

Appendix A

RF Test Data for BT(Conducted Measurement)

Product Name: NASH 7-IN-1 RECORD PLAYER

Test Model: CR6238A-WA

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Yan Chen

A.1 -20dB Bandwidth

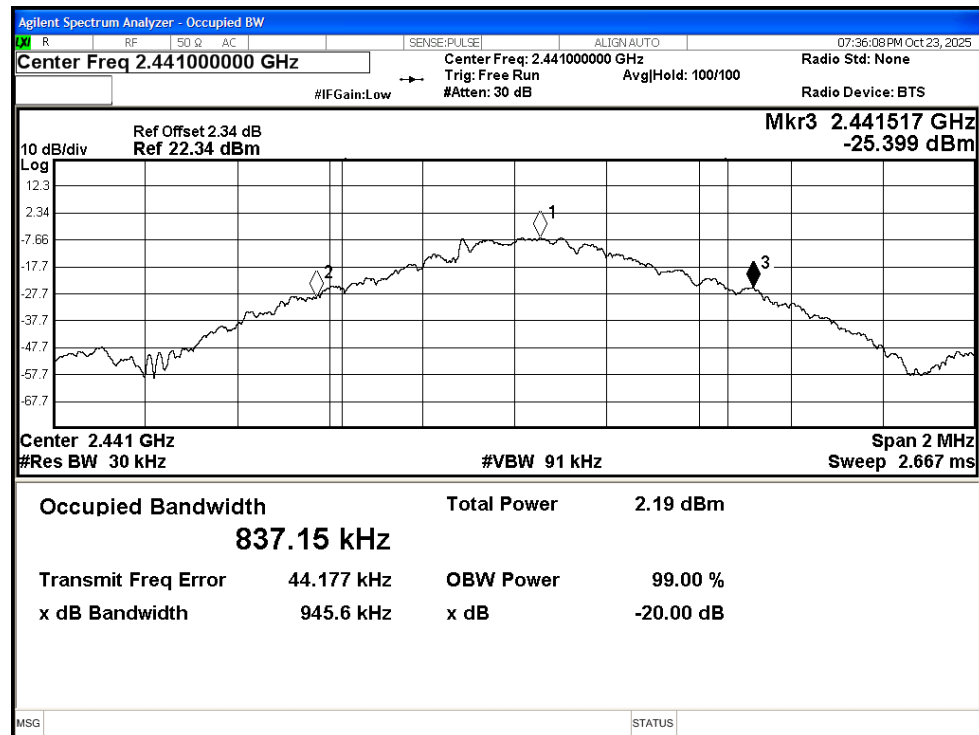
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.944	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.946	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.942	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.317	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.317	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.325	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.316	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.328	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.317	N/A	Pass

Test Graphs

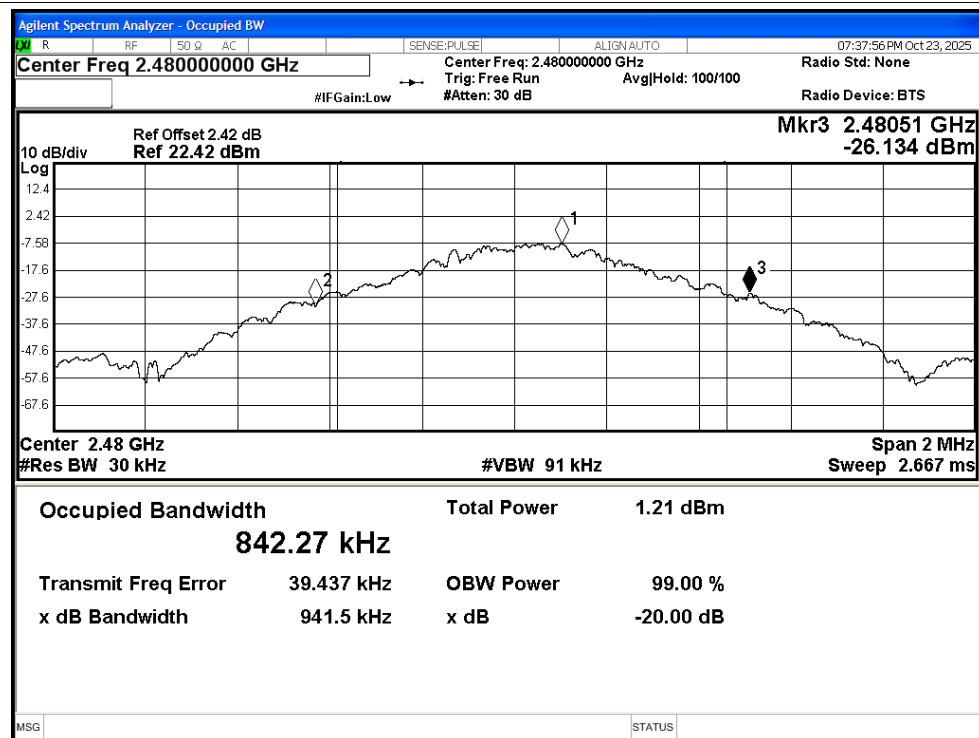
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



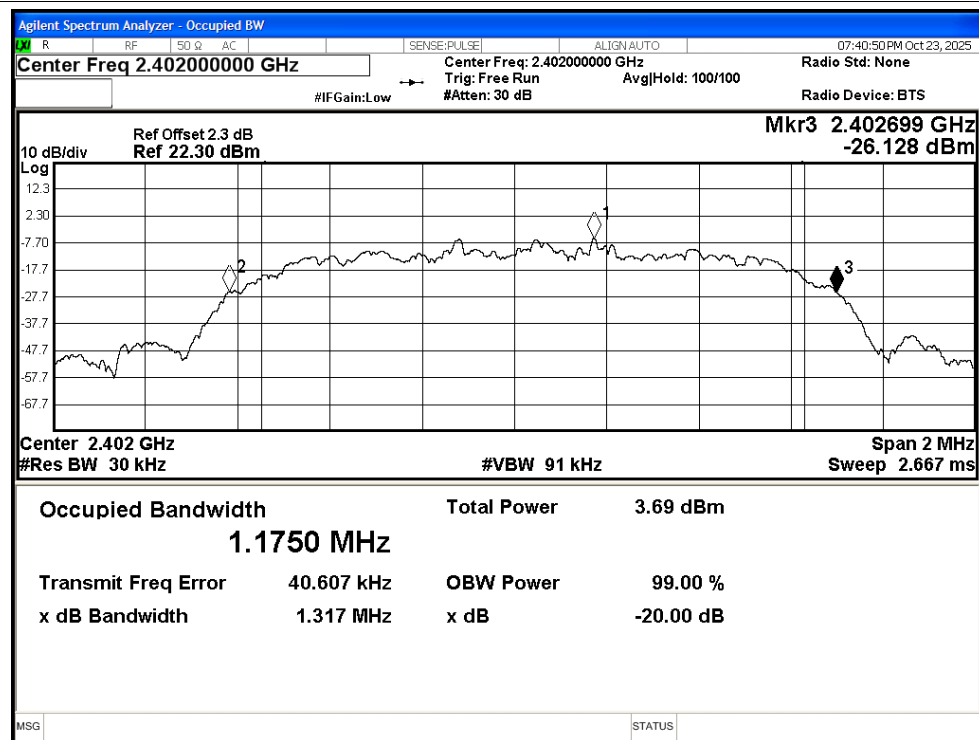
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



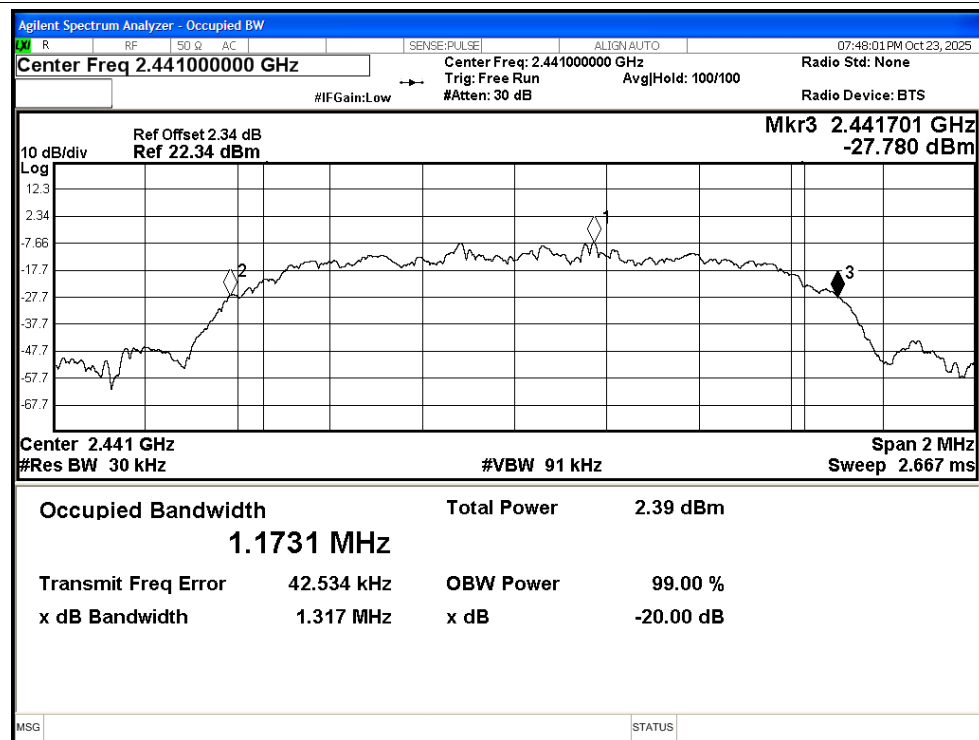
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



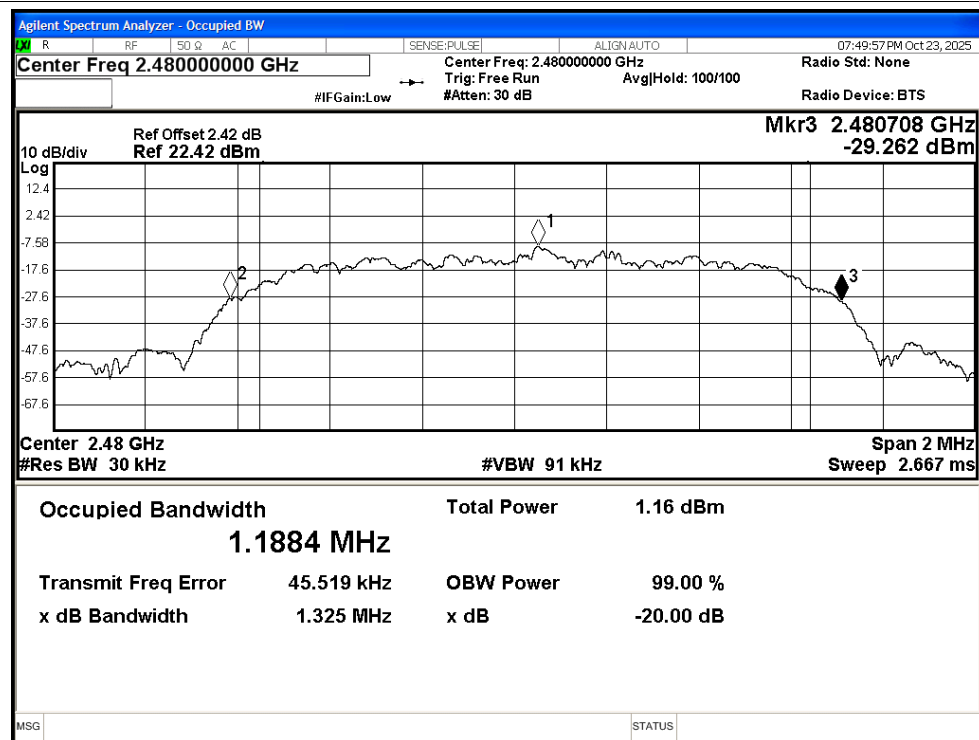
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



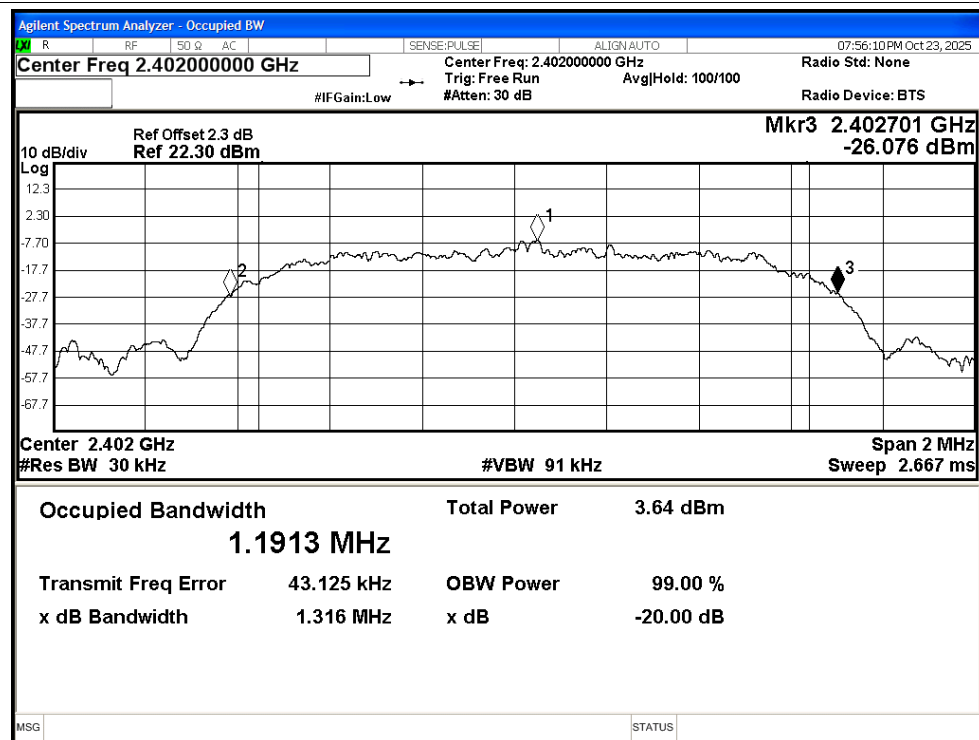
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



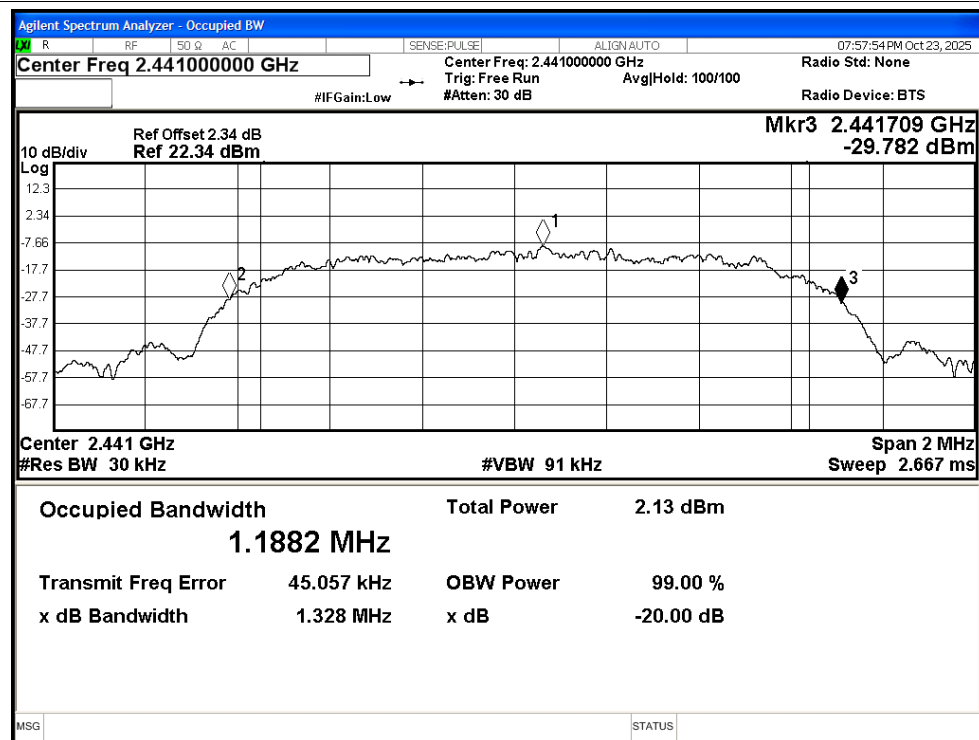
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

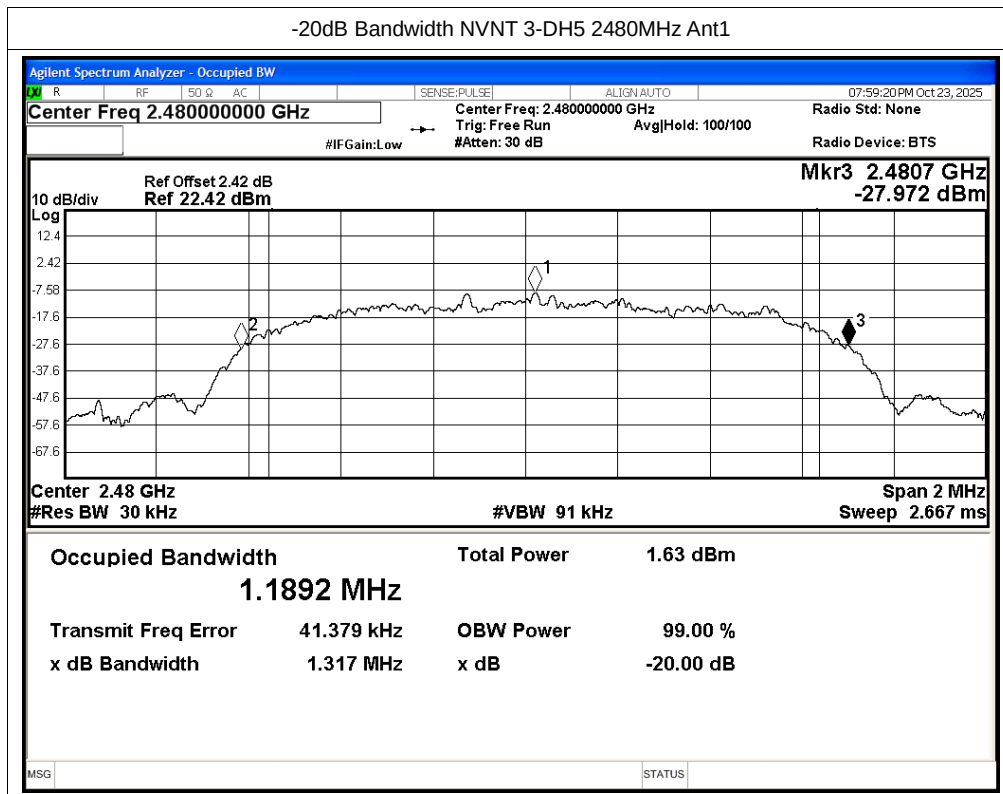


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



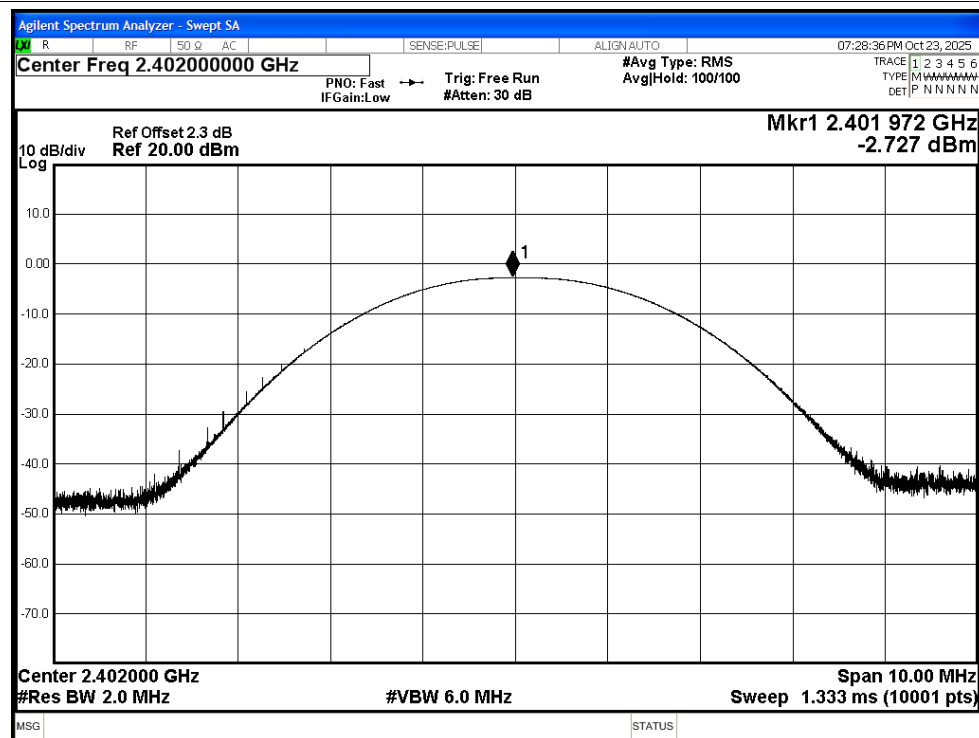


A.2 Maximum Peak Conducted Output Power

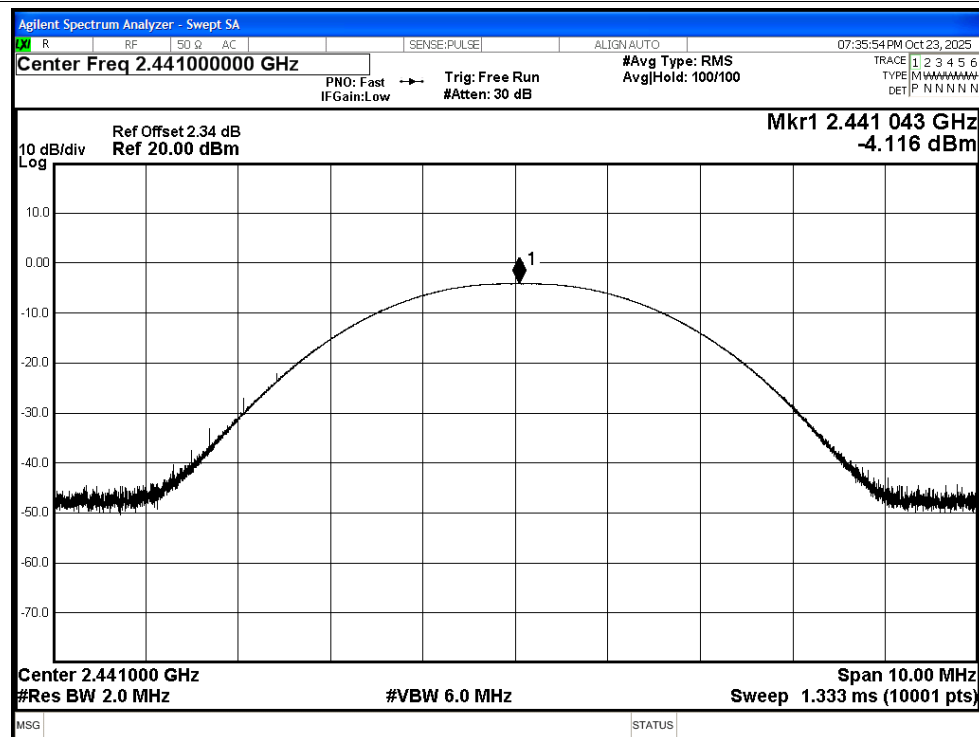
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-2.73	21	Pass
NVNT	1-DH5	2441	Ant1	-4.12	21	Pass
NVNT	1-DH5	2480	Ant1	-4.95	21	Pass
NVNT	2-DH5	2402	Ant1	-0.65	21	Pass
NVNT	2-DH5	2441	Ant1	-1.98	21	Pass
NVNT	2-DH5	2480	Ant1	-2.86	21	Pass
NVNT	3-DH5	2402	Ant1	-0.17	21	Pass
NVNT	3-DH5	2441	Ant1	-1.56	21	Pass
NVNT	3-DH5	2480	Ant1	-2.37	21	Pass

