

Appendix

Test Data

for BTEK250613054A01-T03

Start date	2025/7/15	Finish date	2025/7/24
Temperature	23.8℃	Humidity	55%
RF specifications	2.4G WIFI	Test Engineer	Zora



Table of Contents

1. -6dB Bandwidth.....	3
2. 99% Occupied Bandwidth	9
3. Duty Cycle.....	15
4. MAX. Output Power	21
5. Power Spectral Density.....	27
6. Bandedge.....	34
7. Spurious Emission.....	42



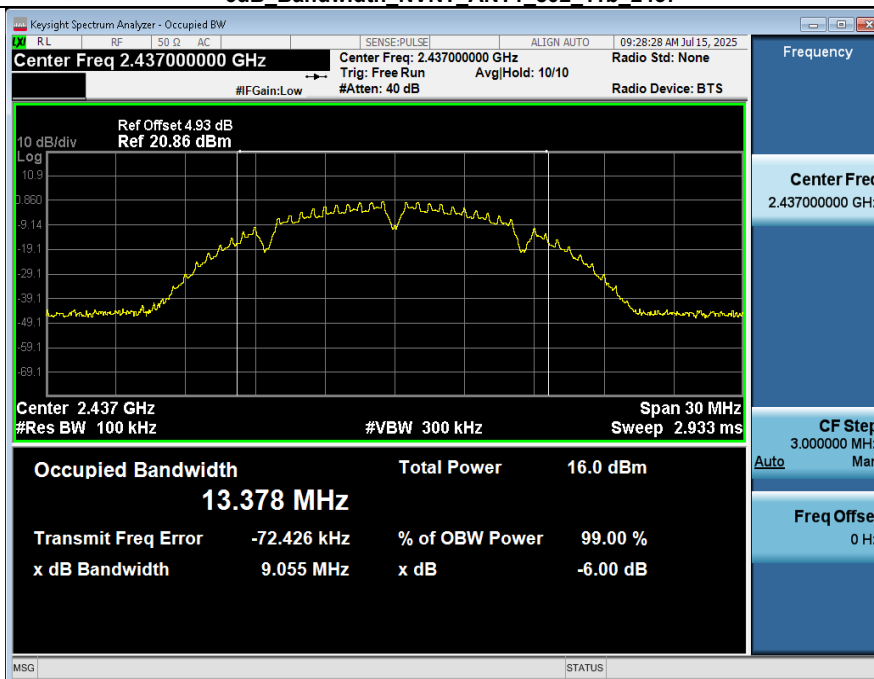
1. -6dB Bandwidth

Condition	Antenna	Modulation	Frequency (MHz)	-6dB BW(MHz)	limit(kHz)	Result
NVNT	ANT1	802.11b	2412.00	9.04	500	Pass
NVNT	ANT1	802.11b	2437.00	9.05	500	Pass
NVNT	ANT1	802.11b	2462.00	9.07	500	Pass
NVNT	ANT1	802.11g	2412.00	16.37	500	Pass
NVNT	ANT1	802.11g	2437.00	16.37	500	Pass
NVNT	ANT1	802.11g	2462.00	16.35	500	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	16.46	500	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	16.47	500	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	17.30	500	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	35.52	500	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	35.76	500	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	35.70	500	Pass

-6dB Bandwidth NVNT ANT1 802 11b 2412



-6dB Bandwidth NVNT ANT1 802 11b 2437

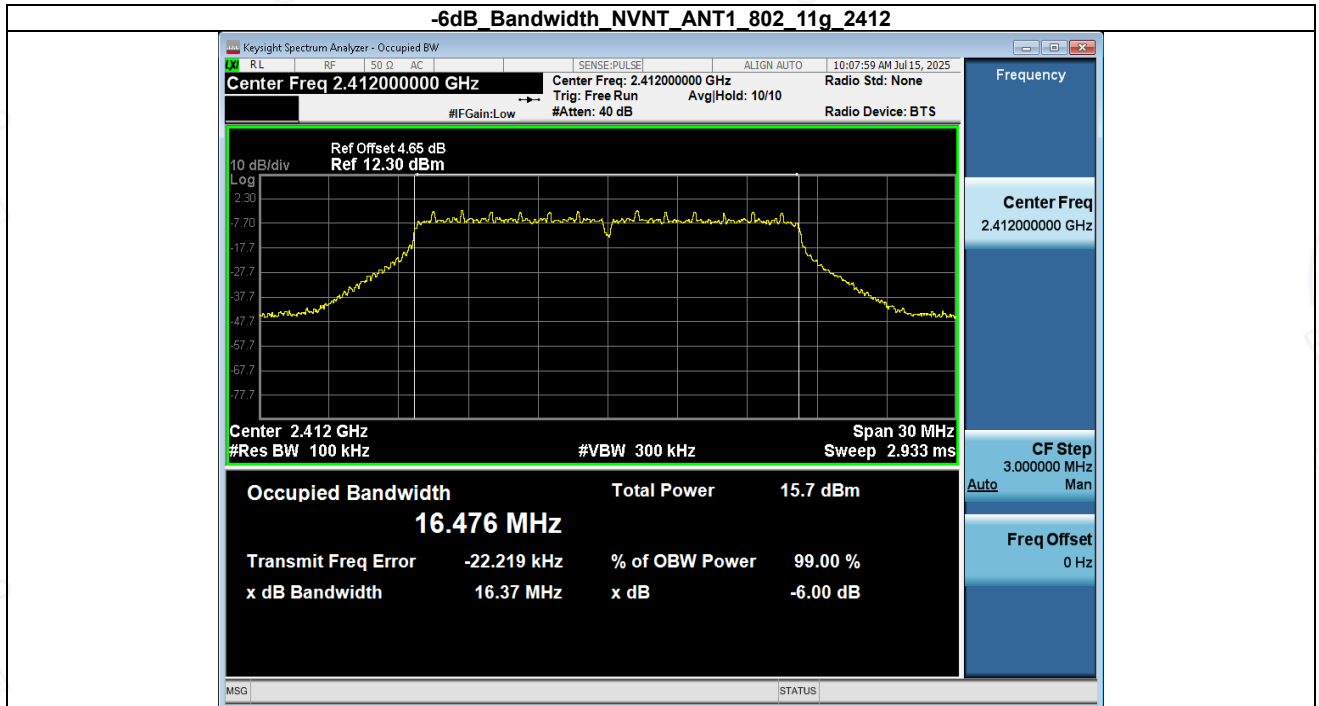


-6dB Bandwidth NVNT ANT1 802 11b 2462



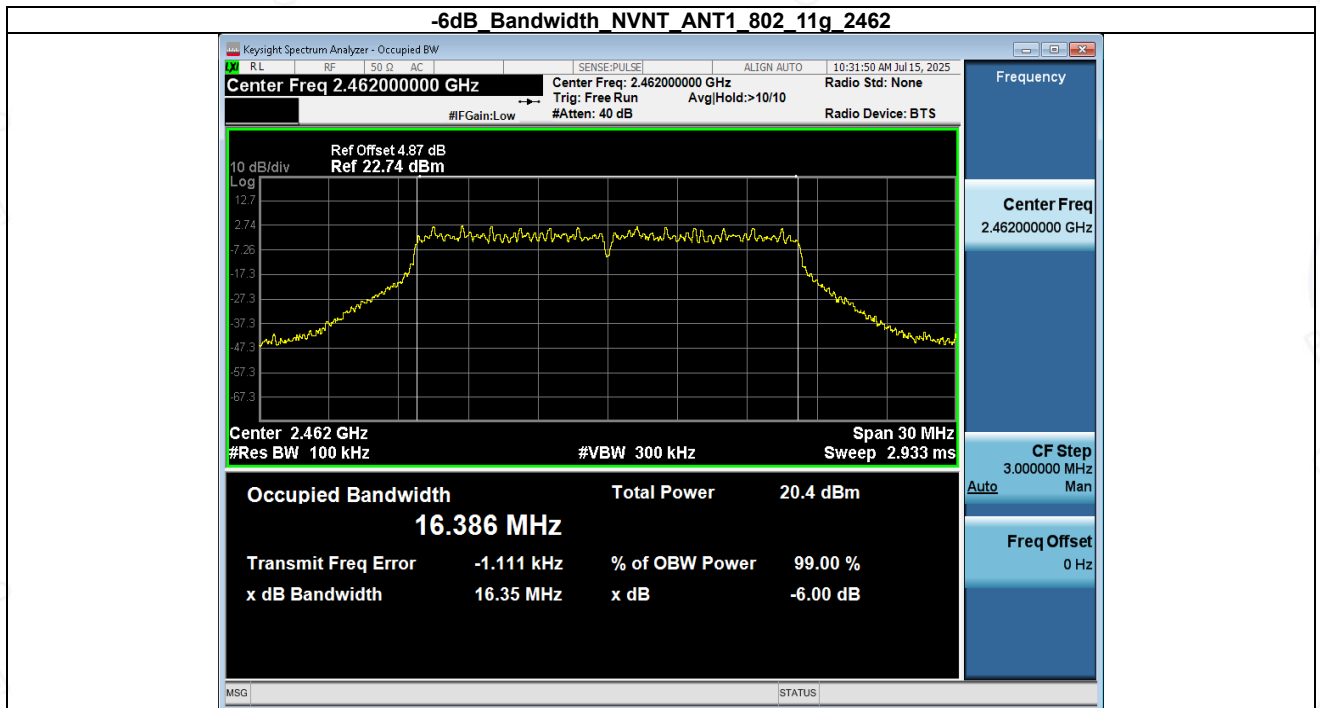
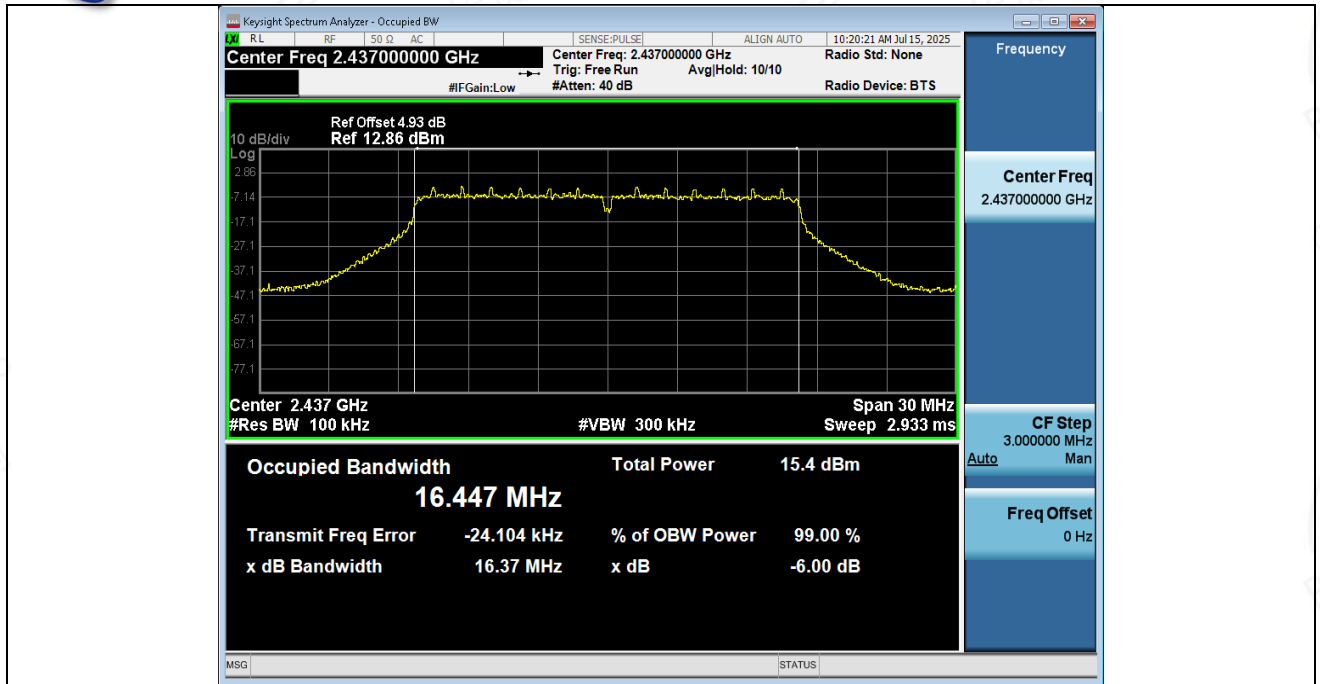


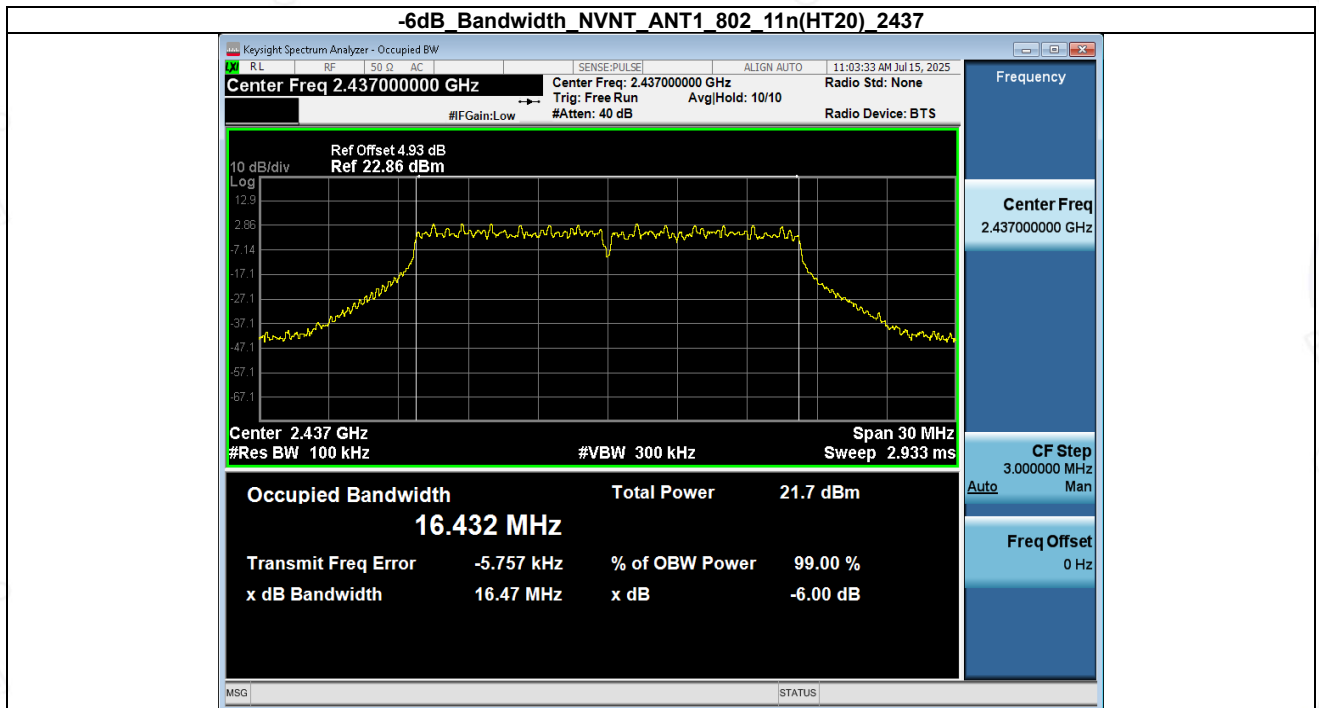
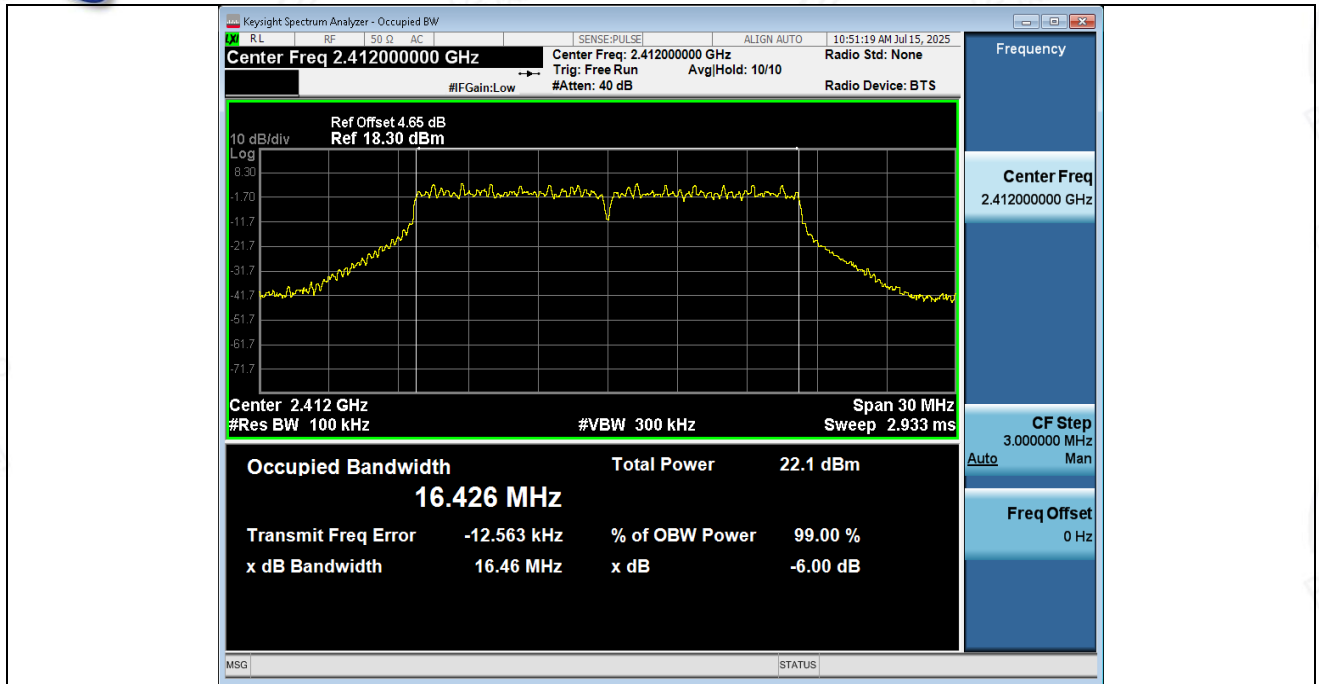
-6dB Bandwidth_NVNT_ANT1_802_11g_2412

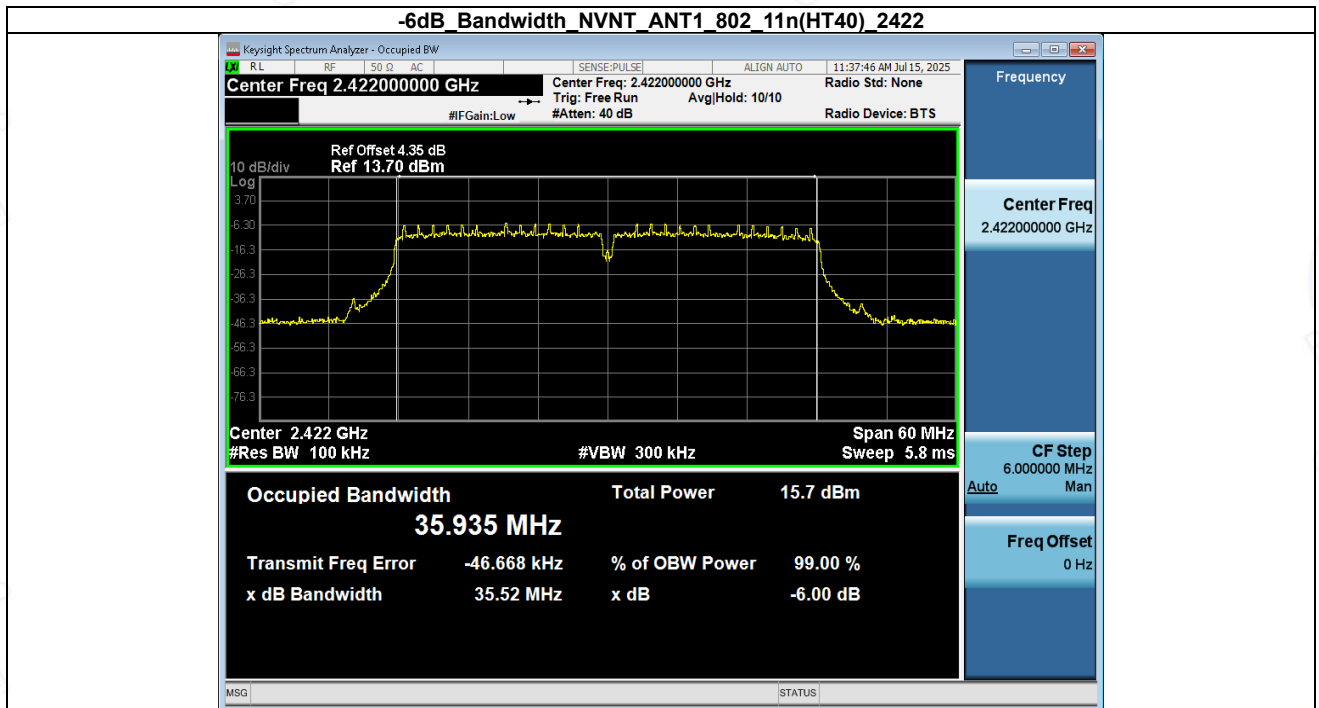
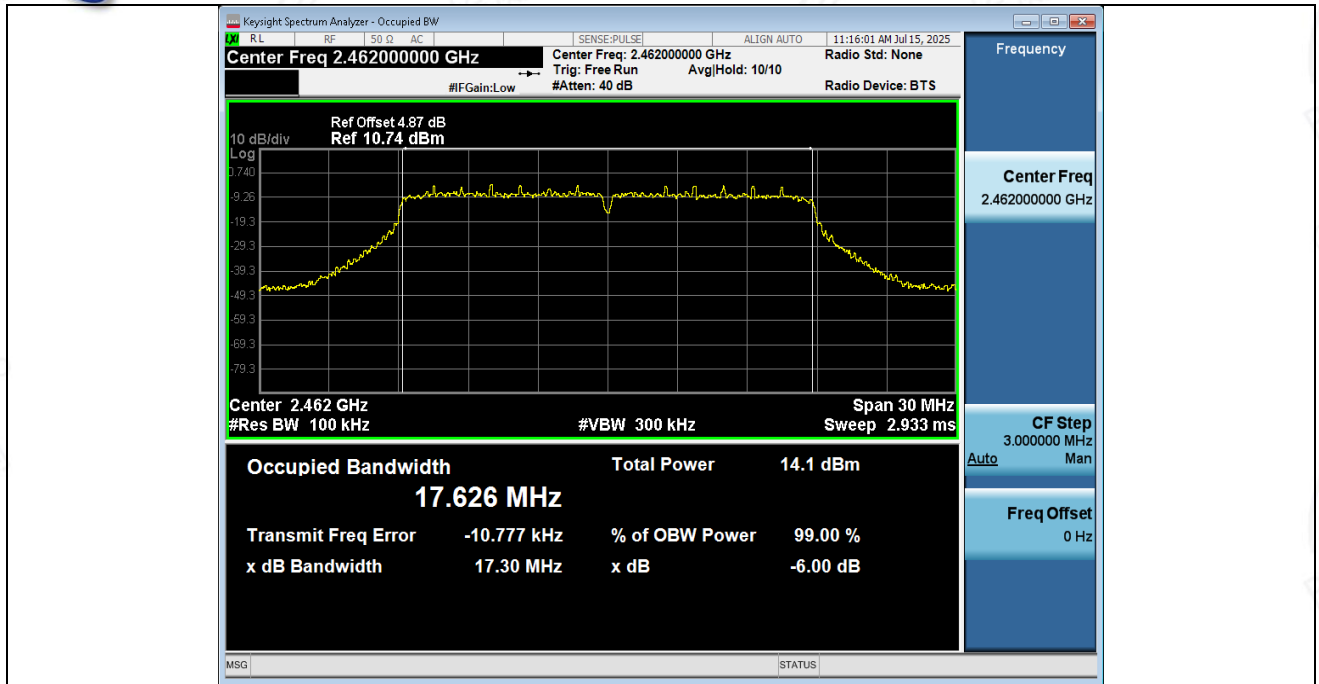


