

Appendix

Test Data

for BTEK241227139A02E01

Start date	2025/2/13	Finish date	2025/2/13
Temperature	22.0℃	Humidity	44%
RF specifications	BLE-1M2M	Test Engineer	Zora



Table of Contents

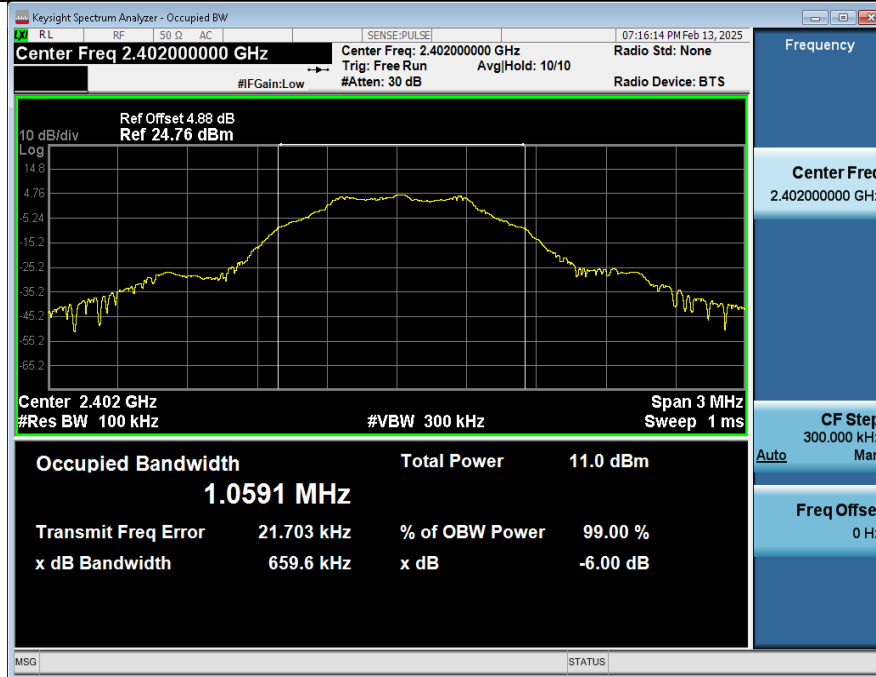
1. -6dB Bandwidth.....	3
2. 99% Occupied Bandwidth	6
3. Duty Cycle.....	9
4. Peak Output Power	12
5. Power Spectral Density.....	15
6. Bandedge.....	18
7. Spurious Emission.....	22



1. -6dB Bandwidth

Condition	Antenna	Rate	Frequency (MHz)	-6dB BW(kHz)	limit(kHz)	Result
NVNT	ANT1	1Mbps	2402.00	659.63	500	Pass
NVNT	ANT1	1Mbps	2440.00	675.65	500	Pass
NVNT	ANT1	1Mbps	2480.00	665.46	500	Pass
NVNT	ANT1	2Mbps	2402.00	1130.32	500	Pass
NVNT	ANT1	2Mbps	2440.00	1136.32	500	Pass
NVNT	ANT1	2Mbps	2480.00	1133.48	500	Pass

