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FCC ID WIFI2.4

FCC_2.4G_WIFI (Part15.247) Test Data

1. -6dB Bandwidth

Condition	Antenna	Modulation	Frequency (MHz)	-6dB BW(MHz)	limit(kHz)	Result
NVNT	ANT1	802.11b	2412.00	8.58	500	Pass
NVNT	ANT1	802.11b	2437.00	8.57	500	Pass
NVNT	ANT1	802.11b	2462.00	9.05	500	Pass
NVNT	ANT1	802.11g	2412.00	15.79	500	Pass
NVNT	ANT1	802.11g	2437.00	16.32	500	Pass
NVNT	ANT1	802.11g	2462.00	16.14	500	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	16.87	500	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	17.00	500	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	17.03	500	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	36.02	500	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	35.52	500	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	35.40	500	Pass



-6dB Bandwidth_NVNT_ANT1_802_11b_2437



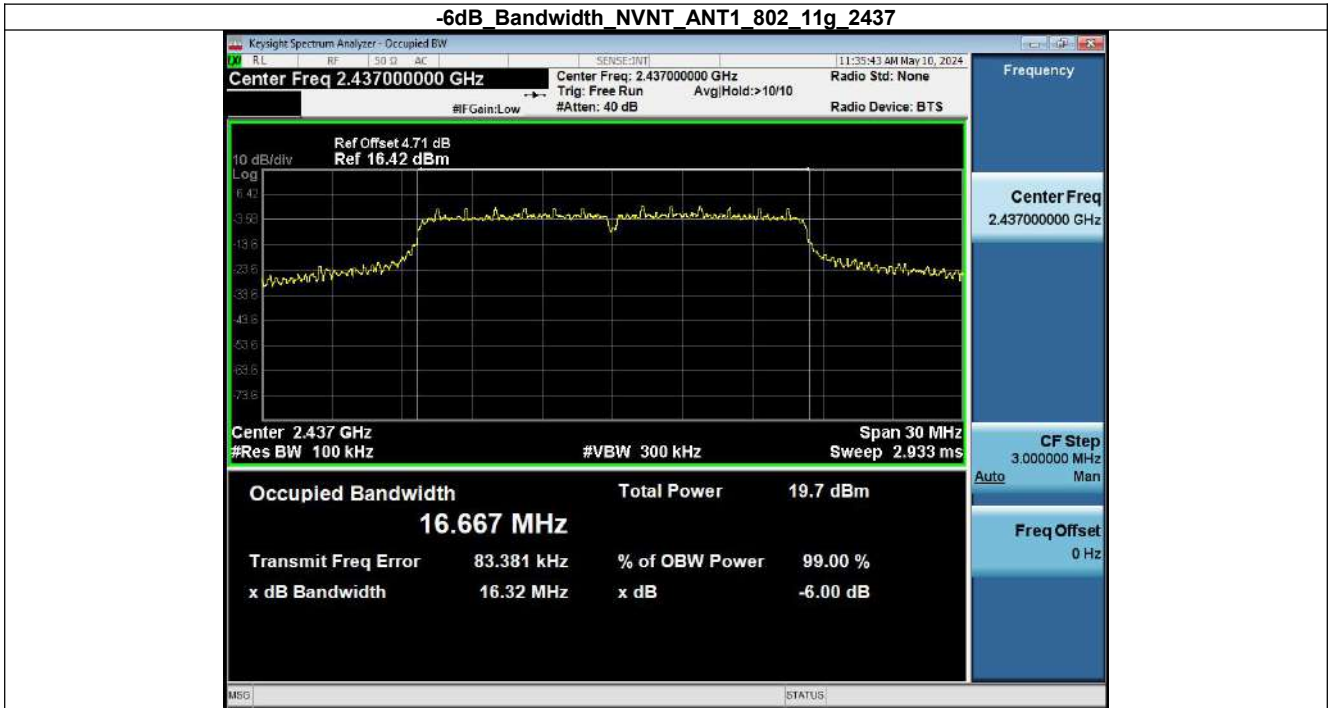
-6dB Bandwidth NVNT_ANT1_802_11b_2462



-6dB Bandwidth NVNT_ANT1_802_11g_2412



-6dB Bandwidth NVNT_ANT1_802_11g_2437



-6dB Bandwidth NVNT_ANT1_802_11g_2462



-6dB Bandwidth NVNT_ANT1_802_11n(HT20)_2412



-6dB Bandwidth NVNT_ANT1_802_11n(HT20)_2437



-6dB_Bandwidth_NVNT_ANT1_802_11n(HT20)_2462



-6dB_Bandwidth_NVNT_ANT1_802_11n(HT40)_2422



-6dB_Bandwidth_NVNT_ANT1_802_11n(HT40)_2437

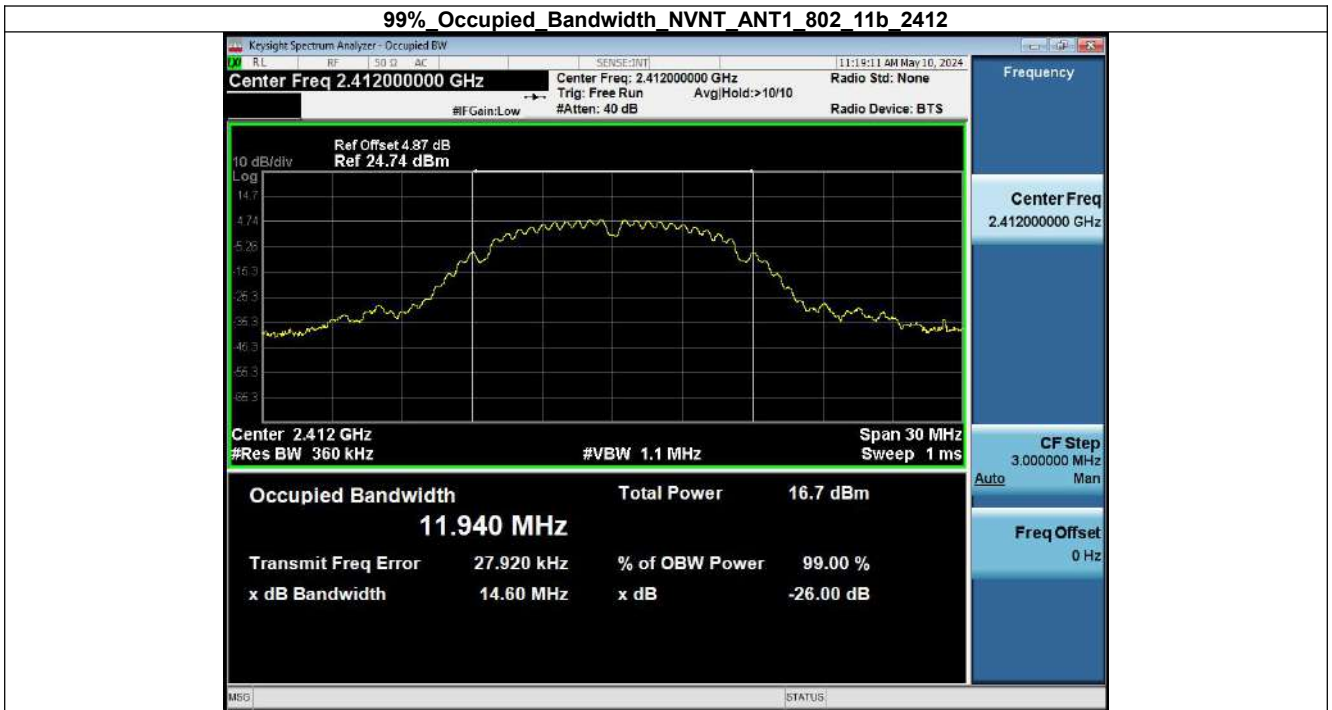


-6dB_Bandwidth_NVNT_ANT1_802_11n(HT40)_2452



2. 99% Occupied Bandwidth

Condition	Antenna	Modulation	Frequency (MHz)	99% BW (MHz)
NVNT	ANT1	802.11b	2412.00	11.940
NVNT	ANT1	802.11b	2437.00	12.108
NVNT	ANT1	802.11b	2462.00	12.093
NVNT	ANT1	802.11g	2412.00	17.192
NVNT	ANT1	802.11g	2437.00	18.373
NVNT	ANT1	802.11g	2462.00	17.735
NVNT	ANT1	802.11n(HT20)	2412.00	17.786
NVNT	ANT1	802.11n(HT20)	2437.00	18.118
NVNT	ANT1	802.11n(HT20)	2462.00	18.152
NVNT	ANT1	802.11n(HT40)	2422.00	36.734
NVNT	ANT1	802.11n(HT40)	2437.00	36.411
NVNT	ANT1	802.11n(HT40)	2452.00	36.447



99% Occupied Bandwidth NVNT ANT1 802_11b_2437



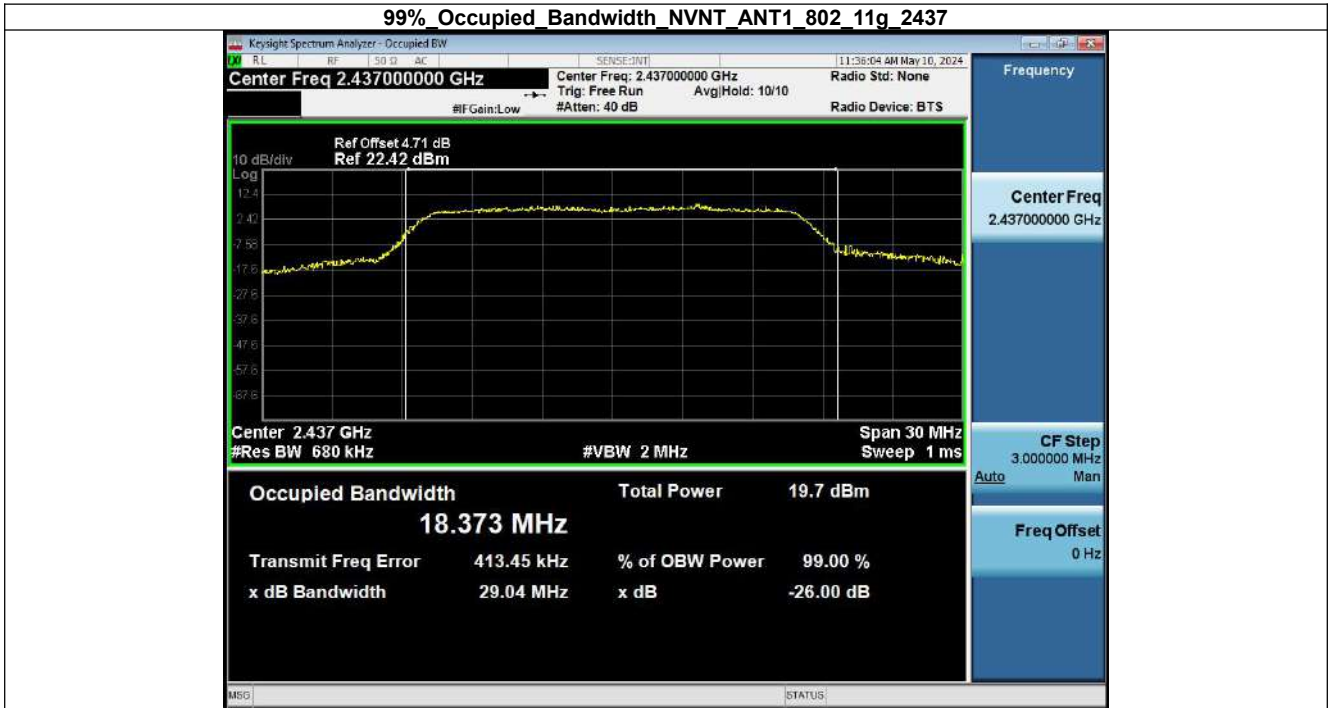
99% Occupied Bandwidth_NVNT_ANT1_802_11b_2462



99% Occupied Bandwidth_NVNT_ANT1_802_11g_2412



99% Occupied Bandwidth_NVNT_ANT1_802_11g_2437



99% Occupied Bandwidth_NVNT_ANT1_802_11g_2462



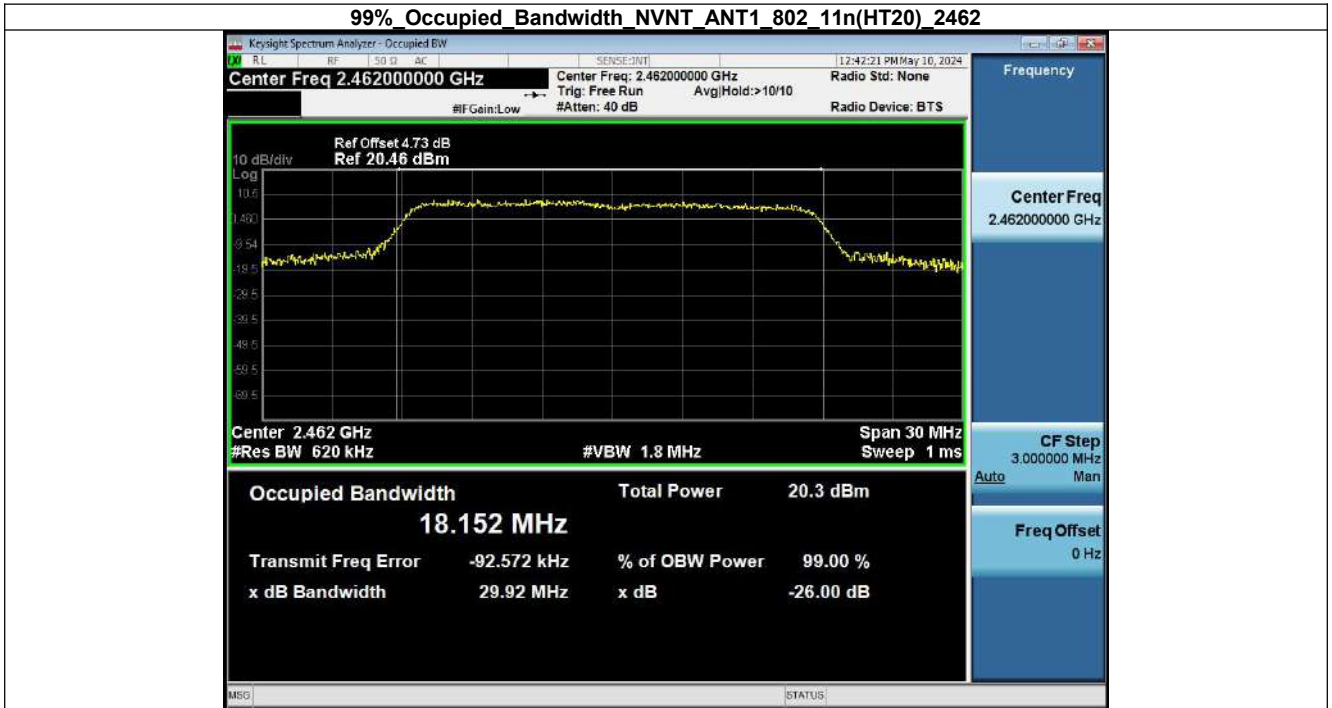
99% Occupied Bandwidth_NVNT_ANT1_802_11n(HT20)_2412



