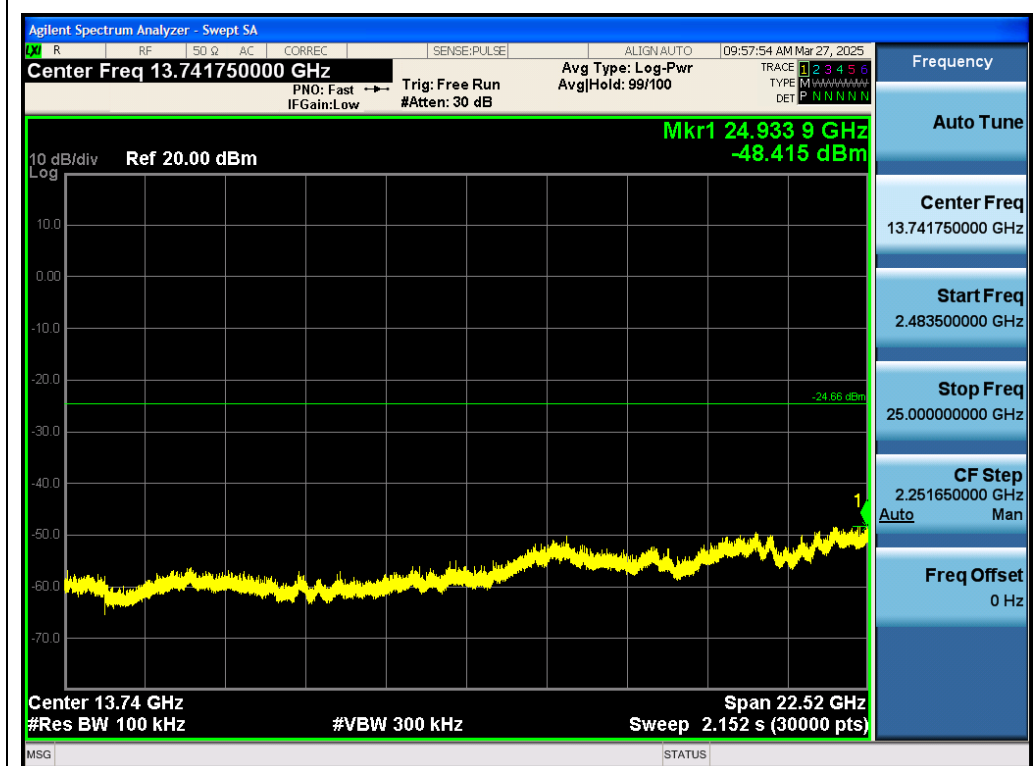
Test_Graph_802.11ax20_ANT2_2462_MCS0_Lower Band Emissions



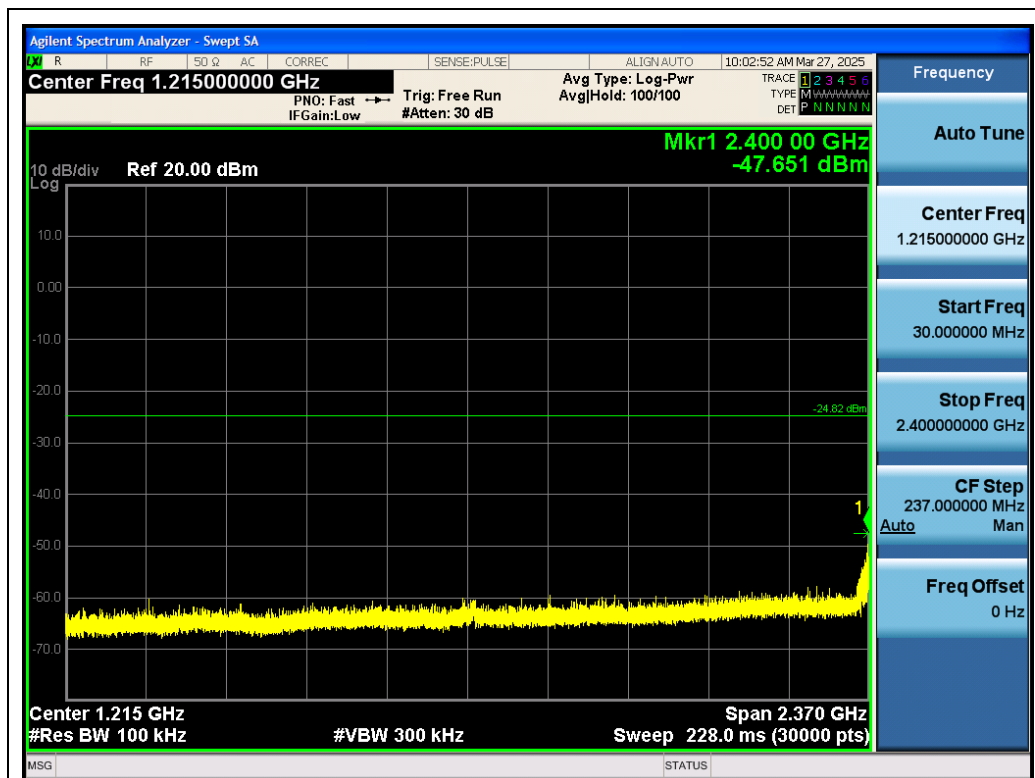
Test_Graph_802.11ax20_ANT2_2462_MCS0_Higher Band Emissions



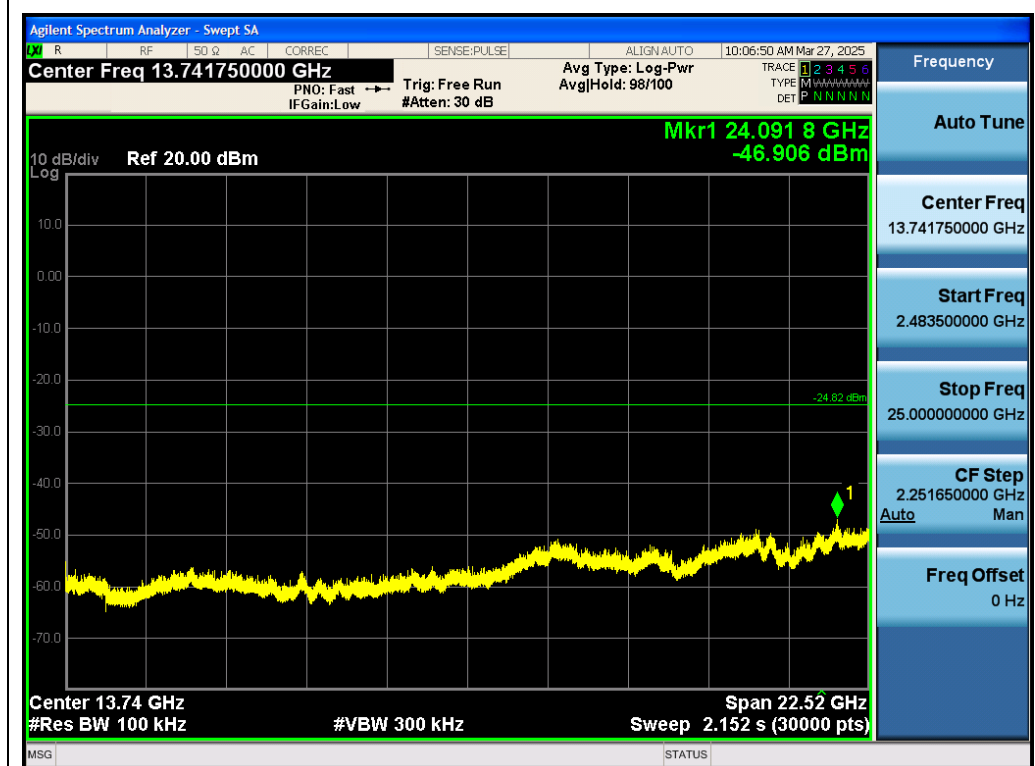
Test_Graph_802.11ax40_ANT2_2422_MCS0_Lower Band Emissions