-6dB_Bandwidth_NVNT_ANT1_1Mbps_2402

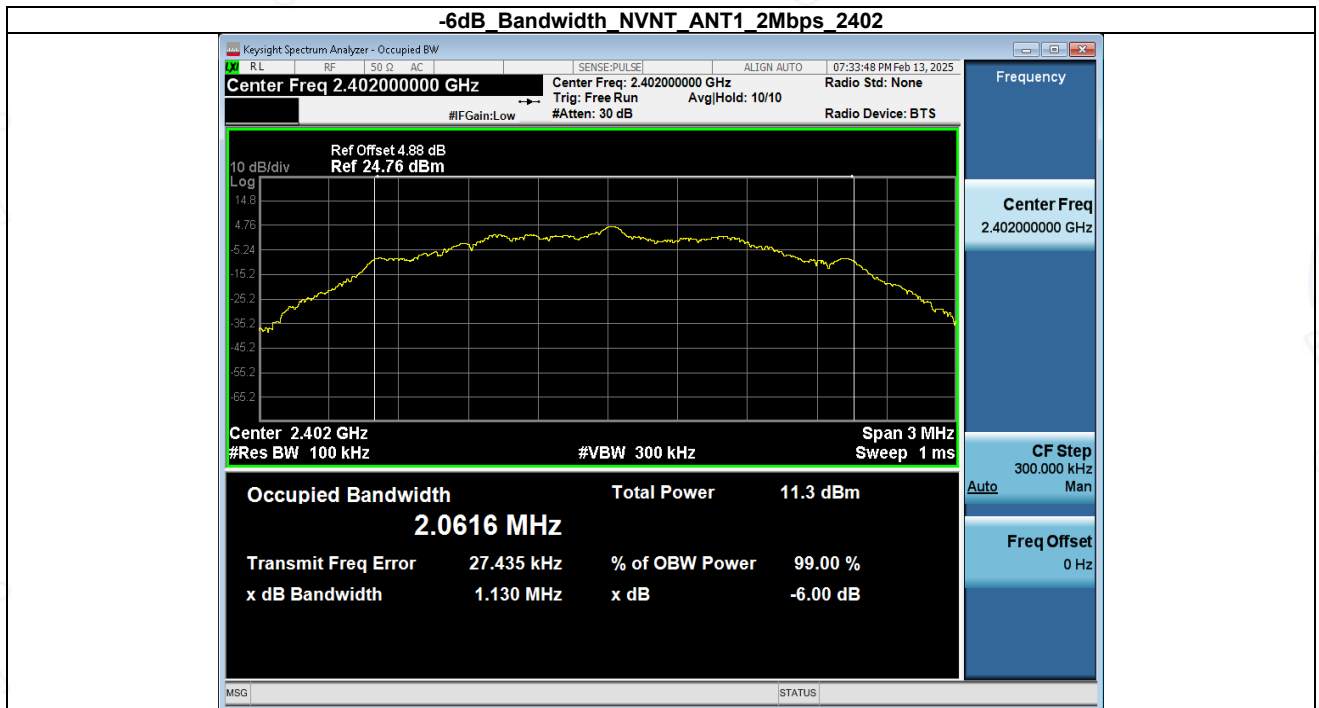


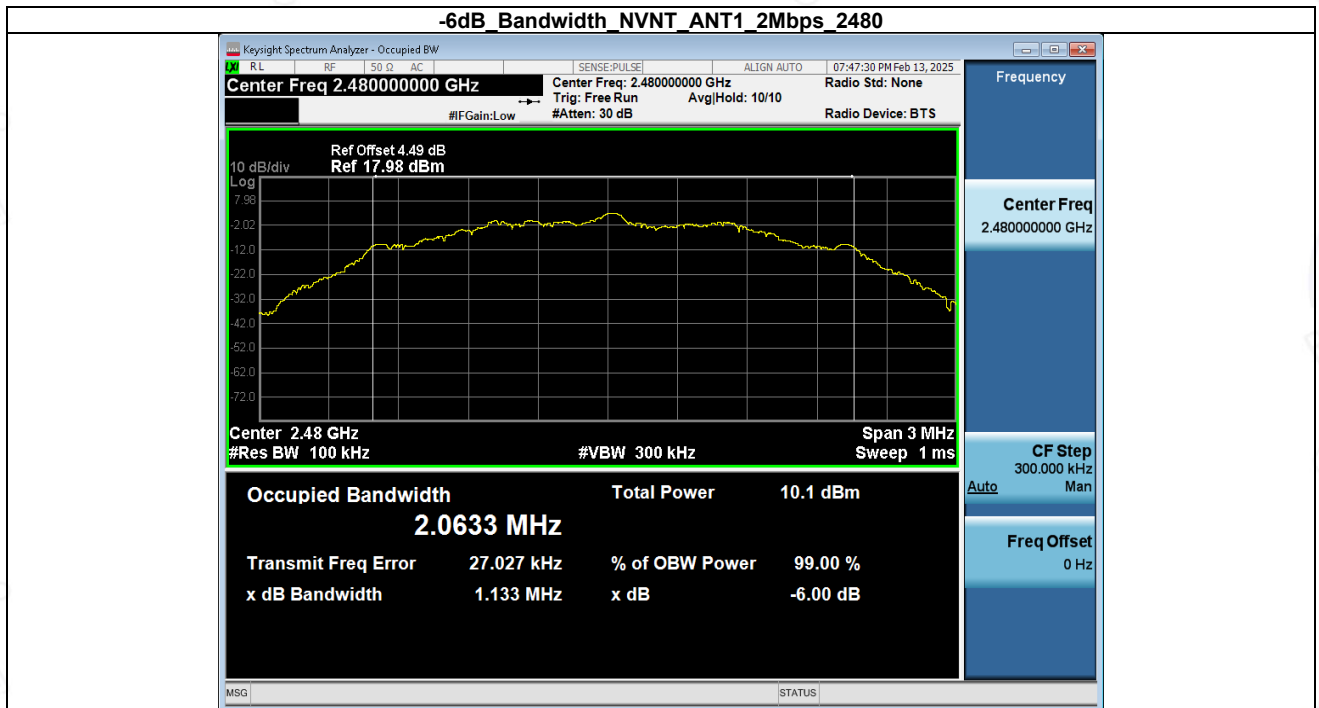
-6dB_Bandwidth_NVNT_ANT1_1Mbps_2440



-6dB_Bandwidth_NVNT_ANT1_1Mbps_2480



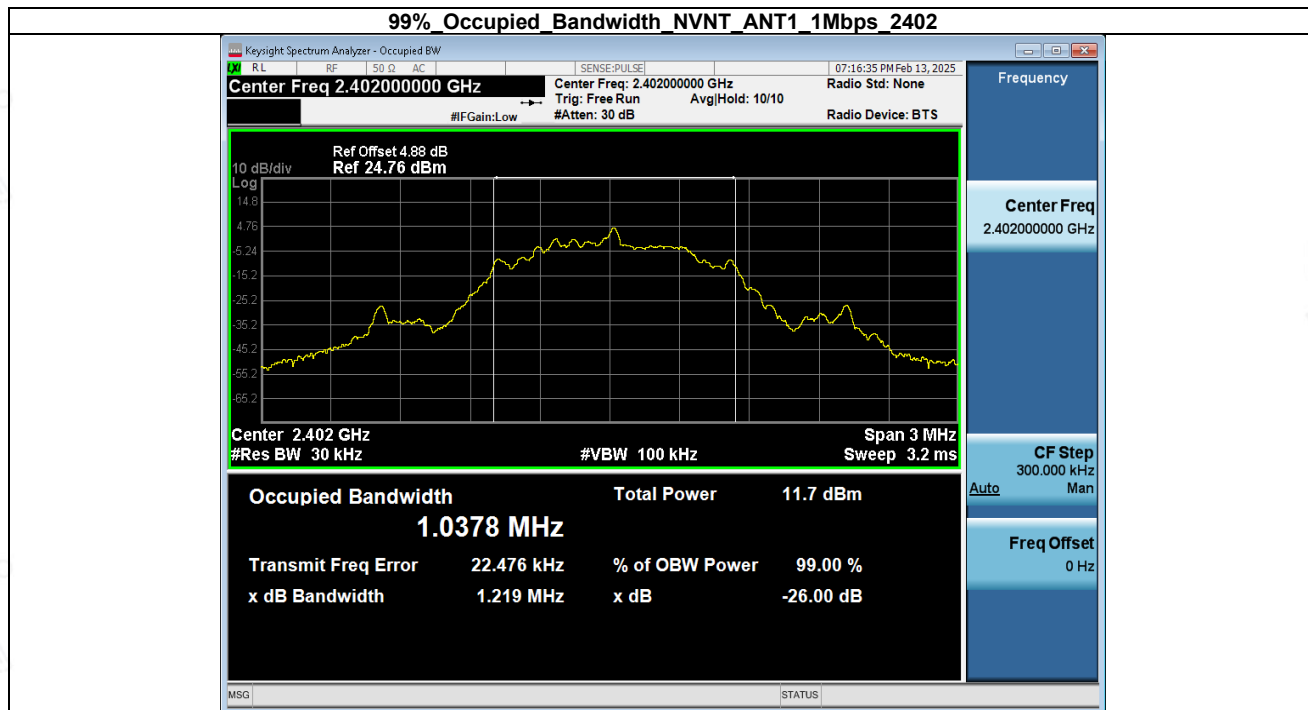




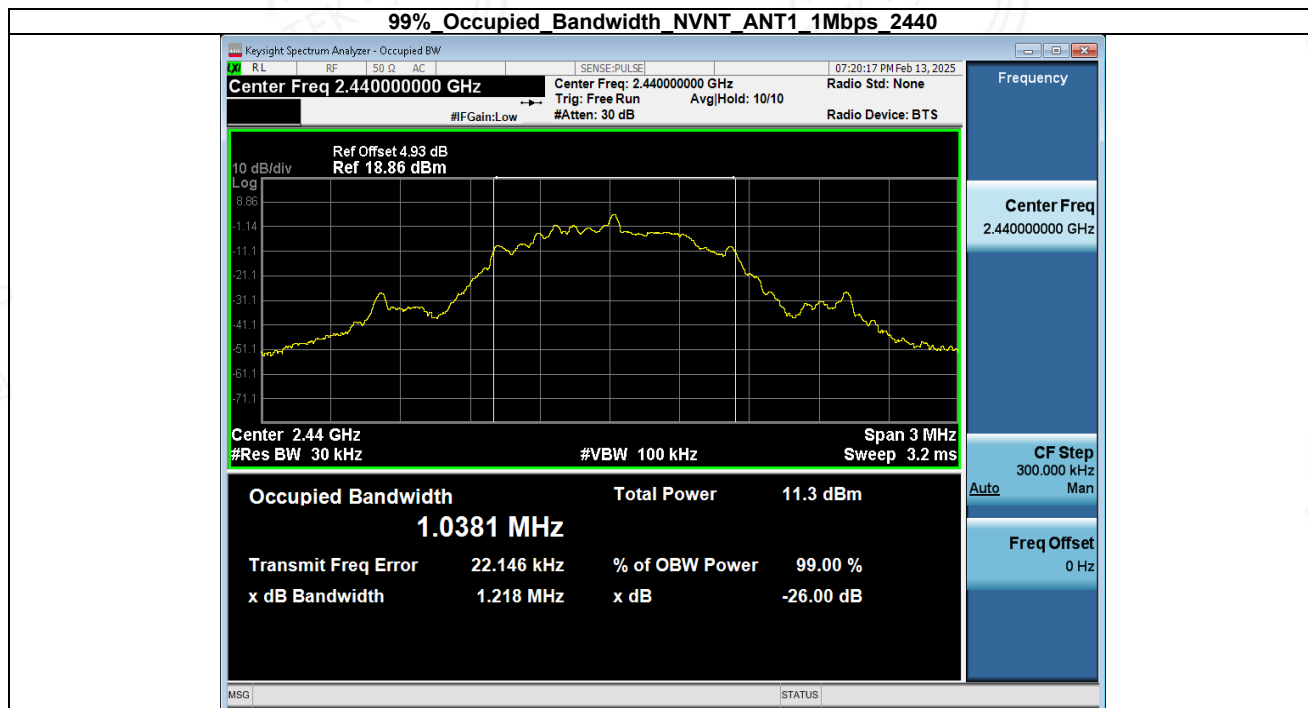
2. 99% Occupied Bandwidth

Condition	Antenna	Rate	Frequency (MHz)	99% BW(MHz)
NVNT	ANT1	1Mbps	2402.00	1.038
NVNT	ANT1	1Mbps	2440.00	1.038
NVNT	ANT1	1Mbps	2480.00	1.039
NVNT	ANT1	2Mbps	2402.00	2.053
NVNT	ANT1	2Mbps	2440.00	2.053
NVNT	ANT1	2Mbps	2480.00	2.056

99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2402

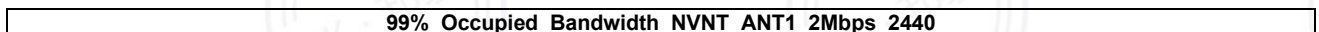
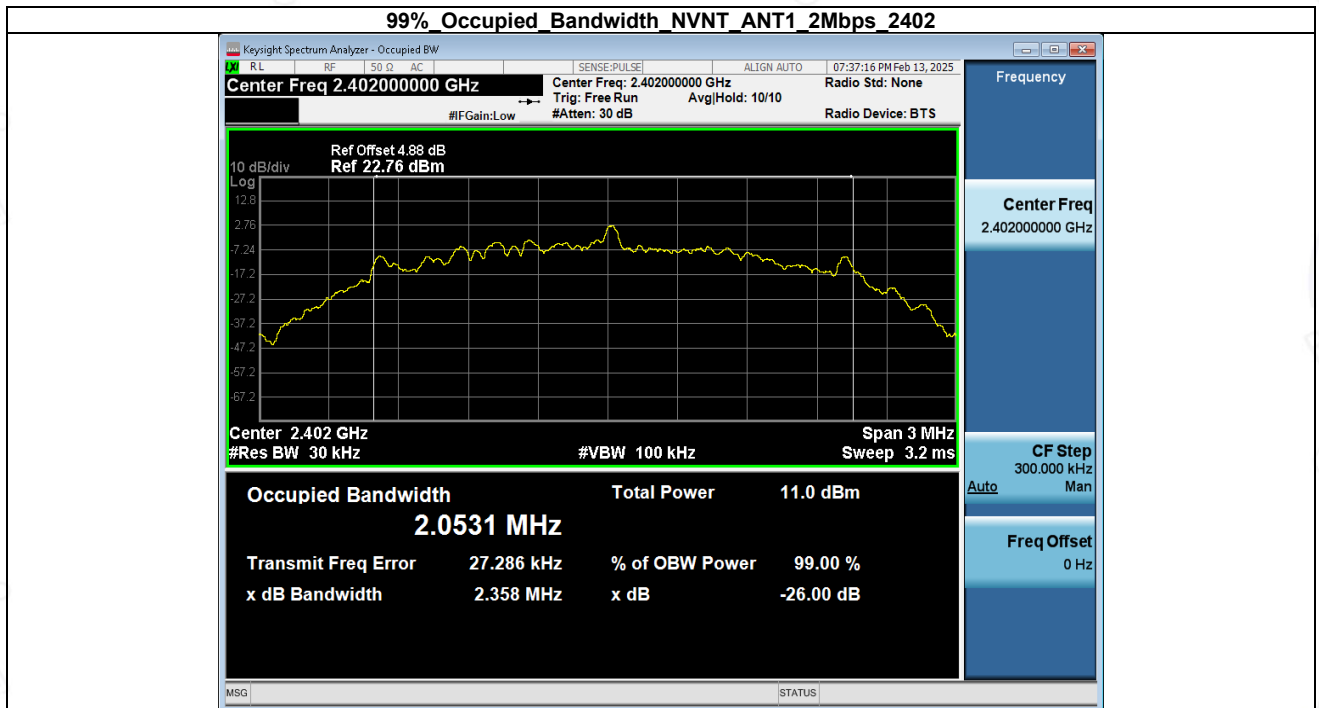
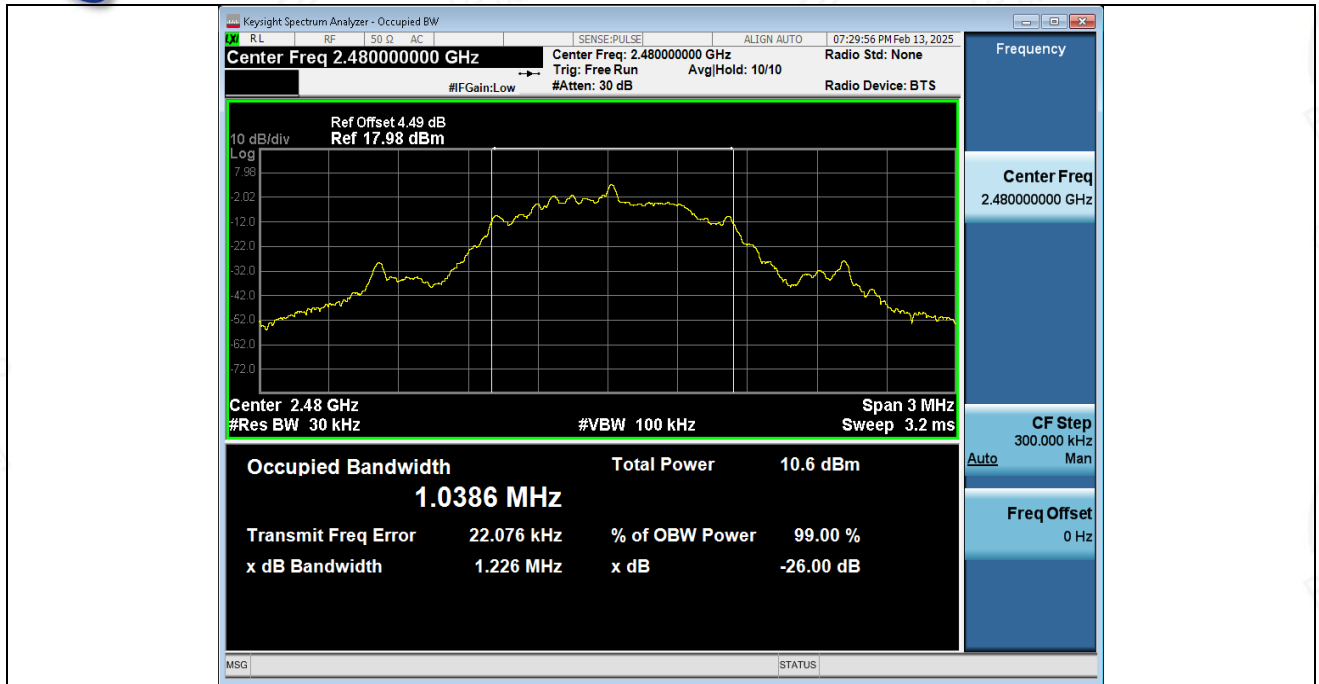