-6dB Bandwidth_NVNT_ANT1_802_11g_2437



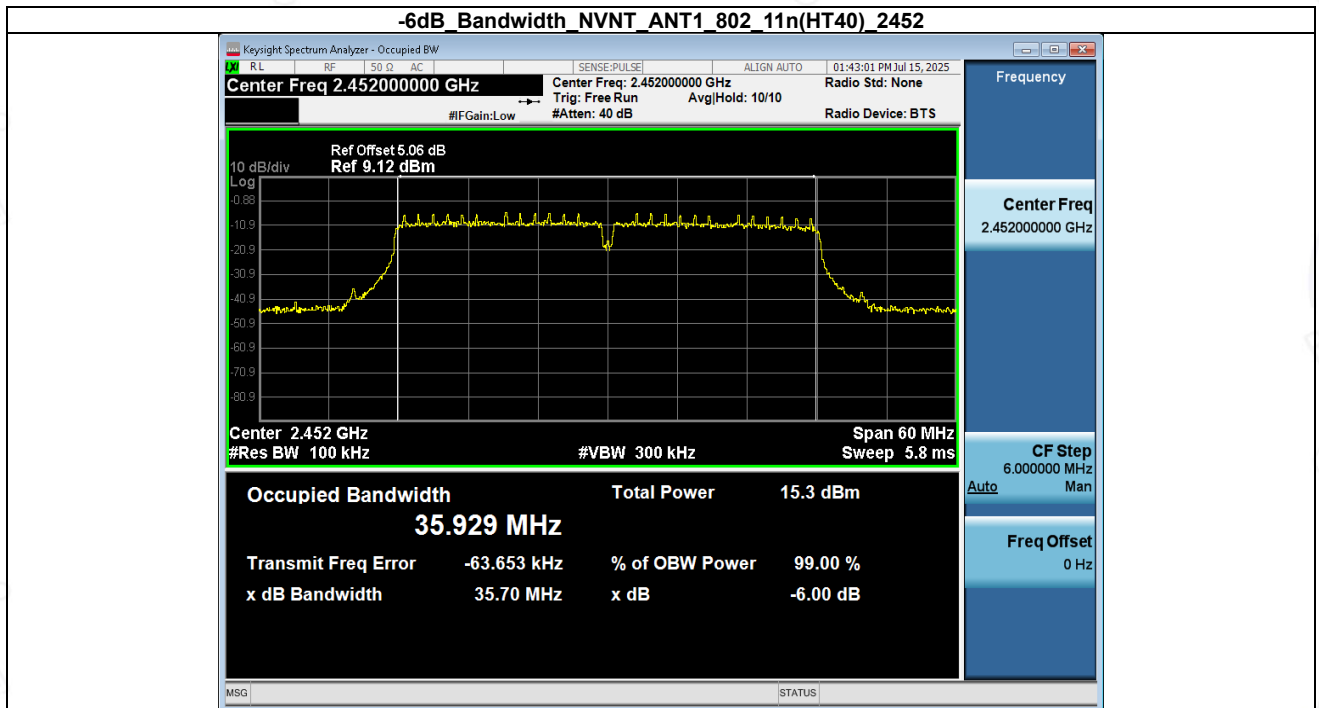
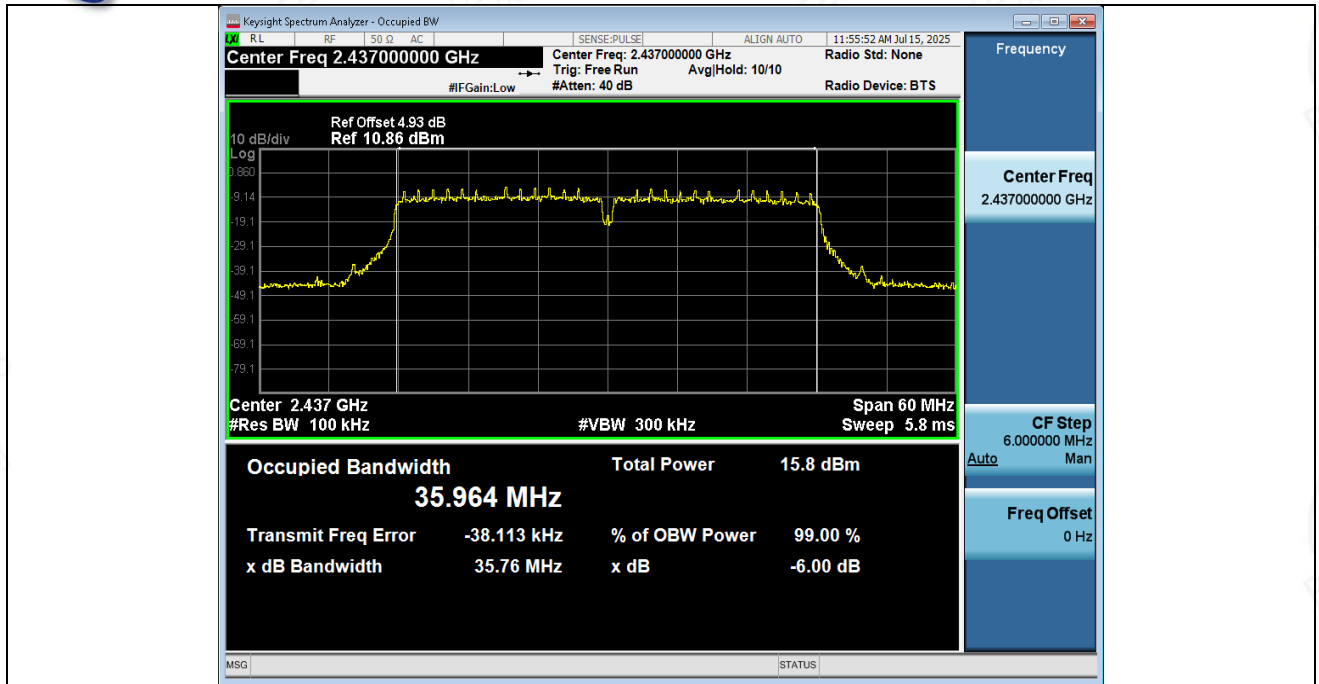






-6dB_Bandwidth_NVNT_ANT1_802_11n(HT40)_2437





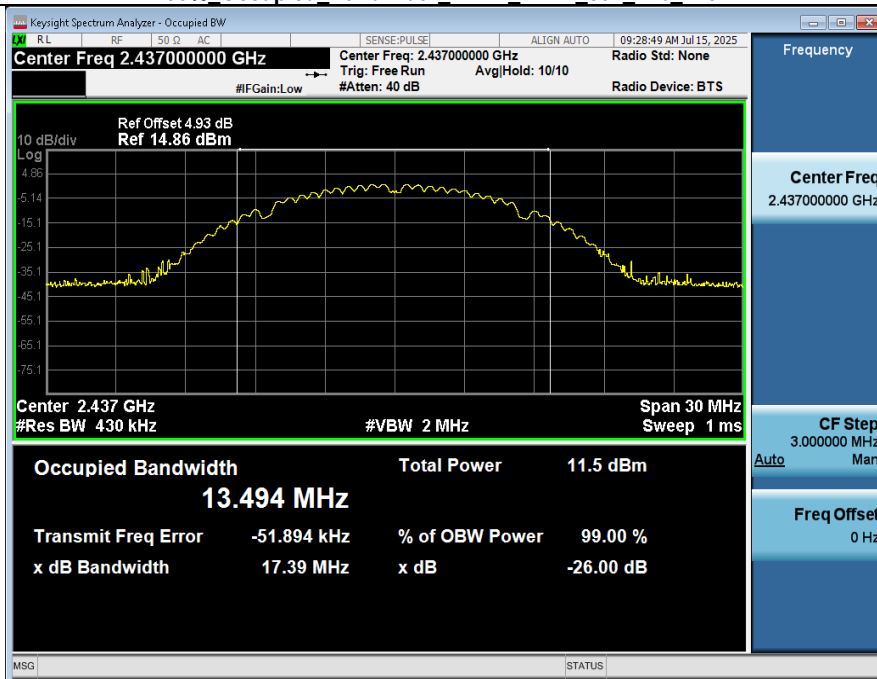
2. 99% Occupied Bandwidth

Condition	Antenna	Modulation	Frequency (MHz)	99% BW (MHz)
NVNT	ANT1	802.11b	2412.00	13.505
NVNT	ANT1	802.11b	2437.00	13.494
NVNT	ANT1	802.11b	2462.00	13.494
NVNT	ANT1	802.11g	2412.00	17.384
NVNT	ANT1	802.11g	2437.00	17.293
NVNT	ANT1	802.11g	2462.00	16.894
NVNT	ANT1	802.11n(HT20)	2412.00	17.041
NVNT	ANT1	802.11n(HT20)	2437.00	17.109
NVNT	ANT1	802.11n(HT20)	2462.00	18.346
NVNT	ANT1	802.11n(HT40)	2422.00	36.471
NVNT	ANT1	802.11n(HT40)	2437.00	36.463
NVNT	ANT1	802.11n(HT40)	2452.00	36.370

99% Occupied Bandwidth NVNT ANT1 802_11b 2412

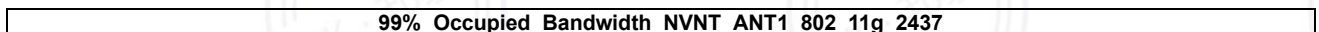
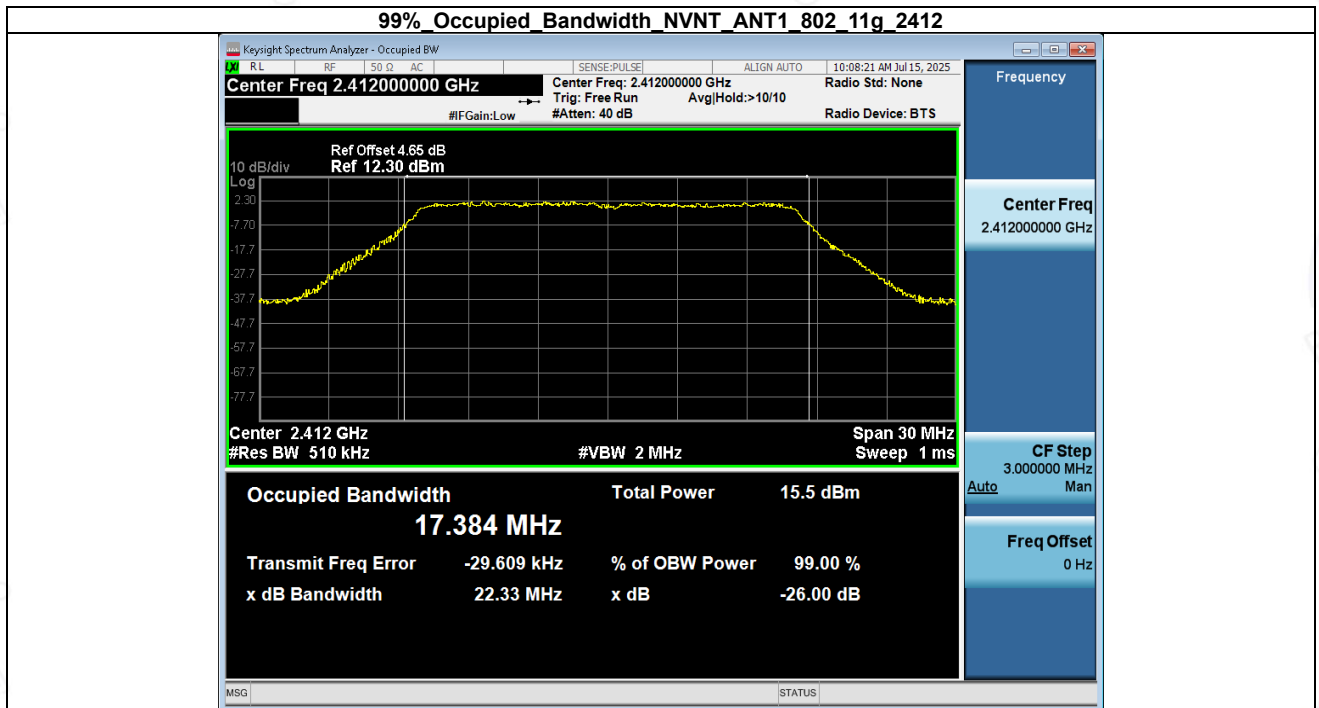


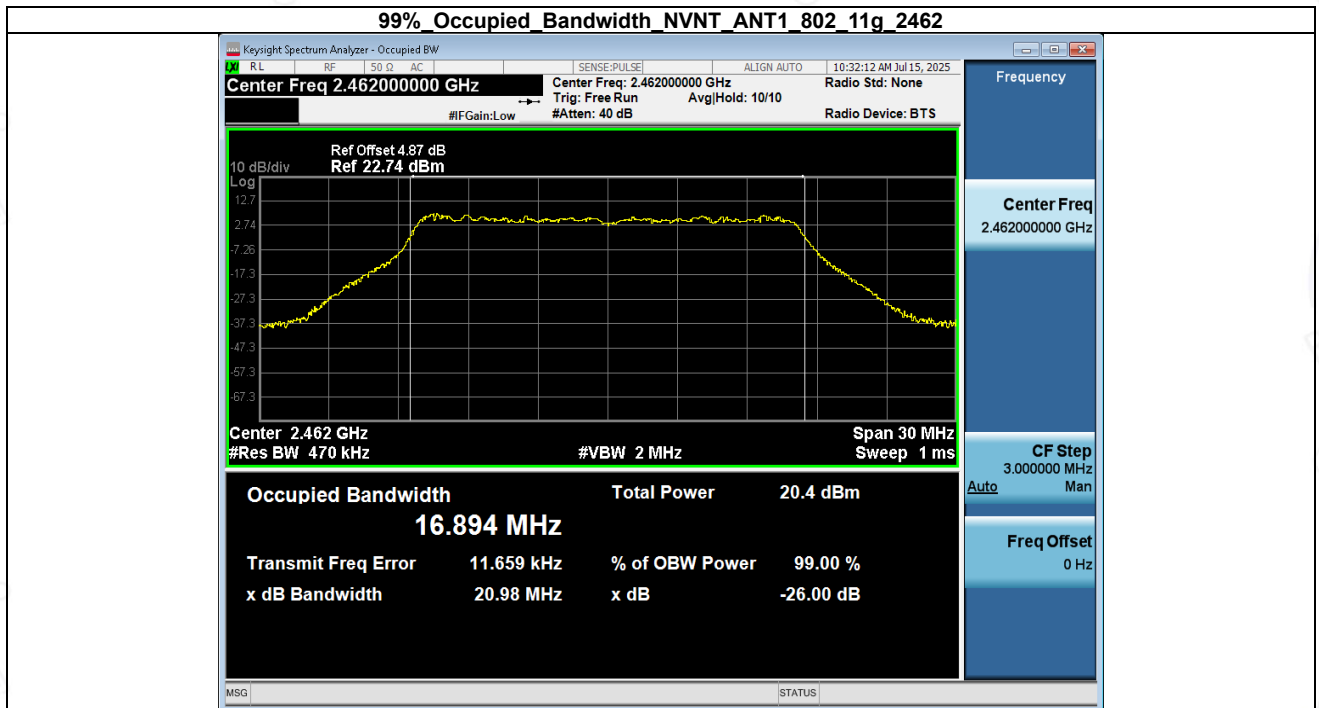
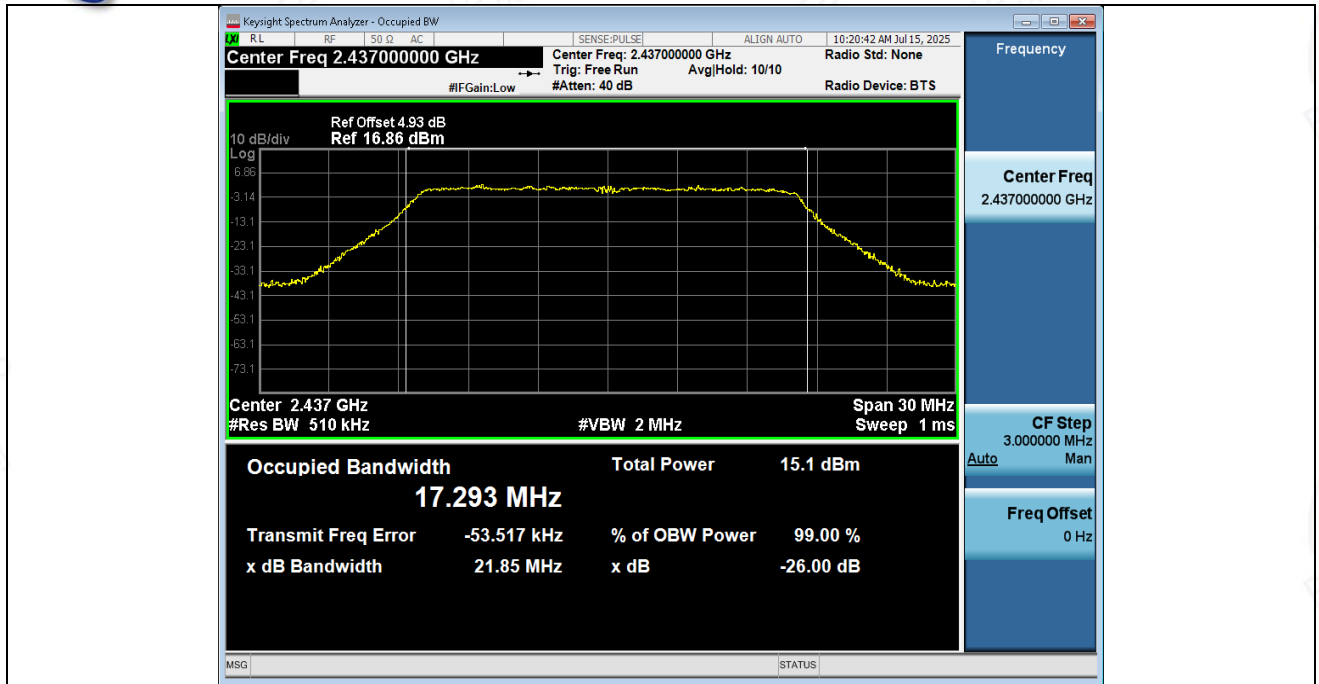
99% Occupied Bandwidth NVNT ANT1 802_11b 2437



99% Occupied Bandwidth NVNT ANT1 802_11b 2462

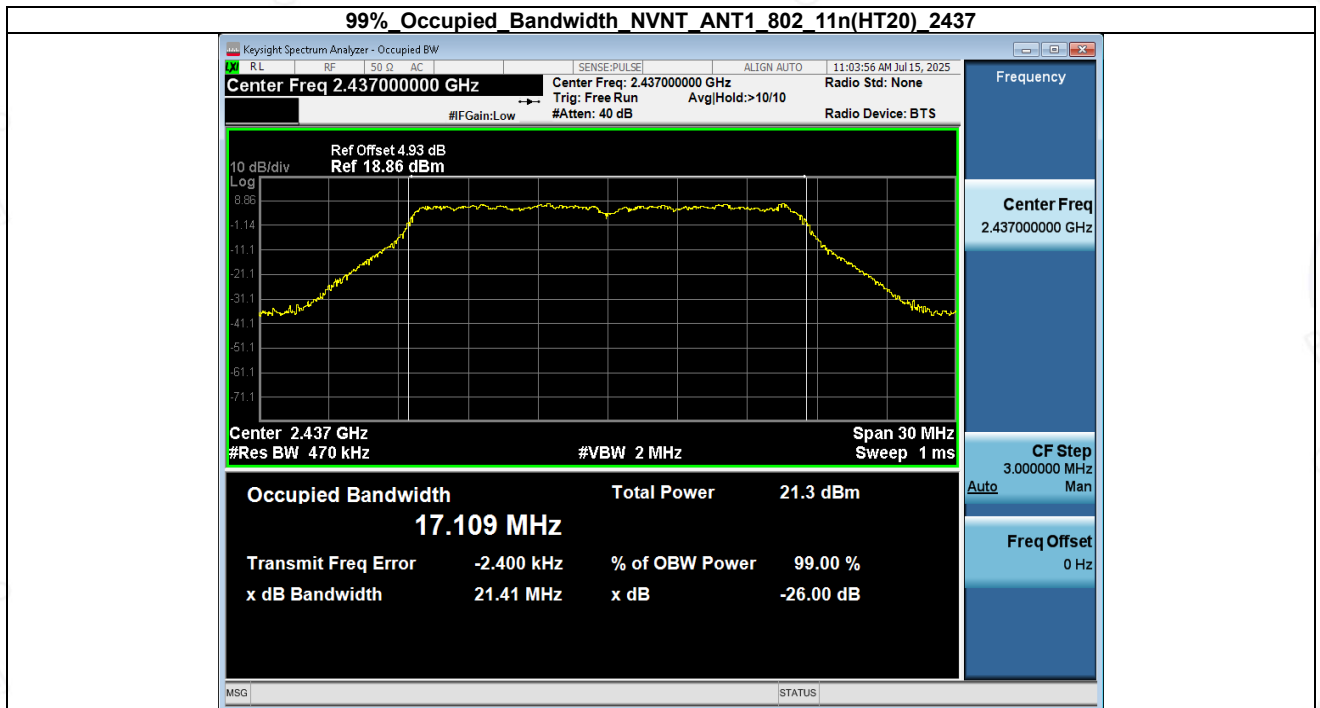
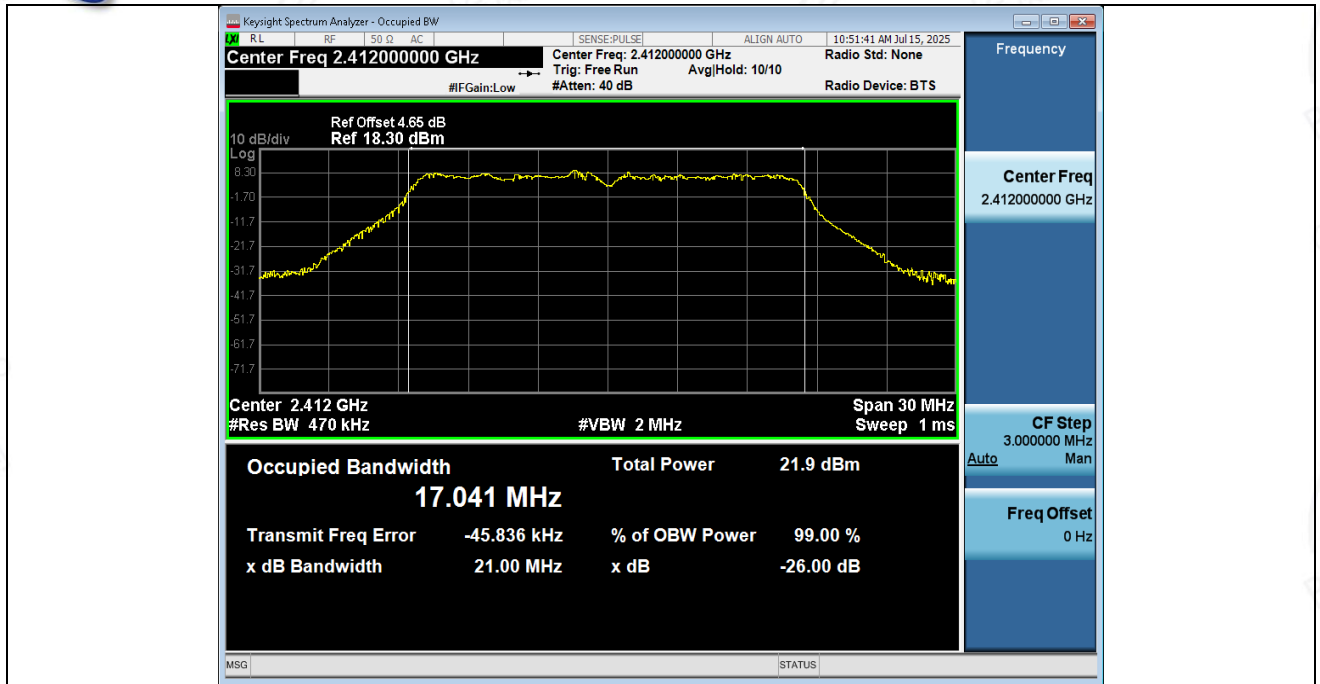






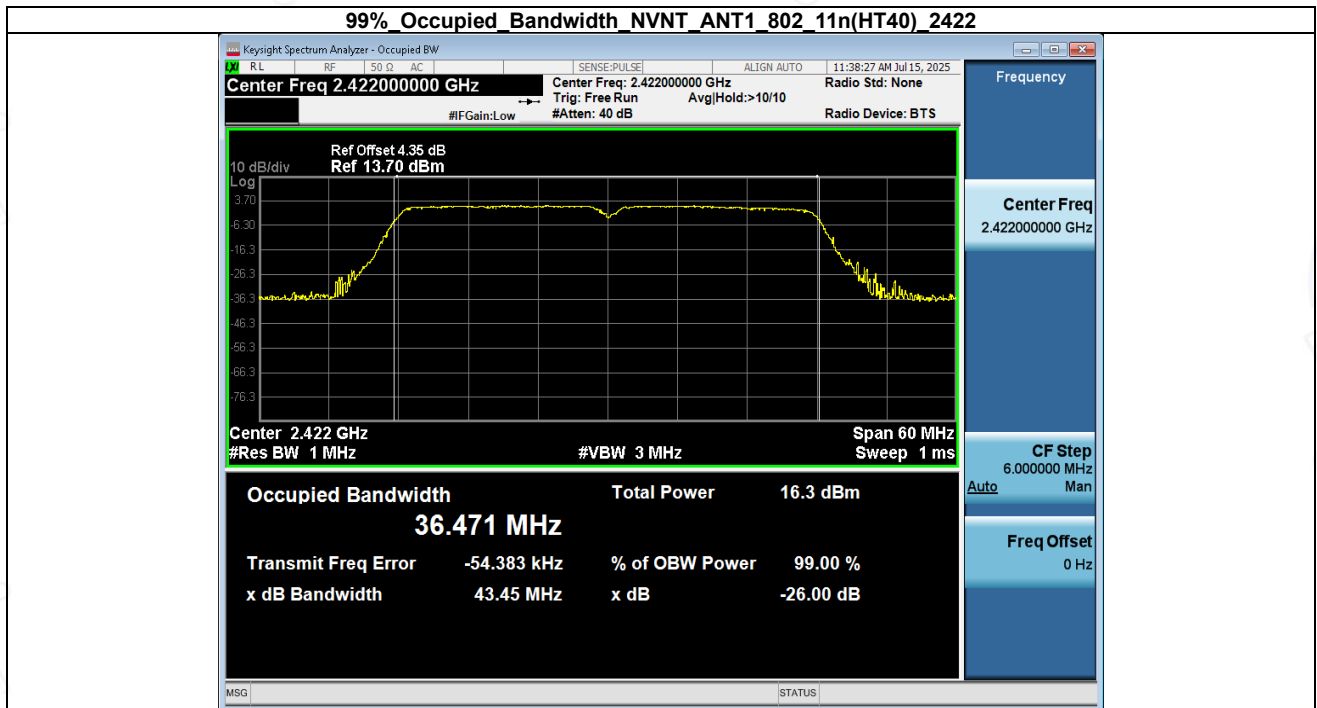
99% Occupied Bandwidth NVNT_ANT1_802_11n(HT20)_2412





