

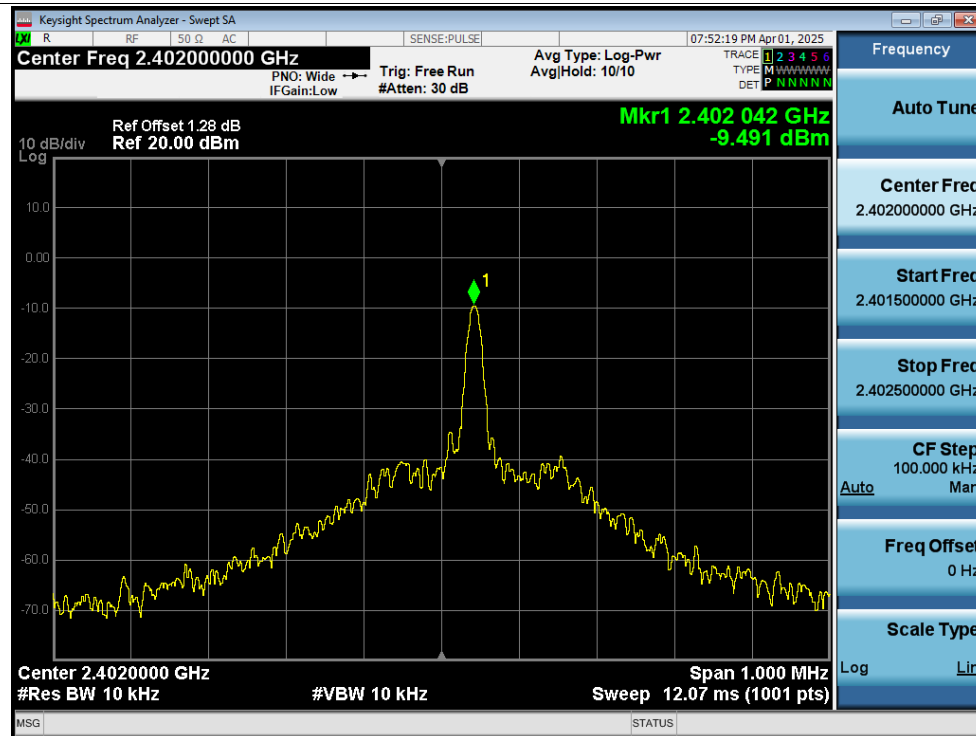
Appendix A

Frequency Error

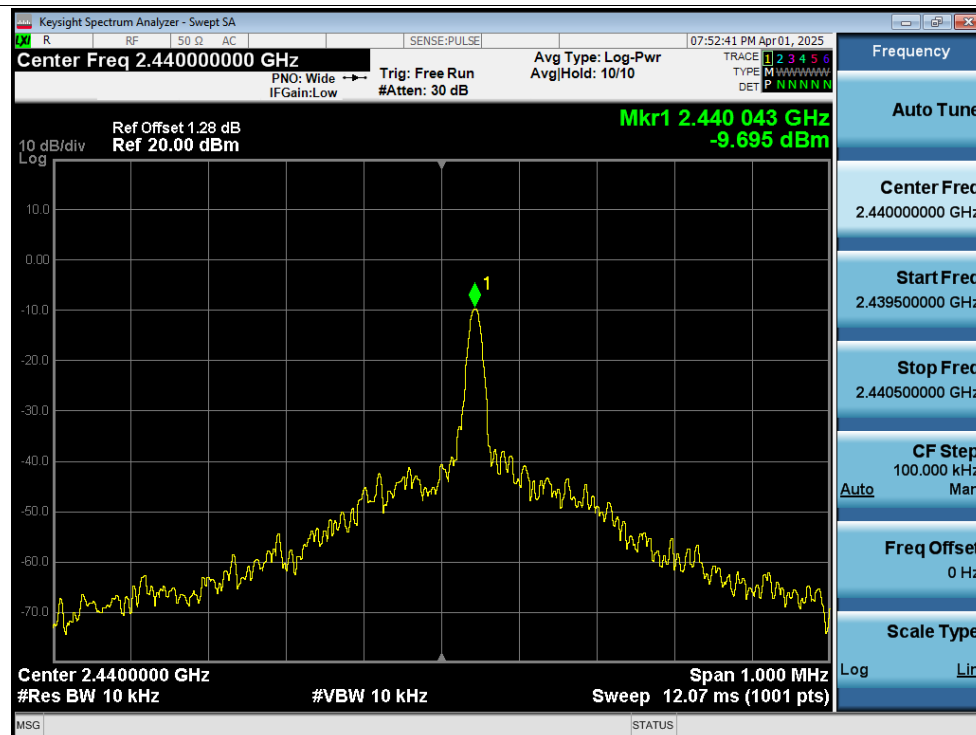
Condition	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	2402	Ant1	2402.042	42000	17.49	50	Pass
NVNT	2440	Ant1	2440.043	43000	17.62	50	Pass
NVNT	2480	Ant1	2480.044	44000	17.74	50	Pass

Test Graphs

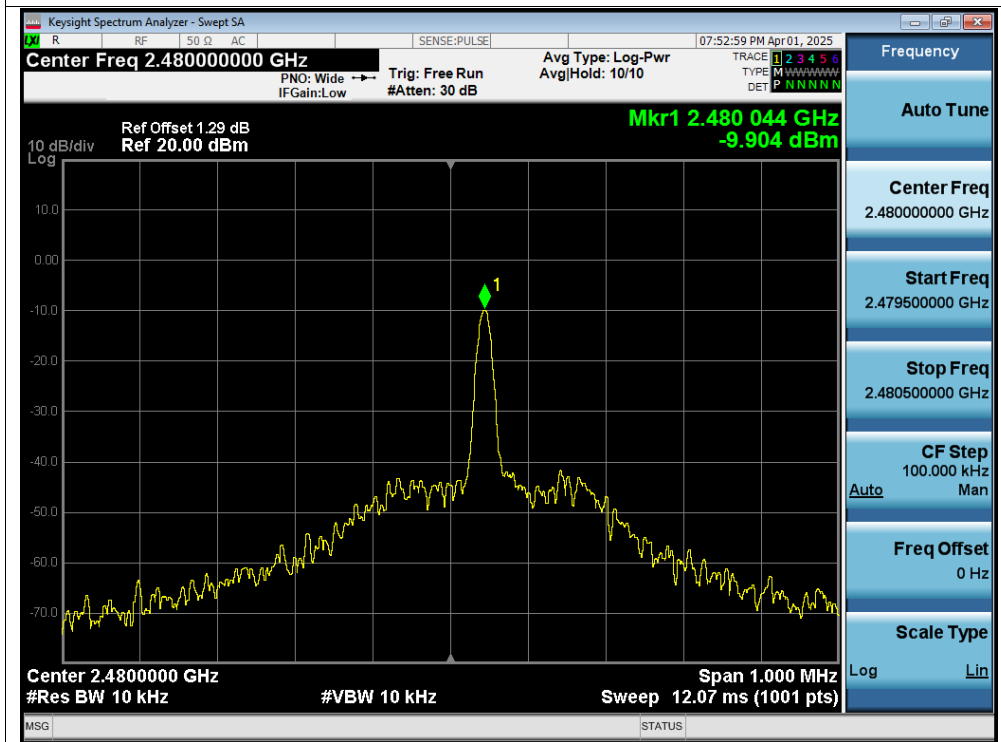
Freq. Error NVNT 2402MHz Ant1



Freq. Error NVNT 2440MHz Ant1



Freq. Error NVNT 2480MHz Ant1

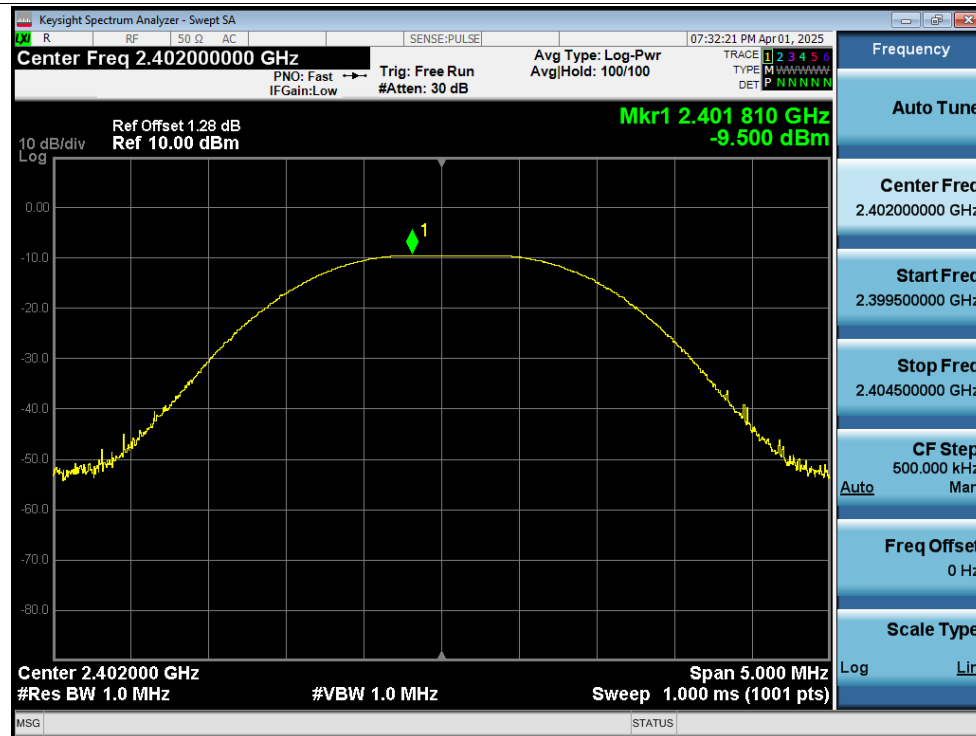


Antenna and EIRP Power

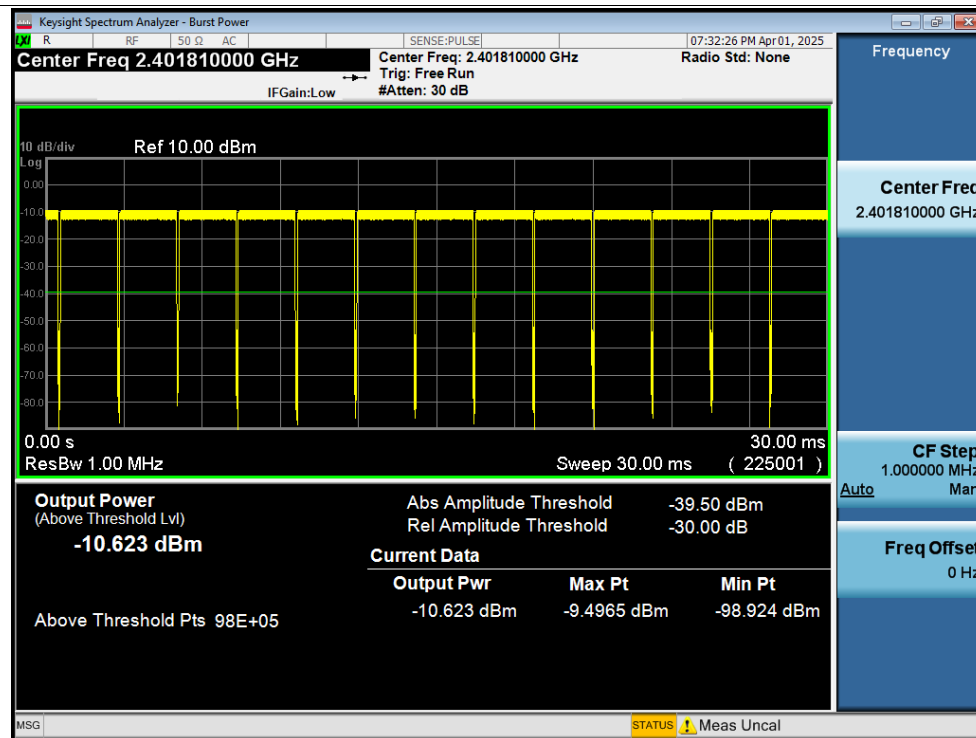
Condition	Mode	Frequency (MHz)	Antenna	Power (dBm)	Antenna Power (mW)	Limit (mW)	Declared Power (mW)	Tolerance (%)	Upper Limit (%)	Verdict
NVNT	BLE 1M	2402	Ant1	-10.62	0.087	10	0.1	-13	20	Pass
NVNT	BLE 1M	2440	Ant1	-10.74	0.084	10	0.1	-16	20	Pass
NVNT	BLE 1M	2480	Ant1	-11.23	0.075	10	0.1	-25	20	Pass
NVNT	BLE 2M	2402	Ant1	-12.54	0.056	10	0.1	-44	20	Pass
NVNT	BLE 2M	2440	Ant1	-12.73	0.053	10	0.1	-47	20	Pass
NVNT	BLE 2M	2480	Ant1	-11.47	0.071	10	0.1	-29	20	Pass

Test Graphs

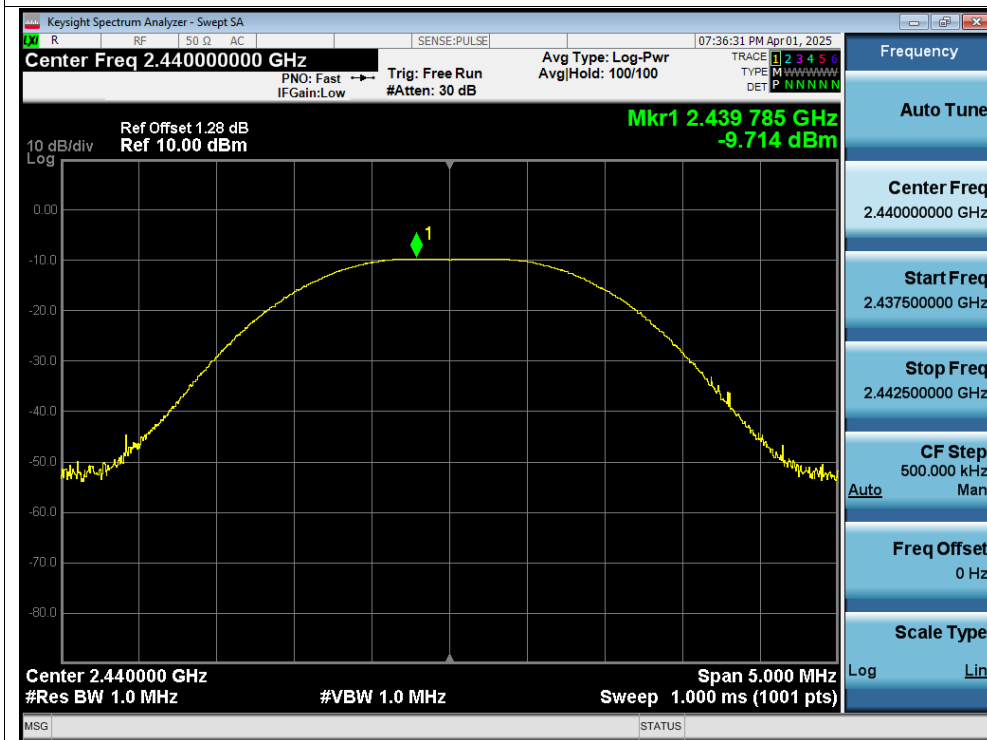
Power NVNT BLE 1M 2402MHz Ant1 Pre Scan



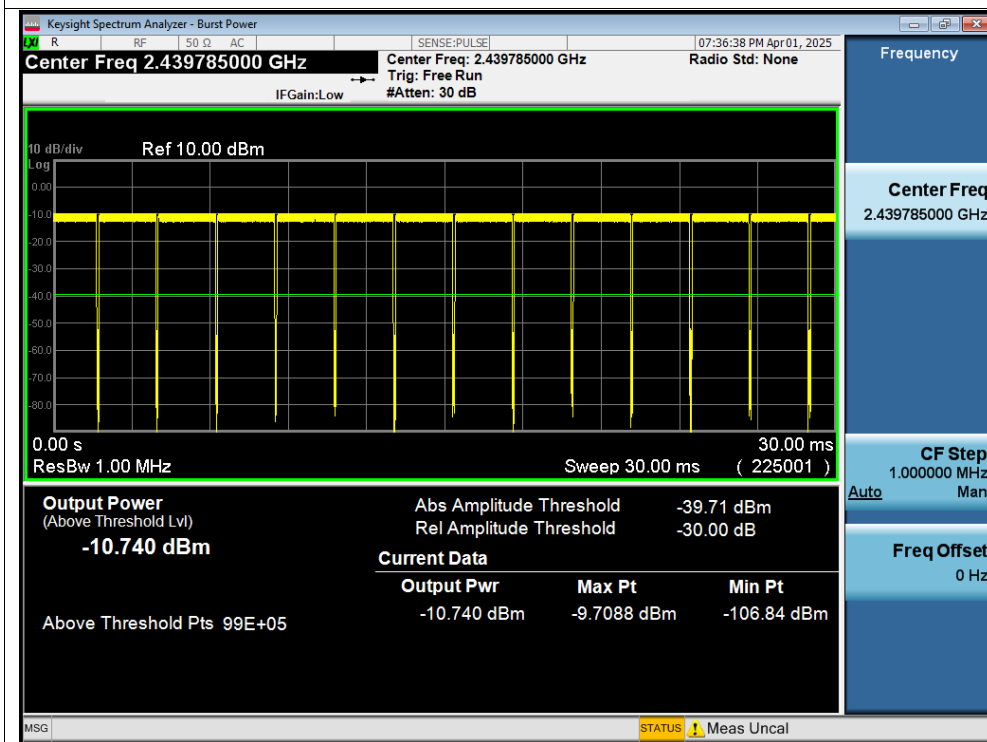
Power NVNT BLE 1M 2402MHz Ant1 Zero Span



