

FCC Appendix RF Test Data for 2.4GWIFI

FCC ID : 2A525-AFF400

Company : Jiangsu Zhong Heng Pet Articles Joint-stock CO., LTD

EUT : Automatic Cat Feeder and Water Dispenser with 4 Bowls

Model Number : AFF400

Report No. : CTA26081003601

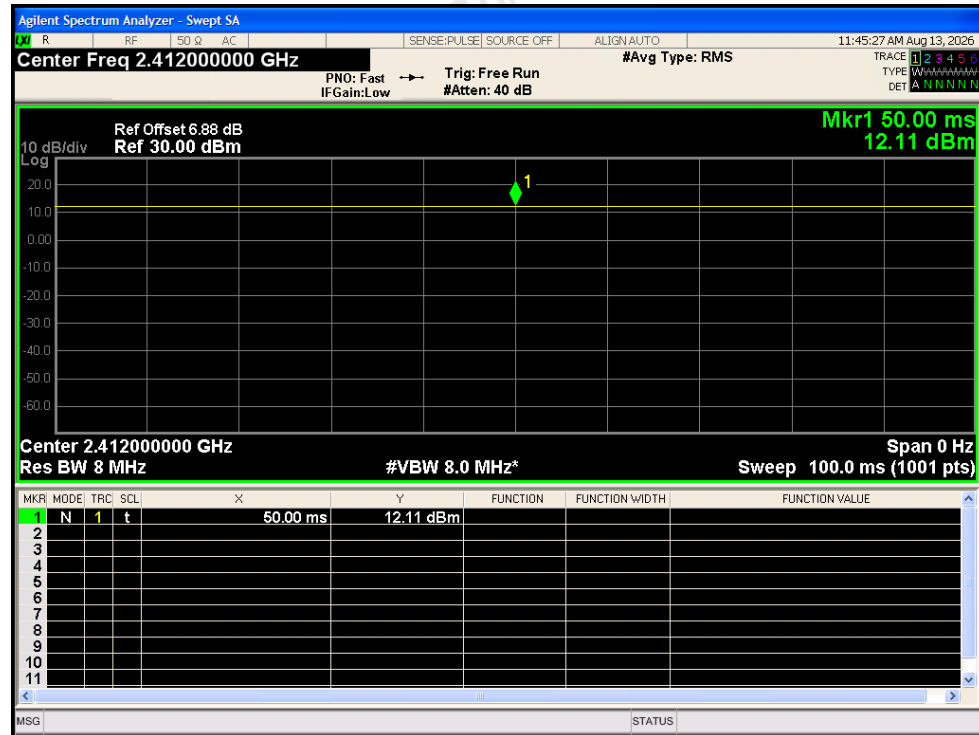
Reviewed By : Eric Wang

Duty Cycle

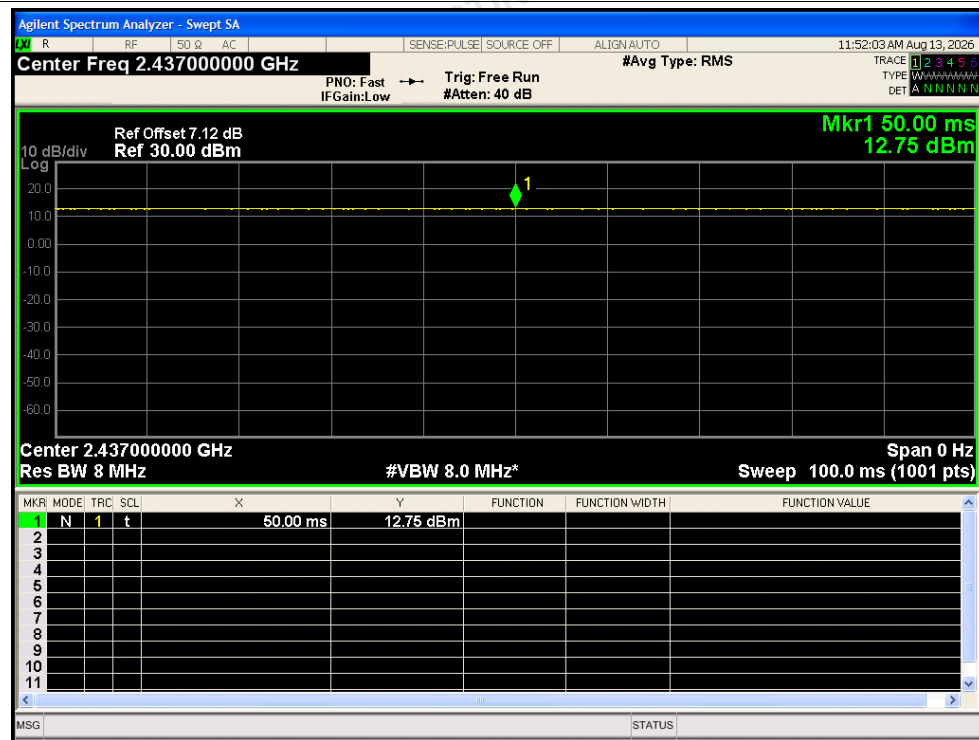
Condition	Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor (dB)
NVNT	b	2412	100	0
NVNT	b	2437	100	0
NVNT	b	2462	100	0
NVNT	g	2412	100	0
NVNT	g	2437	100	0
NVNT	g	2462	100	0
NVNT	n20	2412	100	0
NVNT	n20	2437	100	0
NVNT	n20	2462	100	0
NVNT	n40	2422	100	0
NVNT	n40	2437	100	0
NVNT	n40	2452	100	0

