

Appendix

Test Data

for BTEK240819010AE

Start date	2024/8/27	Finish date	2024/8/27
Temperature	22.5℃	Humidity	59%
RF specifications	BLE	Test Engineer	Zora



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1. -6dB Bandwidth

Condition	Antenna	Rate	Frequency (MHz)	-6dB BW(kHz)	limit(kHz)	Result
NVNT	ANT1	1Mbps	2402.00	667.01	500	Pass
NVNT	ANT1	1Mbps	2440.00	682.76	500	Pass
NVNT	ANT1	1Mbps	2480.00	688.13	500	Pass
NVNT	ANT1	2Mbps	2402.00	1164.59	500	Pass
NVNT	ANT1	2Mbps	2440.00	1173.90	500	Pass
NVNT	ANT1	2Mbps	2480.00	1177.48	500	Pass

-6dB_Bandwidth_NVNT_ANT1_1Mbps_2402

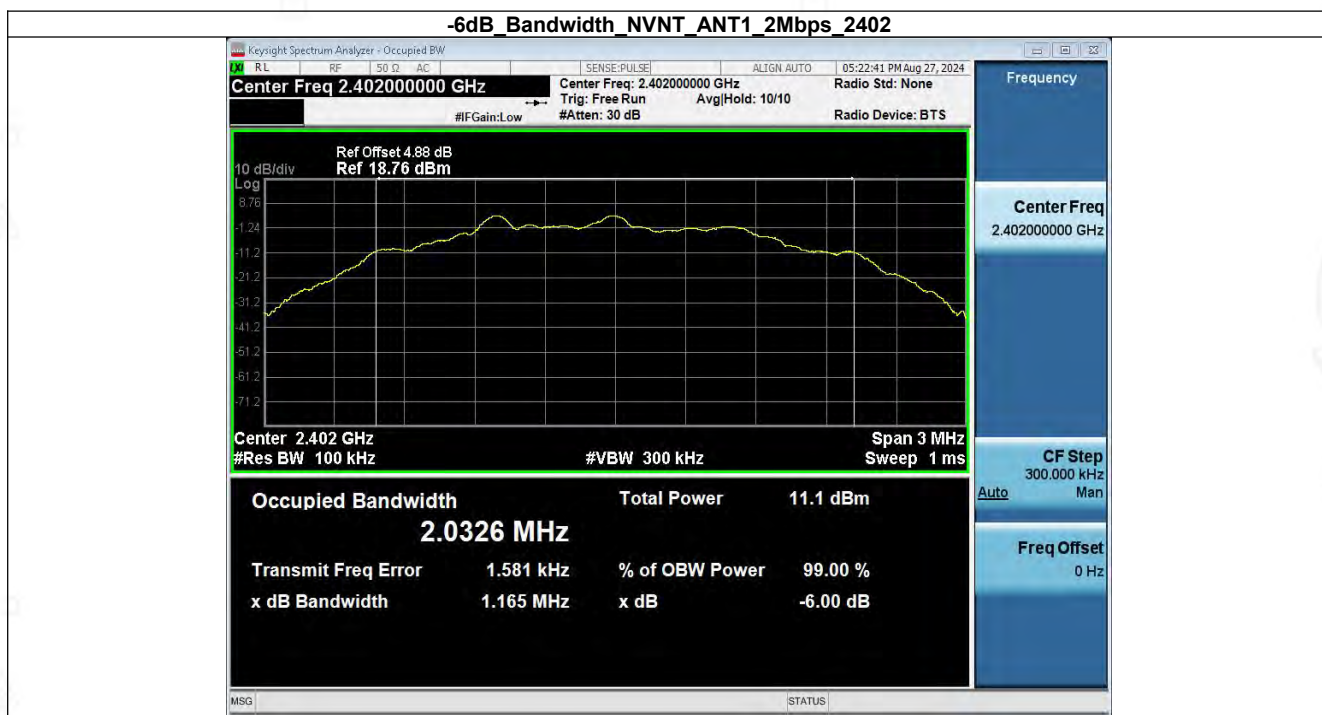
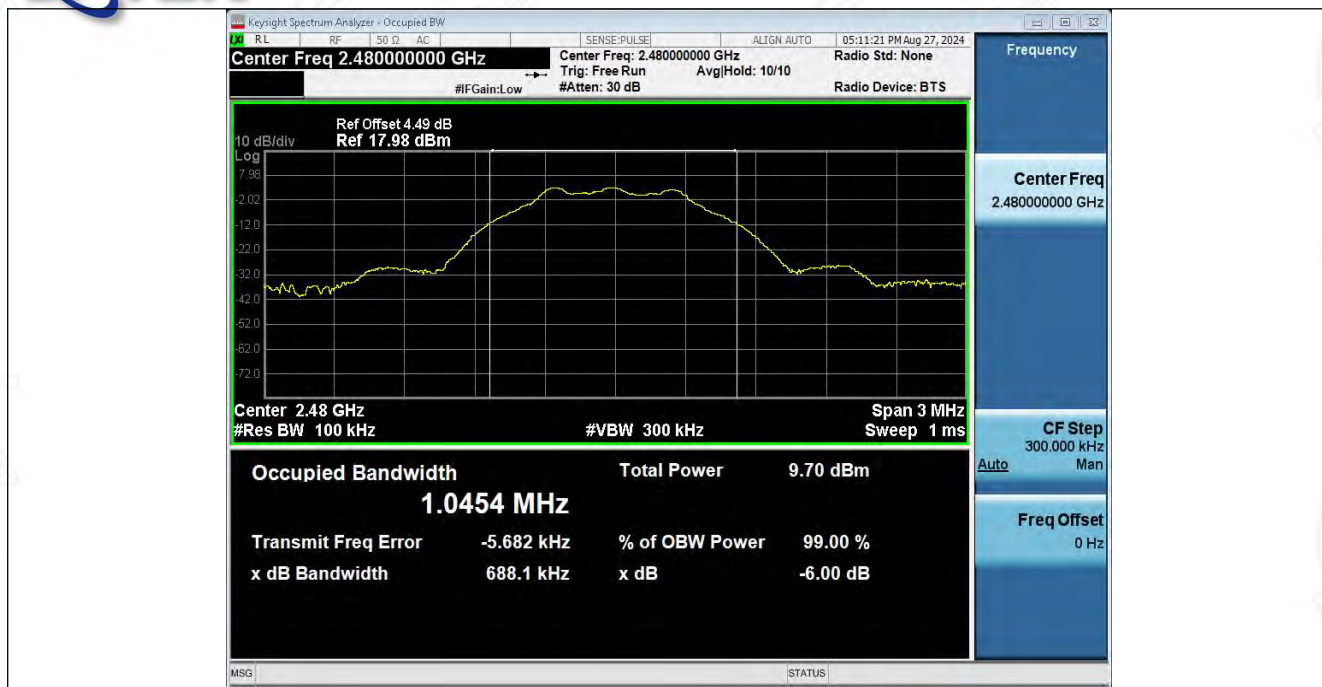