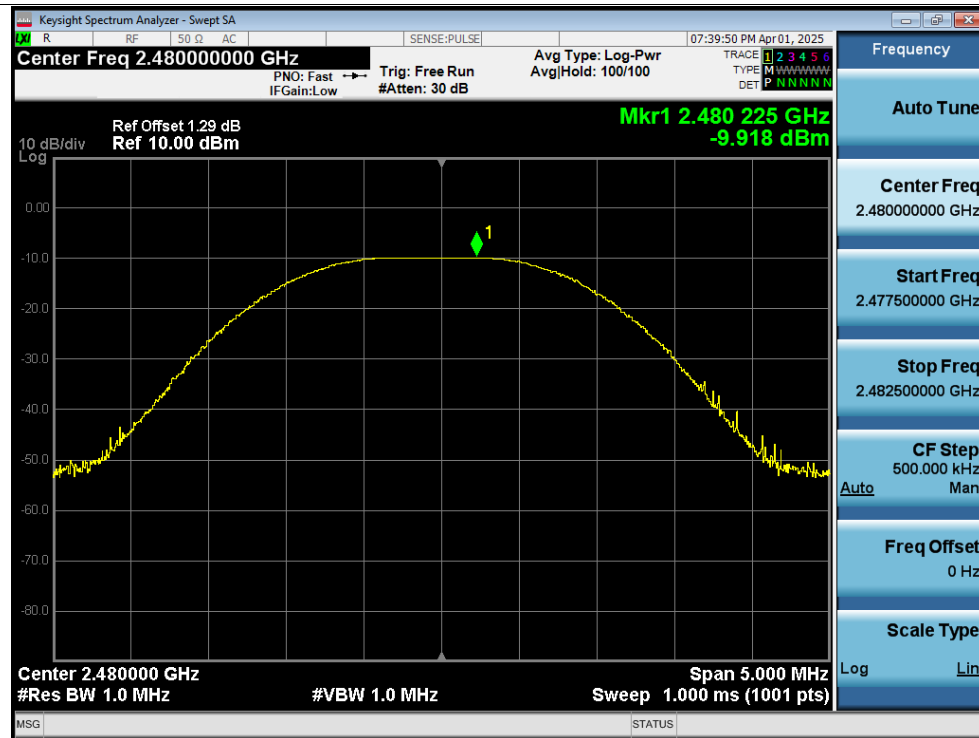
Power NVNT BLE 1M 2440MHz Ant1 Pre Scan



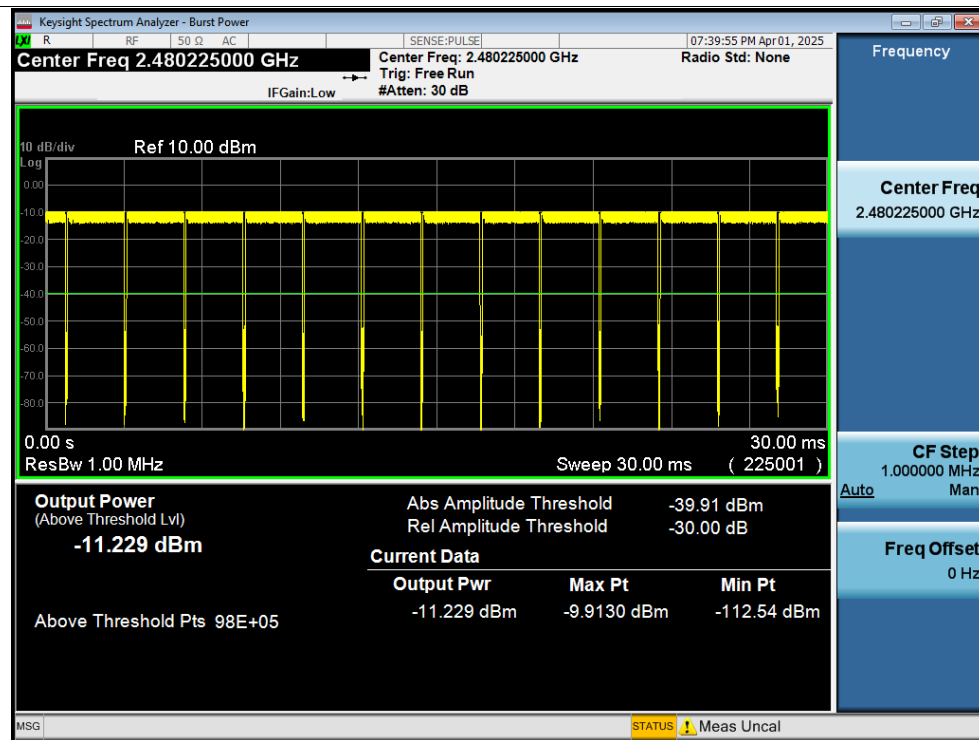
Power NVNT BLE 1M 2440MHz Ant1 Zero Span



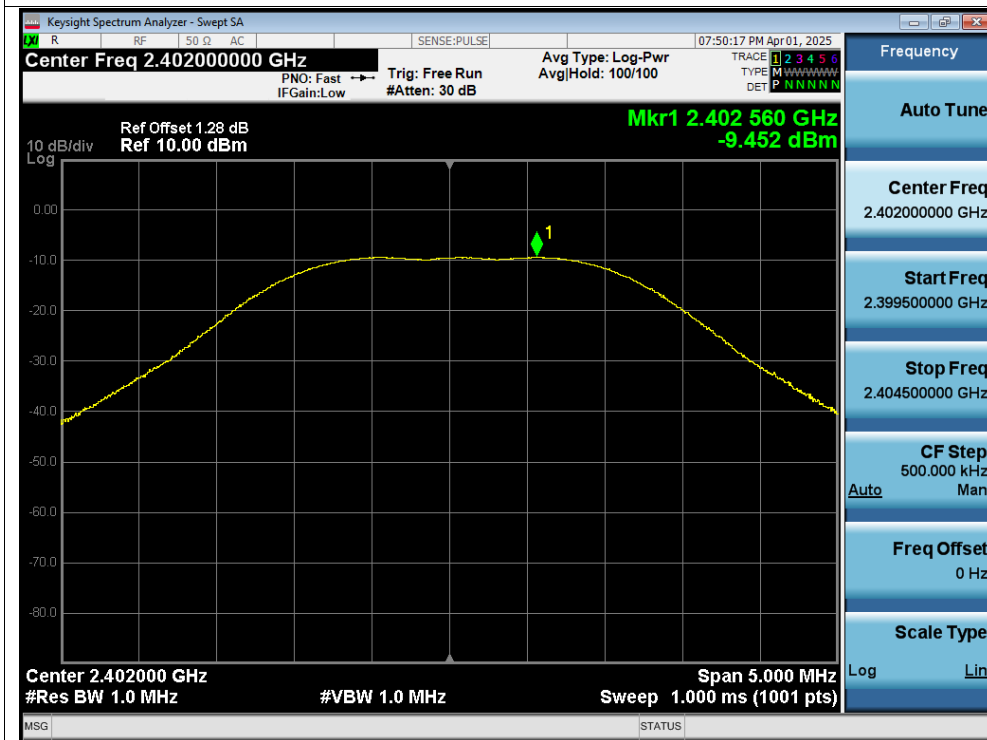
Power NVNT BLE 1M 2480MHz Ant1 Pre Scan



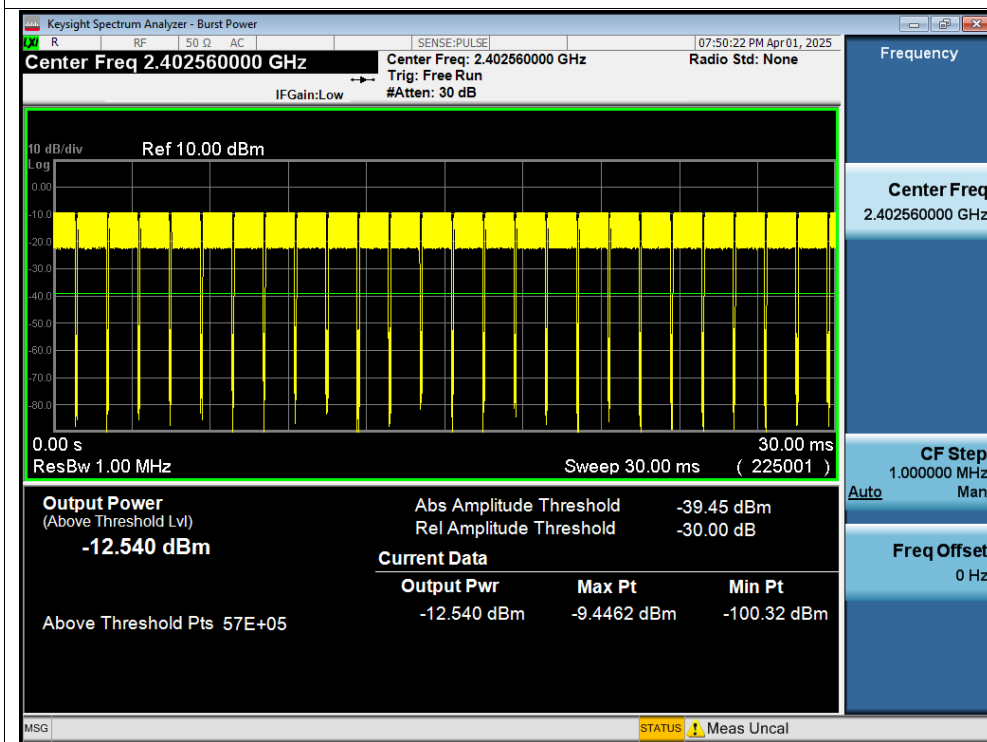
Power NVNT BLE 1M 2480MHz Ant1 Zero Span



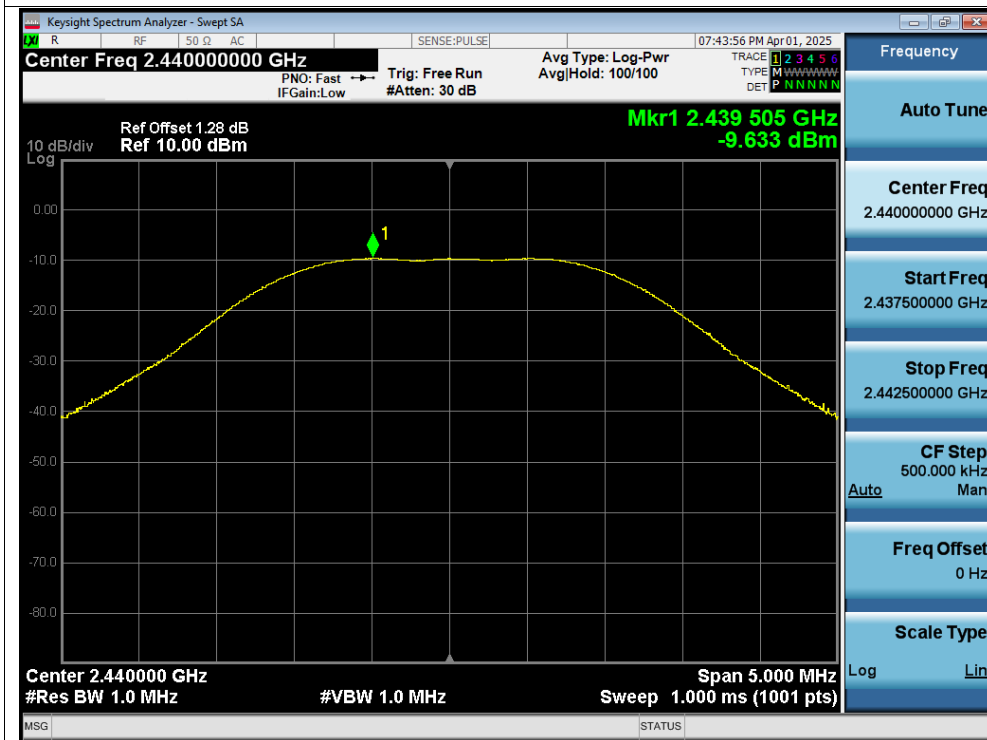
Power NVNT BLE 2M 2402MHz Ant1 Pre Scan



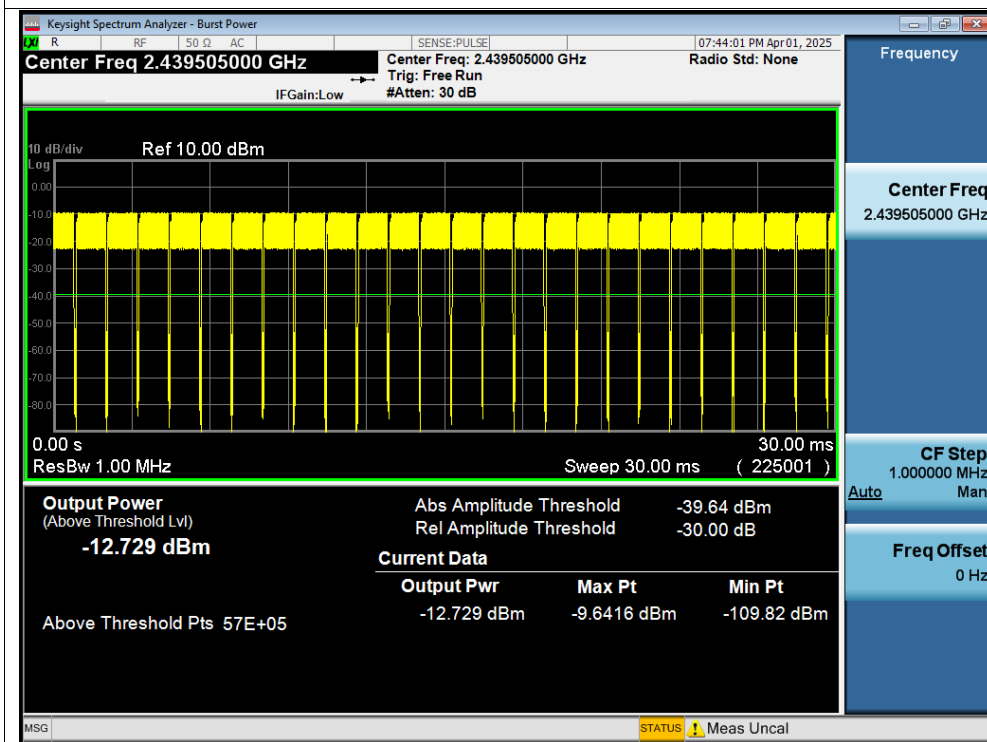
Power NVNT BLE 2M 2402MHz Ant1 Zero Span



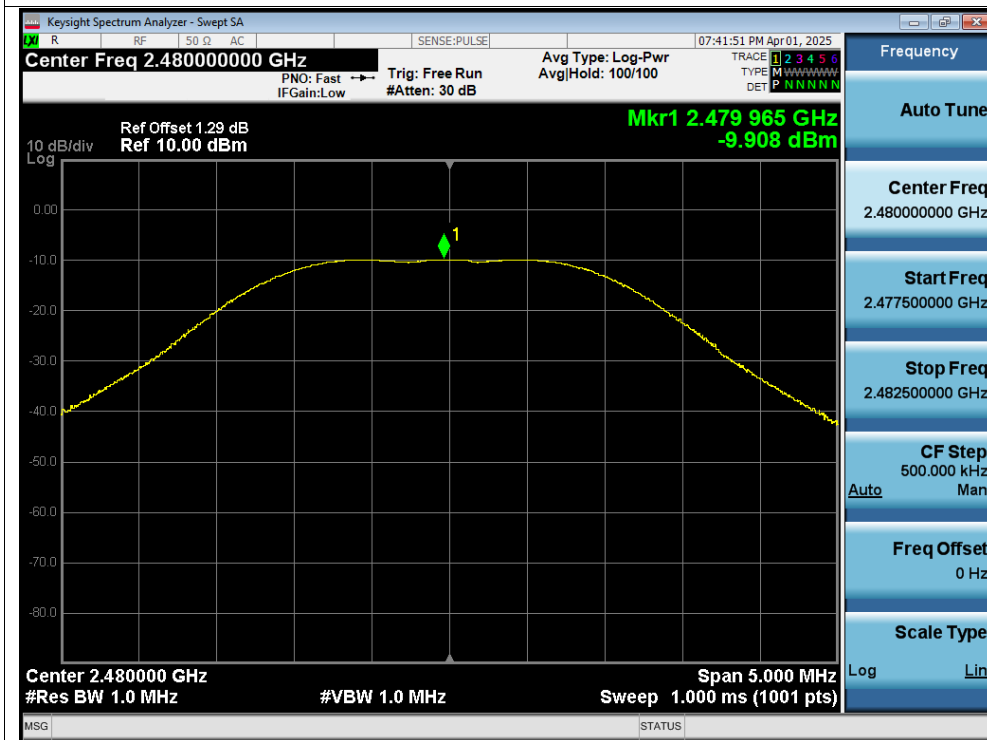
Power NVNT BLE 2M 2440MHz Ant1 Pre Scan



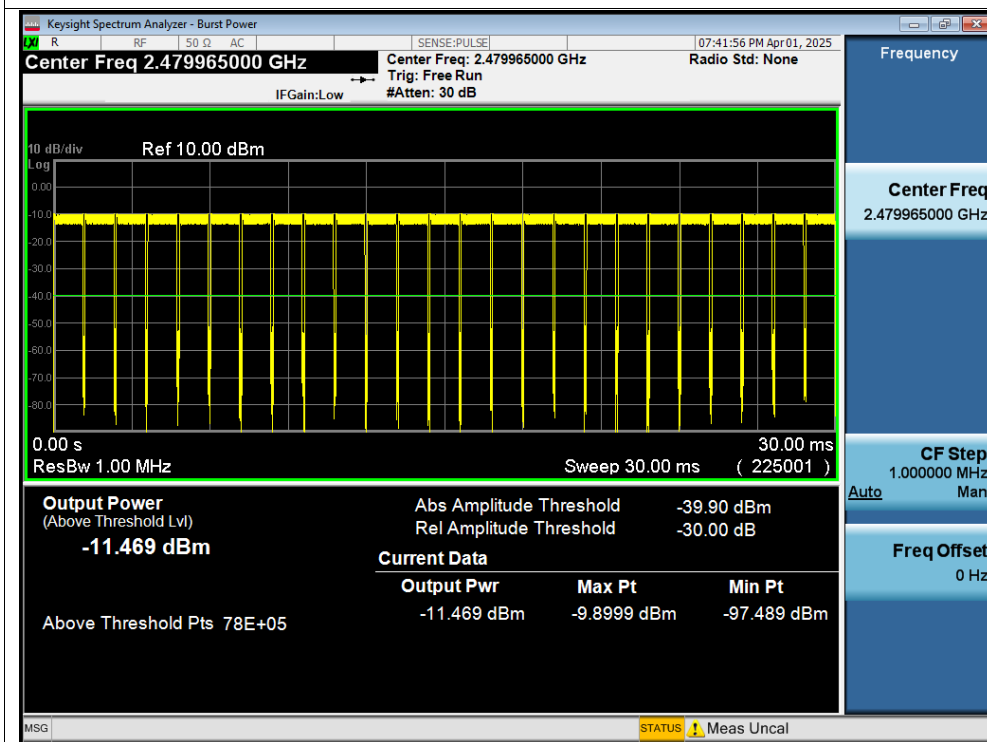
Power NVNT BLE 2M 2440MHz Ant1 Zero Span



Power NVNT BLE 2M 2480MHz Ant1 Pre Scan



Power NVNT BLE 2M 2480MHz Ant1 Zero Span



EIRP Power

Condition	Mode	Frequency (MHz)	Antenna	Antenna Power (mW)	Gain (dBi)	EIRP Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	0.087	2.67	-7.96	12.14	Pass
NVNT	BLE 1M	2440	Ant1	0.084	2.67	-8.07	12.14	Pass
NVNT	BLE 1M	2480	Ant1	0.075	2.67	-8.57	12.14	Pass
NVNT	BLE 2M	2402	Ant1	0.056	2.67	-9.87	12.14	Pass
NVNT	BLE 2M	2440	Ant1	0.053	2.67	-10.04	12.14	Pass
NVNT	BLE 2M	2480	Ant1	0.071	2.67	-8.79	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	1.217	N/A	26	Pass
NVNT	BLE 1M	2440	Ant1	1.217	N/A	26	Pass
NVNT	BLE 1M	2480	Ant1	1.24	N/A	26	Pass
NVNT	BLE 2M	2402	Ant1	2.098	N/A	26	Pass
NVNT	BLE 2M	2440	Ant1	2.105	N/A	26	Pass
NVNT	BLE 2M	2480	Ant1	2.117	N/A	26	Pass

