

Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Smart watch

Test Model: J11

Environmental Conditions

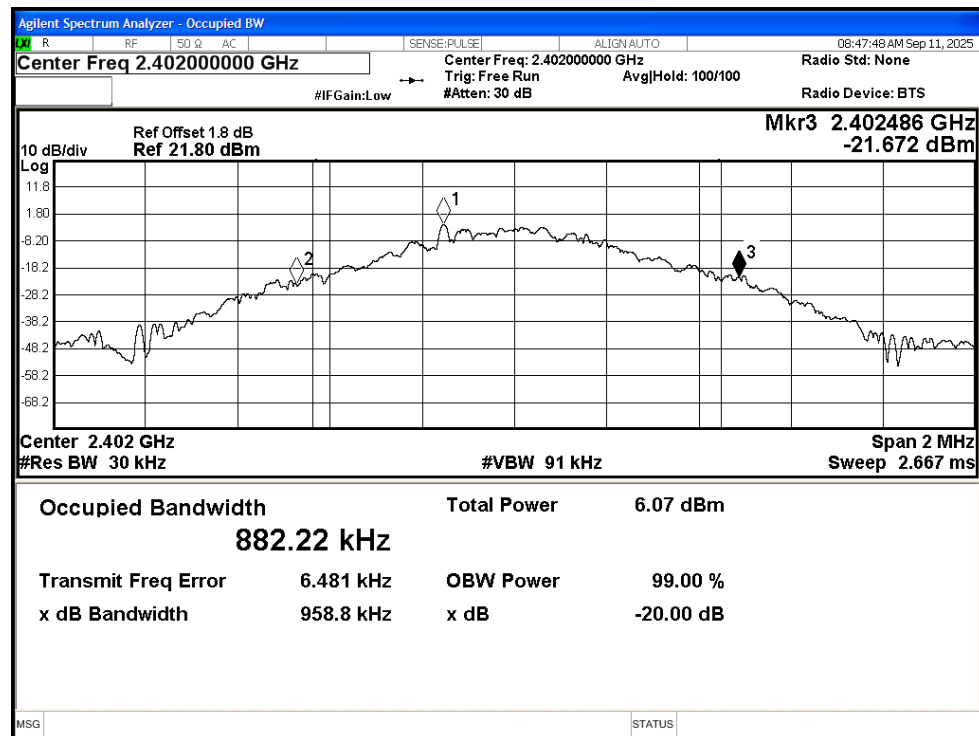
Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Ting He
Supervised by:	Fengliu Tang

A.1 -20dB Bandwidth

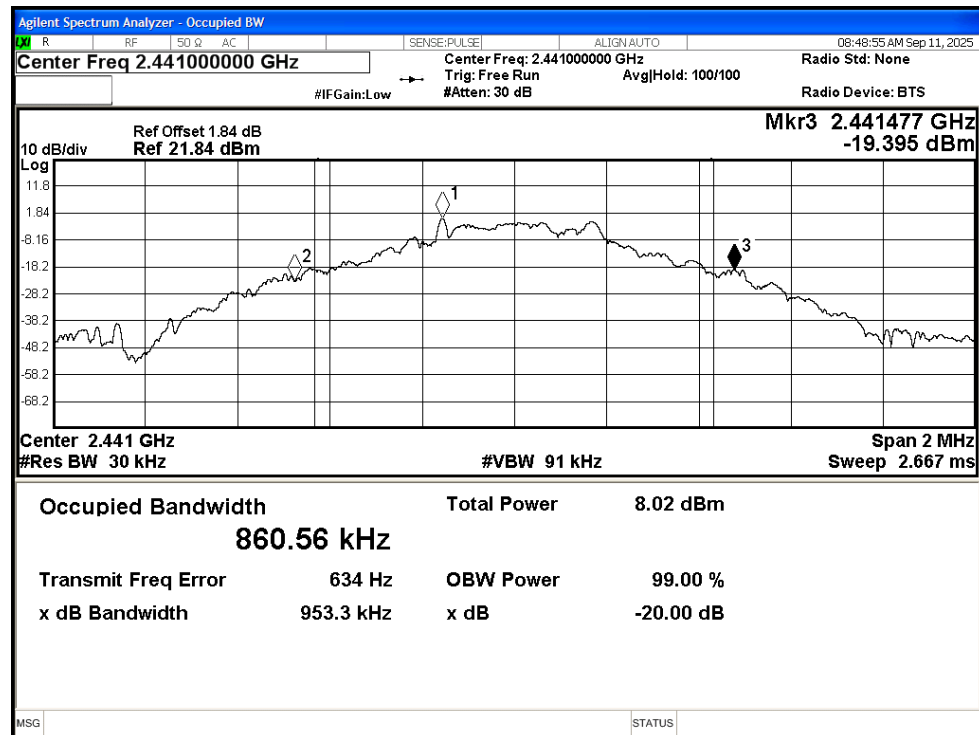
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.959	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.953	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.964	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.287	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.313	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.283	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.3	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.303	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.288	N/A	Pass

Test Graphs

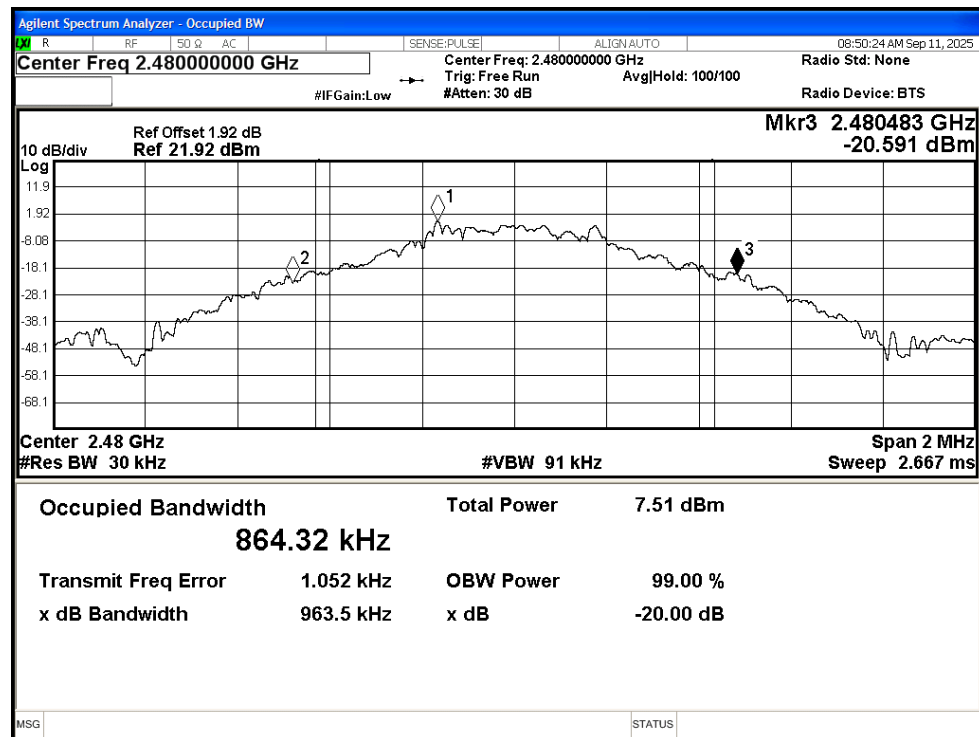
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



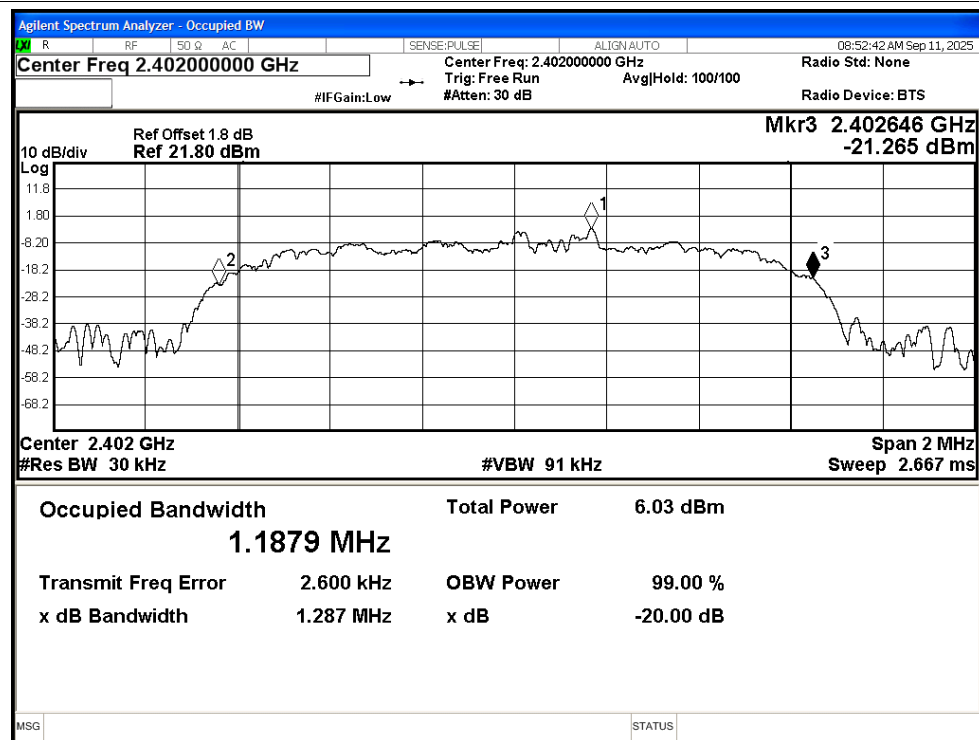
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



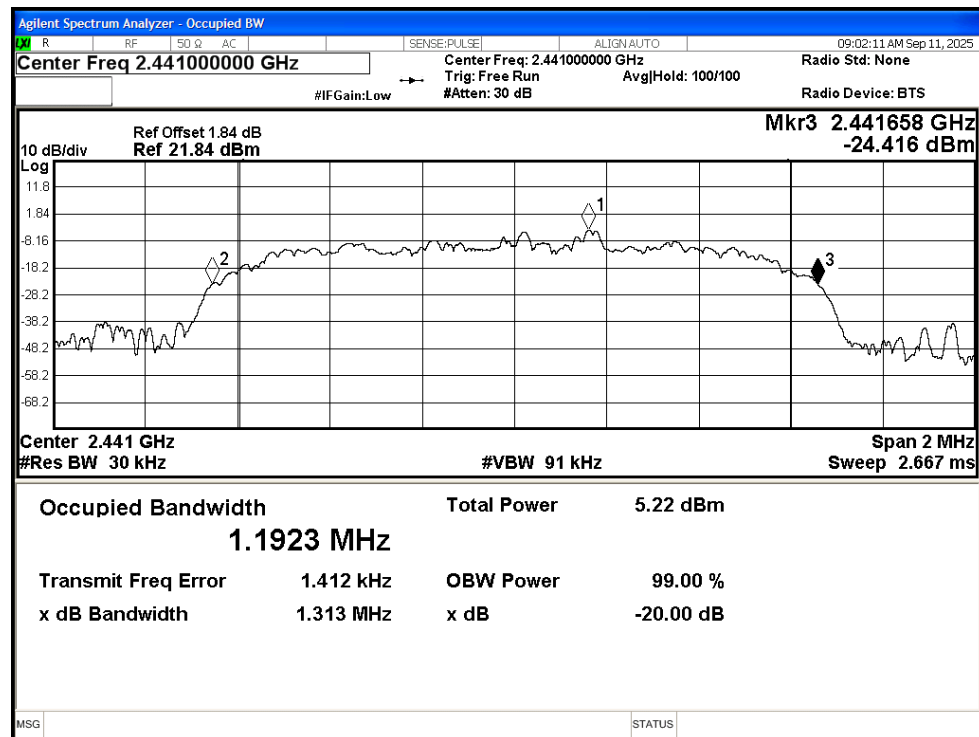
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



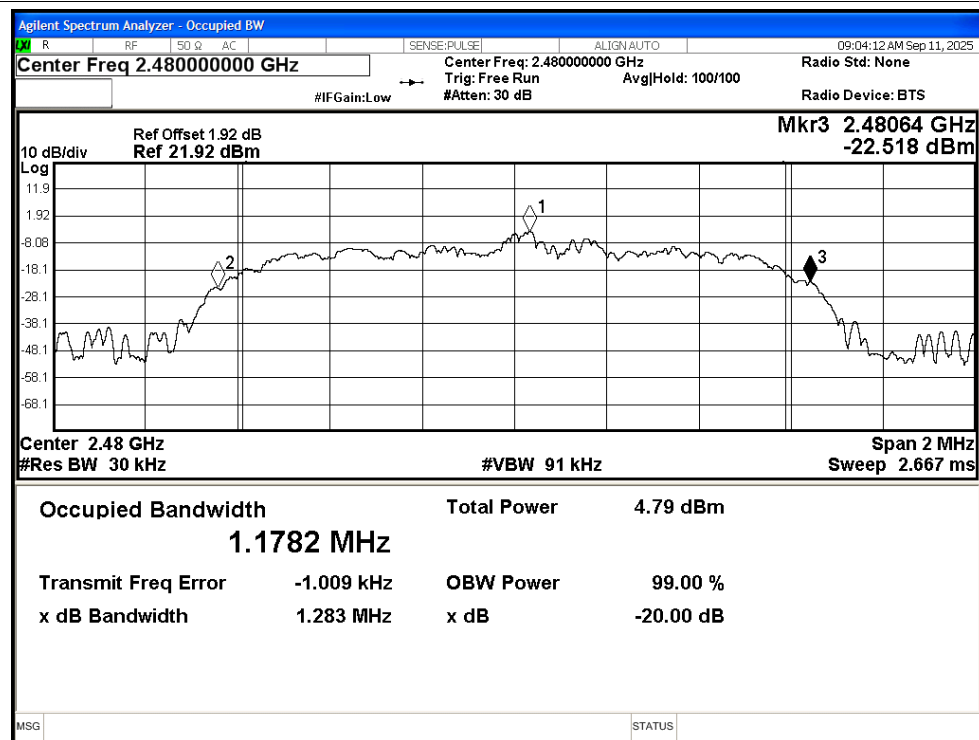
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



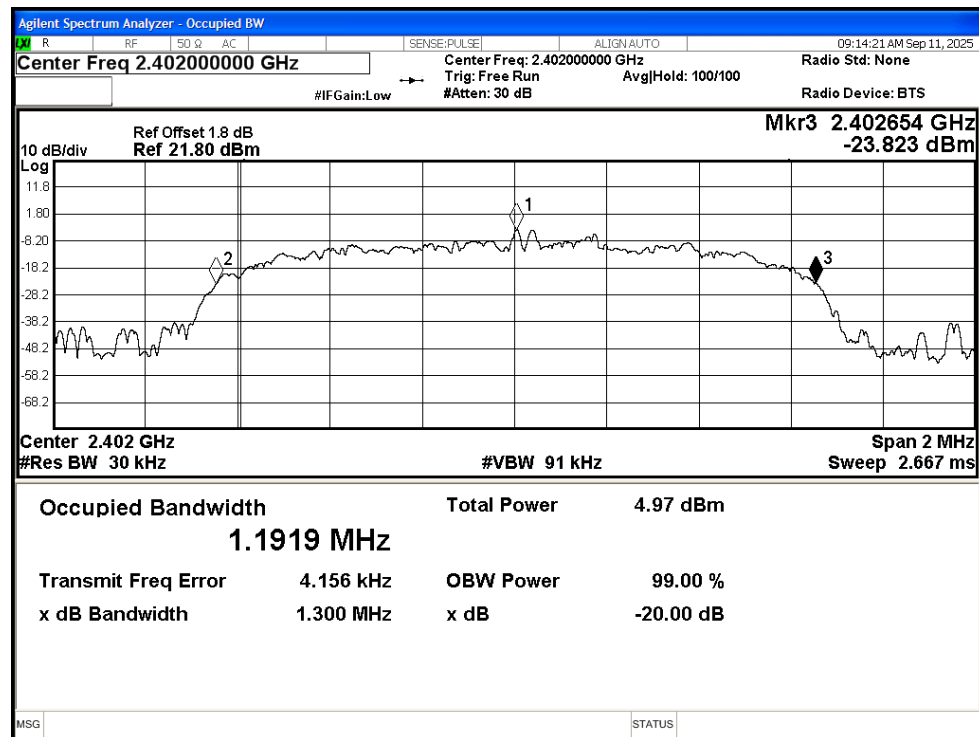
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



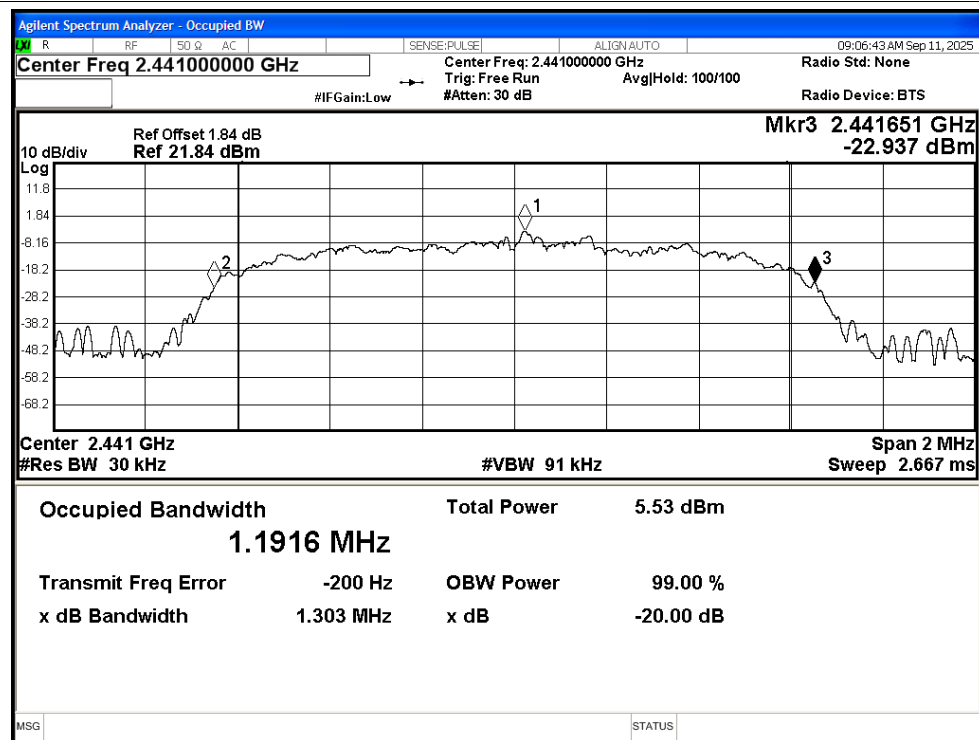
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

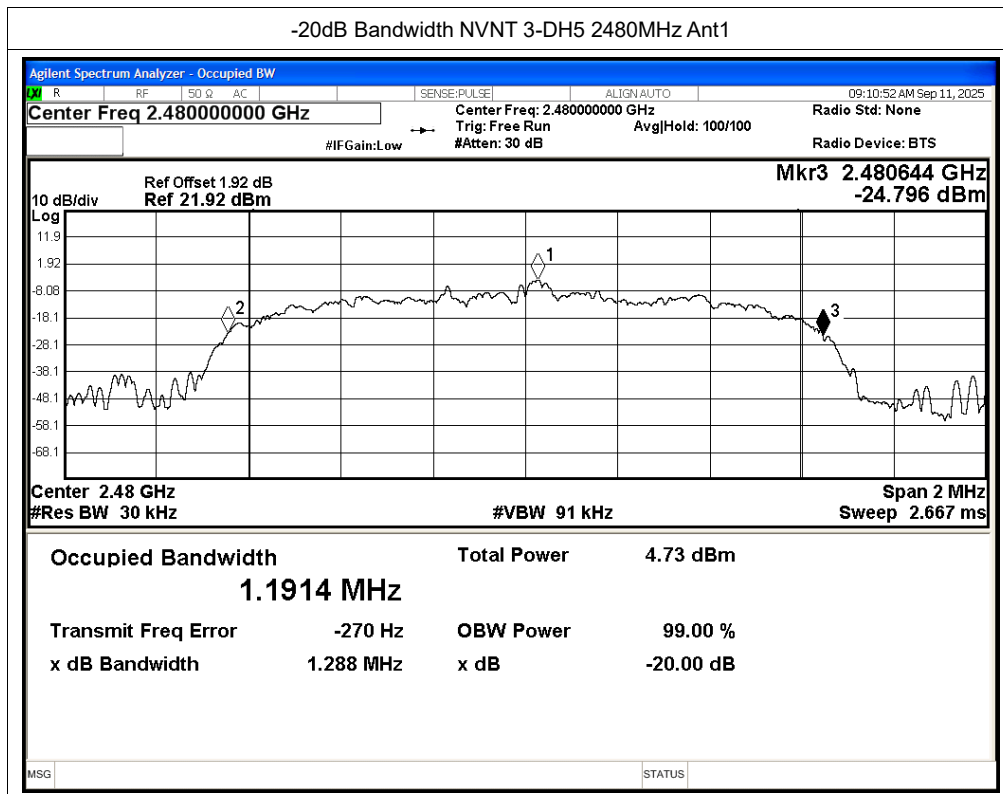


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



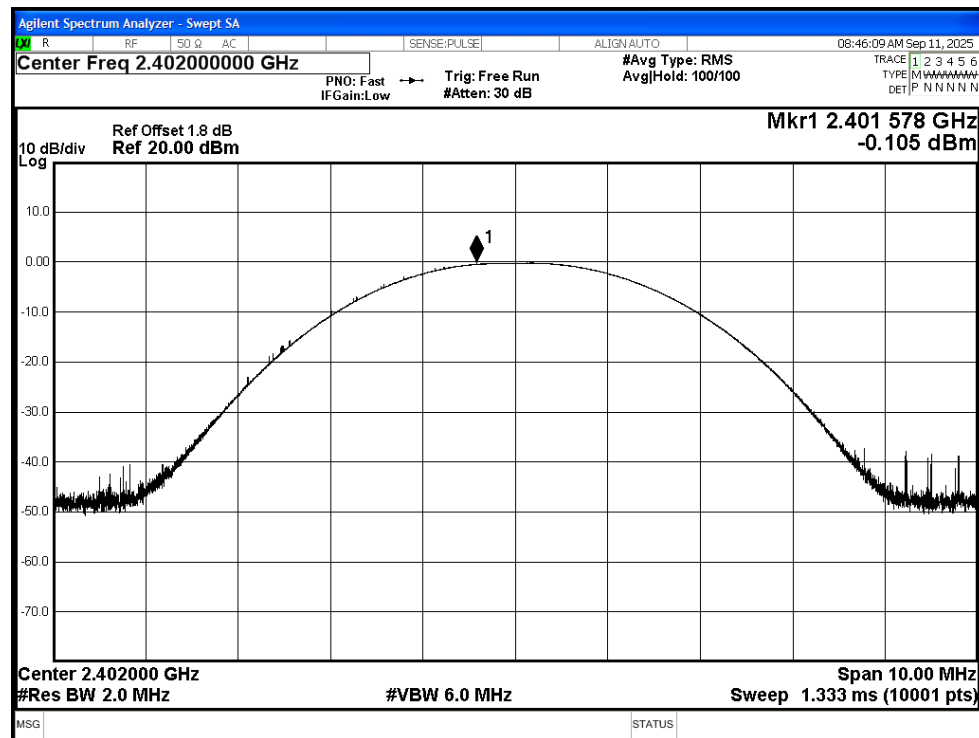


A.2 Maximum Peak Conducted Output Power

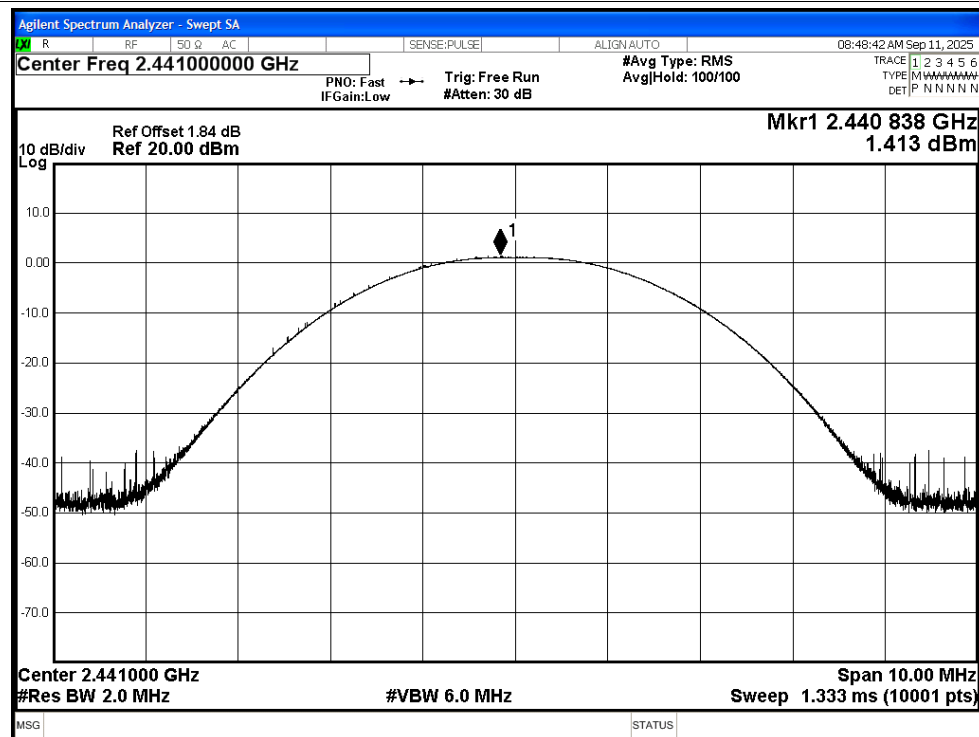
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.11	21	Pass
NVNT	1-DH5	2441	Ant1	1.41	21	Pass
NVNT	1-DH5	2480	Ant1	0.88	21	Pass
NVNT	2-DH5	2402	Ant1	1.53	21	Pass
NVNT	2-DH5	2441	Ant1	1.10	21	Pass
NVNT	2-DH5	2480	Ant1	-0.01	21	Pass
NVNT	3-DH5	2402	Ant1	1.08	21	Pass
NVNT	3-DH5	2441	Ant1	1.46	21	Pass
NVNT	3-DH5	2480	Ant1	0.34	21	Pass

