

FCC Appendix RF Test Data for 2.4GWIFI

FCC ID : 2BR3K-DBCAM-M52-1

Company : HK EKO ELECTRONICS LIMITED

EUT : Doorbell Camera

Model Number : M52

Report No. : CTA26042002902

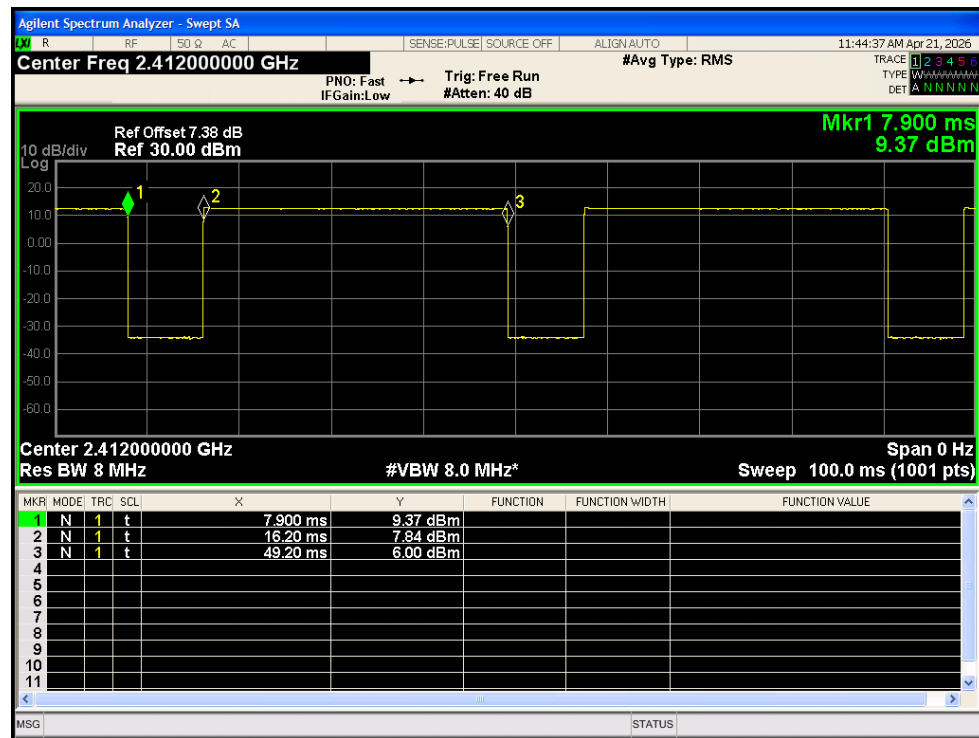
Reviewed By : Eric Wang

Duty Cycle

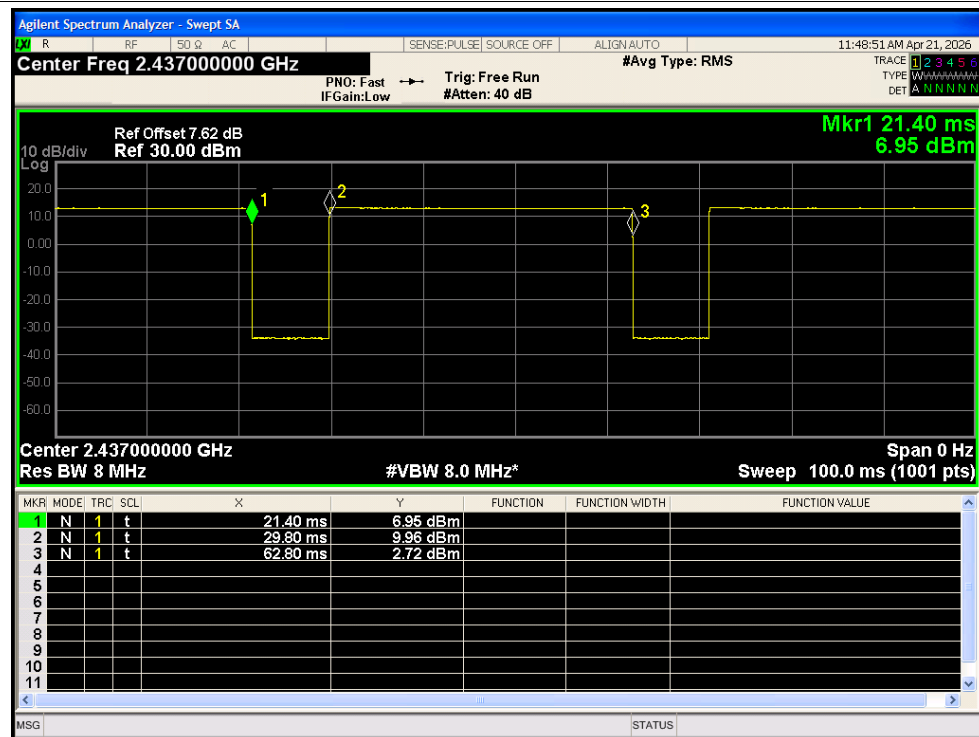
Condition	Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor (dB)
NVNT	b	2412	75.32	1.23
NVNT	b	2437	83.52	0.78
NVNT	b	2462	81.62	0.88
NVNT	g	2412	74.43	1.28
NVNT	g	2437	73.73	1.32
NVNT	g	2462	74.13	1.30
NVNT	n20	2412	75.92	1.20
NVNT	n20	2437	73.23	1.35
NVNT	n20	2462	73.43	1.34

