

Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: WIRELESS SPEAKER

Test Model: ZEALOT-S79

Environmental Conditions

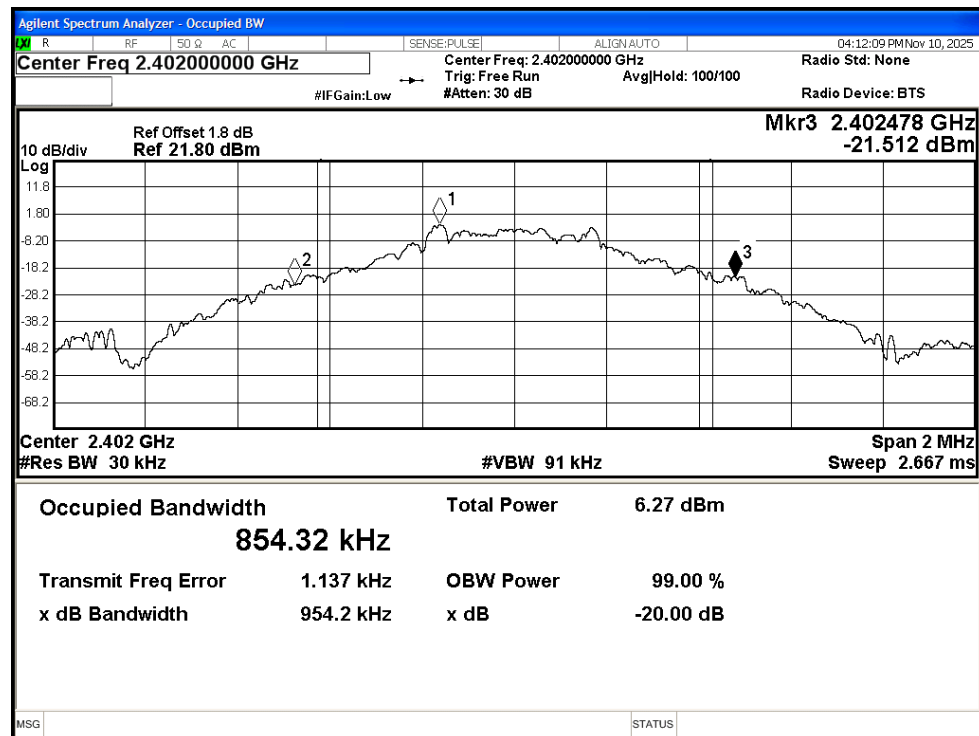
Temperature:	23.8°C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Yan Chen

A.1 -20dB Bandwidth

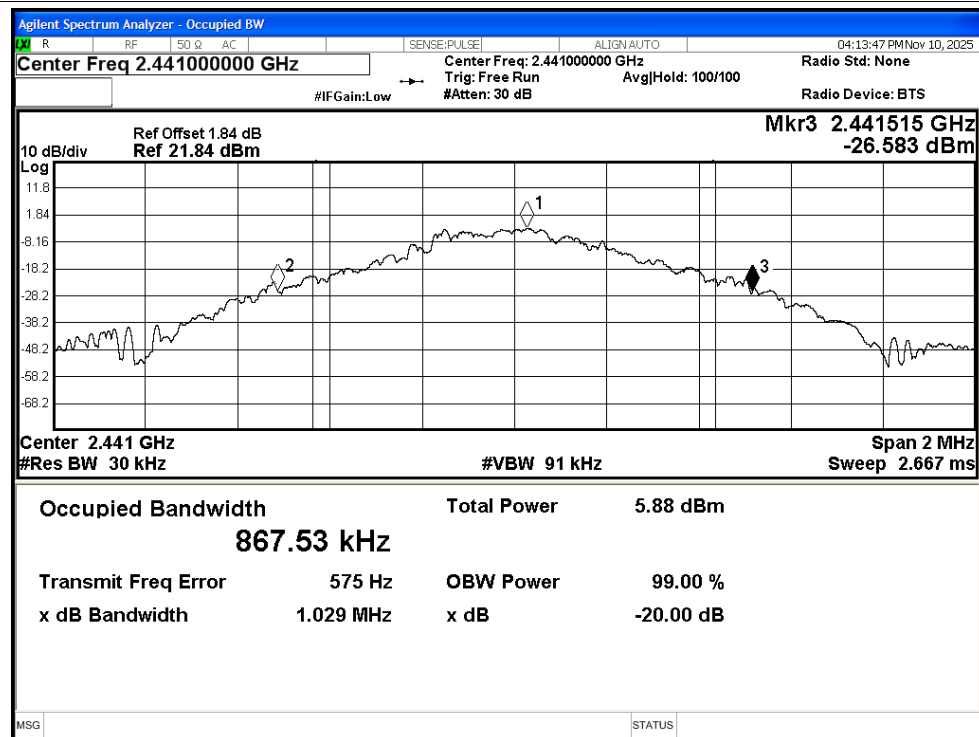
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.954	N/A	Pass
NVNT	1-DH5	2441	Ant1	1.029	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.942	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.314	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.286	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.286	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.3	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.29	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.291	N/A	Pass

Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



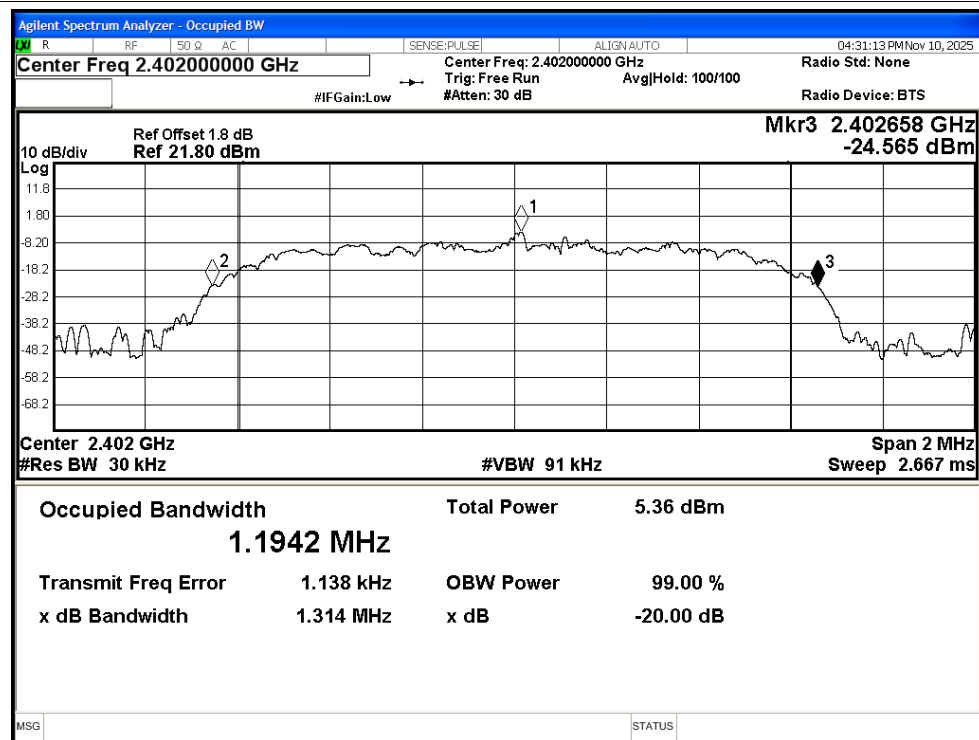
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



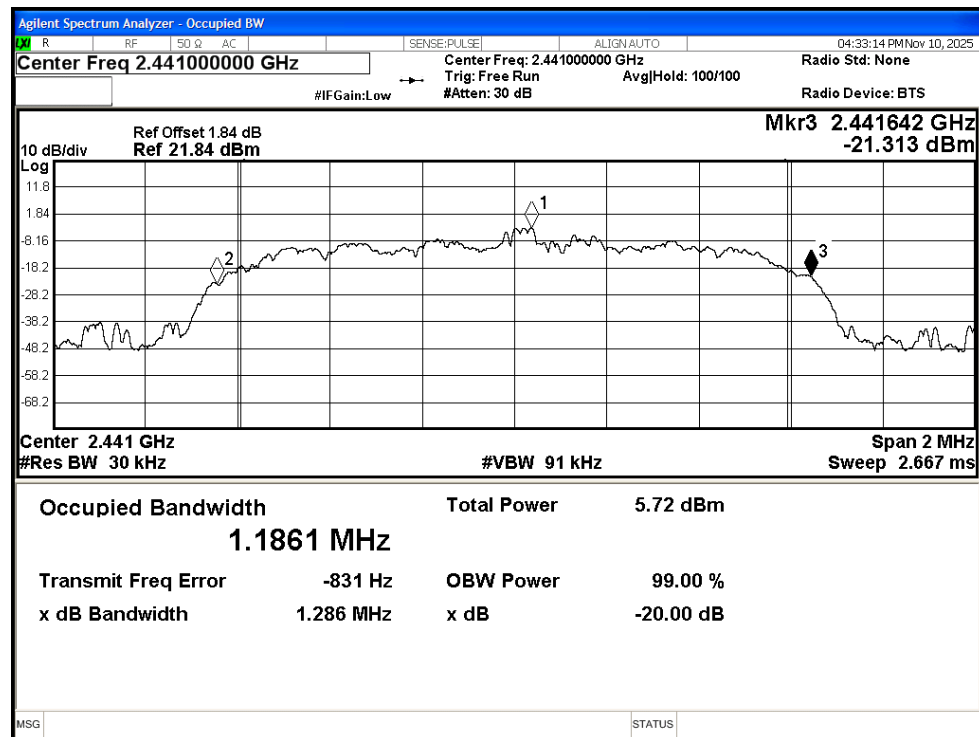
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