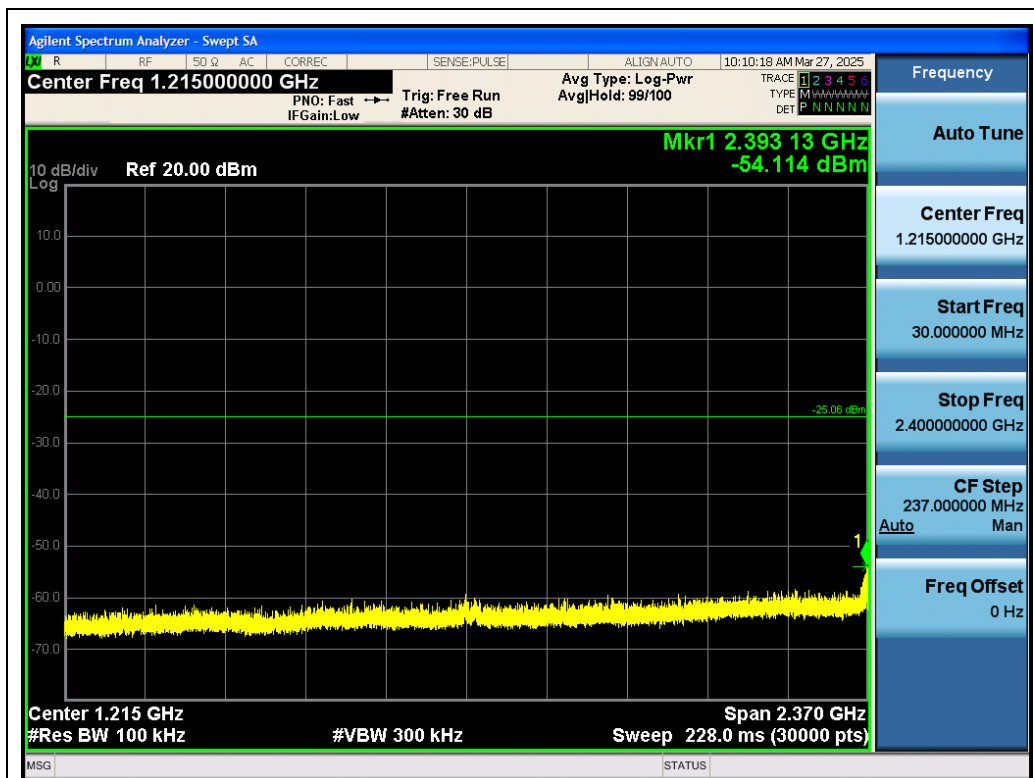
Test_Graph_802.11ax40_ANT2_2422_MCS0_Higher Band Emissions



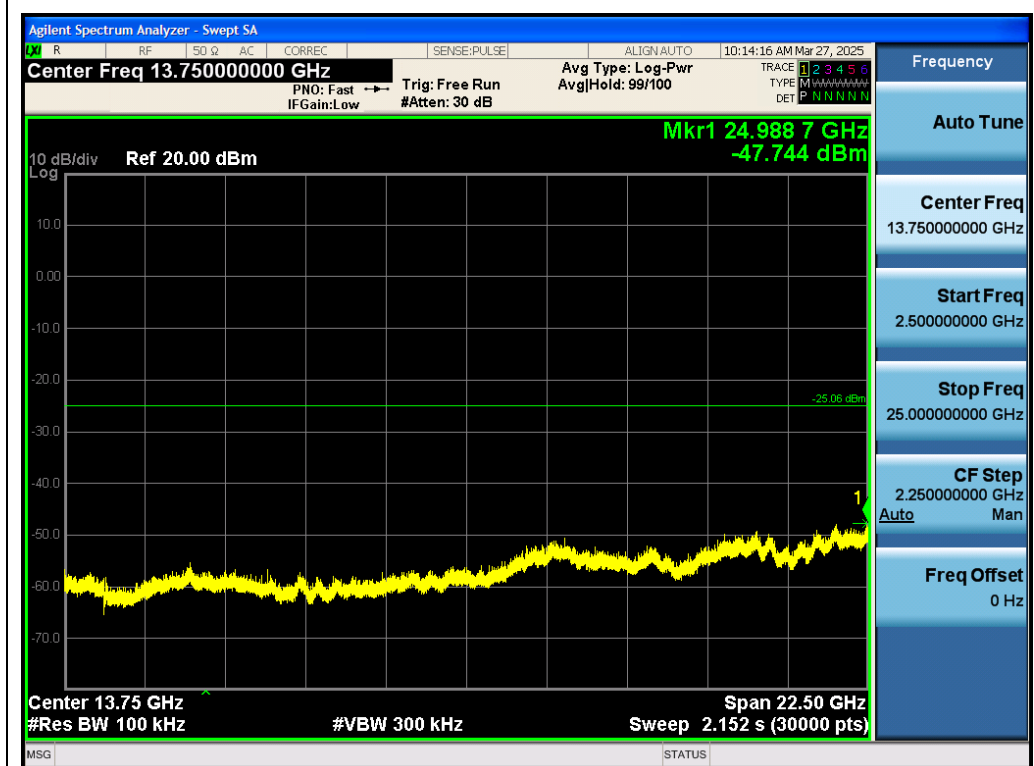
Test_Graph_802.11ax40_ANT2_2437_MCS0_Lower Band Emissions



Test_Graph_802.11ax40_ANT2_2437_MCS0_Higher Band Emissions



Test_Graph_802.11ax40_ANT2_2452_MCS0_Lower Band Emissions



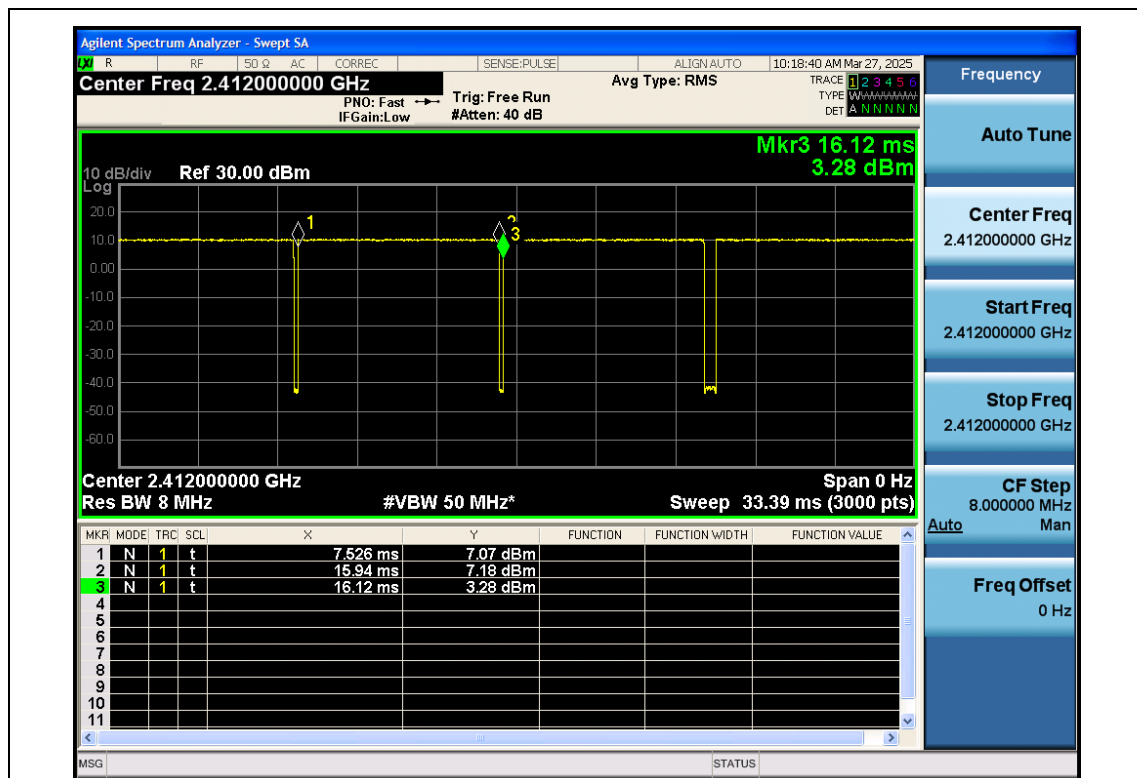
Test_Graph_802.11ax40_ANT2_2452_MCS0_Higher Band Emissions

