

RF Test Data for Bluetooth LE

(Conducted Measurements)

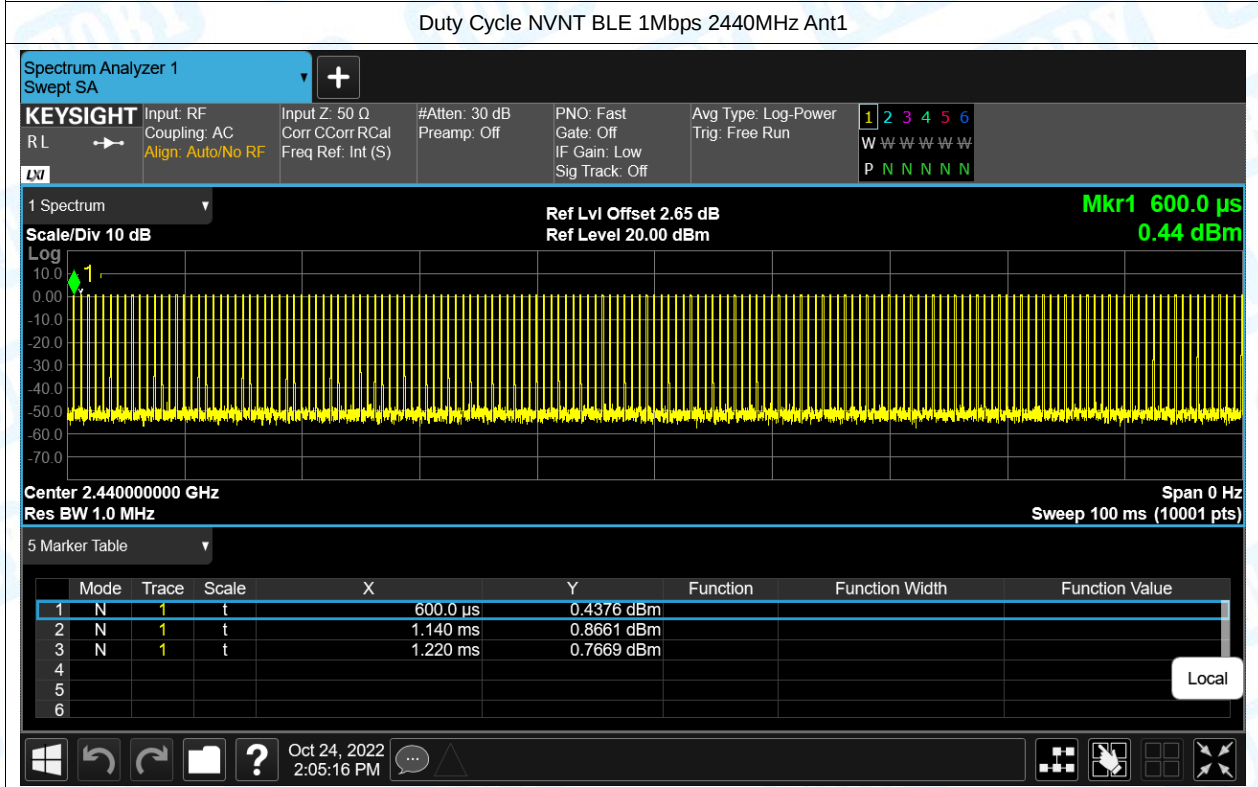
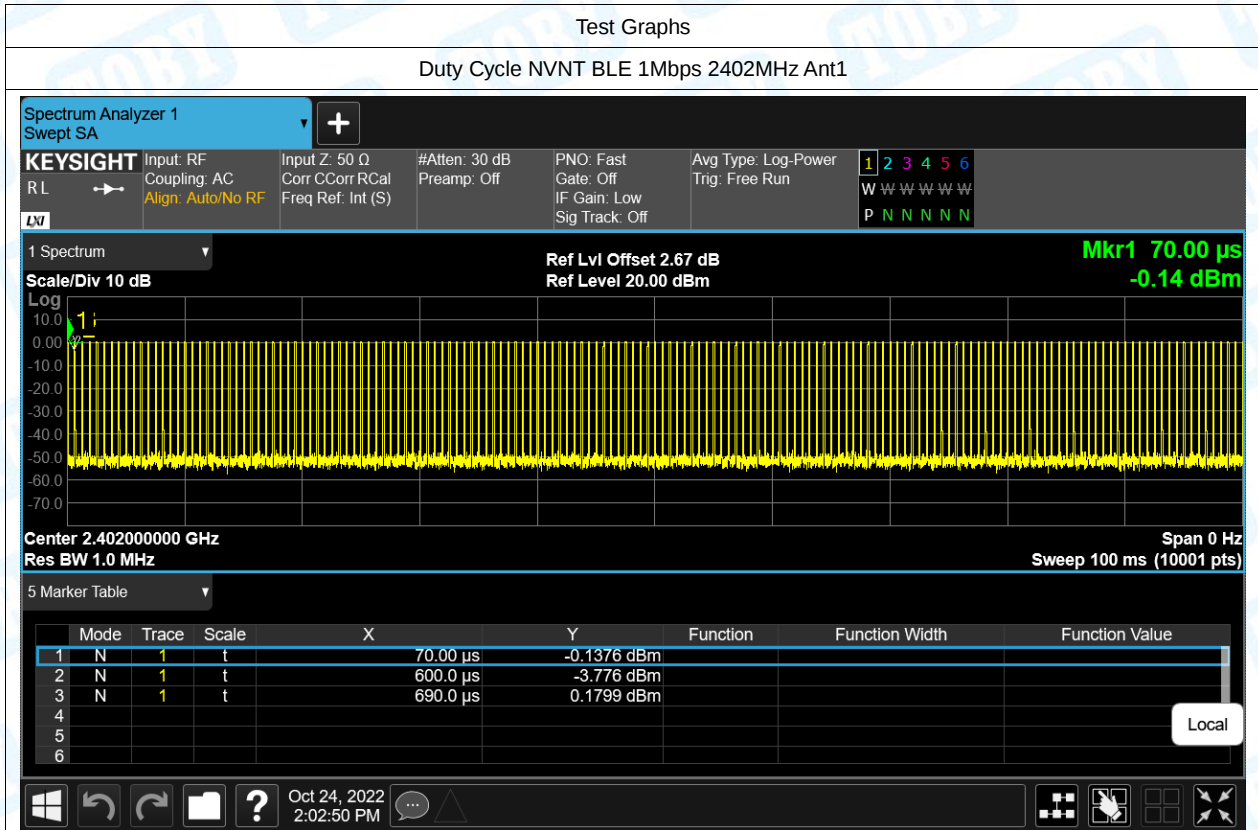
General Description of EUT	
Product Name:	Watch Ultra
Test Model:	Watch Ultra
Sample ID:	202210-0109-03_2
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	DC 3.7V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TBR-C-202210-0109-31	

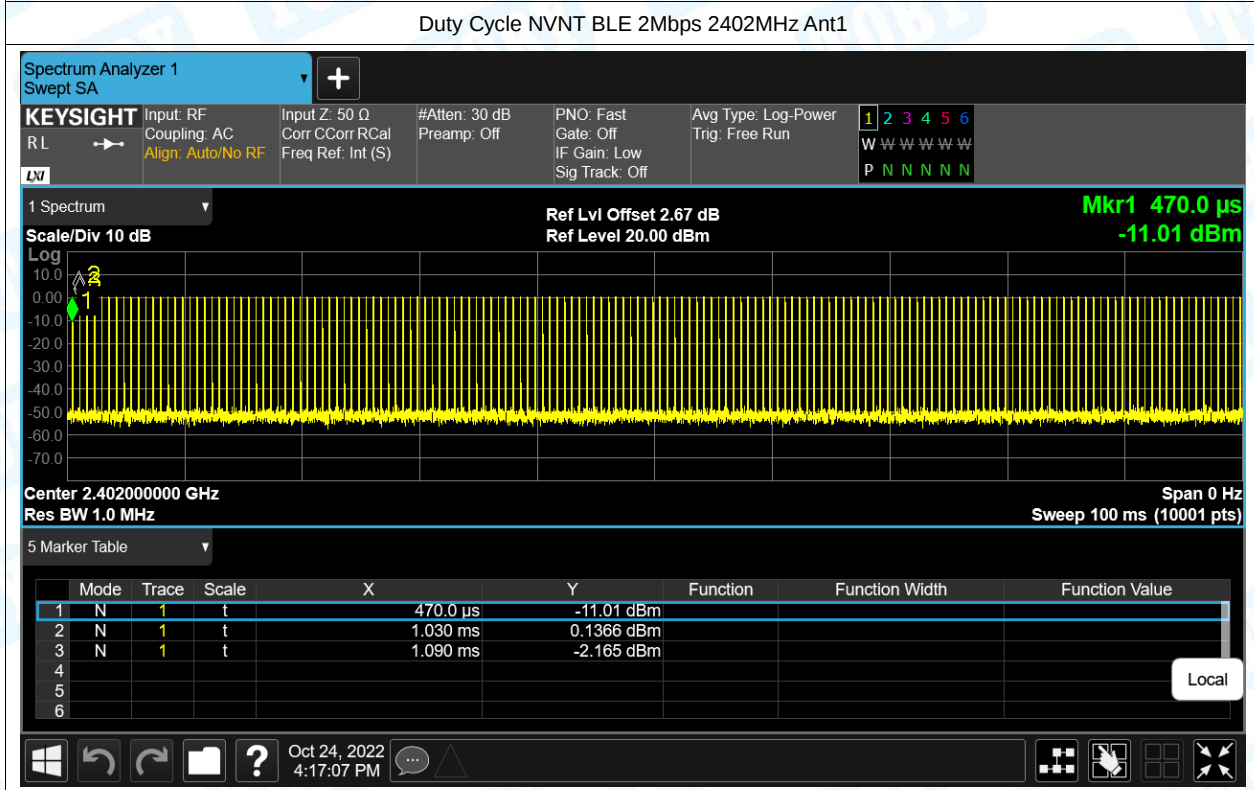
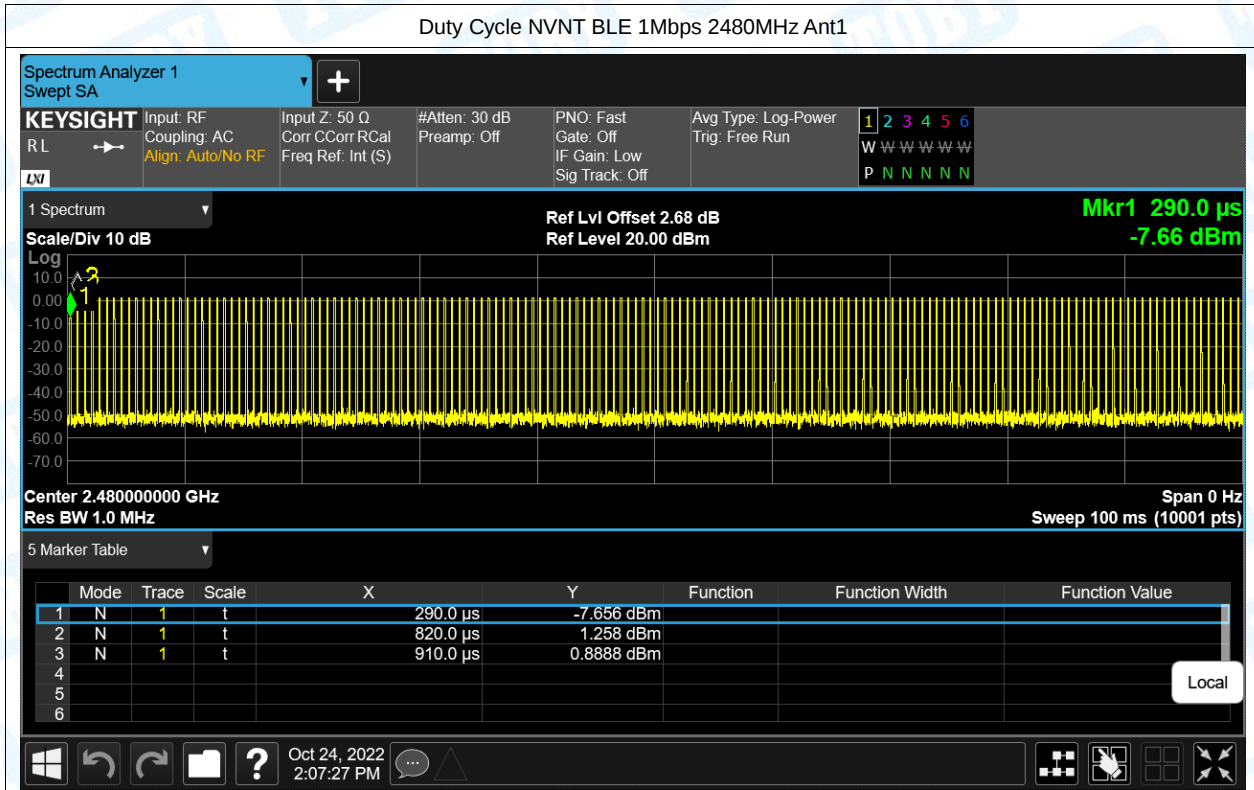
Contents

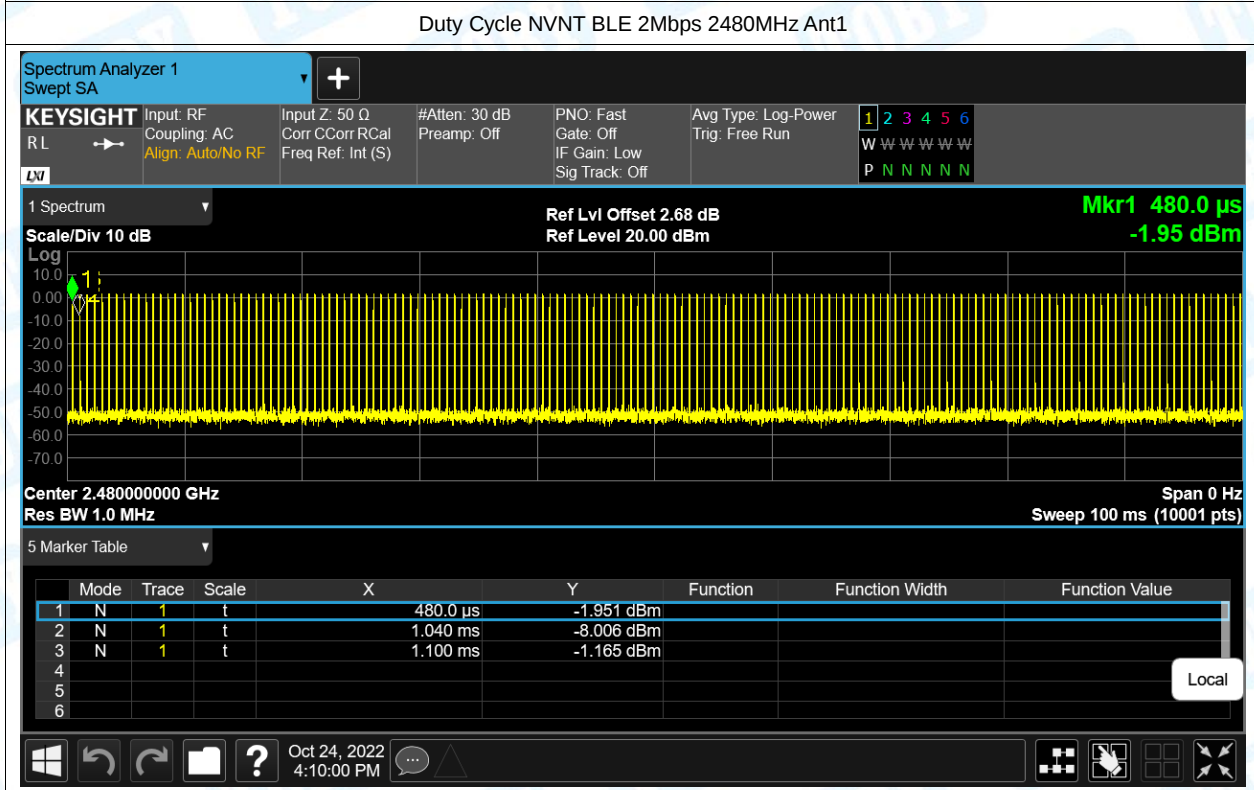
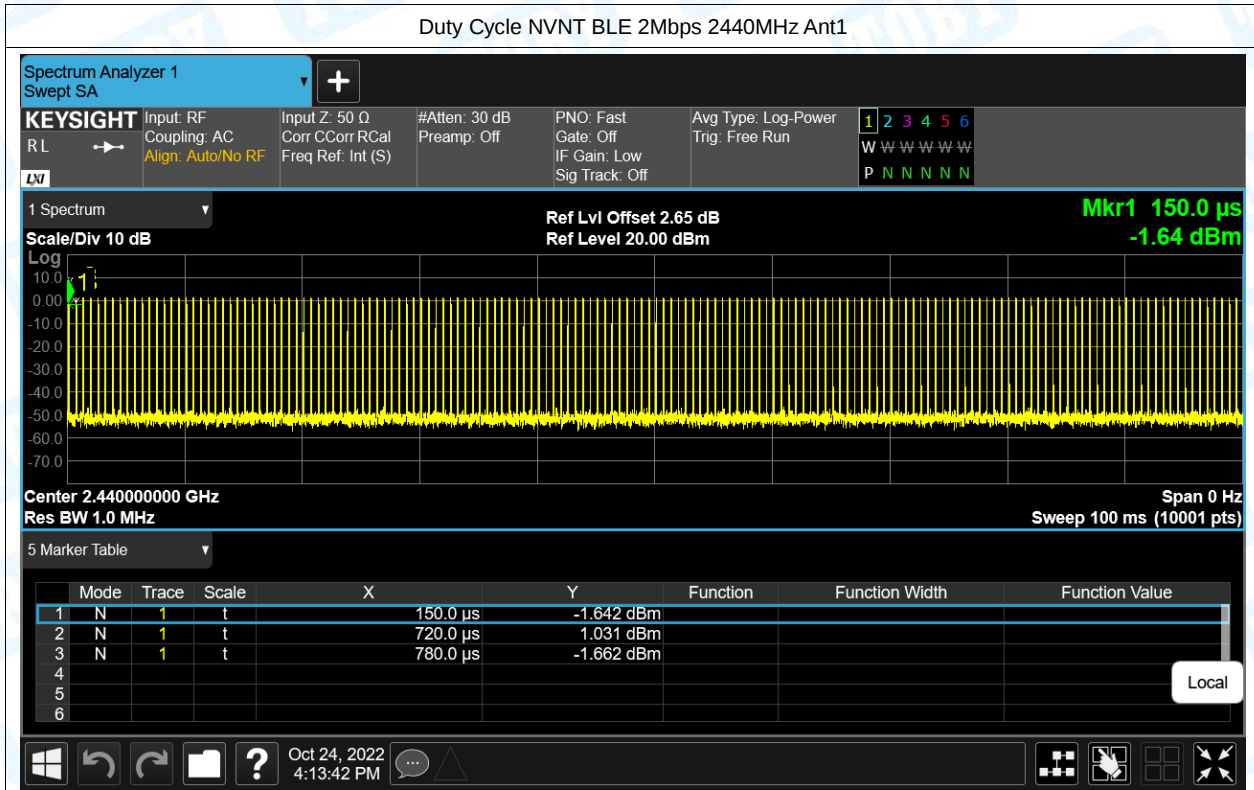
1.Duty Cycle.....	3
2.Maximum Conducted Output Power	7
3.-6dB Bandwidth	11
4.Occupied Channel Bandwidth	15
5.Maximum Power Spectral Density Level.....	19
6.Band Edge	23
7.Conducted RF Spurious Emission	28
8.Restrict Band	35

1.Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1Mbps	2402	Ant1	14.52	8.38	11.11
NVNT	BLE 1Mbps	2440	Ant1	12.9	8.89	12.5
NVNT	BLE 1Mbps	2480	Ant1	14.52	8.38	11.11
NVNT	BLE 2Mbps	2402	Ant1	9.68	10.14	16.67
NVNT	BLE 2Mbps	2440	Ant1	9.52	10.21	16.67
NVNT	BLE 2Mbps	2480	Ant1	9.68	10.14	16.67