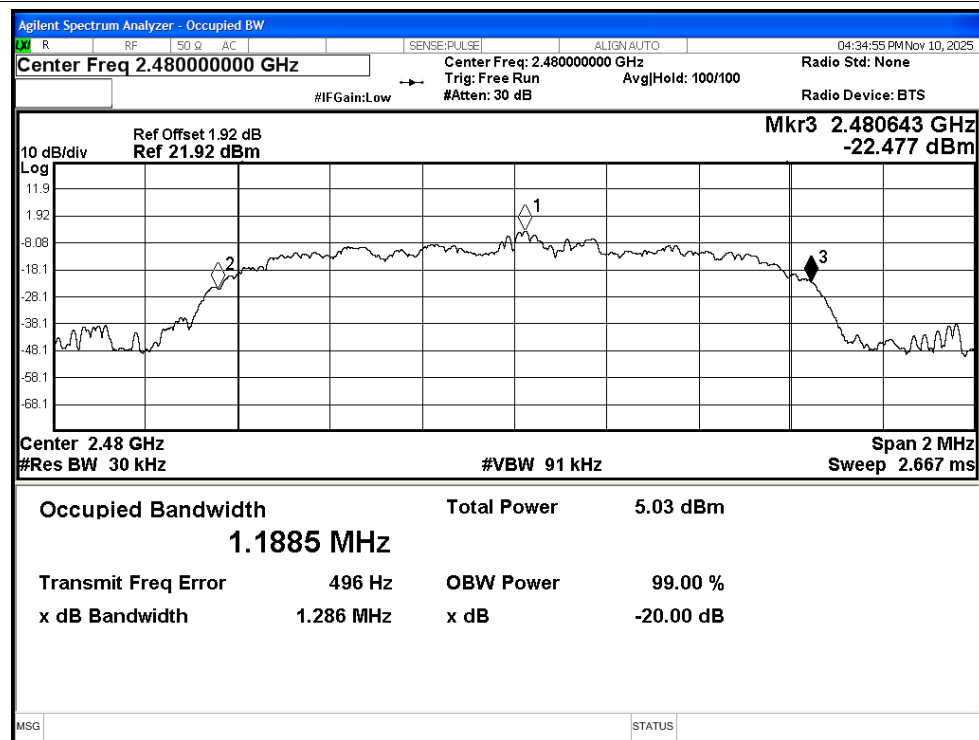
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



