

Appendix A

RF Test Data for BT(Conducted Measurement)

Product Name: Translator

Test Model: W12

Environmental Conditions

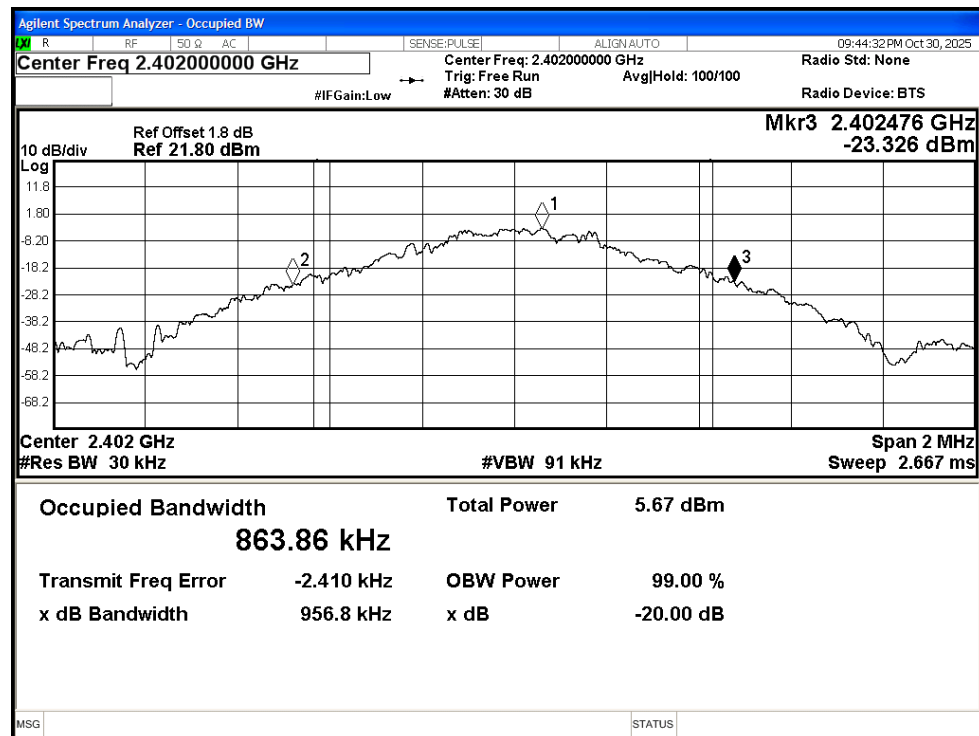
Temperature:	23.8°C
Relative Humidity:	52.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Yan Chen

A.1 -20dB Bandwidth

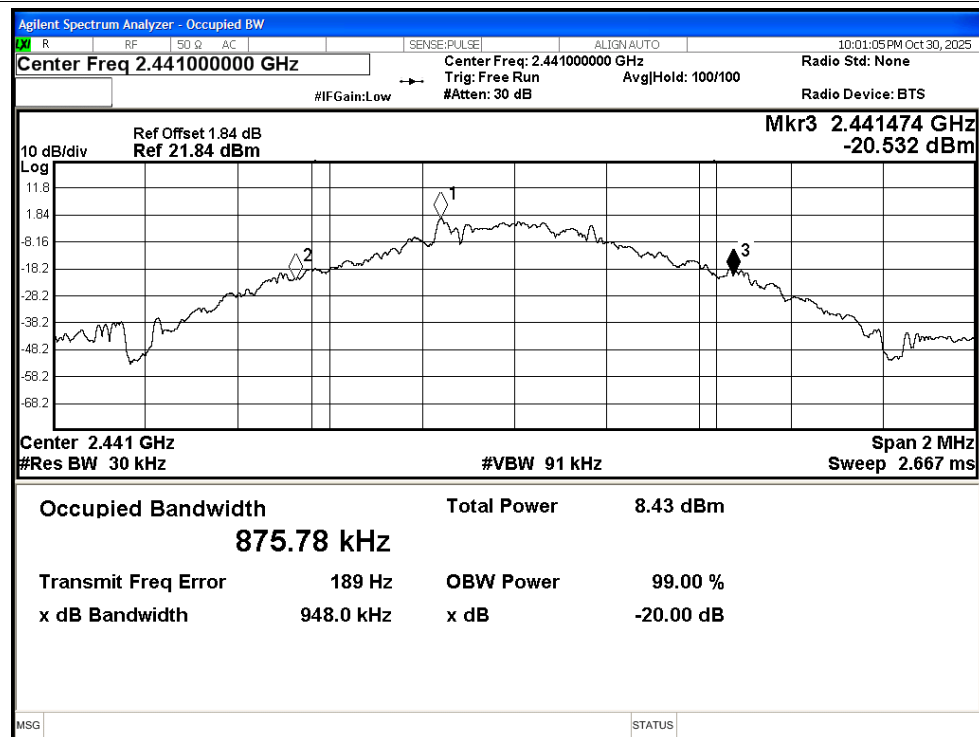
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.957	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.948	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.939	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.313	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.285	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.318	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.297	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.295	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.306	N/A	Pass

Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



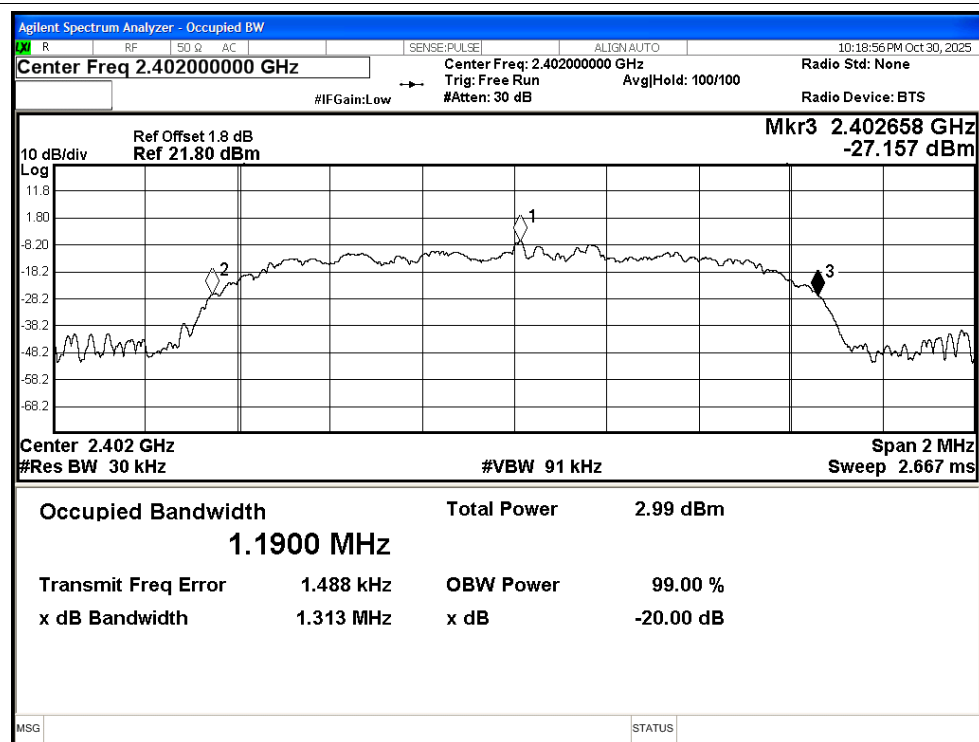
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



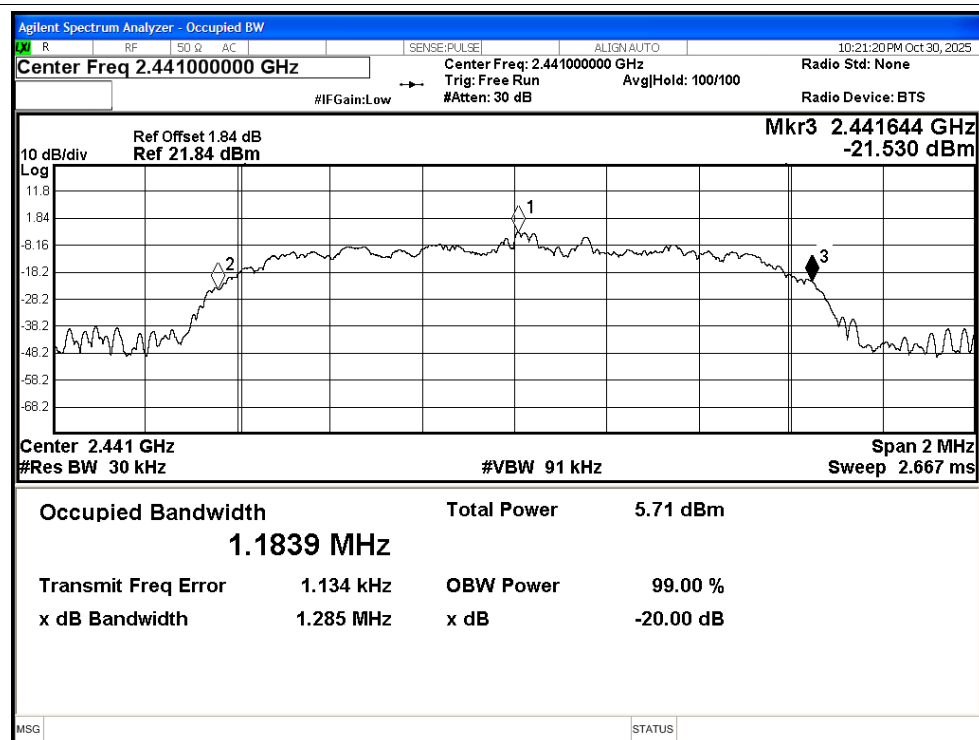
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



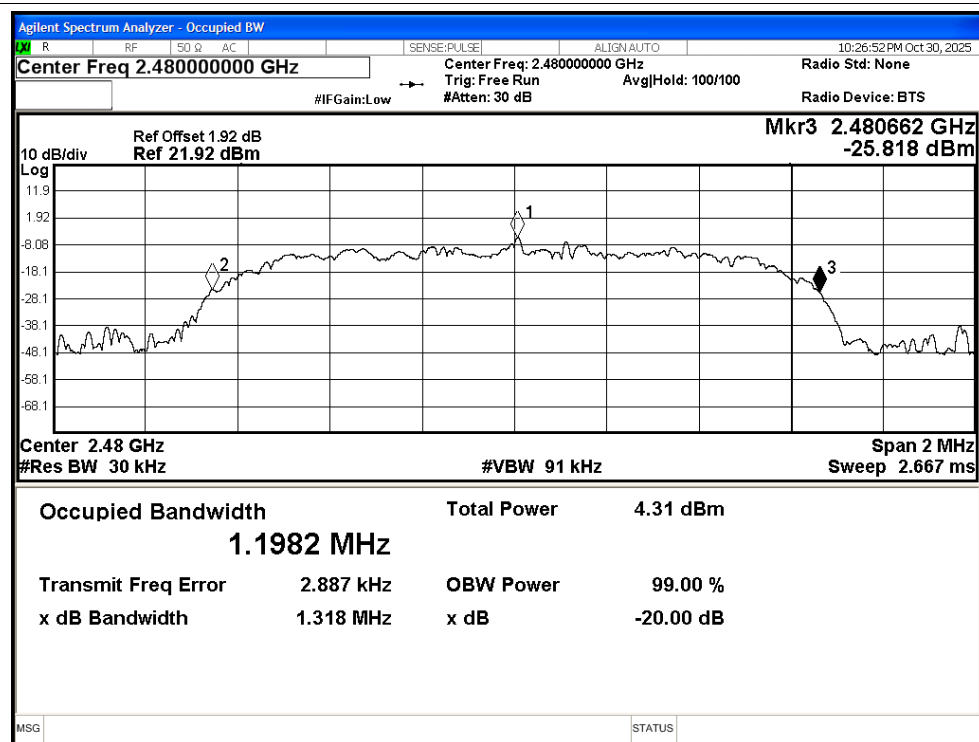
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



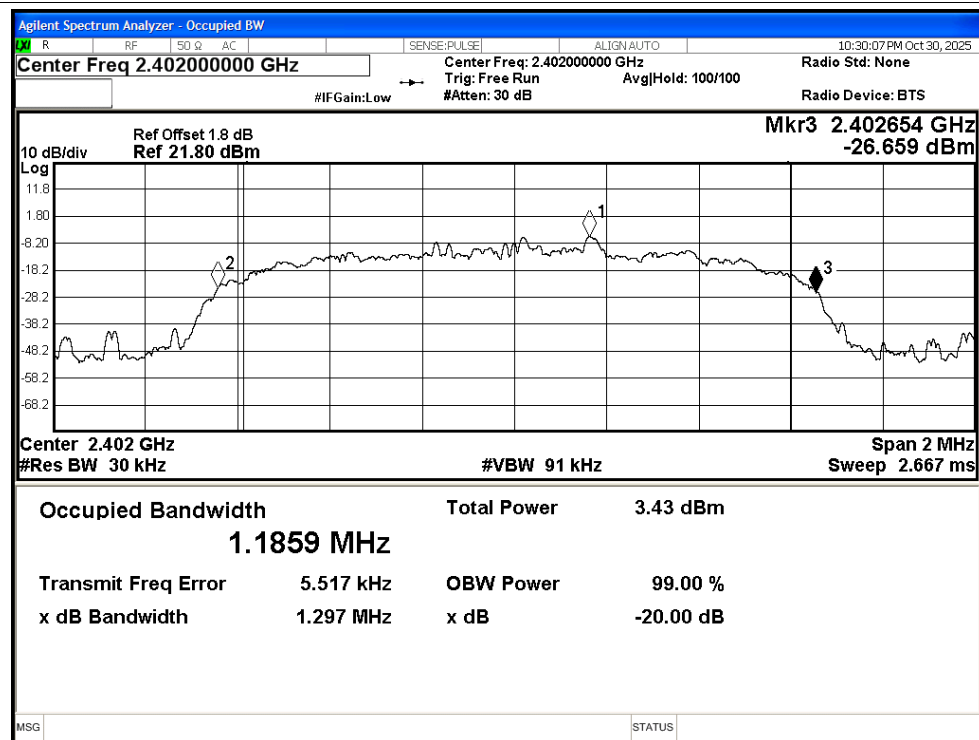
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



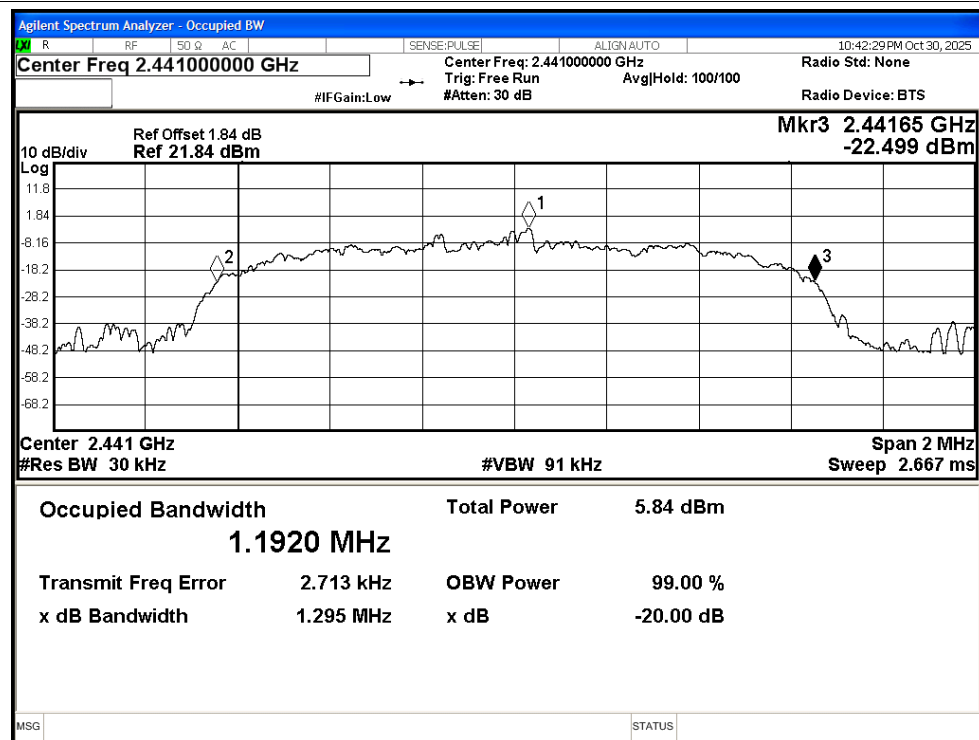
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

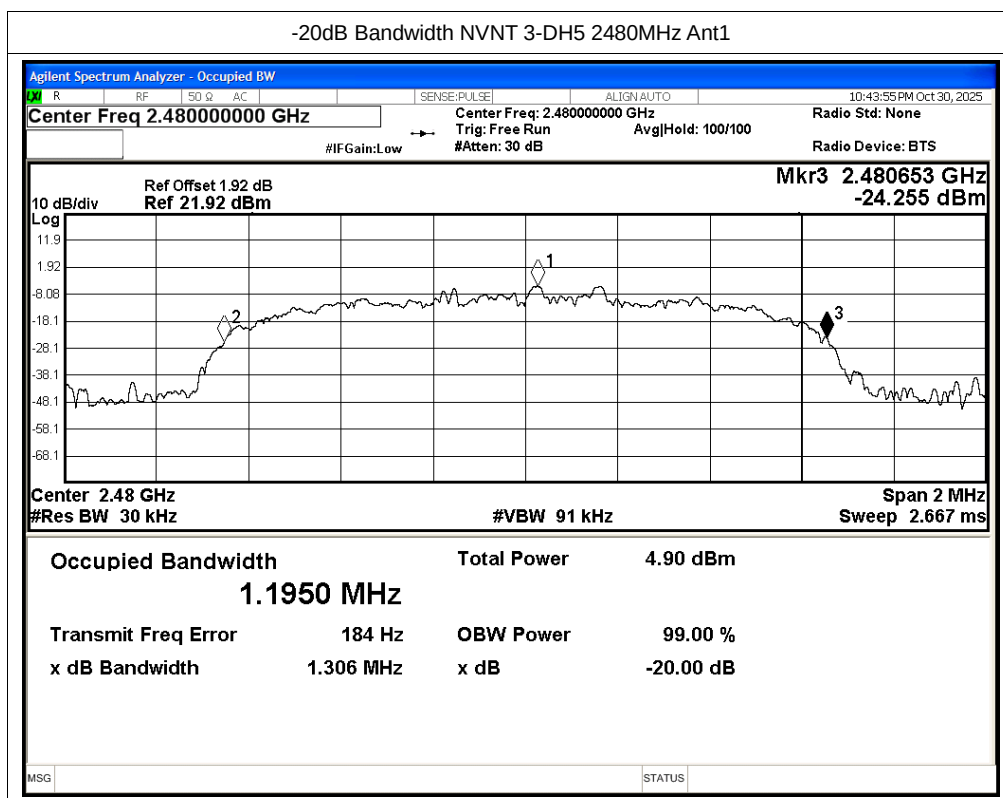


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



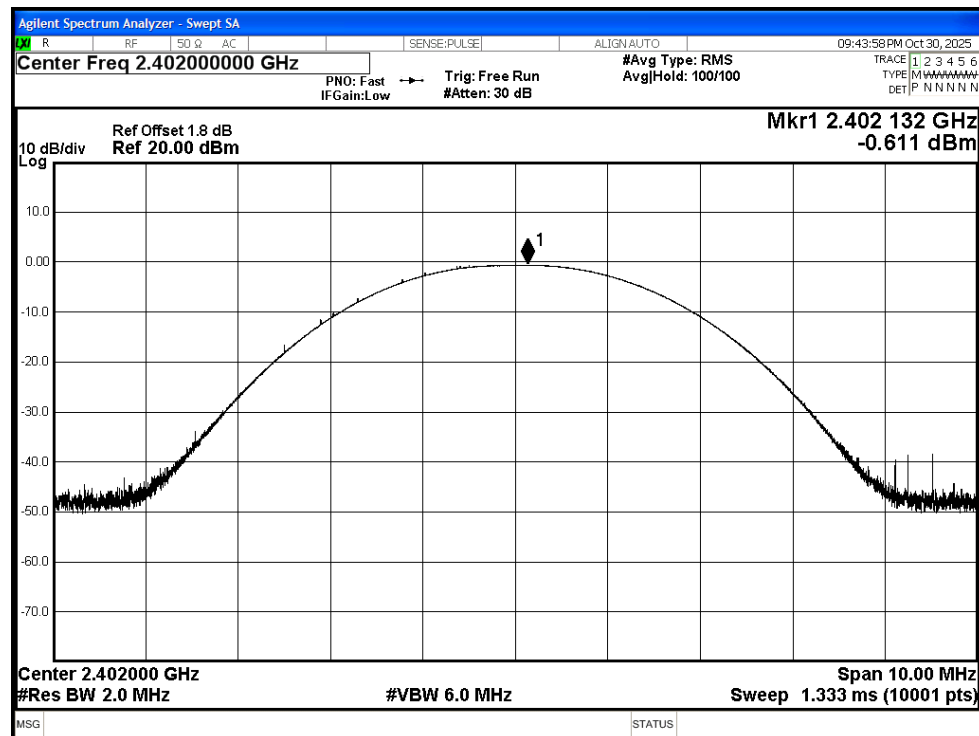


A.2 Maximum Peak Conducted Output Power

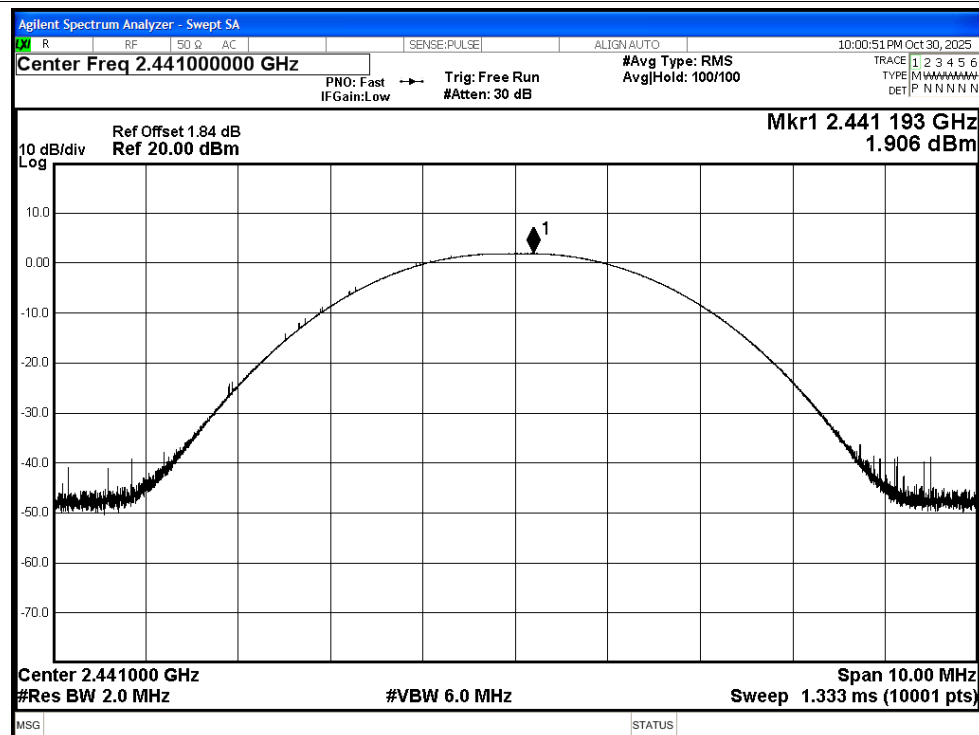
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.61	21	Pass
NVNT	1-DH5	2441	Ant1	1.91	21	Pass
NVNT	1-DH5	2480	Ant1	1.27	21	Pass
NVNT	2-DH5	2402	Ant1	-1.05	21	Pass
NVNT	2-DH5	2441	Ant1	1.47	21	Pass
NVNT	2-DH5	2480	Ant1	0.59	21	Pass
NVNT	3-DH5	2402	Ant1	-0.61	21	Pass
NVNT	3-DH5	2441	Ant1	1.91	21	Pass
NVNT	3-DH5	2480	Ant1	0.95	21	Pass

