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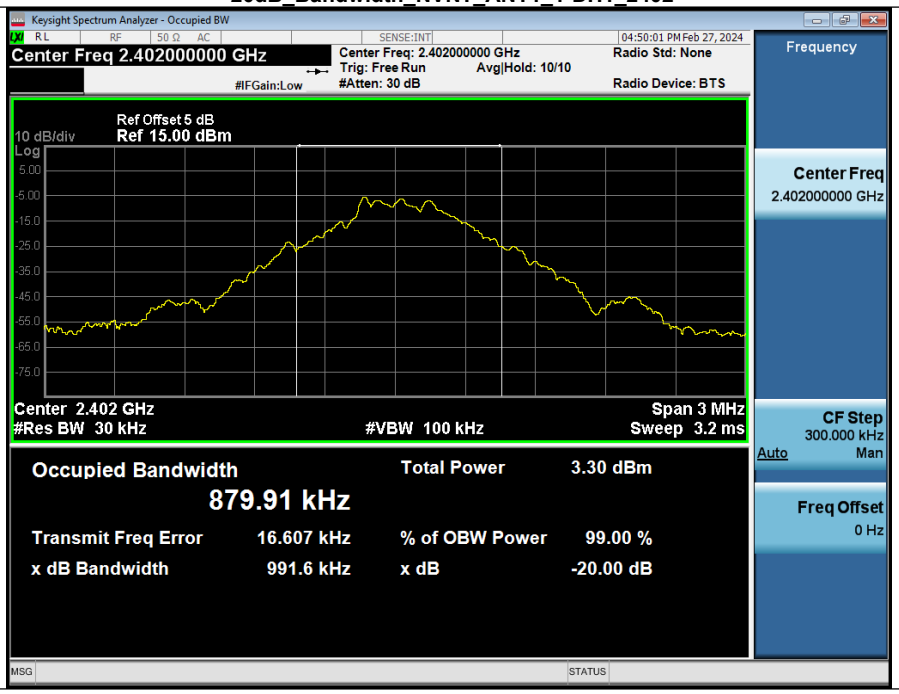
FCC ID:2BE9O-ZOOM98
FCC_BT (Part15.247) Test Data

1. -20dB Bandwidth

Condition	Antenna	Modulation	Frequency (MHz)	-20dB BW(MHz)	if larger than CFS
NVNT	ANT1	1-DH1	2402.00	0.992	No
NVNT	ANT1	1-DH1	2441.00	1.017	Yes
NVNT	ANT1	1-DH1	2480.00	1.023	Yes
NVNT	ANT1	2-DH1	2402.00	1.290	Yes
HVNT	ANT1	2-DH1	2441.00	1.294	Yes
HVNT	ANT1	2-DH1	2480.00	1.286	Yes
HVNT	ANT1	3-DH1	2402.00	1.258	Yes
HVNT	ANT1	3-DH1	2441.00	1.255	Yes
HVNT	ANT1	3-DH1	2480.00	1.253	Yes

-20dB_Bandwidth_NVNT_ANT1_1-DH1_2402

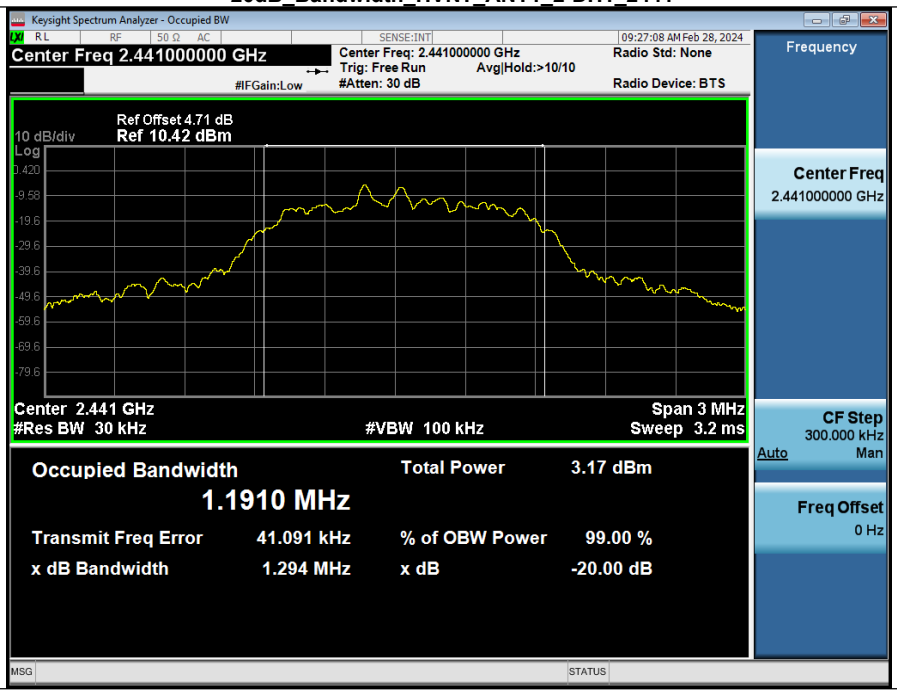


-20dB_Bandwidth_NVNT_ANT1_1-DH1_2441

-20dB_Bandwidth_NVNT_ANT1_1-DH1_2480

-20dB_Bandwidth_NVNT_ANT1_2-DH1_2402

-20dB_Bandwidth_HVNT_ANT1_2-DH1_2441

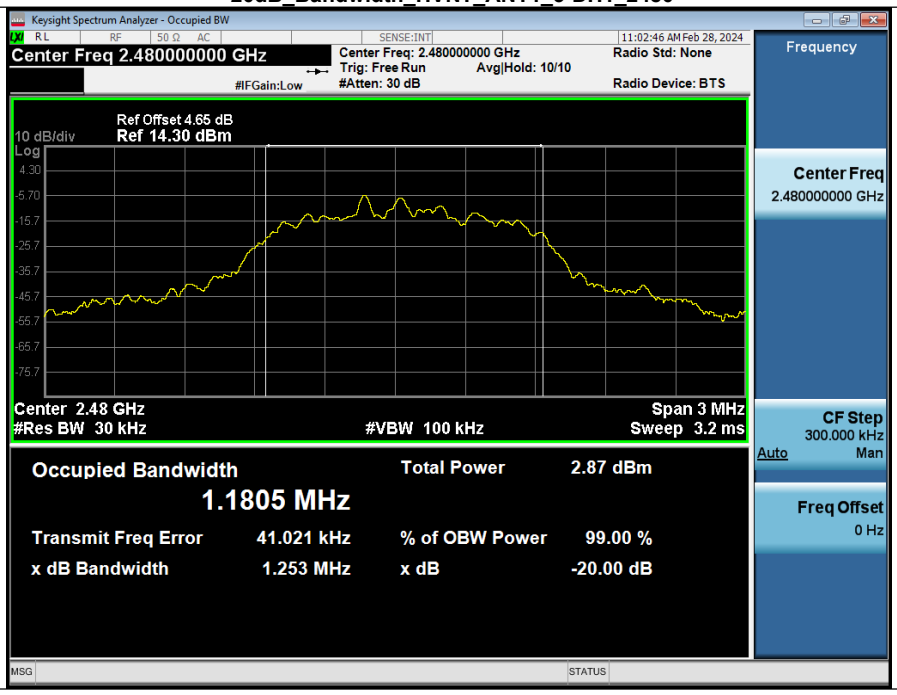


-20dB_Bandwidth_HVNT_ANT1_2-DH1_2480

-20dB_Bandwidth_HVNT_ANT1_3-DH1_2402

-20dB_Bandwidth_HVNT_ANT1_3-DH1_2441

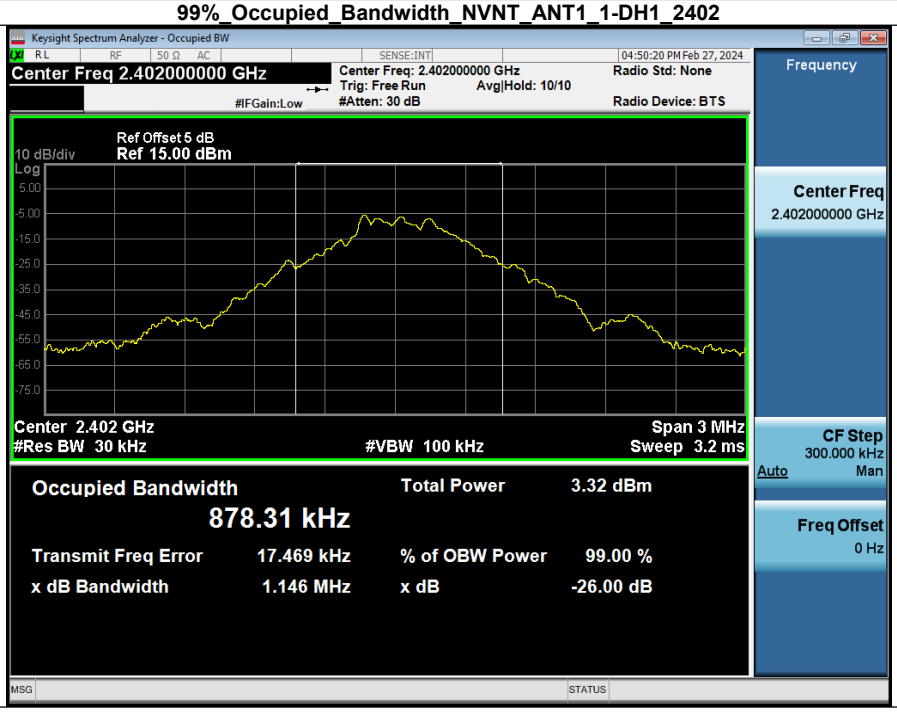
-20dB_Bandwidth_HVNT_ANT1_3-DH1_2480



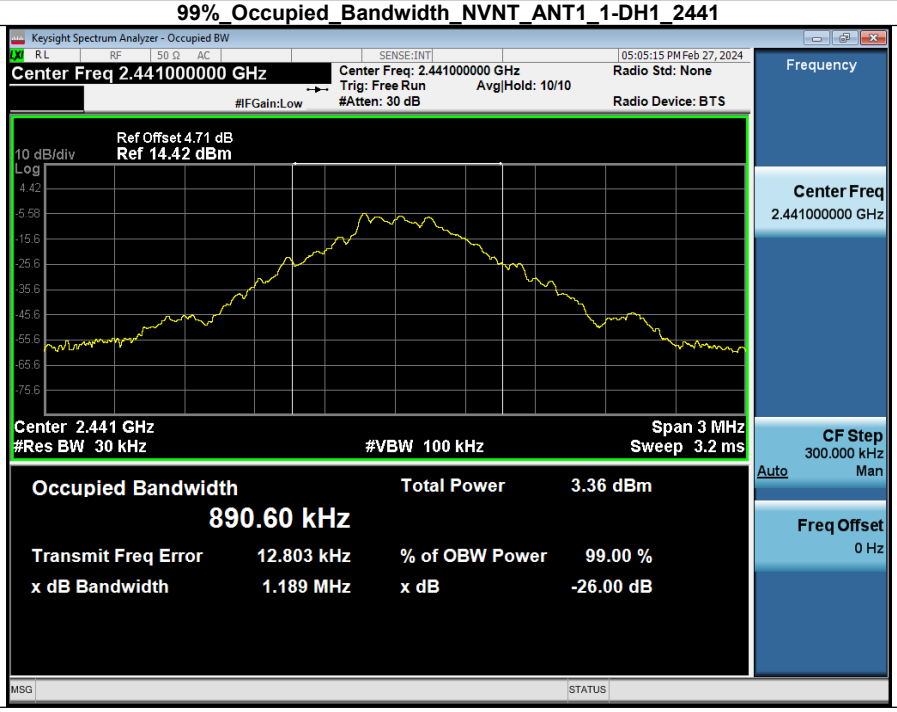
2. 99% Occupied Bandwidth

Condition	Antenna	Modulation	Frequency (MHz)	99%%BW(MHz)
NVNT	ANT1	1-DH1	2402.00	0.878
NVNT	ANT1	1-DH1	2441.00	0.891
NVNT	ANT1	1-DH1	2480.00	0.903
NVNT	ANT1	2-DH1	2402.00	1.182
HVNT	ANT1	2-DH1	2441.00	1.192
HVNT	ANT1	2-DH1	2480.00	1.195
HVNT	ANT1	3-DH1	2402.00	1.172
HVNT	ANT1	3-DH1	2441.00	1.178
HVNT	ANT1	3-DH1	2480.00	1.181

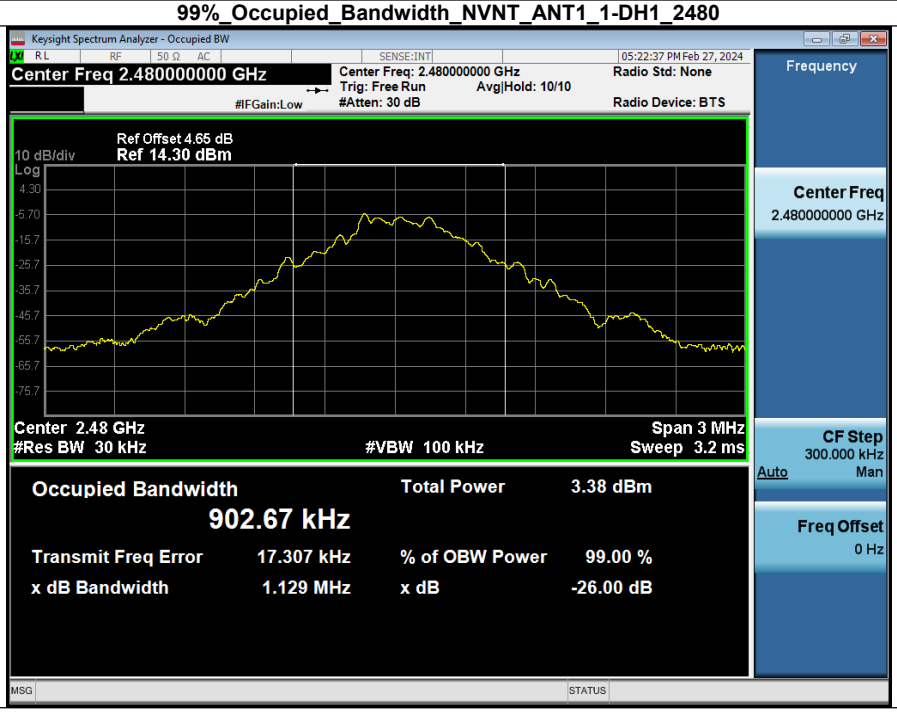
99%_Occupied_Bandwidth_NVNT_ANT1_1-DH1_2402



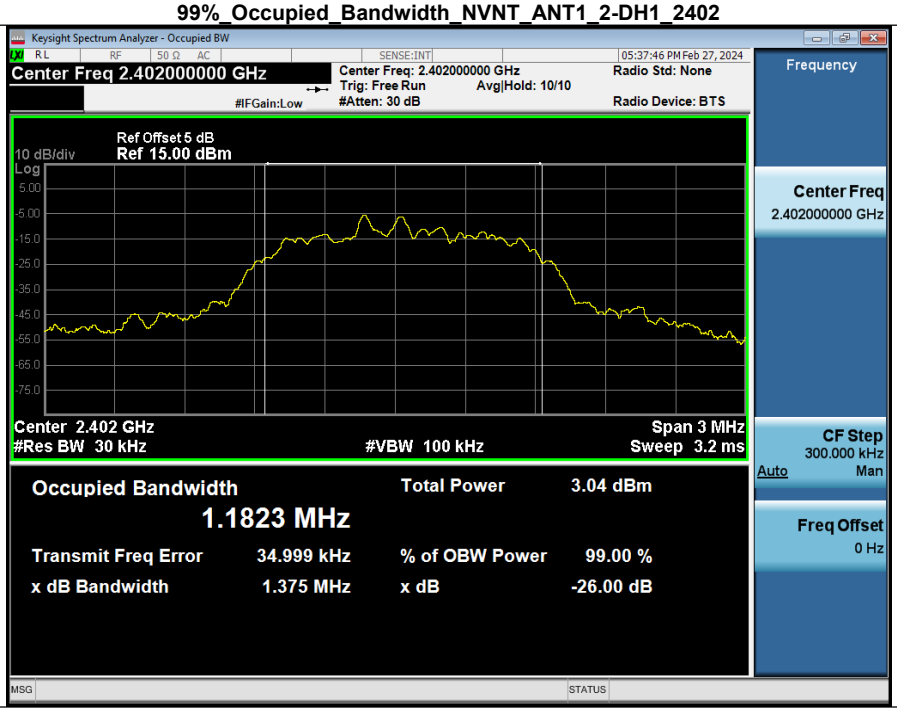
99%_Occupied_Bandwidth_NVNT_ANT1_1-DH1_2441



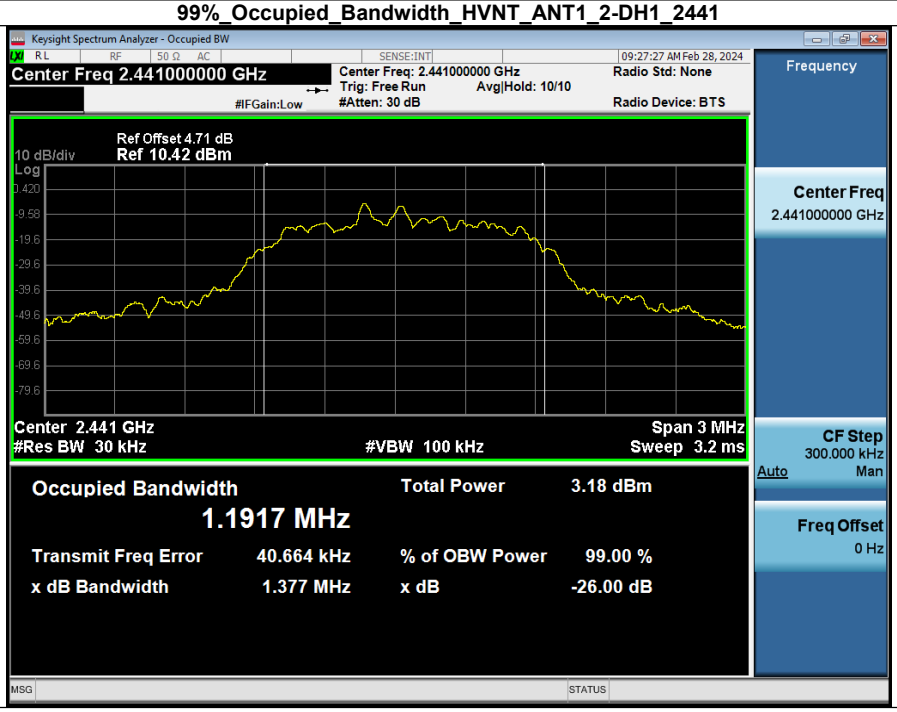
99%_Occupied_Bandwidth_NVNT_ANT1_1-DH1_2480



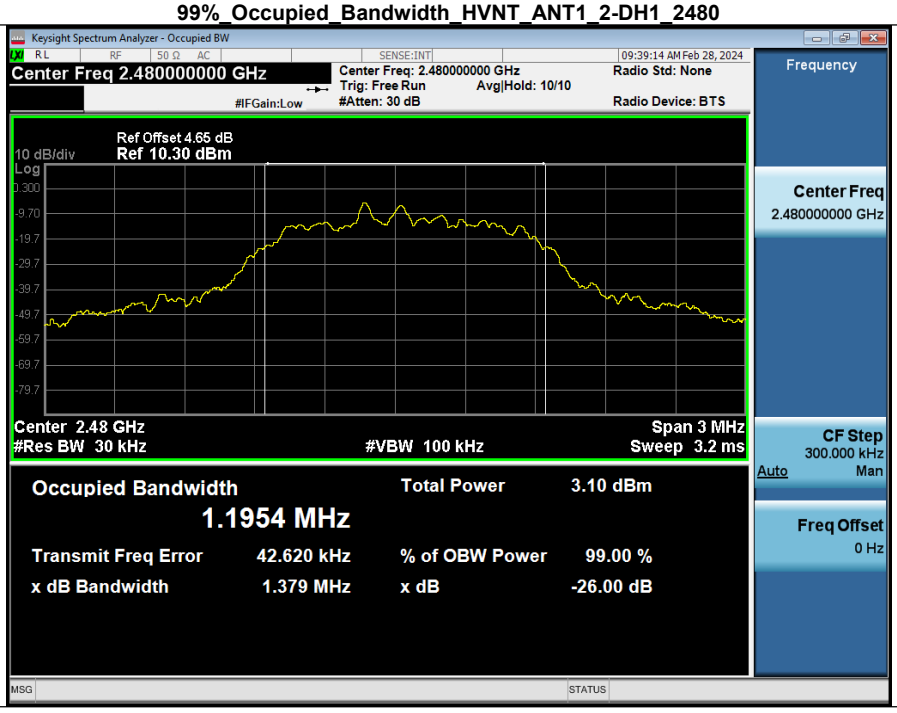
99%_Occupied_Bandwidth_NVNT_ANT1_2-DH1_2402



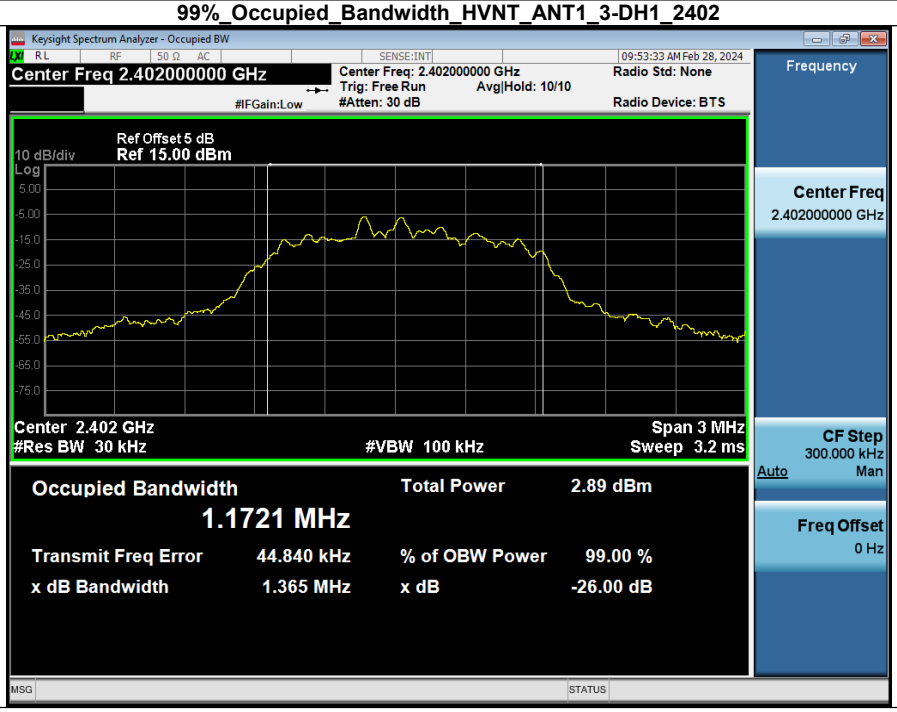
99%_Occupied_Bandwidth_HVNT_ANT1_2-DH1_2441