Test Graphs

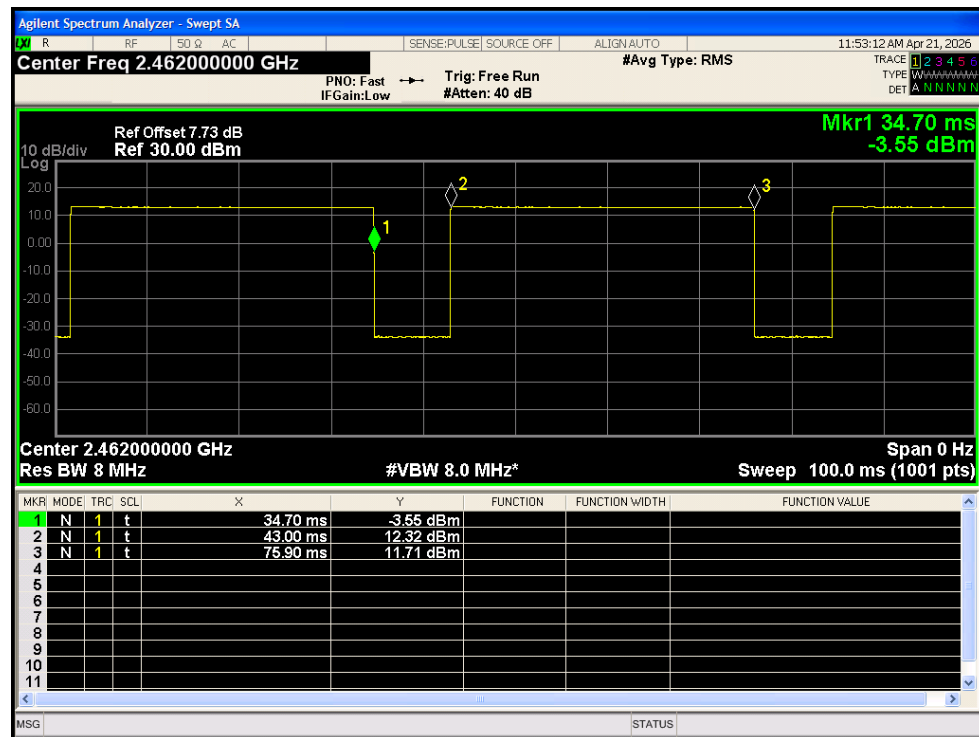
Duty Cycle NVNT b 2412MHz



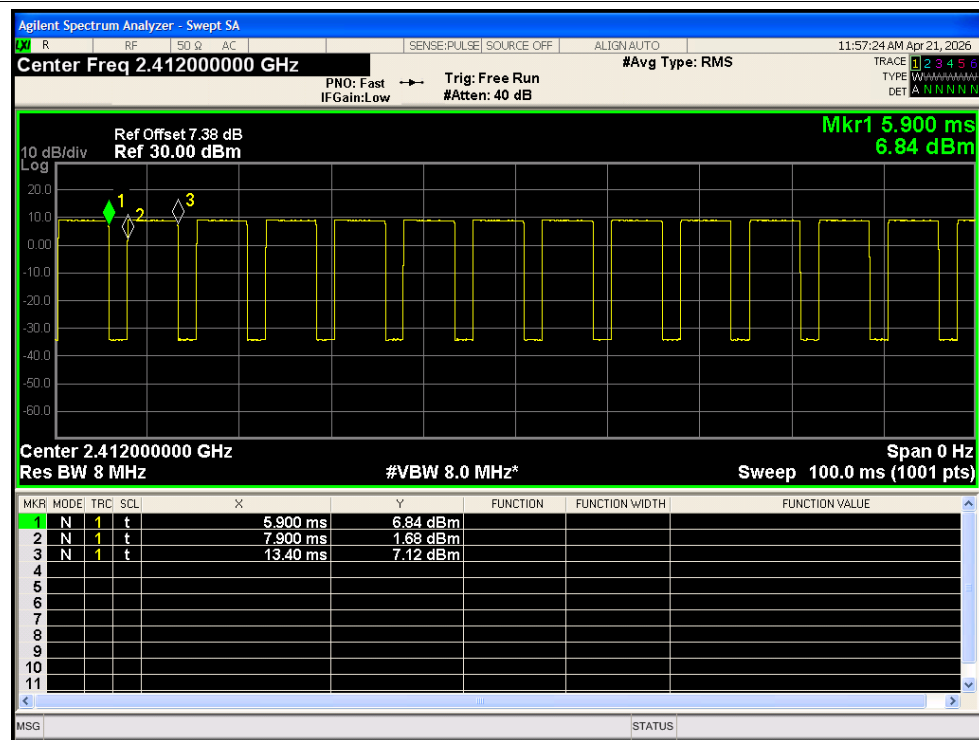
Duty Cycle NVNT b 2437MHz



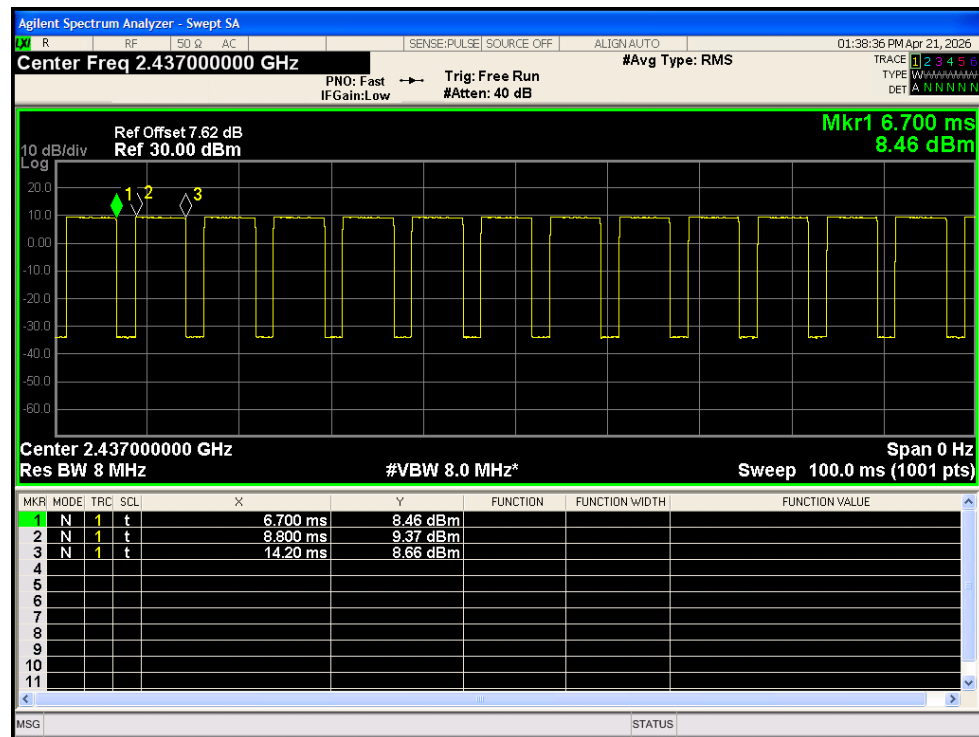
Duty Cycle NVNT b 2462MHz



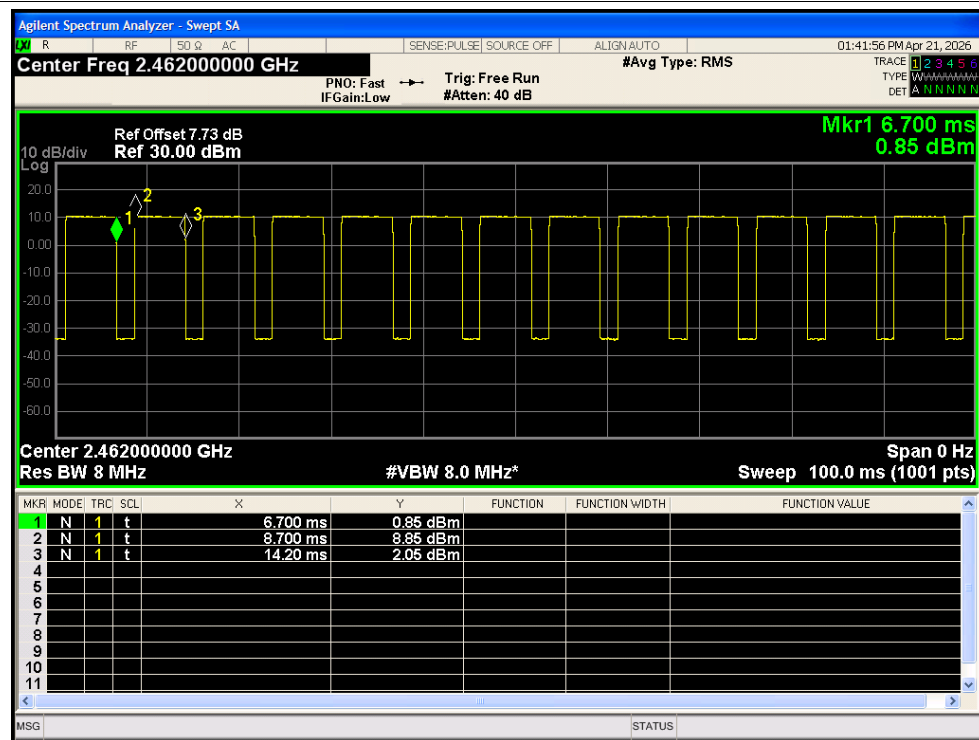
Duty Cycle NVNT g 2412MHz



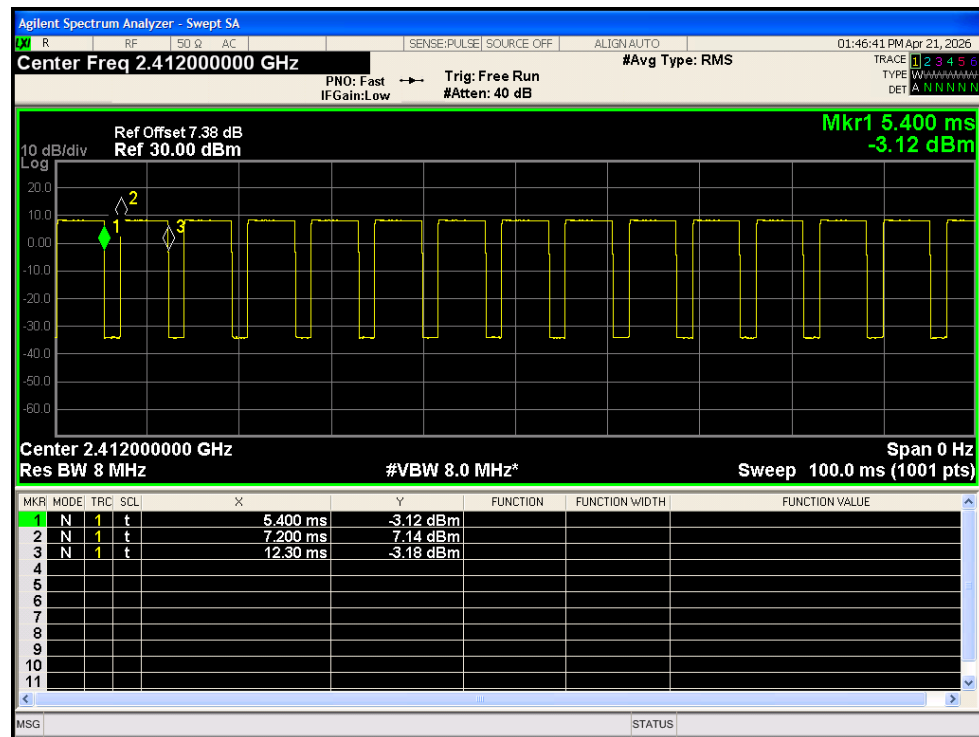
Duty Cycle NVNT g 2437MHz



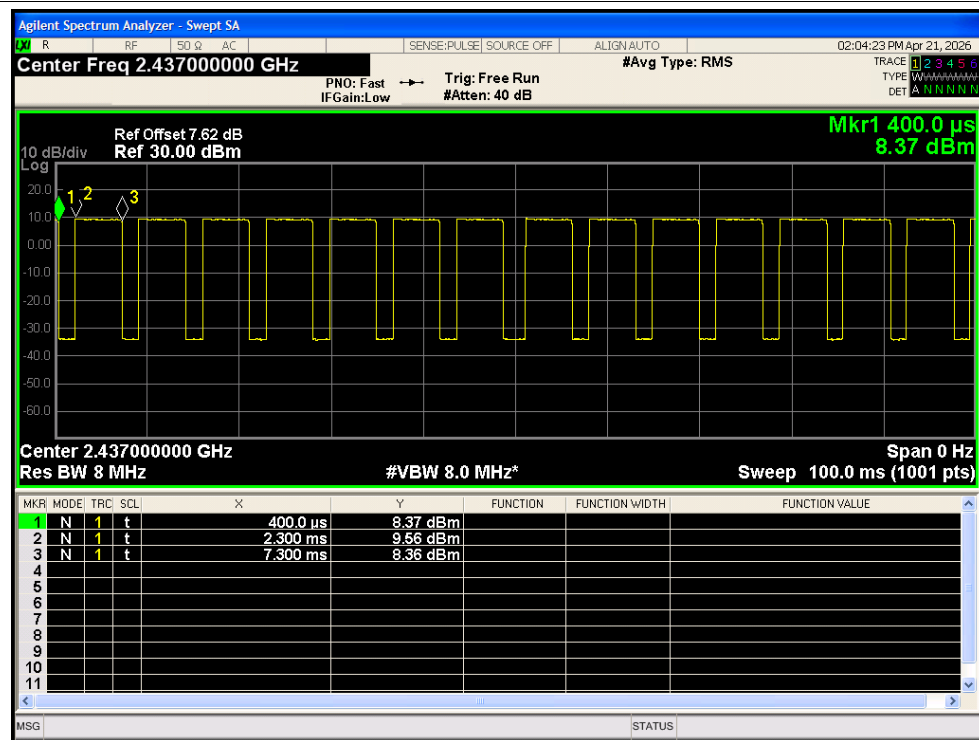
Duty Cycle NVNT g 2462MHz



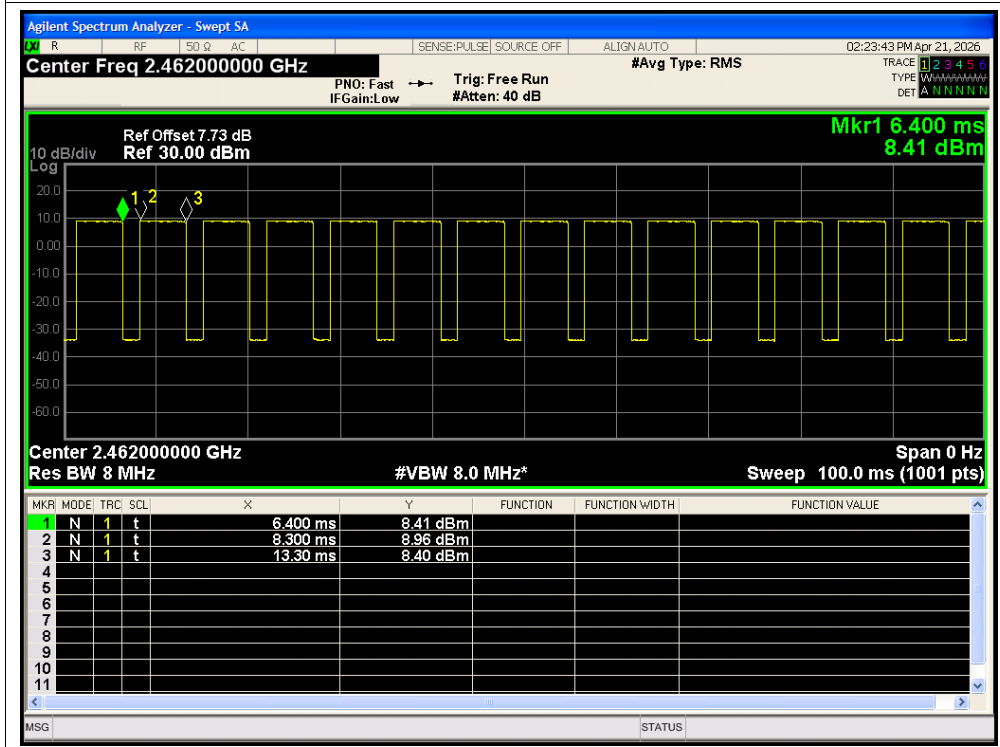
Duty Cycle NVNT n20 2412MHz



Duty Cycle NVNT n20 2437MHz



Duty Cycle NVNT n20 2462MHz



Maximum Conducted (Peak) Output Power

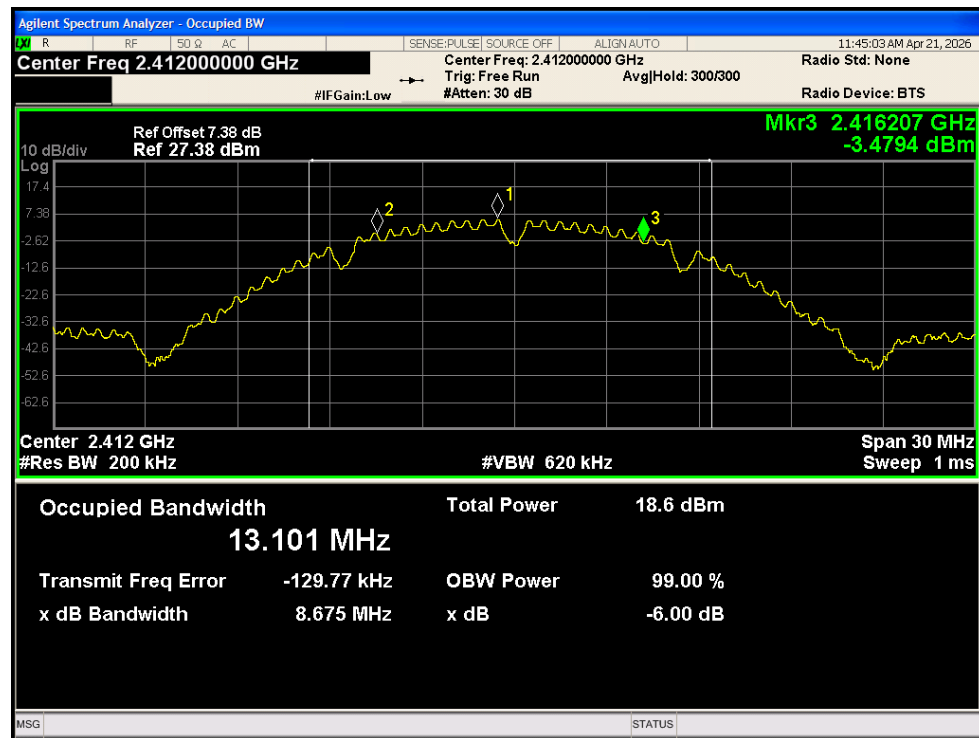
Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	13.67	30	Pass
NVNT	b	2437	13.82	30	Pass
NVNT	b	2462	13.69	30	Pass
NVNT	g	2412	12.44	30	Pass
NVNT	g	2437	12.49	30	Pass
NVNT	g	2462	12.10	30	Pass
NVNT	n20	2412	11.91	30	Pass
NVNT	n20	2437	12.68	30	Pass
NVNT	n20	2462	12.40	30	Pass

-6dB Bandwidth

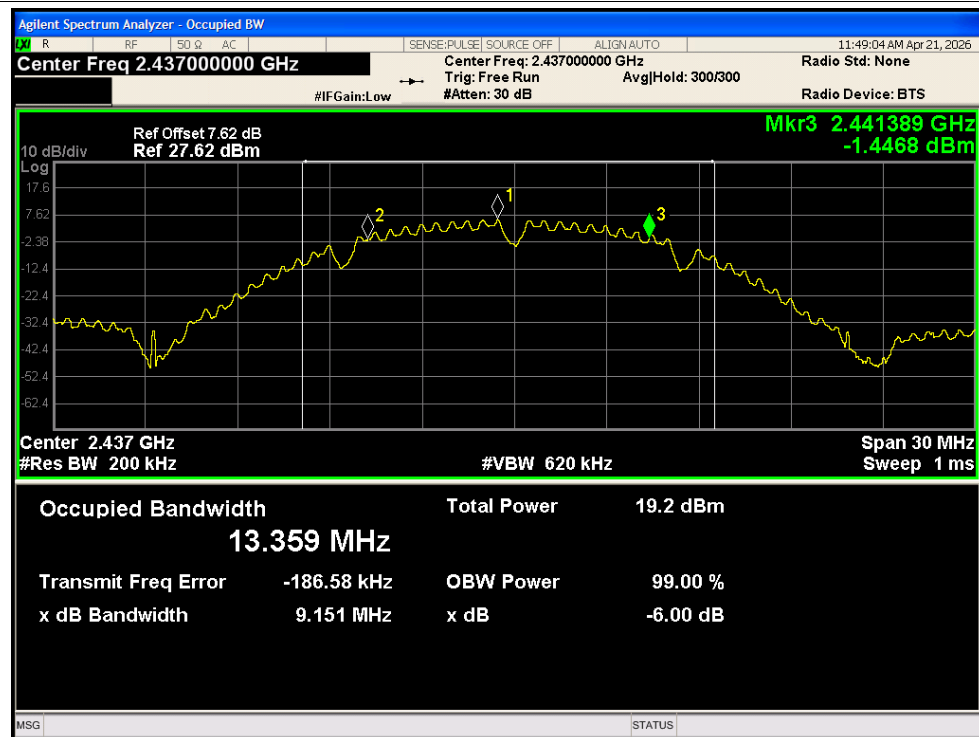
Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	8.675	0.5	Pass
NVNT	b	2437	9.151	0.5	Pass
NVNT	b	2462	9.148	0.5	Pass
NVNT	g	2412	16.37	0.5	Pass
NVNT	g	2437	16.43	0.5	Pass
NVNT	g	2462	16.45	0.5	Pass
NVNT	n20	2412	17.53	0.5	Pass
NVNT	n20	2437	17.58	0.5	Pass
NVNT	n20	2462	17.63	0.5	Pass