Test Graphs

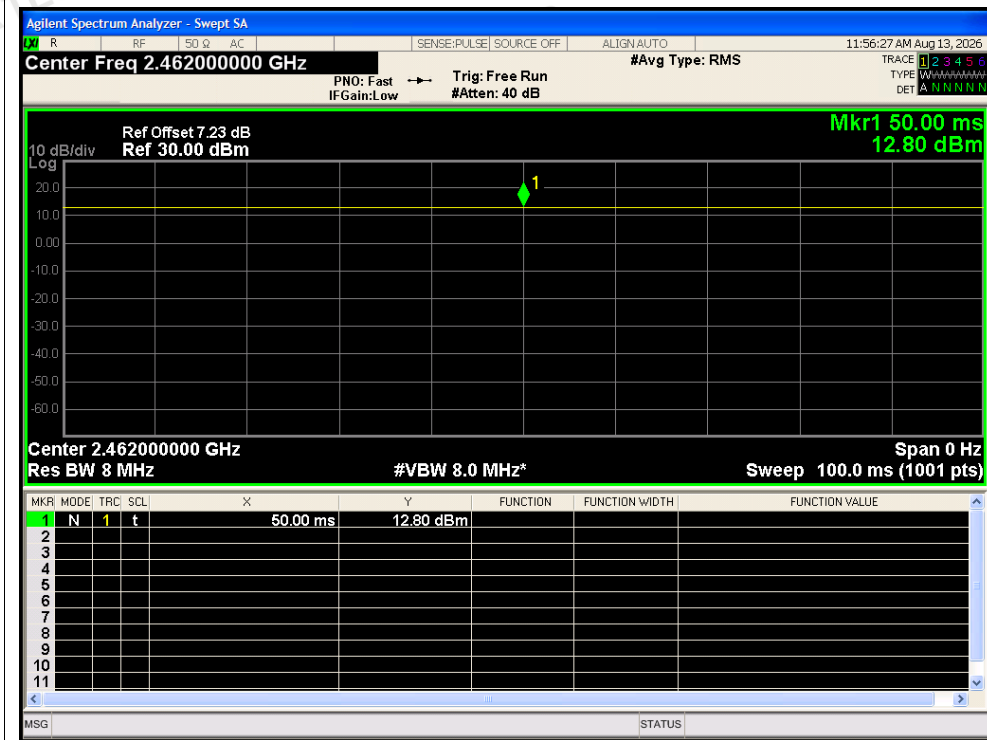
Duty Cycle NVNT b 2412MHz



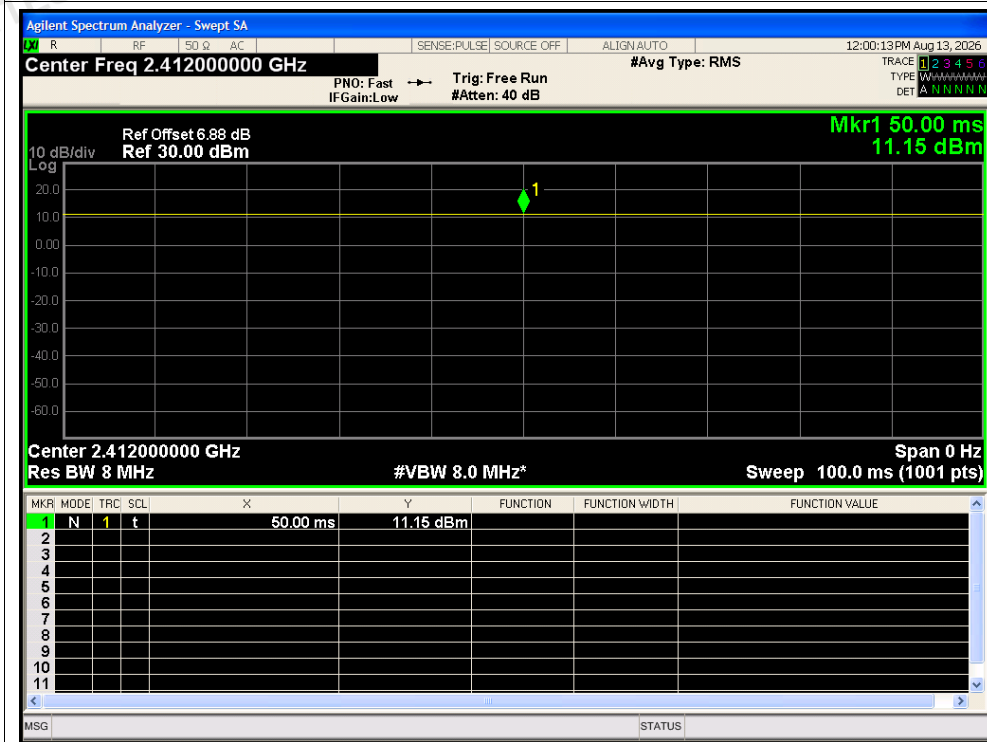
Duty Cycle NVNT b 2437MHz



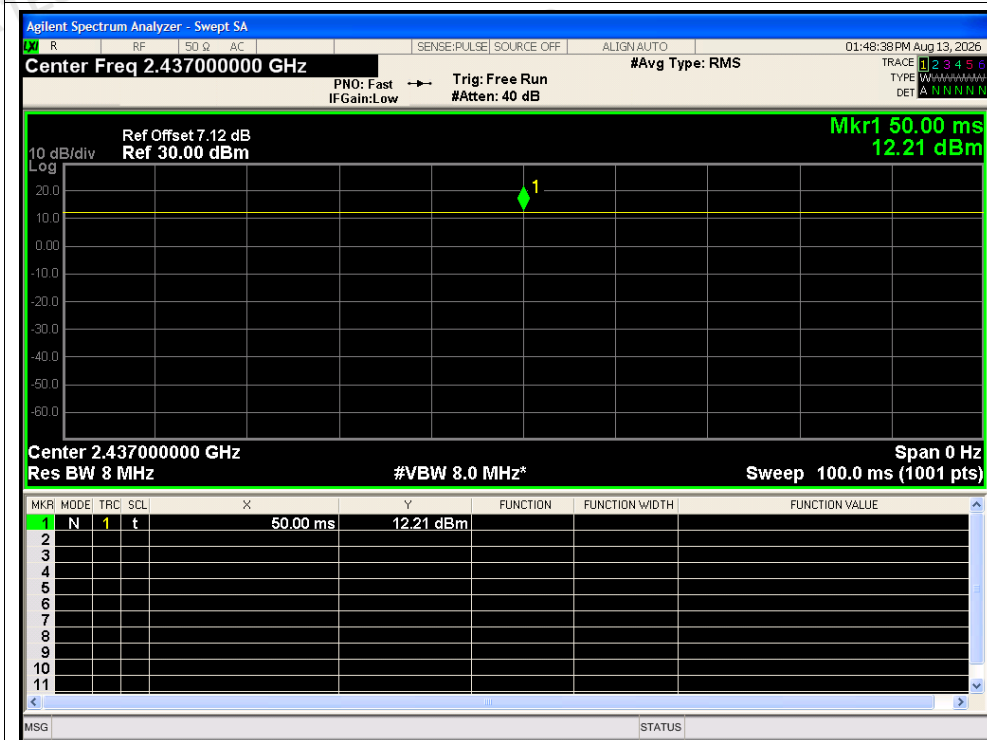
Duty Cycle NVNT b 2462MHz



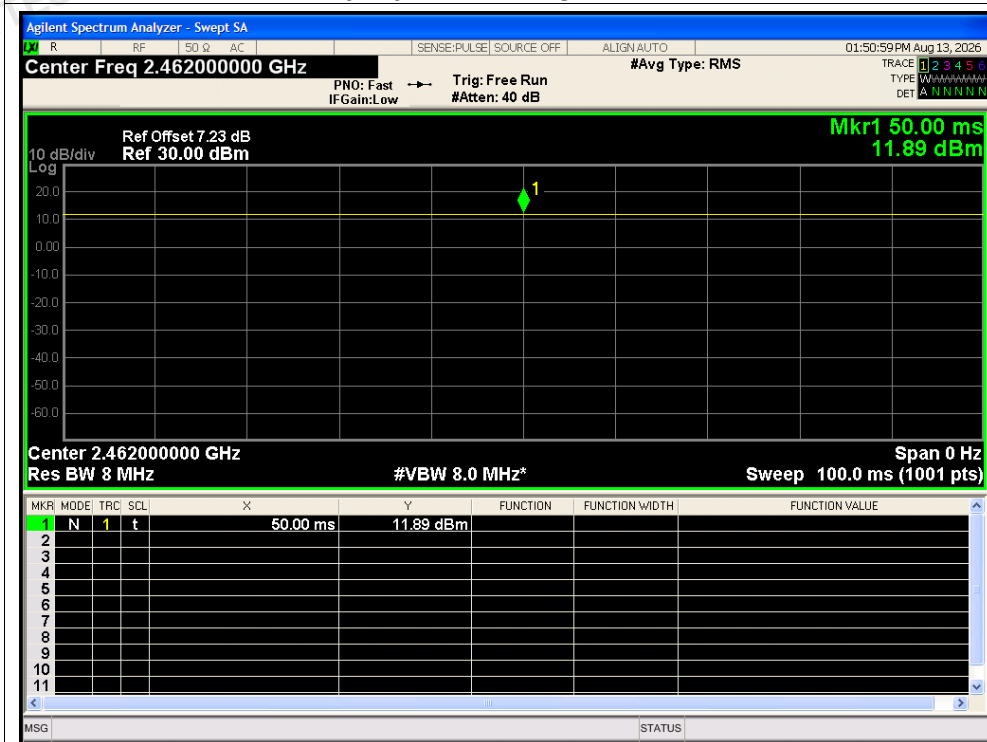
Duty Cycle NVNT g 2412MHz



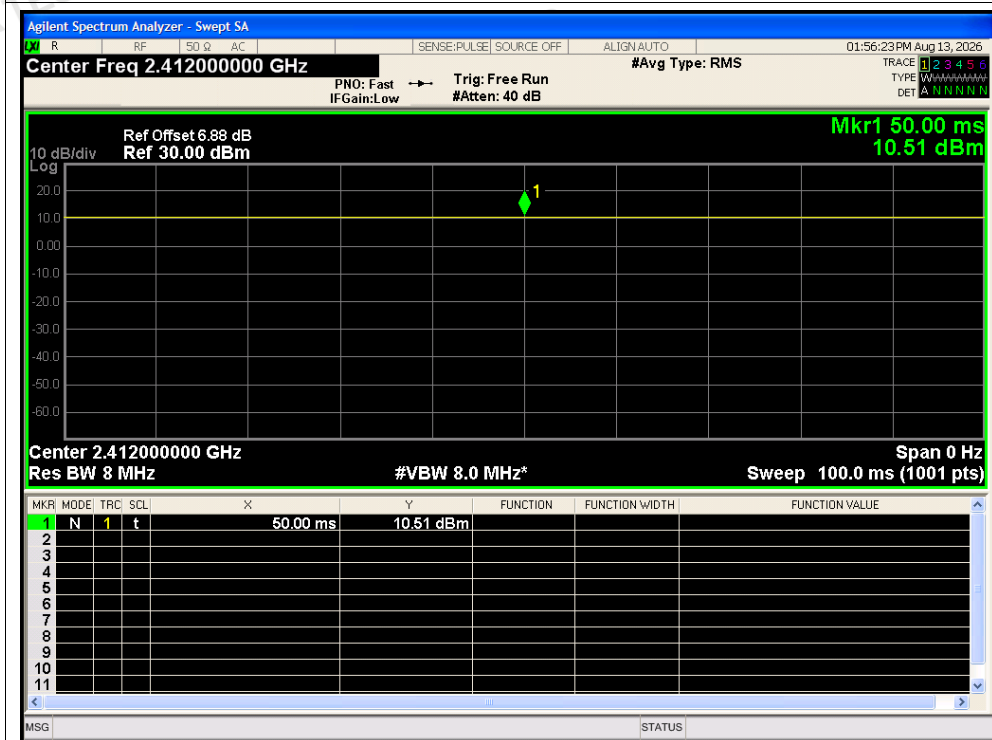
Duty Cycle NVNT g 2437MHz



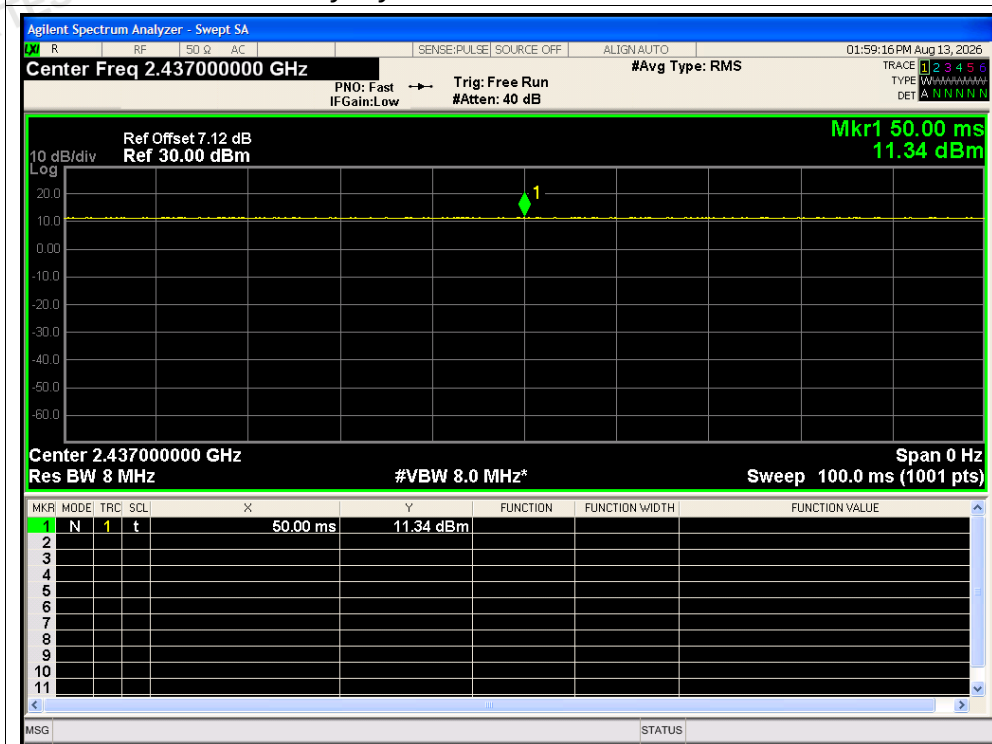
Duty Cycle NVNT g 2462MHz



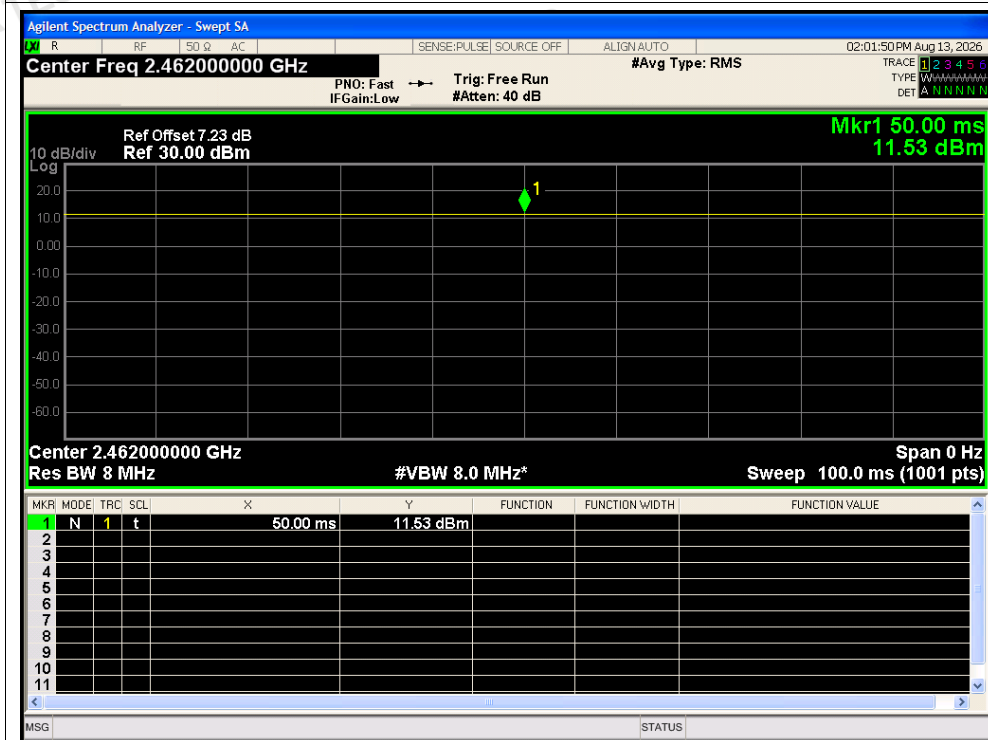
Duty Cycle NVNT n20 2412MHz



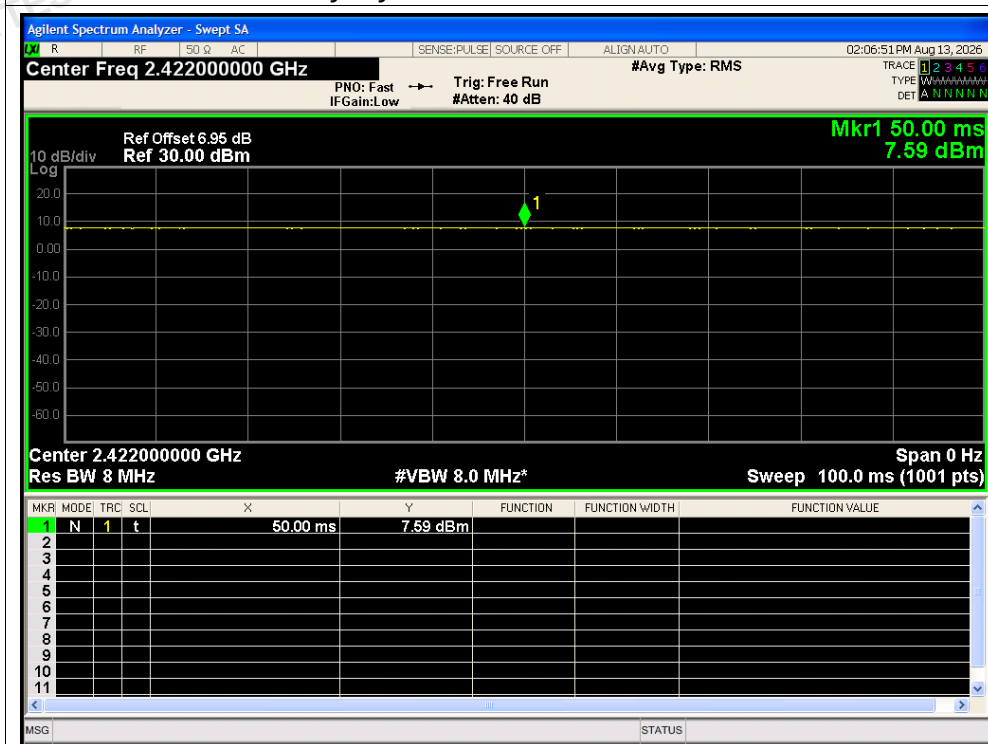
Duty Cycle NVNT n20 2437MHz



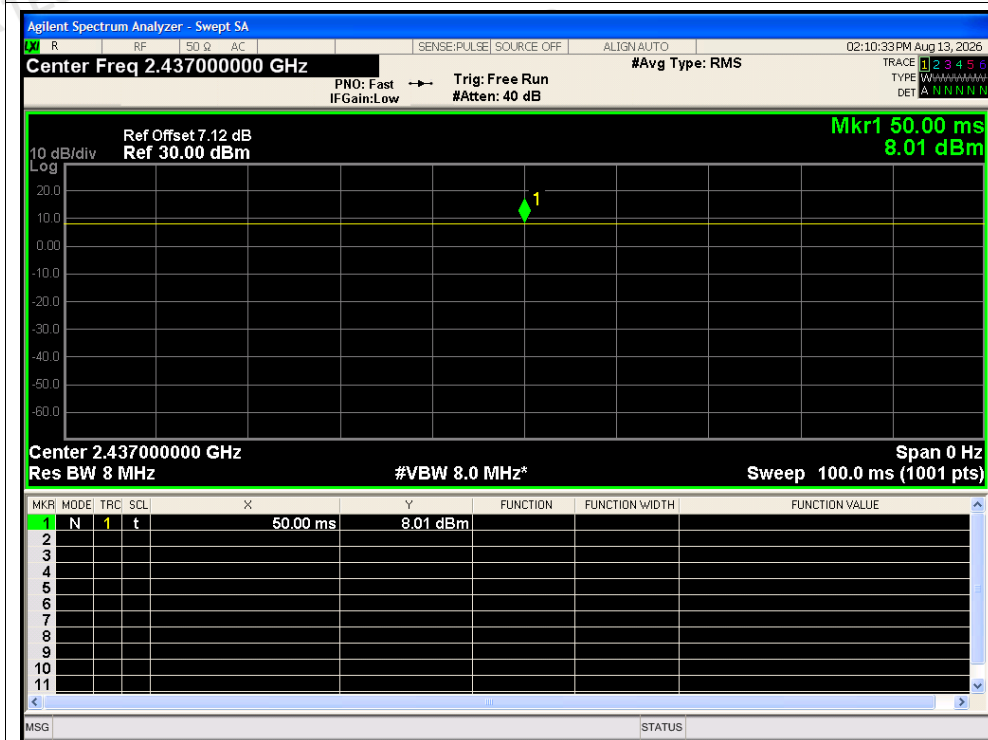
Duty Cycle NVNT n20 2462MHz



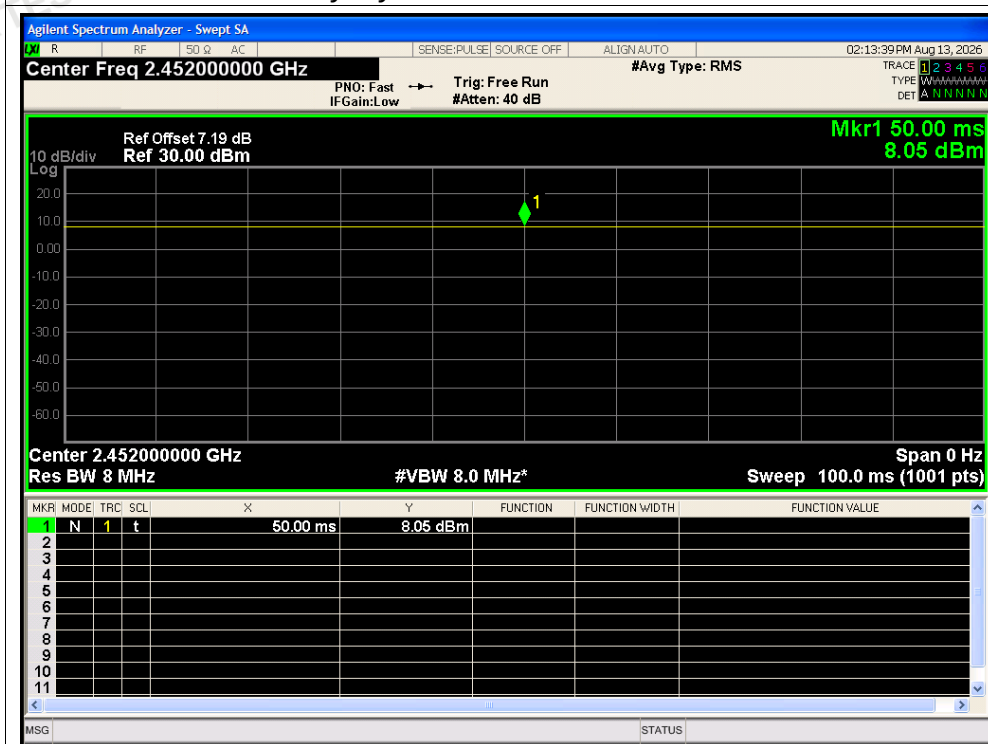
Duty Cycle NVNT n40 2422MHz



Duty Cycle NVNT n40 2437MHz



Duty Cycle NVNT n40 2452MHz



Maximum Conducted Output Power

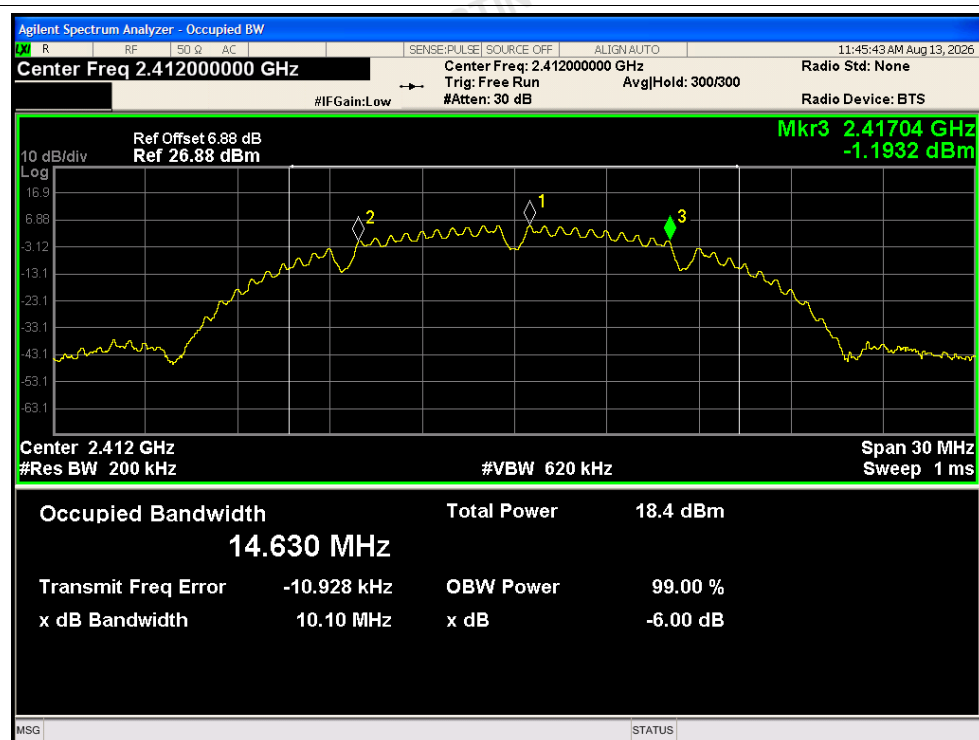
Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	12.99	30	Pass
NVNT	b	2437	13.10	30	Pass
NVNT	b	2462	13.56	30	Pass
NVNT	g	2412	13.89	30	Pass
NVNT	g	2437	14.67	30	Pass
NVNT	g	2462	14.30	30	Pass
NVNT	n20	2412	13.28	30	Pass
NVNT	n20	2437	14.04	30	Pass
NVNT	n20	2462	14.11	30	Pass
NVNT	n40	2422	13.53	30	Pass
NVNT	n40	2437	13.88	30	Pass
NVNT	n40	2452	13.89	30	Pass

-6dB Bandwidth

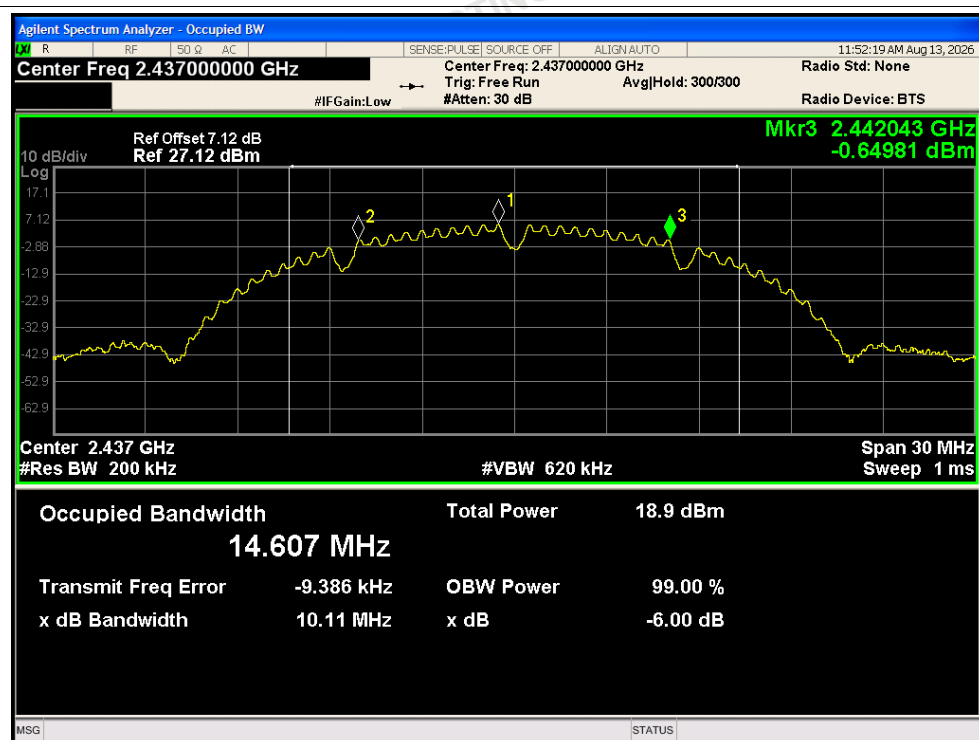
Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	10.10	0.5	Pass
NVNT	b	2437	10.11	0.5	Pass
NVNT	b	2462	10.10	0.5	Pass
NVNT	g	2412	16.38	0.5	Pass
NVNT	g	2437	16.37	0.5	Pass
NVNT	g	2462	16.37	0.5	Pass
NVNT	n20	2412	17.55	0.5	Pass
NVNT	n20	2437	17.60	0.5	Pass
NVNT	n20	2462	17.58	0.5	Pass
NVNT	n40	2422	35.71	0.5	Pass
NVNT	n40	2437	35.77	0.5	Pass
NVNT	n40	2452	35.73	0.5	Pass