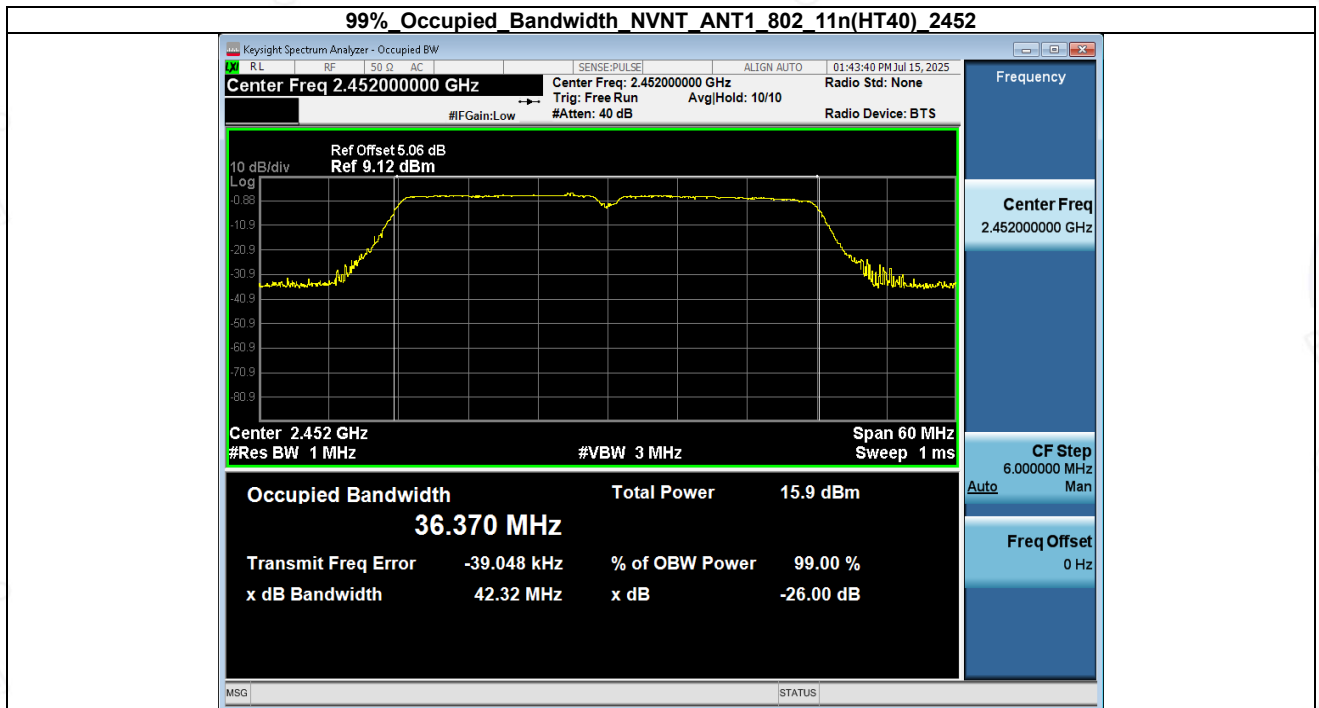
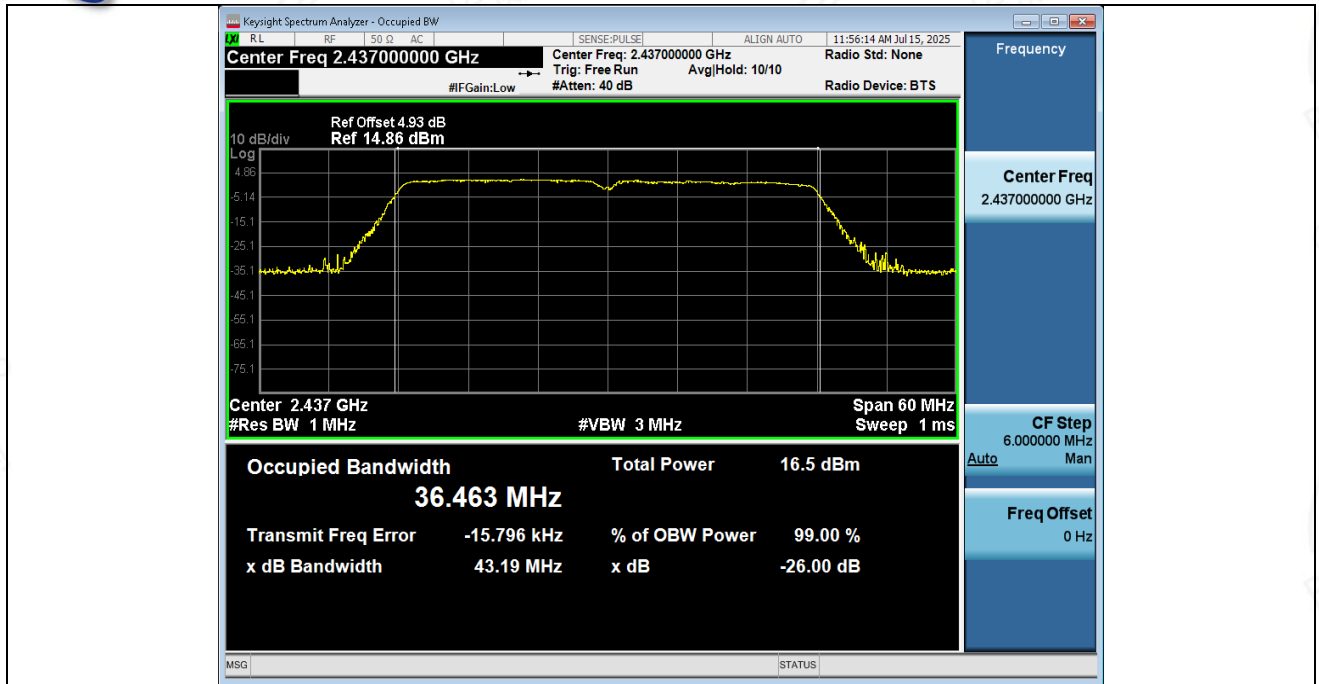
99% Occupied Bandwidth NVNT_ANT1_802_11n(HT20)_2462





99% Occupied Bandwidth NVNT_ANT1_802_11n(HT40)_2437

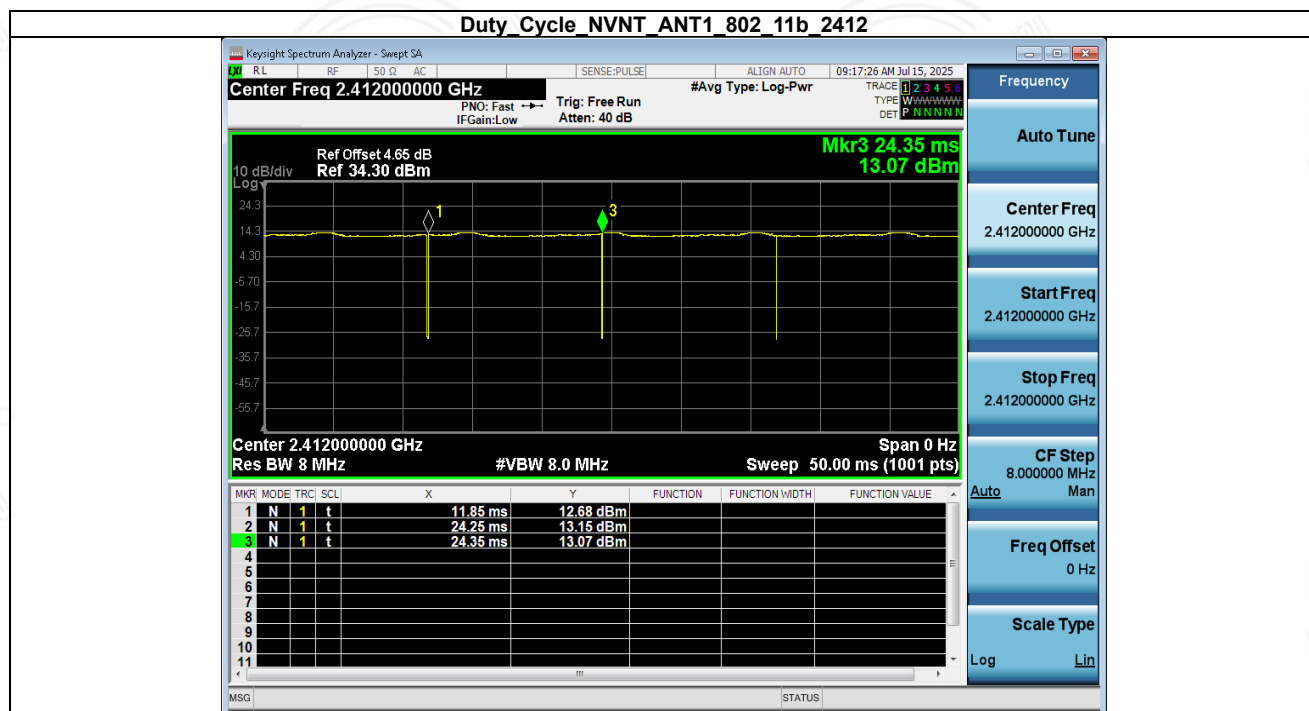




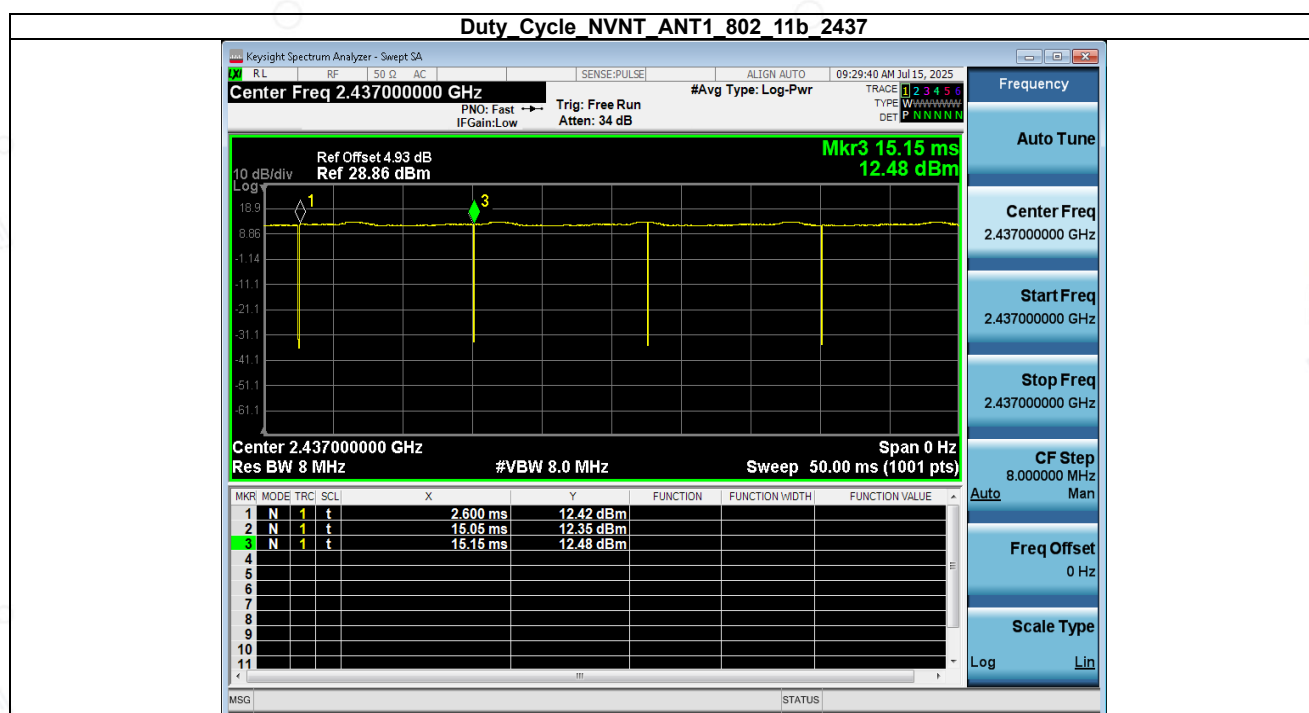
3. Duty Cycle

Condition	Antenna	Modulation	Frequency (MHz)	Duty cycle(%)	Duty factor(dB)
NVNT	ANT1	802.11b	2412.00	99.60	0.00
NVNT	ANT1	802.11b	2437.00	99.60	0.00
NVNT	ANT1	802.11b	2462.00	99.60	0.00
NVNT	ANT1	802.11g	2412.00	98.13	0.00
NVNT	ANT1	802.11g	2437.00	94.55	0.24
NVNT	ANT1	802.11g	2462.00	99.05	0.00
NVNT	ANT1	802.11n(HT20)	2412.00	93.27	0.30
NVNT	ANT1	802.11n(HT20)	2437.00	96.04	0.18
NVNT	ANT1	802.11n(HT20)	2462.00	98.98	0.00
NVNT	ANT1	802.11n(HT40)	2422.00	81.36	0.90
NVNT	ANT1	802.11n(HT40)	2437.00	81.67	0.88
NVNT	ANT1	802.11n(HT40)	2452.00	81.36	0.90

Duty Cycle NVNT ANT1 802_11b 2412

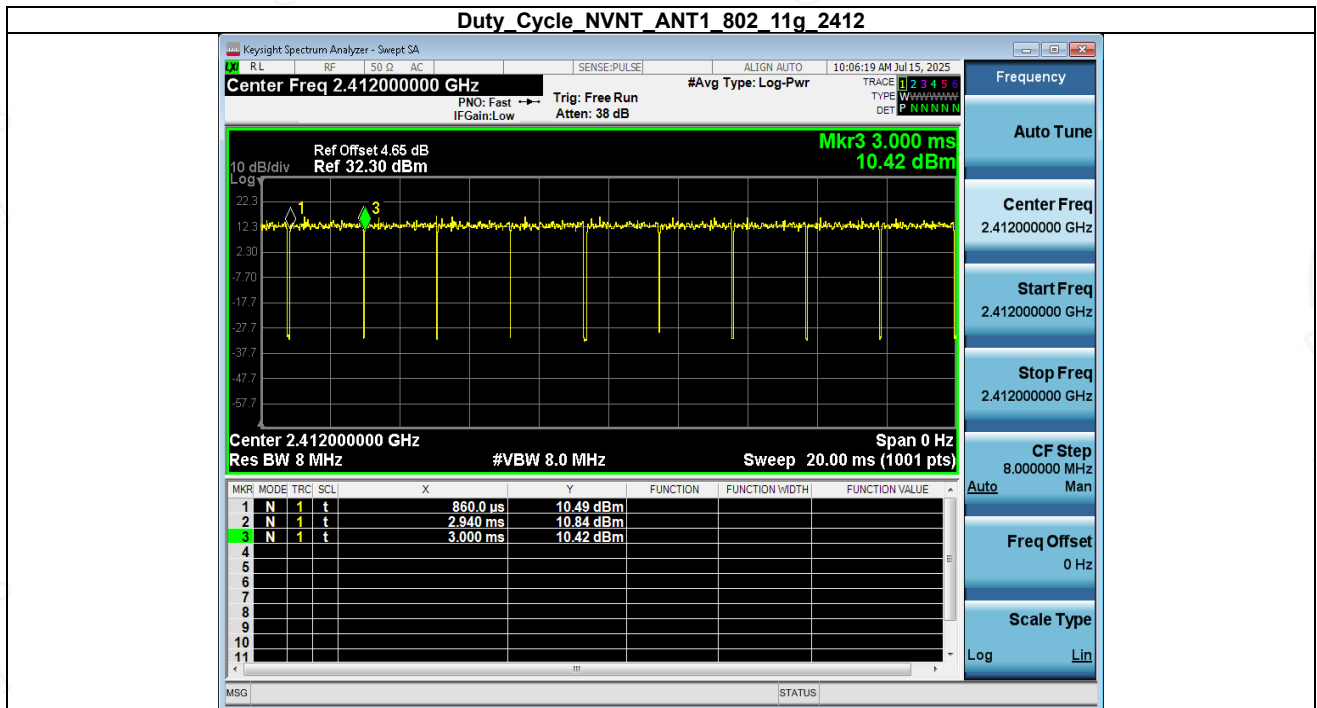
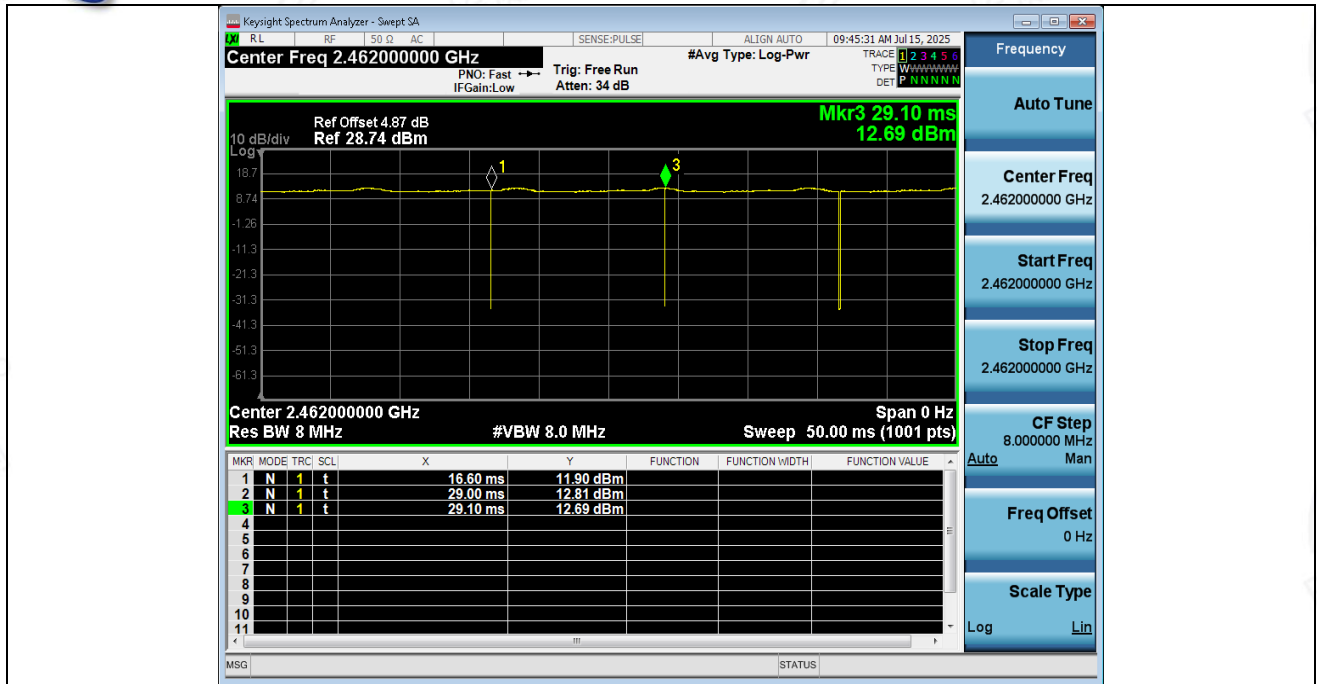


Duty Cycle NVNT ANT1 802_11b 2437



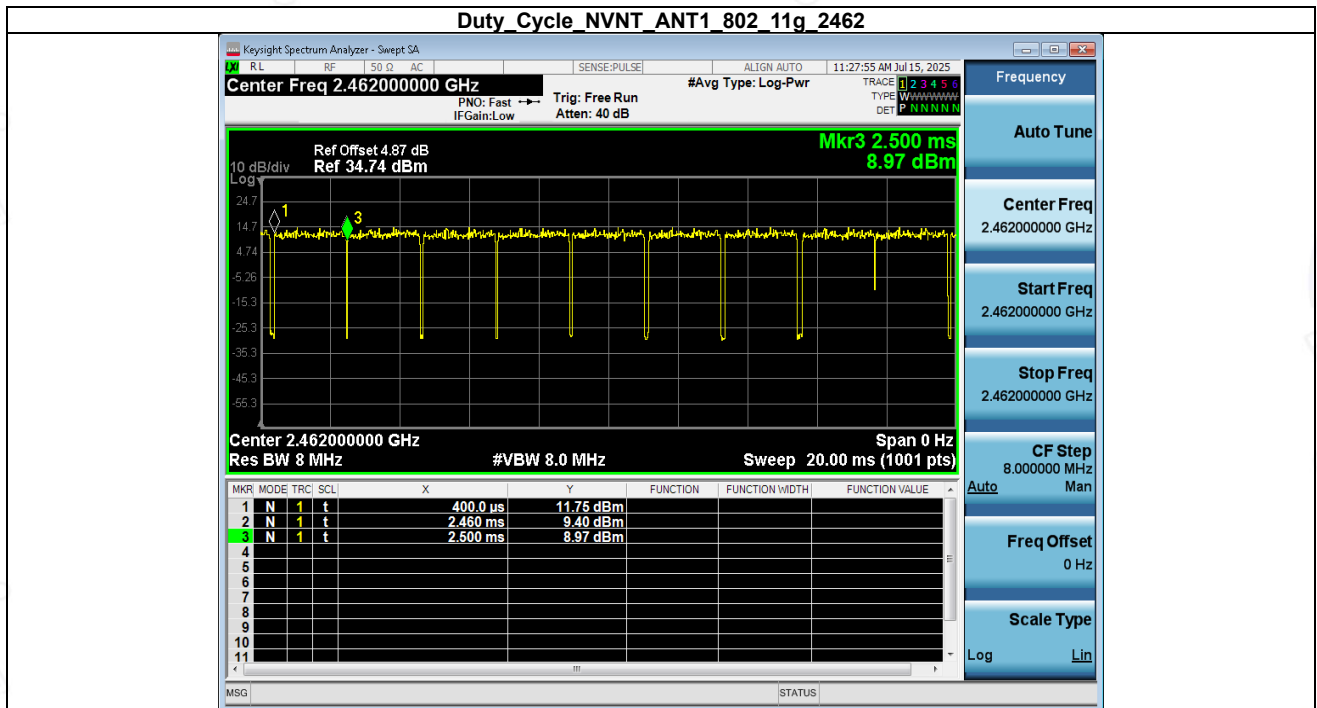
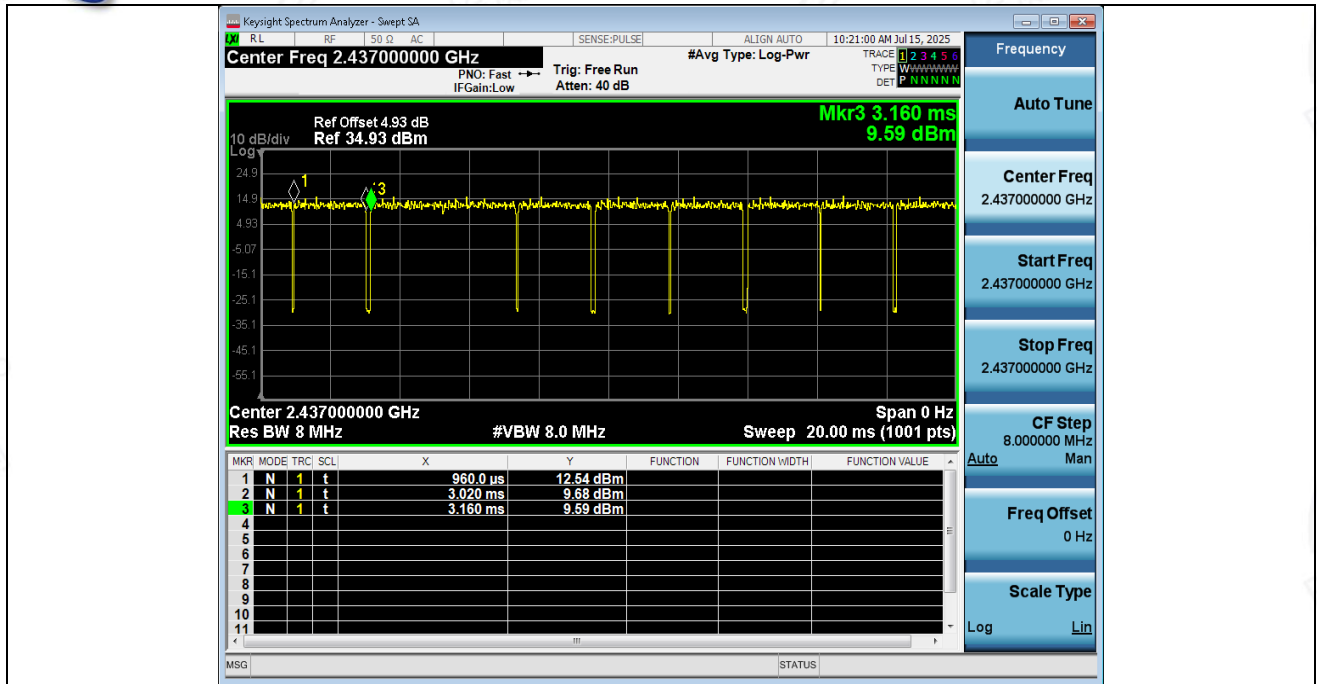
Duty Cycle NVNT ANT1 802_11b 2462





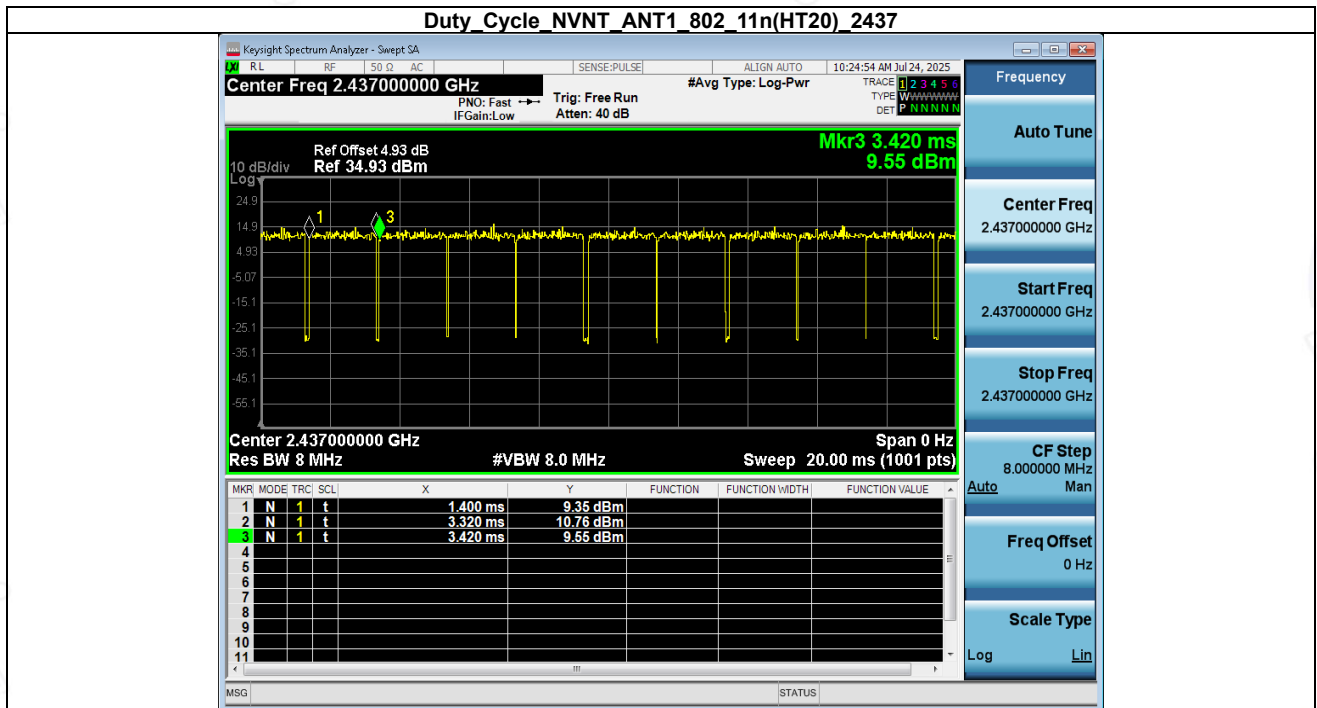
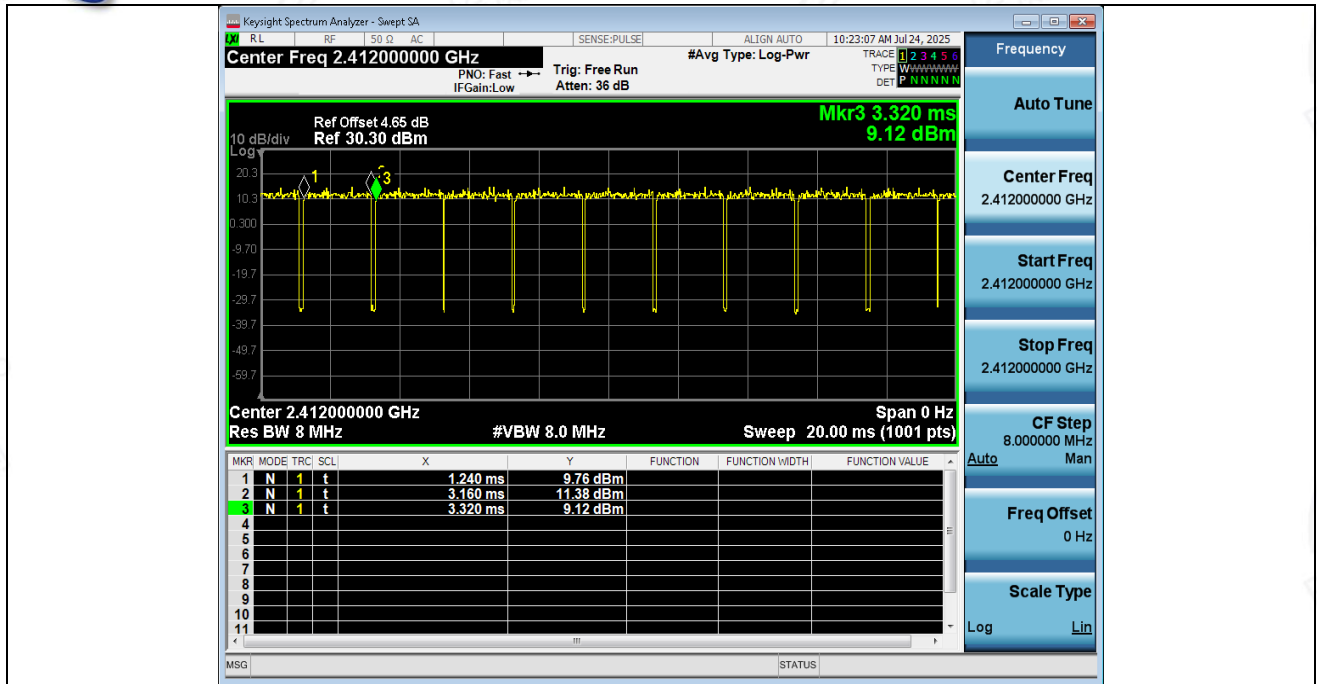
Duty_Cycle_NVNT_ANT1_802_11g_2437