Test Graphs

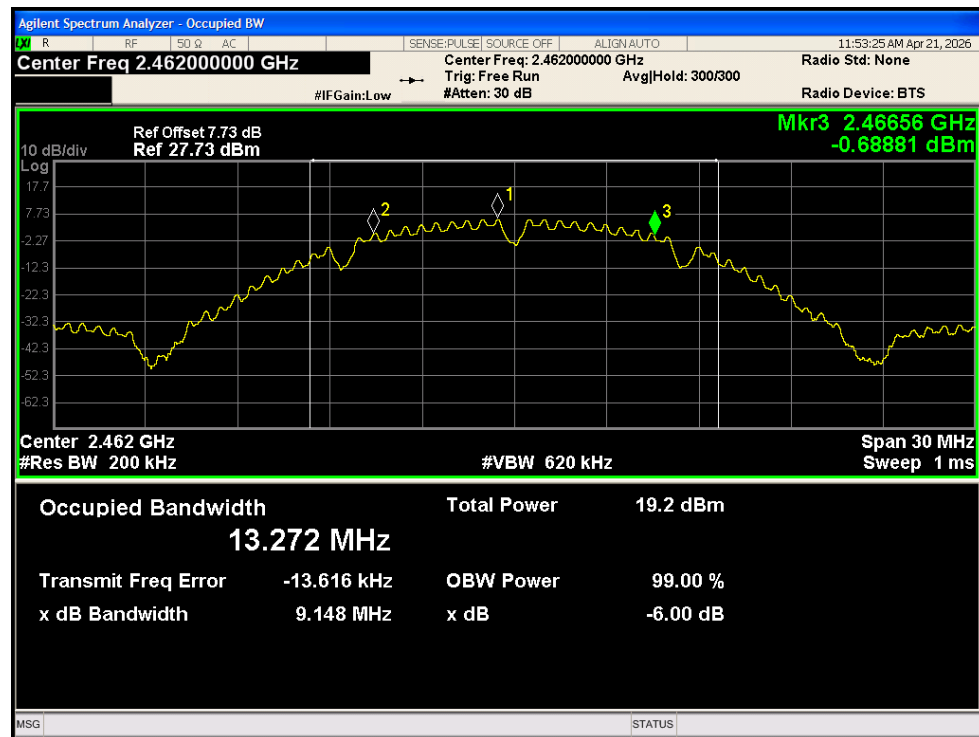
-6dB Bandwidth NVNT b 2412MHz Ant1



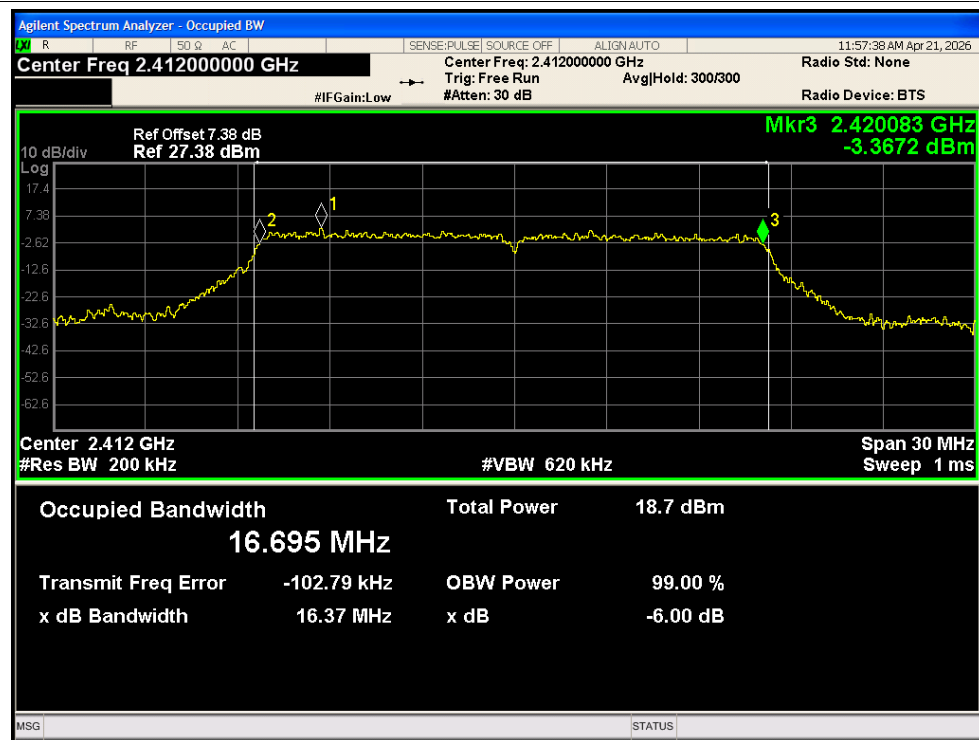
-6dB Bandwidth NVNT b 2437MHz Ant1



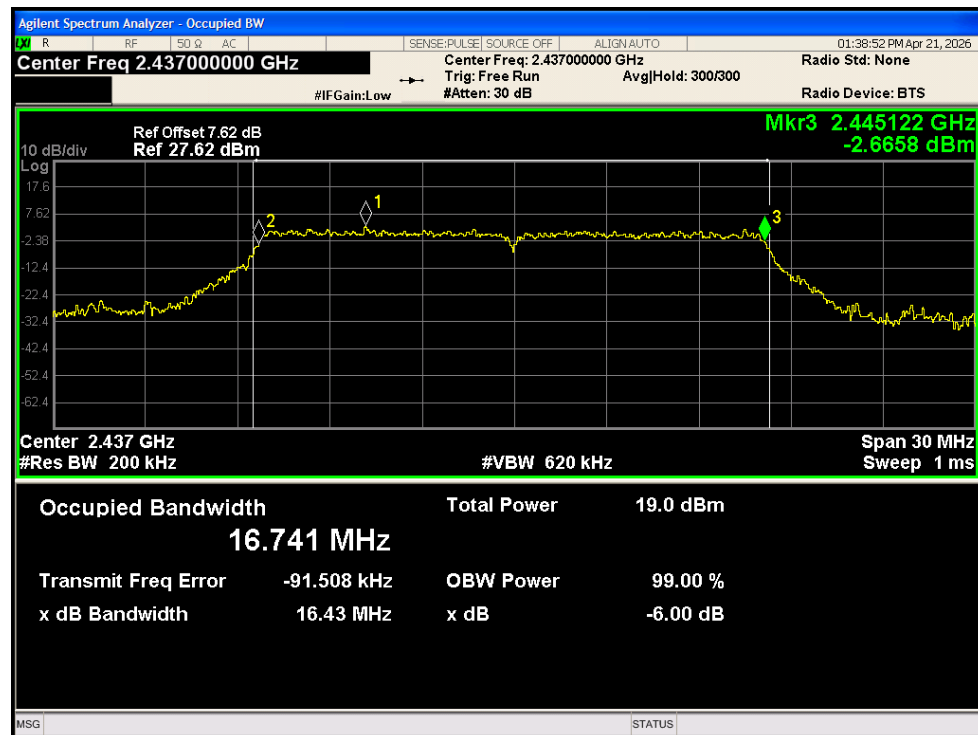
-6dB Bandwidth NVNT b 2462MHz Ant1



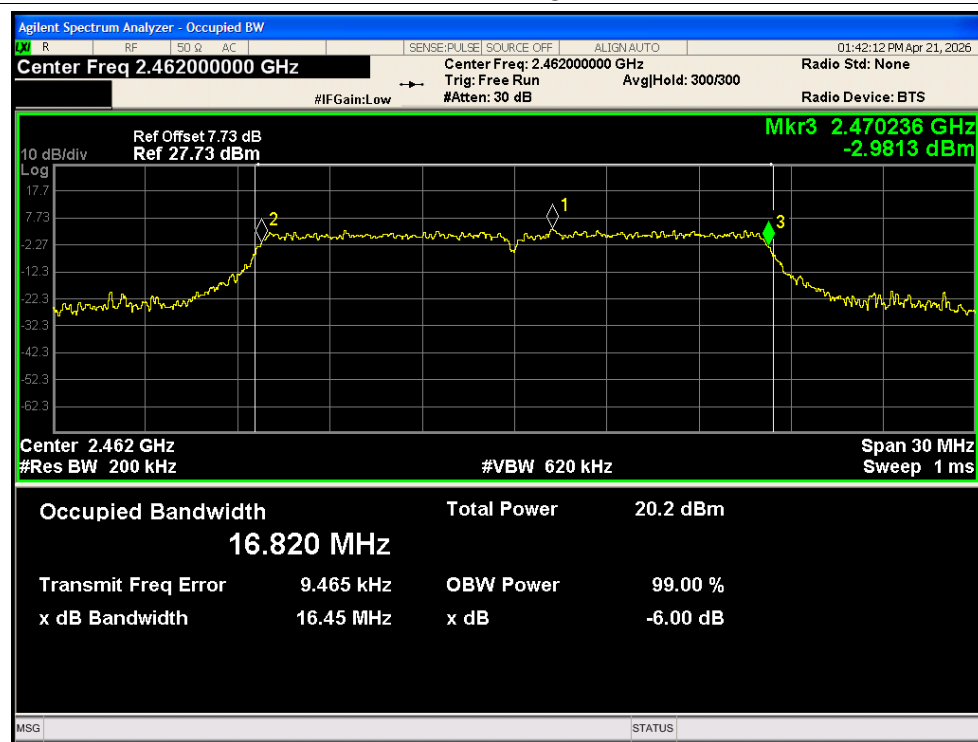
-6dB Bandwidth NVNT g 2412MHz Ant1



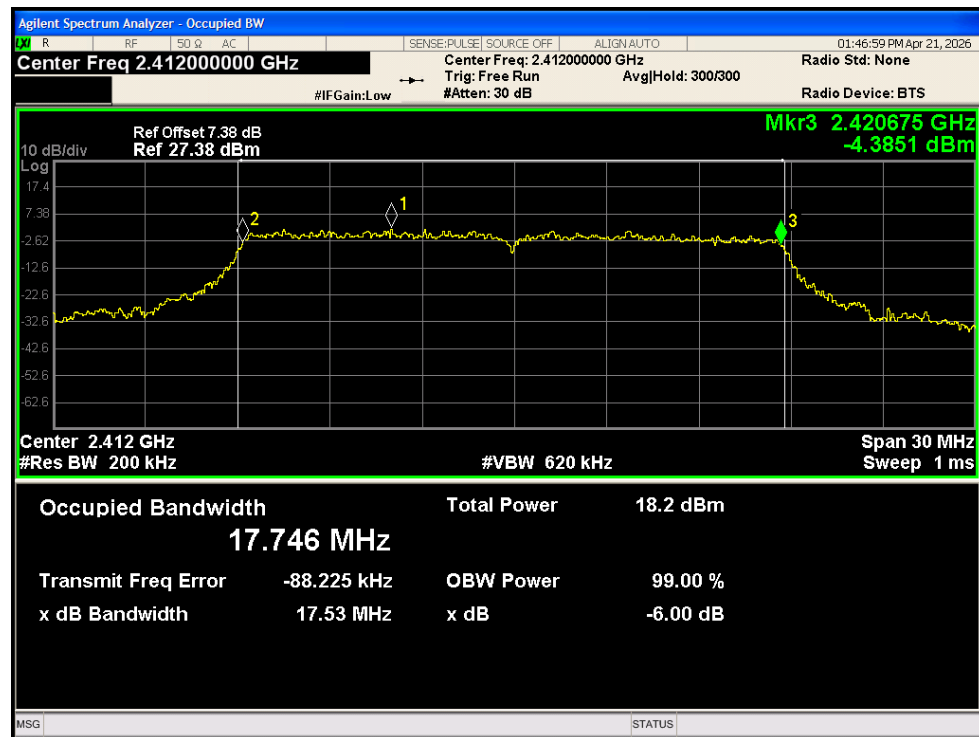
-6dB Bandwidth NVNT g 2437MHz Ant1



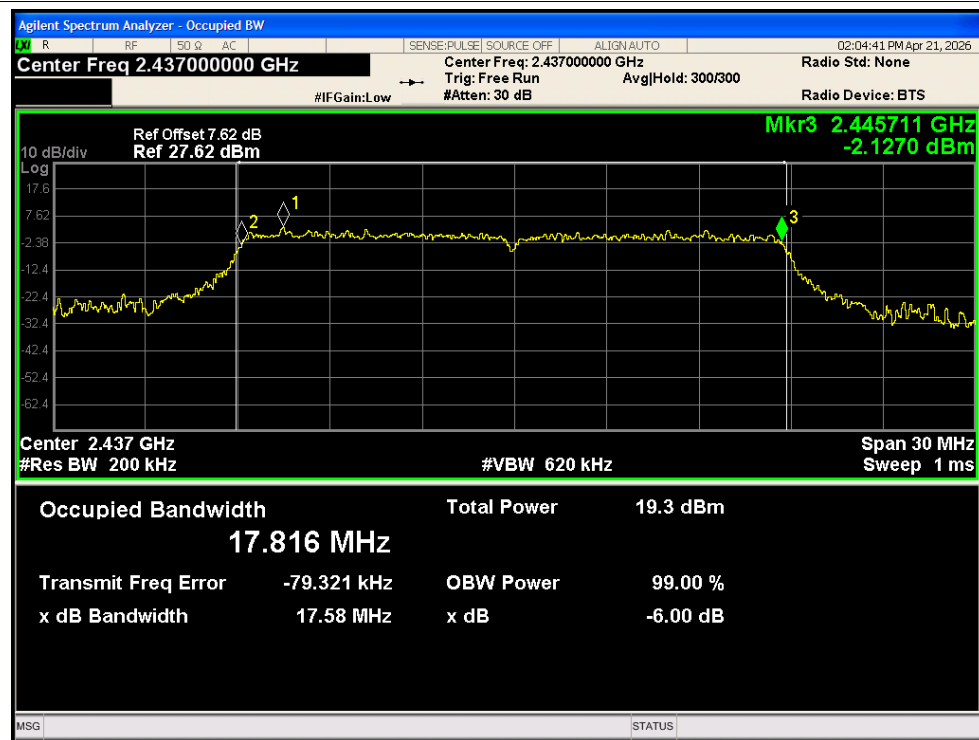
-6dB Bandwidth NVNT g 2462MHz Ant1



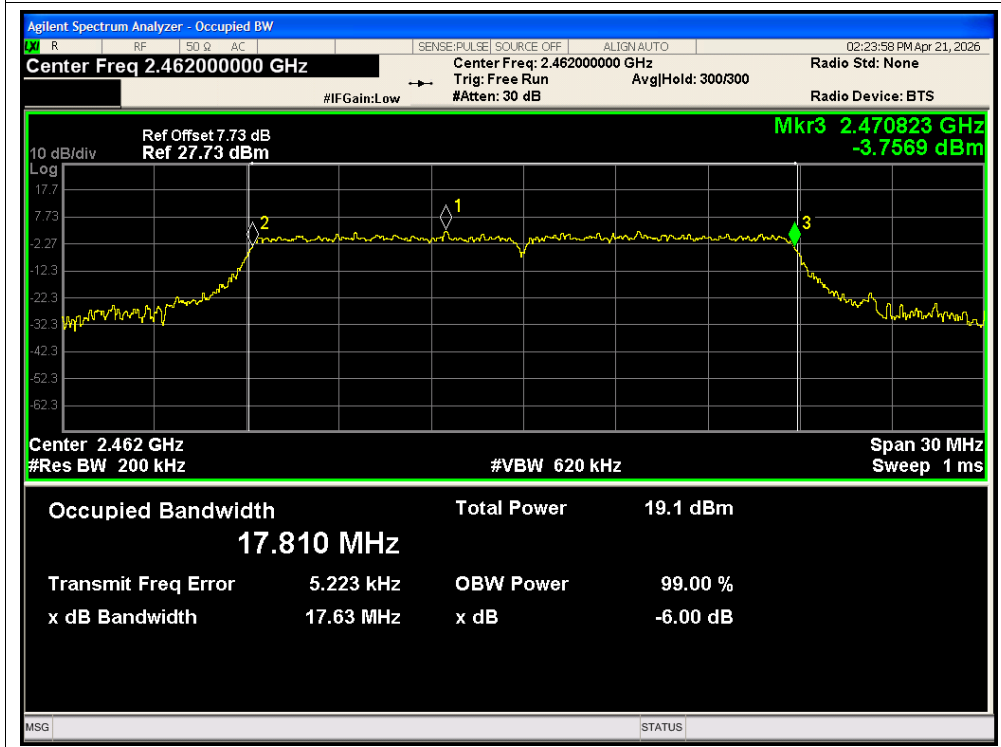
-6dB Bandwidth NVNT n20 2412MHz Ant1



-6dB Bandwidth NVNT n20 2437MHz Ant1



-6dB Bandwidth NVNT n20 2462MHz Ant1

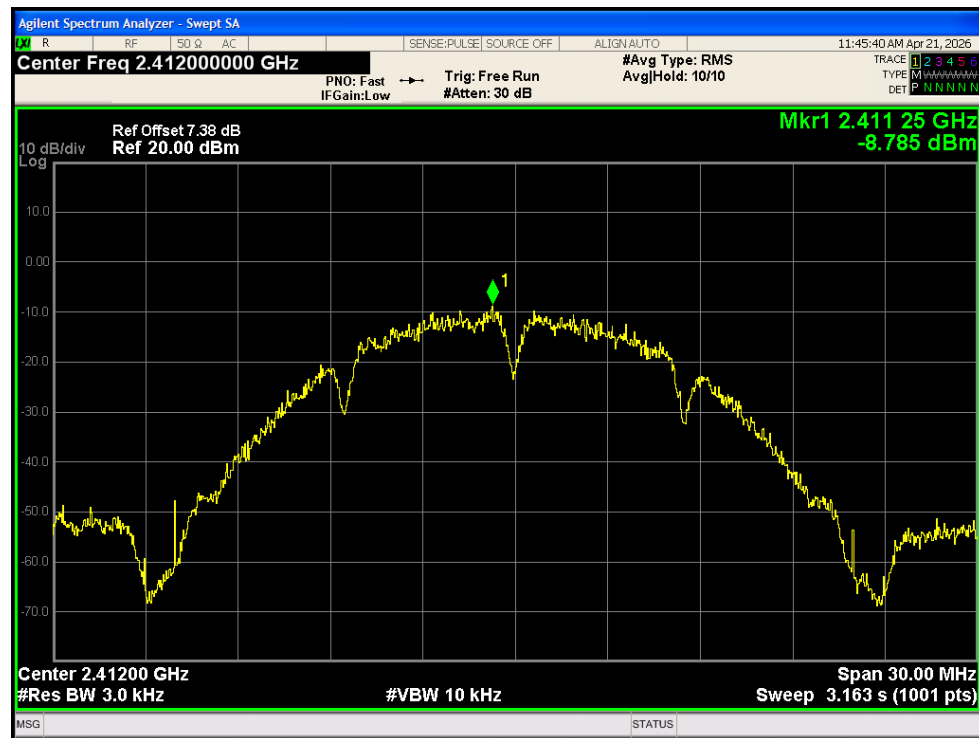


Maximum Power Spectral Density Level

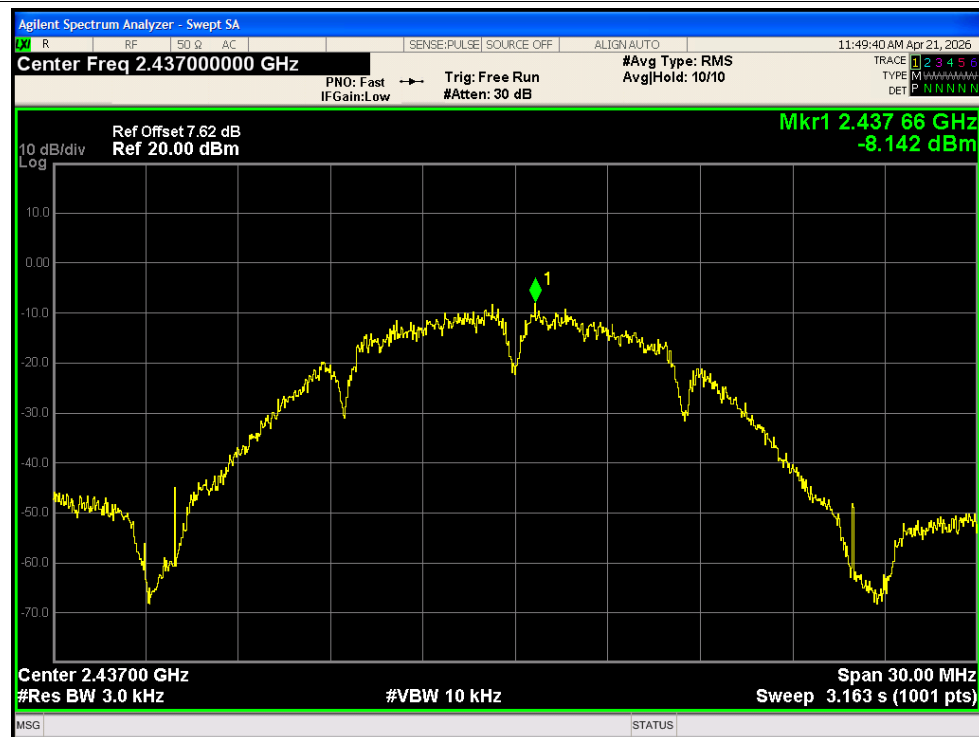
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	-8.79	8	Pass
NVNT	b	2437	-8.14	8	Pass
NVNT	b	2462	-8.50	8	Pass
NVNT	g	2412	-12.48	8	Pass
NVNT	g	2437	-12.17	8	Pass
NVNT	g	2462	-10.01	8	Pass
NVNT	n20	2412	-13.12	8	Pass
NVNT	n20	2437	-11.86	8	Pass
NVNT	n20	2462	-11.64	8	Pass

