Table of Contents

1. -20dB Bandwidth 2
2. 99% Occupied Bandwidth 7
3. Peak Output Power 12
4. Spurious Emissions 17
5. Bandedge 26
6. Carrier Frequencies Separation (Hopping) 39
7. Number of Hopping Channel (Hopping) 44
8. Dwell Time (Hopping) 46

FCC ID:2BQJPKS2501
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	0.880	No
NVNT	ANT1	1-DH1	2441.00	0.877	No
NVNT	ANT1	1-DH1	2480.00	0.878	No
NVNT	ANT1	2-DH1	2402.00	1.287	Yes
NVNT	ANT1	2-DH1	2441.00	1.292	Yes
NVNT	ANT1	2-DH1	2480.00	1.288	Yes
NVNT	ANT1	3-DH1	2402.00	1.227	Yes
NVNT	ANT1	3-DH1	2441.00	1.232	Yes
NVNT	ANT1	3-DH1	2480.00	1.245	Yes

-20dB_Bandwidth_NVNT_ANT1_1-DH1_2402_00

-20dB_Bandwidth_NVNT_ANT1_1-DH1_2441_00

-20dB_Bandwidth_NVNT_ANT1_1-DH1_2480_00

-20dB_Bandwidth_NVNT_ANT1_2-DH1_2402_00

-20dB_Bandwidth_NVNT_ANT1_2-DH1_2441_00

-20dB_Bandwidth_NVNT_ANT1_2-DH1_2480_00

-20dB_Bandwidth_NVNT_ANT1_3-DH1_2402_00

-20dB_Bandwidth_NVNT_ANT1_3-DH1_2441_00

-20dB_Bandwidth_NVNT_ANT1_3-DH1_2480_00

2. 99% Occupied Bandwidth

Condition	Antenna	Modulation	Frequency (MHz)	99%%BW(MHz)
NVNT	ANT1	1-DH1	2402.00	0.824
NVNT	ANT1	1-DH1	2441.00	0.819
NVNT	ANT1	1-DH1	2480.00	0.824
NVNT	ANT1	2-DH1	2402.00	1.240
NVNT	ANT1	2-DH1	2441.00	1.252
NVNT	ANT1	2-DH1	2480.00	1.210
NVNT	ANT1	3-DH1	2402.00	1.208
NVNT	ANT1	3-DH1	2441.00	1.217
NVNT	ANT1	3-DH1	2480.00	1.188

99%_Occupied_Bandwidth_NVNT_ANT1_1-DH1_2402_00

99%_Occupied_Bandwidth_NVNT_ANT1_1-DH1_2441_00

99%_Occupied_Bandwidth_NVNT_ANT1_1-DH1_2480_00

99%_Occupied_Bandwidth_NVNT_ANT1_2-DH1_2402_00

99%_Occupied_Bandwidth_NVNT_ANT1_2-DH1_2441_00

99%_Occupied_Bandwidth_NVNT_ANT1_2-DH1_2480_00

99%_Occupied_Bandwidth_NVNT_ANT1_3-DH1_2402_00

99%_Occupied_Bandwidth_NVNT_ANT1_3-DH1_2441_00

99%_Occupied_Bandwidth_NVNT_ANT1_3-DH1_2480_00

Keysight Spectrum Analyzer - Occupied BW
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
12:26:44 PM Jun 25, 2025
Frequency
Ref Offset 2.65 dB
10 dB/div
Ref 18.30 dBm
Center Freq
2.480000000 GHz
Center 2.48 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
CF Step
300.000 kHz
Auto
Man
Occupied Bandwidth
1.1877 MHz
Total Power 8.79 dBm
Transmit Freq Error 3.062 kHz
% of OBW Power 99.00 %
x dB Bandwidth 1.407 MHz
x dB -26.00 dB
Freq Offset
0 Hz
MSG
STATUS

3. Peak Output Power

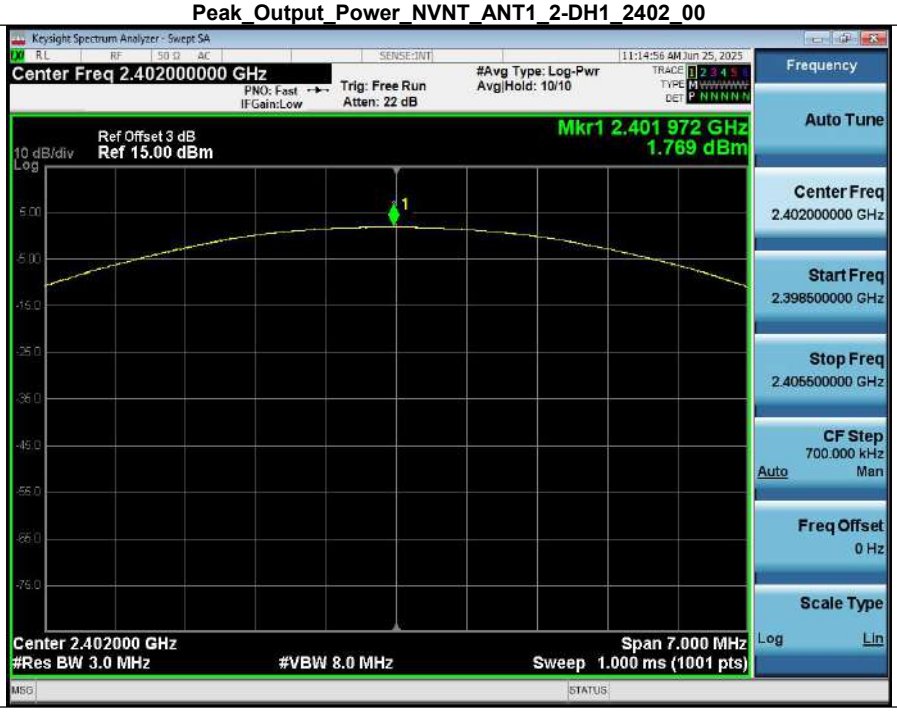
Condition	Antenna	Modulation	Frequency (MHz)	Max. Conducted Power(dBm)	Max. Conducted Power(mW)	Limit(mW)	Result
NVNT	ANT1	1-DH1	2402.00	1.630	1.46	1000	Pass
NVNT	ANT1	1-DH1	2441.00	0.814	1.21	1000	Pass
NVNT	ANT1	1-DH1	2480.00	1.221	1.32	1000	Pass
NVNT	ANT1	2-DH1	2402.00	1.769	1.50	125	Pass
NVNT	ANT1	2-DH1	2441.00	1.127	1.30	125	Pass
NVNT	ANT1	2-DH1	2480.00	1.827	1.52	125	Pass
NVNT	ANT1	3-DH1	2402.00	1.871	1.54	125	Pass
NVNT	ANT1	3-DH1	2441.00	1.361	1.37	125	Pass
NVNT	ANT1	3-DH1	2480.00	2.093	1.62	125	Pass

Peak_Output_Power_NVNT_ANT1_1-DH1_2402_00

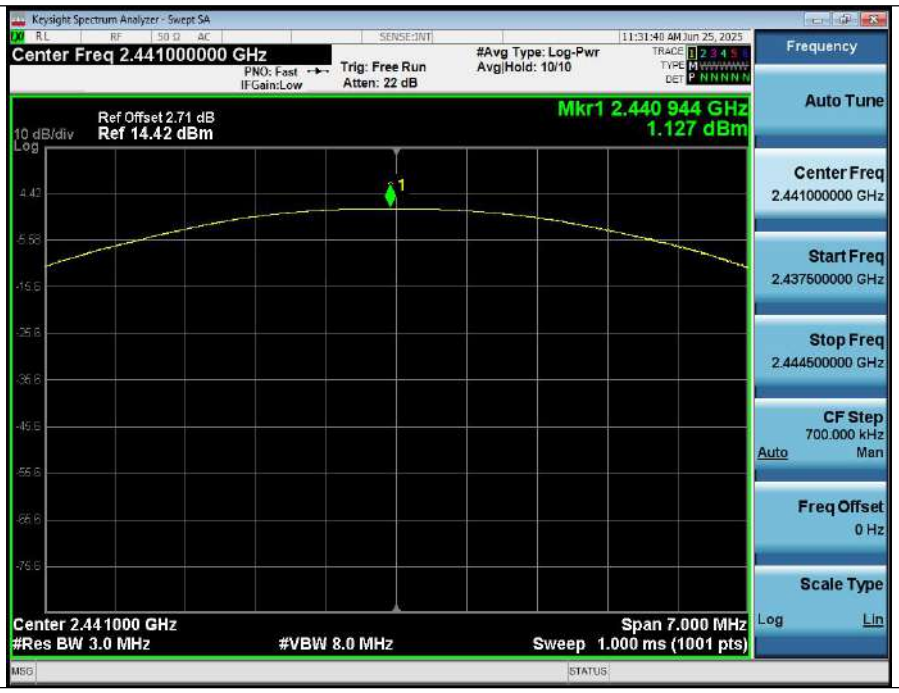
Peak_Output_Power_NVNT_ANT1_1-DH1_2441_00

Peak_Output_Power_NVNT_ANT1_1-DH1_2480_00

Peak_Output_Power_NVNT_ANT1_2-DH1_2402_00



Peak_Output_Power_NVNT_ANT1_2-DH1_2441_00



Peak_Output_Power_NVNT_ANT1_2-DH1_2480_00

Peak_Output_Power_NVNT_ANT1_3-DH1_2402_00

Peak_Output_Power_NVNT_ANT1_3-DH1_2441_00

Peak_Output_Power_NVNT_ANT1_3-DH1_2480_00

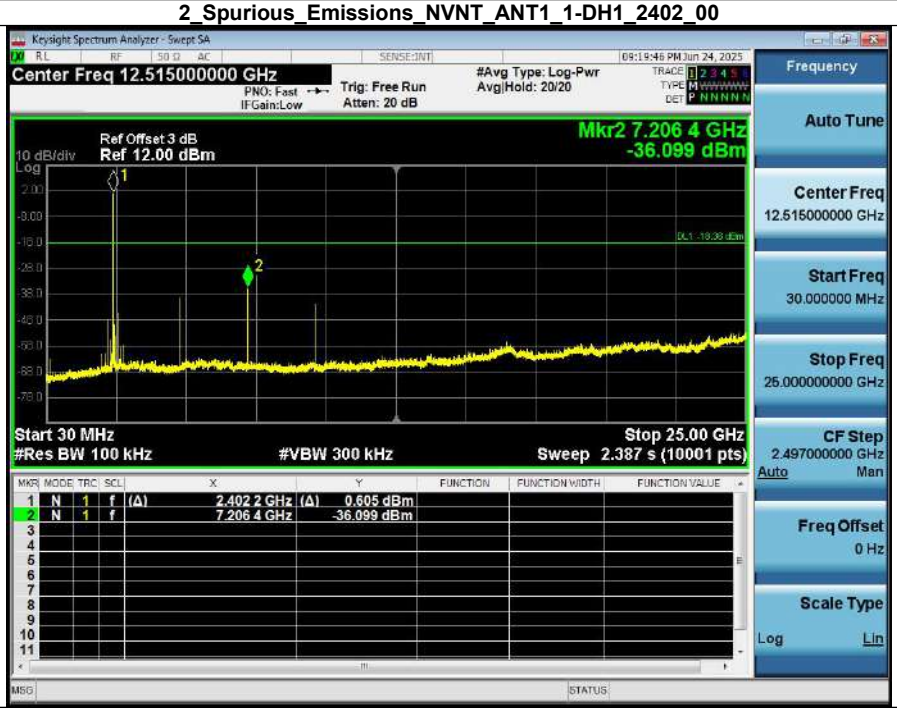
Keysight Spectrum Analyzer - Swept SA
12:27:04 PM Jun 25, 2025
Center Freq 2.480000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 22 dB
#Avg Type: Log-Pwr
Avg|Hold: 10/10
Frequency
Auto Tune
Ref Offset 2.65 dB
10 dB/div
Ref 14.30 dBm
Log
Mkr1 2.479 993 GHz
2.093 dBm
Center Freq
2.480000000 GHz
Start Freq
2.476500000 GHz
Stop Freq
2.483500000 GHz
CF Step
700.000 kHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin
Center 2.480000 GHz
#Res BW 3.0 MHz
#VBW 8.0 MHz
Span 7.000 MHz
Sweep 1.000 ms (1001 pts)
MSG
STATUS

4. Spurious Emissions

Condition	Antenna	Modulation	TX Mode	Ref_level(dBm)	Spurious MAX.Value(dBm)	Limit	Result
NVNT	ANT1	1-DH1	2402.00	1.637	-36.099	-18.363	Pass
NVNT	ANT1	1-DH1	2441.00	0.780	-36.694	-19.220	Pass
NVNT	ANT1	1-DH1	2480.00	1.215	-39.161	-18.785	Pass
NVNT	ANT1	2-DH1	2402.00	1.487	-39.634	-18.513	Pass
NVNT	ANT1	2-DH1	2441.00	0.857	-35.819	-19.143	Pass
NVNT	ANT1	2-DH1	2480.00	1.421	-40.505	-18.579	Pass
NVNT	ANT1	3-DH1	2402.00	1.400	-36.567	-18.600	Pass
NVNT	ANT1	3-DH1	2441.00	0.901	-36.226	-19.099	Pass
NVNT	ANT1	3-DH1	2480.00	1.495	-43.126	-18.505	Pass

