

Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Projector

Test Model: X3AA

Environmental Conditions

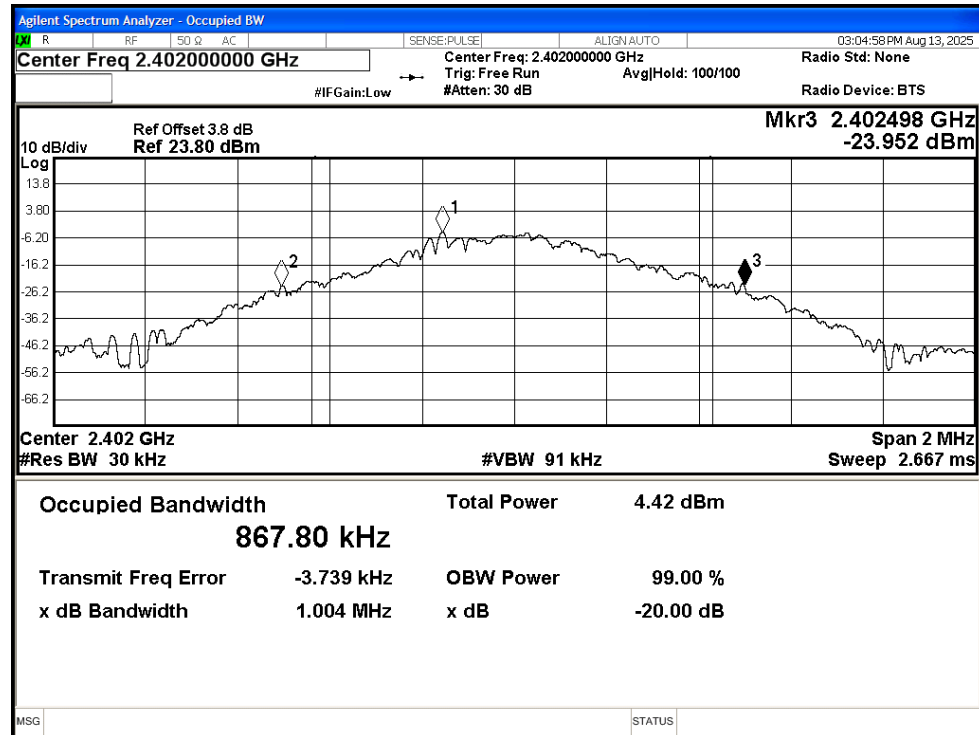
Temperature:	23.8°C
Relative Humidity:	52.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Yan Chen

A.1 -20dB Bandwidth

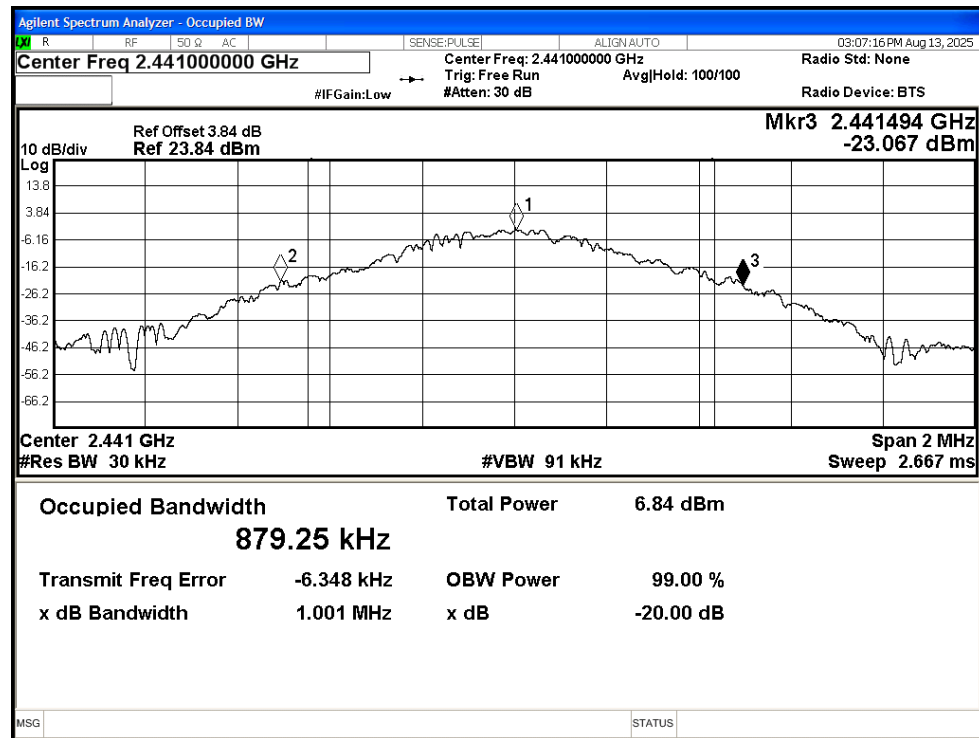
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant	1.004	N/A	Pass
NVNT	1-DH5	2441	Ant	1.001	N/A	Pass
NVNT	1-DH5	2480	Ant	0.987	N/A	Pass
NVNT	2-DH5	2402	Ant	1.286	N/A	Pass
NVNT	2-DH5	2441	Ant	1.276	N/A	Pass
NVNT	2-DH5	2480	Ant	1.314	N/A	Pass
NVNT	3-DH5	2402	Ant	1.31	N/A	Pass
NVNT	3-DH5	2441	Ant	1.297	N/A	Pass
NVNT	3-DH5	2480	Ant	1.304	N/A	Pass

Test Graphs

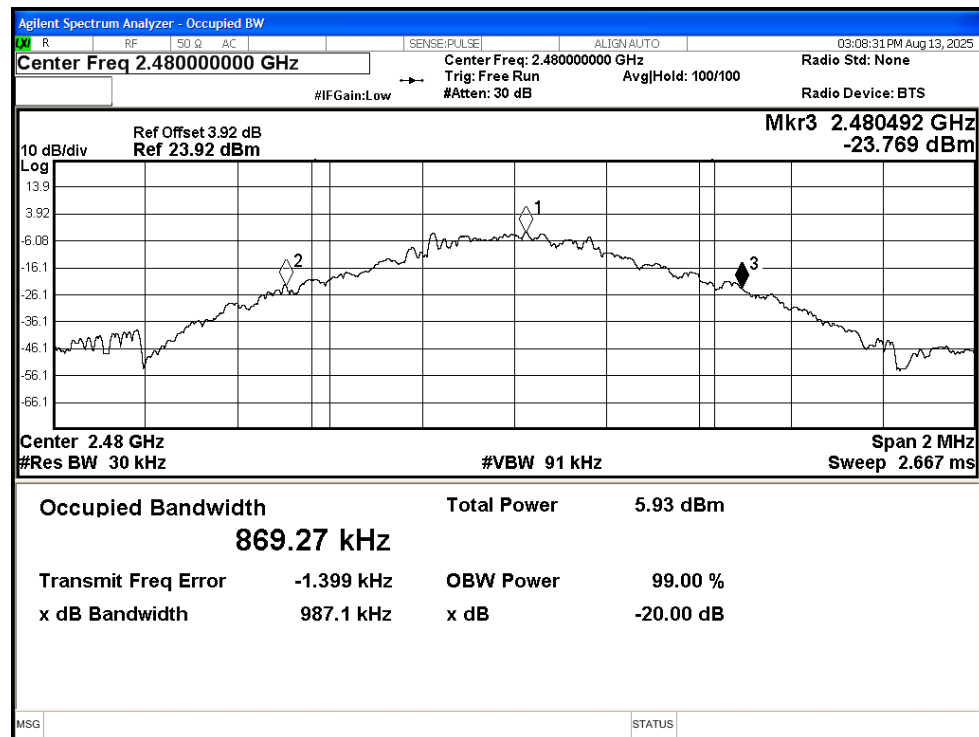
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant



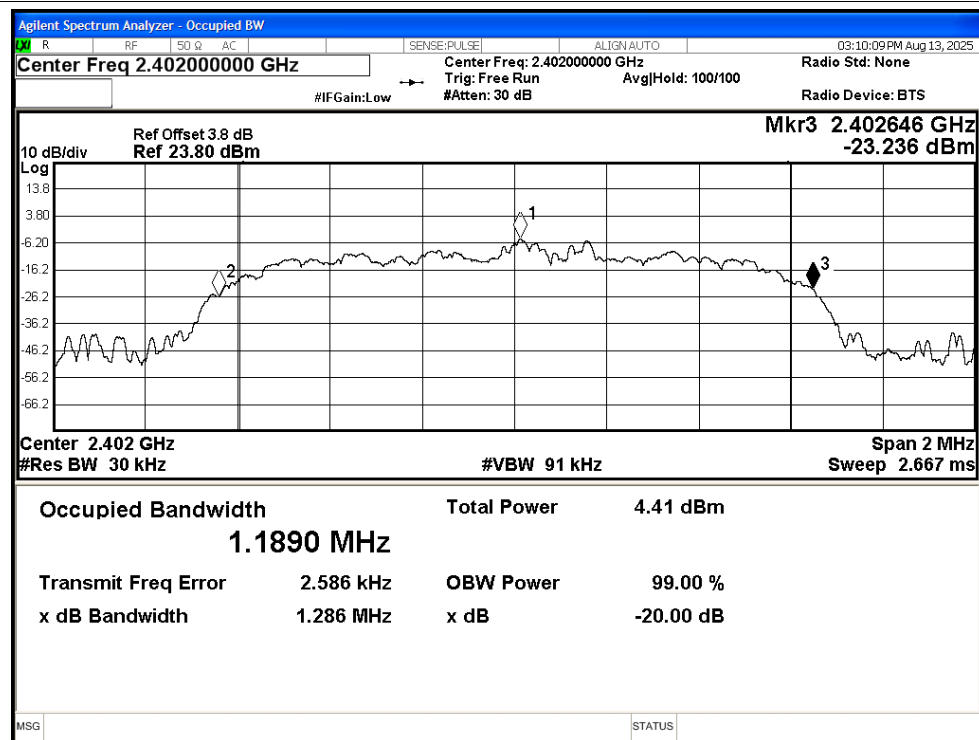
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant



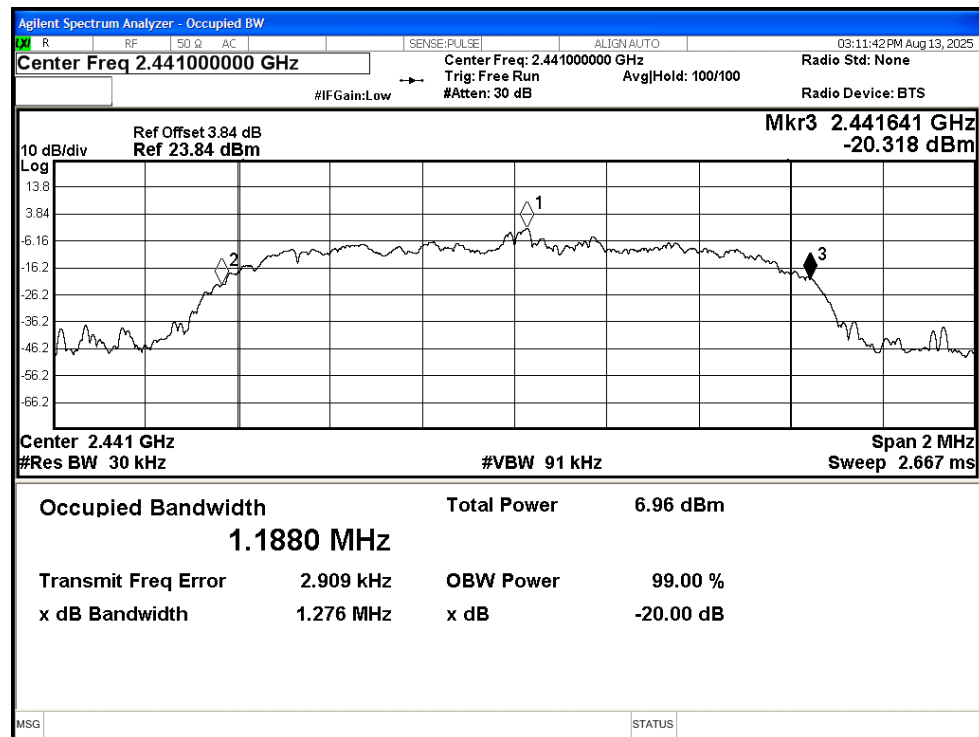
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant



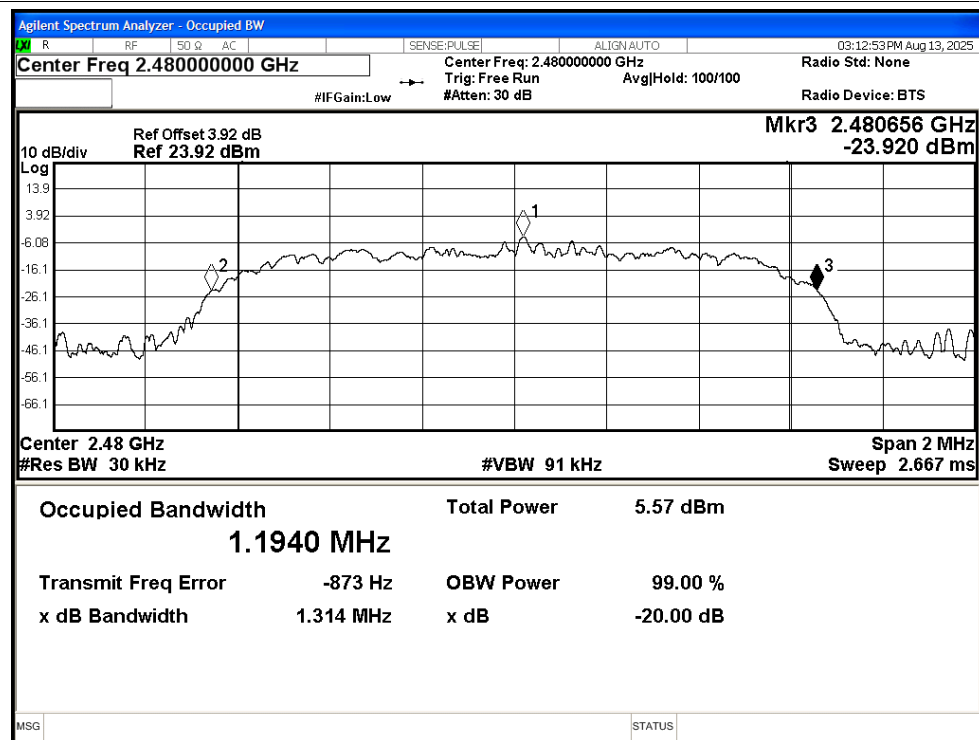
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant



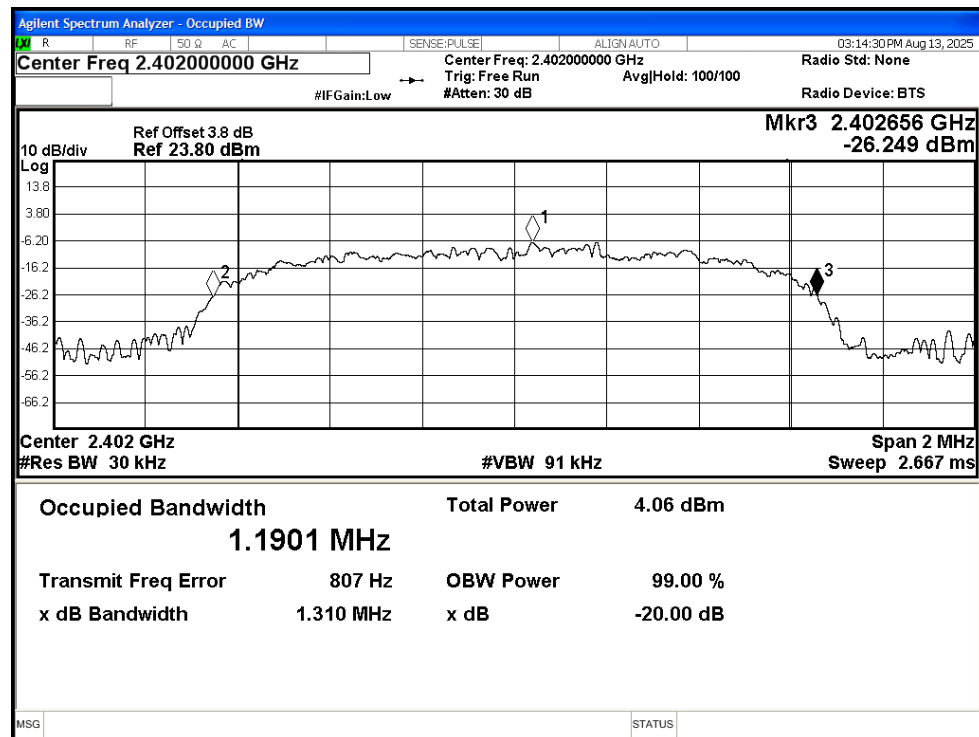
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant



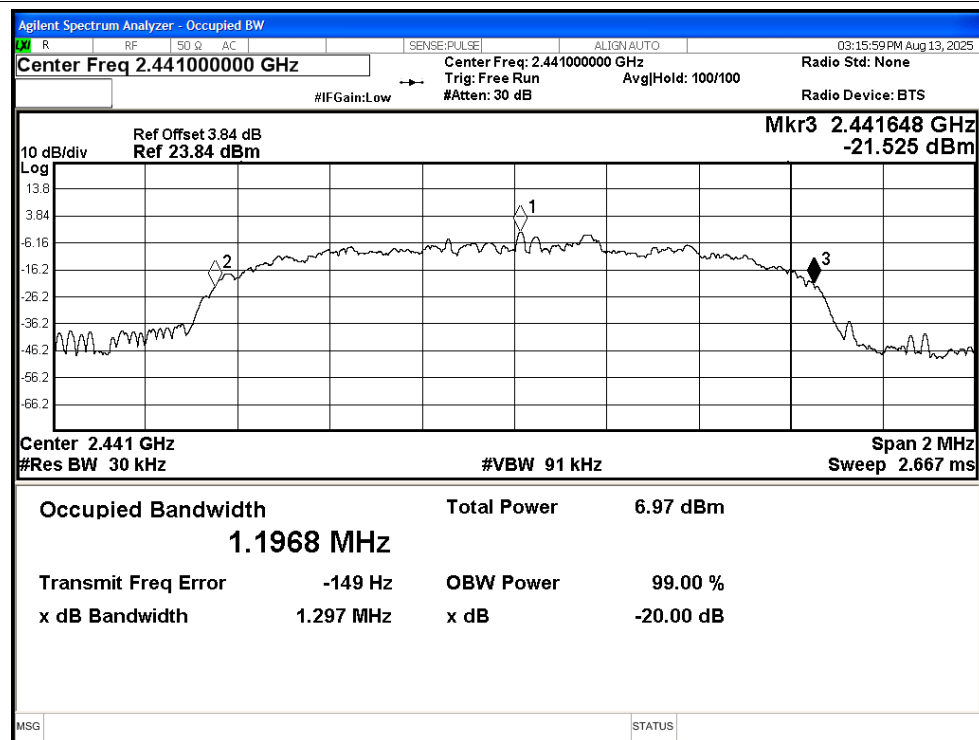
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant

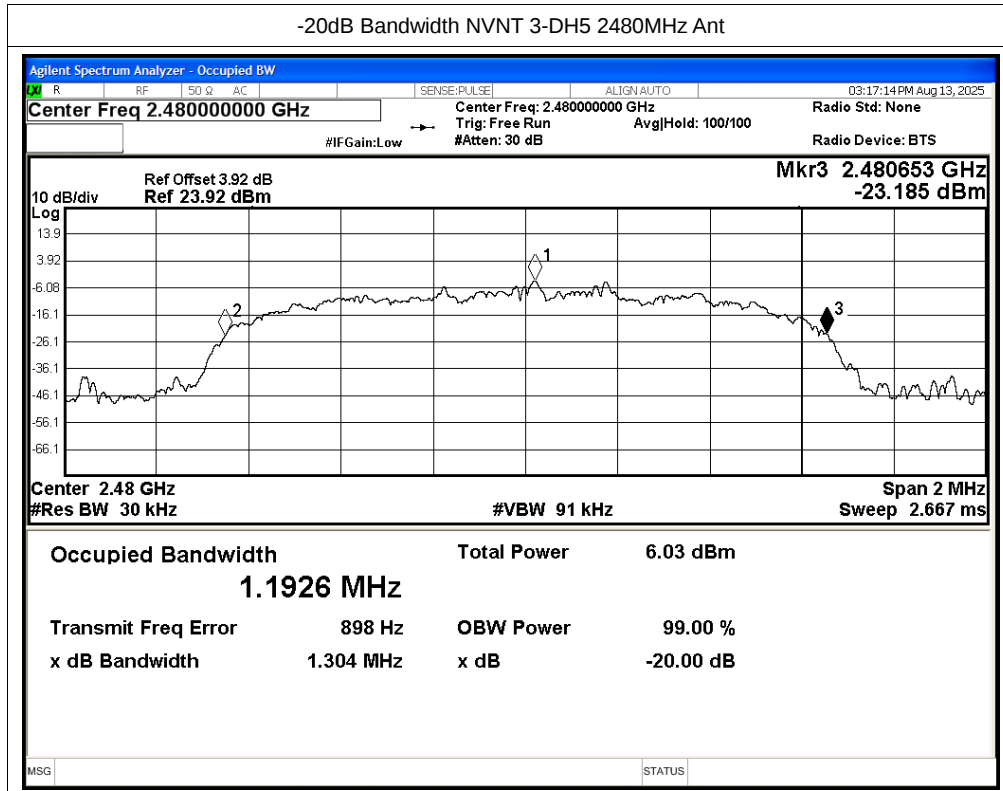


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant



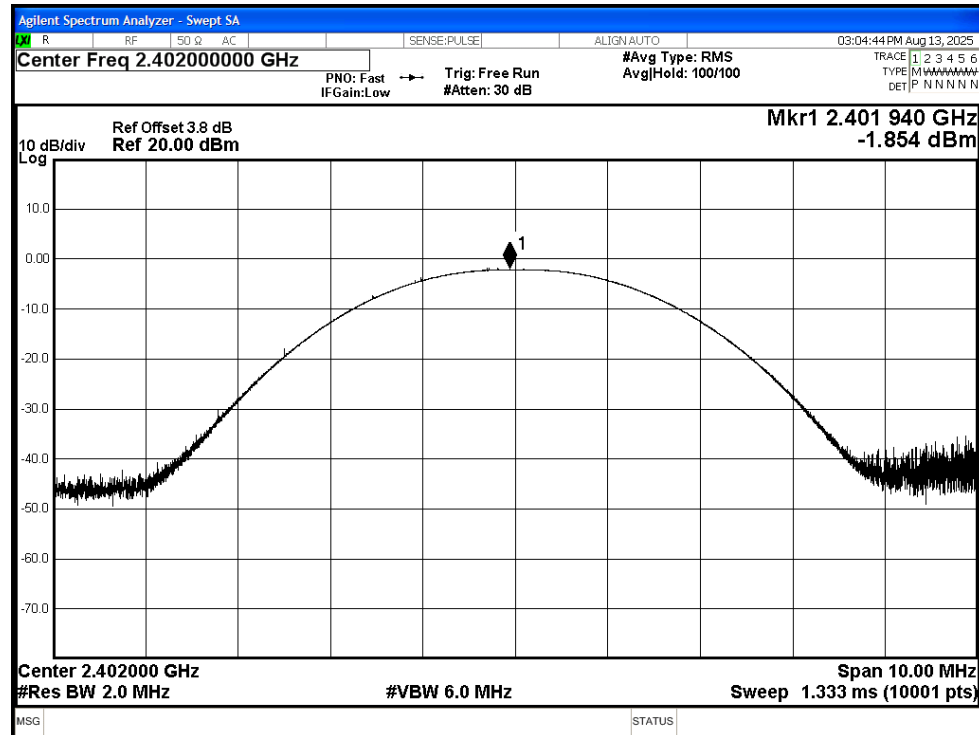


A.2 Maximum Peak Conducted Output Power

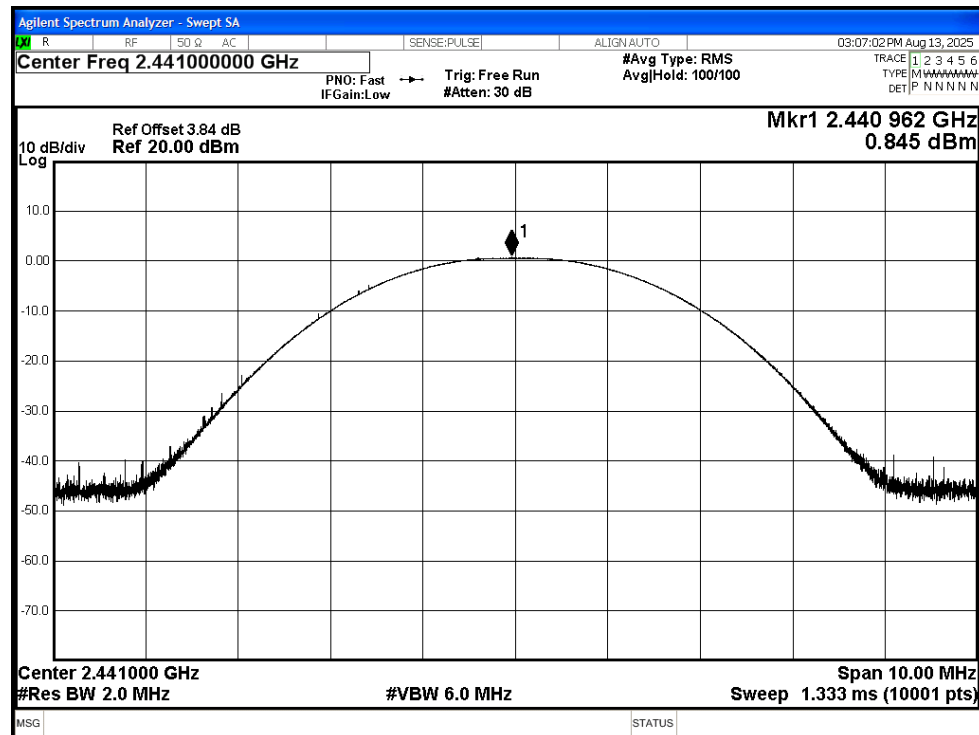
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant	-1.85	21	Pass
NVNT	1-DH5	2441	Ant	0.85	21	Pass
NVNT	1-DH5	2480	Ant	-0.16	21	Pass
NVNT	2-DH5	2402	Ant	0.09	21	Pass
NVNT	2-DH5	2441	Ant	2.79	21	Pass
NVNT	2-DH5	2480	Ant	1.67	21	Pass
NVNT	3-DH5	2402	Ant	0.53	21	Pass
NVNT	3-DH5	2441	Ant	3.21	21	Pass
NVNT	3-DH5	2480	Ant	2.07	21	Pass

