

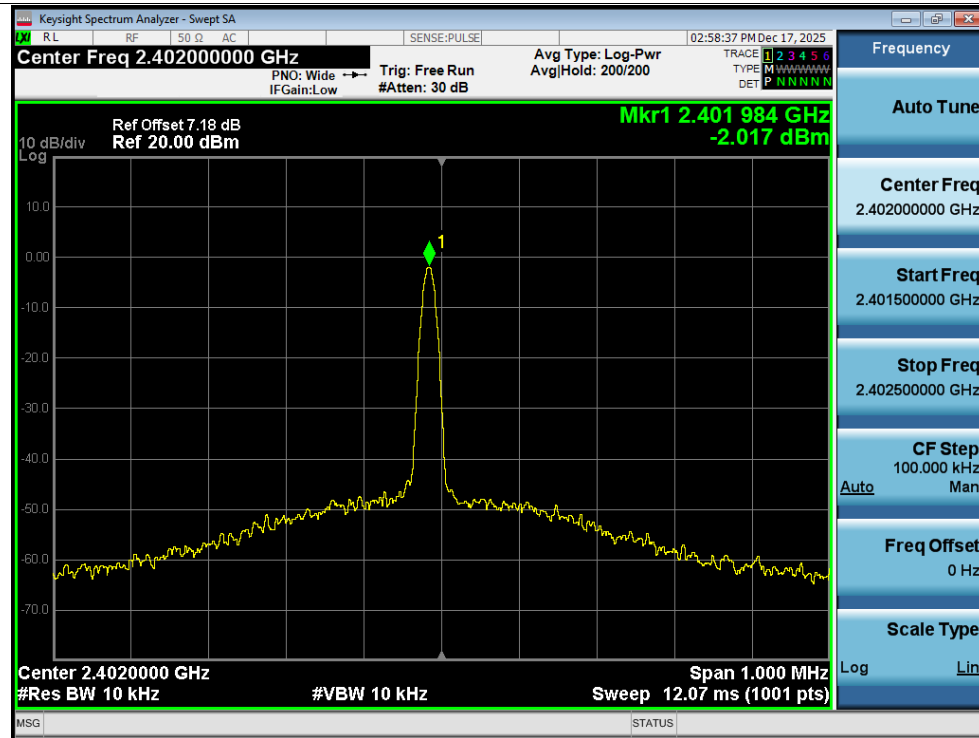
Appendix C

Frequency Error

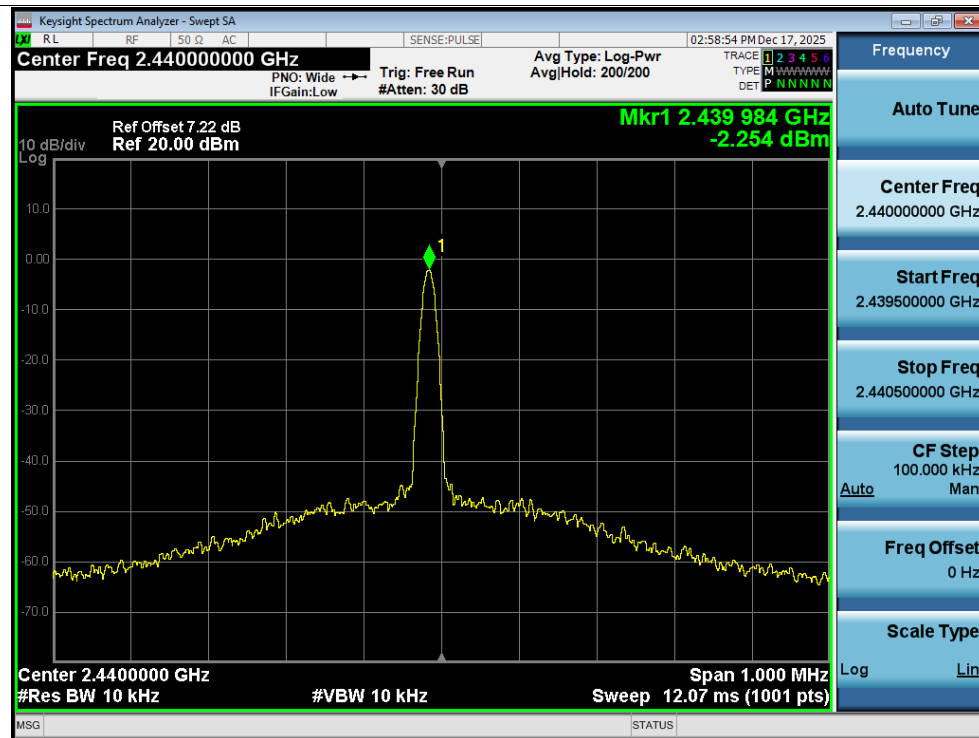
Condition	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	2402	Ant1	2401.984	-16000	-6.66	50	Pass
NVNT	2440	Ant1	2439.984	-16000	-6.56	50	Pass
NVNT	2480	Ant1	2479.983	-17000	-6.85	50	Pass

Test Graphs

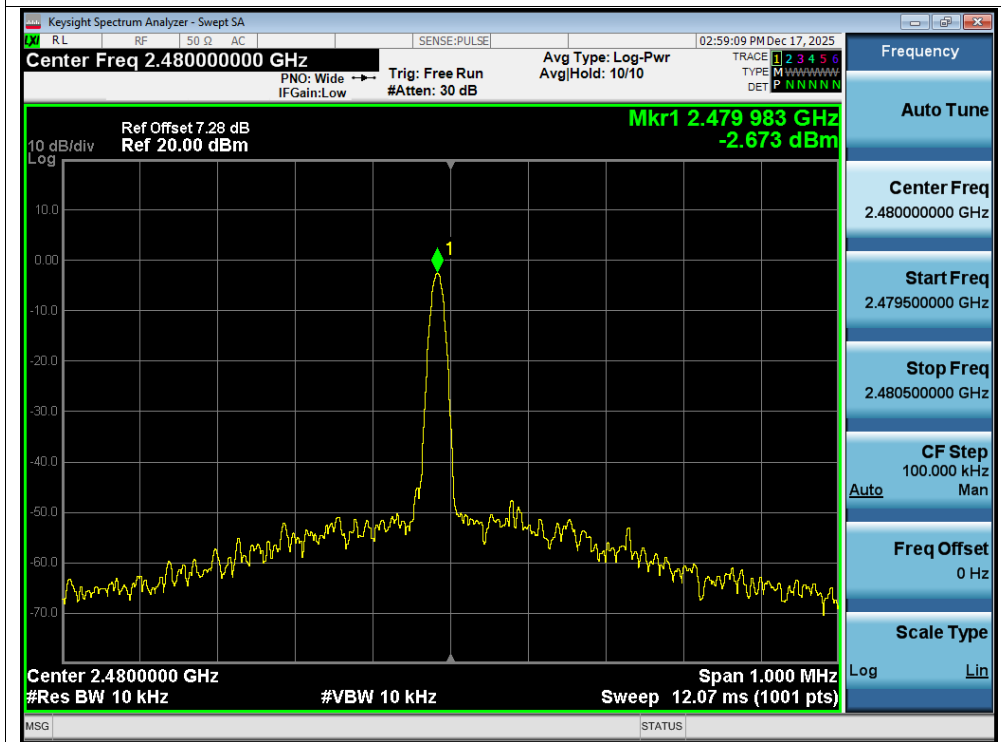
Freq. Error NVNT BLE 1M 2402MHz Ant1



Freq. Error NVNT BLE 1M 2440MHz Ant1



Freq. Error NVNT BLE 1M 2480MHz Ant1

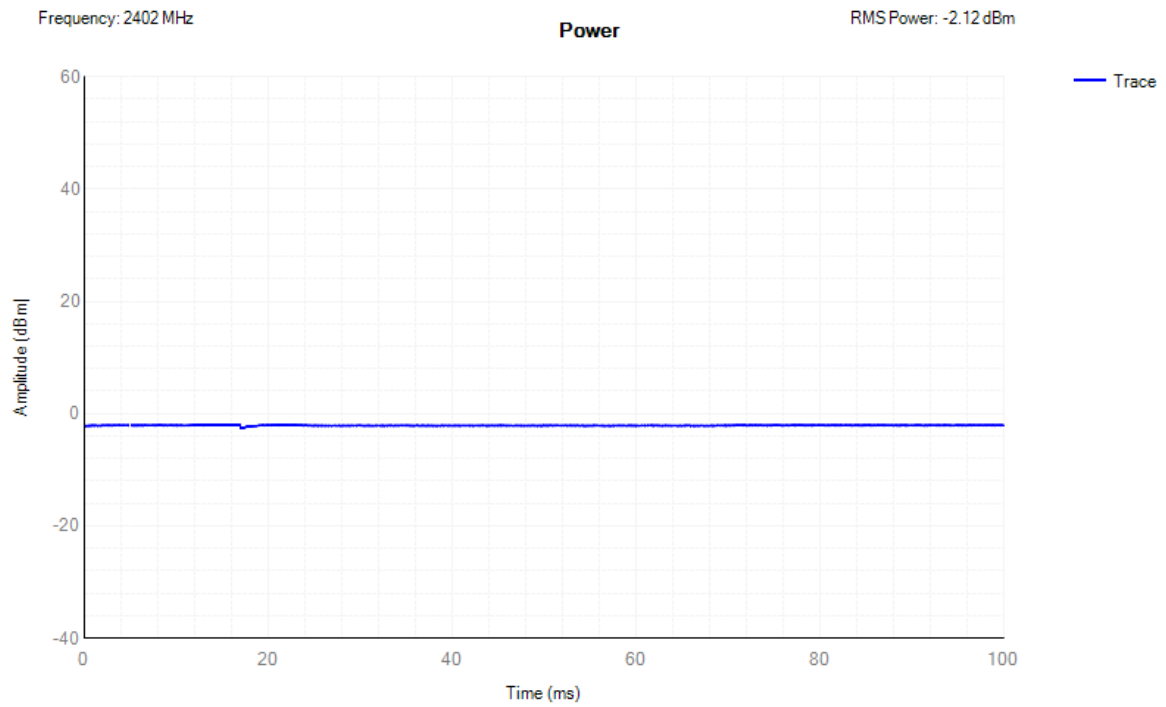


Antenna Power

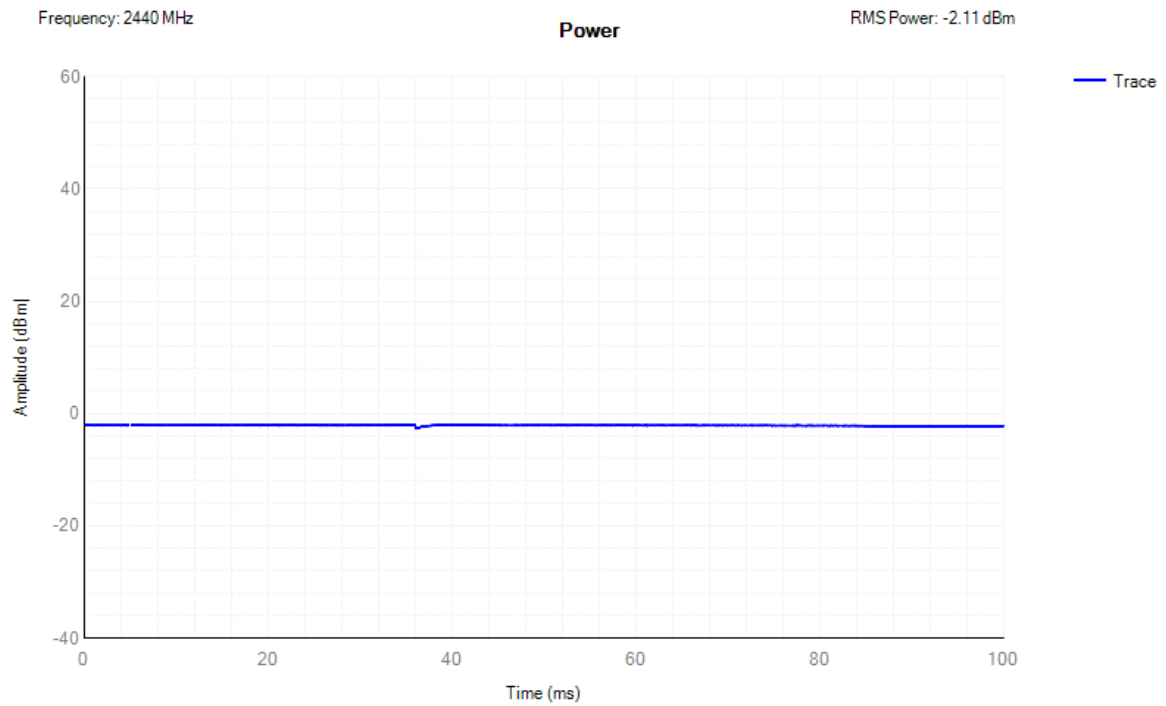
Condition	Mode	Frequency (MHz)	Antenna	Power (dBm)	Antenna Power (mW)	Limit (mW)	Declared Power (mW)	Tolerance (%)	Upper Limit (%)	Verdict
NVNT	BLE 1M	2402	Ant1	-2.12	0.614	10	1	-38.6	20	Pass
NVNT	BLE 1M	2440	Ant1	-2.11	0.615	10	1	-38.5	20	Pass
NVNT	BLE 1M	2480	Ant1	-2.4	0.575	10	1	-42.5	20	Pass
NVNT	BLE 2M	2402	Ant1	-2.1	0.617	10	1	-38.3	20	Pass
NVNT	BLE 2M	2440	Ant1	-2.1	0.617	10	1	-38.3	20	Pass
NVNT	BLE 2M	2480	Ant1	-2.42	0.573	10	1	-42.7	20	Pass