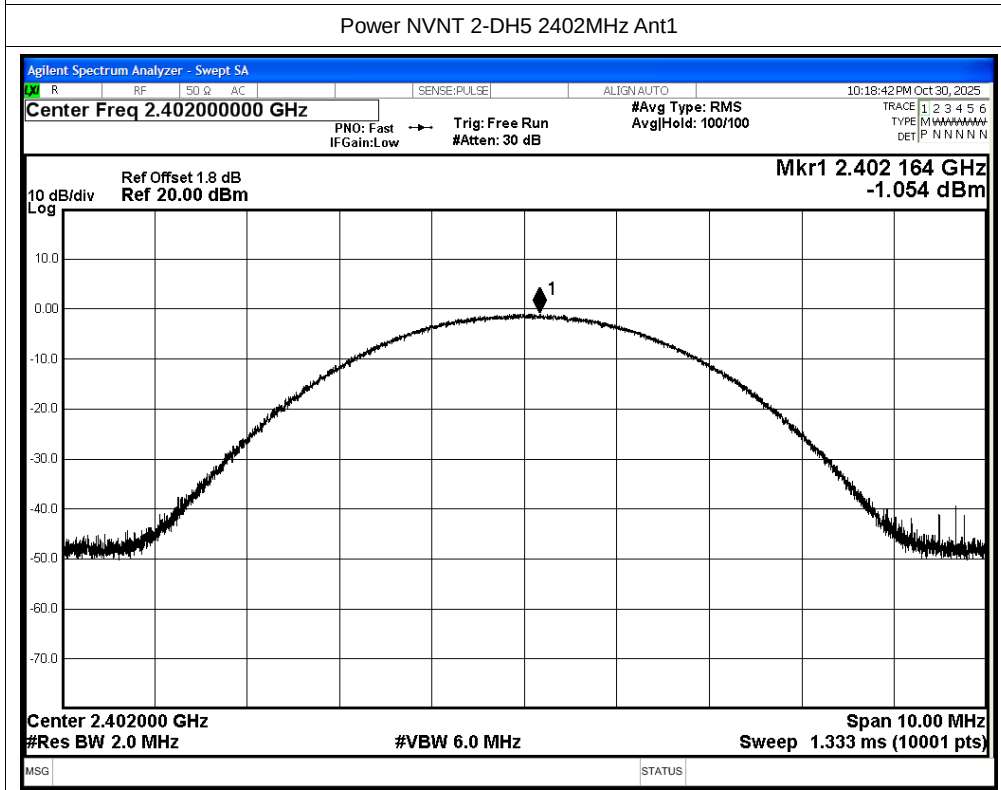
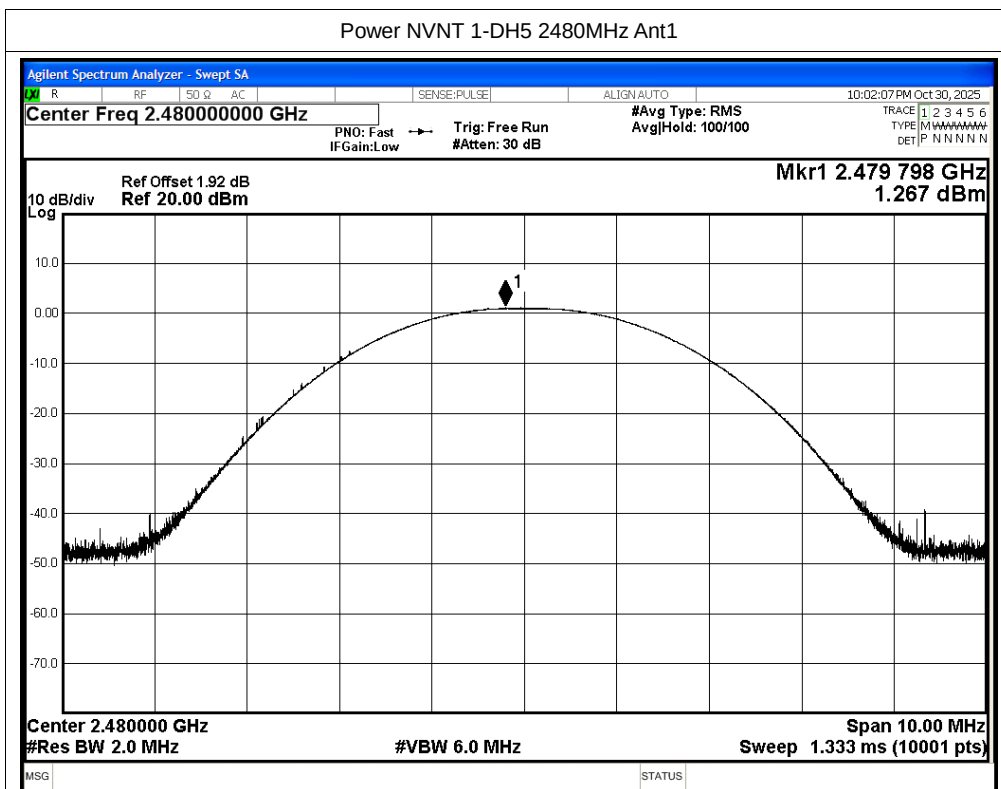
Test Graphs

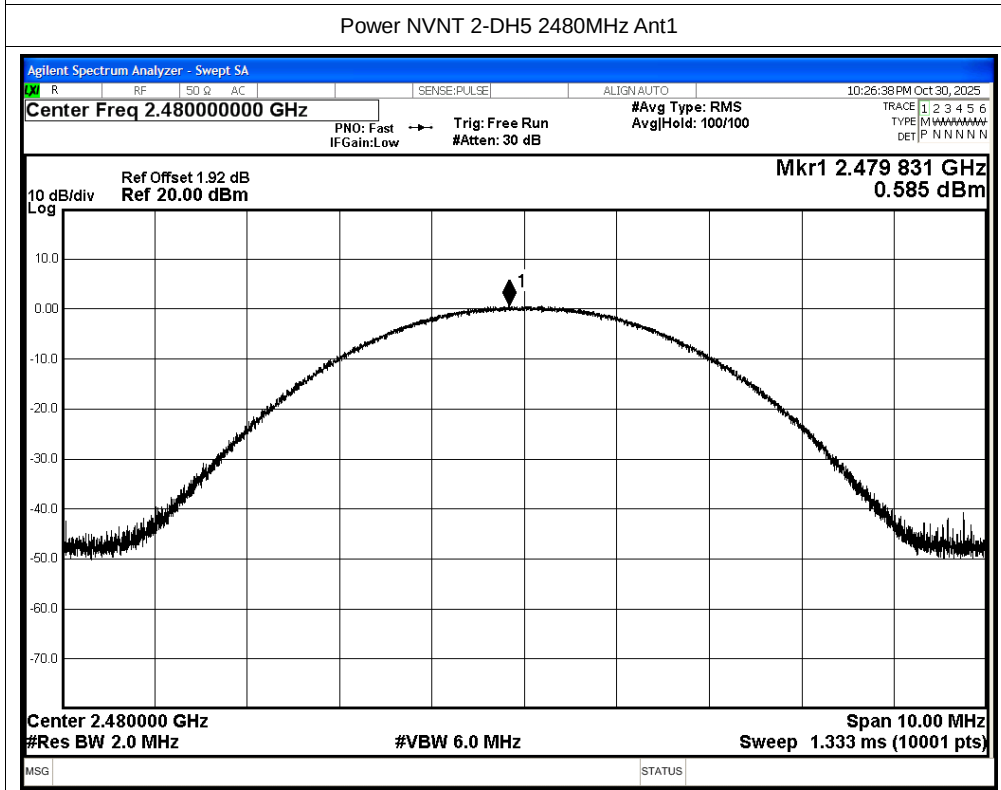
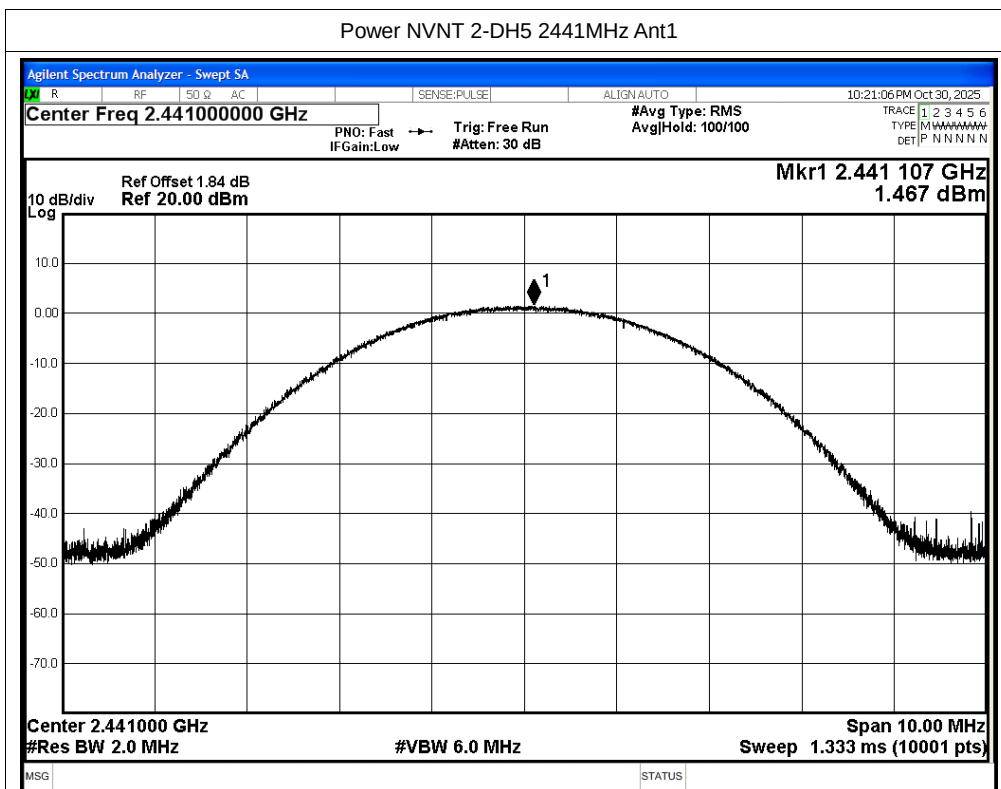
Power NVNT 1-DH5 2402MHz Ant1

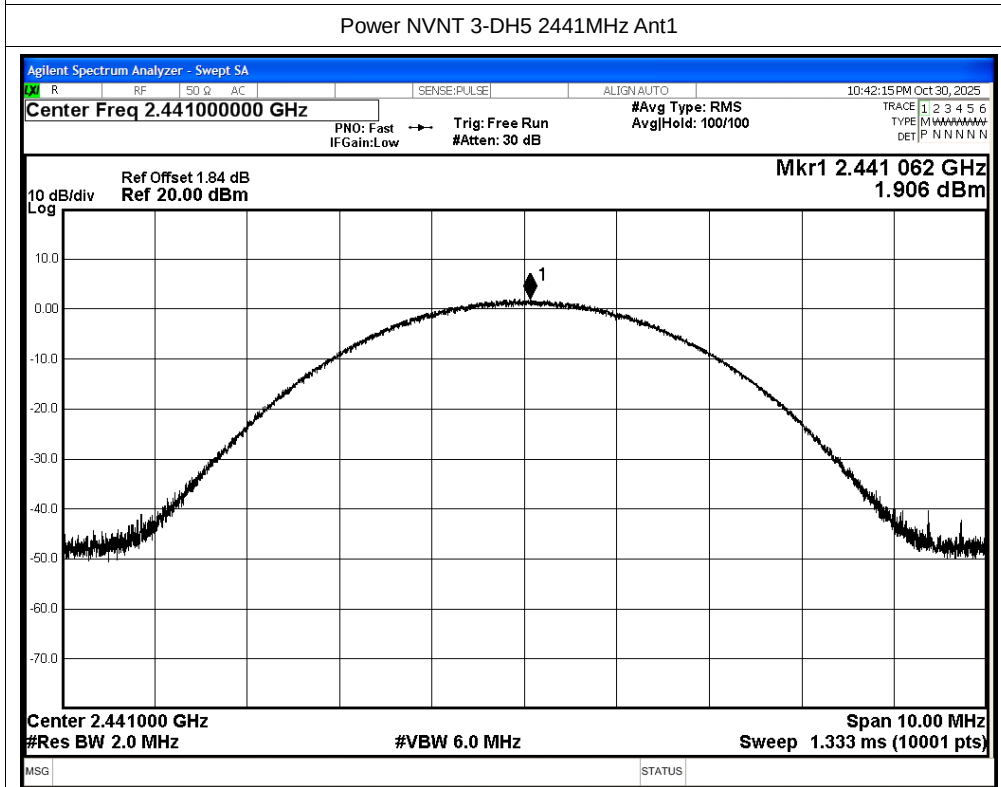
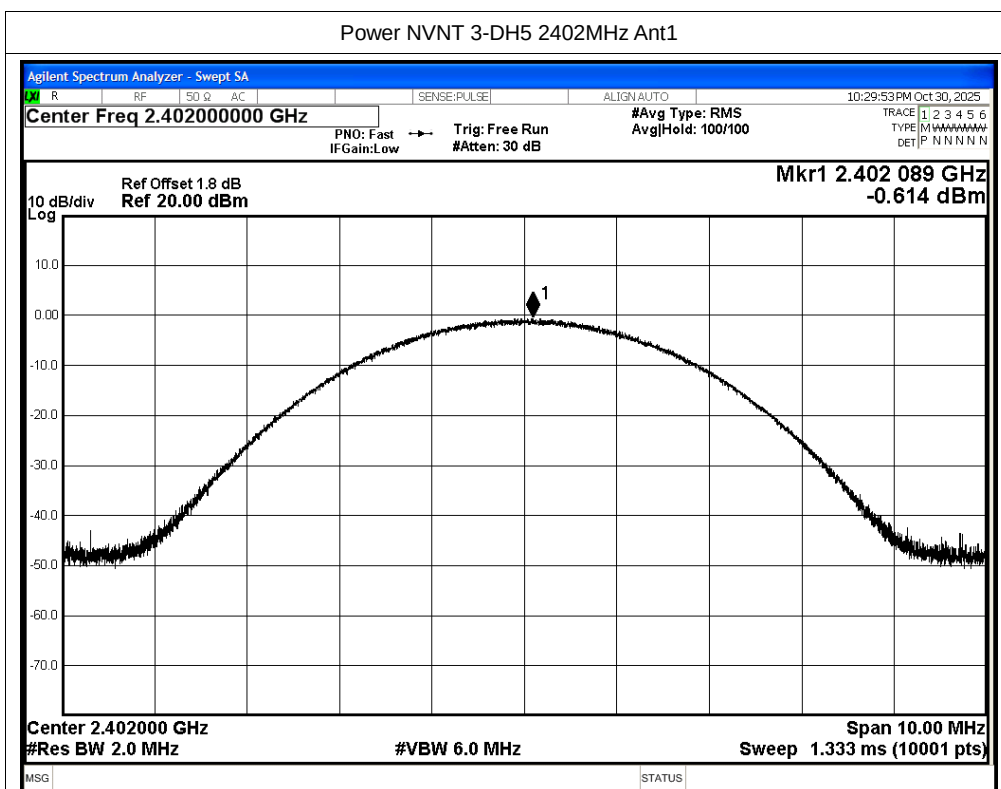


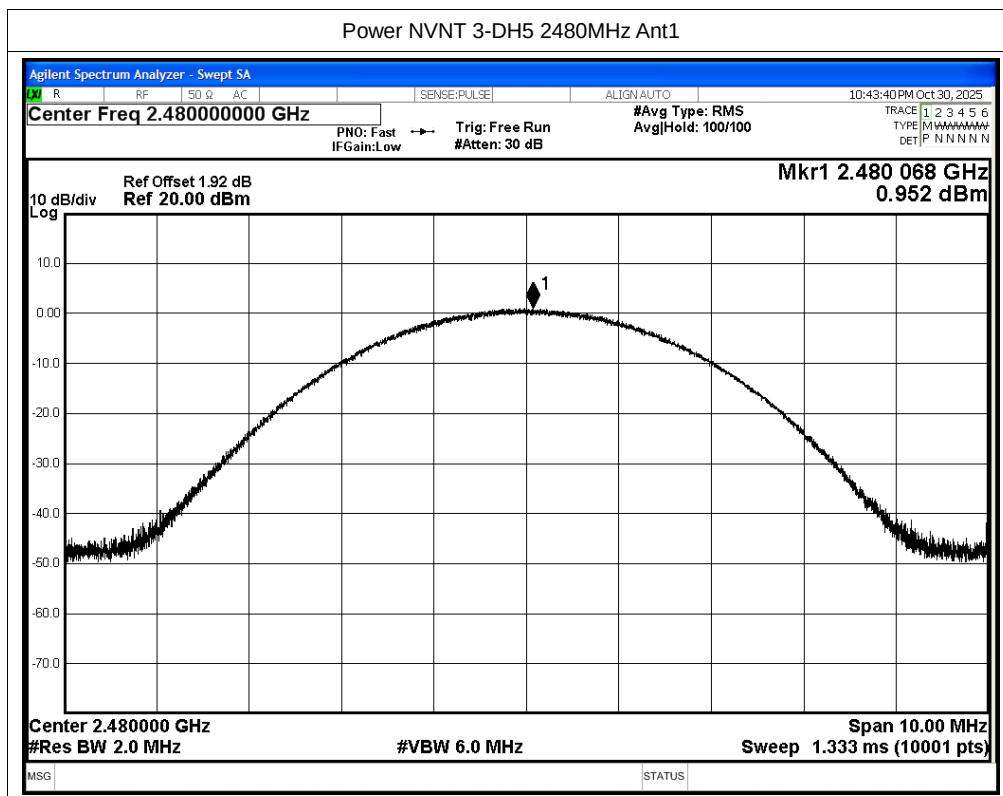
Power NVNT 1-DH5 2441MHz Ant1









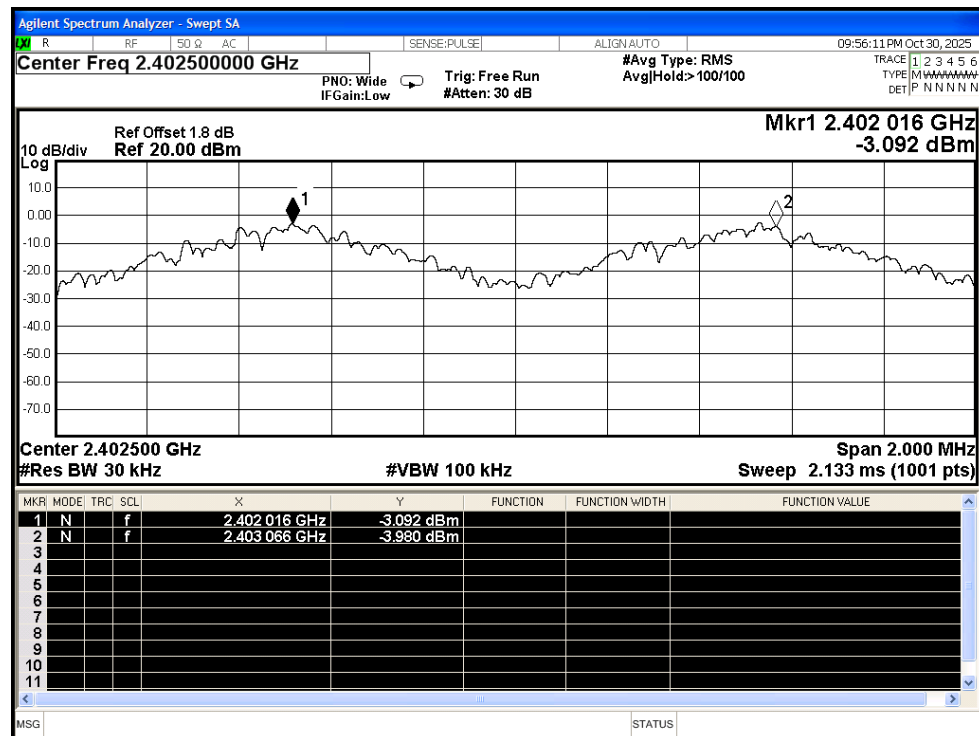


A.3 Carrier Frequencies Separation

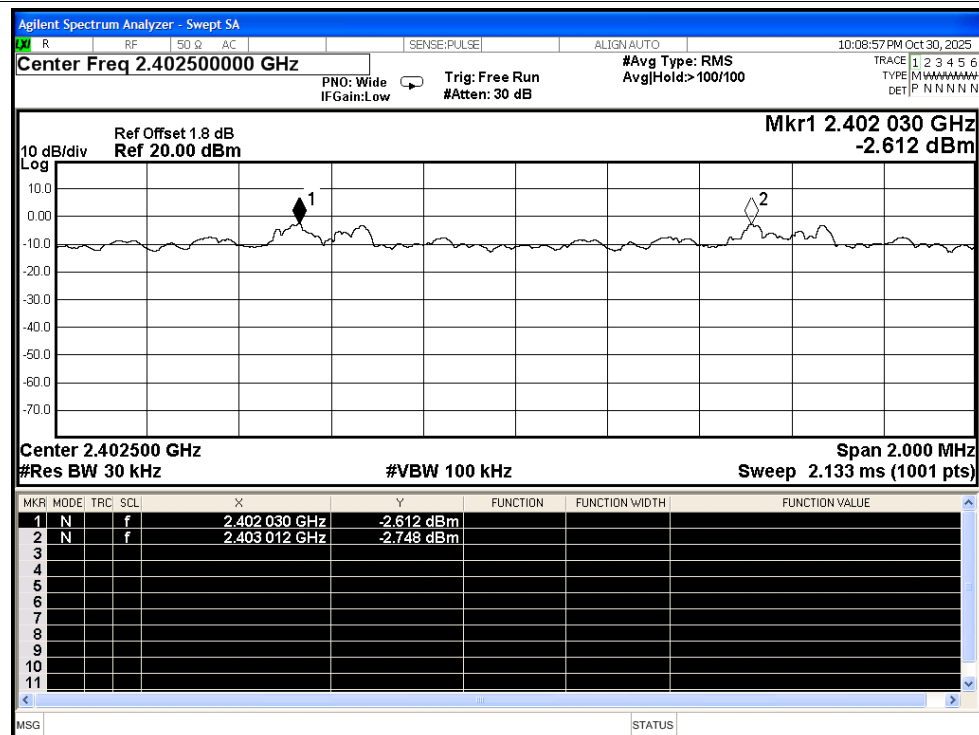
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.016	2403.066	1.05	0.638	Pass
NVNT	2-DH5	Ant1	2402.03	2403.012	0.982	0.879	Pass
NVNT	3-DH5	Ant1	2402.018	2403.162	1.144	0.871	Pass

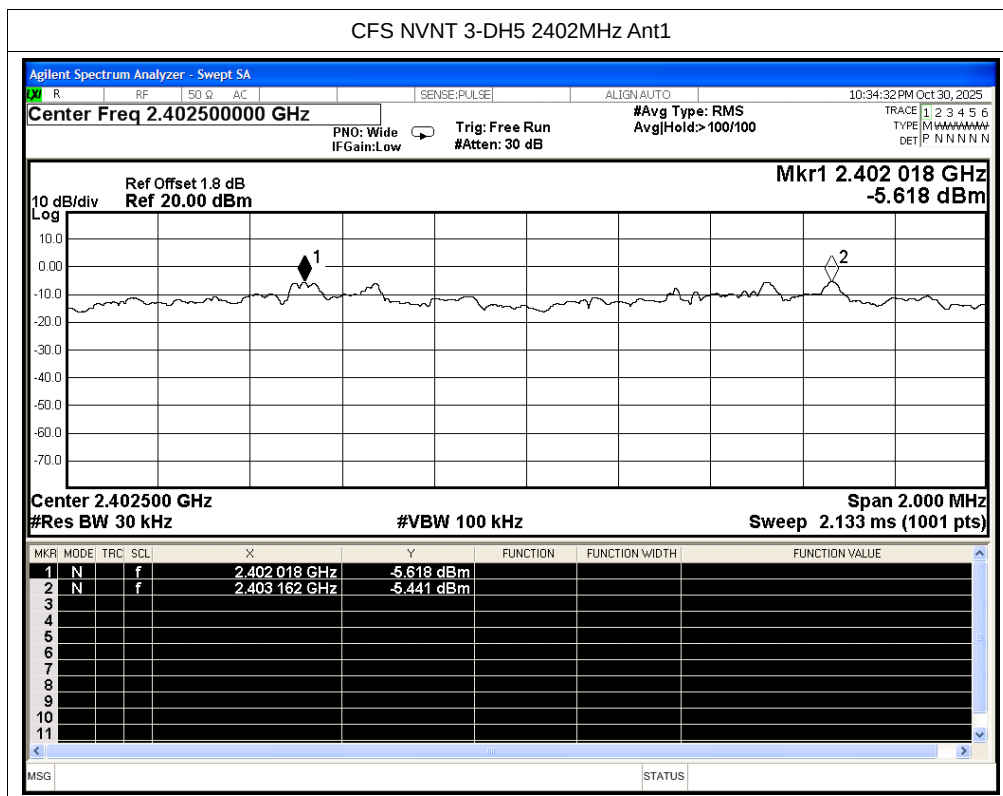
Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1



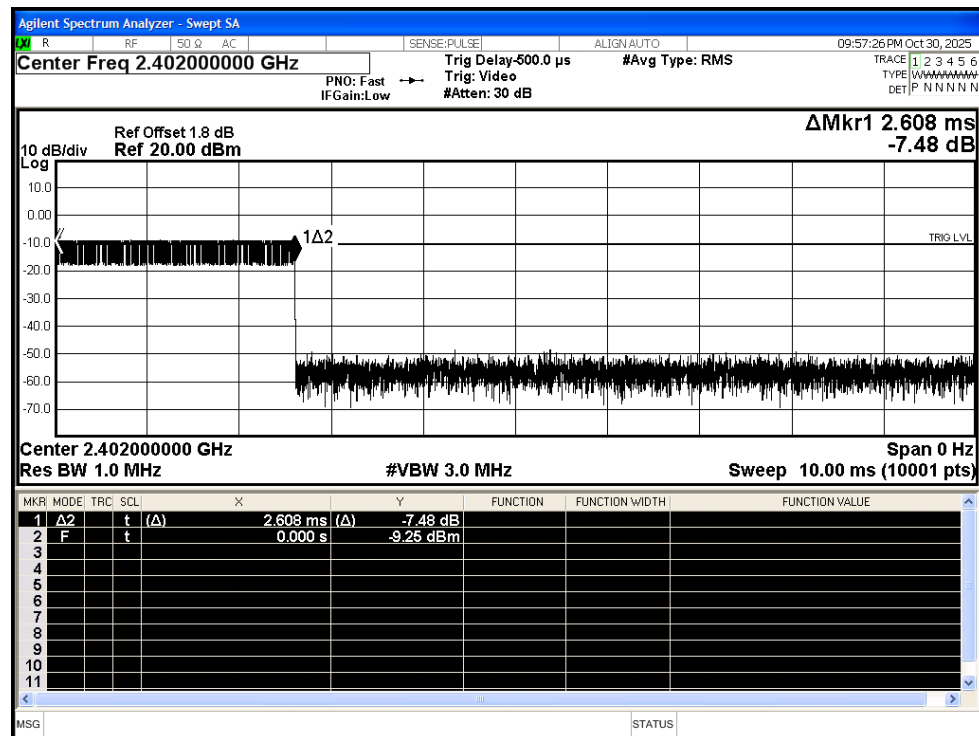


A.4 Dwell Time

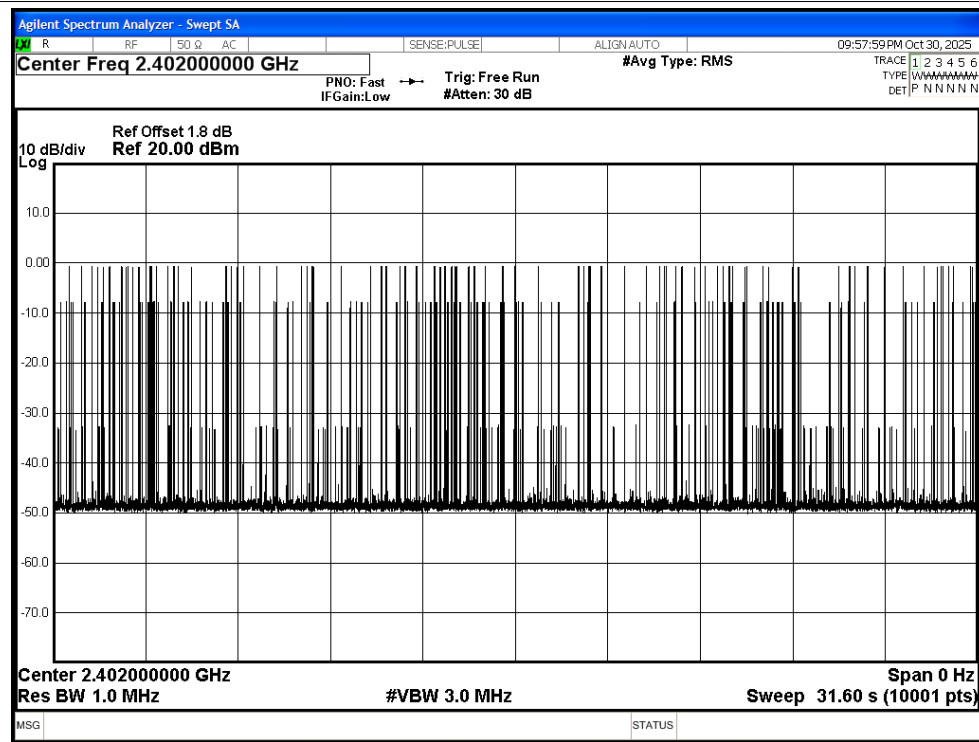
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.608	258.192	99	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	281.106	97	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.897	321.567	111	31600	400	Pass

