

Appendix

BLE Test Data

for BTEK240612018AE



Table of Contents

1. -6dB Bandwidth	3
2. 99% Occupied Bandwidth	7
3. Duty Cycle	10
4. Peak Output Power	13
5. Power Spectral Density	16
6. Bandedge	19
7. Spurious Emission	23

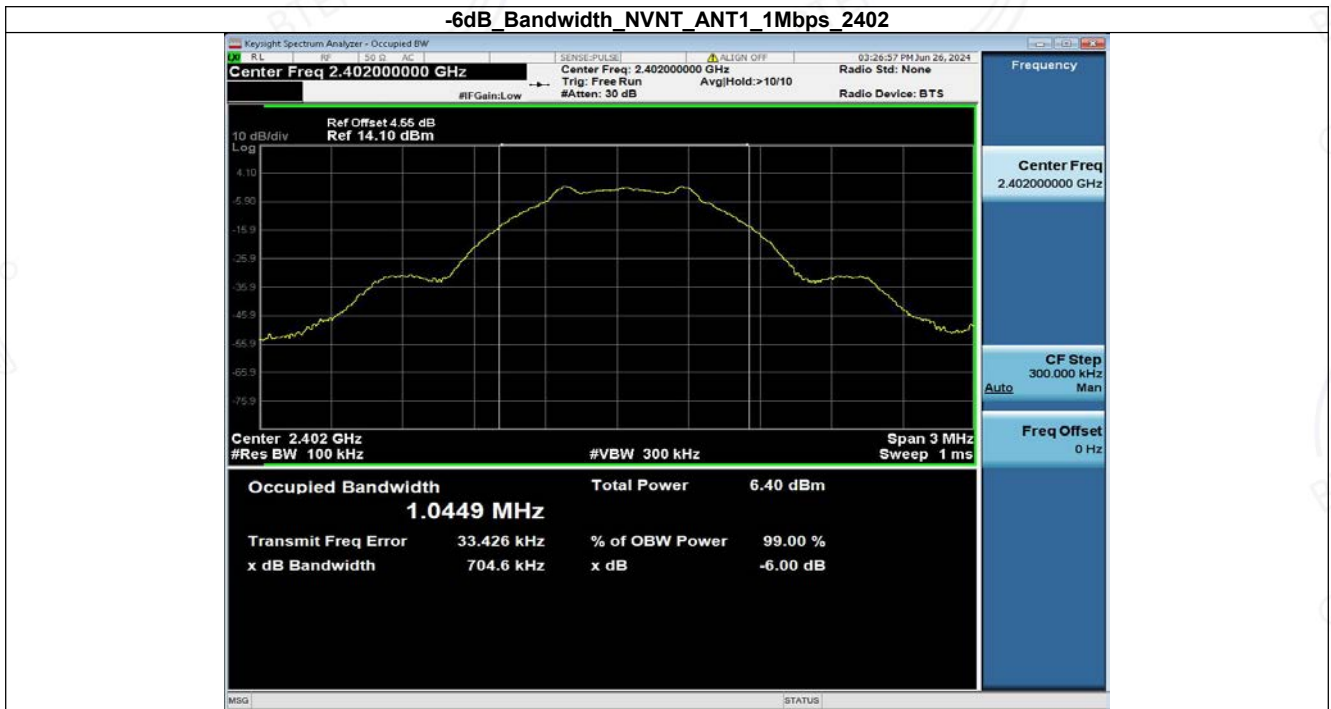


BTEK240612018AE

FCC_BLE (Part15.247) Test Data

1. -6dB Bandwidth

Condition	Antenna	Rate	Frequency (MHz)	-6dB BW(kHz)	limit(kHz)	Result
NVNT	ANT1	1Mbps	2402.00	704.59	500	Pass
NVNT	ANT1	1Mbps	2440.00	681.64	500	Pass
NVNT	ANT1	1Mbps	2480.00	699.89	500	Pass
NVNT	ANT1	2Mbps	2402.00	1398.37	500	Pass
NVNT	ANT1	2Mbps	2440.00	1379.21	500	Pass
NVNT	ANT1	2Mbps	2480.00	1402.78	500	Pass



-6dB_Bandwidth_NVNT_ANT1_1Mbps_2440



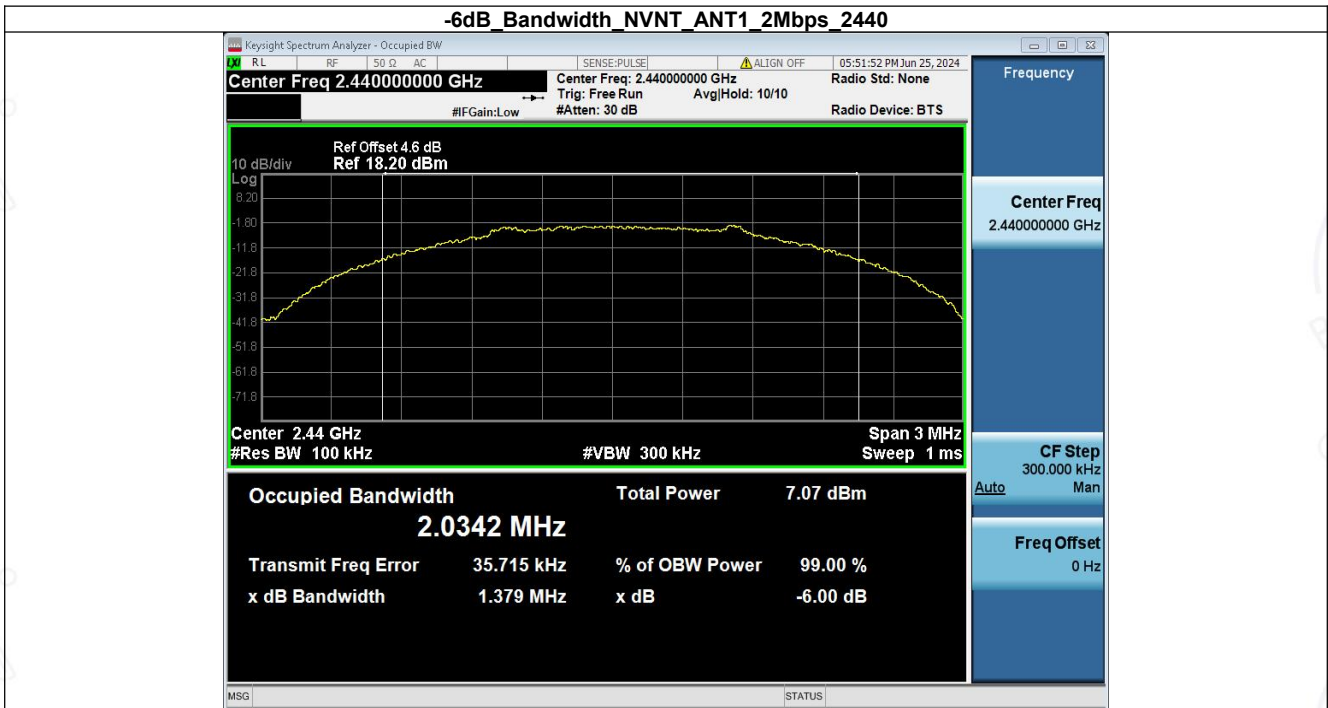


-6dB_Bandwidth_NVNT_ANT1_1Mbps_2480



-6dB_Bandwidth_NVNT_ANT1_2Mbps_2402





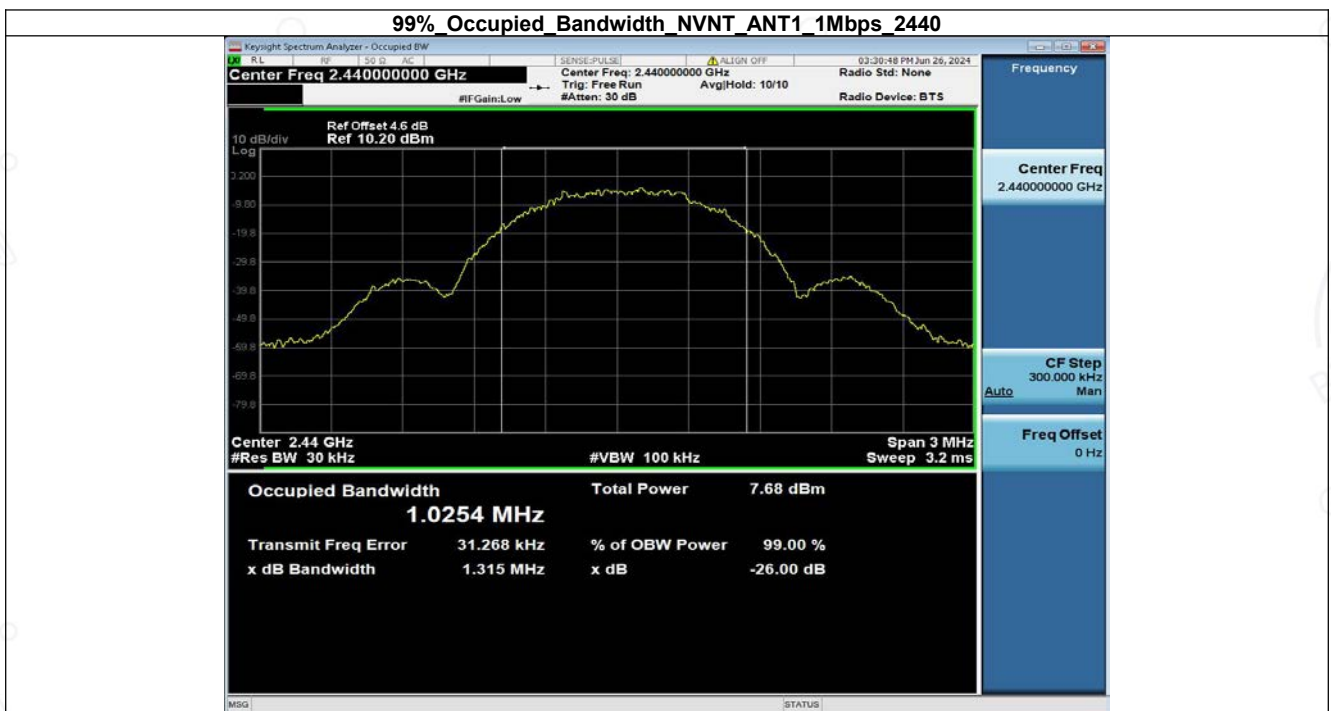
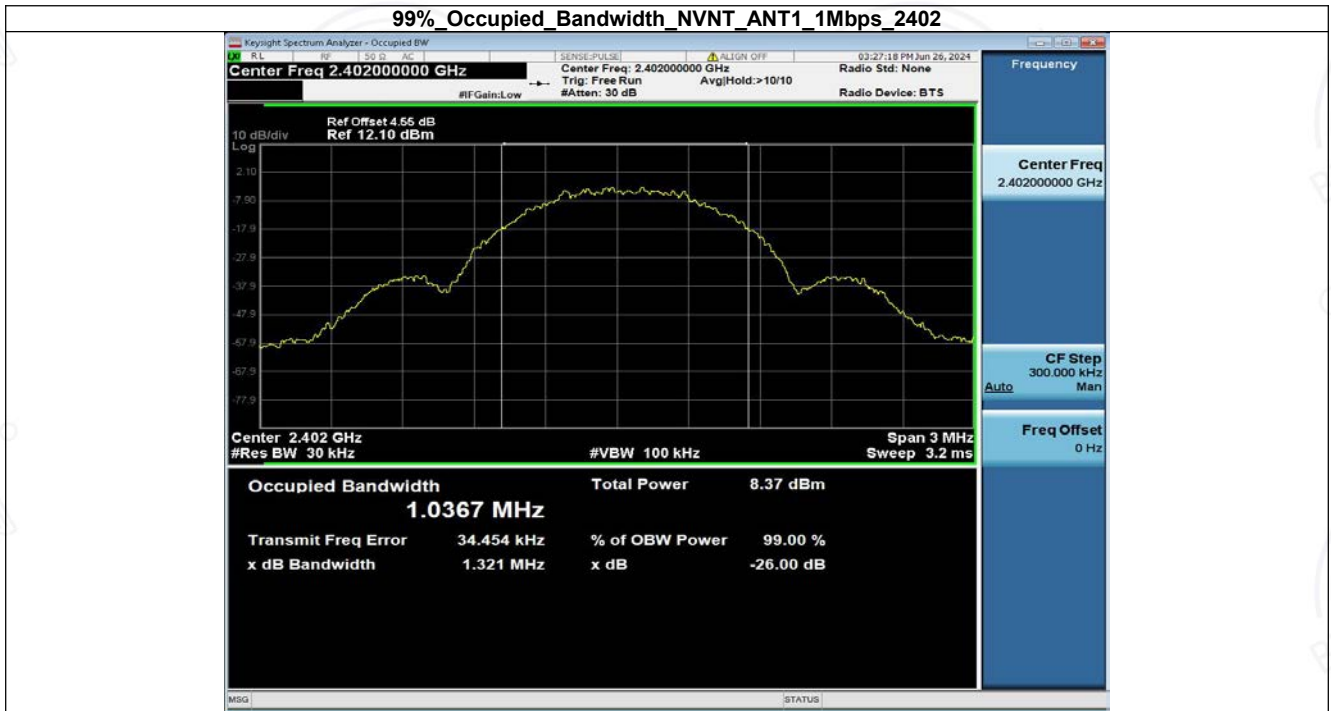
-6dB_Bandwidth_NVNT_ANT1_2Mbps_2480