Test Graphs

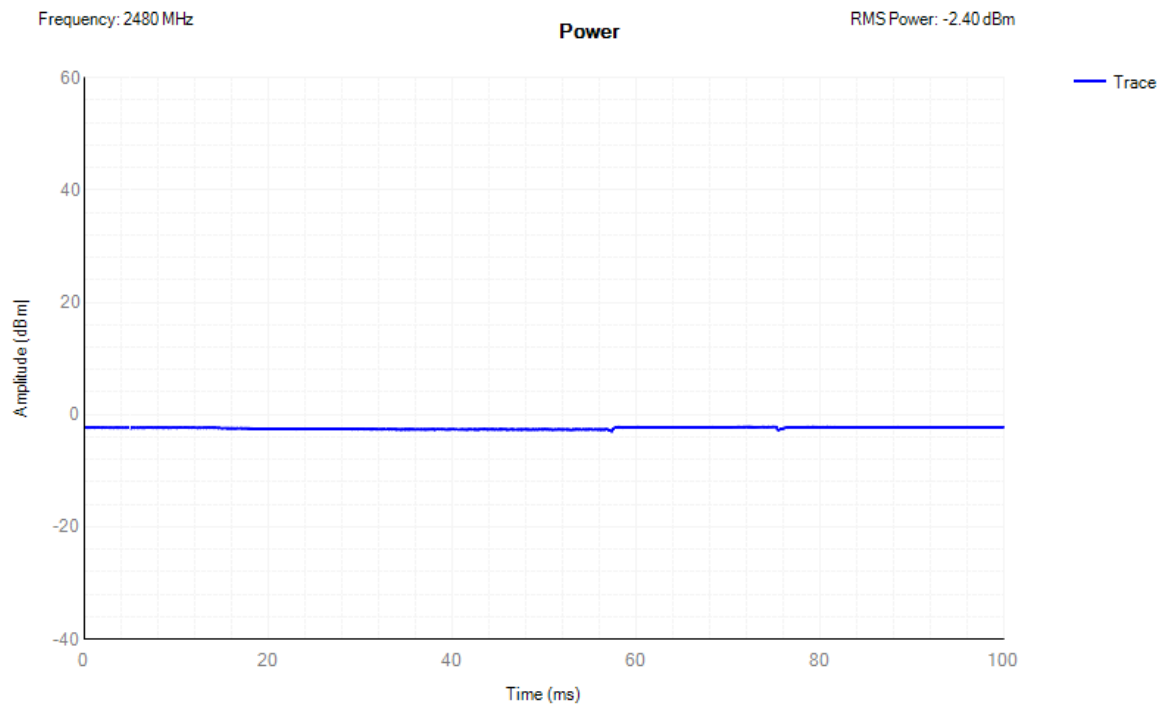
Power NVNT BLE 1M 2402 MHz Ant1



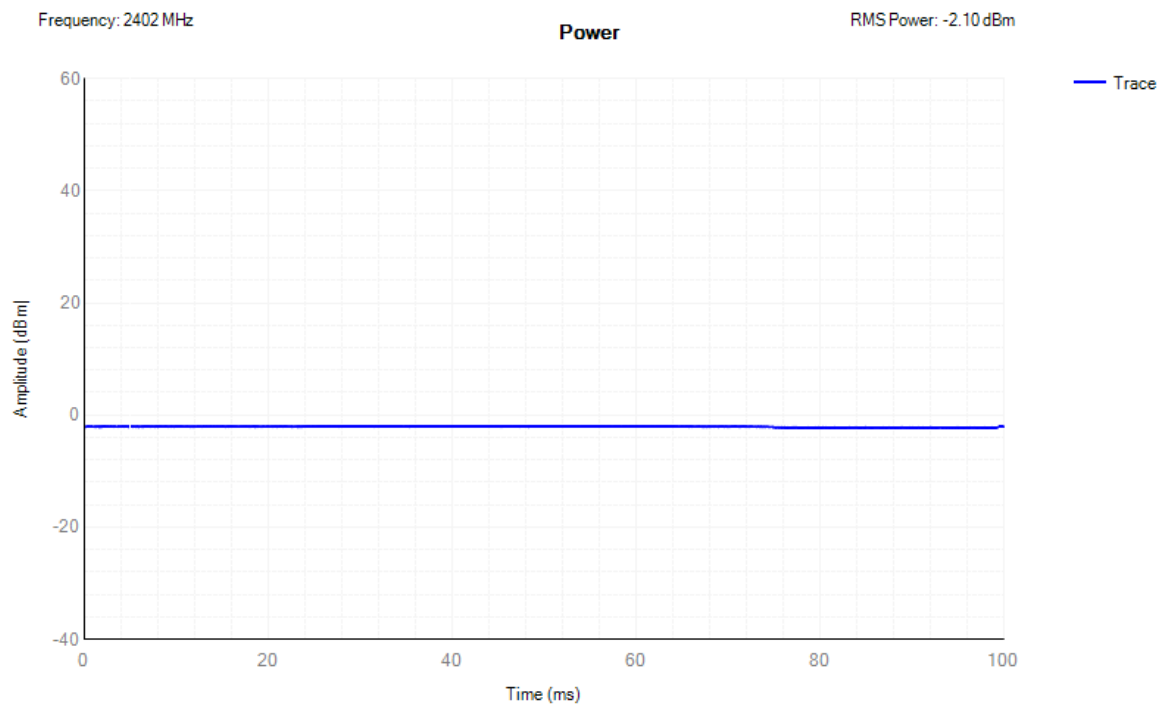
Power NVNT BLE 1M 2440 MHz Ant1



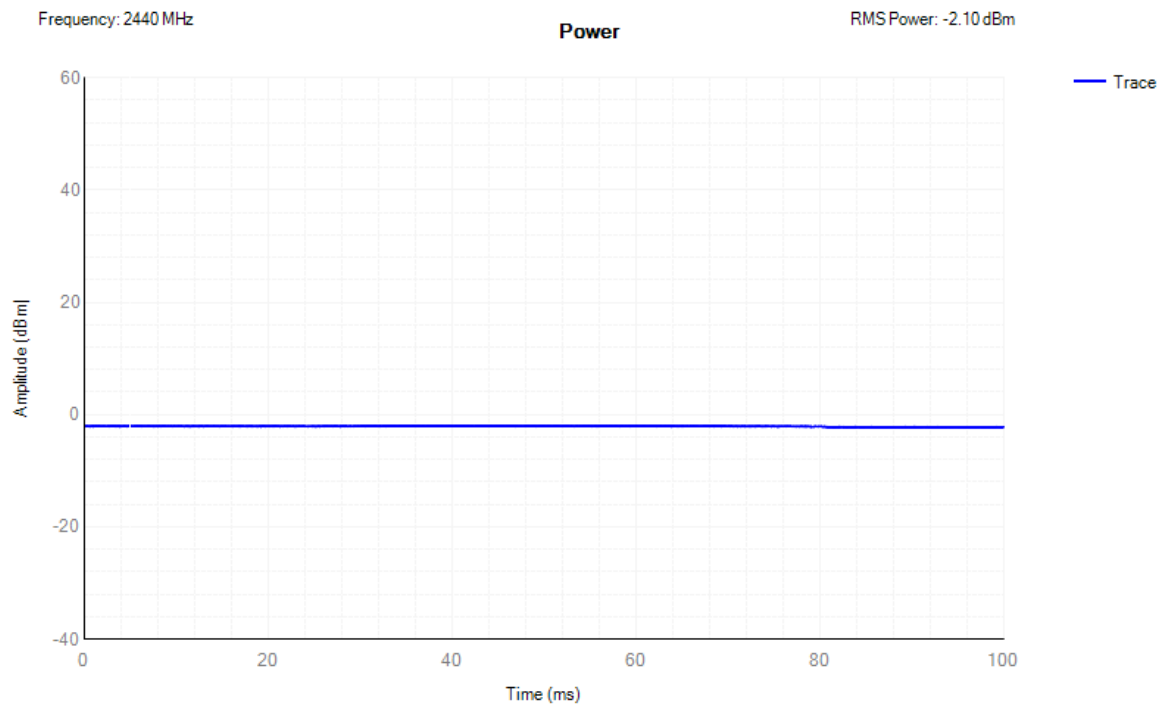
Power NVNT BLE 1M 2480 MHz Ant1



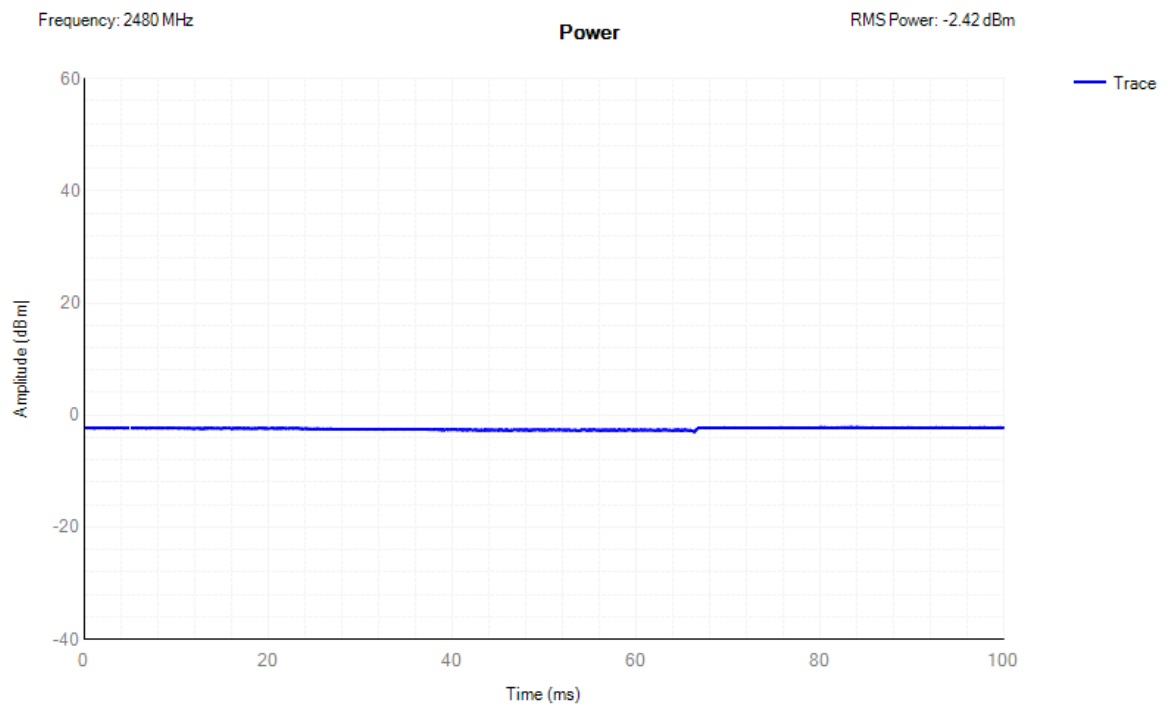
Power NVNT BLE 2M 2402 MHz Ant1



Power NVNT BLE 2M 2440 MHz Ant1



Power NVNT BLE 2M 2480 MHz Ant1



EIRP Power

Condition	Mode	Frequency (MHz)	Antenna	Antenna Power (dBm)	Gain (dBi)	EIRP Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	-2.12	-1.47	-3.59	12.14	Pass
NVNT	BLE 1M	2440	Ant1	-2.11	-1.47	-3.58	12.14	Pass
NVNT	BLE 1M	2480	Ant1	-2.4	-1.47	-3.87	12.14	Pass
NVNT	BLE 2M	2402	Ant1	-2.1	-1.47	-3.57	12.14	Pass
NVNT	BLE 2M	2440	Ant1	-2.1	-1.47	-3.57	12.14	Pass
NVNT	BLE 2M	2480	Ant1	-2.42	-1.47	-3.89	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	1.205	N/A	26	Pass
NVNT	BLE 1M	2440	Ant1	1.207	N/A	26	Pass
NVNT	BLE 1M	2480	Ant1	1.212	N/A	26	Pass
NVNT	BLE 2M	2402	Ant1	2.146	N/A	26	Pass
NVNT	BLE 2M	2440	Ant1	2.145	N/A	26	Pass
NVNT	BLE 2M	2480	Ant1	2.142	N/A	26	Pass