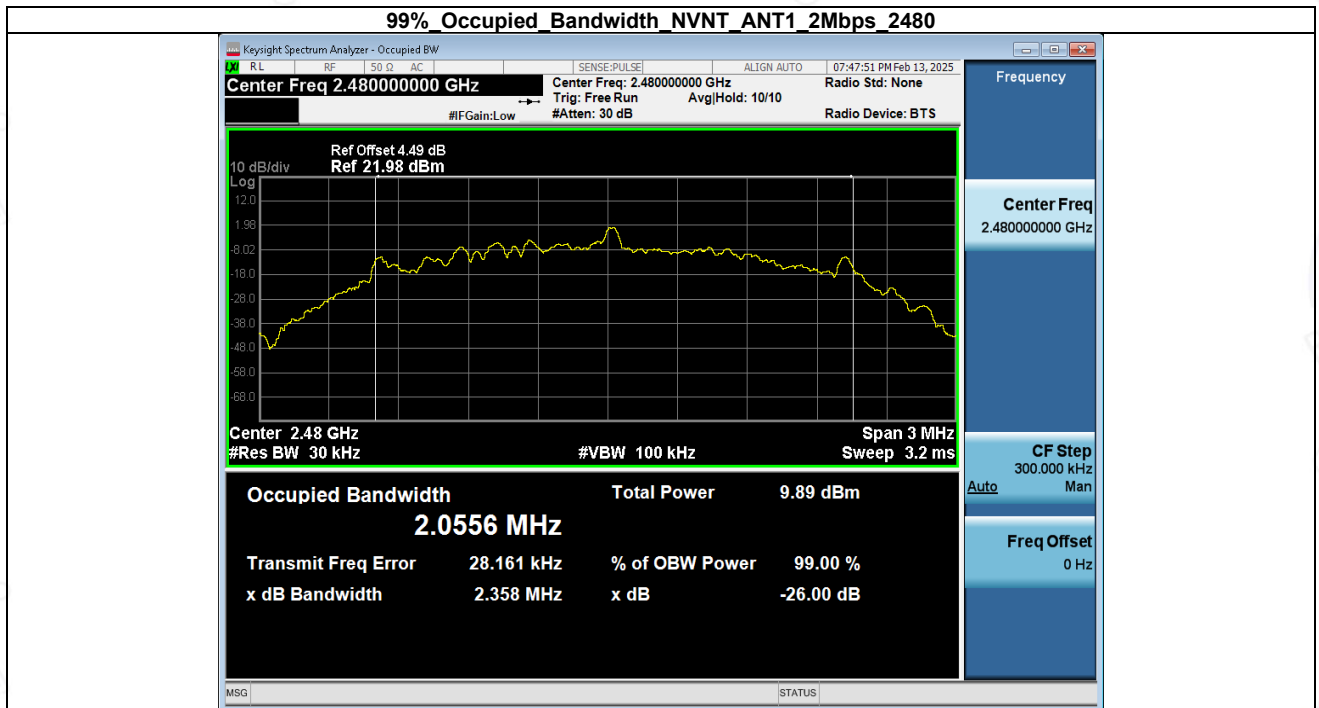
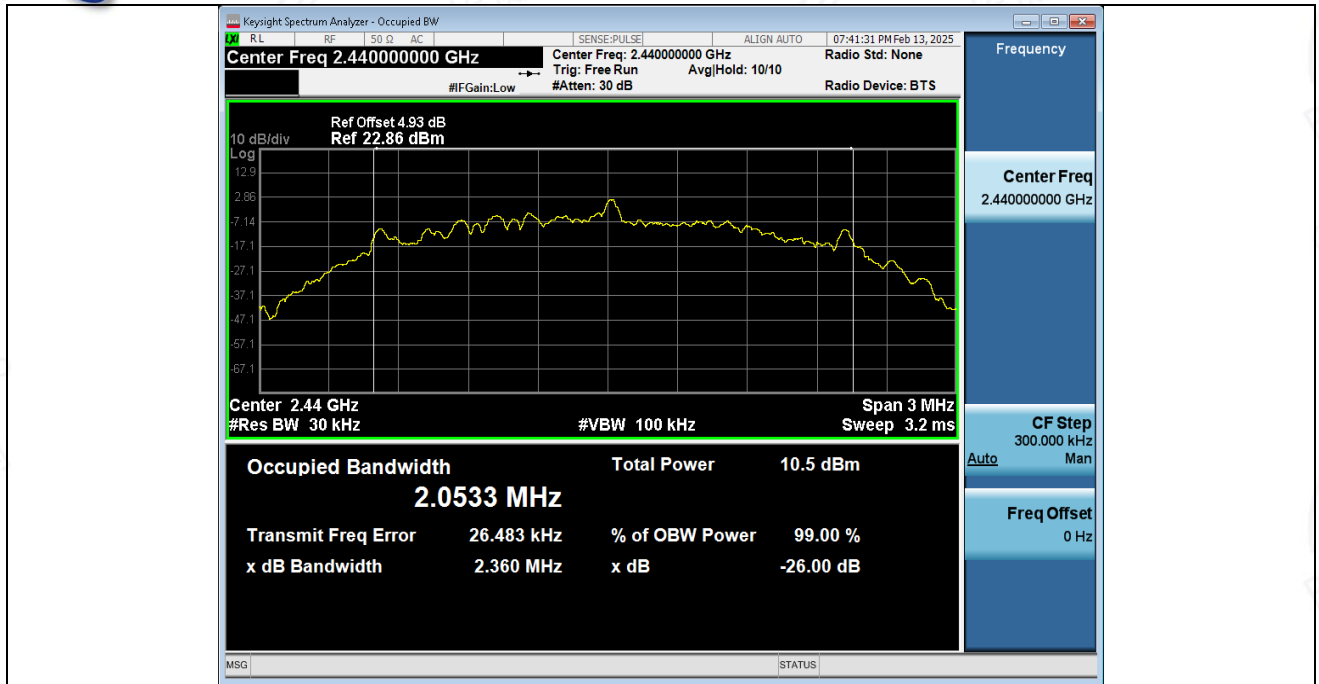
99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2440



99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2480



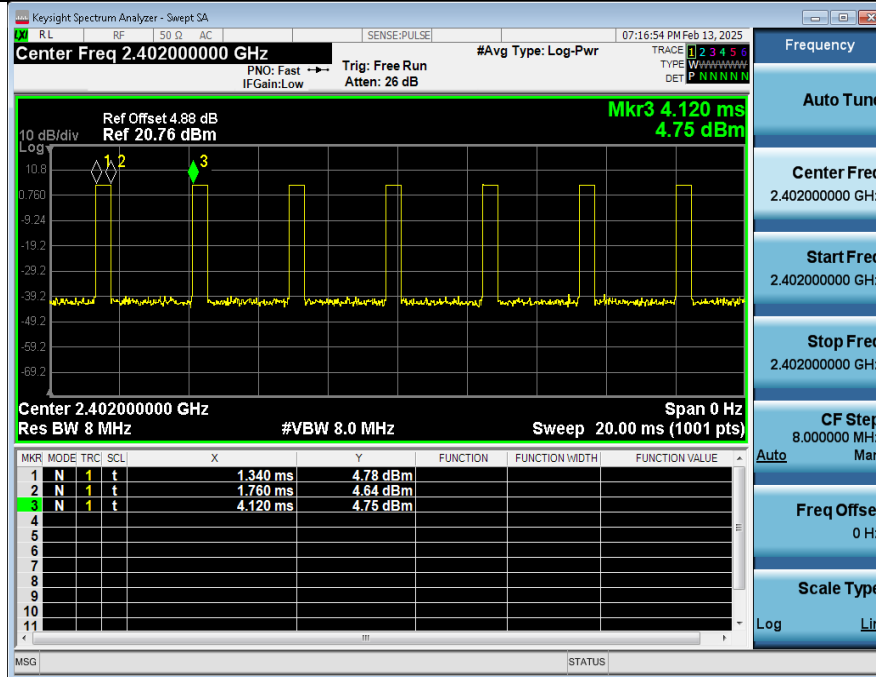




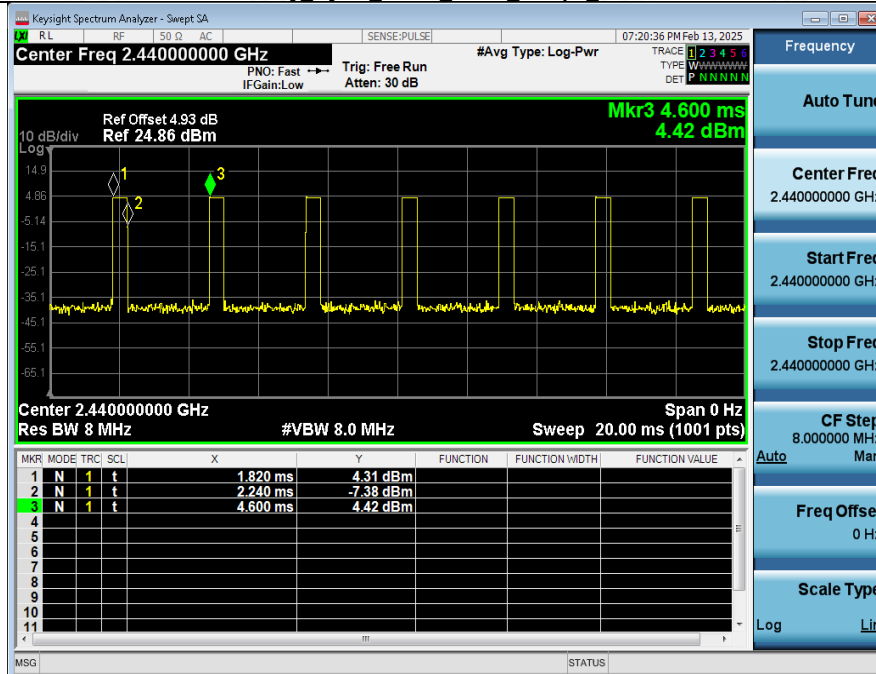
3. Duty Cycle

Condition	Antenna	Rate	Frequency (MHz)	Dutycycle(%)	Duty_factor
NVNT	ANT1	1Mbps	2402.00	15.11	8.21
NVNT	ANT1	1Mbps	2440.00	15.11	8.21
NVNT	ANT1	1Mbps	2480.00	15.11	8.21
NVNT	ANT1	2Mbps	2402.00	8.53	10.69
NVNT	ANT1	2Mbps	2440.00	8.53	10.69
NVNT	ANT1	2Mbps	2480.00	7.81	11.07

Duty Cycle_NVNT_ANT1_1Mbps_2402

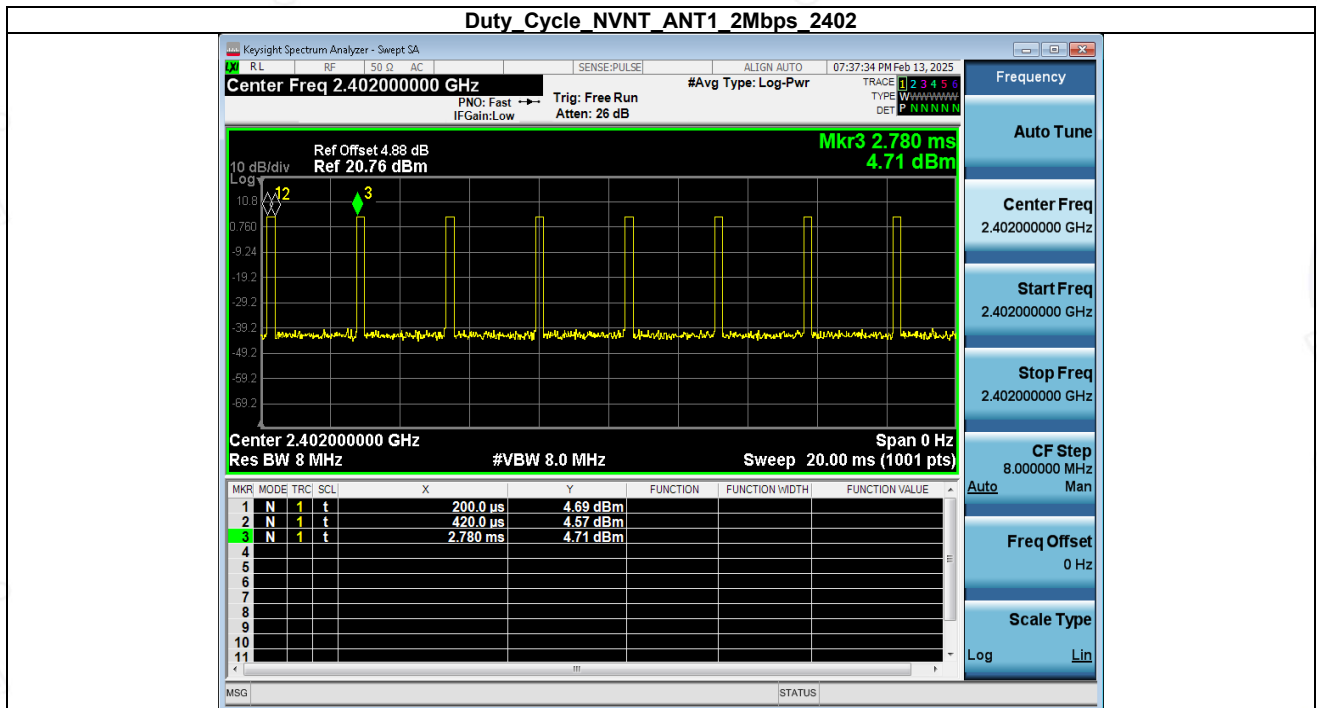
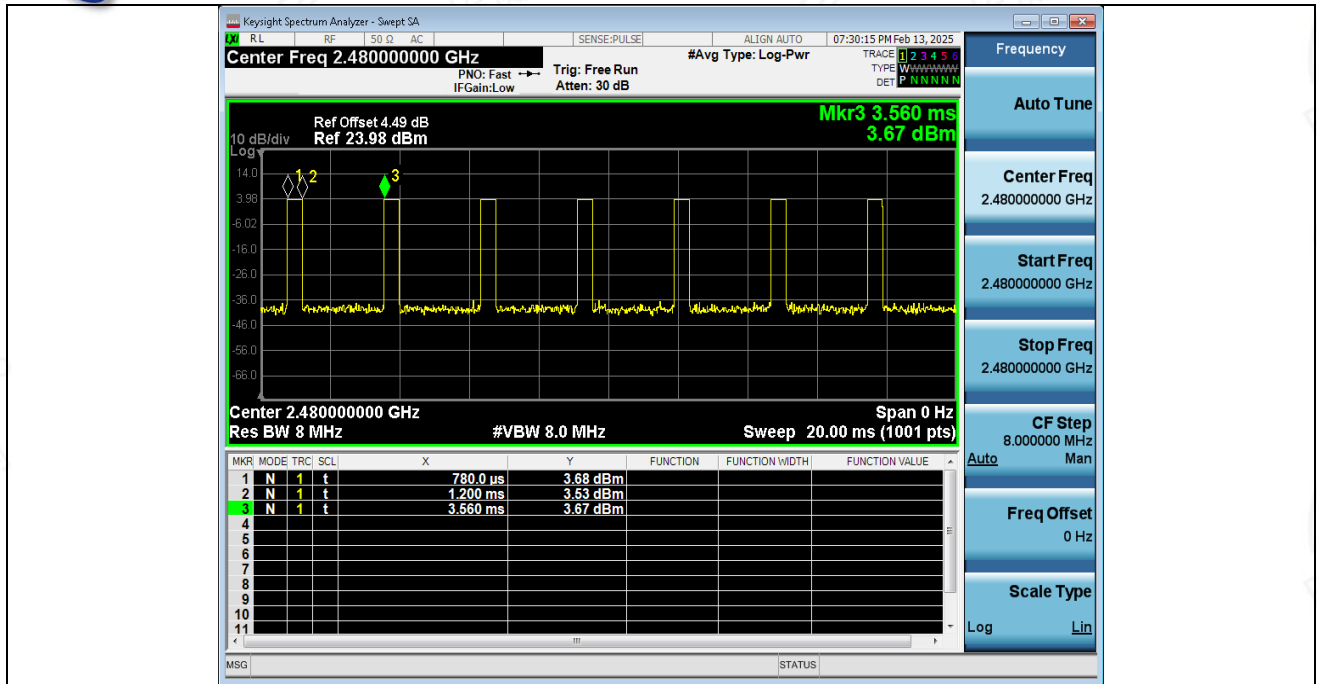