Test Graphs

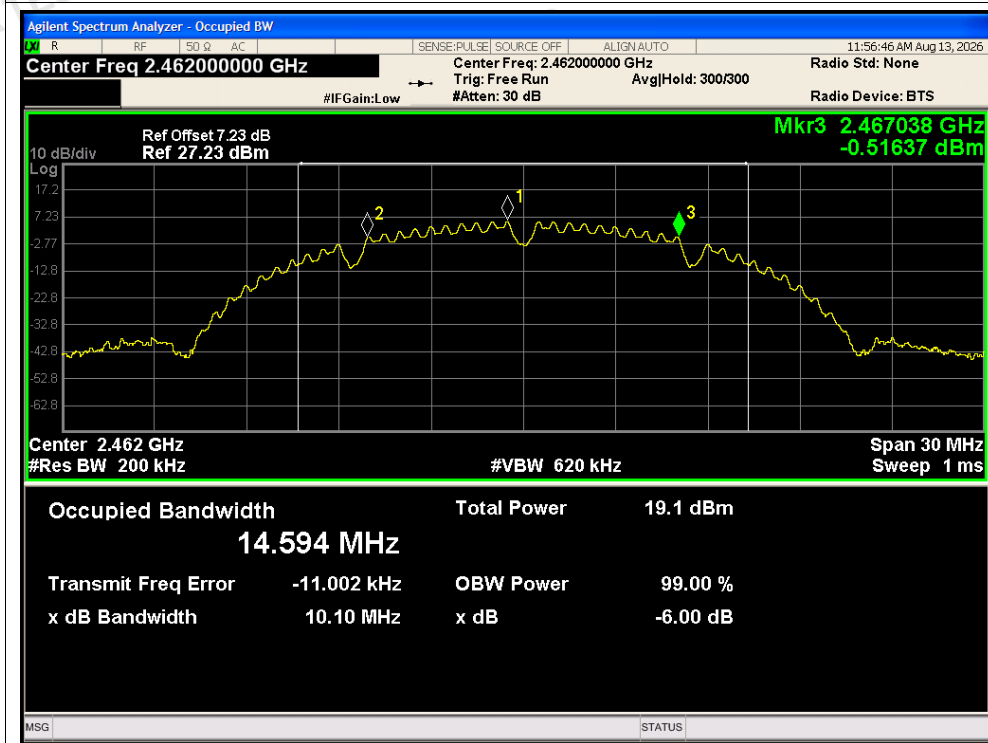
-6dB Bandwidth NVNT b 2412MHz



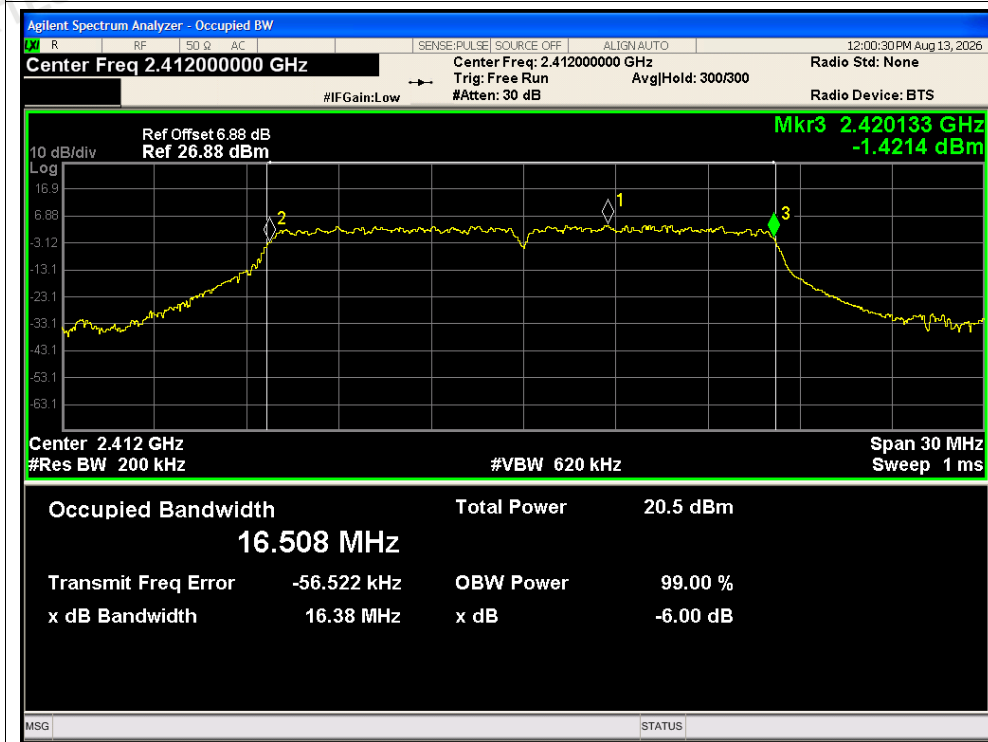
-6dB Bandwidth NVNT b 2437MHz



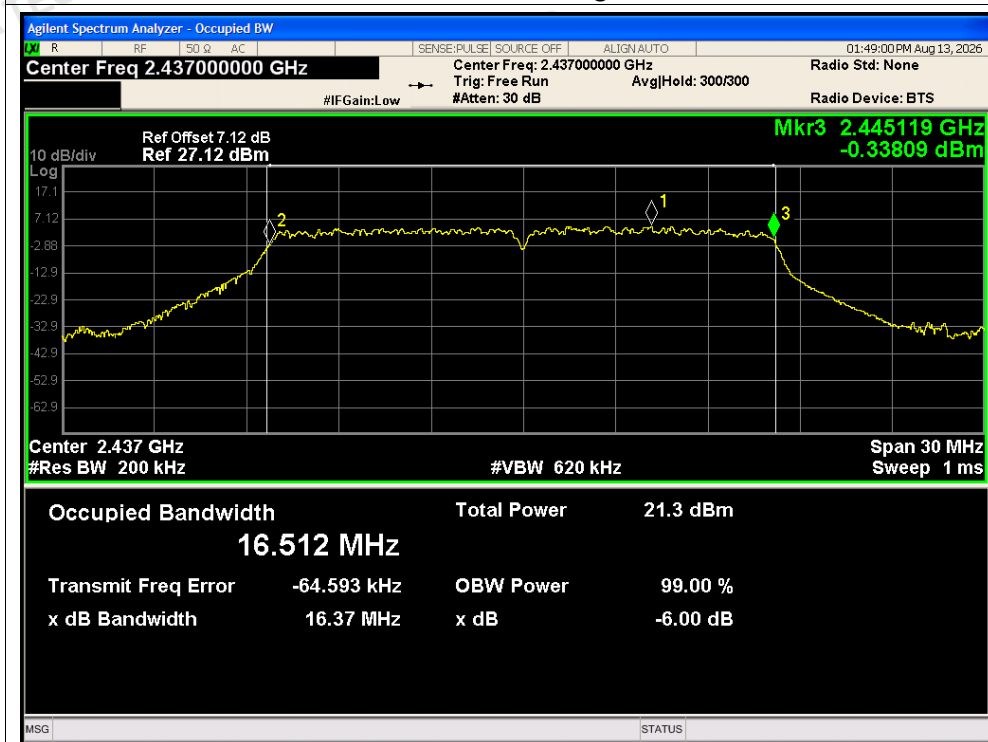
-6dB Bandwidth NVNT b 2462MHz



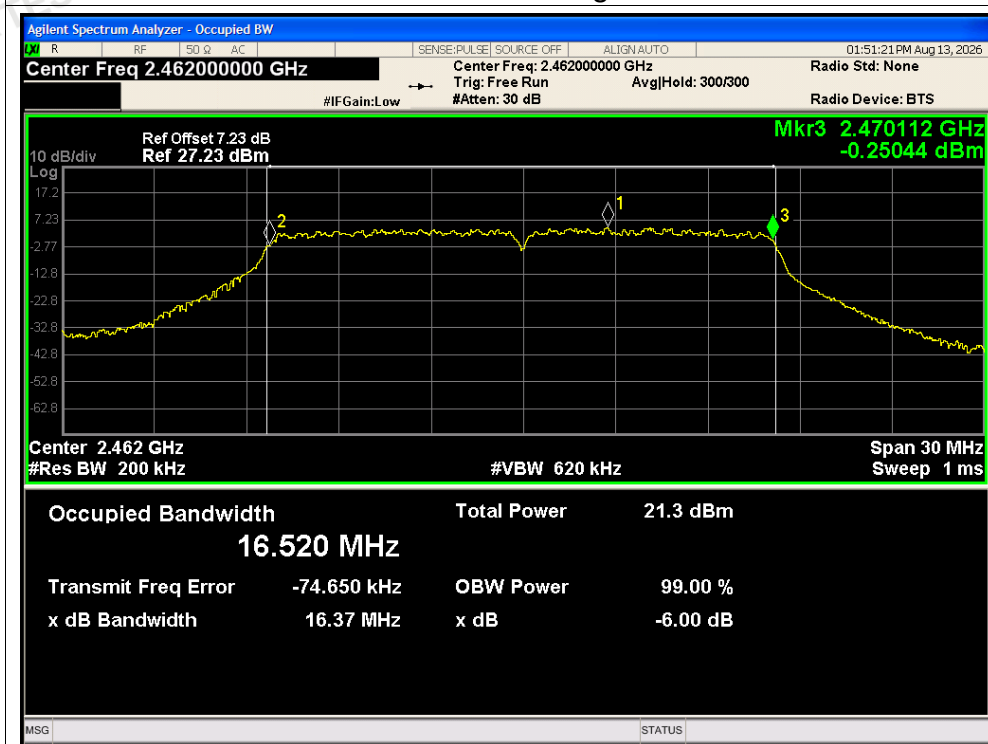
-6dB Bandwidth NVNT g 2412MHz



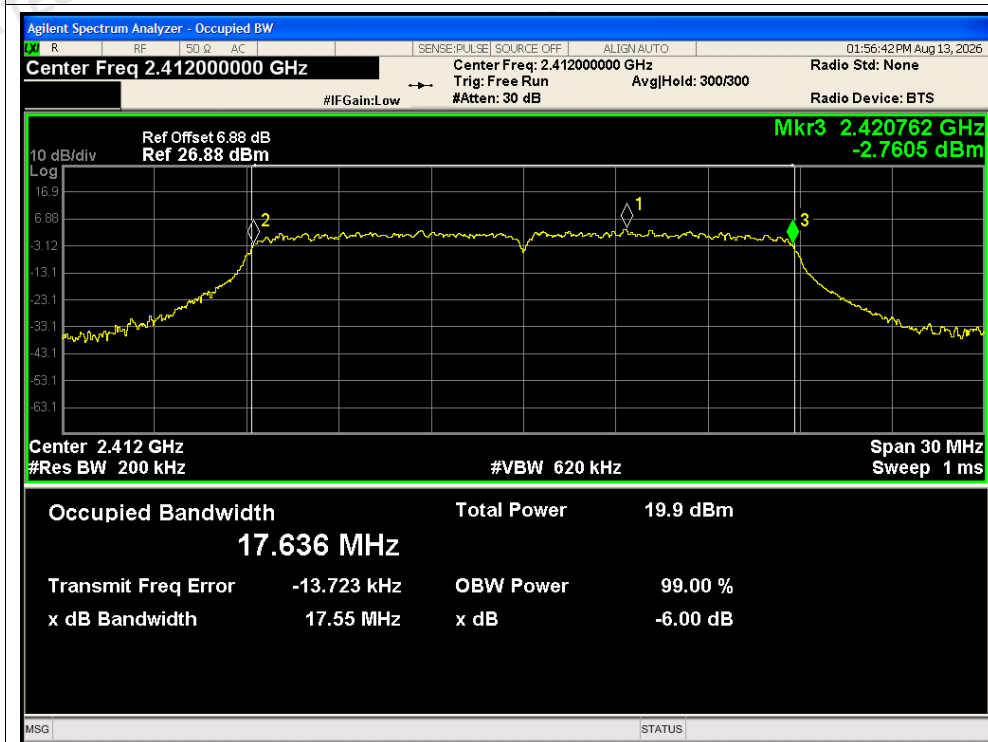
-6dB Bandwidth NVNT g 2437MHz



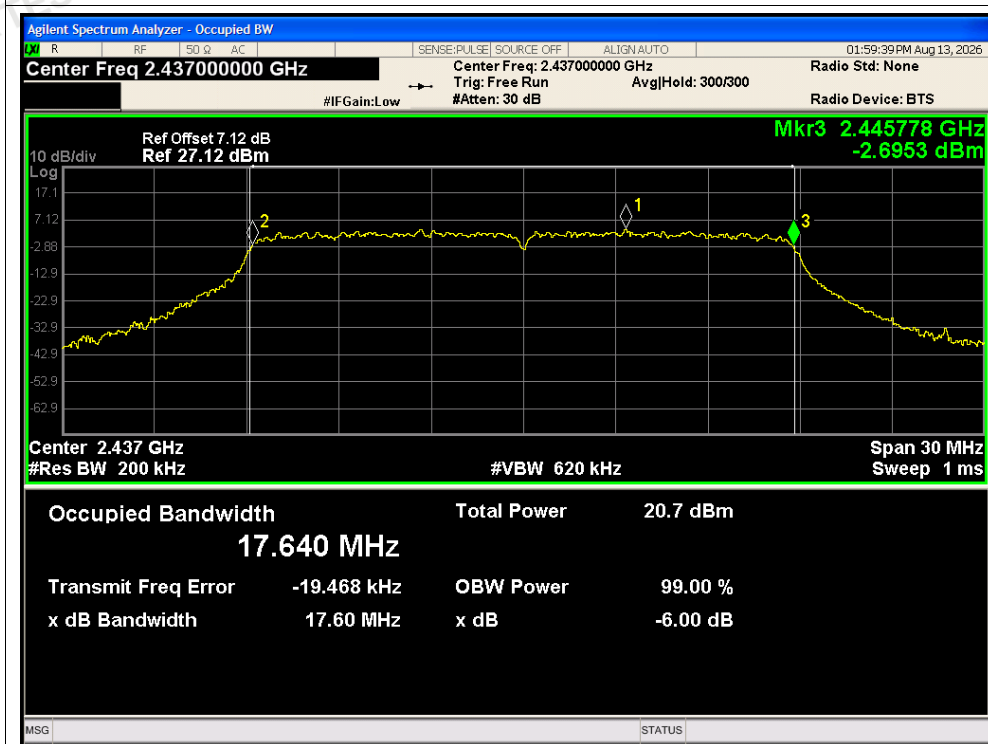
-6dB Bandwidth NVNT g 2462MHz



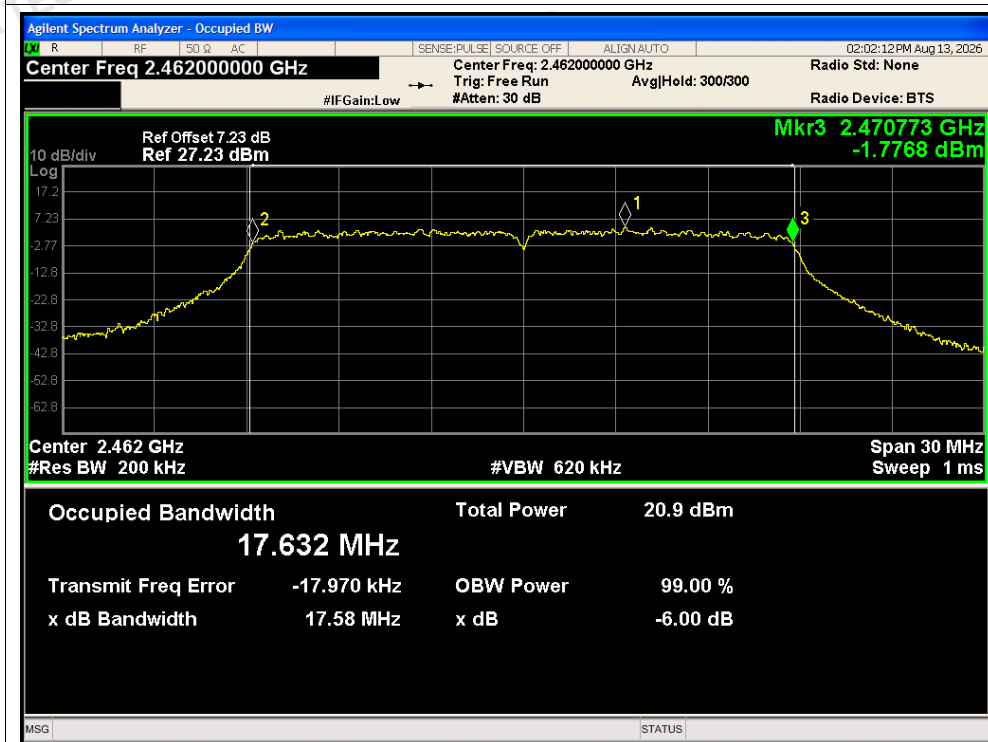
-6dB Bandwidth NVNT n20 2412MHz



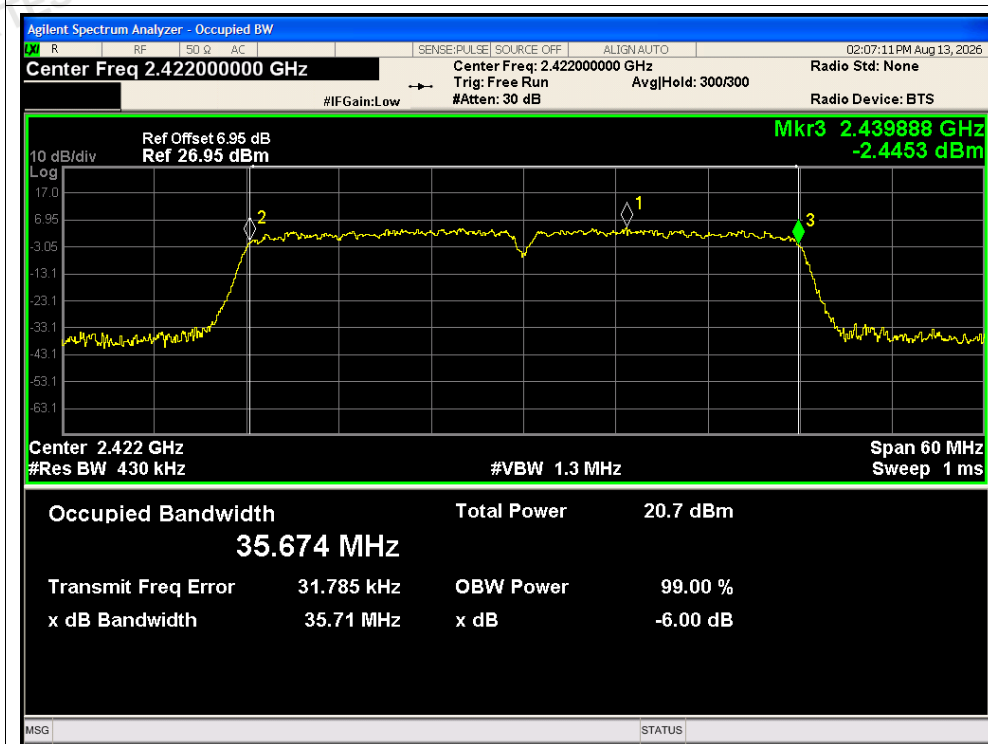
-6dB Bandwidth NVNT n20 2437MHz



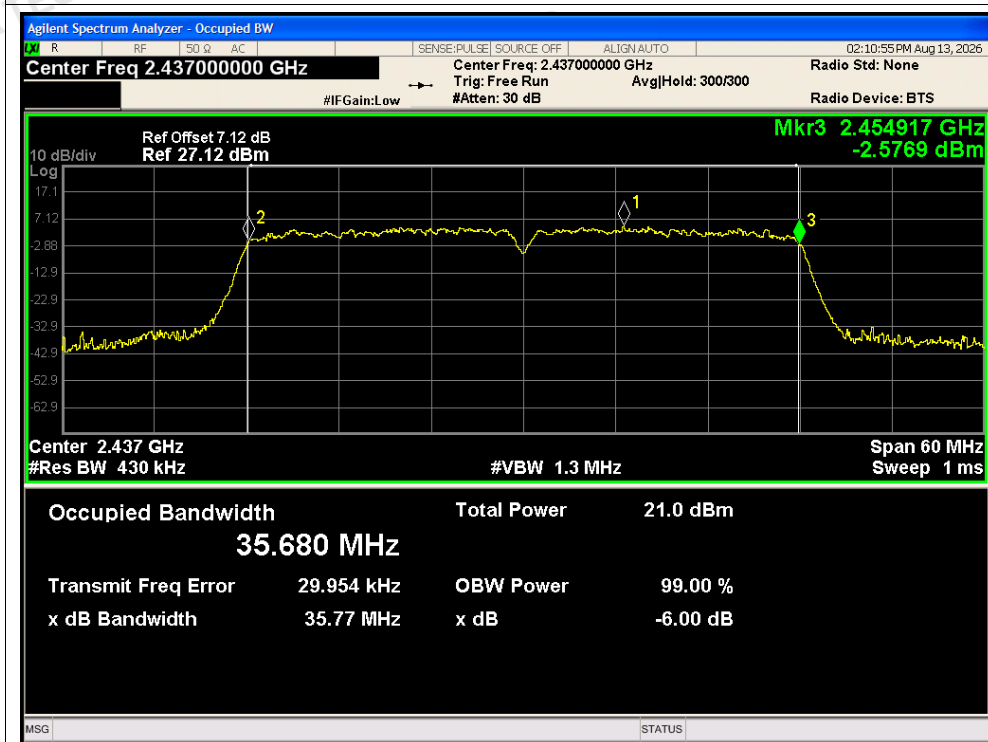
-6dB Bandwidth NVNT n20 2462MHz



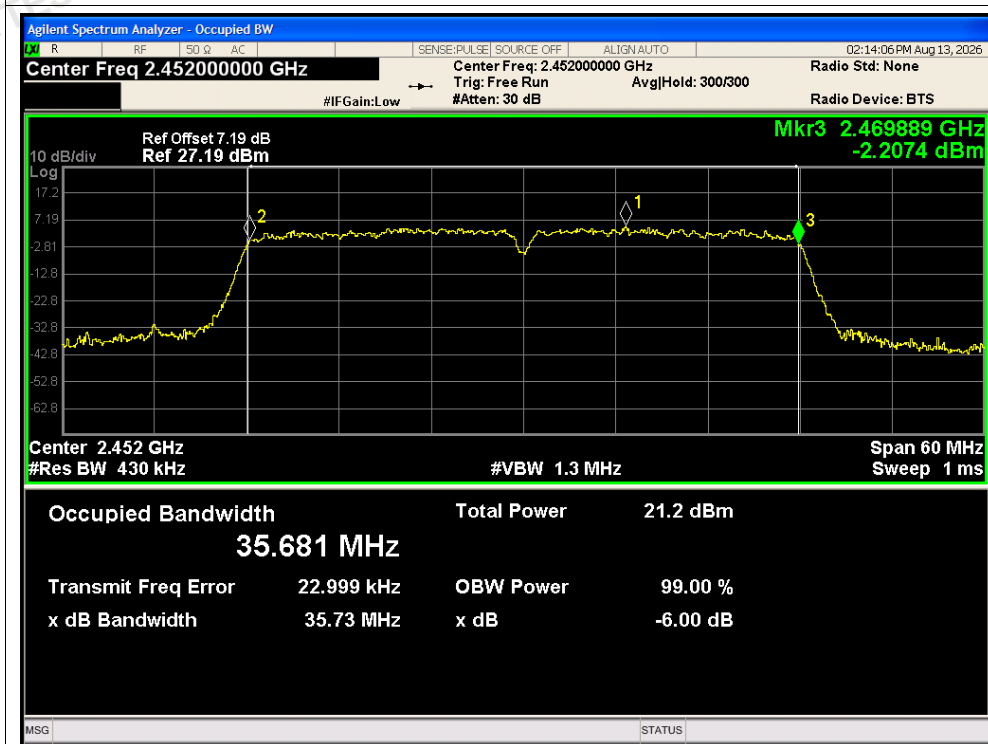
-6dB Bandwidth NVNT n40 2422MHz



-6dB Bandwidth NVNT n40 2437MHz



-6dB Bandwidth NVNT n40 2452MHz

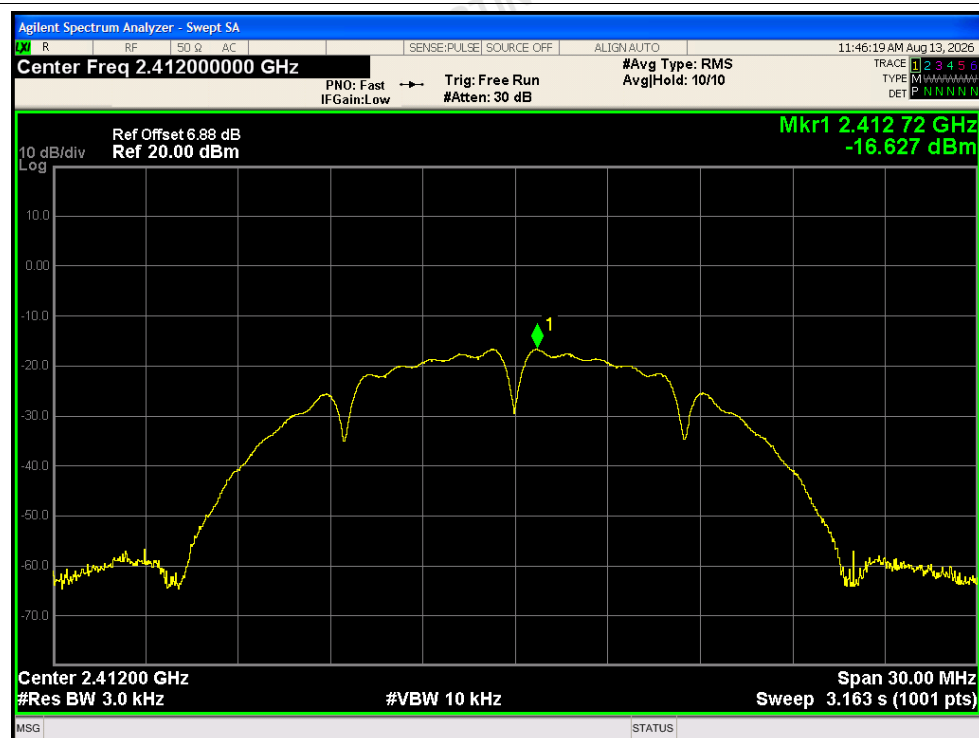


Maximum Power Spectral Density Level

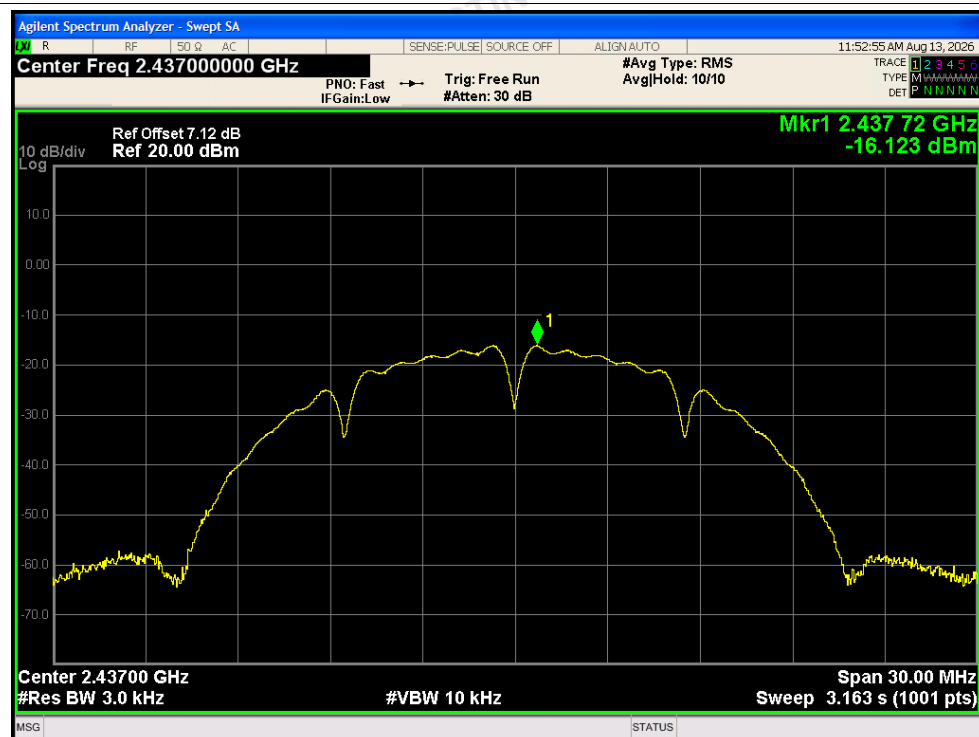
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	-16.63	8	Pass
NVNT	b	2437	-16.12	8	Pass
NVNT	b	2462	-15.90	8	Pass
NVNT	g	2412	-14.06	8	Pass
NVNT	g	2437	-13.47	8	Pass
NVNT	g	2462	-13.11	8	Pass
NVNT	n20	2412	-14.14	8	Pass
NVNT	n20	2437	-13.41	8	Pass
NVNT	n20	2462	-13.03	8	Pass
NVNT	n40	2422	-15.24	8	Pass
NVNT	n40	2437	-13.65	8	Pass
NVNT	n40	2452	-15.24	8	Pass