Test Graphs

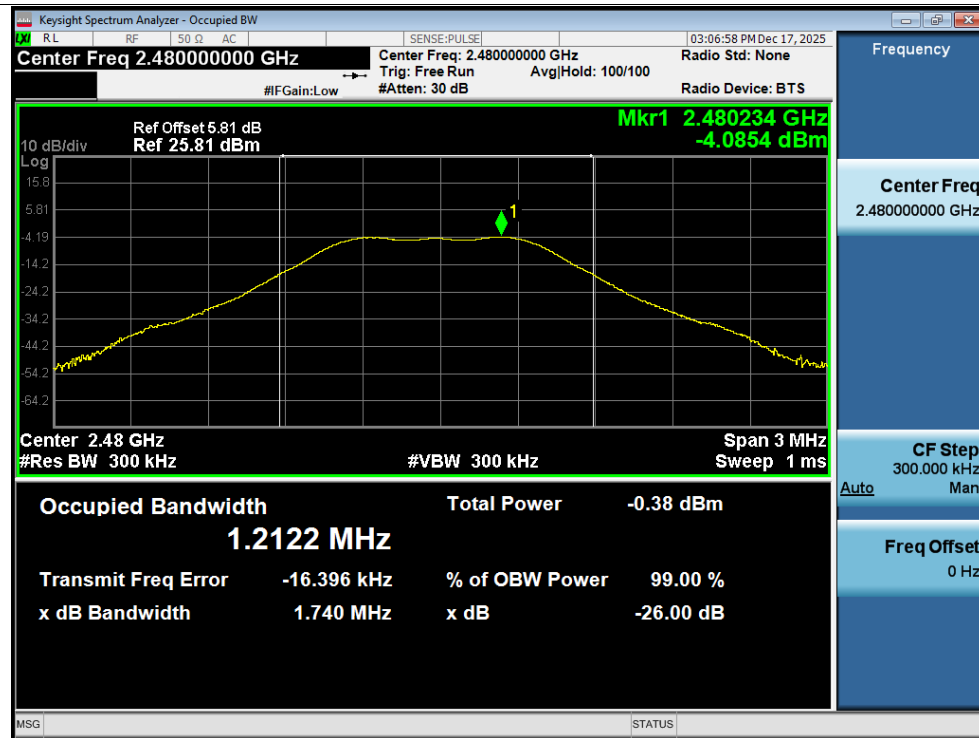
OBW NVNT BLE 1M 2402MHz Ant1



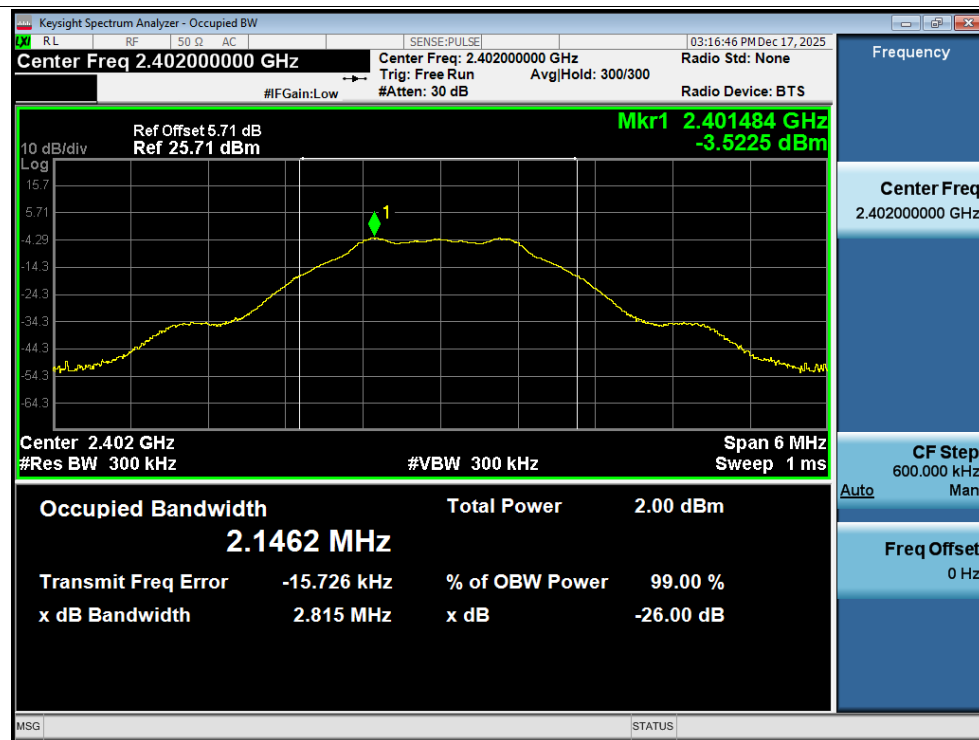
OBW NVNT BLE 1M 2440MHz Ant1



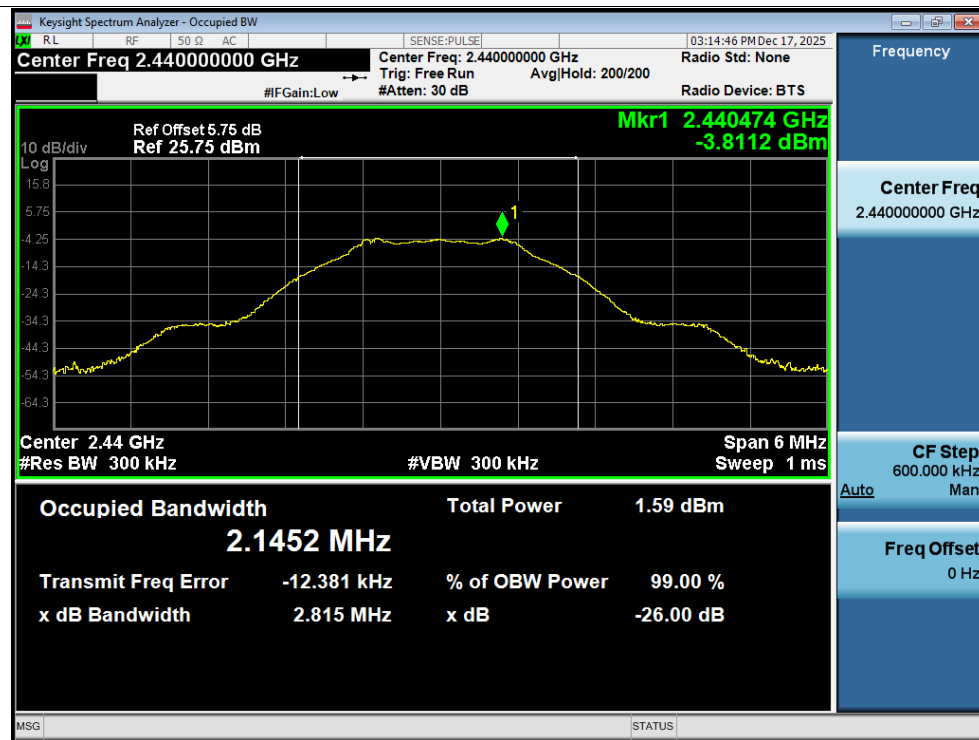
OBW NVNT BLE 1M 2480MHz Ant1



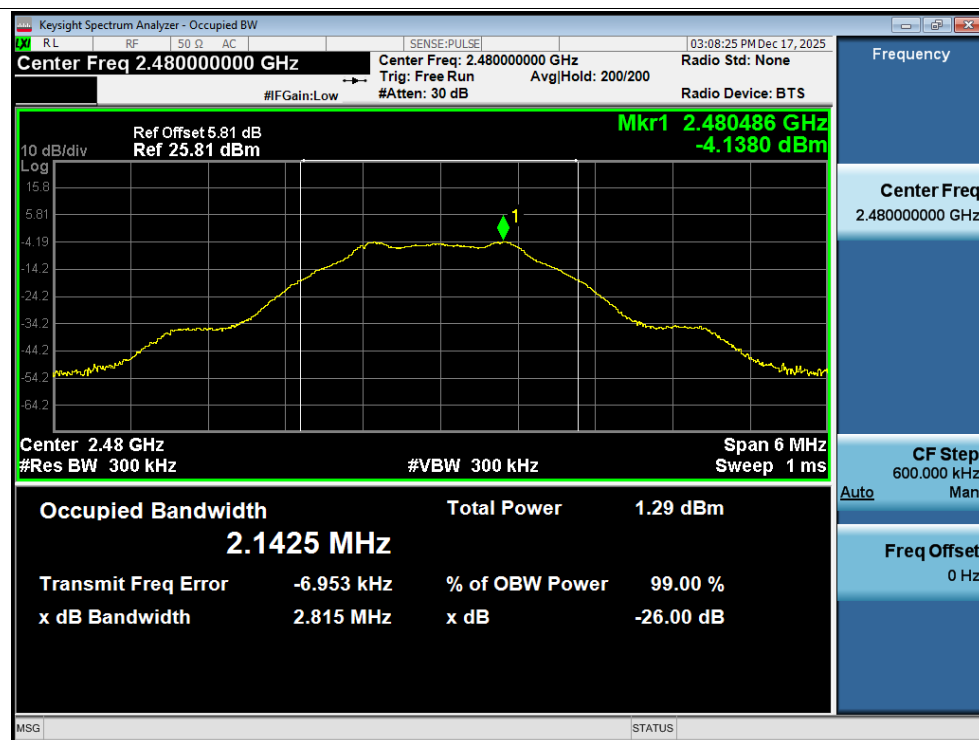
OBW NVNT BLE 2M 2402MHz Ant1



OBW NVNT BLE 2M 2440MHz Ant1



OBW NVNT BLE 2M 2480MHz Ant1



Tx Spurious Emission

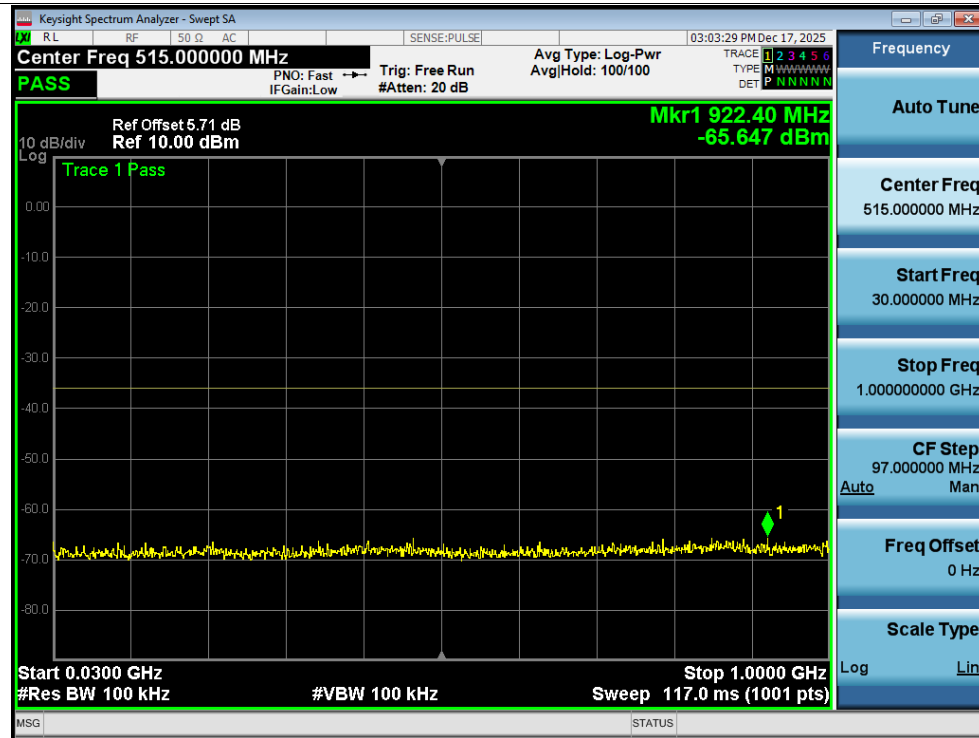
Condition	Mode	Frequency (MHz)	Antenna	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm/100kHz)	Limit Start(dBm/100kHz)	Limit Stop (dBm/100kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	30-1000	922.4	-65.65	-36	-36	Pass
NVNT	BLE 1M	2440	Ant1	30-1000	418	-65.69	-36	-36	Pass
NVNT	BLE 1M	2480	Ant1	30-1000	981.57	-66	-36	-36	Pass
NVNT	BLE 2M	2402	Ant1	30-1000	208.48	-65.8	-36	-36	Pass
NVNT	BLE 2M	2440	Ant1	30-1000	878.75	-65.99	-36	-36	Pass
NVNT	BLE 2M	2480	Ant1	30-1000	59.1	-64.88	-36	-36	Pass

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	1991.71	-54.08	-26	-26	Pass
NVNT	BLE 1M	2402	Ant1	2387-2400	2400	-41.03	-16	-16	Pass
NVNT	BLE 1M	2402	Ant1	2483.5-2496.5	2496.34	-54.65	-16	-16	Pass
NVNT	BLE 1M	2402	Ant1	2496.5-13000	12012.67	-49.49	-26	-26	Pass
NVNT	BLE 1M	2440	Ant1	1000-2387	2303.78	-53.54	-26	-26	Pass
NVNT	BLE 1M	2440	Ant1	2387-2400	2393.44	-54.08	-16	-16	Pass
NVNT	BLE 1M	2440	Ant1	2483.5-2496.5	2489.94	-54.44	-16	-16	Pass
NVNT	BLE 1M	2440	Ant1	2496.5-13000	12201.73	-49.89	-26	-26	Pass
NVNT	BLE 1M	2480	Ant1	1000-2387	1771.17	-53.92	-26	-26	Pass
NVNT	BLE 1M	2480	Ant1	2387-2400	2395.81	-54.47	-16	-16	Pass
NVNT	BLE 1M	2480	Ant1	2483.5-2496.5	2490.16	-54.35	-16	-16	Pass
NVNT	BLE 1M	2480	Ant1	2496.5-13000	5794.6	-46.9	-26	-26	Pass
NVNT	BLE 2M	2402	Ant1	1000-2387	2320.42	-54.24	-26	-26	Pass
NVNT	BLE 2M	2402	Ant1	2387-2400	2400	-26.13	-16	-16	Pass
NVNT	BLE 2M	2402	Ant1	2483.5-2496.5	2494.45	-54.62	-16	-16	Pass
NVNT	BLE 2M	2402	Ant1	2496.5-13000	12012.67	-49.35	-26	-26	Pass
NVNT	BLE 2M	2440	Ant1	1000-2387	2377.29	-53.88	-26	-26	Pass
NVNT	BLE 2M	2440	Ant1	2387-2400	2399.95	-53.68	-16	-16	Pass
NVNT	BLE 2M	2440	Ant1	2483.5-2496.5	2486.83	-54.13	-16	-16	Pass
NVNT	BLE	2440	Ant1	2496.5-13000	12201.73	-49.65	-26	-26	Pass

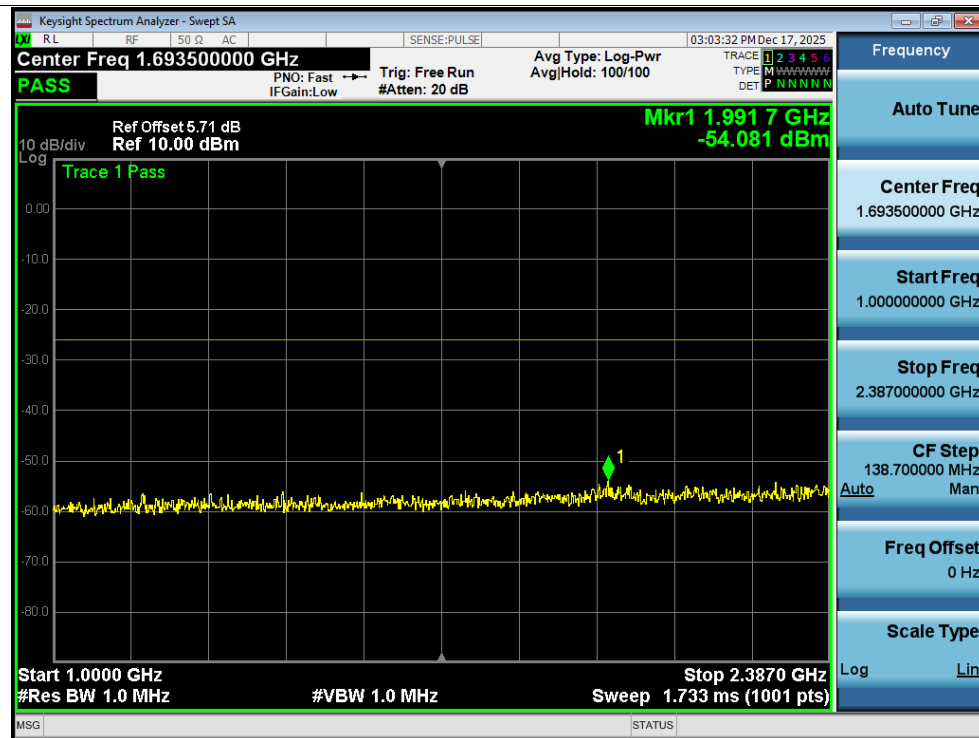
	2M								
NVNT	BLE 2M	2480	Ant1	1000-2387	1772.56	-51.88	-26	-26	Pass
NVNT	BLE 2M	2480	Ant1	2387-2400	2396.02	-54.6	-16	-16	Pass
NVNT	BLE 2M	2480	Ant1	2483.5-2496.5	2483.57	-52.59	-16	-16	Pass
NVNT	BLE 2M	2480	Ant1	2496.5-13000	12401.3	-50.77	-26	-26	Pass

Test Graphs

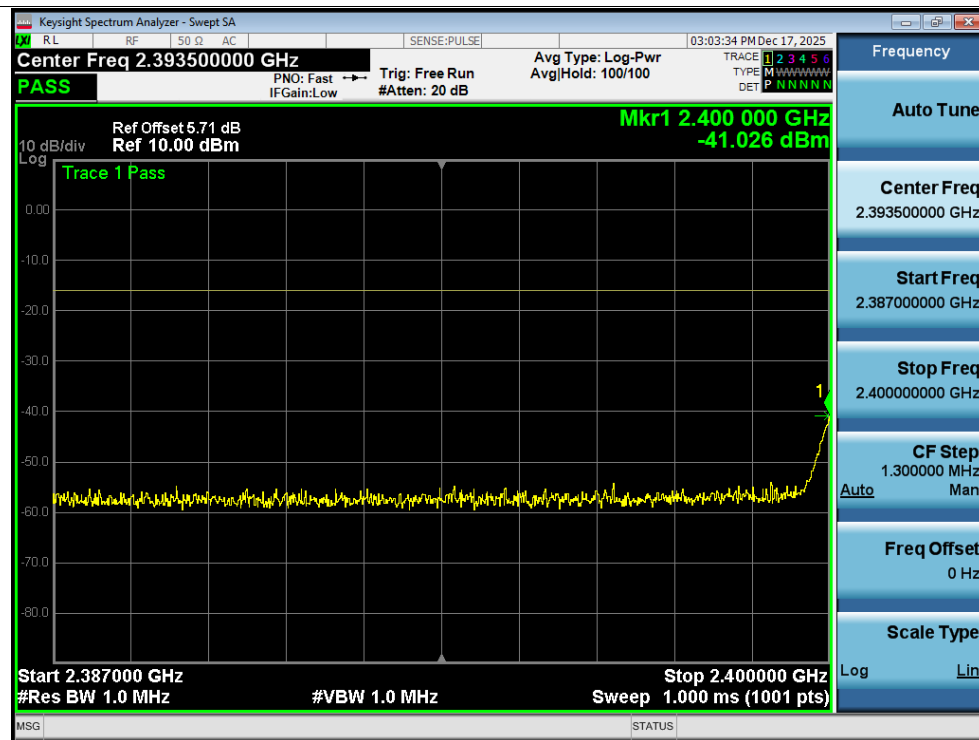
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 30MHz-1000MHz