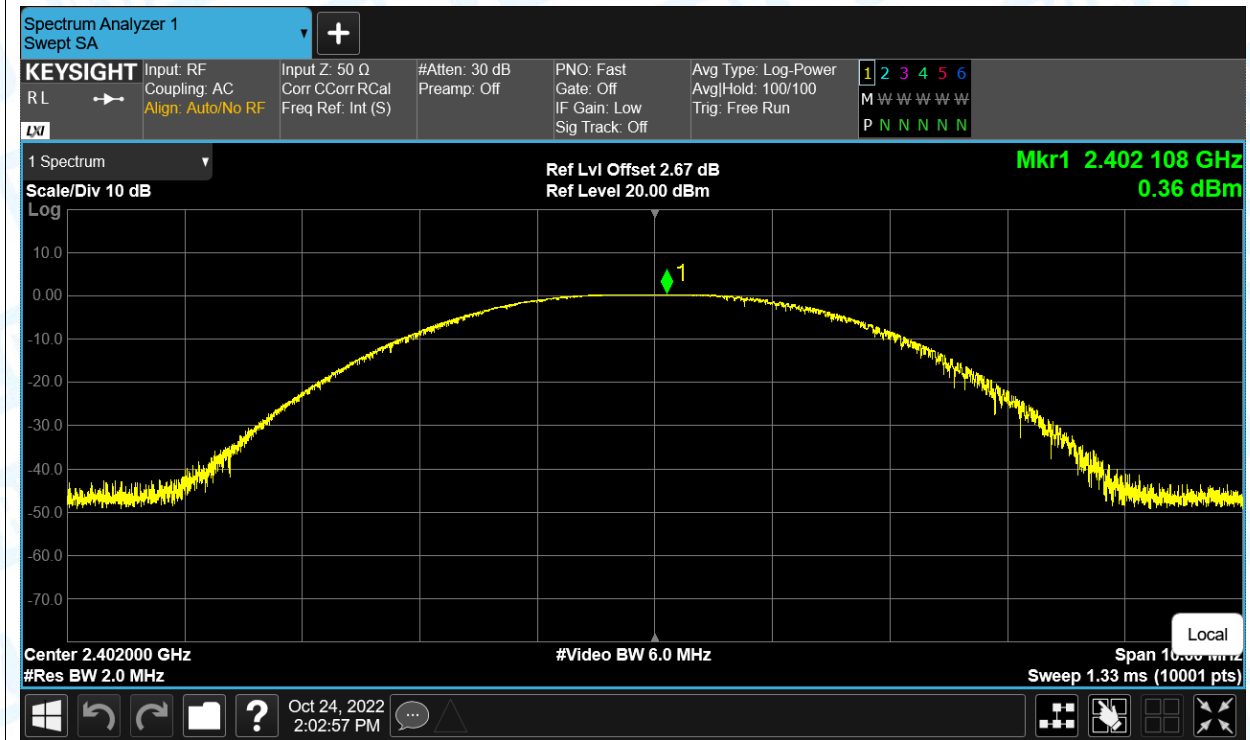


2.Maximum Conducted Output Power

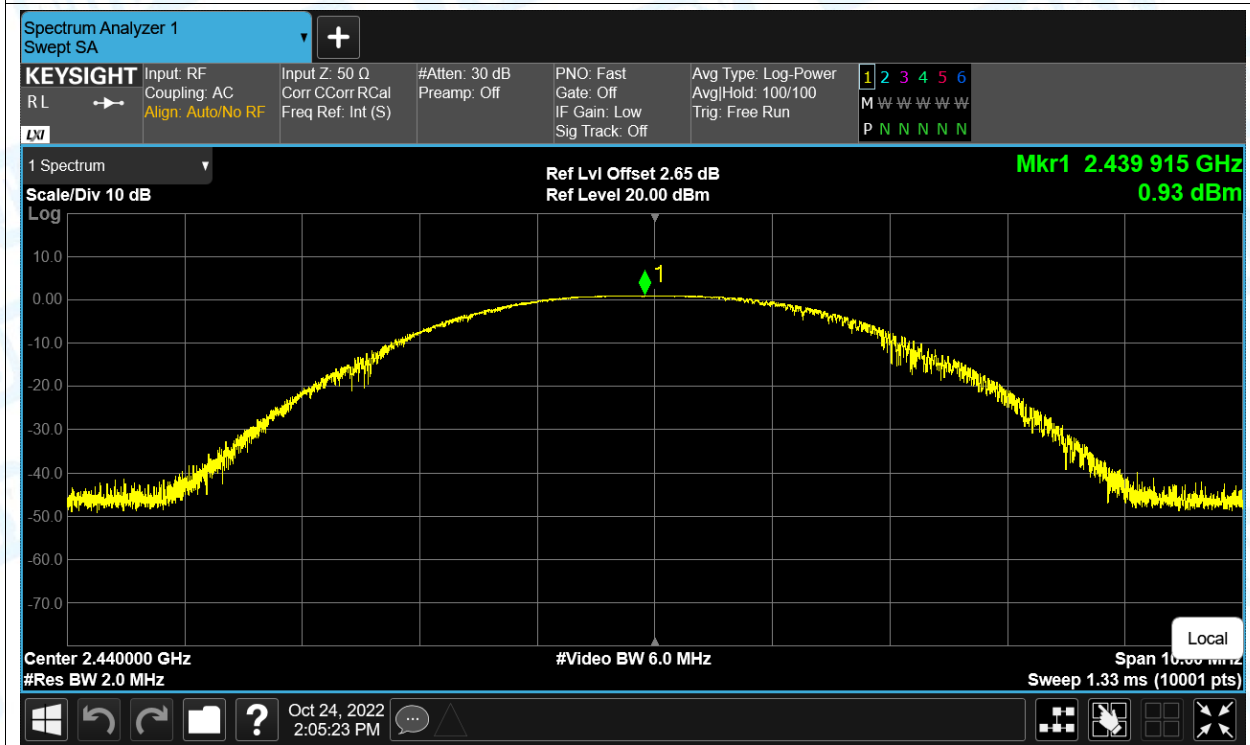
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	0.359	30	Pass
NVNT	BLE 1Mbps	2440	Ant1	0.931	30	Pass
NVNT	BLE 1Mbps	2480	Ant1	1.334	30	Pass
NVNT	BLE 2Mbps	2402	Ant1	0.478	30	Pass
NVNT	BLE 2Mbps	2440	Ant1	1.041	30	Pass
NVNT	BLE 2Mbps	2480	Ant1	1.492	30	Pass

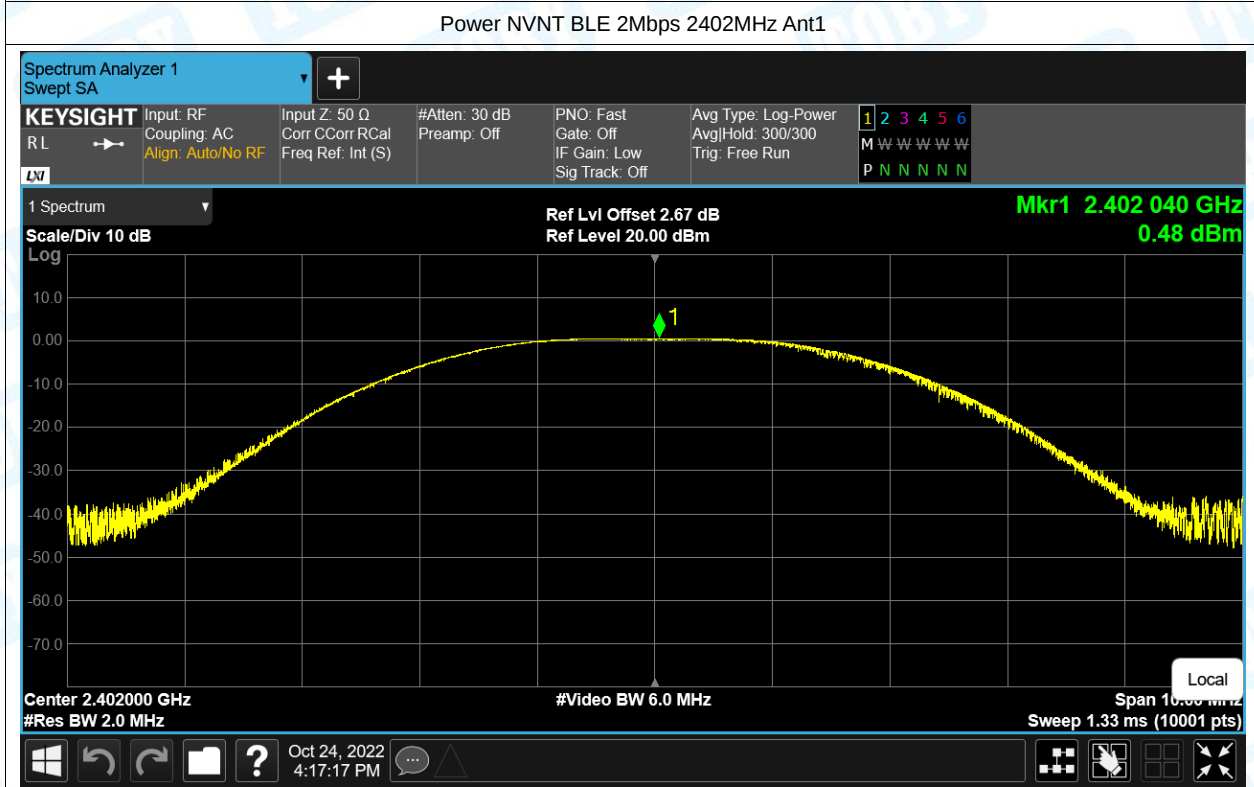
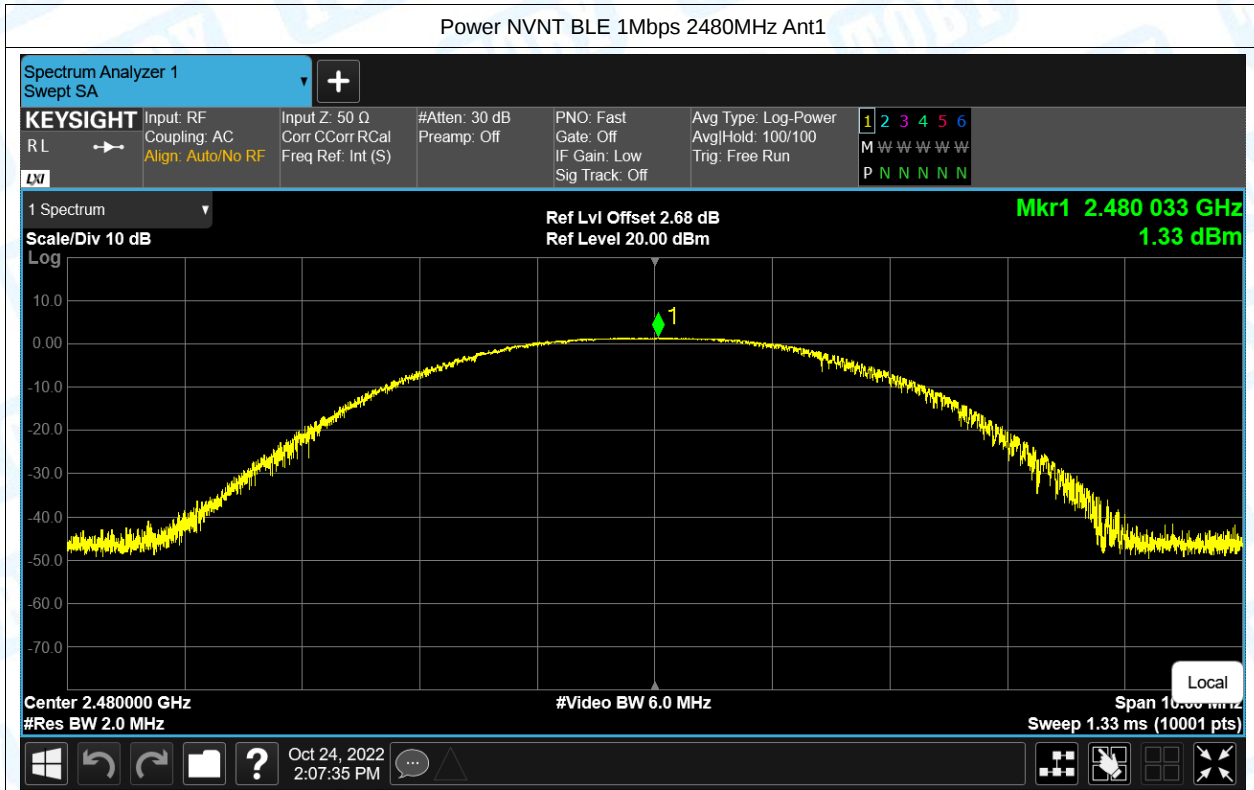
Test Graphs

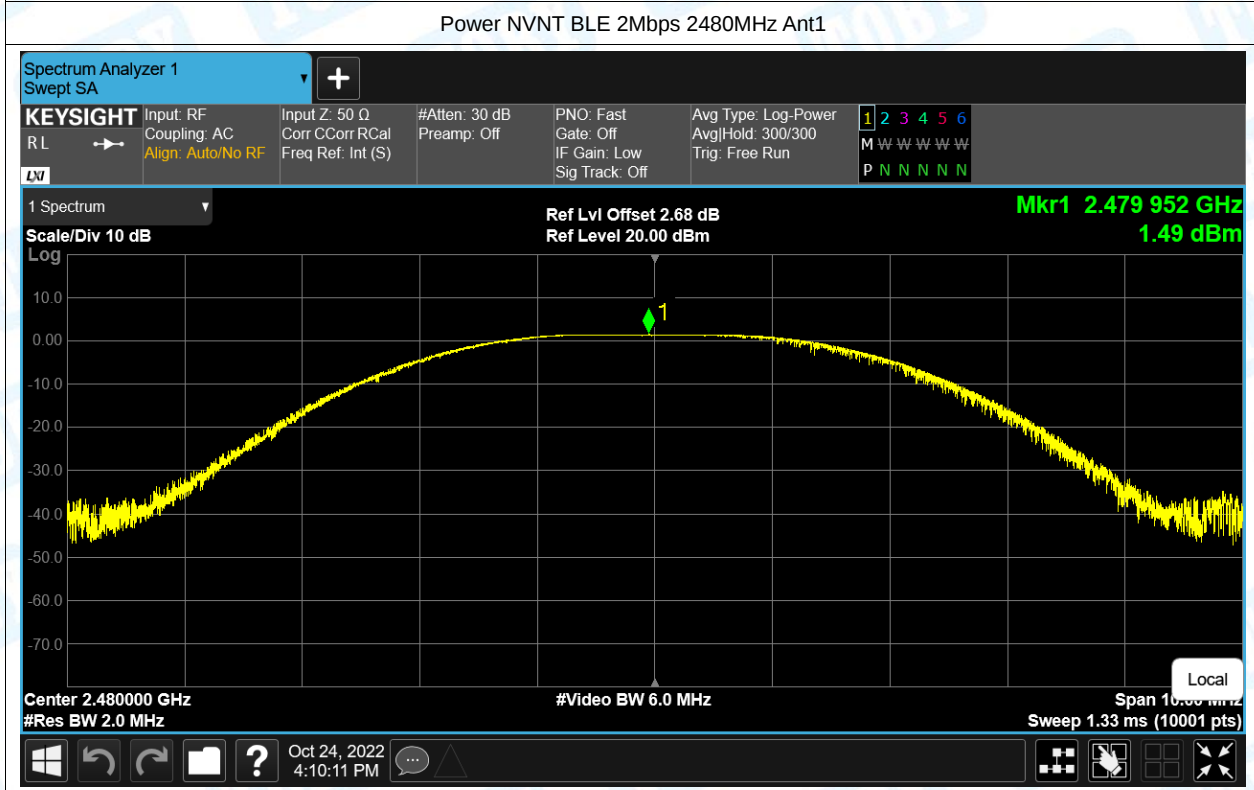
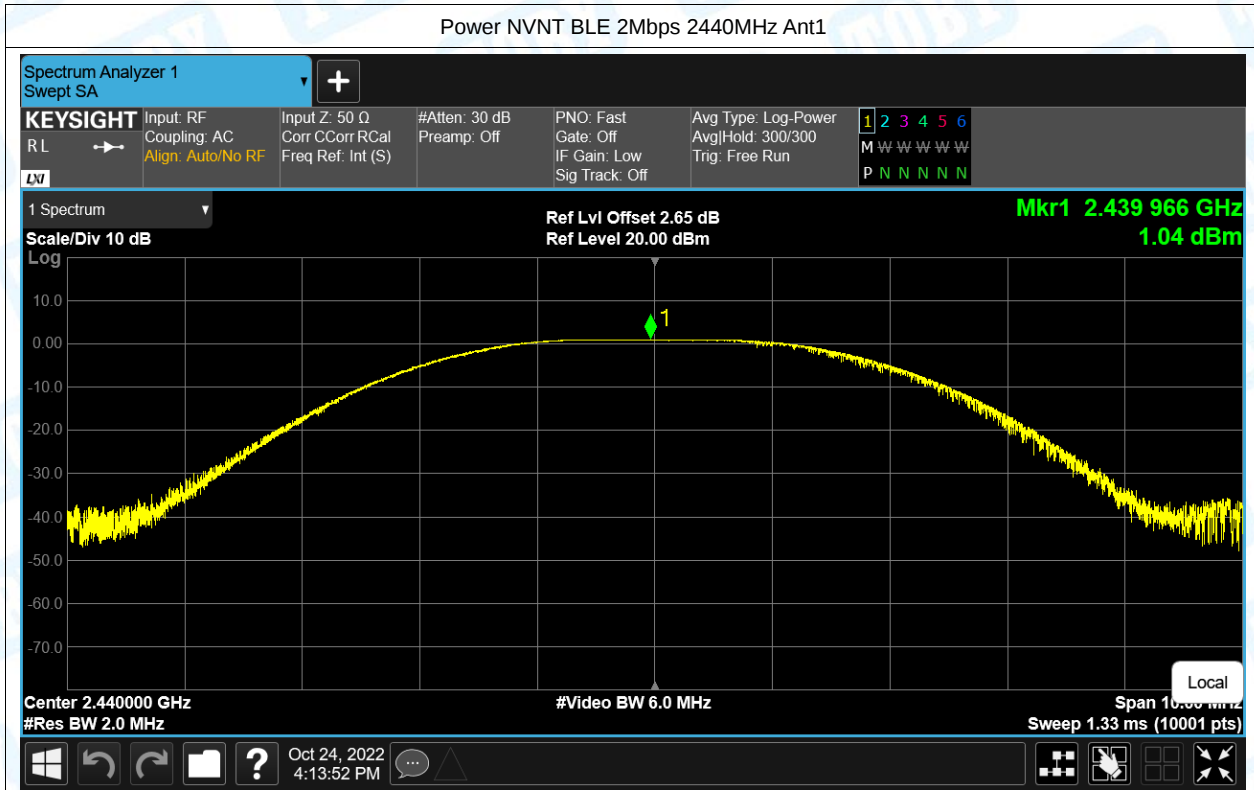
Power NVNT BLE 1Mbps 2402MHz Ant1



Power NVNT BLE 1Mbps 2440MHz Ant1





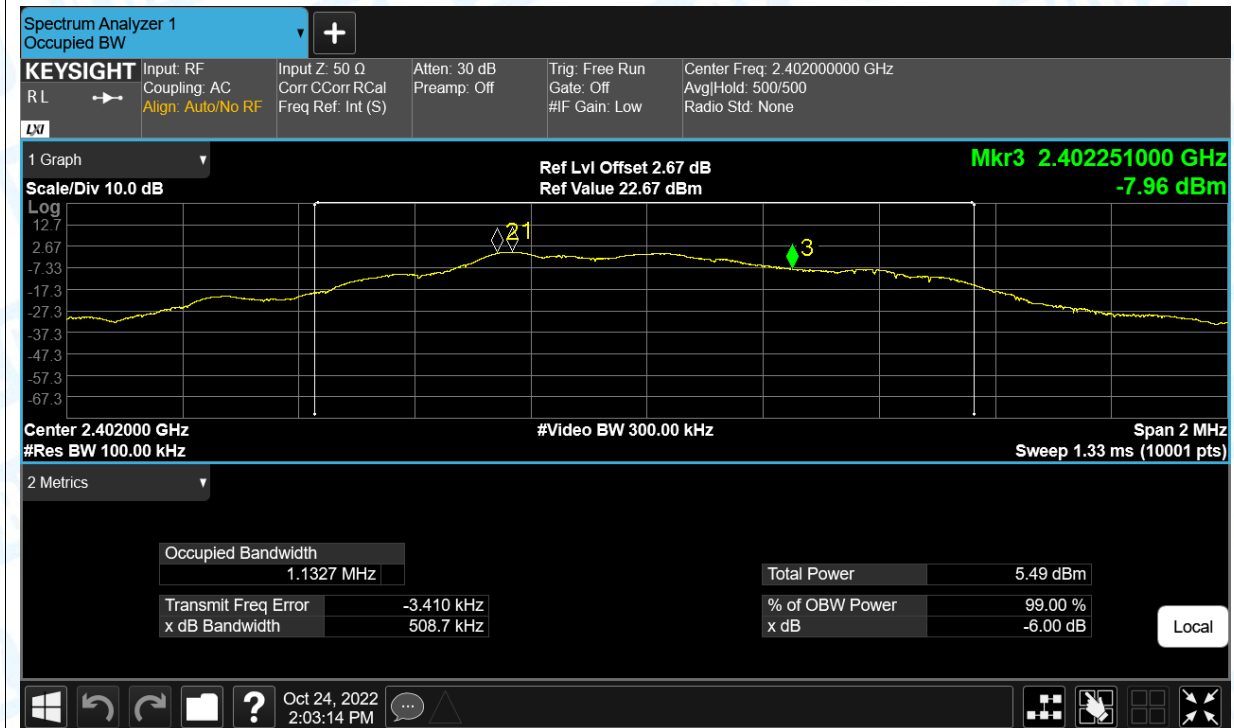


3.-6dB Bandwidth

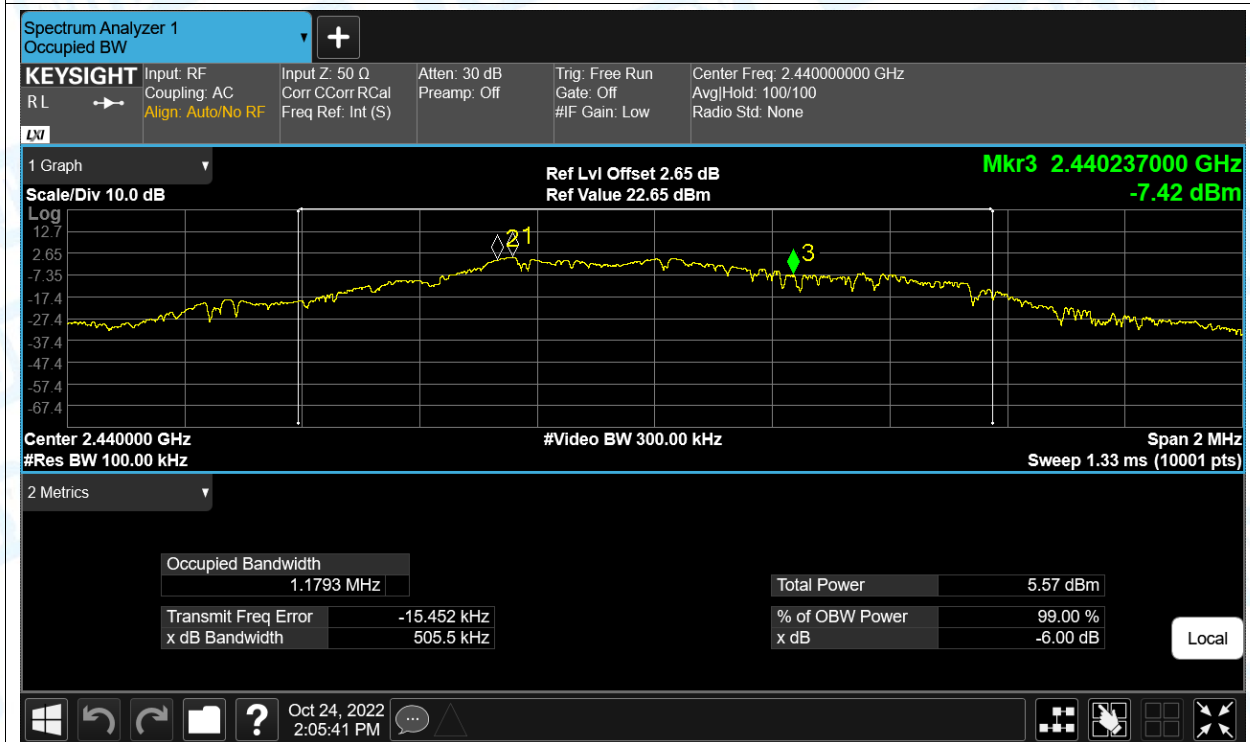
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	0.51	0.5	Pass
NVNT	BLE 1Mbps	2440	Ant1	0.51	0.5	Pass
NVNT	BLE 1Mbps	2480	Ant1	0.52	0.5	Pass
NVNT	BLE 2Mbps	2402	Ant1	0.85	0.5	Pass
NVNT	BLE 2Mbps	2440	Ant1	0.8	0.5	Pass
NVNT	BLE 2Mbps	2480	Ant1	0.85	0.5	Pass

