

FCC Appendix RF Test Data for 2.4G WIFI

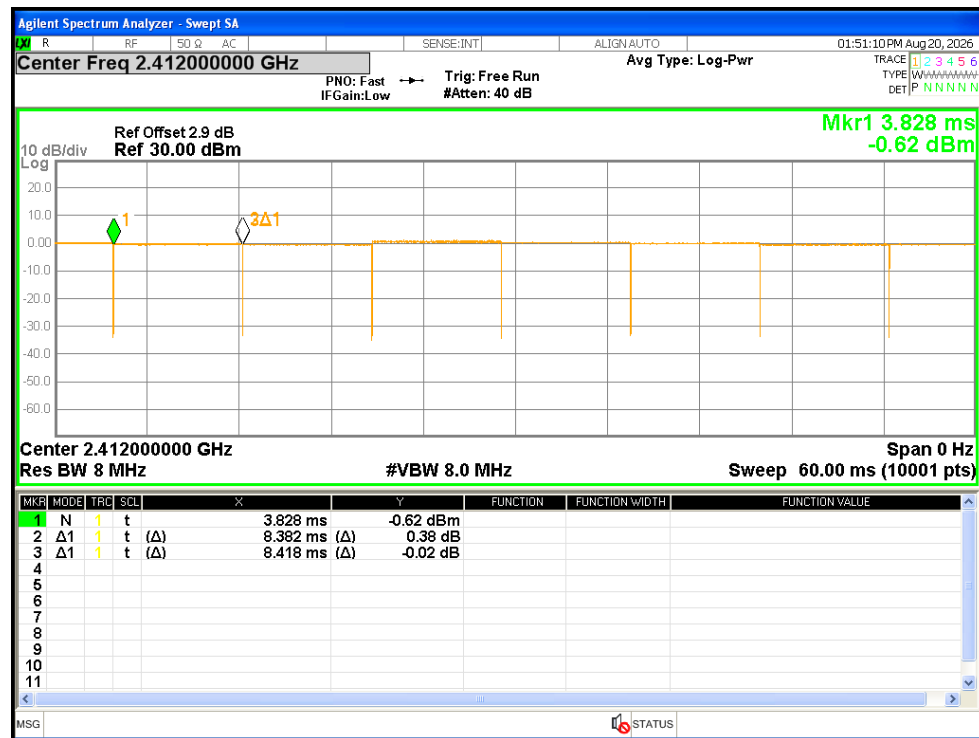
FCC ID : 2AUARTU7ABS
Company : THINKCAR TECH CO., LTD.
EUT : Automotive Diagnostic Tool
Model Number : TU7ABS
Report No. : CTA26080701803
Reviewed By : Eric Wang

Duty Cycle

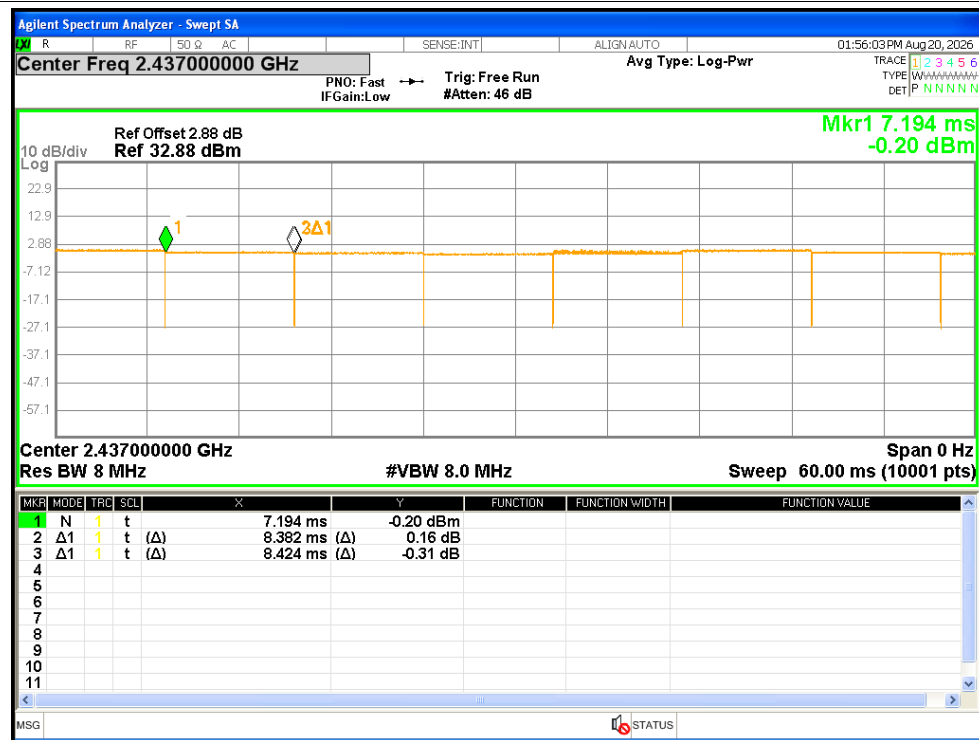
Mode	Frequency (MHz)	On Time (ms)	Period (ms)	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
b	2412	8.382	8.418	99.57	0.02	0.12
b	2437	8.382	8.424	99.5	0.02	0.12
b	2462	8.382	8.424	99.5	0.02	0.12
g	2412	8.386	8.416	99.64	0.02	0.12
g	2437	8.386	8.416	99.64	0.02	0.12
g	2462	8.385	8.416	99.63	0.02	0.12
n20	2412	1.3	1.345	96.65	0.15	0.77
n20	2437	1.3	1.344	96.73	0.14	0.77
n20	2462	1.3	1.344	96.73	0.14	0.77
n40	2422	0.648	0.692	93.64	0.29	1.54
n40	2437	0.648	0.692	93.64	0.29	1.54
n40	2452	0.648	0.692	93.64	0.29	1.54

Test Graphs

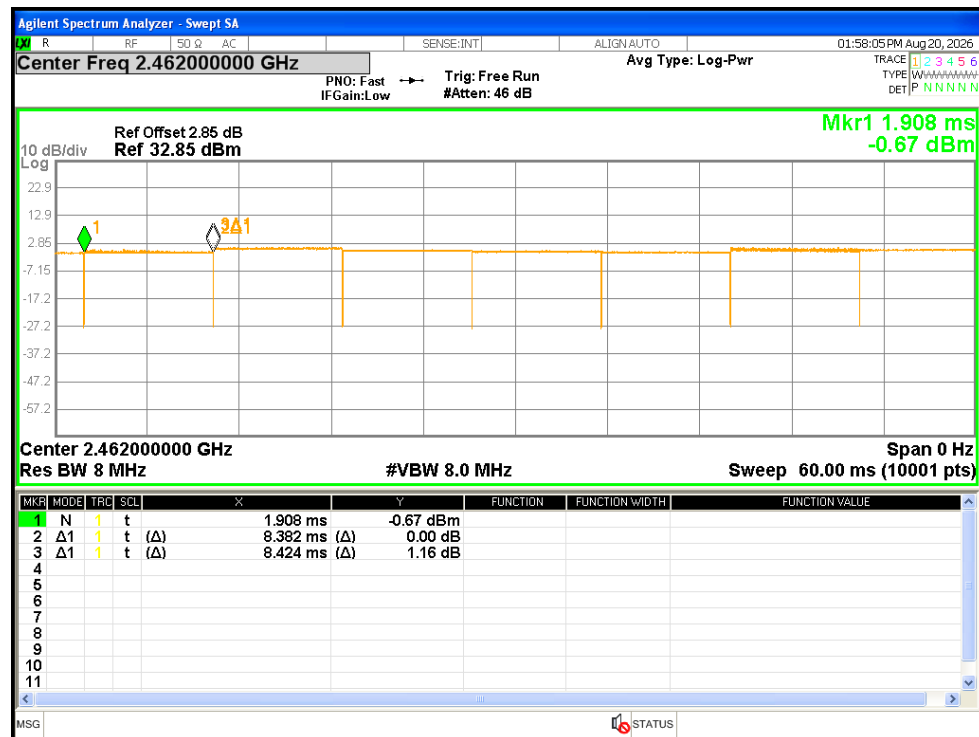
Duty Cycle NVNT b 2412MHz



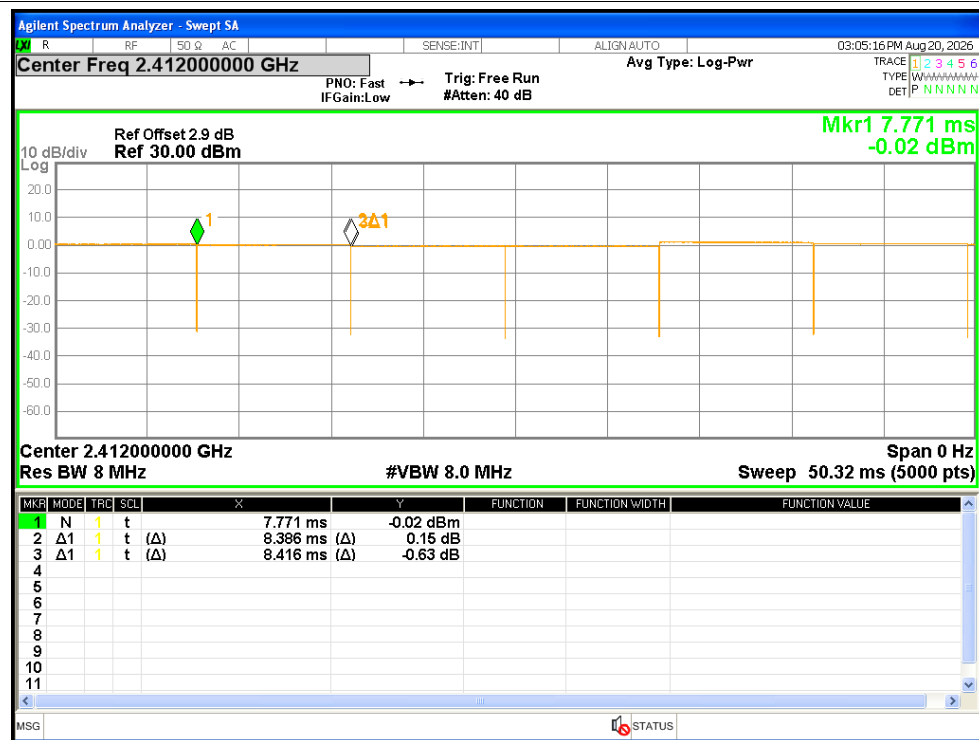
Duty Cycle NVNT b 2437MHz



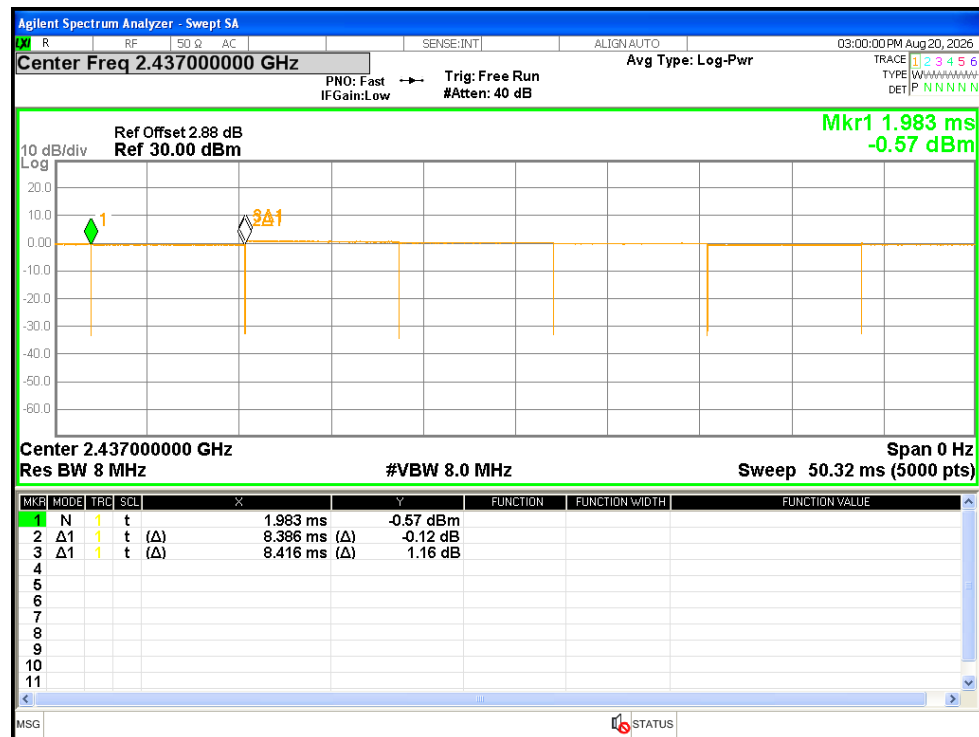
Duty Cycle NVNT b 2462MHz



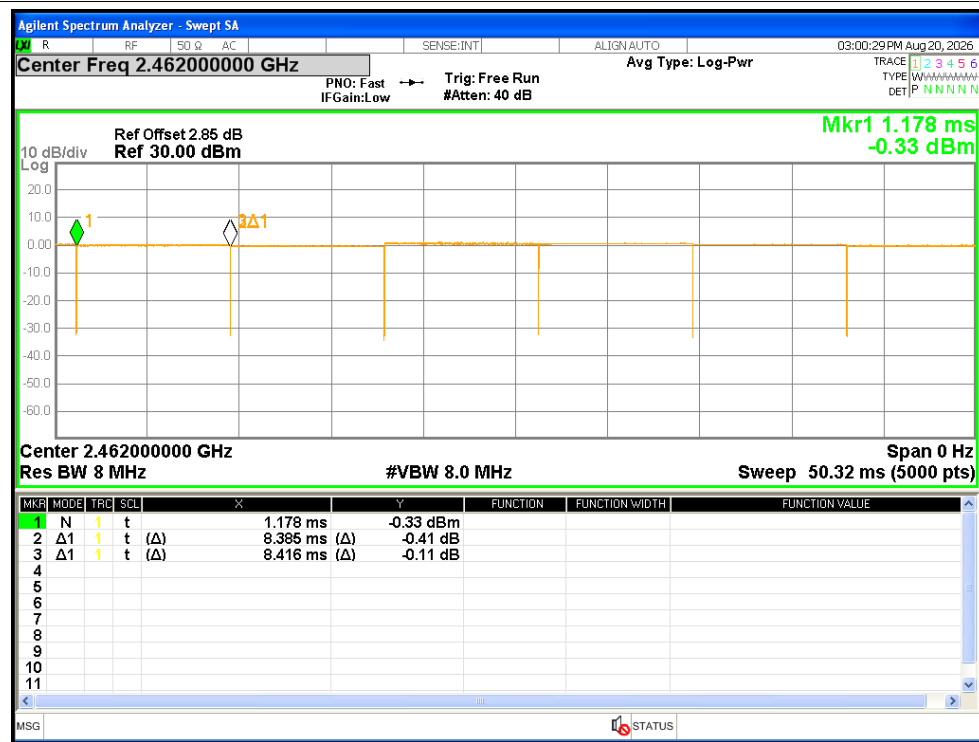
Duty Cycle NVNT g 2412MHz



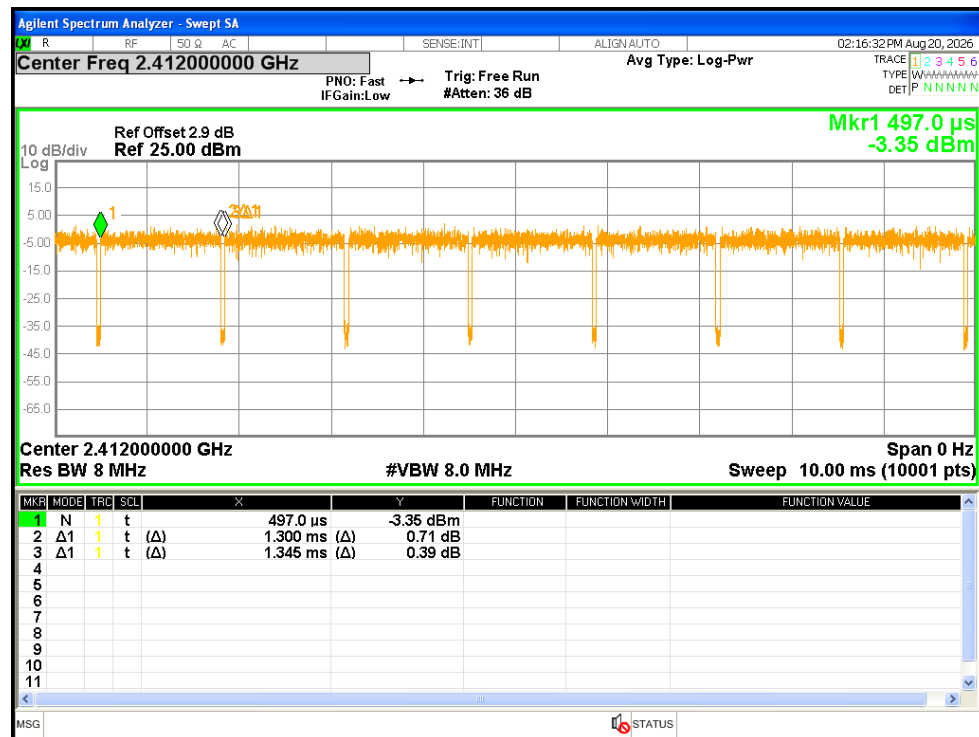
Duty Cycle NVNT g 2437MHz



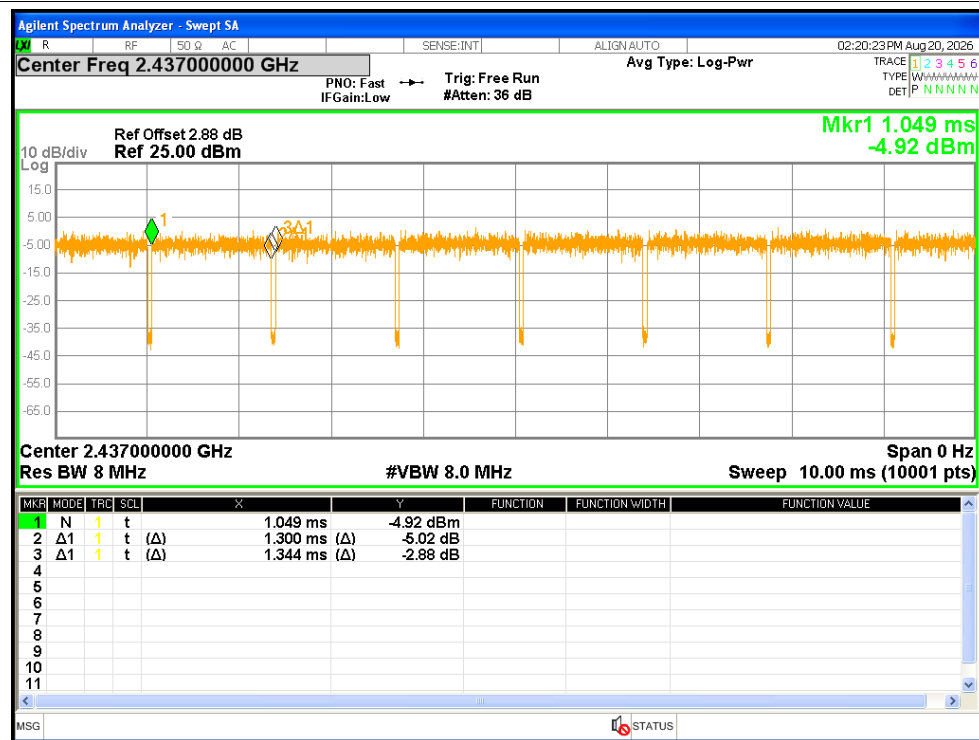
Duty Cycle NVNT g 2462MHz



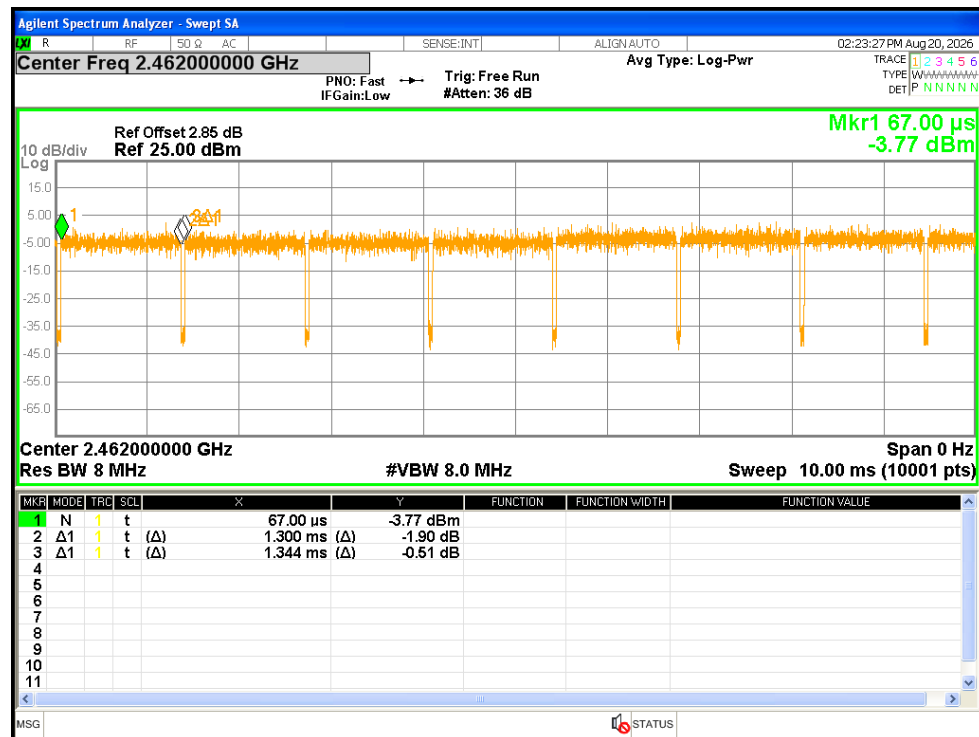
Duty Cycle NVNT n20 2412MHz



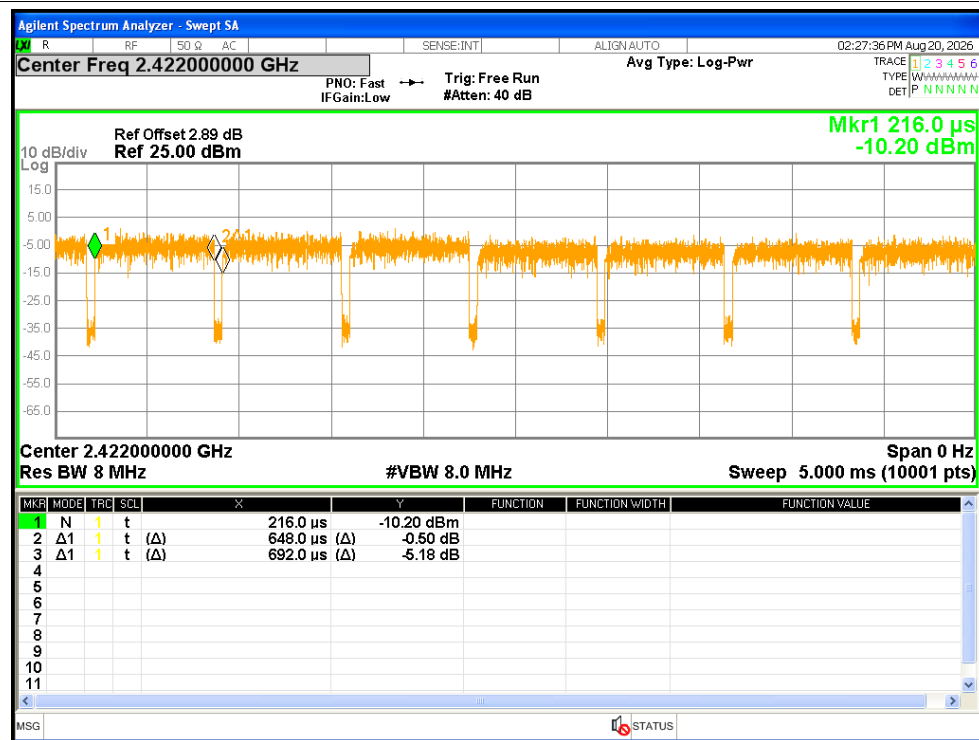
Duty Cycle NVNT n20 2437MHz



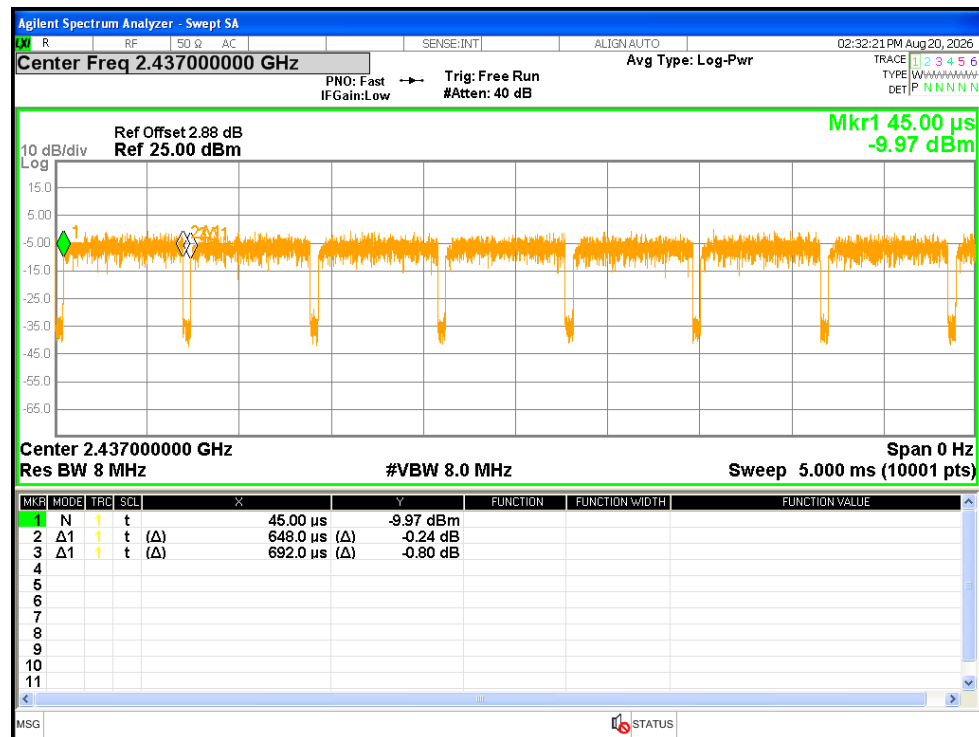
Duty Cycle NVNT n20 2462MHz



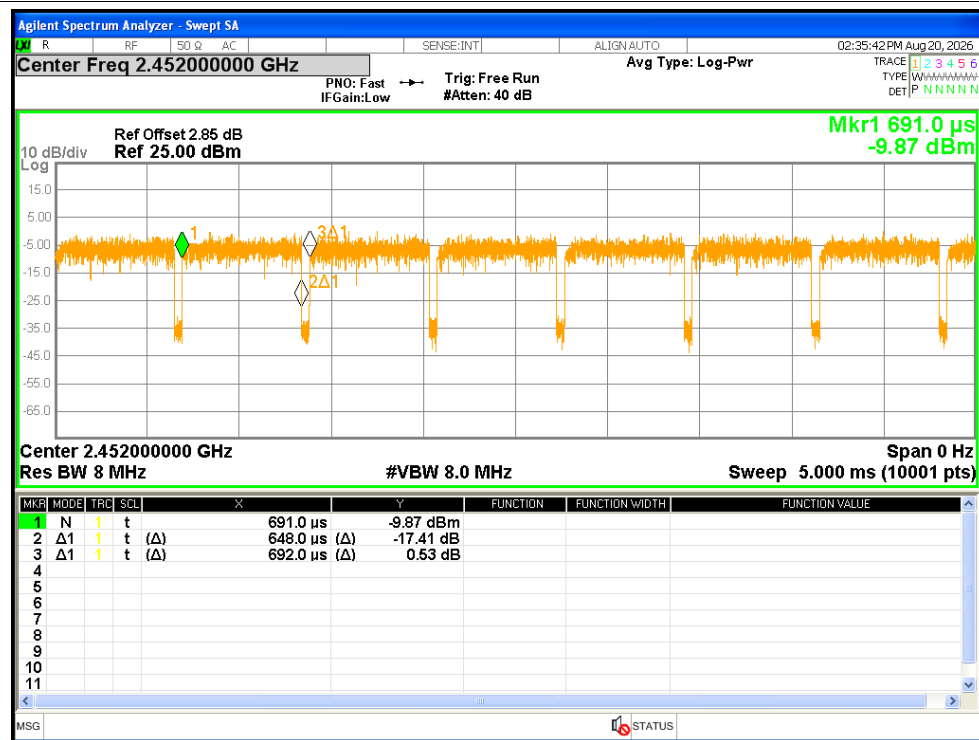
Duty Cycle NVNT n40 2422MHz



Duty Cycle NVNT n40 2437MHz



Duty Cycle NVNT n40 2452MHz



Maximum Peak Conducted Output Power

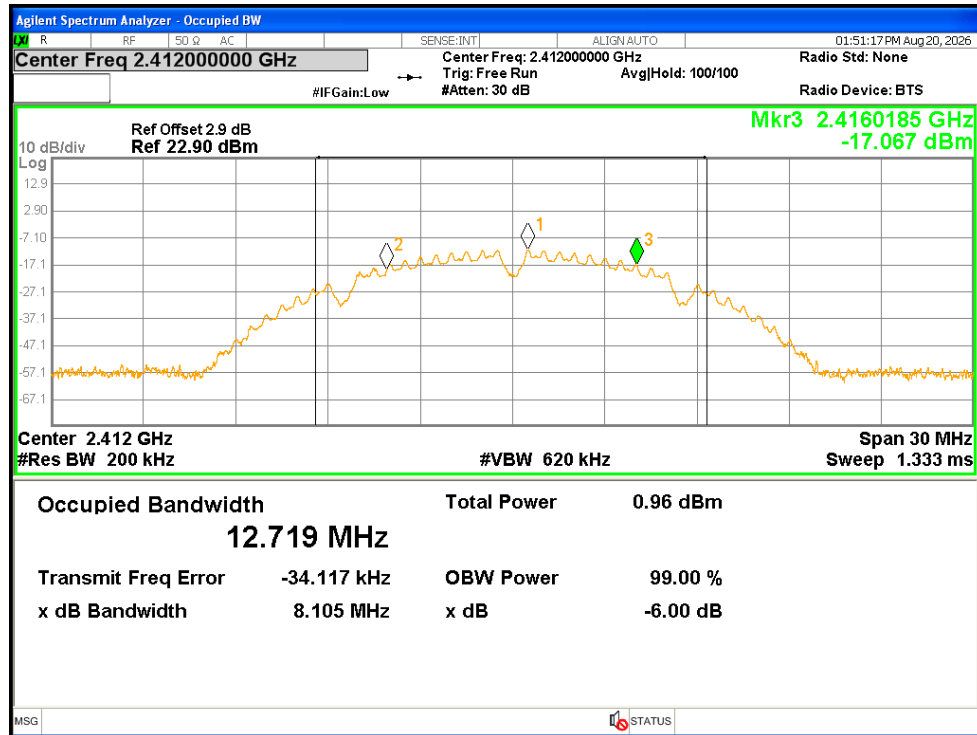
Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
b	2412	1.48	<=30	Pass
b	2437	1.16	<=30	Pass
b	2462	1.22	<=30	Pass
g	2412	1.47	<=30	Pass
g	2437	1.27	<=30	Pass
g	2462	1.39	<=30	Pass
n20	2412	1.29	<=30	Pass
n20	2437	1.59	<=30	Pass
n20	2462	1.83	<=30	Pass
n40	2422	1.78	<=30	Pass
n40	2437	1.52	<=30	Pass
n40	2452	1.32	<=30	Pass