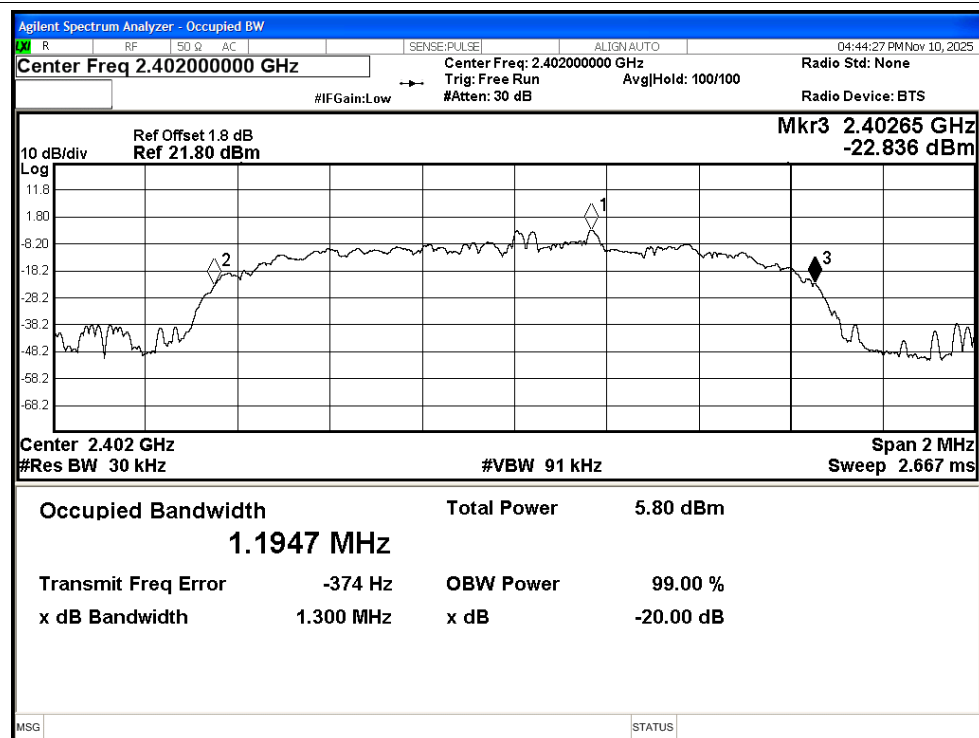
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



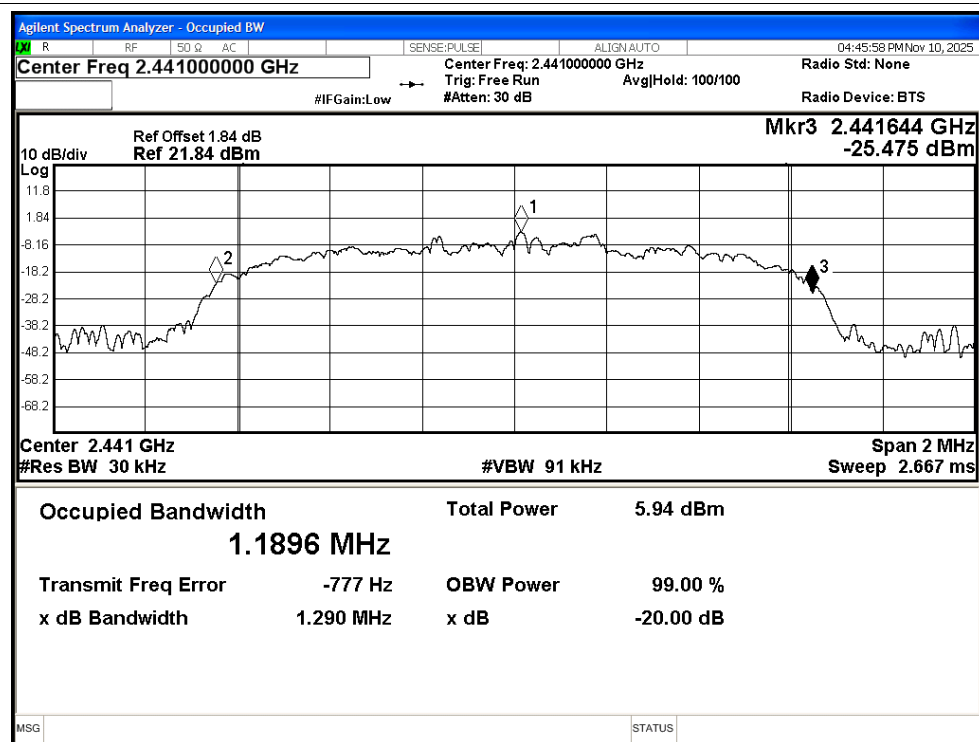
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