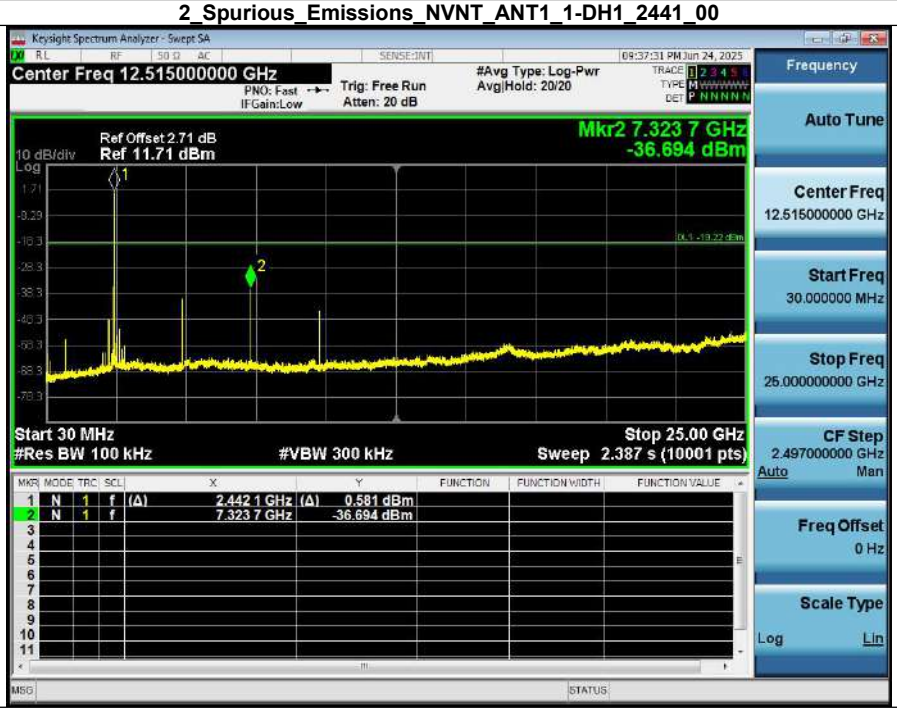
1_Reference_Level_NVNT_ANT1_1-DH1_2402_00

2_Spurious_Emissions_NVNT_ANT1_1-DH1_2402_00

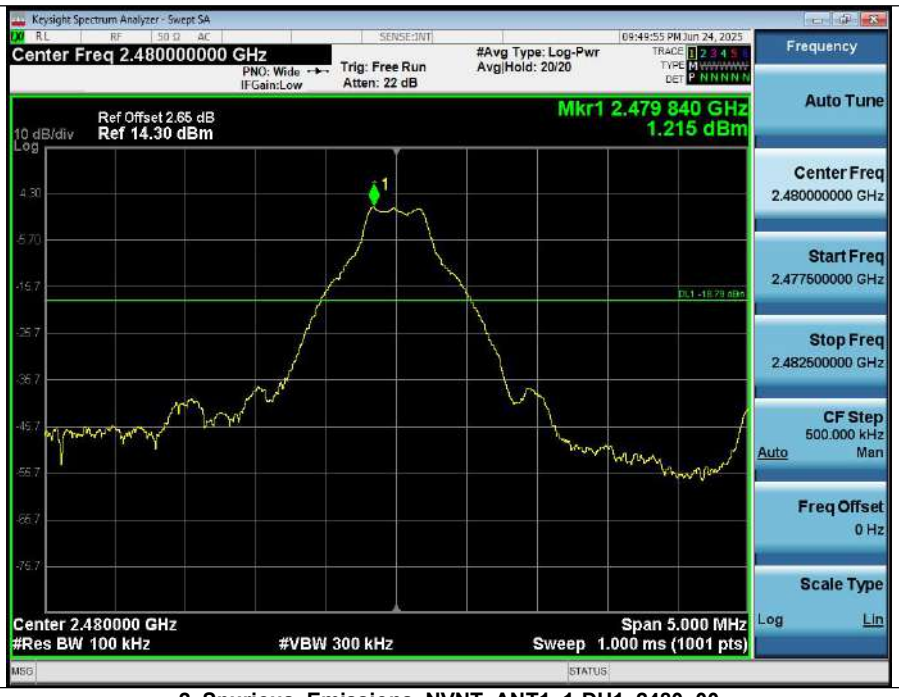


1_Reference_Level_NVNT_ANT1_1-DH1_2441_00

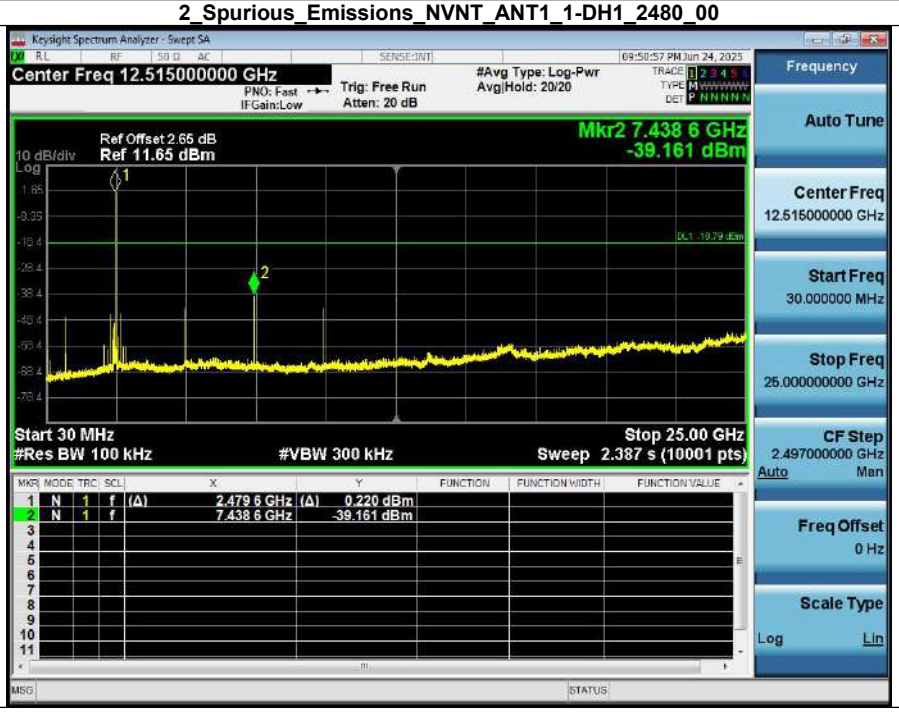
2_Spurious_Emissions_NVNT_ANT1_1-DH1_2441_00



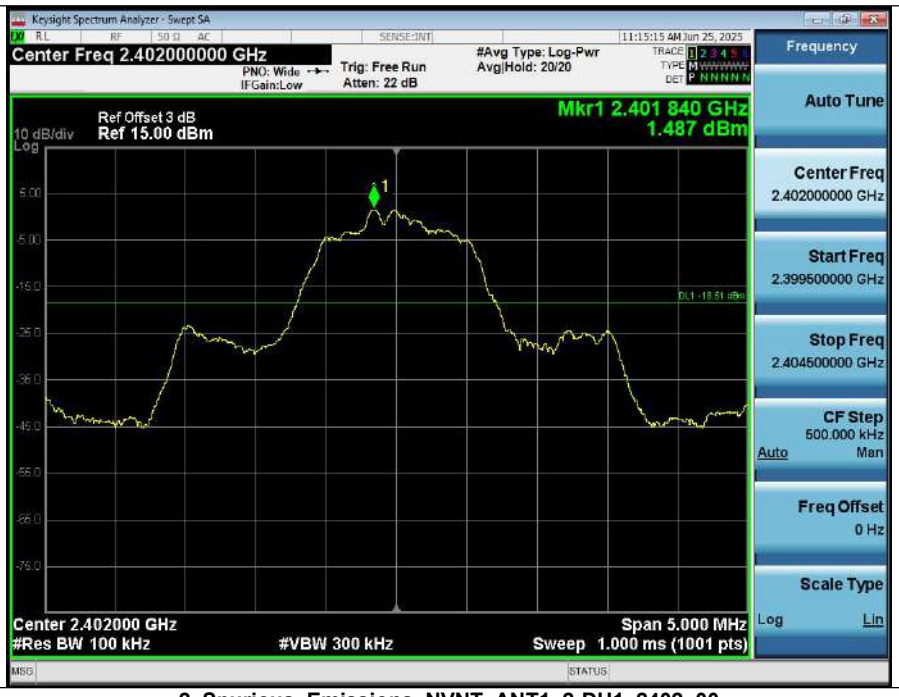
1_Reference_Level_NVNT_ANT1_1-DH1_2480_00



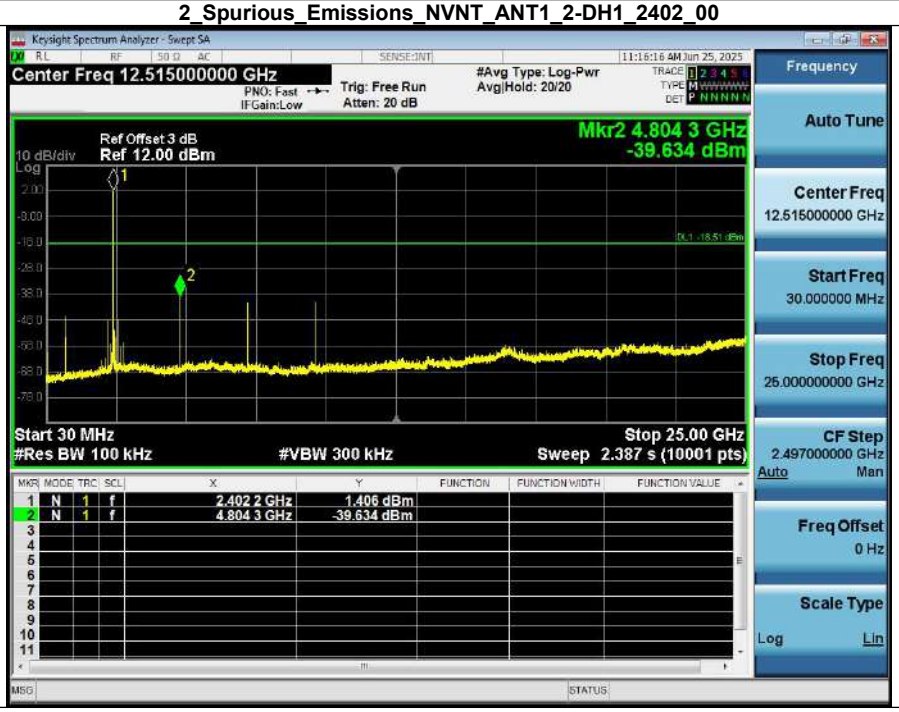
2_Spurious_Emissions_NVNT_ANT1_1-DH1_2480_00