-6dB Bandwidth

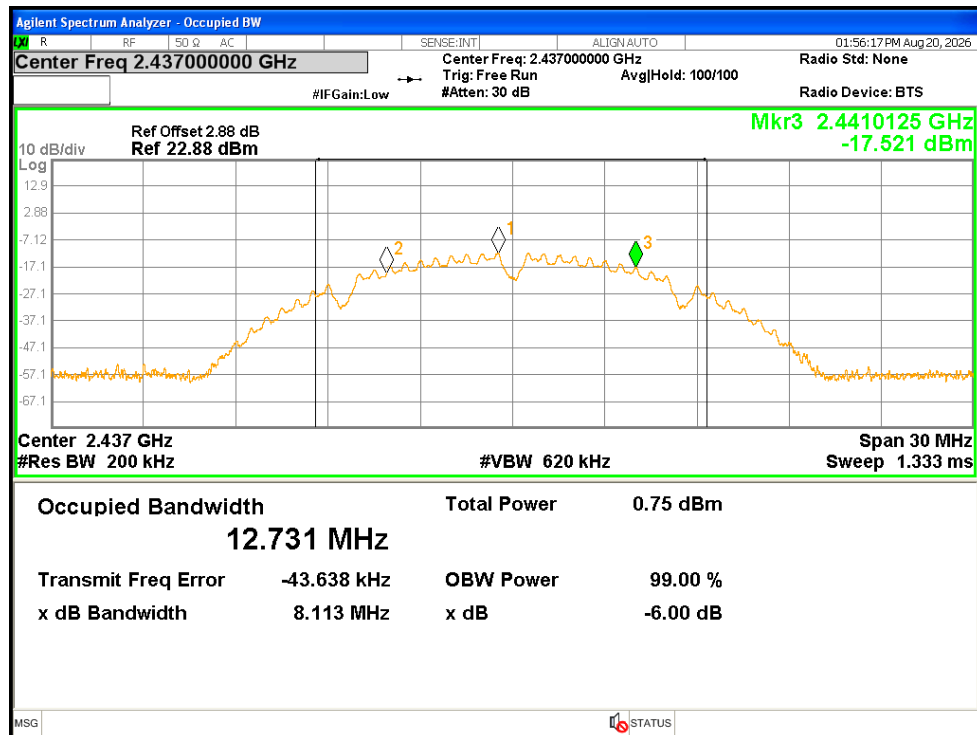
Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
b	2412	8.105	≥ 0.5	Pass
b	2437	8.113	≥ 0.5	Pass
b	2462	8.091	≥ 0.5	Pass
g	2412	8.082	≥ 0.5	Pass
g	2437	8.093	≥ 0.5	Pass
g	2462	8.115	≥ 0.5	Pass
n20	2412	17.14	≥ 0.5	Pass
n20	2437	16.29	≥ 0.5	Pass
n20	2462	17.16	≥ 0.5	Pass
n40	2422	35.57	≥ 0.5	Pass
n40	2437	35.84	≥ 0.5	Pass
n40	2452	35.59	≥ 0.5	Pass