Test Graphs

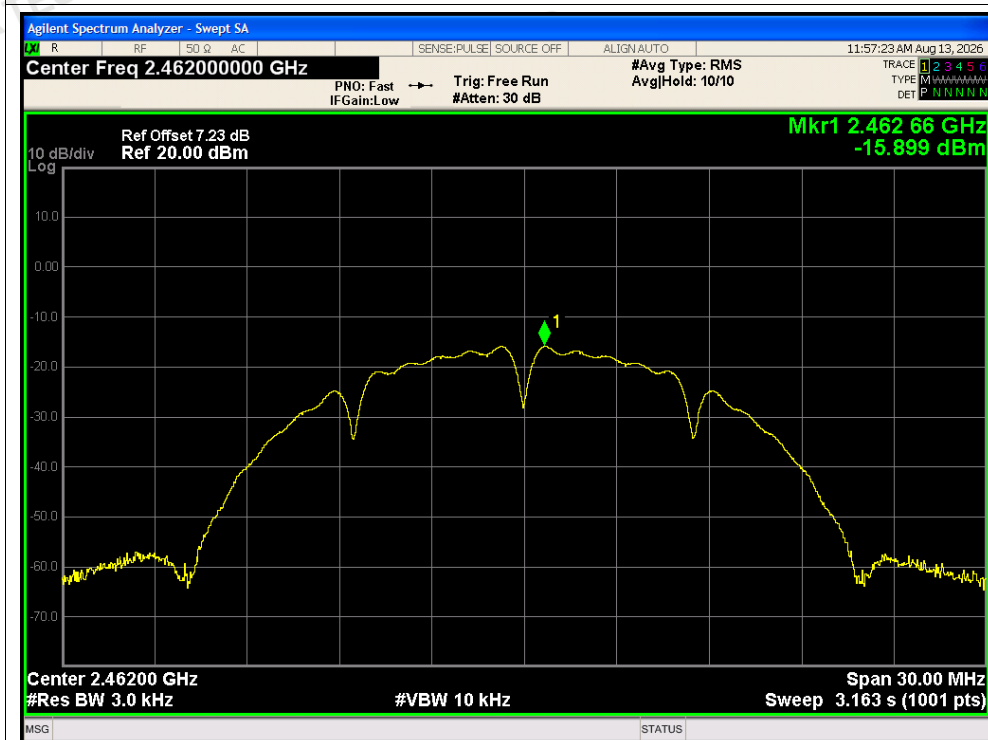
PSD NVNT b 2412MHz



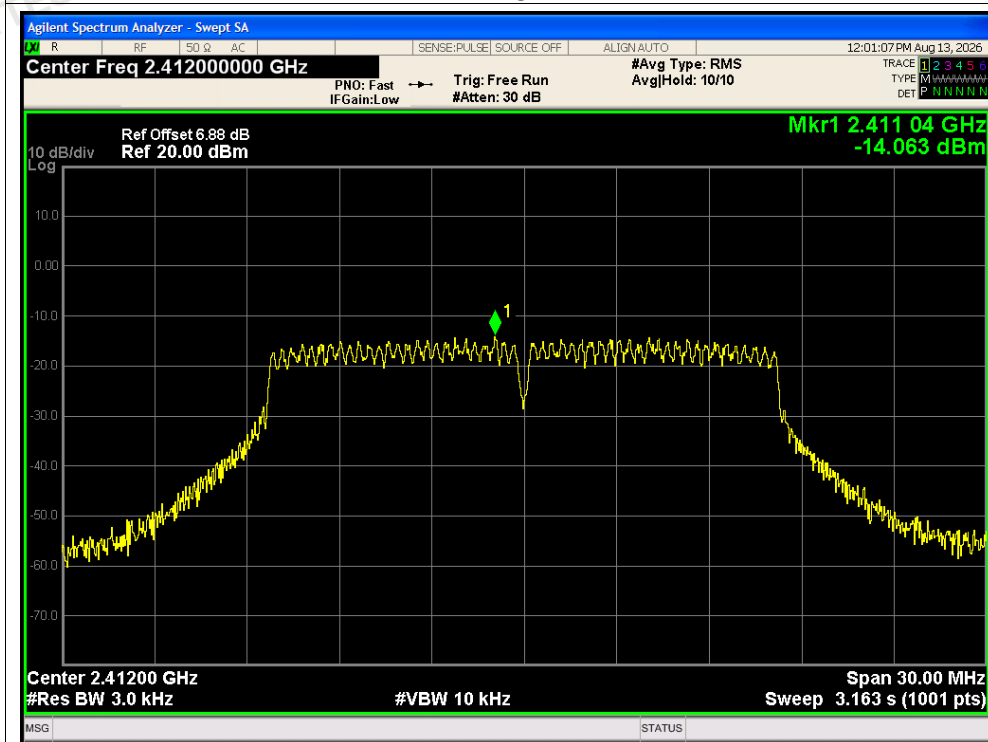
PSD NVNT b 2437MHz



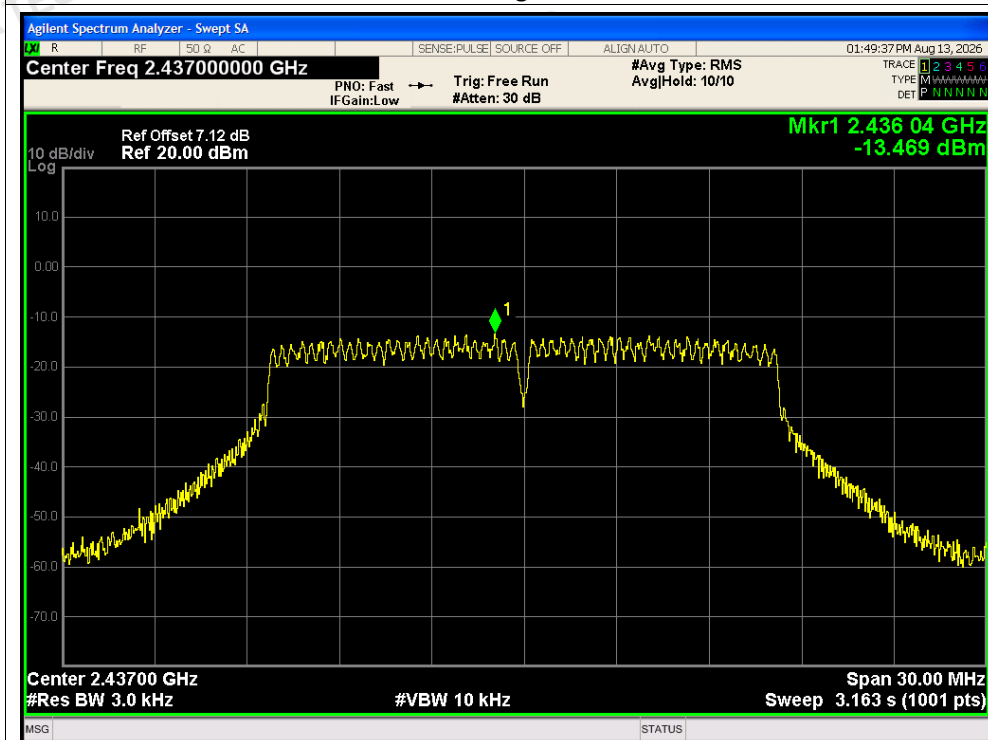
PSD NVNT b 2462MHz



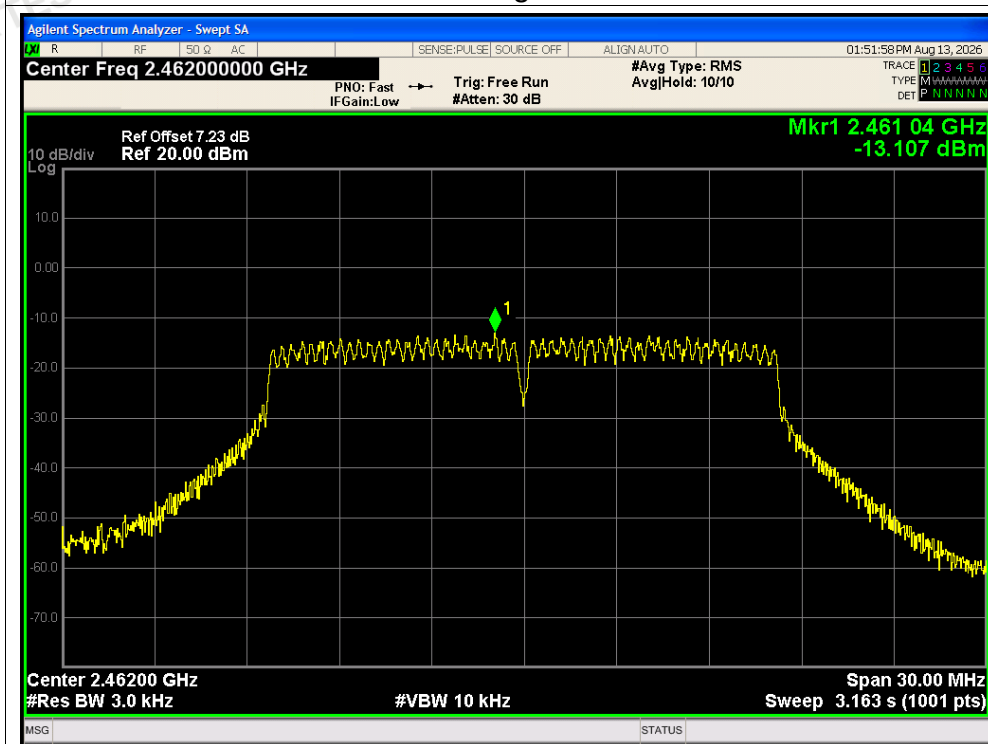
PSD NVNT g 2412MHz



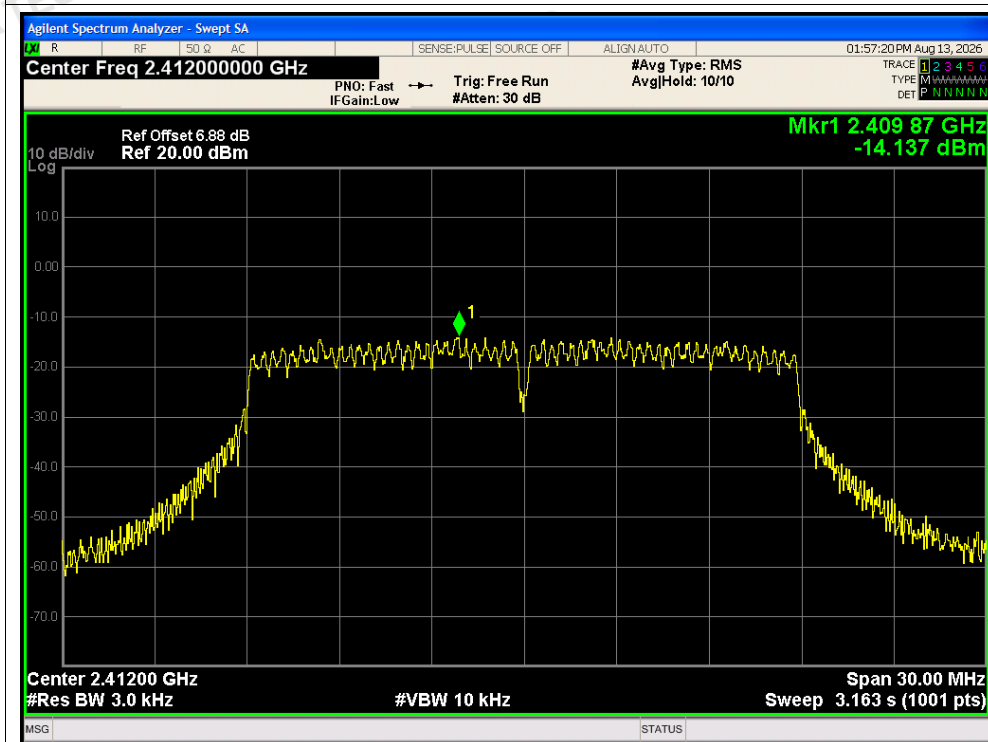
PSD NVNT g 2437MHz



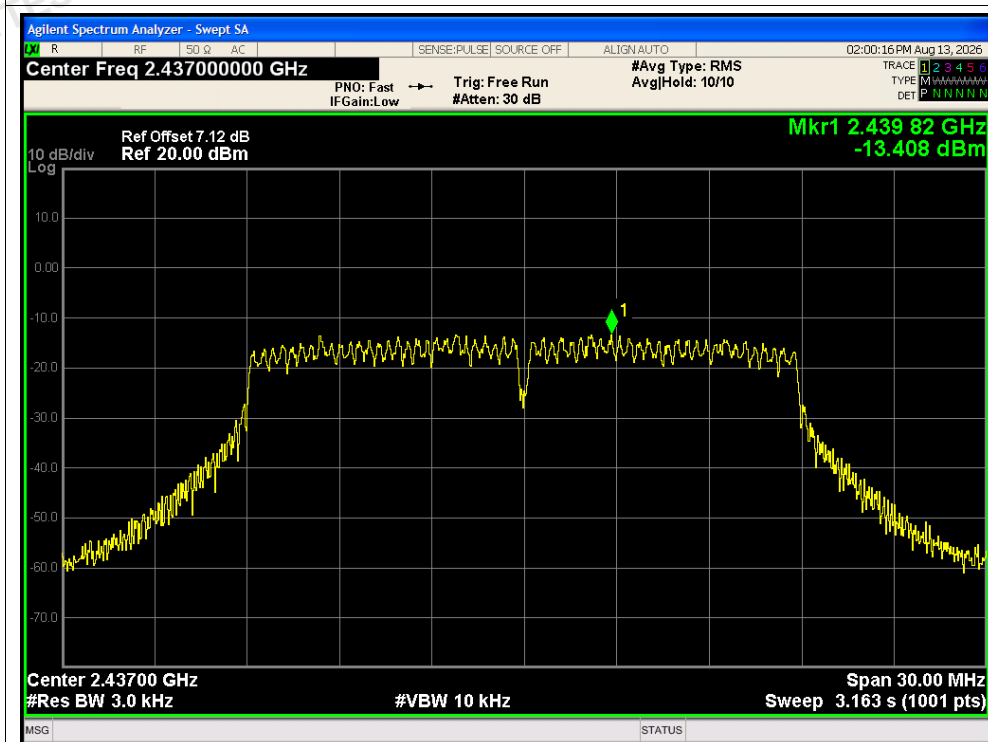
PSD NVNT g 2462MHz



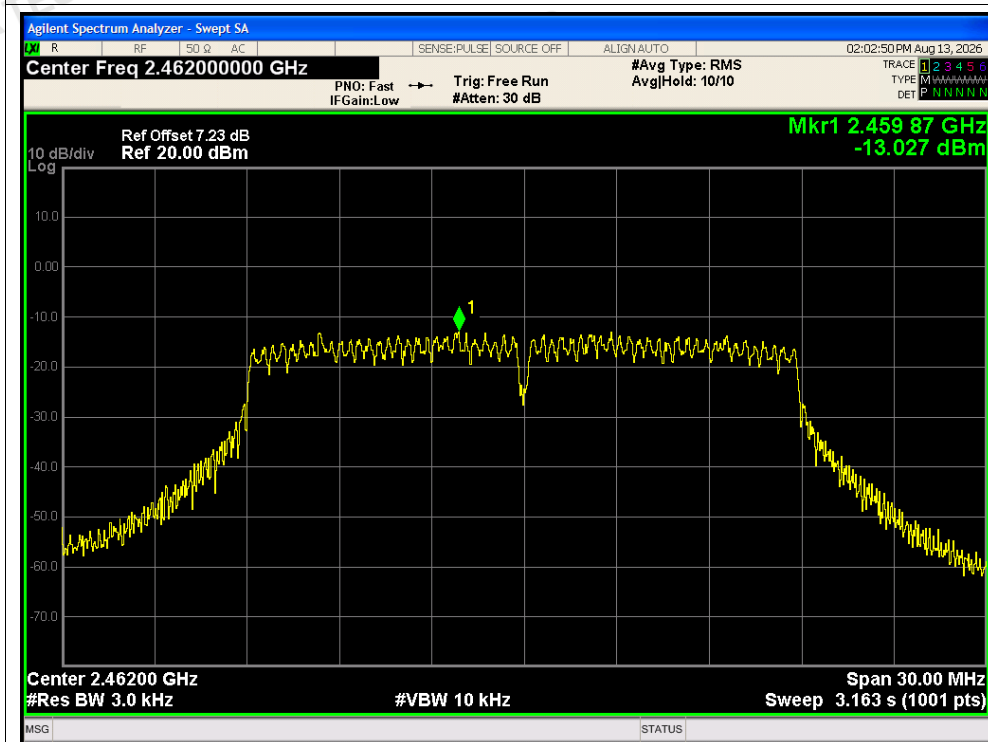
PSD NVNT n20 2412MHz



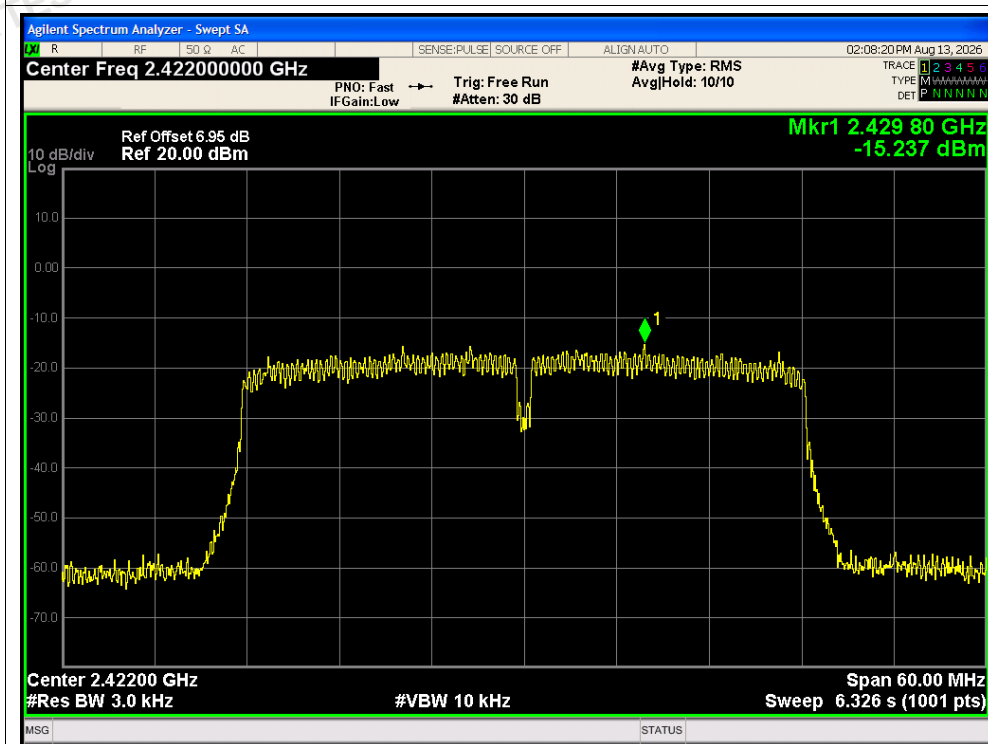
PSD NVNT n20 2437MHz



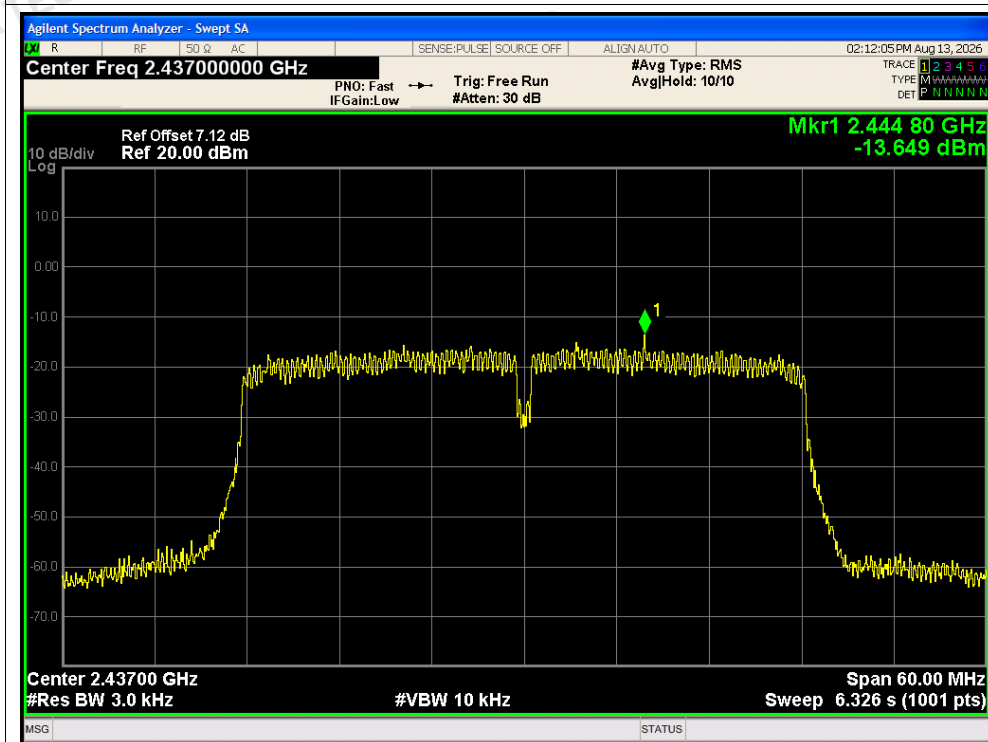
PSD NVNT n20 2462MHz



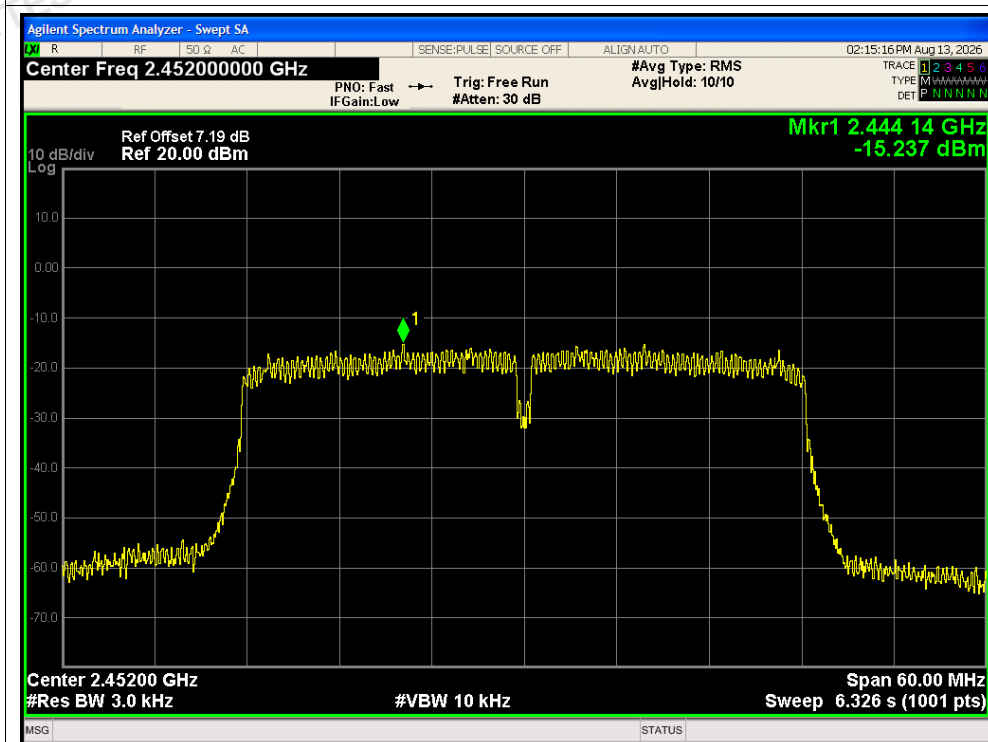
PSD NVNT n40 2422MHz



PSD NVNT n40 2437MHz



PSD NVNT n40 2452MHz

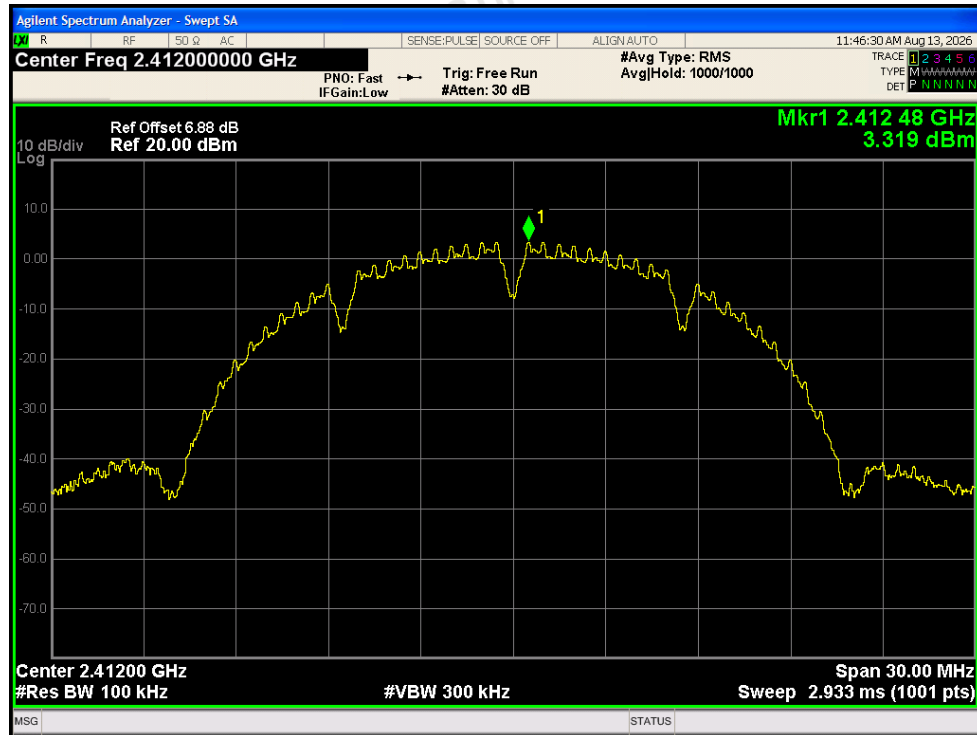


Band Edge

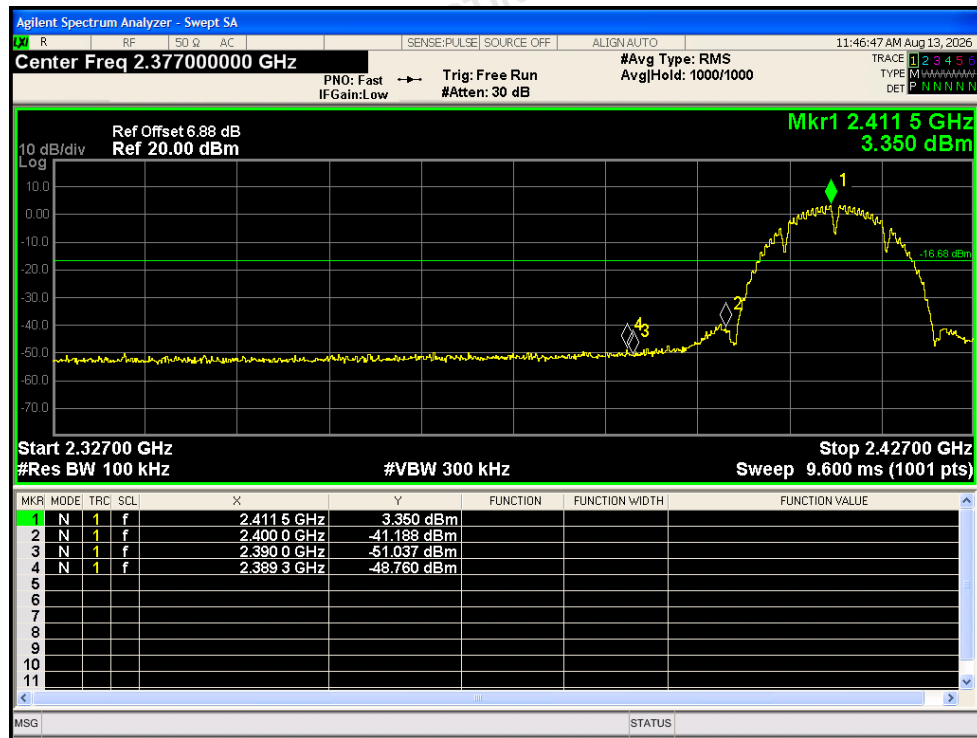
Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	-52.08	-20	Pass
NVNT	b	2462	-52.07	-20	Pass
NVNT	g	2412	-46.26	-20	Pass
NVNT	g	2462	-47.44	-20	Pass
NVNT	n20	2412	-44.81	-20	Pass
NVNT	n20	2462	-47.61	-20	Pass
NVNT	n40	2422	-41.26	-20	Pass
NVNT	n40	2452	-44.60	-20	Pass