Test Graphs

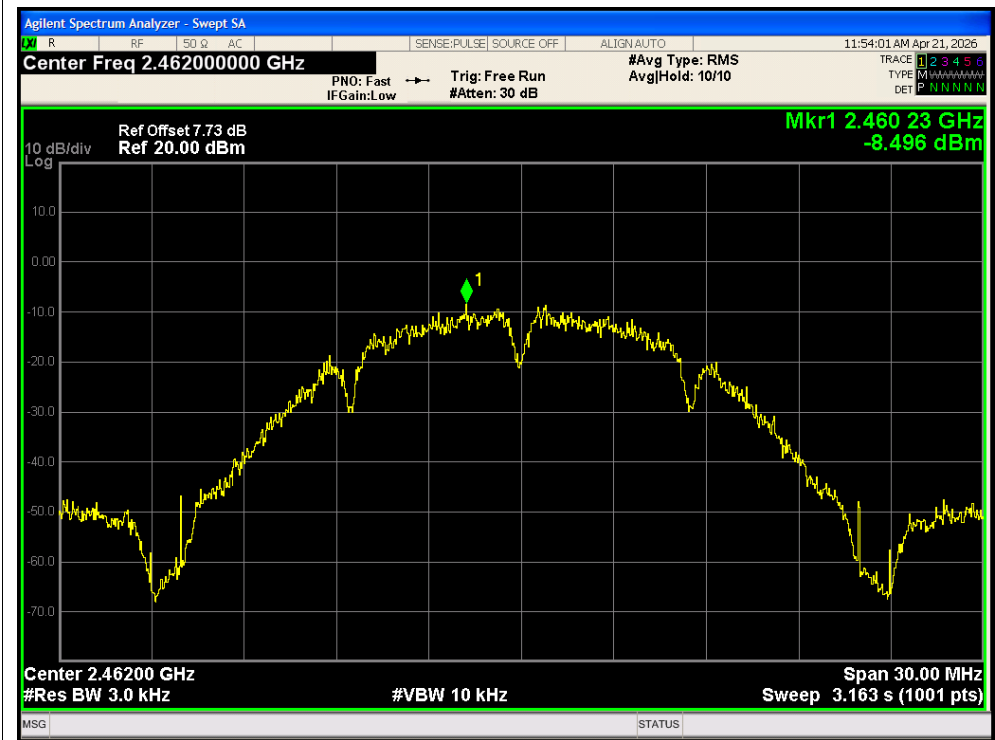
PSD NVNT b 2412MHz



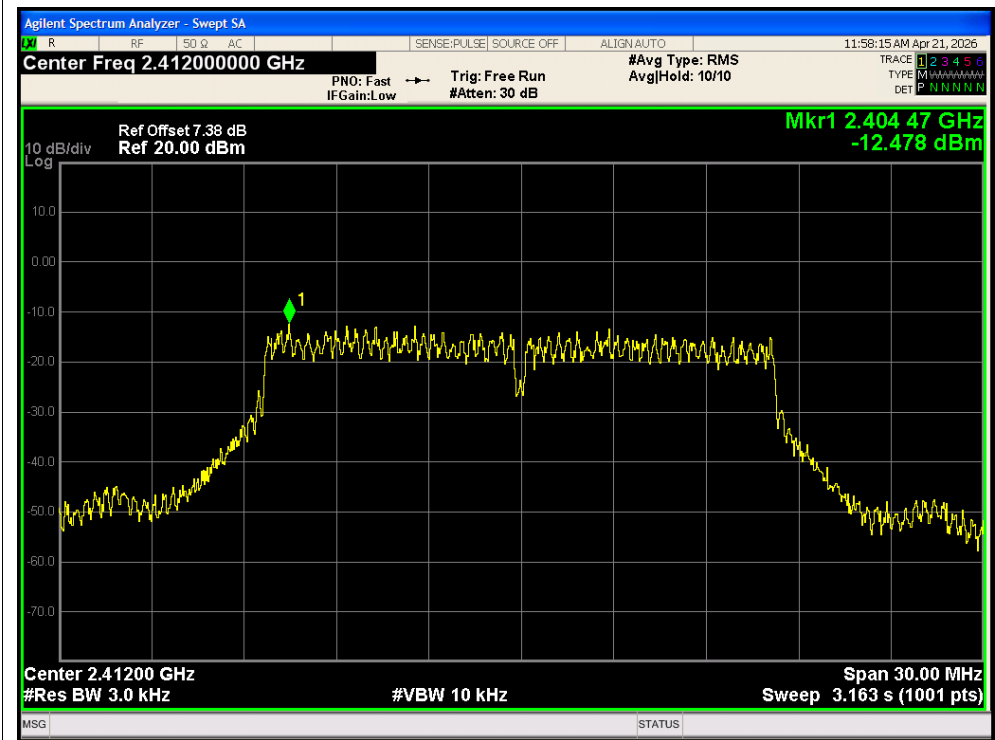
PSD NVNT b 2437MHz



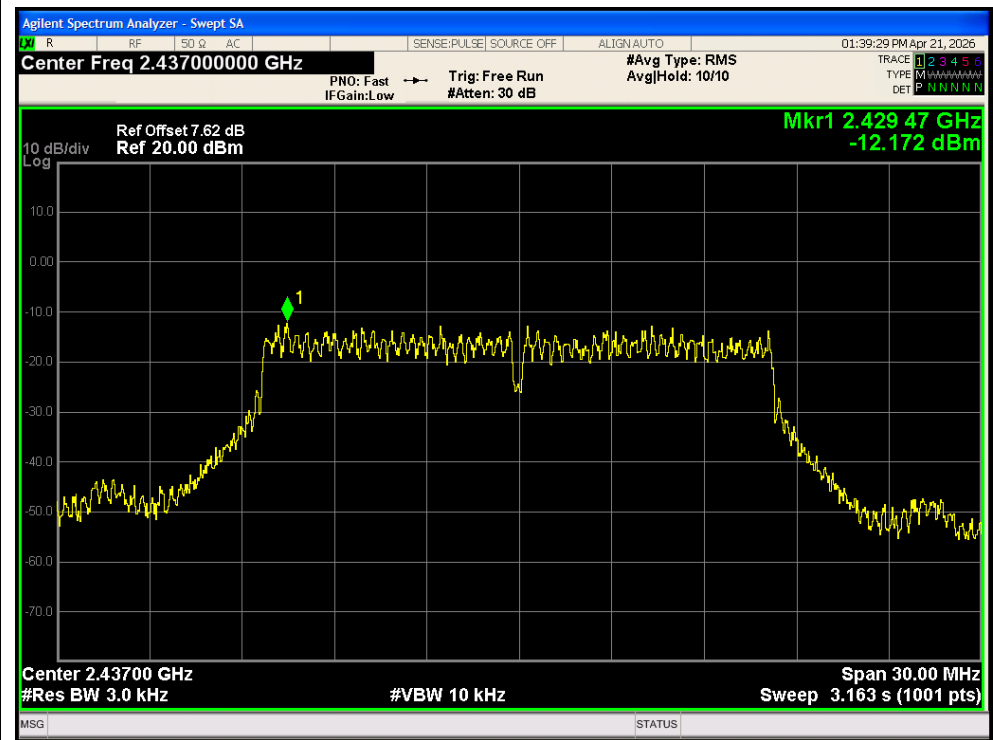
PSD NVNT b 2462MHz



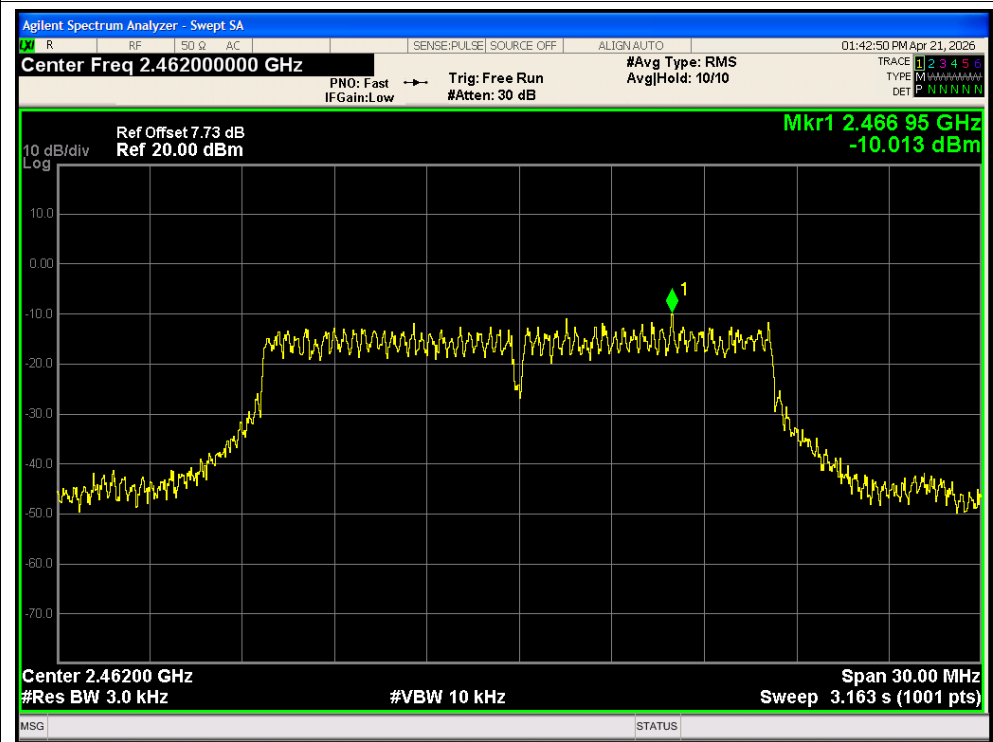
PSD NVNT g 2412MHz



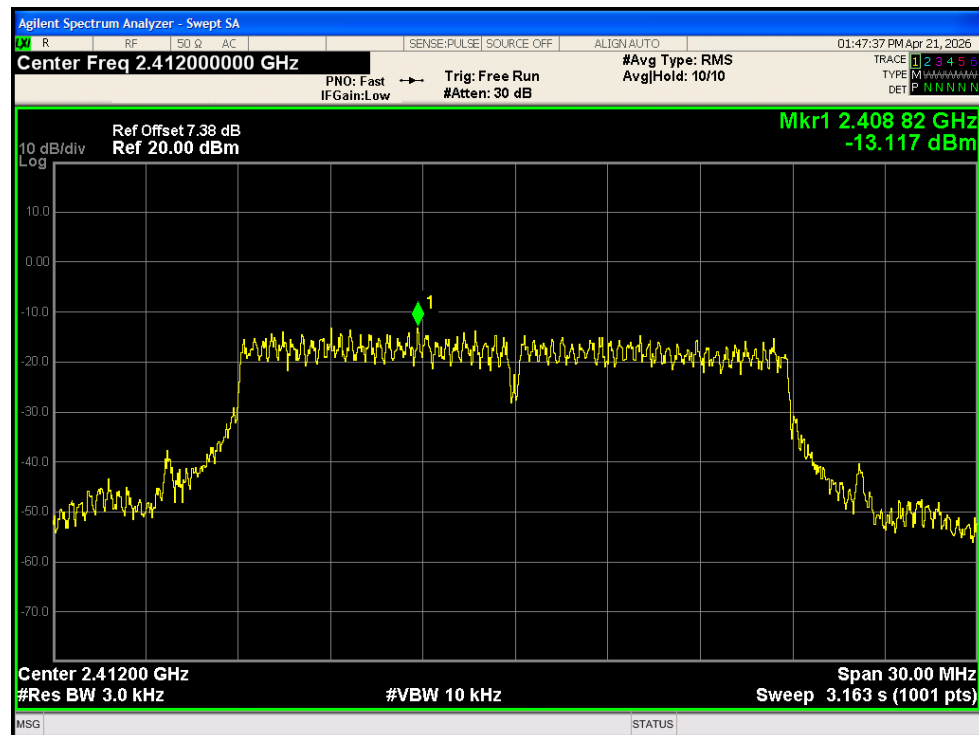
PSD NVNT g 2437MHz



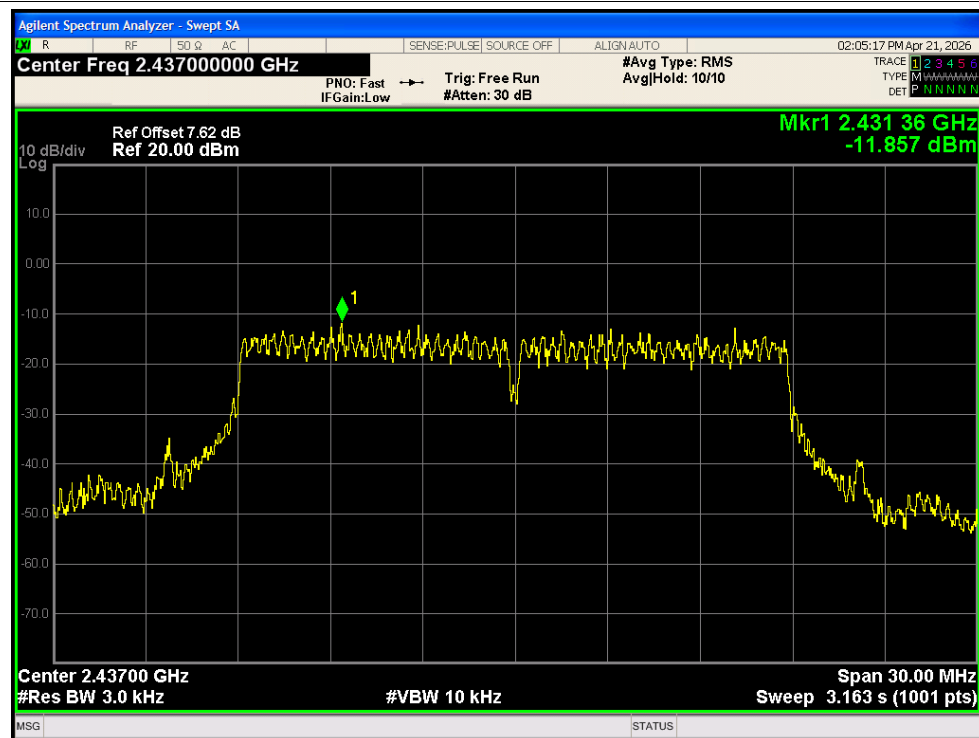
PSD NVNT g 2462MHz



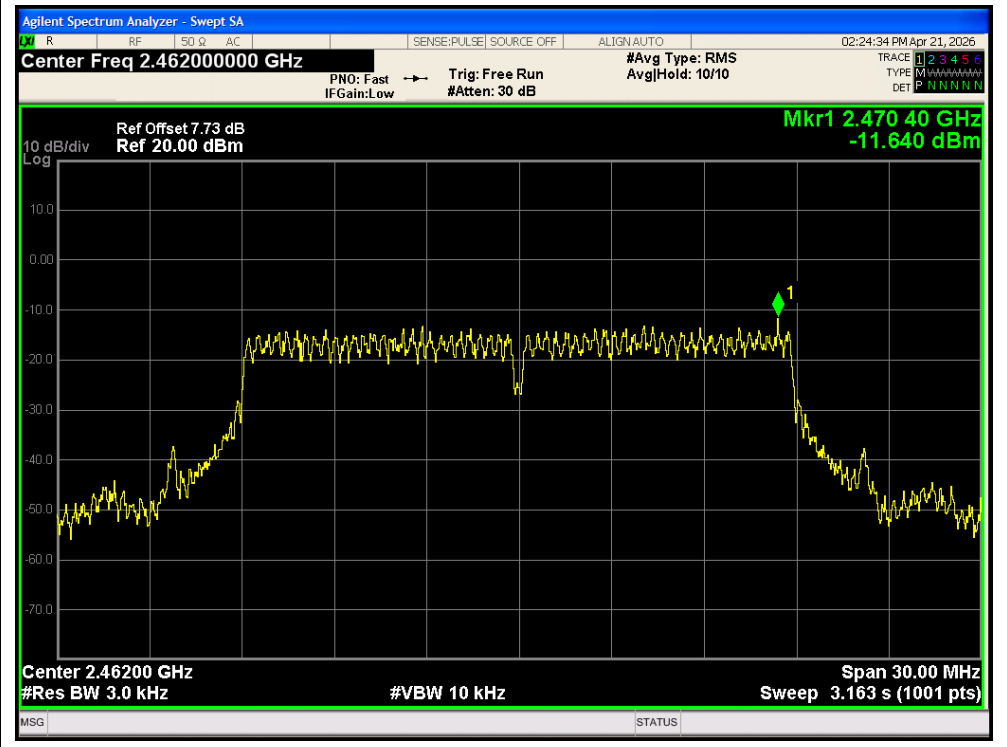
PSD NVNT n20 2412MHz



PSD NVNT n20 2437MHz



PSD NVNT n20 2462MHz

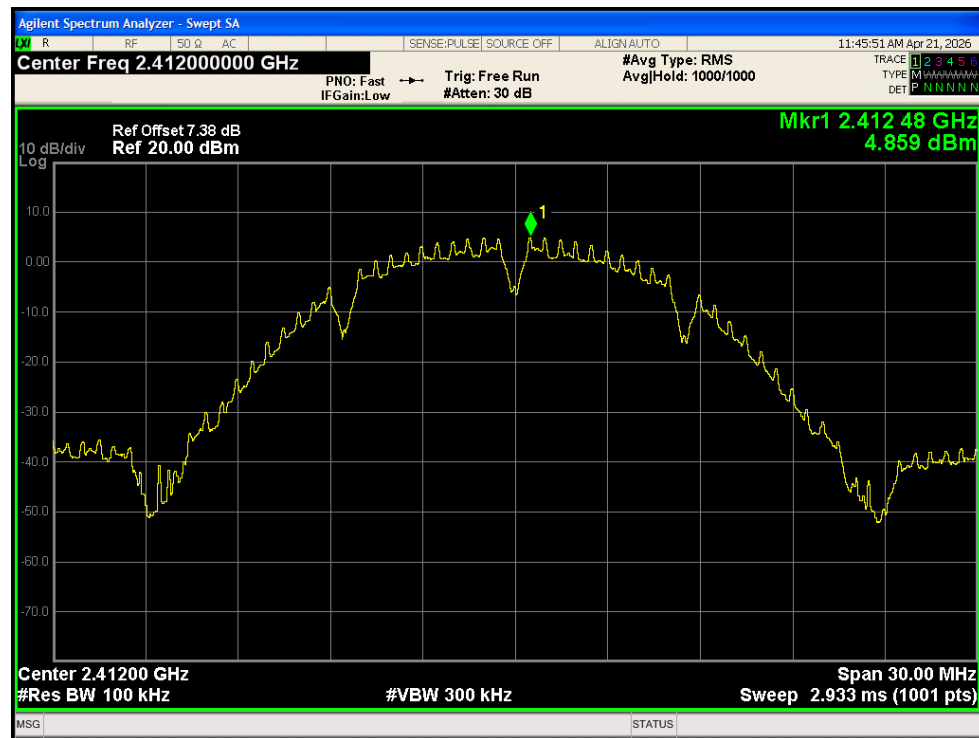


Band Edge

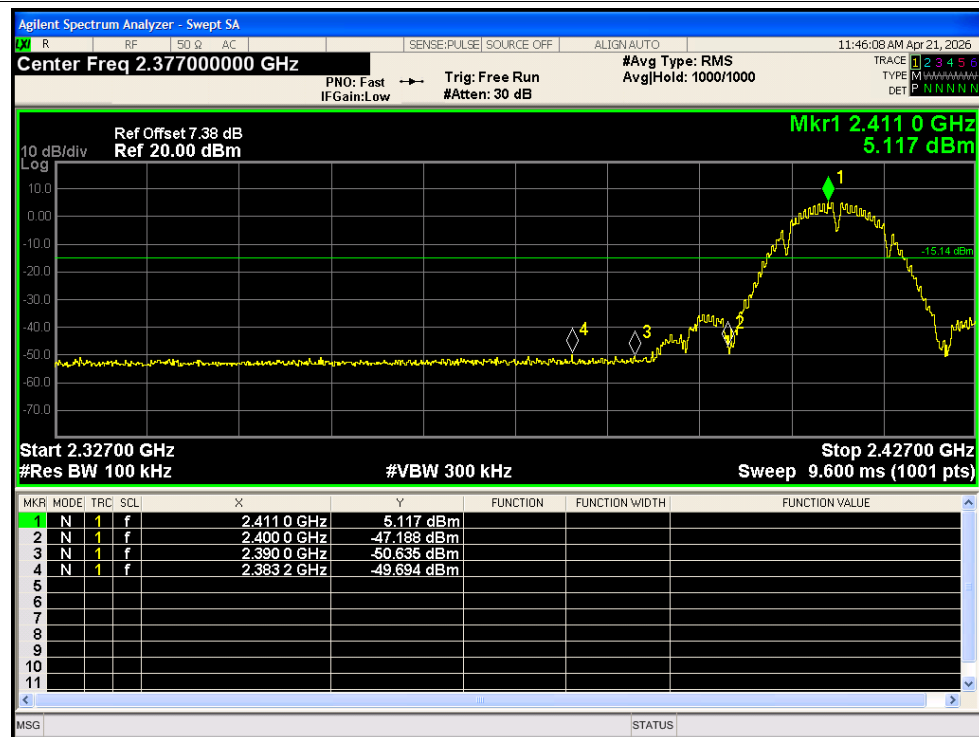
Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	-54.55	-20	Pass
NVNT	b	2462	-54.73	-20	Pass
NVNT	g	2412	-40.32	-20	Pass
NVNT	g	2462	-36.54	-20	Pass
NVNT	n20	2412	-40.41	-20	Pass
NVNT	n20	2462	-40.08	-20	Pass