Test Graphs

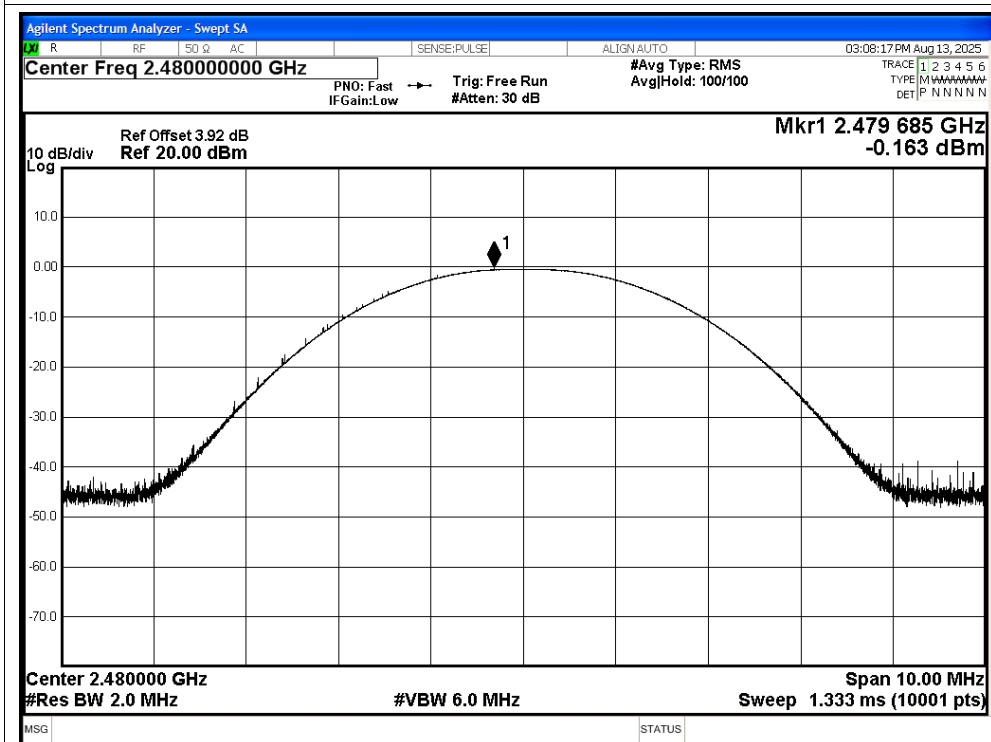
Power NVNT 1-DH5 2402MHz Ant



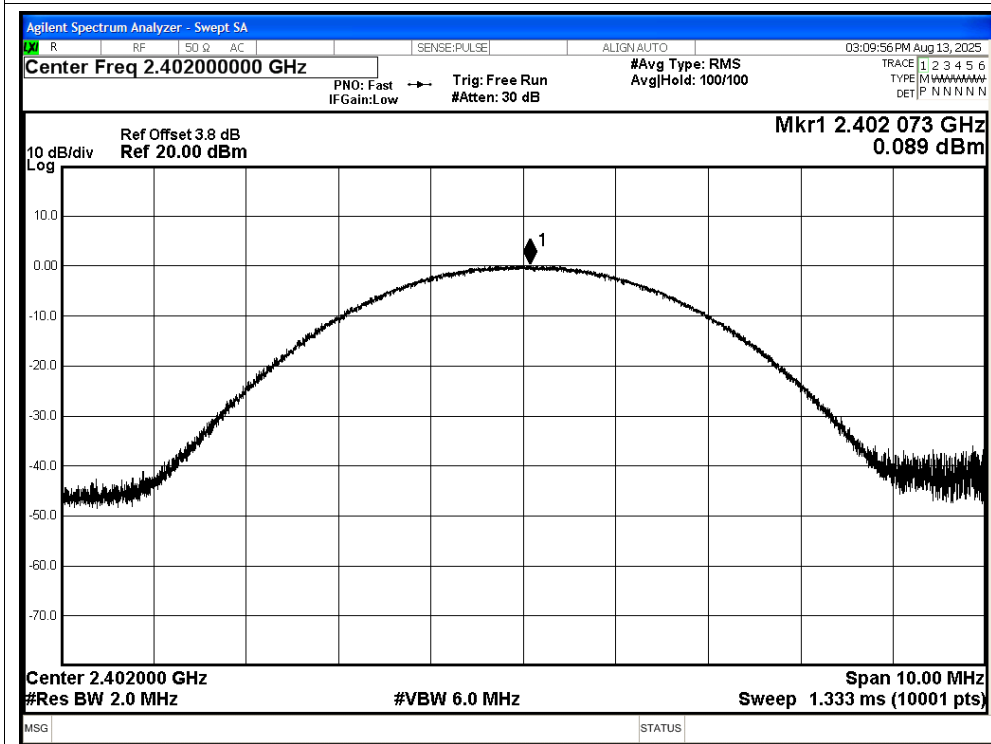
Power NVNT 1-DH5 2441MHz Ant

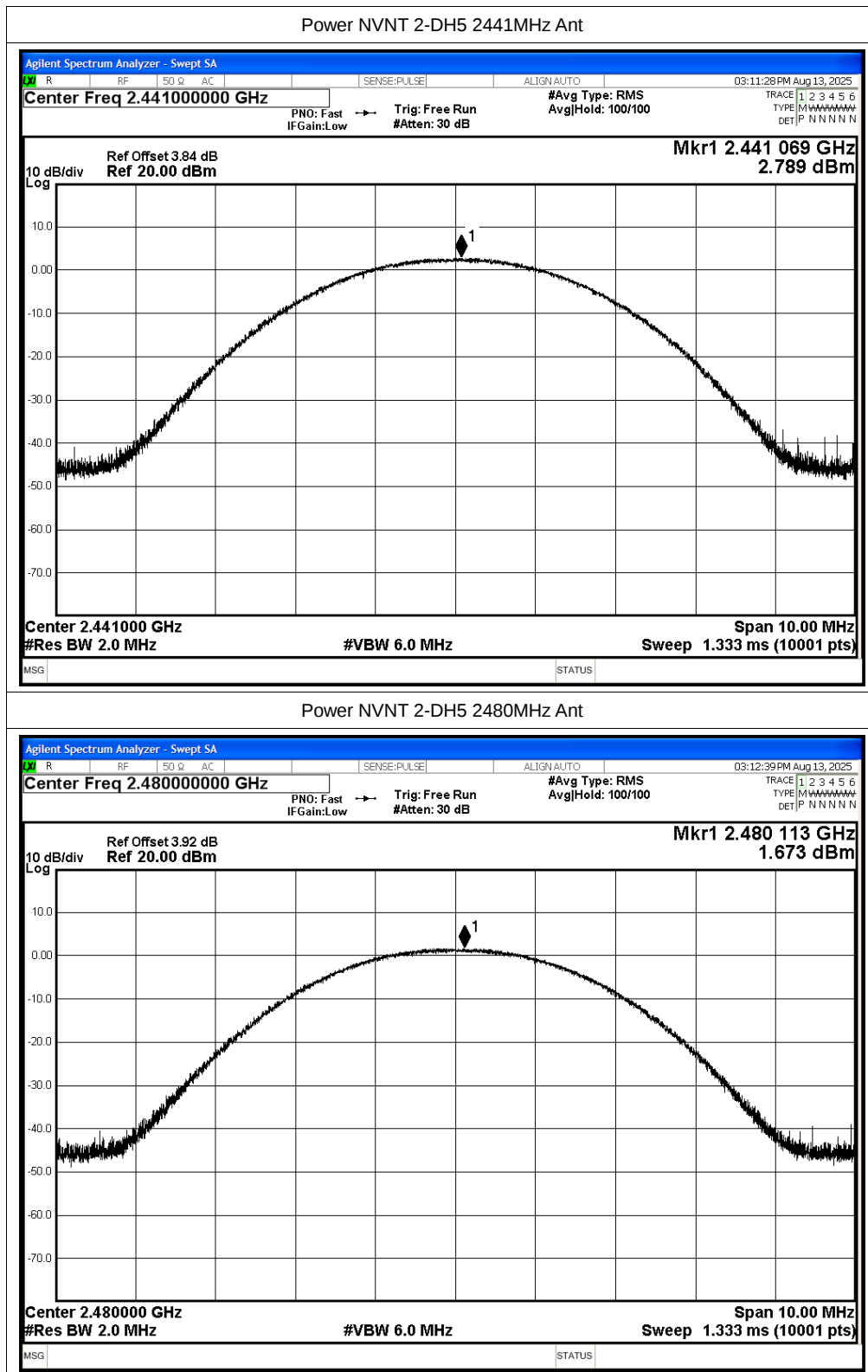


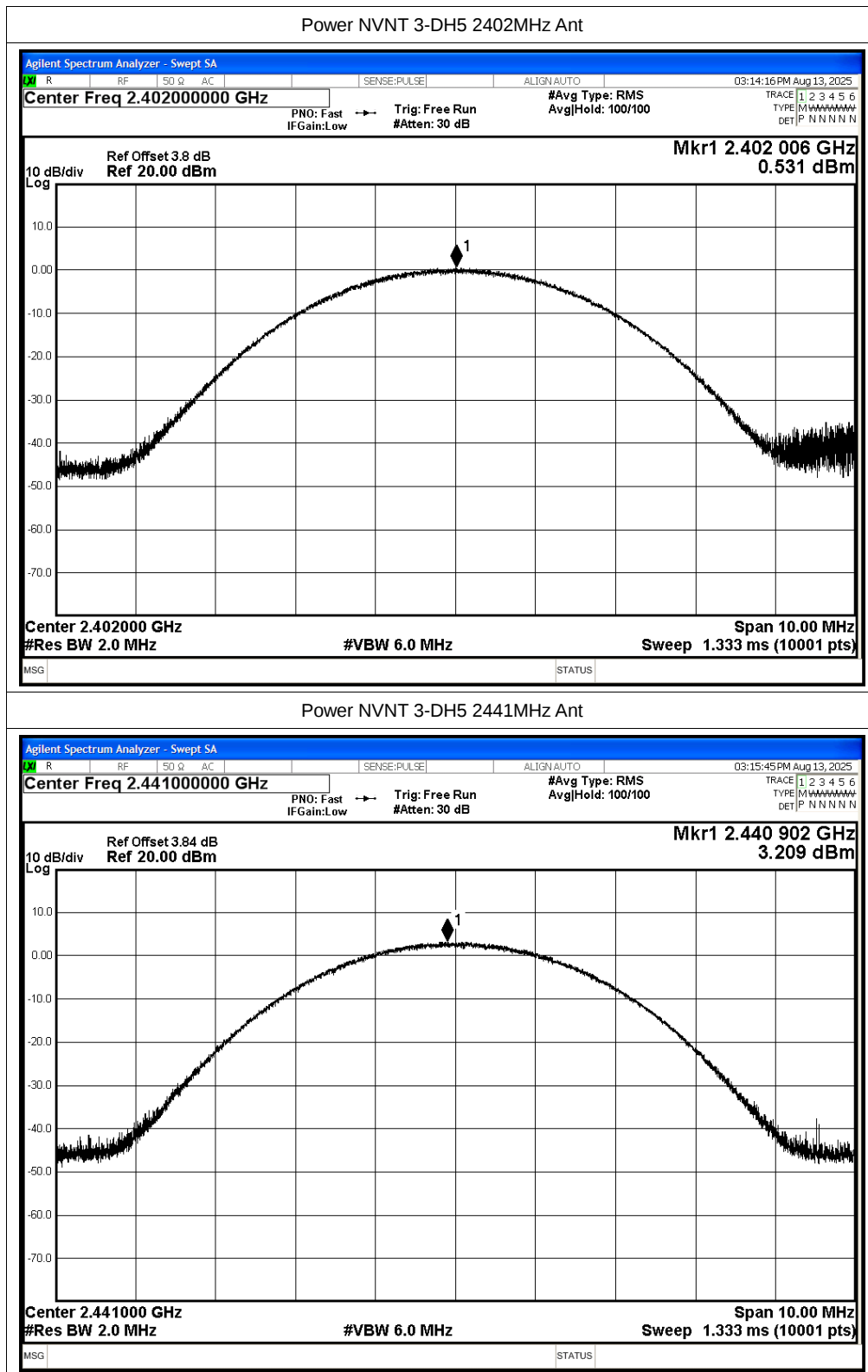
Power NVNT 1-DH5 2480MHz Ant

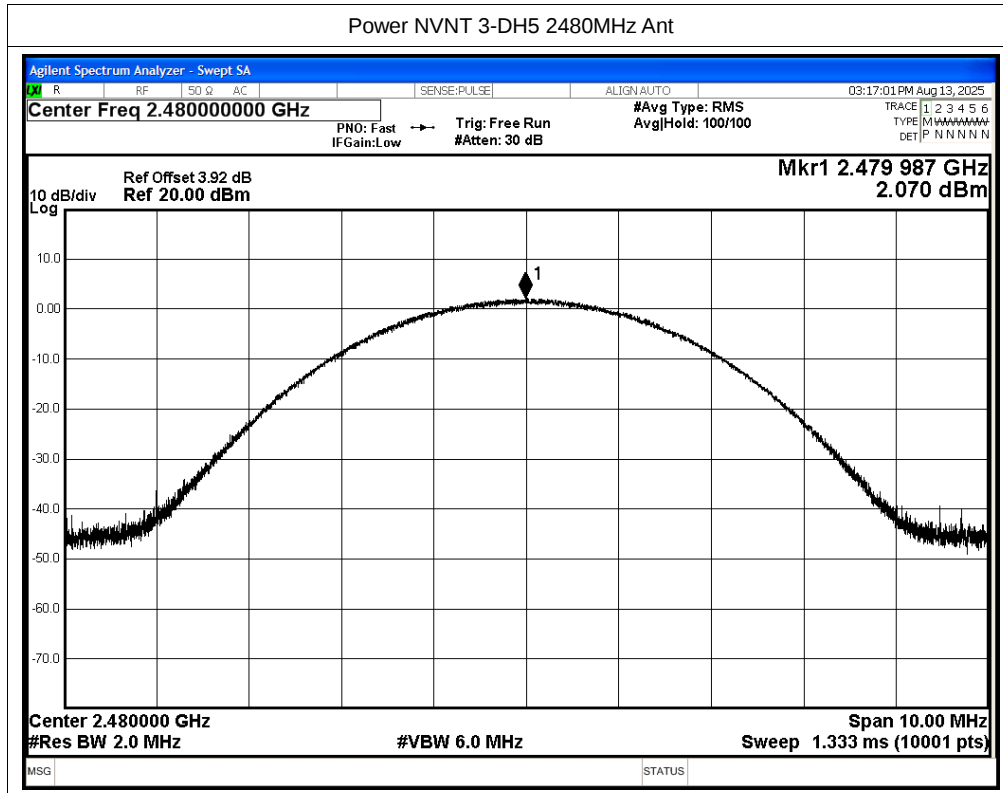


Power NVNT 2-DH5 2402MHz Ant







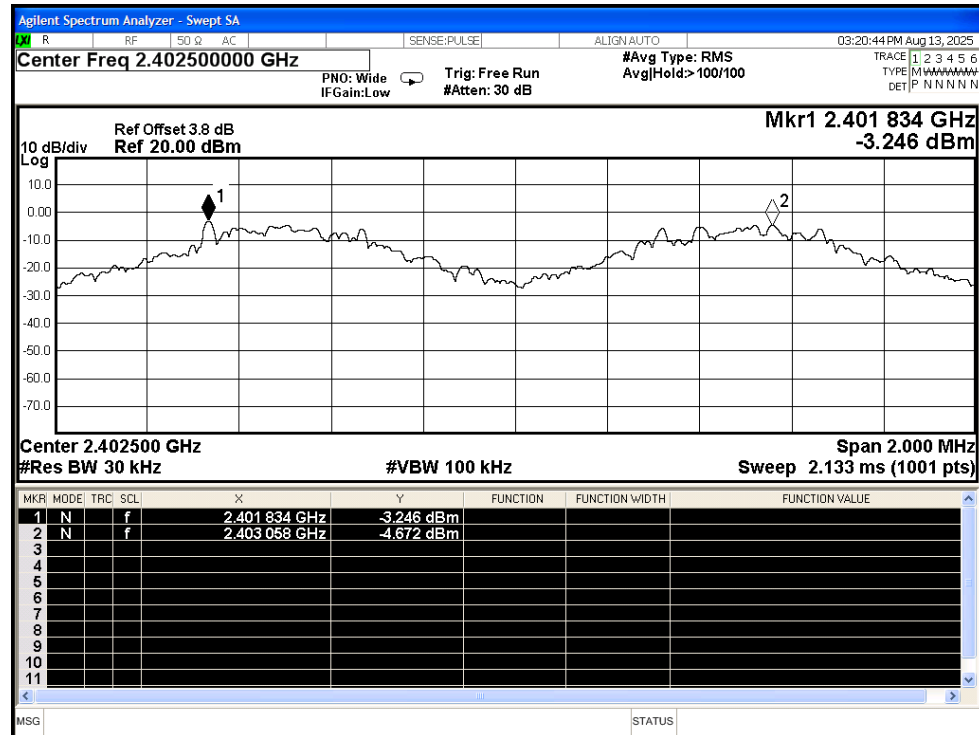


A.3 Carrier Frequencies Separation

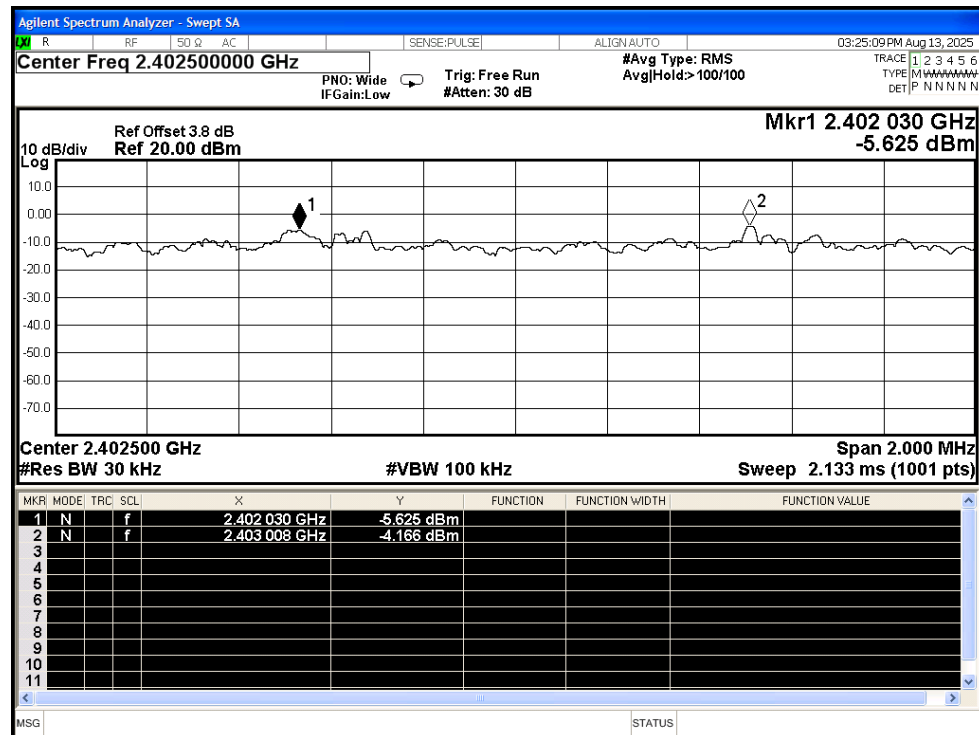
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant	2401.834	2403.058	1.224	0.669	Pass
NVNT	2-DH5	Ant	2402.03	2403.008	0.978	0.876	Pass
NVNT	3-DH5	Ant	2401.912	2403.034	1.122	0.873	Pass

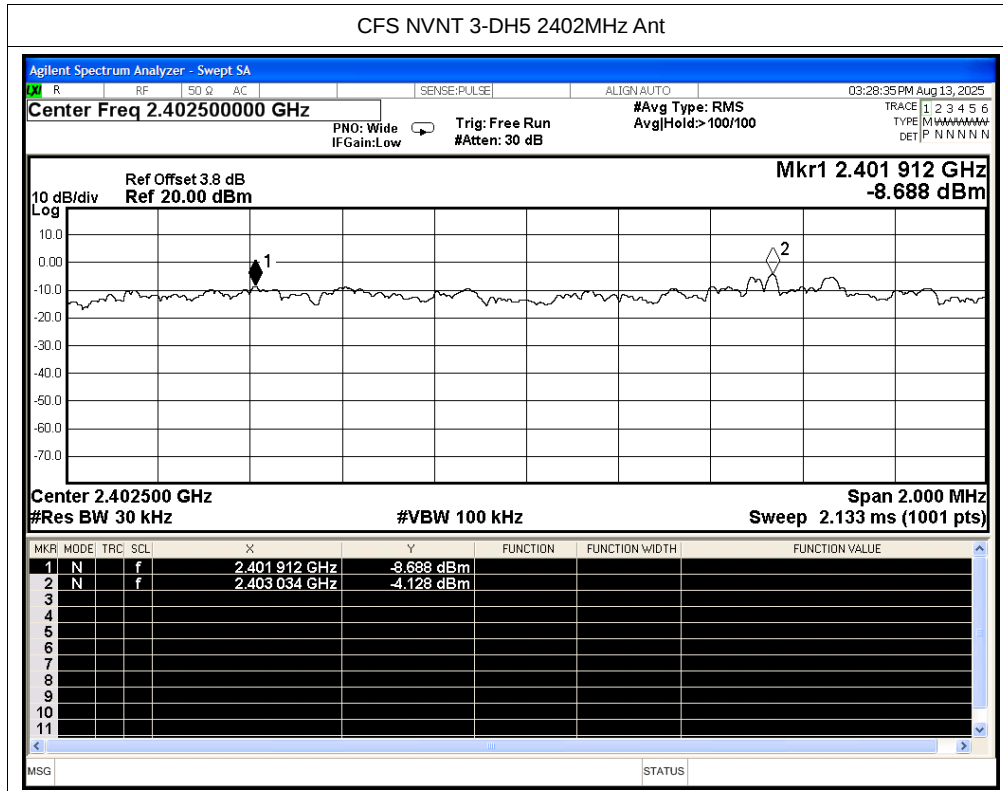
Test Graphs

CFS NVNT 1-DH5 2402MHz Ant



CFS NVNT 2-DH5 2402MHz Ant



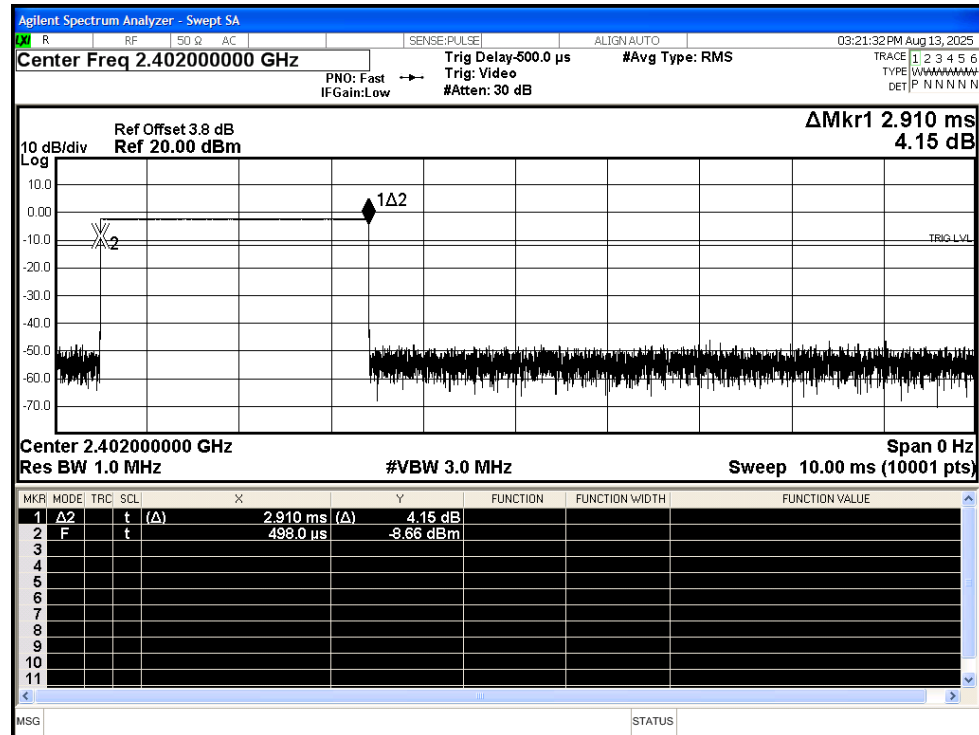


A.4 Dwell Time

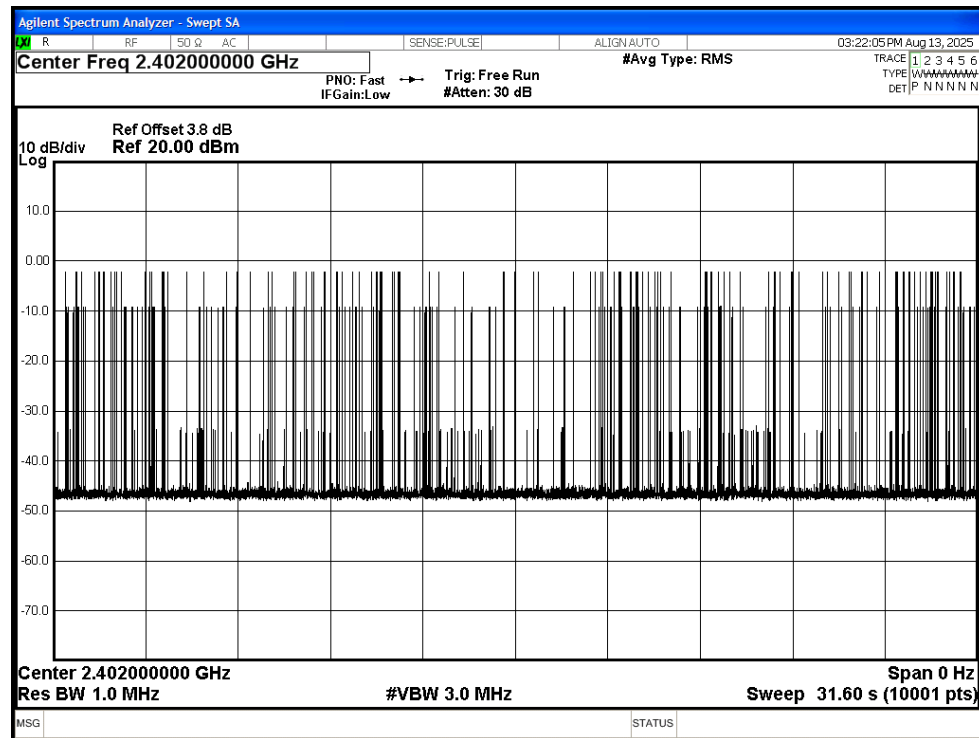
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant	2.91	334.65	115	31600	400	Pass
NVNT	2-DH5	2402	Ant	2.899	315.991	109	31600	400	Pass
NVNT	3-DH5	2402	Ant	2.897	307.082	106	31600	400	Pass

