

Appendix B: Test Results of 2.4GHz Wi-Fi

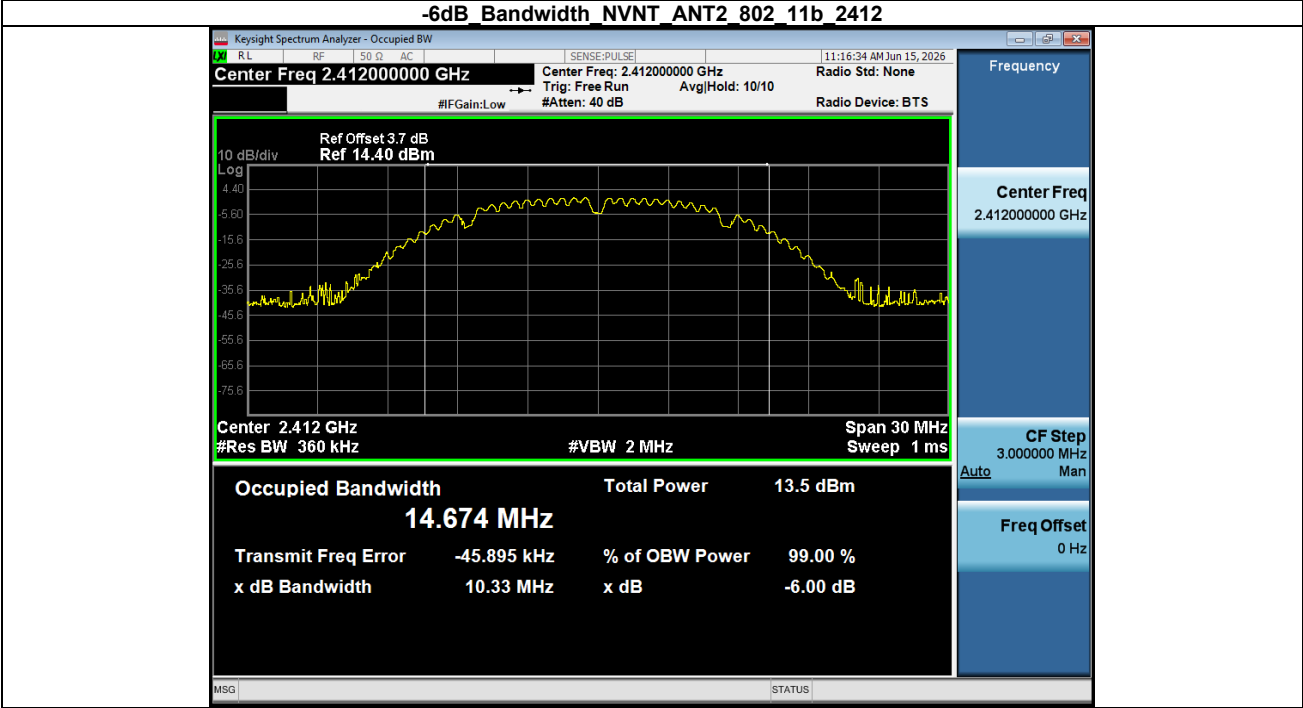
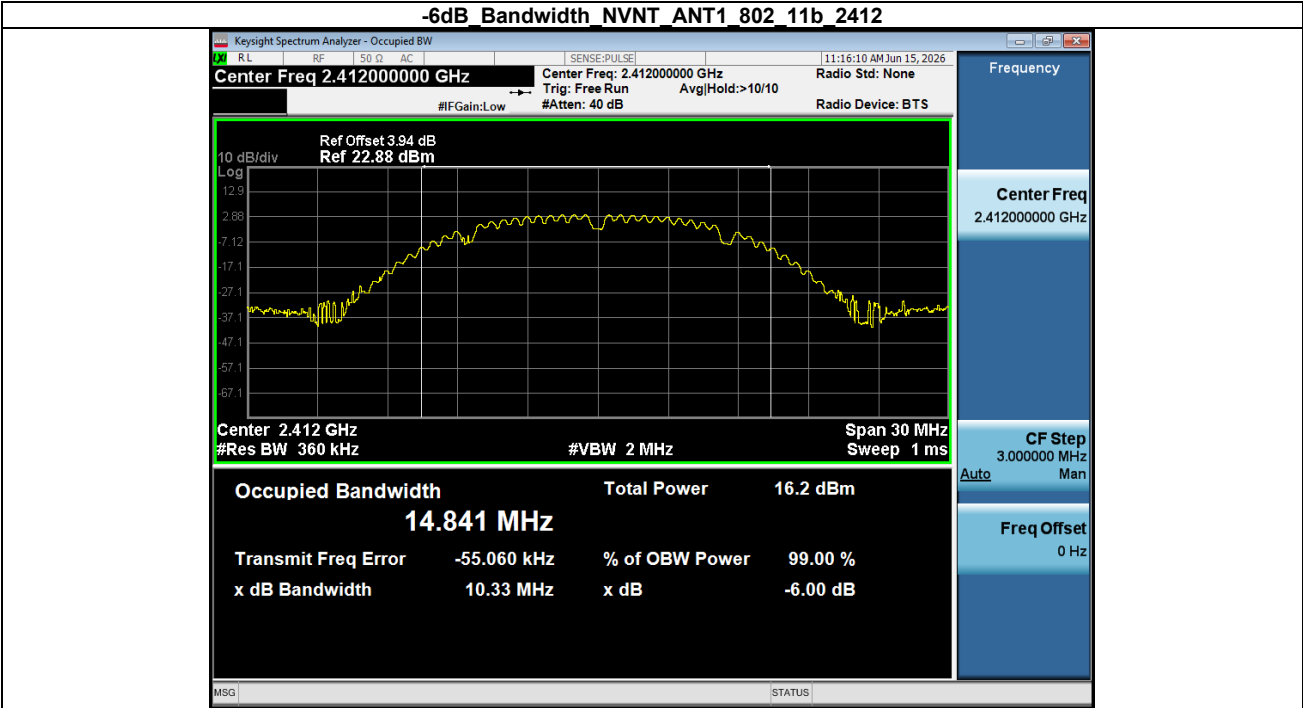
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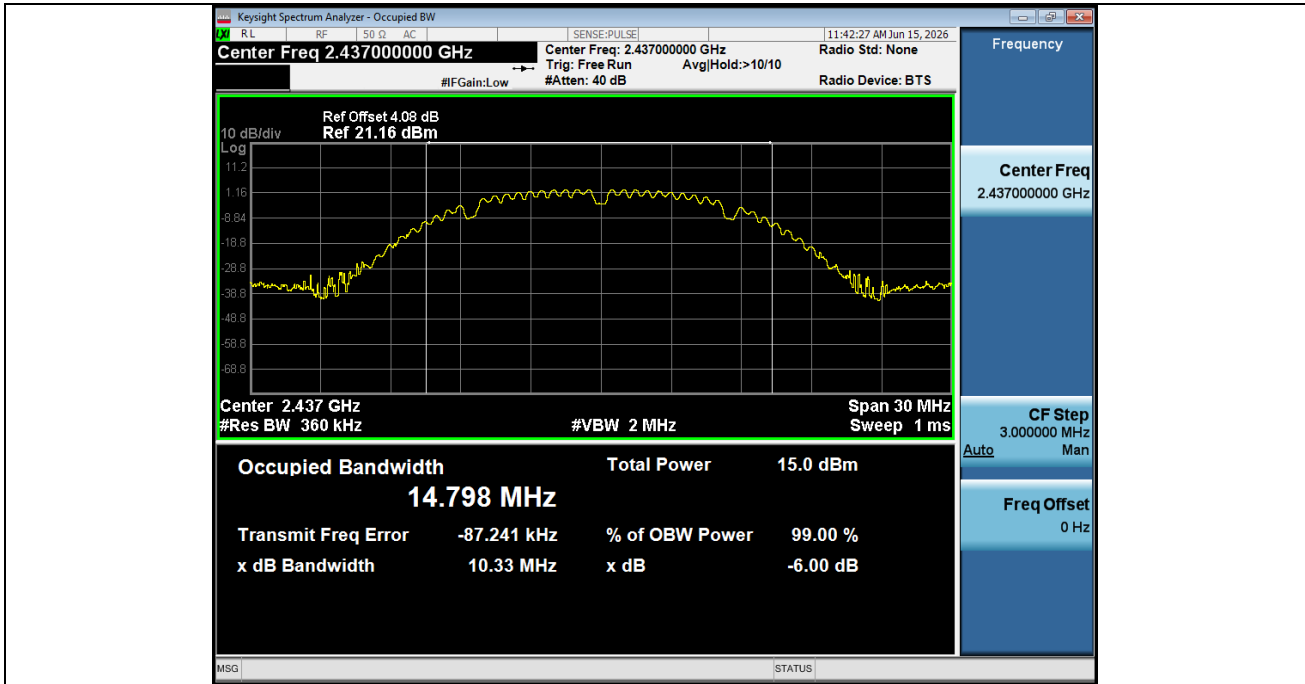
Appendix B.1: Test Results of 6dB Bandwidth

Test Result

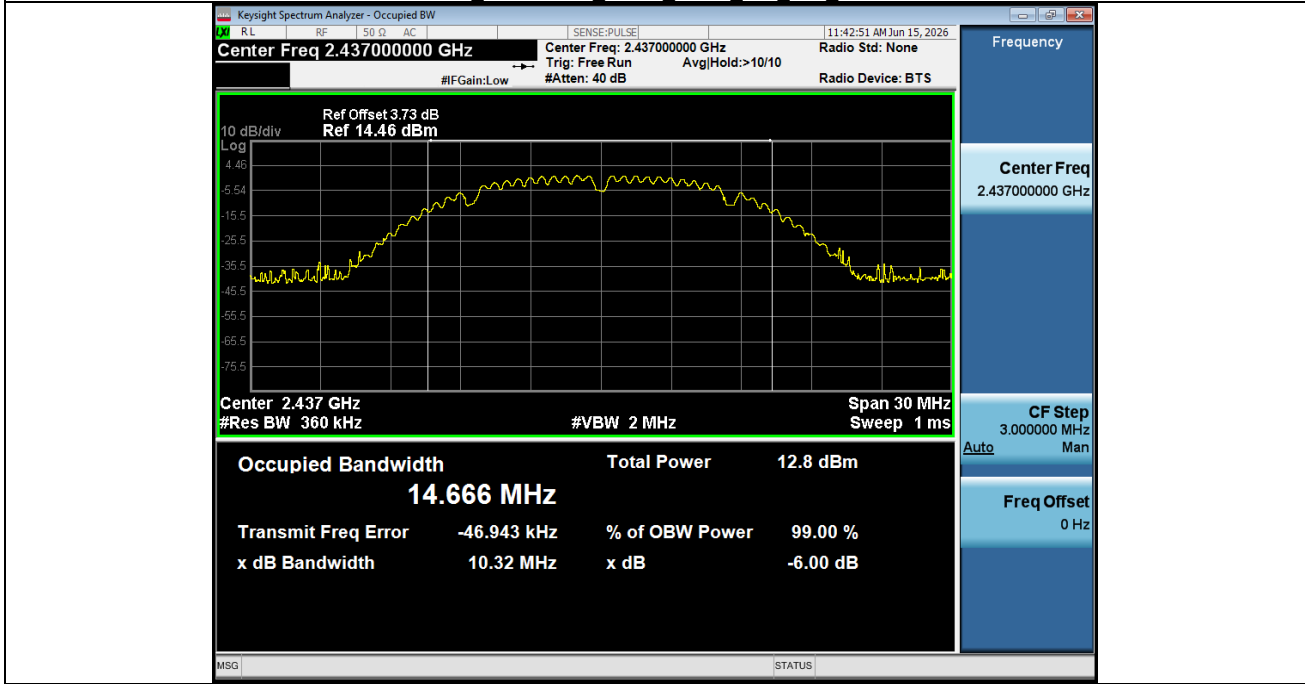
Condition	Antenna	Modulation	Frequency (MHz)	-6dB BW(MHz)	limit(kHz)	Result
NVNT	ANT1	802.11b	2412.00	10.33	500	Pass
NVNT	ANT2	802.11b	2412.00	10.33	500	Pass
NVNT	ANT1	802.11b	2437.00	10.33	500	Pass
NVNT	ANT2	802.11b	2437.00	10.32	500	Pass
NVNT	ANT1	802.11b	2462.00	10.33	500	Pass
NVNT	ANT2	802.11b	2462.00	10.33	500	Pass
NVNT	ANT1	802.11g	2412.00	16.37	500	Pass
NVNT	ANT2	802.11g	2412.00	16.35	500	Pass
NVNT	ANT1	802.11g	2437.00	16.24	500	Pass
NVNT	ANT2	802.11g	2437.00	16.33	500	Pass
NVNT	ANT1	802.11g	2462.00	16.27	500	Pass
NVNT	ANT2	802.11g	2462.00	16.29	500	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	17.23	500	Pass
NVNT	ANT2	802.11n(HT20)	2412.00	17.24	500	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	17.02	500	Pass
NVNT	ANT2	802.11n(HT20)	2437.00	17.19	500	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	17.52	500	Pass
NVNT	ANT2	802.11n(HT20)	2462.00	17.54	500	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	36.15	500	Pass
NVNT	ANT2	802.11n(HT40)	2422.00	36.40	500	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	35.73	500	Pass
NVNT	ANT2	802.11n(HT40)	2437.00	35.73	500	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	36.12	500	Pass
NVNT	ANT2	802.11n(HT40)	2452.00	36.23	500	Pass