Test Graphs

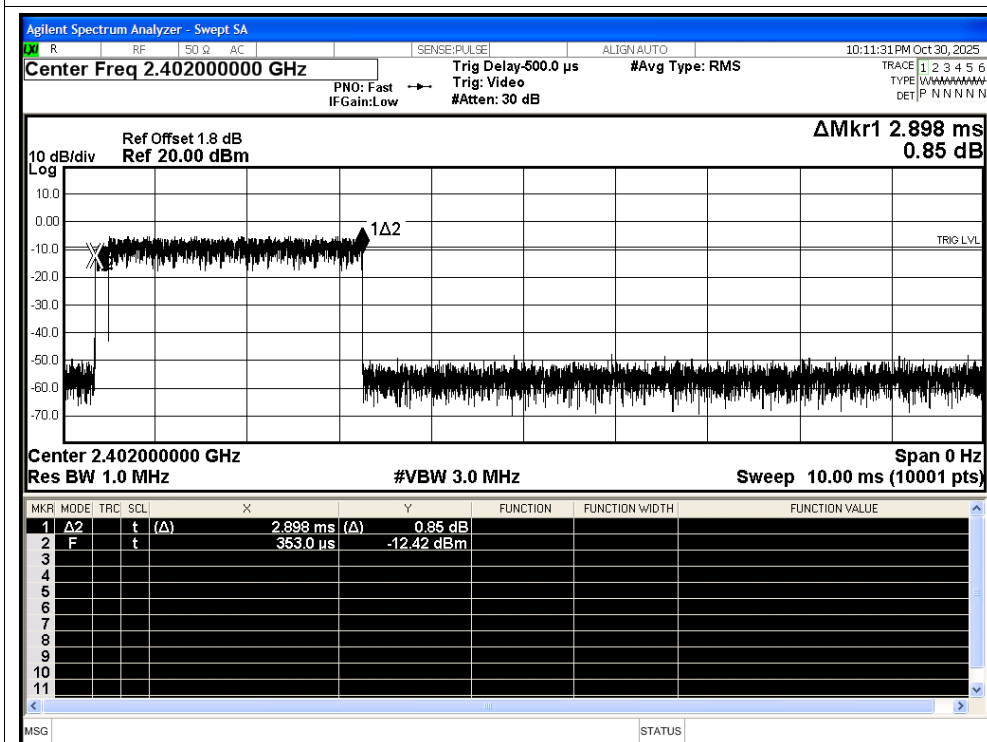
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



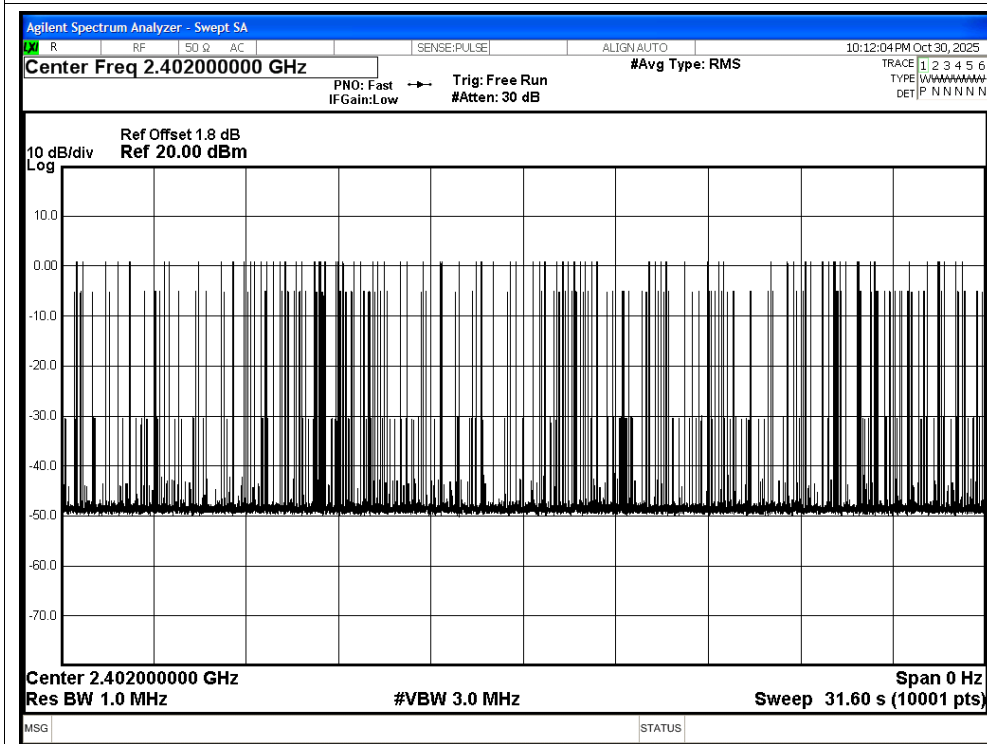
Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



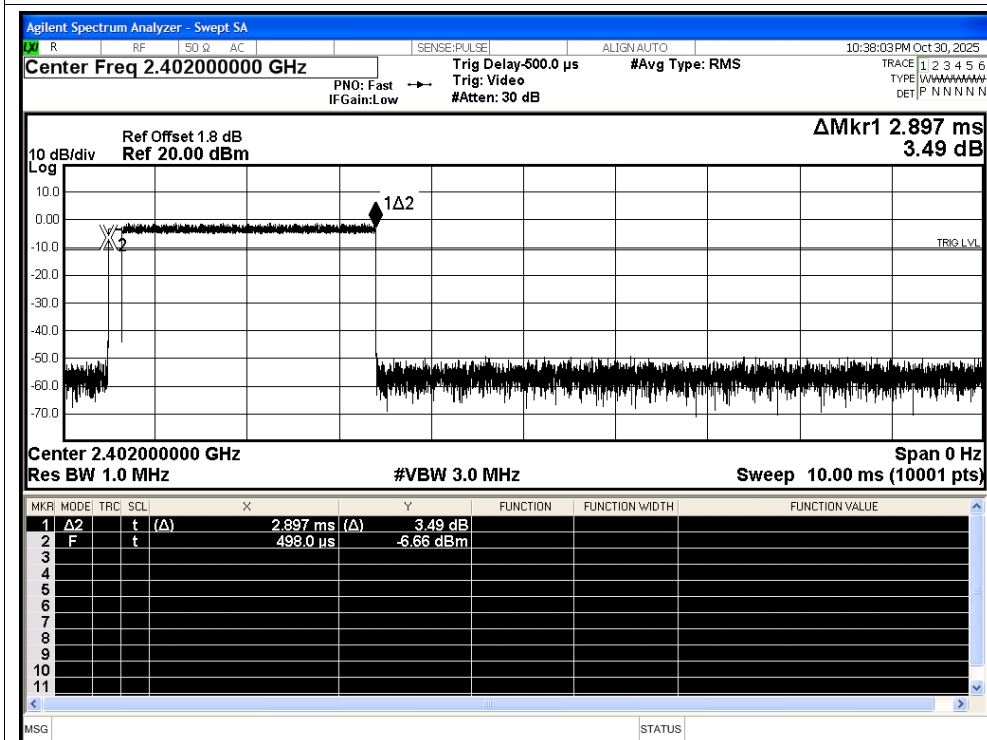
Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



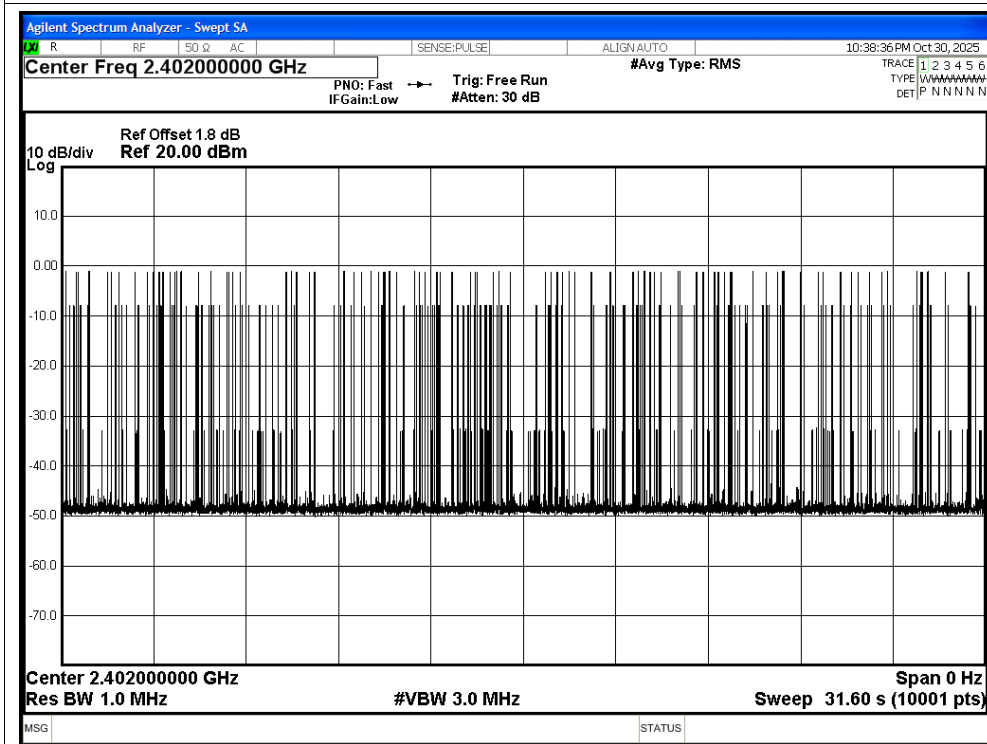
Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated

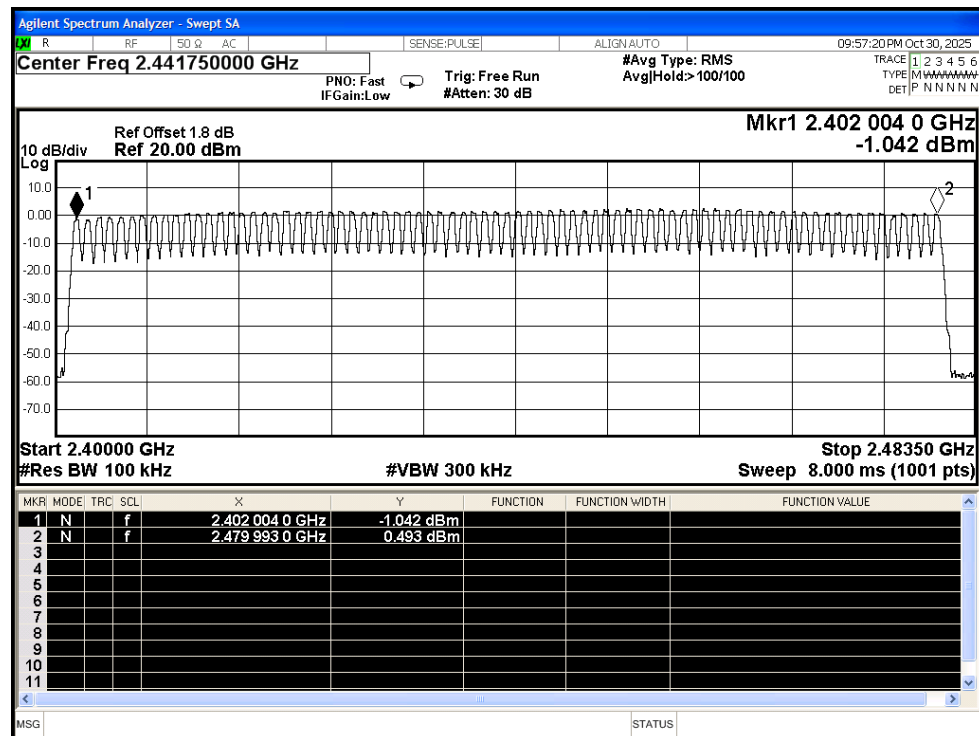


A.5 Number of Hopping Channel

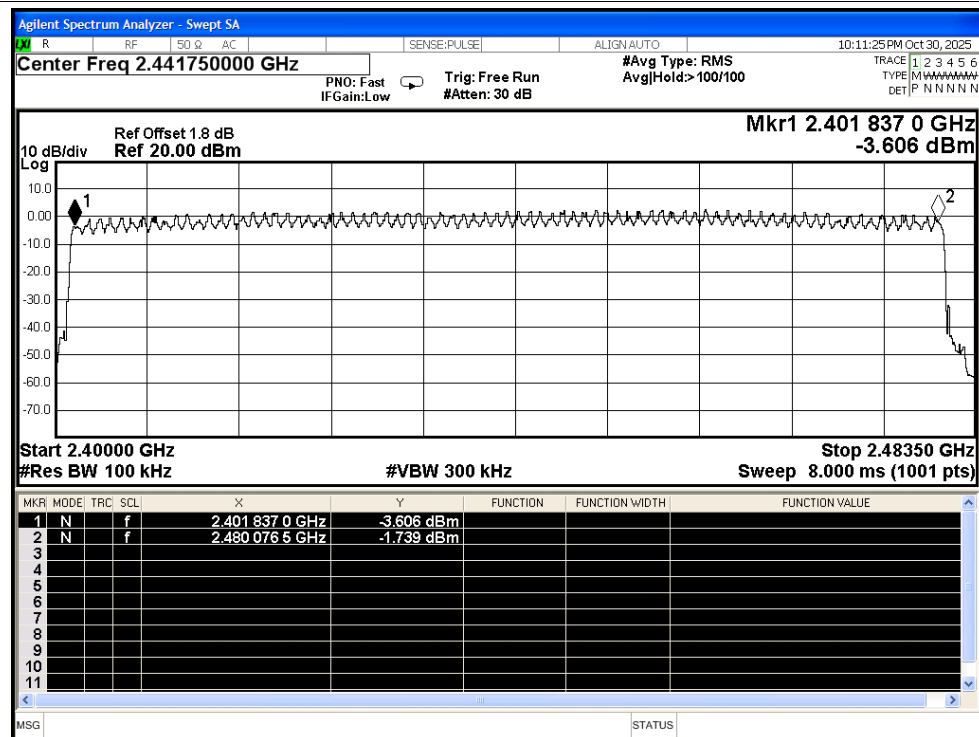
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

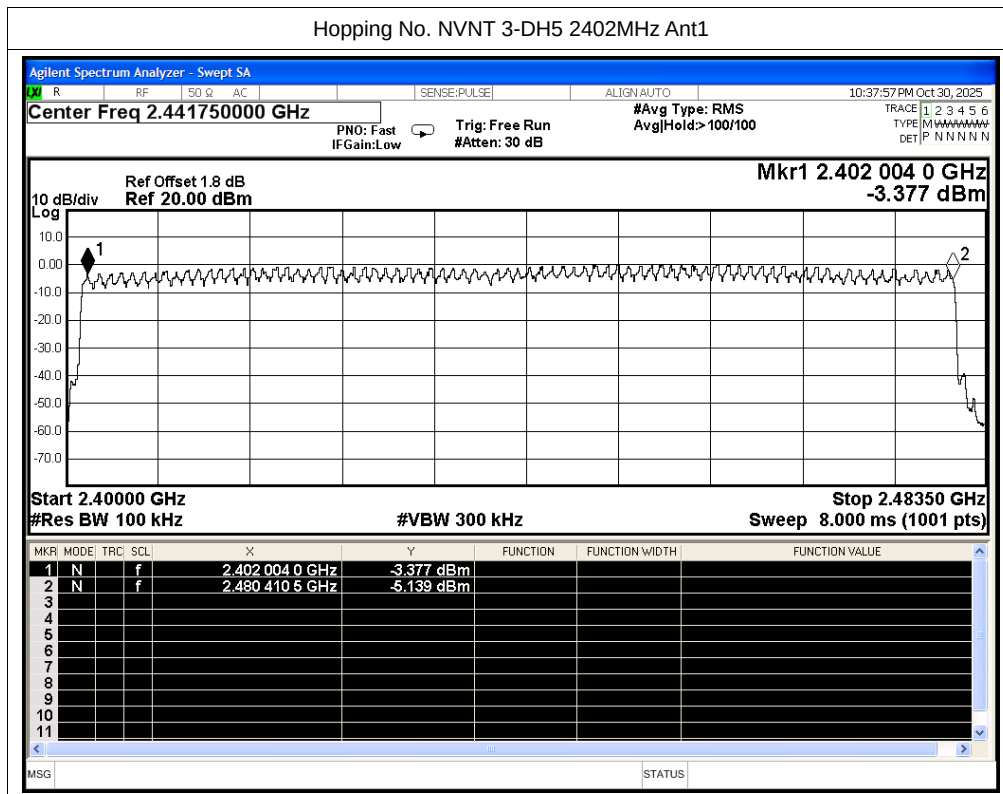
Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1



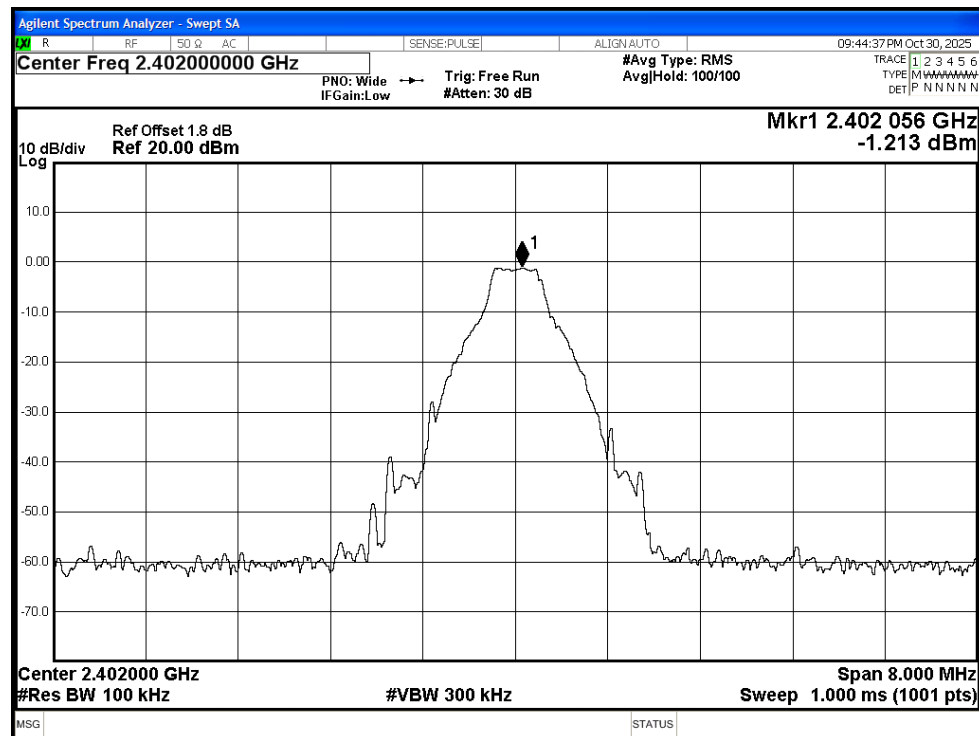


A.6 Band Edge

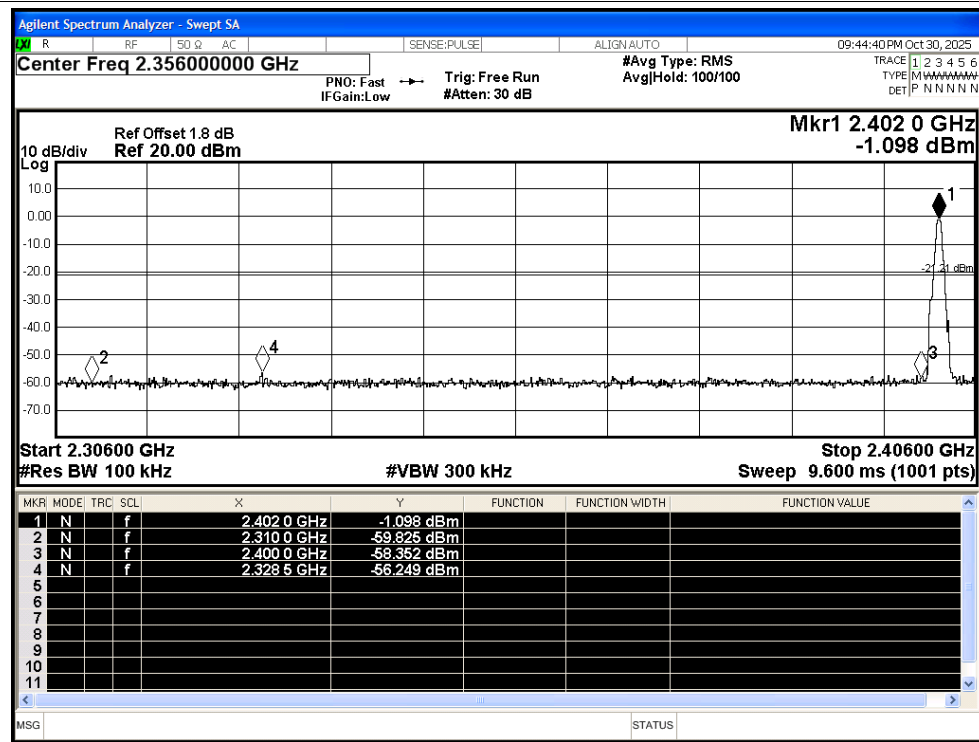
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-55.04	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-58.11	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-50.04	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-55.74	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-50.28	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-54.22	-20	Pass

