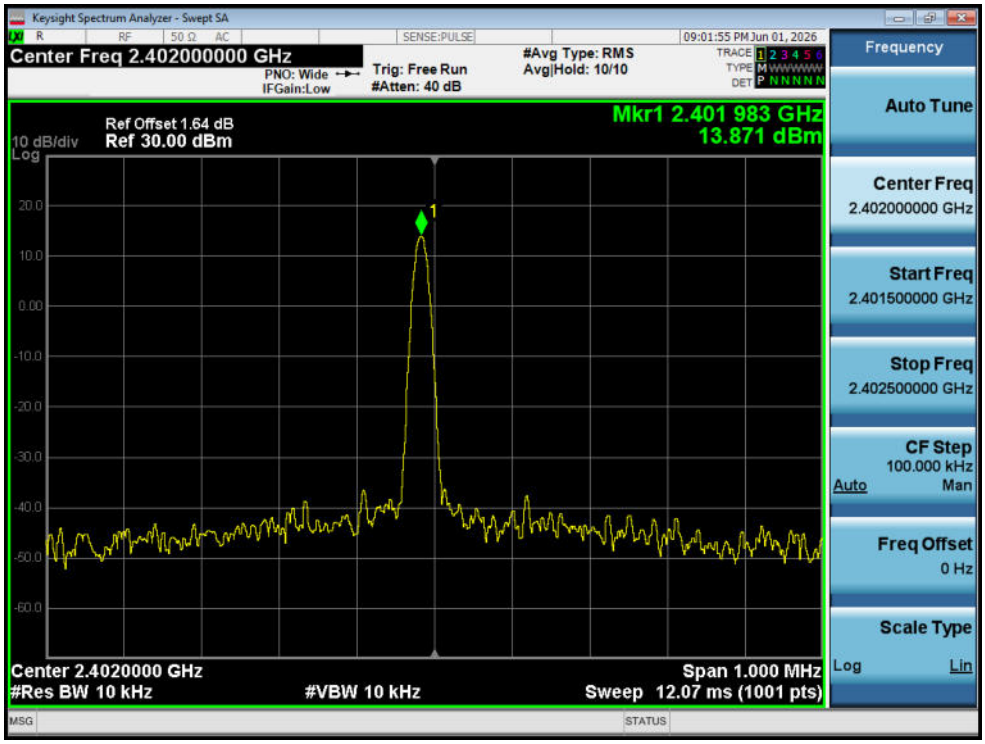
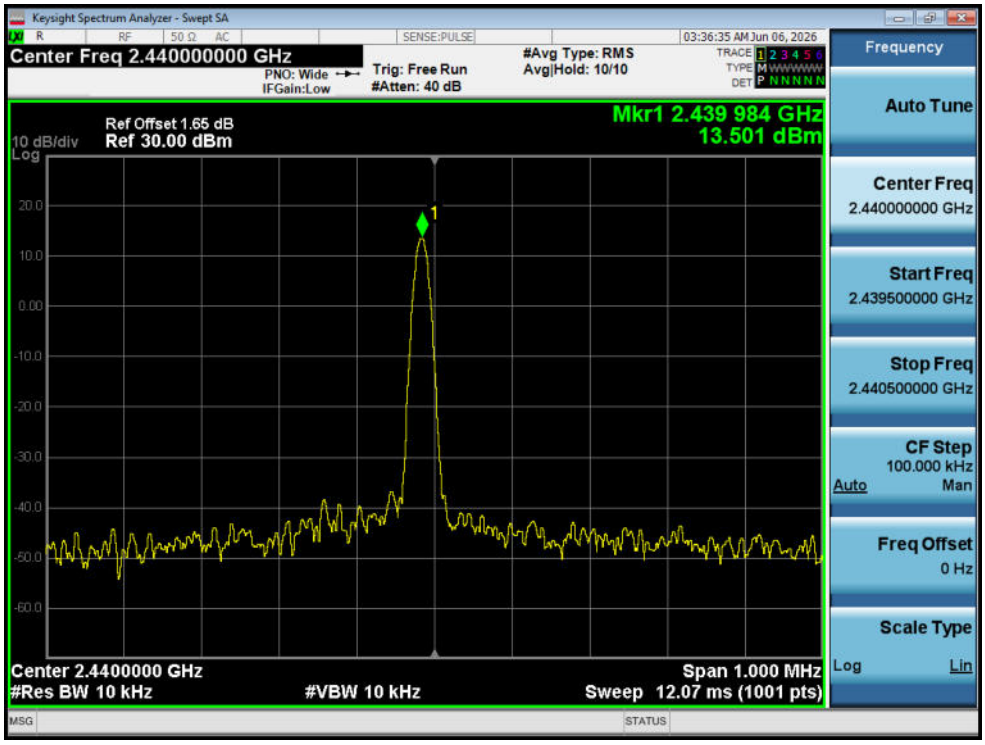
Appendix A

Frequency Error

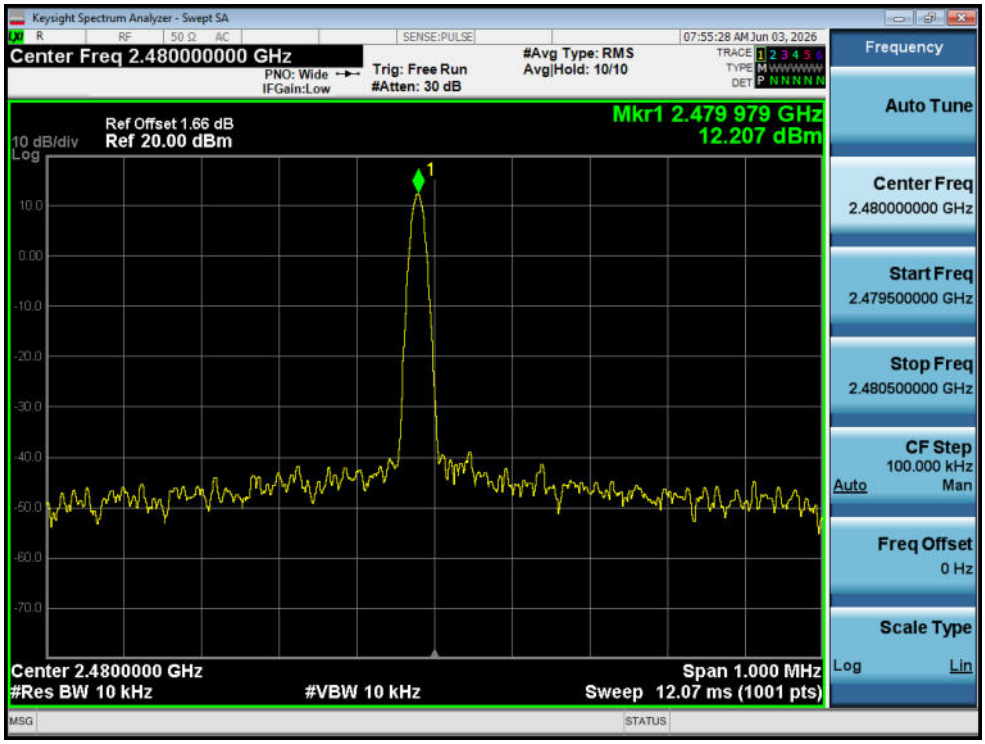
Condition	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	2402	Ant1	2401.983	-17000	-7.08	50	Pass
NVNT	2440	Ant1	2439.984	-16000	-6.56	50	Pass
NVNT	2480	Ant1	2479.979	-21000	-8.47	50	Pass



Freq. Error NVNT BLE 2402MHz Ant1



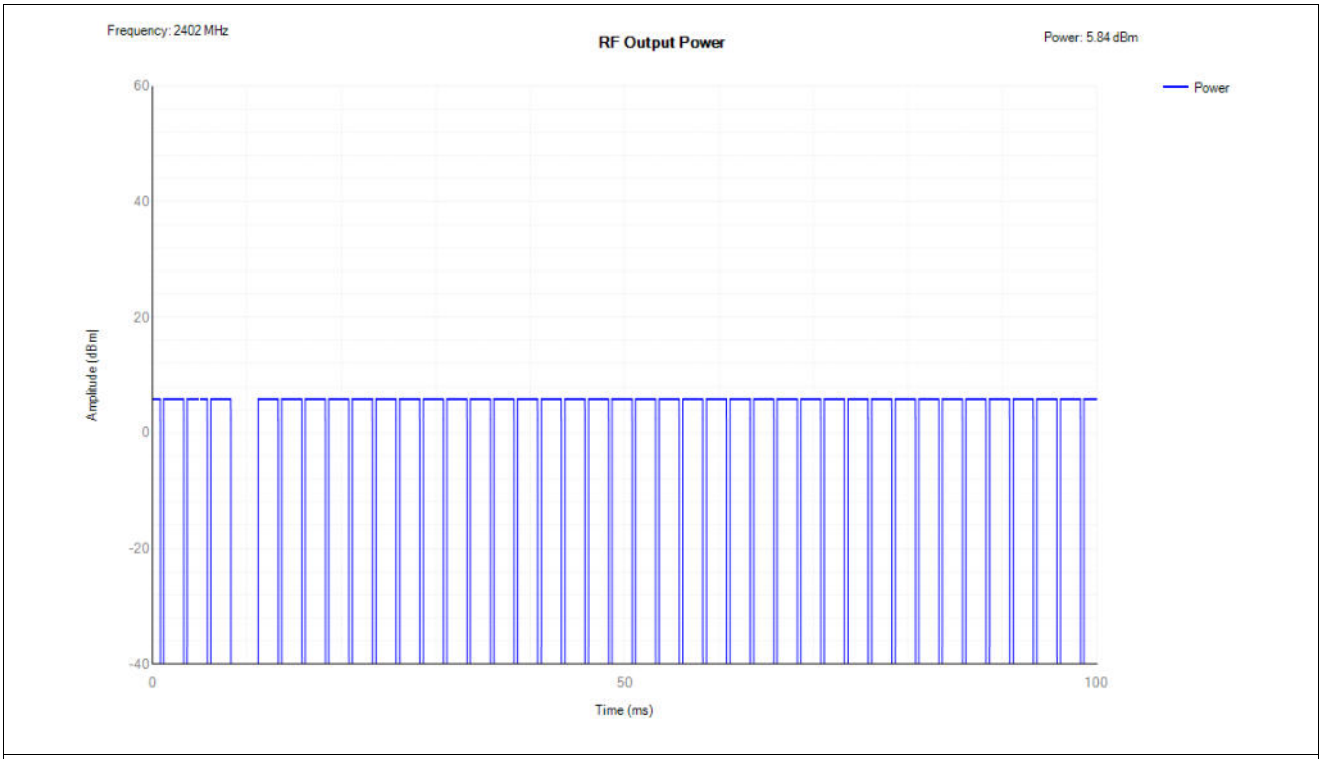
Freq. Error NVNT BLE 2440MHz Ant1



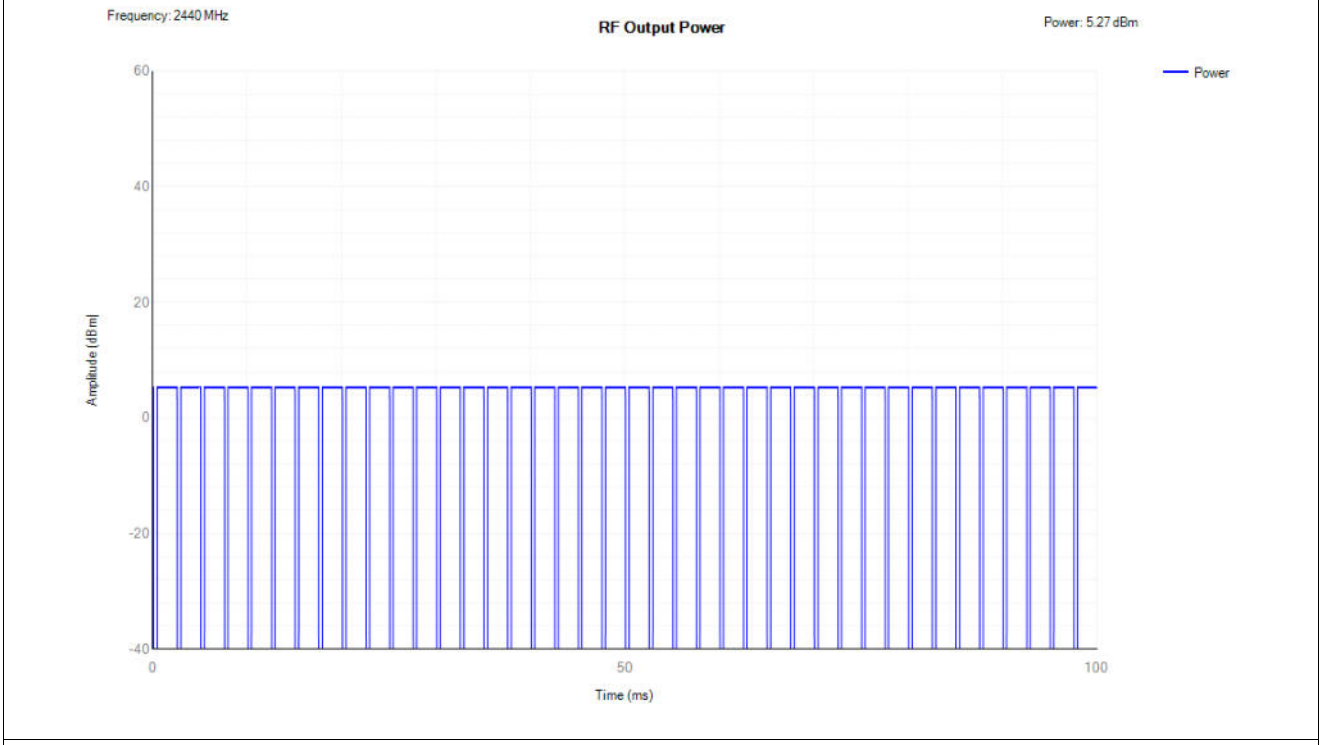
Freq. Error NVNT BLE 2480MHz Ant1

Antenna Power

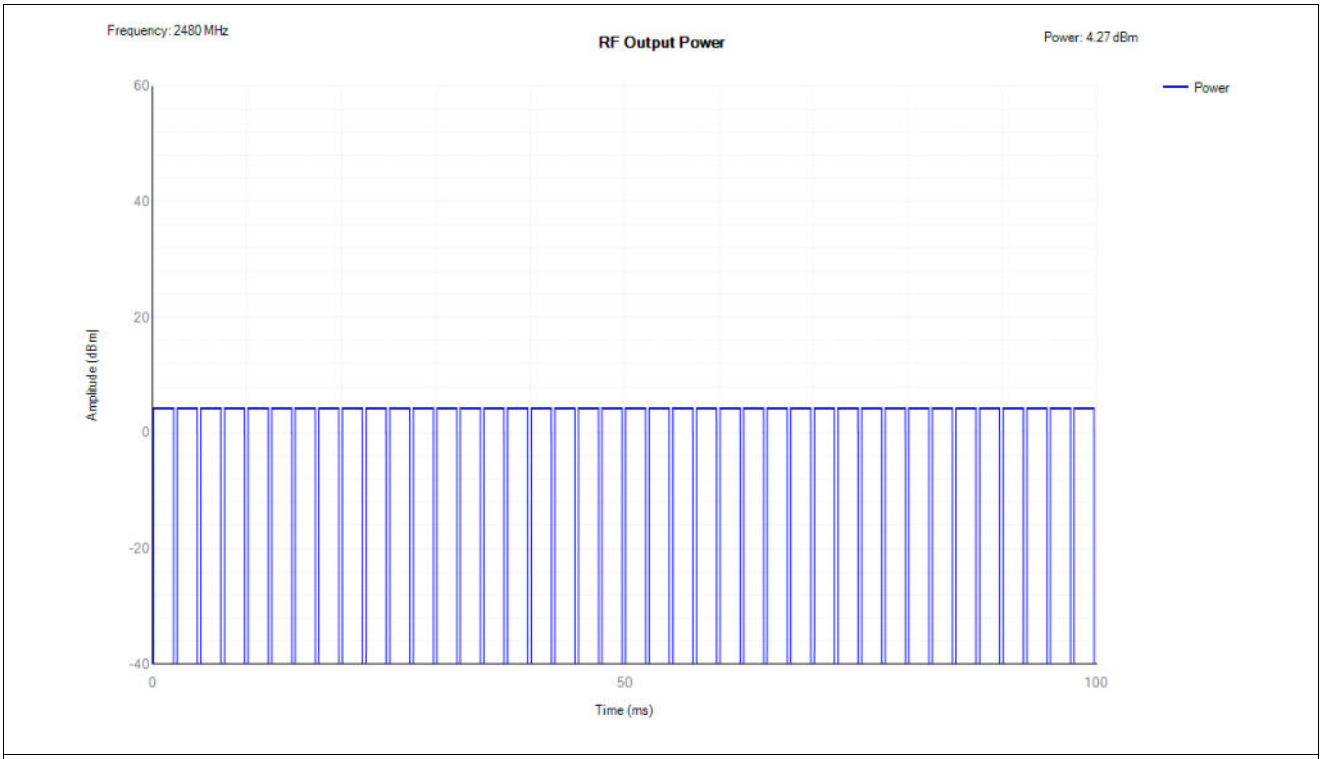
Condition	Mode	Frequency (MHz)	Antenna	Power (dBm)	Power (mW)	Limit (mW)	Declared Power (mW)	Tolerance (%)	Upper Limit (%)	Verdict
NVNT	BLE 1M	2402	Ant1	5.84	3.837	10	5	-23.26	20	Pass
NVNT	BLE 1M	2440	Ant1	5.27	3.365	10	5	-32.7	20	Pass
NVNT	BLE 1M	2480	Ant1	4.27	2.673	10	5	-46.54	20	Pass
NVNT	BLE 2M	2402	Ant1	5.94	3.926	10	5	-21.48	20	Pass
NVNT	BLE 2M	2440	Ant1	5.37	3.443	10	5	-31.14	20	Pass
NVNT	BLE 2M	2480	Ant1	4.4	2.754	10	5	-44.92	20	Pass