99% Occupied Bandwidth_NVNT_ANT1_802_11n(HT20)_2437



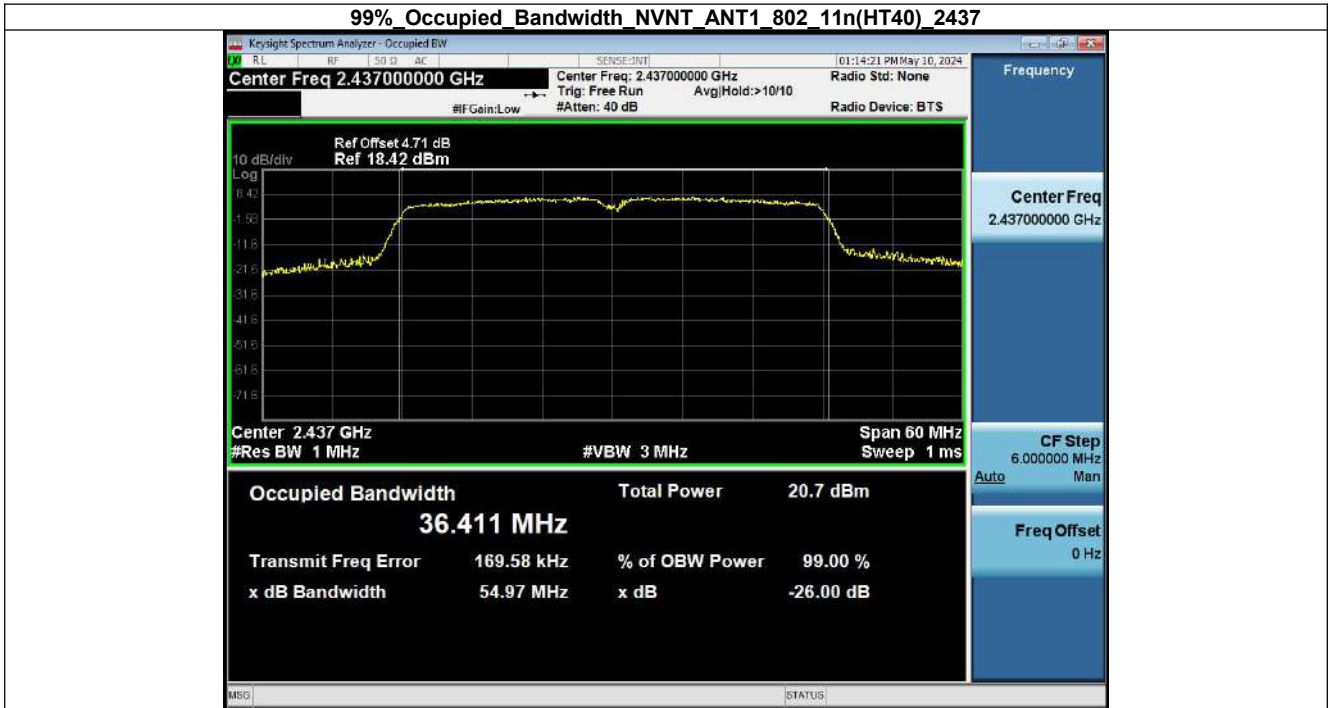
99% Occupied Bandwidth_NVNT_ANT1_802_11n(HT20)_2462



99% Occupied Bandwidth_NVNT_ANT1_802_11n(HT40)_2422



99% Occupied Bandwidth_NVNT_ANT1_802_11n(HT40)_2437

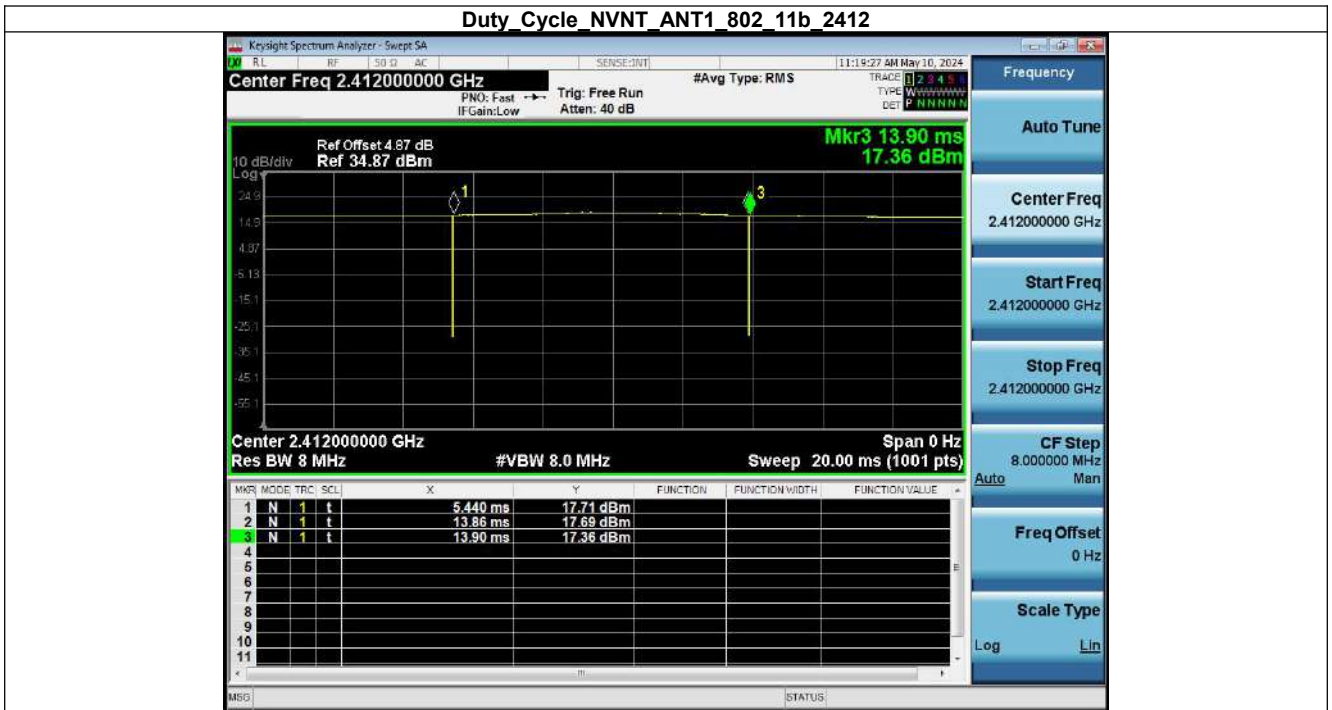


99% Occupied Bandwidth_NVNT_ANT1_802_11n(HT40)_2452

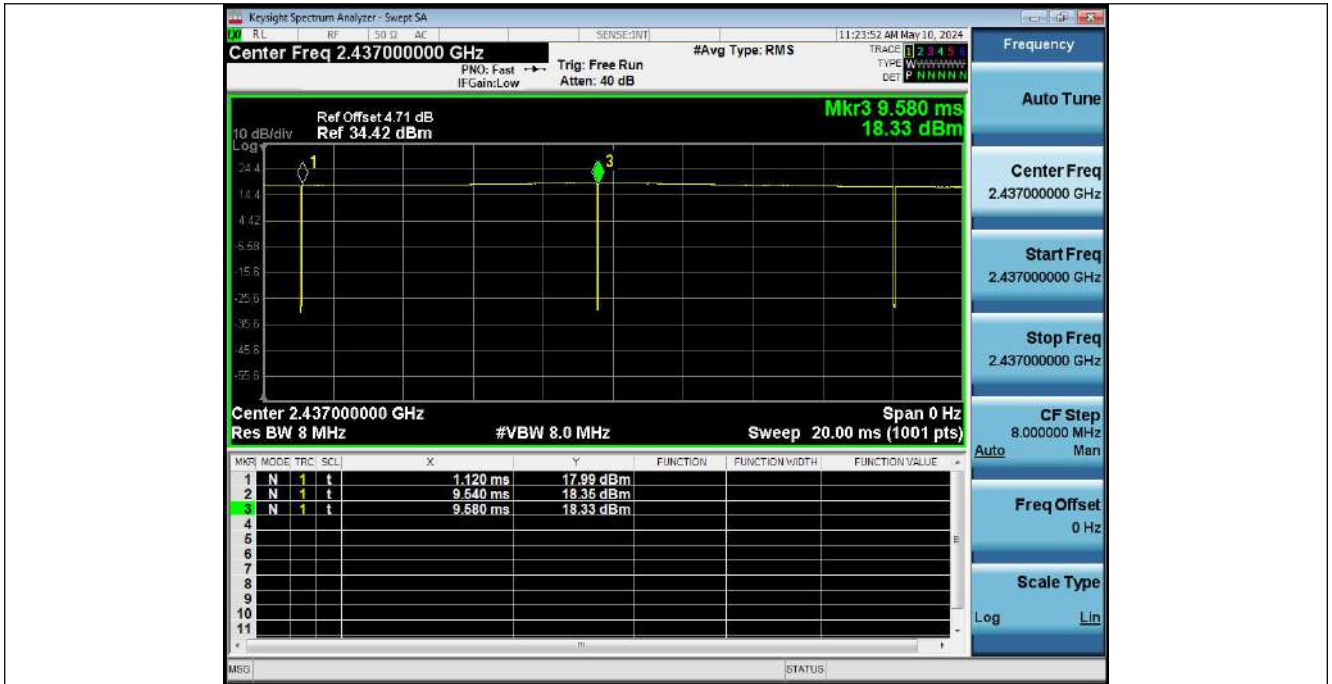


3. Duty Cycle

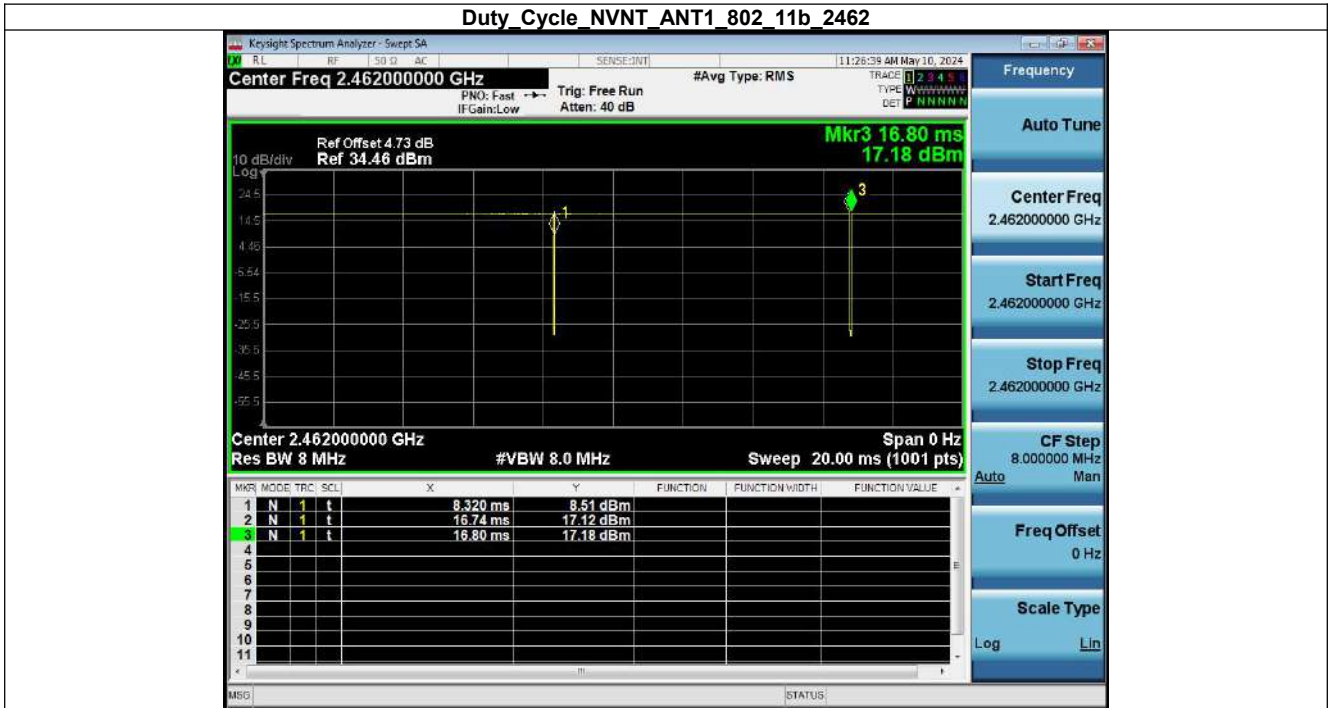
Condition	Antenna	Modulation	Frequency (MHz)	Duty cycle(%)	Duty factor(dB)
NVNT	ANT1	802.11b	2412.00	99.76	0.00
NVNT	ANT1	802.11b	2437.00	99.76	0.00
NVNT	ANT1	802.11b	2462.00	99.53	0.00
NVNT	ANT1	802.11g	2412.00	97.22	0.12
NVNT	ANT1	802.11g	2437.00	97.26	0.12
NVNT	ANT1	802.11g	2462.00	95.89	0.18
NVNT	ANT1	802.11n(HT20)	2412.00	98.36	0.00
NVNT	ANT1	802.11n(HT20)	2437.00	96.77	0.14
NVNT	ANT1	802.11n(HT20)	2462.00	98.36	0.00
NVNT	ANT1	802.11n(HT40)	2422.00	96.88	0.14
NVNT	ANT1	802.11n(HT40)	2437.00	93.75	0.28
NVNT	ANT1	802.11n(HT40)	2452.00	93.75	0.28