1_Reference_Level_NVNT_ANT1_2-DH1_2402_00

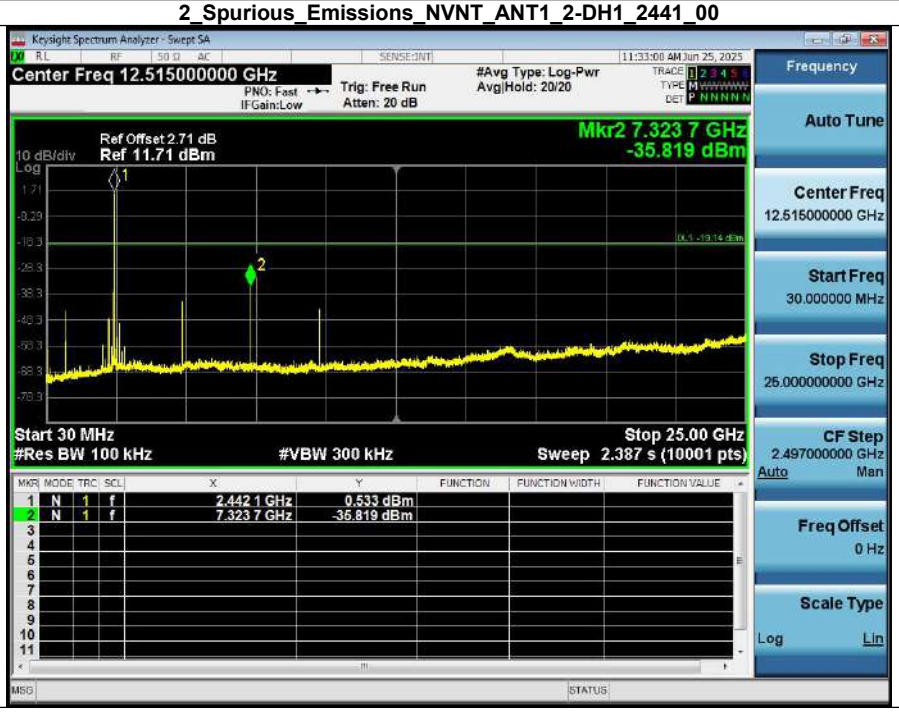


2_Spurious_Emissions_NVNT_ANT1_2-DH1_2402_00



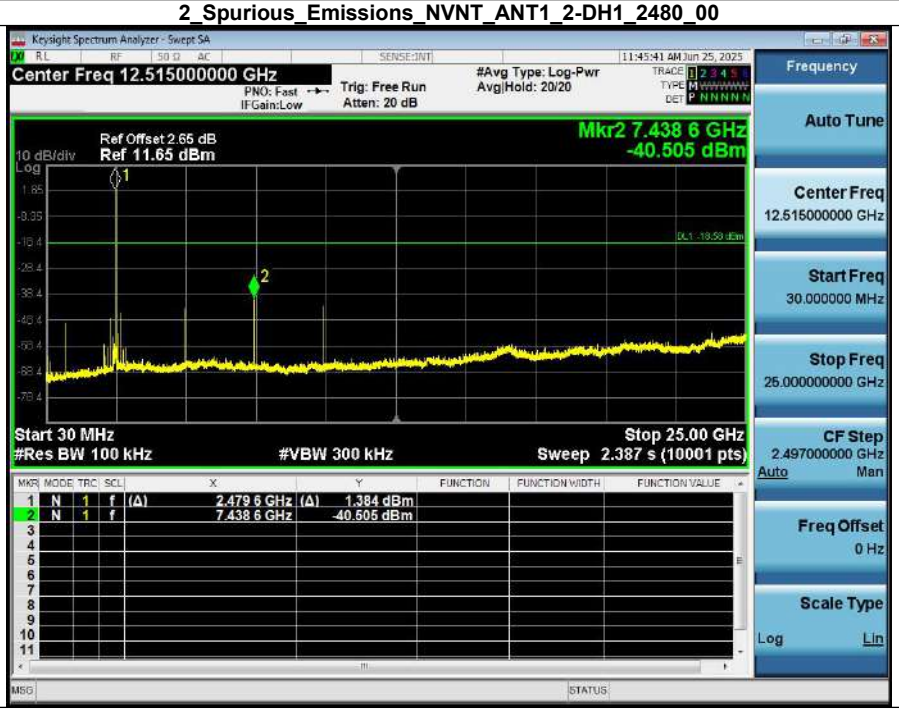
1_Reference_Level_NVNT_ANT1_2-DH1_2441_00

2_Spurious_Emissions_NVNT_ANT1_2-DH1_2441_00

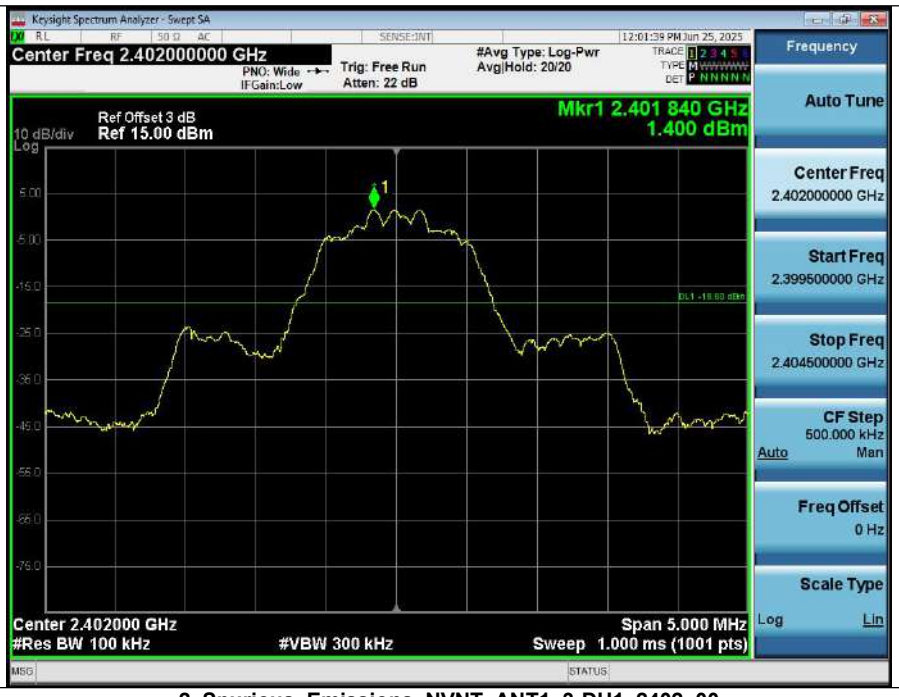


1_Reference_Level_NVNT_ANT1_2-DH1_2480_00

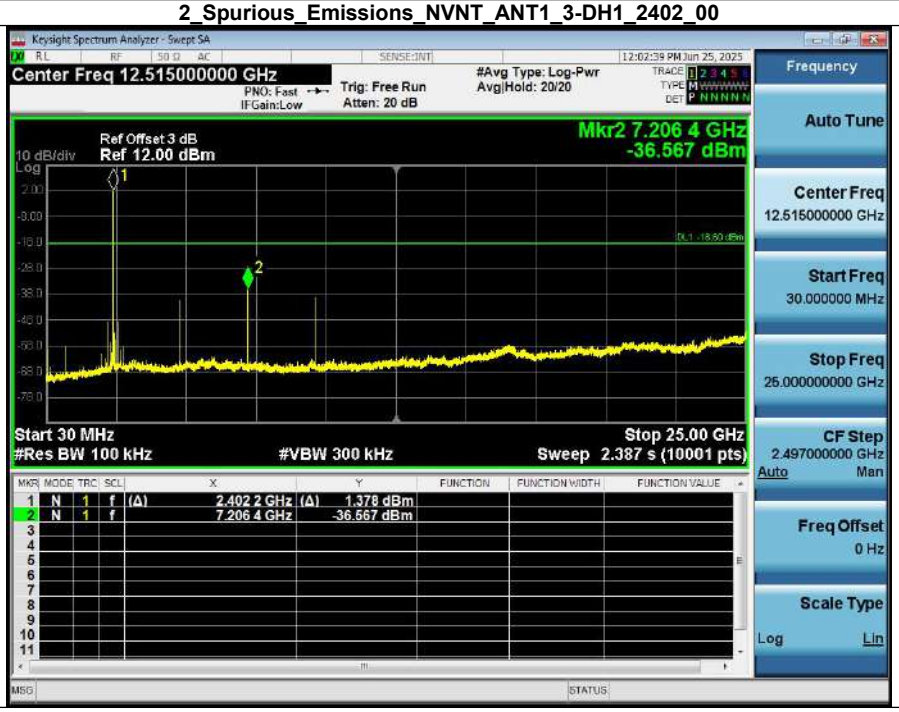
2_Spurious_Emissions_NVNT_ANT1_2-DH1_2480_00



1_Reference_Level_NVNT_ANT1_3-DH1_2402_00

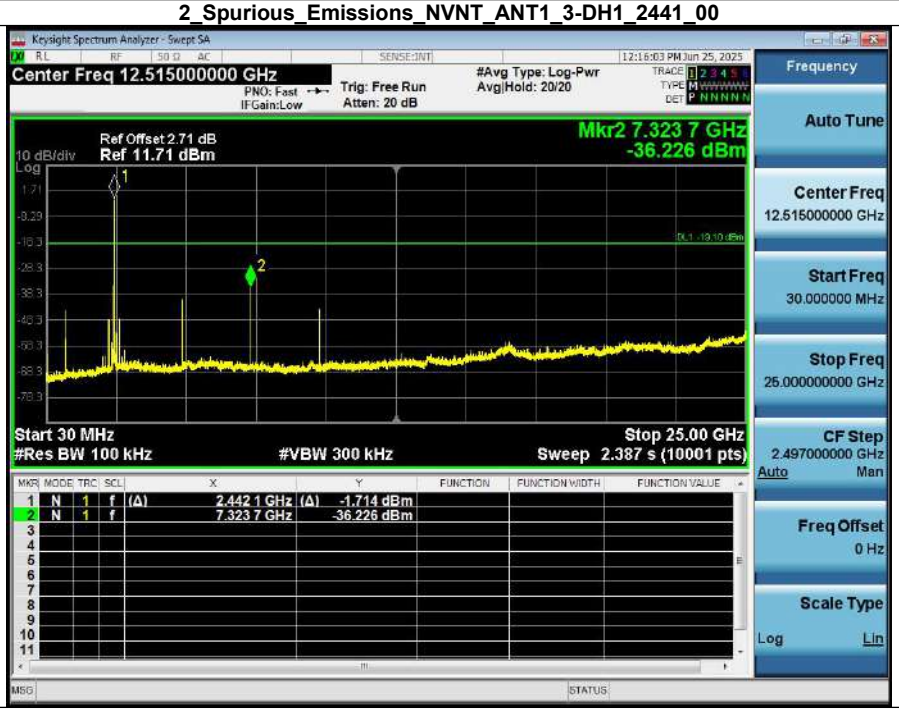


2_Spurious_Emissions_NVNT_ANT1_3-DH1_2402_00



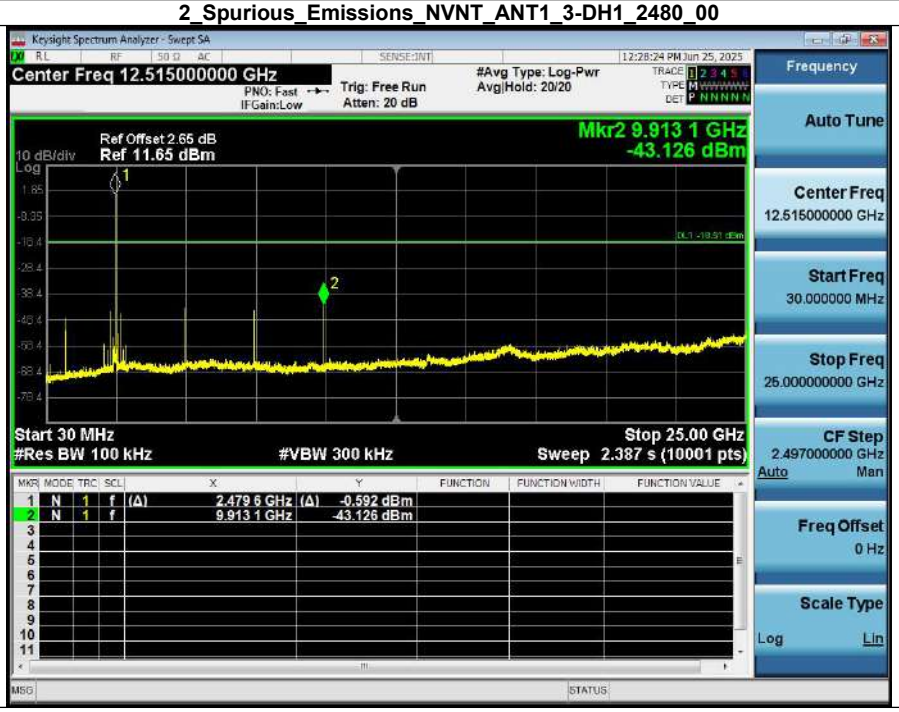
1_Reference_Level_NVNT_ANT1_3-DH1_2441_00

