

FCC Appendix RF Test Data for BLE

FCC ID : 2AC8UA2570

Company : Anhui Huami Information Technology Co., Ltd.

EUT : Smart Watch

Model Number : A2570

Report No. : CTA26061300101

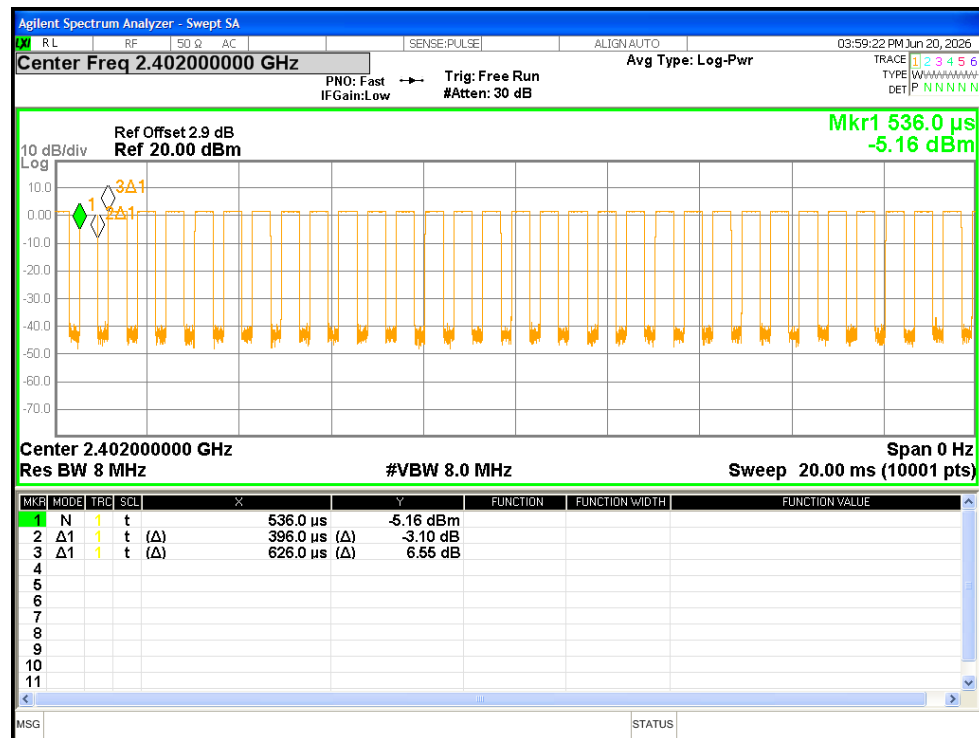
Reviewed By : Eric Wang

Duty Cycle

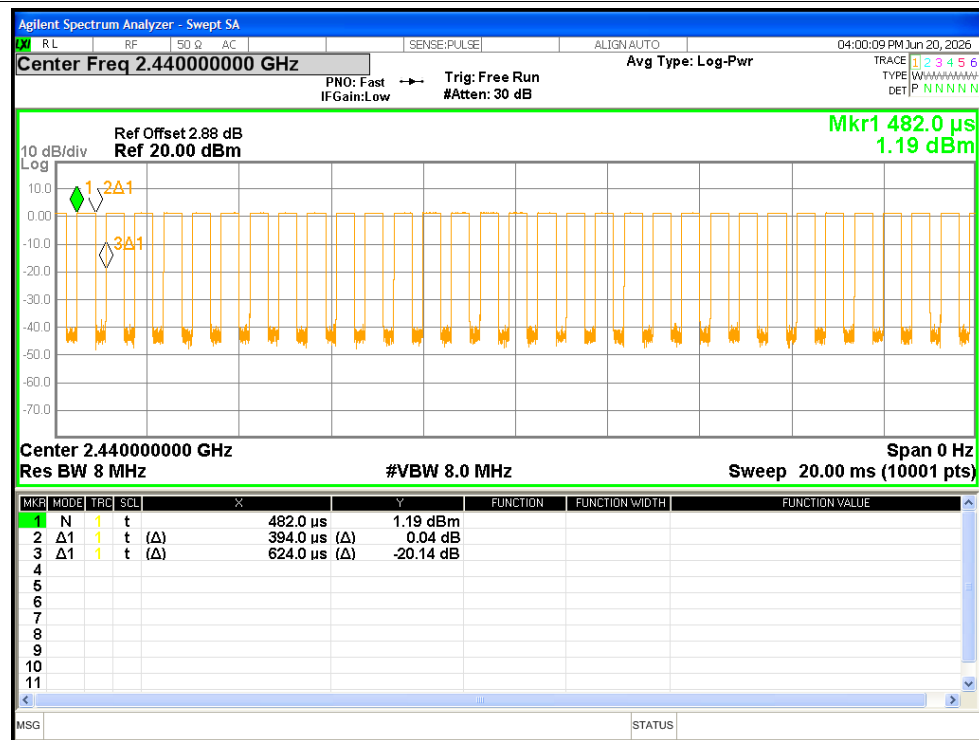
Condition	Mode	Frequency (MHz)	On Time (ms)	Period (ms)	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	0.396	0.626	63.26	1.99	2.53
NVNT	BLE 1M	2440	0.394	0.624	63.14	2	2.54
NVNT	BLE 1M	2480	0.394	0.624	63.14	2	2.54
NVNT	BLE 2M	2402	0.208	0.624	33.33	4.77	4.81
NVNT	BLE 2M	2440	0.208	0.624	33.33	4.77	4.81
NVNT	BLE 2M	2480	0.21	0.626	33.55	4.74	4.76