Test Graphs

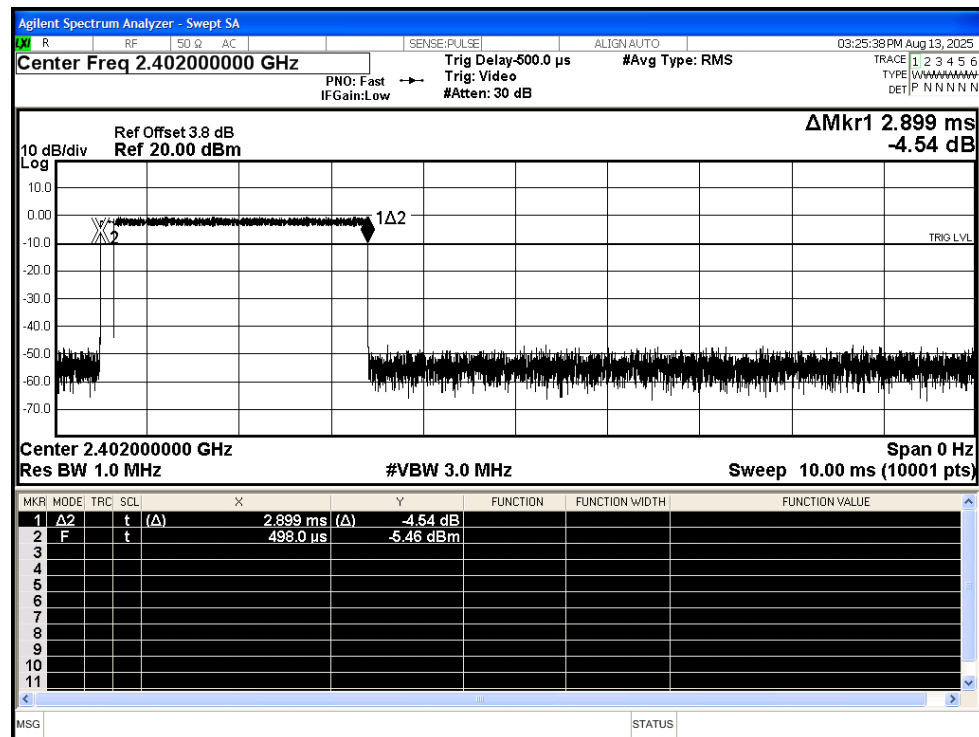
Dwell NVNT 1-DH5 2402MHz Ant One Burst



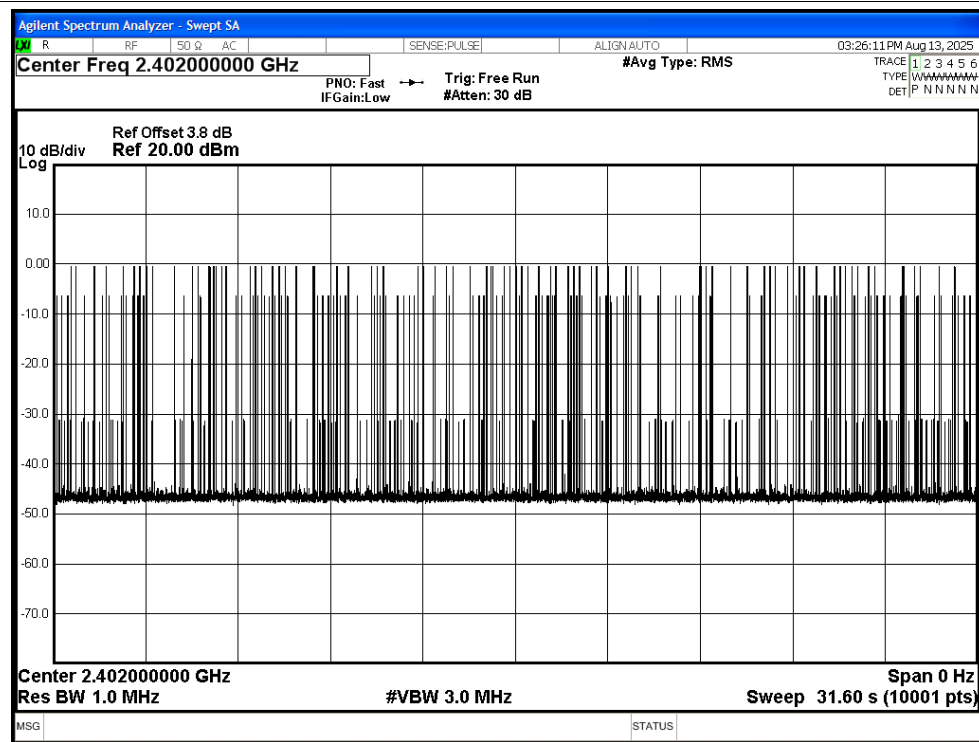
Dwell NVNT 1-DH5 2402MHz Ant Accumulated



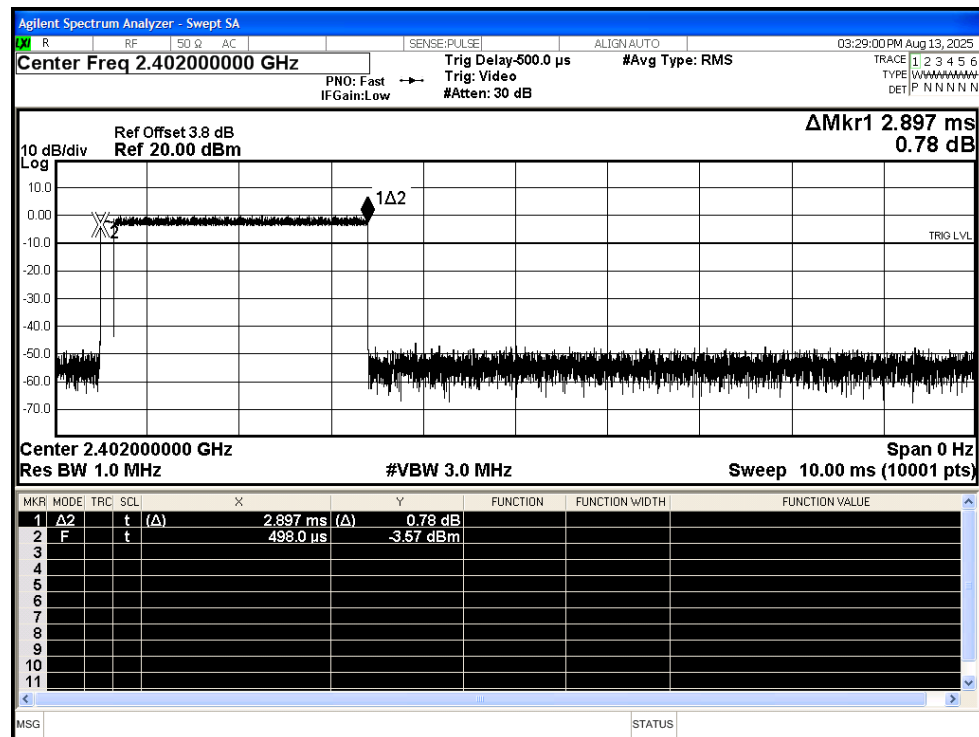
Dwell NVNT 2-DH5 2402MHz Ant One Burst



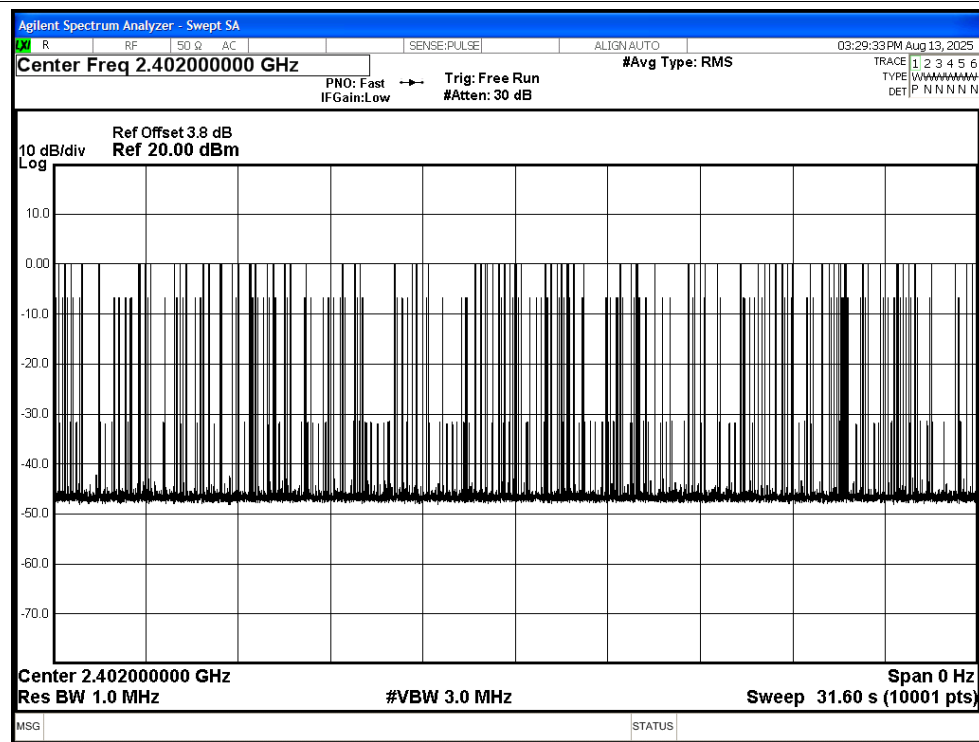
Dwell NVNT 2-DH5 2402MHz Ant Accumulated



Dwell NVNT 3-DH5 2402MHz Ant One Burst



Dwell NVNT 3-DH5 2402MHz Ant Accumulated

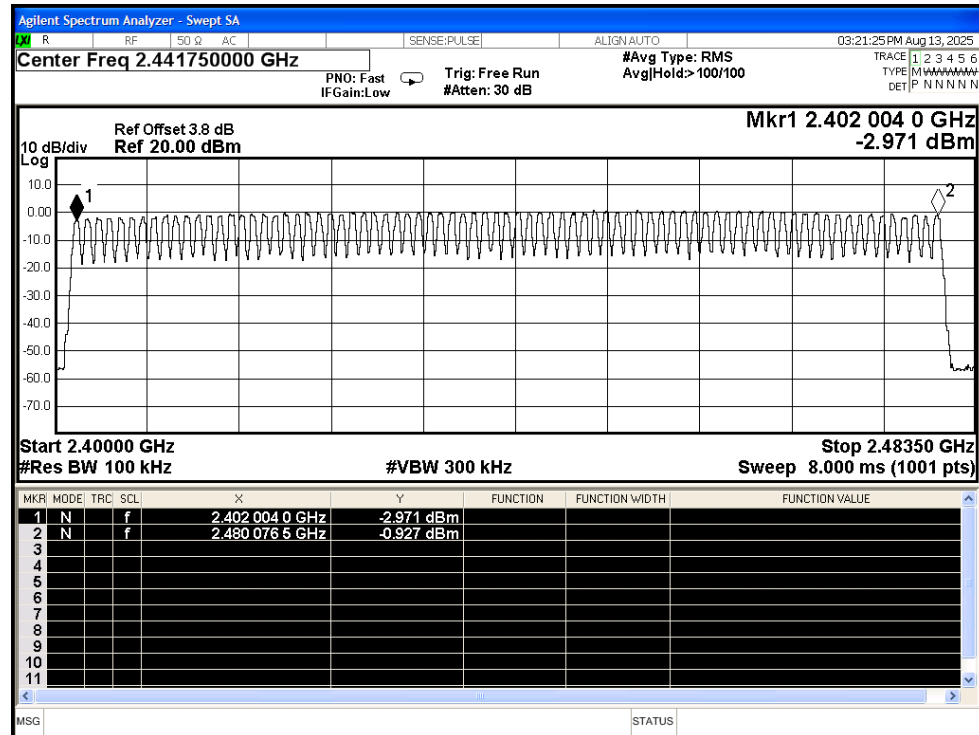


A.5 Number of Hopping Channel

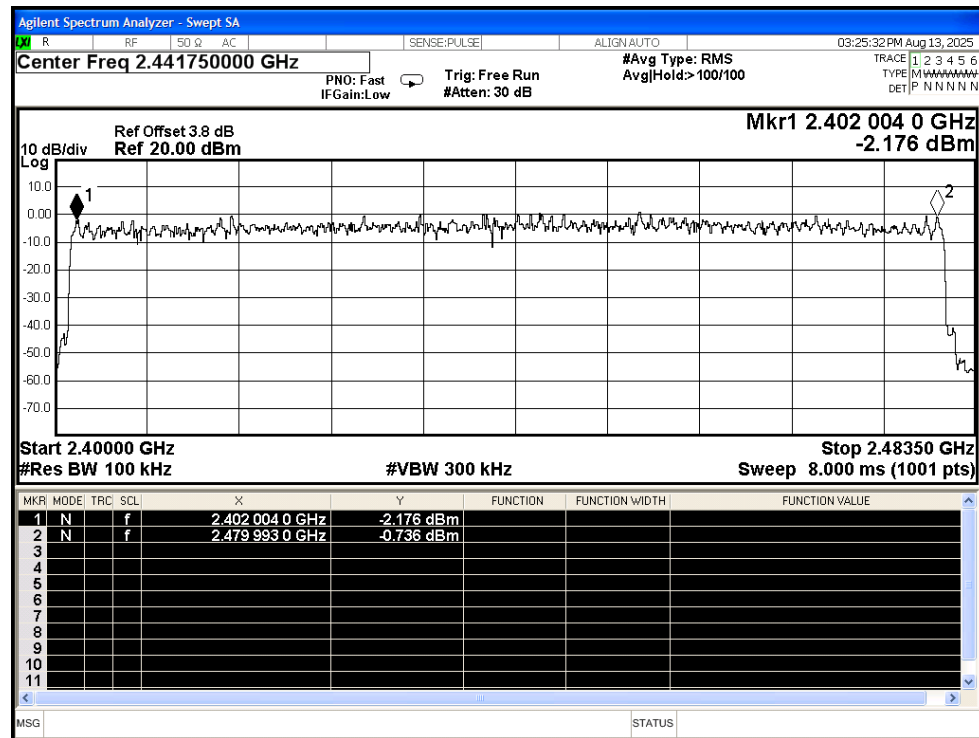
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant	79	15	Pass
NVNT	2-DH5	Ant	79	15	Pass
NVNT	3-DH5	Ant	79	15	Pass

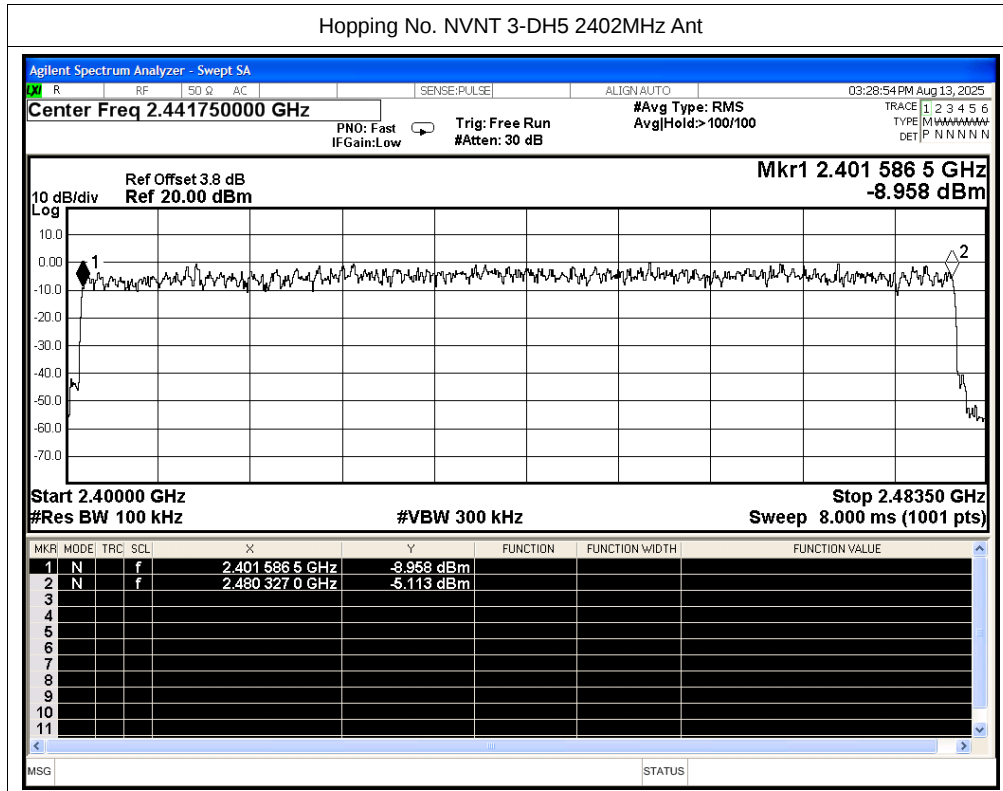
Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant



Hopping No. NVNT 2-DH5 2402MHz Ant



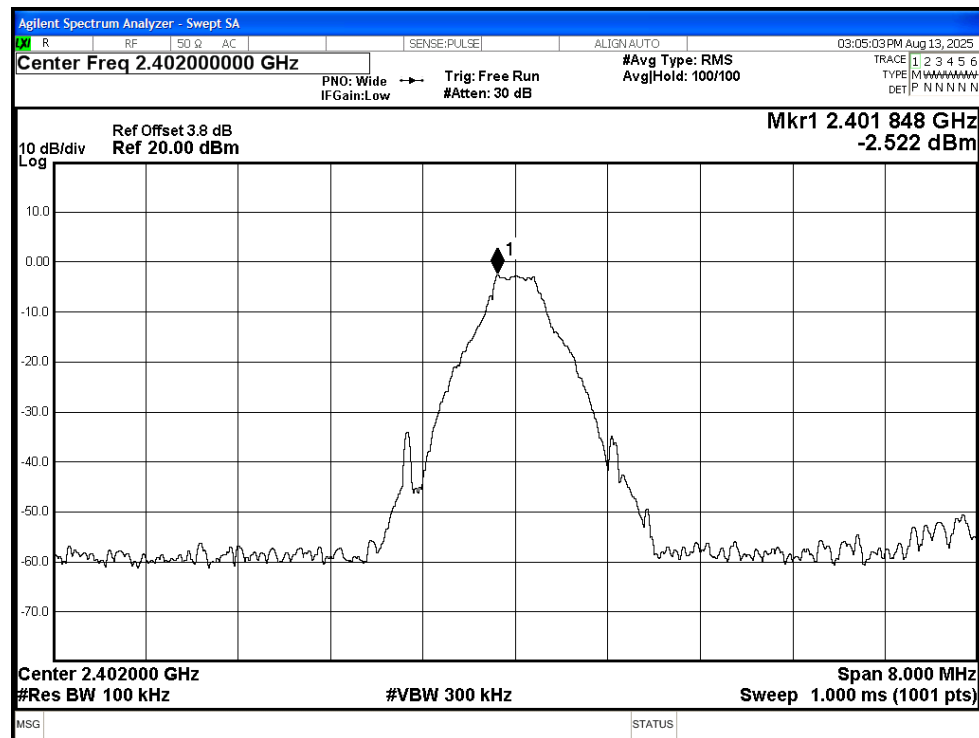


A.6 Band Edge

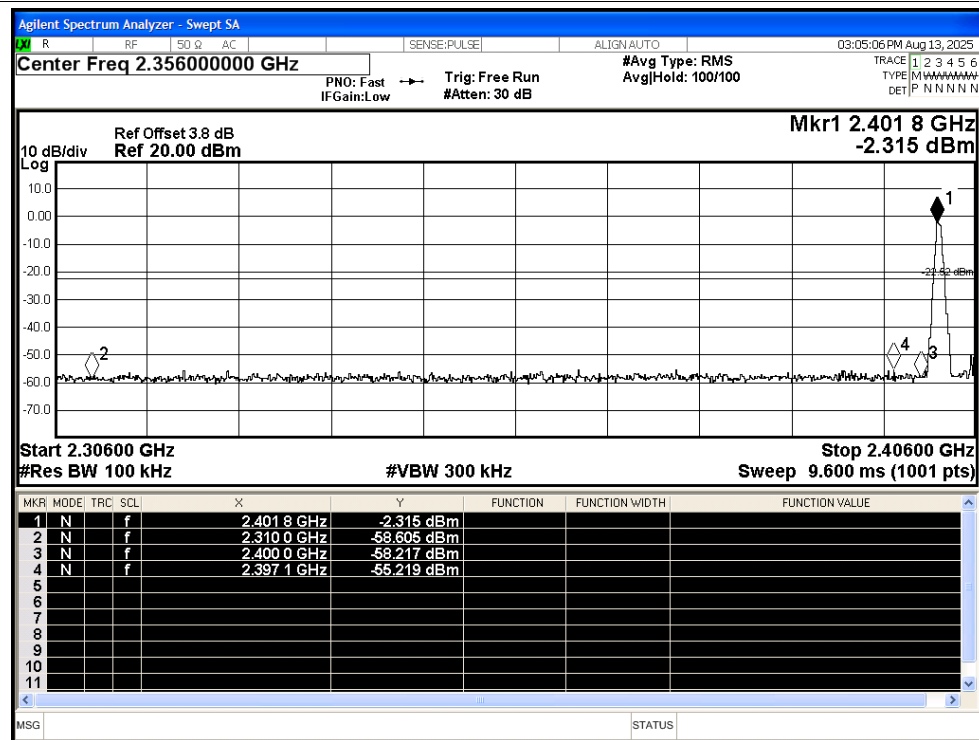
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant	No-Hopping	-52.7	-20	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	-54.58	-20	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	-49.71	-20	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	-53.71	-20	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	-51.67	-20	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	-54.25	-20	Pass

Test Graphs

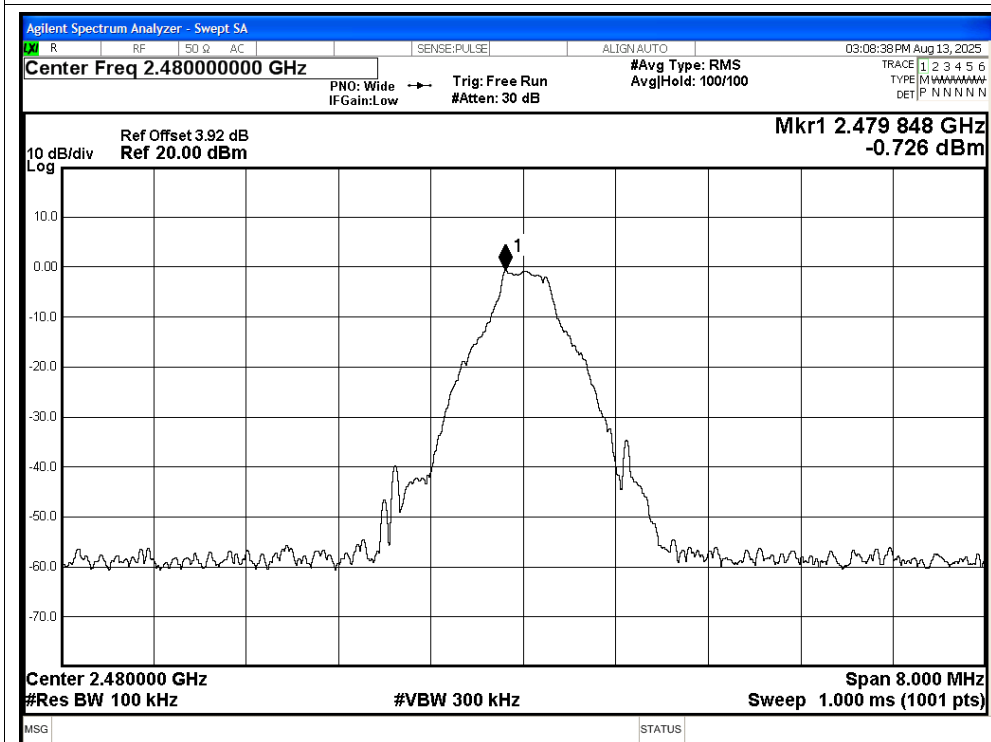
Band Edge NVNT 1-DH5 2402MHz Ant No-Hopping Ref



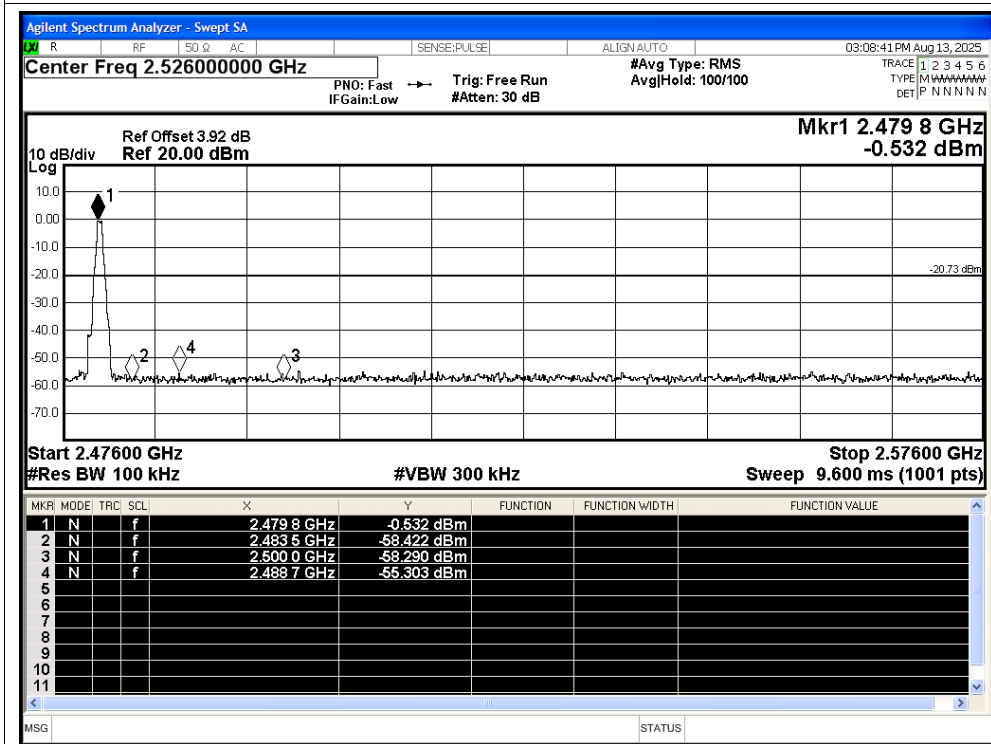
Band Edge NVNT 1-DH5 2402MHz Ant No-Hopping Emission



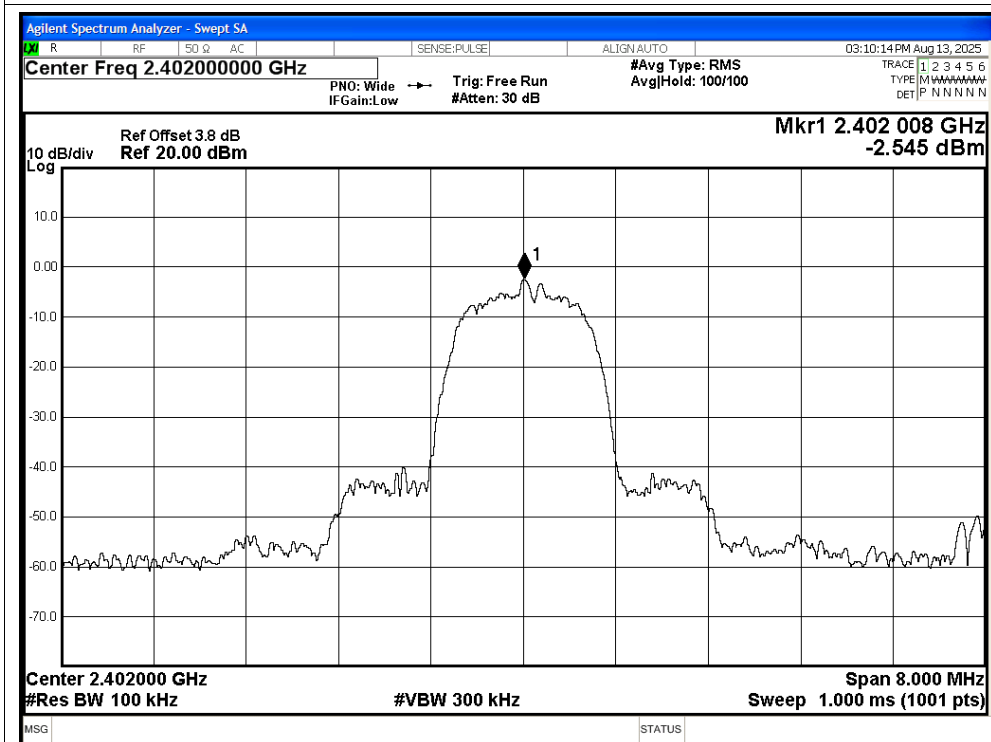
Band Edge NVNT 1-DH5 2480MHz Ant No-Hopping Ref



