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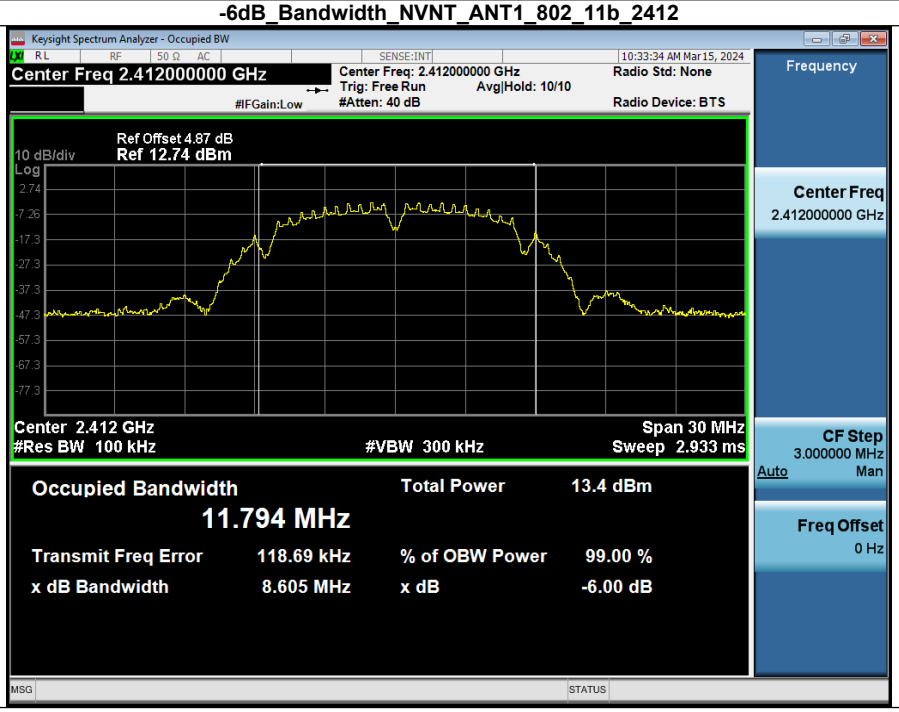
FCC ID: 2BFIG-WSQ01
FCC_2.4G_WIFI (Part15.247) Test Data

1. -6dB Bandwidth

Condition	Antenna	Modulation	Frequency (MHz)	-6dB BW(MHz)	limit(kHz)	Result
NVNT	ANT1	802.11b	2412.00	8.60	500	Pass
NVNT	ANT1	802.11b	2437.00	9.07	500	Pass
NVNT	ANT1	802.11b	2462.00	8.56	500	Pass
NVNT	ANT1	802.11g	2412.00	16.10	500	Pass
NVNT	ANT1	802.11g	2437.00	16.36	500	Pass
NVNT	ANT1	802.11g	2462.00	16.10	500	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	16.91	500	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	17.30	500	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	17.16	500	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	35.88	500	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	36.18	500	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	35.67	500	Pass

-6dB_Bandwidth_NVNT_ANT1_802_11b_2412



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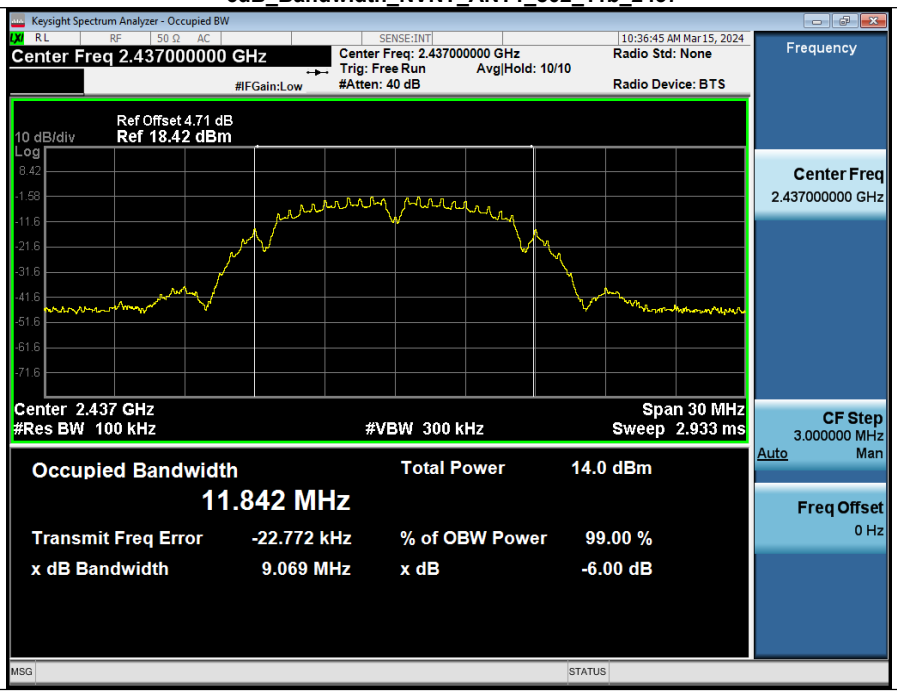
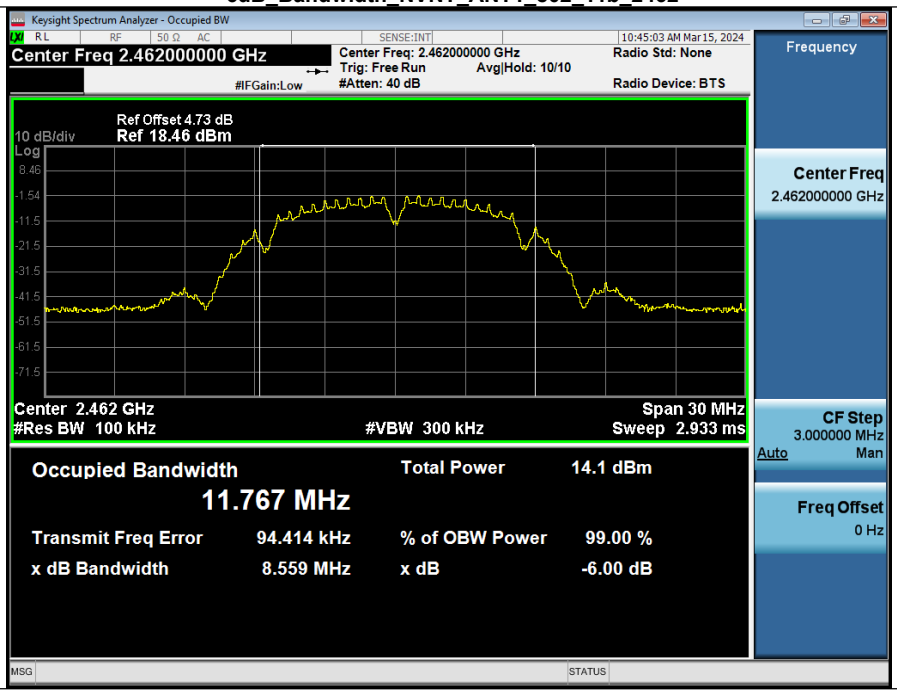
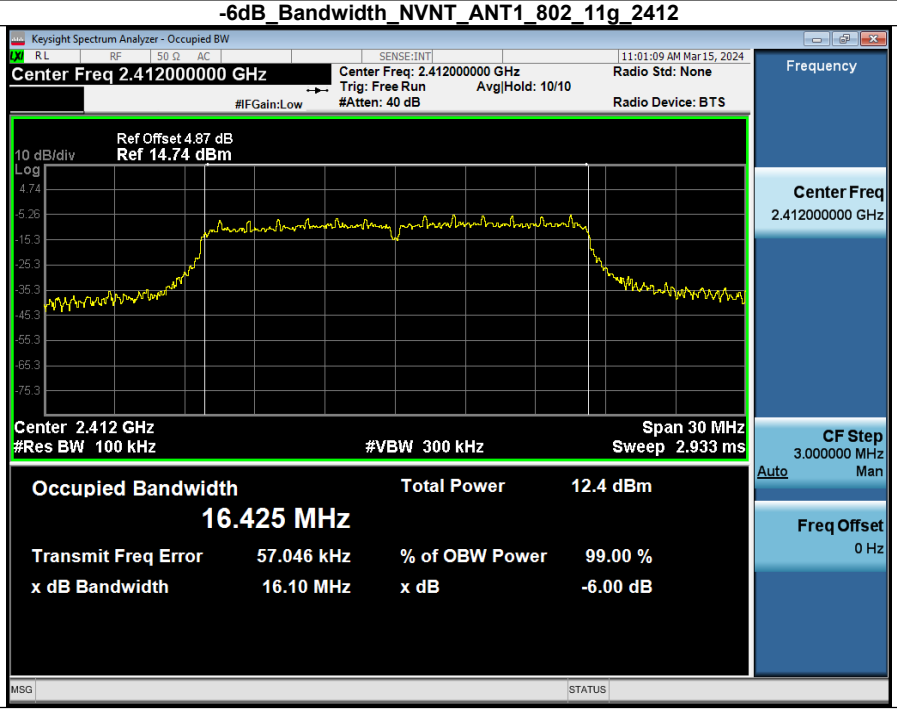


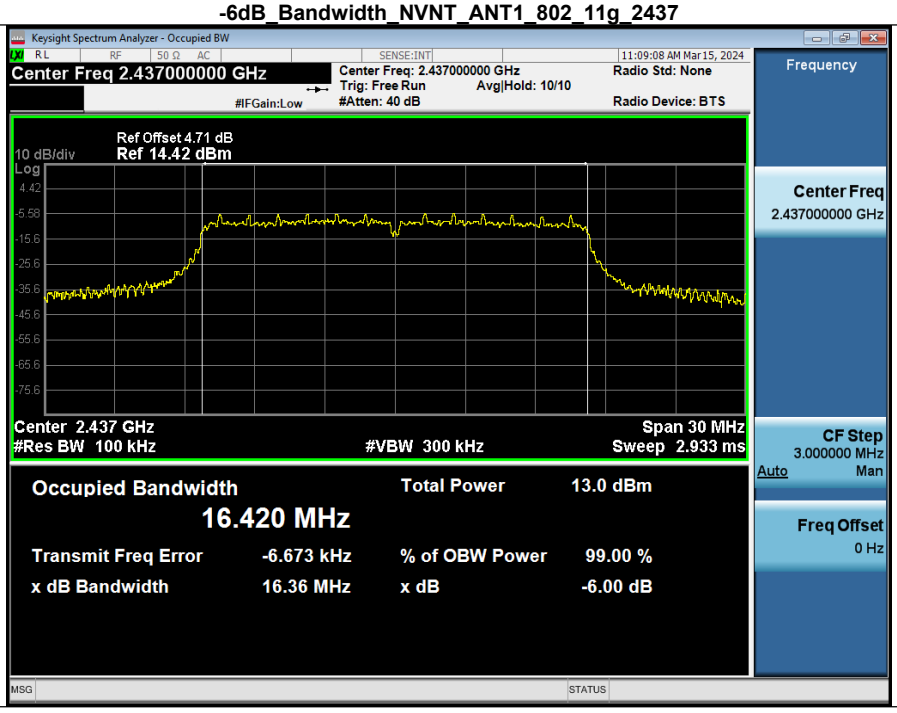
-6dB_Bandwidth_NVNT_ANT1_802_11b_2462



-6dB_Bandwidth_NVNT_ANT1_802_11g_2412



-6dB_Bandwidth_NVNT_ANT1_802_11g_2437



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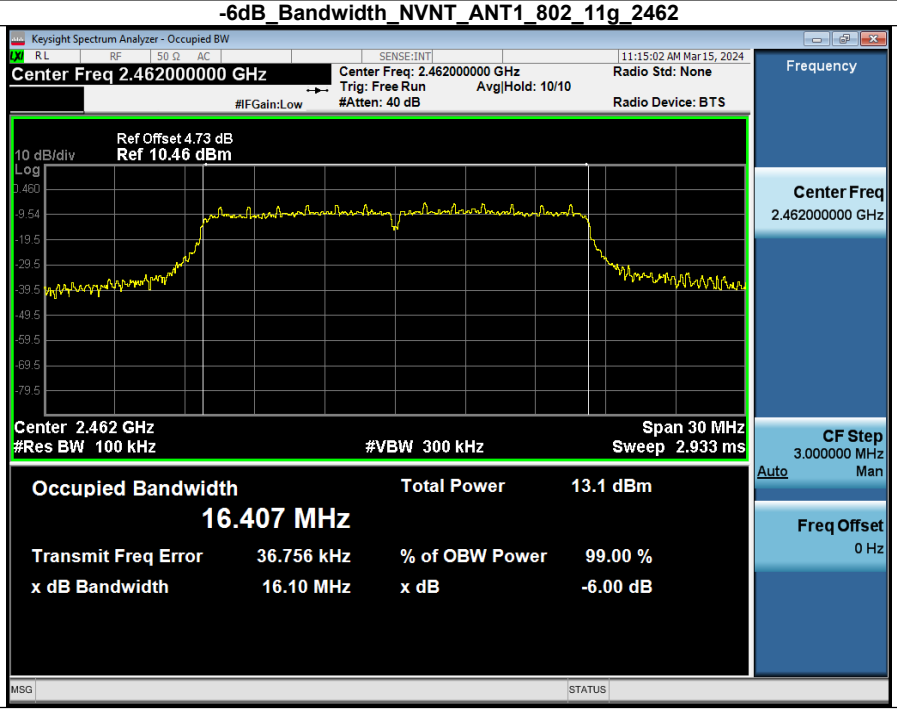
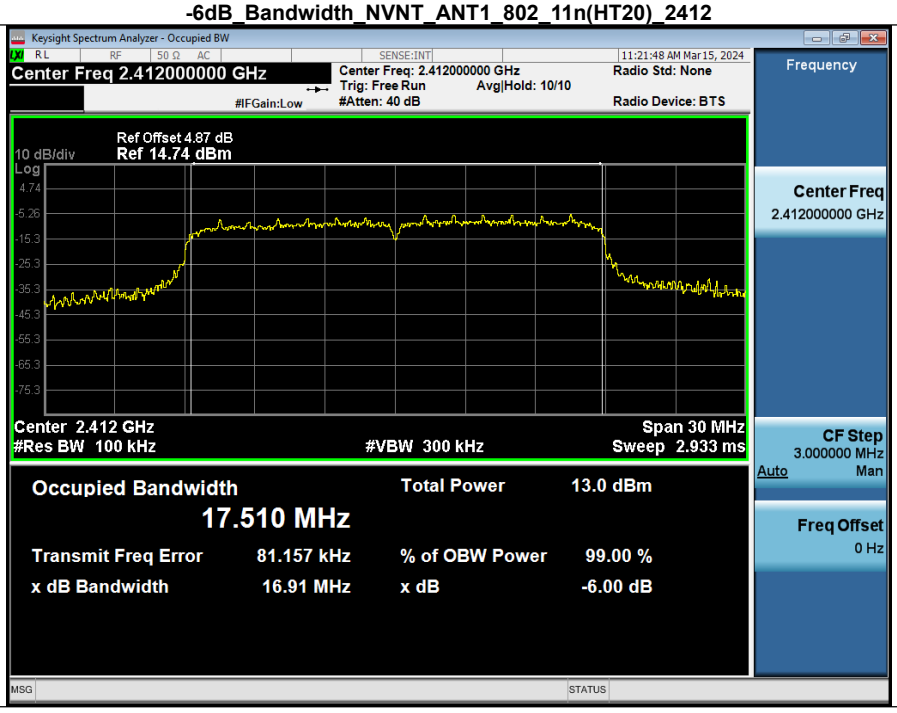


-6dB_Bandwidth_NVNT_ANT1_802_11n(HT20)_2412



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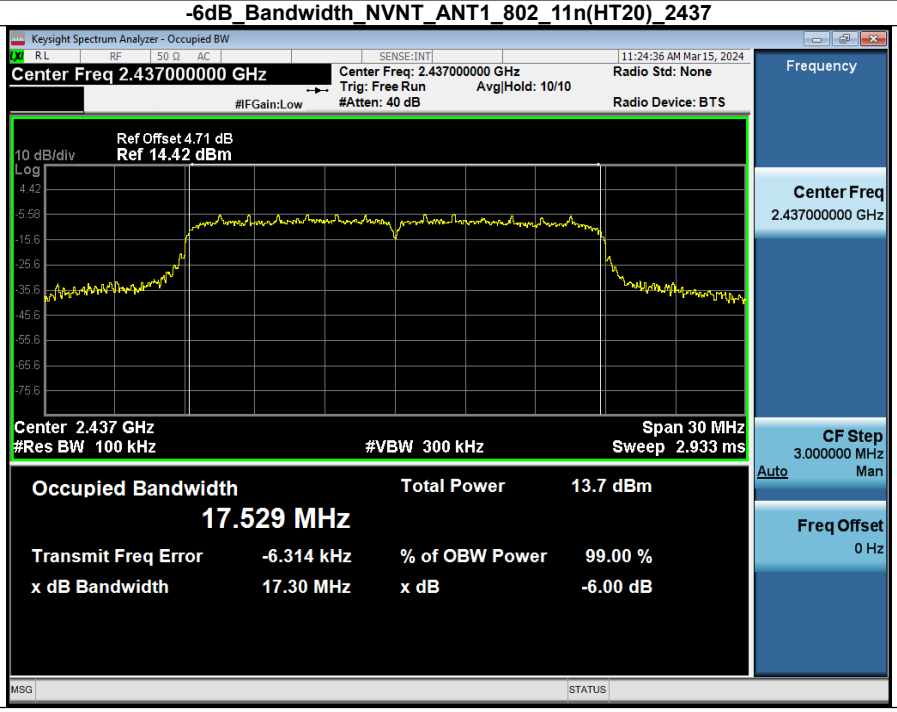

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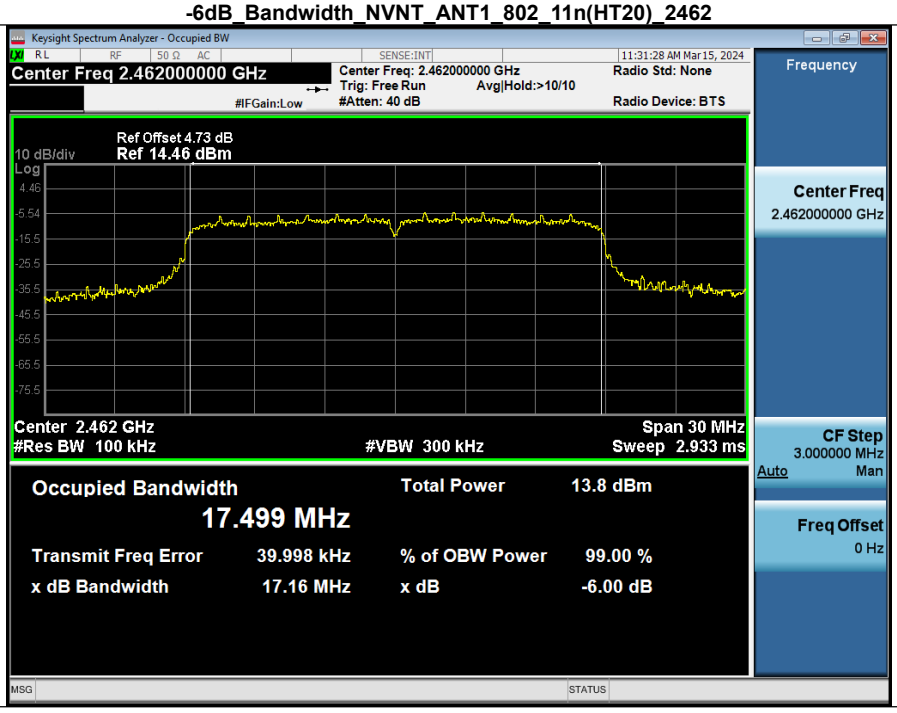
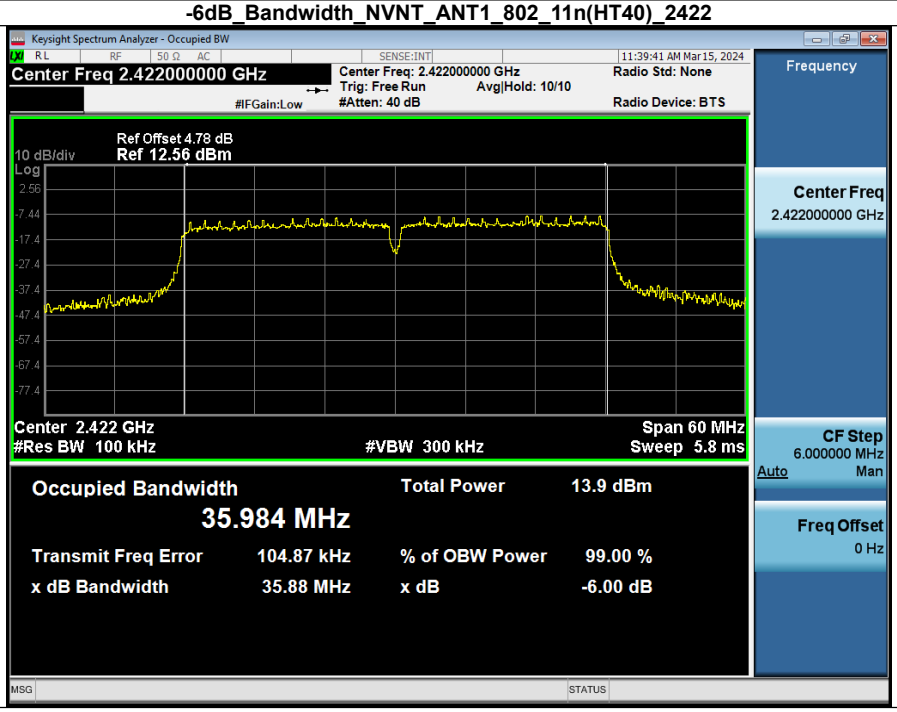
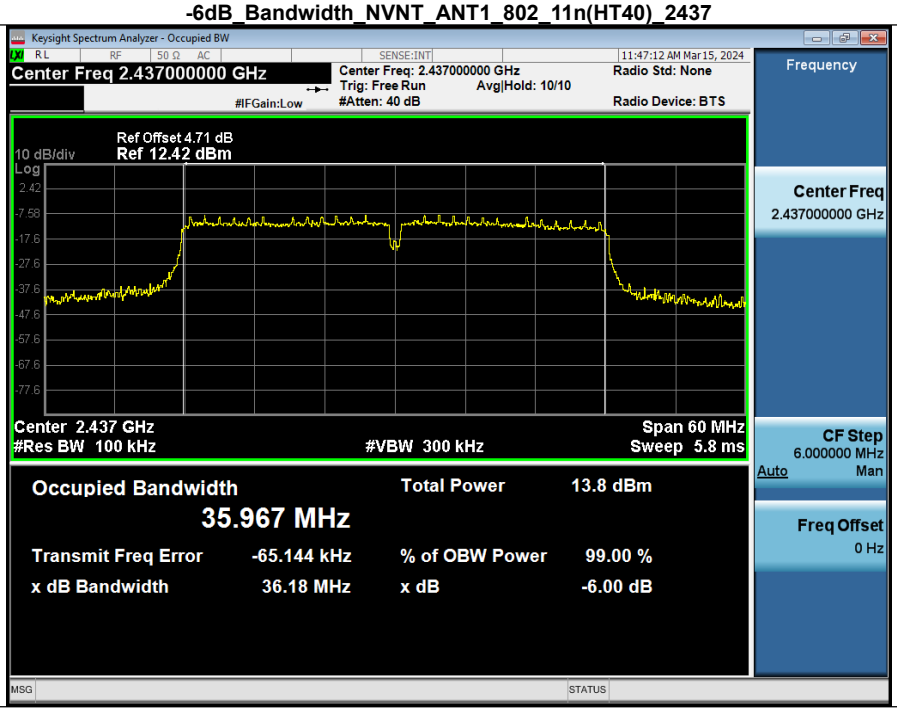


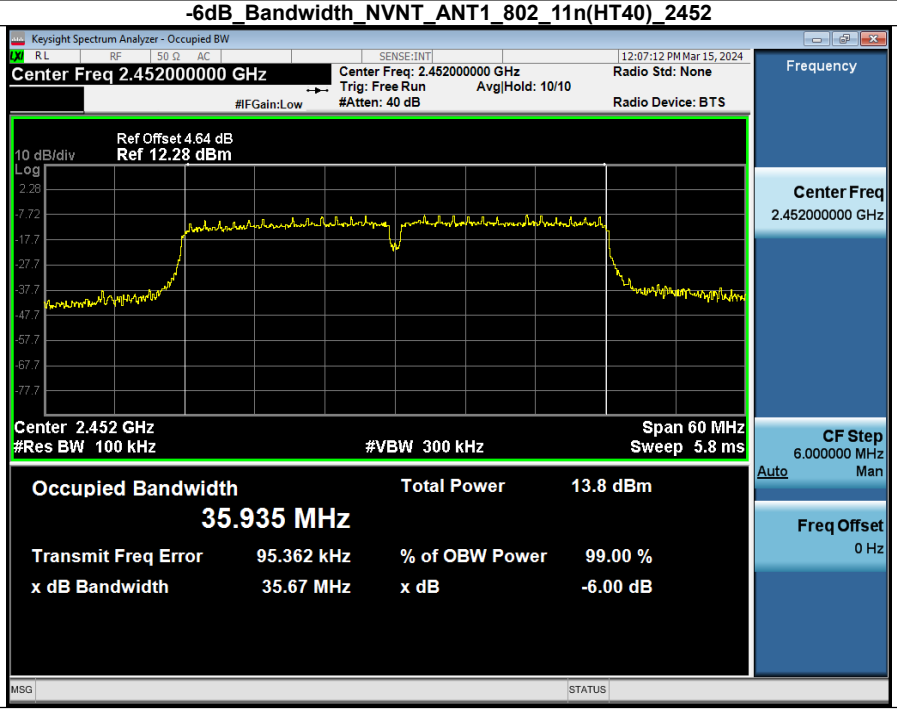
-6dB_Bandwidth_NVNT_ANT1_802_11n(HT40)_2422