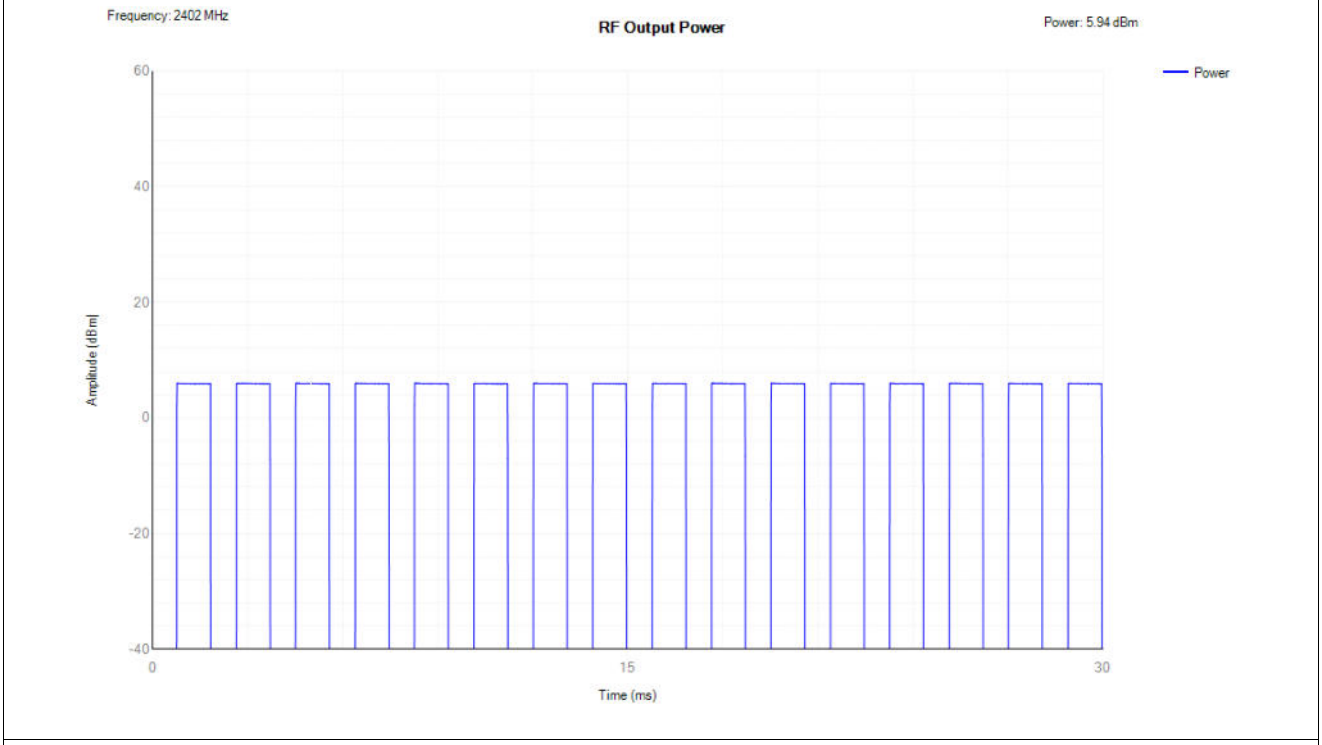
Power NVNT BLE 1M 2402MHz Ant1



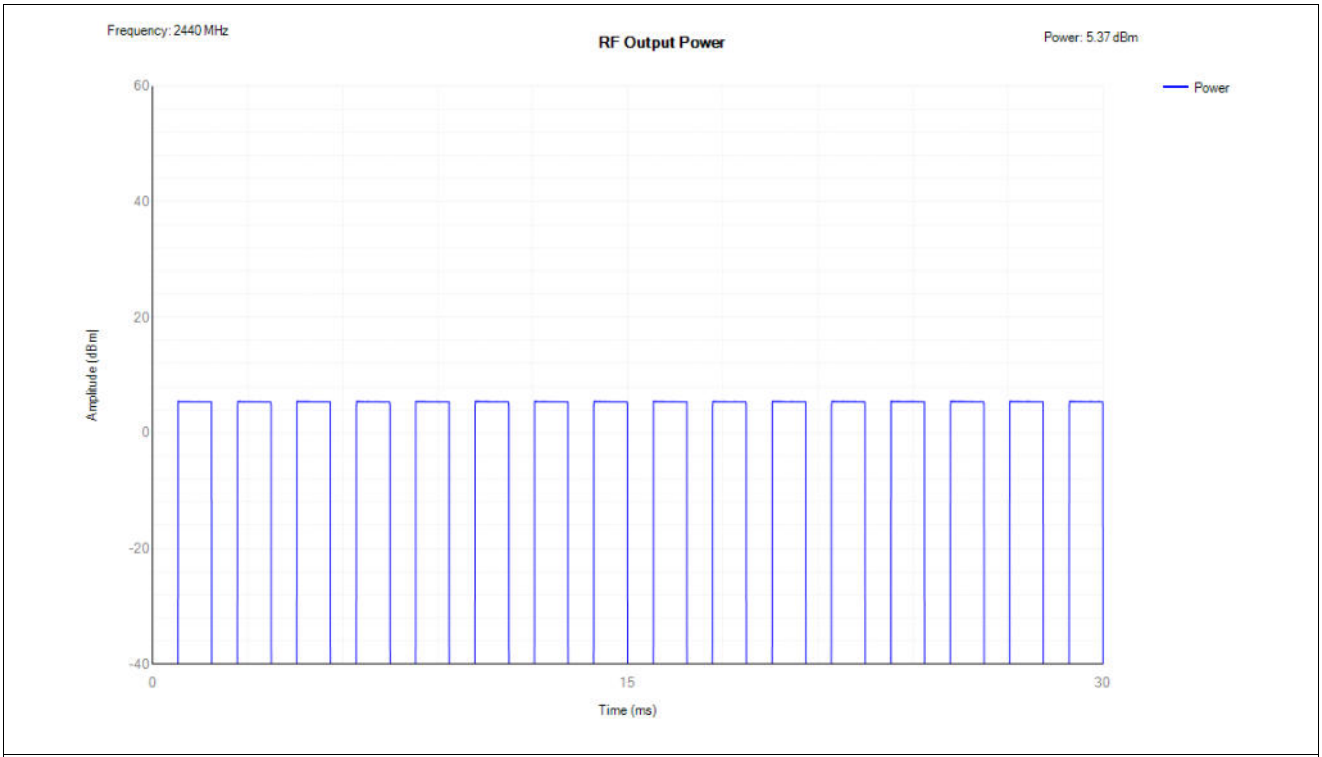
Power NVNT BLE 1M 2440MHz Ant1



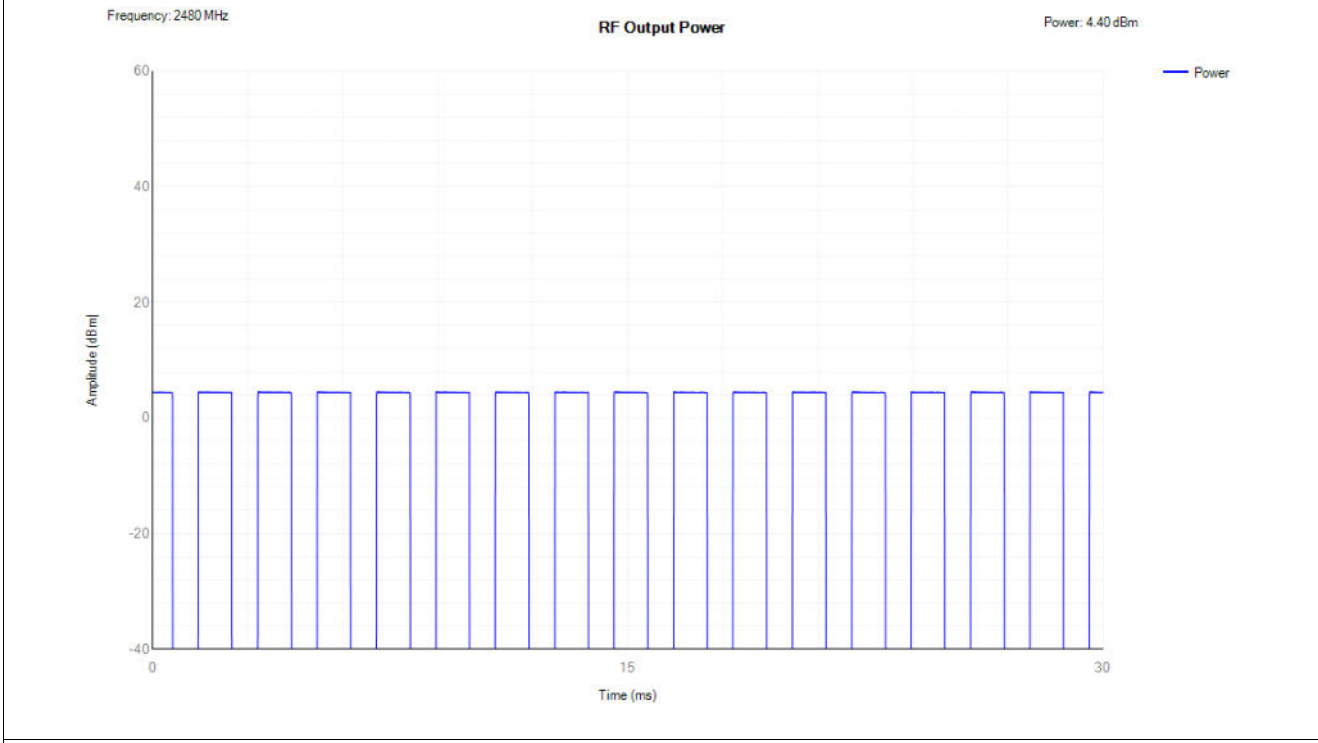
Power NVNT BLE 1M 2480MHz Ant1



Power NVNT BLE 2M 2402MHz Ant1



Power NVNT BLE 2M 2440MHz Ant1



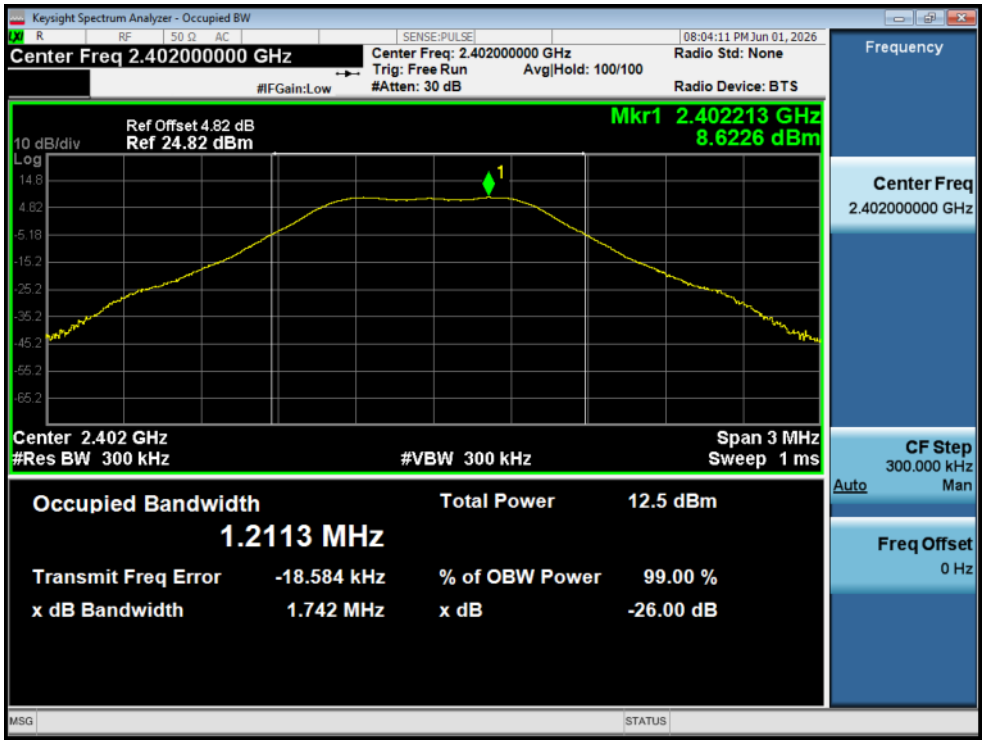
Power NVNT BLE 2M 2480MHz Ant1

EIRP Power

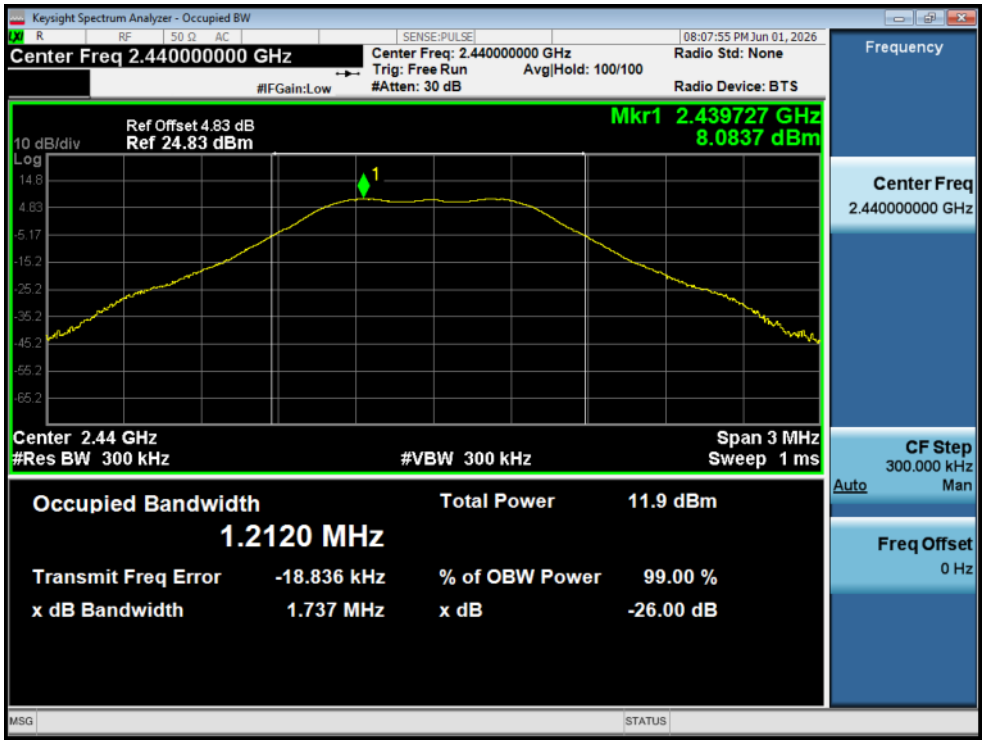
Condition	Mode	Frequency (MHz)	Antenna	Antenna Power (mW)	Antenna Power (dBm)	Gain (dBi)	EIRP Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	3.837	5.84	3.18	9.02	12.14	Pass
NVNT	BLE 1M	2440	Ant1	3.365	5.27	3.18	8.45	12.14	Pass
NVNT	BLE 1M	2480	Ant1	2.673	4.27	3.18	7.45	12.14	Pass
NVNT	BLE 2M	2402	Ant1	3.926	5.94	3.18	9.12	12.14	Pass
NVNT	BLE 2M	2440	Ant1	3.443	5.37	3.18	8.55	12.14	Pass
NVNT	BLE 2M	2480	Ant1	2.754	4.4	3.18	7.58	12.14	Pass

Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)	Lower Limit (MHz)	Upper Limit (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	1.2113	N/A	26	Pass
NVNT	BLE 1M	2440	Ant1	1.212	N/A	26	Pass
NVNT	BLE 1M	2480	Ant1	1.2124	N/A	26	Pass
NVNT	BLE 2M	2402	Ant1	2.1171	N/A	26	Pass
NVNT	BLE 2M	2440	Ant1	2.1143	N/A	26	Pass
NVNT	BLE 2M	2480	Ant1	2.1256	N/A	26	Pass



OBW NVNT BLE 1M 2402MHz Ant1



OBW NVNT BLE 1M 2440MHz Ant1

OBW NVNT BLE 1M 2480MHz Ant1

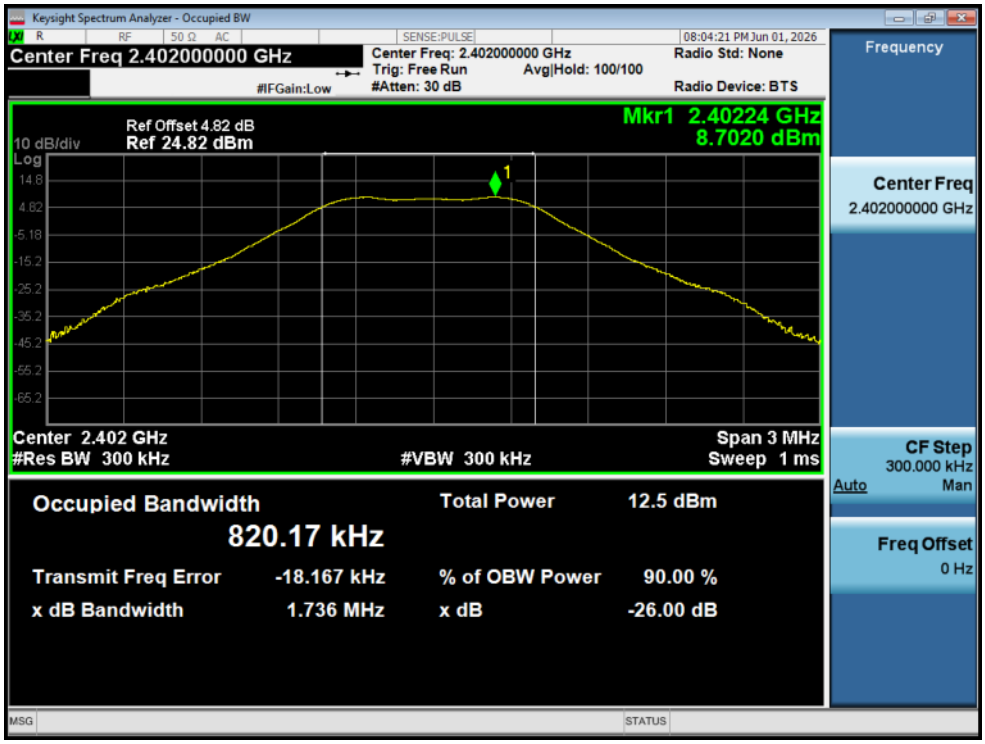
OBW NVNT BLE 2M 2402MHz Ant1

OBW NVNT BLE 2M 2440MHz Ant1

OBW NVNT BLE 2M 2480MHz Ant1

Spreading Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	90% OBW (MHz)
NVNT	BLE 1M	2402	Ant1	0.82017
NVNT	BLE 1M	2440	Ant1	0.81996
NVNT	BLE 1M	2480	Ant1	0.82084
NVNT	BLE 2M	2402	Ant1	1.3768
NVNT	BLE 2M	2440	Ant1	1.3758
NVNT	BLE 2M	2480	Ant1	1.3734