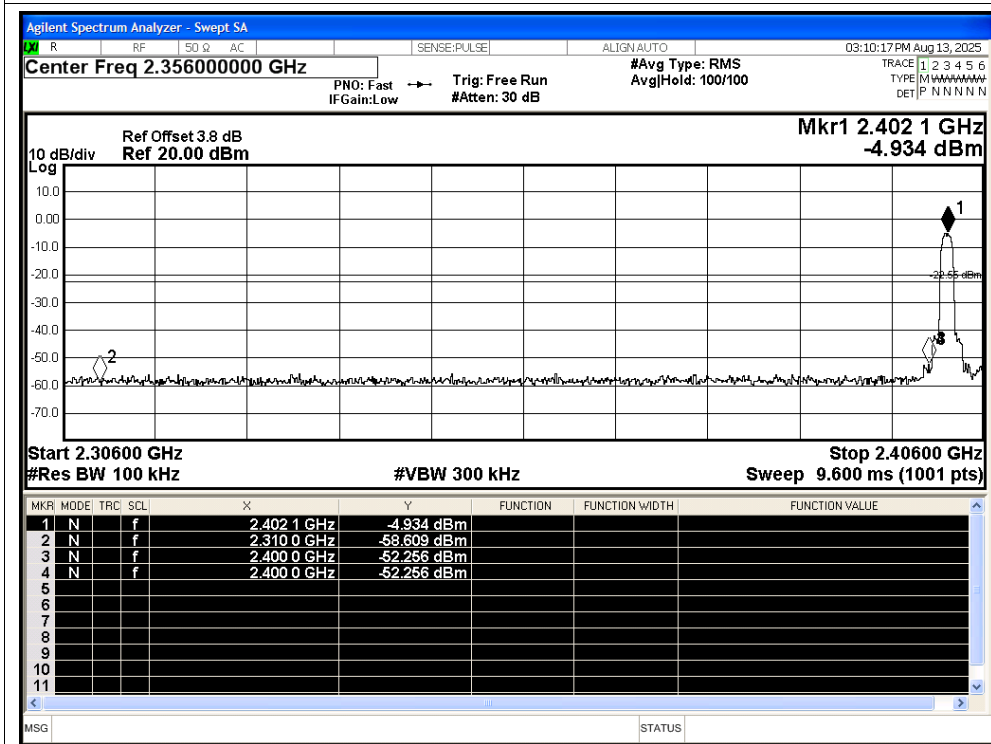
Band Edge NVNT 1-DH5 2480MHz Ant No-Hopping Emission



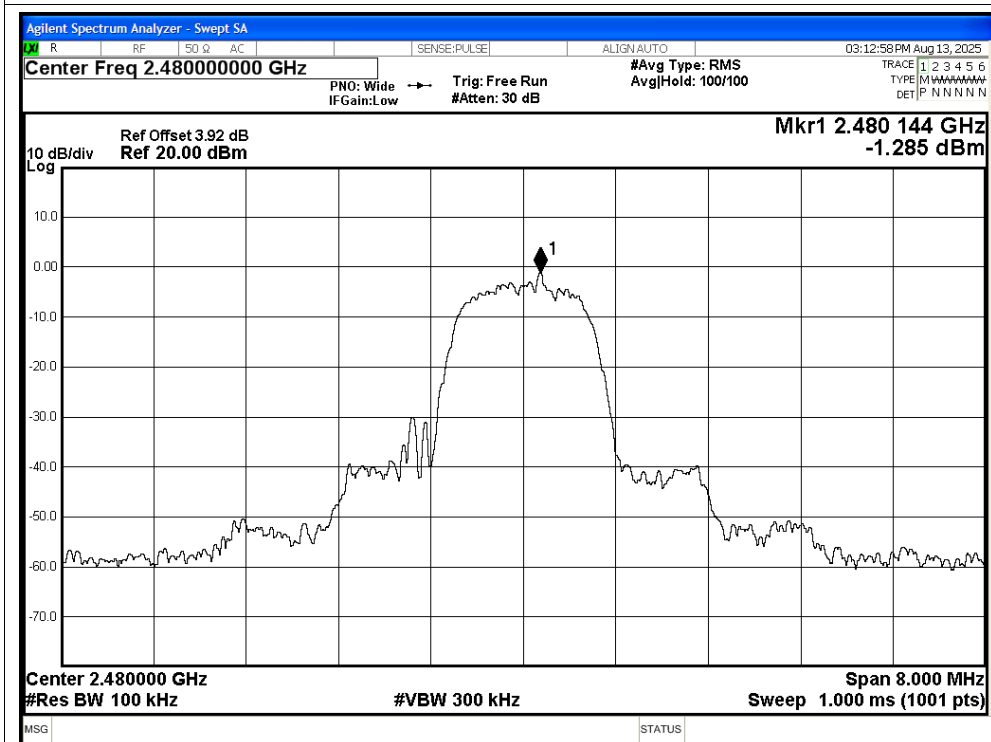
Band Edge NVNT 2-DH5 2402MHz Ant No-Hopping Ref



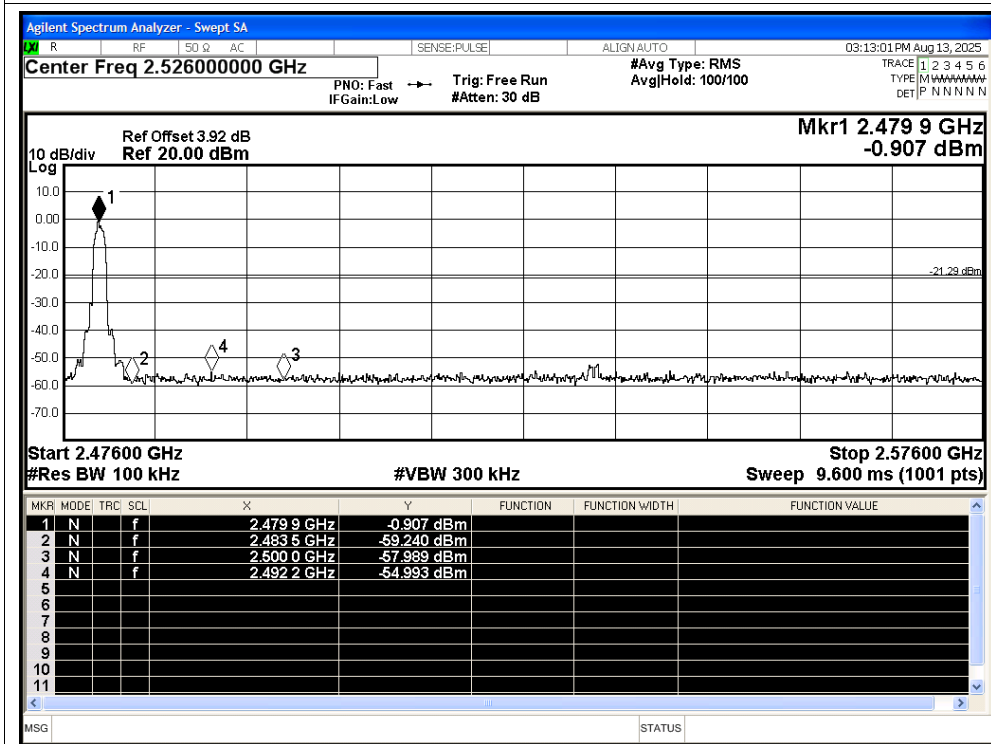
Band Edge NVNT 2-DH5 2402MHz Ant No-Hopping Emission



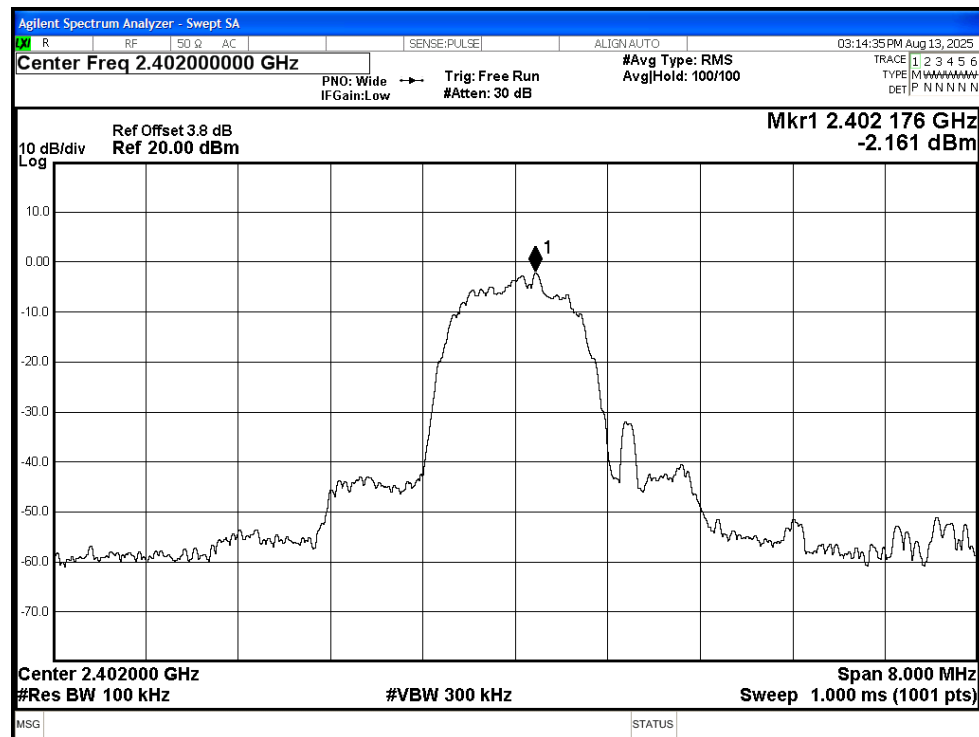
Band Edge NVNT 2-DH5 2480MHz Ant No-Hopping Ref



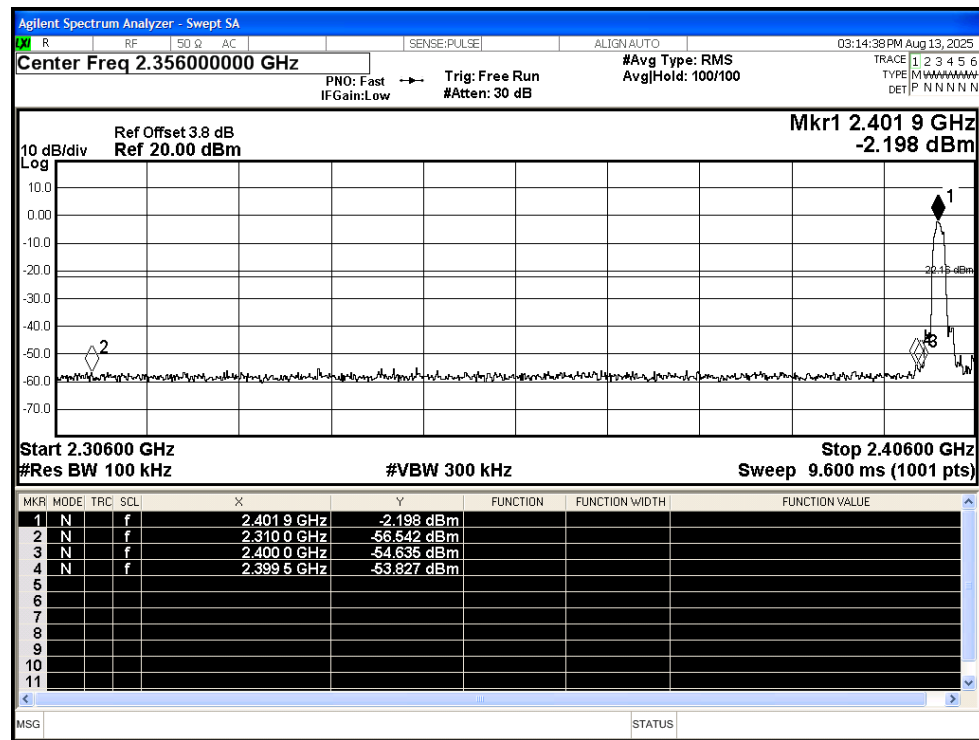
Band Edge NVNT 2-DH5 2480MHz Ant No-Hopping Emission



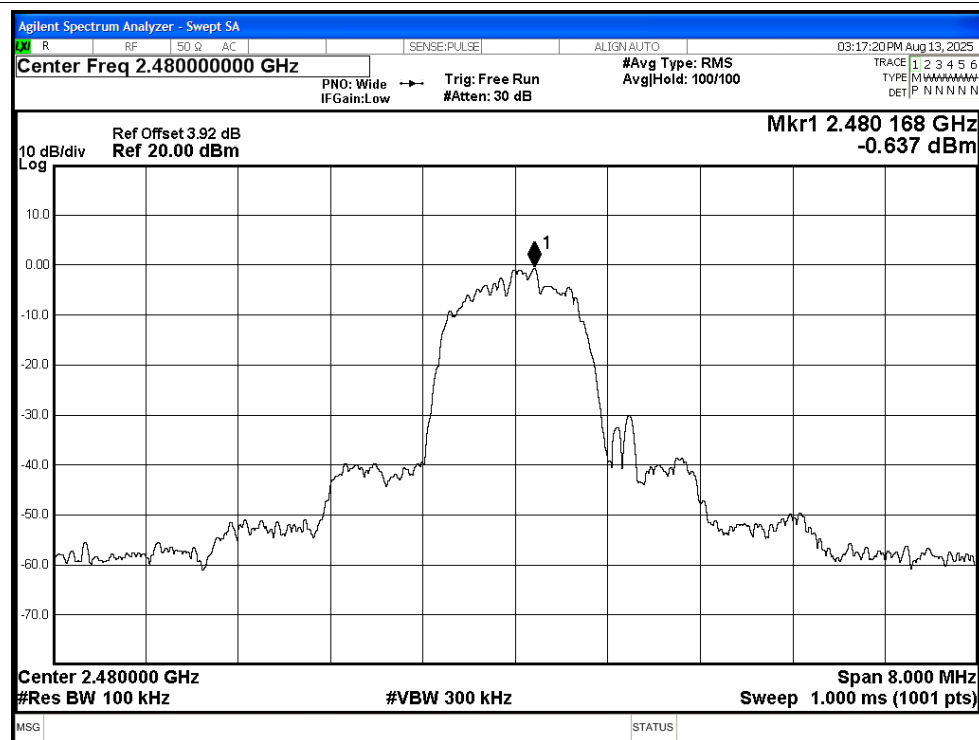
Band Edge NVNT 3-DH5 2402MHz Ant No-Hopping Ref



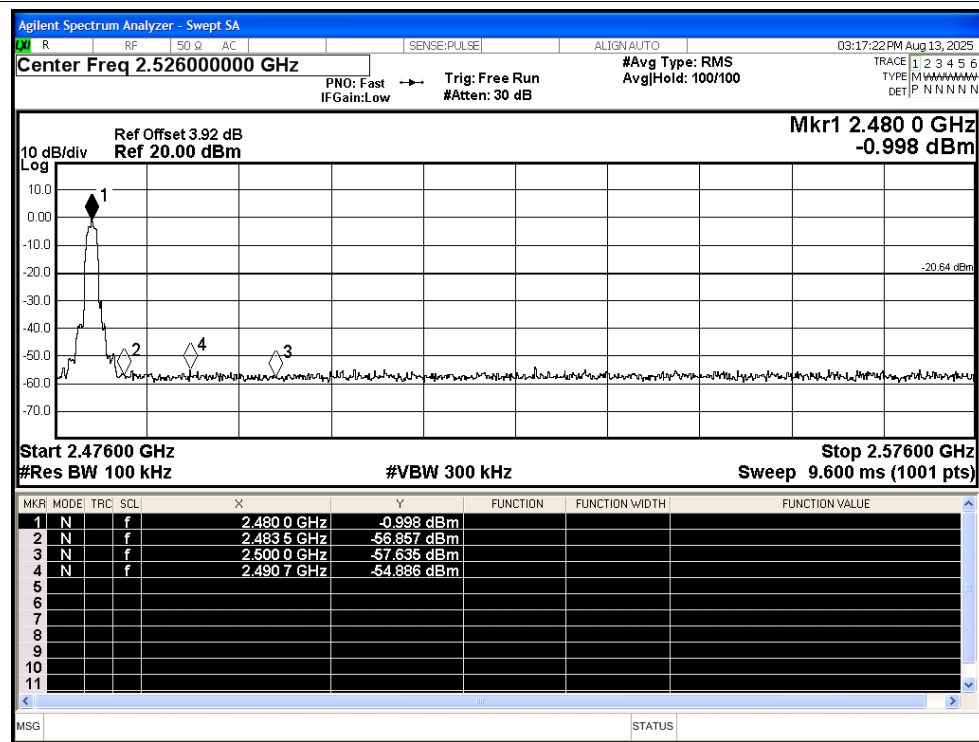
Band Edge NVNT 3-DH5 2402MHz Ant No-Hopping Emission



Band Edge NVNT 3-DH5 2480MHz Ant No-Hopping Ref



Band Edge NVNT 3-DH5 2480MHz Ant No-Hopping Emission

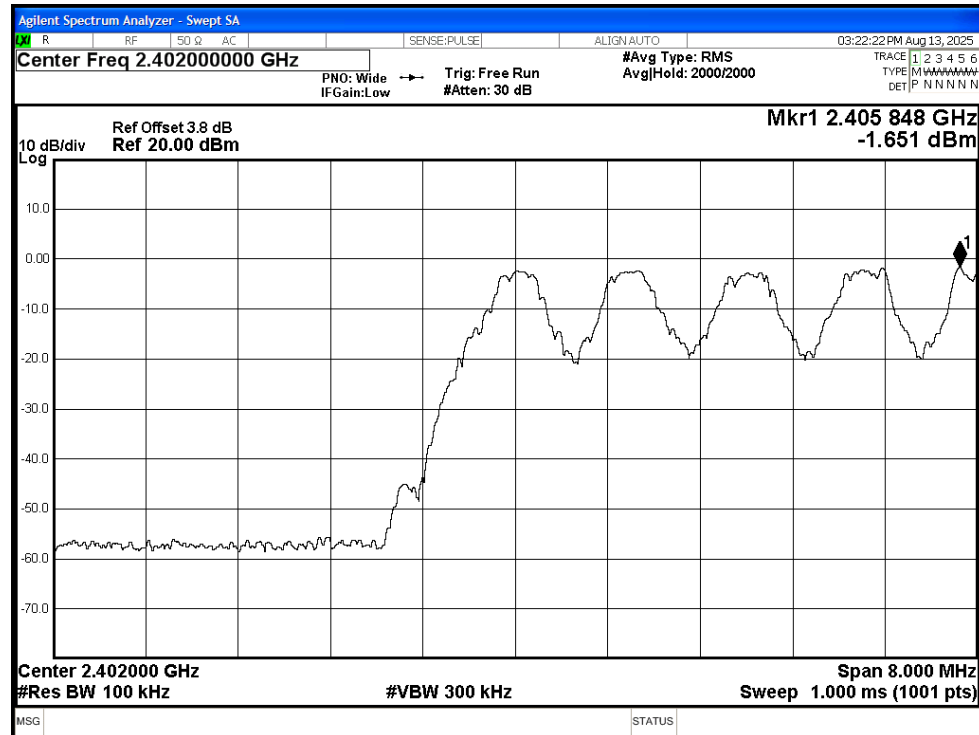


(Hopping)

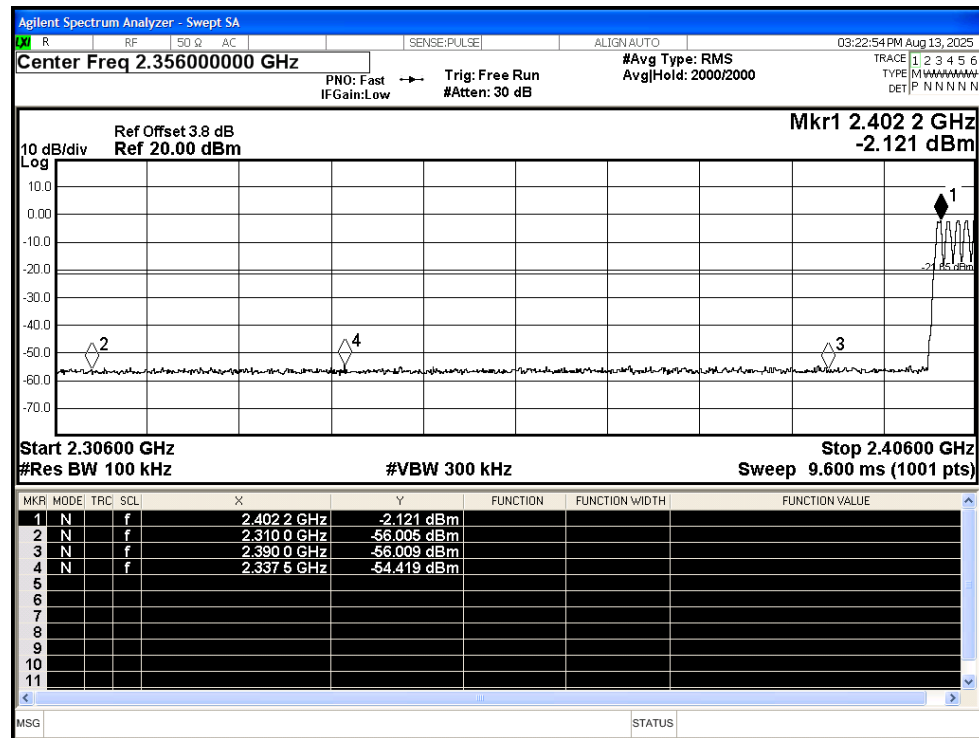
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant	Hopping	-52.77	-20	Pass
NVNT	1-DH5	2480	Ant	Hopping	-53.76	-20	Pass
NVNT	2-DH5	2402	Ant	Hopping	-52.24	-20	Pass
NVNT	2-DH5	2480	Ant	Hopping	-53.97	-20	Pass
NVNT	3-DH5	2402	Ant	Hopping	-51.2	-20	Pass
NVNT	3-DH5	2480	Ant	Hopping	-53.55	-20	Pass

Test Graphs

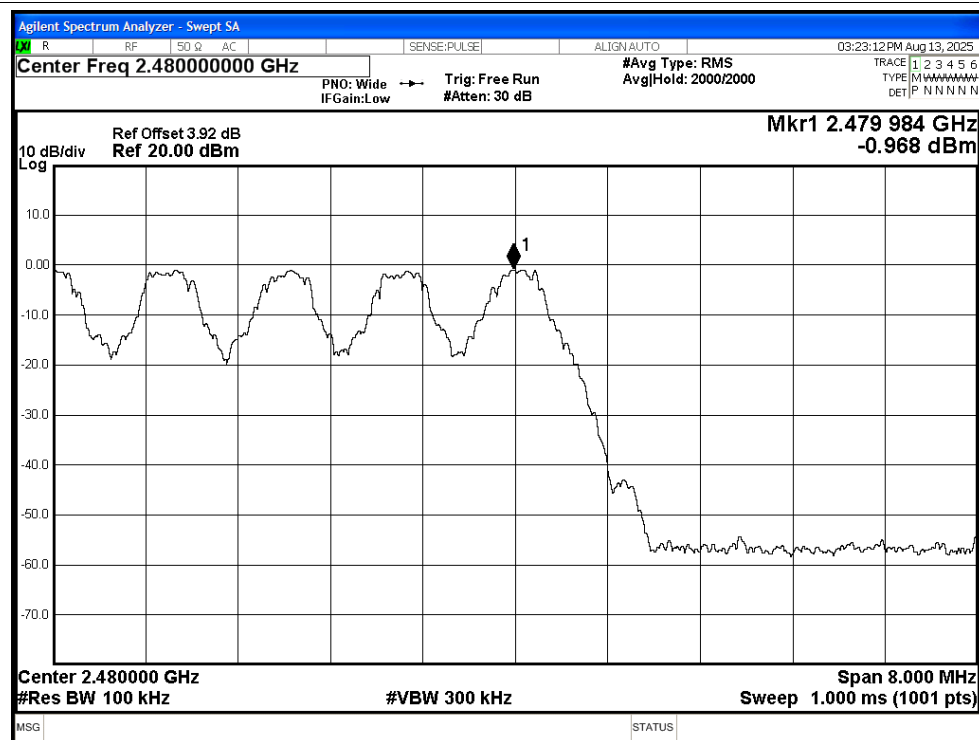
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant Hopping Ref



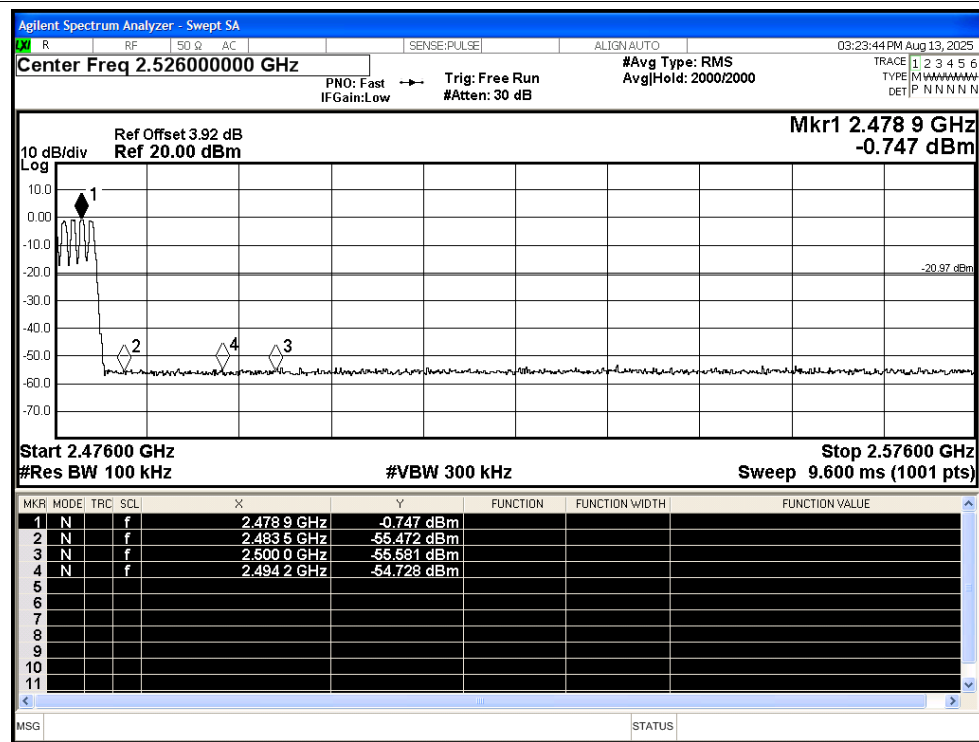
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant Hopping Emission