Appendix F: Duty Cycle

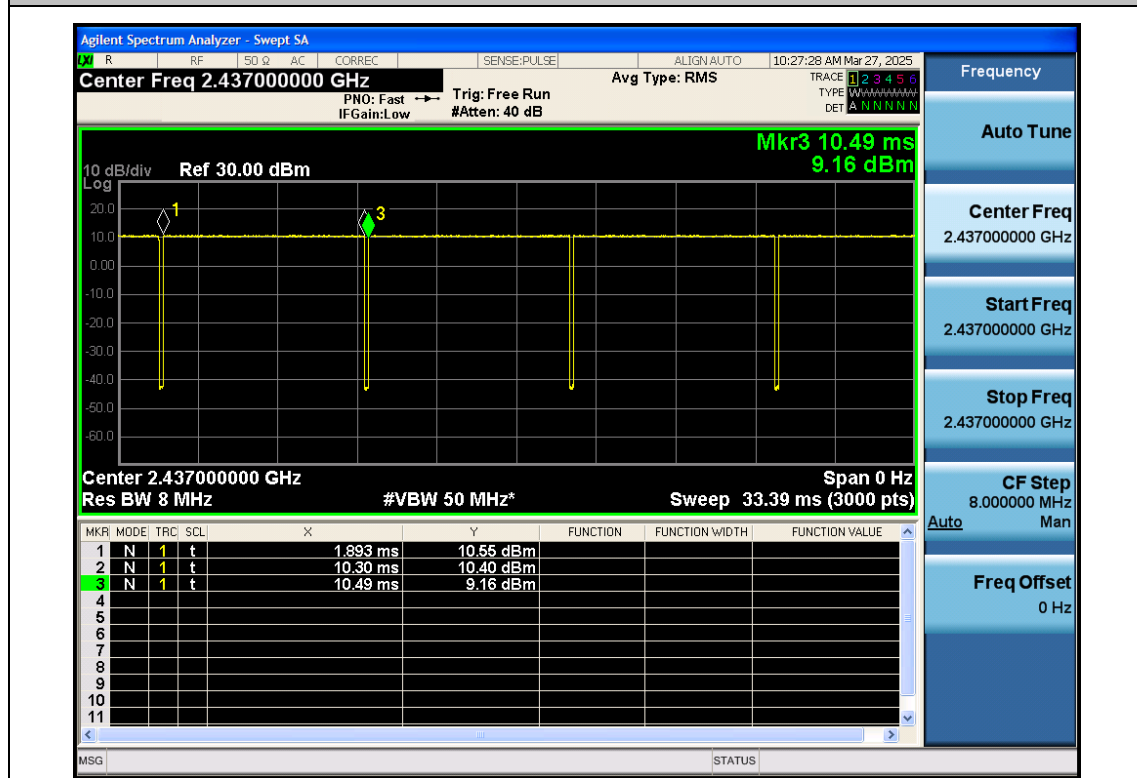
Test Result

Test Mode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor
11B	Ant1	2412	12.24	12.30	99.51	0.02
11B	Ant1	2437	12.22	12.29	99.43	0.02
11B	Ant1	2462	12.22	12.34	99.03	0.04
11G	Ant1	2412	2.03	2.14	94.86	0.23
11G	Ant1	2437	2.03	2.11	96.21	0.17
11G	Ant1	2462	2.03	2.08	97.60	0.11
11N20SISO	Ant1	2412	1.90	1.97	96.45	0.16
11N20SISO	Ant1	2437	1.90	1.97	96.45	0.16
11N20SISO	Ant1	2462	1.89	2.05	92.20	0.35
11N40SISO	Ant1	2422	0.93	1.11	83.78	0.77
11N40SISO	Ant1	2437	0.93	1.15	80.87	0.92
11N40SISO	Ant1	2452	0.93	1.15	80.87	0.92
11AX20SISO	Ant1	2412	1.46	1.57	92.99	0.32
11AX20SISO	Ant1	2437	1.45	1.57	92.36	0.35
11AX20SISO	Ant1	2462	1.46	1.58	92.41	0.34
11AX40SISO	Ant1	2422	0.75	0.87	86.21	0.64
11AX40SISO	Ant1	2437	0.74	0.88	84.09	0.75
11AX40SISO	Ant1	2452	0.74	0.95	77.89	1.09