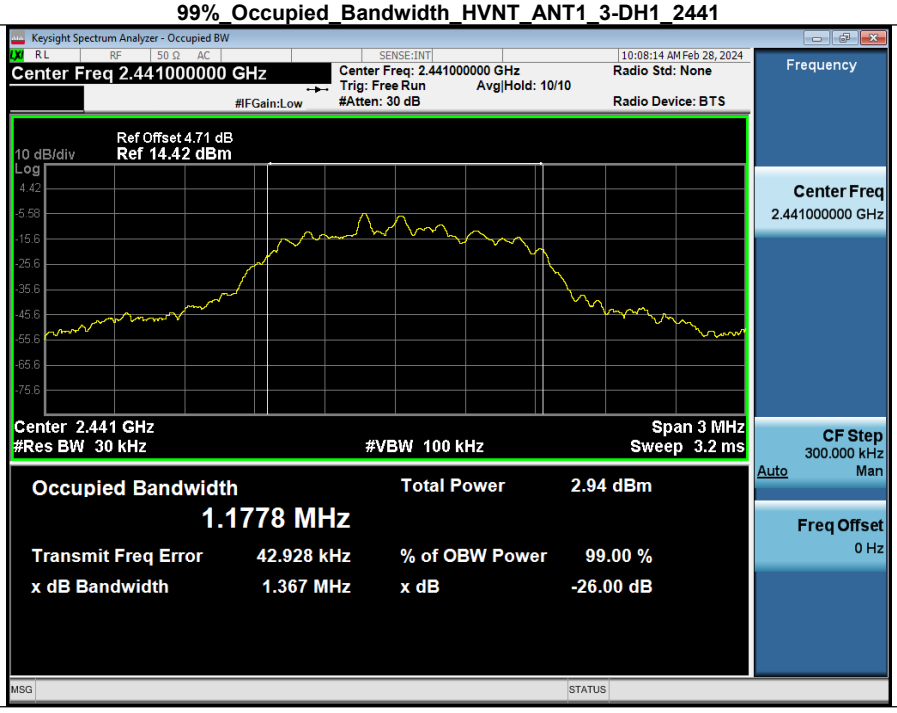
99%_Occupied_Bandwidth_HVNT_ANT1_2-DH1_2480



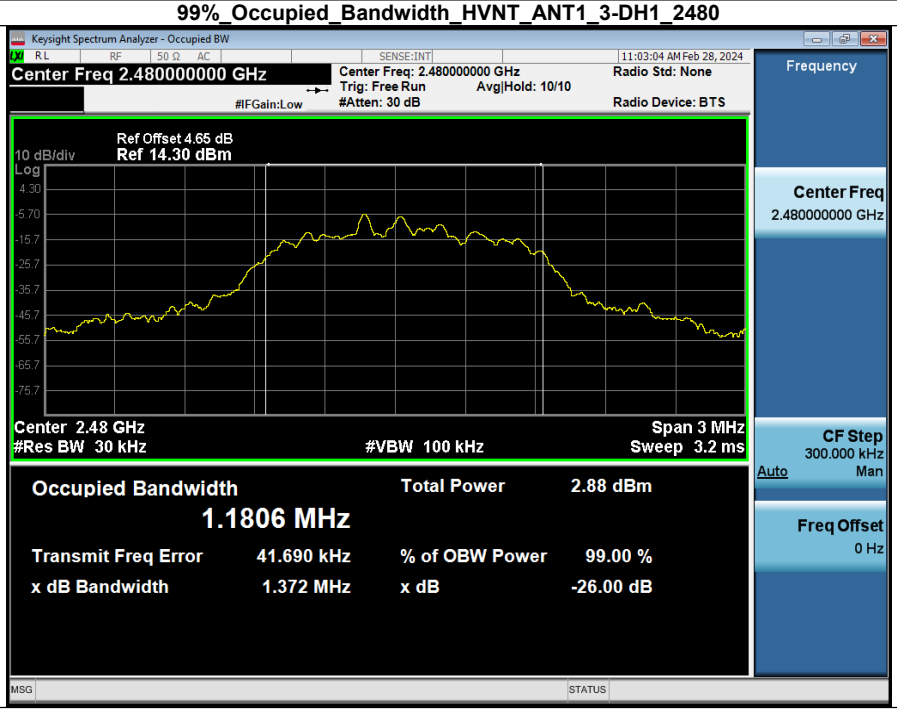
99%_Occupied_Bandwidth_HVNT_ANT1_3-DH1_2402



99%_Occupied_Bandwidth_HVNT_ANT1_3-DH1_2441



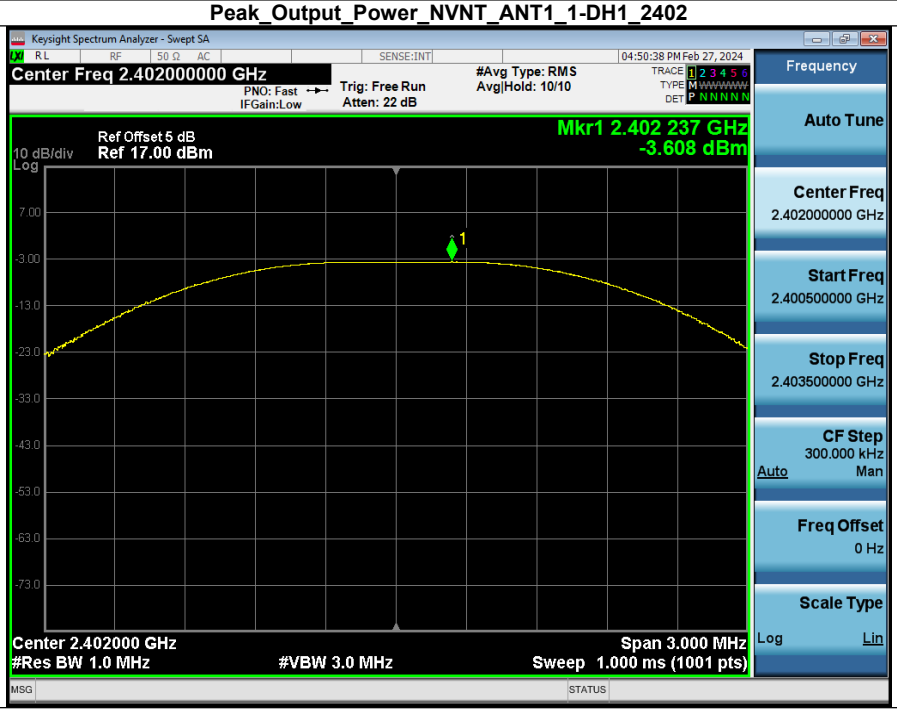
99%_Occupied_Bandwidth_HVNT_ANT1_3-DH1_2480



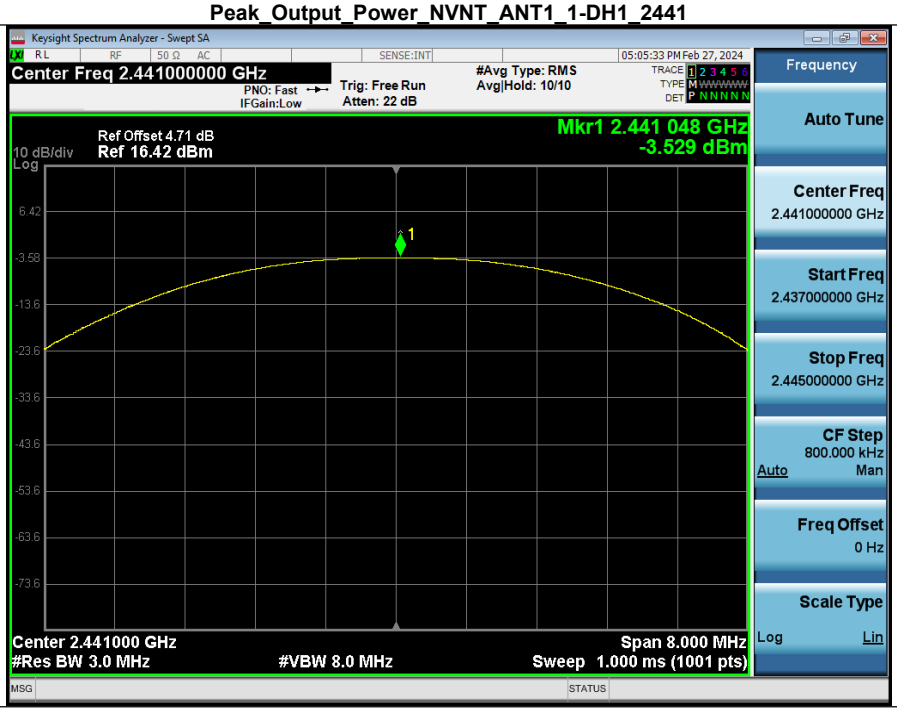
3. Peak Output Power

Condition	Antenna	Modulation	Frequency (MHz)	Max. Conducted Power(dBm)	Max. Conducted Power(mW)	Limit(mW)	Result
NVNT	ANT1	1-DH1	2402.00	-3.61	0.44	1000	Pass
NVNT	ANT1	1-DH1	2441.00	-3.53	0.44	125	Pass
NVNT	ANT1	1-DH1	2480.00	-3.61	0.44	125	Pass
NVNT	ANT1	2-DH1	2402.00	-2.79	0.53	125	Pass
HVNT	ANT1	2-DH1	2441.00	-2.55	0.56	125	Pass
HVNT	ANT1	2-DH1	2480.00	-2.67	0.54	125	Pass
HVNT	ANT1	3-DH1	2402.00	-2.12	0.61	125	Pass
HVNT	ANT1	3-DH1	2441.00	-2.10	0.62	125	Pass
HVNT	ANT1	3-DH1	2480.00	-2.23	0.60	125	Pass