Test Graphs

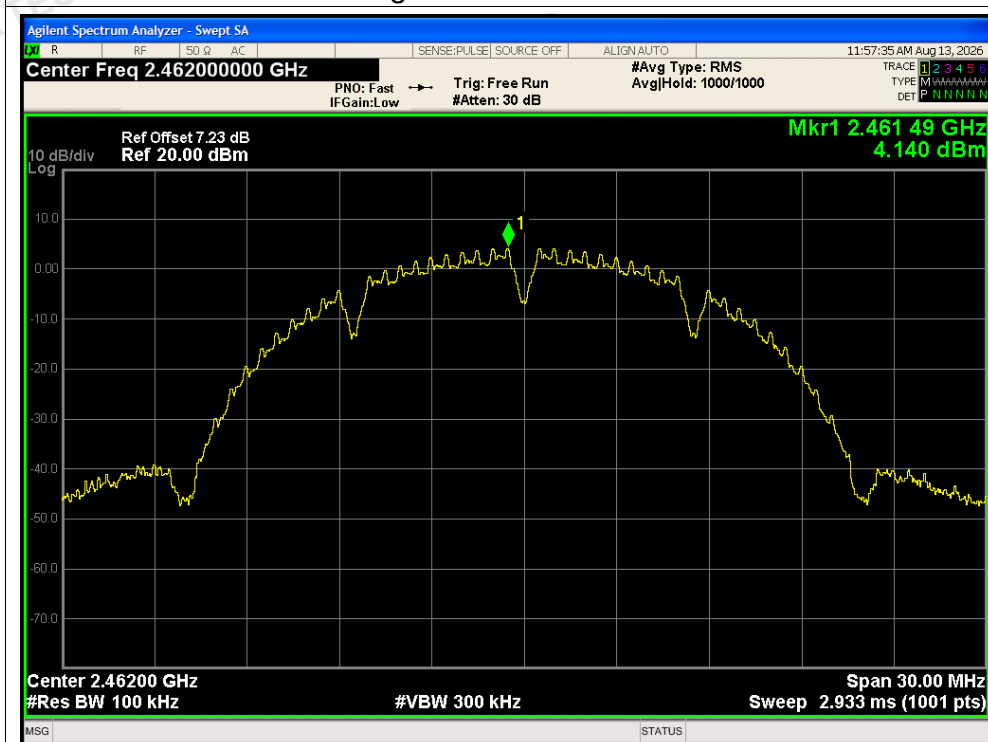
Band Edge NVNT b 2412MHz Ref



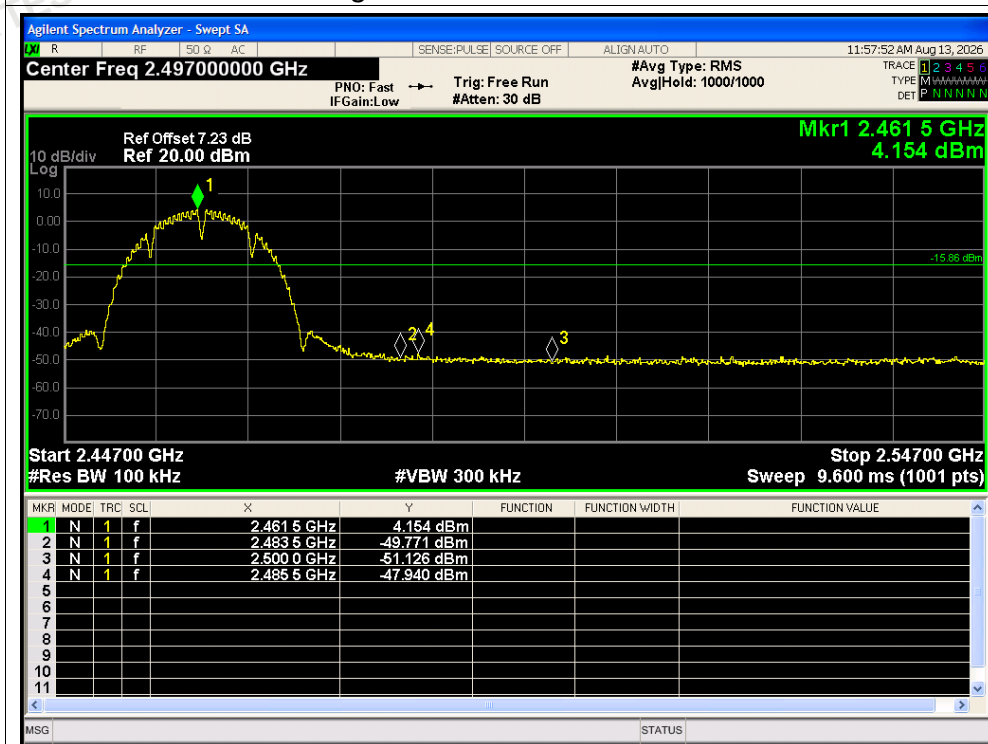
Band Edge NVNT b 2412MHz Emission



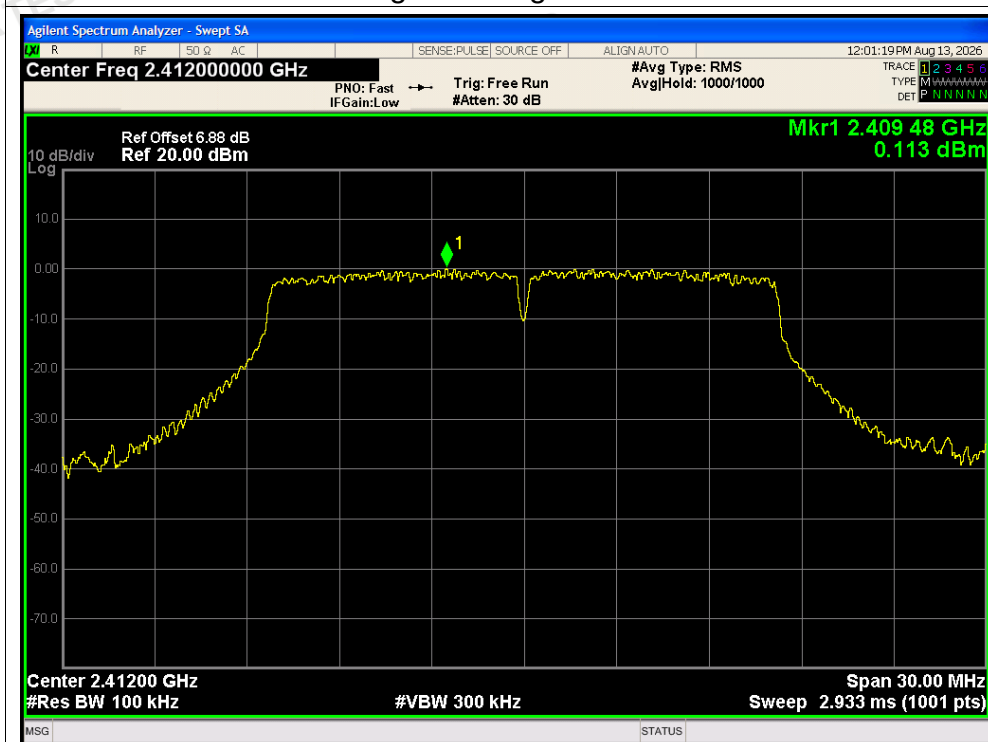
Band Edge NVNT b 2462MHz Ref



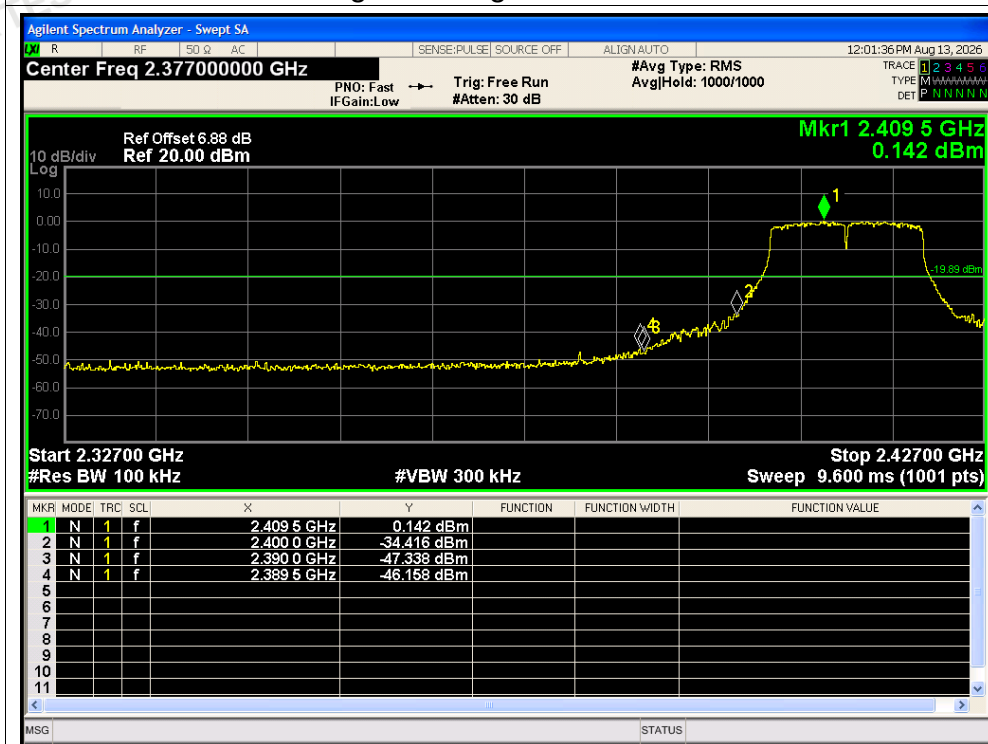
Band Edge NVNT b 2462MHz Emission



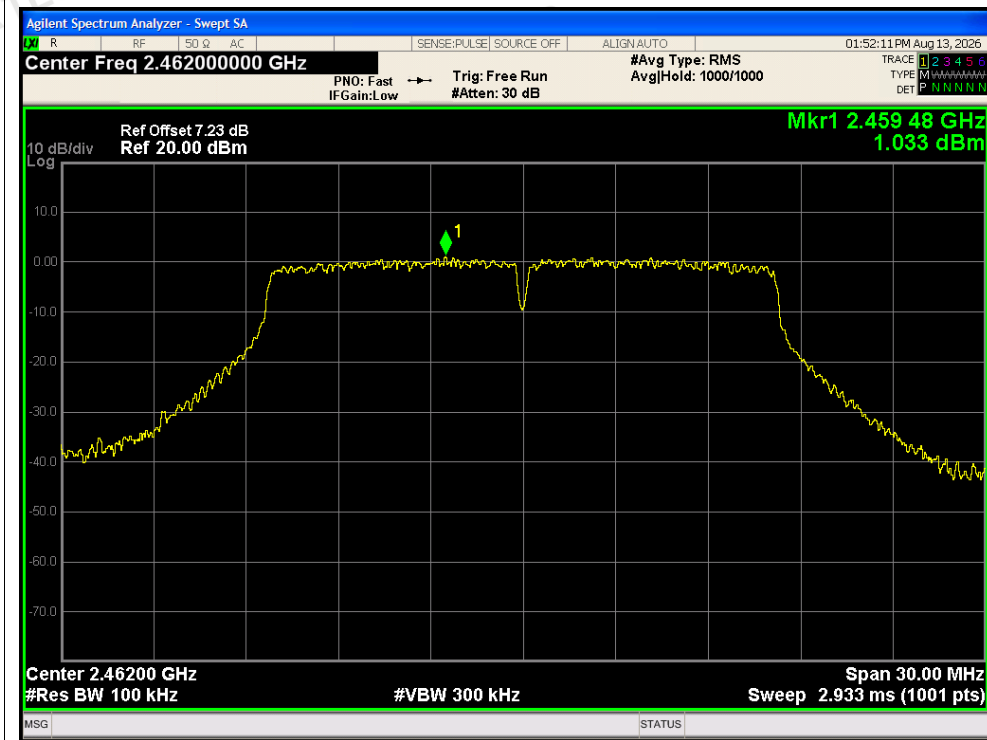
Band Edge NVNT g 2412MHz Ref



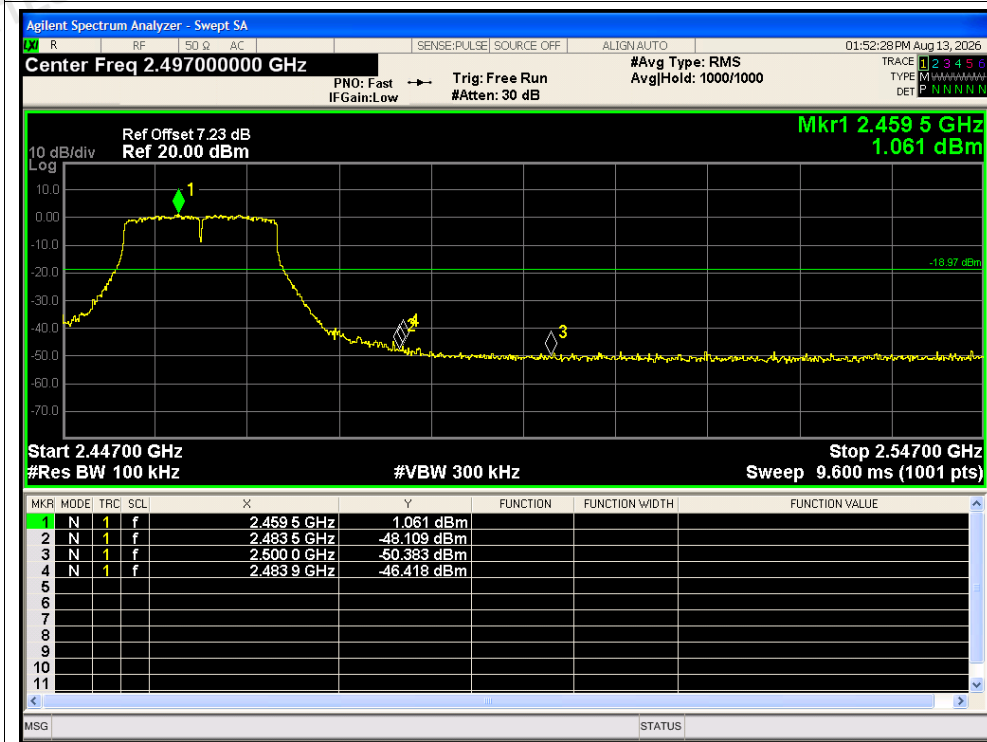
Band Edge NVNT g 2412MHz Emission



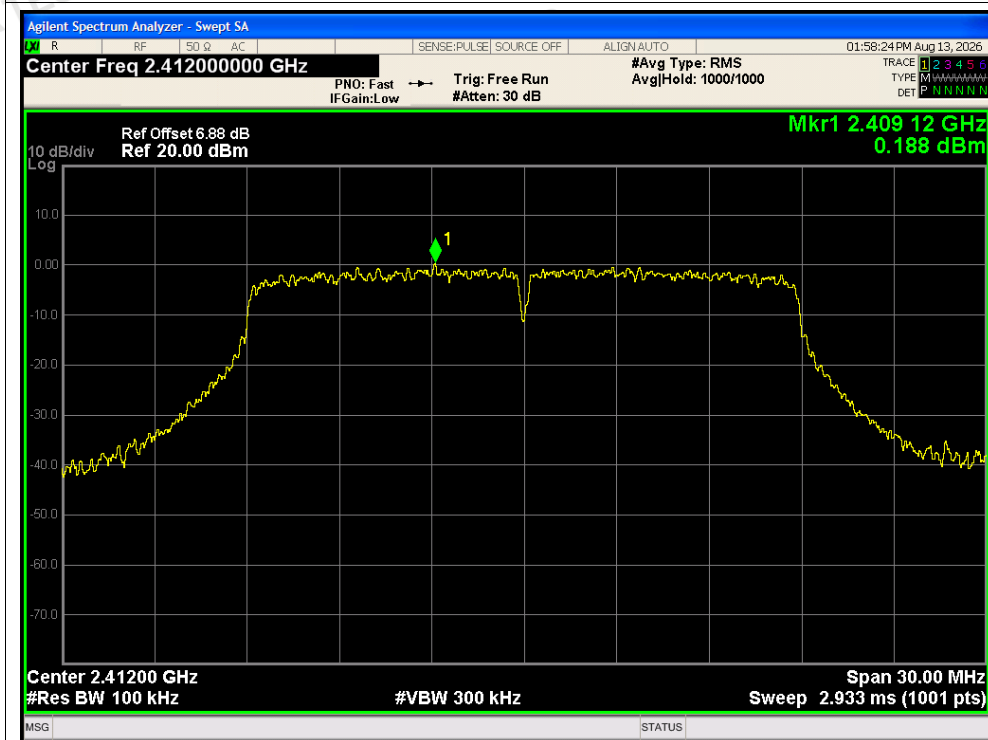
Band Edge NVNT g 2462MHz Ref



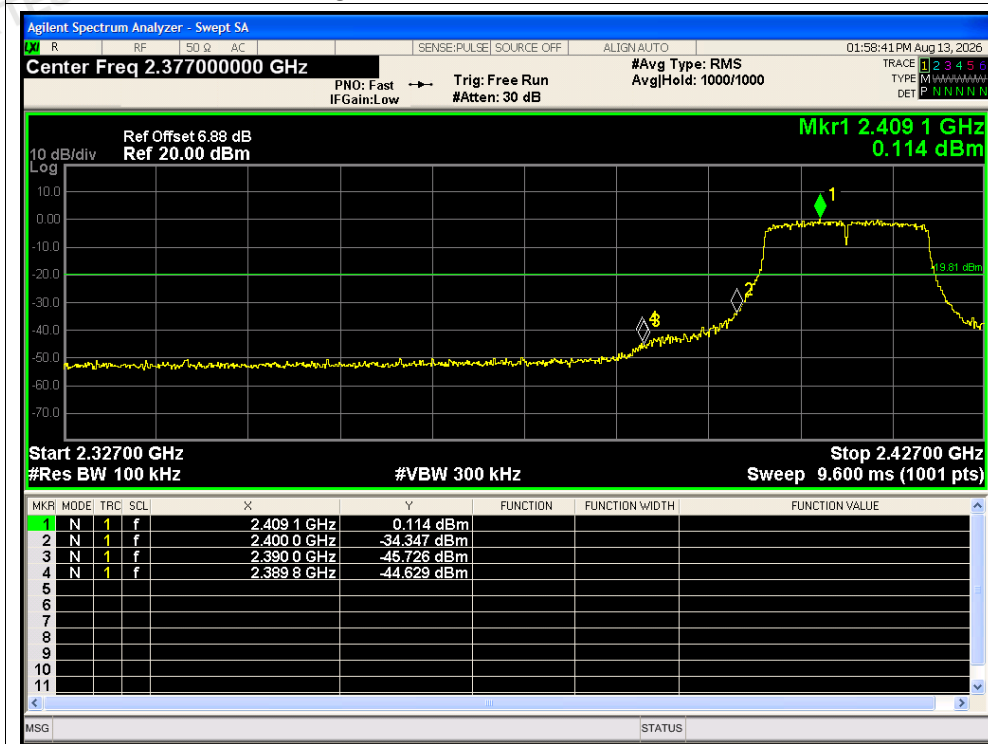
Band Edge NVNT g 2462MHz Emission



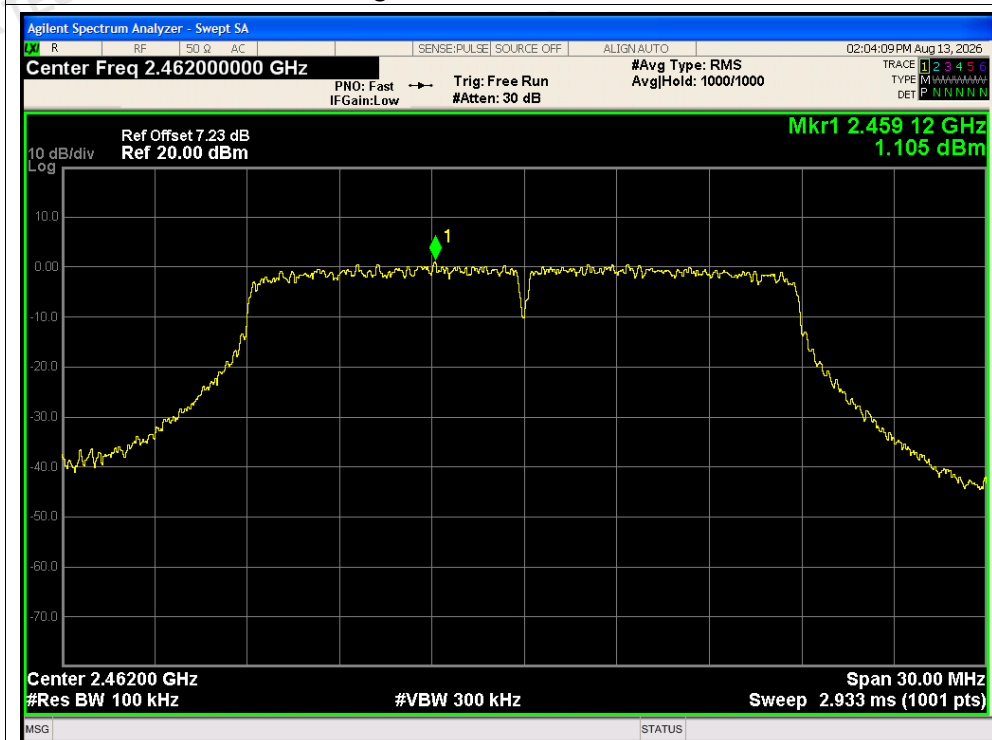
Band Edge NVNT n20 2412MHz Ref



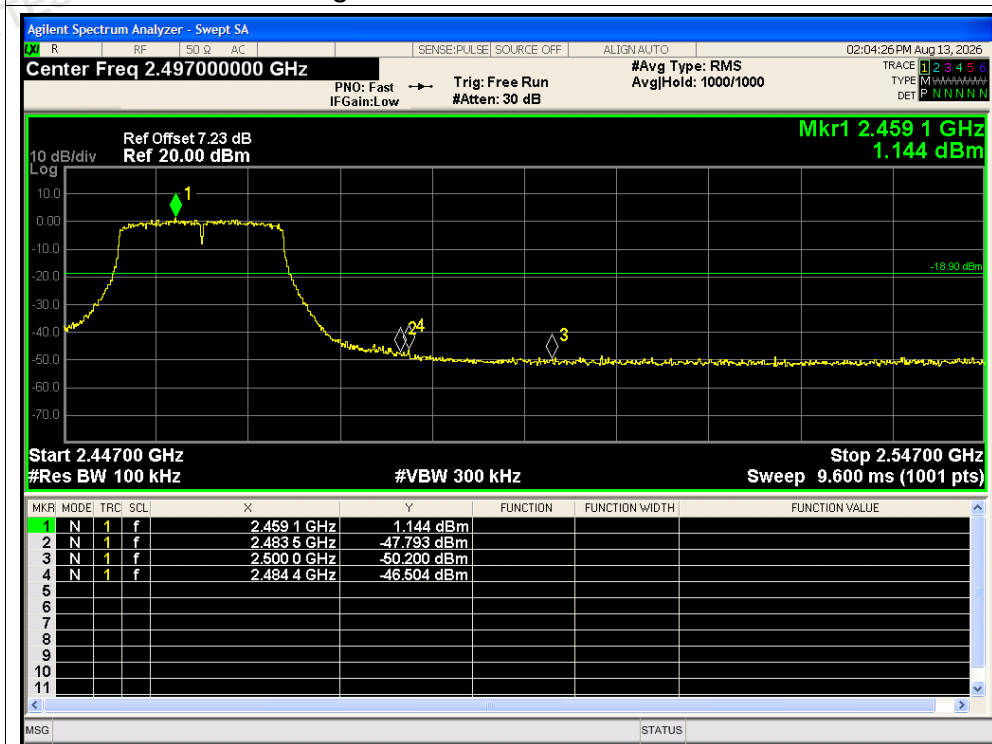
Band Edge NVNT n20 2412MHz Emission



Band Edge NVNT n20 2462MHz Ref



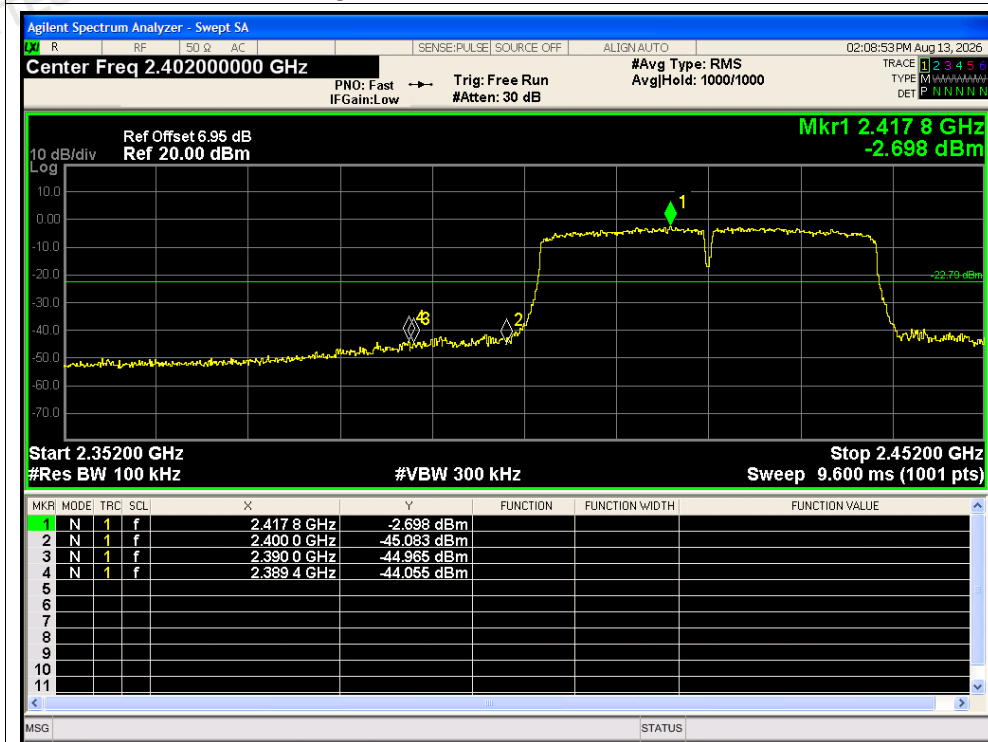
Band Edge NVNT n20 2462MHz Emission



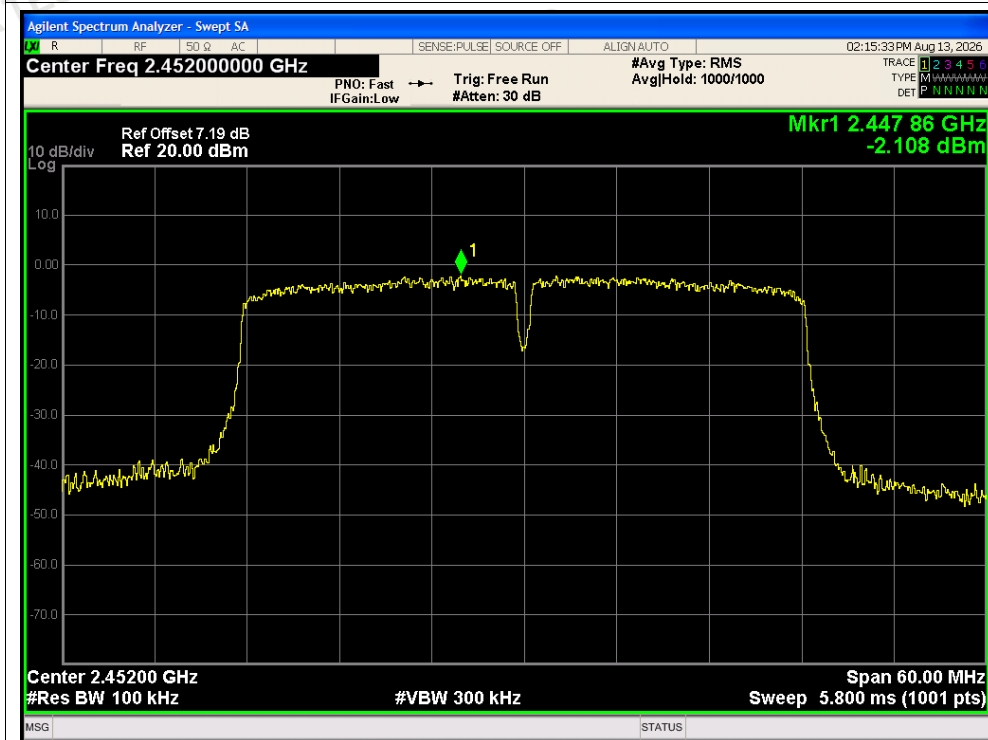
Band Edge NVNT n40 2422MHz Ref



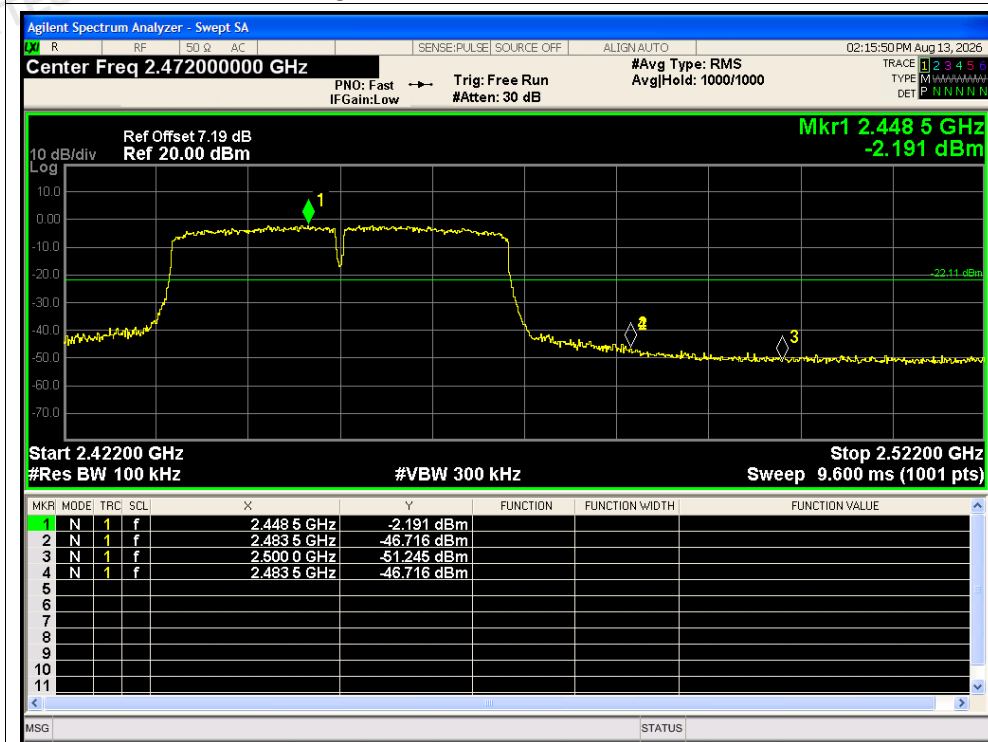
Band Edge NVNT n40 2422MHz Emission



Band Edge NVNT n40 2452MHz Ref



Band Edge NVNT n40 2452MHz Emission

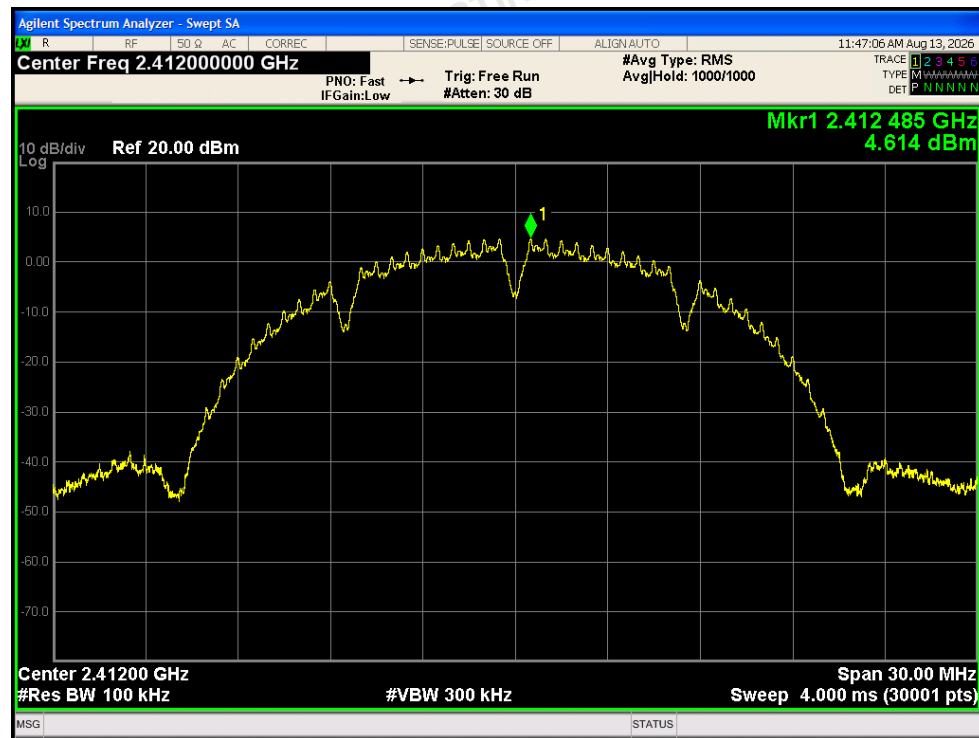


Conducted RF Spurious Emission

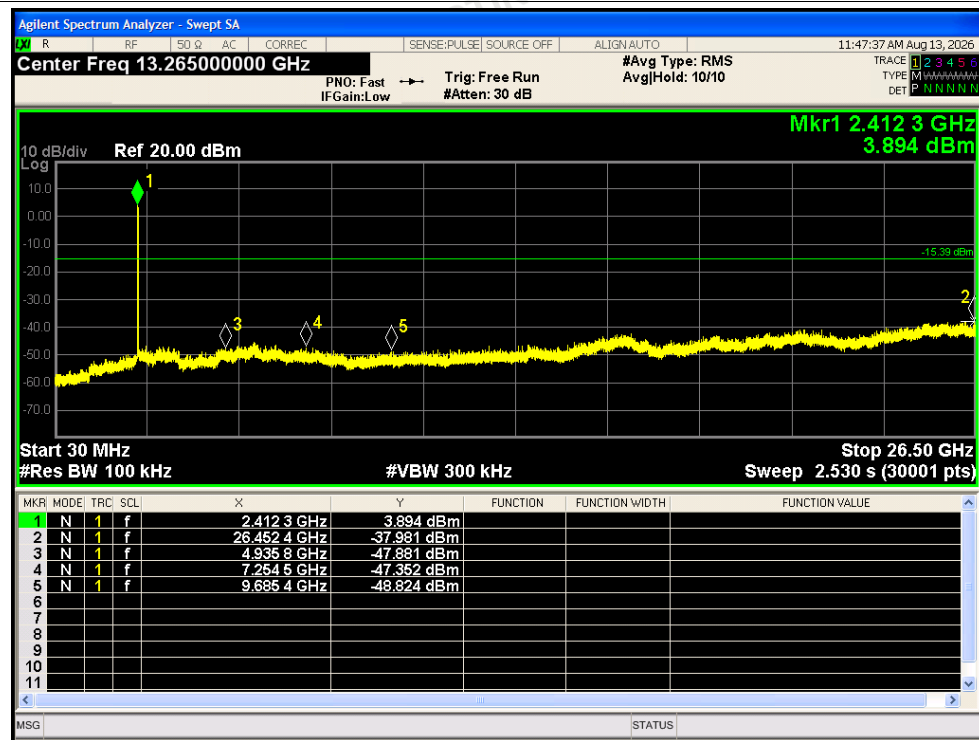
Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	-42.59	-20	Pass
NVNT	b	2437	-42.77	-20	Pass
NVNT	b	2462	-42.56	-20	Pass
NVNT	g	2412	-39.33	-20	Pass
NVNT	g	2437	-39.16	-20	Pass
NVNT	g	2462	-39.53	-20	Pass
NVNT	n20	2412	-39.42	-20	Pass
NVNT	n20	2437	-39.59	-20	Pass
NVNT	n20	2462	-39.87	-20	Pass
NVNT	n40	2422	-45.83	-20	Pass
NVNT	n40	2437	-41.24	-20	Pass
NVNT	n40	2452	-40.88	-20	Pass