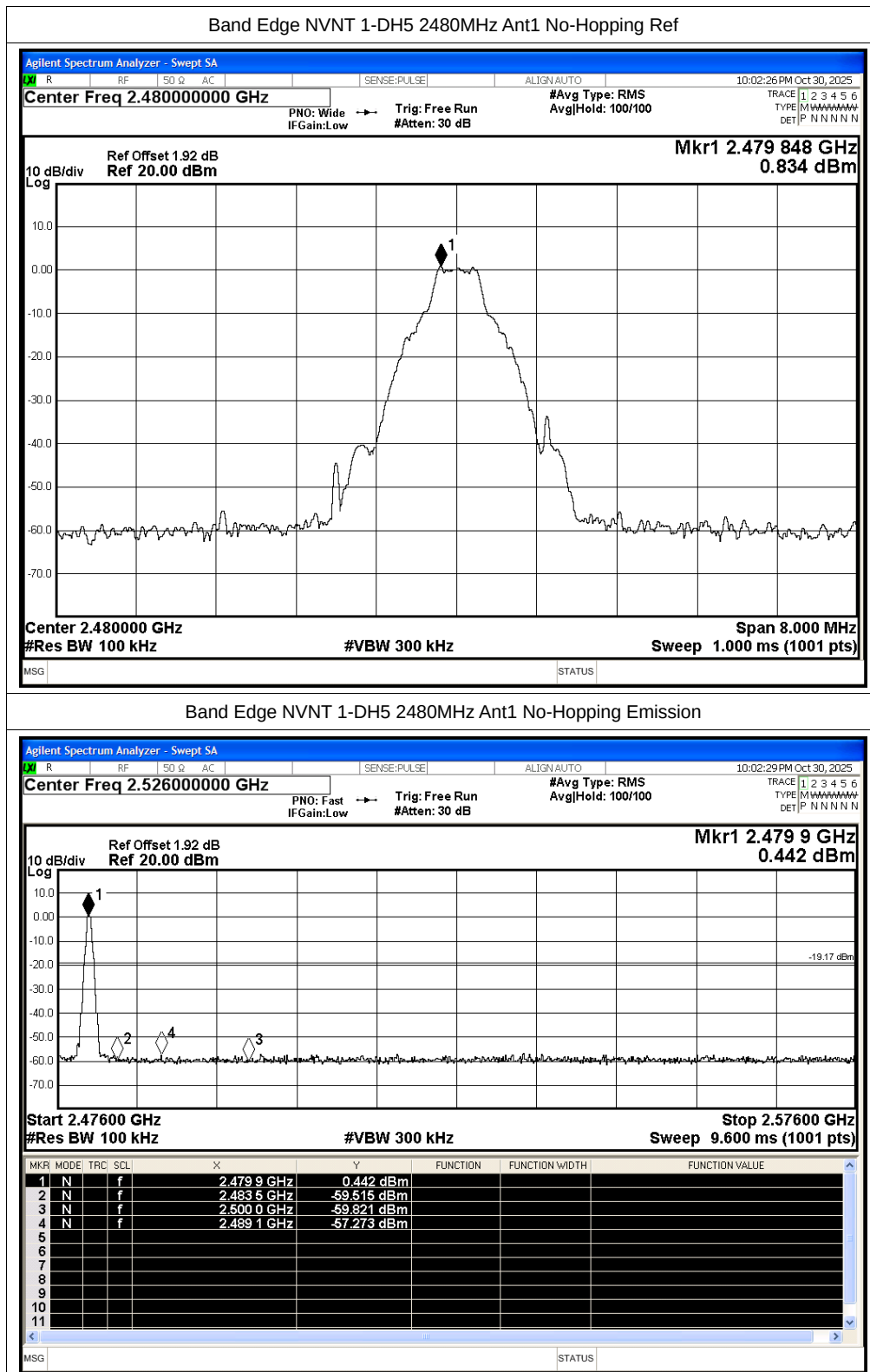
Test Graphs

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

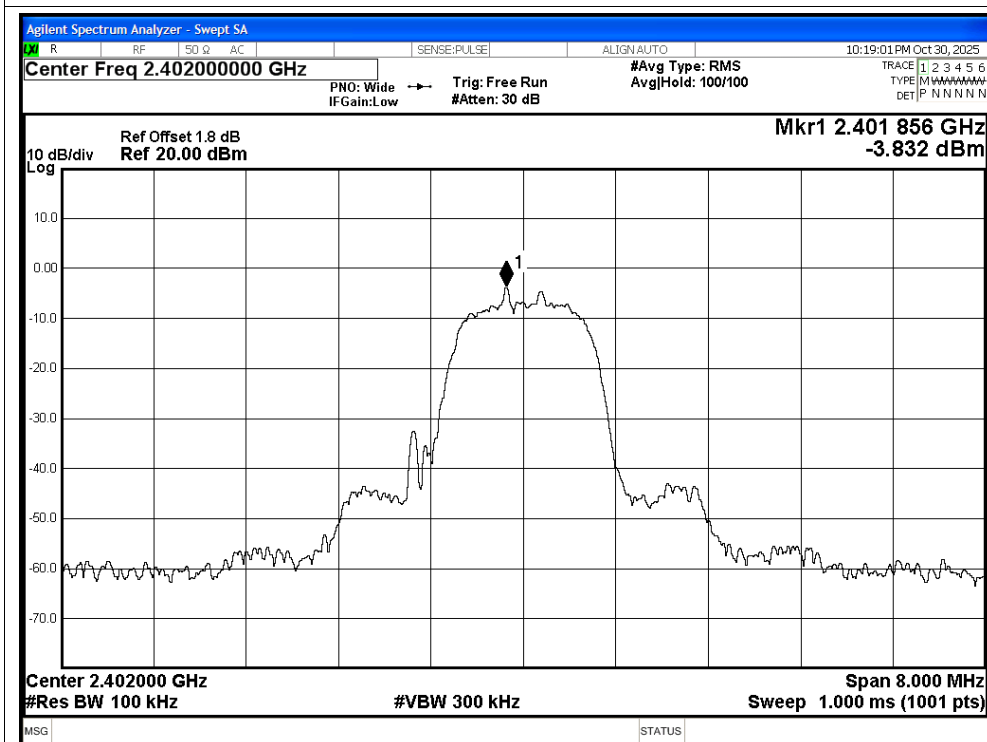


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

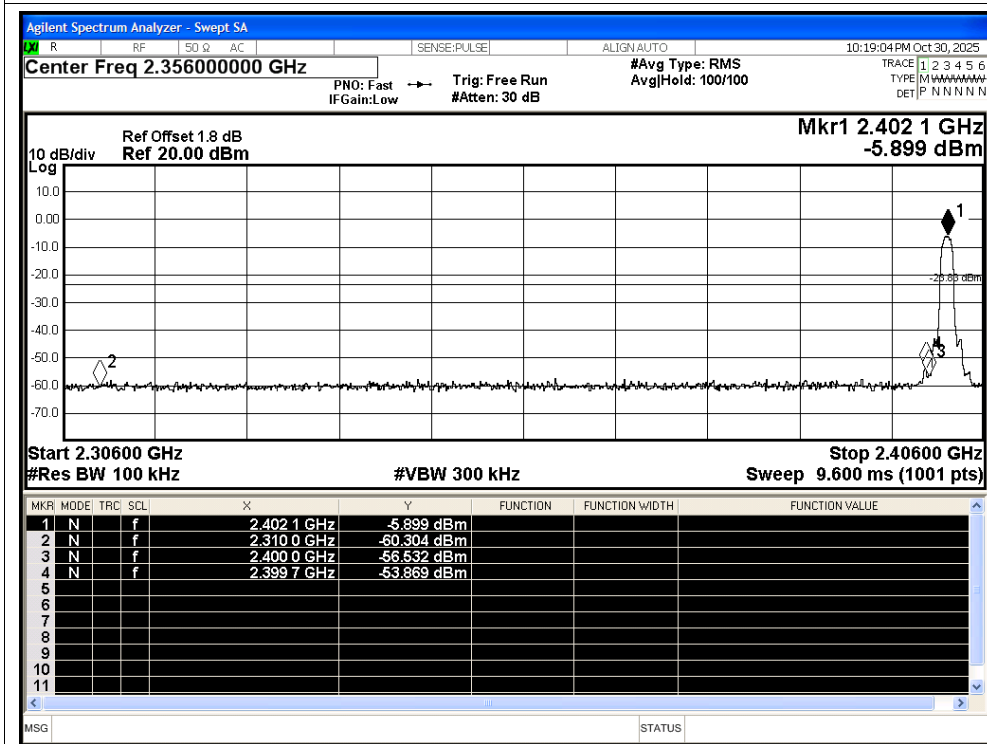




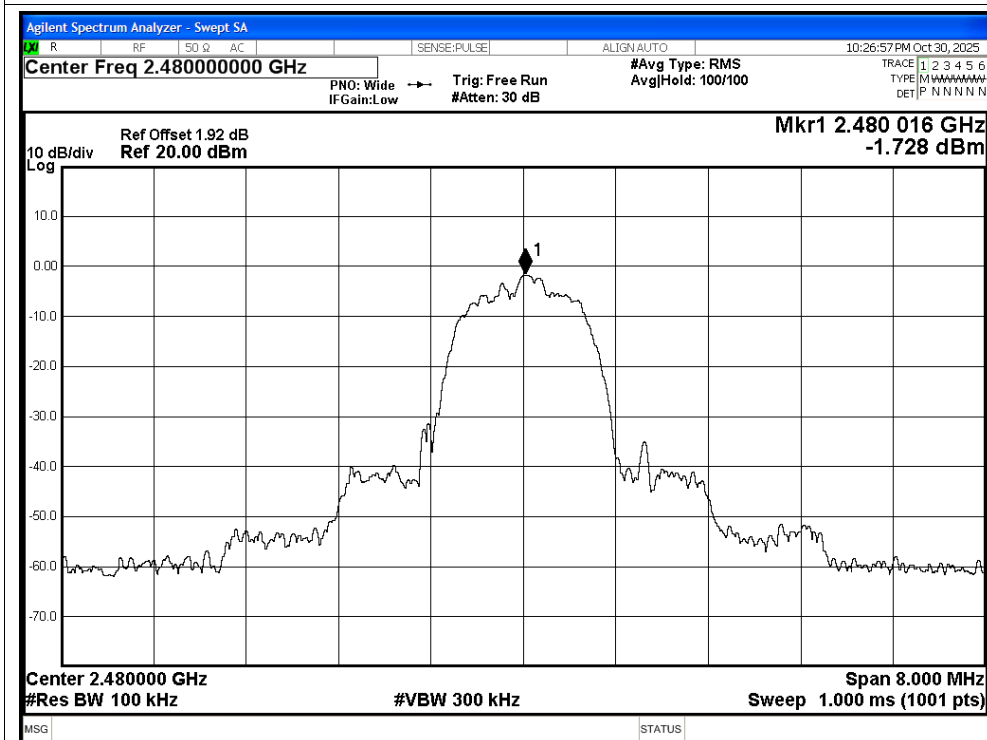
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



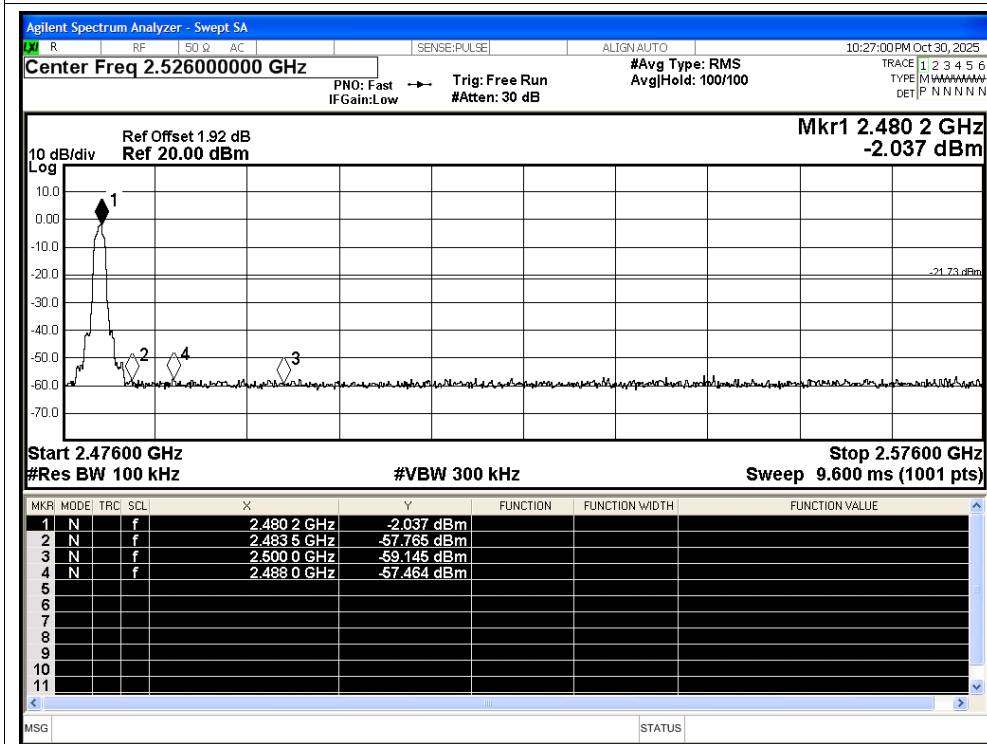
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



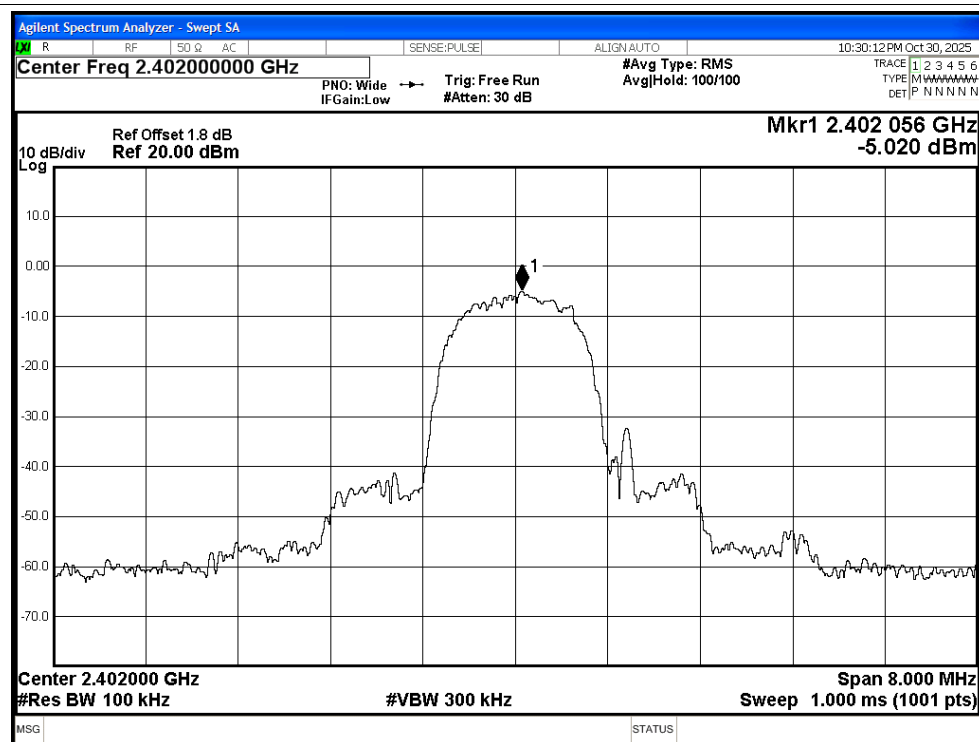
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



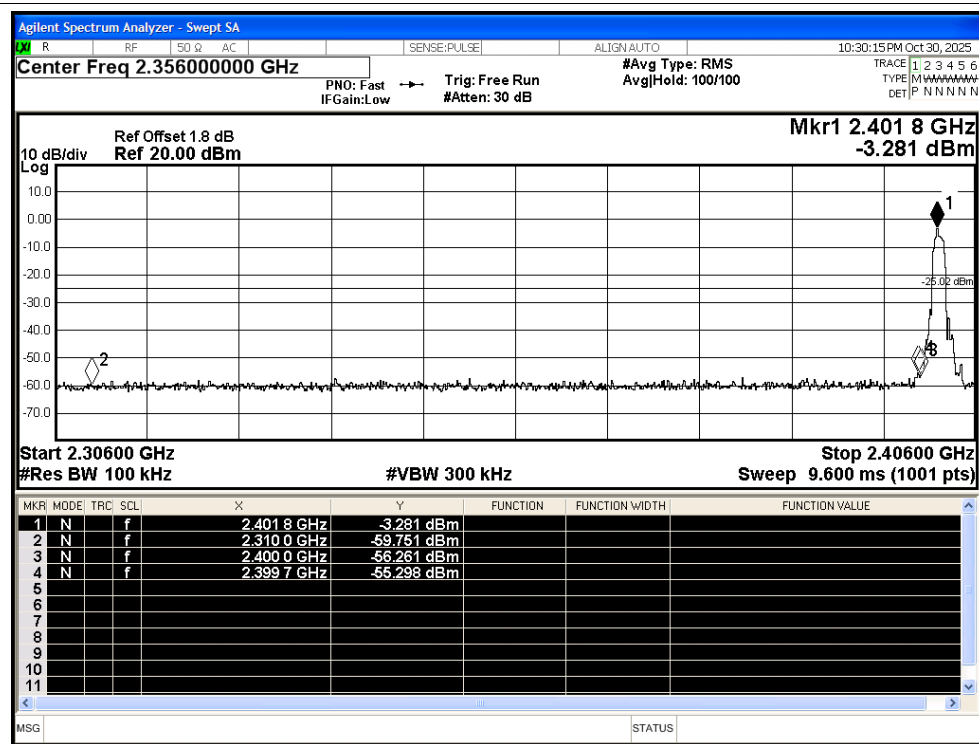
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



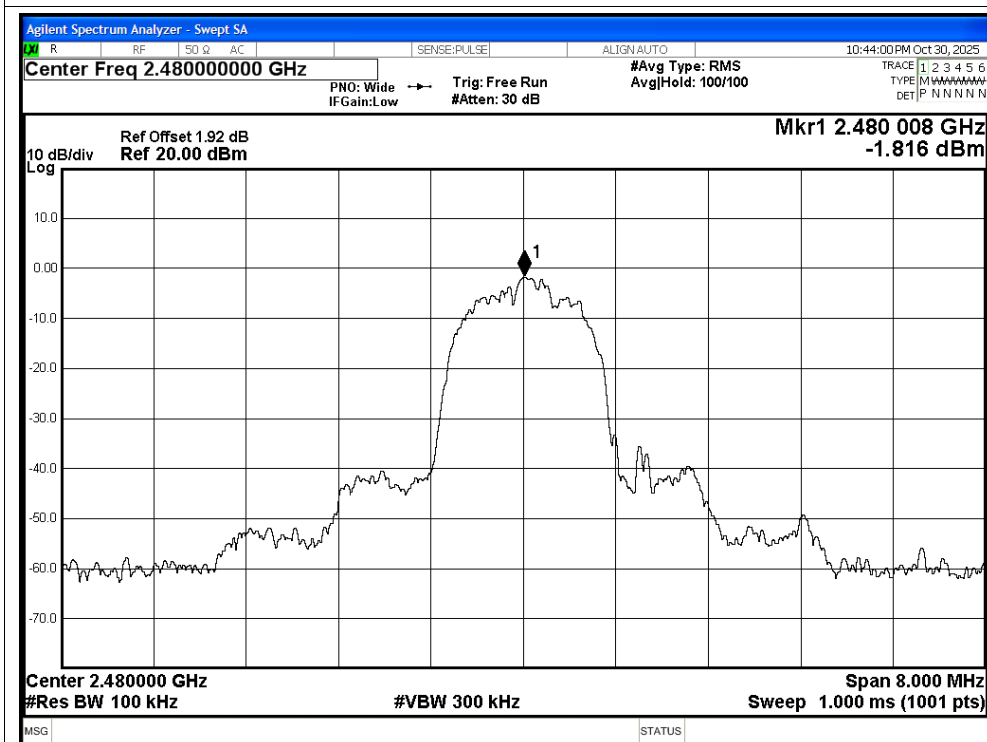
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



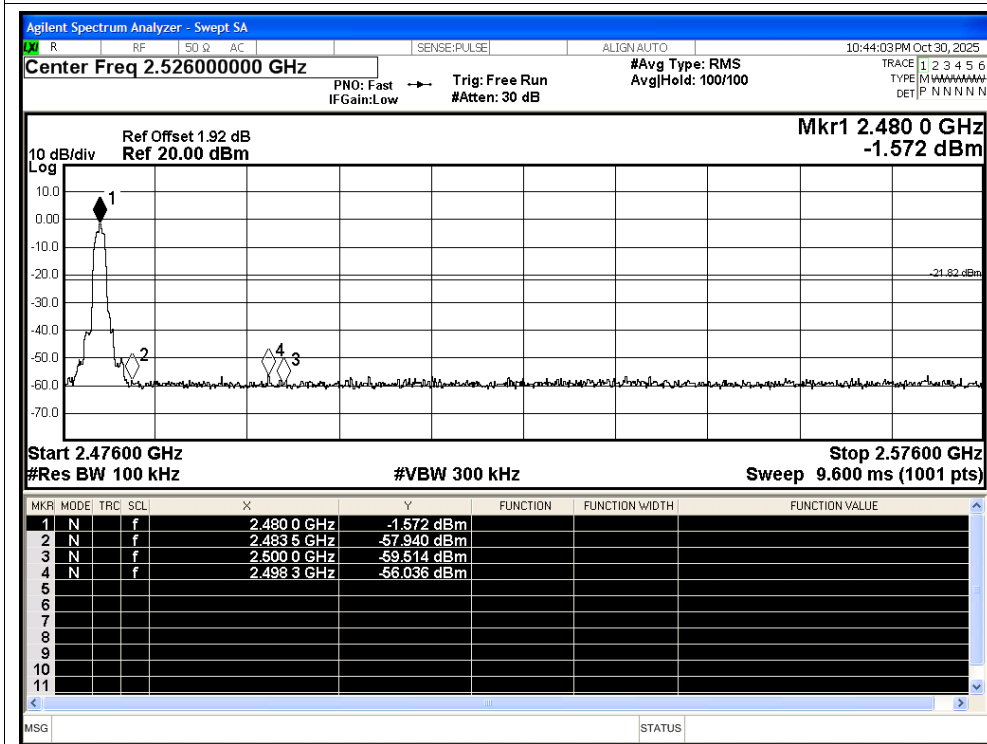
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



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



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

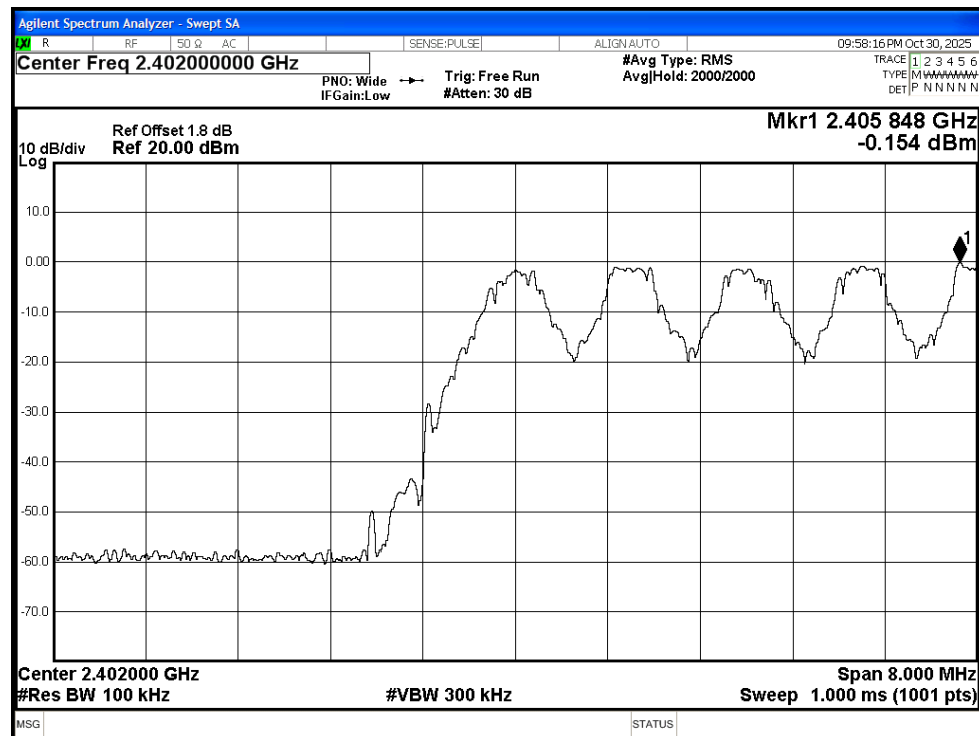


(Hopping)

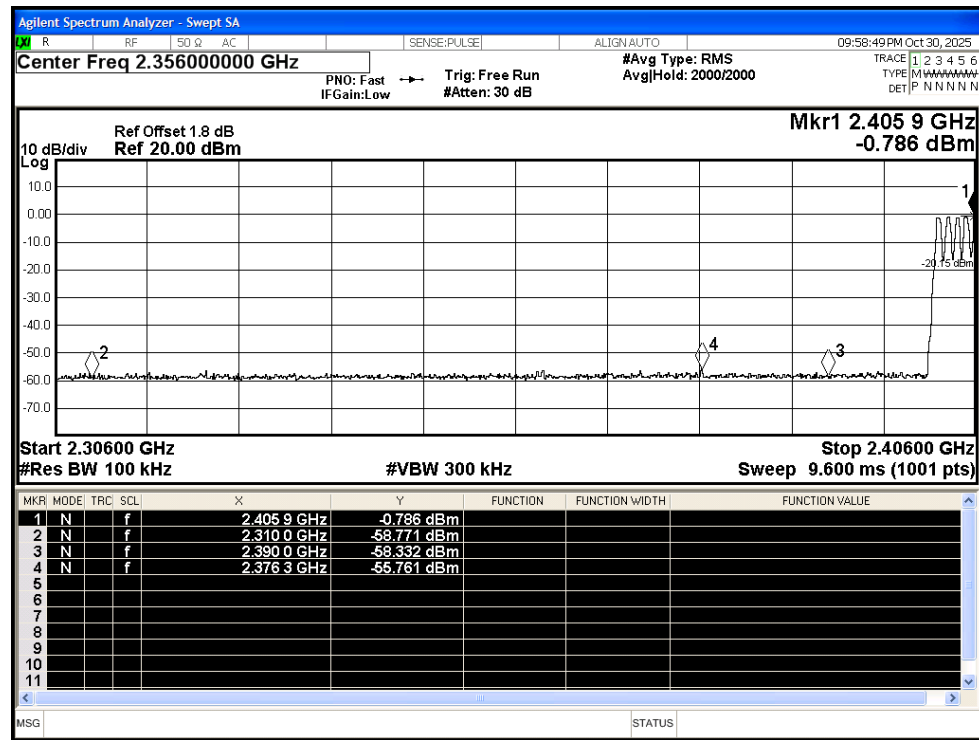
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-55.61	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-56.7	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-53.99	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-56.35	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-53.3	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-53.22	-20	Pass