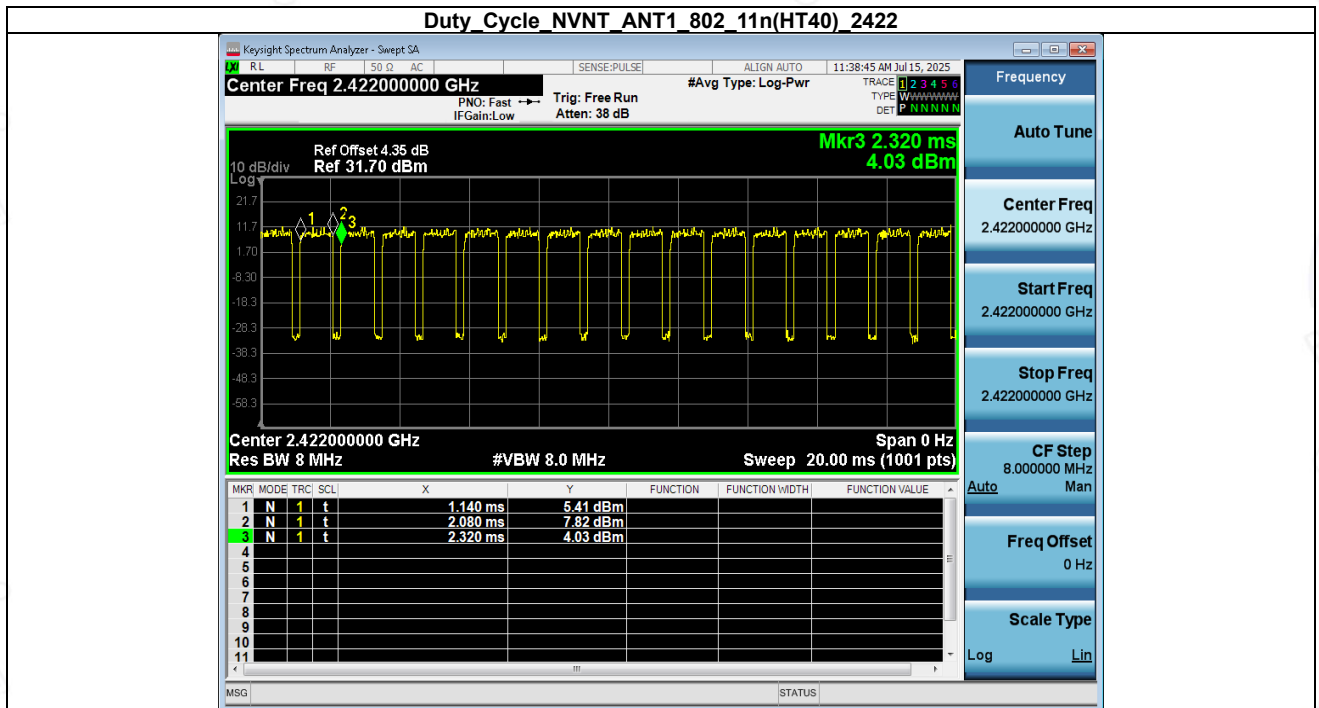
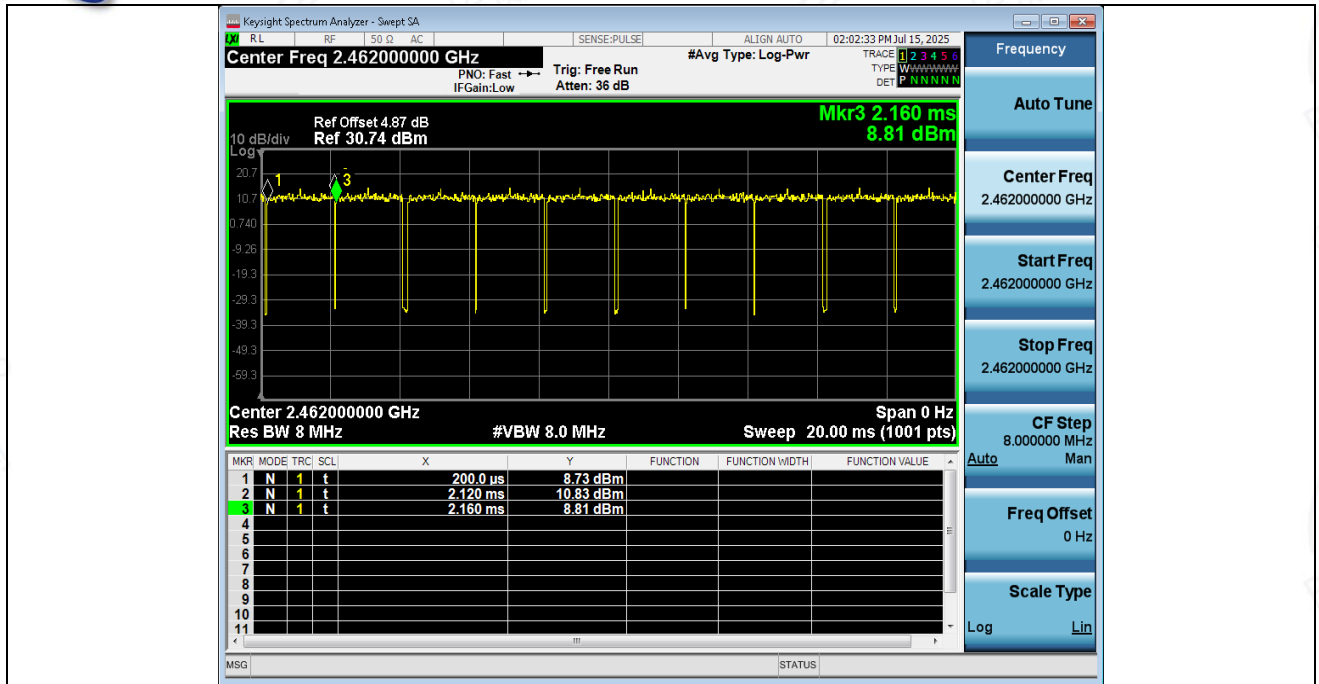
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_2412





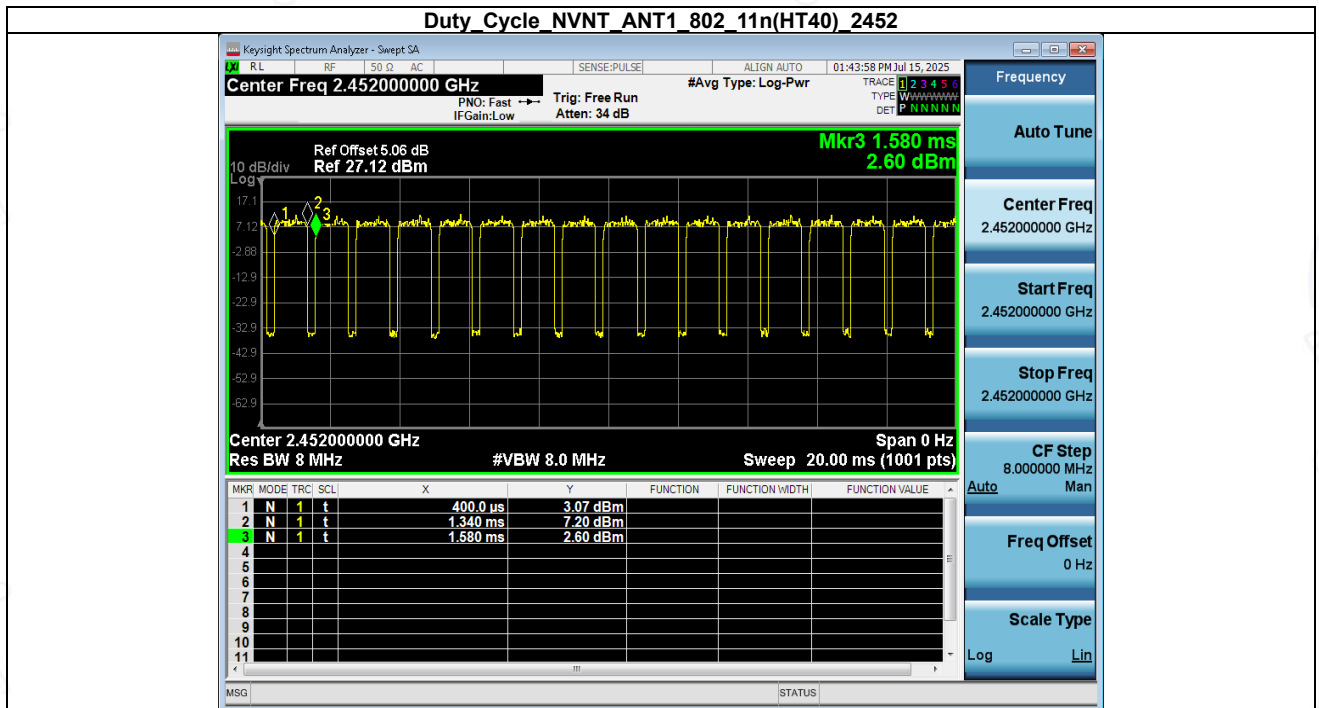
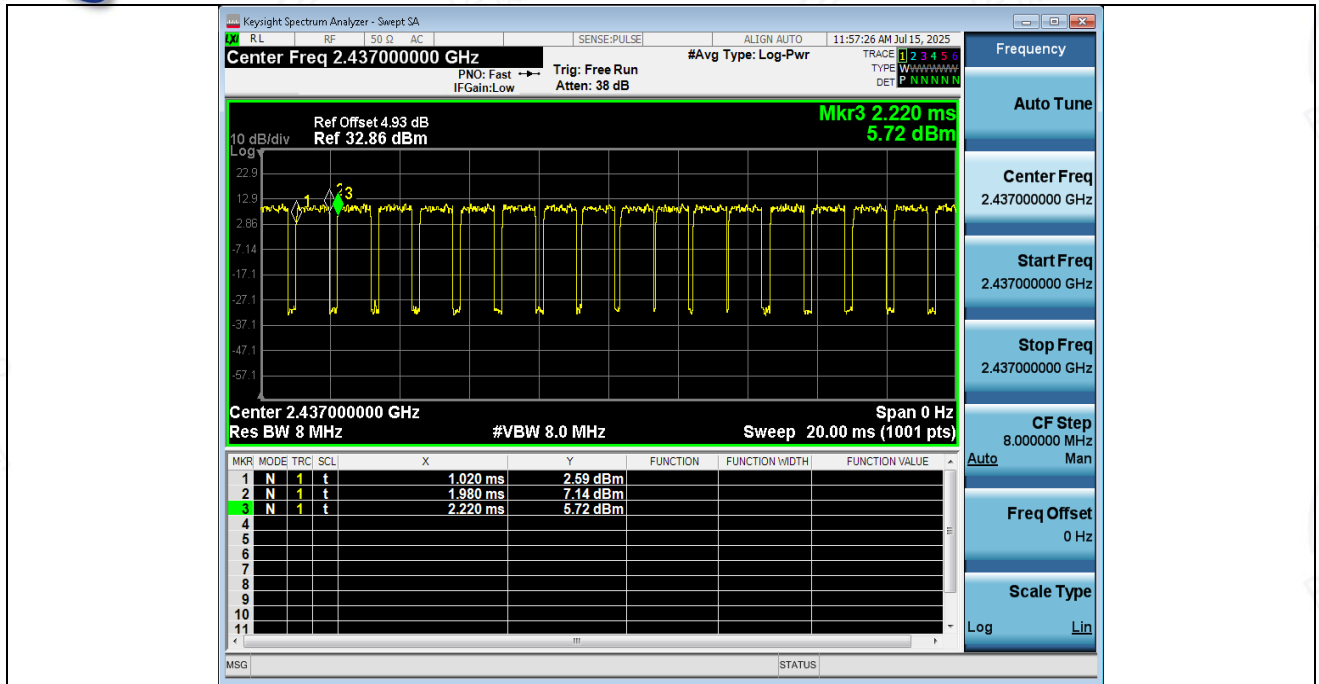
Duty Cycle NVNT_ANT1_802_11n(HT20)_2462





Duty Cycle NVNT_ANT1_802_11n(HT40)_2437

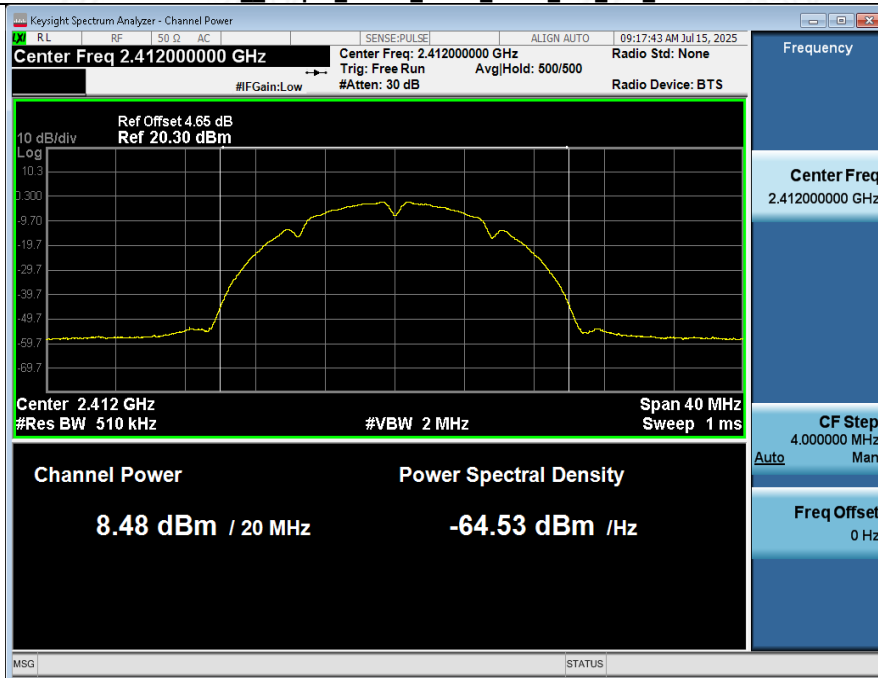




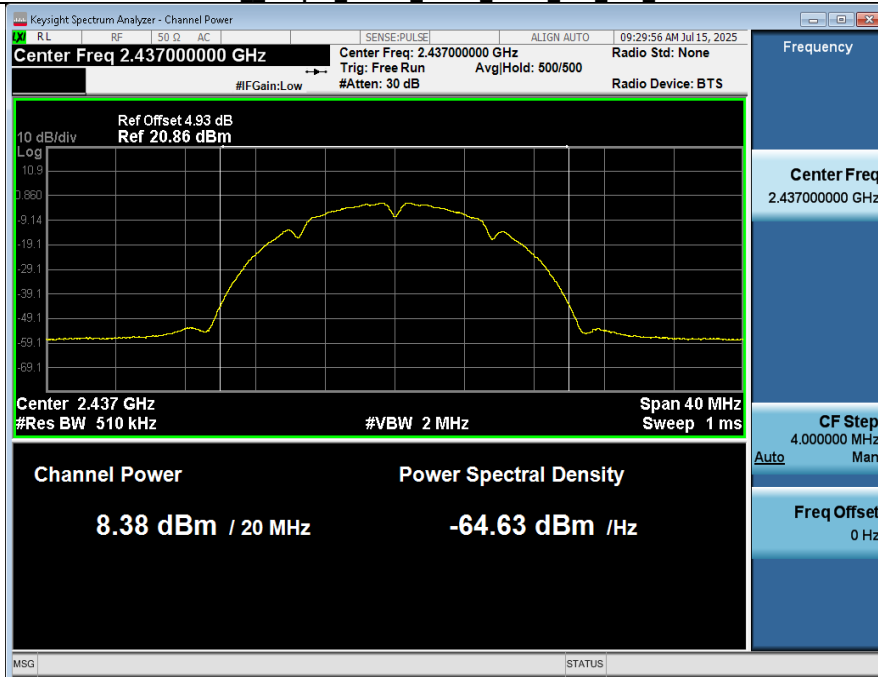
4. MAX. Output Power

Condition	Antenna	Modulation	Frequency (MHz)	Detector	Conducted Power(dBm)	Duty factor(dB)	Total Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	RMS	8.48	0.00	8.48	30	Pass
NVNT	ANT1	802.11b	2437.00	RMS	8.38	0.00	8.38	30	Pass
NVNT	ANT1	802.11b	2462.00	RMS	7.83	0.00	7.83	30	Pass
NVNT	ANT1	802.11g	2412.00	RMS	8.38	0.00	8.38	30	Pass
NVNT	ANT1	802.11g	2437.00	RMS	8.00	0.24	8.24	30	Pass
NVNT	ANT1	802.11g	2462.00	RMS	7.21	0.00	7.21	30	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	RMS	7.70	0.30	8.00	30	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	RMS	7.42	0.18	7.60	30	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	RMS	7.05	0.00	7.05	30	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	RMS	7.24	0.90	8.14	30	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	RMS	7.35	0.88	8.23	30	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	RMS	6.96	0.90	7.86	30	Pass

MAX Output Power NVNT ANT1 802 11b 2412

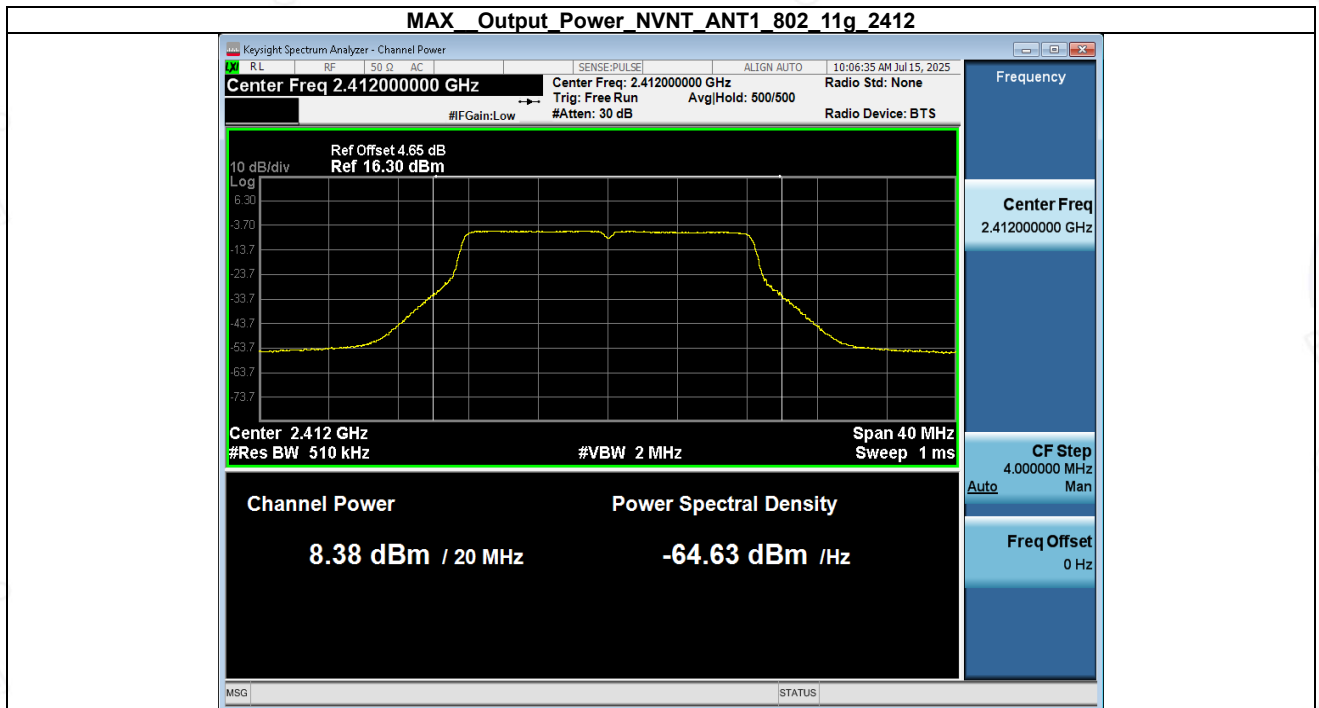
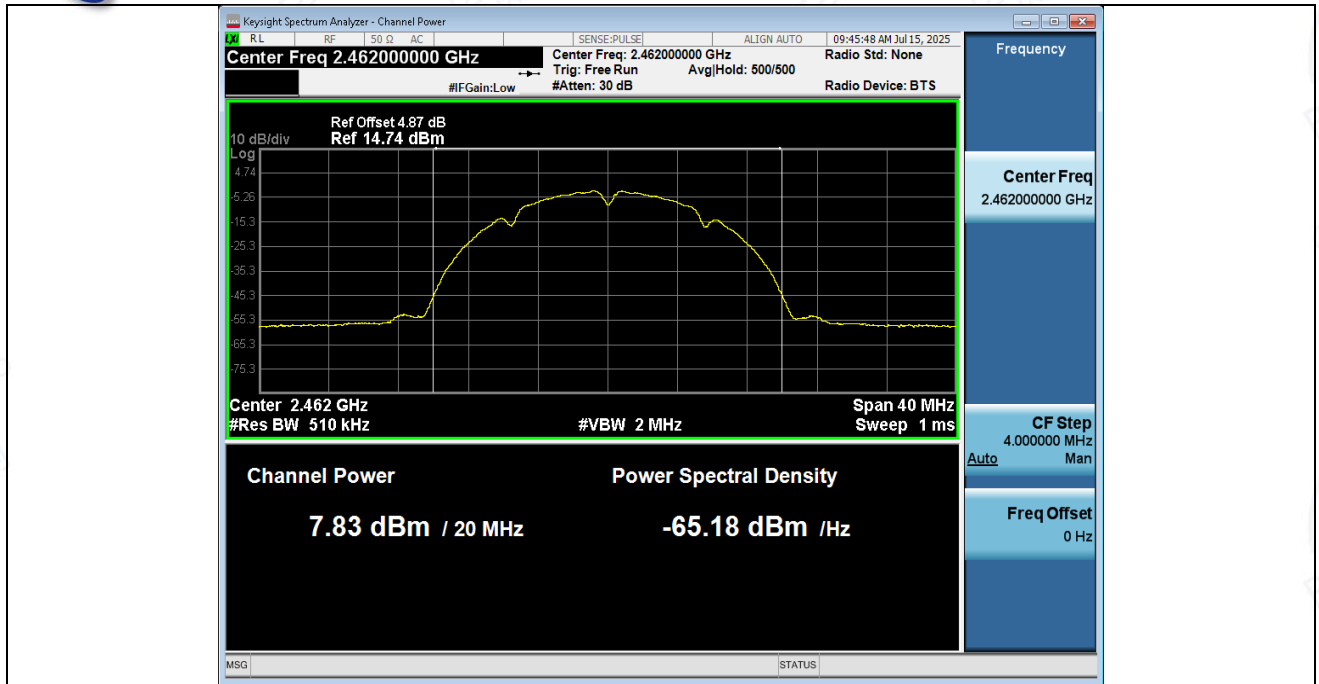


MAX Output Power NVNT ANT1 802 11b 2437



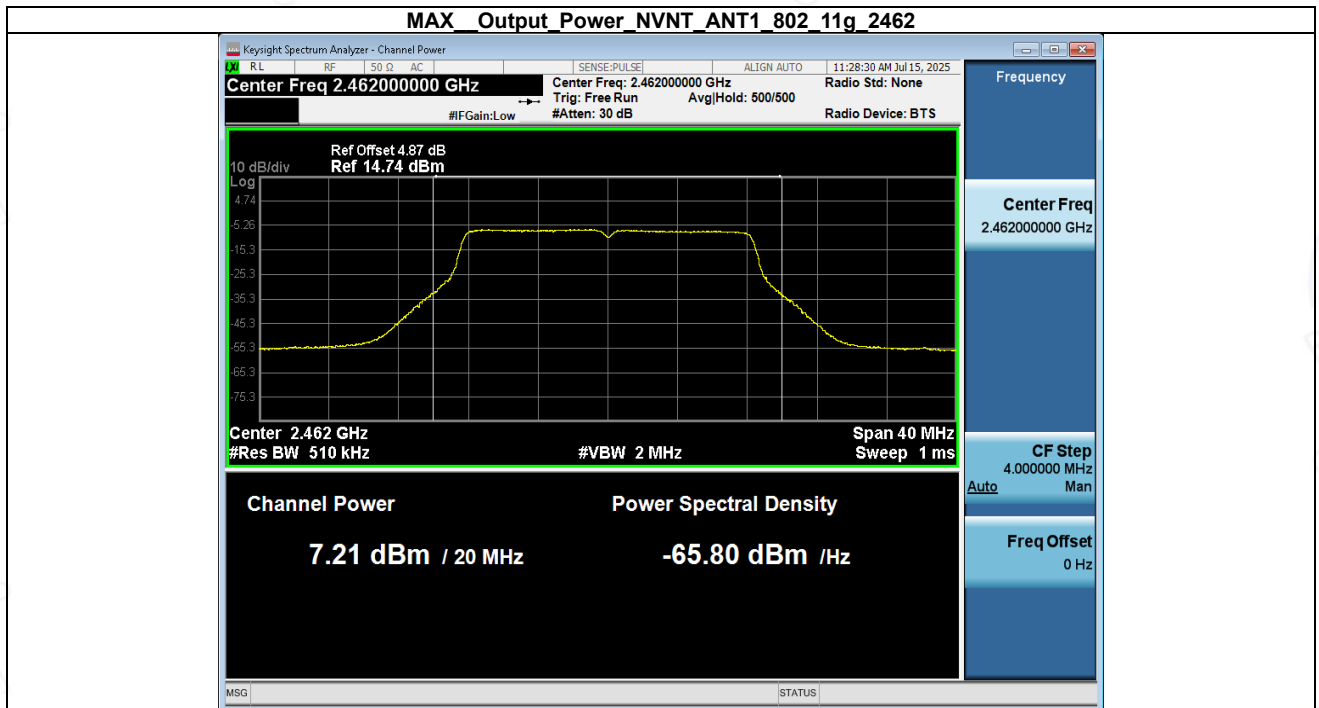
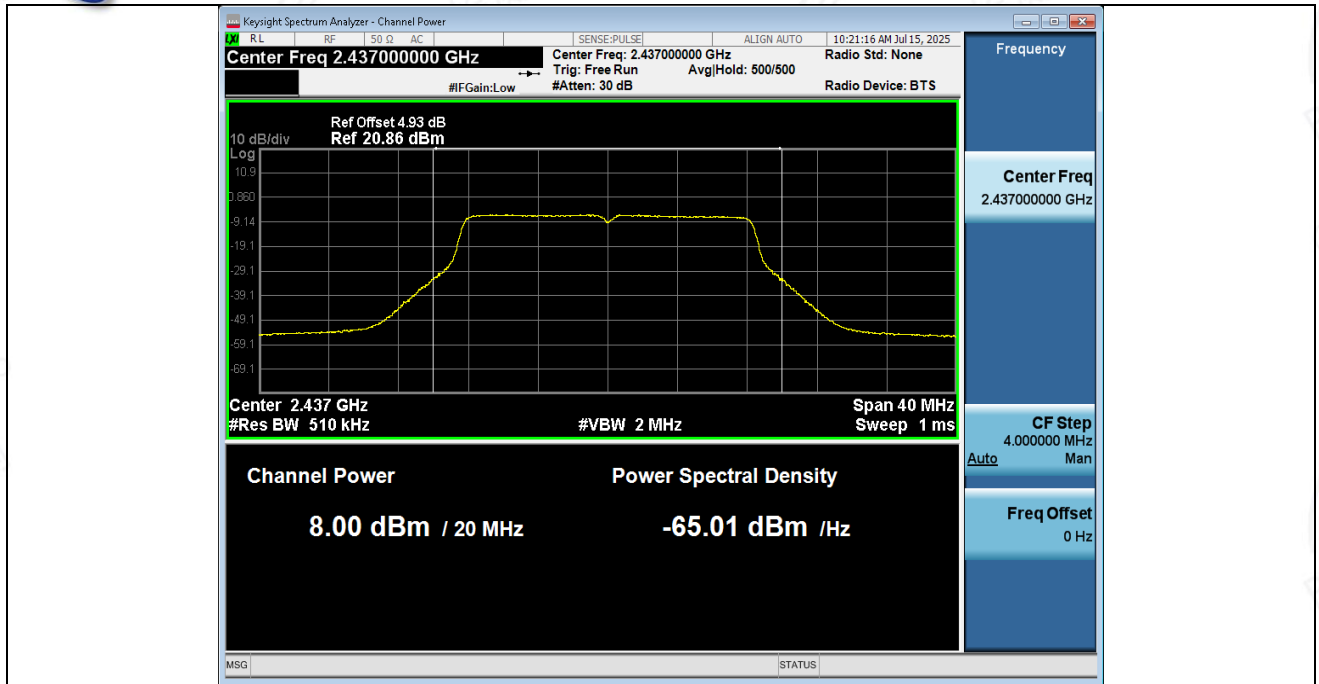
MAX Output Power NVNT ANT1 802 11b 2462