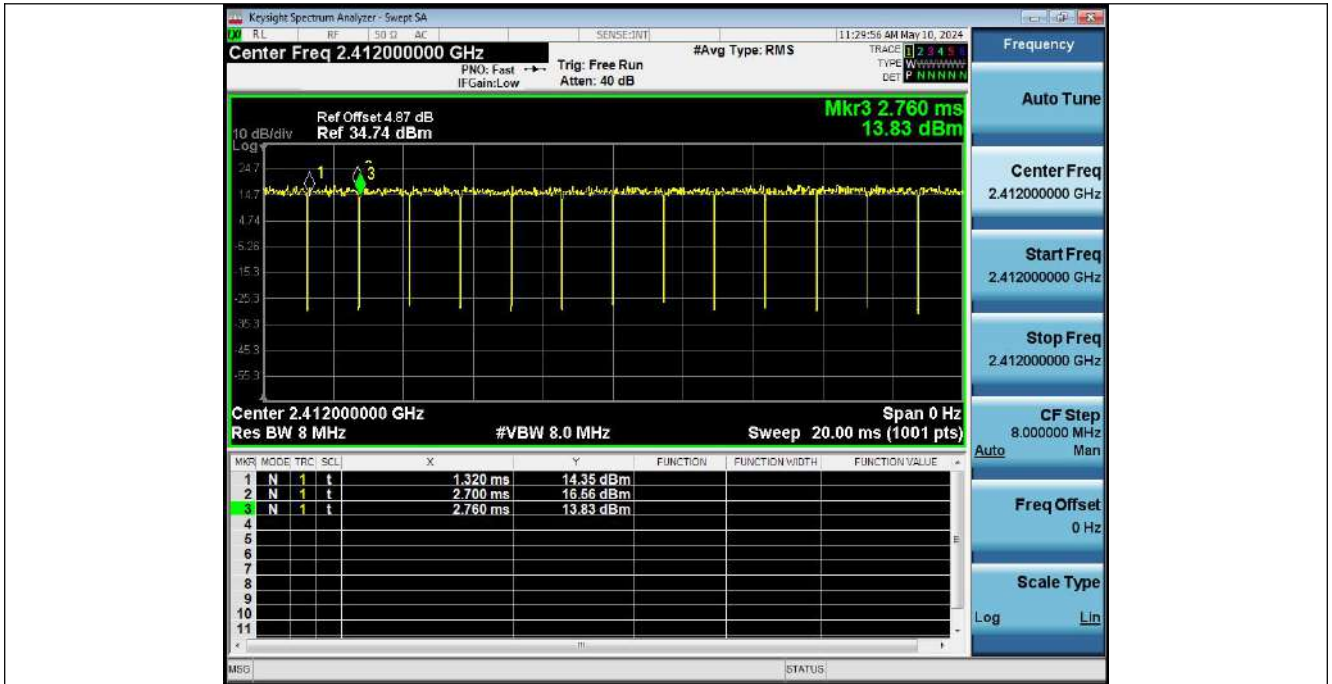
Duty Cycle NVNT ANT1 802_11b_2437



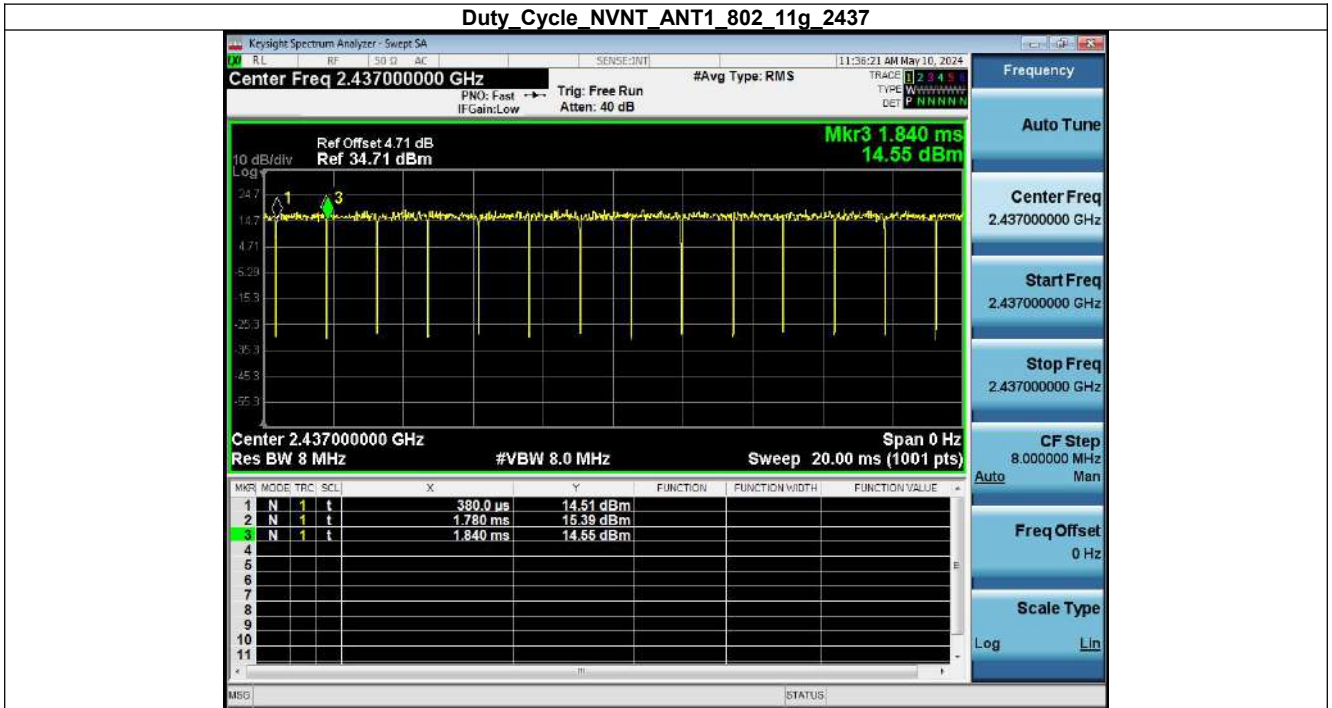
Duty Cycle NVNT ANT1 802_11b_2462



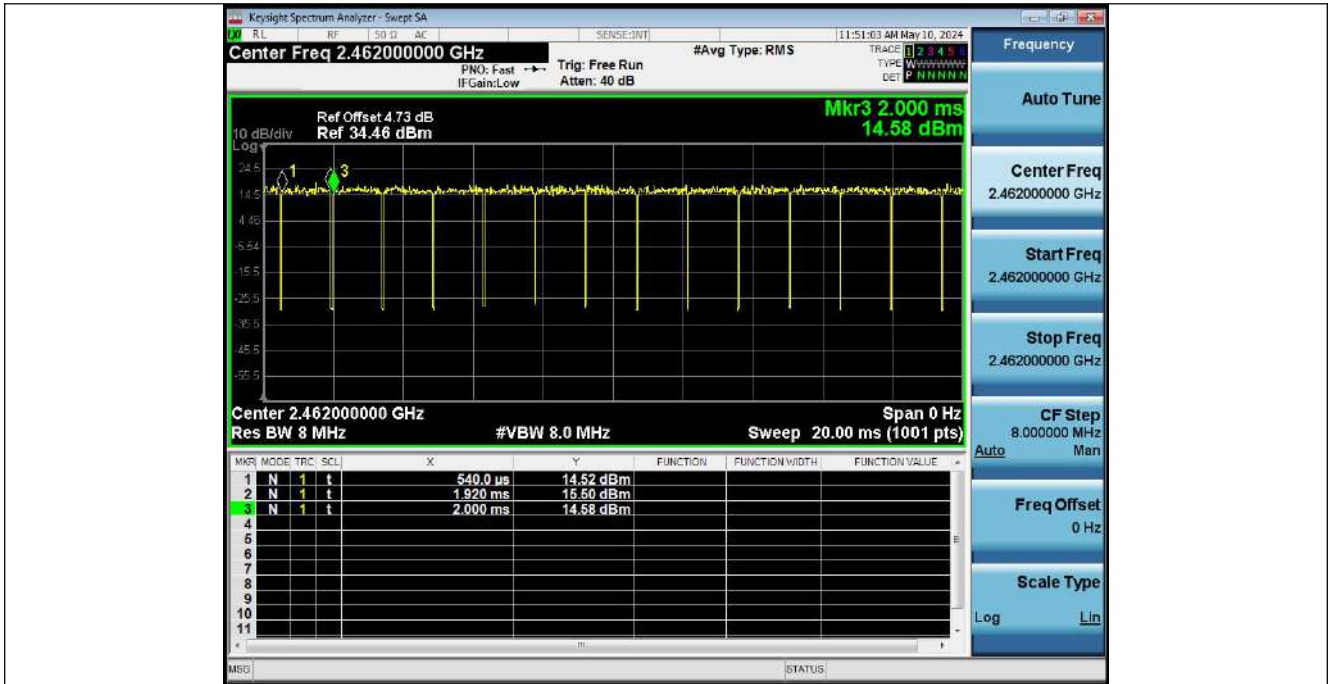
Duty Cycle NVNT ANT1 802_11g_2412



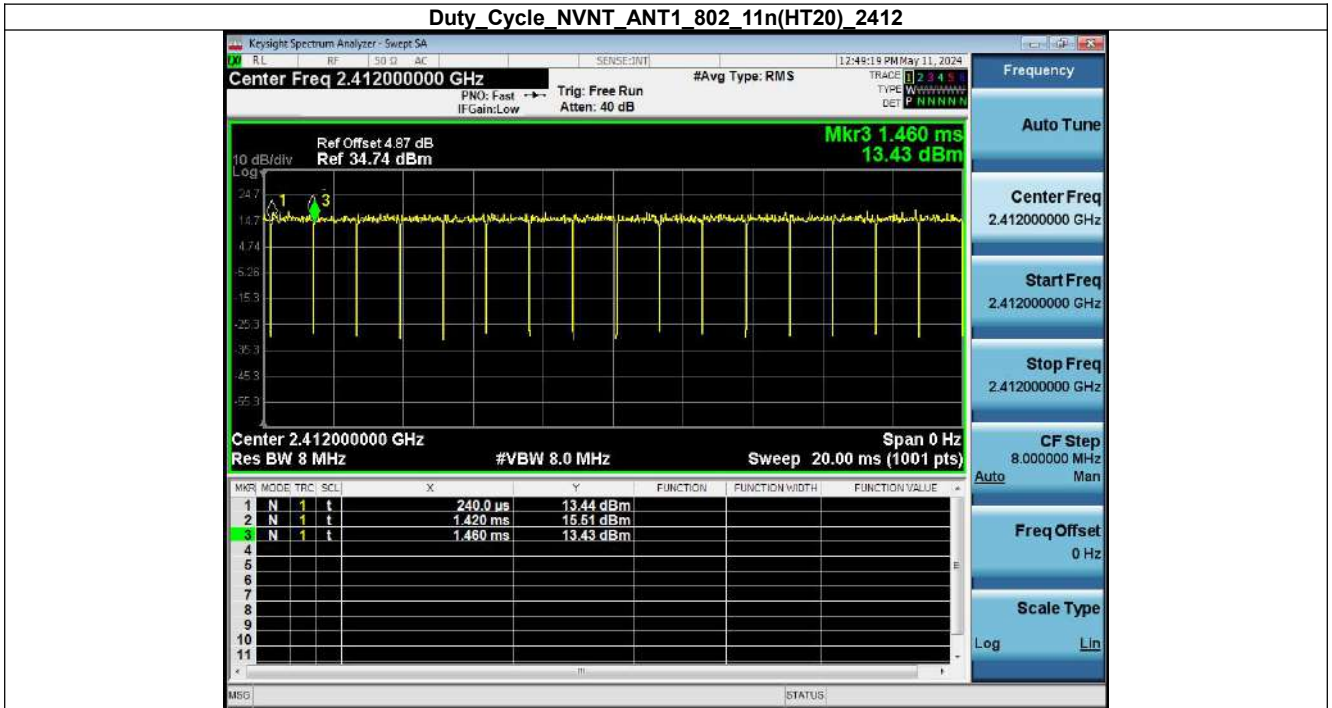
Duty Cycle NVNT_ANT1_802_11g_2437



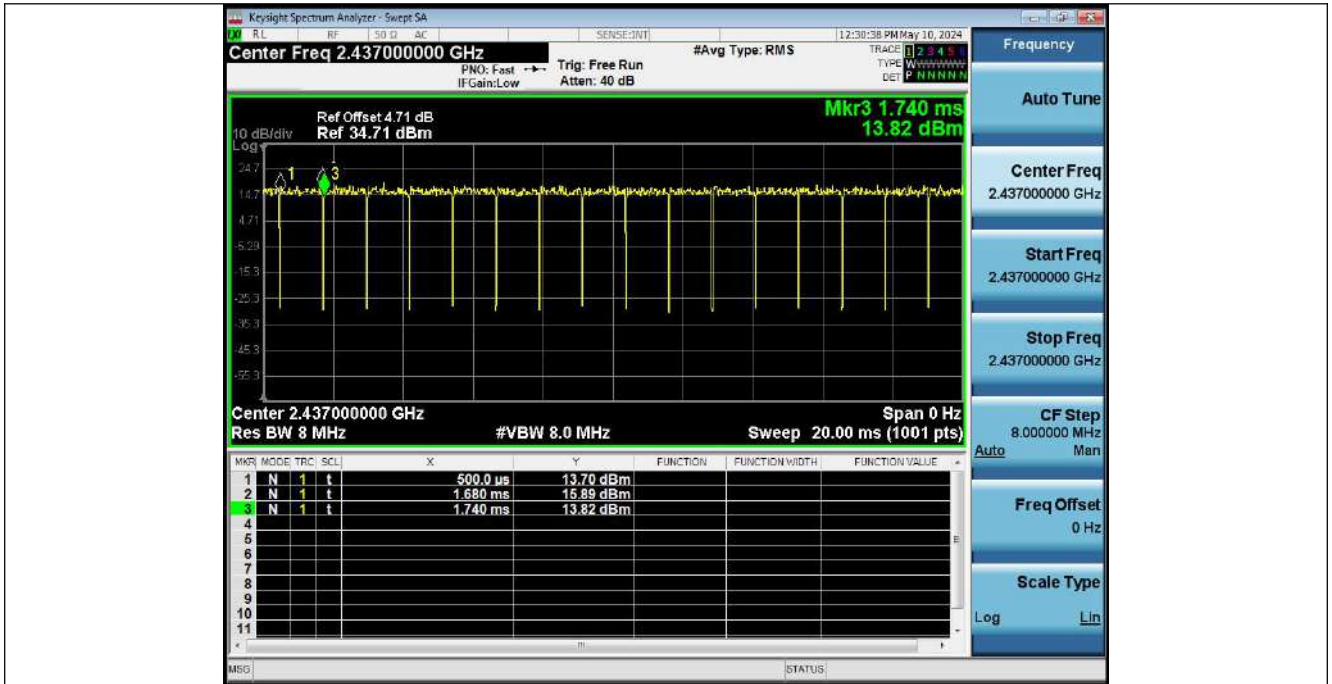
Duty Cycle NVNT_ANT1_802_11g_2462



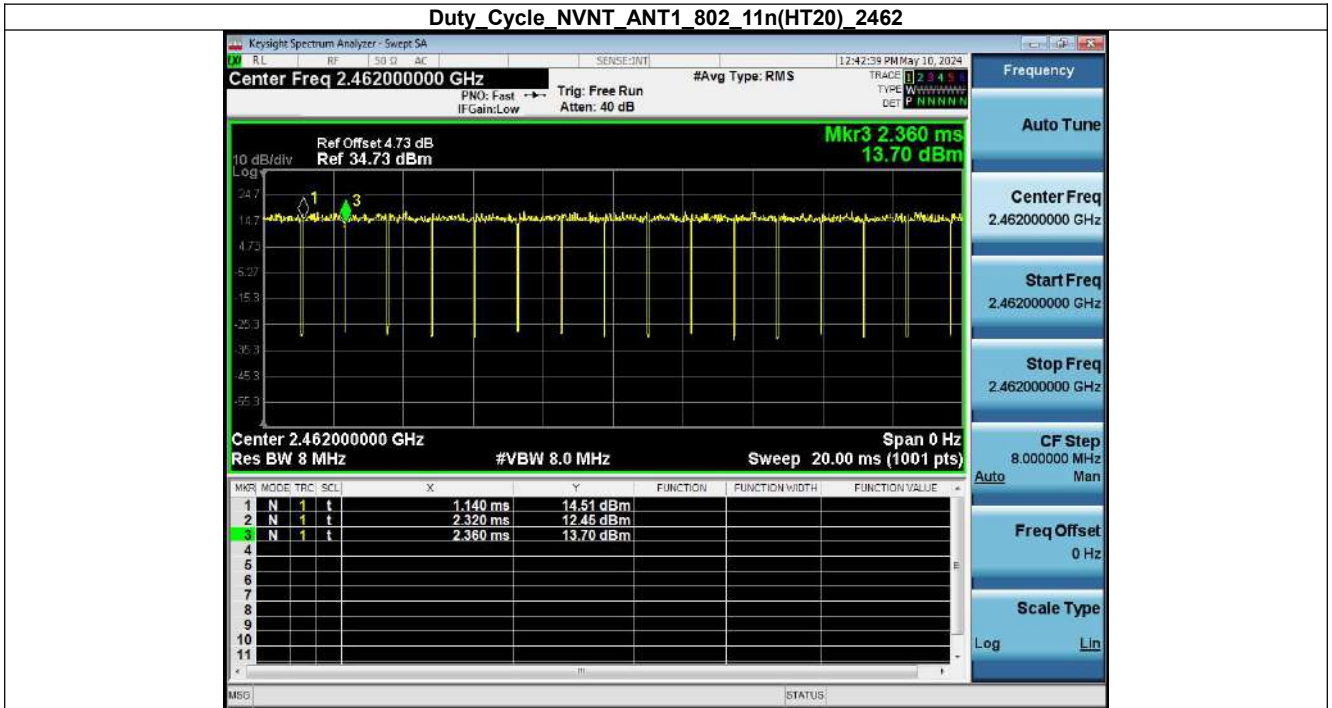
Duty Cycle_NVNT_ANT1_802_11n(HT20)_2412



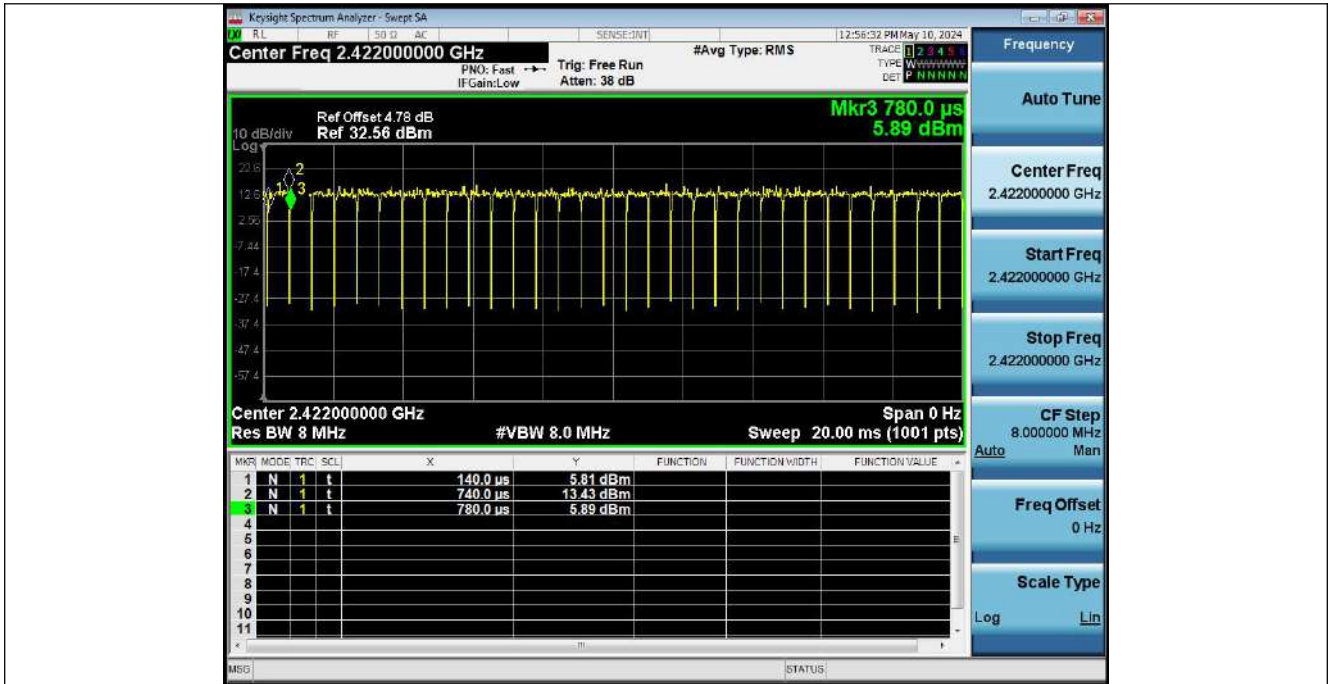
Duty Cycle_NVNT_ANT1_802_11n(HT20)_2437



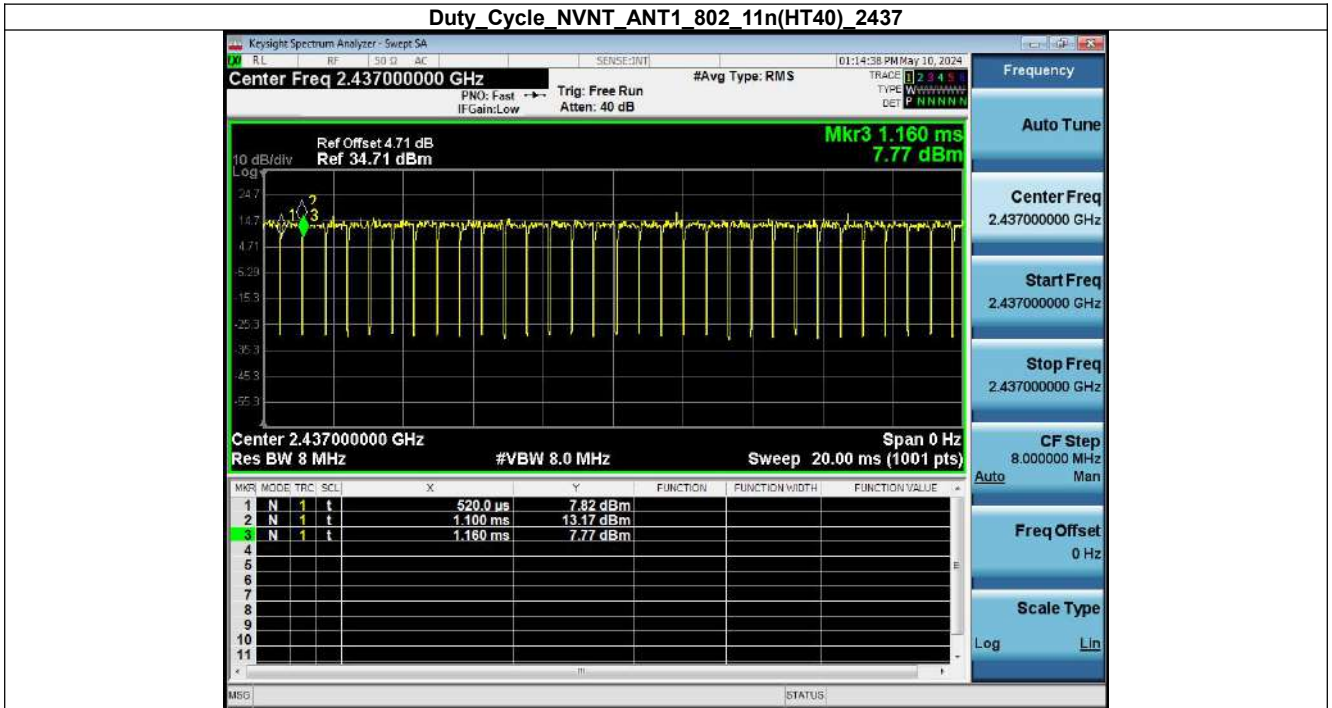
Duty Cycle NVNT_ANT1_802_11n(HT20)_2462



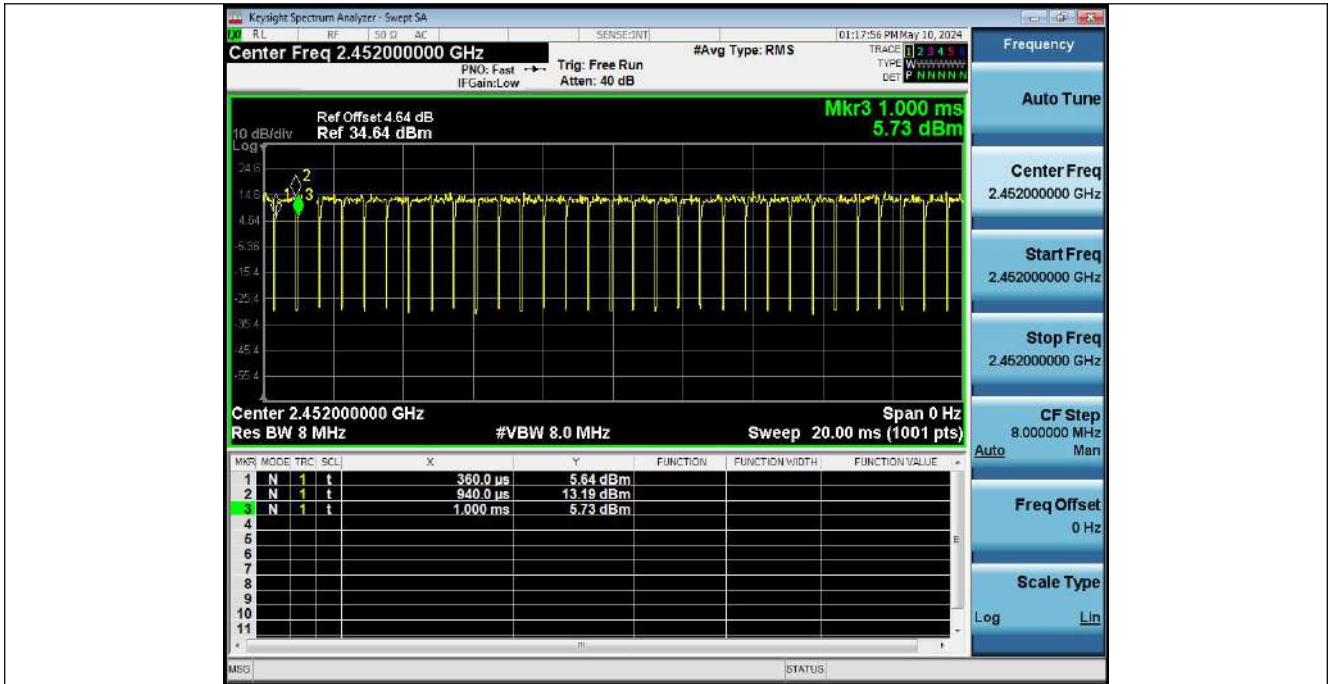
Duty Cycle NVNT_ANT1_802_11n(HT40)_2422



Duty Cycle_NVNT_ANT1_802_11n(HT40)_2437



Duty Cycle_NVNT_ANT1_802_11n(HT40)_2452



4. MAX. Output Power

Condition	Antenna	Modulation	Frequency (MHz)	Detector	Conducted Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	Peak	16.32	30	Pass
NVNT	ANT1	802.11b	2437.00	Peak	16.71	30	Pass
NVNT	ANT1	802.11b	2462.00	Peak	16.53	30	Pass
NVNT	ANT1	802.11g	2412.00	Peak	19.63	30	Pass
NVNT	ANT1	802.11g	2437.00	Peak	20.31	30	Pass
NVNT	ANT1	802.11g	2462.00	Peak	20.14	30	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	Peak	19.43	30	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	Peak	20.17	30	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	Peak	20.09	30	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	Peak	20.44	30	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	Peak	20.38	30	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	Peak	19.86	30	Pass