2_Spurious_Emissions_NVNT_ANT1_3-DH1_2441_00



1_Reference_Level_NVNT_ANT1_3-DH1_2480_00

2_Spurious_Emissions_NVNT_ANT1_3-DH1_2480_00

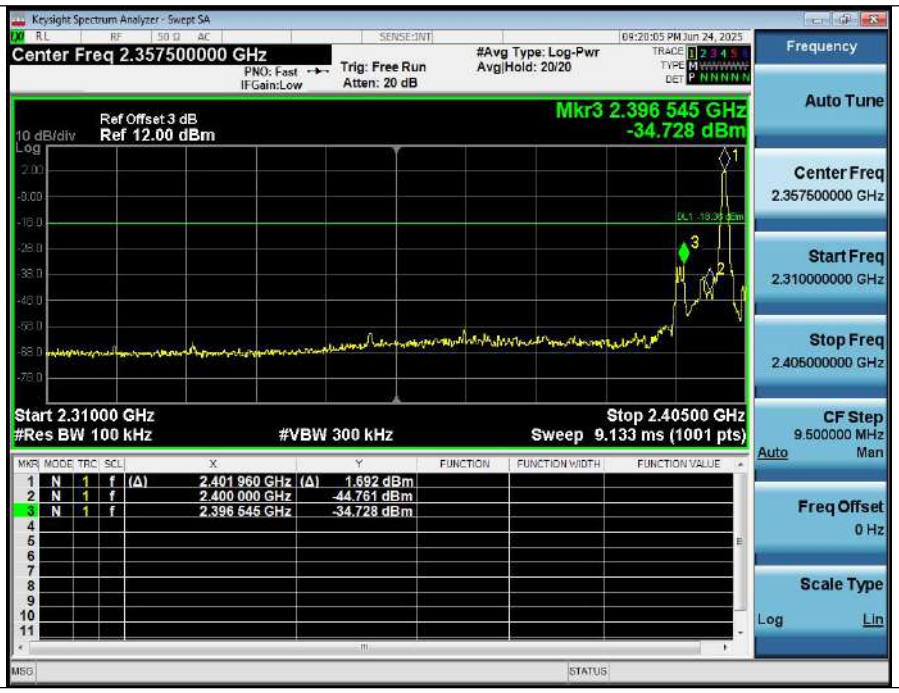


5. Bandedge

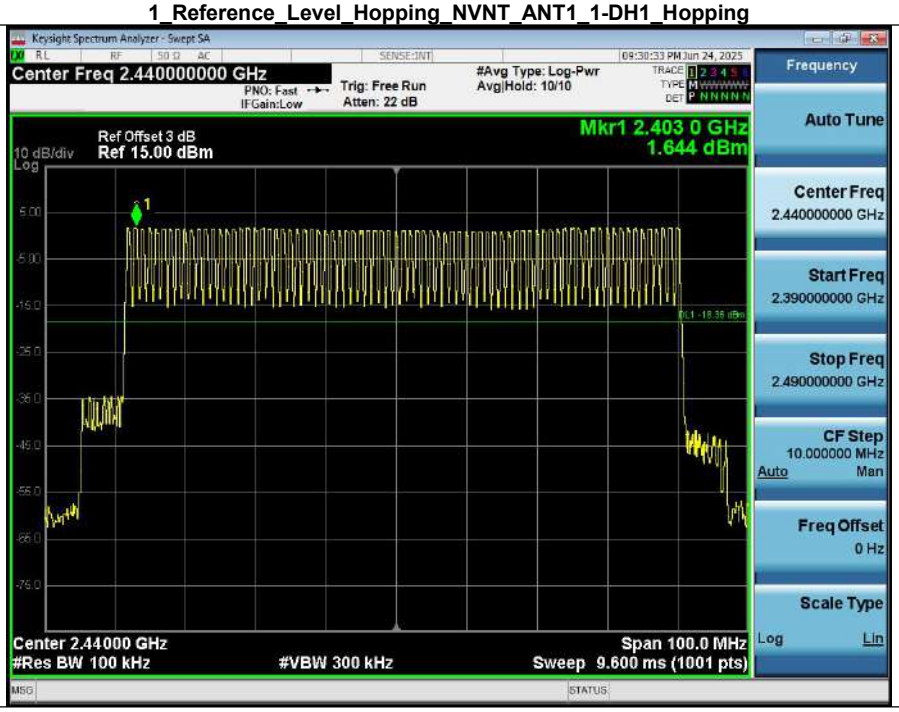
Condition	Antenna	Modulation	TX Mode	Ref_level(dBm)	Bandedge MAX.Value	Limit	Result
NVNT	ANT1	1-DH1	2402.00	1.637	-34.728	-18.363	Pass
NVNT	ANT1	1-DH1	Hopping_LCH	1.644	-34.567	-18.356	Pass
NVNT	ANT1	1-DH1	2480.00	1.215	-43.246	-18.785	Pass
NVNT	ANT1	1-DH1	Hopping_HCH	1.316	-43.214	-18.684	Pass
NVNT	ANT1	2-DH1	2402.00	1.487	-34.619	-18.513	Pass
NVNT	ANT1	2-DH1	Hopping_LCH	1.566	-34.655	-18.434	Pass
NVNT	ANT1	2-DH1	2480.00	1.421	-42.931	-18.579	Pass
NVNT	ANT1	2-DH1	Hopping_HCH	1.496	-42.930	-18.504	Pass
NVNT	ANT1	3-DH1	2402.00	1.400	-34.568	-18.600	Pass
NVNT	ANT1	3-DH1	Hopping_LCH	1.886	-34.487	-18.114	Pass
NVNT	ANT1	3-DH1	2480.00	1.495	-43.179	-18.505	Pass
NVNT	ANT1	3-DH1	Hopping_HCH	1.551	-43.015	-18.449	Pass

1_Reference_Level_NVNT_ANT1_1-DH1_2402_00

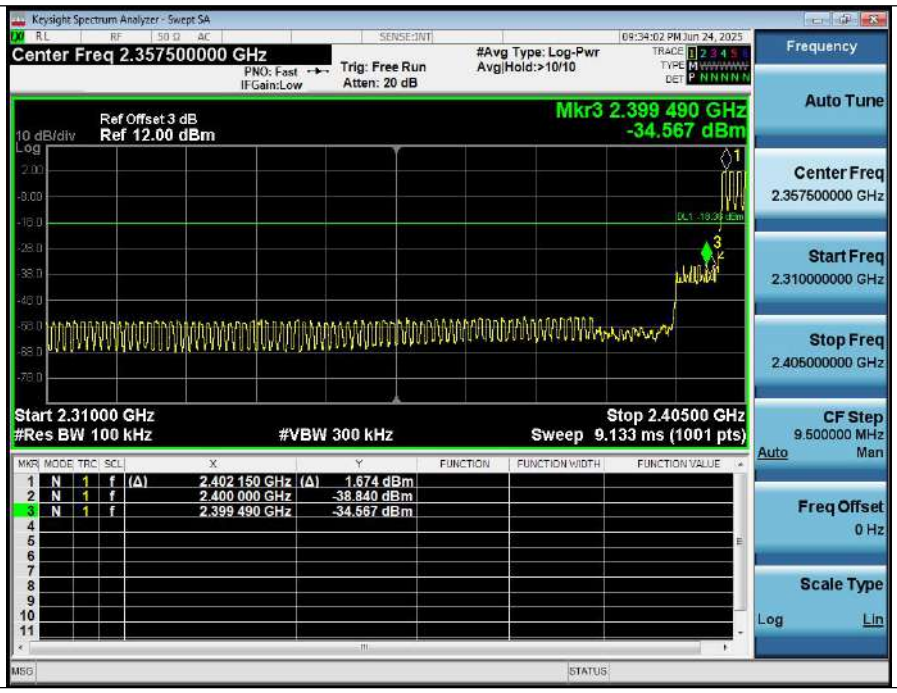
2_Bandedge_NVNT_ANT1_1-DH1_2402_00



1_Reference_Level_Hopping_NVNT_ANT1_1-DH1_Hopping

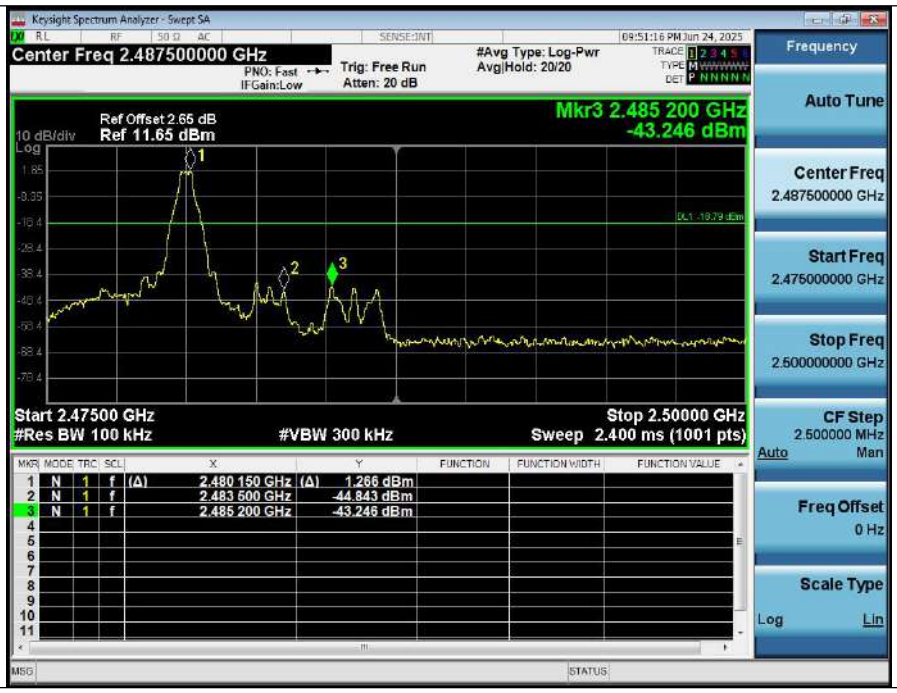


2_Band_Edge_(Hopping)_NVNT_ANT1_1-DH1_Hopping

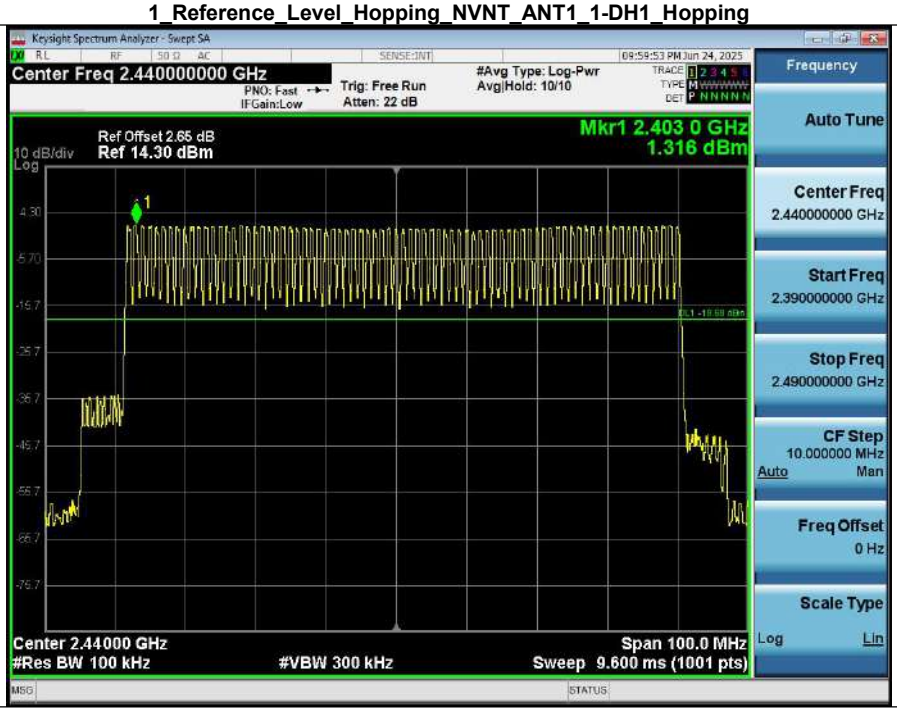


1_Reference_Level_NVNT_ANT1_1-DH1_2480_00

2_Bandedge_NVNT_ANT1_1-DH1_2480_00



1_Reference_Level_Hopping_NVNT_ANT1_1-DH1_Hopping



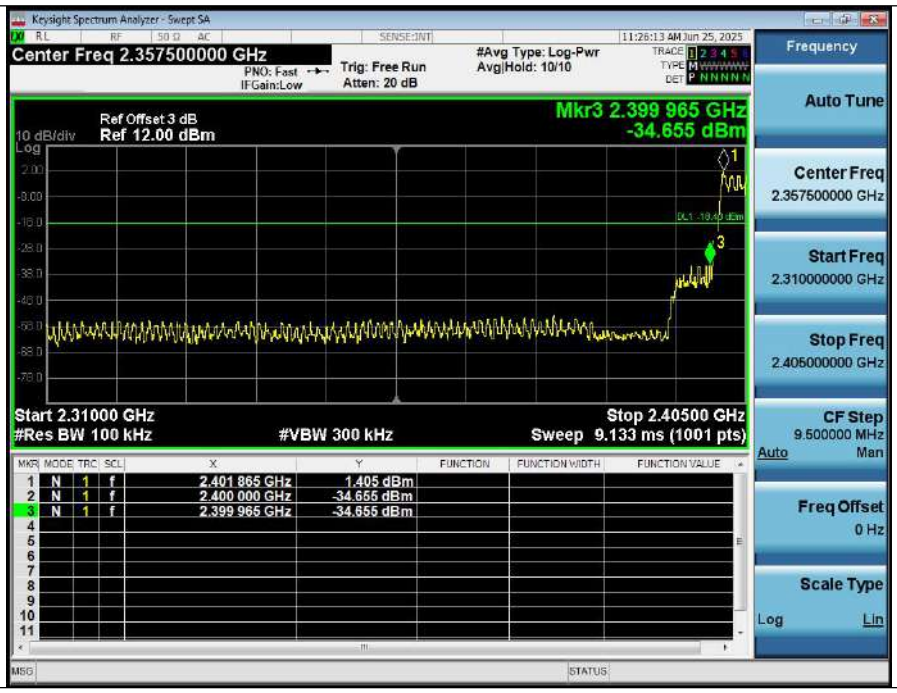
2_Band_Edge_(Hopping)_NVNT_ANT1_1-DH1_Hopping