Test Graphs

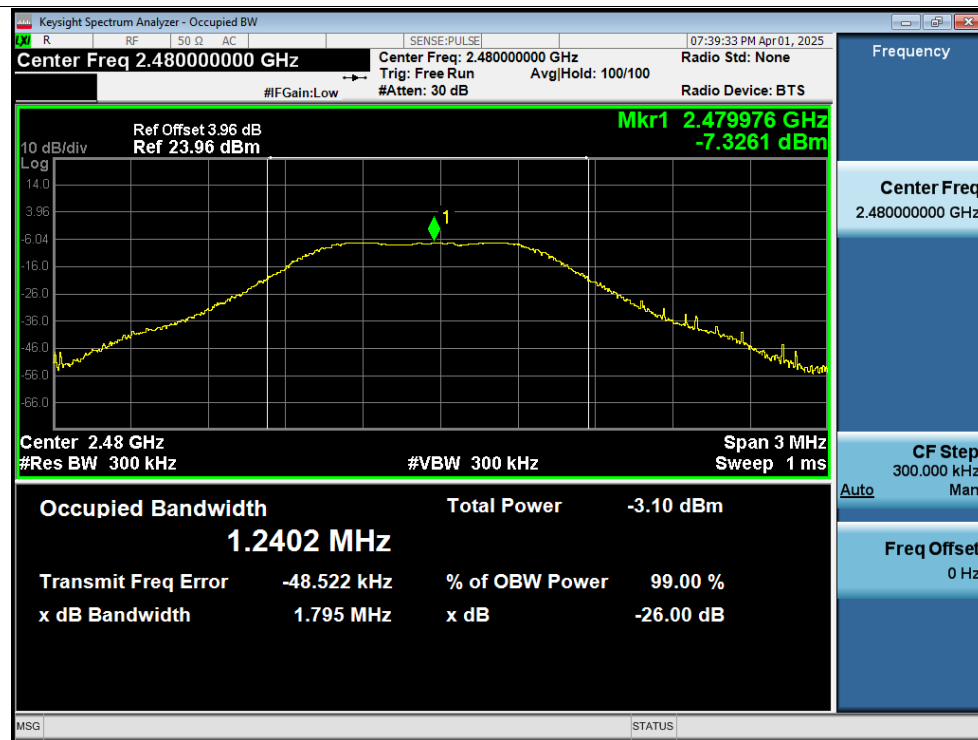
OBW NVNT BLE 1M 2402MHz Ant1



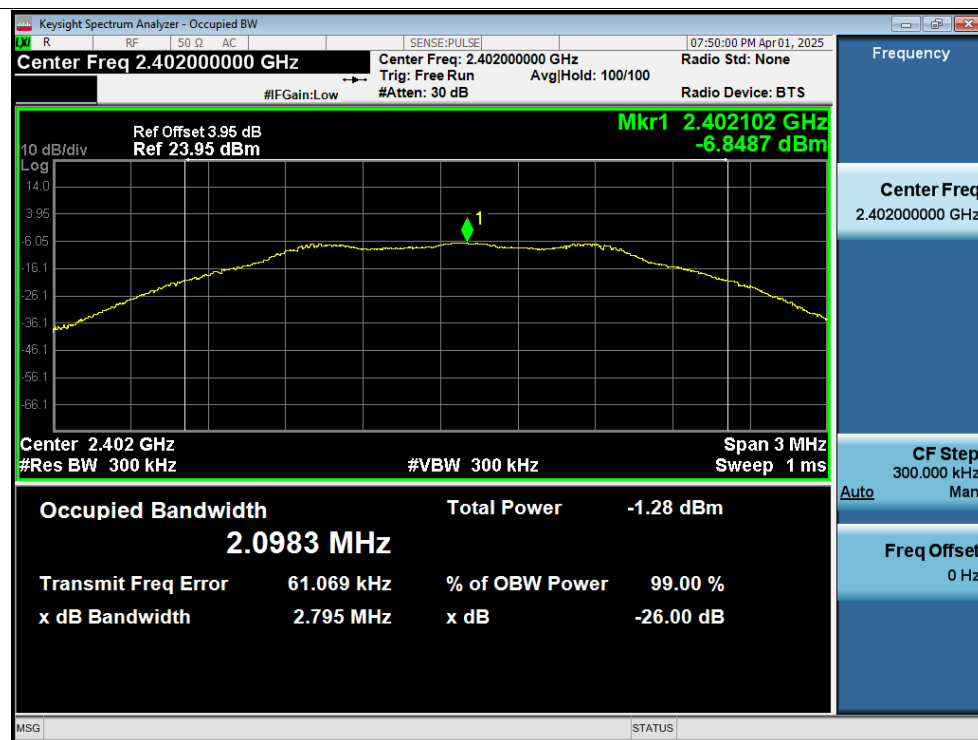
OBW NVNT BLE 1M 2440MHz Ant1



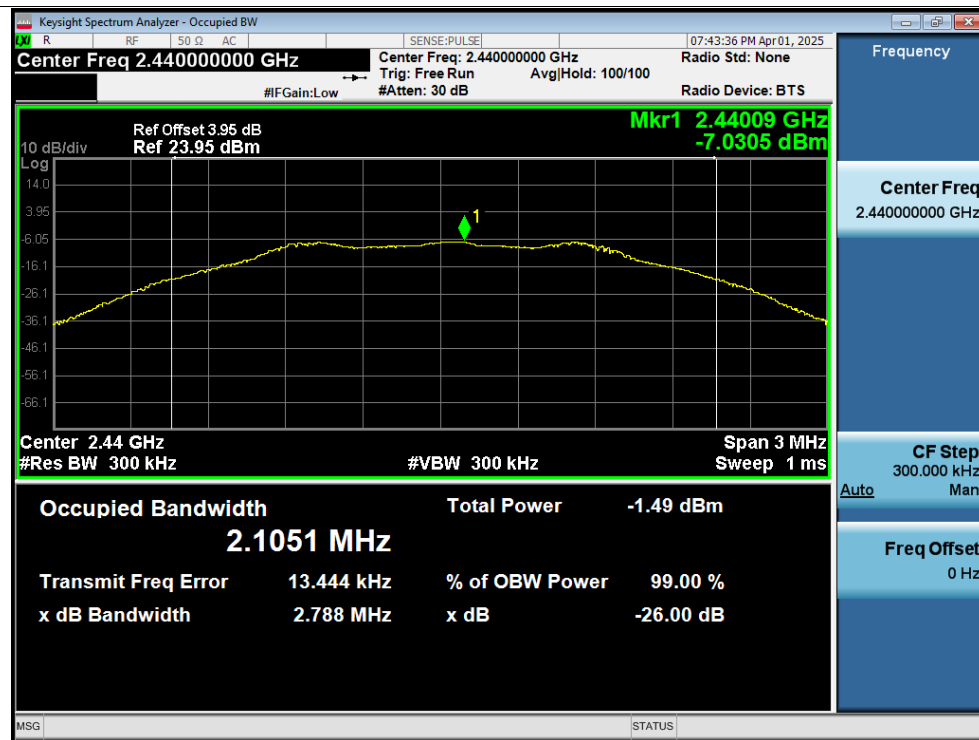
OBW NVNT BLE 1M 2480MHz Ant1



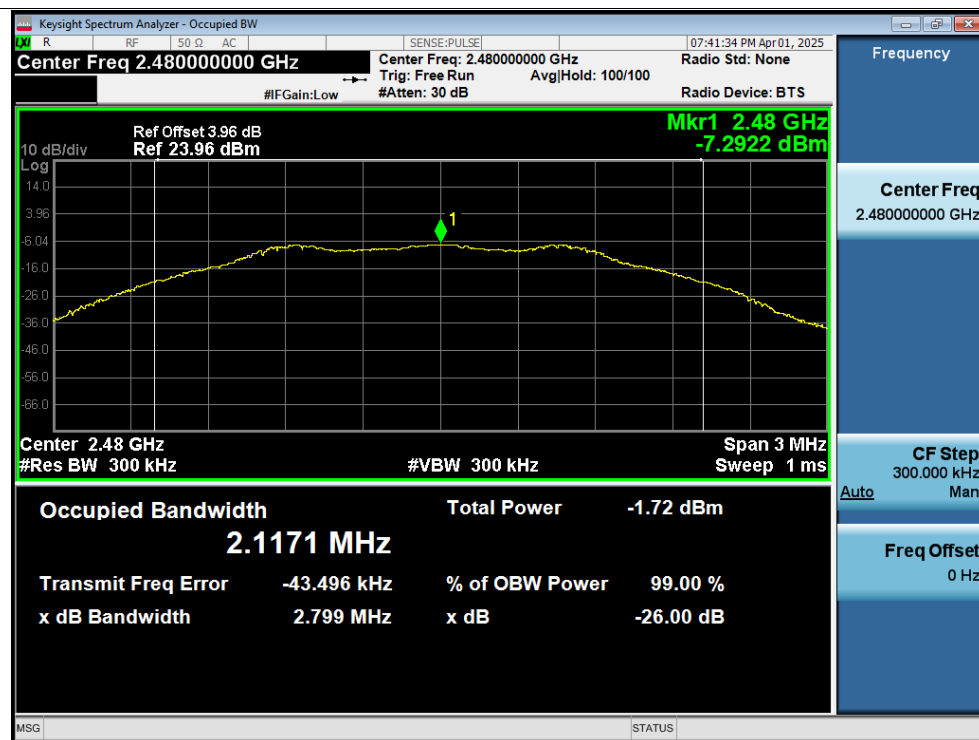
OBW NVNT BLE 2M 2402MHz Ant1



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	0.844
NVNT	BLE 1M	2440	Ant1	0.846
NVNT	BLE 1M	2480	Ant1	0.868
NVNT	BLE 2M	2402	Ant1	1.371
NVNT	BLE 2M	2440	Ant1	1.378
NVNT	BLE 2M	2480	Ant1	1.392

Test Graphs

Spreading Bandwidth NVNT BLE 1M 2402MHz Ant1



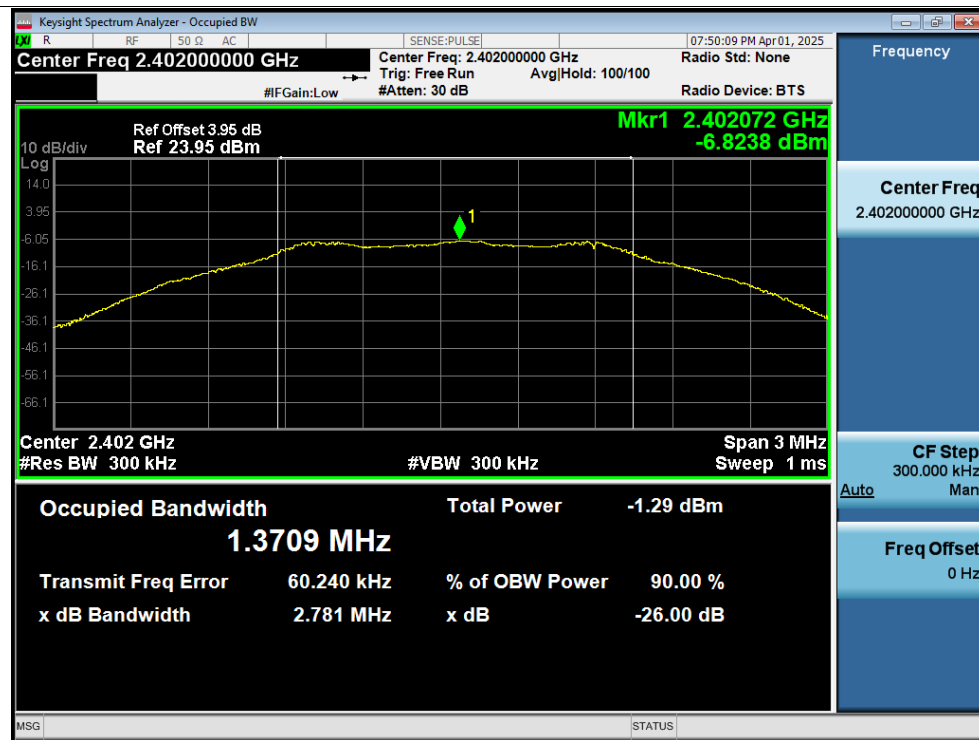
Spreading Bandwidth NVNT BLE 1M 2440MHz Ant1



Spreading Bandwidth NVNT BLE 1M 2480MHz Ant1



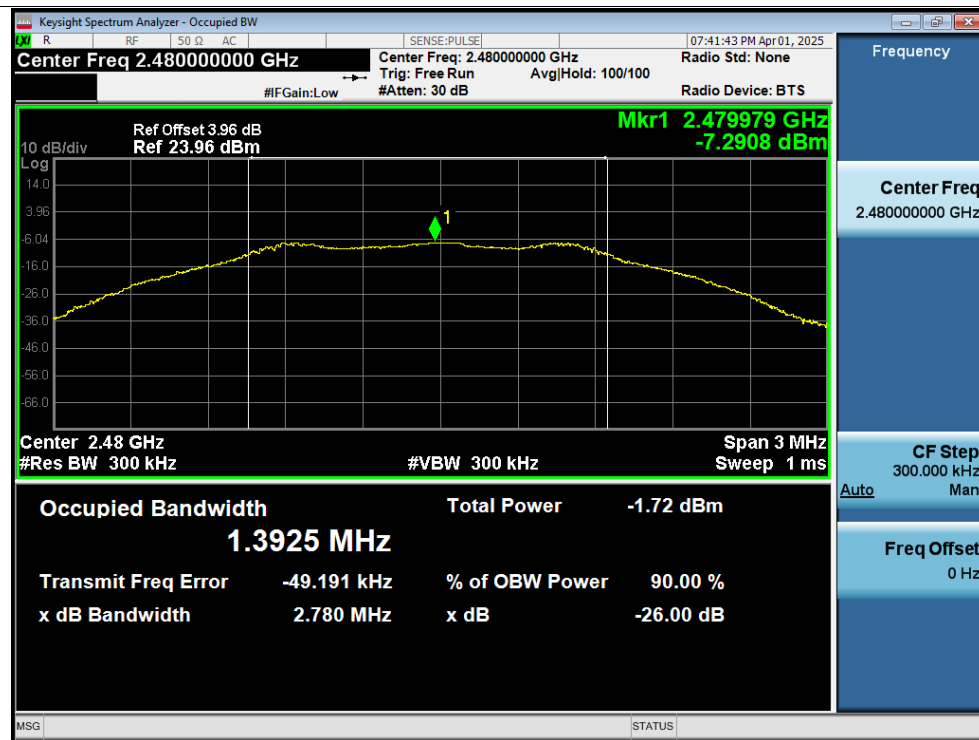
Spreading Bandwidth NVNT BLE 2M 2402MHz Ant1



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 Value (dBm/100kHz)	Limit Start(dBm/100kHz)	Limit Stop (dBm/100kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	30-1000	709	-66.92	-36	-36	Pass
NVNT	BLE 1M	2440	Ant1	30-1000	787.57	-66.85	-36	-36	Pass
NVNT	BLE 1M	2480	Ant1	30-1000	970.9	-67.47	-36	-36	Pass
NVNT	BLE 2M	2402	Ant1	30-1000	799.21	-67.44	-36	-36	Pass
NVNT	BLE 2M	2440	Ant1	30-1000	822.49	-67.48	-36	-36	Pass
NVNT	BLE 2M	2480	Ant1	30-1000	893.3	-67.86	-36	-36	Pass

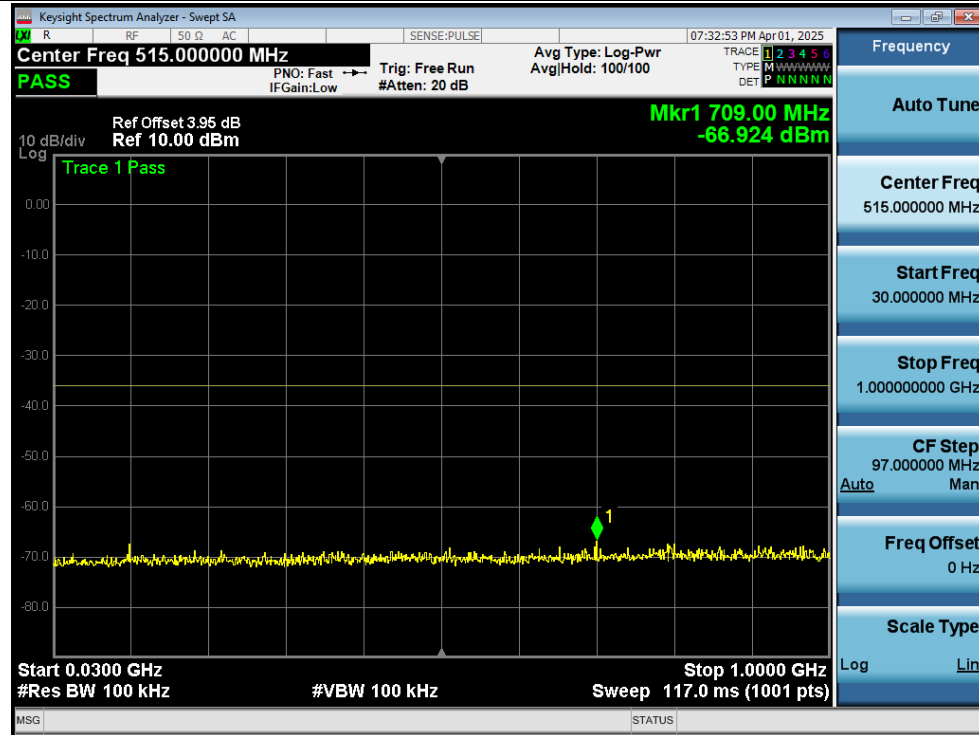
Tx Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm/MHz)	Limit Start(dBm/MHz)	Limit Stop (dBm/MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	1000-2387	2339.84	-52.59	-26	-26	Pass
NVNT	BLE 1M	2402	Ant1	2387-2400	2399.97	-42.95	-16	-16	Pass
NVNT	BLE 1M	2402	Ant1	2483.5-2496.5	2489.42	-55.97	-16	-16	Pass
NVNT	BLE 1M	2402	Ant1	2496.5-13000	7202.07	-28.42	-26	-26	Pass
NVNT	BLE 1M	2440	Ant1	1000-2387	2375.9	-51.75	-26	-26	Pass
NVNT	BLE 1M	2440	Ant1	2387-2400	2391.94	-54.18	-16	-16	Pass
NVNT	BLE 1M	2440	Ant1	2483.5-2496.5	2488.26	-51.94	-16	-16	Pass
NVNT	BLE 1M	2440	Ant1	2496.5-13000	7317.61	-31.57	-26	-26	Pass
NVNT	BLE 1M	2480	Ant1	1000-2387	2371.74	-56.54	-26	-26	Pass
NVNT	BLE 1M	2480	Ant1	2387-2400	2399.95	-56.89	-16	-16	Pass
NVNT	BLE 1M	2480	Ant1	2483.5-2496.5	2485.9	-56.29	-16	-16	Pass
NVNT	BLE 1M	2480	Ant1	2496.5-13000	7443.65	-34.08	-26	-26	Pass
NVNT	BLE 2M	2402	Ant1	1000-2387	2338.46	-51.98	-26	-26	Pass
NVNT	BLE 2M	2402	Ant1	2387-2400	2400	-31.15	-16	-16	Pass
NVNT	BLE 2M	2402	Ant1	2483.5-2496.5	2488.56	-56.31	-16	-16	Pass
NVNT	BLE 2M	2402	Ant1	2496.5-13000	7202.07	-28.37	-26	-26	Pass
NVNT	BLE 2M	2440	Ant1	1000-2387	2377.29	-51.33	-26	-26	Pass
NVNT	BLE 2M	2440	Ant1	2387-2400	2392.07	-54.11	-16	-16	Pass
NVNT	BLE 2M	2440	Ant1	2483.5-2496.5	2488.05	-51.14	-16	-16	Pass