Test Graphs

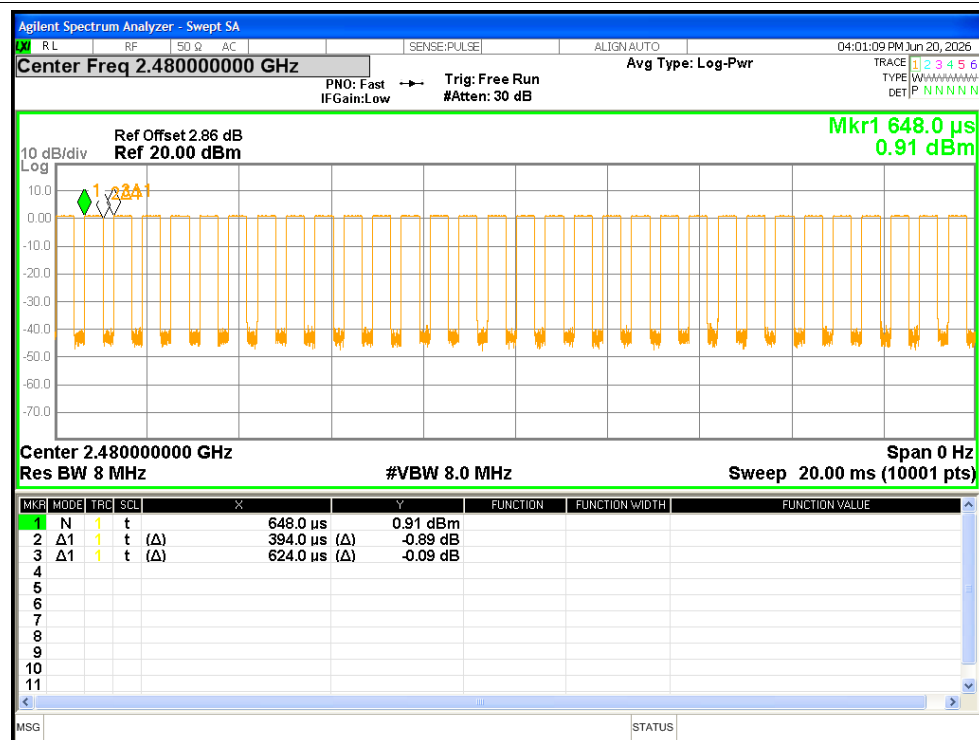
Duty Cycle NVNT BLE 1M 2402MHz



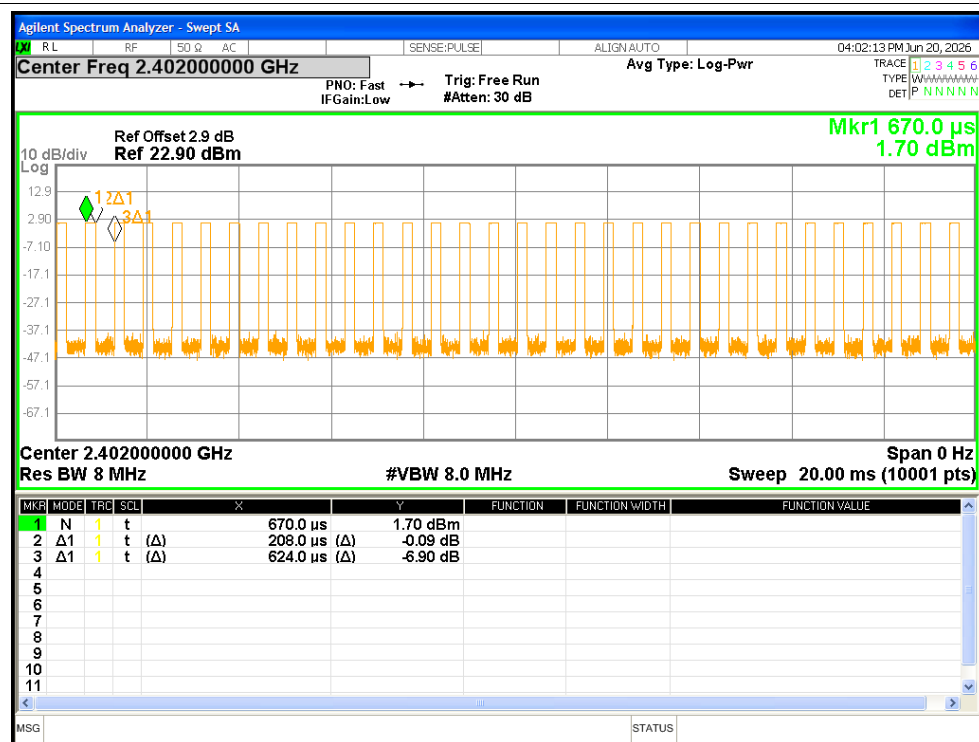
Duty Cycle NVNT BLE 1M 2440MHz



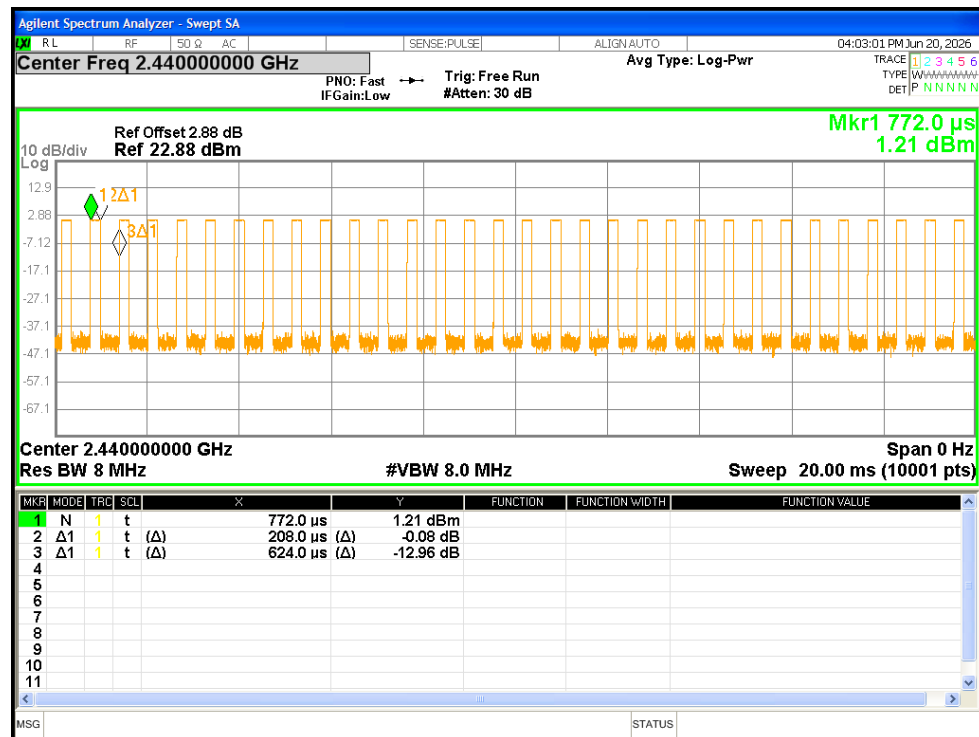
Duty Cycle NVNT BLE 1M 2480MHz



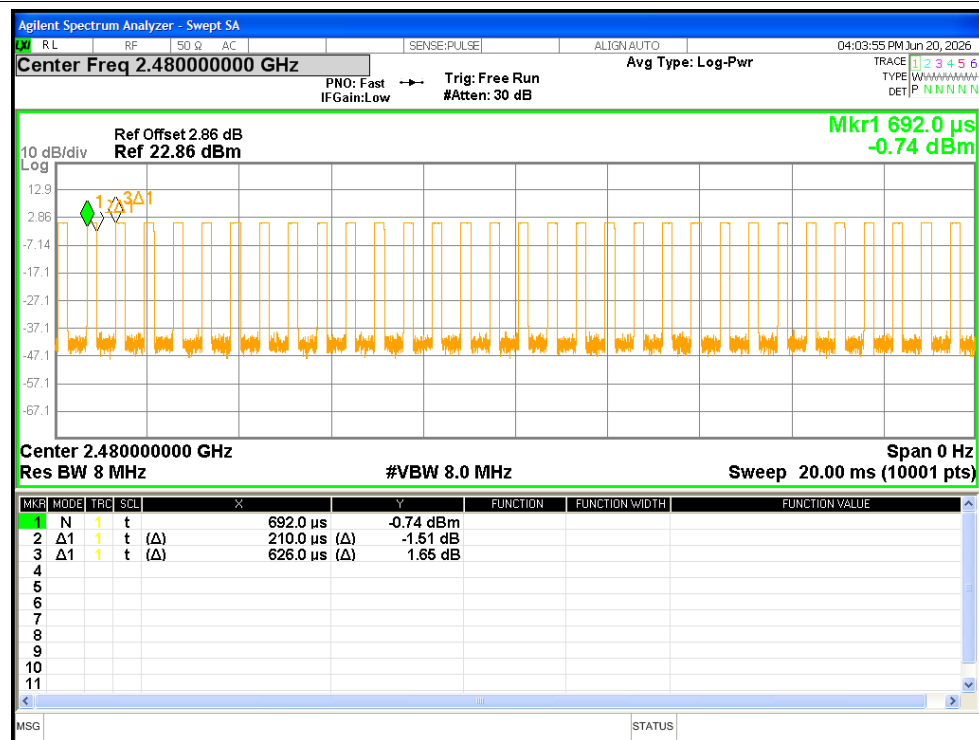
Duty Cycle NVNT BLE 2M 2402MHz



Duty Cycle NVNT BLE 2M 2440MHz



Duty Cycle NVNT BLE 2M 2480MHz



Maximum Peak Conducted Output Power

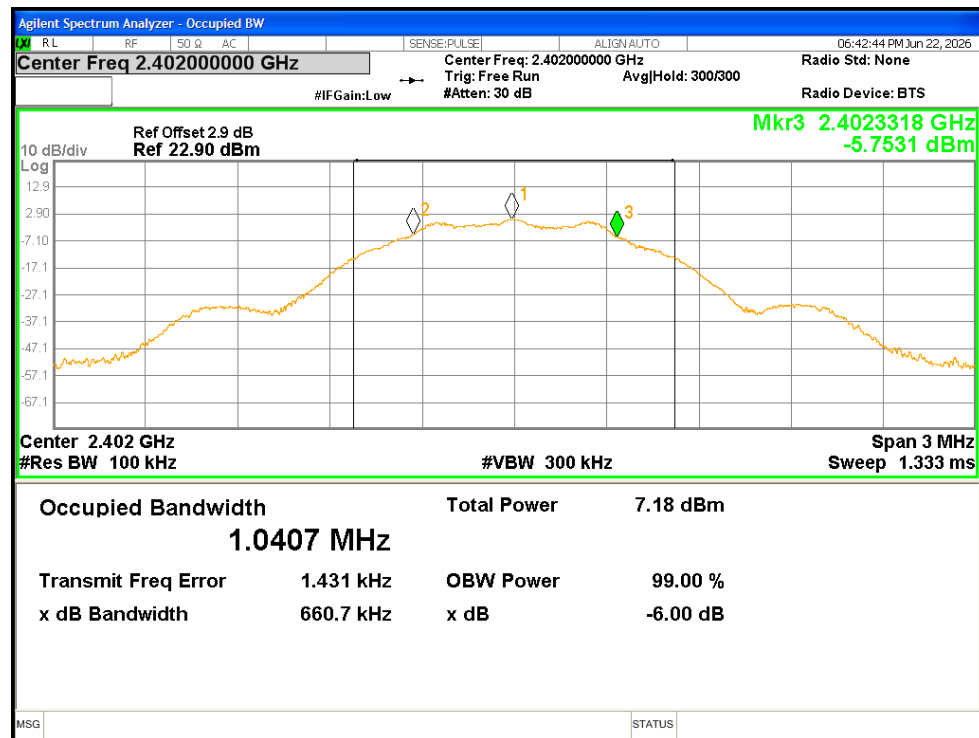
Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	1.44	<=30	Pass
NVNT	BLE 1M	2440	1.21	<=30	Pass
NVNT	BLE 1M	2480	0.87	<=30	Pass
NVNT	BLE 2M	2402	1.5	<=30	Pass
NVNT	BLE 2M	2440	1.25	<=30	Pass
NVNT	BLE 2M	2480	0.96	<=30	Pass

-6dB Bandwidth

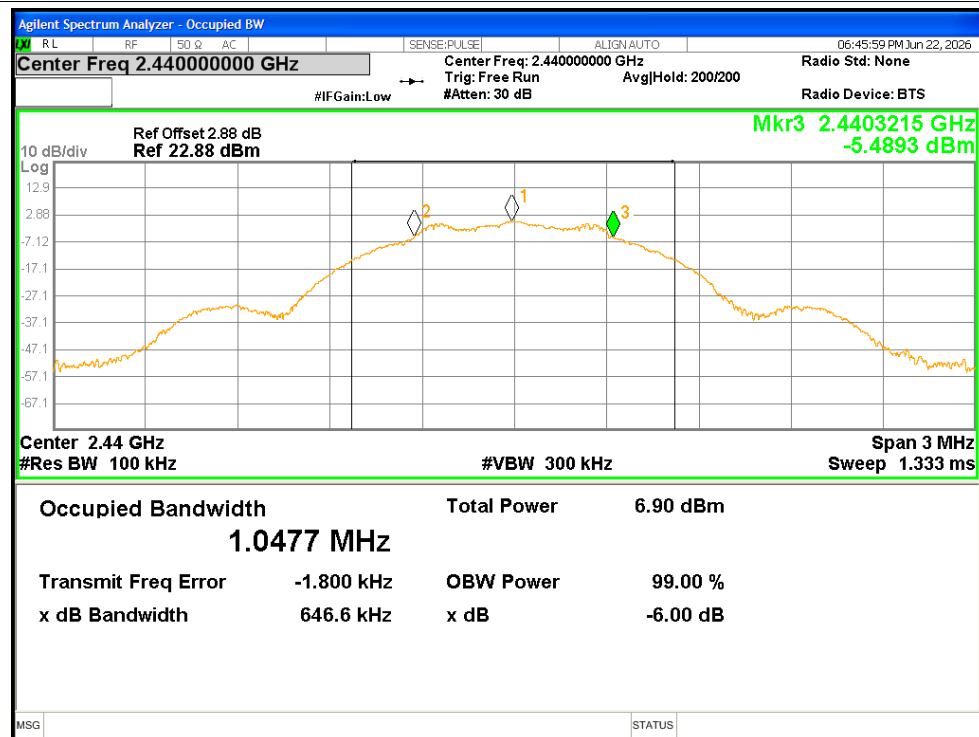
Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	0.6607	≥ 0.5	Pass
NVNT	BLE 1M	2440	0.6466	≥ 0.5	Pass
NVNT	BLE 1M	2480	0.656	≥ 0.5	Pass
NVNT	BLE 2M	2402	1.124	≥ 0.5	Pass
NVNT	BLE 2M	2440	1.096	≥ 0.5	Pass
NVNT	BLE 2M	2480	1.136	≥ 0.5	Pass