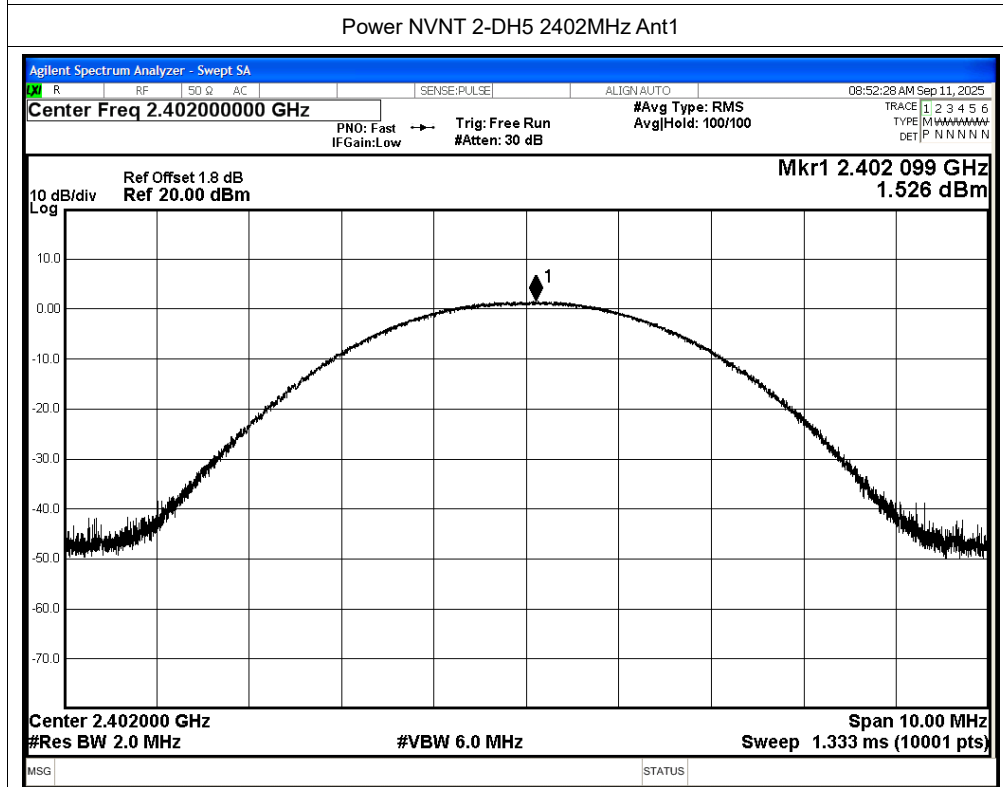
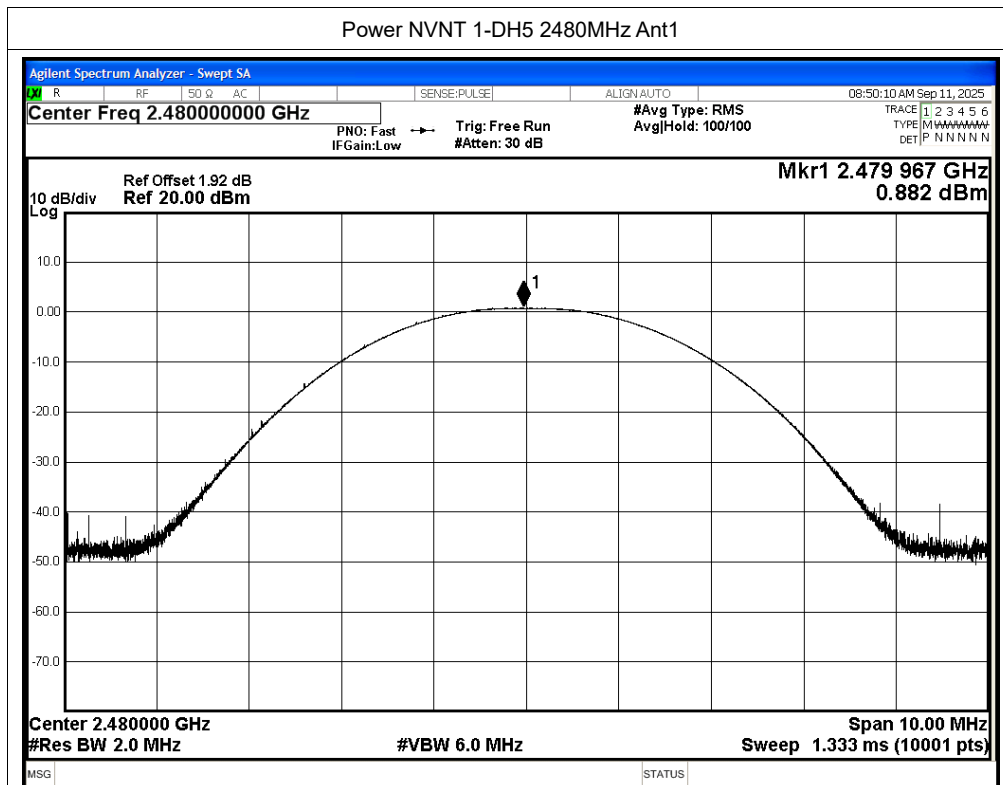
Test Graphs

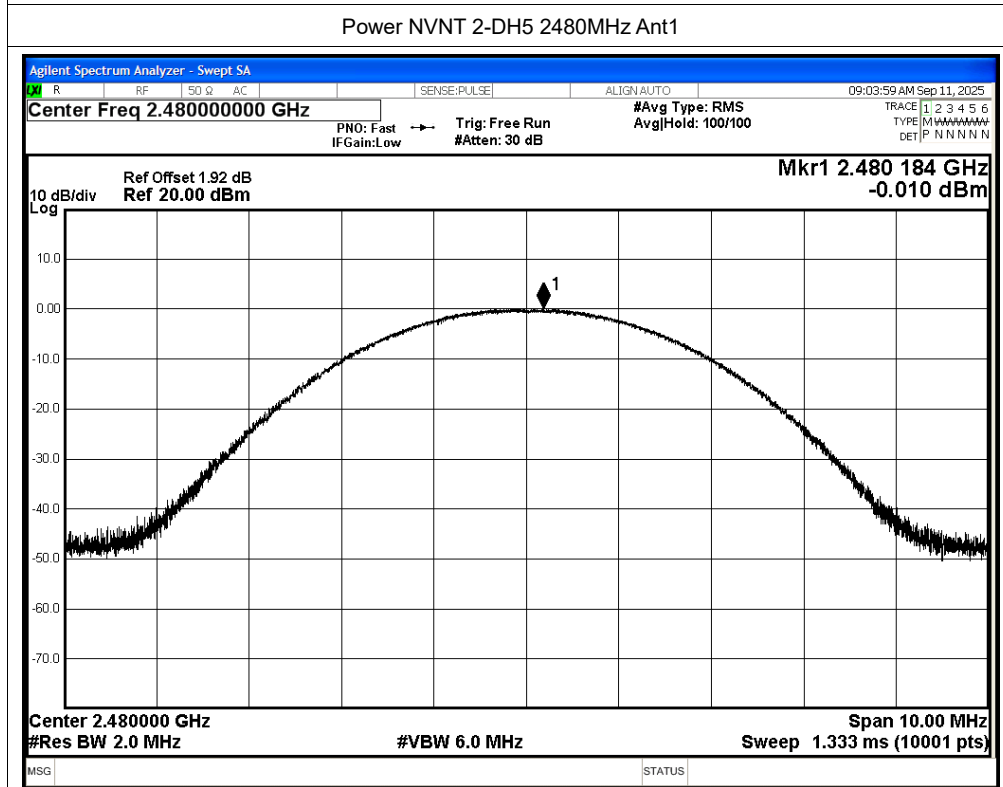
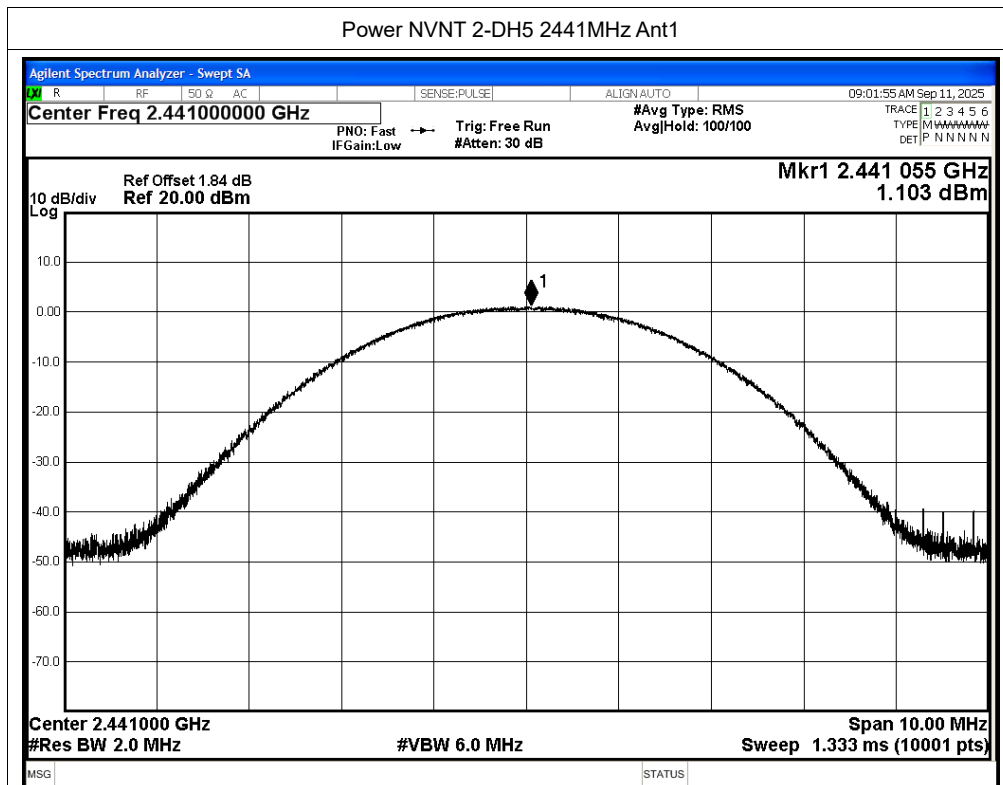
Power NVNT 1-DH5 2402MHz Ant1

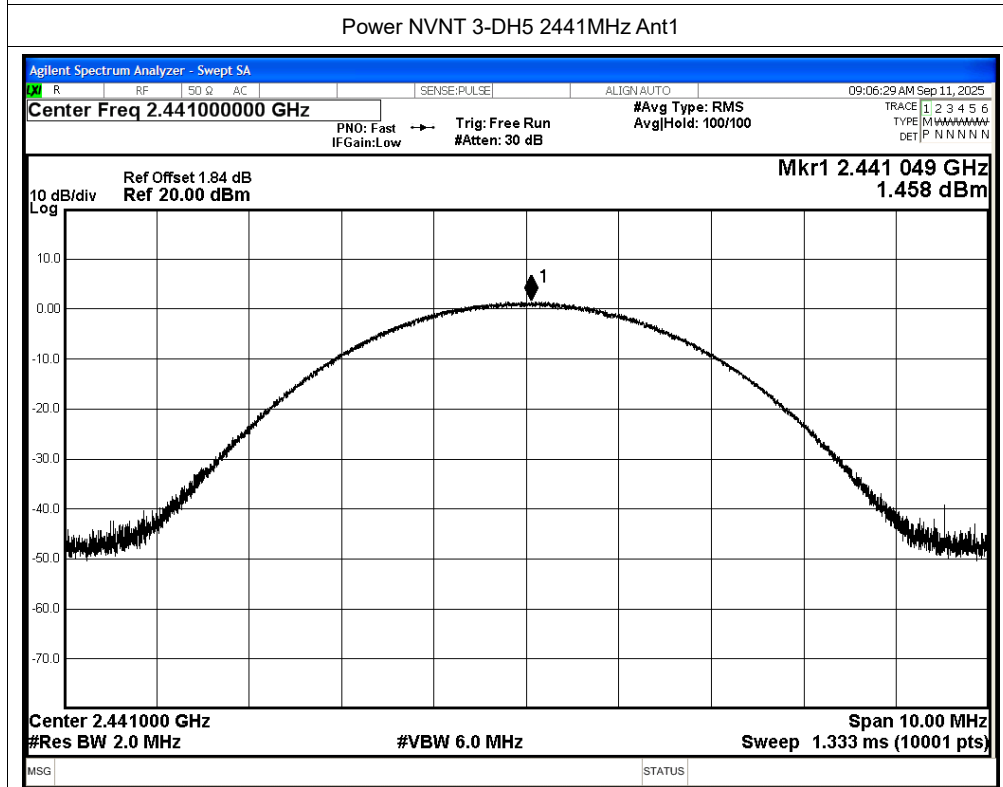
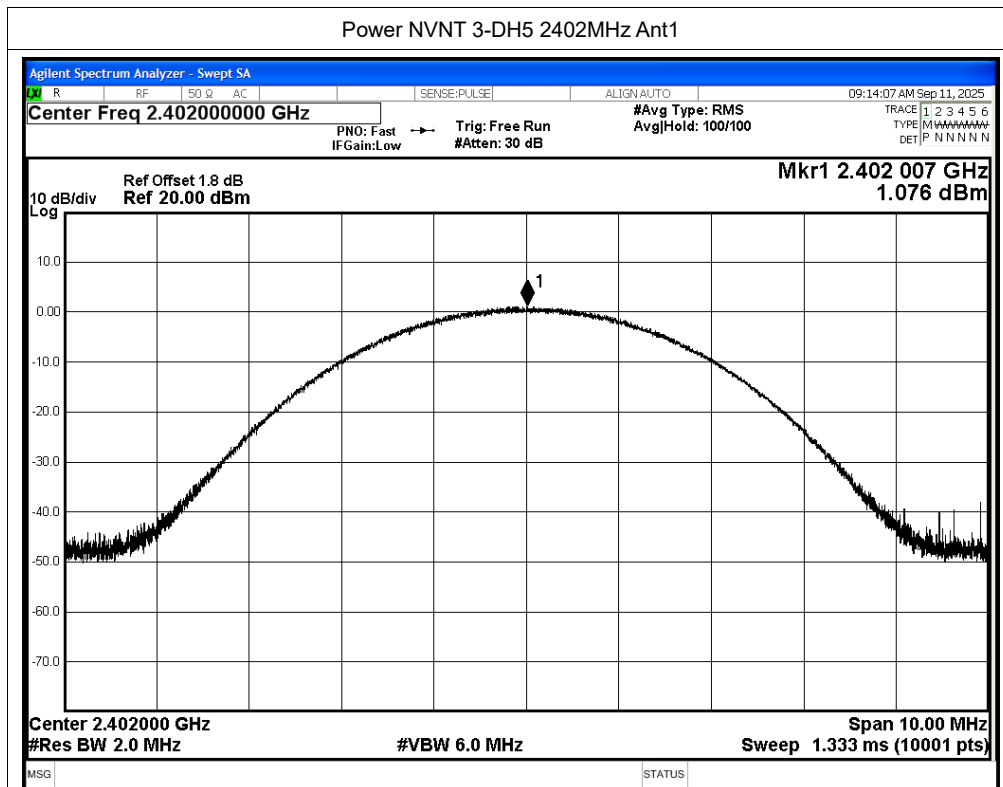


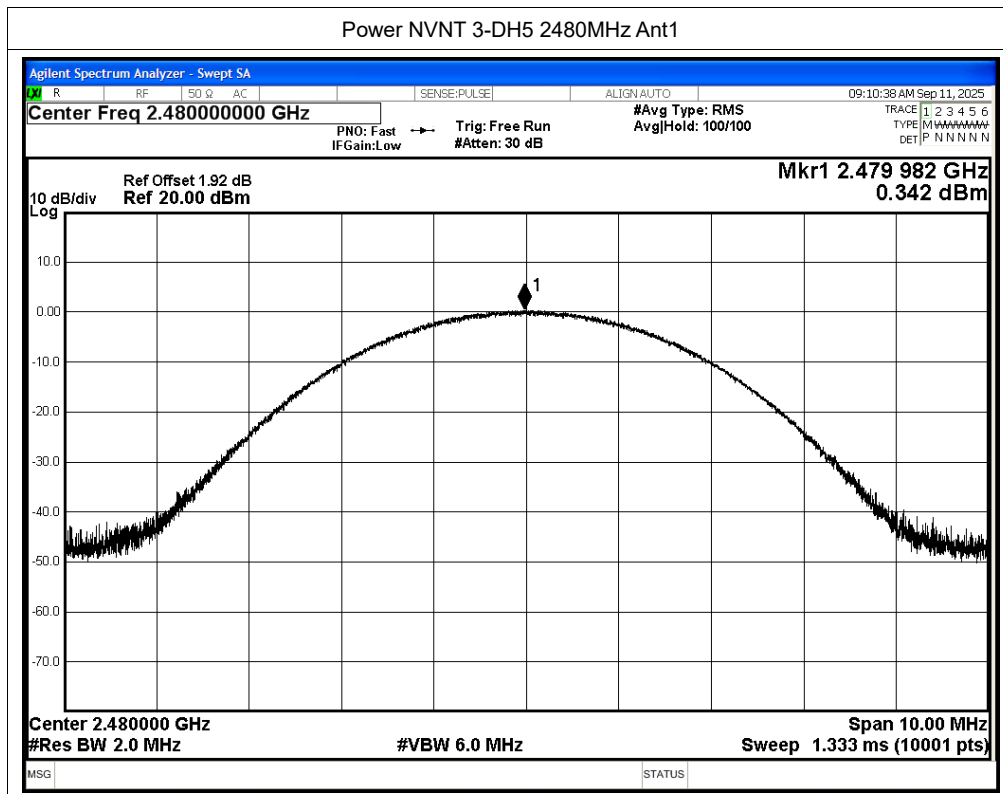
Power NVNT 1-DH5 2441MHz Ant1









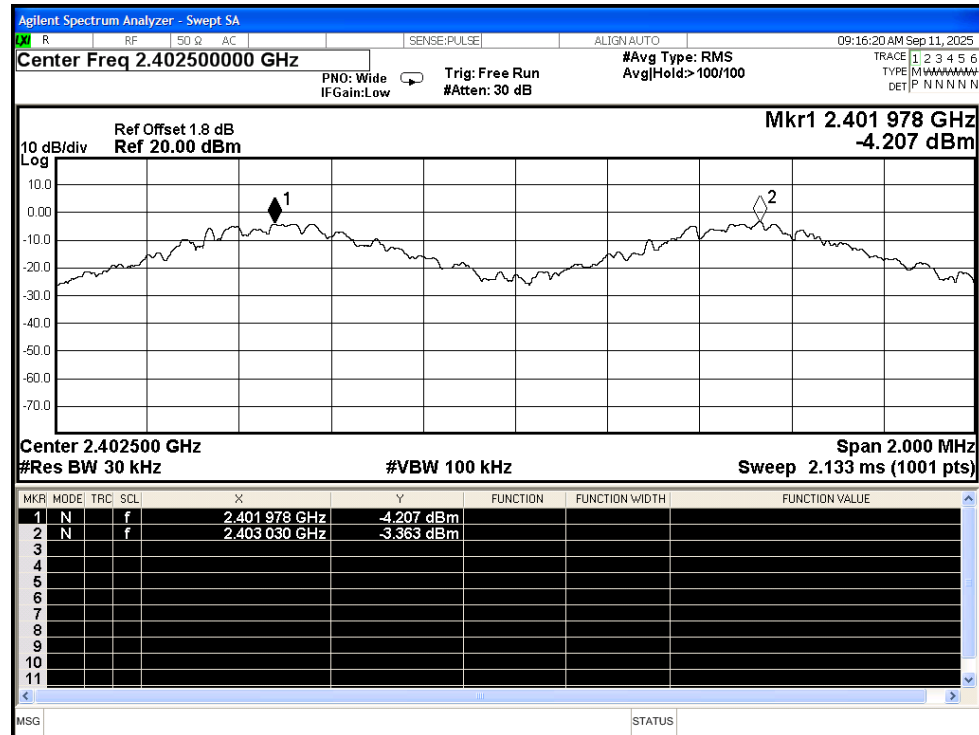


A.3 Carrier Frequencies Separation

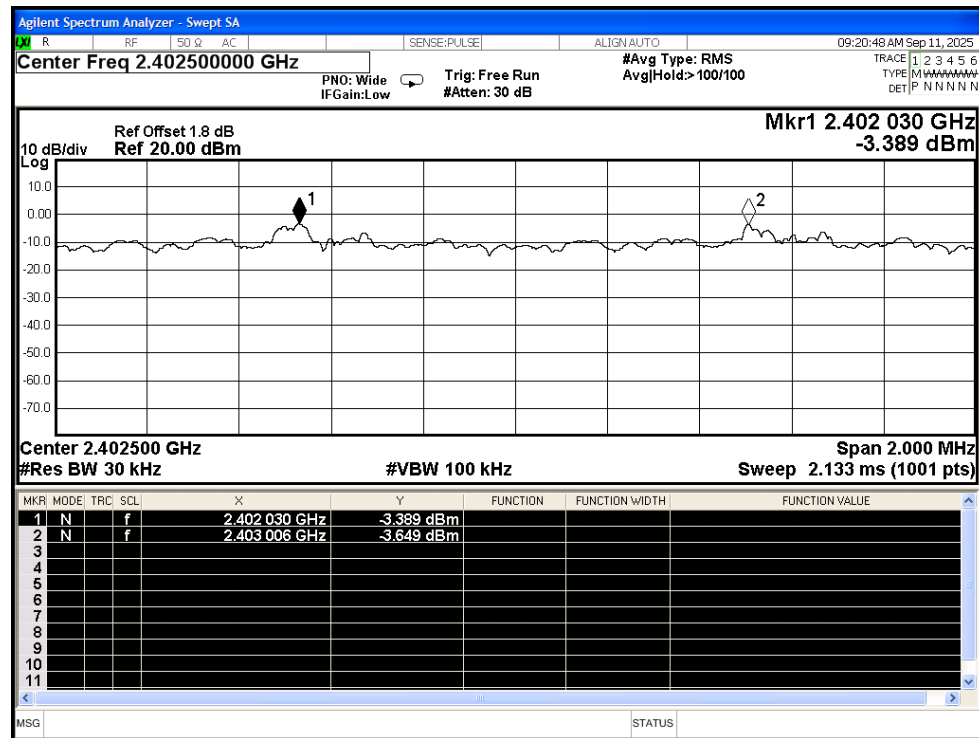
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.978	2403.03	1.052	0.639	Pass
NVNT	2-DH5	Ant1	2402.03	2403.006	0.976	0.858	Pass
NVNT	3-DH5	Ant1	2402.02	2403.034	1.014	0.867	Pass

Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1

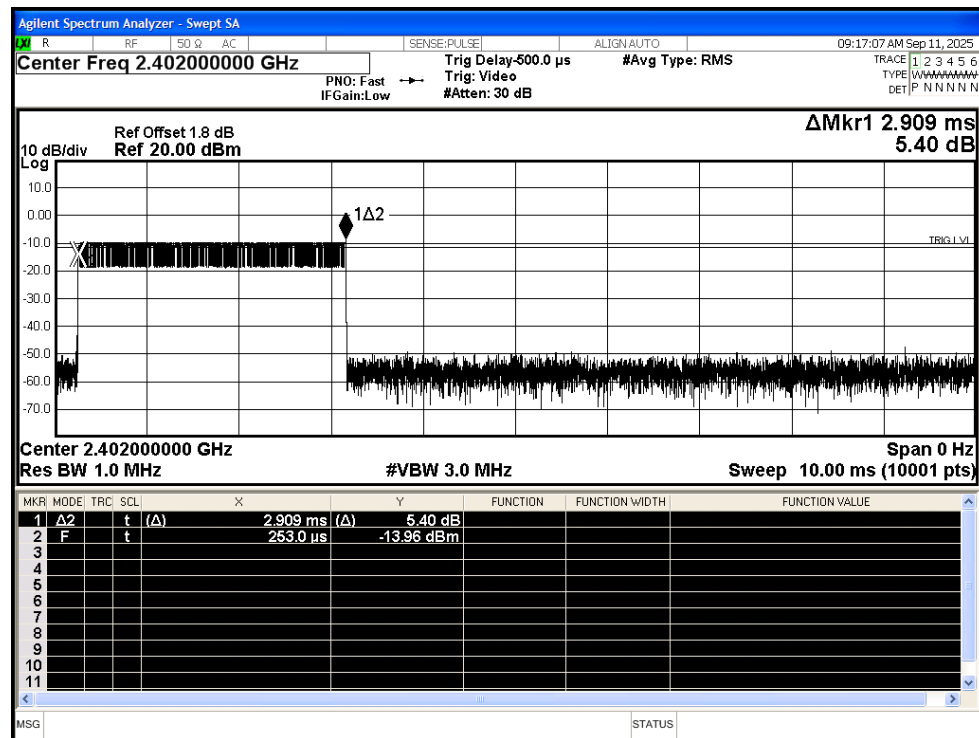


A.4 Dwell Time

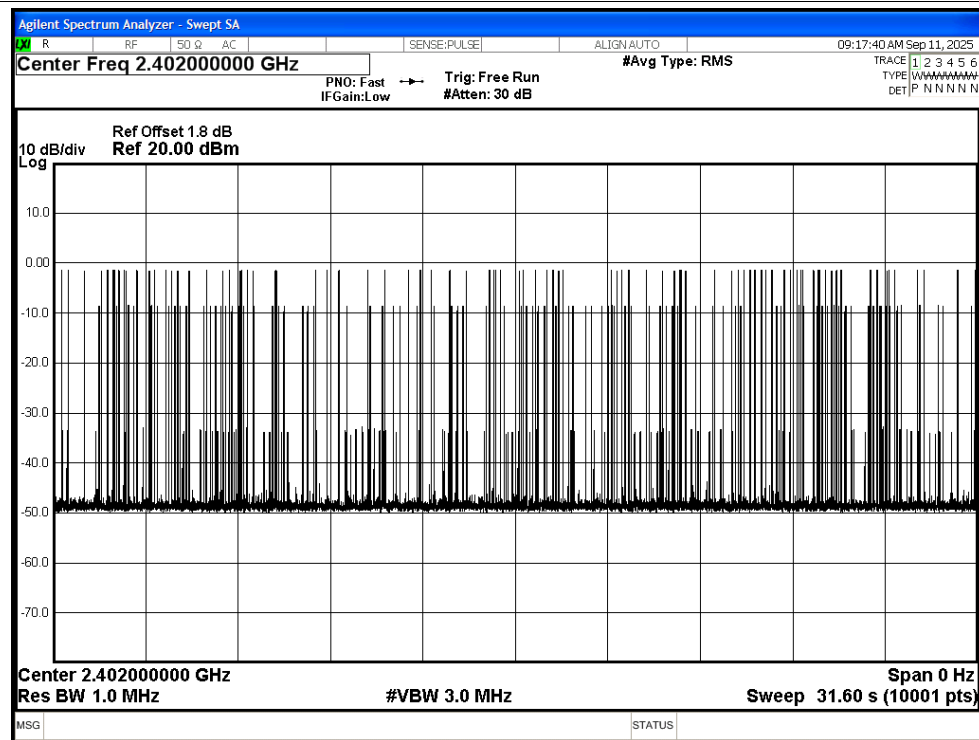
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.909	296.718	102	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	327.474	113	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.898	315.882	109	31600	400	Pass

Test Graphs

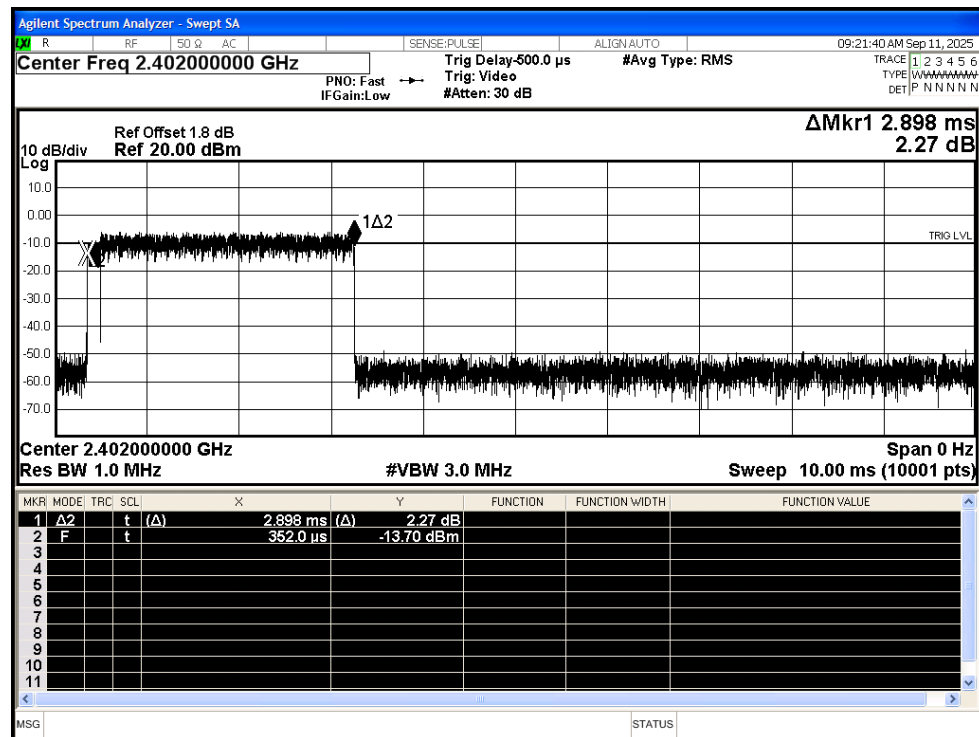
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



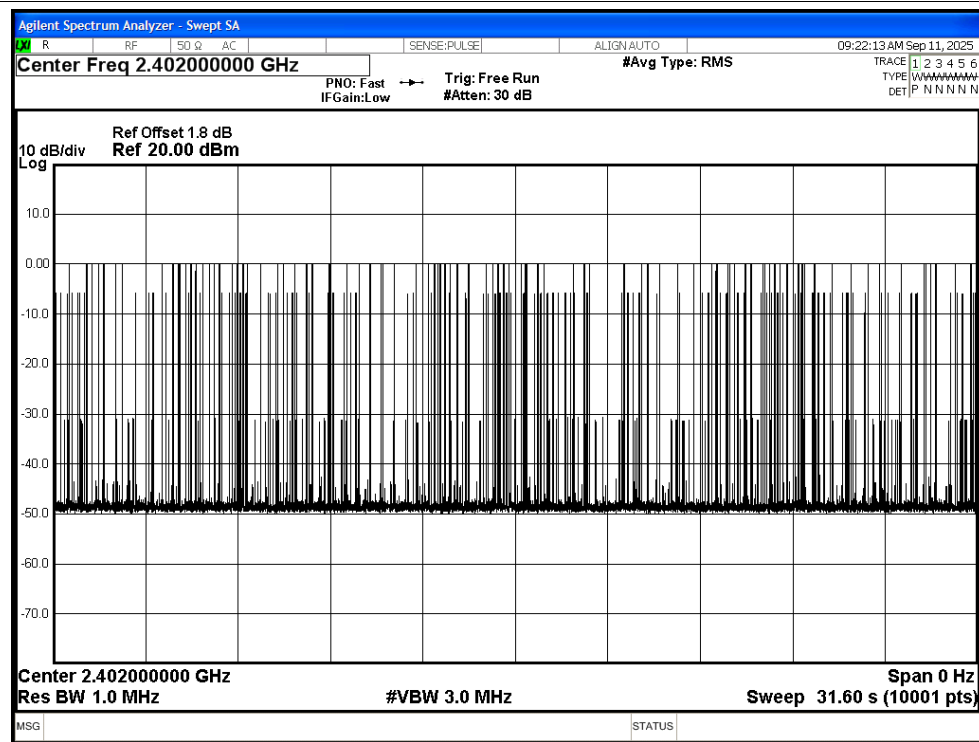
Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



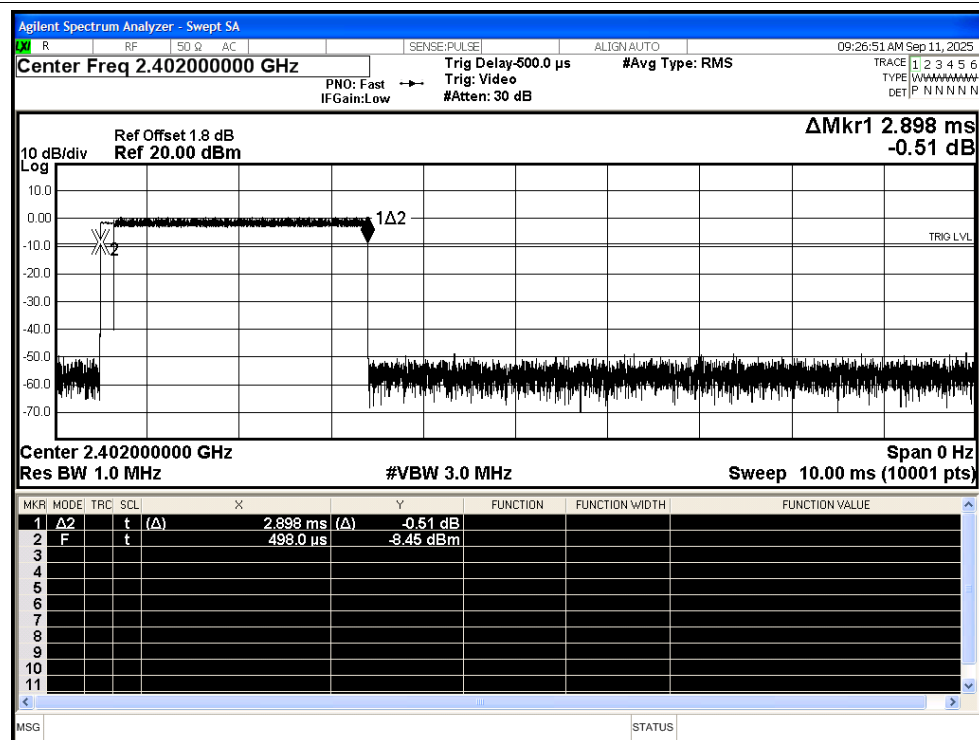
Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



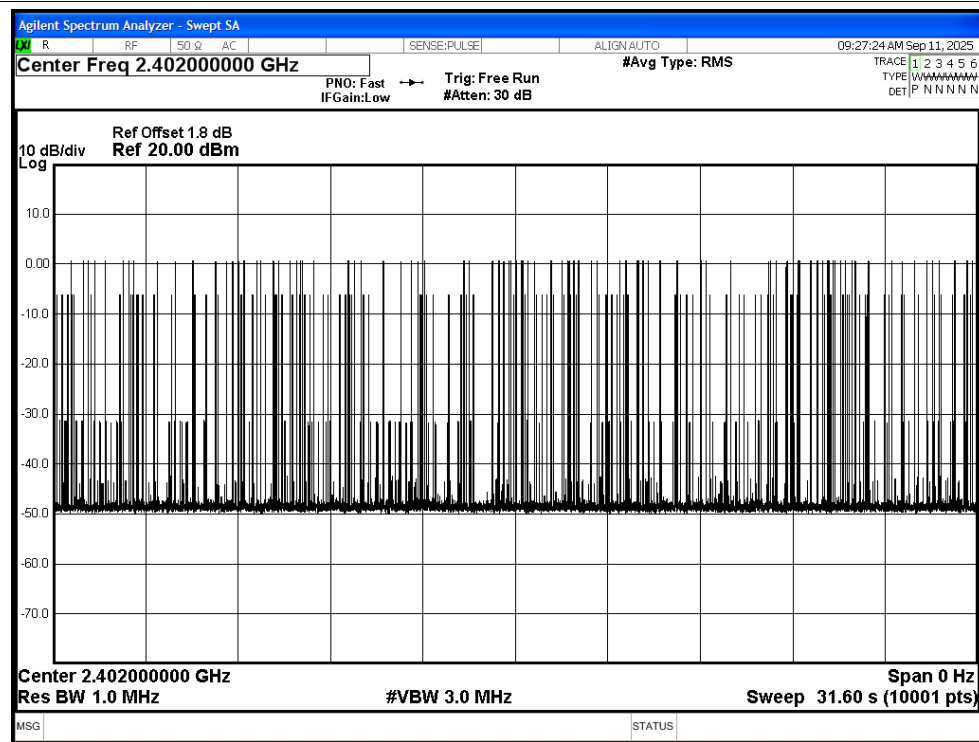
Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated

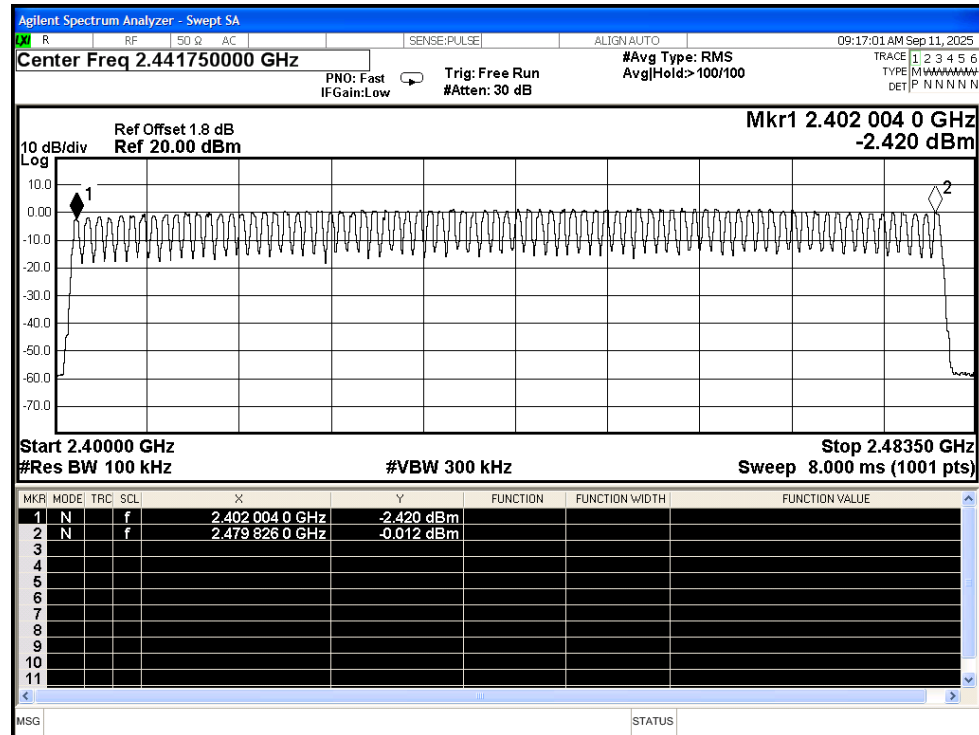


A.5 Number of Hopping Channel

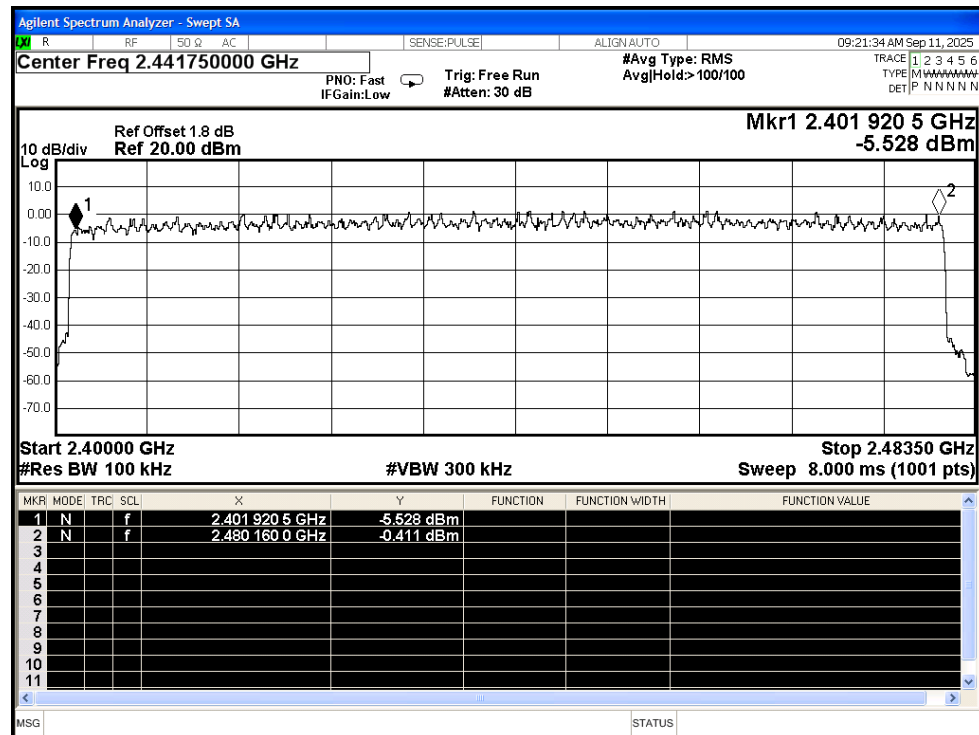
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

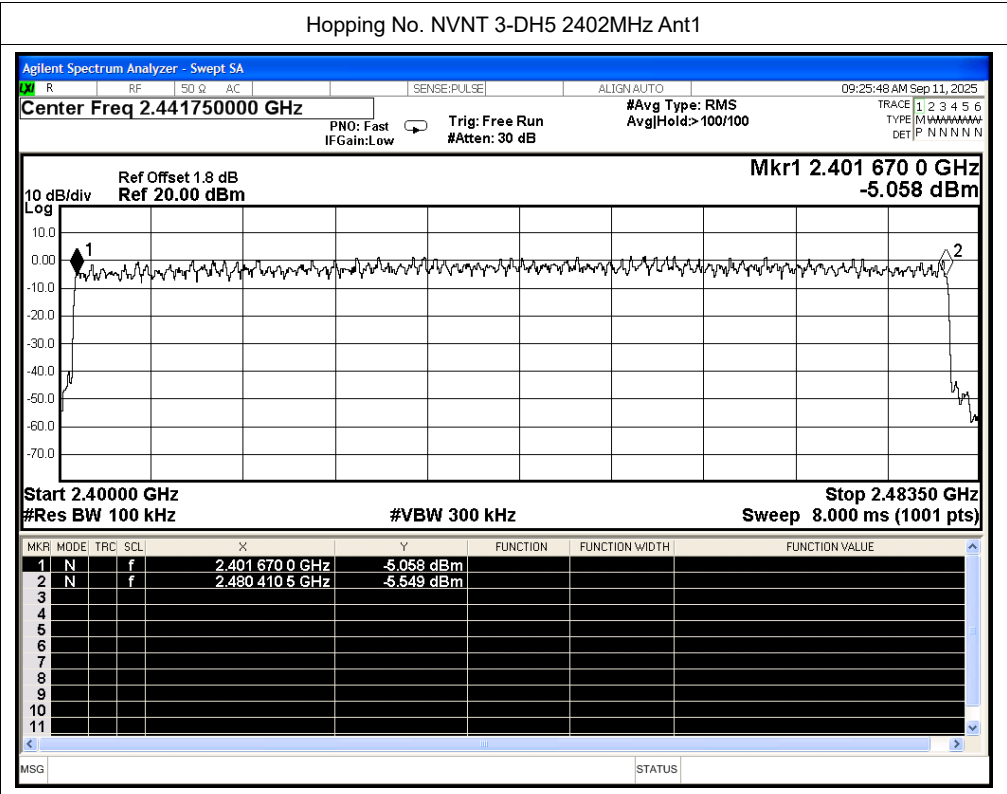
Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1



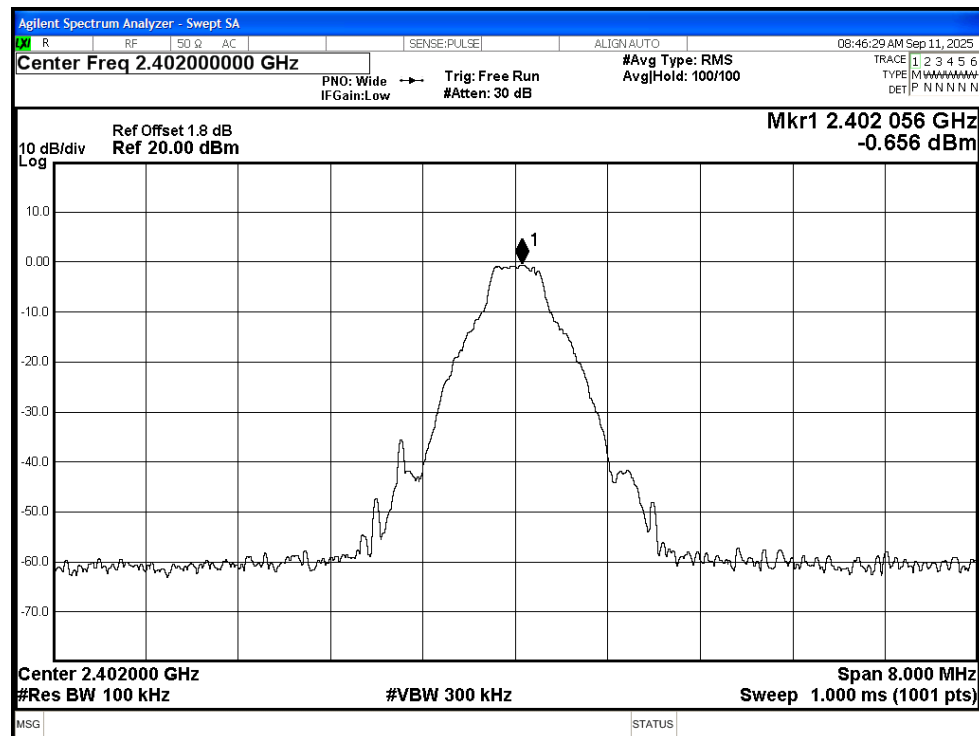


A.6 Band Edge

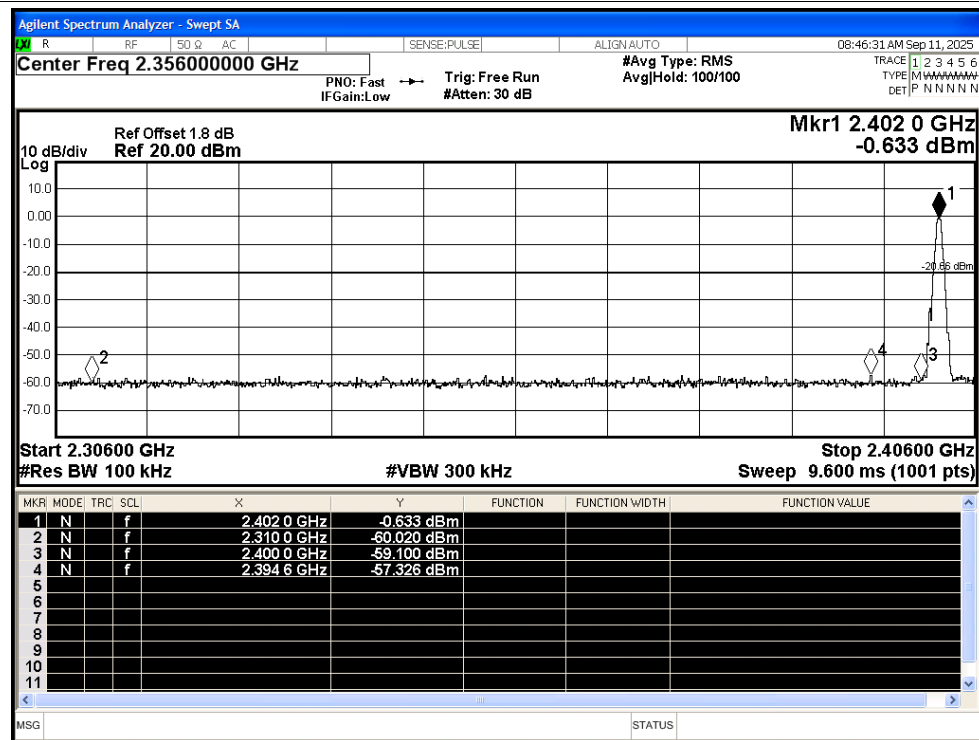
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-56.67	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-57.87	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-53.22	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-55.52	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-50.68	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-55.4	-20	Pass