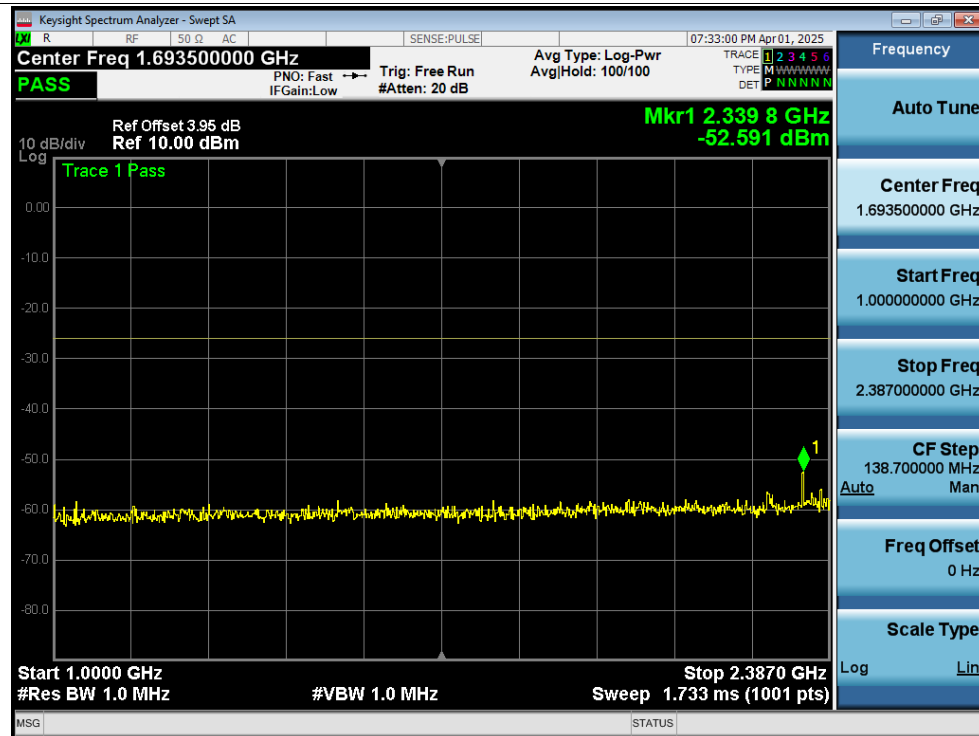
NVNT	BLE 2M	2440	Ant1	2496.5-13000	7317.61	-31.71	-26	-26	Pass
NVNT	BLE 2M	2480	Ant1	1000-2387	2134.57	-56.49	-26	-26	Pass
NVNT	BLE 2M	2480	Ant1	2387-2400	2399.75	-56.77	-16	-16	Pass
NVNT	BLE 2M	2480	Ant1	2483.5-2496.5	2484.44	-55.1	-16	-16	Pass
NVNT	BLE 2M	2480	Ant1	2496.5-13000	7443.65	-34.3	-26	-26	Pass

Test Graphs

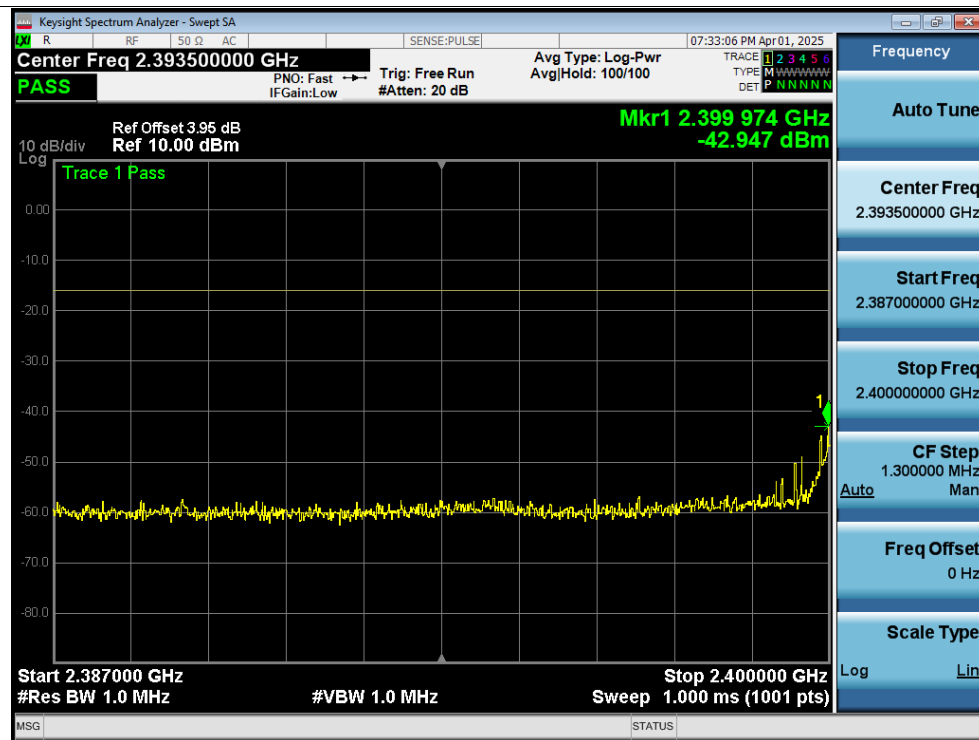
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 30MHz-1000MHz



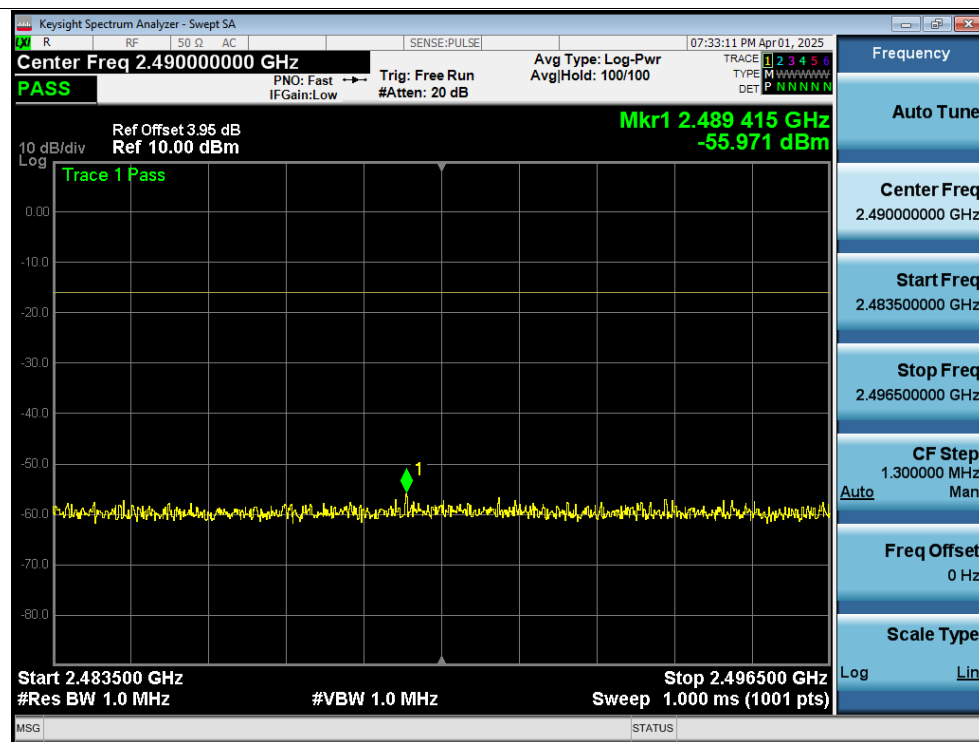
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 1000MHz-2387MHz



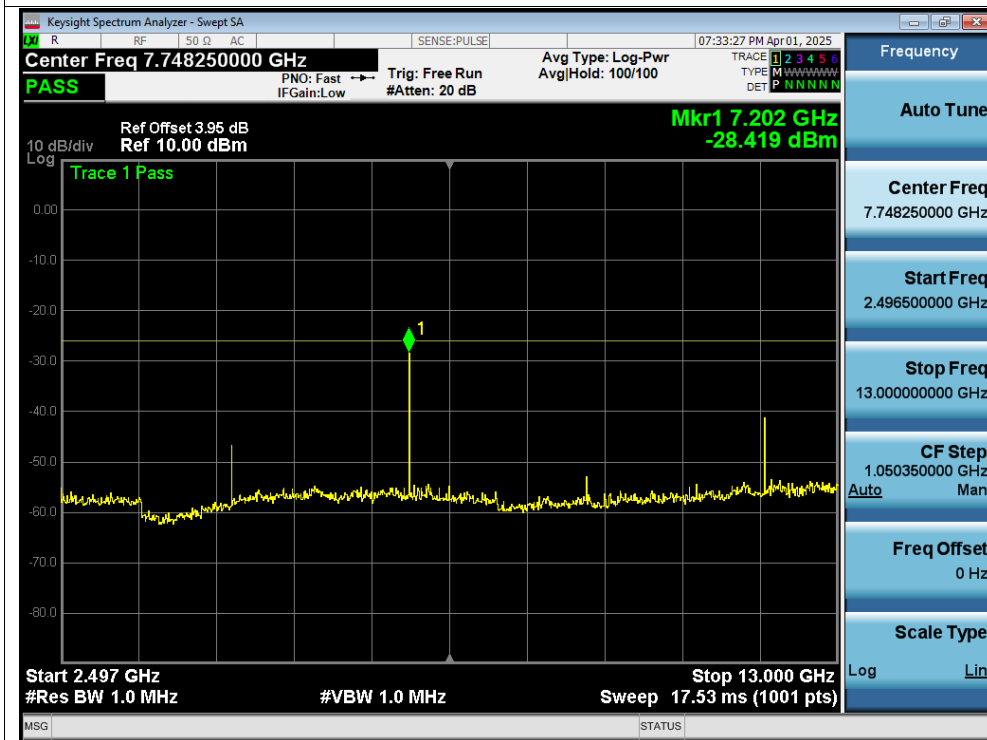
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 2387MHz-2400MHz



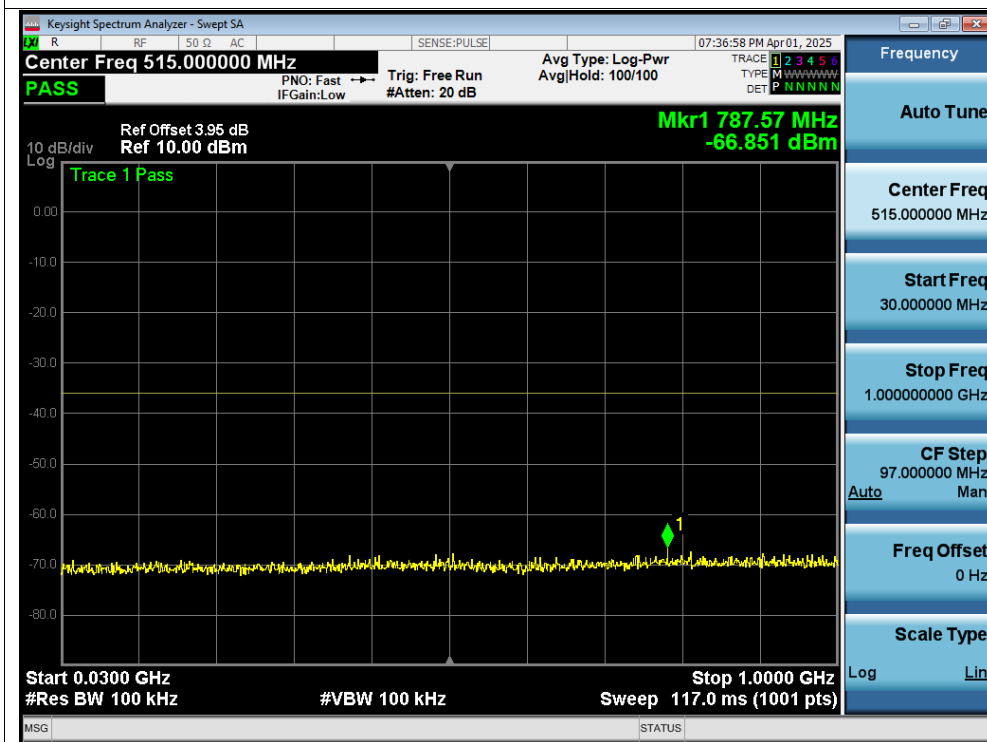
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 2483.5MHz-2496.5MHz



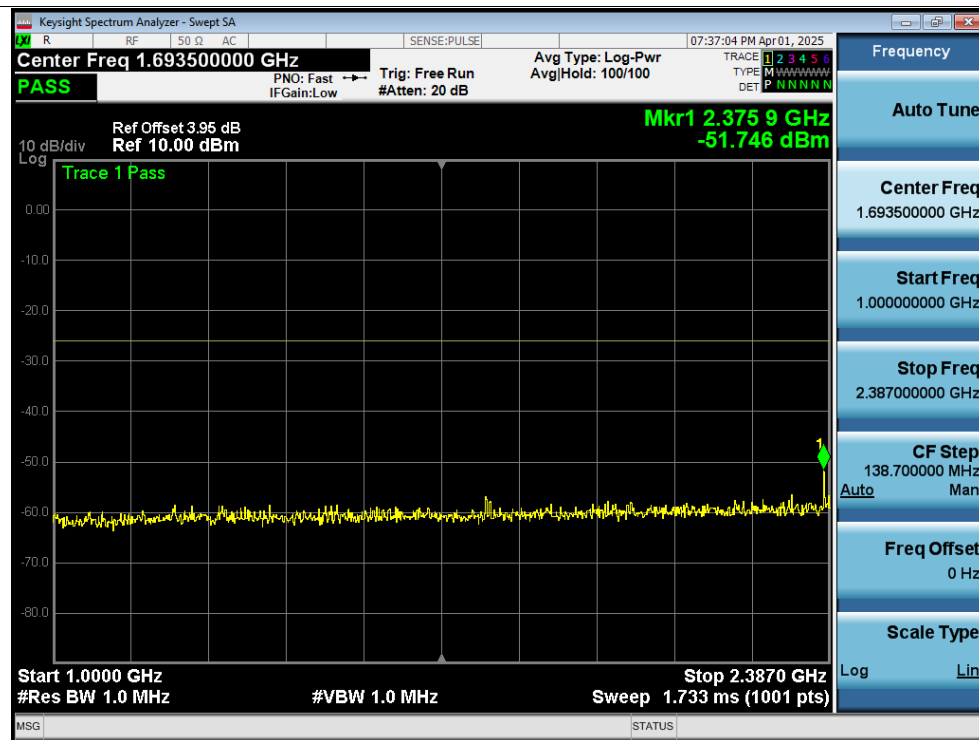
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 2496.5MHz-13000MHz



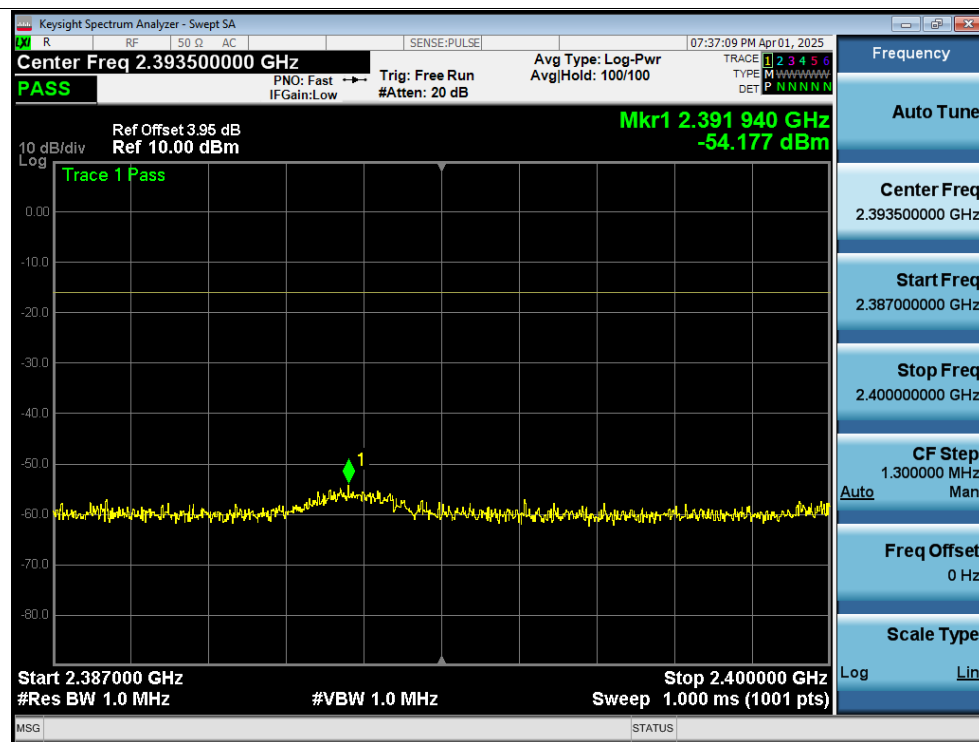
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 30MHz-1000MHz



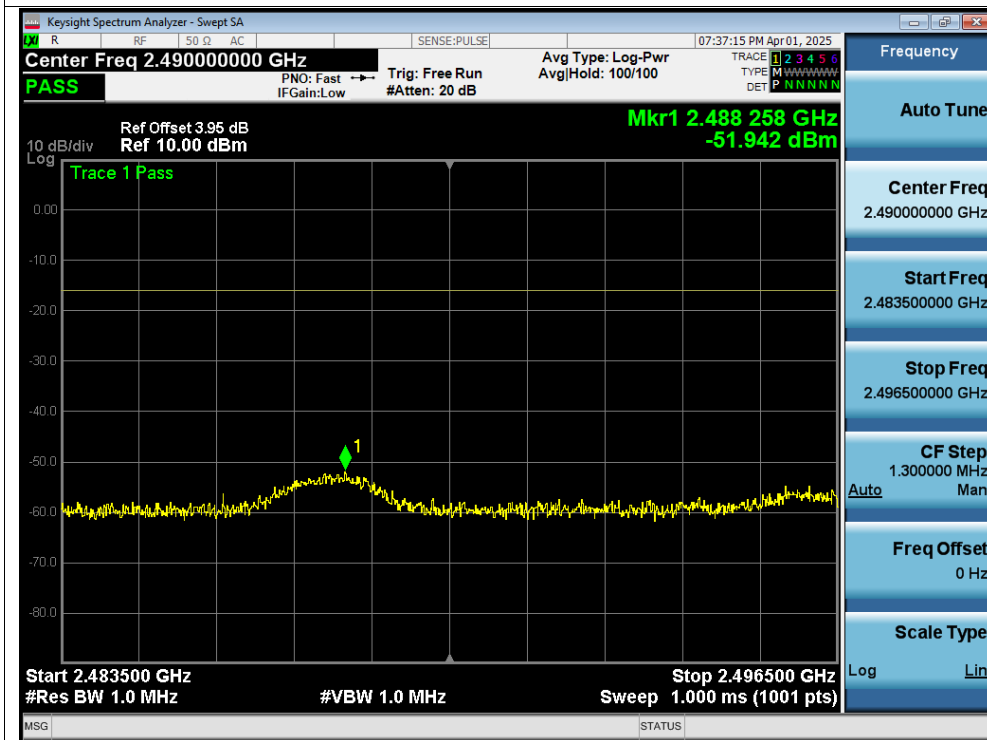
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 1000MHz-2387MHz