Test Graphs

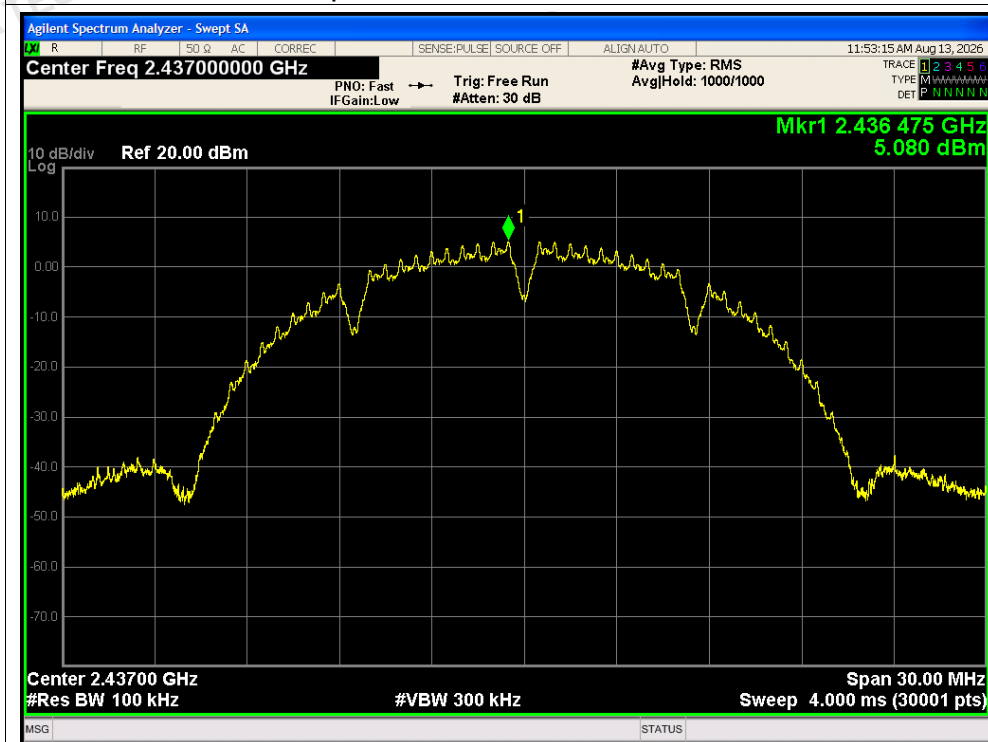
Tx. Spurious NVNT b 2412MHz Ref



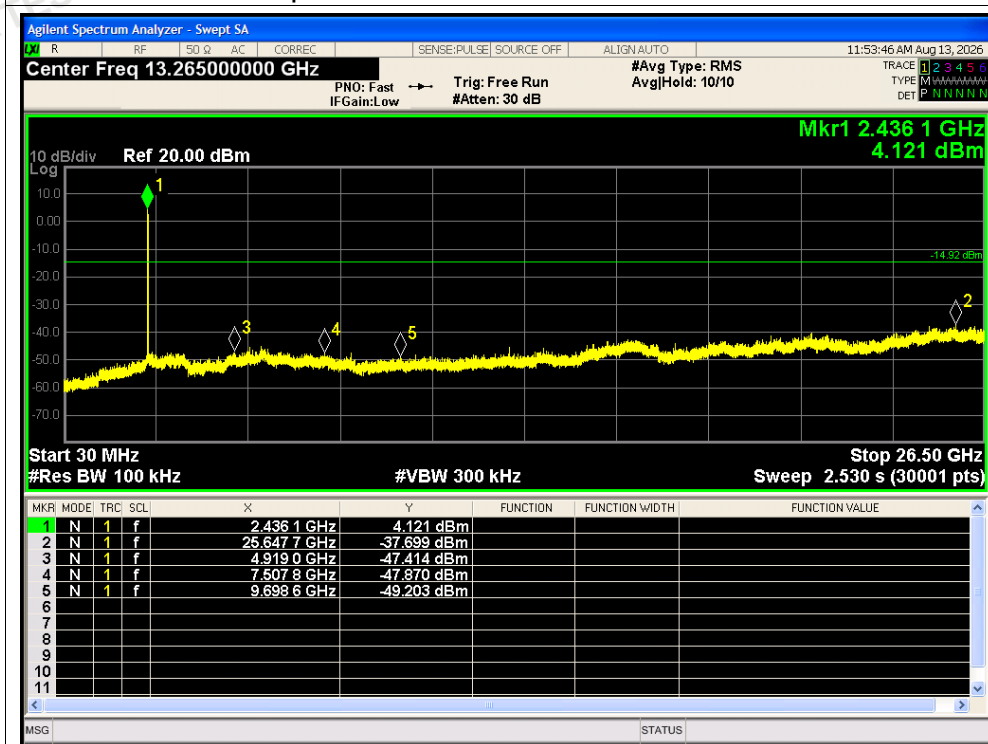
Tx. Spurious NVNT b 2412MHz Emission



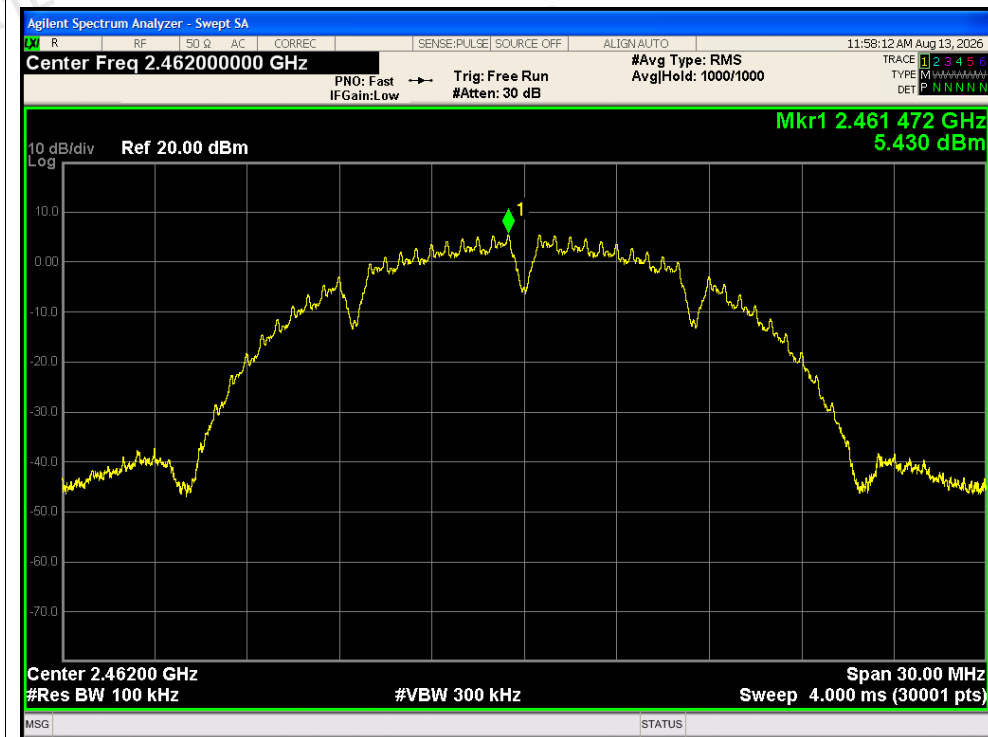
Tx. Spurious NVNT b 2437MHz Ref



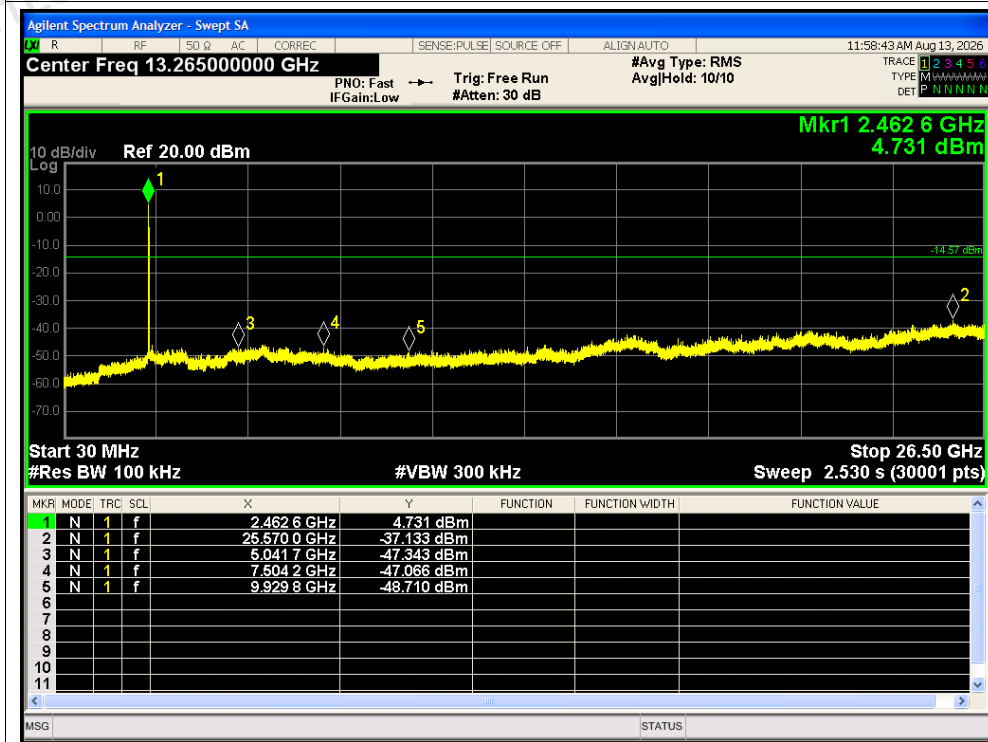
Tx. Spurious NVNT b 2437MHz Emission



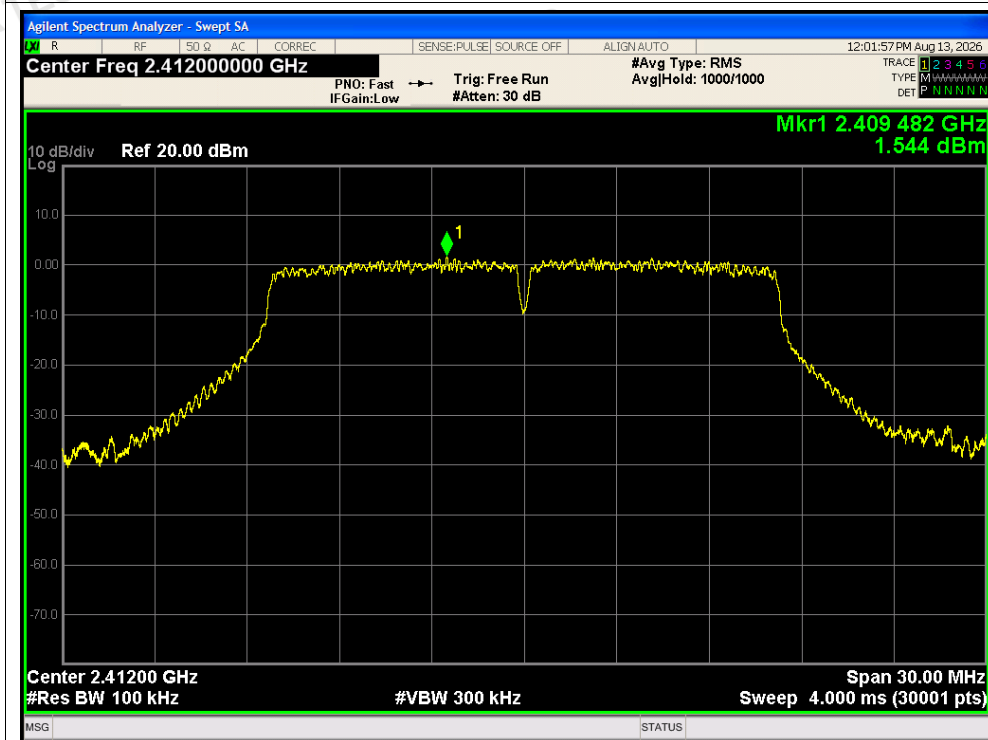
Tx. Spurious NVNT b 2462MHz Ref



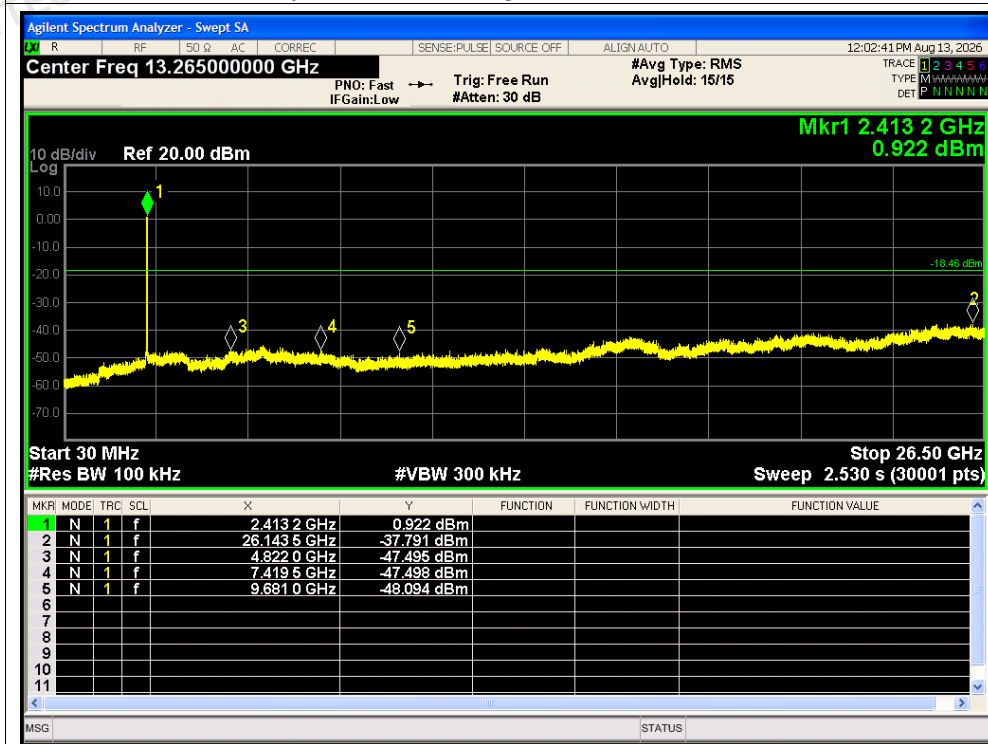
Tx. Spurious NVNT b 2462MHz Emission



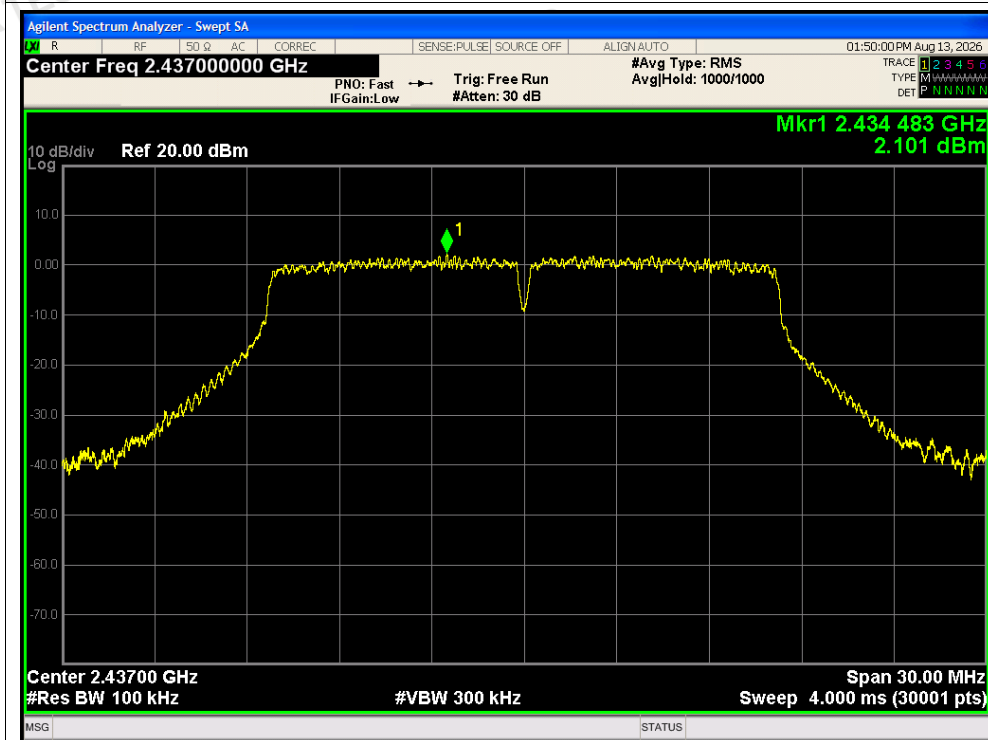
Tx. Spurious NVNT g 2412MHz Ref



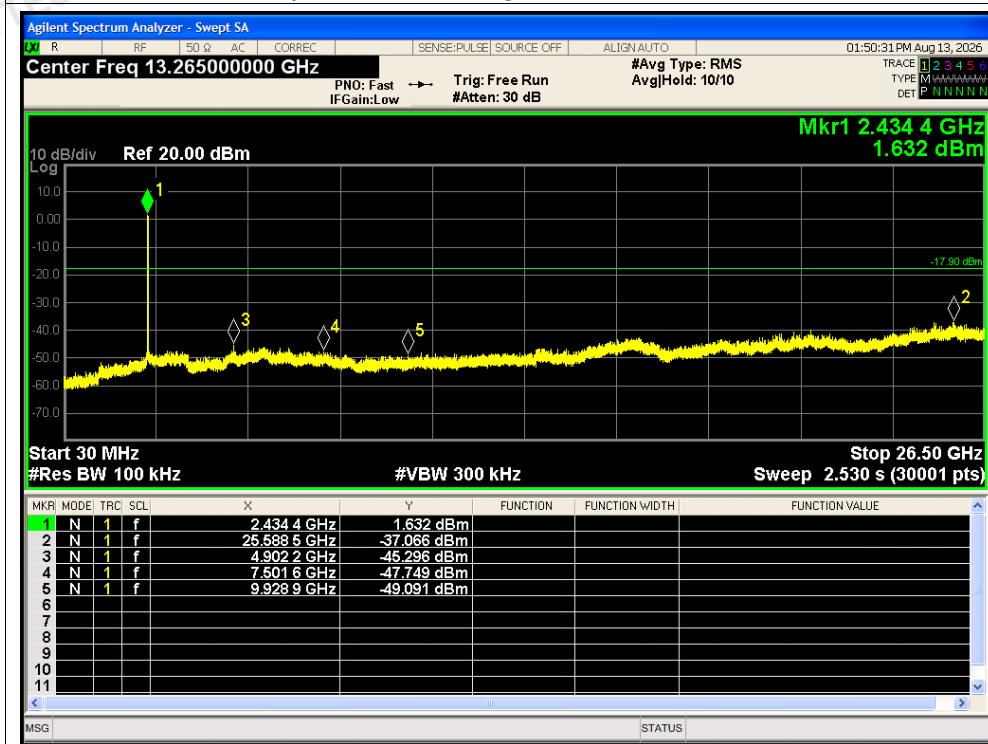
Tx. Spurious NVNT g 2412MHz Emission



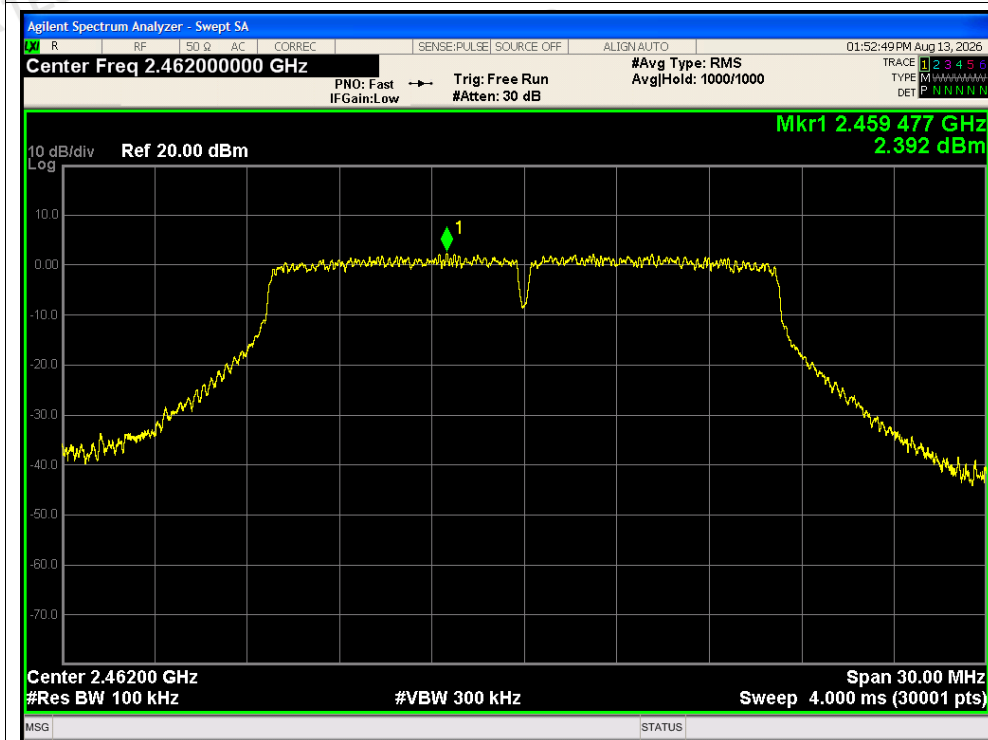
Tx. Spurious NVNT g 2437MHz Ref



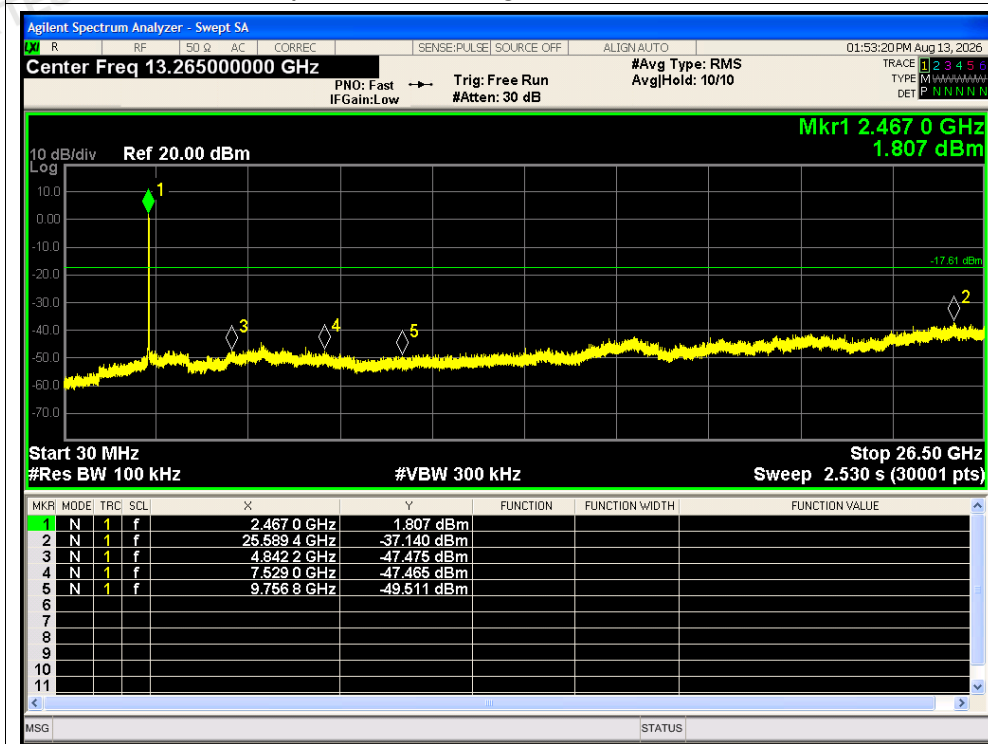
Tx. Spurious NVNT g 2437MHz Emission



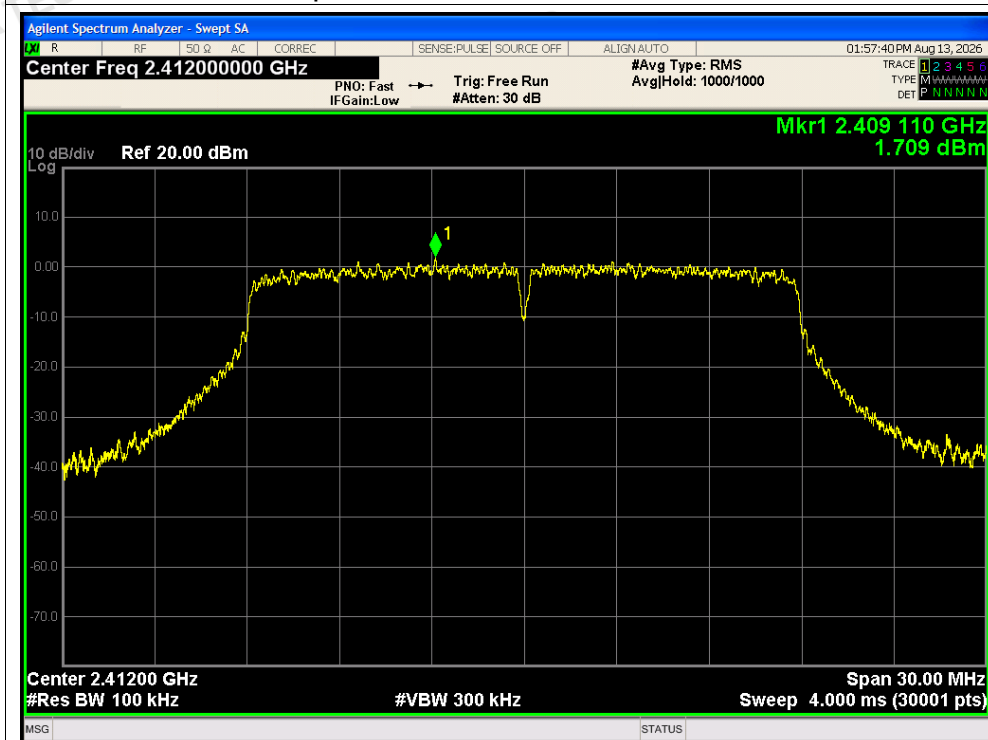
Tx. Spurious NVNT g 2462MHz Ref



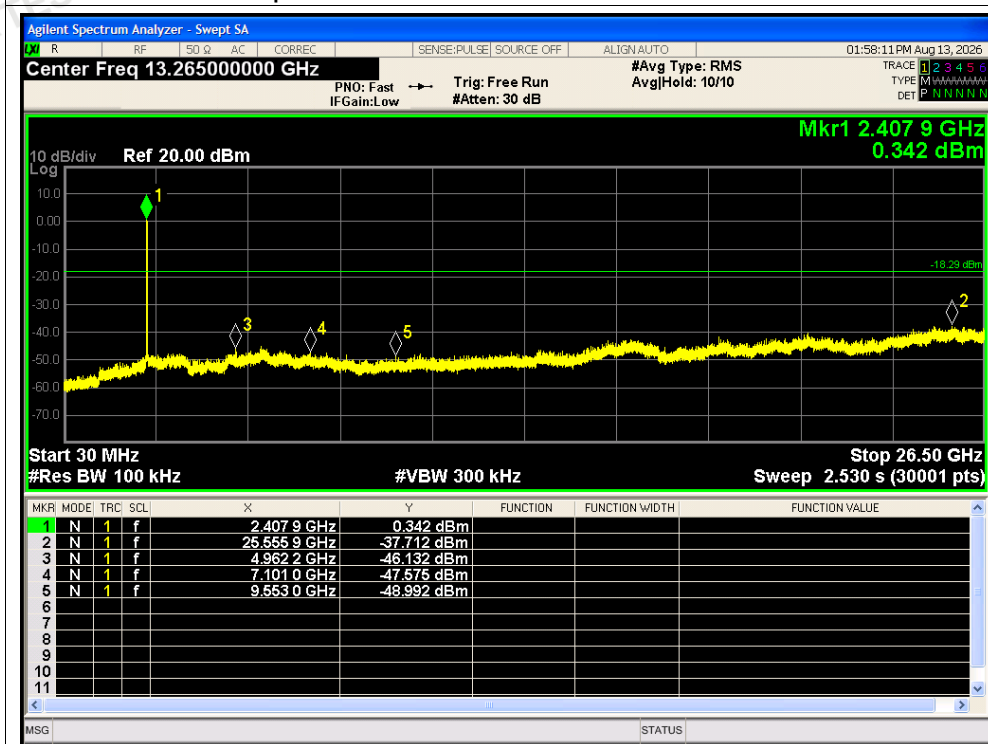
Tx. Spurious NVNT g 2462MHz Emission



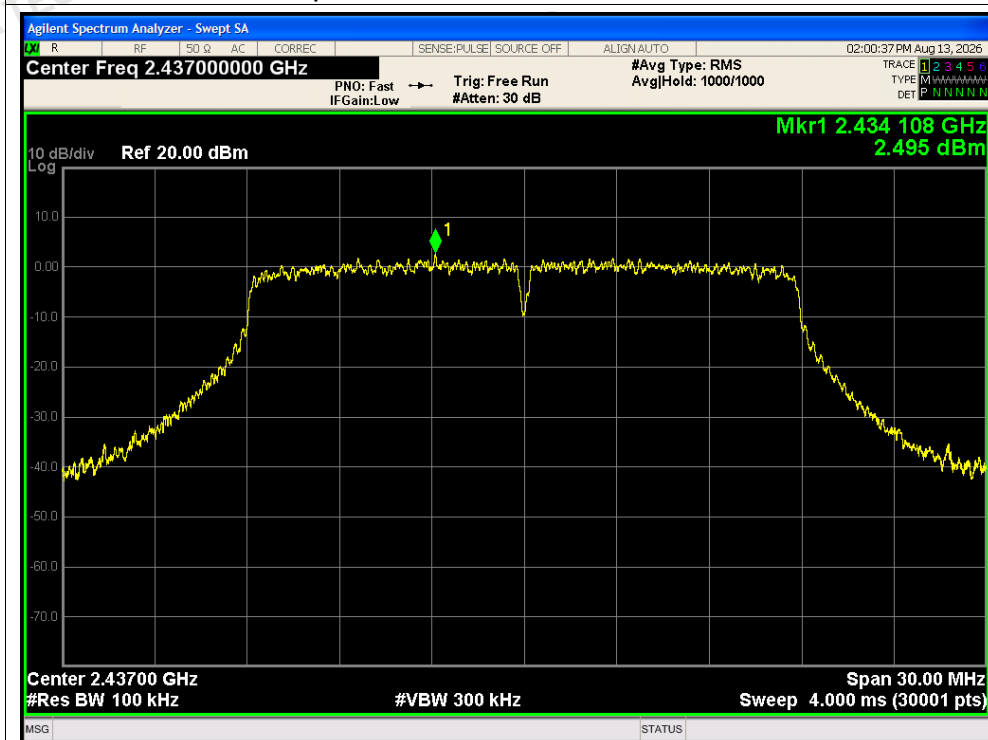
Tx. Spurious NVNT n20 2412MHz Ref



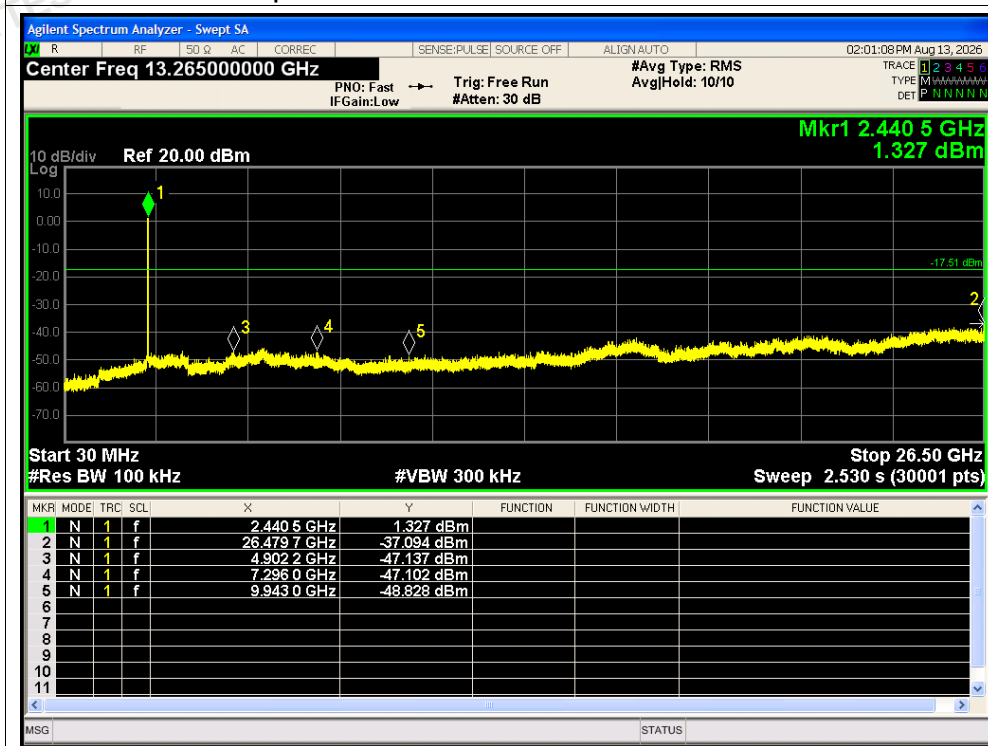
Tx. Spurious NVNT n20 2412MHz Emission



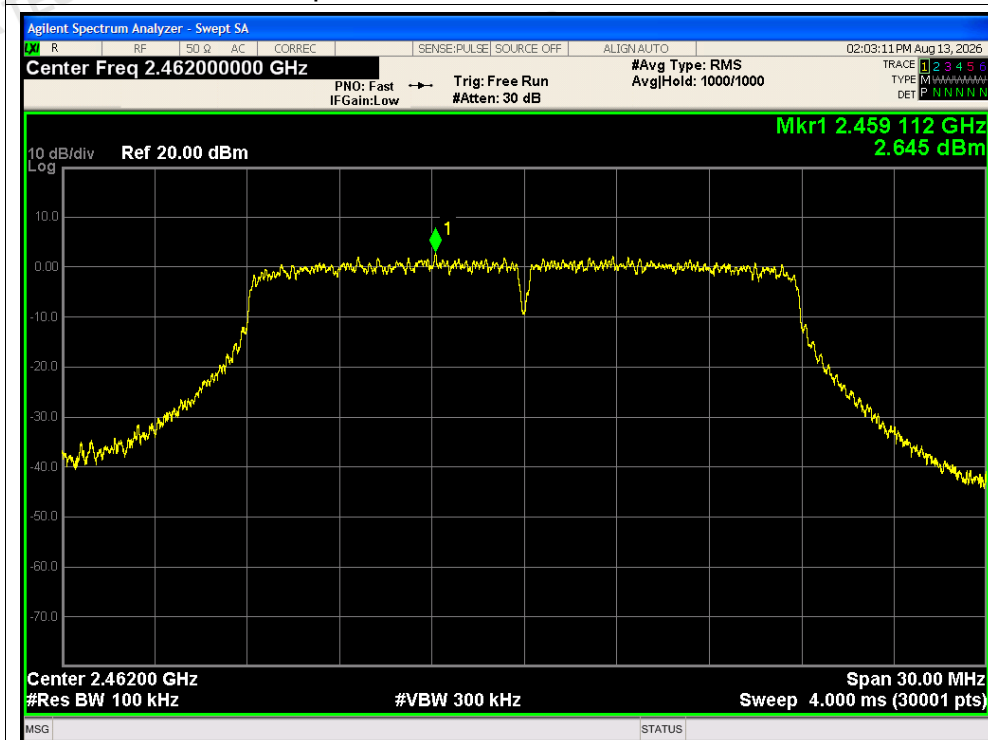
Tx. Spurious NVNT n20 2437MHz Ref



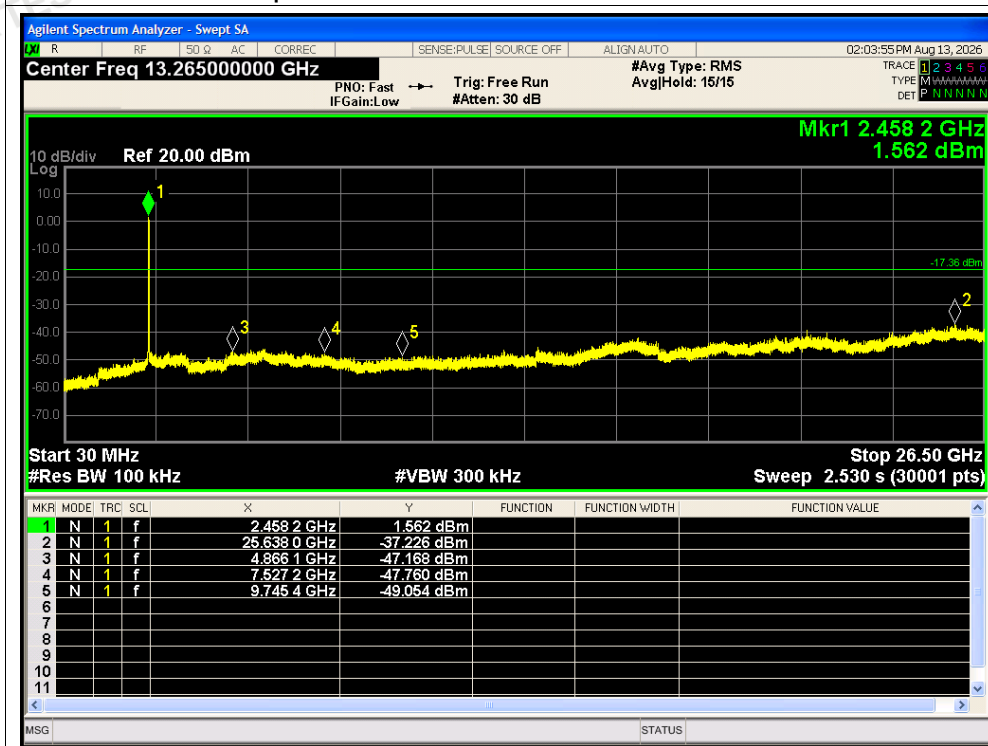
Tx. Spurious NVNT n20 2437MHz Emission



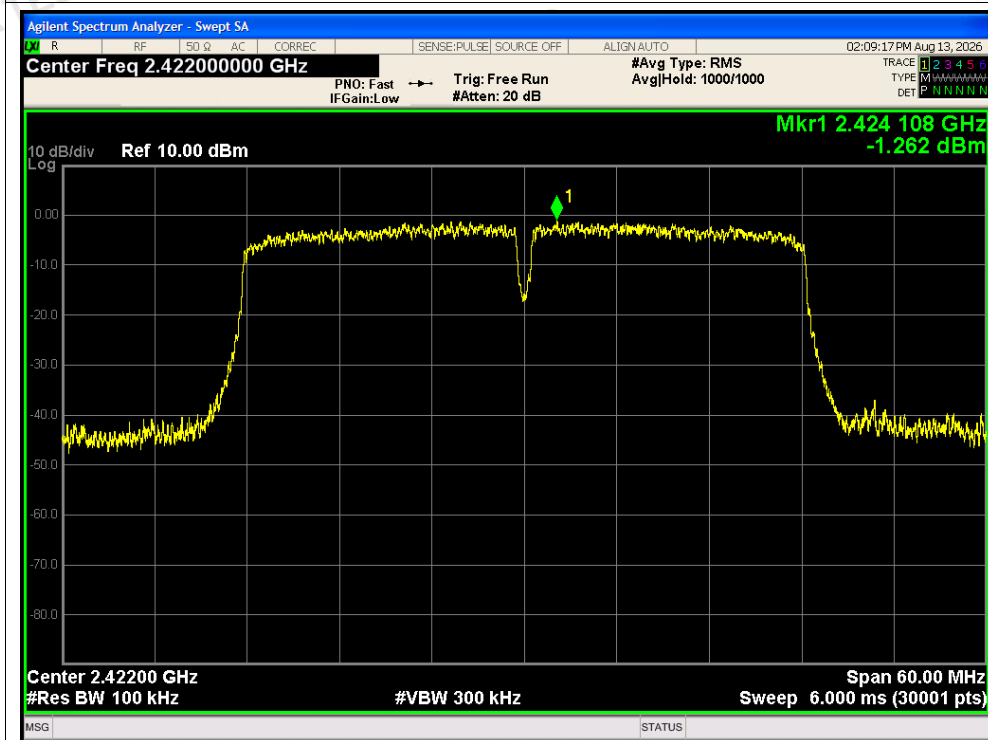
Tx. Spurious NVNT n20 2462MHz Ref



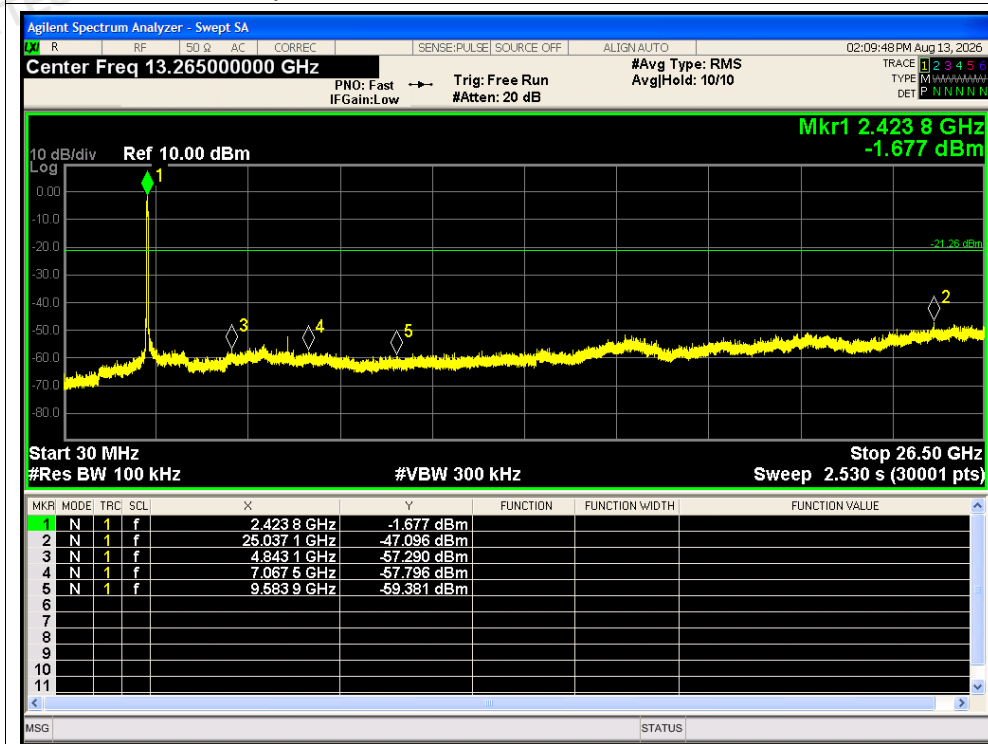
Tx. Spurious NVNT n20 2462MHz Emission



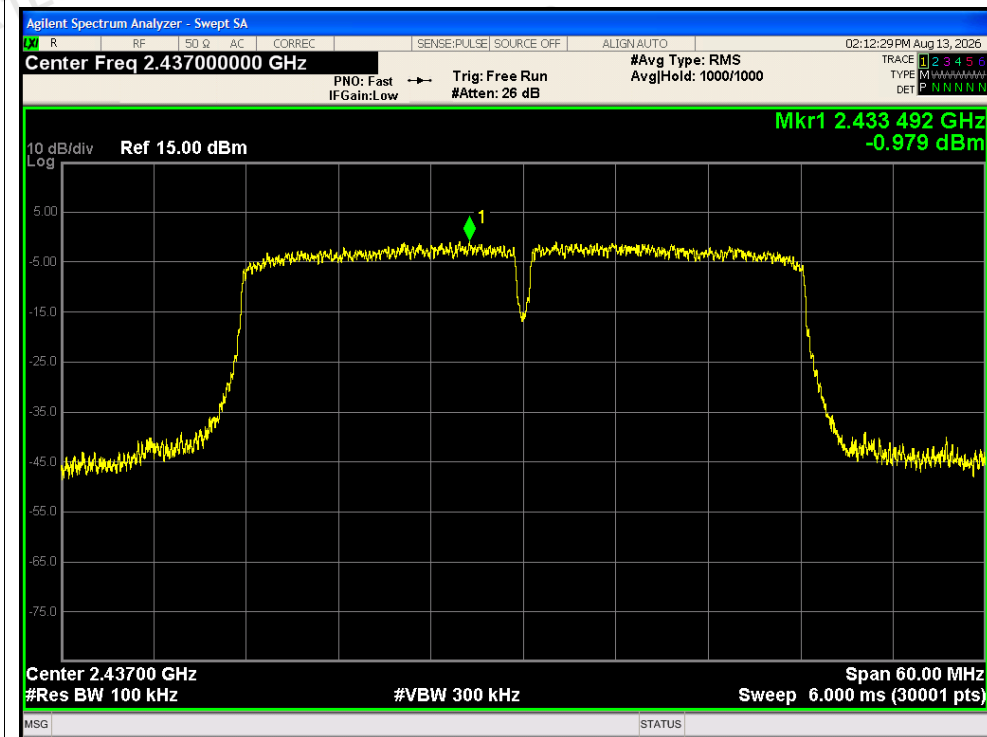
Tx. Spurious NVNT n40 2422MHz Ref



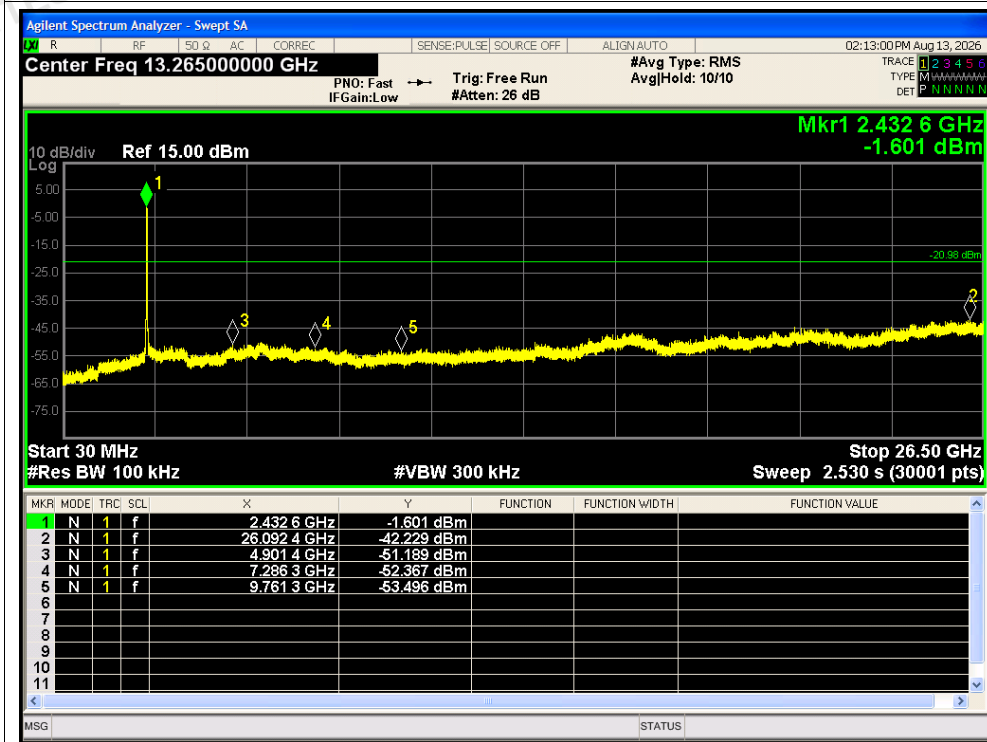
Tx. Spurious NVNT n40 2422MHz Emission



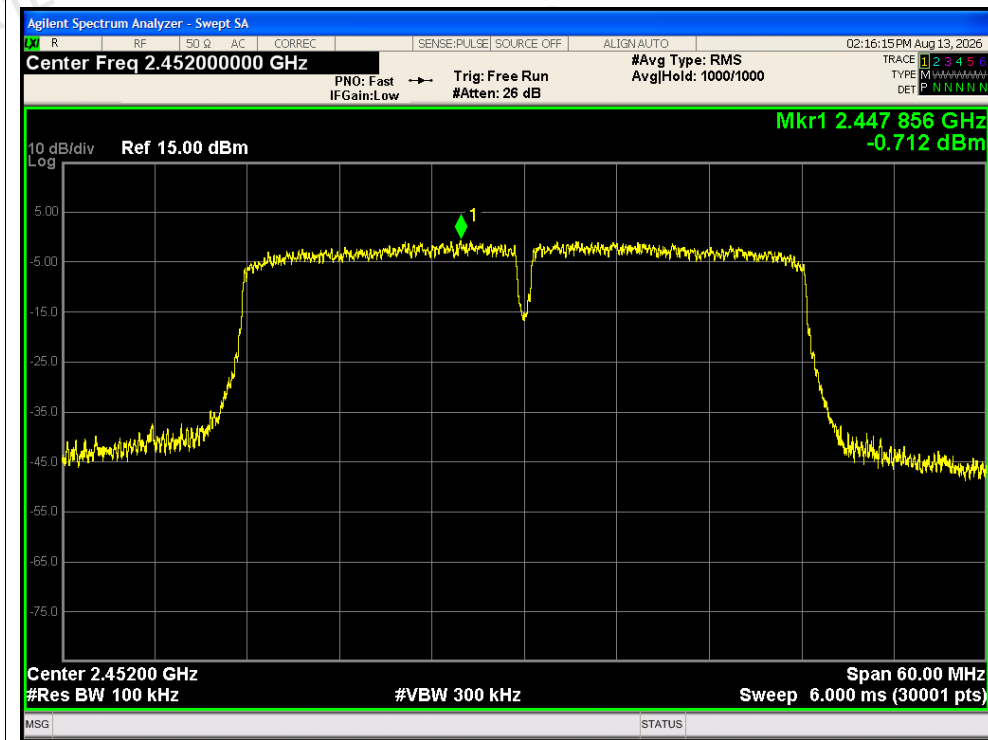
Tx. Spurious NVNT n40 2437MHz Ref



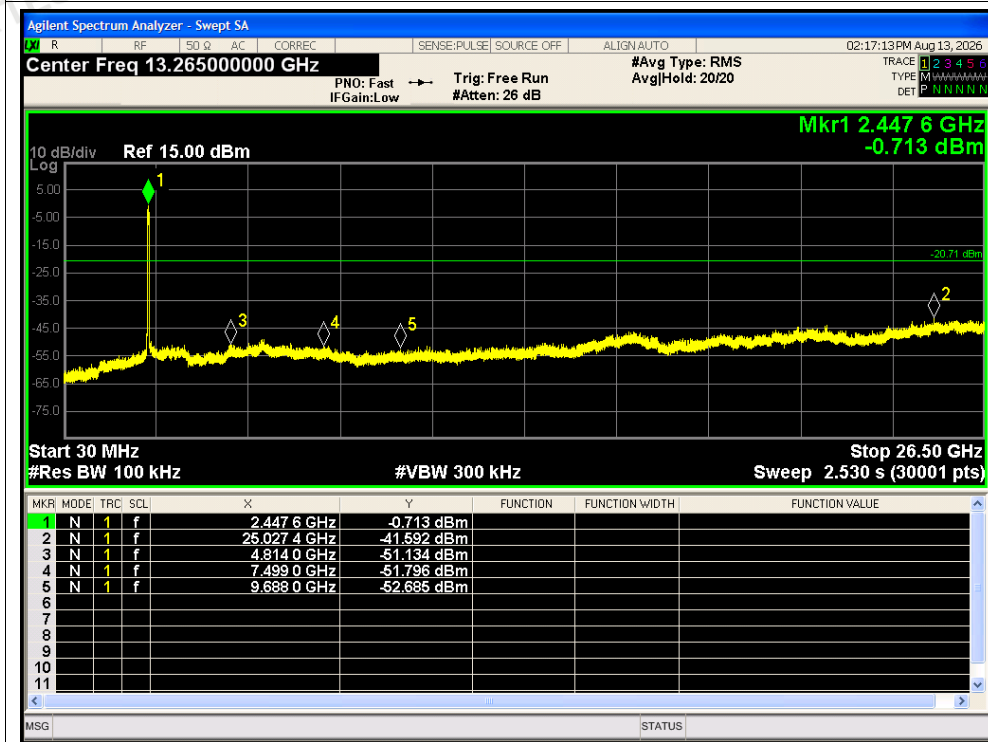
Tx. Spurious NVNT n40 2437MHz Emission



Tx. Spurious NVNT n40 2452MHz Ref



Tx. Spurious NVNT n40 2452MHz Emission



Emissions in Restricted Bands

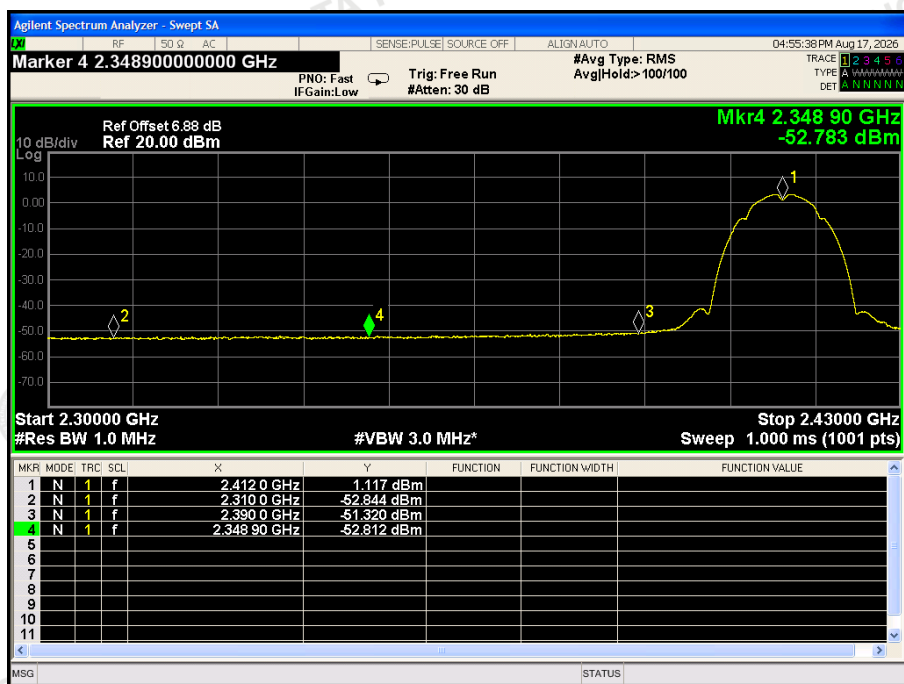
Test Mode	Ch	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dBi]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
b	Low	2412	AV	2310.000	-52.84	2.00	0	44.36	≤54	PASS
			AV	2348.900	-52.81	2.00	0	44.39	≤54	PASS
			AV	2390.000	-51.32	2.00	0	45.88	≤54	PASS