Duty Cycle_NVNT_ANT1_1Mbps_2440



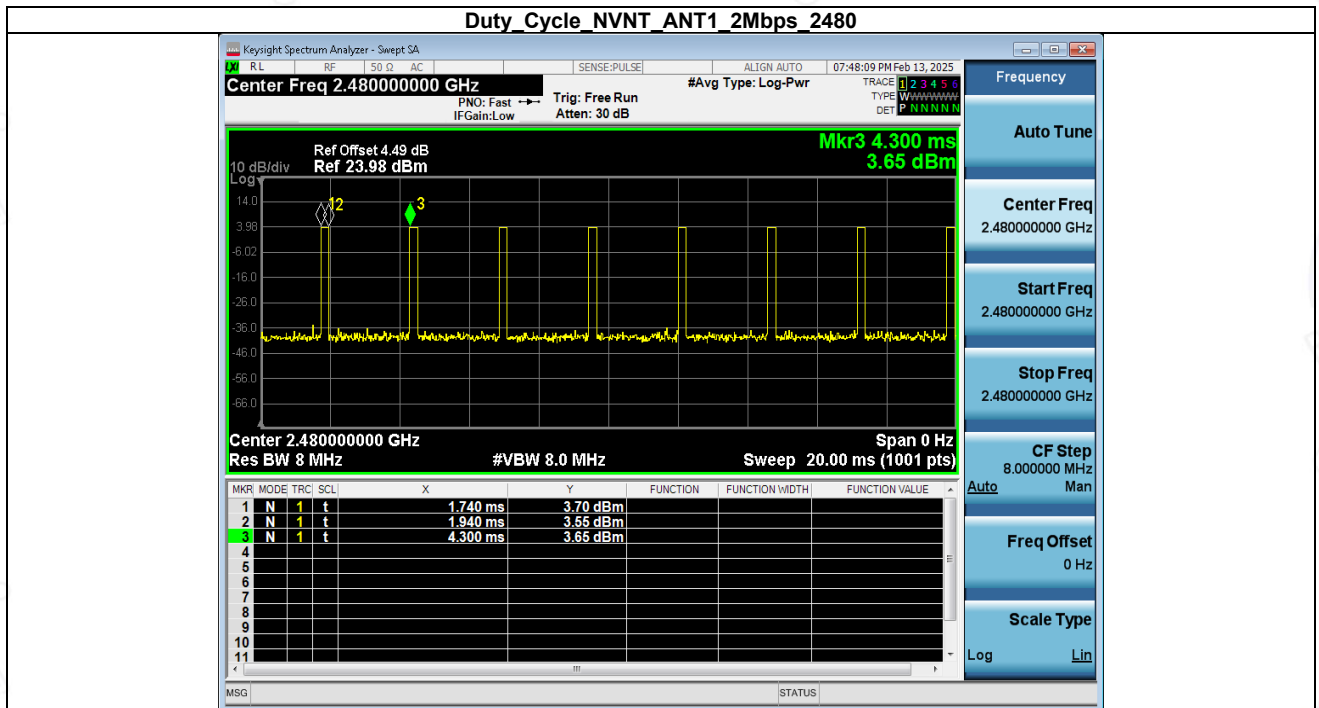
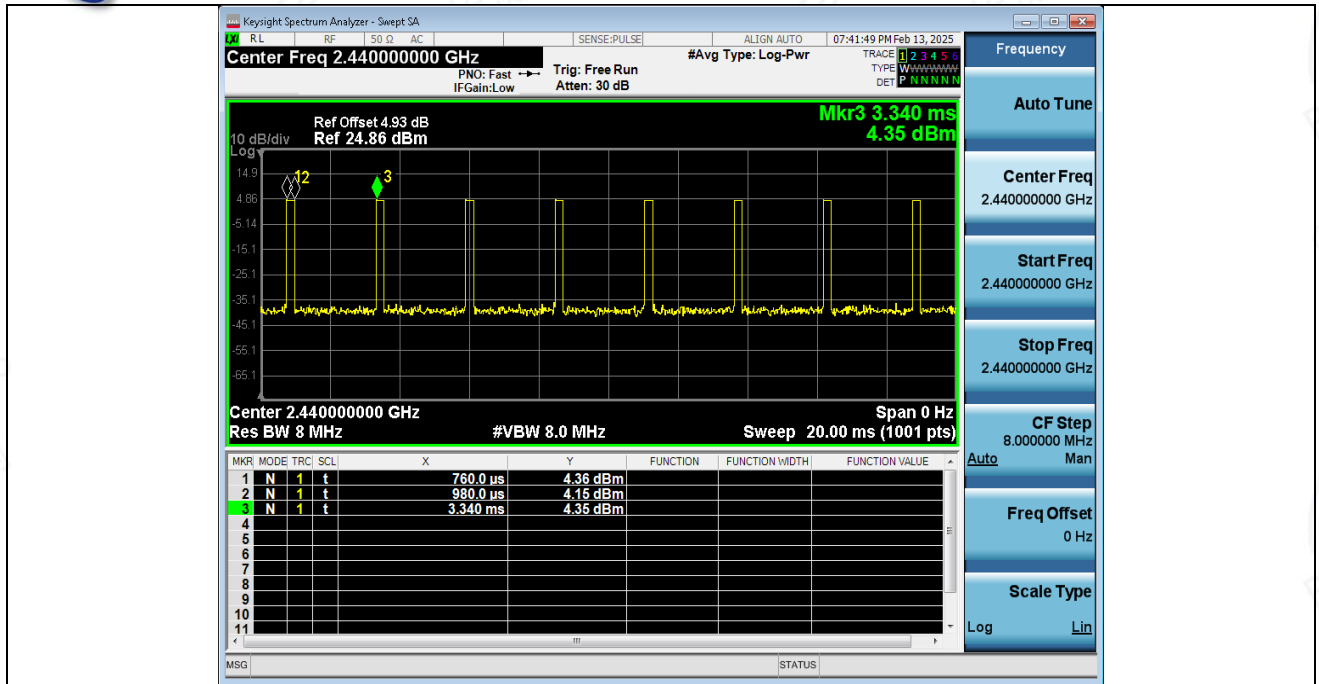
Duty Cycle_NVNT_ANT1_1Mbps_2480





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	4.73	2.97	1000	Pass
NVNT	ANT1	1Mbps	2440.00	4.27	2.68	1000	Pass
NVNT	ANT1	1Mbps	2480.00	3.63	2.31	1000	Pass
NVNT	ANT1	2Mbps	2402.00	4.66	2.92	1000	Pass
NVNT	ANT1	2Mbps	2440.00	4.24	2.66	1000	Pass
NVNT	ANT1	2Mbps	2480.00	3.61	2.30	1000	Pass