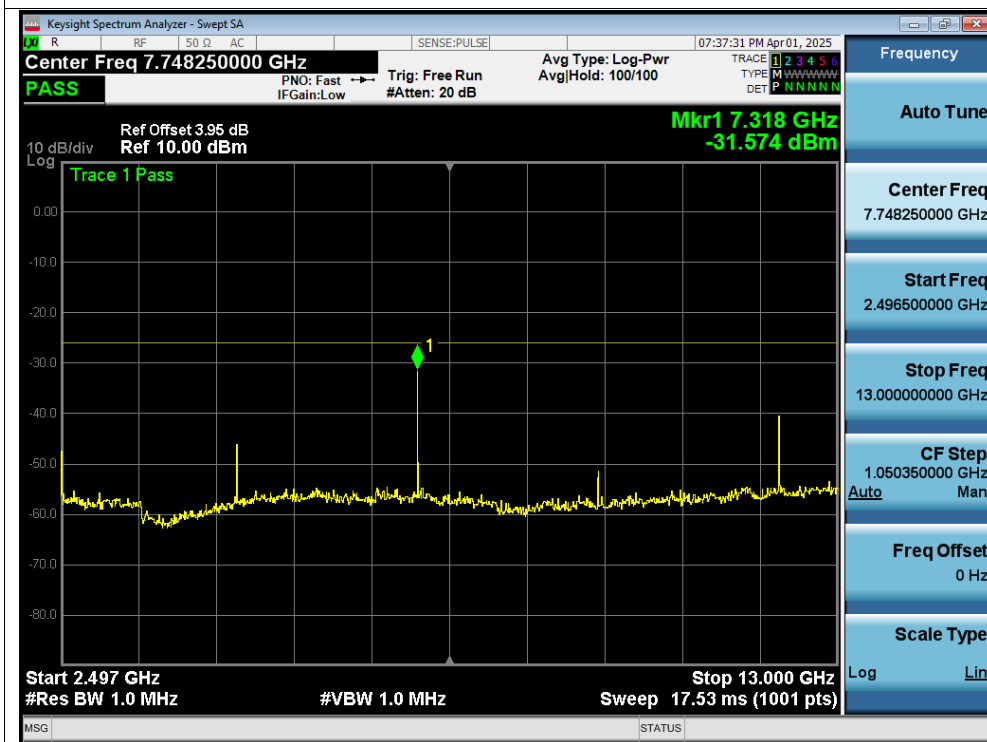
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 2387MHz-2400MHz



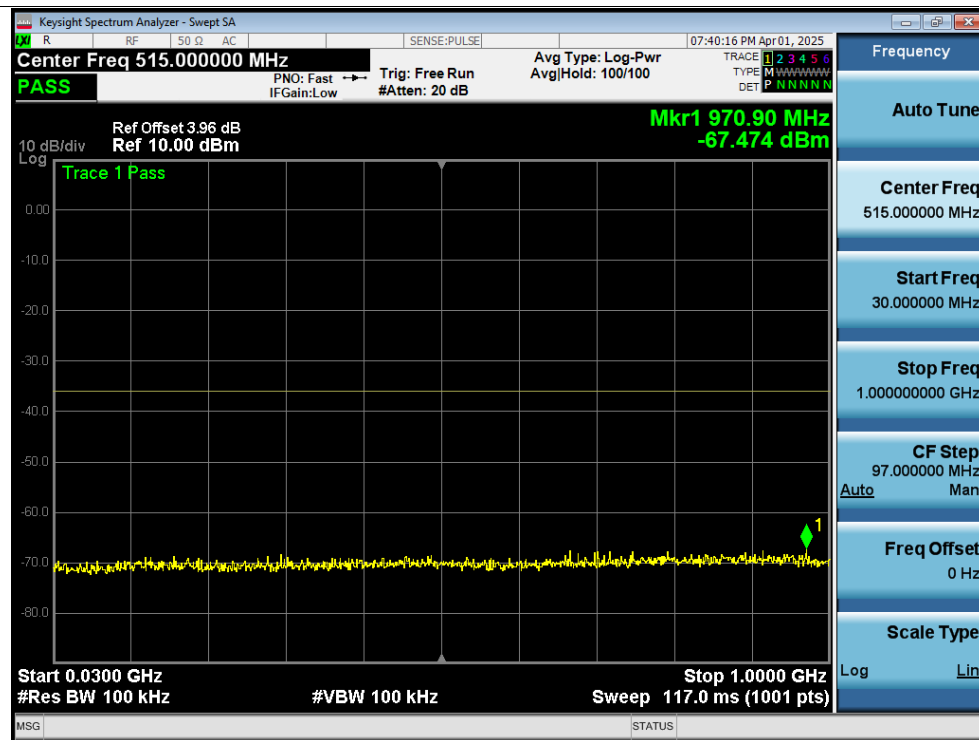
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 2483.5MHz-2496.5MHz



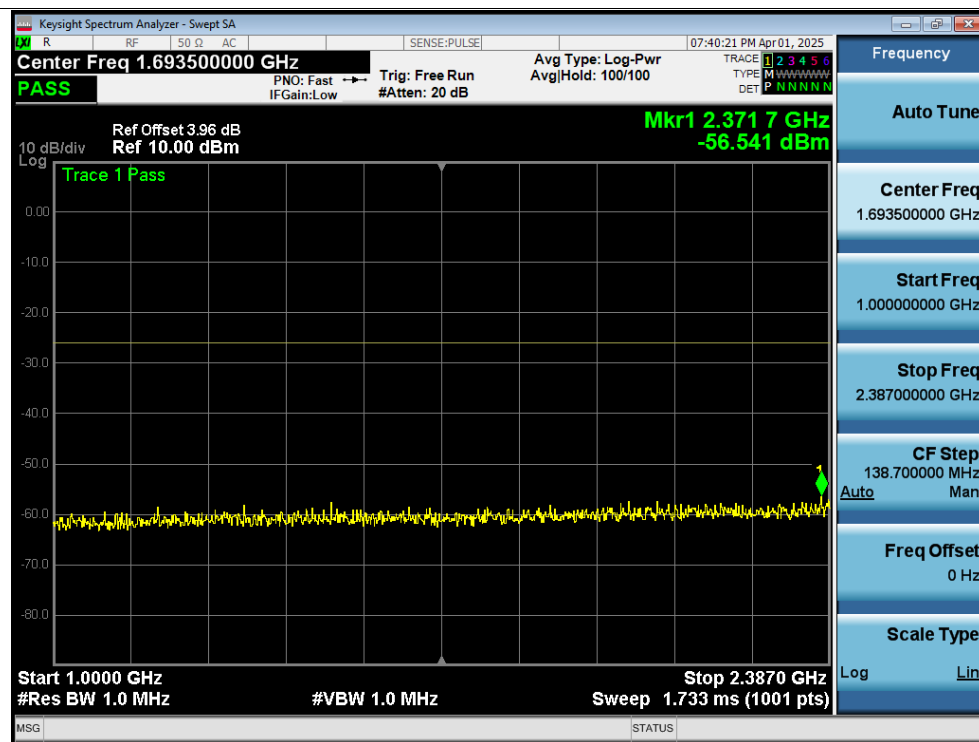
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 2496.5MHz-13000MHz



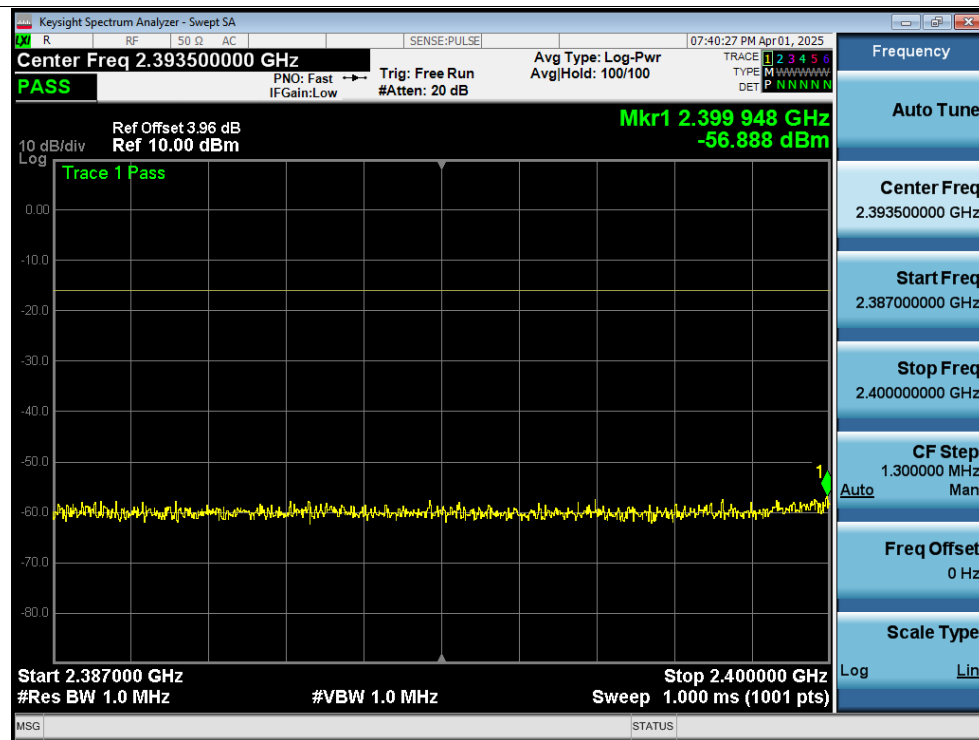
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 30MHz-1000MHz



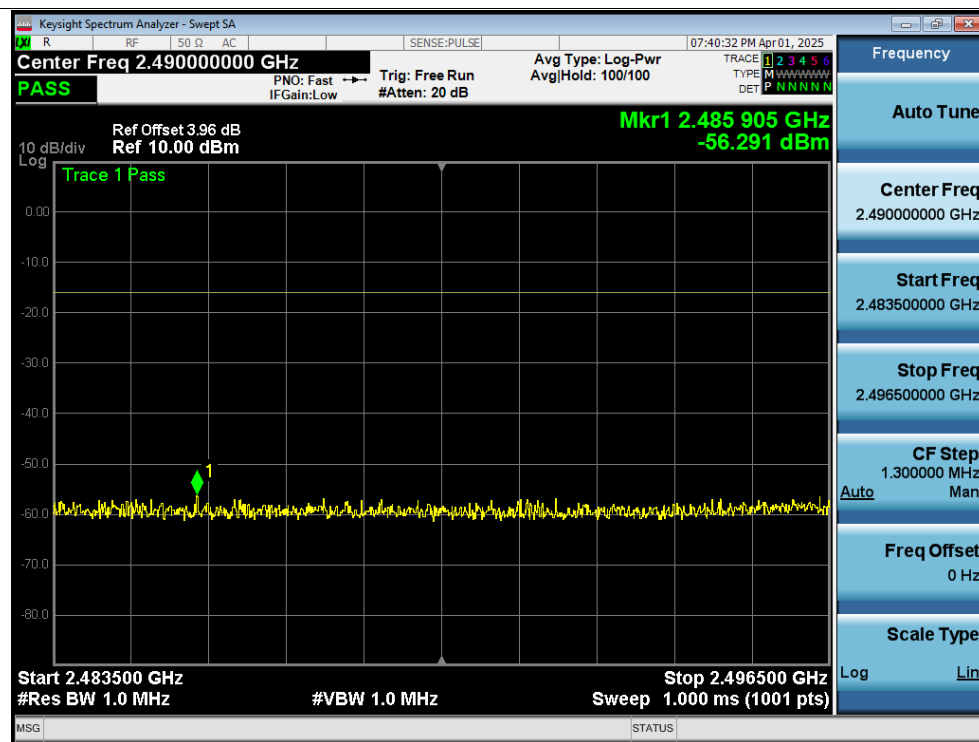
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 1000MHz-2387MHz



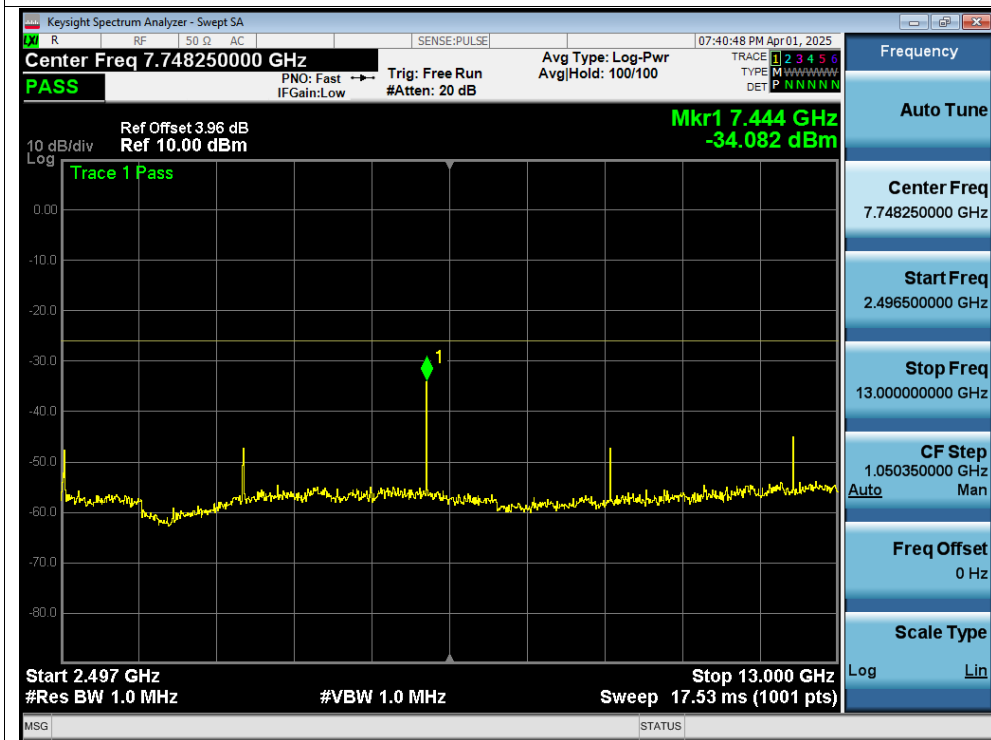
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 2387MHz-2400MHz



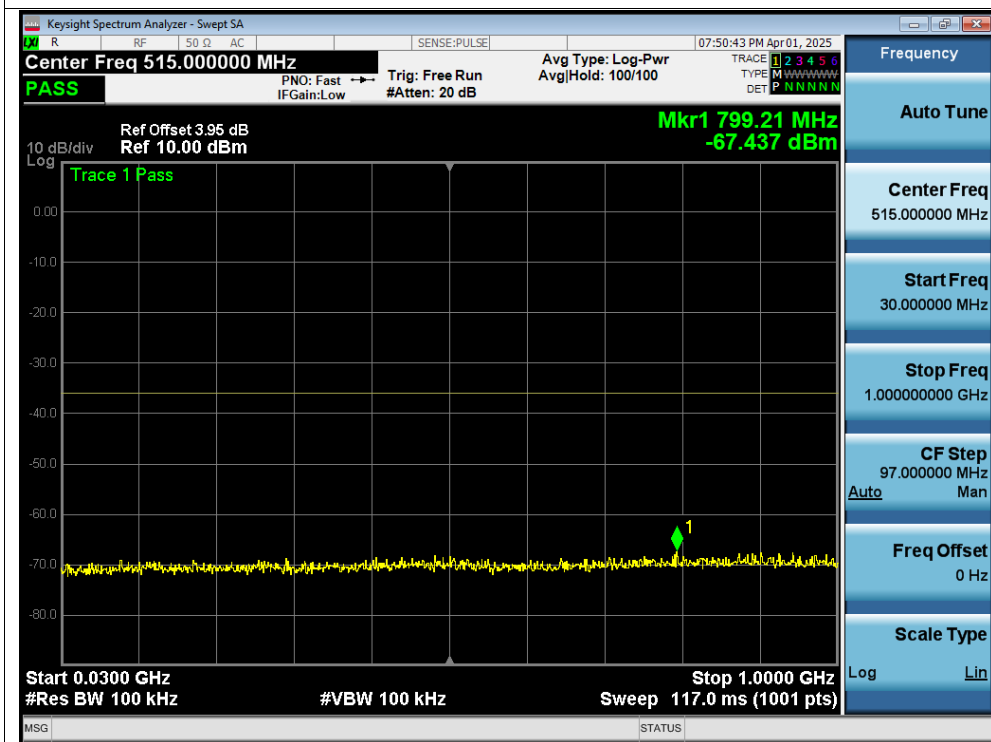
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 2483.5MHz-2496.5MHz



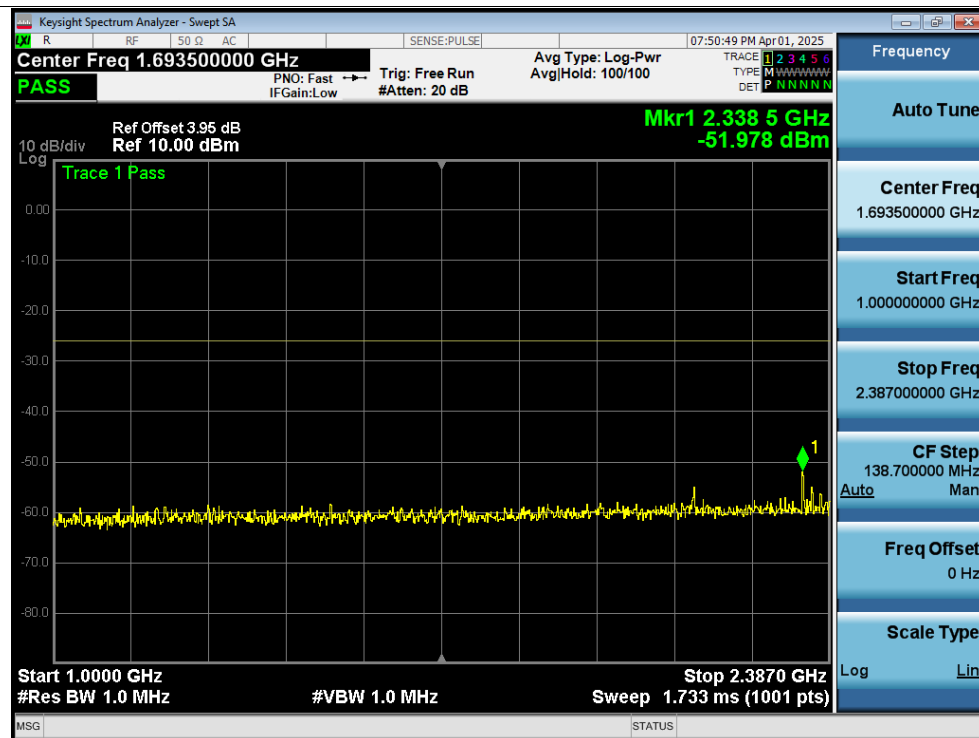
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 2496.5MHz-13000MHz