Test Graphs

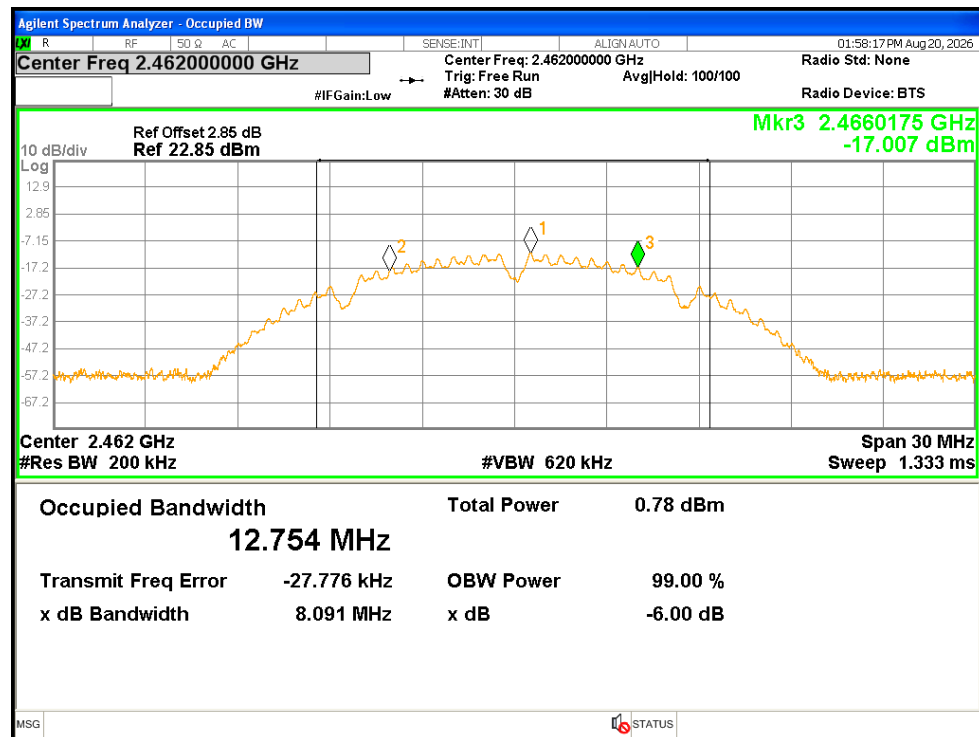
-6dB Bandwidth NVNT b 2412MHz



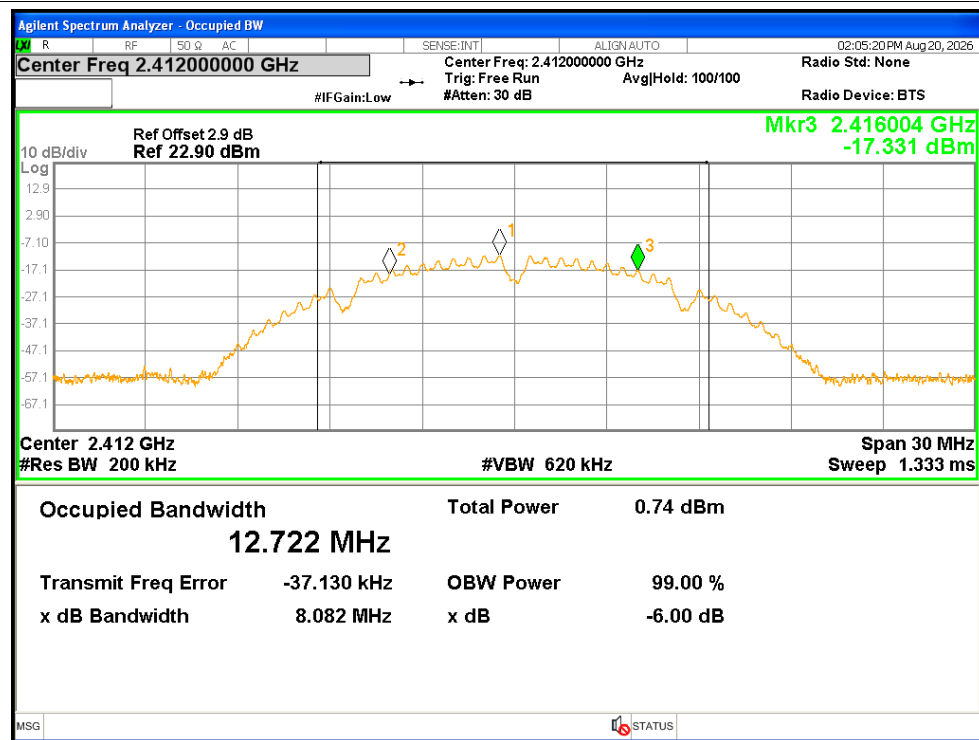
-6dB Bandwidth NVNT b 2437MHz



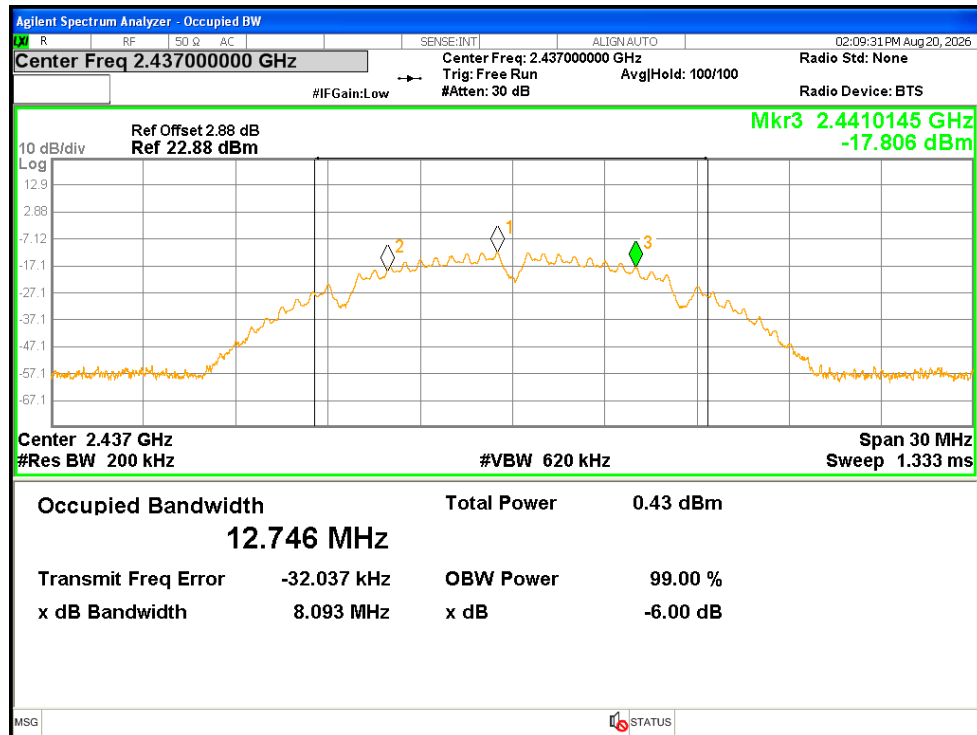
-6dB Bandwidth NVNT b 2462MHz



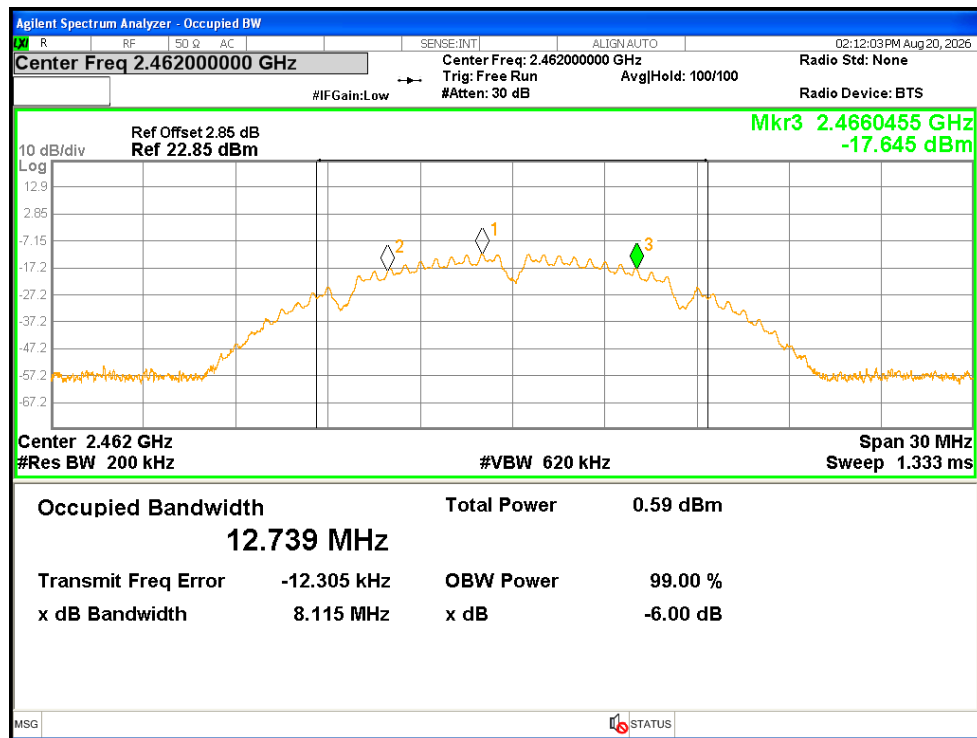
-6dB Bandwidth NVNT g 2412MHz



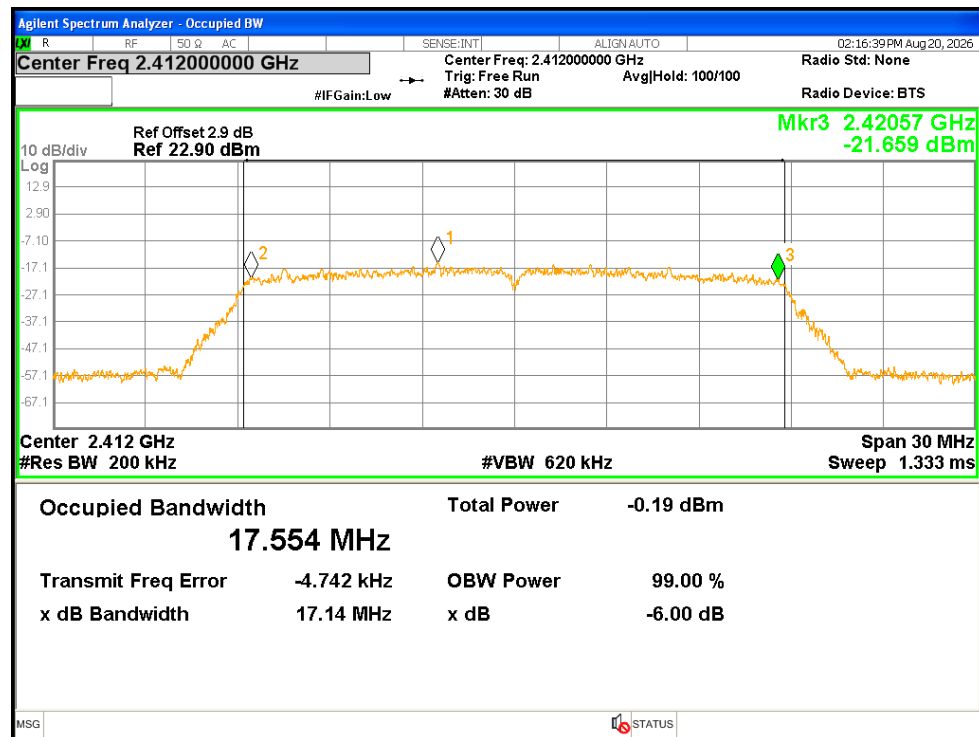
-6dB Bandwidth NVNT g 2437MHz



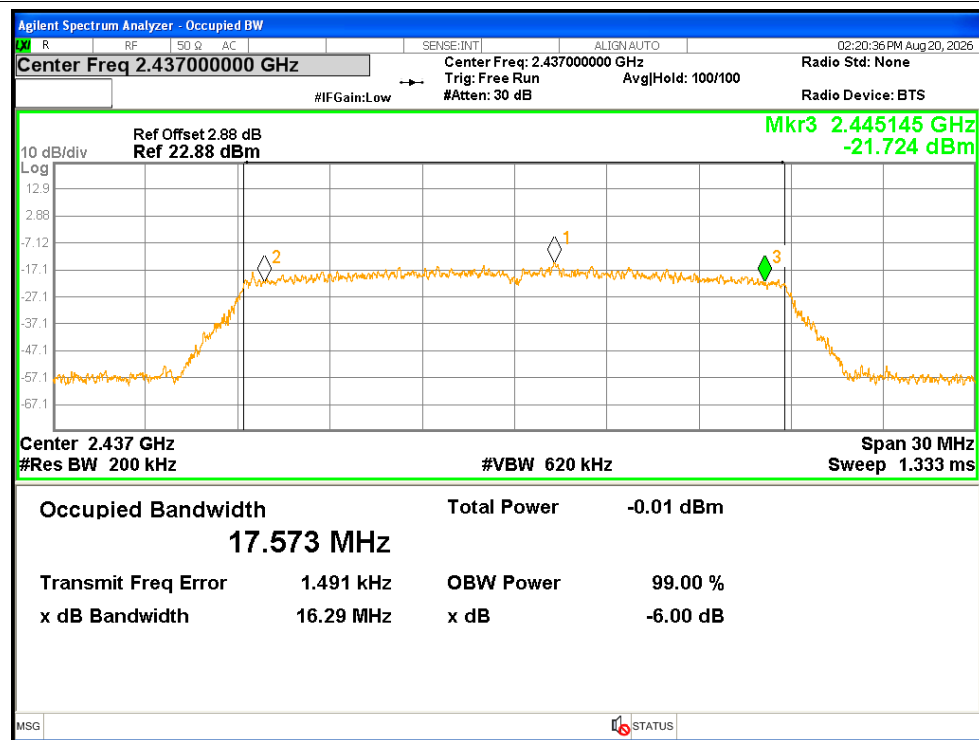
-6dB Bandwidth NVNT g 2462MHz



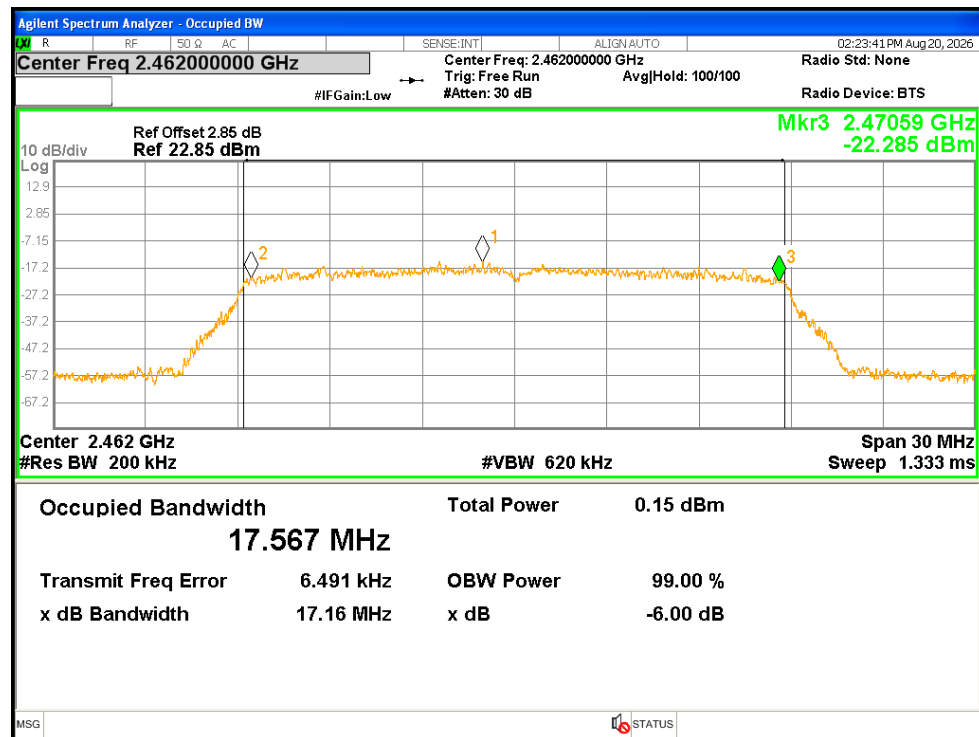
-6dB Bandwidth NVNT n20 2412MHz



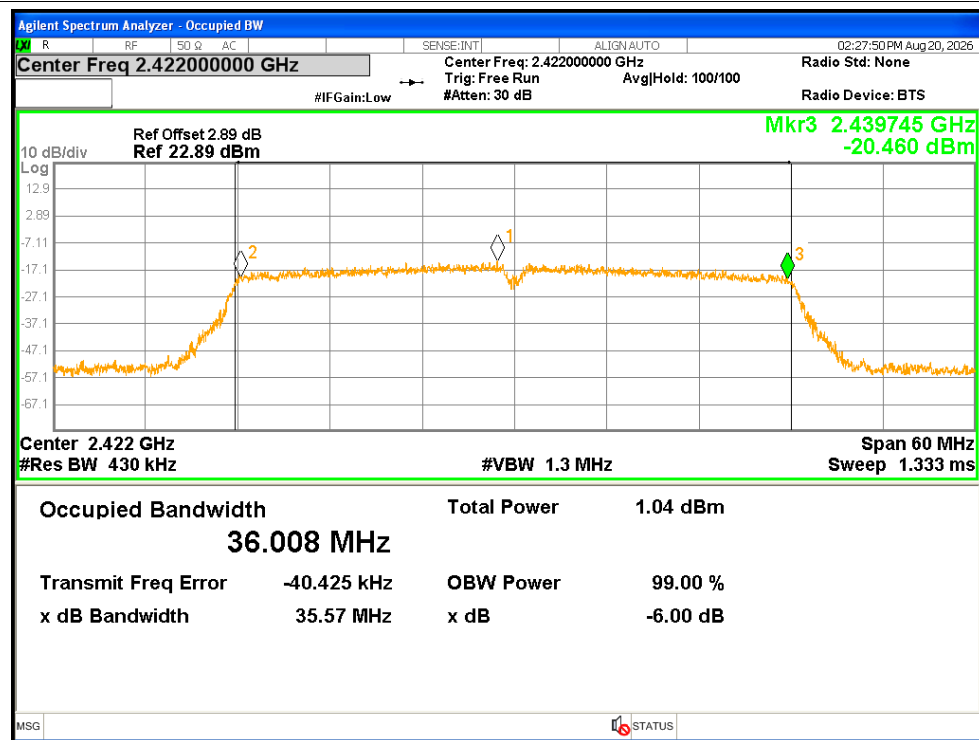
-6dB Bandwidth NVNT n20 2437MHz



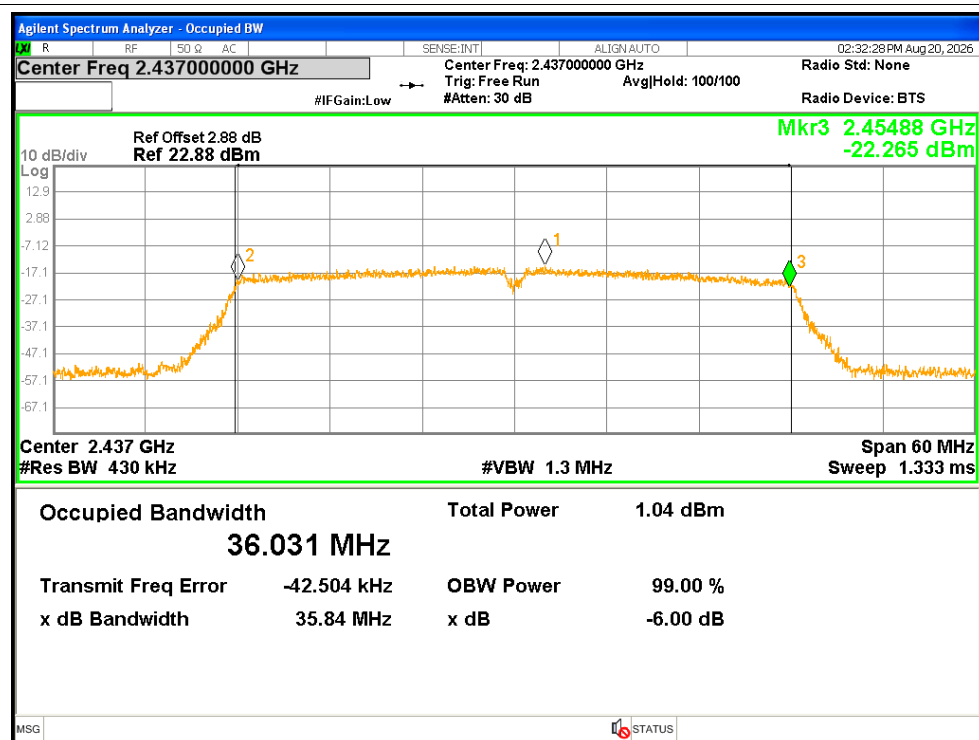
-6dB Bandwidth NVNT n20 2462MHz



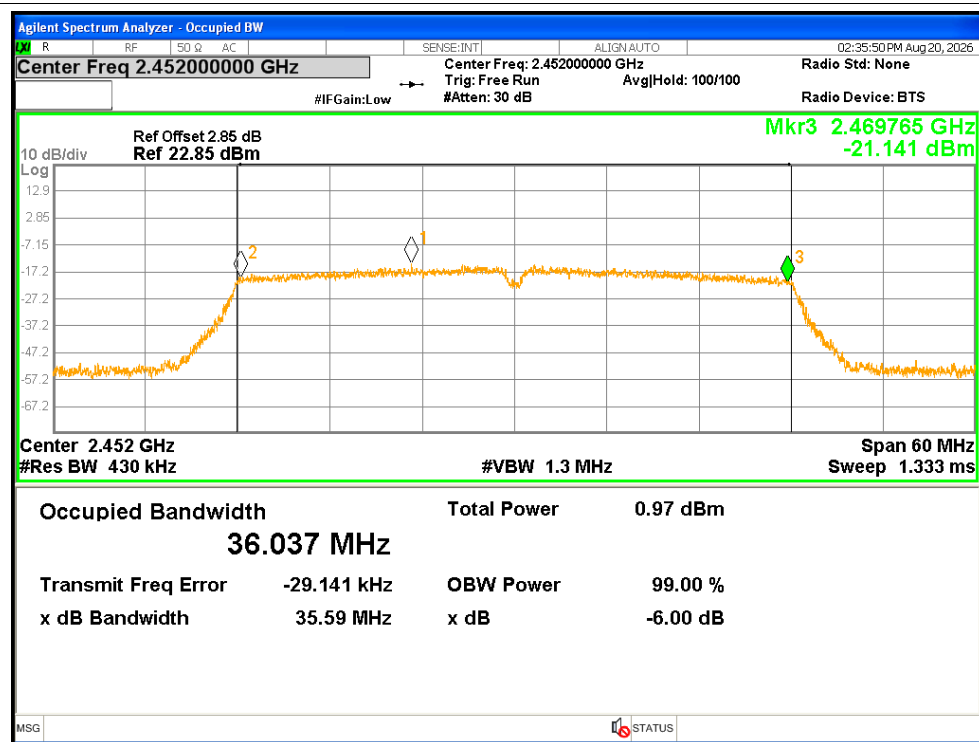
-6dB Bandwidth NVNT n40 2422MHz



-6dB Bandwidth NVNT n40 2437MHz



-6dB Bandwidth NVNT n40 2452MHz

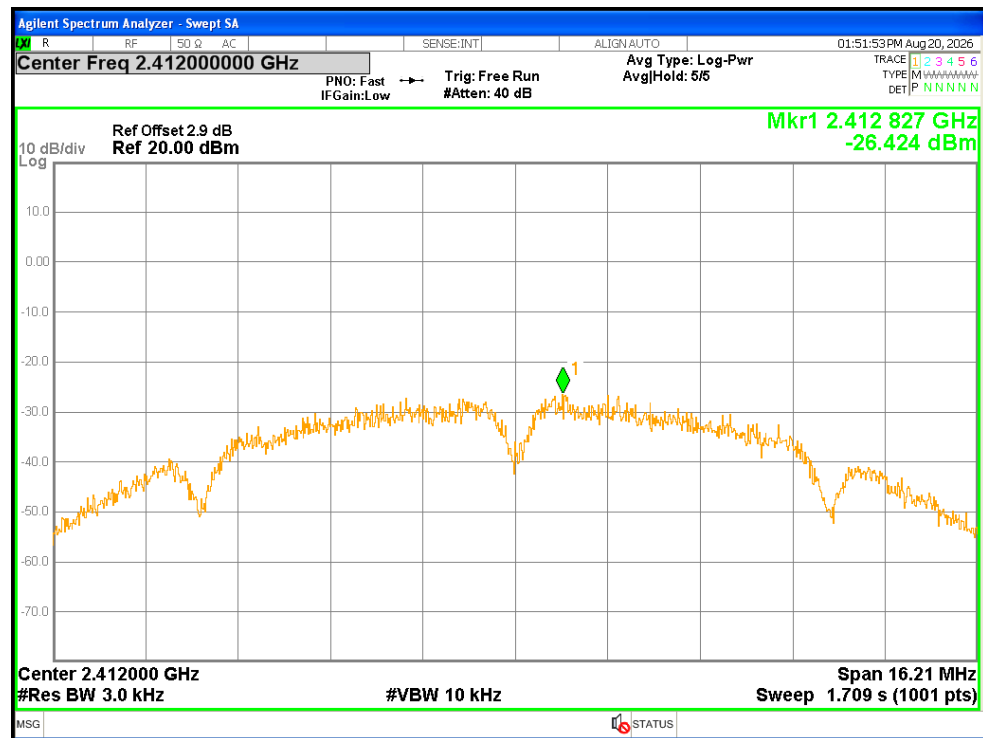


Maximum Power Spectral Density Level

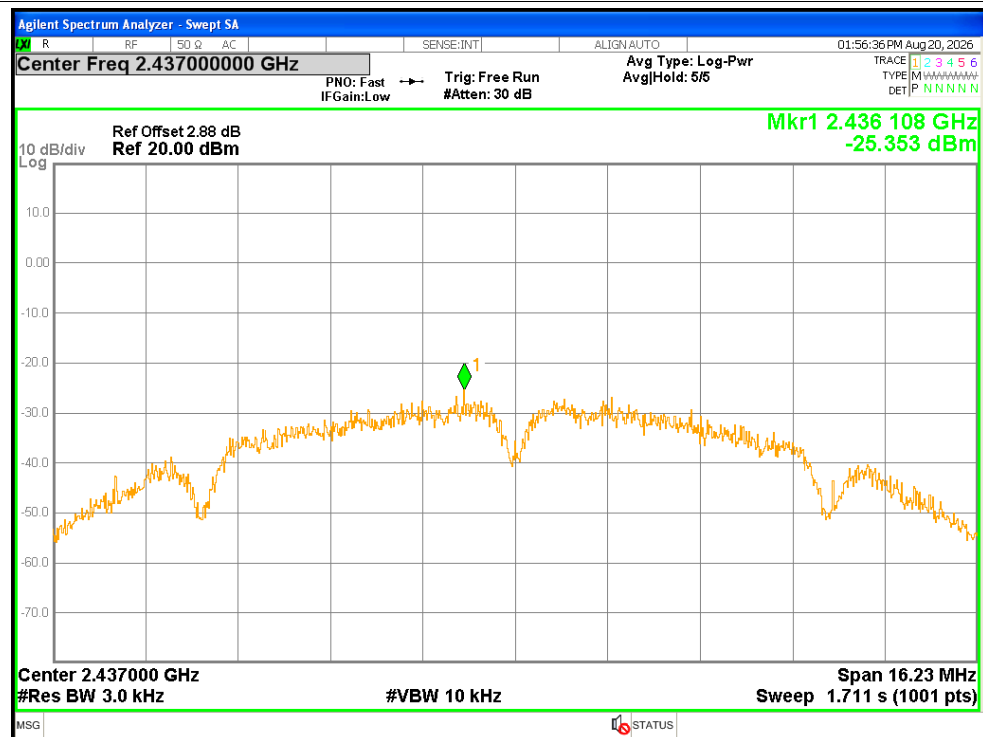
Mode	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
b	2412	-26.42	<=8	Pass
b	2437	-25.35	<=8	Pass
b	2462	-25.85	<=8	Pass
g	2412	-26.52	<=8	Pass
g	2437	-27.12	<=8	Pass
g	2462	-26.25	<=8	Pass
n20	2412	-30.97	<=8	Pass
n20	2437	-28.64	<=8	Pass
n20	2462	-28.95	<=8	Pass
n40	2422	-27.88	<=8	Pass
n40	2437	-28.57	<=8	Pass
n40	2452	-28.94	<=8	Pass