-6dB_Bandwidth_NVNT_ANT1_1Mbps_2440



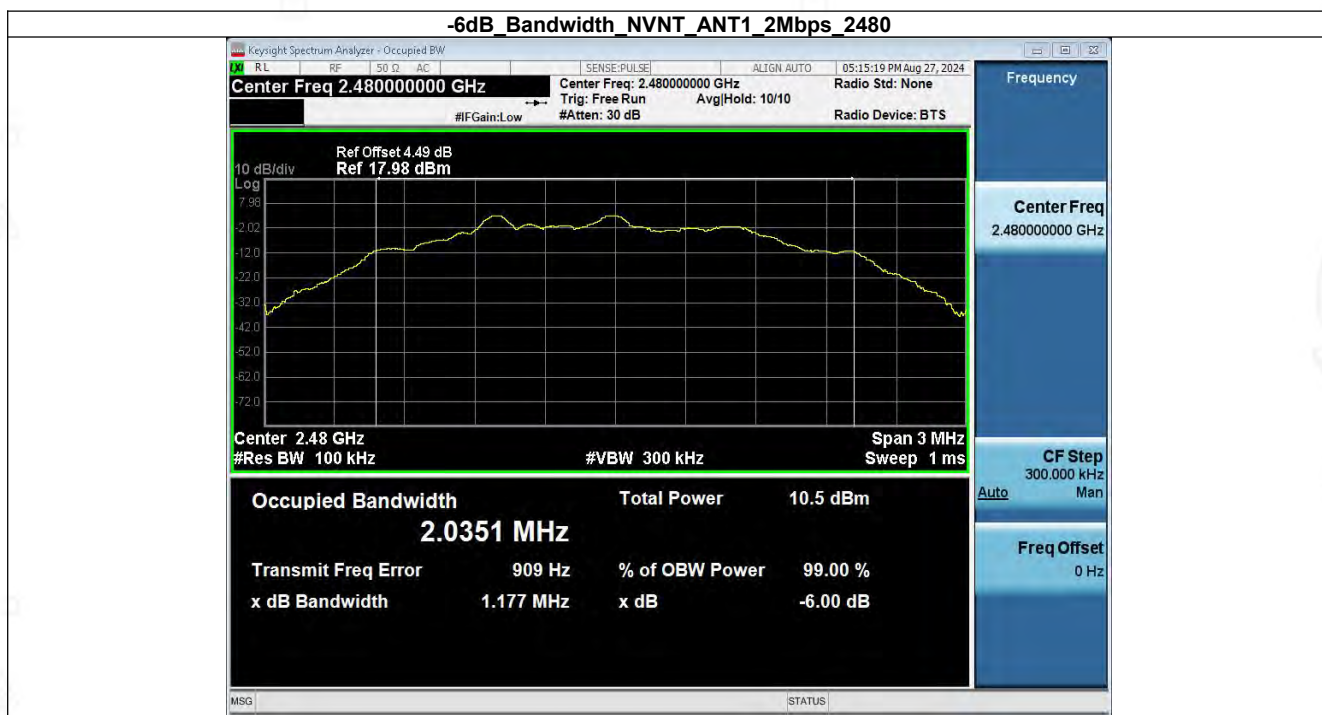
-6dB_Bandwidth_NVNT_ANT1_1Mbps_2480





-6dB_Bandwidth_NVNT_ANT1_2Mbps_2440





2. 99% Occupied Bandwidth

Condition	Antenna	Rate	Frequency (MHz)	99% BW (MHz)
NVNT	ANT1	1Mbps	2402.00	1.018
NVNT	ANT1	1Mbps	2440.00	1.018
NVNT	ANT1	1Mbps	2480.00	1.021
NVNT	ANT1	2Mbps	2402.00	1.993
NVNT	ANT1	2Mbps	2440.00	1.998
NVNT	ANT1	2Mbps	2480.00	1.998

99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2402

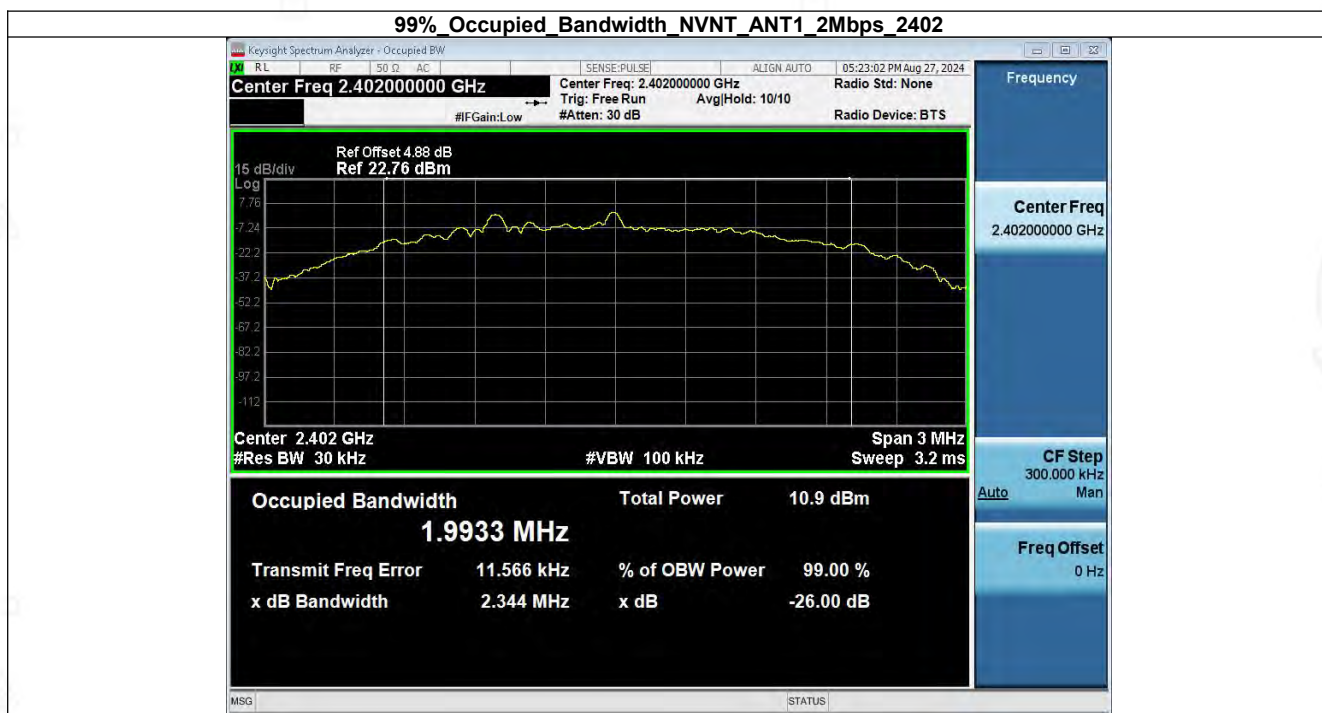


99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2440



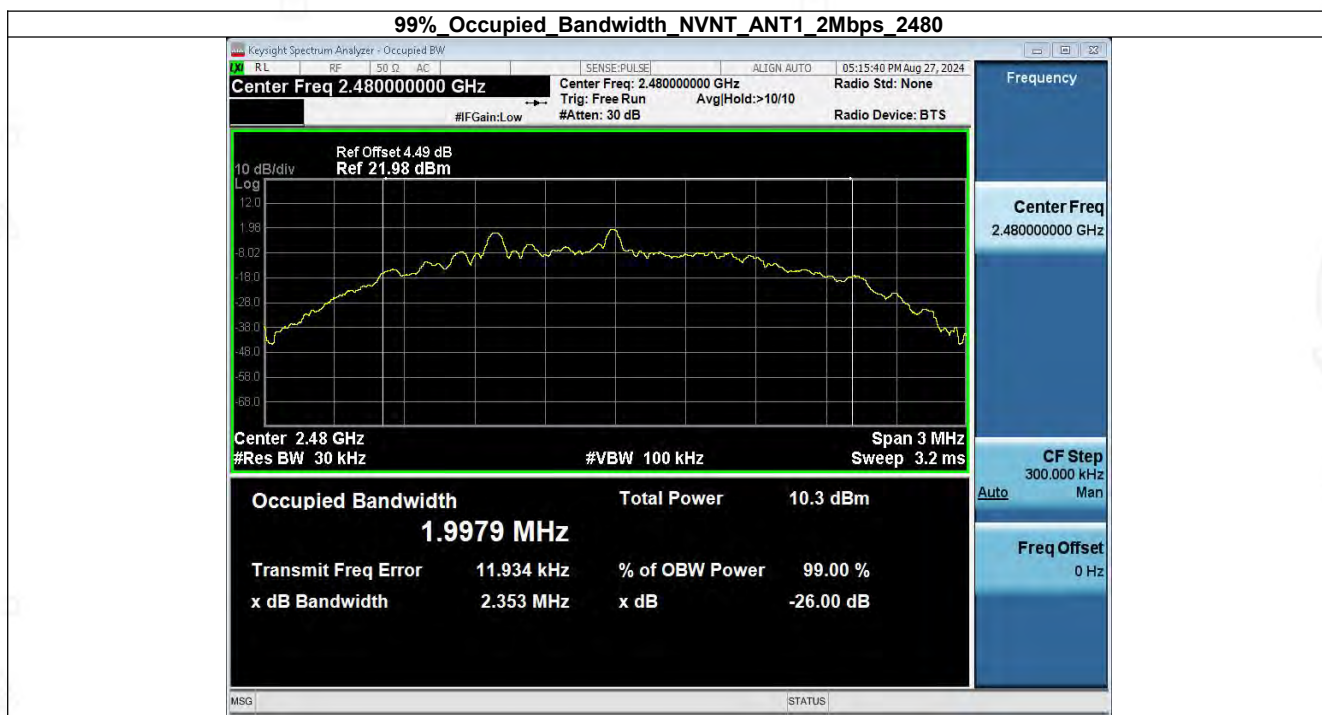
99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2480