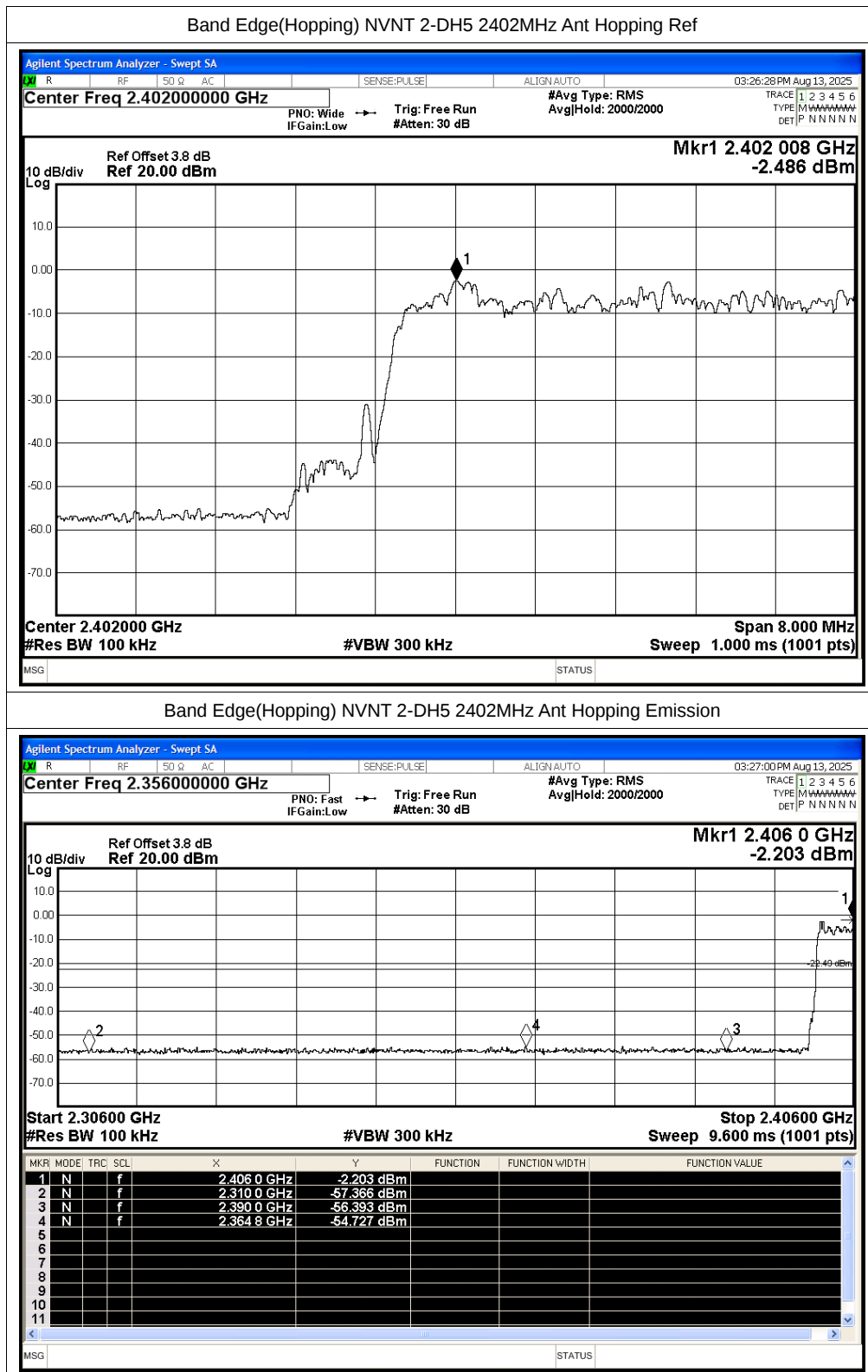


Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant Hopping Ref



Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant Hopping Emission

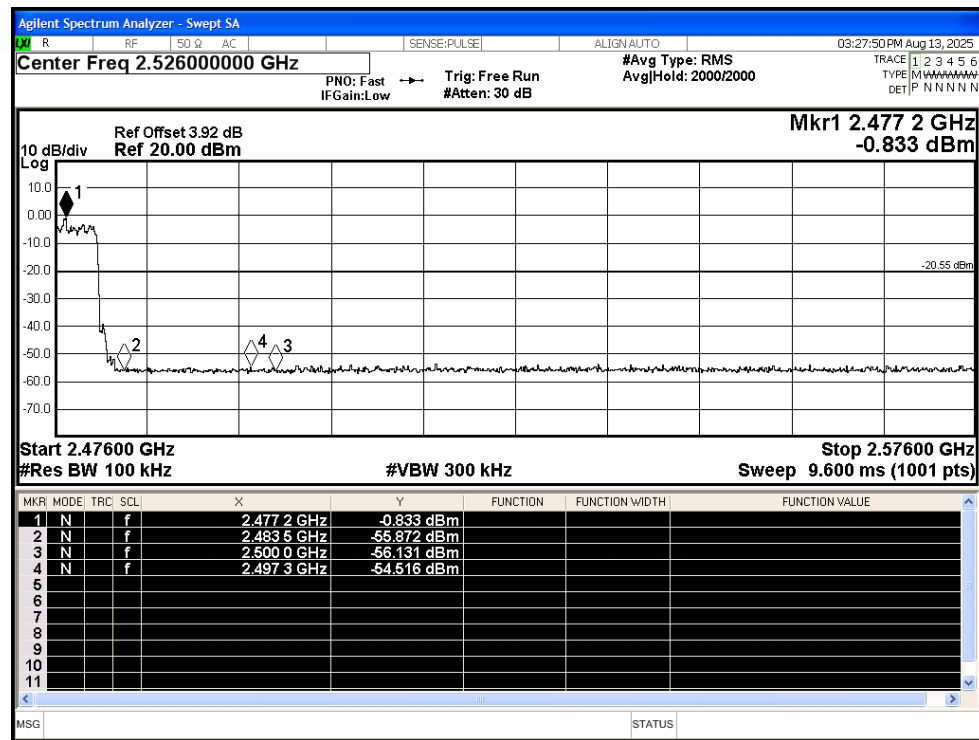


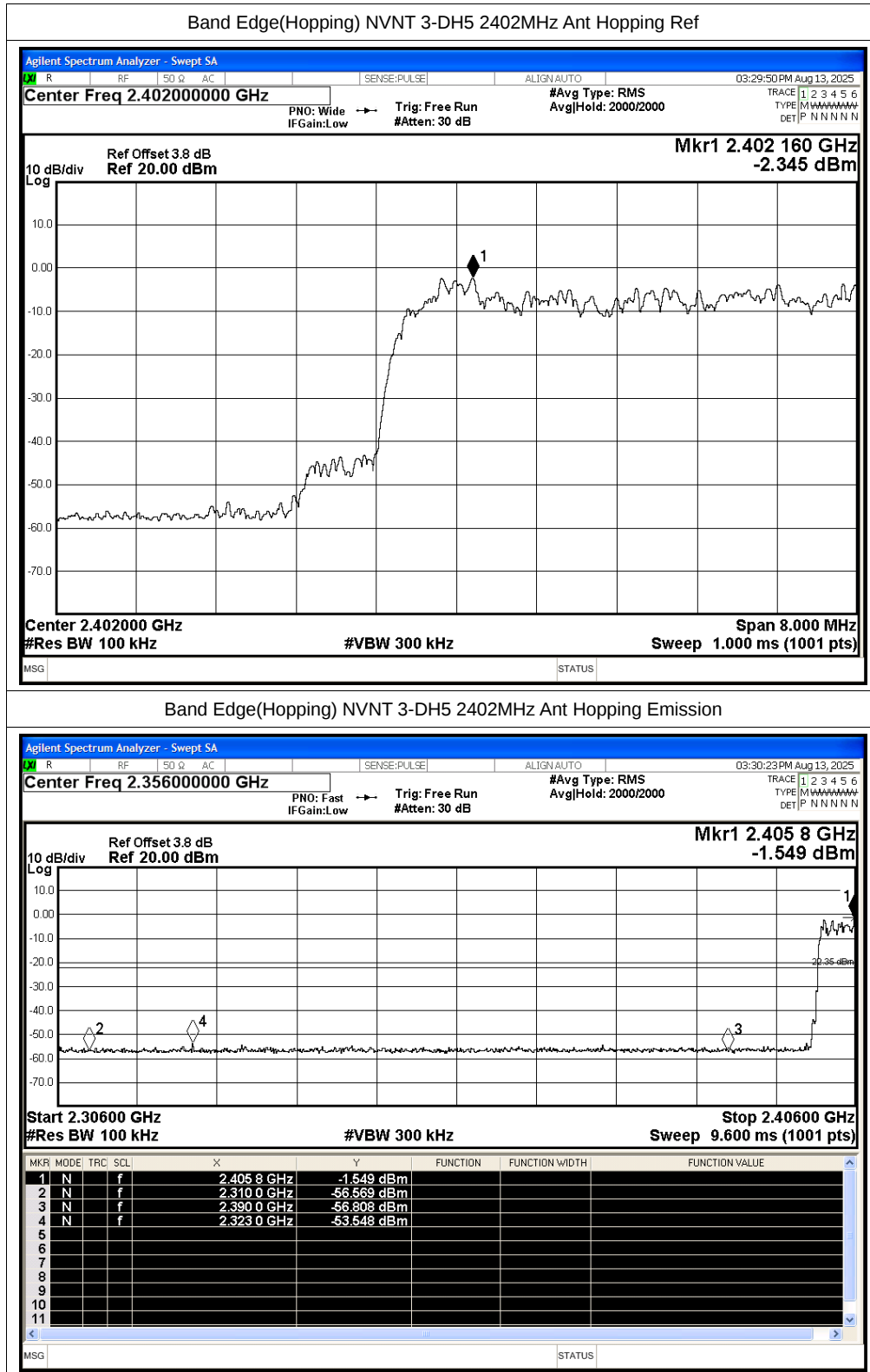


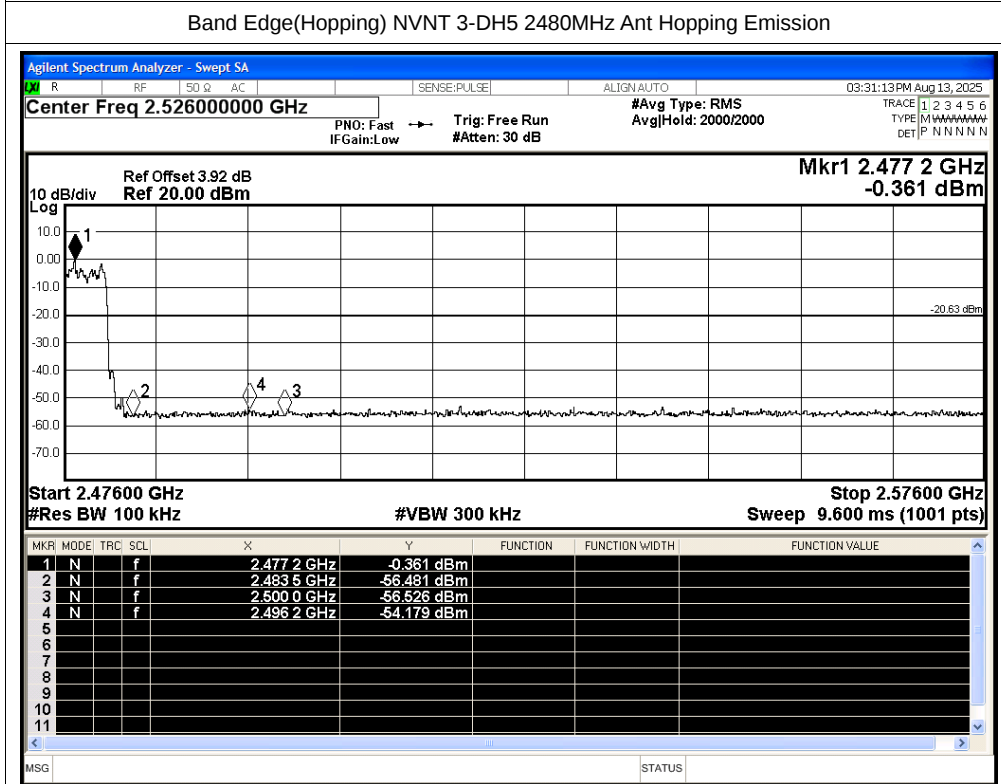
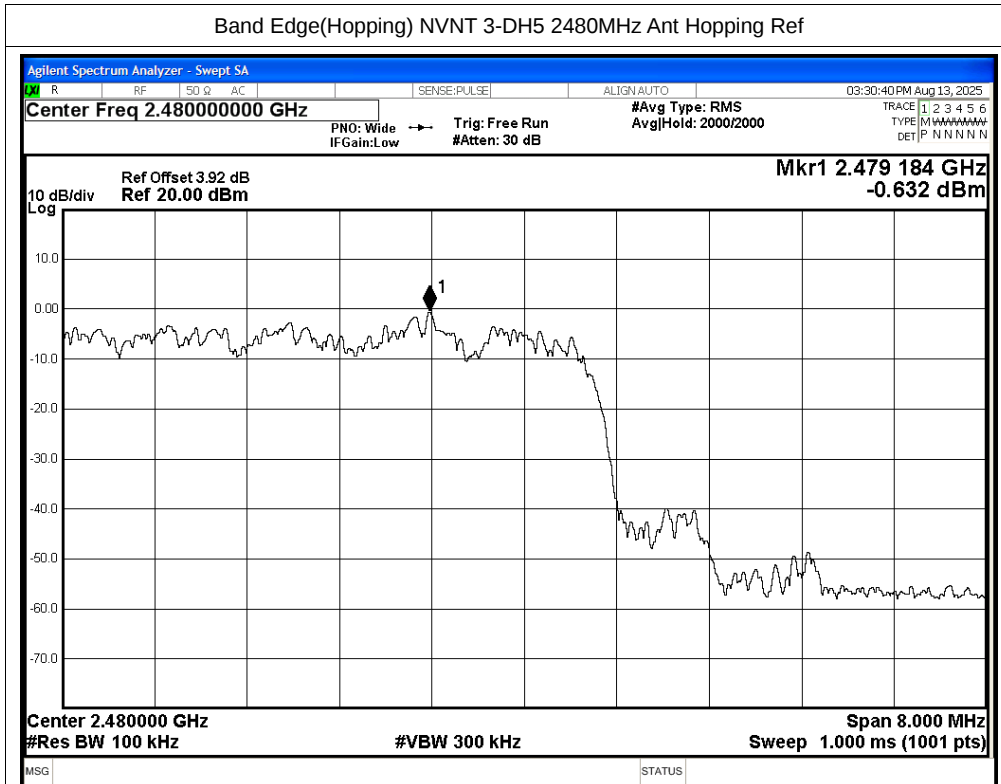
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant Hopping Ref



Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant Hopping Emission





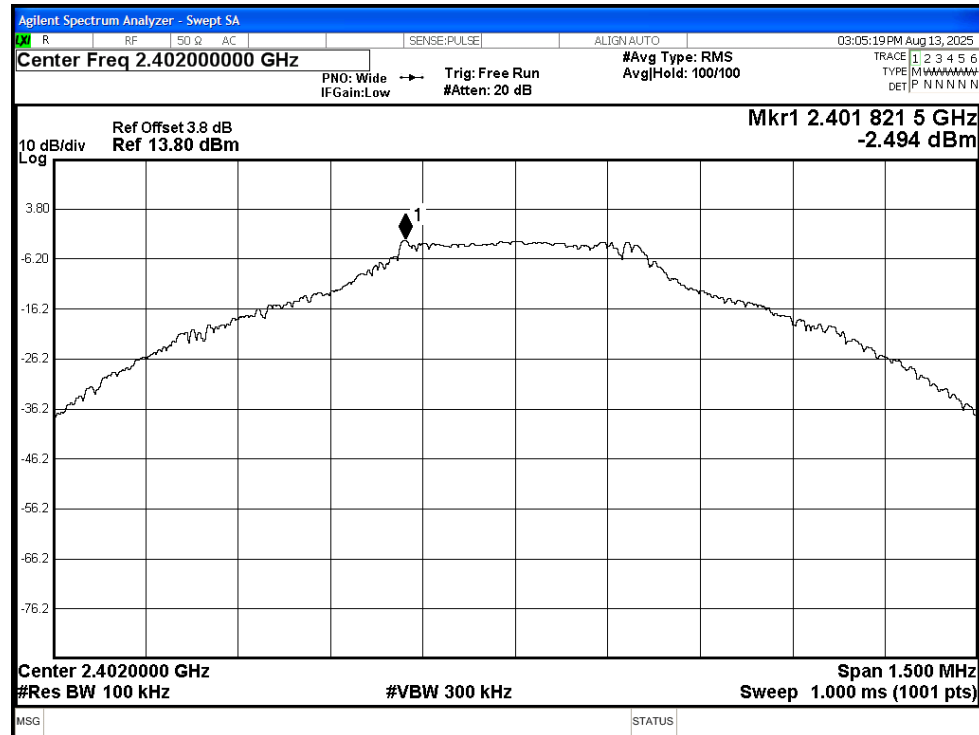


A.7 Conducted RF Spurious Emission

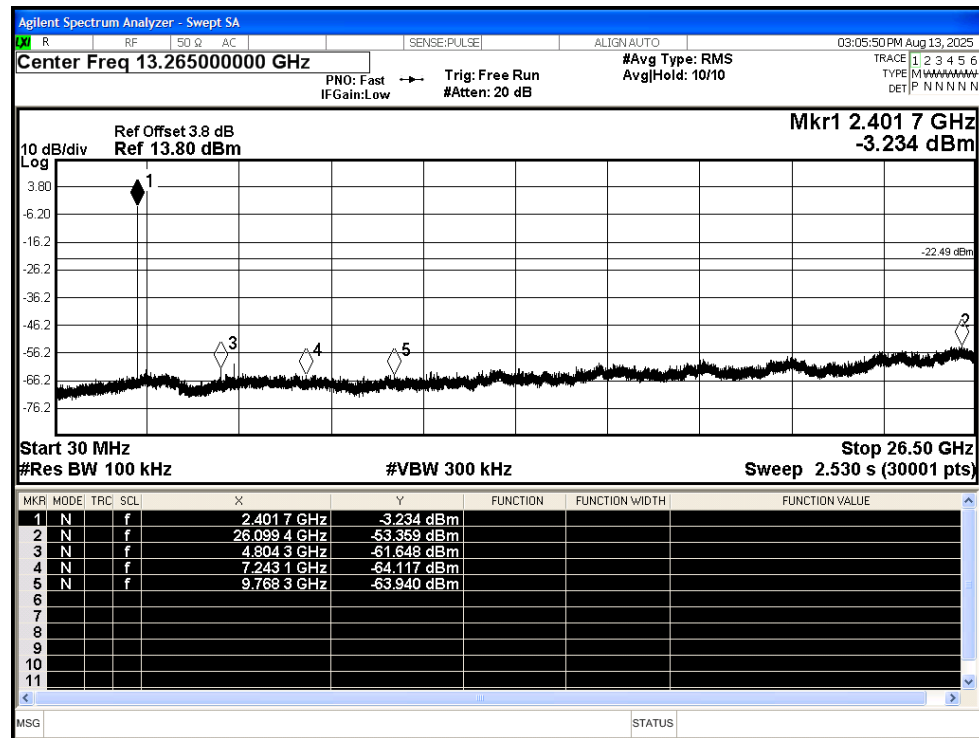
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant	-50.87	-20	Pass
NVNT	1-DH5	2441	Ant	-53.81	-20	Pass
NVNT	1-DH5	2480	Ant	-52.09	-20	Pass
NVNT	2-DH5	2402	Ant	-51.16	-20	Pass
NVNT	2-DH5	2441	Ant	-54.32	-20	Pass
NVNT	2-DH5	2480	Ant	-52.71	-20	Pass
NVNT	3-DH5	2402	Ant	-51.96	-20	Pass
NVNT	3-DH5	2441	Ant	-54.29	-20	Pass
NVNT	3-DH5	2480	Ant	-53.15	-20	Pass

Test Graphs

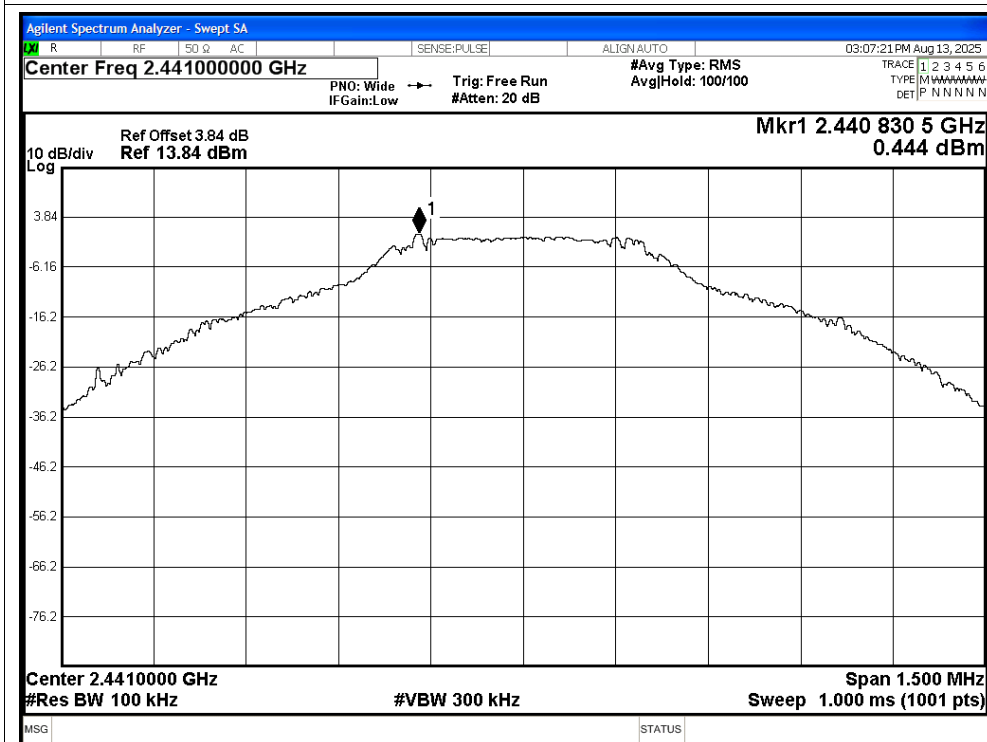
Tx. Spurious NVNT 1-DH5 2402MHz Ant Ref



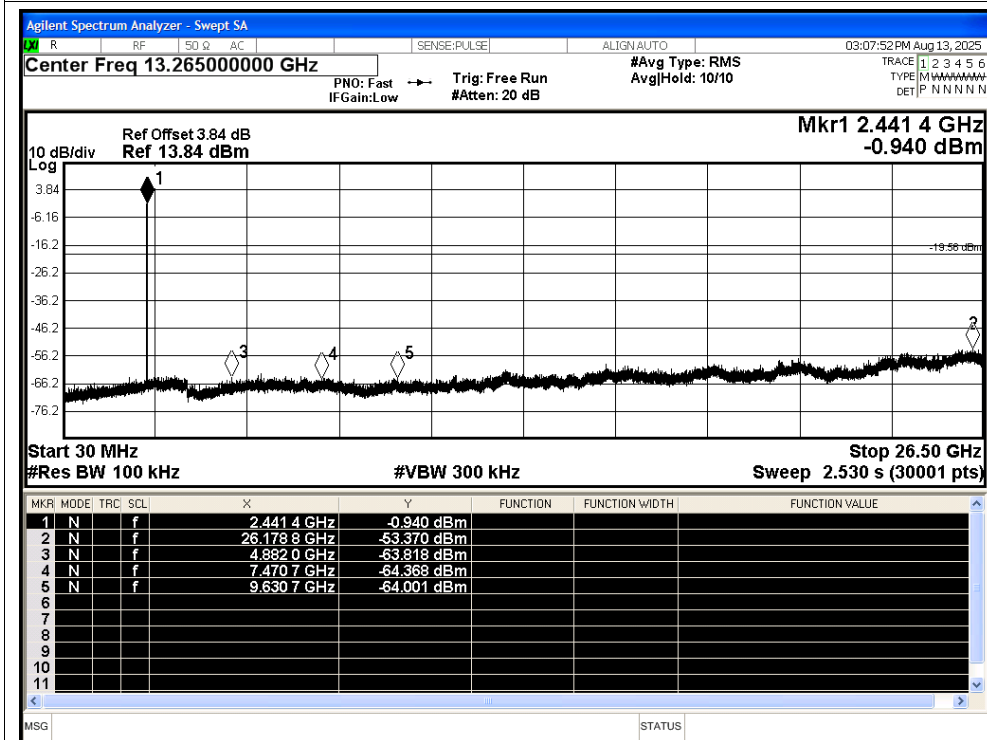
Tx. Spurious NVNT 1-DH5 2402MHz Ant Emission



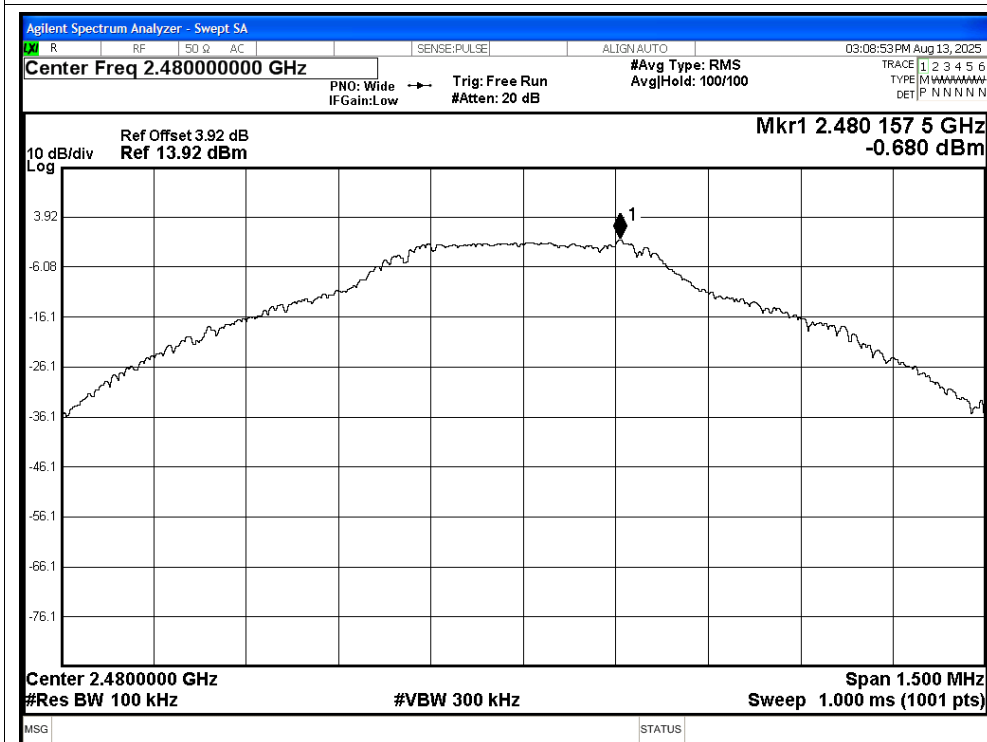
Tx. Spurious NVNT 1-DH5 2441MHz Ant Ref



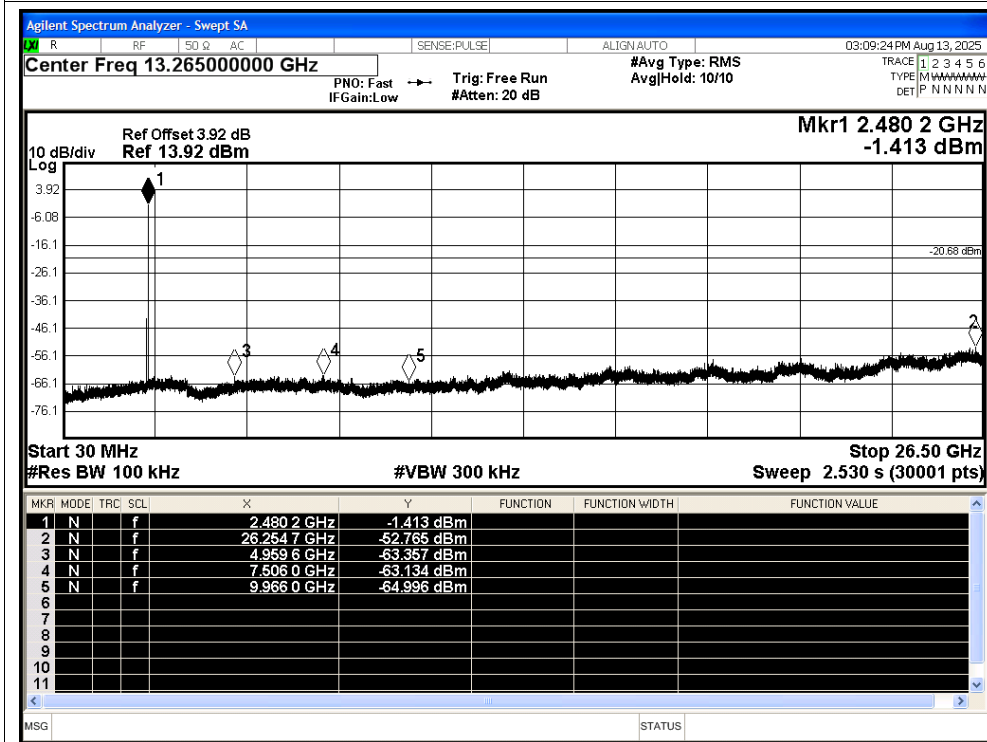
Tx. Spurious NVNT 1-DH5 2441MHz Ant Emission