Test Graphs

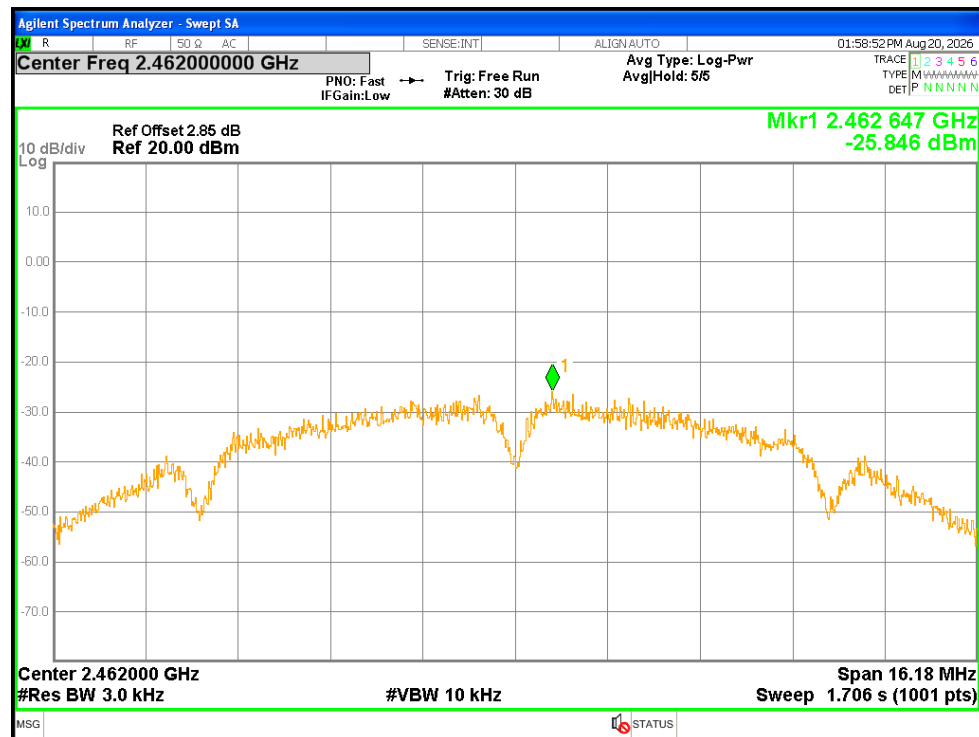
PSD NVNT b 2412MHz



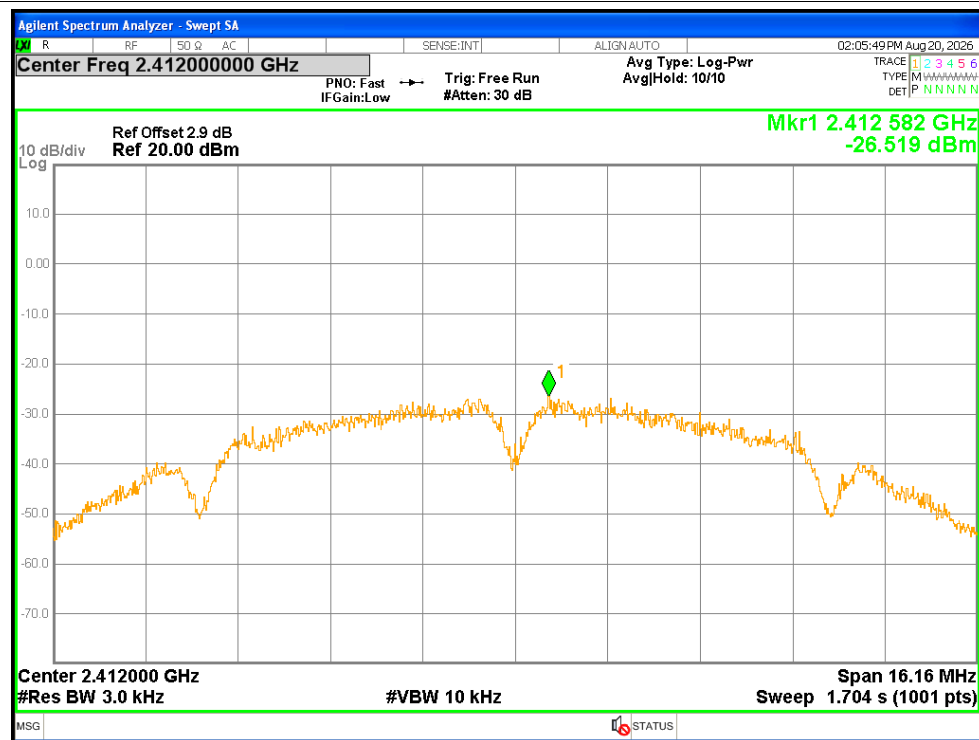
PSD NVNT b 2437MHz



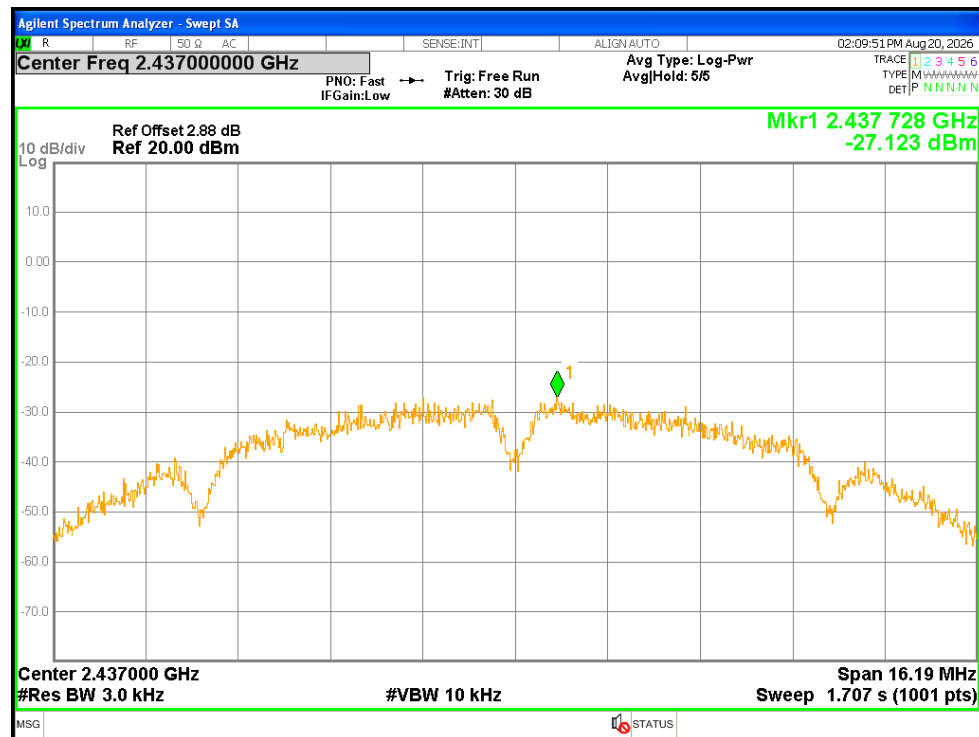
PSD NVNT b 2462MHz



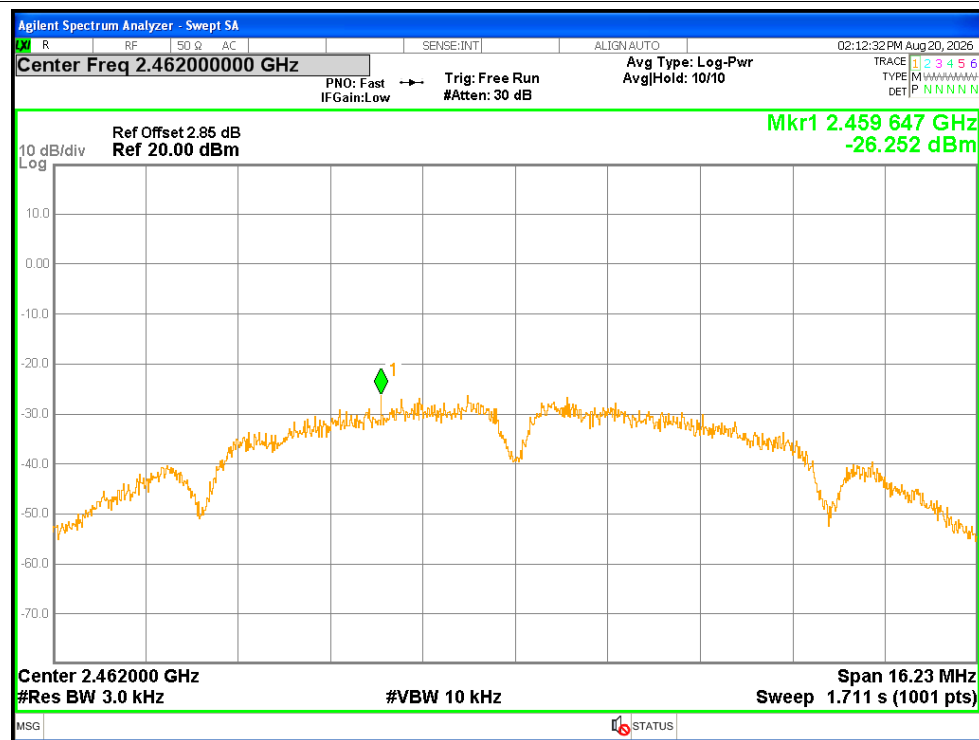
PSD NVNT g 2412MHz



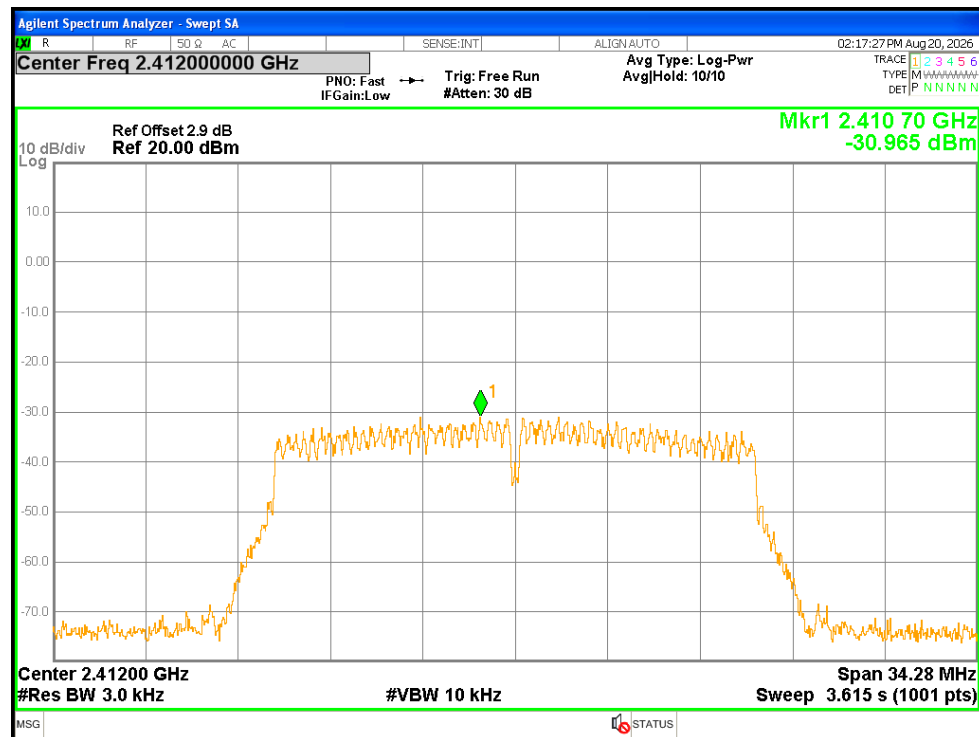
PSD NVNT g 2437MHz



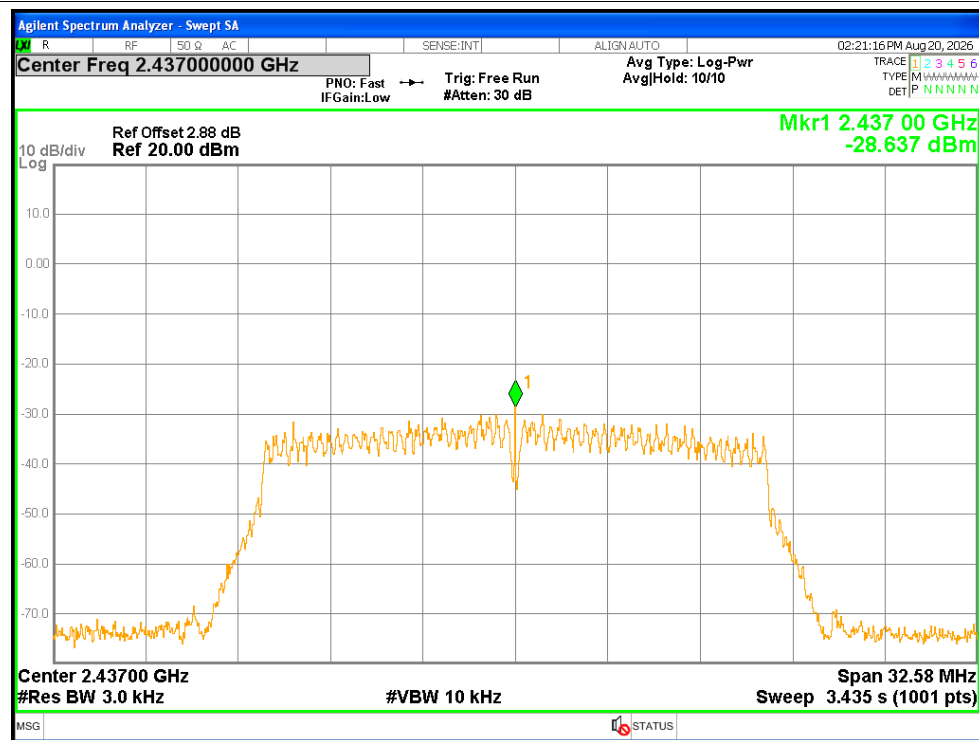
PSD NVNT g 2462MHz



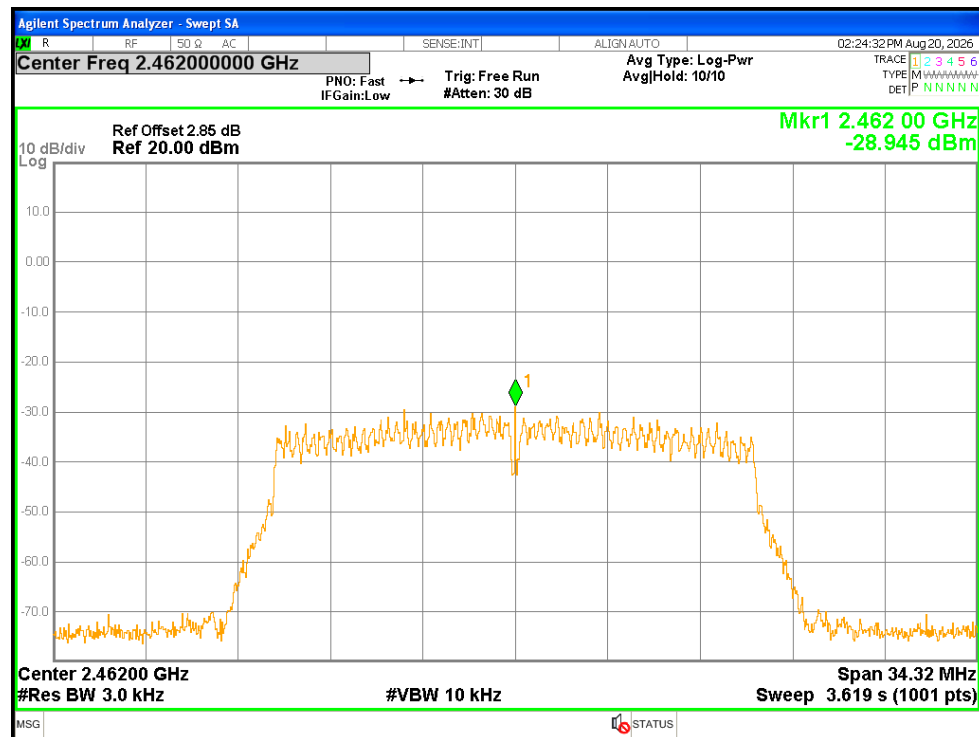
PSD NVNT n20 2412MHz



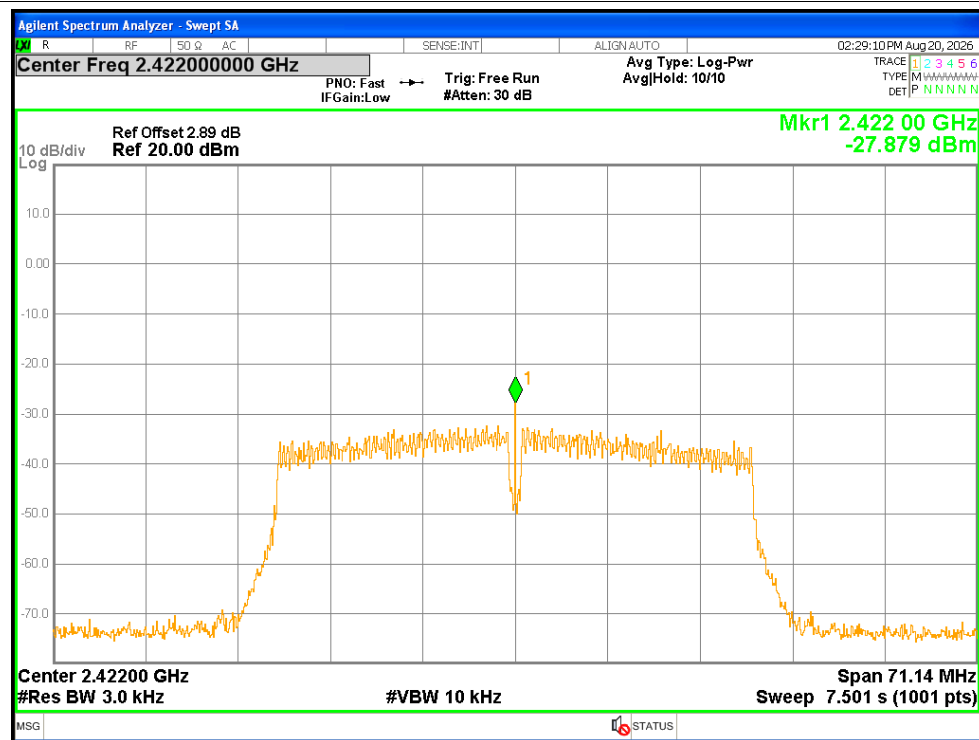
PSD NVNT n20 2437MHz



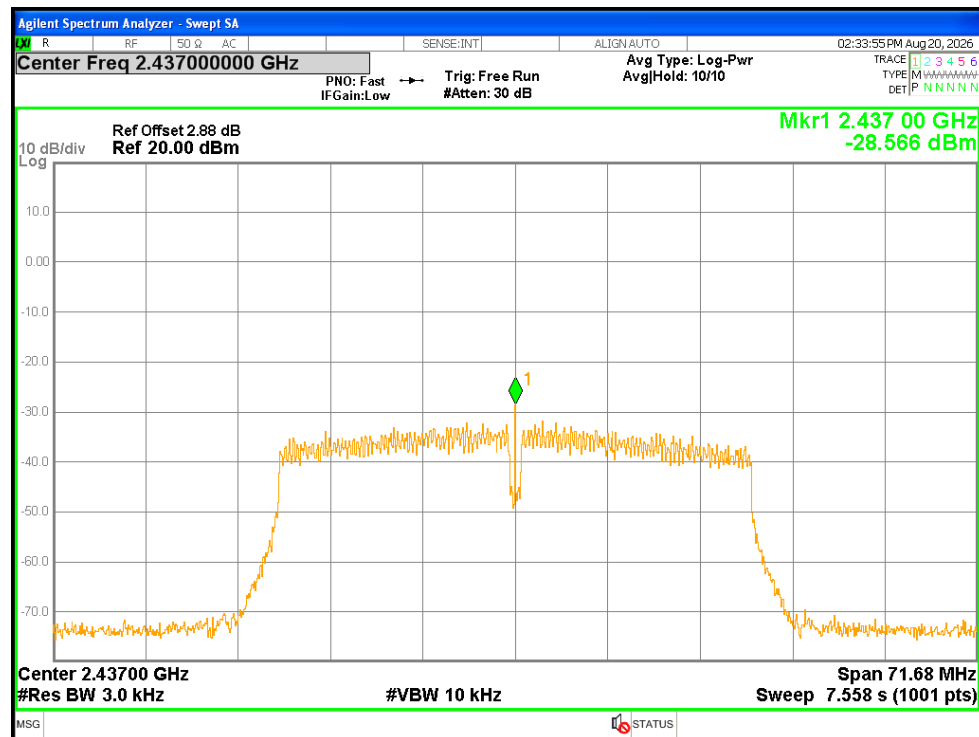
PSD NVNT n20 2462MHz



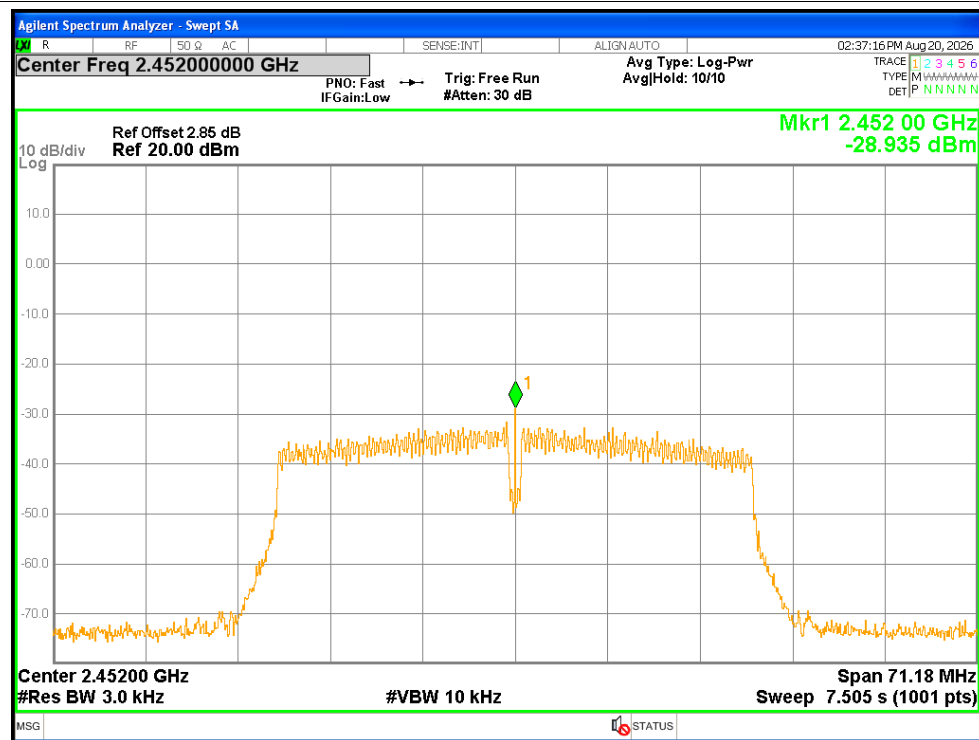
PSD NVNT n40 2422MHz



PSD NVNT n40 2437MHz



PSD NVNT n40 2452MHz

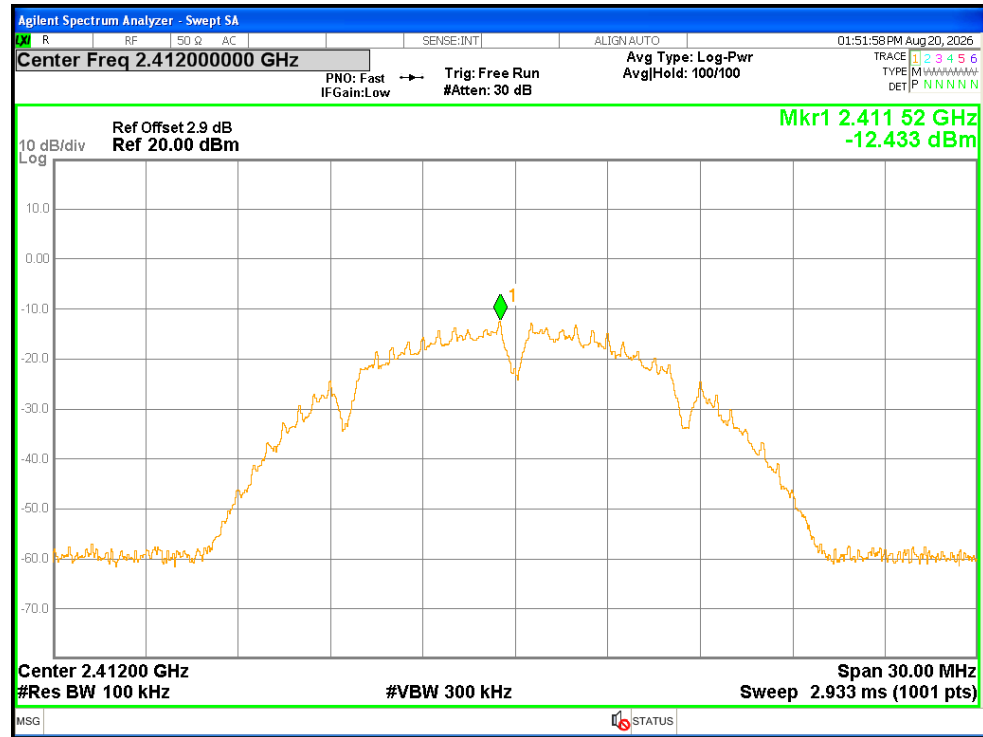


Band Edge

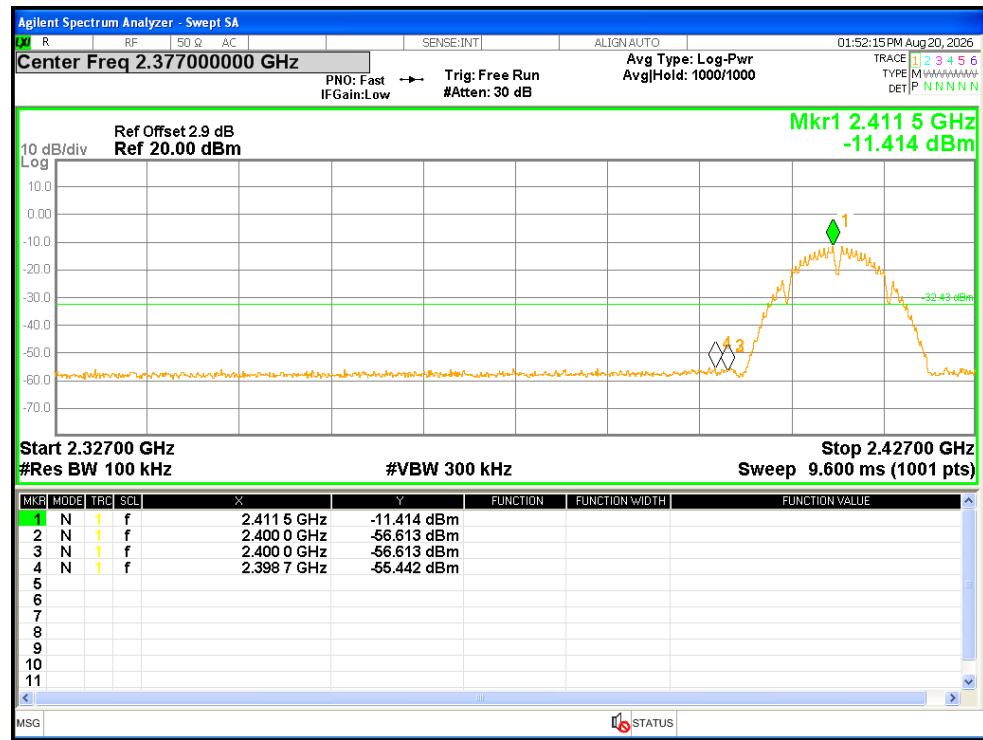
Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	-43.01	<=-20	Pass
b	2462	-43.44	<=-20	Pass
g	2412	-42.93	<=-20	Pass
g	2462	-43.37	<=-20	Pass
n20	2412	-38.35	<=-20	Pass
n20	2462	-39.23	<=-20	Pass
n40	2422	-35.84	<=-20	Pass
n40	2452	-38.77	<=-20	Pass