99%_Occupied_Bandwidth_NVNT_ANT1_2Mbps_2440

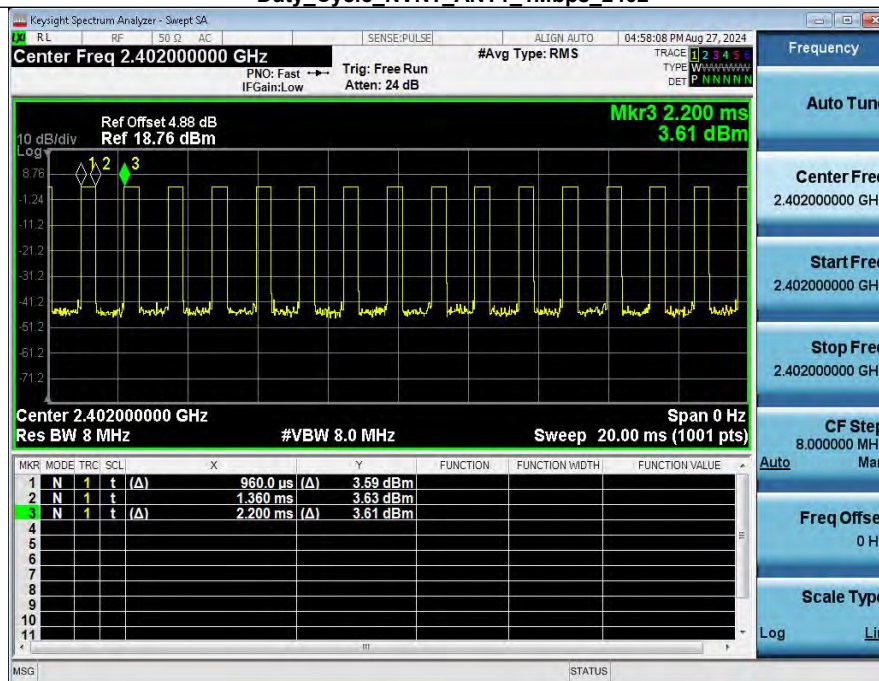




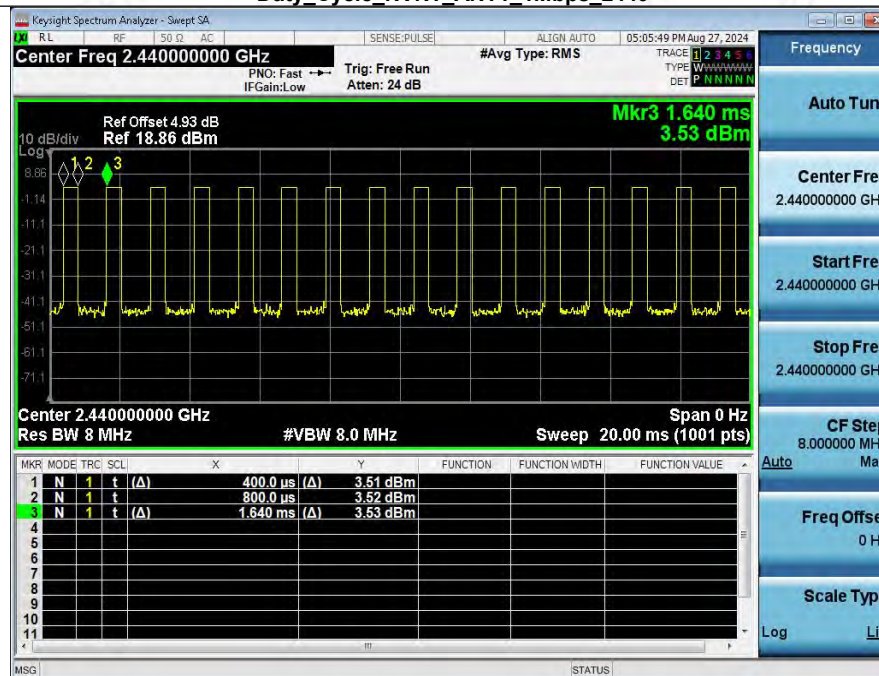
3. Duty Cycle

Condition	Antenna	Rate	Frequency (MHz)	Dutycycle(%)	Duty_factor
NVNT	ANT1	1Mbps	2402.00	33.87	4.70
NVNT	ANT1	1Mbps	2440.00	32.26	4.91
NVNT	ANT1	1Mbps	2480.00	32.26	4.91
NVNT	ANT1	2Mbps	2402.00	35.48	4.50
NVNT	ANT1	2Mbps	2440.00	41.94	3.77
NVNT	ANT1	2Mbps	2480.00	38.71	4.12

Duty_Cycle_NVNT_ANT1_1Mbps_2402

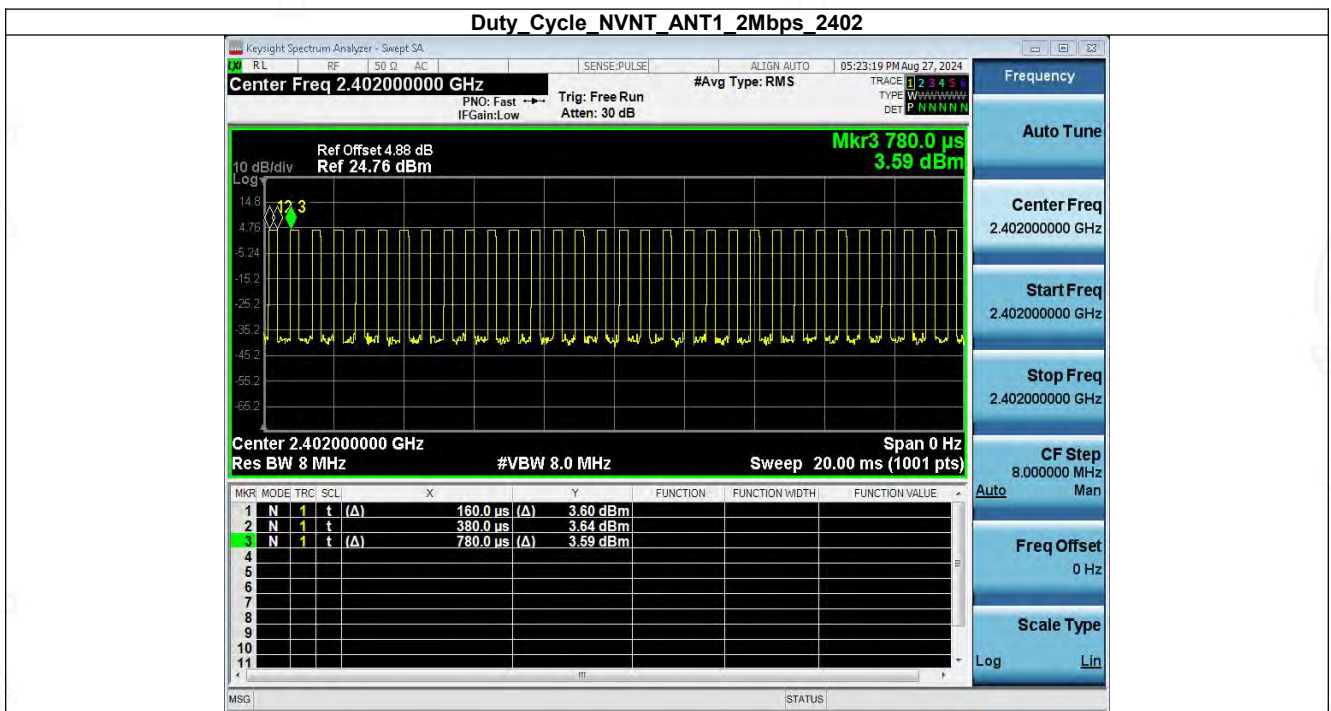
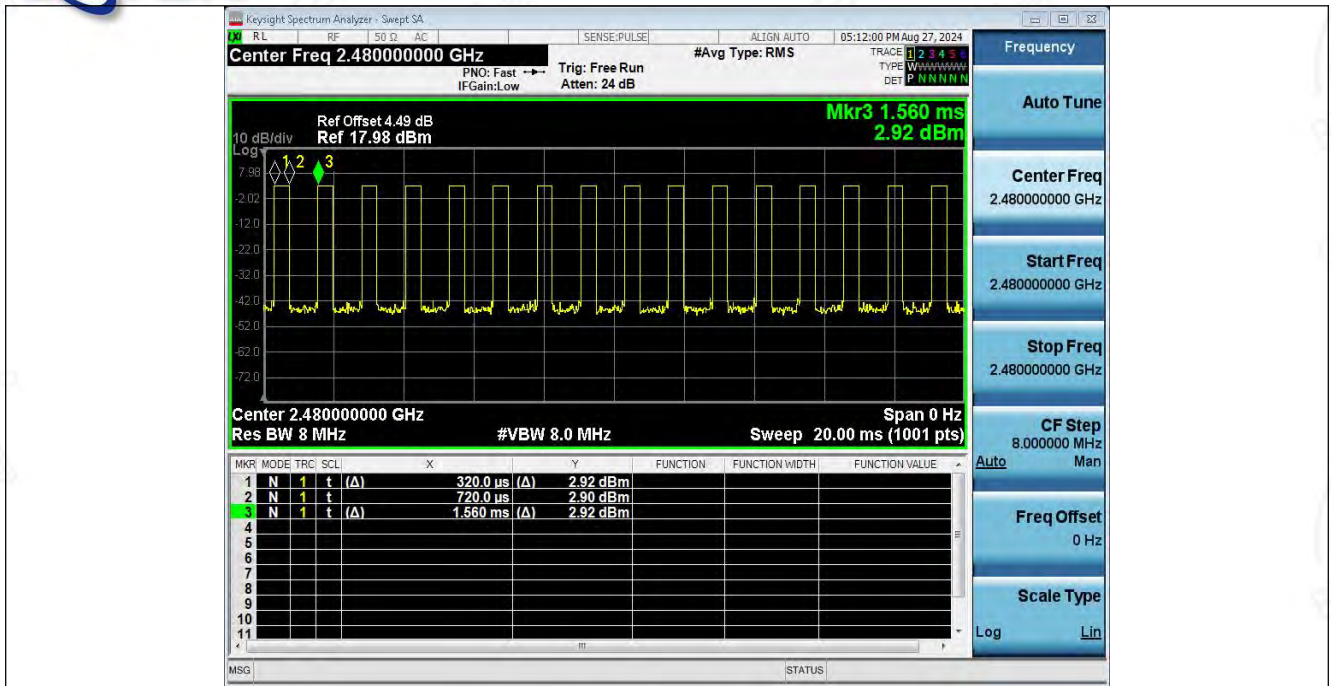