-6dB_Bandwidth_NVNT_ANT1_802_11n(HT40)_2437



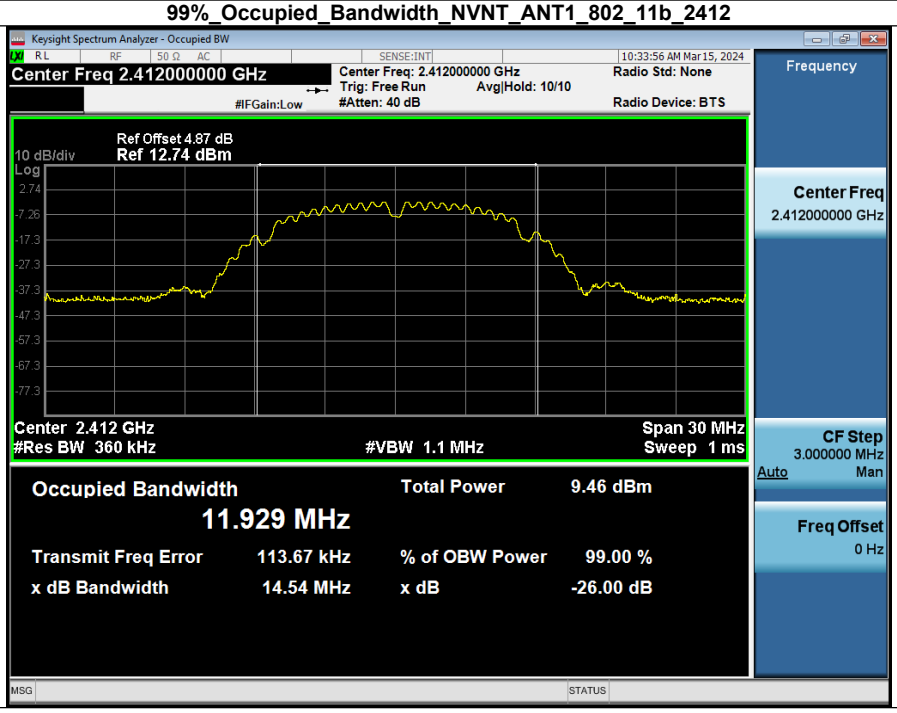
-6dB_Bandwidth_NVNT_ANT1_802_11n(HT40)_2452



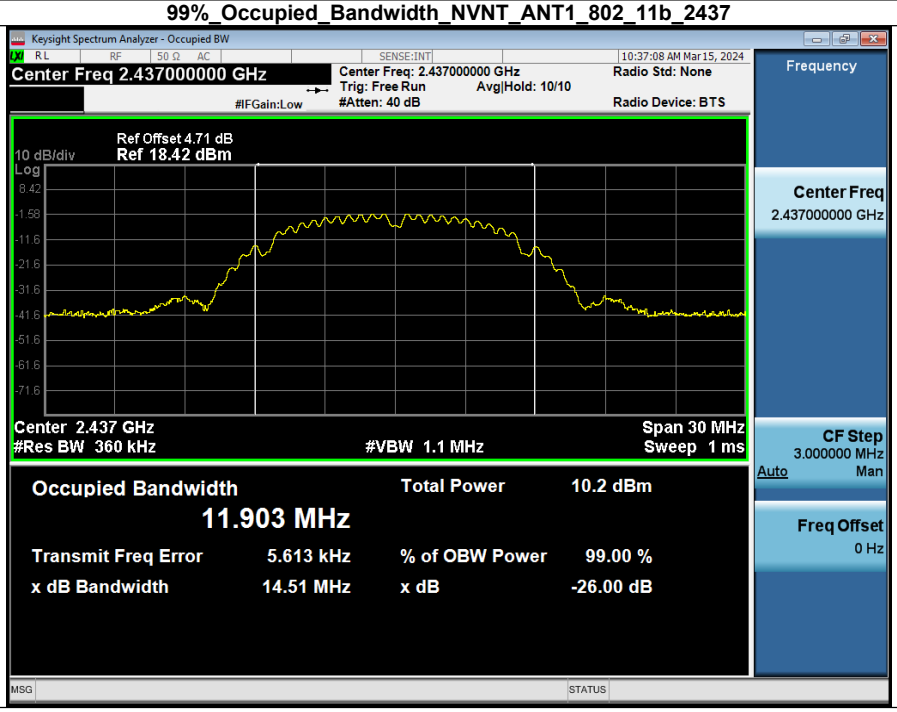
2. 99% Occupied Bandwidth

Condition	Antenna	Modulation	Frequency (MHz)	99%%BW(MHz)
NVNT	ANT1	802.11b	2412.00	11.929
NVNT	ANT1	802.11b	2437.00	11.903
NVNT	ANT1	802.11b	2462.00	11.864
NVNT	ANT1	802.11g	2412.00	17.106
NVNT	ANT1	802.11g	2437.00	17.151
NVNT	ANT1	802.11g	2462.00	17.103
NVNT	ANT1	802.11n(HT20)	2412.00	17.867
NVNT	ANT1	802.11n(HT20)	2437.00	17.851
NVNT	ANT1	802.11n(HT20)	2462.00	17.863
NVNT	ANT1	802.11n(HT40)	2422.00	36.548
NVNT	ANT1	802.11n(HT40)	2437.00	36.444
NVNT	ANT1	802.11n(HT40)	2452.00	36.540

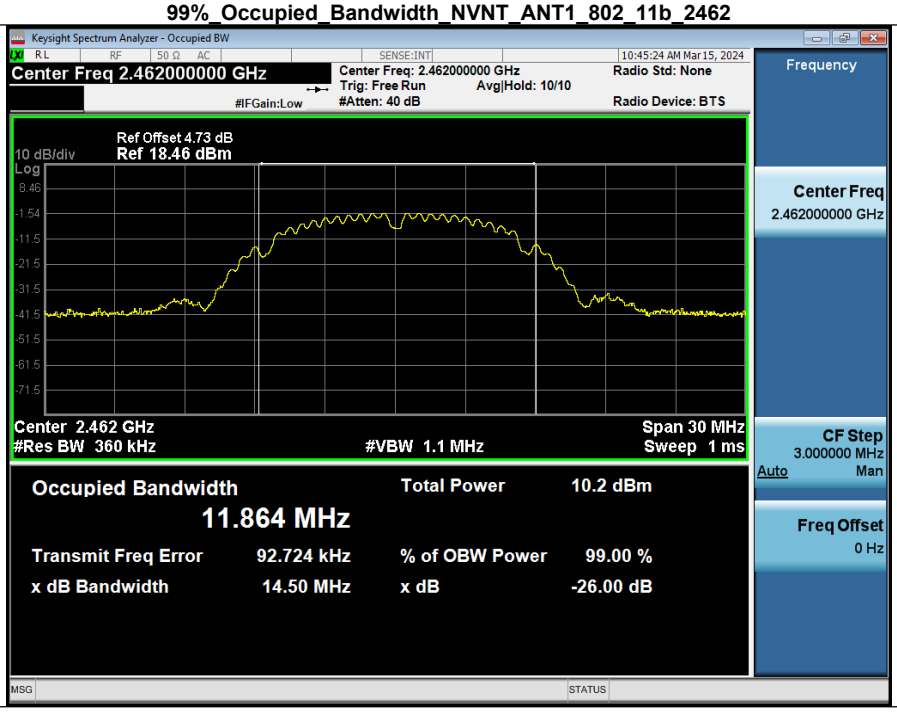
99%_Occupied_Bandwidth_NVNT_ANT1_802_11b_2412



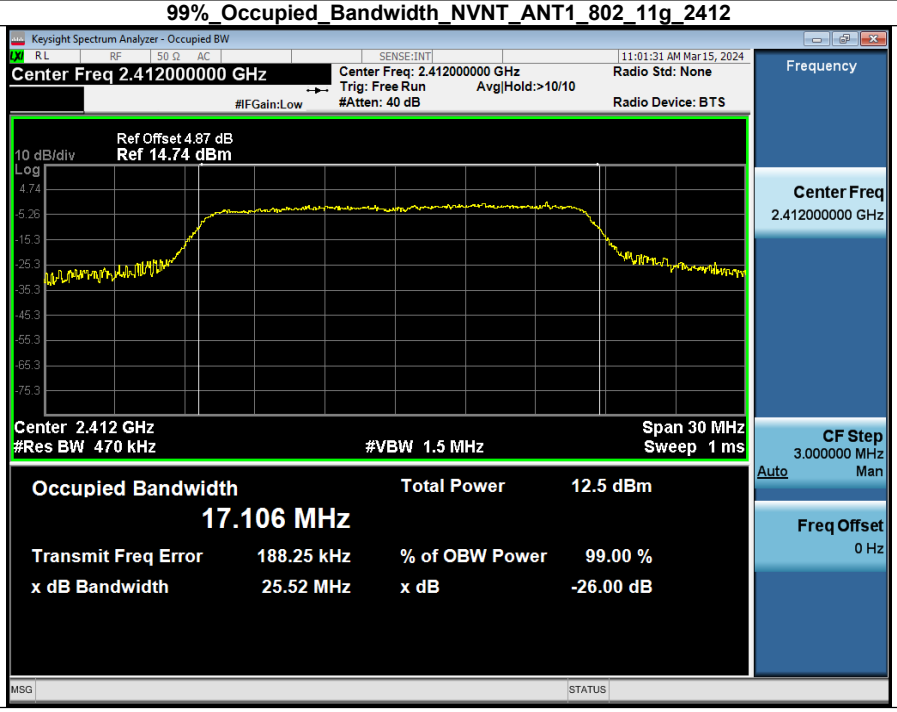
99%_Occupied_Bandwidth_NVNT_ANT1_802_11b_2437



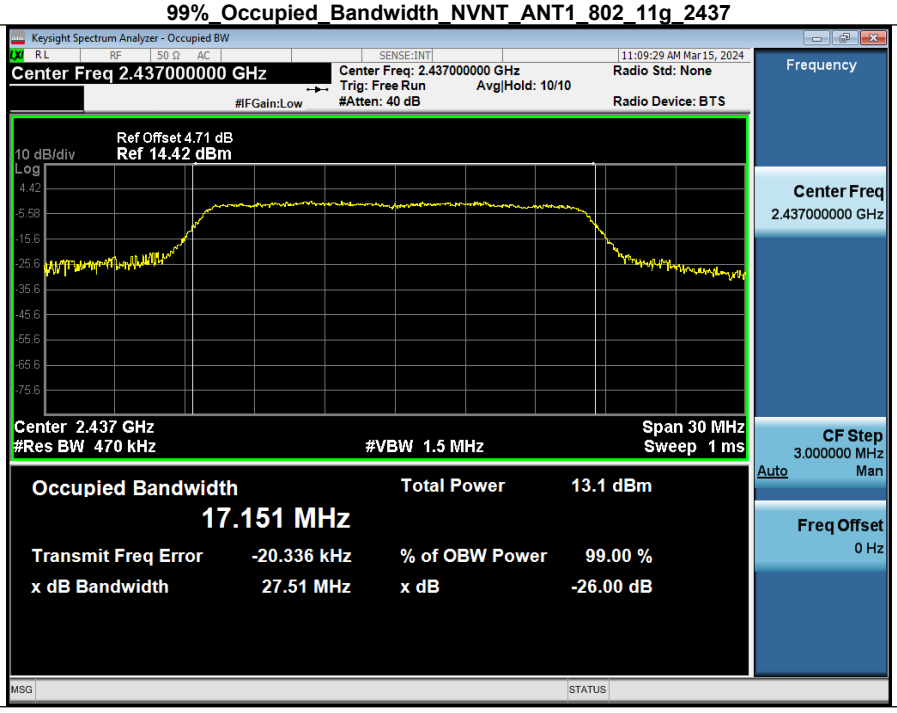
99%_Occupied_Bandwidth_NVNT_ANT1_802_11b_2462



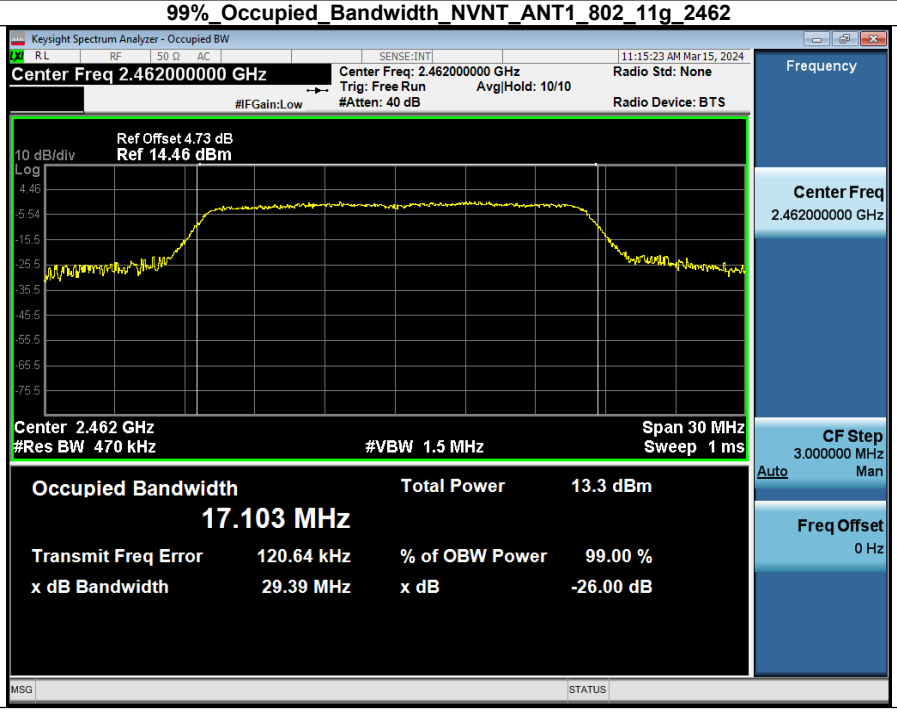
99%_Occupied_Bandwidth_NVNT_ANT1_802_11g_2412



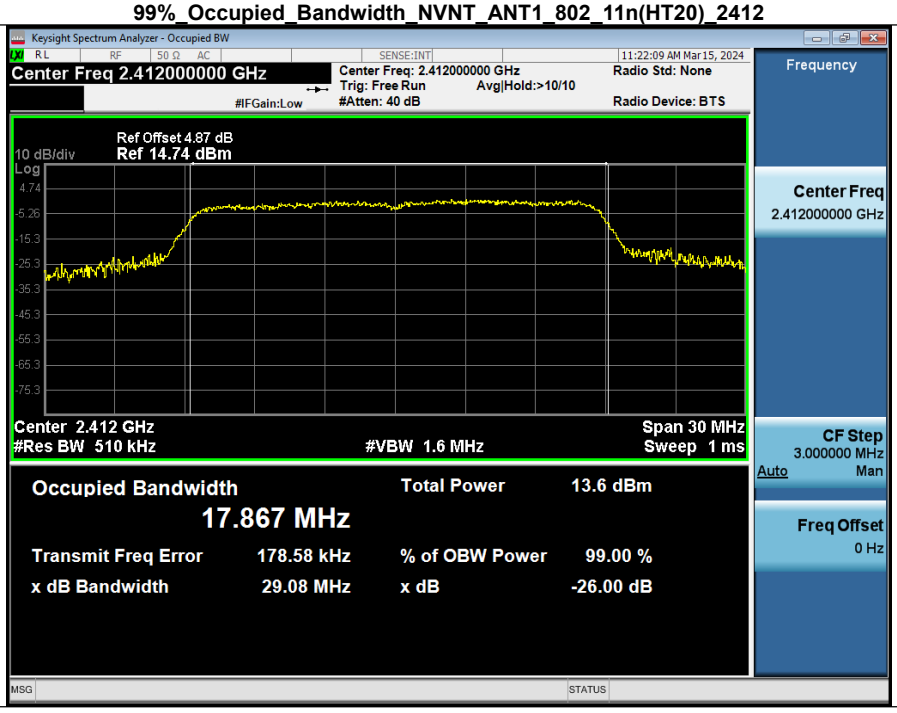
99%_Occupied_Bandwidth_NVNT_ANT1_802_11g_2437



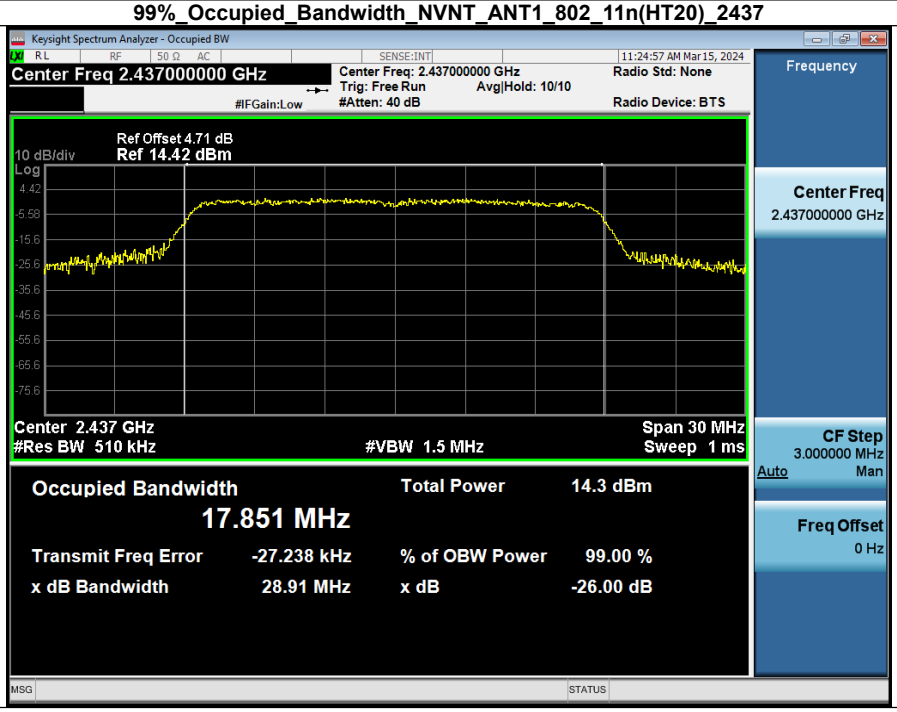
99%_Occupied_Bandwidth_NVNT_ANT1_802_11g_2462



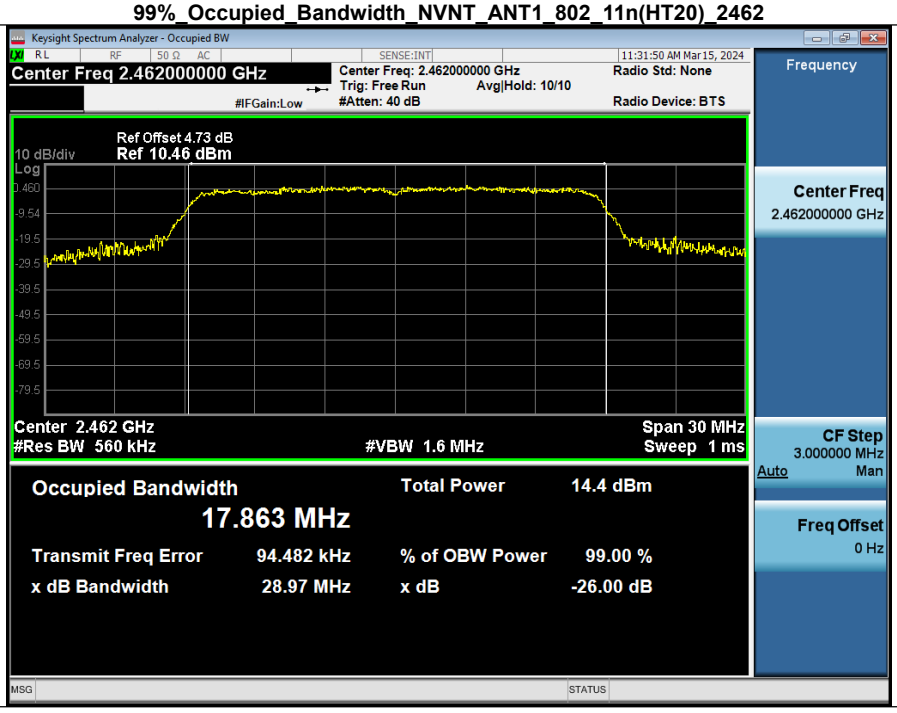
99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT20)_2412



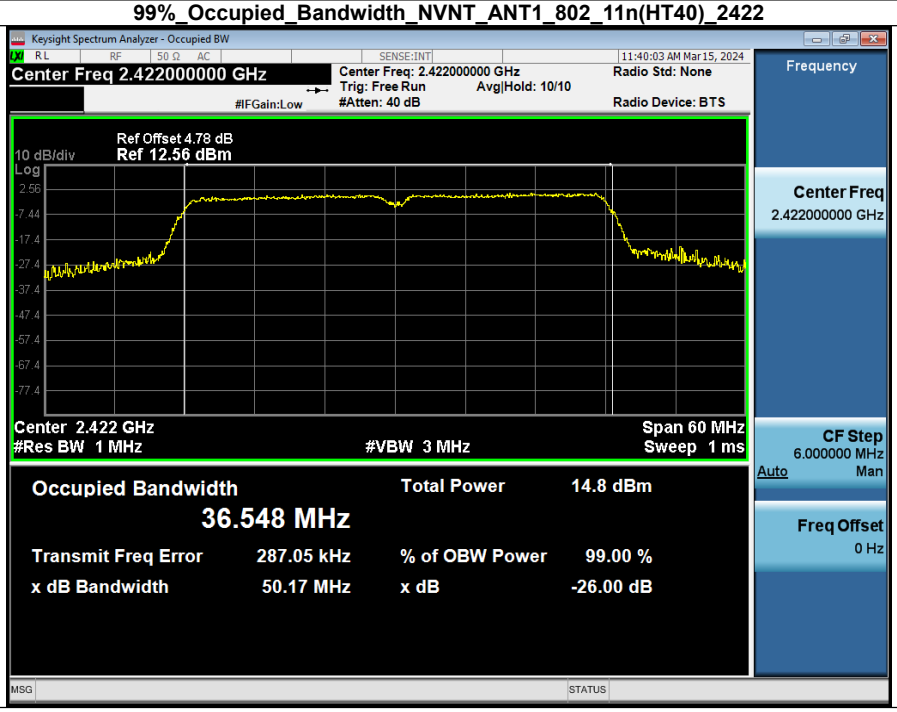
99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT20)_2437



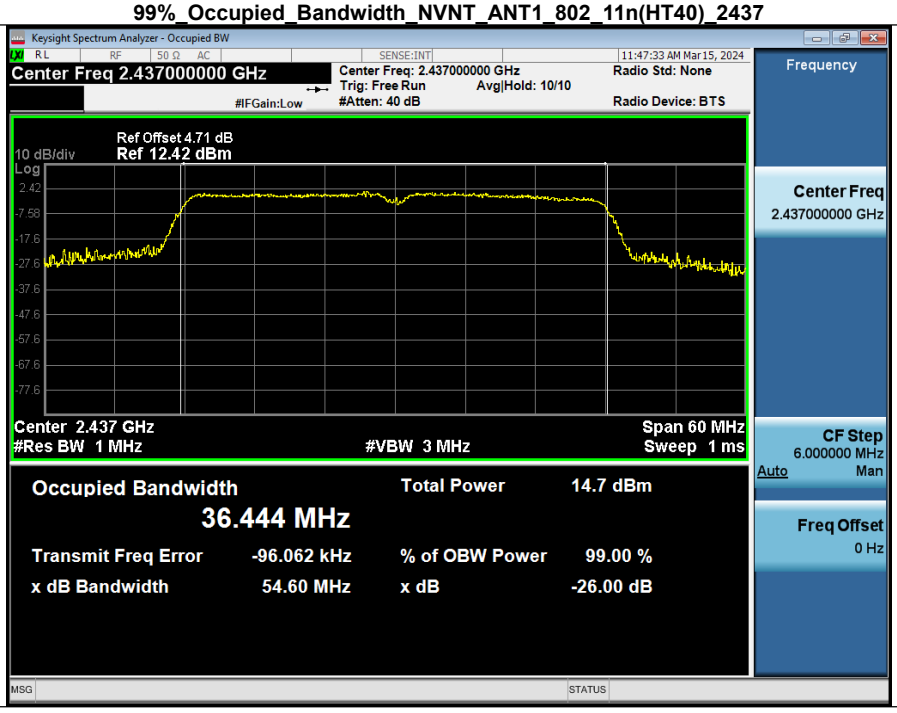
99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT20)_2462