Test Graphs

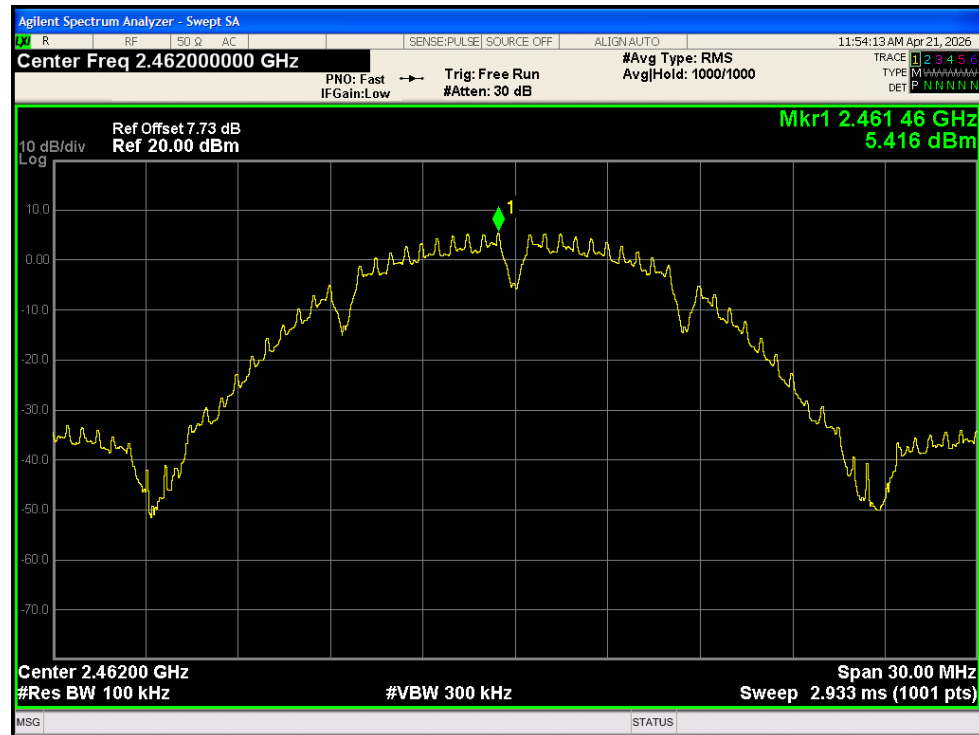
Band Edge NVNT b 2412MHz Ref



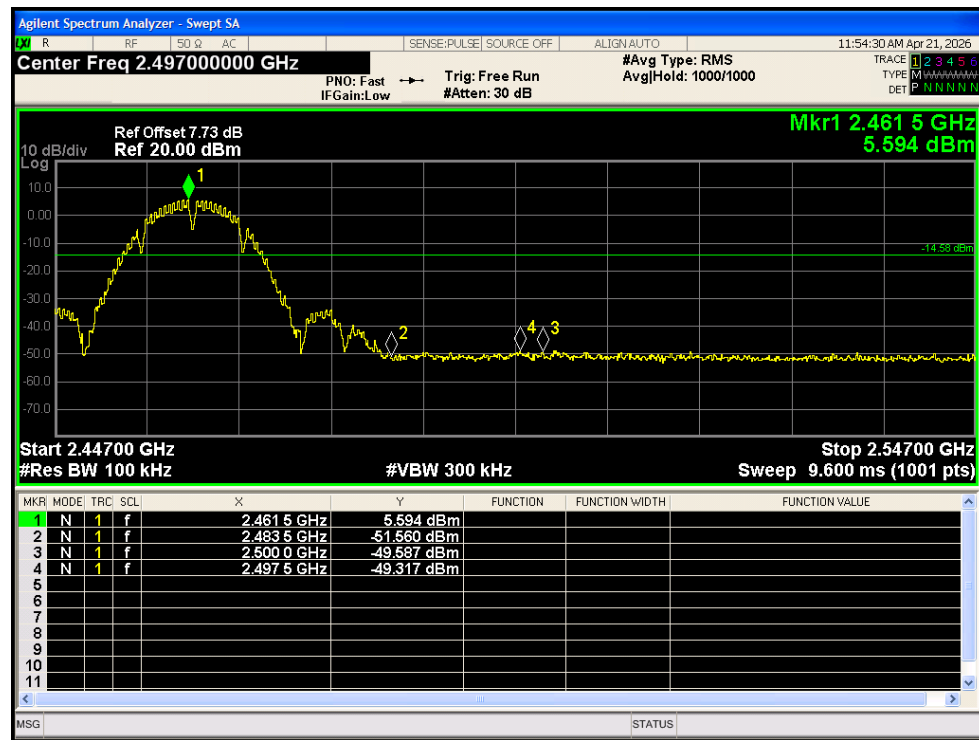
Band Edge NVNT b 2412MHz Emission



Band Edge NVNT b 2462MHz Ref



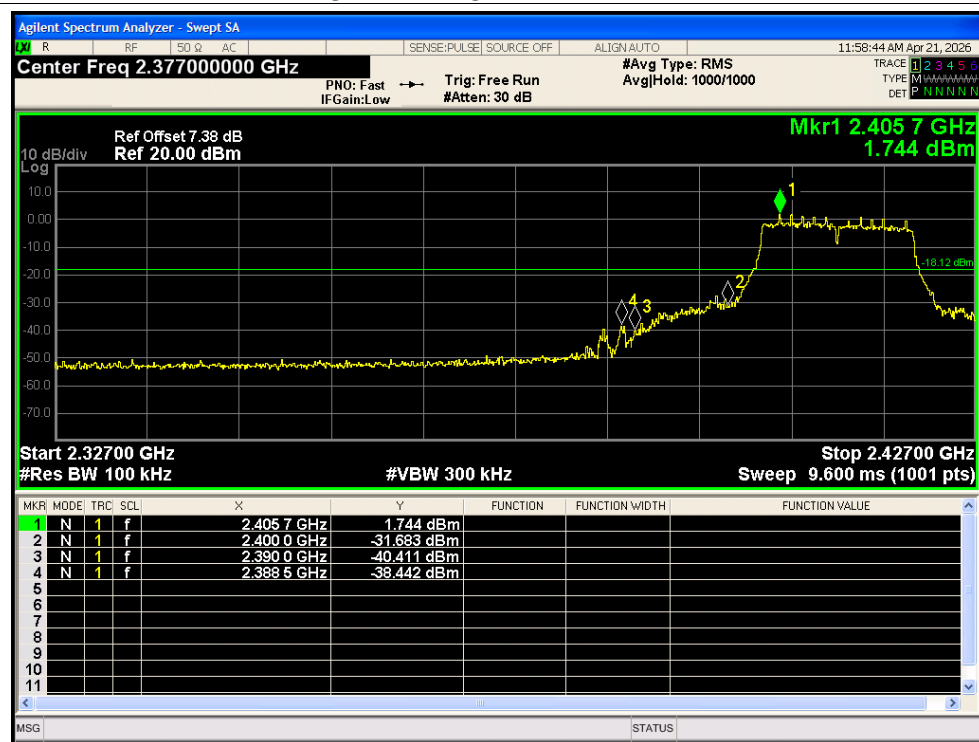
Band Edge NVNT b 2462MHz Emission



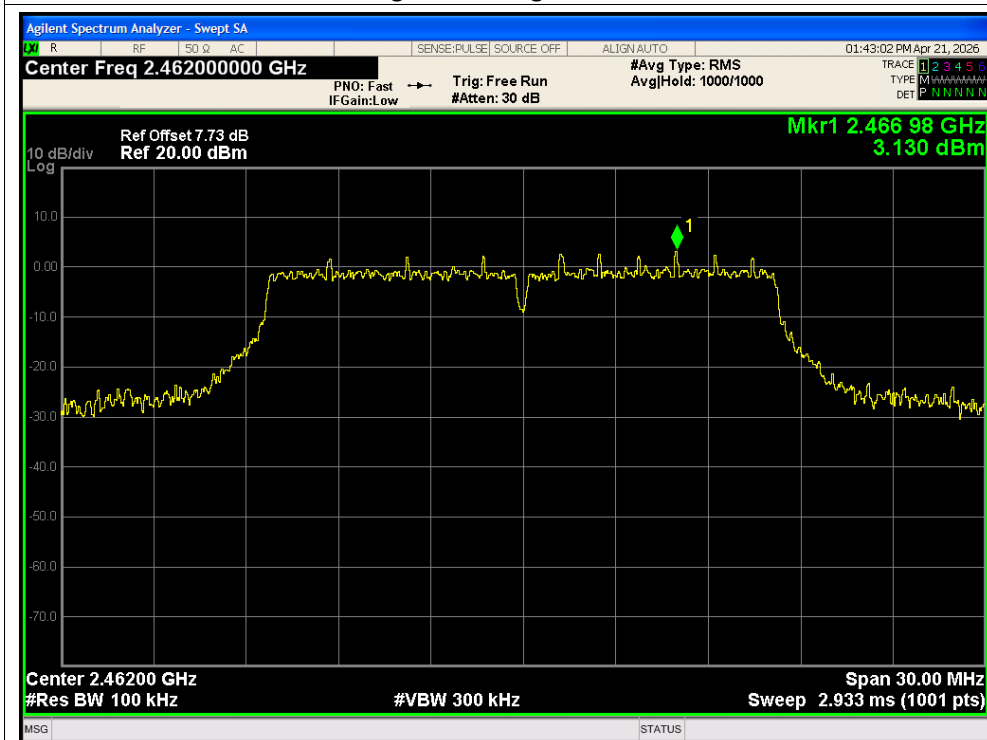
Band Edge NVNT g 2412MHz Ref



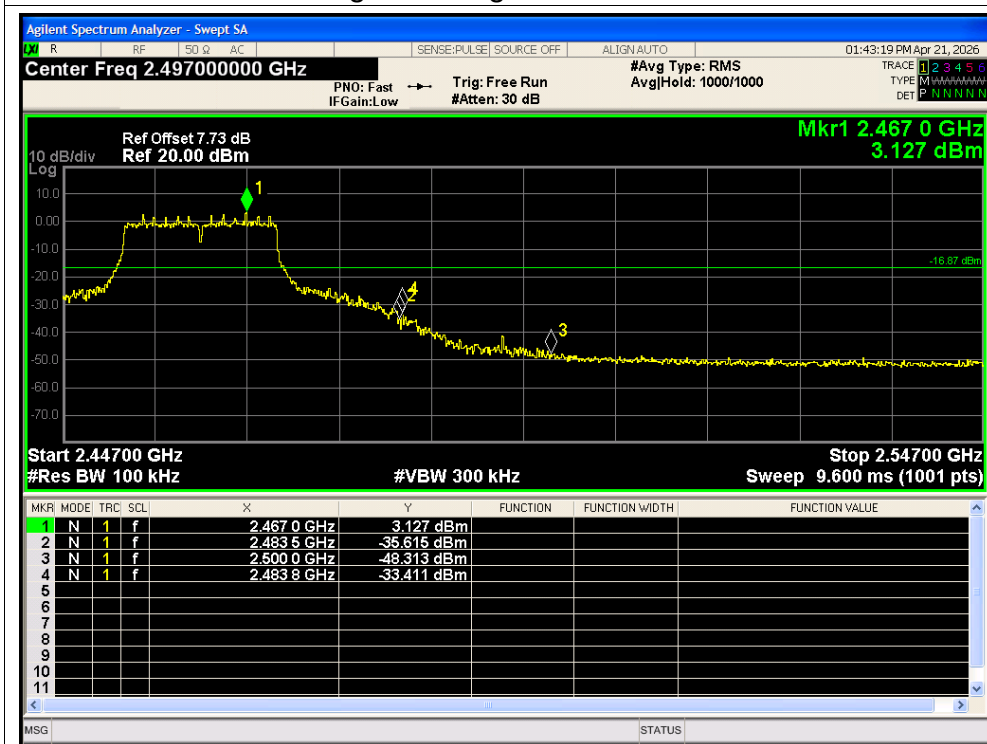
Band Edge NVNT g 2412MHz 1 Emission



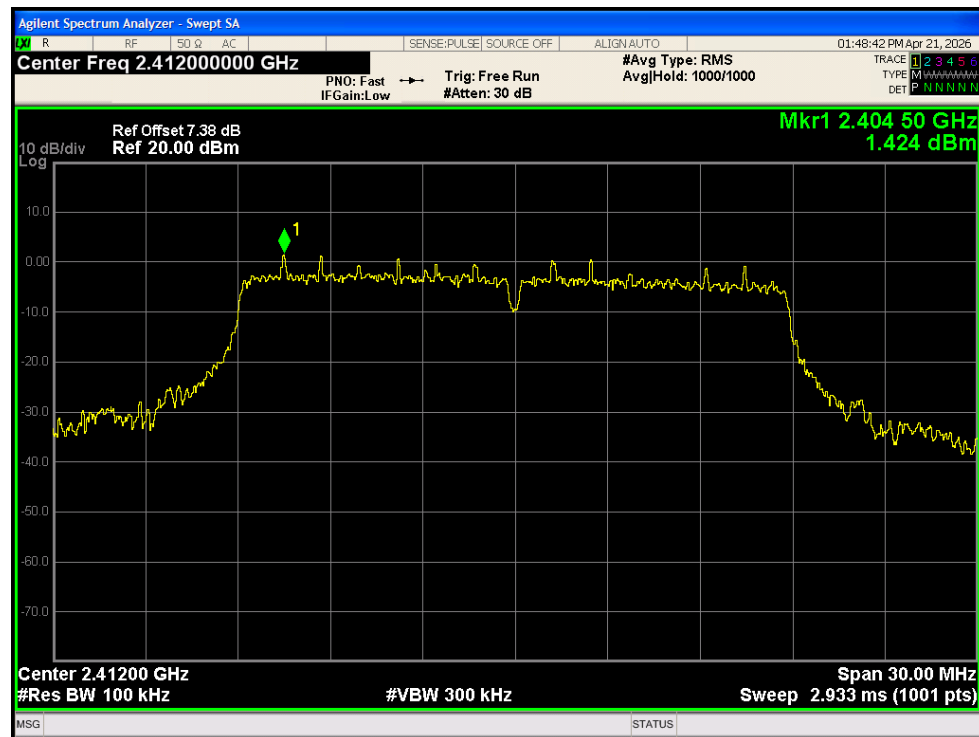
Band Edge NVNT g 2462MHz Ref



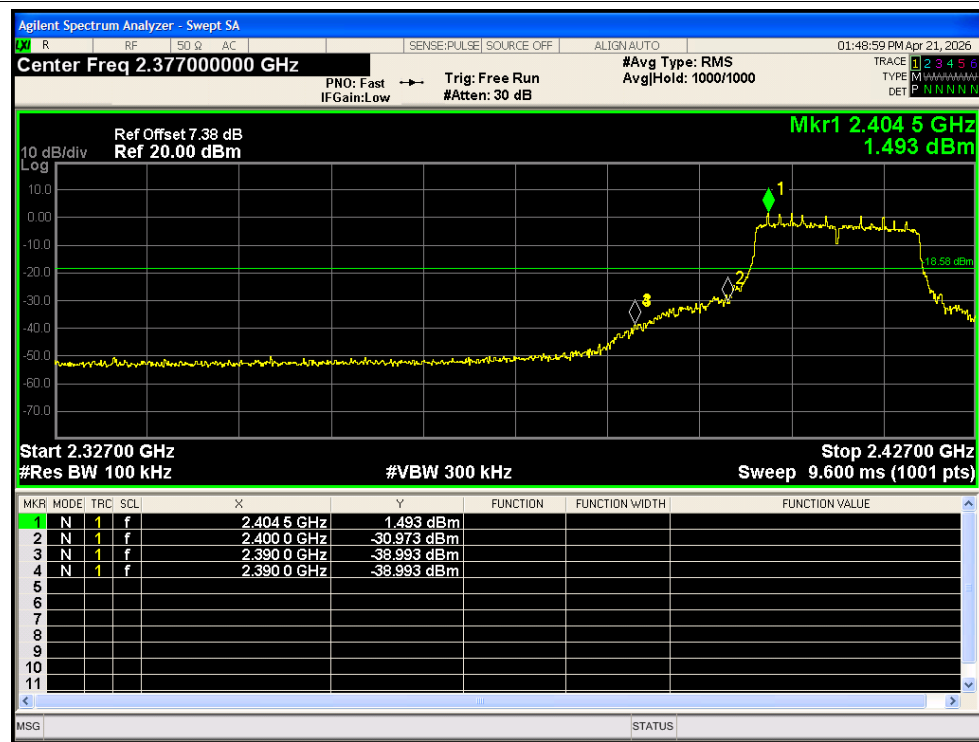
Band Edge NVNT g 2462MHz Emission



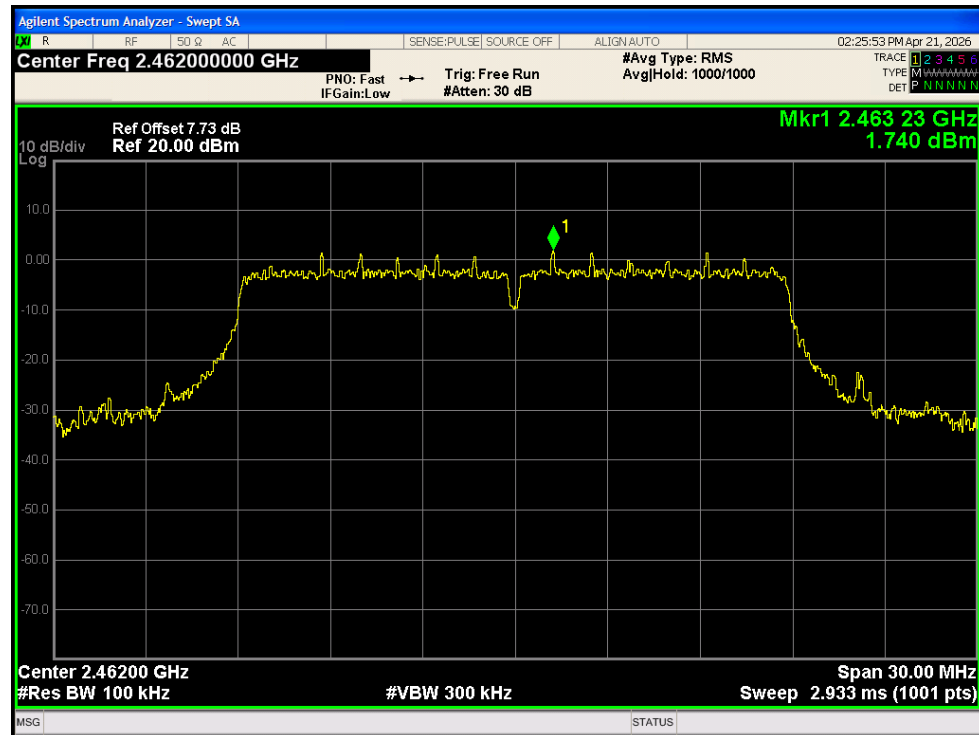
Band Edge NVNT n20 2412MHz Ref



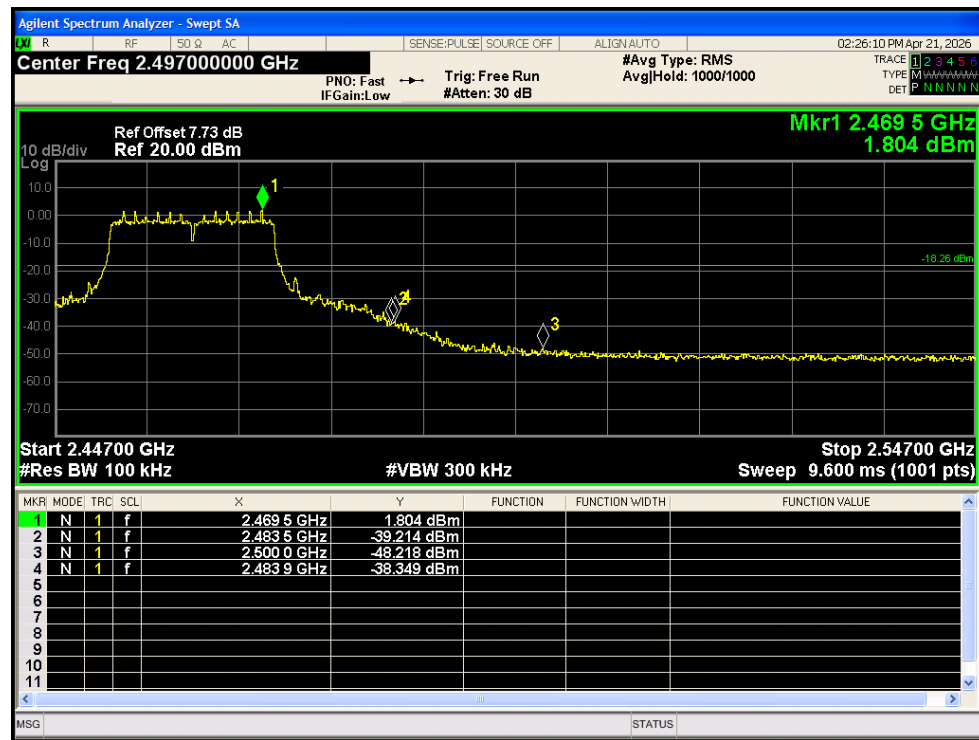
Band Edge NVNT n20 2412MHz Emission



Band Edge NVNT n20 2462MHz Ref



Band Edge NVNT n20 2462MHz Emission

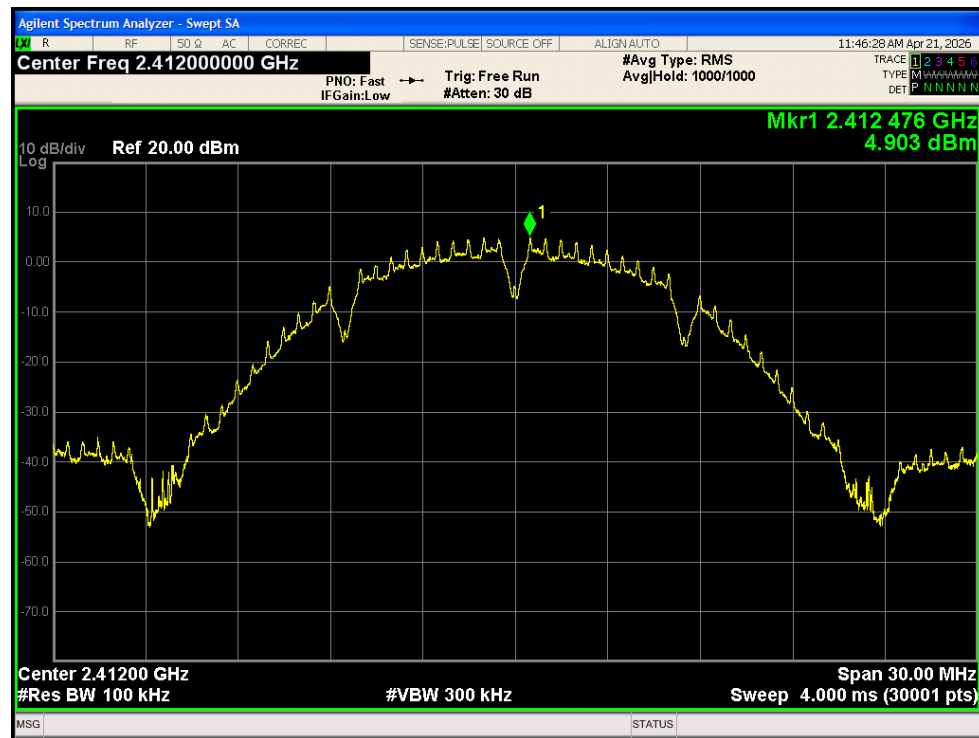


Conducted RF Spurious Emission

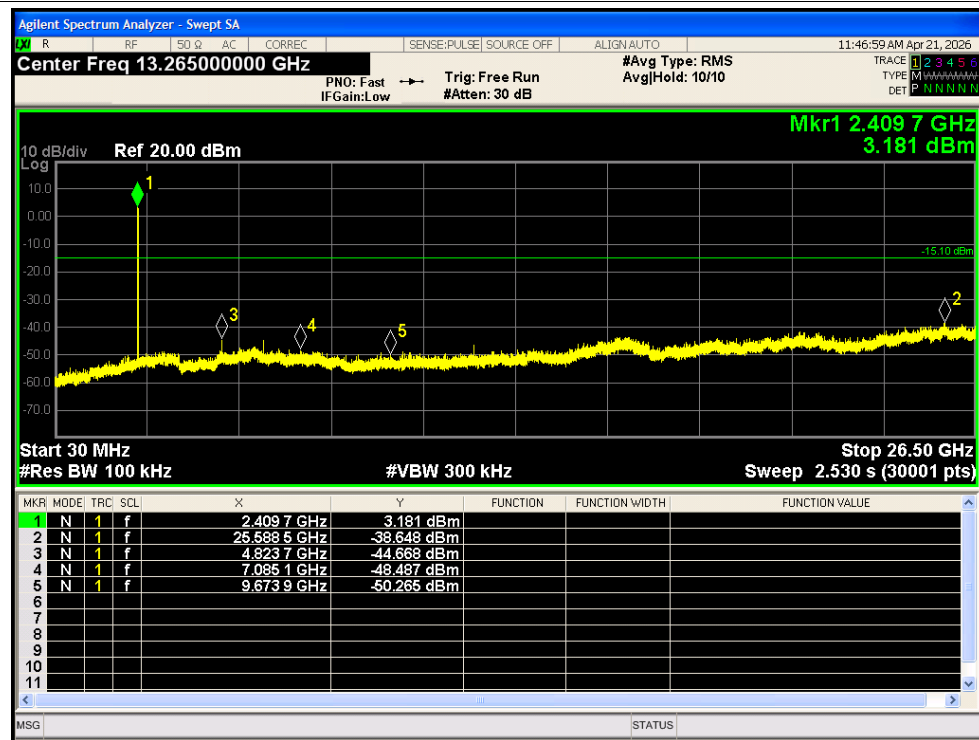
Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	-43.54	-20	Pass
NVNT	b	2437	-43.87	-20	Pass
NVNT	b	2462	-44.14	-20	Pass
NVNT	g	2412	-40.24	-20	Pass
NVNT	g	2437	-41.28	-20	Pass
NVNT	g	2462	-41.99	-20	Pass
NVNT	n20	2412	-40.04	-20	Pass
NVNT	n20	2437	-40.93	-20	Pass
NVNT	n20	2462	-40.06	-20	Pass