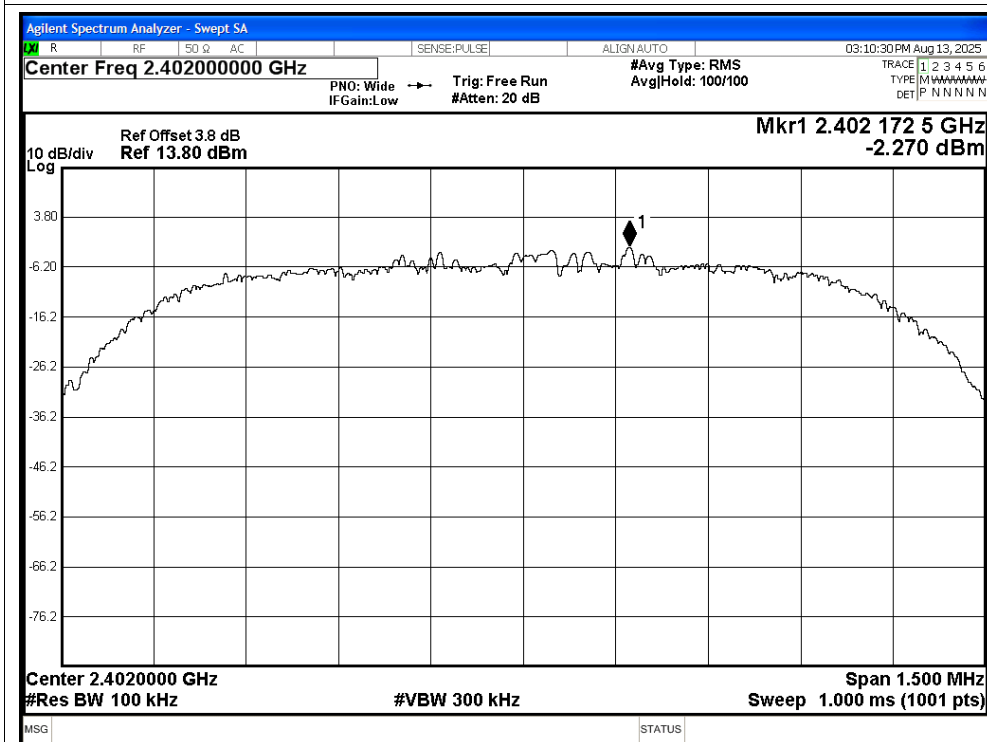
Tx. Spurious NVNT 1-DH5 2480MHz Ant Ref



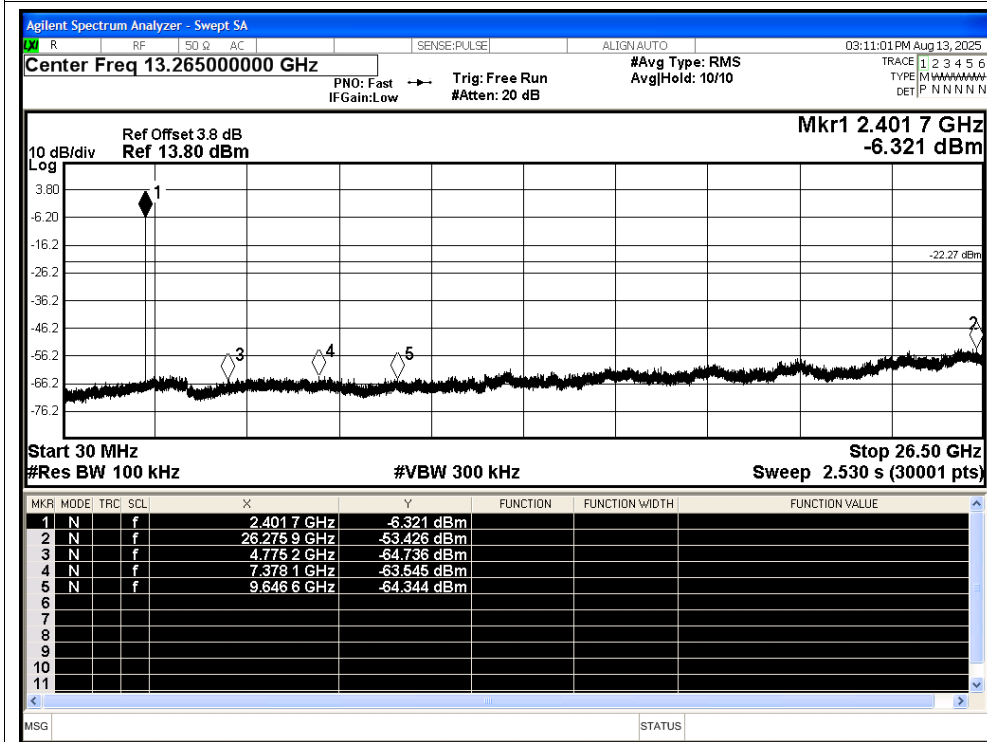
Tx. Spurious NVNT 1-DH5 2480MHz Ant Emission



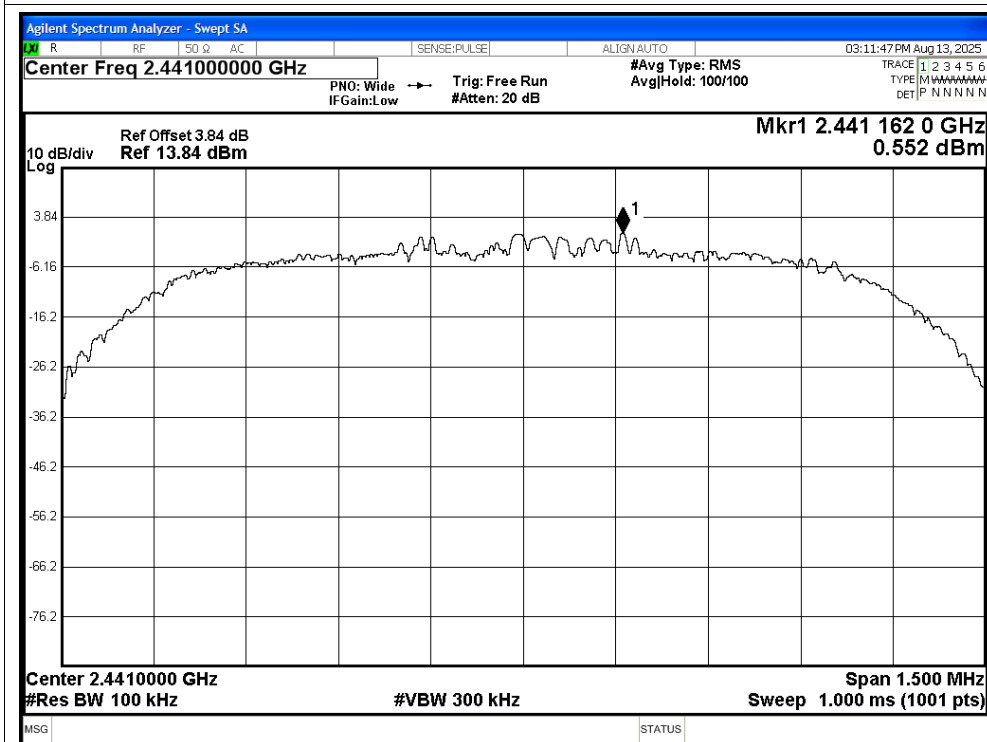
Tx. Spurious NVNT 2-DH5 2402MHz Ant Ref



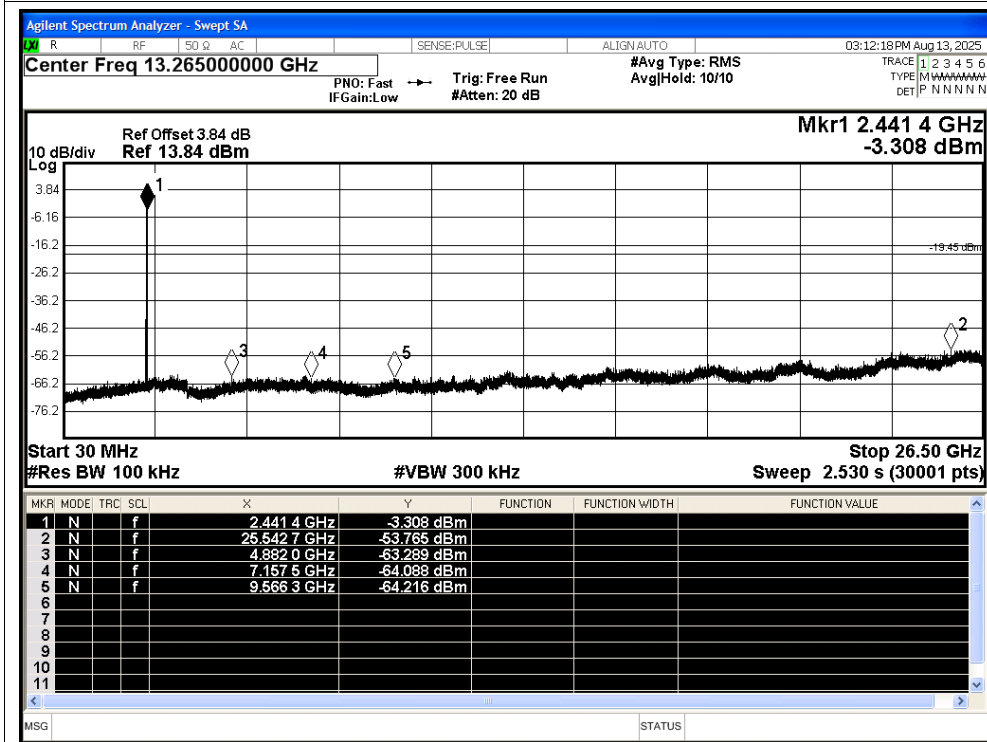
Tx. Spurious NVNT 2-DH5 2402MHz Ant Emission



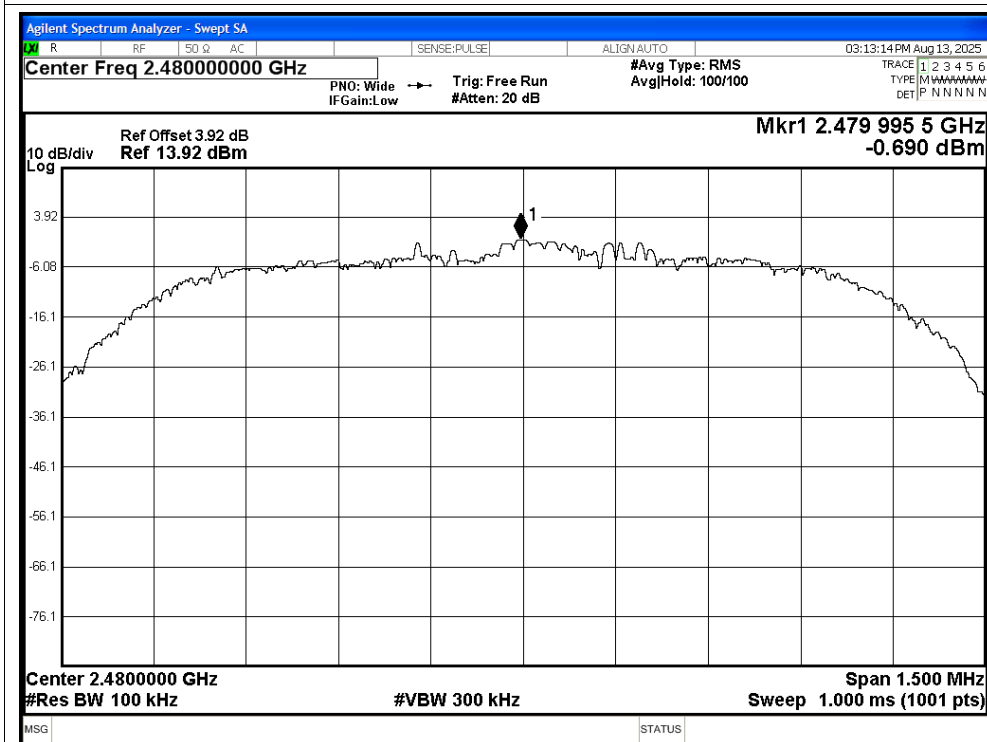
Tx. Spurious NVNT 2-DH5 2441MHz Ant Ref



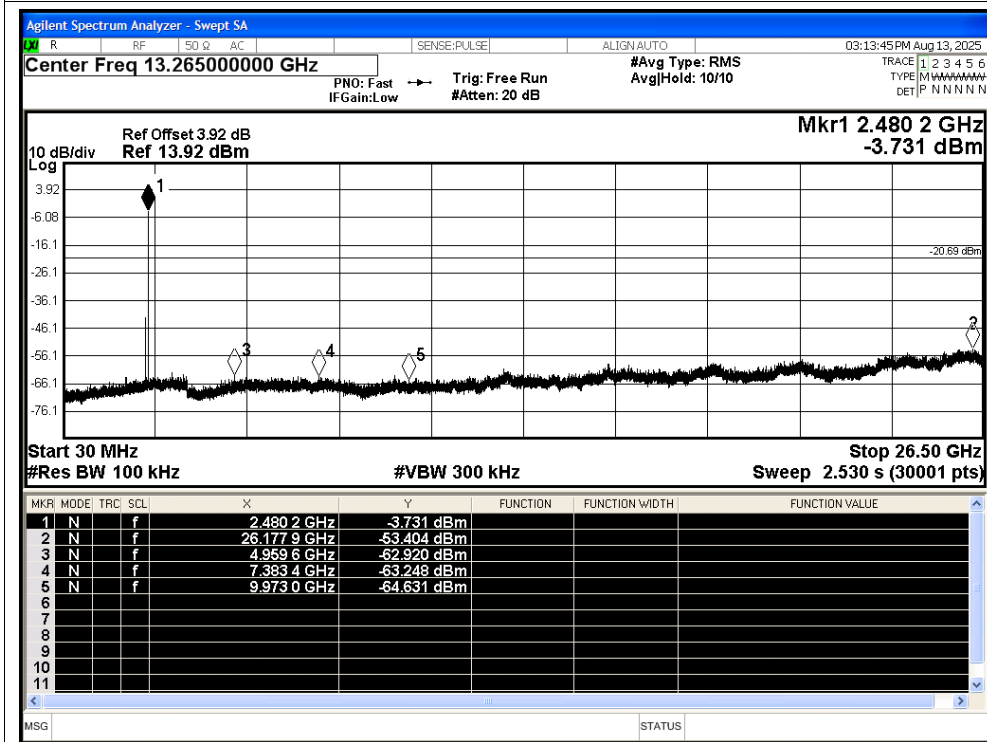
Tx. Spurious NVNT 2-DH5 2441MHz Ant Emission



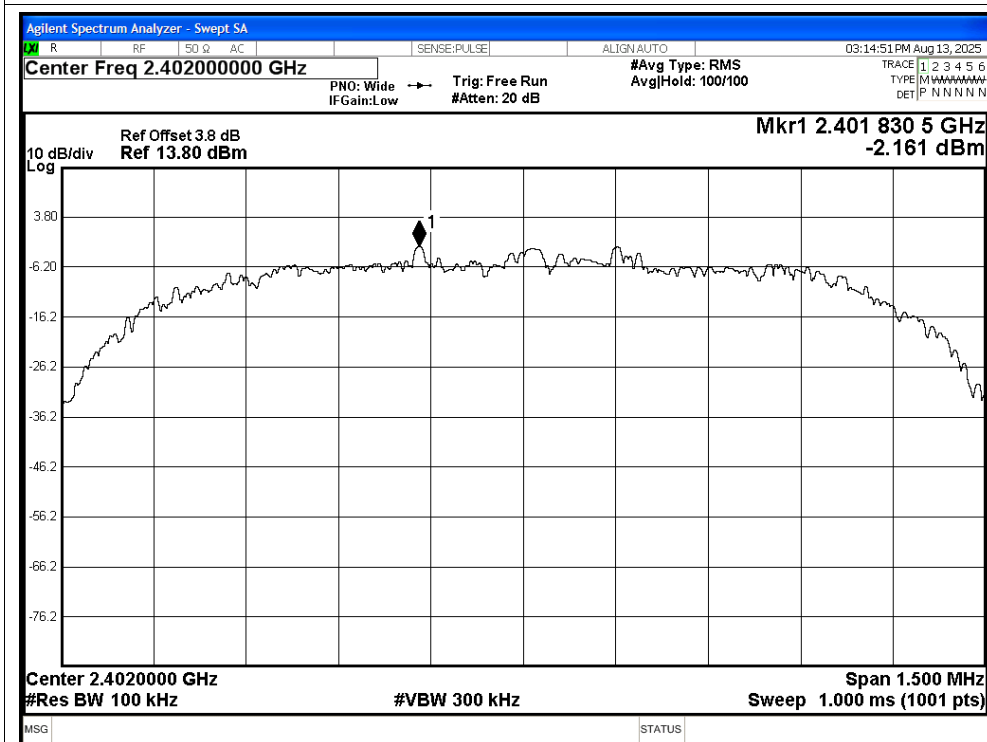
Tx. Spurious NVNT 2-DH5 2480MHz Ant Ref



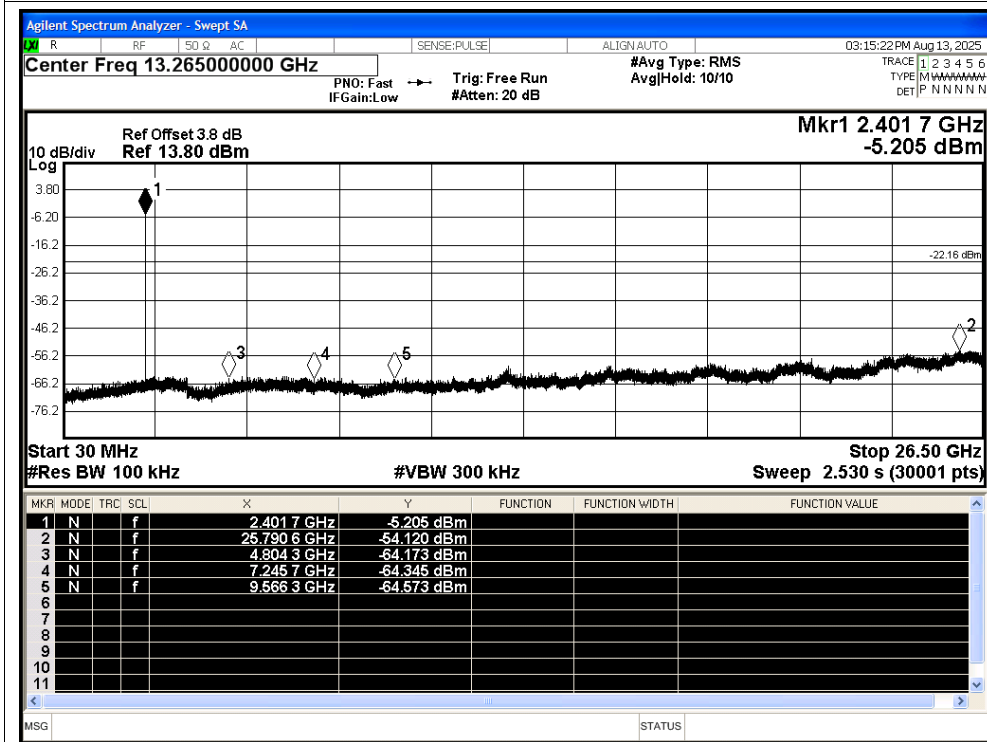
Tx. Spurious NVNT 2-DH5 2480MHz Ant Emission



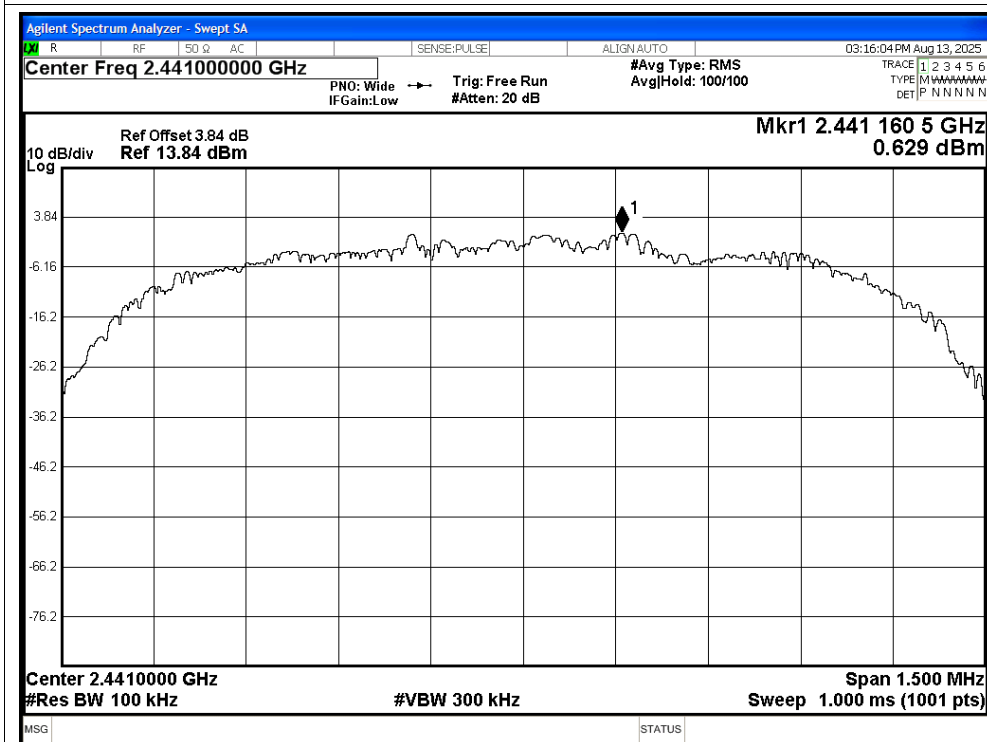
Tx. Spurious NVNT 3-DH5 2402MHz Ant Ref



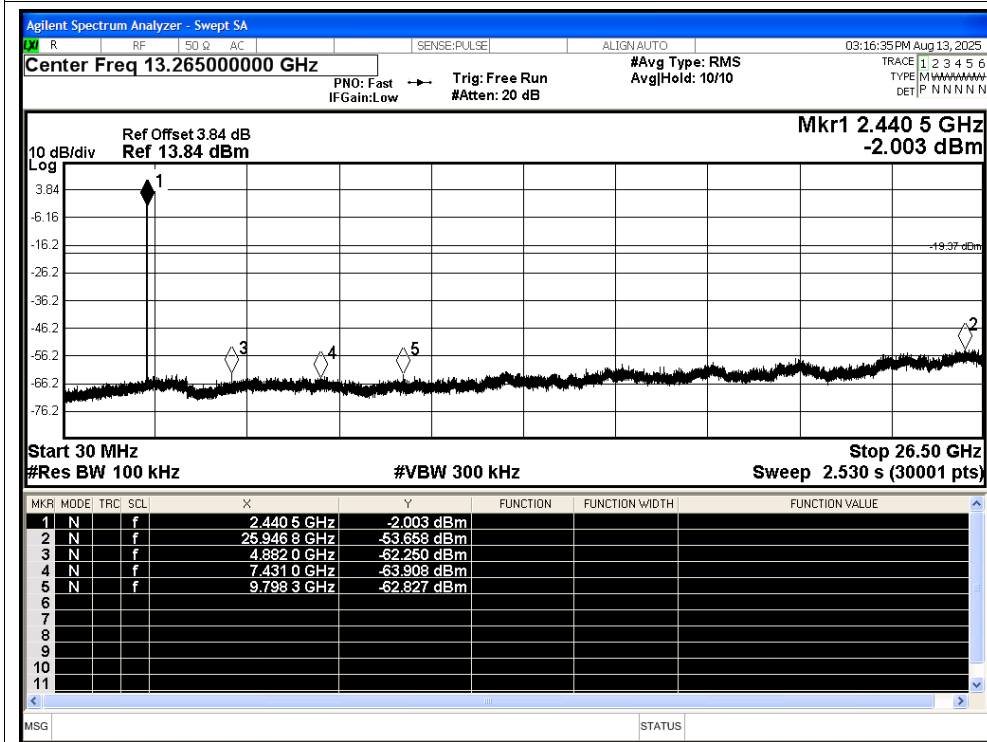
Tx. Spurious NVNT 3-DH5 2402MHz Ant Emission