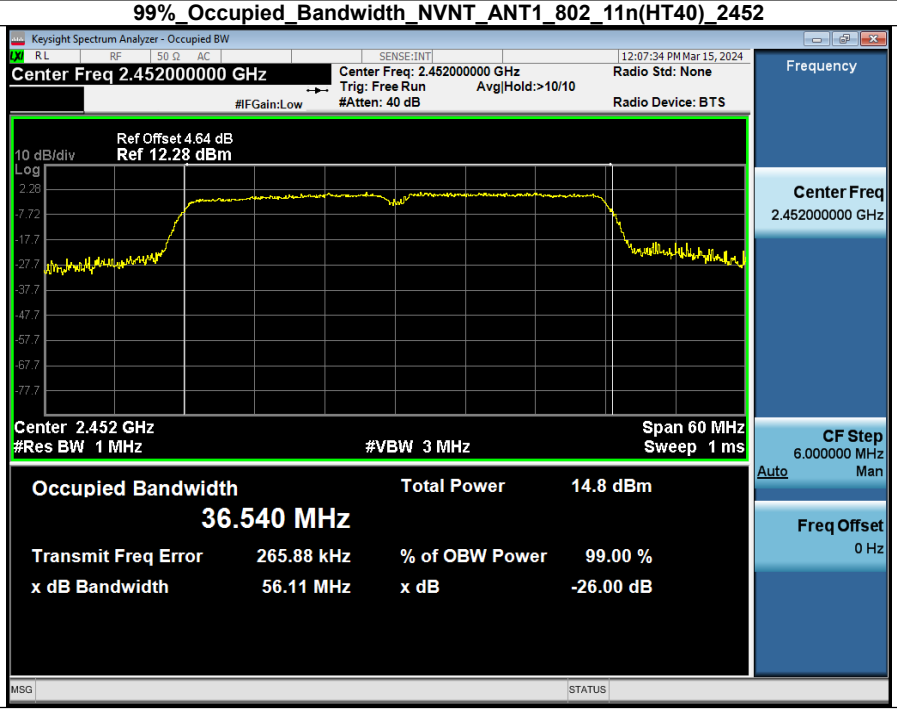
99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT40)_2422



99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT40)_2437



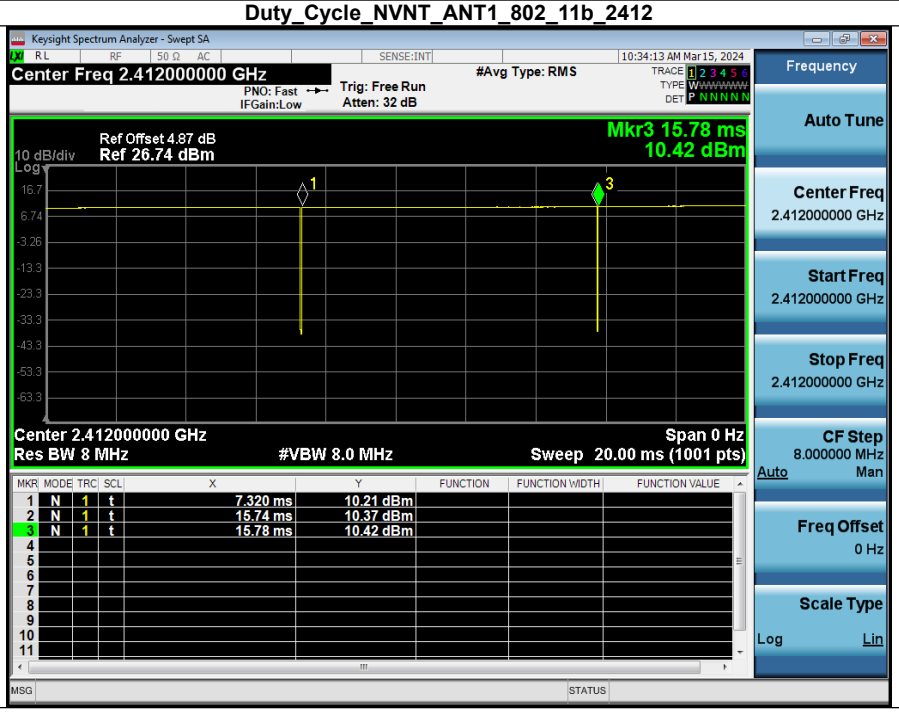
99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT40)_2452



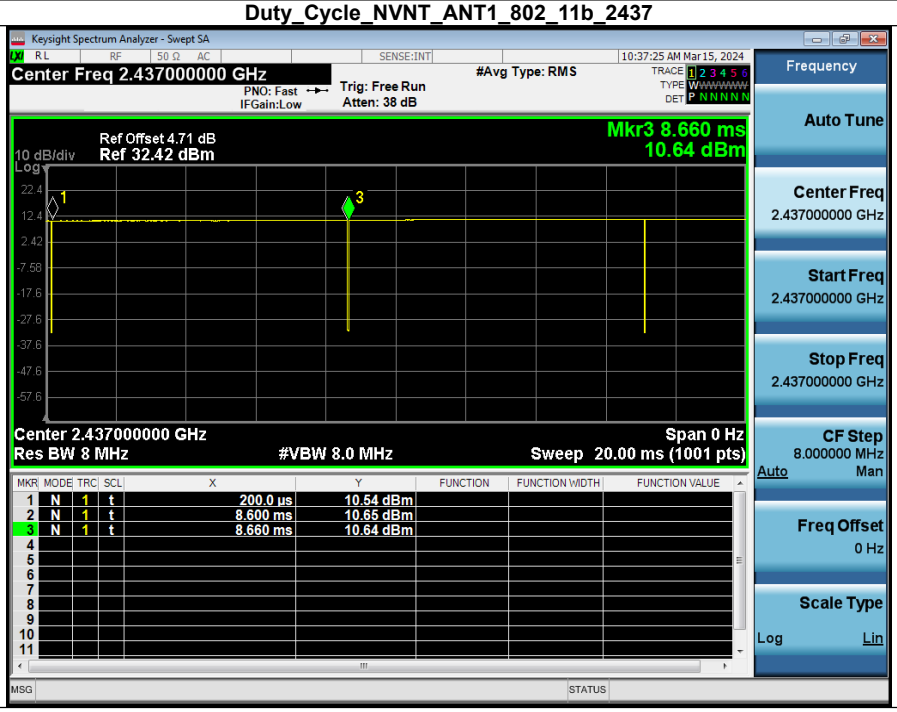
3. Duty Cycle

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	99.53	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	97.26	0.12
NVNT	ANT1	802.11n(HT20)	2412.00	95.24	0.21
NVNT	ANT1	802.11n(HT20)	2437.00	96.77	0.14
NVNT	ANT1	802.11n(HT20)	2462.00	96.77	0.14
NVNT	ANT1	802.11n(HT40)	2422.00	93.75	0.28
NVNT	ANT1	802.11n(HT40)	2437.00	93.75	0.28
NVNT	ANT1	802.11n(HT40)	2452.00	96.87	0.14

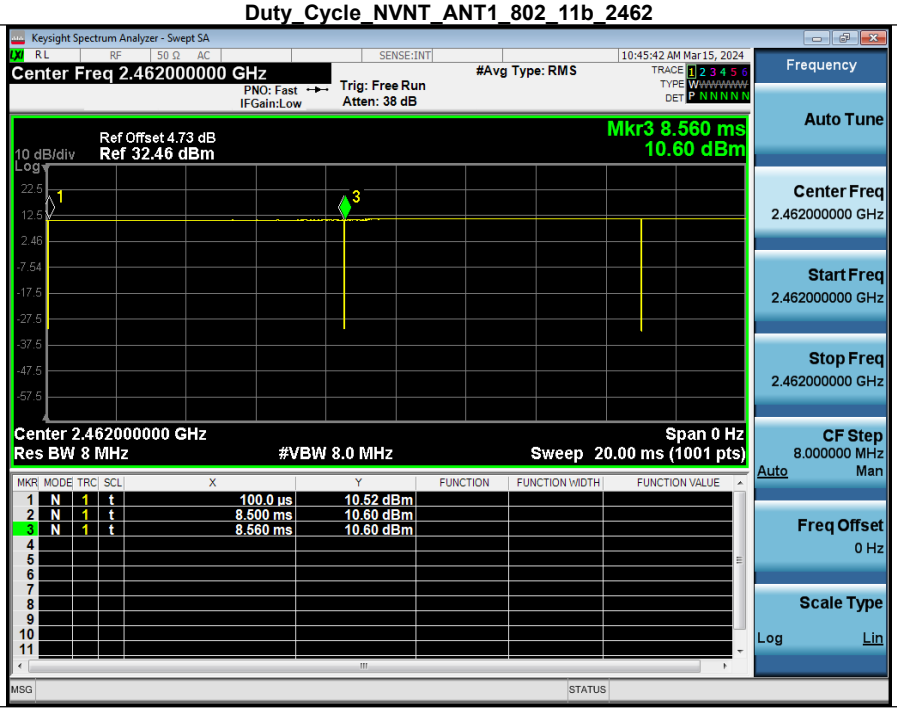
Duty_Cycle_NVNT_ANT1_802_11b_2412



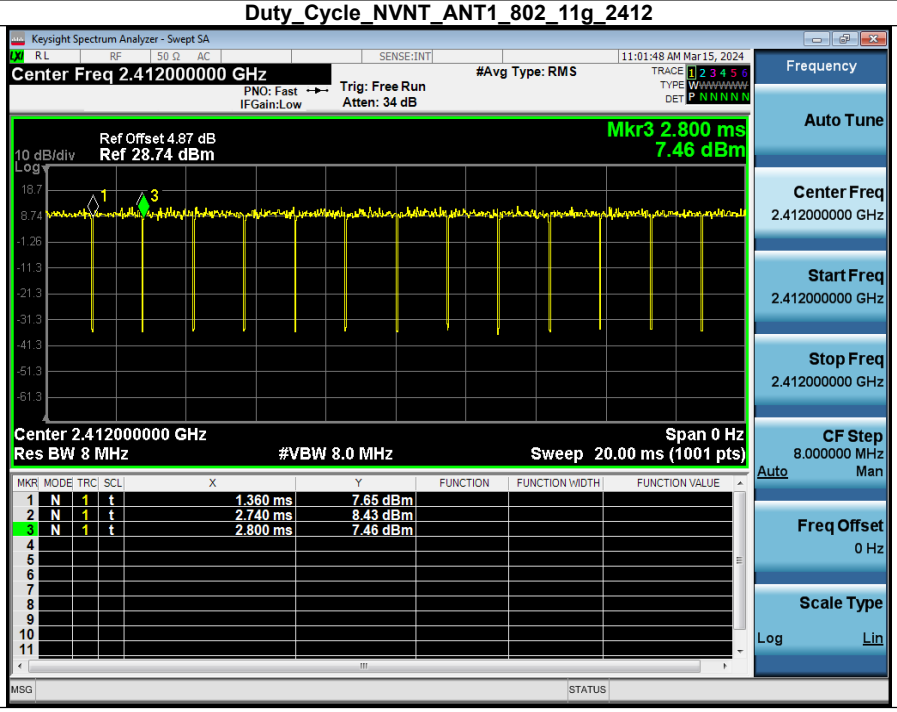
Duty_Cycle_NVNT_ANT1_802_11b_2437



Duty_Cycle_NVNT_ANT1_802_11b_2462



Duty_Cycle_NVNT_ANT1_802_11g_2412



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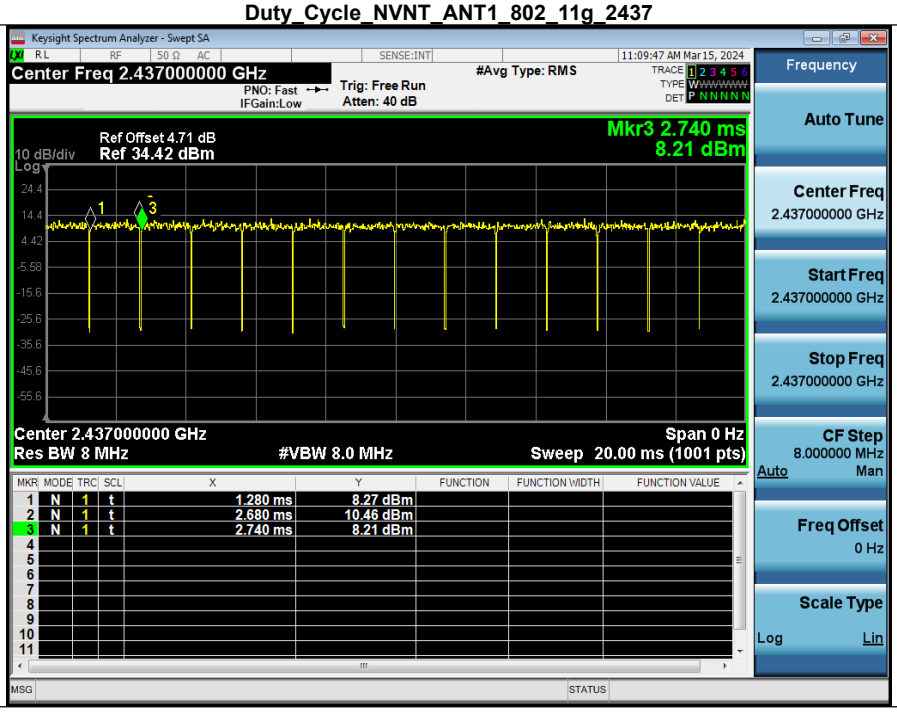
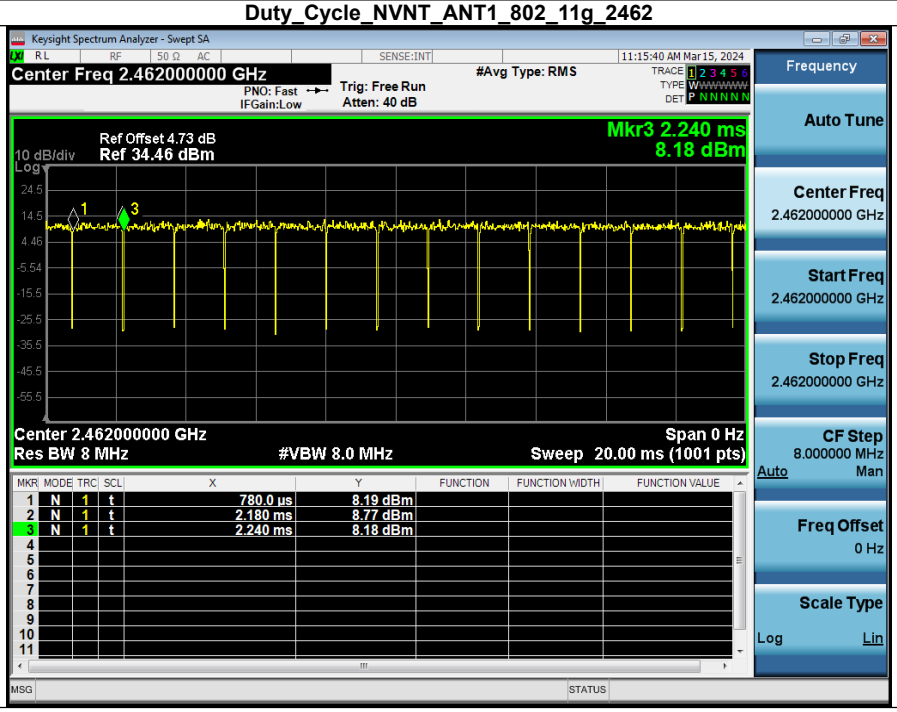
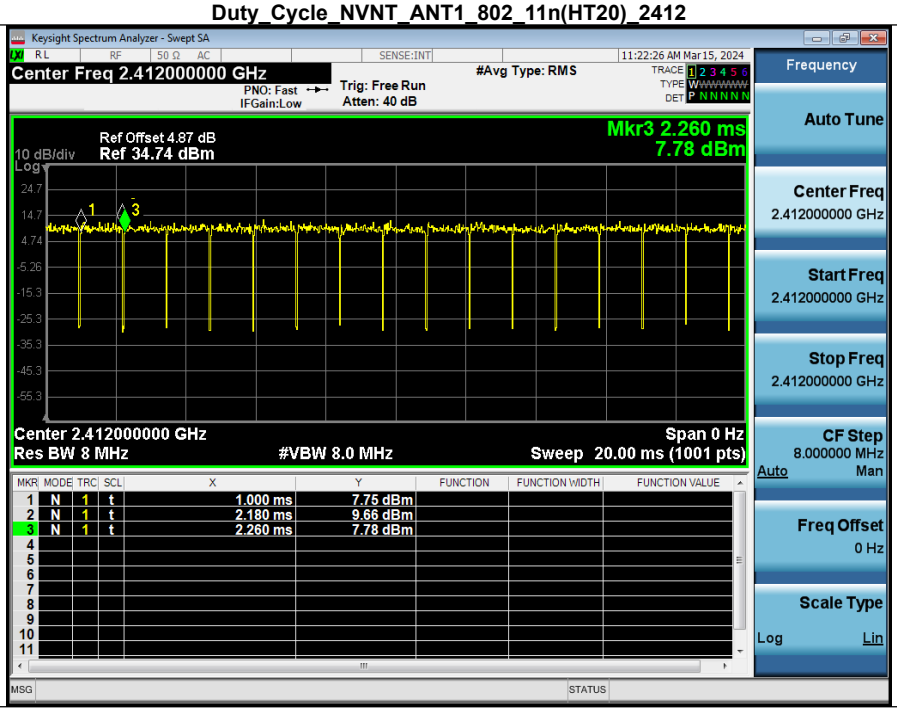


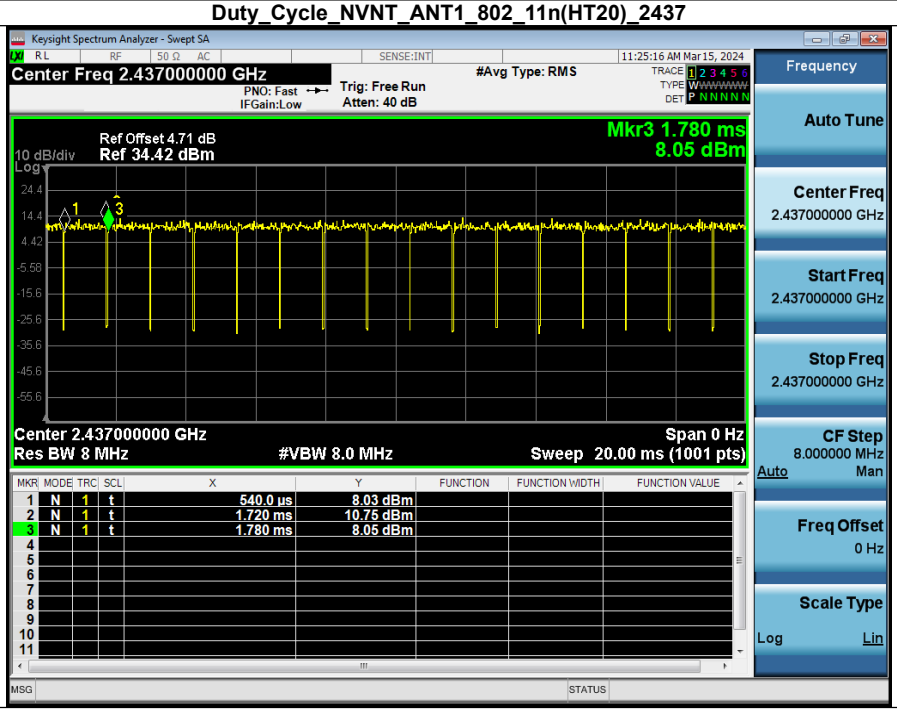
Duty_Cycle_NVNT_ANT1_802_11g_2462



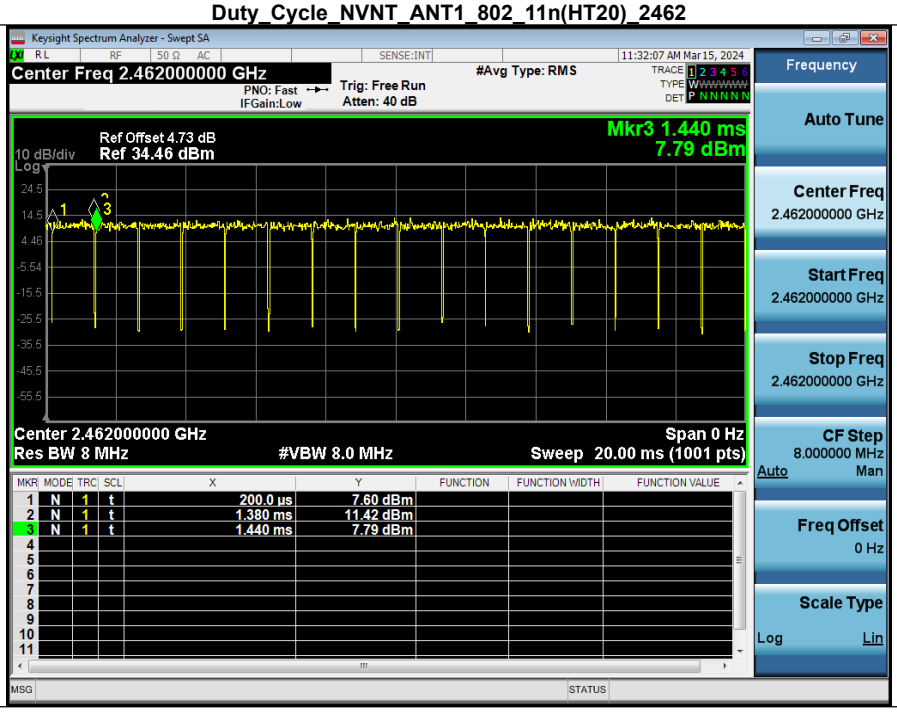
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_2412



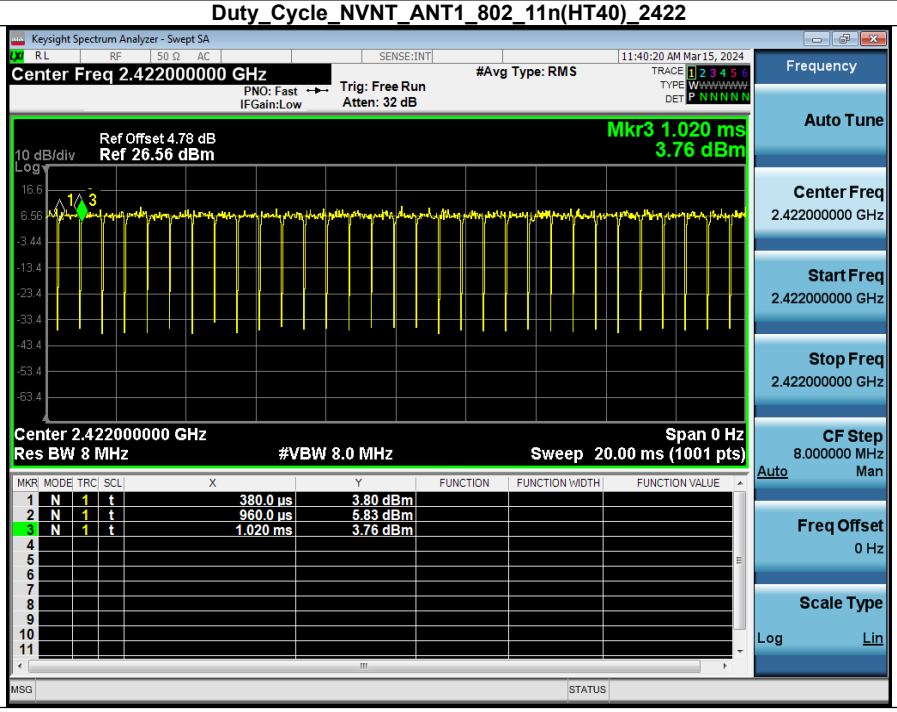
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_2437



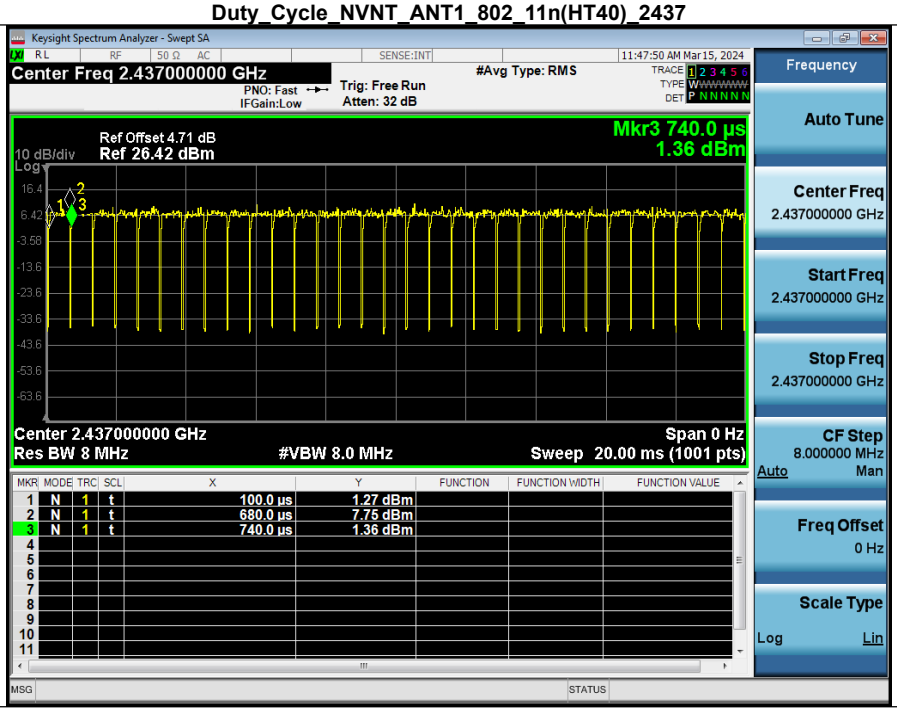
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_2462