Peak Output Power NVNT ANT1 1Mbps 2402

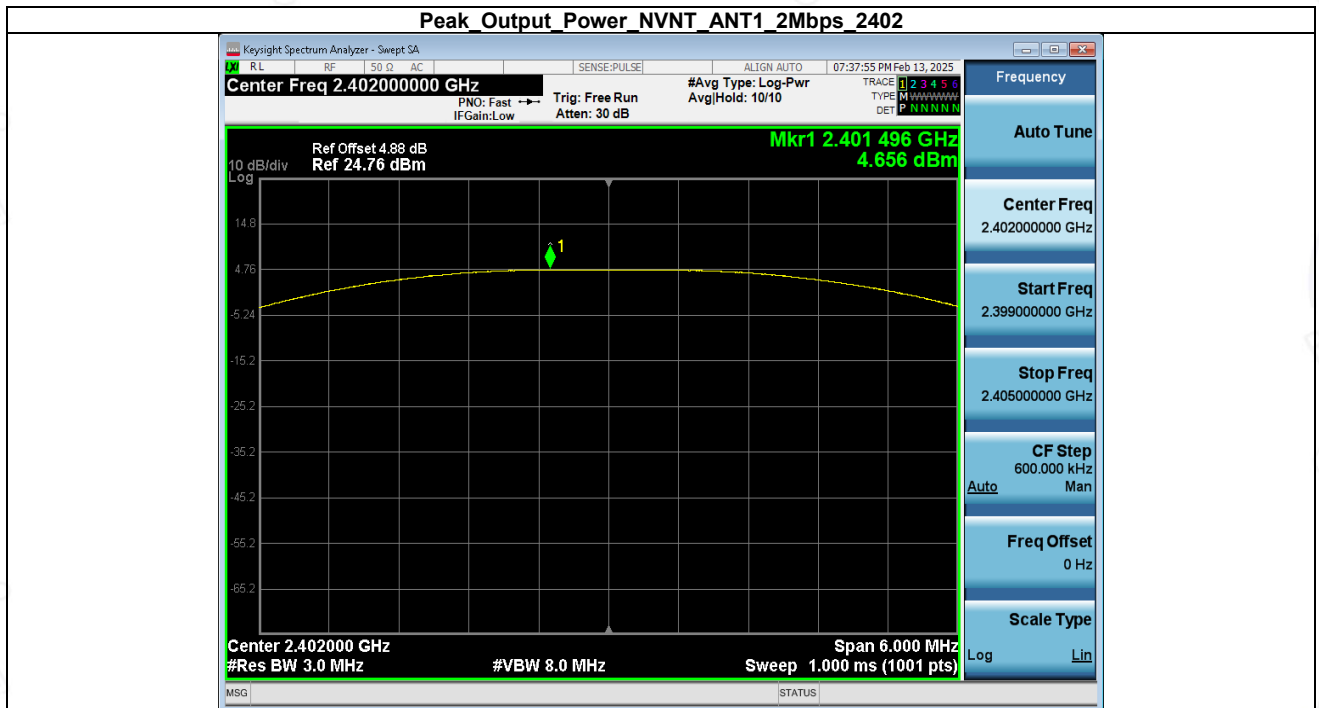
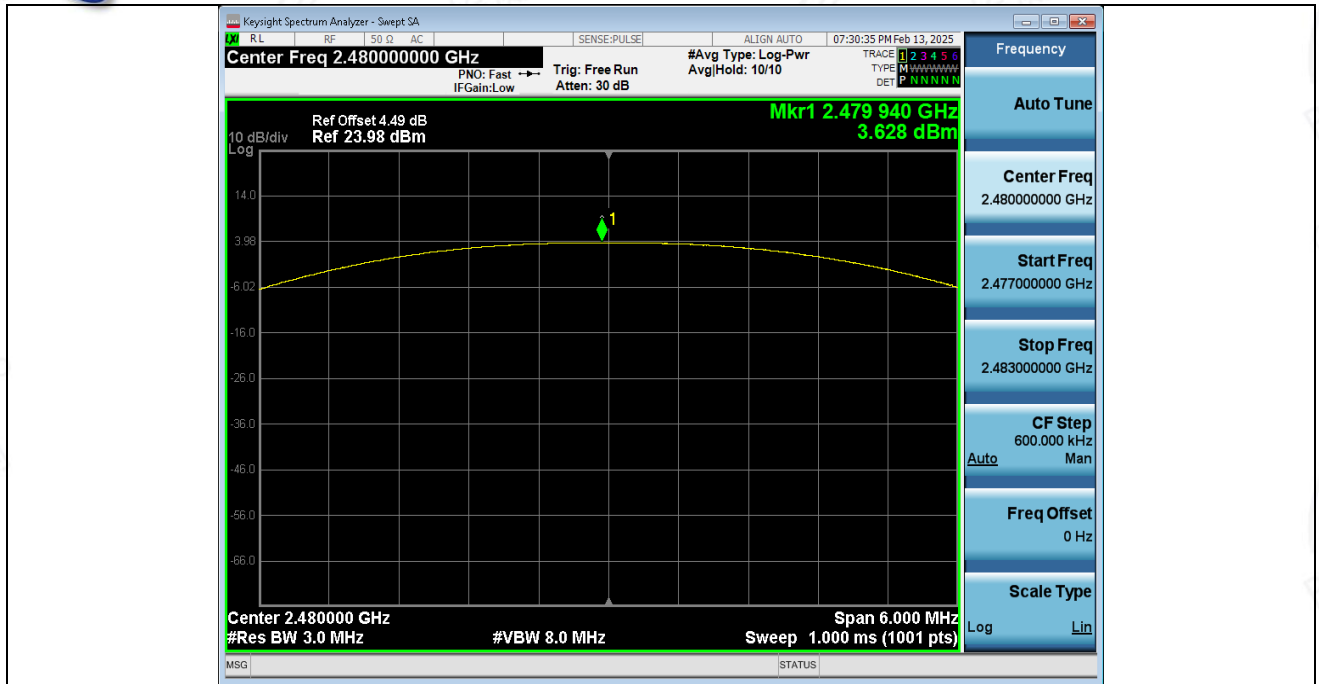


Peak Output Power NVNT ANT1 1Mbps 2440



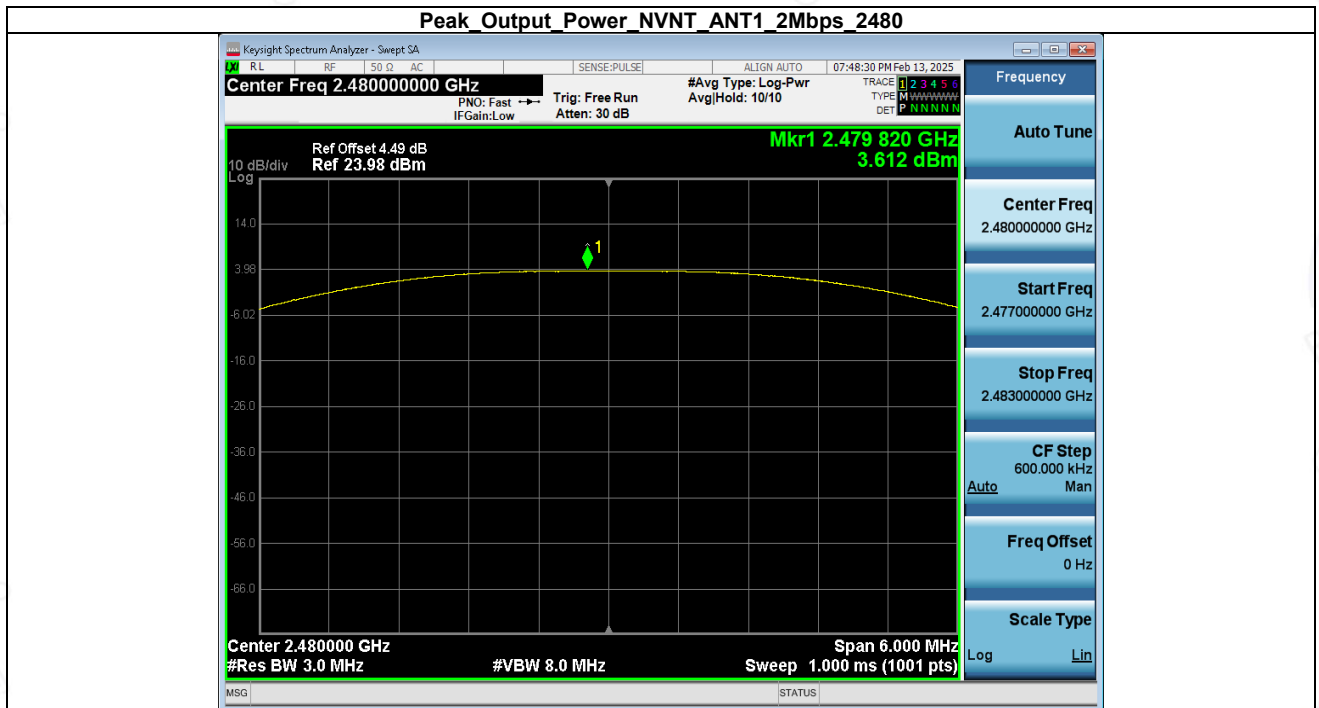
Peak Output Power NVNT ANT1 1Mbps 2480





Peak_Output_Power_NVNT_ANT1_2Mbps_2440

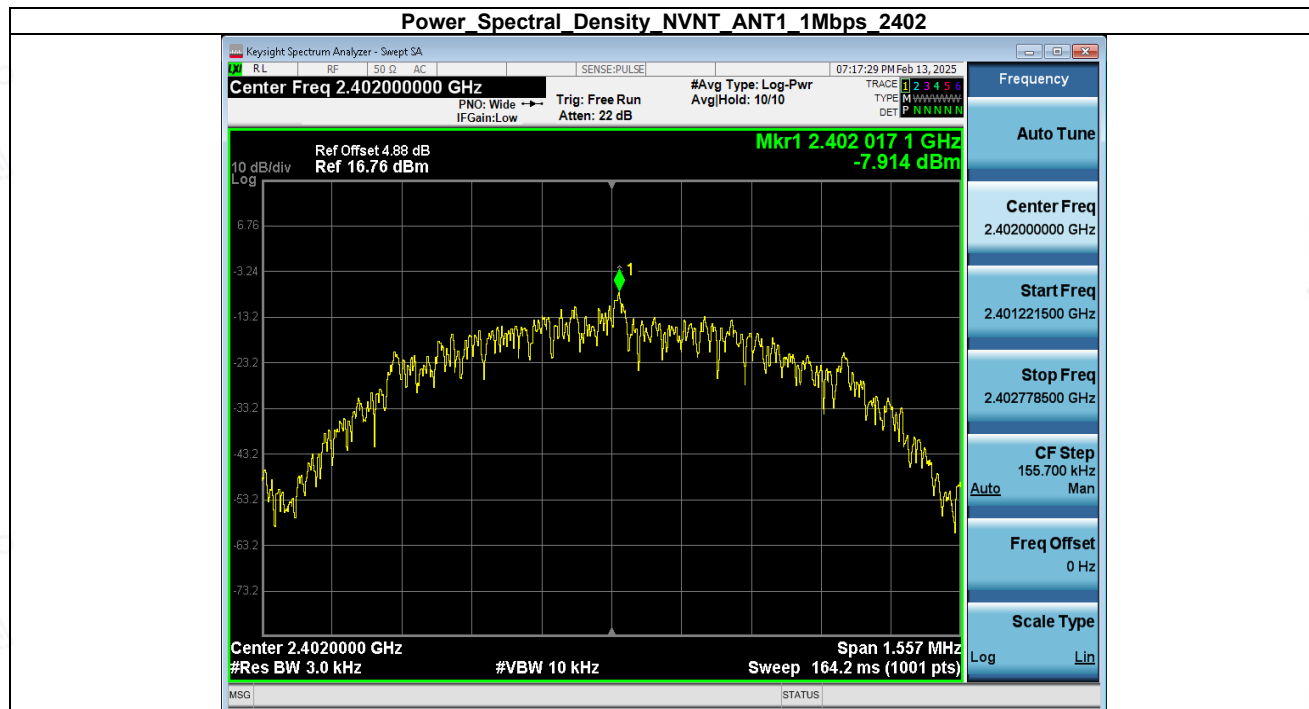




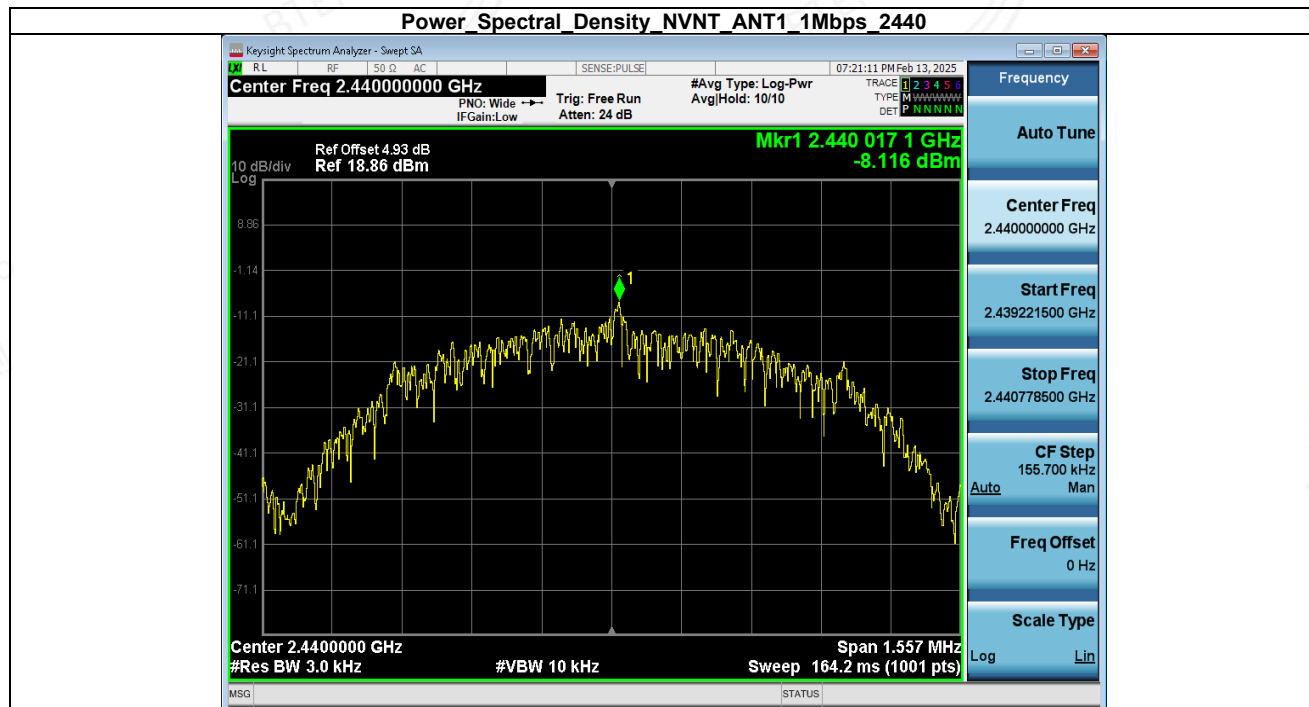
5. Power Spectral Density

Condition	Antenna	Rate	Frequency (MHz)	Power Spectral Density(dBm/3kHz)	Limit(dBm/3kHz)	Result
NVNT	ANT1	1Mbps	2402.00	-7.91	8	Pass
NVNT	ANT1	1Mbps	2440.00	-8.12	8	Pass
NVNT	ANT1	1Mbps	2480.00	-9.12	8	Pass
NVNT	ANT1	2Mbps	2402.00	-12.31	8	Pass
NVNT	ANT1	2Mbps	2440.00	-12.60	8	Pass
NVNT	ANT1	2Mbps	2480.00	-13.49	8	Pass