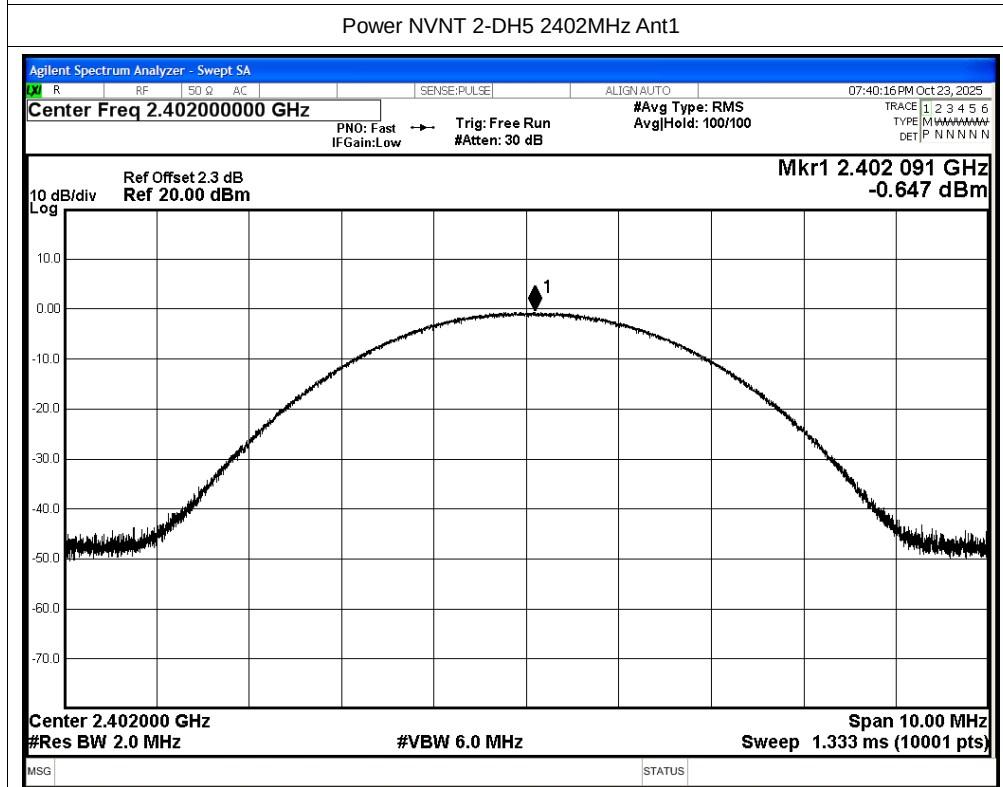
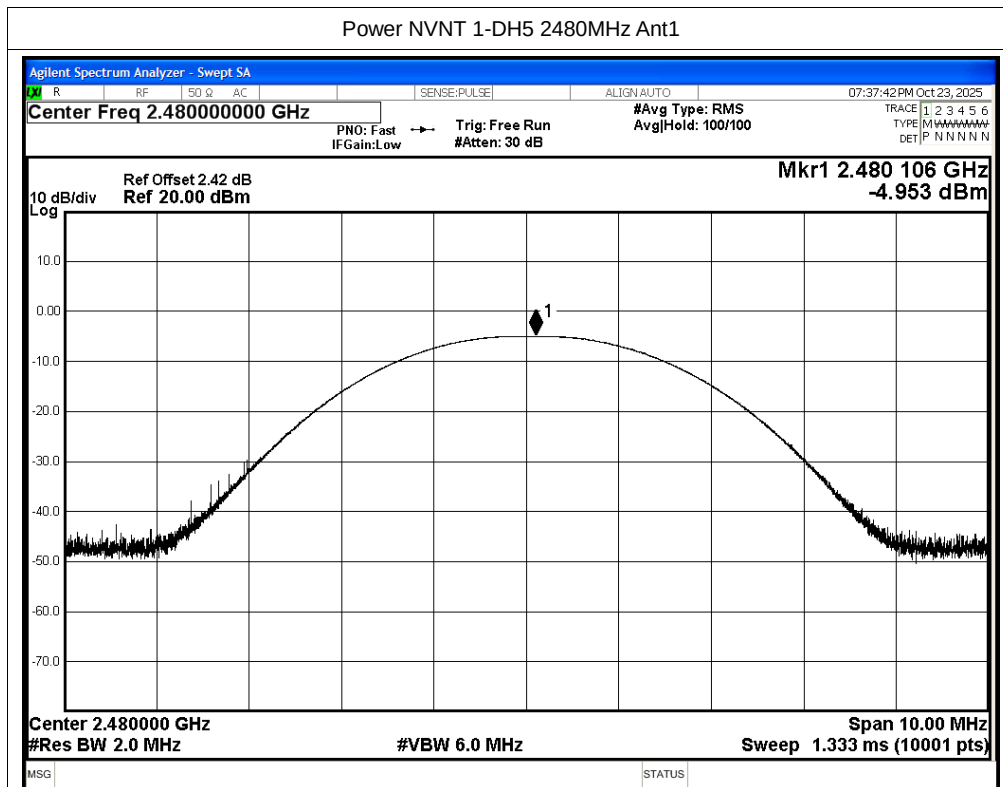
Test Graphs

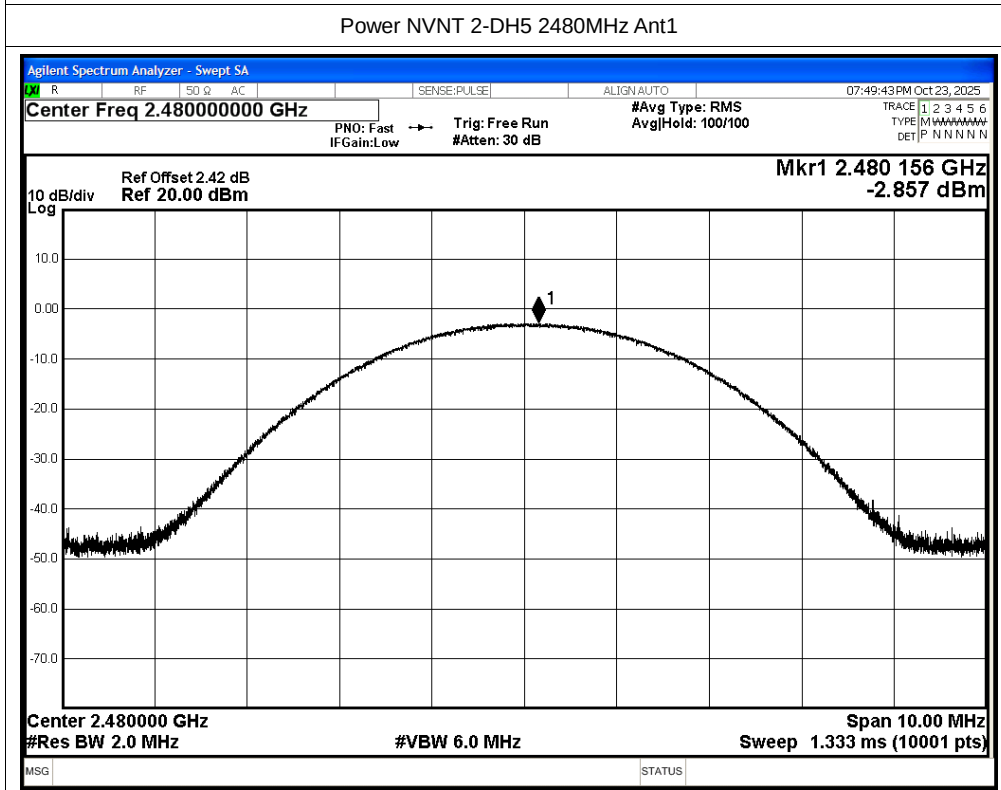
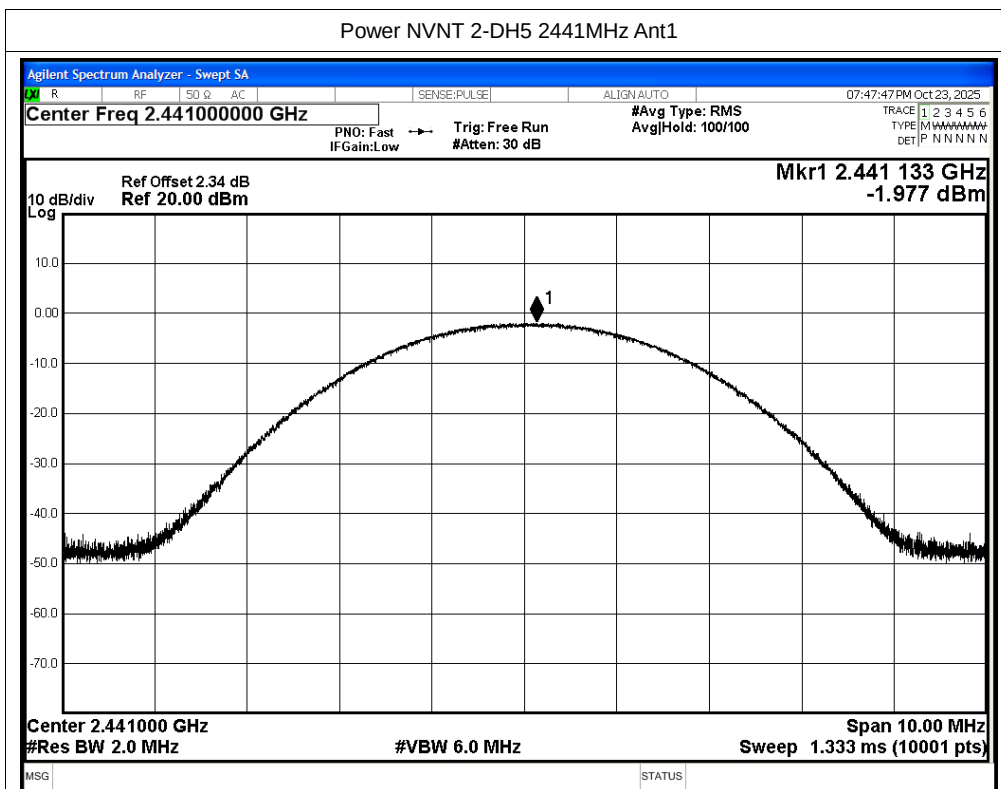
Power NVNT 1-DH5 2402MHz Ant1

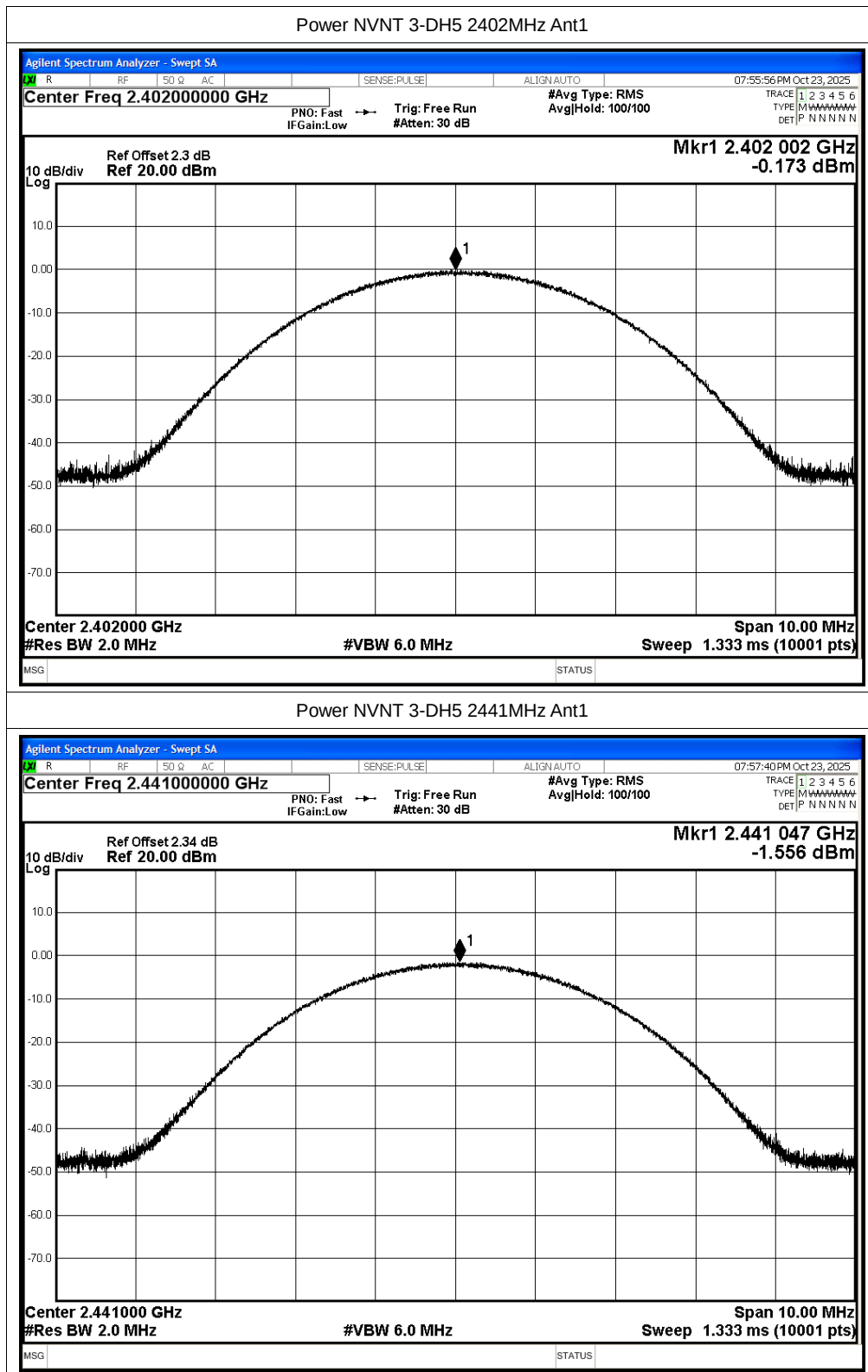


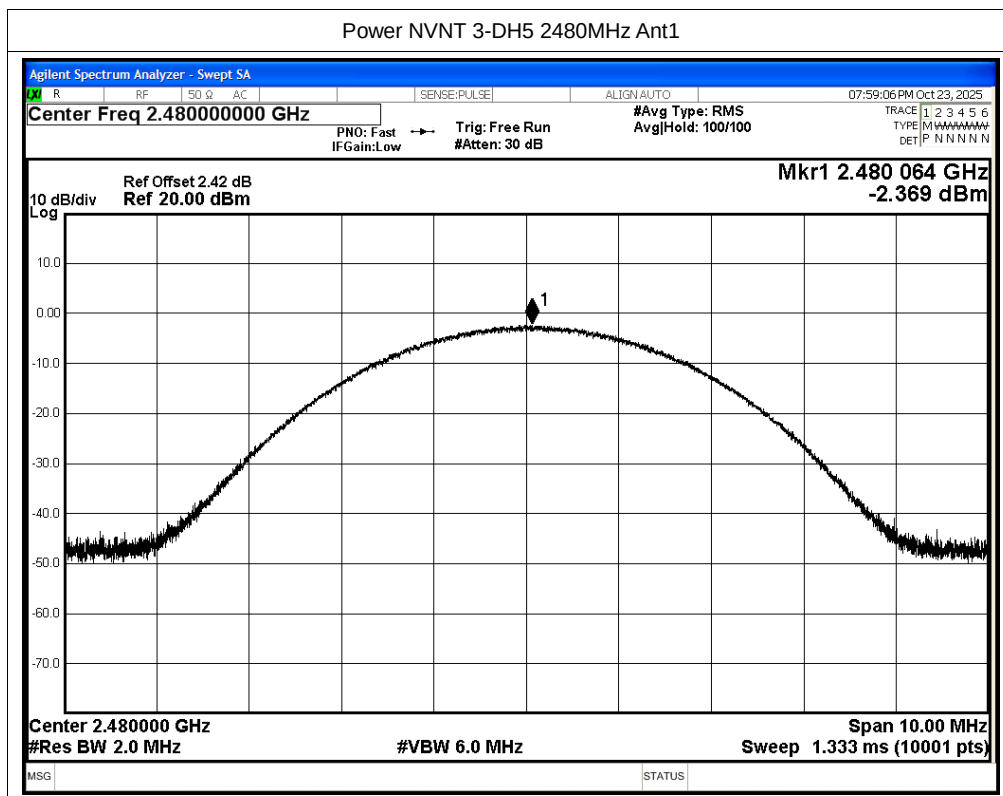
Power NVNT 1-DH5 2441MHz Ant1









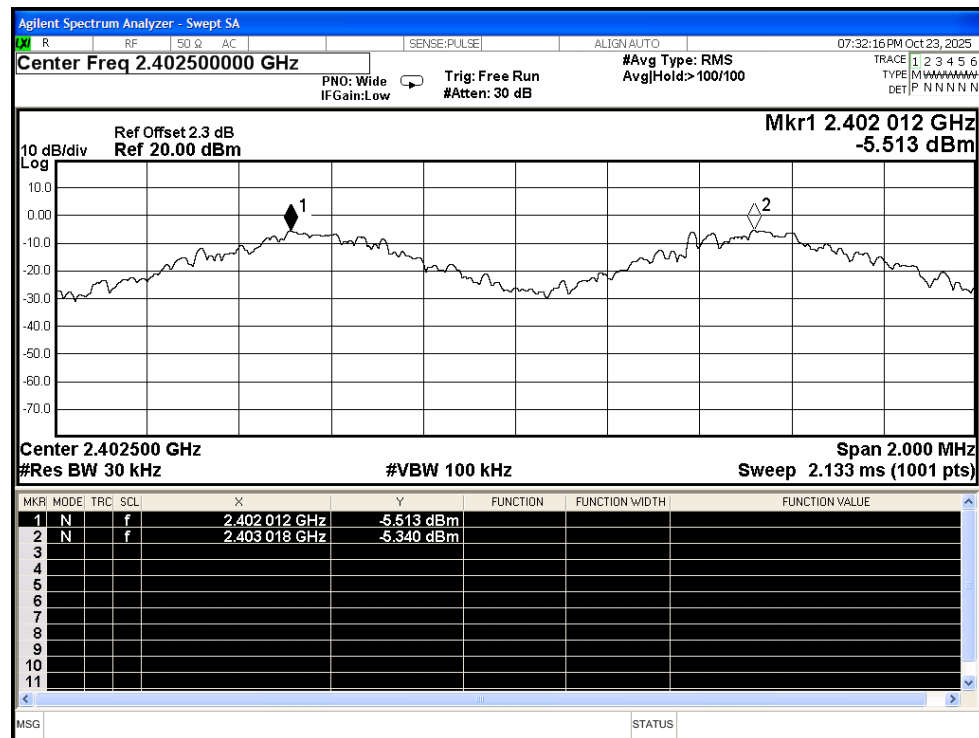


A.3 Carrier Frequencies Separation

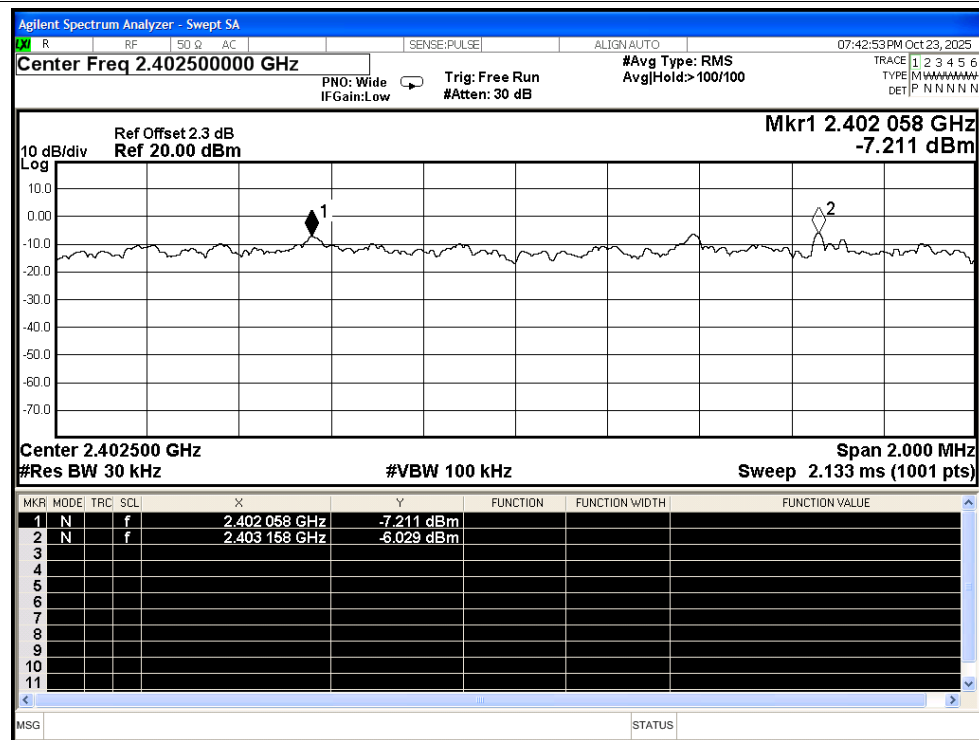
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.012	2403.018	1.006	0.631	Pass
NVNT	2-DH5	Ant1	2402.058	2403.158	1.1	0.883	Pass
NVNT	3-DH5	Ant1	2401.886	2403.042	1.156	0.885	Pass

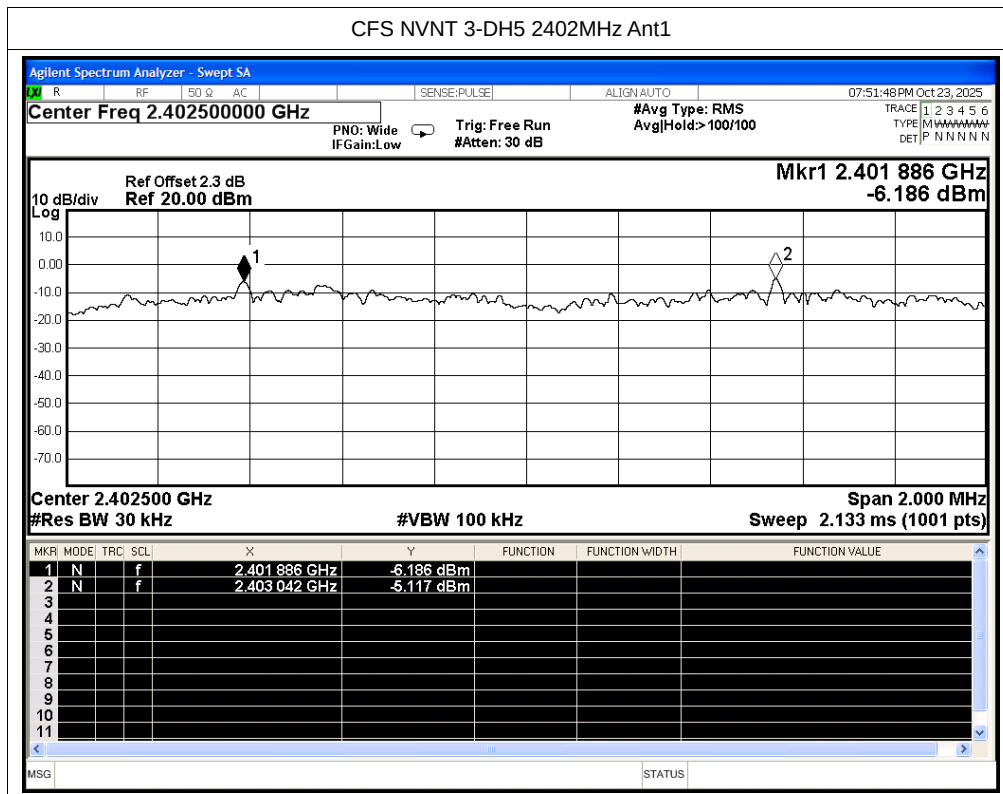
Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1



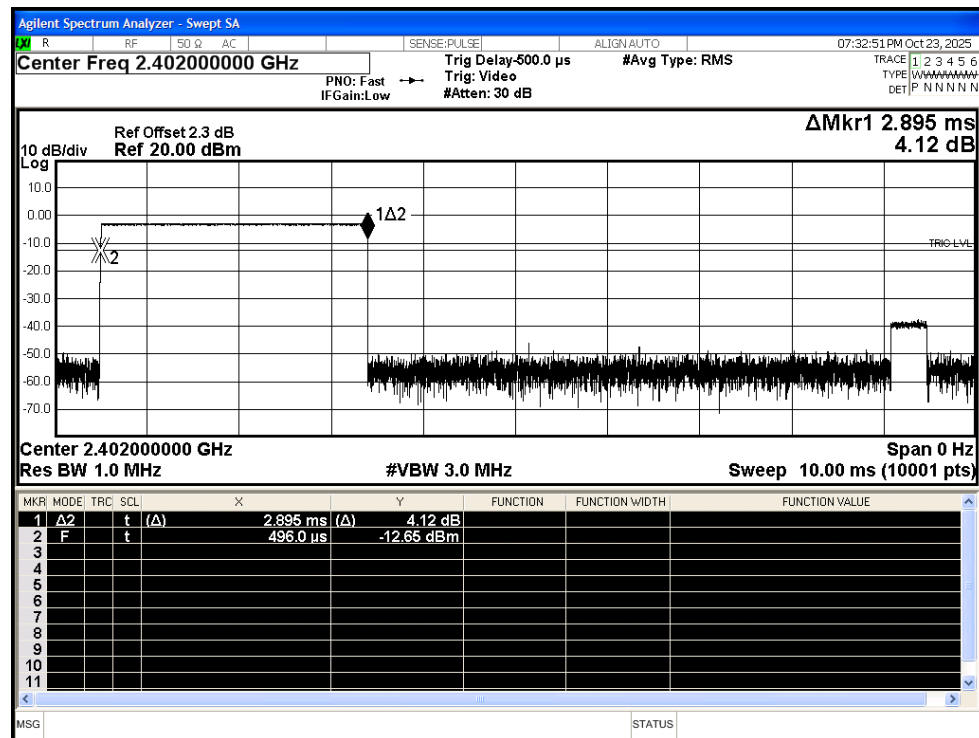


A.4 Dwell Time

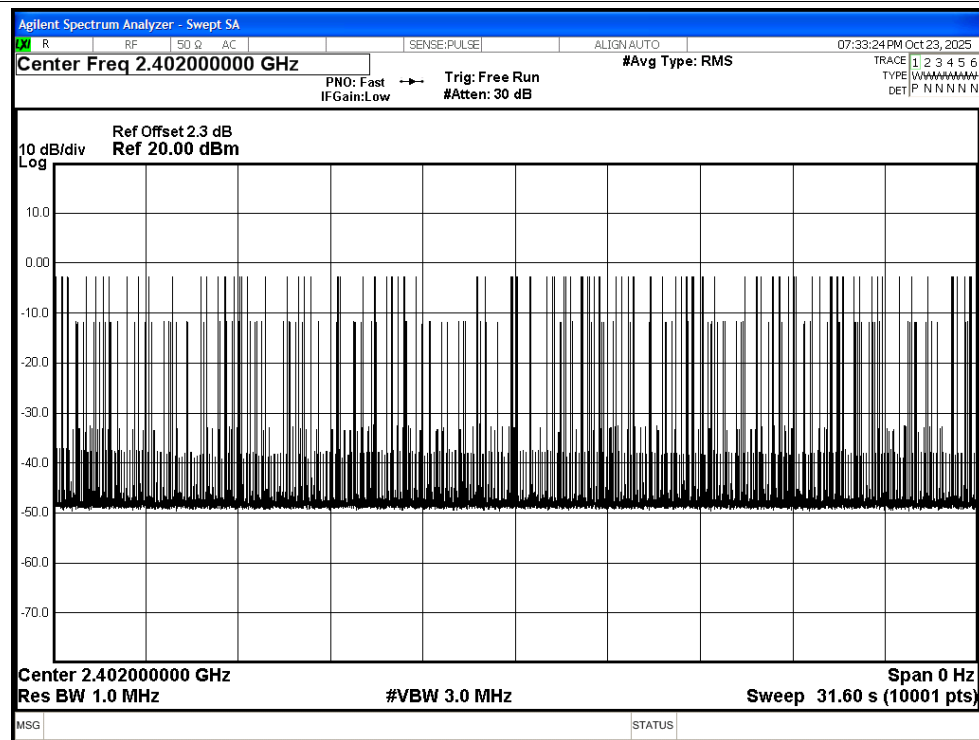
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.895	275.025	95	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.899	266.708	92	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.901	330.714	114	31600	400	Pass