Duty_Cycle_NVNT_ANT1_1Mbps_2440



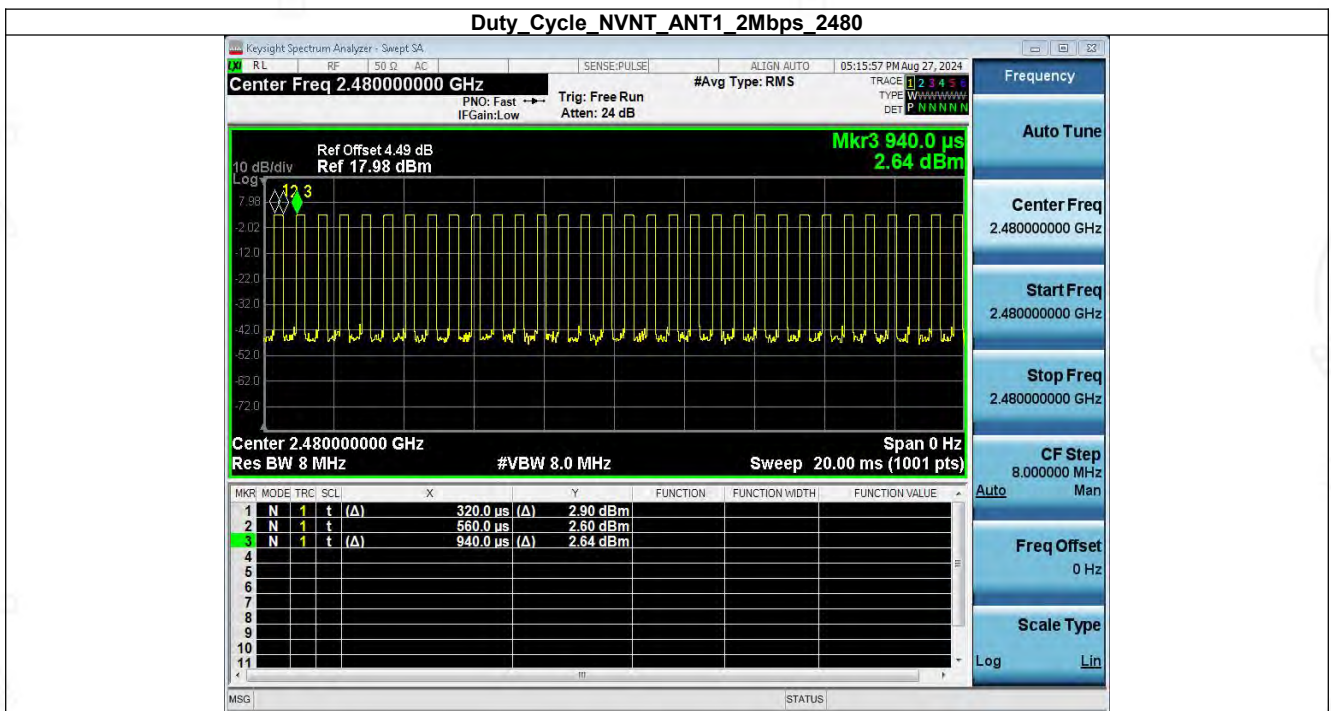
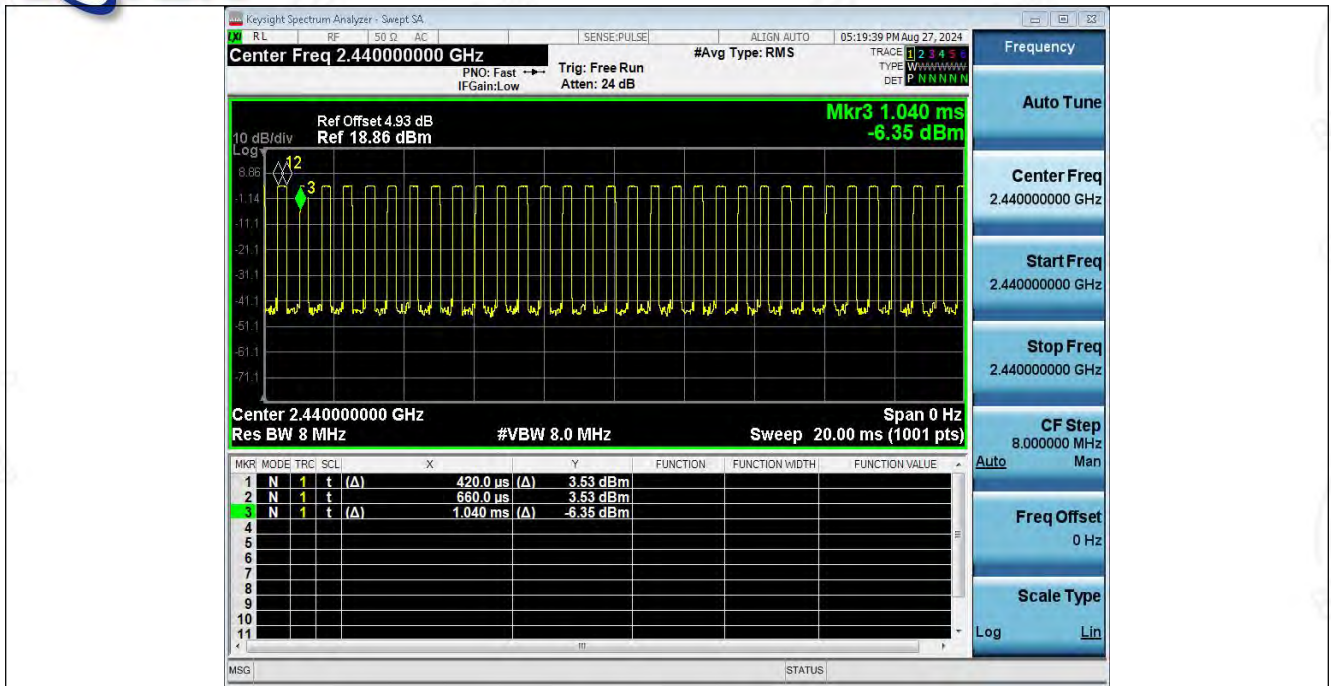
Duty_Cycle_NVNT_ANT1_1Mbps_2480