Test Graphs

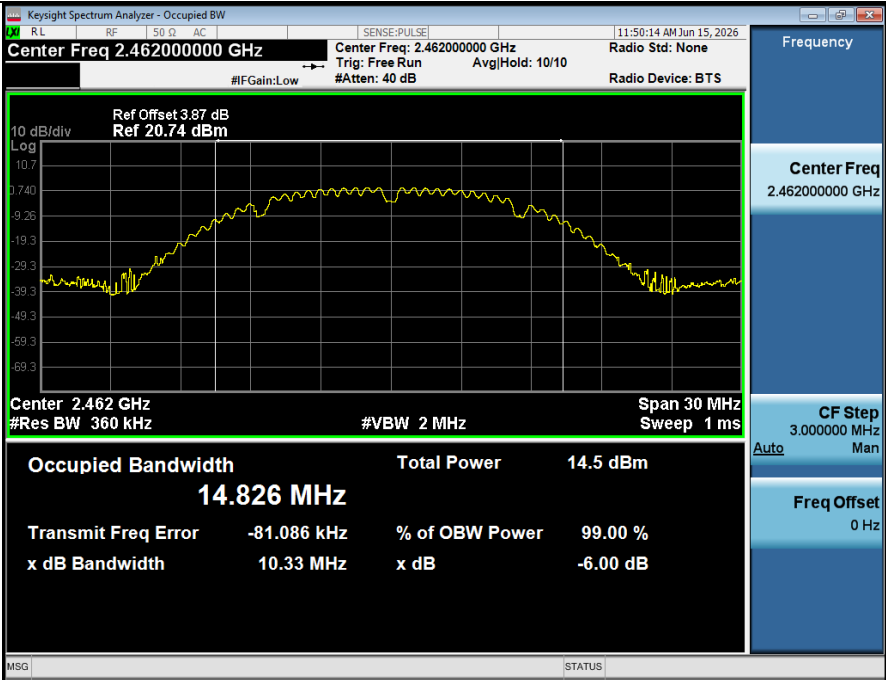




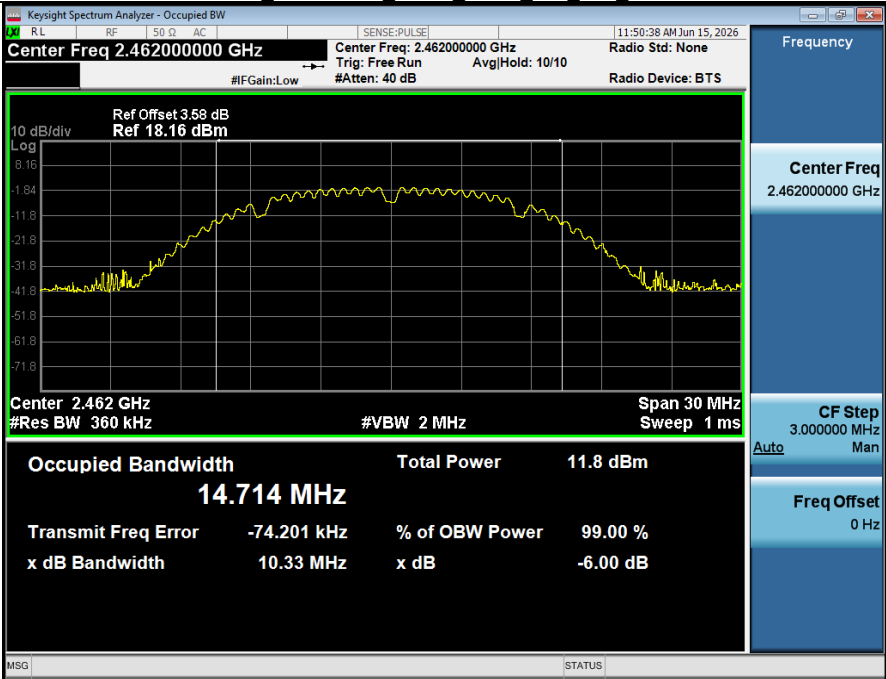
-6dB Bandwidth NVNT ANT2 802 11b 2437



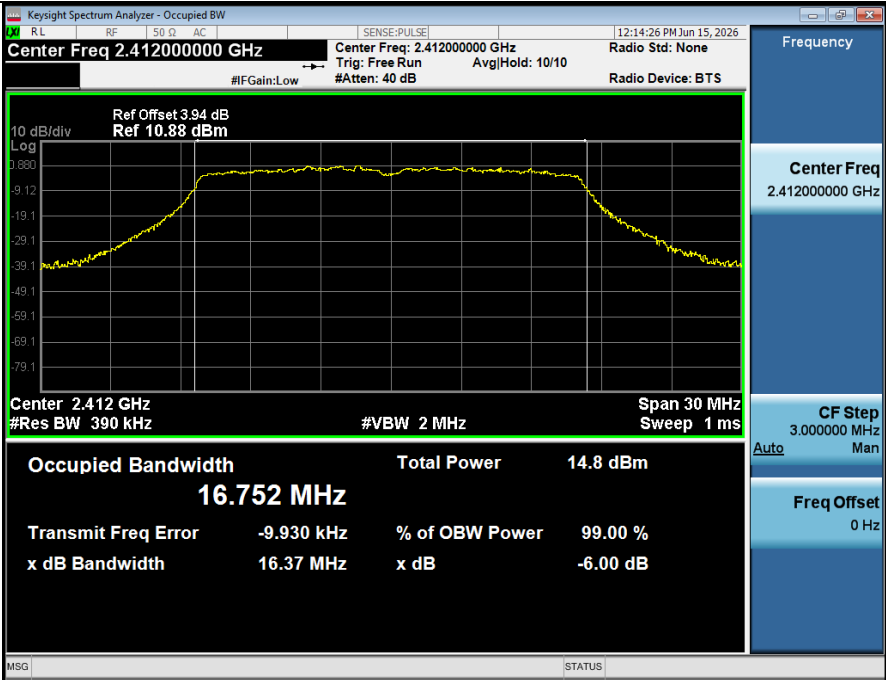
-6dB_Bandwidth_NVNT_ANT1_802_11b_2462



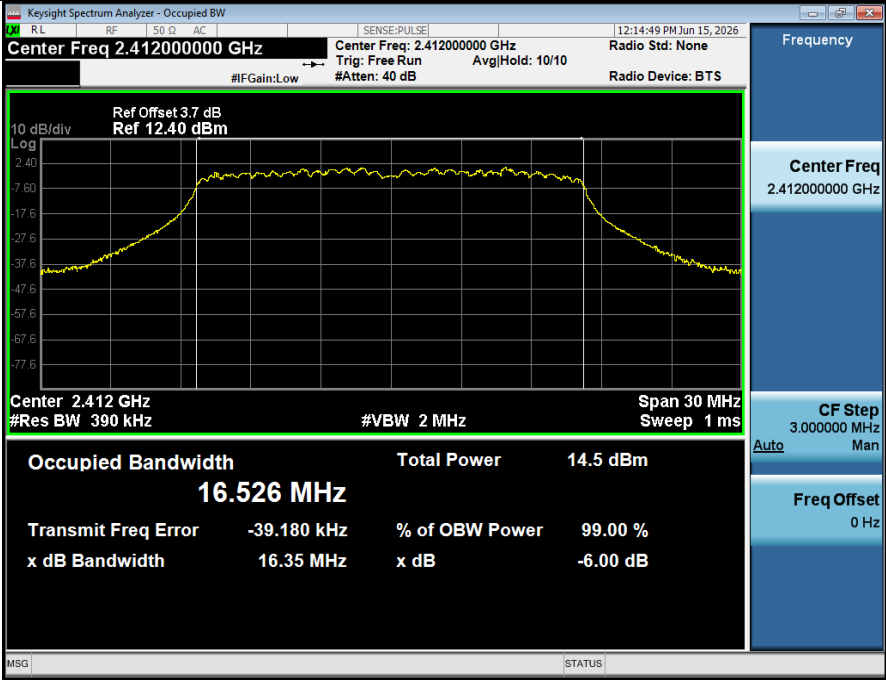
-6dB Bandwidth NVNT ANT2 802 11b 2462



-6dB_Bandwidth_NVNT_ANT1_802_11g_2412



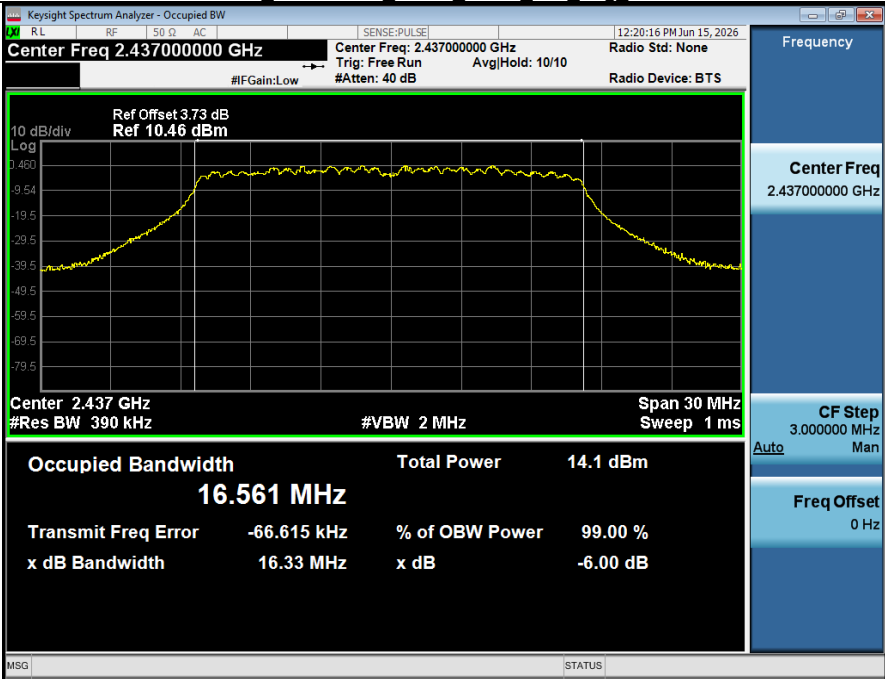
-6dB Bandwidth NVNT ANT2 802 11g 2412



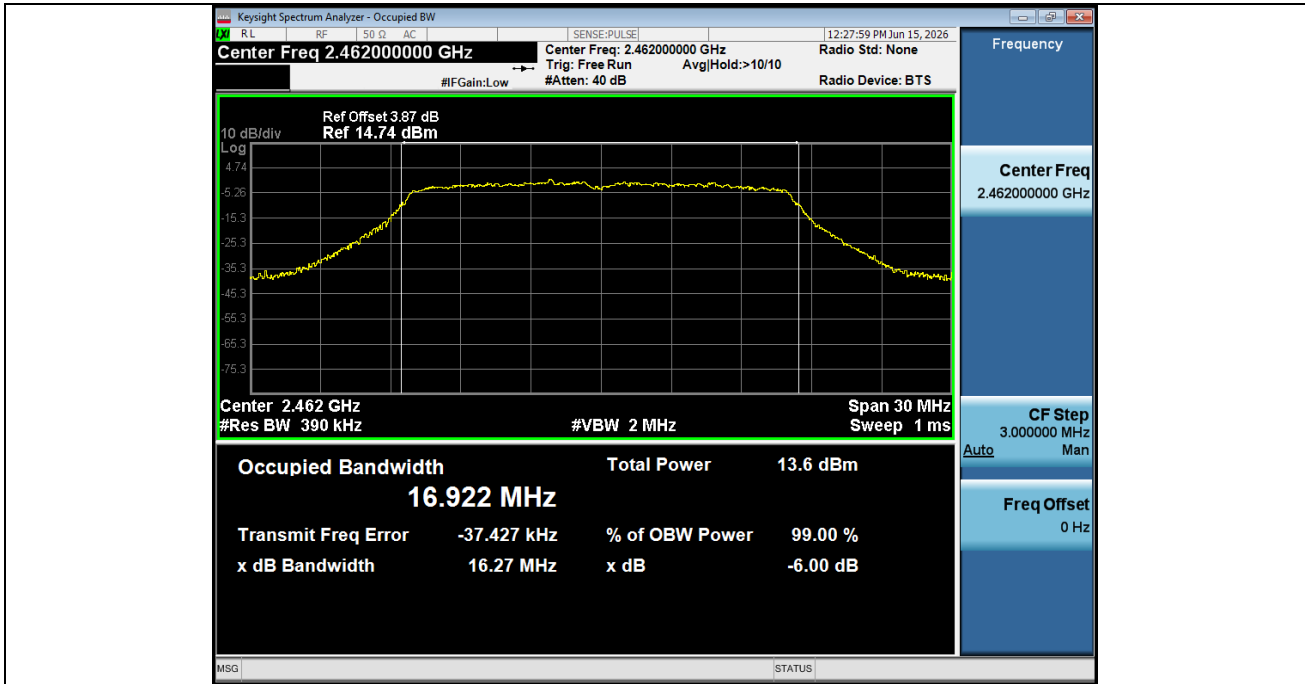
-6dB Bandwidth NVNT ANT1 802 11g 2437



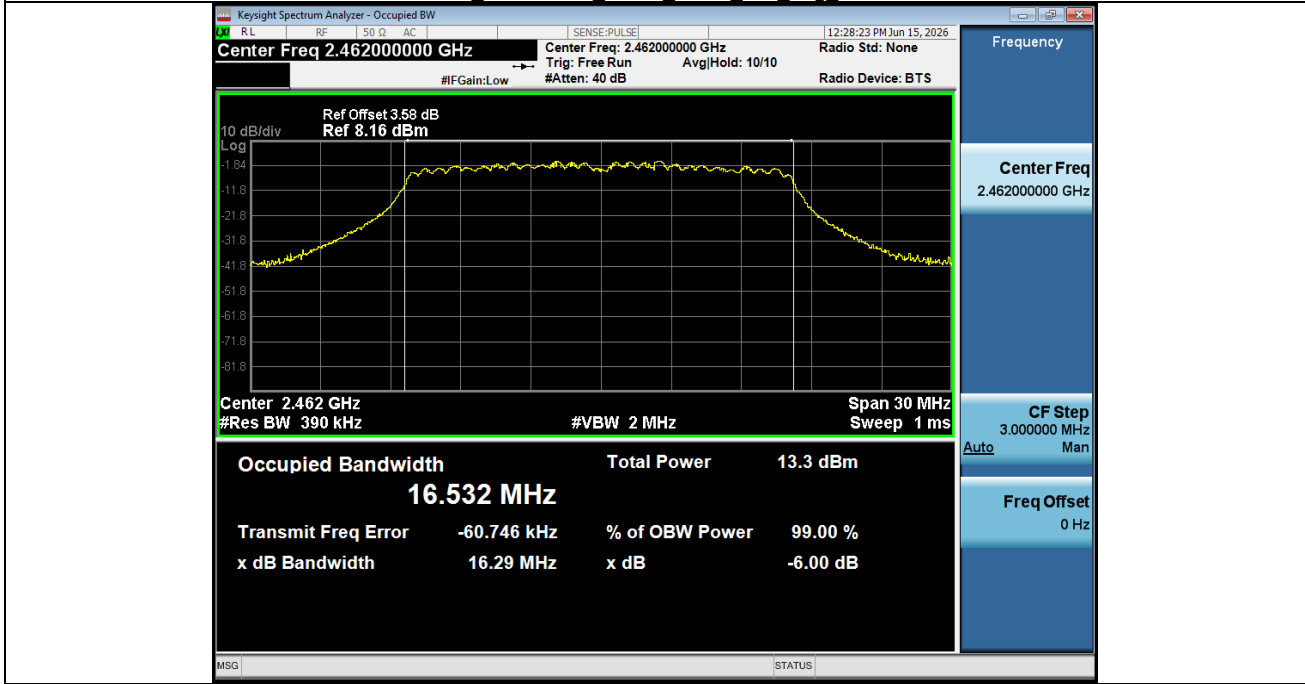
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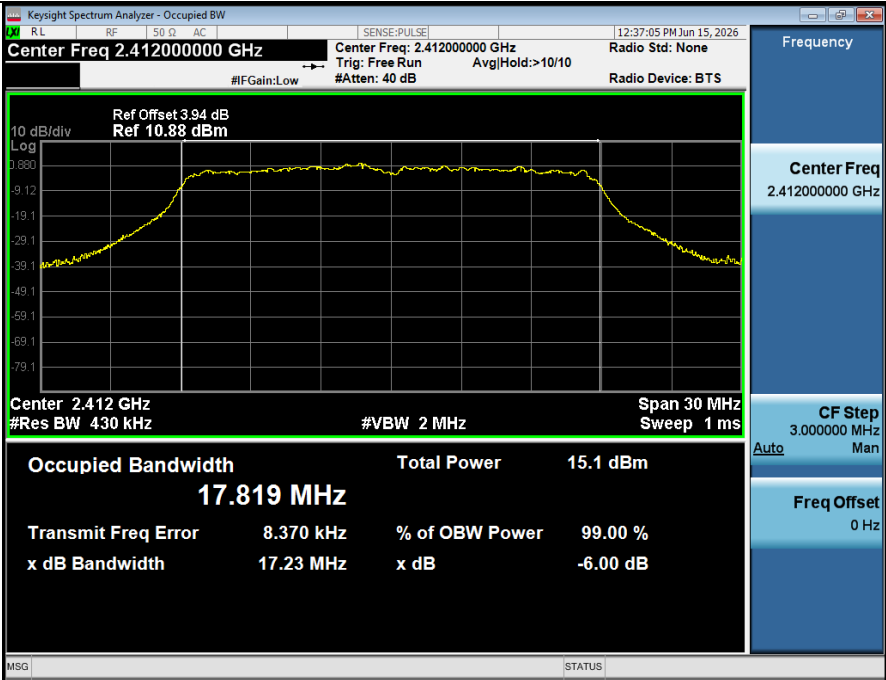
-6dB Bandwidth NVNT ANT1 802 11g 2462



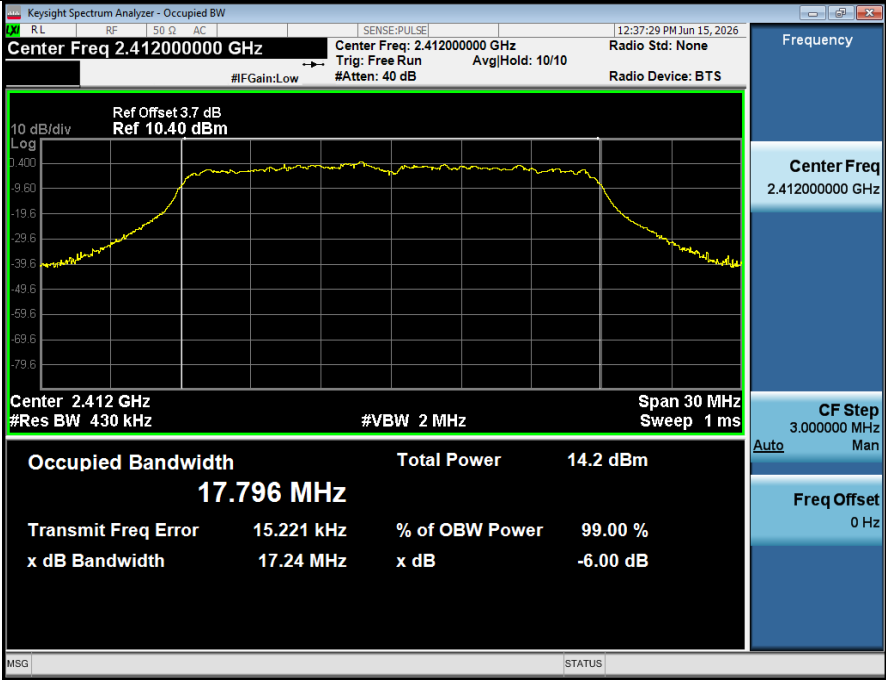
-6dB Bandwidth NVNT ANT2 802 11g 2462



-6dB Bandwidth NVNT ANT1 802 11n(HT20) 2412



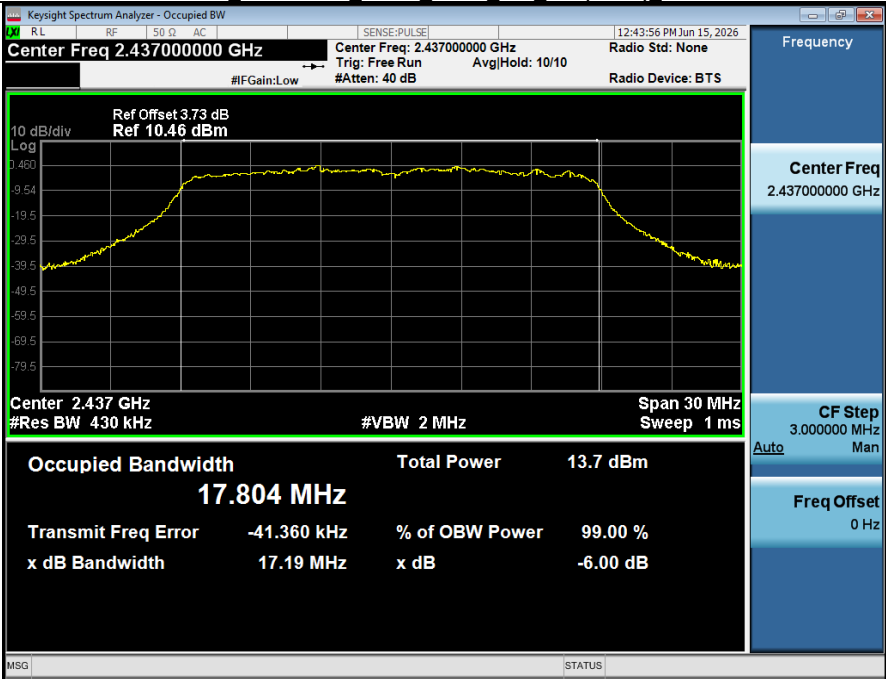
-6dB Bandwidth_NVNT_ANT2_802_11n(HT20)_2412



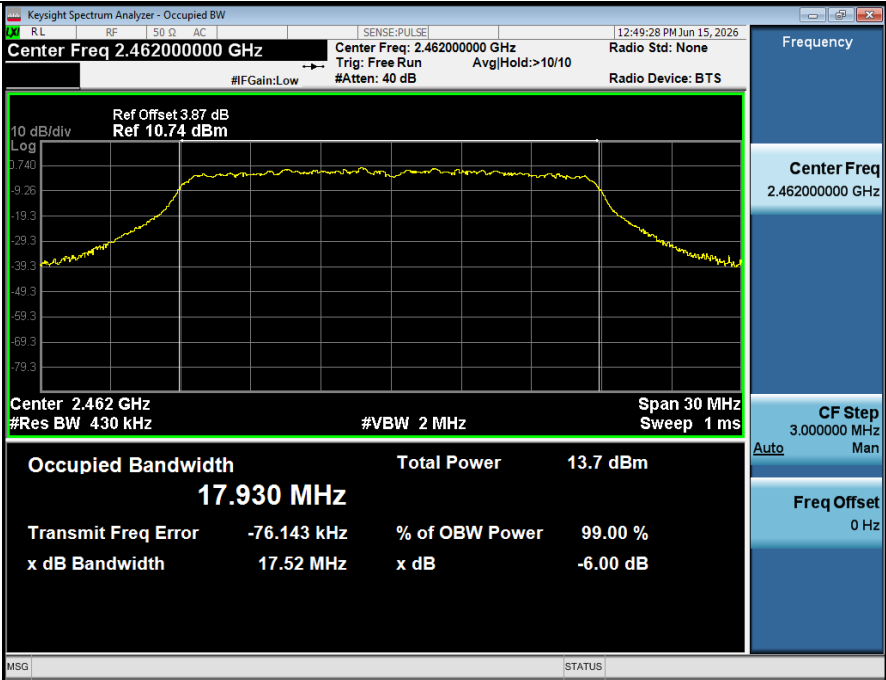
-6dB_Bandwidth_NVNT_ANT1_802_11n(HT20)_2437



-6dB Bandwidth_NVNT_ANT2_802_11n(HT20)_2437



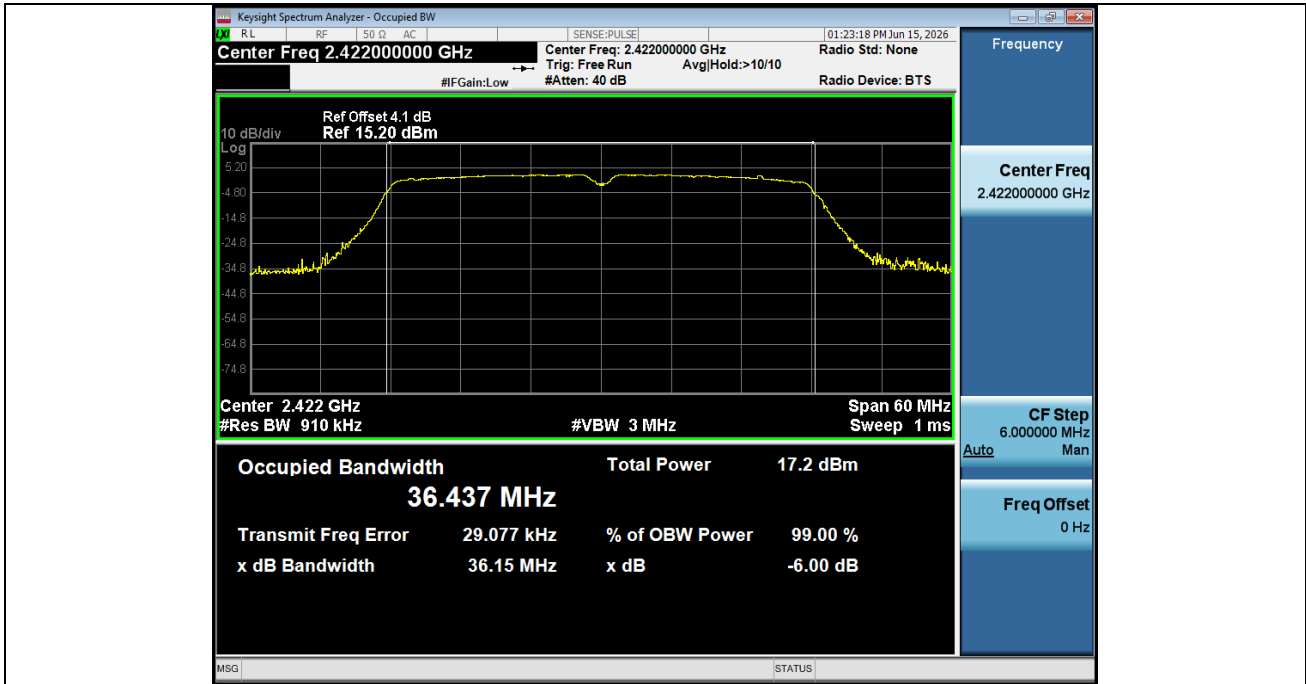
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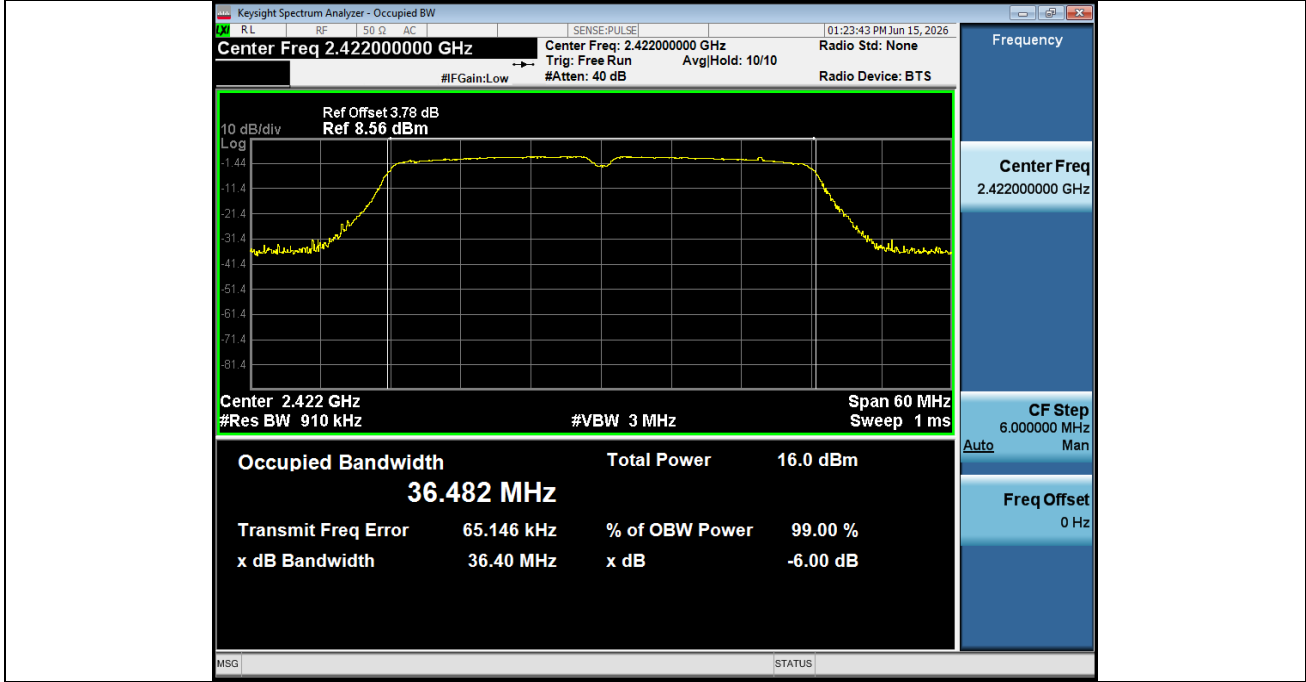
-6dB Bandwidth NVNT ANT2 802 11n(HT20) 2462