Test Graphs

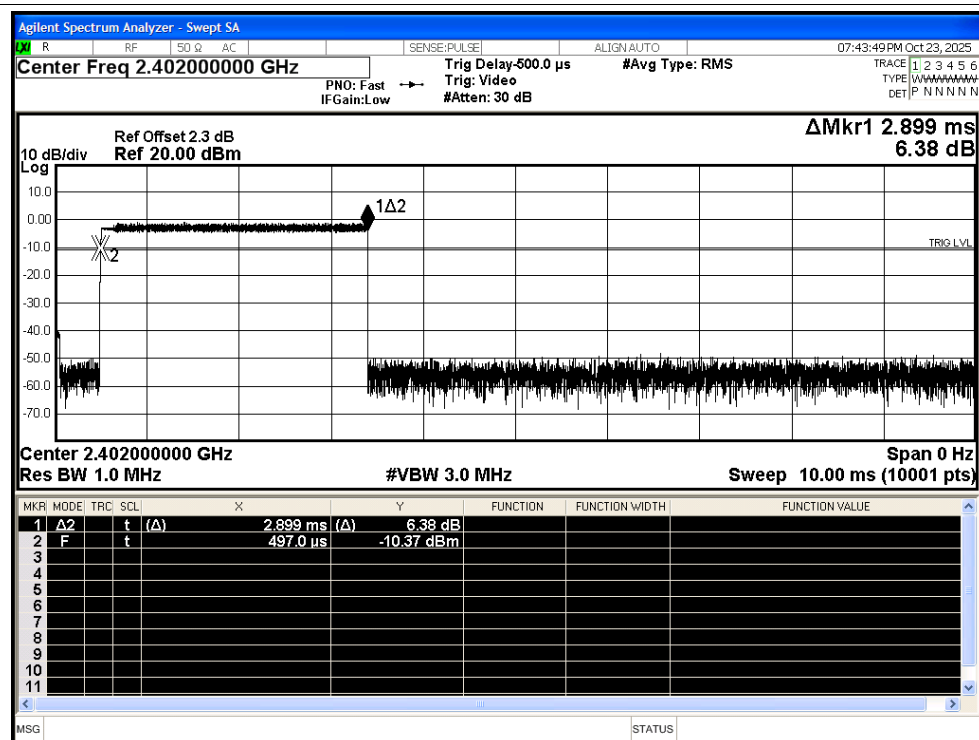
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



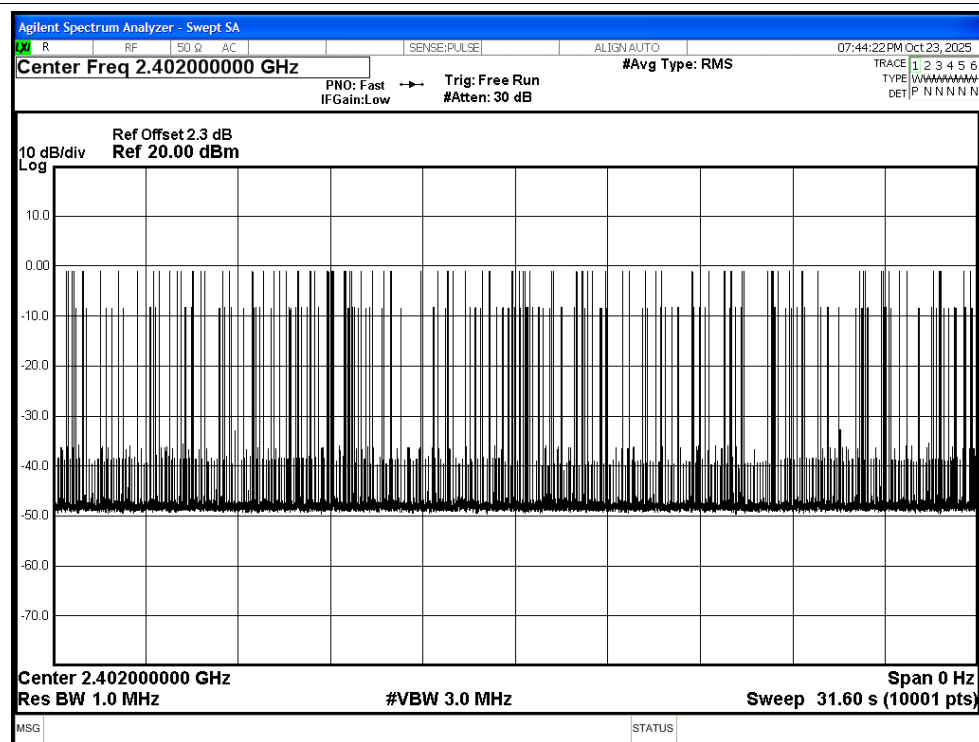
Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



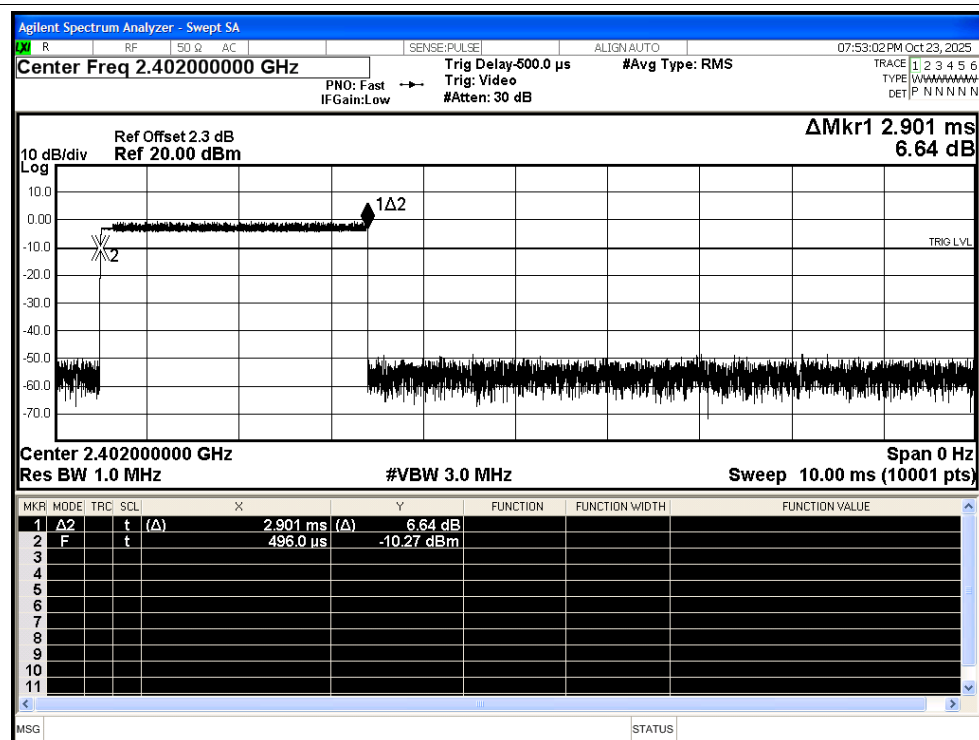
Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



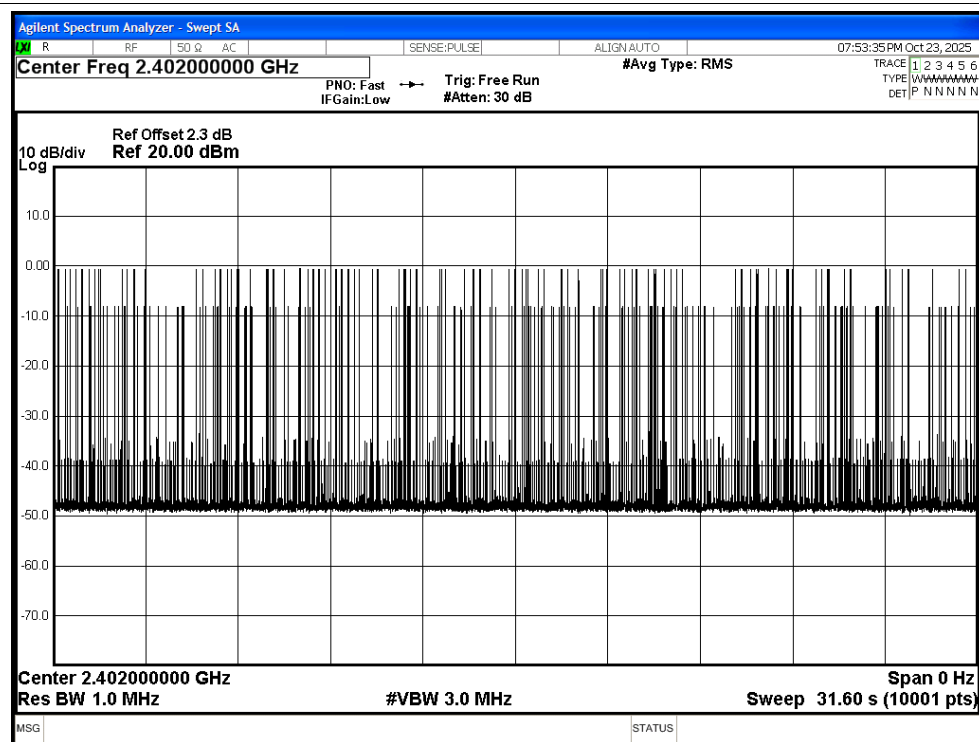
Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated

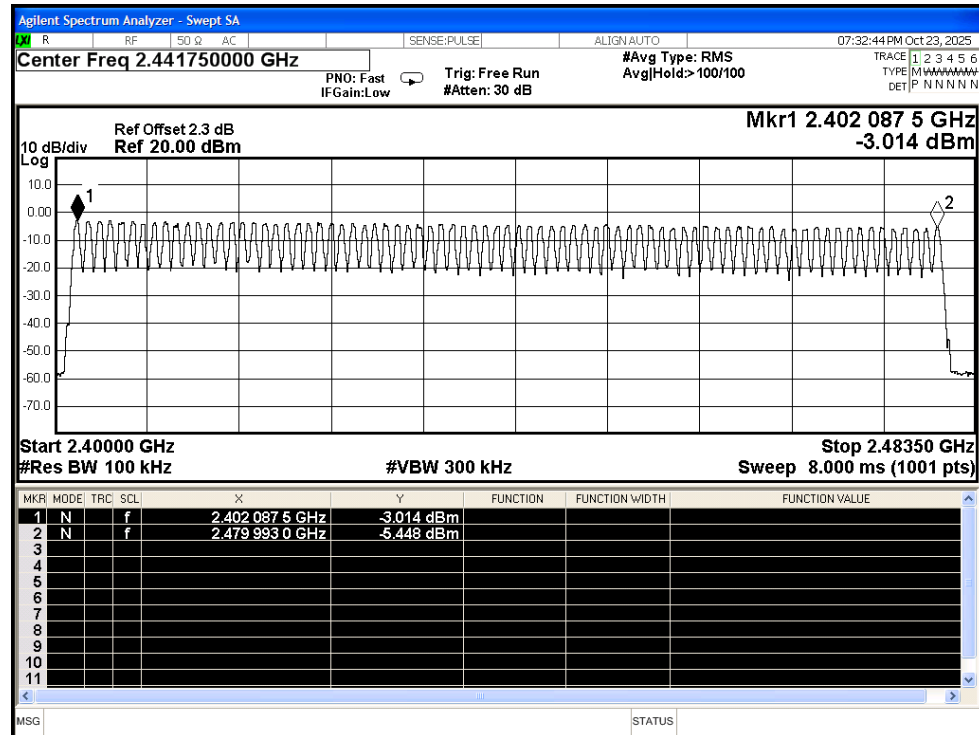


A.5 Number of Hopping Channel

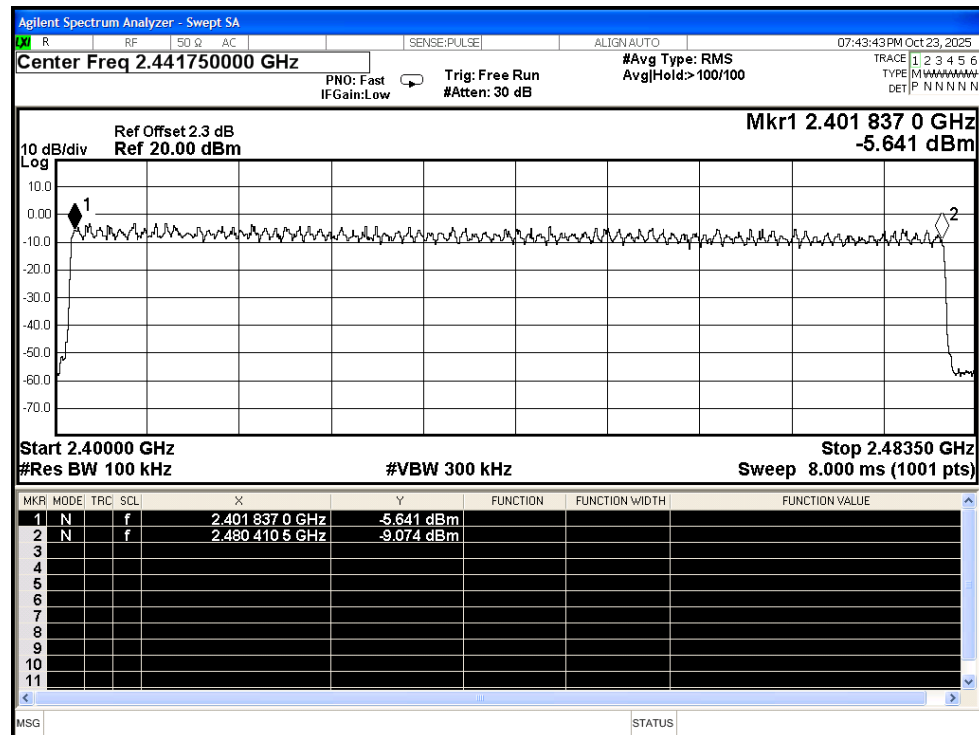
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

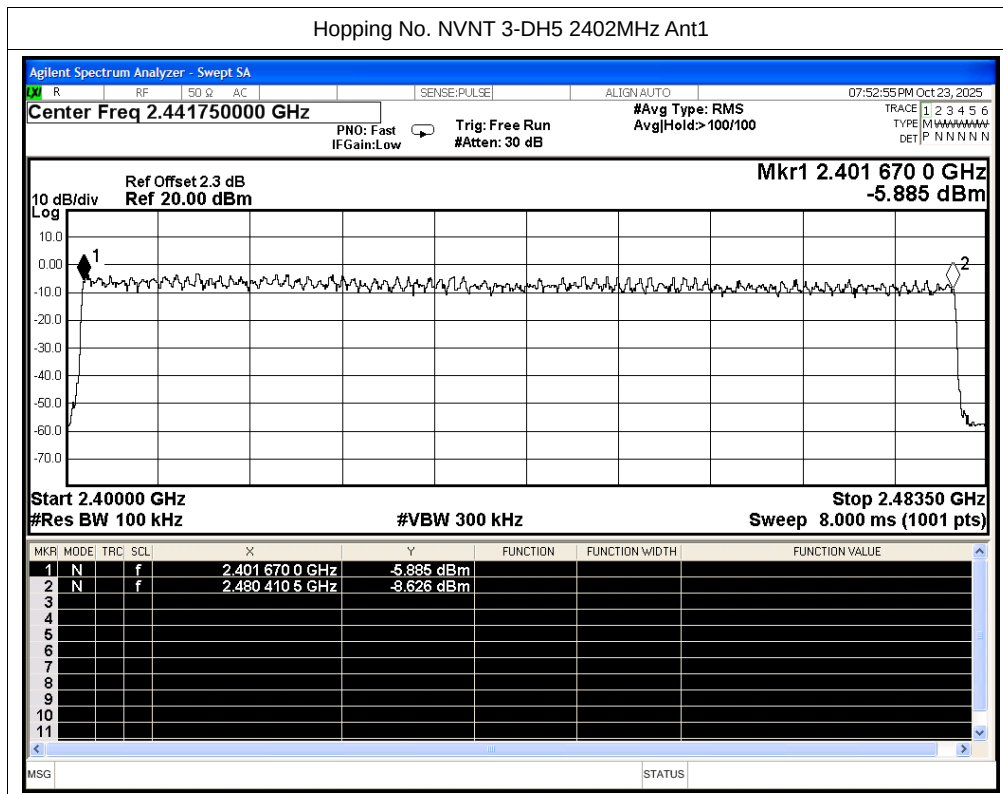
Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1



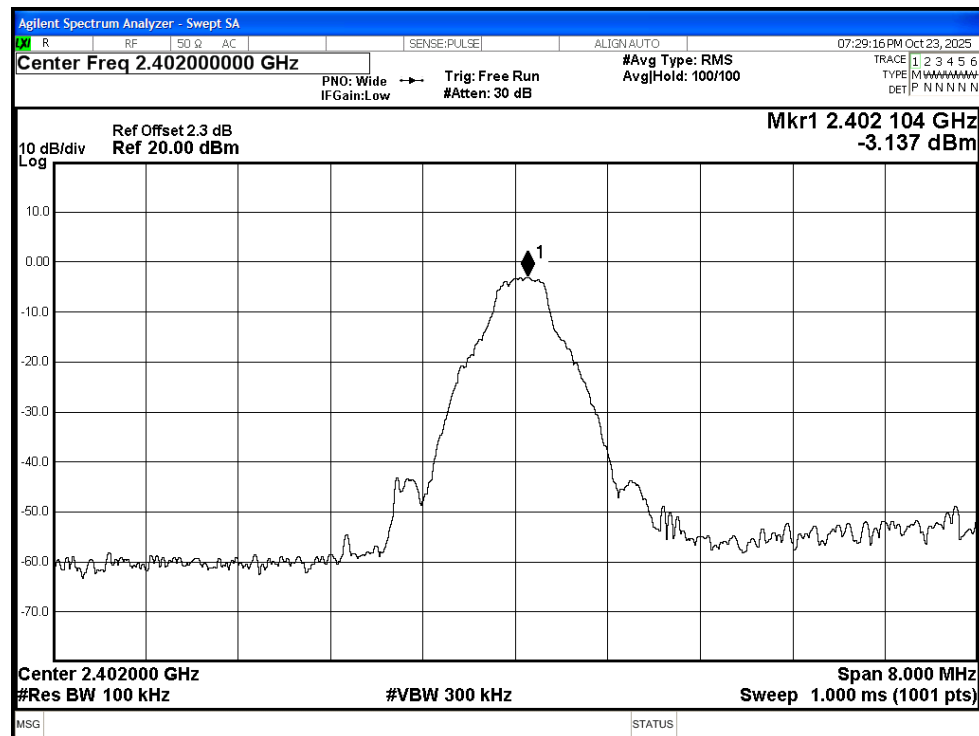


A.6 Band Edge

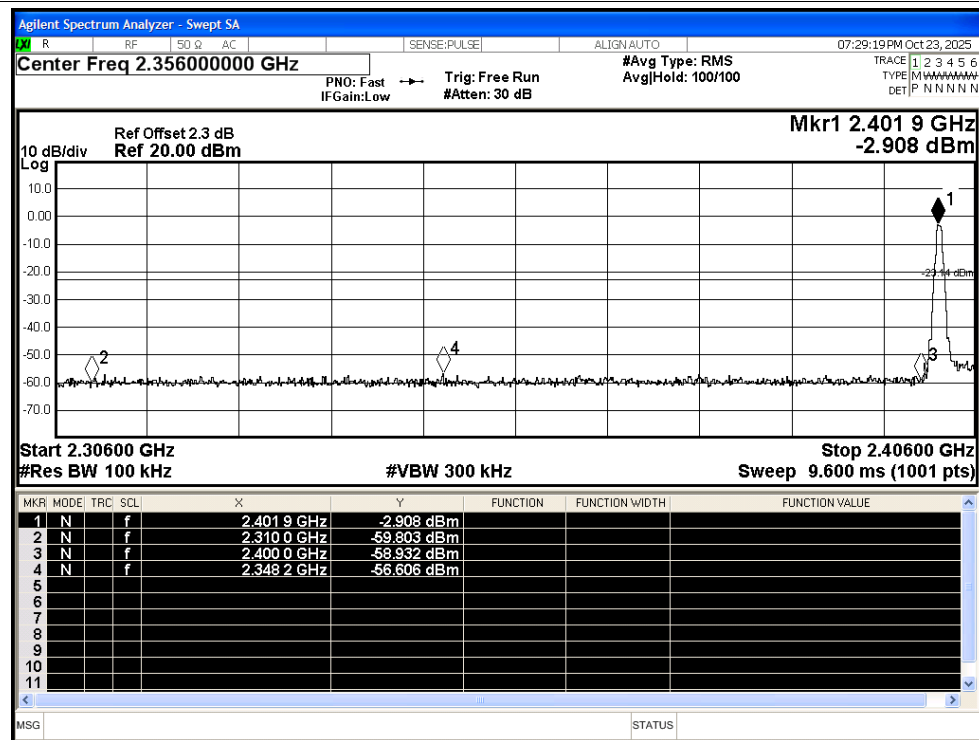
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-53.47	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-51.07	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-52.44	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-50.46	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-53.3	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-50.14	-20	Pass