Duty Cycle_NVNT_ANT1_2Mbps_2440

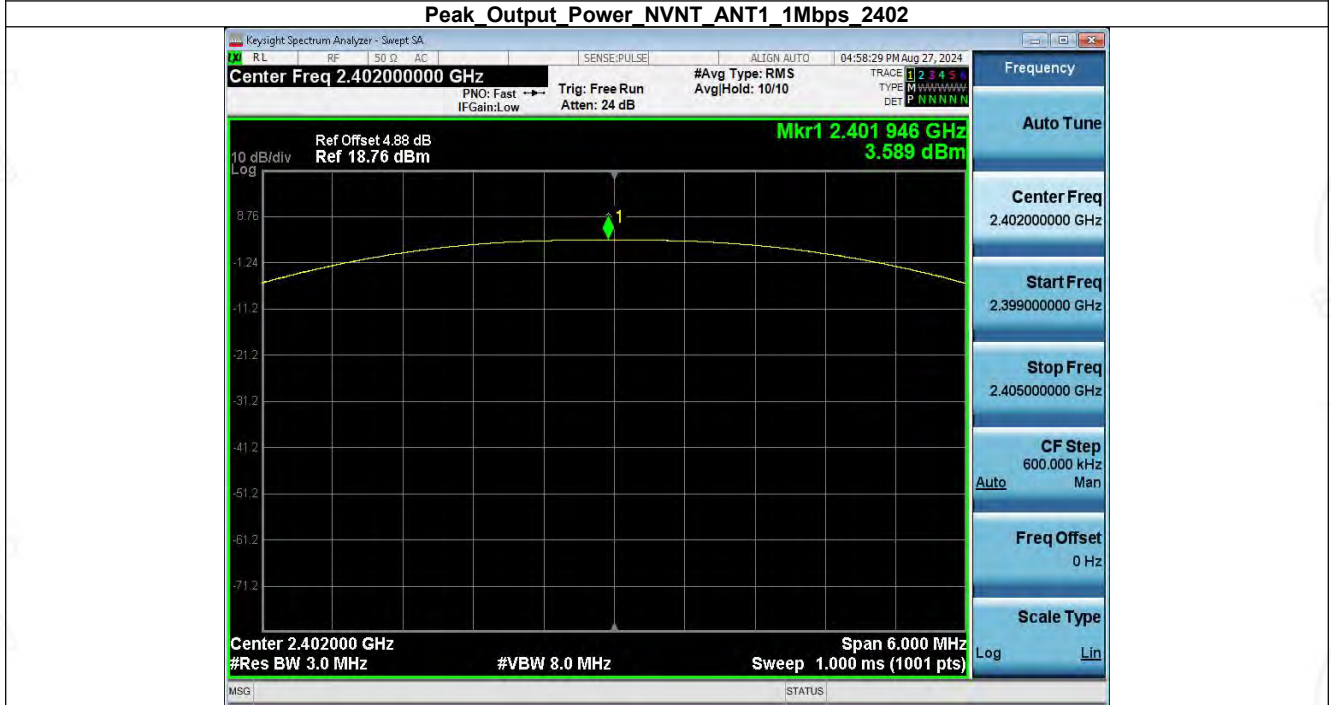




4. Peak Output Power

Condition	Antenna	Rate	Frequency (MHz)	Max. Conducted Power(dBm)	Max. Conducted Power(mW)	Limit(mW)	Result
NVNT	ANT1	1Mbps	2402.00	3.59	2.29	1000	Pass
NVNT	ANT1	1Mbps	2440.00	3.50	2.24	1000	Pass
NVNT	ANT1	1Mbps	2480.00	2.88	1.94	1000	Pass
NVNT	ANT1	2Mbps	2402.00	3.62	2.30	1000	Pass
NVNT	ANT1	2Mbps	2440.00	3.52	2.25	1000	Pass
NVNT	ANT1	2Mbps	2480.00	2.89	1.95	1000	Pass