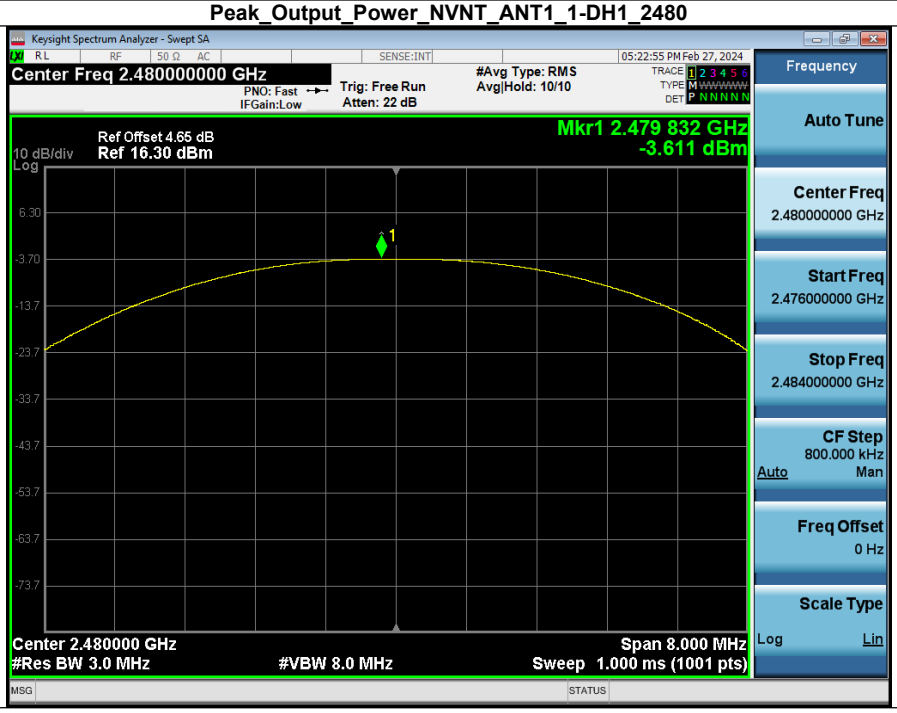
Peak_Output_Power_NVNT_ANT1_1-DH1_2402



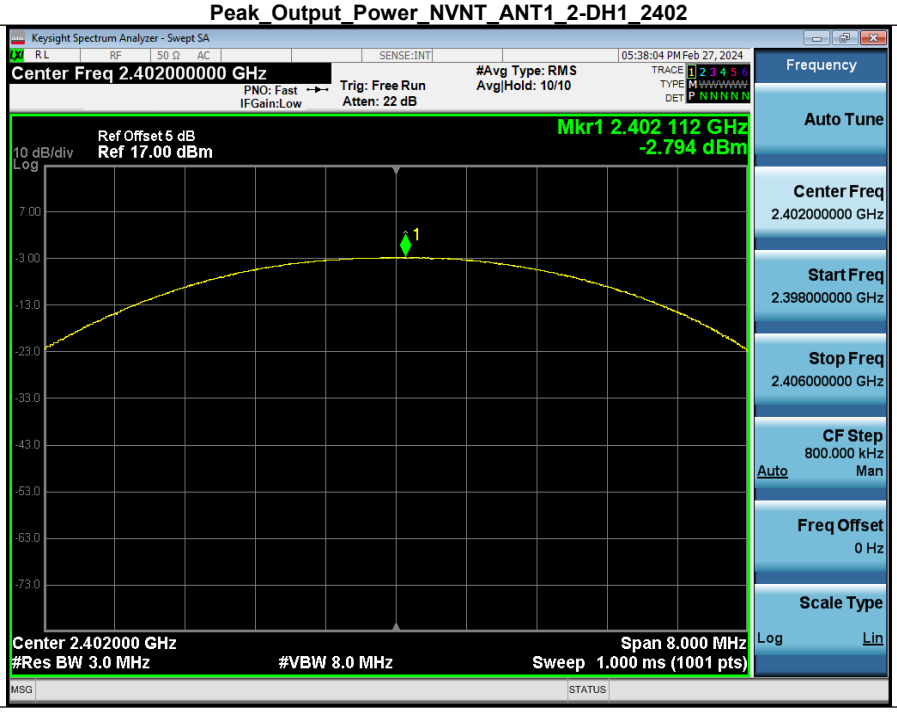
Peak_Output_Power_NVNT_ANT1_1-DH1_2441



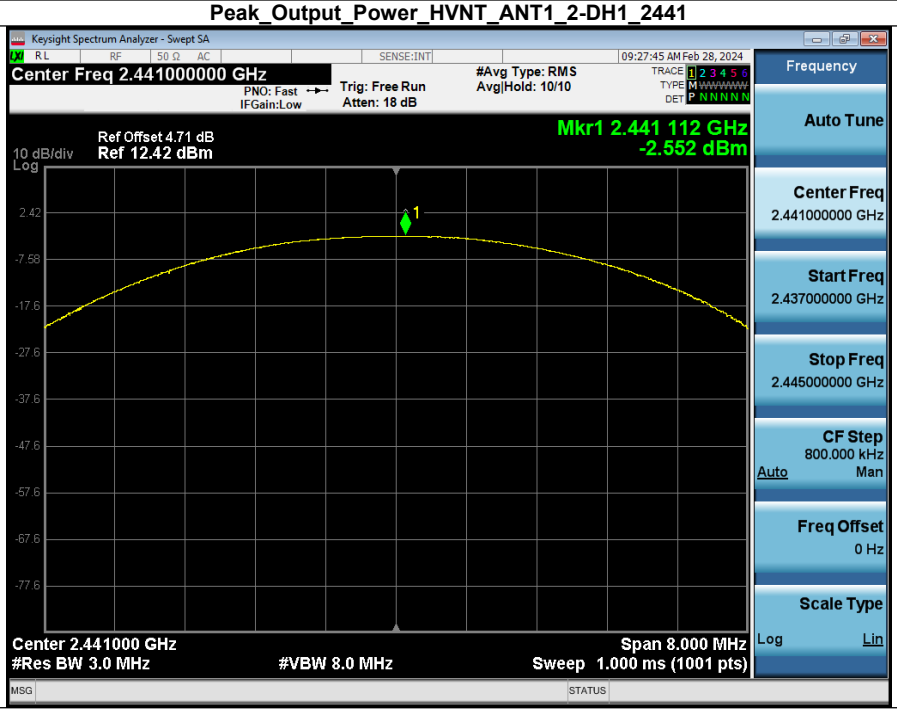
Peak_Output_Power_NVNT_ANT1_1-DH1_2480



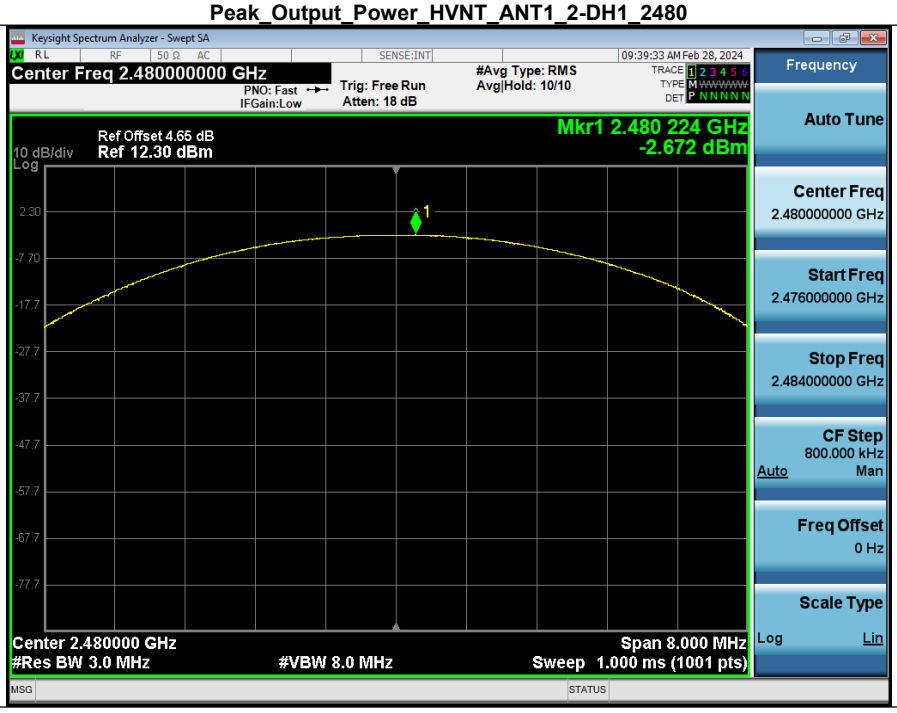
Peak_Output_Power_NVNT_ANT1_2-DH1_2402



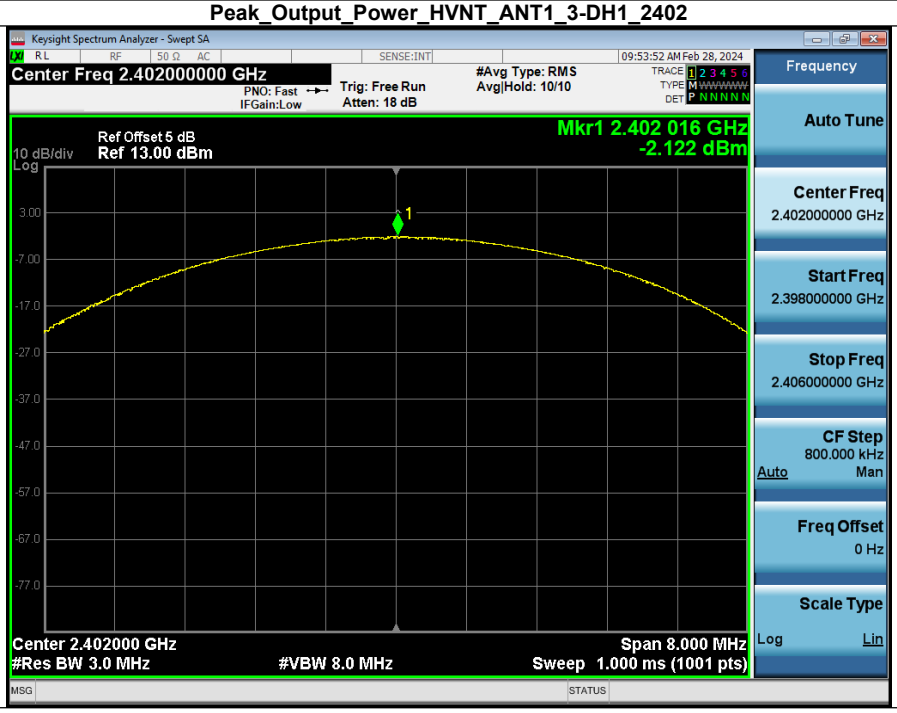
Peak_Output_Power_HVNT_ANT1_2-DH1_2441



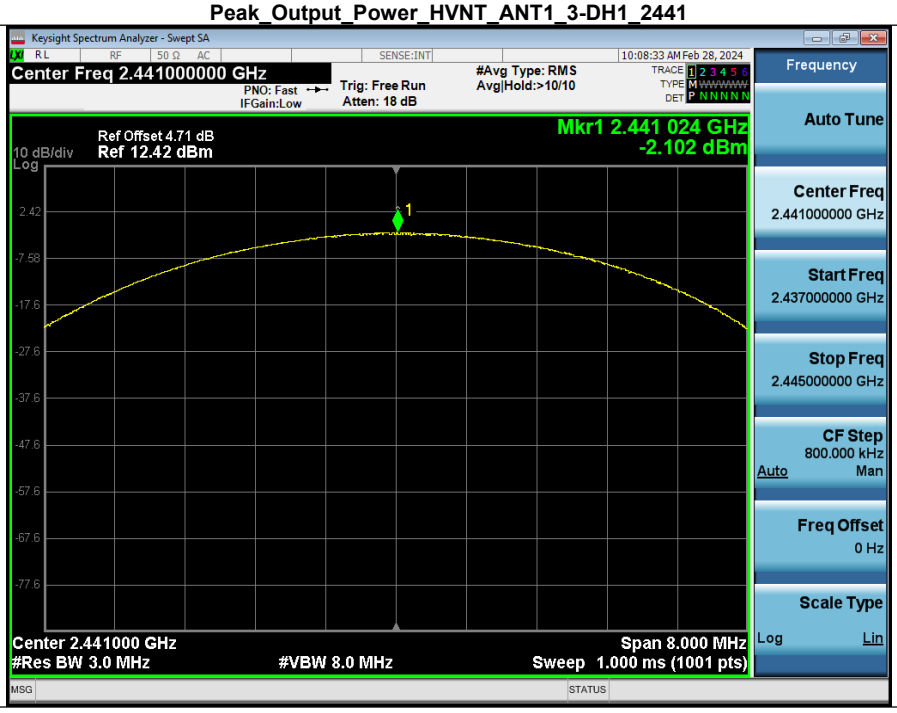
Peak_Output_Power_HVNT_ANT1_2-DH1_2480



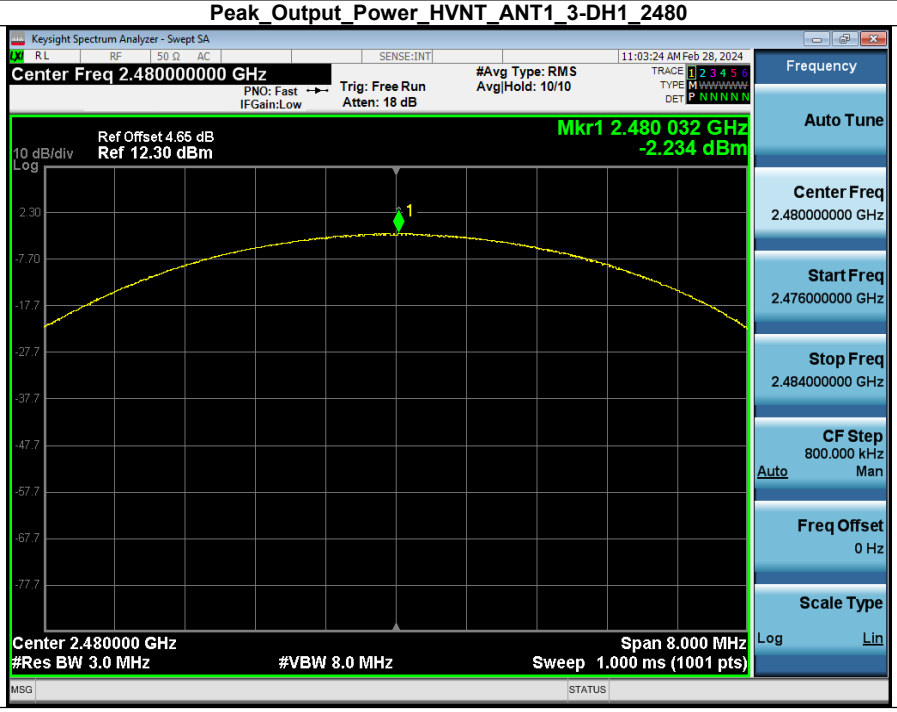
Peak_Output_Power_HVNT_ANT1_3-DH1_2402



Peak_Output_Power_HVNT_ANT1_3-DH1_2441



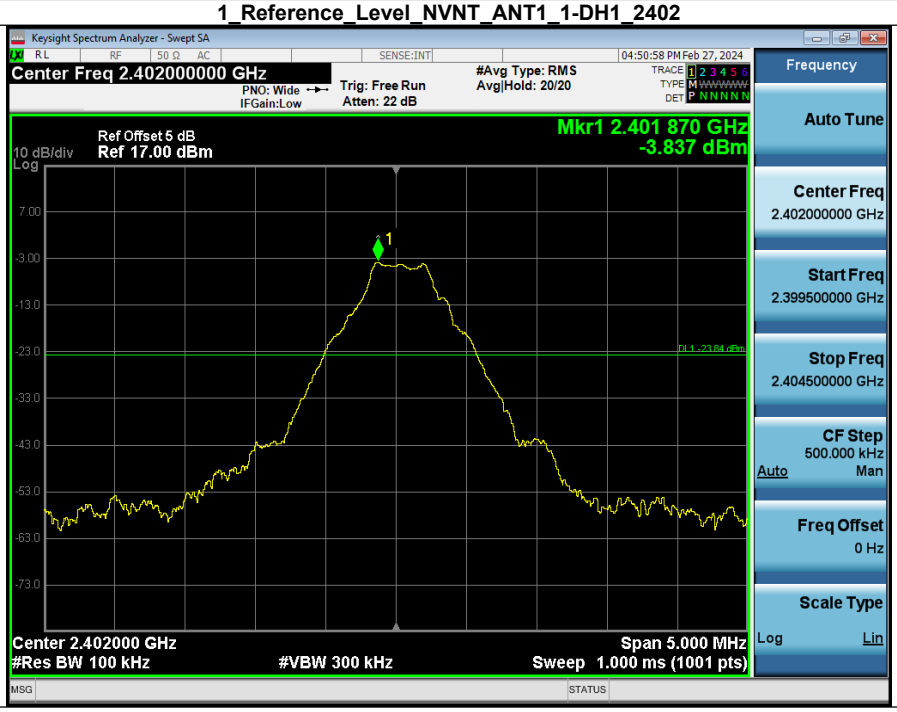
Peak_Output_Power_HVNT_ANT1_3-DH1_2480



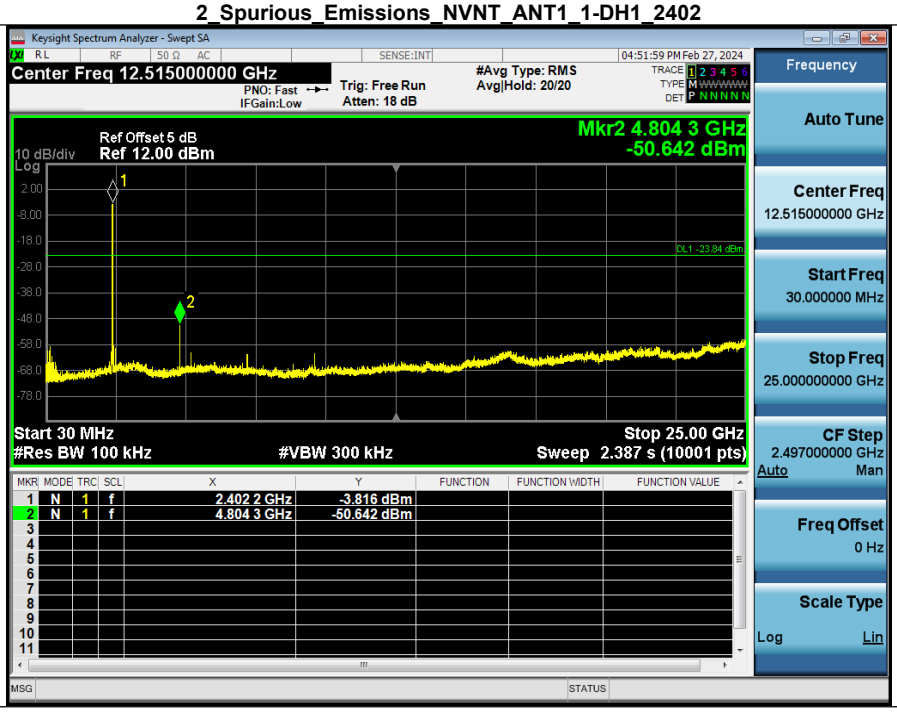
4. Spurious Emissions

Condition	Antenna	Modulation	TX Mode	Spurious MAX.Value(dBm)	Limit	Result
NVNT	ANT1	1-DH1	2402.00	-50.642	-23.837	Pass
NVNT	ANT1	1-DH1	2441.00	-50.074	-23.822	Pass
NVNT	ANT1	1-DH1	2480.00	-49.868	-23.877	Pass
NVNT	ANT1	2-DH1	2402.00	-51.886	-23.856	Pass
HVNT	ANT1	2-DH1	2441.00	-40.625	-23.681	Pass
HVNT	ANT1	2-DH1	2480.00	-46.444	-23.787	Pass
HVNT	ANT1	3-DH1	2402.00	-50.239	-23.782	Pass
HVNT	ANT1	3-DH1	2441.00	-50.851	-23.752	Pass
HVNT	ANT1	3-DH1	2480.00	-49.266	-23.836	Pass

1_Reference_Level_NVNT_ANT1_1-DH1_2402

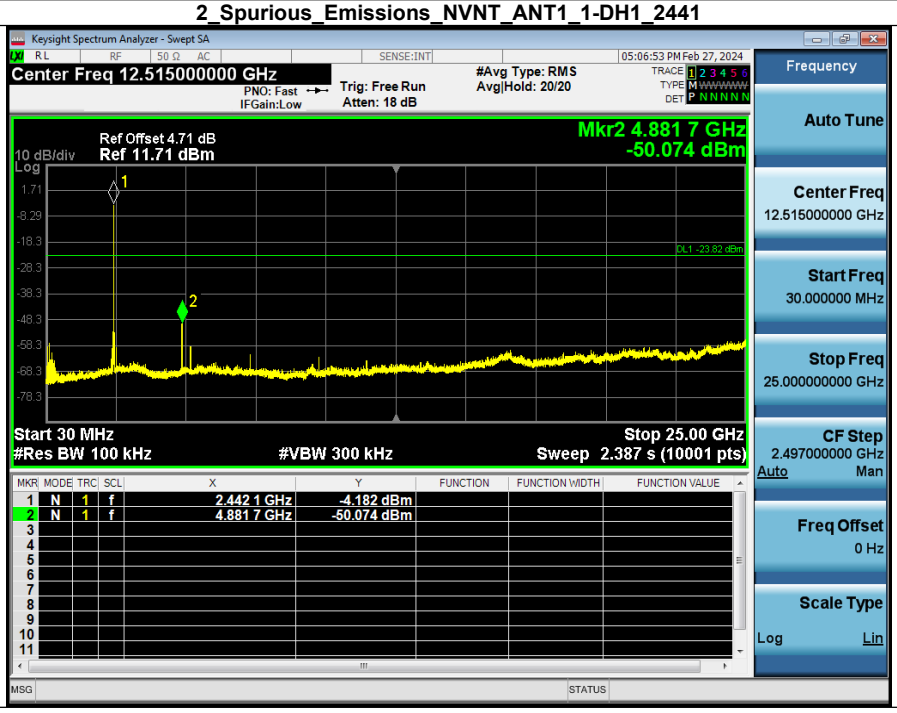


2_Spurious_Emissions_NVNT_ANT1_1-DH1_2402

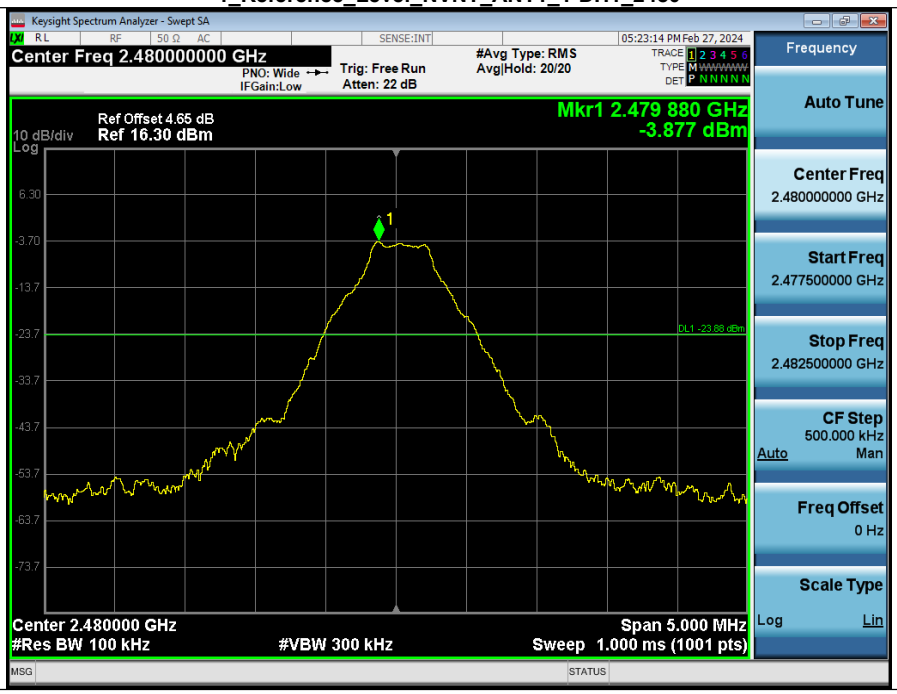


1_Reference_Level_NVNT_ANT1_1-DH1_2441

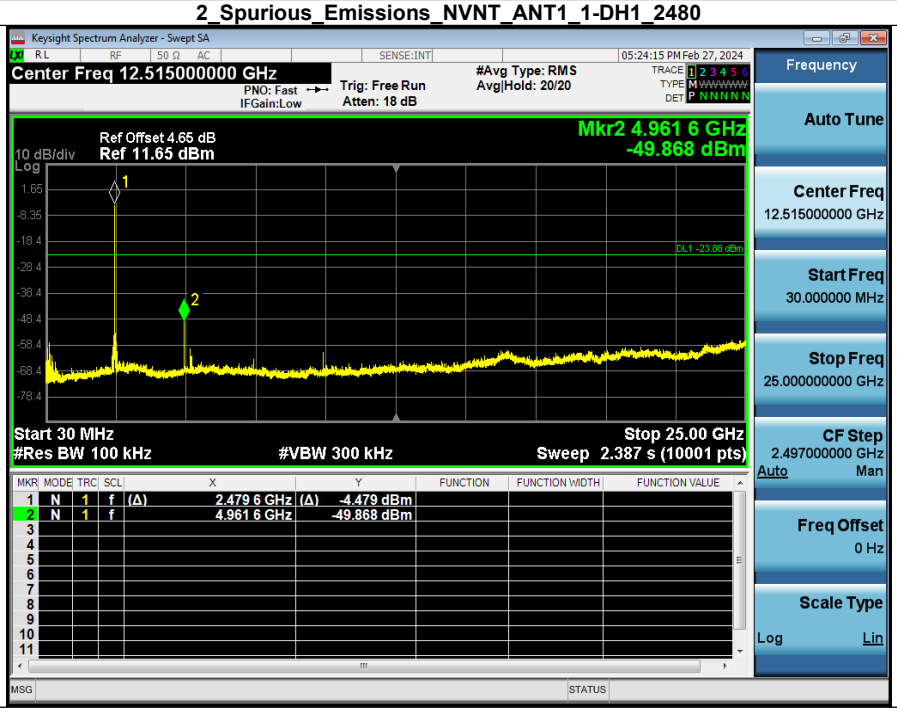
2_Spurious_Emissions_NVNT_ANT1_1-DH1_2441