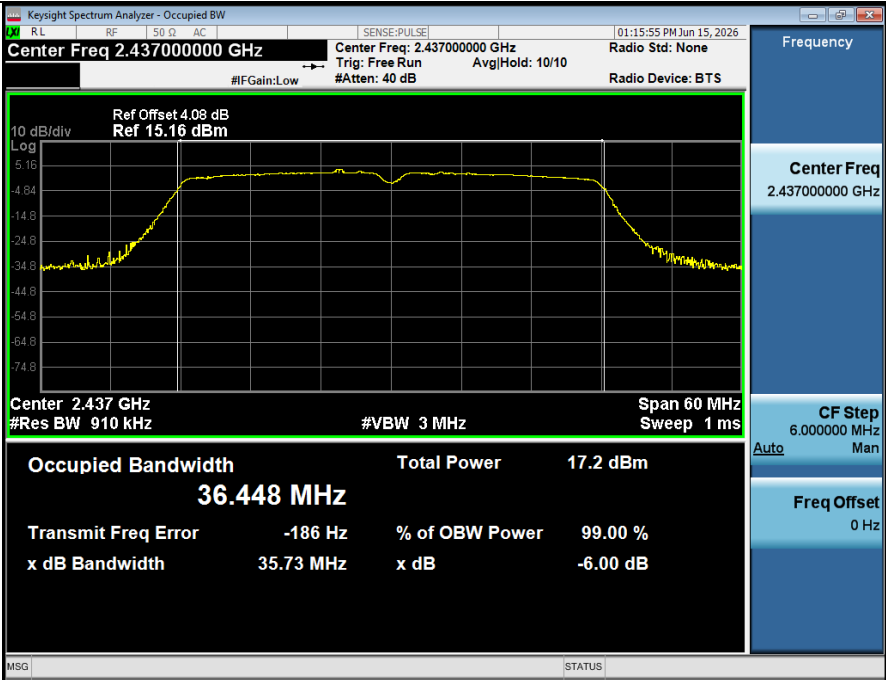
-6dB Bandwidth NVNT ANT1 802 11n(HT40) 2422



-6dB_Bandwidth_NVNT_ANT2_802_11n(HT40)_2422



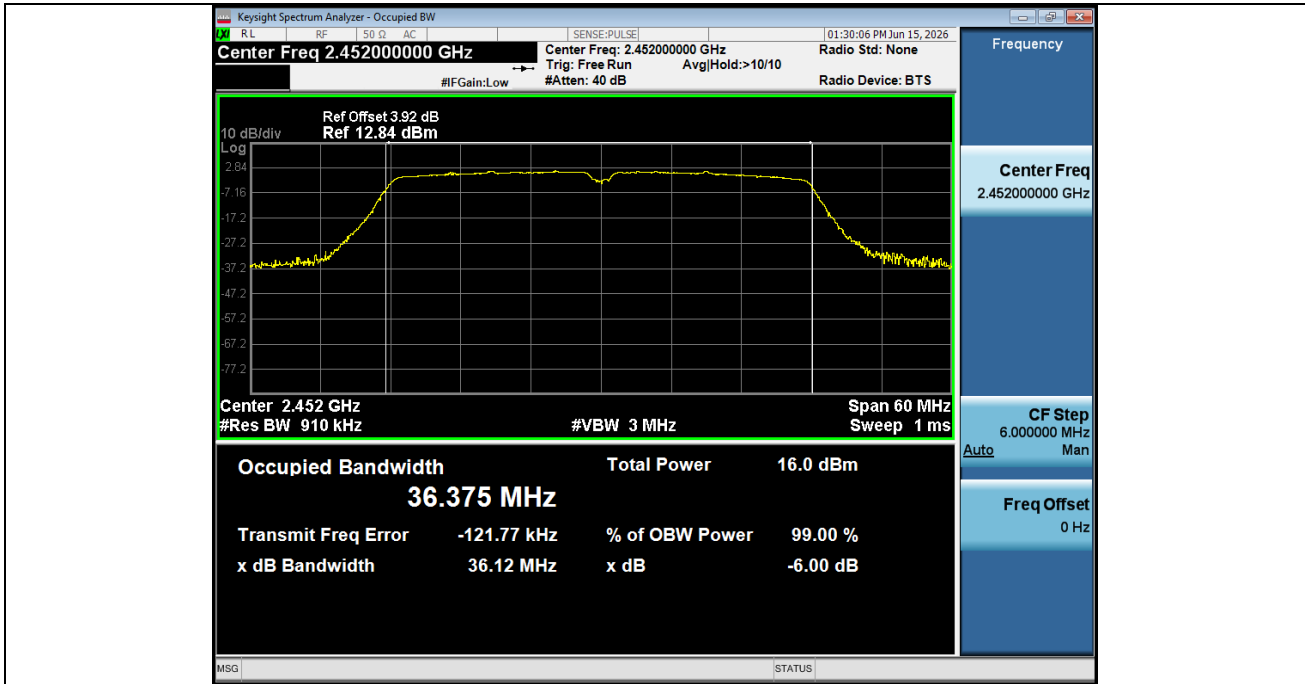
-6dB_Bandwidth_NVNT_ANT1_802_11n(HT40)_2437



-6dB Bandwidth_NVNT_ANT2_802_11n(HT40)_2437



-6dB Bandwidth_NVNT_ANT1_802_11n(HT40)_2452



-6dB Bandwidth NVNT ANT2 802 11n(HT40) 2452

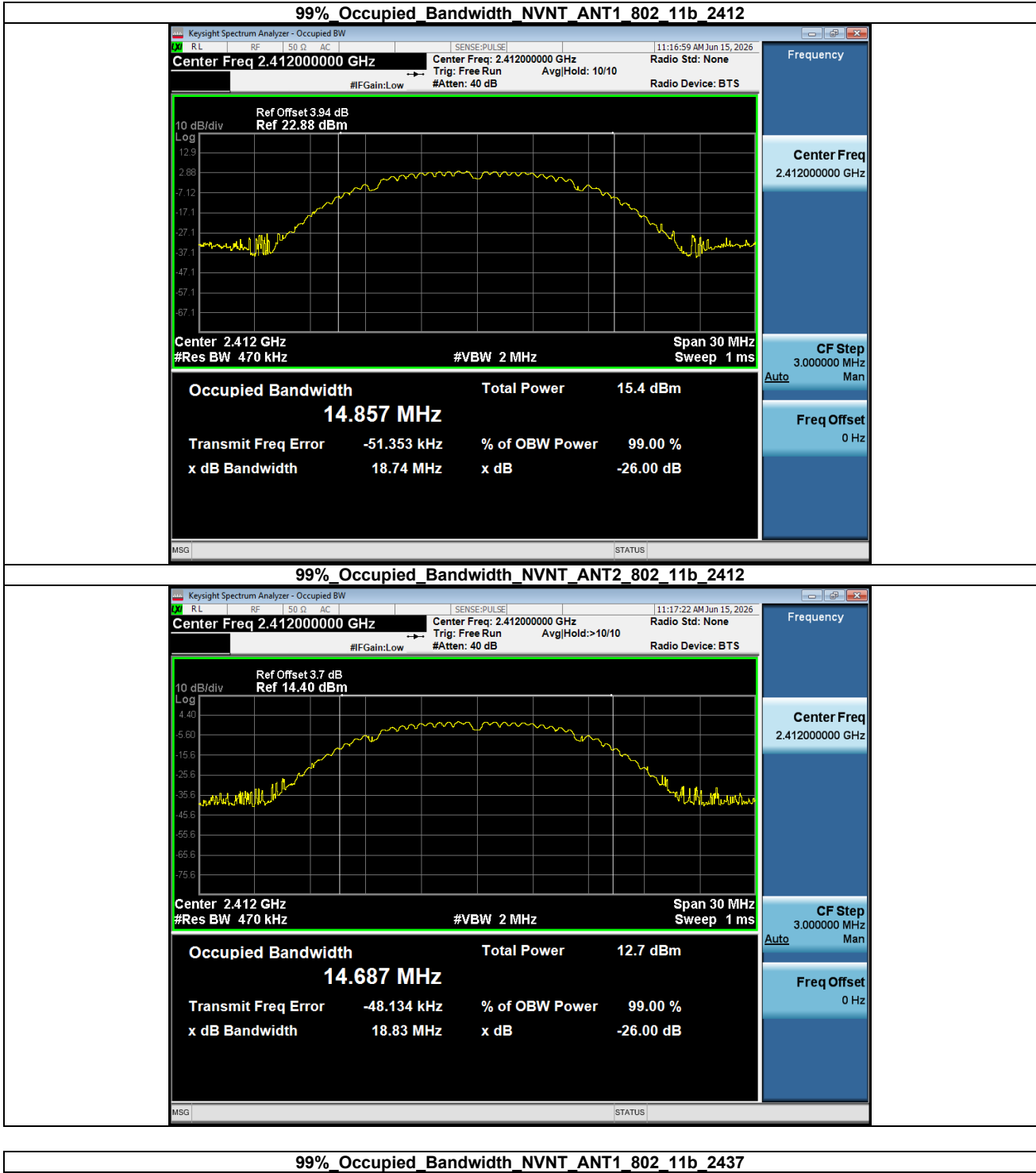


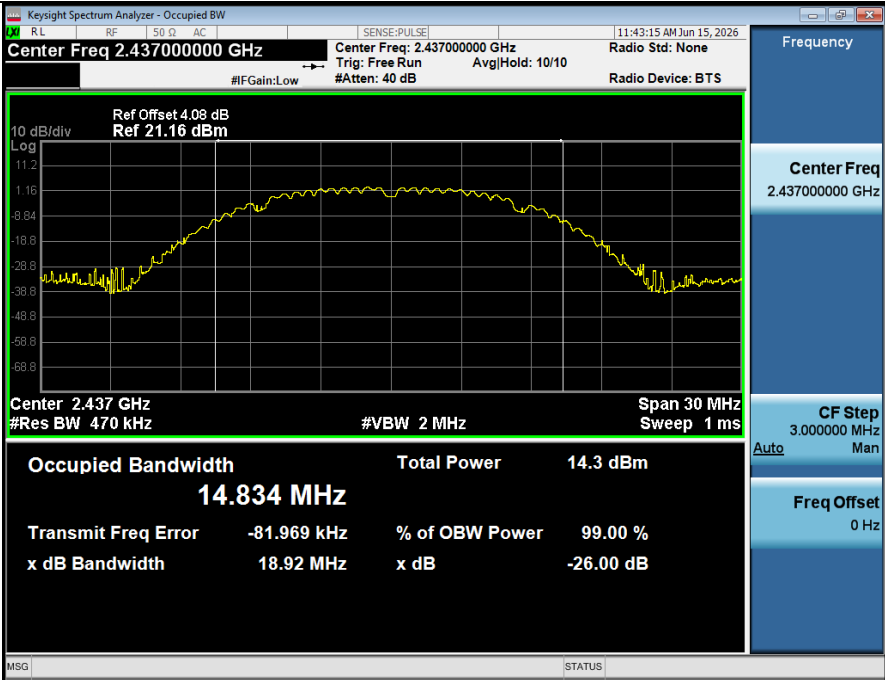
Appendix B.2: Test Results of 99% Bandwidth

Test Result

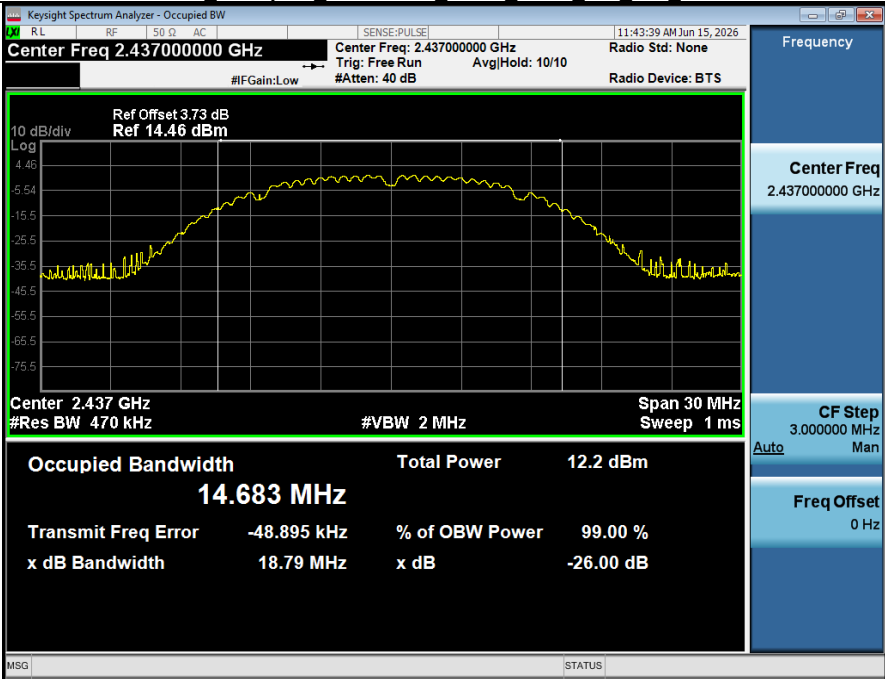
Condition	Antenna	Modulation	Frequency (MHz)	99% BW (MHz)
NVNT	ANT1	802.11b	2412.00	14.857
NVNT	ANT2	802.11b	2412.00	14.687
NVNT	ANT1	802.11b	2437.00	14.834
NVNT	ANT2	802.11b	2437.00	14.683
NVNT	ANT1	802.11b	2462.00	14.848
NVNT	ANT2	802.11b	2462.00	14.703
NVNT	ANT1	802.11g	2412.00	16.922
NVNT	ANT2	802.11g	2412.00	16.619
NVNT	ANT1	802.11g	2437.00	17.016
NVNT	ANT2	802.11g	2437.00	16.656
NVNT	ANT1	802.11g	2462.00	17.128
NVNT	ANT2	802.11g	2462.00	16.614
NVNT	ANT1	802.11n(HT20)	2412.00	17.860
NVNT	ANT2	802.11n(HT20)	2412.00	17.888
NVNT	ANT1	802.11n(HT20)	2437.00	17.871
NVNT	ANT2	802.11n(HT20)	2437.00	17.844
NVNT	ANT1	802.11n(HT20)	2462.00	18.060
NVNT	ANT2	802.11n(HT20)	2462.00	18.064
NVNT	ANT1	802.11n(HT40)	2422.00	36.377
NVNT	ANT2	802.11n(HT40)	2422.00	36.462
NVNT	ANT1	802.11n(HT40)	2437.00	36.395
NVNT	ANT2	802.11n(HT40)	2437.00	36.436
NVNT	ANT1	802.11n(HT40)	2452.00	36.399
NVNT	ANT2	802.11n(HT40)	2452.00	36.521

Test Graphs

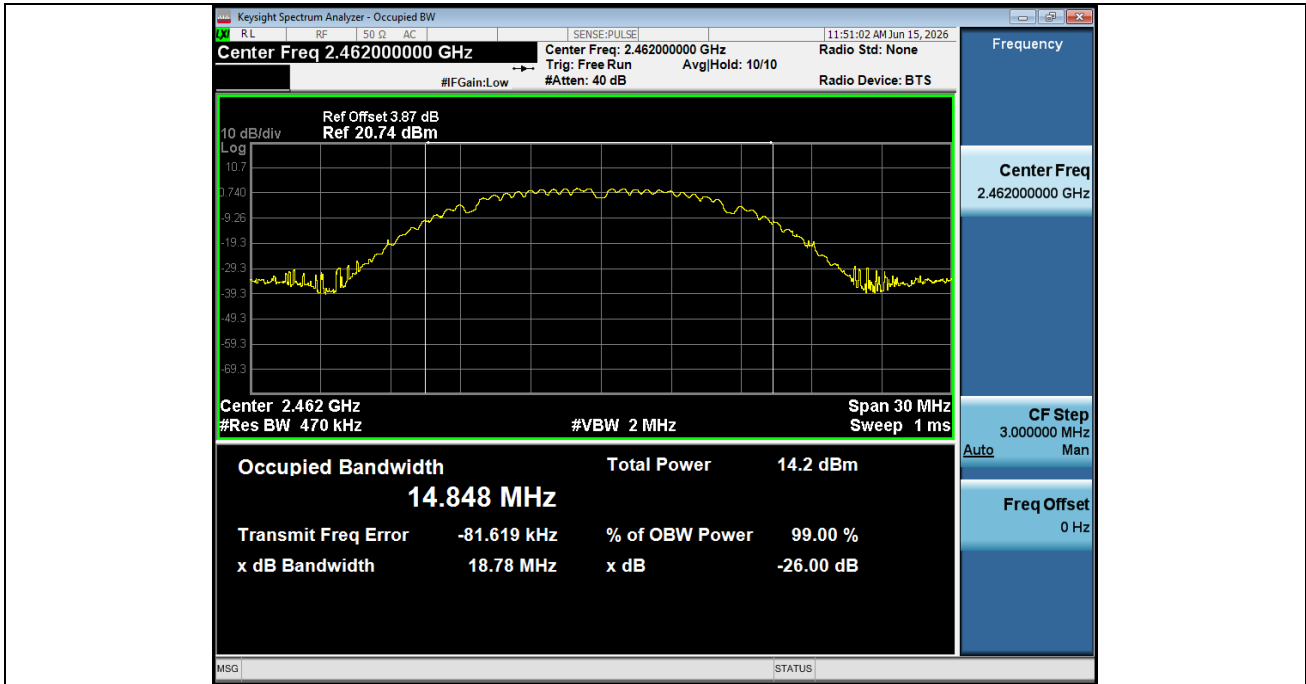




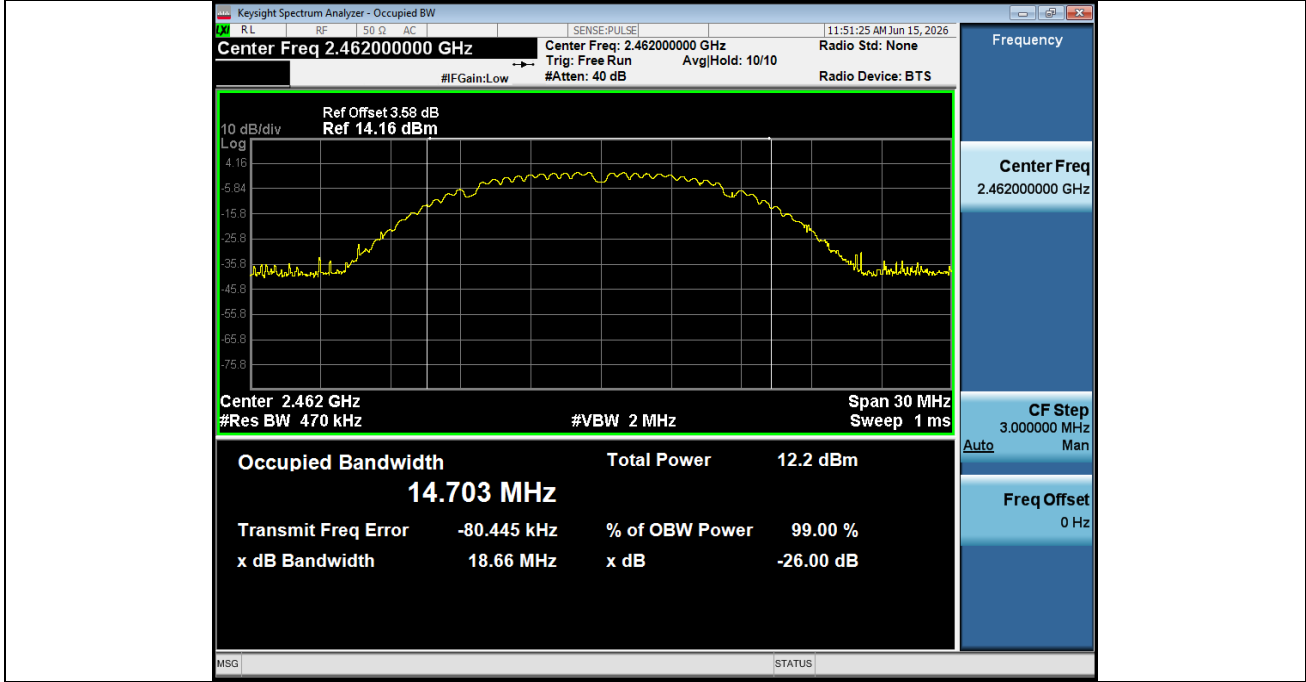
99% Occupied Bandwidth NVNT ANT2 802 11b 2437



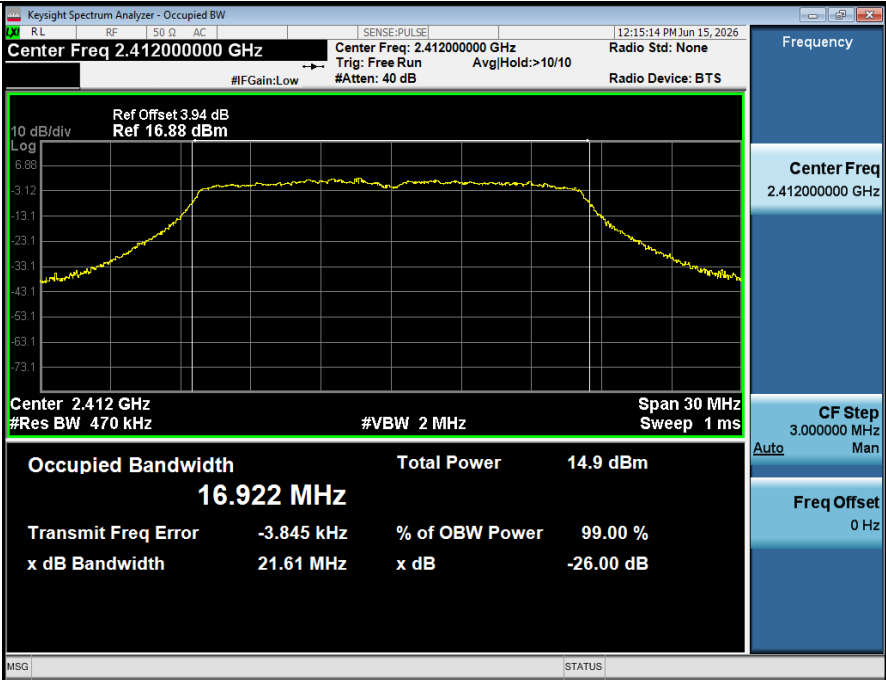
99%_Occupied_Bandwidth_NVNT_ANT1_802_11b_2462