Test Graphs

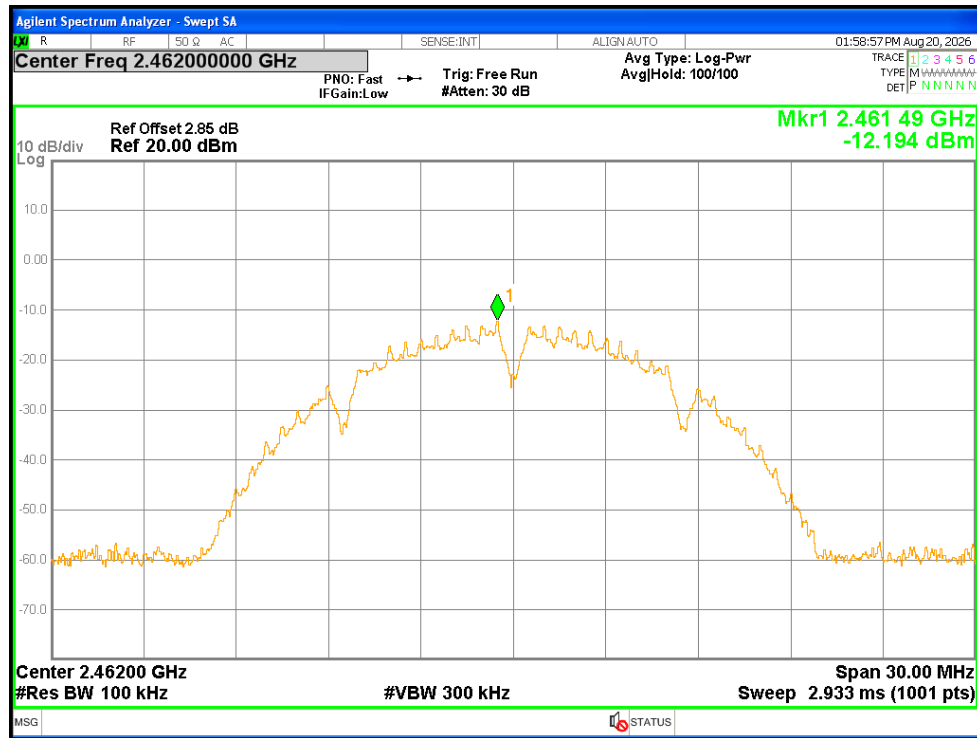
Band Edge NVNT b 2412MHz Ref



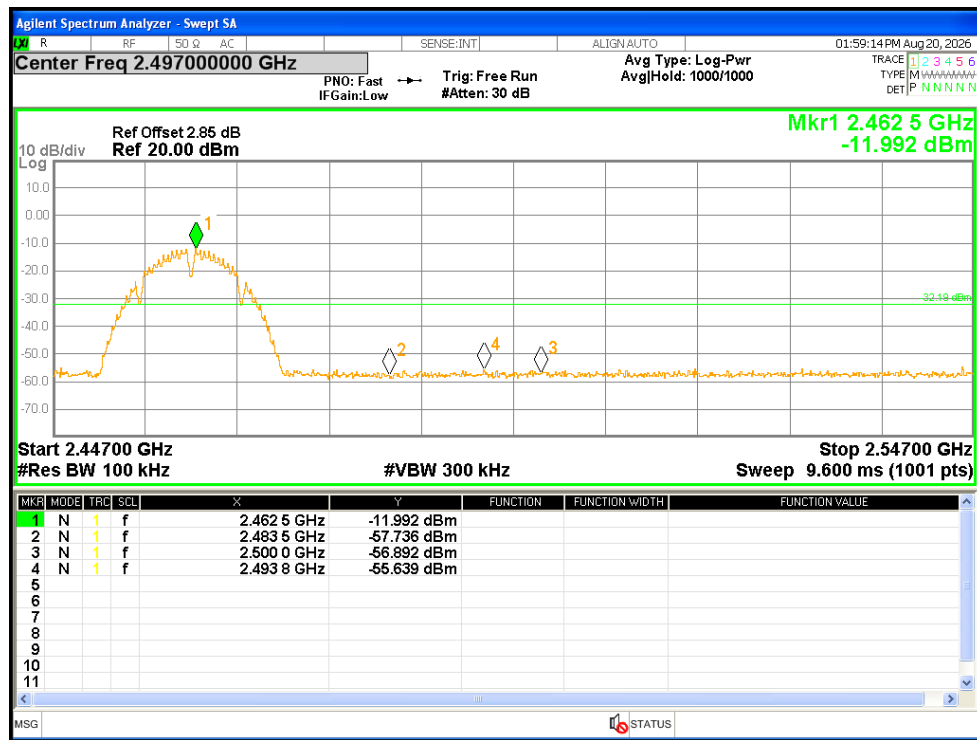
Band Edge NVNT b 2412MHz Emission



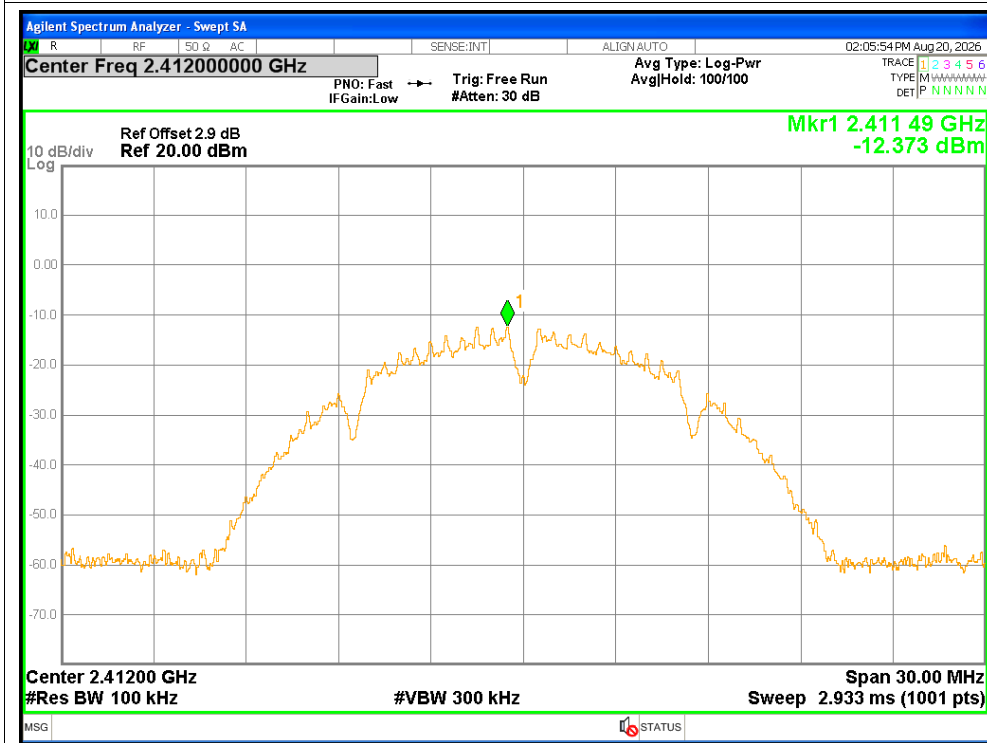
Band Edge NVNT b 2462MHz Ref



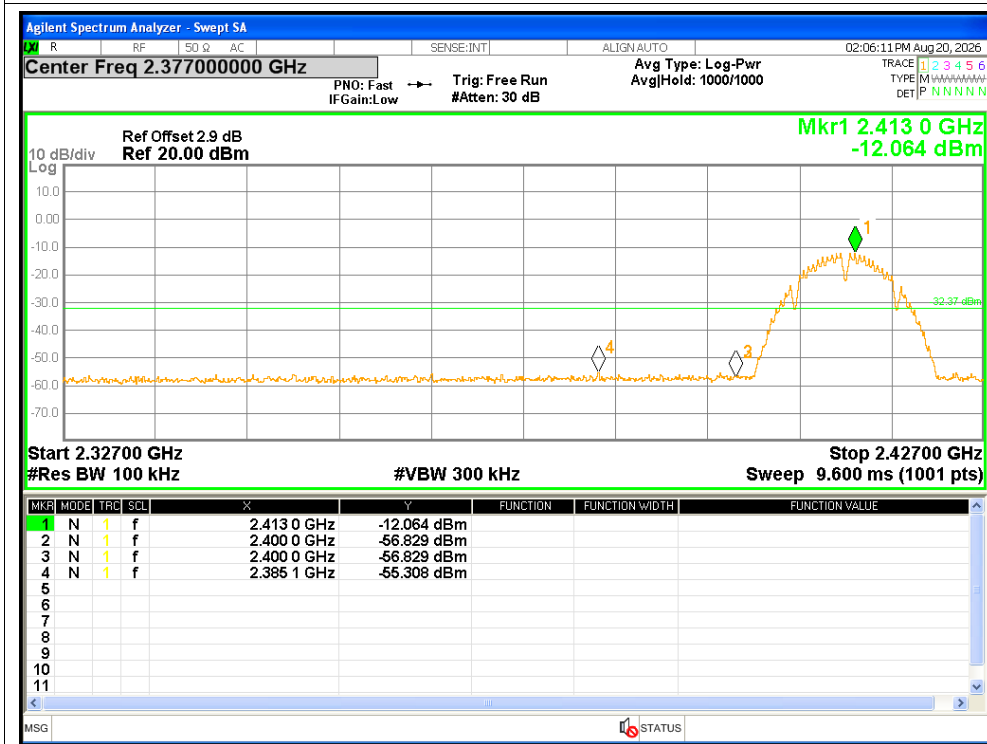
Band Edge NVNT b 2462MHz Emission



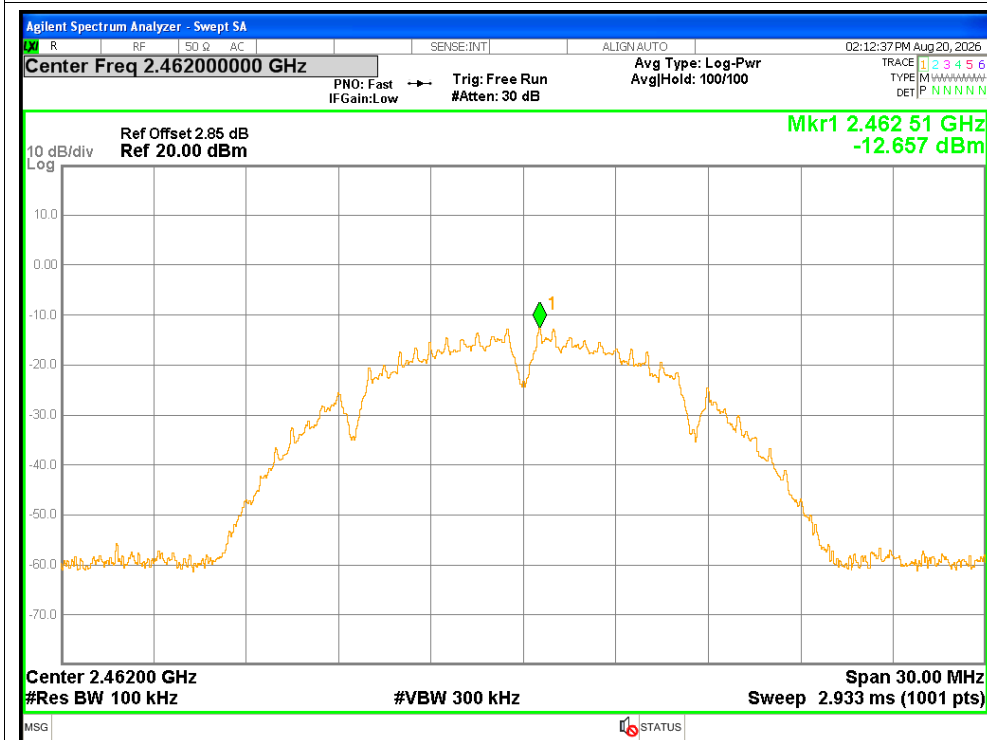
Band Edge NVNT g 2412MHz Ref



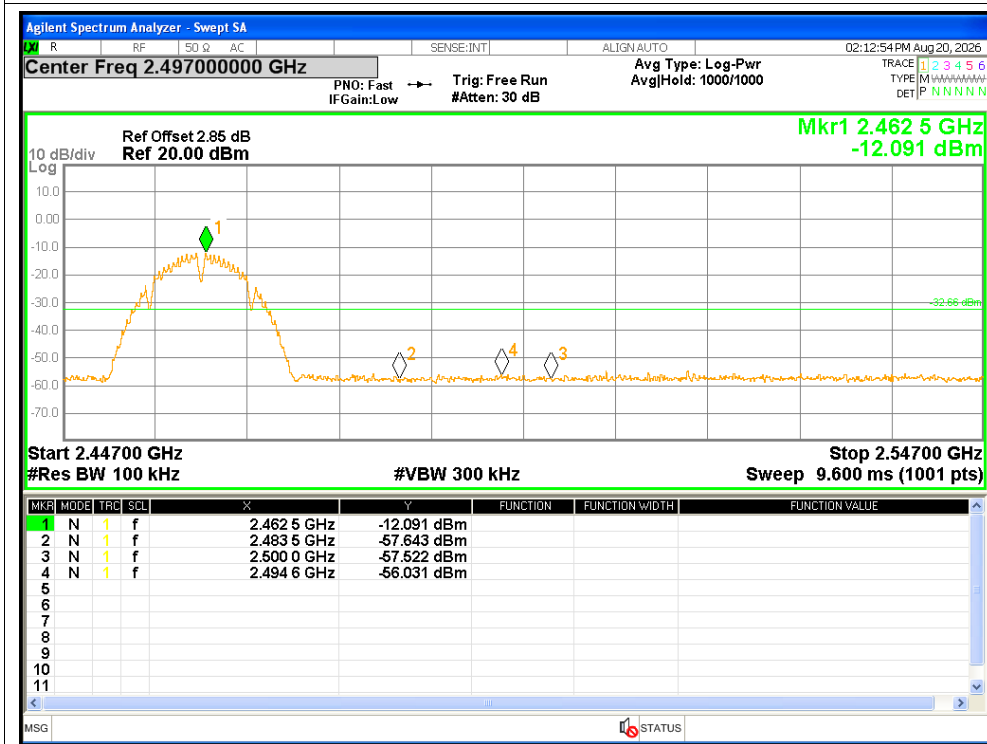
Band Edge NVNT g 2412MHz Emission



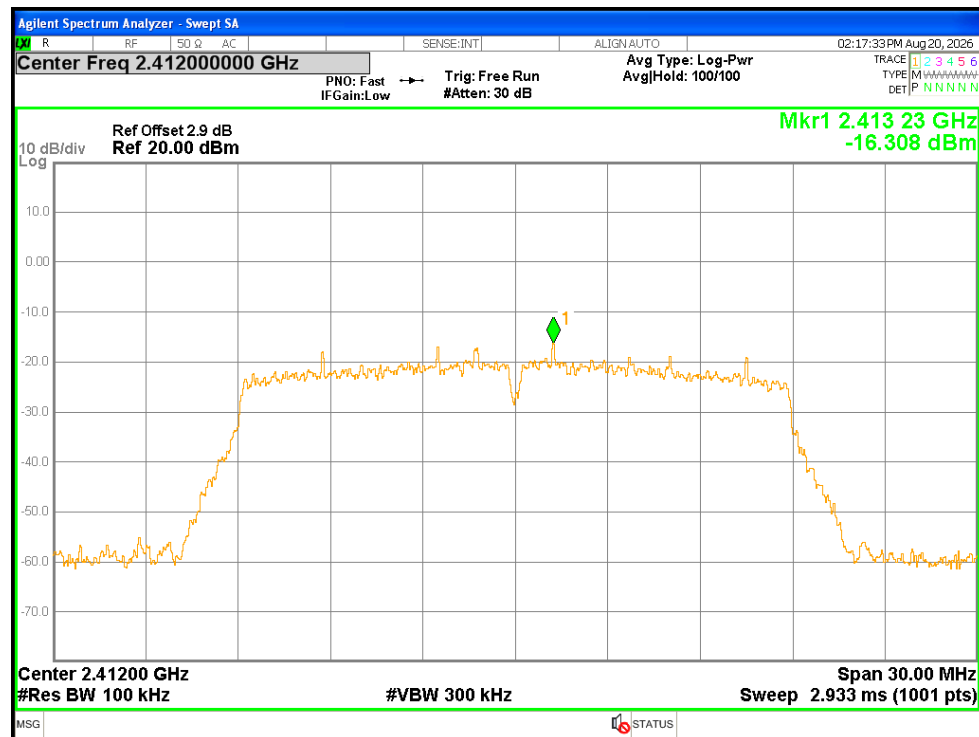
Band Edge NVNT g 2462MHz Ref



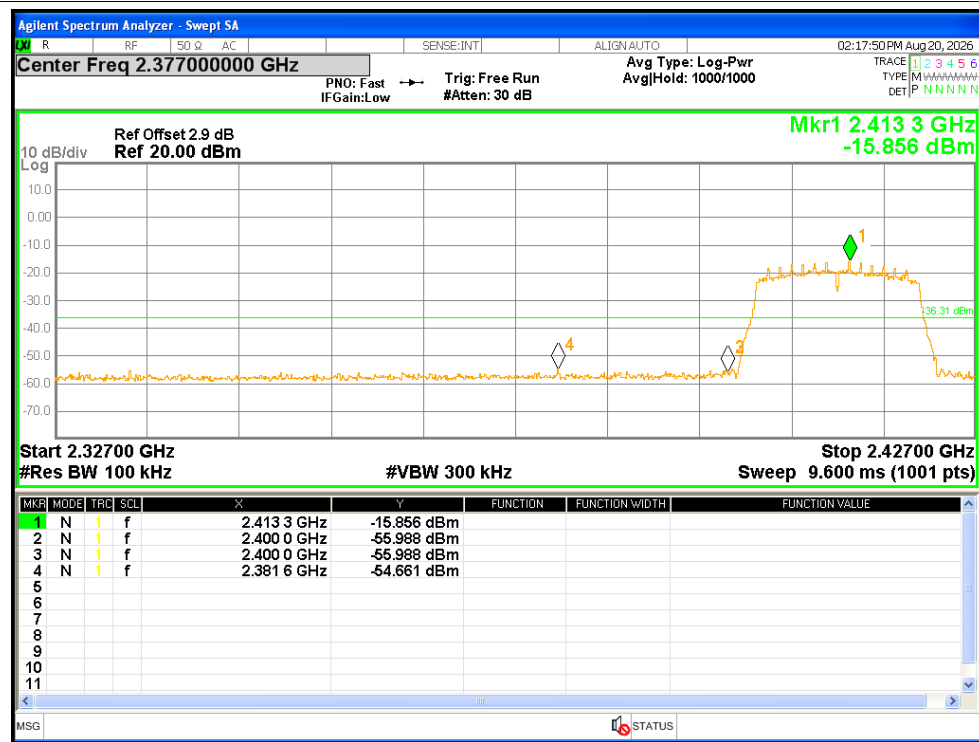
Band Edge NVNT g 2462MHz Emission



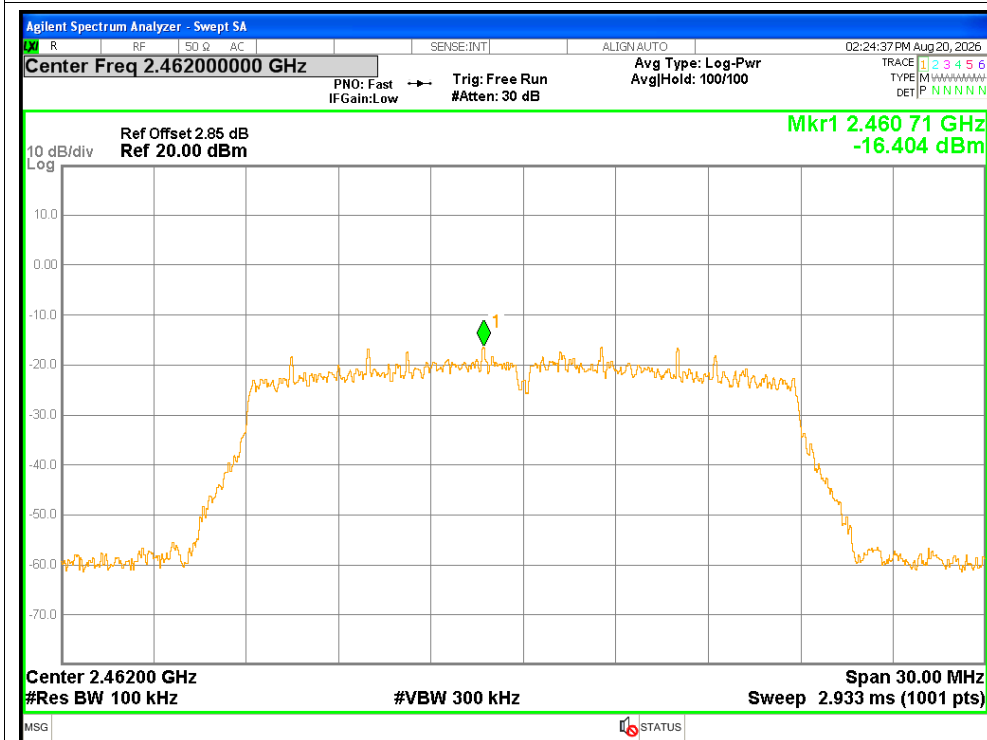
Band Edge NVNT n20 2412MHz Ref



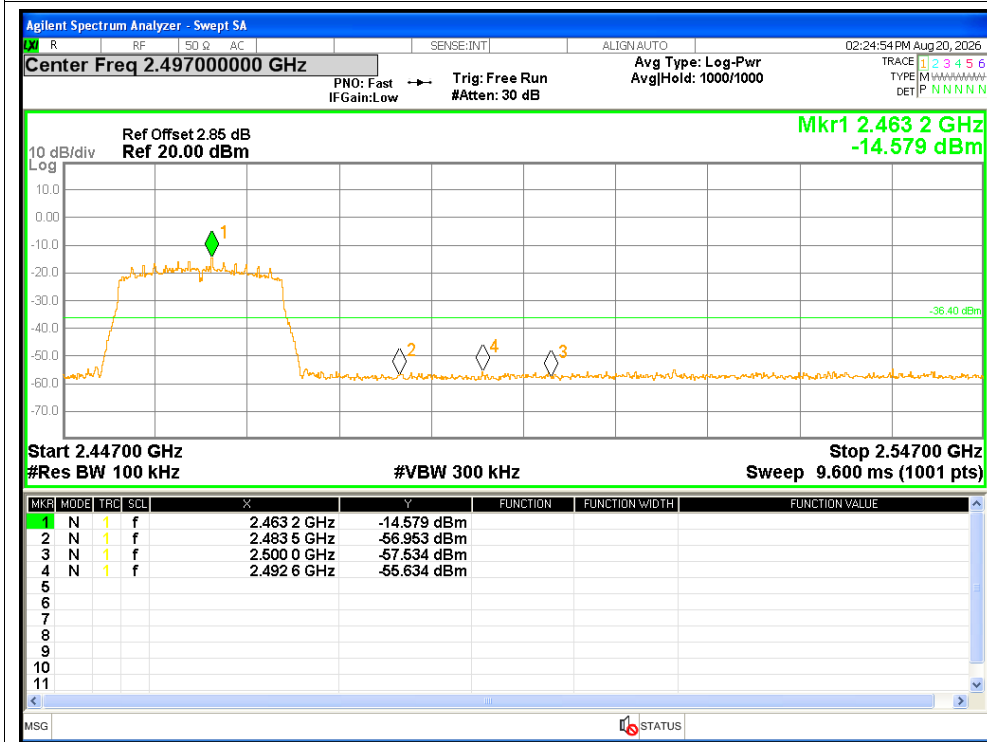
Band Edge NVNT n20 2412MHz Emission



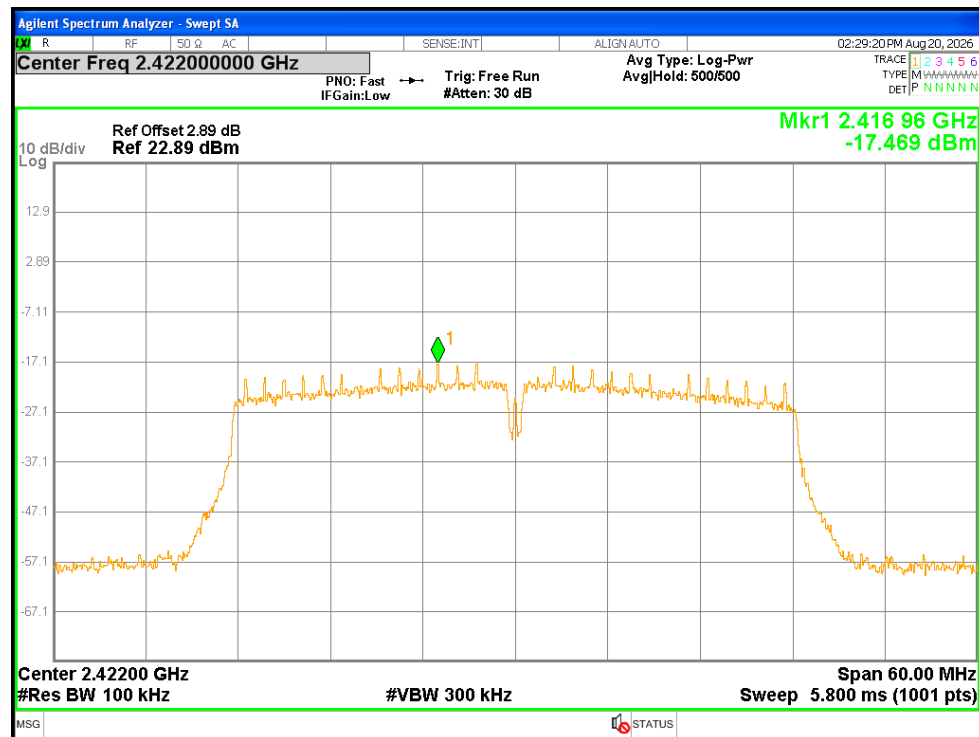
Band Edge NVNT n20 2462MHz Ref



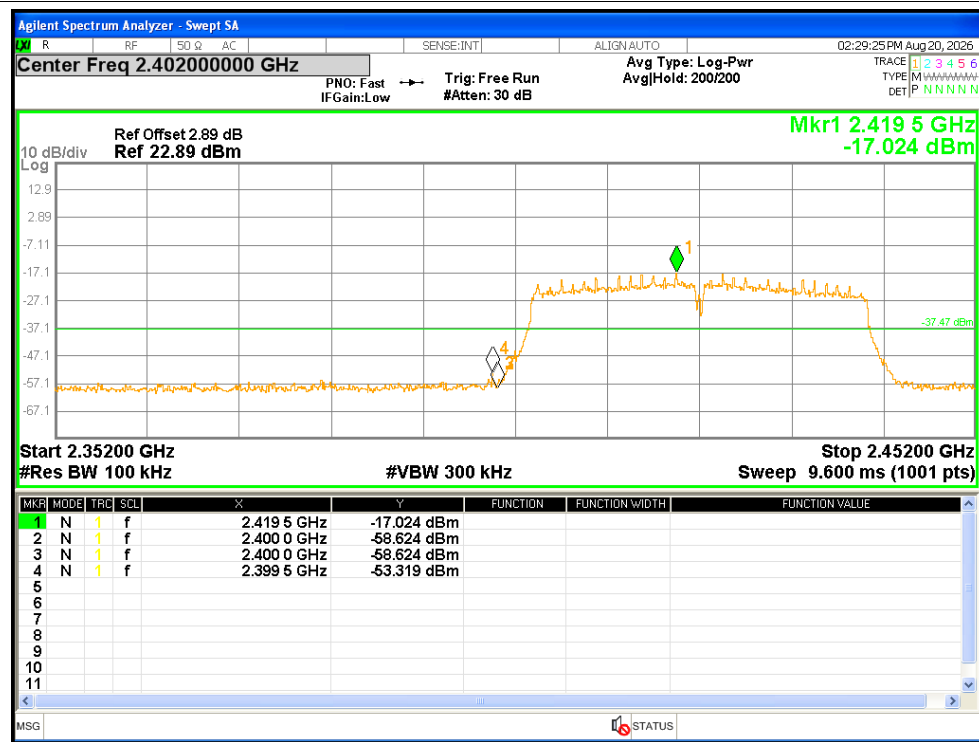
Band Edge NVNT n20 2462MHz Emission



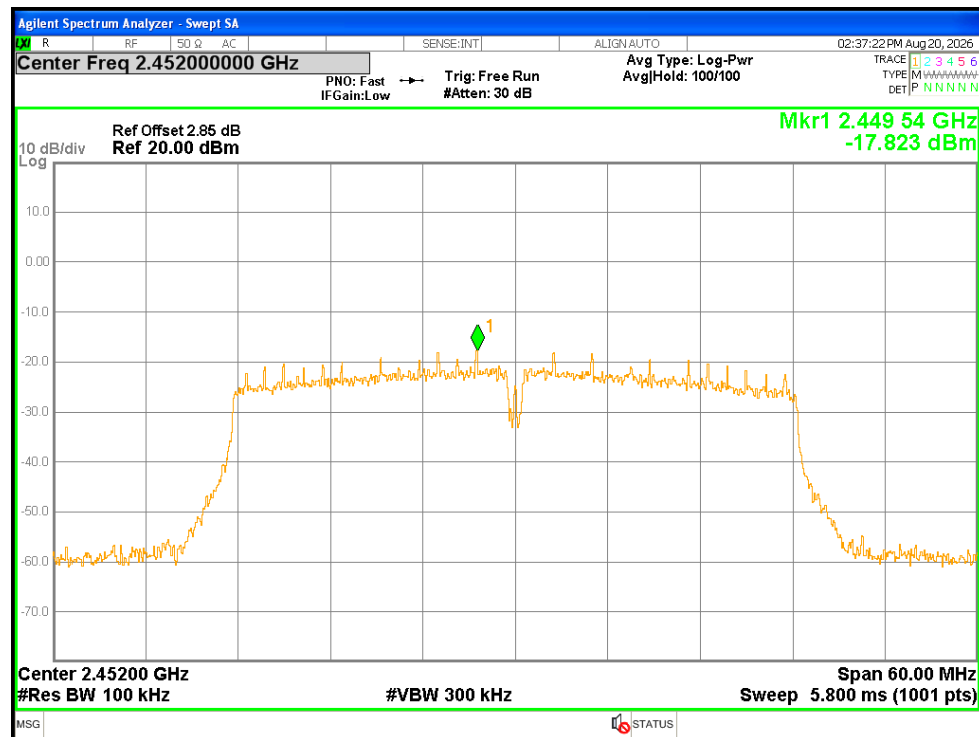
Band Edge NVNT n40 2422MHz Ref



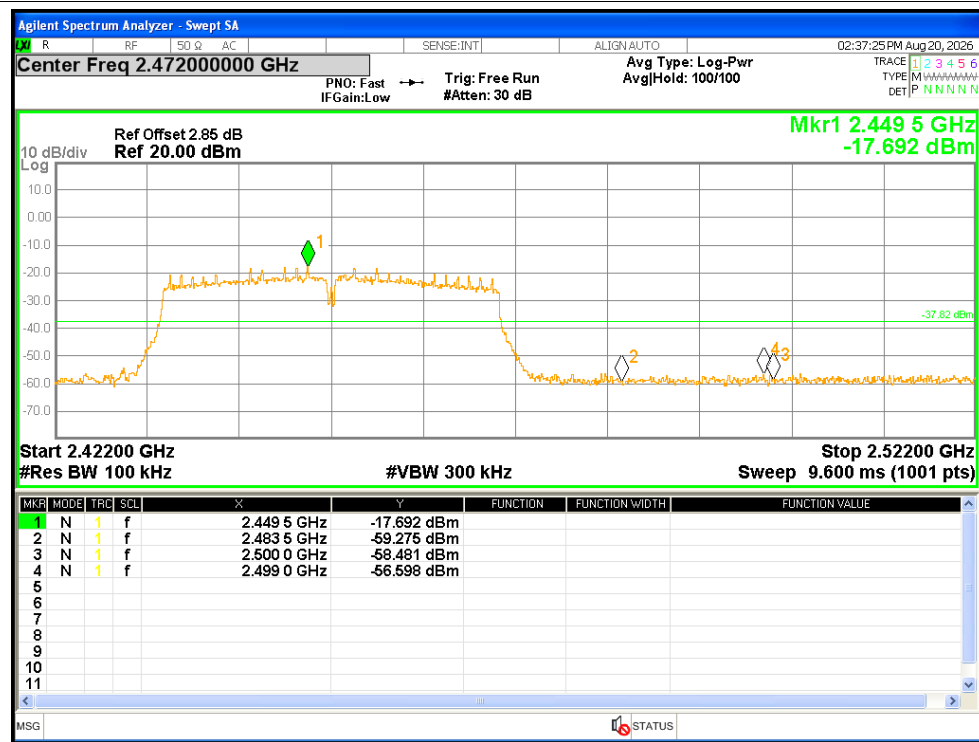
Band Edge NVNT n40 2422MHz Emission



Band Edge NVNT n40 2452MHz Ref



Band Edge NVNT n40 2452MHz Emission

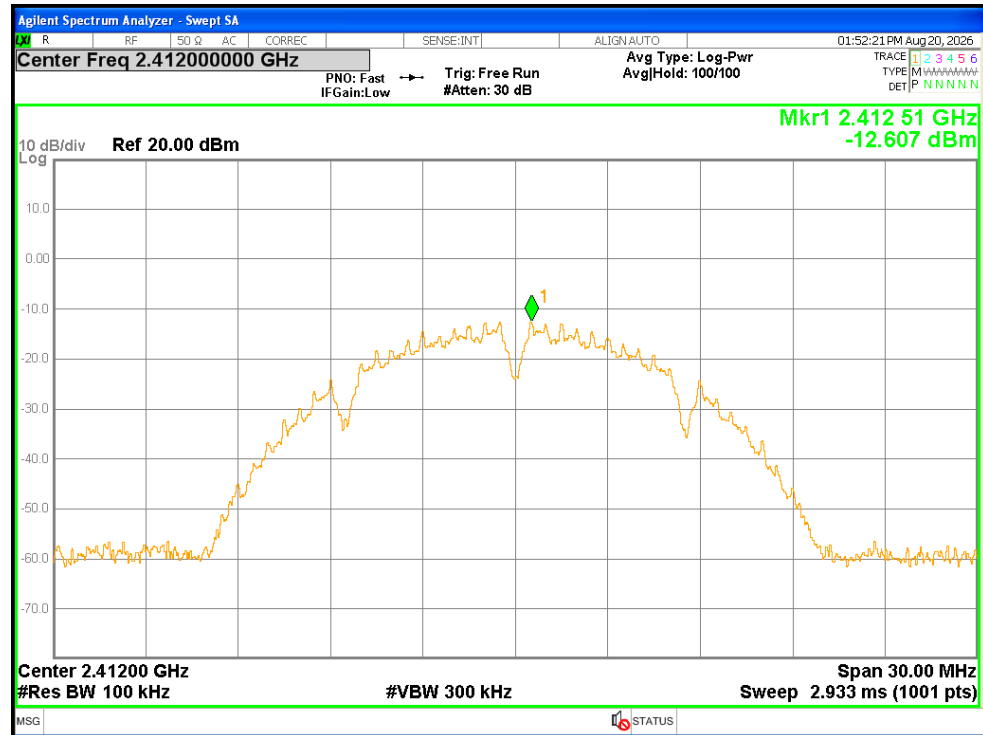


Conducted RF Spurious Emission

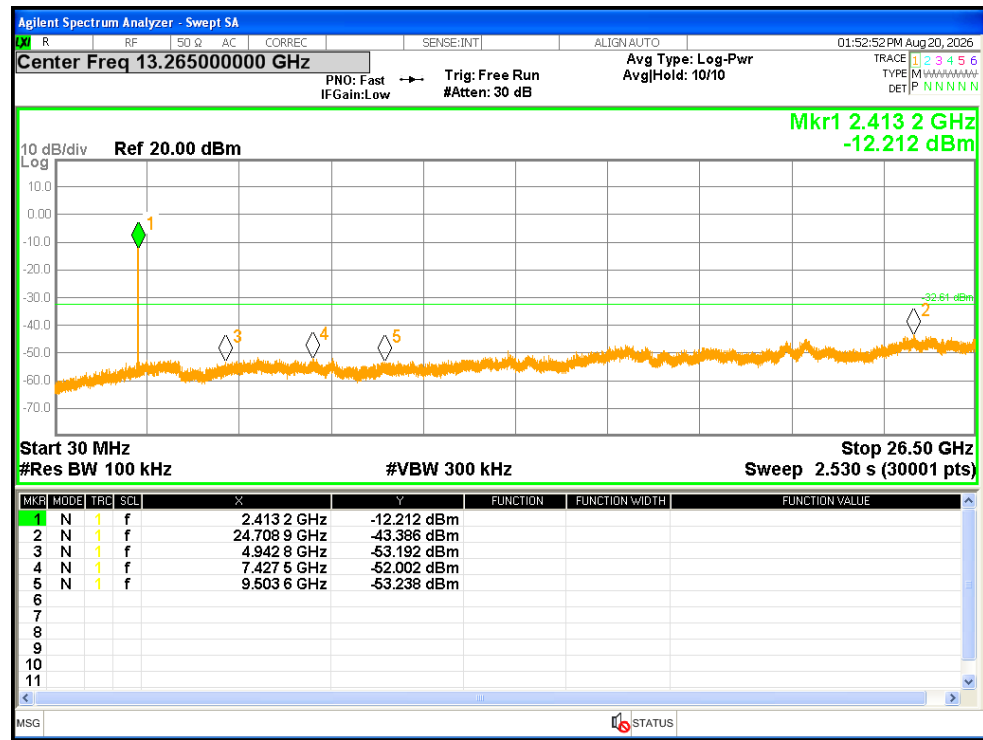
Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	-30.77	<=-20	Pass
b	2437	-30.79	<=-20	Pass
b	2462	-30.49	<=-20	Pass
g	2412	-31.49	<=-20	Pass
g	2437	-31.3	<=-20	Pass
g	2462	-31.1	<=-20	Pass
n20	2412	-26.61	<=-20	Pass
n20	2437	-27.26	<=-20	Pass
n20	2462	-27.68	<=-20	Pass
n40	2422	-26.08	<=-20	Pass
n40	2437	-25.42	<=-20	Pass
n40	2452	-26	<=-20	Pass