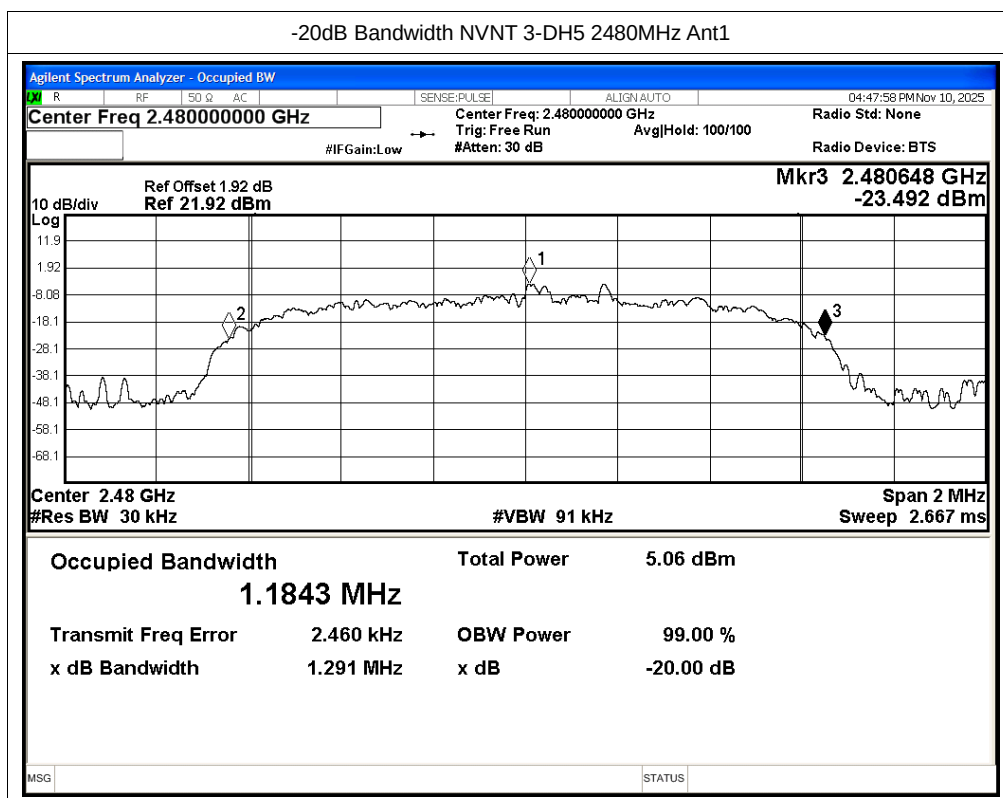


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



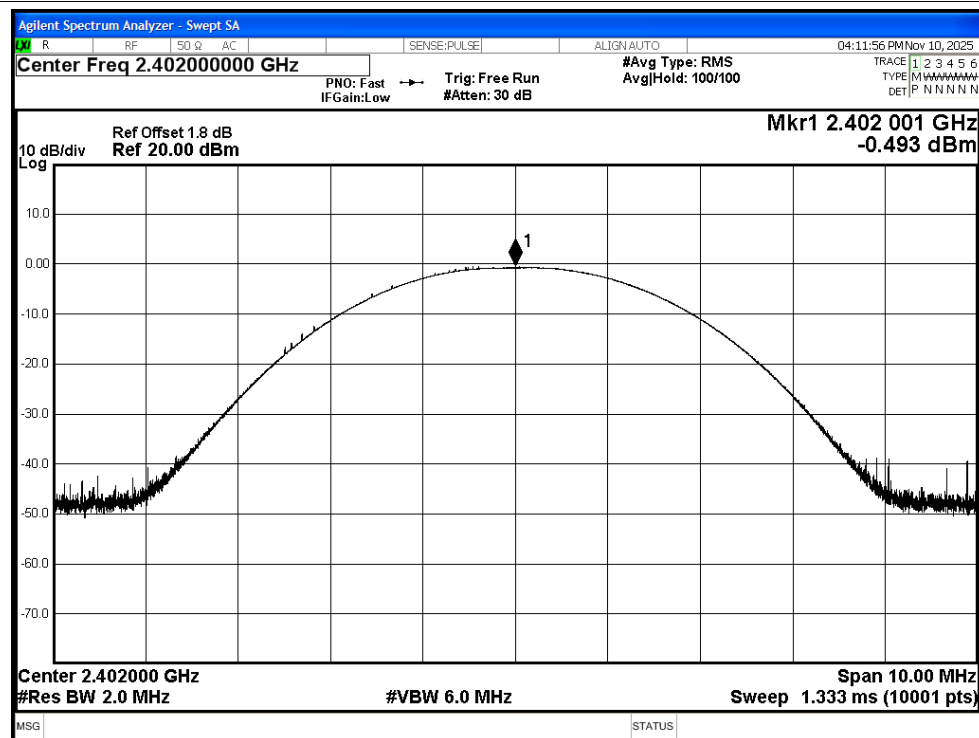


A.2 Maximum Peak Conducted Output Power

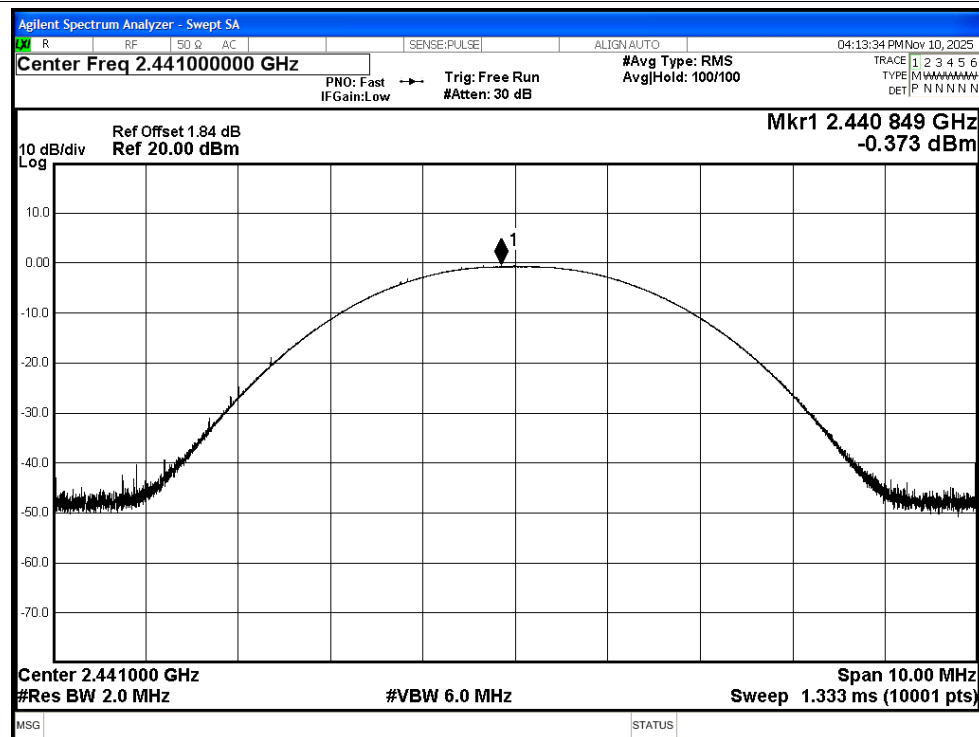
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.49	21	Pass
NVNT	1-DH5	2441	Ant1	-0.37	21	Pass
NVNT	1-DH5	2480	Ant1	-1.14	21	Pass
NVNT	2-DH5	2402	Ant1	1.47	21	Pass
NVNT	2-DH5	2441	Ant1	1.45	21	Pass
NVNT	2-DH5	2480	Ant1	0.63	21	Pass
NVNT	3-DH5	2402	Ant1	1.84	21	Pass
NVNT	3-DH5	2441	Ant1	1.9	21	Pass
NVNT	3-DH5	2480	Ant1	1.07	21	Pass