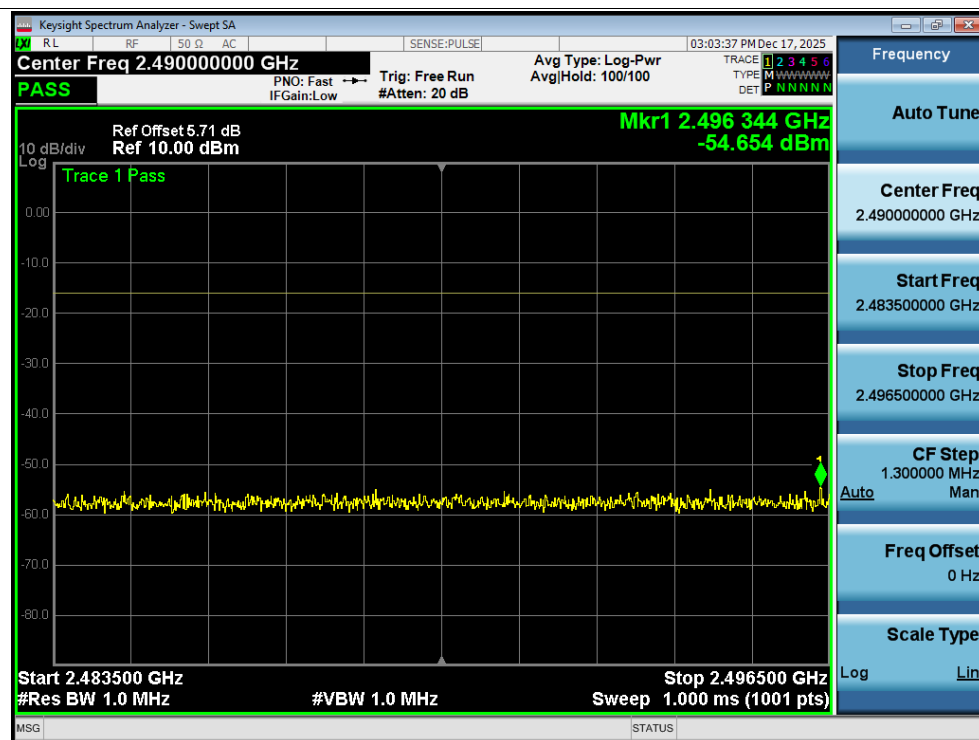
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 1000MHz-2387MHz



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



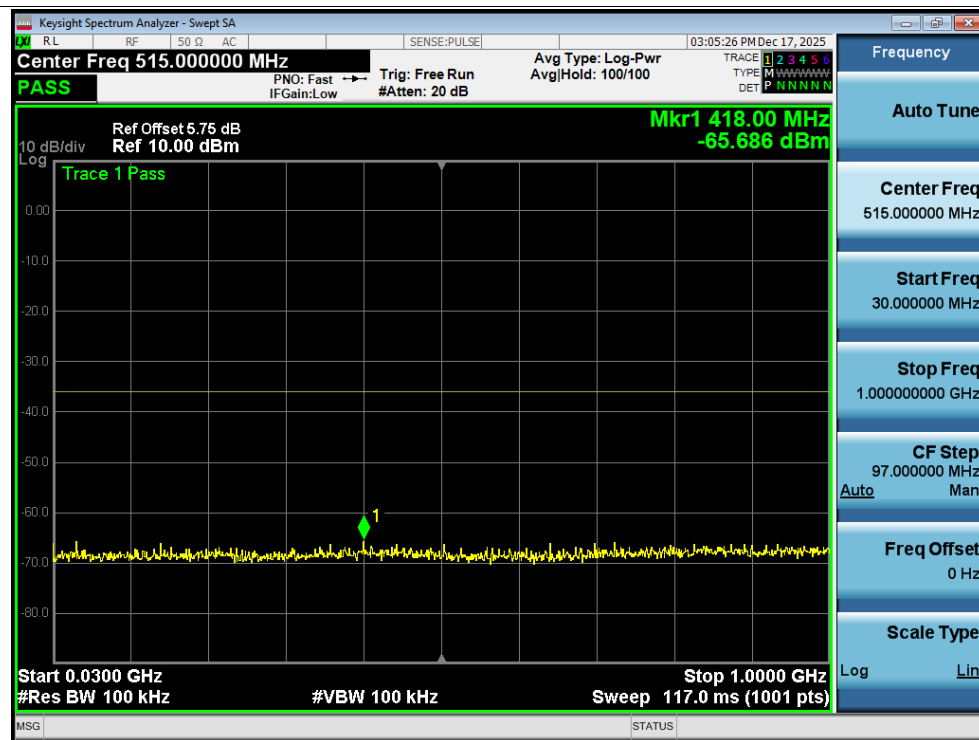
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 2483.5MHz-2496.5MHz



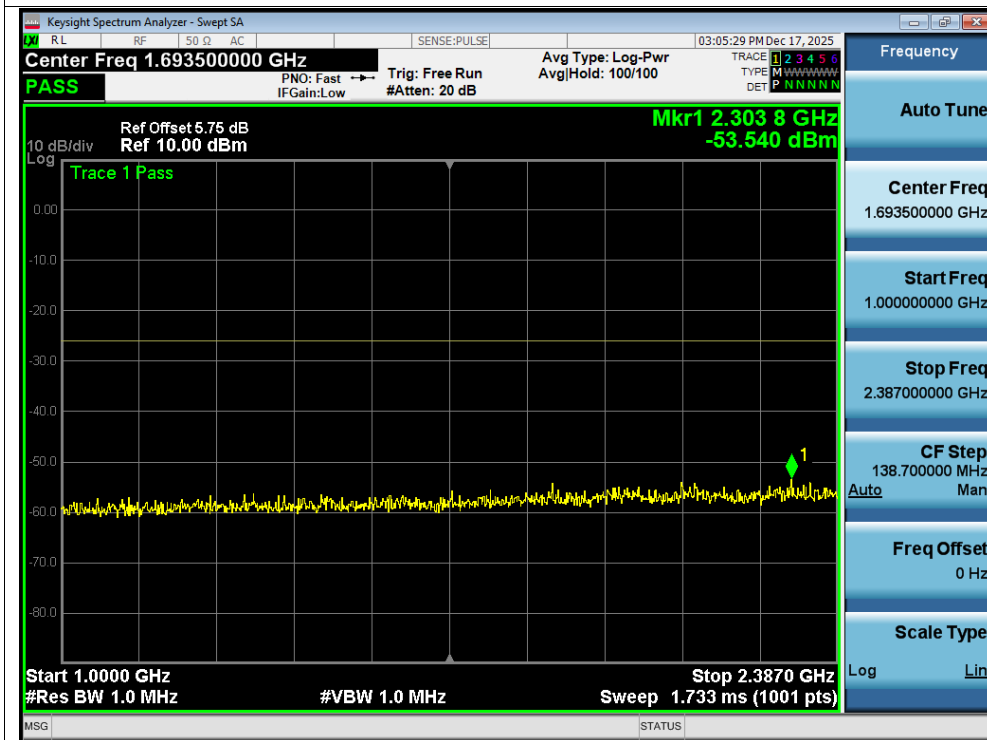
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 2496.5MHz-13000MHz



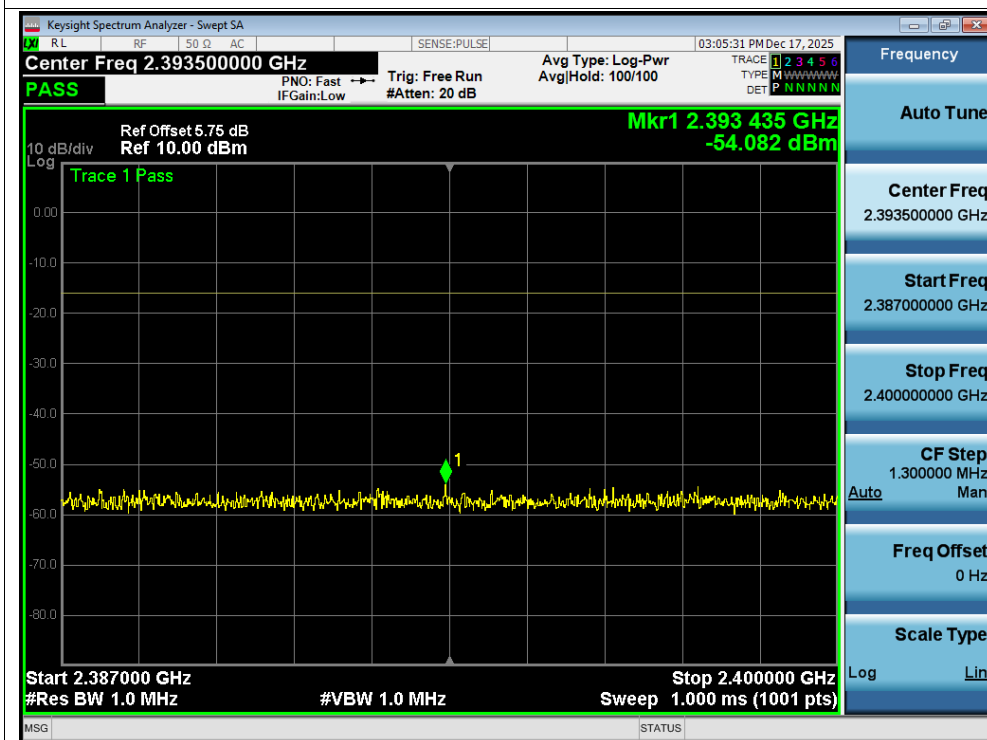
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 30MHz-1000MHz



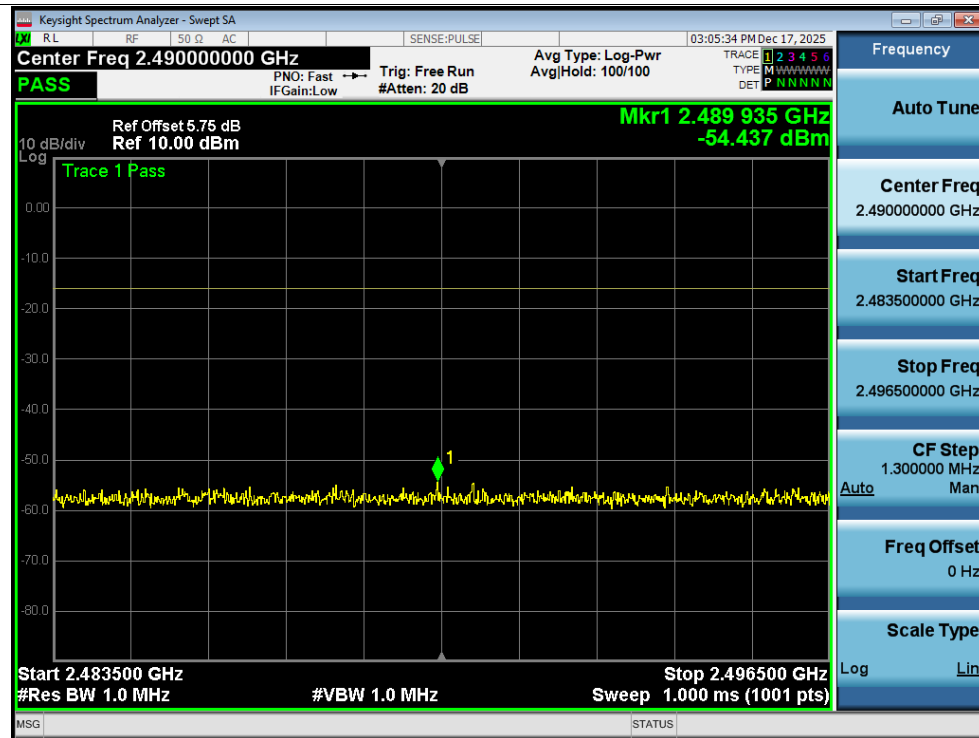
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 1000MHz-2387MHz



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



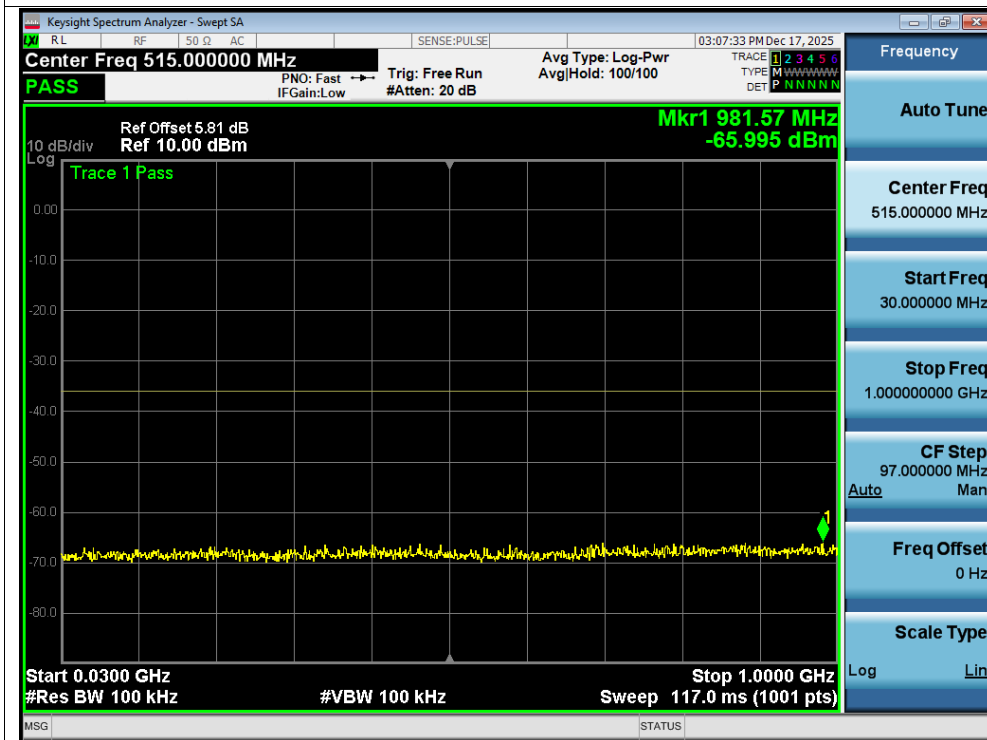
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 2483.5MHz-2496.5MHz



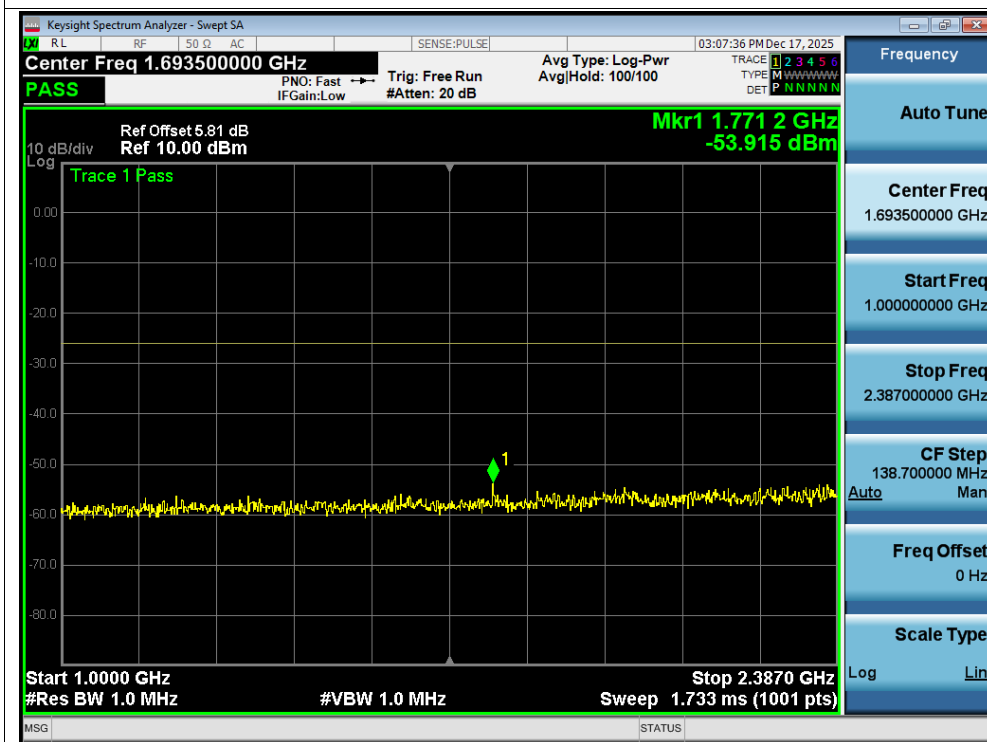
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 2496.5MHz-13000MHz