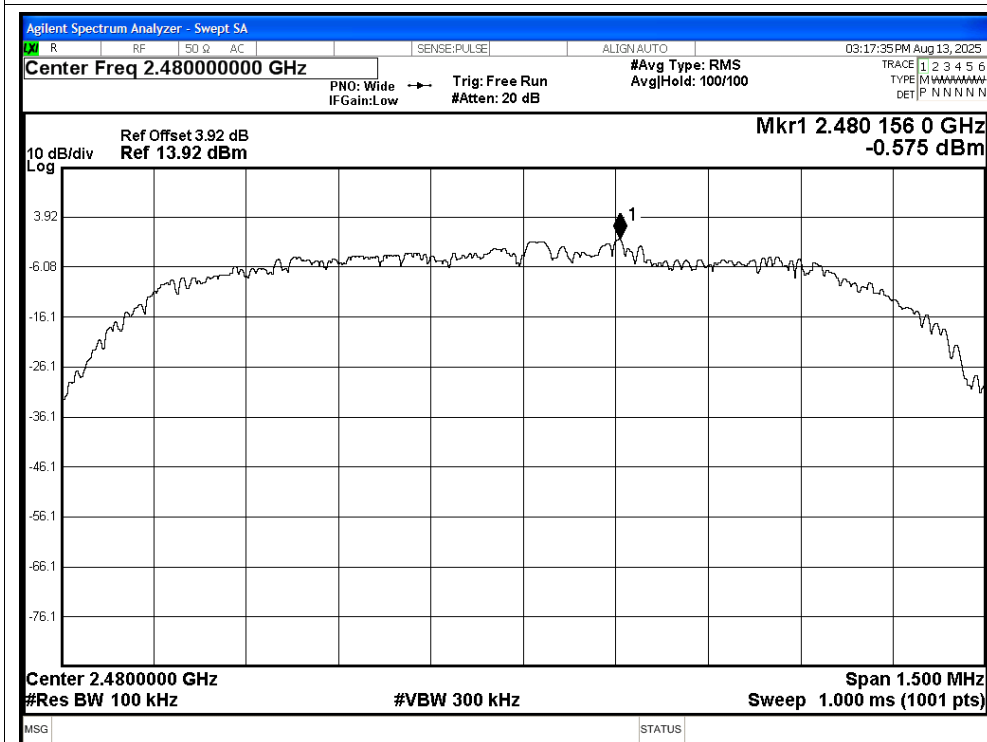
Tx. Spurious NVNT 3-DH5 2441MHz Ant Ref



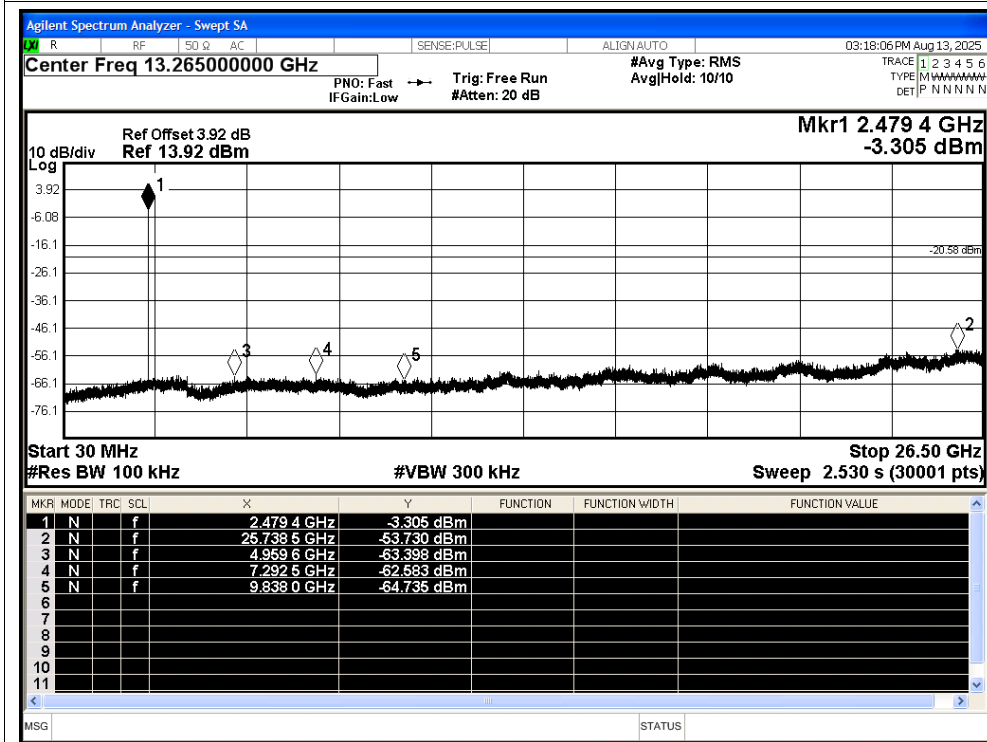
Tx. Spurious NVNT 3-DH5 2441MHz Ant Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant Emission

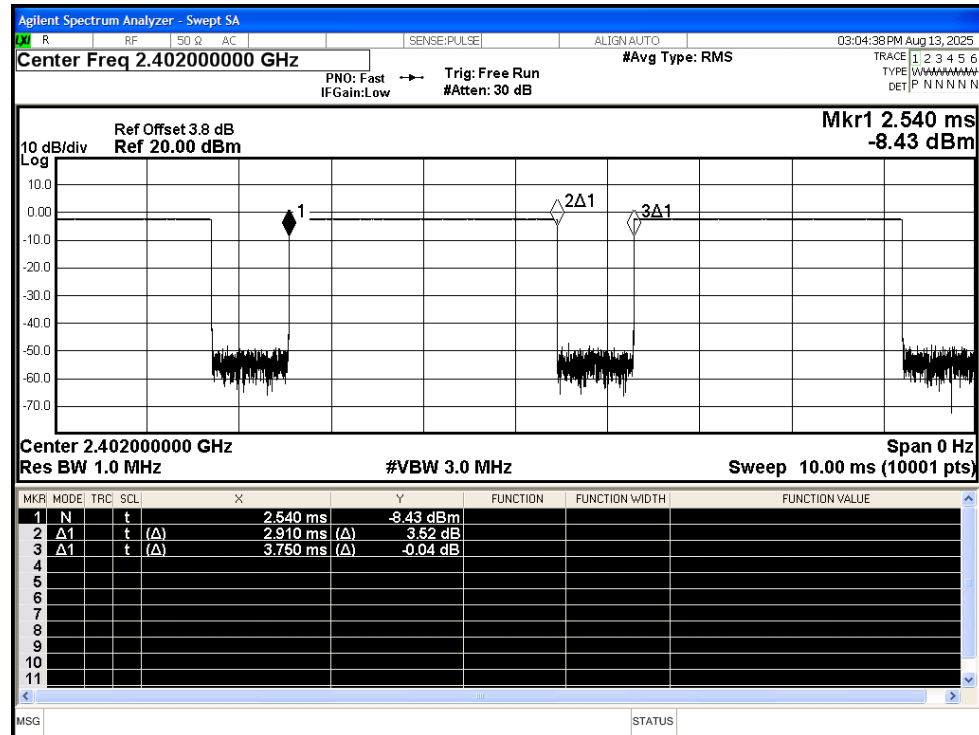


A.8 Duty Cycle

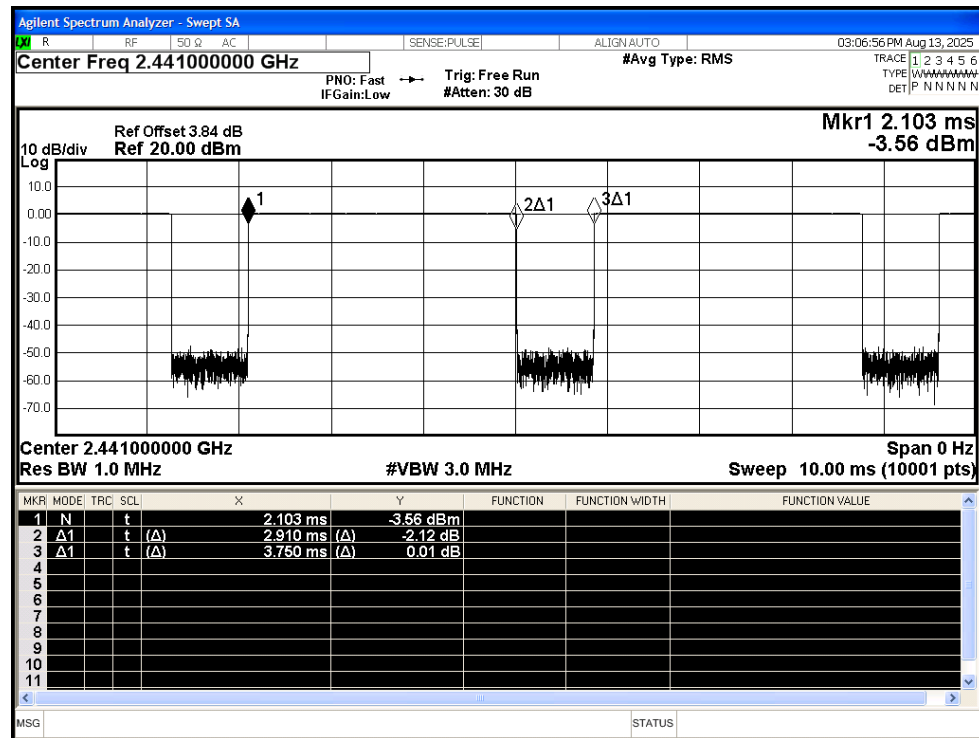
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant	77.6	1.1	0.34
NVNT	1-DH5	2441	Ant	77.6	1.1	0.34
NVNT	1-DH5	2480	Ant	77.6	1.1	0.34
NVNT	2-DH5	2402	Ant	77.28	1.12	0.35
NVNT	2-DH5	2441	Ant	77.28	1.12	0.35
NVNT	2-DH5	2480	Ant	77.28	1.12	0.35
NVNT	3-DH5	2402	Ant	77.28	1.12	0.35
NVNT	3-DH5	2441	Ant	77.28	1.12	0.35
NVNT	3-DH5	2480	Ant	77.28	1.12	0.35