1_Reference_Level_NVNT_ANT1_1-DH1_2480

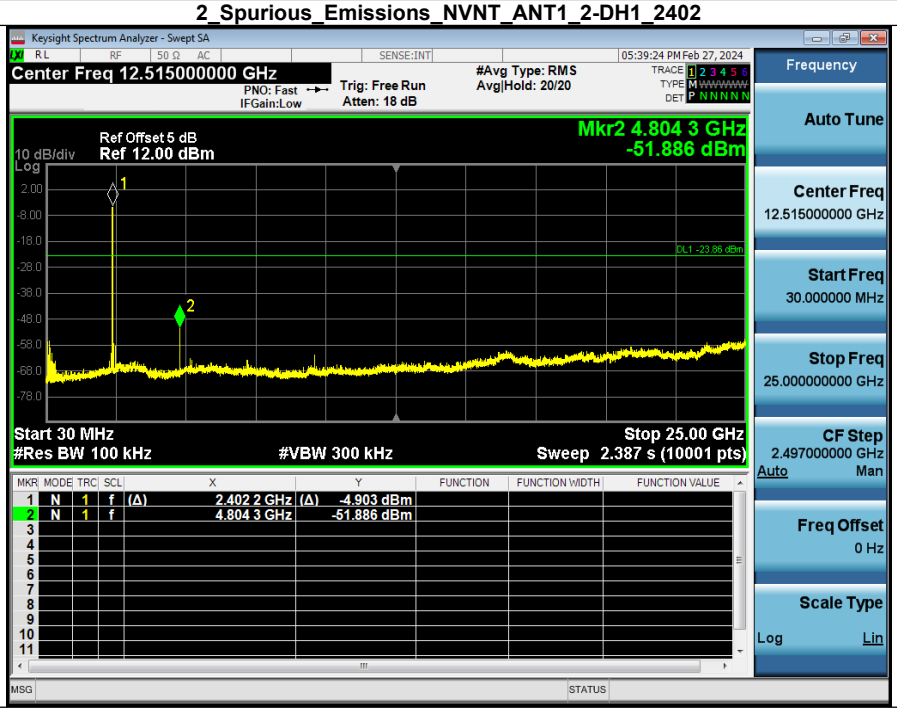


2_Spurious_Emissions_NVNT_ANT1_1-DH1_2480



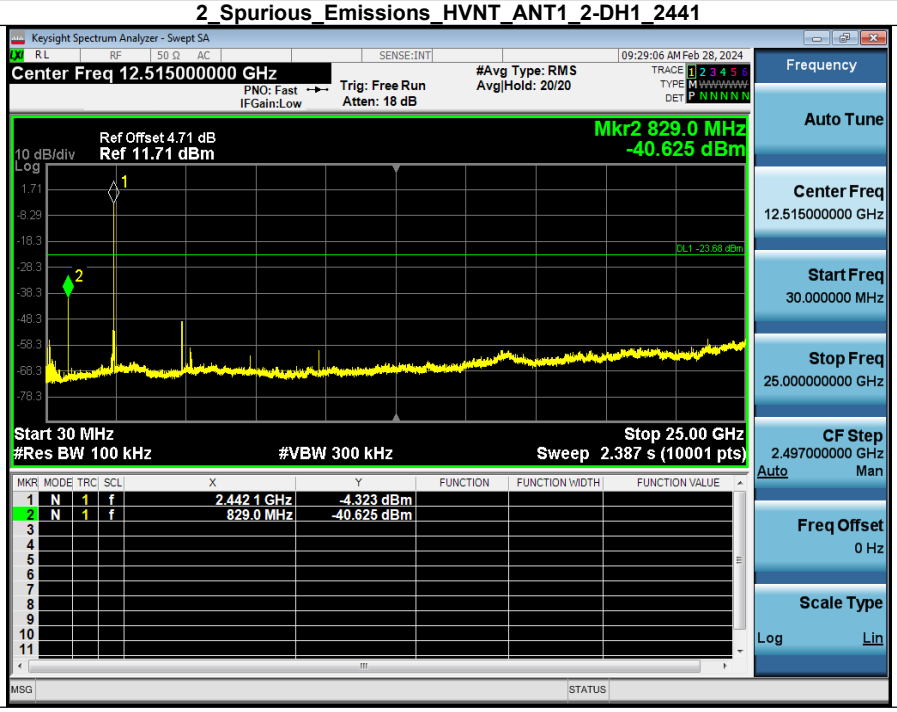
1_Reference_Level_NVNT_ANT1_2-DH1_2402

2_Spurious_Emissions_NVNT_ANT1_2-DH1_2402



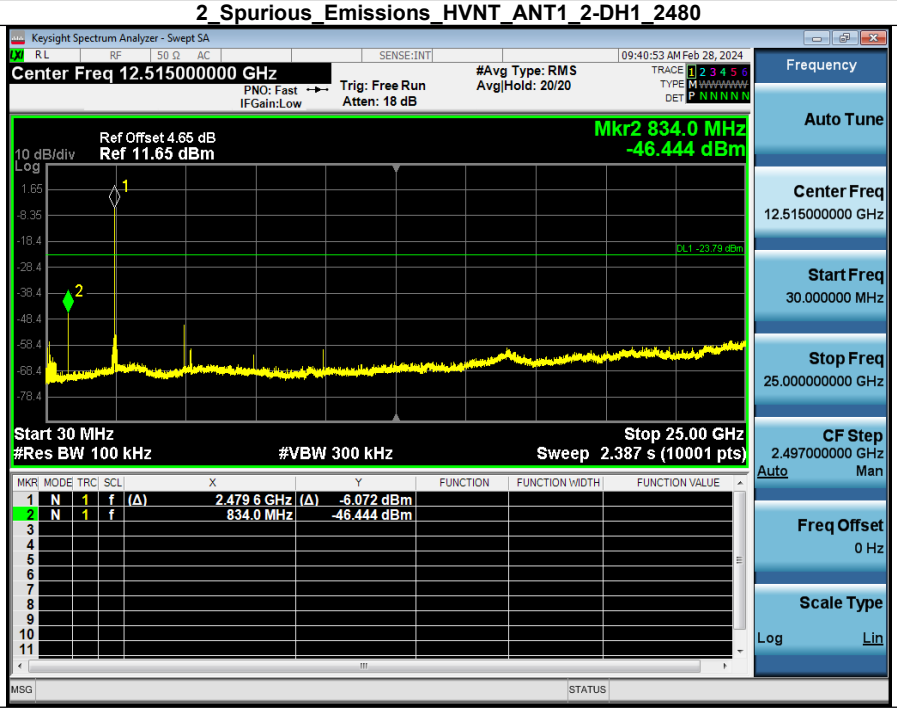
1_Reference_Level_HVNT_ANT1_2-DH1_2441

2_Spurious_Emissions_HVNT_ANT1_2-DH1_2441



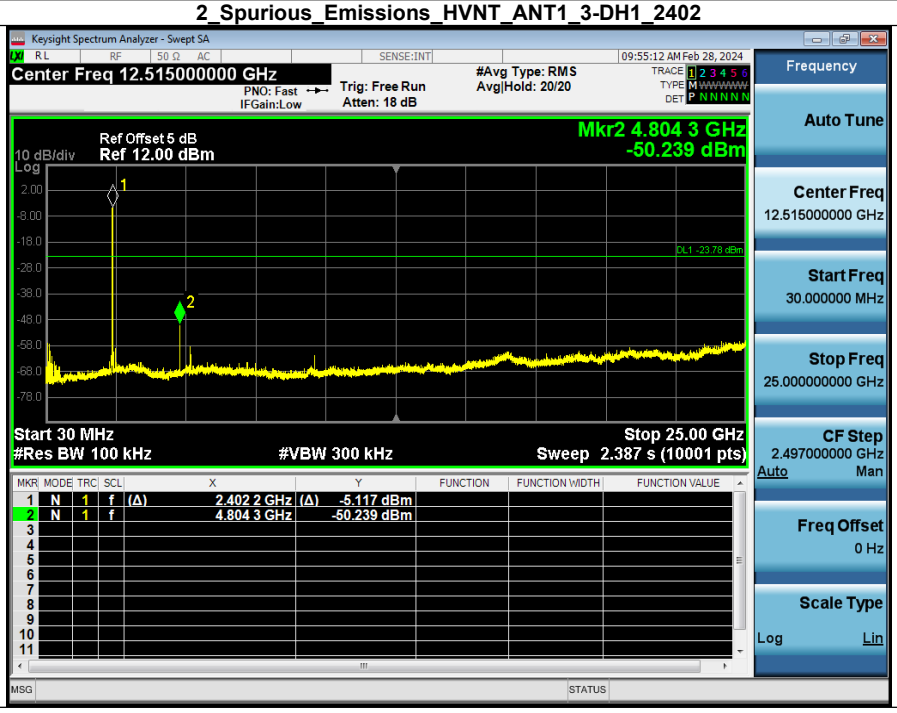
1_Reference_Level_HVNT_ANT1_2-DH1_2480

2_Spurious_Emissions_HVNT_ANT1_2-DH1_2480



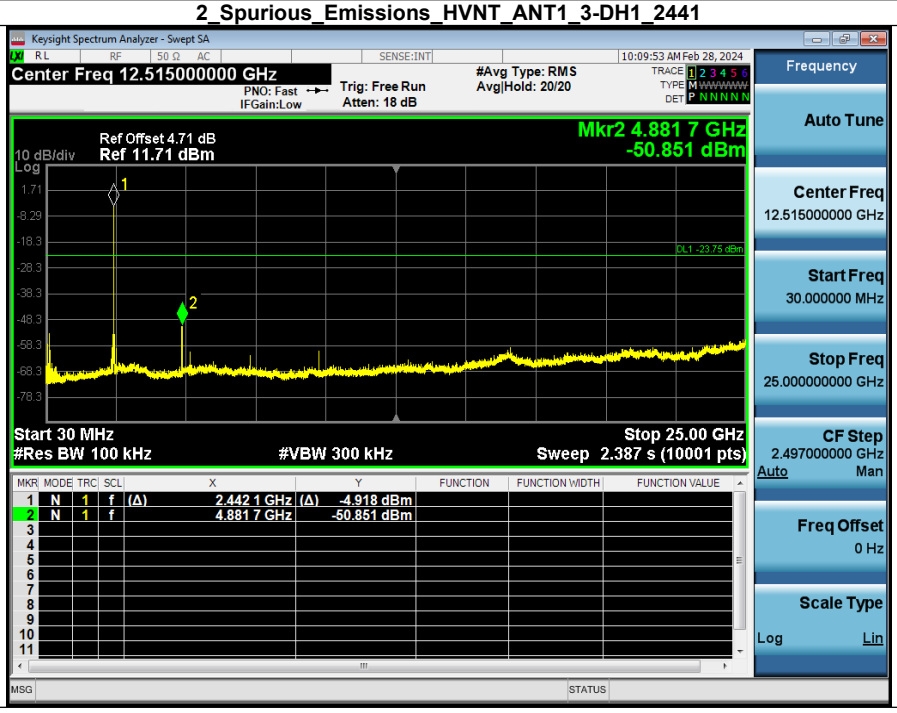
1_Reference_Level_HVNT_ANT1_3-DH1_2402

2_Spurious_Emissions_HVNT_ANT1_3-DH1_2402



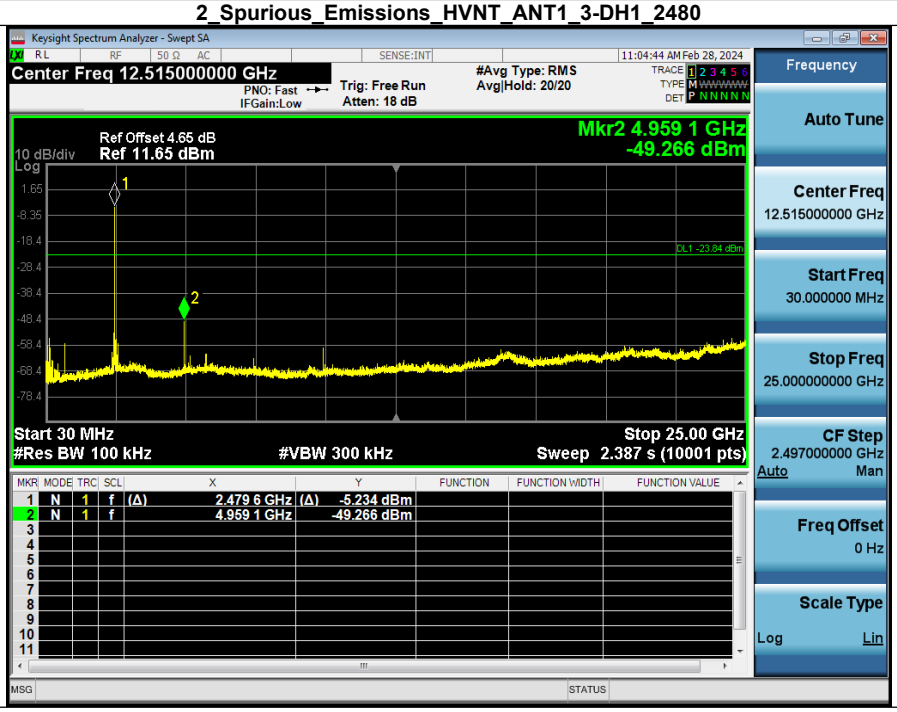
1_Reference_Level_HVNT_ANT1_3-DH1_2441

2_Spurious_Emissions_HVNT_ANT1_3-DH1_2441



1_Reference_Level_HVNT_ANT1_3-DH1_2480

2_Spurious_Emissions_HVNT_ANT1_3-DH1_2480

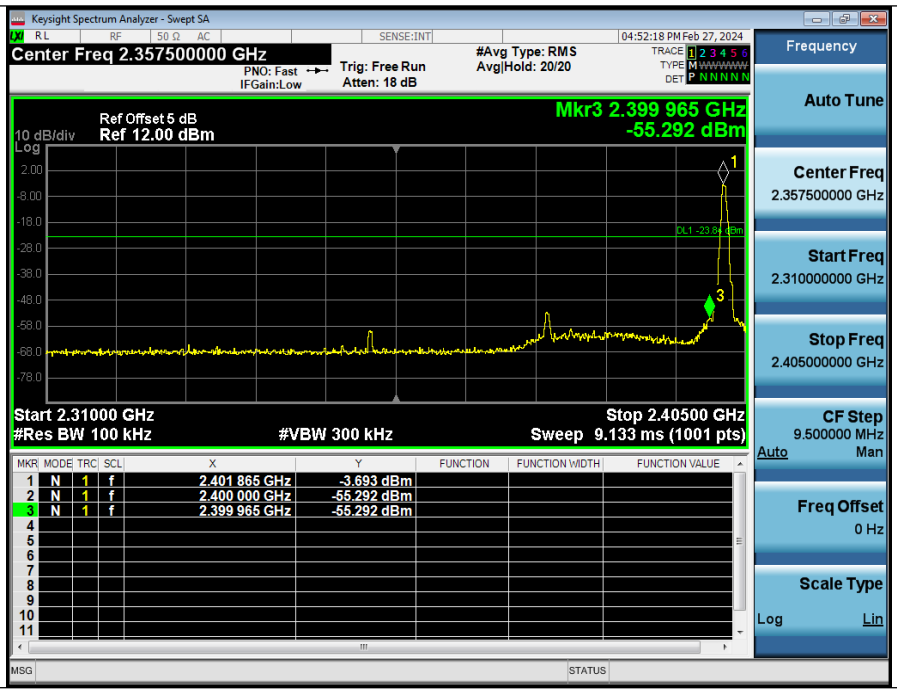


5. Bandedge

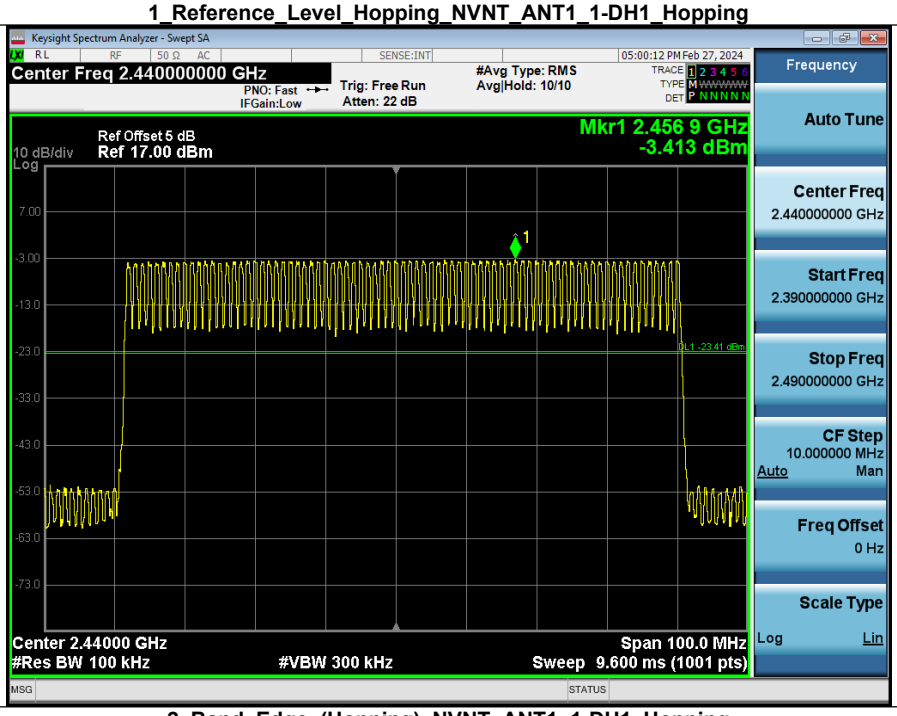
Condition	Antenna	Modulation	TX Mode	Bandedge MAX.Value	Limit	Result
NVNT	ANT1	1-DH1	2402.00	-55.292	-23.837	Pass
NVNT	ANT1	1-DH1	Hopping_LCH	-51.733	-23.413	Pass
NVNT	ANT1	1-DH1	2480.00	-60.088	-23.877	Pass
NVNT	ANT1	1-DH1	Hopping_HCH	-52.712	-23.738	Pass
NVNT	ANT1	2-DH1	2402.00	-56.299	-23.856	Pass
NVNT	ANT1	2-DH1	Hopping_LCH	-52.273	-23.437	Pass
HVNT	ANT1	2-DH1	2480.00	-59.342	-23.787	Pass
HVNT	ANT1	2-DH1	Hopping_HCH	-52.591	-23.684	Pass
HVNT	ANT1	3-DH1	2402.00	-56.924	-23.782	Pass
HVNT	ANT1	3-DH1	Hopping_LCH	-52.438	-23.372	Pass
HVNT	ANT1	3-DH1	2480.00	-58.589	-23.836	Pass
HVNT	ANT1	3-DH1	Hopping_HCH	-53.040	-23.722	Pass

1_Reference_Level_NVNT_ANT1_1-DH1_2402

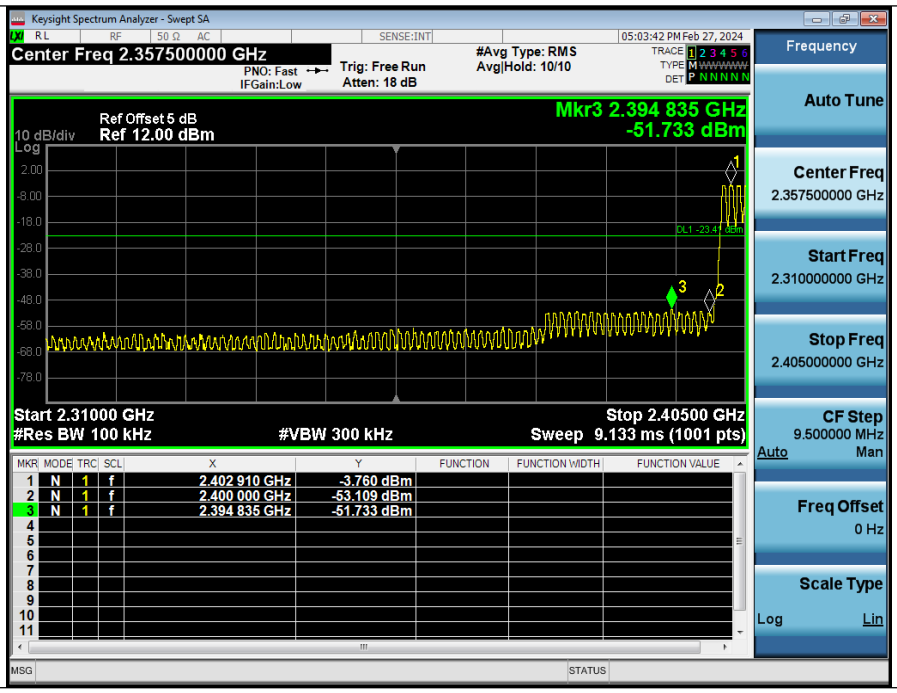
2_Bandedge_NVNT_ANT1_1-DH1_2402



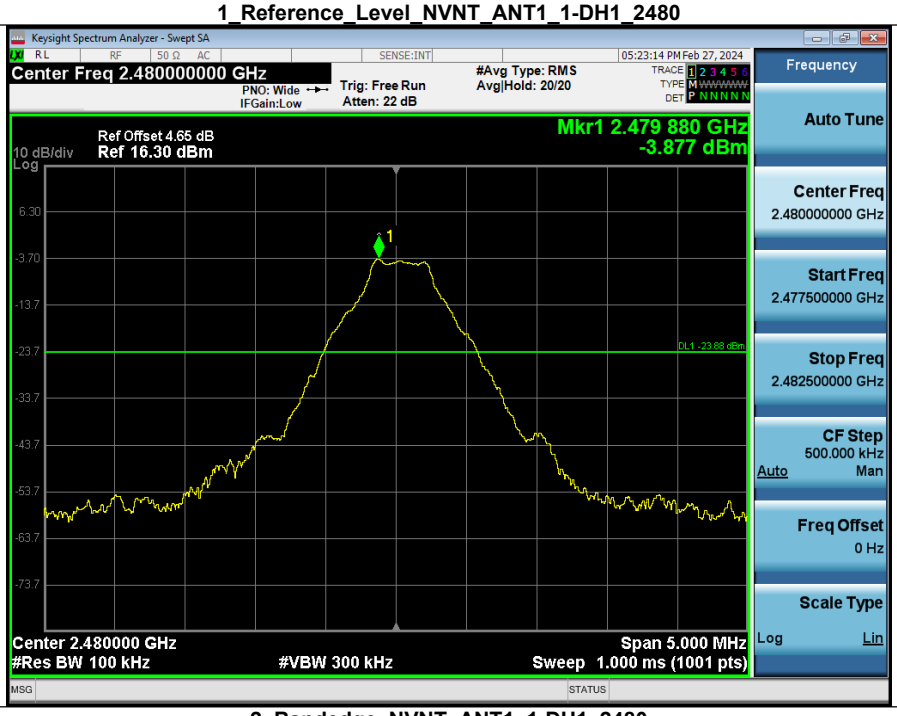
1_Reference_Level_Hopping_NVNT_ANT1_1-DH1_Hopping



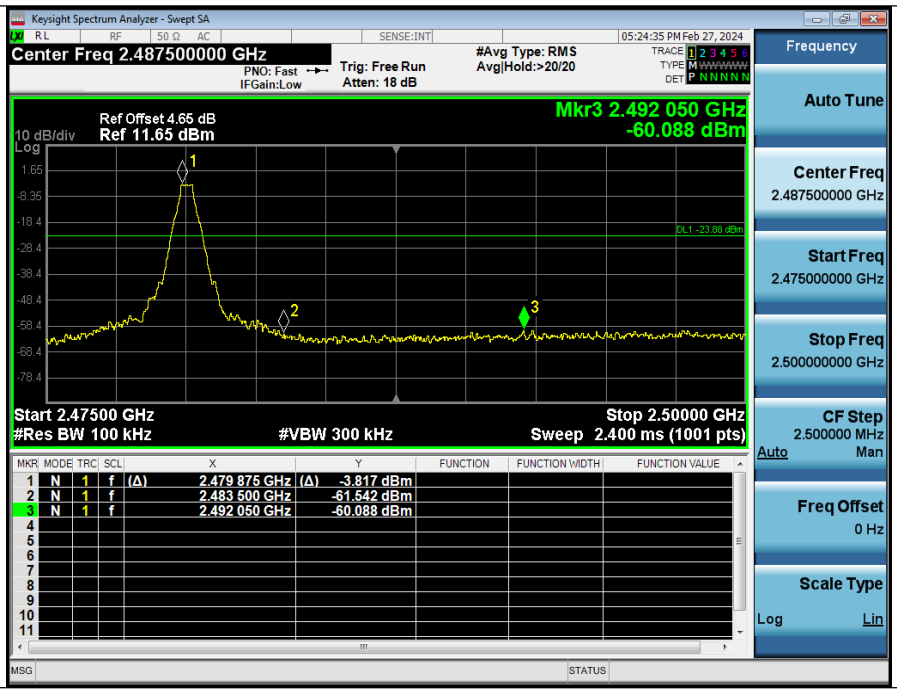
2_Band_Edge_(Hopping)_NVNT_ANT1_1-DH1_Hopping