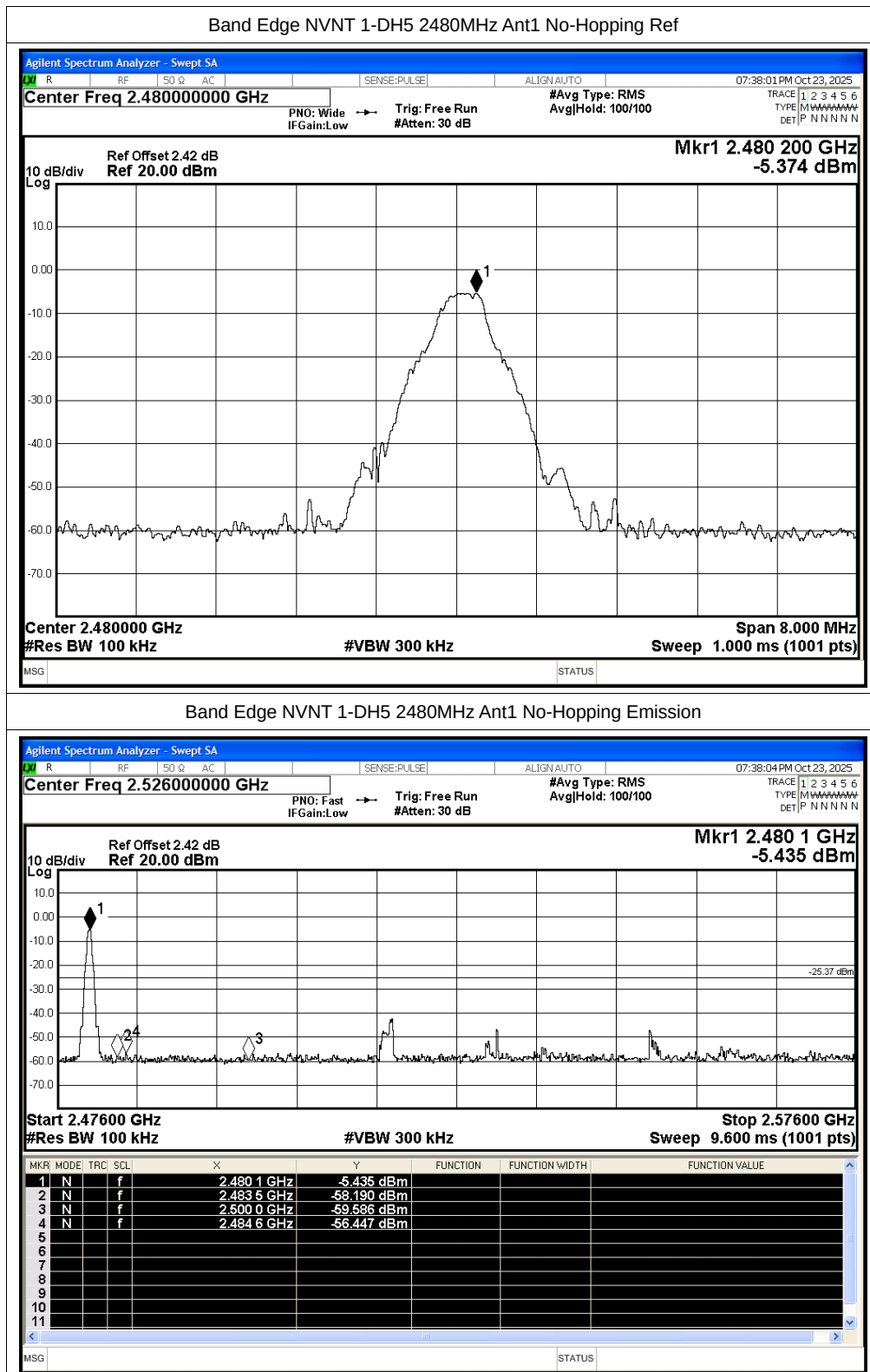
Test Graphs

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

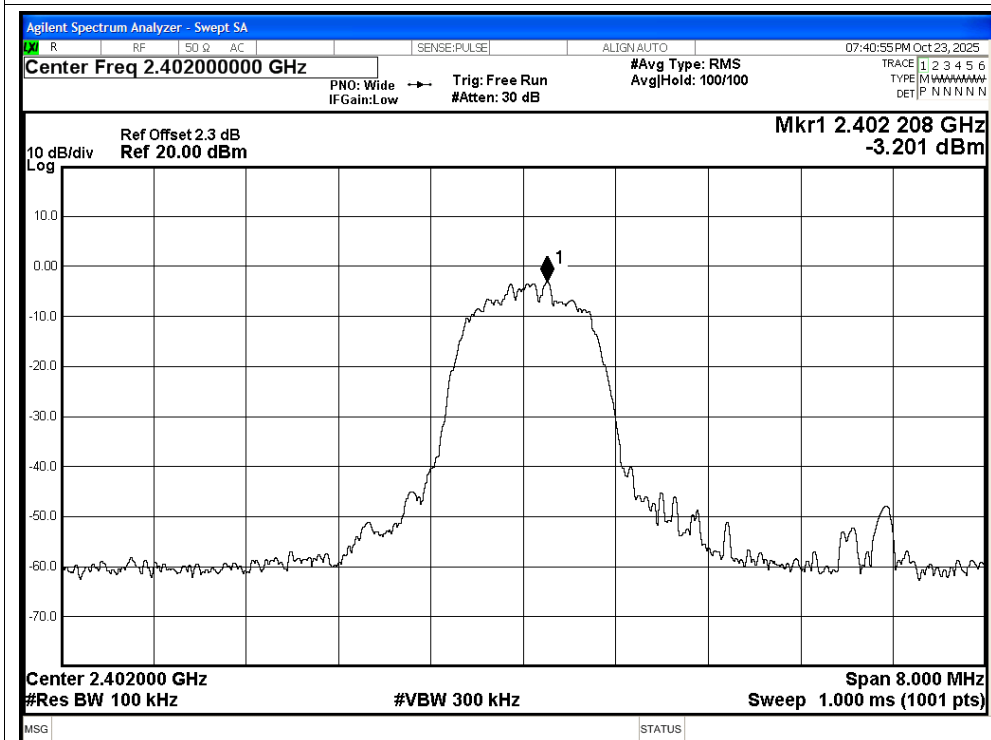


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

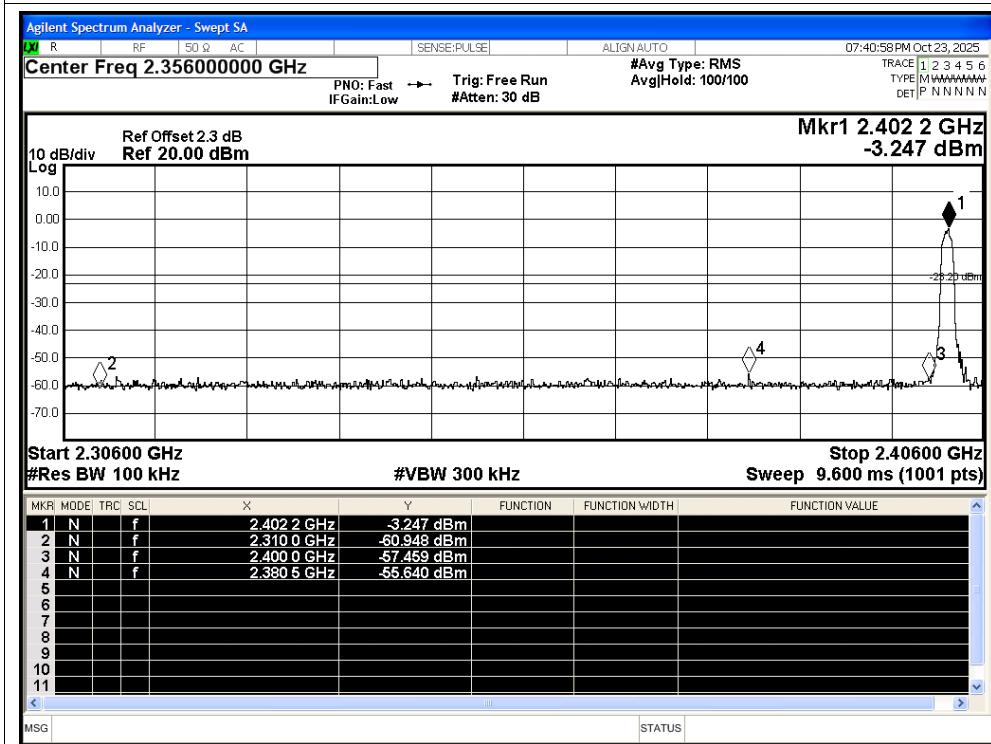


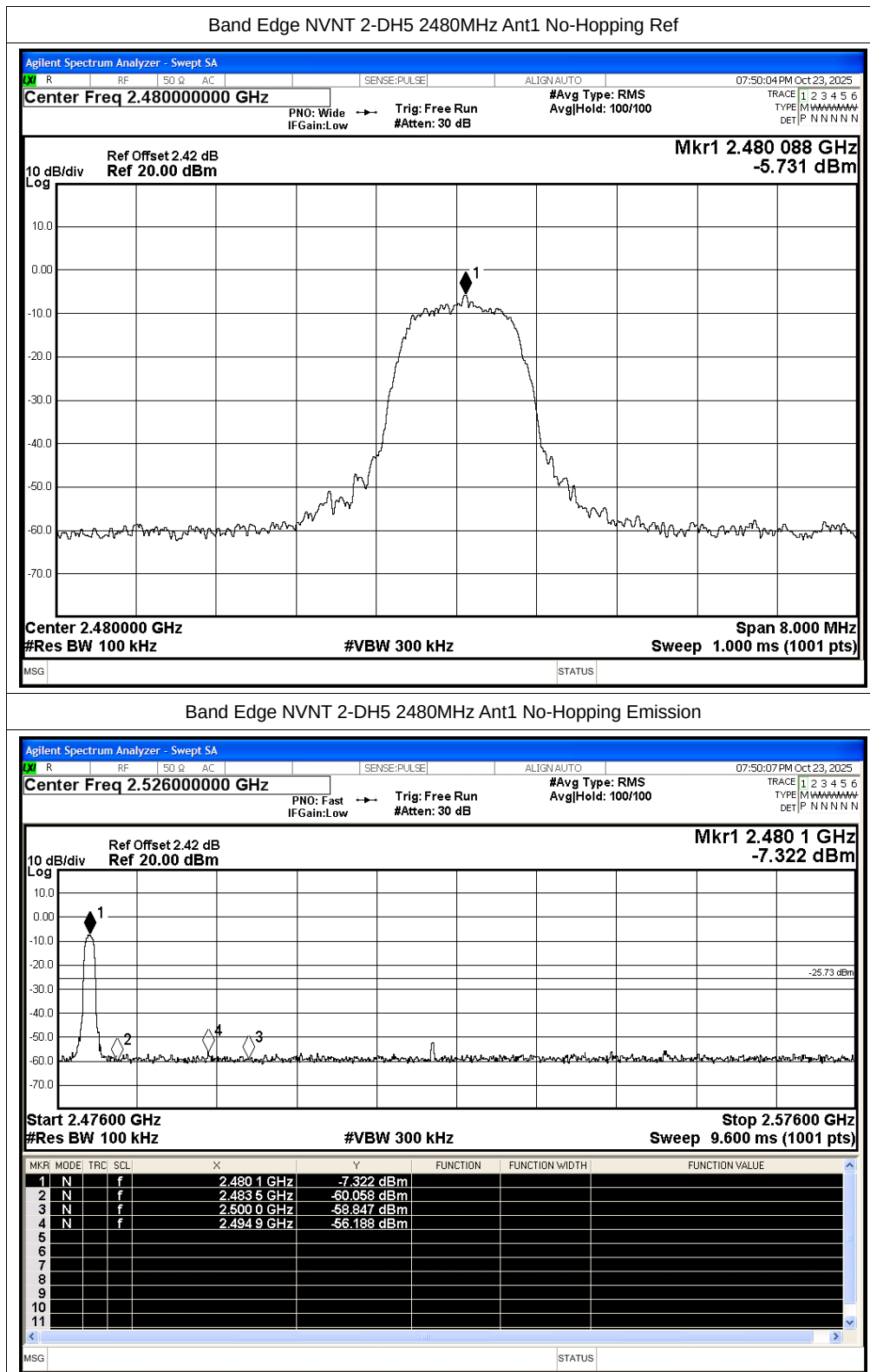


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

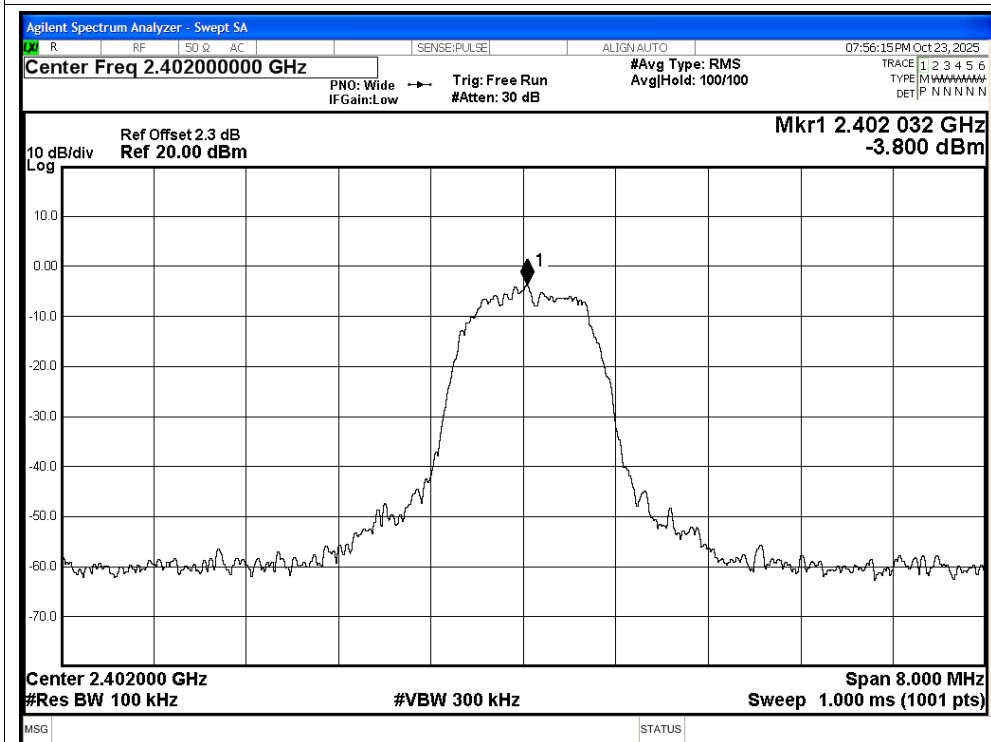


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

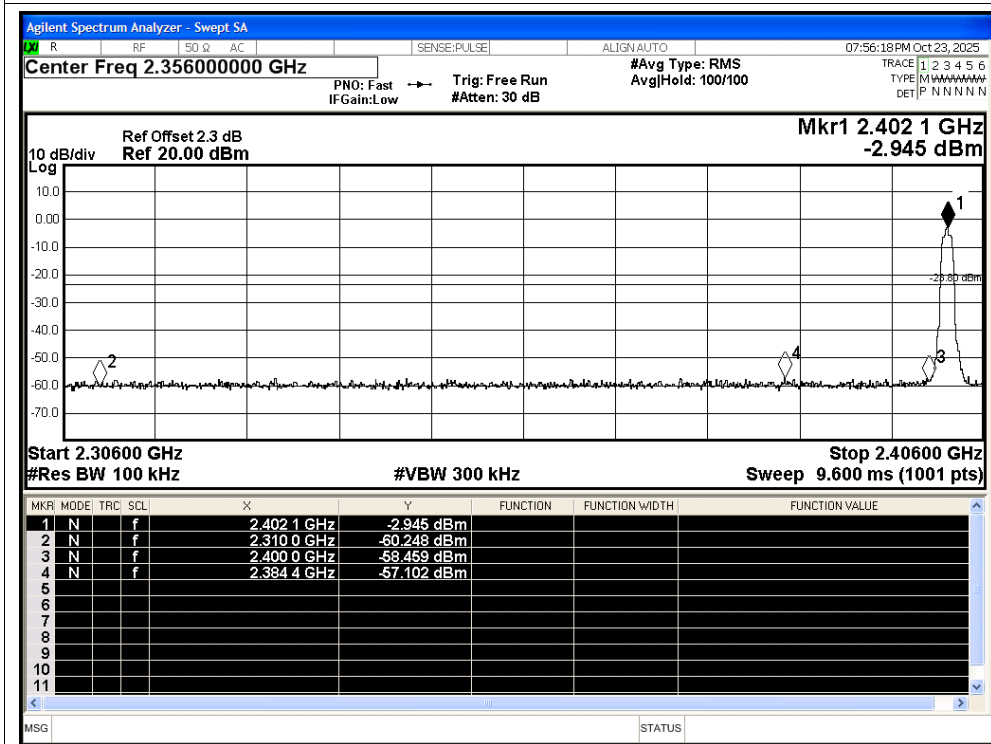




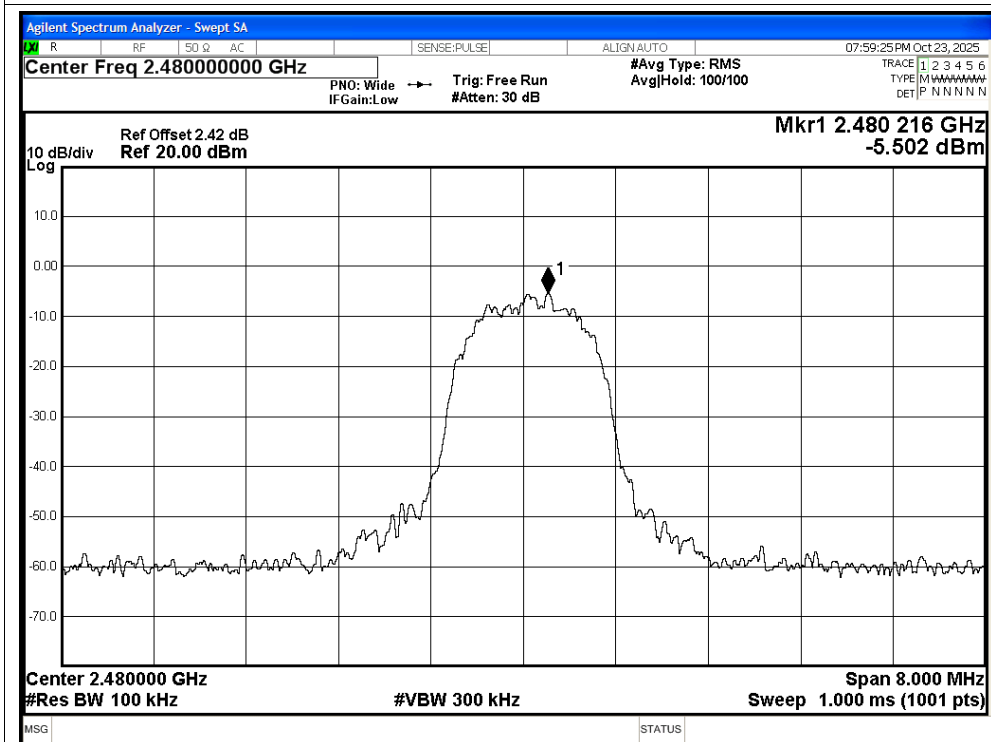
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



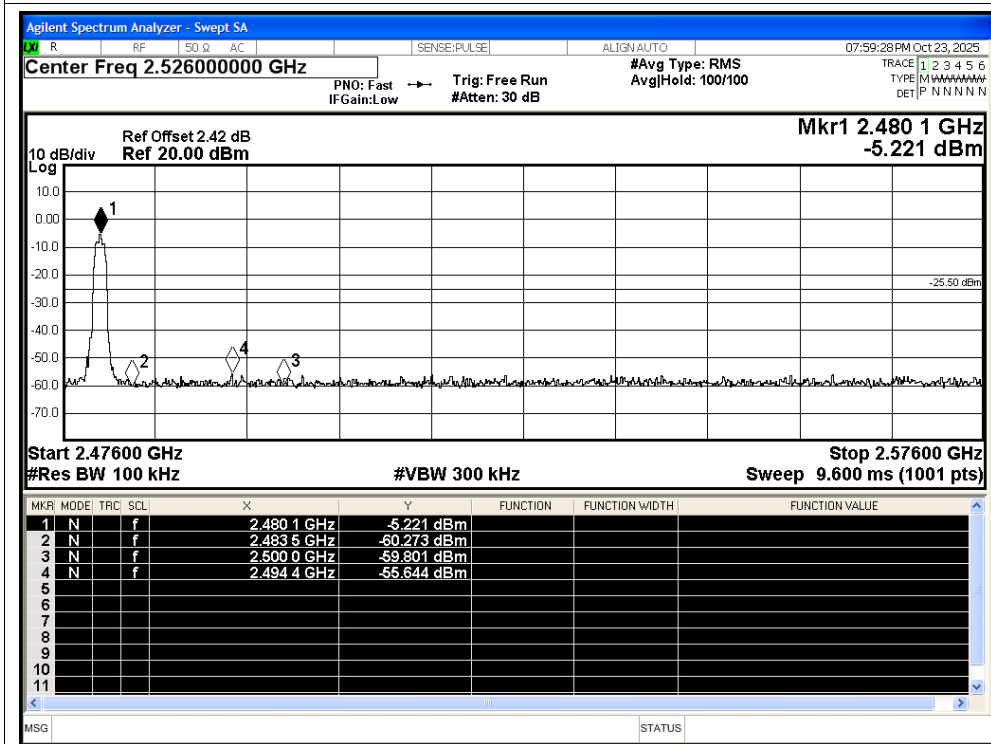
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Emission

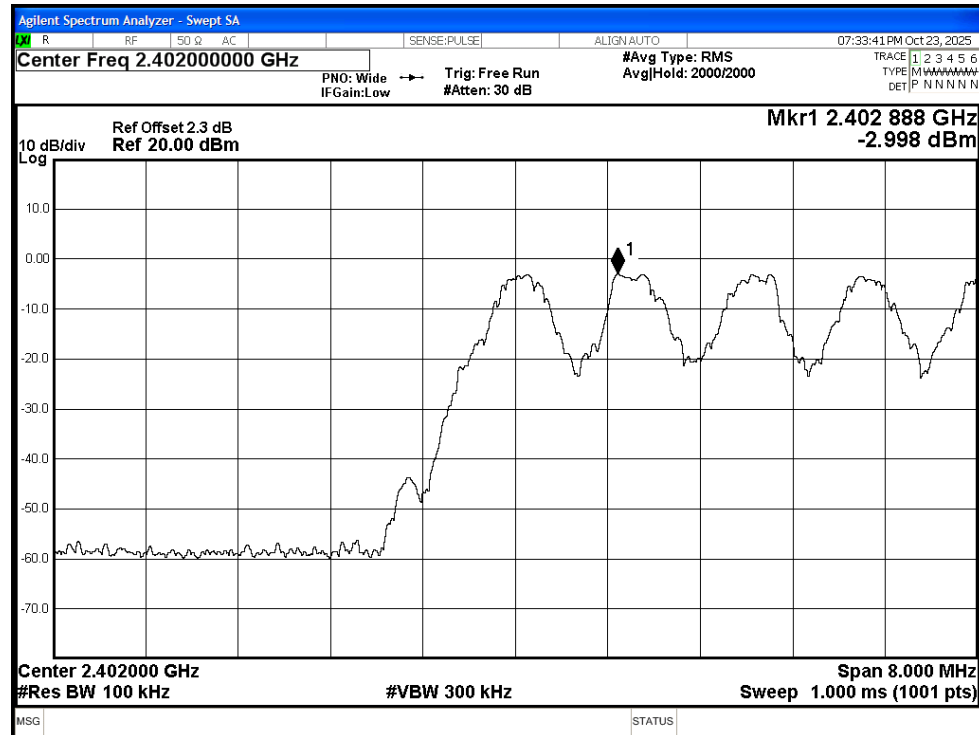


(Hopping)

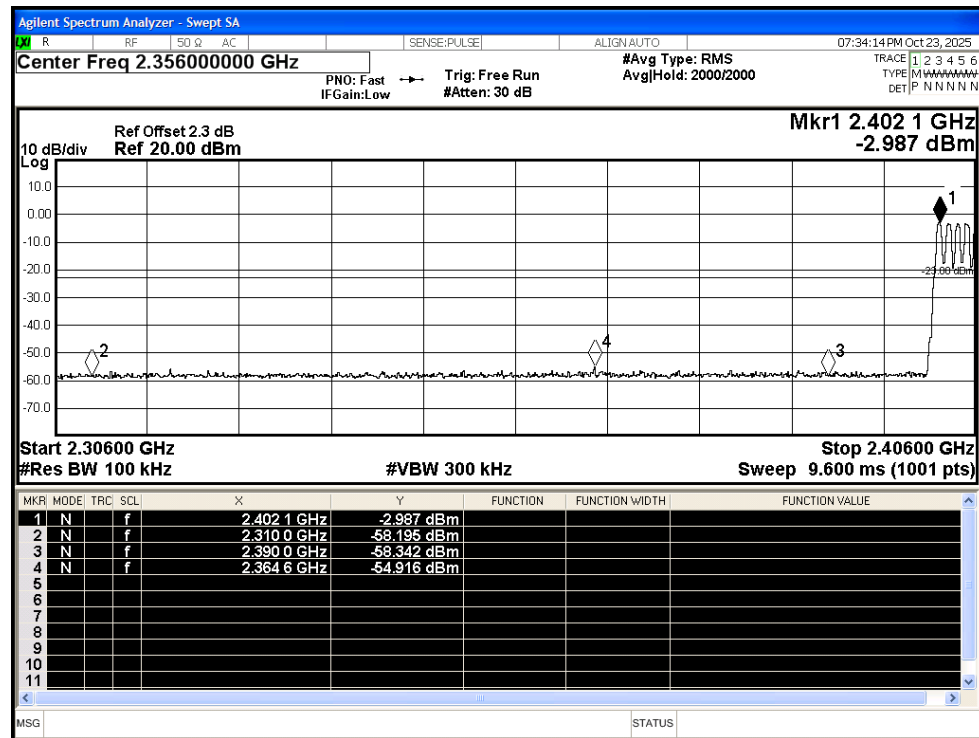
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-51.92	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-50.6	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-50.56	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-49.69	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-51.82	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-48.68	-20	Pass

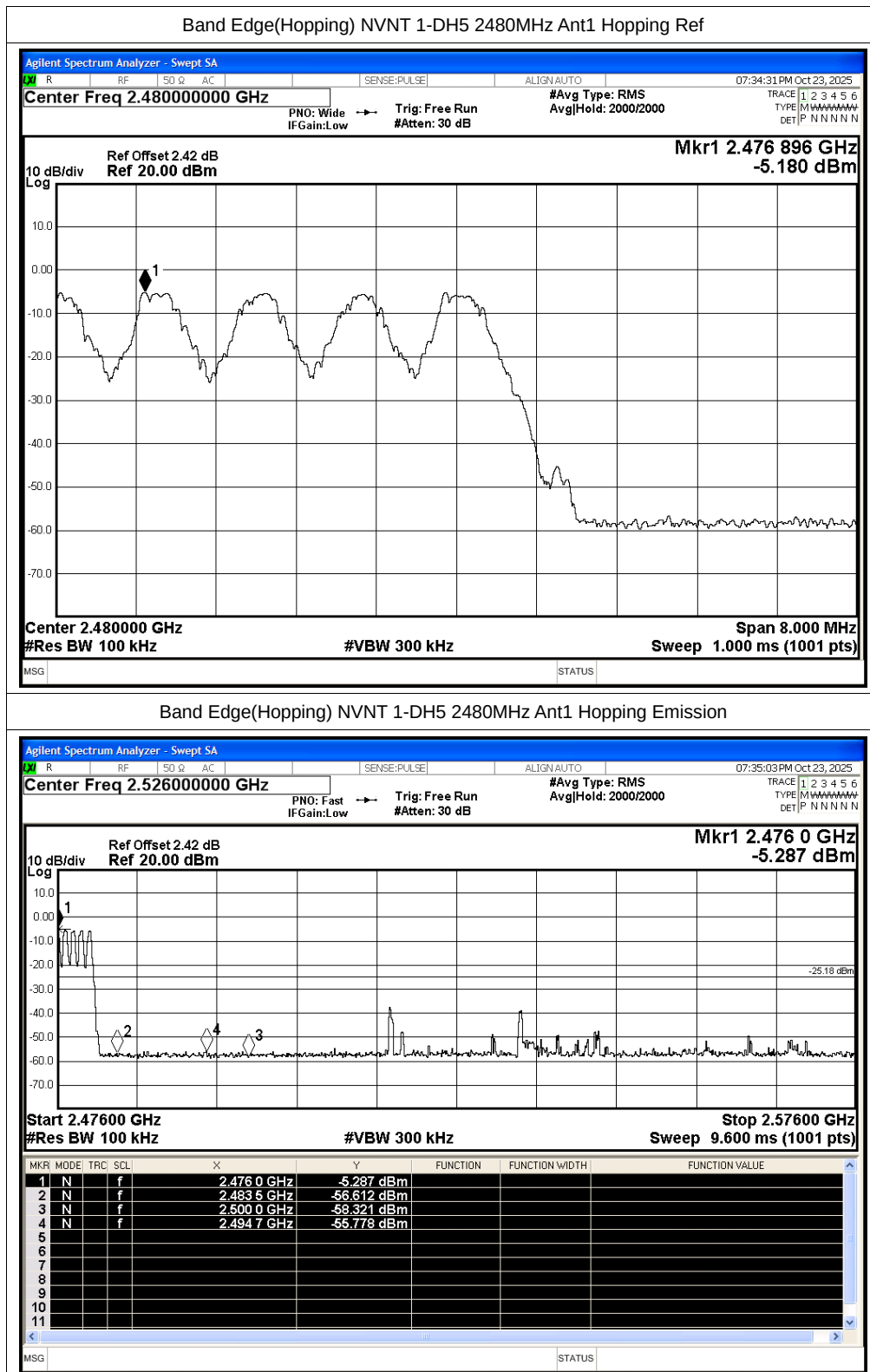
Test Graphs

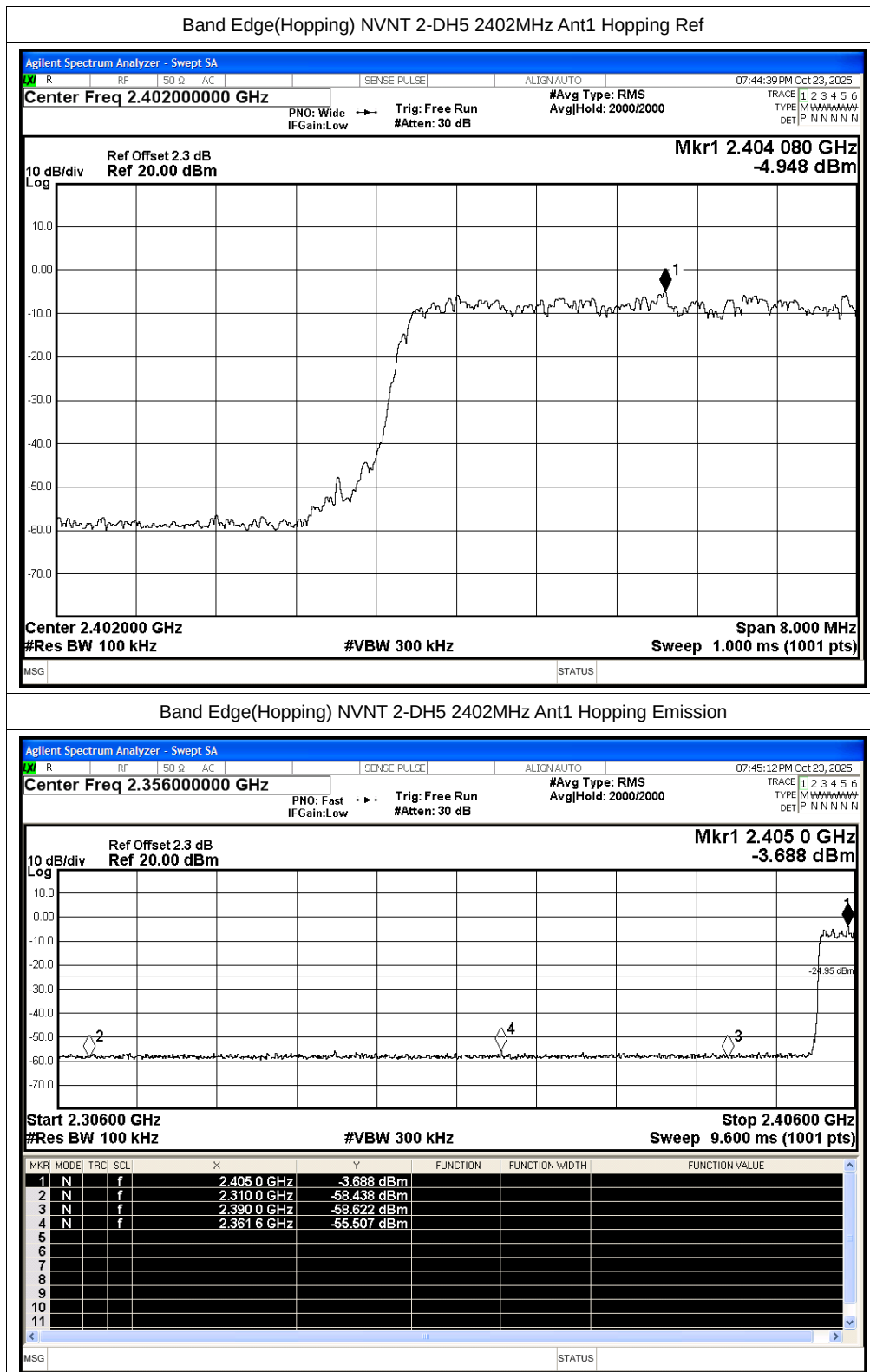
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref