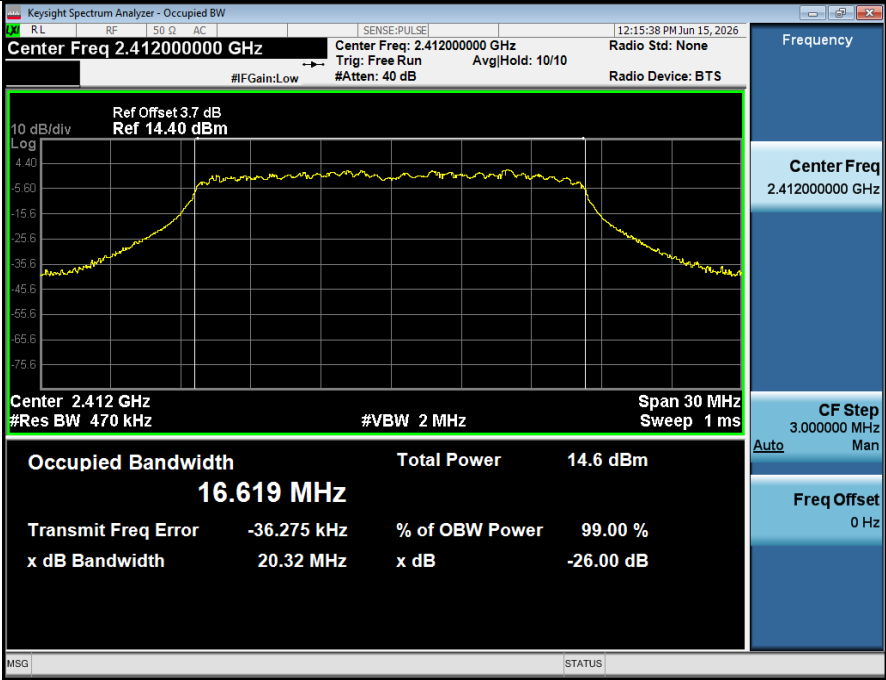
99% Occupied Bandwidth NVNT ANT2 802 11b 2462



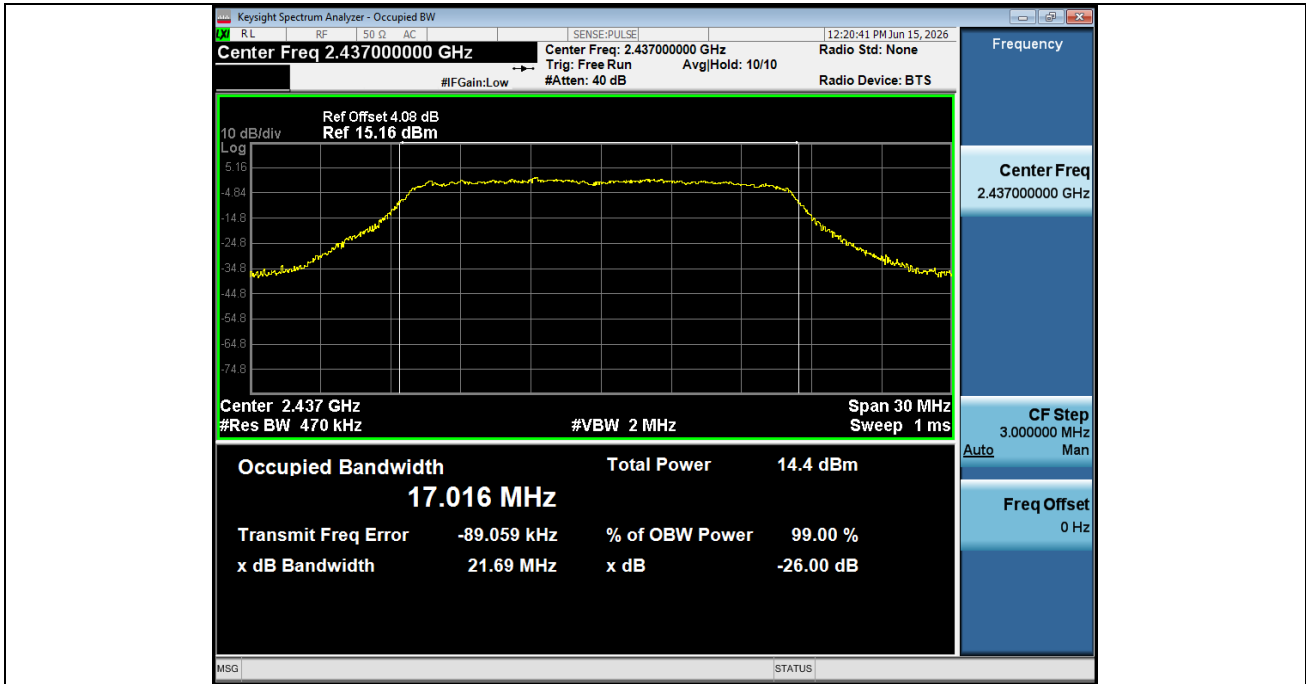
99%_Occupied_Bandwidth_NVNT_ANT1_802_11g_2412



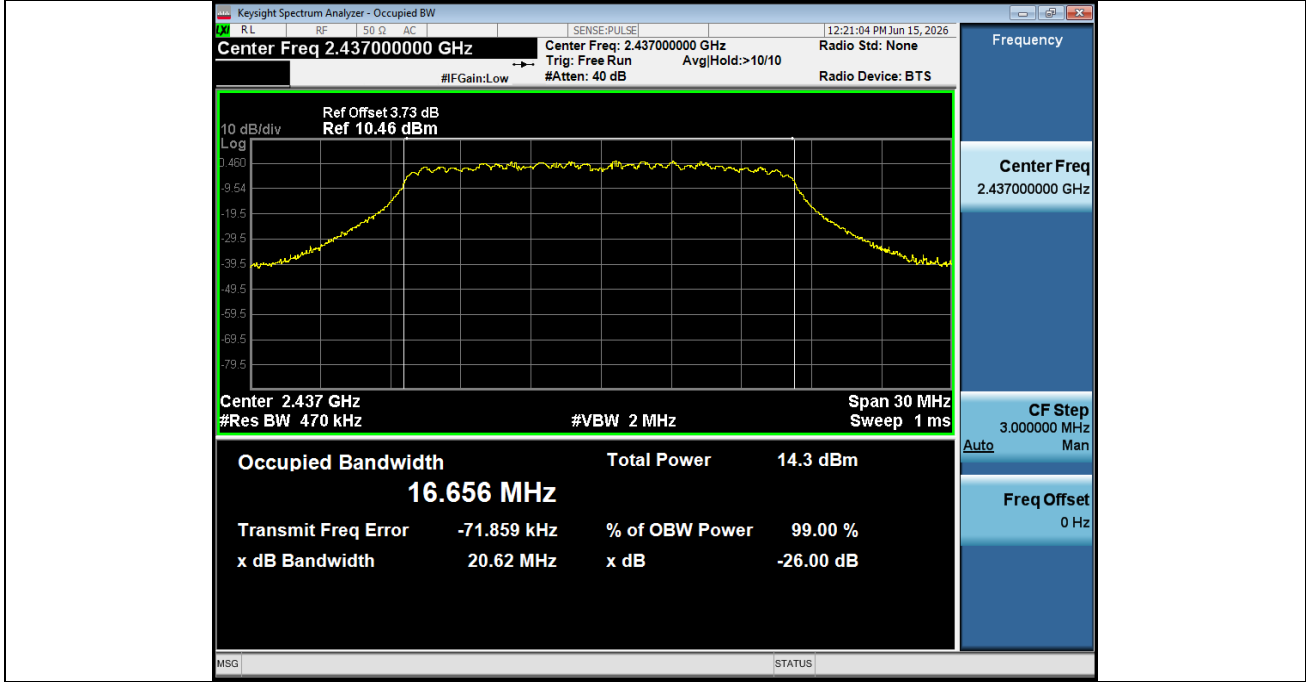
99% Occupied Bandwidth NVNT ANT2 802 11g 2412



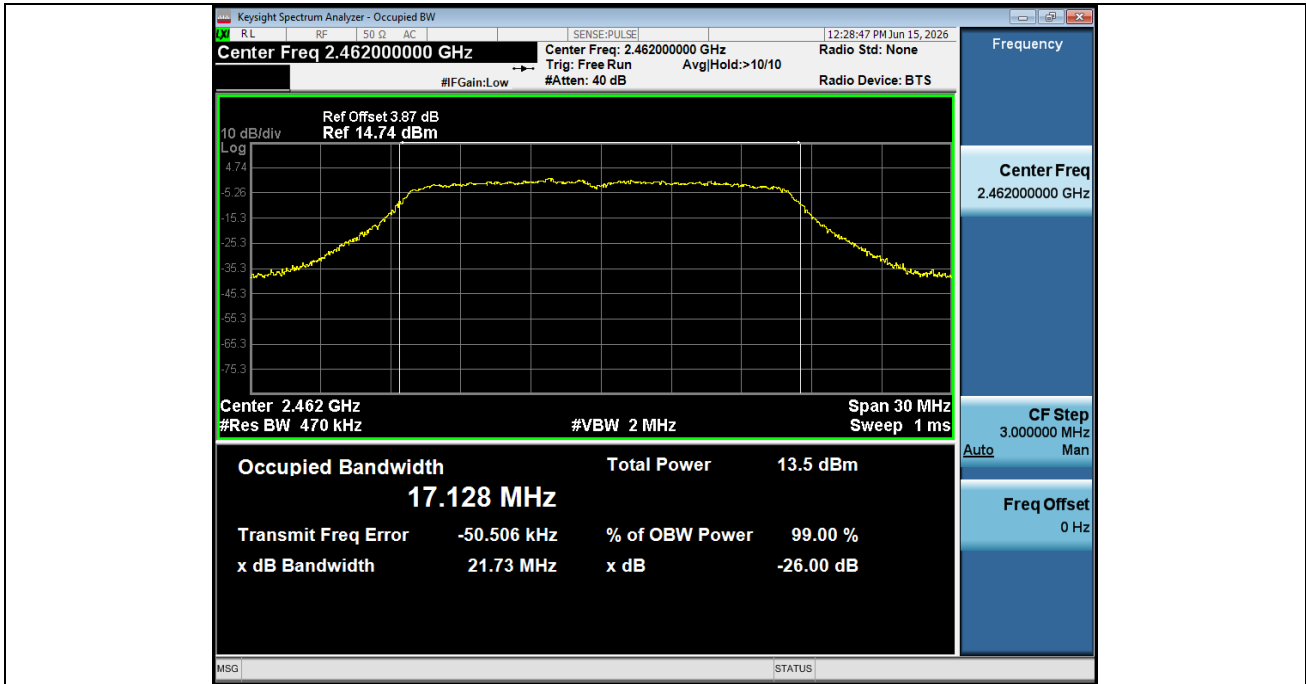
99%_Occupied_Bandwidth_NVNT_ANT1_802_11g_2437



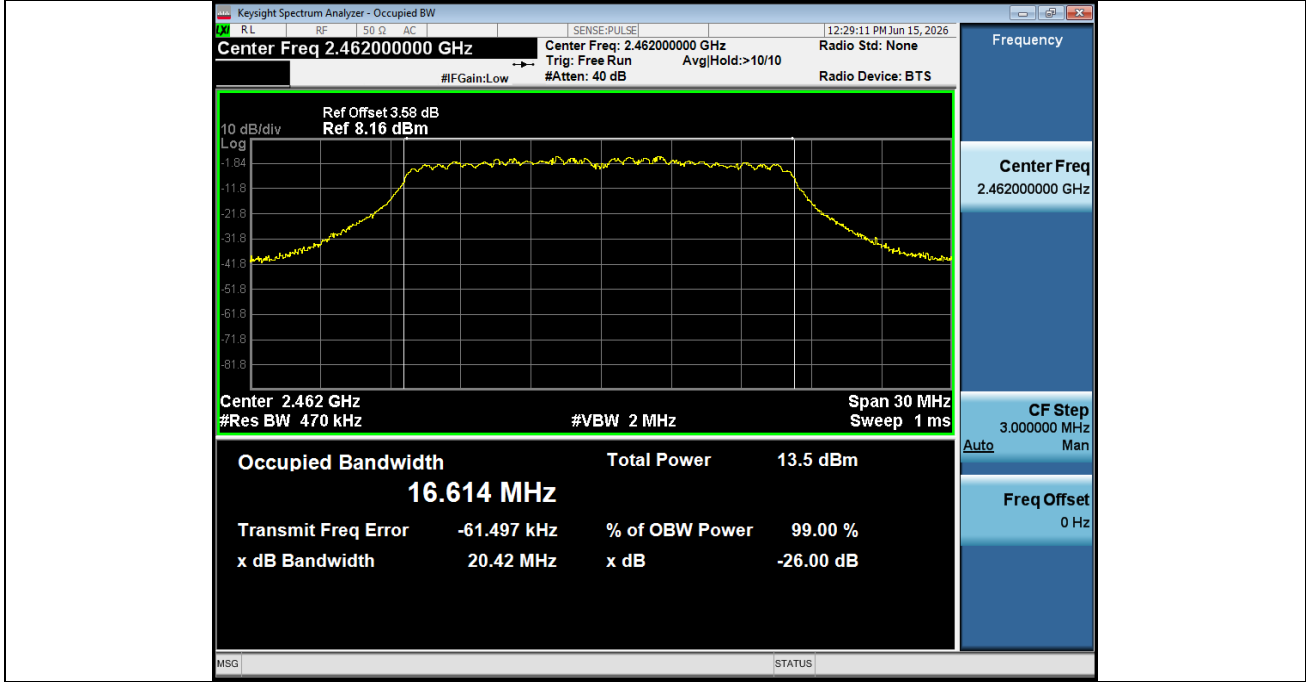
99% Occupied Bandwidth NVNT ANT2 802 11g 2437



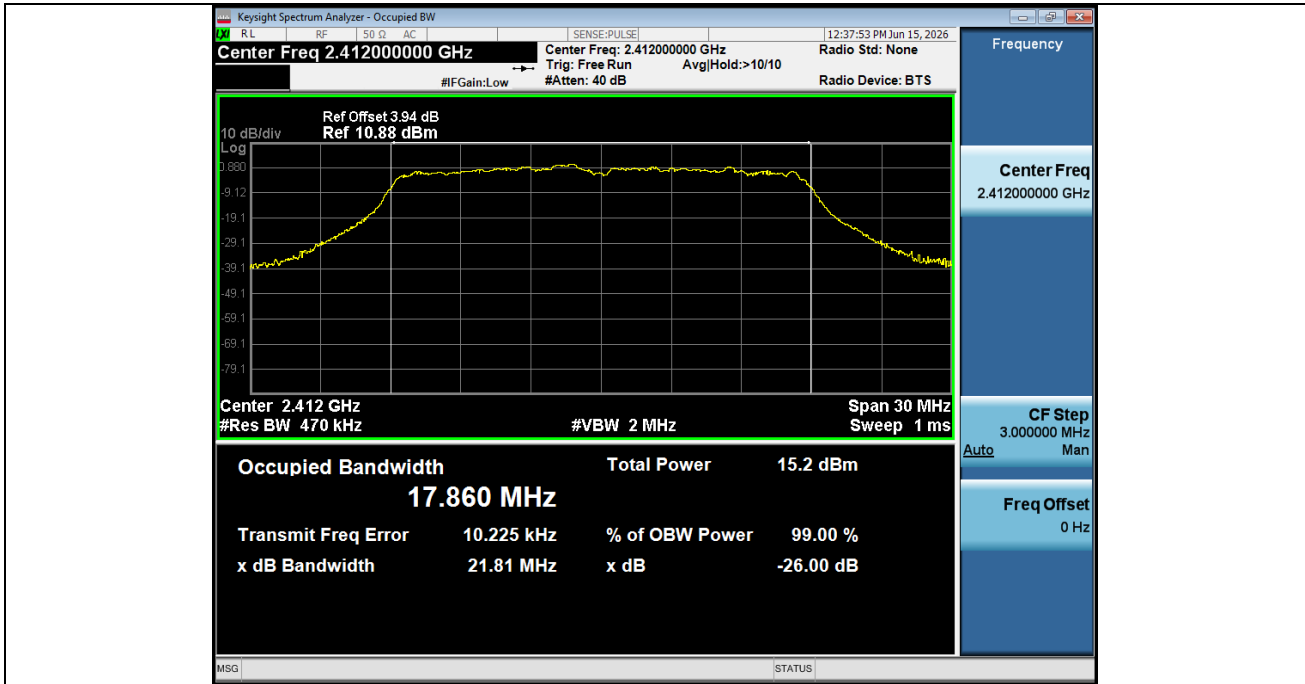
99%_Occupied_Bandwidth_NVNT_ANT1_802_11g_2462



99% Occupied Bandwidth NVNT ANT2 802 11g 2462



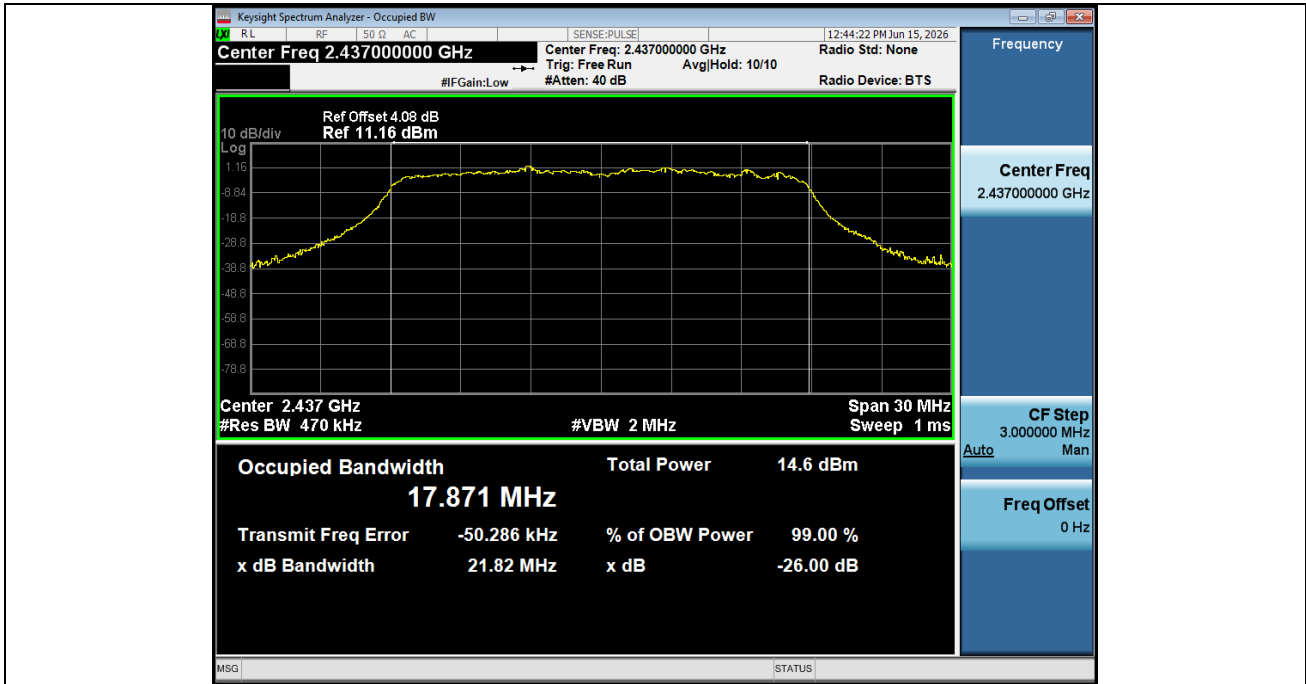
99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT20)_2412