Test Graphs

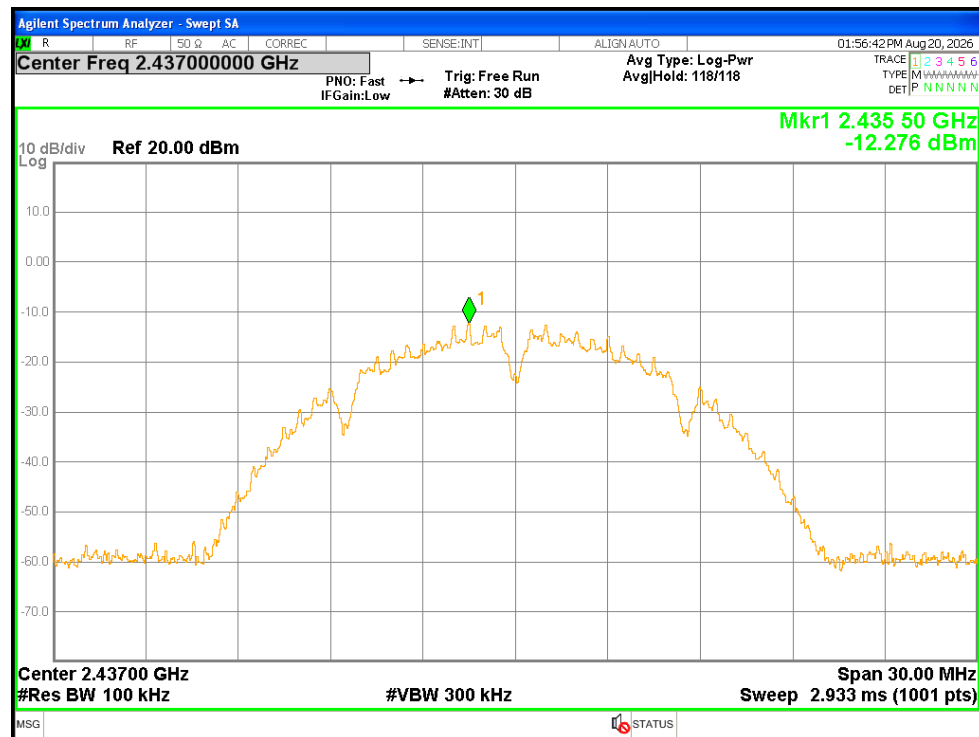
Tx. Spurious NVNT b 2412MHz Ref



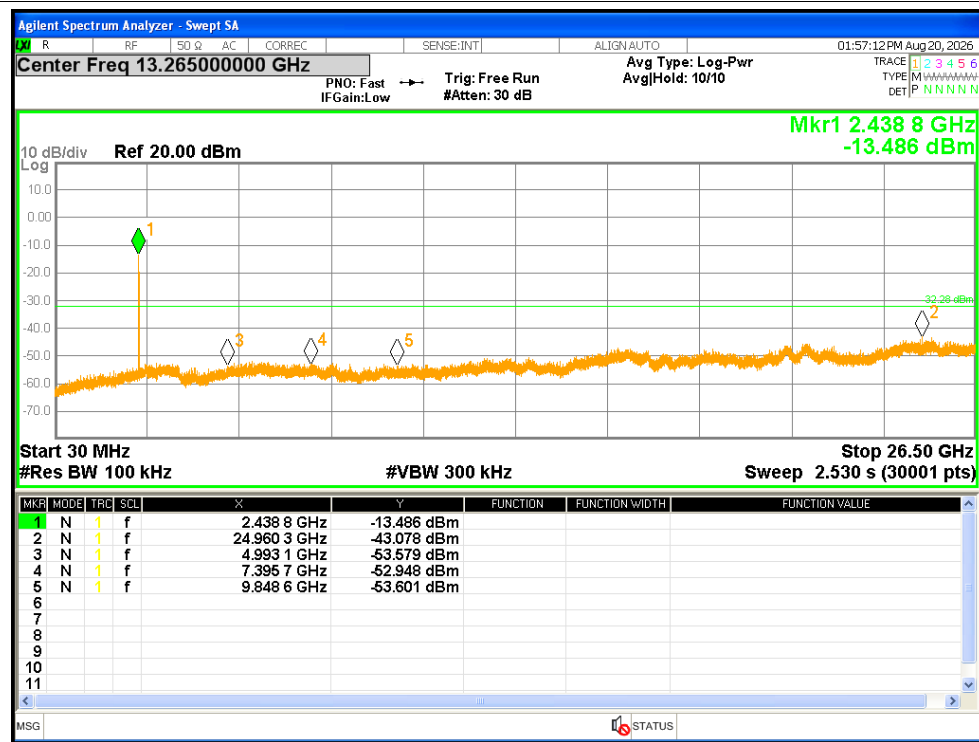
Tx. Spurious NVNT b 2412MHz Emission



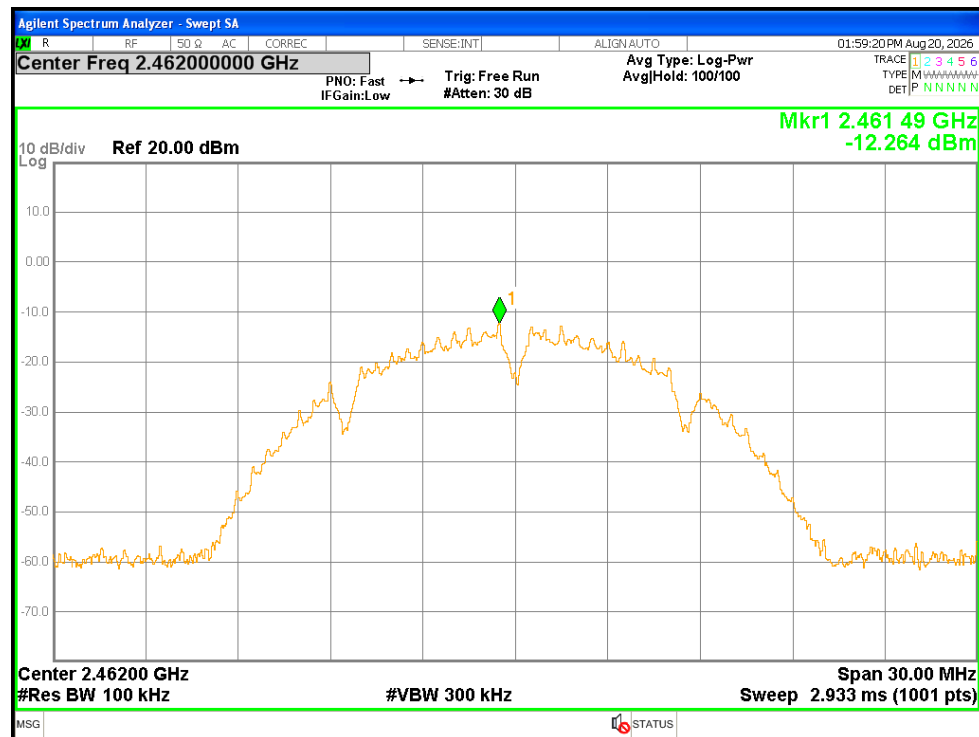
Tx. Spurious NVNT b 2437MHz Ref



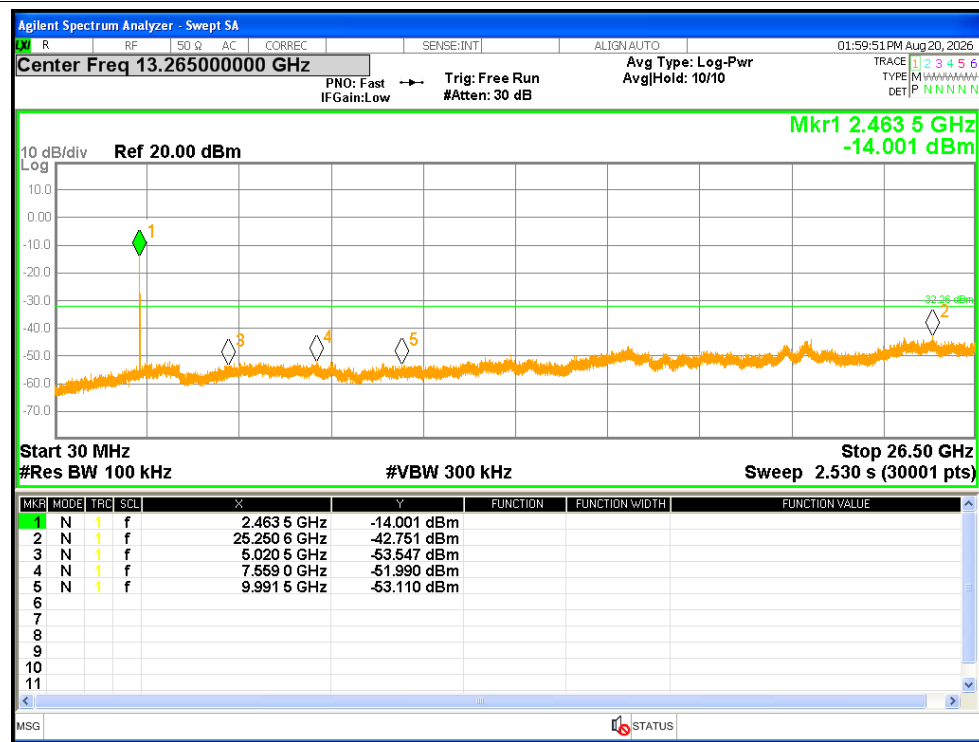
Tx. Spurious NVNT b 2437MHz Emission



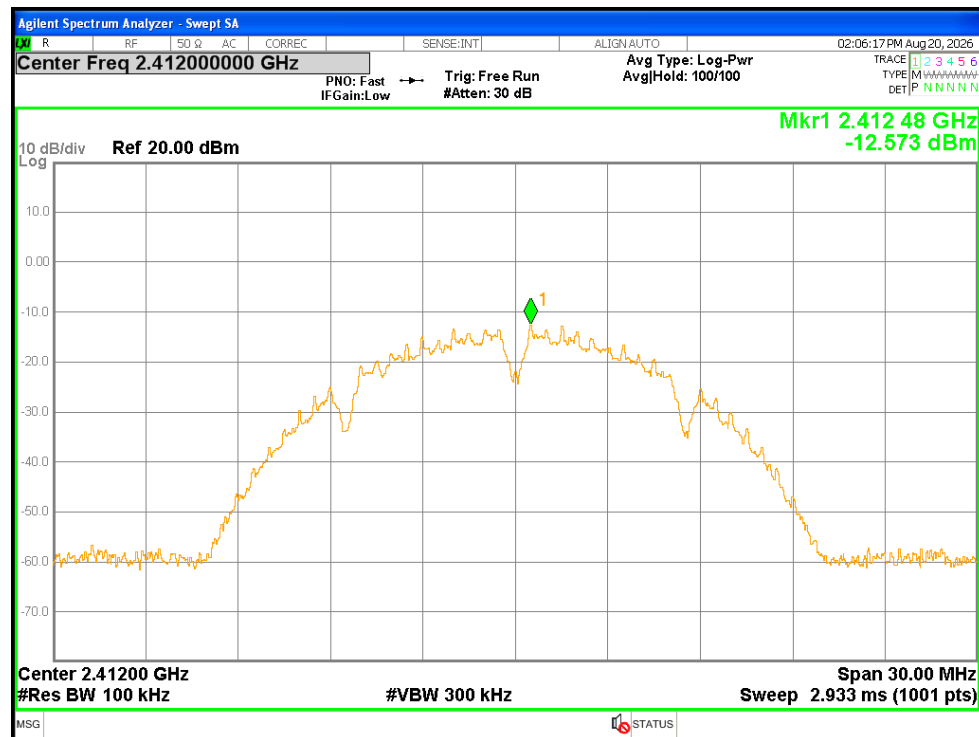
Tx. Spurious NVNT b 2462MHz Ref



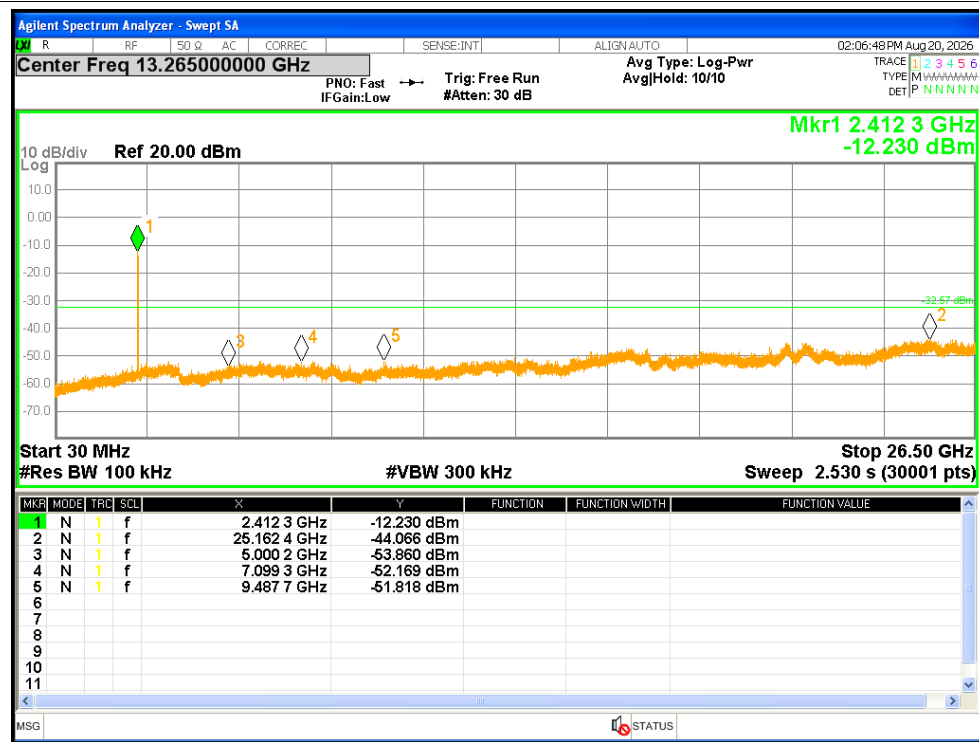
Tx. Spurious NVNT b 2462MHz Emission



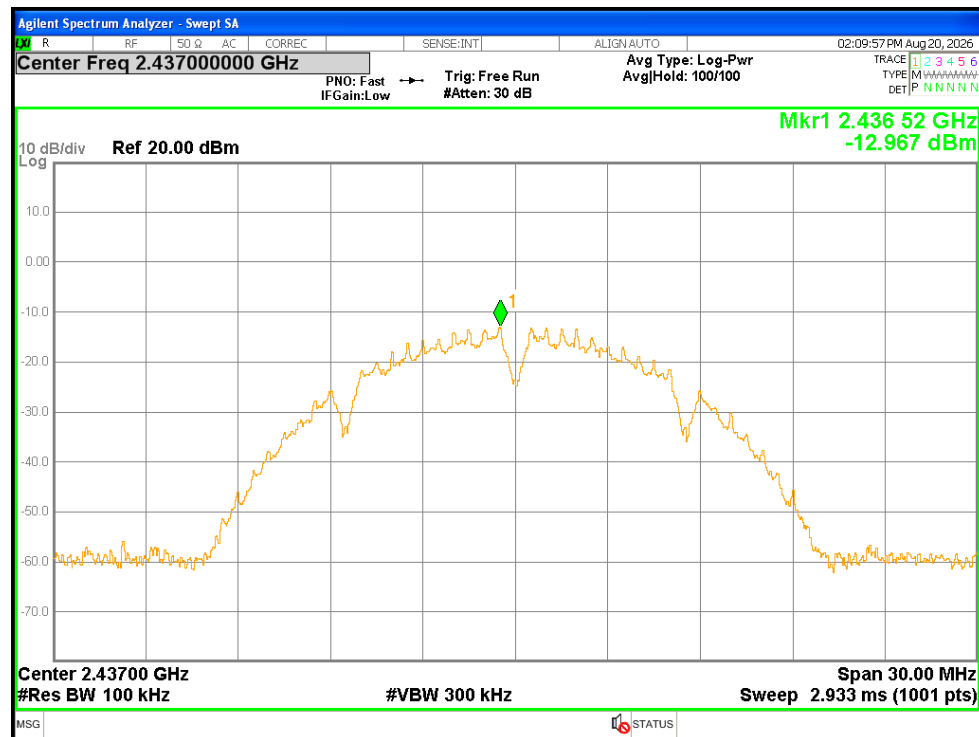
Tx. Spurious NVNT g 2412MHz Ref



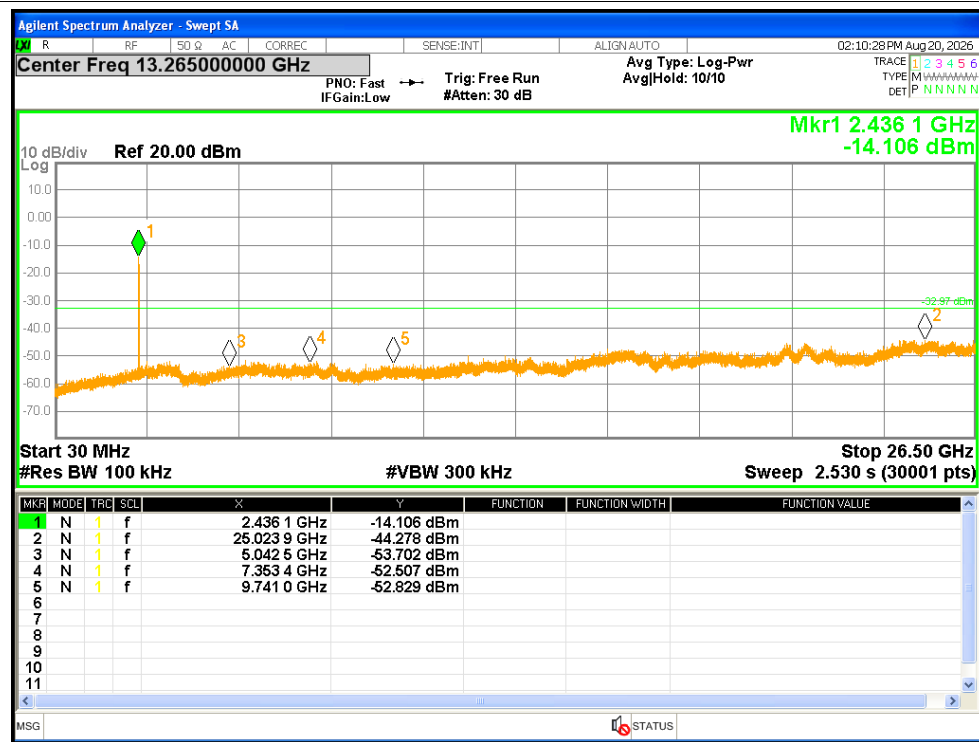
Tx. Spurious NVNT g 2412MHz Emission



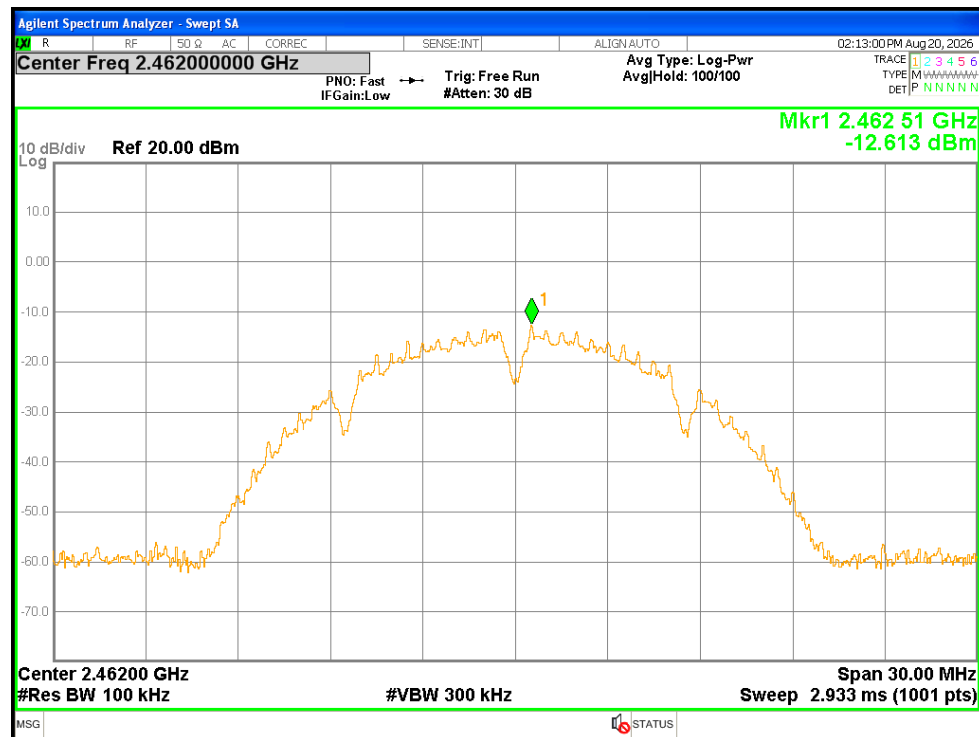
Tx. Spurious NVNT g 2437MHz Ref



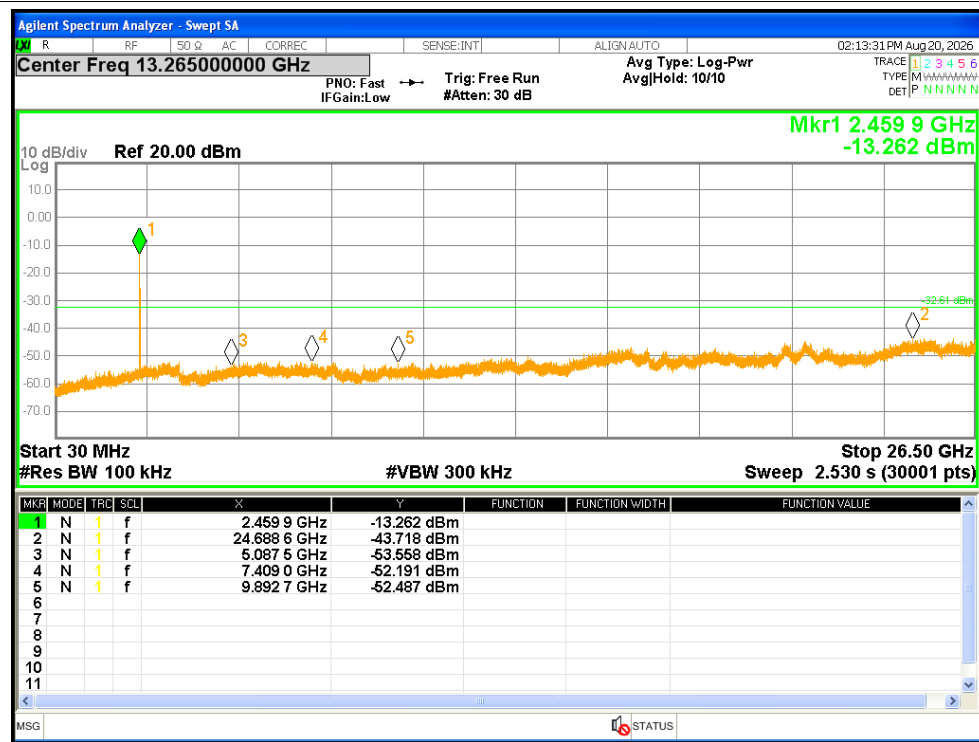
Tx. Spurious NVNT g 2437MHz Emission



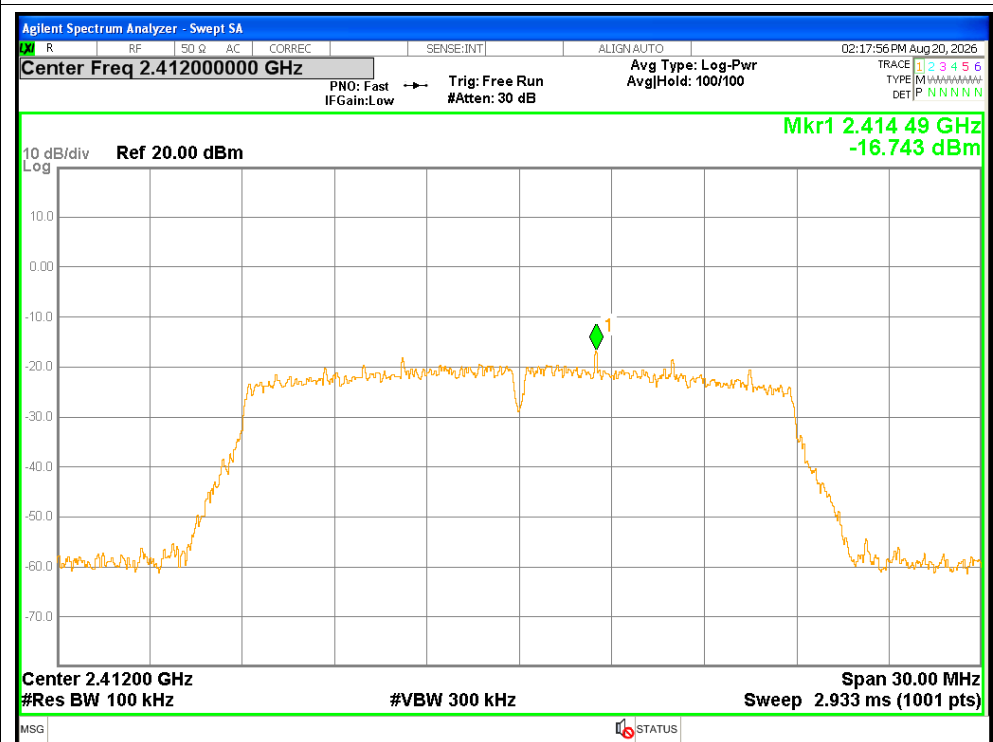
Tx. Spurious NVNT g 2462MHz Ref



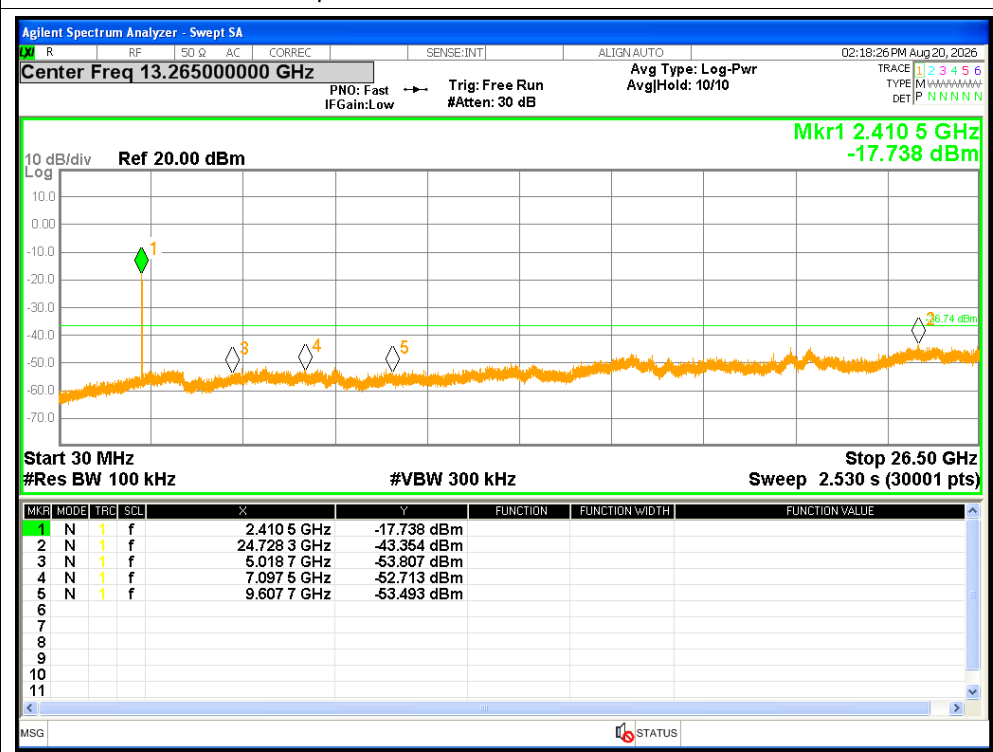
Tx. Spurious NVNT g 2462MHz Emission



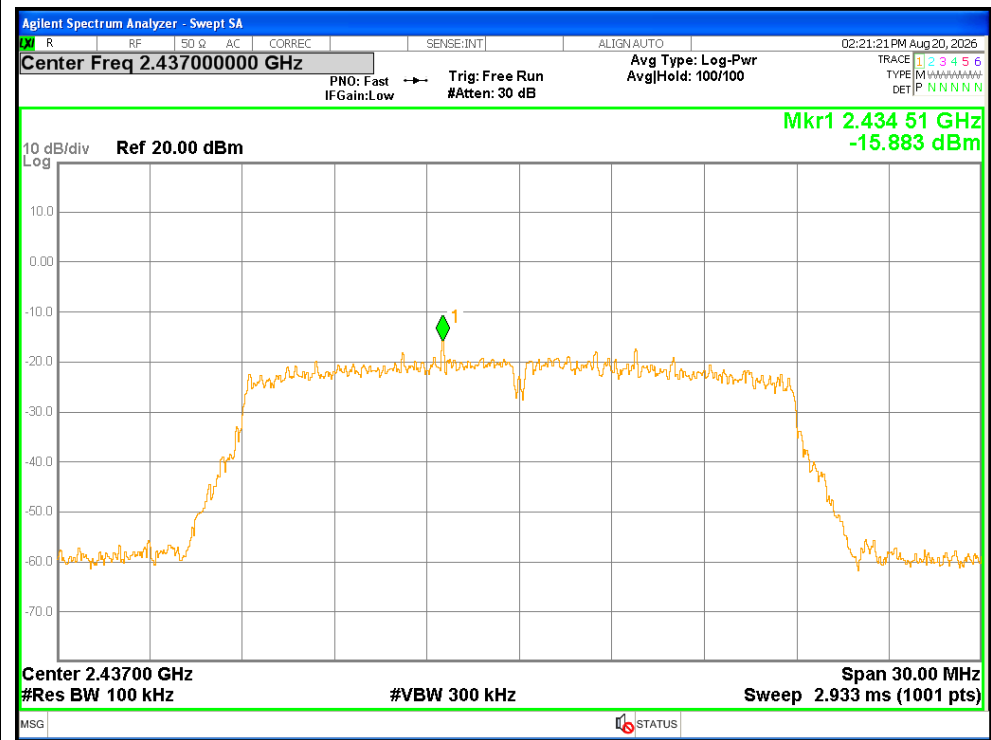
Tx. Spurious NVNT n20 2412MHz Ref



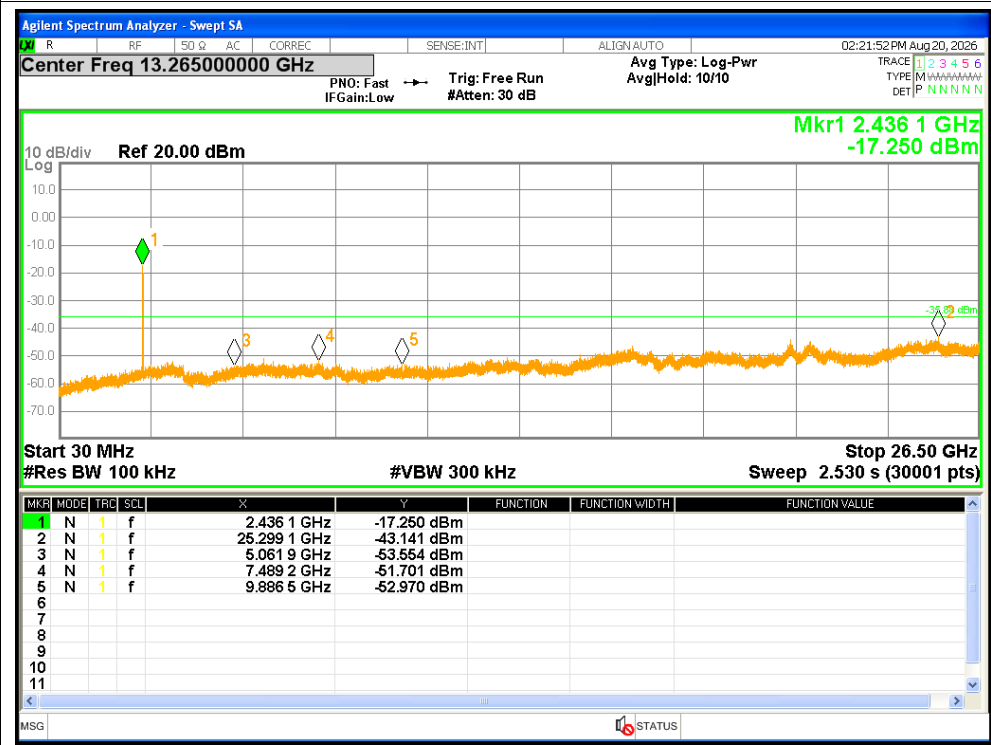
Tx. Spurious NVNT n20 2412MHz Emission



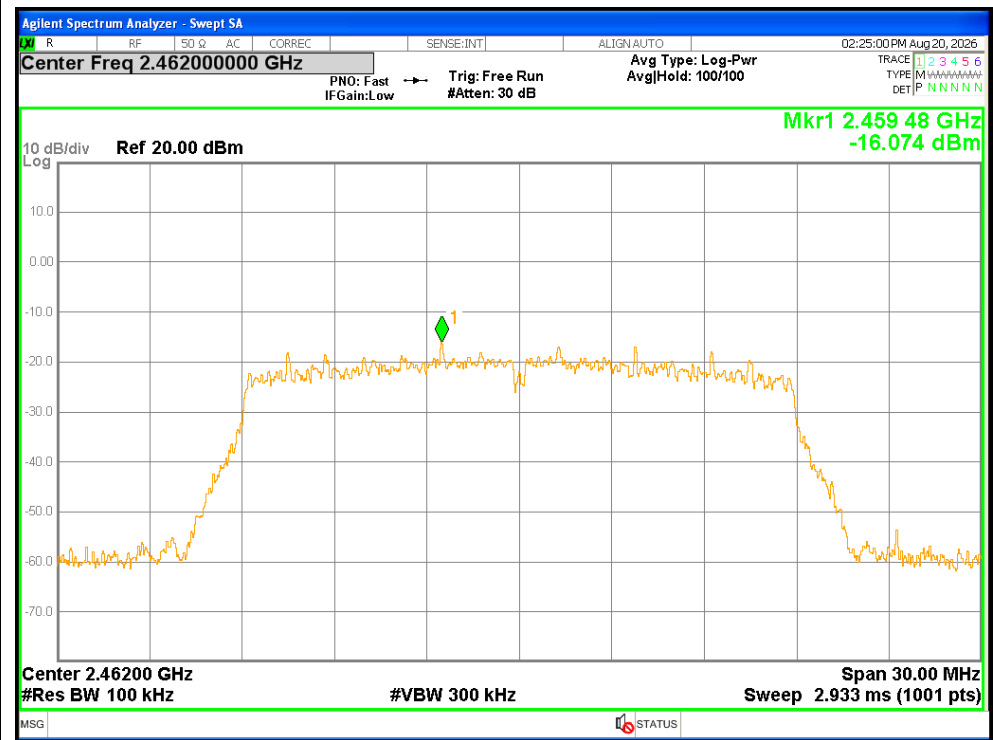
Tx. Spurious NVNT n20 2437MHz Ref



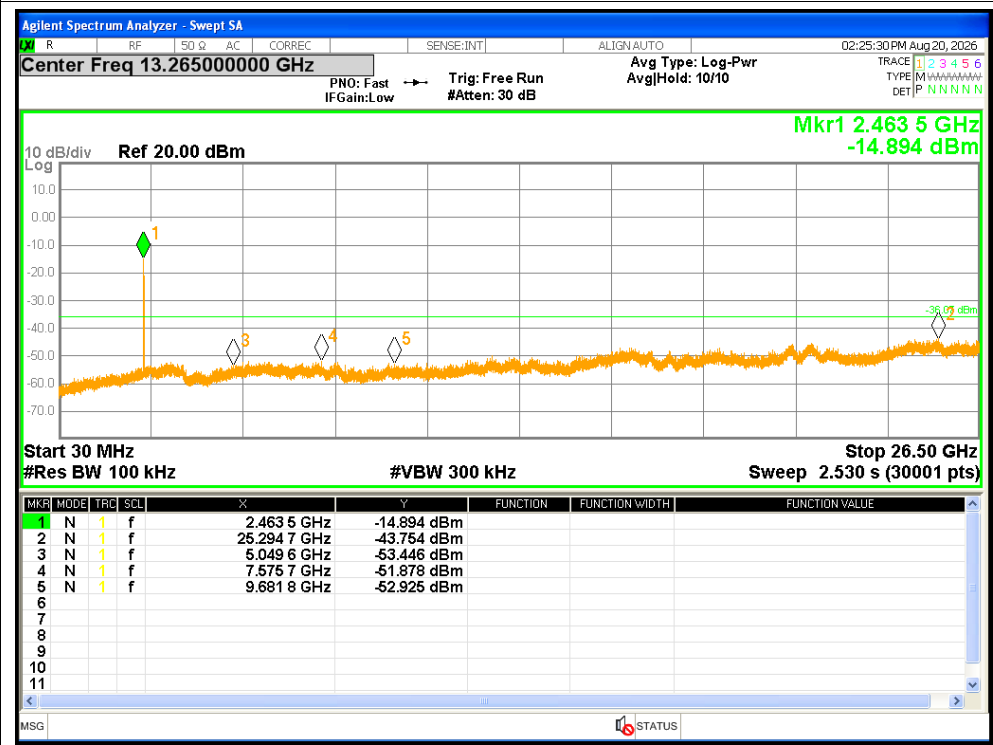
Tx. Spurious NVNT n20 2437MHz Emission



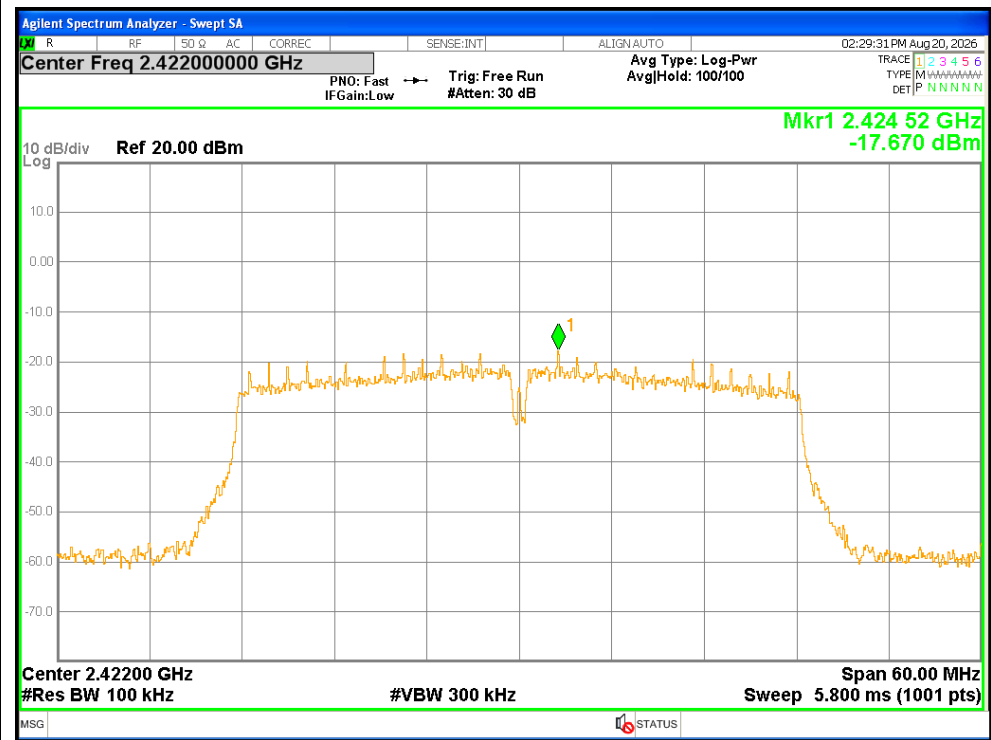
Tx. Spurious NVNT n20 2462MHz Ref



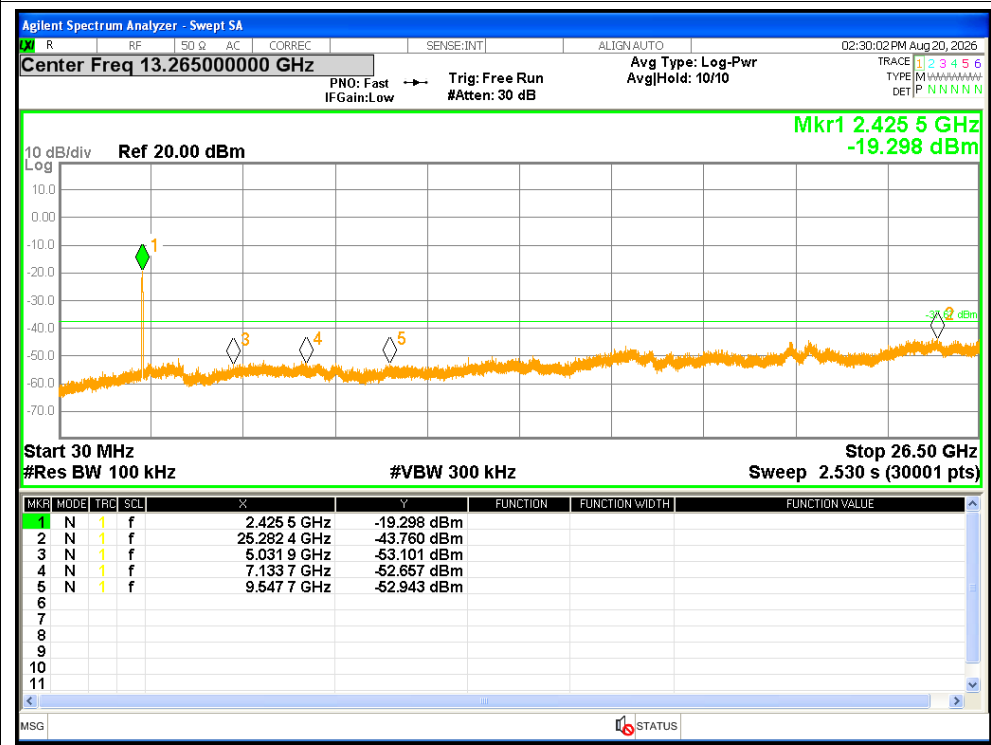
Tx. Spurious NVNT n20 2462MHz Emission



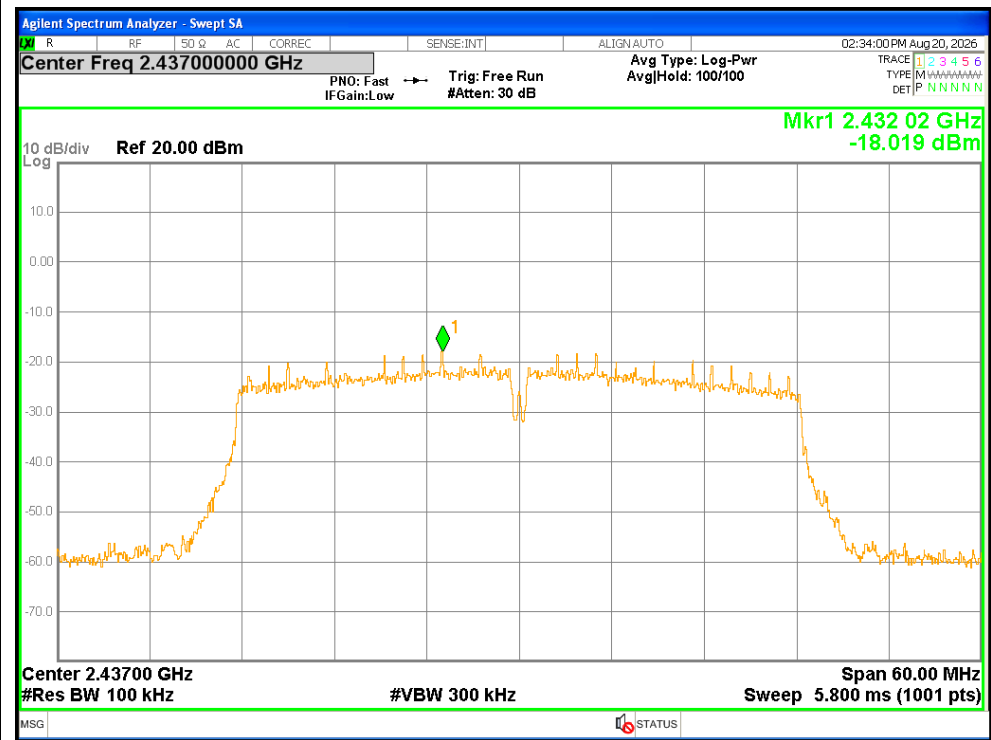
Tx. Spurious NVNT n40 2422MHz Ref



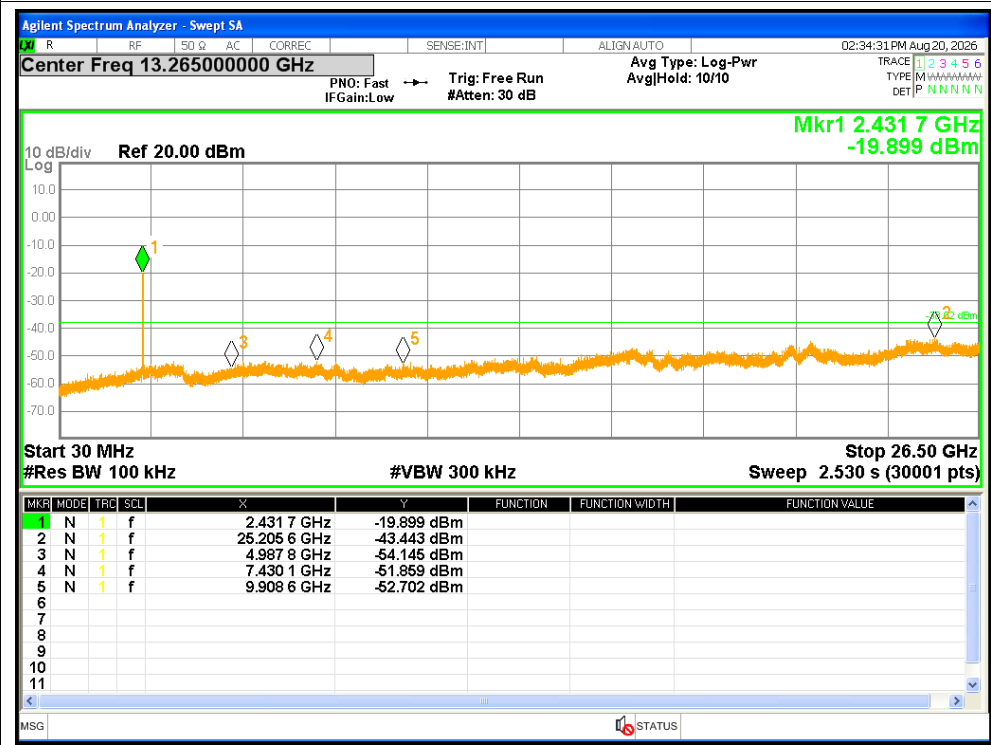
Tx. Spurious NVNT n40 2422MHz Emission



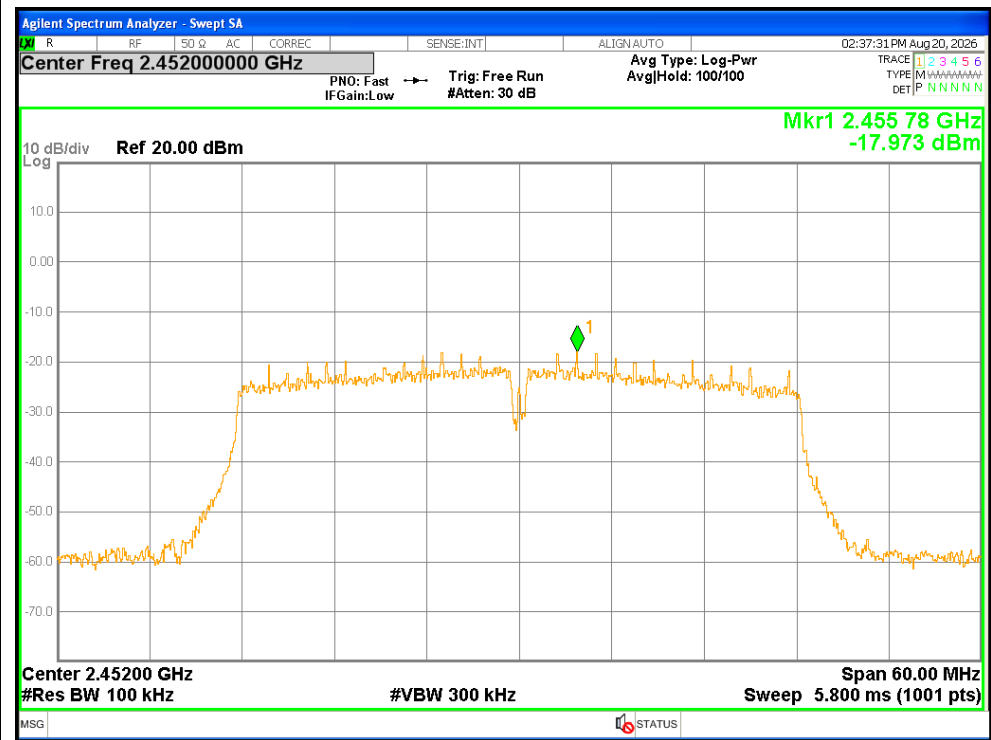
Tx. Spurious NVNT n40 2437MHz Ref



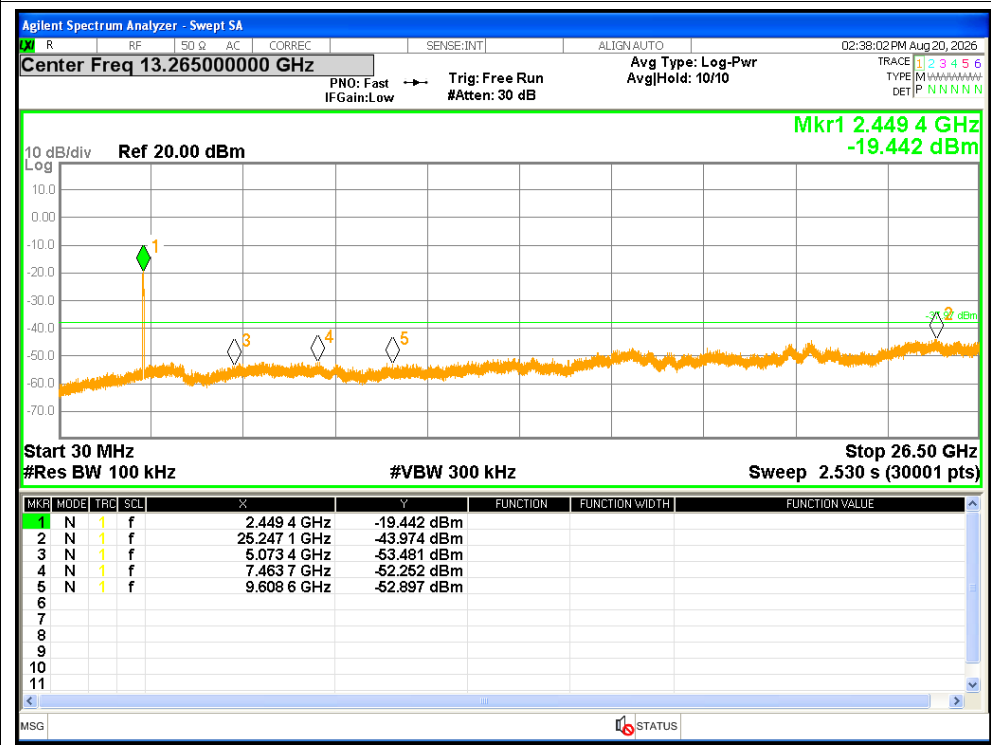
Tx. Spurious NVNT n40 2437MHz Emission



Tx. Spurious NVNT n40 2452MHz Ref



Tx. Spurious NVNT n40 2452MHz Emission



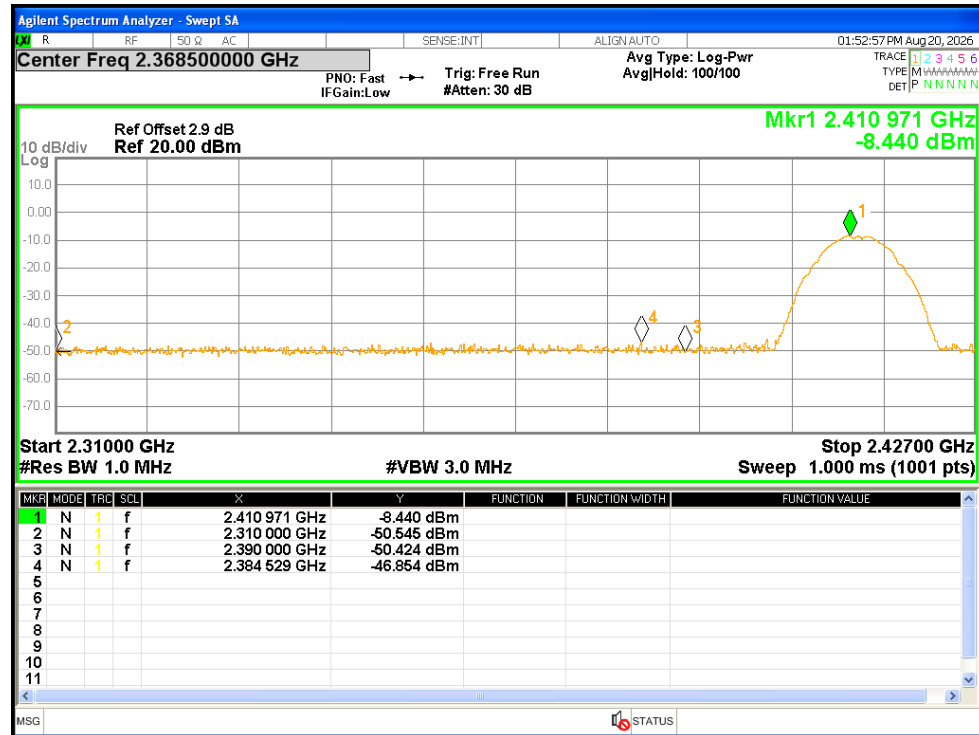
Restrict Band

Mode	Frequency (MHz)	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
b	2412	2310	-50.54	2.06	0	46.78	Peak	<=74	Pass
b	2412	2310	-57.77	2.06	0.02	39.57	Average	<=54	Pass
b	2412	2384.529	-46.85	2.06	0	50.47	Peak	<=74	Pass
b	2412	2378.094	-56.59	2.06	0.02	40.75	Average	<=54	Pass
b	2412	2390	-50.42	2.06	0	46.9	Peak	<=74	Pass
b	2412	2390	-57.56	2.06	0.02	39.78	Average	<=54	Pass