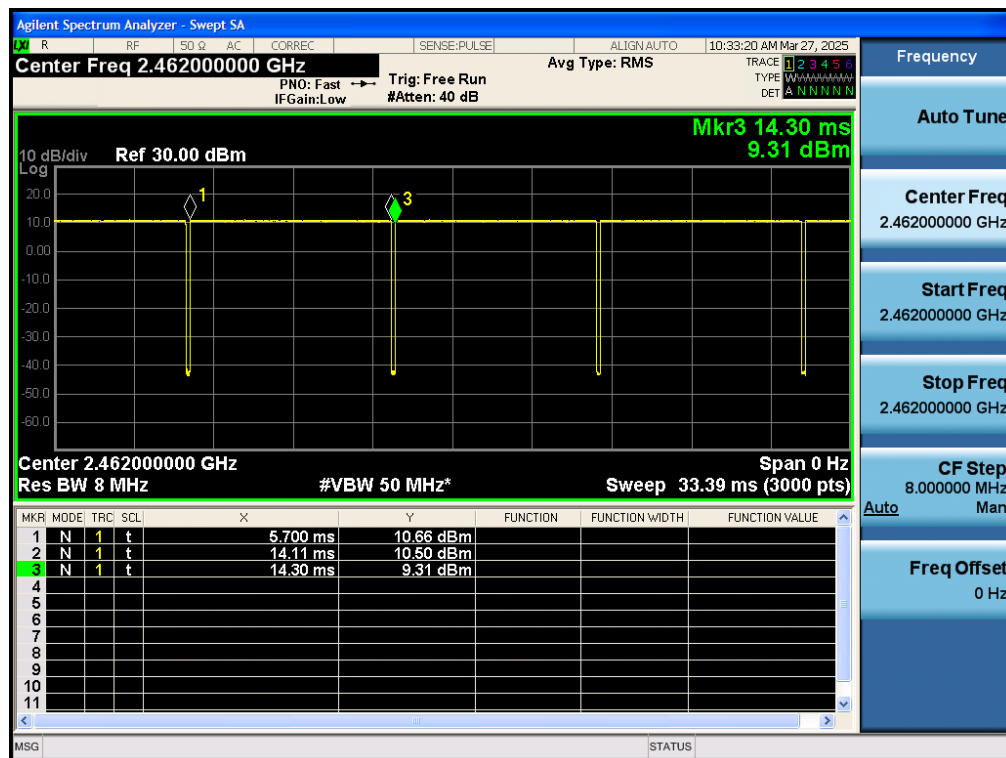
Test Graphs



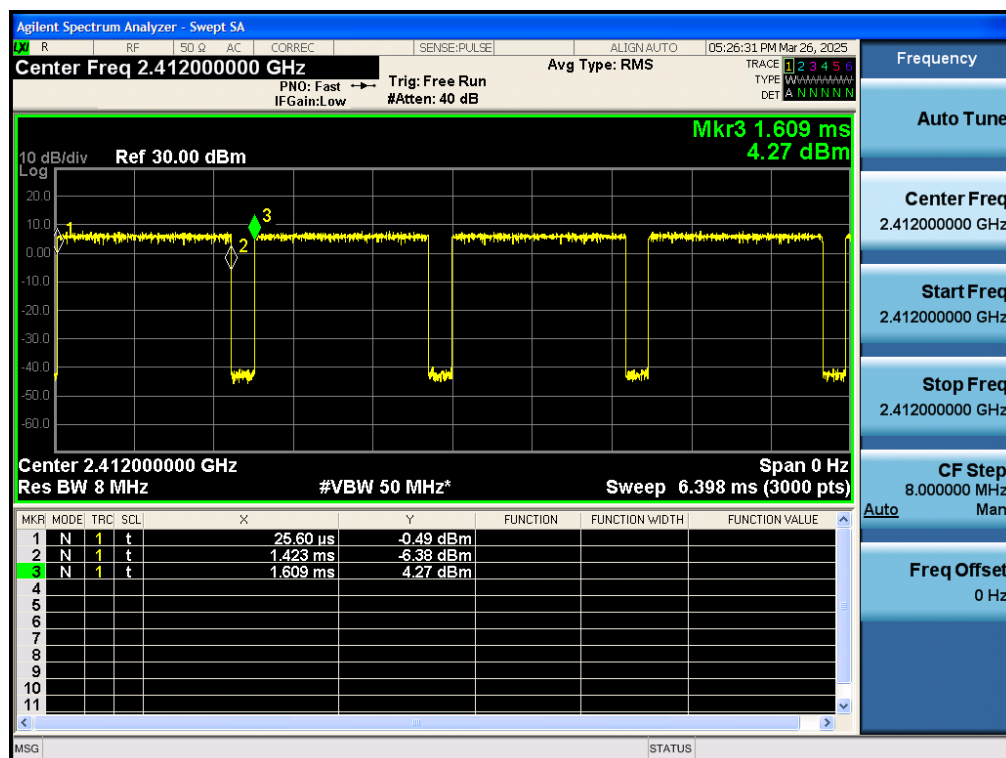
NTNV-11B-Ant1-2412



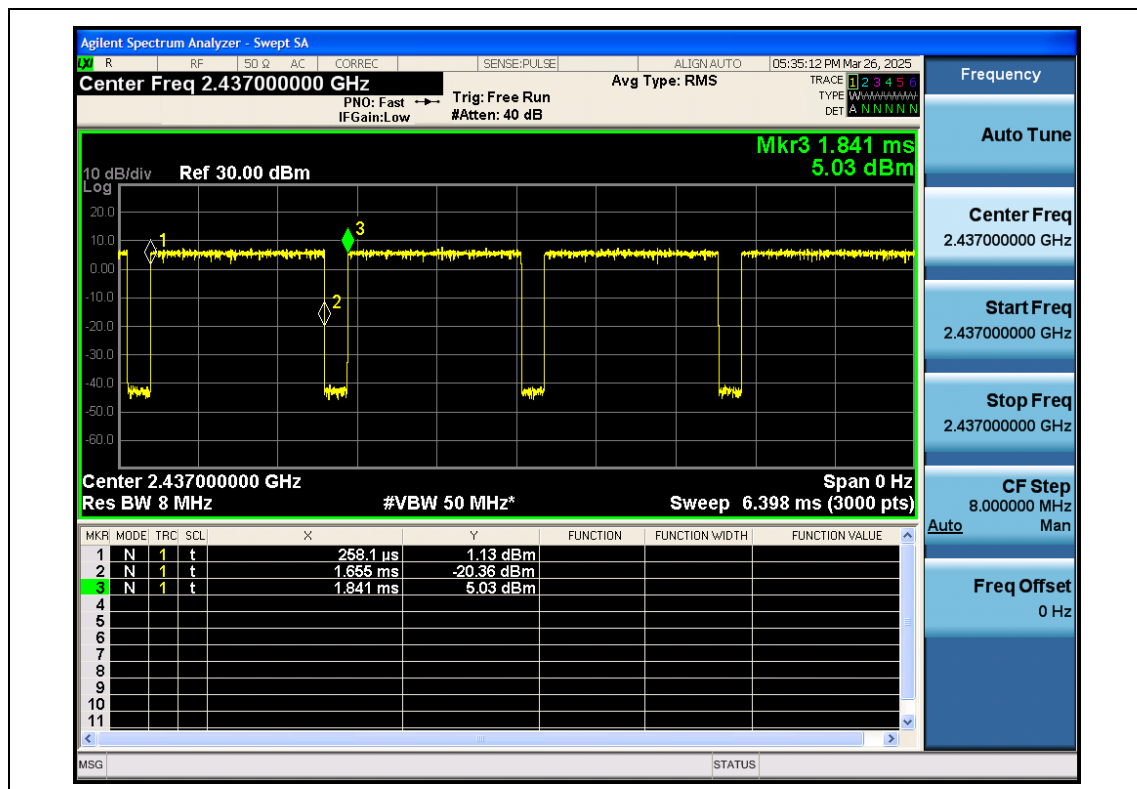
NTNV-11B-Ant1-2437



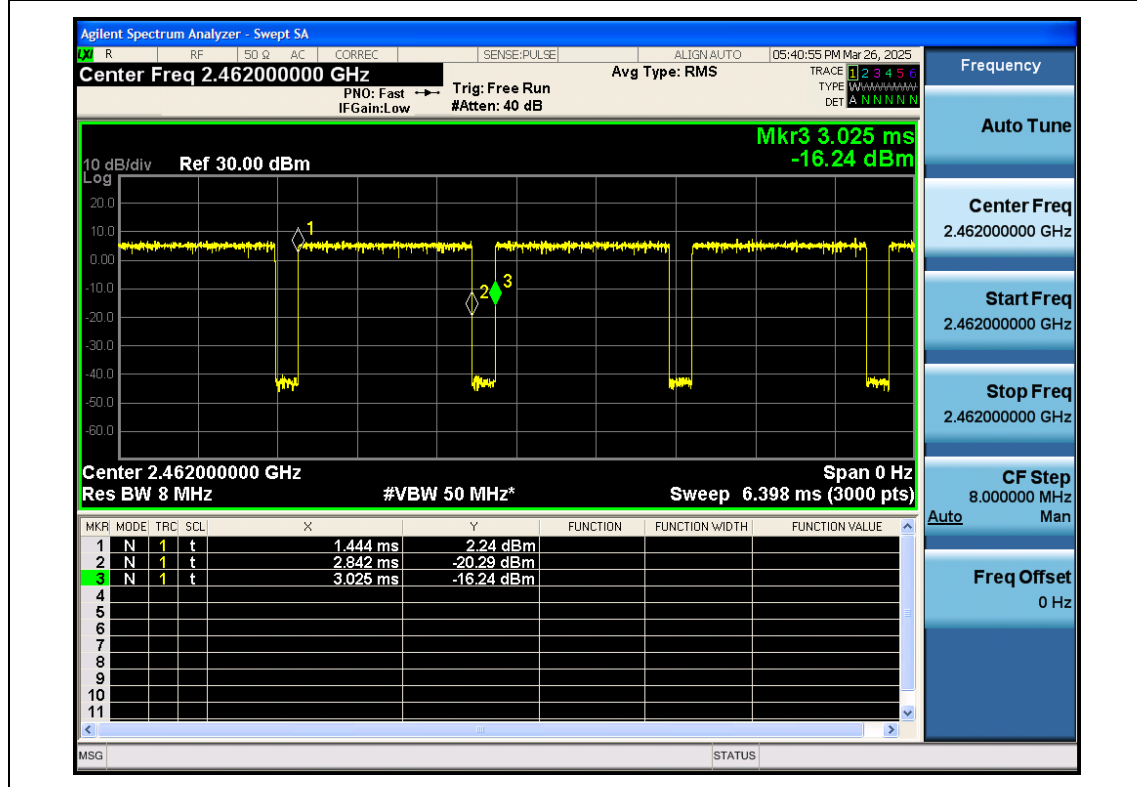