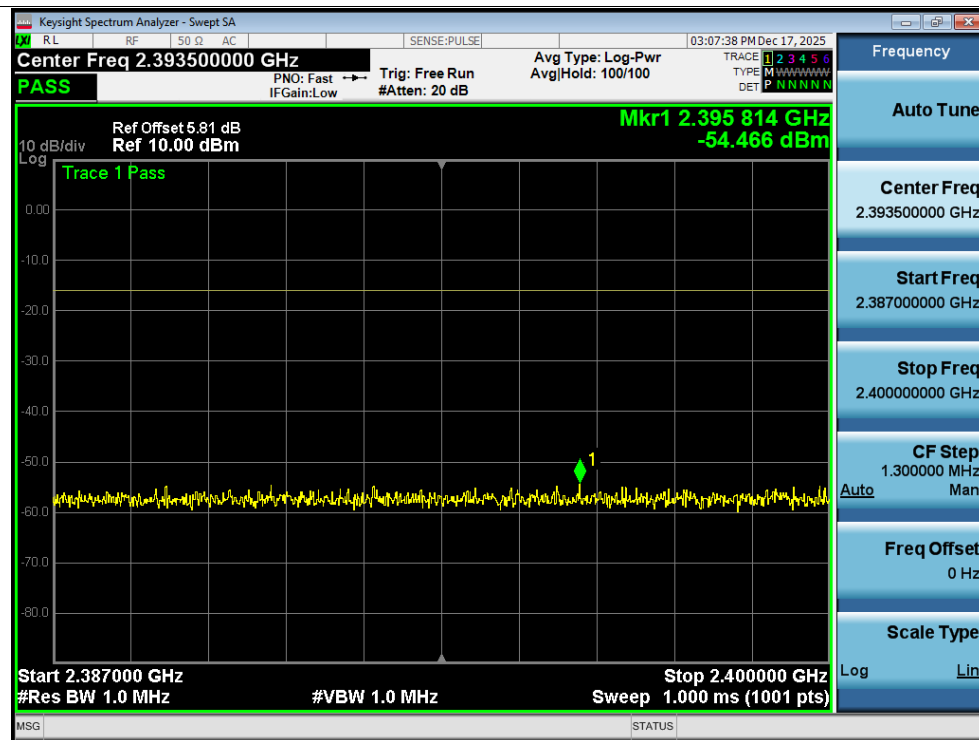
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 30MHz-1000MHz



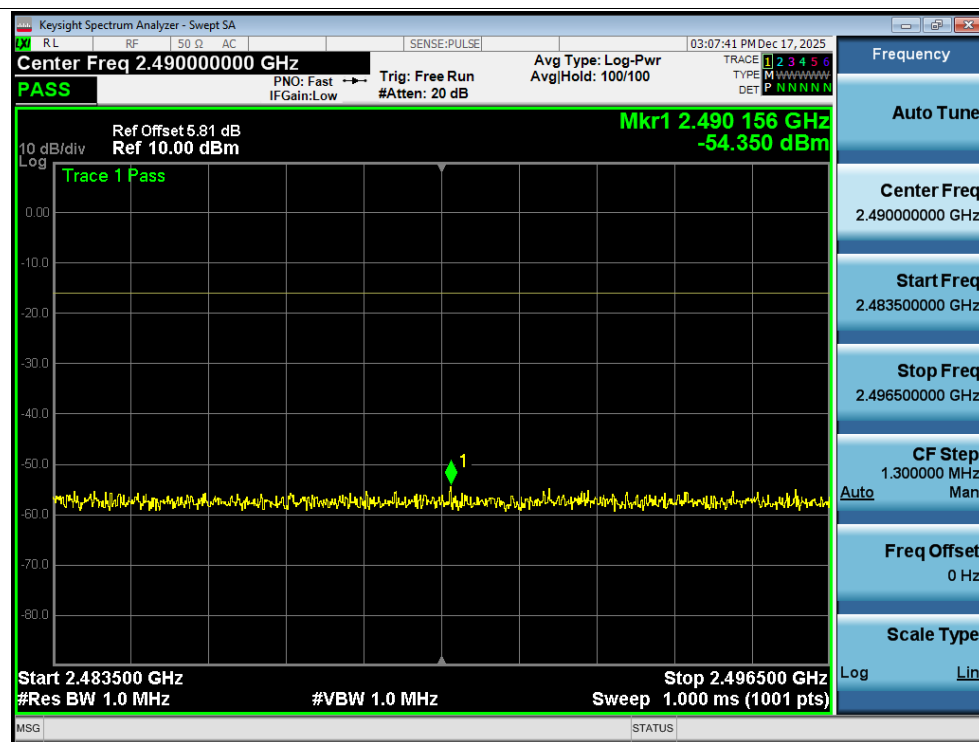
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 1000MHz-2387MHz



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



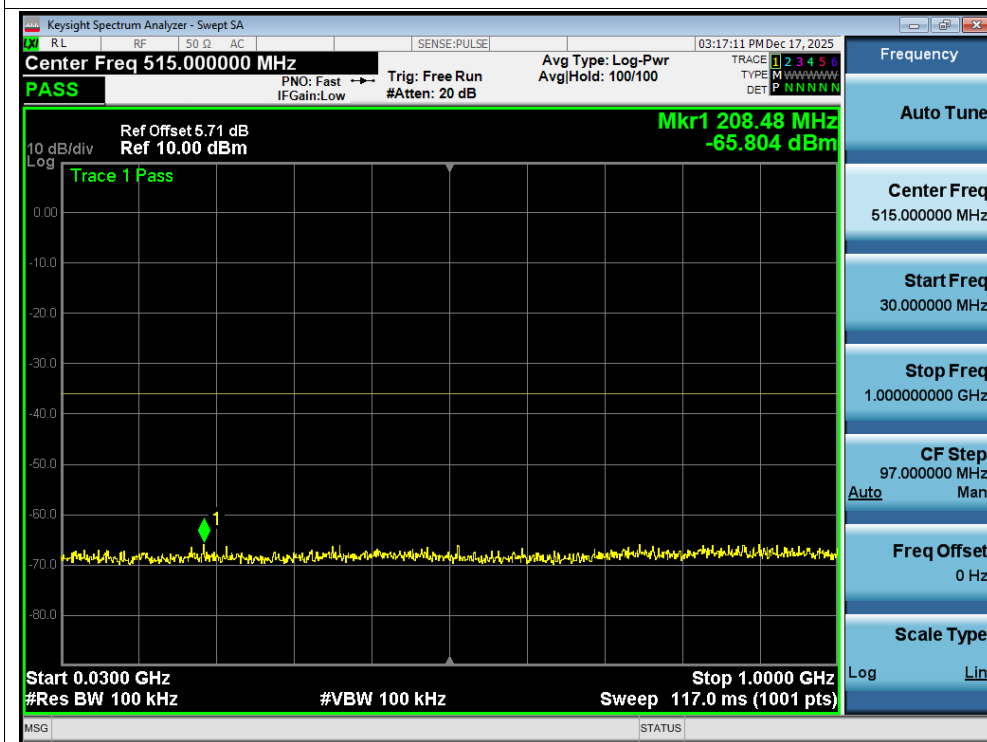
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 2483.5MHz-2496.5MHz



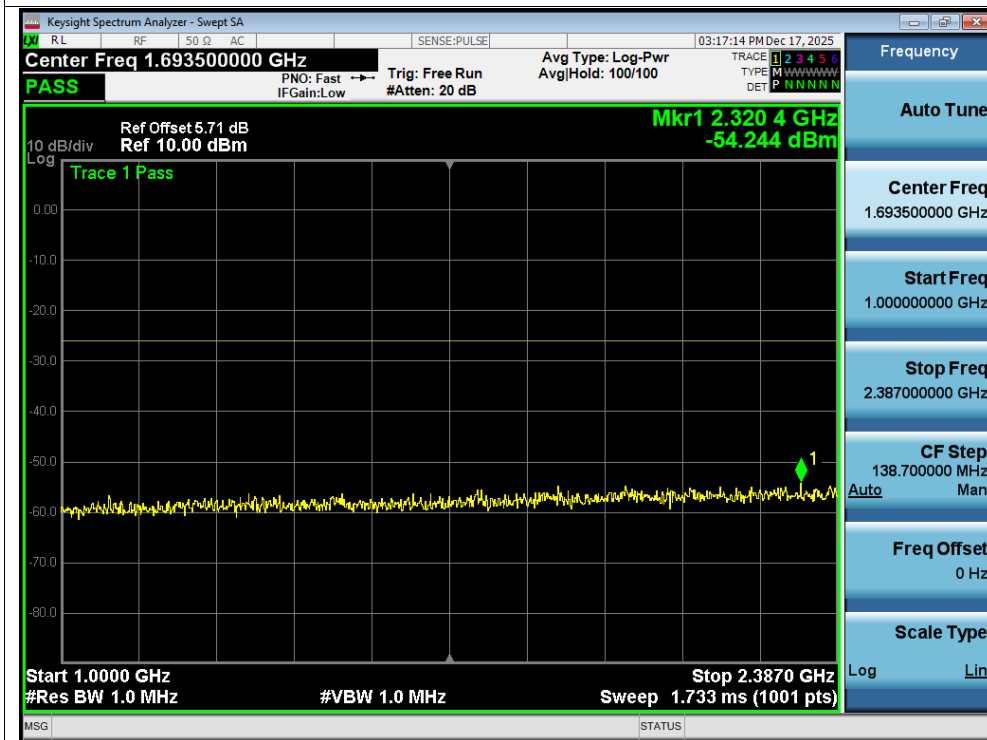
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 2496.5MHz-13000MHz



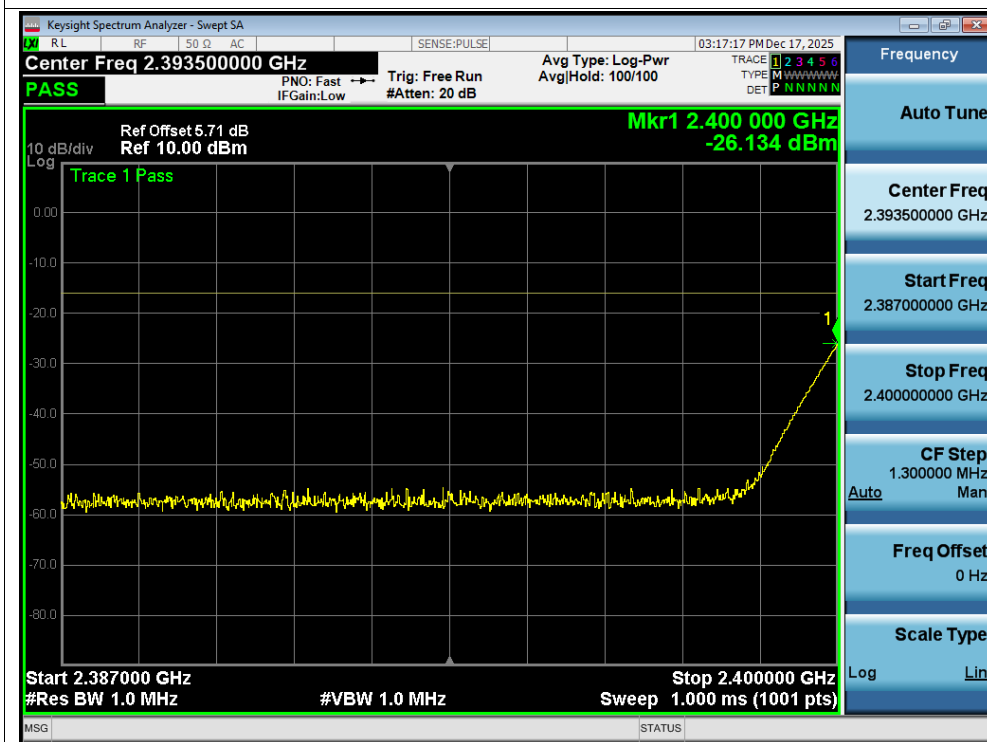
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 30MHz-1000MHz



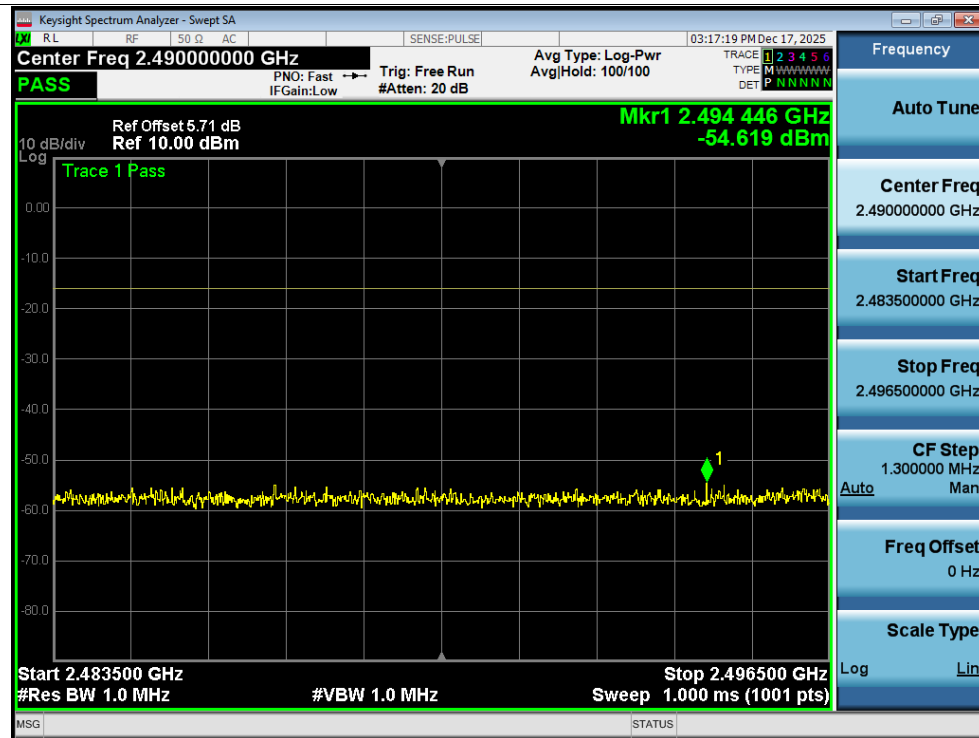
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 1000MHz-2387MHz