Power Spectral Density_NVNT_ANT1_1Mbps_2402

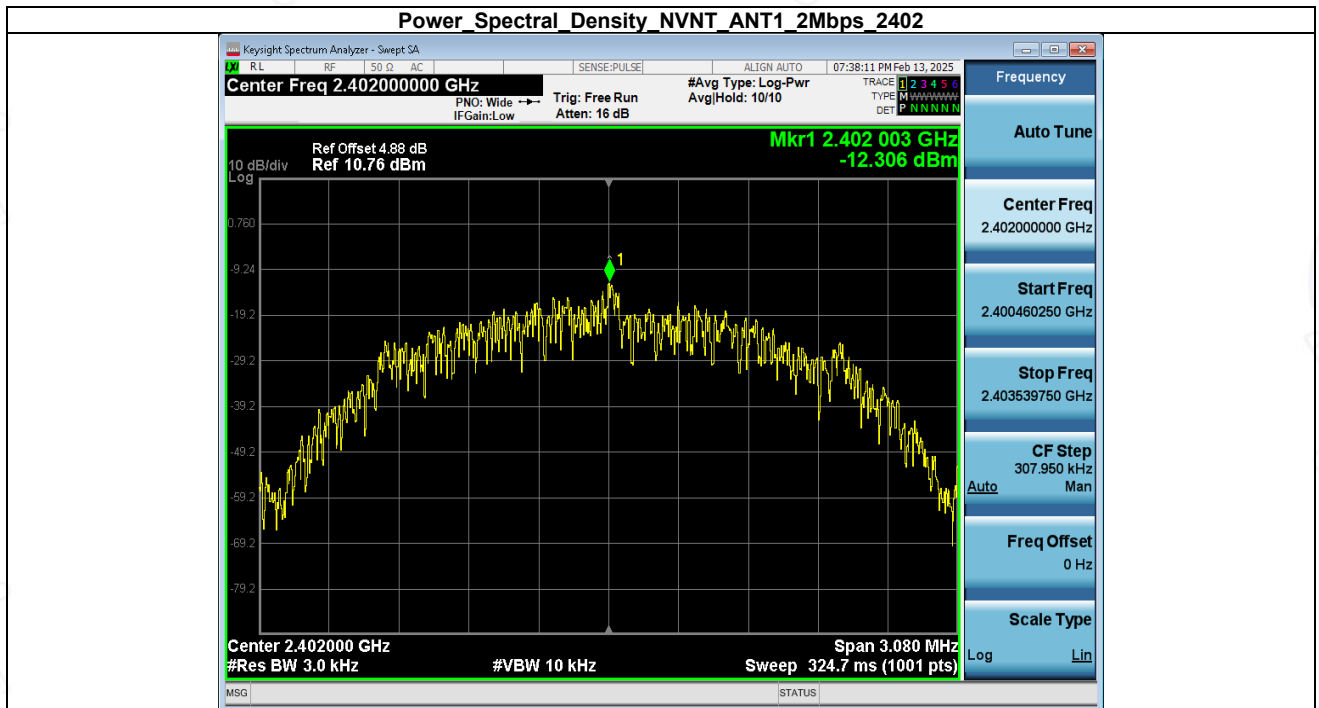
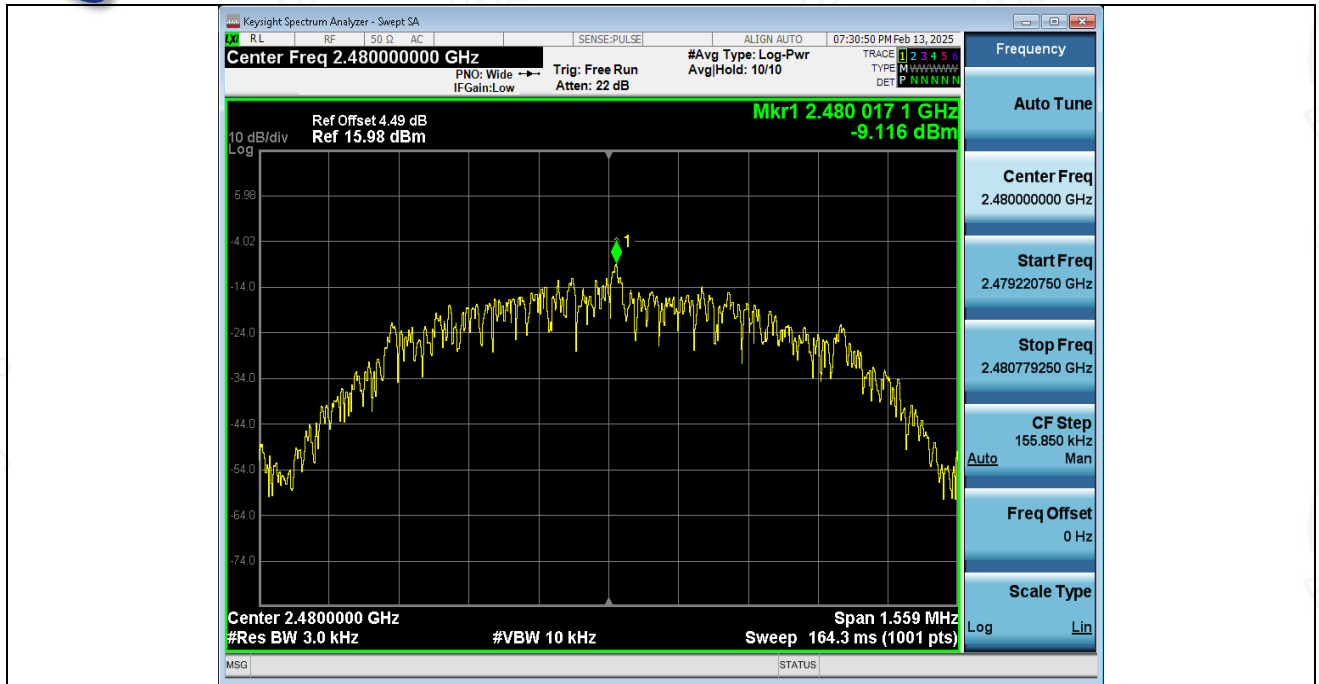


Power Spectral Density_NVNT_ANT1_1Mbps_2440



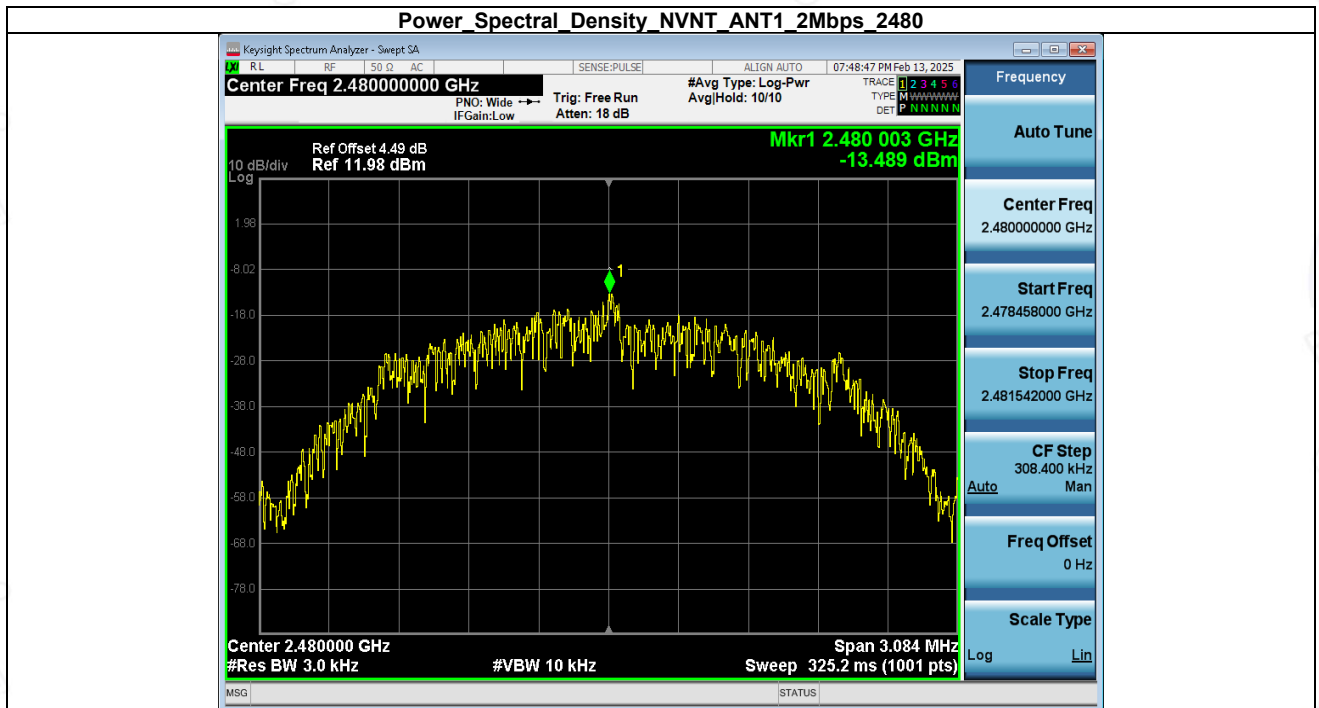
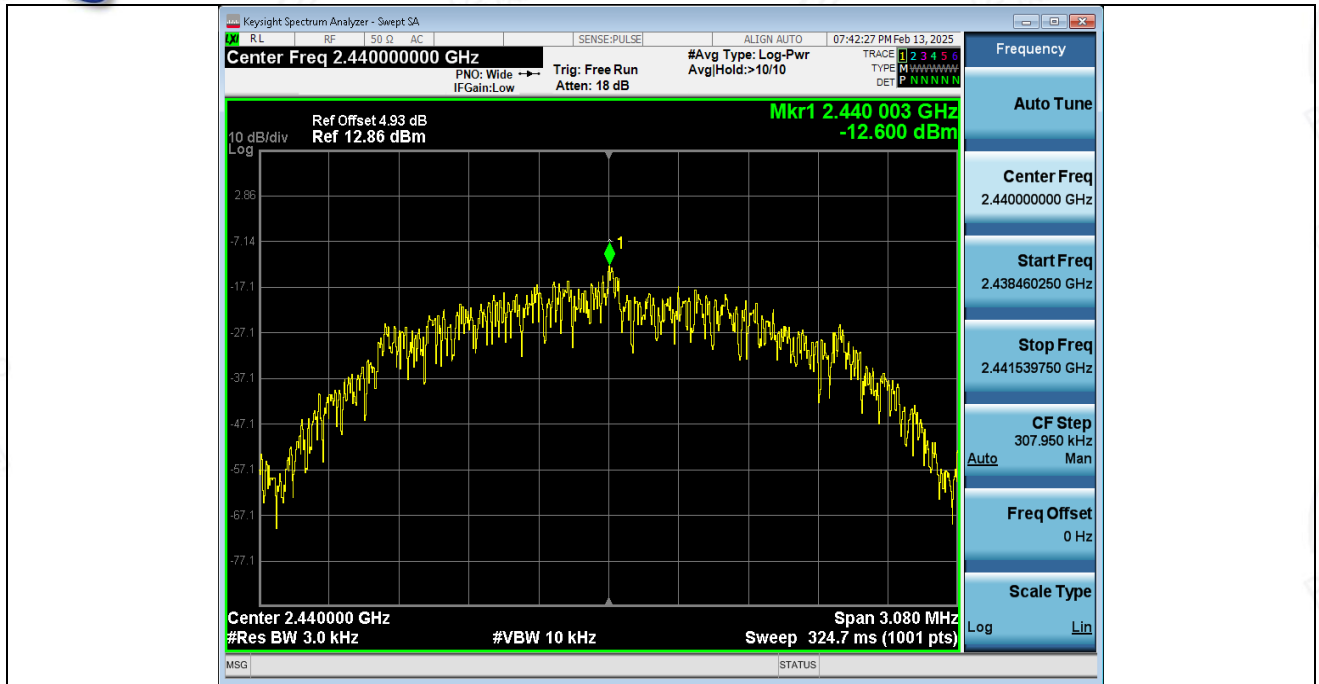
Power Spectral Density_NVNT_ANT1_1Mbps_2480