1_Reference_Level_NVNT_ANT1_2-DH1_2402_00

2_Bandedge_NVNT_ANT1_2-DH1_2402_00

1_Reference_Level_Hopping_NVNT_ANT1_2-DH1_Hopping

2_Band_Edge_(Hopping)_NVNT_ANT1_2-DH1_Hopping



1_Reference_Level_NVNT_ANT1_2-DH1_2480_00

2_Bandedge_NVNT_ANT1_2-DH1_2480_00

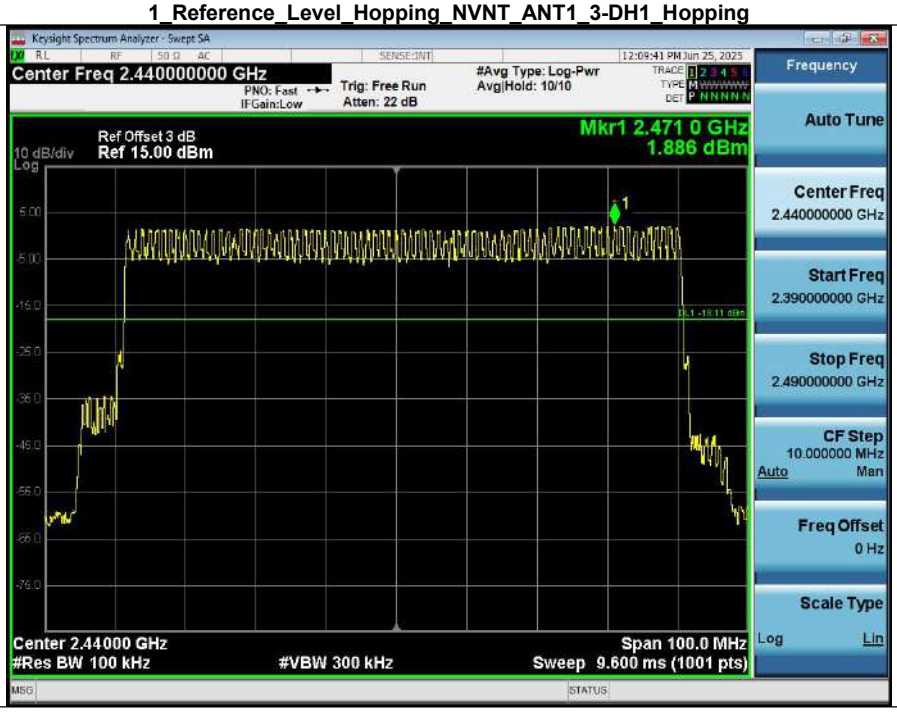
1_Reference_Level_Hopping_NVNT_ANT1_2-DH1_Hopping

2_Band_Edge_(Hopping)_NVNT_ANT1_2-DH1_Hopping

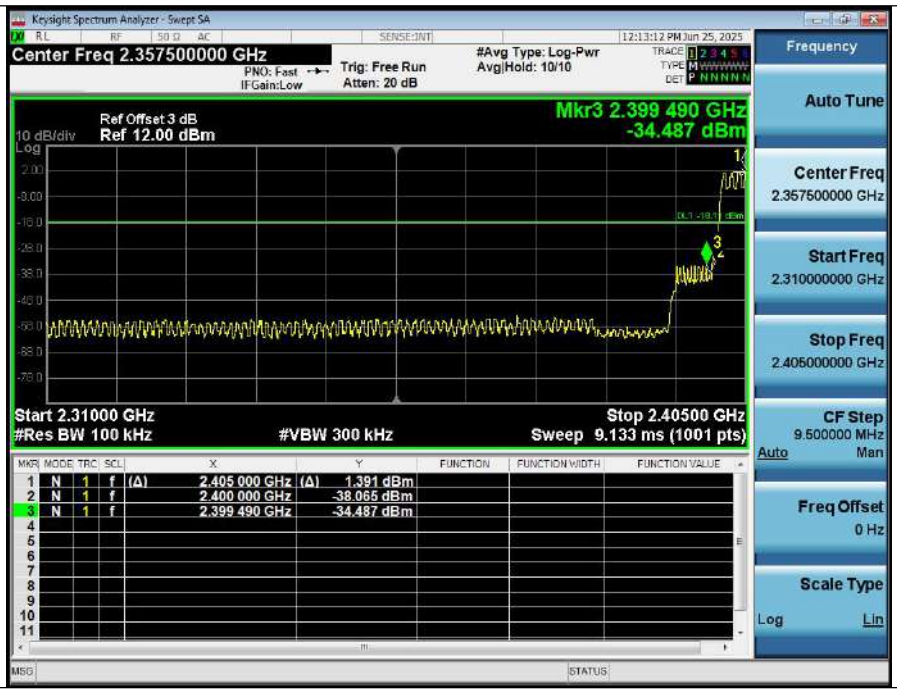
1_Reference_Level_NVNT_ANT1_3-DH1_2402_00

2_Bandedge_NVNT_ANT1_3-DH1_2402_00

1_Reference_Level_Hopping_NVNT_ANT1_3-DH1_Hopping



2_Band_Edge_(Hopping)_NVNT_ANT1_3-DH1_Hopping



1_Reference_Level_NVNT_ANT1_3-DH1_2480_00

2_Bandedge_NVNT_ANT1_3-DH1_2480_00

1_Reference_Level_Hopping_NVNT_ANT1_3-DH1_Hopping

2_Band_Edge_(Hopping)_NVNT_ANT1_3-DH1_Hopping

Keysight Spectrum Analyzer - Swept SA
Center Freq 2.487500000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
#Avg Type: Log-Pwr
Avg|Hold: 10/10
12:39:45 PM Jun 25, 2025
Ref Offset 2.65 dB
10 dB/div
Ref 11.65 dBm
Mkr3 2.485 000 GHz
-43.015 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) 2.479 850 GHz (Δ) 1.539 dBm
2 N 1 f 2.483 500 GHz -45.685 dBm
3 N 1 f 2.485 000 GHz -43.015 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	2401.831	2402.827	0.996	0.880	Pass
NVNT	ANT1	1-DH1	2441.00	2440.834	2441.842	1.008	0.877	Pass
NVNT	ANT1	1-DH1	2480.00	2478.831	2479.830	0.999	0.878	Pass
NVNT	ANT1	2-DH1	2402.00	2401.831	2402.833	1.002	0.858	Pass
NVNT	ANT1	2-DH1	2441.00	2440.828	2441.833	1.005	0.861	Pass
NVNT	ANT1	2-DH1	2480.00	2478.834	2479.839	1.005	0.859	Pass
NVNT	ANT1	3-DH1	2402.00	2401.837	2402.833	0.996	0.818	Pass
NVNT	ANT1	3-DH1	2441.00	2440.837	2441.830	0.993	0.821	Pass
NVNT	ANT1	3-DH1	2480.00	2478.840	2479.836	0.996	0.830	Pass

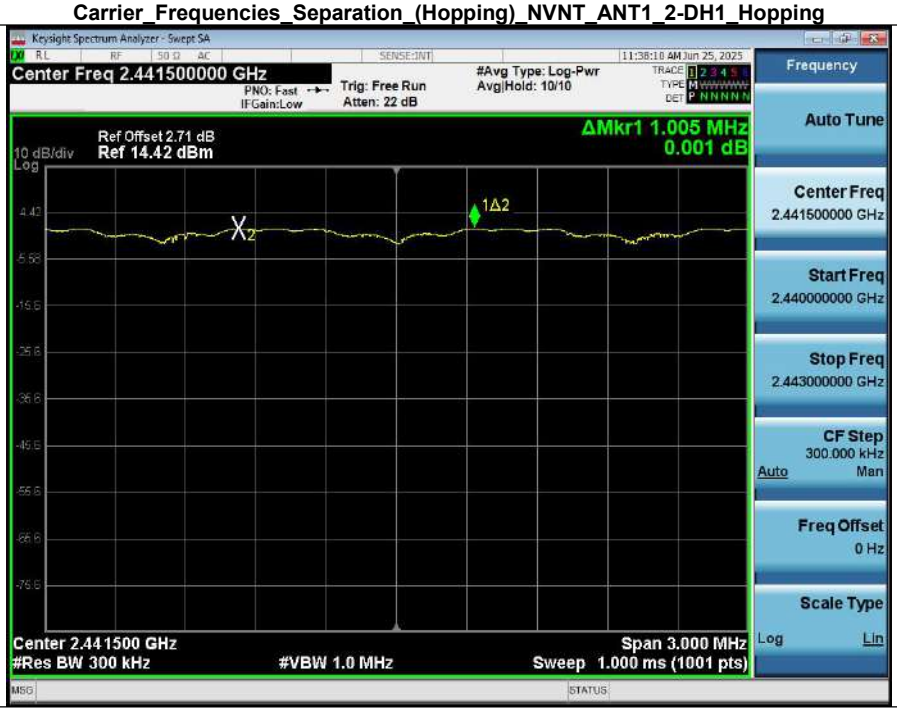
Carrier_Frequencies_Separation_(Hopping)_NVNT_ANT1_1-DH1_Hopping

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)_NVNT_ANT1_2-DH1_Hopping



Carrier_Frequencies_Separation_(Hopping)_NVNT_ANT1_2-DH1_Hopping

Carrier_Frequencies_Separation_(Hopping)_NVNT_ANT1_3-DH1_Hopping

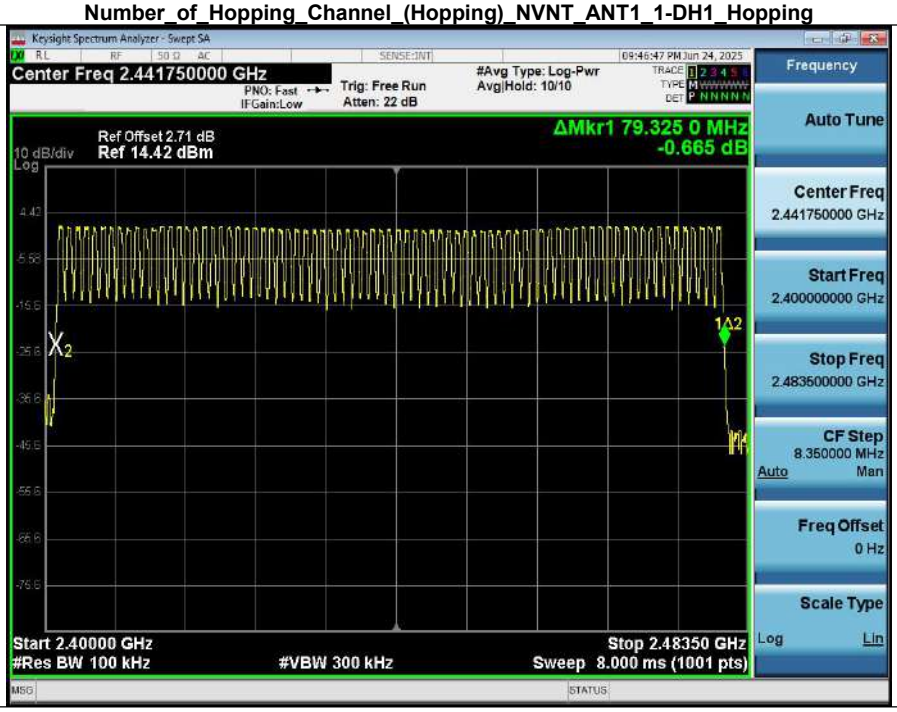
Carrier_Frequencies_Separation_(Hopping)_NVNT_ANT1_3-DH1_Hopping