Test Graphs

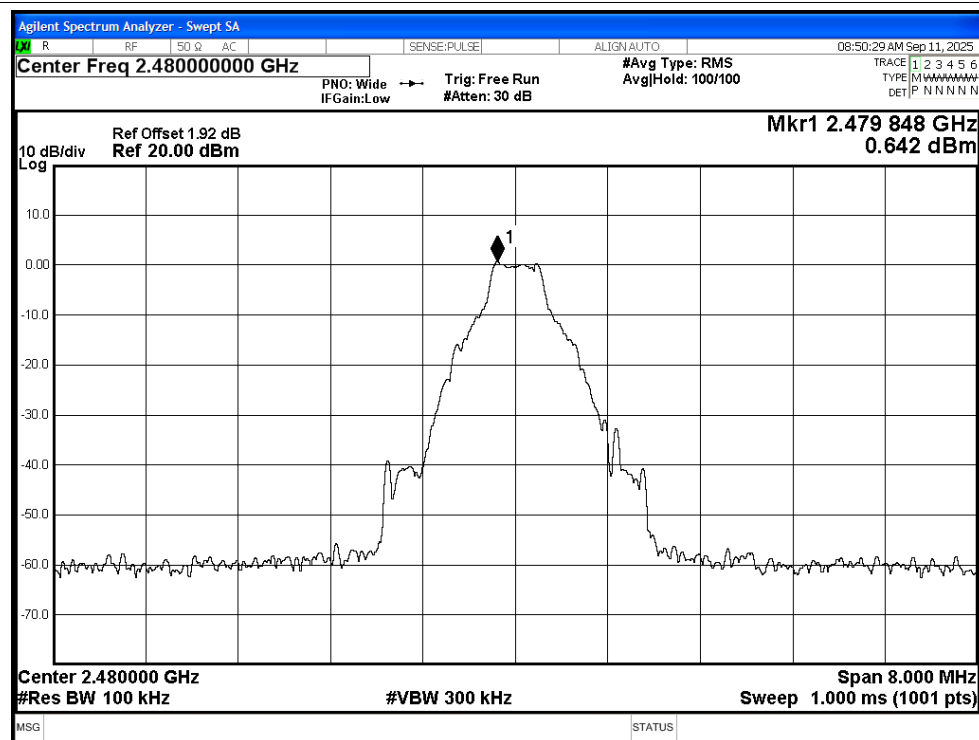
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



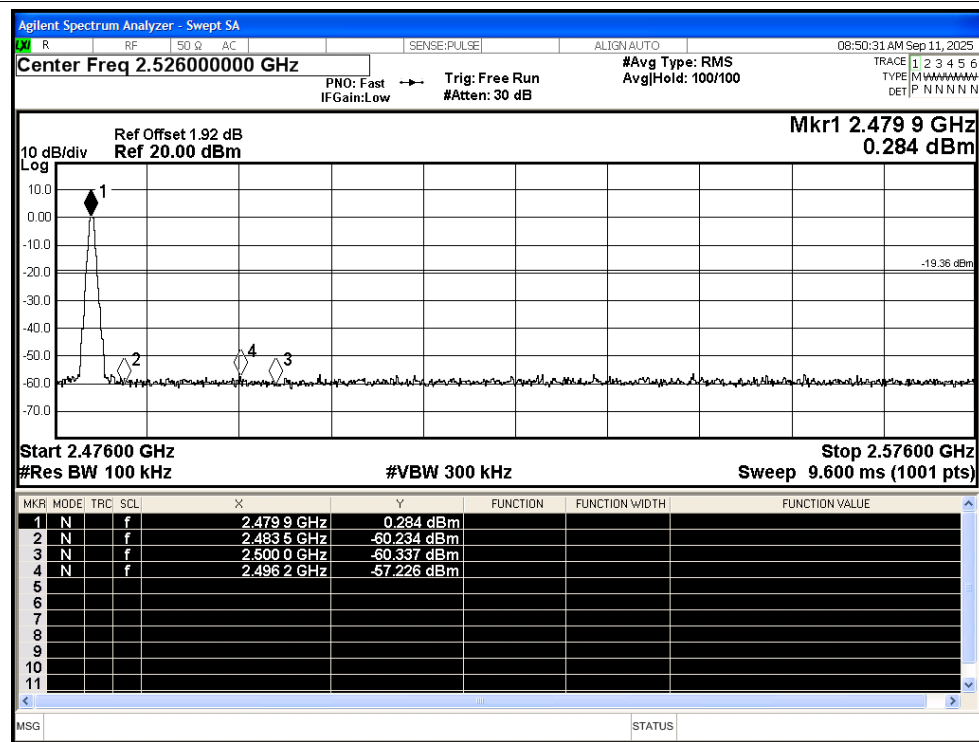
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

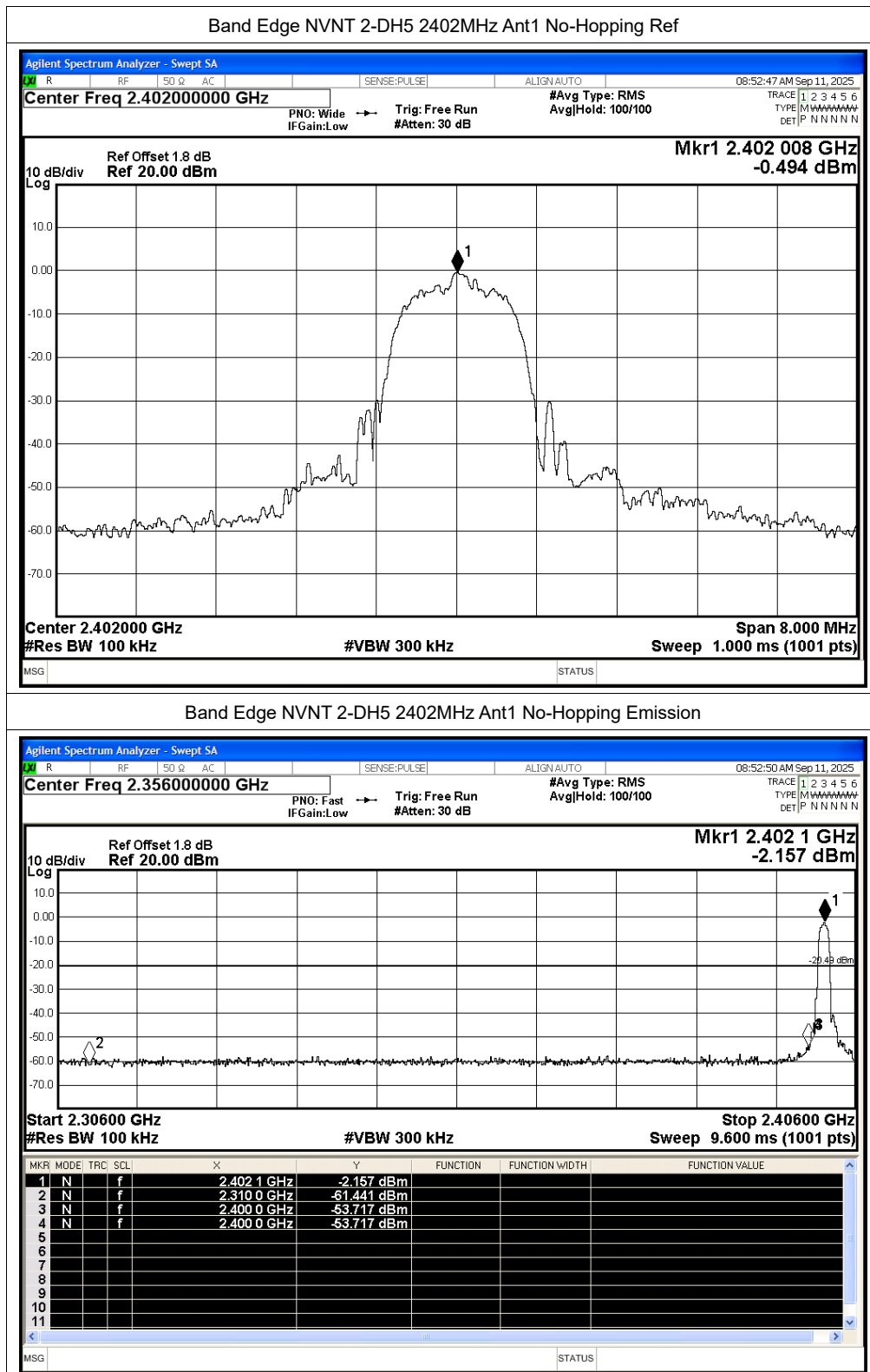


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

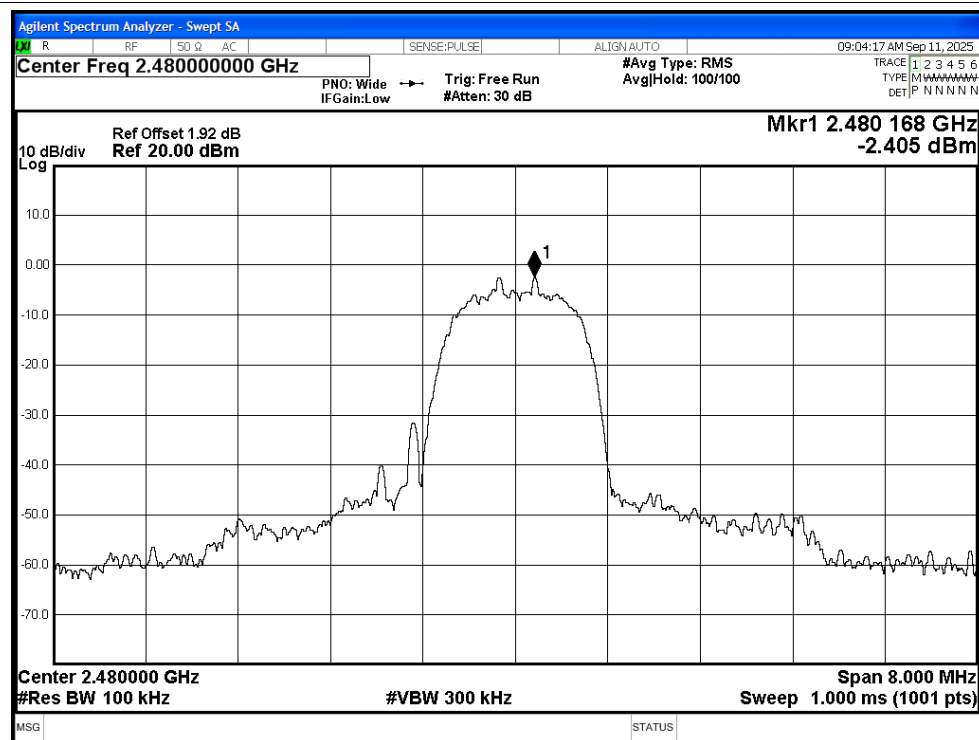


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

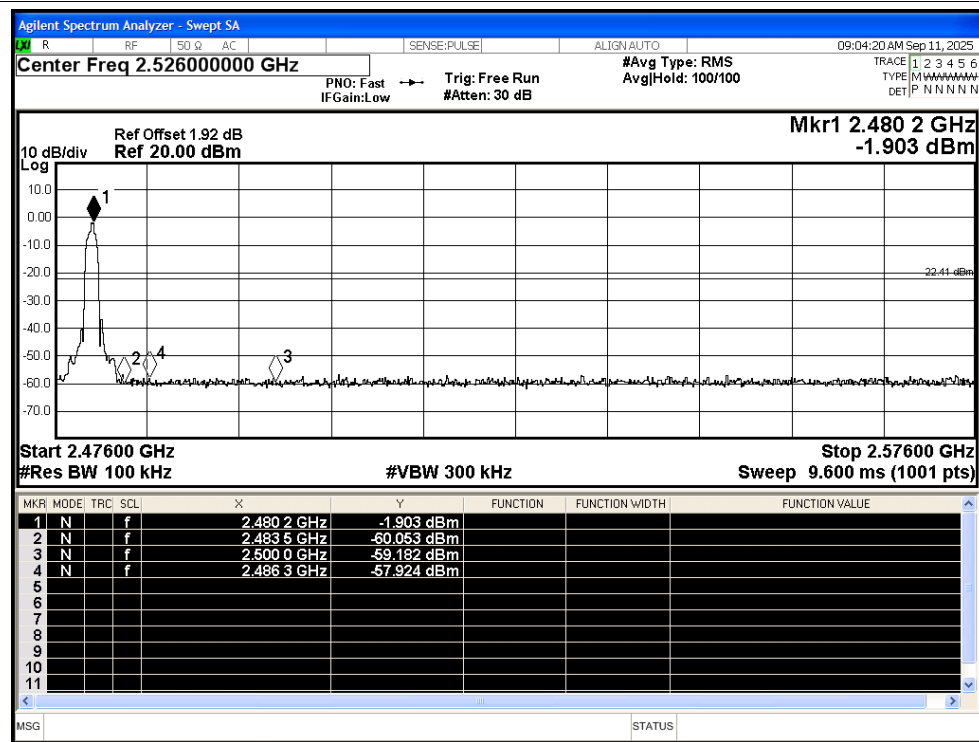




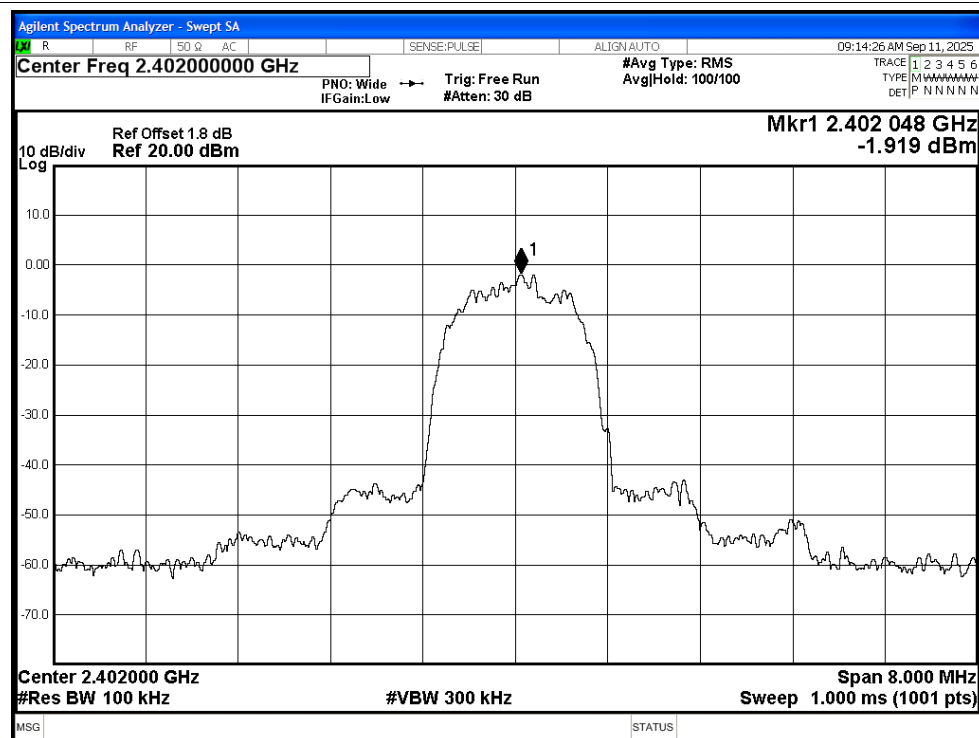
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



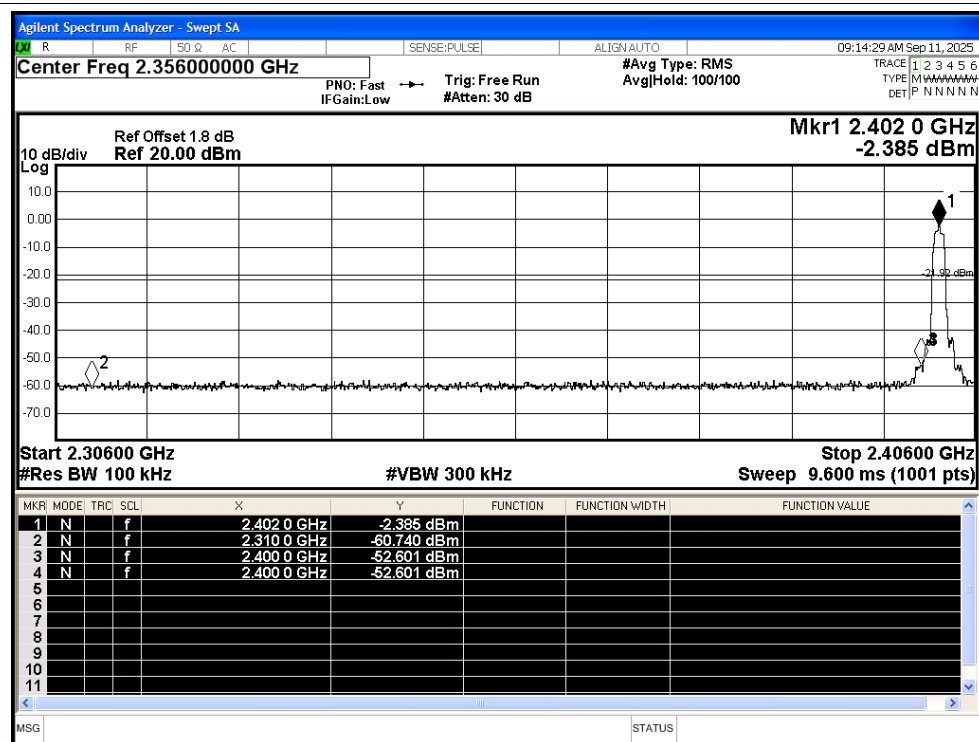
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

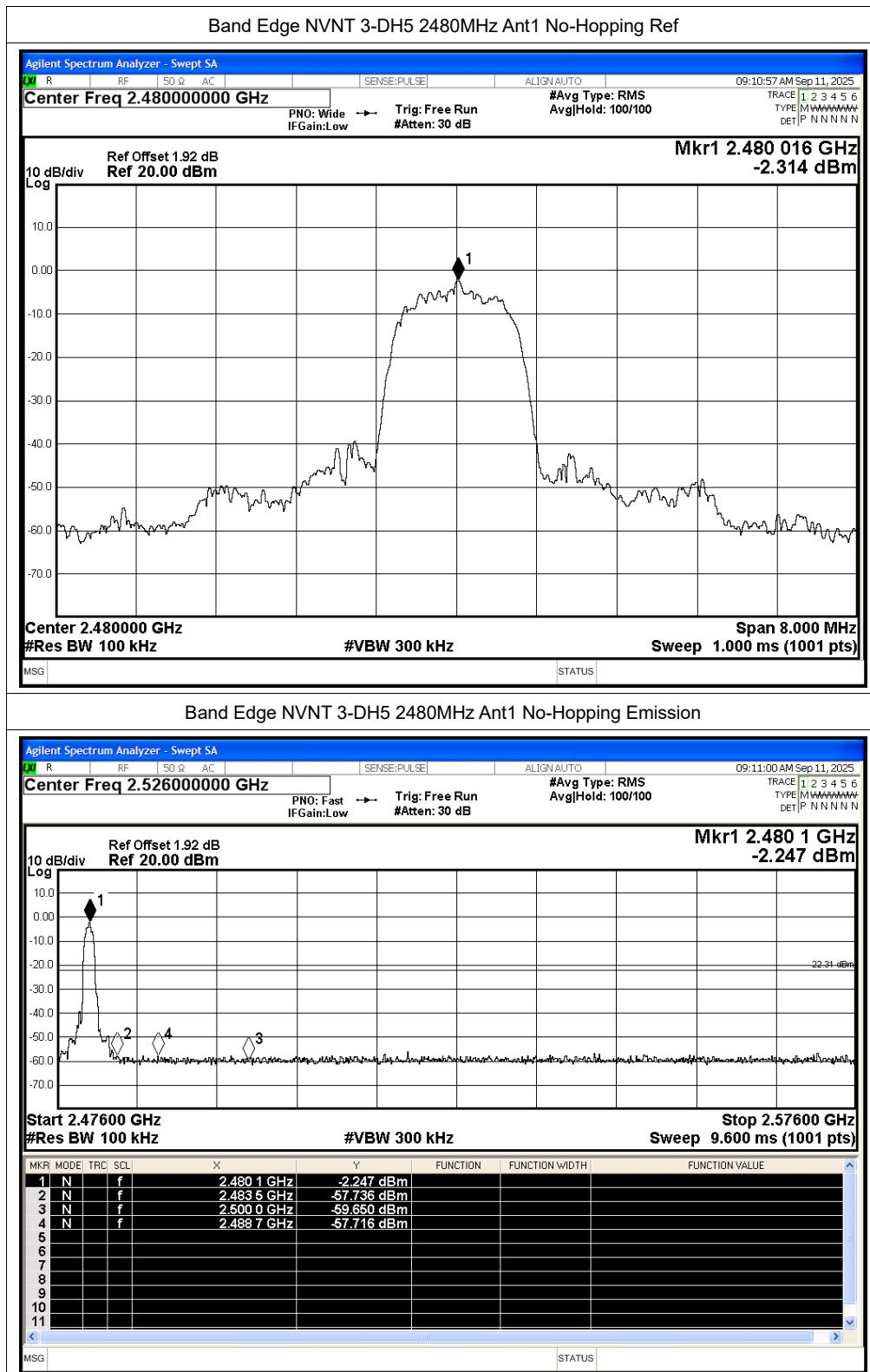


Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



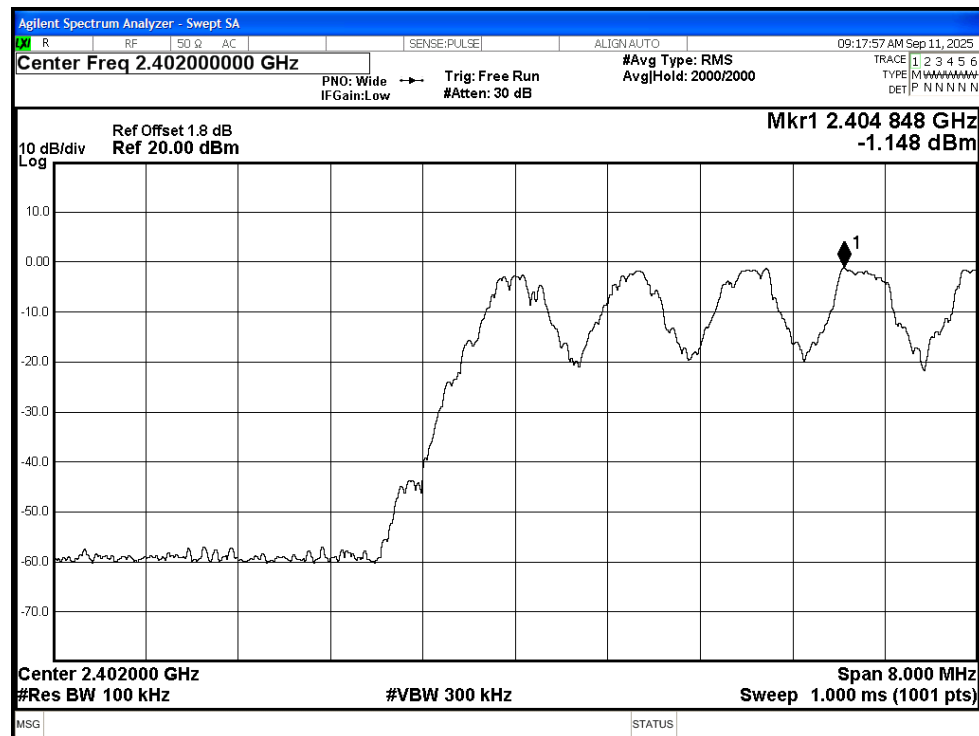


(Hopping)