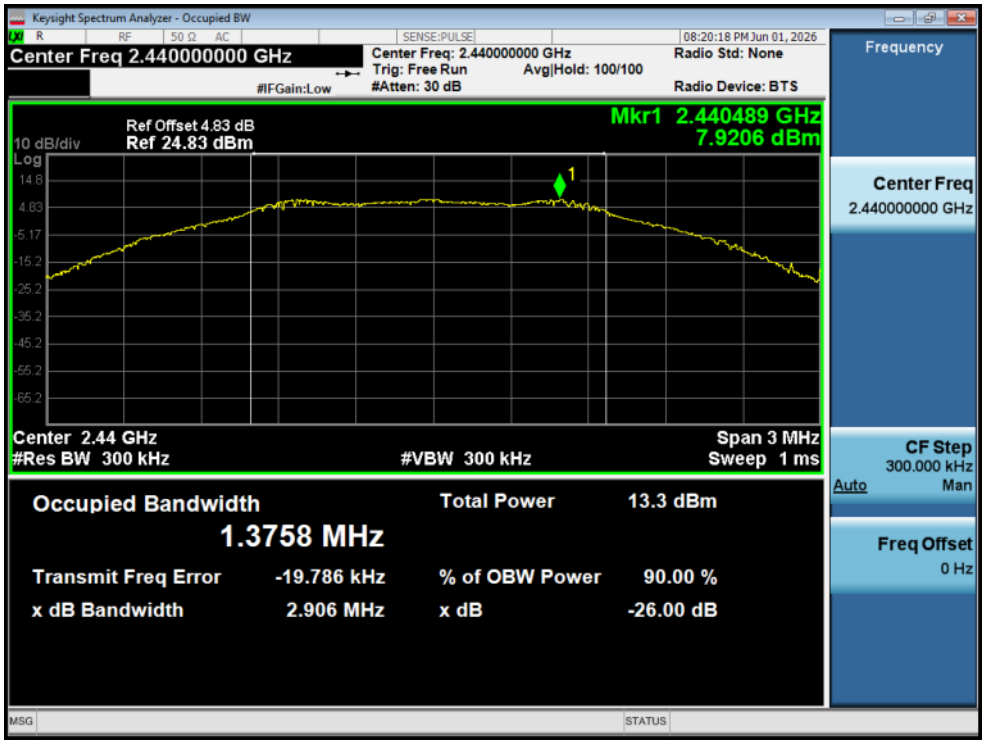


Spreading Bandwidth NVNT BLE 1M 2402MHz Ant1

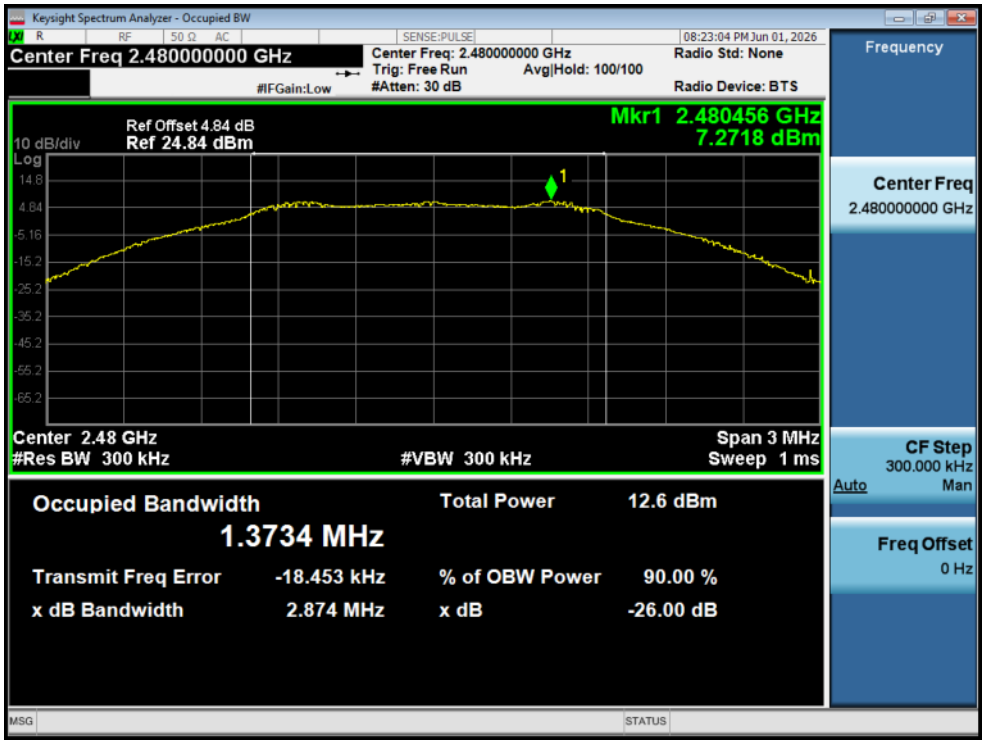
Spreading Bandwidth NVNT BLE 1M 2440MHz Ant1

Spreading Bandwidth NVNT BLE 1M 2480MHz Ant1

Spreading Bandwidth NVNT BLE 2M 2402MHz Ant1



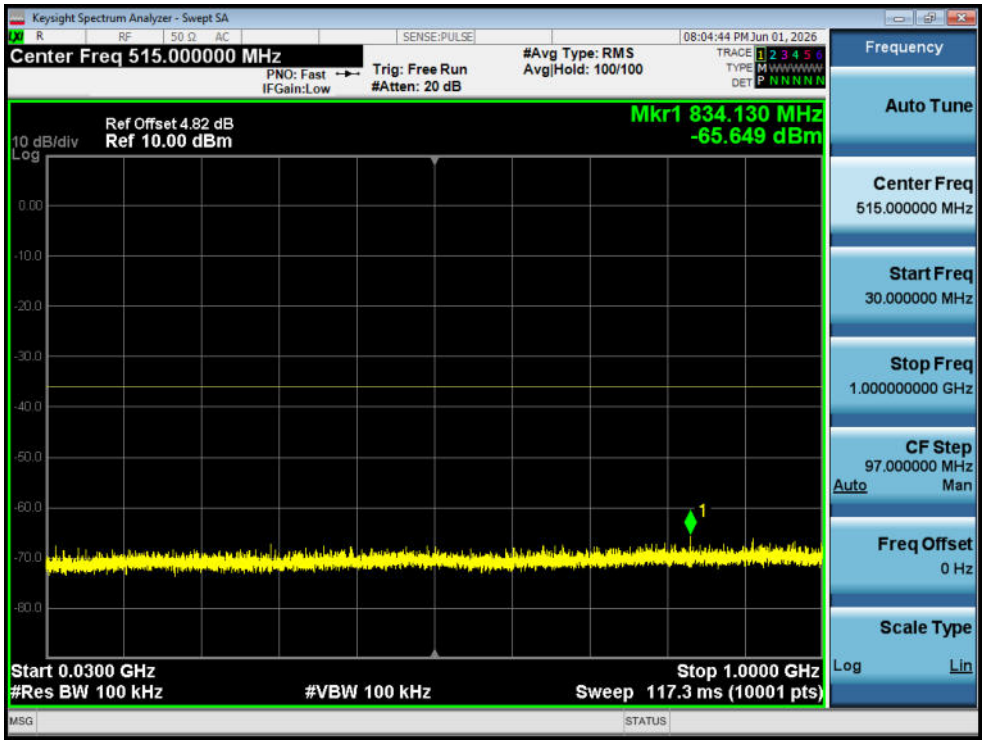
Spreading Bandwidth NVNT BLE 2M 2440MHz Ant1



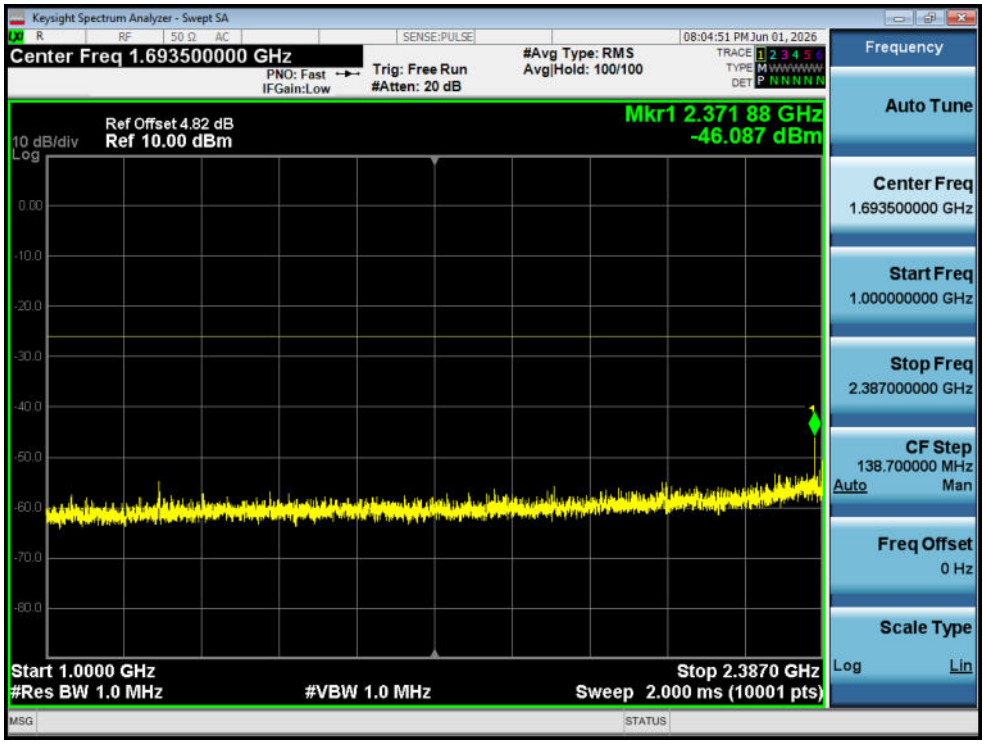
Spreading Bandwidth NVNT BLE 2M 2480MHz Ant1

Tx Spurious Emission

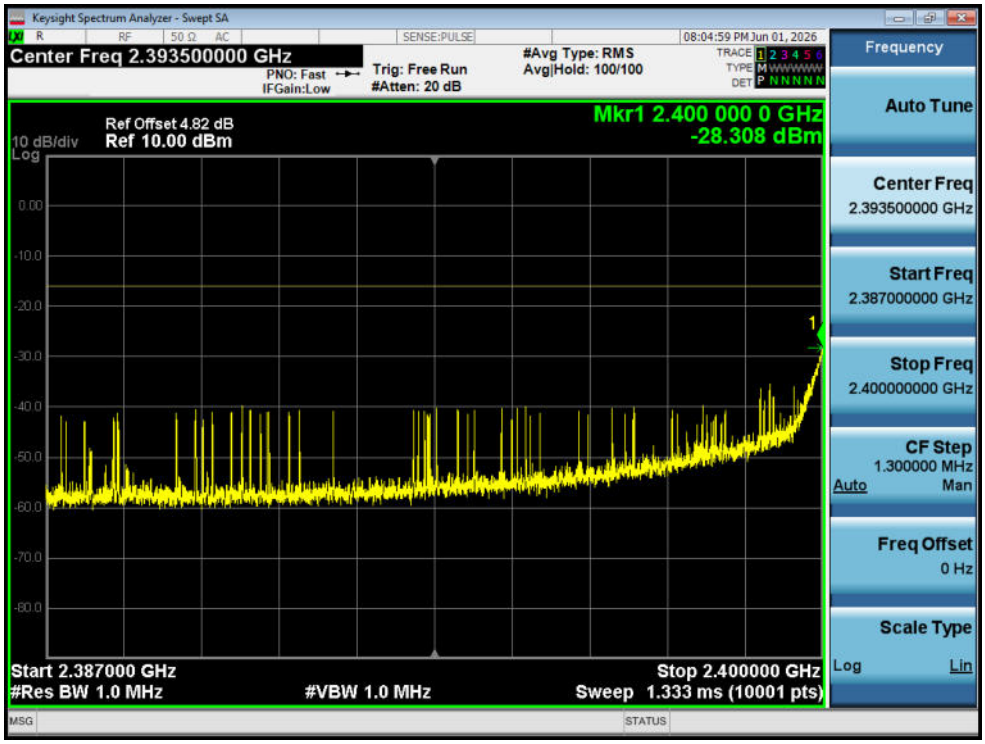
Condition	Mode	Frequency (MHz)	Antenna	Range (MHz)	Emission Frequency (MHz)	Max Peak Value (dBm)	Max RMS Value (dBm)	Max Peak Value (uW)	Max RMS Value (uW)	Limit Start(uW)	Limit Stop (uW)	Verdict
NVNT	BLE 1M	2402	Ant1	30-1000	834.13	-65.65	NA	0.0003	NA	0.25	0.25	Pass
NVNT	BLE 1M	2402	Ant1	1000-2387	2371.88	-46.09	NA	0.0246	NA	2.5	2.5	Pass
NVNT	BLE 1M	2402	Ant1	2387-2400	2400.00	-28.31	NA	1.4757	NA	25	25	Pass
NVNT	BLE 1M	2402	Ant1	2483.5-2496.5	2494.54	-40.98	NA	0.0798	NA	25	25	Pass
NVNT	BLE 1M	2402	Ant1	2496.5-13000	12625.03	-51.83	NA	0.0066	NA	2.5	2.5	Pass
NVNT	BLE 1M	2440	Ant1	30-1000	967.99	-65.84	NA	0.0003	NA	0.25	0.25	Pass
NVNT	BLE 1M	2440	Ant1	1000-2387	2386.72	-47.74	NA	0.0168	NA	2.5	2.5	Pass
NVNT	BLE 1M	2440	Ant1	2387-2400	2387.10	-39.37	NA	0.1156	NA	25	25	Pass
NVNT	BLE 1M	2440	Ant1	2483.5-2496.5	2493.29	-37.44	NA	0.1803	NA	25	25	Pass
NVNT	BLE 1M	2440	Ant1	2496.5-13000	2505.95	-51.47	NA	0.0071	NA	2.5	2.5	Pass
NVNT	BLE 1M	2480	Ant1	30-1000	561.46	-66.12	NA	0.0002	NA	0.25	0.25	Pass
NVNT	BLE 1M	2480	Ant1	1000-2387	2363.84	-53.74	NA	0.0042	NA	2.5	2.5	Pass
NVNT	BLE 1M	2480	Ant1	2387-2400	2387.01	-39.05	NA	0.1245	NA	25	25	Pass
NVNT	BLE 1M	2480	Ant1	2483.5-2496.5	2484.75	-39.80	NA	0.1047	NA	25	25	Pass
NVNT	BLE 1M	2480	Ant1	2496.5-13000	2510.15	-49.28	NA	0.0118	NA	2.5	2.5	Pass
NVNT	BLE 2M	2402	Ant1	30-1000	994.67	-66.16	NA	0.0002	NA	0.25	0.25	Pass
NVNT	BLE 2M	2402	Ant1	1000-2387	2350.24	-53.26	NA	0.0047	NA	2.5	2.5	Pass
NVNT	BLE 2M	2402	Ant1	2387-2400	2400.00	-13.96	-19.55	40.1791	11.0917	25	25	Pass
NVNT	BLE 2M	2402	Ant1	2483.5-2496.5	2488.02	-41.09	NA	0.0778	NA	25	25	Pass
NVNT	BLE 2M	2402	Ant1	2496.5-13000	2613.09	-39.28	NA	0.118	NA	2.5	2.5	Pass
NVNT	BLE 2M	2440	Ant1	30-1000	737.42	-66.38	NA	0.0002	NA	0.25	0.25	Pass
NVNT	BLE 2M	2440	Ant1	1000-2387	2385.61	-49.51	NA	0.0112	NA	2.5	2.5	Pass
NVNT	BLE 2M	2440	Ant1	2387-2400	2389.34	-7.76	-64.65	167.4943	0.0003	25	25	Pass
NVNT	BLE 2M	2440	Ant1	2483.5-2496.5	2495.35	-23.17	NA	4.8195	NA	25	25	Pass
NVNT	BLE 2M	2440	Ant1	2496.5-13000	4880.79	-51.54	NA	0.007	NA	2.5	2.5	Pass
NVNT	BLE 2M	2480	Ant1	30-1000	828.02	-65.93	NA	0.0003	NA	0.25	0.25	Pass
NVNT	BLE 2M	2480	Ant1	1000-2387	1240.64	-54.13	NA	0.0039	NA	2.5	2.5	Pass
NVNT	BLE 2M	2480	Ant1	2387-2400	2387.46	-21.75	NA	6.6834	NA	25	25	Pass
NVNT	BLE 2M	2480	Ant1	2483.5-2496.5	2487.05	-22.57	NA	5.5335	NA	25	25	Pass
NVNT	BLE 2M	2480	Ant1	2496.5-13000	2498.60	-48.52	NA	0.0141	NA	2.5	2.5	Pass