2. 99% Occupied Bandwidth

Condition	Antenna	Rate	Frequency (MHz)	99% BW (MHz)
NVNT	ANT1	1Mbps	2402.00	1.037
NVNT	ANT1	1Mbps	2440.00	1.025
NVNT	ANT1	1Mbps	2480.00	1.035
NVNT	ANT1	2Mbps	2402.00	2.037
NVNT	ANT1	2Mbps	2440.00	2.030
NVNT	ANT1	2Mbps	2480.00	2.029

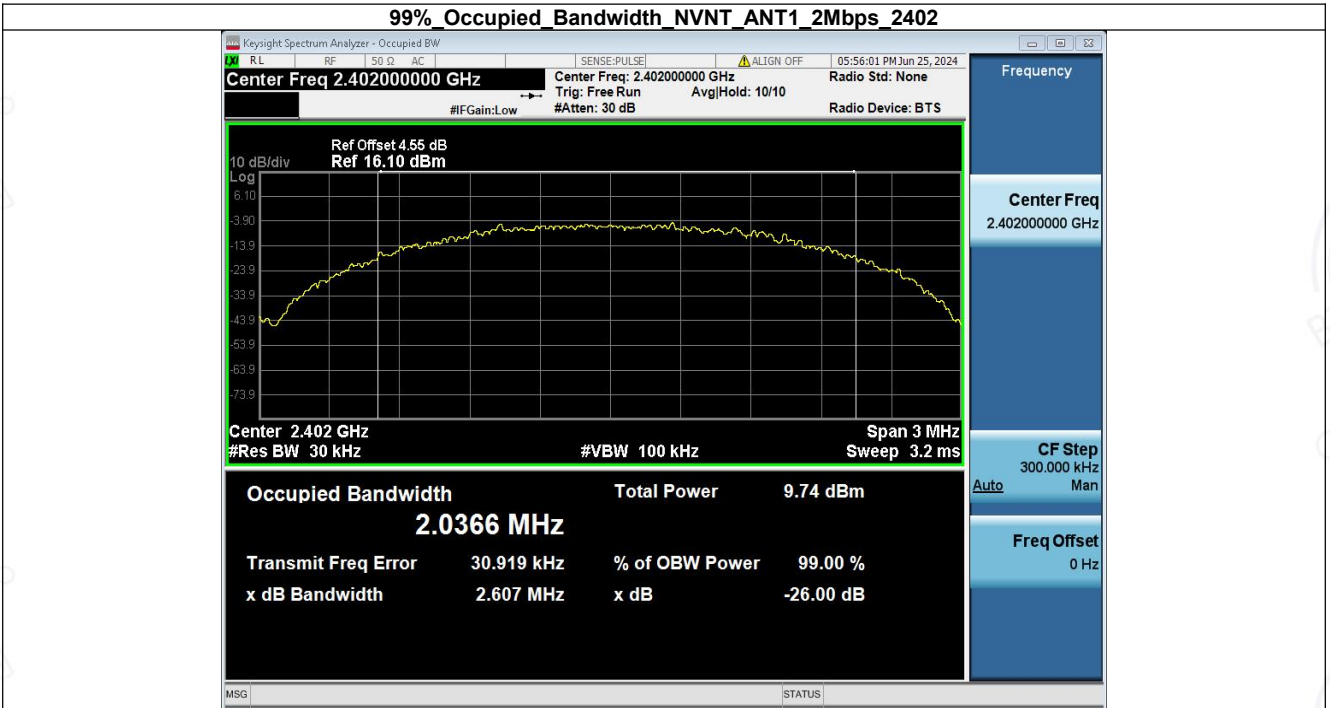


99% Occupied Bandwidth NVNT ANT1 1Mbps 2480





99% Occupied Bandwidth NVNT_ANT1_2Mbps_2402

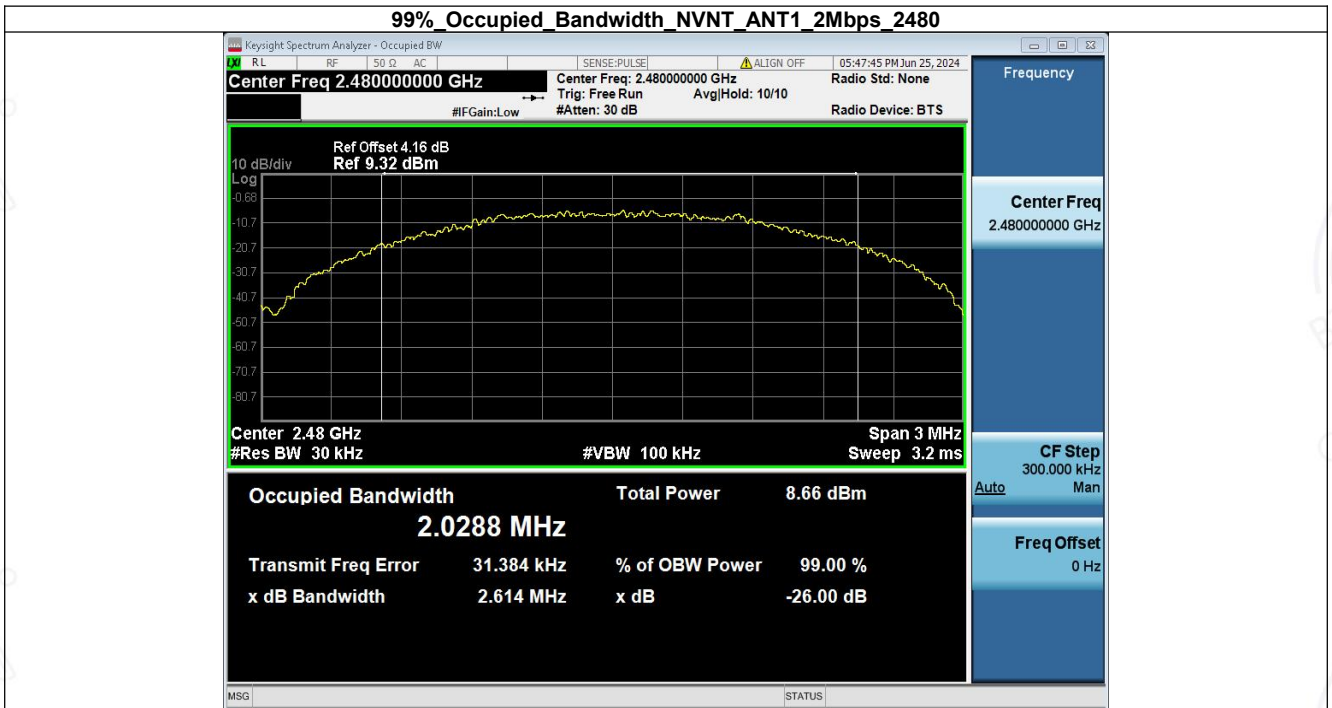


99% Occupied Bandwidth NVNT_ANT1_2Mbps_2440





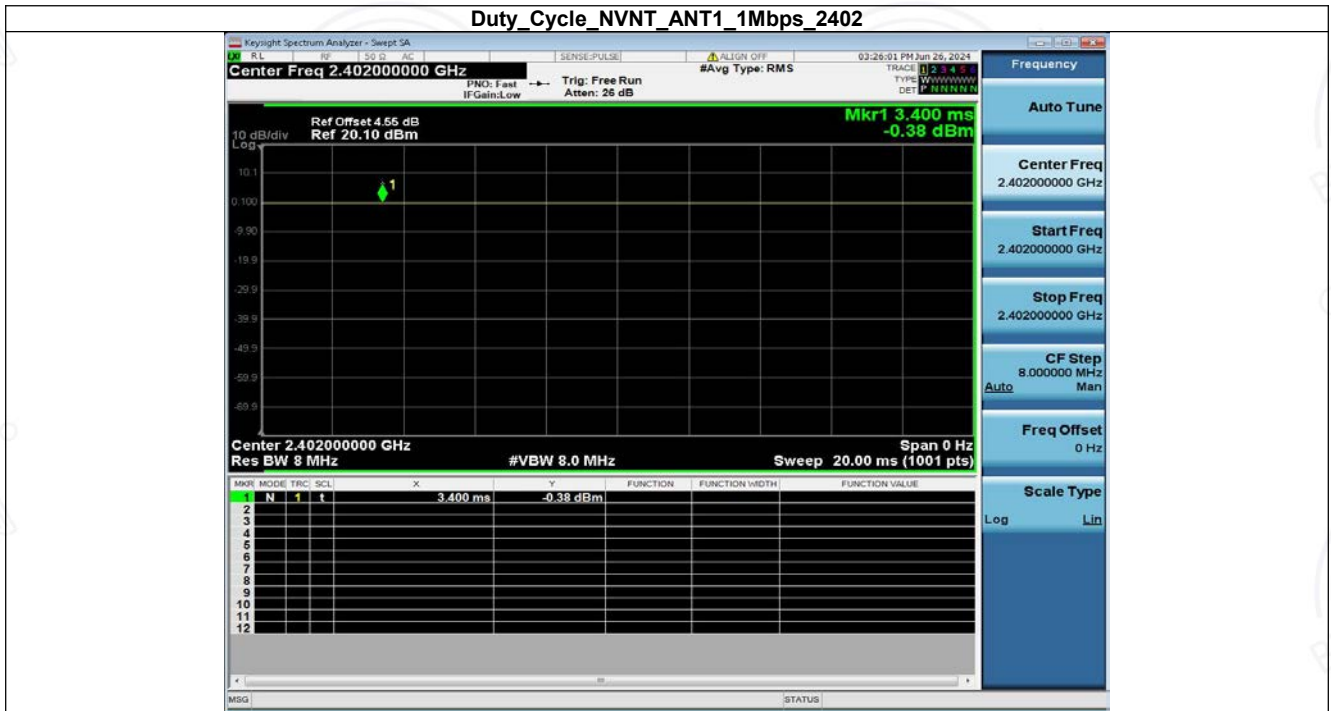
99%_Occupied_Bandwidth_NVNT_ANT1_2Mbps_2480