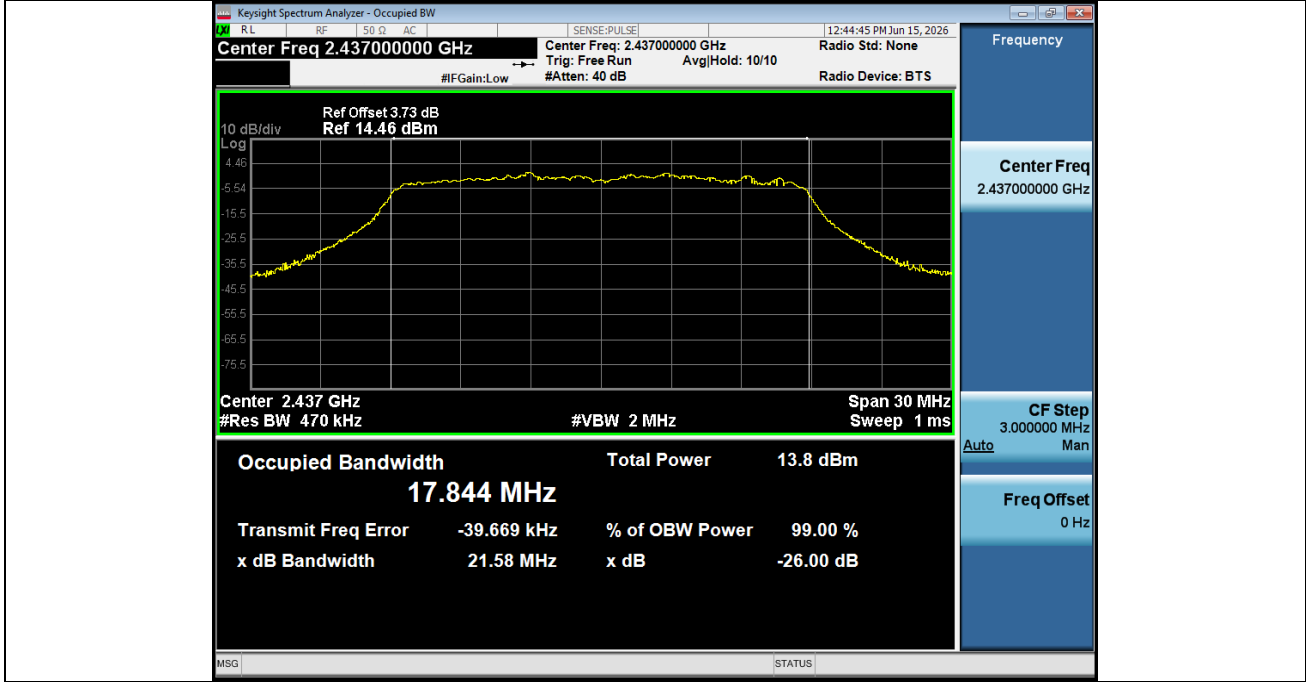
99% Occupied Bandwidth NVNT_ANT2_802_11n(HT20)_2412



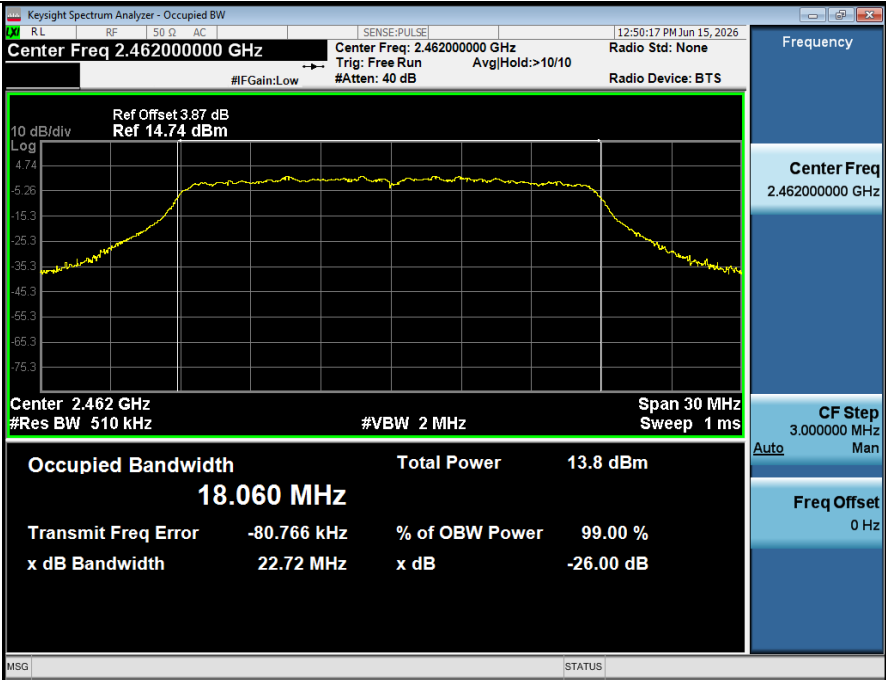
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99% Occupied Bandwidth NVNT_ANT2_802_11n(HT20)_2437



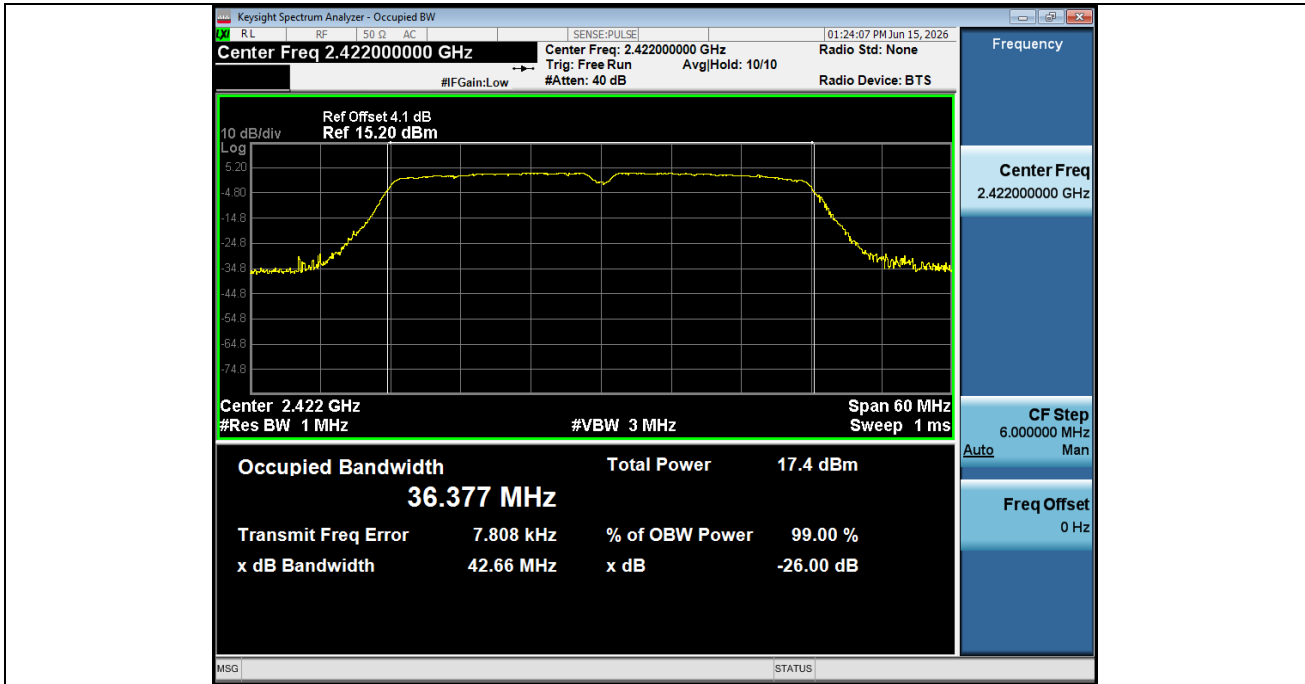
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99% Occupied Bandwidth NVNT_ANT2_802_11n(HT20)_2462



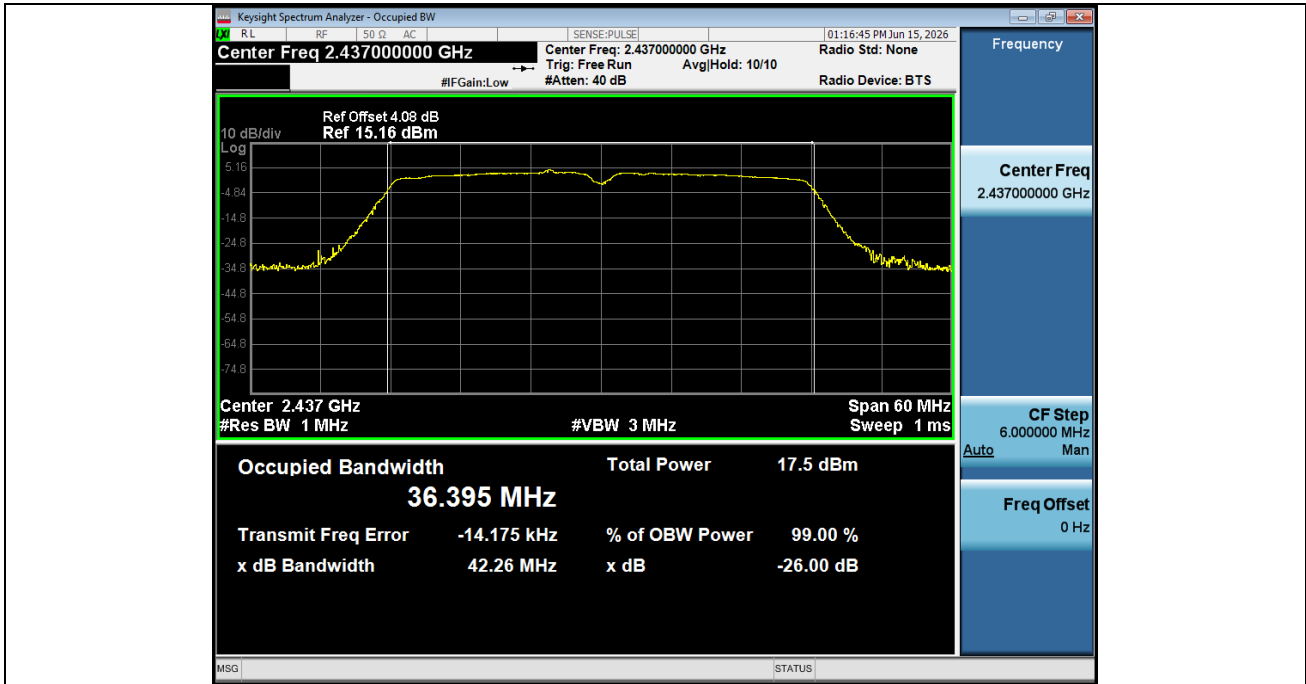
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99% Occupied Bandwidth NVNT_ANT2_802_11n(HT40)_2422



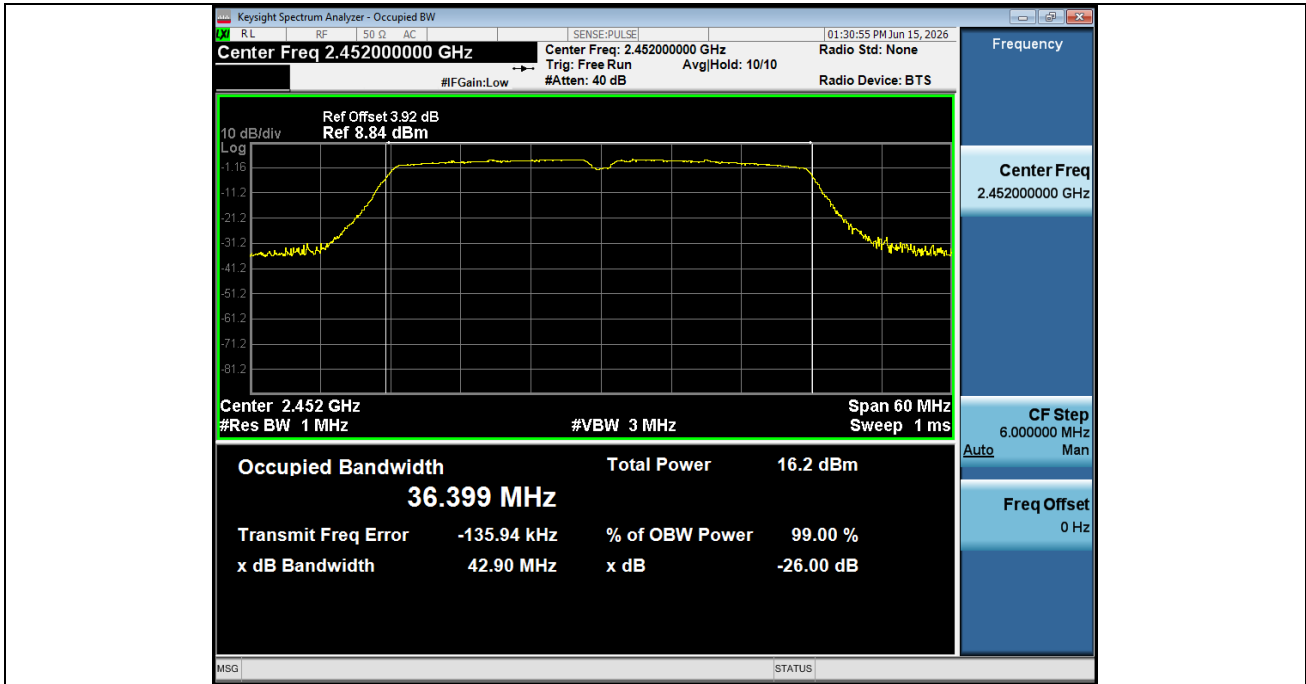
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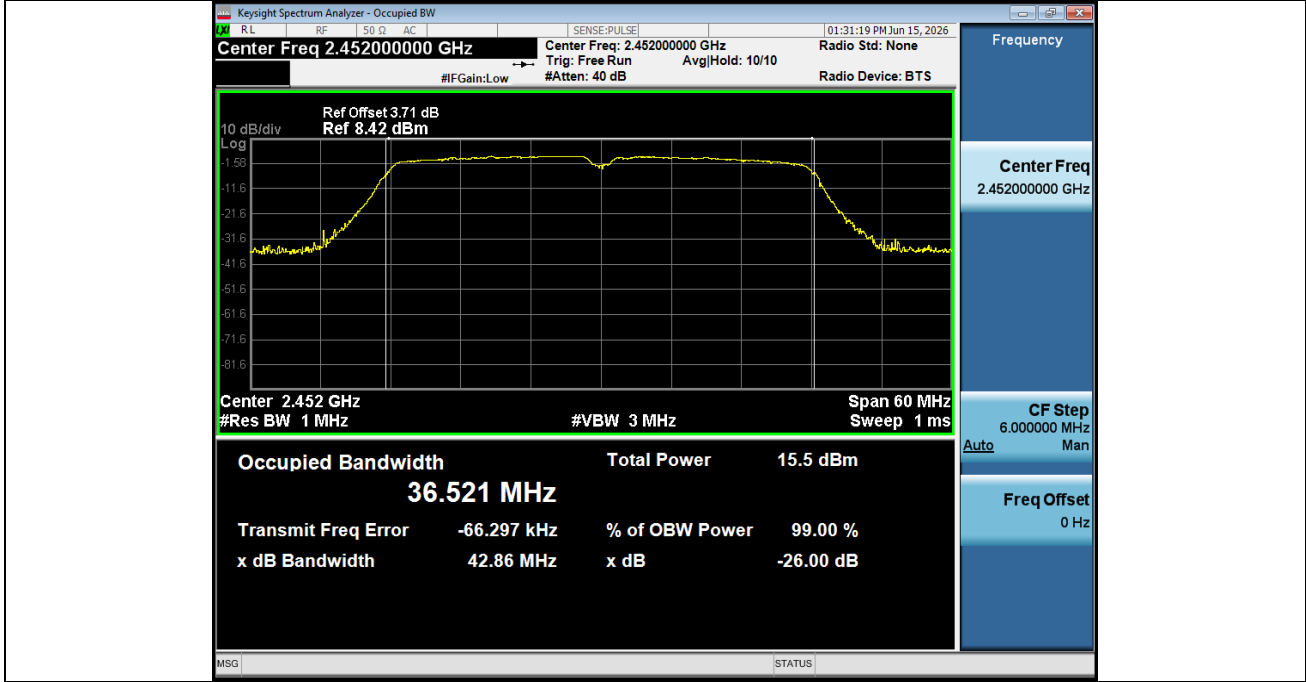
99% Occupied Bandwidth NVNT_ANT2_802_11n(HT40)_2437



99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT40)_2452



99% Occupied Bandwidth NVNT ANT2 802 11n(HT40) 2452



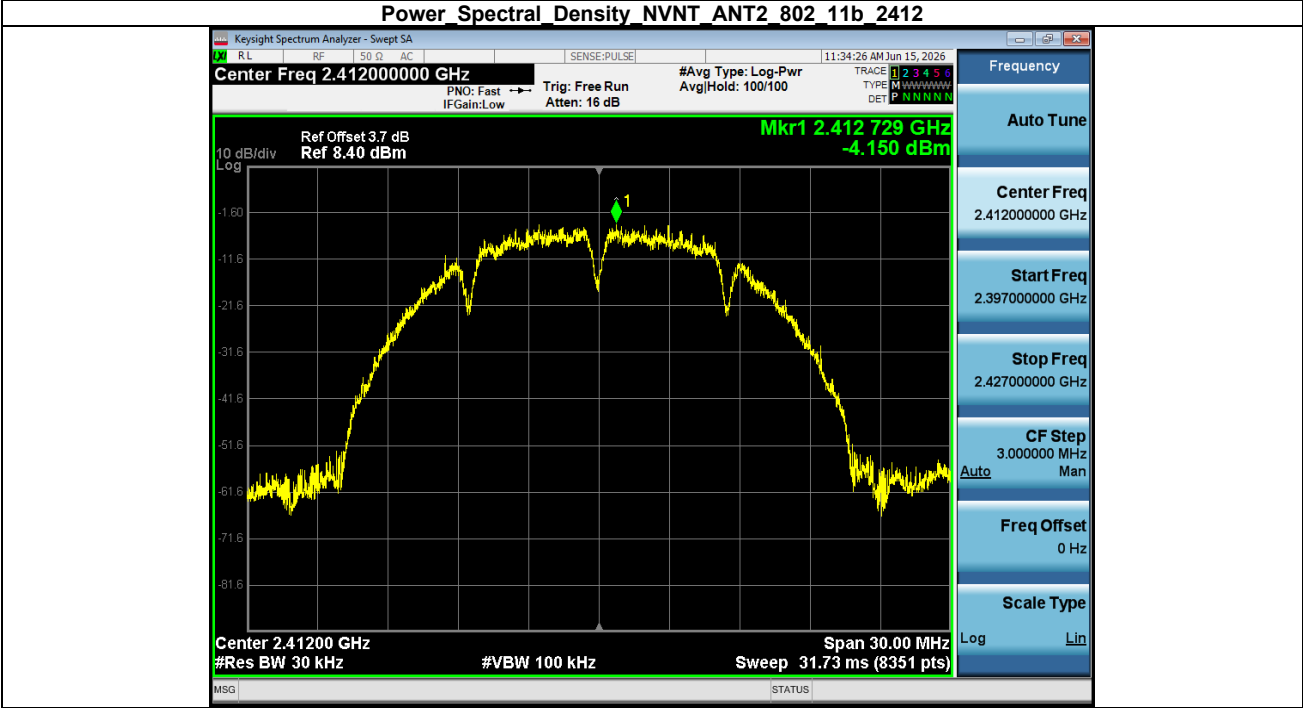
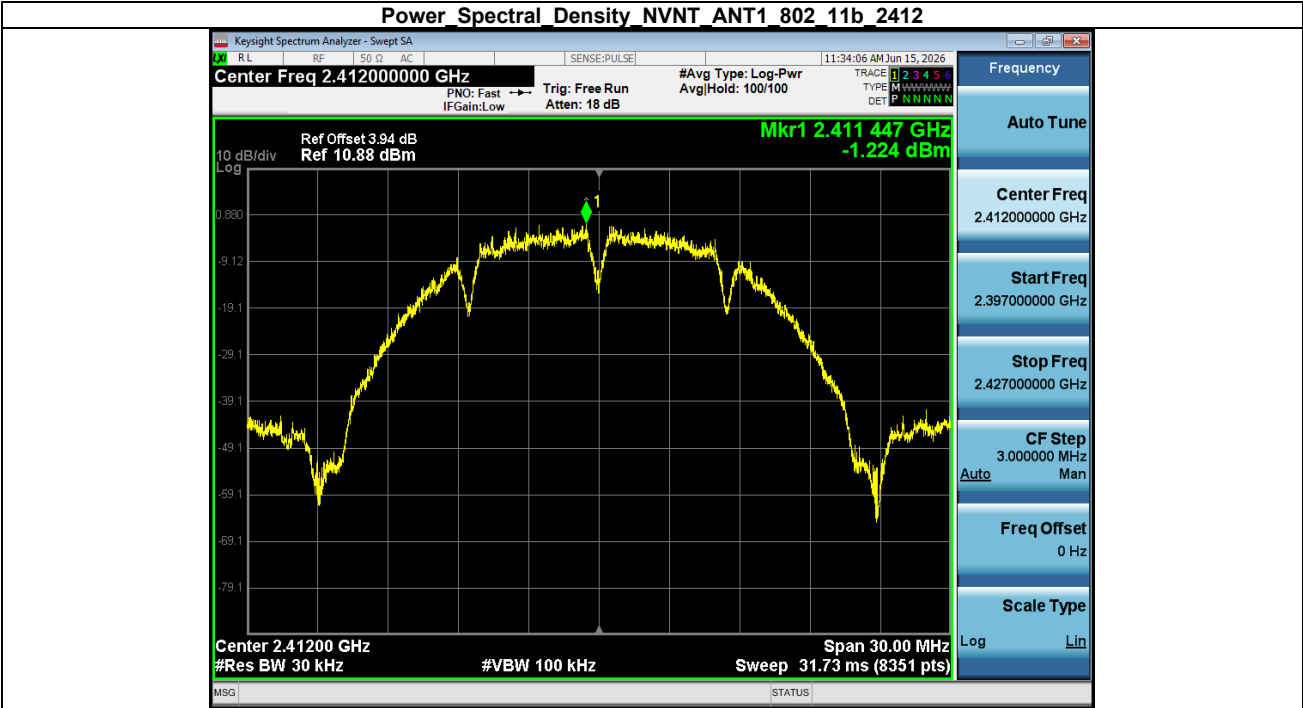
Appendix B.3: Test Results of Conducted Power Spectral Density