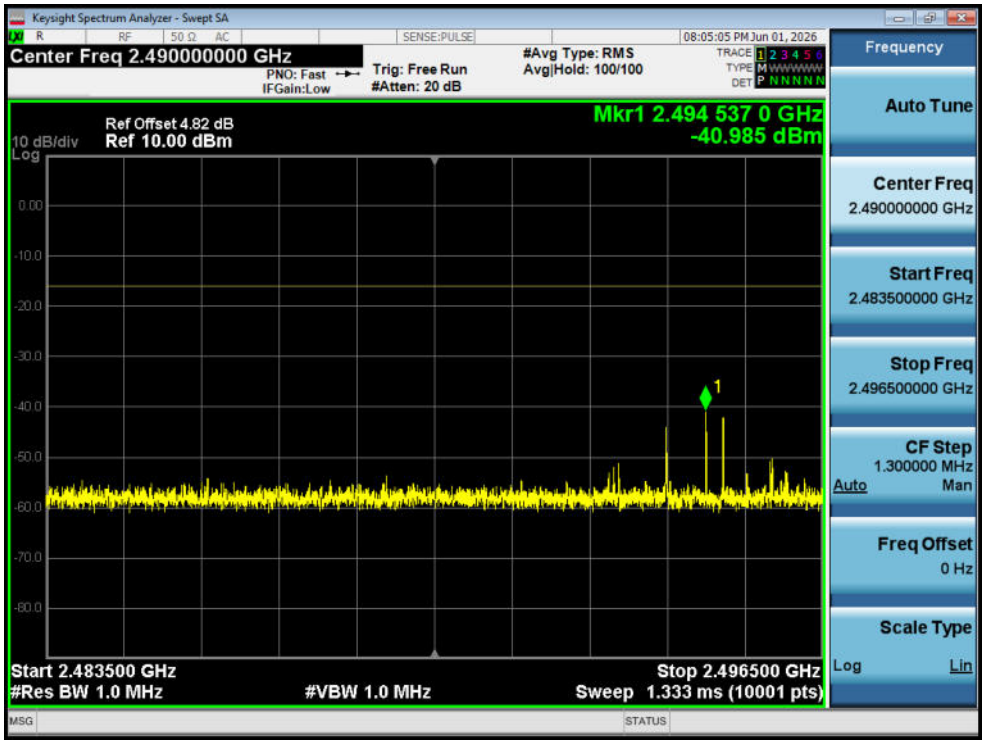
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 30MHz-1000MHz



Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 1000MHz-2387MHz

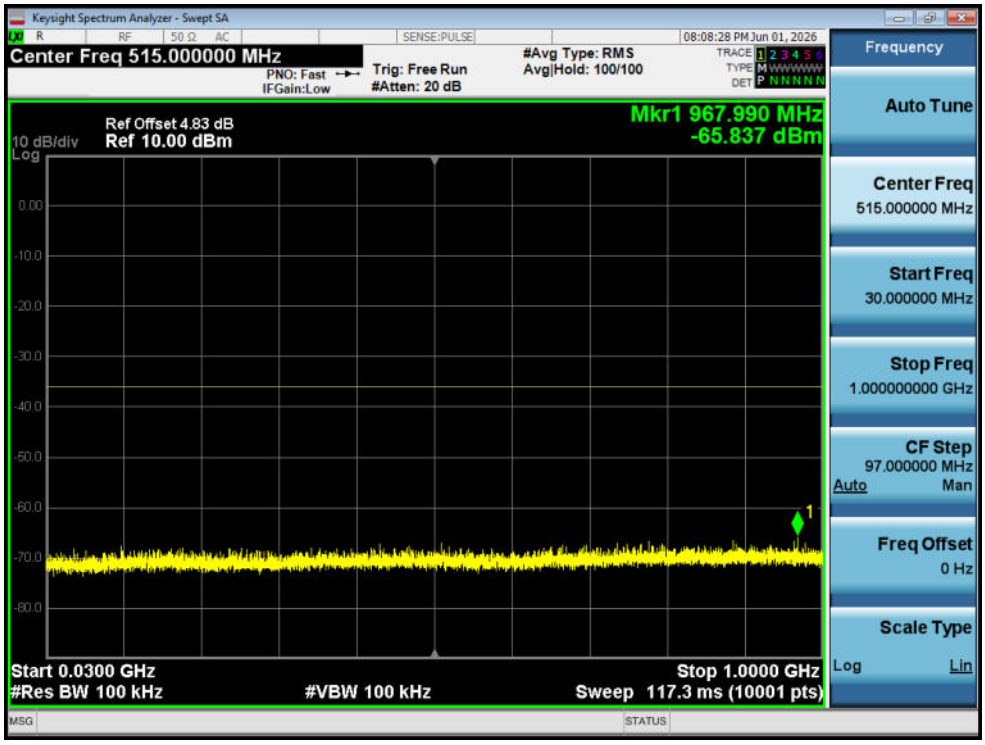


Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 2387MHz-2400MHz

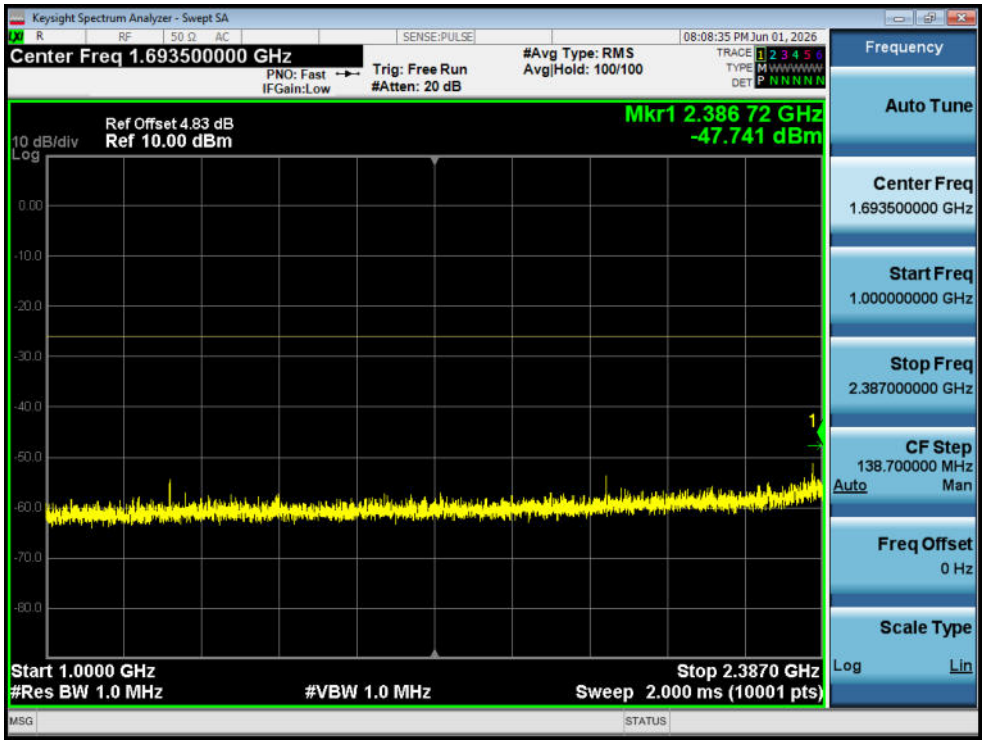


Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 2483.5MHz-2496.5MHz

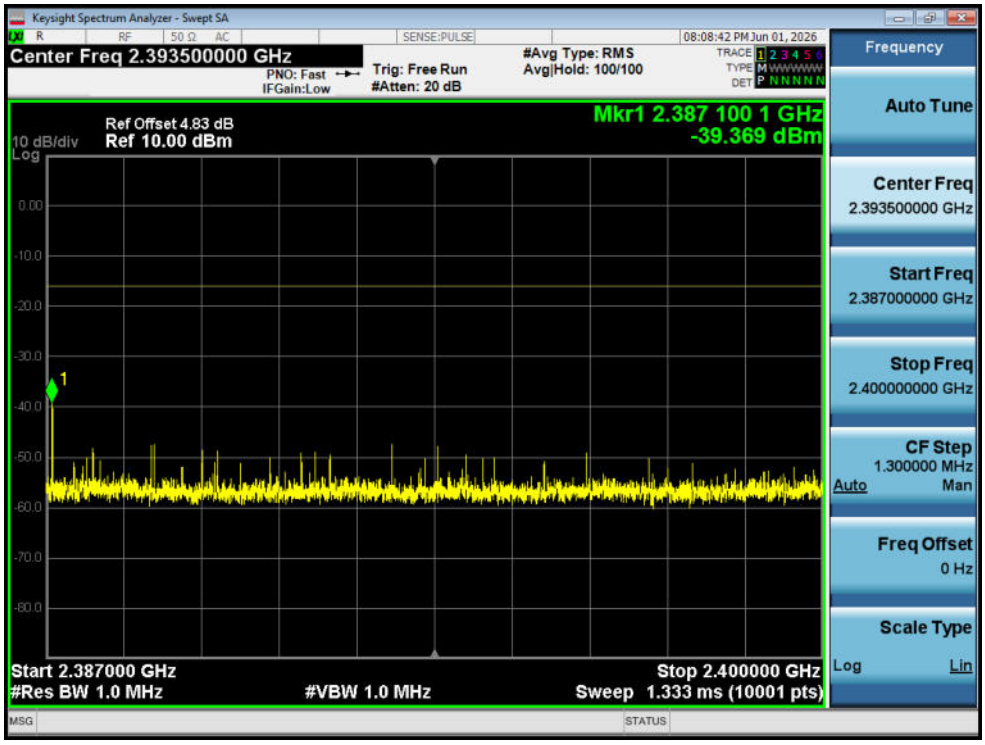
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 2496.5MHz-13000MHz



Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 30MHz-1000MHz



Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 1000MHz-2387MHz



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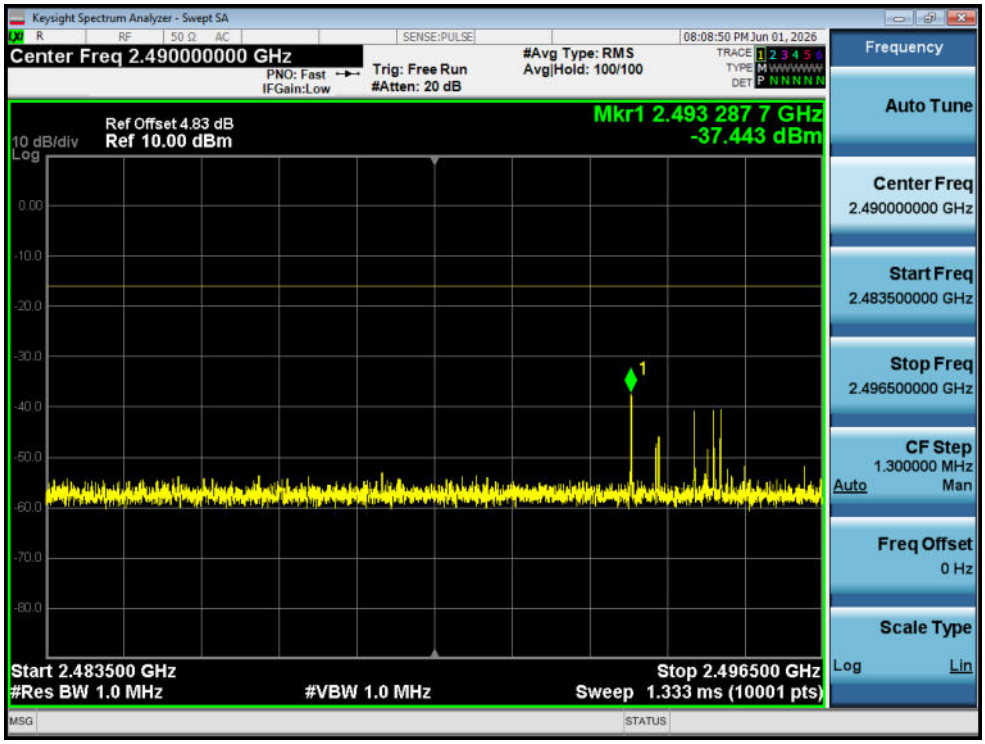
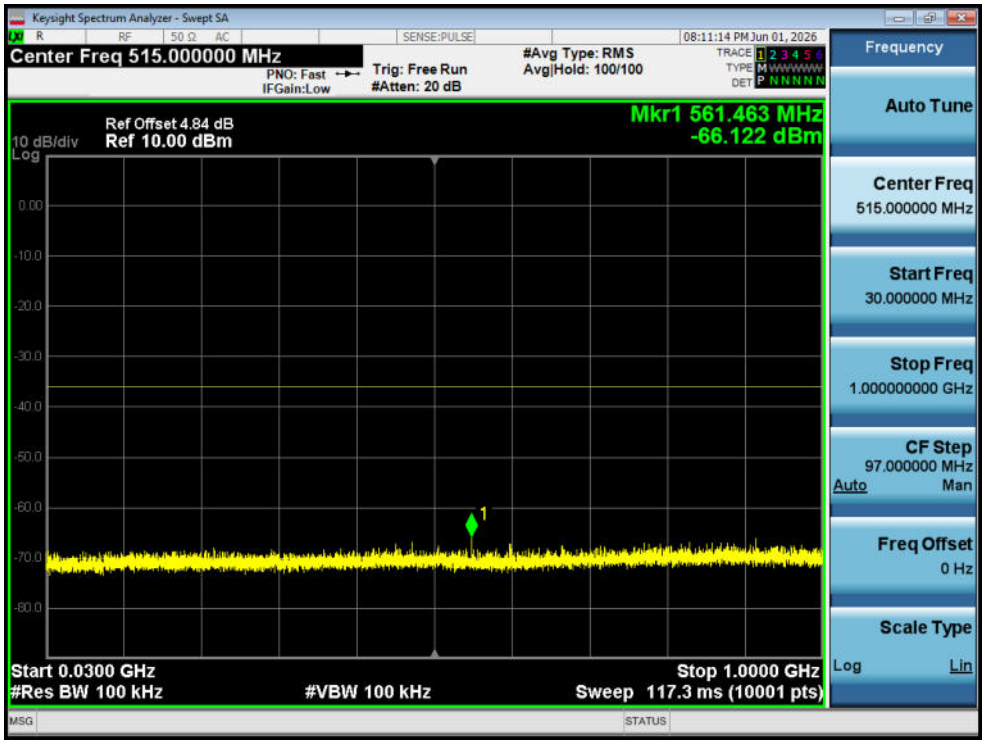
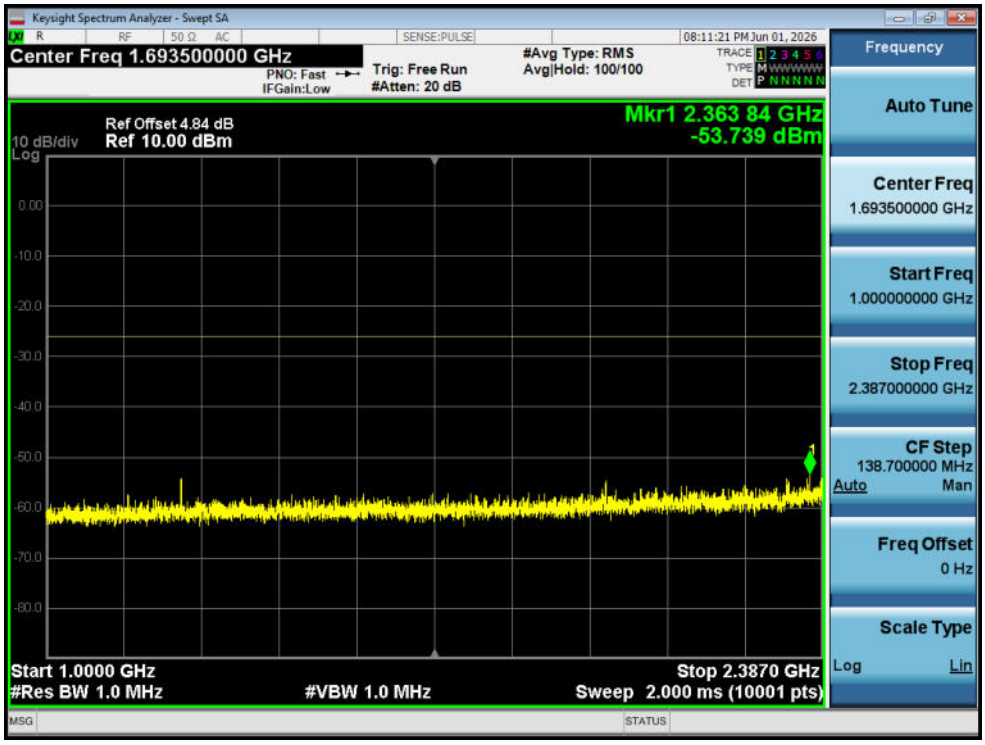


Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 2483.5MHz-2496.5MHz

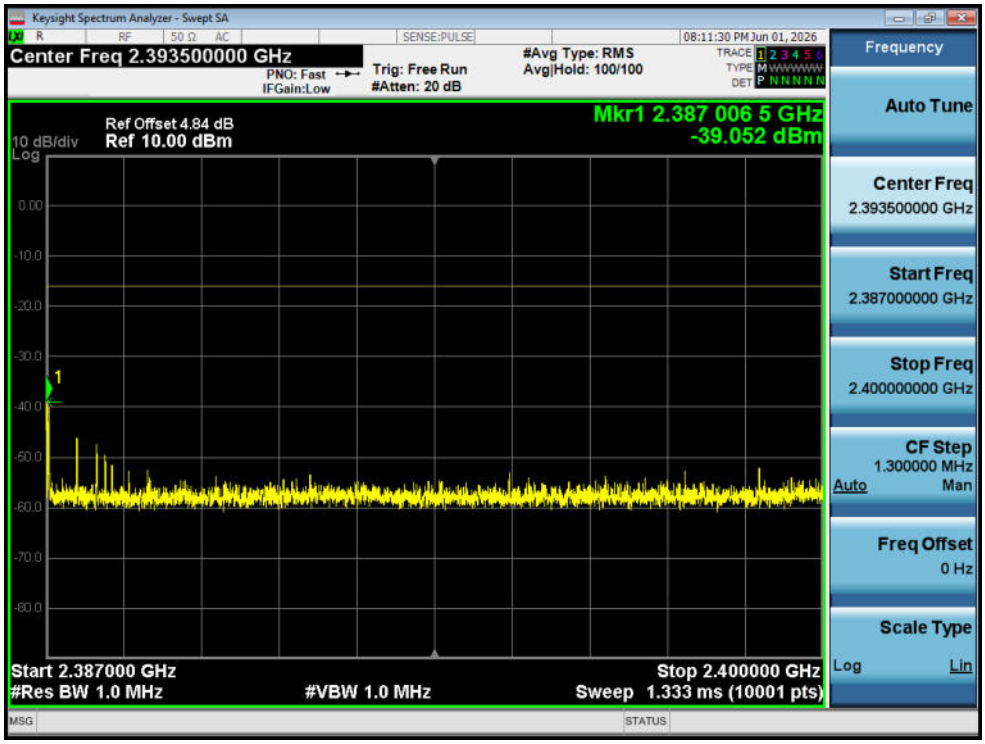
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 2496.5MHz-13000MHz