NTNV-11B-Ant1-2462



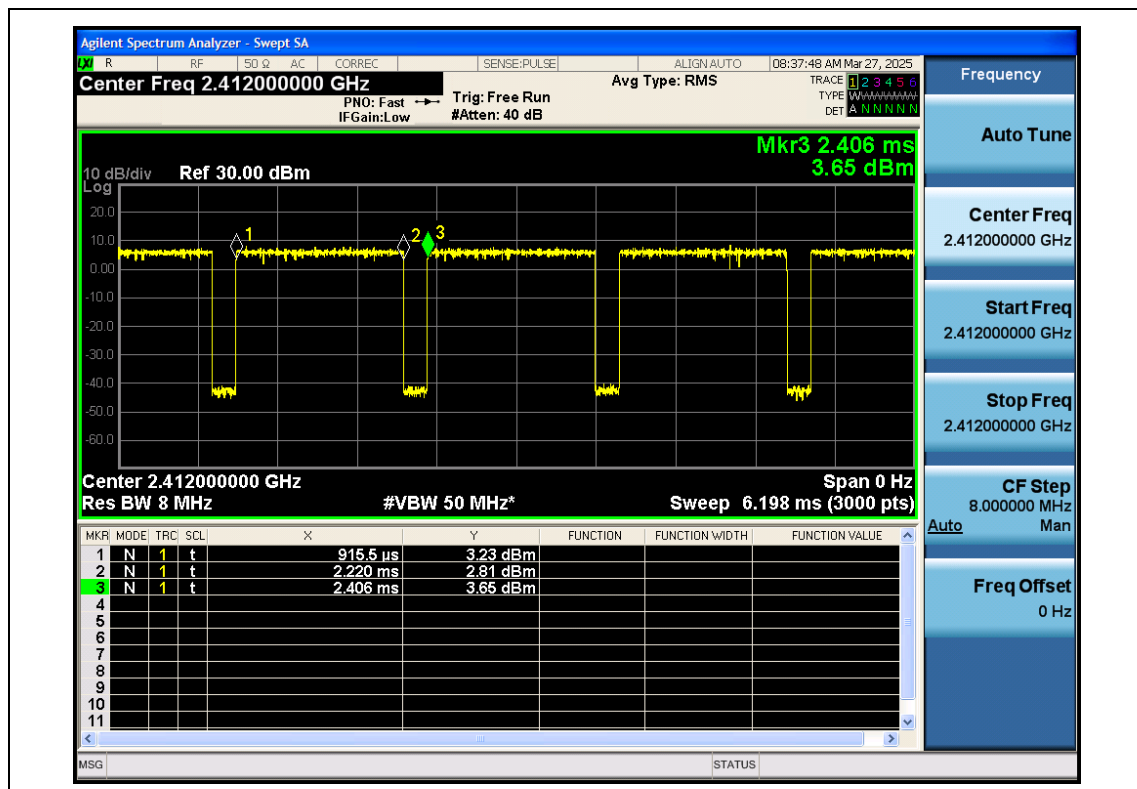
NTNV-11G-Ant1-2412



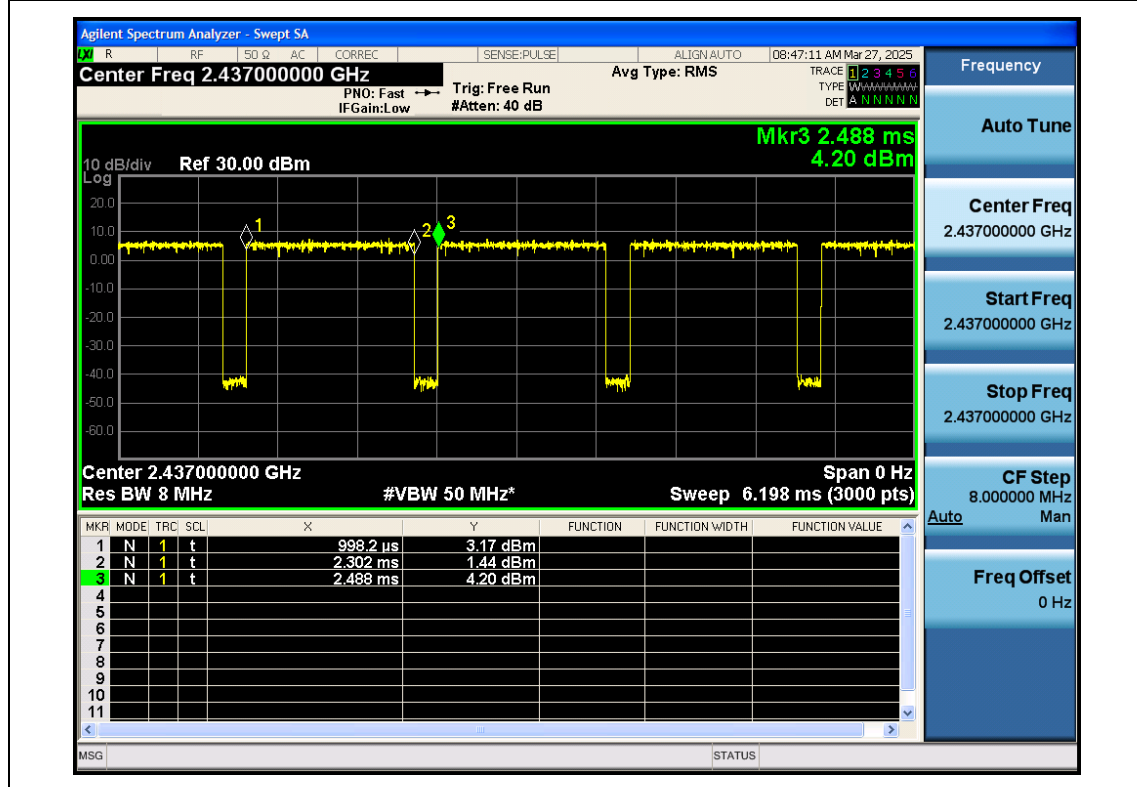
NTNV-11G-Ant1-2437



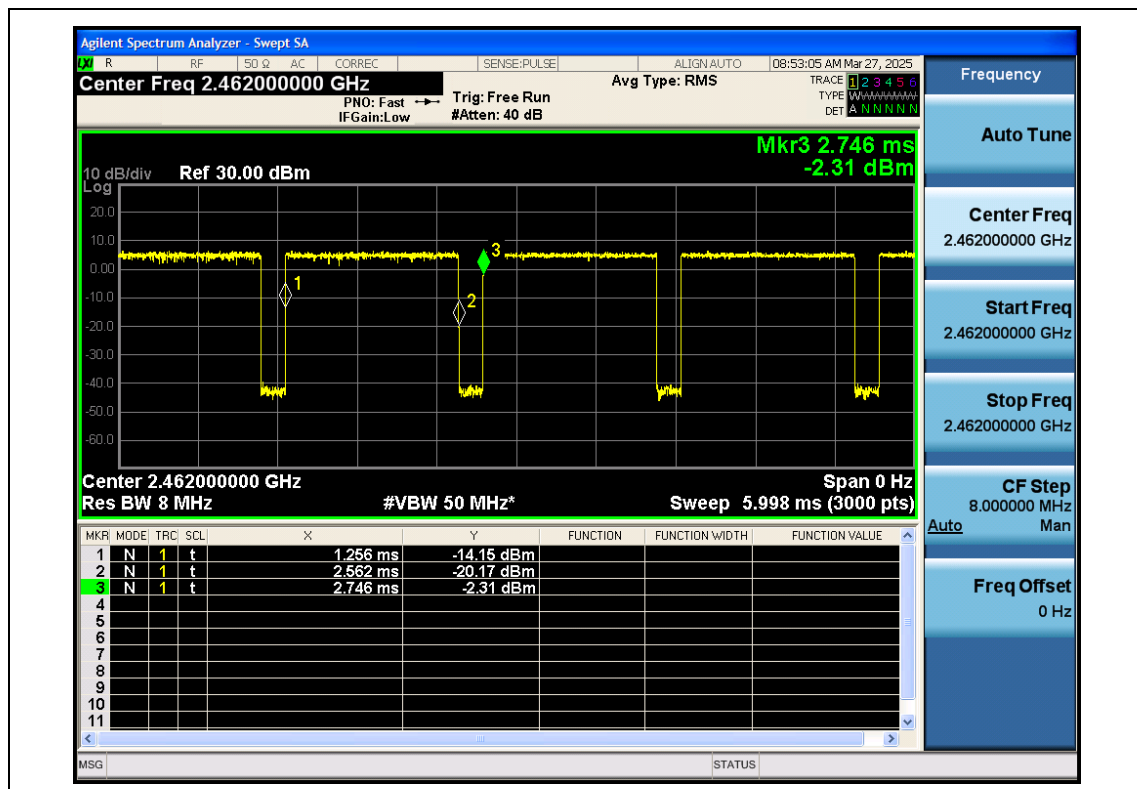
NTNV-11G-Ant1-2462



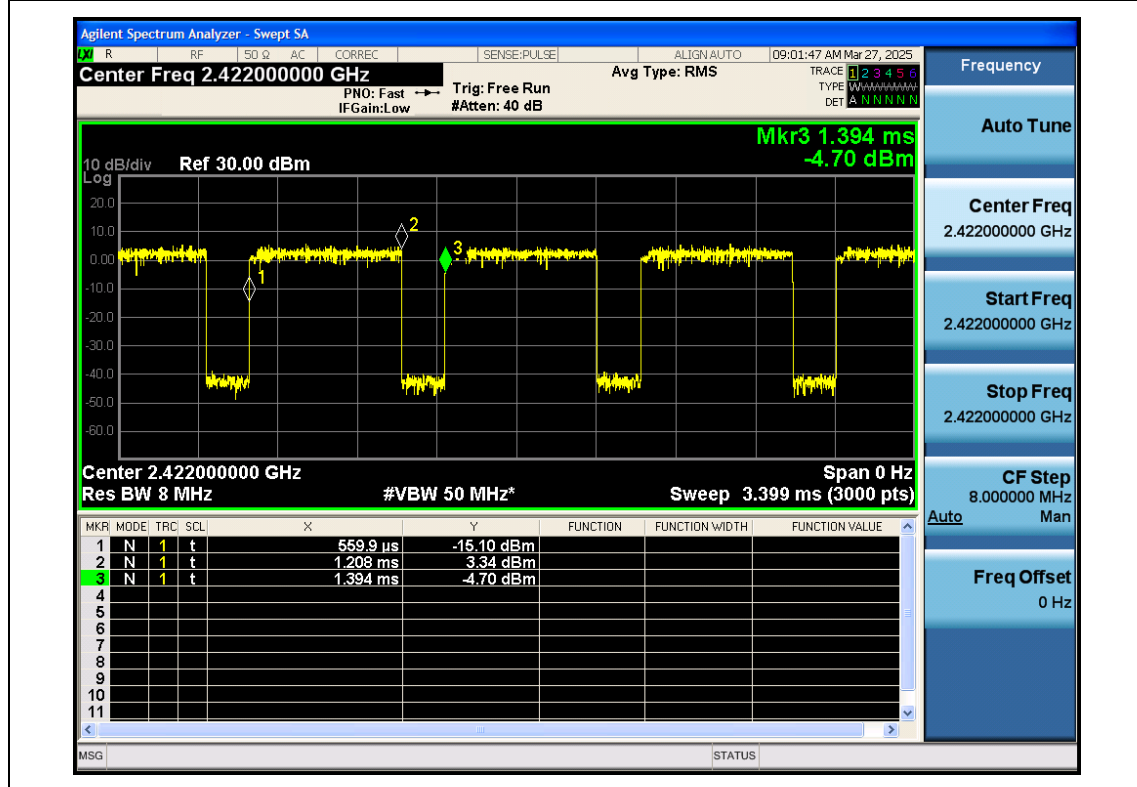