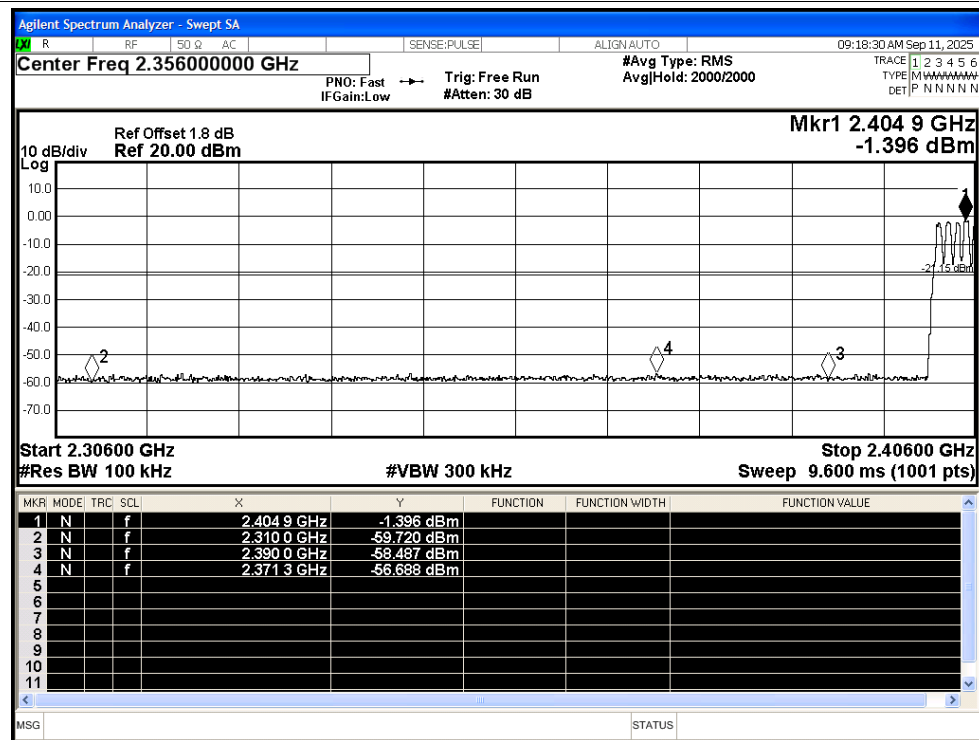
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-55.54	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-55.69	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-54.76	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-55.43	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-54.25	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-55.41	-20	Pass

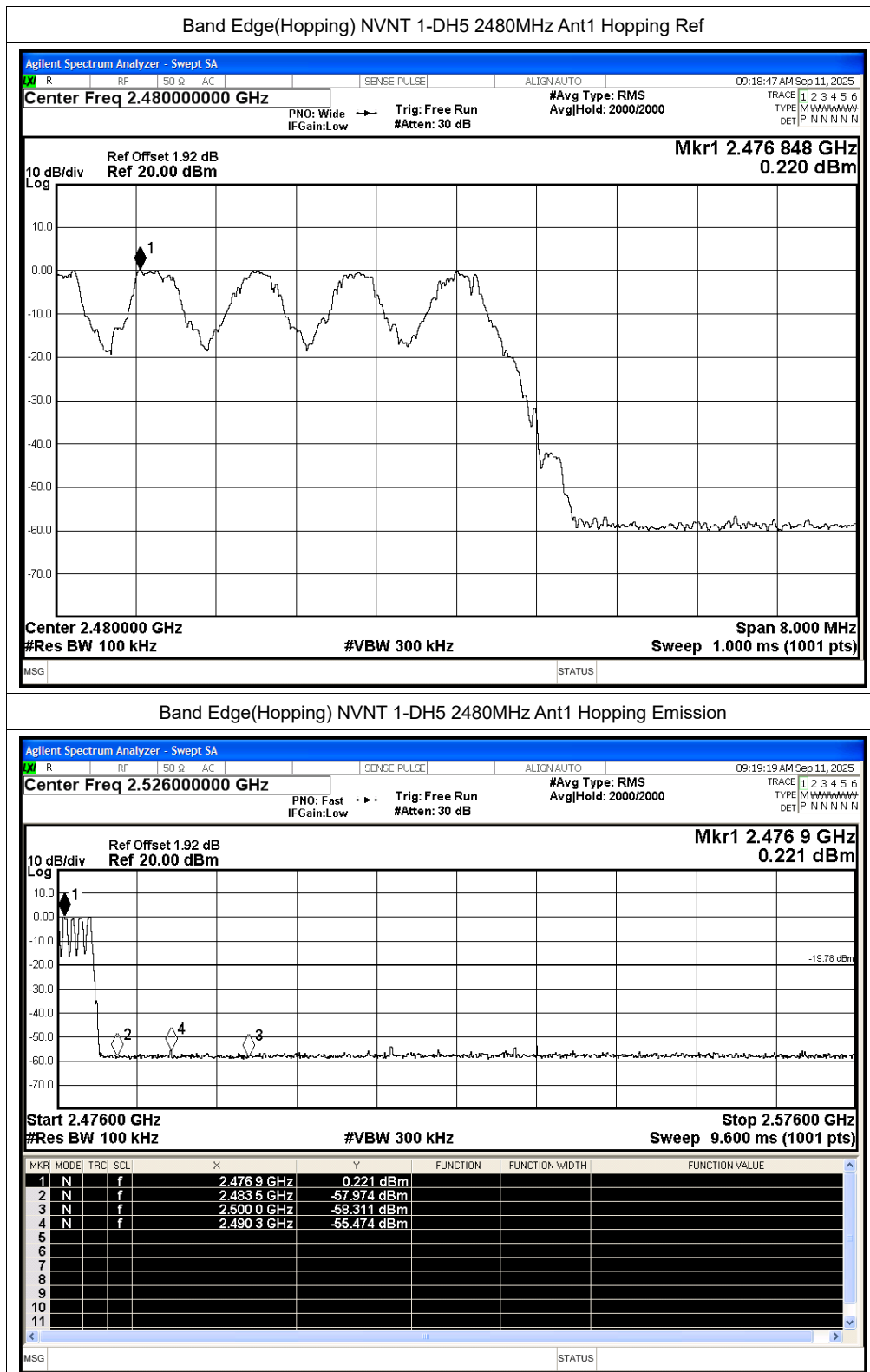
Test Graphs

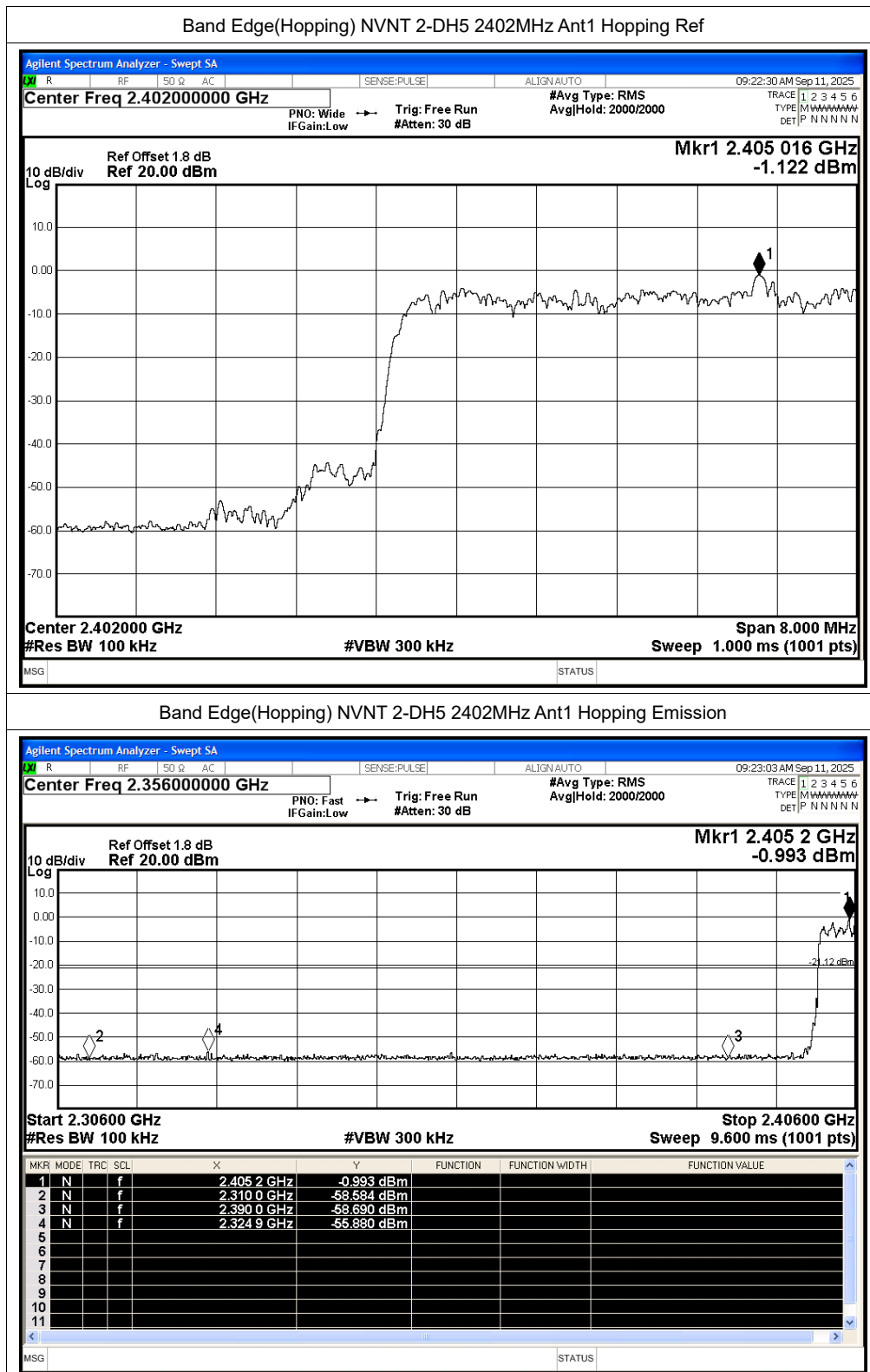
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref

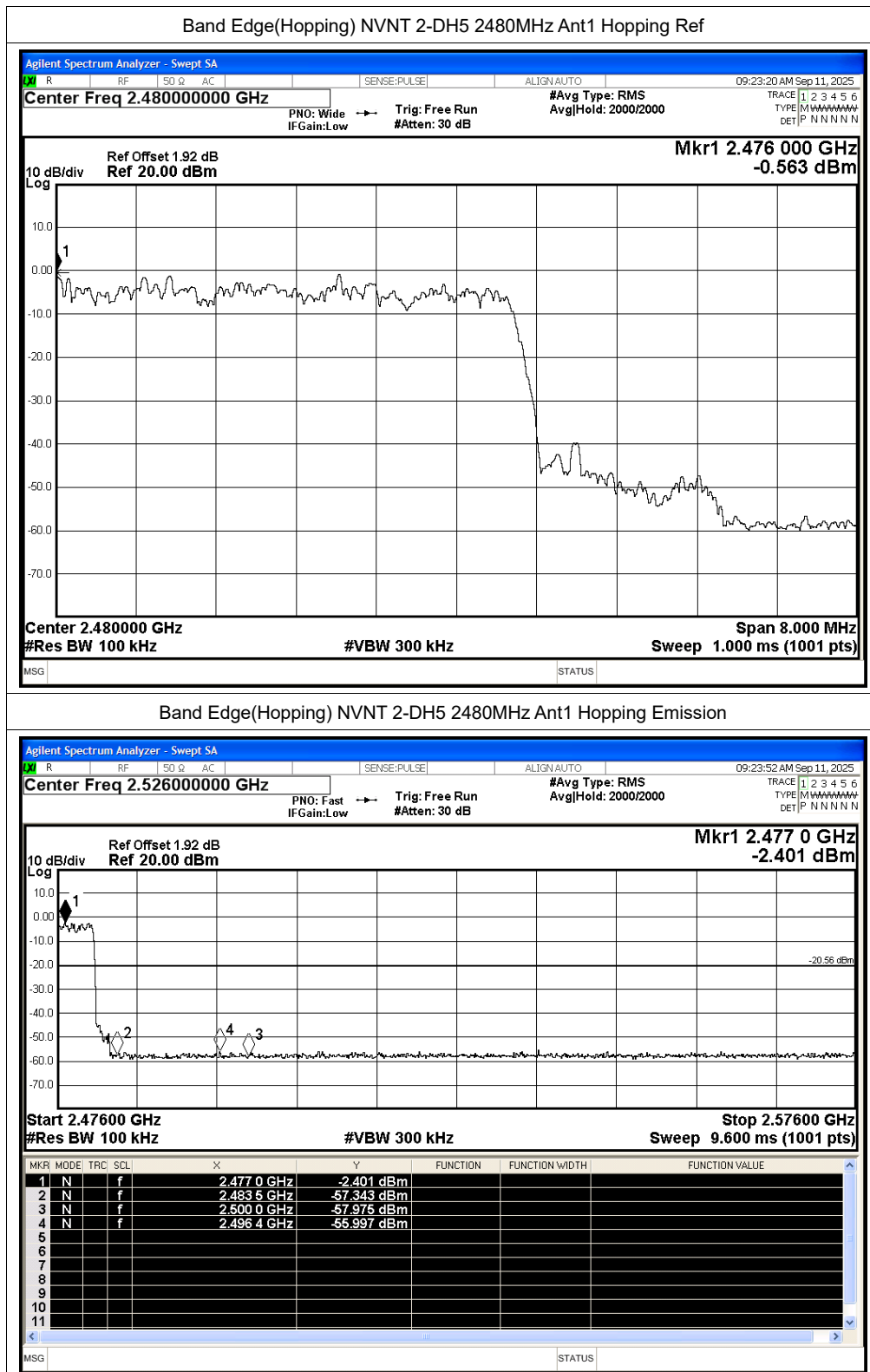


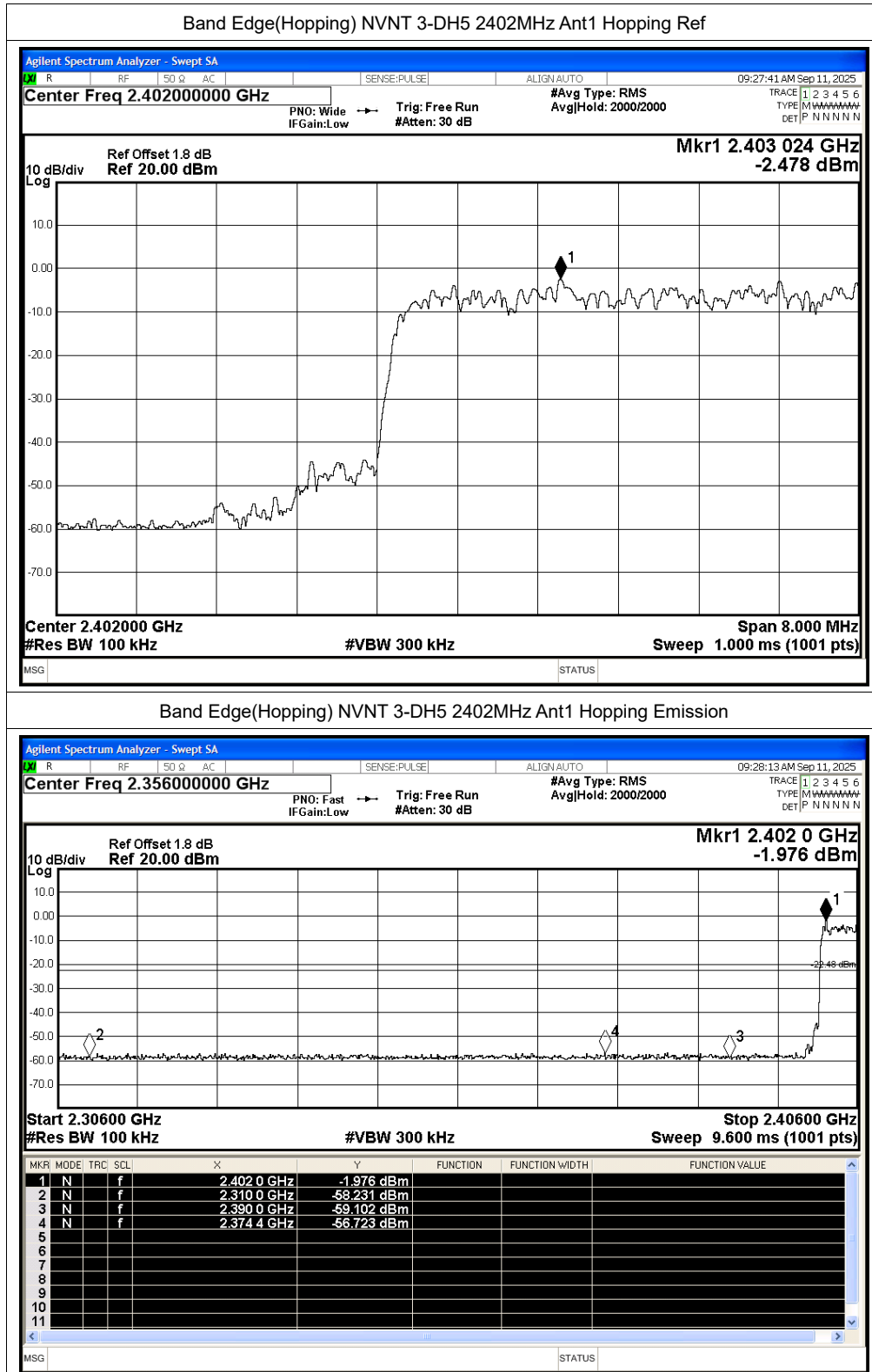
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

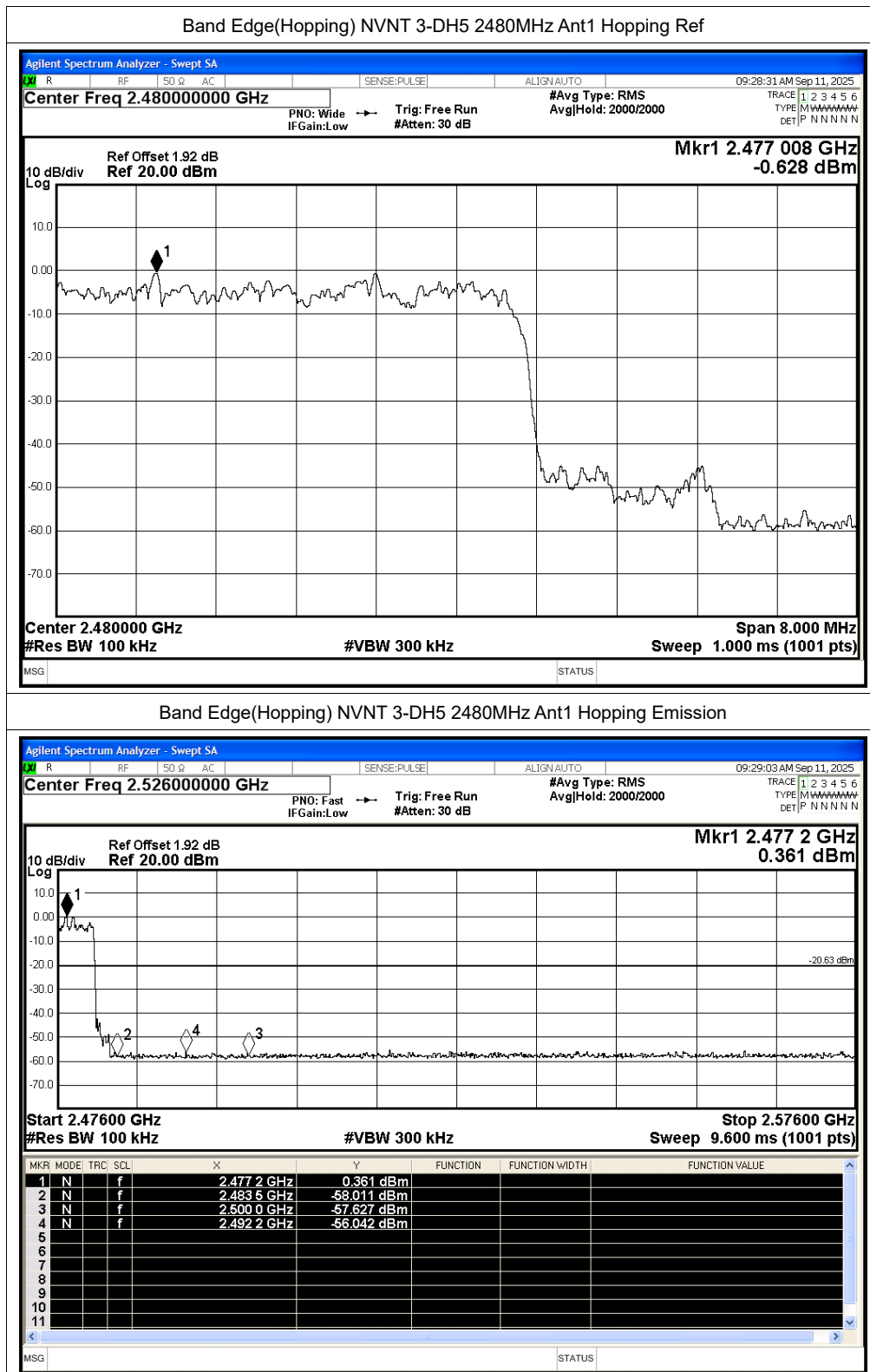










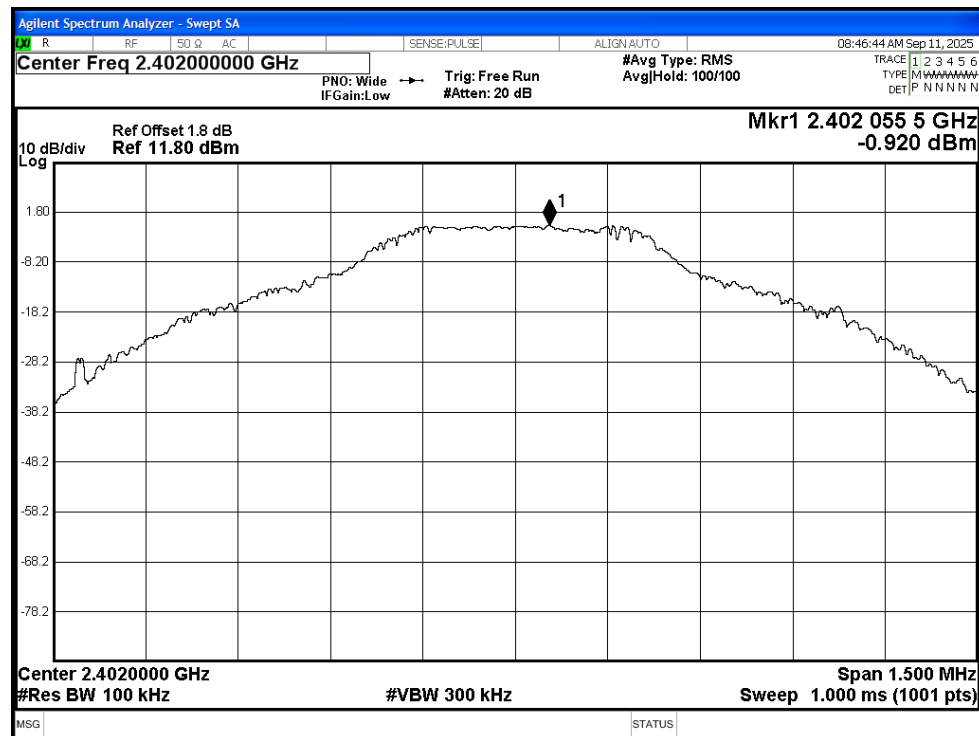


A.7 Conducted RF Spurious Emission

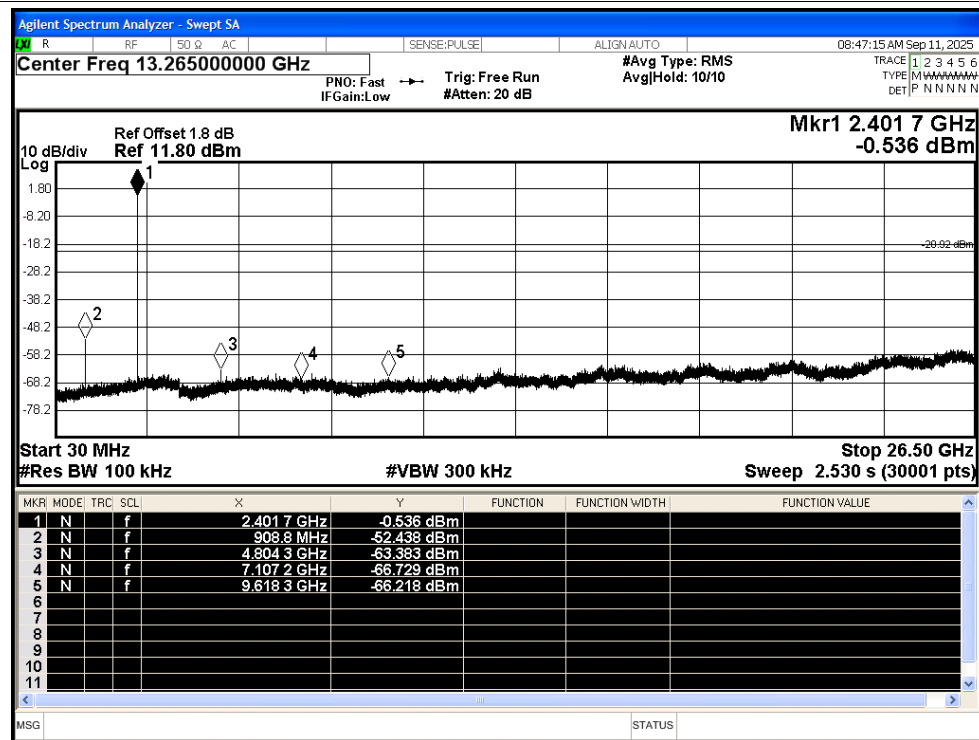
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-51.52	-20	Pass
NVNT	1-DH5	2441	Ant1	-55.59	-20	Pass
NVNT	1-DH5	2480	Ant1	-55.41	-20	Pass
NVNT	2-DH5	2402	Ant1	-55.28	-20	Pass
NVNT	2-DH5	2441	Ant1	-53.63	-20	Pass
NVNT	2-DH5	2480	Ant1	-52.86	-20	Pass
NVNT	3-DH5	2402	Ant1	-53.76	-20	Pass
NVNT	3-DH5	2441	Ant1	-54.53	-20	Pass
NVNT	3-DH5	2480	Ant1	-53.33	-20	Pass