Test Graphs

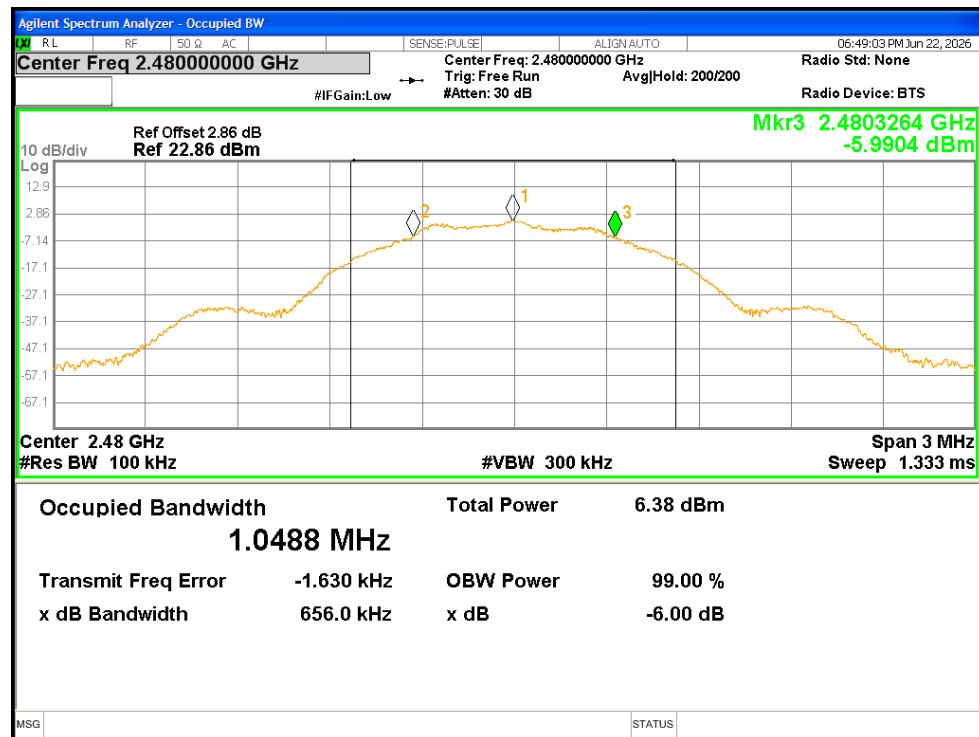
-6dB Bandwidth NVNT BLE 1M 2402MHz



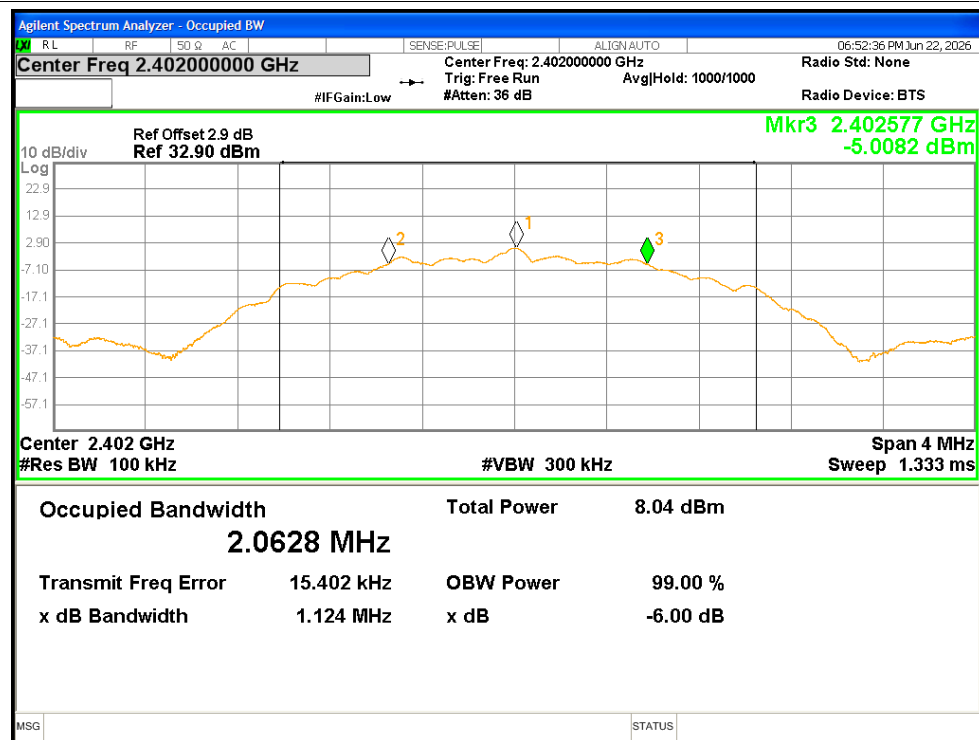
-6dB Bandwidth NVNT BLE 1M 2440MHz



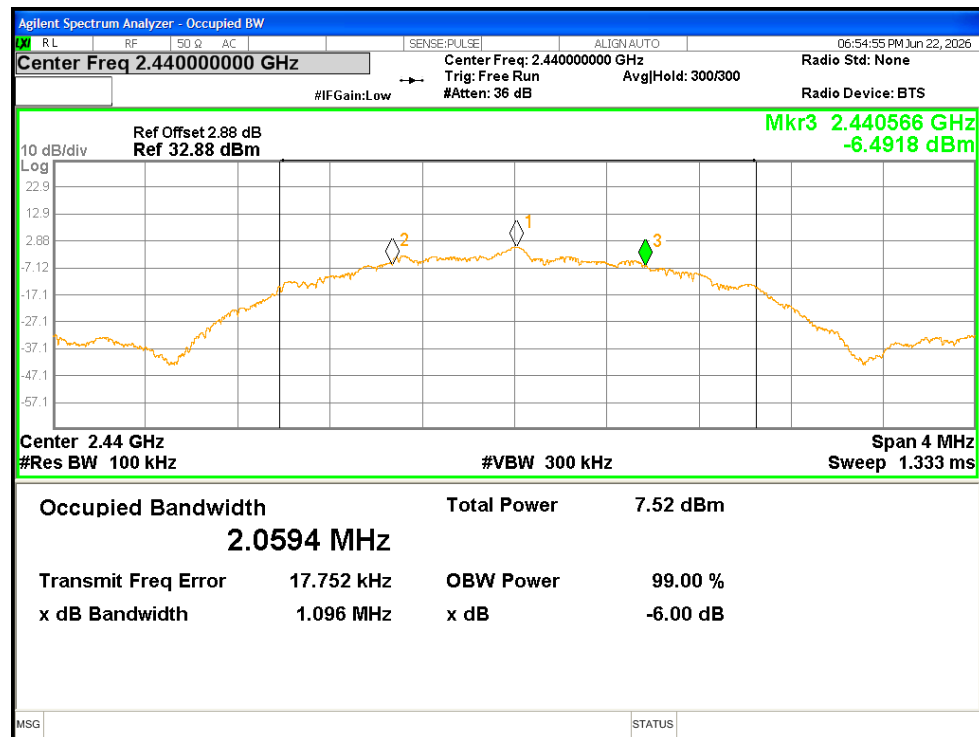
-6dB Bandwidth NVNT BLE 1M 2480MHz



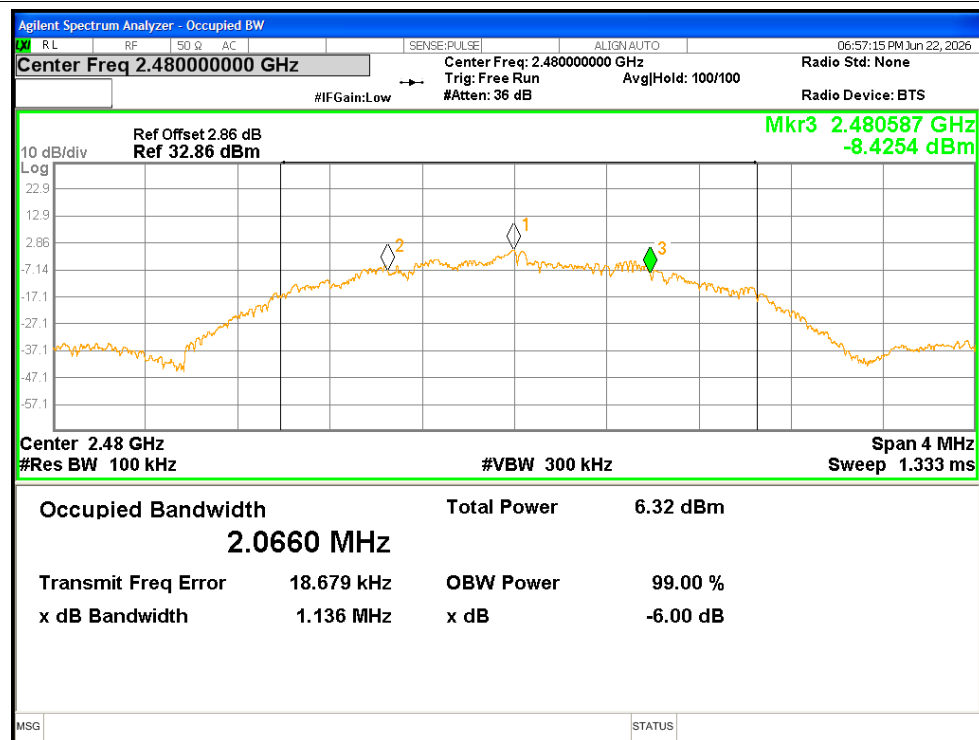
-6dB Bandwidth NVNT BLE 2M 2402MHz



-6dB Bandwidth NVNT BLE 2M 2440MHz



-6dB Bandwidth NVNT BLE 2M 2480MHz

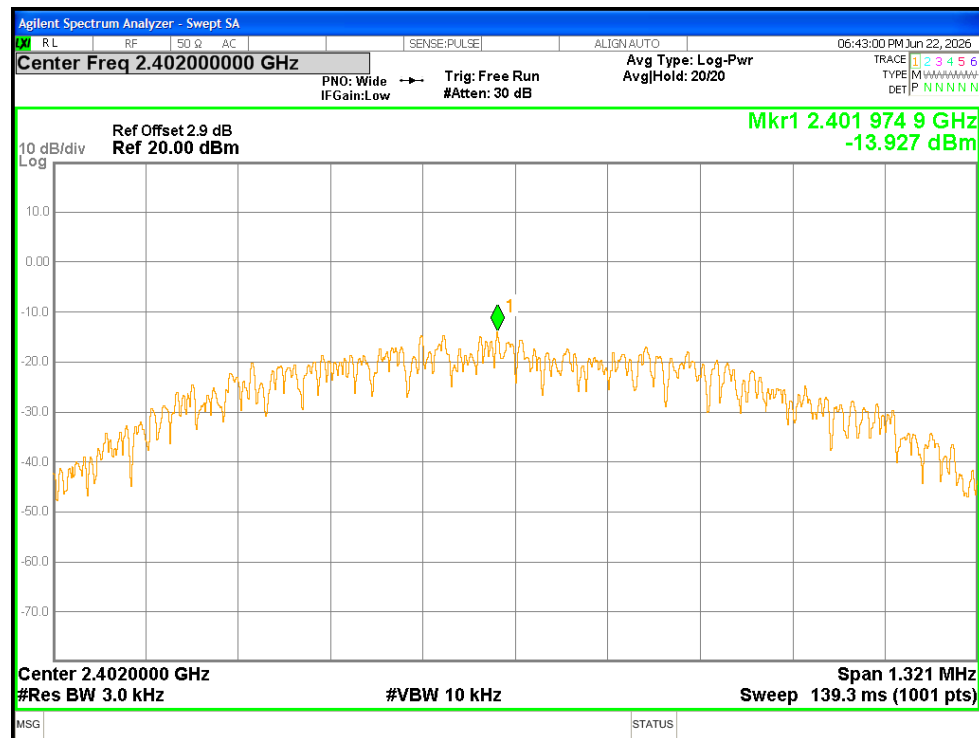


Maximum Power Spectral Density Level

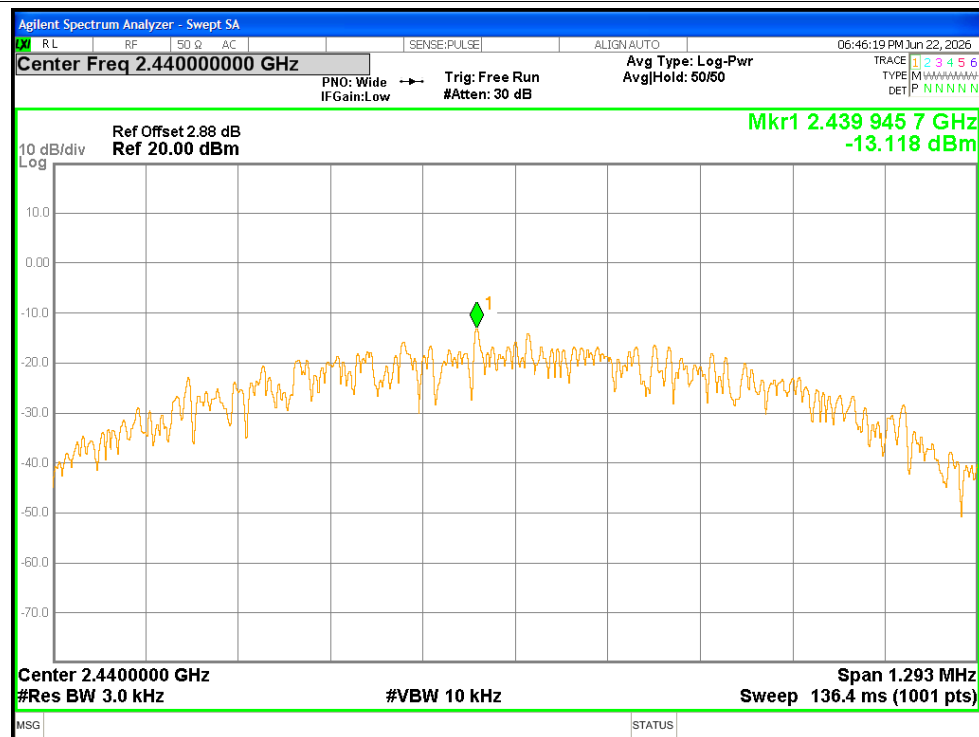
Condition	Mode	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	-13.93	≤ 8	Pass
NVNT	BLE 1M	2440	-13.12	≤ 8	Pass
NVNT	BLE 1M	2480	-14.33	≤ 8	Pass
NVNT	BLE 2M	2402	-15.62	≤ 8	Pass
NVNT	BLE 2M	2440	-16.62	≤ 8	Pass
NVNT	BLE 2M	2480	-17.25	≤ 8	Pass