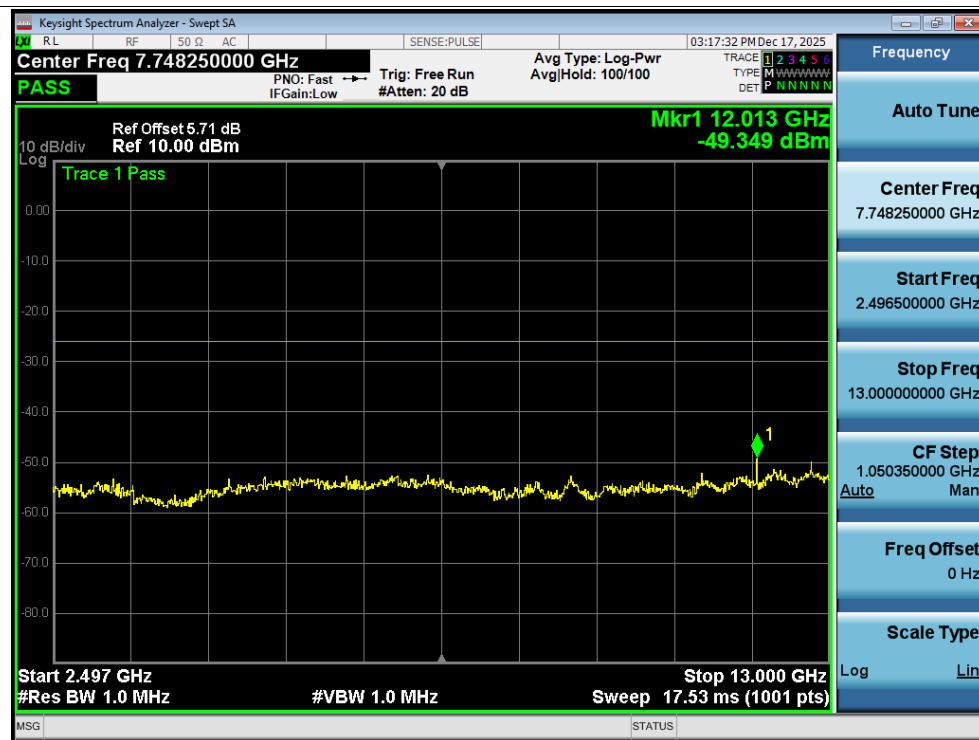
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 2387MHz-2400MHz



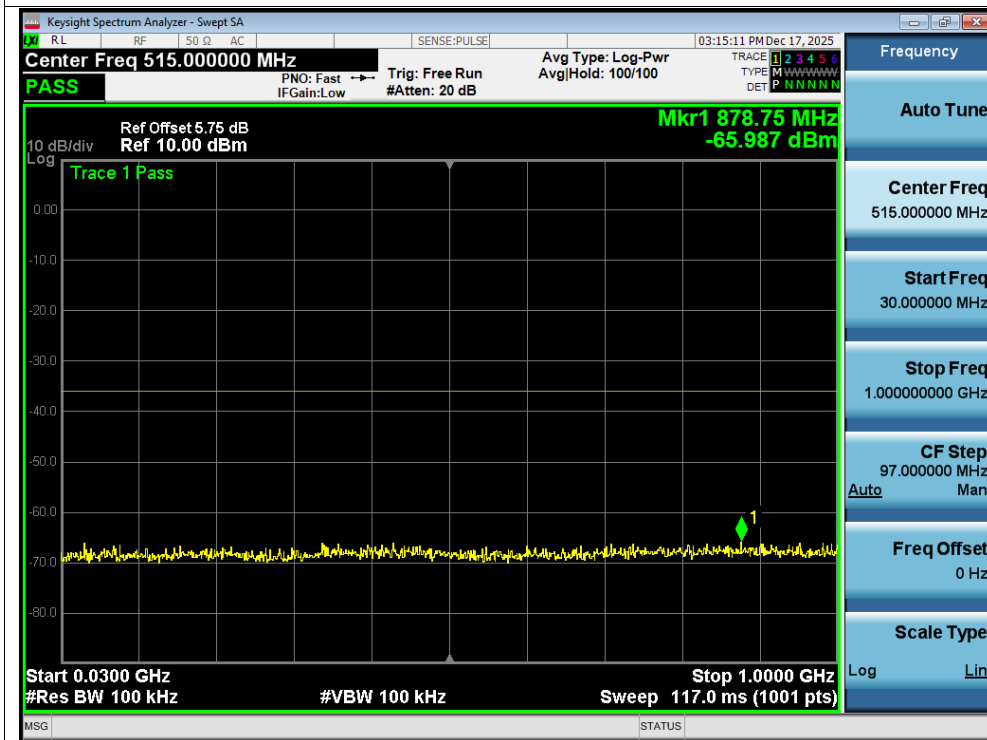
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 2483.5MHz-2496.5MHz



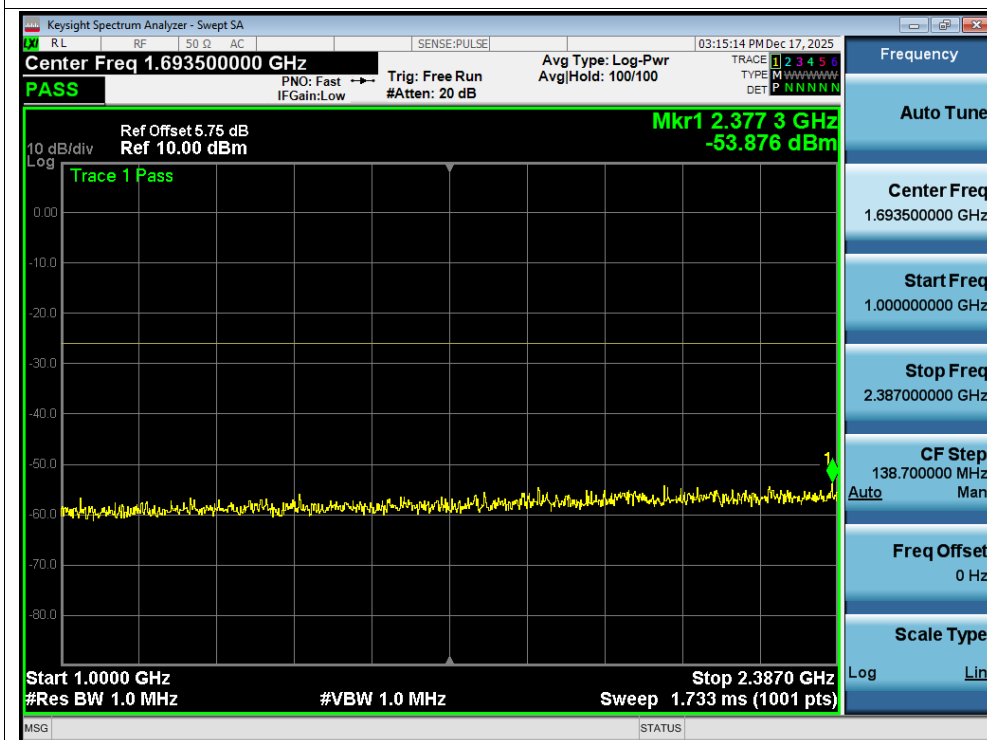
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 2496.5MHz-13000MHz



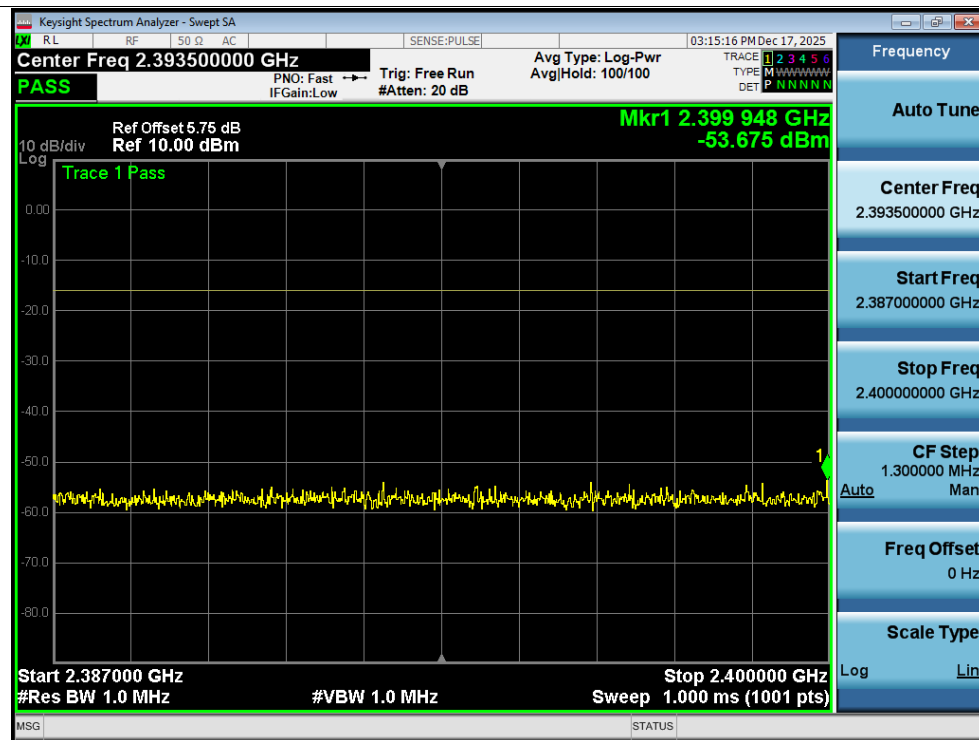
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 30MHz-1000MHz



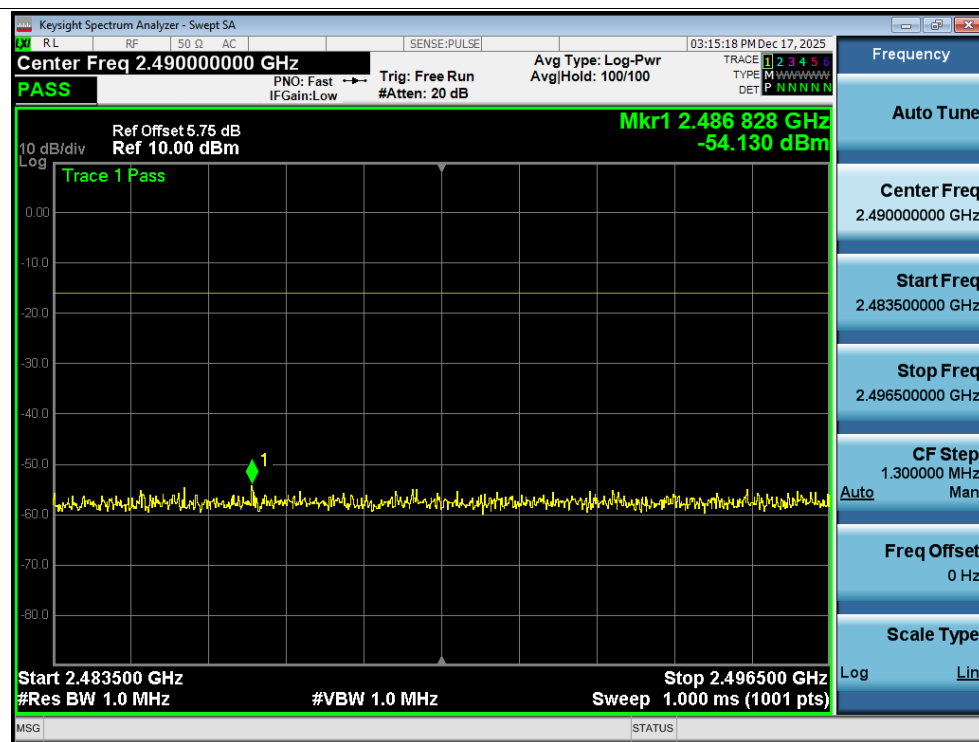
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 1000MHz-2387MHz



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



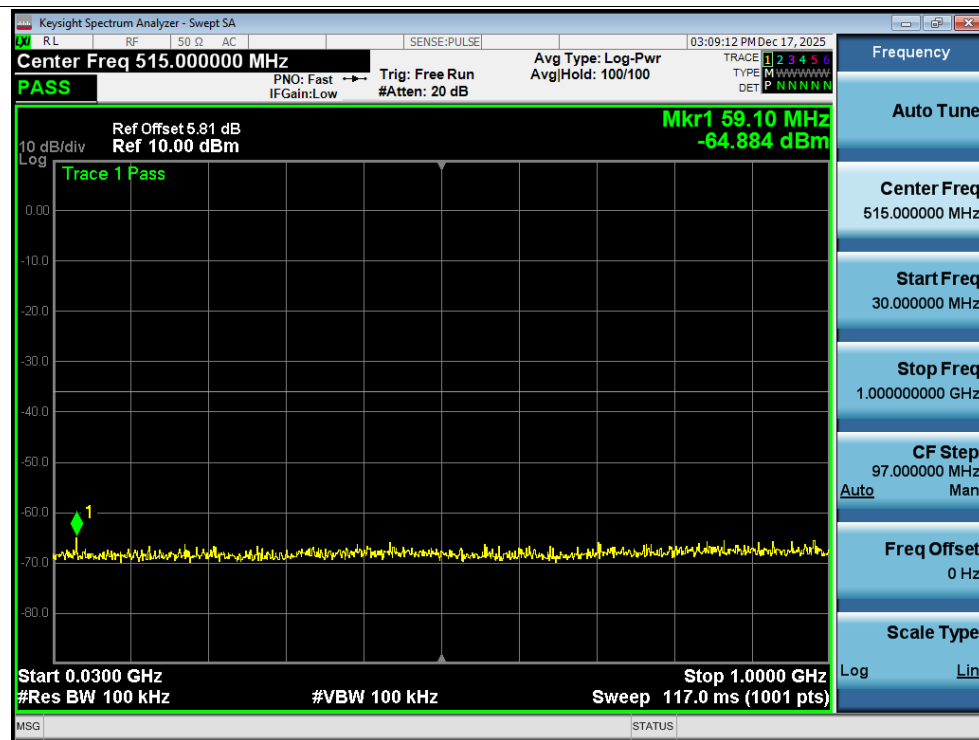
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 2483.5MHz-2496.5MHz



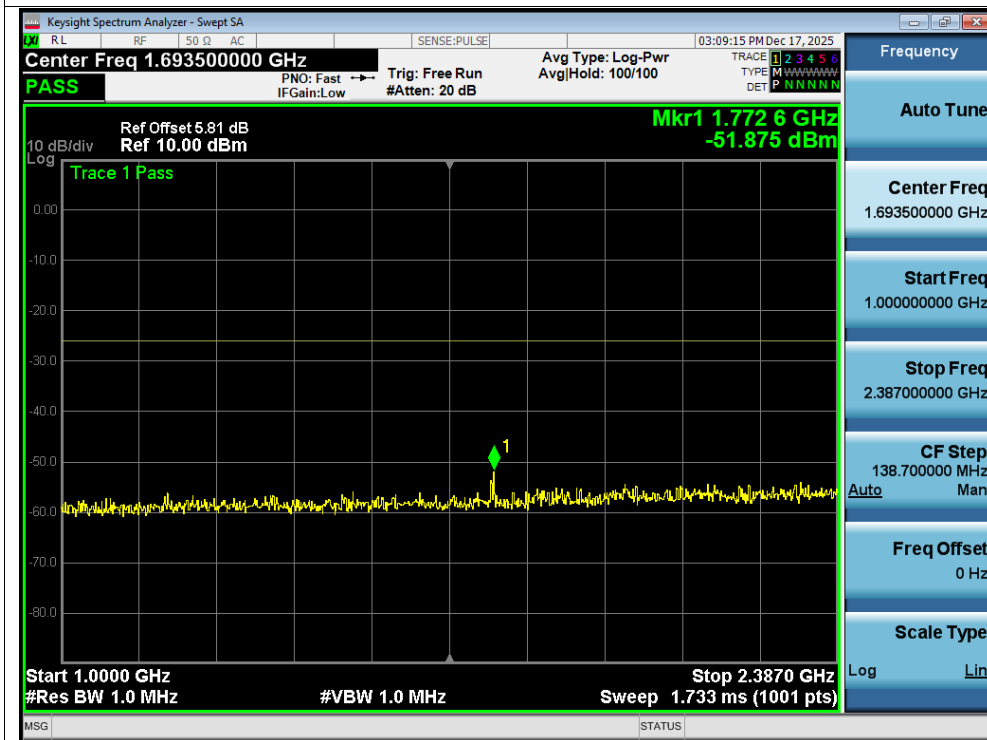
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 2496.5MHz-13000MHz