Remark:

1. Measured output power at difference data rate for each mode and recorded worst case for each mode.
2. Test results including cable loss;
3. Worst case data at 1Mbps at IEEE 802.11b; 6Mbps at IEEE 802.11g; 6.5Mbps at IEEE 802.11n HT20; 13.5Mbps at IEEE 802.11n HT40;

5. Power Spectral Density

Condition	Antenna	Modulation	Frequency (MHz)	PSD(dBm/30kHz)	Duty factor(dB)	RB factor(dB)	PSD(dBm/3kHz)	limit(dBm/3kHz)	Result
NVNT	ANT1	802.11b	2412.00	3.80	N/A	-10.00	-6.20	8	Pass
NVNT	ANT1	802.11b	2437.00	1.39	N/A	-10.00	-8.61	8	Pass
NVNT	ANT1	802.11b	2462.00	1.15	N/A	-10.00	-8.85	8	Pass
NVNT	ANT1	802.11g	2412.00	-3.85	N/A	-10.00	-13.86	8	Pass
NVNT	ANT1	802.11g	2437.00	-2.38	N/A	-10.00	-12.38	8	Pass
NVNT	ANT1	802.11g	2462.00	-3.04	N/A	-10.00	-13.04	8	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	-4.24	N/A	-10.00	-14.24	8	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	-3.72	N/A	-10.00	-13.72	8	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	-4.03	N/A	-10.00	-14.03	8	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	-6.57	N/A	-10.00	-16.57	8	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	-6.62	N/A	-10.00	-16.62	8	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	-6.52	N/A	-10.00	-16.52	8	Pass



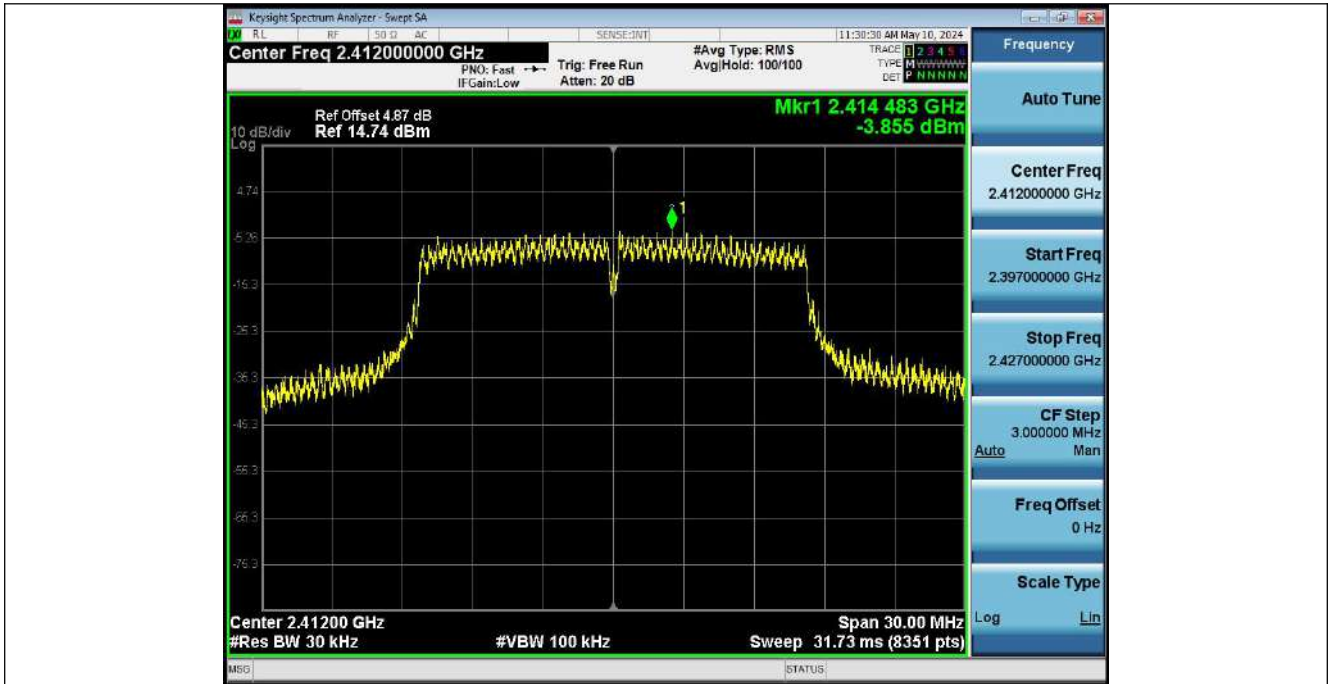
Power_Spectral_Density_NVNT_ANT1_802_11b_2437



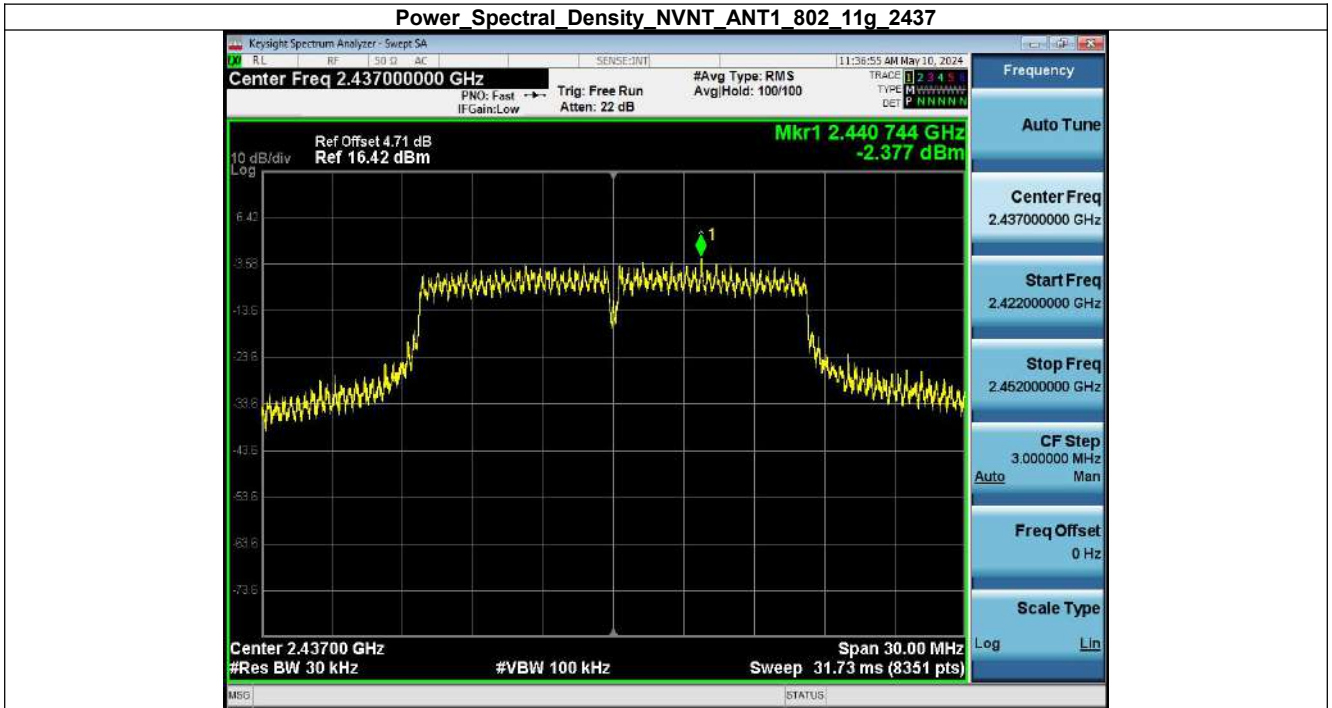
Power_Spectral_Density_NVNT_ANT1_802_11b_2462