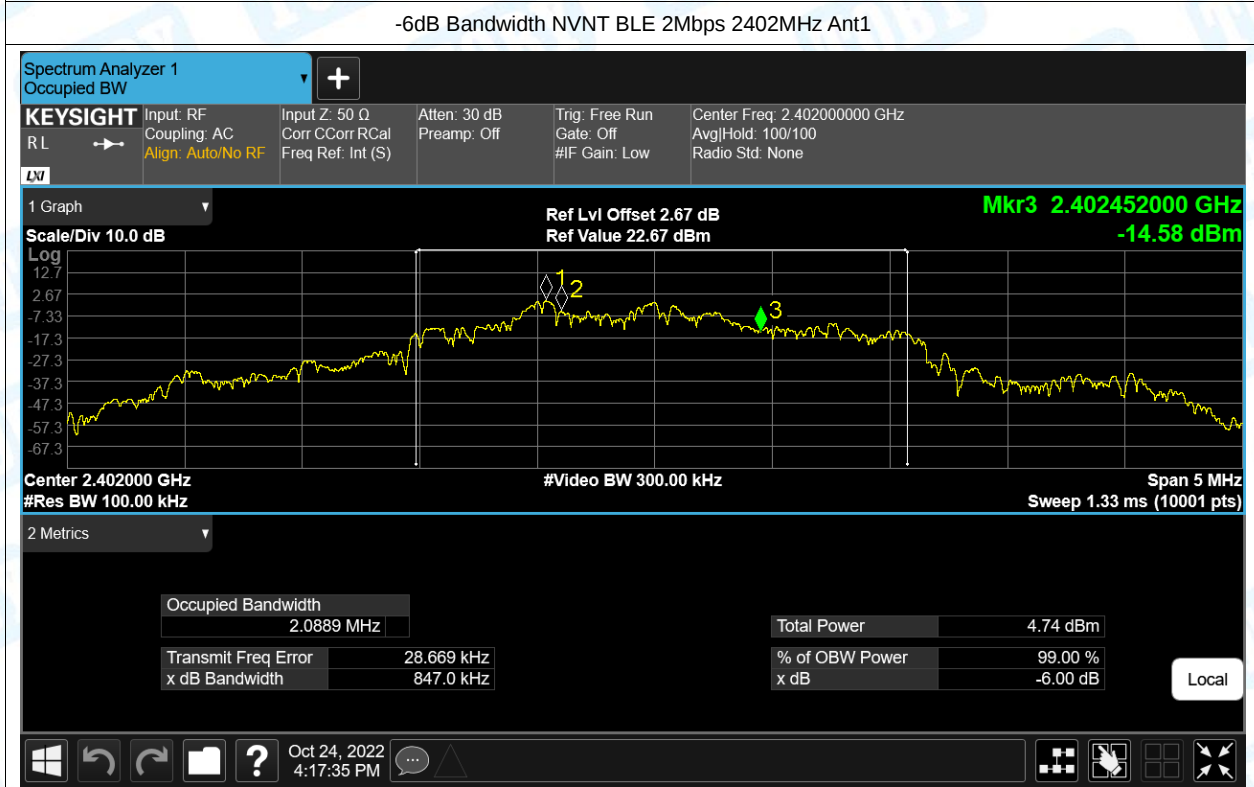
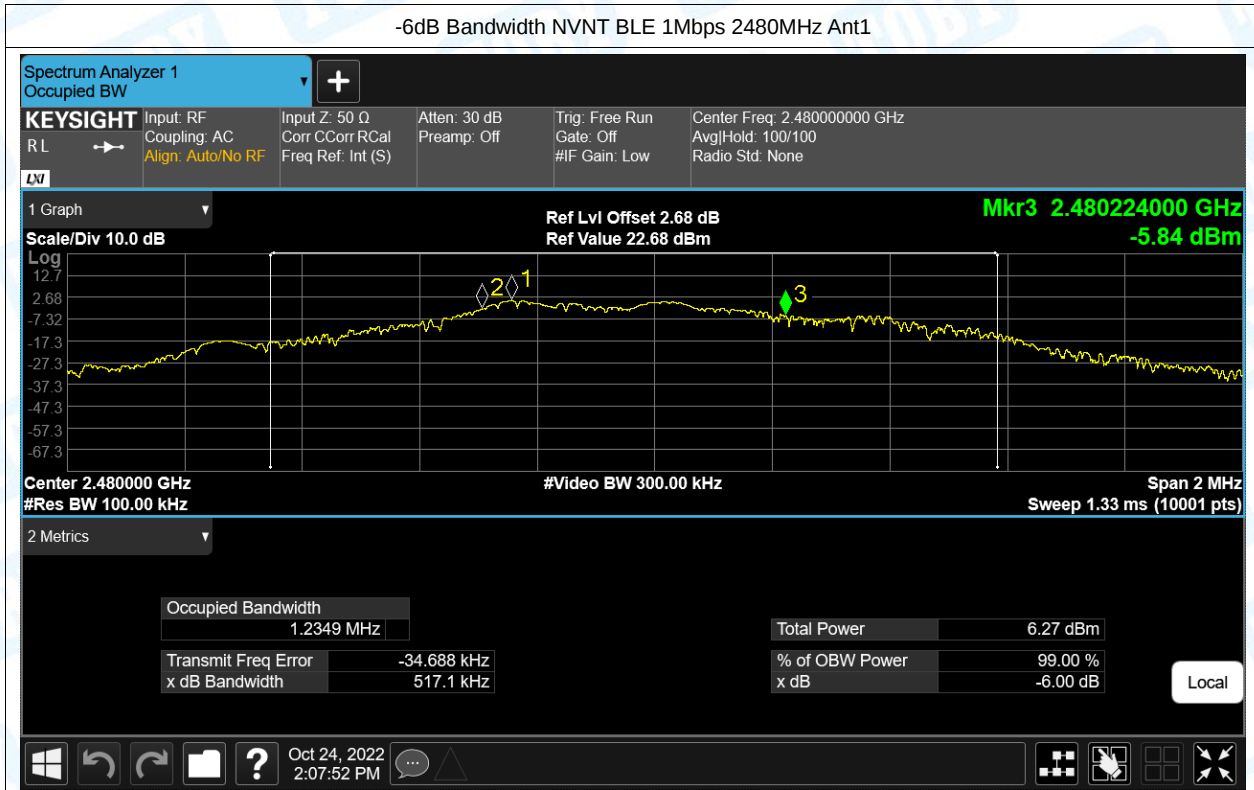
Test Graphs

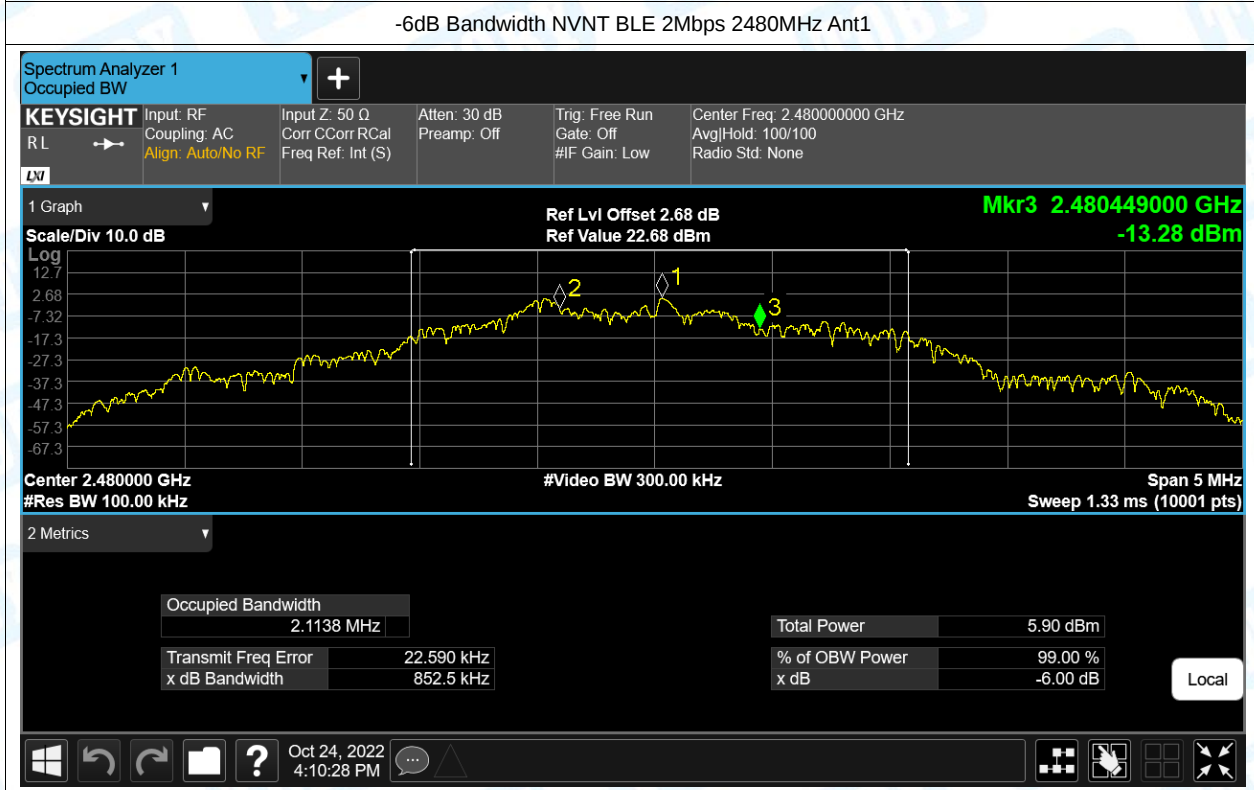
-6dB Bandwidth NVNT BLE 1Mbps 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1Mbps 2440MHz Ant1

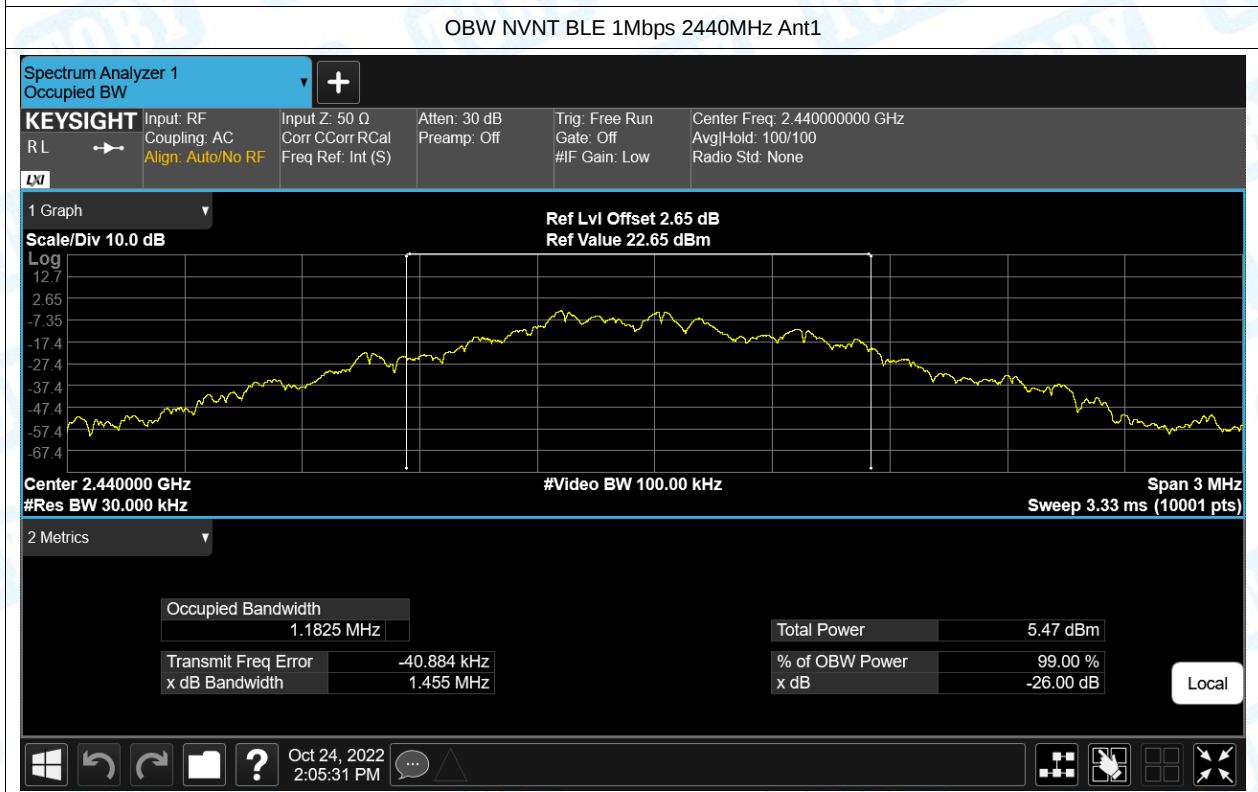
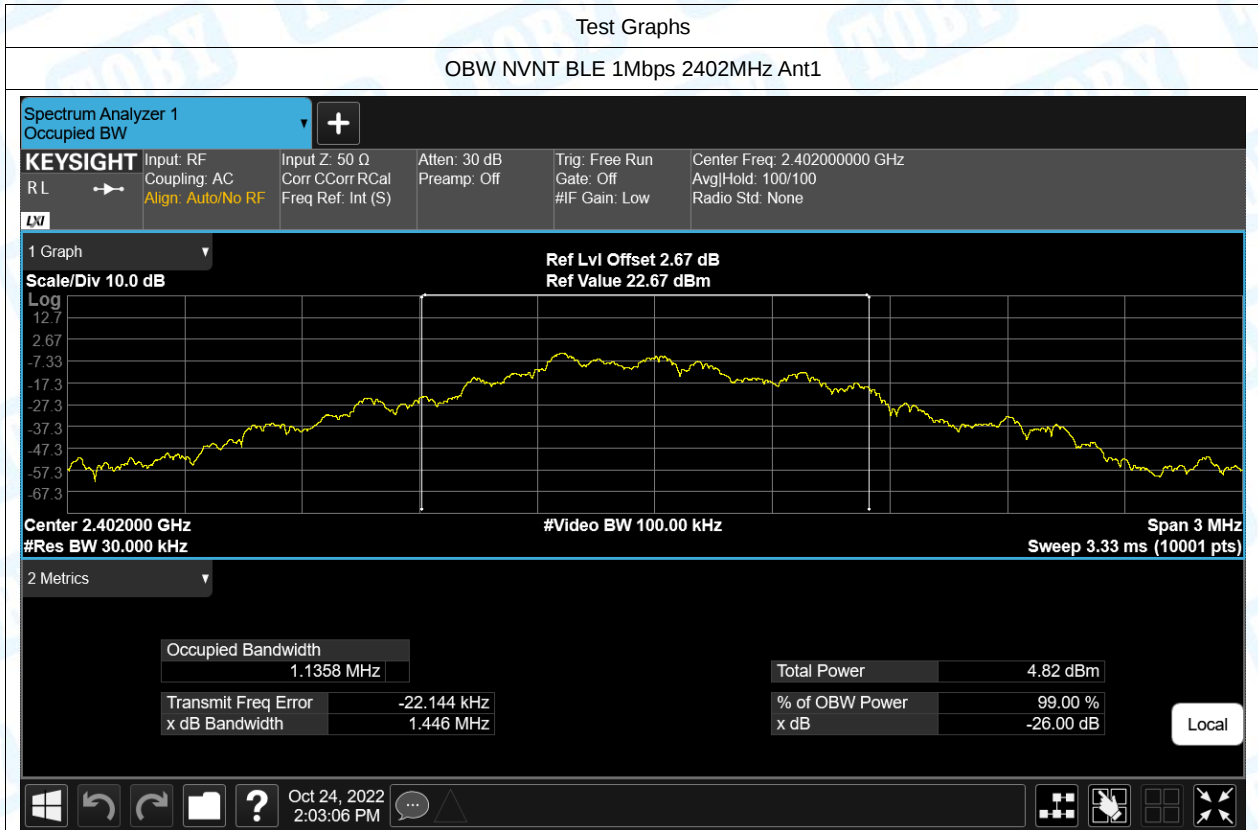


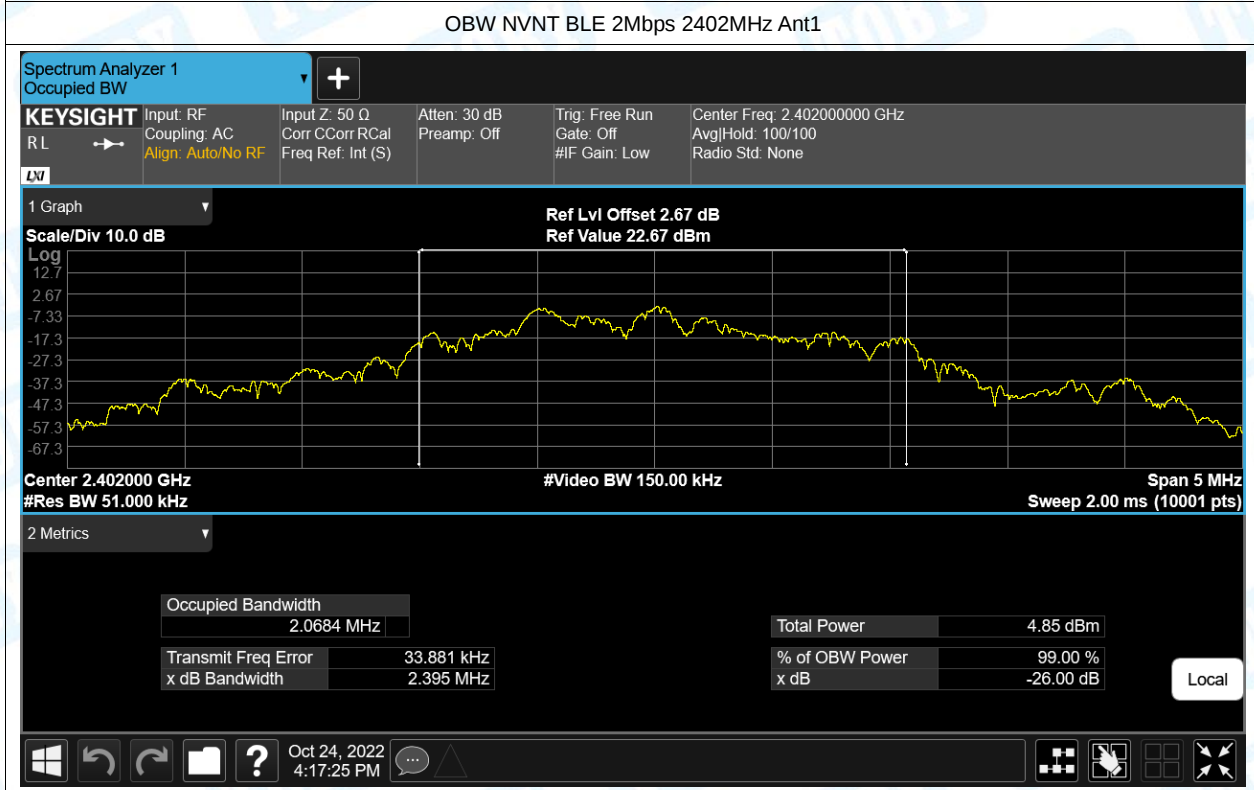
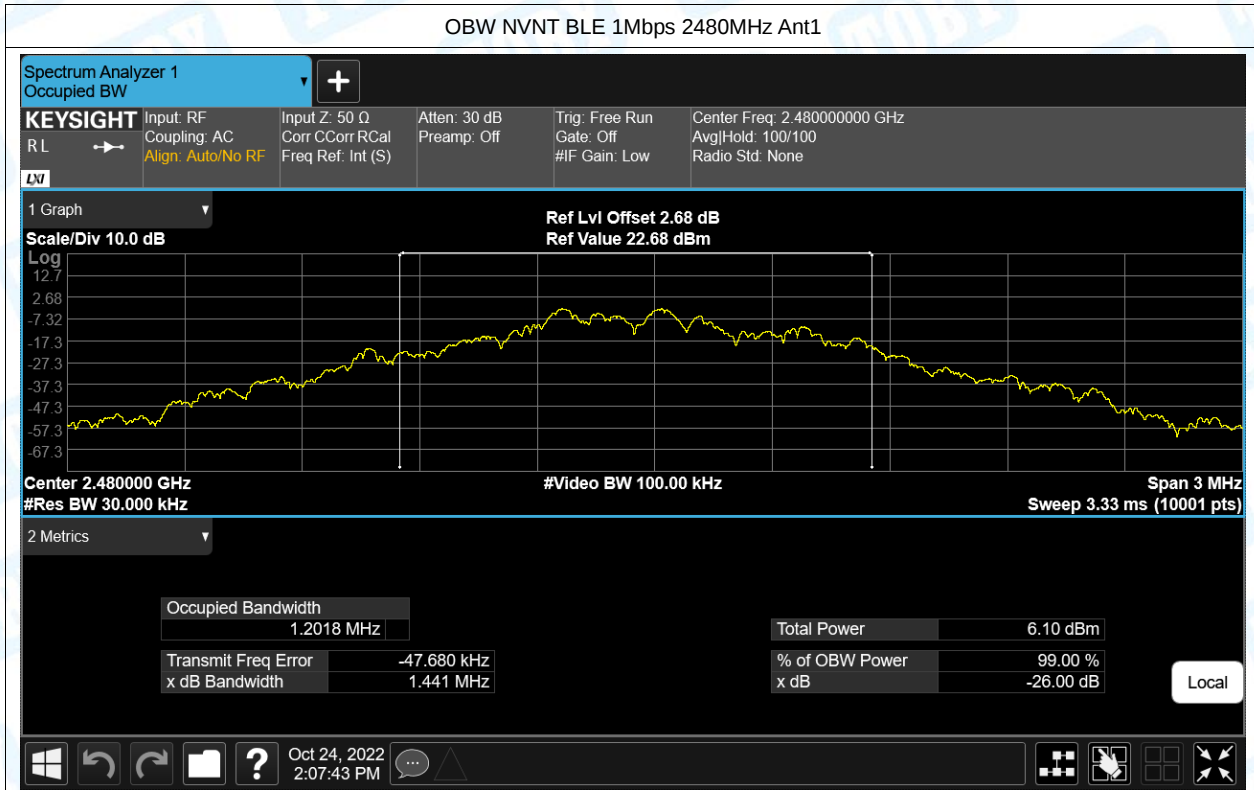