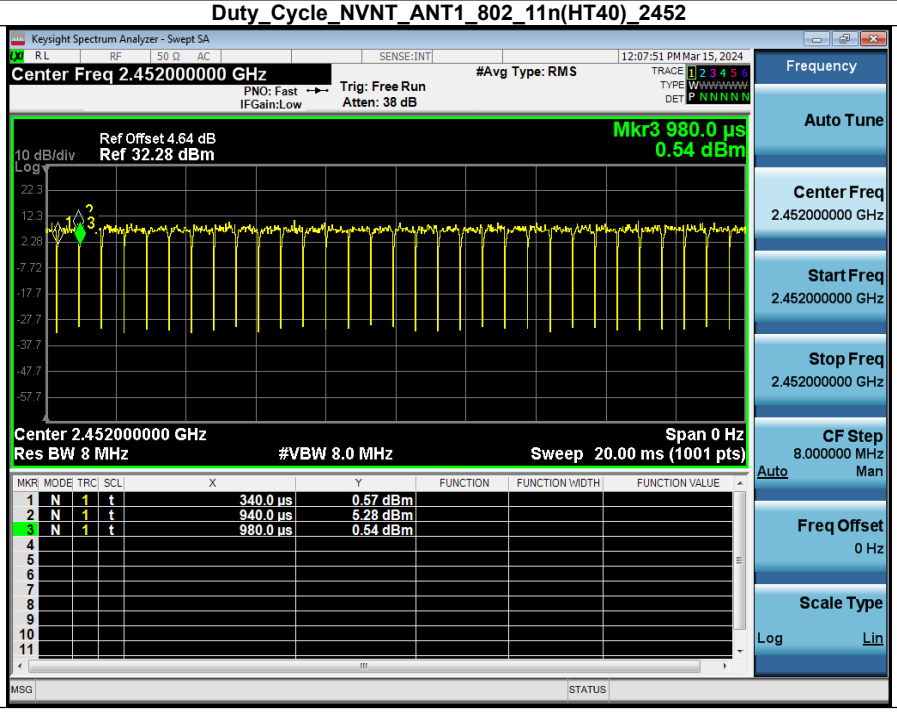
Duty_Cycle_NVNT_ANT1_802_11n(HT40)_2422



Duty_Cycle_NVNT_ANT1_802_11n(HT40)_2437



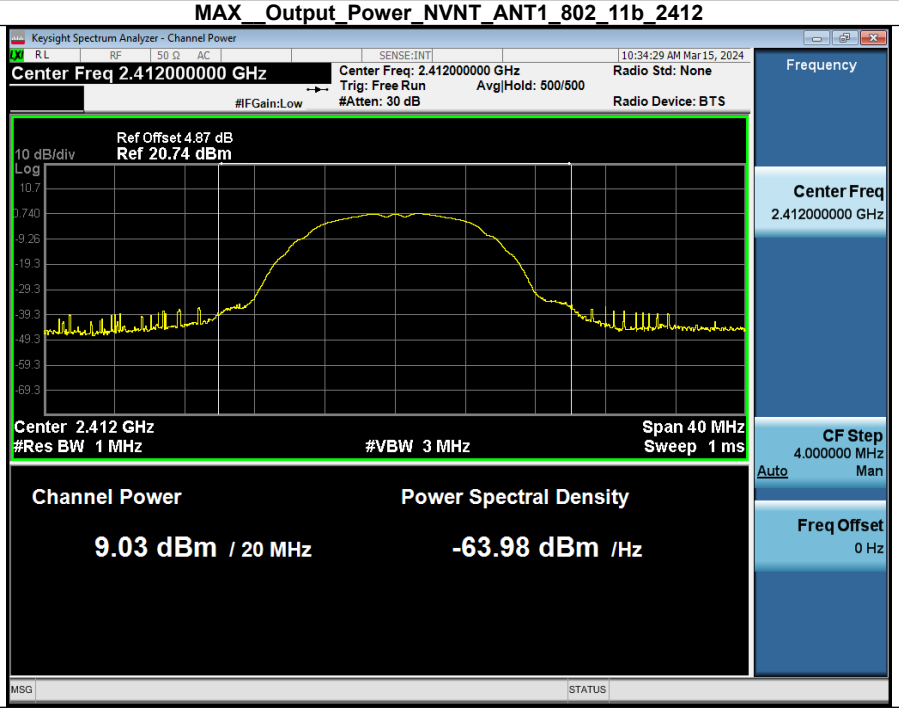
Duty_Cycle_NVNT_ANT1_802_11n(HT40)_2452



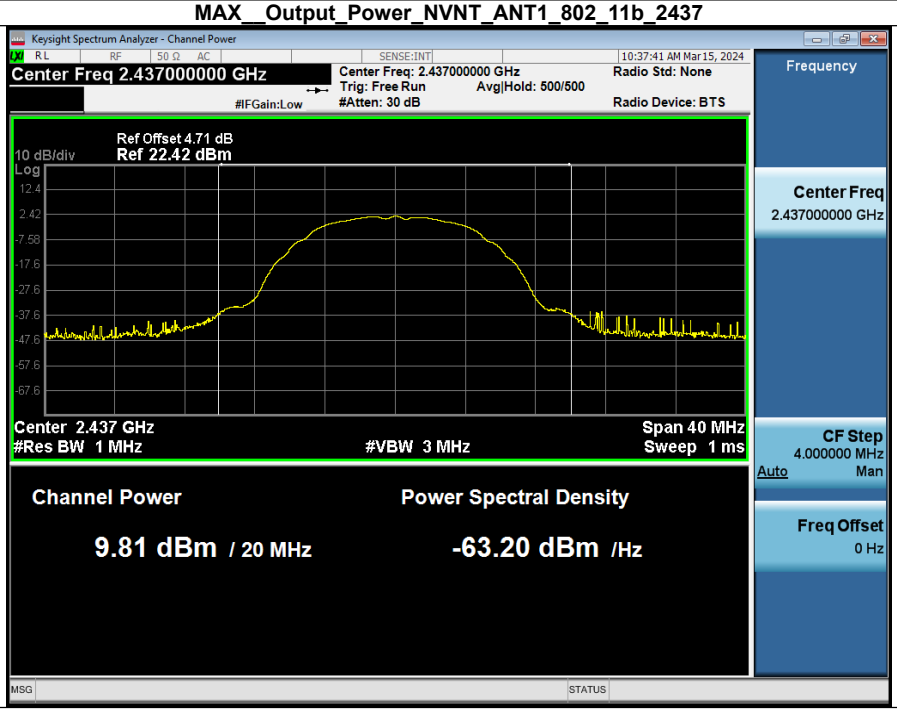
4. MAX. Output Power

Condition	Antenna	Modulation	Frequency (MHz)	Detector	Conducted Power(dBm)	Total Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	Peak	9.03	9.03	30	Pass
NVNT	ANT1	802.11b	2437.00	Peak	9.81	9.81	30	Pass
NVNT	ANT1	802.11b	2462.00	Peak	9.82	9.82	30	Pass
NVNT	ANT1	802.11g	2412.00	Peak	13.13	13.13	30	Pass
NVNT	ANT1	802.11g	2437.00	Peak	13.75	13.75	30	Pass
NVNT	ANT1	802.11g	2462.00	Peak	13.91	13.91	30	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	Peak	13.67	13.67	30	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	Peak	14.37	14.37	30	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	Peak	14.47	14.47	30	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	Peak	14.44	14.44	30	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	Peak	14.40	14.40	30	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	Peak	14.40	14.40	30	Pass

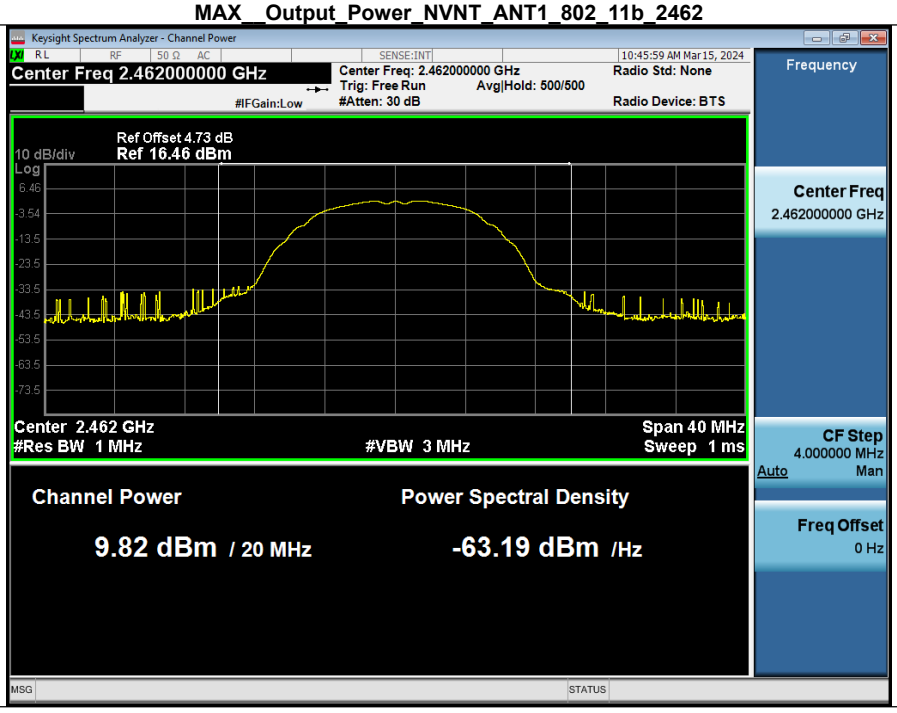
MAX__Output_Power_NVNT_ANT1_802_11b_2412



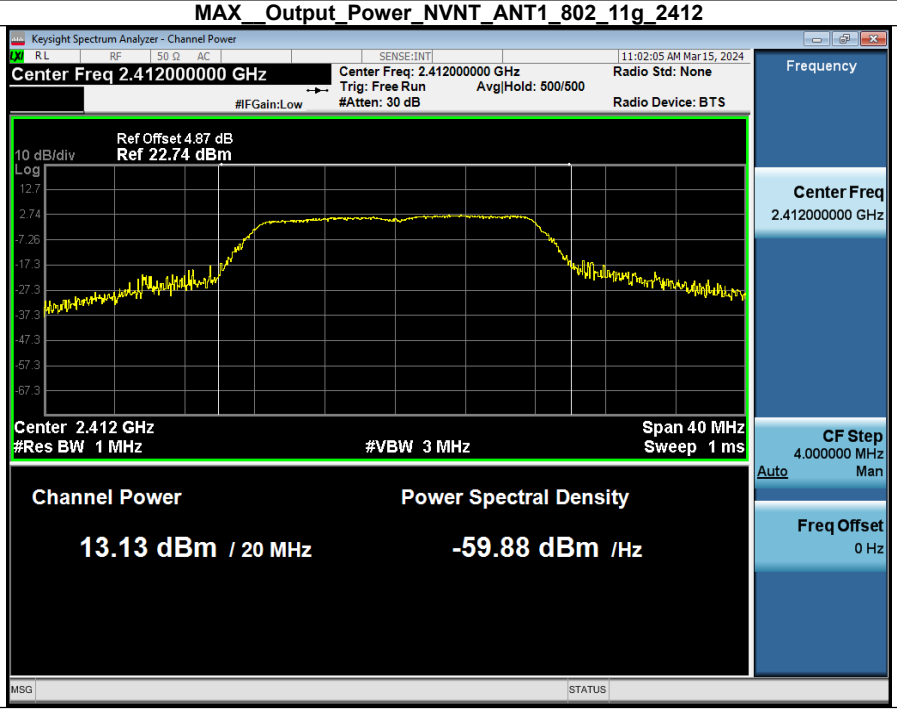
MAX__Output_Power_NVNT_ANT1_802_11b_2437



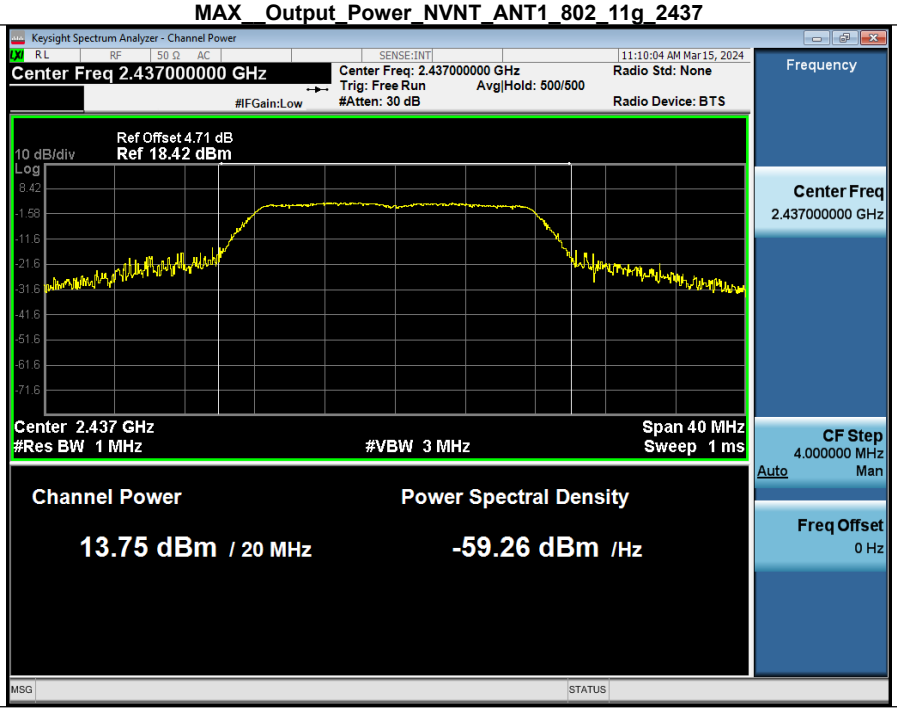
MAX__Output_Power_NVNT_ANT1_802_11b_2462



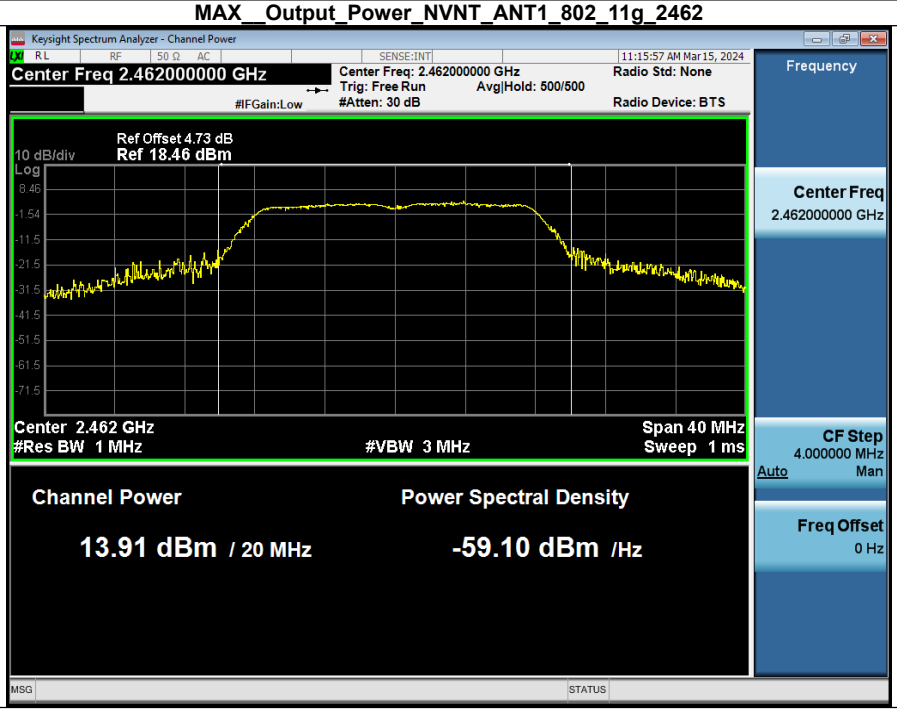
MAX__Output_Power_NVNT_ANT1_802_11g_2412



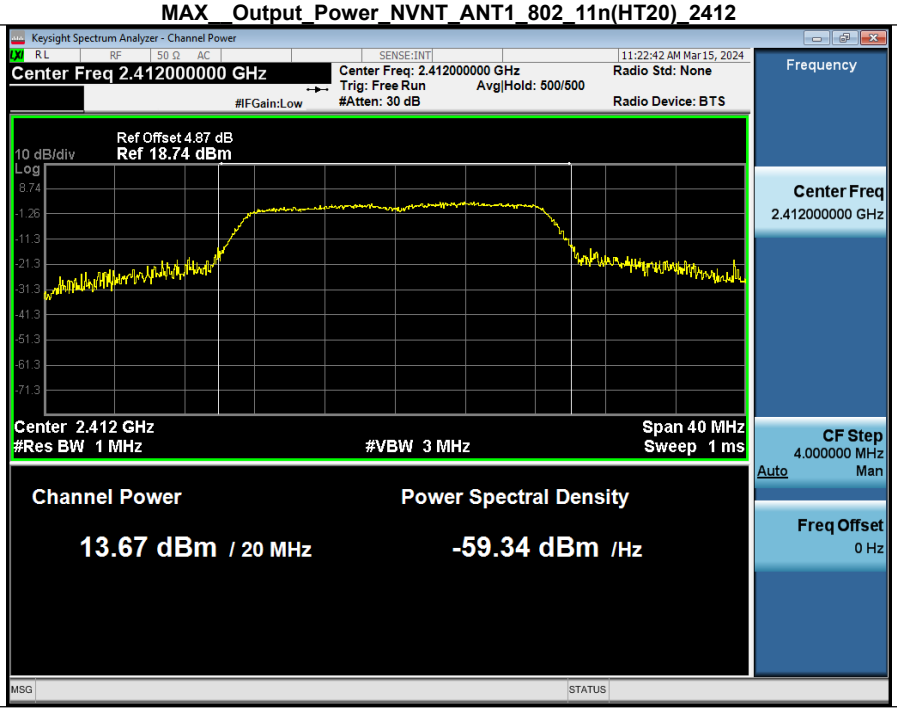
MAX__Output_Power_NVNT_ANT1_802_11g_2437



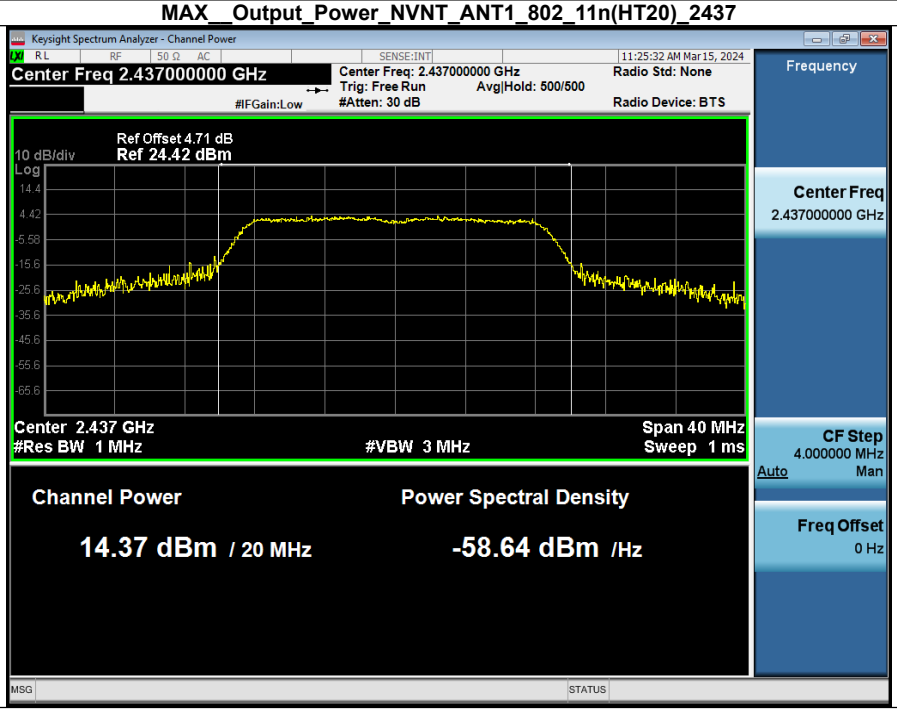
MAX__Output_Power_NVNT_ANT1_802_11g_2462



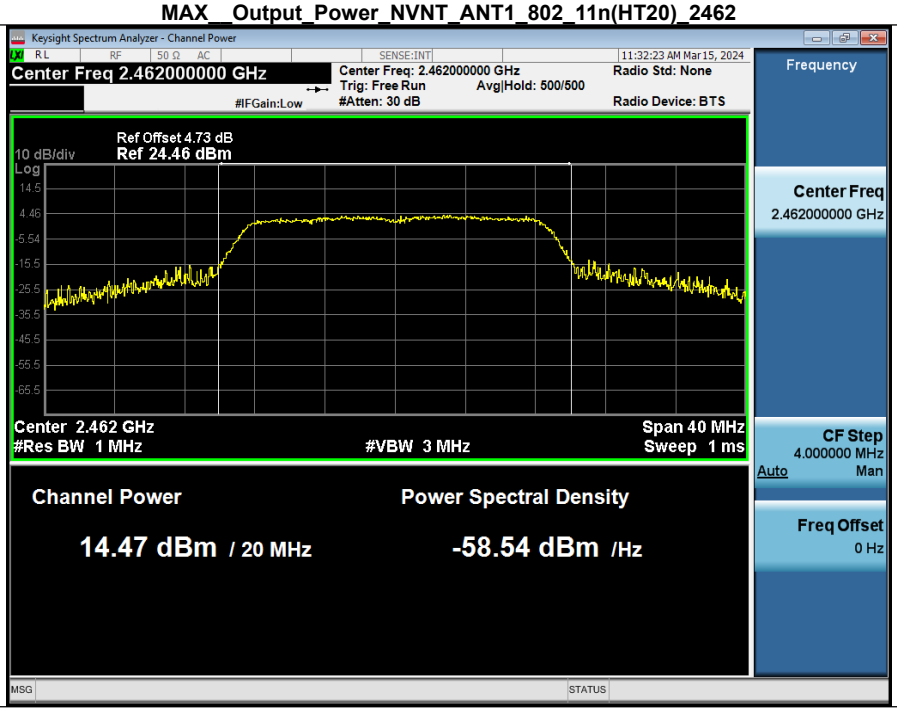
MAX__Output_Power_NVNT_ANT1_802_11n(HT20)_2412



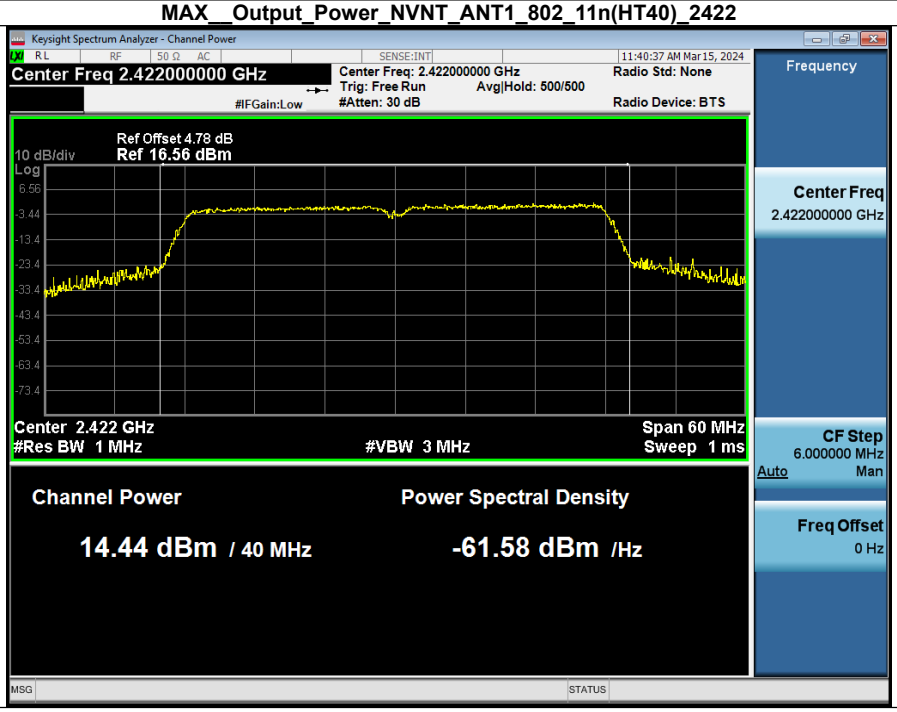
MAX__Output_Power_NVNT_ANT1_802_11n(HT20)_2437



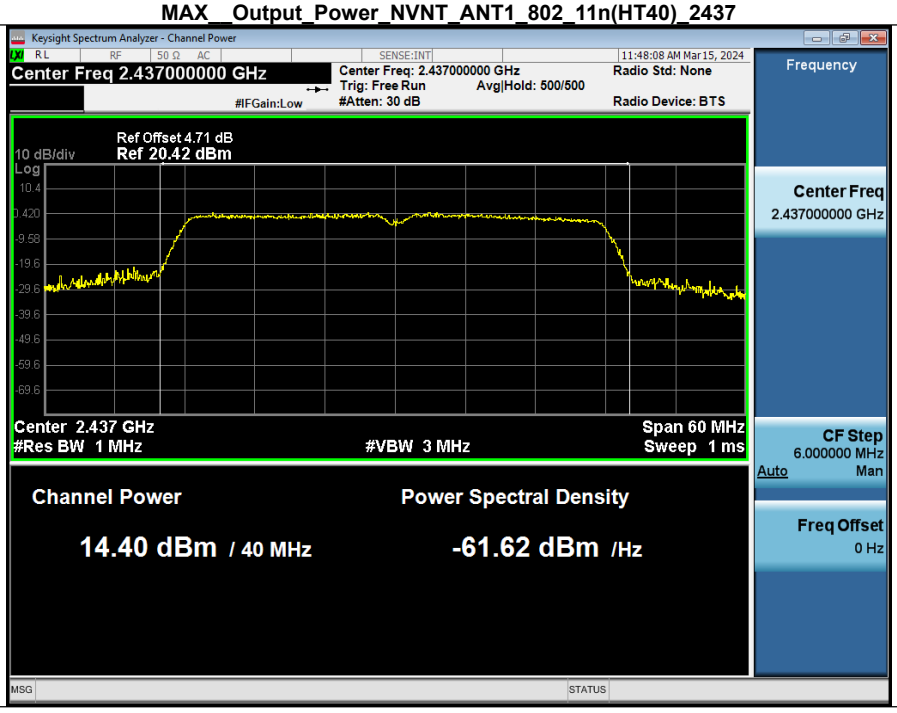
MAX__Output_Power_NVNT_ANT1_802_11n(HT20)_2462