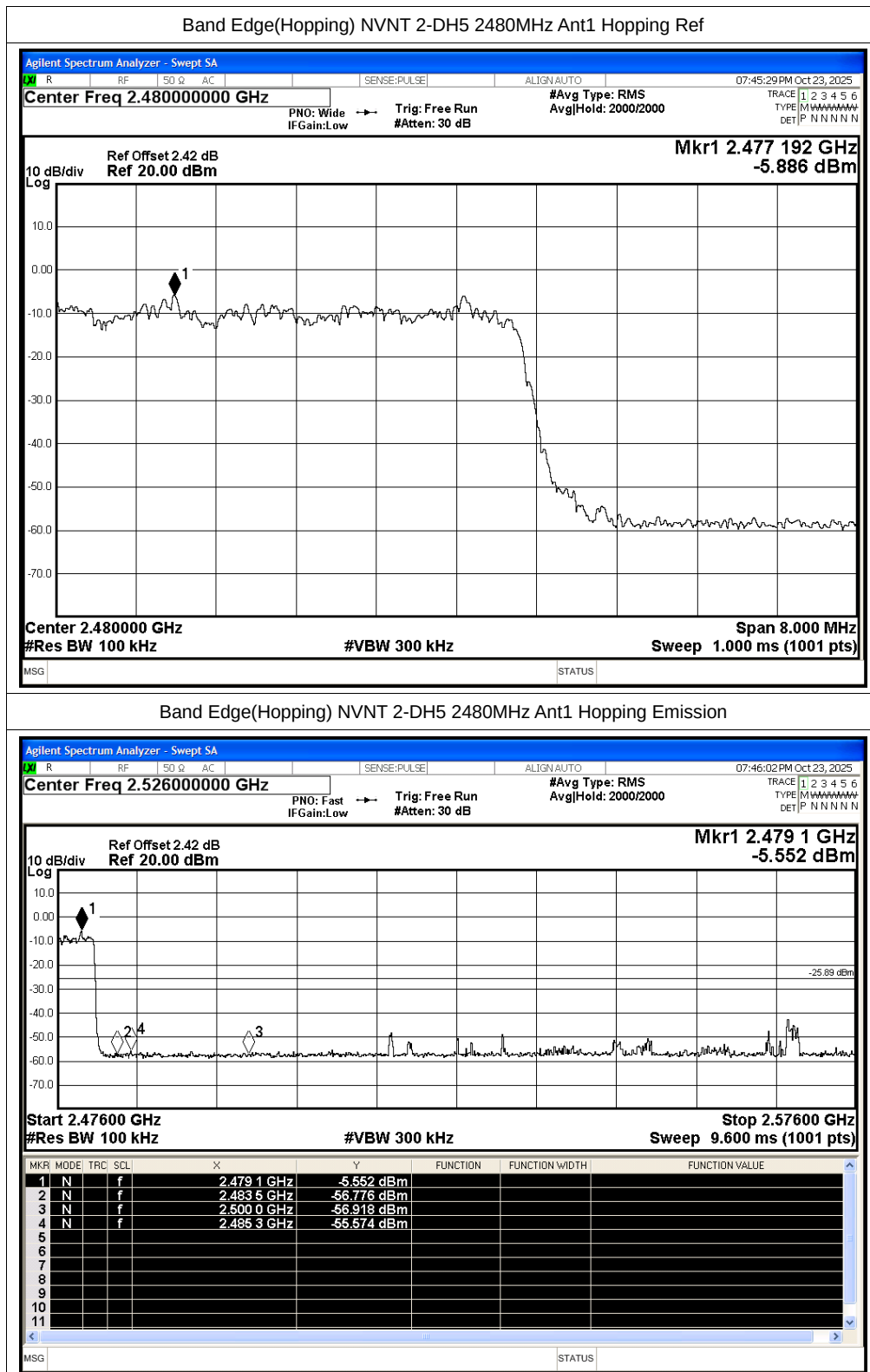


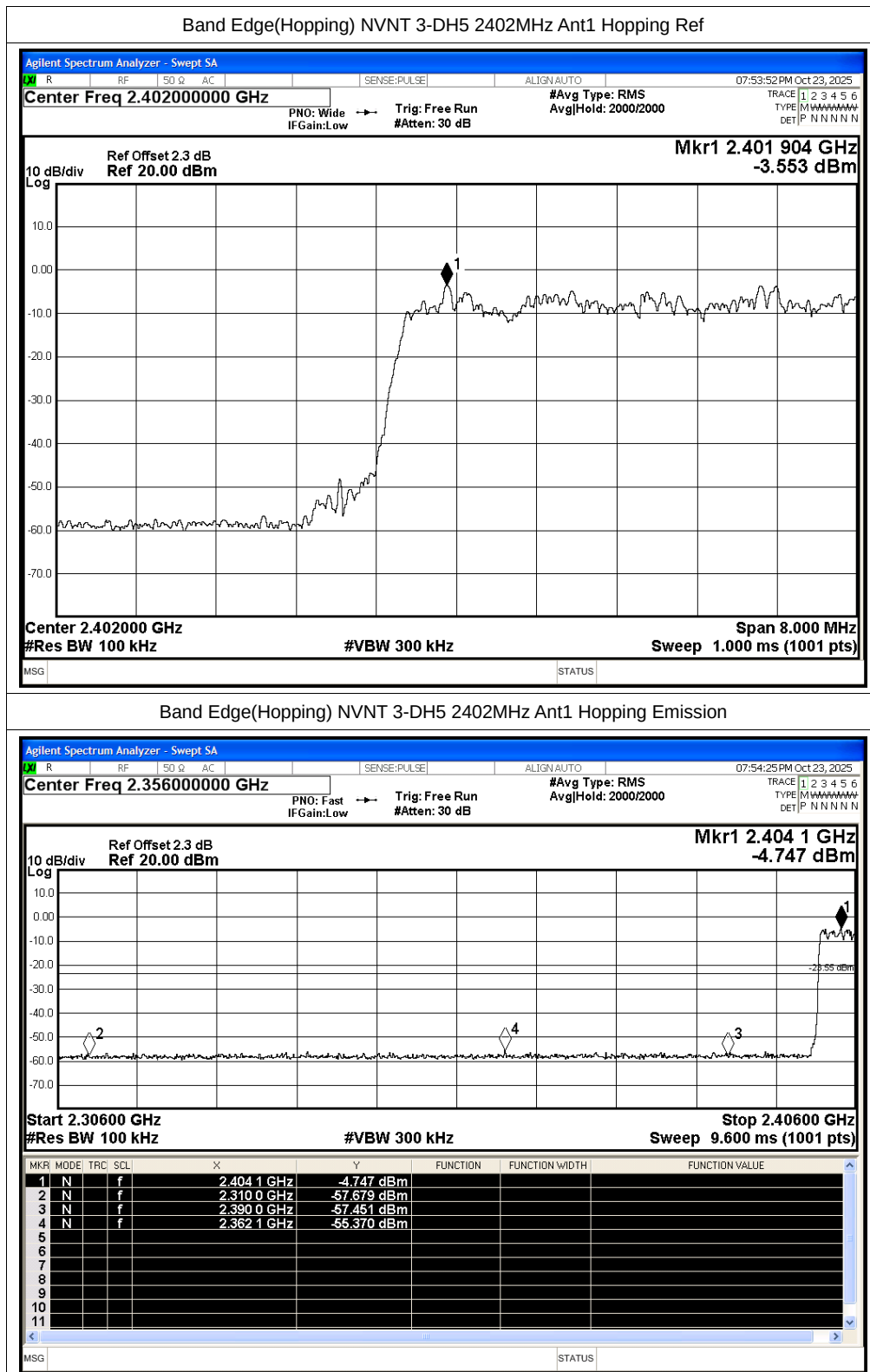
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

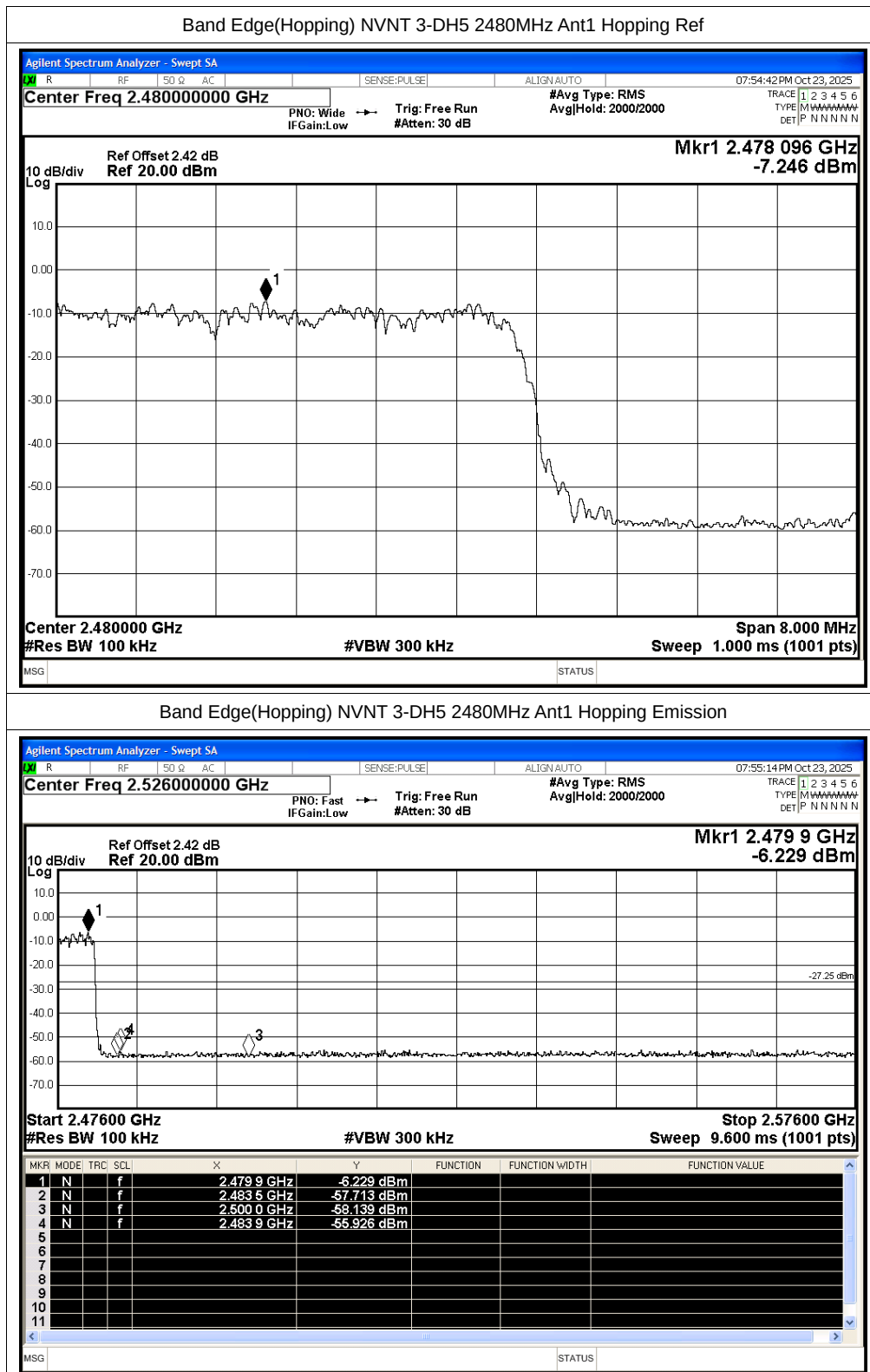










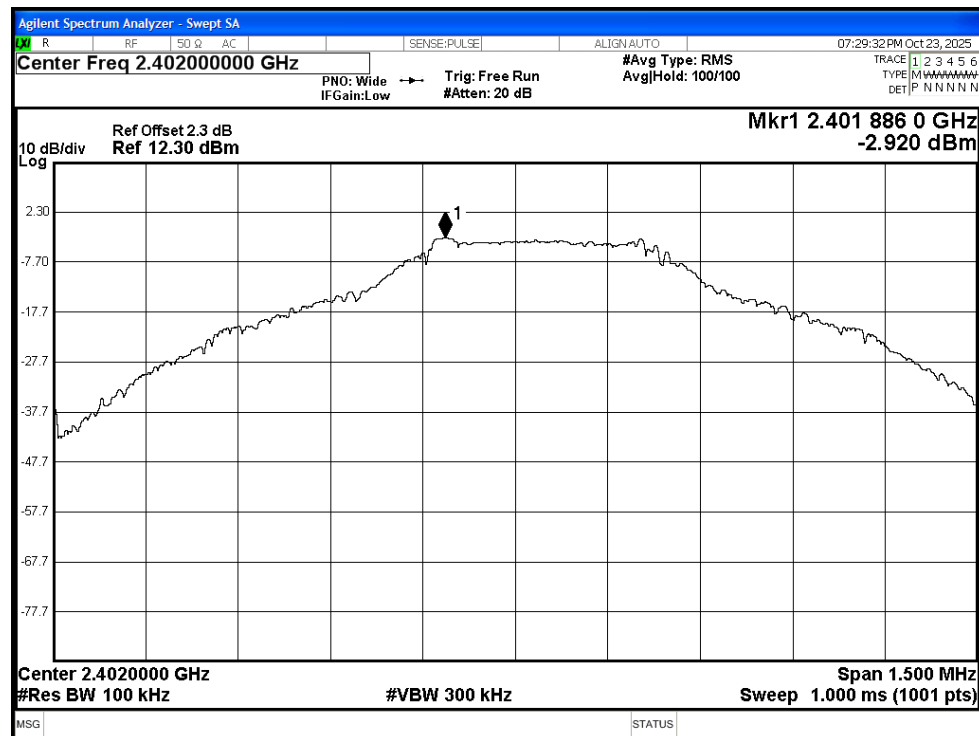


A.7 Conducted RF Spurious Emission

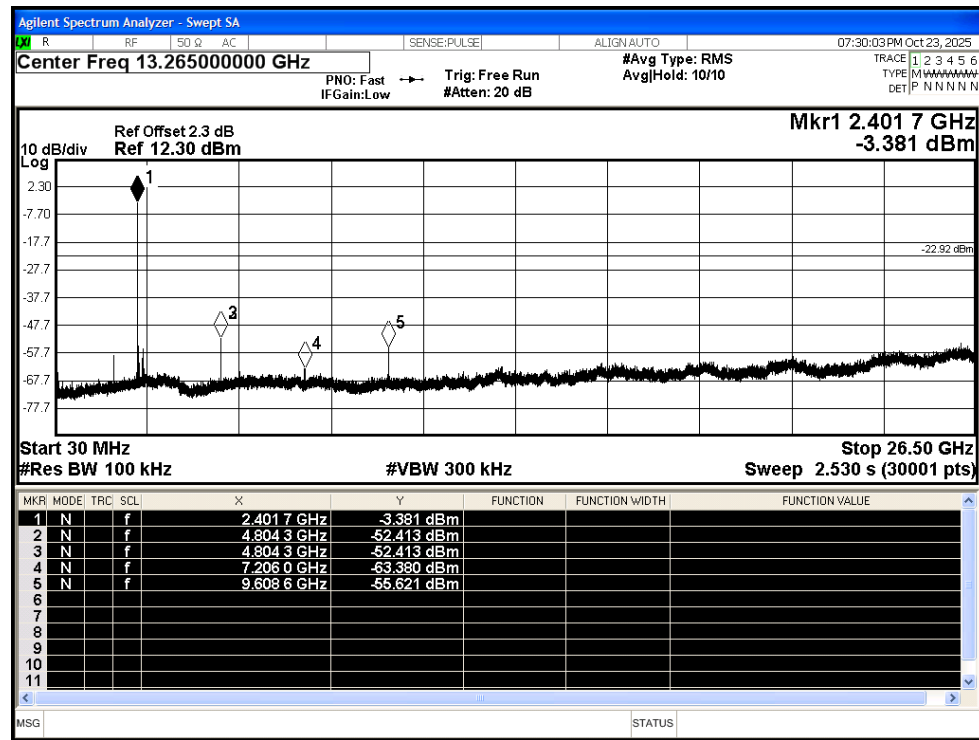
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-49.49	-20	Pass
NVNT	1-DH5	2441	Ant1	-40.71	-20	Pass
NVNT	1-DH5	2480	Ant1	-41.12	-20	Pass
NVNT	2-DH5	2402	Ant1	-50.42	-20	Pass
NVNT	2-DH5	2441	Ant1	-48.56	-20	Pass
NVNT	2-DH5	2480	Ant1	-47.18	-20	Pass
NVNT	3-DH5	2402	Ant1	-48.08	-20	Pass
NVNT	3-DH5	2441	Ant1	-48.71	-20	Pass
NVNT	3-DH5	2480	Ant1	-45.22	-20	Pass

Test Graphs

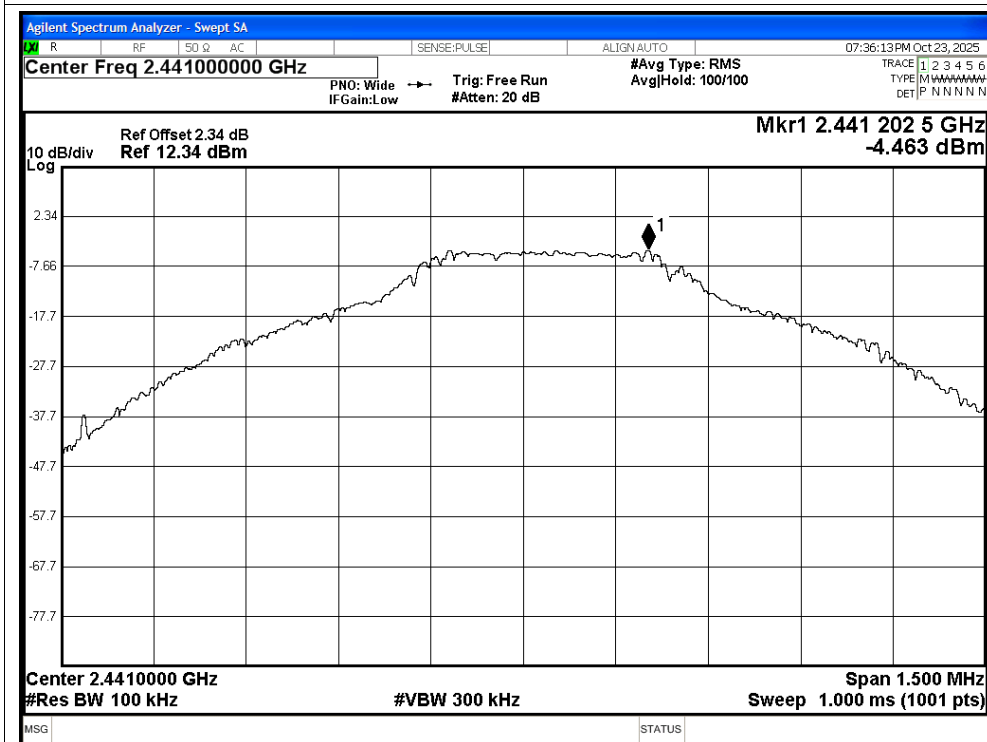
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



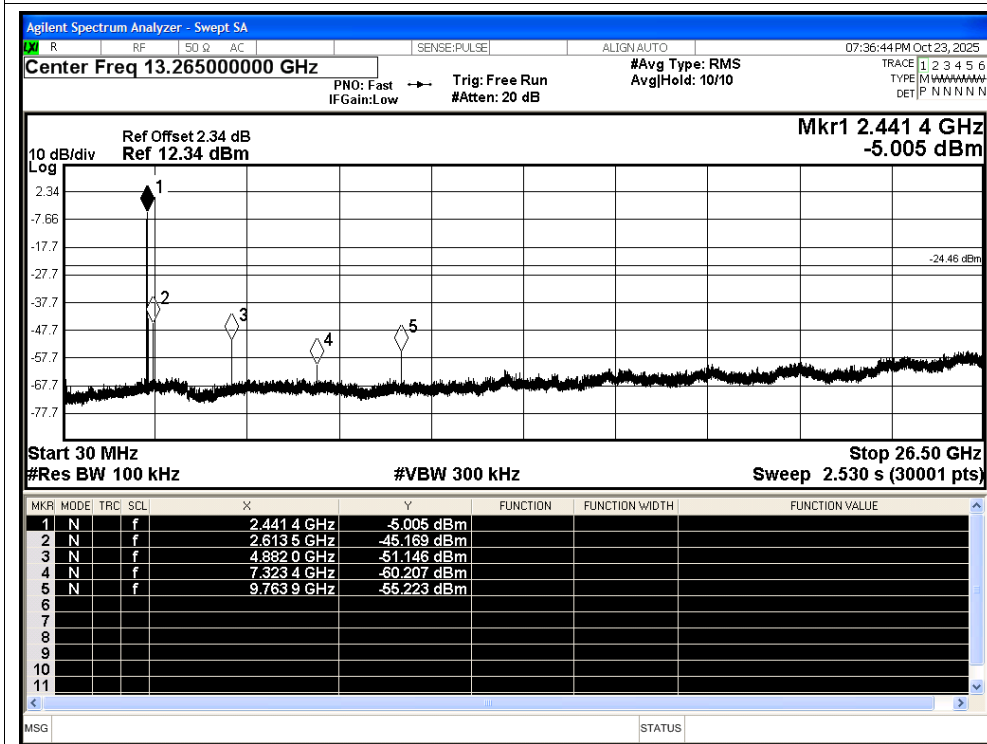
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



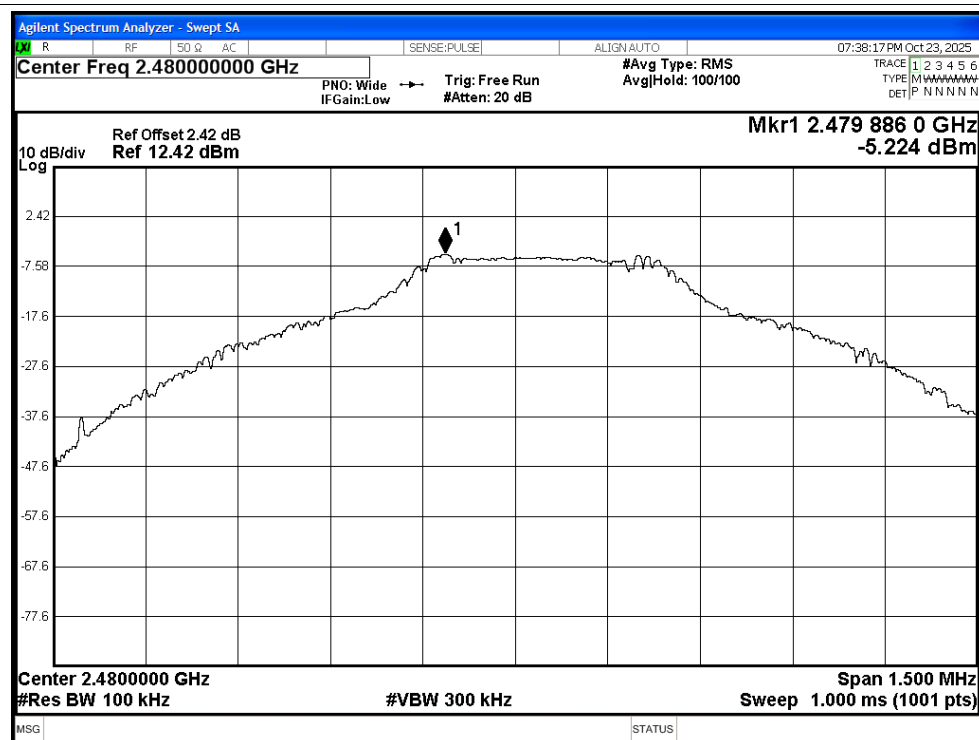
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