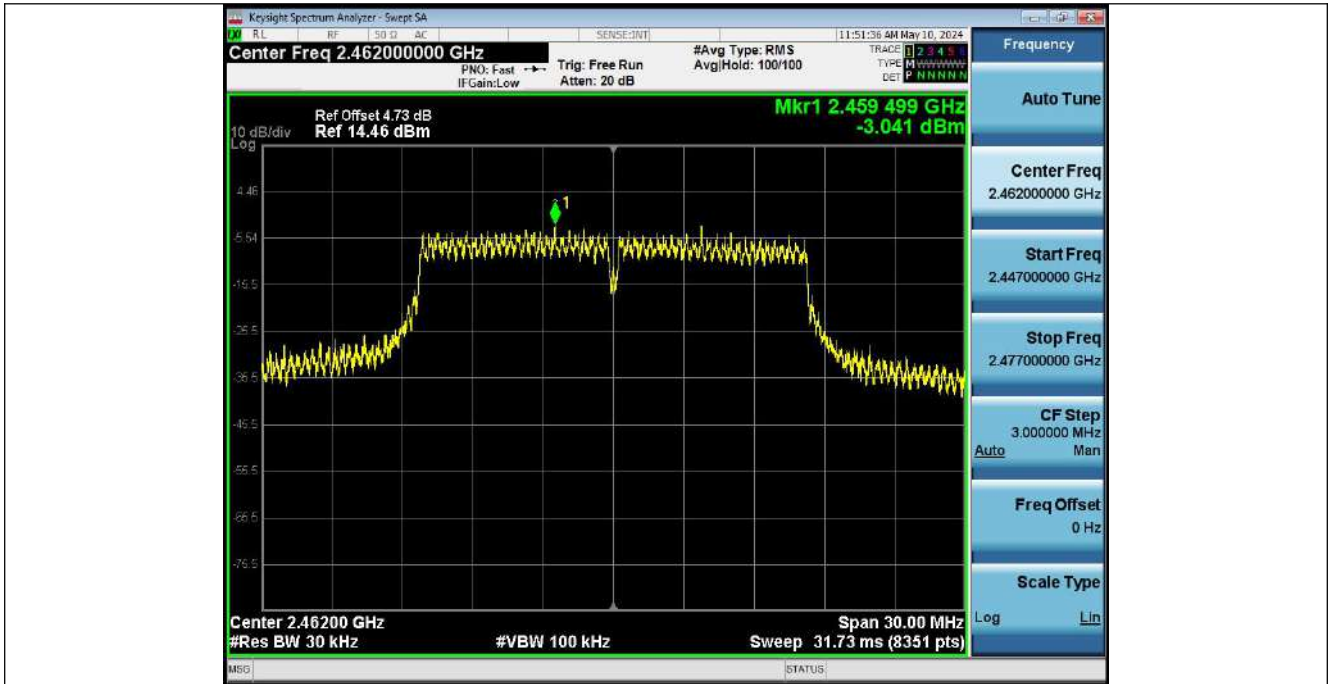
Power_Spectral_Density_NVNT_ANT1_802_11g_2412



Power_Spectral_Density_NVNT_ANT1_802_11g_2437



Power_Spectral_Density_NVNT_ANT1_802_11g_2462



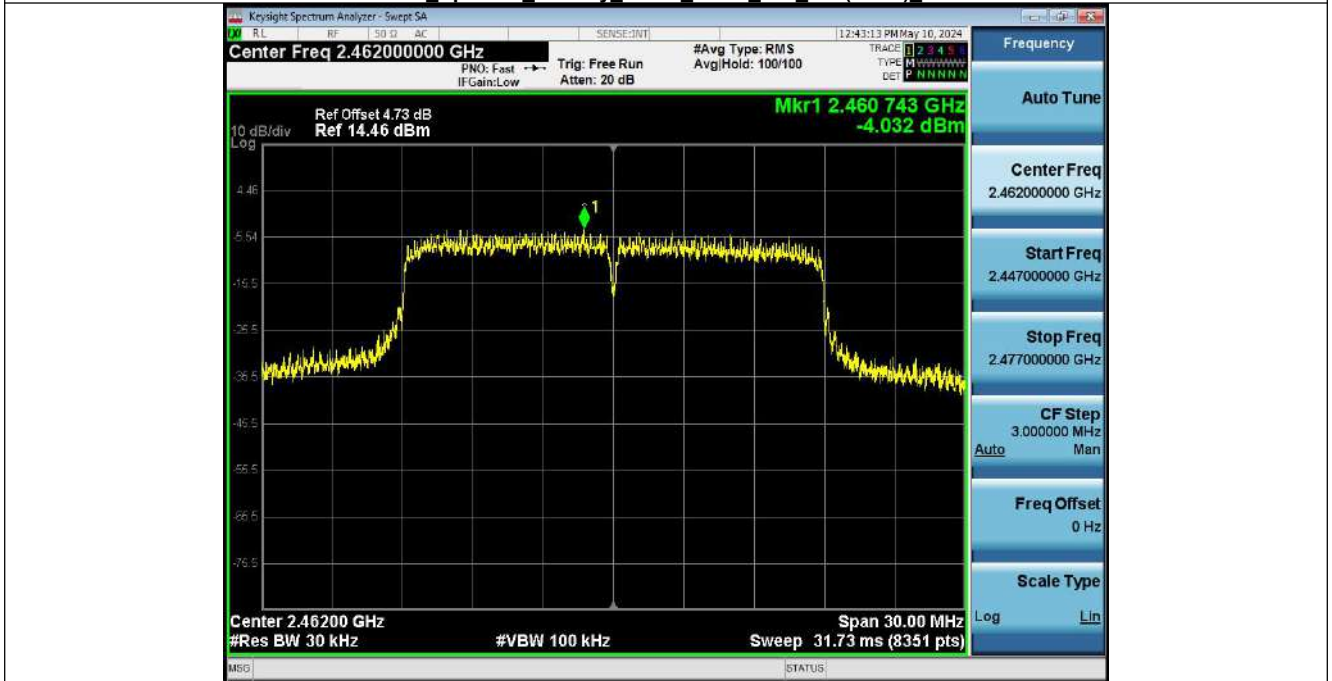
Power Spectral Density_NVNT_ANT1_802_11n(HT20)_2412



Power Spectral Density_NVNT_ANT1_802_11n(HT20)_2437



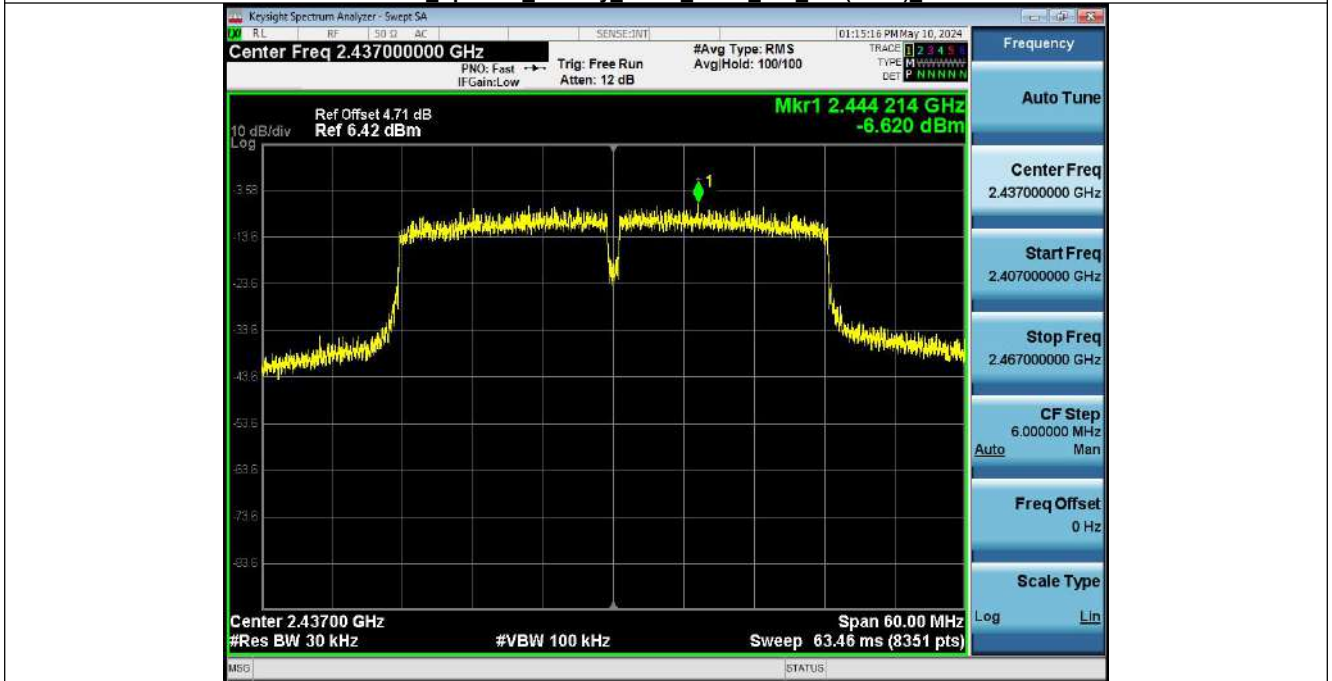
Power Spectral Density_NVNT_ANT1_802_11n(HT20)_2462



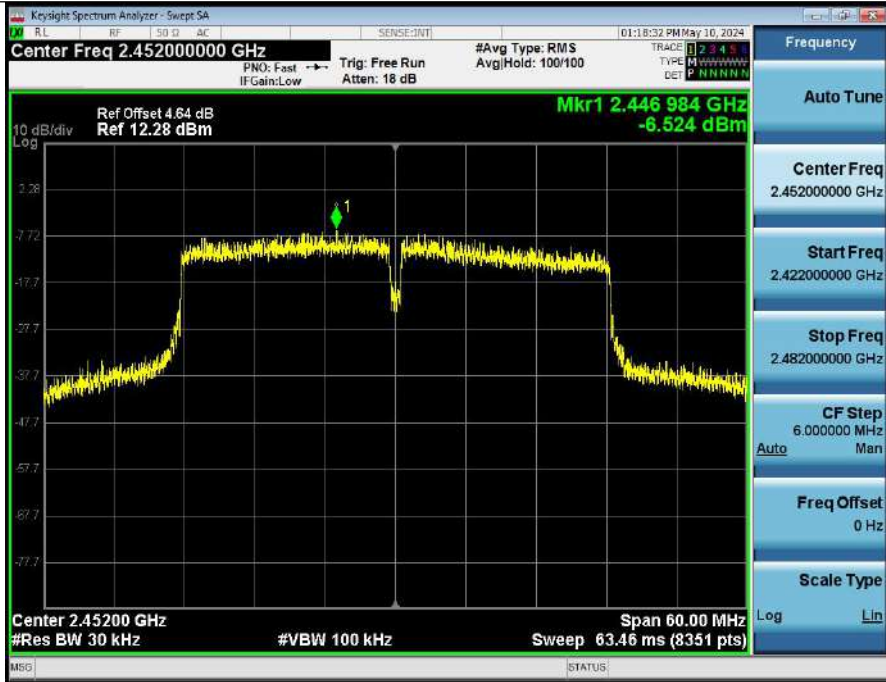
Power Spectral Density_NVNT_ANT1_802_11n(HT40)_2422



Power Spectral Density_NVNT_ANT1_802_11n(HT40)_2437



Power Spectral Density_NVNT_ANT1_802_11n(HT40)_2452



6. Bandedge

Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark_frequency(MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	2399.936	-38.121	-15.109	Pass
NVNT	ANT1	802.11b	2462.00	2485.984	-55.845	-14.993	Pass
NVNT	ANT1	802.11g	2412.00	2399.488	-27.731	-18.808	Pass
NVNT	ANT1	802.11g	2462.00	2483.536	-38.707	-18.530	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	2399.152	-30.160	-19.894	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	2484.208	-39.313	-18.985	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	2397.648	-31.174	-21.490	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	2483.612	-35.260	-21.612	Pass

1 Reference Level NVNT_ANT1_802_11b_2412



2 Bandedge_NVNT_ANT1_802_11b_2412



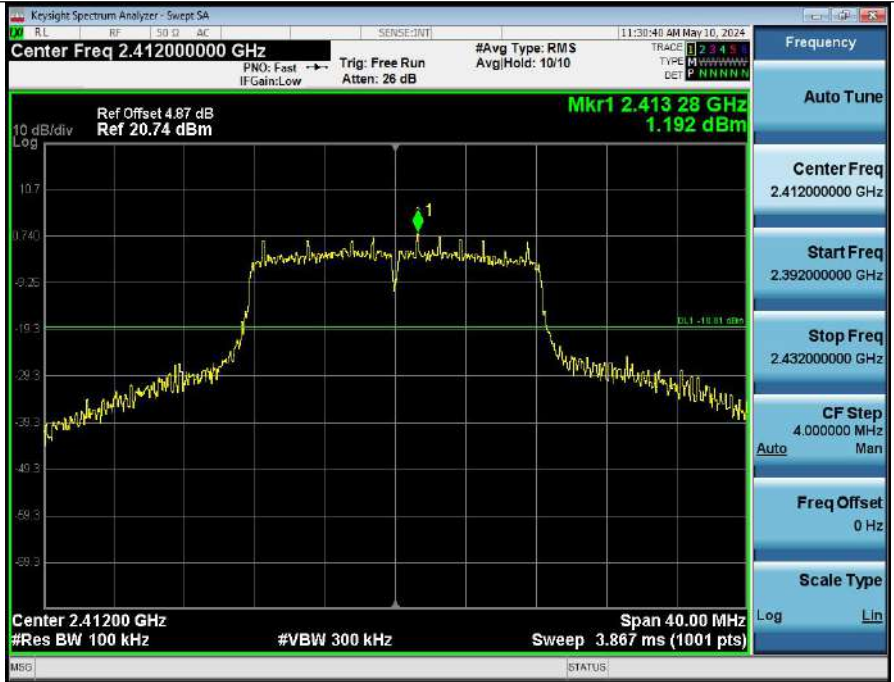
1 Reference Level NVNT_ANT1_802_11b_2462



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



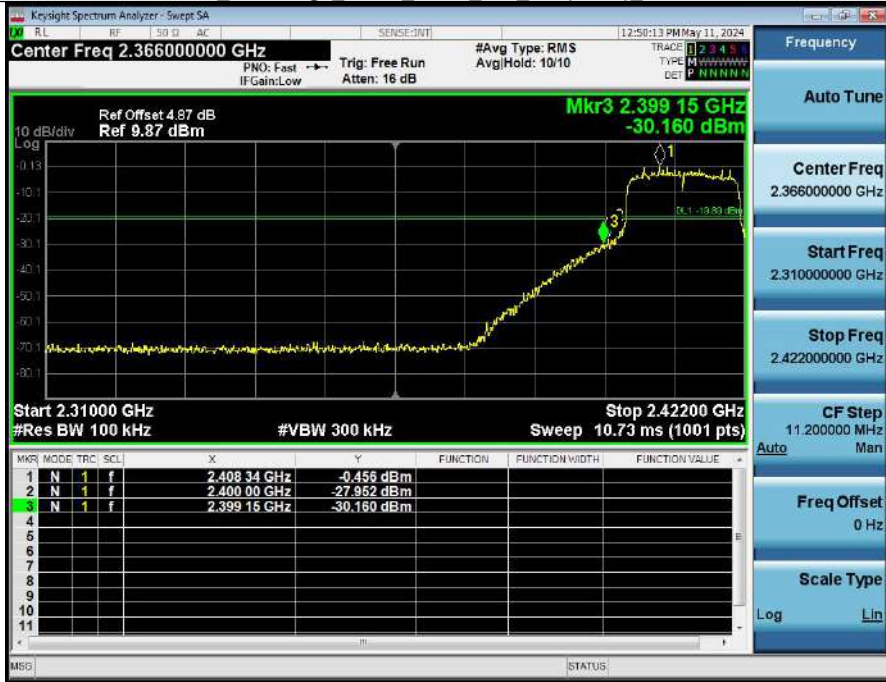
2_Bandedge_NVNT_ANT1_802_11g_2462



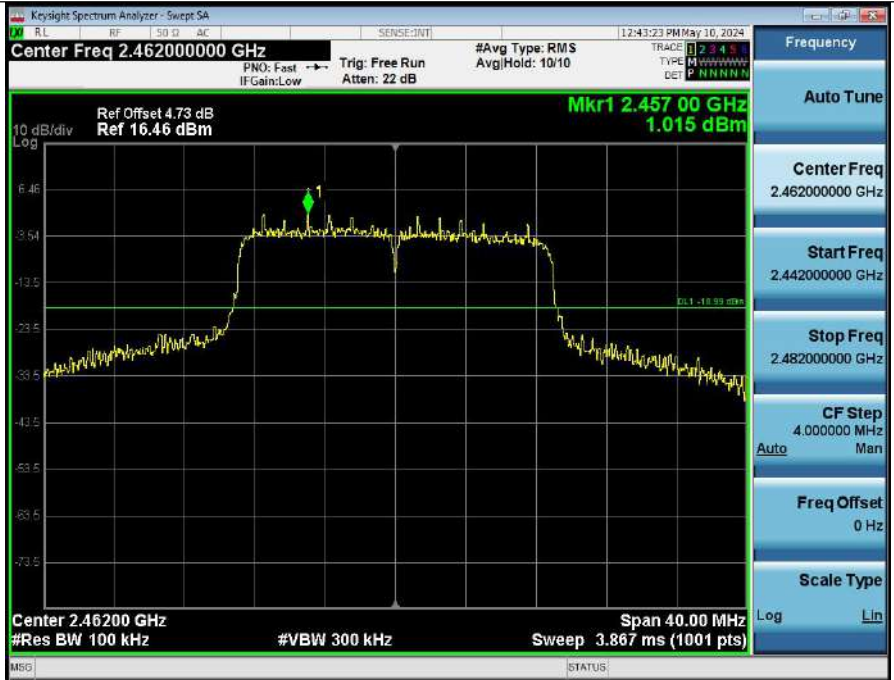
1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2412