Test Graphs

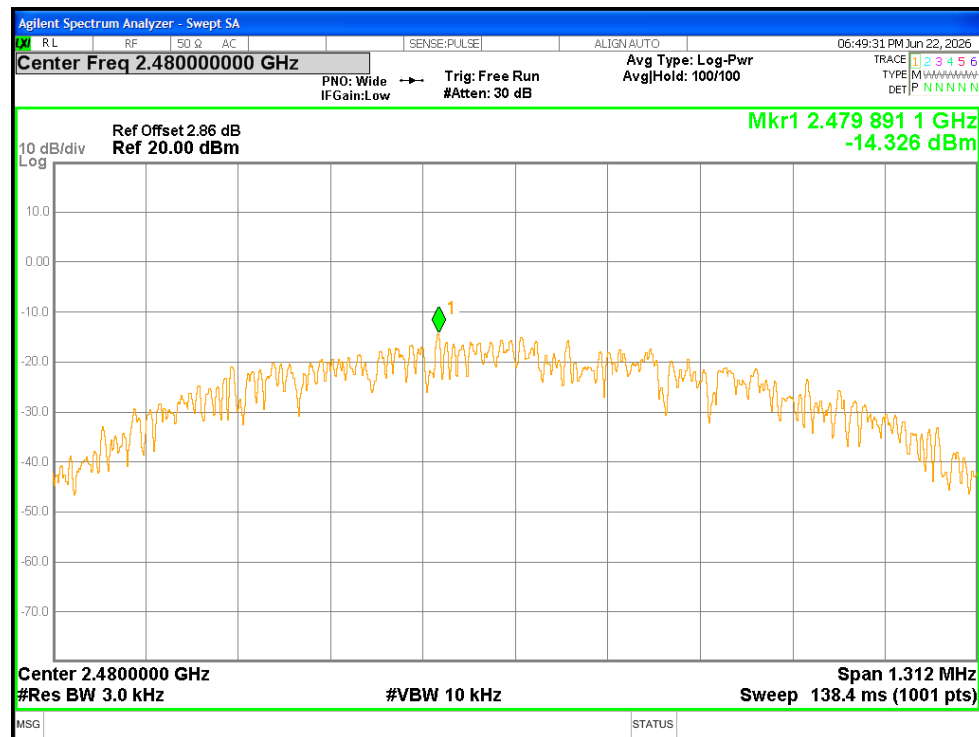
PSD NVNT BLE 1M 2402MHz



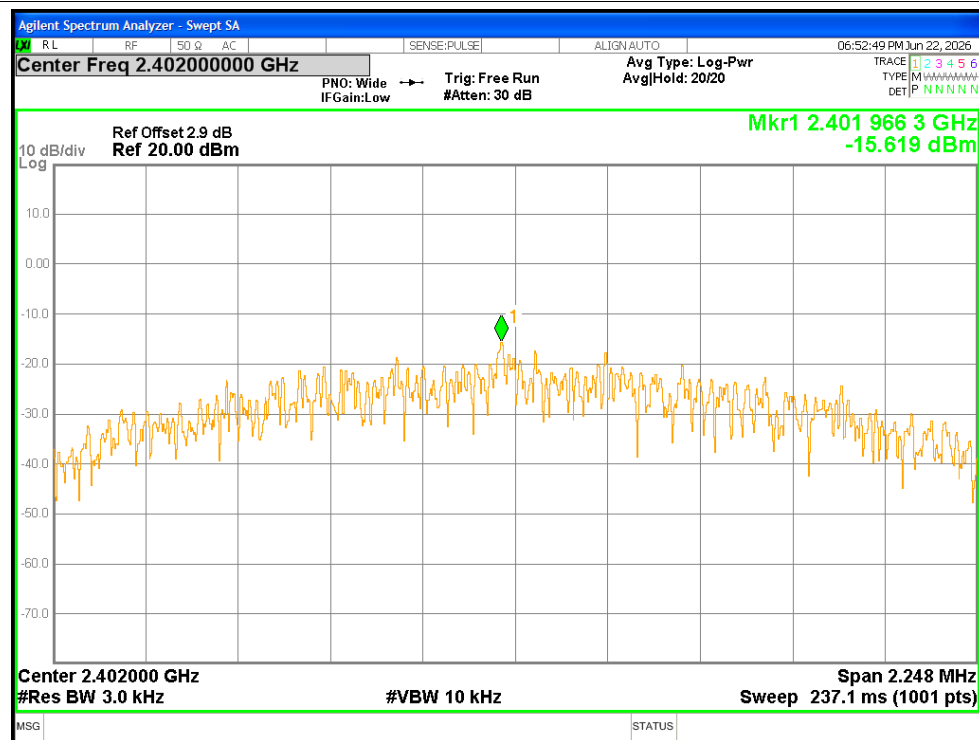
PSD NVNT BLE 1M 2440MHz



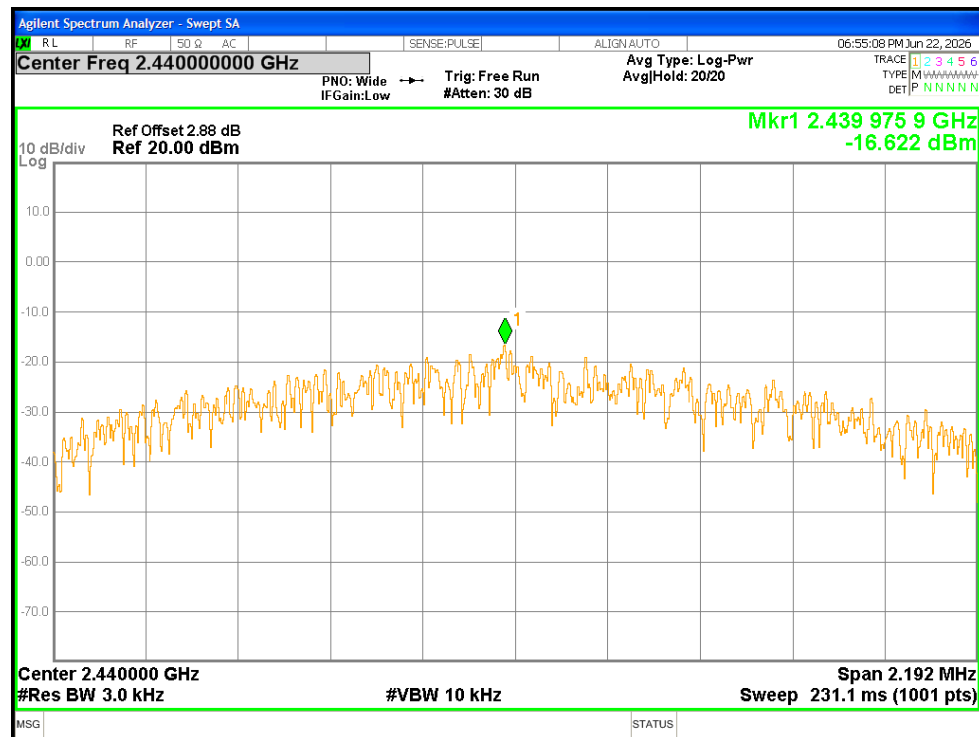
PSD NVNT BLE 1M 2480MHz



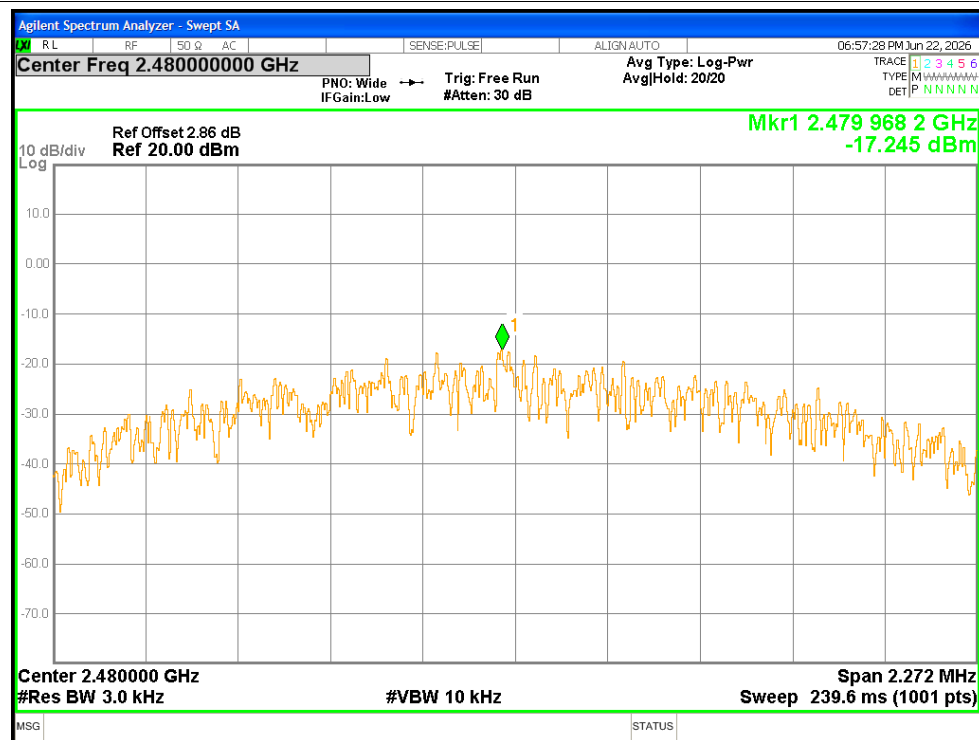
PSD NVNT BLE 2M 2402MHz



PSD NVNT BLE 2M 2440MHz



PSD NVNT BLE 2M 2480MHz

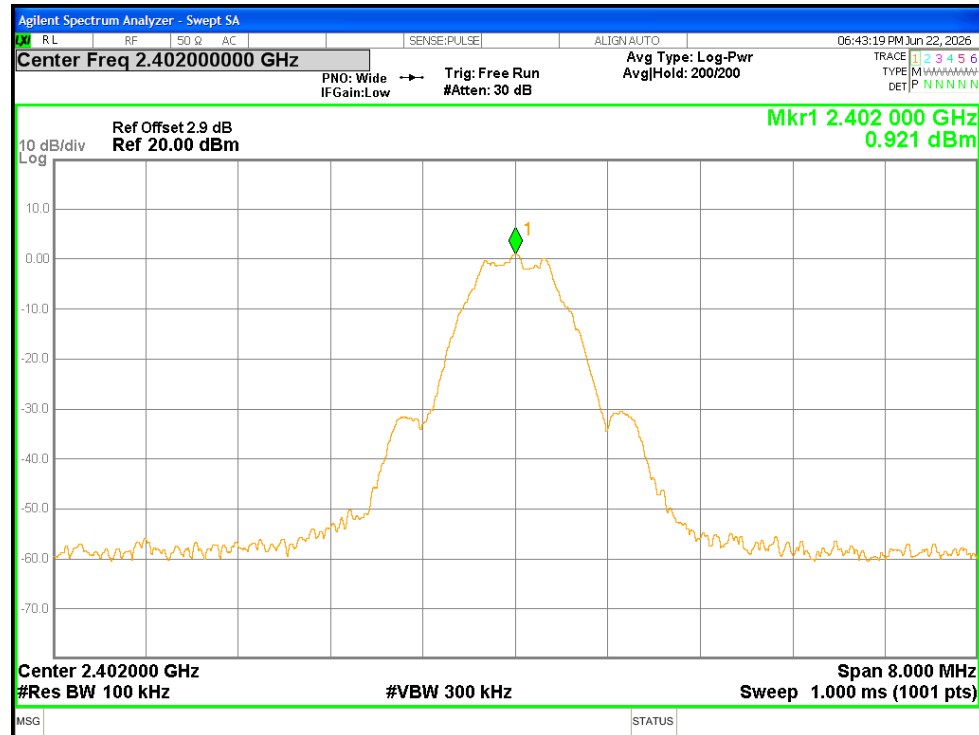


Band Edge

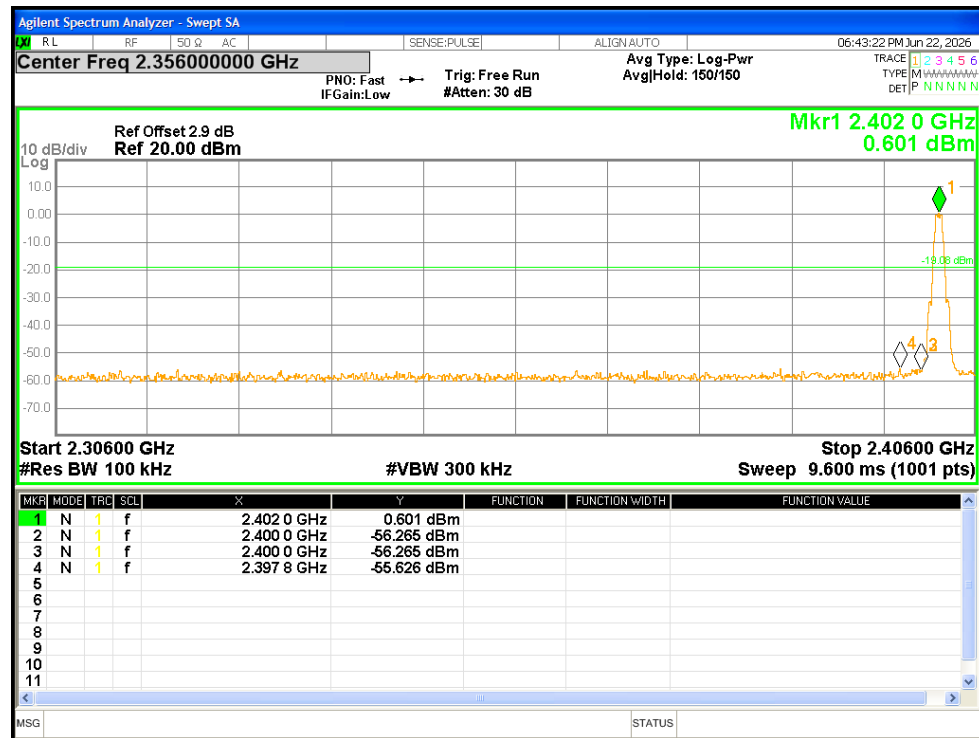
Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	-56.54	<=-20	Pass
NVNT	BLE 1M	2480	-56.58	<=-20	Pass
NVNT	BLE 2M	2402	-32.95	<=-20	Pass
NVNT	BLE 2M	2480	-49.42	<=-20	Pass