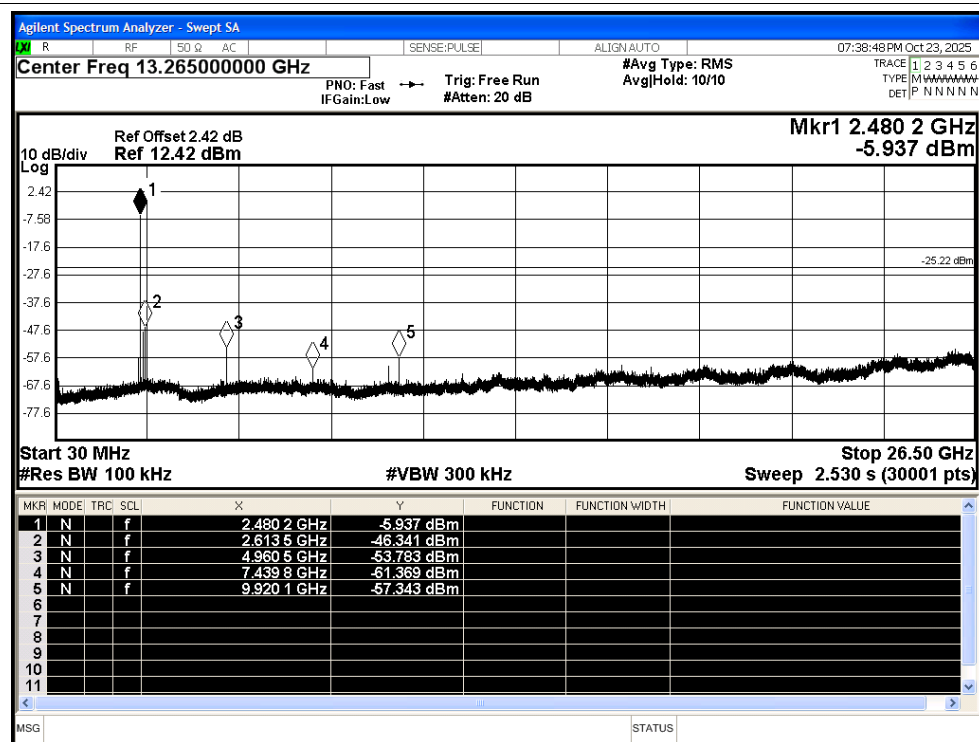
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



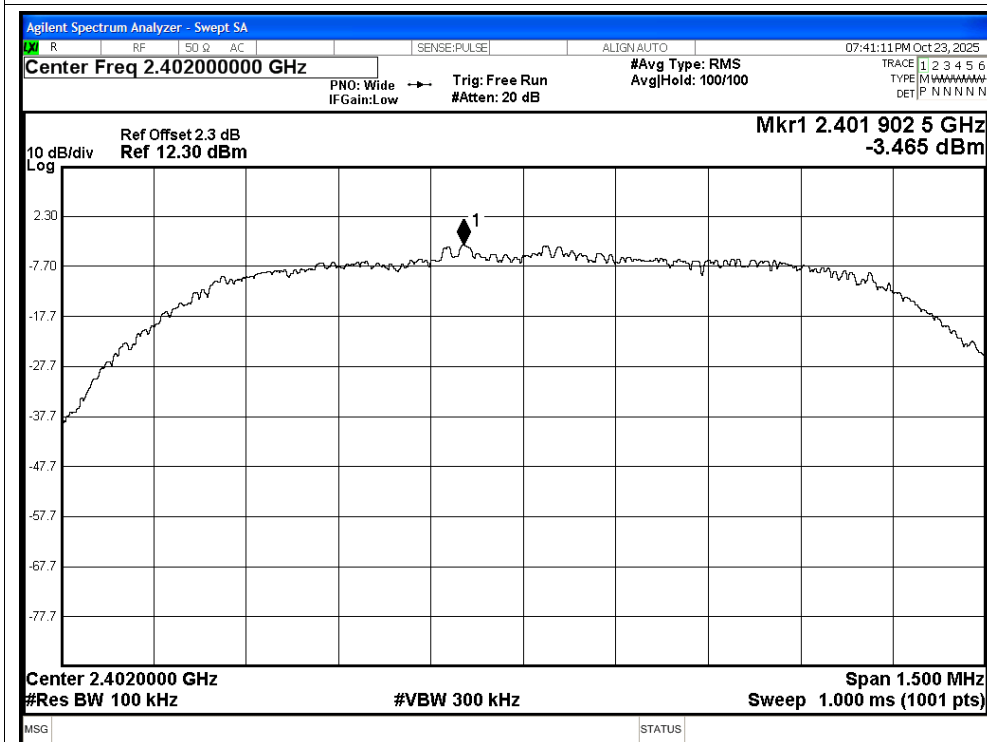
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



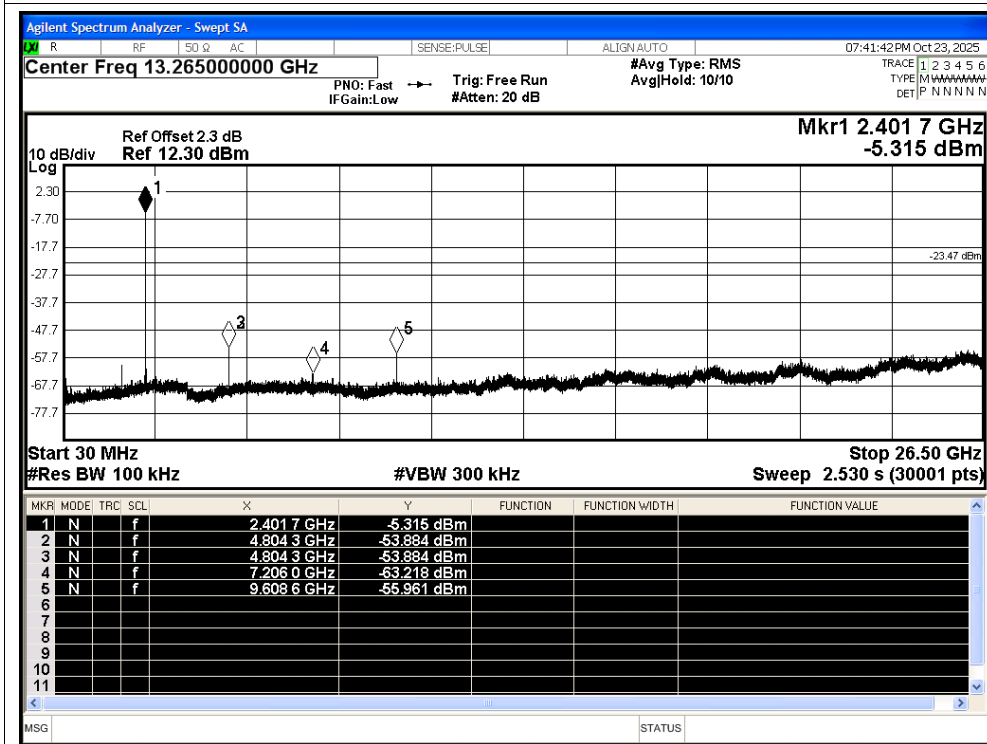
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



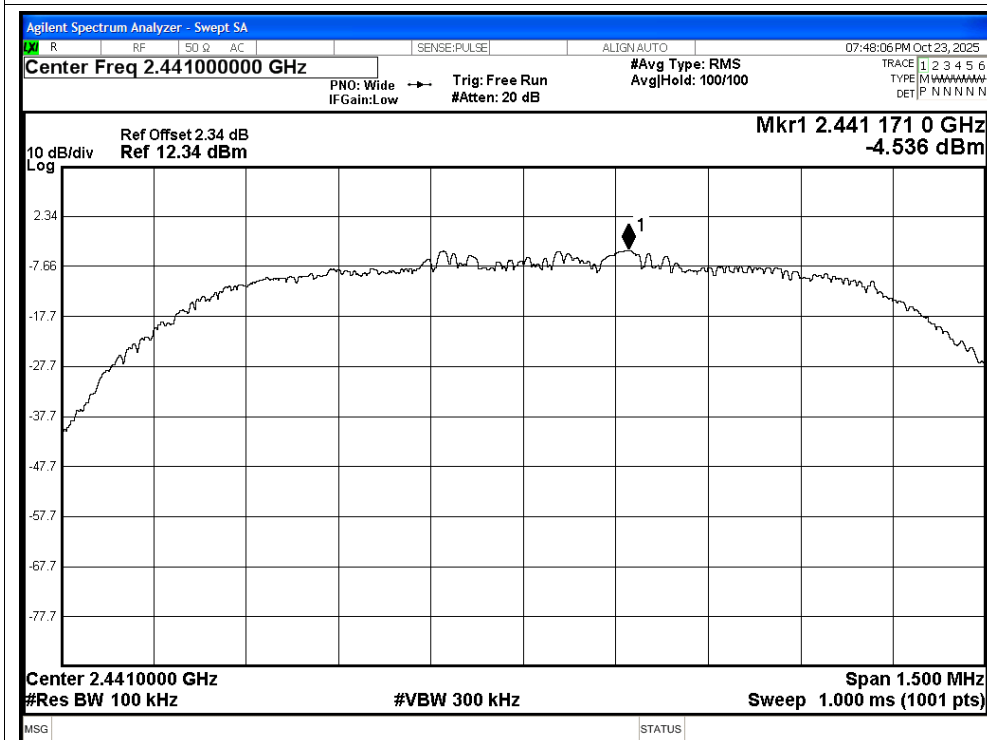
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



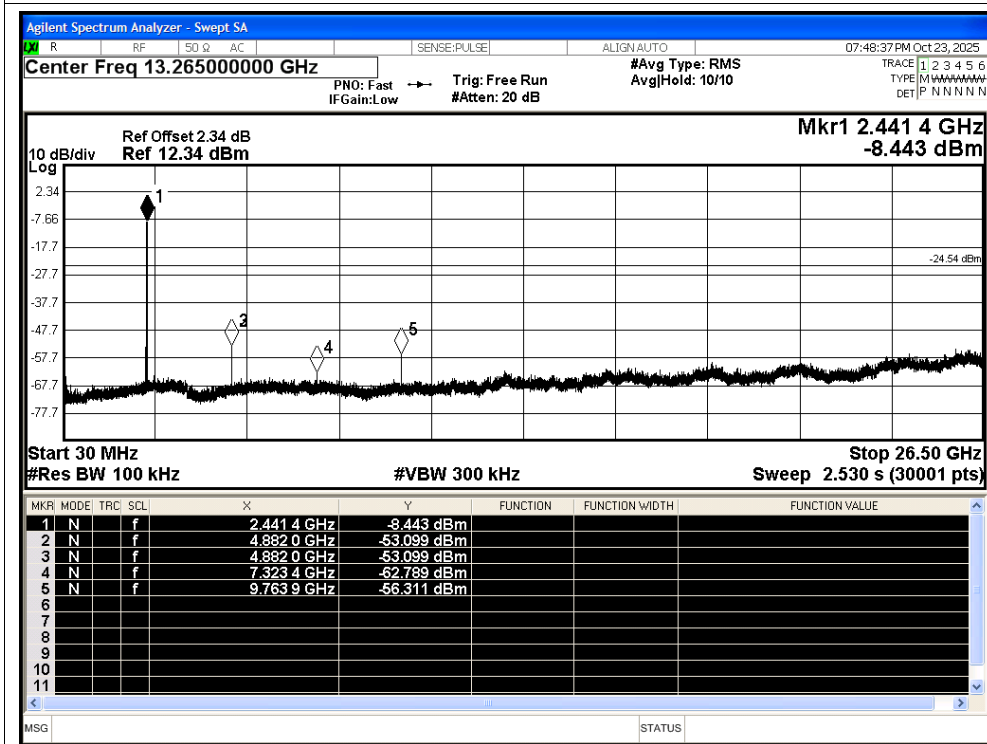
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



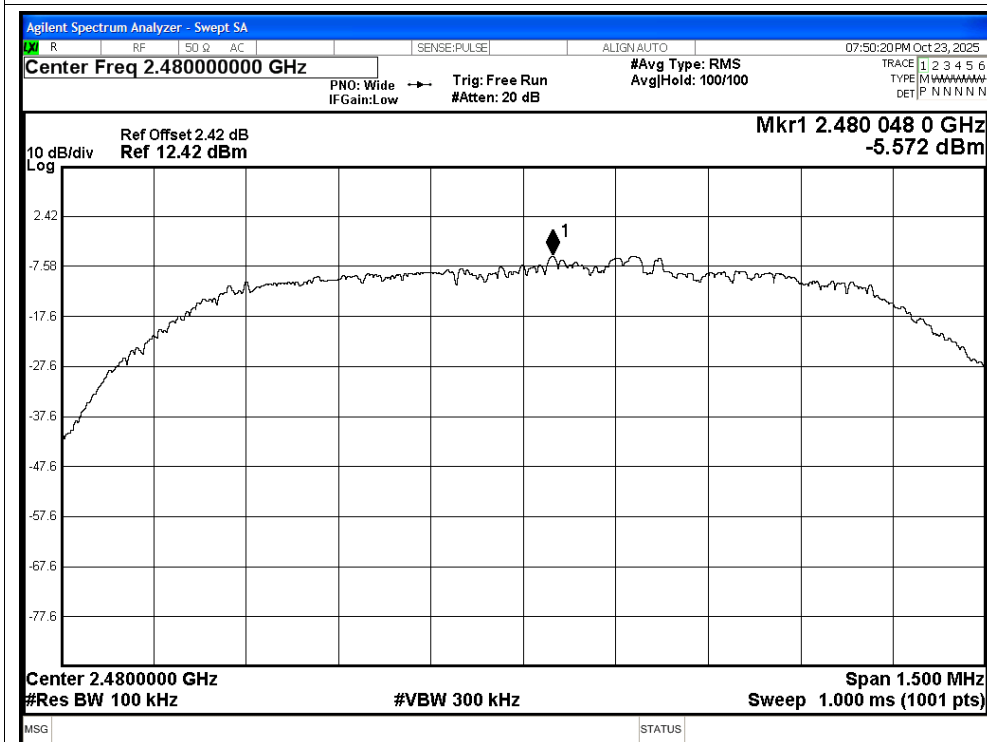
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



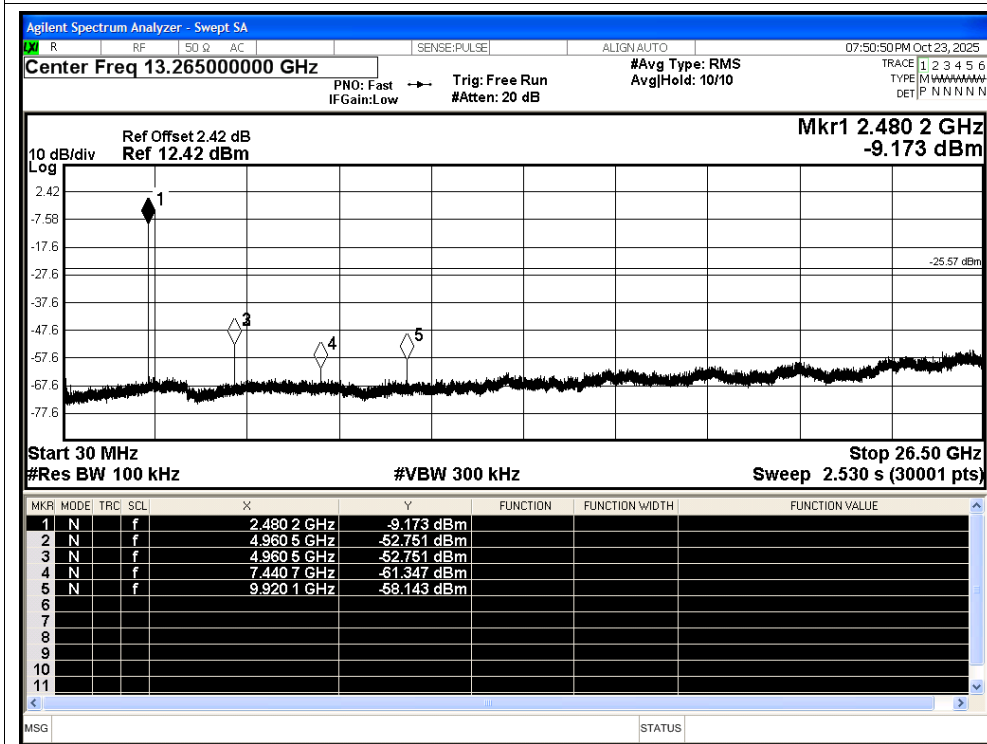
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



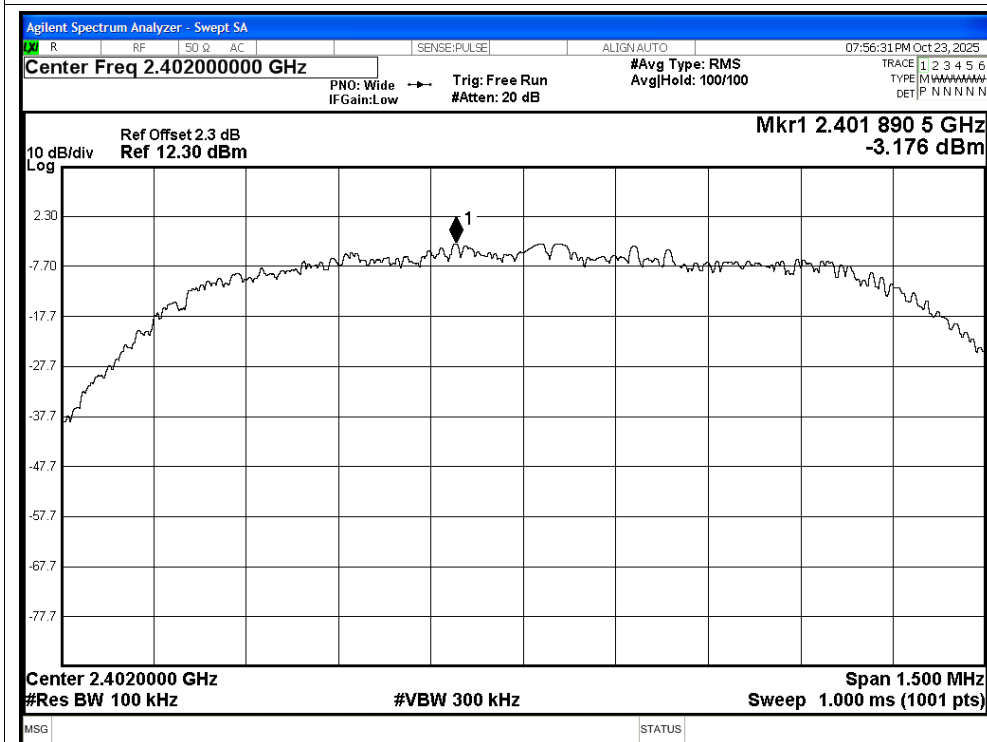
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



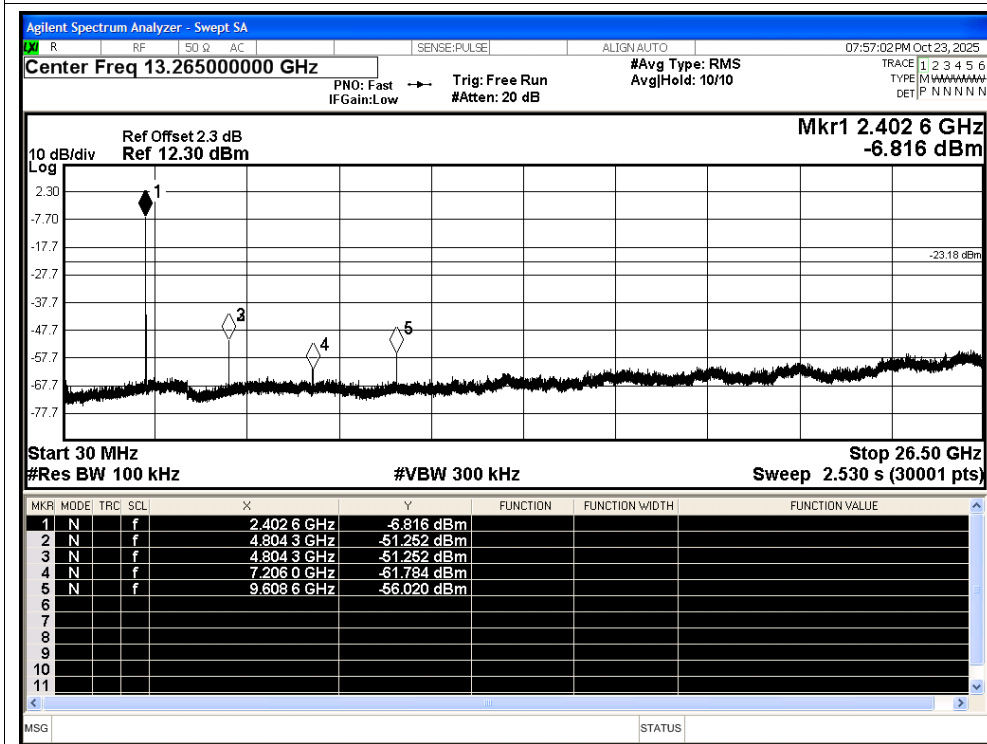
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



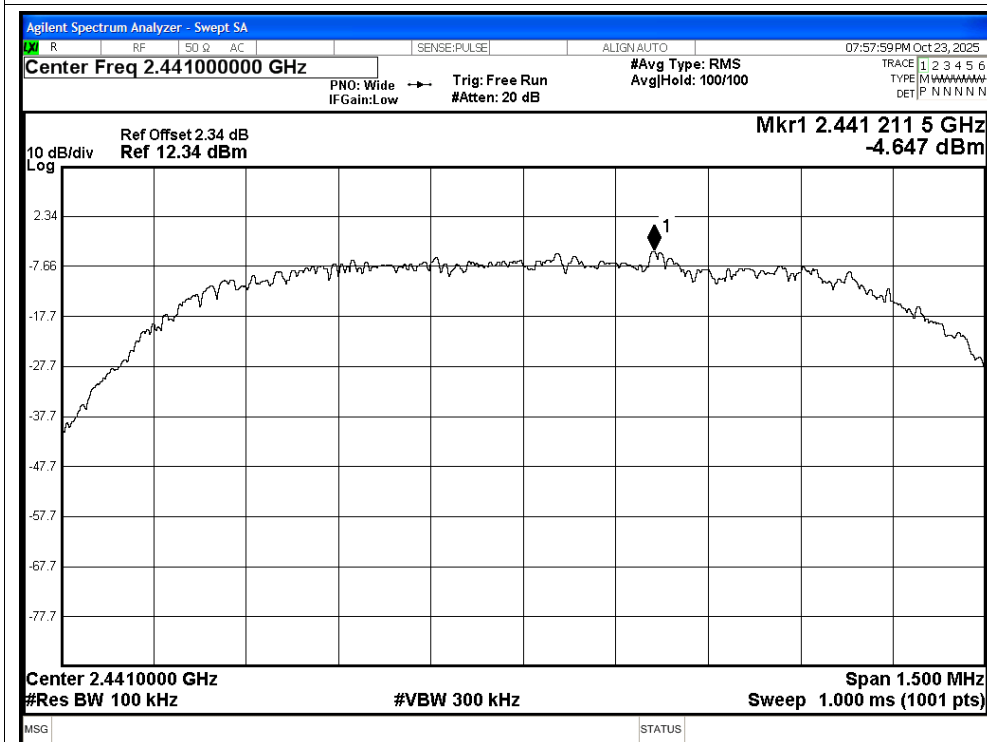
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



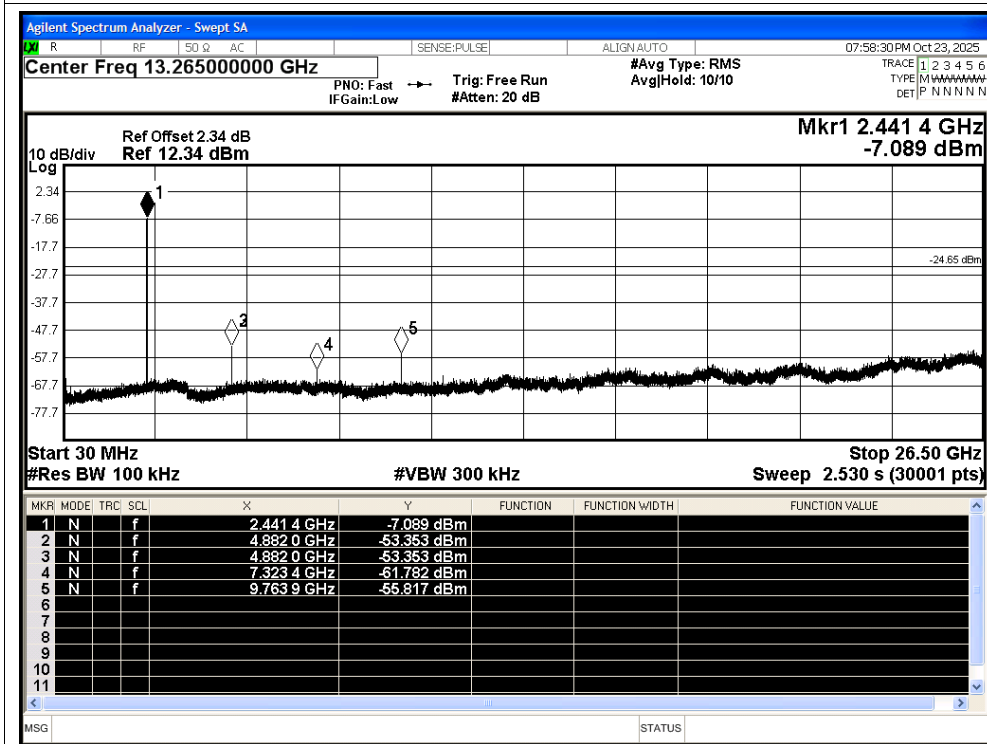
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission



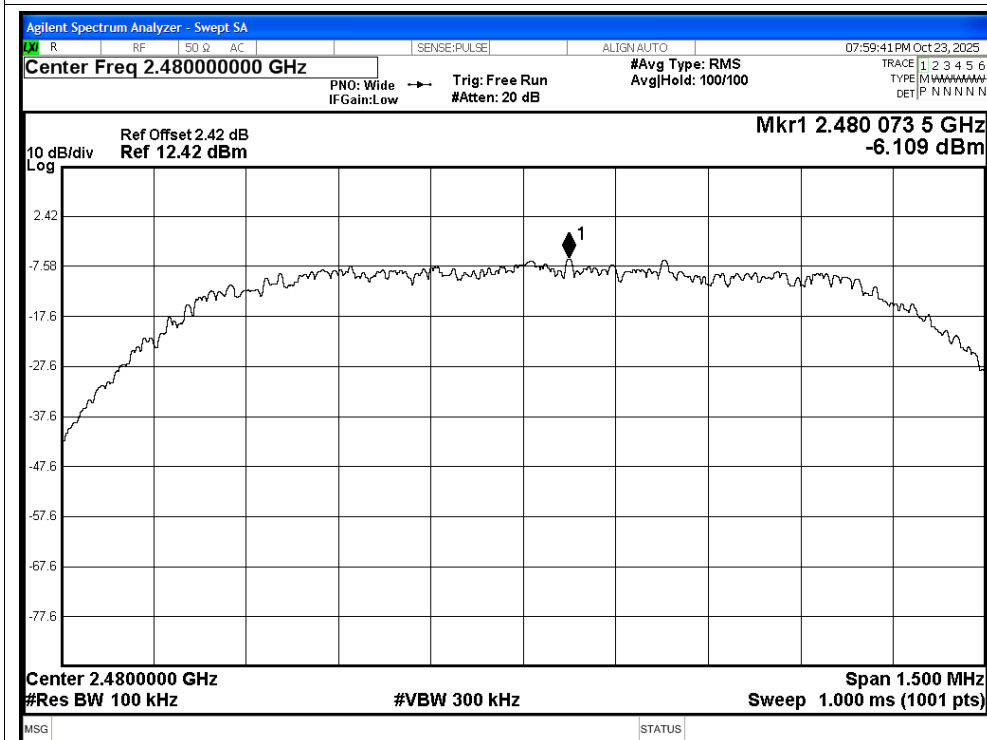
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



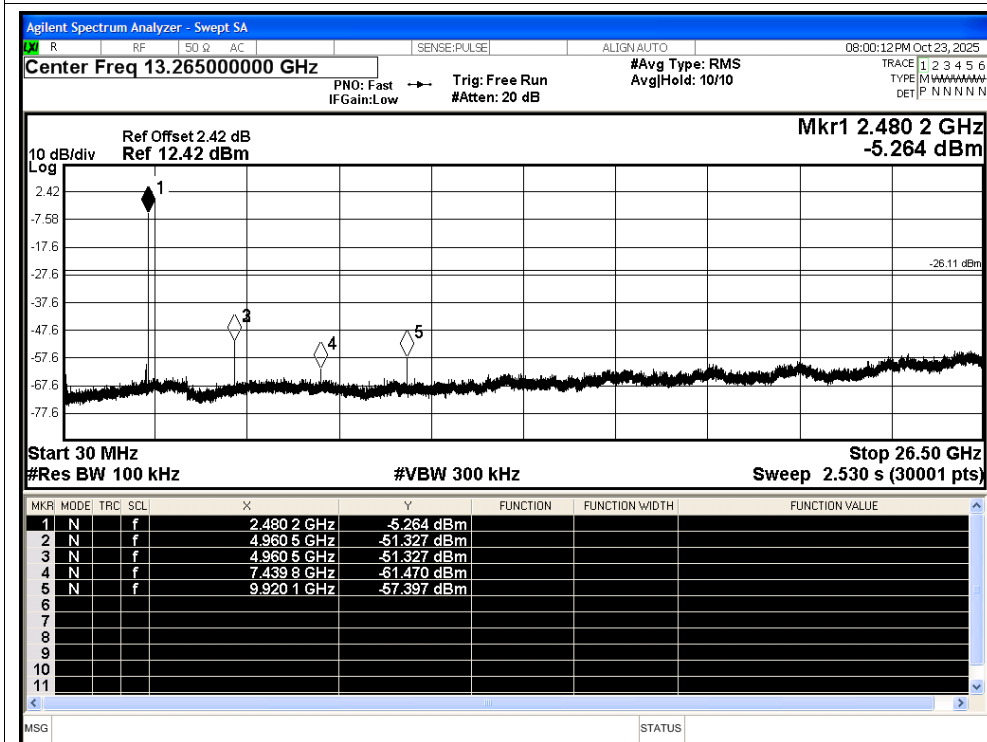
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission

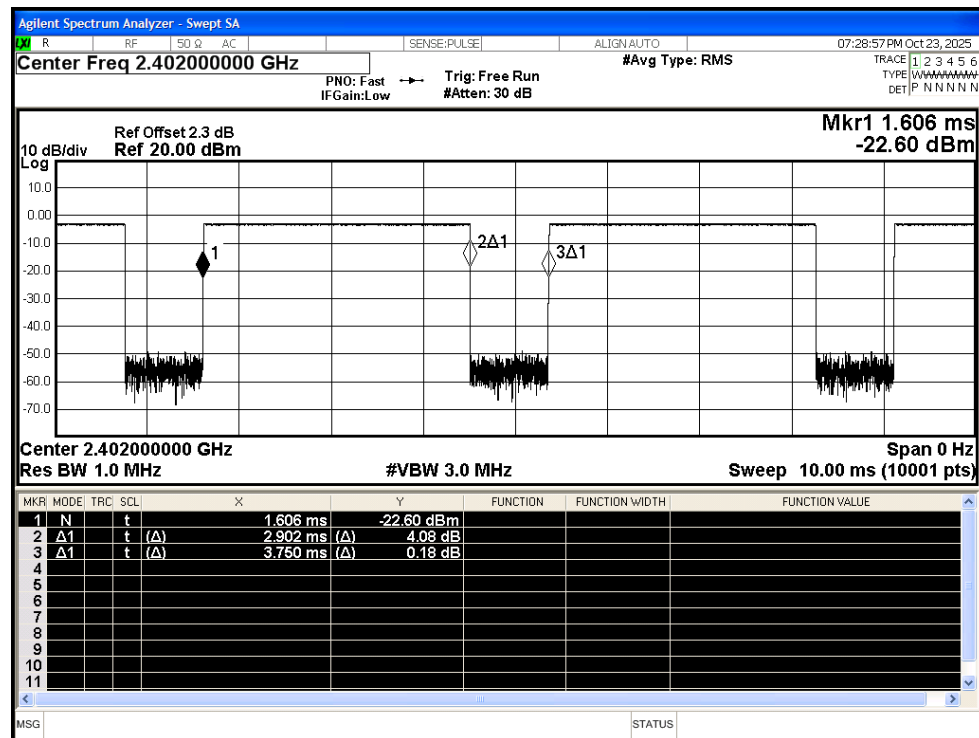


A.8 Duty Cycle

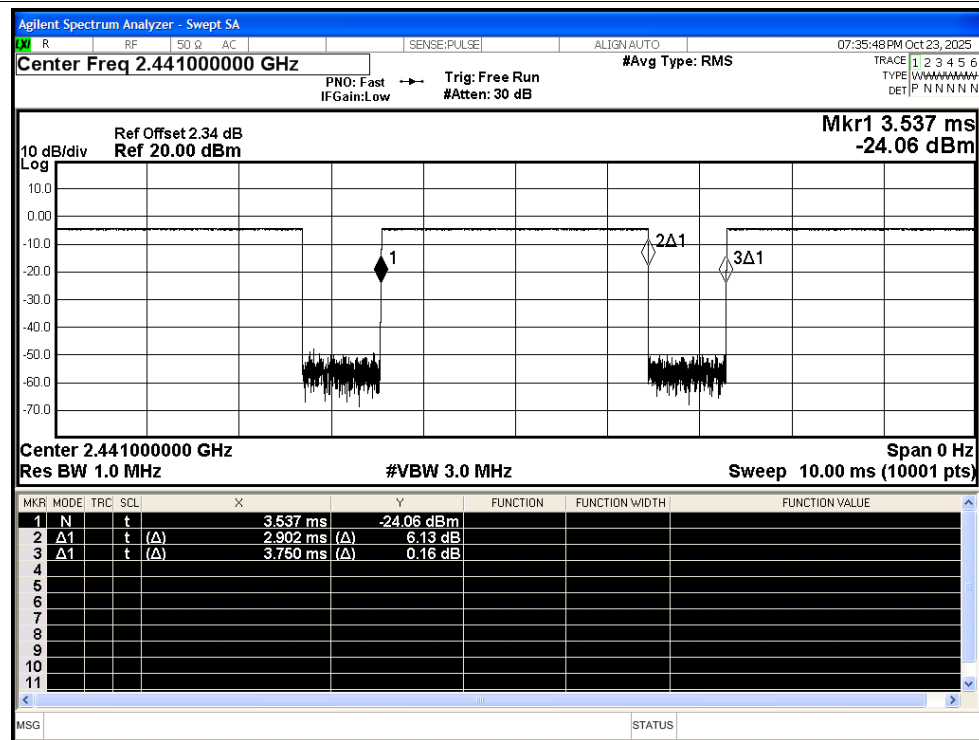
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.39	1.11	0.34
NVNT	1-DH5	2441	Ant1	77.39	1.11	0.34
NVNT	1-DH5	2480	Ant1	77.36	1.11	0.34
NVNT	2-DH5	2402	Ant1	77.55	1.1	0.34
NVNT	2-DH5	2441	Ant1	77.49	1.11	0.34
NVNT	2-DH5	2480	Ant1	77.49	1.11	0.34
NVNT	3-DH5	2402	Ant1	77.6	1.1	0.34
NVNT	3-DH5	2441	Ant1	77.55	1.1	0.34
NVNT	3-DH5	2480	Ant1	77.44	1.11	0.34