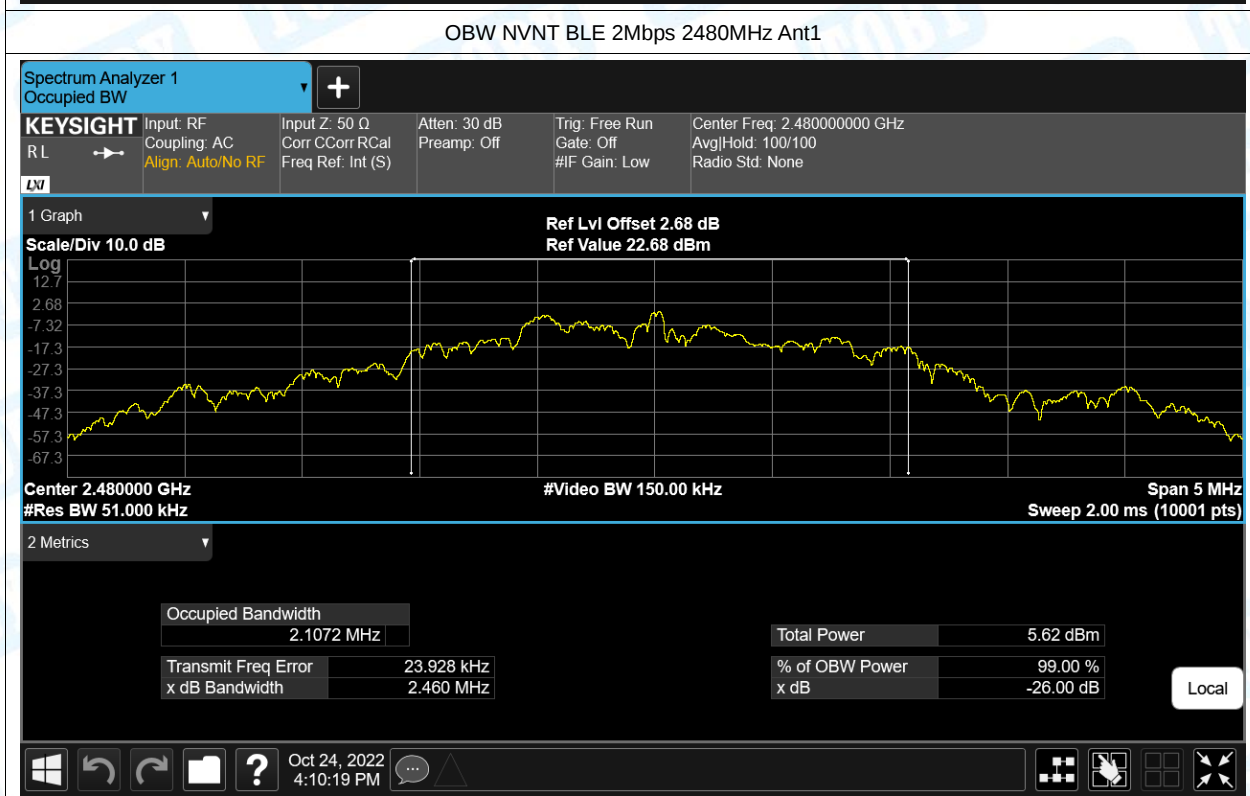
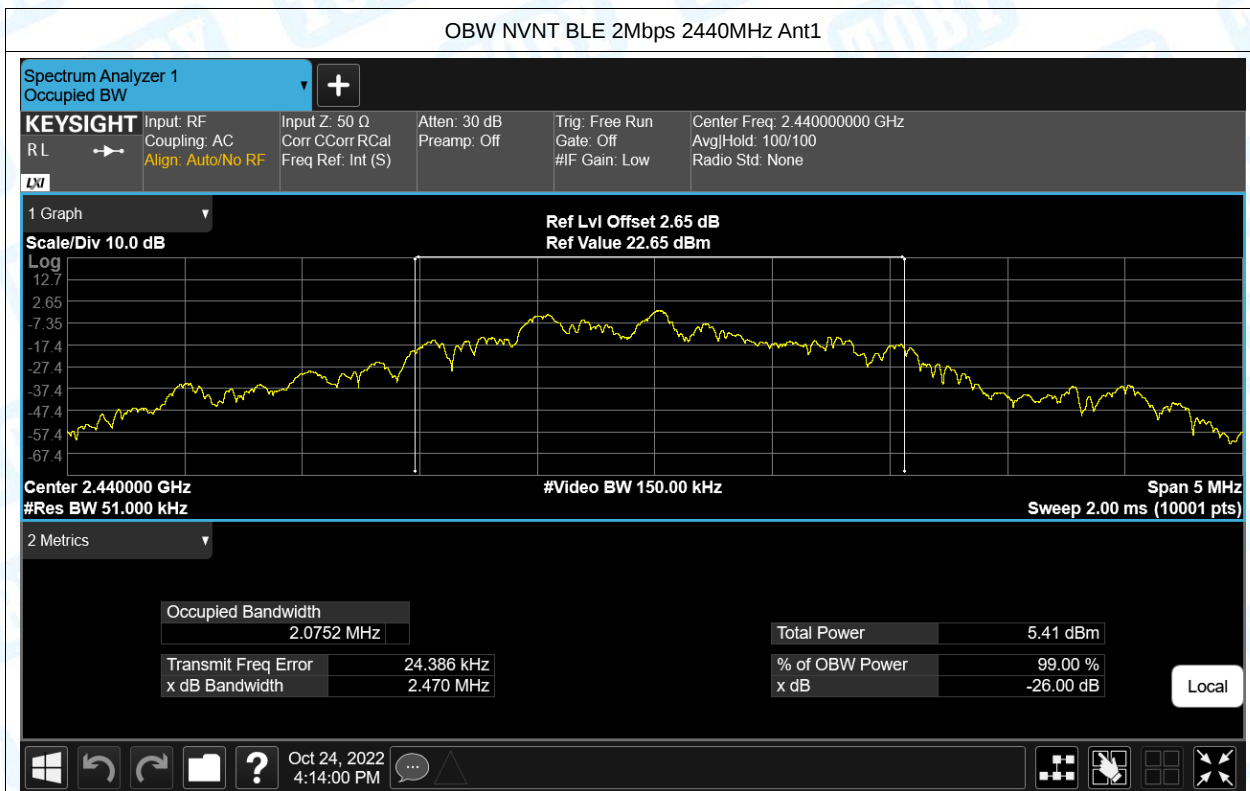


4.Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE 1Mbps	2402	Ant1	1.136
NVNT	BLE 1Mbps	2440	Ant1	1.183
NVNT	BLE 1Mbps	2480	Ant1	1.202
NVNT	BLE 2Mbps	2402	Ant1	2.068
NVNT	BLE 2Mbps	2440	Ant1	2.075
NVNT	BLE 2Mbps	2480	Ant1	2.107

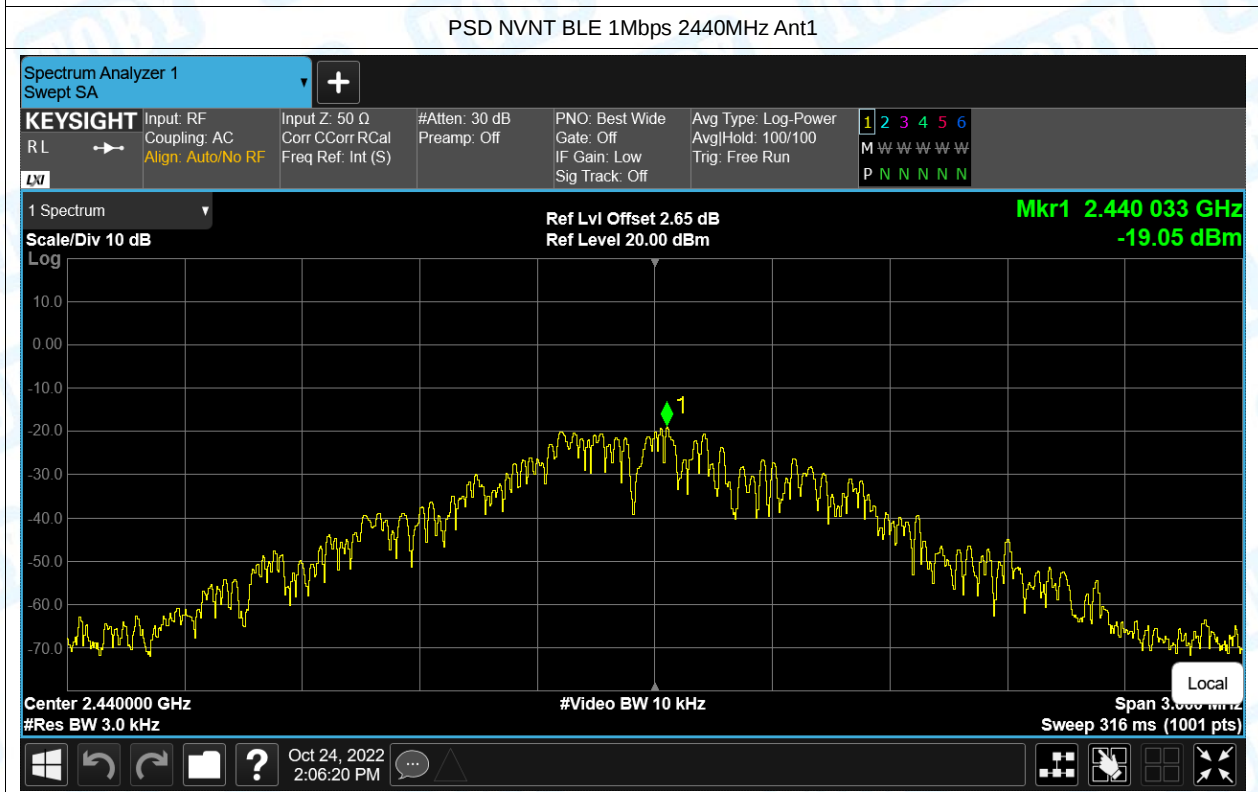
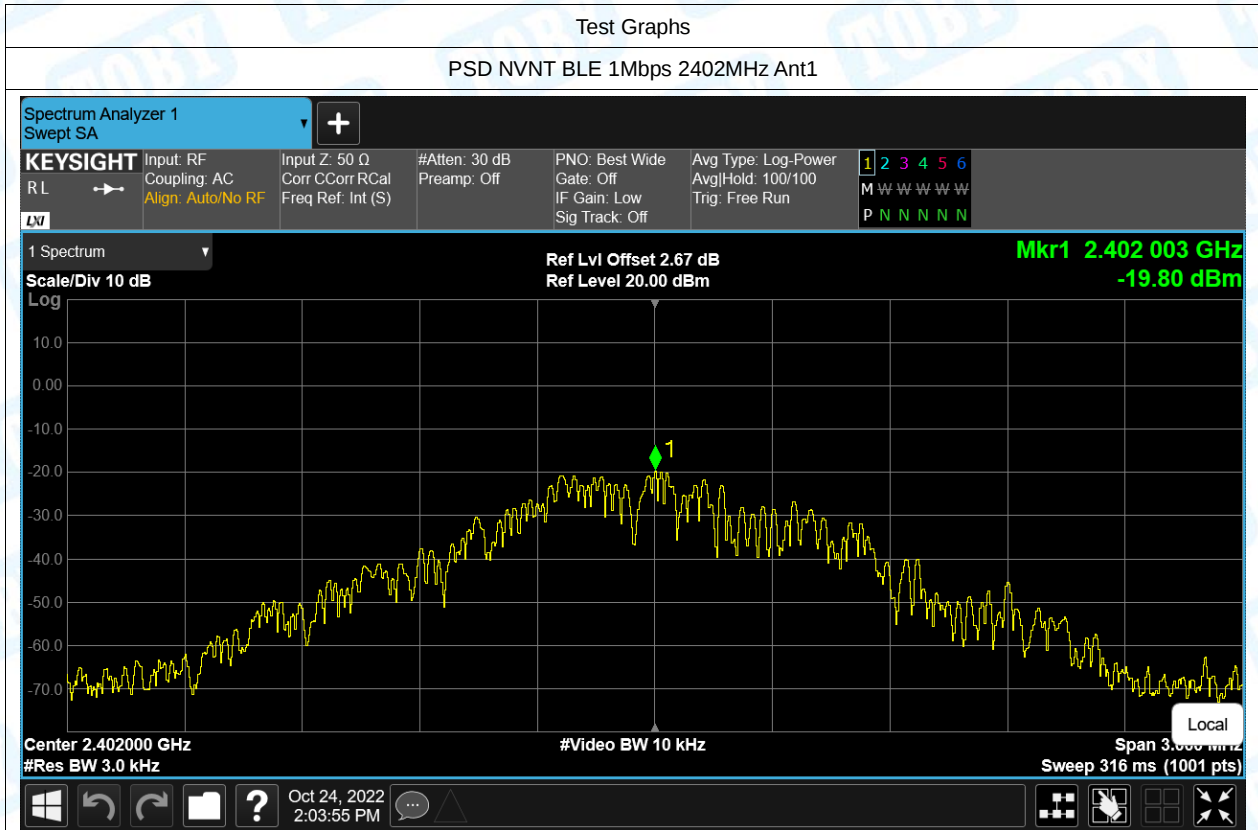


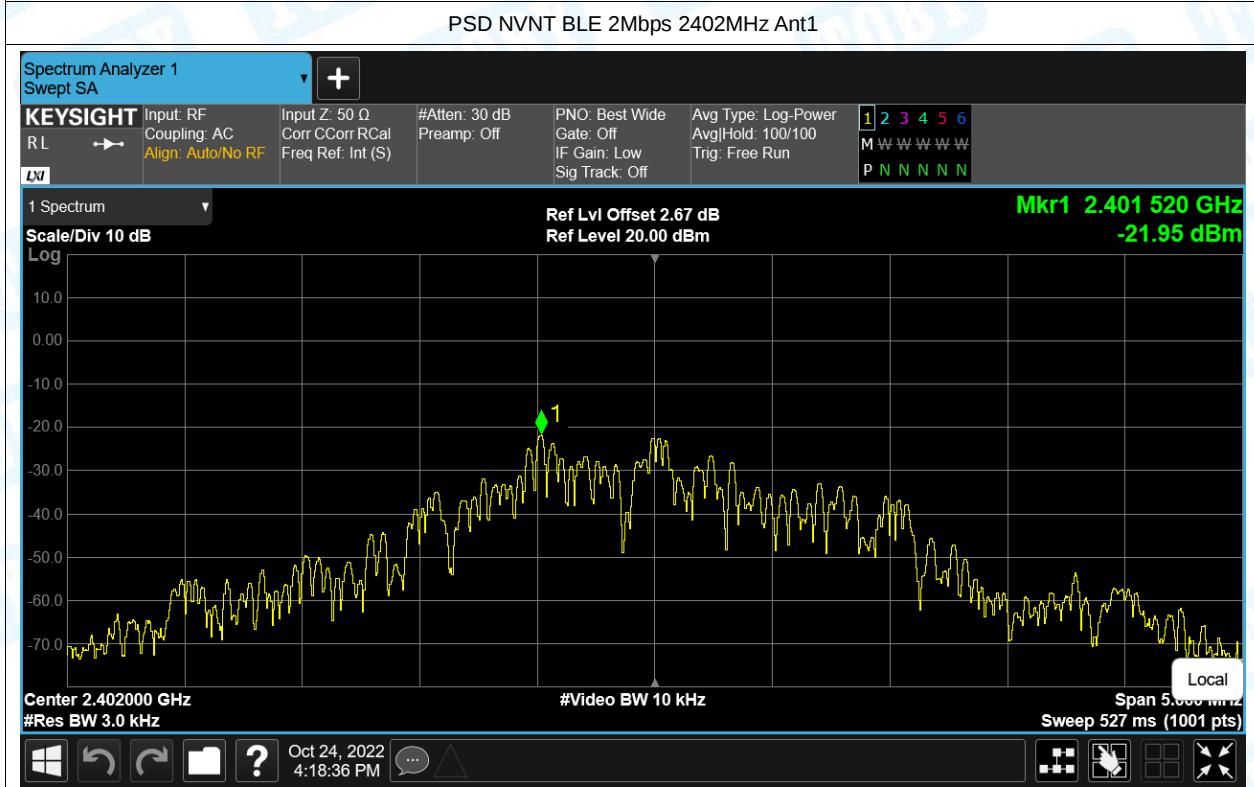
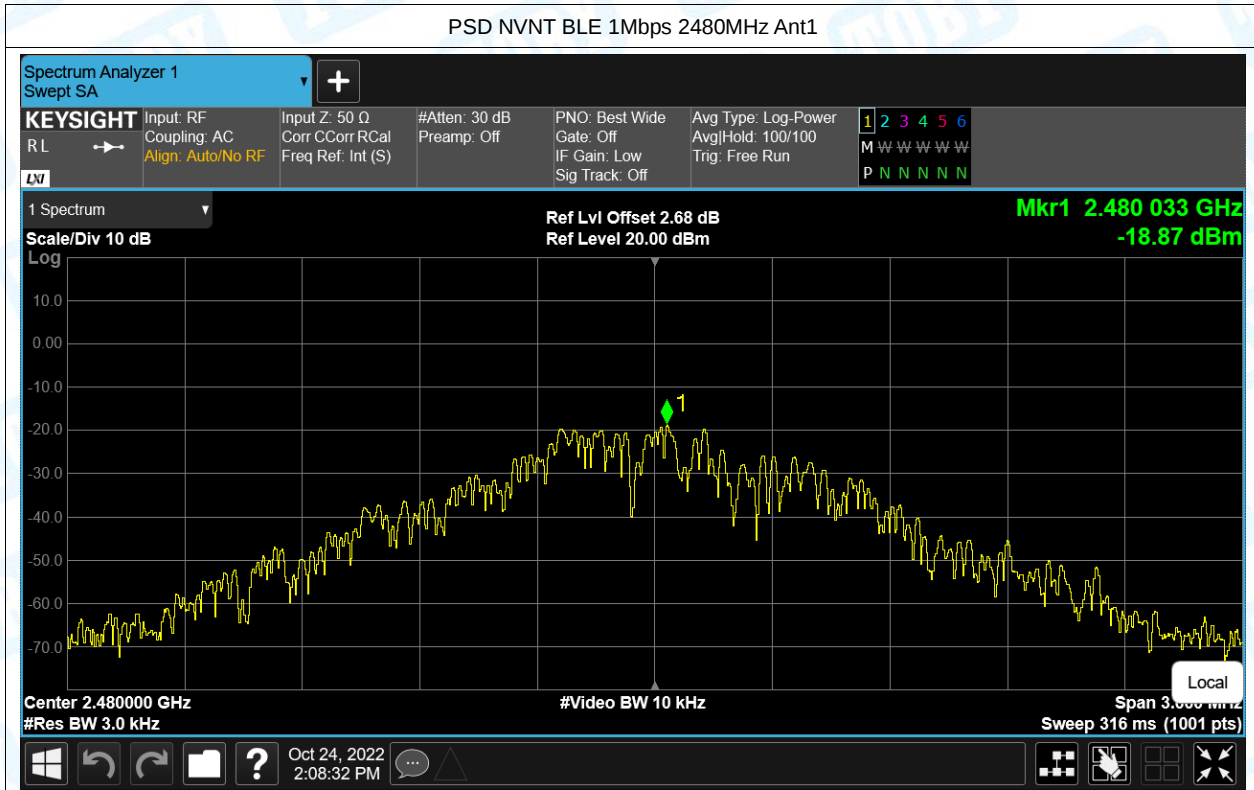