Carrier_Frequencies_Separation_(Hopping)_NVNT_ANT1_3-DH1_Hopping

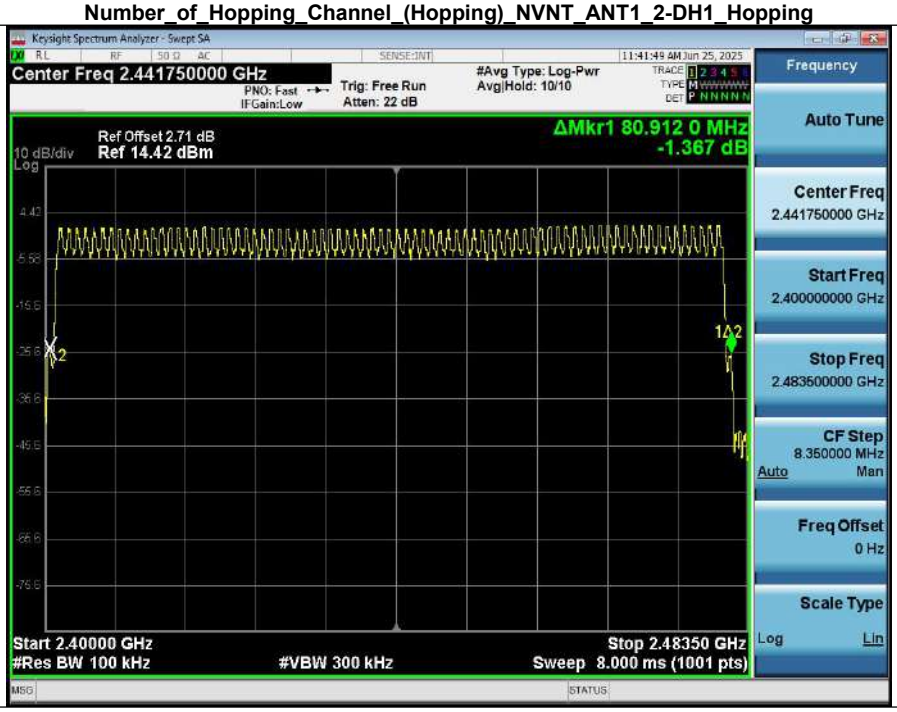
7. Number of Hopping Channel (Hopping)

Condition	Antenna	Modulation	Hopping Num	Limit	Result
NVNT	ANT1	1-DH1	79	15	Pass
NVNT	ANT1	2-DH1	80	15	Pass
NVNT	ANT1	3-DH1	80	15	Pass

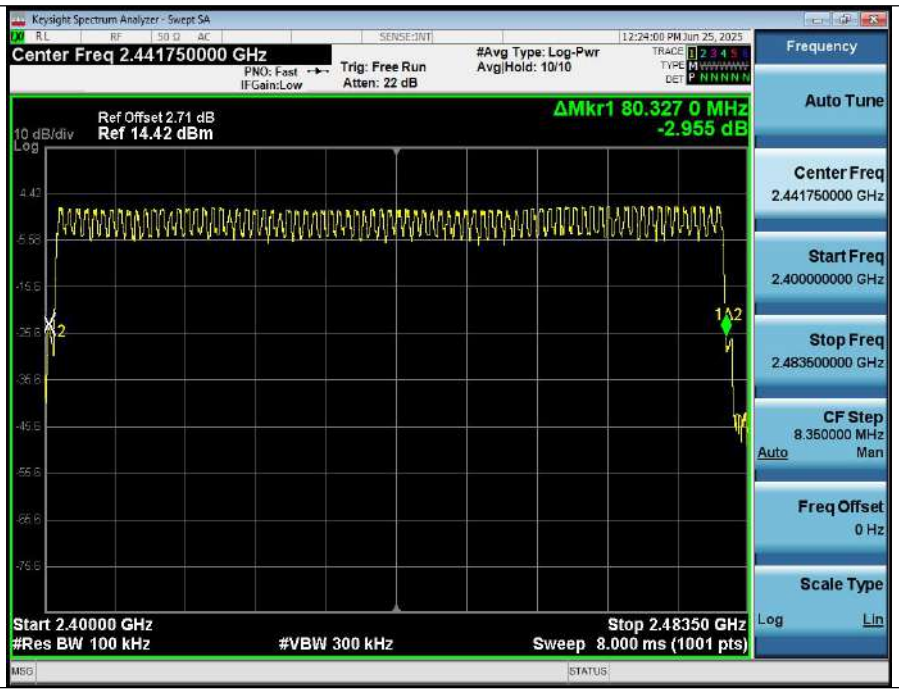
Number_of_Hopping_Channel_(Hopping)_NVNT_ANT1_1-DH1_Hopping



Number_of_Hopping_Channel_(Hopping)_NVNT_ANT1_2-DH1_Hopping



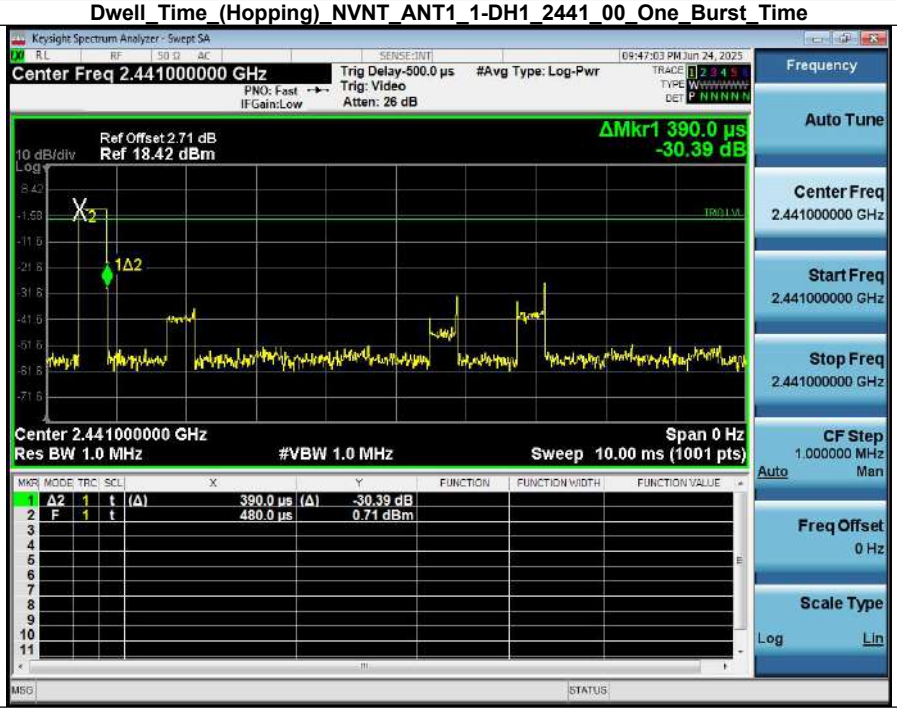
Number_of_Hopping_Channel_(Hopping)_NVNT_ANT1_3-DH1_Hopping


Keysight Spectrum Analyzer - Swept SA
Center Freq 2.441750000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 22 dB
#Avg Type: Log-Pwr
Avg|Hold: 10/10
12:24:00 PM Jun 25, 2025
Ref Offset 2.71 dB
10 dB/div
Ref 14.42 dBm
Log
ΔMkr1 80.327 0 MHz
-2.955 dB
Start 2.40000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.48350 GHz
Sweep 8.000 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.441750000 GHz
Start Freq
2.400000000 GHz
Stop Freq
2.483500000 GHz
CF Step
8.350000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

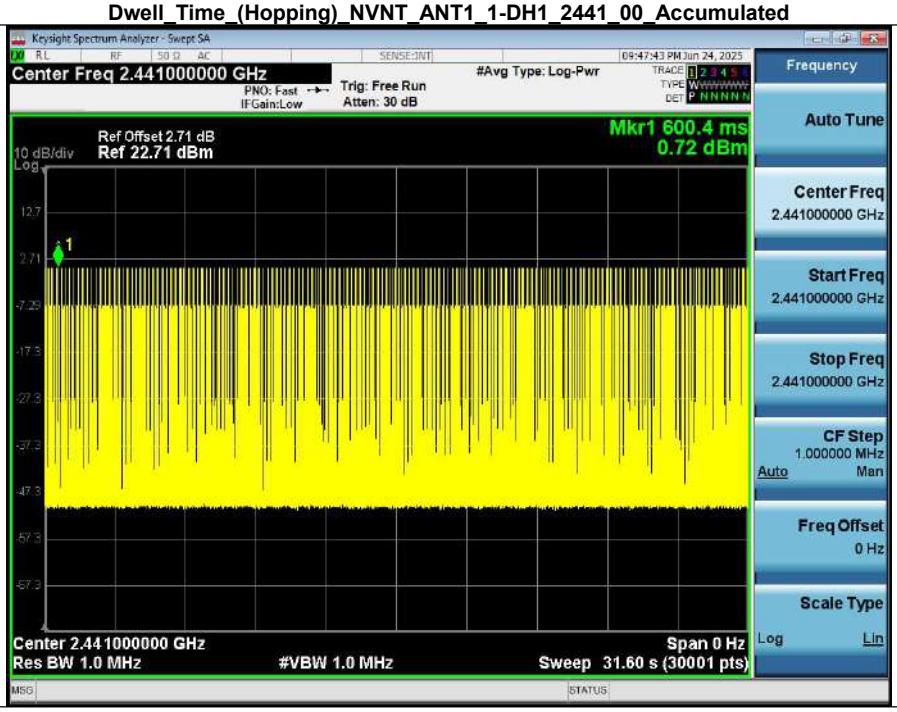
8. Dwell Time (Hopping)

Condition	Antenna	Packet Type	Pulse Time(ms)	Hops	Dwell Time(ms)	Limit(s)	Result
NVNT	ANT1	1-DH1	0.390	319.00	124.410	0.40	Pass
NVNT	ANT1	2-DH1	0.410	320.00	131.200	0.40	Pass
NVNT	ANT1	3-DH1	0.400	320.00	128.000	0.40	Pass
NVNT	ANT1	1-DH3	1.650	164.00	270.600	0.40	Pass
NVNT	ANT1	1-DH5	2.900	113.00	327.700	0.40	Pass
NVNT	ANT1	2-DH3	1.660	158.00	262.280	0.40	Pass
NVNT	ANT1	2-DH5	2.900	105.00	304.500	0.40	Pass
NVNT	ANT1	3-DH3	1.650	165.00	272.250	0.40	Pass
NVNT	ANT1	3-DH5	2.910	100.00	291.000	0.40	Pass

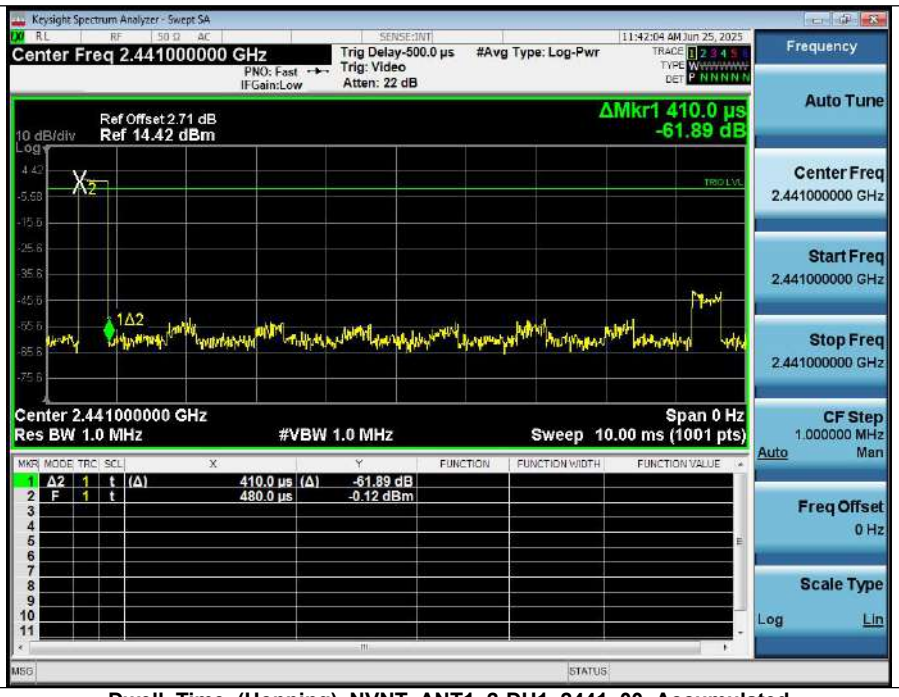
Dwell_Time_(Hopping)_NVNT_ANT1_1-DH1_2441_00_One_Burst_Time