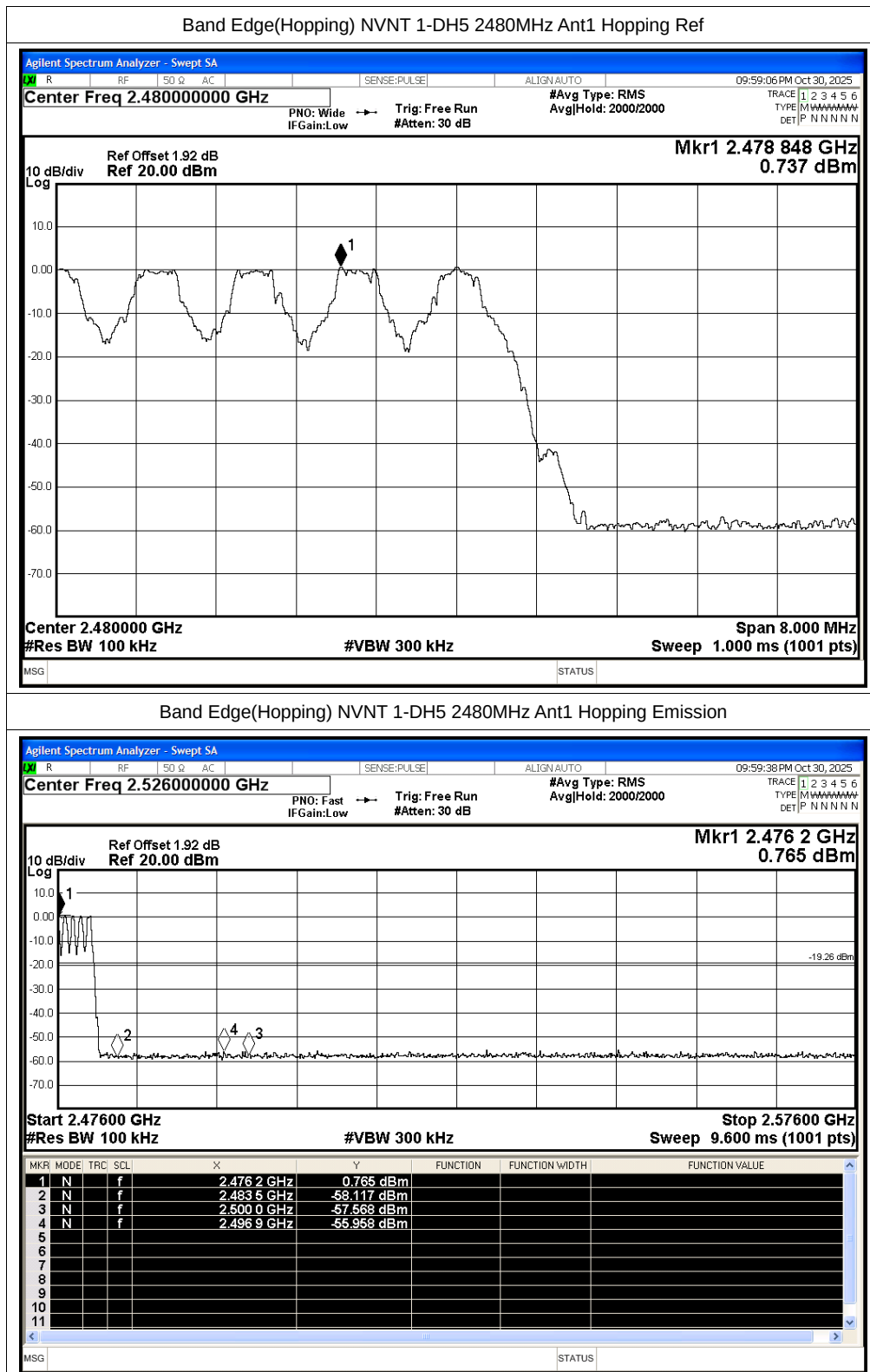
Test Graphs

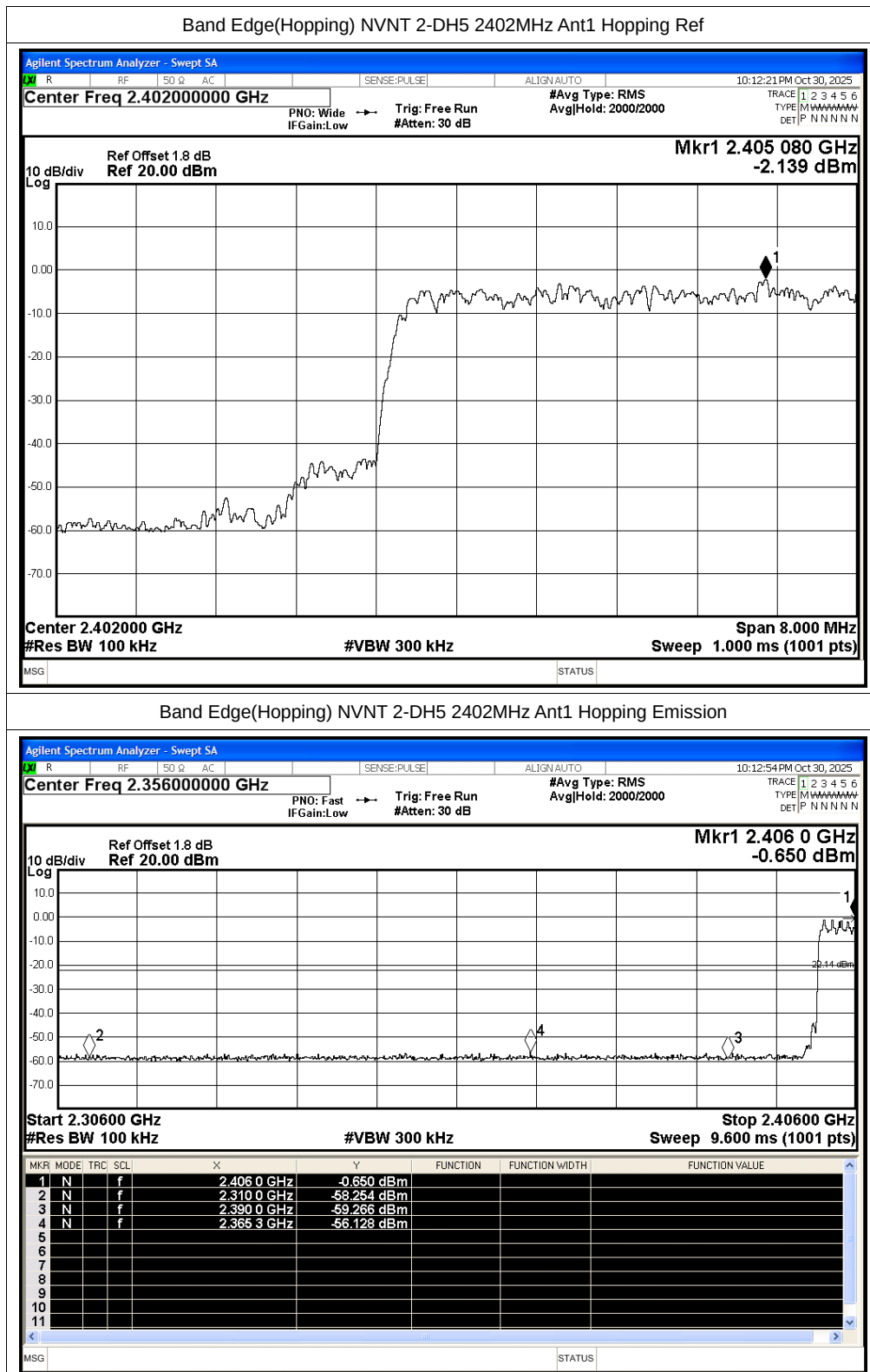
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



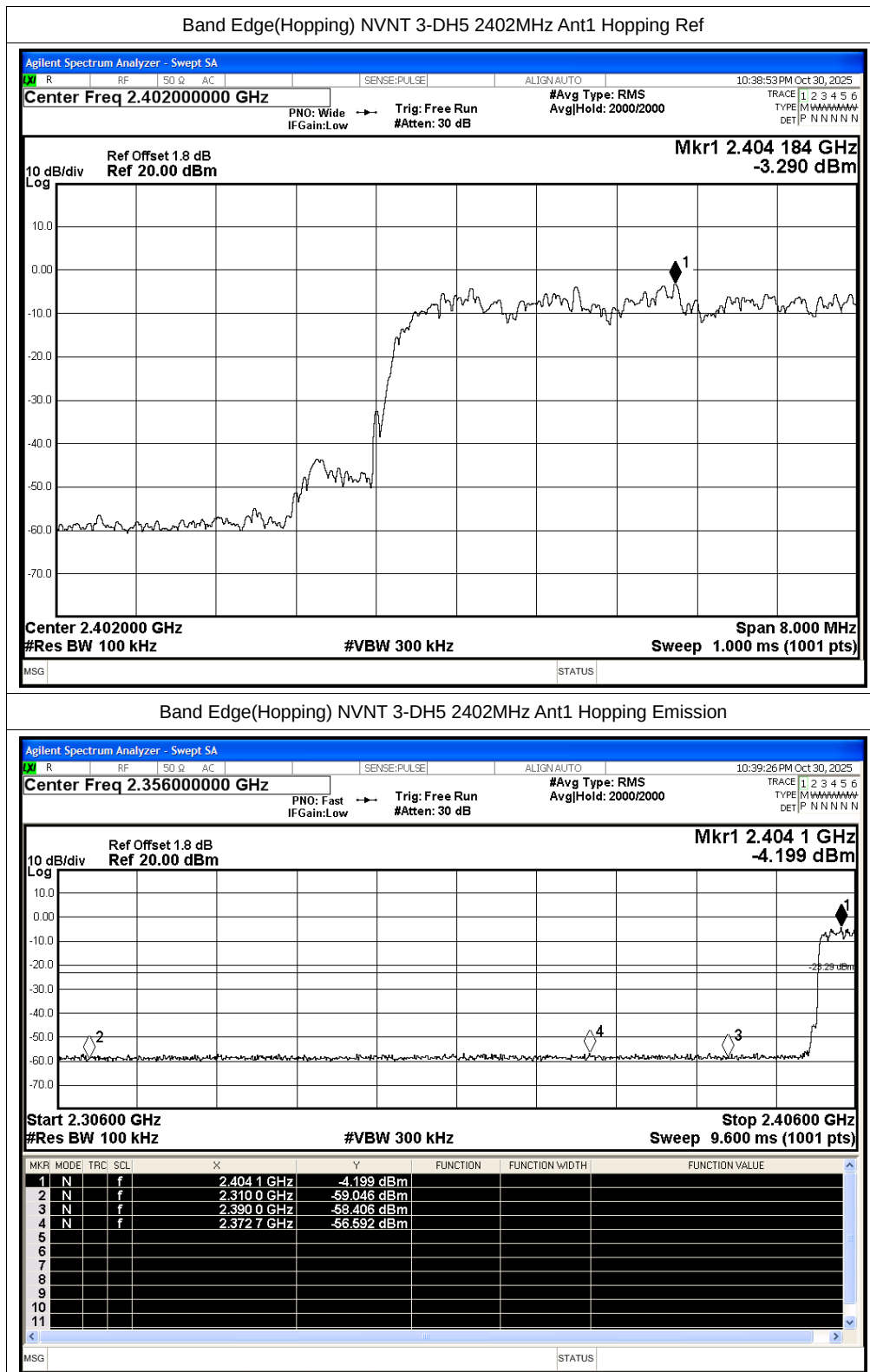
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

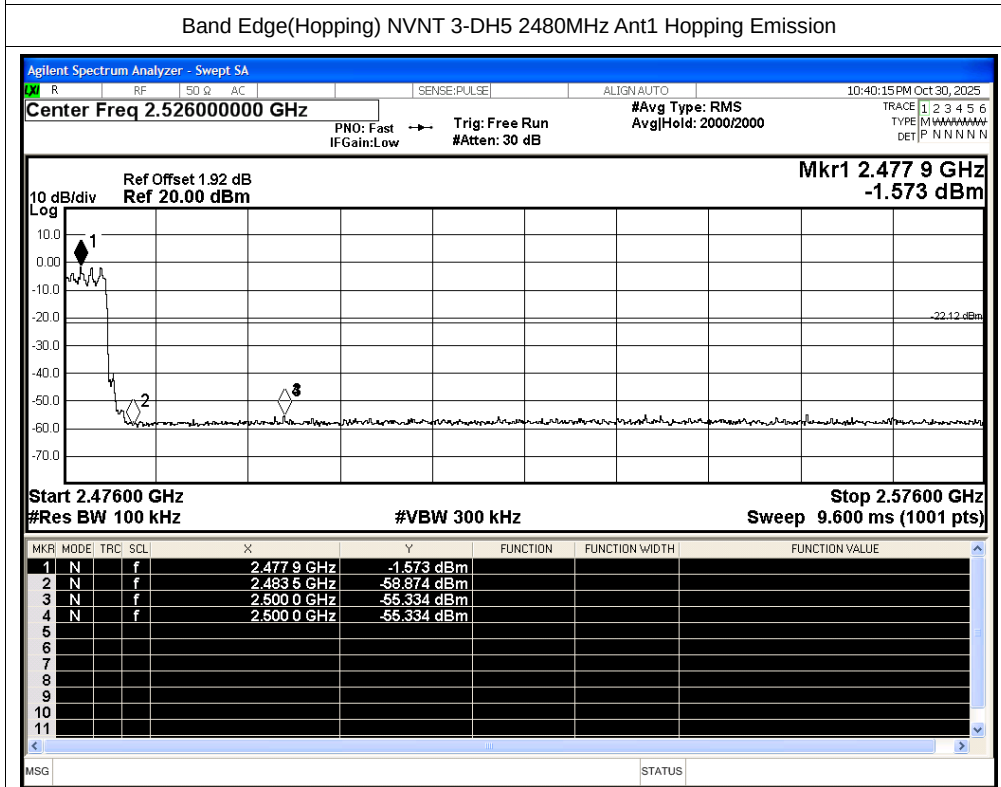
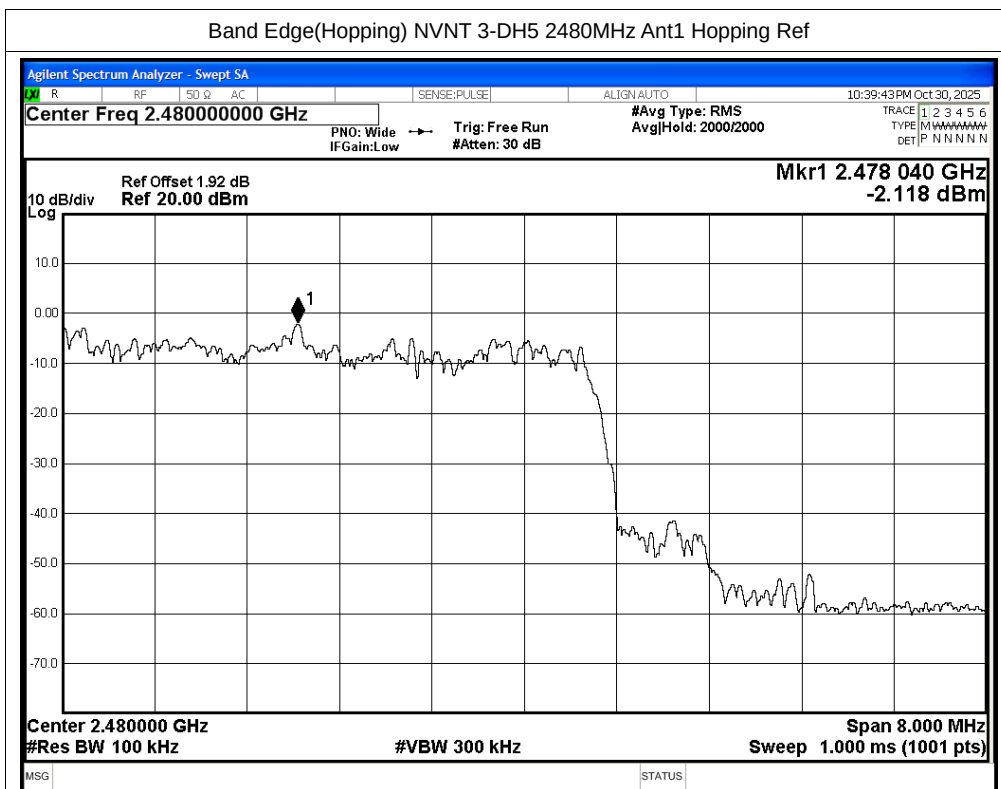










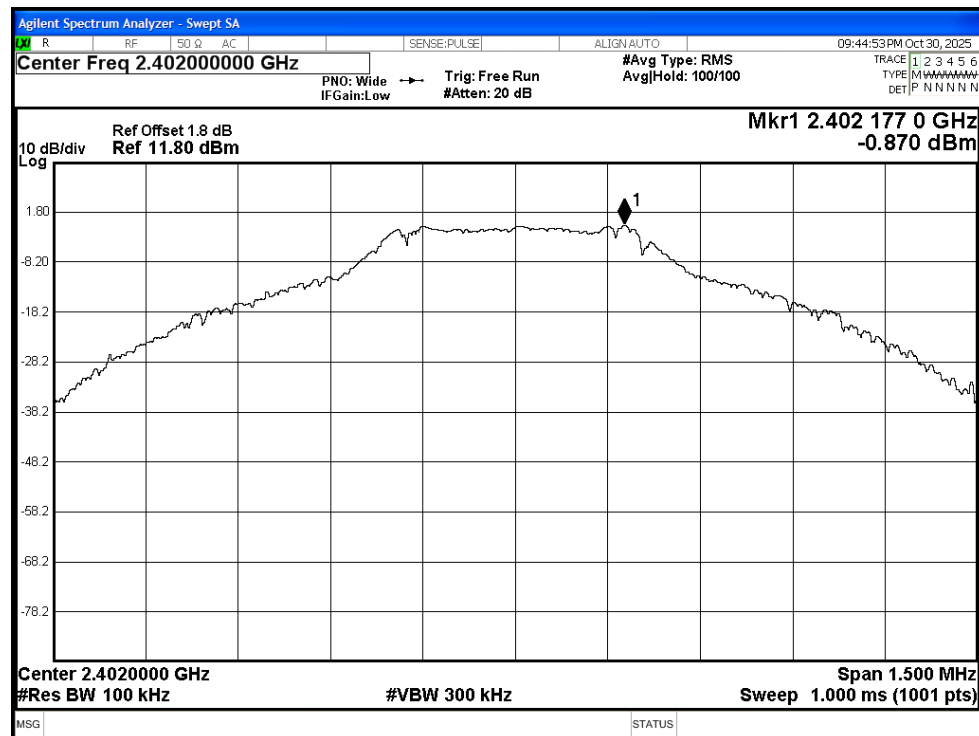


A.7 Conducted RF Spurious Emission

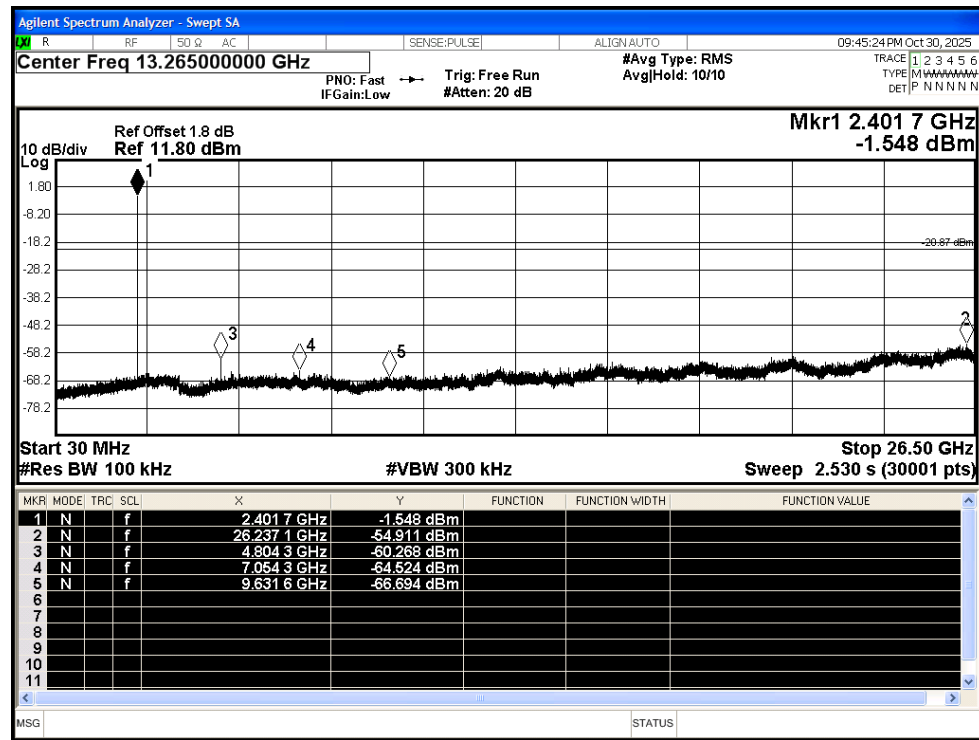
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-54.04	-20	Pass
NVNT	1-DH5	2441	Ant1	-57.08	-20	Pass
NVNT	1-DH5	2480	Ant1	-55.7	-20	Pass
NVNT	2-DH5	2402	Ant1	-51.94	-20	Pass
NVNT	2-DH5	2441	Ant1	-54.44	-20	Pass
NVNT	2-DH5	2480	Ant1	-52.96	-20	Pass
NVNT	3-DH5	2402	Ant1	-52.43	-20	Pass
NVNT	3-DH5	2441	Ant1	-54.02	-20	Pass
NVNT	3-DH5	2480	Ant1	-53.22	-20	Pass

Test Graphs

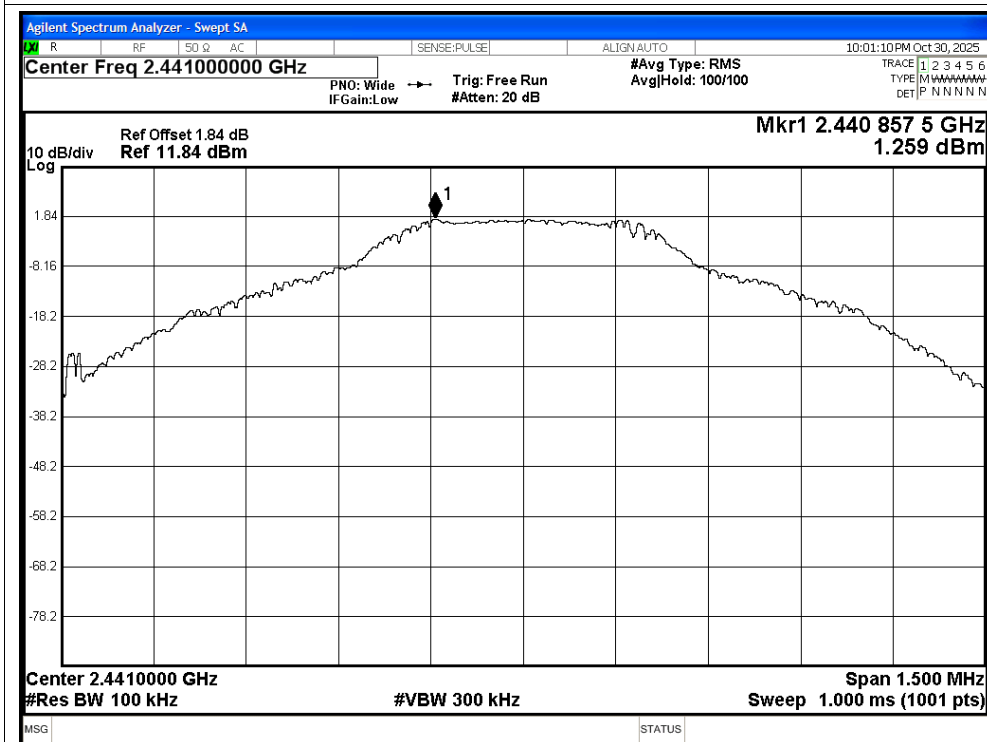
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



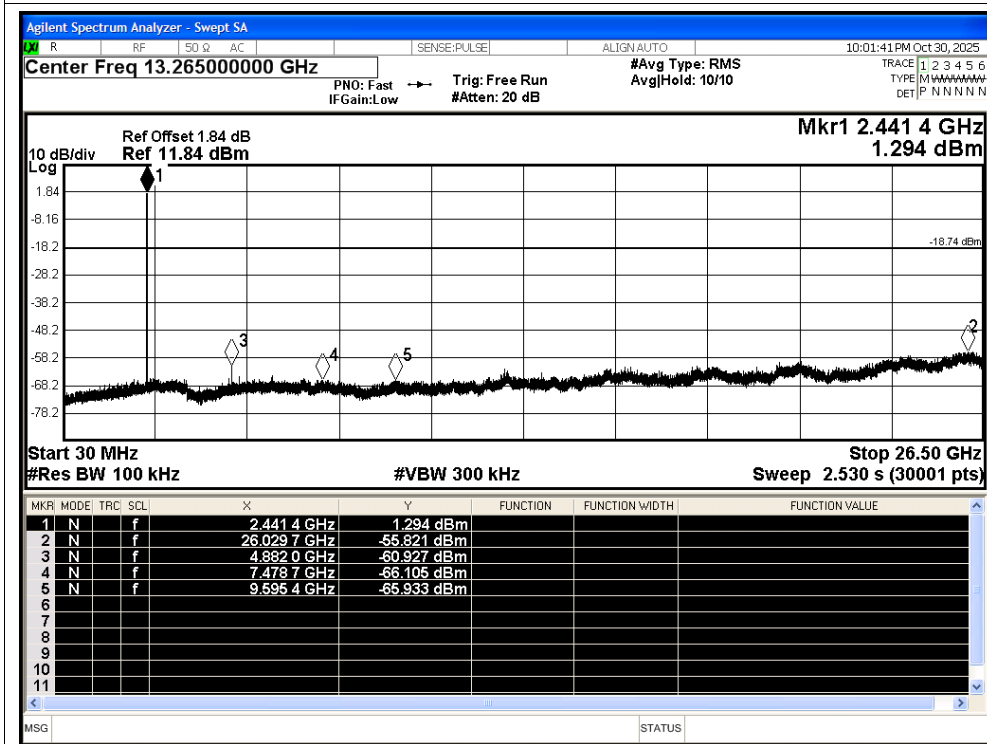
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



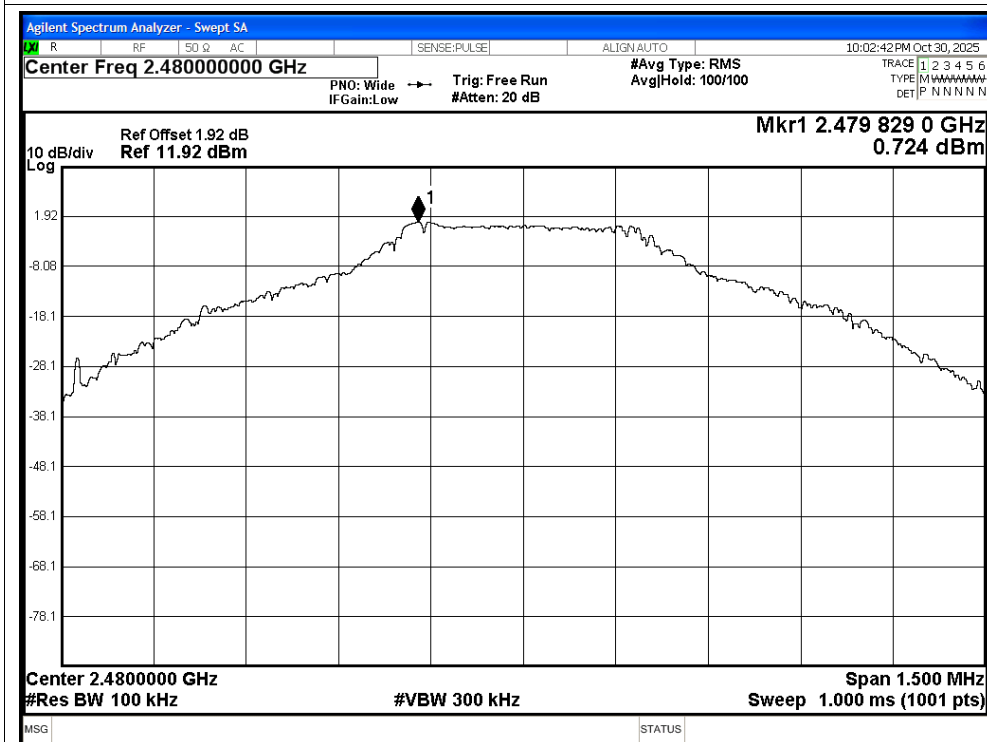
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