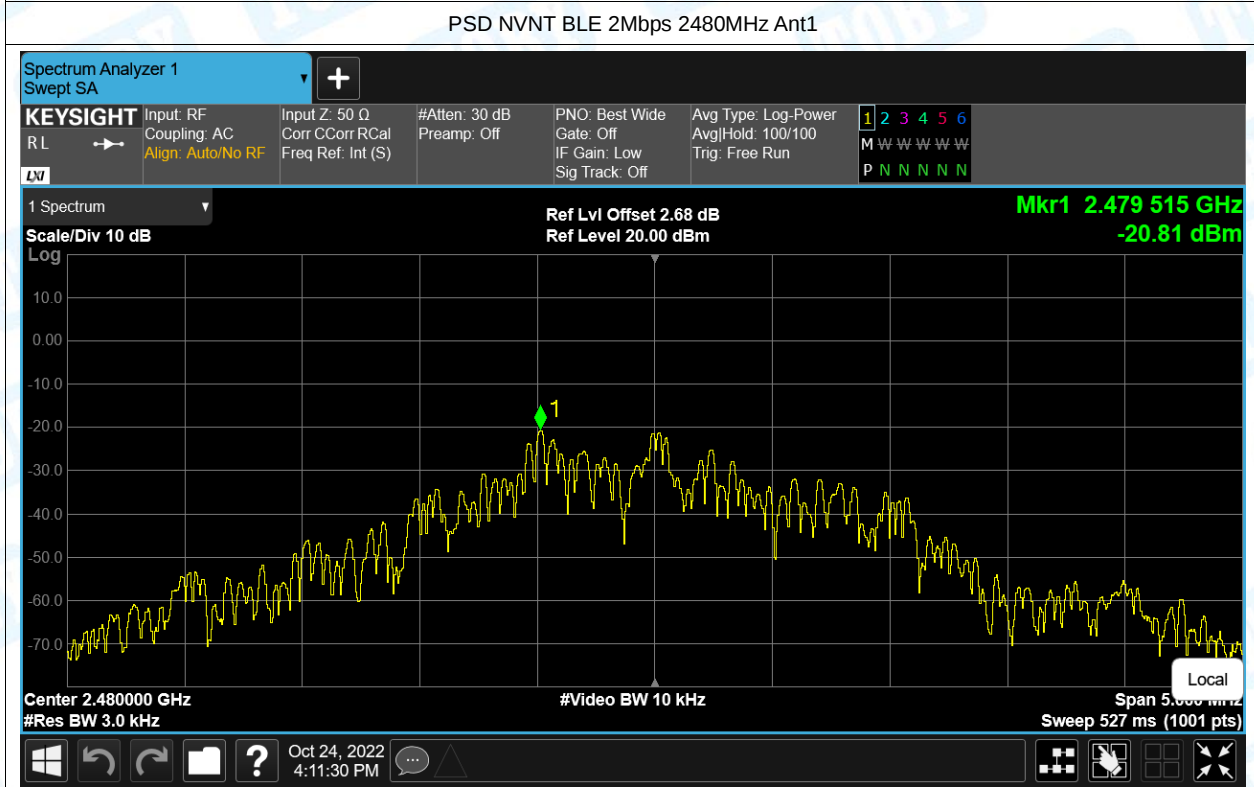
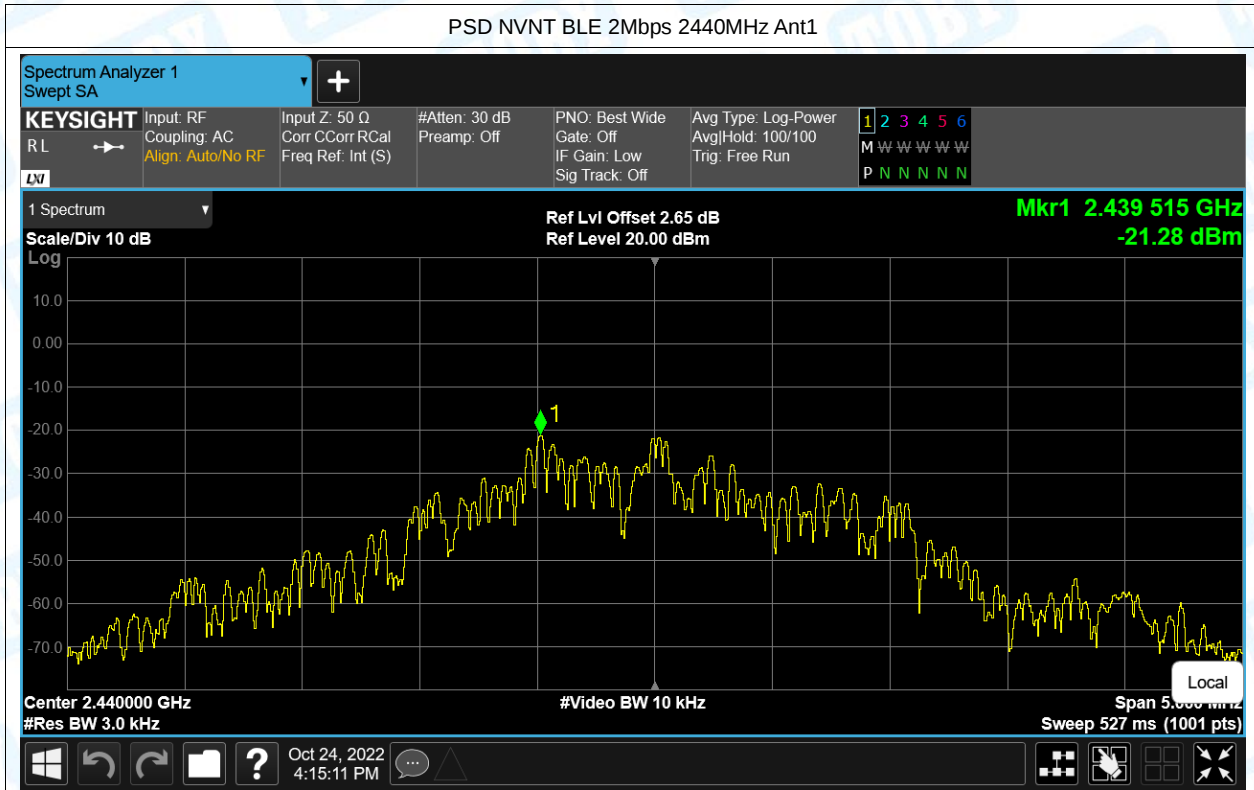


5.Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-19.799	8	Pass
NVNT	BLE 1Mbps	2440	Ant1	-19.051	8	Pass
NVNT	BLE 1Mbps	2480	Ant1	-18.867	8	Pass
NVNT	BLE 2Mbps	2402	Ant1	-21.947	8	Pass
NVNT	BLE 2Mbps	2440	Ant1	-21.284	8	Pass
NVNT	BLE 2Mbps	2480	Ant1	-20.808	8	Pass

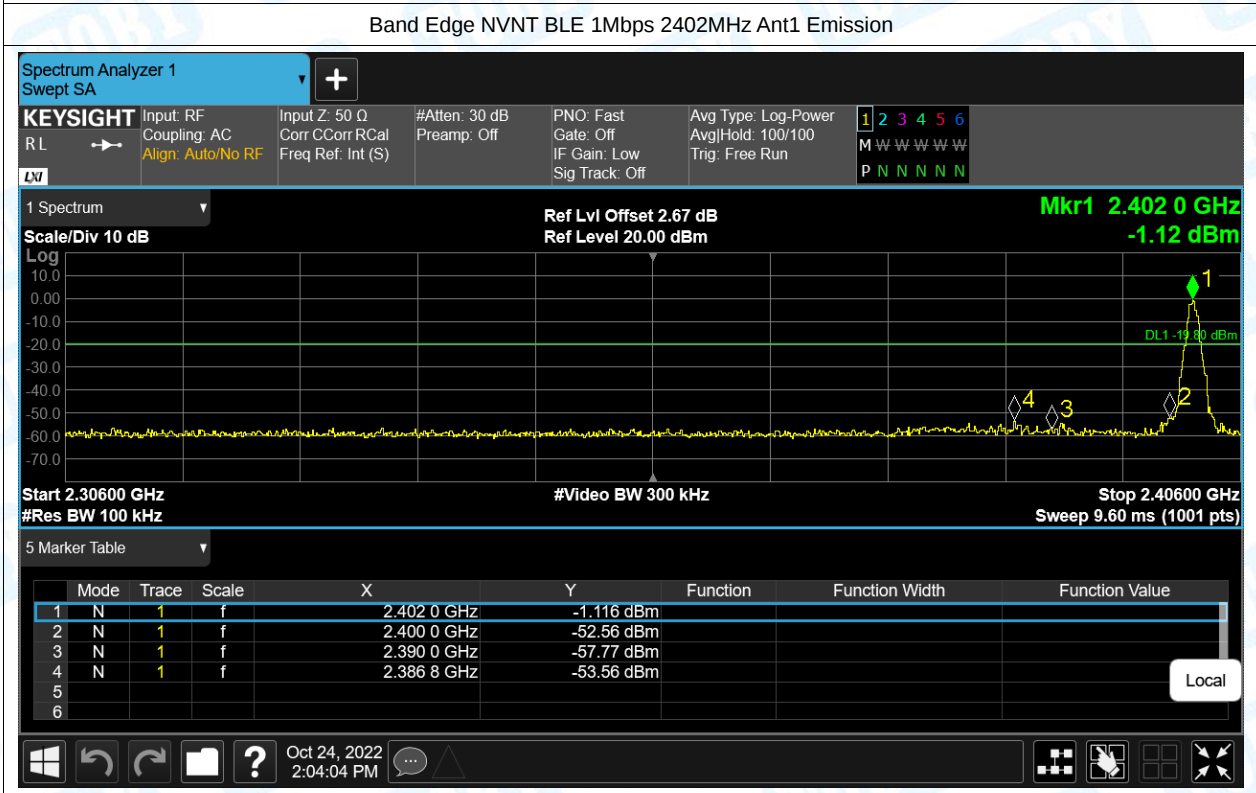
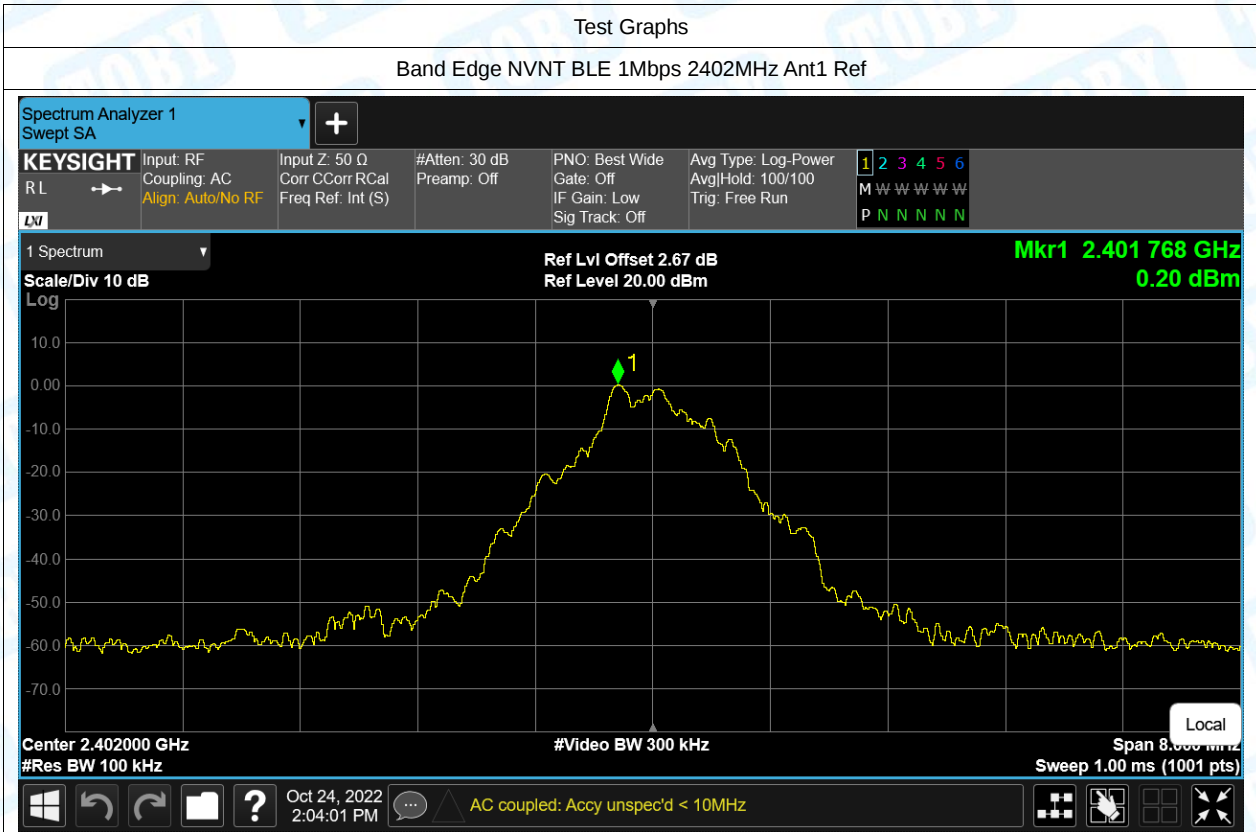


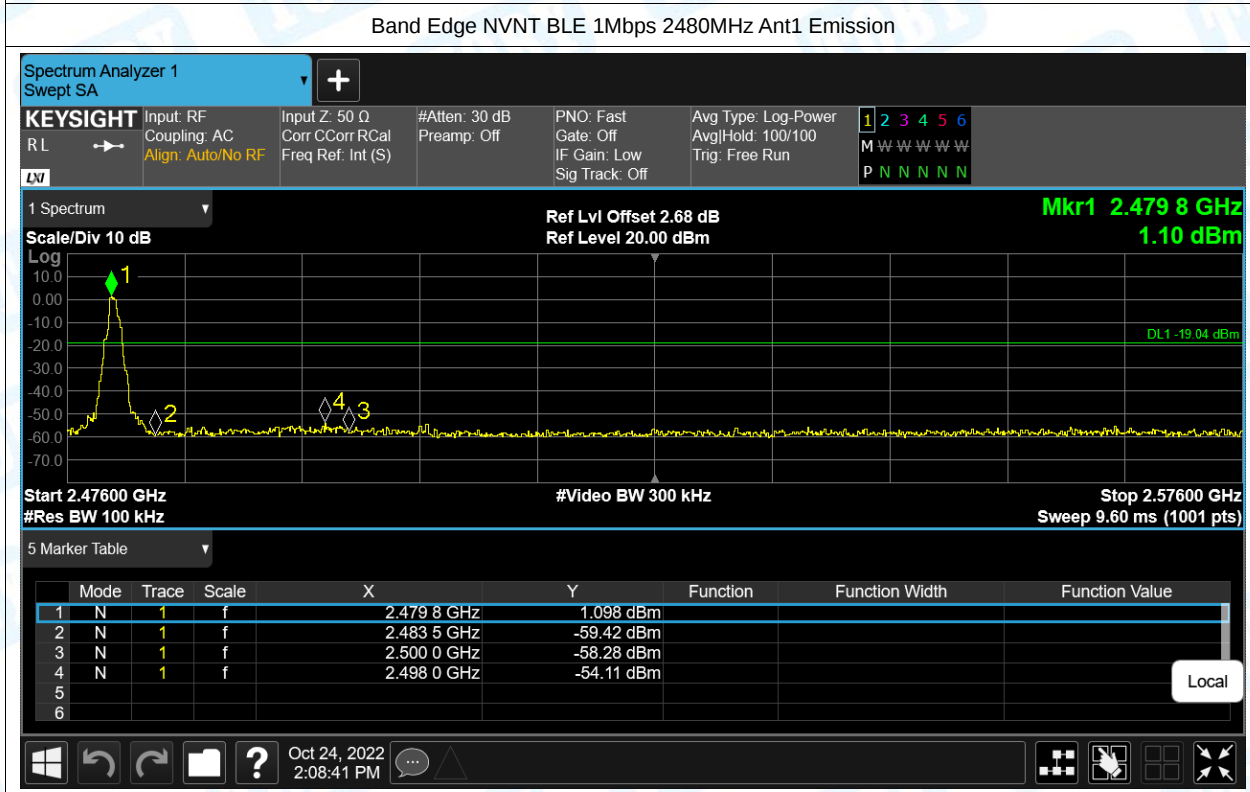
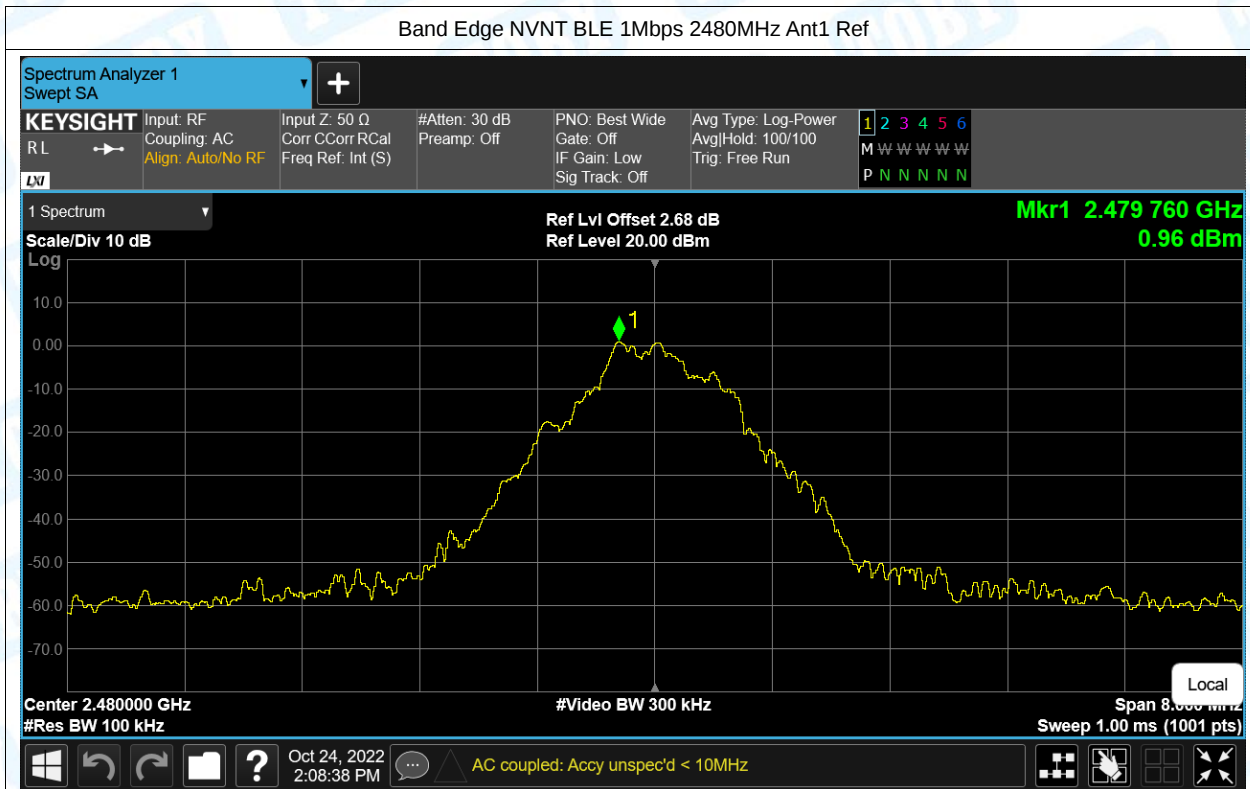