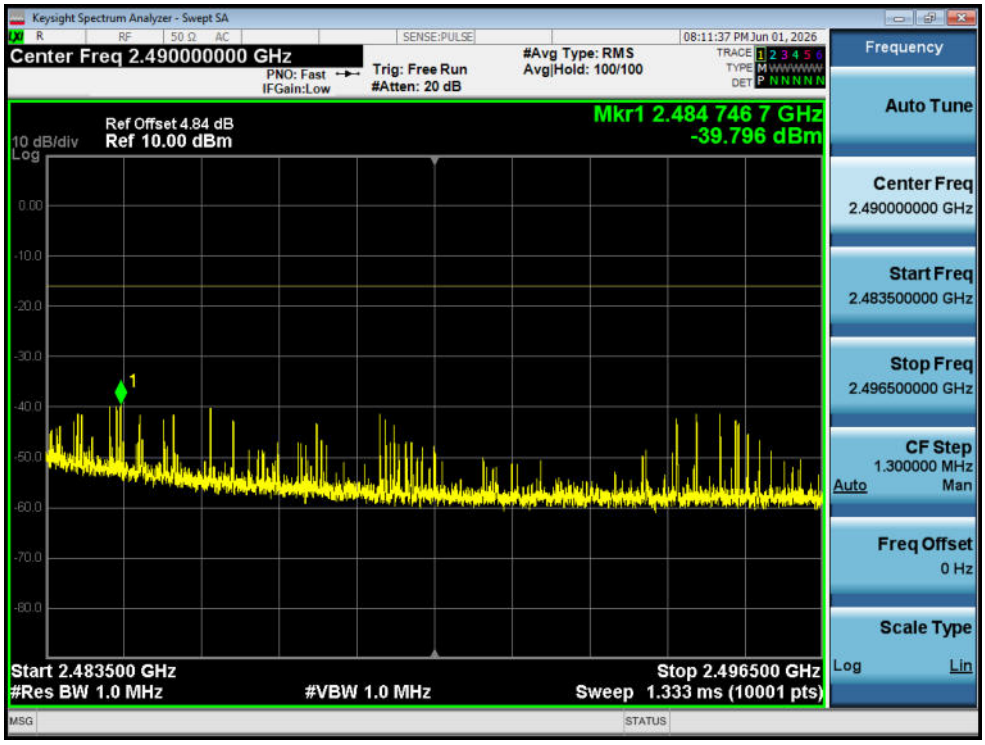
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 30MHz-1000MHz



Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 1000MHz-2387MHz

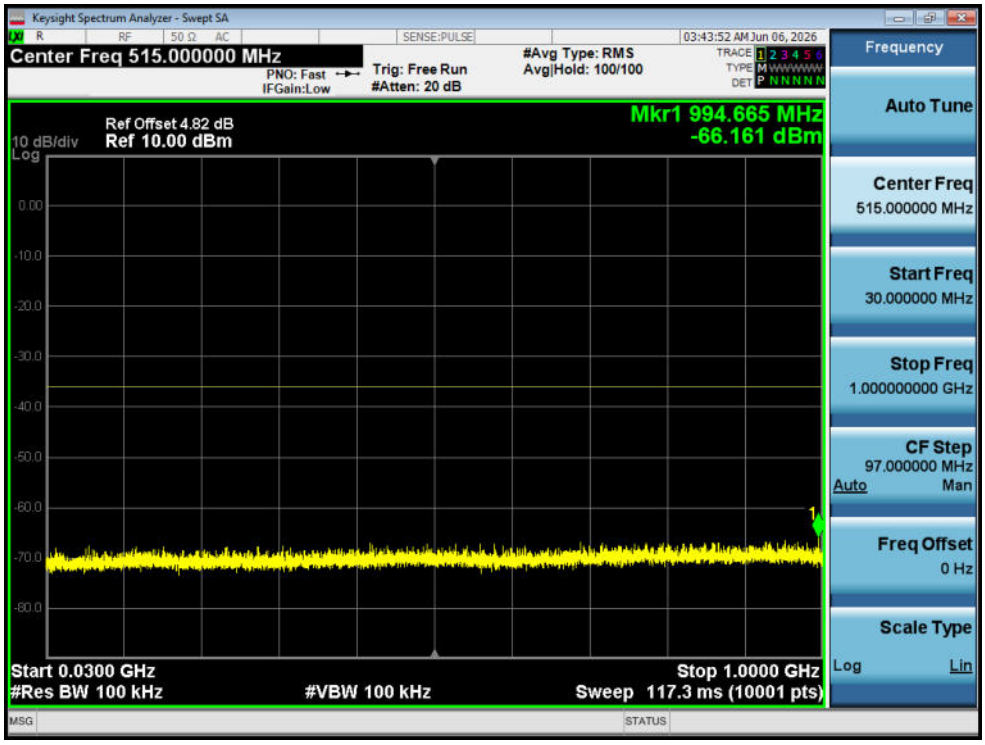


Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 2387MHz-2400MHz

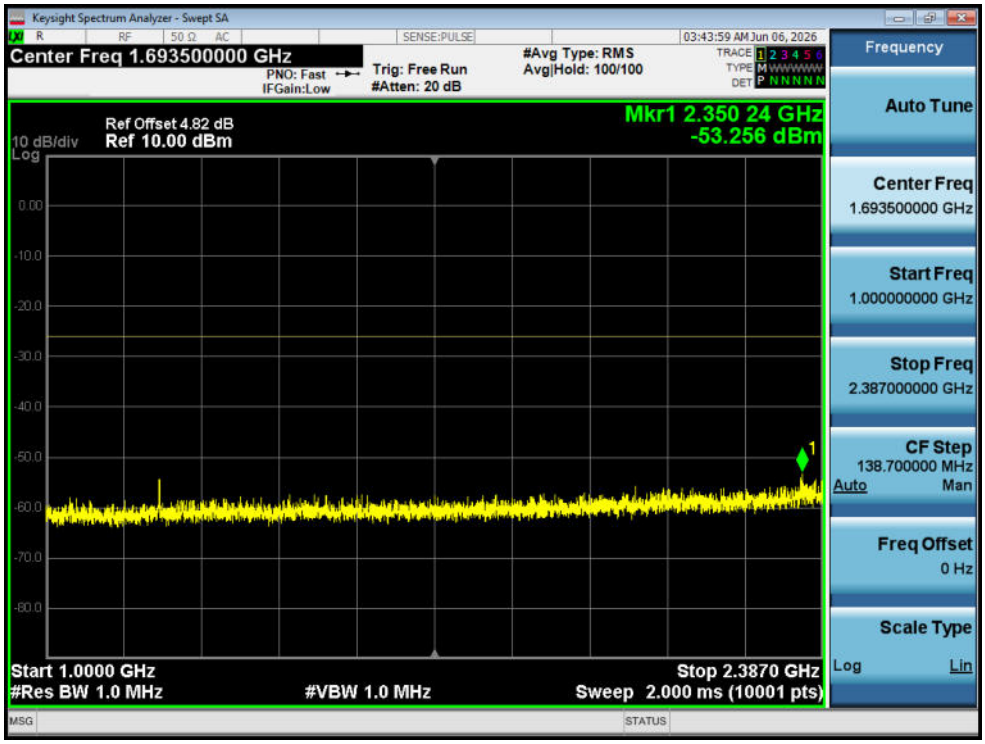


Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 2483.5MHz-2496.5MHz

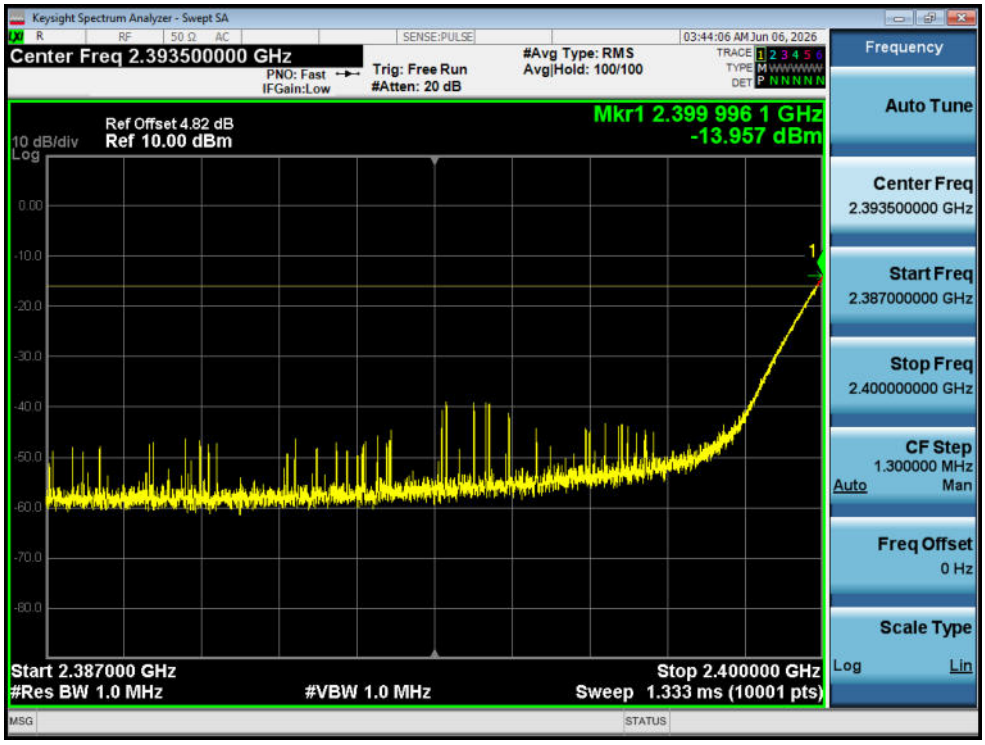
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 2496.5MHz-13000MHz



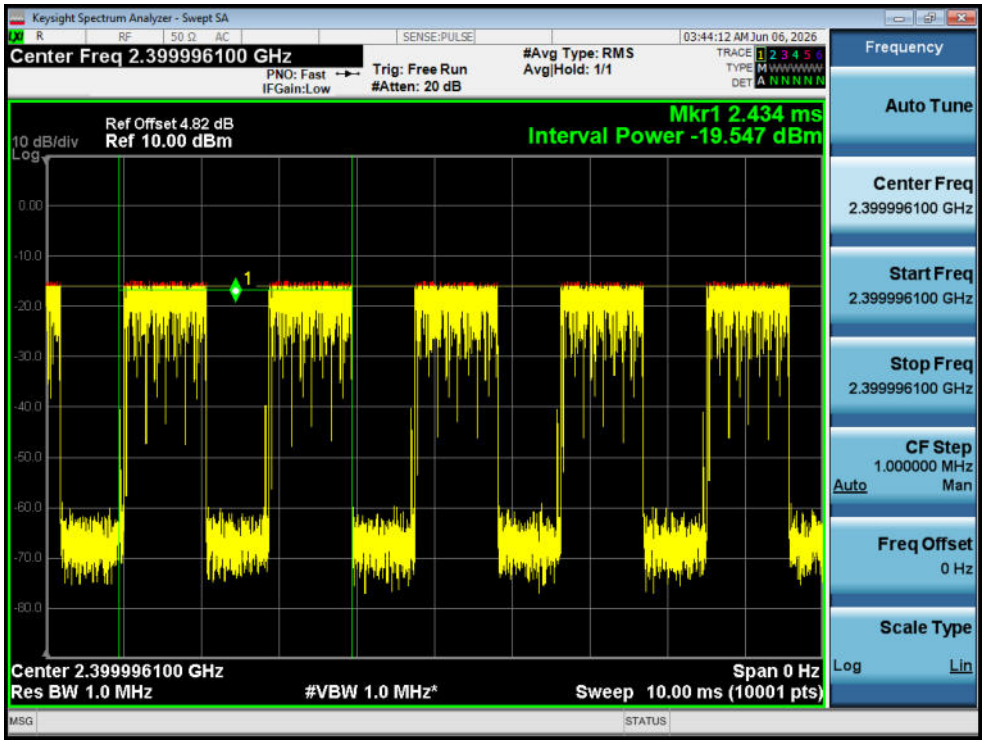
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 30MHz-1000MHz



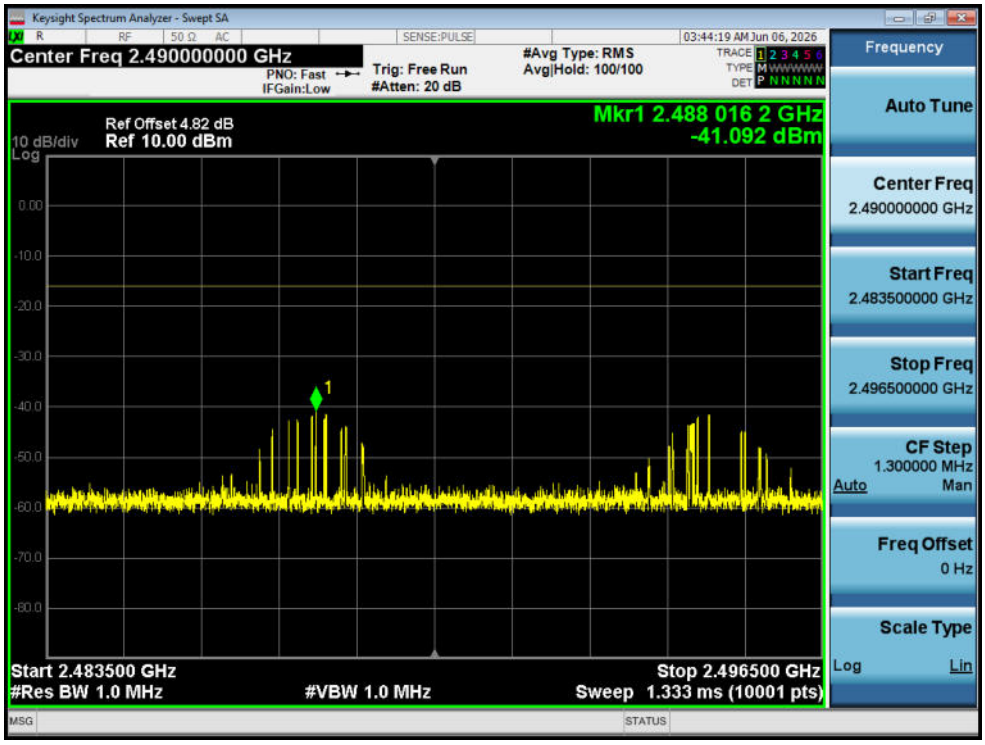
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 1000MHz-2387MHz



Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 2387MHz-2400MHz

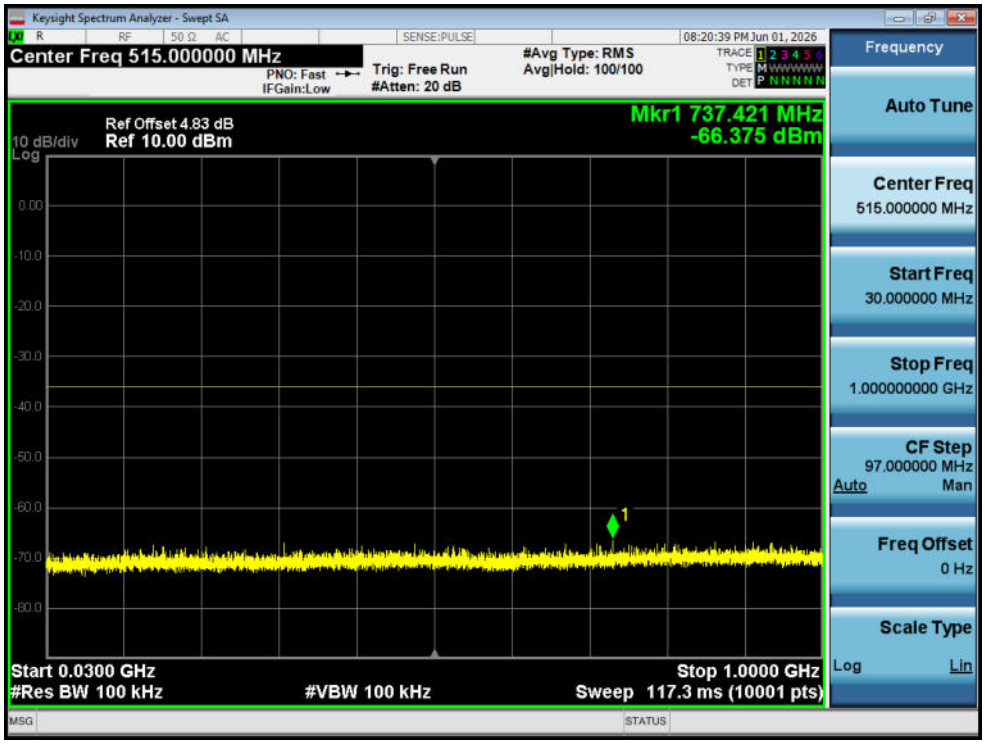


Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 2387MHz-2400MHz Final

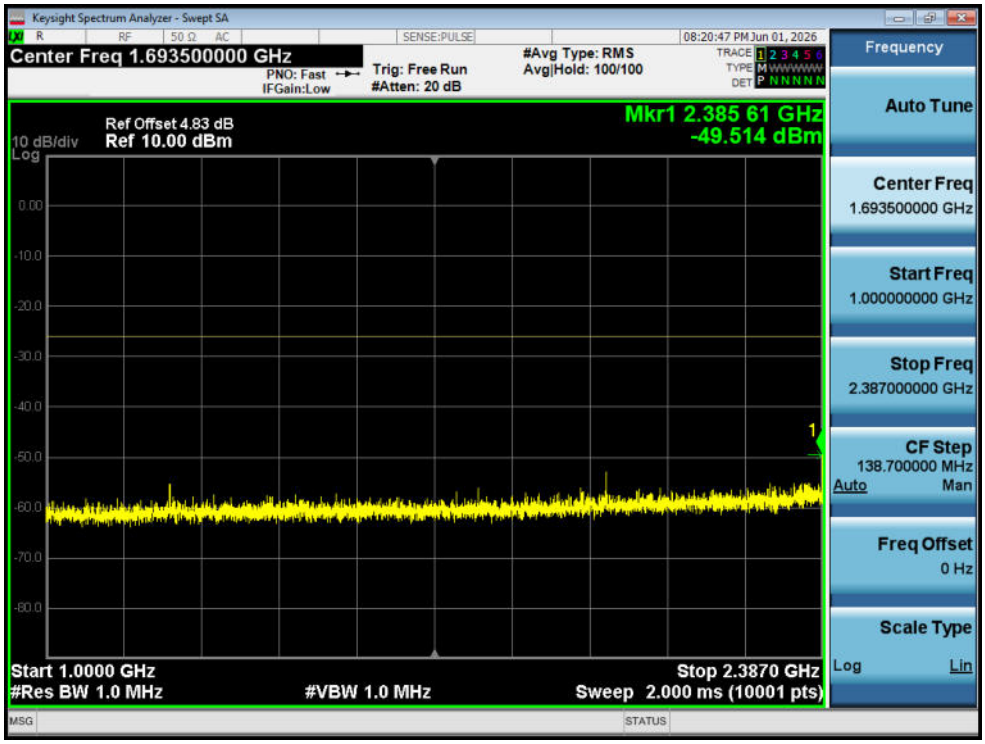


Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 2483.5MHz-2496.5MHz

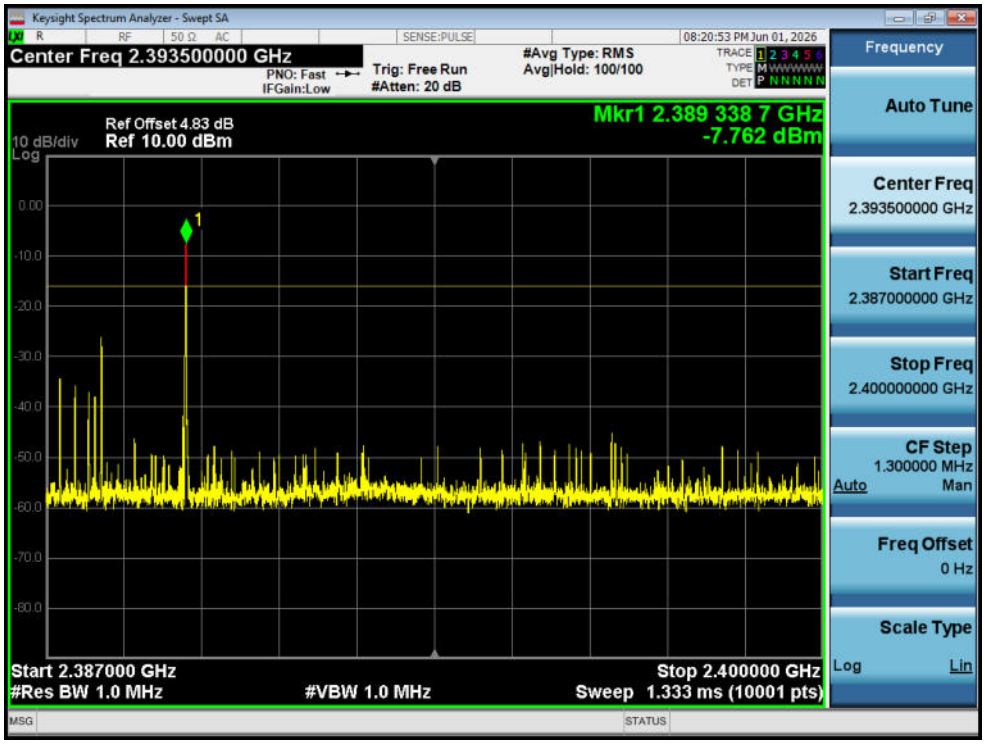
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 2496.5MHz-13000MHz



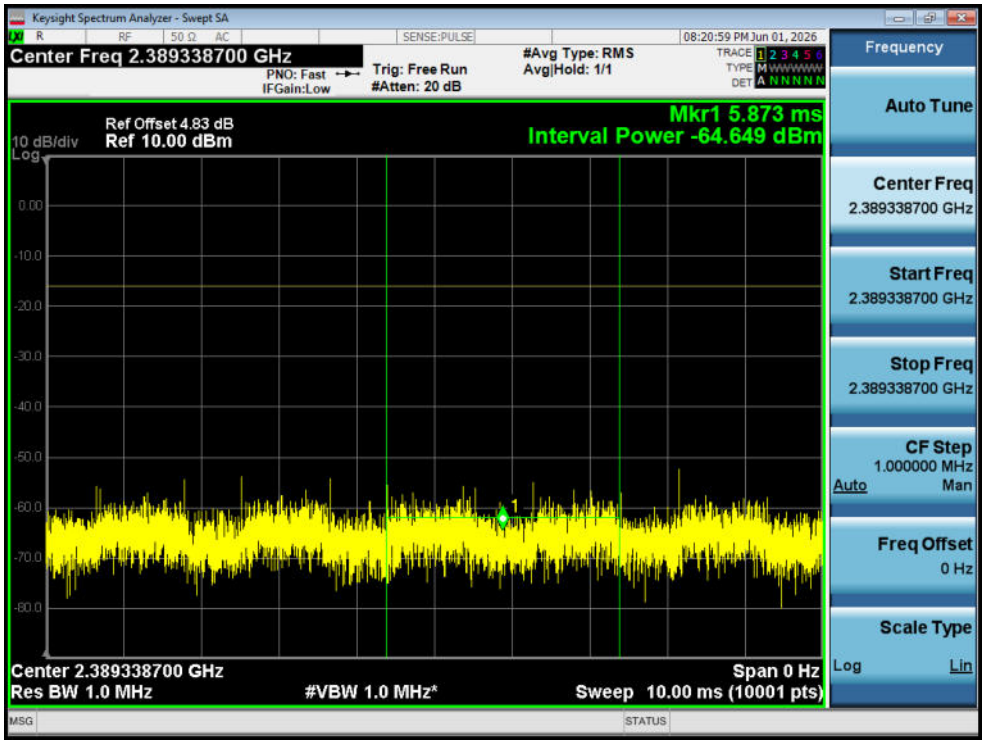
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 30MHz-1000MHz



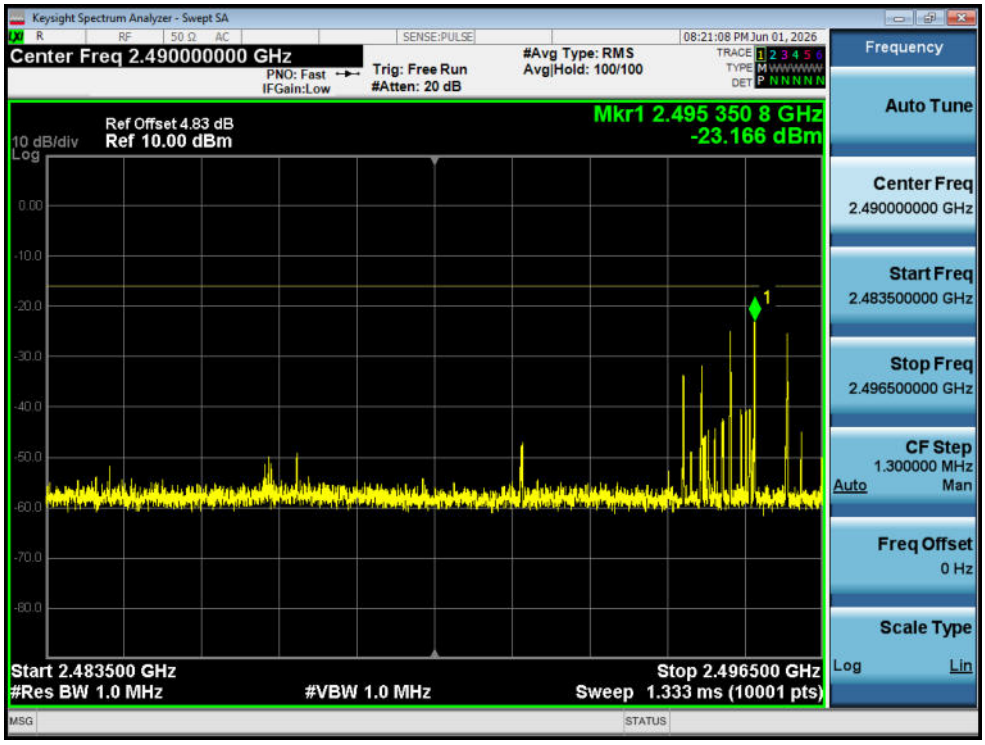
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 1000MHz-2387MHz



Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 2387MHz-2400MHz

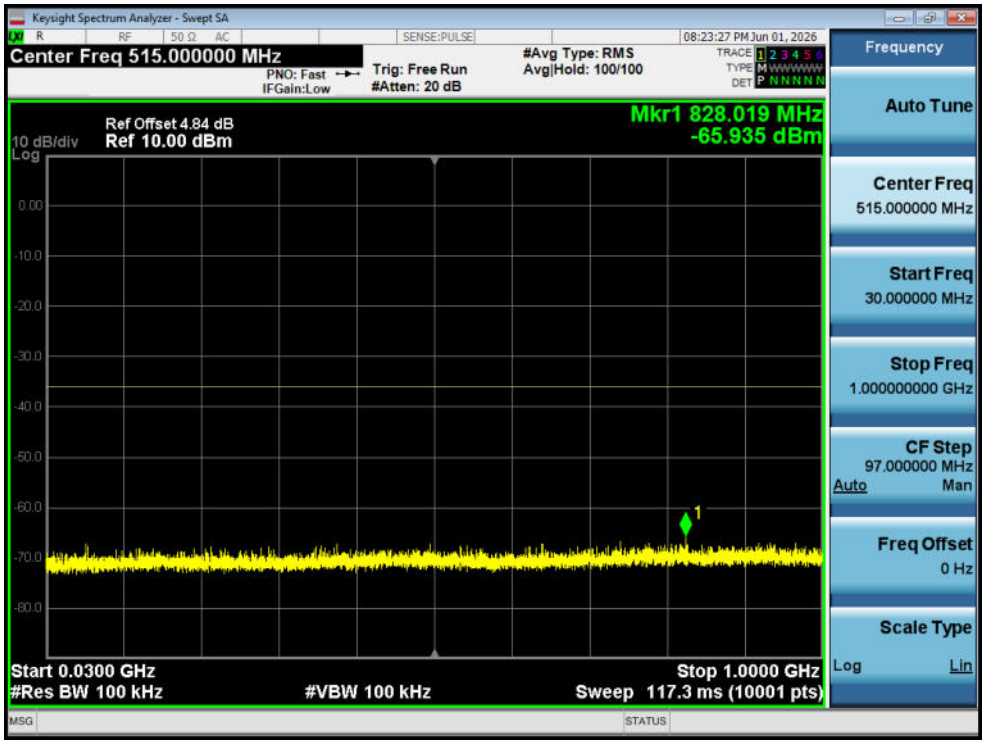


Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 2387MHz-2400MHz Final

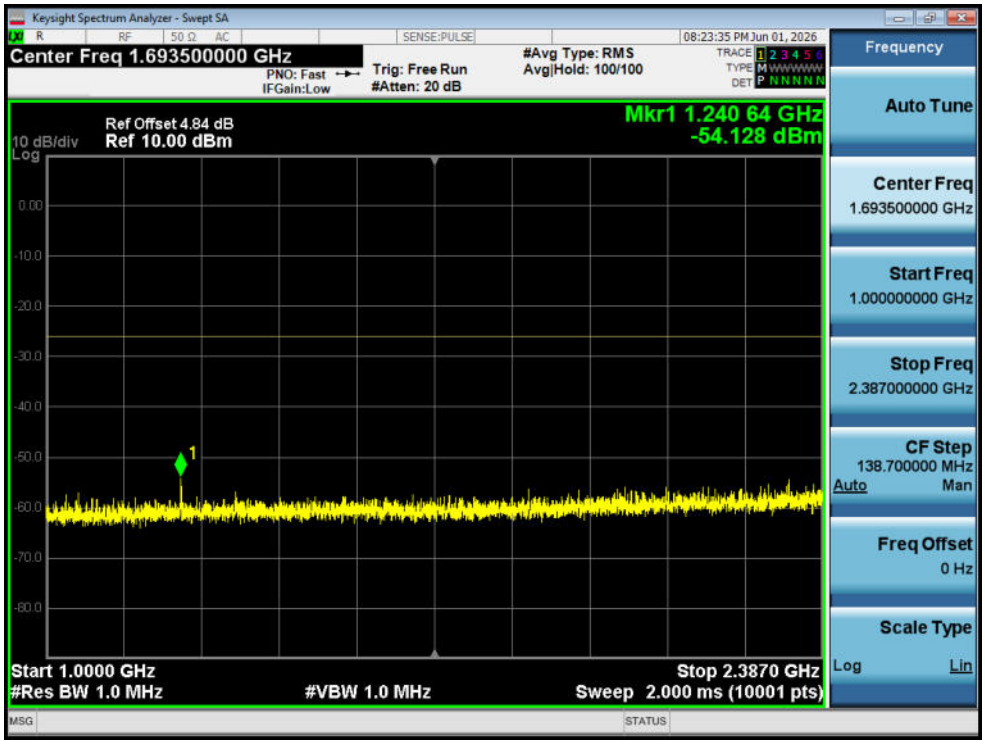


Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 2483.5MHz-2496.5MHz

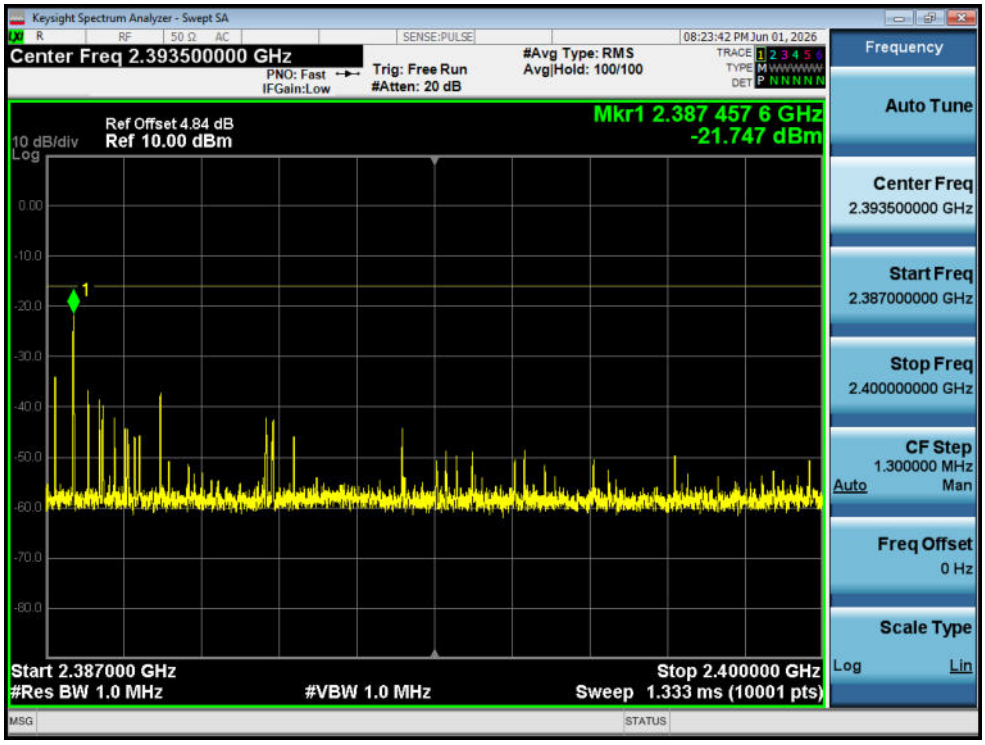
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 2496.5MHz-13000MHz



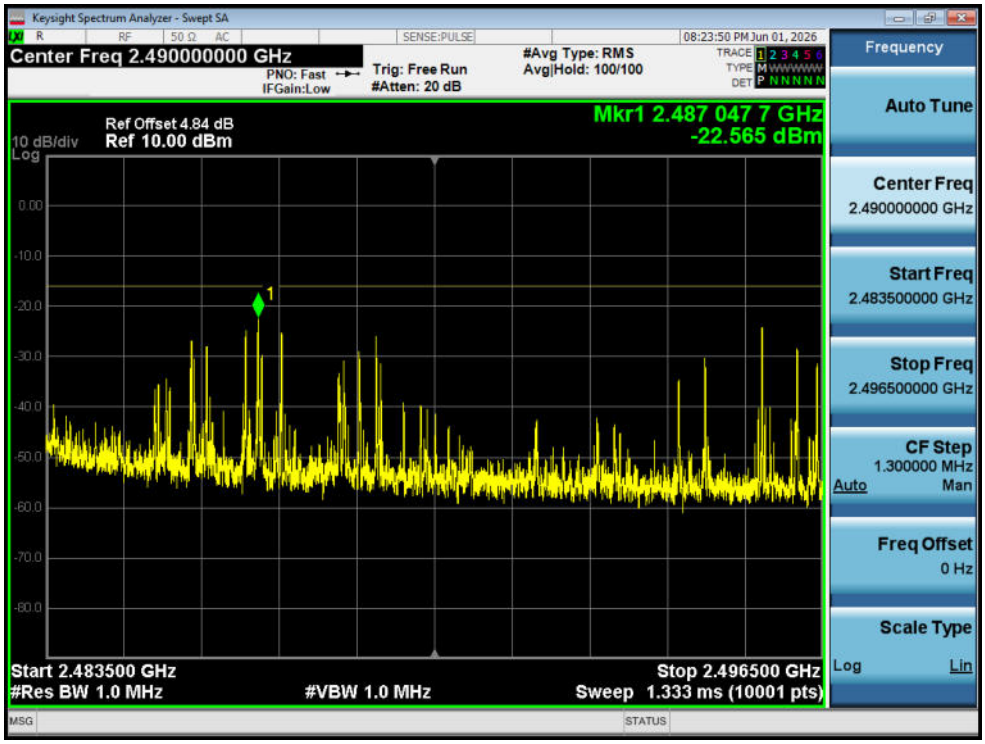
Tx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 30MHz-1000MHz