Test Graphs

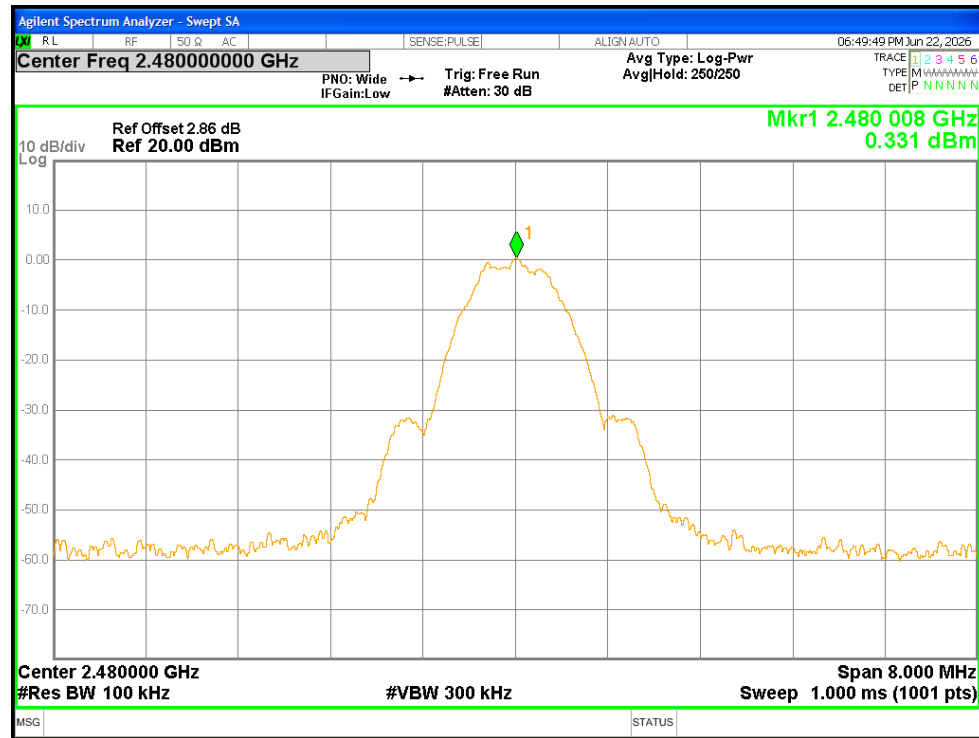
Band Edge NVNT BLE 1M 2402MHz Ref



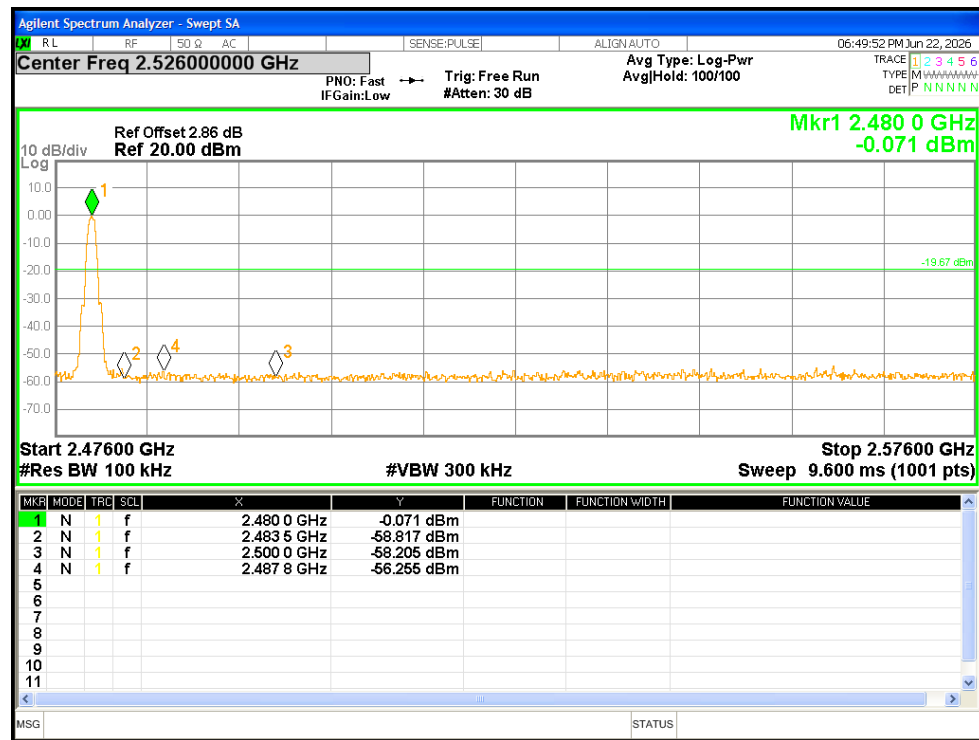
Band Edge NVNT BLE 1M 2402MHz Emission



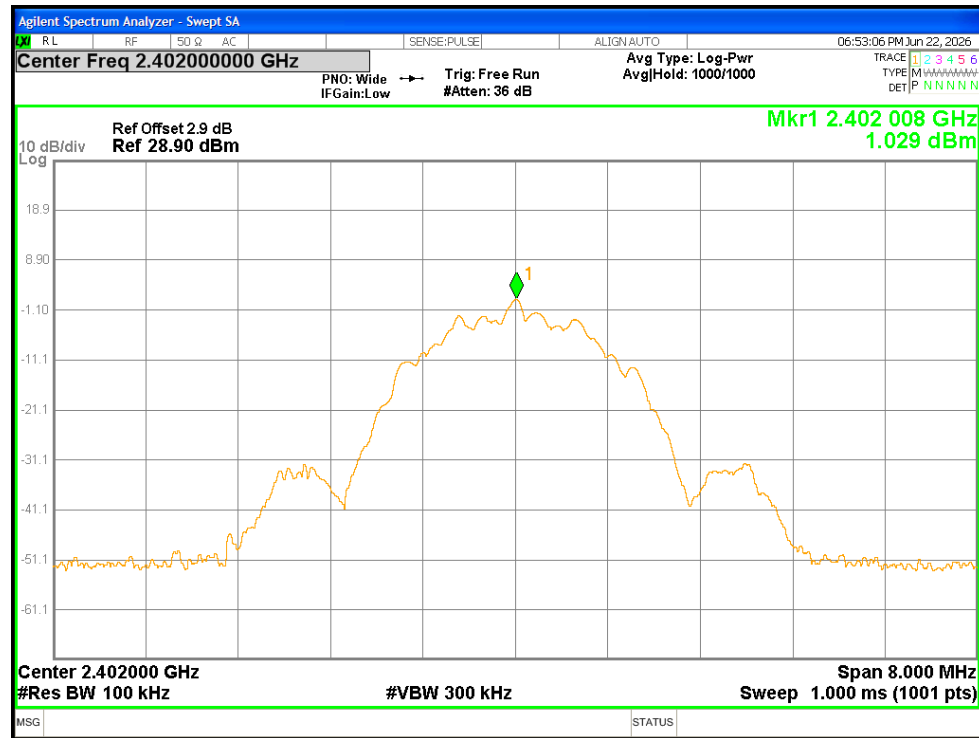
Band Edge NVNT BLE 1M 2480MHz Ref



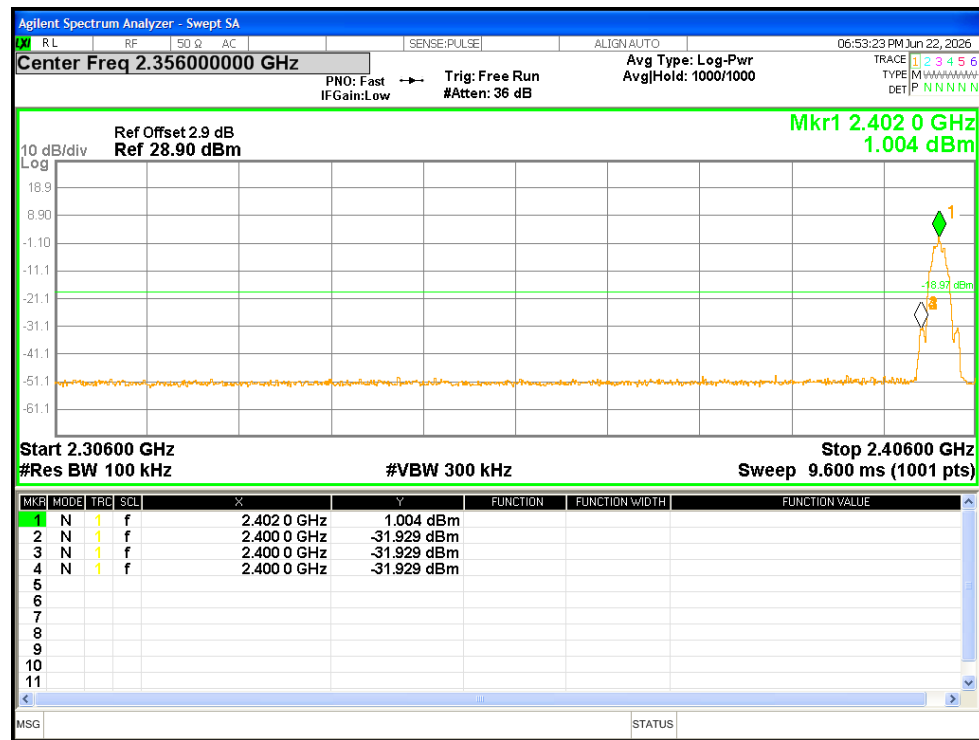
Band Edge NVNT BLE 1M 2480MHz Emission



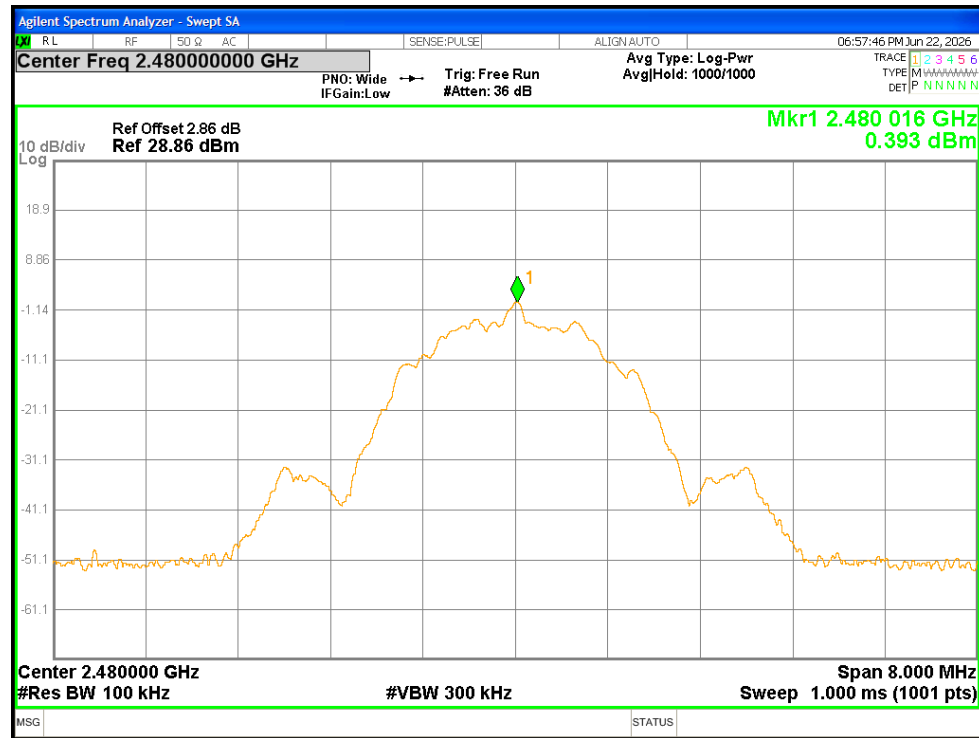
Band Edge NVNT BLE 2M 2402MHz Ref



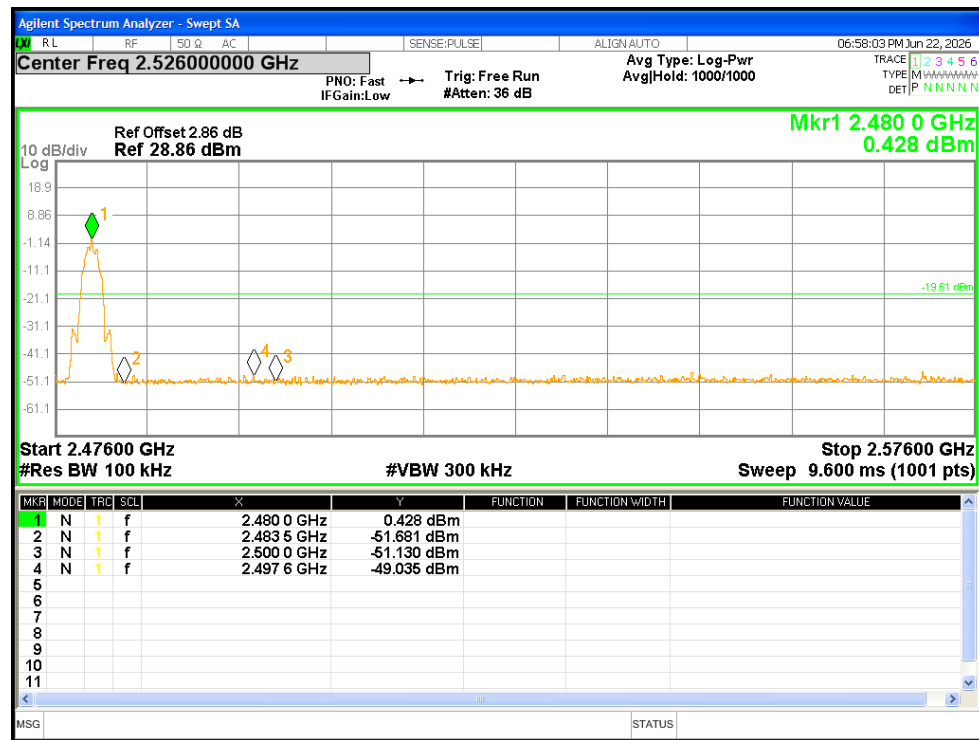
Band Edge NVNT BLE 2M 2402MHz Emission



Band Edge NVNT BLE 2M 2480MHz Ref



Band Edge NVNT BLE 2M 2480MHz Emission

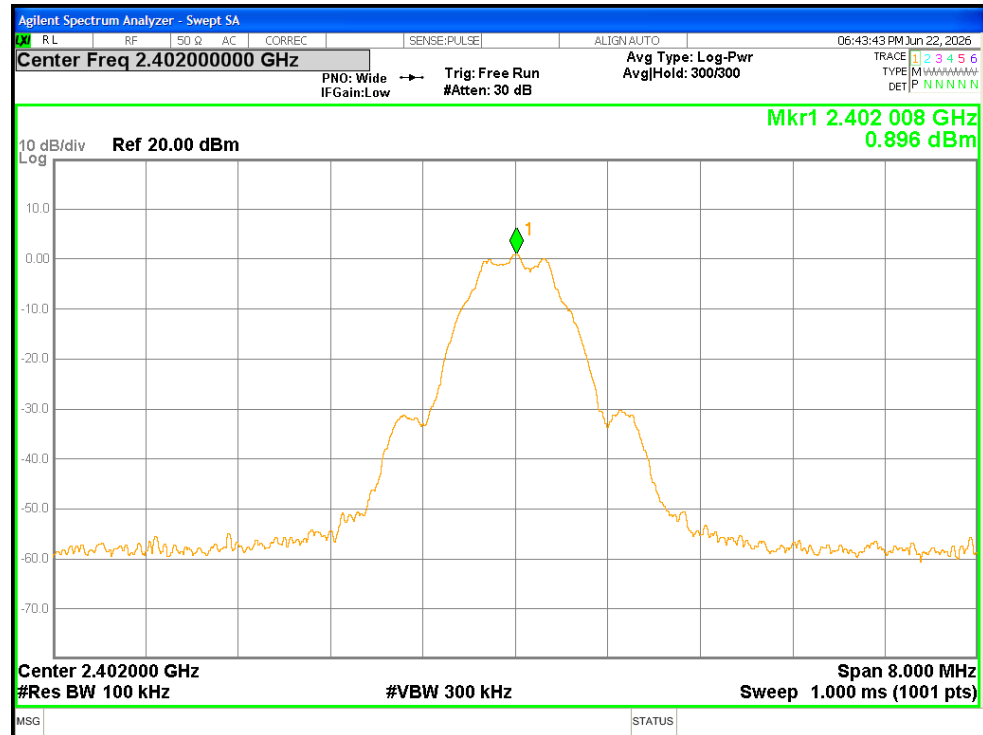


Conducted RF Spurious Emission

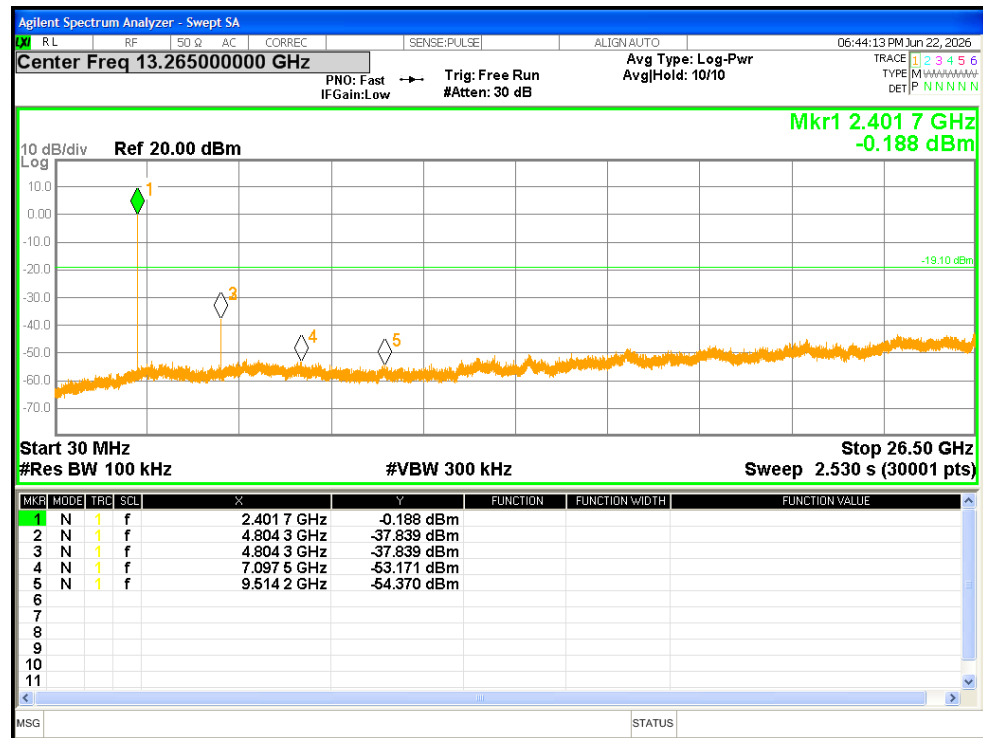
Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	-38.73	≤ -20	Pass
NVNT	BLE 1M	2440	-40.14	≤ -20	Pass
NVNT	BLE 1M	2480	-43.64	≤ -20	Pass
NVNT	BLE 2M	2402	-38.22	≤ -20	Pass
NVNT	BLE 2M	2440	-37.38	≤ -20	Pass
NVNT	BLE 2M	2480	-37.32	≤ -20	Pass