NTNV-11N20SISO-Ant1-2412



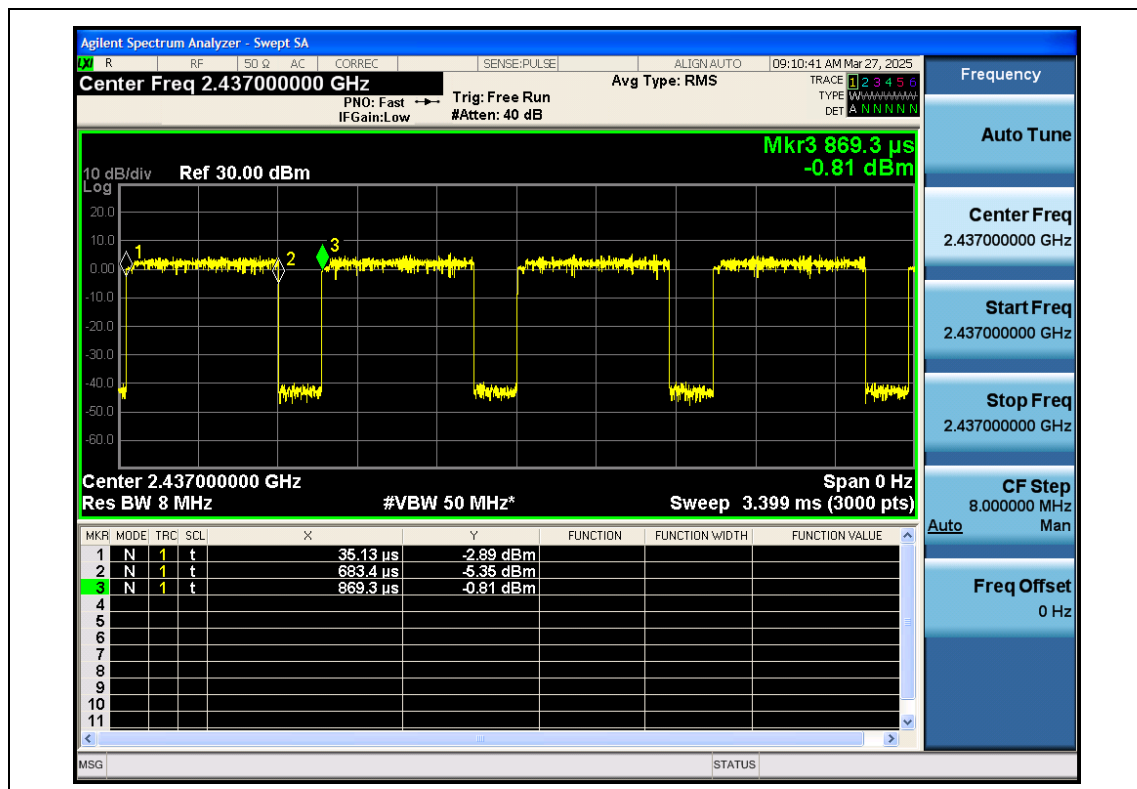
NTNV-11N20SISO-Ant1-2437



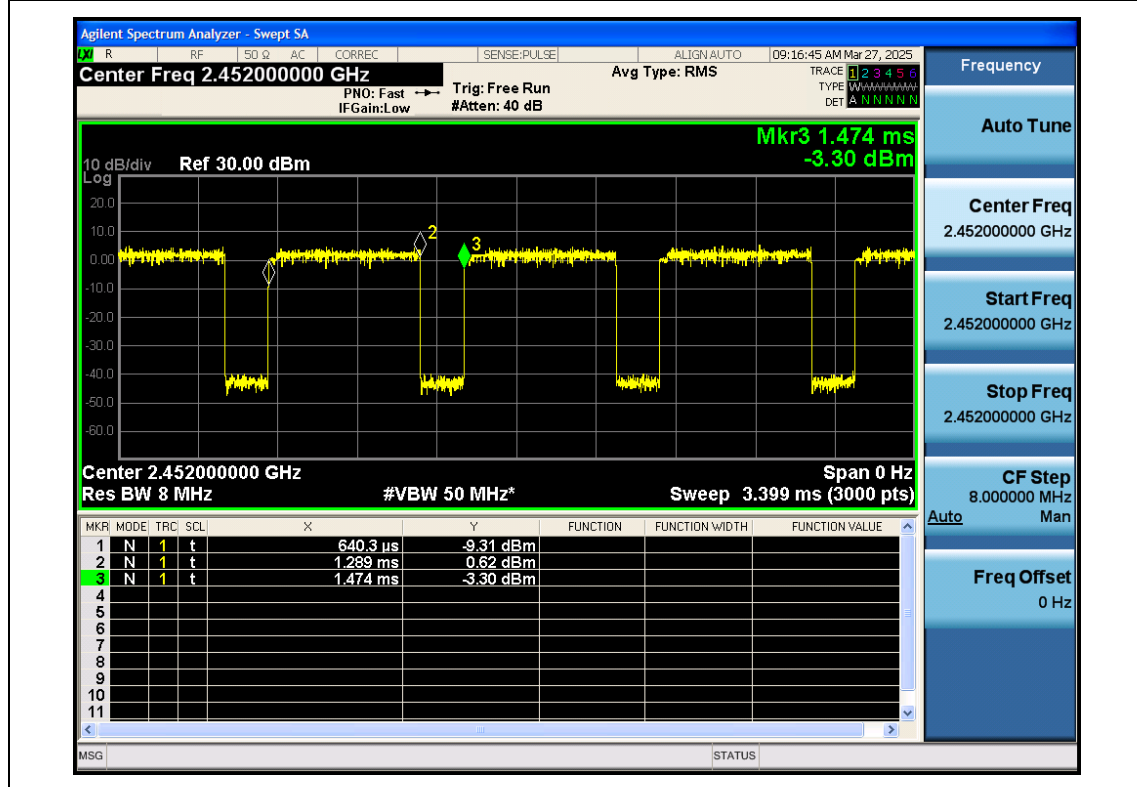
NTNV-11N20SISO-Ant1-2462



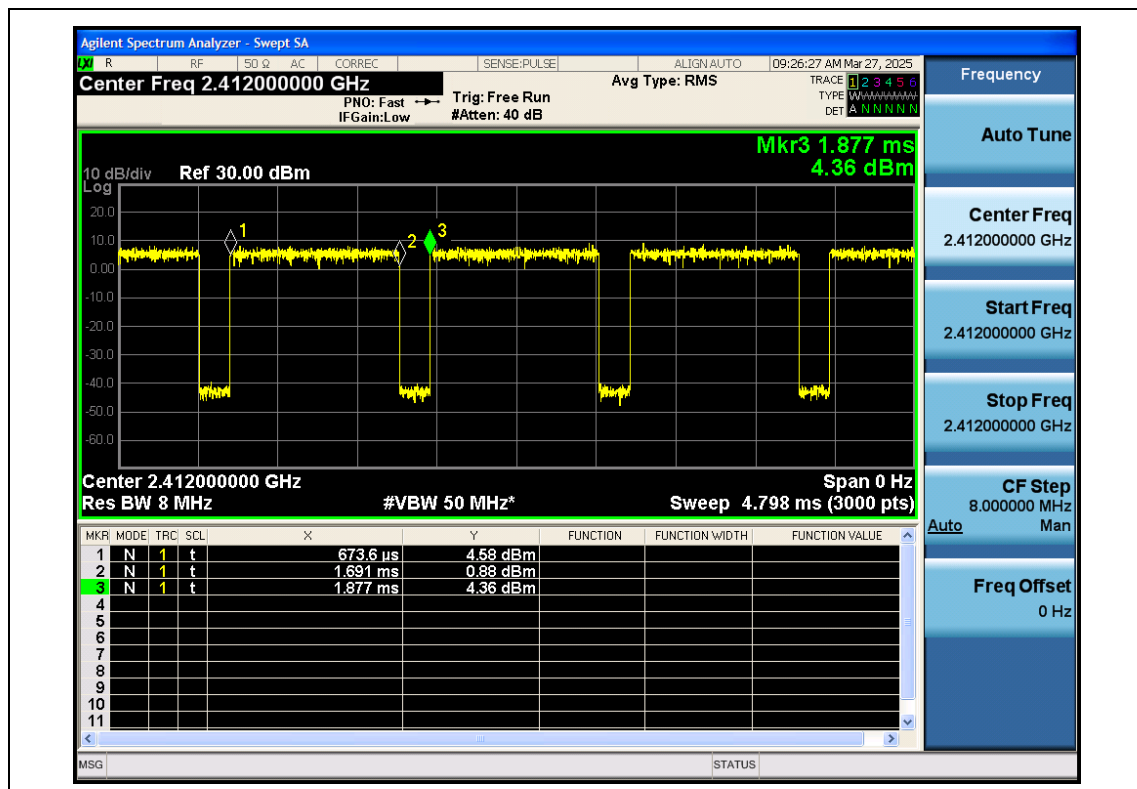