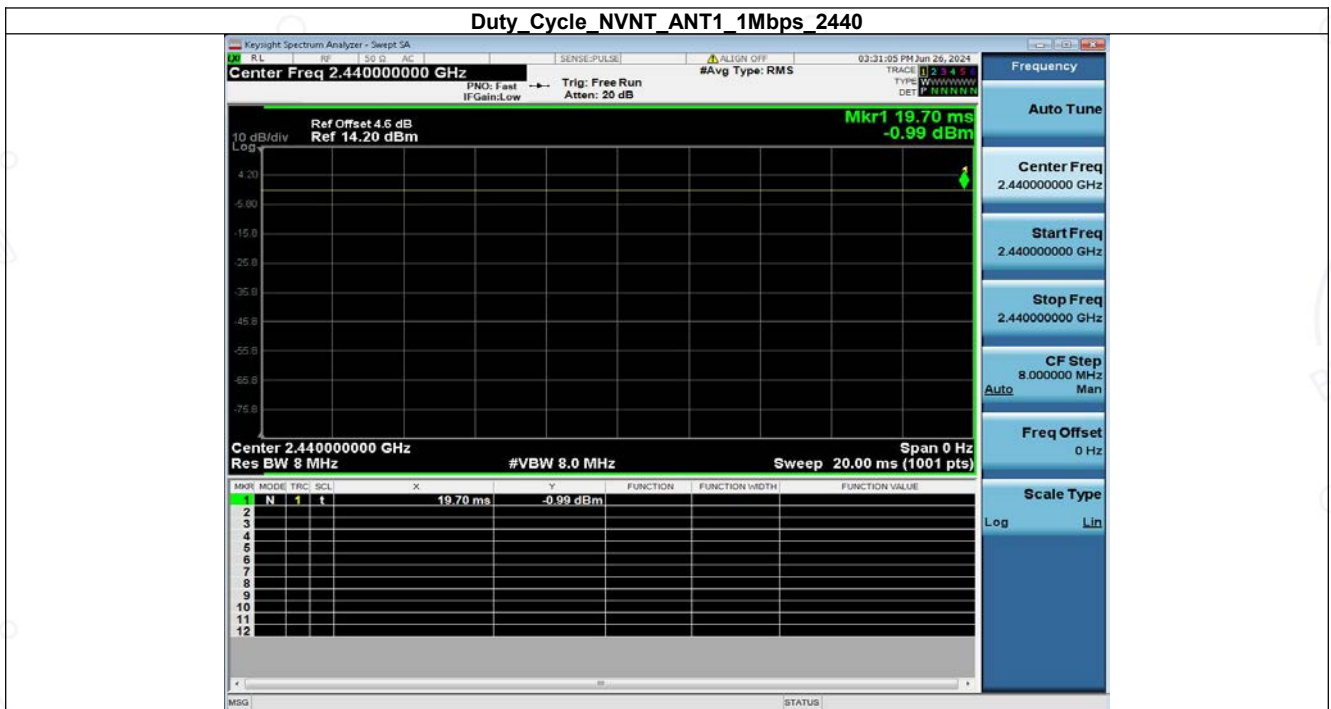
3. Duty Cycle

Condition	Antenna	Rate	Frequency (MHz)	Dutycycle(%)	Duty_factor
NVNT	ANT1	1Mbps	2402.00	100	0.00
NVNT	ANT1	1Mbps	2440.00	100	0.00
NVNT	ANT1	1Mbps	2480.00	100	0.00
NVNT	ANT1	2Mbps	2402.00	100	0.00
NVNT	ANT1	2Mbps	2440.00	100	0.00
NVNT	ANT1	2Mbps	2480.00	100	0.00

Duty_Cycle_NVNT_ANT1_1Mbps_2402

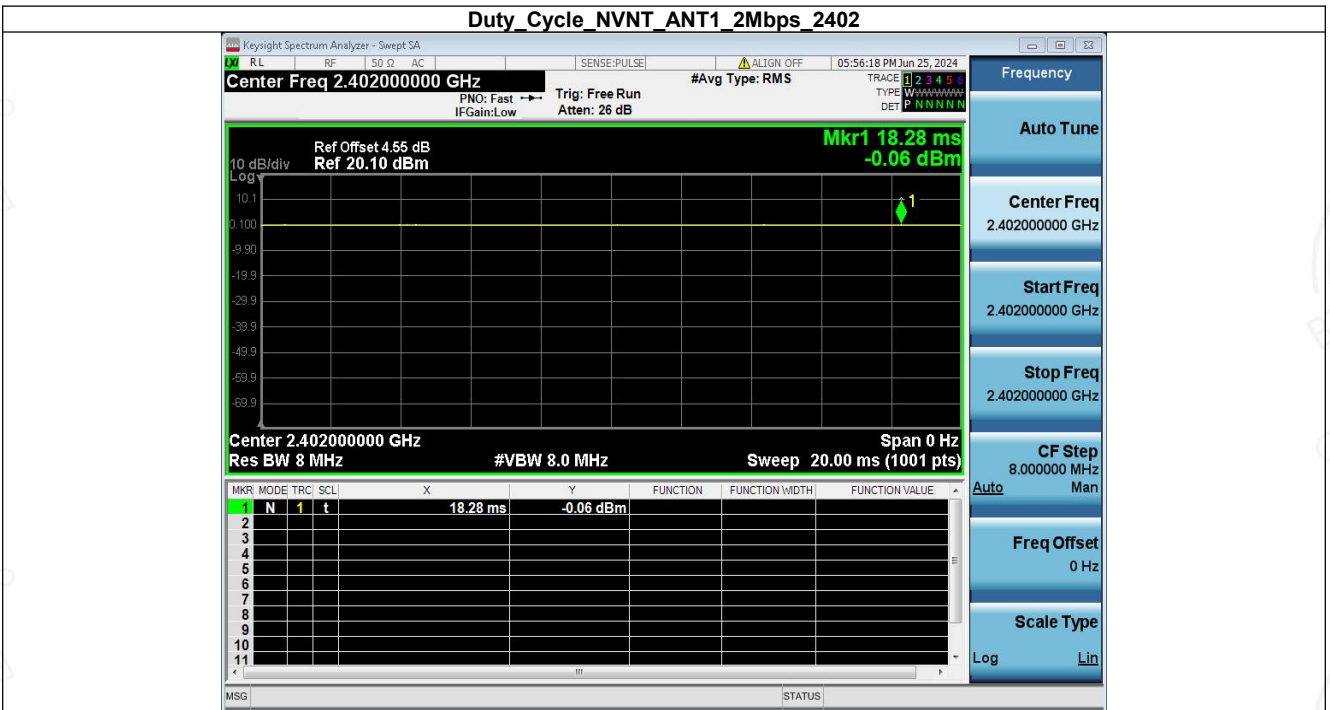
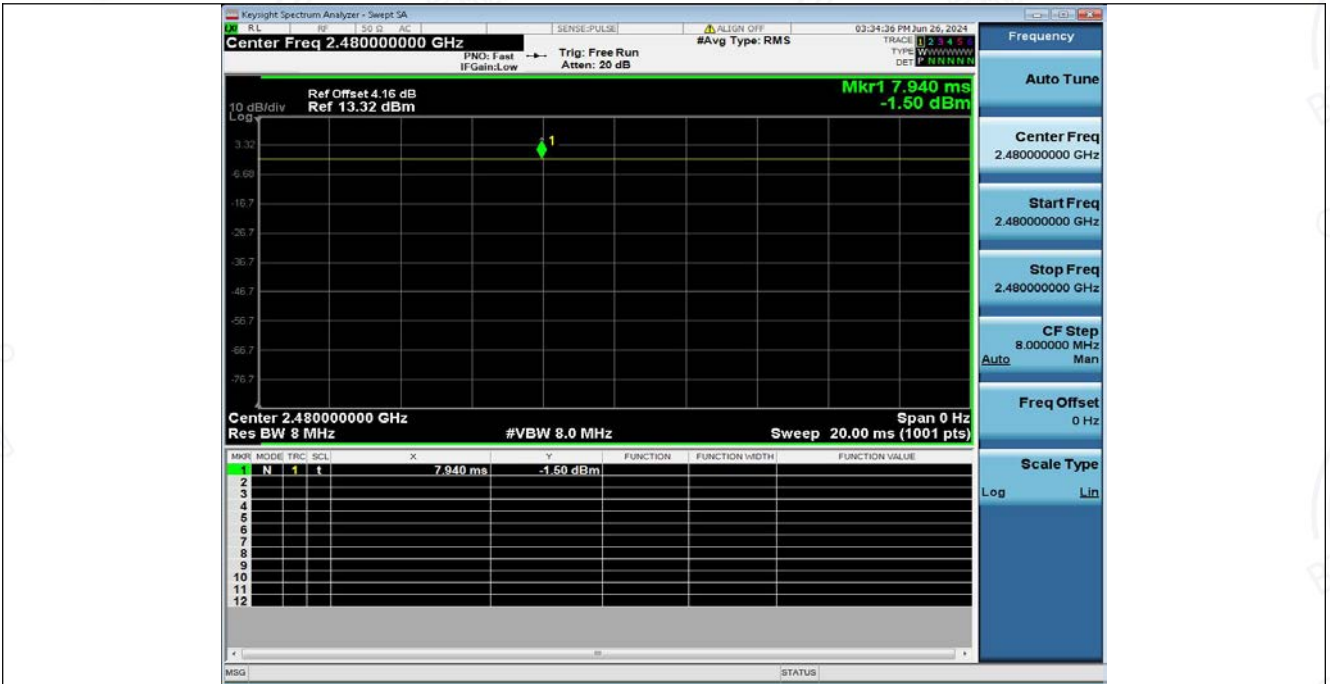