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



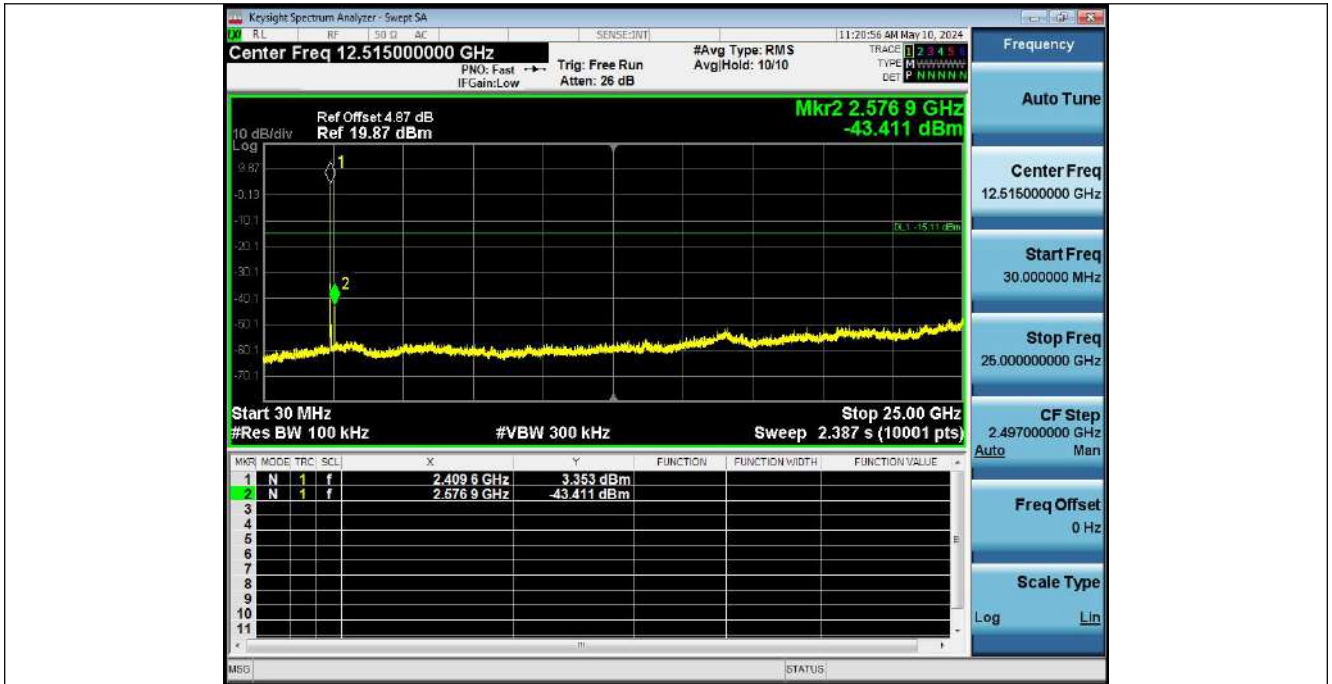
7. Spurious Emission

Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark_frequency(MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	2576.940	-43.411	-15.109	Pass
NVNT	ANT1	802.11b	2437.00	24970.036	-51.721	-15.198	Pass
NVNT	ANT1	802.11b	2462.00	831.537	-26.193	-14.993	Pass
NVNT	ANT1	802.11g	2412.00	704.190	-44.632	-18.808	Pass
NVNT	ANT1	802.11g	2437.00	24947.563	-56.607	-18.324	Pass
NVNT	ANT1	802.11g	2462.00	711.681	-32.755	-18.530	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	711.681	-42.562	-19.894	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	1755.427	-44.972	-19.243	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	5201.287	-48.282	-18.985	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	721.669	-39.880	-21.490	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	706.687	-42.304	-21.635	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	24967.539	-60.470	-21.612	Pass

1 Reference_Level_NVNT_ANT1_802_11b_2412



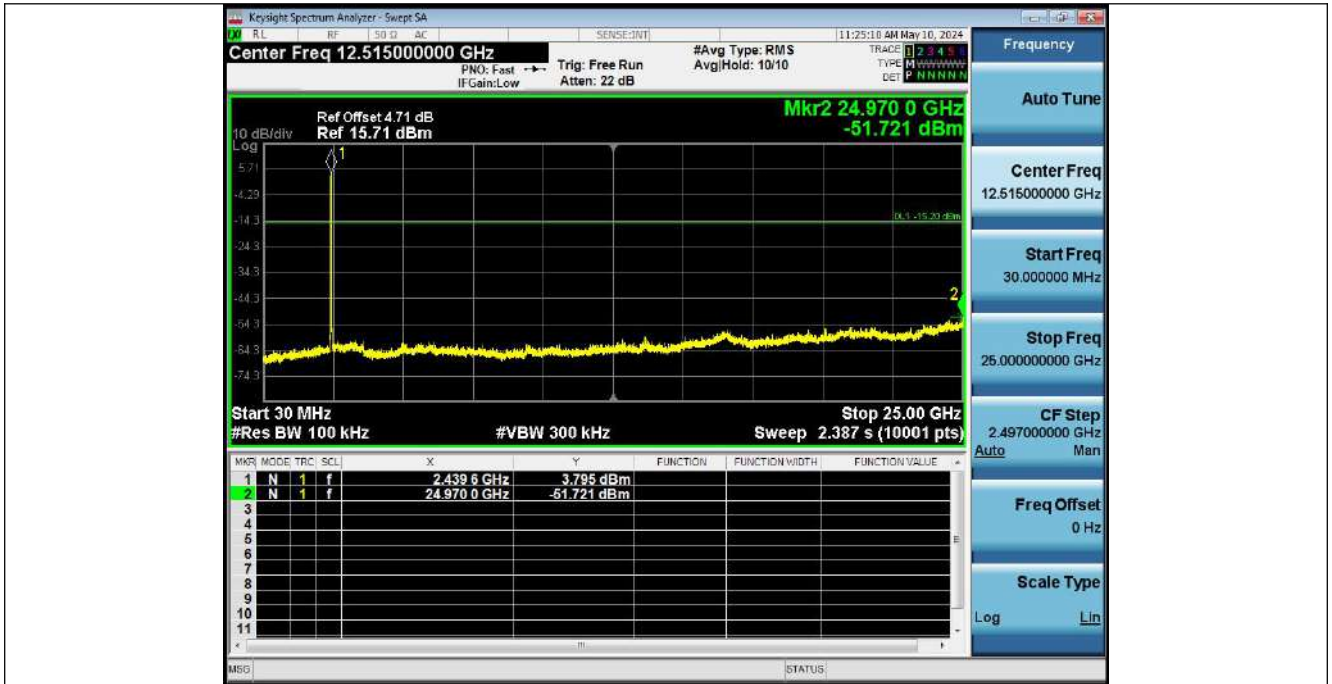
2 Spurious Emission_NVNT_ANT1_802_11b_2412



1 Reference Level NVNT ANT1 802 11b 2437



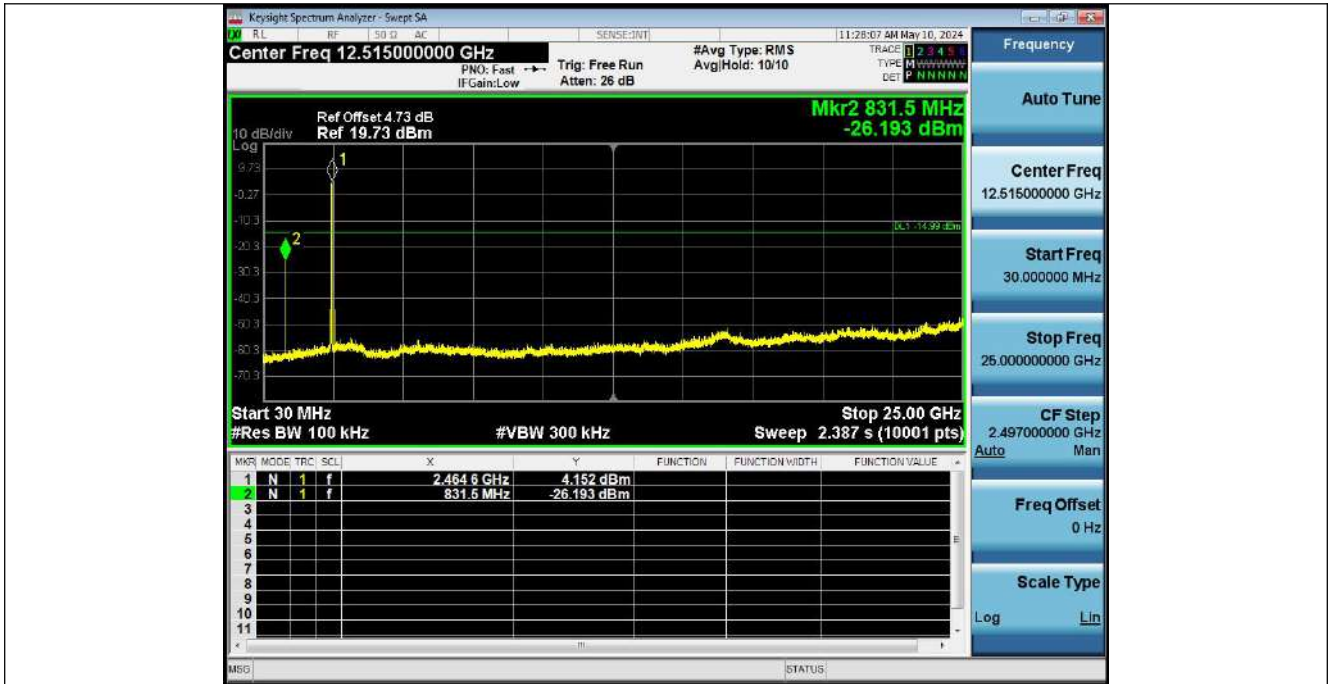
2 Spurious Emission_NVNT ANT1 802 11b 2437



1 Reference Level NVNT ANT1 802 11b 2462



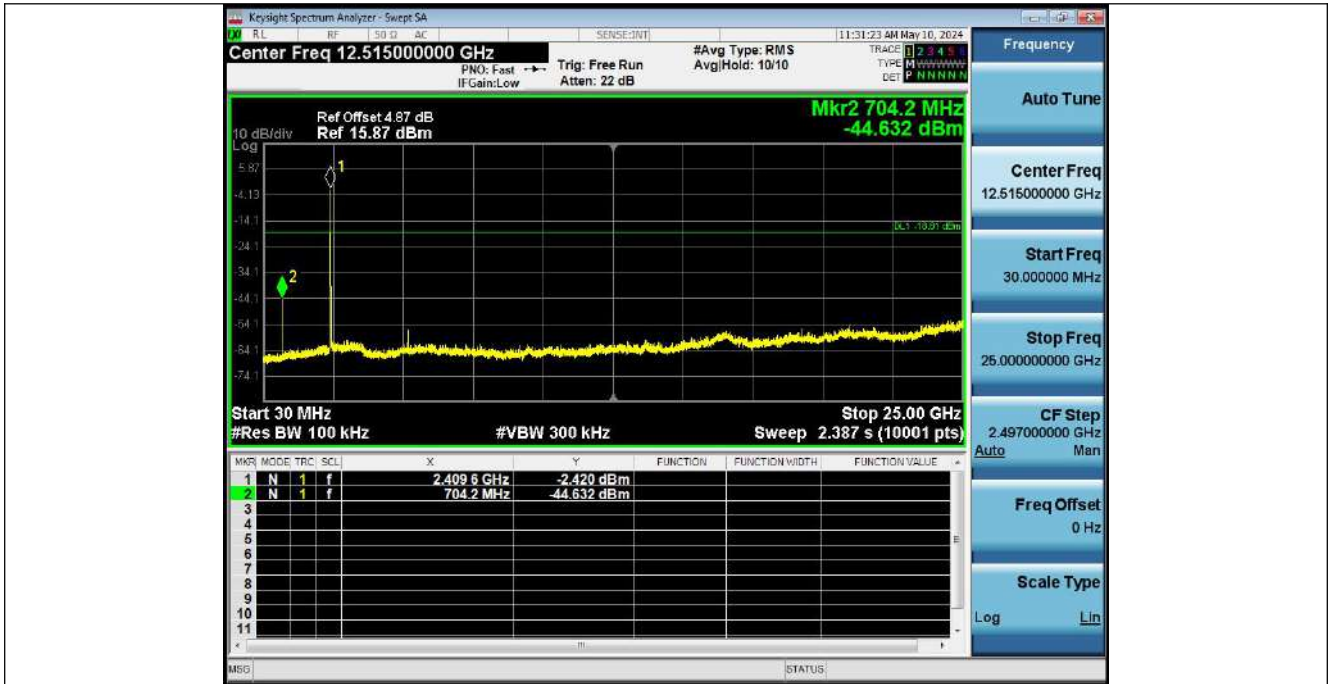
2 Spurious Emission_NVNT ANT1 802 11b 2462



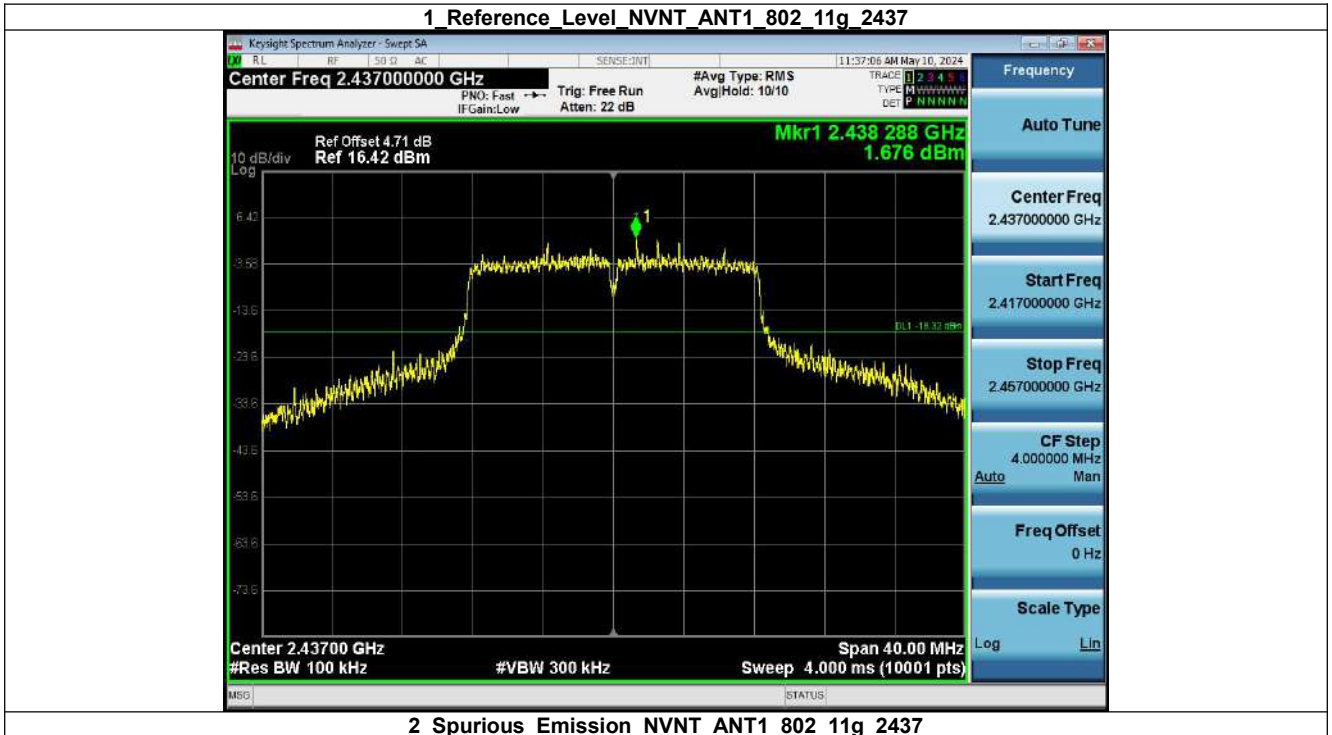
1 Reference Level NVNT ANT1 802 11g 2412