Test Graphs

Tx. Spurious NVNT b 2412MHz Ref



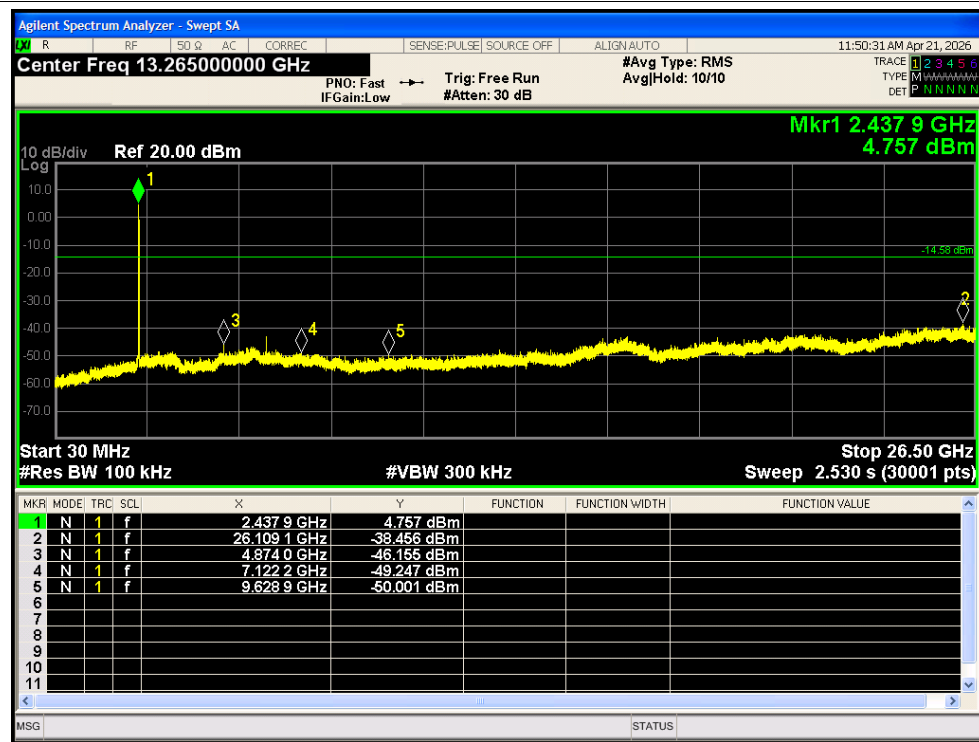
Tx. Spurious NVNT b 2412MHz Emission



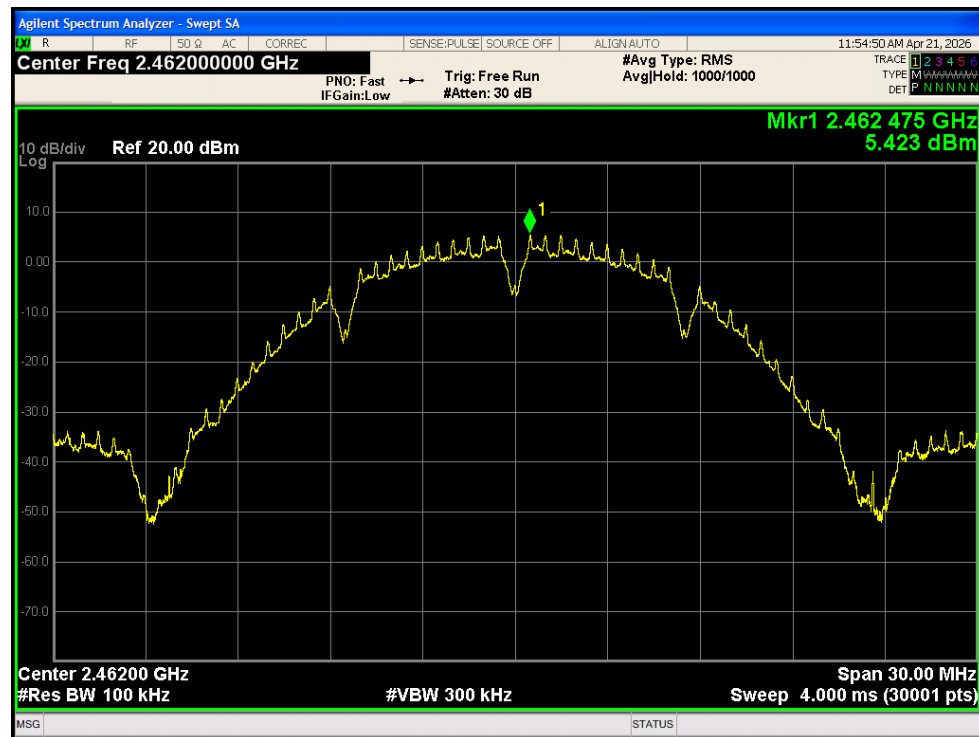
Tx. Spurious NVNT b 2437MHz Ref



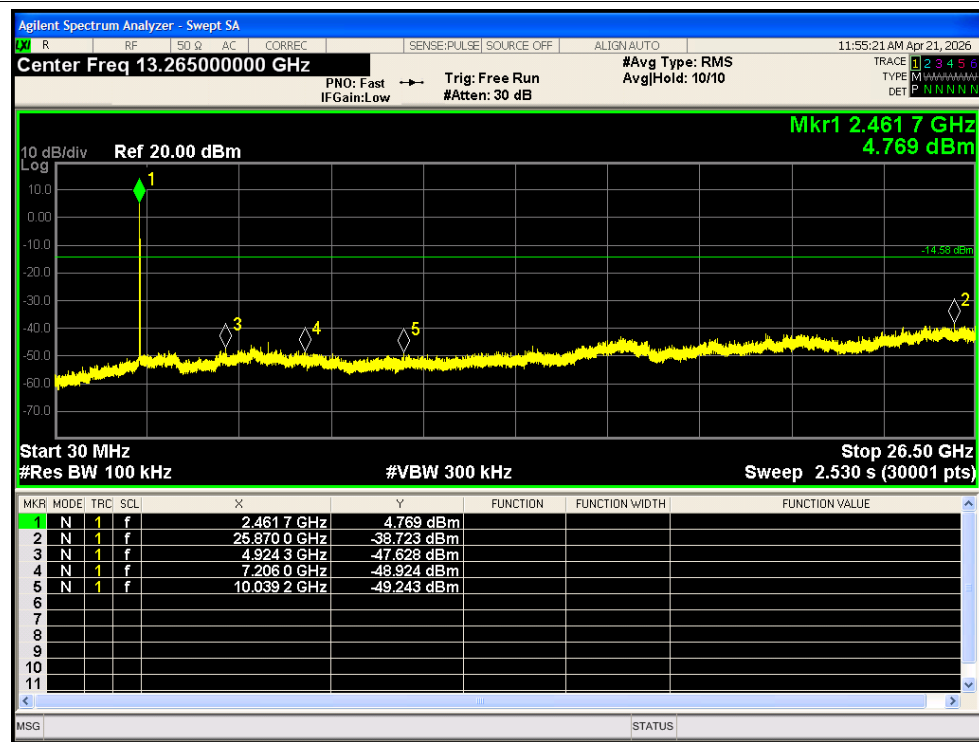
Tx. Spurious NVNT b 2437MHz Emission



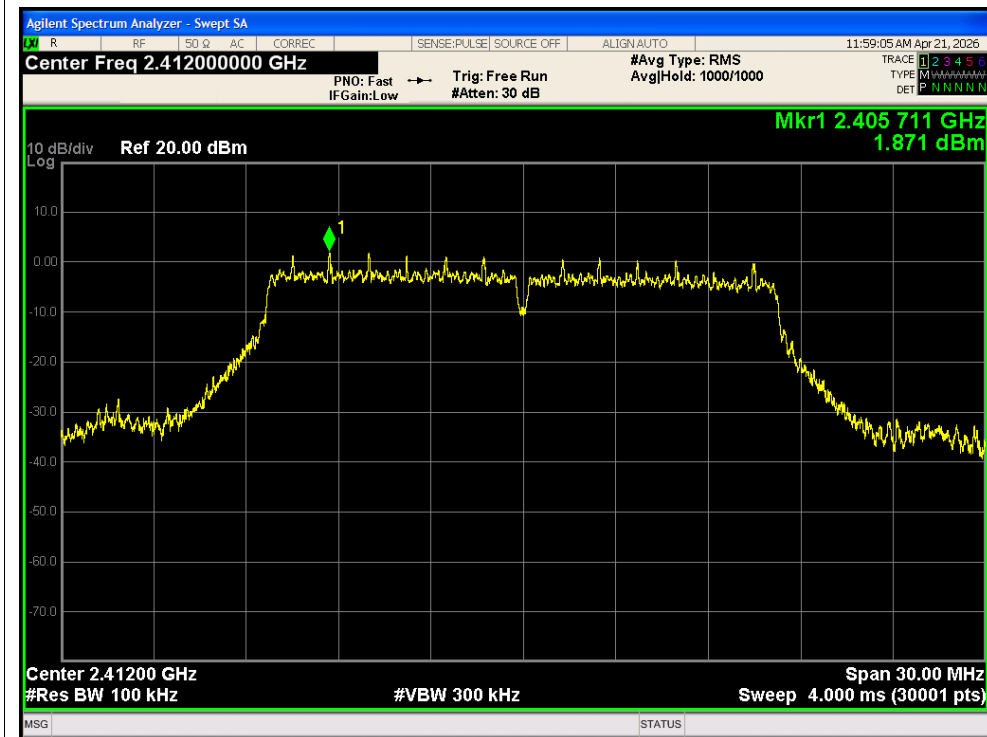
Tx. Spurious NVNT b 2462MHz Ref



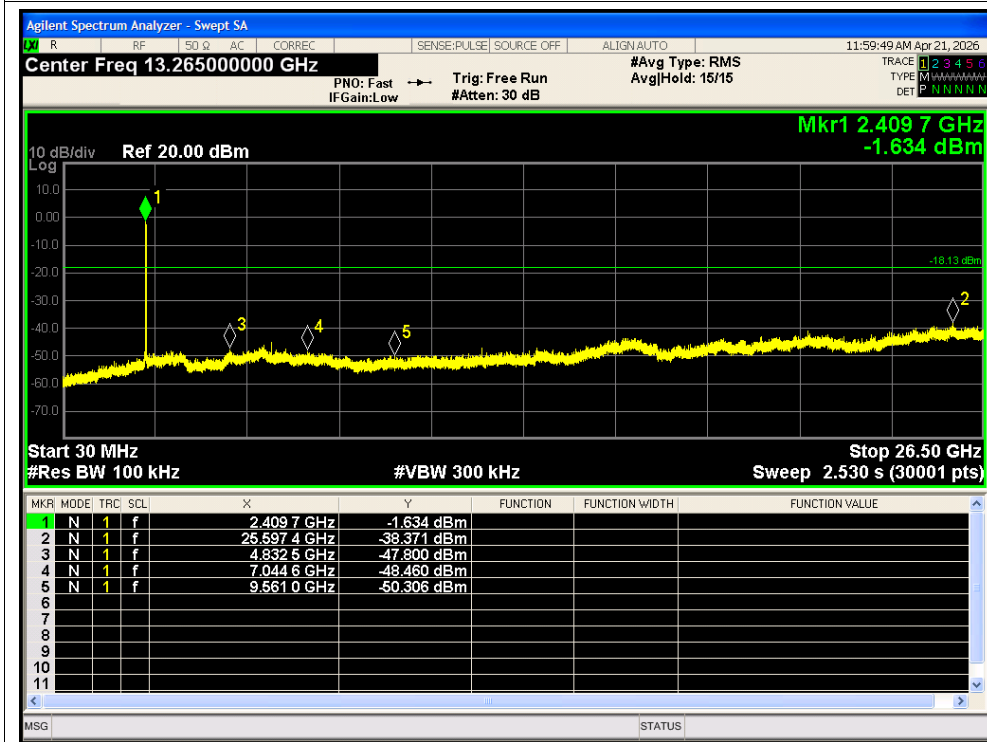
Tx. Spurious NVNT b 2462MHz Emission



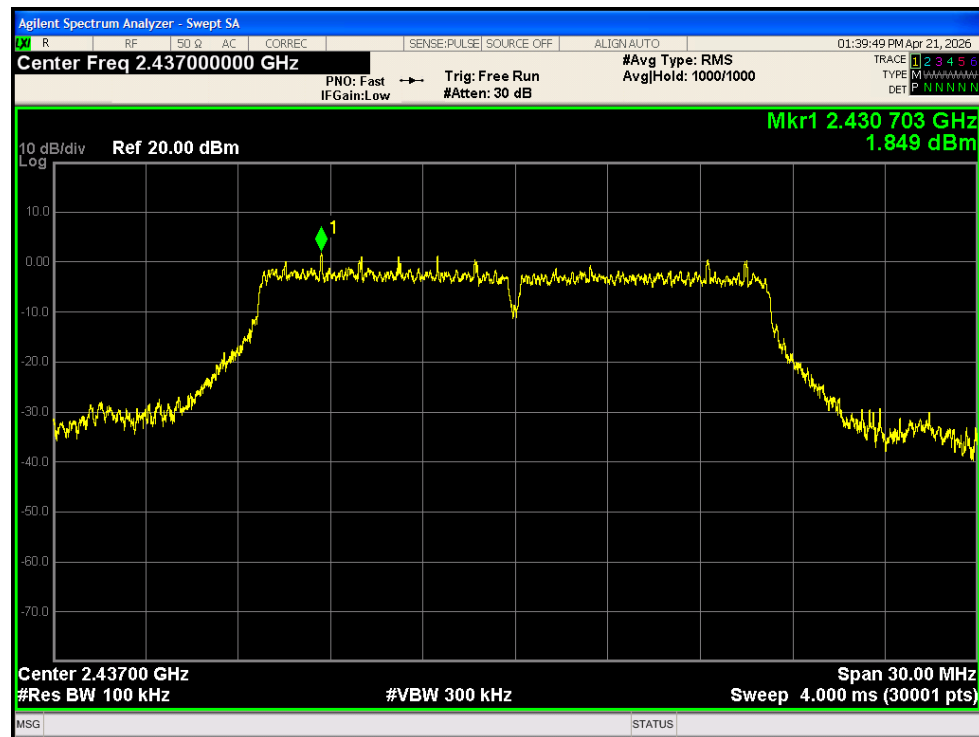
Tx. Spurious NVNT g 2412MHz Ref



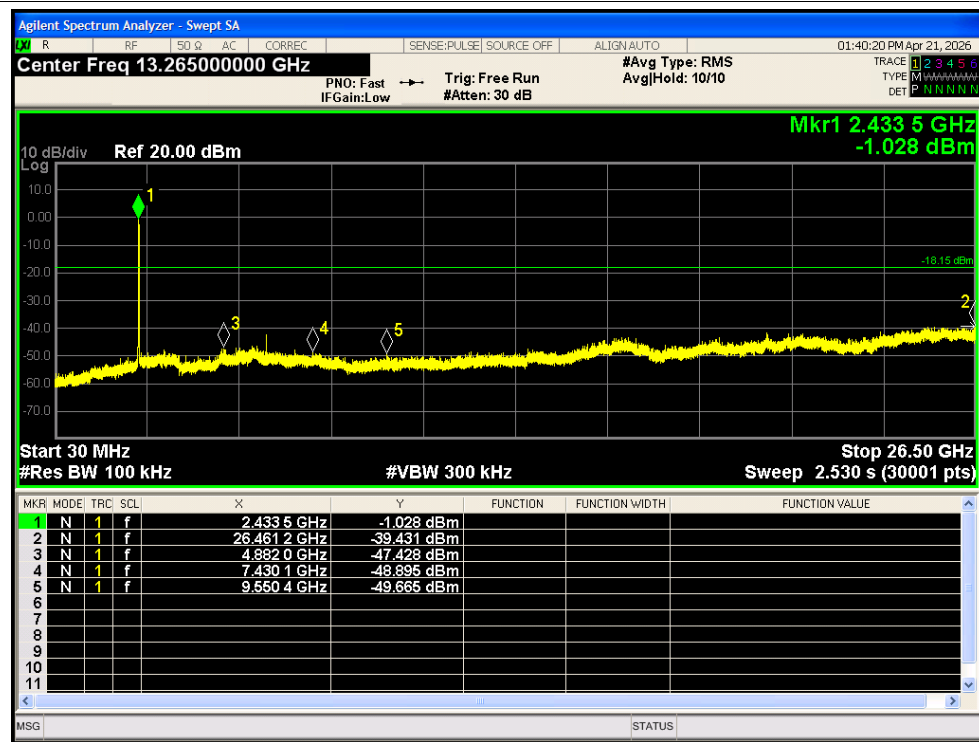
Tx. Spurious NVNT g 2412MHz Emission



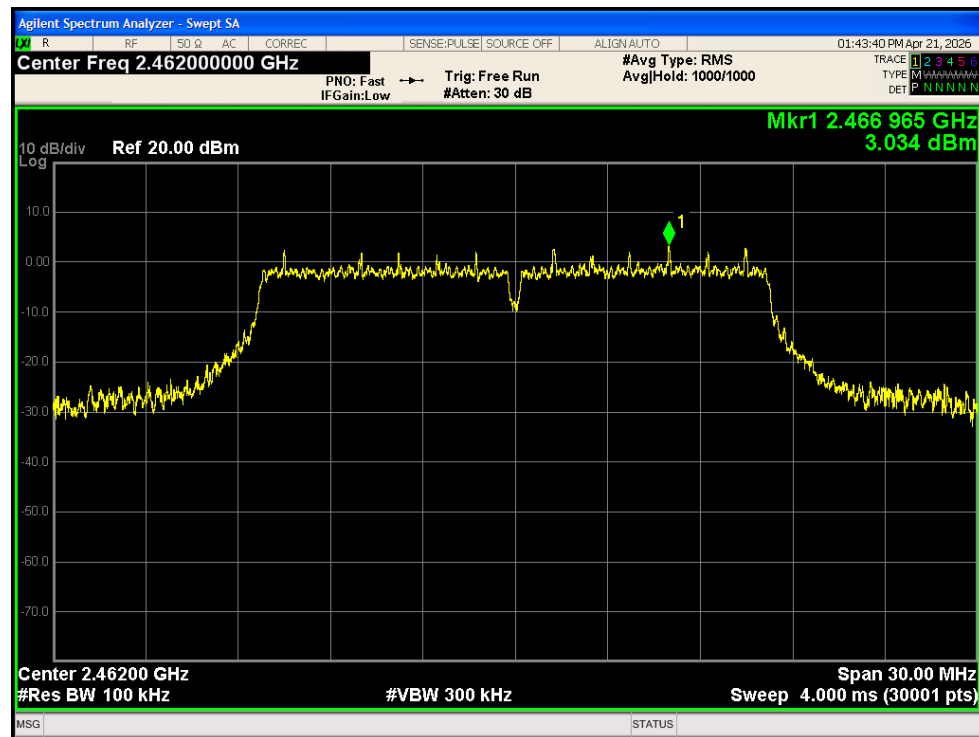
Tx. Spurious NVNT g 2437MHz Ref



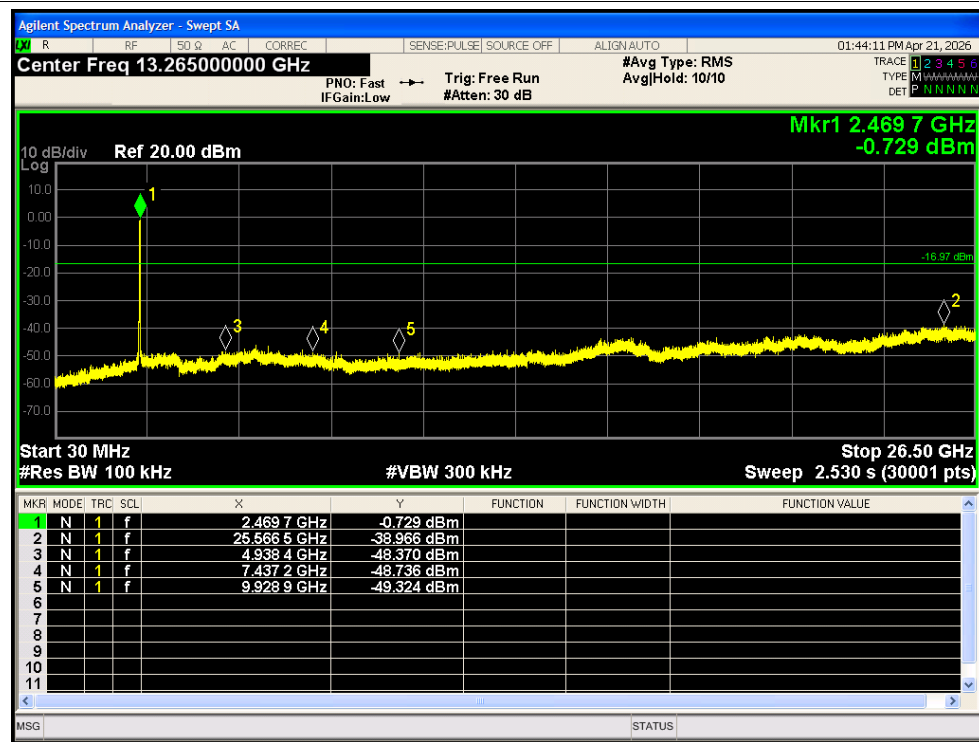
Tx. Spurious NVNT g 2437MHz Emission



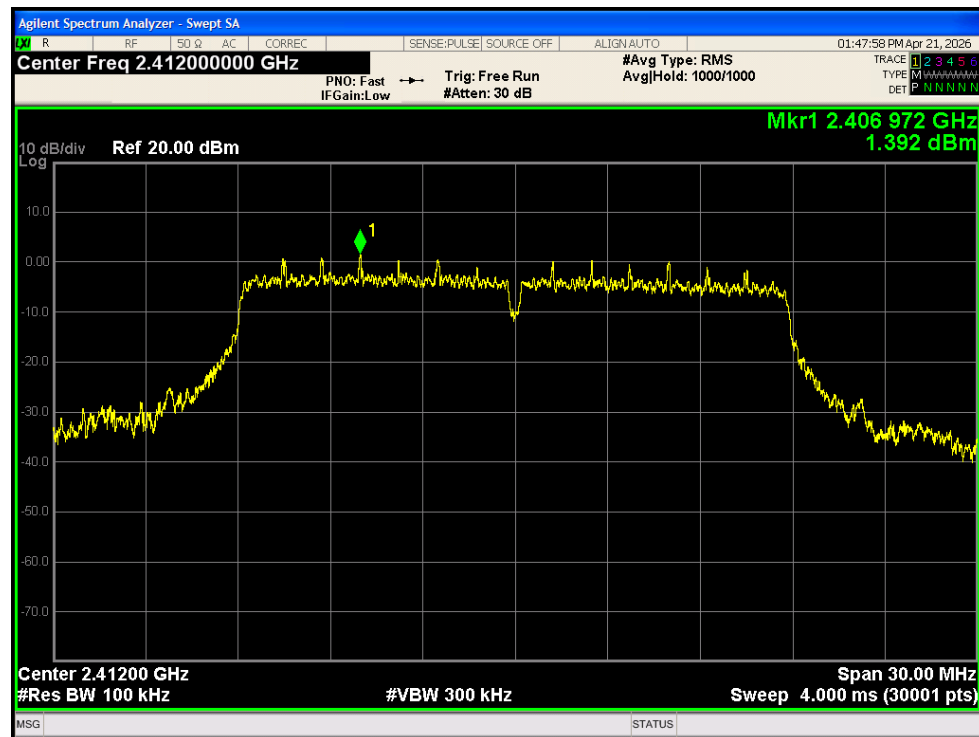
Tx. Spurious NVNT g 2462MHz Ref



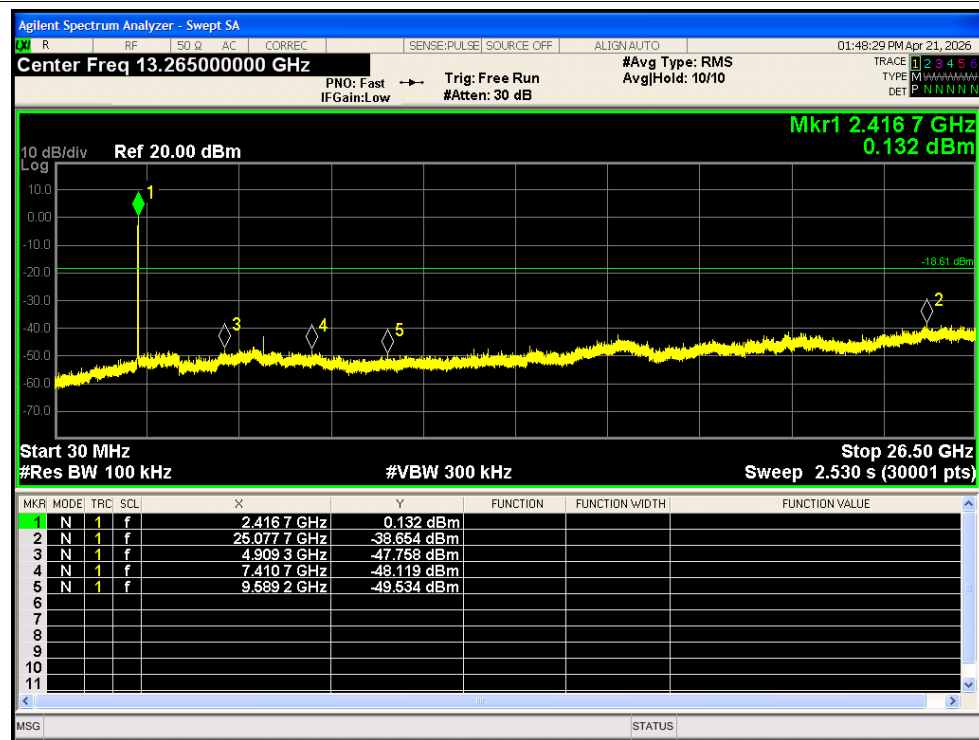
Tx. Spurious NVNT g 2462MHz Emission



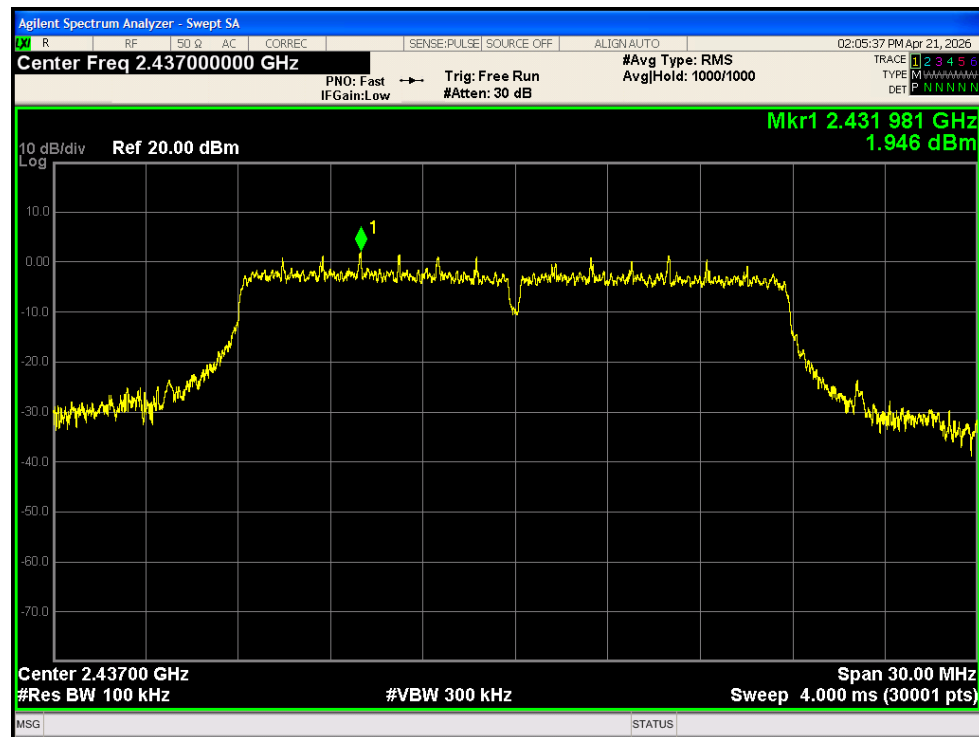
Tx. Spurious NVNT n20 2412MHz Ref



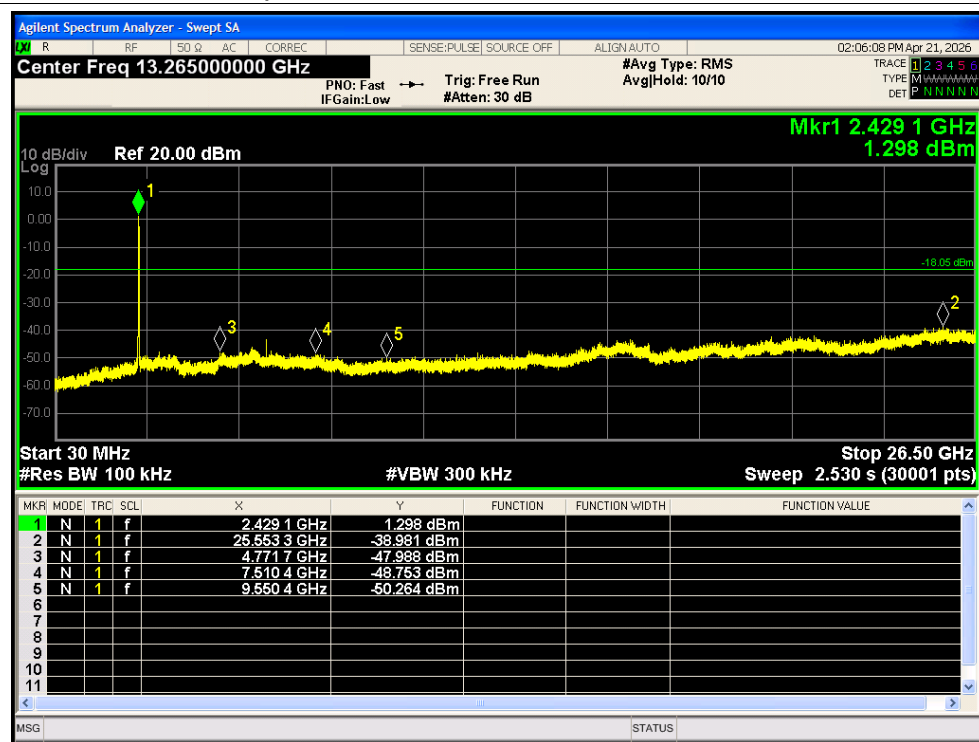
Tx. Spurious NVNT n20 2412MHz Emission



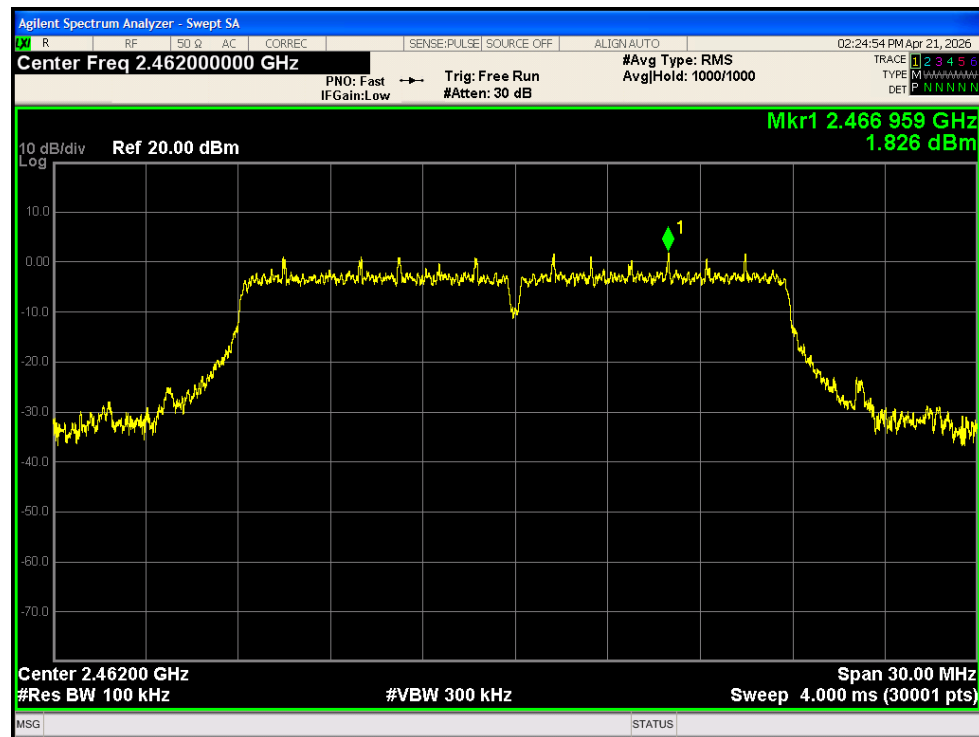
Tx. Spurious NVNT n20 2437MHz Ref



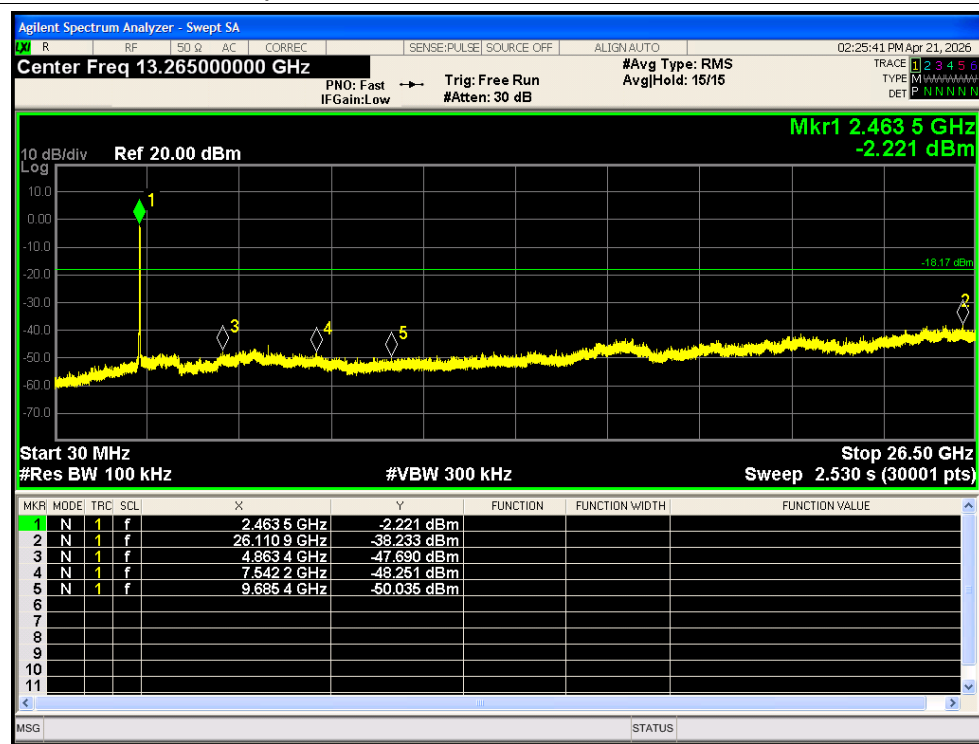
Tx. Spurious NVNT n20 2437MHz Emission



Tx. Spurious NVNT n20 2462MHz Ref



Tx. Spurious NVNT n20 2462MHz Emission



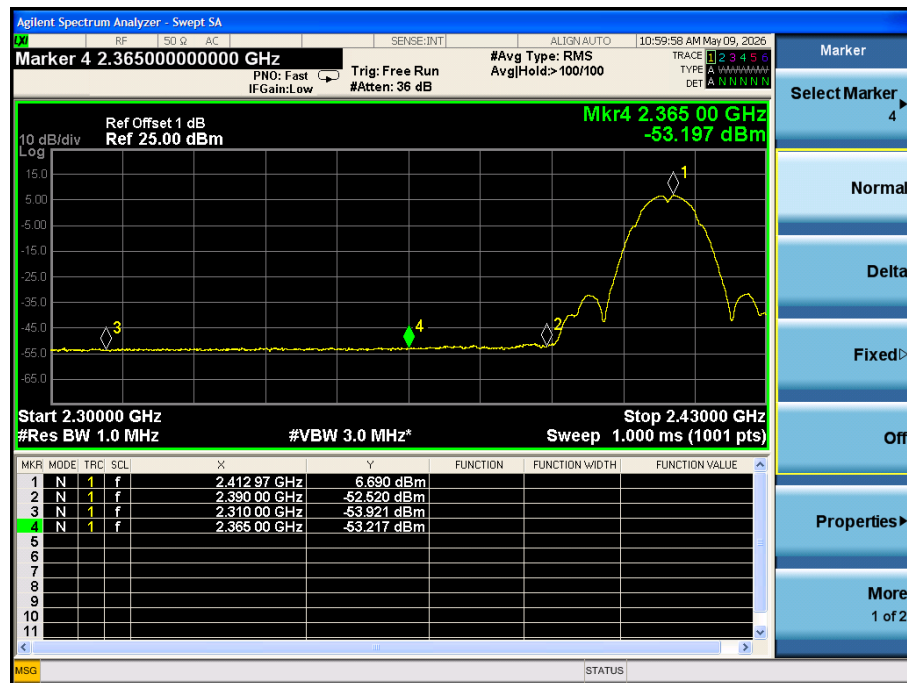
Emissions in Restricted Bands

Test Mode	Ch	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dBi]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
b	Low	2412	AV	2310.000	-53.92	2.99	1.17	45.44	≤54	PASS
			AV	2365.000	-53.22	2.99	1.17	46.14	≤54	PASS
			AV	2390.000	-52.52	2.99	1.17	46.84	≤54	PASS