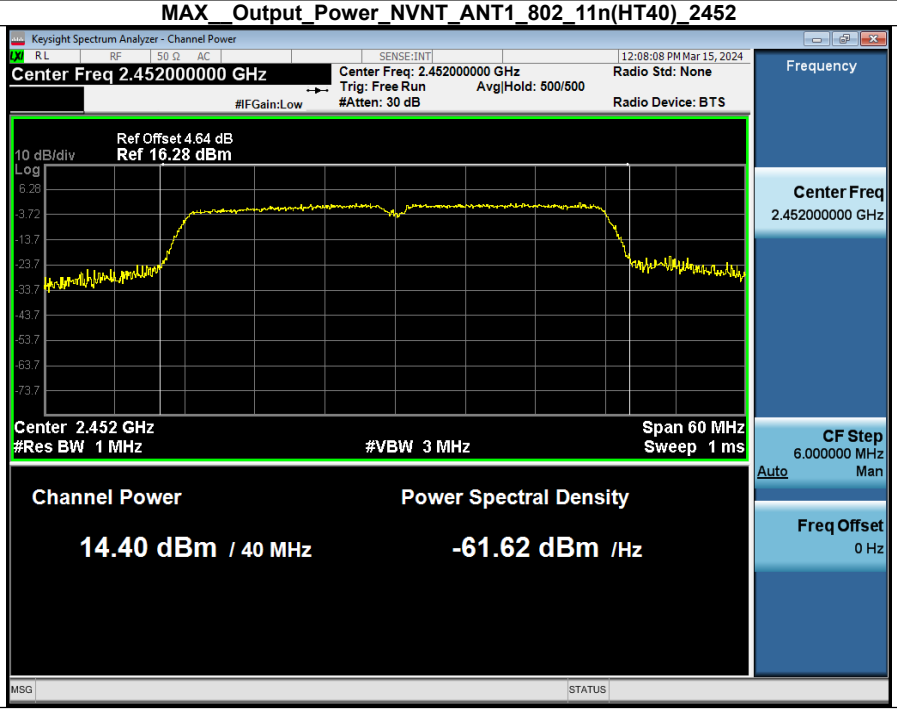
MAX__Output_Power_NVNT_ANT1_802_11n(HT40)_2422



MAX__Output_Power_NVNT_ANT1_802_11n(HT40)_2437



MAX__Output_Power_NVNT_ANT1_802_11n(HT40)_2452

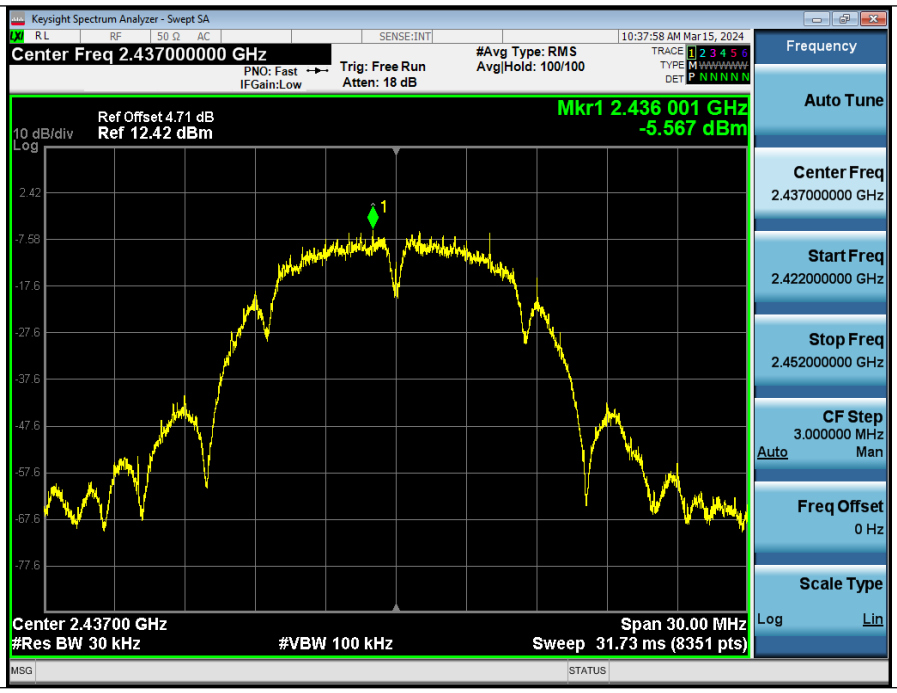


5. Power Spectral Density

Condition	Antenna	Modulation	Frequency (MHz)	PSD(dBm/30kHz)	RB factor(dB)	PSD(dBm/3kHz)	limit(dBm/3kHz)	Result
NVNT	ANT1	802.11b	2412.00	-6.56	-10.00	-16.56	8	Pass
NVNT	ANT1	802.11b	2437.00	-5.57	-10.00	-15.57	8	Pass
NVNT	ANT1	802.11b	2462.00	-5.41	-10.00	-15.41	8	Pass
NVNT	ANT1	802.11g	2412.00	-10.02	-10.00	-20.02	8	Pass
NVNT	ANT1	802.11g	2437.00	-9.36	-10.00	-19.36	8	Pass
NVNT	ANT1	802.11g	2462.00	-8.75	-10.00	-18.75	8	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	-9.94	-10.00	-19.94	8	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	-10.02	-10.00	-20.02	8	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	-9.69	-10.00	-19.69	8	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	-12.61	-10.00	-22.61	8	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	-12.76	-10.00	-22.76	8	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	-12.72	-10.00	-22.72	8	Pass

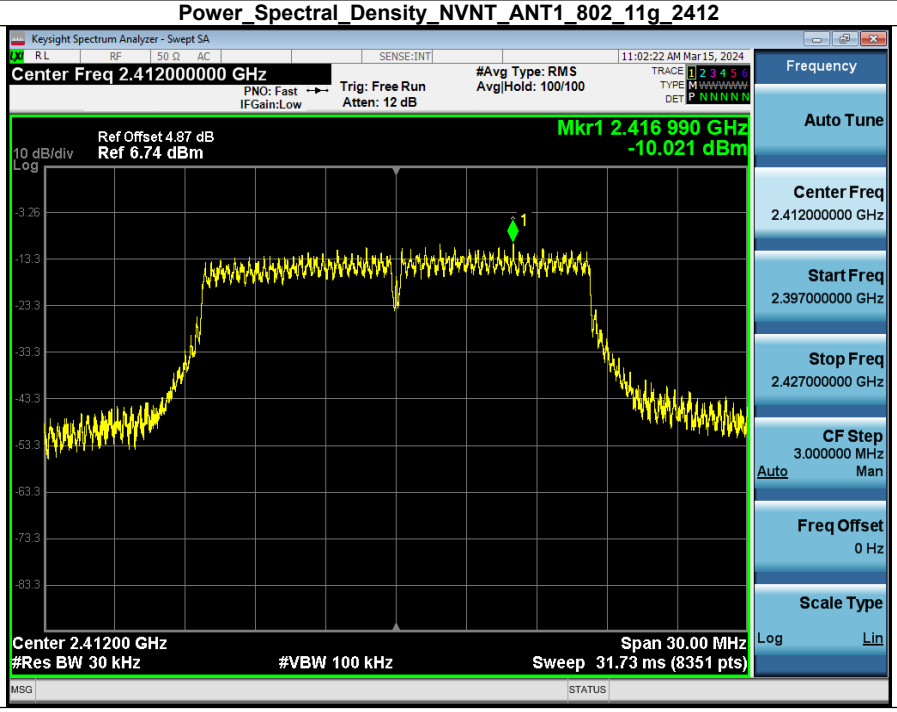
Power_Spectral_Density_NVNT_ANT1_802_11b_2412

Power_Spectral_Density_NVNT_ANT1_802_11b_2437

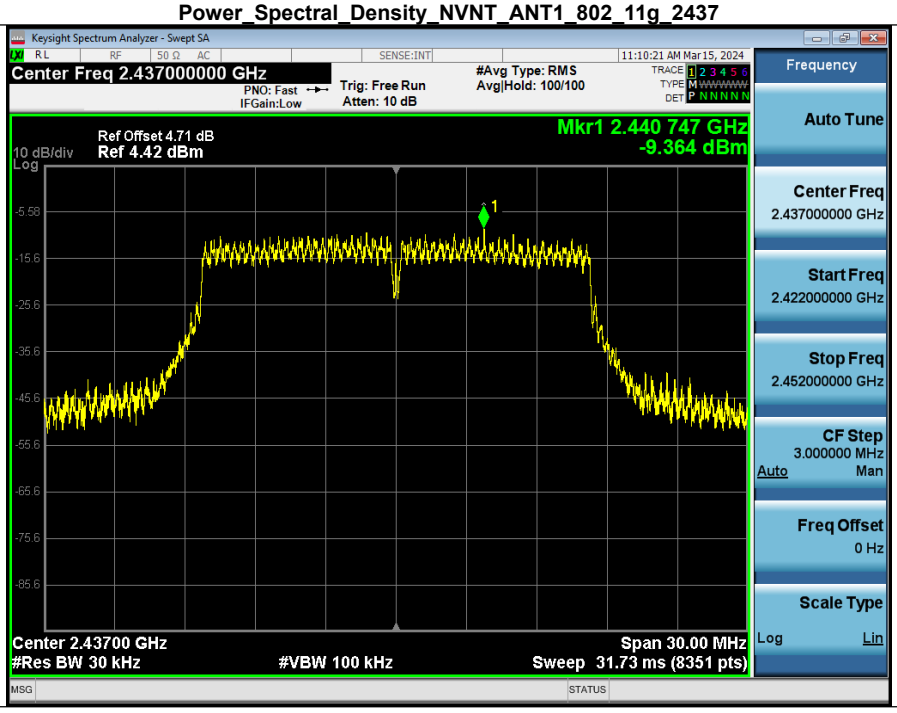


Power_Spectral_Density_NVNT_ANT1_802_11b_2462

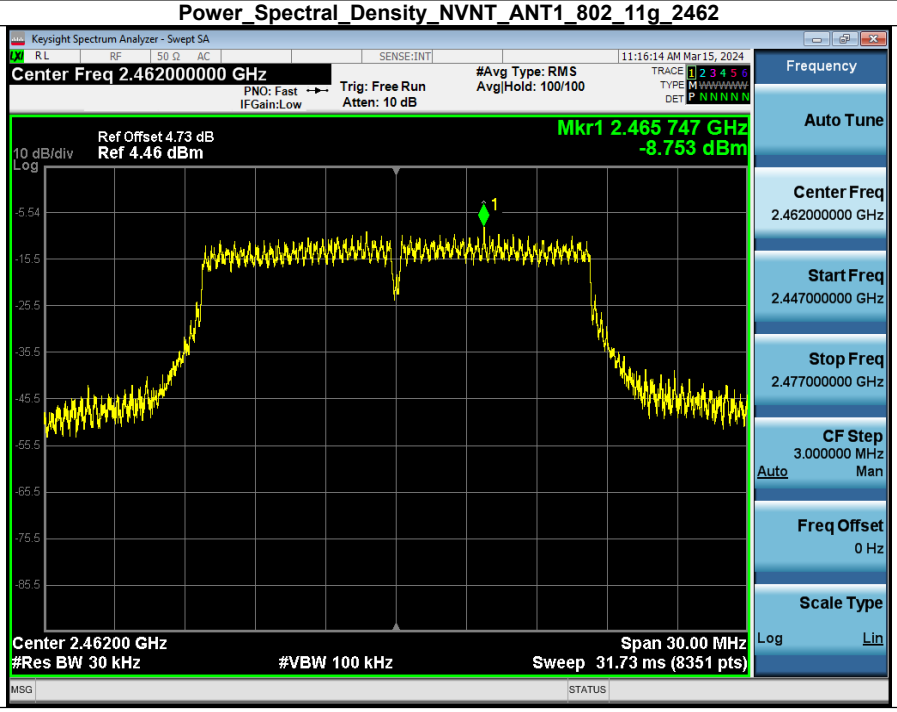
Power_Spectral_Density_NVNT_ANT1_802_11g_2412



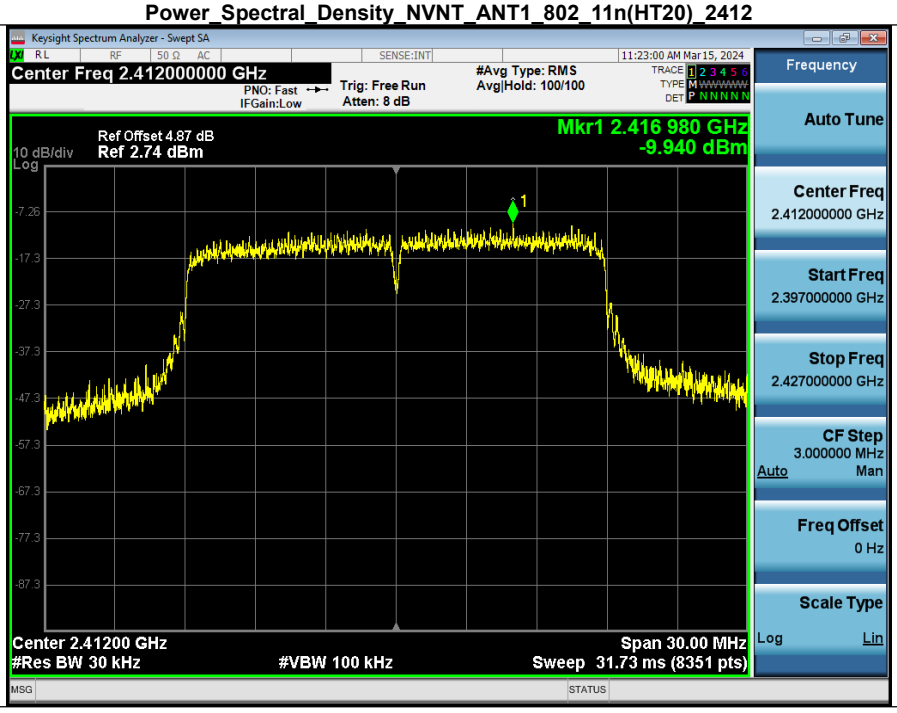
Power_Spectral_Density_NVNT_ANT1_802_11g_2437



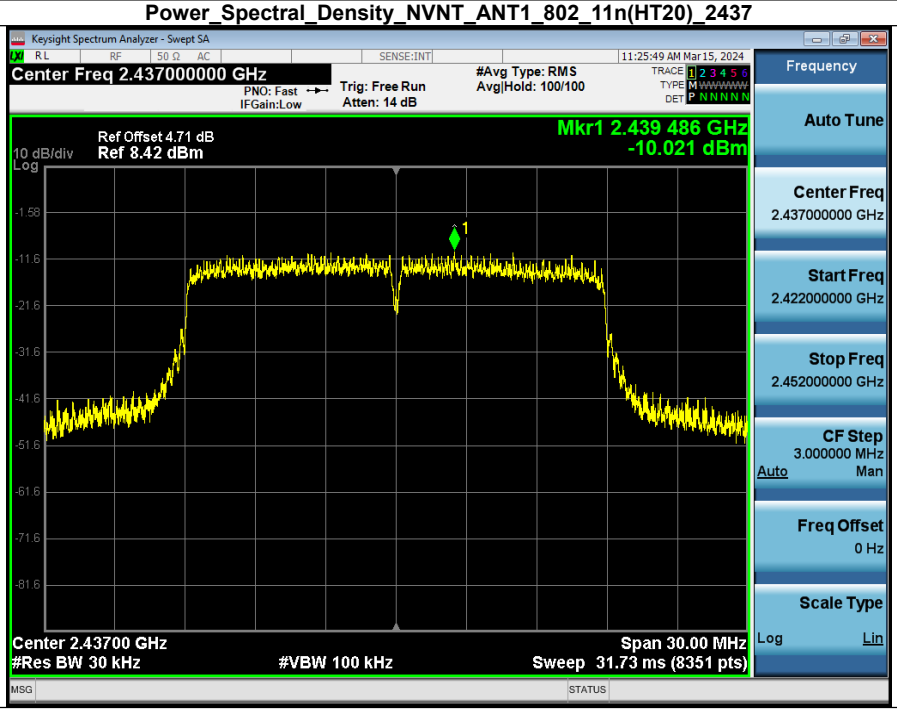
Power_Spectral_Density_NVNT_ANT1_802_11g_2462



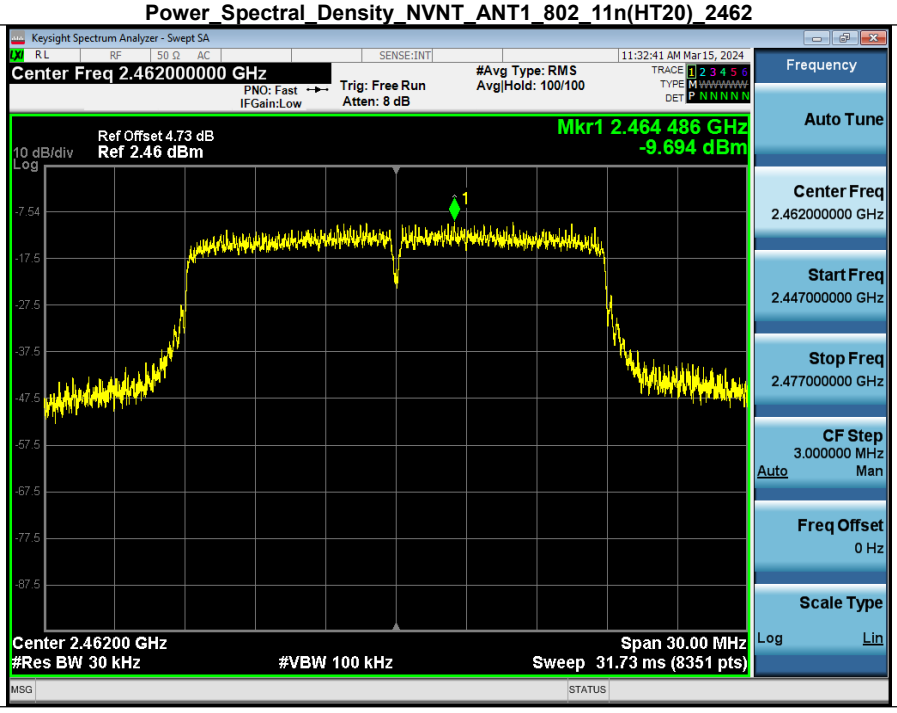
Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_2412



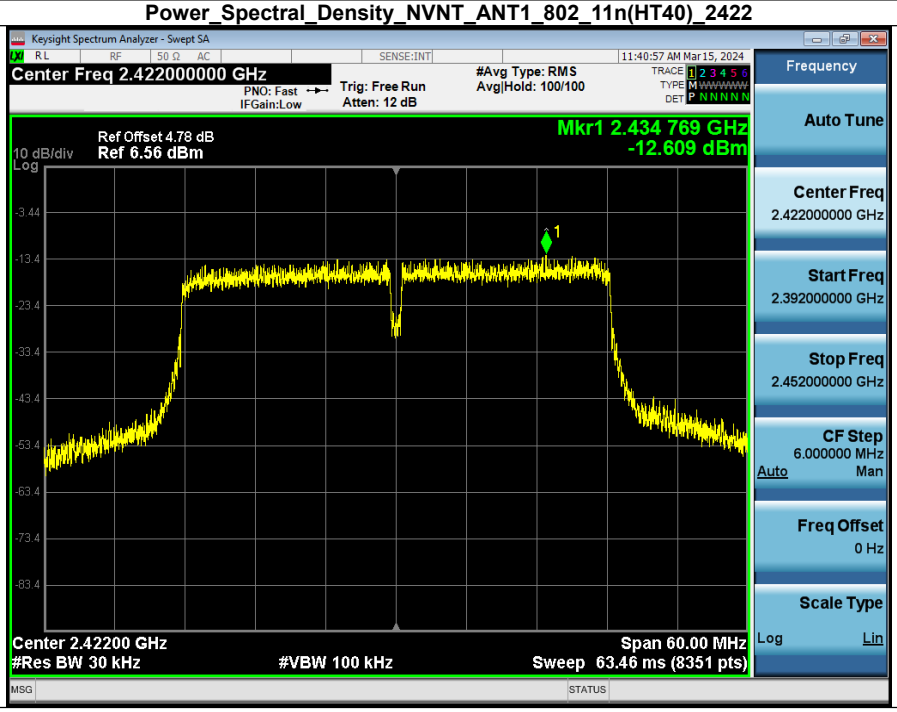
Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_2437



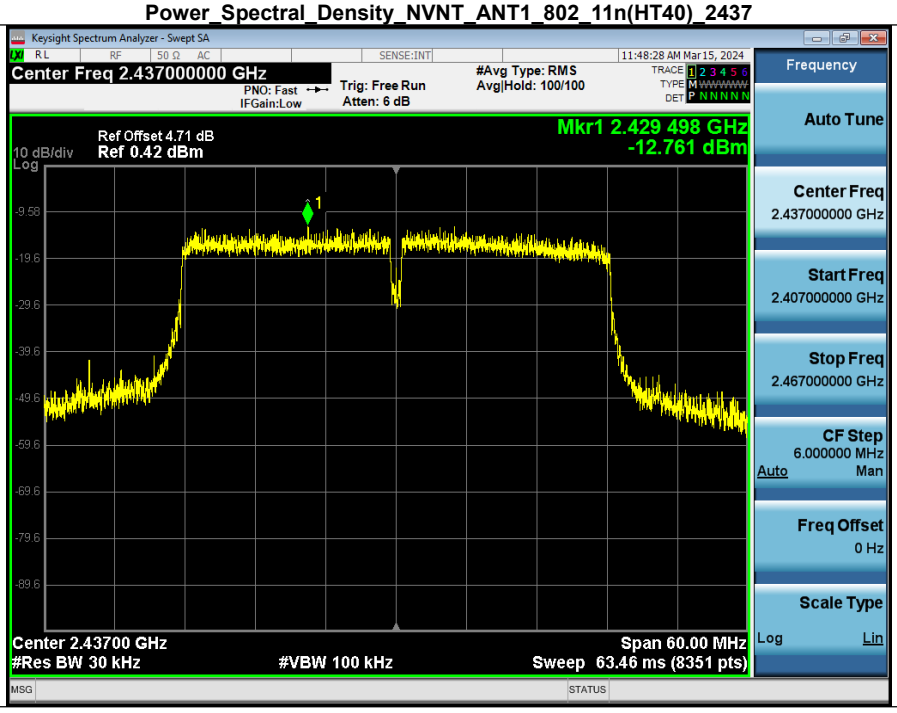
Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_2462



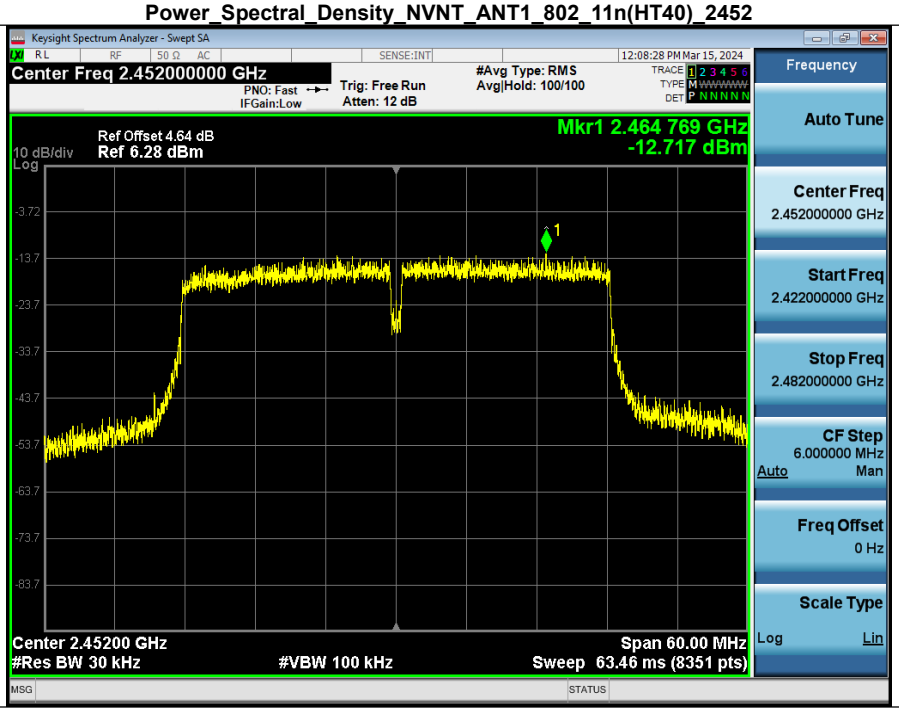
Power_Spectral_Density_NVNT_ANT1_802_11n(HT40)_2422