Tx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 1000MHz-2387MHz



Tx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 2387MHz-2400MHz

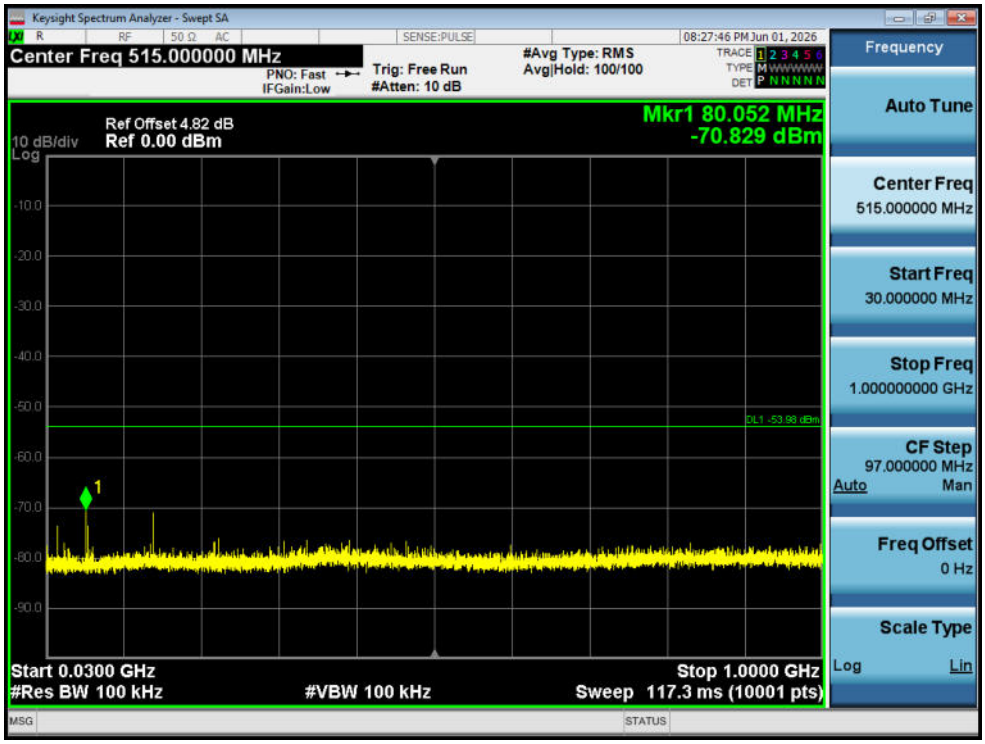


Tx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 2483.5MHz-2496.5MHz

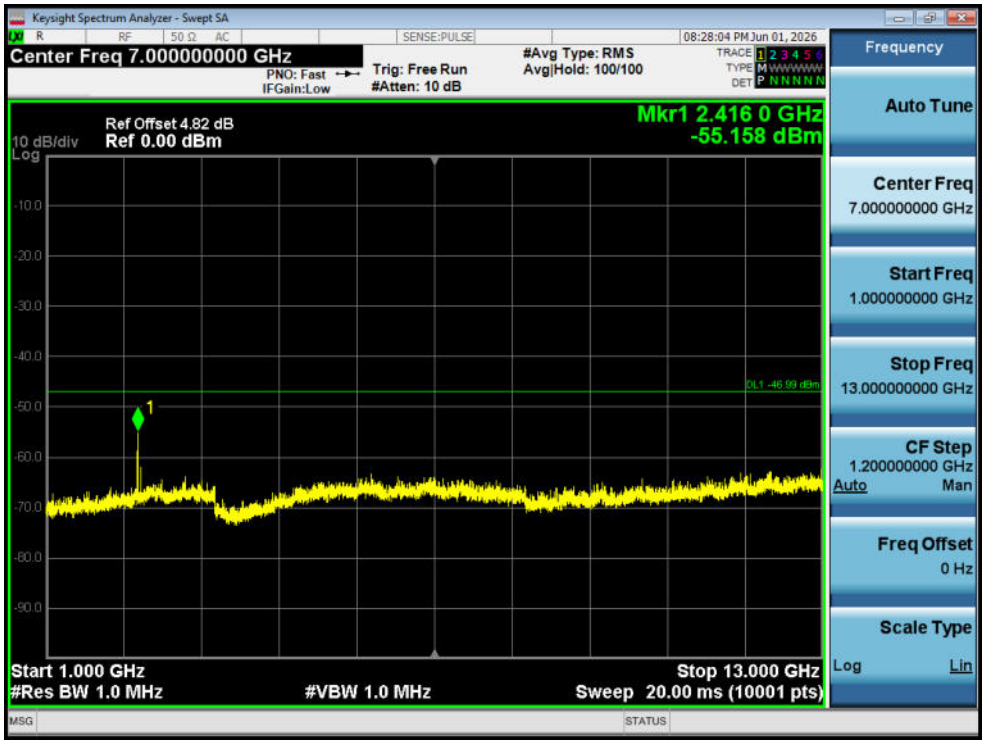
Tx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 2496.5MHz-13000MHz

Rx Spurious Emission

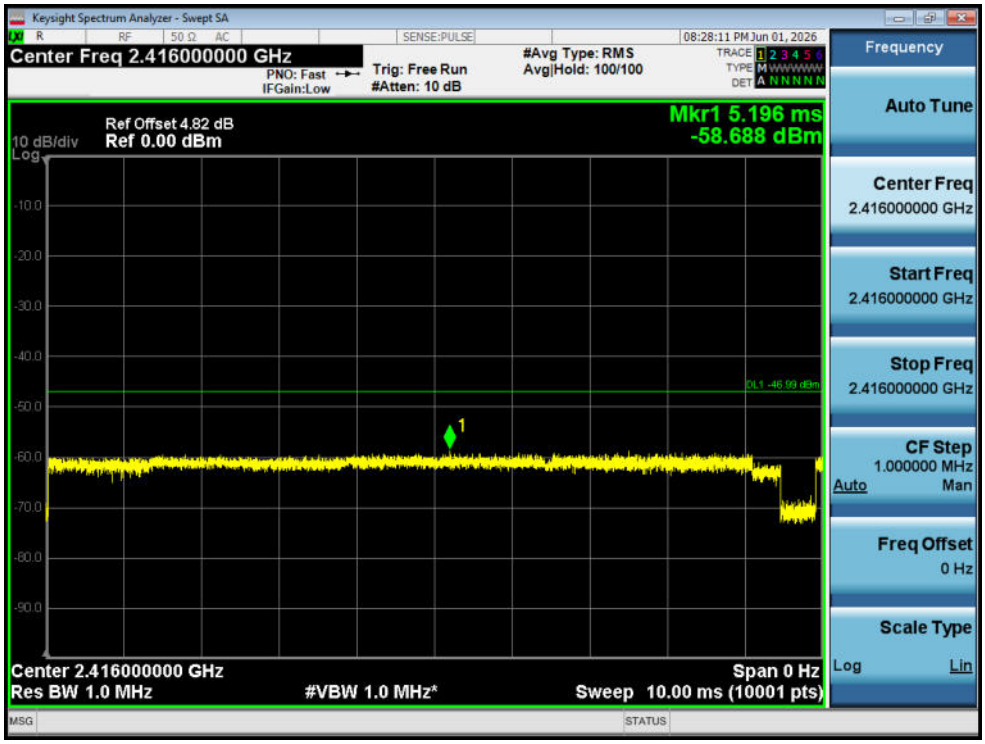
Condition	Mode	Frequency (MHz)	Antenna	Range (MHz)	Emission Frequency (MHz)	Max Peak Value (dBm)	Max RMS Value (dBm)	Max Peak Value (nW)	Max RMS Value (nW)	Limit (nW)	Verdict
NVNT	BLE 1M	2402	Ant1	30-1000	80.05	-70.83	NA	0.0826	NA	4	Pass
NVNT	BLE 1M	2402	Ant1	1000-13000	2416.00	-55.16	-58.69	3.0479	1.3521	20	Pass
NVNT	BLE 1M	2440	Ant1	30-1000	80.05	-70.88	NA	0.0817	NA	4	Pass
NVNT	BLE 1M	2440	Ant1	1000-13000	2414.80	-54.27	-54.48	3.7411	3.5645	20	Pass
NVNT	BLE 1M	2480	Ant1	30-1000	336.13	-69.02	NA	0.1253	NA	4	Pass
NVNT	BLE 1M	2480	Ant1	1000-13000	1945.60	-47.31	-67.24	18.578	0.1888	20	Pass
NVNT	BLE 2M	2402	Ant1	30-1000	163.57	-70.75	NA	0.0841	NA	4	Pass
NVNT	BLE 2M	2402	Ant1	1000-13000	1951.60	-49.86	-67.41	10.3276	0.1816	20	Pass
NVNT	BLE 2M	2440	Ant1	30-1000	80.05	-69.75	NA	0.1059	NA	4	Pass
NVNT	BLE 2M	2440	Ant1	1000-13000	2461.60	-50.62	-61.8	8.6696	0.6607	20	Pass
NVNT	BLE 2M	2480	Ant1	30-1000	80.05	-70.50	NA	0.0891	NA	4	Pass
NVNT	BLE 2M	2480	Ant1	1000-13000	2458.00	-55.74	-57.53	2.6669	1.766	20	Pass



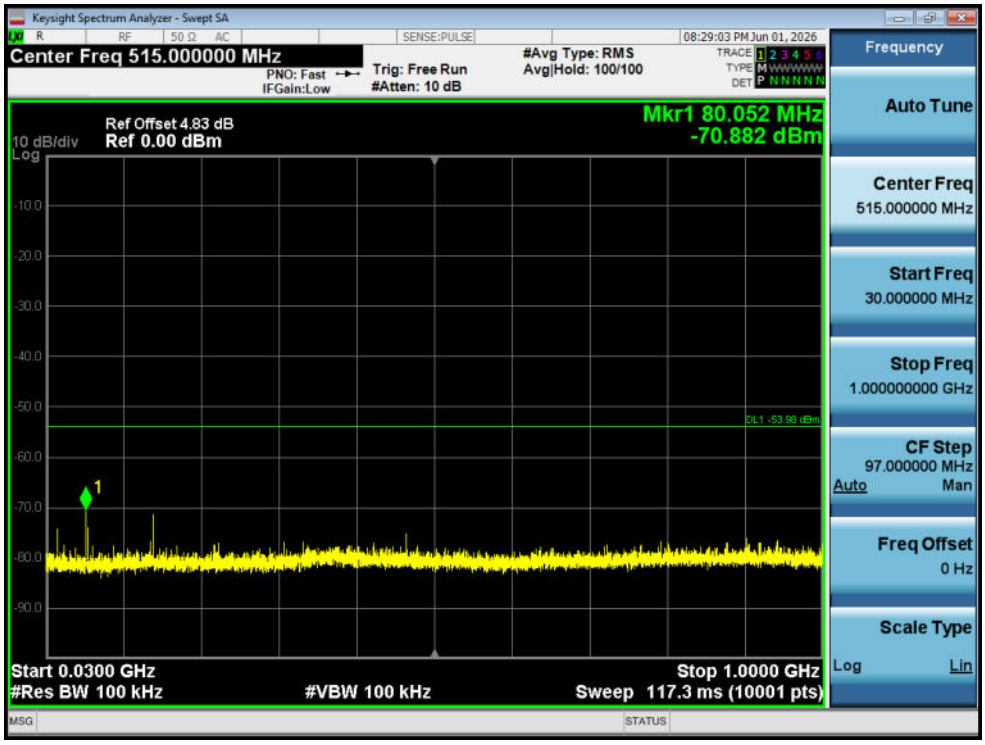
Rx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 30MHz-1000MHz



Rx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 1000MHz-13000MHz

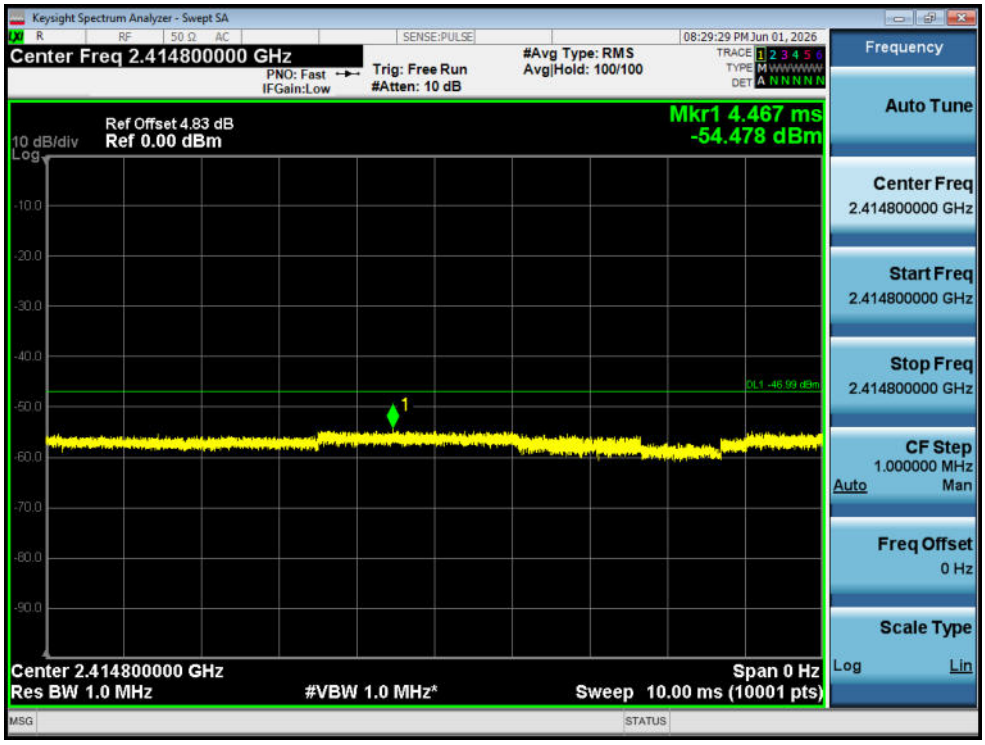


Rx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 1000MHz-13000MHz Final

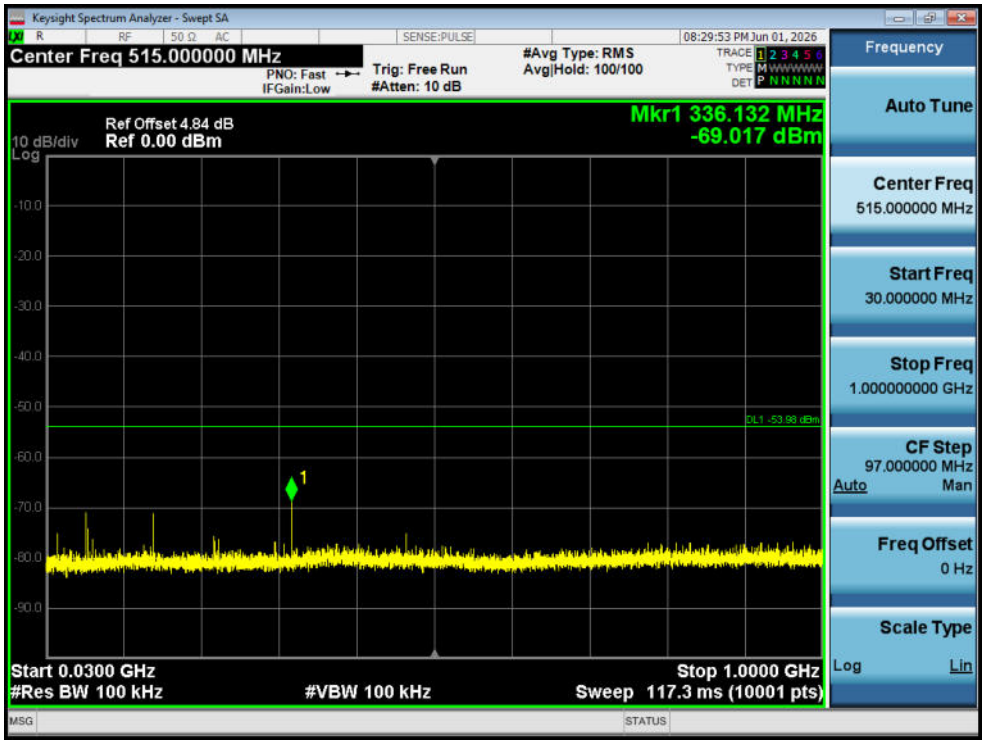


Rx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 30MHz-1000MHz

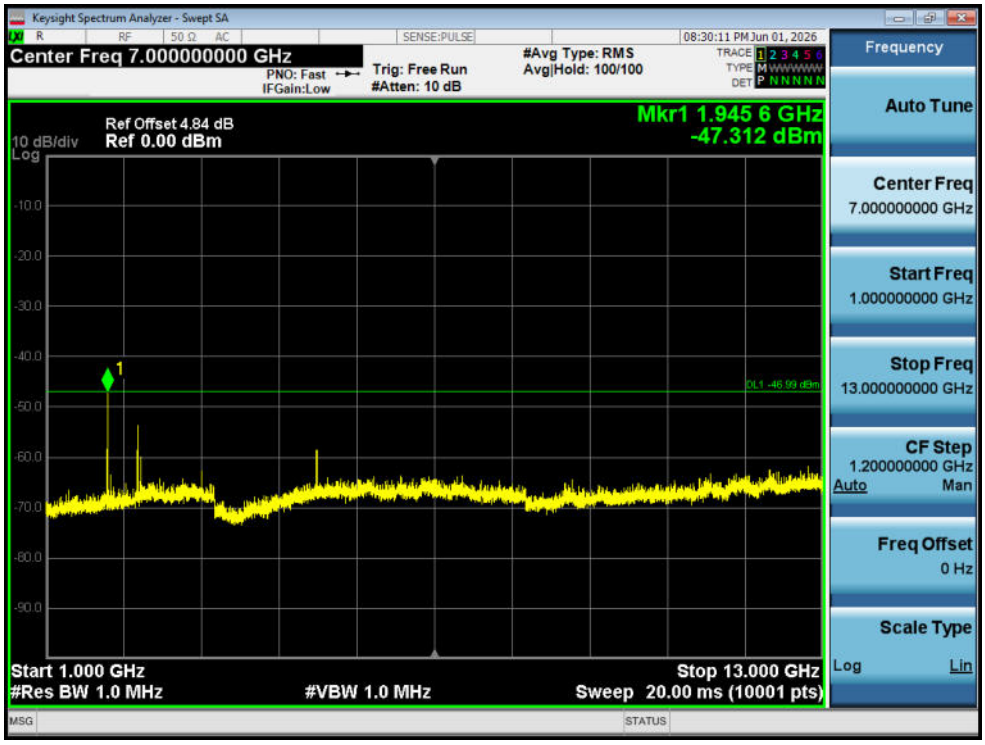
Rx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 1000MHz-13000MHz