Test Graphs

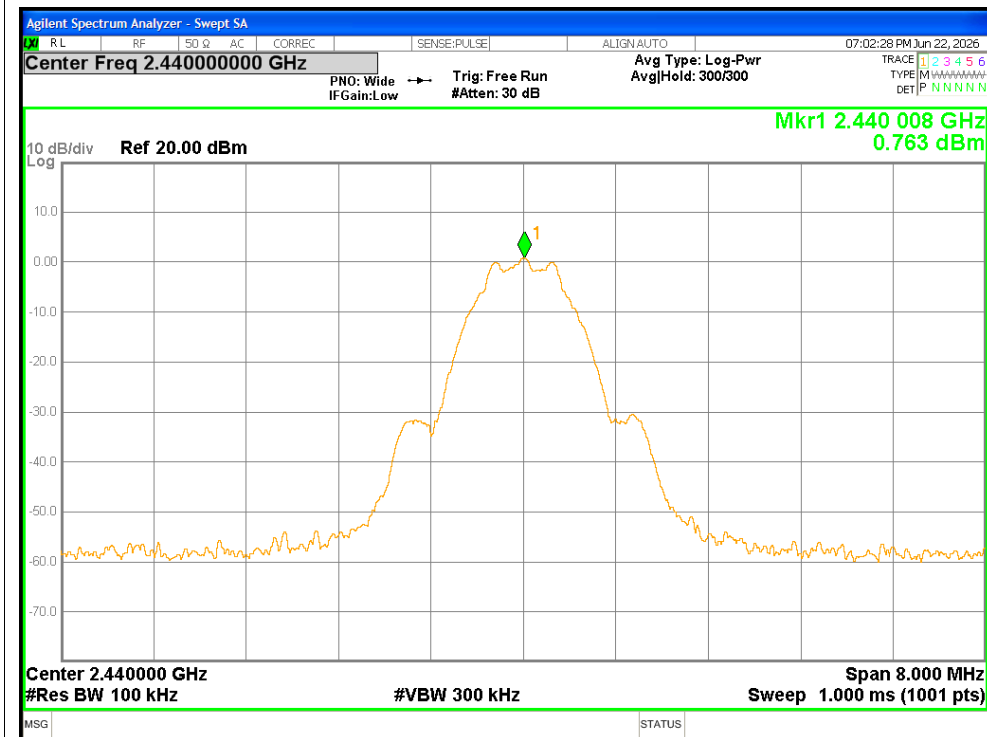
Tx. Spurious NVNT BLE 1M 2402MHz Ref



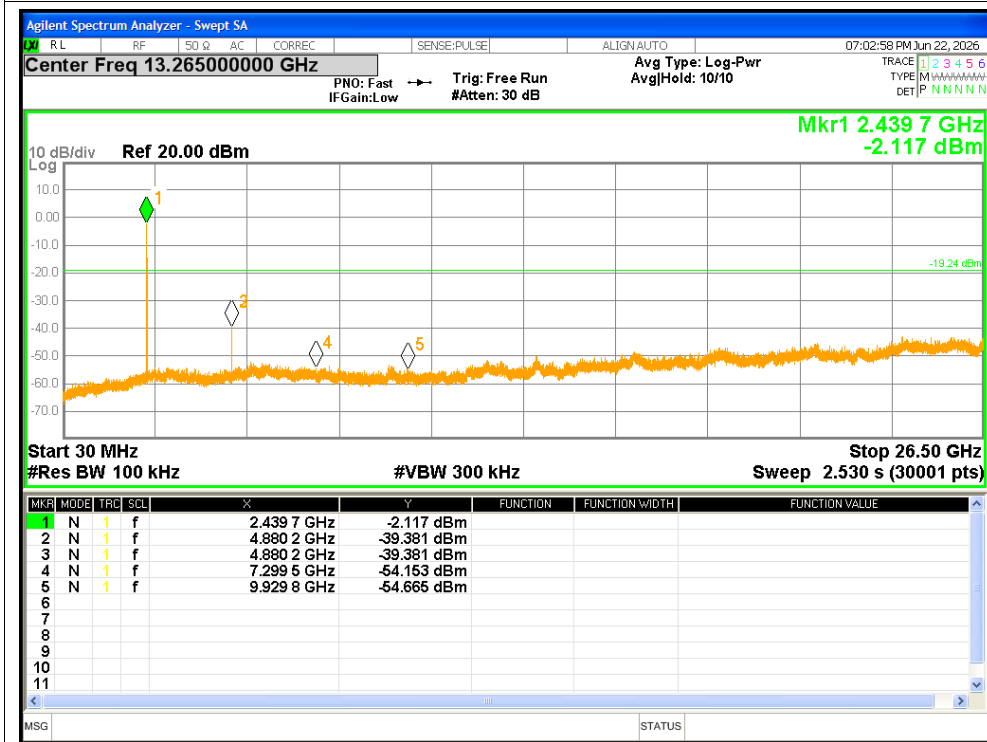
Tx. Spurious NVNT BLE 1M 2402MHz Emission



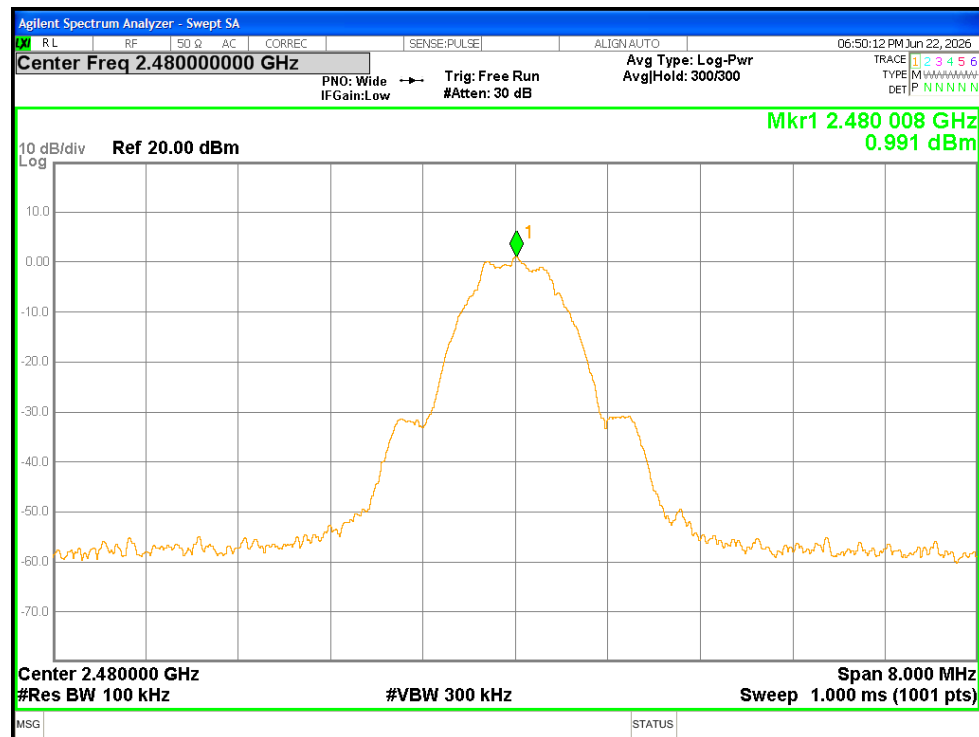
Tx. Spurious NVNT BLE 1M 2440MHz Ref



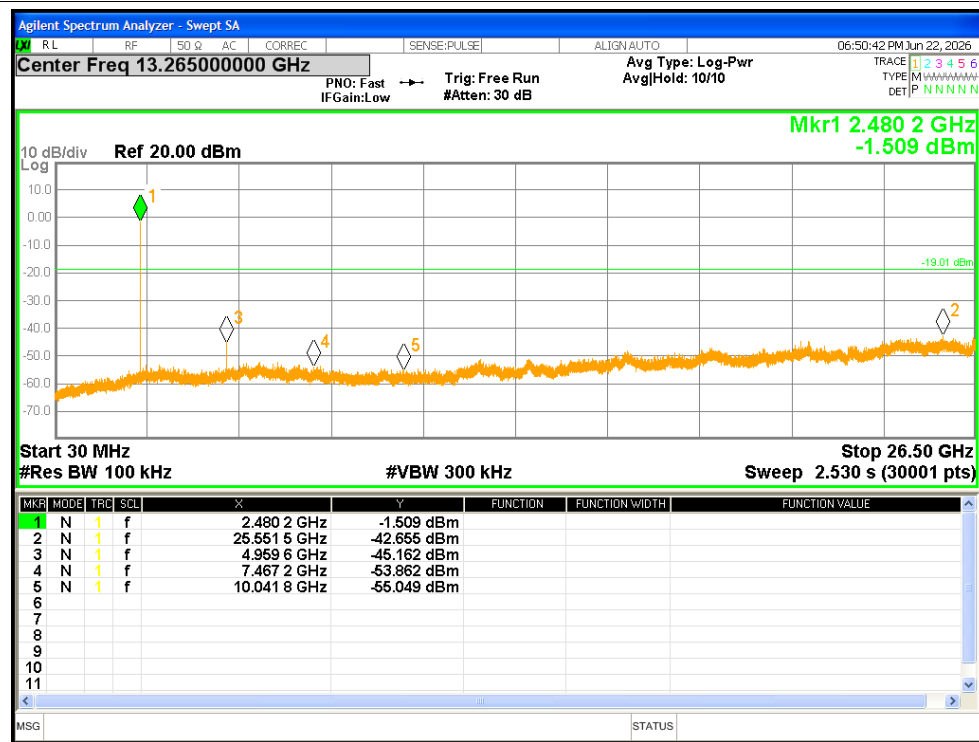
Tx. Spurious NVNT BLE 1M 2440MHz Emission



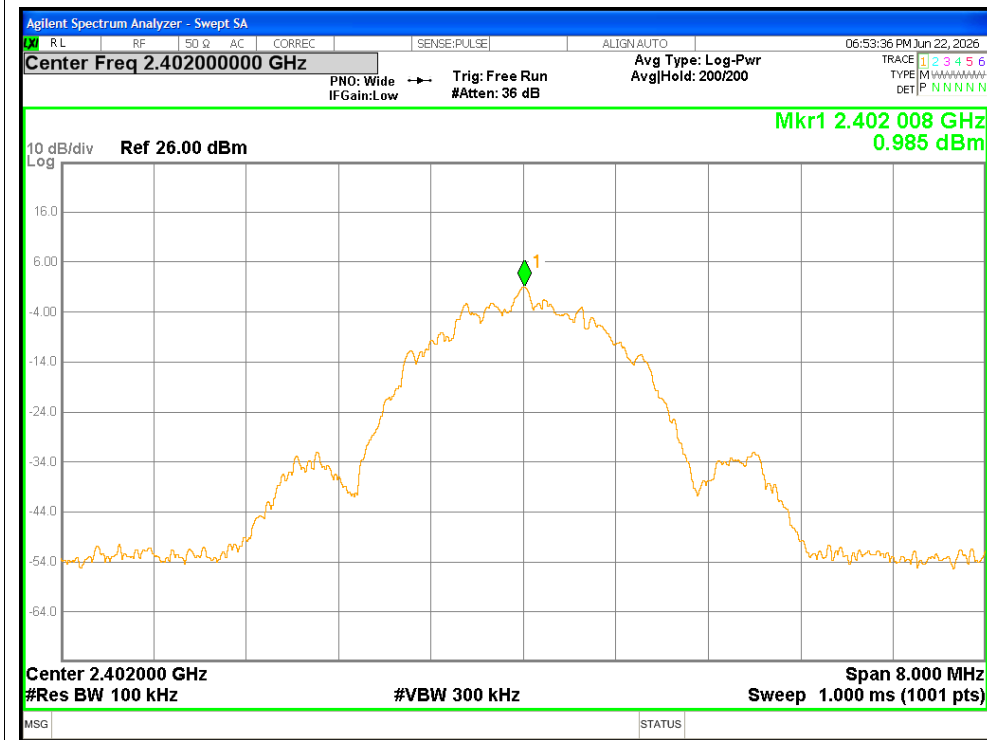
Tx. Spurious NVNT BLE 1M 2480MHz Ref



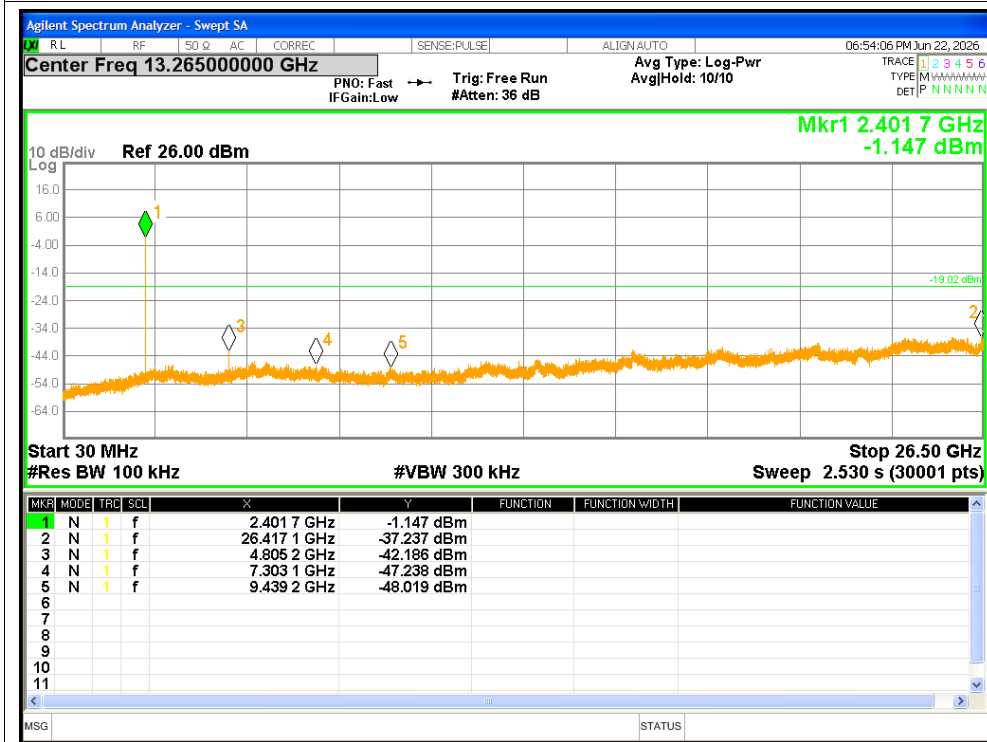
Tx. Spurious NVNT BLE 1M 2480MHz Emission