b	2462	2483.5	-49.38	2.06	0	47.94	Peak	<=74	Pass
b	2462	2483.5	-57.73	2.06	0.02	39.61	Average	<=54	Pass
b	2462	2497.668	-45.66	2.06	0	51.66	Peak	<=74	Pass
b	2462	2491.467	-56.87	2.06	0.02	40.47	Average	<=54	Pass
b	2462	2500	-48.58	2.06	0	48.74	Peak	<=74	Pass
b	2462	2500	-57.32	2.06	0.02	40.02	Average	<=54	Pass
g	2412	2310	-50.22	2.06	0	47.1	Peak	<=74	Pass
g	2412	2310	-58.42	2.06	0.02	38.92	Average	<=54	Pass
g	2412	2377.977	-46.81	2.06	0	50.51	Peak	<=74	Pass
g	2412	2386.05	-56.82	2.06	0.02	40.52	Average	<=54	Pass
g	2412	2390	-47.06	2.06	0	50.26	Peak	<=74	Pass
g	2412	2390	-57.61	2.06	0.02	39.73	Average	<=54	Pass
g	2462	2483.5	-47.95	2.06	0	49.37	Peak	<=74	Pass
g	2462	2483.5	-57.08	2.06	0.02	40.26	Average	<=54	Pass
g	2462	2485.69	-46.91	2.06	0	50.41	Peak	<=74	Pass
g	2462	2495.389	-56.82	2.06	0.02	40.52	Average	<=54	Pass
g	2462	2500	-47.46	2.06	0	49.86	Peak	<=74	Pass
g	2462	2500	-57.1	2.06	0.02	40.24	Average	<=54	Pass
n20	2412	2310	-50.09	2.06	0	47.23	Peak	<=74	Pass
n20	2412	2310	-57.82	2.06	0.15	39.65	Average	<=54	Pass
n20	2412	2358.672	-46.47	2.06	0	50.85	Peak	<=74	Pass
n20	2412	2383.476	-56.63	2.06	0.15	40.84	Average	<=54	Pass
n20	2412	2390	-49.99	2.06	0	47.33	Peak	<=74	Pass
n20	2412	2390	-57.4	2.06	0.15	40.07	Average	<=54	Pass
n20	2462	2483.5	-49.44	2.06	0	47.88	Peak	<=74	Pass
n20	2462	2483.5	-57.48	2.06	0.14	39.98	Average	<=54	Pass
n20	2462	2498.039	-46.07	2.06	0	51.25	Peak	<=74	Pass
n20	2462	2494.912	-56.74	2.06	0.14	40.72	Average	<=54	Pass
n20	2462	2500	-49.26	2.06	0	48.06	Peak	<=74	Pass
n20	2462	2500	-57.56	2.06	0.14	39.9	Average	<=54	Pass
n40	2422	2310	-49.42	2.06	0	47.9	Peak	<=74	Pass
n40	2422	2310	-58.17	2.06	0.29	39.44	Average	<=54	Pass
n40	2422	2331.016	-46.8	2.06	0	50.52	Peak	<=74	Pass

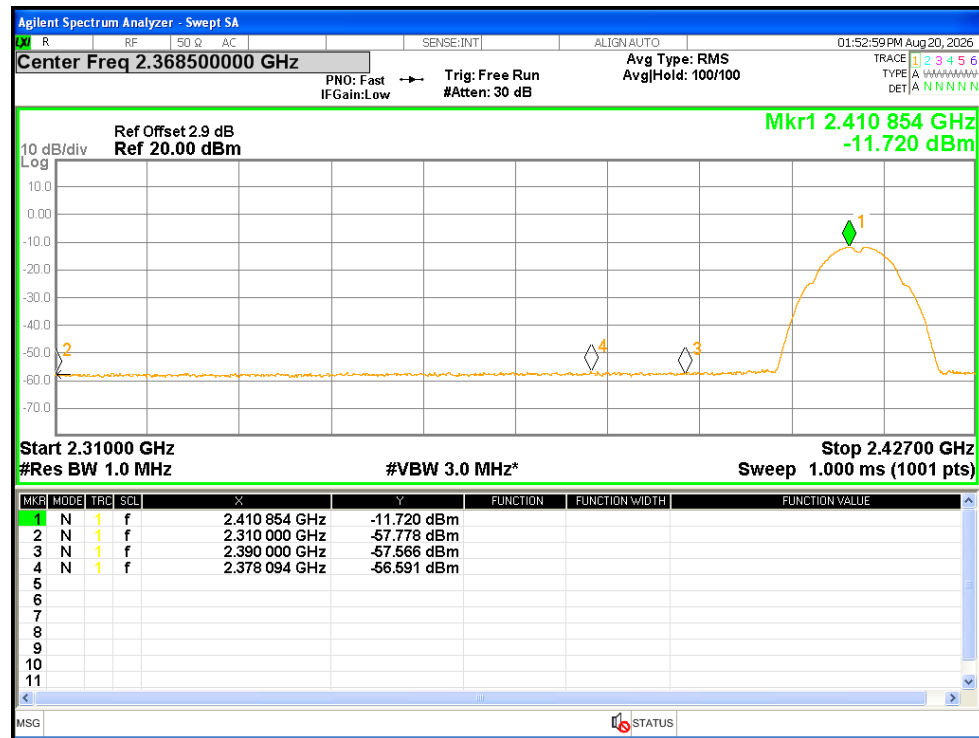
n40	2422	2386.68	-56.77	2.06	0.29	40.84	Average	<=54	Pass
n40	2422	2390	-49.36	2.06	0	47.96	Peak	<=74	Pass
n40	2422	2390	-57.12	2.06	0.29	40.49	Average	<=54	Pass
n40	2452	2483.5	-50.18	2.06	0	47.14	Peak	<=74	Pass
n40	2452	2483.5	-57.51	2.06	0.29	40.1	Average	<=54	Pass
n40	2452	2489.704	-46.36	2.06	0	50.96	Peak	<=74	Pass
n40	2452	2495.554	-56.76	2.06	0.29	40.85	Average	<=54	Pass
n40	2452	2500	-49.13	2.06	0	48.19	Peak	<=74	Pass
n40	2452	2500	-57.15	2.06	0.29	40.46	Average	<=54	Pass