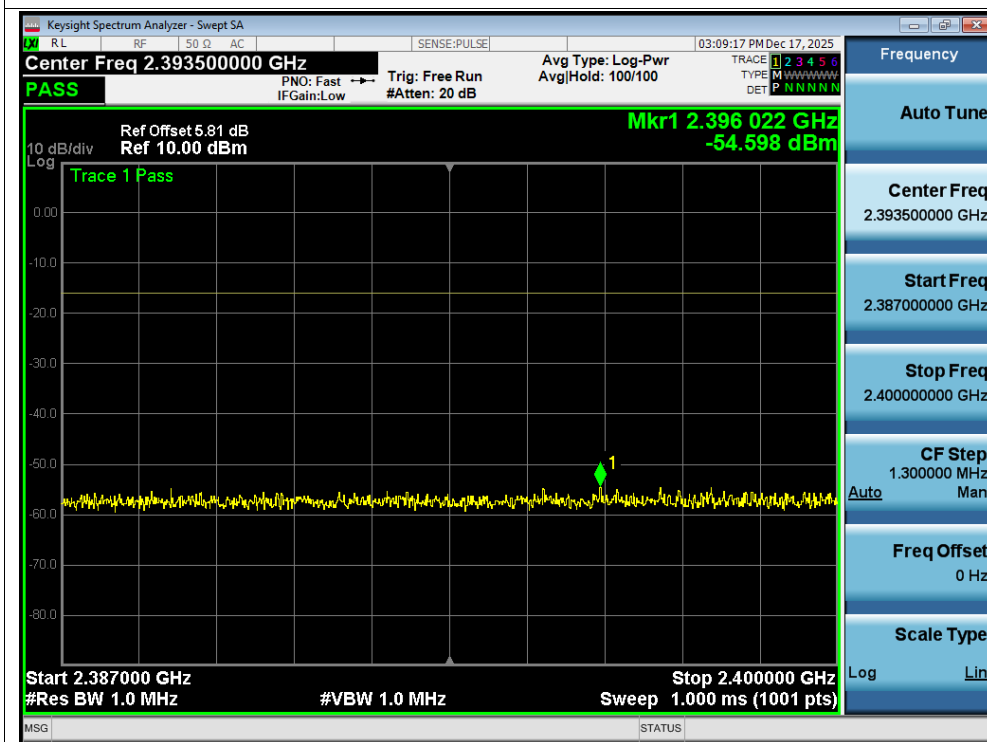
Tx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 30MHz-1000MHz



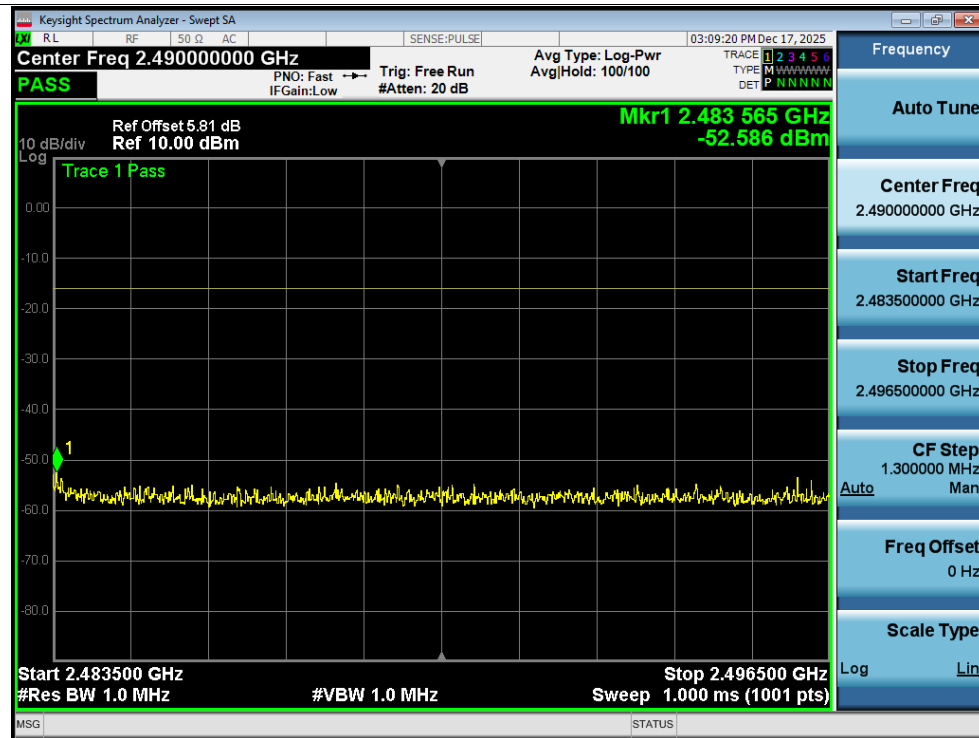
Tx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 1000MHz-2387MHz



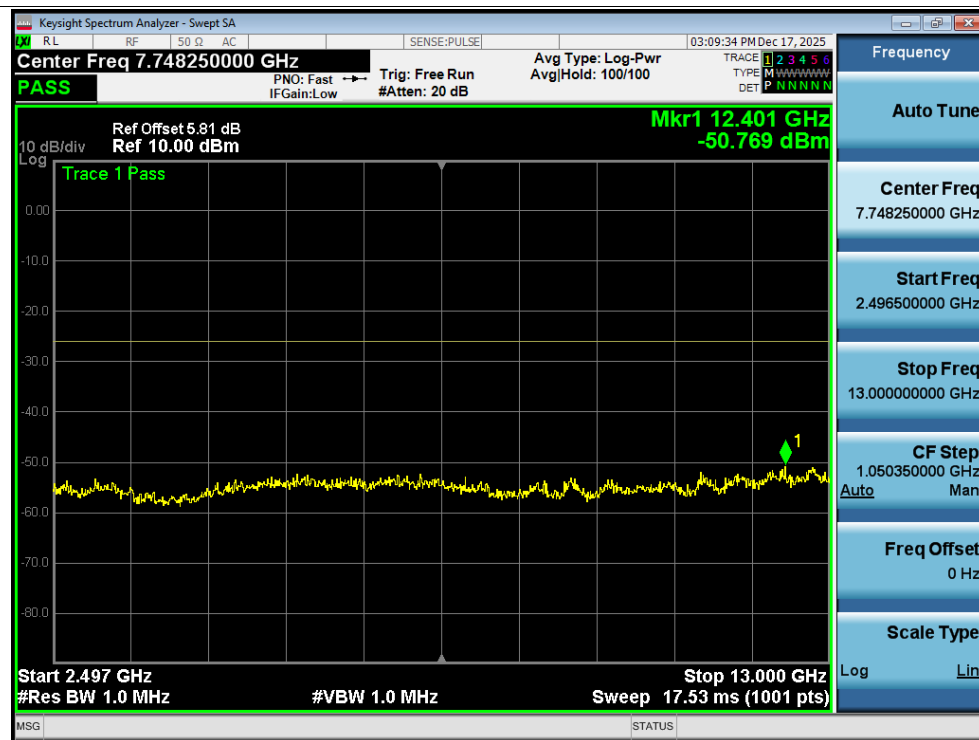
Tx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 2387MHz-2400MHz



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



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

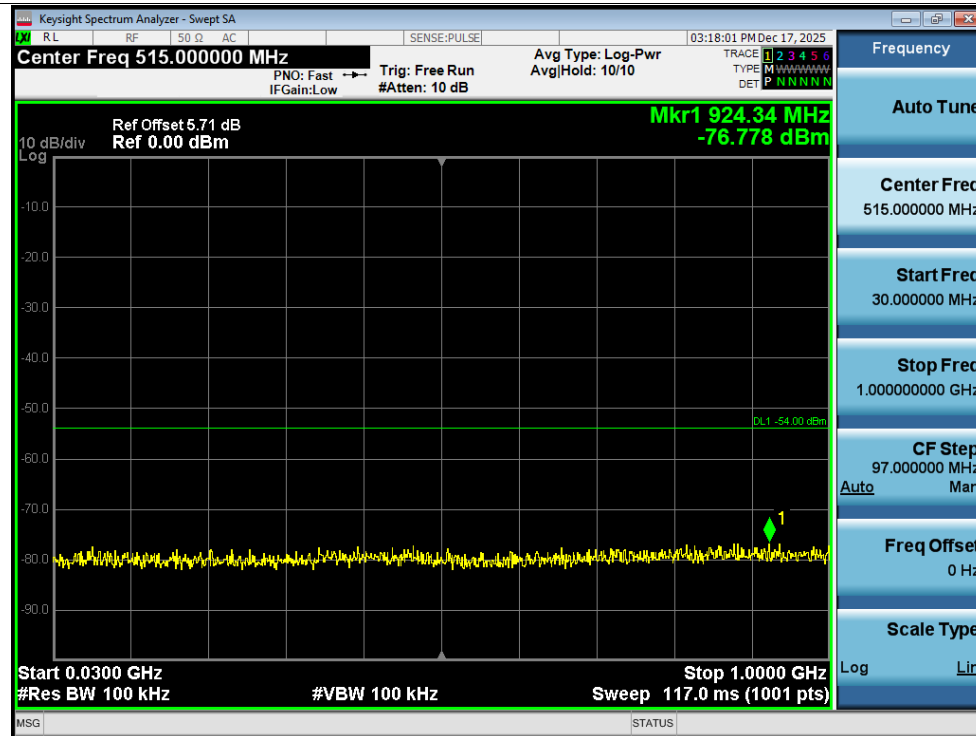


Rx Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	30-1000	924.34	-76.78	-54	Pass
NVNT	BLE 1M	2402	Ant1	1000-13000	2464	-52.75	-47	Pass
NVNT	BLE 1M	2440	Ant1	30-1000	699.3	-76.08	-54	Pass
NVNT	BLE 1M	2440	Ant1	1000-13000	2464	-54.86	-47	Pass
NVNT	BLE 1M	2480	Ant1	30-1000	714.82	-76.22	-54	Pass
NVNT	BLE 1M	2480	Ant1	1000-13000	2464	-55.13	-47	Pass
NVNT	BLE 2M	2402	Ant1	30-1000	903.97	-76.29	-54	Pass
NVNT	BLE 2M	2402	Ant1	1000-13000	2464	-60.96	-47	Pass
NVNT	BLE 2M	2440	Ant1	30-1000	932.1	-76.22	-54	Pass
NVNT	BLE 2M	2440	Ant1	1000-13000	5752	-49.05	-47	Pass
NVNT	BLE 2M	2480	Ant1	30-1000	191.02	-75.66	-54	Pass
NVNT	BLE 2M	2480	Ant1	1000-13000	2464	-52.11	-47	Pass

Test Graphs

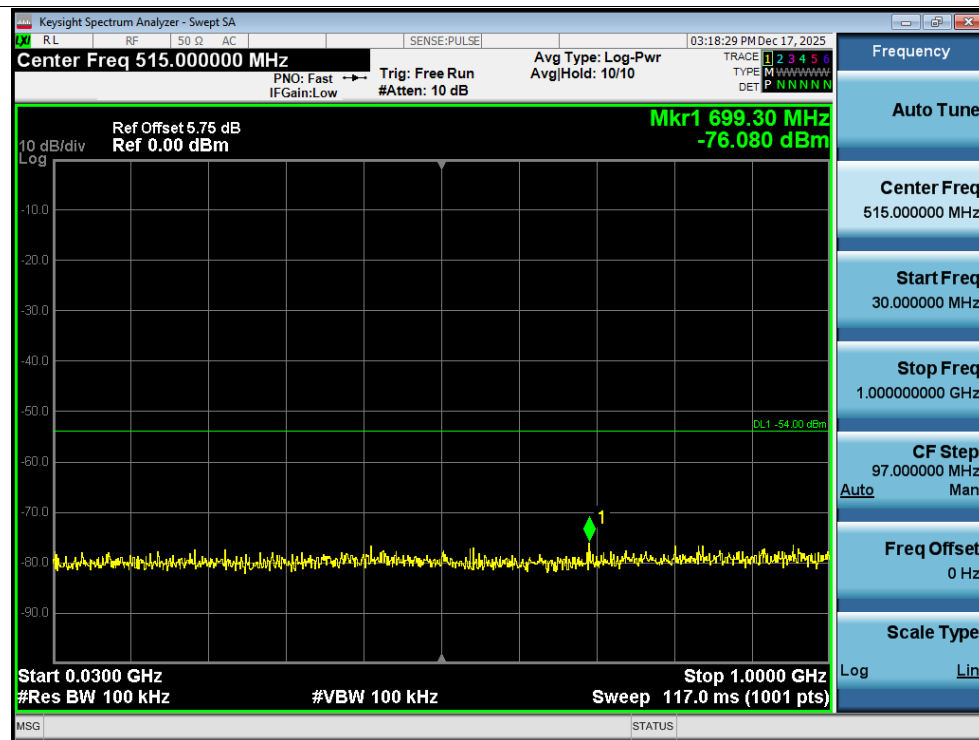
Rx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 30MHz-1000MHz



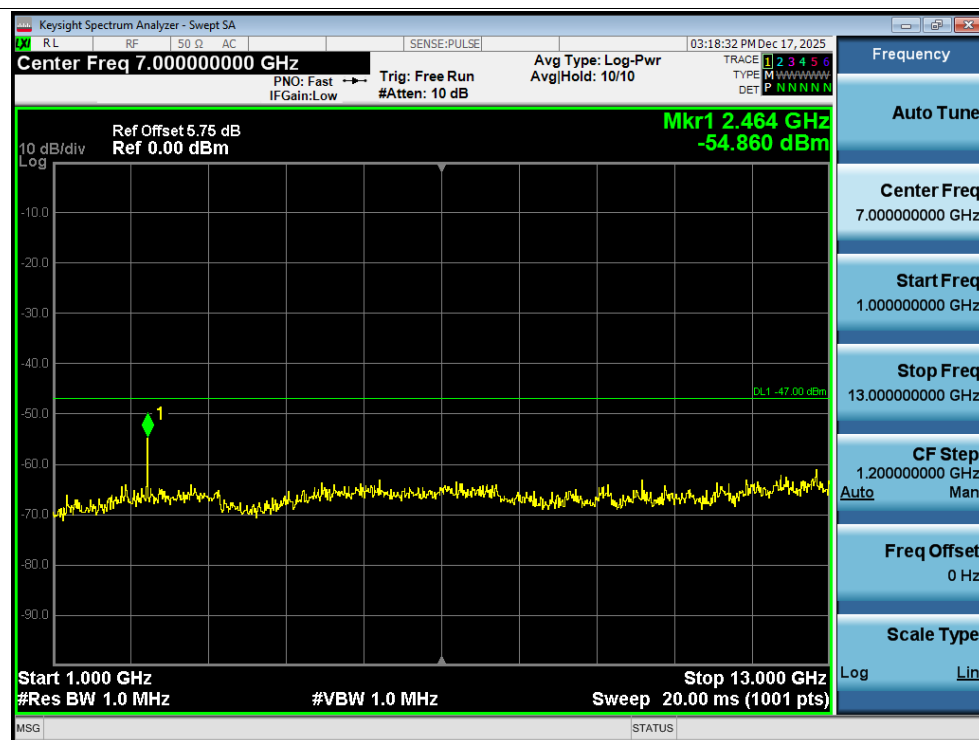
Rx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 1000MHz-13000MHz