Power_Spectral_Density_NVNT_ANT1_802_11n(HT40)_2437



Power_Spectral_Density_NVNT_ANT1_802_11n(HT40)_2452

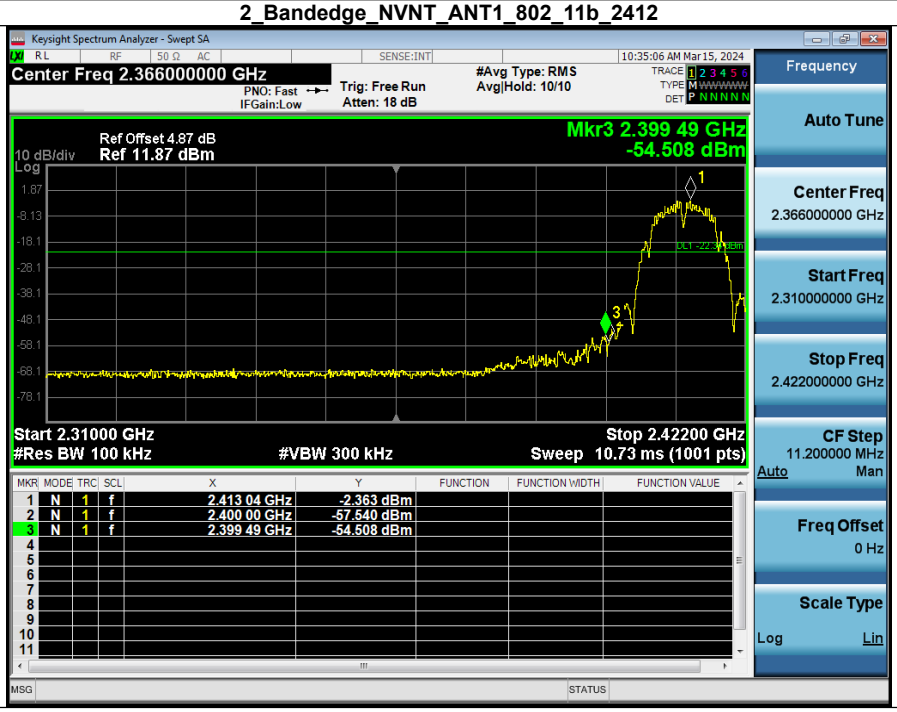


6. Bandedge

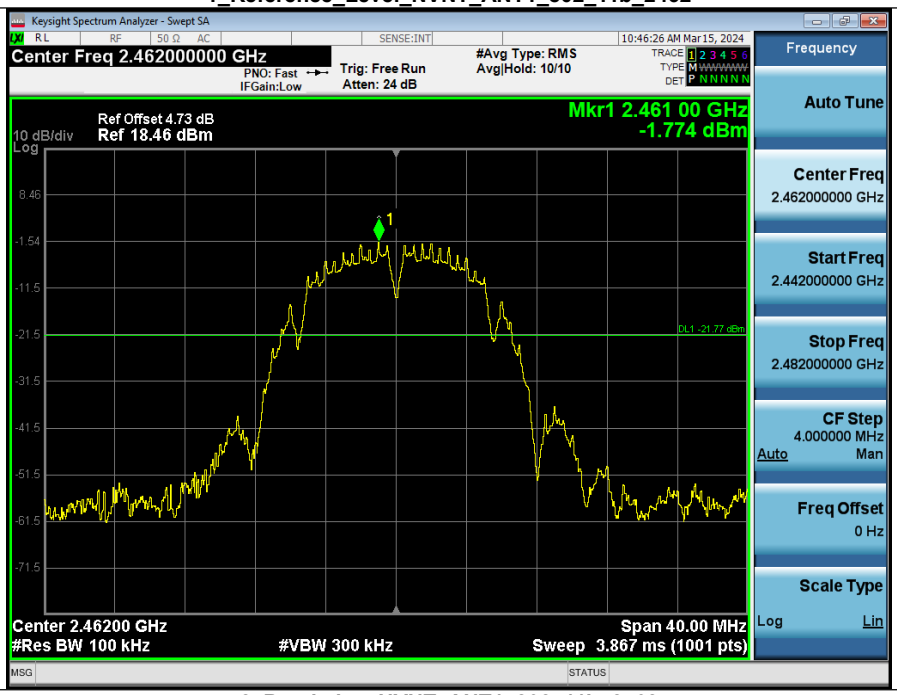
Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark_frequency(MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	2399.488	-54.508	-22.339	Pass
NVNT	ANT1	802.11b	2462.00	2484.496	-57.215	-21.774	Pass
NVNT	ANT1	802.11g	2412.00	2399.824	-37.489	-25.594	Pass
NVNT	ANT1	802.11g	2462.00	2483.536	-47.217	-25.392	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	2399.488	-36.339	-25.607	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	2484.496	-45.704	-24.925	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	2399.760	-40.011	-27.866	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	2483.816	-41.318	-27.944	Pass

1_Reference_Level_NVNT_ANT1_802_11b_2412

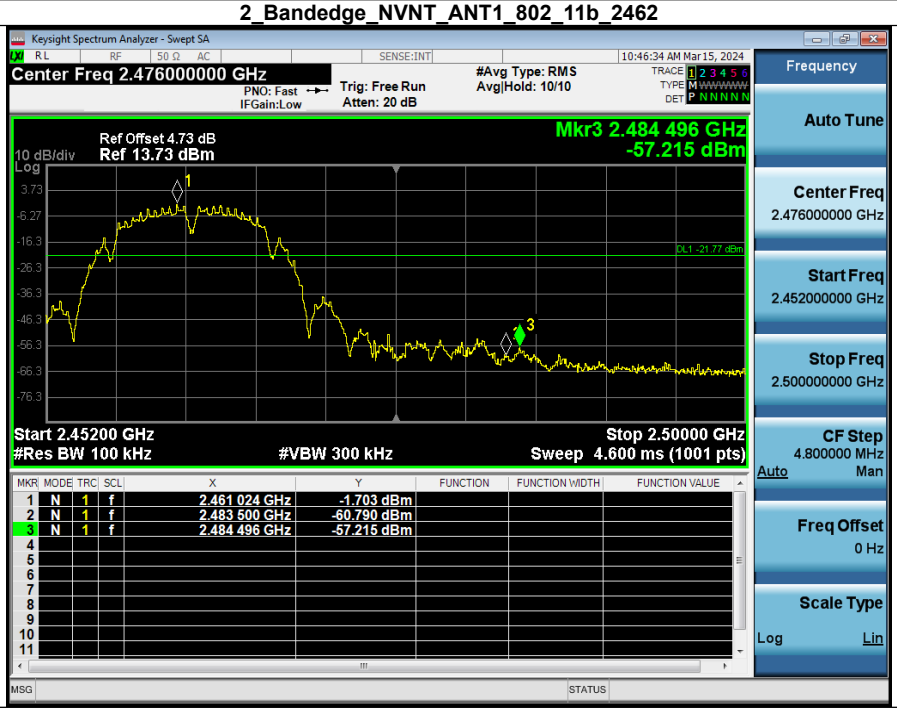
2_Bandedge_NVNT_ANT1_802_11b_2412



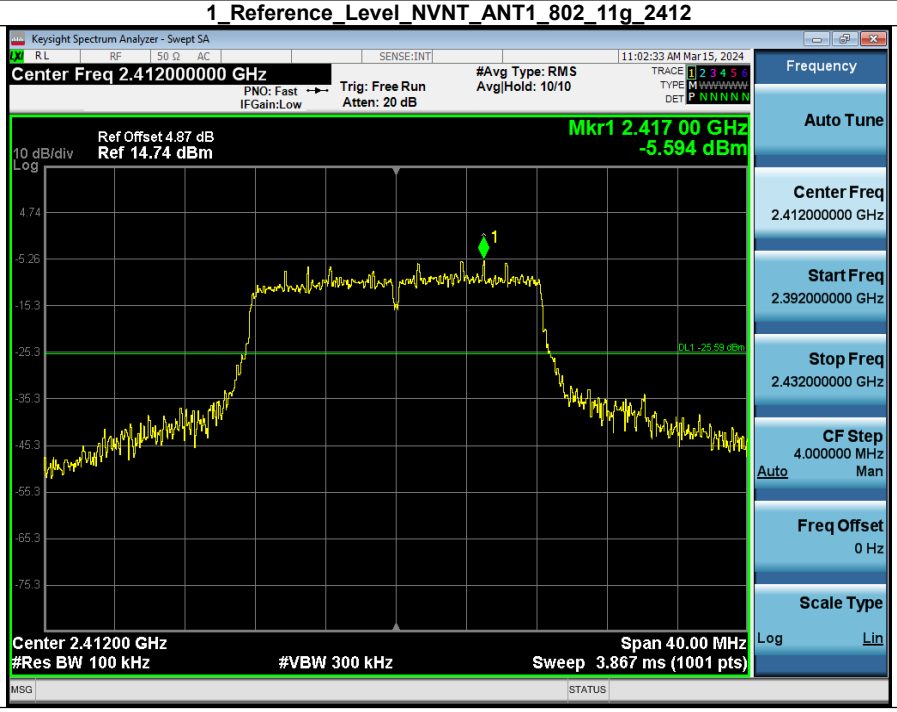
1_Reference_Level_NVNT_ANT1_802_11b_2462



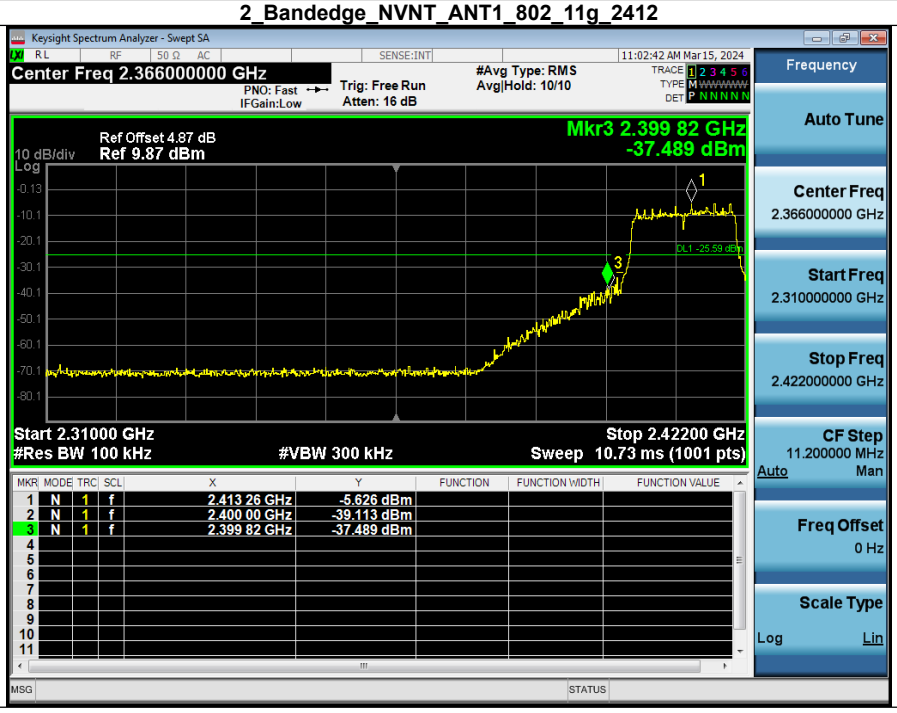
2_Bandedge_NVNT_ANT1_802_11b_2462



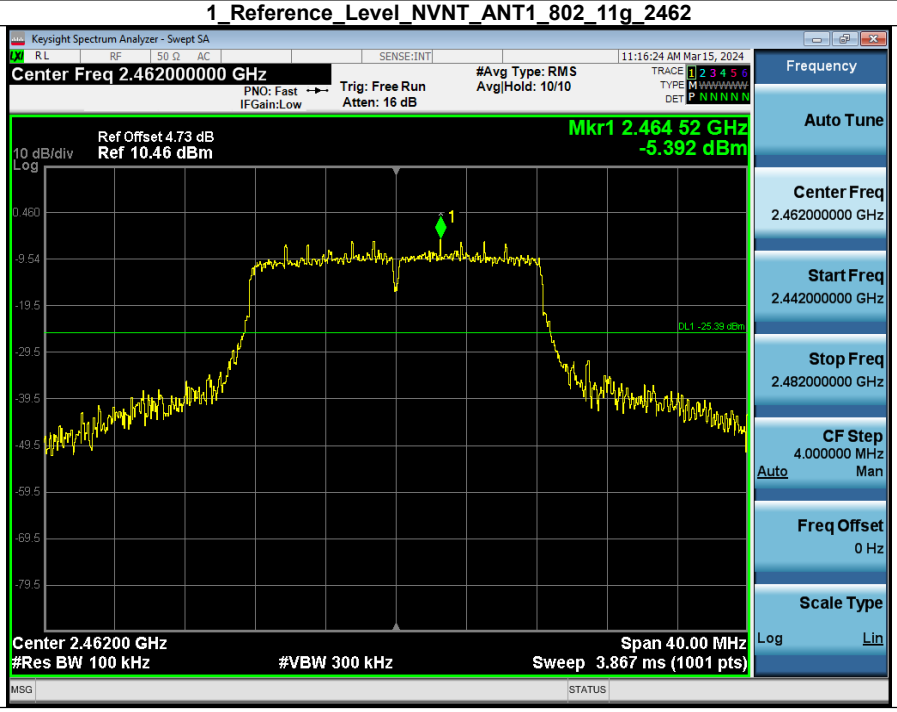
1_Reference_Level_NVNT_ANT1_802_11g_2412



2_Bandedge_NVNT_ANT1_802_11g_2412

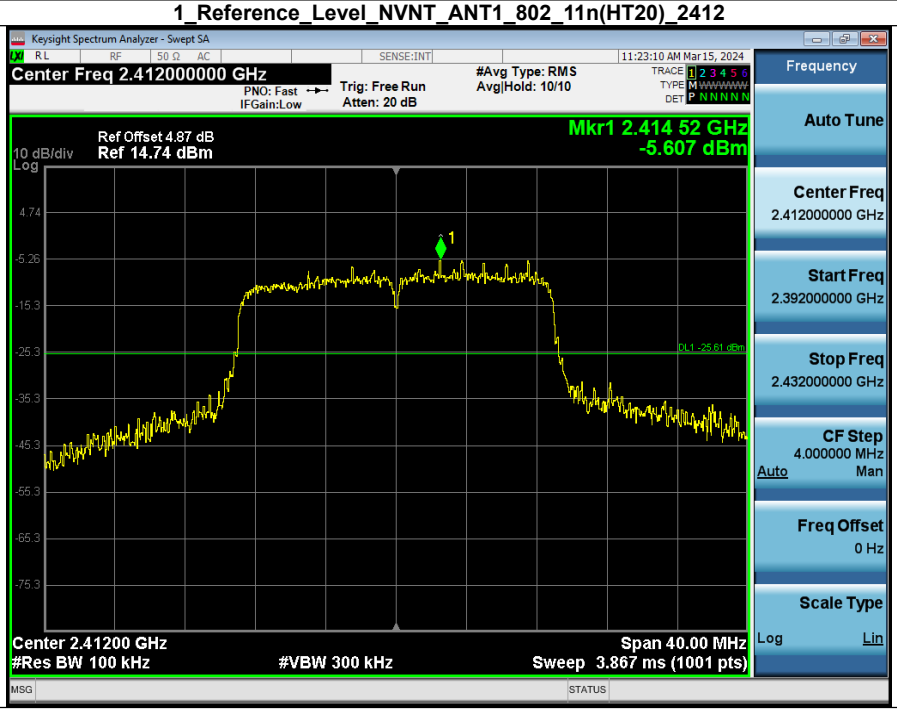


1_Reference_Level_NVNT_ANT1_802_11g_2462

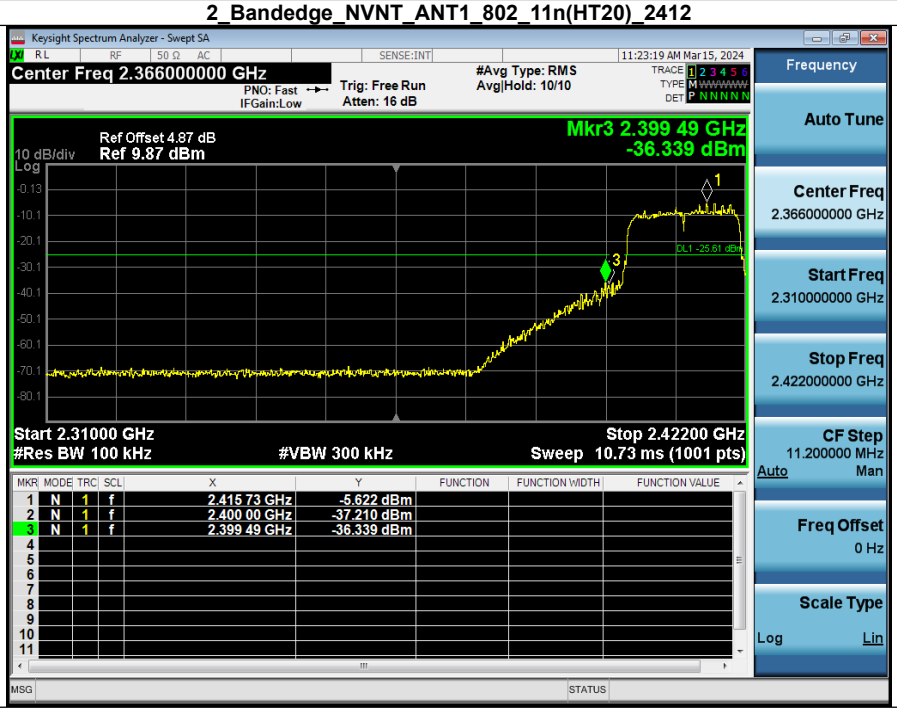


2_Bandedge_NVNT_ANT1_802_11g_2462

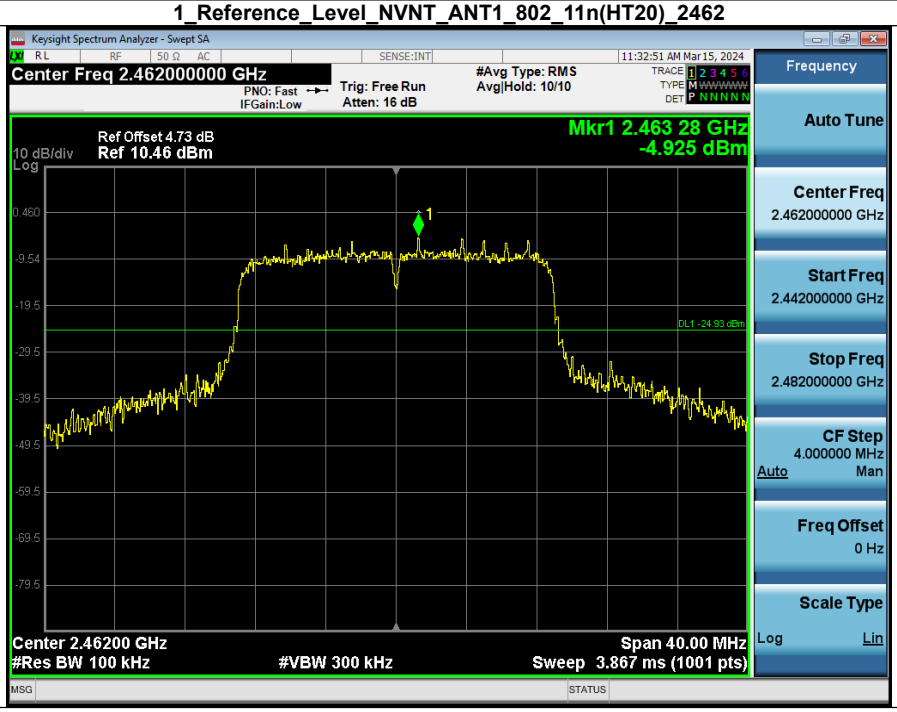
1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2412



2_Bandedge_NVNT_ANT1_802_11n(HT20)_2412

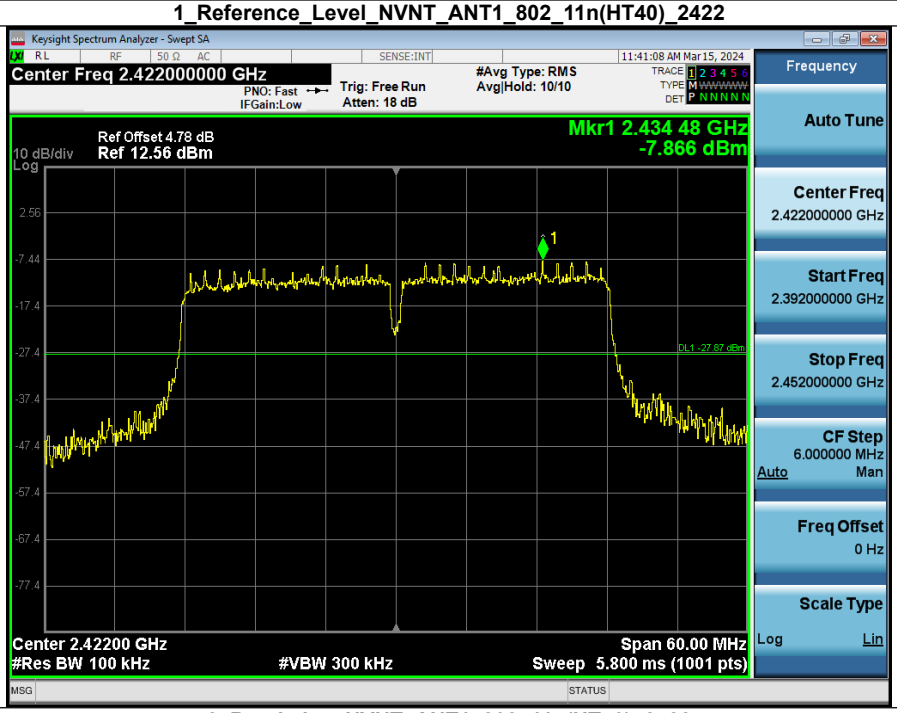


1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2462

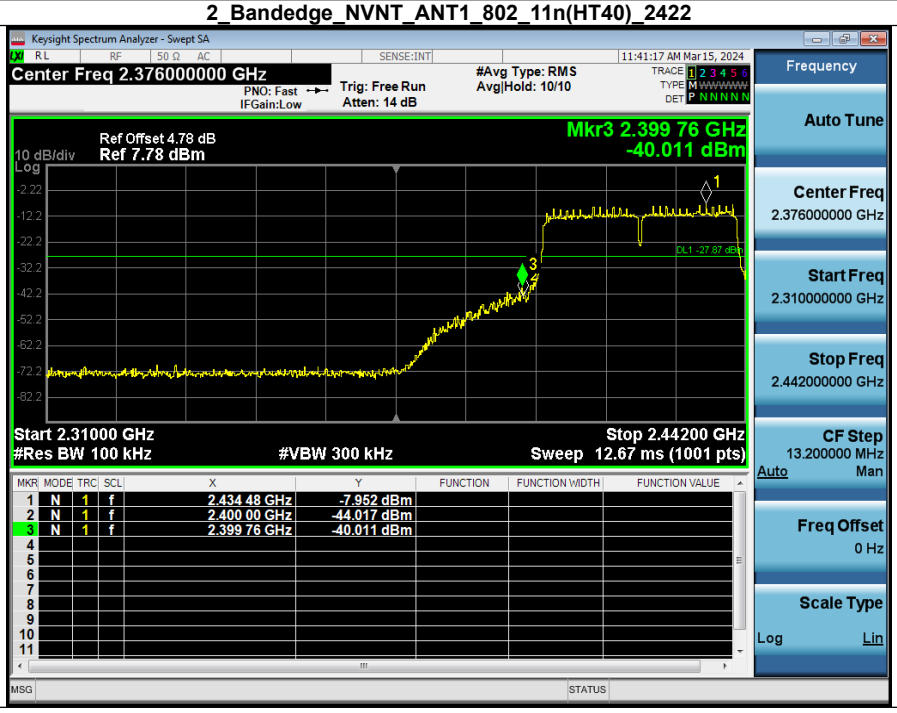


2_Bandedge_NVNT_ANT1_802_11n(HT20)_2462

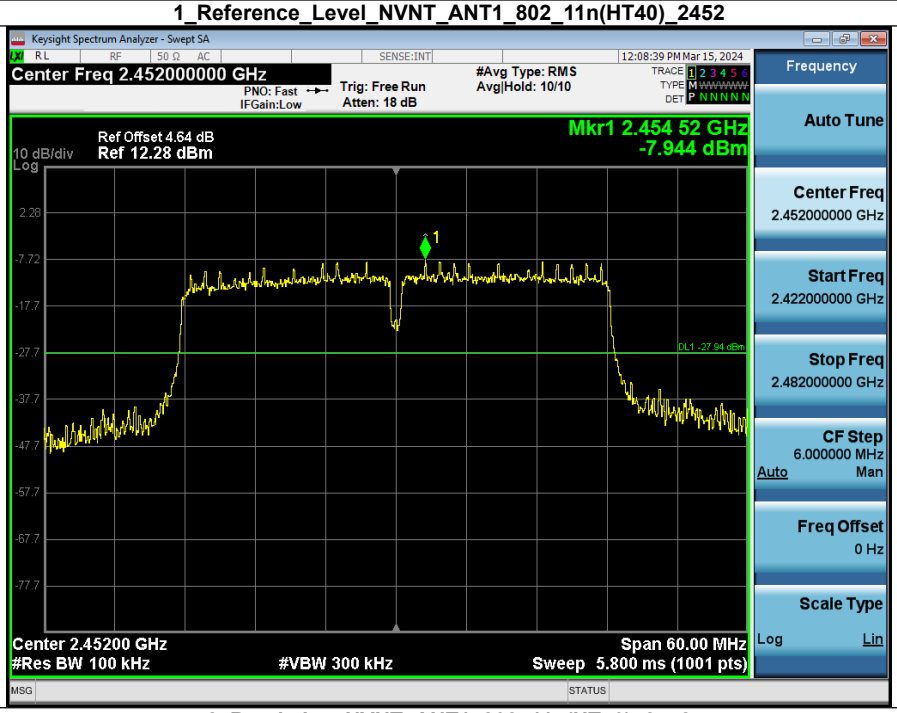
1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2422