Duty_Cycle_NVNT_ANT1_1Mbps_2440



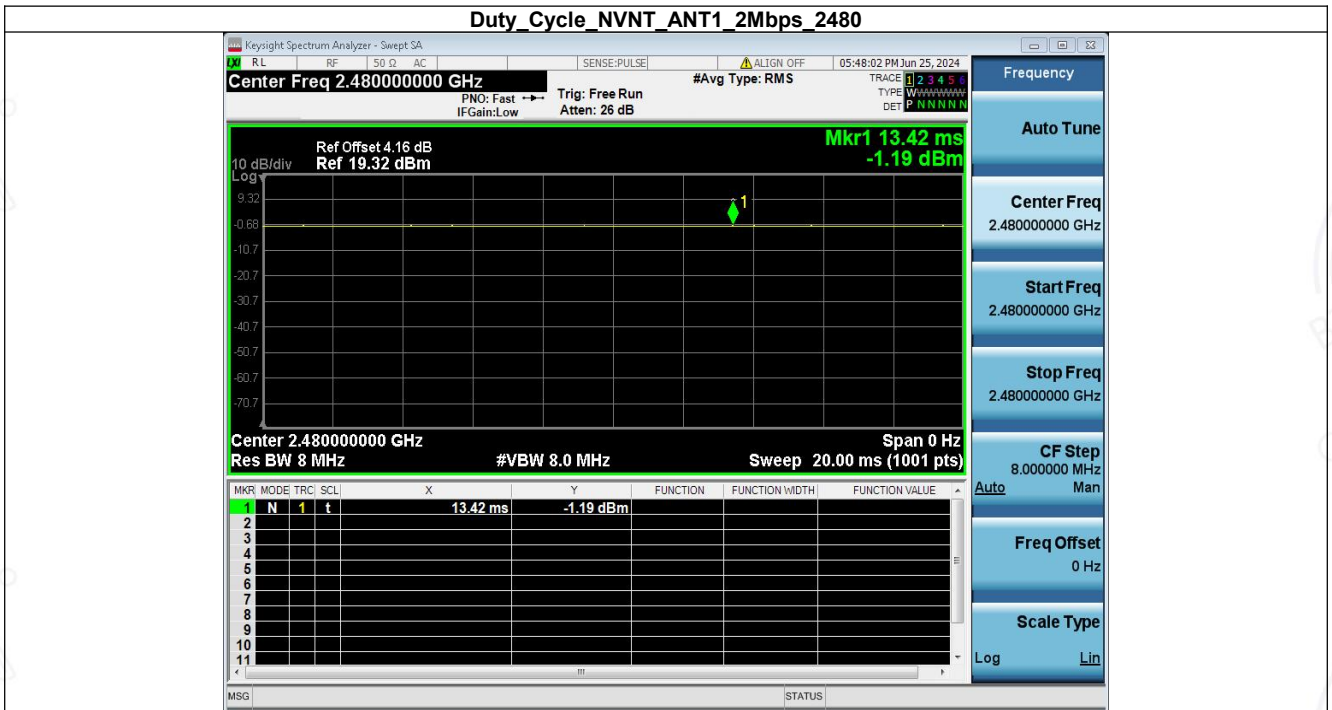
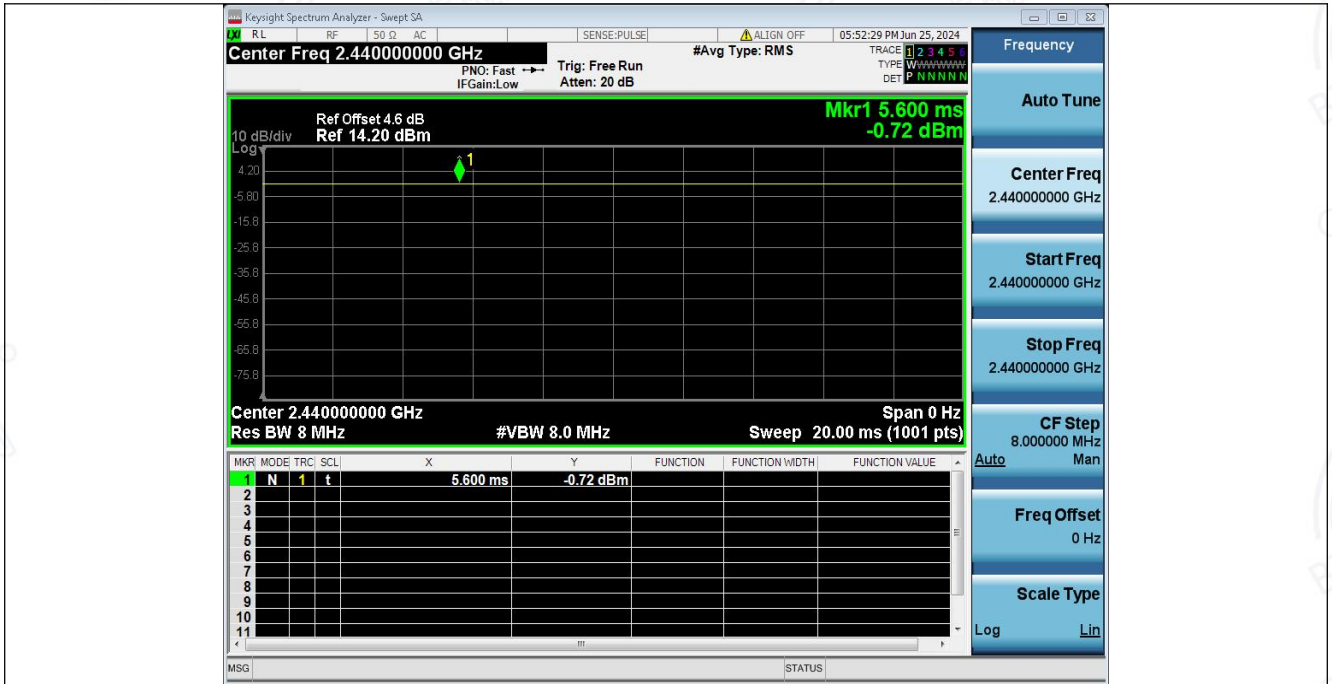
Duty_Cycle_NVNT_ANT1_1Mbps_2480





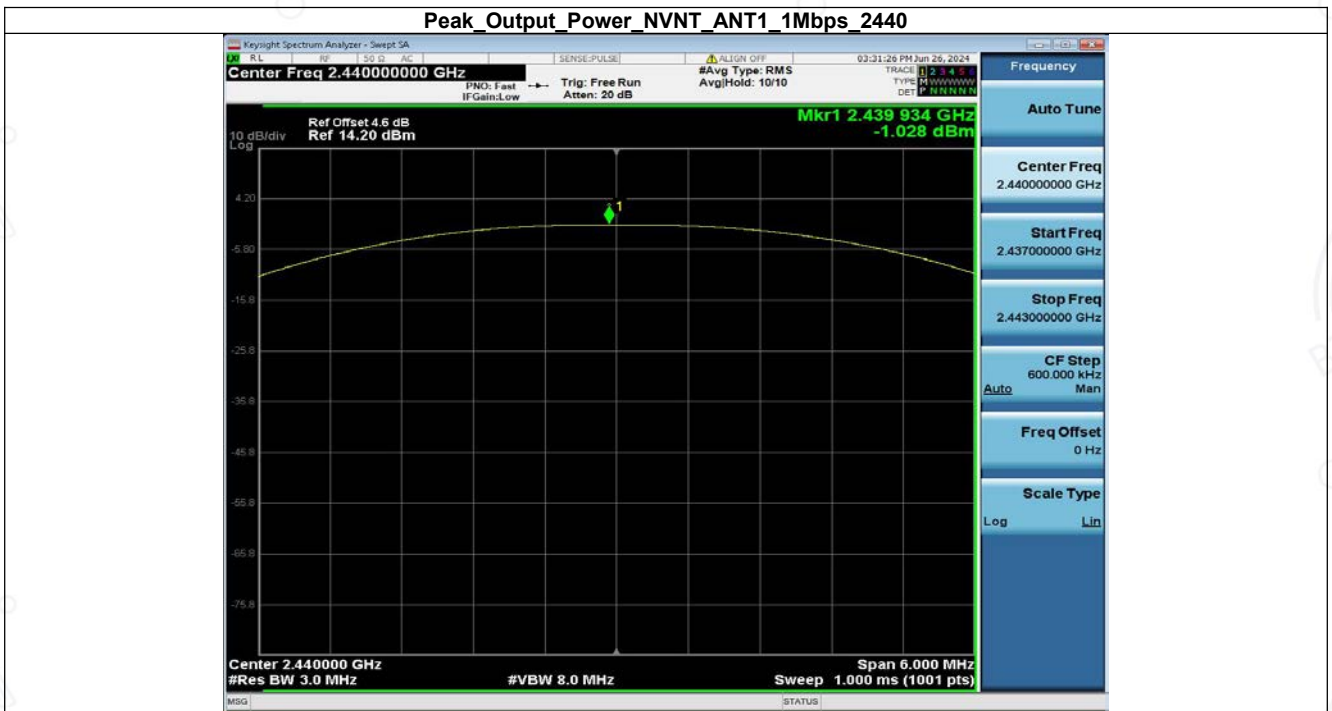
Duty Cycle_NVNT_ANT1_2Mbps_2440





4. Peak Output Power

Condition	Antenna	Rate	Frequency (MHz)	Max. Conducted Power(dBm)	Max. Conducted Power(mW)	Limit(mW)	Result
NVNT	ANT1	1Mbps	2402.00	-0.40	0.91	1000	Pass
NVNT	ANT1	1Mbps	2440.00	-1.03	0.79	1000	Pass
NVNT	ANT1	1Mbps	2480.00	-1.54	0.70	1000	Pass
NVNT	ANT1	2Mbps	2402.00	-0.09	0.98	1000	Pass
NVNT	ANT1	2Mbps	2440.00	-0.78	0.83	1000	Pass
NVNT	ANT1	2Mbps	2480.00	-1.33	0.74	1000	Pass