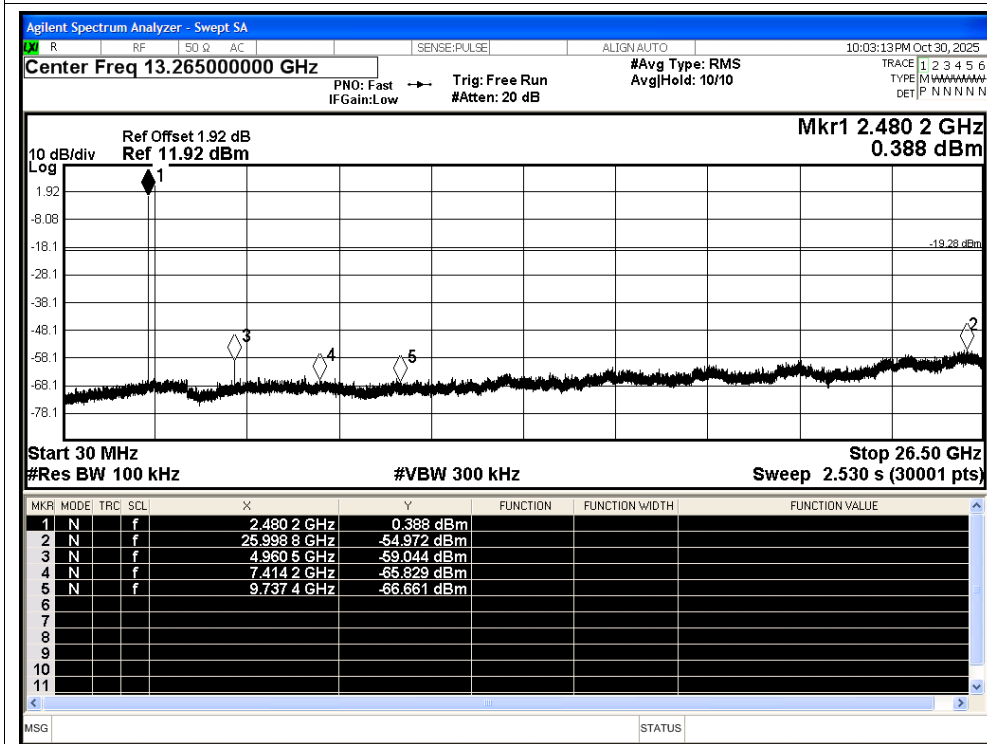
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



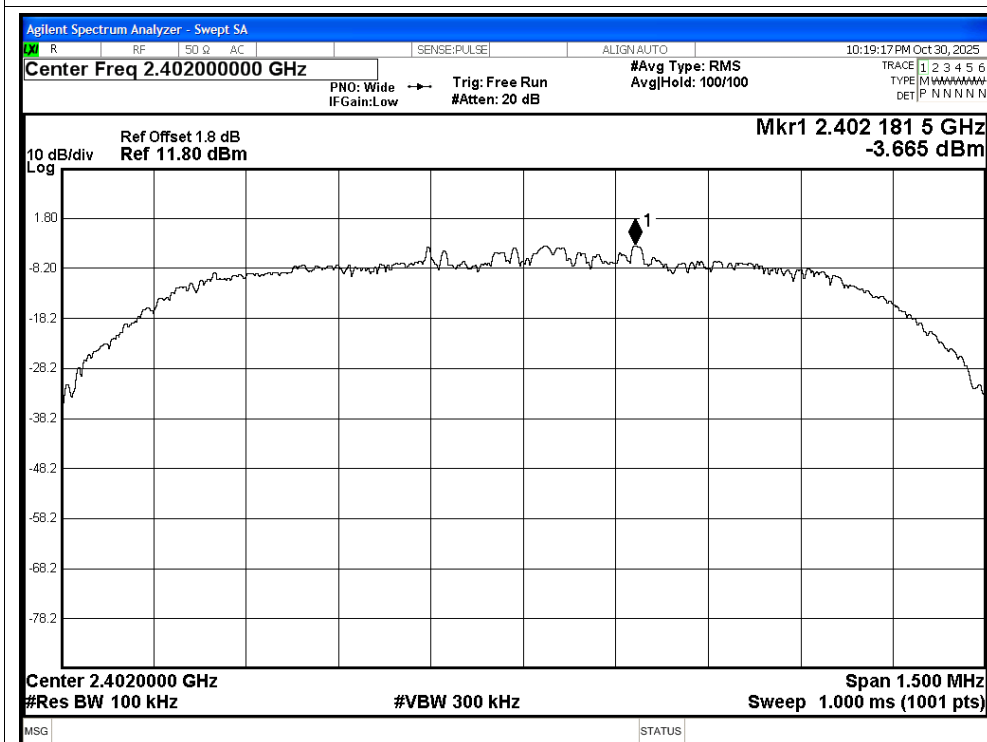
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



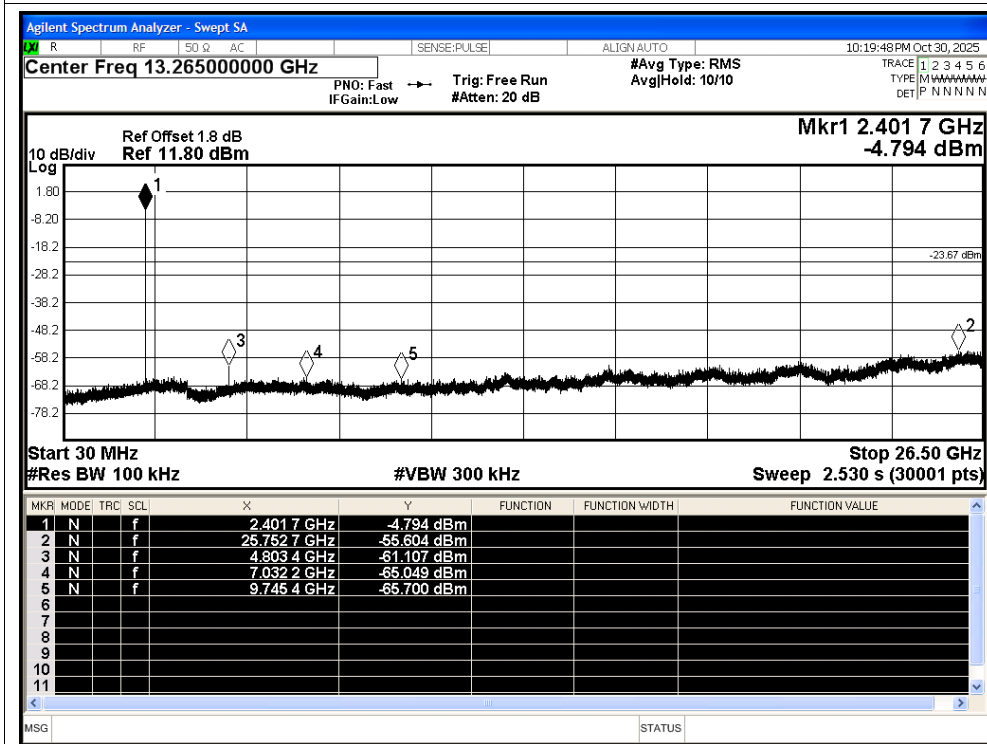
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



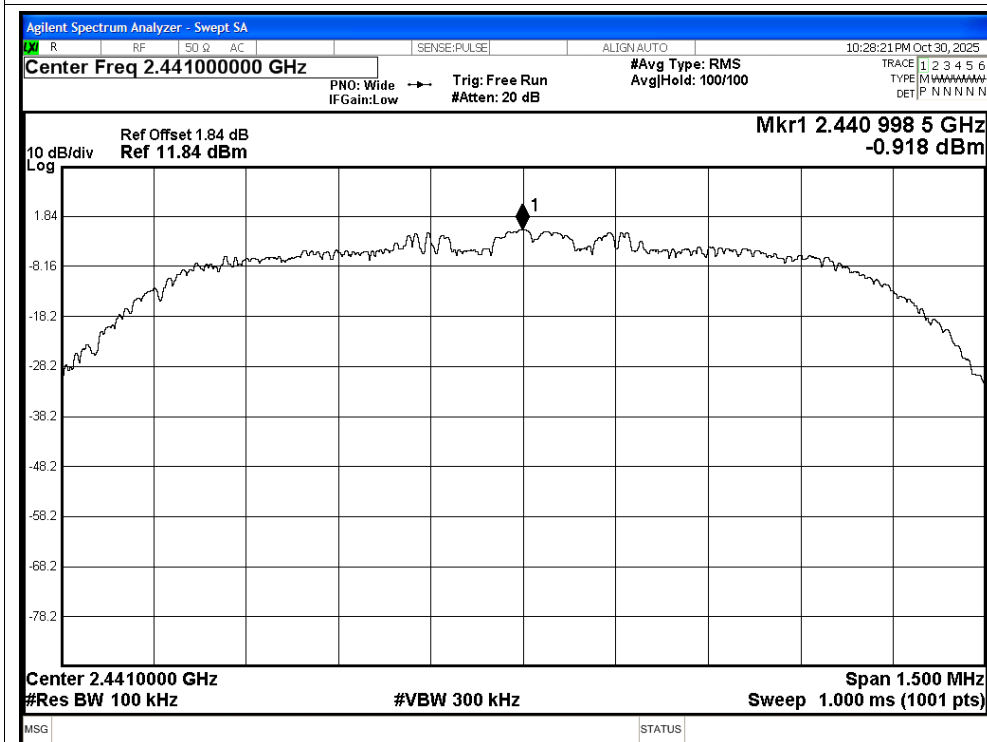
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



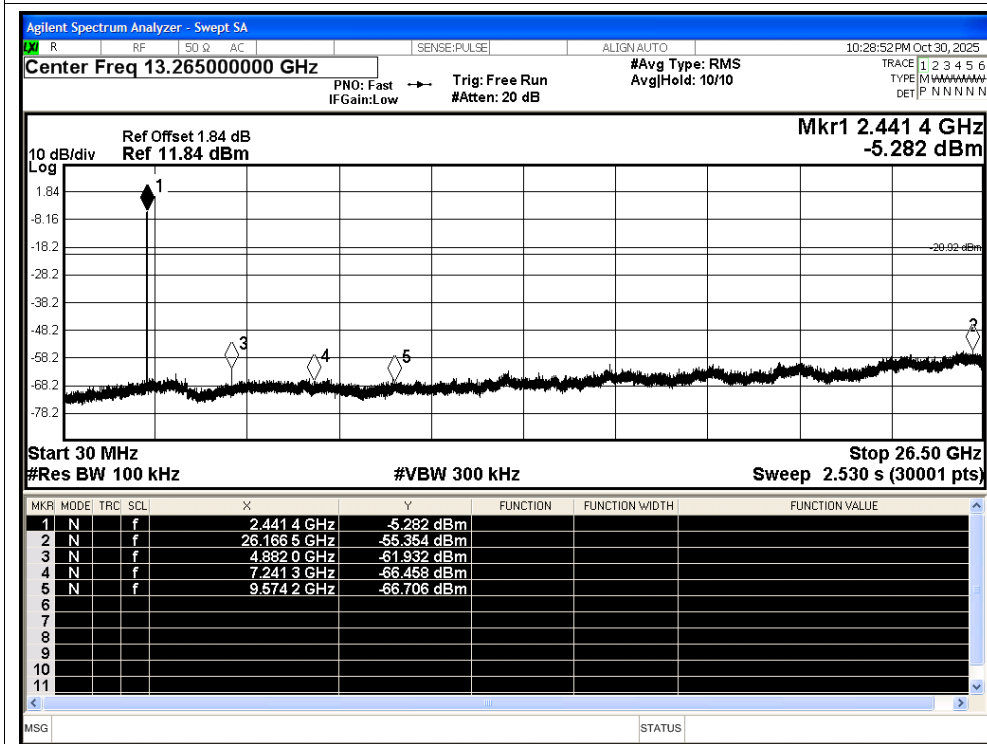
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



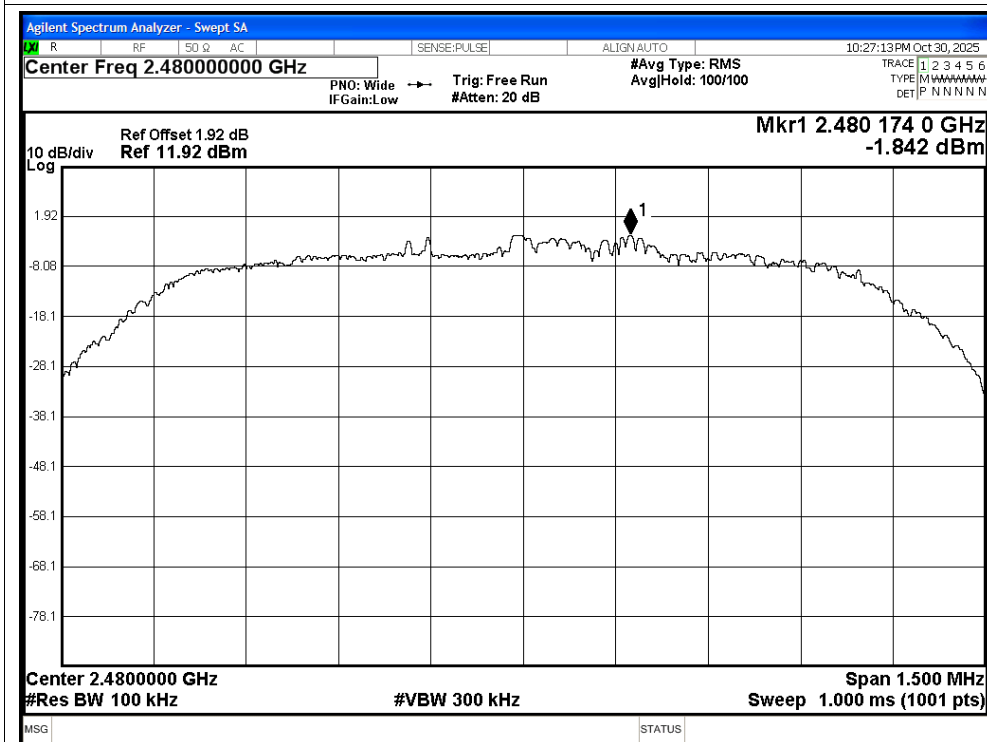
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



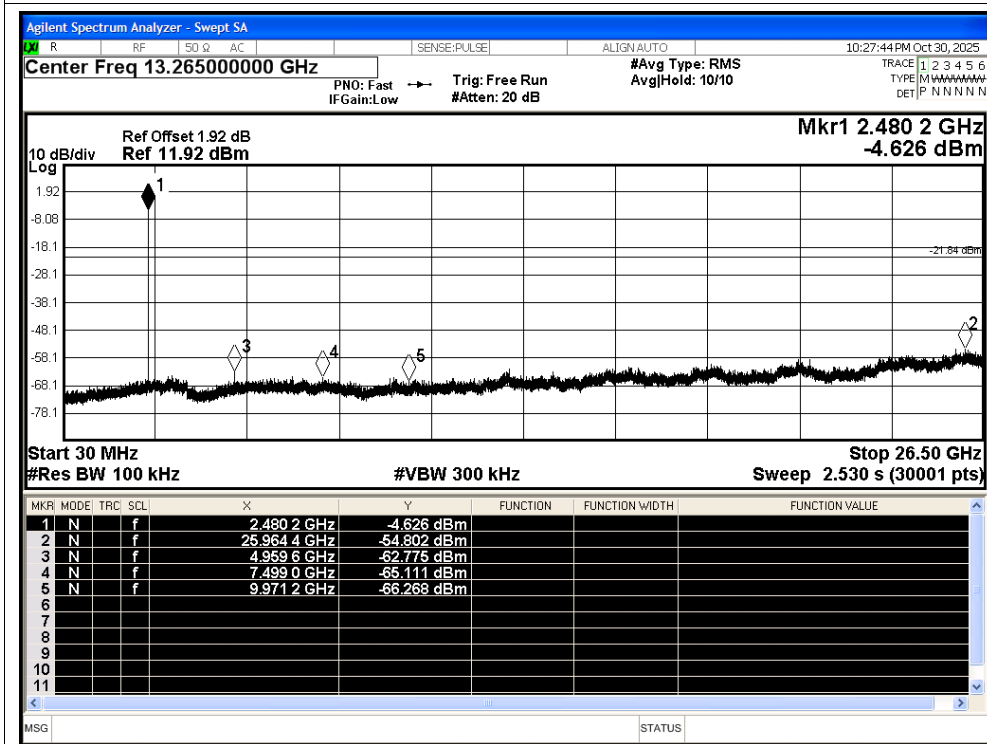
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



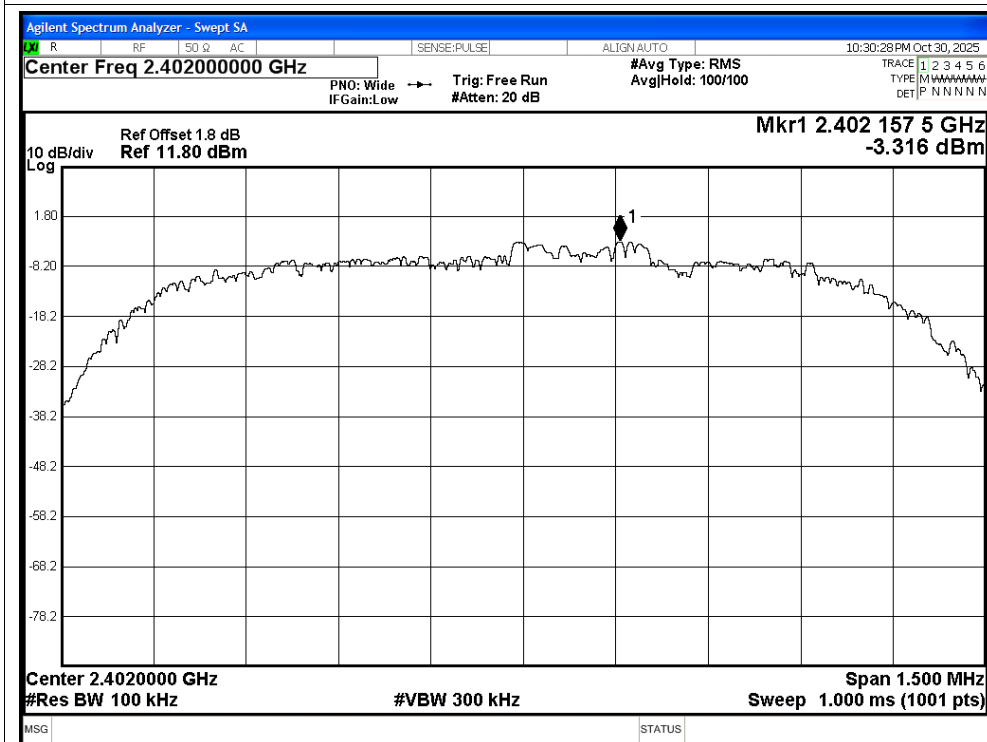
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



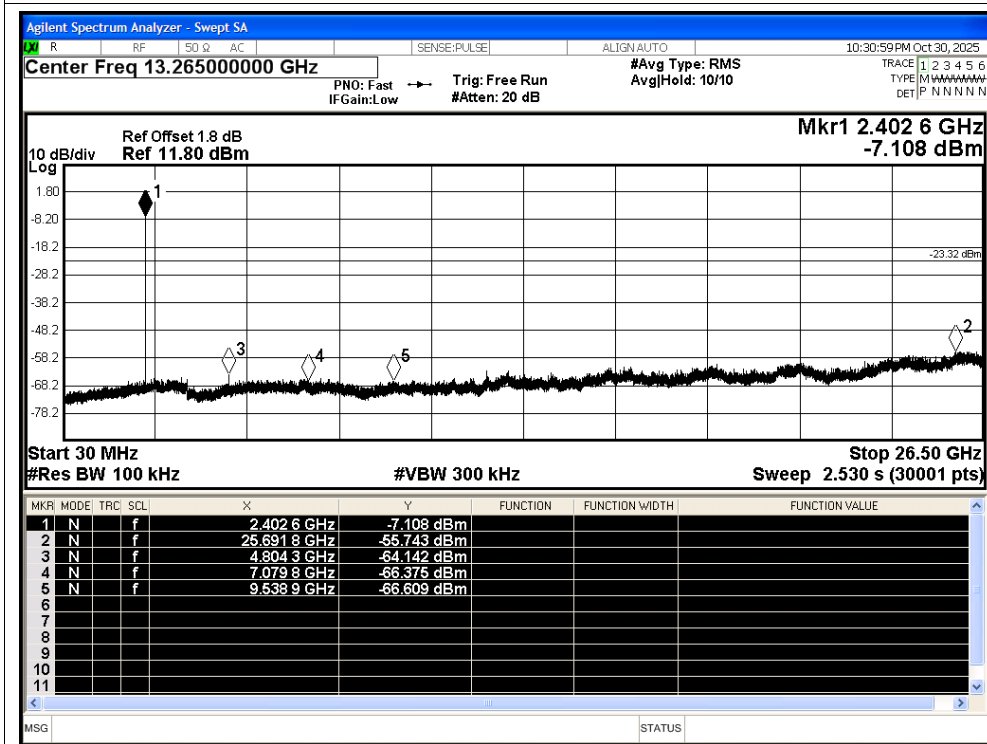
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



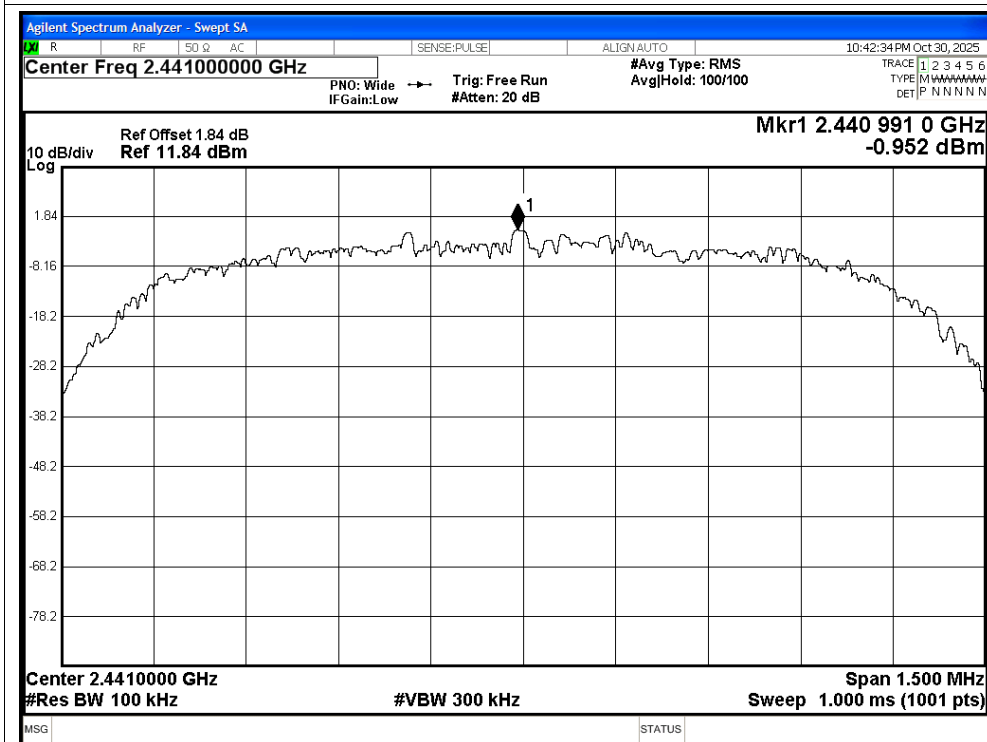
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



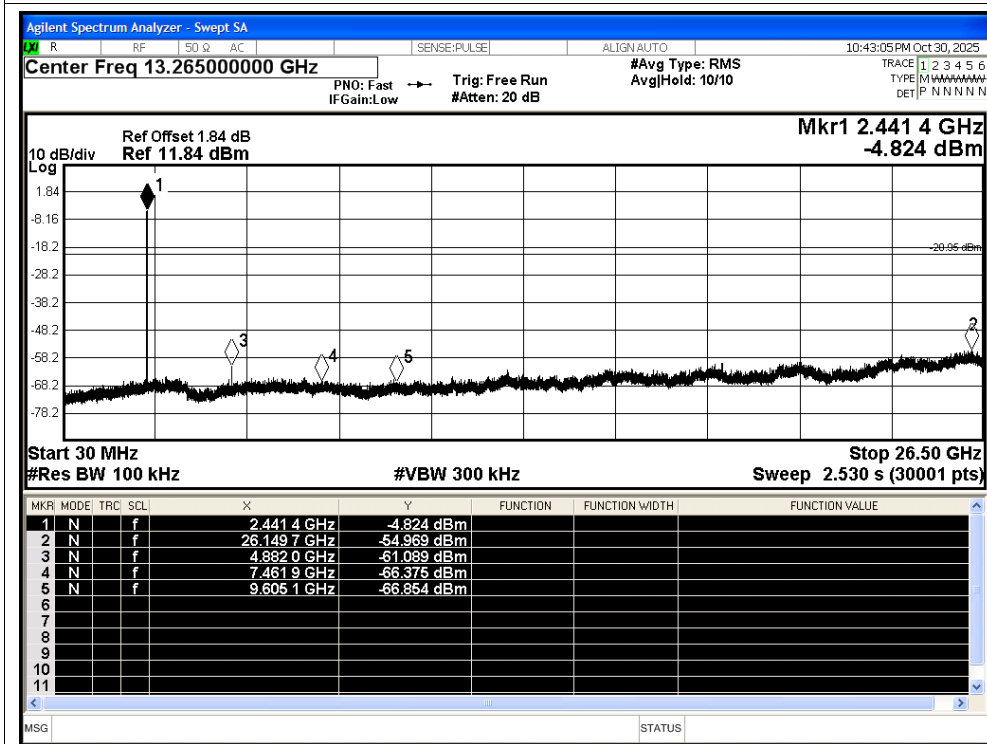
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission



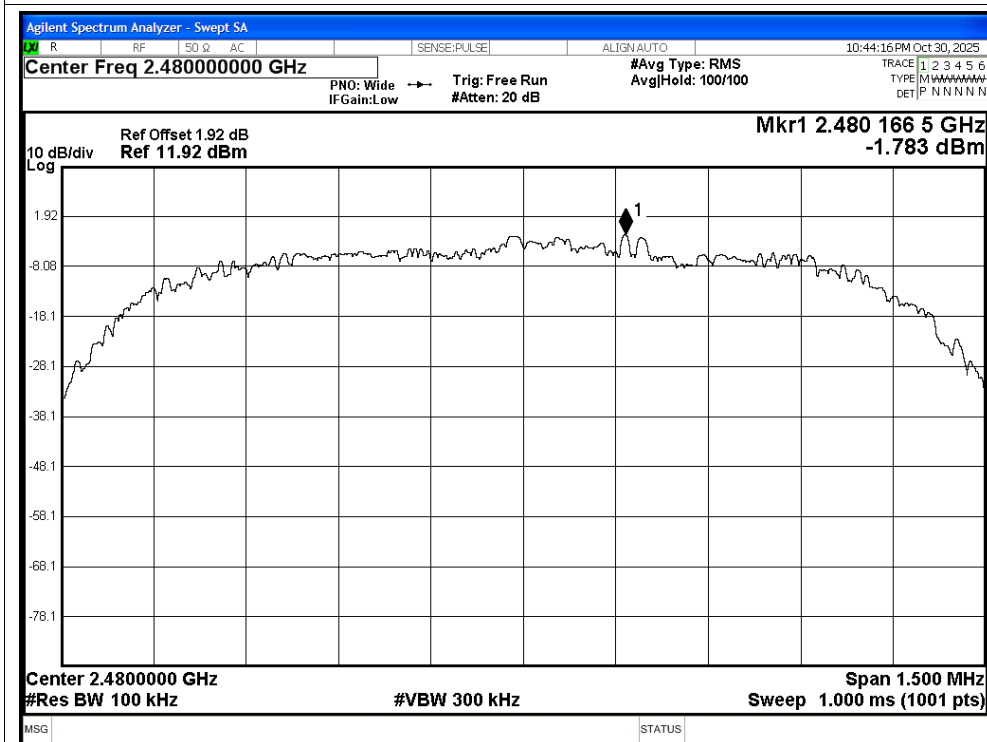
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