			Peak	2310.000	-42.83	2.00	0	54.37	≤74	PASS
			Peak	2348.770	-40.02	2.00	0	57.18	≤74	PASS
			Peak	2390.000	-40.99	2.00	0	56.21	≤74	PASS
	High	2462	AV	2483.500	-49.87	2.00	0	47.33	≤54	PASS
			AV	2484.100	-50.42	2.00	0	46.78	≤54	PASS
			AV	2500.000	-49.89	2.00	0	47.31	≤54	PASS
			Peak	2483.500	-40.07	2.00	0	57.13	≤74	PASS
			Peak	2484.100	-40.86	2.00	0	56.34	≤74	PASS
			Peak	2500.000	-38.37	2.00	0	58.83	≤74	PASS
g	Low	2412	AV	2310.000	-53.16	2.00	0	44.04	≤54	PASS
			AV	2352.280	-52.52	2.00	0	44.68	≤54	PASS
			AV	2390.000	-48.68	2.00	0	48.52	≤54	PASS
			Peak	2310.000	-42.64	2.00	0	54.56	≤74	PASS
			Peak	2352.410	-40.17	2.00	0	57.03	≤74	PASS
			Peak	2390.000	-34.16	2.00	0	63.04	≤74	PASS
	High	2462	AV	2483.500	-48.30	2.00	0	48.90	≤54	PASS
			AV	2484.210	-48.53	2.00	0	48.67	≤54	PASS
			AV	2500.000	-50.94	2.00	0	46.26	≤54	PASS
			Peak	2483.500	-33.56	2.00	0	63.64	≤74	PASS
			Peak	2484.210	-33.65	2.00	0	63.55	≤74	PASS
			Peak	2500.000	-41.15	2.00	0	56.05	≤74	PASS
n20	Low	2412	AV	2310.000	-53.19	2.00	0	44.01	≤54	PASS
			AV	2381.270	-51.52	2.00	0	45.68	≤54	PASS
			AV	2390.000	-47.22	2.00	0	49.98	≤54	PASS
			Peak	2310.000	-42.33	2.00	0	54.87	≤74	PASS
			Peak	2381.270	-38.75	2.00	0	58.45	≤74	PASS
			Peak	2390.000	-27.93	2.00	0	69.27	≤74	PASS
	High	2462	AV	2483.500	-47.18	2.00	0	50.02	≤54	PASS
			AV	2485.090	-48.61	2.00	0	48.59	≤54	PASS
			AV	2500.000	-50.90	2.00	0	46.30	≤54	PASS
			Peak	2483.500	-33.63	2.00	0	63.57	≤74	PASS
			Peak	2485.090	-33.79	2.00	0	63.41	≤74	PASS
			Peak	2500.000	-40.23	2.00	0	56.97	≤74	PASS
n40	Low	2422	AV	2310.000	-52.75	2.00	0	44.45	≤54	PASS
			AV	2385.920	-47.44	2.00	0	49.76	≤54	PASS

			AV	2390.000	-46.21	2.00	0	50.99	≤54	PASS
			Peak	2310.000	-41.82	2.00	0	55.38	≤74	PASS
			Peak	2385.920	-31.17	2.00	0	66.03	≤74	PASS
			Peak	2390.000	-31.76	2.00	0	65.44	≤74	PASS
	High	2452	AV	2483.500	-46.77	2.00	0	50.43	≤54	PASS
			AV	2487.590	-49.22	2.00	0	47.98	≤54	PASS
			AV	2500.000	-50.29	2.00	0	46.91	≤54	PASS
			Peak	2483.500	-33.53	2.00	0	63.67	≤74	PASS
			Peak	2487.590	-34.78	2.00	0	62.42	≤74	PASS
			Peak	2500.000	-38.71	2.00	0	58.49	≤74	PASS

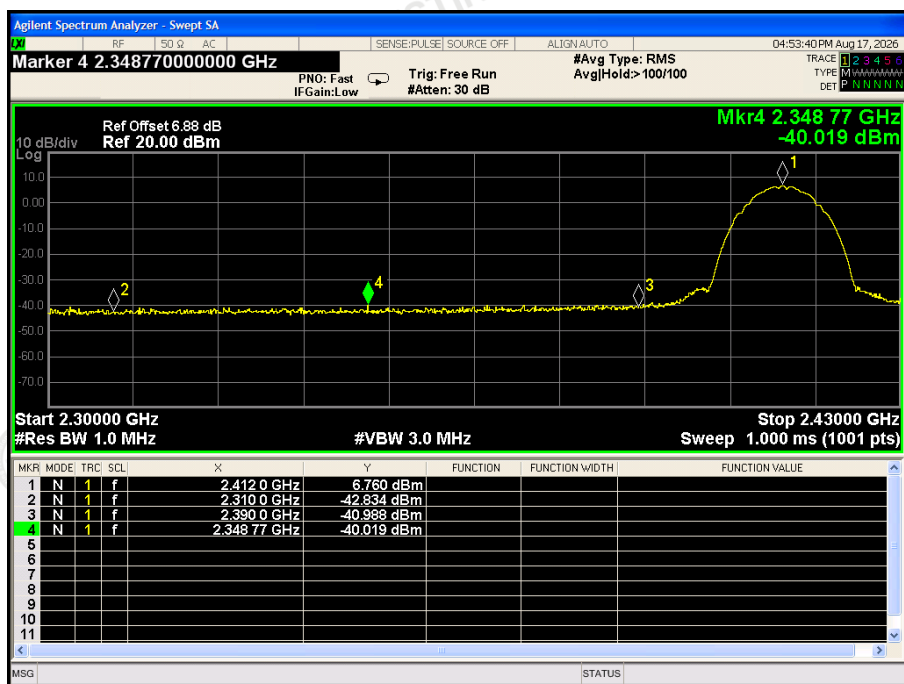
Note: The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