Test Graphs

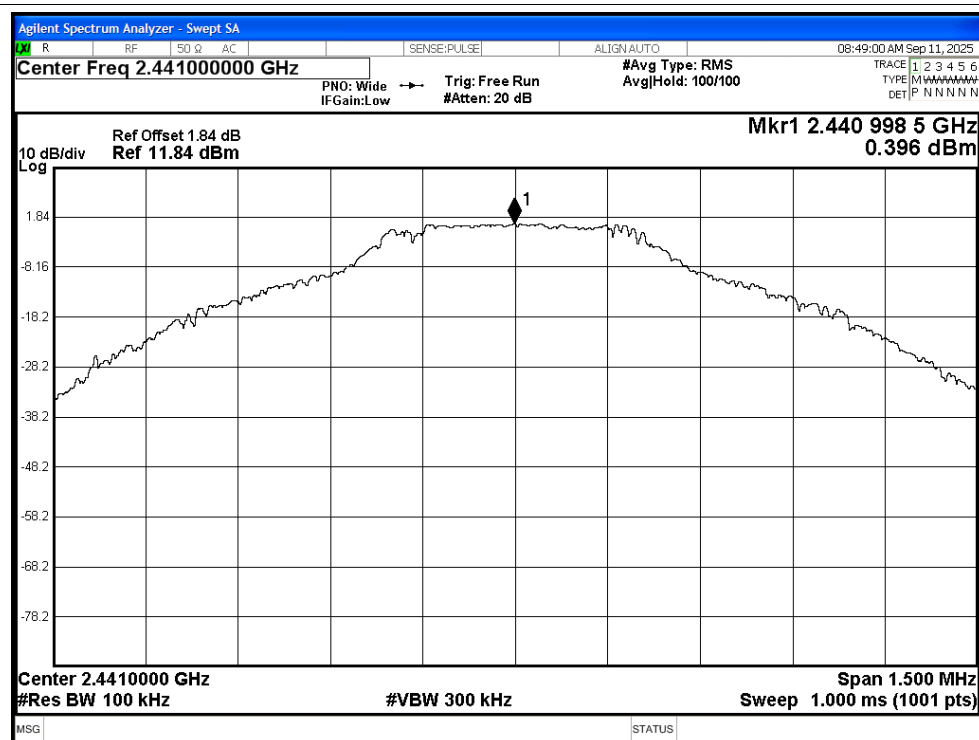
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



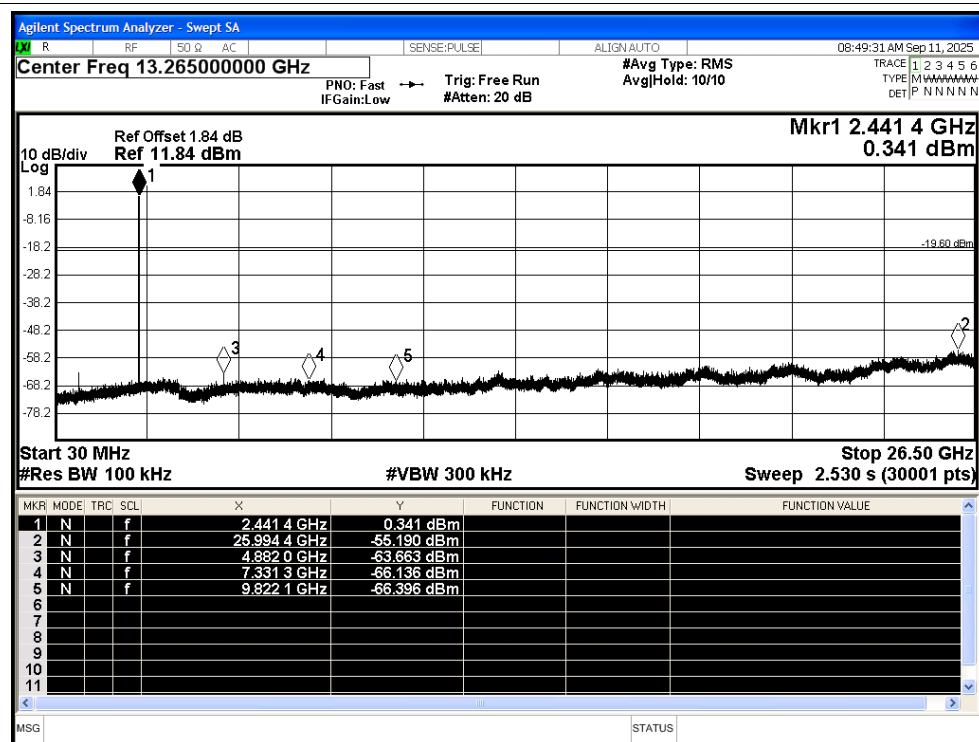
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



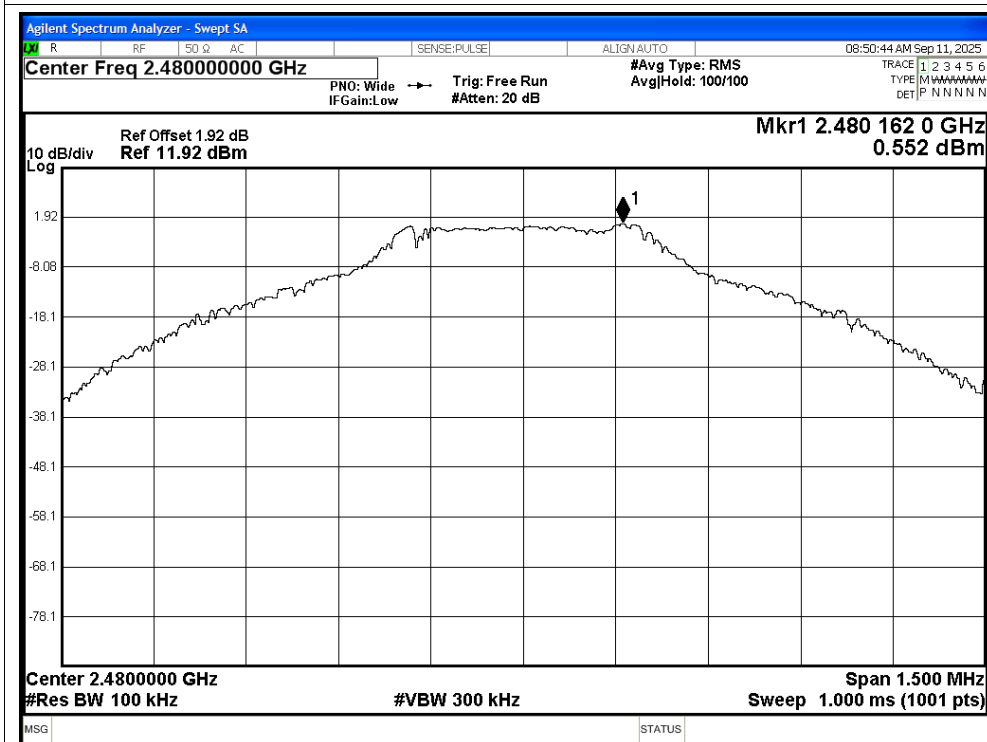
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



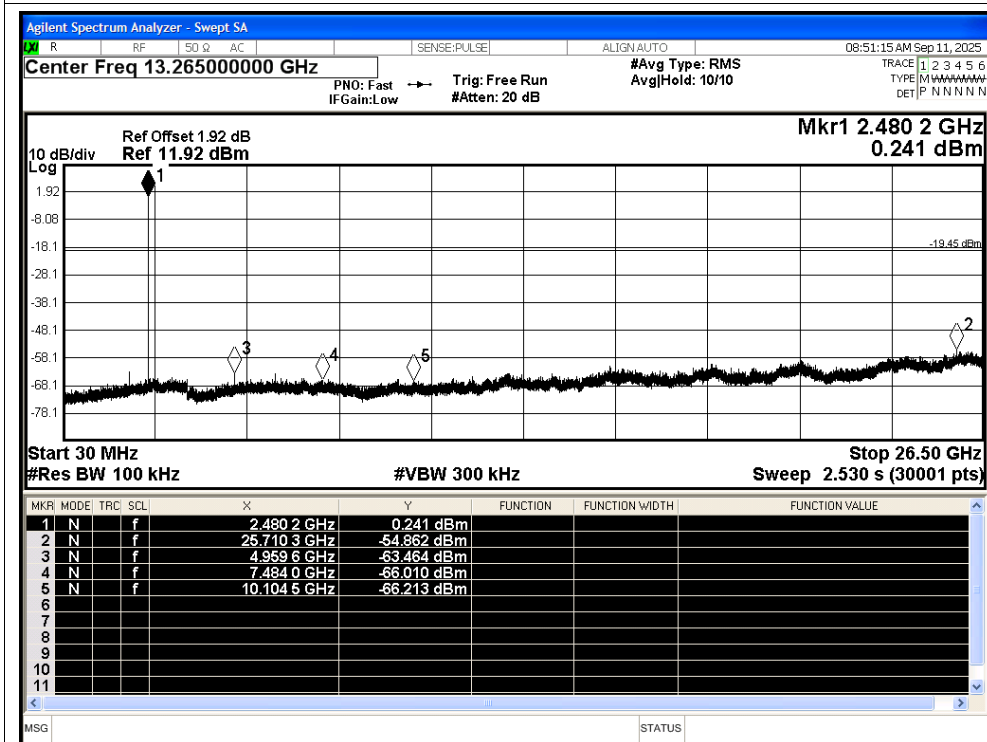
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



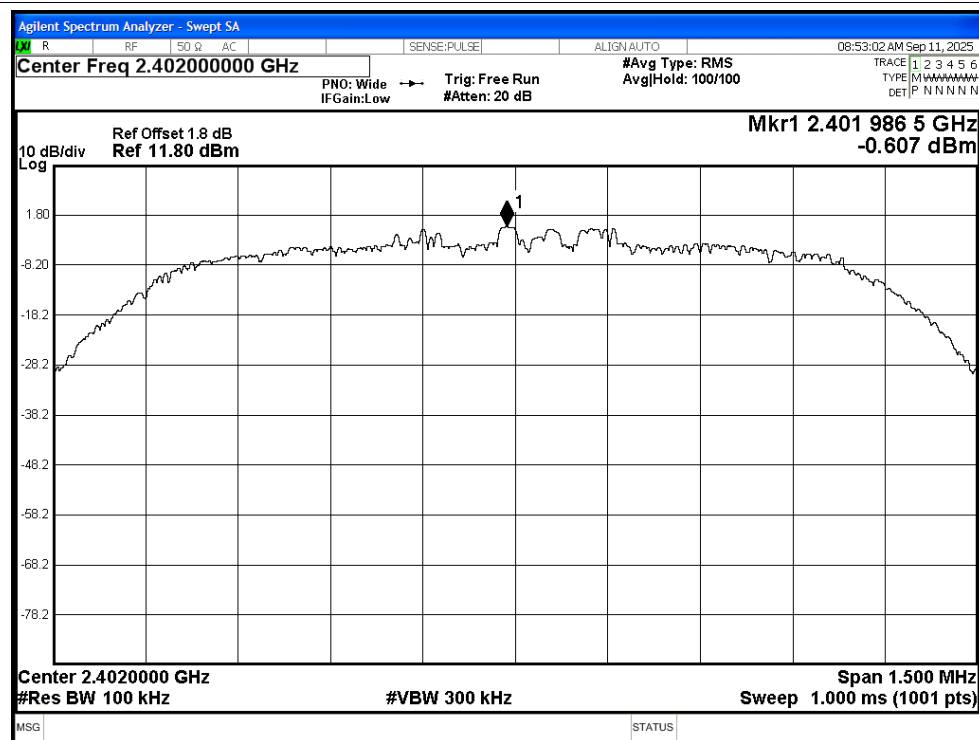
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



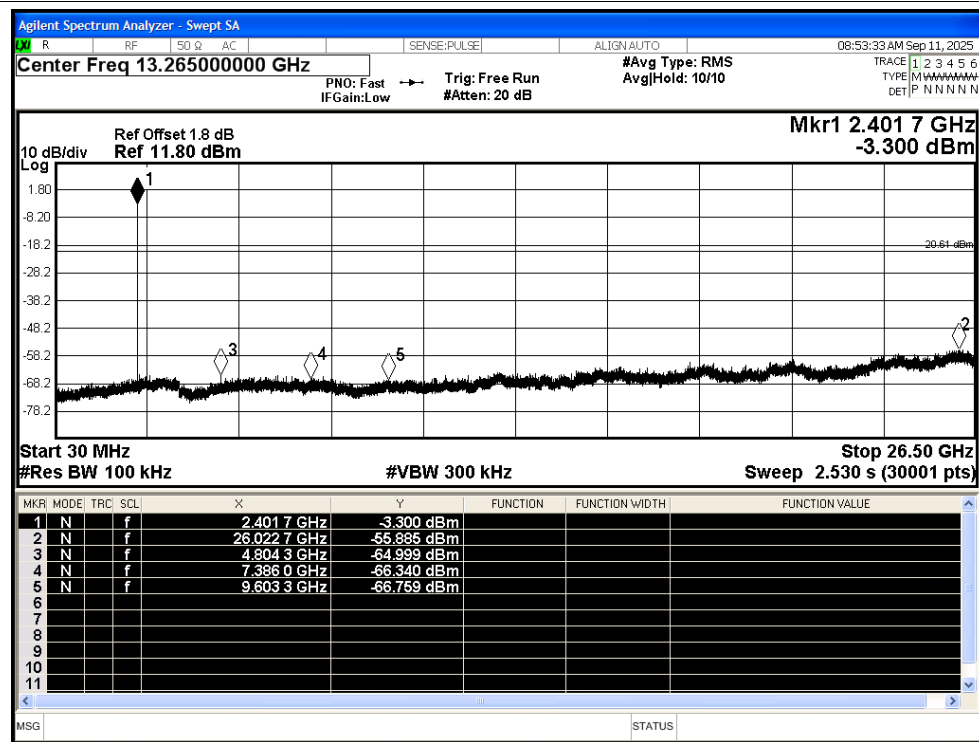
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



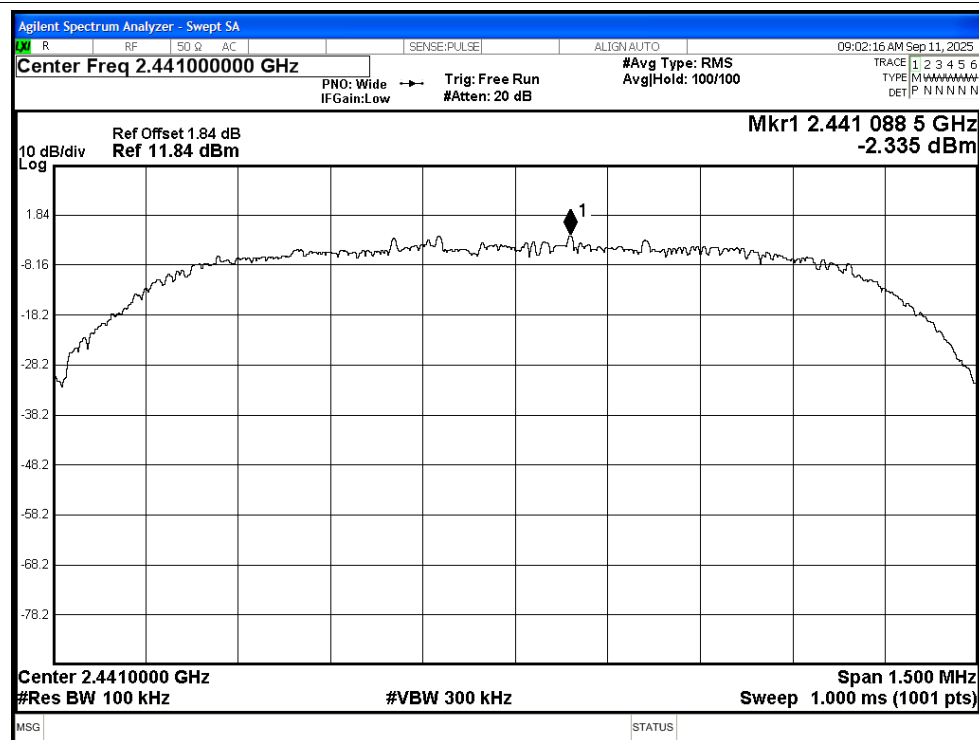
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



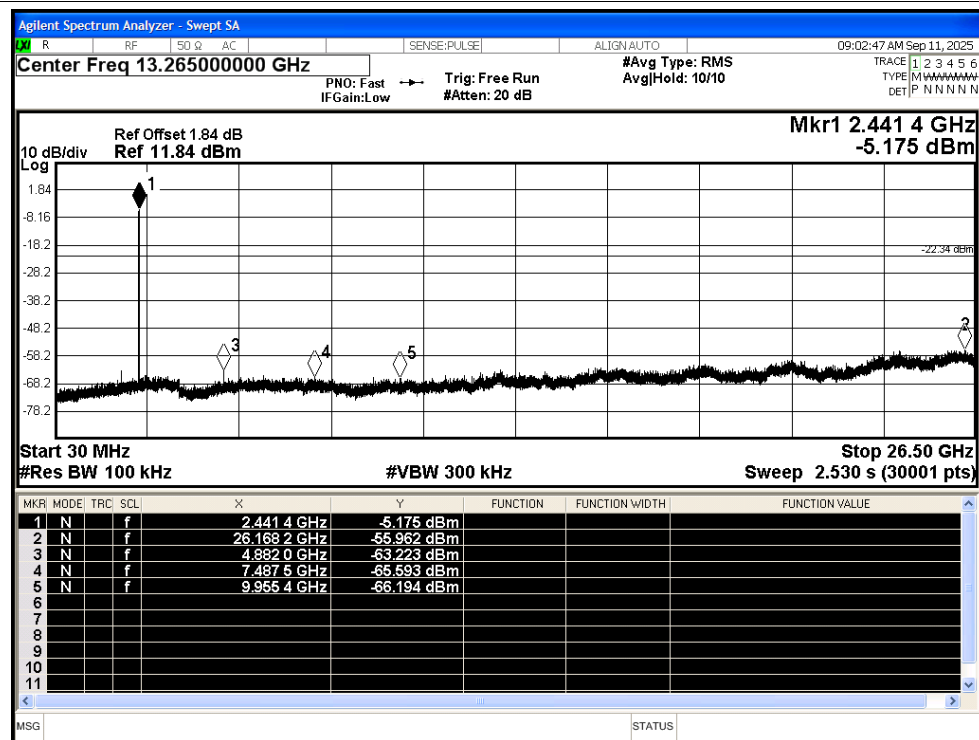
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



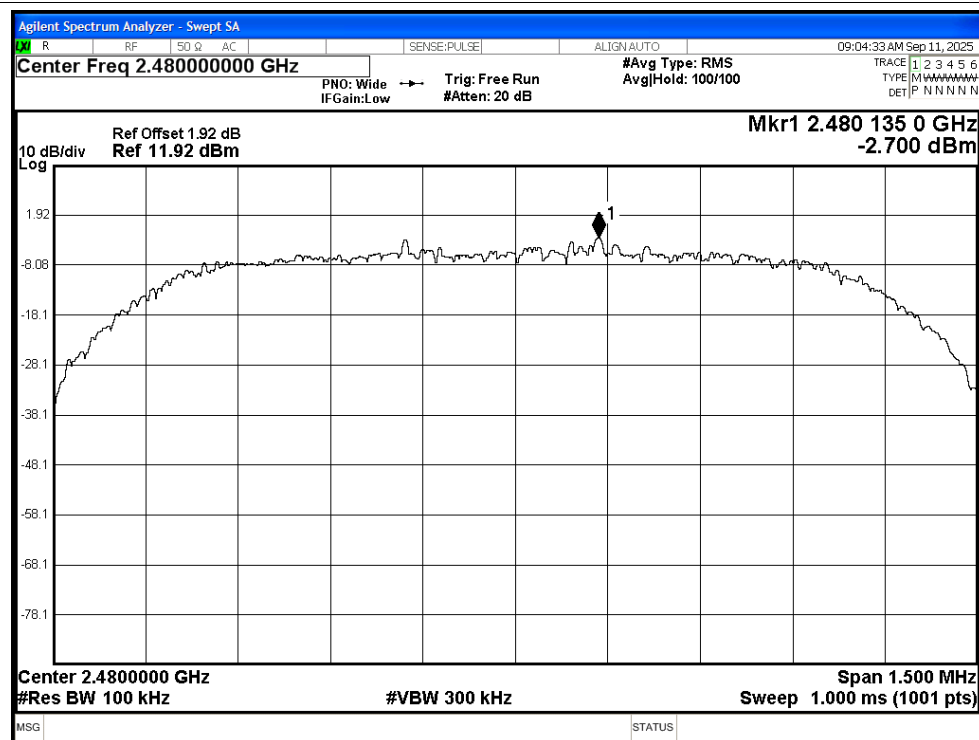
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



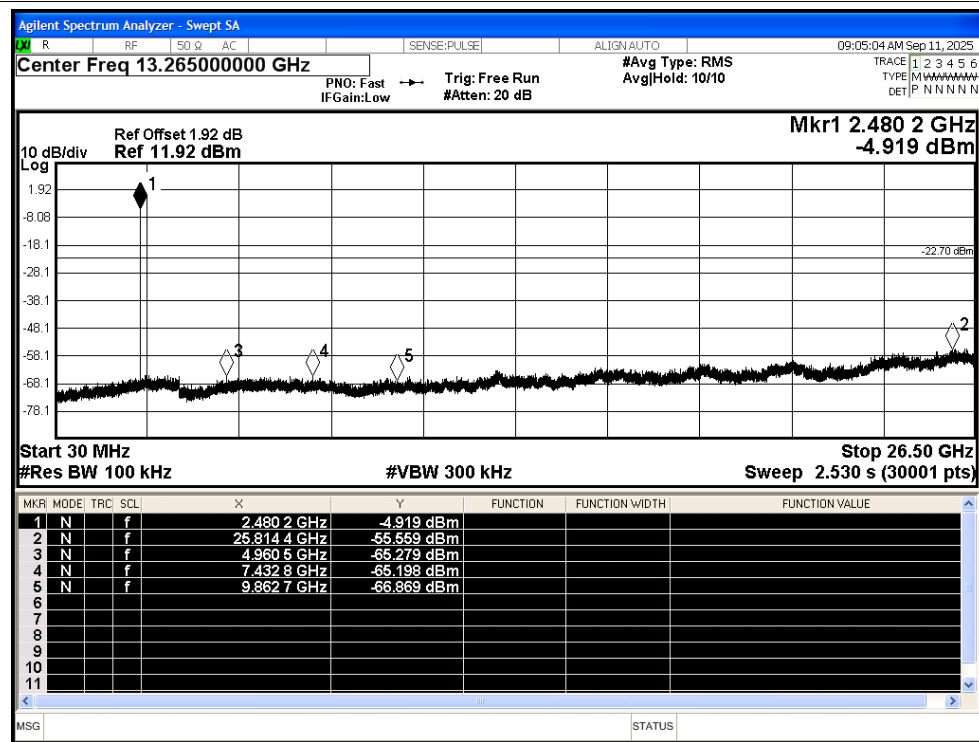
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