			Peak	2310.000	-43.19	2.99	0.00	55.00	≤74	PASS
			Peak	2365.000	-43.14	2.99	0.00	55.05	≤74	PASS
			Peak	2390.000	-41.58	2.99	0.00	56.61	≤74	PASS
	High	2462	AV	2483.500	-52.00	2.99	0.86	47.05	≤54	PASS
			AV	2495.000	-52.59	2.99	0.86	46.46	≤54	PASS
			AV	2500.000	-51.92	2.99	0.86	47.13	≤54	PASS
			Peak	2483.500	-41.65	2.99	0.00	56.54	≤74	PASS
			Peak	2495.000	-41.07	2.99	0.00	57.12	≤74	PASS
			Peak	2500.000	-42.61	2.99	0.00	55.58	≤74	PASS
g	Low	2412	AV	2310.000	-53.52	2.99	1.25	45.92	≤54	PASS
			AV	2365.000	-53.24	2.99	1.25	46.20	≤54	PASS
			AV	2390.000	-48.31	2.99	1.25	51.13	≤54	PASS
			Peak	2310.000	-42.23	2.99	0.00	55.96	≤74	PASS
			Peak	2365.000	-41.84	2.99	0.00	56.35	≤74	PASS
			Peak	2390.000	-59.64	2.99	0.00	38.55	≤74	PASS
	High	2462	AV	2483.500	-48.22	2.99	1.34	51.31	≤54	PASS
			AV	2495.000	-51.89	2.99	1.34	47.64	≤54	PASS
			AV	2500.000	-51.98	2.99	1.34	47.55	≤54	PASS
			Peak	2483.500	-30.67	2.99	0.00	67.52	≤74	PASS
			Peak	2495.000	-40.39	2.99	0.00	57.80	≤74	PASS
			Peak	2500.000	-41.53	2.99	0.00	56.66	≤74	PASS
n20	Low	2412	AV	2310.000	-53.46	2.99	1.34	46.07	≤54	PASS
			AV	2365.000	-52.19	2.99	1.34	47.34	≤54	PASS
			AV	2390.000	-46.50	2.99	1.34	53.03	≤54	PASS
			Peak	2310.000	-43.12	2.99	0.00	55.07	≤74	PASS
			Peak	2365.000	-42.14	2.99	0.00	56.05	≤74	PASS
			Peak	2390.000	-27.70	2.99	0.00	70.49	≤74	PASS
	High	2462	AV	2483.500	-47.11	2.99	1.30	52.38	≤54	PASS
			AV	2495.000	-51.98	2.99	1.30	47.51	≤54	PASS
			AV	2500.000	-52.18	2.99	1.30	47.31	≤54	PASS
			Peak	2483.500	-31.46	2.99	0.00	66.73	≤74	PASS
			Peak	2495.000	-39.75	2.99	0.00	58.44	≤74	PASS
			Peak	2500.000	-41.86	2.99	0.00	56.33	≤74	PASS