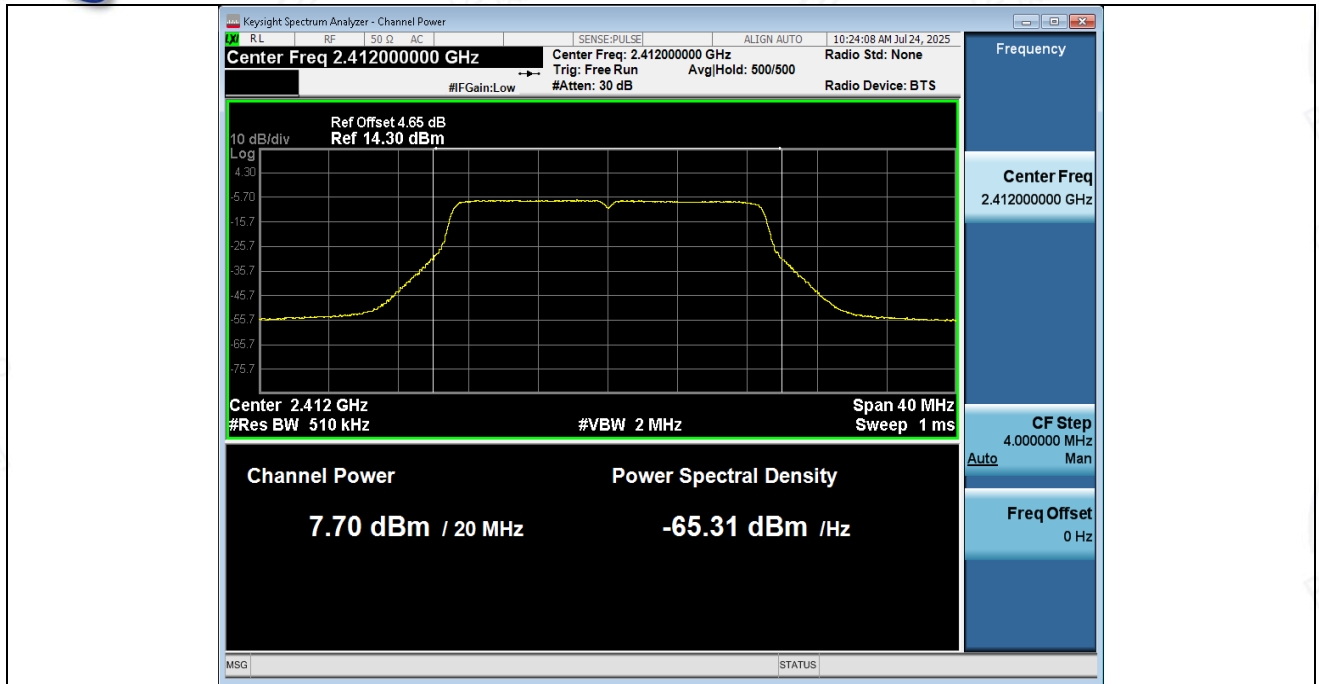
MAX Output Power NVNT_ANT1_802_11g_2437



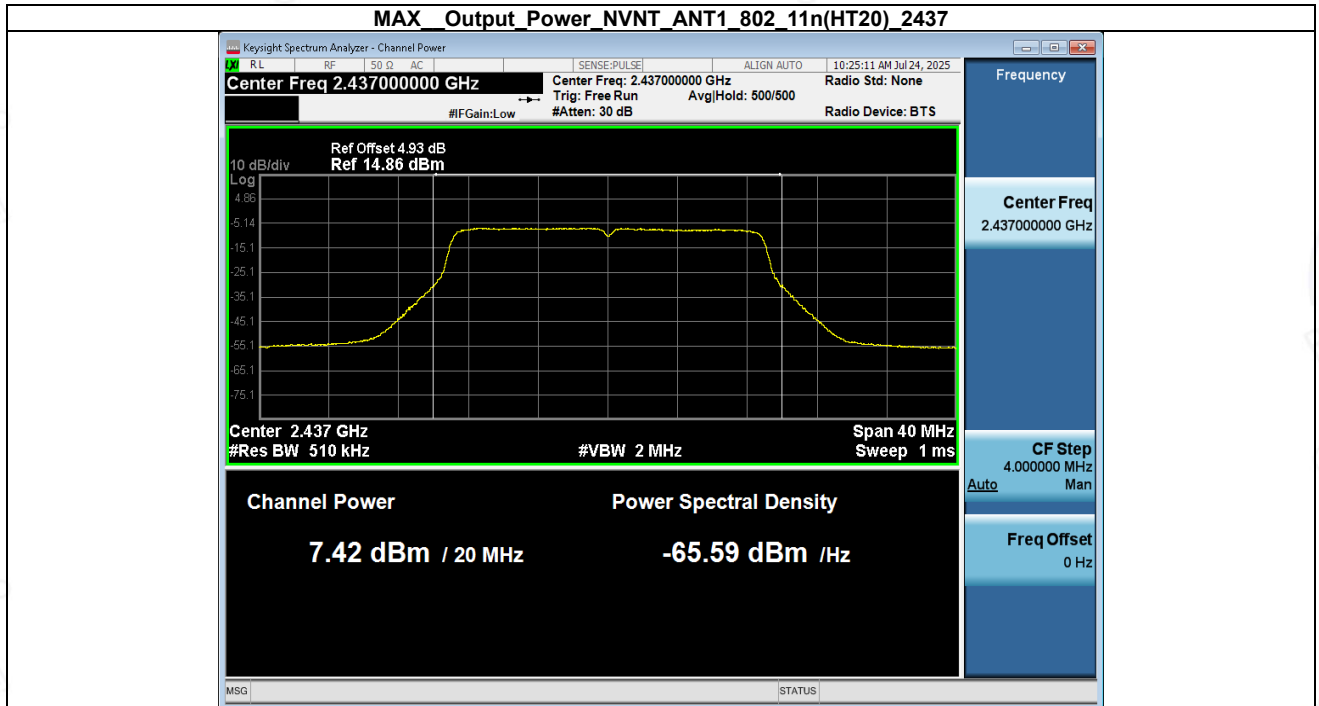


MAX Output Power NVNT ANT1_802_11n(HT20)_2412



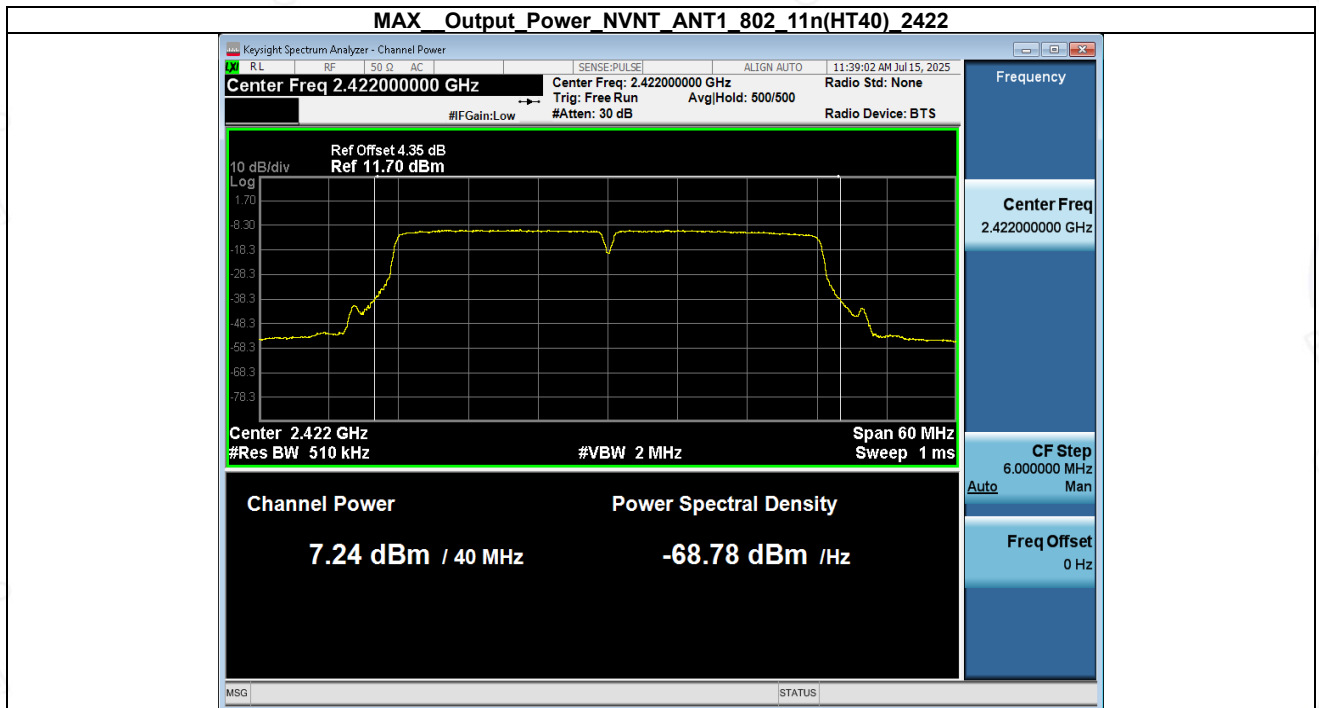
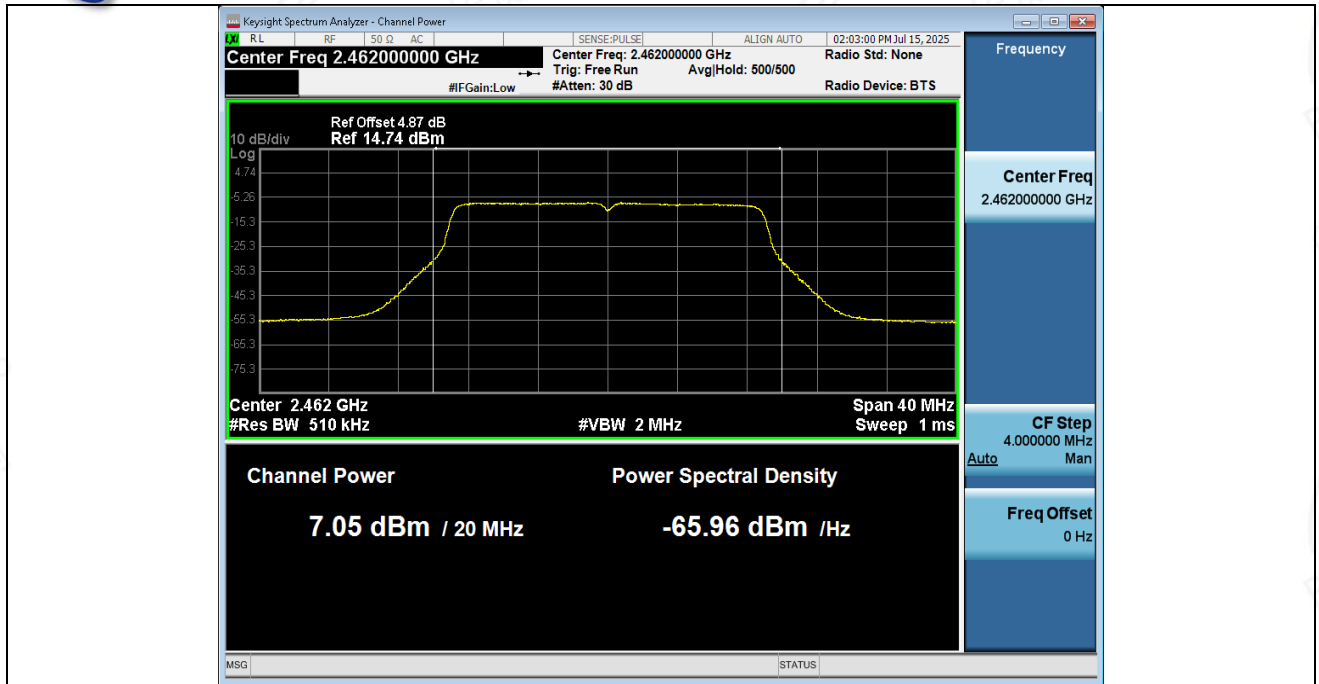


MAX Output Power NVNT ANT1_802_11n(HT20)_2437



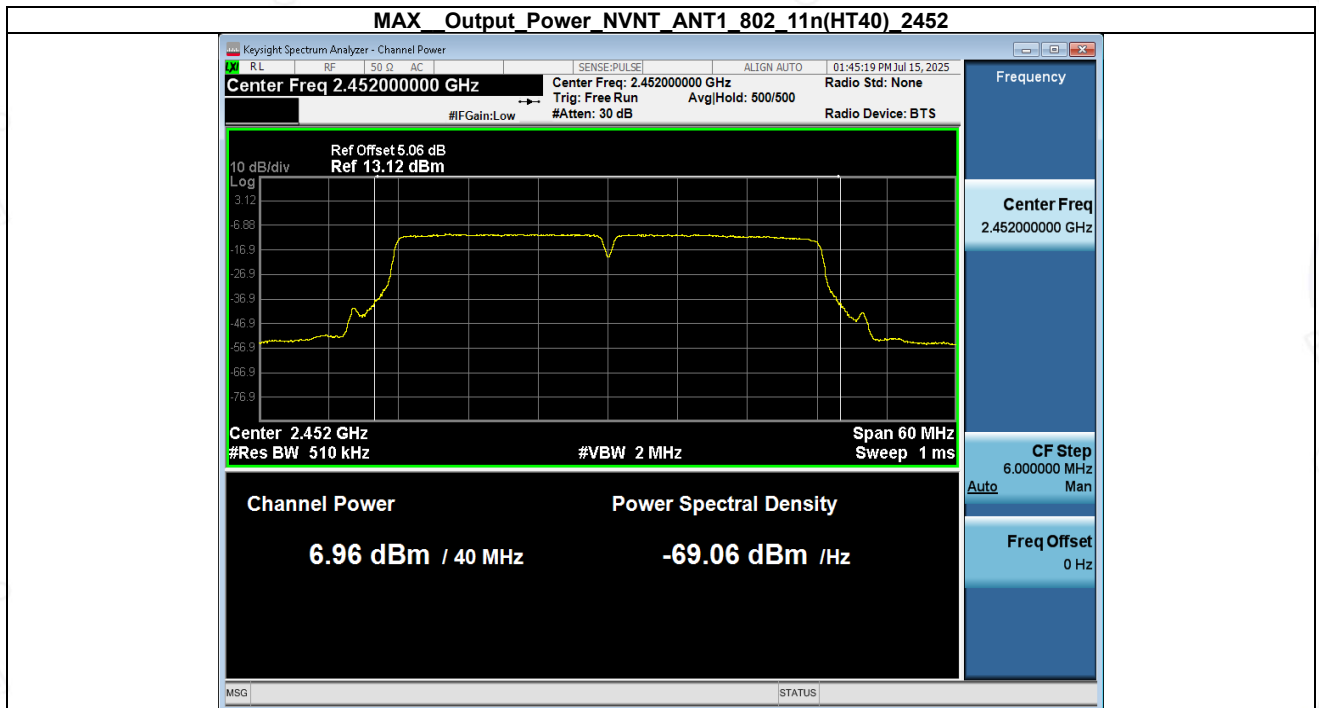
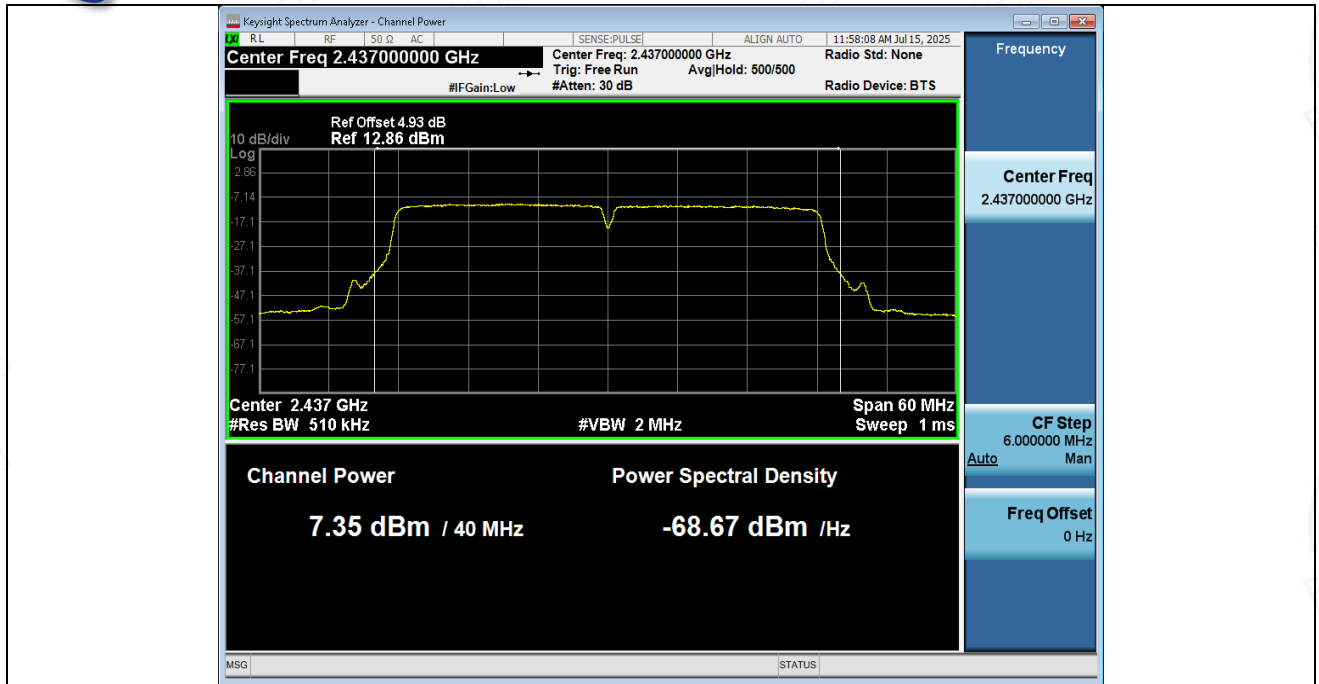
MAX Output Power NVNT ANT1_802_11n(HT20)_2462





MAX Output Power NVNT ANT1_802_11n(HT40)_2437

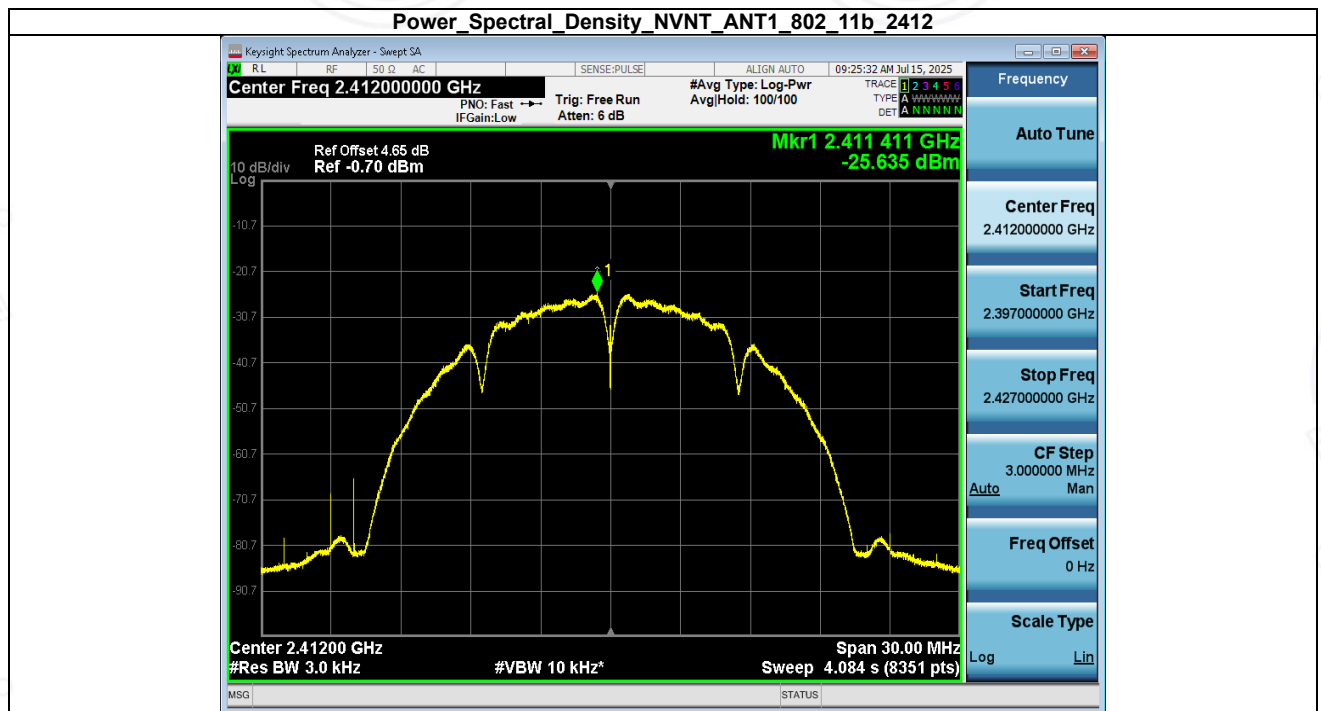




5. Power Spectral Density

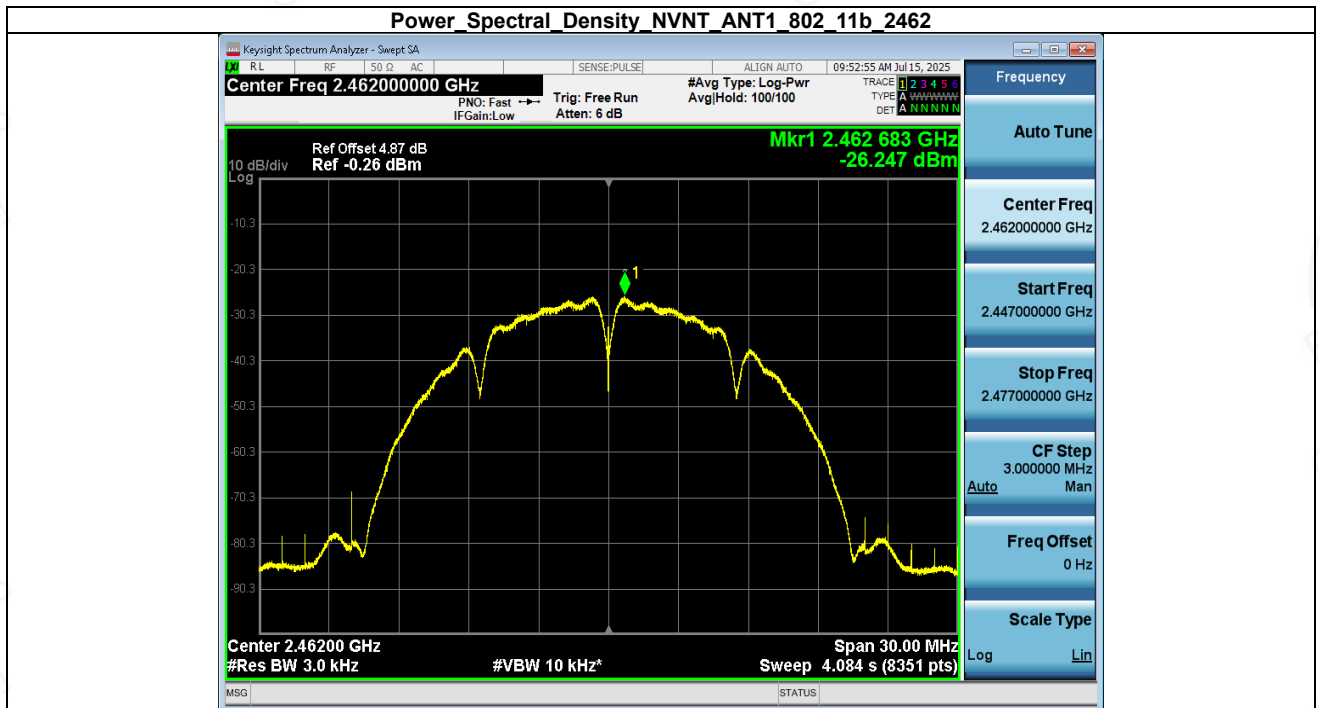
Condition	Antenna	Modulation	Frequency (MHz)	SA_PSD(dBm/3kHz)	Duty factor(dB)	RB factor(dB)	PSD(dBm/3kHz)	limit(dBm/3kHz)	Result
NVNT	ANT1	802.11b	2412.00	-25.64	0.00	0.00	-25.64	8	Pass
NVNT	ANT1	802.11b	2437.00	-25.45	0.00	0.00	-25.45	8	Pass
NVNT	ANT1	802.11b	2462.00	-26.25	0.00	0.00	-26.25	8	Pass
NVNT	ANT1	802.11g	2412.00	-25.89	0.00	0.00	-25.89	8	Pass
NVNT	ANT1	802.11g	2437.00	-26.35	0.24	0.00	-26.11	8	Pass
NVNT	ANT1	802.11g	2462.00	-26.93	0.00	0.00	-26.93	8	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	-55.83	0.30	0.00	-55.53	8	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	-55.70	0.18	0.00	-55.52	8	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	-26.72	0.00	0.00	-26.72	8	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	-31.86	0.90	0.00	-30.96	8	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	-31.24	0.88	0.00	-30.36	8	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	-31.30	0.90	0.00	-30.40	8	Pass