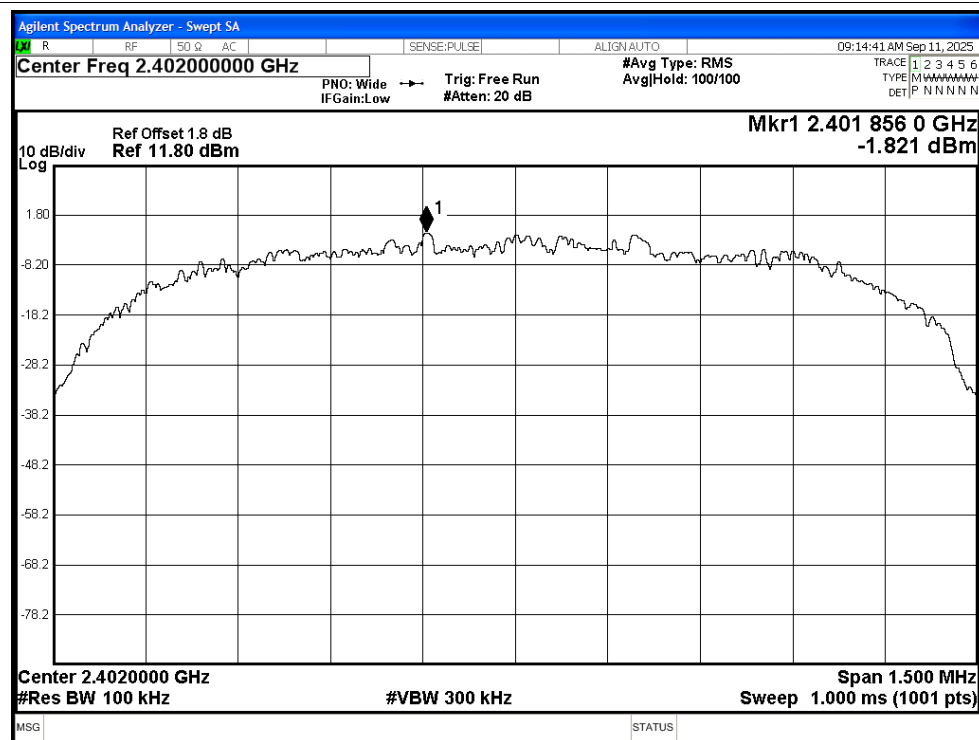
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



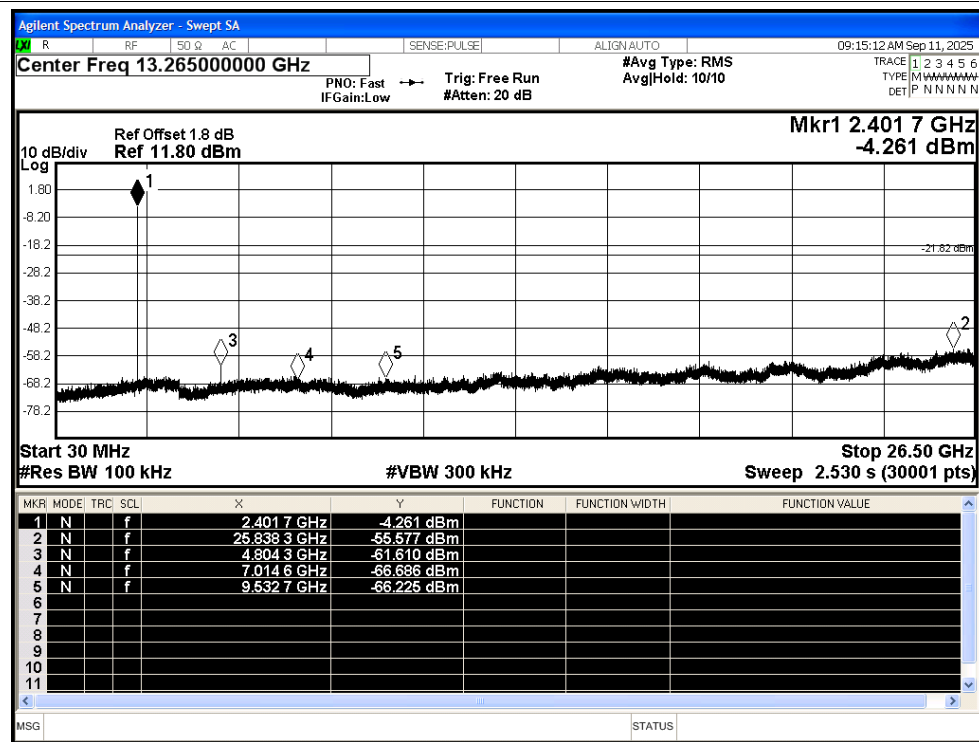
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



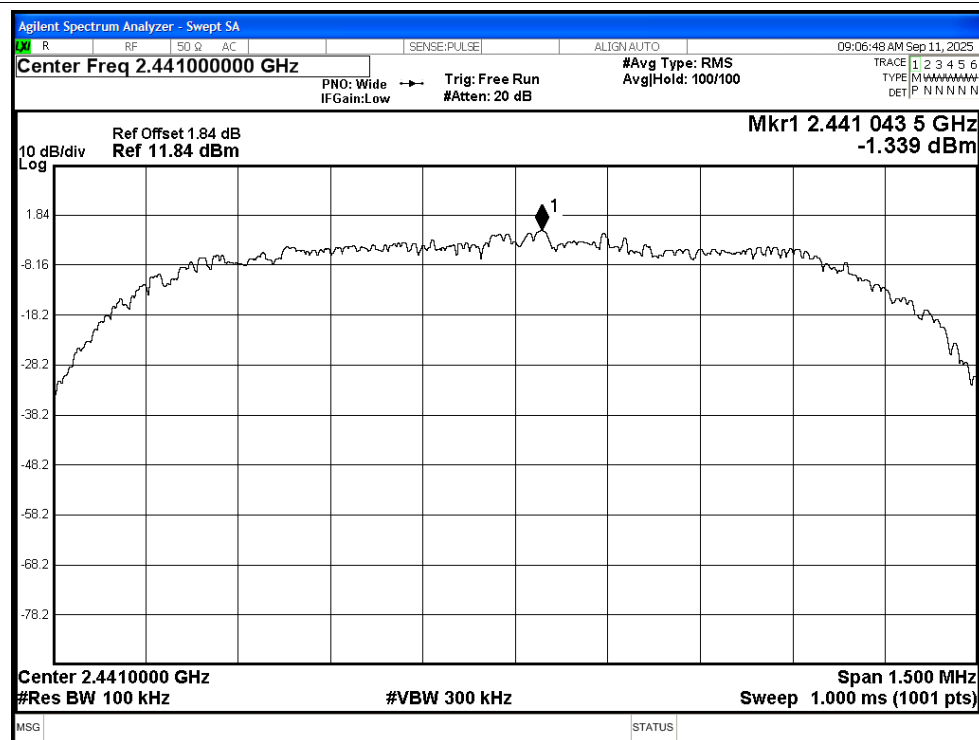
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



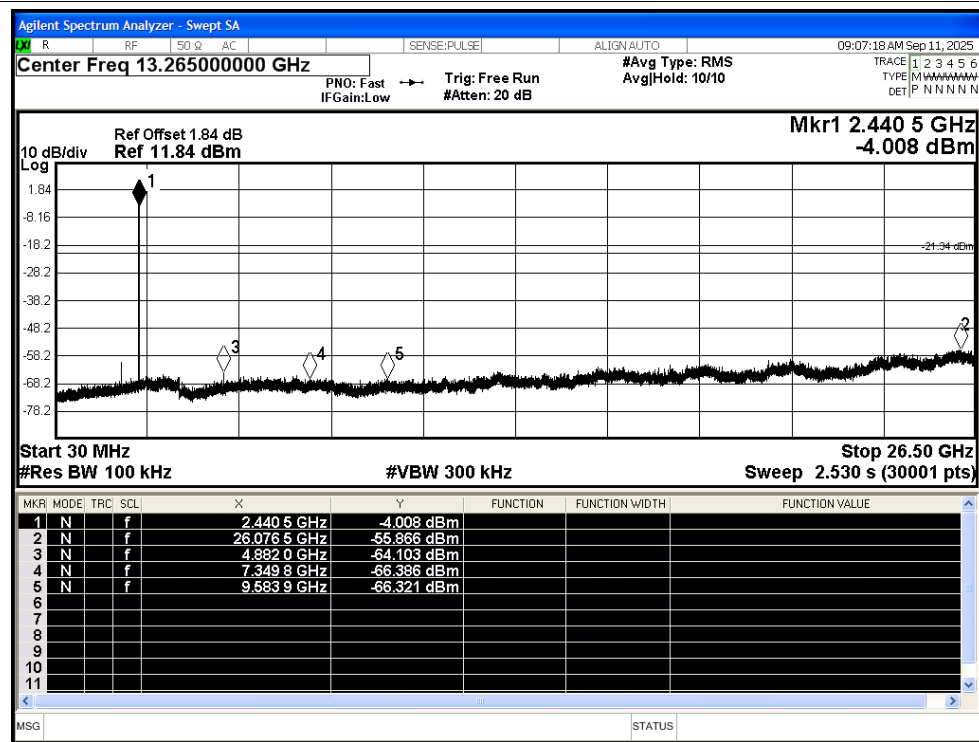
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission



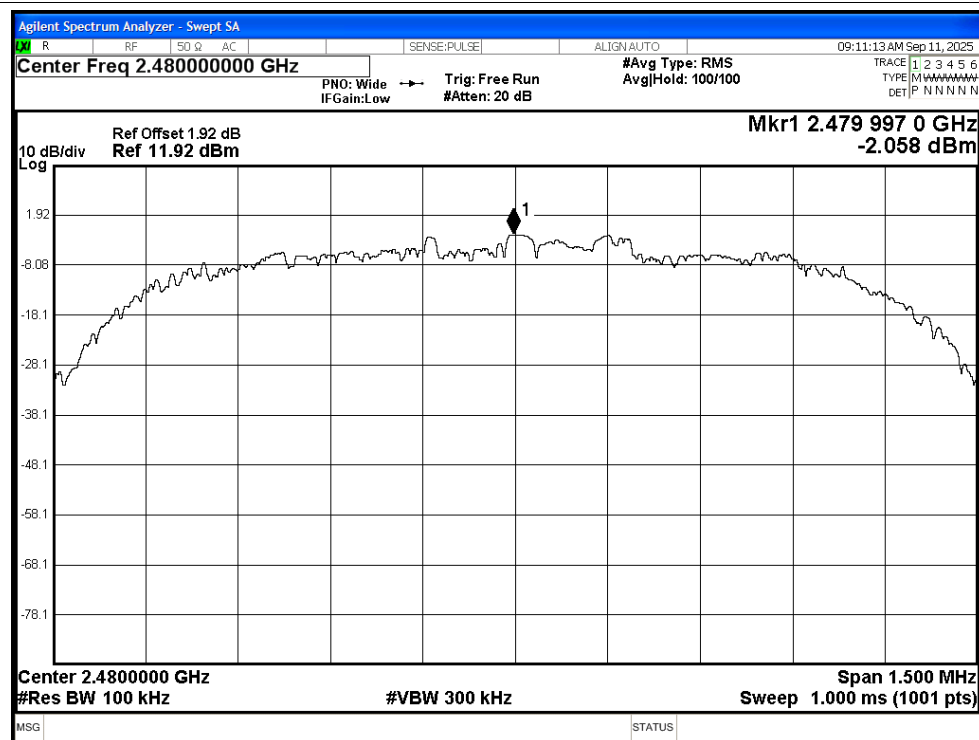
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



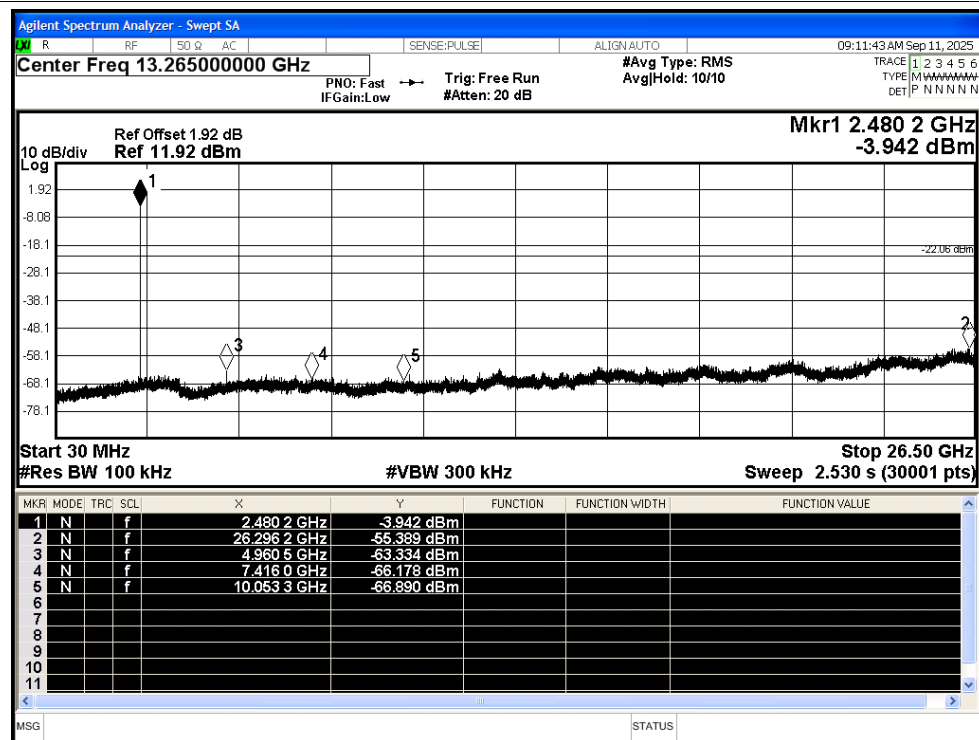
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission

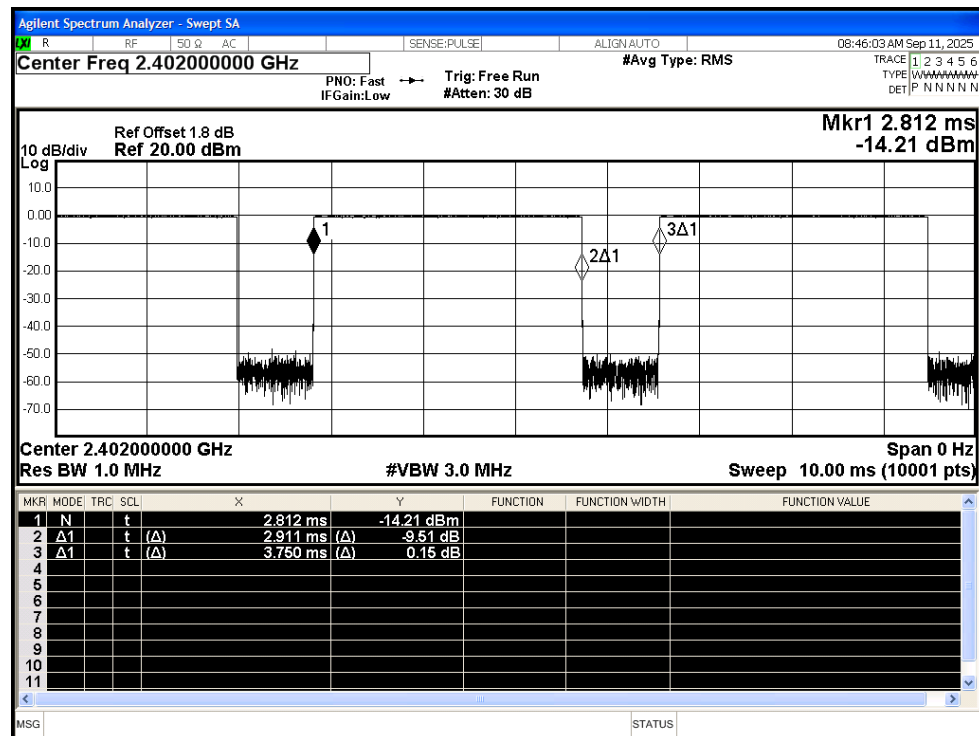


A.8 Duty Cycle

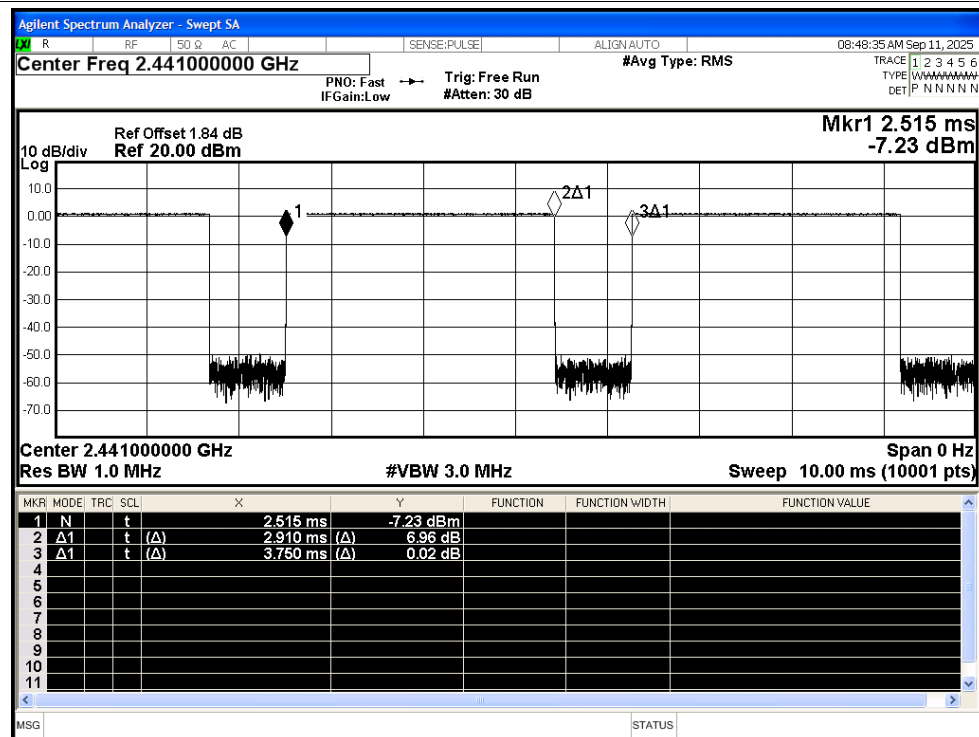
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.63	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.6	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2441	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2480	Ant1	77.28	1.12	0.35
NVNT	3-DH5	2402	Ant1	77.28	1.12	0.35
NVNT	3-DH5	2441	Ant1	77.28	1.12	0.35
NVNT	3-DH5	2480	Ant1	77.23	1.12	0.35