Peak Output Power_NVNT_ANT1_1Mbps_2480



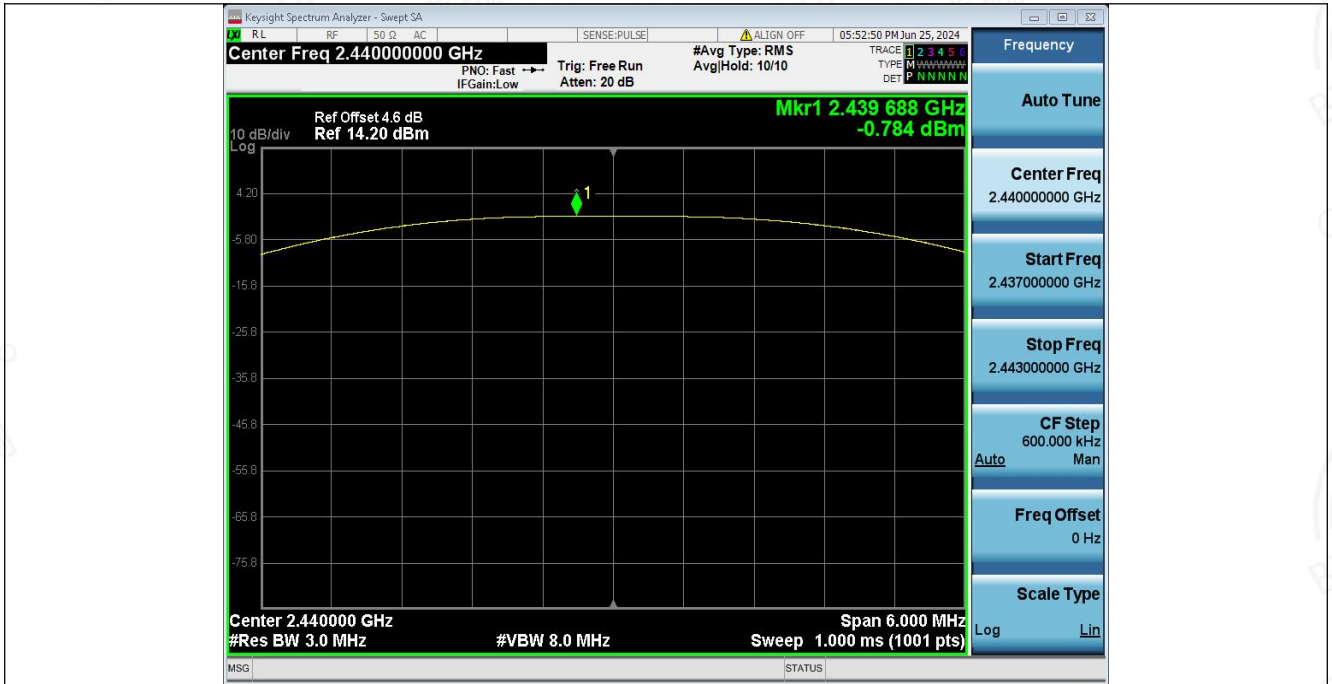


Peak Output Power_NVNT_ANT1_2Mbps_2402



Peak Output Power_NVNT_ANT1_2Mbps_2440



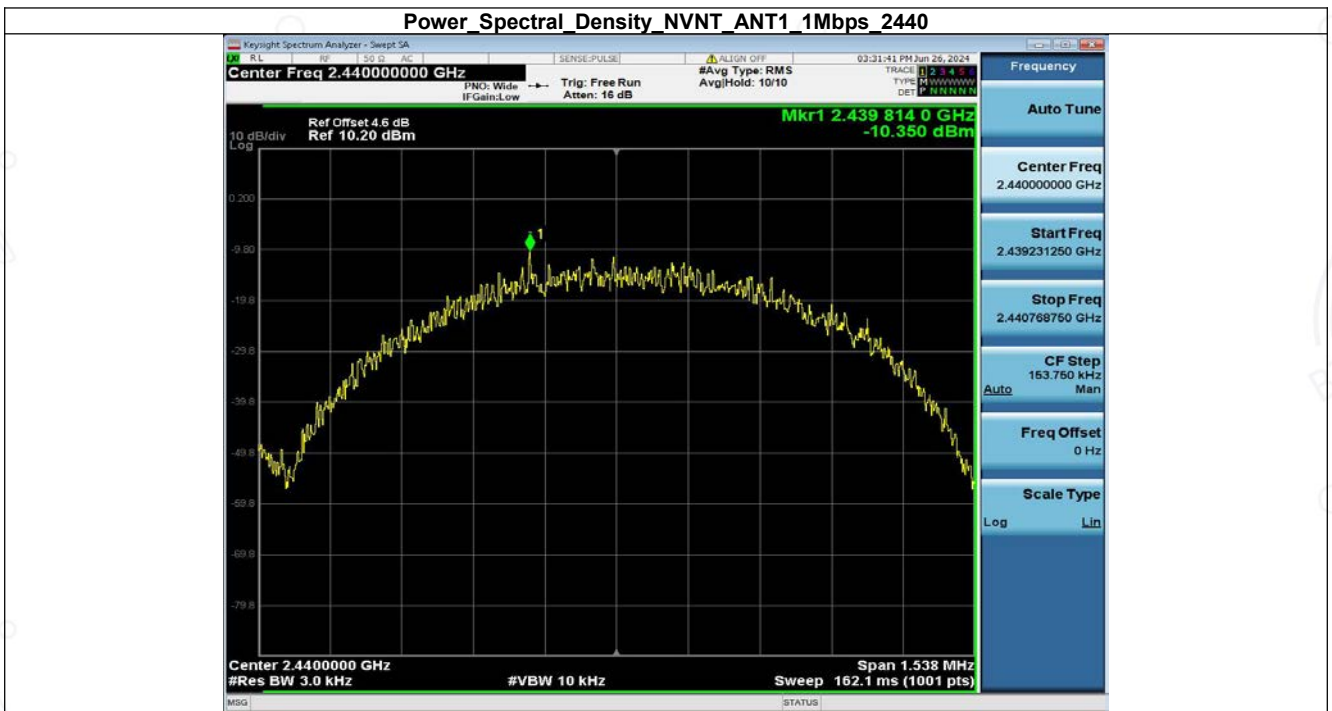


Peak Output Power_NVNT_ANT1_2Mbps_2480



5. Power Spectral Density

Condition	Antenna	Rate	Frequency (MHz)	Power Spectral Density(dBm)	Limit(dBm/3kHz)	Result
NVNT	ANT1	1Mbps	2402.00	-10.75	8	Pass
NVNT	ANT1	1Mbps	2440.00	-10.35	8	Pass
NVNT	ANT1	1Mbps	2480.00	-11.11	8	Pass
NVNT	ANT1	2Mbps	2402.00	-13.38	8	Pass
NVNT	ANT1	2Mbps	2440.00	-14.53	8	Pass
NVNT	ANT1	2Mbps	2480.00	-15.53	8	Pass