Test Graphs

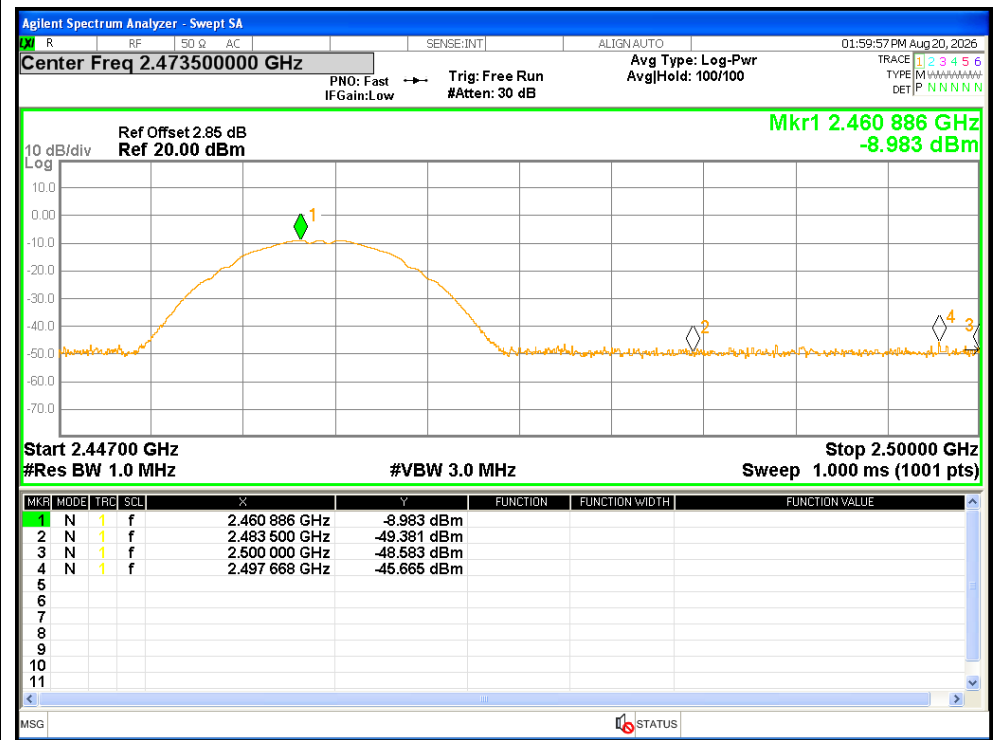
Restrict Band NVNT b 2412MHz Peak



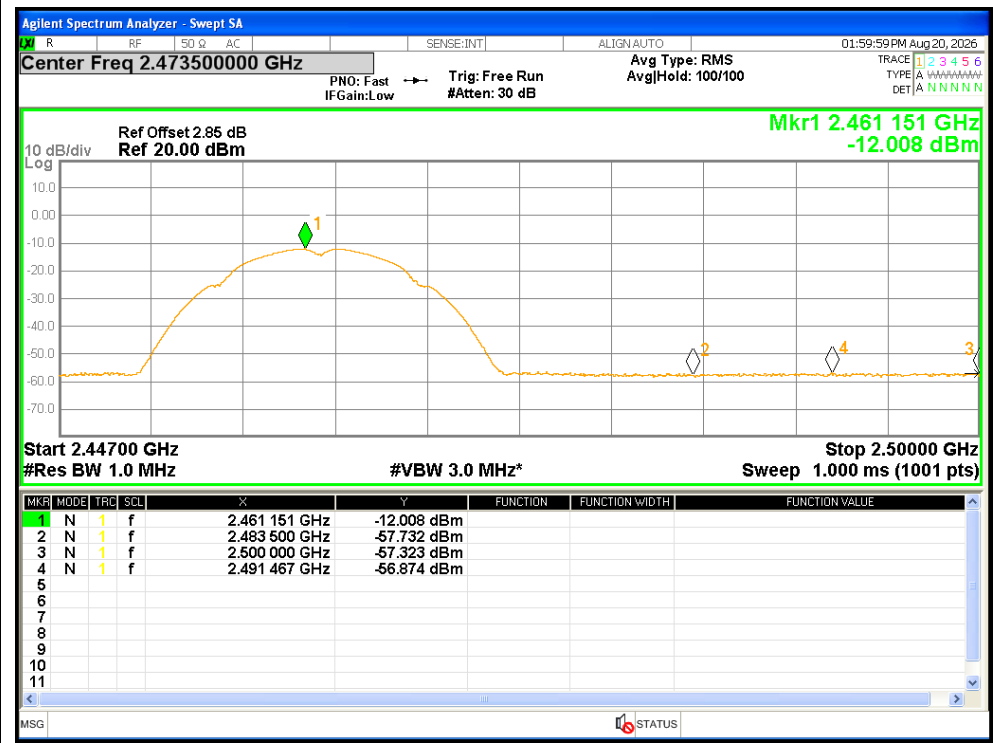
Restrict Band NVNT b 2412MHz Average



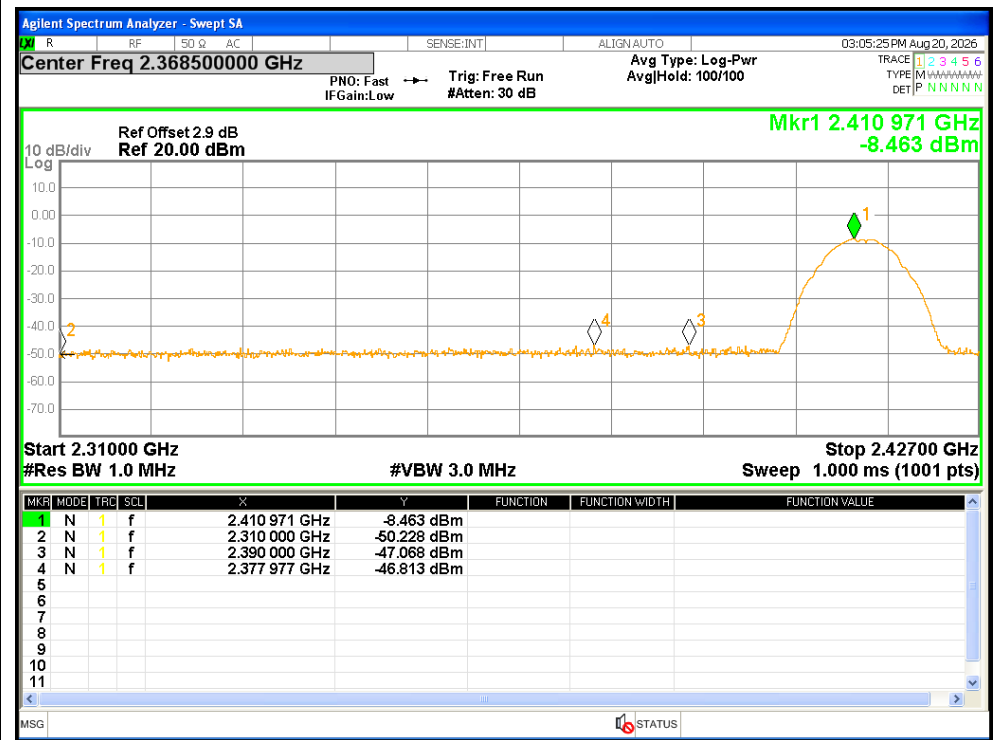
Restrict Band NVNT b 2462MHz Peak



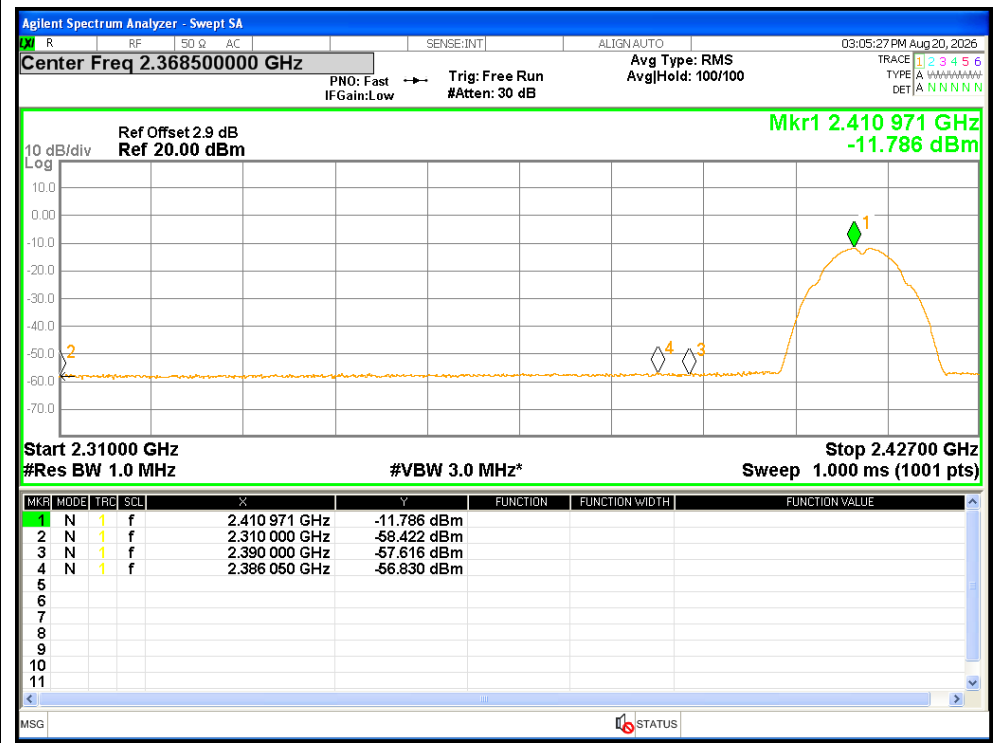
Restrict Band NVNT b 2462MHz Average



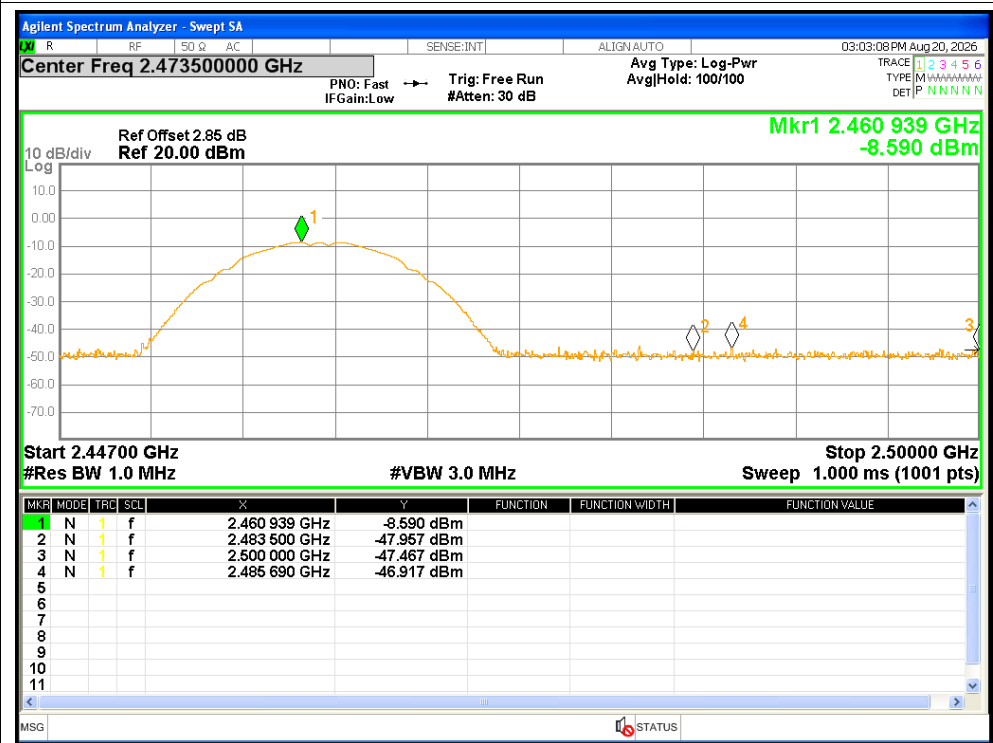
Restrict Band NVNT g 2412MHz Peak



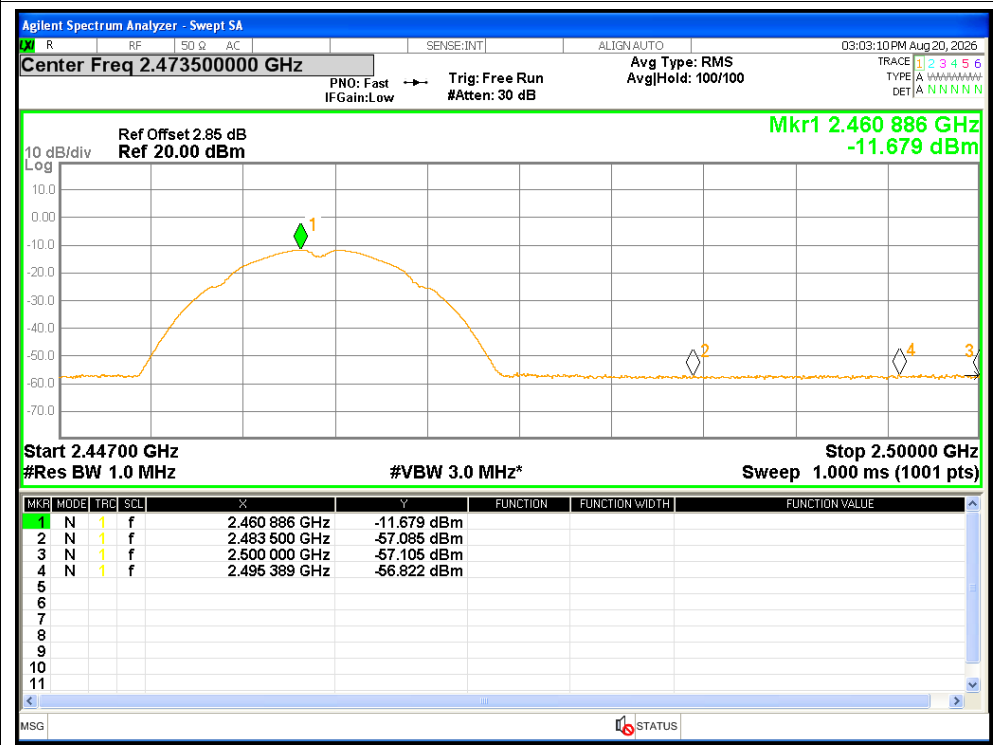
Restrict Band NVNT g 2412MHz Average



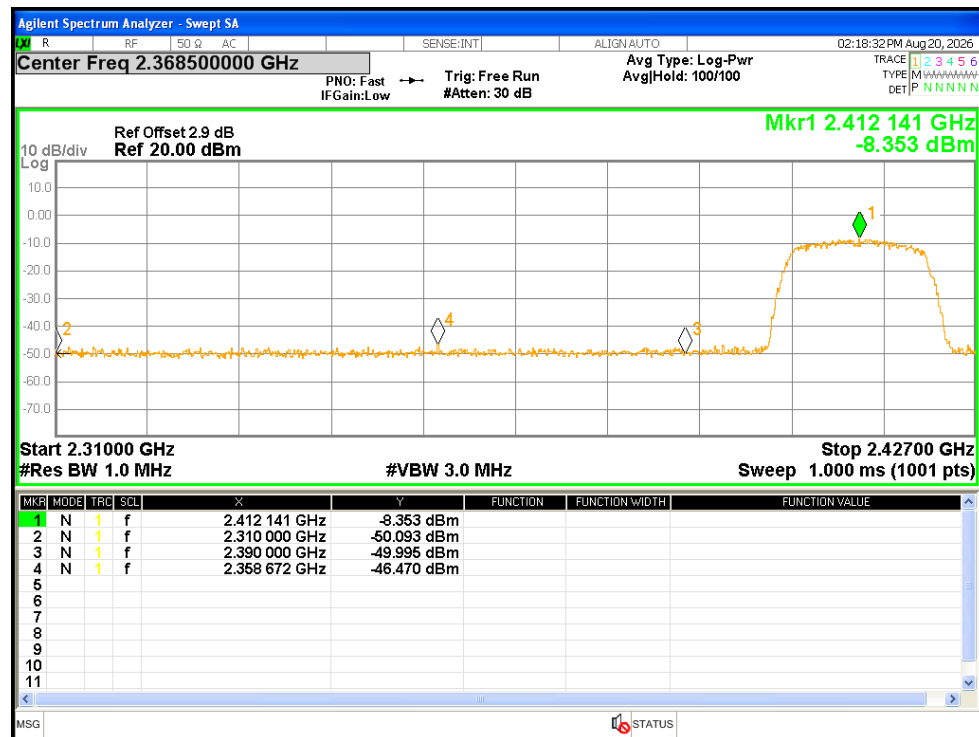
Restrict Band NVNT g 2462MHz Peak



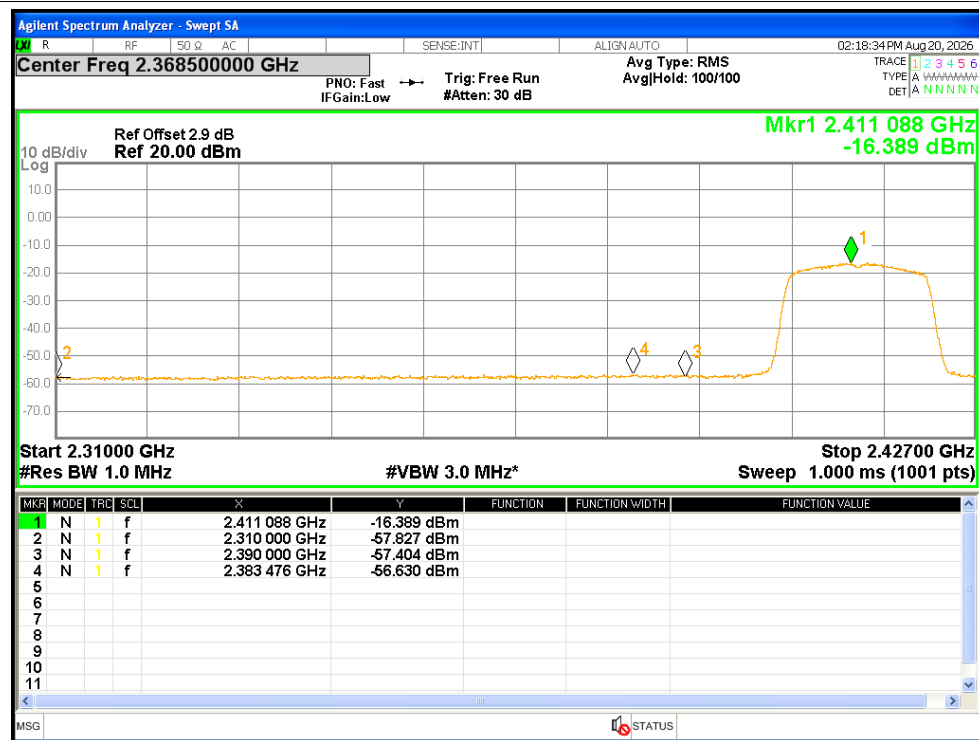
Restrict Band NVNT g 2462MHz Average



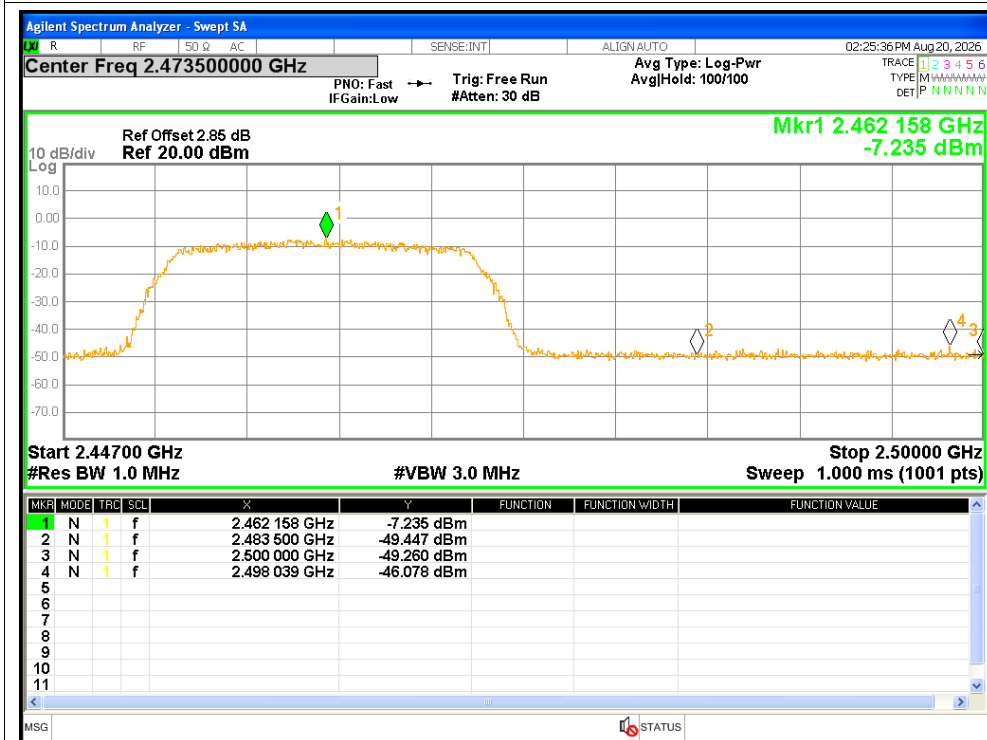
Restrict Band NVNT n20 2412MHz Peak



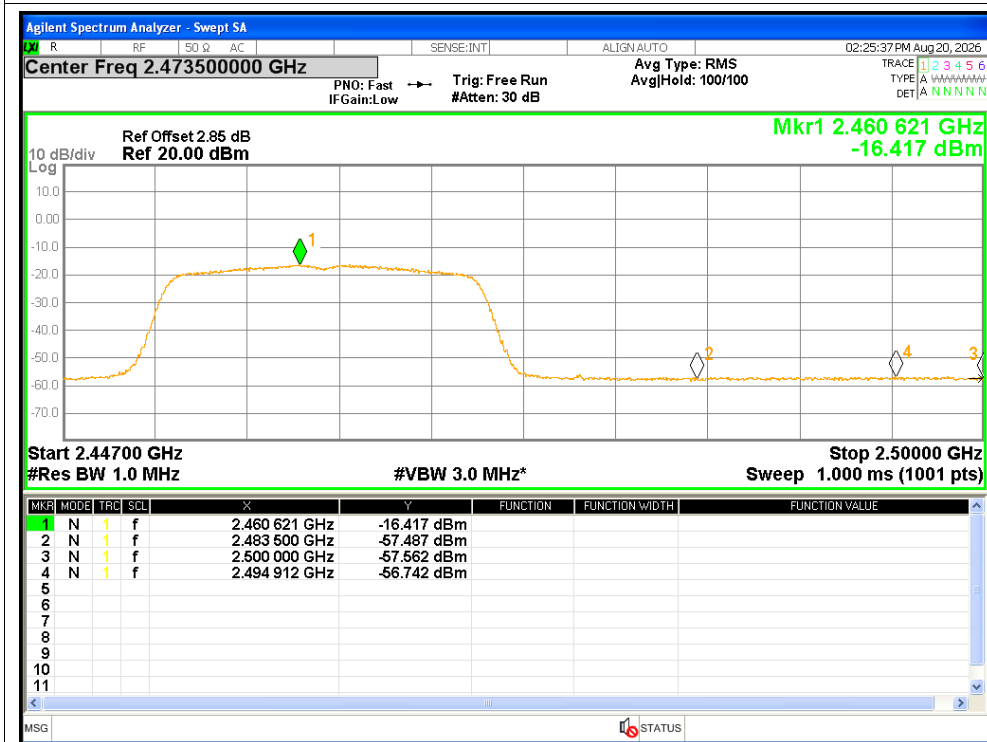
Restrict Band NVNT n20 2412MHz Average



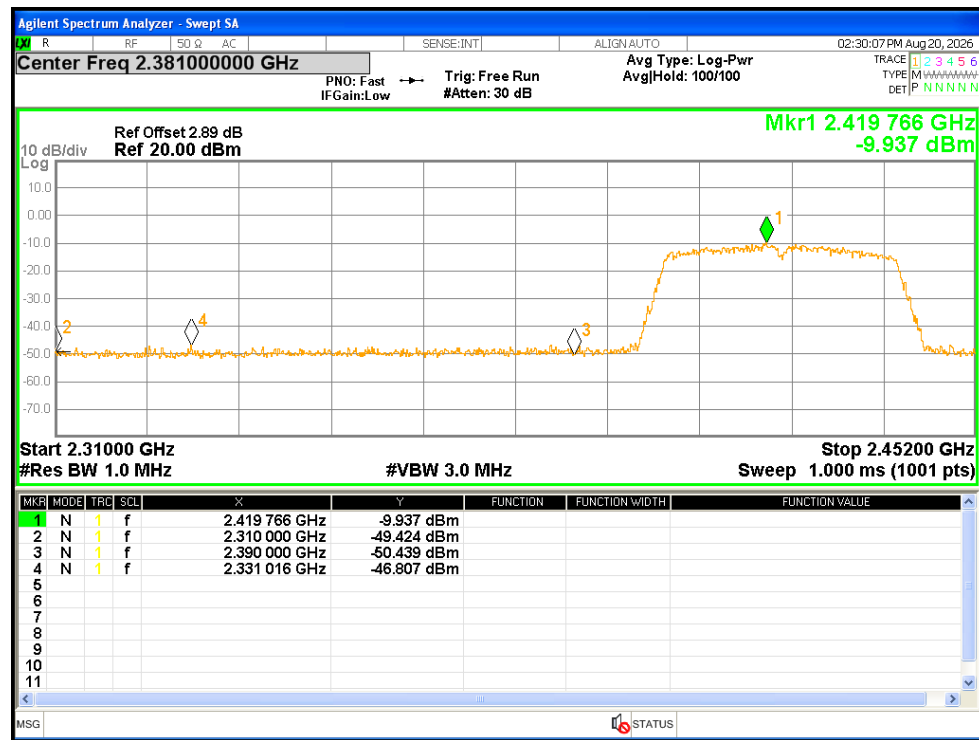
Restrict Band NVNT n20 2462MHz Peak



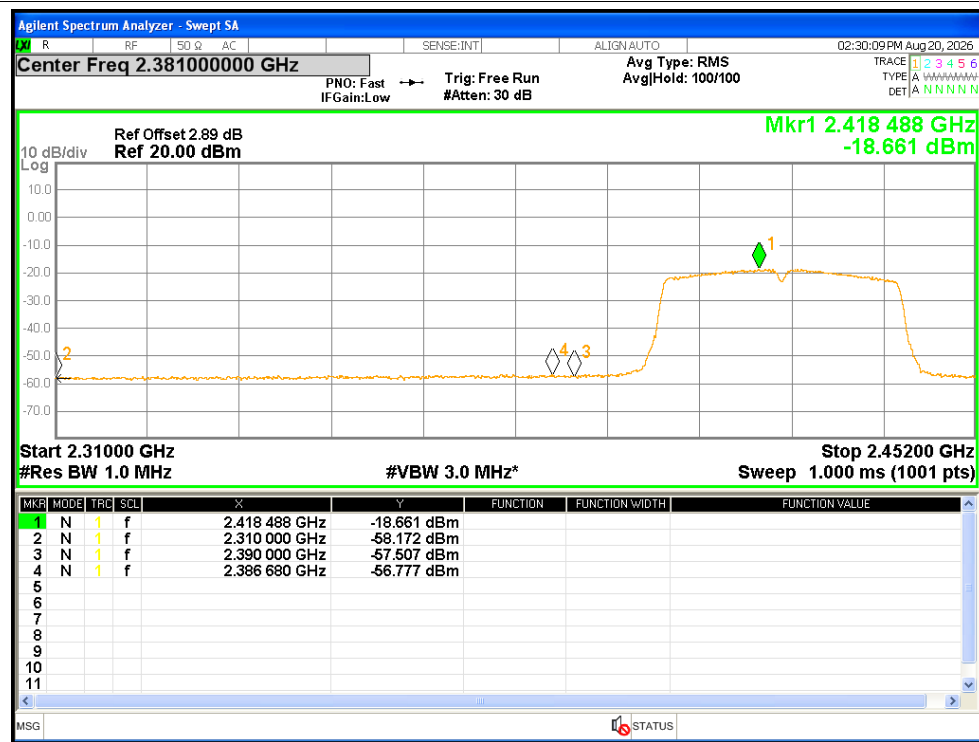
Restrict Band NVNT n20 2462MHz Average



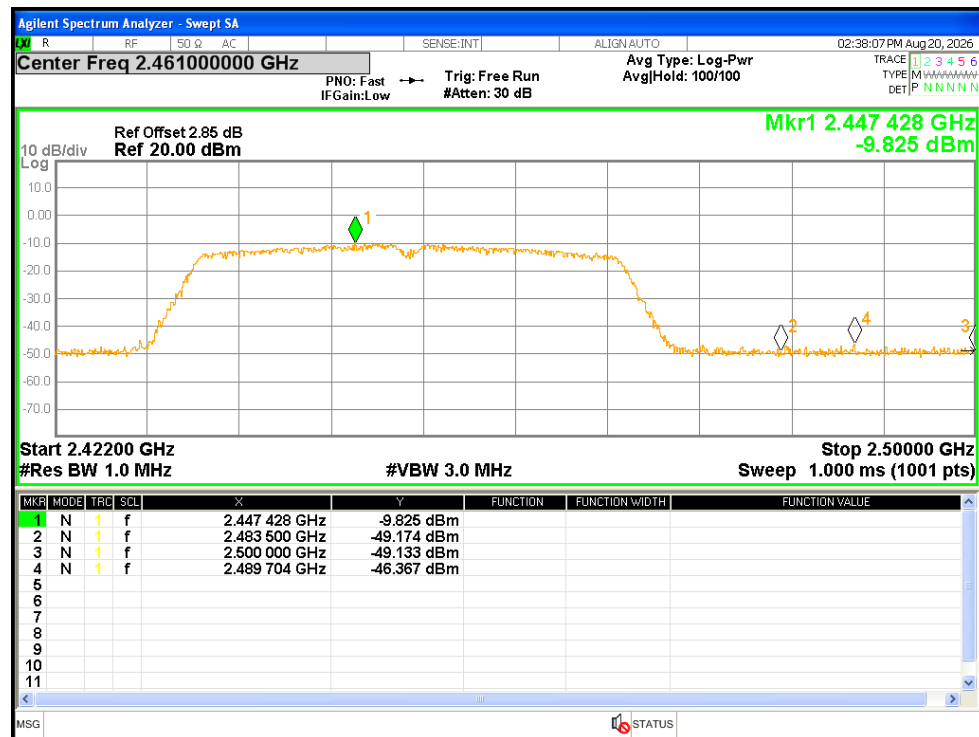
Restrict Band NVNT n40 2422MHz Peak



Restrict Band NVNT n40 2422MHz Average



Restrict Band NVNT n40 2452MHz Peak



Restrict Band NVNT n40 2452MHz Average