Test Graphs

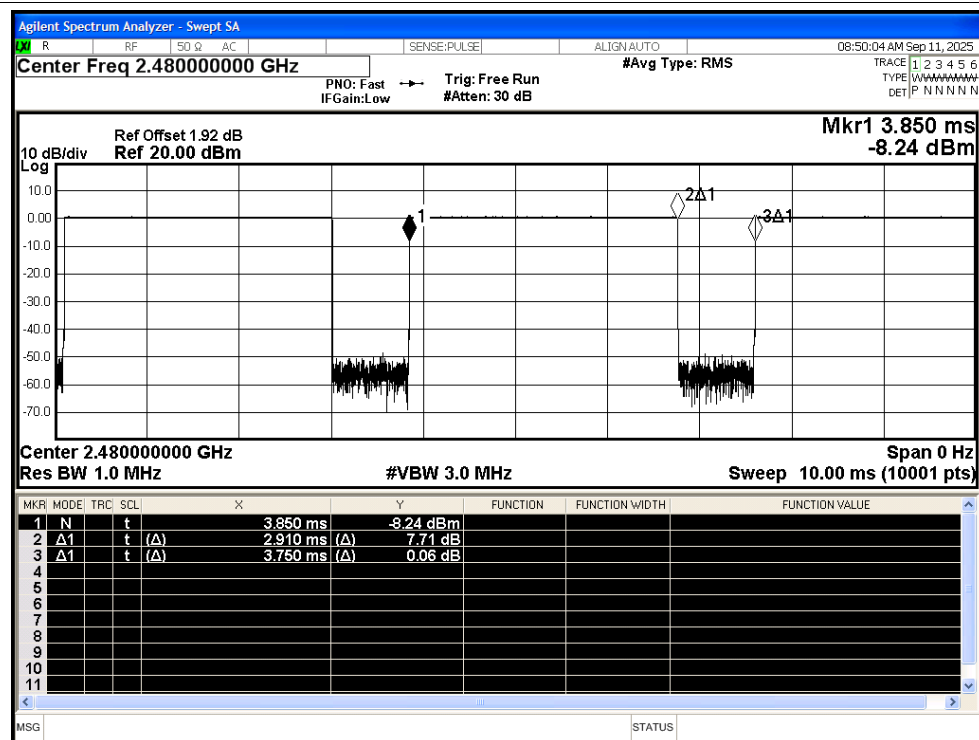
Duty Cycle NVNT 1-DH5 2402MHz Ant1



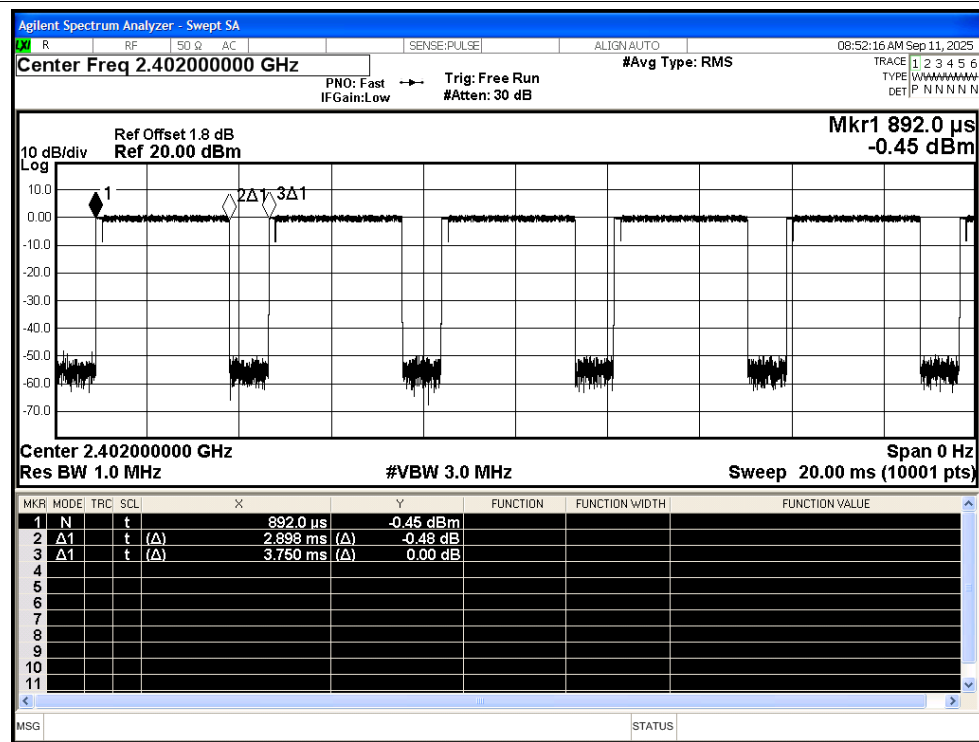
Duty Cycle NVNT 1-DH5 2441MHz Ant1



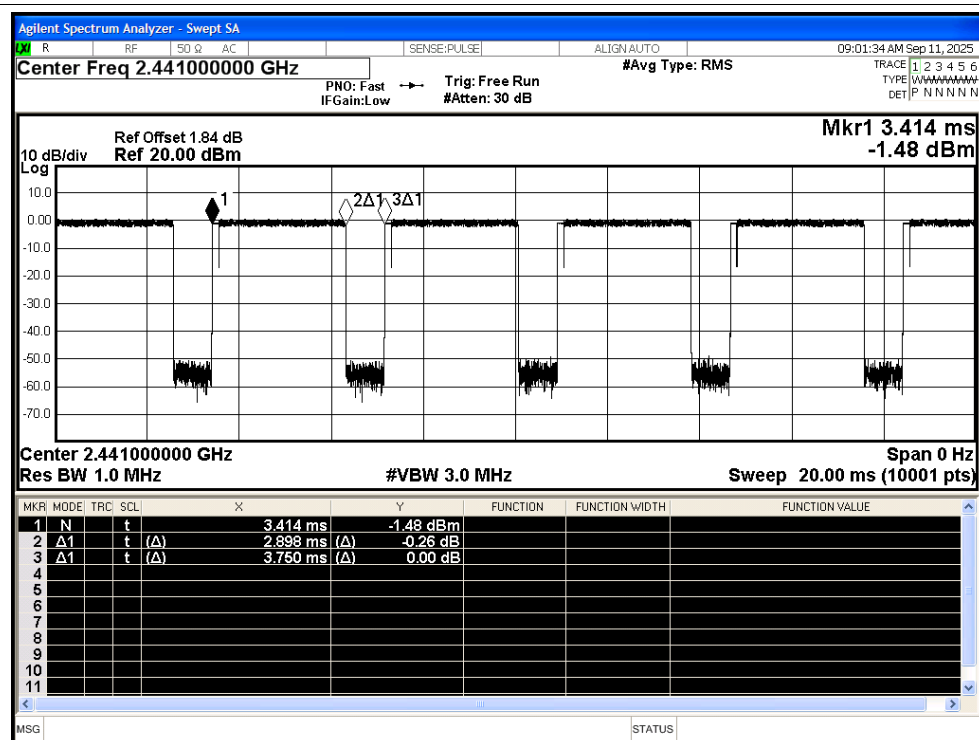
Duty Cycle NVNT 1-DH5 2480MHz Ant1



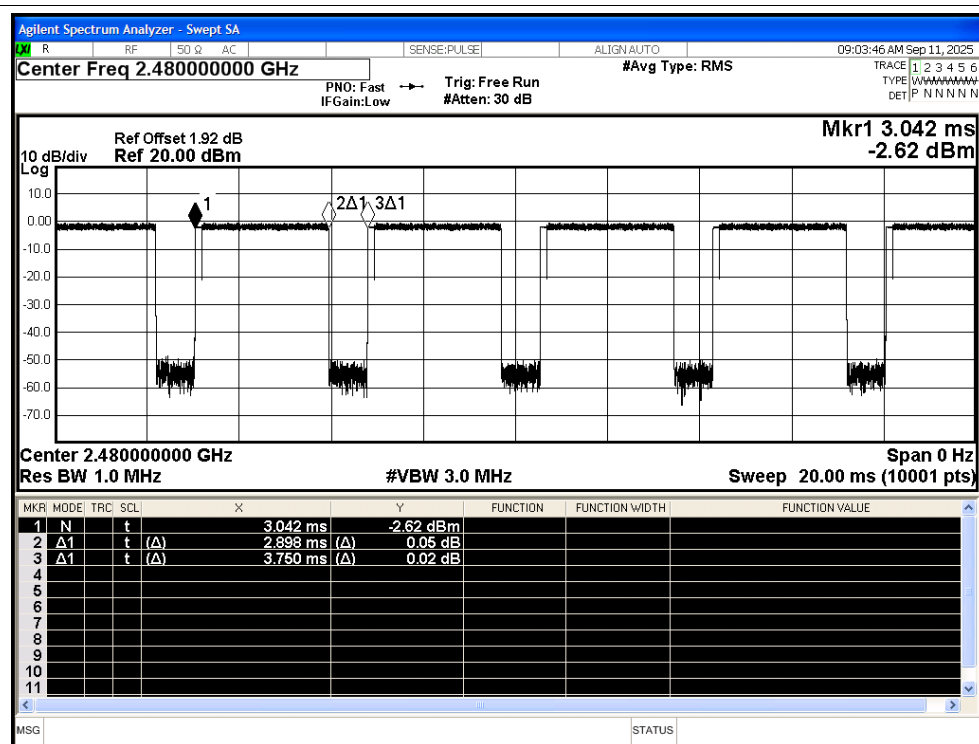
Duty Cycle NVNT 2-DH5 2402MHz Ant1



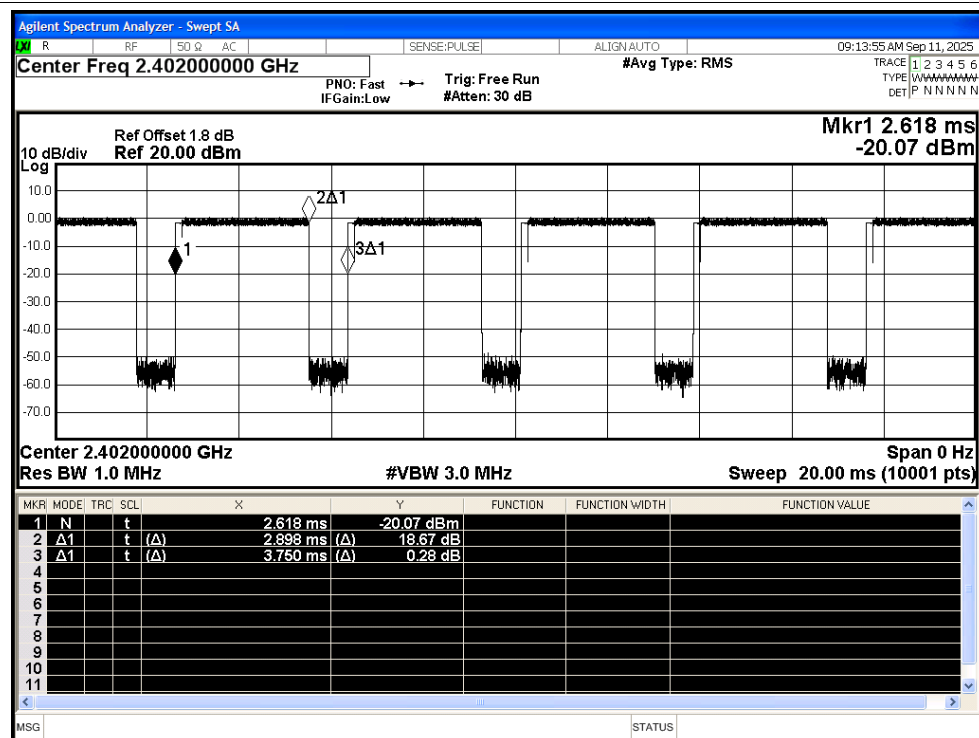
Duty Cycle NVNT 2-DH5 2441MHz Ant1



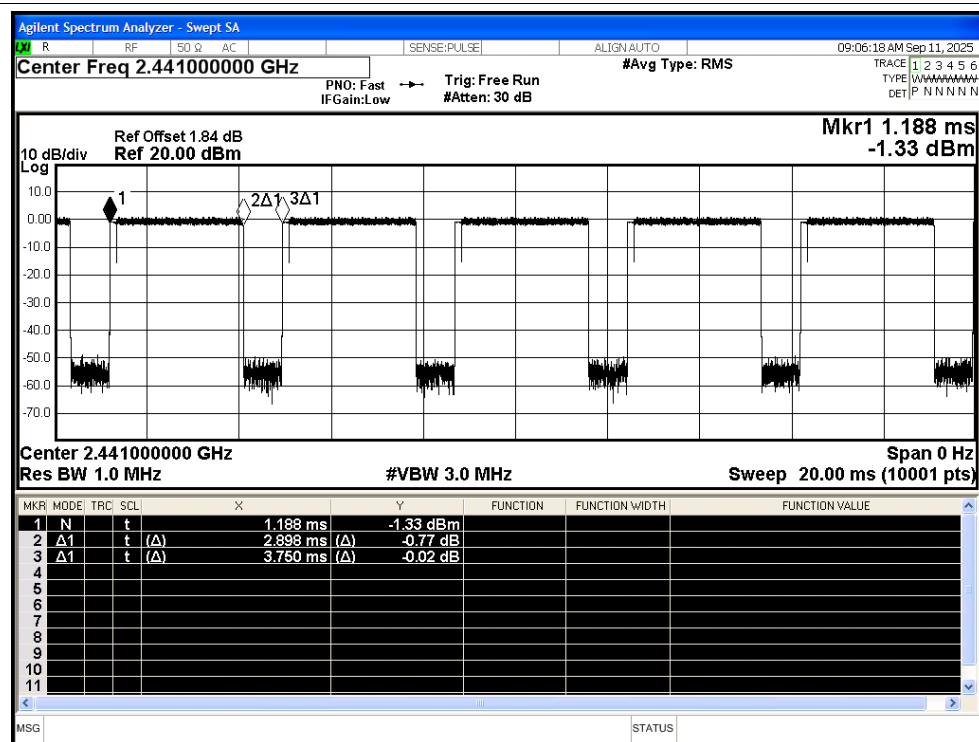
Duty Cycle NVNT 2-DH5 2480MHz Ant1

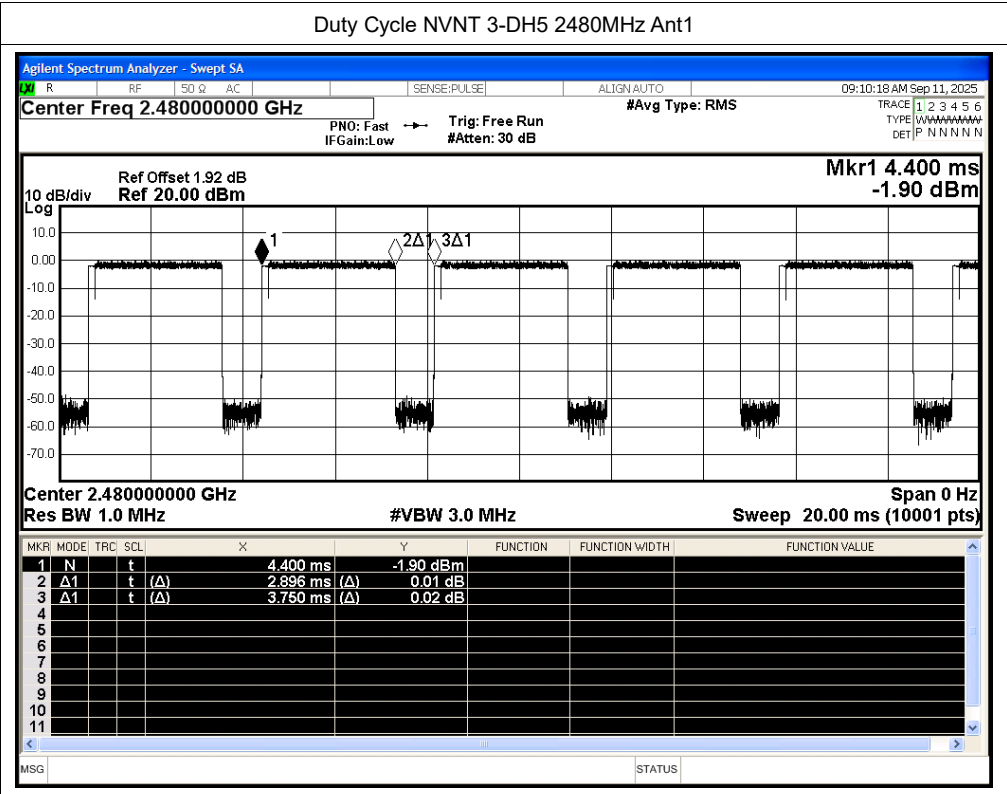


Duty Cycle NVNT 3-DH5 2402MHz Ant1



Duty Cycle NVNT 3-DH5 2441MHz Ant1



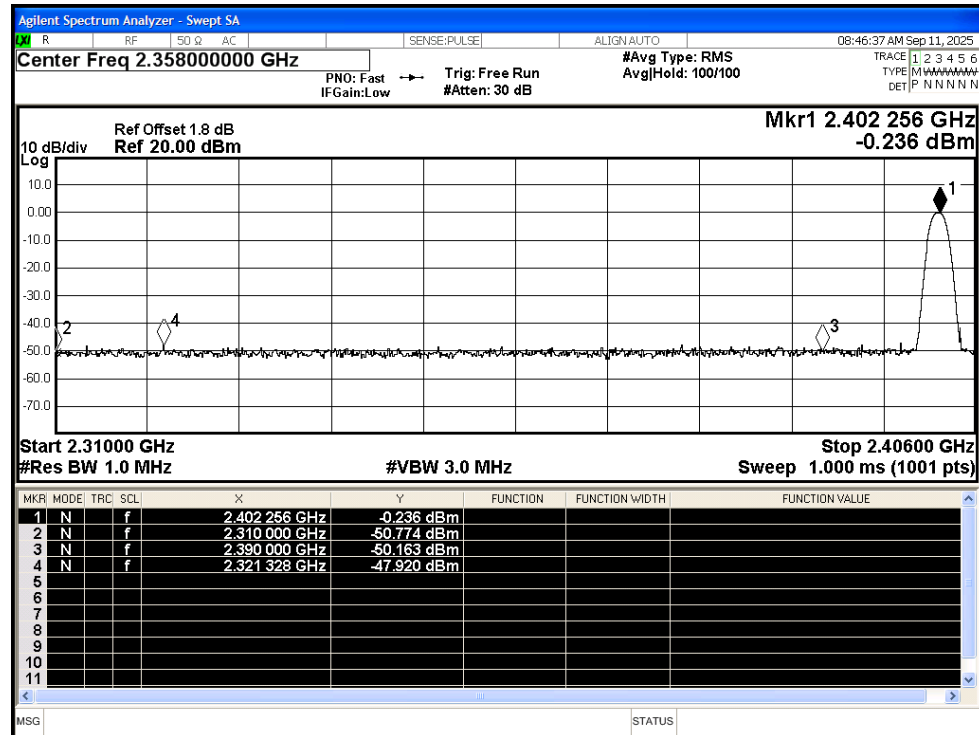


A.9 Restrict Band

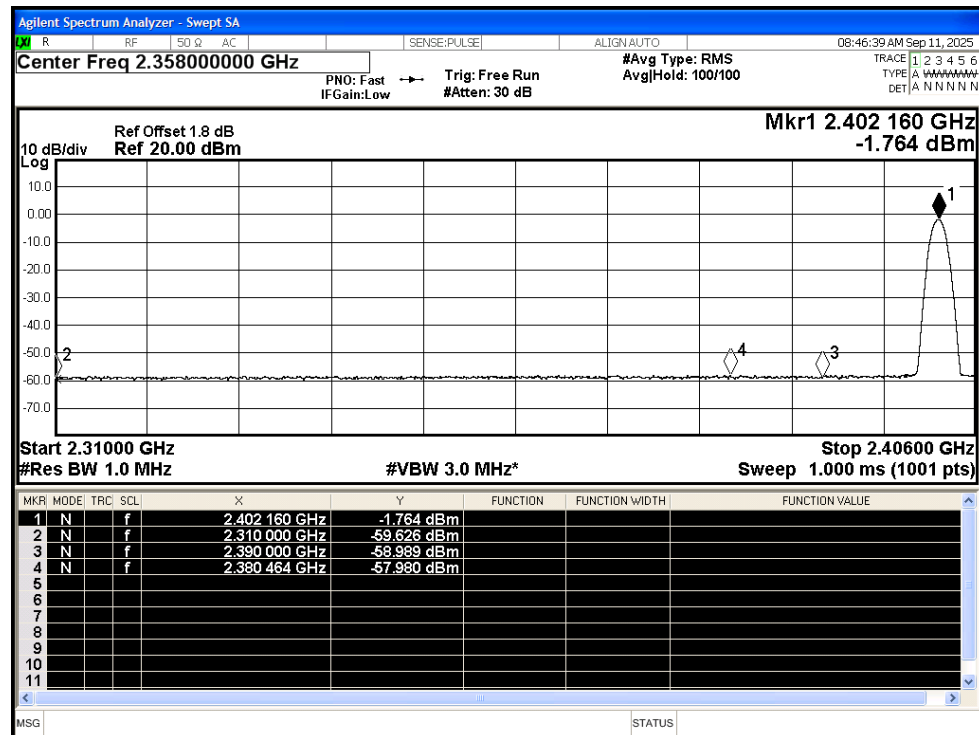
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-50.77	2	-	46.49	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-59.63	2	1.1	38.73	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2321.328	-47.92	2	-	49.34	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2380.464	-57.98	2	1.1	40.38	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-50.16	2	-	47.1	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-58.99	2	1.1	39.37	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-49	2	-	48.26	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-58.51	2	1.1	39.85	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.536	-43.71	2	-	53.55	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2484.592	-57.26	2	1.1	41.1	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-50.62	2	-	46.64	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-58.16	2	1.1	40.2	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-50.93	2	-	46.33	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-58.56	2	1.12	39.82	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2369.136	-46.37	2	-	50.89	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2378.16	-57.86	2	1.12	40.52	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-48.91	2	-	48.35	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-58.75	2	1.12	39.63	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-47.51	2	-	49.75	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-57.18	2	1.12	41.2	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.608	-46.74	2	-	50.52	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.752	-56.85	2	1.12	41.53	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-49.87	2	-	47.39	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-58.02	2	1.12	40.36	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-51.33	2	-	45.93	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-58.75	2	1.12	39.63	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2326.128	-47.59	2	-	49.67	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2370	-57.82	2	1.12	40.56	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-50.78	2	-	46.48	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-58.68	2	1.12	39.7	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-46.9	2	-	50.36	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-57.08	2	1.12	41.3	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.536	-45.83	2	-	51.43	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.584	-57.01	2	1.12	41.37	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-49.26	2	-	48	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-57.63	2	1.12	40.75	Average	54	Pass

Test Graphs

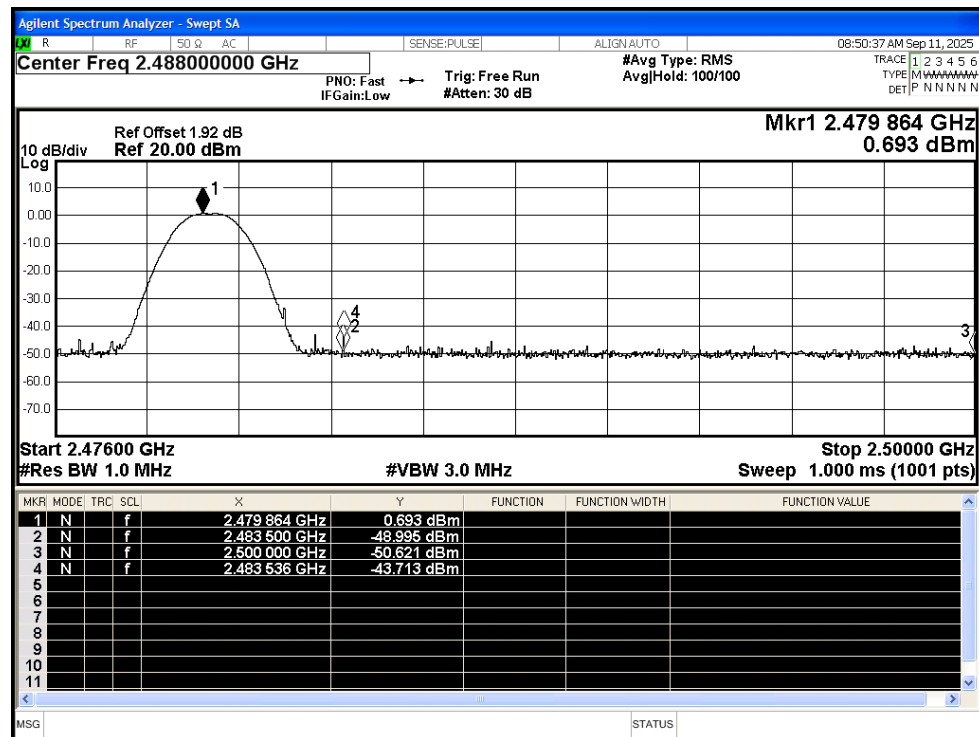
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



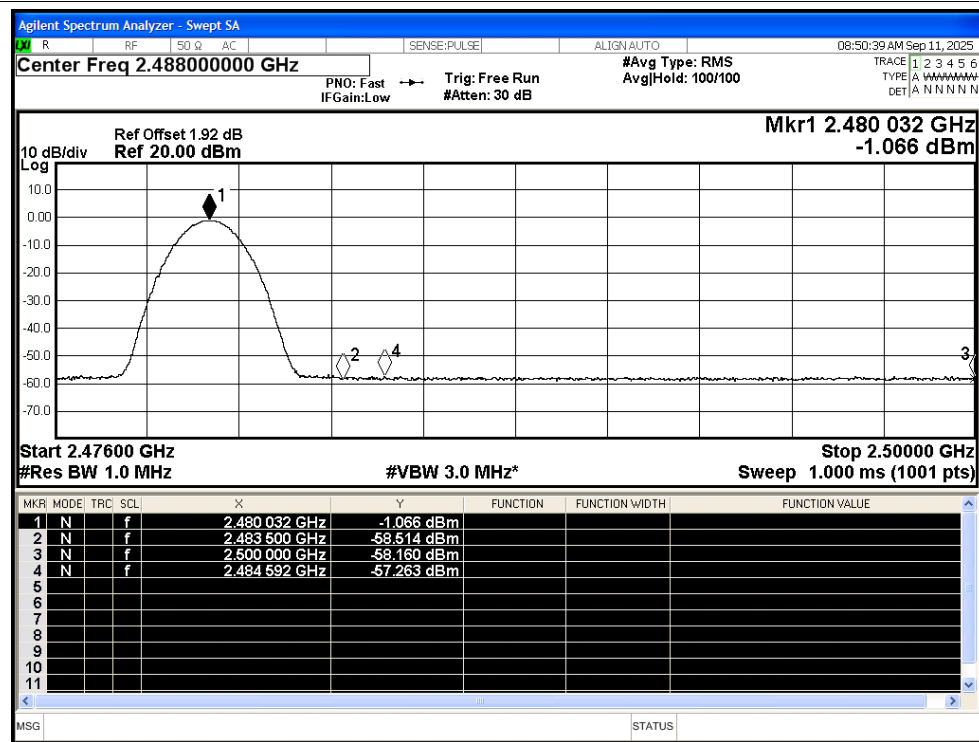
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



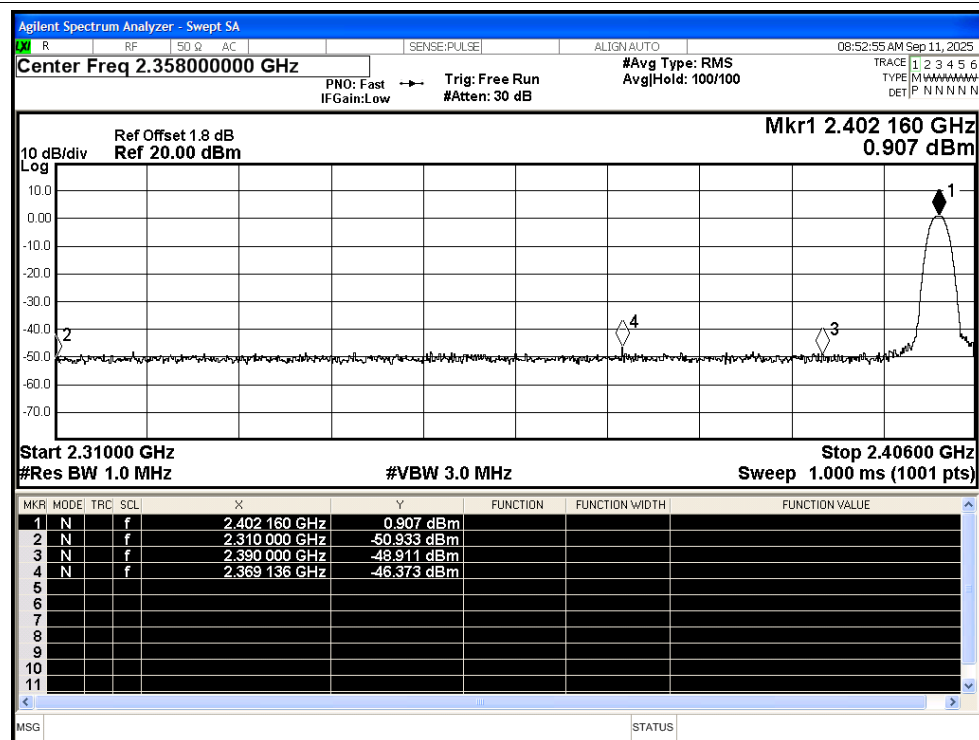
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average