Peak_Output_Power_NVNT_ANT1_1Mbps_2402

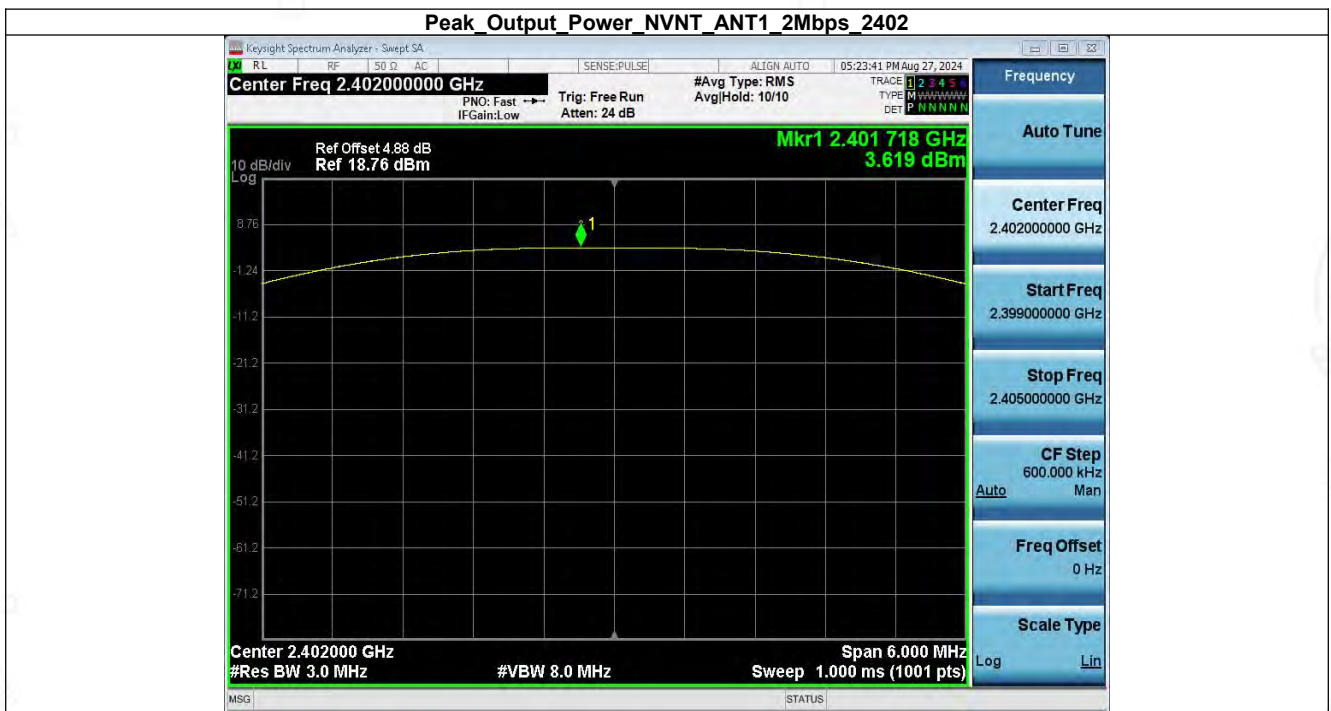


Peak_Output_Power_NVNT_ANT1_1Mbps_2440



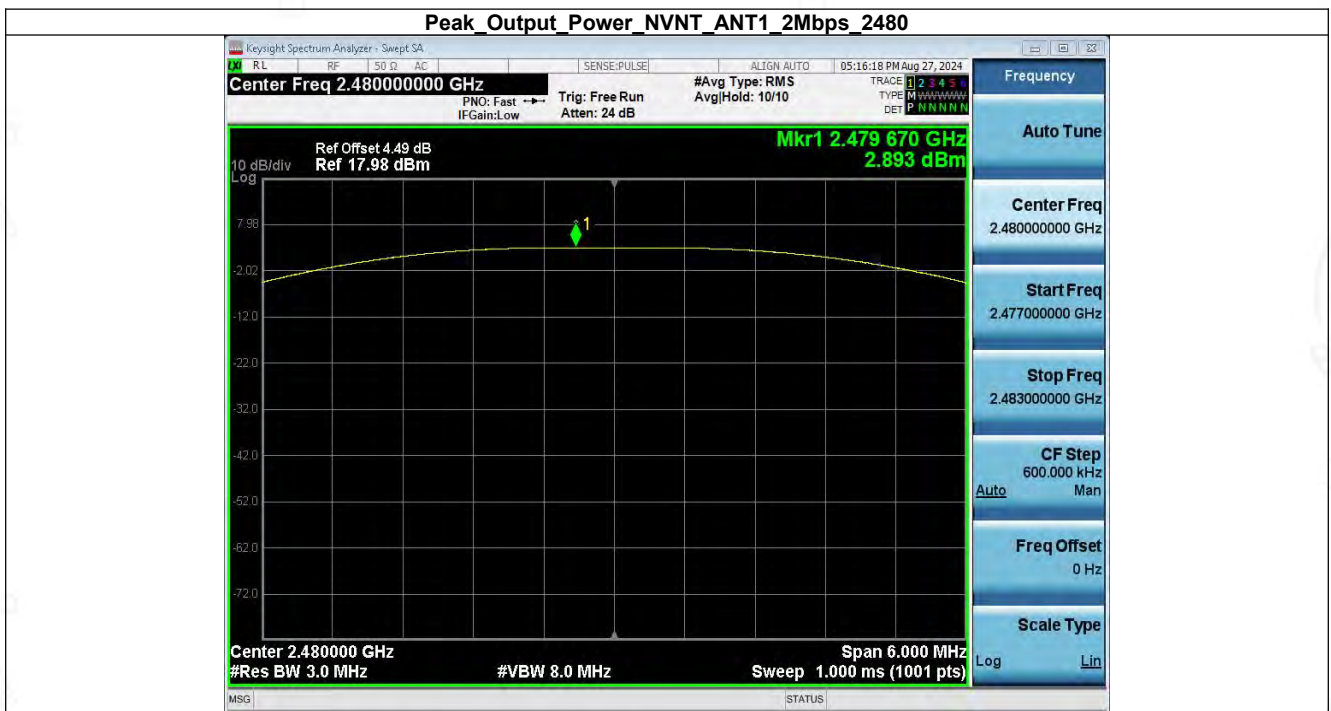
Peak_Output_Power_NVNT_ANT1_1Mbps_2480





Peak_Output_Power_NVNT_ANT1_2Mbps_2440

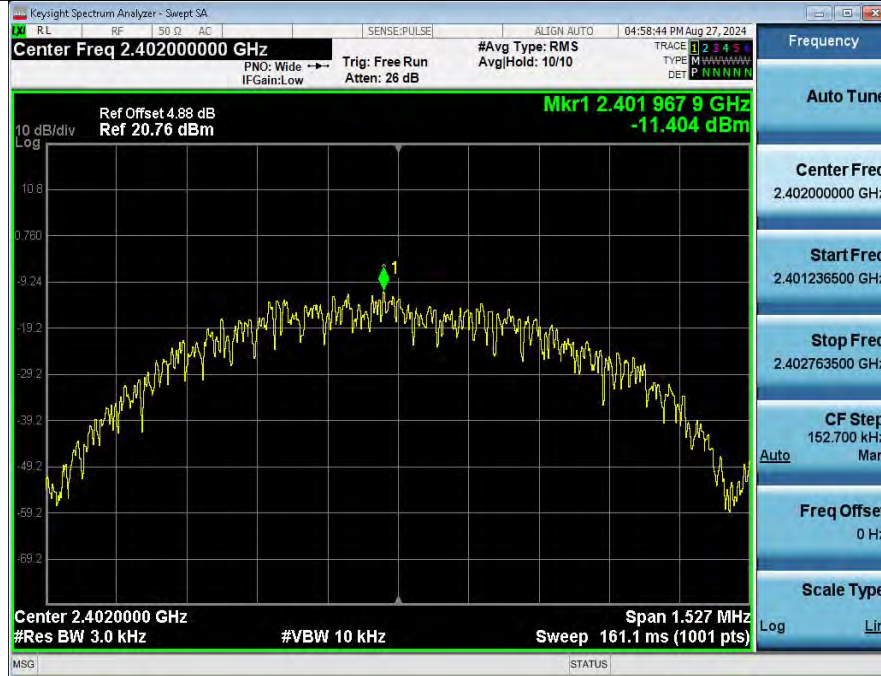




5. Power Spectral Density

Condition	Antenna	Rate	Frequency (MHz)	Power Spectral Density(dBm)	Limit(dBm/3kHz)	Result
NVNT	ANT1	1Mbps	2402.00	-11.40	8	Pass
NVNT	ANT1	1Mbps	2440.00	-10.62	8	Pass
NVNT	ANT1	1Mbps	2480.00	-11.44	8	Pass
NVNT	ANT1	2Mbps	2402.00	-12.78	8	Pass
NVNT	ANT1	2Mbps	2440.00	-12.99	8	Pass
NVNT	ANT1	2Mbps	2480.00	-13.64	8	Pass

Power_Spectral_Density_NVNT_ANT1_1Mbps_2402



Power_Spectral_Density_NVNT_ANT1_1Mbps_2440



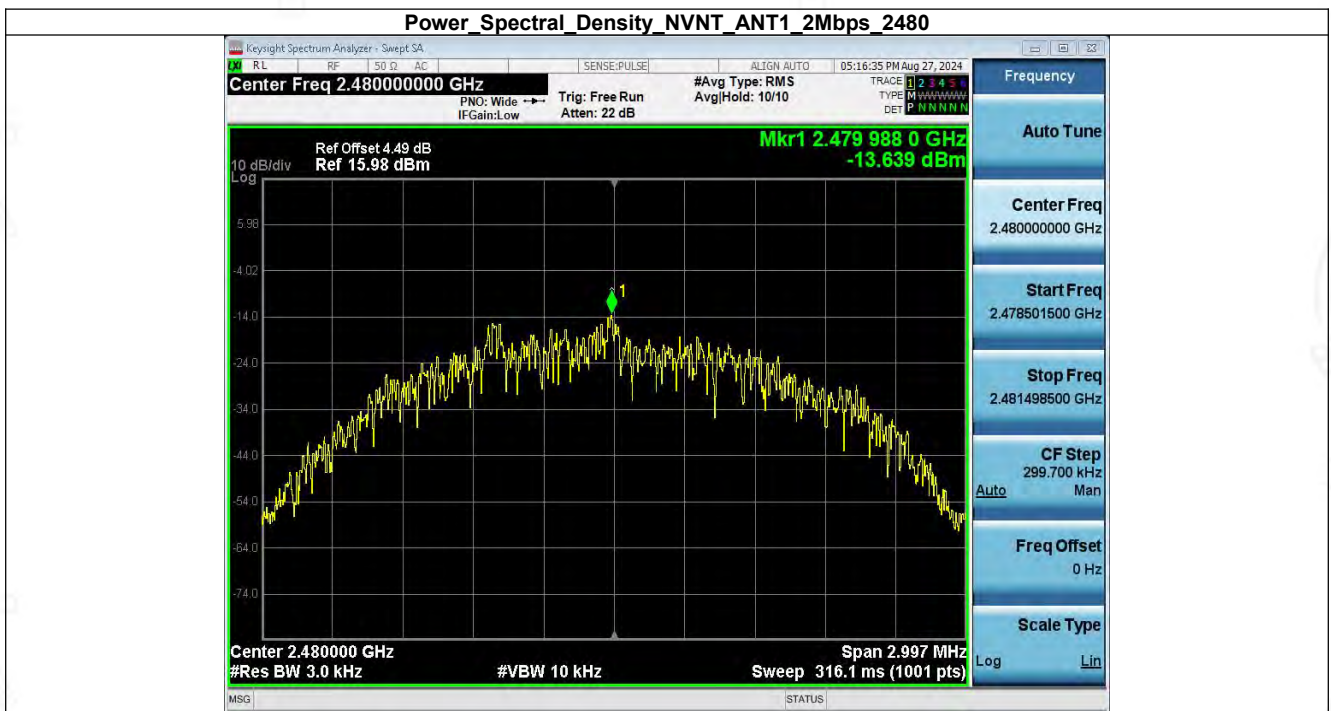
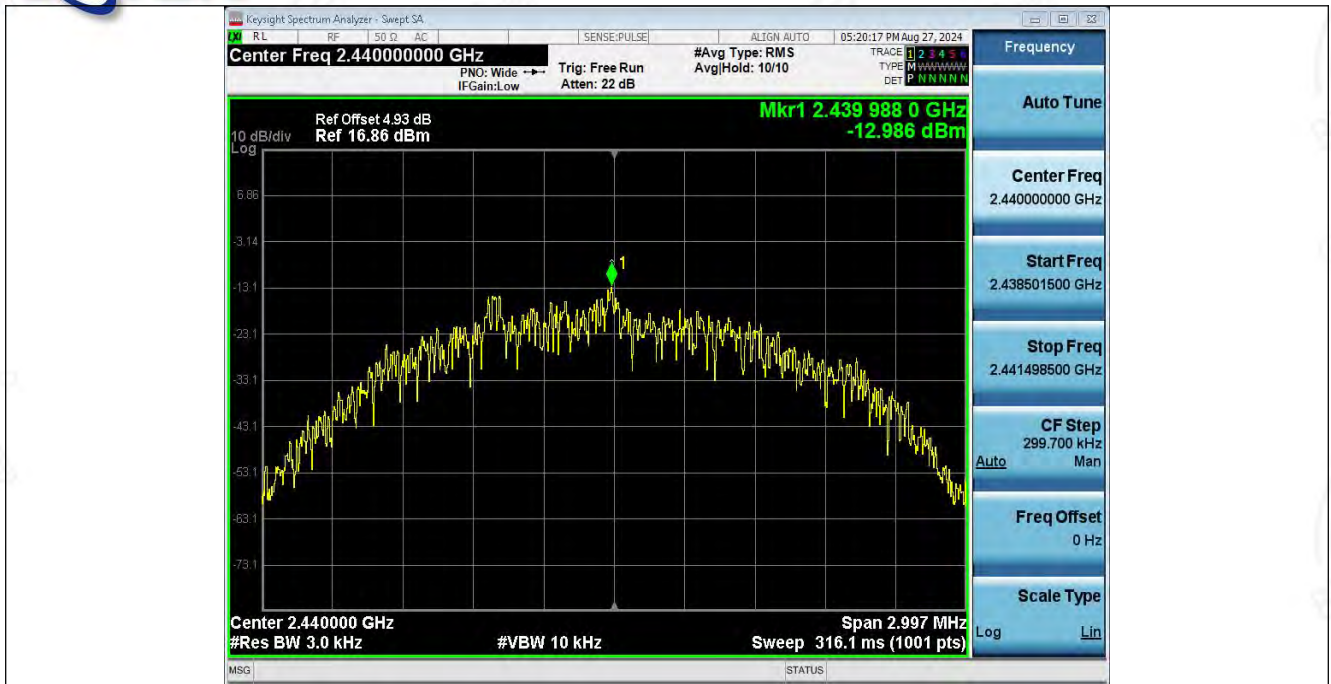
Power_Spectral_Density_NVNT_ANT1_1Mbps_2480