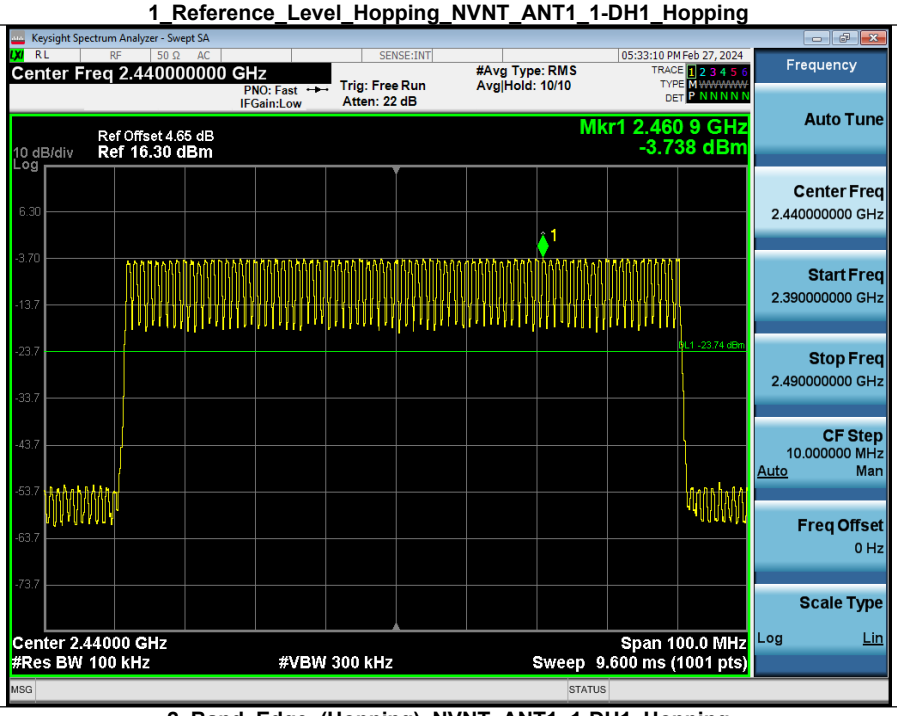
1_Reference_Level_NVNT_ANT1_1-DH1_2480



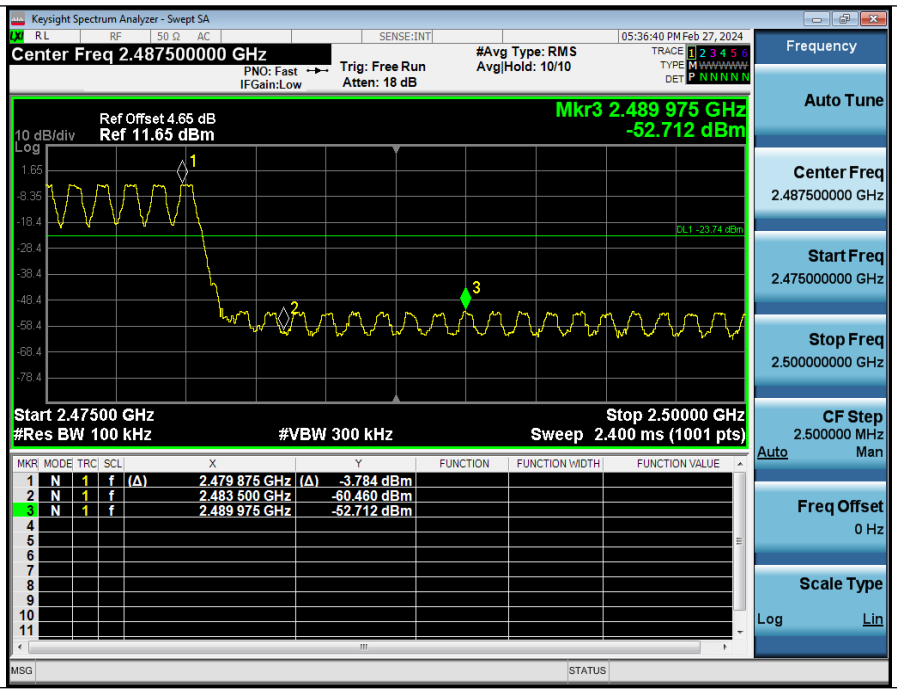
2_Bandedge_NVNT_ANT1_1-DH1_2480



1_Reference_Level_Hopping_NVNT_ANT1_1-DH1_Hopping

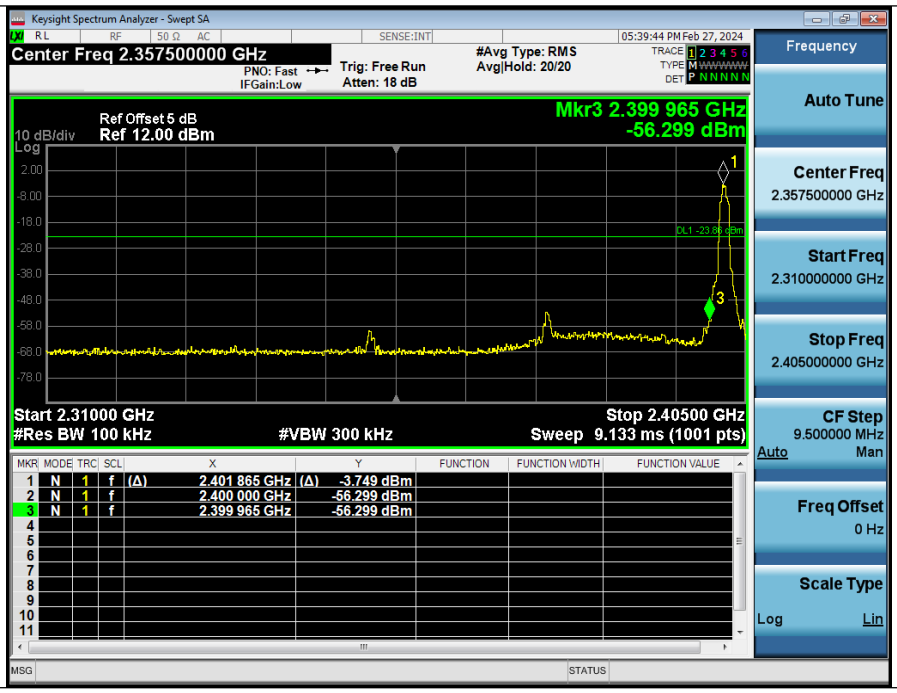


2_Band_Edge_(Hopping)_NVNT_ANT1_1-DH1_Hopping

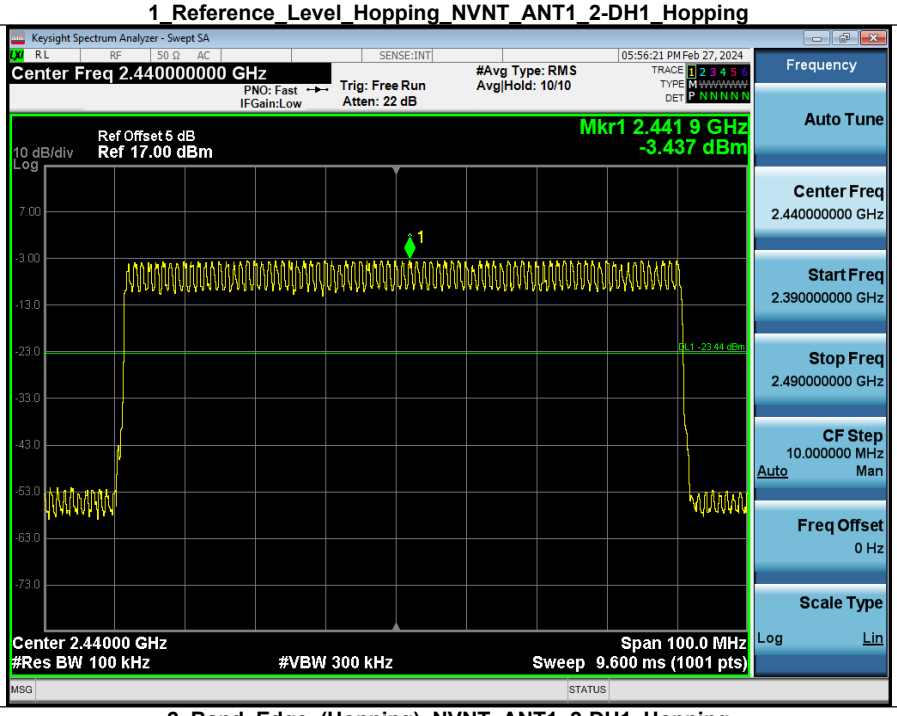


1_Reference_Level_NVNT_ANT1_2-DH1_2402

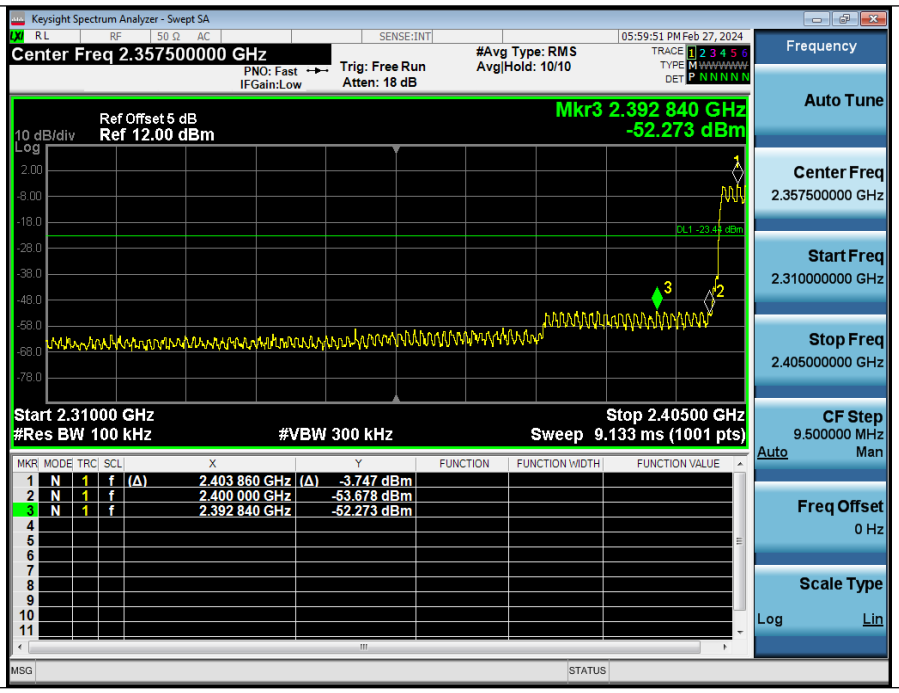
2_Bandedge_NVNT_ANT1_2-DH1_2402



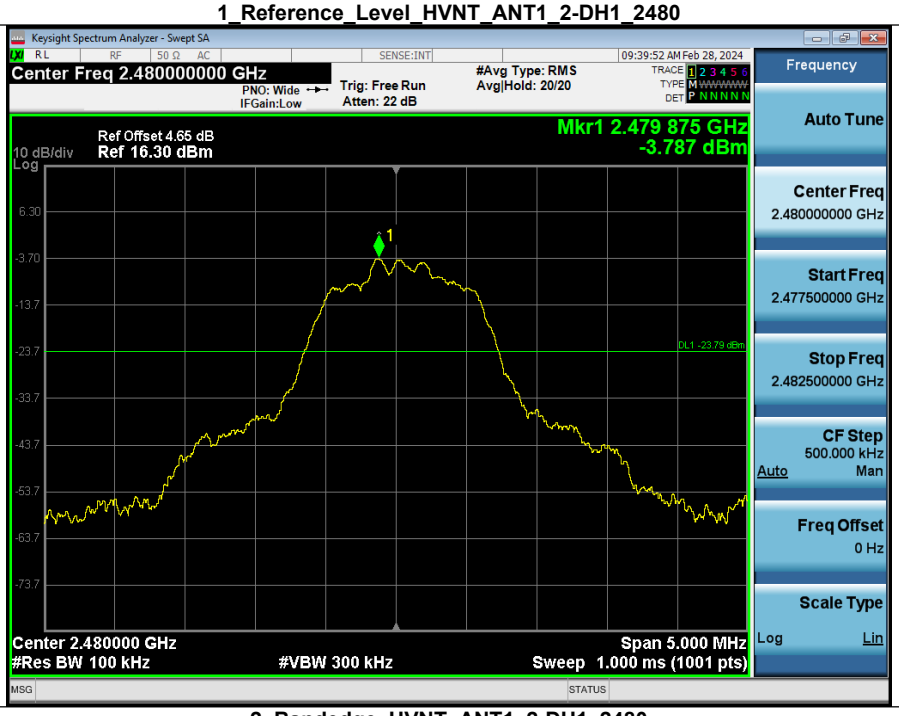
1_Reference_Level_Hopping_NVNT_ANT1_2-DH1_Hopping



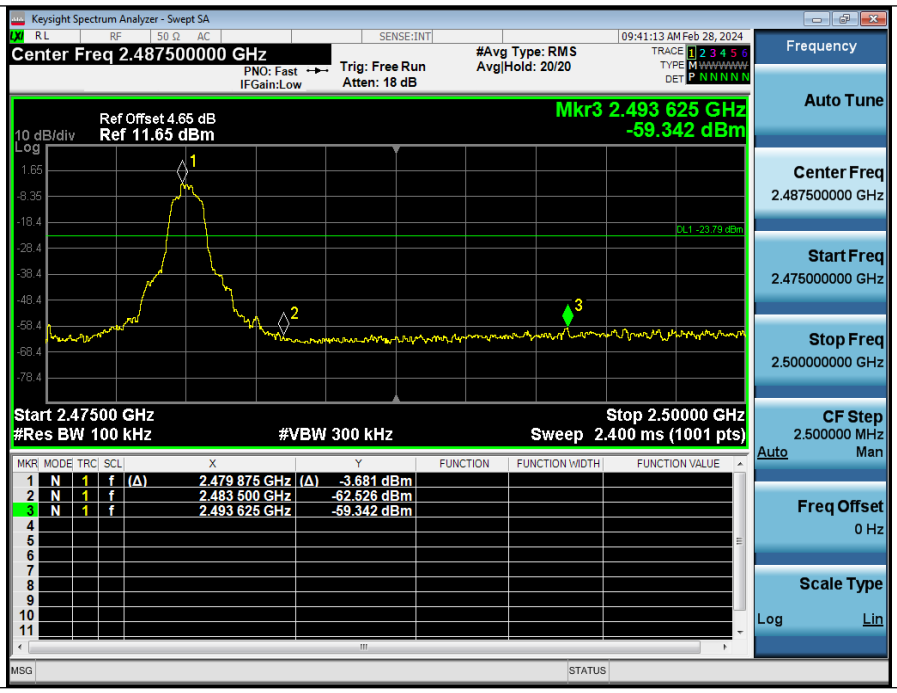
2_Band_Edge_(Hopping)_NVNT_ANT1_2-DH1_Hopping



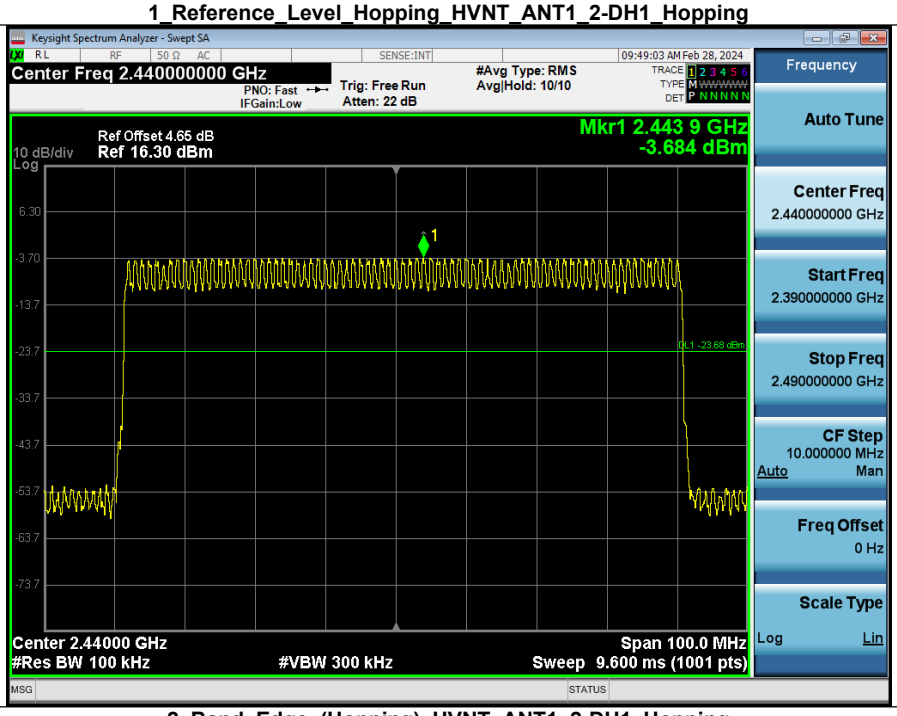
1_Reference_Level_HVNT_ANT1_2-DH1_2480



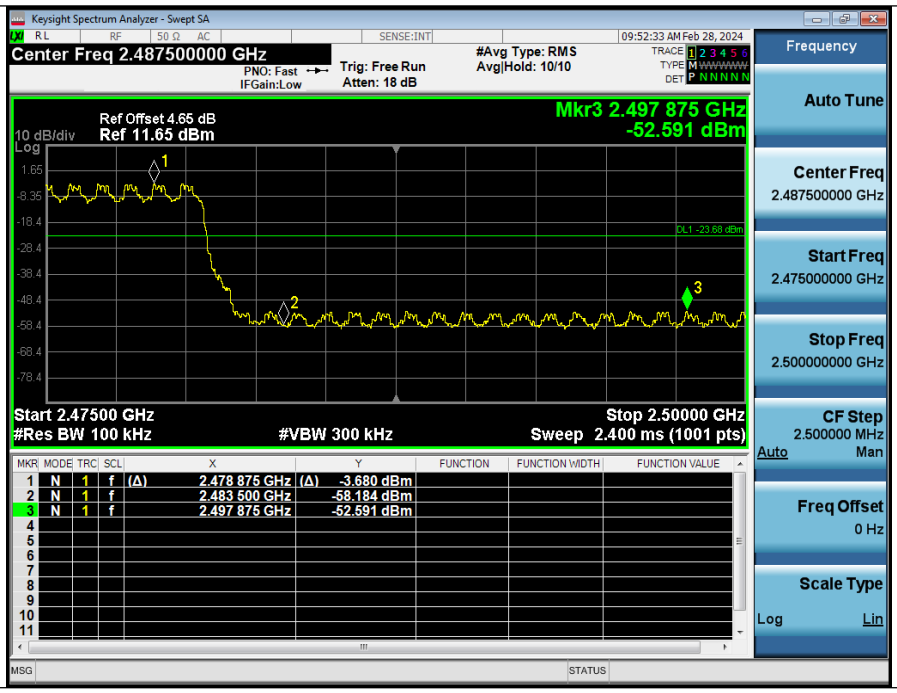
2_Bandedge_HVNT_ANT1_2-DH1_2480



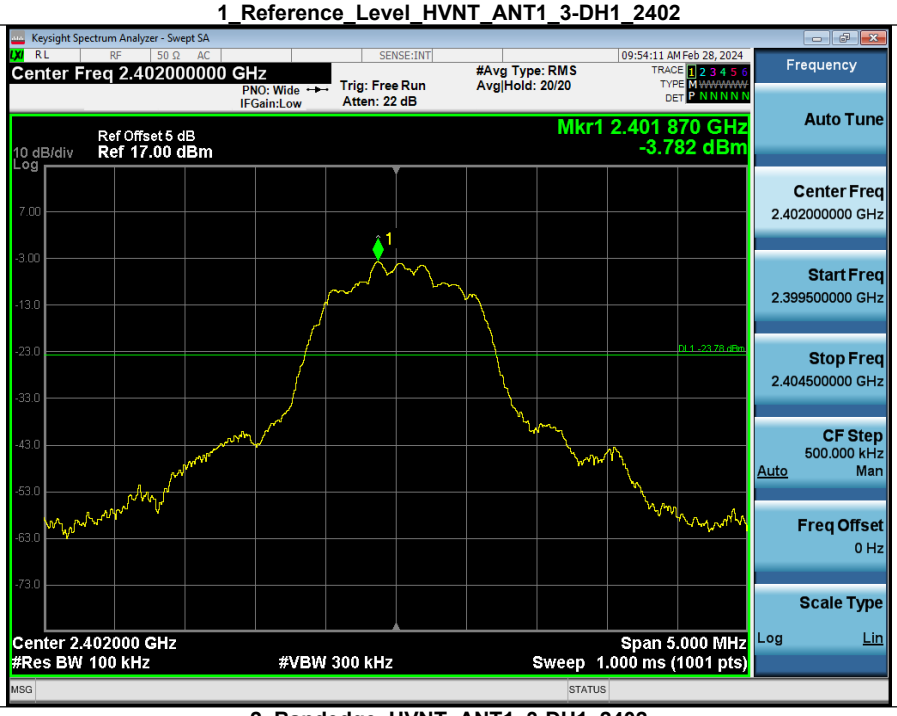
1_Reference_Level_Hopping_HVNT_ANT1_2-DH1_Hopping



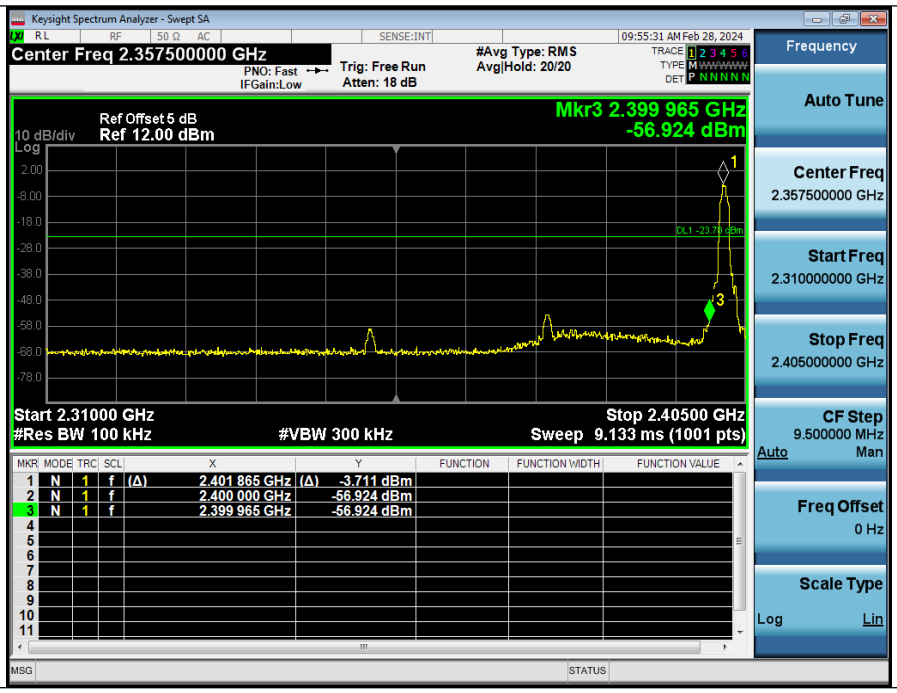
2_Band_Edge_(Hopping)_HVNT_ANT1_2-DH1_Hopping



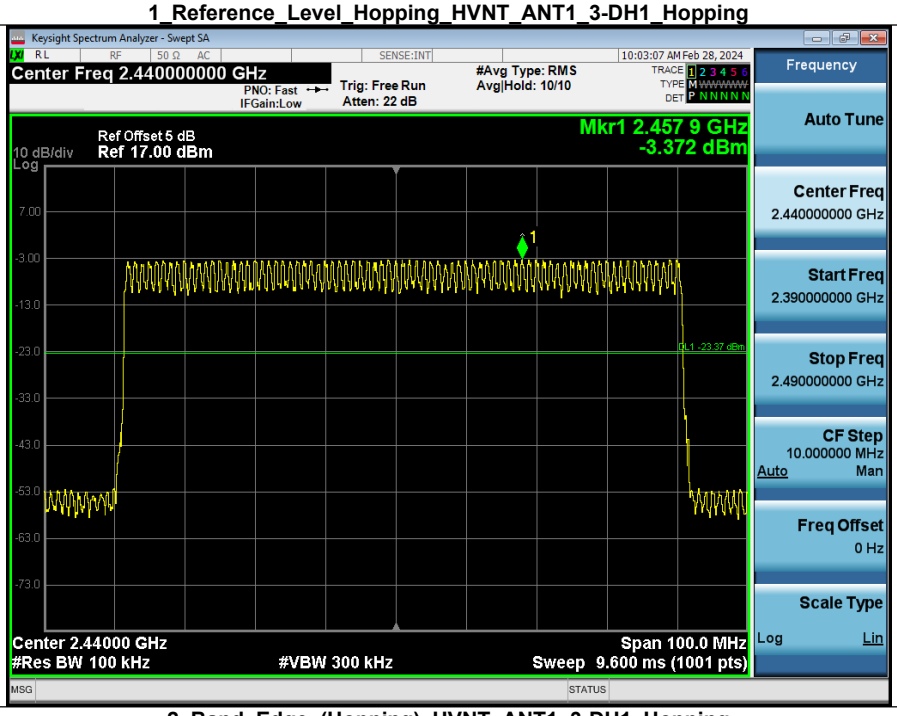
1_Reference_Level_HVNT_ANT1_3-DH1_2402



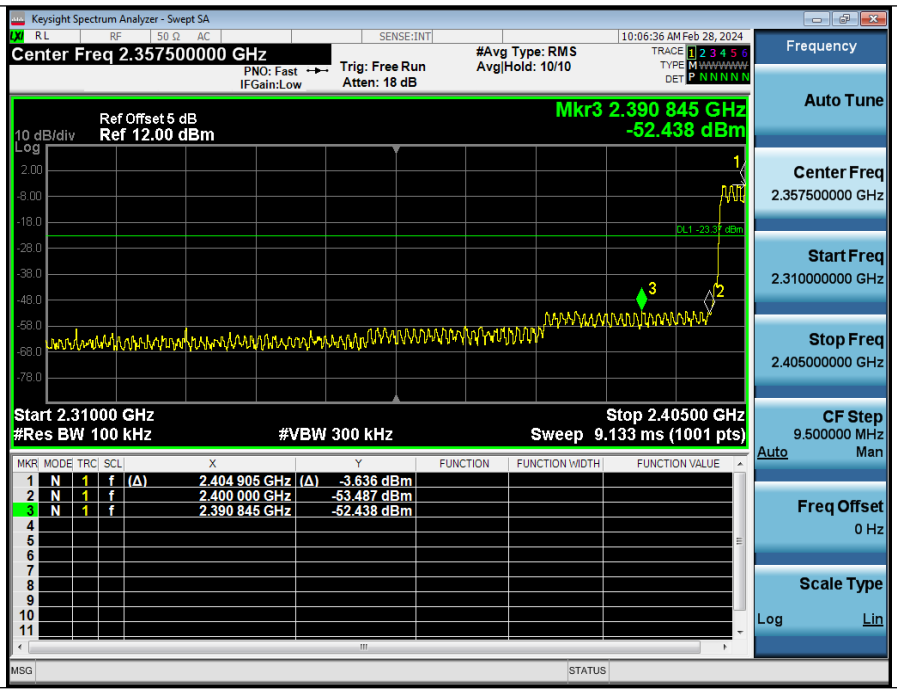
2_Bandedge_HVNT_ANT1_3-DH1_2402



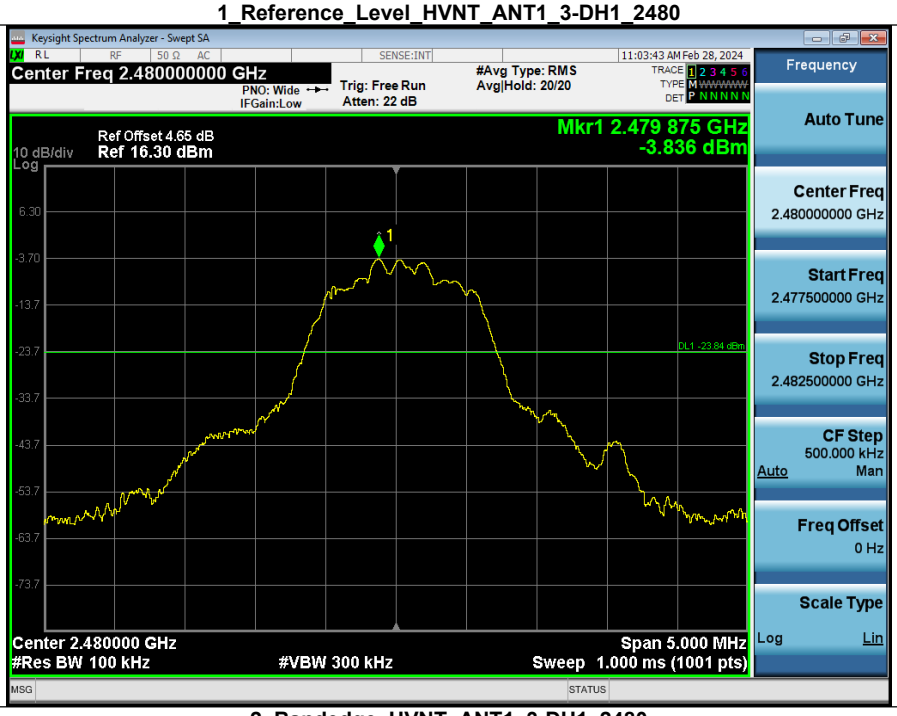
1_Reference_Level_Hopping_HVNT_ANT1_3-DH1_Hopping