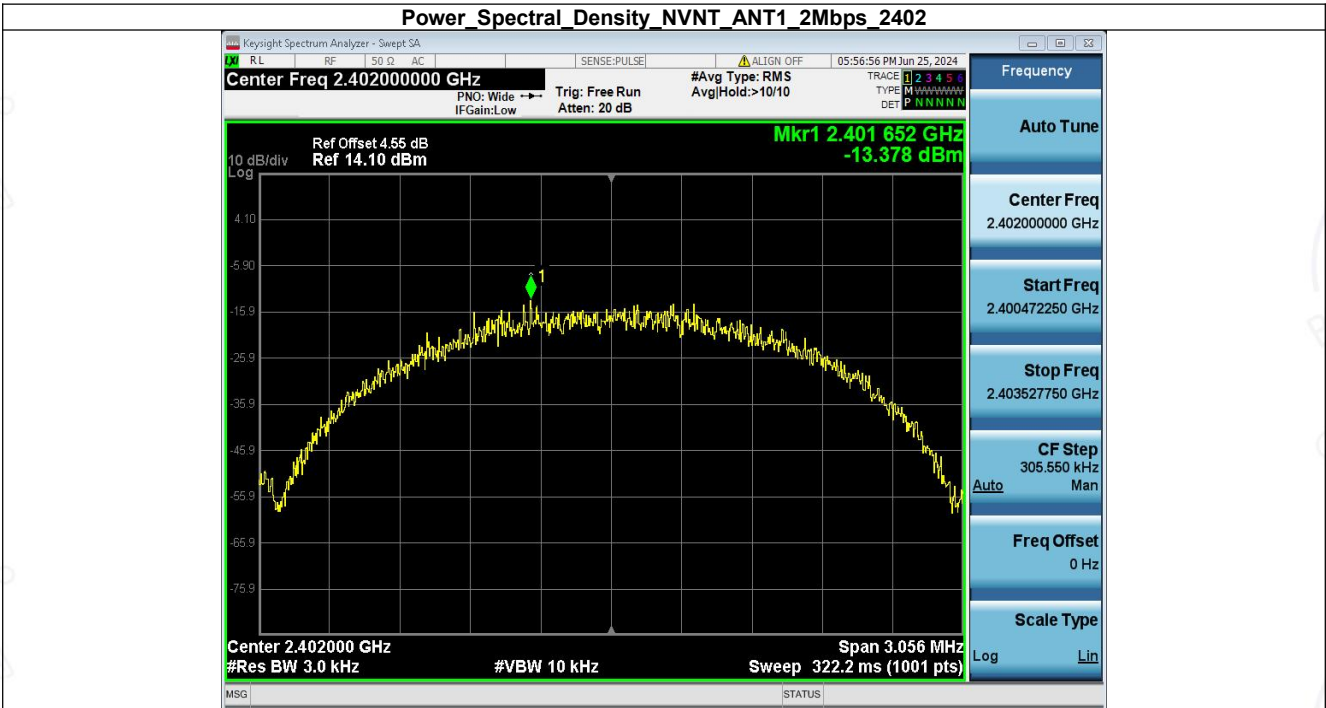


Power Spectral Density_NVNT_ANT1_1Mbps_2480



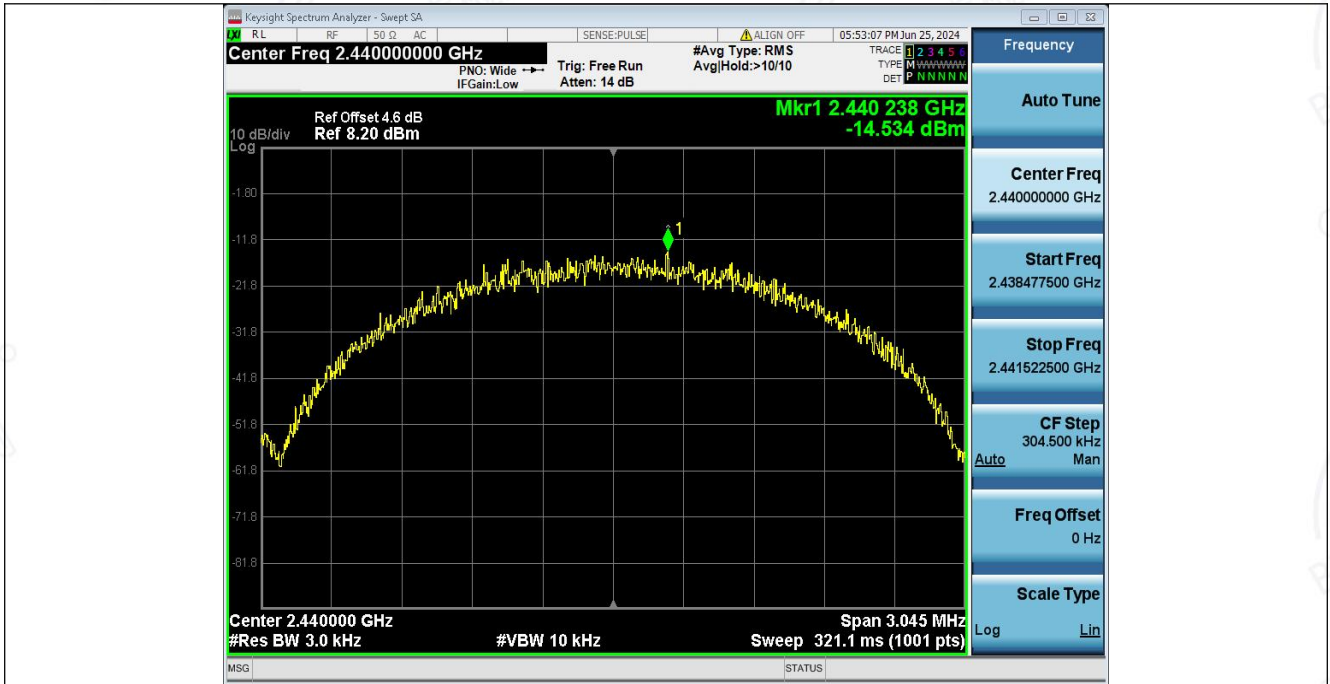


Power Spectral Density_NVNT_ANT1_2Mbps_2402

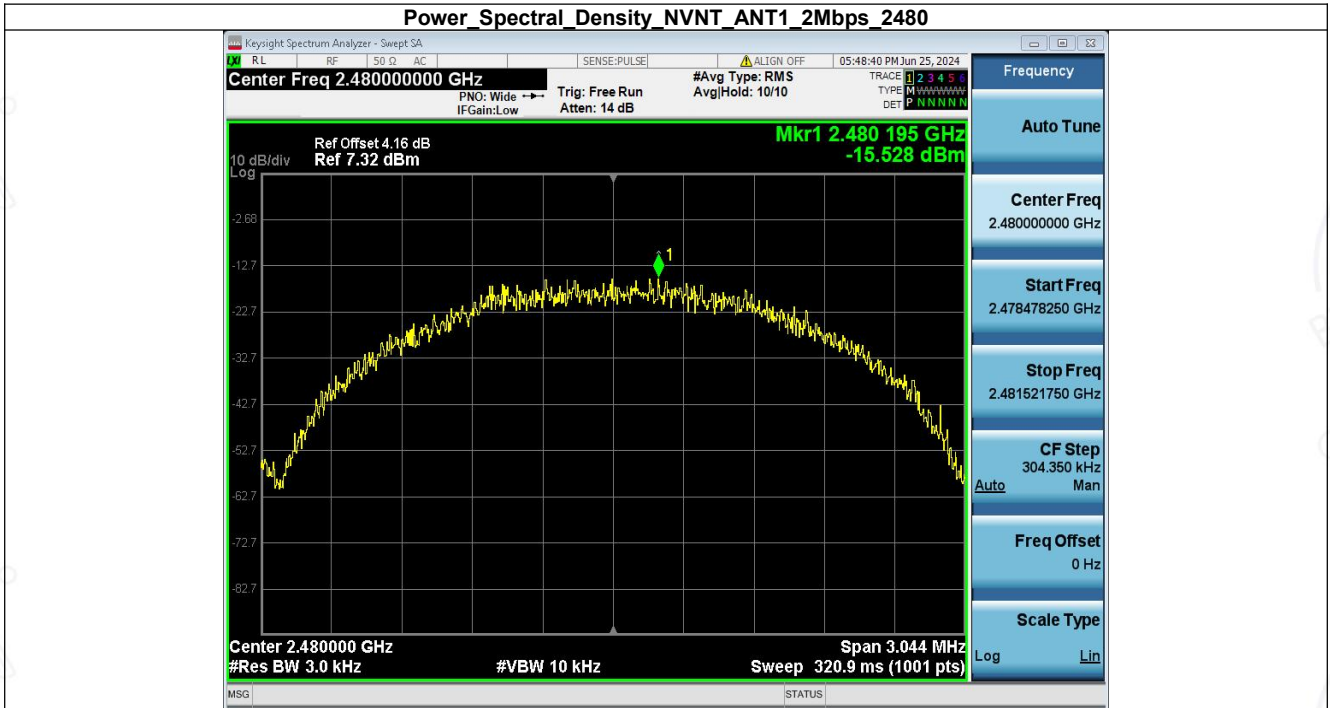


Power Spectral Density_NVNT_ANT1_2Mbps_2440





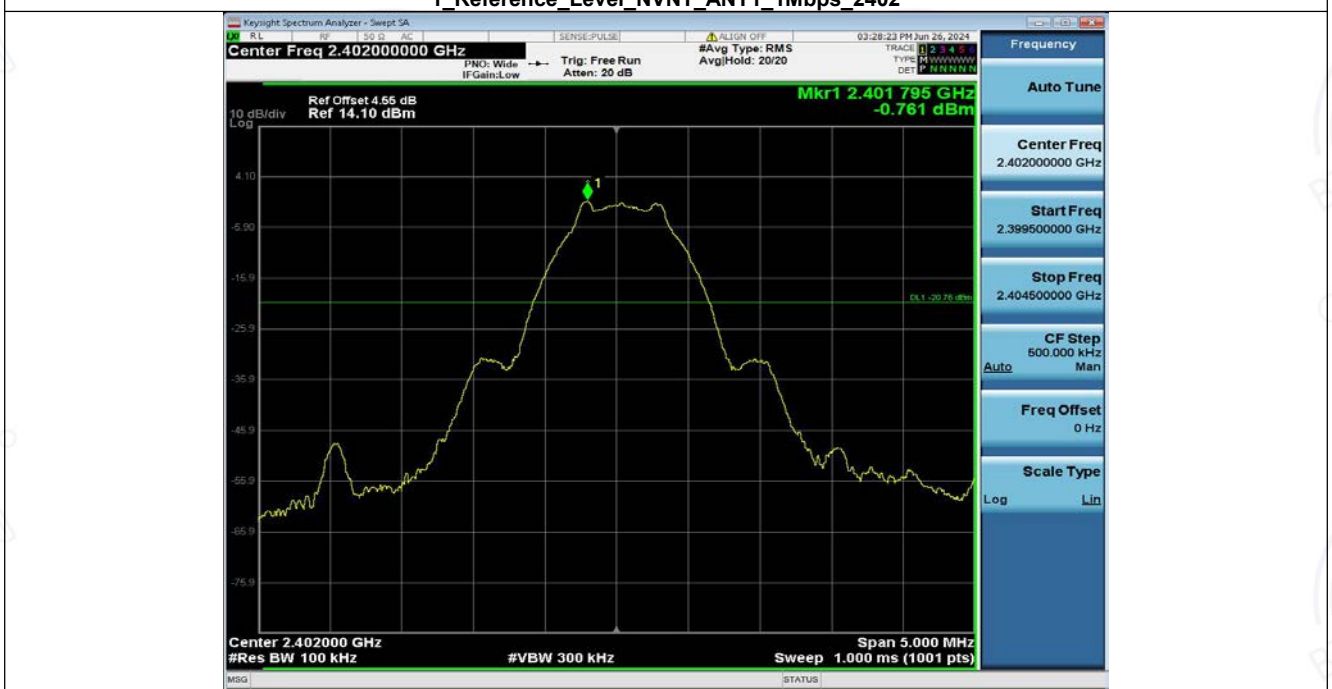
Power Spectral Density_NVNT_ANT1_2Mbps_2480



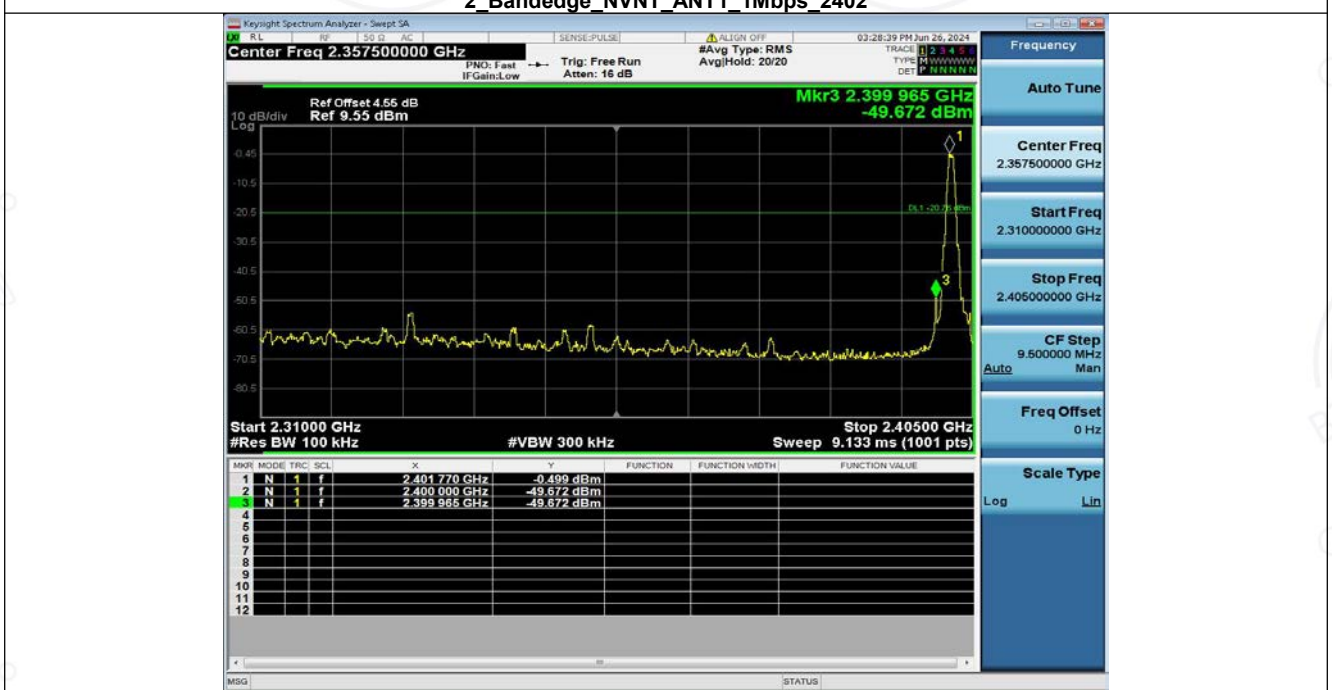
6. Bandedge

Condition	Antenna	Rate	TX_Frequency (MHz)	Max. Mark Frequency (MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	1Mbps	2402.00	2399.965	-49.672	-20.761	Pass
NVNT	ANT1	1Mbps	2480.00	2484.250	-65.886	-21.999	Pass
NVNT	ANT1	2Mbps	2402.00	2399.965	-34.691	-21.759	Pass
NVNT	ANT1	2Mbps	2480.00	2483.550	-64.150	-22.327	Pass