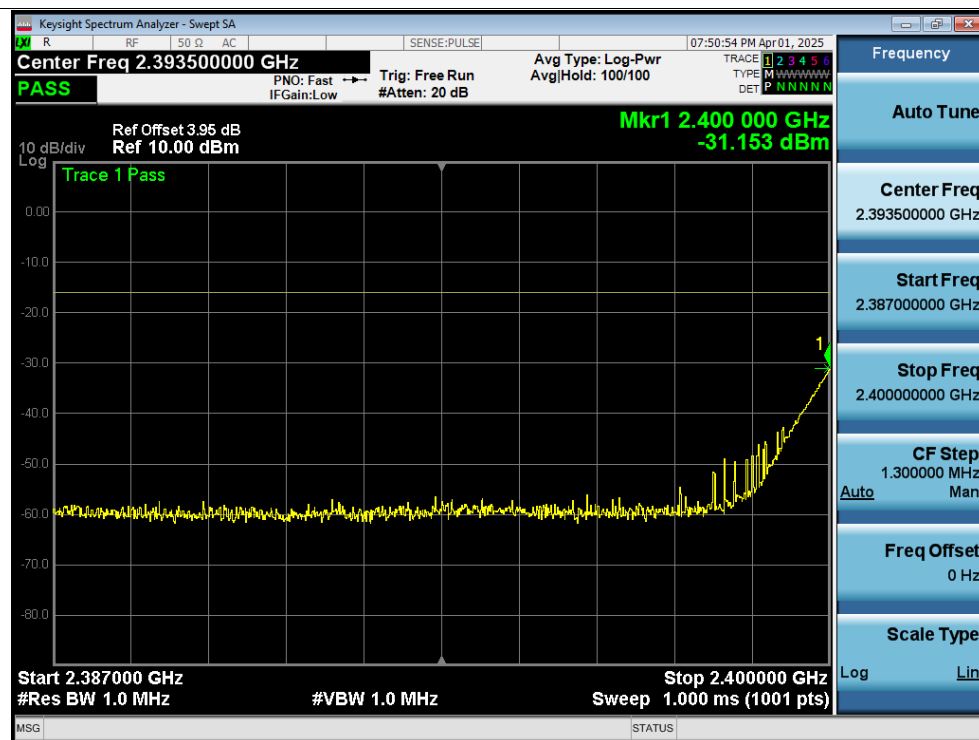
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 30MHz-1000MHz



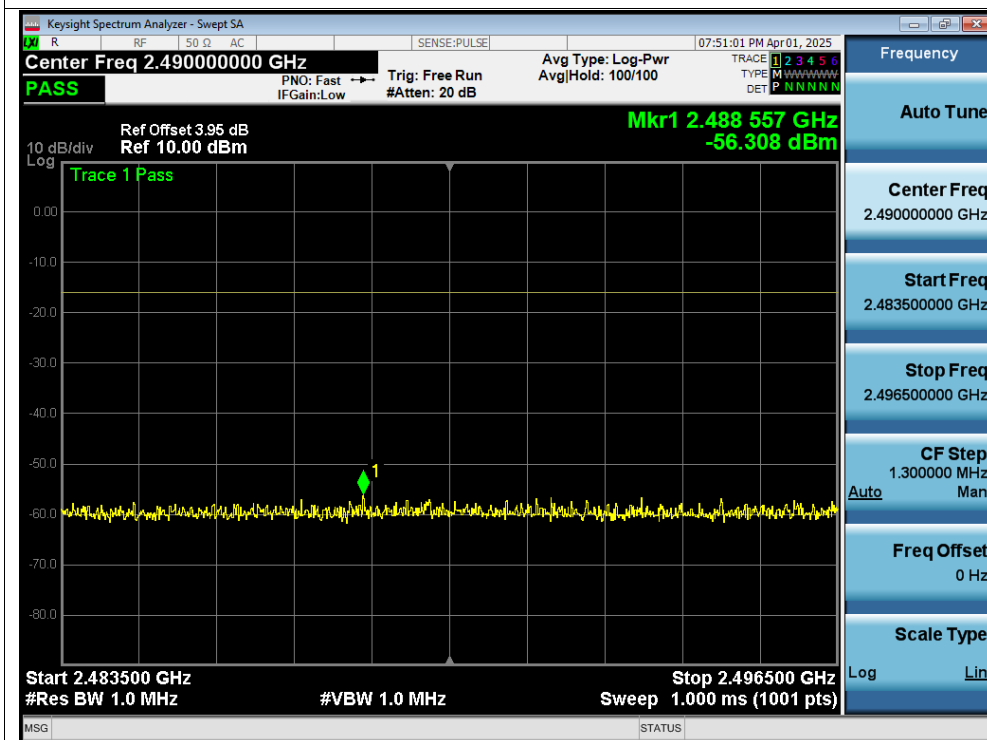
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 1000MHz-2387MHz



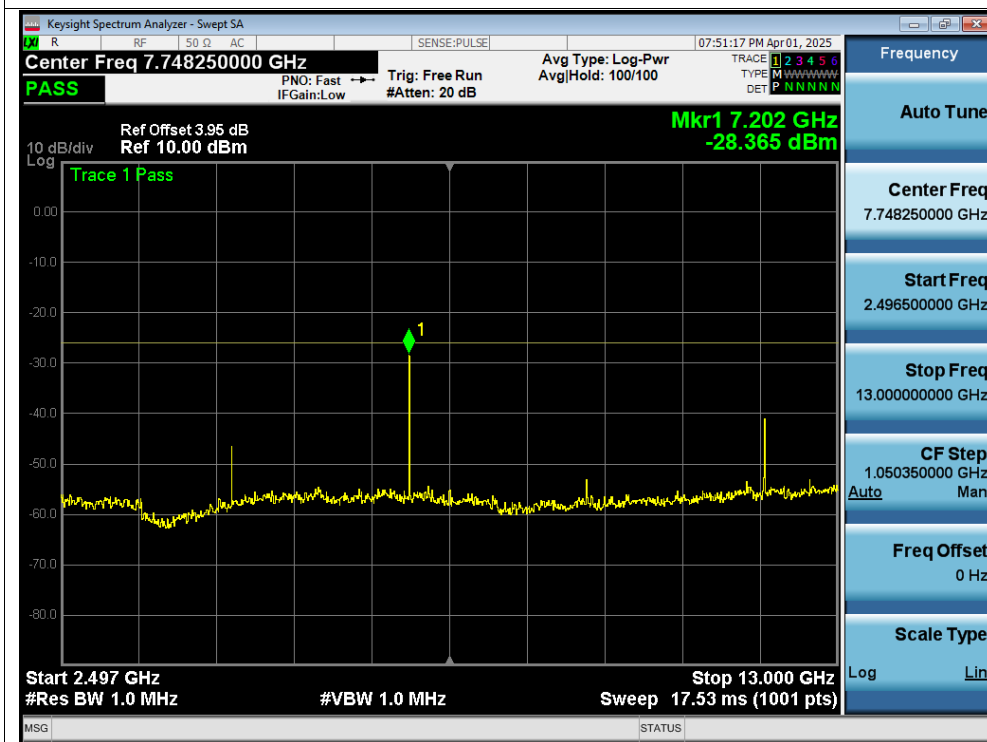
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 2387MHz-2400MHz



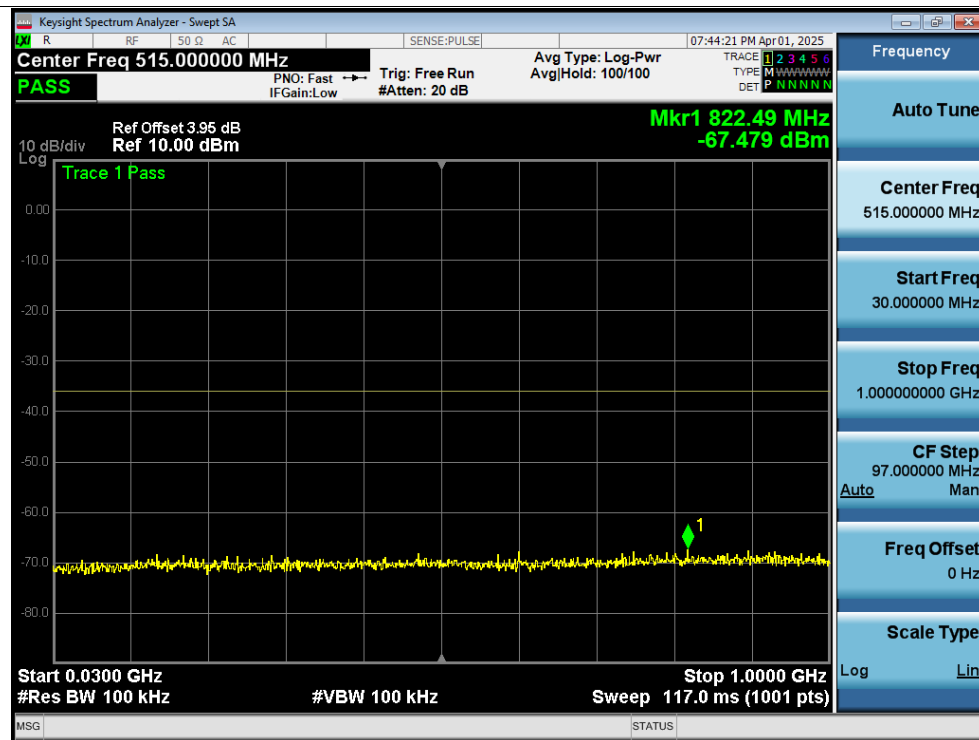
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 2483.5MHz-2496.5MHz



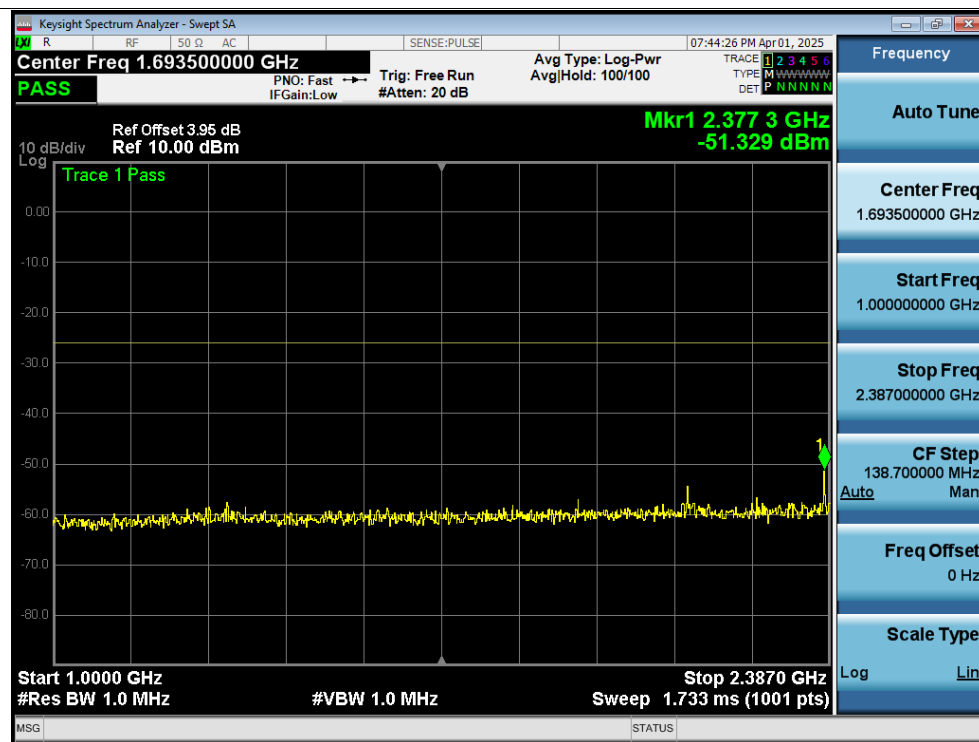
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 2496.5MHz-13000MHz



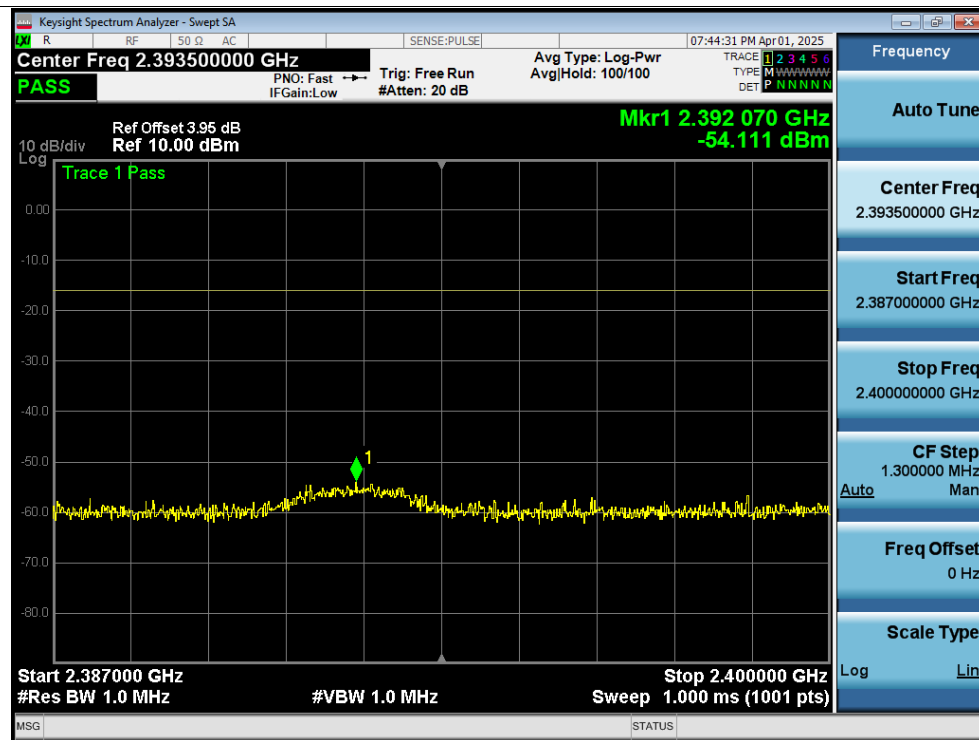
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 30MHz-1000MHz



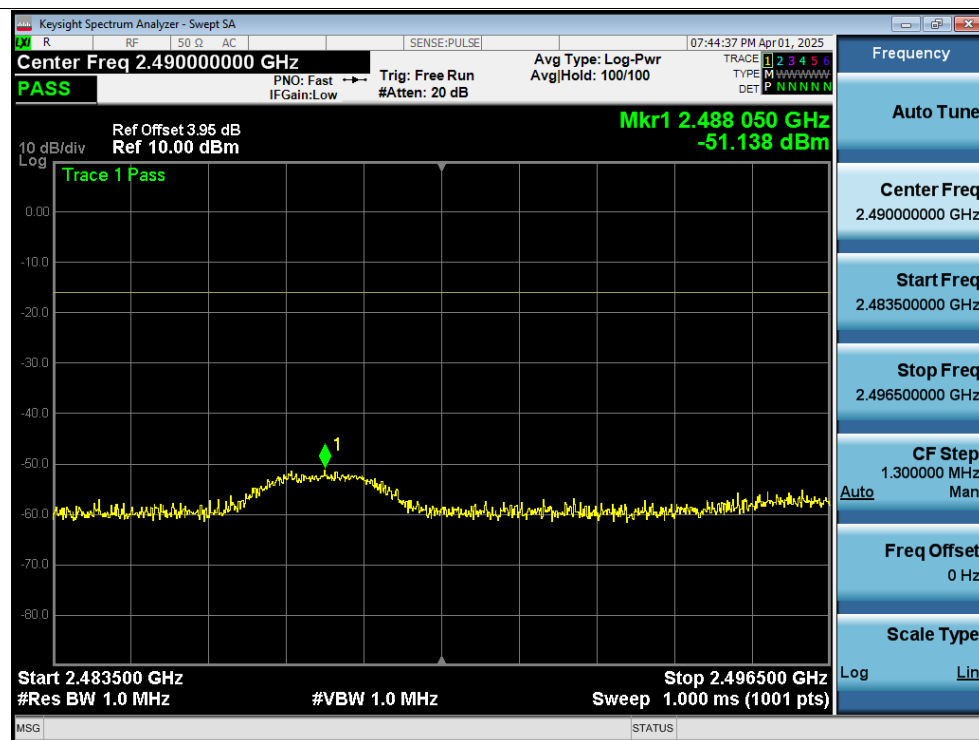
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 1000MHz-2387MHz



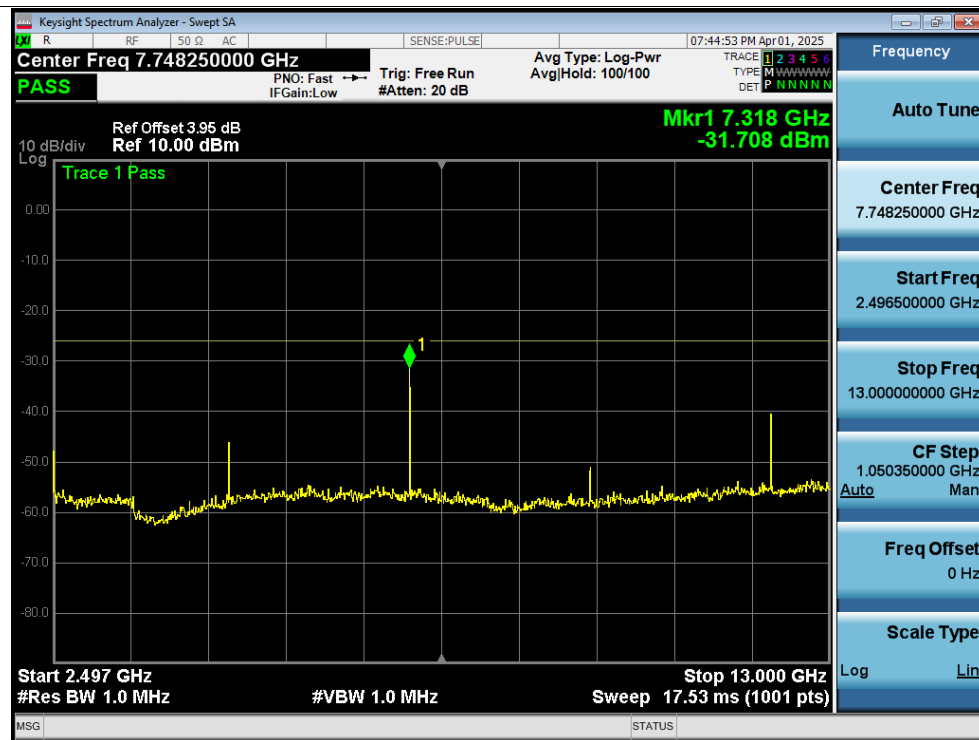
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 2387MHz-2400MHz