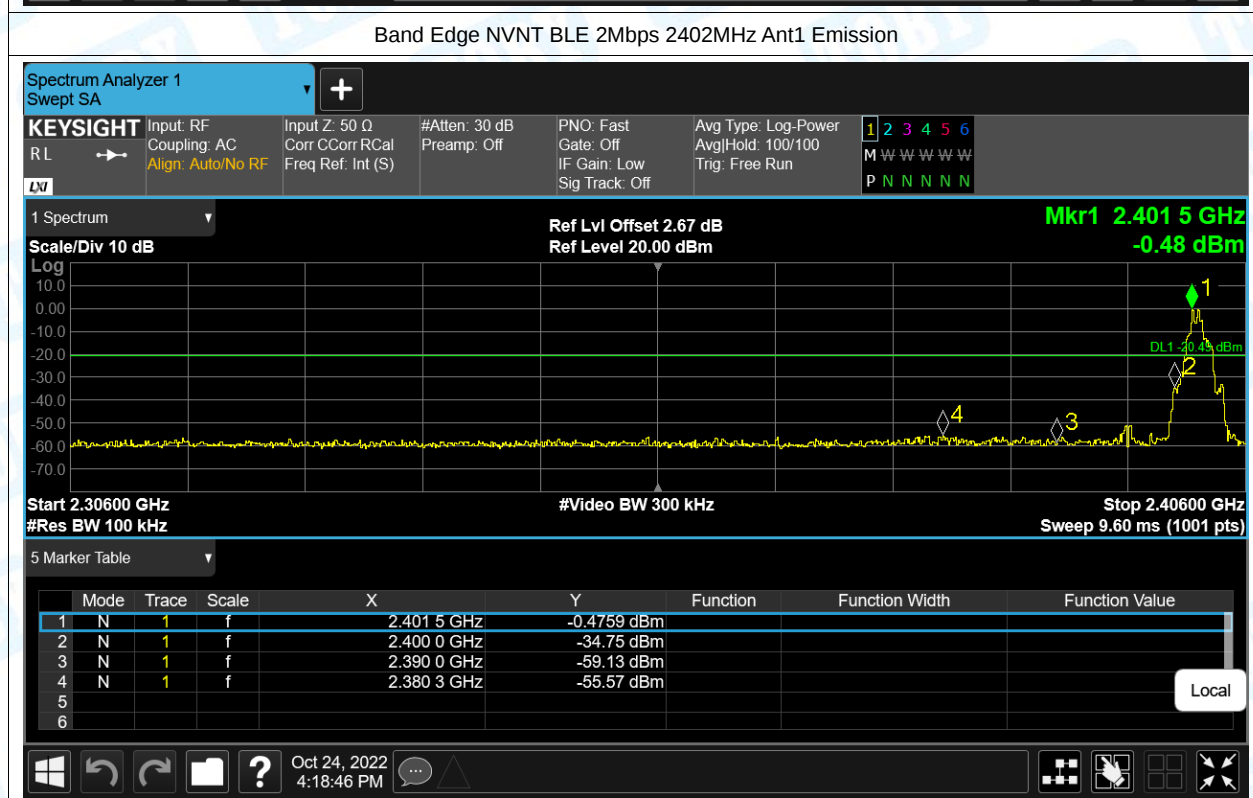
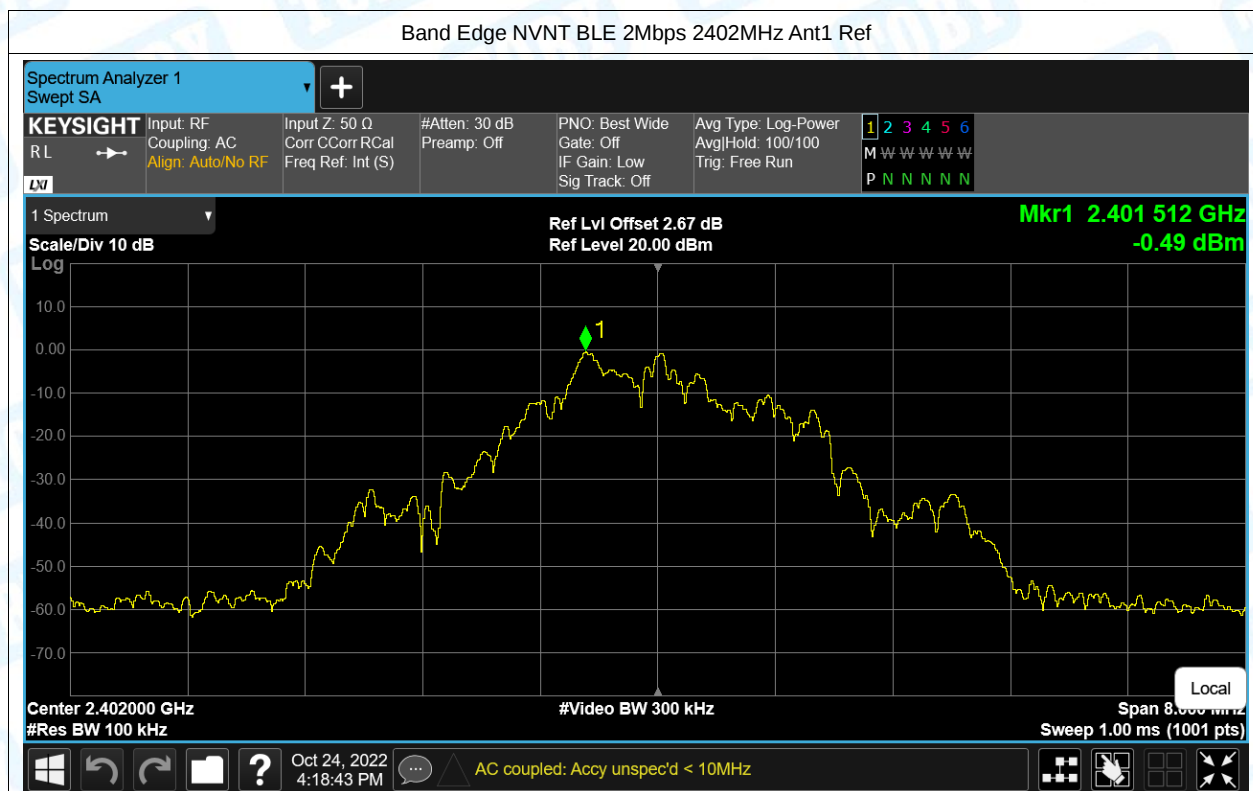


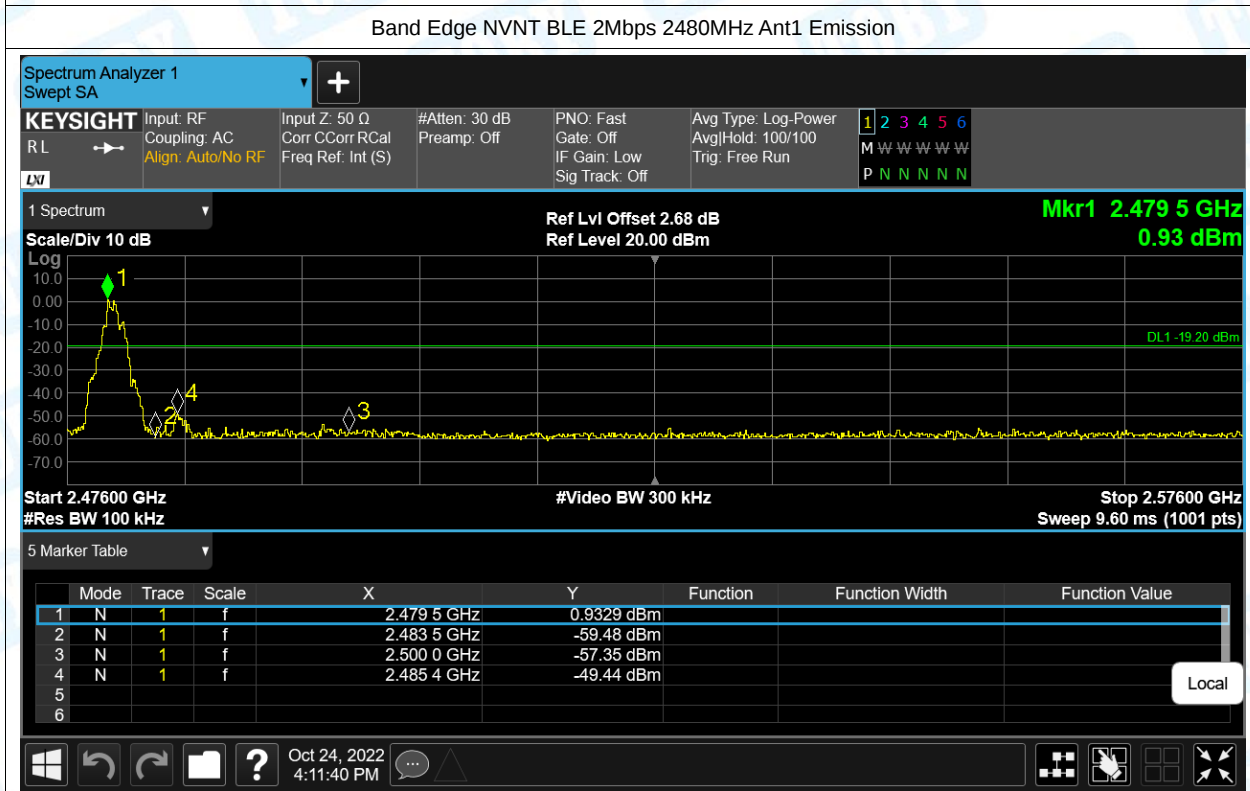
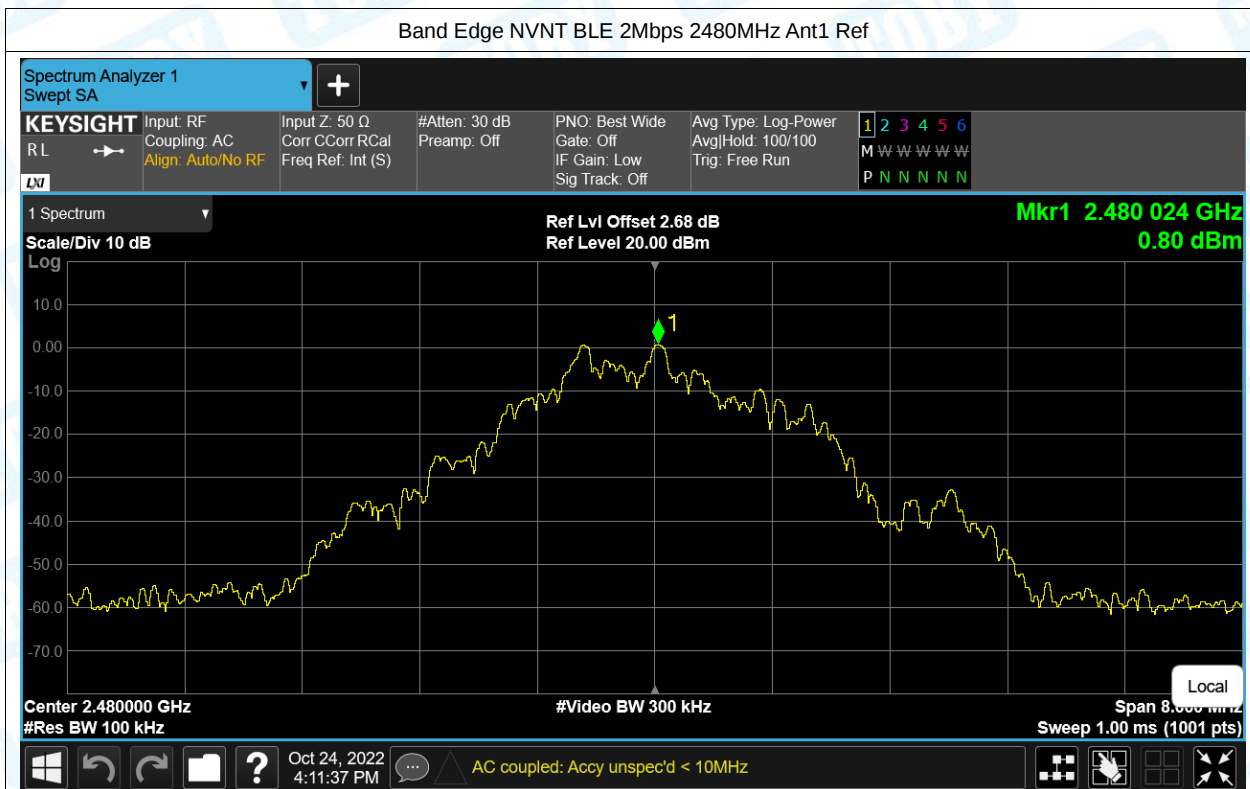
6.Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-53.76	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	-55.07	-20	Pass
NVNT	BLE 2Mbps	2402	Ant1	-55.08	-20	Pass
NVNT	BLE 2Mbps	2480	Ant1	-50.24	-20	Pass





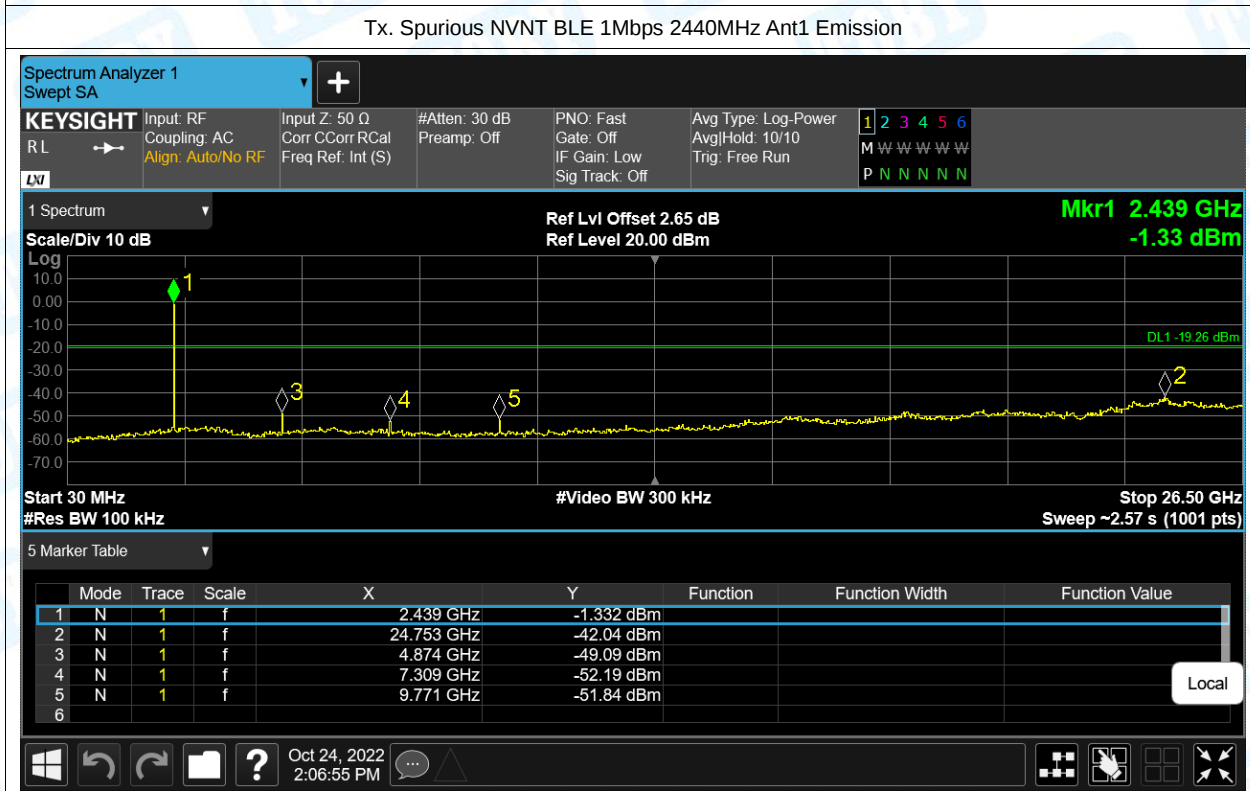
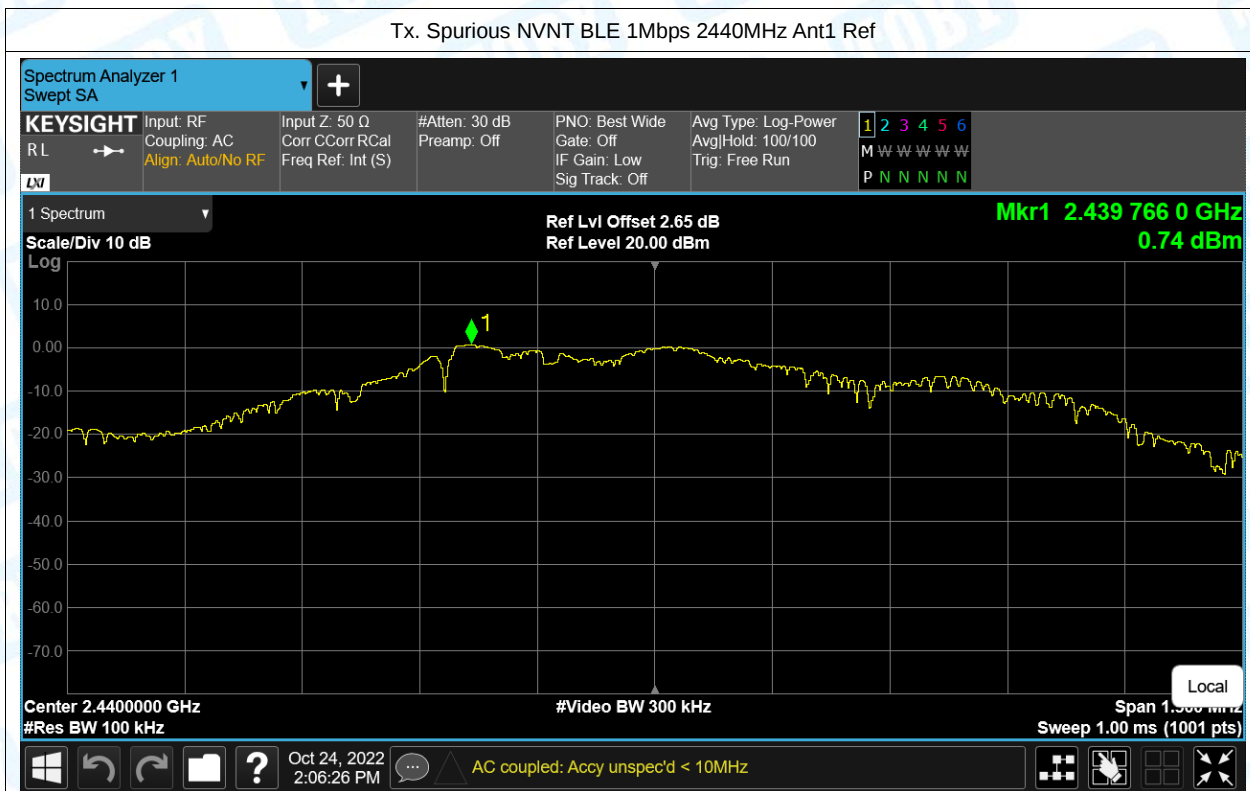


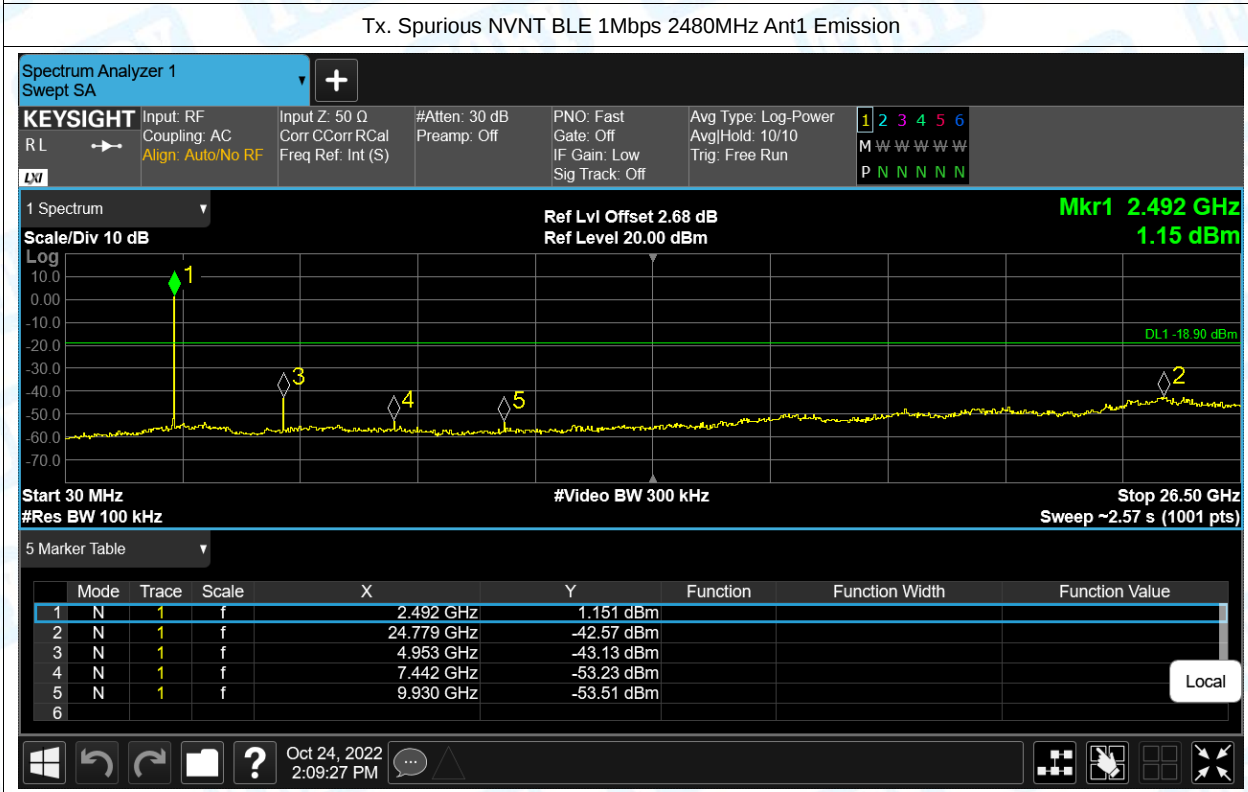
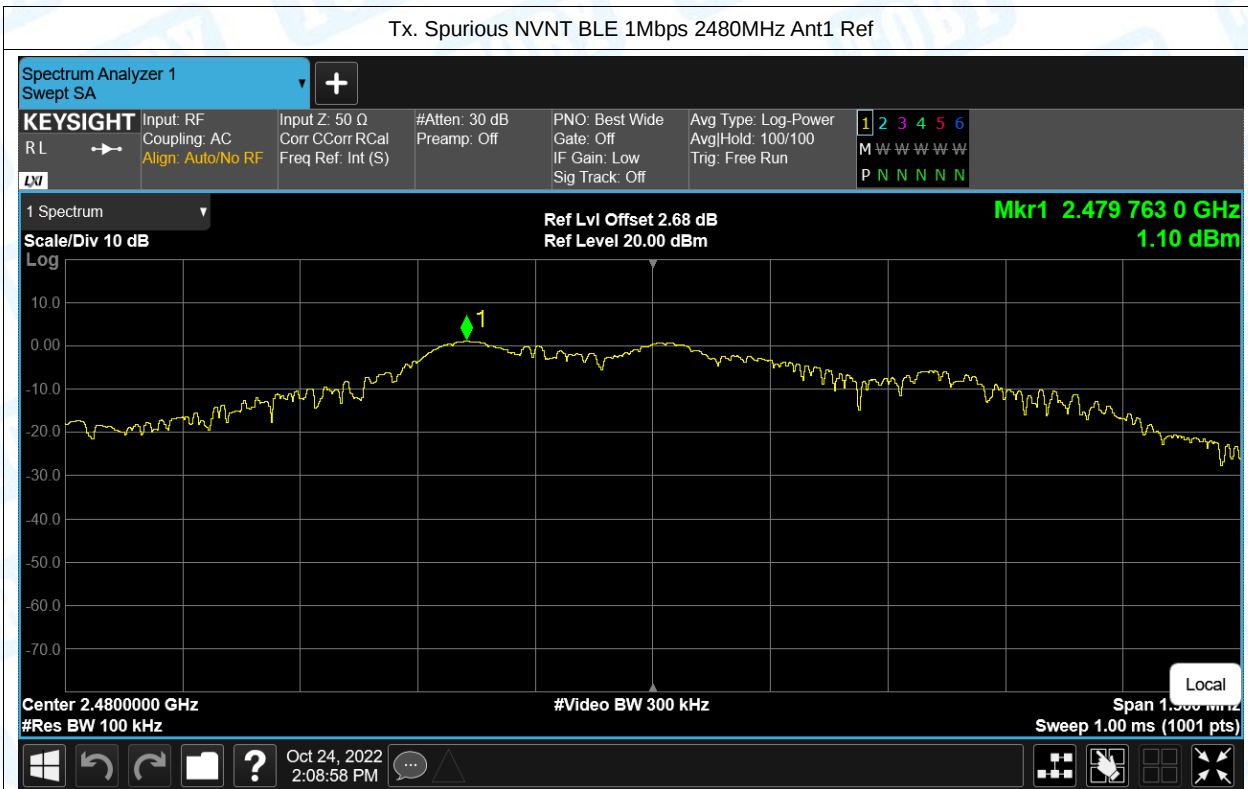