Test Graphs

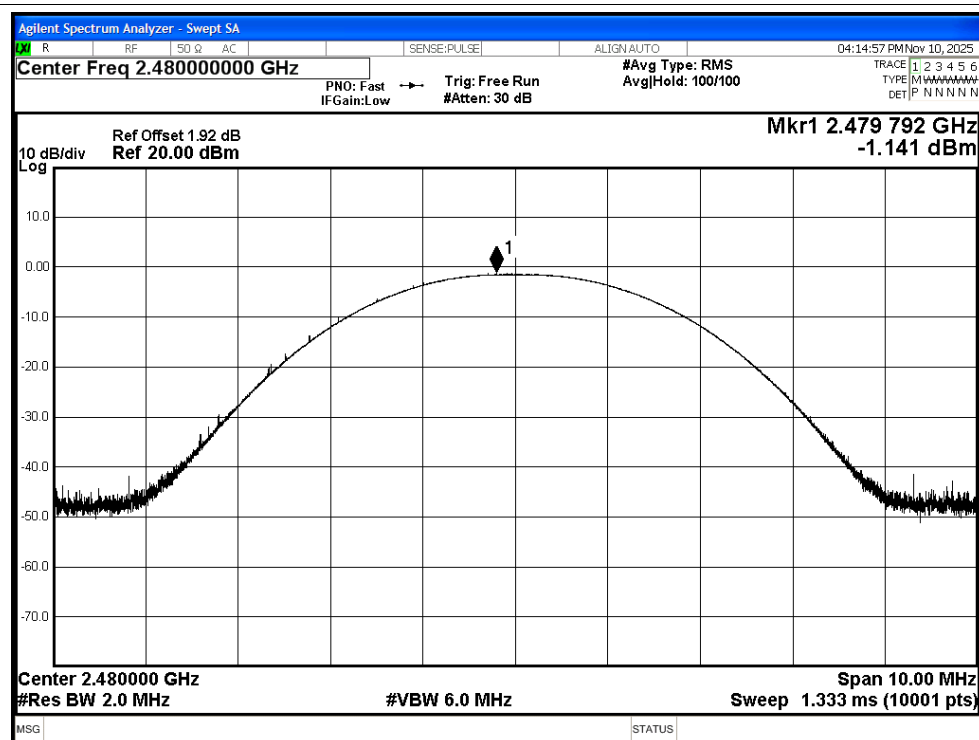
Power NVNT 1-DH5 2402MHz Ant1



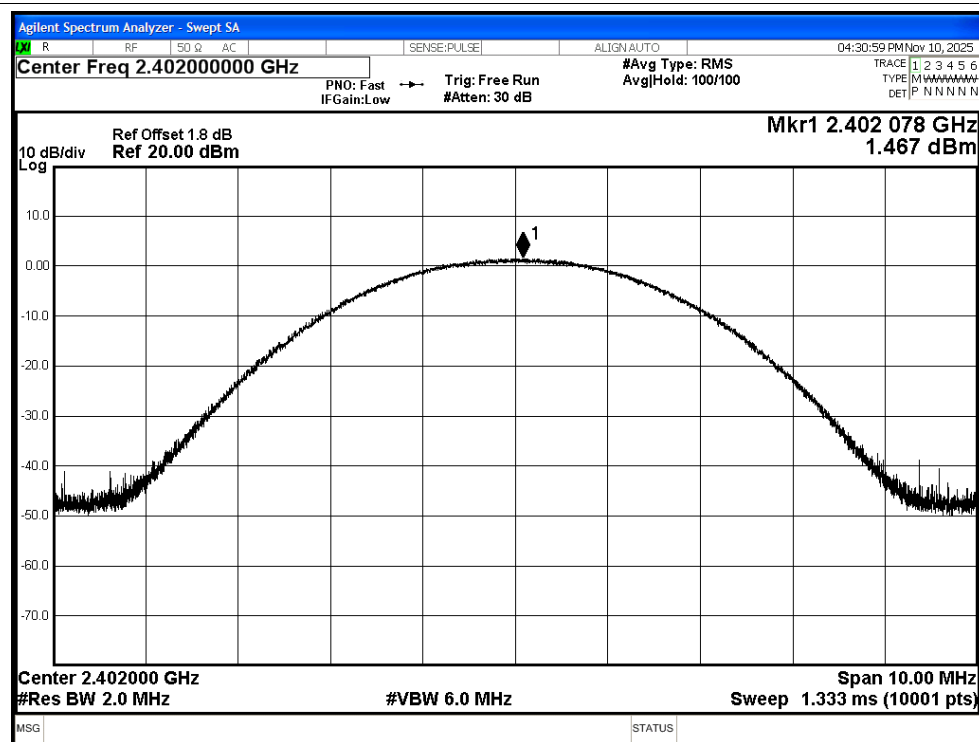