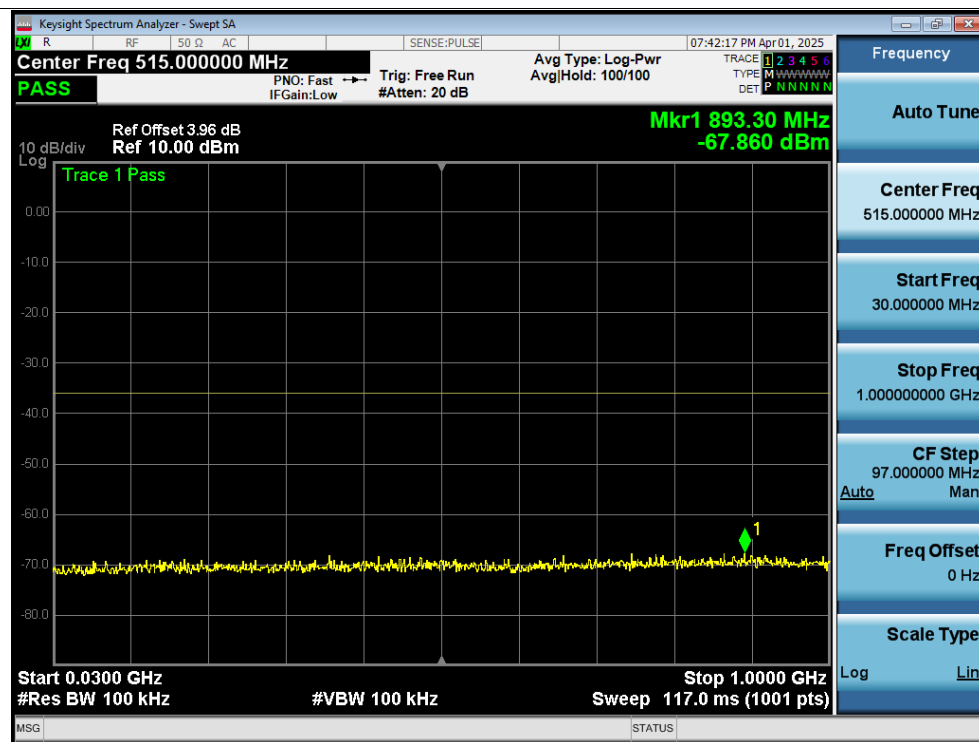
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 2483.5MHz-2496.5MHz



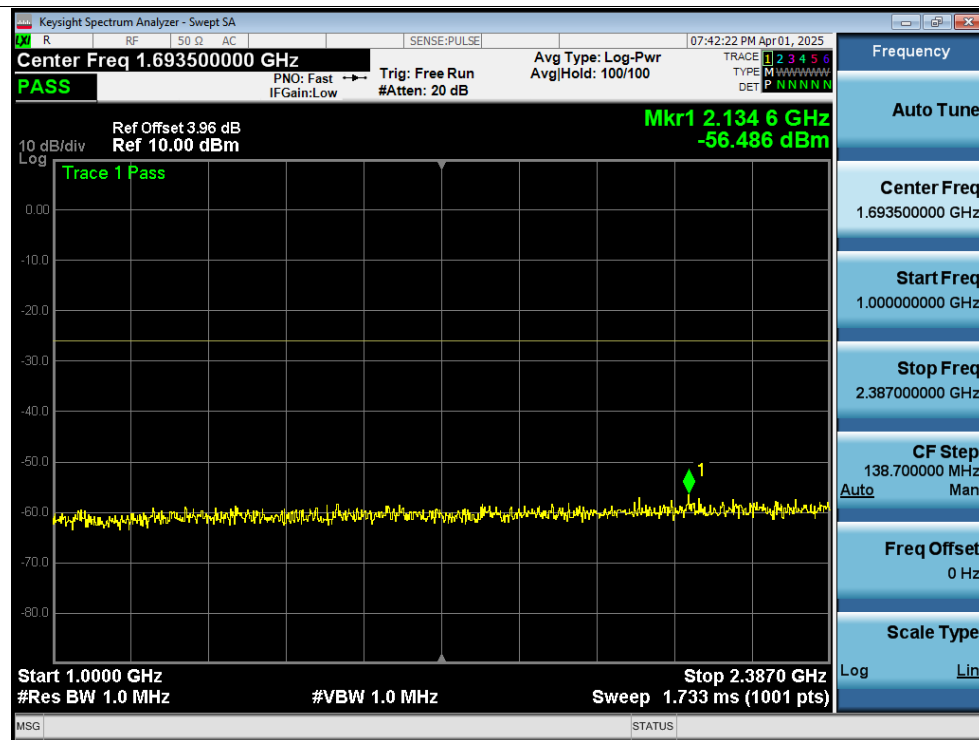
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 2496.5MHz-13000MHz



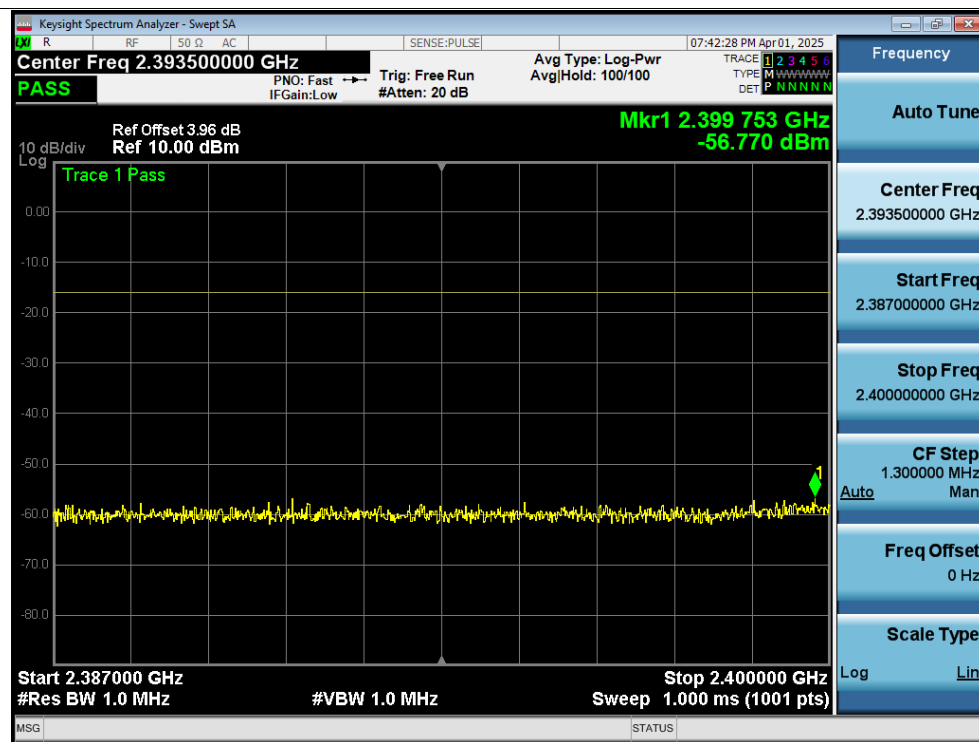
Tx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 30MHz-1000MHz



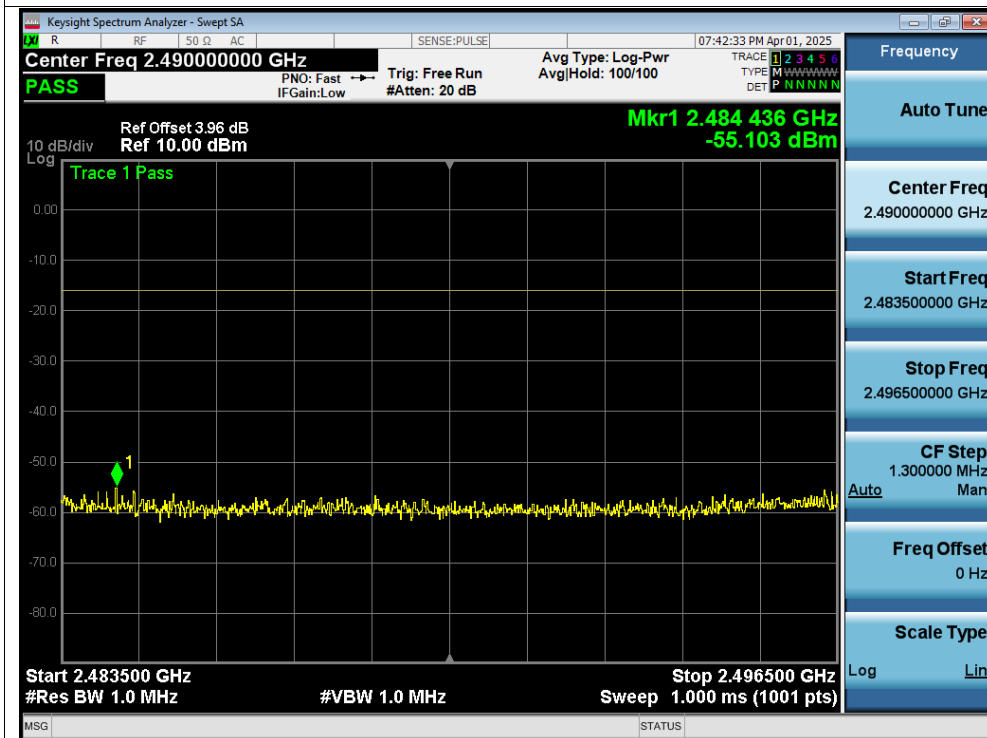
Tx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 1000MHz-2387MHz



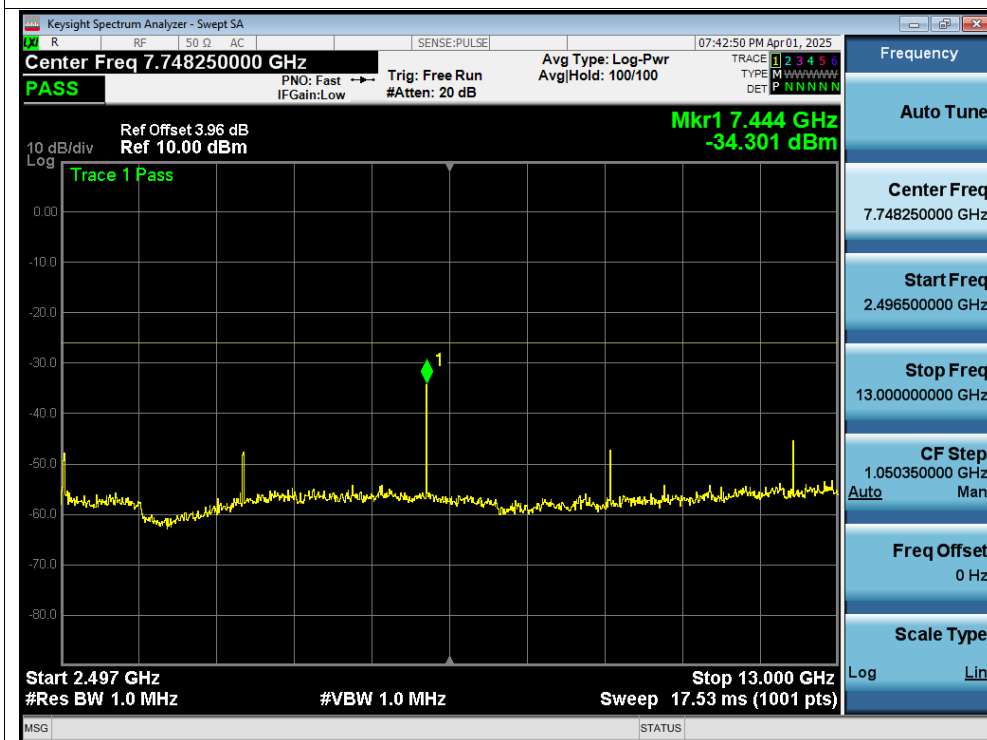
Tx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 2387MHz-2400MHz



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



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

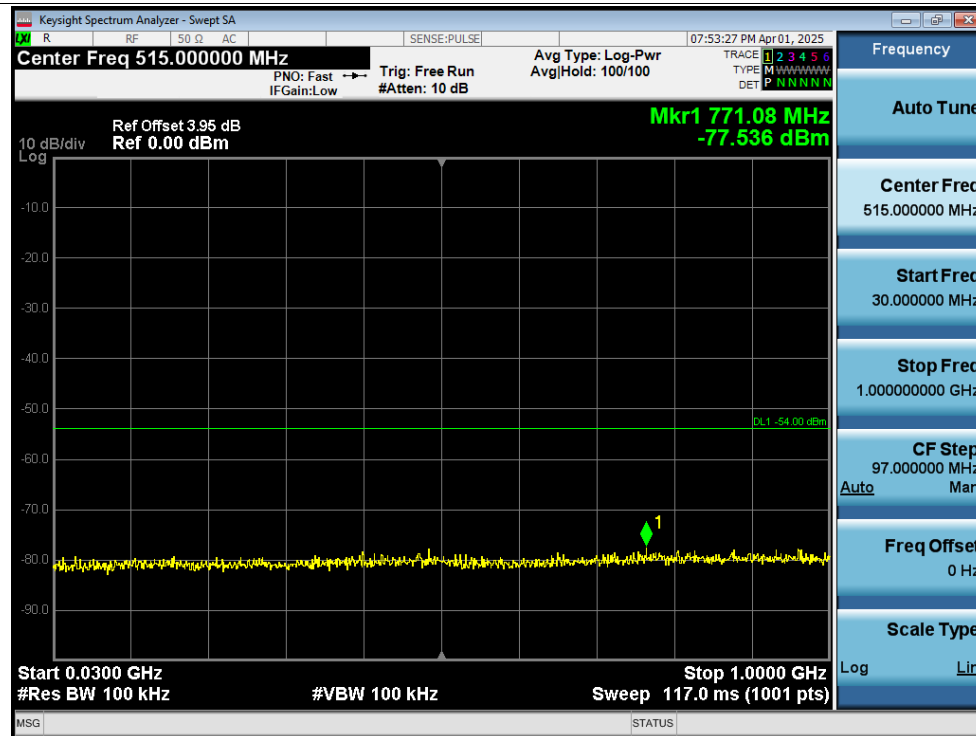


Rx Spurious Emission

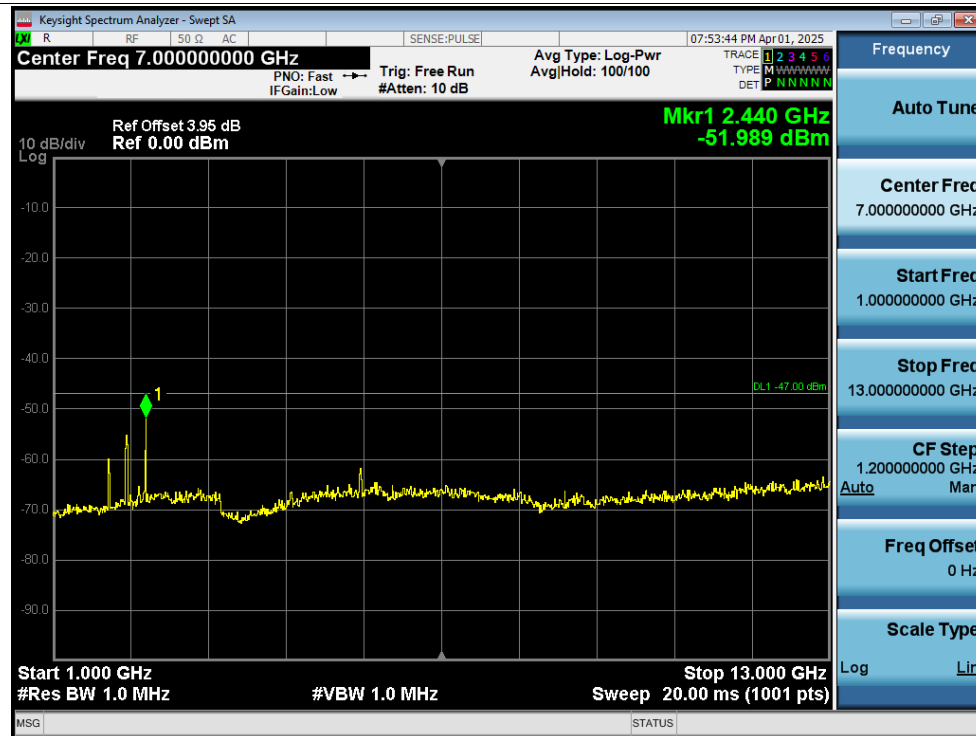
Condition	Mode	Frequency (MHz)	Antenna	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	30-1000	771.08	-77.54	-54	Pass
NVNT	BLE 1M	2402	Ant1	1000-13000	2440	-51.99	-47	Pass
NVNT	BLE 1M	2440	Ant1	30-1000	916.58	-77.14	-54	Pass
NVNT	BLE 1M	2440	Ant1	1000-13000	2440	-50.95	-47	Pass
NVNT	BLE 1M	2480	Ant1	30-1000	903.97	-78.12	-54	Pass
NVNT	BLE 1M	2480	Ant1	1000-13000	2440	-50.9	-47	Pass
NVNT	BLE 2M	2402	Ant1	30-1000	805.03	-78.14	-54	Pass
NVNT	BLE 2M	2402	Ant1	1000-13000	2440	-51.82	-47	Pass
NVNT	BLE 2M	2440	Ant1	30-1000	875.84	-77.14	-54	Pass
NVNT	BLE 2M	2440	Ant1	1000-13000	2440	-51.1	-47	Pass
NVNT	BLE 2M	2480	Ant1	30-1000	886.51	-77.49	-54	Pass
NVNT	BLE 2M	2480	Ant1	1000-13000	2440	-51.61	-47	Pass

Test Graphs

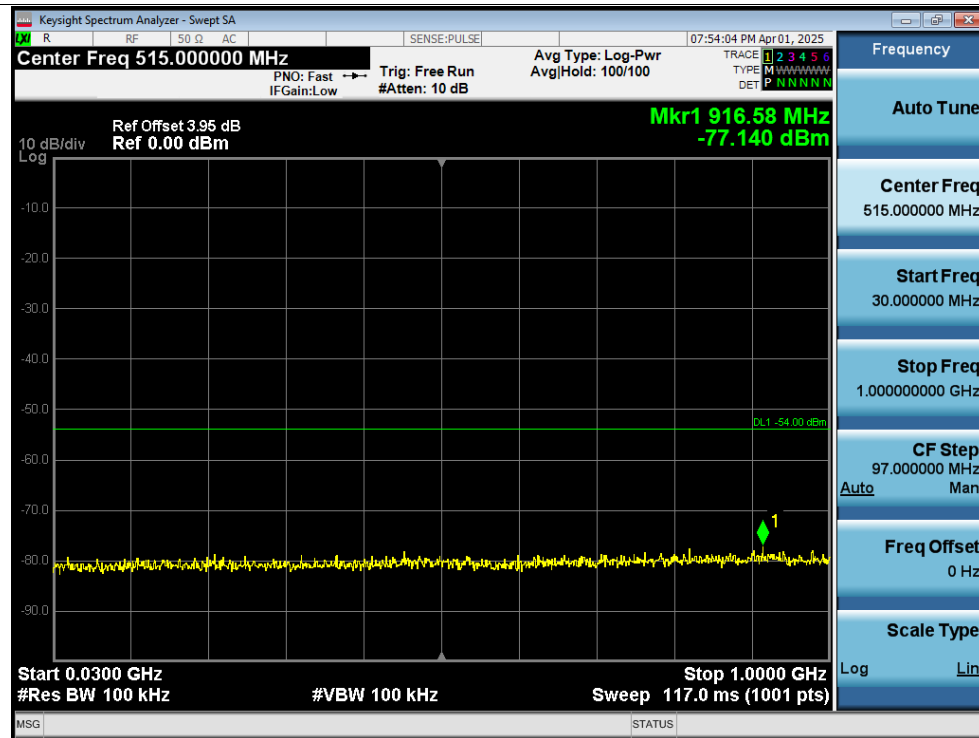
Rx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 30MHz-1000MHz