Power Spectral Density_NVNT_ANT1_2Mbps_2440

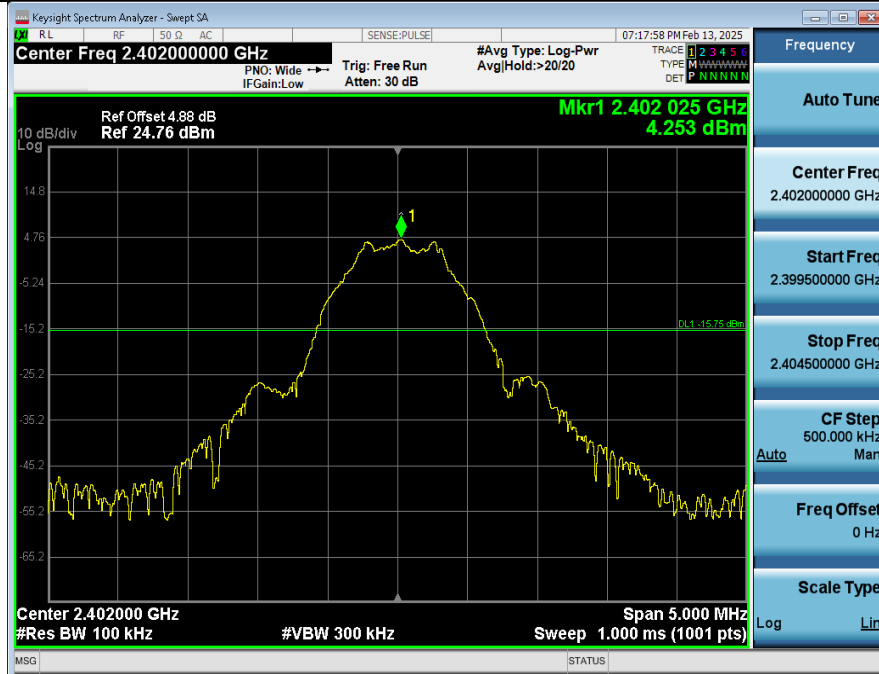




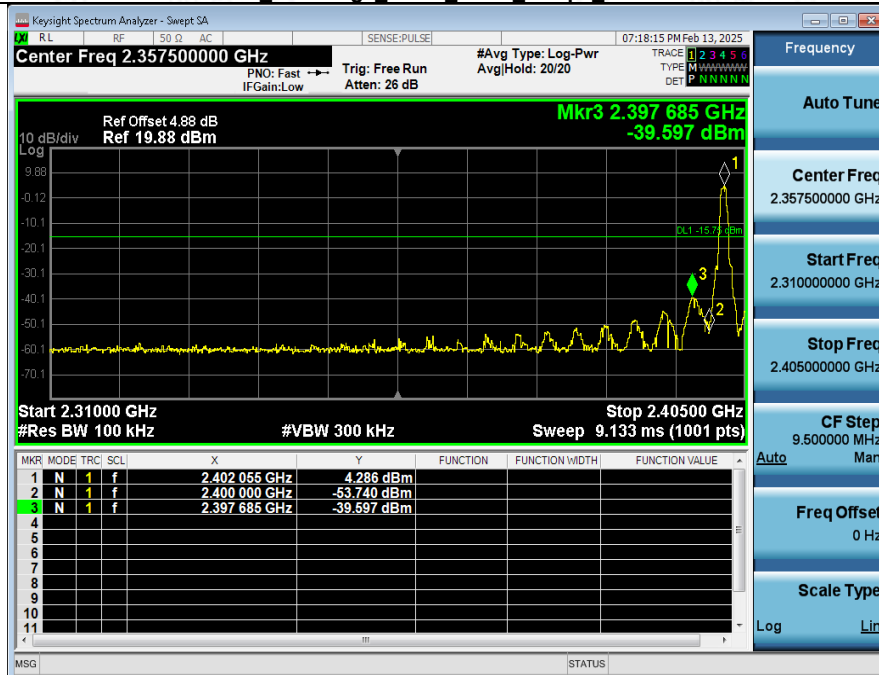
6. Bandedge

Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark_freq(MHz)	Ref_level(dBm)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	1Mbps	2402.00	2397.685	4.253	-39.597	-15.747	Pass
NVNT	ANT1	1Mbps	2480.00	2483.750	3.020	-40.700	-16.980	Pass
NVNT	ANT1	2Mbps	2402.00	2399.965	4.069	-27.769	-15.931	Pass
NVNT	ANT1	2Mbps	2480.00	2483.525	2.975	-40.821	-17.025	Pass