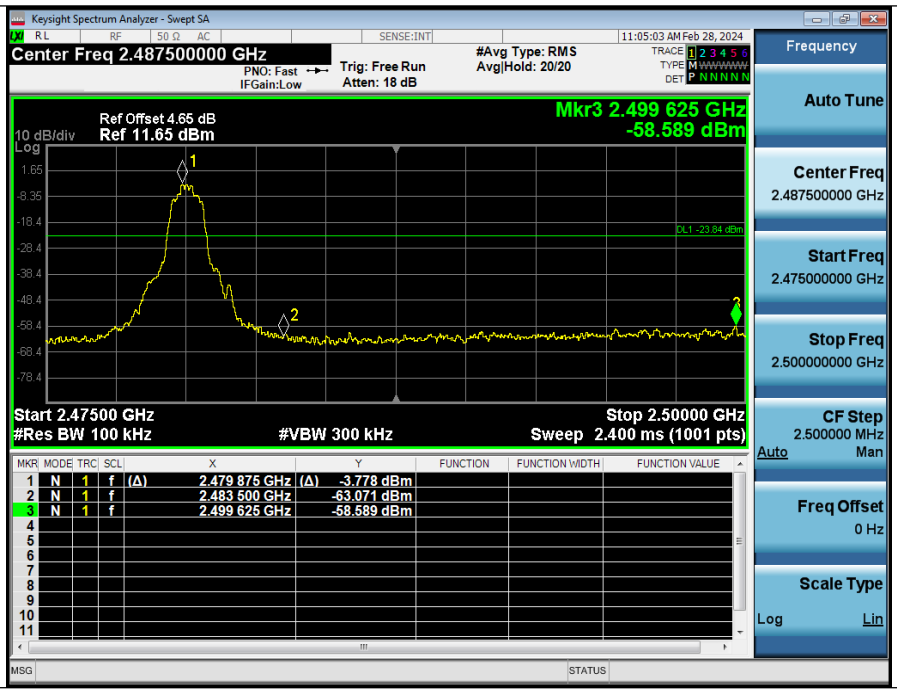
2_Band_Edge_(Hopping)_HVNT_ANT1_3-DH1_Hopping



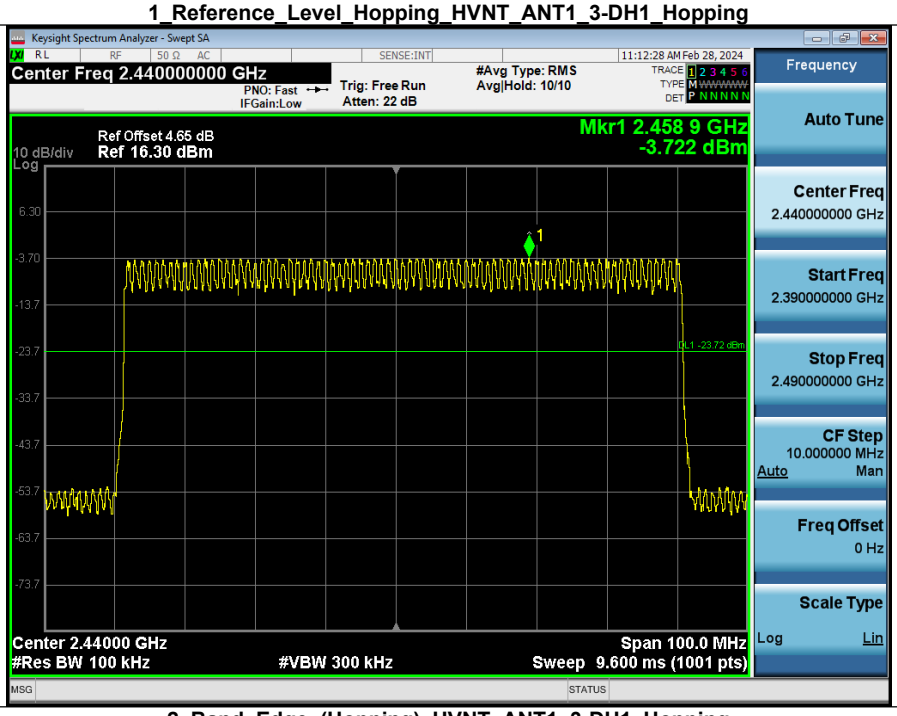
1_Reference_Level_HVNT_ANT1_3-DH1_2480



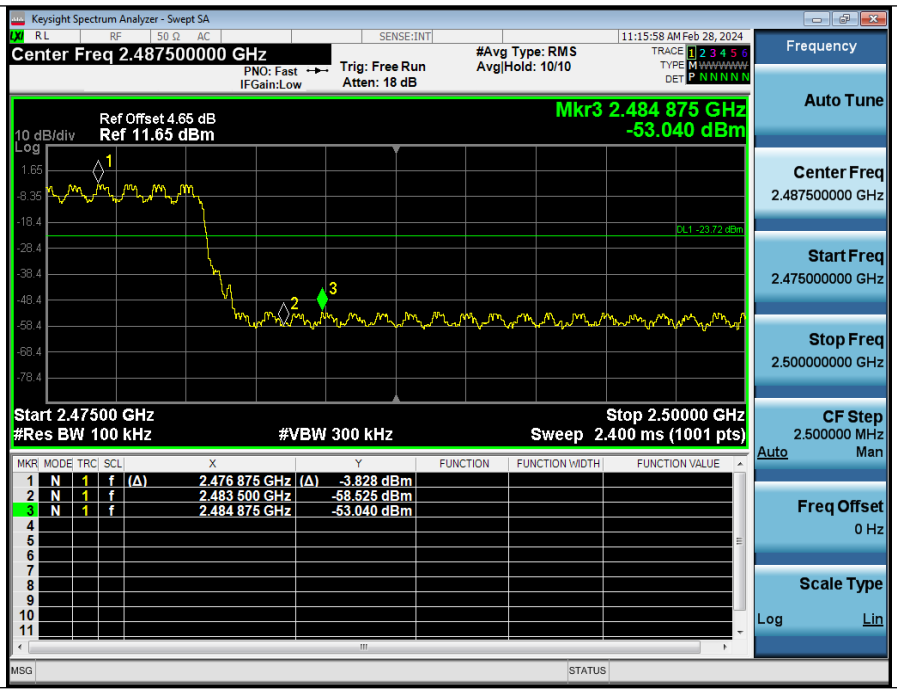
2_Bandedge_HVNT_ANT1_3-DH1_2480



1_Reference_Level_Hopping_HVNT_ANT1_3-DH1_Hopping



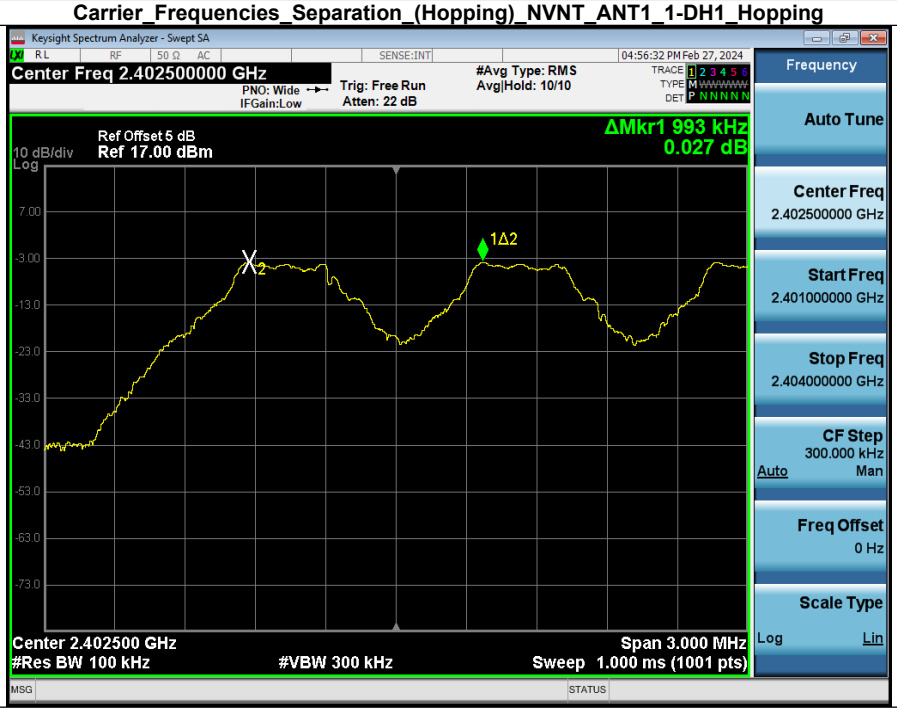
2_Band_Edge_(Hopping)_HVNT_ANT1_3-DH1_Hopping


Keysight Spectrum Analyzer - Swept SA
Center Freq 2.487500000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 18 dB
#Avg Type: RMS
Avg|Hold: 10/10
11:15:58 AM Feb 28, 2024
Ref Offset 4.65 dB
10 dB/div
Ref 11.65 dBm
Mkr3 2.484 875 GHz
-53.040 dBm
Start 2.47500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.50000 GHz
Sweep 2.400 ms (1001 pts)
1 N 1 f (Δ) 2.476 875 GHz (Δ) -3.828 dBm
2 N 1 f 2.483 500 GHz -58.525 dBm
3 N 1 f 2.484 875 GHz -53.040 dBm
Frequency
Auto Tune
Center Freq
2.487500000 GHz
Start Freq
2.475000000 GHz
Stop Freq
2.500000000 GHz
CF Step
2.500000 MHz
Auto Man
Freq Offset
0 Hz
Scale Type
Log Lin

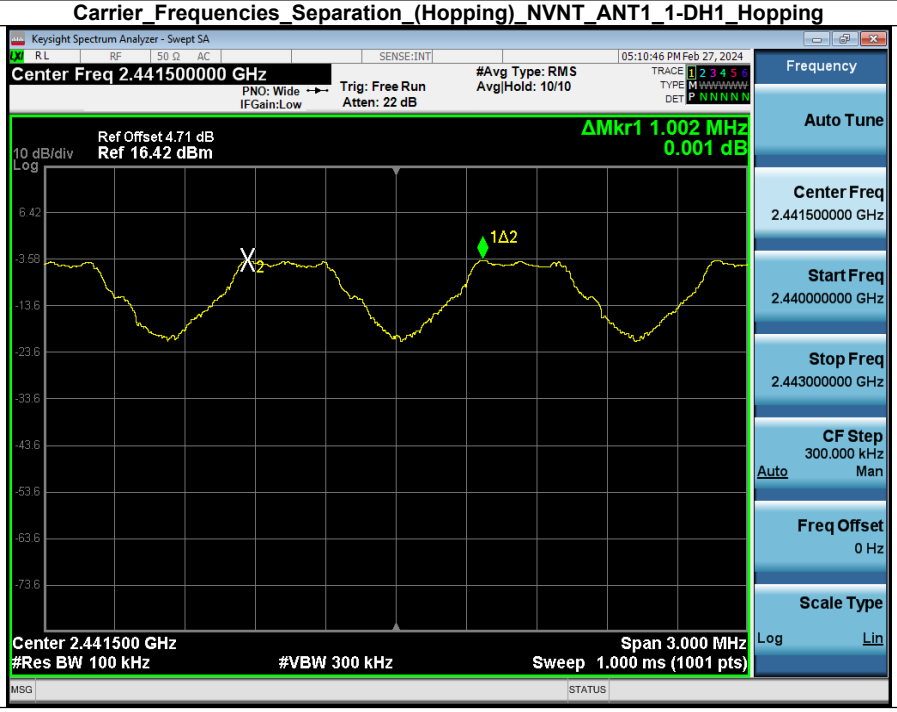
6. Carrier Frequencies Separation (Hopping)

Condition	Antenna	Modulation	Frequency(MHz)	Hopping NO.0 (MHz)	Hopping NO.1 (MHz)	Carrier Frequencies Separation(MHz)	Limit(MHz)	Result
NVNT	ANT1	1-DH1	2402.00	2401.876	2402.869	0.993	0.992	Pass
NVNT	ANT1	1-DH1	2441.00	2440.867	2441.869	1.002	0.678	Pass
NVNT	ANT1	1-DH1	2480.00	2478.873	2479.878	1.005	0.682	Pass
NVNT	ANT1	2-DH1	2402.00	2401.870	2402.869	0.999	0.860	Pass
HVNT	ANT1	2-DH1	2441.00	2440.870	2441.869	0.999	0.863	Pass
HVNT	ANT1	2-DH1	2480.00	2478.876	2479.869	0.993	0.857	Pass
HVNT	ANT1	3-DH1	2402.00	2401.870	2402.863	0.993	0.839	Pass
HVNT	ANT1	3-DH1	2441.00	2440.870	2441.872	1.002	0.837	Pass
HVNT	ANT1	3-DH1	2480.00	2478.870	2479.869	0.999	0.835	Pass

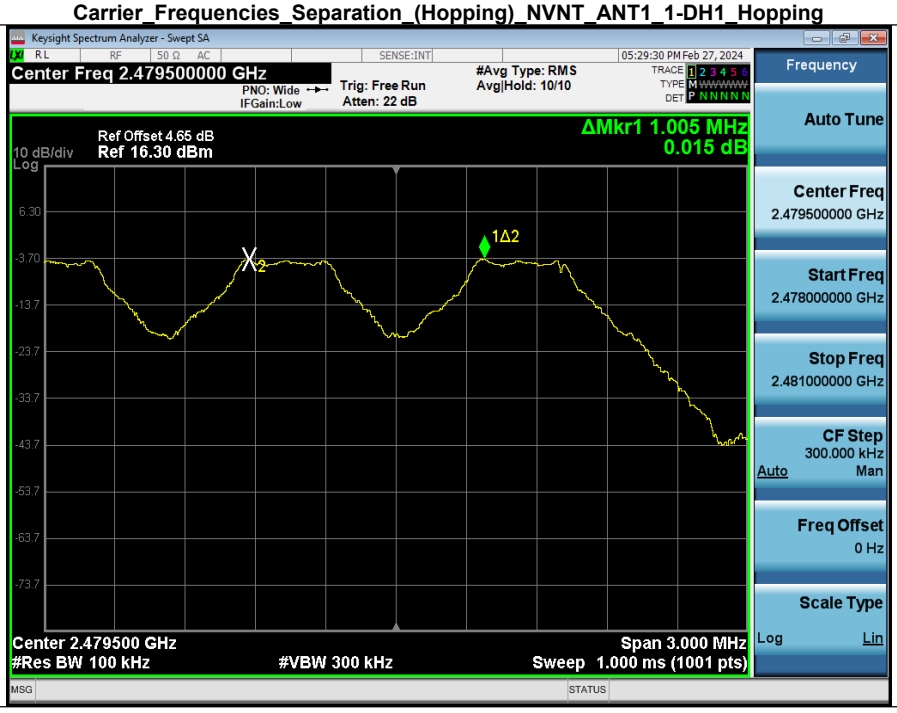
Carrier_Frequencies_Separation_(Hopping)_NVNT_ANT1_1-DH1_Hopping



Carrier_Frequencies_Separation_(Hopping)_NVNT_ANT1_1-DH1_Hopping

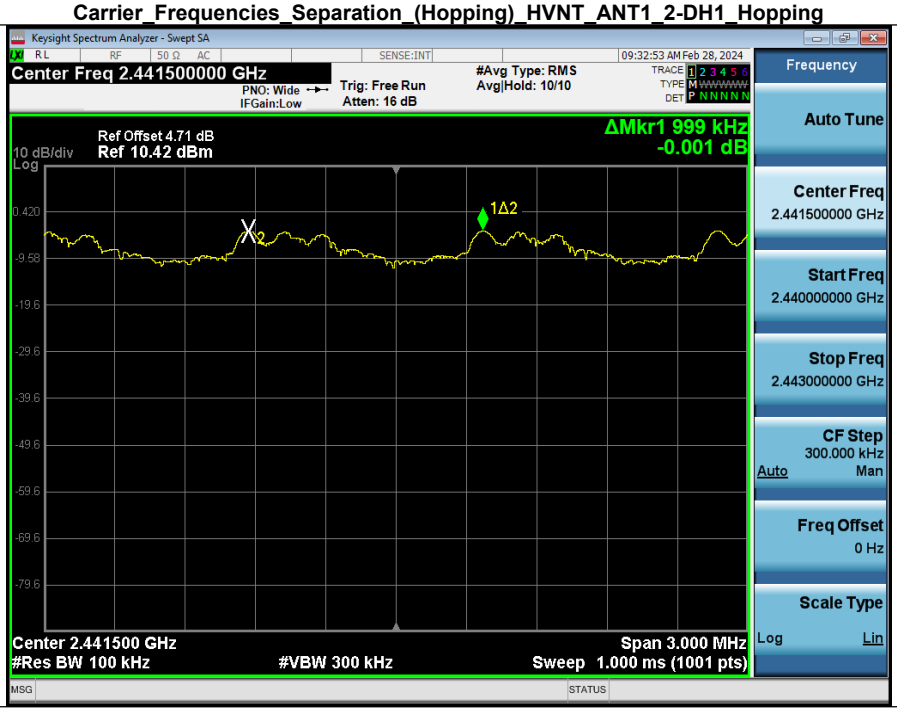


Carrier_Frequencies_Separation_(Hopping)_NVNT_ANT1_1-DH1_Hopping



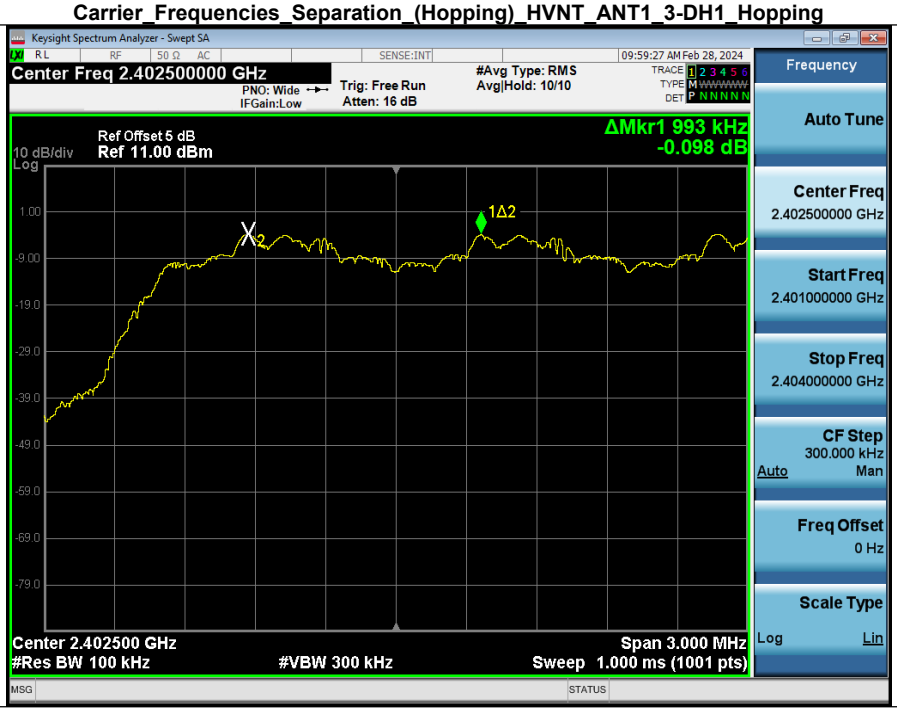
Carrier_Frequencies_Separation_(Hopping)_NVNT_ANT1_2-DH1_Hopping

Carrier_Frequencies_Separation_(Hopping)_HVNT_ANT1_2-DH1_Hopping



Carrier_Frequencies_Separation_(Hopping)_HVNT_ANT1_2-DH1_Hopping

Carrier_Frequencies_Separation_(Hopping)_HVNT_ANT1_3-DH1_Hopping



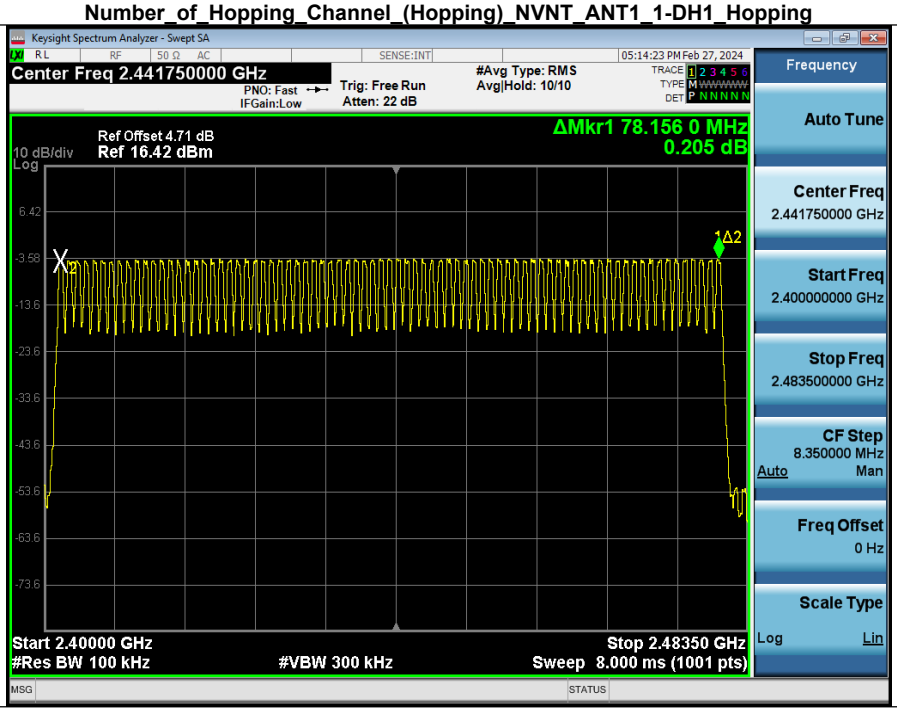
Carrier_Frequencies_Separation_(Hopping)_HVNT_ANT1_3-DH1_Hopping