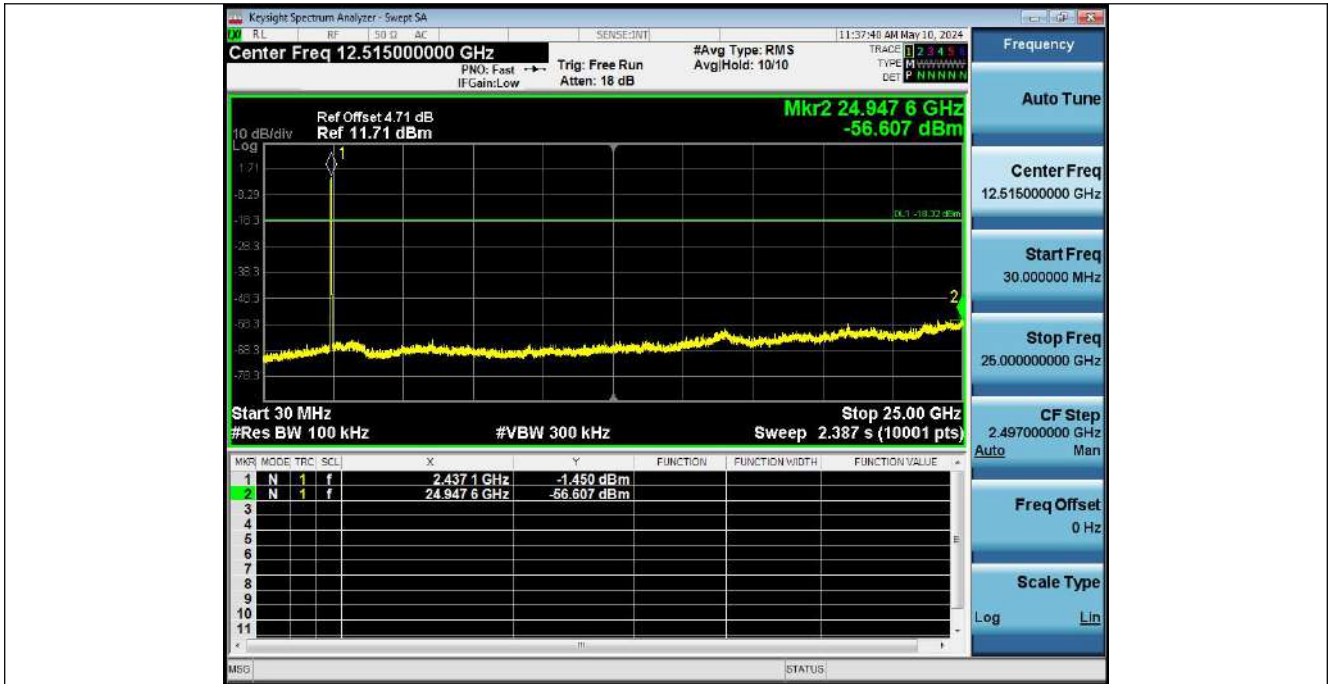
2 Spurious Emission_NVNT ANT1 802 11g 2412



1 Reference Level NVNT ANT1 802 11g 2437



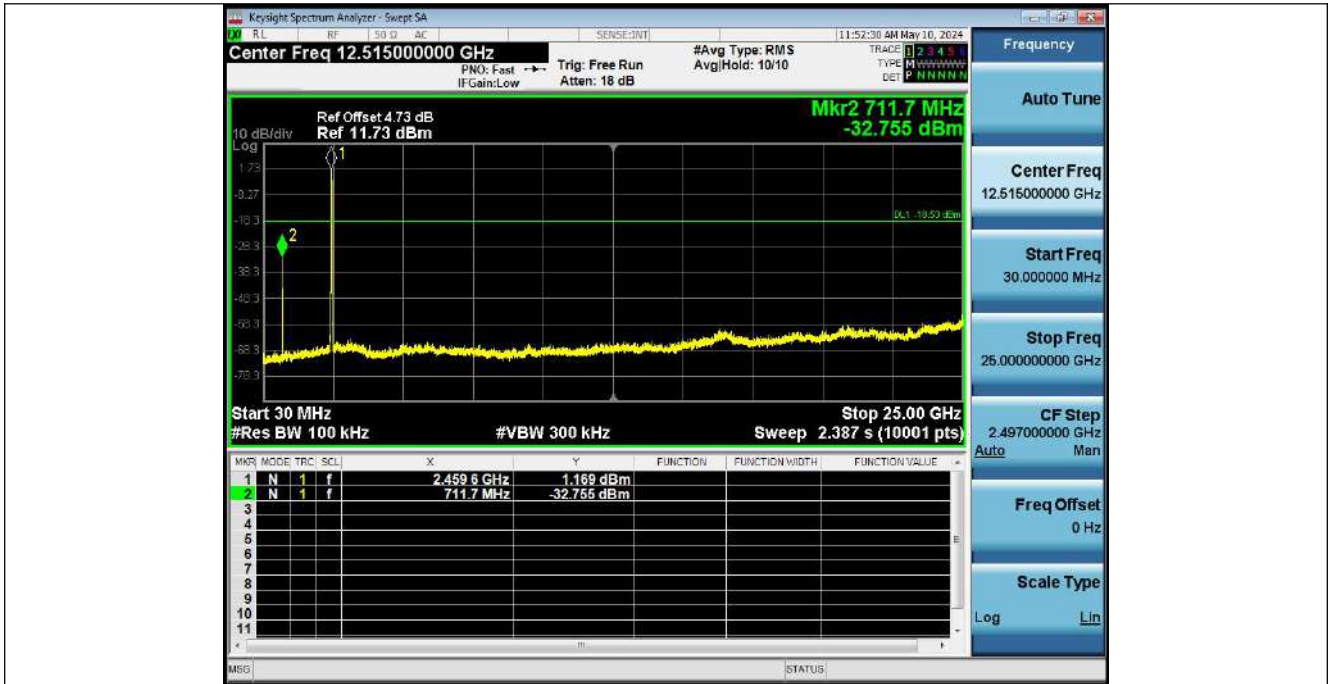
2 Spurious Emission_NVNT ANT1 802 11g 2437



1 Reference Level NVNT ANT1 802 11g 2462



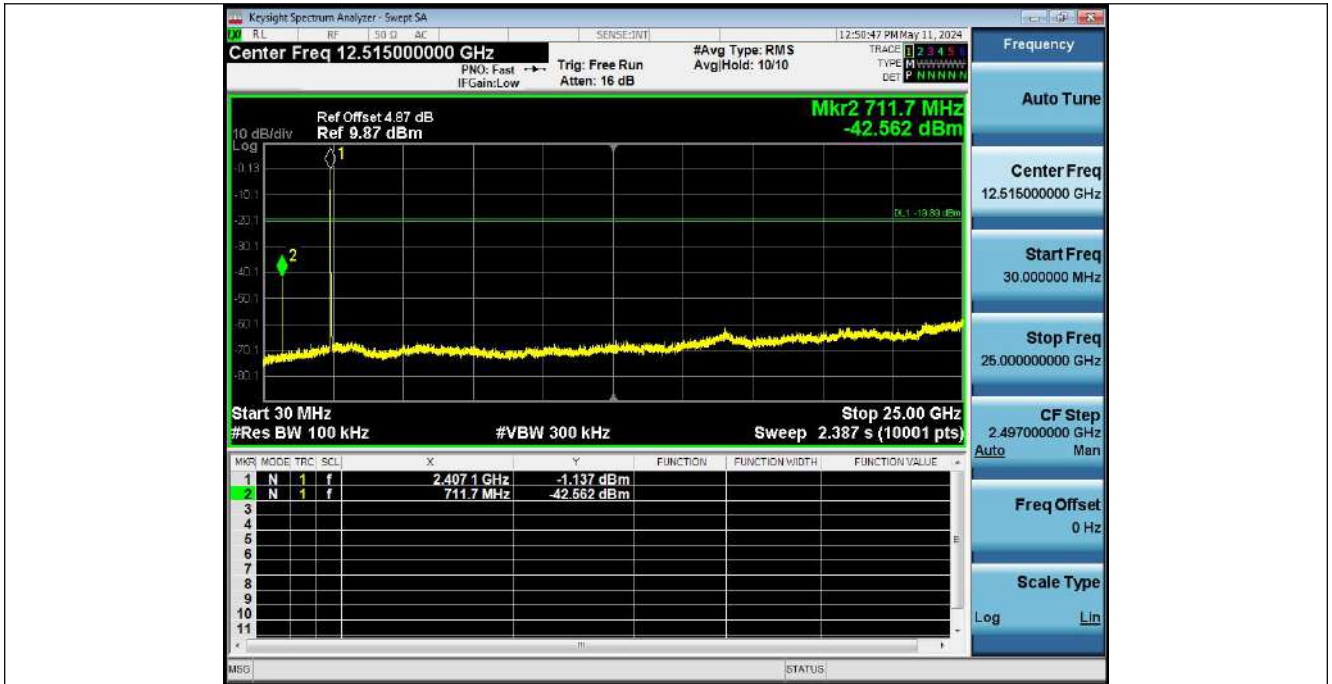
2 Spurious Emission_NVNT ANT1 802 11g 2462



1 Reference Level NVNT ANT1 802 11n(HT20) 2412



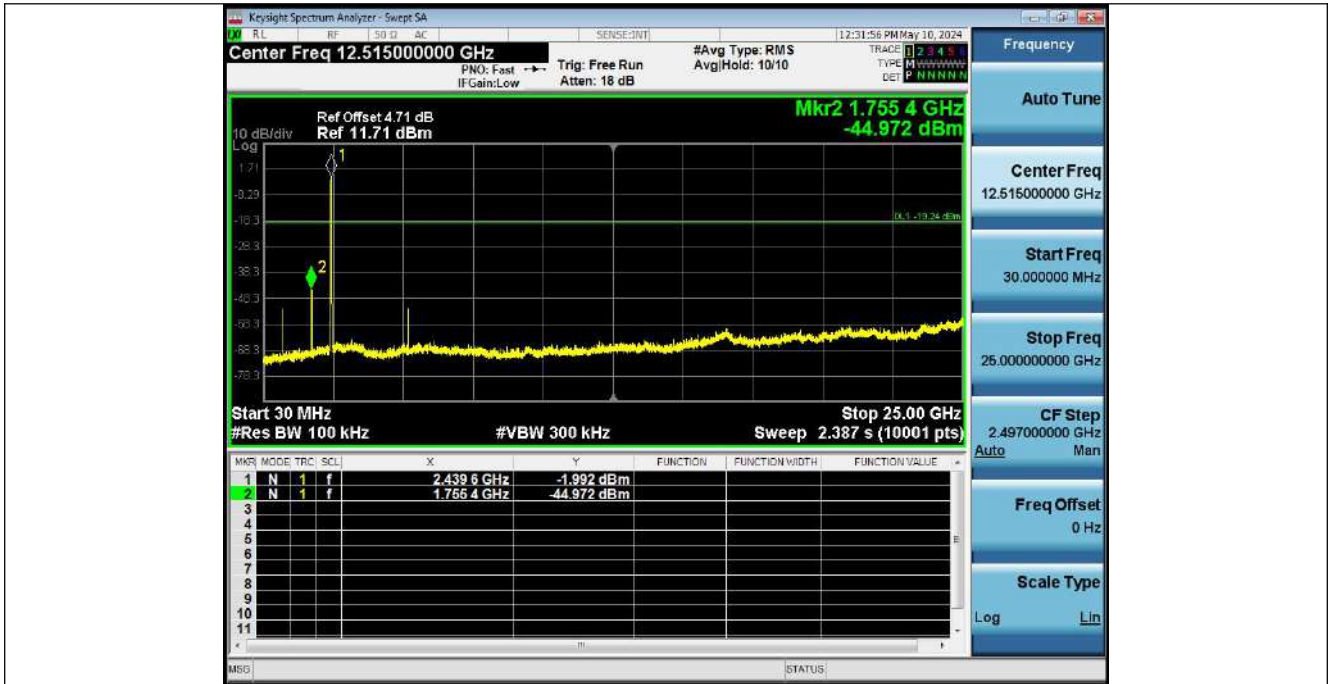
2 Spurious Emission NVNT ANT1 802 11n(HT20) 2412



1 Reference Level NVNT ANT1 802 11n(HT20) 2437



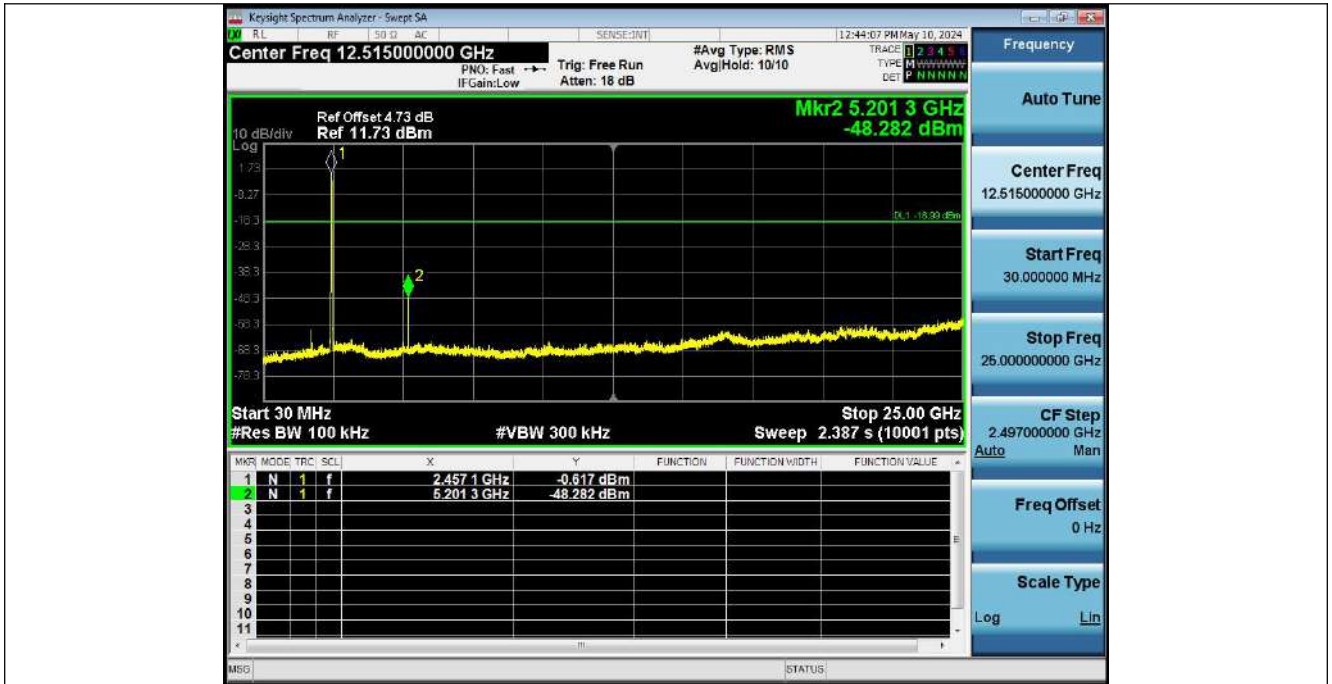
2 Spurious Emission NVNT ANT1 802 11n(HT20) 2437