Power_Spectral_Density_NVNT_ANT1_802_11b_2412



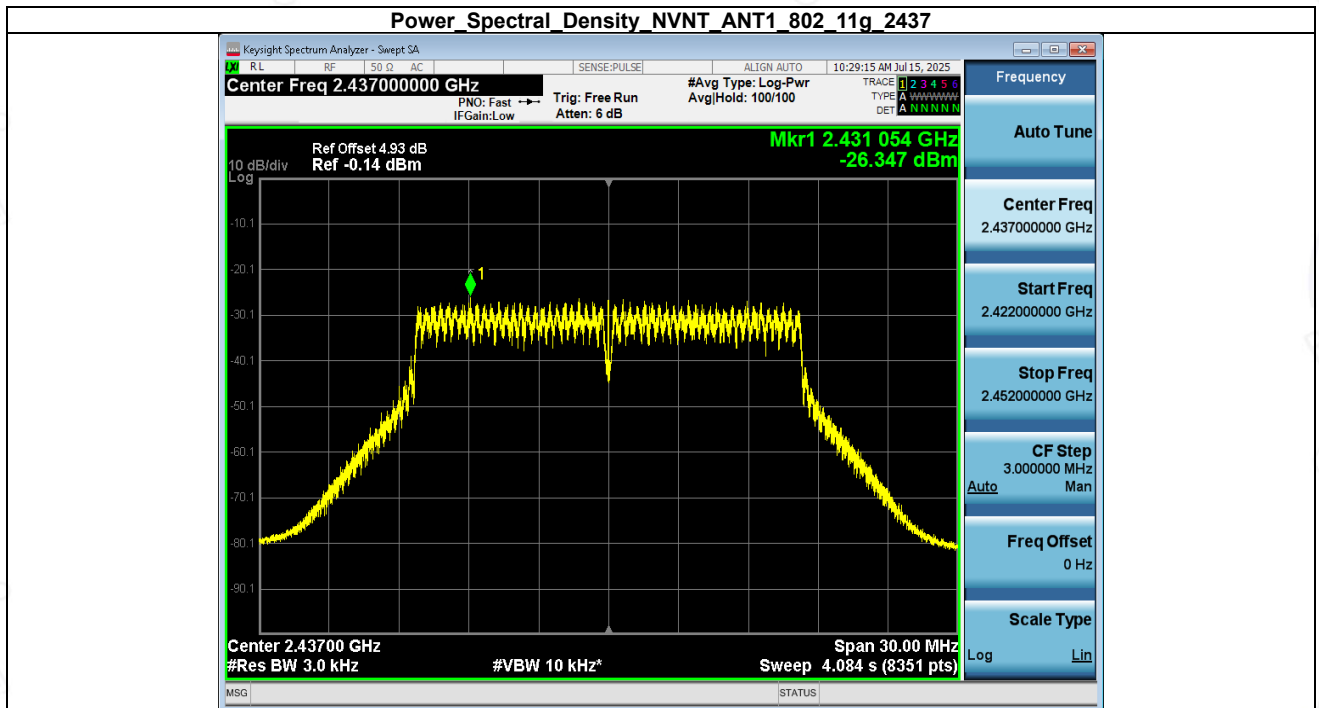
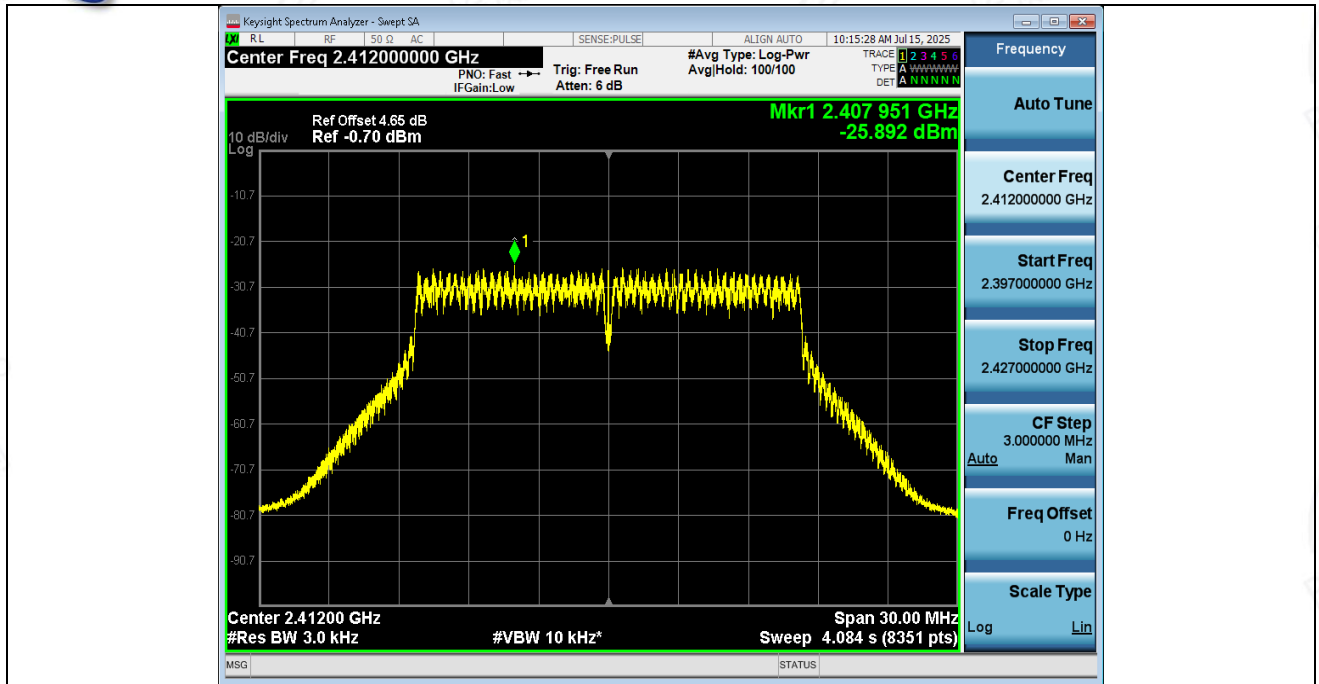
Power_Spectral_Density_NVNT_ANT1_802_11b_2437





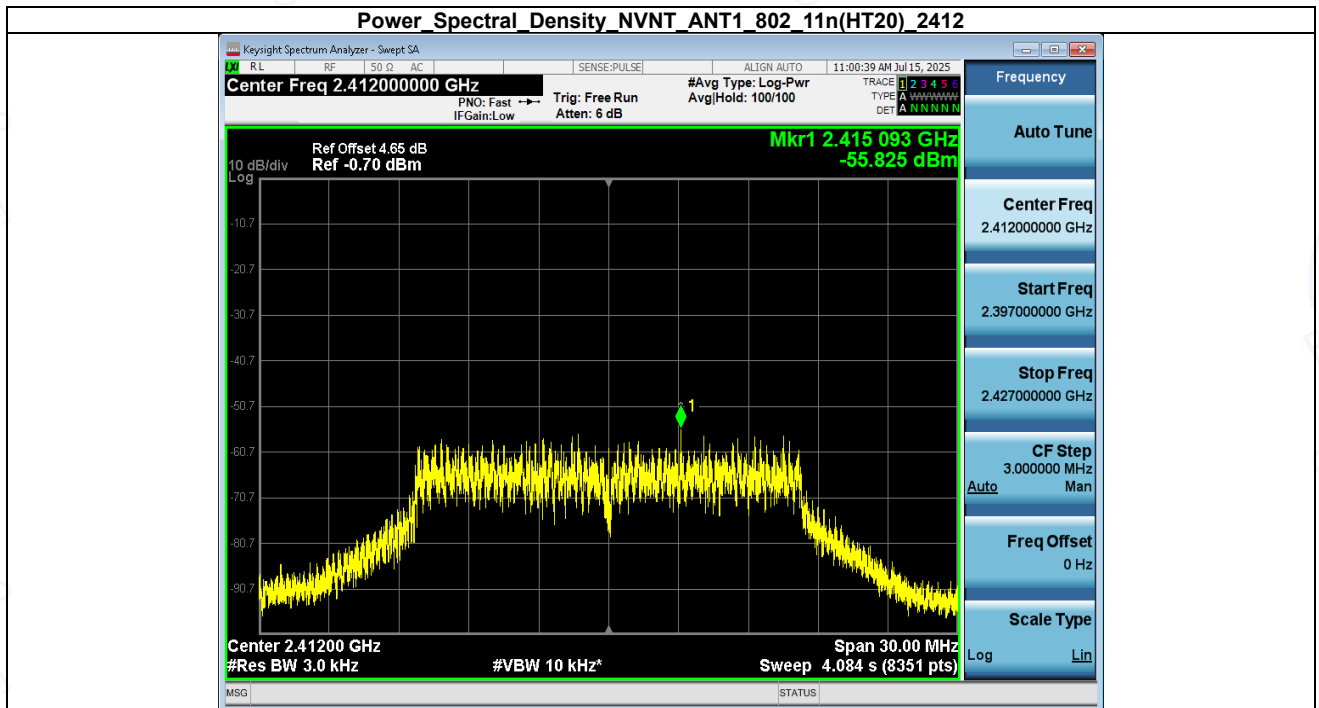
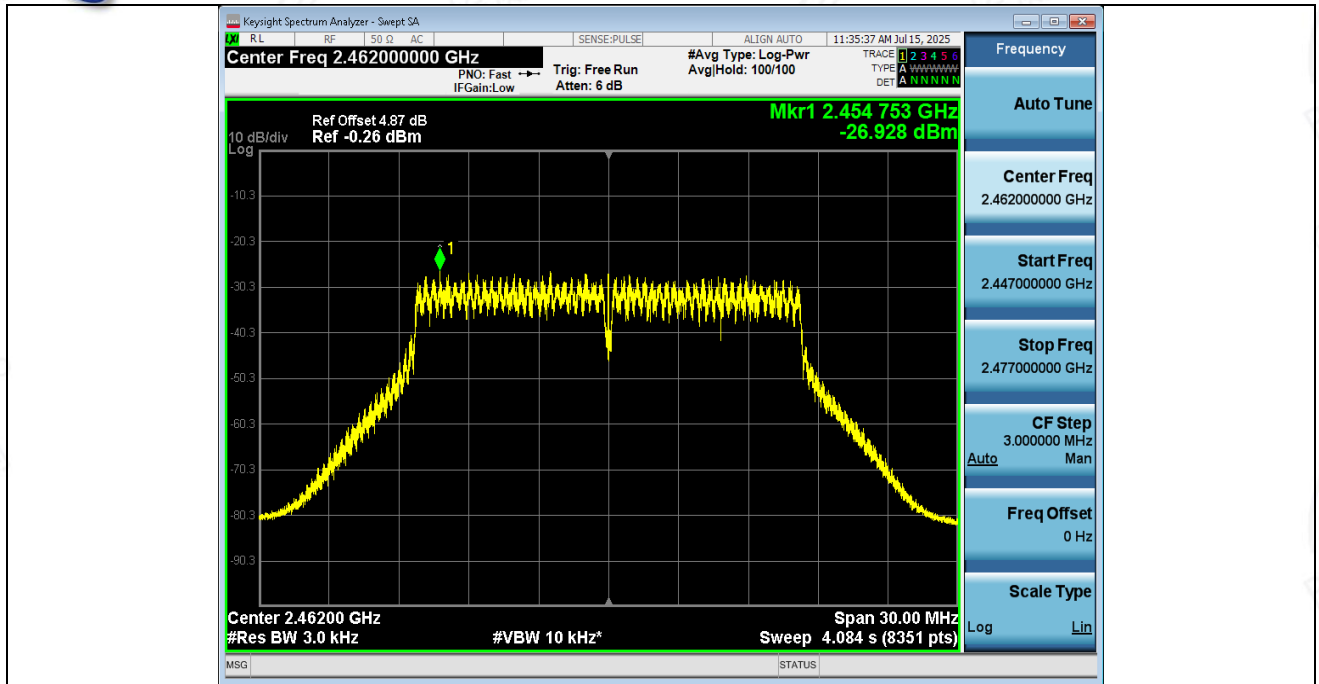
Power Spectral Density NVNT_ANT1_802_11g_2412





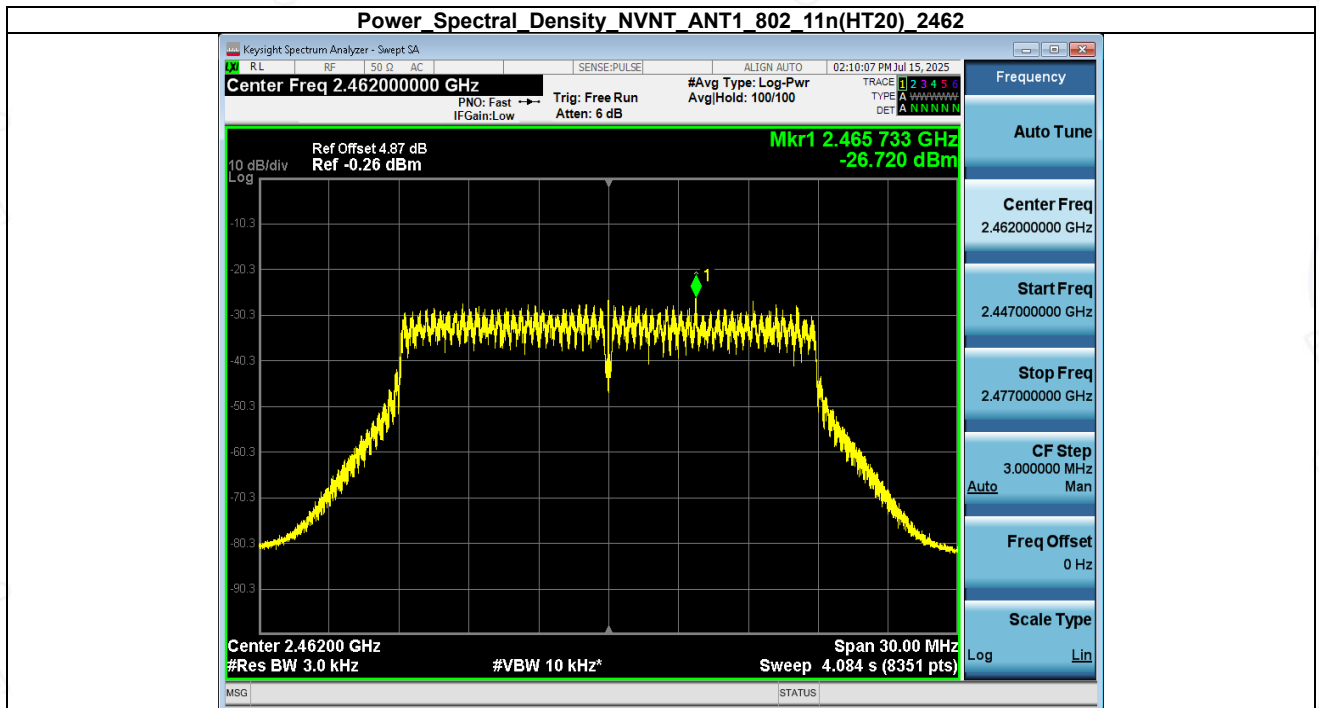
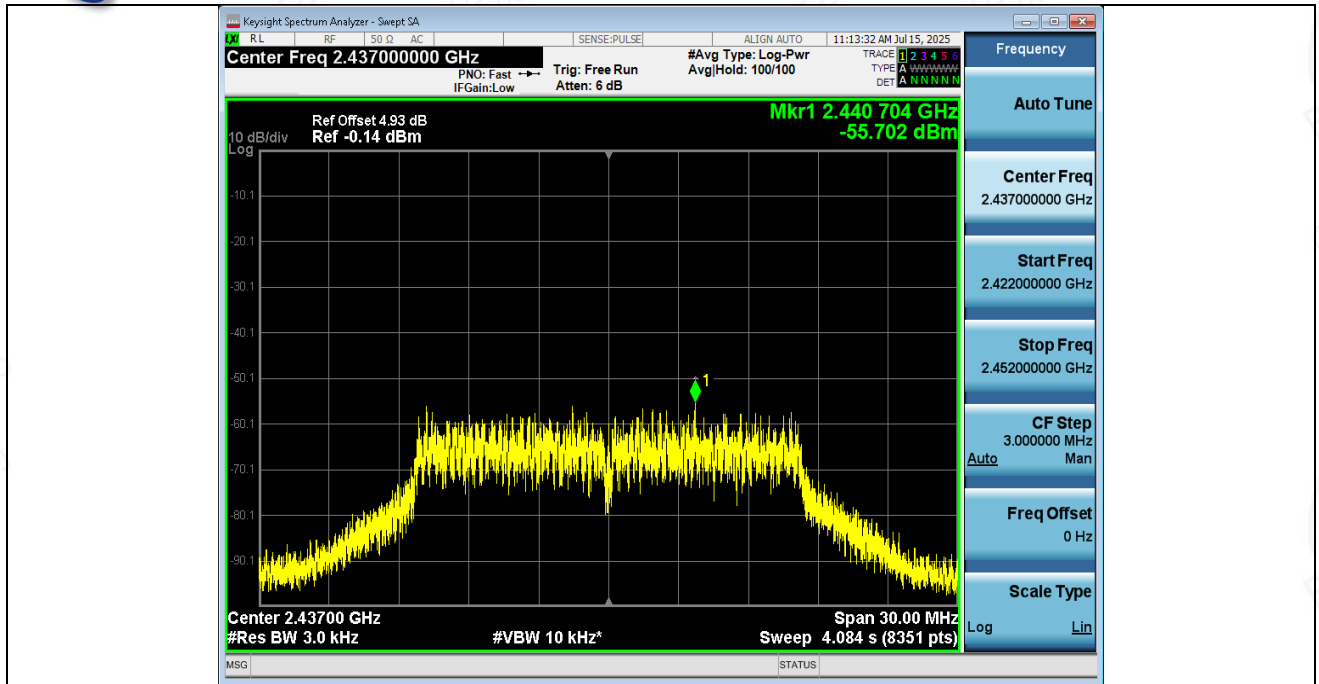
Power Spectral Density NVNT_ANT1_802_11g_2462





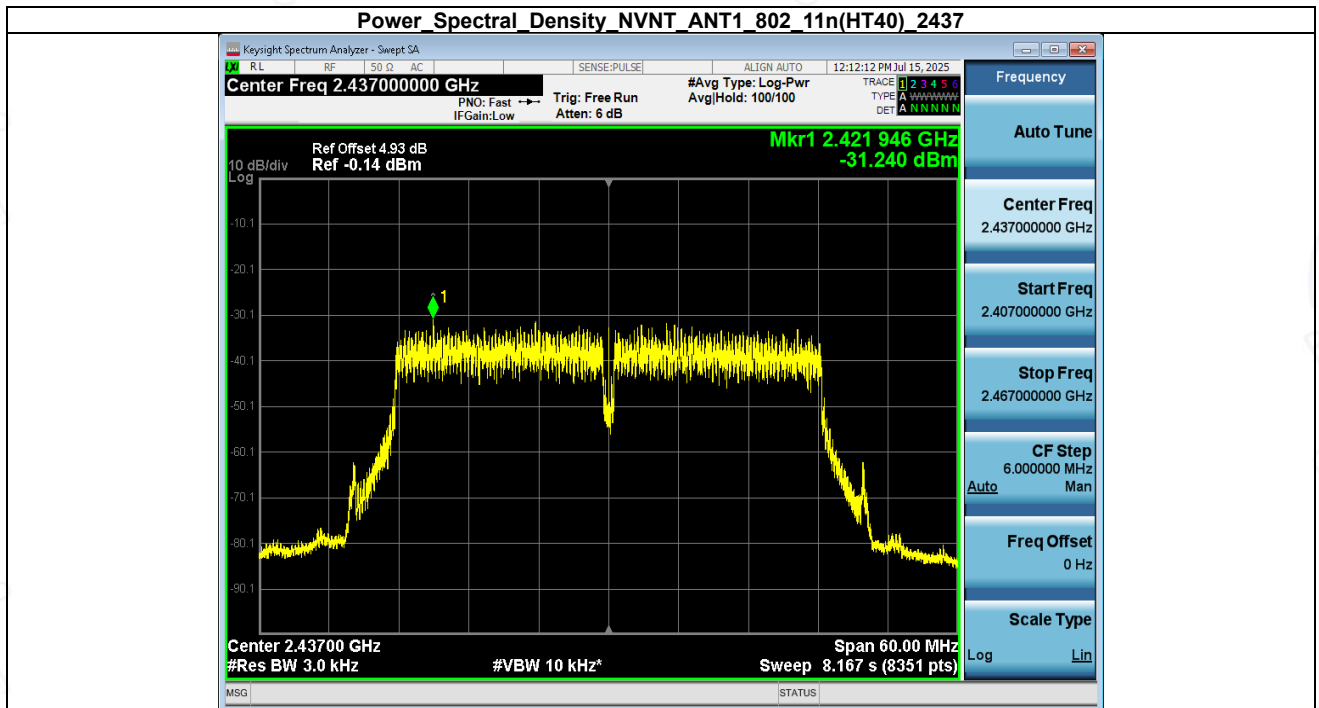
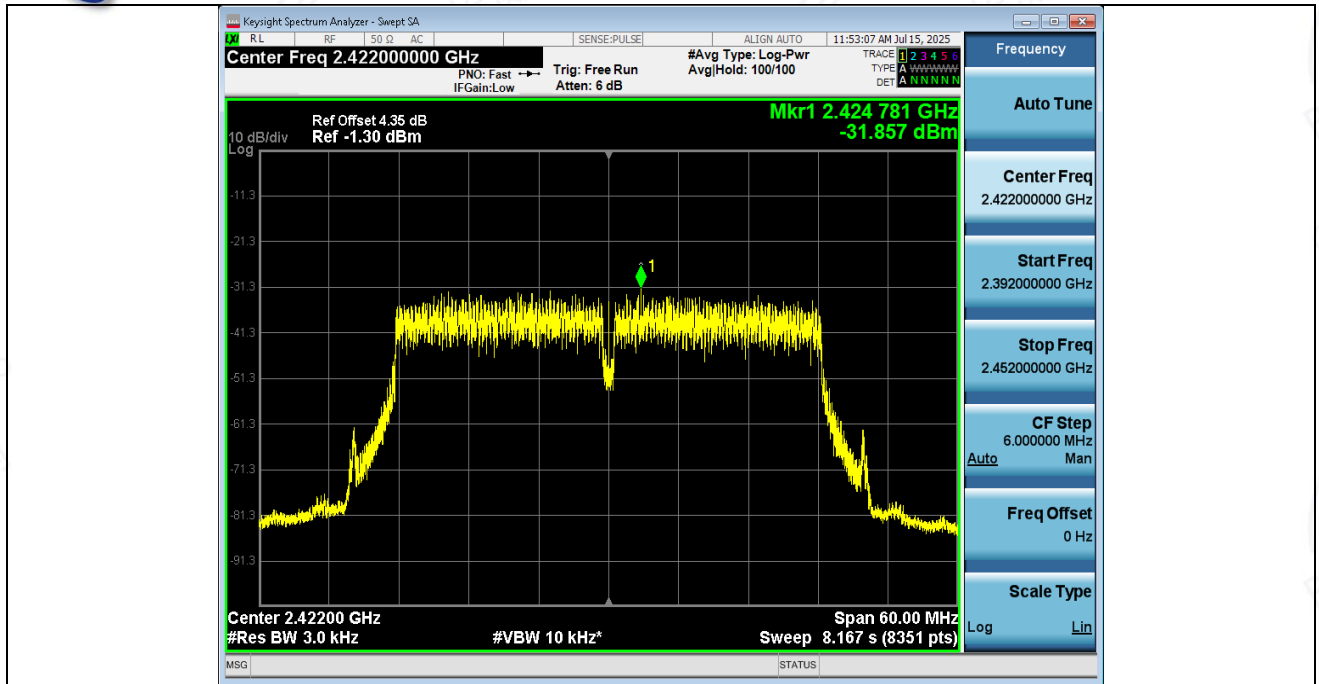
Power Spectral Density NVNT_ANT1_802_11n(HT20)_2437