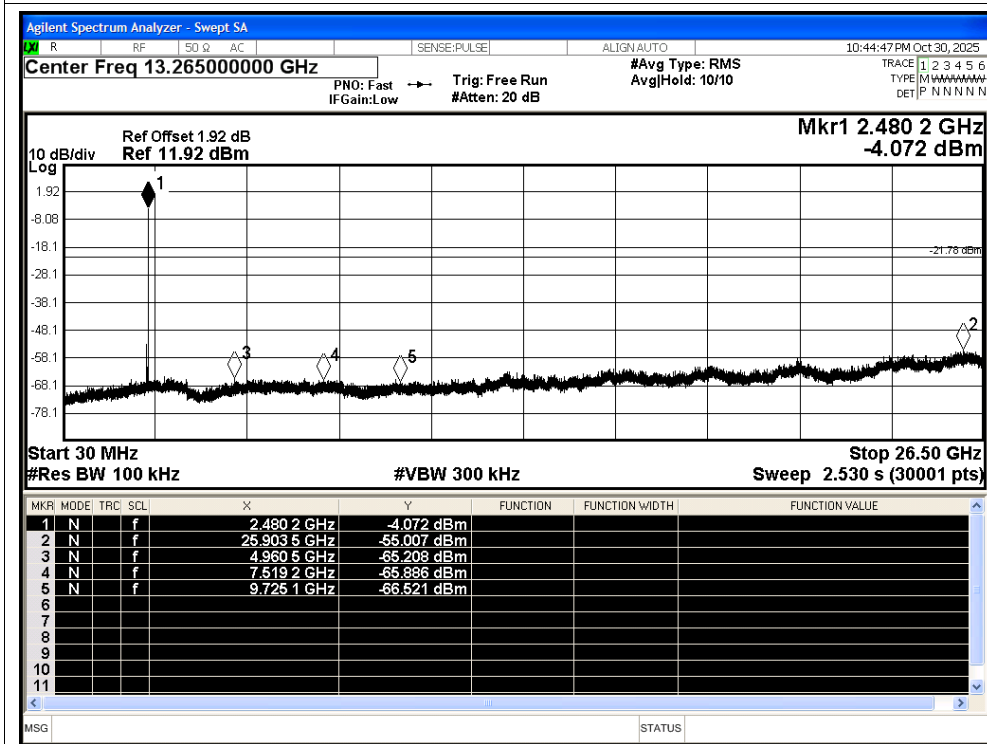
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission

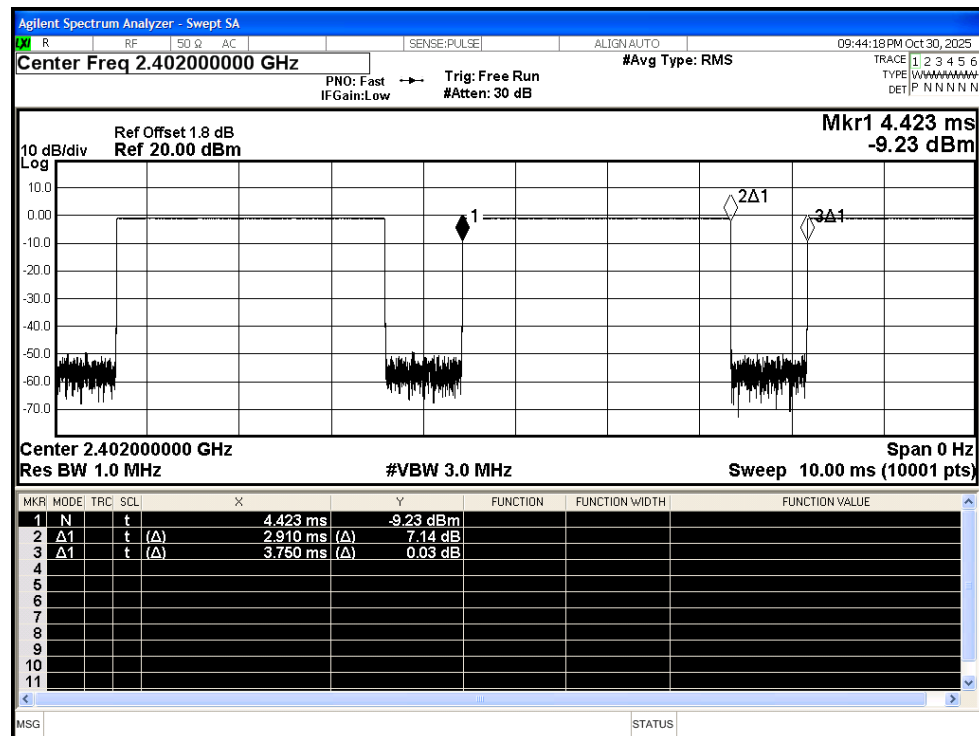


A.8 Duty Cycle

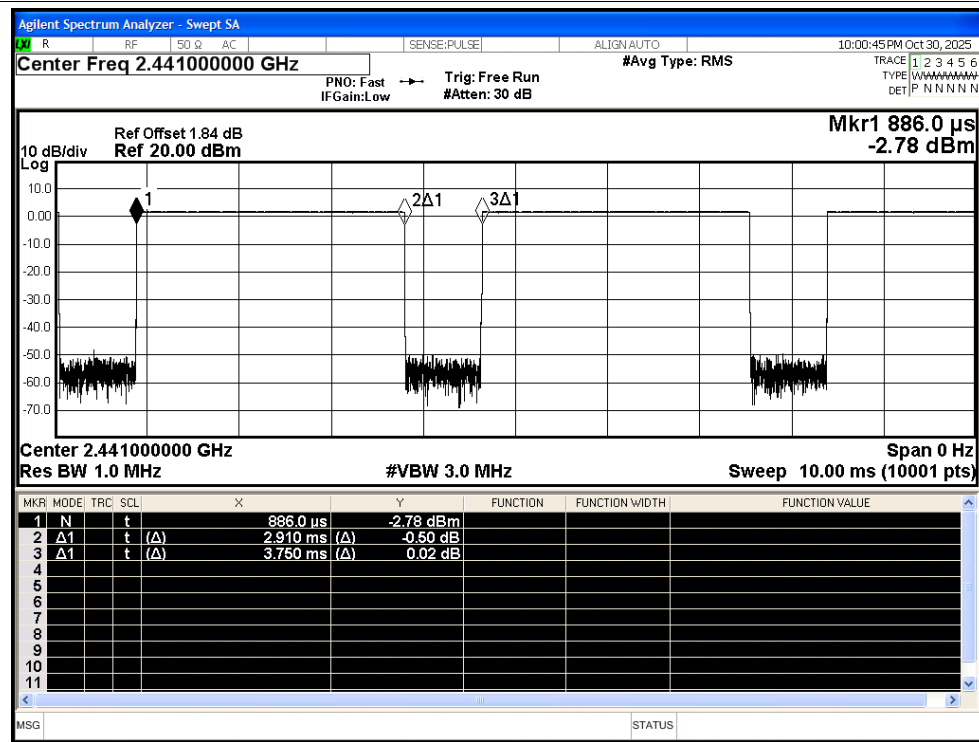
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.63	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2441	Ant1	97.22	0.12	7.14
NVNT	2-DH5	2480	Ant1	97.22	0.12	7.14
NVNT	3-DH5	2402	Ant1	76.37	1.17	0.36
NVNT	3-DH5	2441	Ant1	97.22	0.12	7.14
NVNT	3-DH5	2480	Ant1	97.22	0.12	7.14