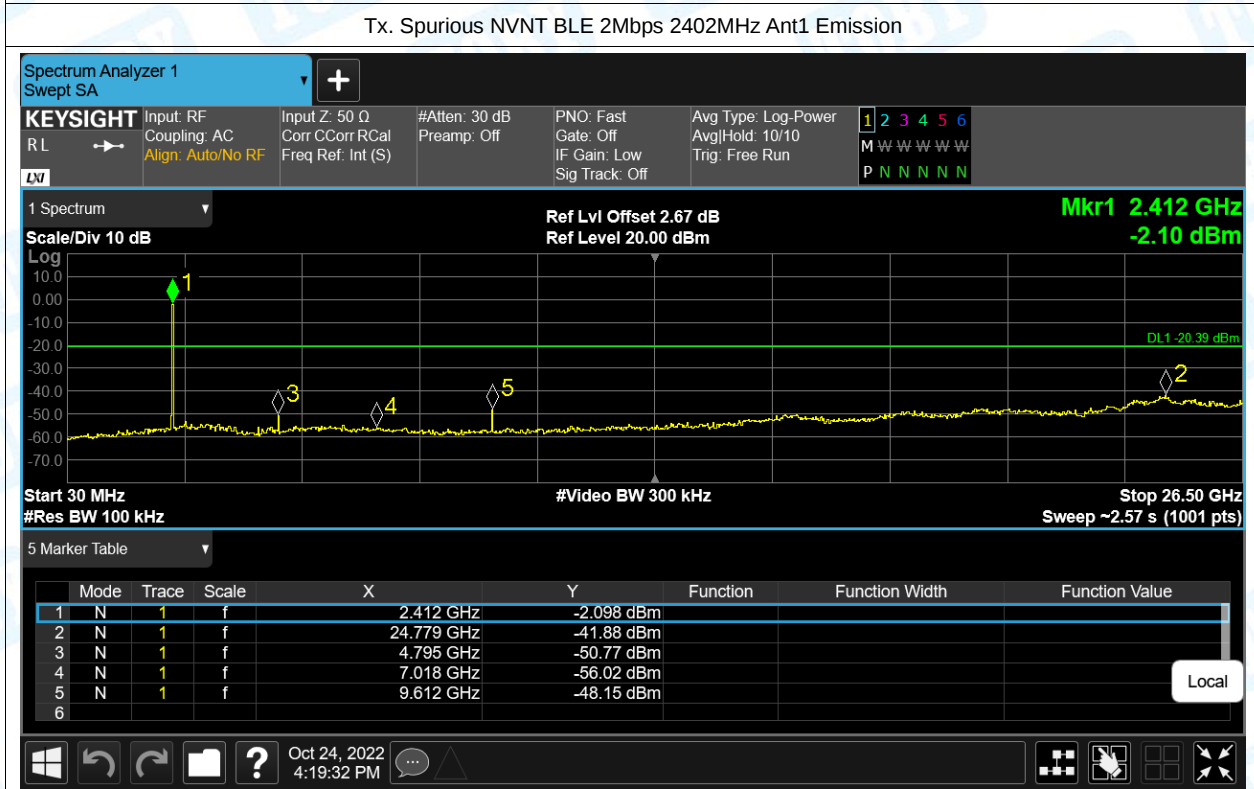
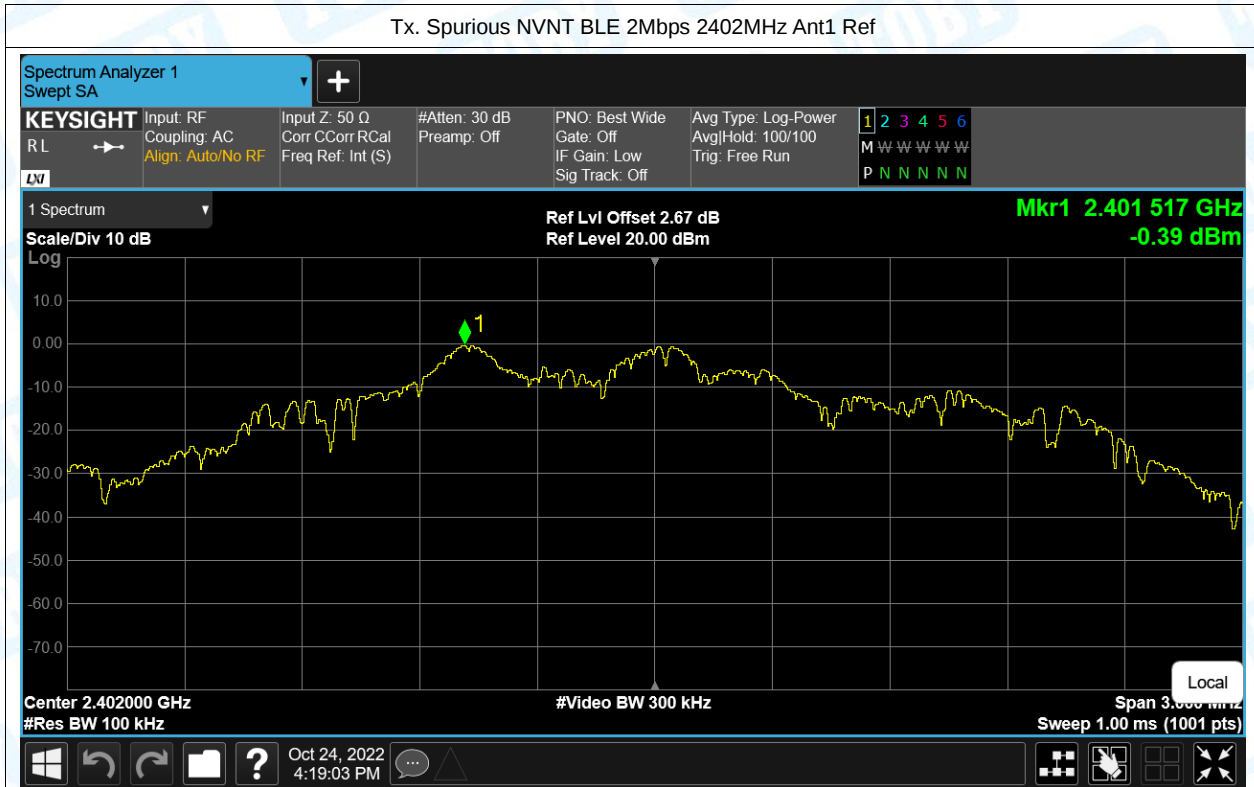
7.Conducted RF Spurious Emission

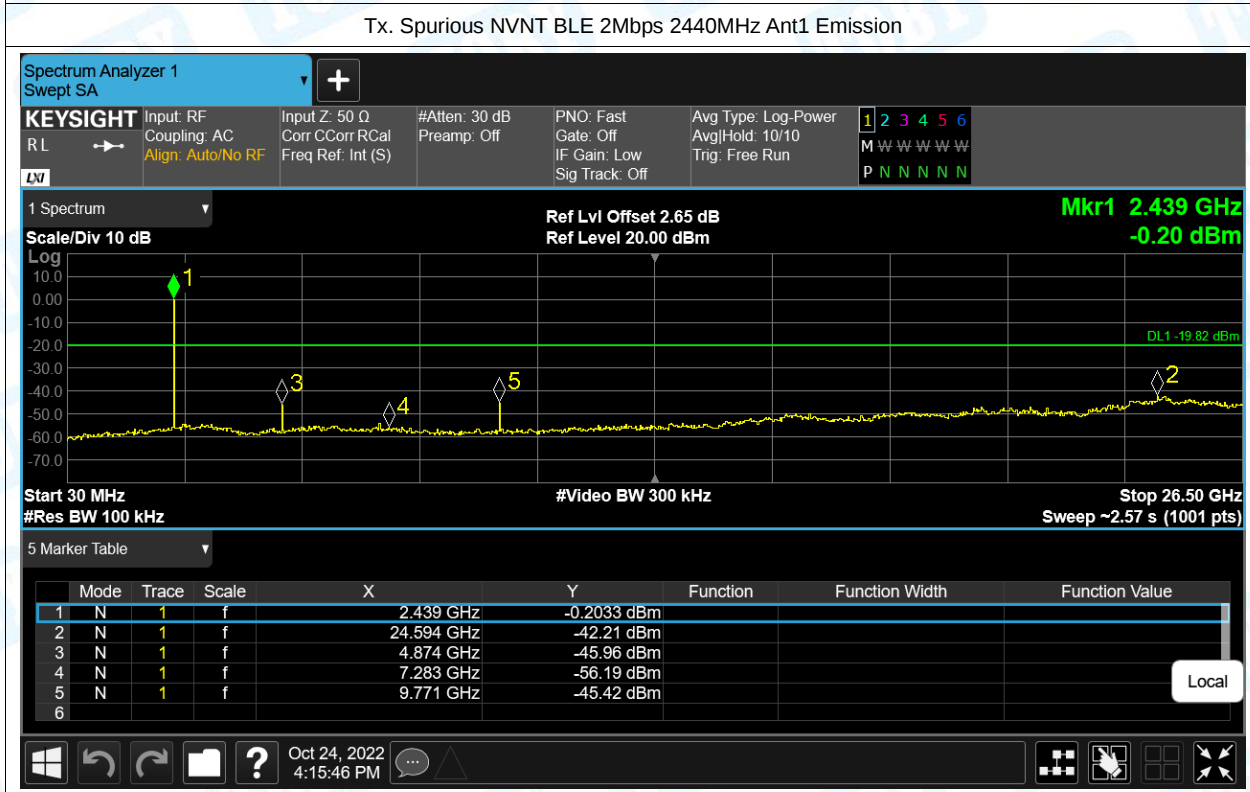
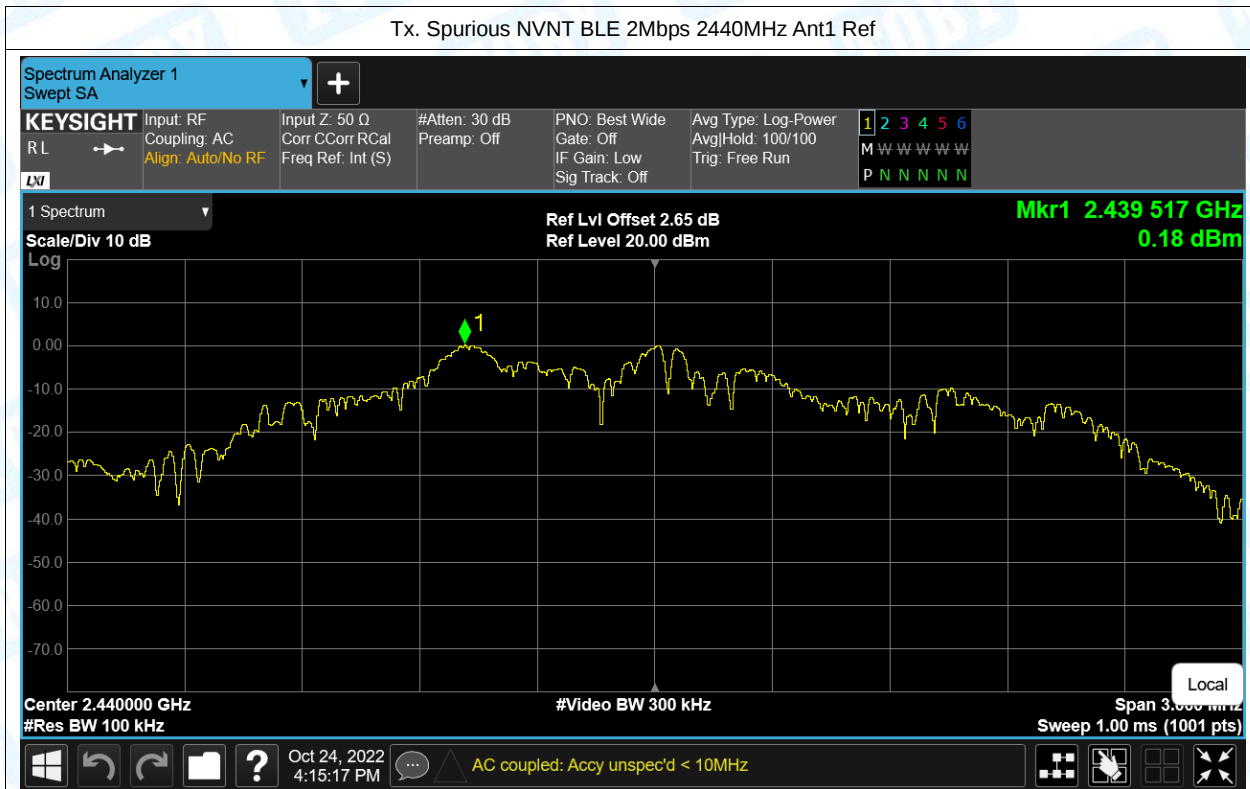
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-42.55	-20	Pass
NVNT	BLE 1Mbps	2440	Ant1	-42.78	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	-43.67	-20	Pass
NVNT	BLE 2Mbps	2402	Ant1	-41.5	-20	Pass
NVNT	BLE 2Mbps	2440	Ant1	-42.39	-20	Pass
NVNT	BLE 2Mbps	2480	Ant1	-42.44	-20	Pass

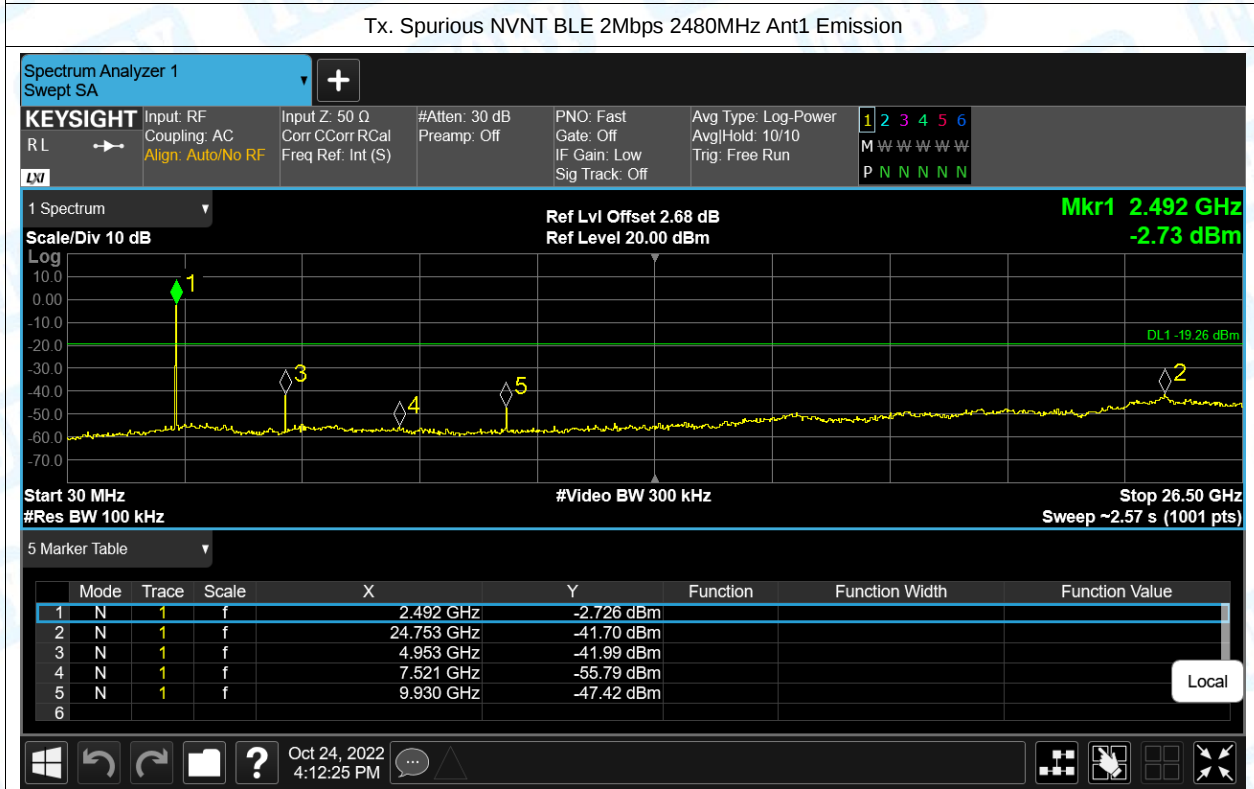
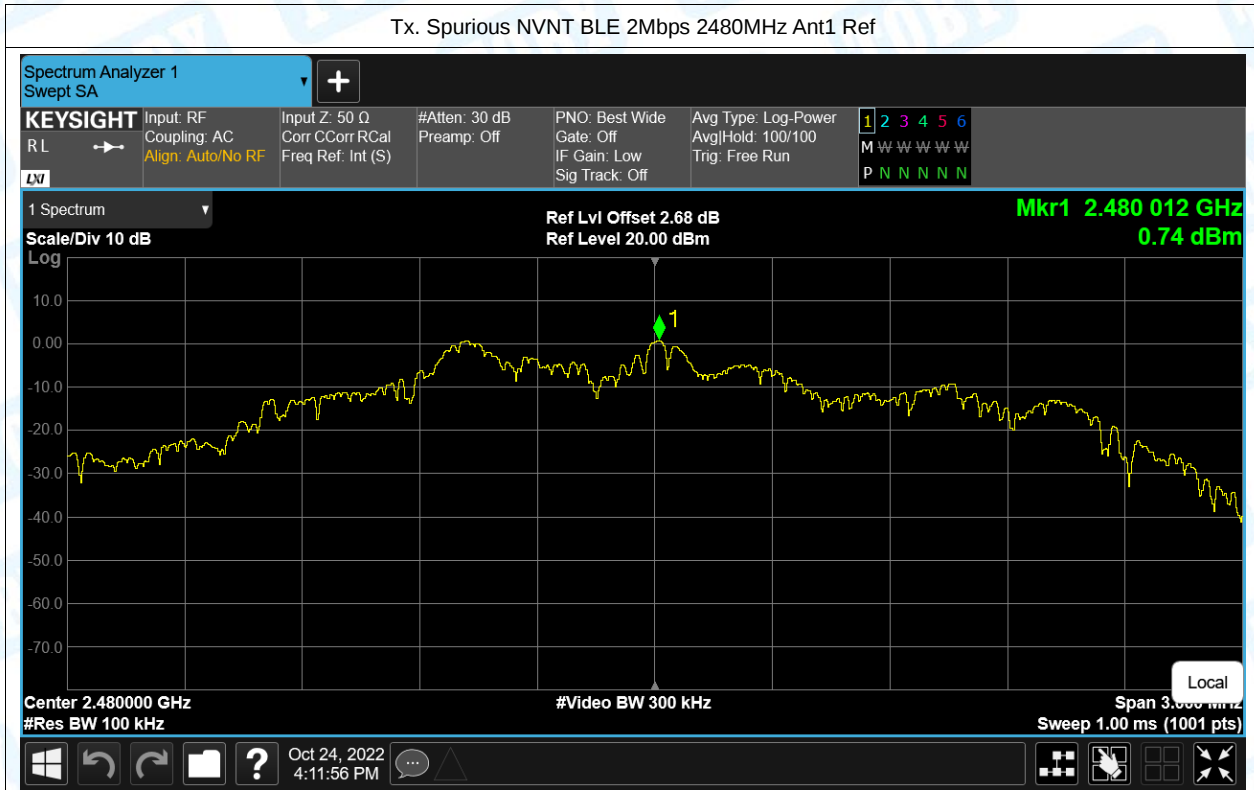