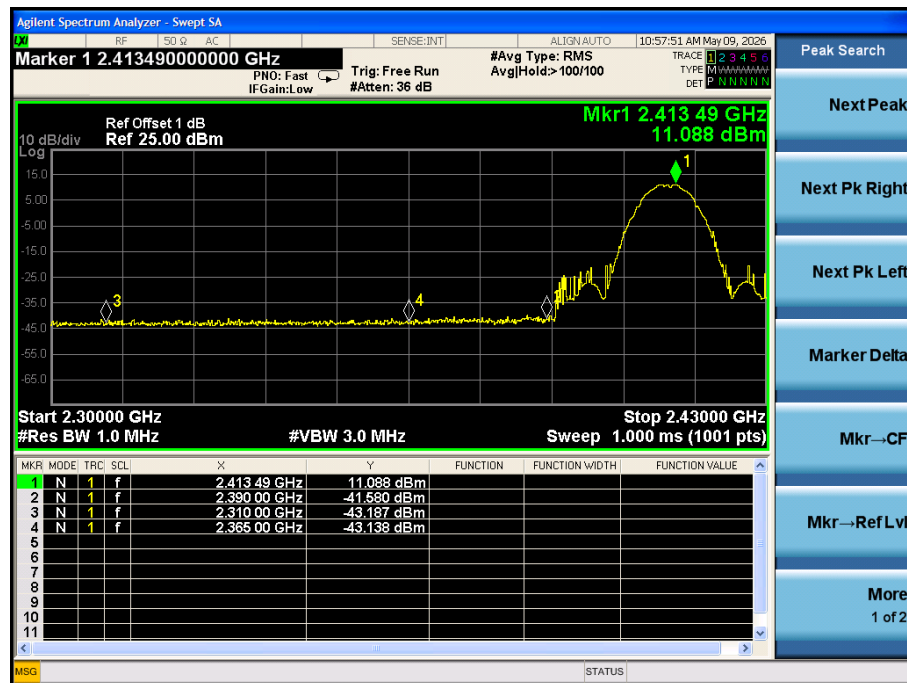
- Note: The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a).
The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

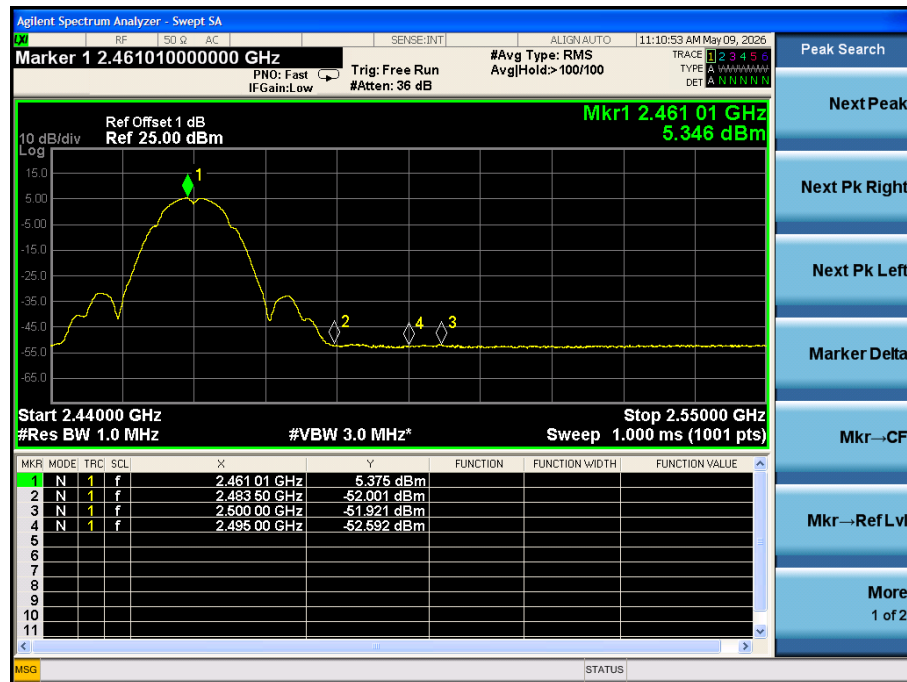
NVNT b 2412MHz AV



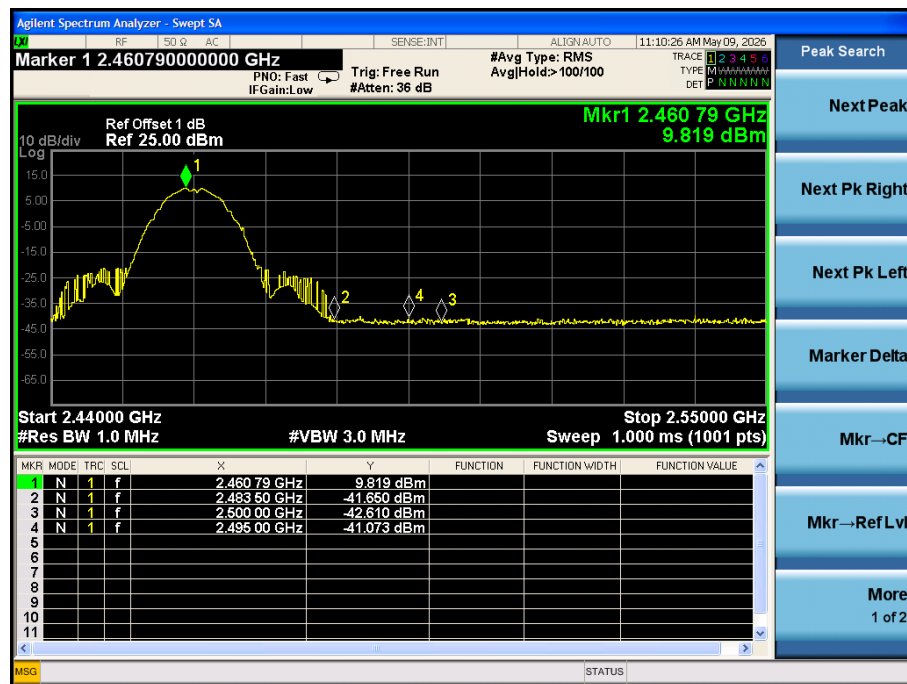
NVNT b 2412MHz PK



NVNT b 2462MHz AV

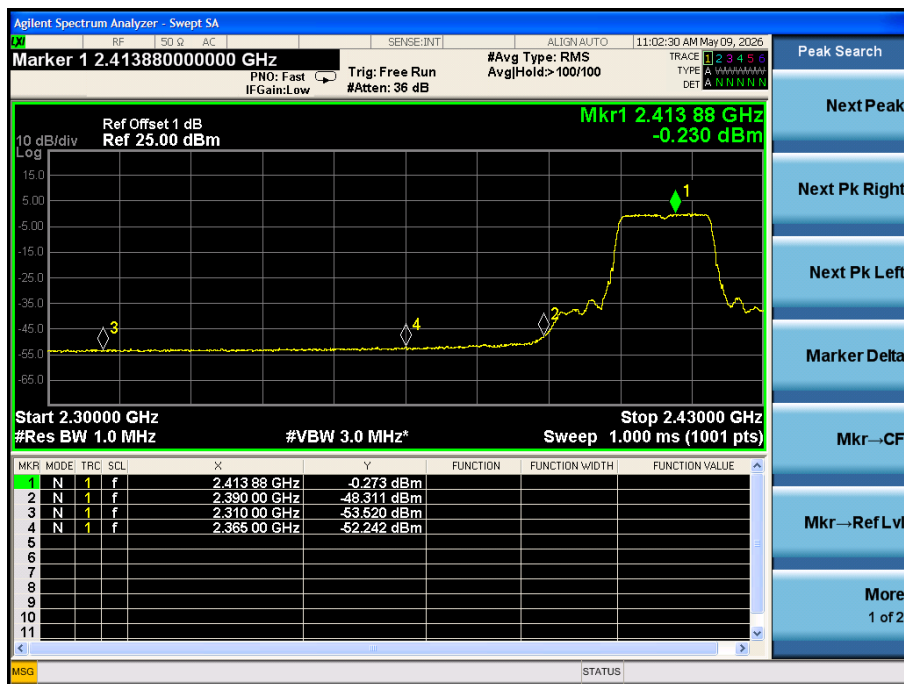


NVNT b 2462MHz PK

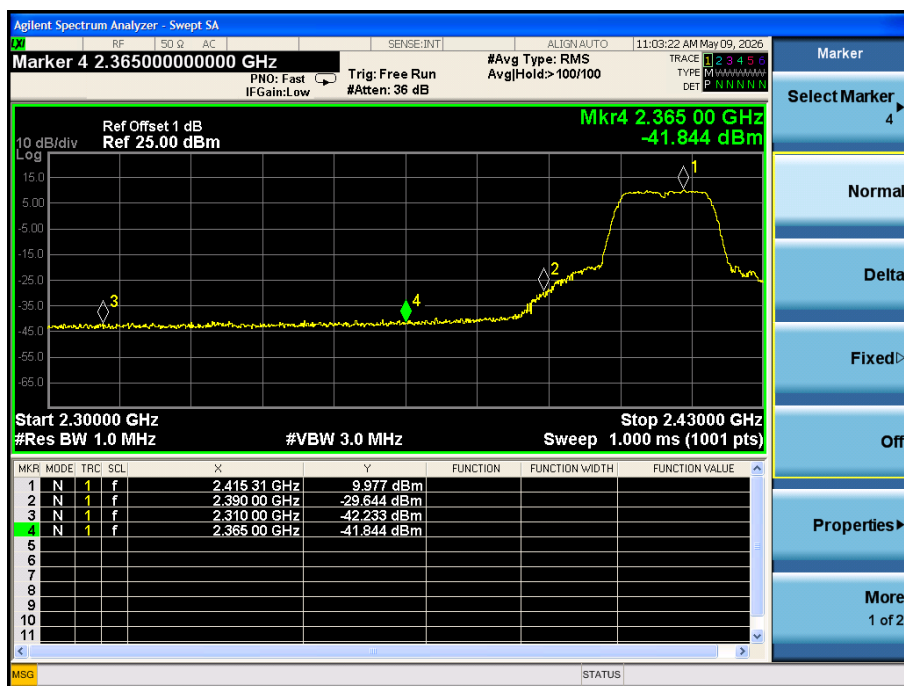


Test Graphs

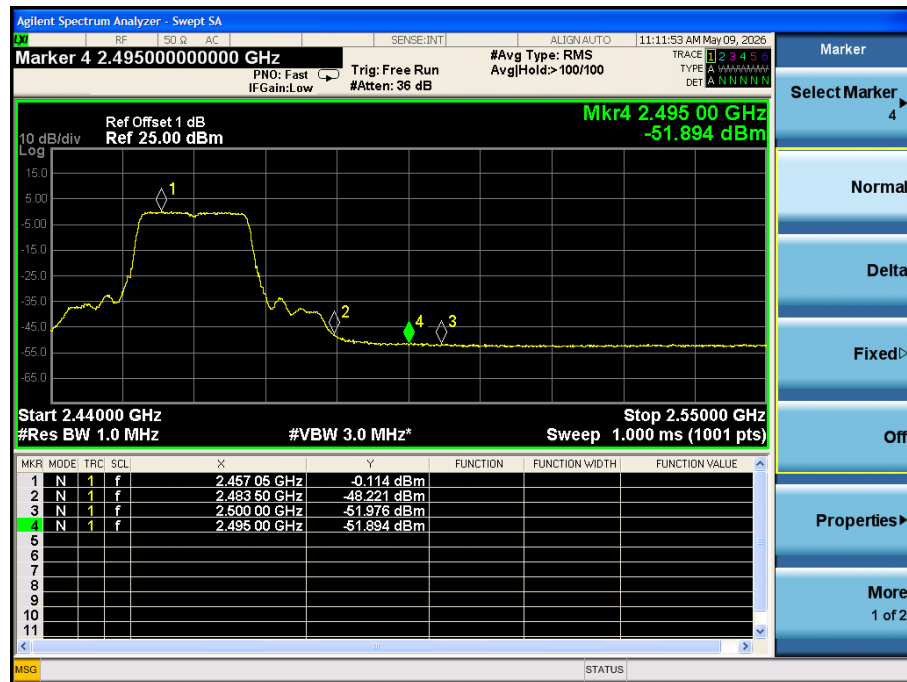
NVNT g 2412MHz AV



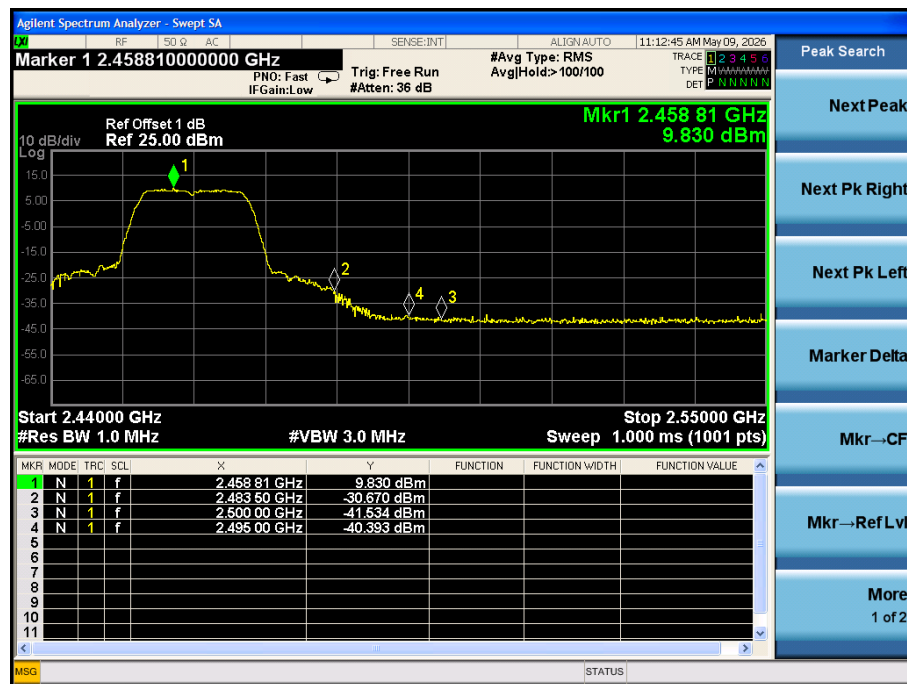
NVNT g 2412MHz PK



NVNT g 2462MHz AV

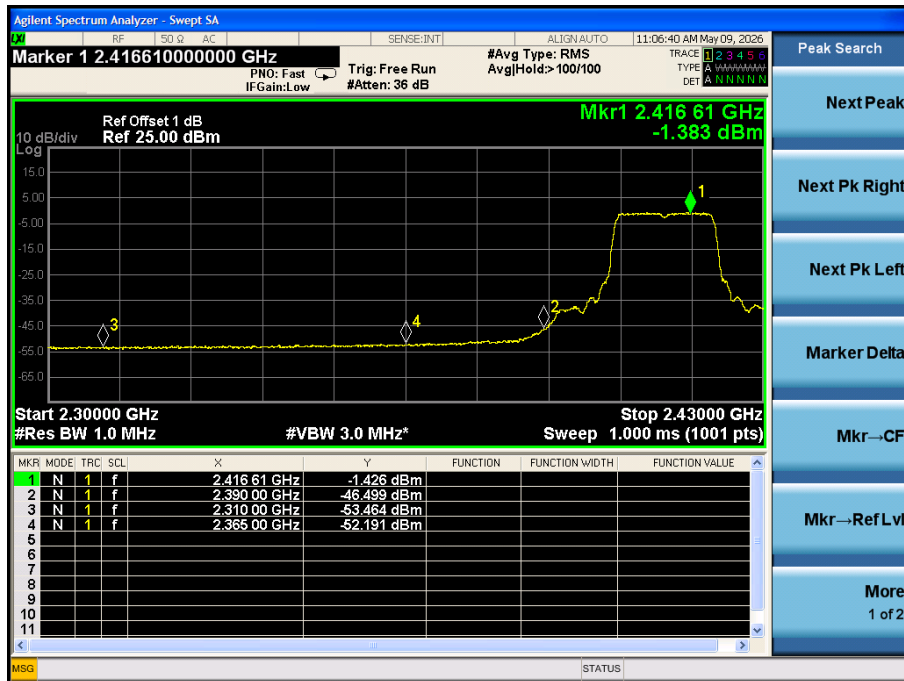


NVNT g 2462MHz PK

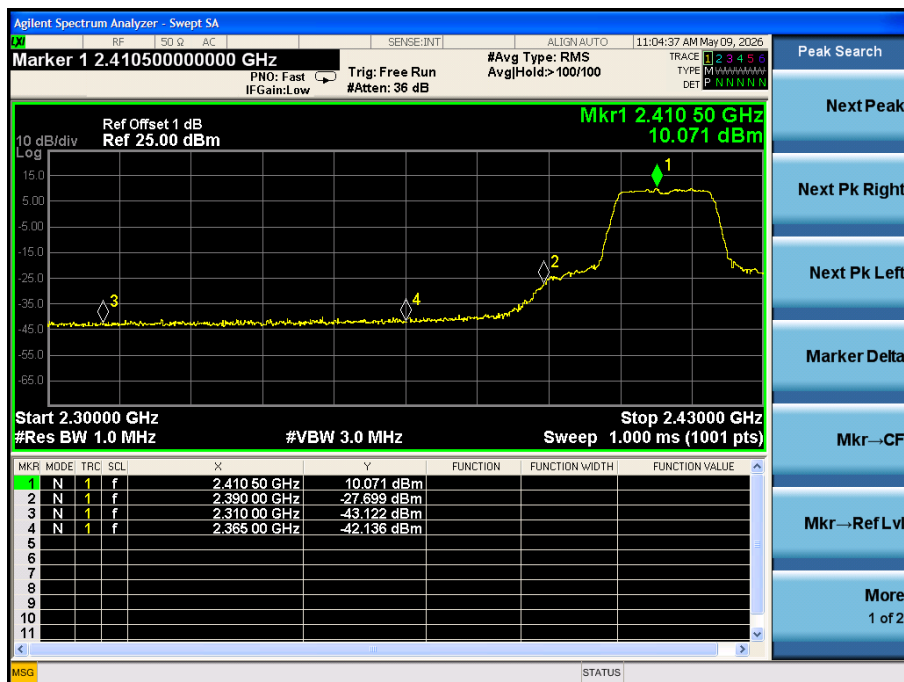


Test Graphs

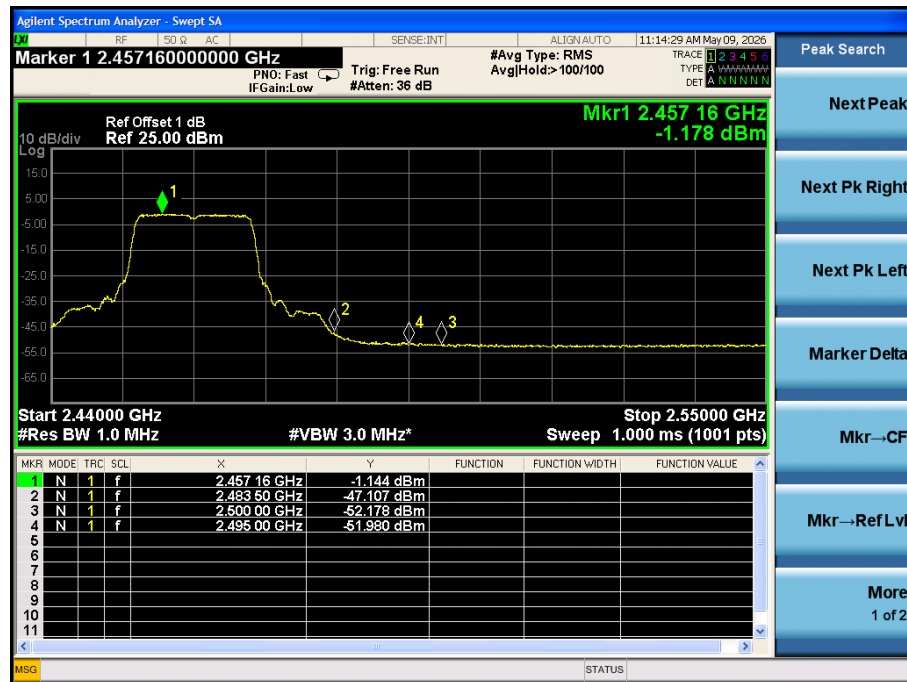
NVNT n20 2412MHz AV



NVNT n20 2412MHz PK



NVNT n20 2462MHz AV



NVNT n20 2462MHz PK