Test Graphs

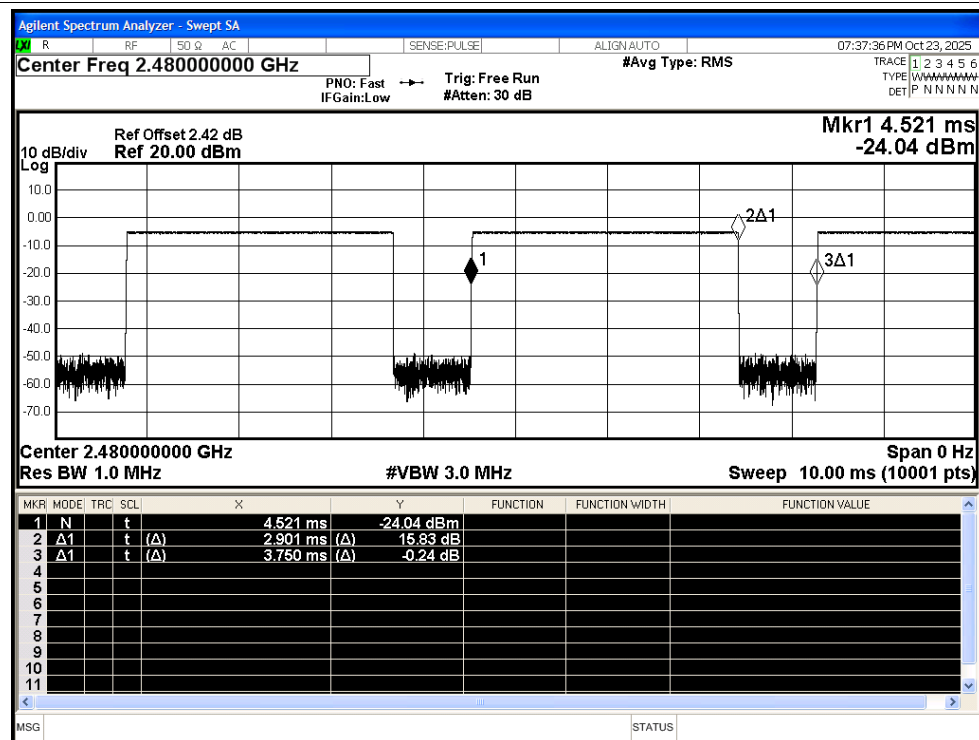
Duty Cycle NVNT 1-DH5 2402MHz Ant1



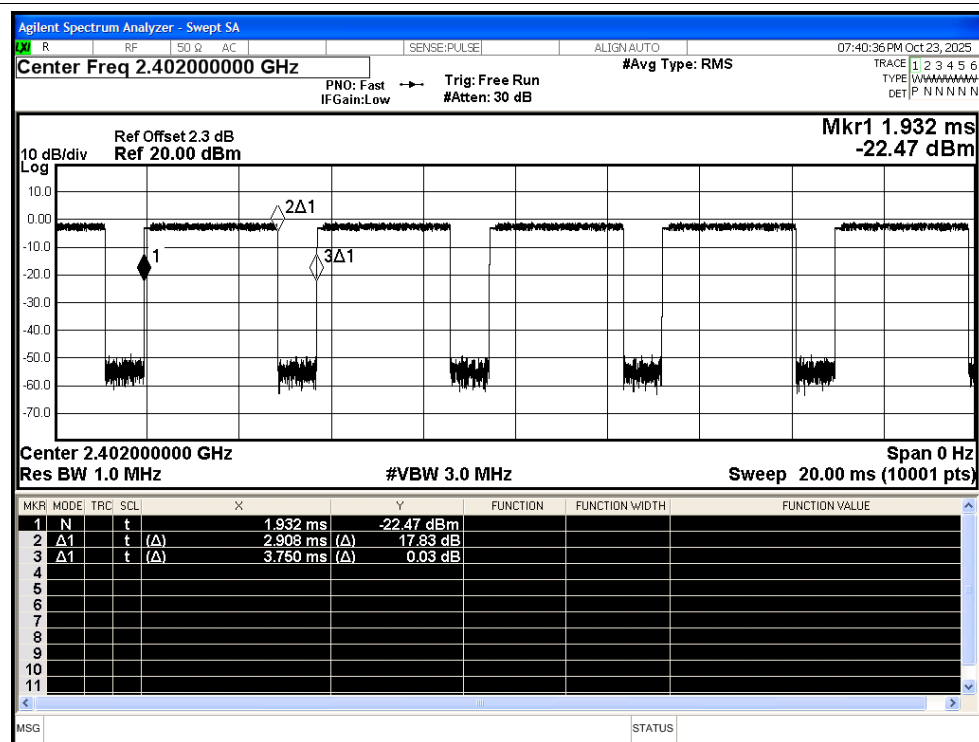
Duty Cycle NVNT 1-DH5 2441MHz Ant1



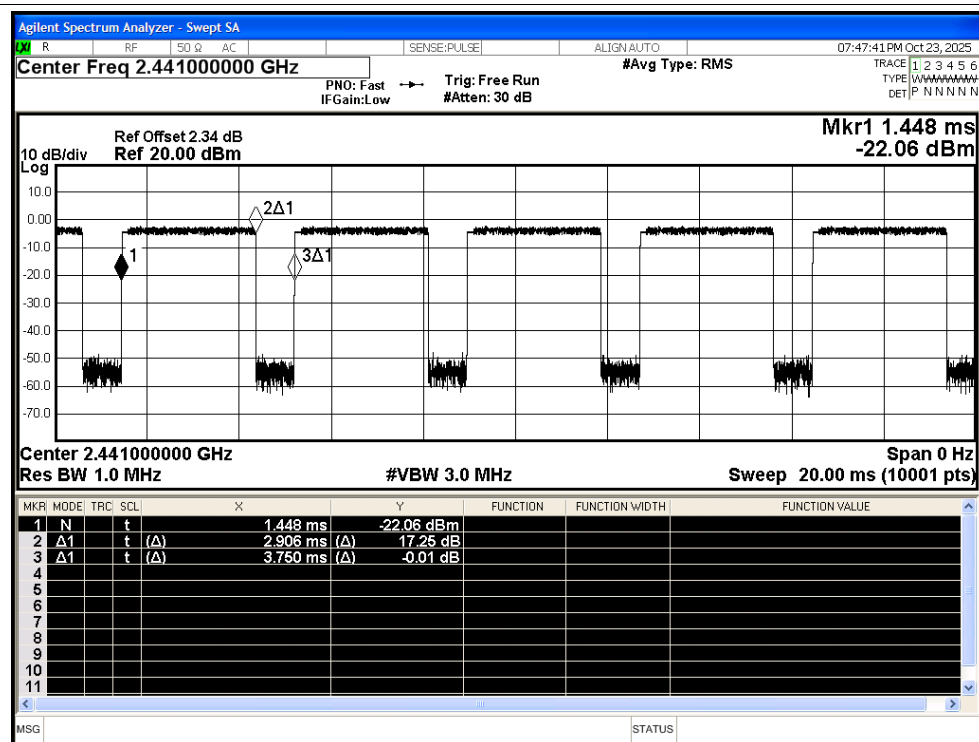
Duty Cycle NVNT 1-DH5 2480MHz Ant1



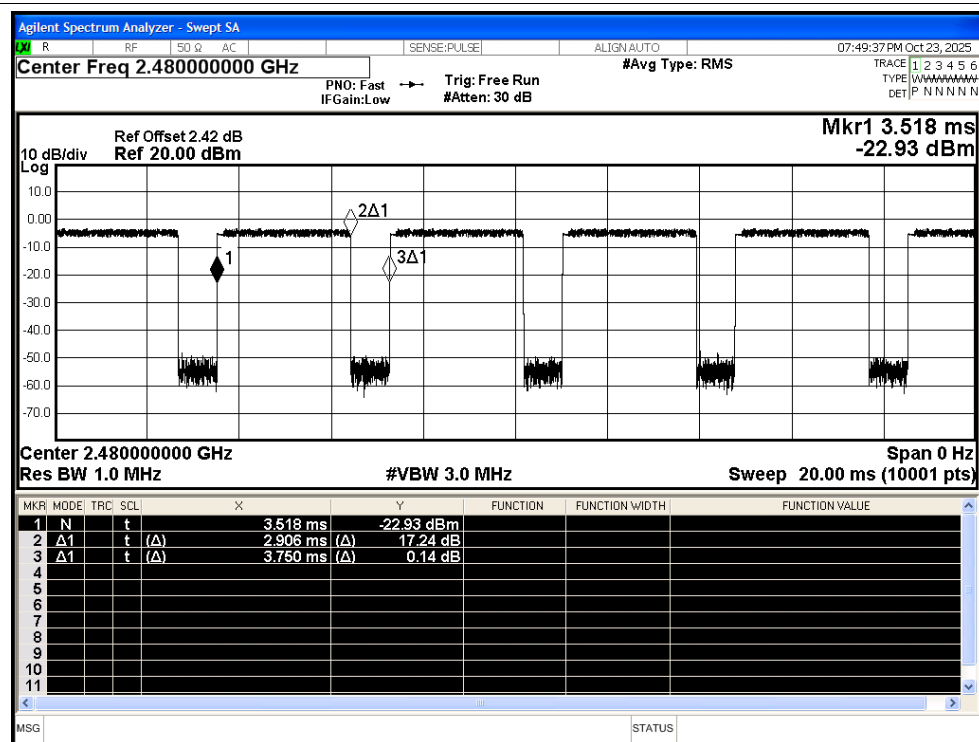
Duty Cycle NVNT 2-DH5 2402MHz Ant1



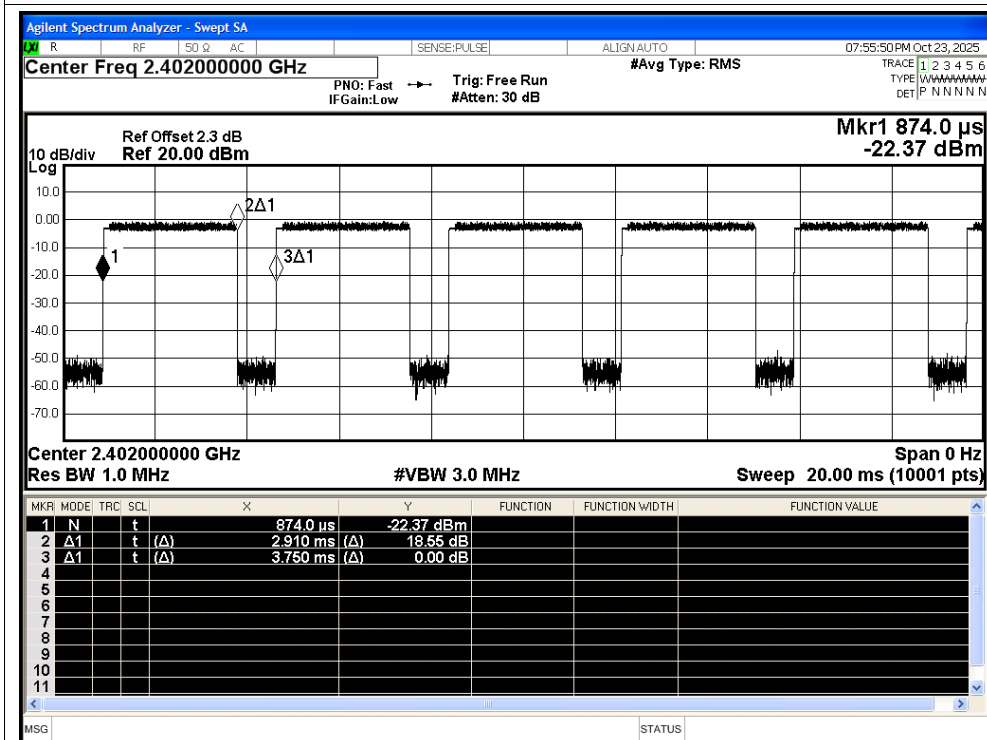
Duty Cycle NVNT 2-DH5 2441MHz Ant1



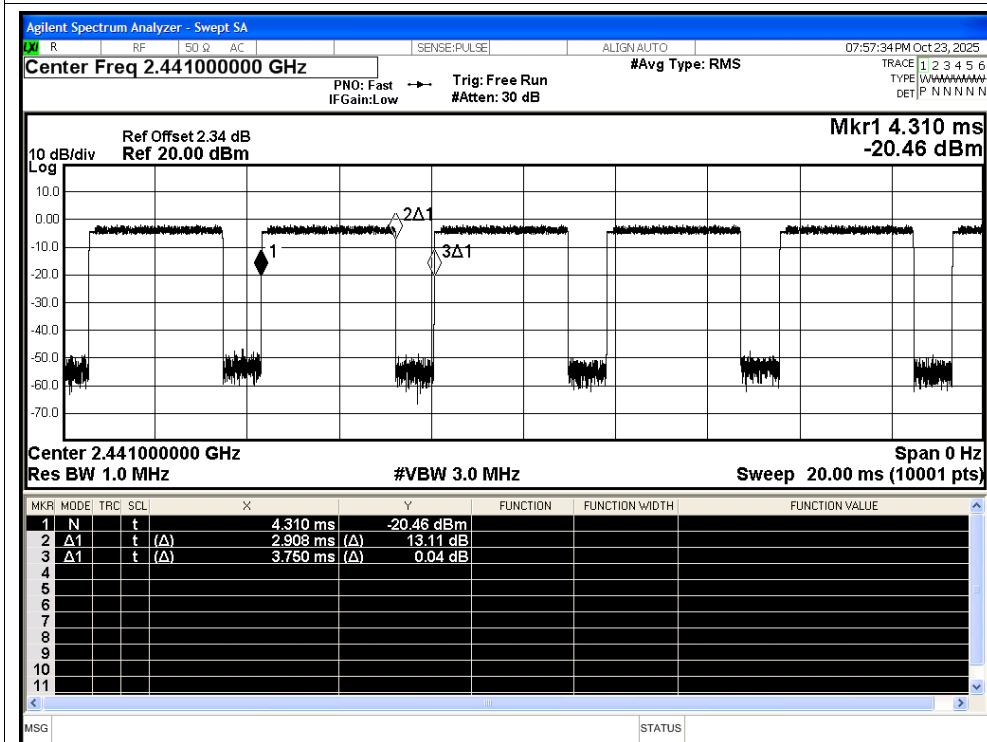
Duty Cycle NVNT 2-DH5 2480MHz Ant1

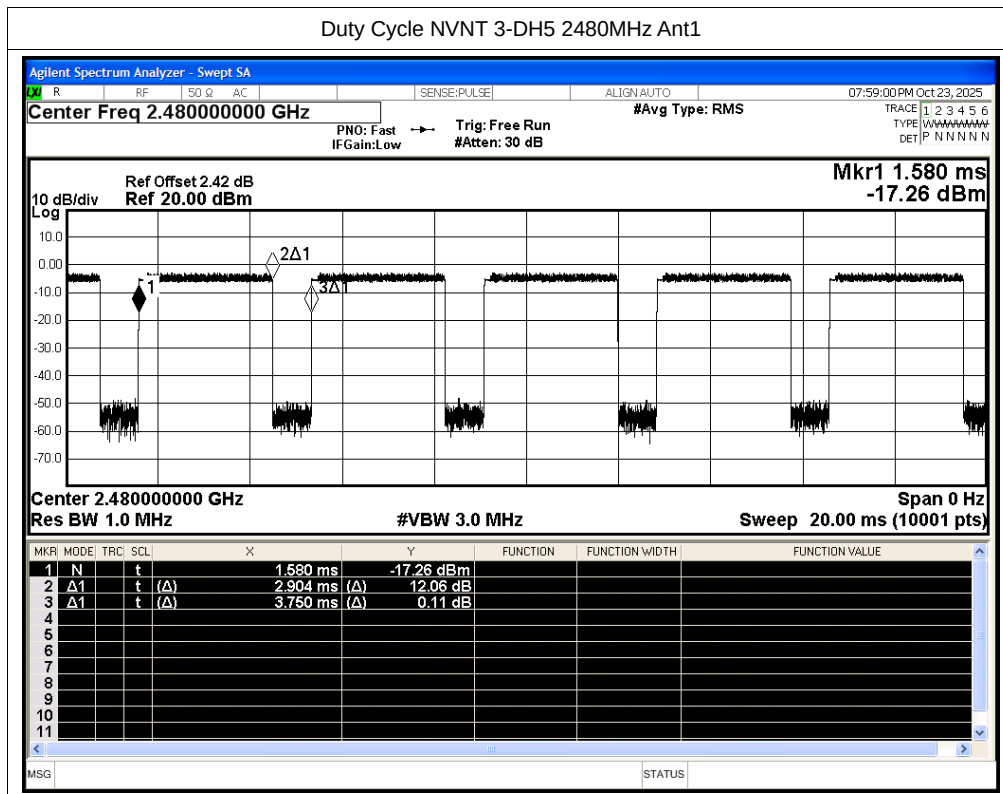


Duty Cycle NVNT 3-DH5 2402MHz Ant1



Duty Cycle NVNT 3-DH5 2441MHz Ant1



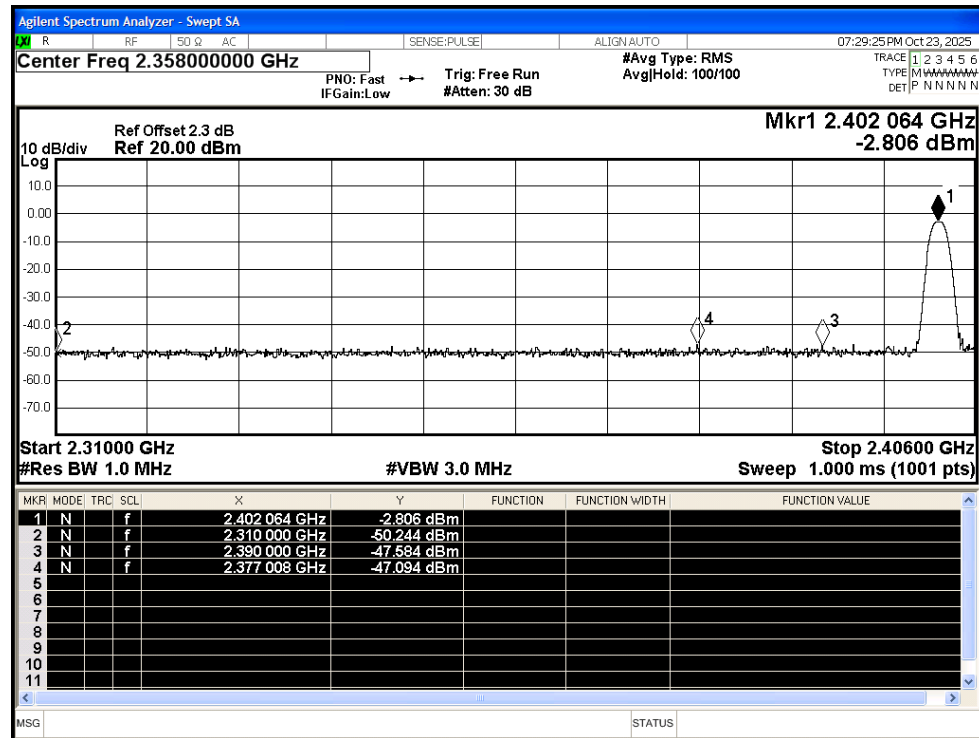


A.9 Restrict Band

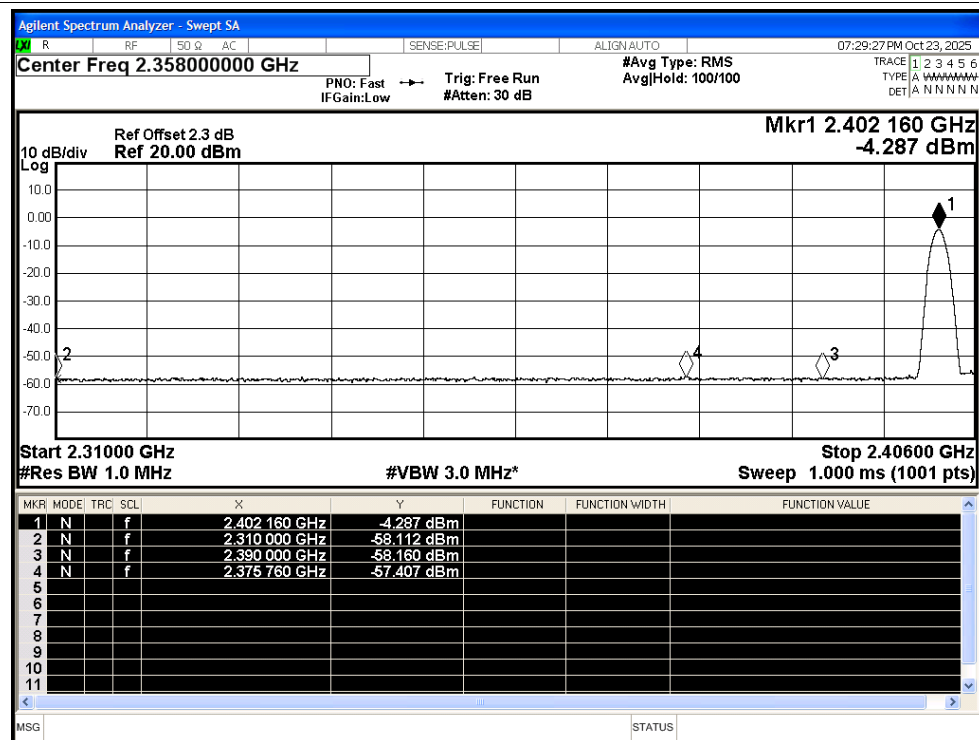
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-50.24	2	-	47.02	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.11	2	1.11	40.26	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2377.008	-47.09	2	-	50.17	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2375.76	-57.41	2	1.11	40.96	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-47.58	2	-	49.68	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-58.16	2	1.11	40.21	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-49.55	2	-	47.71	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-57.94	2	1.11	40.43	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2488.288	-46.7	2	-	50.56	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2490.928	-56.83	2	1.11	41.54	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-49.72	2	-	47.54	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-58.04	2	1.11	40.33	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-49.88	2	-	47.38	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-58.72	2	1.1	39.64	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2380.368	-46.27	2	-	50.99	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2362.896	-57.27	2	1.1	41.09	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-49.9	2	-	47.36	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-57.97	2	1.1	40.39	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-47.98	2	-	49.28	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-57.91	2	1.11	40.46	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2494.216	-46.51	2	-	50.75	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2494.168	-56.9	2	1.11	41.47	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-48.11	2	-	49.15	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-57.55	2	1.11	40.82	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-48.77	2	-	48.49	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-58.31	2	1.1	40.05	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2362.512	-47.42	2	-	49.84	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2386.608	-56.81	2	1.1	41.55	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-50.1	2	-	47.16	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-58.16	2	1.1	40.2	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-49.34	2	-	47.92	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-58.31	2	1.11	40.06	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2494.936	-46.13	2	-	51.13	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2486.104	-56.9	2	1.11	41.47	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-47.15	2	-	50.11	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-57.79	2	1.11	40.58	Average	54	Pass

Test Graphs

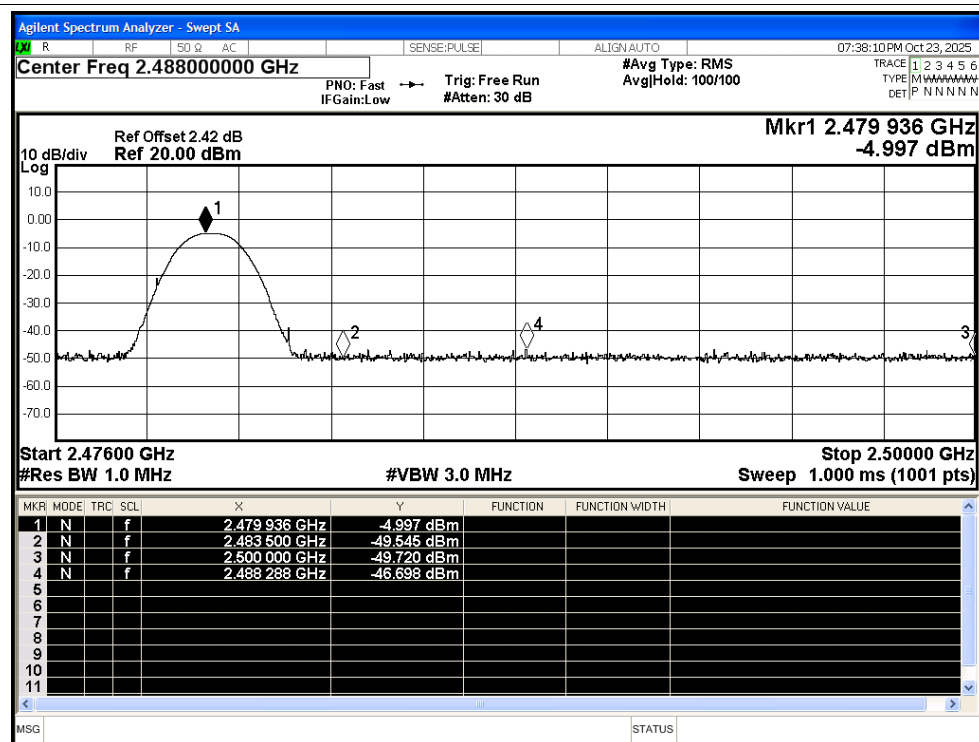
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



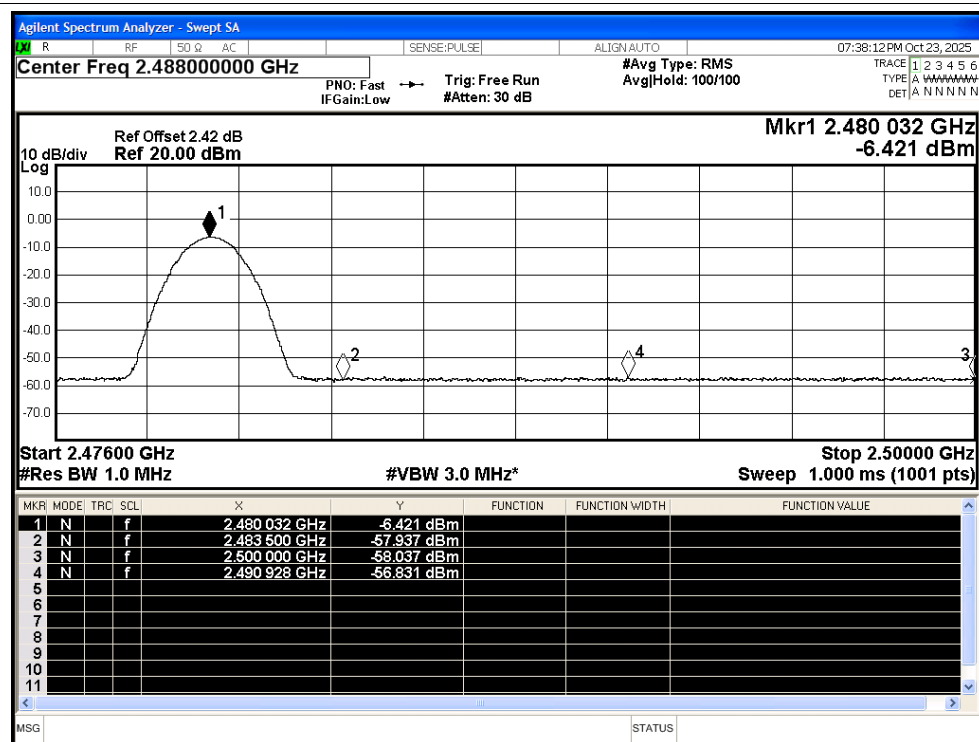
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



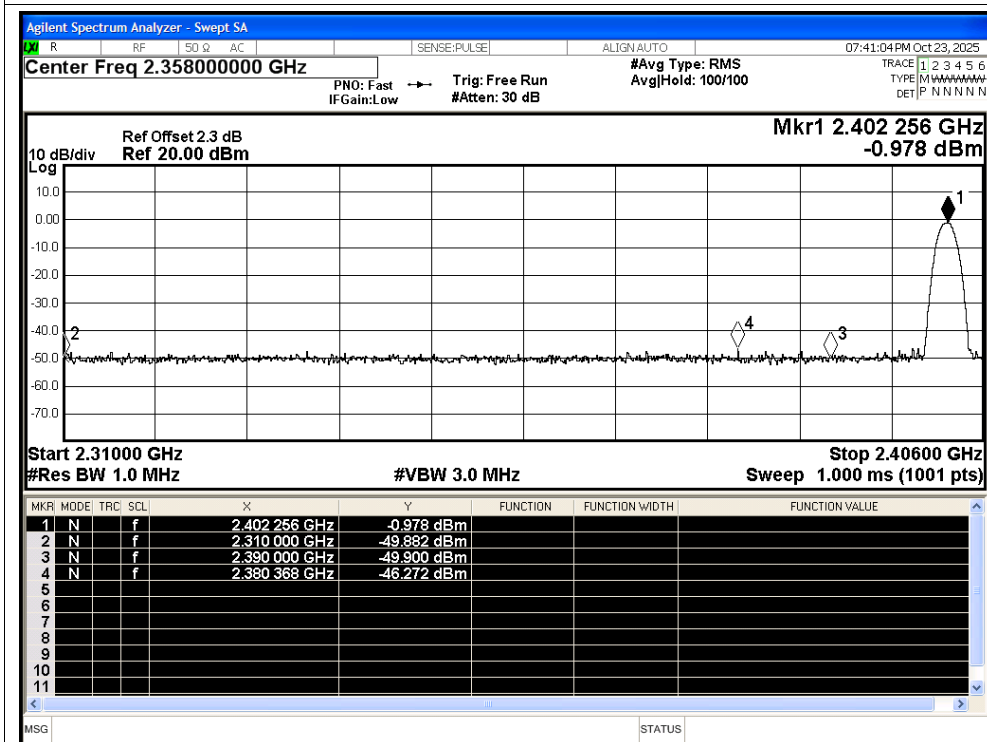
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



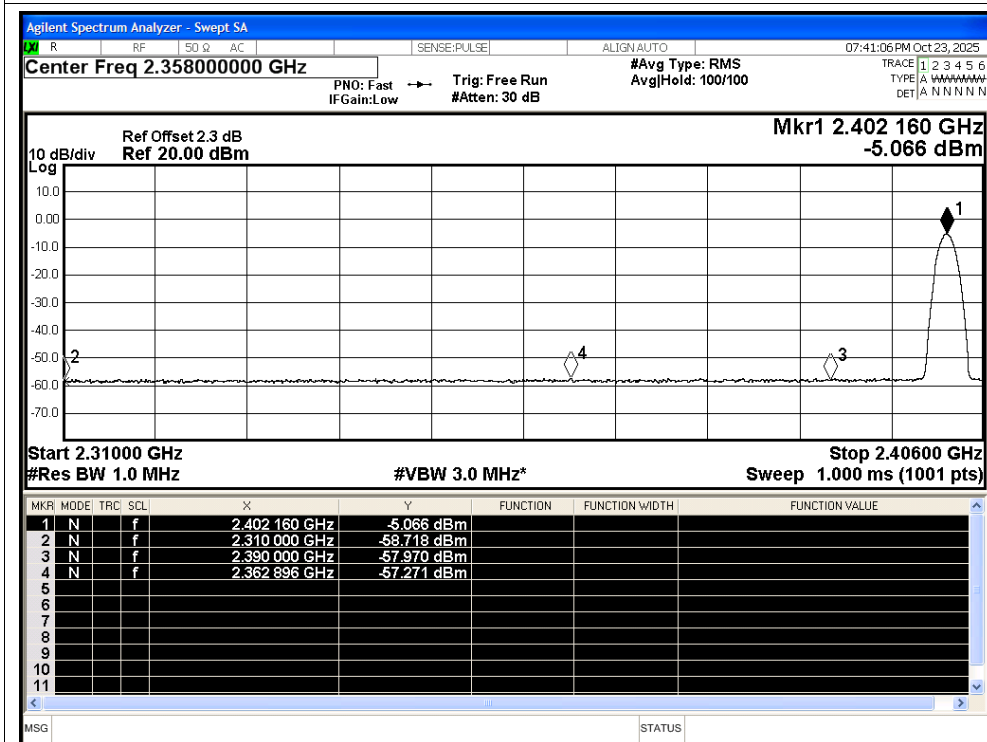
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



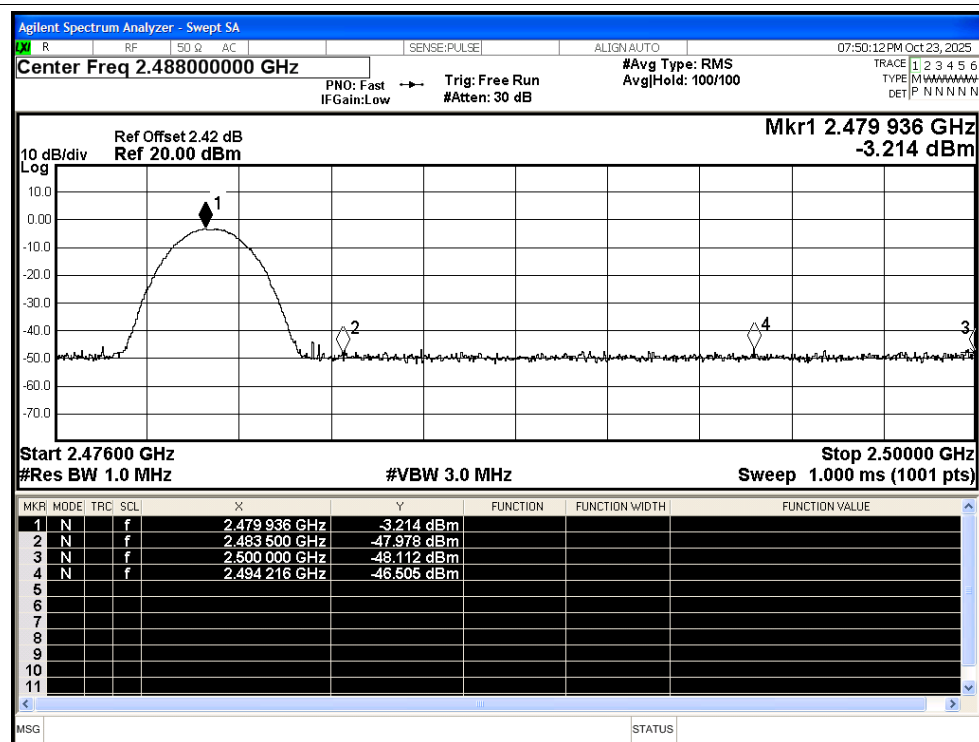
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



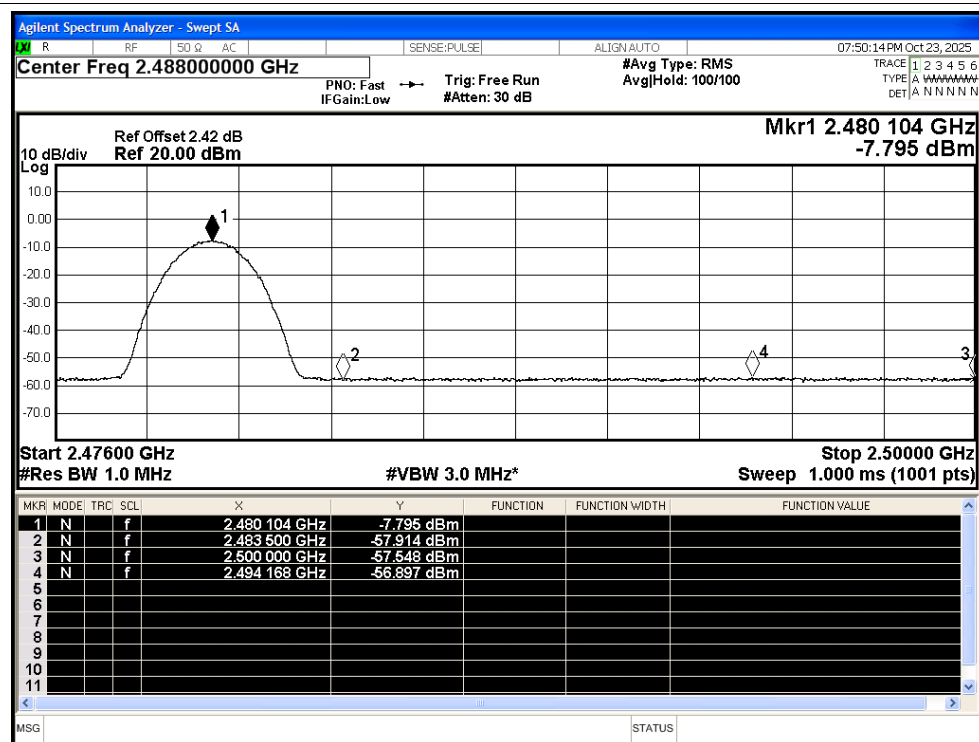
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average

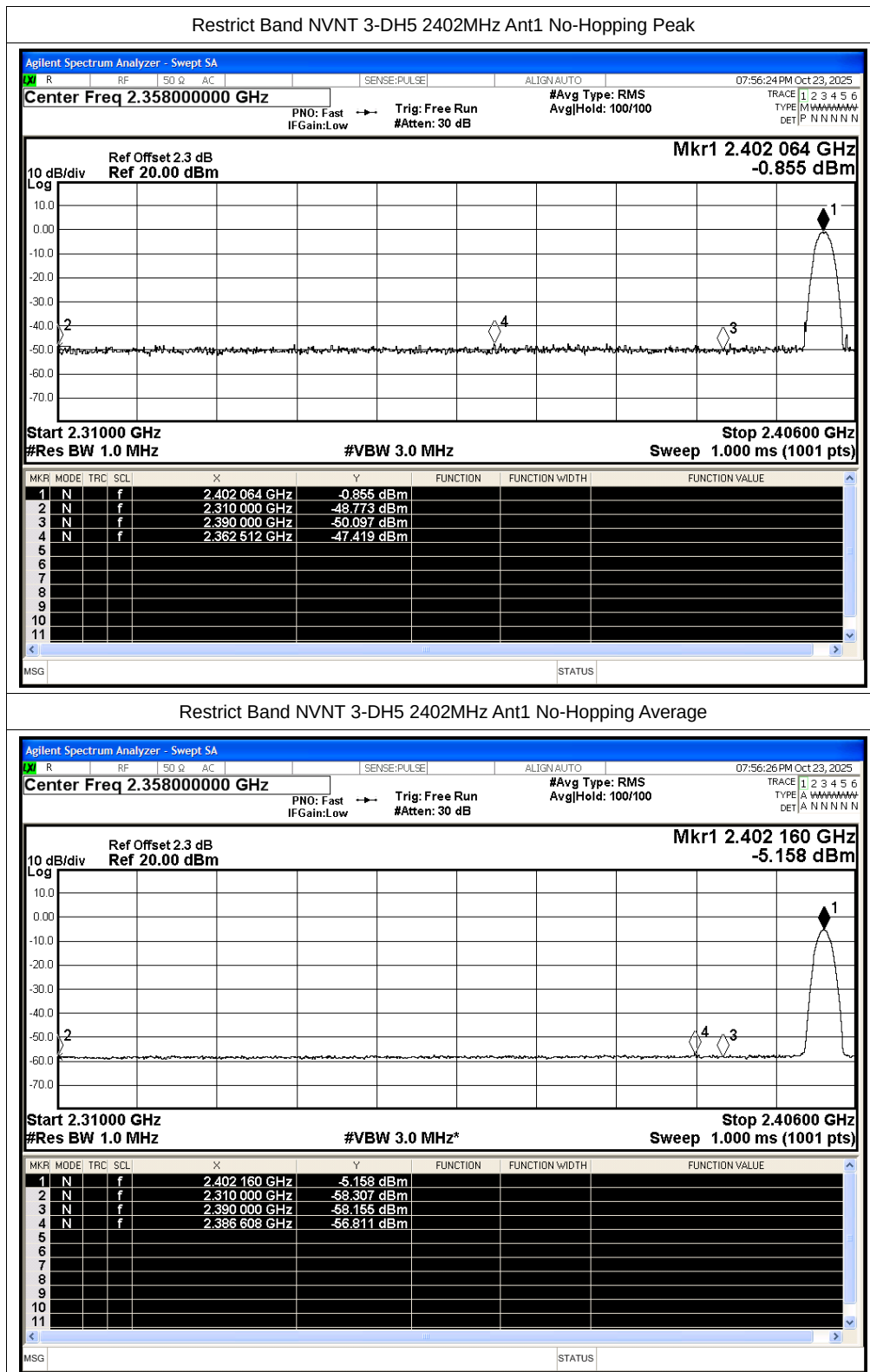


Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak

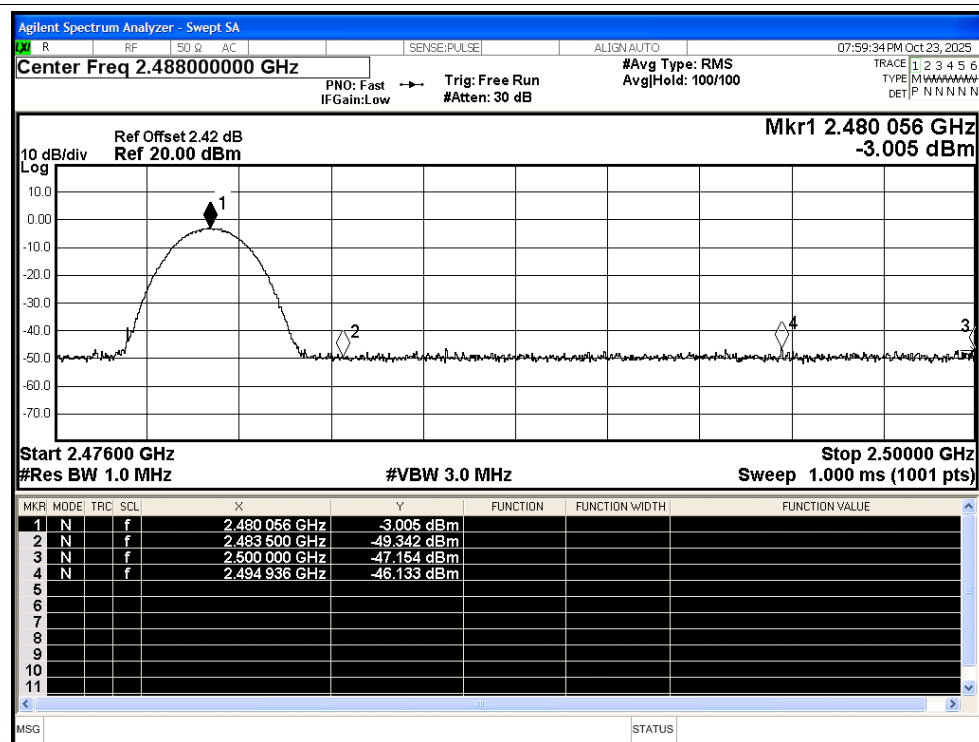


Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Average





Restrict Band NVNT 3-DH5 2480MHz Ant1 No-Hopping Peak



Restrict Band NVNT 3-DH5 2480MHz Ant1 No-Hopping Average