NTNV-11N40SISO-Ant1-2422



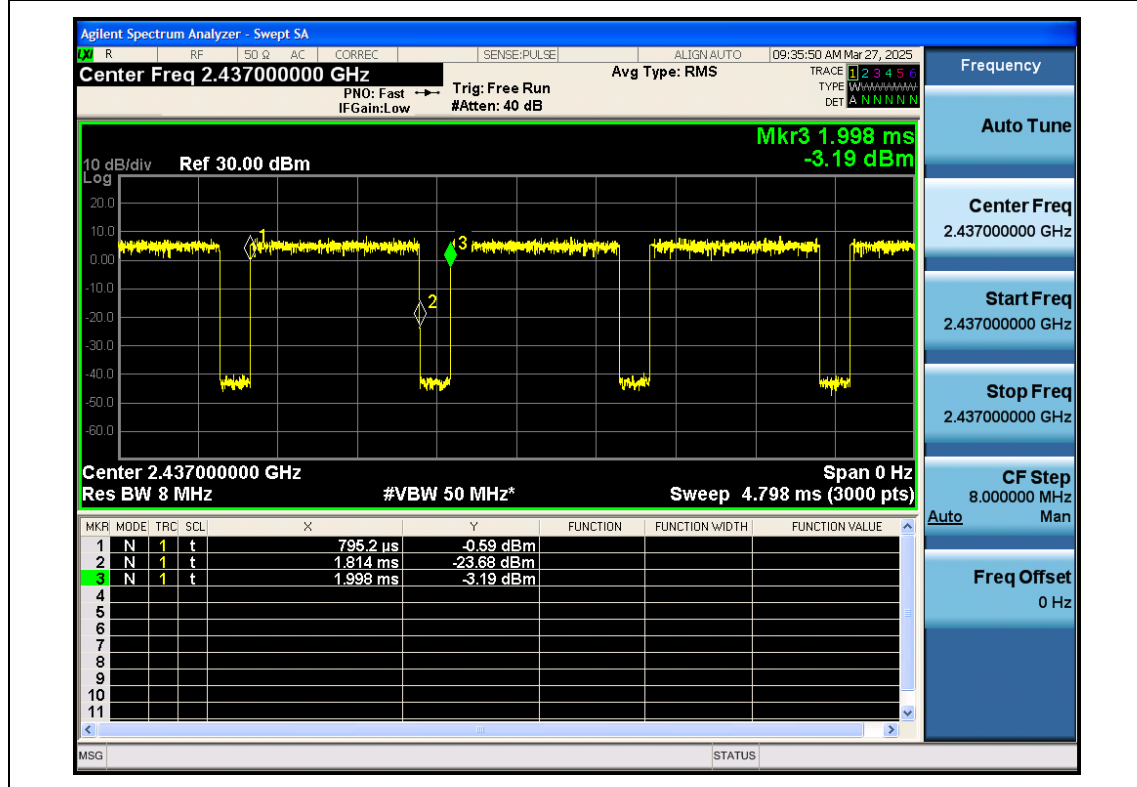
NTNV-11N40SISO-Ant1-2437



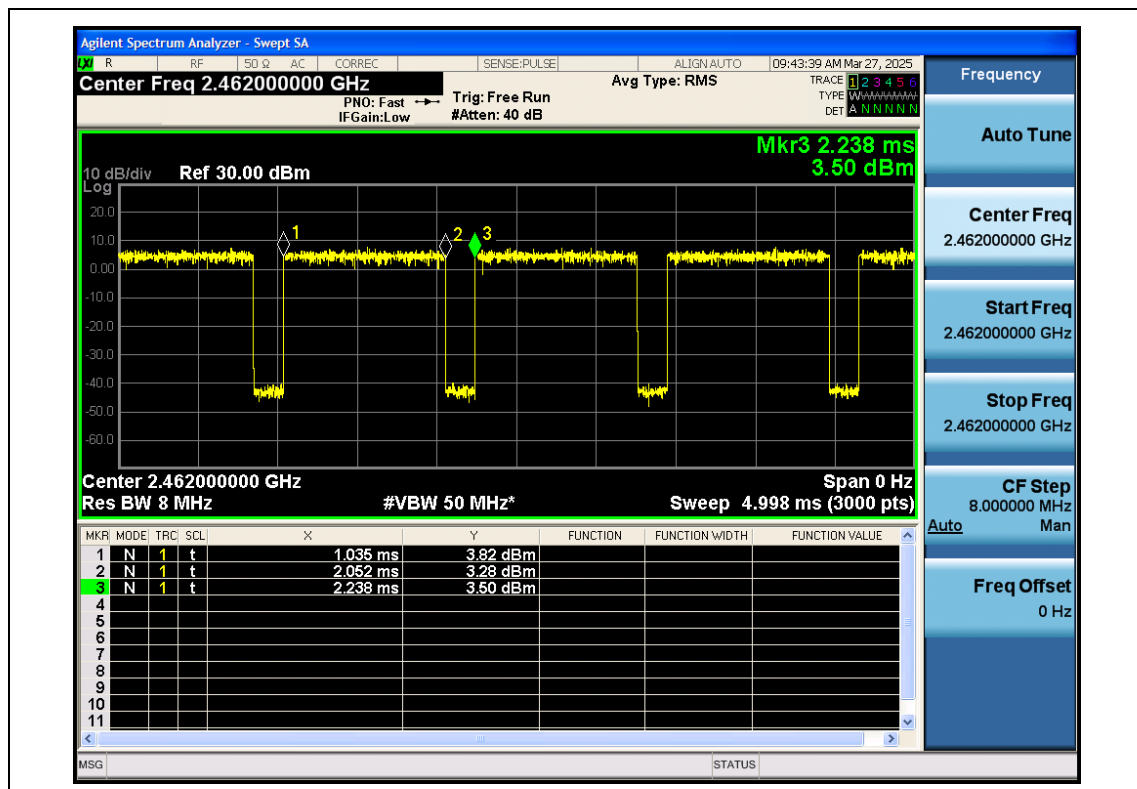
NTNV-11N40SISO-Ant1-2452



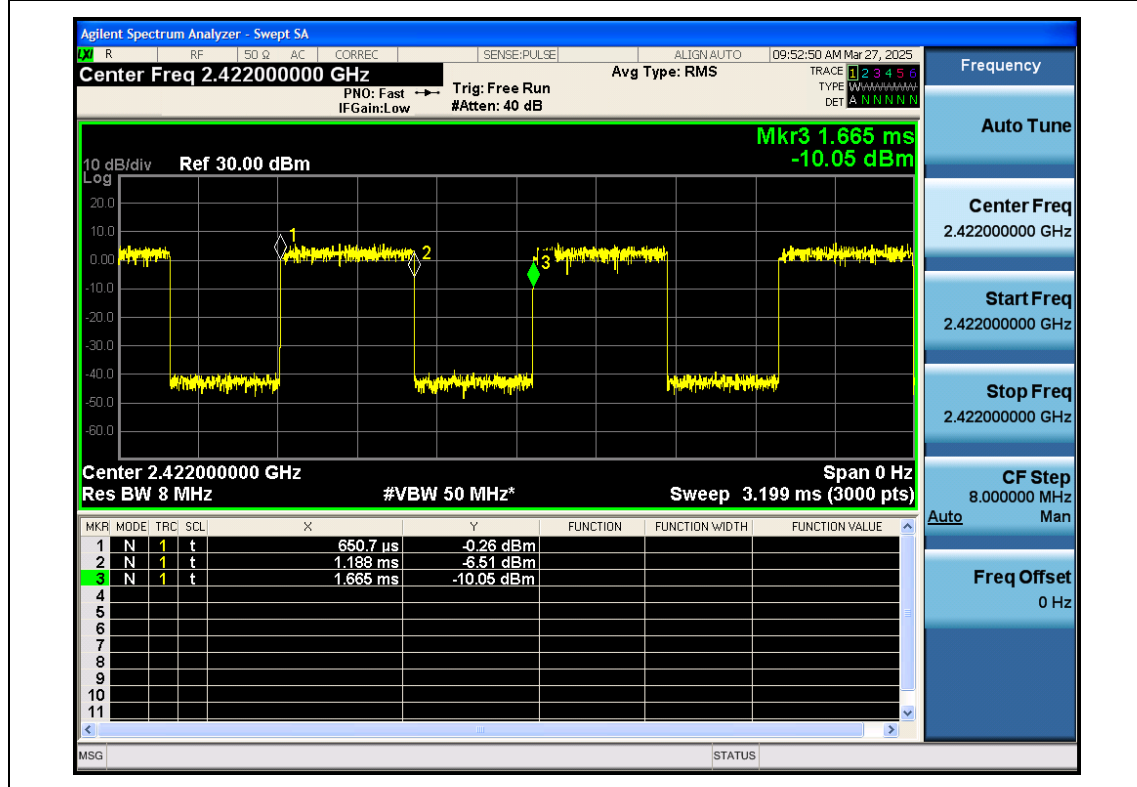
NTNV-11AX20SISO-Ant1-2412