Test Result

Antenna	Modulation	Frequency (MHz)	SA_PSD(dBm/30kHz)	Duty factor(dB)	RB factor(dB)	PSD(dBm/3kHz)	limit(dBm/3kHz)	Result
ANT1	802.11b	2412.00	-1.22	N/A	-10.00	-11.22	8	Pass
ANT2	802.11b	2412.00	-4.15	N/A	-10.00	-14.15	8	Pass
ANT1	802.11b	2437.00	-0.12	N/A	-10.00	-10.12	8	Pass
ANT2	802.11b	2437.00	-3.67	N/A	-10.00	-13.67	8	Pass
ANT1	802.11b	2462.00	-0.06	N/A	-10.00	-10.06	8	Pass
ANT2	802.11b	2462.00	-2.73	N/A	-10.00	-12.72	8	Pass
ANT1	802.11g	2412.00	-7.06	N/A	-10.00	-17.06	8	Pass
ANT2	802.11g	2412.00	-7.38	N/A	-10.00	-17.38	8	Pass
ANT1	802.11g	2437.00	-7.62	N/A	-10.00	-17.62	8	Pass
ANT2	802.11g	2437.00	-7.73	N/A	-10.00	-17.73	8	Pass
ANT1	802.11g	2462.00	-8.86	N/A	-10.00	-18.86	8	Pass
ANT2	802.11g	2462.00	-8.76	N/A	-10.00	-18.76	8	Pass
ANT1	802.11n(HT20)	2412.00	-8.79	N/A	-10.00	-18.79	8	Pass
ANT2	802.11n(HT20)	2412.00	-9.26	N/A	-10.00	-19.26	8	Pass
ANT1	802.11n(HT20)	2437.00	-9.05	N/A	-10.00	-19.05	8	Pass
ANT2	802.11n(HT20)	2437.00	-9.96	N/A	-10.00	-19.96	8	Pass
ANT1	802.11n(HT20)	2462.00	-9.36	N/A	-10.00	-19.36	8	Pass
ANT2	802.11n(HT20)	2462.00	-8.97	N/A	-10.00	-18.97	8	Pass
ANT1	802.11n(HT40)	2422.00	-9.30	N/A	-10.00	-19.30	8	Pass
ANT2	802.11n(HT40)	2422.00	-10.50	N/A	-10.00	-20.50	8	Pass
ANT1	802.11n(HT40)	2437.00	-7.83	N/A	-10.00	-17.83	8	Pass
ANT2	802.11n(HT40)	2437.00	-8.65	N/A	-10.00	-18.65	8	Pass
ANT1	802.11n(HT40)	2452.00	-10.52	N/A	-10.00	-20.52	8	Pass
ANT2	802.11n(HT40)	2452.00	-11.50	N/A	-10.00	-21.50	8	Pass

Antenna	Modulation	Frequency (MHz)	SA_MIMO_PSD(dBm/30kHz)	RB factor(dB)	MIMO_PSD(dBm/3kHz)	limit(dBm/3kHz)	Result
MIMO TX	802.11n(HT20)	2412.00	-6.08	-10	-16.08	8	Pass
MIMO TX	802.11n(HT20)	2437.00	-6.49	-10	-16.49	8	Pass
MIMO TX	802.11n(HT20)	2462.00	-6.57	-10	-16.57	8	Pass
MIMO TX	802.11n(HT40)	2422.00	-6.85	-10	-16.85	8	Pass
MIMO TX	802.11n(HT40)	2437.00	-5.23	-10	-15.23	8	Pass
MIMO TX	802.11n(HT40)	2452.00	-8.18	-10	-18.18	8	Pass

Test Graphs





Power Spectral Density NVNT ANT2 802 11b 2437



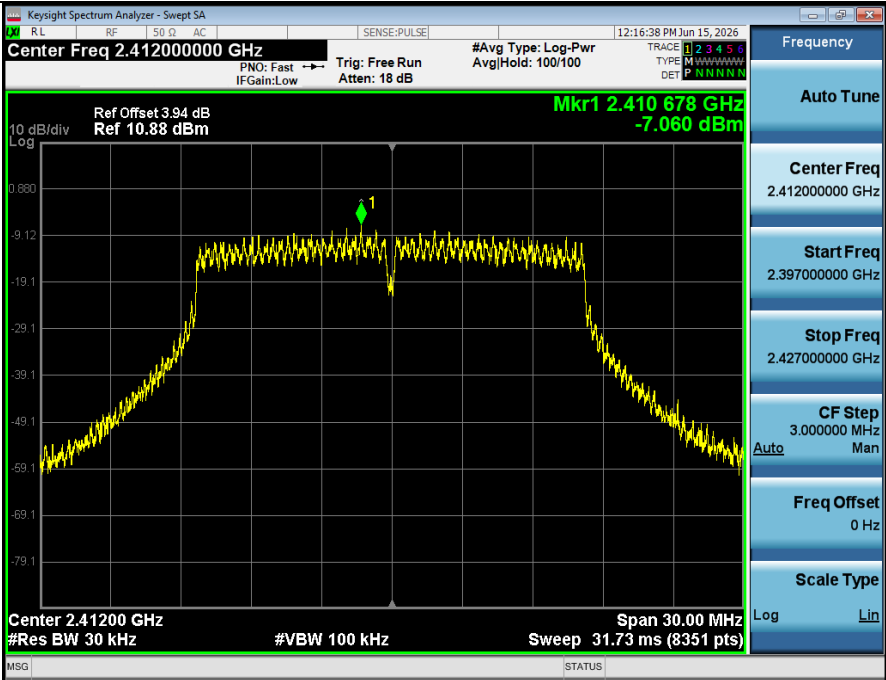
Power Spectral Density NVNT ANT1 802 11b 2462



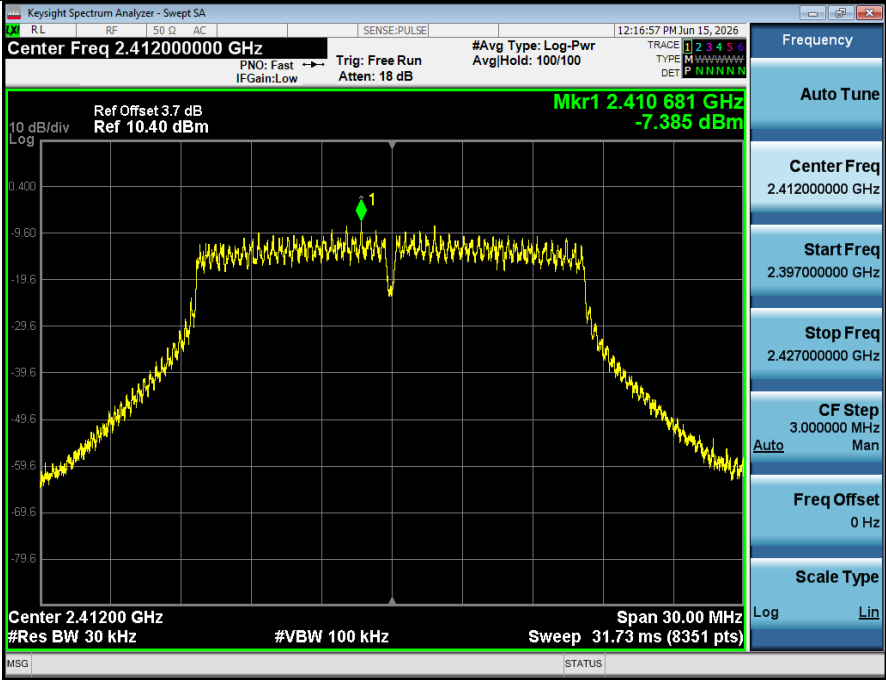
Power Spectral Density NVNT ANT2 802 11b 2462



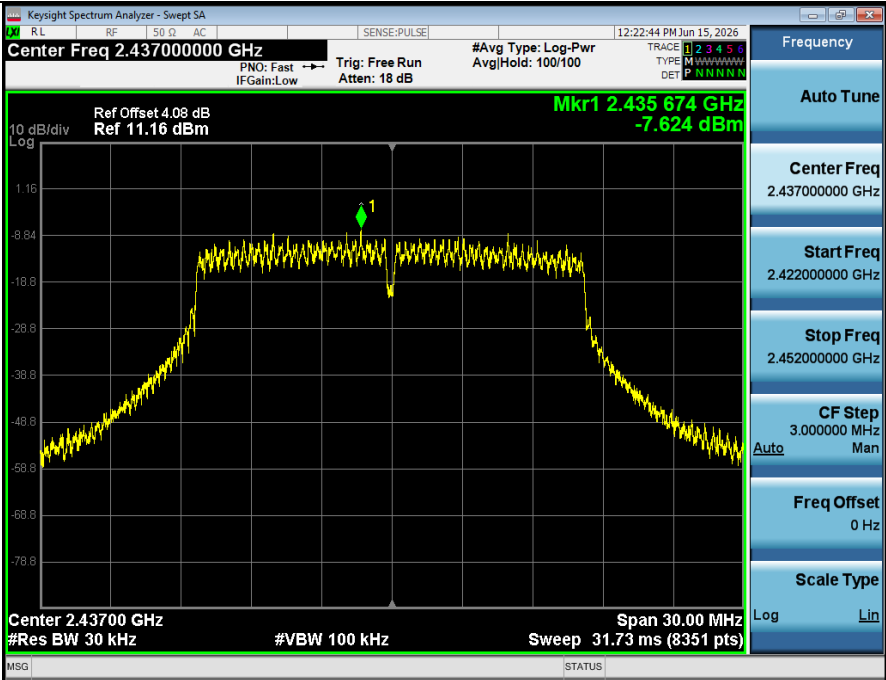
Power Spectral Density NVNT ANT1 802 11g 2412



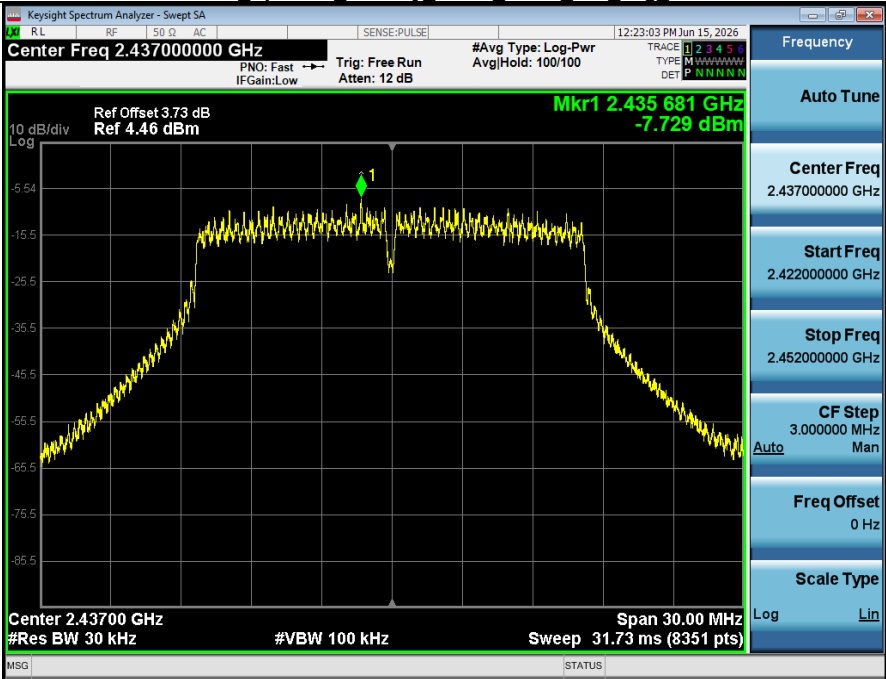
Power Spectral Density NVNT ANT2 802 11g 2412



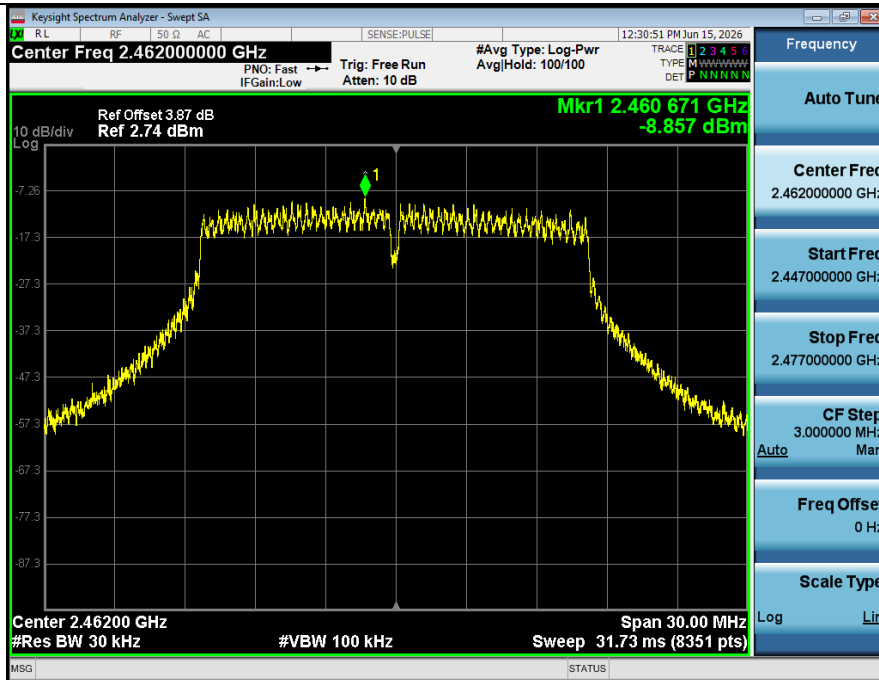
Power Spectral Density NVNT ANT1 802 11g 2437



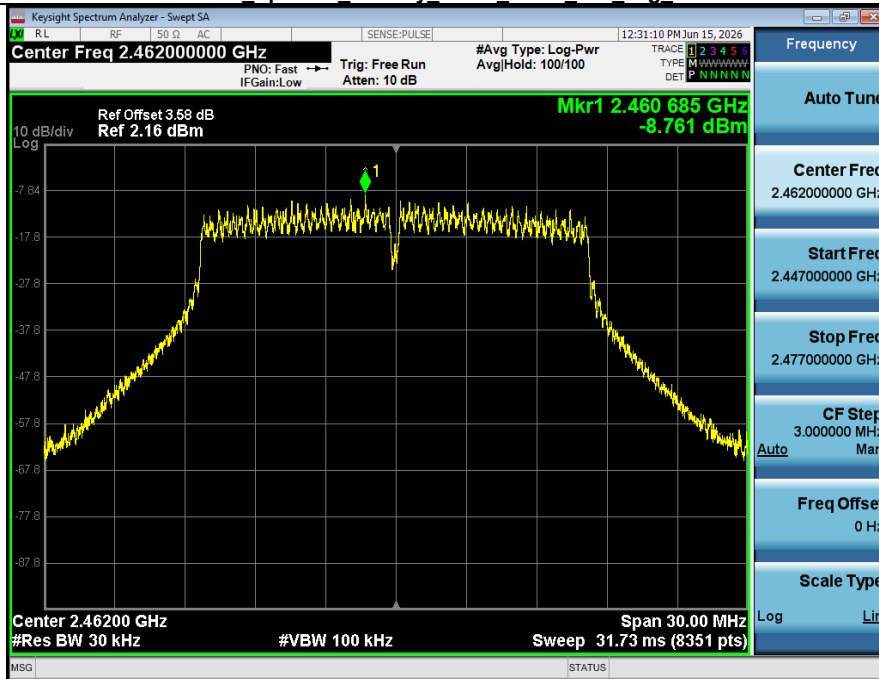
Power Spectral Density NVNT ANT2 802 11g 2437



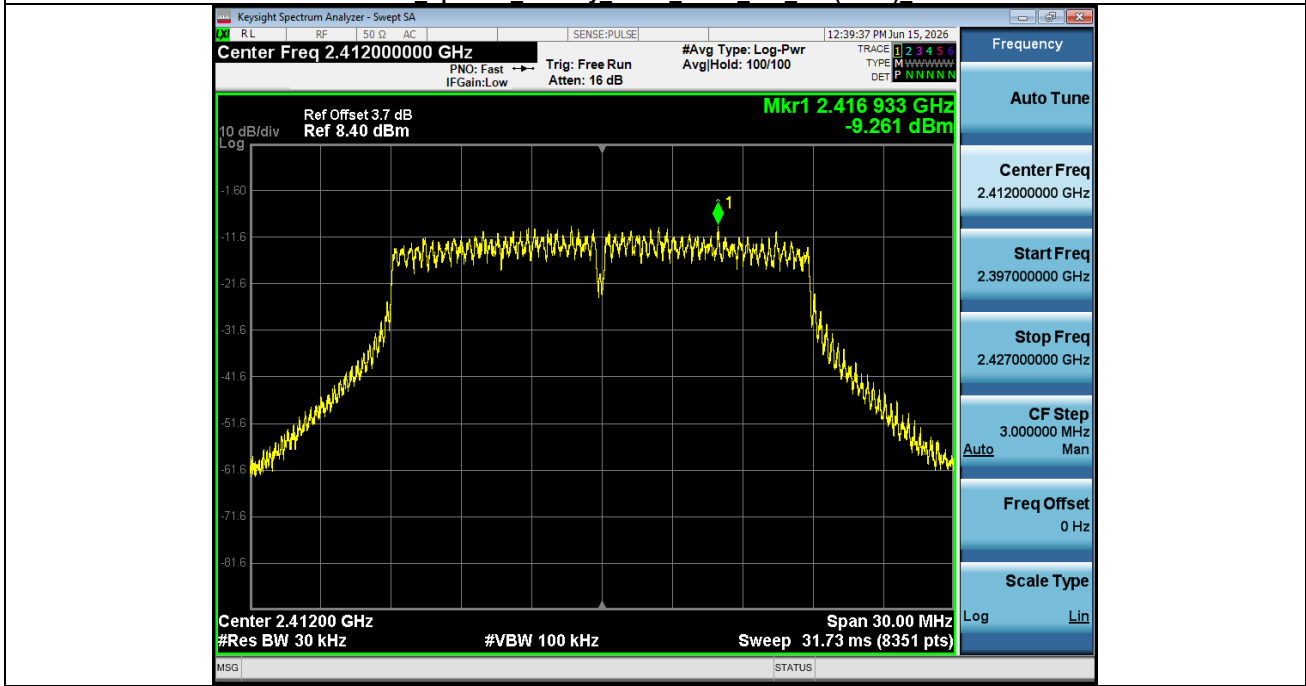
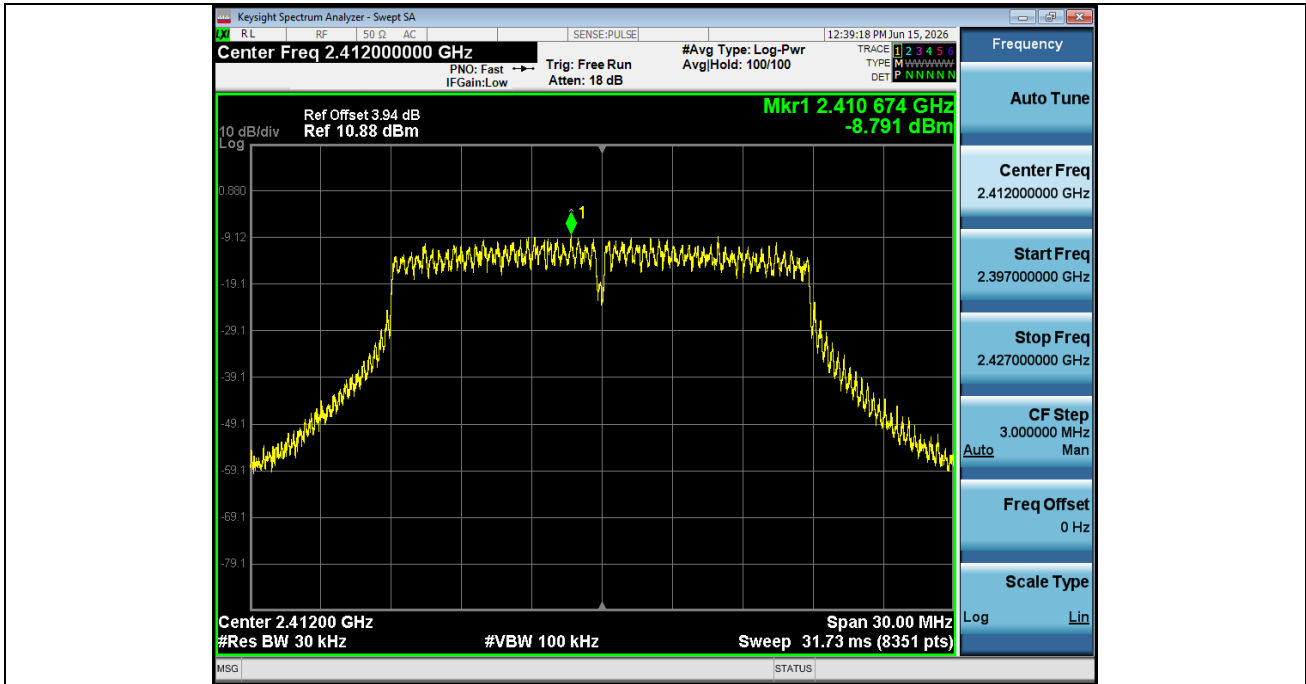
Power Spectral Density NVNT ANT1 802 11g 2462