1_Reference_Level_NVNT_ANT1_1Mbps_2402



2_Bandedge_NVNT_ANT1_1Mbps_2402

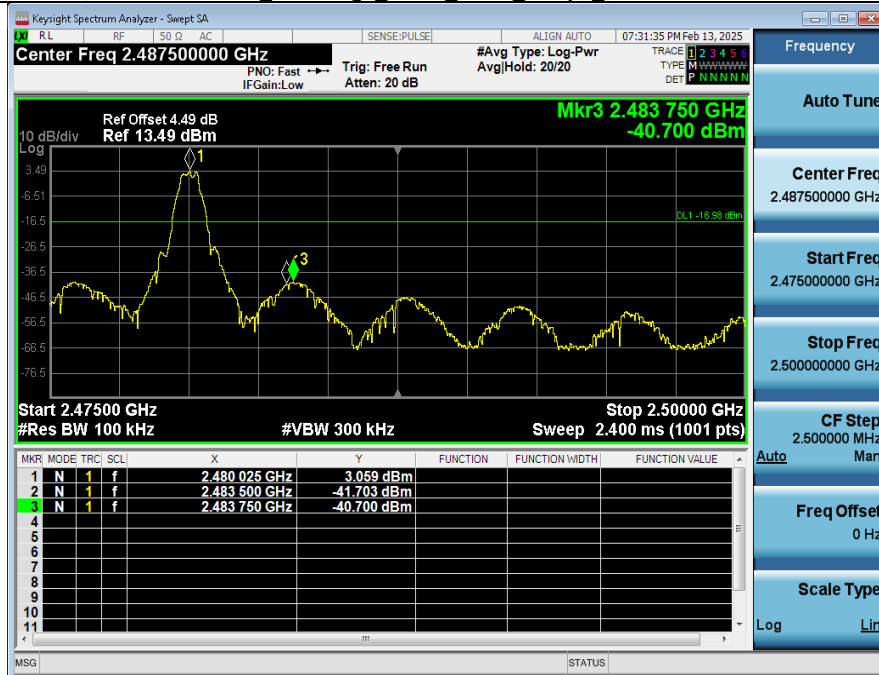


1_Reference_Level_NVNT_ANT1_1Mbps_2480





2_Bandedge_NVNT_ANT1_1Mbps_2480

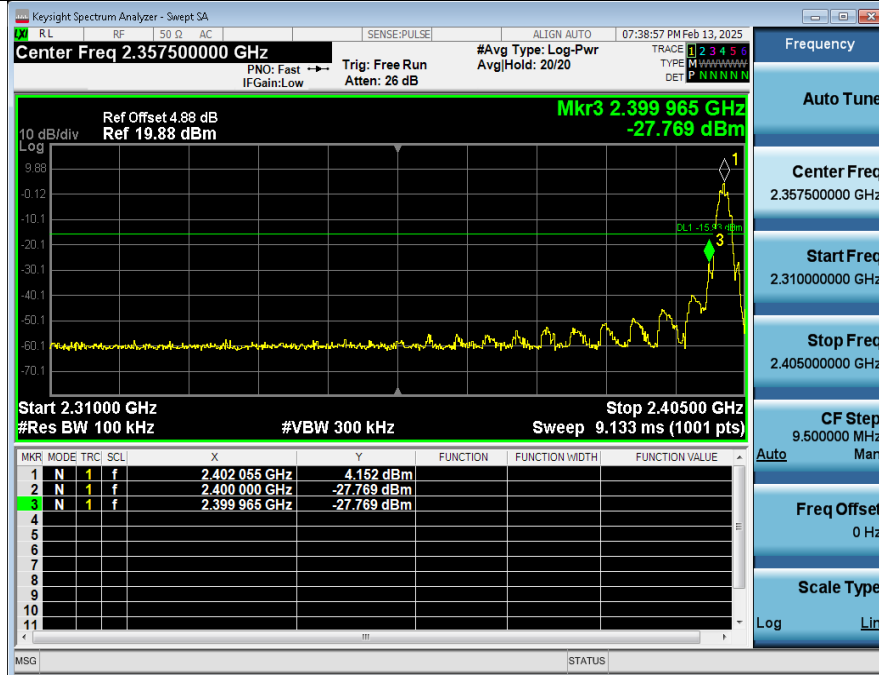


1_Reference_Level_NVNT_ANT1_2Mbps_2402



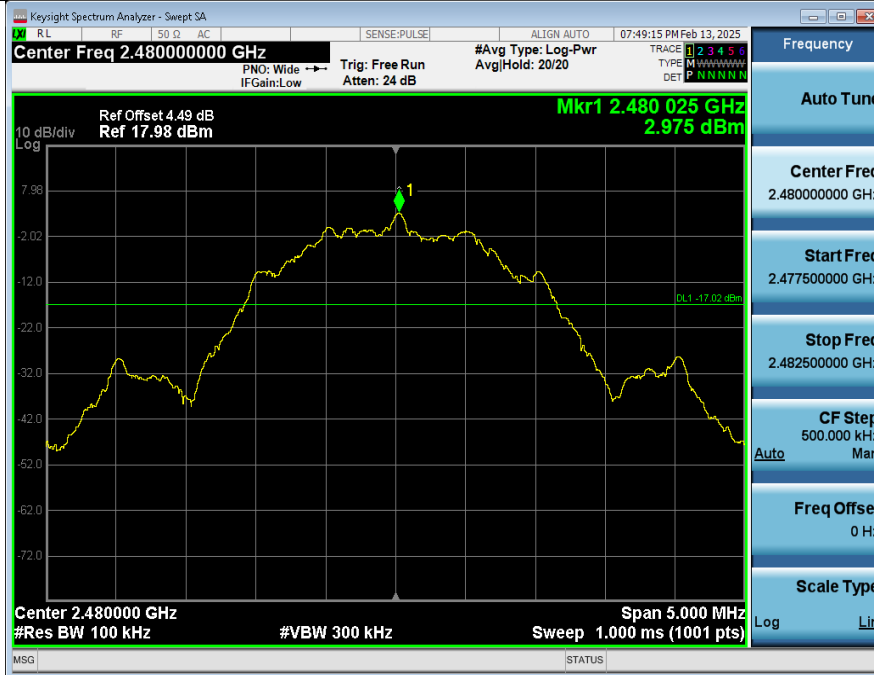


2_Bandedge_NVNT_ANT1_2Mbps_2402



1_Reference_Level_NVNT_ANT1_2Mbps_2480





2_Bandedge_NVNT_ANT1_2Mbps_2480



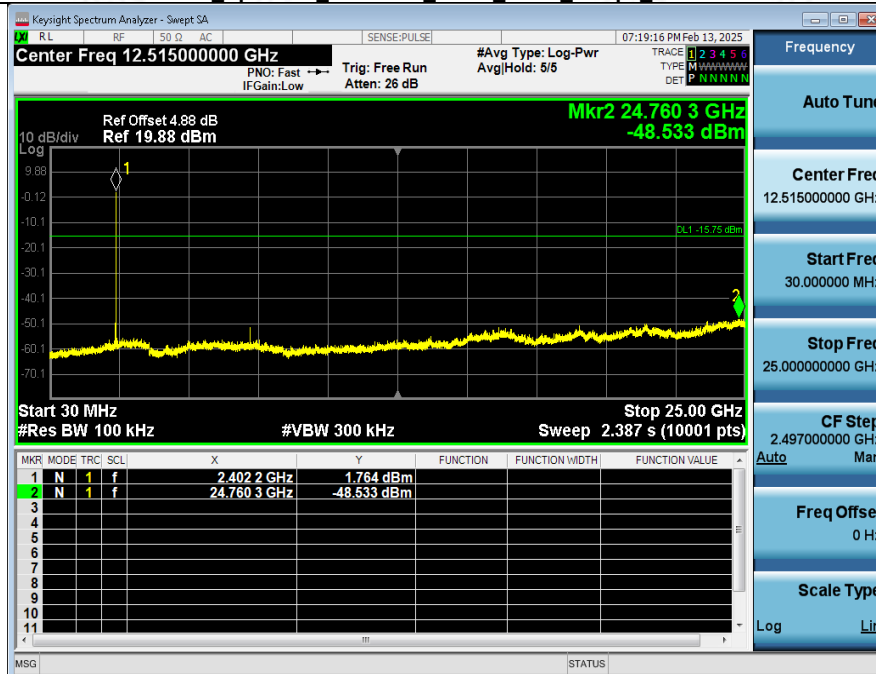
7. Spurious Emission

Condition	Antenna	Modulation	TX_Frequency (MHz)	Ref_level(dBm)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	1Mbps	2402.00	4.253	-48.533	-15.747	Pass
NVNT	ANT1	1Mbps	2440.00	3.768	-50.518	-16.232	Pass
NVNT	ANT1	1Mbps	2480.00	3.020	-48.873	-16.980	Pass
NVNT	ANT1	2Mbps	2402.00	4.069	-47.931	-15.931	Pass
NVNT	ANT1	2Mbps	2440.00	3.690	-52.583	-16.310	Pass
NVNT	ANT1	2Mbps	2480.00	2.975	-53.996	-17.025	Pass

1 Reference_Level_NVNT_ANT1_1Mbps_2402



2 Spurious Emission_NVNT_ANT1_1Mbps_2402

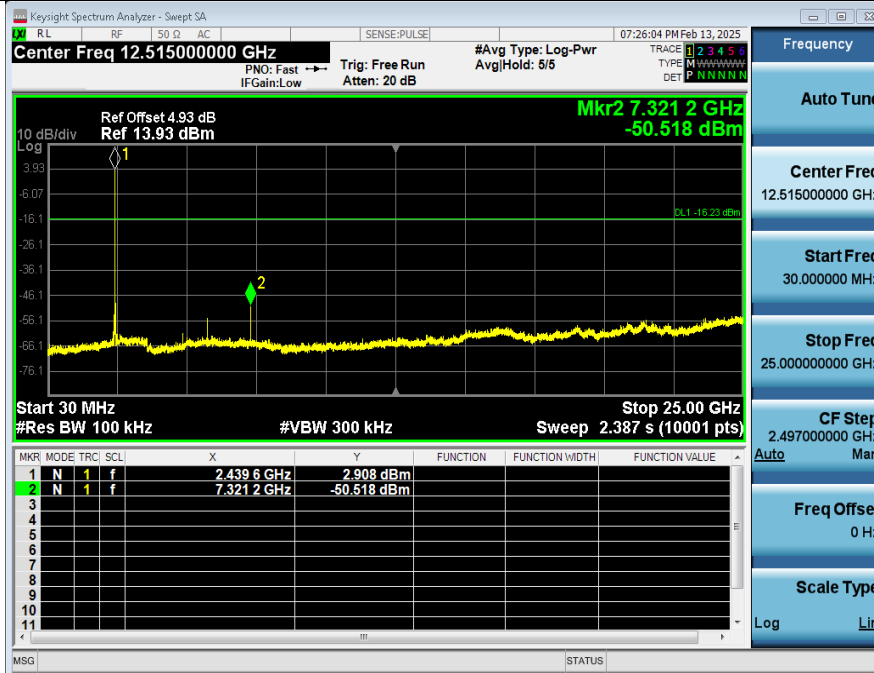


1 Reference_Level_NVNT_ANT1_1Mbps_2440





2_Spurious_Emission_NVNT_ANT1_1Mbps_2440

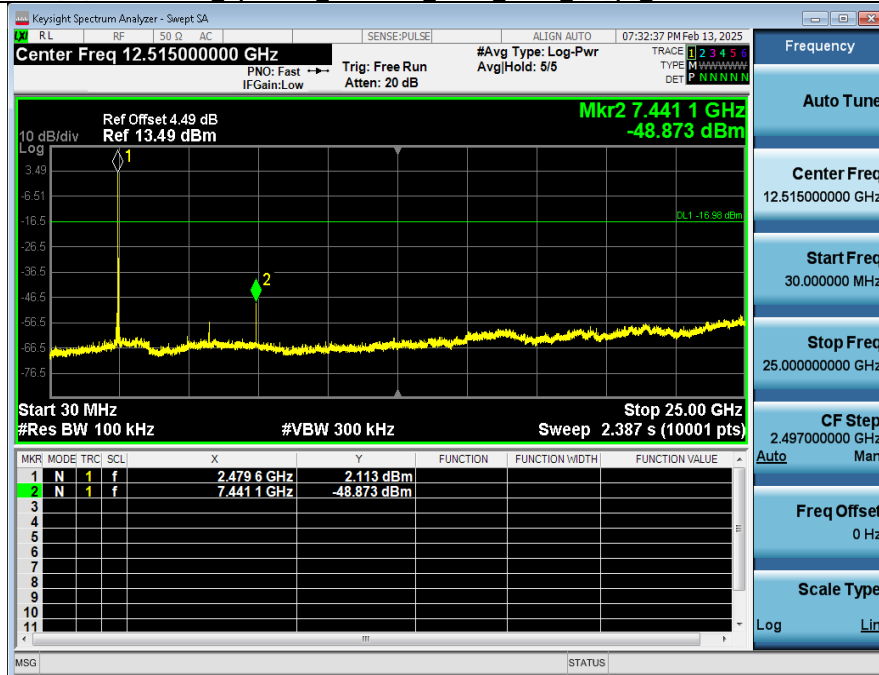


1_Reference_Level_NVNT_ANT1_1Mbps_2480





2_Spurious_Emission_NVNT_ANT1_1Mbps_2480

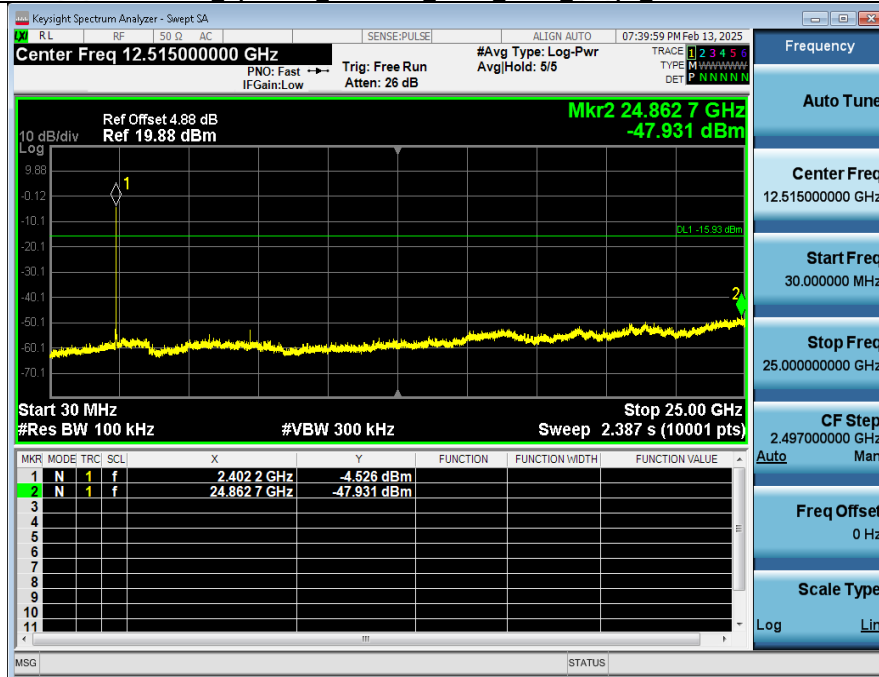


1_Reference_Level_NVNT_ANT1_2Mbps_2402





2_Spurious_Emission_NVNT_ANT1_2Mbps_2402

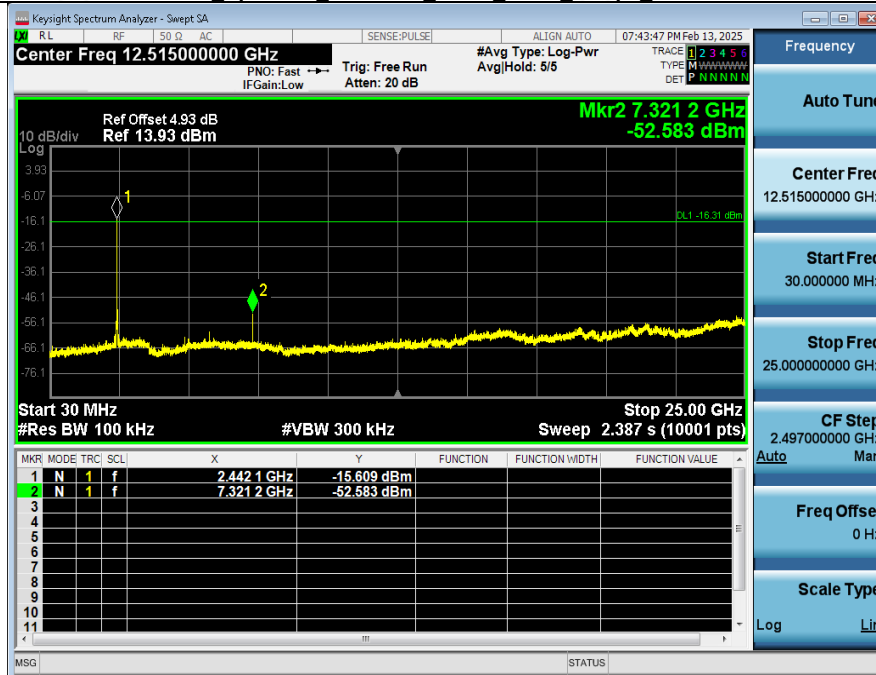


1_Reference_Level_NVNT_ANT1_2Mbps_2440





2_Spurious_Emission_NVNT_ANT1_2Mbps_2440



1_Reference_Level_NVNT_ANT1_2Mbps_2480





2 Spurious Emission NVNT_ANT1_2Mbps_2480