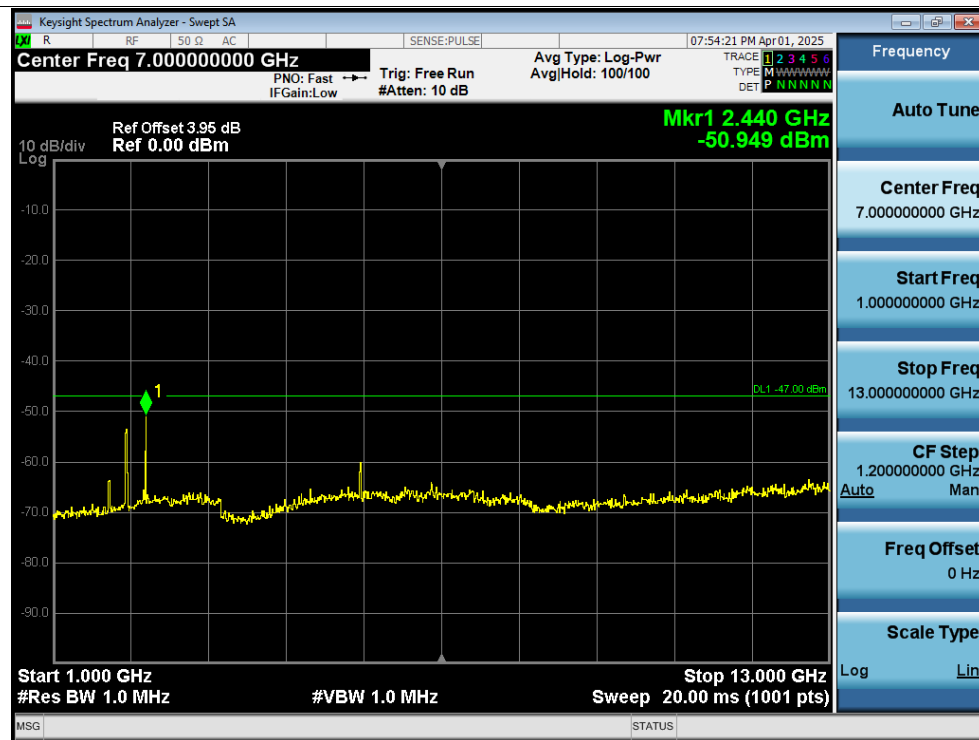
Rx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 1000MHz-13000MHz



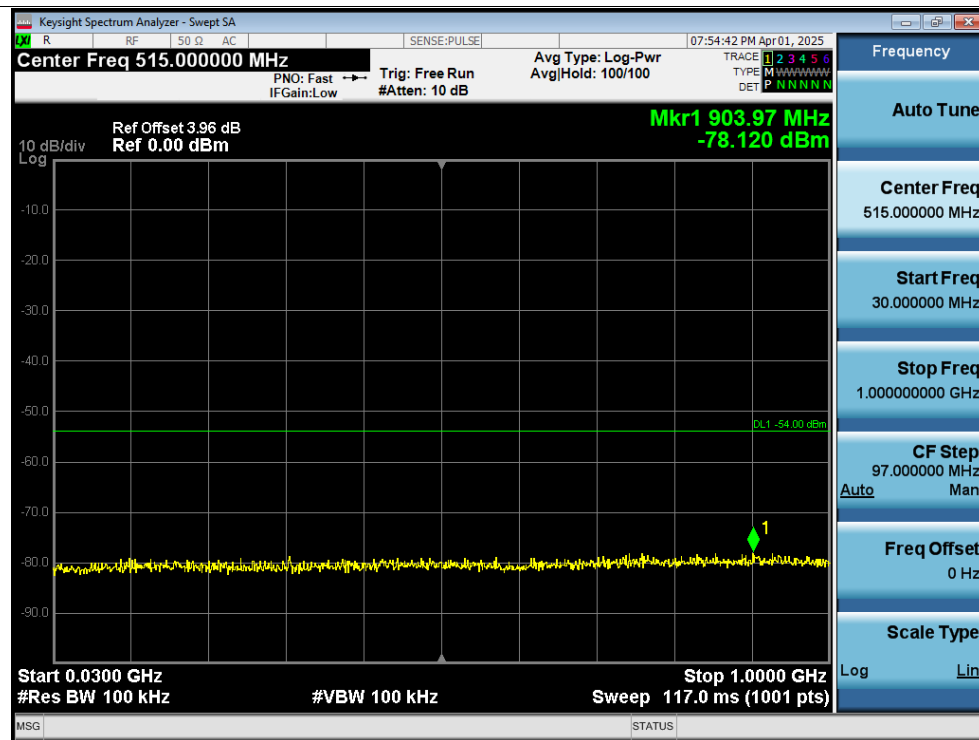
Rx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 30MHz-1000MHz



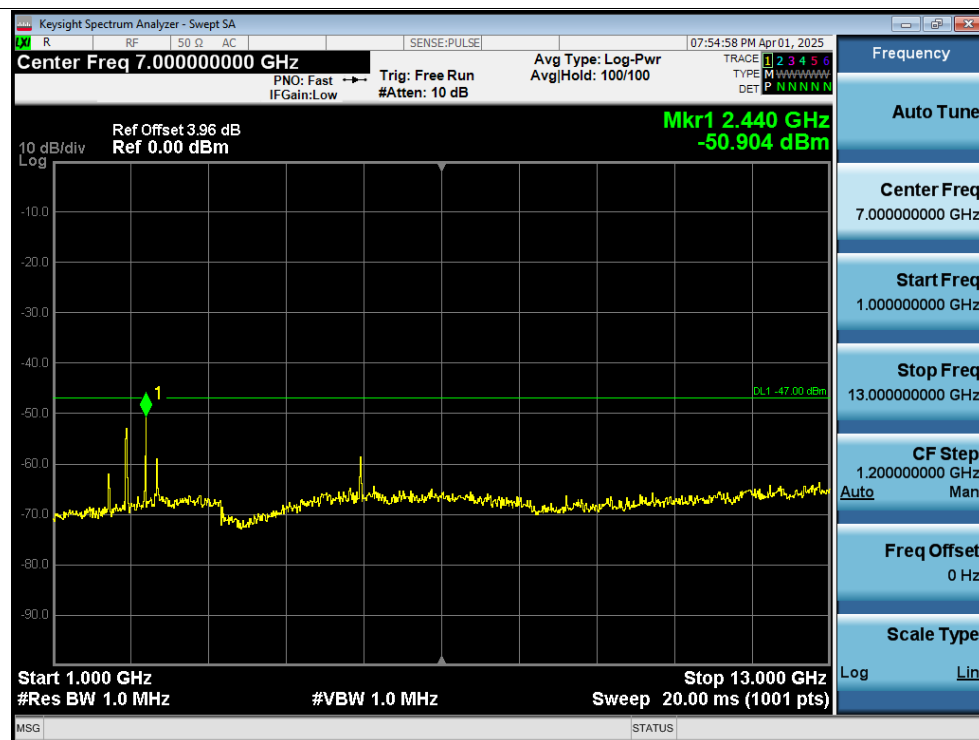
Rx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 1000MHz-13000MHz



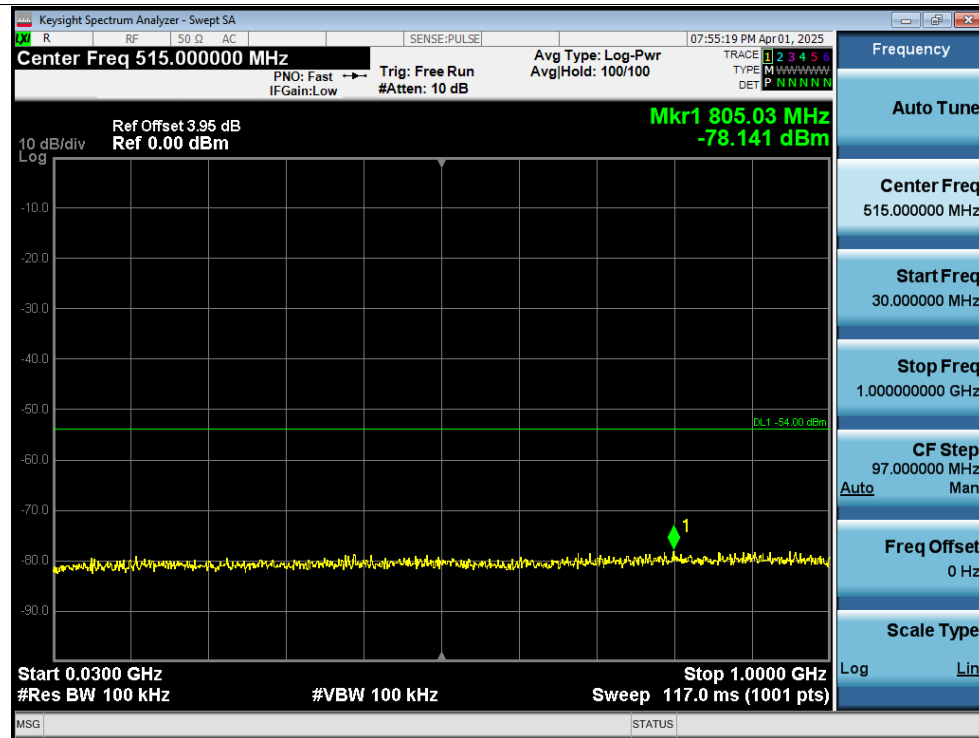
Rx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 30MHz-1000MHz



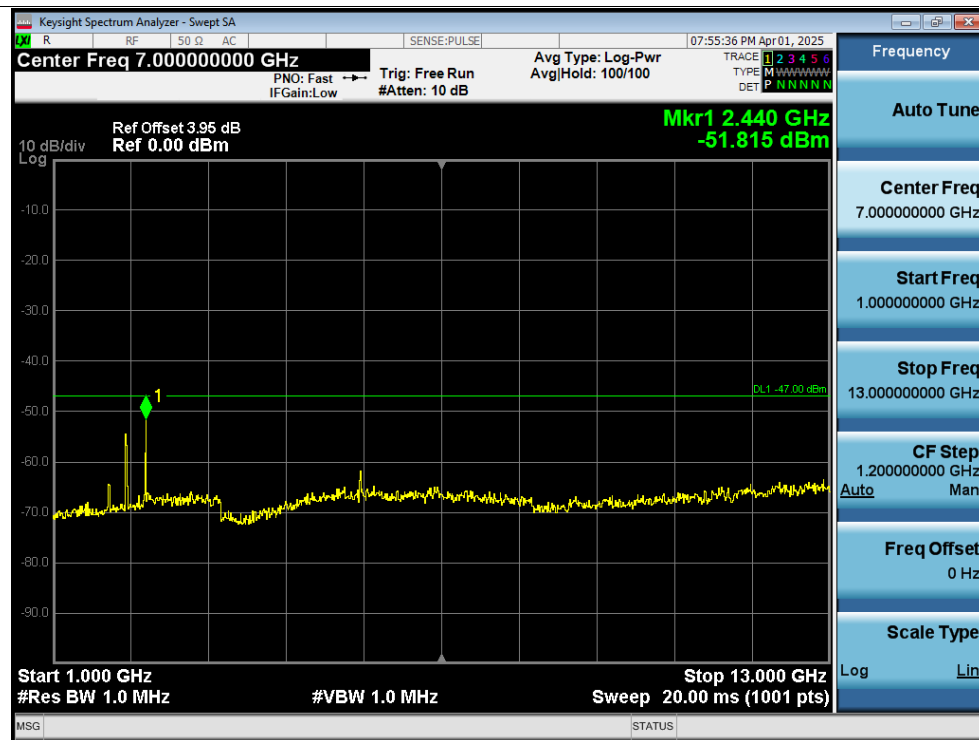
Rx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 1000MHz-13000MHz



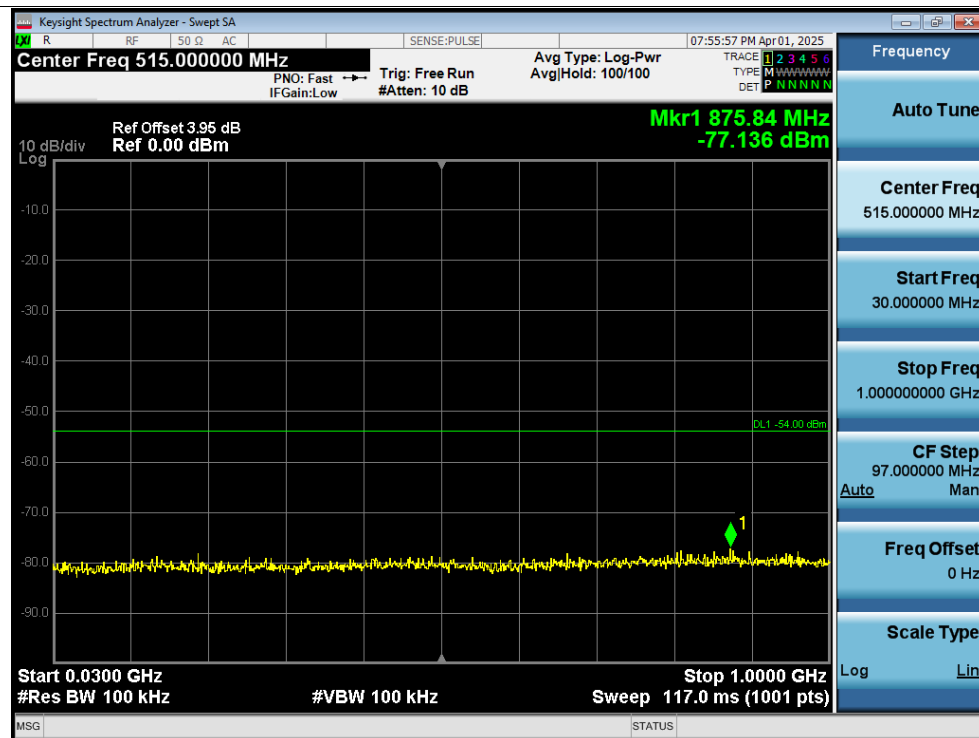
Rx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 30MHz-1000MHz



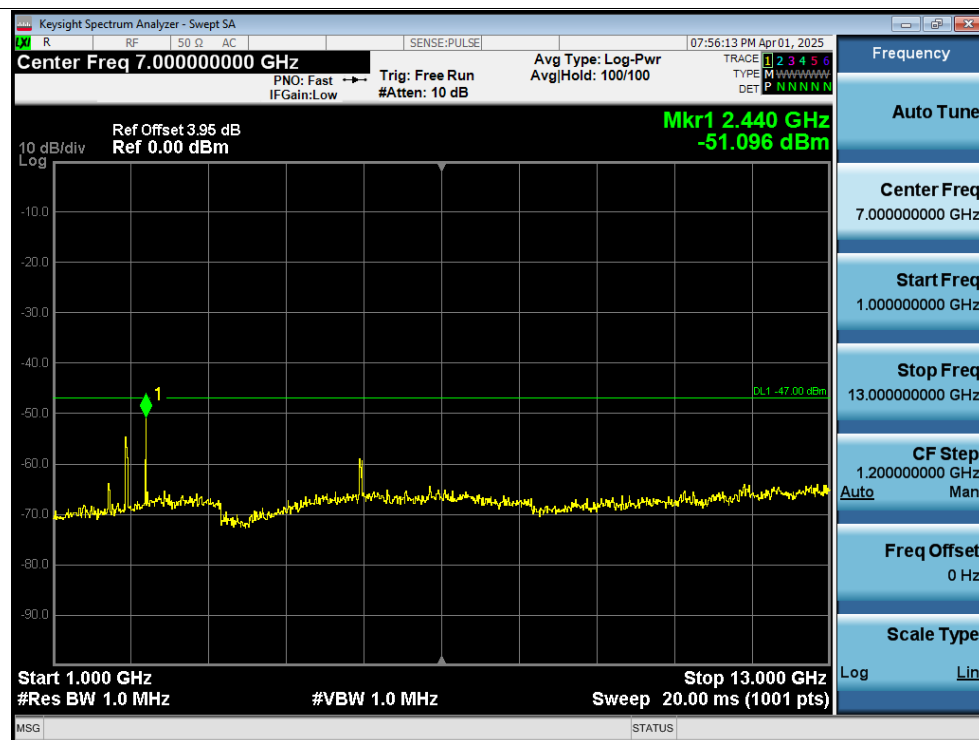
Rx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 1000MHz-13000MHz



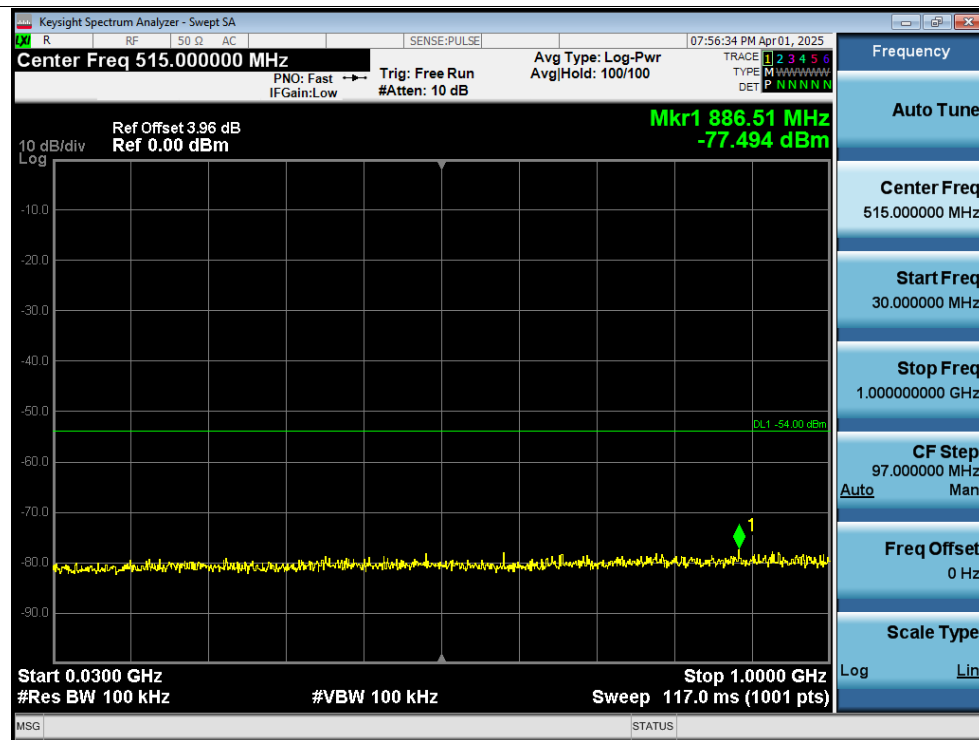
Rx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 30MHz-1000MHz



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



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



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