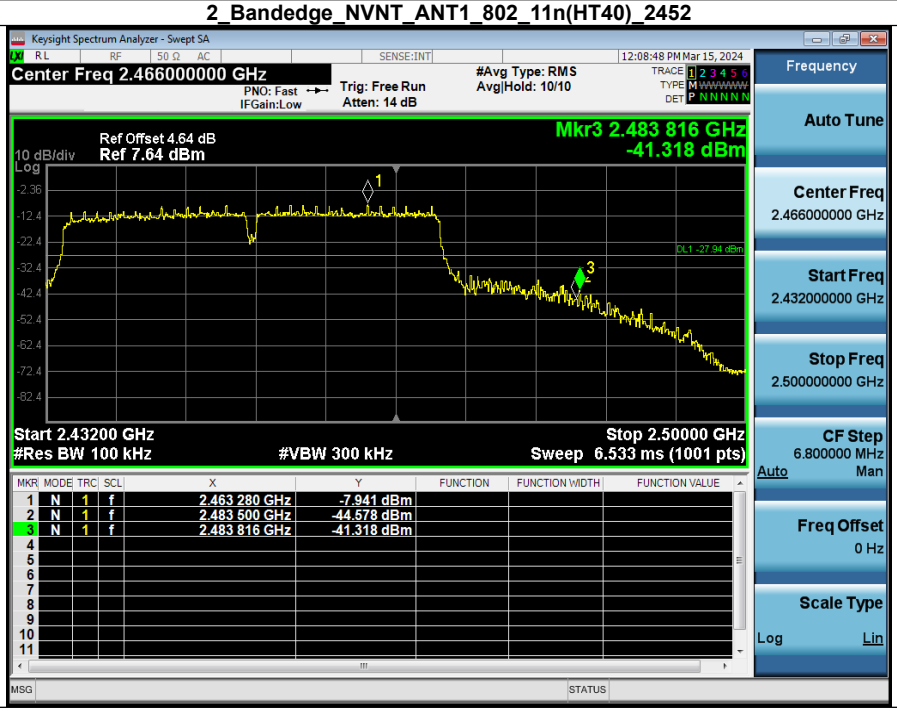
2_Bandedge_NVNT_ANT1_802_11n(HT40)_2422



1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2452



2_Bandedge_NVNT_ANT1_802_11n(HT40)_2452

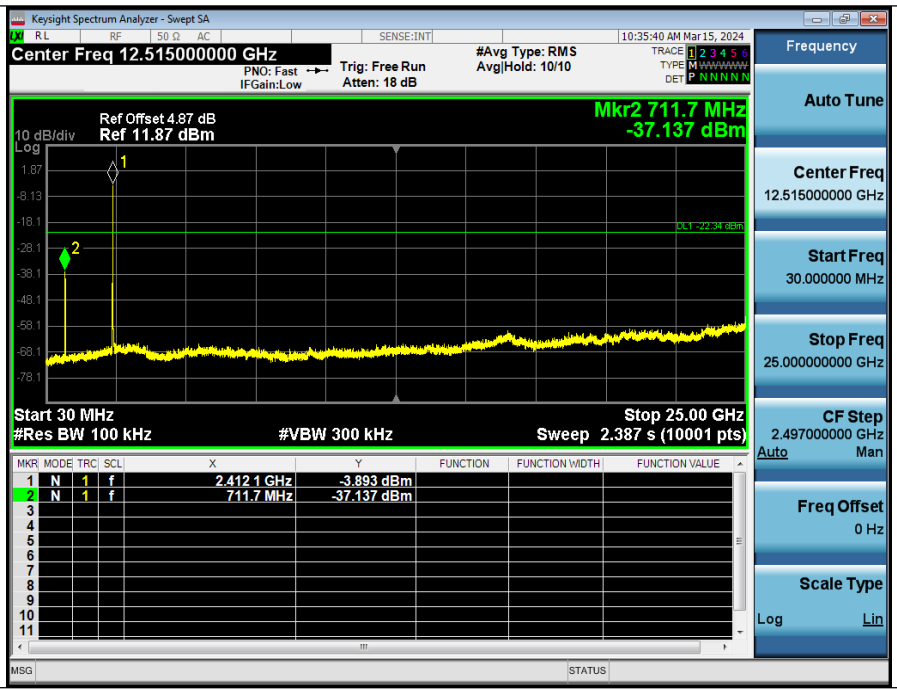


7. Spurious Emission

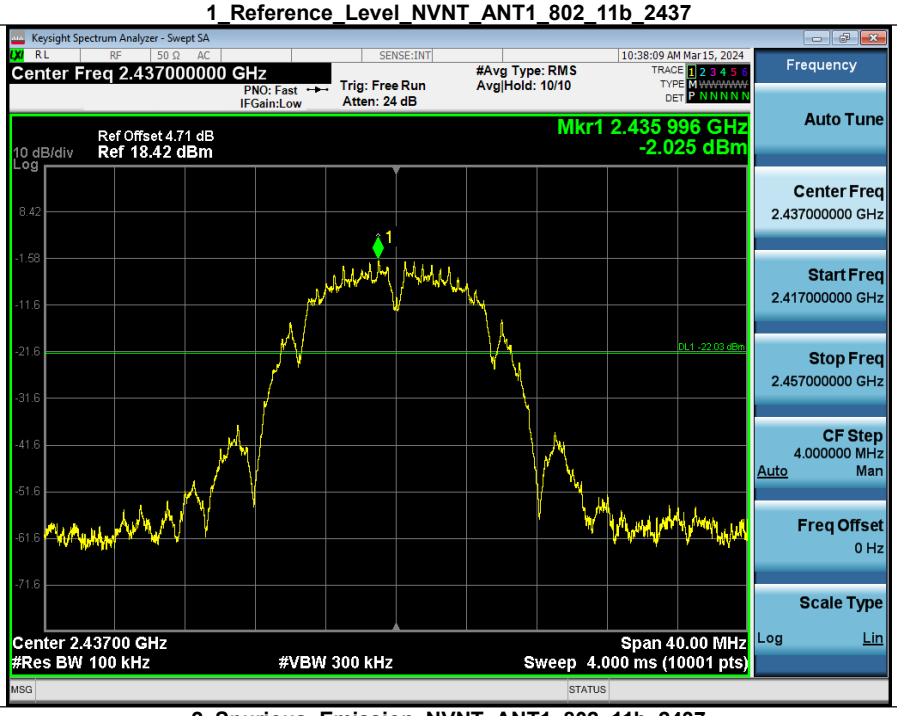
Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark_frequency(MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	711.681	-37.137	-22.339	Pass
NVNT	ANT1	802.11b	2437.00	709.184	-38.197	-22.025	Pass
NVNT	ANT1	802.11b	2462.00	24940.072	-53.842	-21.774	Pass
NVNT	ANT1	802.11g	2412.00	829.040	-32.864	-25.594	Pass
NVNT	ANT1	802.11g	2437.00	24955.054	-58.077	-25.721	Pass
NVNT	ANT1	802.11g	2462.00	5825.537	-52.982	-25.392	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	24965.042	-57.947	-25.607	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	24972.533	-62.288	-25.360	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	829.040	-30.054	-24.925	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	2536.988	-39.544	-27.866	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	896.459	-28.123	-28.121	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	888.968	-28.939	-27.944	Pass

1_Reference_Level_NVNT_ANT1_802_11b_2412

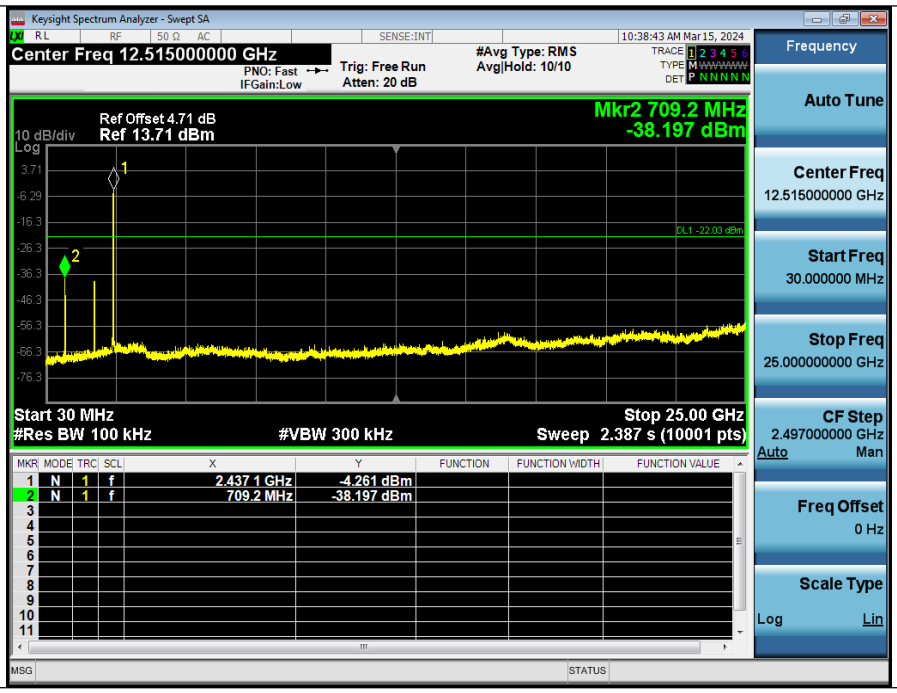
2_Spurious_Emission_NVNT_ANT1_802_11b_2412



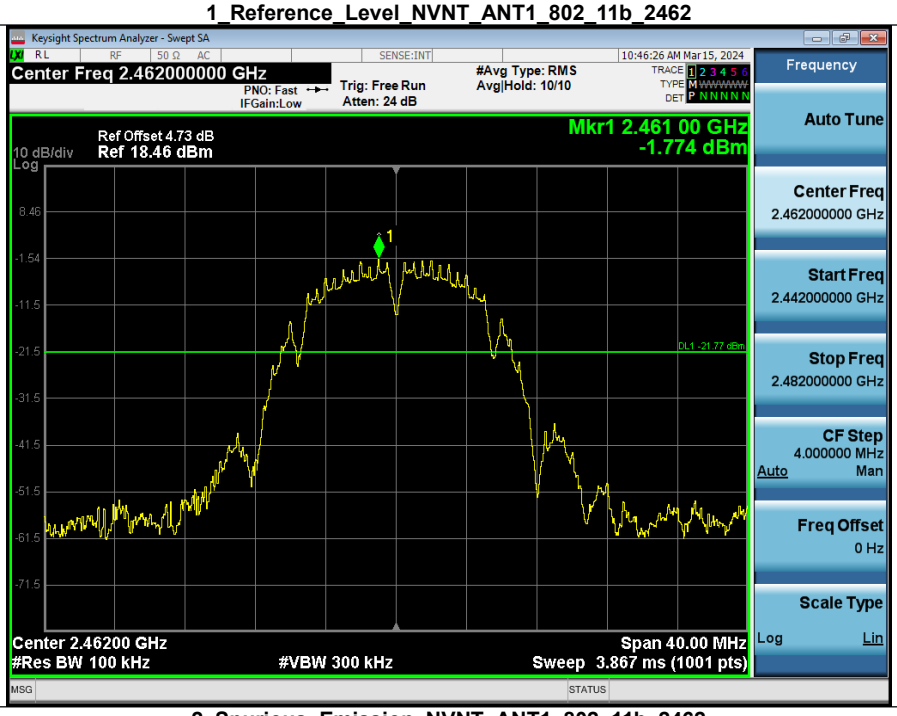
1_Reference_Level_NVNT_ANT1_802_11b_2437



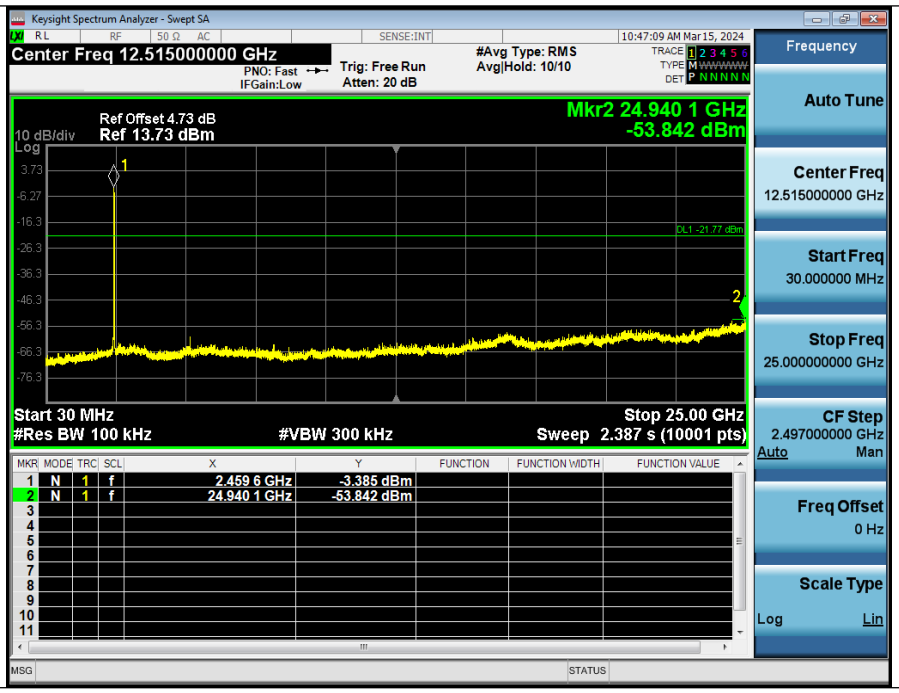
2_Spurious_Emission_NVNT_ANT1_802_11b_2437



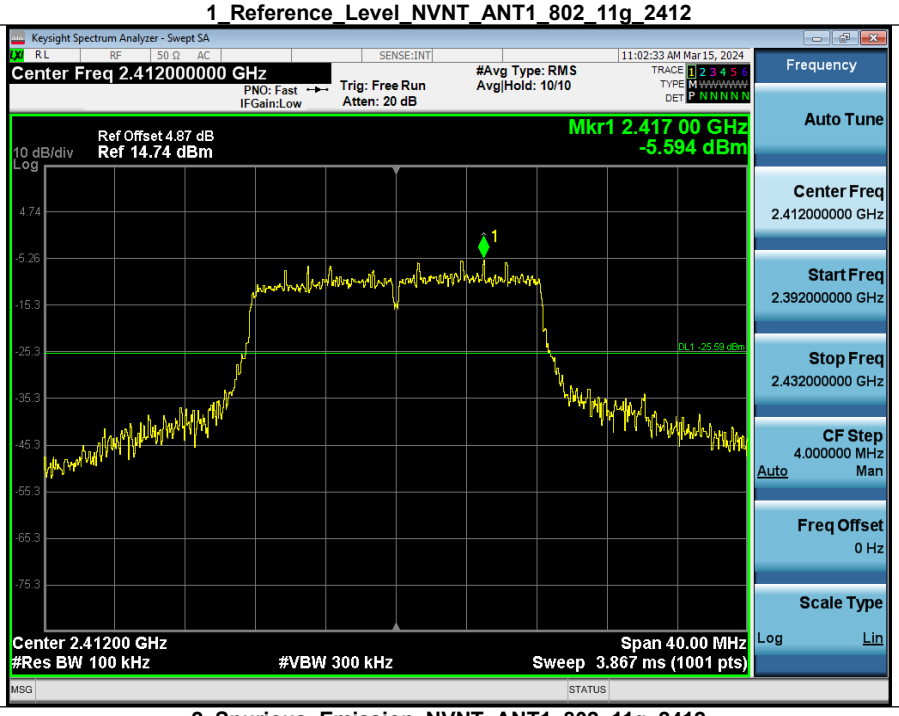
1_Reference_Level_NVNT_ANT1_802_11b_2462



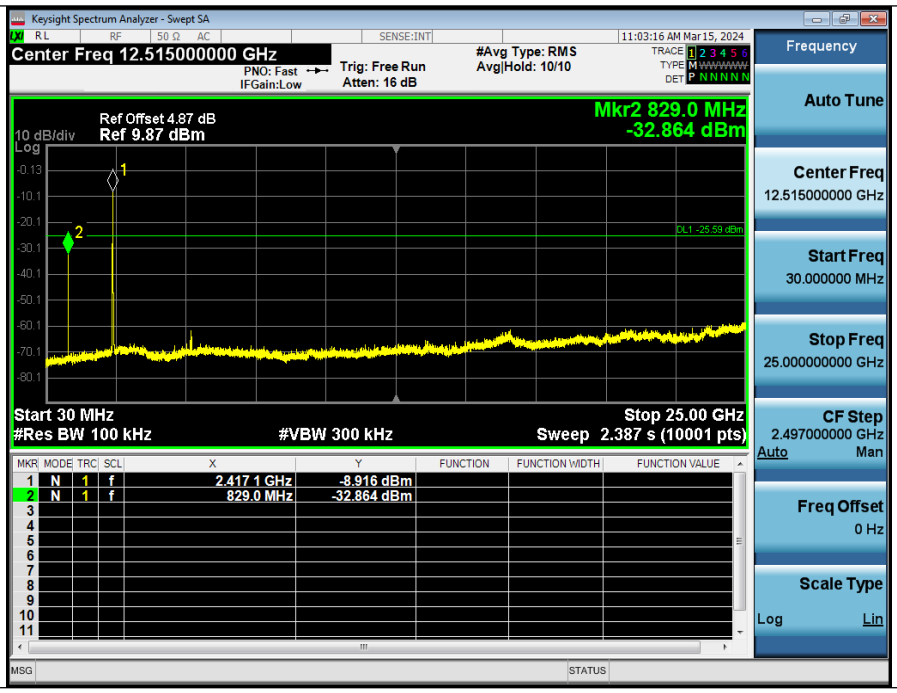
2_Spurious_Emission_NVNT_ANT1_802_11b_2462



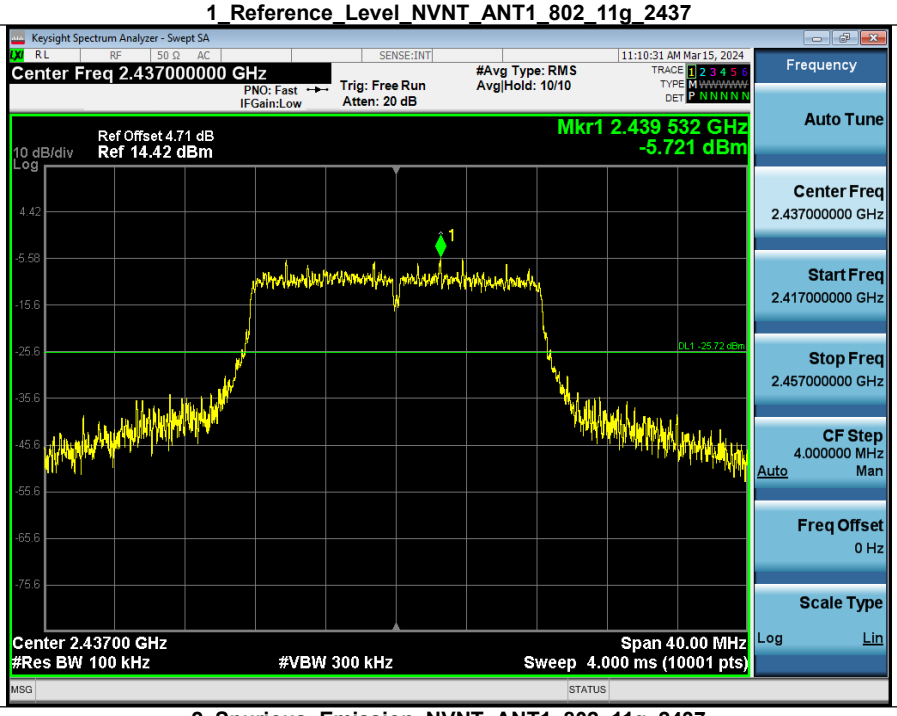
1_Reference_Level_NVNT_ANT1_802_11g_2412



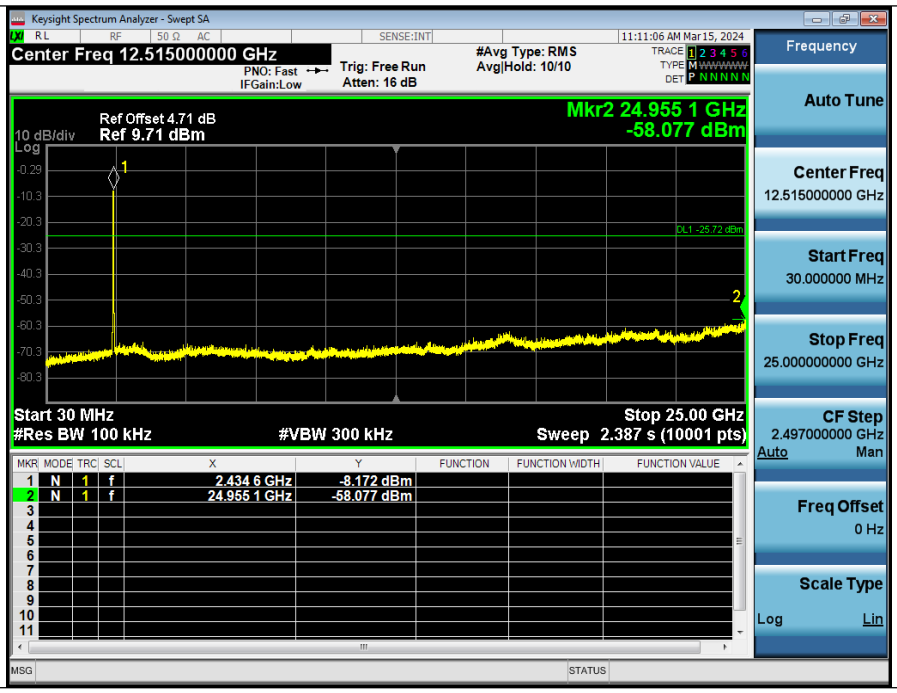
2_Spurious_Emission_NVNT_ANT1_802_11g_2412



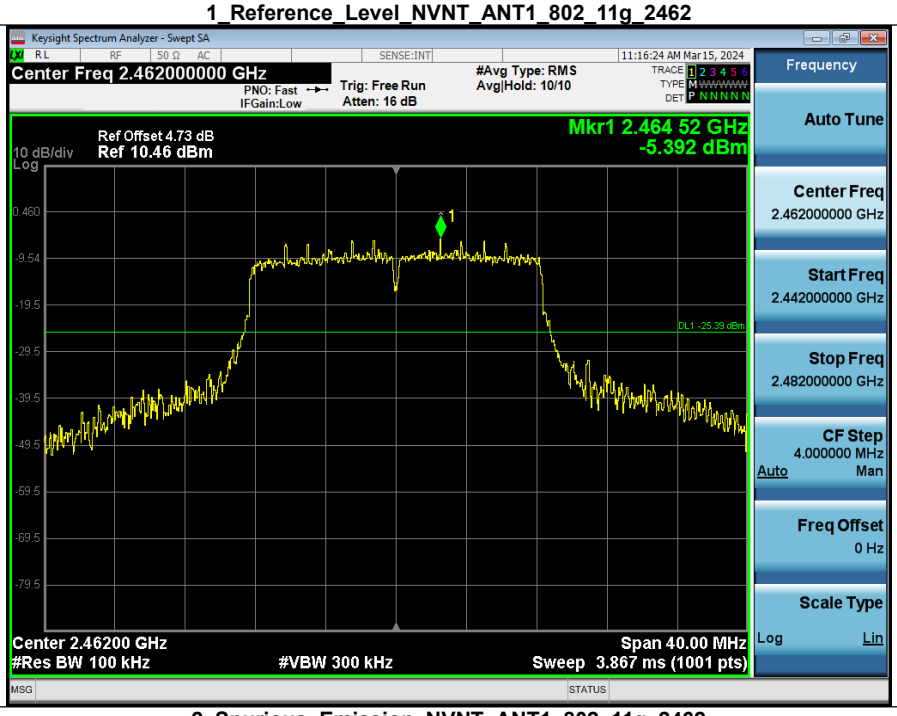
1_Reference_Level_NVNT_ANT1_802_11g_2437



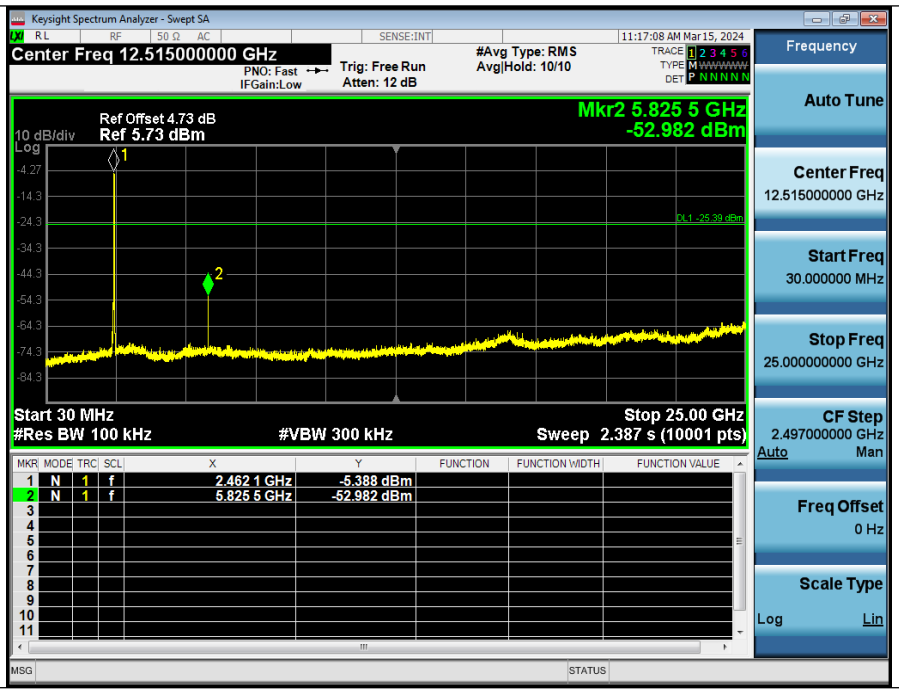
2_Spurious_Emission_NVNT_ANT1_802_11g_2437