Power Spectral Density_NVNT_ANT1_2Mbps_2440





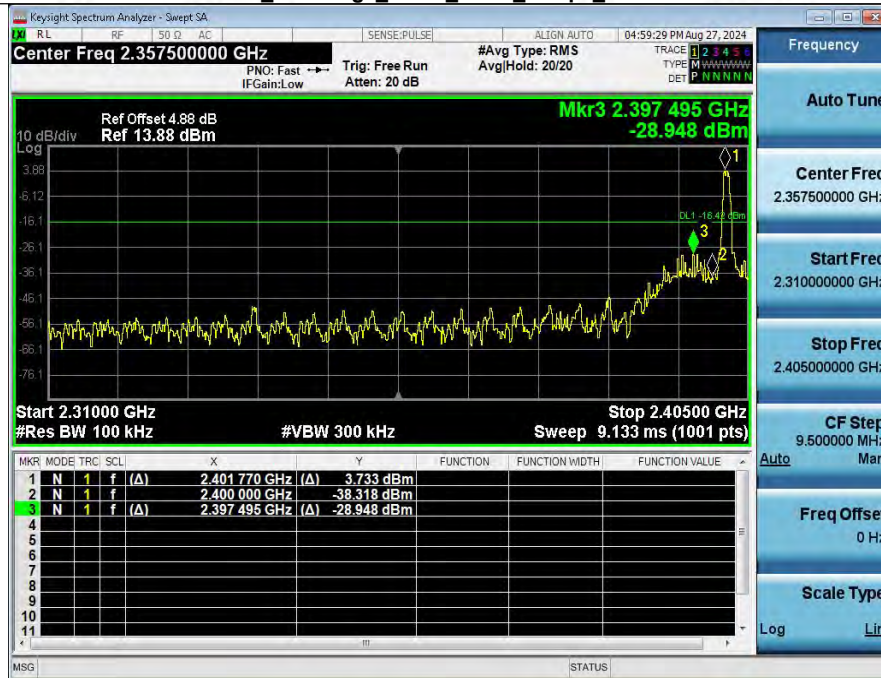
6. Bandedge

Condition	Antenna	Rate	TX_Frequency (MHz)	Max. Mark Frequency (MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	1Mbps	2402.00	2397.495	-28.948	-16.415	Pass
NVNT	ANT1	1Mbps	2480.00	2485.275	-28.354	-17.119	Pass
NVNT	ANT1	2Mbps	2402.00	2396.640	-27.754	-16.389	Pass
NVNT	ANT1	2Mbps	2480.00	2484.275	-28.713	-17.084	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

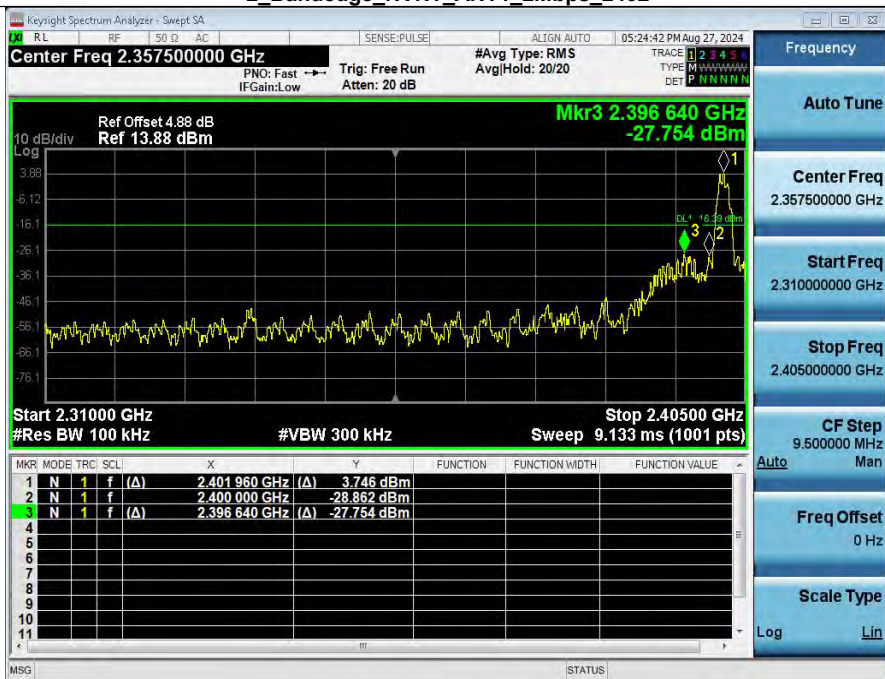


1_Reference_Level_NVNT_ANT1_2Mbps_2402





2_Bandedge_NVNT_ANT1_2Mbps_2402



1_Reference_Level_NVNT_ANT1_2Mbps_2480





2_Bandedge_NVNT_ANT1_2Mbps_2480



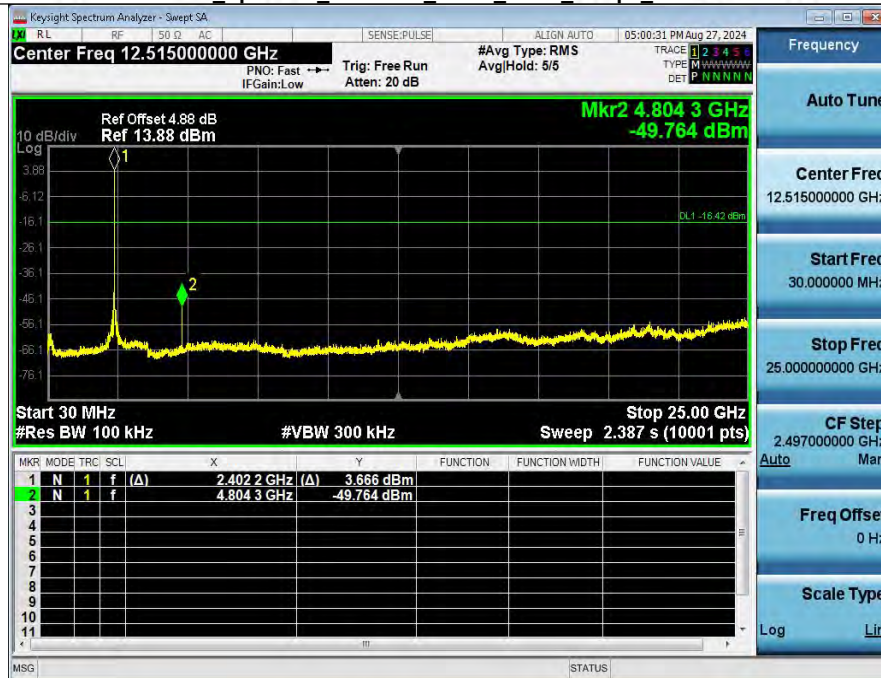
7. Spurious Emission

Condition	Antenna	Rate	TX_Frequency(MHz)	Spurious MAX.Value(dBm)	Limit	Result
NVNT	ANT1	1Mbps	2402.00	-49.764	-16.415	Pass
NVNT	ANT1	1Mbps	2440.00	-48.018	-16.442	Pass
NVNT	ANT1	1Mbps	2480.00	-48.469	-17.119	Pass
NVNT	ANT1	2Mbps	2402.00	-47.864	-16.389	Pass
NVNT	ANT1	2Mbps	2440.00	-47.301	-16.451	Pass
NVNT	ANT1	2Mbps	2480.00	-49.430	-17.084	Pass