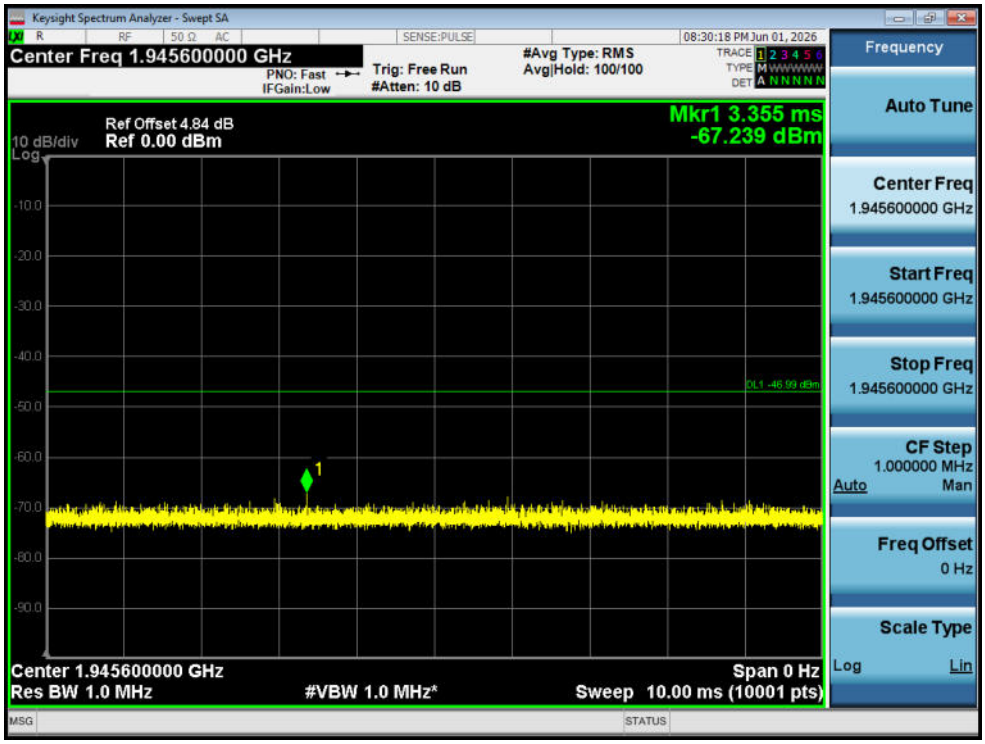
Rx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 1000MHz-13000MHz Final



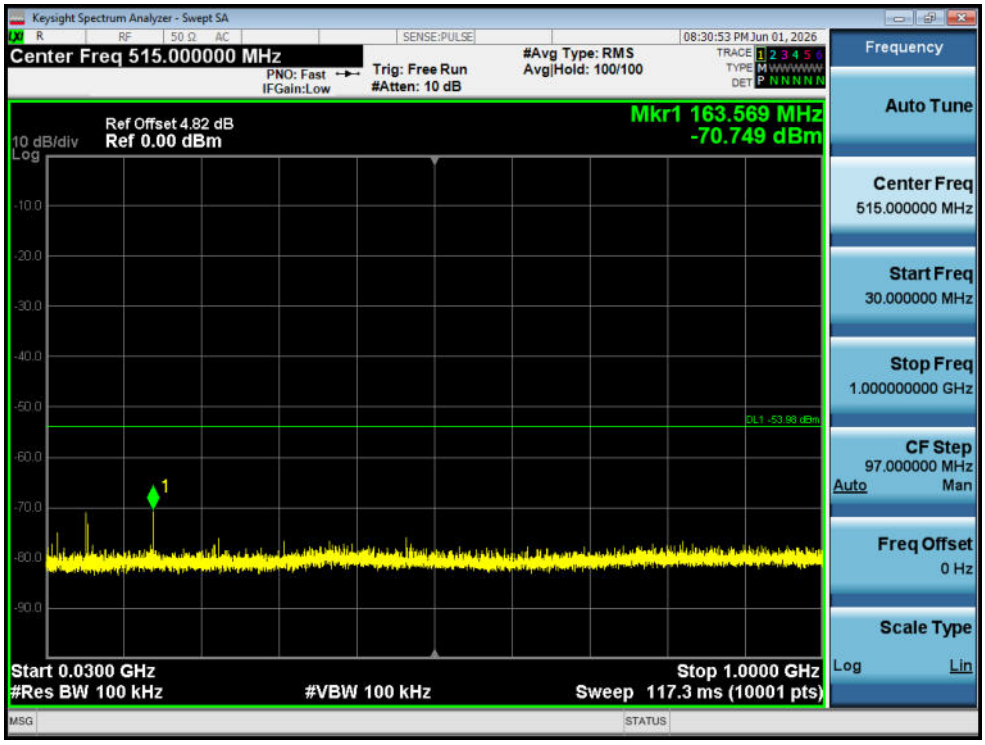
Rx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 30MHz-1000MHz



Rx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 1000MHz-13000MHz

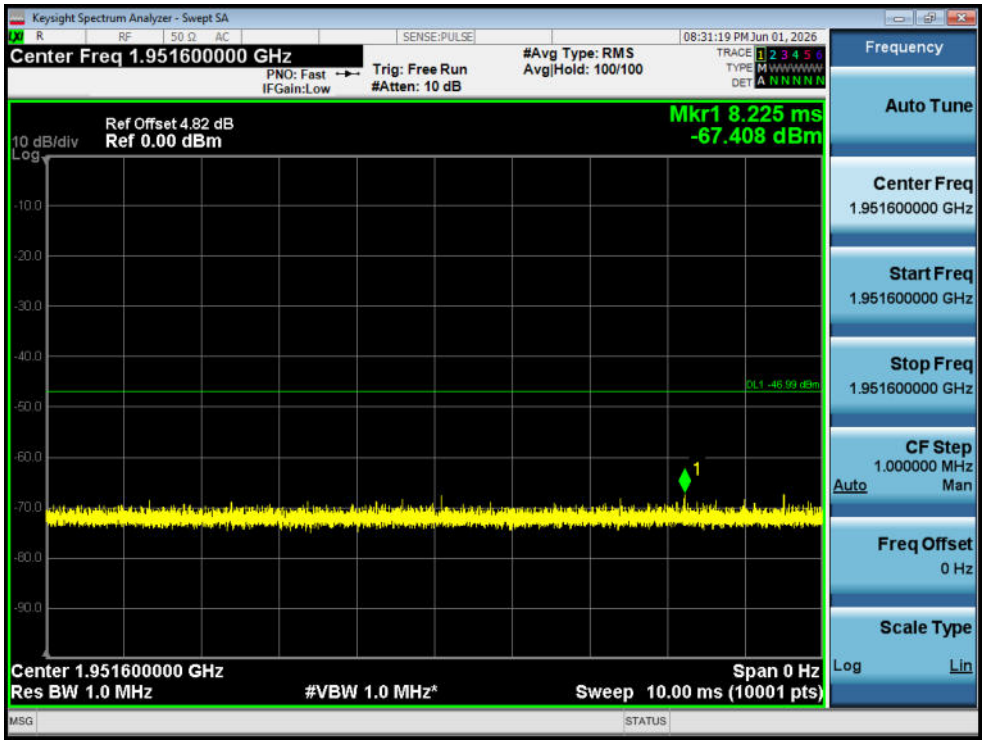


Rx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 1000MHz-13000MHz Final

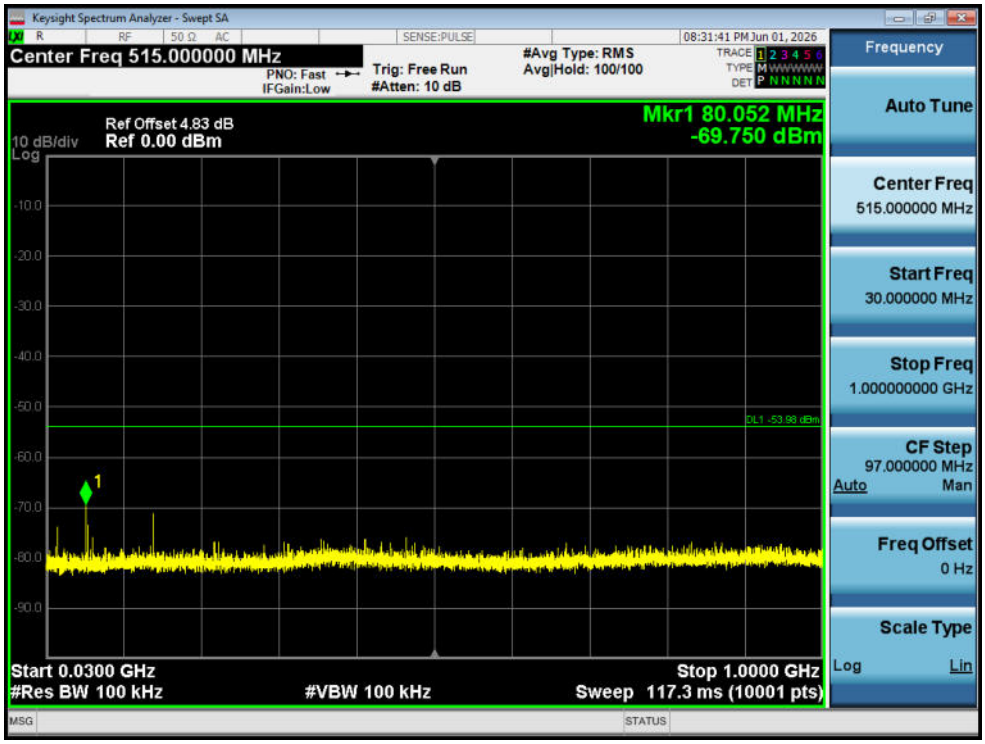


Rx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 30MHz-1000MHz

Rx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 1000MHz-13000MHz

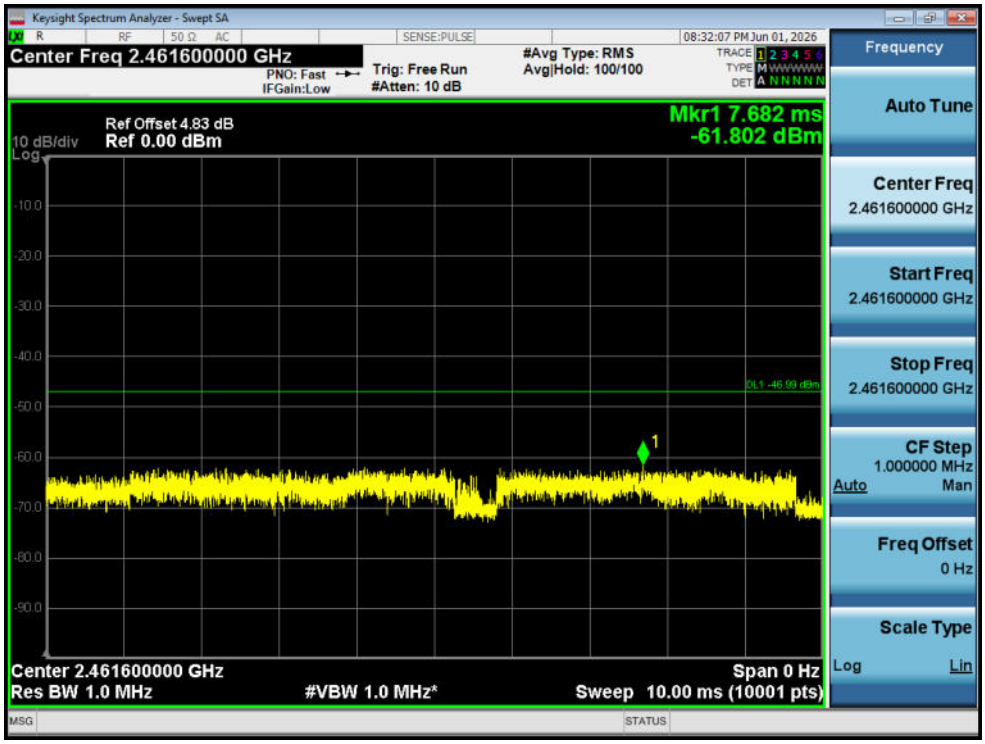


Rx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 1000MHz-13000MHz Final

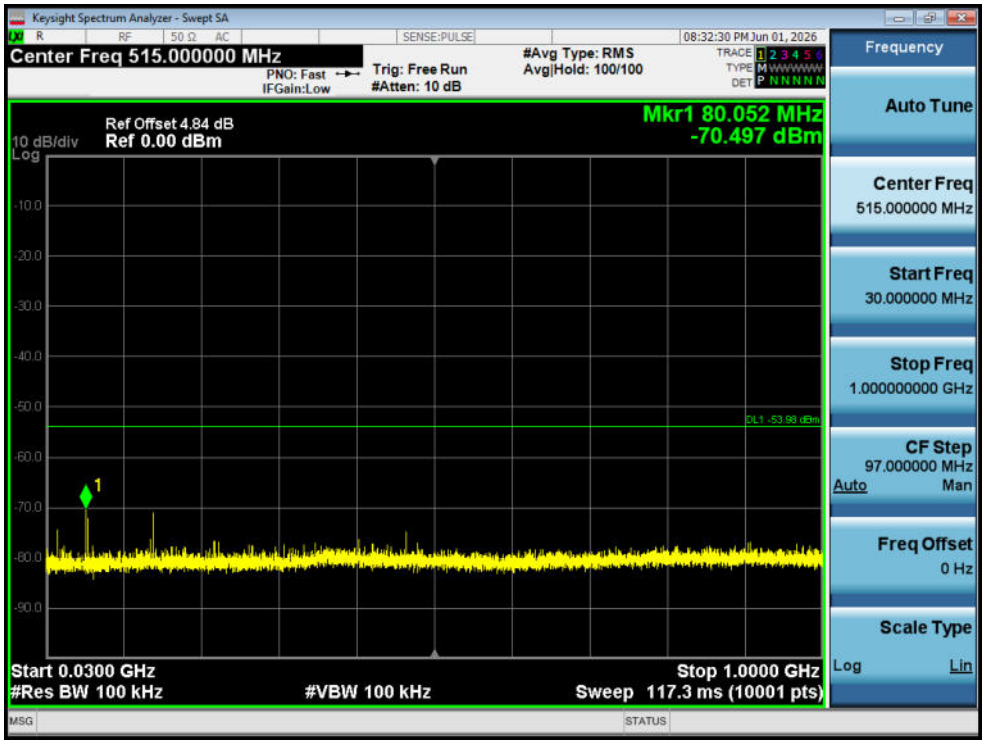


Rx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 30MHz-1000MHz

Rx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 1000MHz-13000MHz

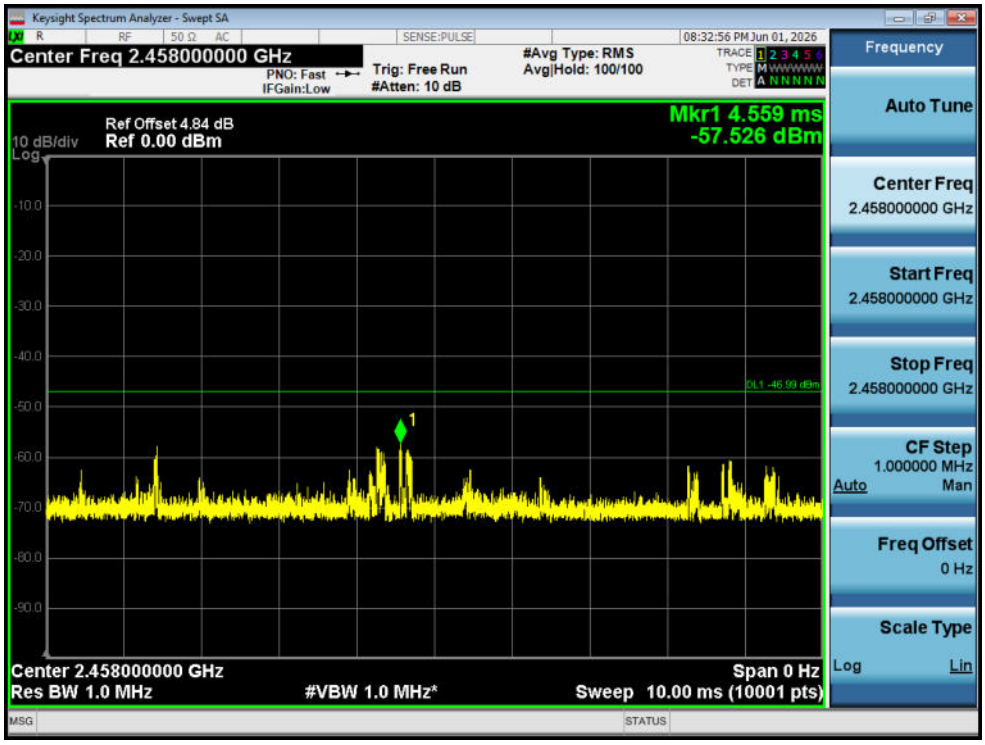


Rx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 1000MHz-13000MHz Final



Rx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 30MHz-1000MHz

Rx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 1000MHz-13000MHz



Rx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 1000MHz-13000MHz Final