1 Reference_Level_NVNT_ANT1_1Mbps_2402

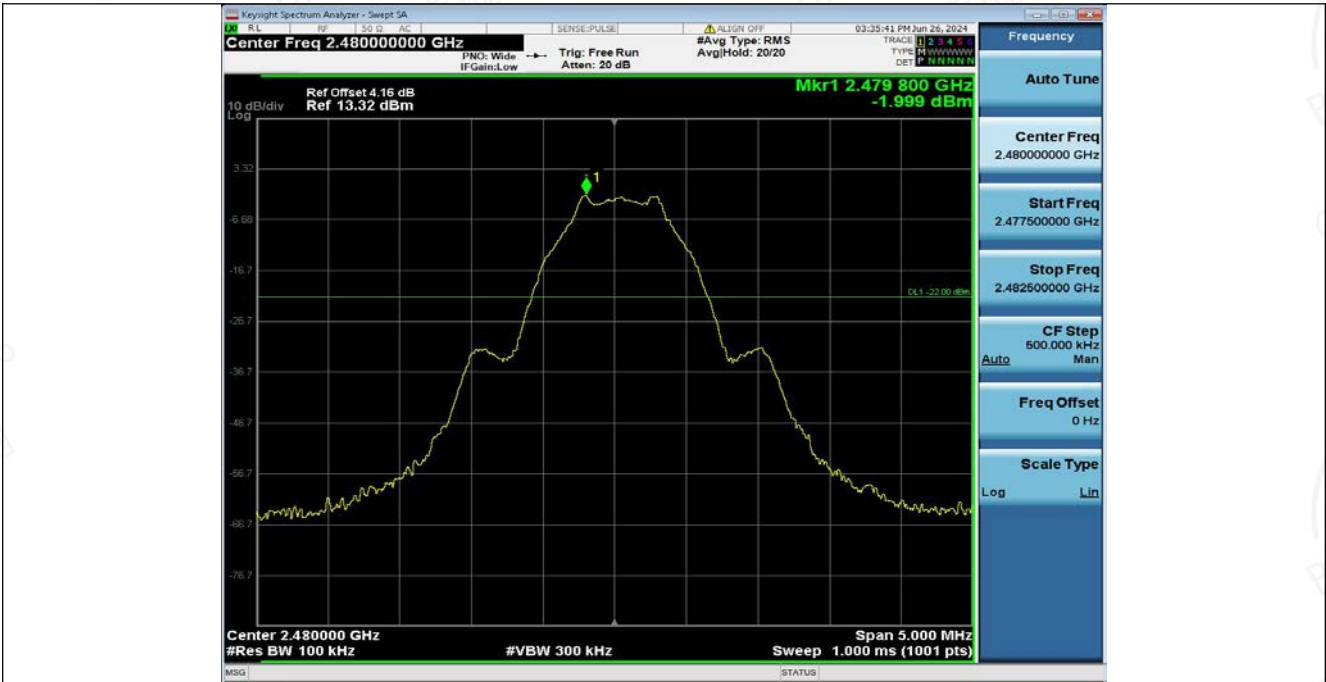


2 Bandedge_NVNT_ANT1_1Mbps_2402

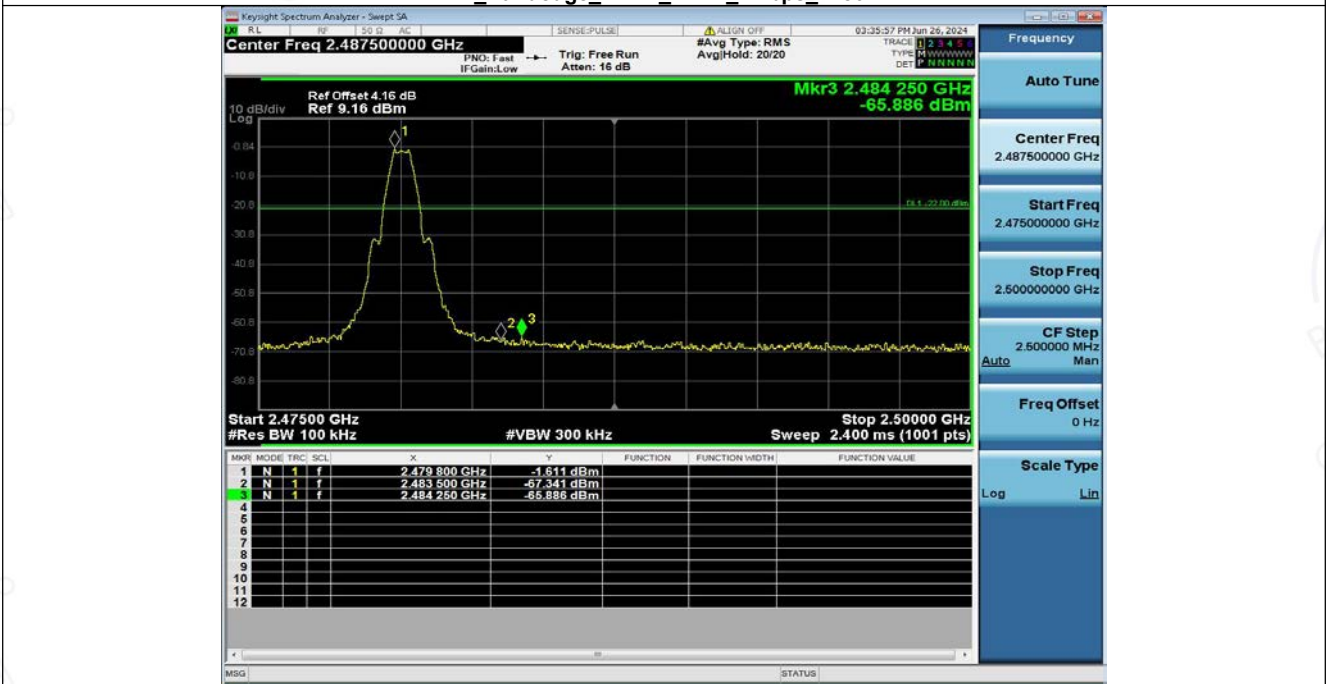


1 Reference_Level_NVNT_ANT1_1Mbps_2480





2_Bandedge_NVNT_ANT1_1Mbps_2480

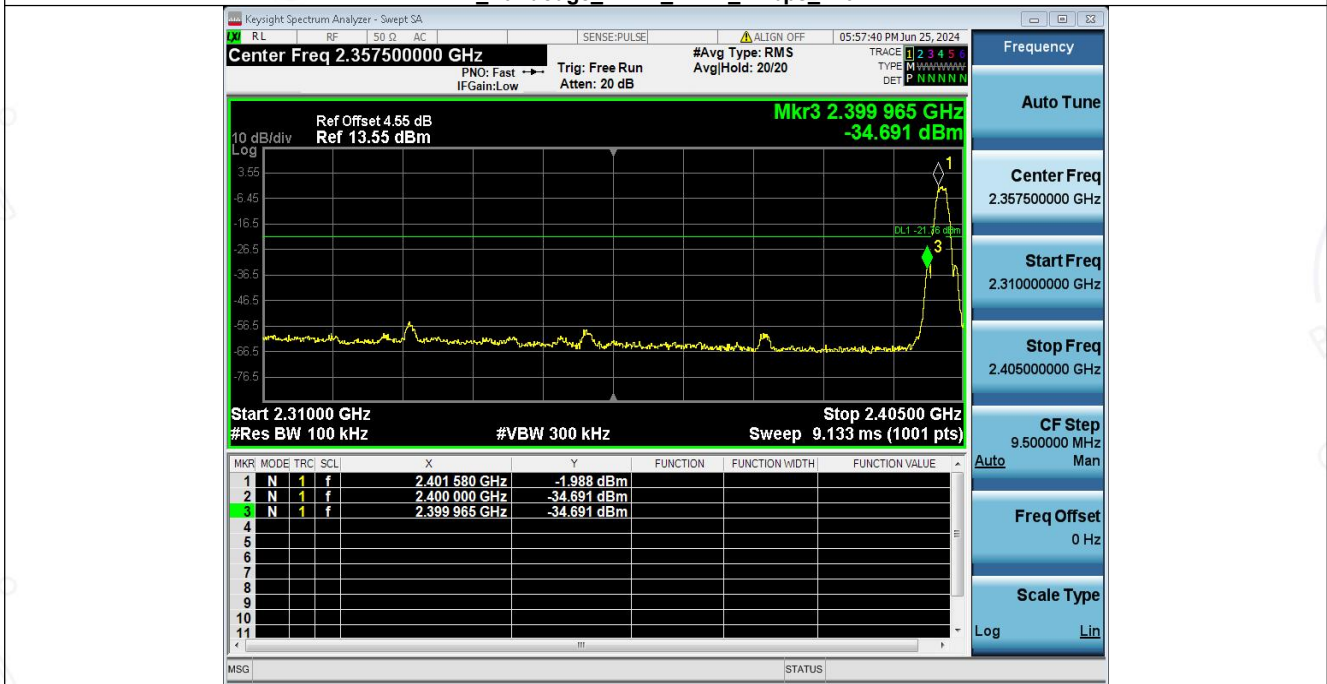


1_Reference_Level_NVNT_ANT1_2Mbps_2402





2_Bandedge_NVNT_ANT1_2Mbps_2402

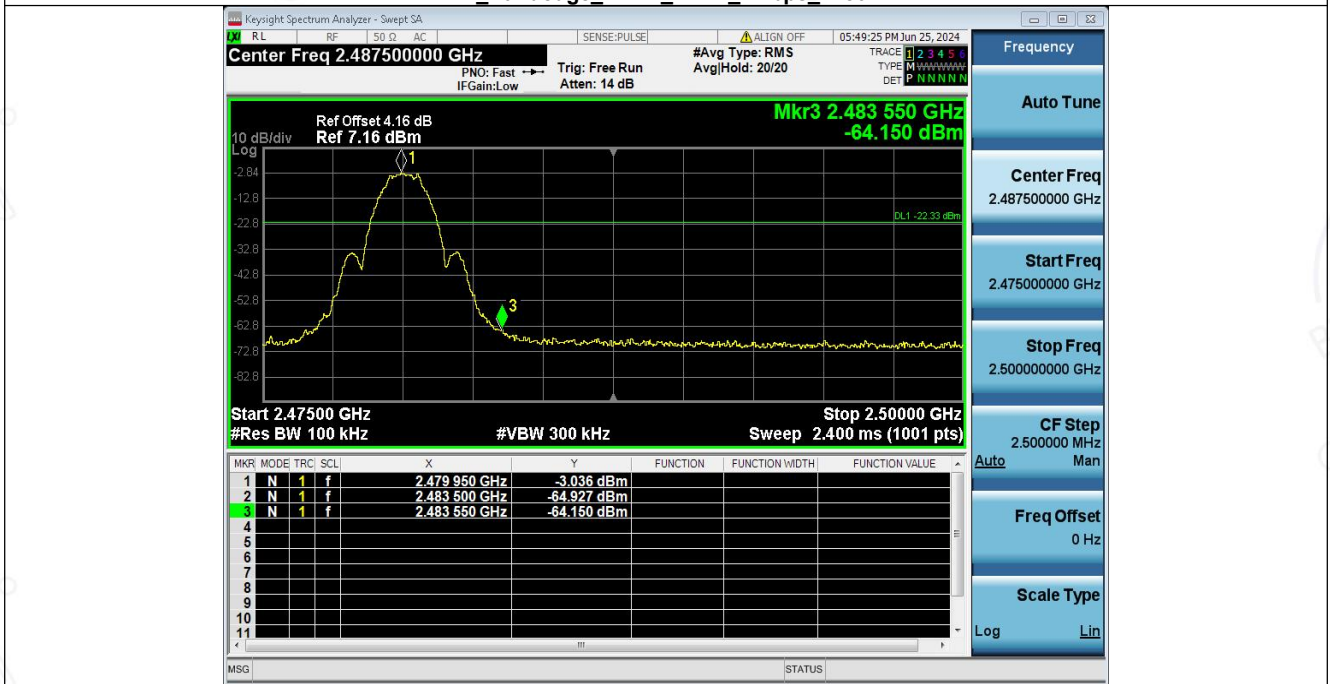


1_Reference_Level_NVNT_ANT1_2Mbps_2480





2_Bandedge_NVNT_ANT1_2Mbps_2480



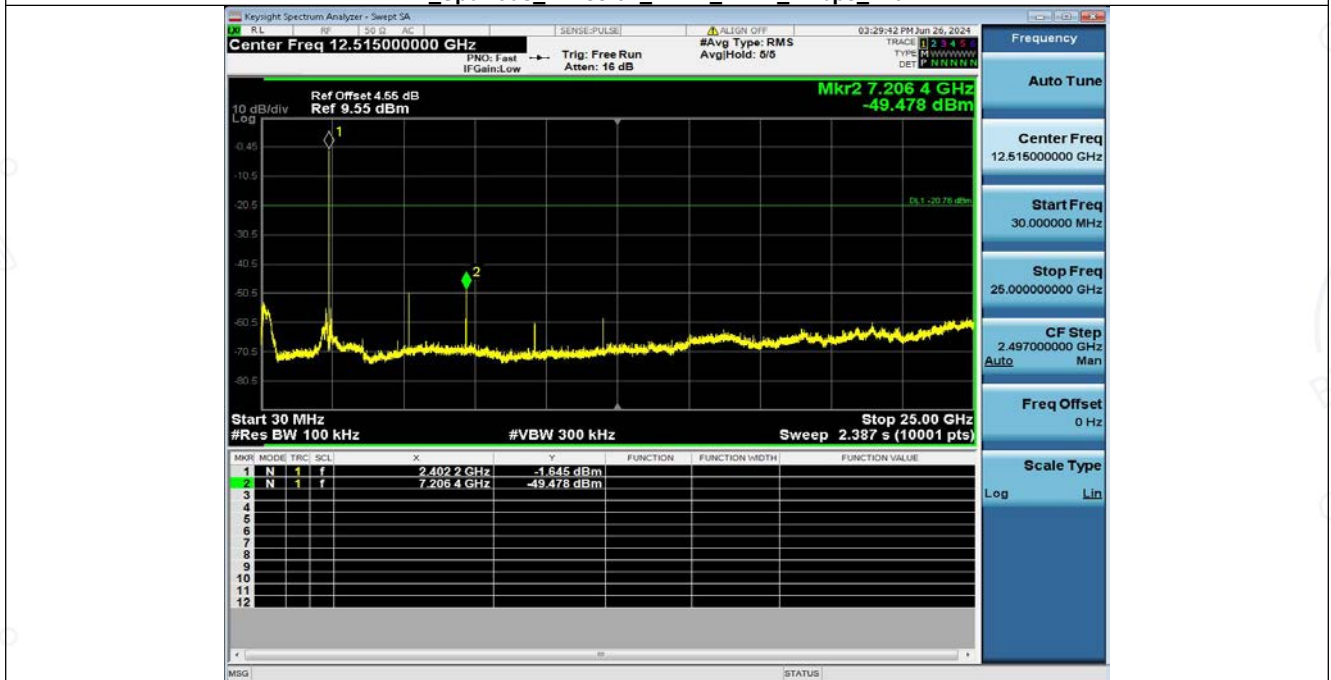
7. Spurious Emission

Condition	Antenna	Rate	TX_Frequency(MHz)	Spurious MAX.Value(dBm)	Limit	Result
NVNT	ANT1	1Mbps	2402.00	-49.478	-20.761	Pass
NVNT	ANT1	1Mbps	2440.00	-45.247	-21.635	Pass
NVNT	ANT1	1Mbps	2480.00	-42.356	-21.999	Pass
NVNT	ANT1	2Mbps	2402.00	-37.971	-21.759	Pass
NVNT	ANT1	2Mbps	2440.00	-50.991	-22.265	Pass
NVNT	ANT1	2Mbps	2480.00	-54.721	-22.327	Pass