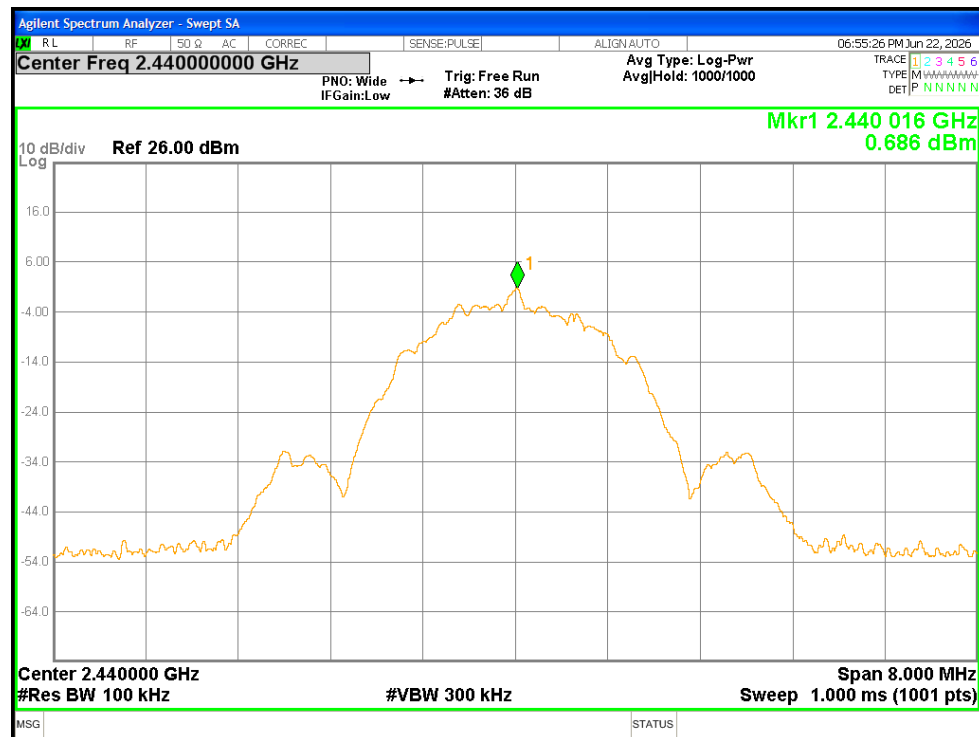
Tx. Spurious NVNT BLE 2M 2402MHz Ref



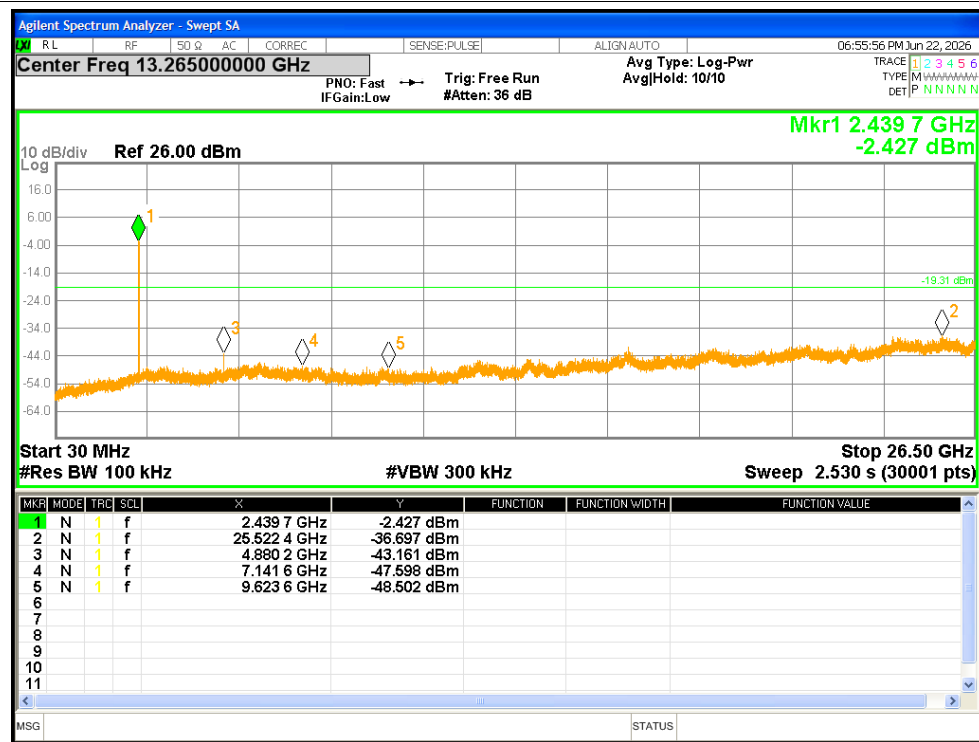
Tx. Spurious NVNT BLE 2M 2402MHz Emission



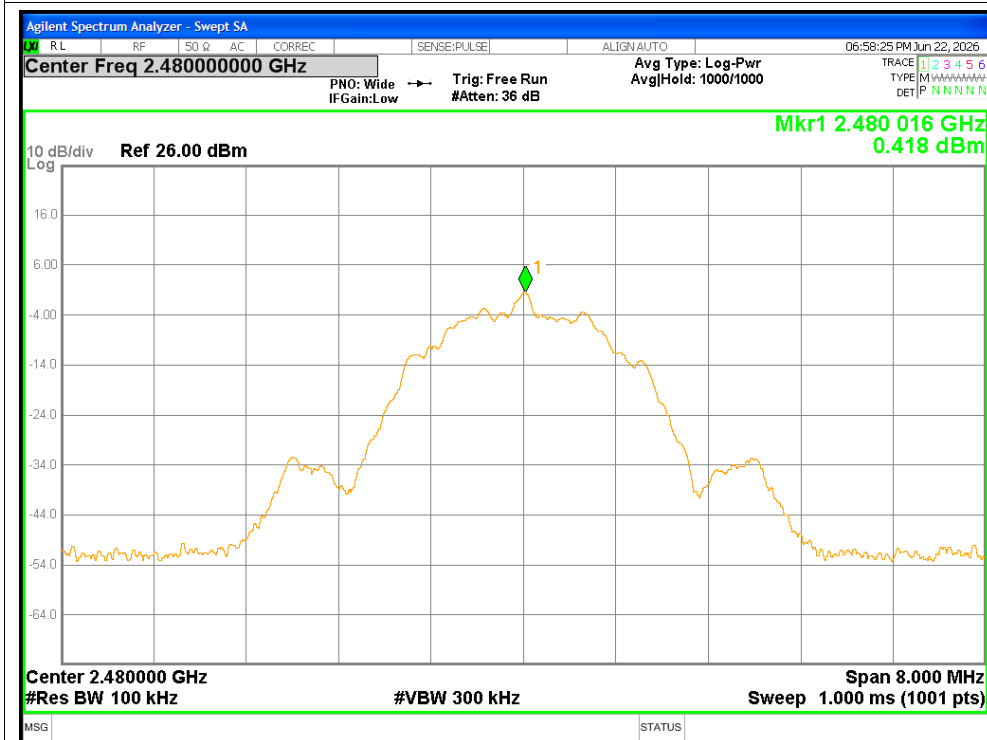
Tx. Spurious NVNT BLE 2M 2440MHz Ref



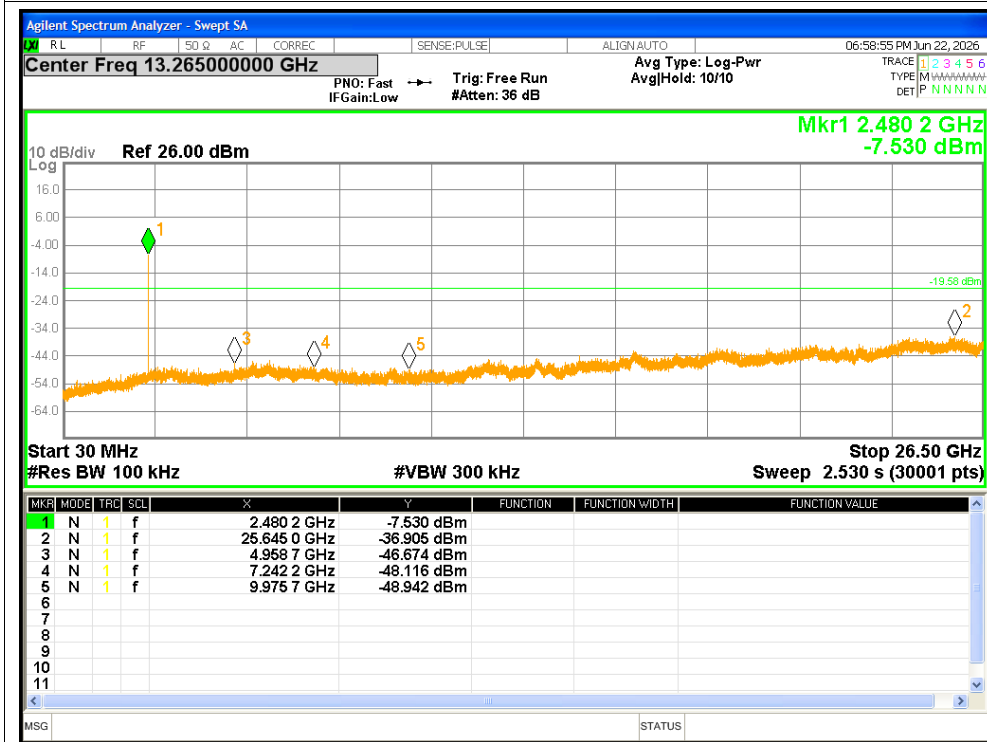
Tx. Spurious NVNT BLE 2M 2440MHz Emission



Tx. Spurious NVNT BLE 2M 2480MHz Ref



Tx. Spurious NVNT BLE 2M 2480MHz Emission

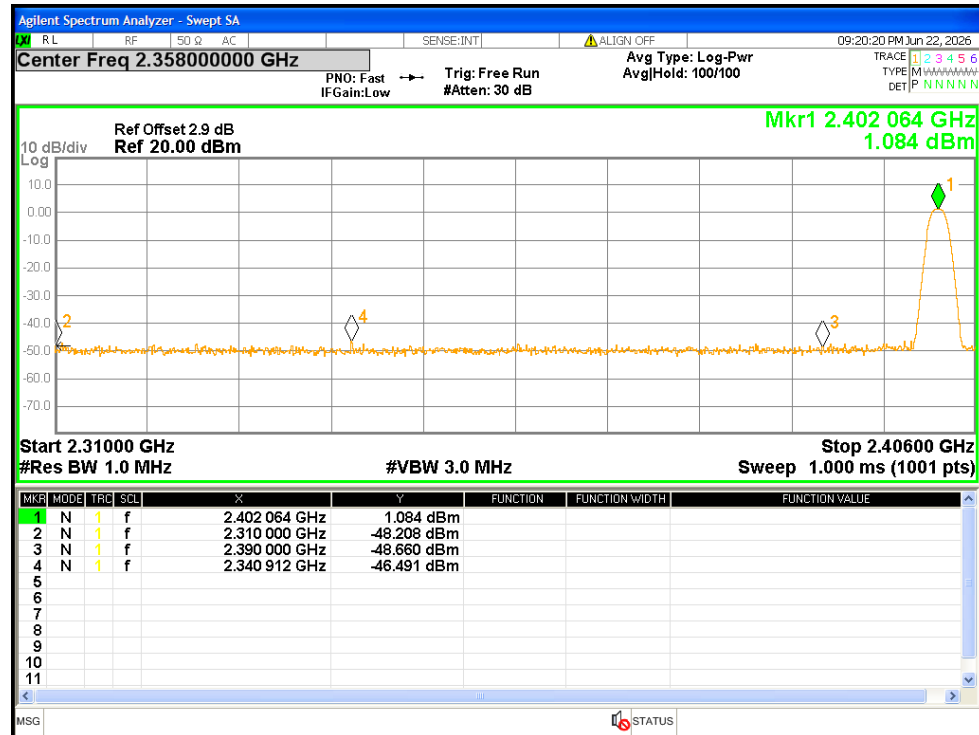


Restrict Band

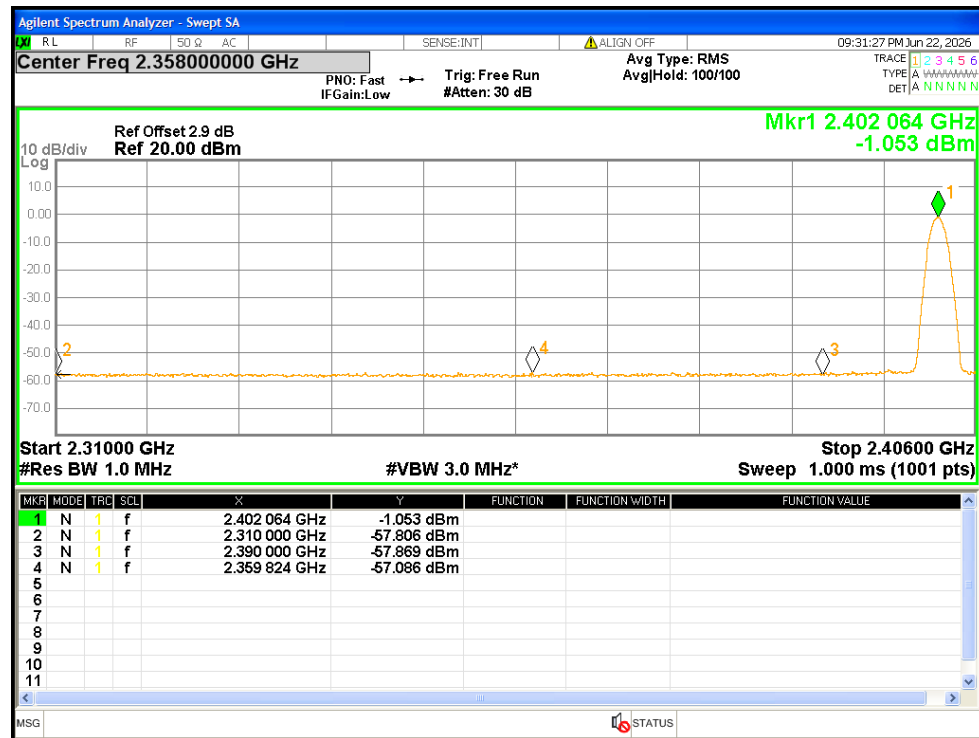
Mode	Frequency (MHz)	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
BLE 1M	2402	2310	-48.2	2	0	49.06	Peak	<=74	Pass
BLE 1M	2402	2310	-57.8	2	1.99	41.45	Average	<=54	Pass
BLE 1M	2402	2340.912	-46.49	2	0	50.77	Peak	<=74	Pass
BLE 1M	2402	2359.824	-57.08	2	1.99	42.17	Average	<=54	Pass
BLE 1M	2402	2390	-48.6	2	0	48.66	Peak	<=74	Pass
BLE 1M	2402	2390	-57.28	2	1.99	41.97	Average	<=54	Pass
BLE 1M	2480	2483.5	-49.42	2	0	47.84	Peak	<=74	Pass
BLE 1M	2480	2483.5	-56.62	2	2	42.64	Average	<=54	Pass
BLE 1M	2480	2495.8	-45.69	2	0	51.57	Peak	<=74	Pass
BLE 1M	2480	2484.04	-56.24	2	2	43.02	Average	<=54	Pass
BLE 1M	2480	2500	-49.69	2	0	47.57	Peak	<=74	Pass
BLE 1M	2480	2500	-57.4	2	2	41.86	Average	<=54	Pass
BLE 2M	2402	2310	-50.82	2	0	46.44	Peak	<=74	Pass
BLE 2M	2402	2310	-57.8	2	4.77	44.23	Average	<=54	Pass
BLE 2M	2402	2310.672	-46.67	2	0	50.59	Peak	<=74	Pass
BLE 2M	2402	2380.56	-57.15	2	4.77	44.88	Average	<=54	Pass
BLE 2M	2402	2390	-49.36	2	0	47.9	Peak	<=74	Pass
BLE 2M	2402	2390	-57.83	2	4.77	44.2	Average	<=54	Pass
BLE 2M	2480	2483.5	-48	2	0	49.26	Peak	<=74	Pass
BLE 2M	2480	2483.5	-56.19	2	4.77	45.84	Average	<=54	Pass
BLE 2M	2480	2483.536	-45.56	2	0	51.7	Peak	<=74	Pass
BLE 2M	2480	2483.536	-56.12	2	4.77	45.91	Average	<=54	Pass
BLE 2M	2480	2500	-49.8	2	0	47.46	Peak	<=74	Pass
BLE 2M	2480	2500	-57.2	2	4.77	44.83	Average	<=54	Pass