Carrier_Frequencies_Separation_(Hopping)_HVNT_ANT1_3-DH1_Hopping

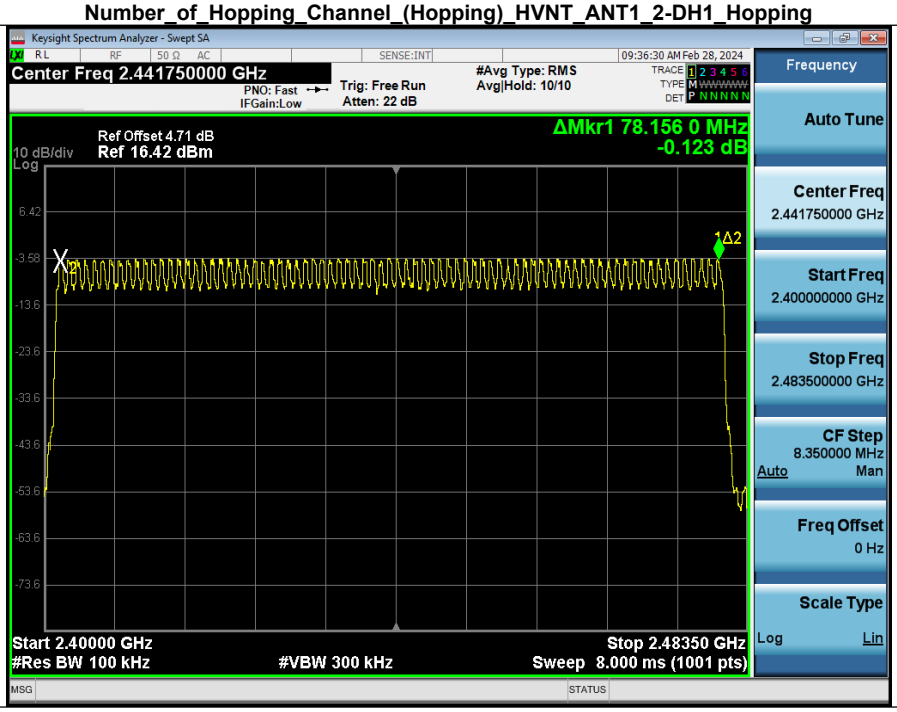
7. Number of Hopping Channel (Hopping)

Condition	Antenna	Modulation	Hopping Num	Limit	Result
NVNT	ANT1	1-DH1	79	15	Pass
HVNT	ANT1	2-DH1	79	15	Pass
HVNT	ANT1	3-DH1	79	15	Pass

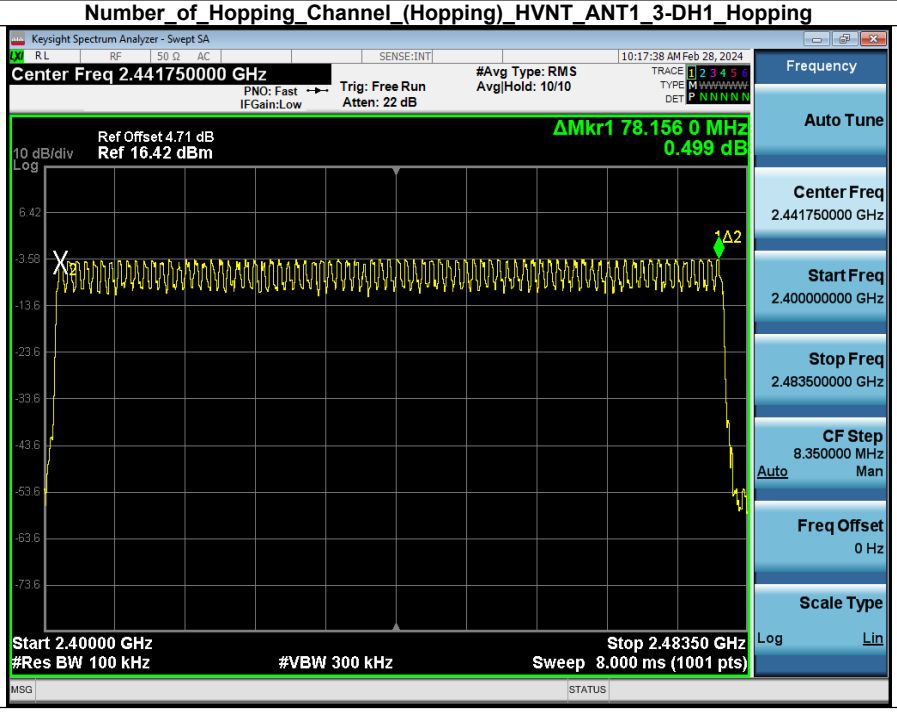
Number_of_Hopping_Channel_(Hopping)_NVNT_ANT1_1-DH1_Hopping



Number_of_Hopping_Channel_(Hopping)_HVNT_ANT1_2-DH1_Hopping



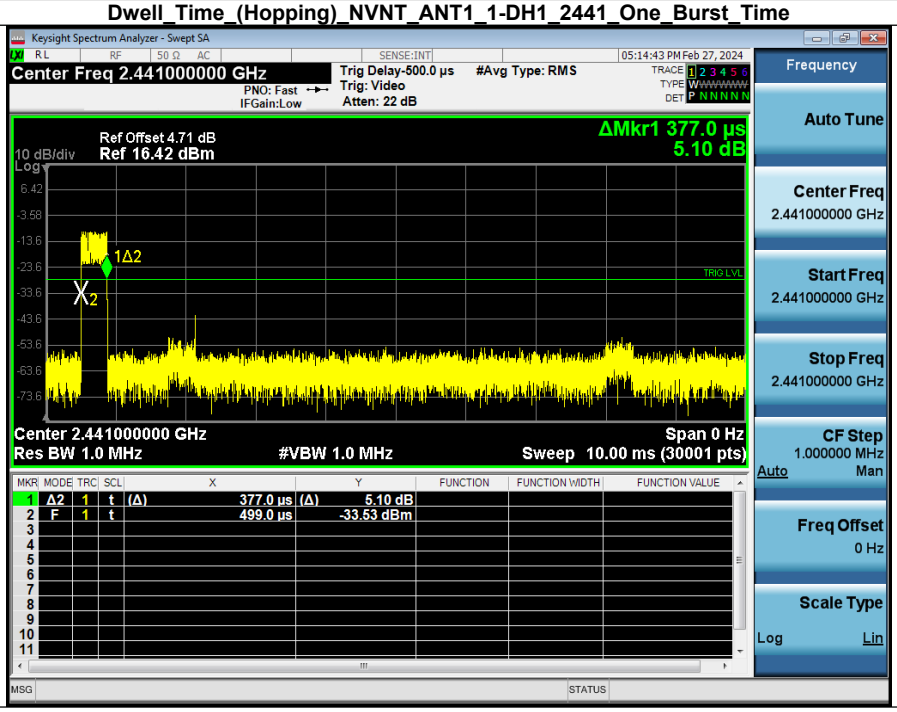
Number_of_Hopping_Channel_(Hopping)_HVNT_ANT1_3-DH1_Hopping



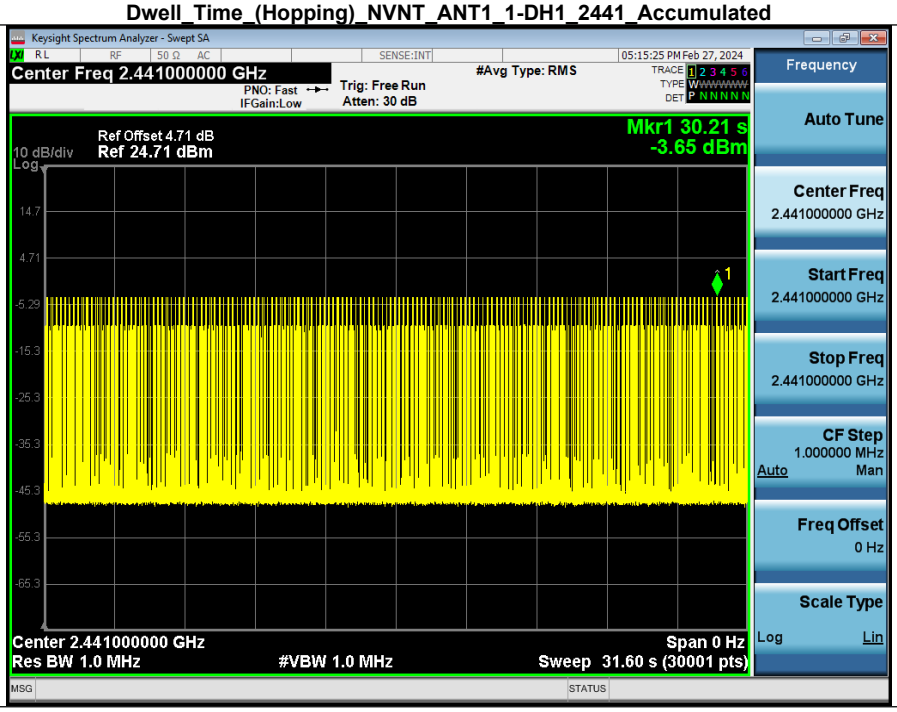
8. Dwell Time (Hopping)

Condition	Antenna	Packet Type	Pulse Time(ms)	Hops	Dwell Time(ms)	Limit(s)	Result
NVNT	ANT1	1-DH1	0.377	320.00	120.640	0.40	Pass
HVNT	ANT1	2-DH1	0.388	320.00	124.160	0.40	Pass
HVNT	ANT1	3-DH1	0.389	320.00	124.480	0.40	Pass
HVNT	ANT1	1-DH3	1.634	158.00	258.172	0.40	Pass
HVNT	ANT1	1-DH5	2.882	103.00	296.846	0.40	Pass
HVNT	ANT1	2-DH3	1.640	150.00	246.000	0.40	Pass
HVNT	ANT1	2-DH5	2.888	114.00	329.232	0.40	Pass
HVNT	ANT1	3-DH3	1.639	156.00	255.684	0.40	Pass
HVNT	ANT1	3-DH5	2.890	112.00	323.680	0.40	Pass

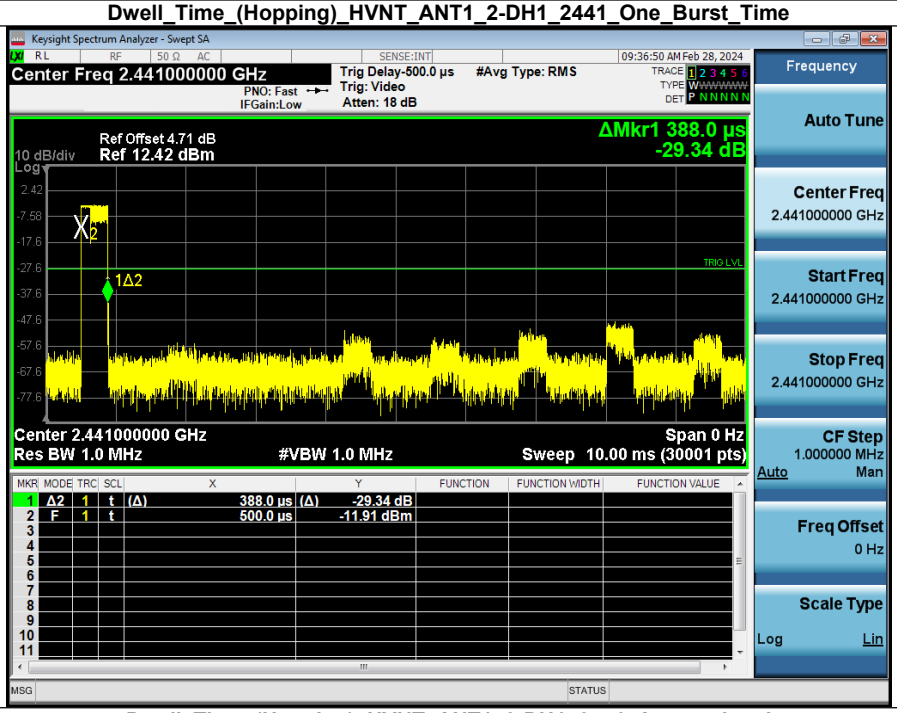
Dwell_Time_(Hopping)_NVNT_ANT1_1-DH1_2441_One_Burst_Time



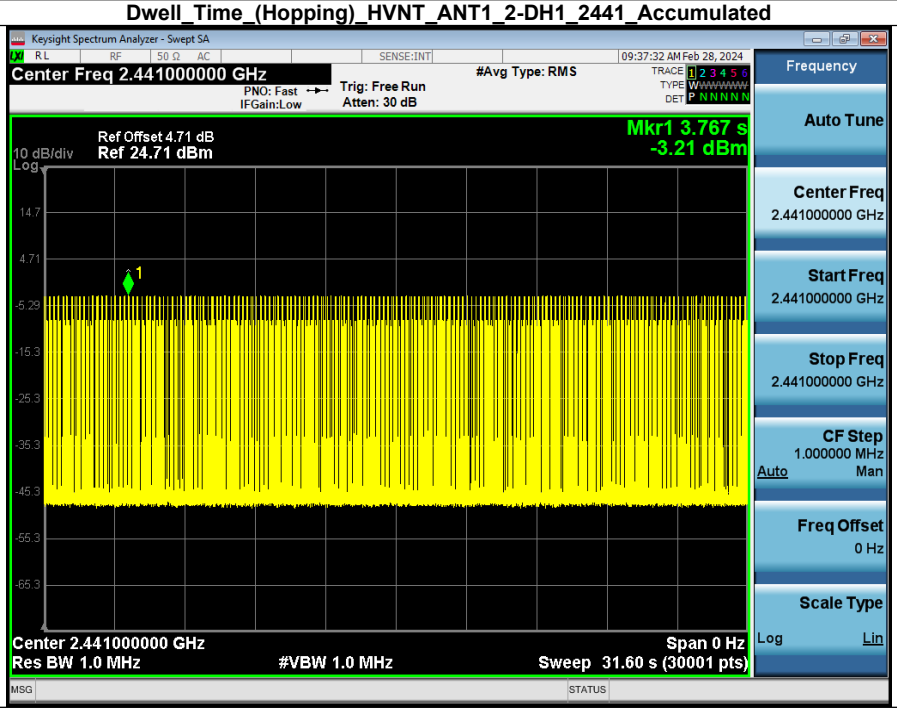
Dwell_Time_(Hopping)_NVNT_ANT1_1-DH1_2441_Accumulated



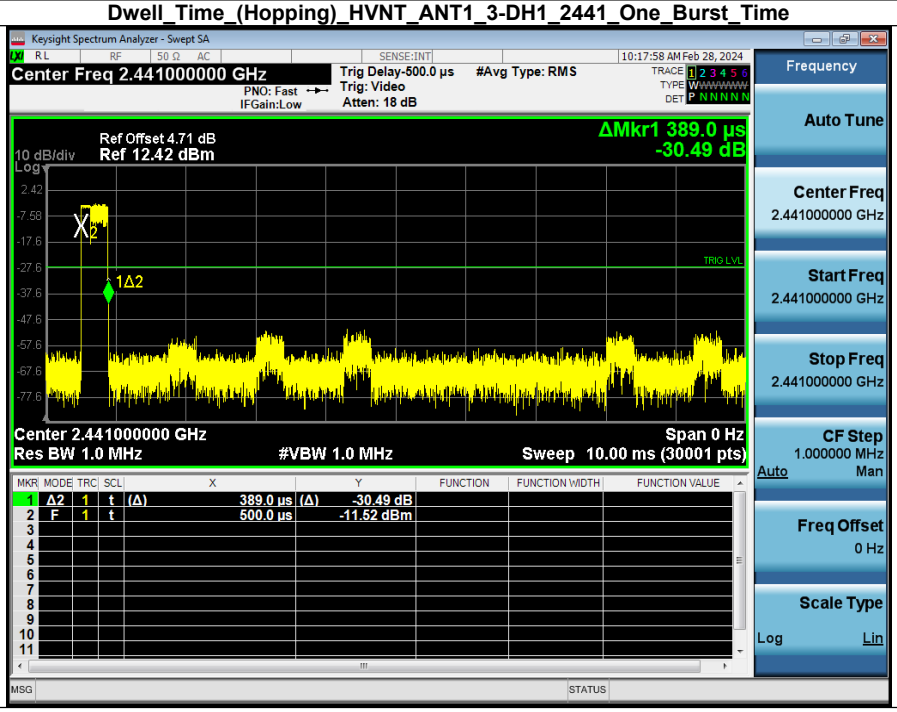
Dwell_Time_(Hopping)_HVNT_ANT1_2-DH1_2441_One_Burst_Time



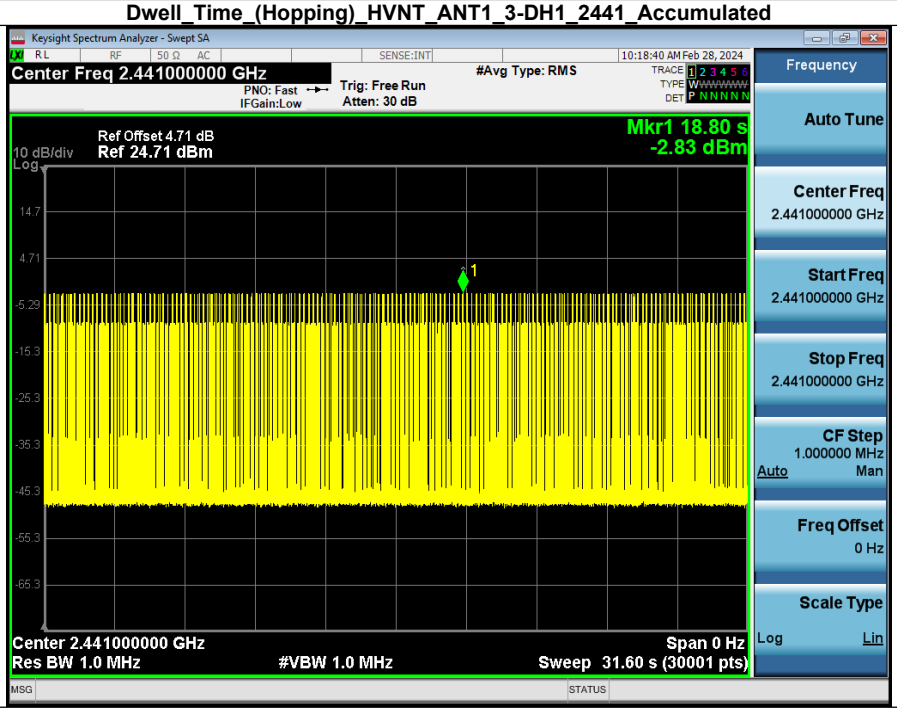
Dwell_Time_(Hopping)_HVNT_ANT1_2-DH1_2441_Accumulated



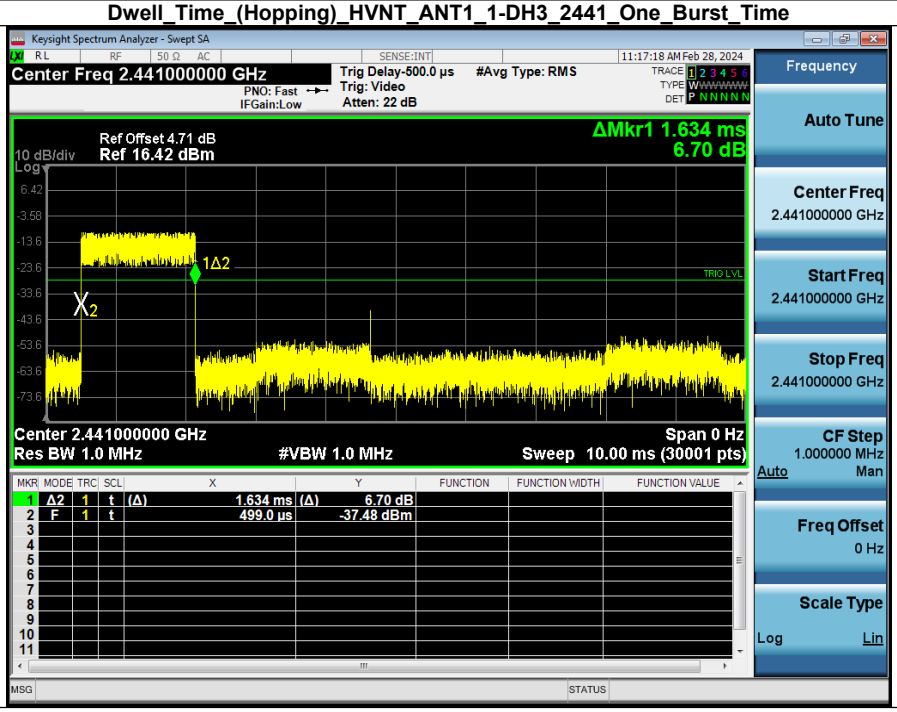
Dwell_Time_(Hopping)_HVNT_ANT1_3-DH1_2441_One_Burst_Time



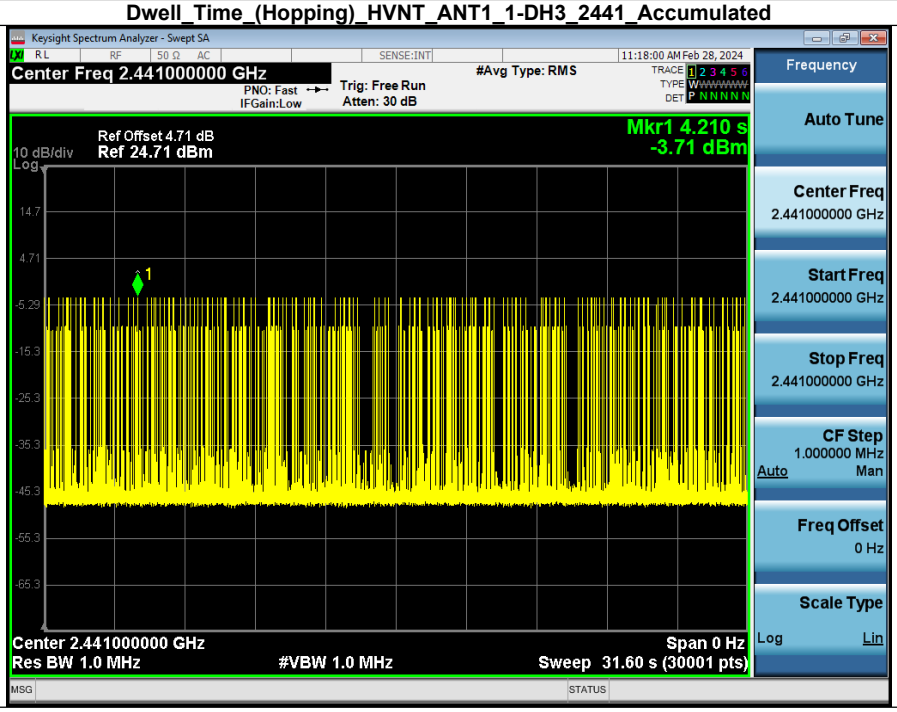
Dwell_Time_(Hopping)_HVNT_ANT1_3-DH1_2441_Accumulated