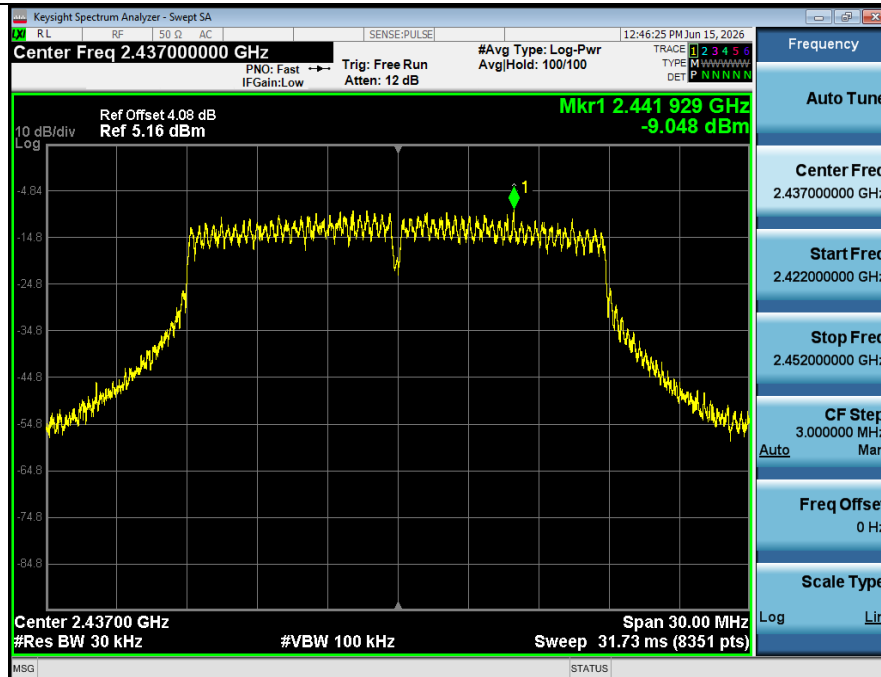


Power Spectral Density NVNT ANT2 802 11g 2462

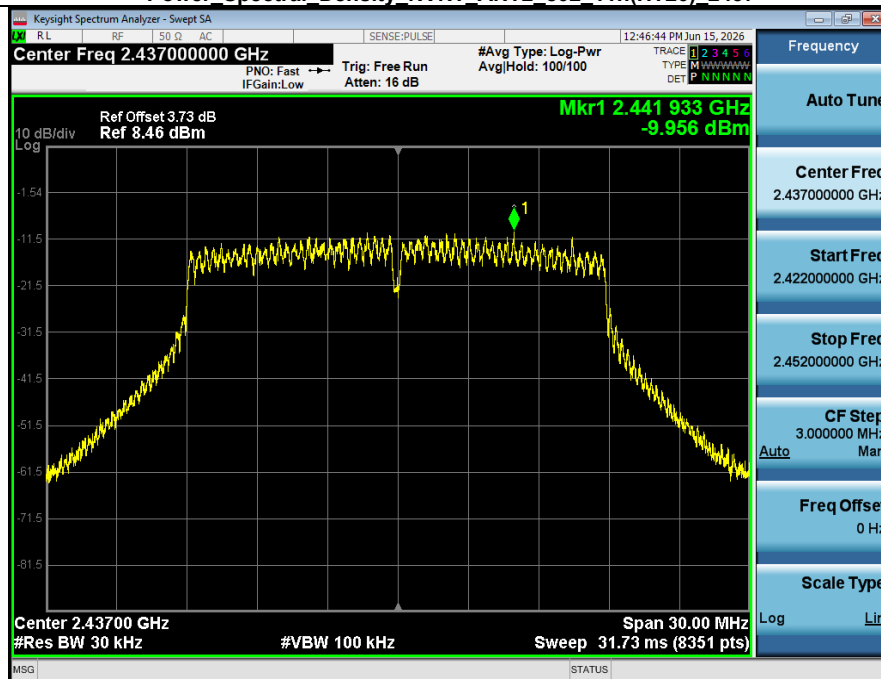


Power Spectral Density NVNT ANT1 802 11n(HT20) 2412

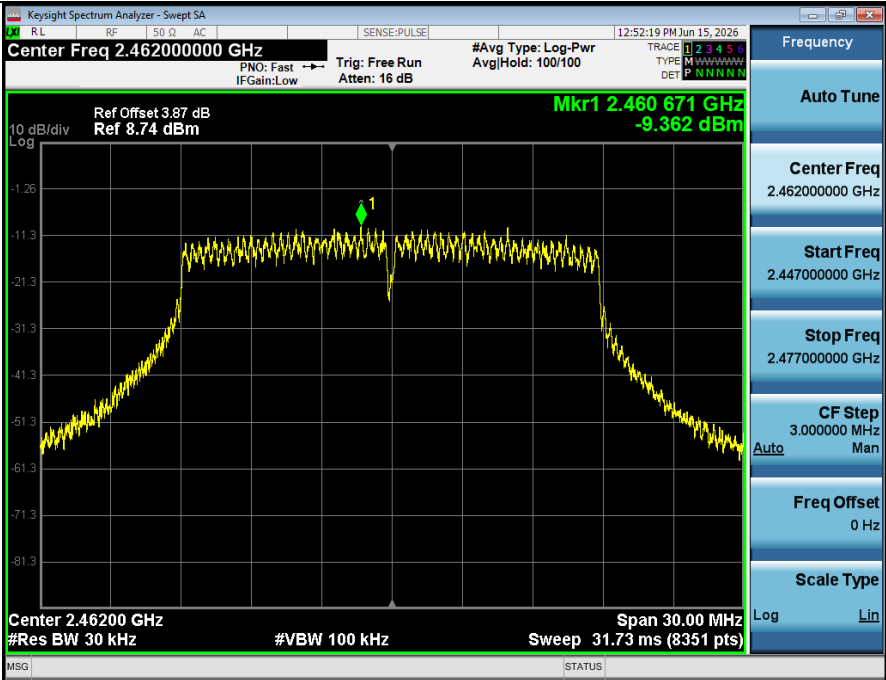




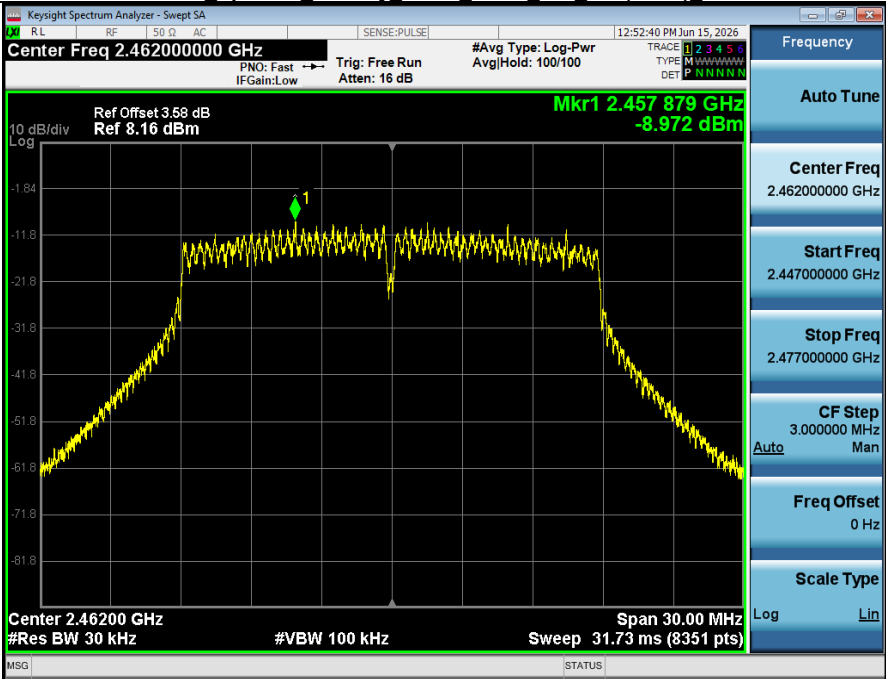
Power Spectral Density_NVNT_ANT2_802_11n(HT20)_2437



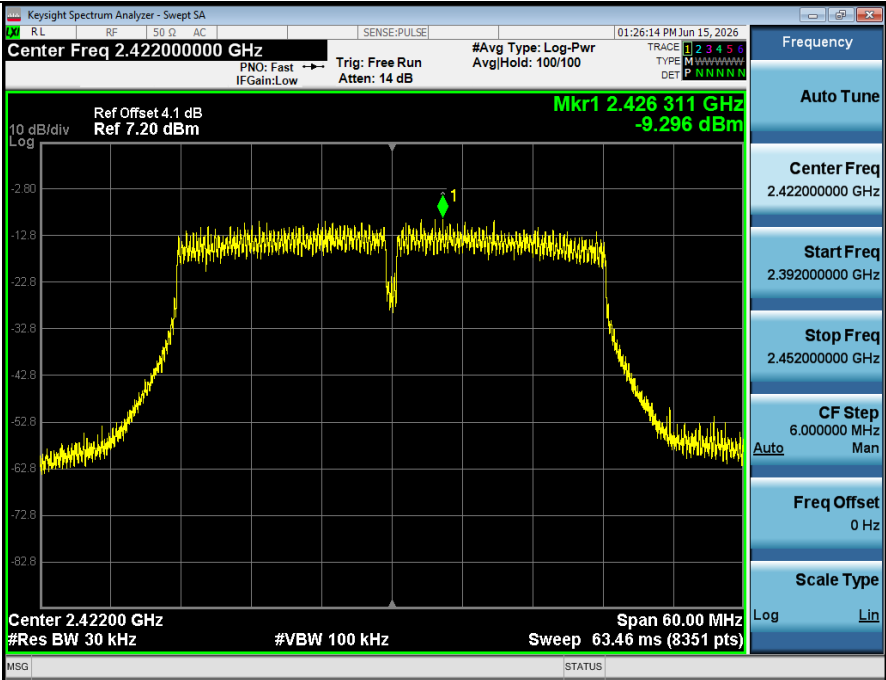
Power Spectral Density_NVNT_ANT1_802_11n(HT20)_2462



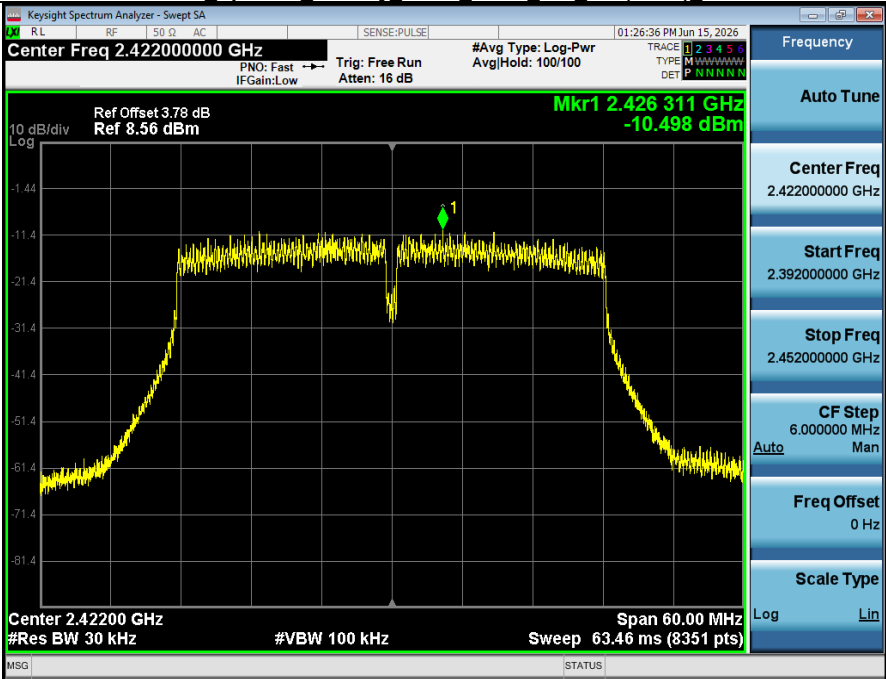
Power_Spectral_Density_NVNT_ANT2_802_11n(HT20)_2462



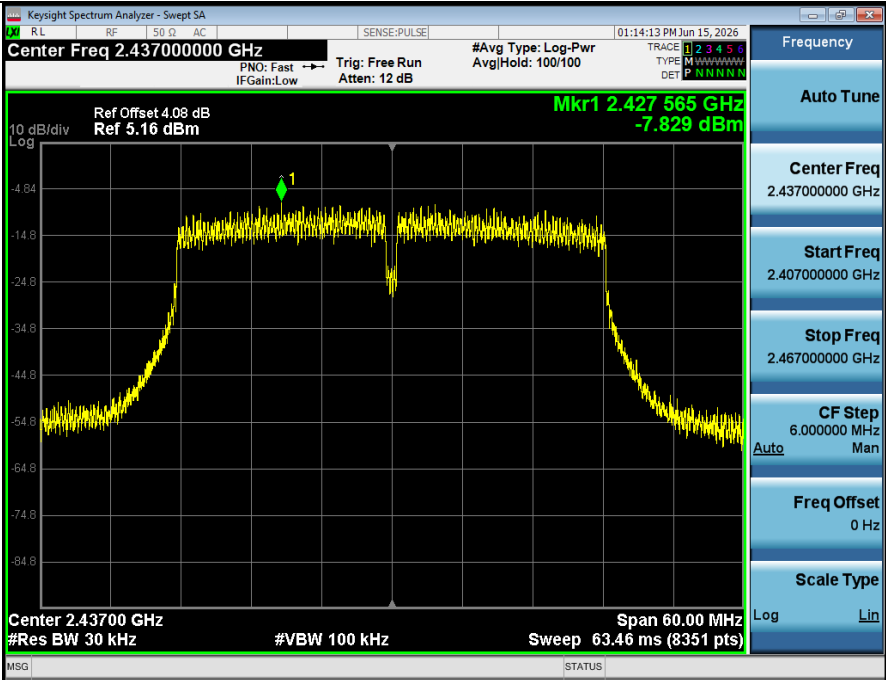
Power_Spectral_Density_NVNT_ANT1_802_11n(HT40)_2422



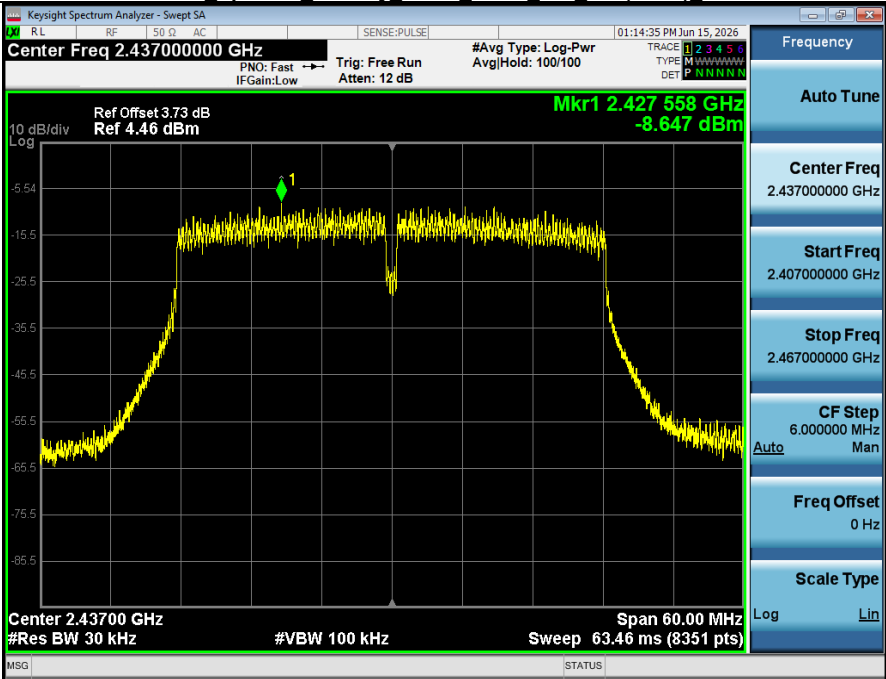
Power_Spectral_Density_NVNT_ANT2_802_11n(HT40)_2422



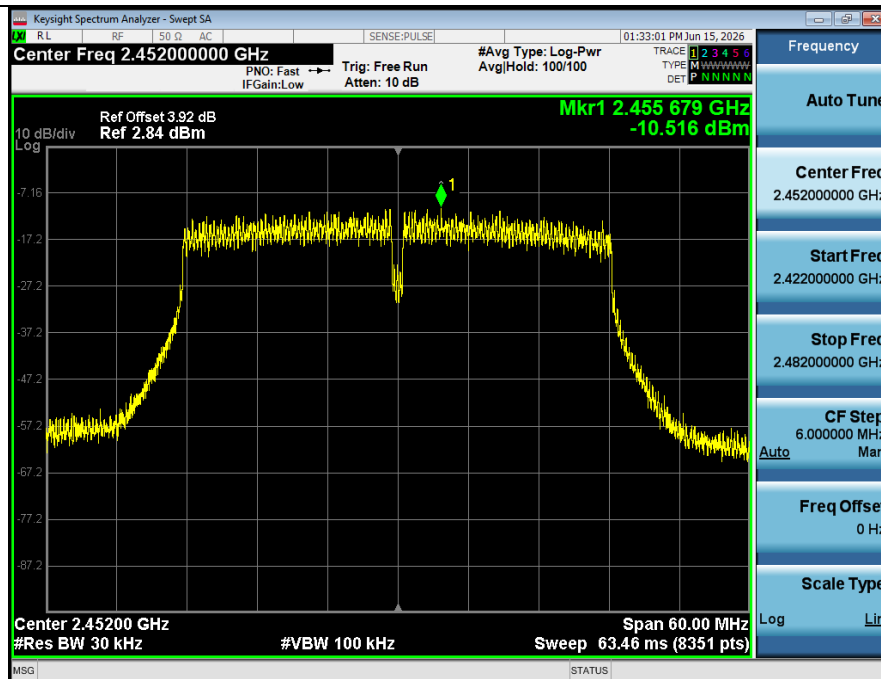
Power_Spectral_Density_NVNT_ANT1_802_11n(HT40)_2437



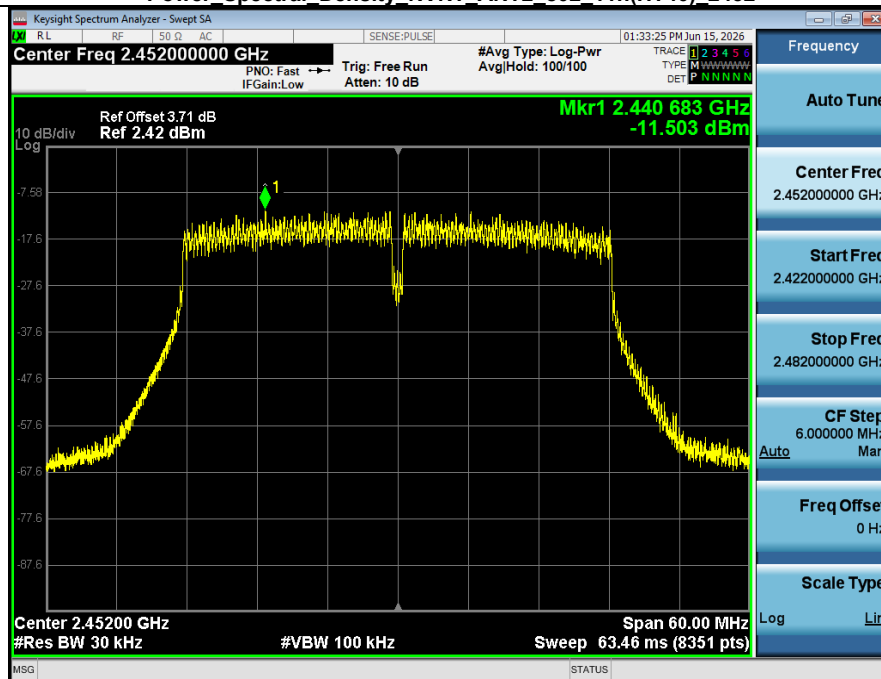
Power Spectral Density NVNT ANT2 802 11n(HT40) 2437



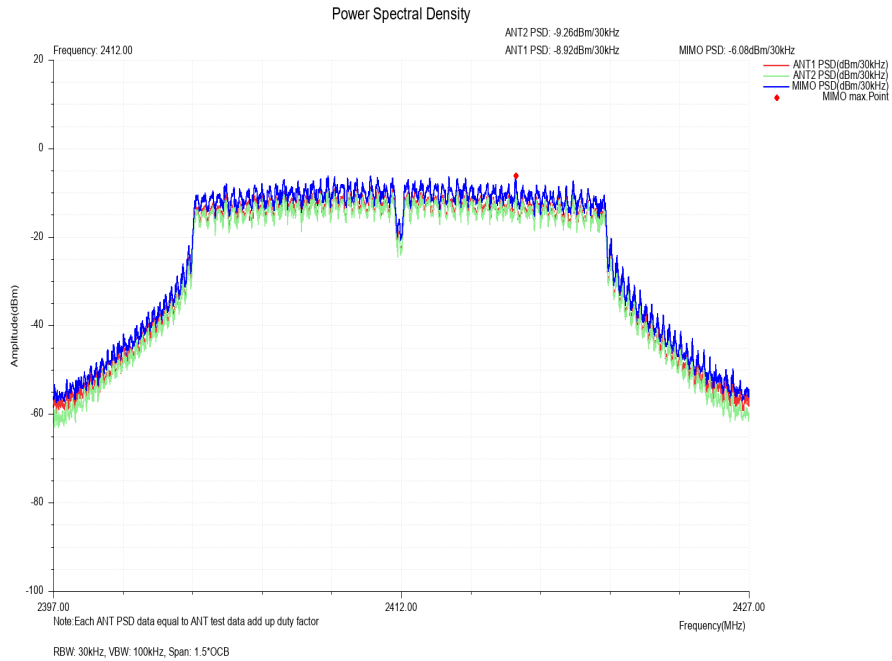
Power Spectral Density NVNT ANT1 802 11n(HT40) 2452