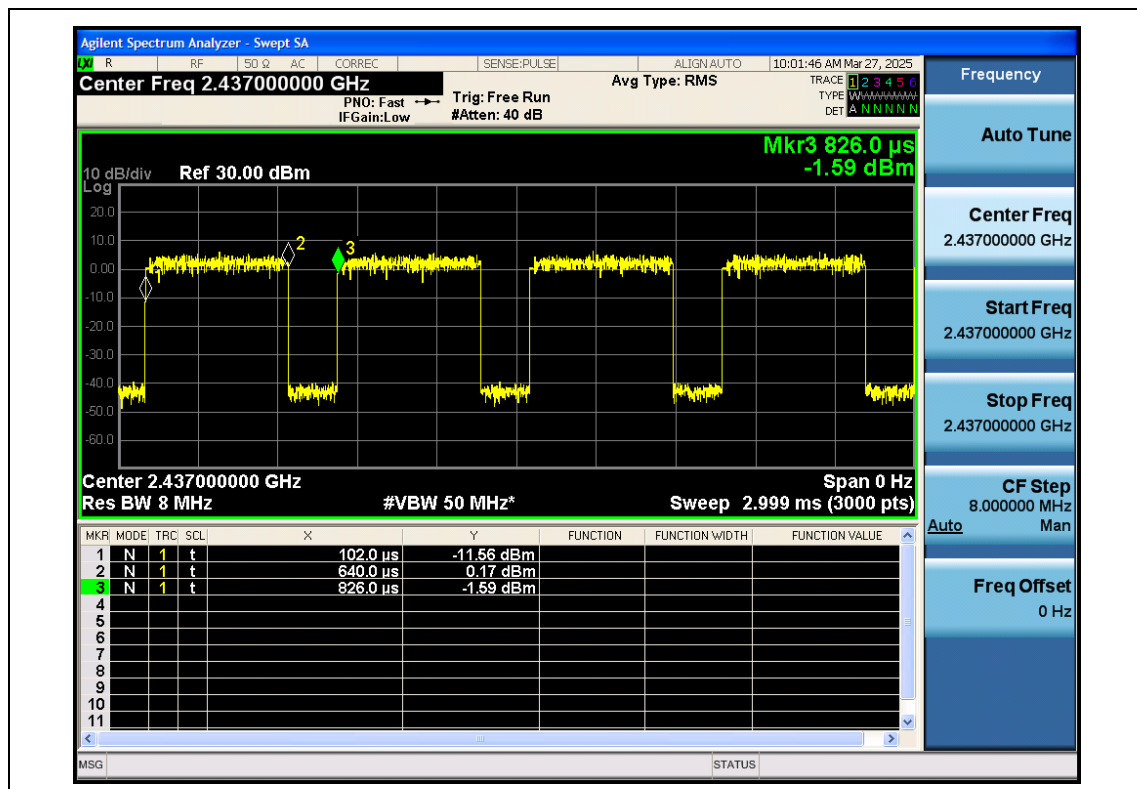
NTNV-11AX20SISO-Ant1-2437



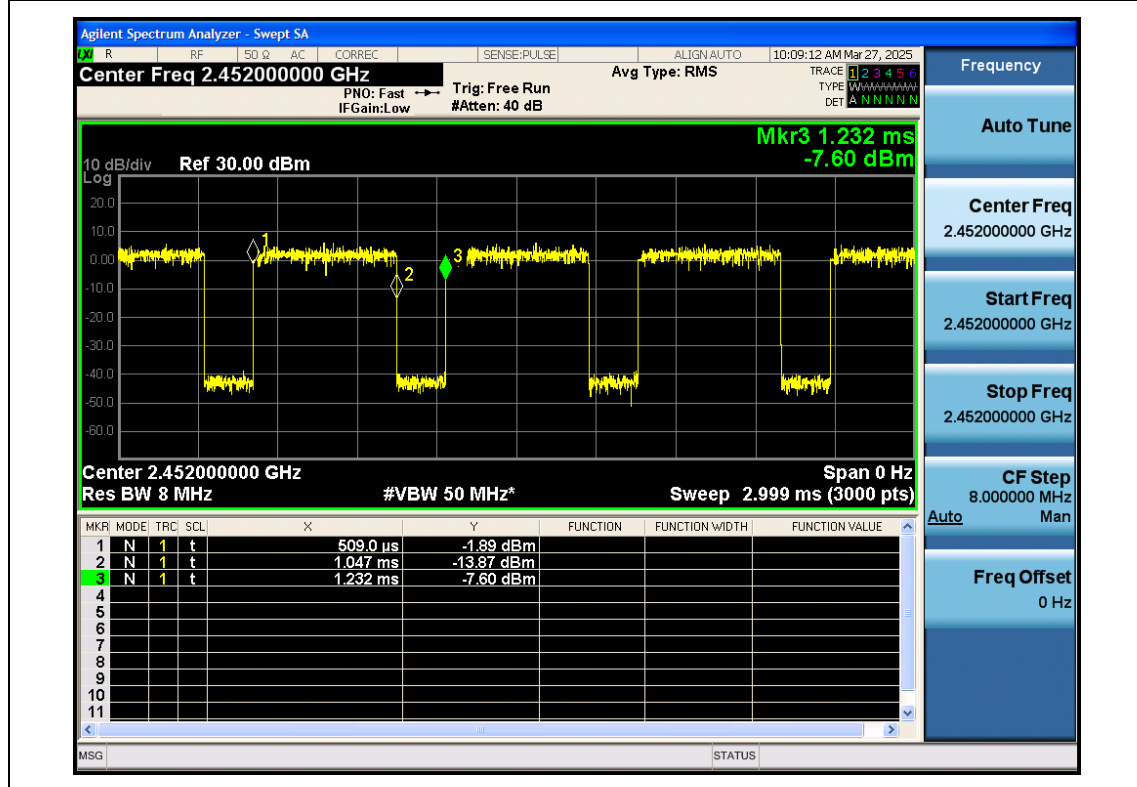
NTNV-11AX20SISO-Ant1-2462



NTNV-11AX40SISO-Ant1-2422



NTNV-11AX40SISO-Ant1-2437



NTNV-11AX40SISO-Ant1-2452