Power Spectral Density NVNT_ANT1_802_11n(HT40)_2422





Power Spectral Density NVNT_ANT1_802_11n(HT40)_2452

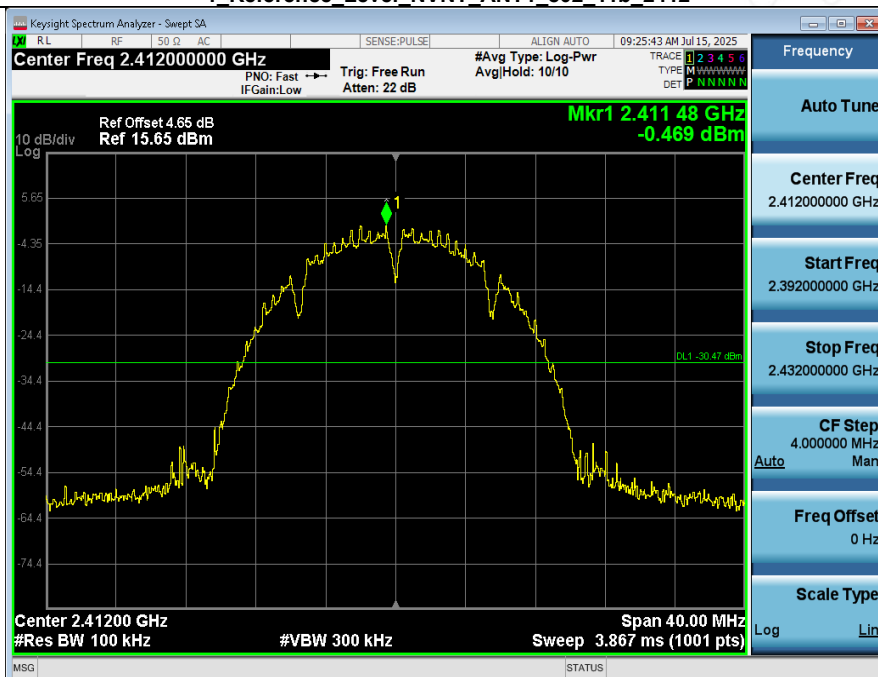




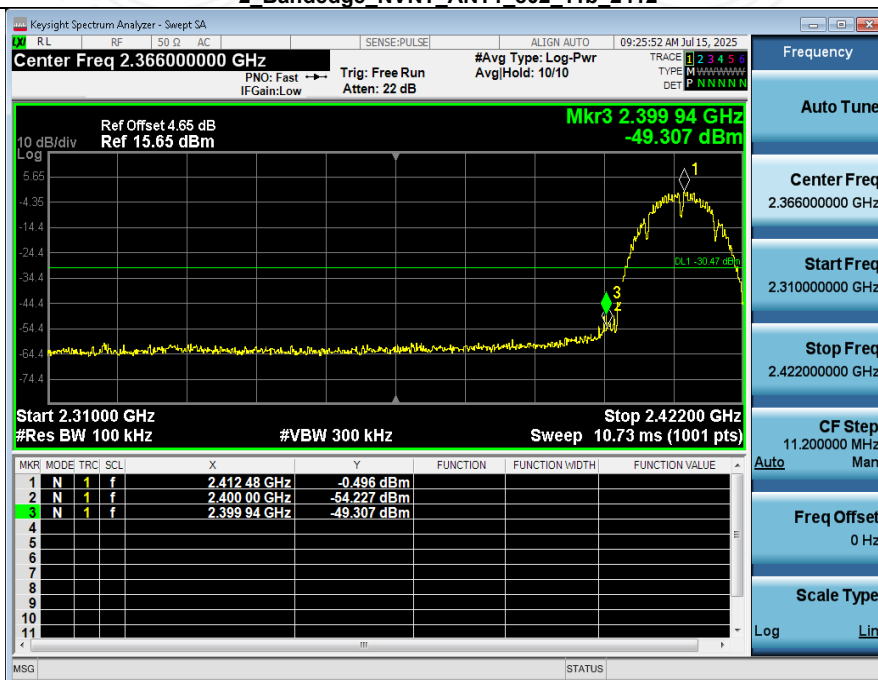
6. Bandedge

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	2399.936	-0.469	-49.307	-30.469	Pass
NVNT	ANT1	802.11b	2462.00	2484.448	-0.540	-61.825	-30.540	Pass
NVNT	ANT1	802.11g	2412.00	2399.936	-2.966	-43.119	-32.966	Pass
NVNT	ANT1	802.11g	2462.00	2483.536	1.796	-52.819	-28.204	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	2399.936	3.618	-34.565	-26.382	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	2485.456	-4.003	-56.784	-34.003	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	2399.892	-5.686	-42.806	-35.686	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	2484.224	-6.079	-55.466	-36.079	Pass

1 Reference Level NVNT ANT1 802 11b 2412



2 Bandedge NVNT ANT1 802 11b 2412



1 Reference Level NVNT ANT1 802 11b 2462



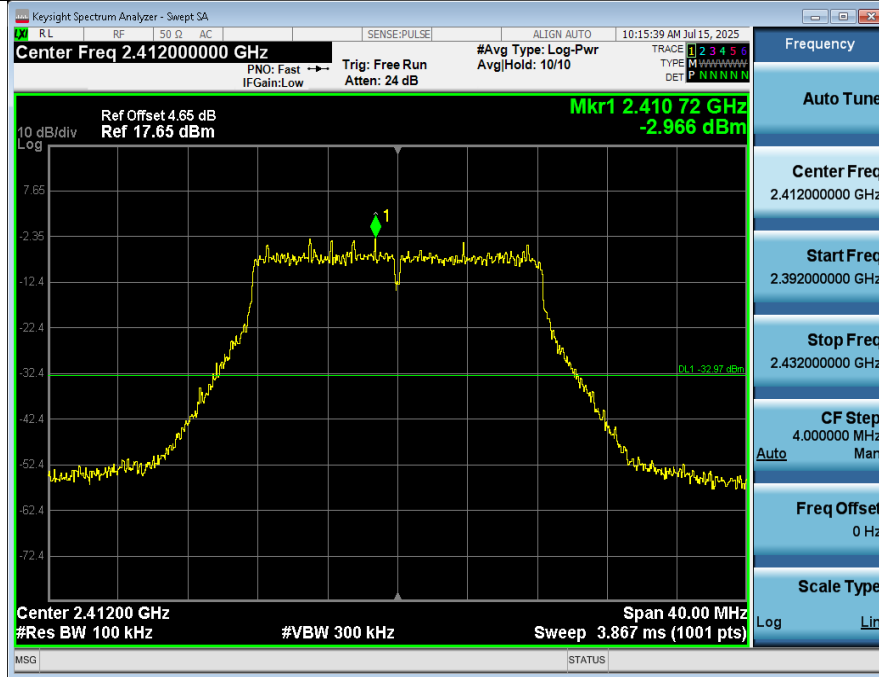


2_Bandedge_NVNT_ANT1_802_11b_2462

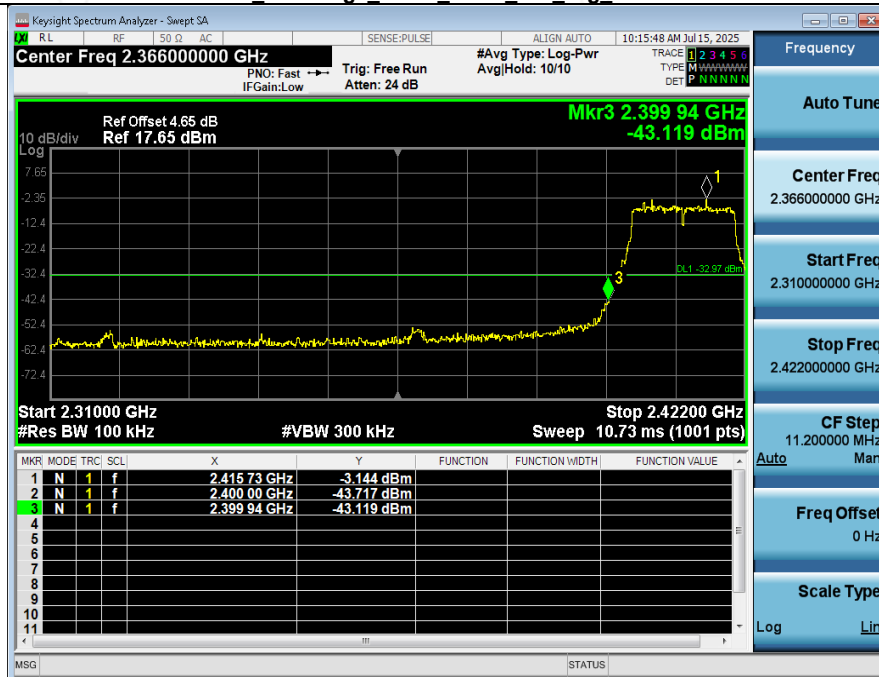


1_Reference_Level_NVNT_ANT1_802_11g_2412



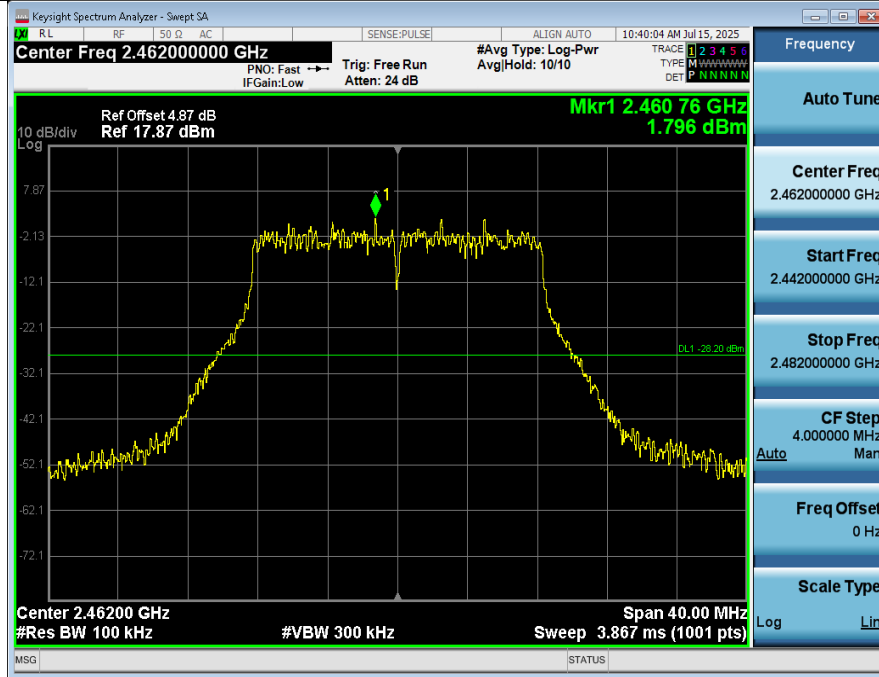


2_Bandedge_NVNT_ANT1_802_11g_2412

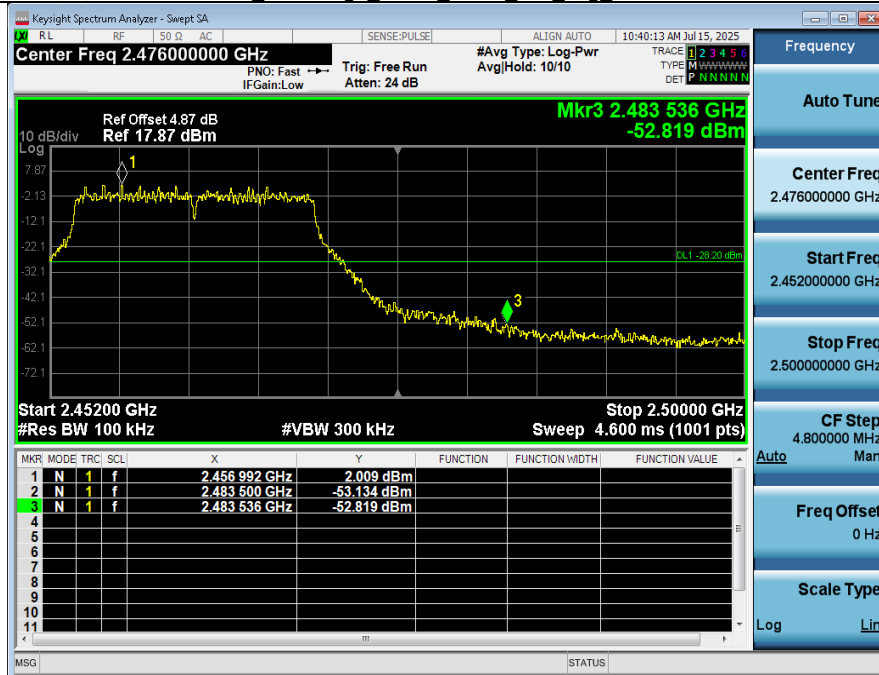


1_Reference_Level_NVNT_ANT1_802_11g_2462





2_Bandedge_NVNT_ANT1_802_11g_2462

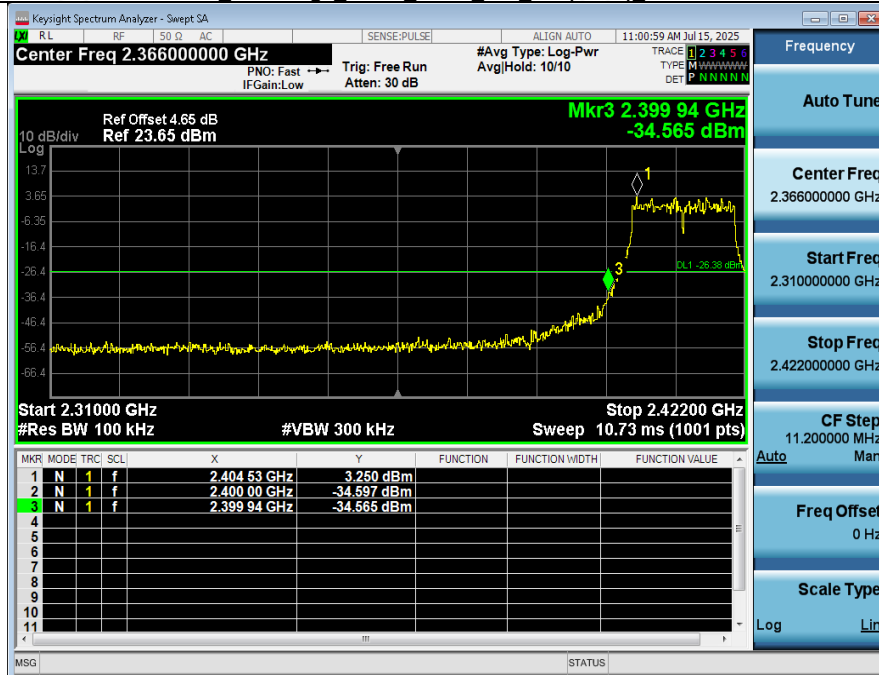


1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2412



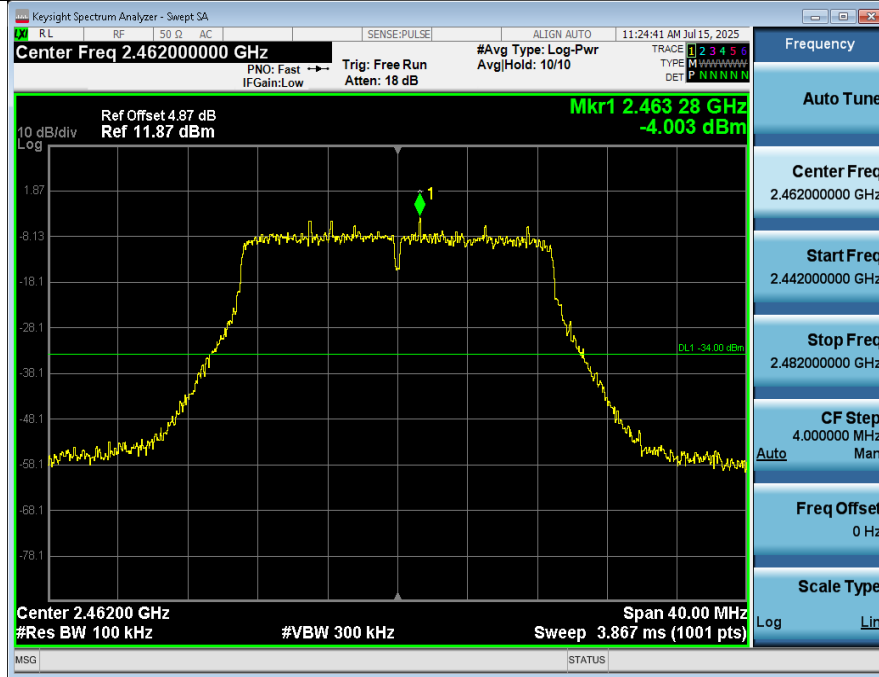


2_Bandedge_NVNT_ANT1_802_11n(HT20)_2412

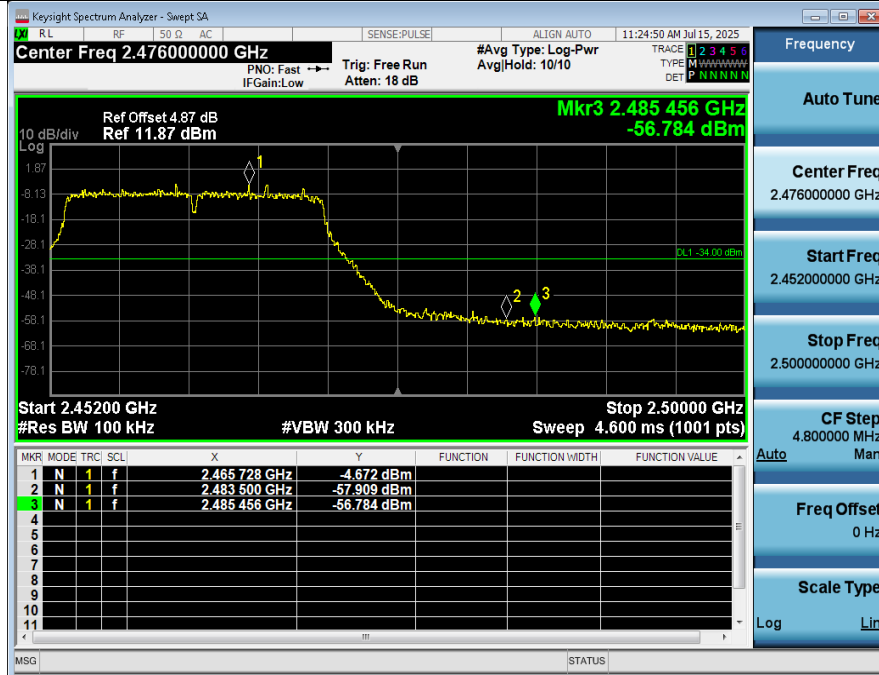


1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2462





2_Bandedge_NVNT_ANT1_802_11n(HT20)_2462

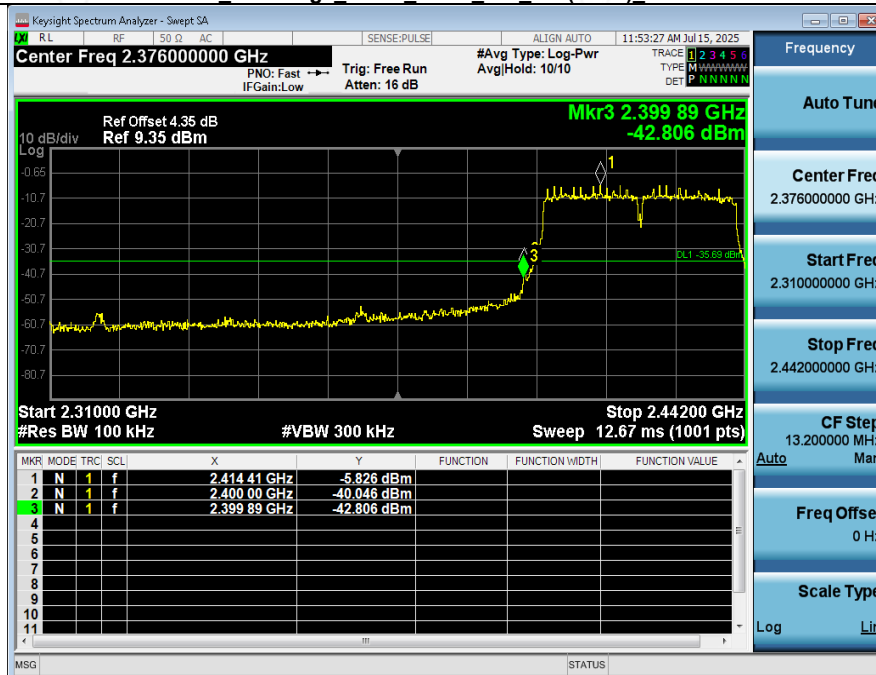


1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2422





2_Bandedge_NVNT_ANT1_802_11n(HT40)_2422



1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2452





2_Bandedge_NVNT_ANT1_802_11n(HT40)_2452



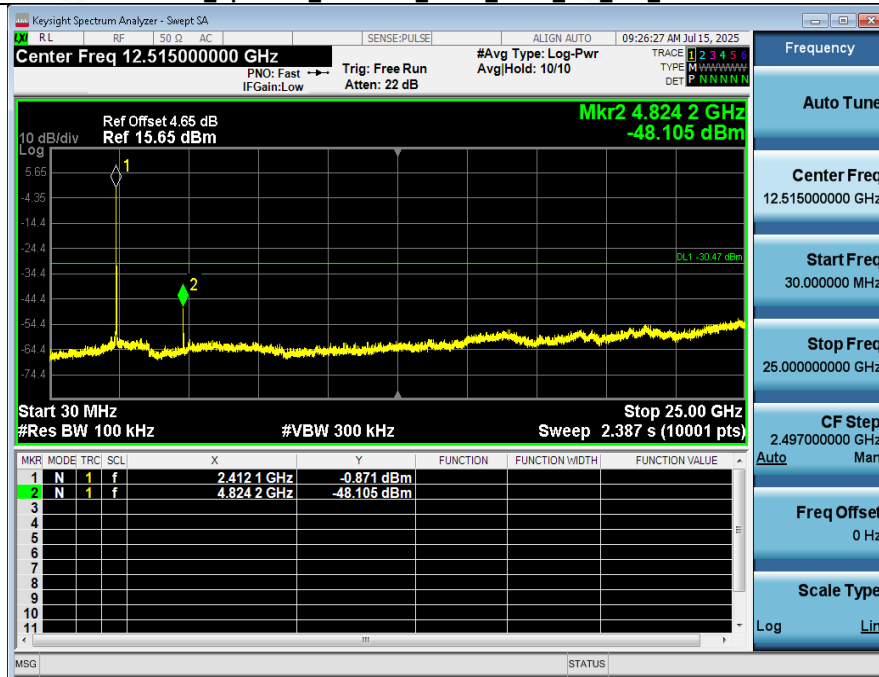
7. Spurious Emission

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	4824.240	-0.469	-48.105	-30.469	Pass
NVNT	ANT1	802.11b	2437.00	4874.180	-0.213	-50.294	-30.213	Pass
NVNT	ANT1	802.11b	2462.00	4924.120	-0.540	-53.082	-30.540	Pass
NVNT	ANT1	802.11g	2412.00	24650.420	-2.966	-50.769	-32.966	Pass
NVNT	ANT1	802.11g	2437.00	24290.852	-3.707	-55.954	-33.707	Pass
NVNT	ANT1	802.11g	2462.00	24875.150	1.796	-50.729	-28.204	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	24568.019	3.618	-44.025	-26.382	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	24852.677	3.448	-43.561	-26.552	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	24995.006	-4.003	-56.046	-34.003	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	2239.845	-5.686	-57.727	-35.686	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	2239.845	-5.705	-56.831	-35.705	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	2519.509	-6.079	-56.580	-36.079	Pass