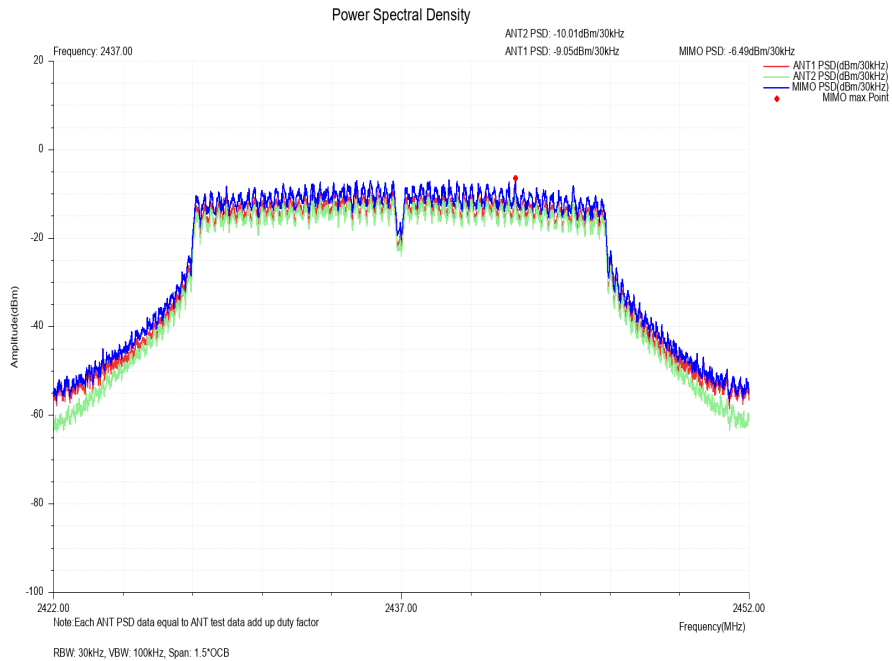
Power Spectral Density NVNT ANT2 802 11n(HT40) 2452



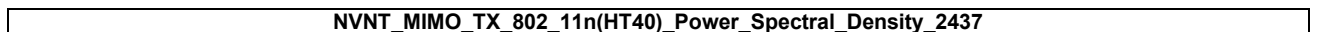
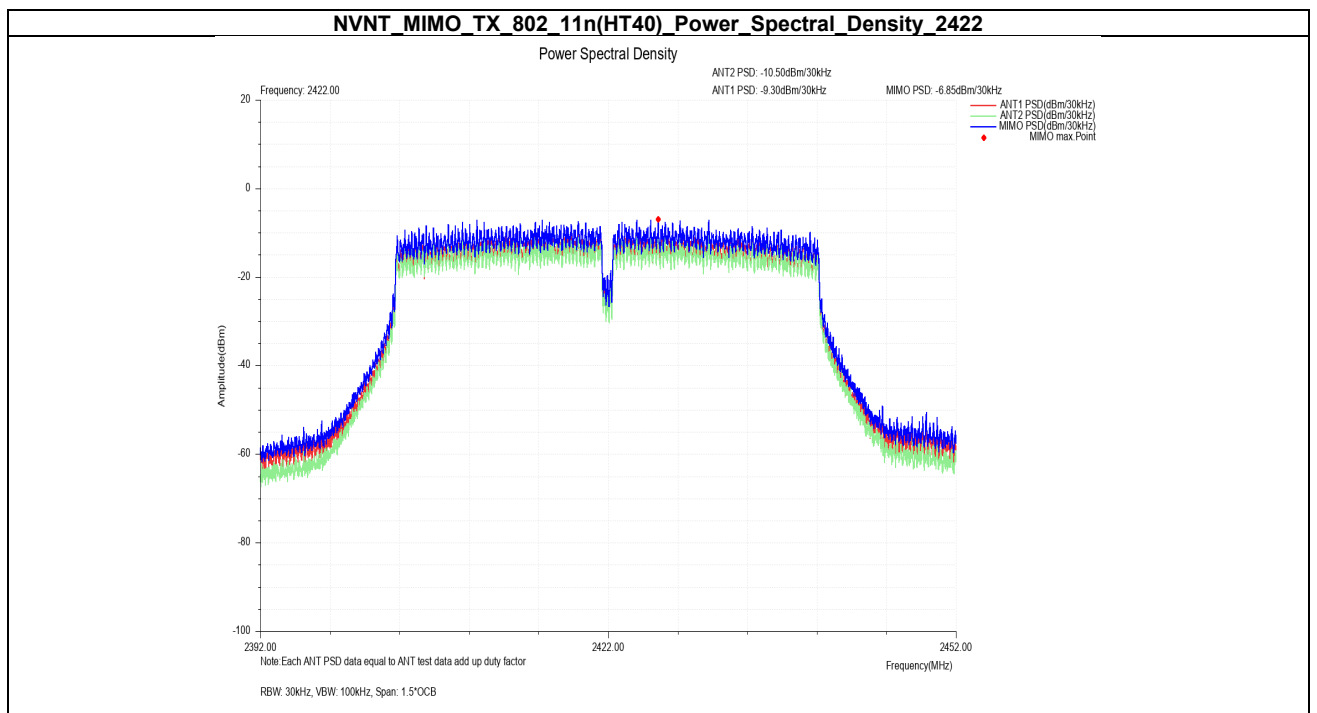
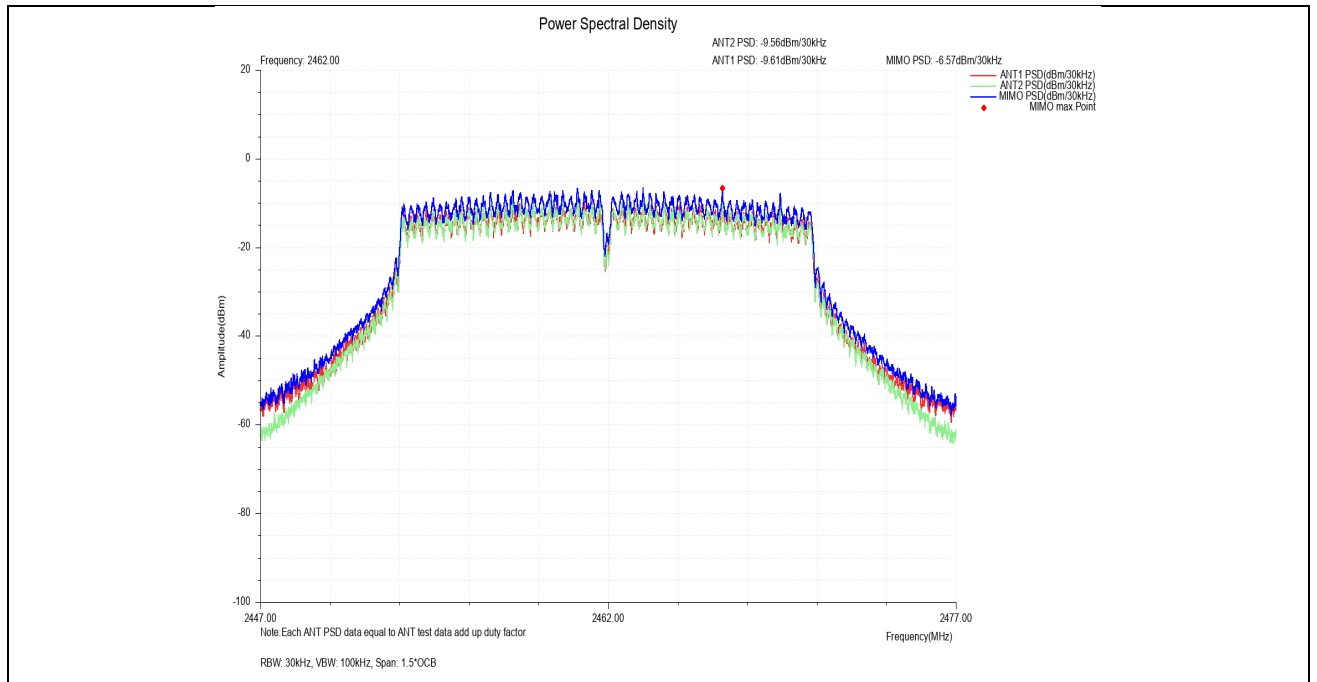
NVNT_MIMO_TX_802_11n(HT20)_Power_Spectral_Density_2412

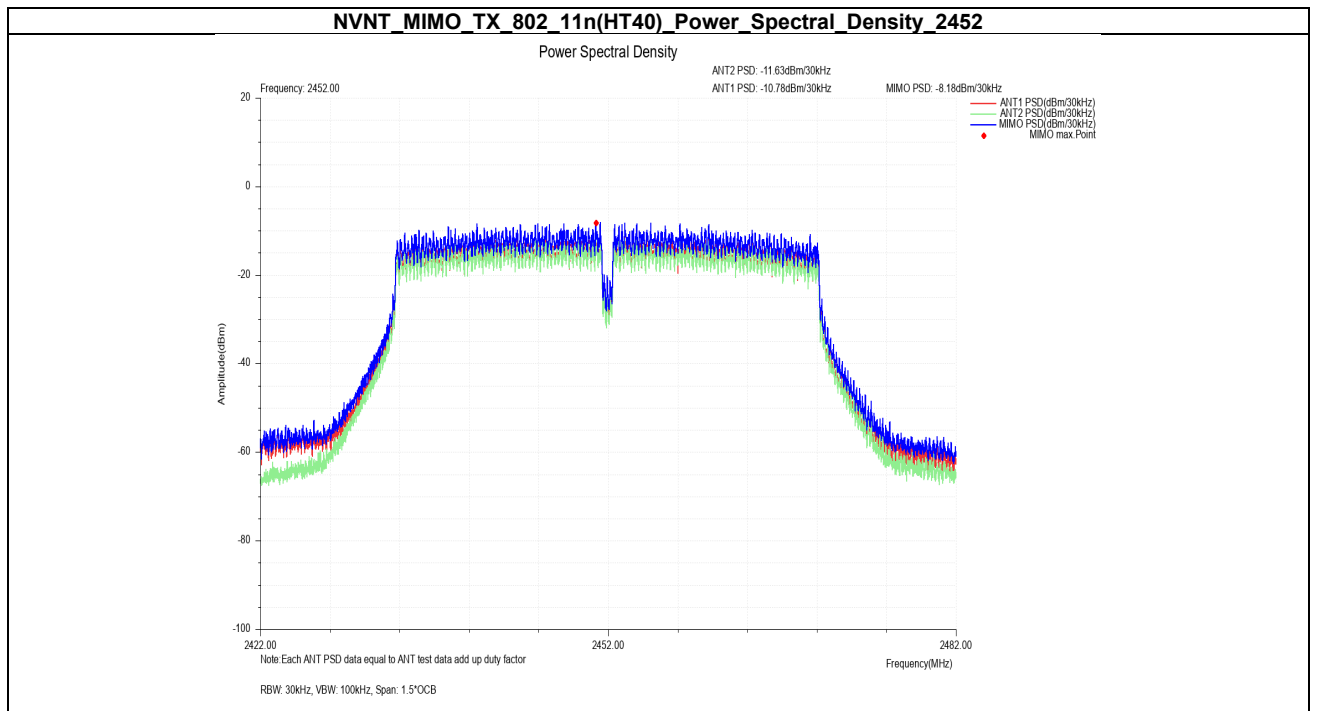
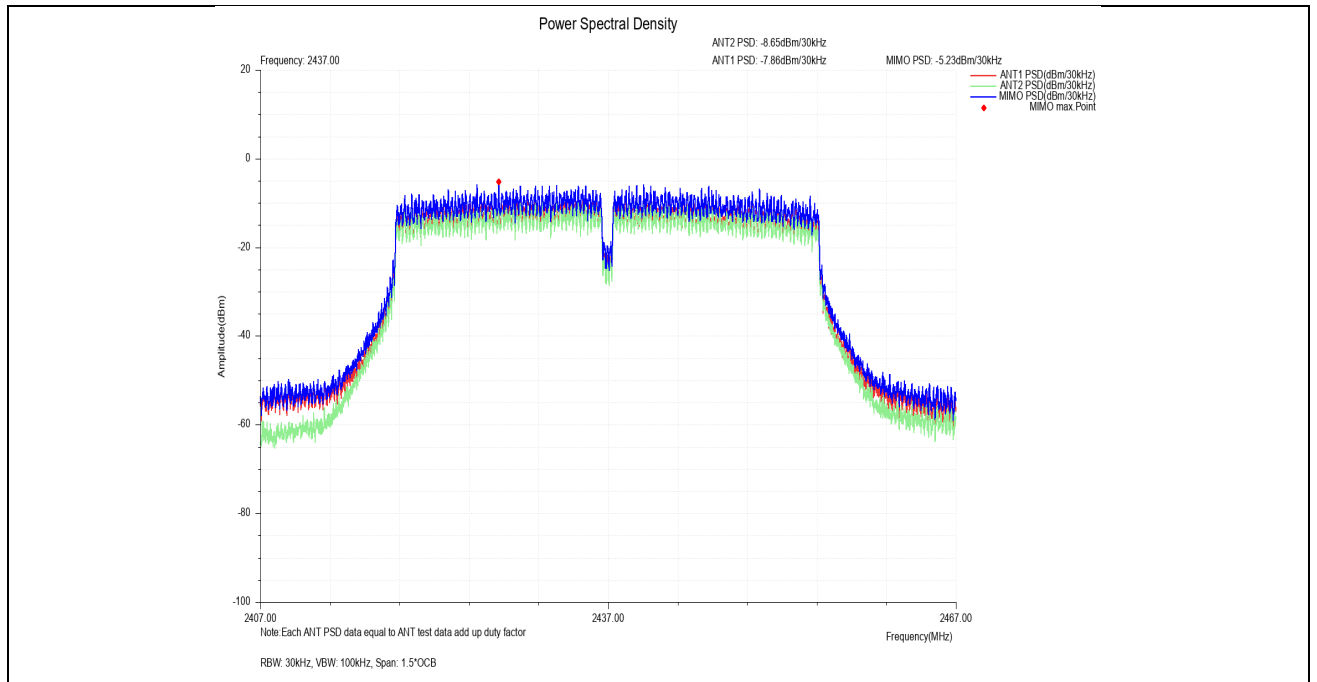


NVNT_MIMO_TX_802_11n(HT20)_Power_Spectral_Density_2437



NVNT_MIMO_TX_802_11n(HT20)_Power_Spectral_Density_2462





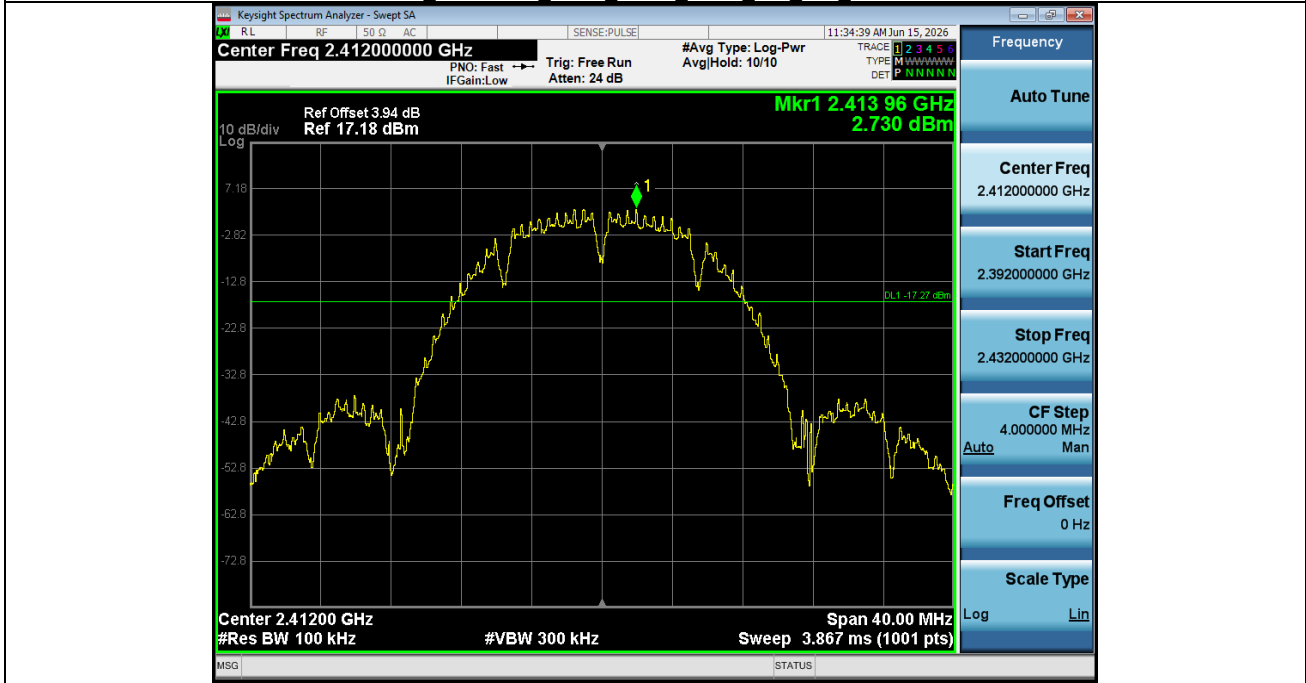
Appendix B.4: Test Results of Band Edge Measurements

Test Result

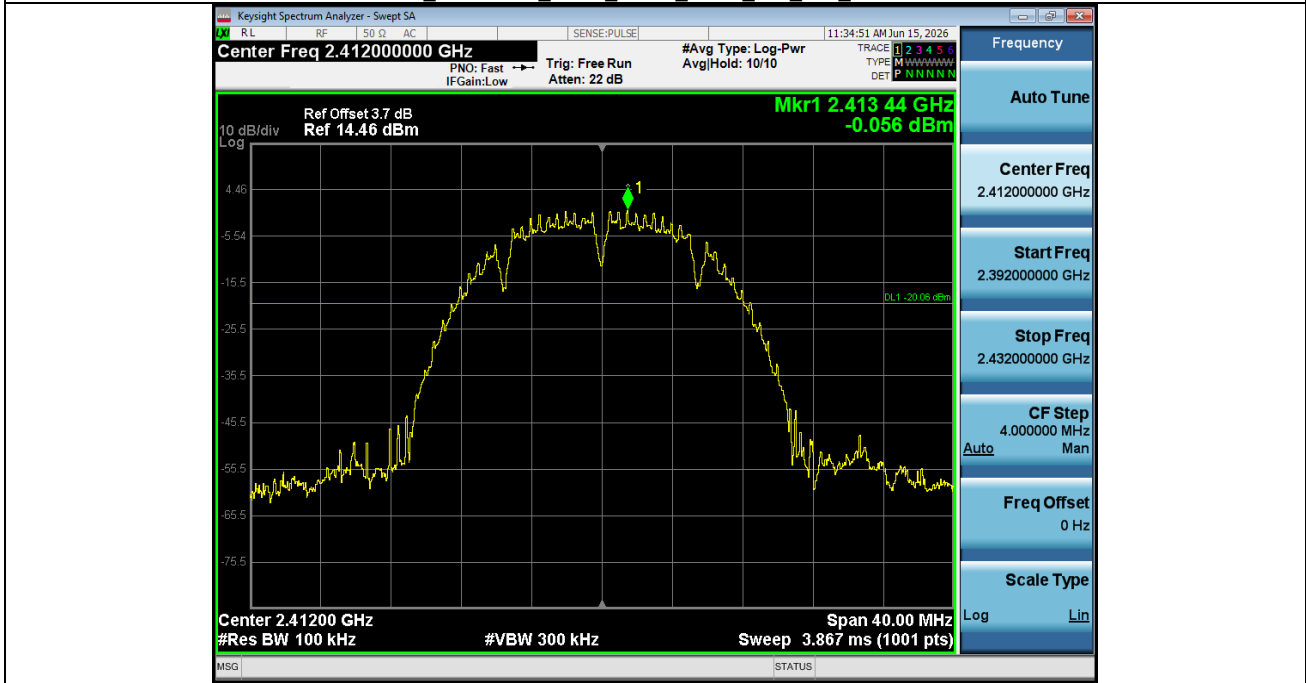
Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark_freq(MHz)	Ref_level(dBm)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	2396.912	2.730	-37.205	-17.270	Pass
NVNT	ANT2	802.11b	2412.00	2399.824	2.730	-47.389	-17.270	Pass
NVNT	ANT1	802.11b	2462.00	2490.208	3.341	-54.978	-16.659	Pass
NVNT	ANT2	802.11b	2462.00	2486.656	3.341	-57.862	-16.659	Pass
NVNT	ANT1	802.11g	2412.00	2399.936	-2.653	-43.242	-22.653	Pass
NVNT	ANT2	802.11g	2412.00	2399.936	-2.653	-44.291	-22.653	Pass
NVNT	ANT1	802.11g	2462.00	2483.536	-4.210	-59.374	-24.210	Pass
NVNT	ANT2	802.11g	2462.00	2488.048	-4.210	-60.153	-24.210	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	2399.936	-3.344	-42.034	-23.344	Pass
NVNT	ANT2	802.11n(HT20)	2412.00	2399.936	-3.344	-43.004	-23.344	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	2489.728	-3.794	-57.567	-23.794	Pass
NVNT	ANT2	802.11n(HT20)	2462.00	2486.272	-3.794	-57.224	-23.794	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	2399.892	-4.364	-44.877	-24.364	Pass
NVNT	ANT2	802.11n(HT40)	2422.00	2399.892	-4.364	-45.798	-24.364	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	2485.652	-5.954	-54.608	-25.954	Pass
NVNT	ANT2	802.11n(HT40)	2452.00	2485.788	-5.954	-55.384	-25.954	Pass

Test Graphs

1 Reference Level NVNT_ANT1_802_11b_2412



1 Reference Level NVNT_ANT2_802_11b_2412



2 Bandedge NVNT_ANT1_802_11b_2412