Test Graphs

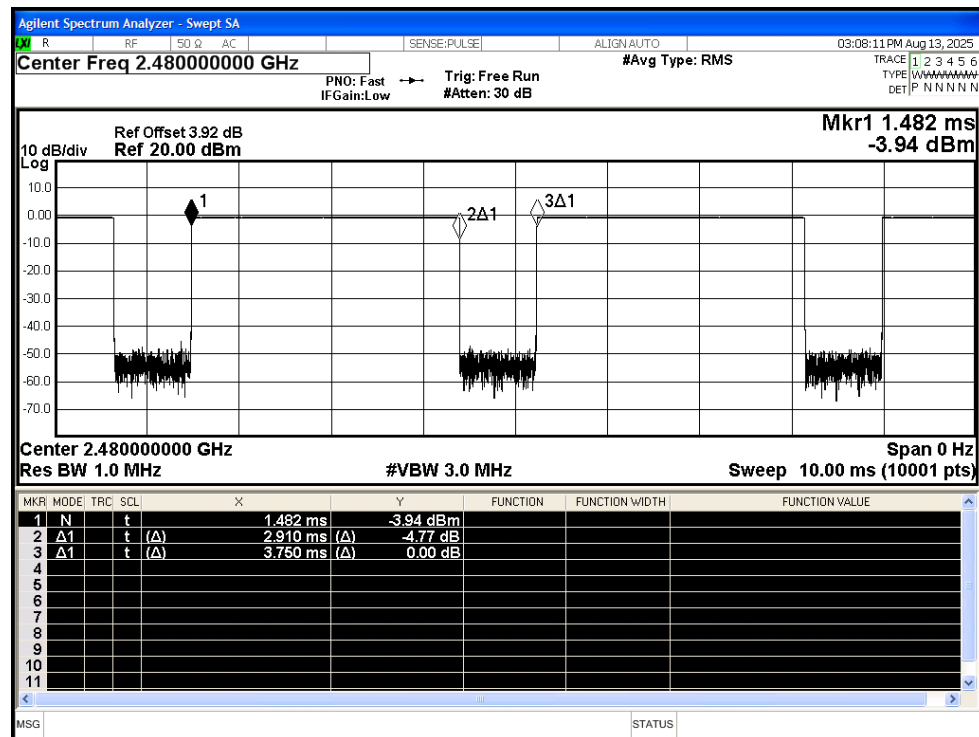
Duty Cycle NVNT 1-DH5 2402MHz Ant



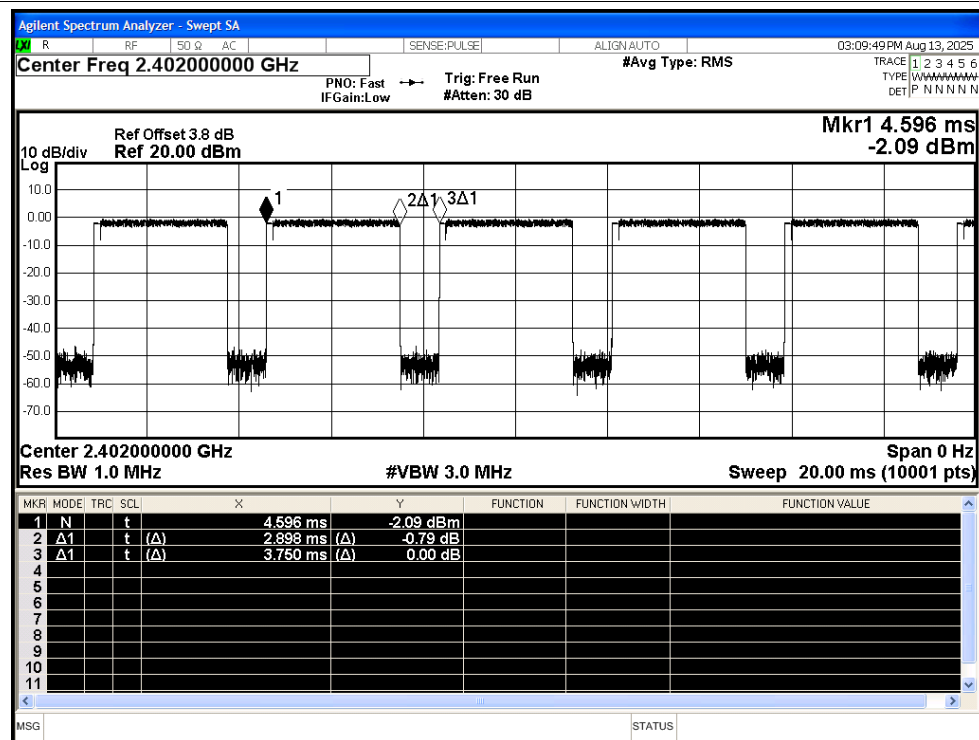
Duty Cycle NVNT 1-DH5 2441MHz Ant



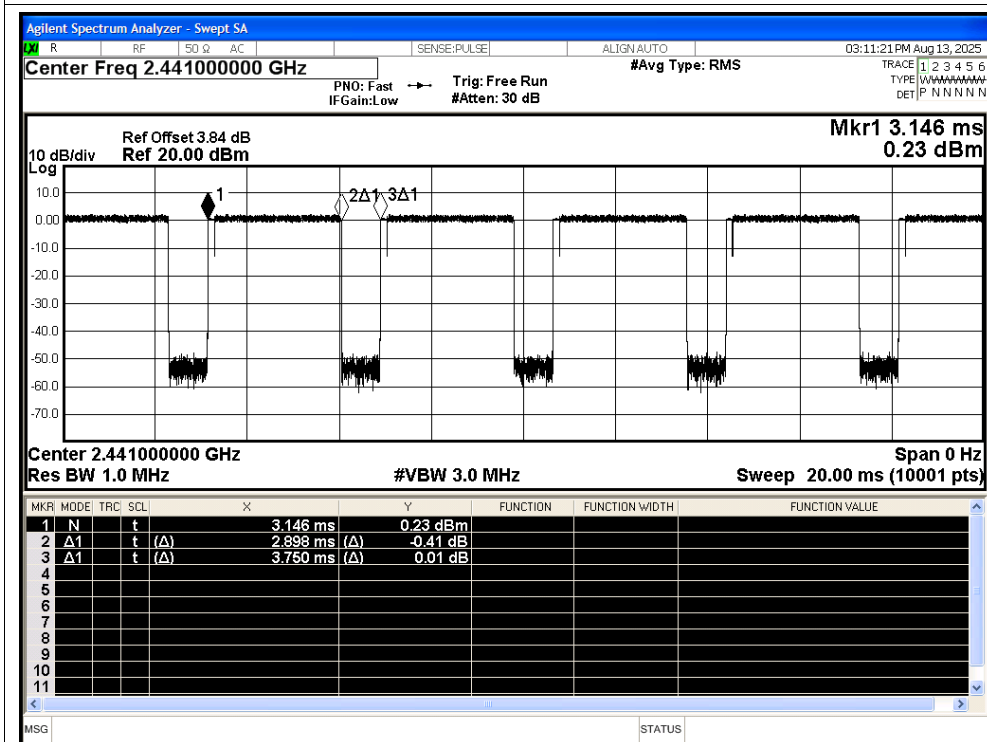
Duty Cycle NVNT 1-DH5 2480MHz Ant



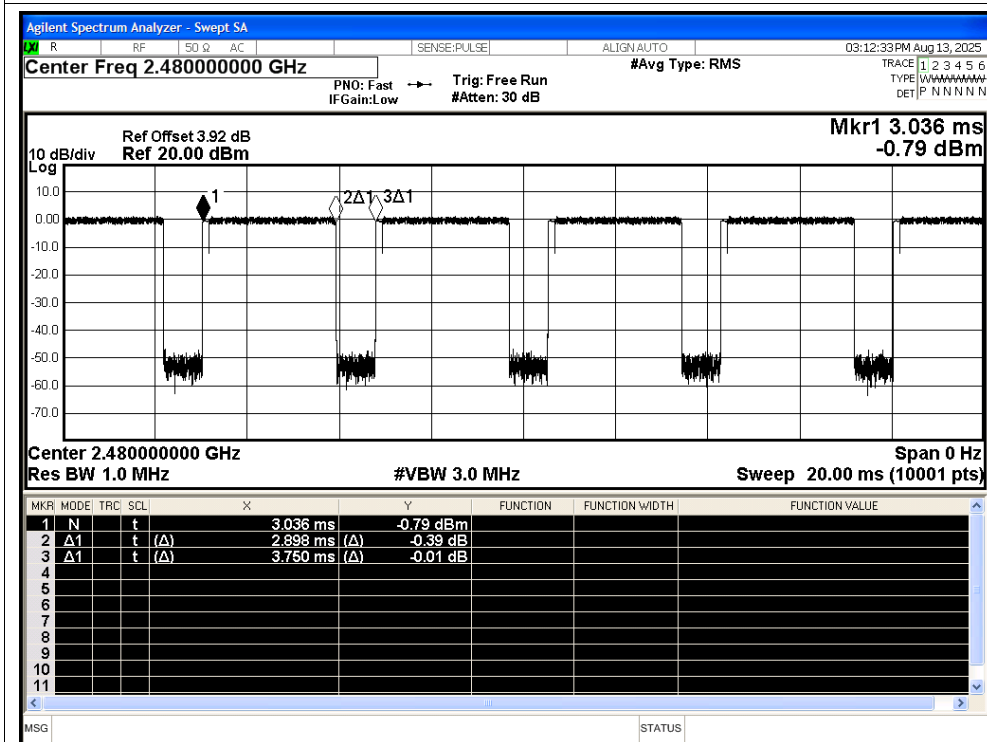
Duty Cycle NVNT 2-DH5 2402MHz Ant



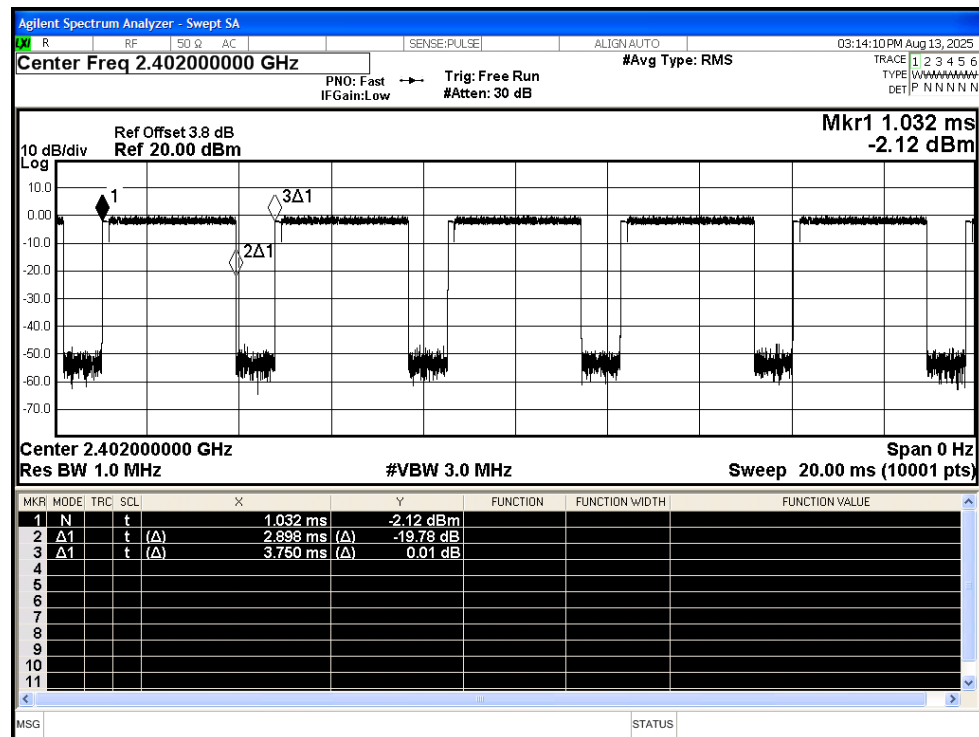
Duty Cycle NVNT 2-DH5 2441MHz Ant



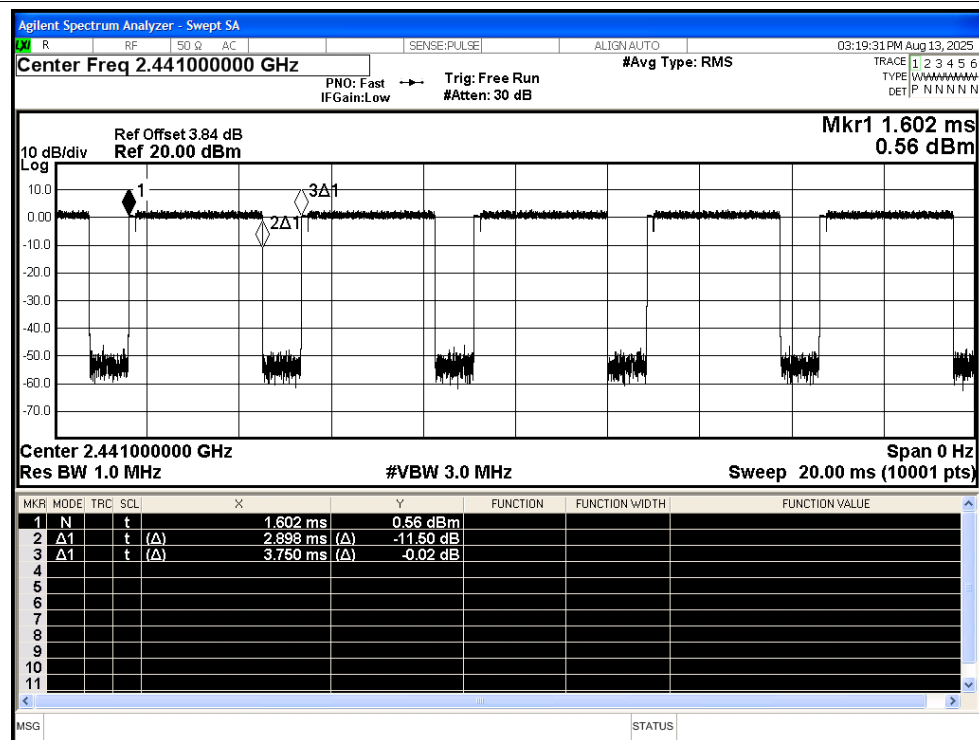
Duty Cycle NVNT 2-DH5 2480MHz Ant

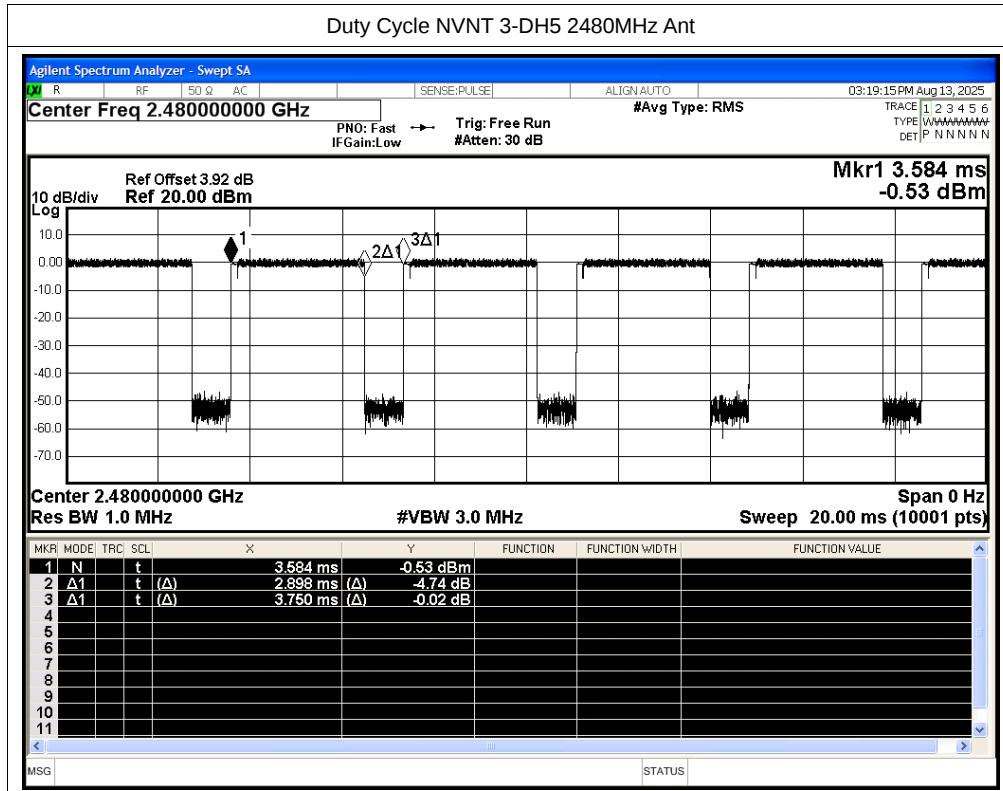


Duty Cycle NVNT 3-DH5 2402MHz Ant



Duty Cycle NVNT 3-DH5 2441MHz Ant



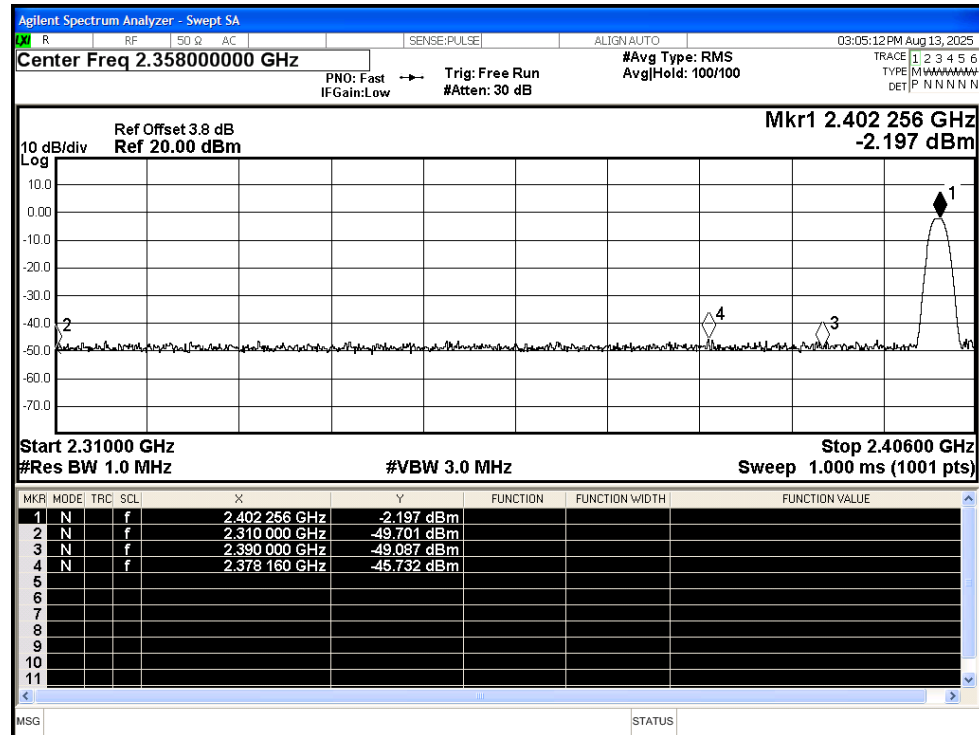


A.9 Restrict Band

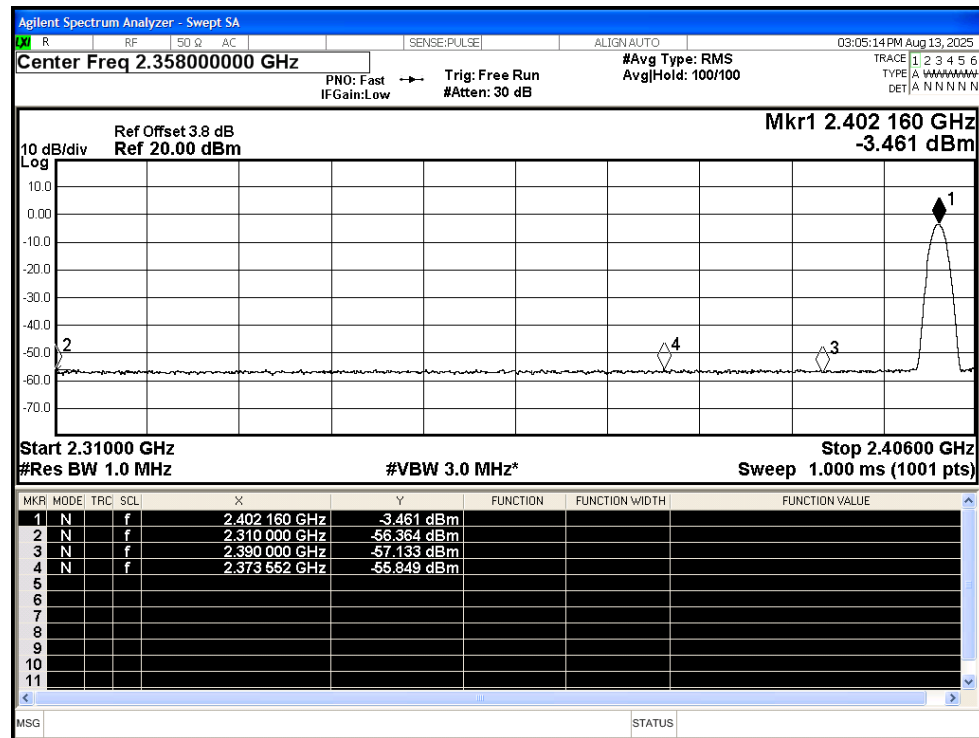
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant	No-Hopping	2310	-49.7	3.68	-	49.24	Peak	74	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2310	-56.36	3.68	1.1	43.68	Average	54	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2378.16	-45.73	3.68	-	53.21	Peak	74	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2373.552	-55.85	3.68	1.1	44.19	Average	54	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2390	-49.09	3.68	-	49.85	Peak	74	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2390	-57.13	3.68	1.1	42.91	Average	54	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2483.5	-48.57	3.68	-	50.37	Peak	74	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2483.5	-56.12	3.68	1.1	43.92	Average	54	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2484.448	-44.95	3.68	-	53.99	Peak	74	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2486.392	-55.49	3.68	1.1	44.55	Average	54	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2500	-47.73	3.68	-	51.21	Peak	74	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2500	-56.43	3.68	1.1	43.61	Average	54	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2310	-48.97	3.68	-	49.97	Peak	74	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2310	-57.22	3.68	1.12	42.84	Average	54	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2331.504	-45.99	3.68	-	52.95	Peak	74	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2331.888	-56.01	3.68	1.12	44.05	Average	54	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2390	-47.05	3.68	-	51.89	Peak	74	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2390	-56.34	3.68	1.12	43.72	Average	54	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2483.5	-45.32	3.68	-	53.62	Peak	74	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2483.5	-55.48	3.68	1.12	44.58	Average	54	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2499.208	-45.13	3.68	-	53.81	Peak	74	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2485.048	-55.3	3.68	1.12	44.76	Average	54	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2500	-48.96	3.68	-	49.98	Peak	74	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2500	-56.45	3.68	1.12	43.61	Average	54	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2310	-49.15	3.68	-	49.79	Peak	74	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2310	-57.24	3.68	1.12	42.82	Average	54	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2318.352	-45.99	3.68	-	52.95	Peak	74	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2388.048	-56	3.68	1.12	44.06	Average	54	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2390	-49.01	3.68	-	49.93	Peak	74	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2390	-56.44	3.68	1.12	43.62	Average	54	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2483.5	-46.74	3.68	-	52.20	Peak	74	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2483.5	-55.39	3.68	0.12	43.67	Average	54	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2484.616	-44.95	3.68	-	53.99	Peak	74	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2483.536	-55.08	3.68	0.12	43.98	Average	54	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2500	-47.86	3.68	-	51.08	Peak	74	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2500	-55.75	3.68	0.12	43.31	Average	54	Pass

Test Graphs

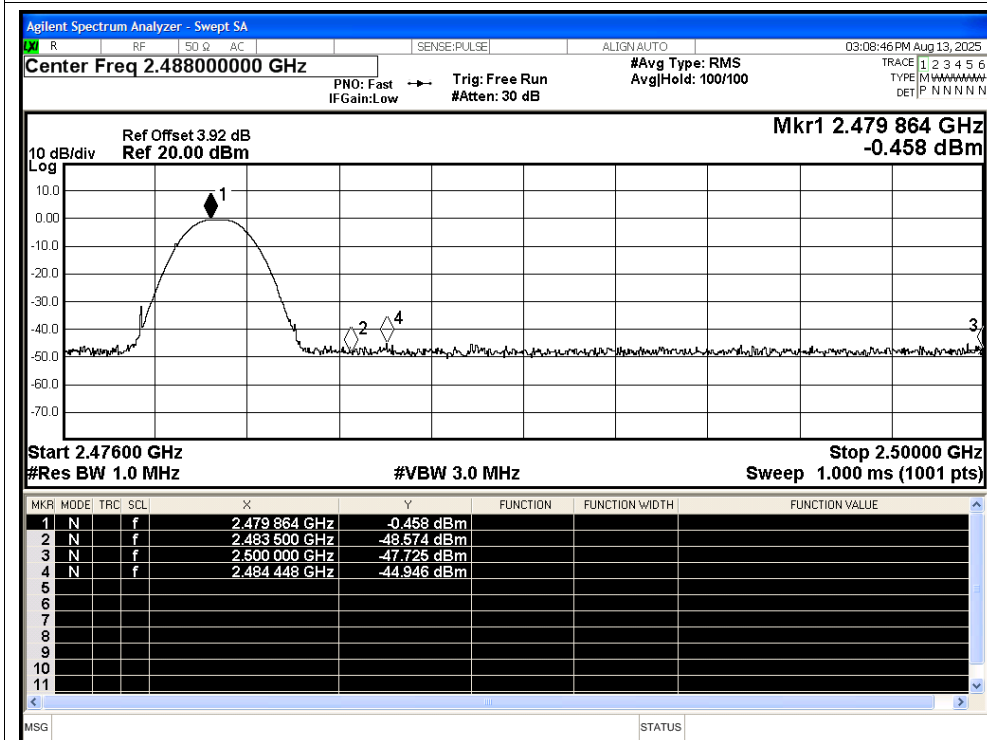
Restrict Band NVNT 1-DH5 2402MHz Ant No-Hopping Peak



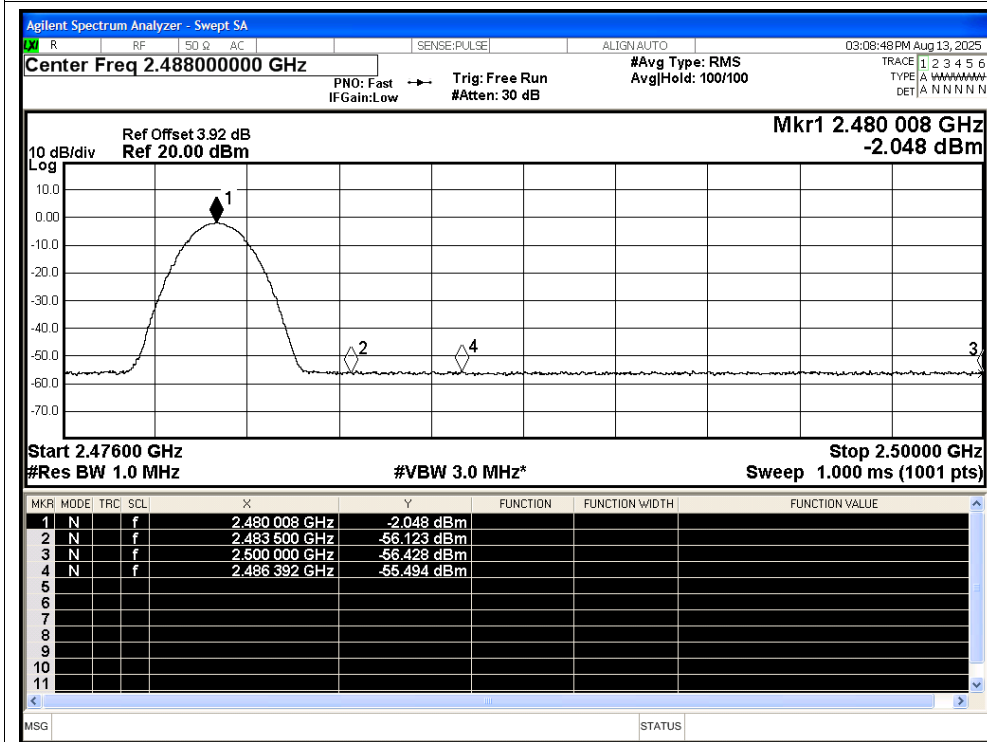
Restrict Band NVNT 1-DH5 2402MHz Ant No-Hopping Average



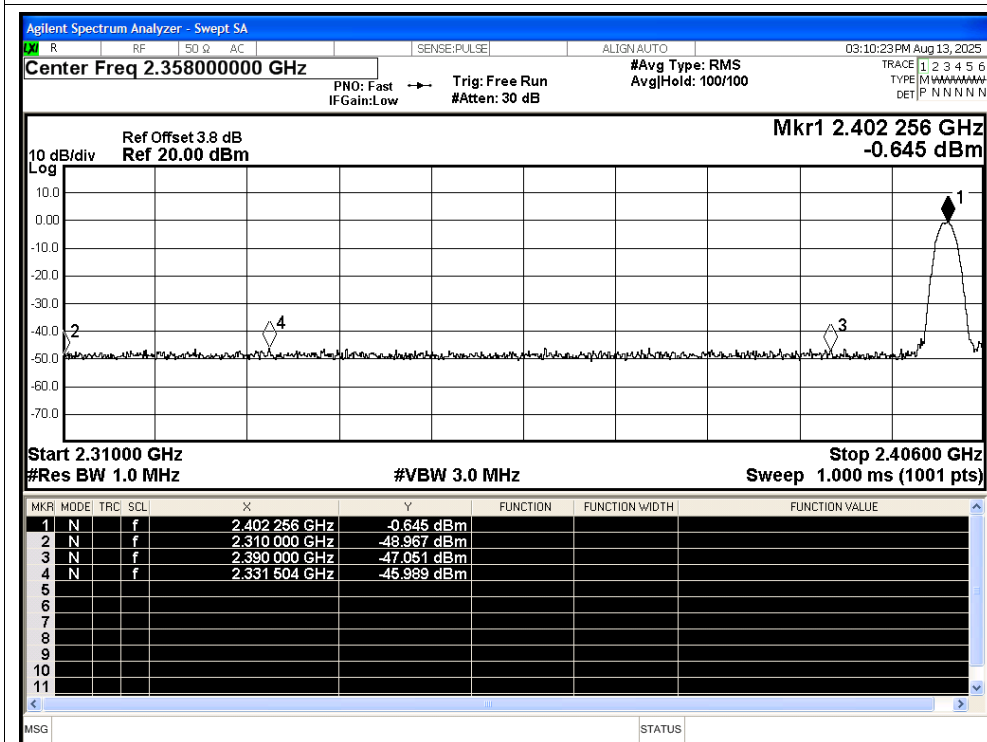
Restrict Band NVNT 1-DH5 2480MHz Ant No-Hopping Peak



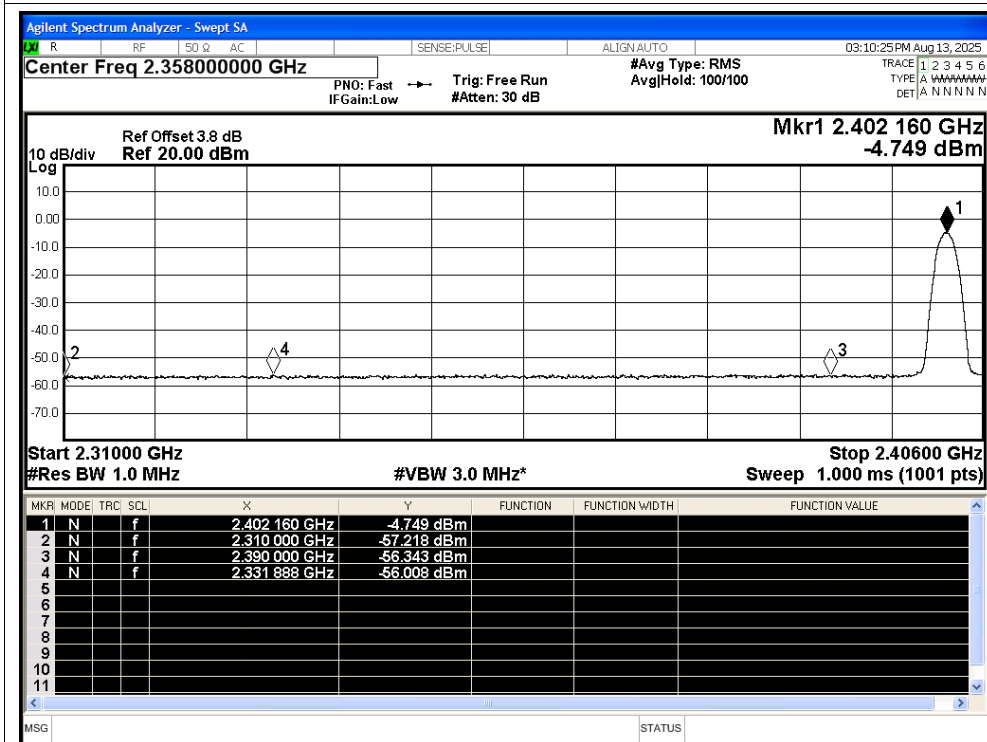
Restrict Band NVNT 1-DH5 2480MHz Ant No-Hopping Average



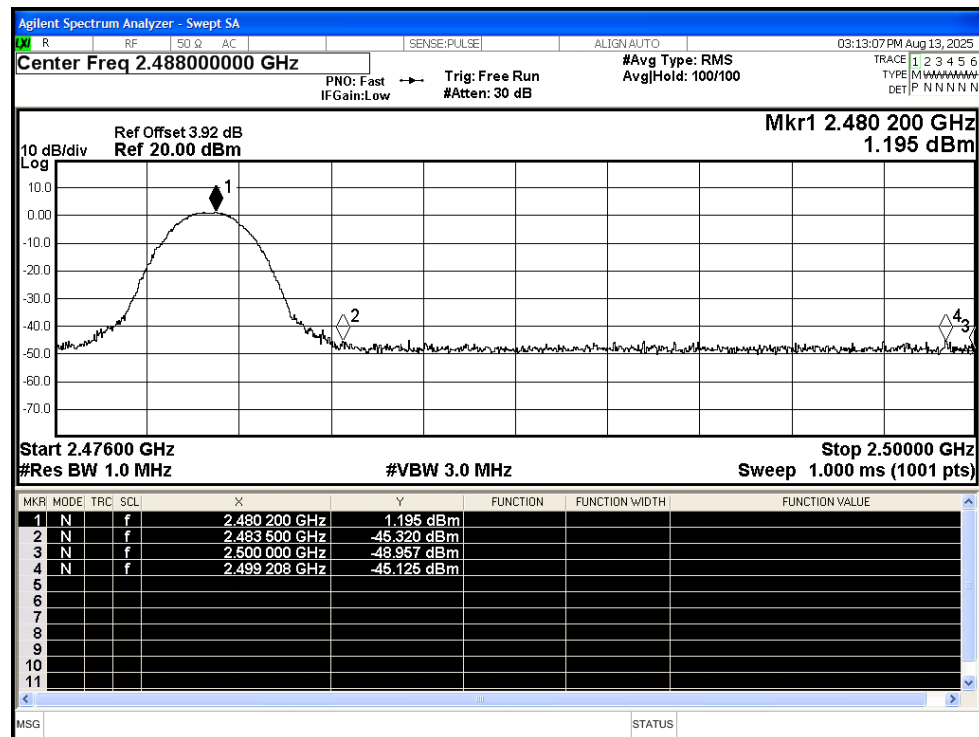
Restrict Band NVNT 2-DH5 2402MHz Ant No-Hopping Peak



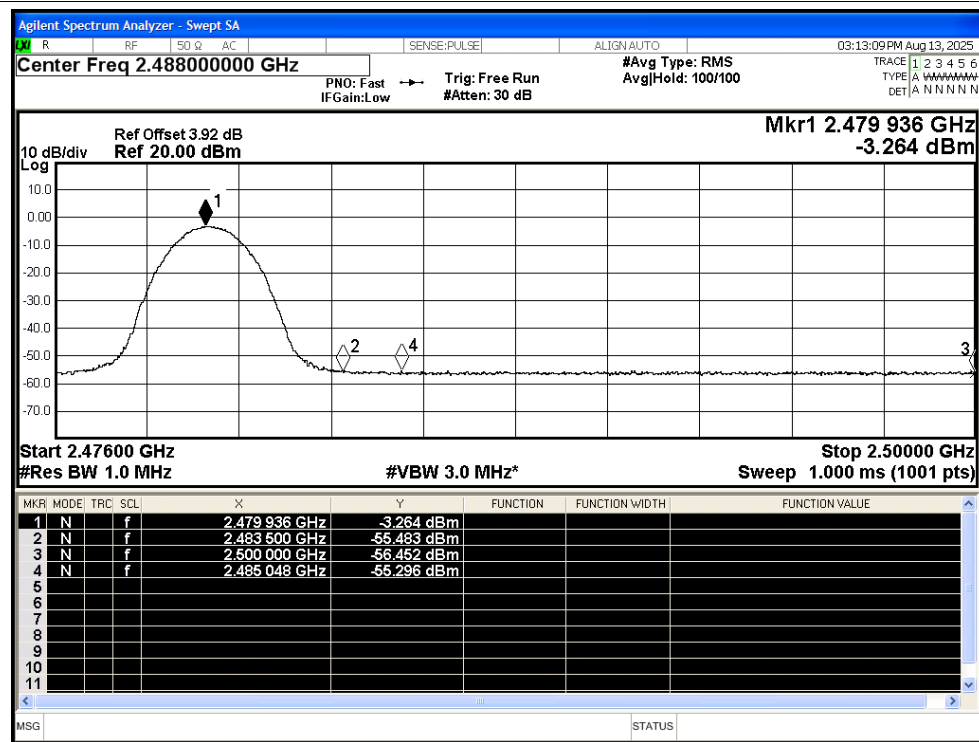
Restrict Band NVNT 2-DH5 2402MHz Ant No-Hopping Average



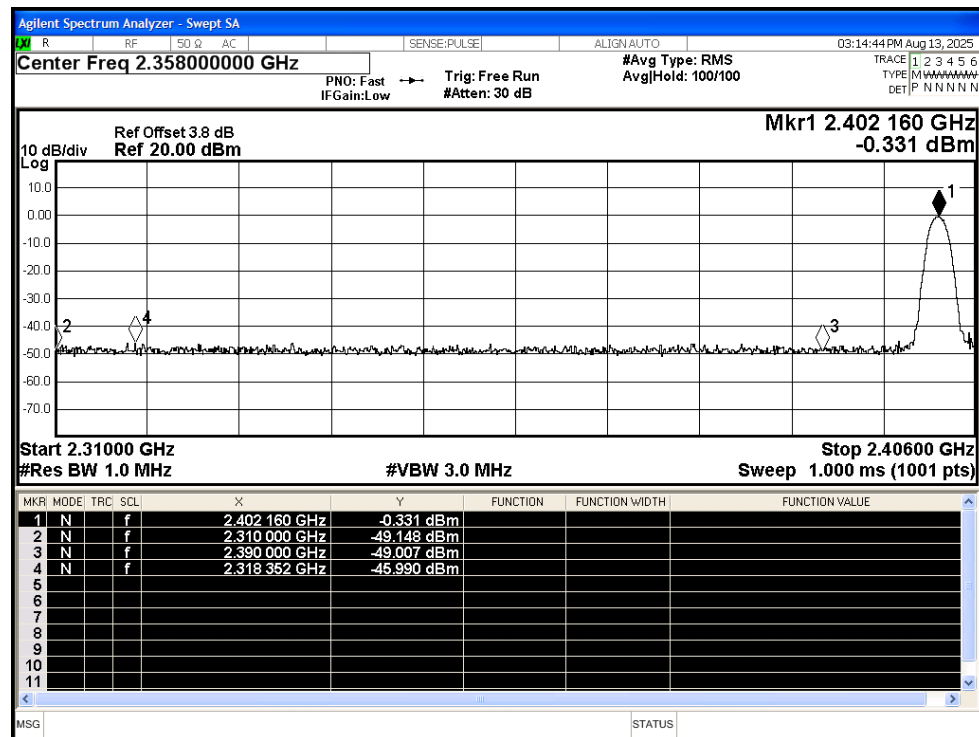
Restrict Band NVNT 2-DH5 2480MHz Ant No-Hopping Peak



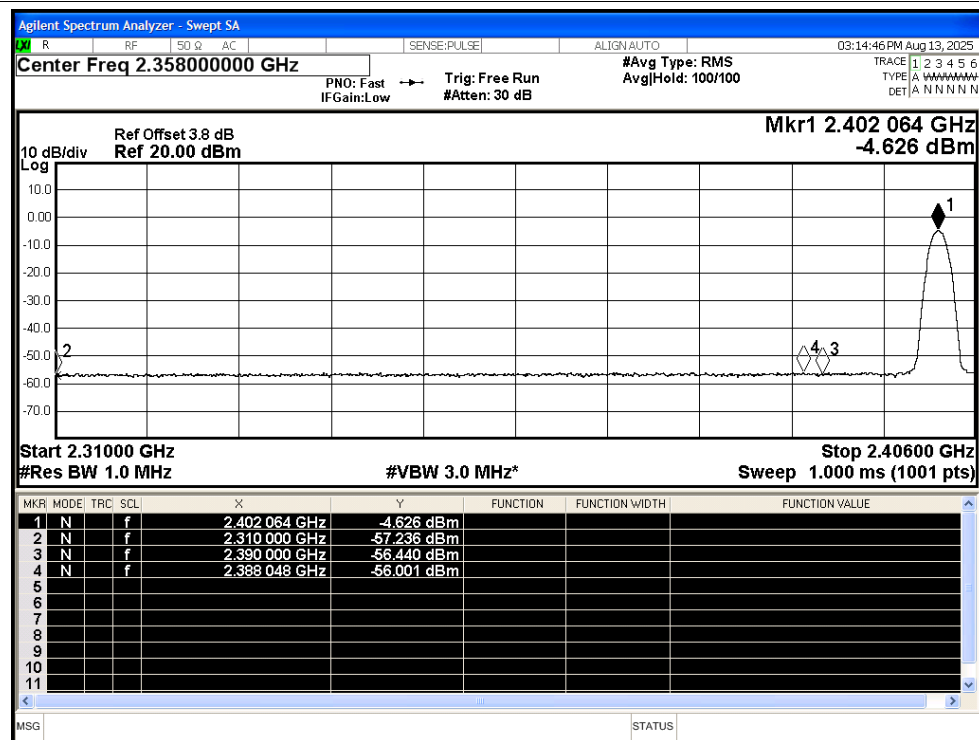
Restrict Band NVNT 2-DH5 2480MHz Ant No-Hopping Average



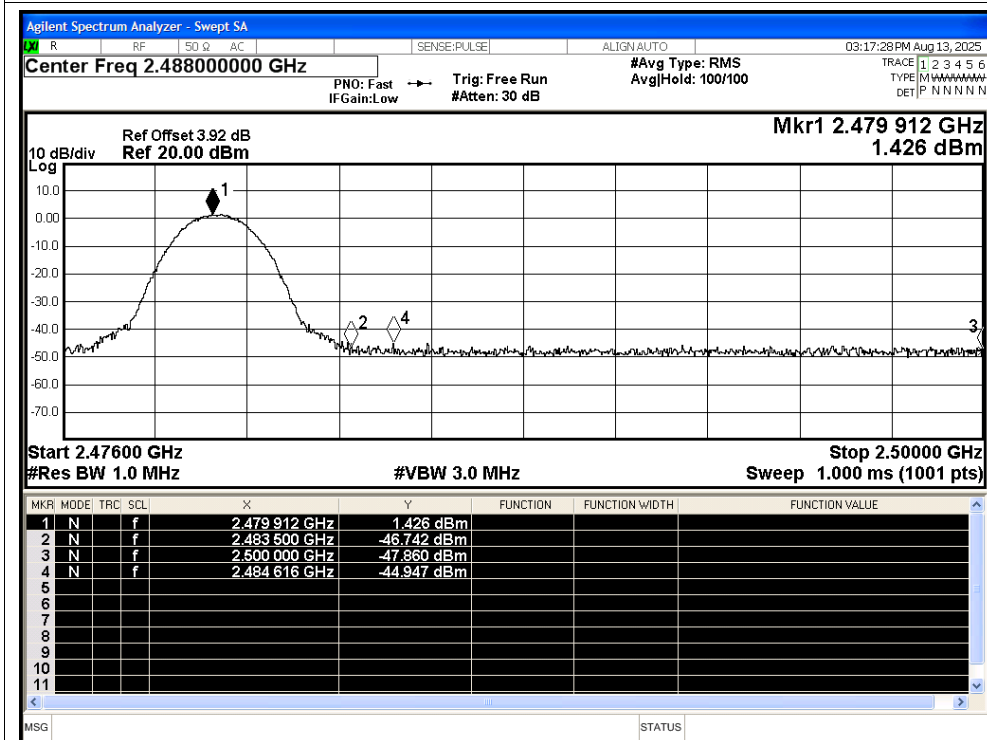
Restrict Band NVNT 3-DH5 2402MHz Ant No-Hopping Peak



Restrict Band NVNT 3-DH5 2402MHz Ant No-Hopping Average



Restrict Band NVNT 3-DH5 2480MHz Ant No-Hopping Peak



Restrict Band NVNT 3-DH5 2480MHz Ant No-Hopping Average