1 Reference_Level_NVNT_ANT1_1Mbps_2402



2 Spurious_Emission_NVNT_ANT1_1Mbps_2402



1 Reference_Level_NVNT_ANT1_1Mbps_2440



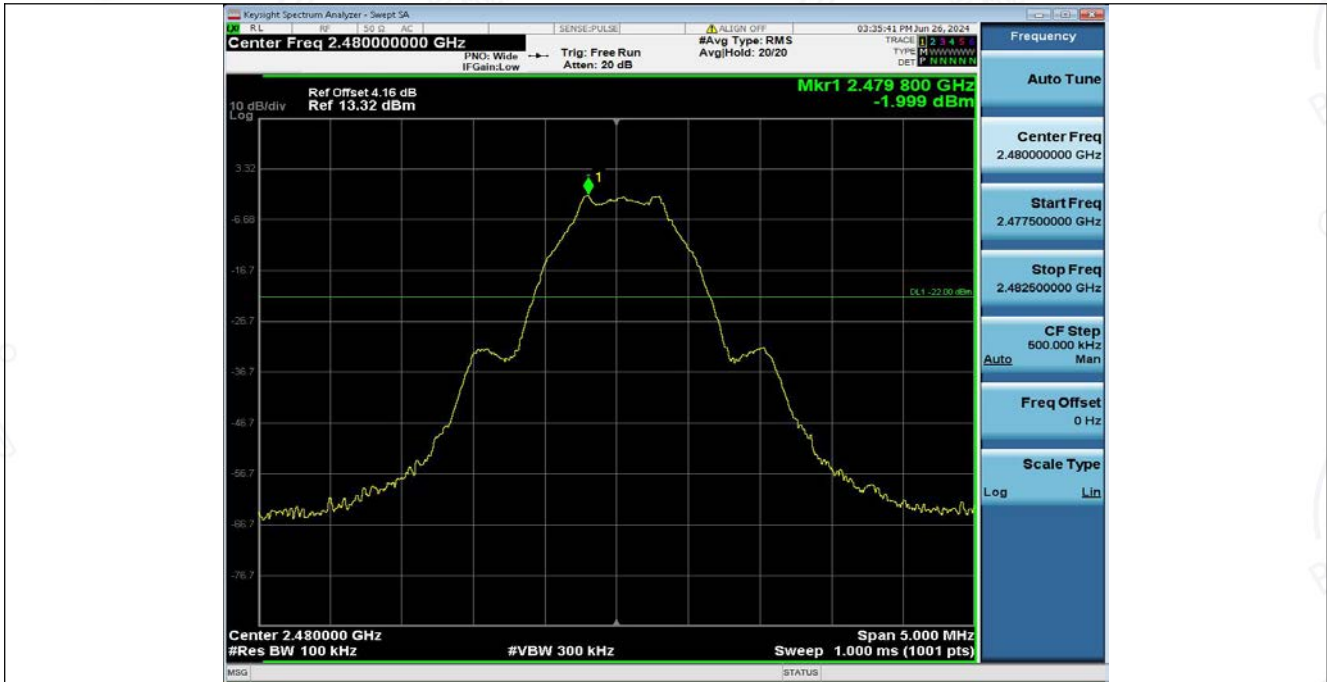


2_Spurious_Emission_NVNT_ANT1_1Mbps_2440

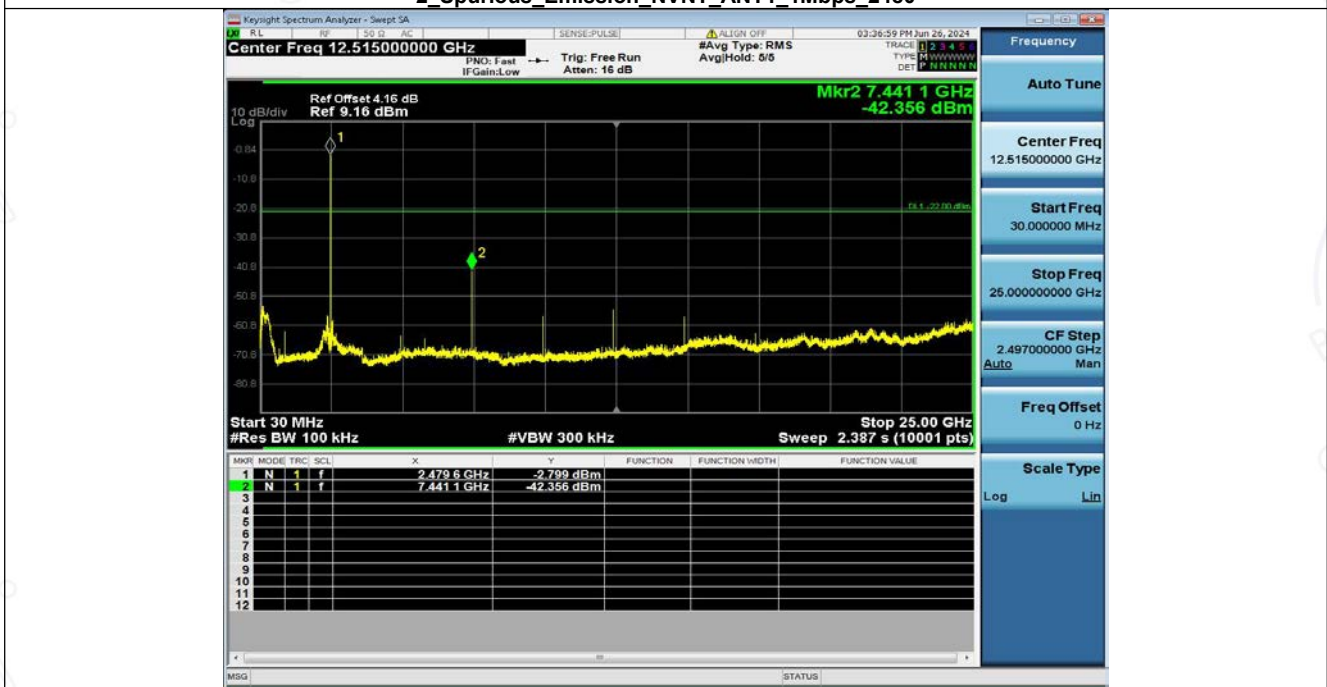


1_Reference_Level_NVNT_ANT1_1Mbps_2480





2_Spurious_Emission_NVNT_ANT1_1Mbps_2480

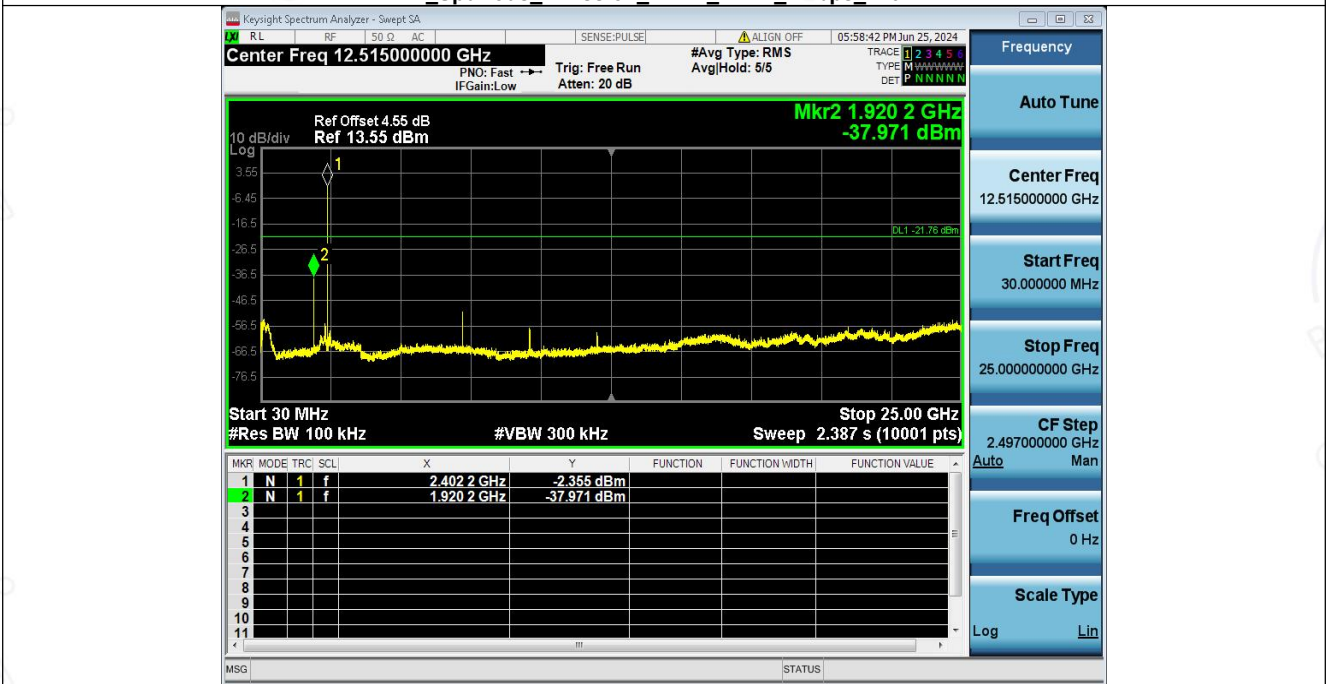


1_Reference_Level_NVNT_ANT1_2Mbps_2402





2_Spurious_Emission_NVNT_ANT1_2Mbps_2402

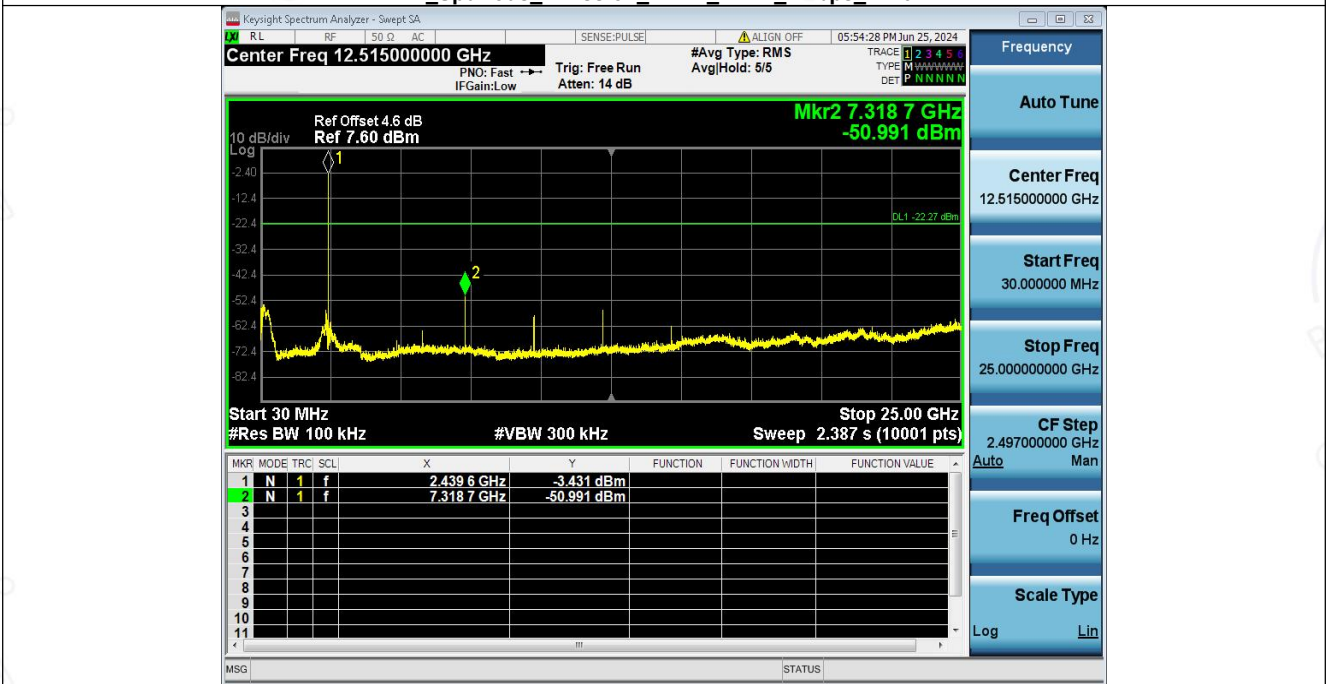


1_Reference_Level_NVNT_ANT1_2Mbps_2440





2_Spurious_Emission_NVNT_ANT1_2Mbps_2440



1_Reference_Level_NVNT_ANT1_2Mbps_2480





2_Spurious_Emission_NVNT_ANT1_2Mbps_2480