1 Reference_Level_NVNT_ANT1_802_11b_2412

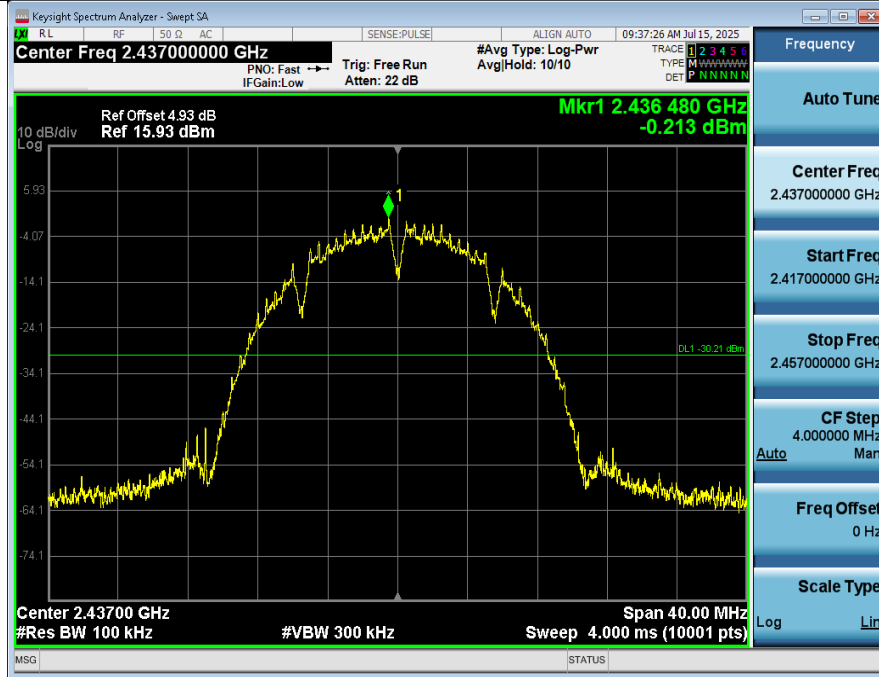


2 Spurious_Emission_NVNT_ANT1_802_11b_2412

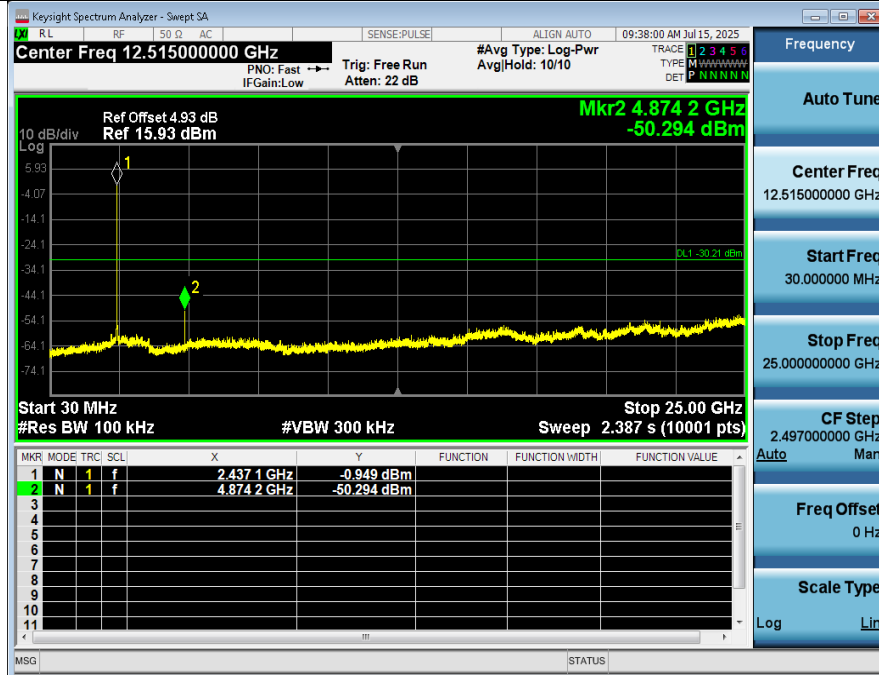


1 Reference_Level_NVNT_ANT1_802_11b_2437





2_Spurious_Emission_NVNT_ANT1_802_11b_2437

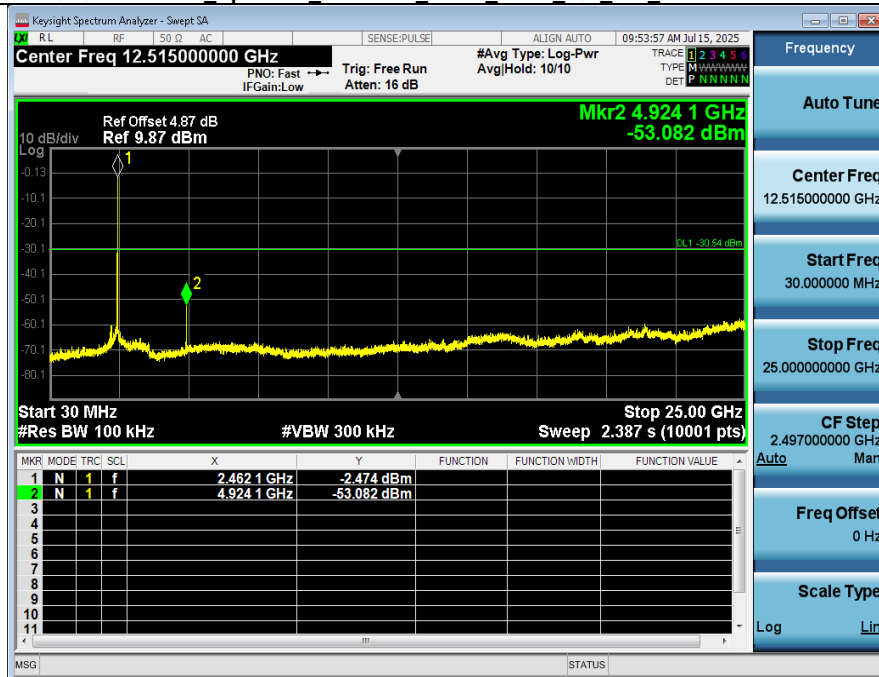


1_Reference_Level_NVNT_ANT1_802_11b_2462



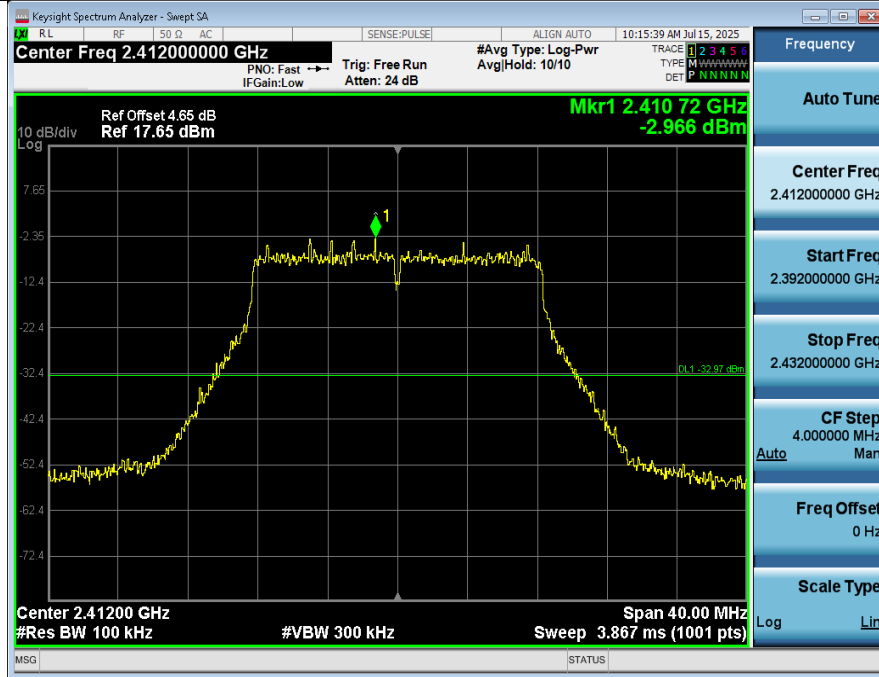


2_Spurious_Emission_NVNT_ANT1_802_11b_2462

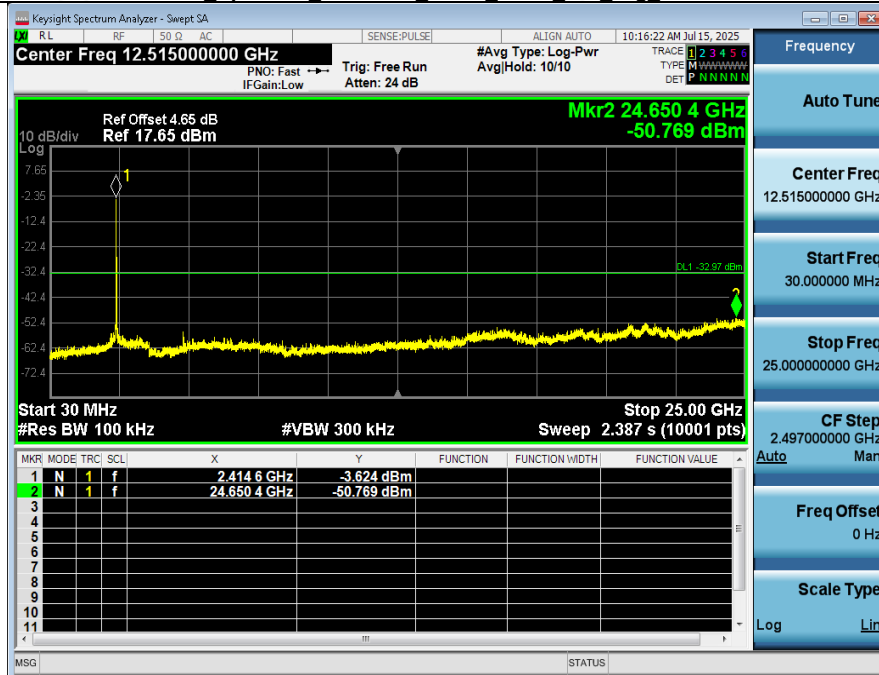


1_Reference_Level_NVNT_ANT1_802_11g_2412



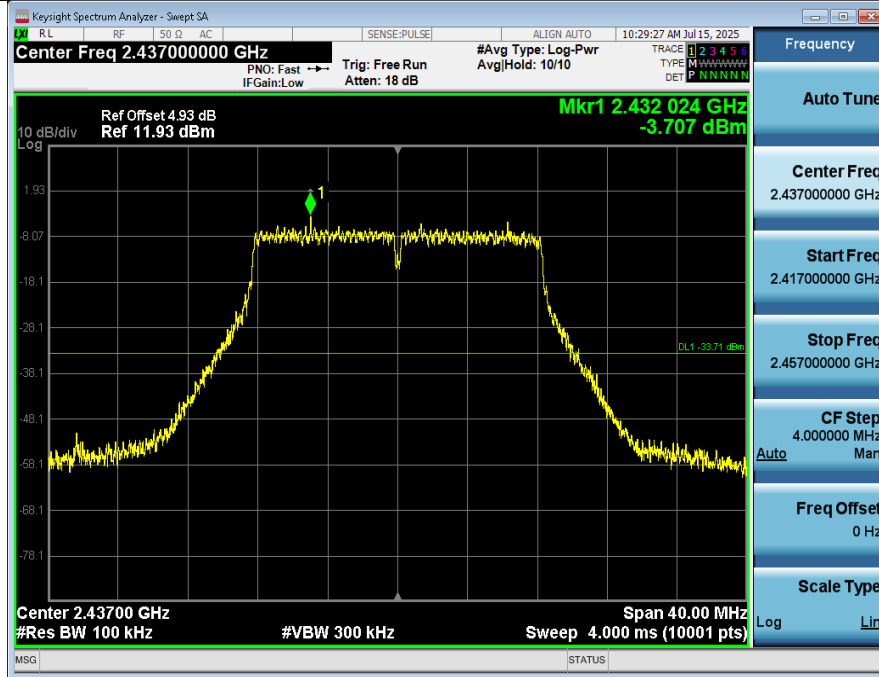


2_Spurious_Emission_NVNT_ANT1_802_11g_2412

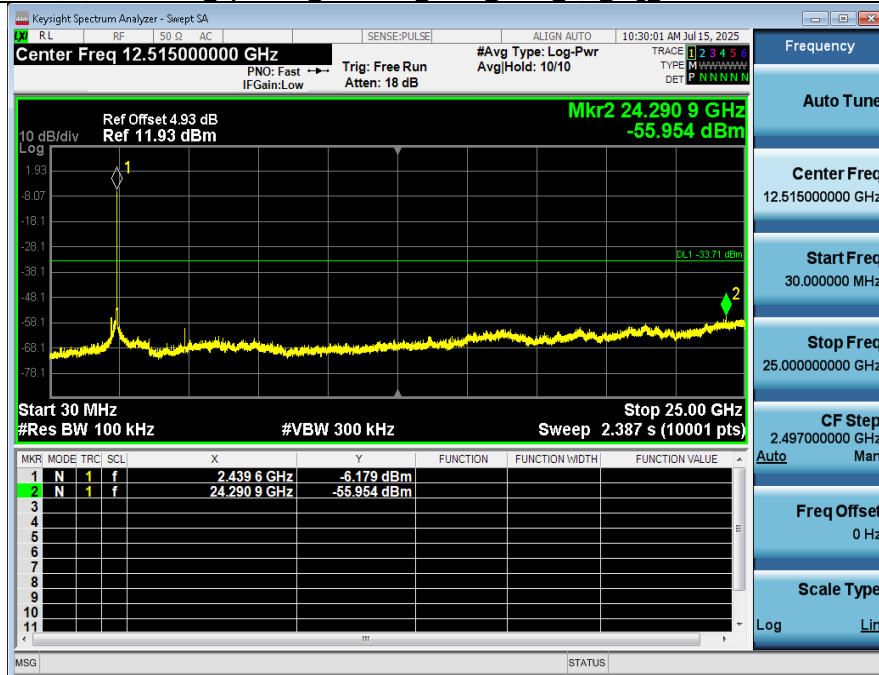


1_Reference_Level_NVNT_ANT1_802_11g_2437



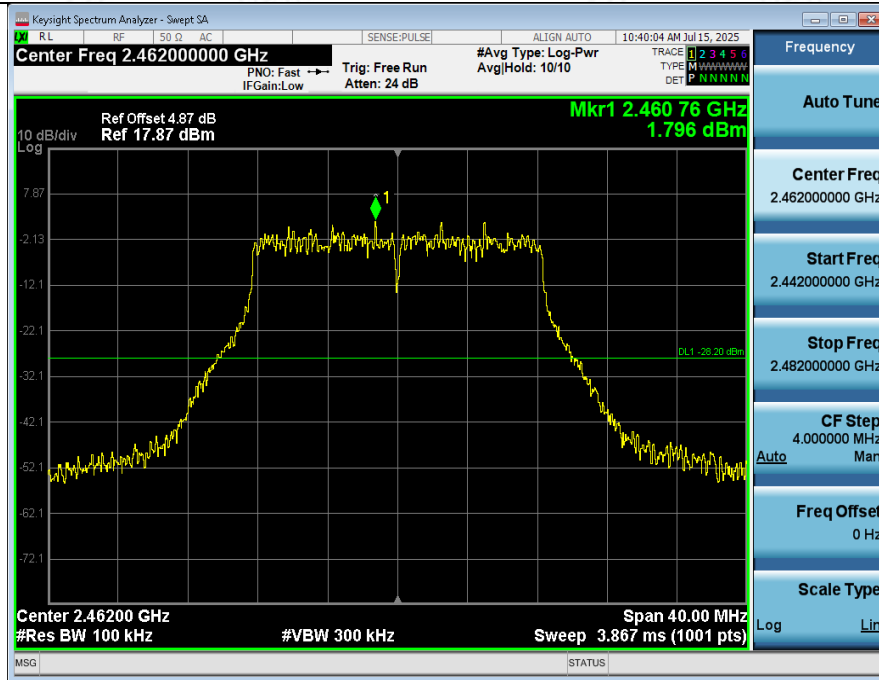


2_Spurious_Emission_NVNT_ANT1_802_11g_2437

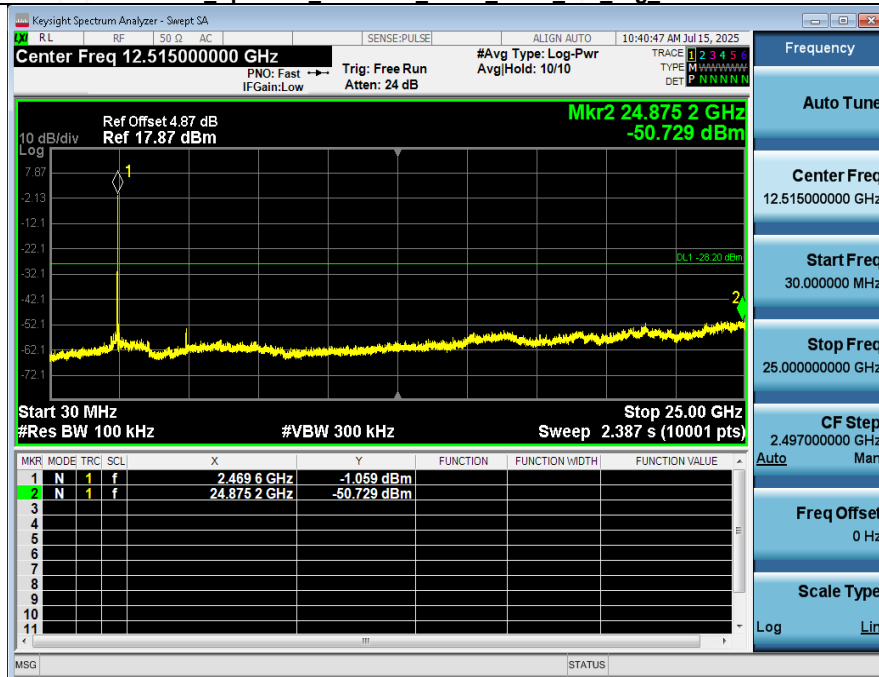


1_Reference_Level_NVNT_ANT1_802_11g_2462



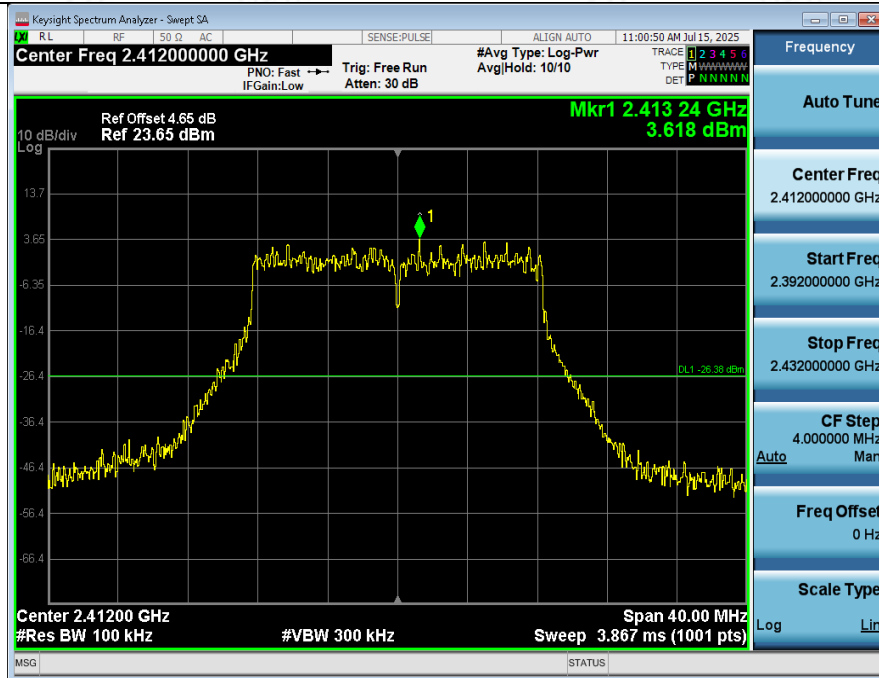


2_Spurious_Emission_NVNT_ANT1_802_11g_2462

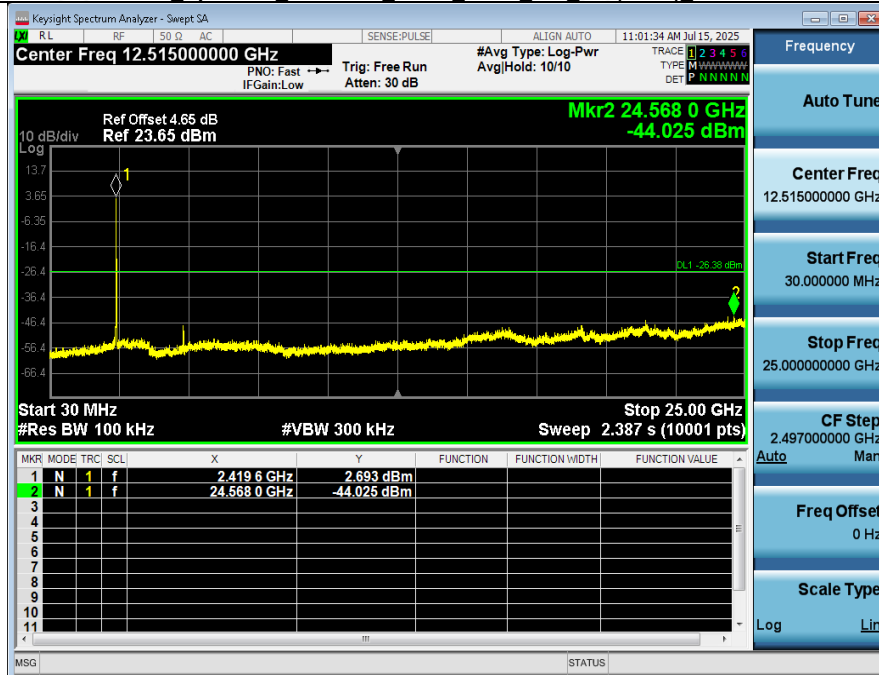


1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2412



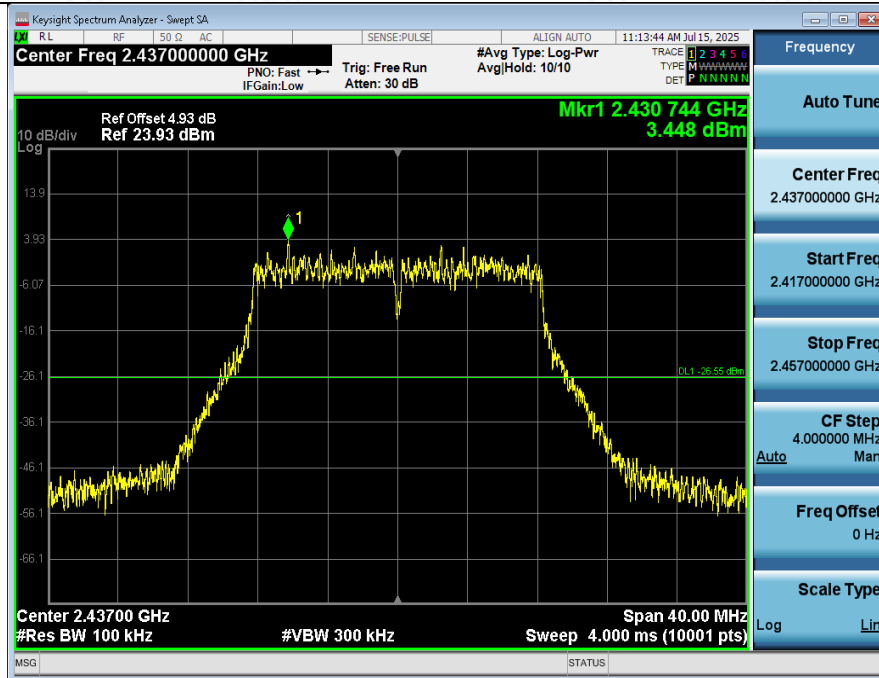


2_Spurious_Emission_NVNT_ANT1_802_11n(HT20)_2412

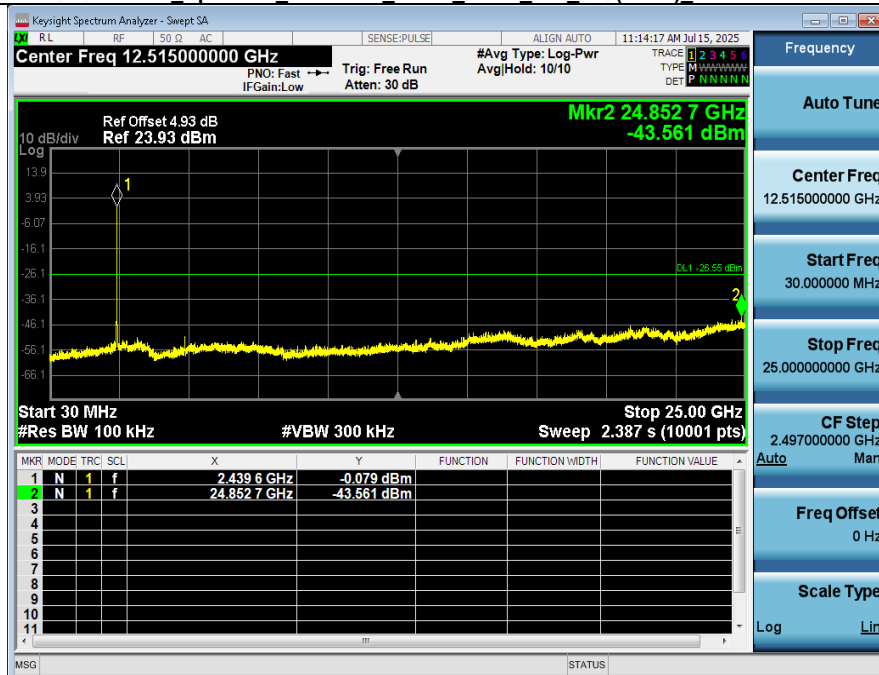


1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2437





2_Spurious_Emission_NVNT_ANT1_802_11n(HT20)_2437

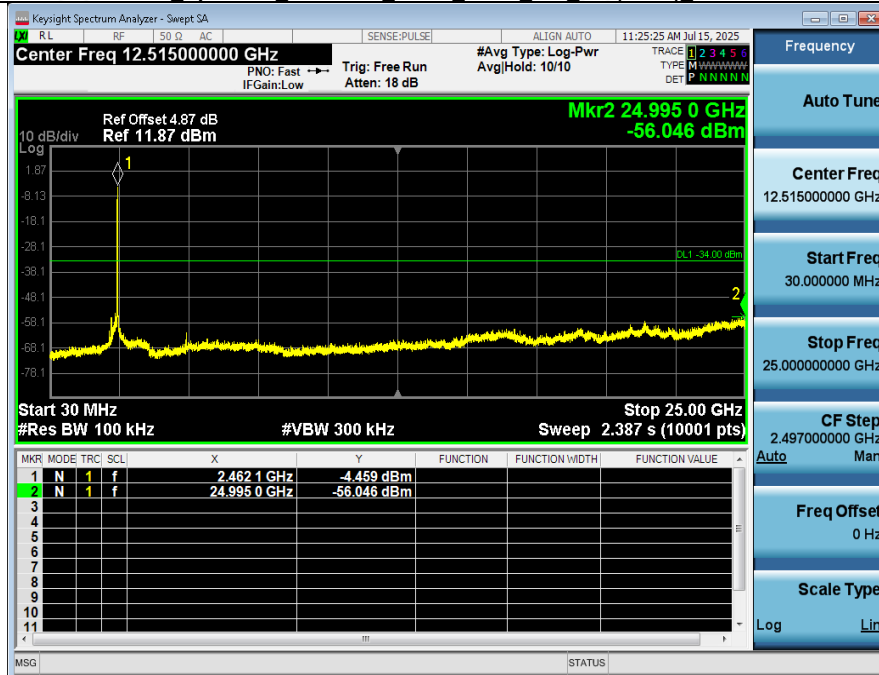


1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2462





2_Spurious_Emission_NVNT_ANT1_802_11n(HT20)_2462

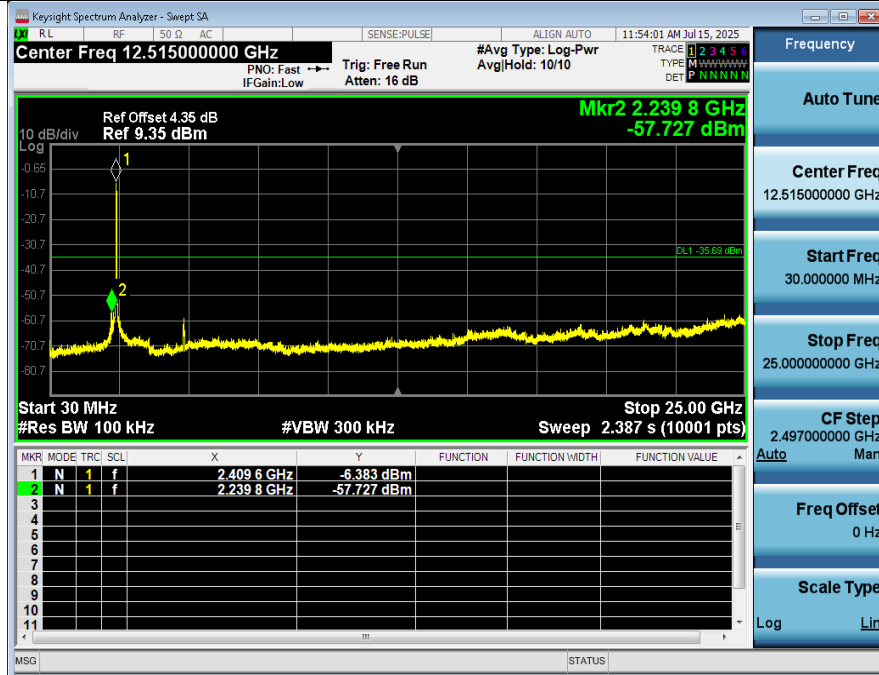


1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2422





2_Spurious_Emission_NVNT_ANT1_802_11n(HT40)_2422

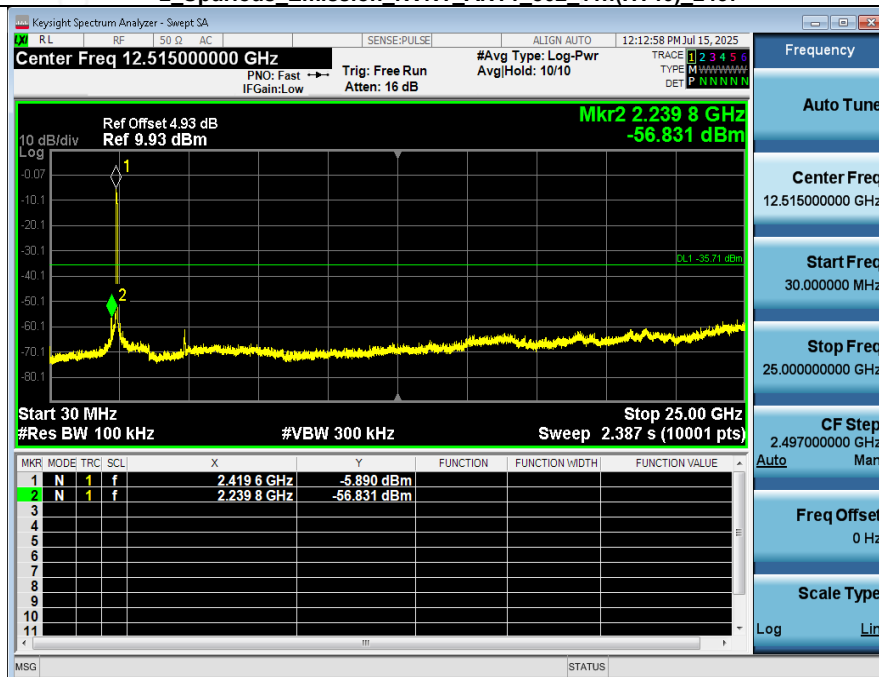


1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2437





2_Spurious_Emission_NVNT_ANT1_802_11n(HT40)_2437



1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2452





2 Spurious Emission NVNT ANT1_802_11n(HT40)_2452