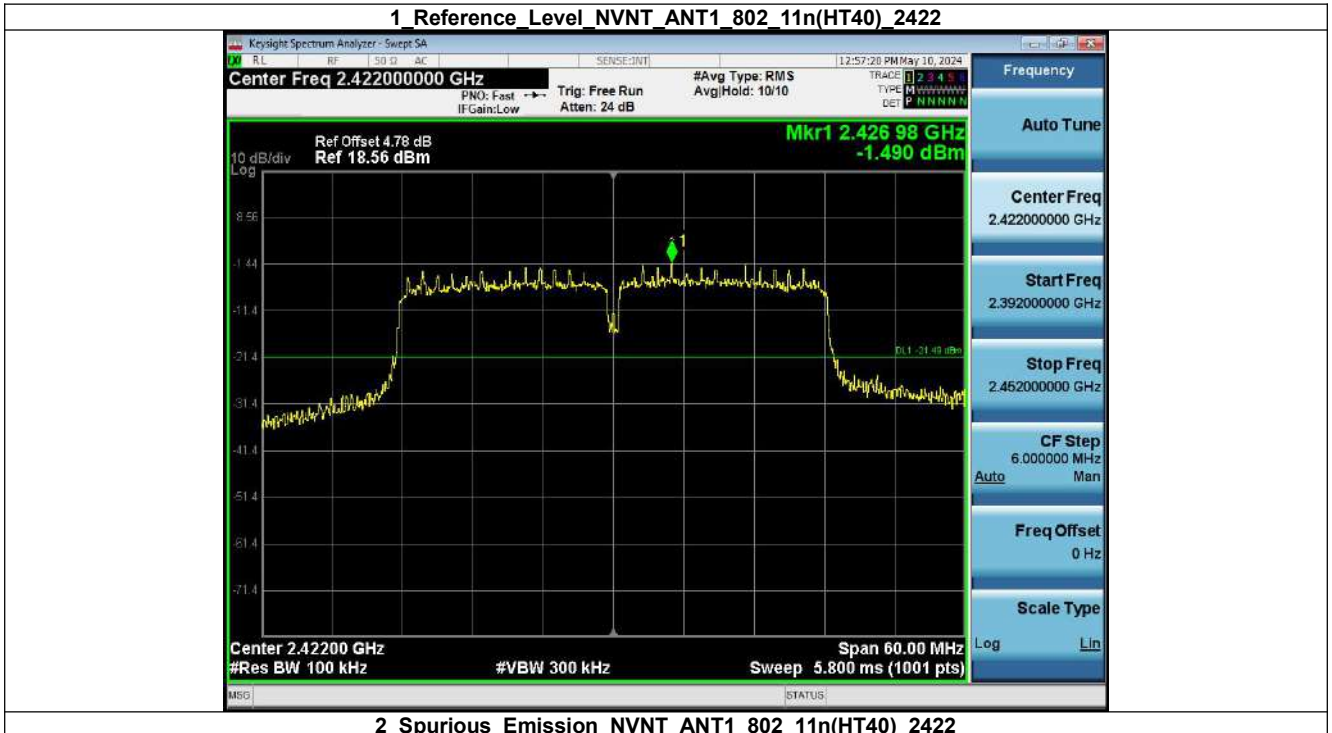
1 Reference Level NVNT_ANT1_802_11n(HT20)_2462



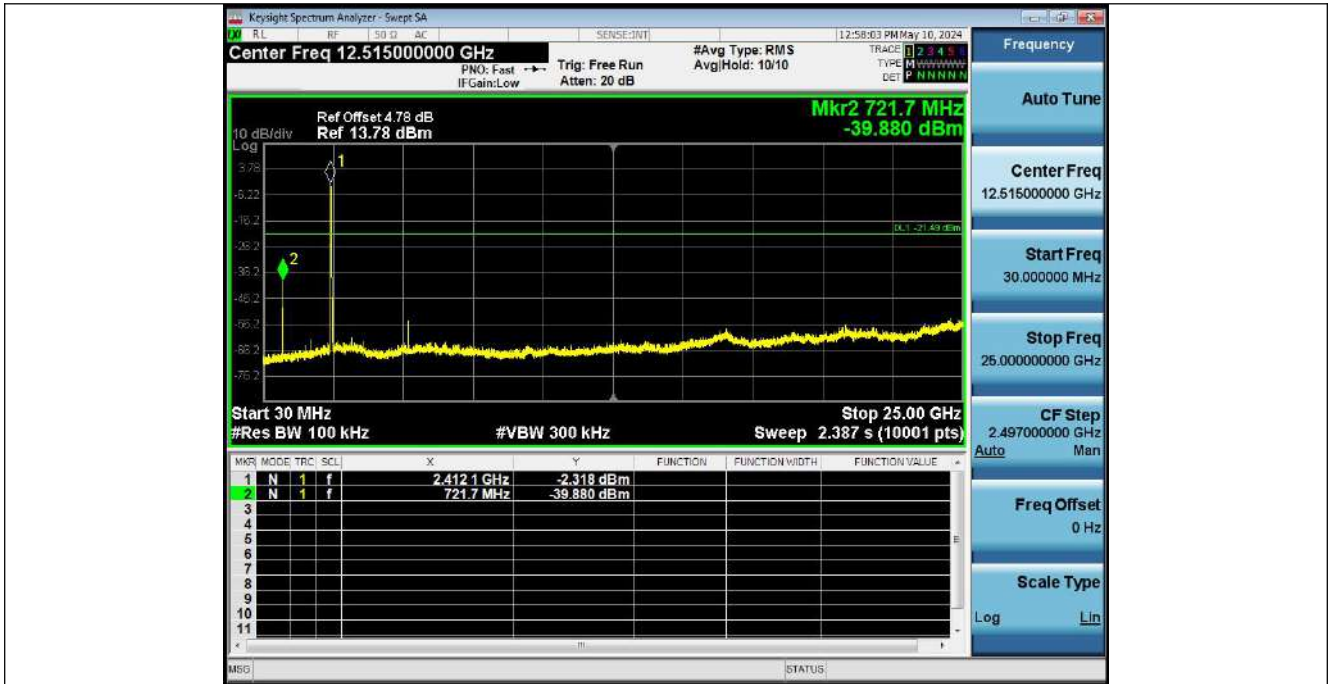
2 Spurious Emission NVNT_ANT1_802_11n(HT20)_2462



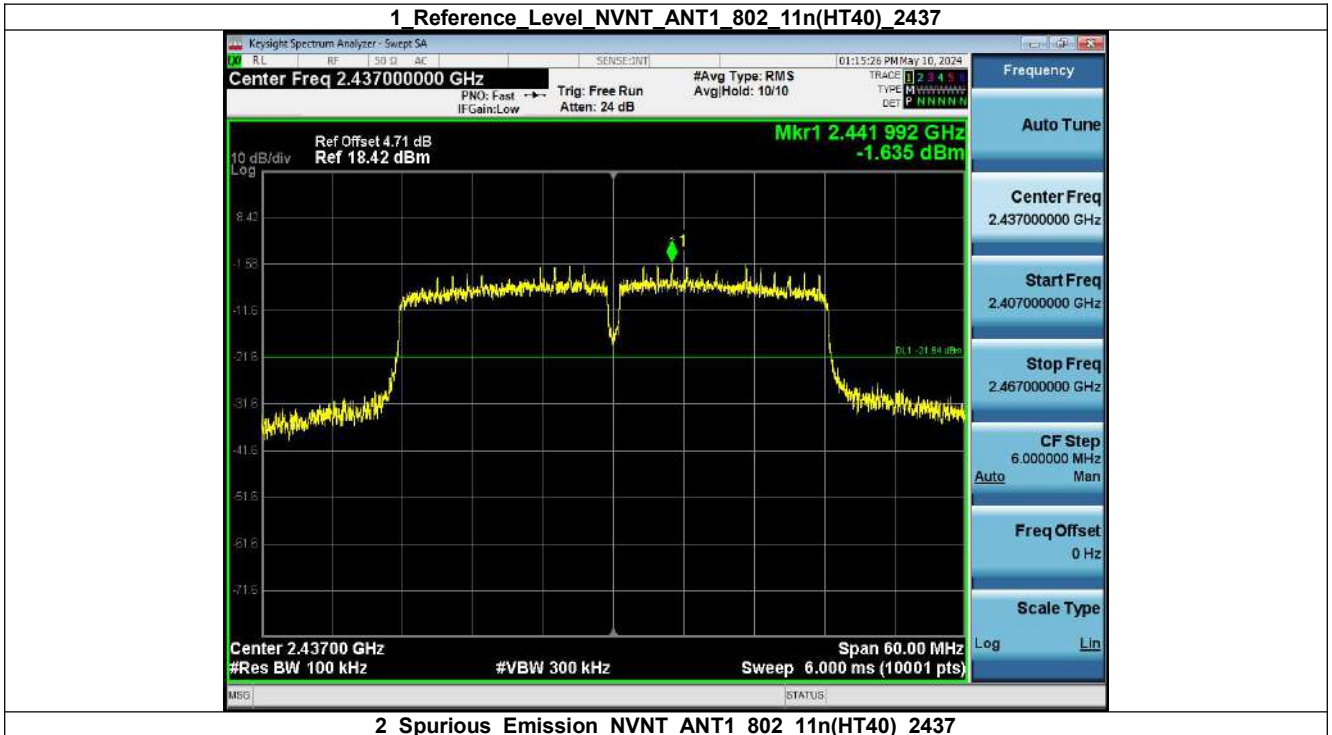
1 Reference Level NVNT ANT1 802 11n(HT40) 2422



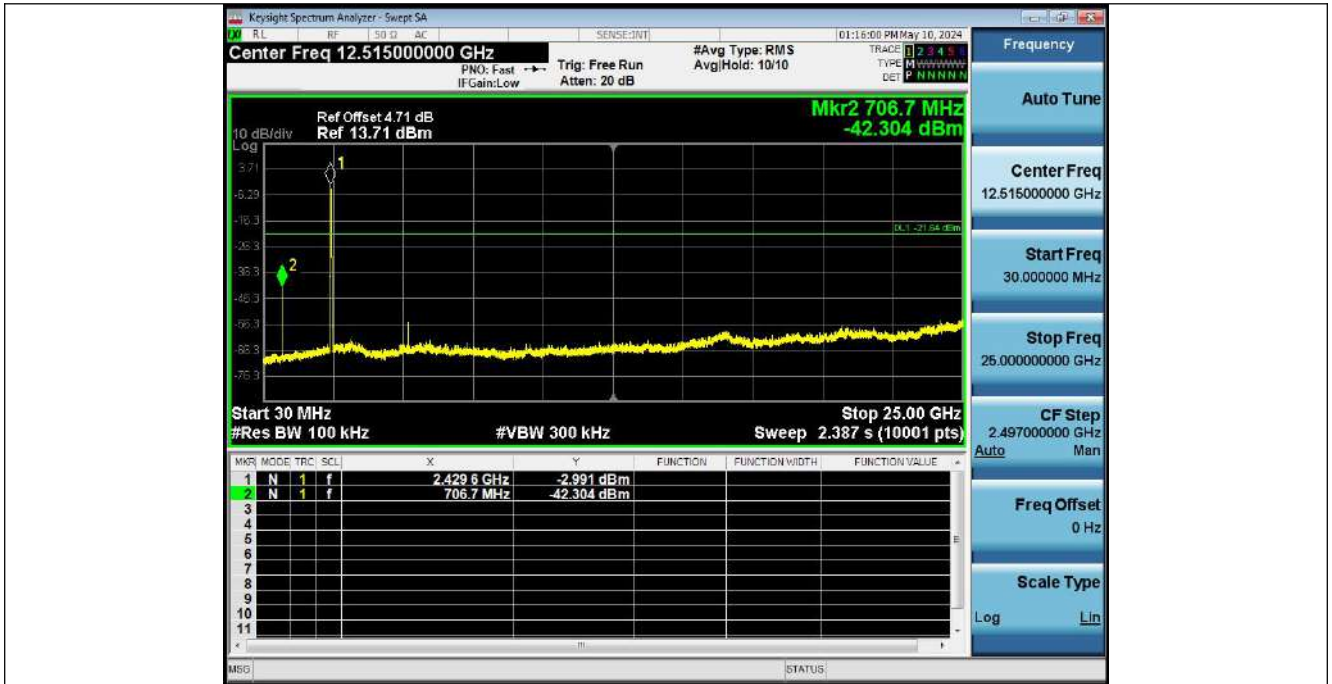
2 Spurious Emission NVNT ANT1 802 11n(HT40) 2422



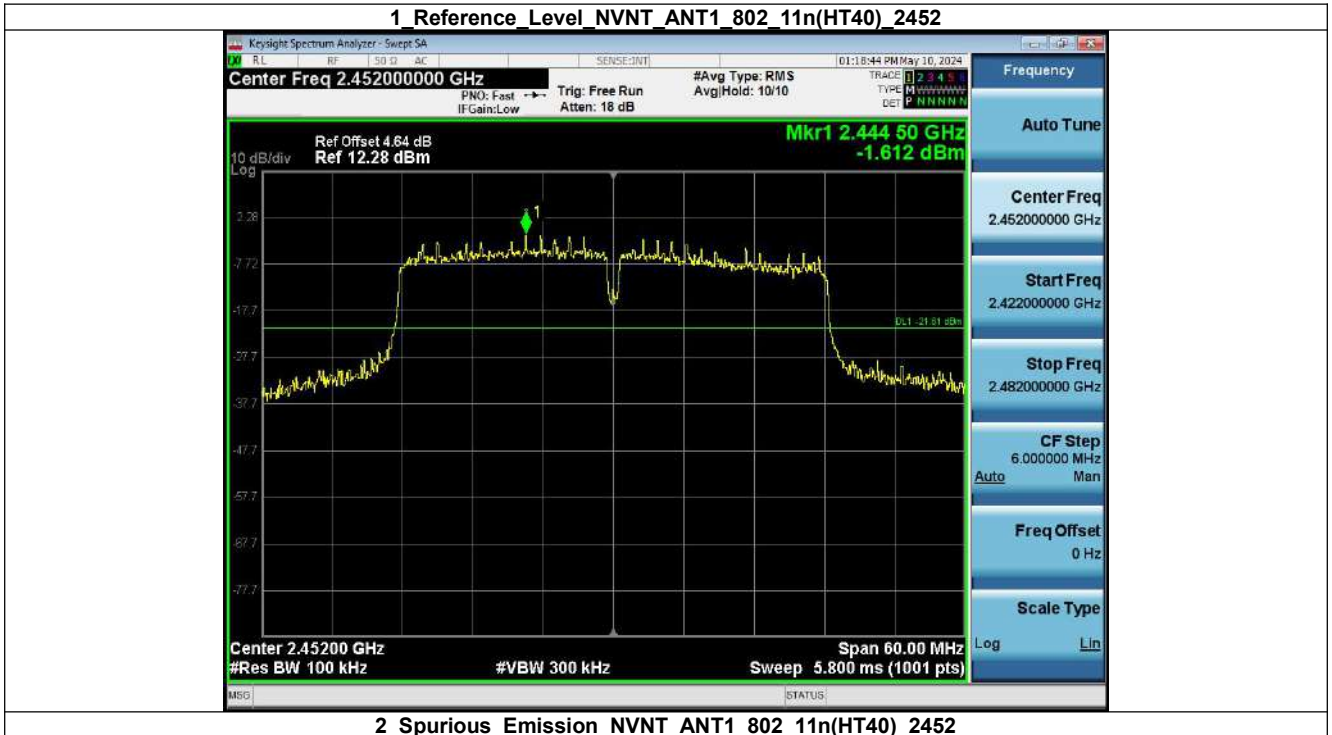
1 Reference Level NVNT ANT1 802 11n(HT40) 2437



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