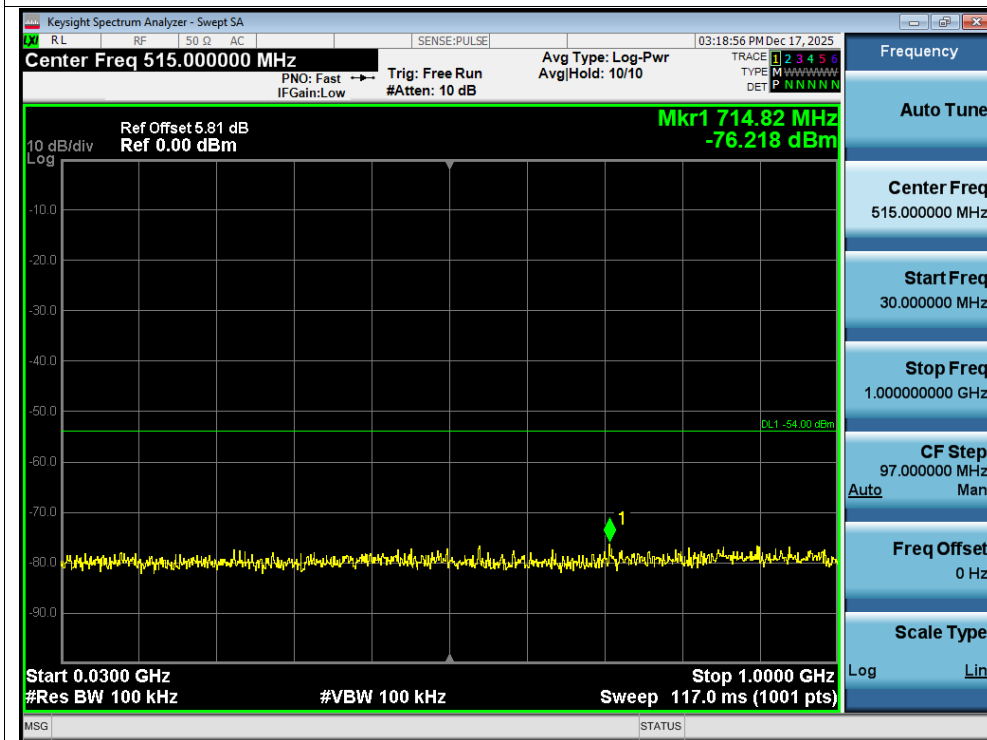
Rx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 30MHz-1000MHz



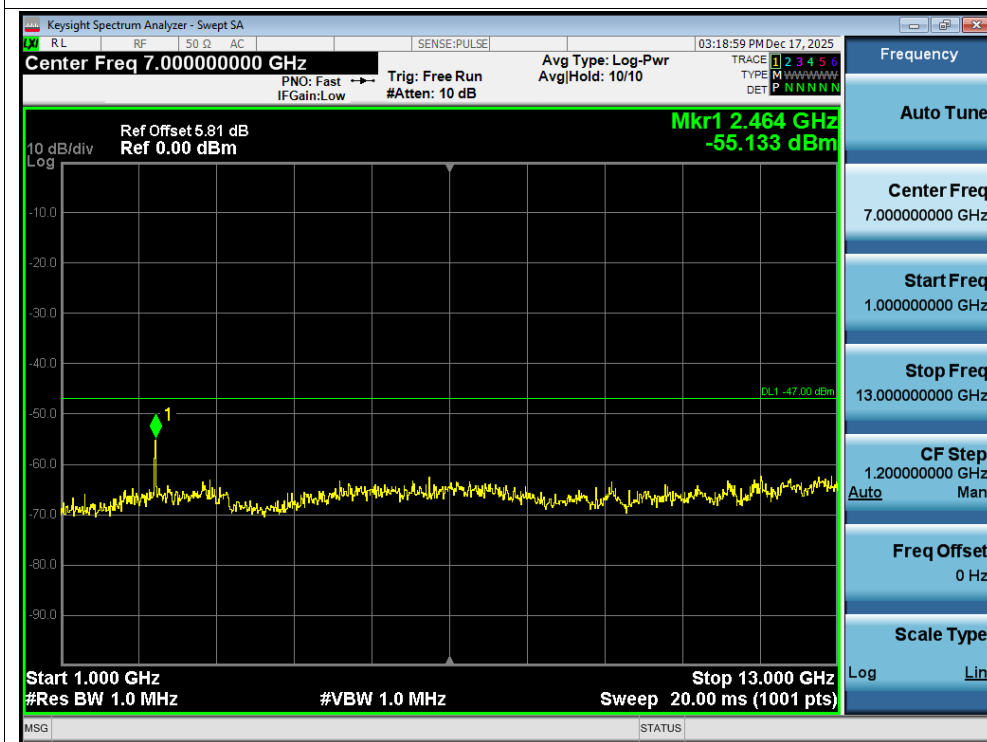
Rx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 1000MHz-13000MHz



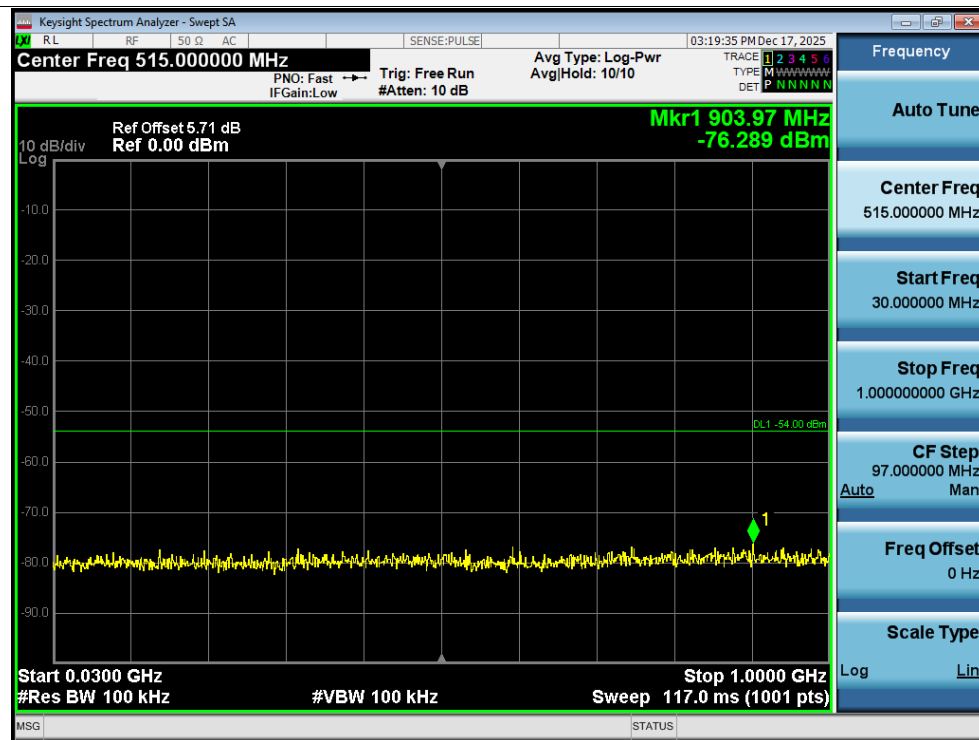
Rx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 30MHz-1000MHz



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



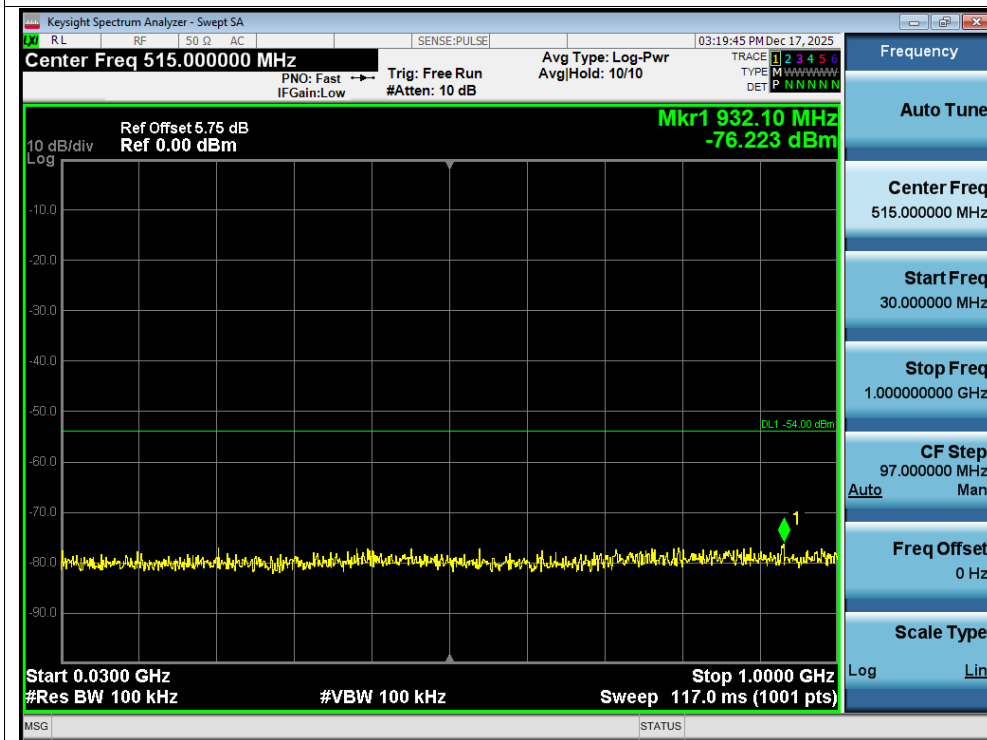
Rx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 30MHz-1000MHz



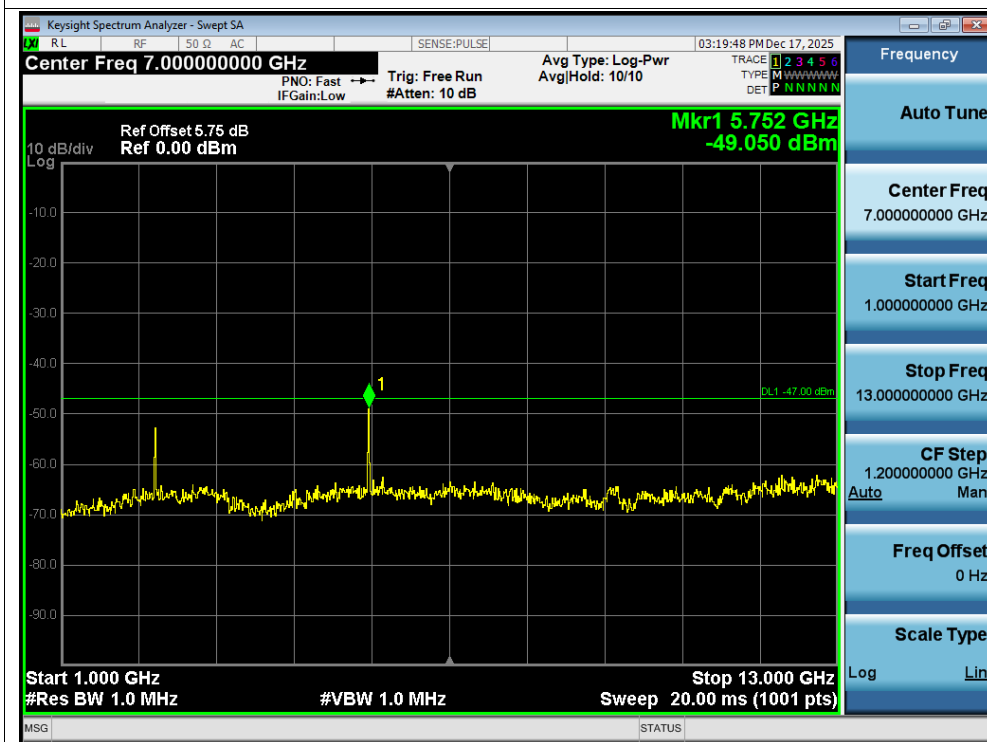
Rx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 1000MHz-13000MHz



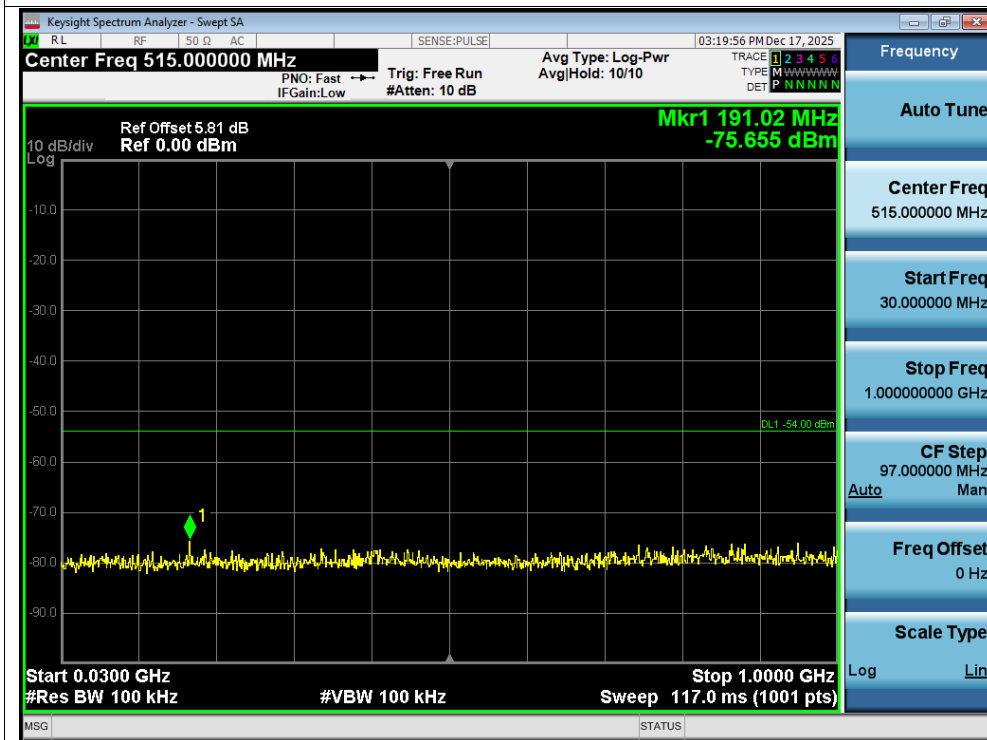
Rx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 30MHz-1000MHz



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