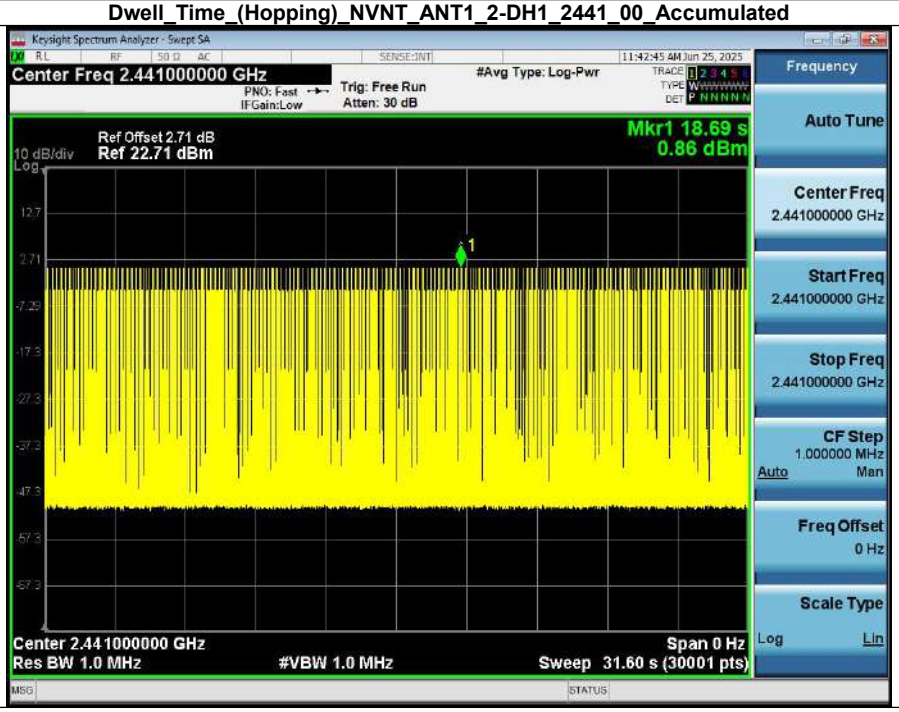
Dwell_Time_(Hopping)_NVNT_ANT1_1-DH1_2441_00_Accumulated



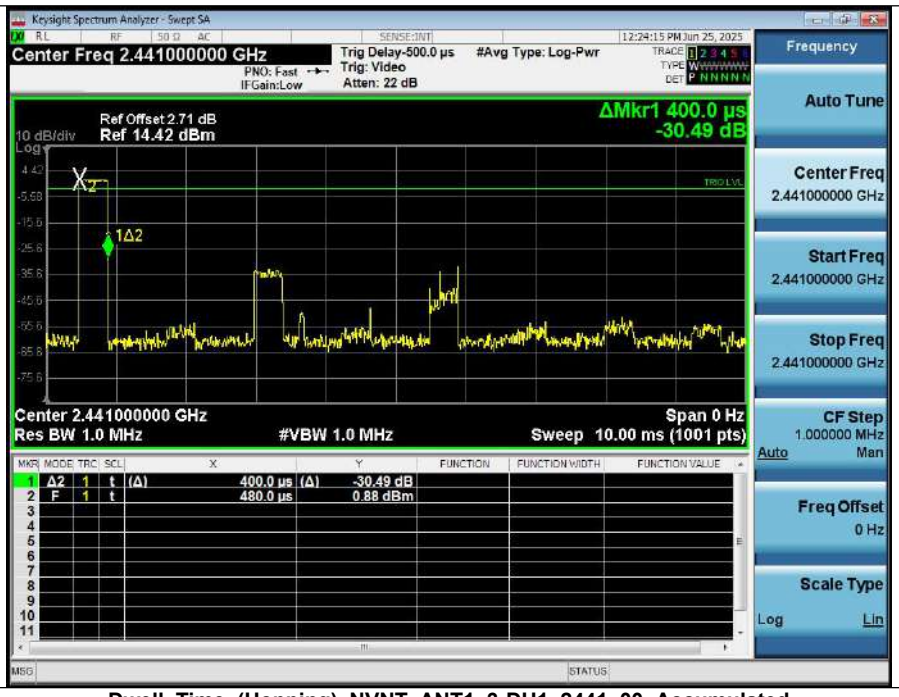
Dwell_Time_(Hopping)_NVNT_ANT1_2-DH1_2441_00_One_Burst_Time



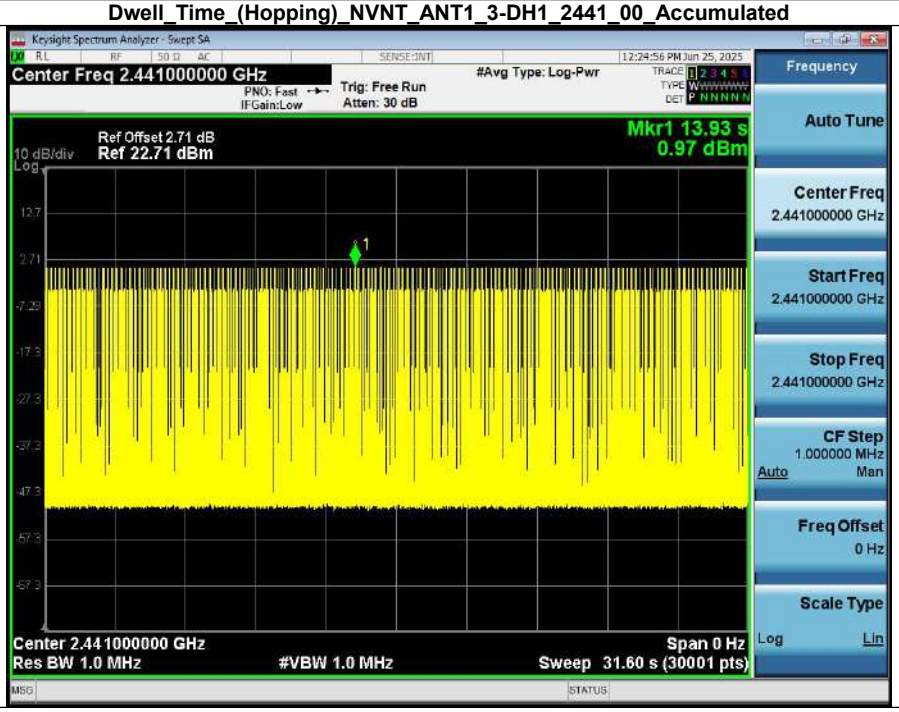
Dwell_Time_(Hopping)_NVNT_ANT1_2-DH1_2441_00_Accumulated



Dwell_Time_(Hopping)_NVNT_ANT1_3-DH1_2441_00_One_Burst_Time

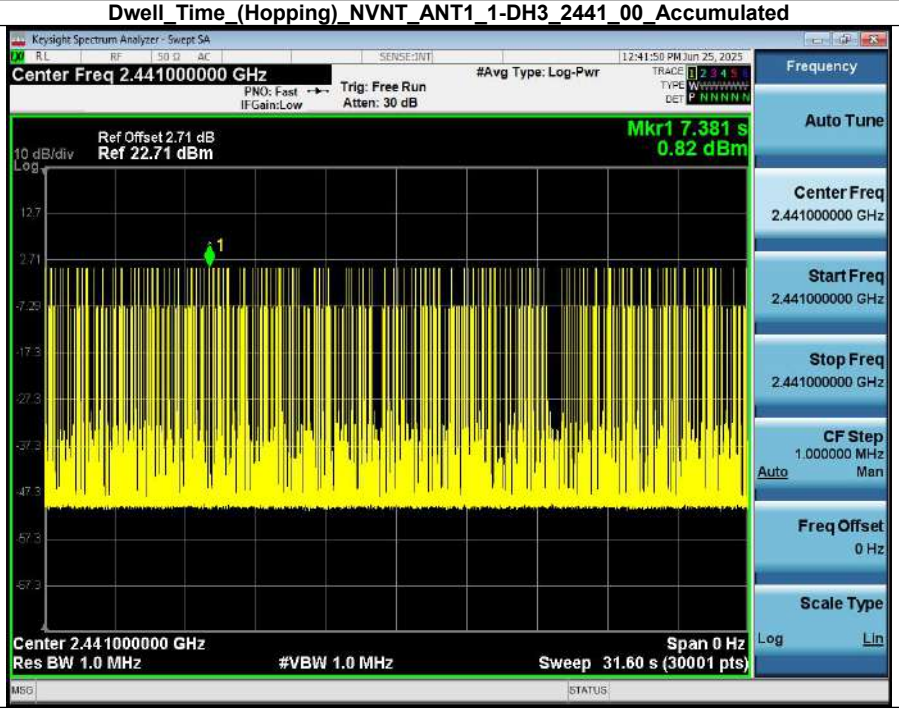


Dwell_Time_(Hopping)_NVNT_ANT1_3-DH1_2441_00_Accumulated



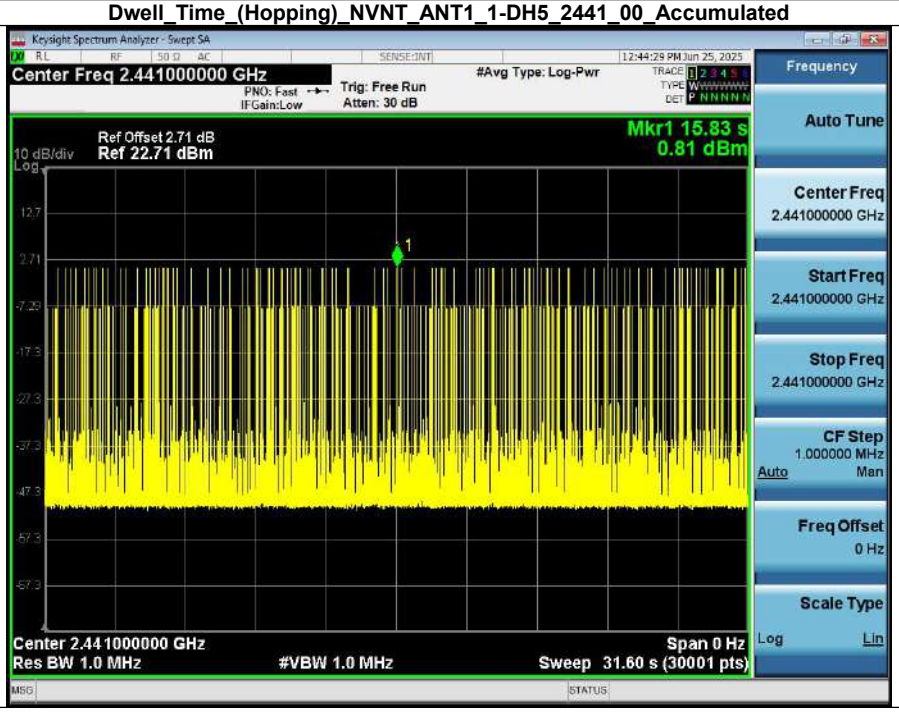
Dwell_Time_(Hopping)_NVNT_ANT1_1-DH3_2441_00_One_Burst_Time

Dwell_Time_(Hopping)_NVNT_ANT1_1-DH3_2441_00_Accumulated

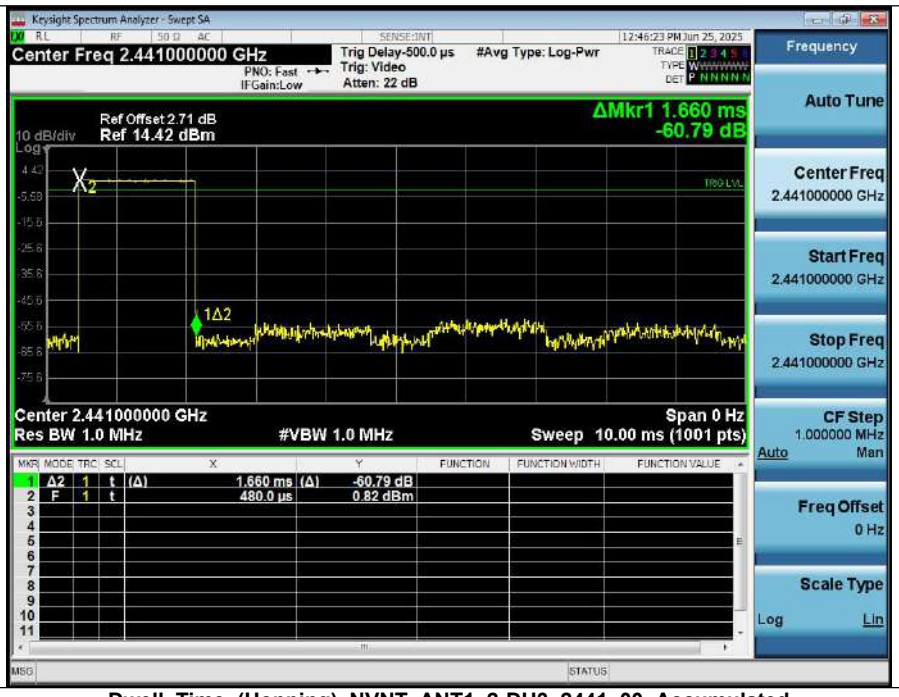


Dwell_Time_(Hopping)_NVNT_ANT1_1-DH5_2441_00_One_Burst_Time

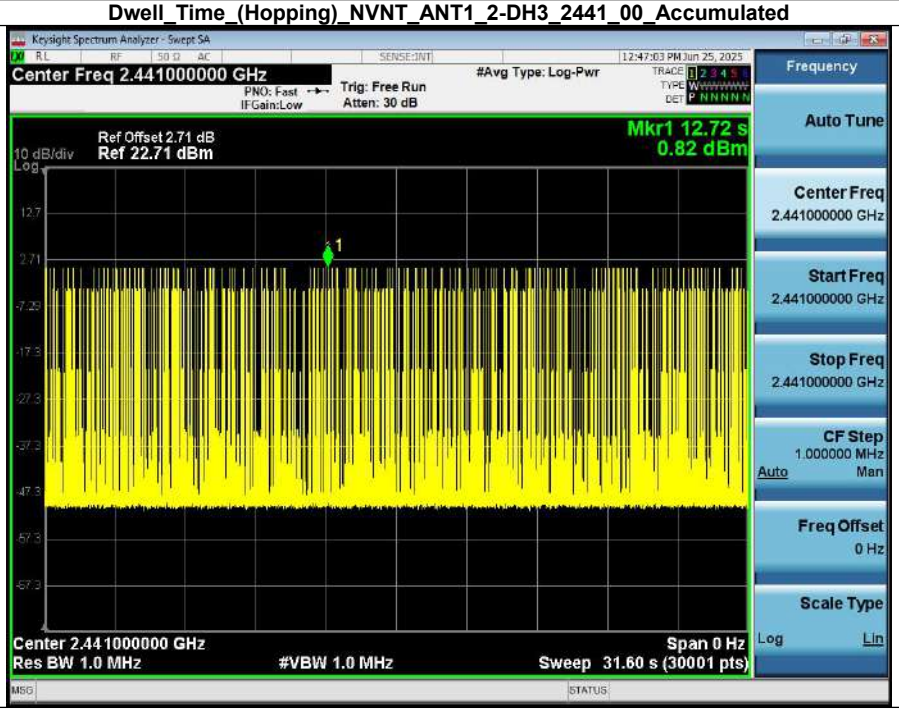
Dwell_Time_(Hopping)_NVNT_ANT1_1-DH5_2441_00_Accumulated