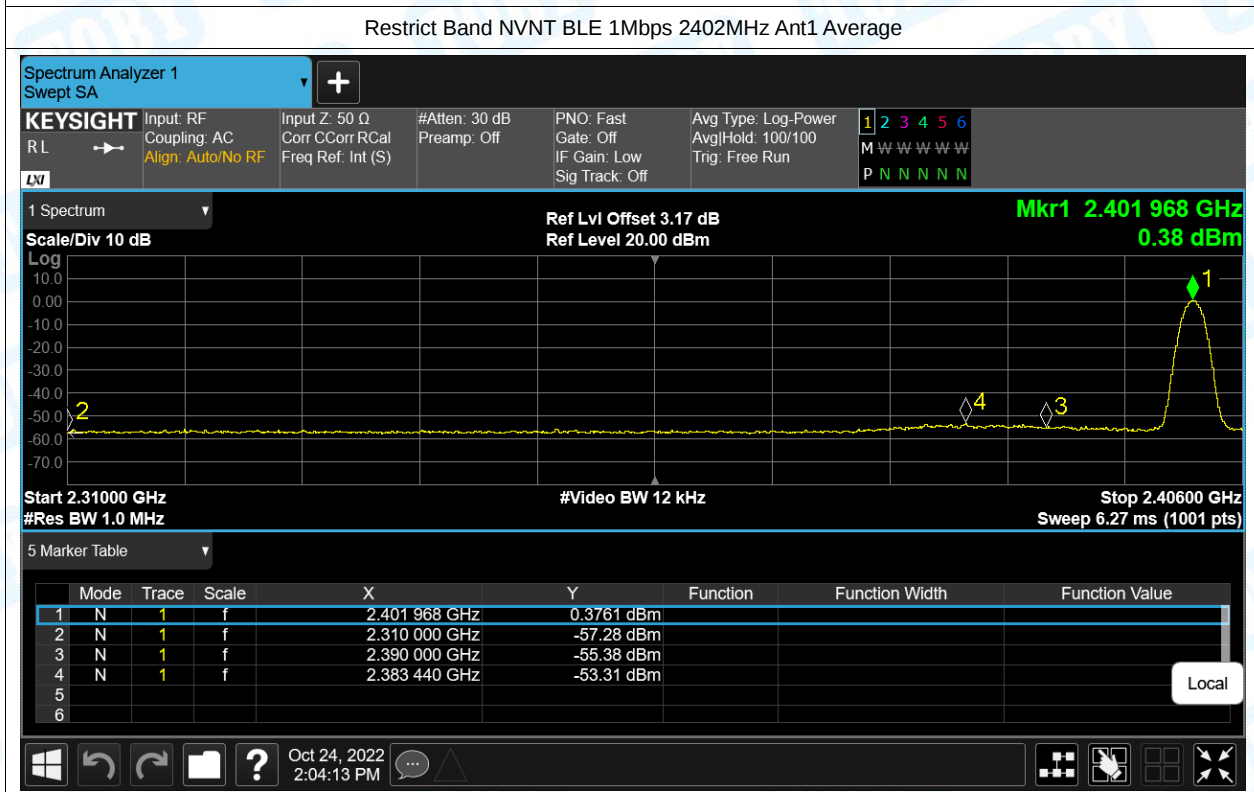
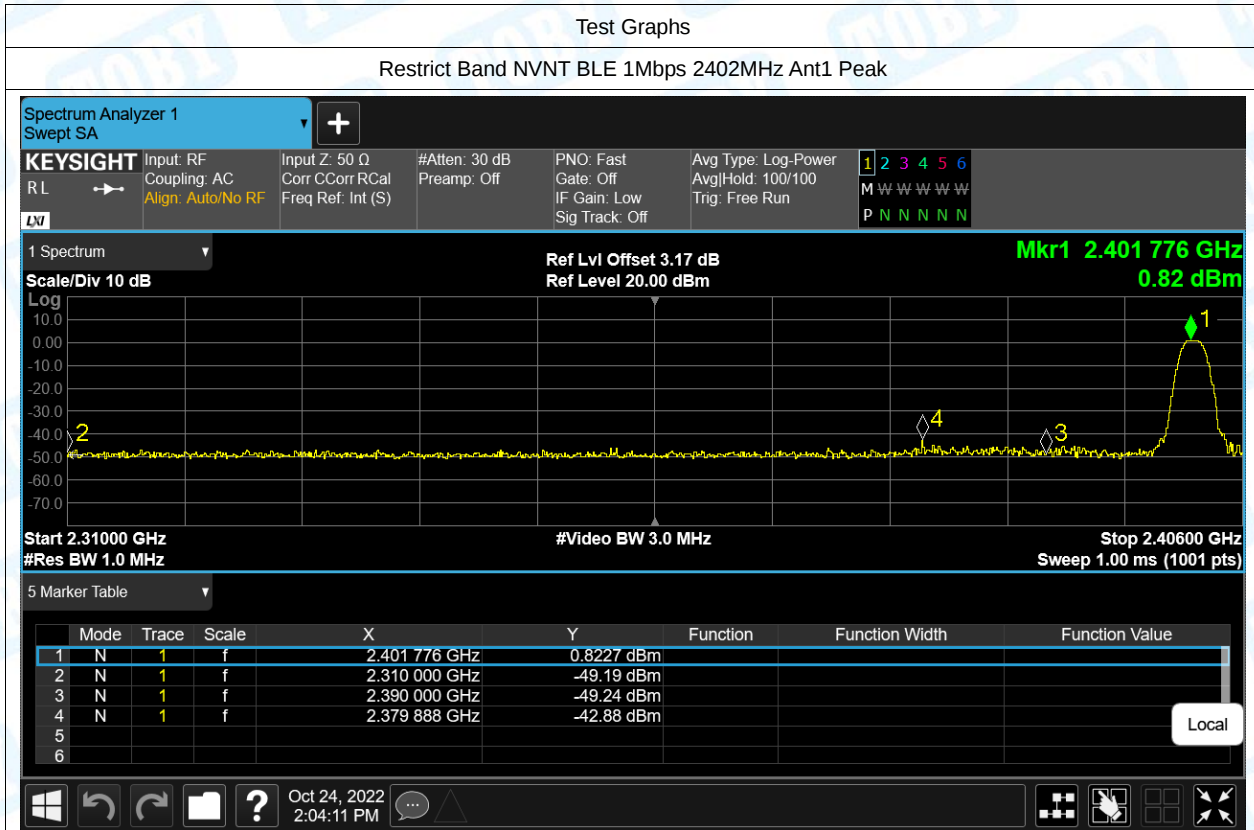




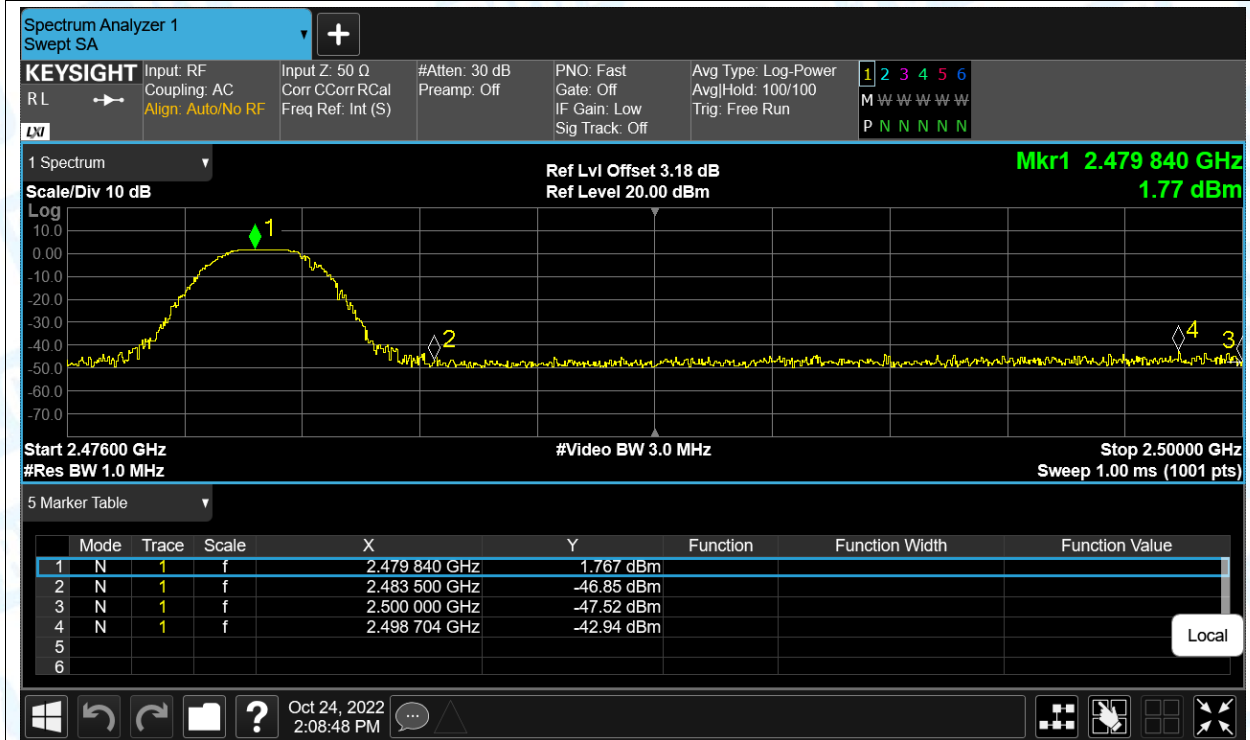
8.Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	2310	-49.19	2	48.07	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2310	-57.28	2	39.98	Average	54	Pass
NVNT	BLE 1Mbps	2402	Ant1	2379.888	-42.88	2	54.38	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2383.44	-53.31	2	43.95	Average	54	Pass
NVNT	BLE 1Mbps	2402	Ant1	2390	-48.3	2	48.96	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2390	-55.13	2	42.13	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.5	-46.85	2	50.41	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.5	-55.94	2	41.32	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2498.704	-42.94	2	54.32	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2499.28	-52.93	2	44.33	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2500	-47.52	2	49.74	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2500	-54.11	2	43.15	Average	54	Pass
NVNT	BLE 2Mbps	2402	Ant1	2310	-50.33	2	46.93	Peak	74	Pass
NVNT	BLE 2Mbps	2402	Ant1	2310	-56.52	2	40.74	Average	54	Pass
NVNT	BLE 2Mbps	2402	Ant1	2382.384	-44.89	2	52.37	Peak	74	Pass
NVNT	BLE 2Mbps	2402	Ant1	2381.04	-52.93	2	44.33	Average	54	Pass
NVNT	BLE 2Mbps	2402	Ant1	2390	-47.82	2	49.44	Peak	74	Pass
NVNT	BLE 2Mbps	2402	Ant1	2390	-54.71	2	42.55	Average	54	Pass
NVNT	BLE 2Mbps	2480	Ant1	2483.5	-44.81	2	52.45	Peak	74	Pass
NVNT	BLE 2Mbps	2480	Ant1	2483.5	-53.64	2	43.62	Average	54	Pass
NVNT	BLE 2Mbps	2480	Ant1	2485.24	-35.22	2	62.04	Peak	74	Pass
NVNT	BLE 2Mbps	2480	Ant1	2494.456	-52.62	2	44.64	Average	54	Pass

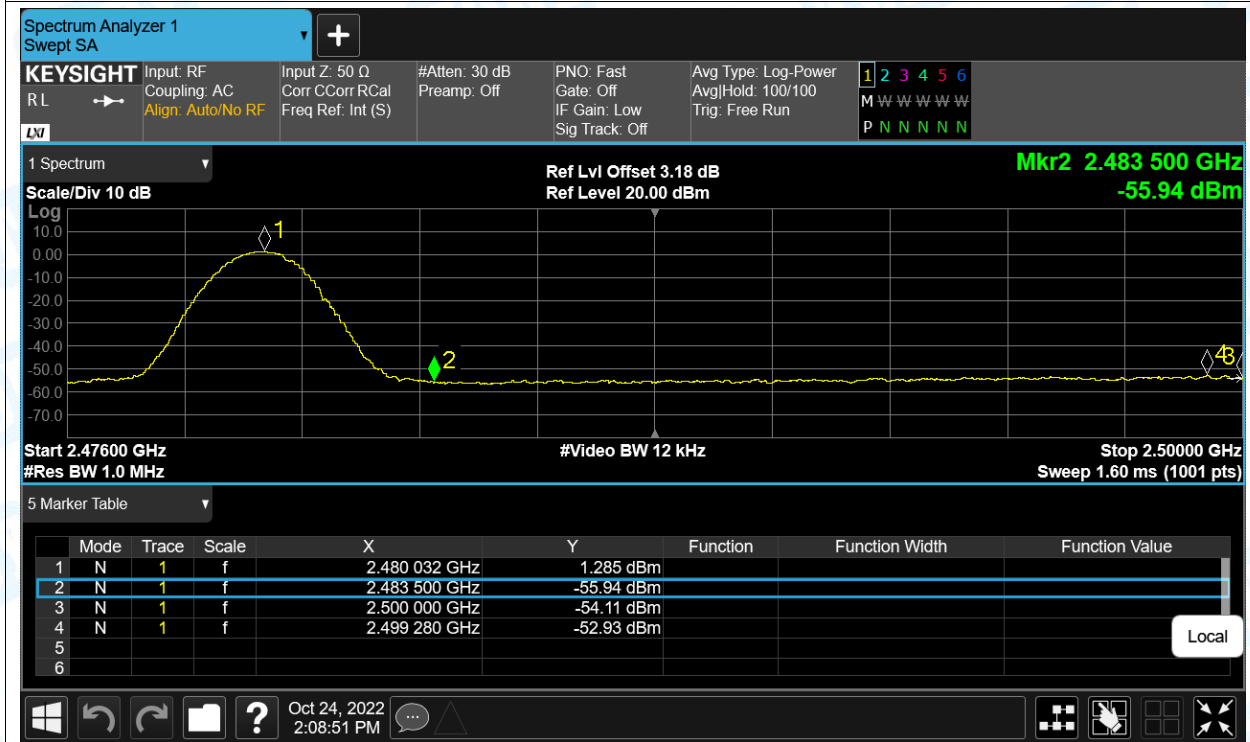
NVNT	BLE 2Mbps	2480	Ant1	2500	-45.03	2	52.23	Peak	74	Pass
NVNT	BLE 2Mbps	2480	Ant1	2500	-54.14	2	43.12	Average	54	Pass



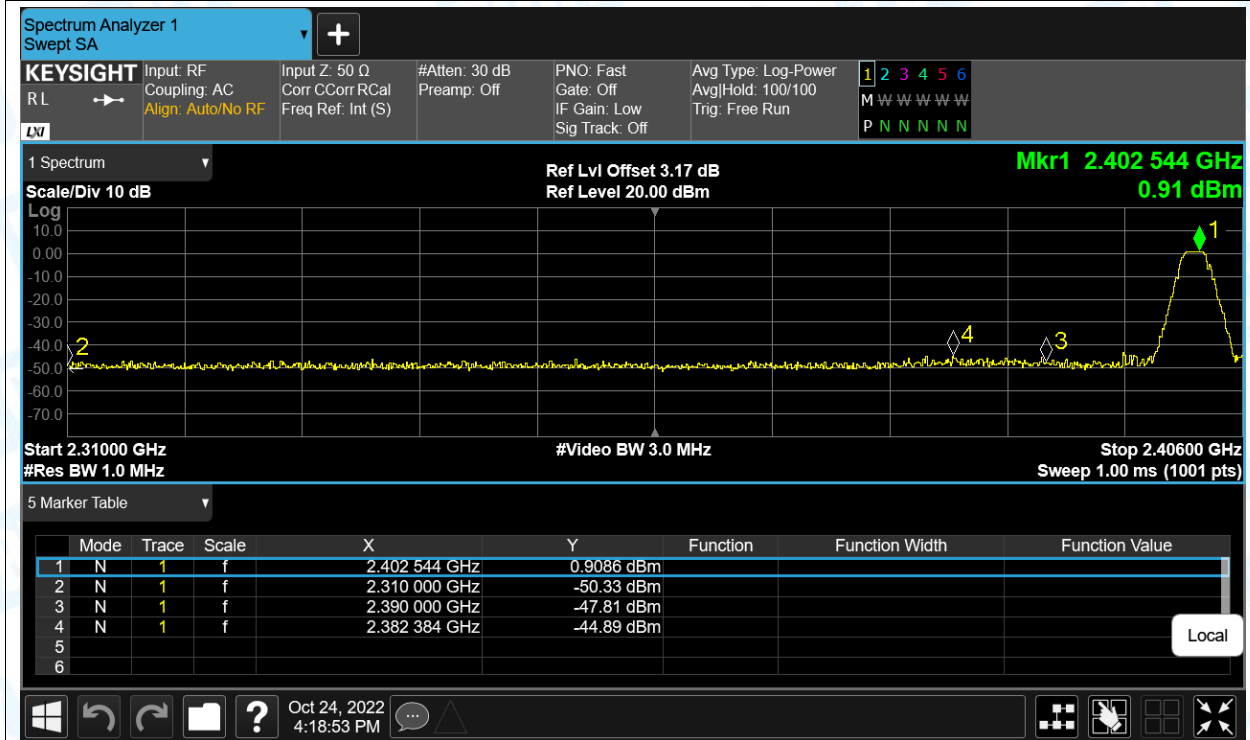
Restrict Band NVNT BLE 1Mbps 2480MHz Ant1 Peak



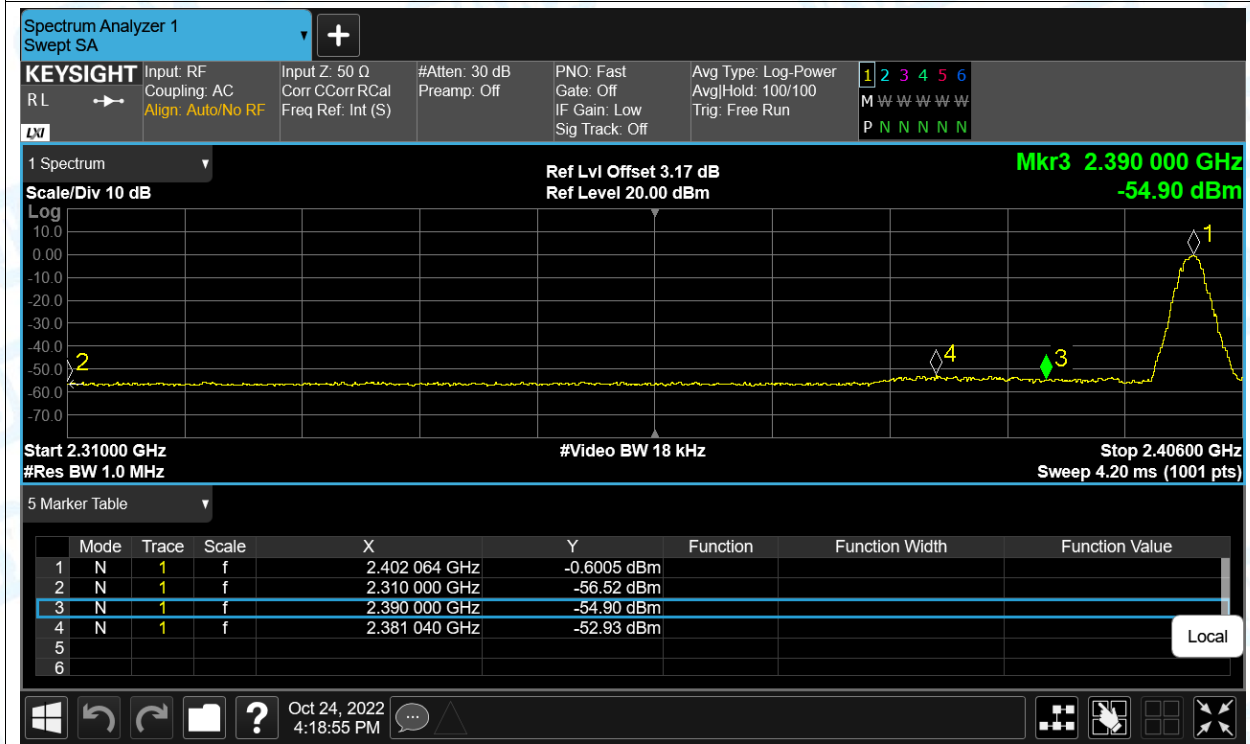
Restrict Band NVNT BLE 1Mbps 2480MHz Ant1 Average



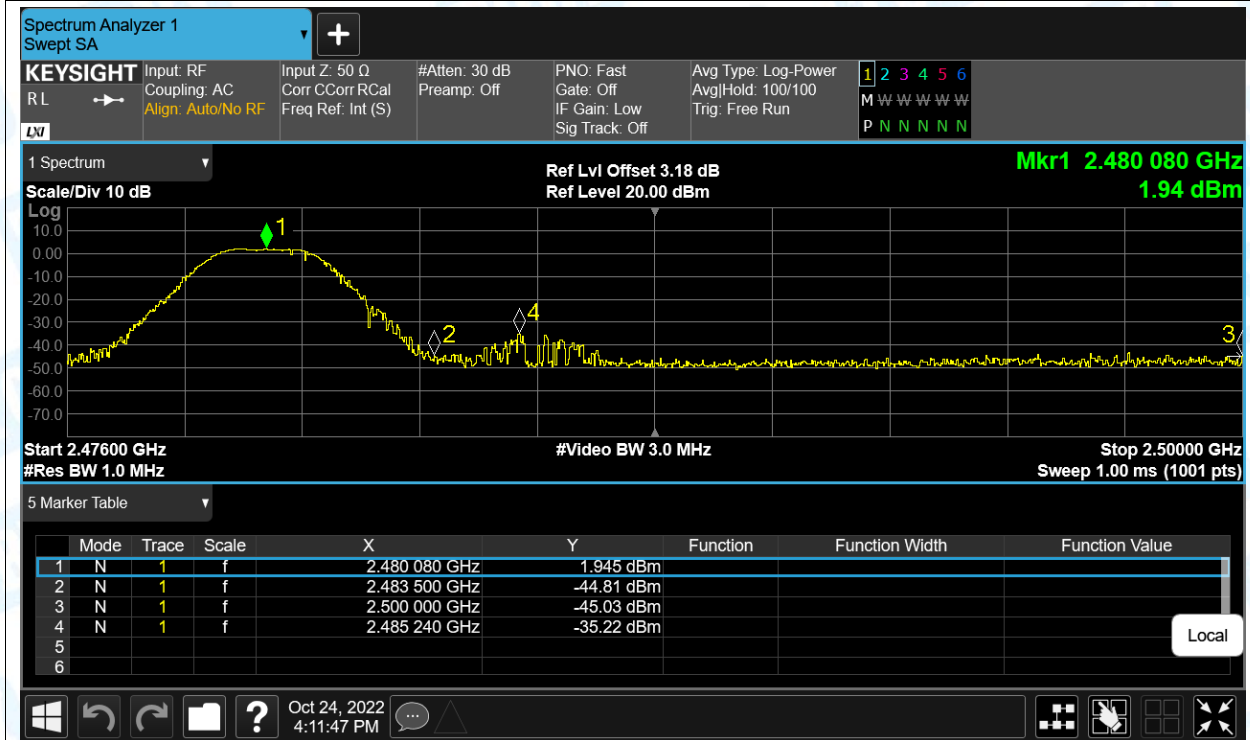
Restrict Band NVNT BLE 2Mbps 2402MHz Ant1 Peak



Restrict Band NVNT BLE 2Mbps 2402MHz Ant1 Average



Restrict Band NVNT BLE 2Mbps 2480MHz Ant1 Peak



Restrict Band NVNT BLE 2Mbps 2480MHz Ant1 Average