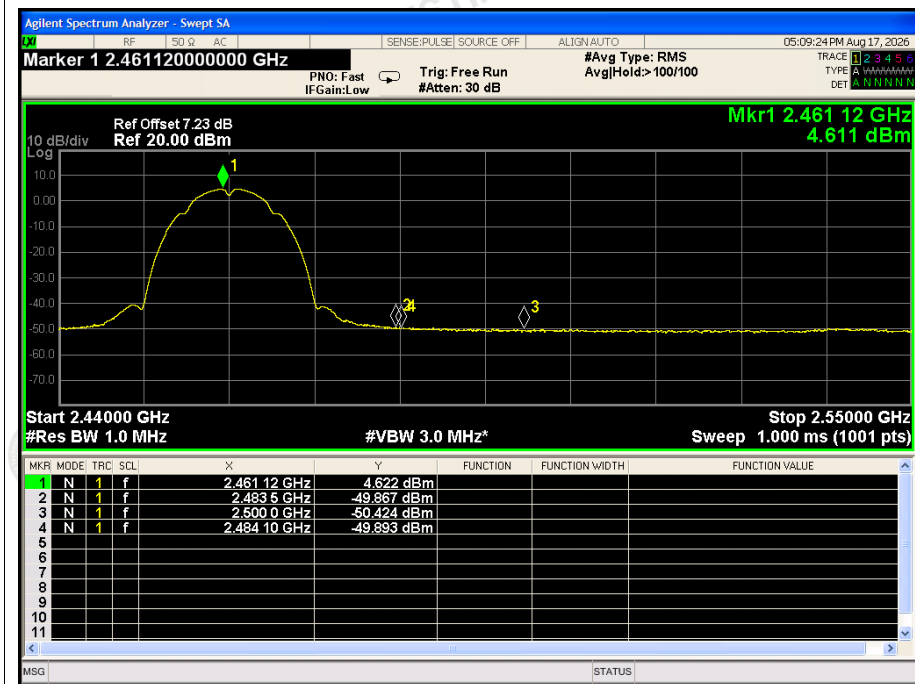
NVNT b 2412MHz AV



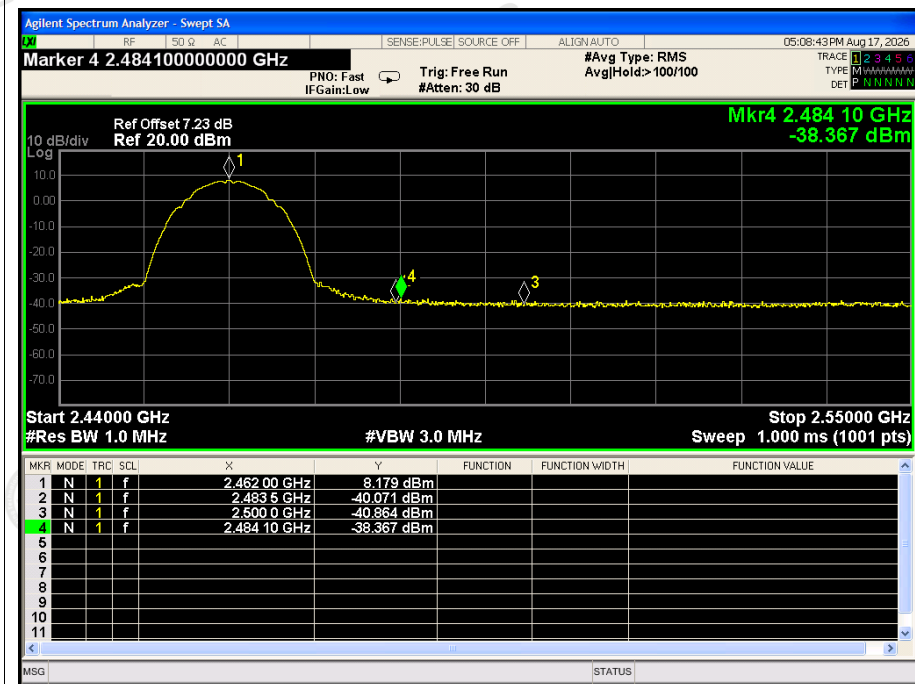
NVNT b 2412MHz PK



NVNT b 2462MHz AV

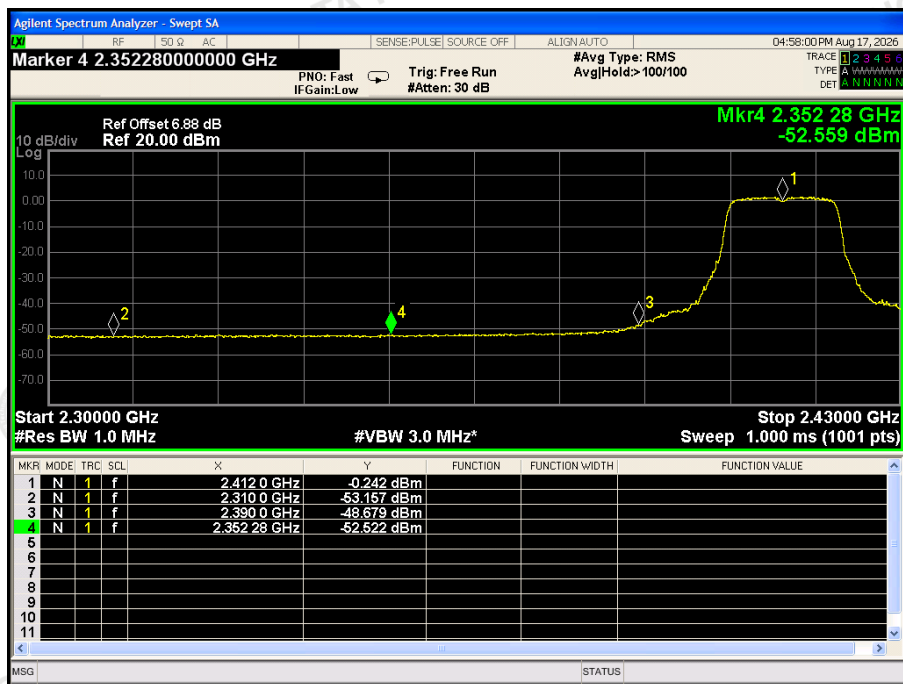


NVNT b 2462MHz PK

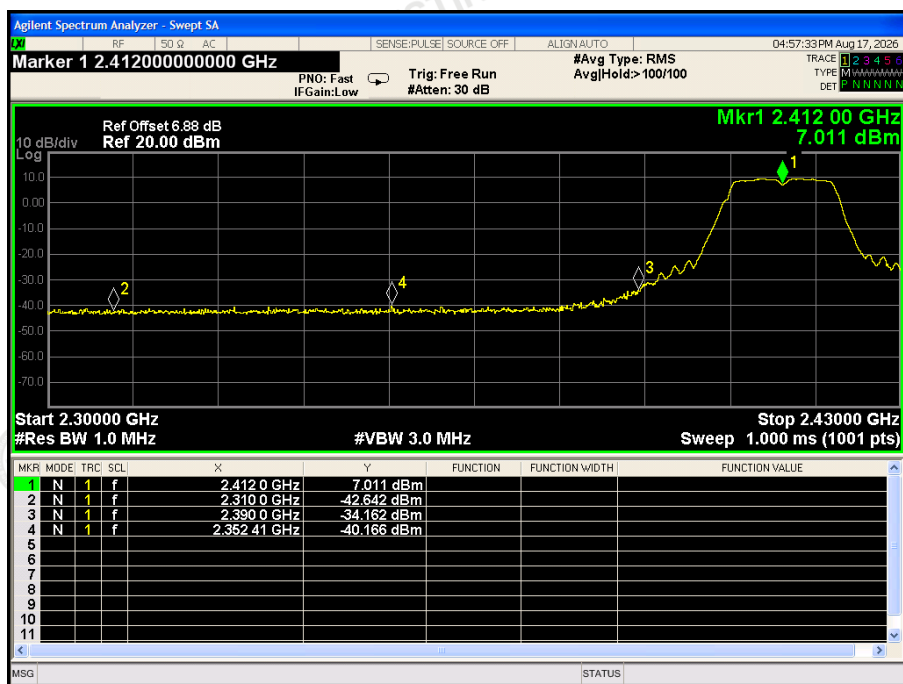


Test Graphs

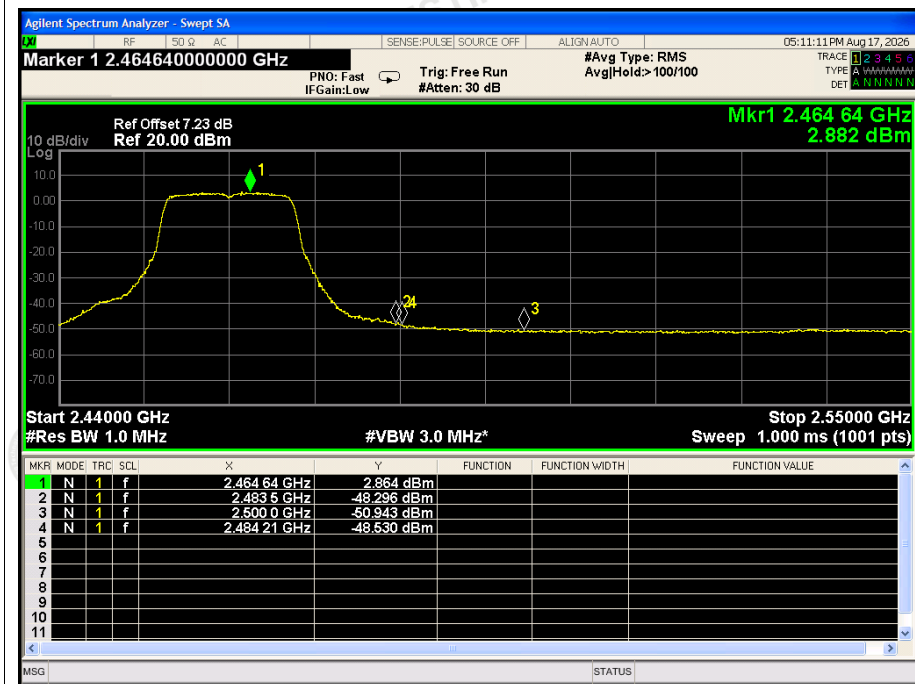
NVNT g 2412MHz AV



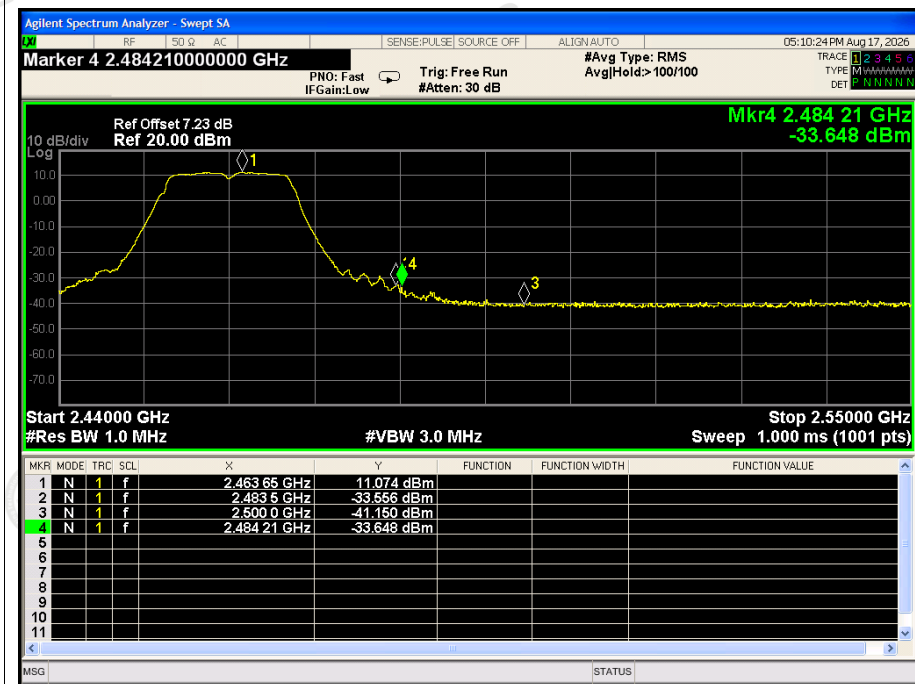
NVNT g 2412MHz PK



NVNT g 2462MHz AV

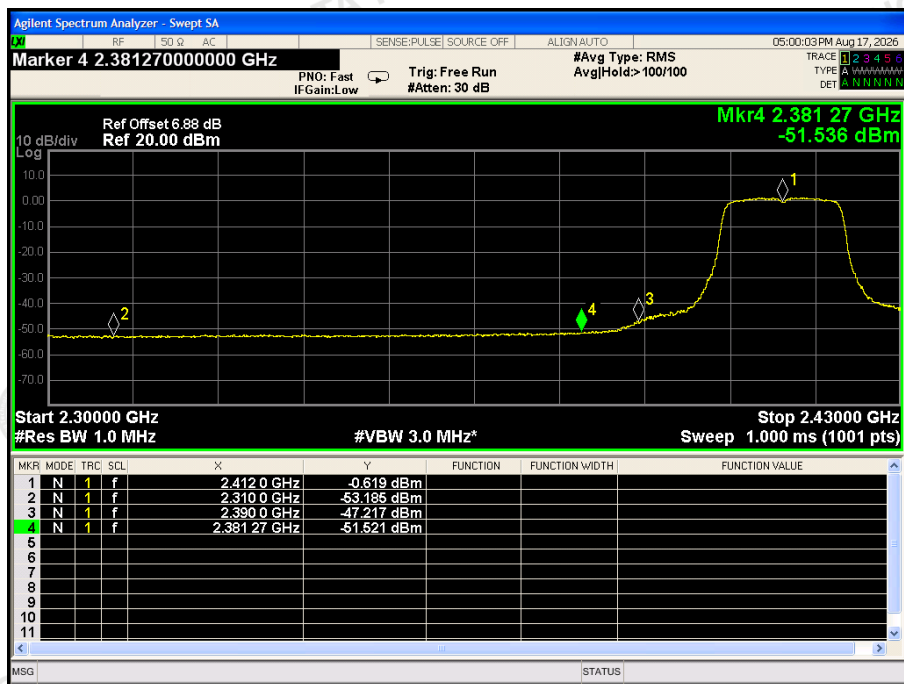


NVNT g 2462MHz PK

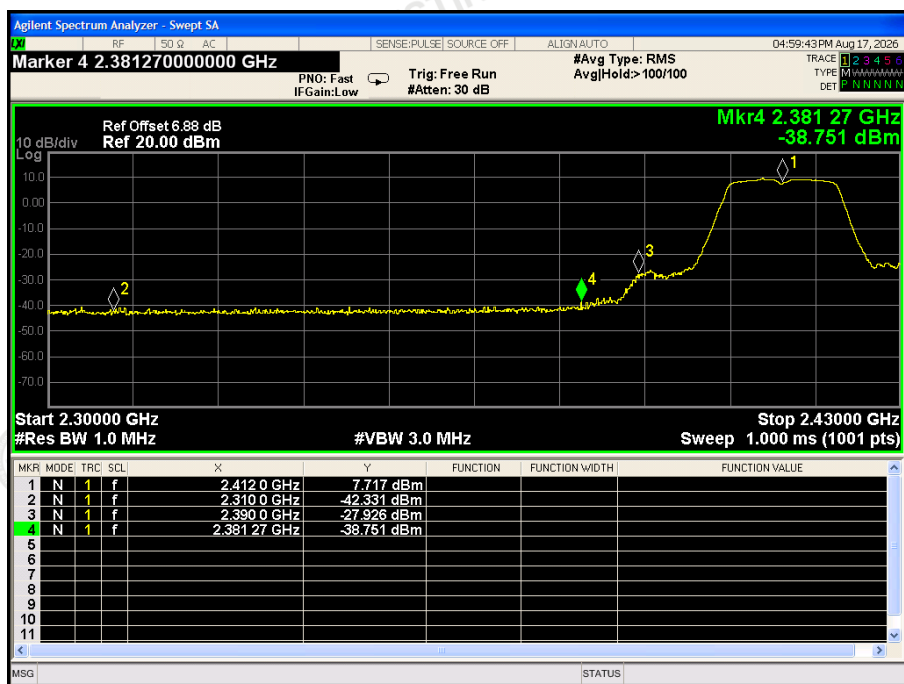


Test Graphs

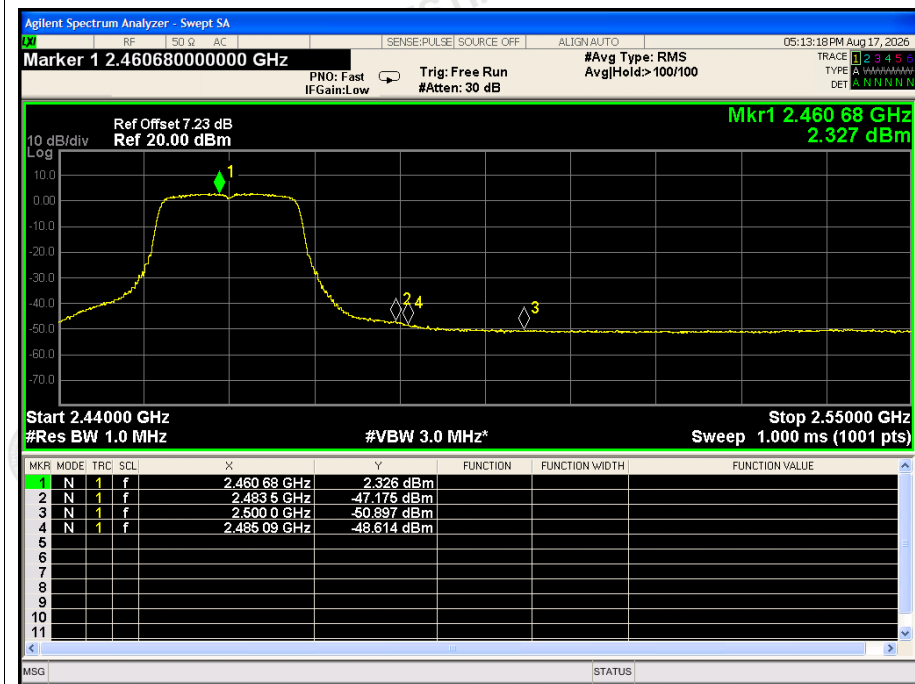
NVNT n20 2412MHz AV



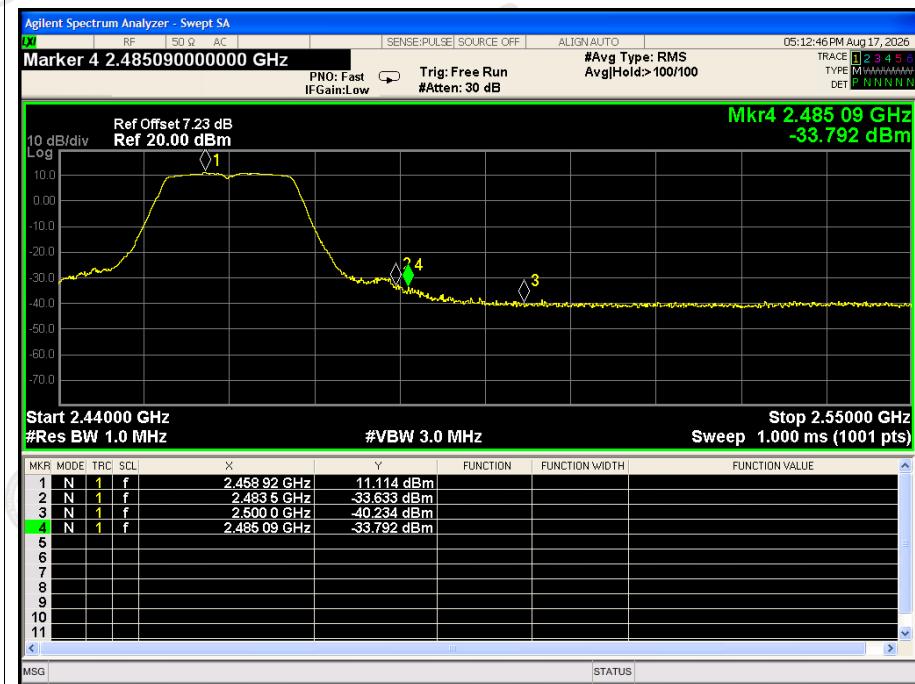
NVNT n20 2412MHz PK



NVNT n20 2462MHz AV

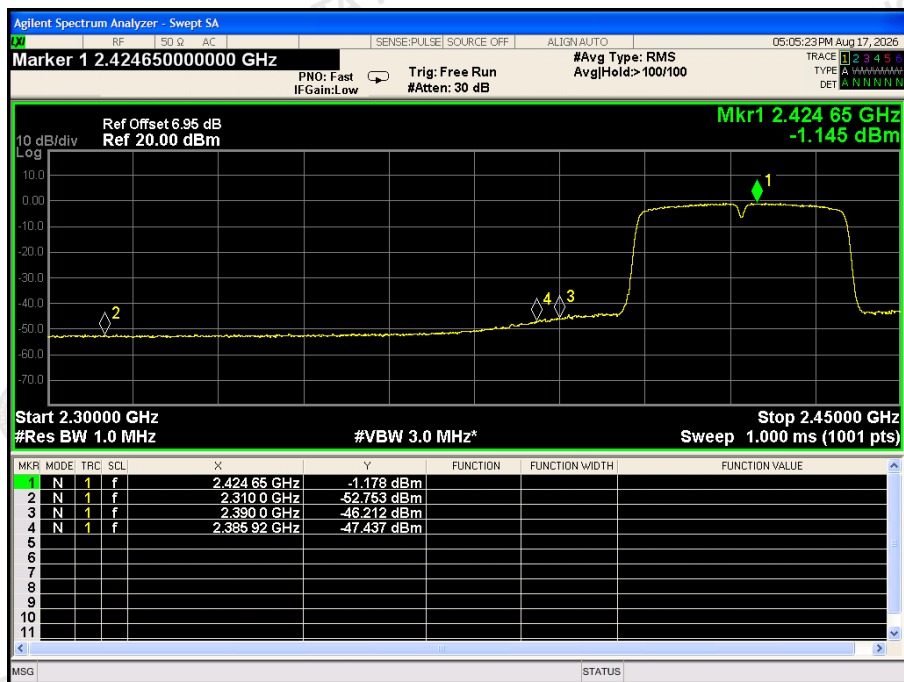


NVNT n20 2462MHz PK

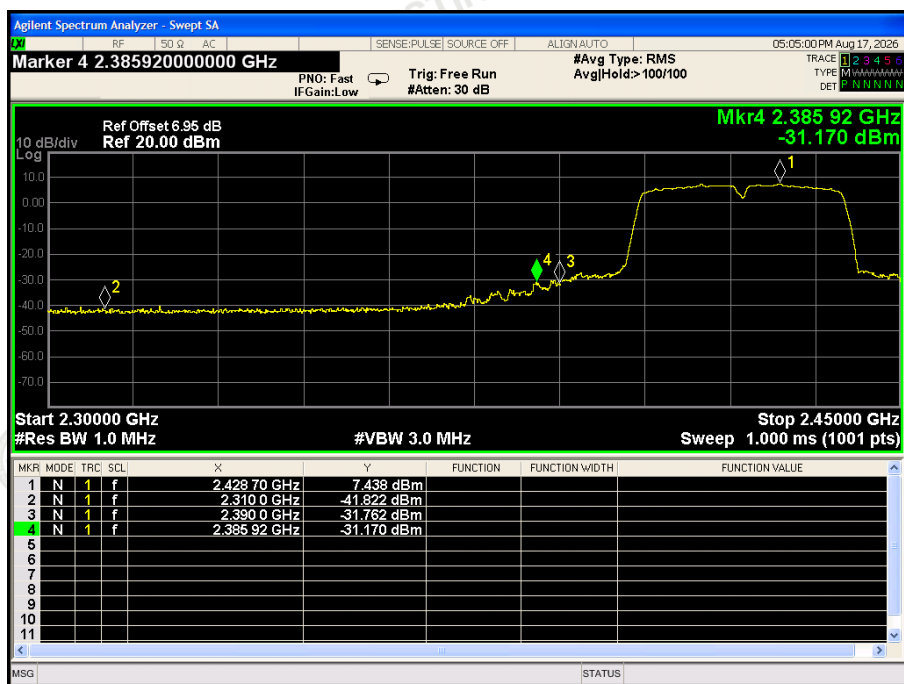


Test Graphs

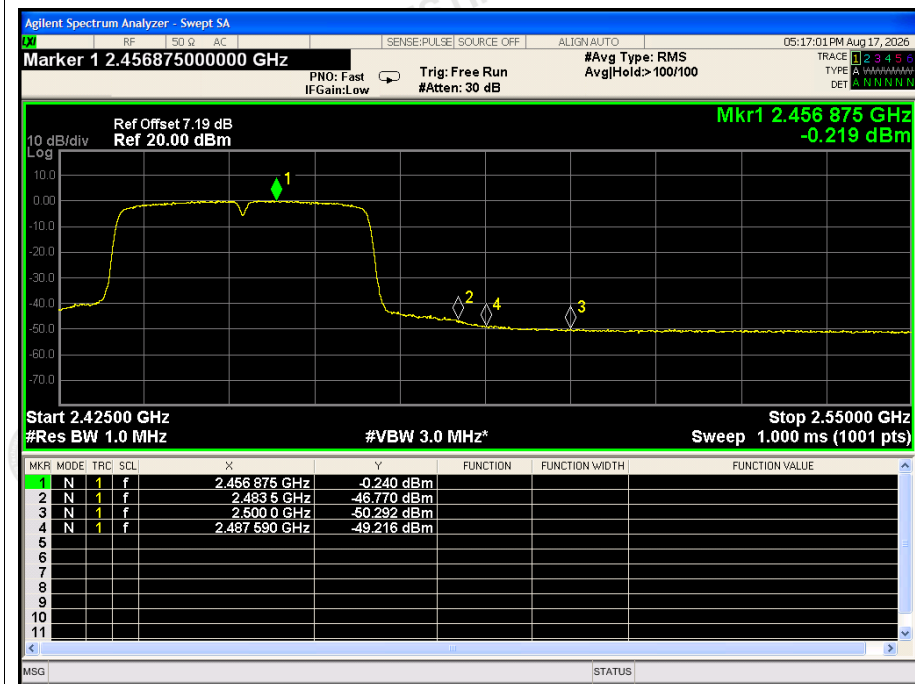
NVNT n40 2422MHz AV



NVNT n40 2422MHz PK



NVNT n40 2452MHz AV



NVNT n40 2452MHz PK