Test Graphs

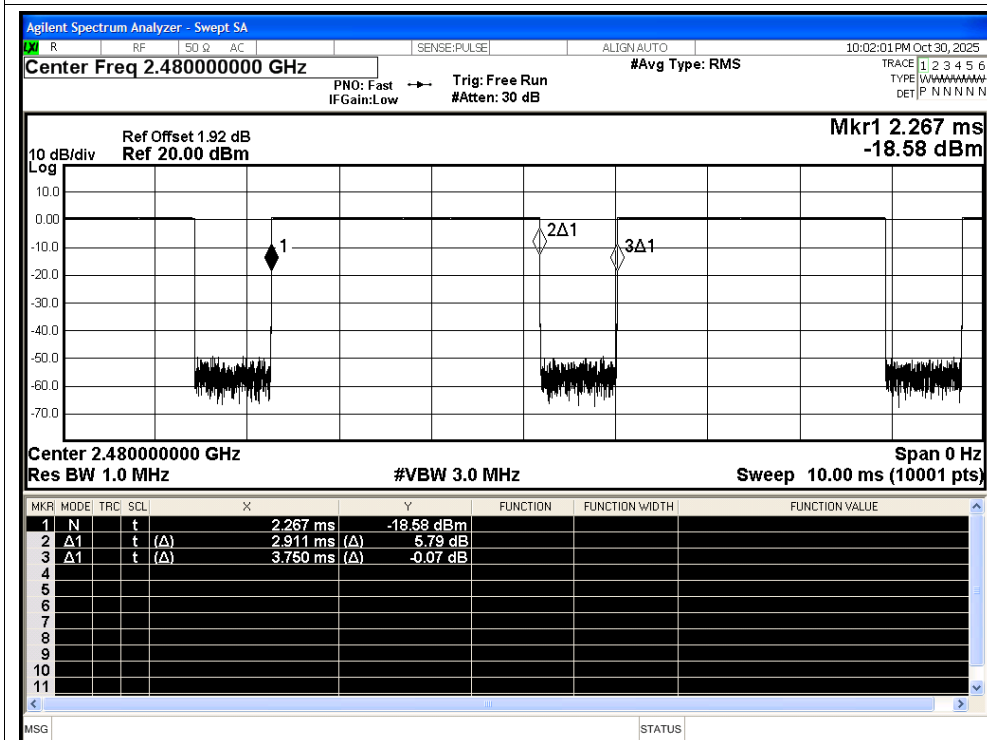
Duty Cycle NVNT 1-DH5 2402MHz Ant1



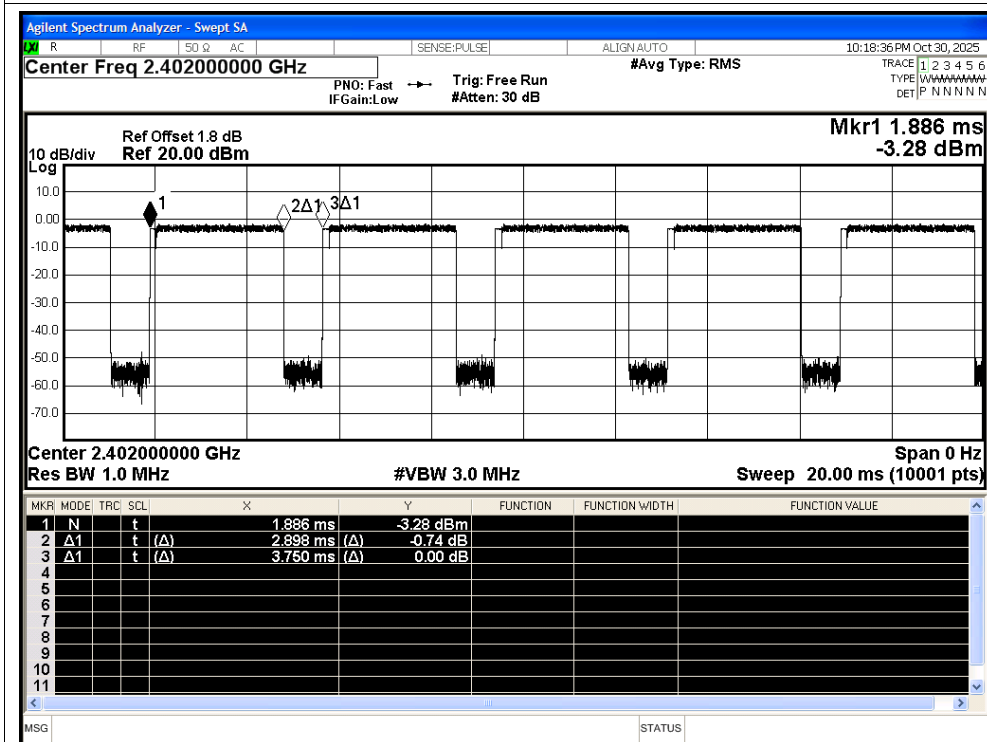
Duty Cycle NVNT 1-DH5 2441MHz Ant1



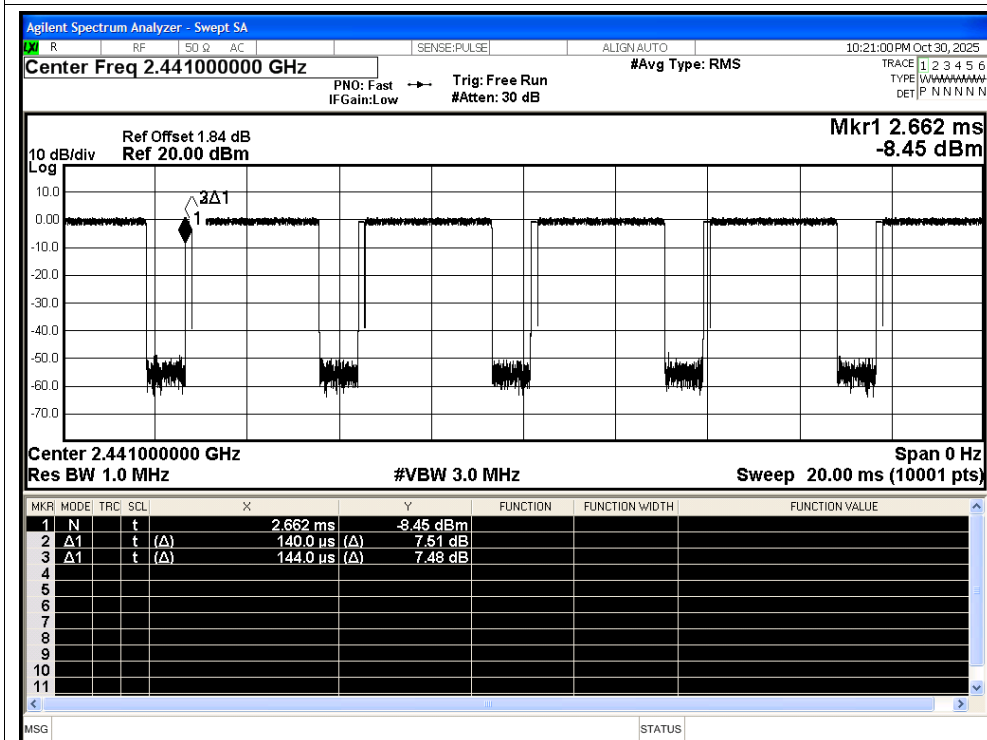
Duty Cycle NVNT 1-DH5 2480MHz Ant1



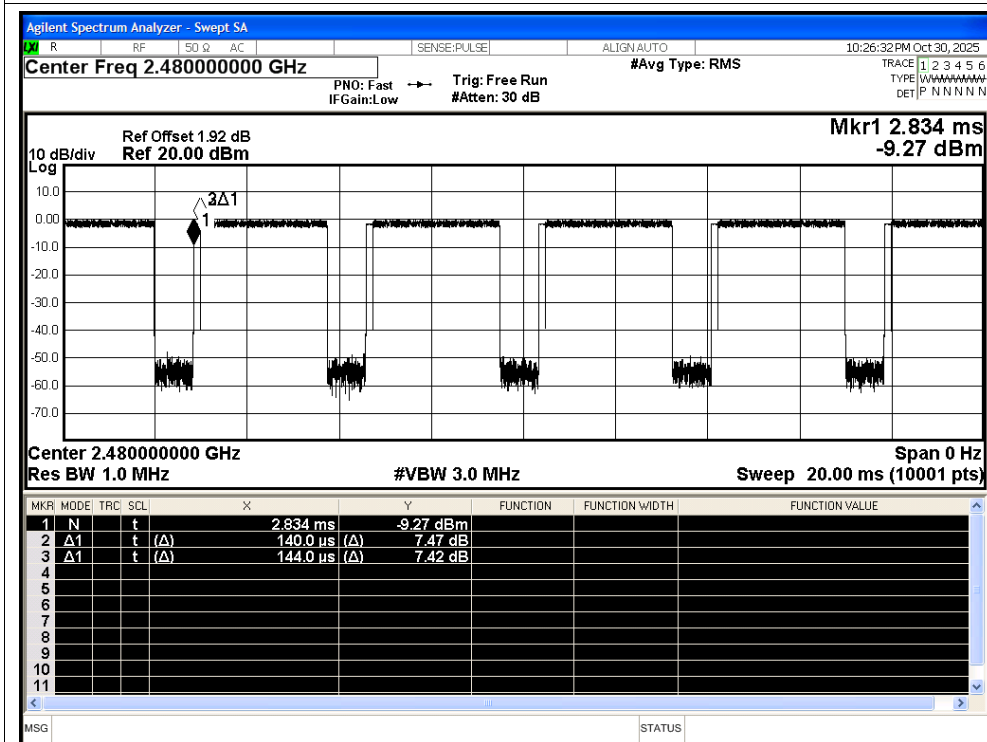
Duty Cycle NVNT 2-DH5 2402MHz Ant1



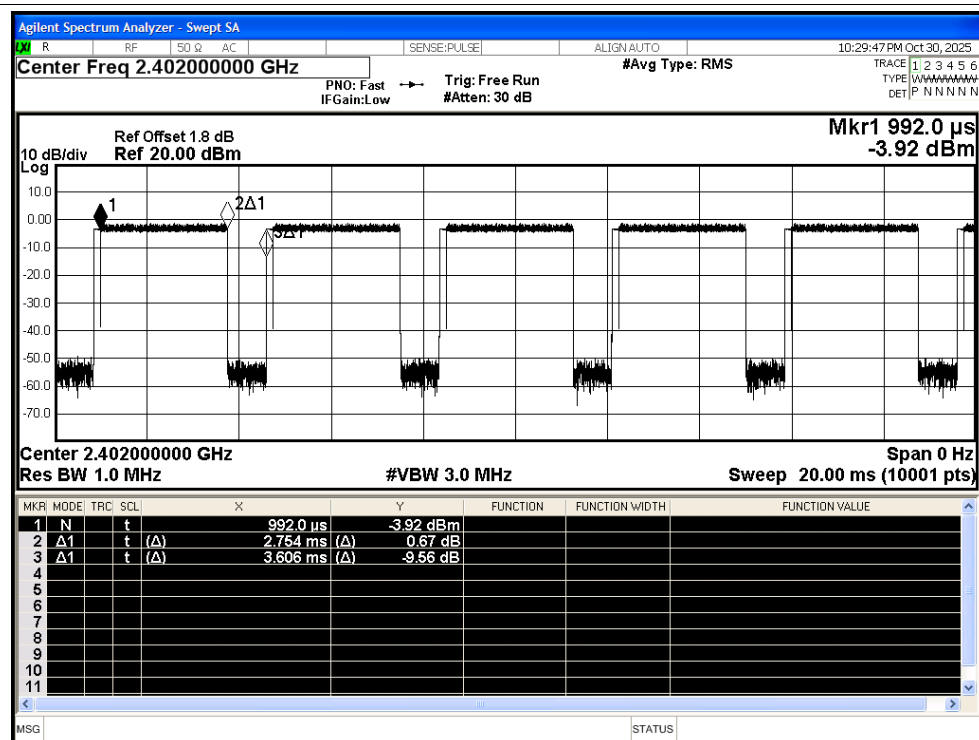
Duty Cycle NVNT 2-DH5 2441MHz Ant1



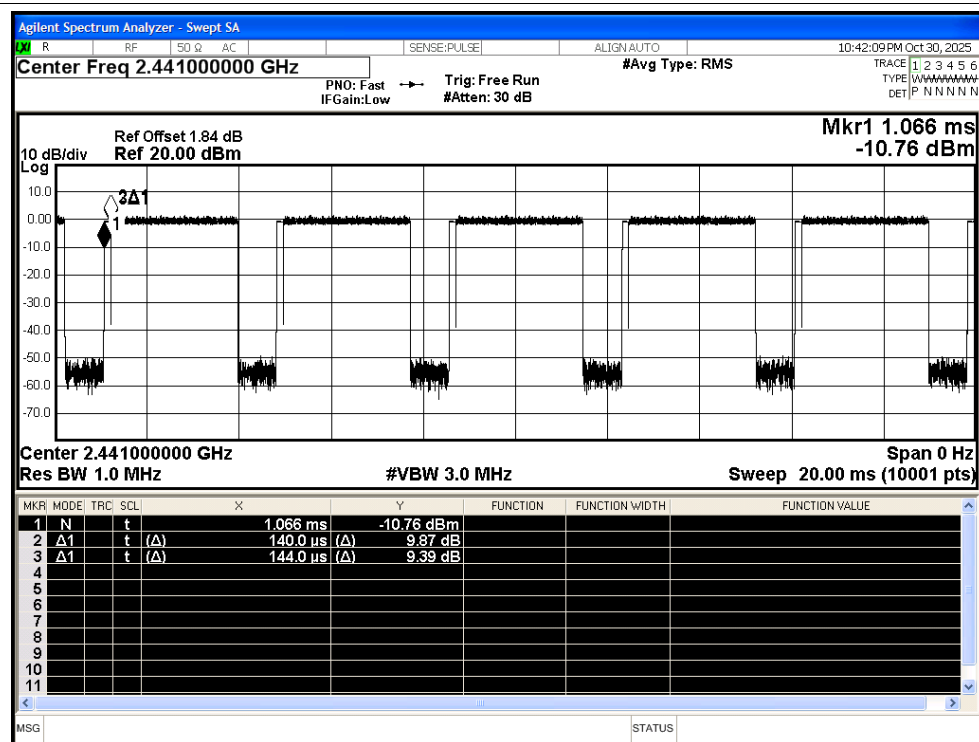
Duty Cycle NVNT 2-DH5 2480MHz Ant1

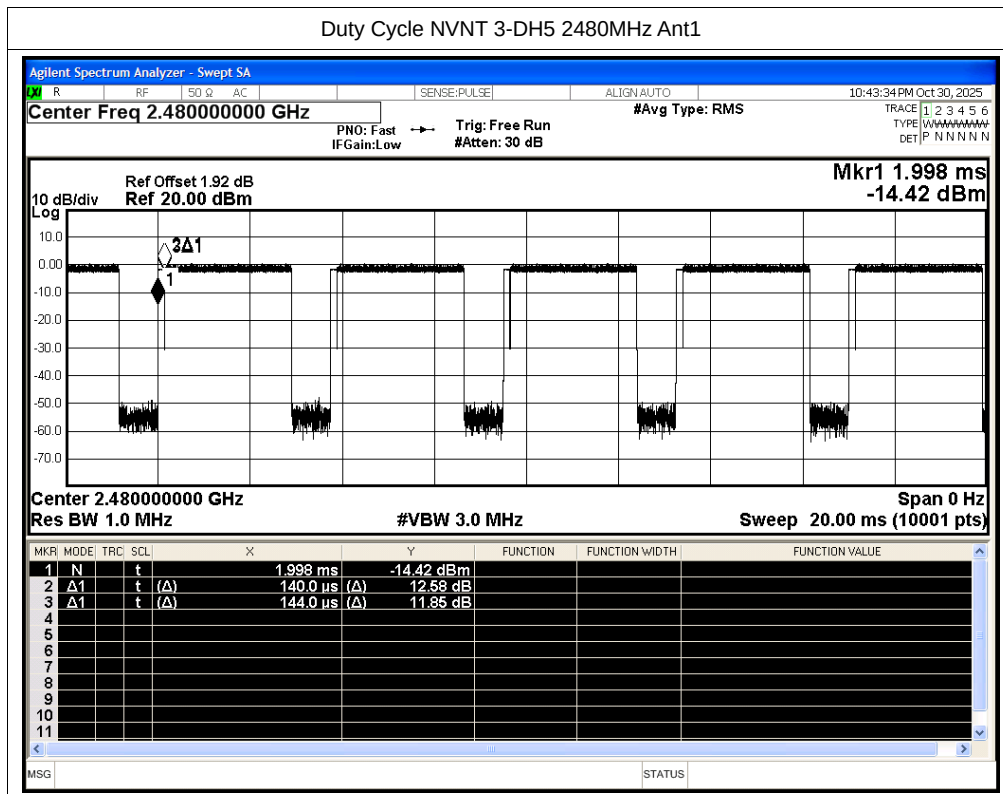


Duty Cycle NVNT 3-DH5 2402MHz Ant1



Duty Cycle NVNT 3-DH5 2441MHz Ant1



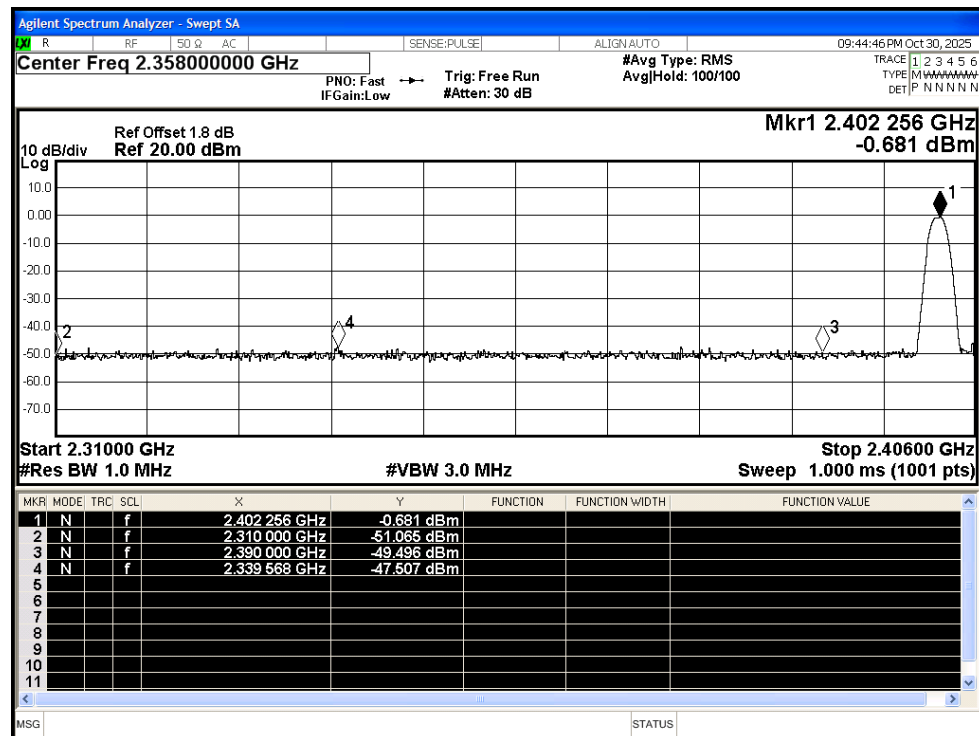


A.9 Restrict Band

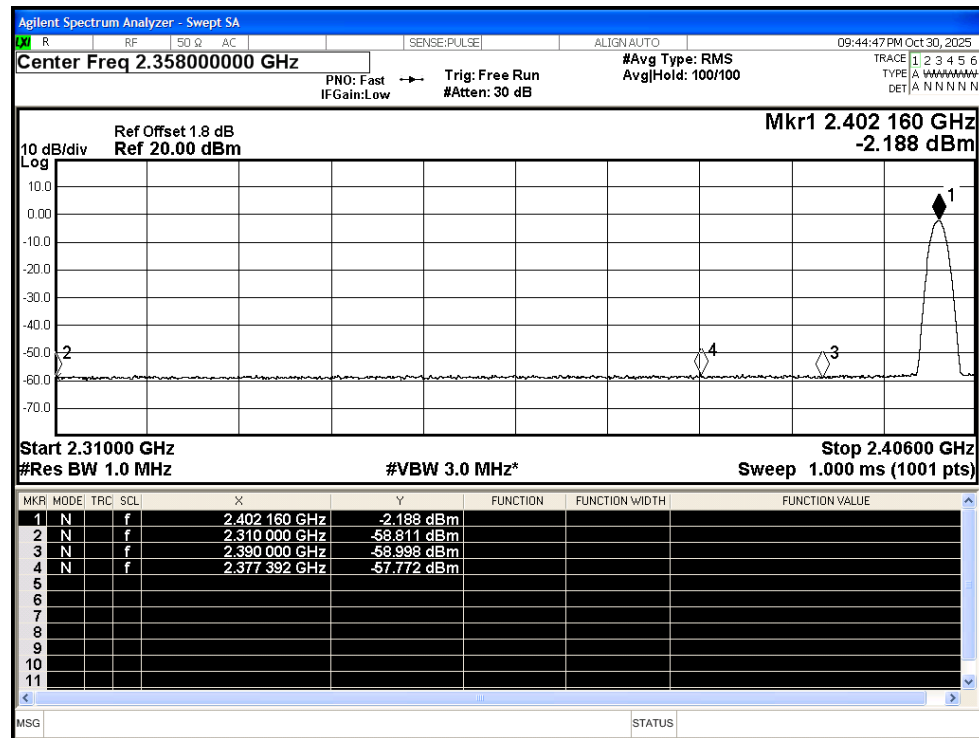
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-51.07	2	-	46.19	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.81	2	1.1	39.55	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2339.568	-47.51	2	-	49.75	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2377.392	-57.77	2	1.1	40.59	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-49.5	2	-	47.76	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-59	2	1.1	39.36	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-48.71	2	-	48.55	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-58.23	2	1.1	40.13	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2484.04	-43.16	2	-	54.1	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2493.52	-57.12	2	1.1	41.24	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-47.82	2	-	49.44	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-58.06	2	1.1	40.3	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-51.42	2	-	45.84	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-58.5	2	1.12	39.88	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2377.392	-47.56	2	-	49.7	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2313.264	-57.92	2	1.12	40.46	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-50.44	2	-	46.82	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-58.89	2	1.12	39.49	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-48.58	2	-	48.68	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-57.49	2	0.12	39.89	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.824	-45.52	2	-	51.74	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.56	-57	2	0.12	40.38	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-50.17	2	-	47.09	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-57.5	2	0.12	39.88	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-50.49	2	-	46.77	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-59.22	2	1.17	39.21	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2370.192	-47.94	2	-	49.32	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2387.76	-57.89	2	1.17	40.54	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-49.29	2	-	47.97	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-58.34	2	1.17	40.09	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-49.6	2	-	47.66	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-57.84	2	0.12	39.54	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2485.024	-45.67	2	-	51.59	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.632	-56.9	2	0.12	40.48	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-49.25	2	-	48.01	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-58.44	2	0.12	38.94	Average	54	Pass

Test Graphs

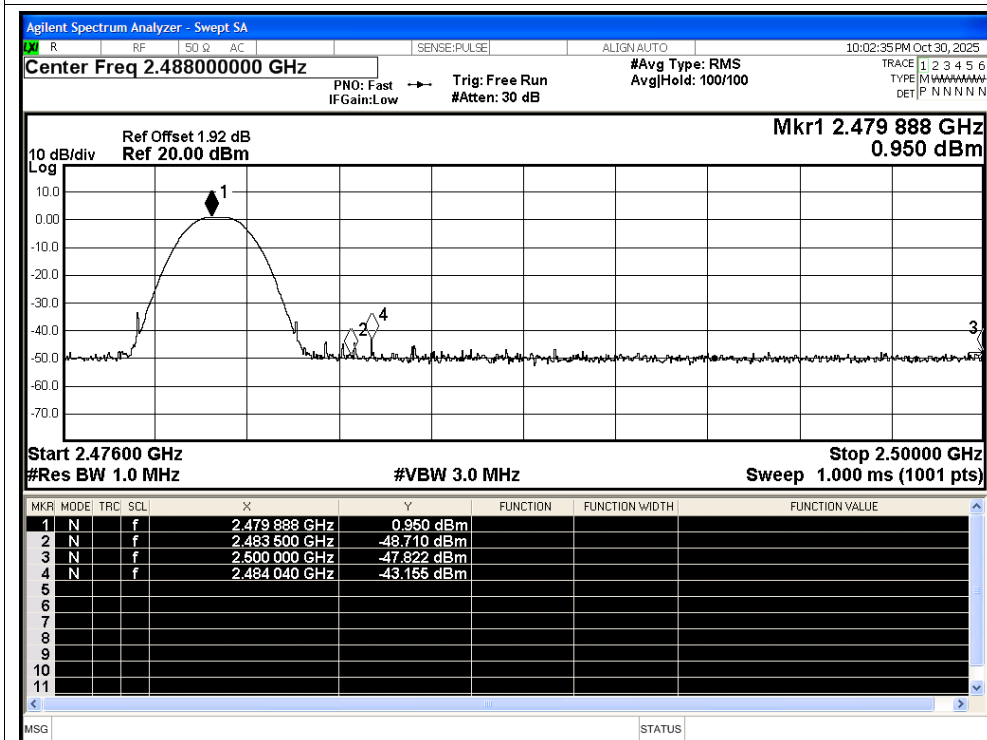
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



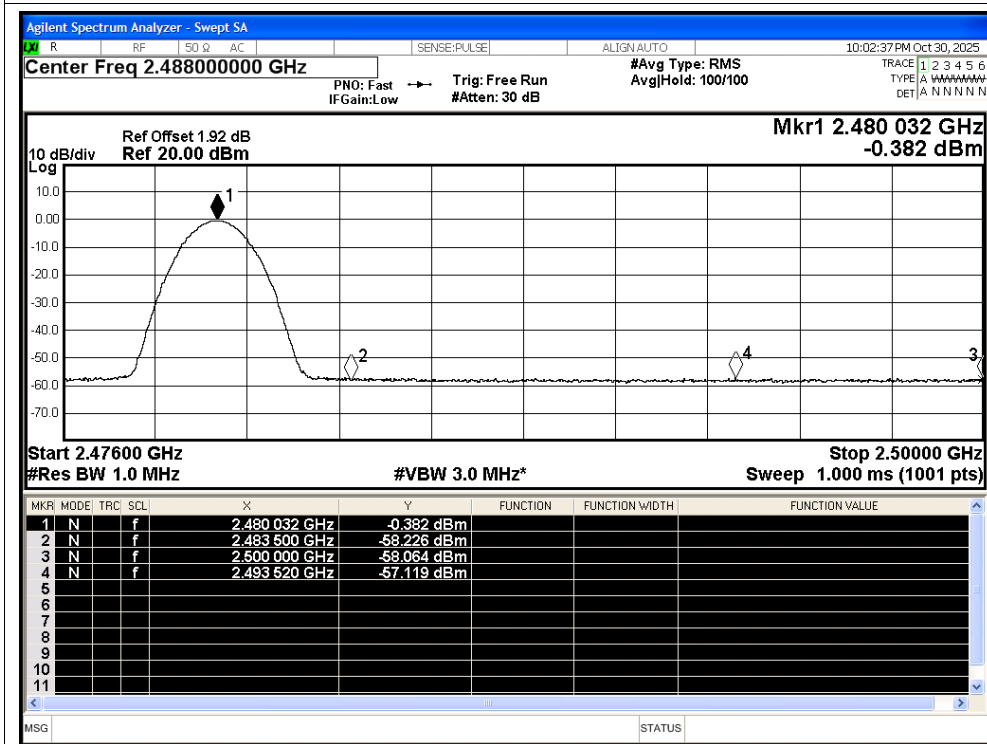
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



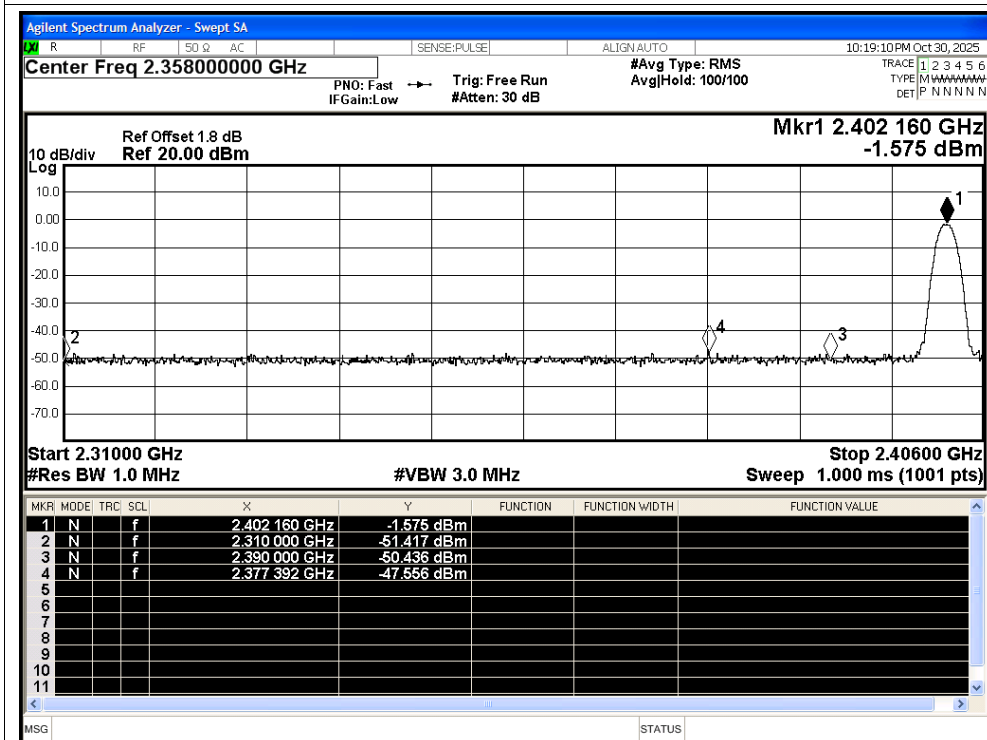
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



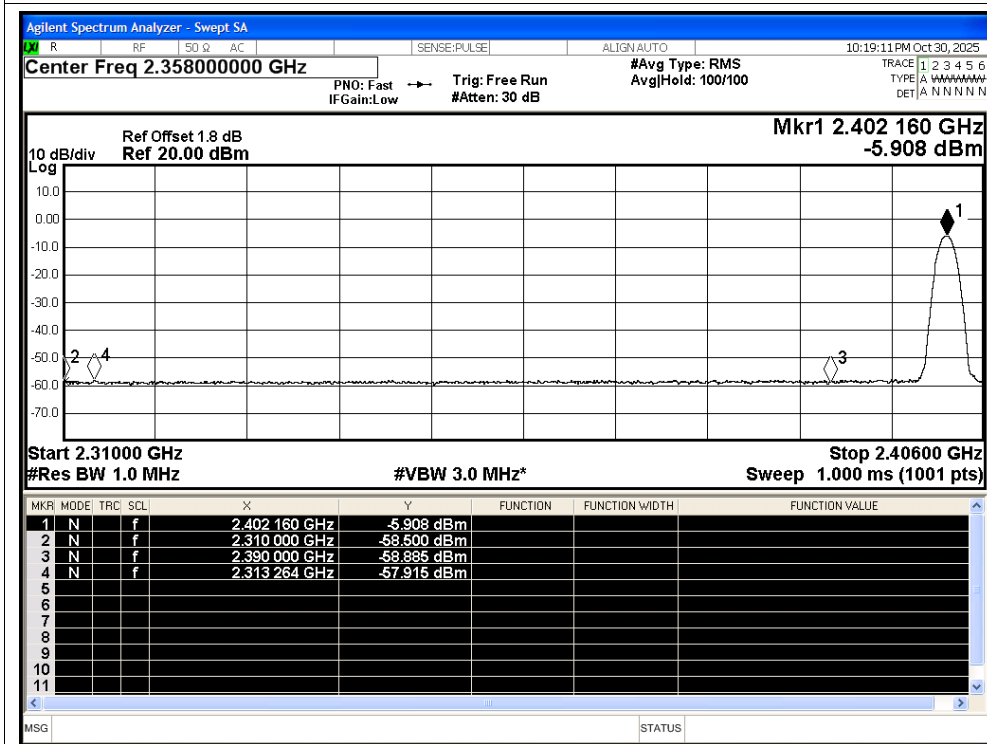
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average

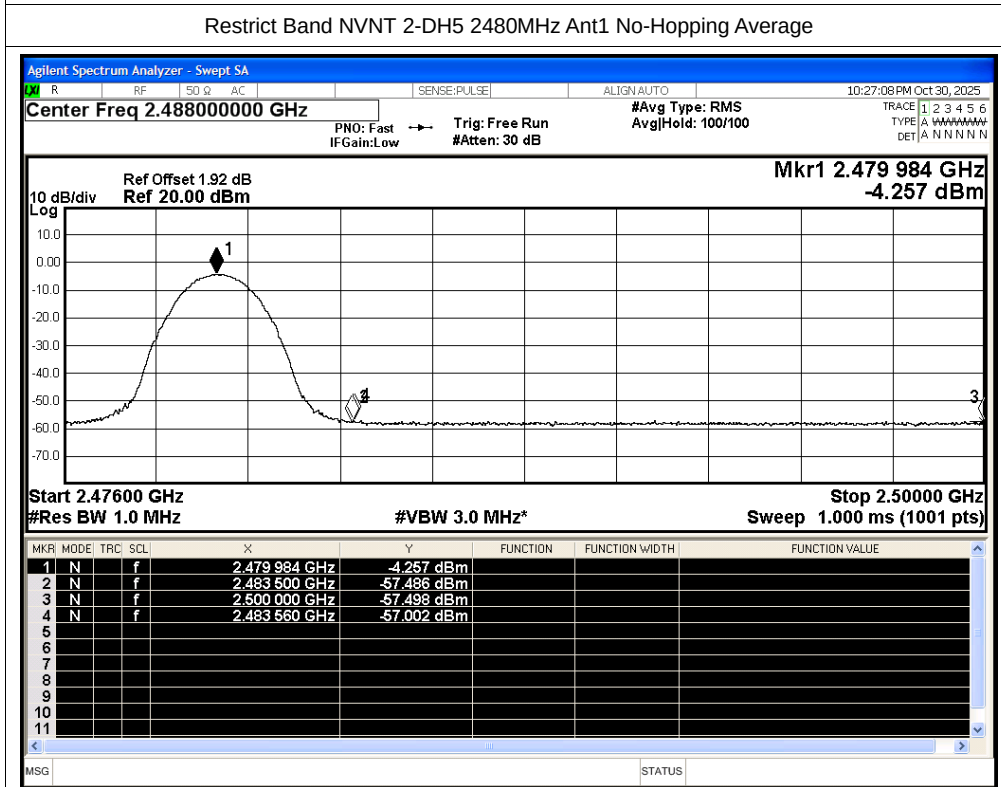
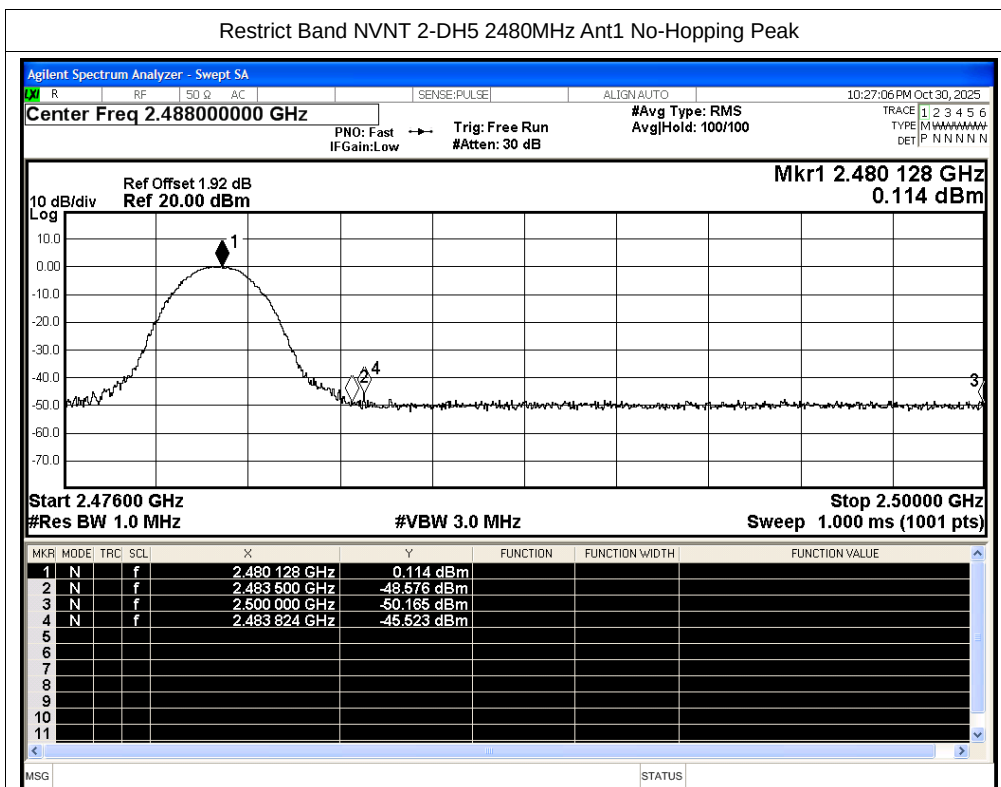


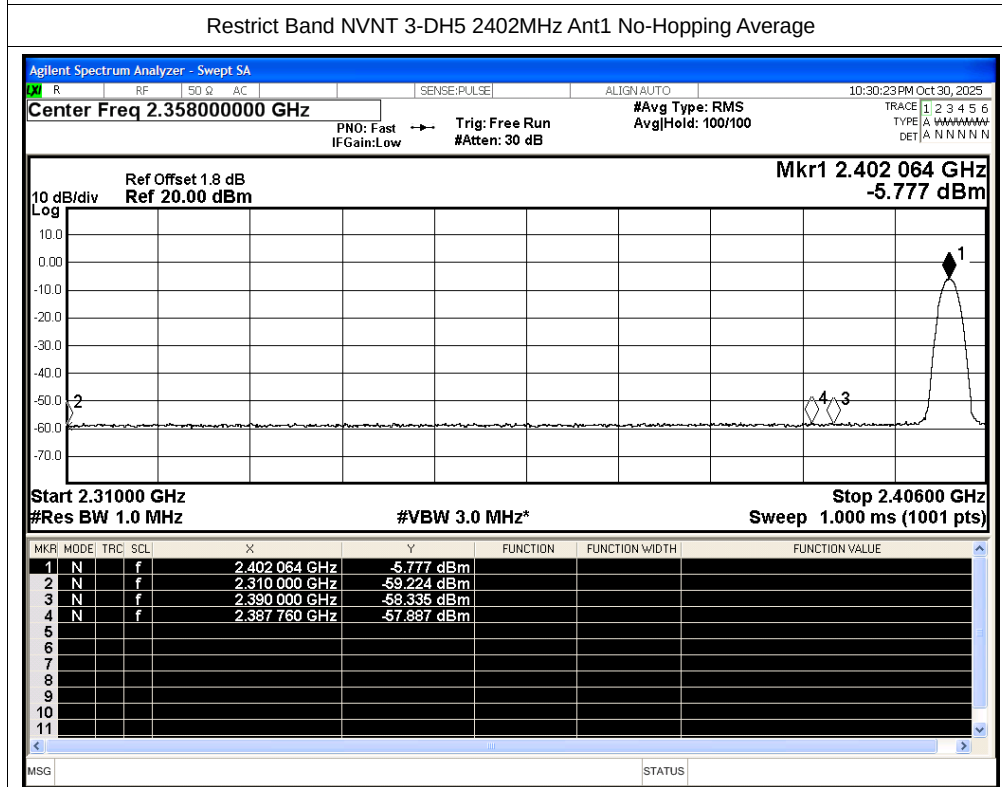
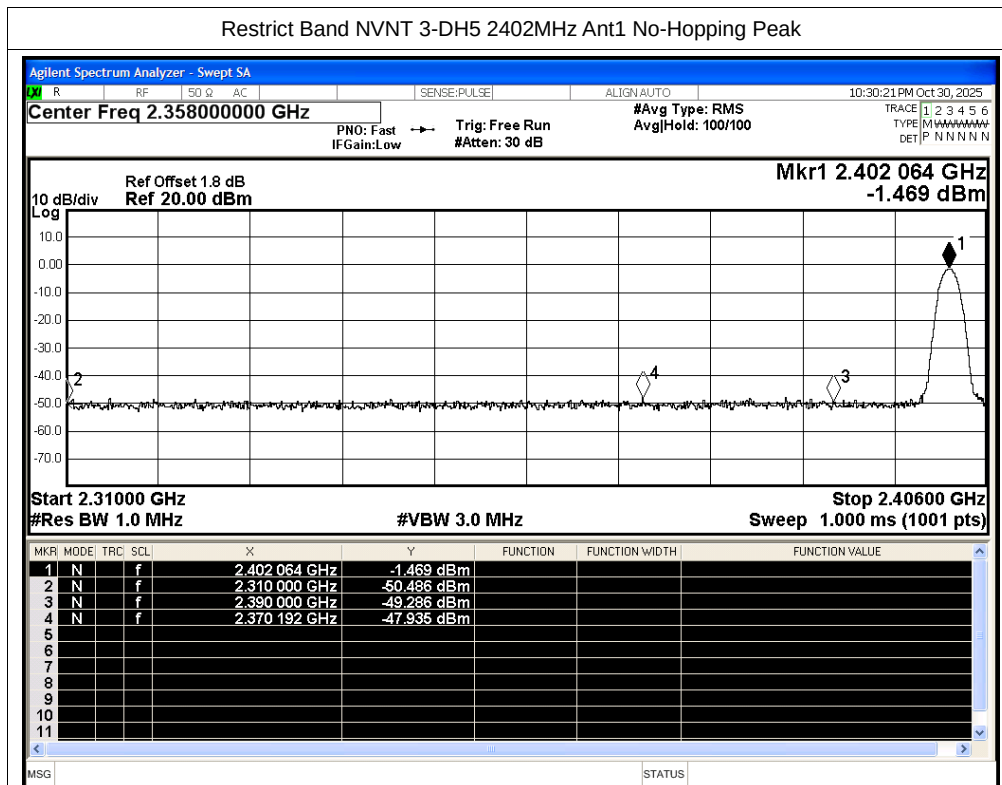
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



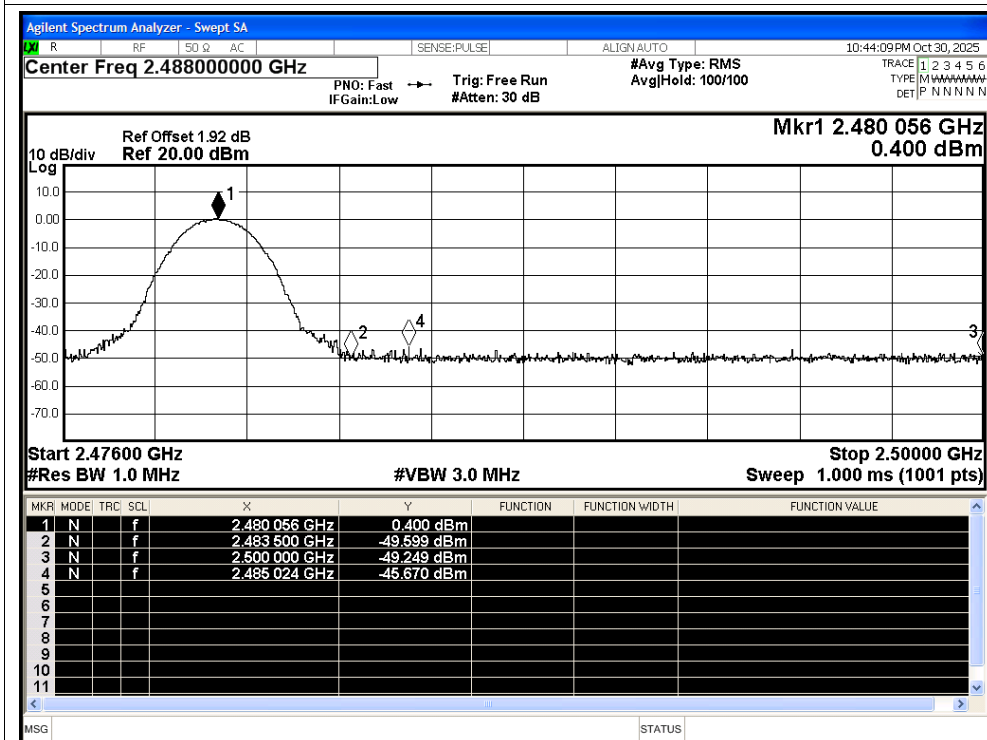
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average







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



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