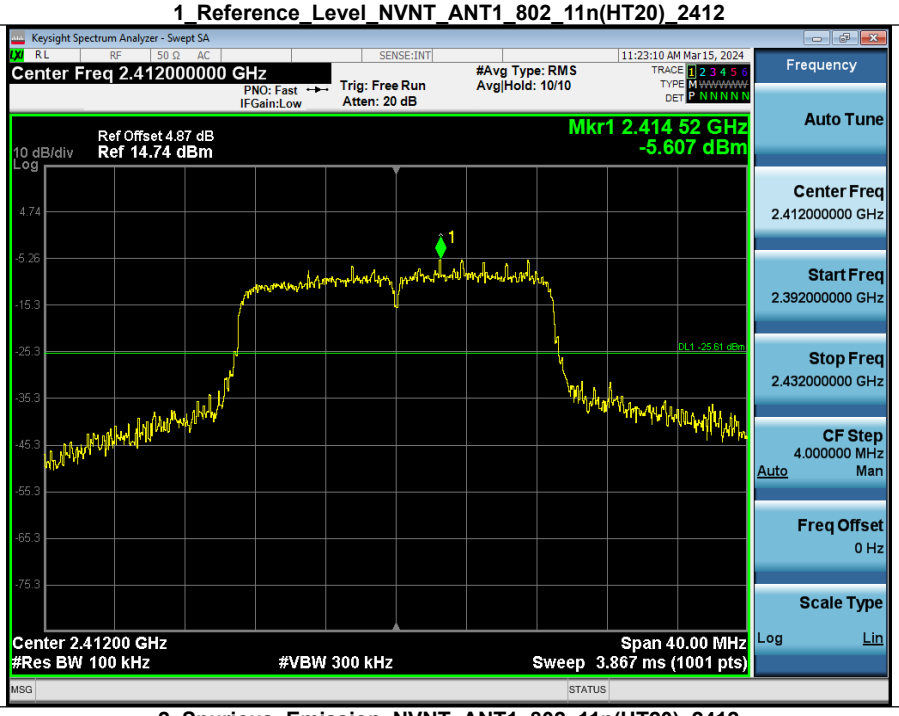
1_Reference_Level_NVNT_ANT1_802_11g_2462



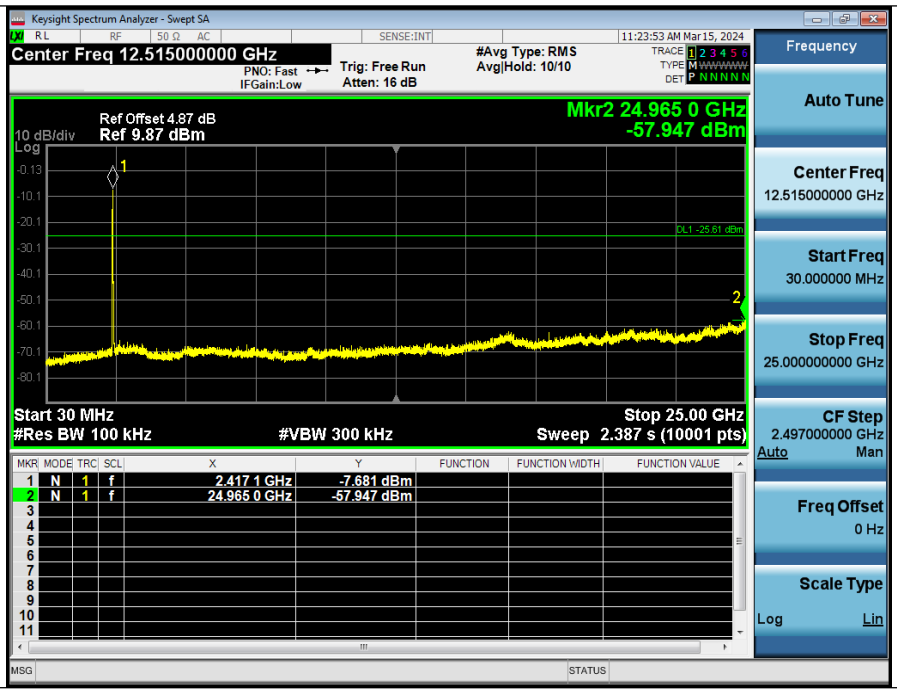
2_Spurious_Emission_NVNT_ANT1_802_11g_2462



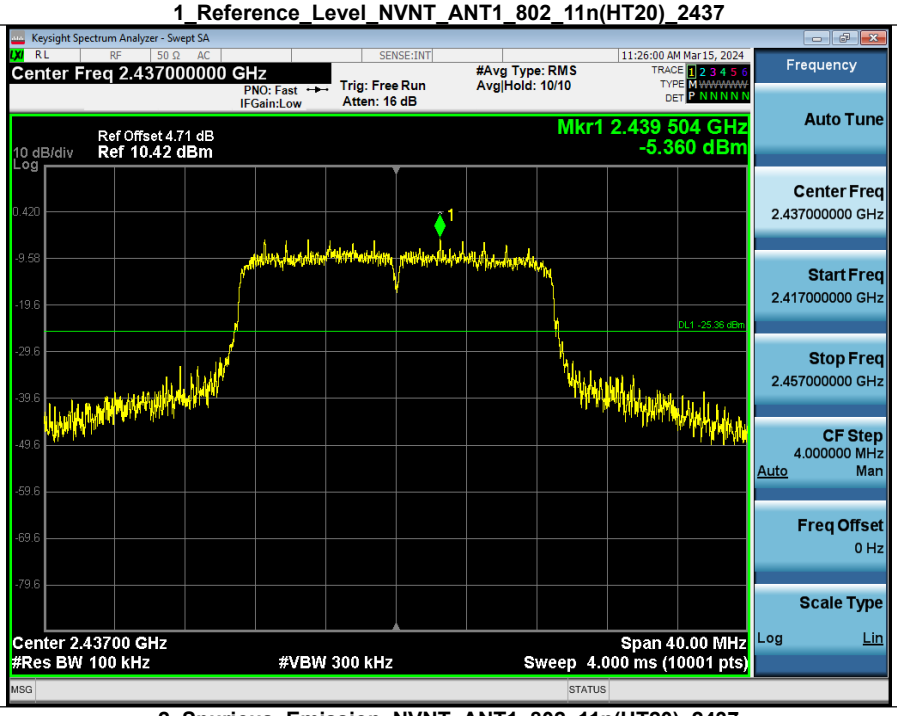
1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2412



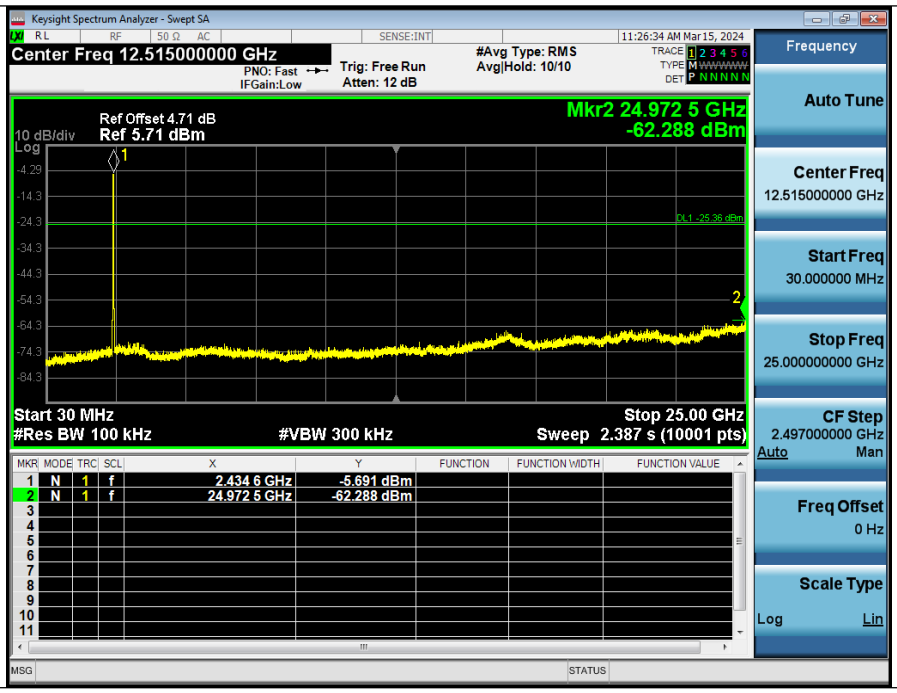
2_Spurious_Emission_NVNT_ANT1_802_11n(HT20)_2412



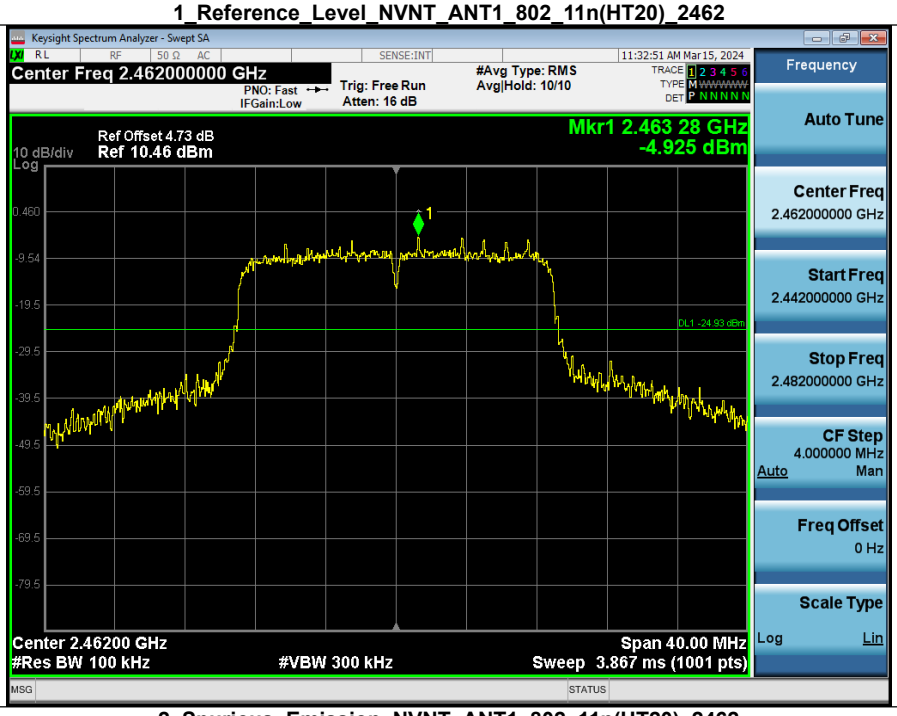
1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2437



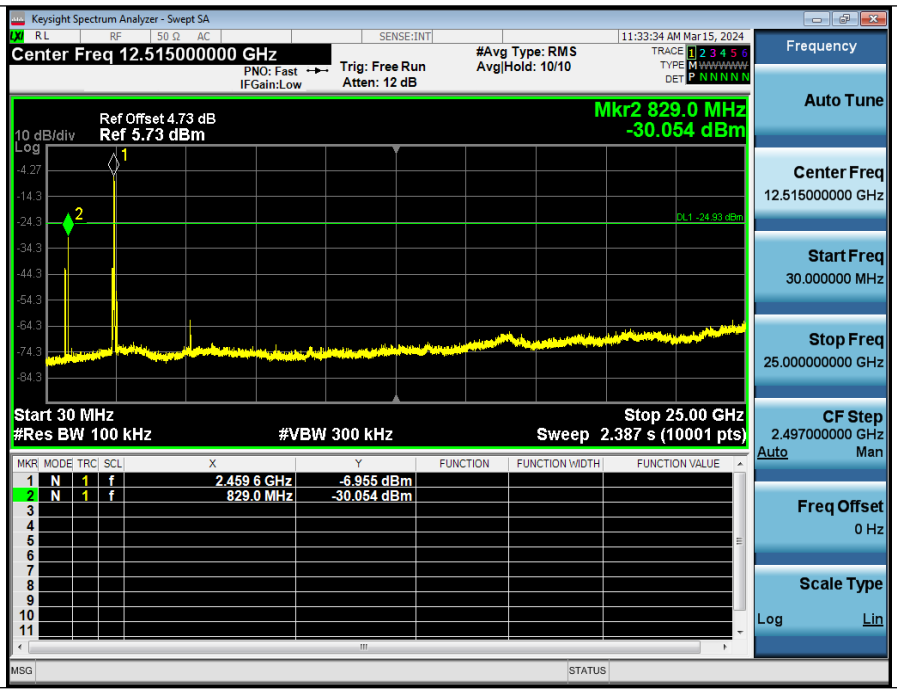
2_Spurious_Emission_NVNT_ANT1_802_11n(HT20)_2437



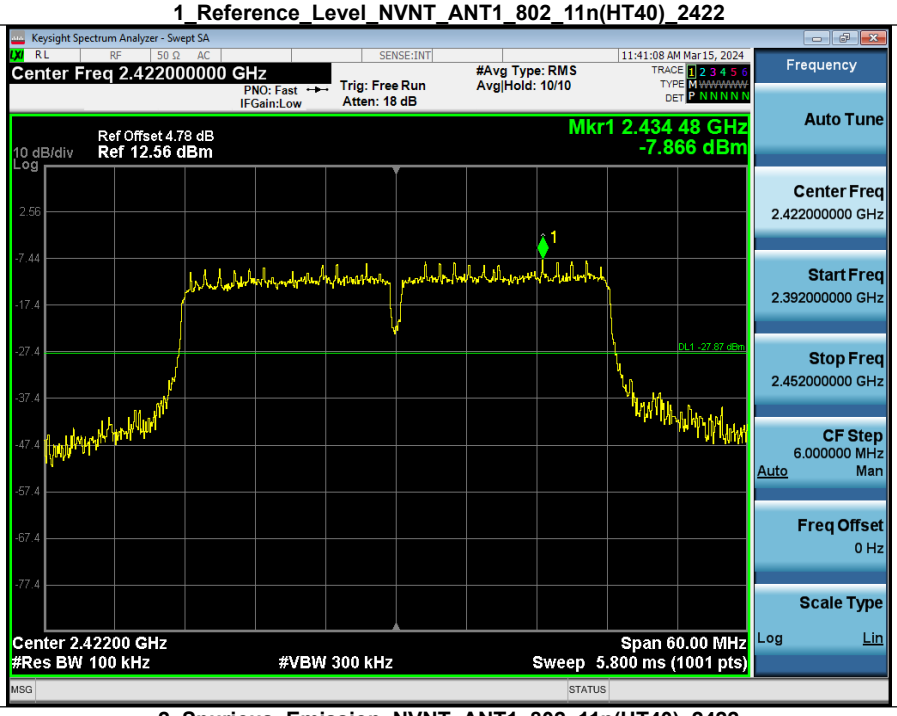
1_Reference_Level_NVNT_ANT1_802_11n(HT20)_2462



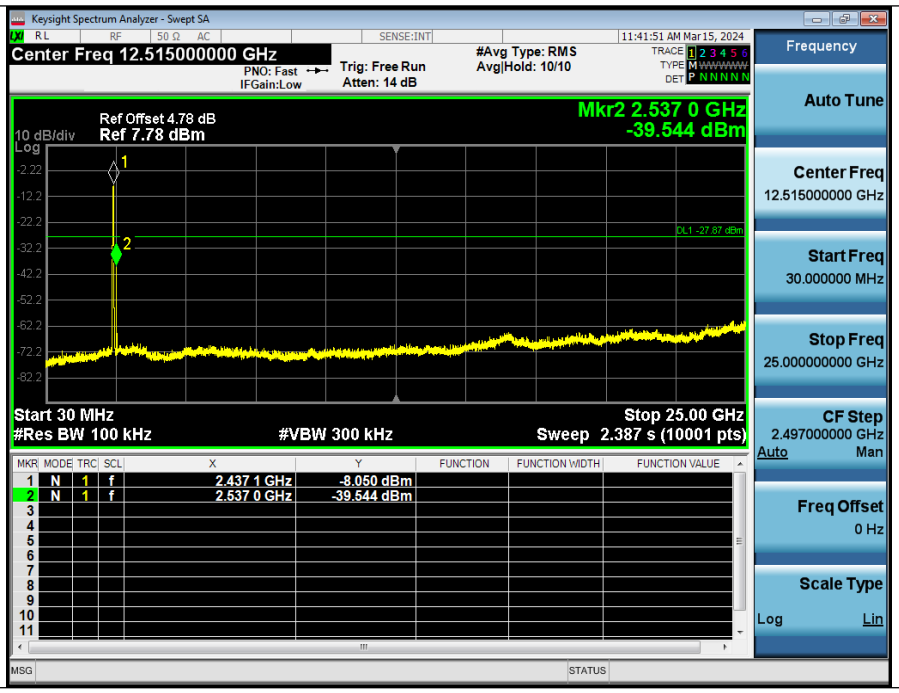
2_Spurious_Emission_NVNT_ANT1_802_11n(HT20)_2462



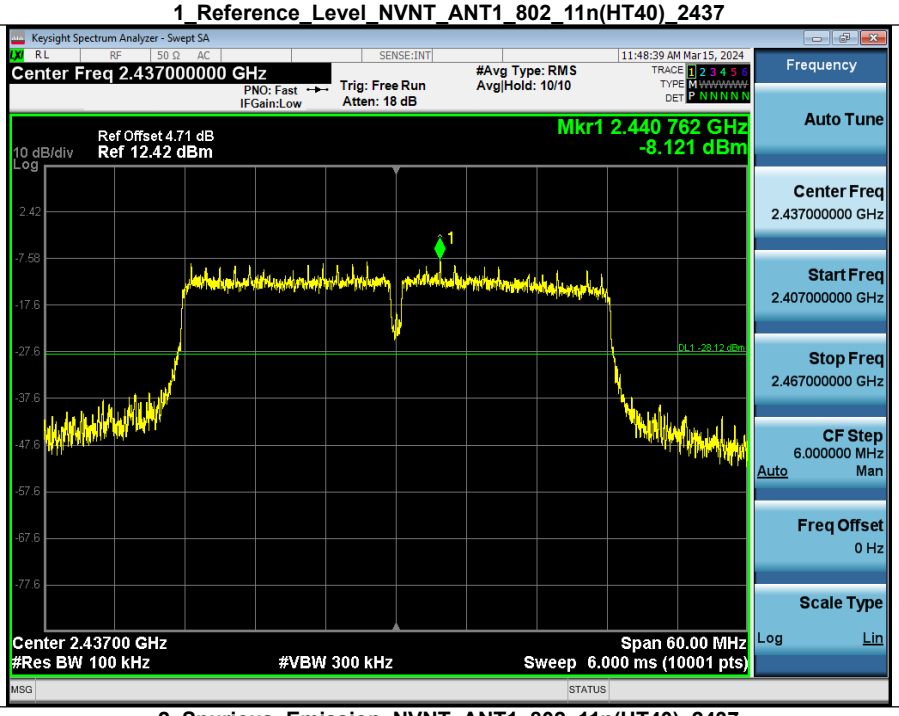
1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2422



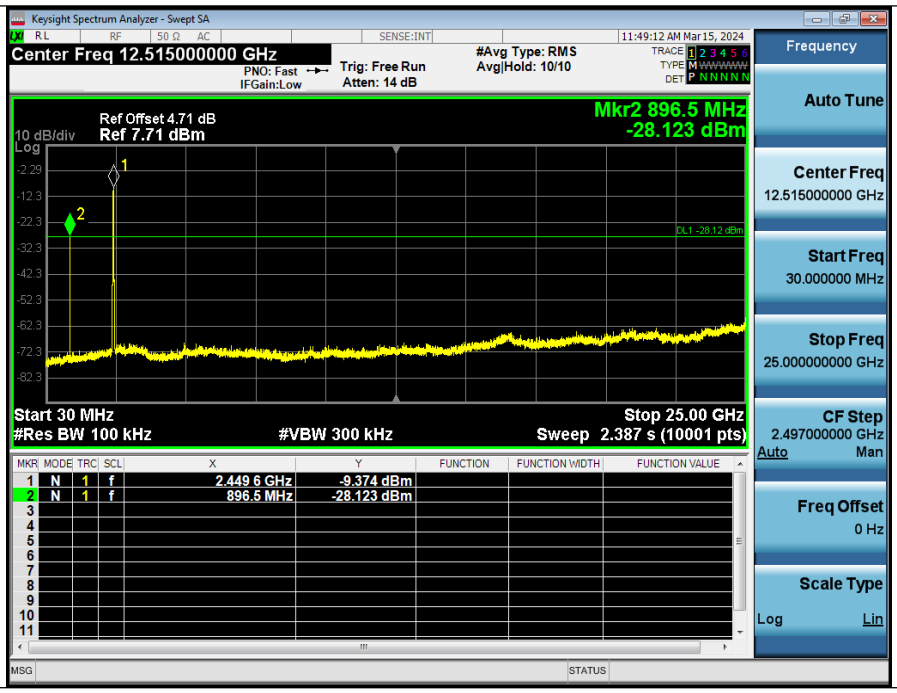
2_Spurious_Emission_NVNT_ANT1_802_11n(HT40)_2422



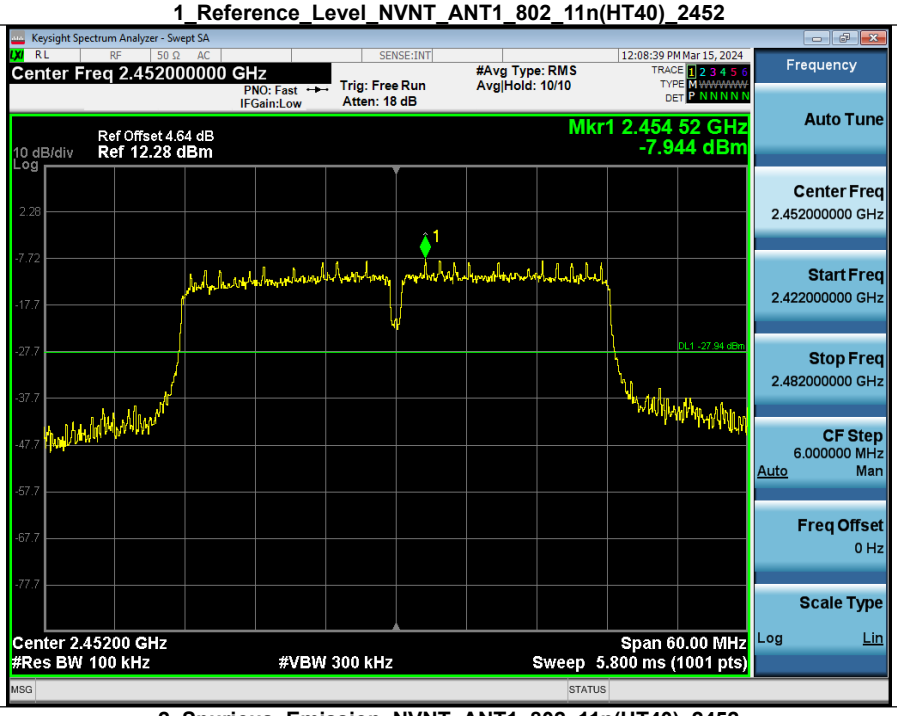
1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2437



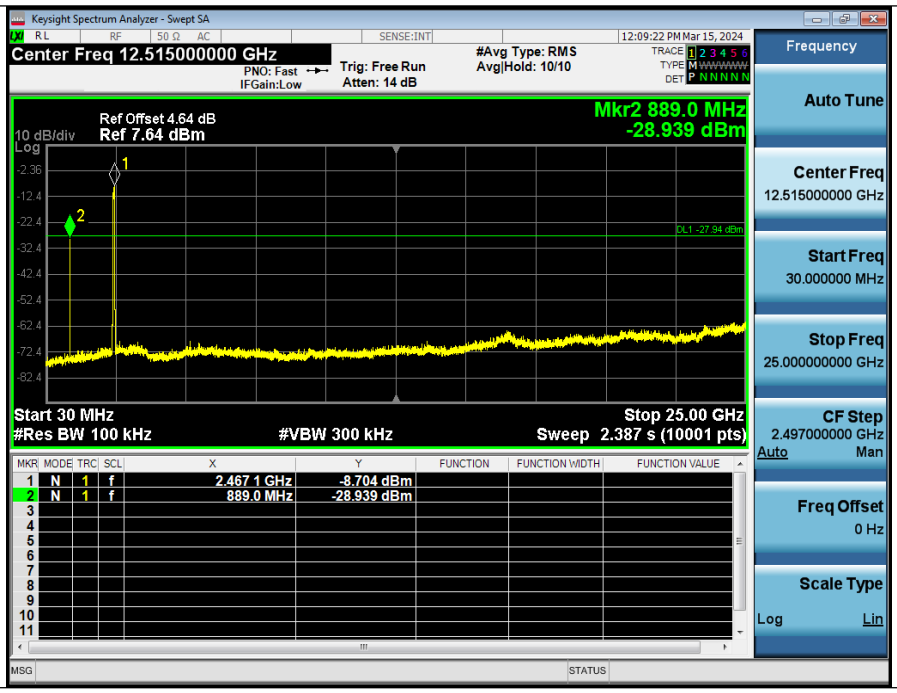
2_Spurious_Emission_NVNT_ANT1_802_11n(HT40)_2437



1_Reference_Level_NVNT_ANT1_802_11n(HT40)_2452



2_Spurious_Emission_NVNT_ANT1_802_11n(HT40)_2452


Keysight Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 14 dB
#Avg Type: RMS
Avg|Hold: 10/10
12:09:22 PM Mar 15, 2024
Ref Offset 4.64 dB
10 dB/div
Ref 7.64 dBm
Mkr2 889.0 MHz
-28.939 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (10001 pts)
1 N 1 f 2.467 1 GHz -8.704 dBm
2 N 1 f 889.0 MHz -28.939 dBm
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto Man
Freq Offset
0 Hz
Scale Type
Log Lin