Test Graphs

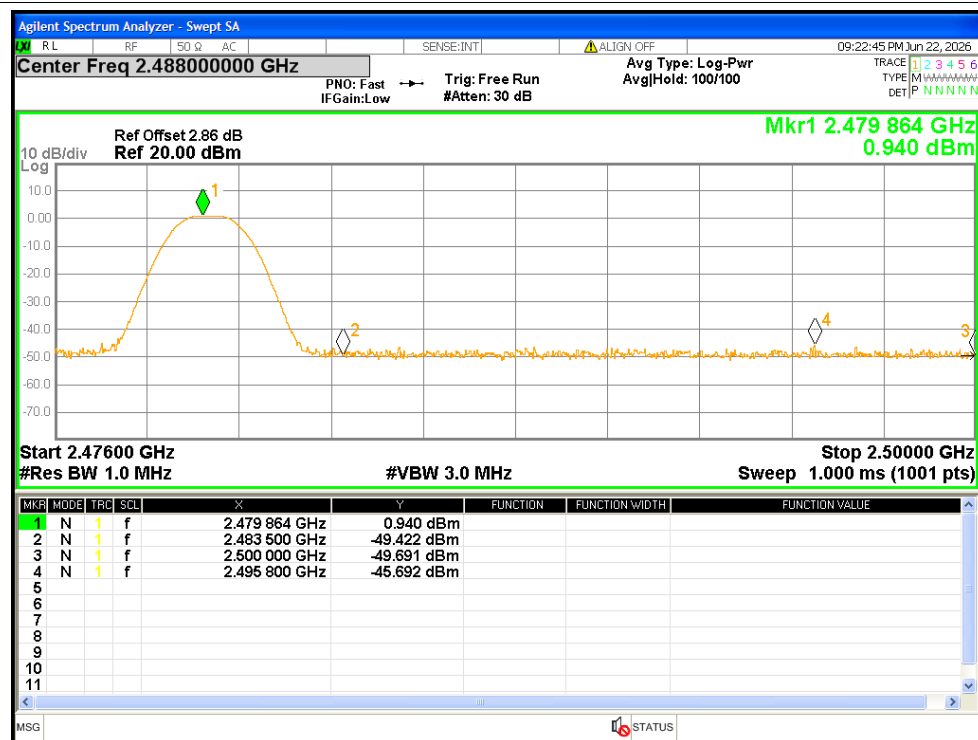
Restrict Band NVNT BLE 1M 2402MHz Peak



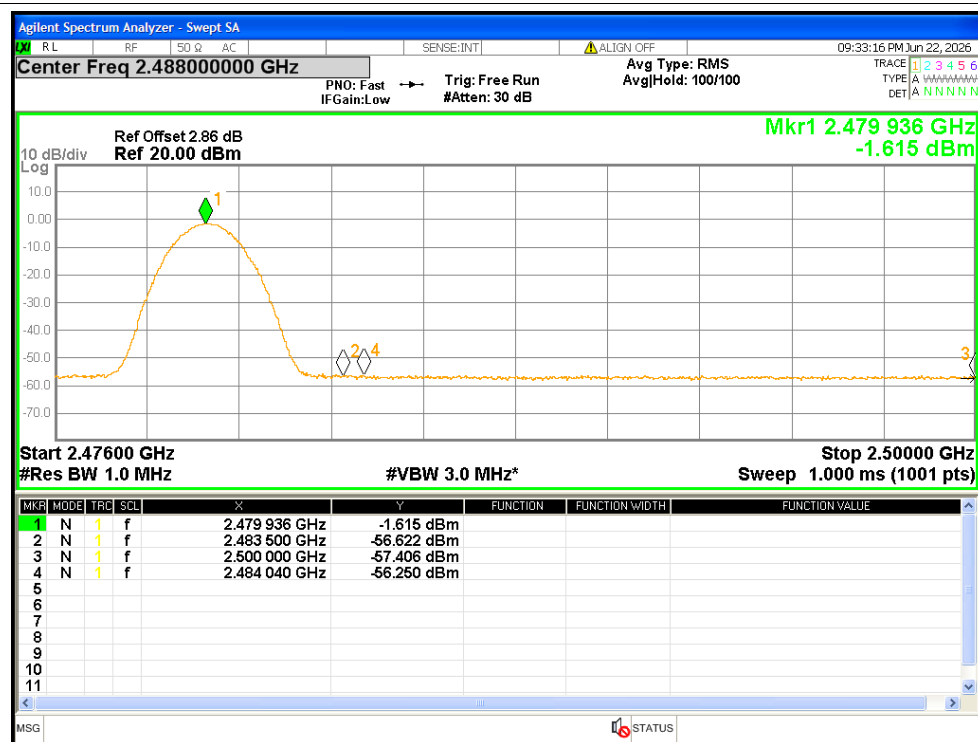
Restrict Band NVNT BLE 1M 2402MHz Average



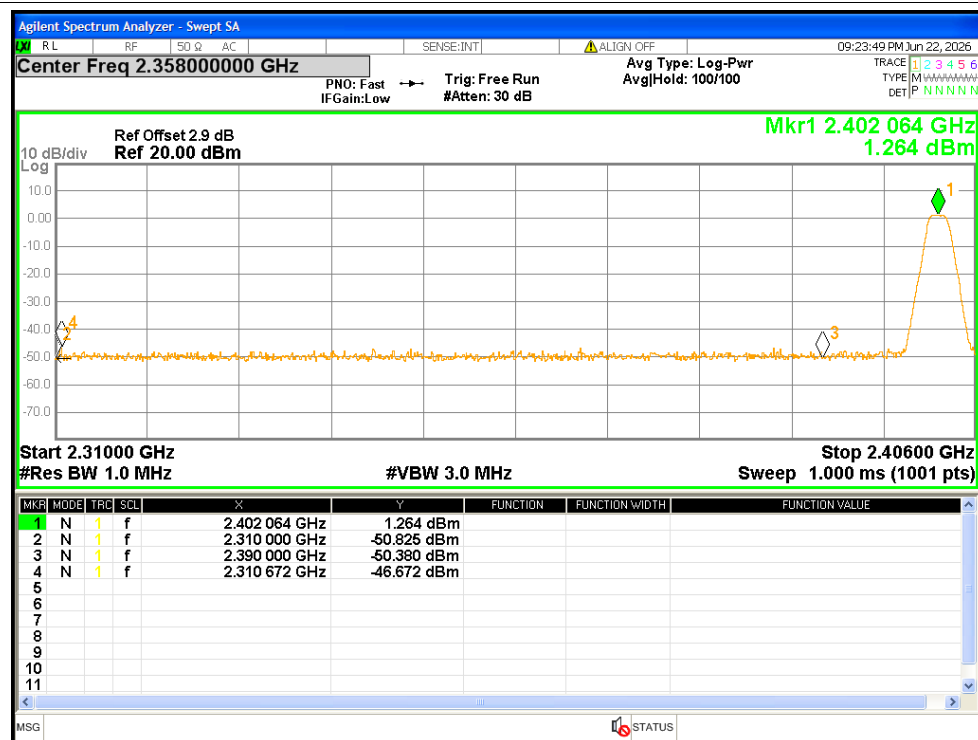
Restrict Band NVNT BLE 1M 2480MHz Peak



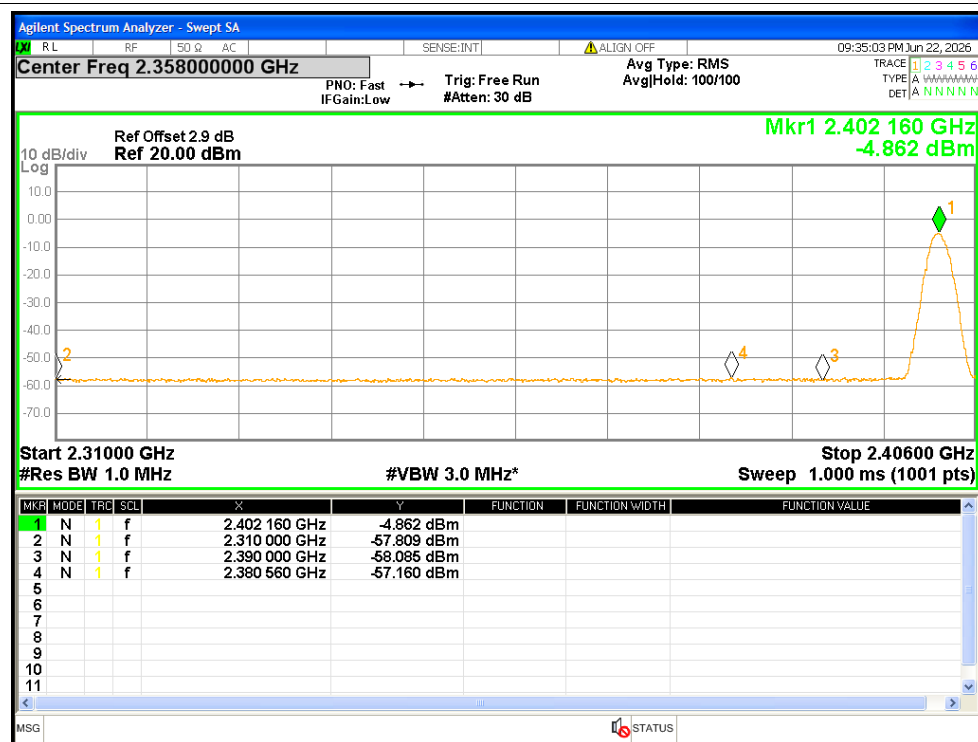
Restrict Band NVNT BLE 1M 2480MHz Average



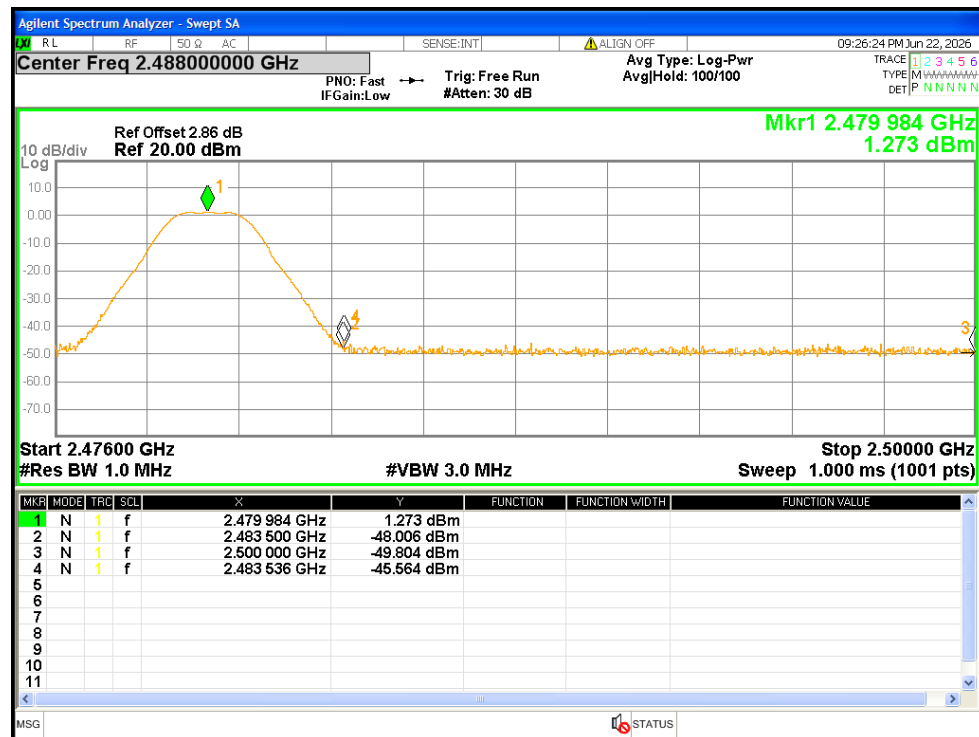
Restrict Band NVNT BLE 2M 2402MHz Peak



Restrict Band NVNT BLE 2M 2402MHz Average



Restrict Band NVNT BLE 2M 2480MHz Peak



Restrict Band NVNT BLE 2M 2480MHz Average