1_Reference_Level_NVNT_ANT1_1Mbps_2402

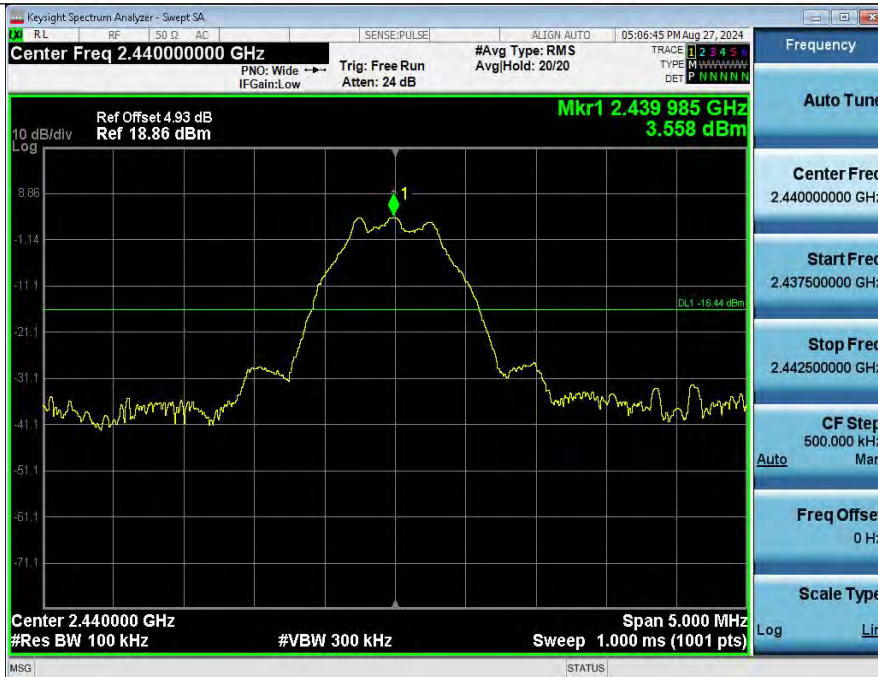


2_Spurious Emission_NVNT_ANT1_1Mbps_2402

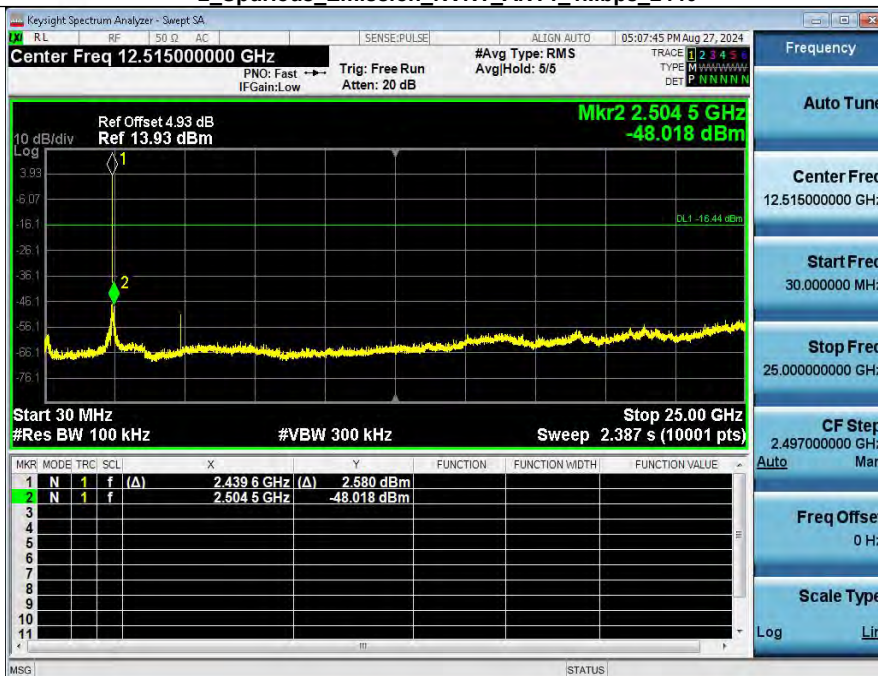


1_Reference_Level_NVNT_ANT1_1Mbps_2440





2_Spurious Emission_NVNT_ANT1_1Mbps_2440

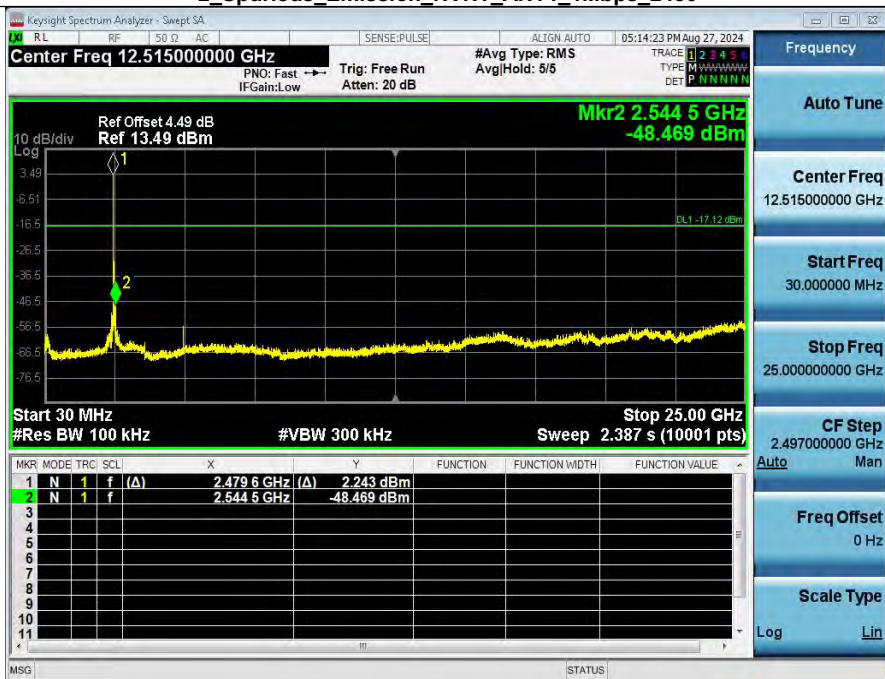


1 Reference_Level_NVNT_ANT1_1Mbps_2480





2_Spurious_Emission_NVNT_ANT1_1Mbps_2480

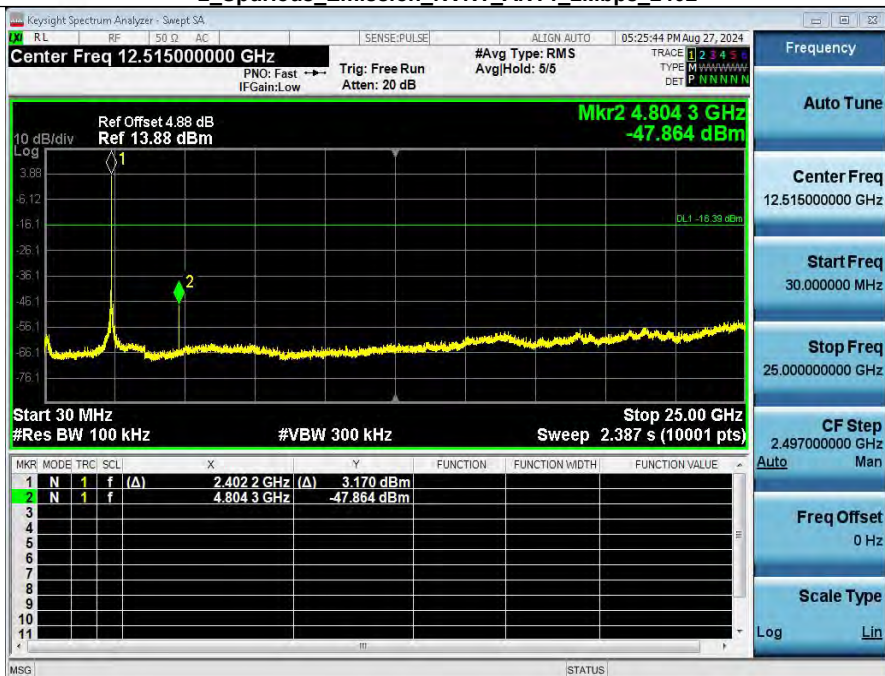


1_Reference_Level_NVNT_ANT1_2Mbps_2402





2_Spurious Emission_NVNT_ANT1_2Mbps_2402

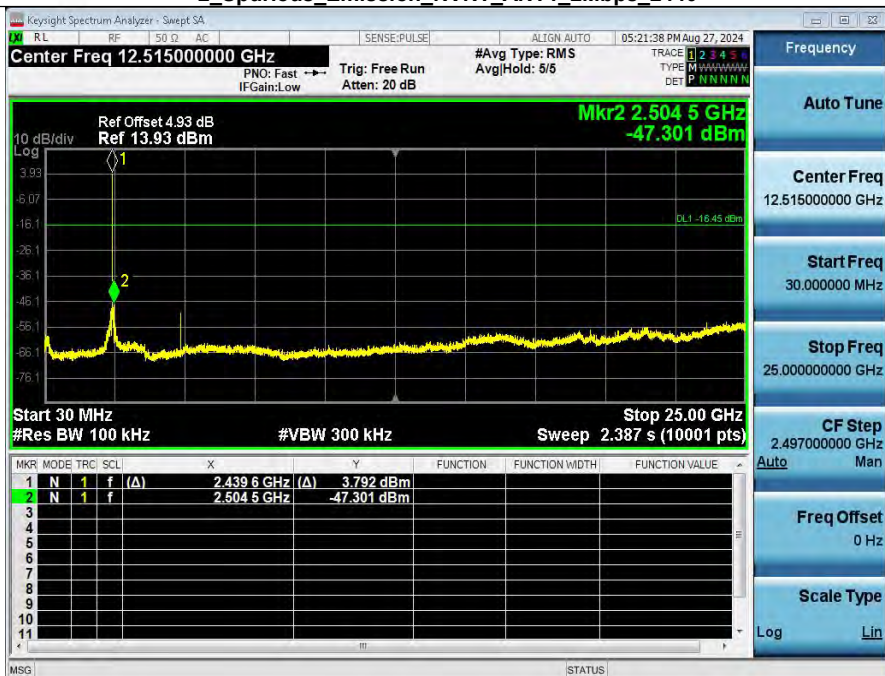


1_Reference_Level_NVNT_ANT1_2Mbps_2440





2_Spurious Emission_NVNT_ANT1_2Mbps_2440



1_Reference_Level_NVNT_ANT1_2Mbps_2480





2_Spurious Emission_NVNT_ANT1_2Mbps_2480