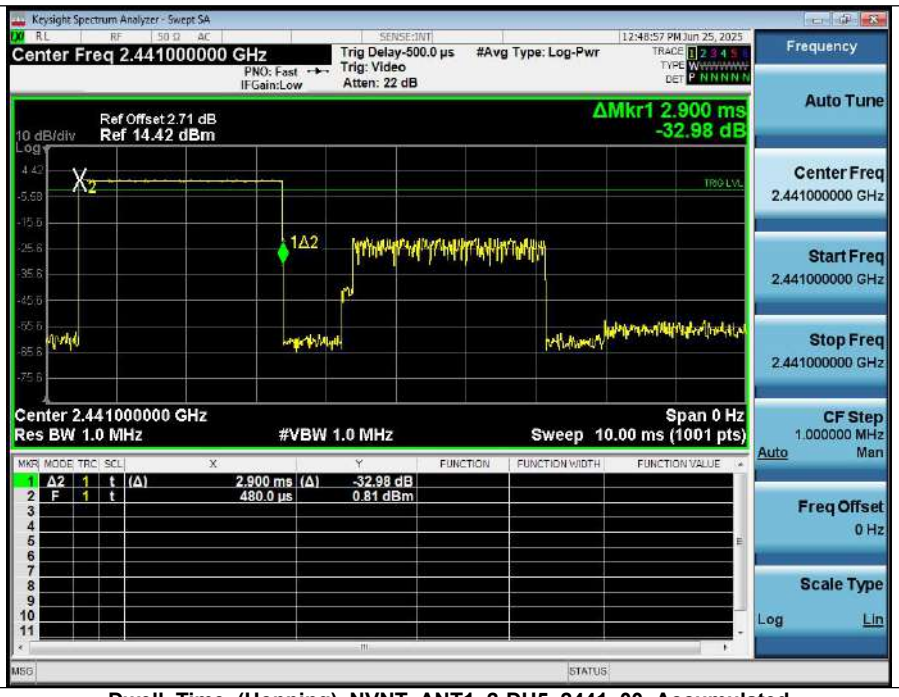
Dwell_Time_(Hopping)_NVNT_ANT1_2-DH3_2441_00_One_Burst_Time



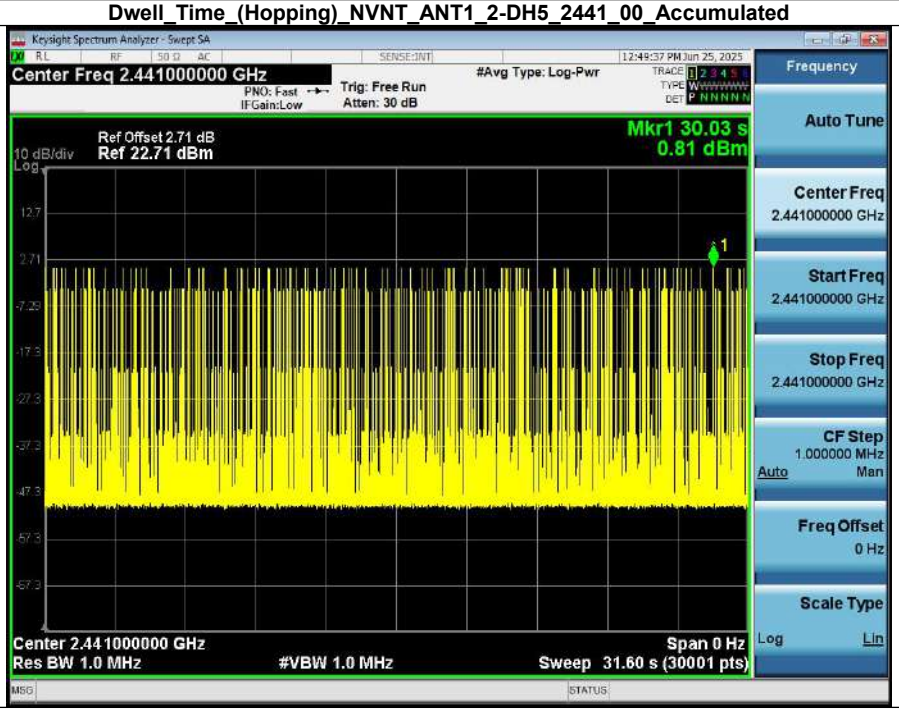
Dwell_Time_(Hopping)_NVNT_ANT1_2-DH3_2441_00_Accumulated



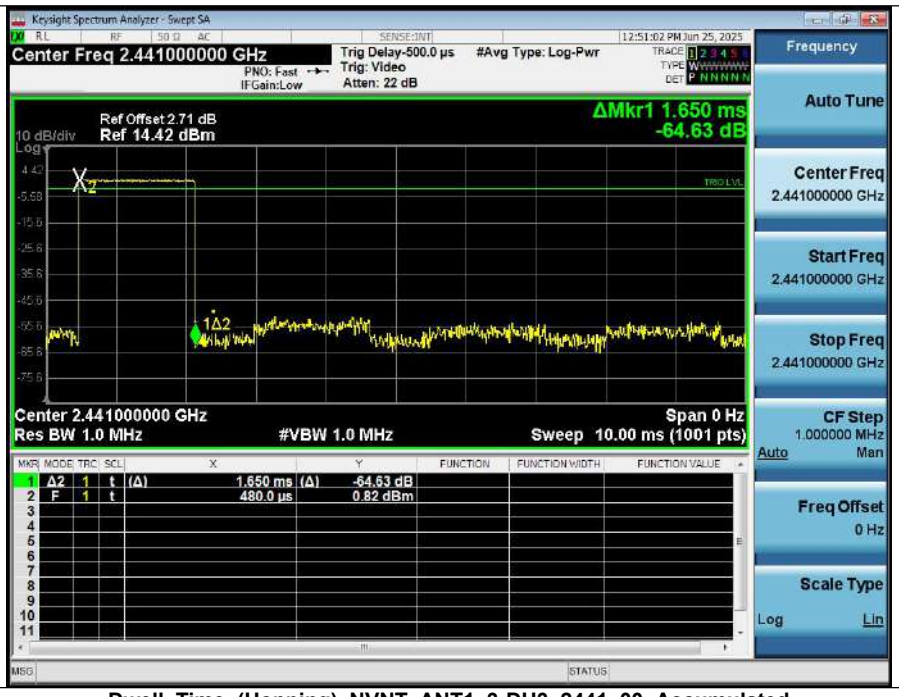
Dwell_Time_(Hopping)_NVNT_ANT1_2-DH5_2441_00_One_Burst_Time



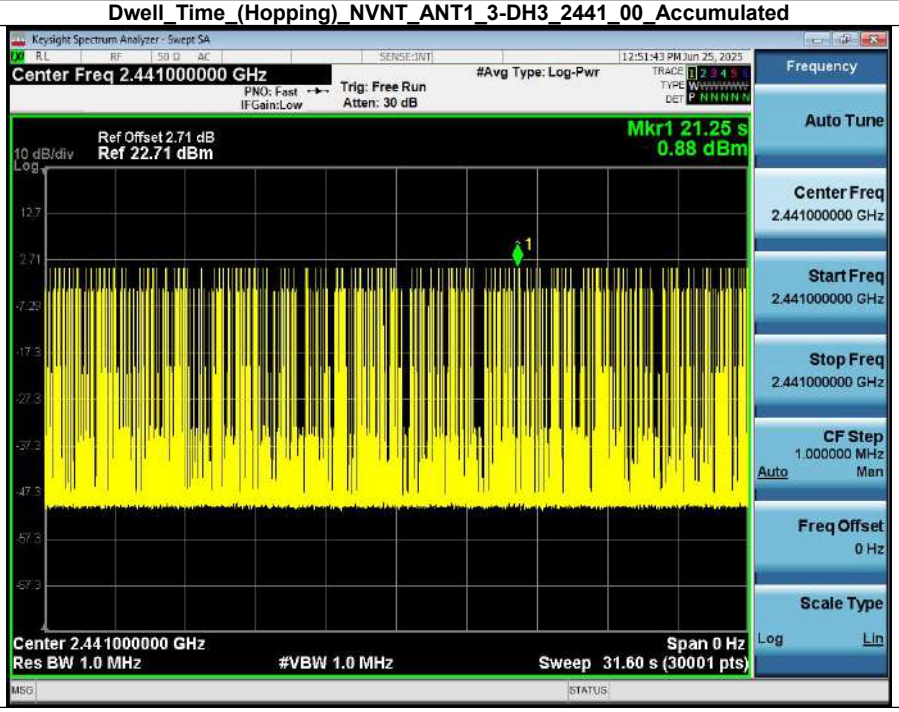
Dwell_Time_(Hopping)_NVNT_ANT1_2-DH5_2441_00_Accumulated

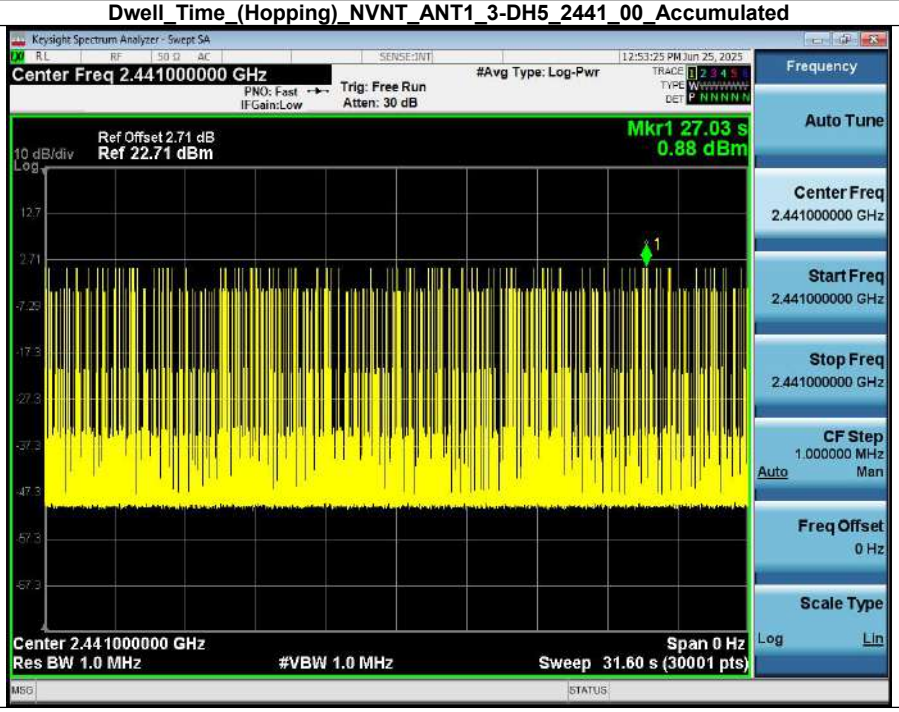


Dwell_Time_(Hopping)_NVNT_ANT1_3-DH3_2441_00_One_Burst_Time



Dwell_Time_(Hopping)_NVNT_ANT1_3-DH3_2441_00_Accumulated



Dwell_Time_(Hopping)_NVNT_ANT1_3-DH5_2441_00_One_Burst_Time

Dwell_Time_(Hopping)_NVNT_ANT1_3-DH5_2441_00_Accumulated