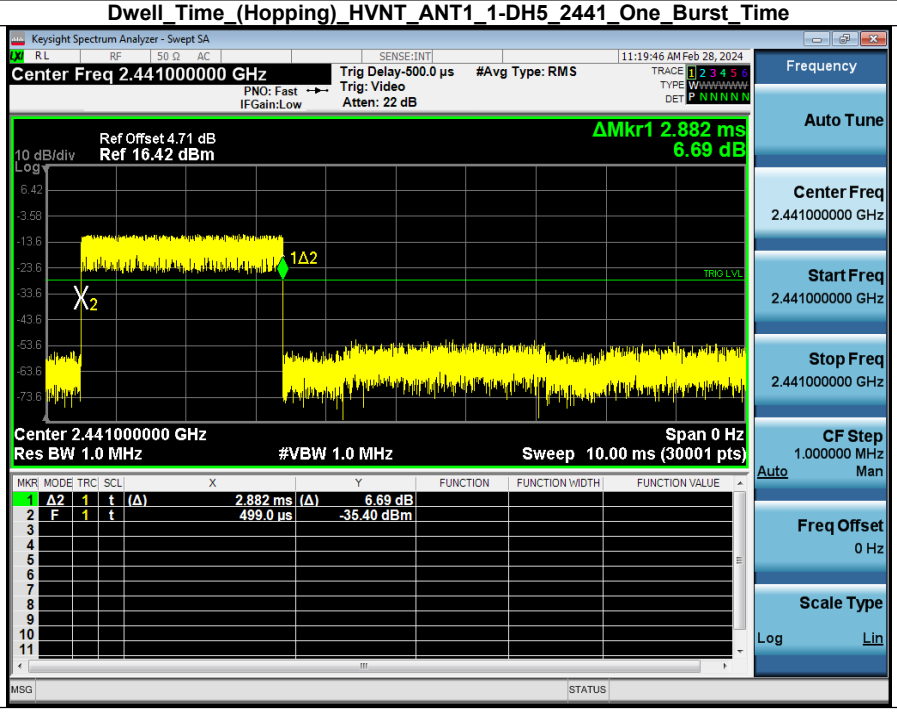
Dwell_Time_(Hopping)_HVNT_ANT1_1-DH3_2441_One_Burst_Time



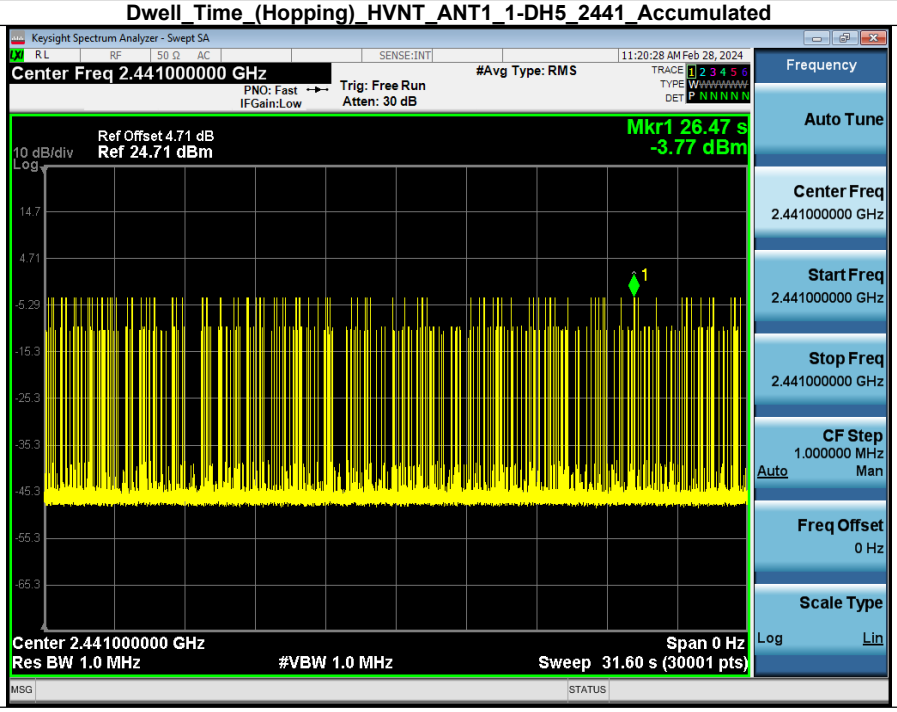
Dwell_Time_(Hopping)_HVNT_ANT1_1-DH3_2441_Accumulated



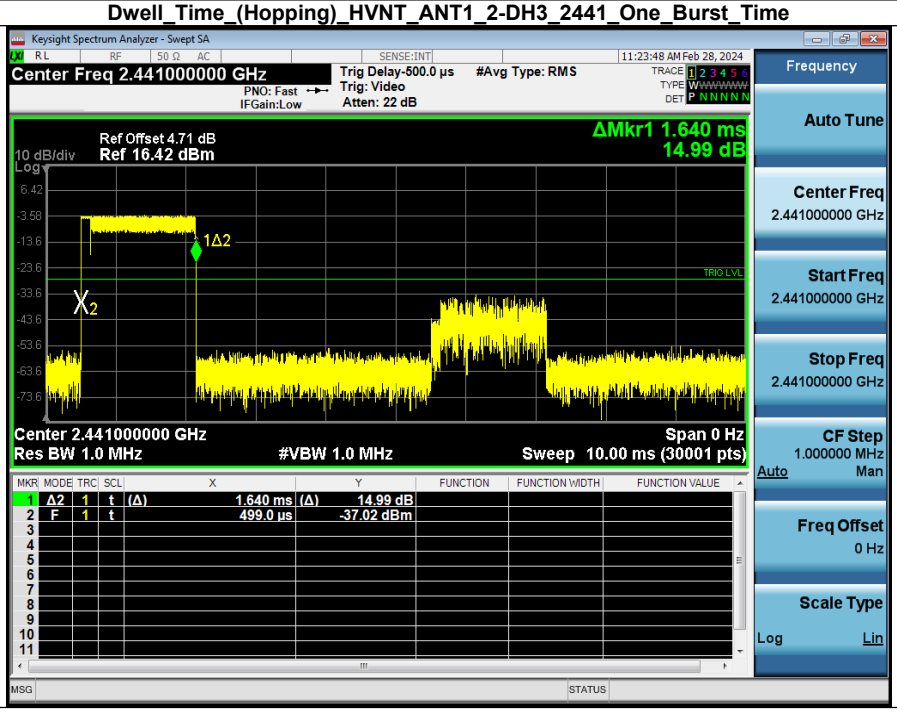
Dwell_Time_(Hopping)_HVNT_ANT1_1-DH5_2441_One_Burst_Time



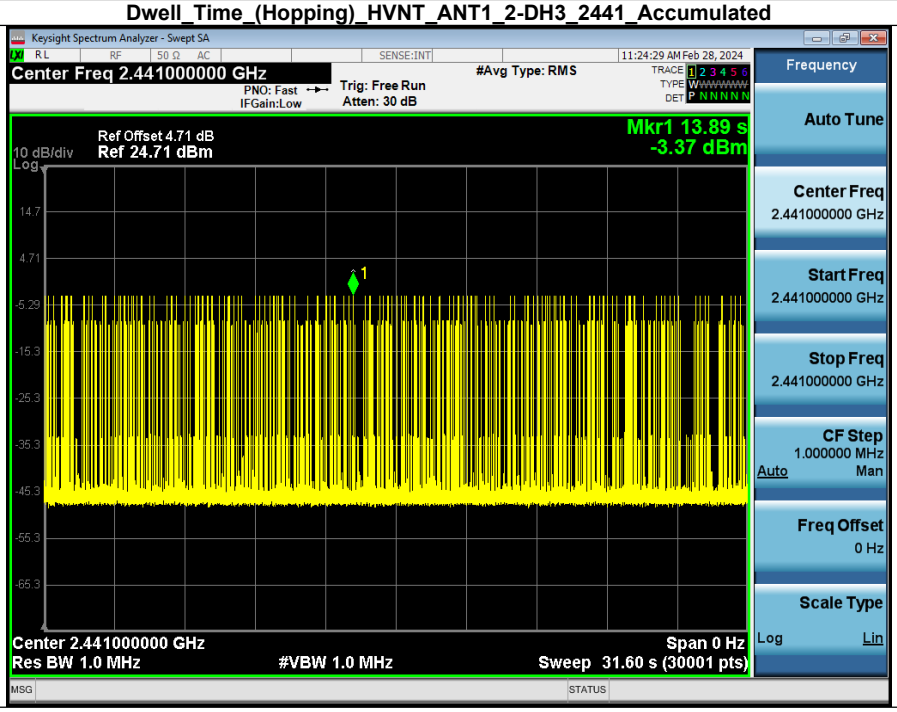
Dwell_Time_(Hopping)_HVNT_ANT1_1-DH5_2441_Accumulated



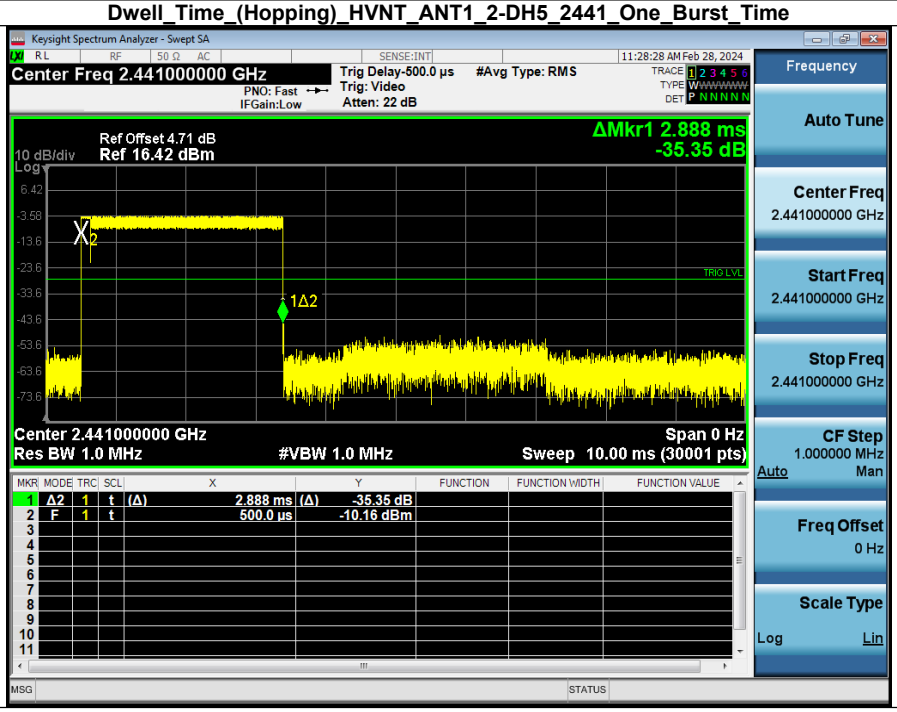
Dwell_Time_(Hopping)_HVNT_ANT1_2-DH3_2441_One_Burst_Time



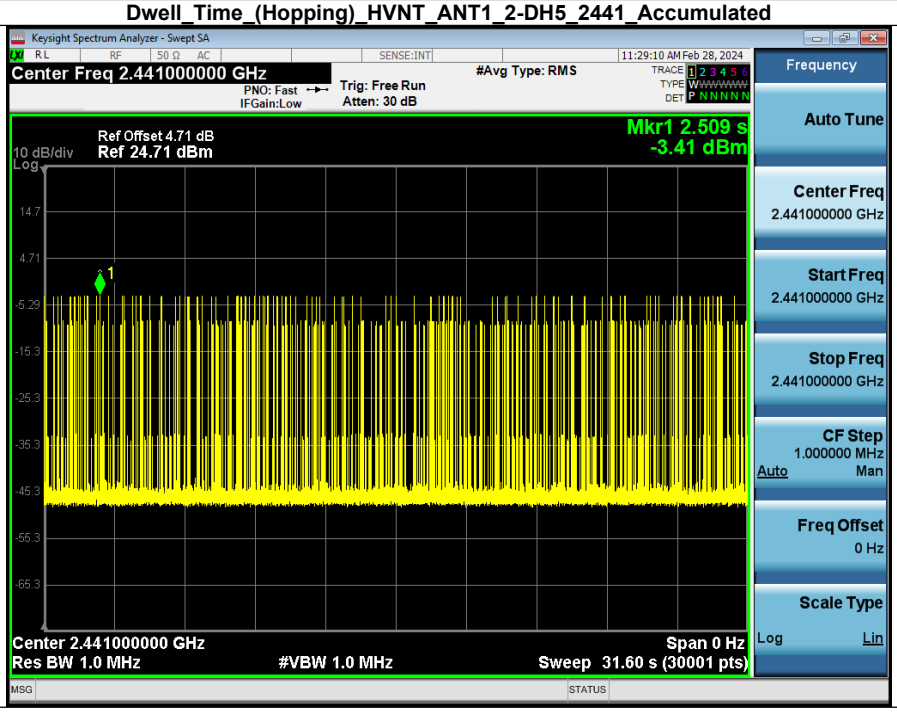
Dwell_Time_(Hopping)_HVNT_ANT1_2-DH3_2441_Accumulated



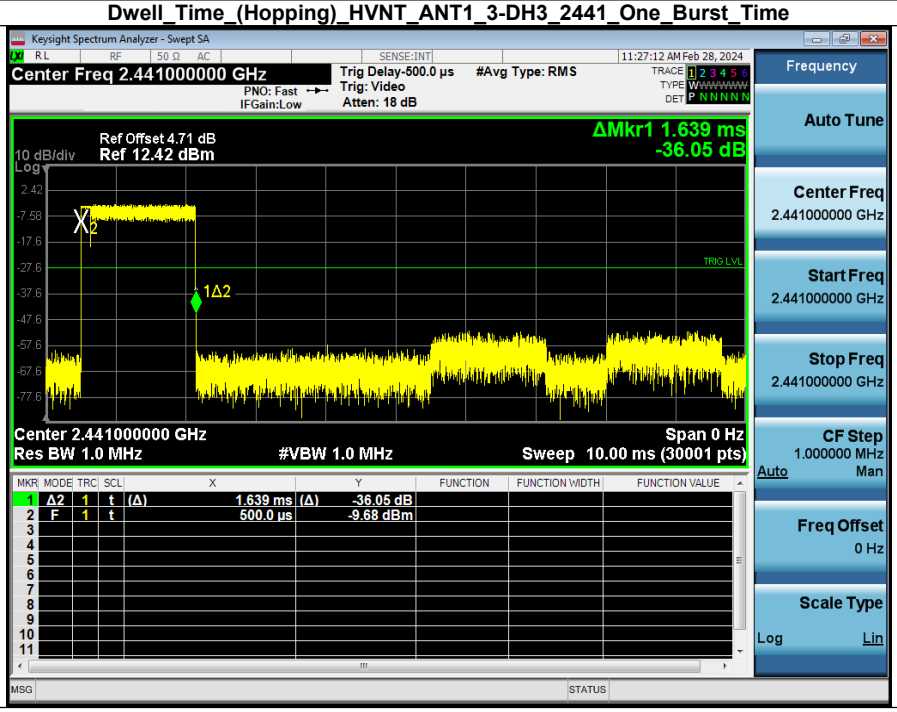
Dwell_Time_(Hopping)_HVNT_ANT1_2-DH5_2441_One_Burst_Time



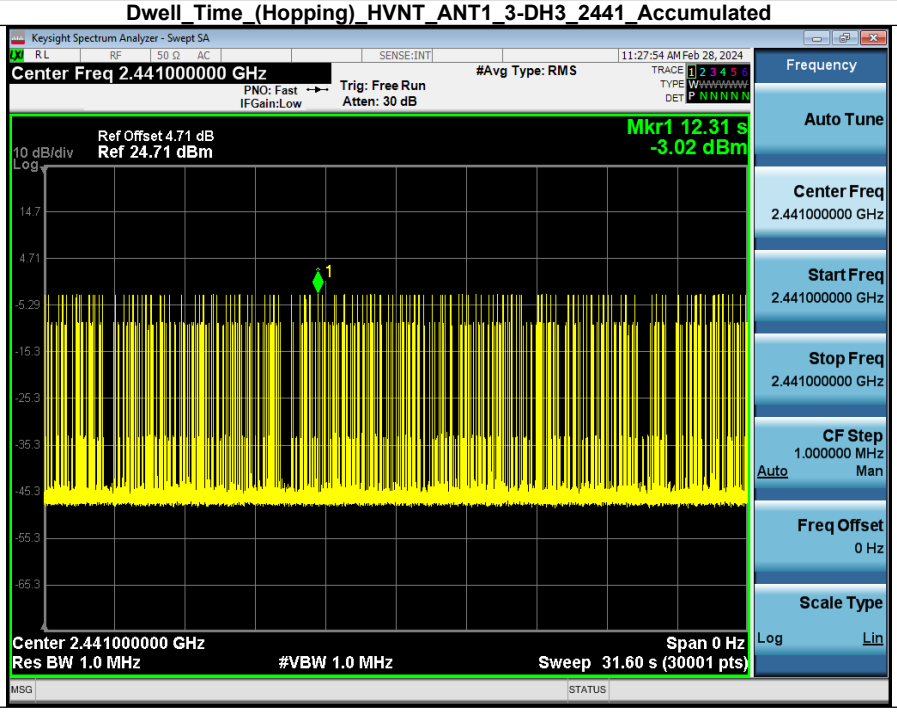
Dwell_Time_(Hopping)_HVNT_ANT1_2-DH5_2441_Accumulated



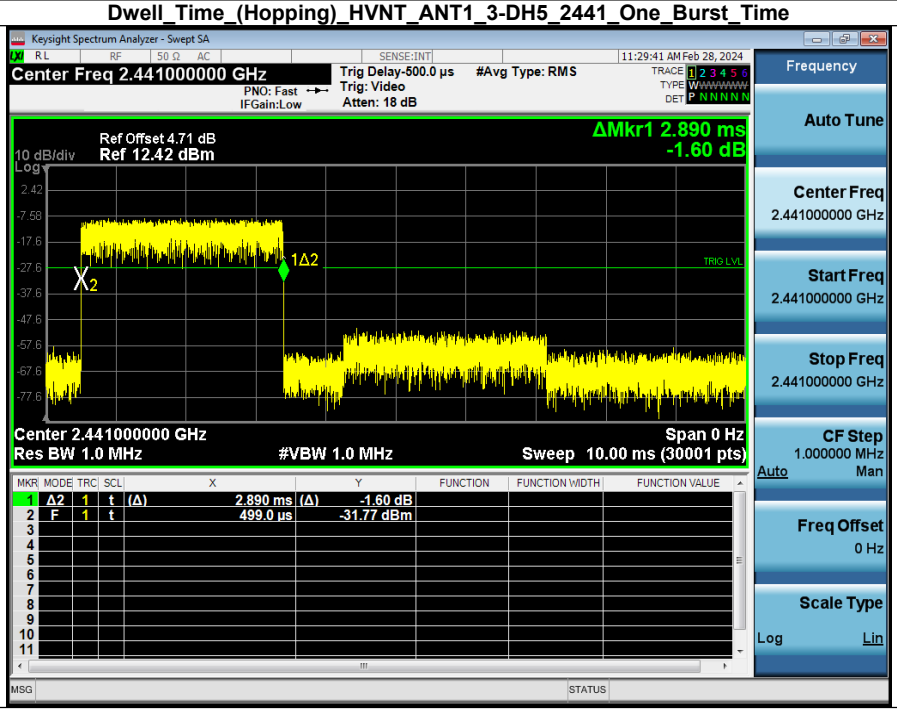
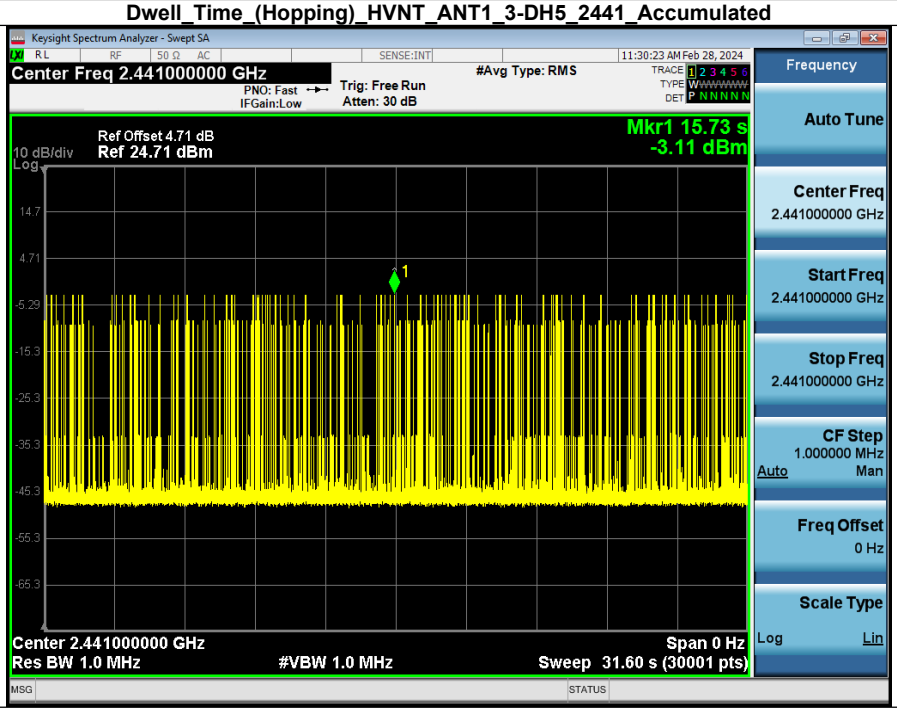
Dwell_Time_(Hopping)_HVNT_ANT1_3-DH3_2441_One_Burst_Time



Dwell_Time_(Hopping)_HVNT_ANT1_3-DH3_2441_Accumulated



Dwell_Time_(Hopping)_HVNT_ANT1_3-DH5_2441_One_Burst_Time



Dwell_Time_(Hopping)_HVNT_ANT1_3-DH5_2441_Accumulated