Power NVNT 1-DH5 2441MHz Ant1

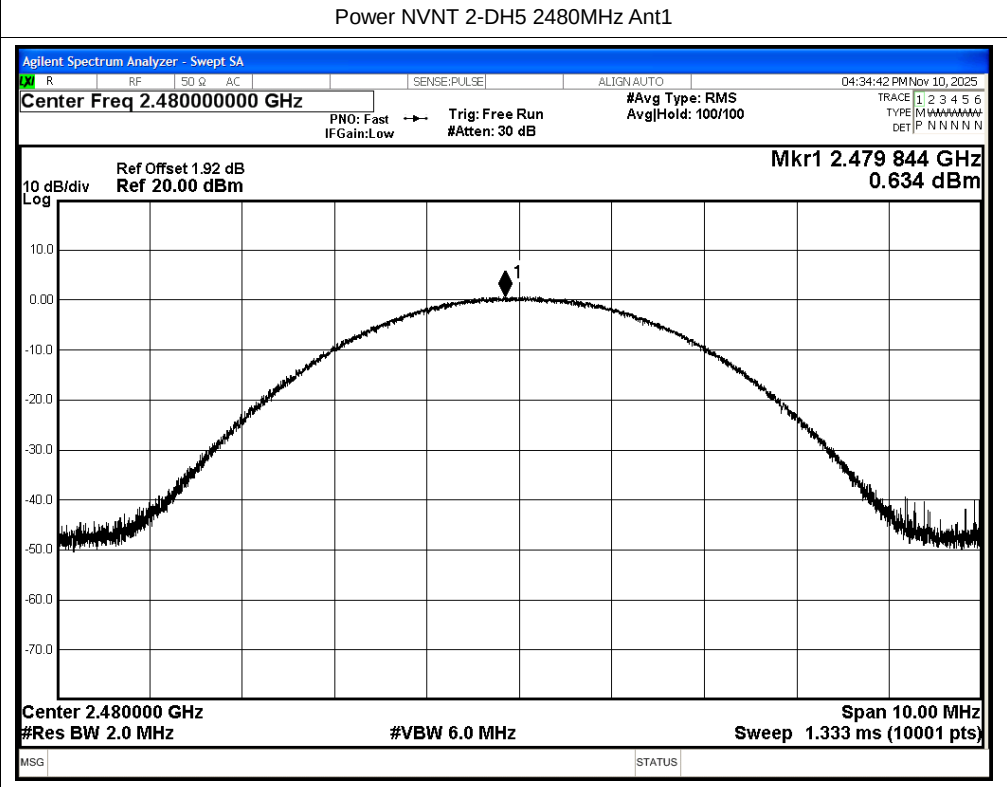
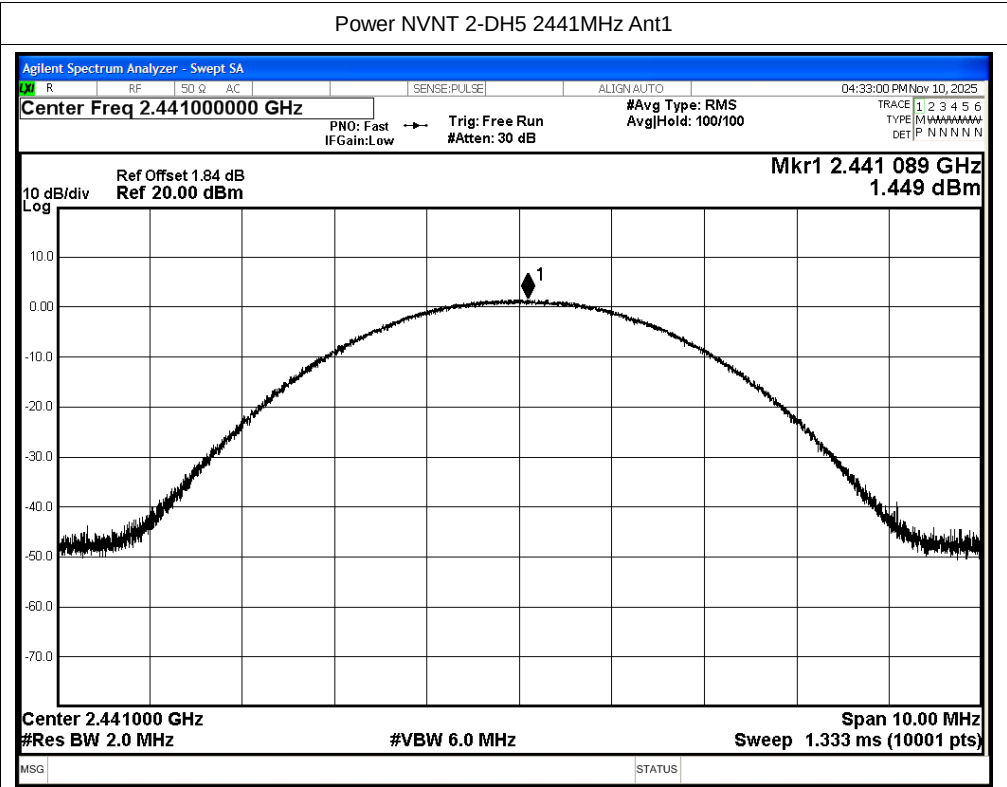


Power NVNT 1-DH5 2480MHz Ant1

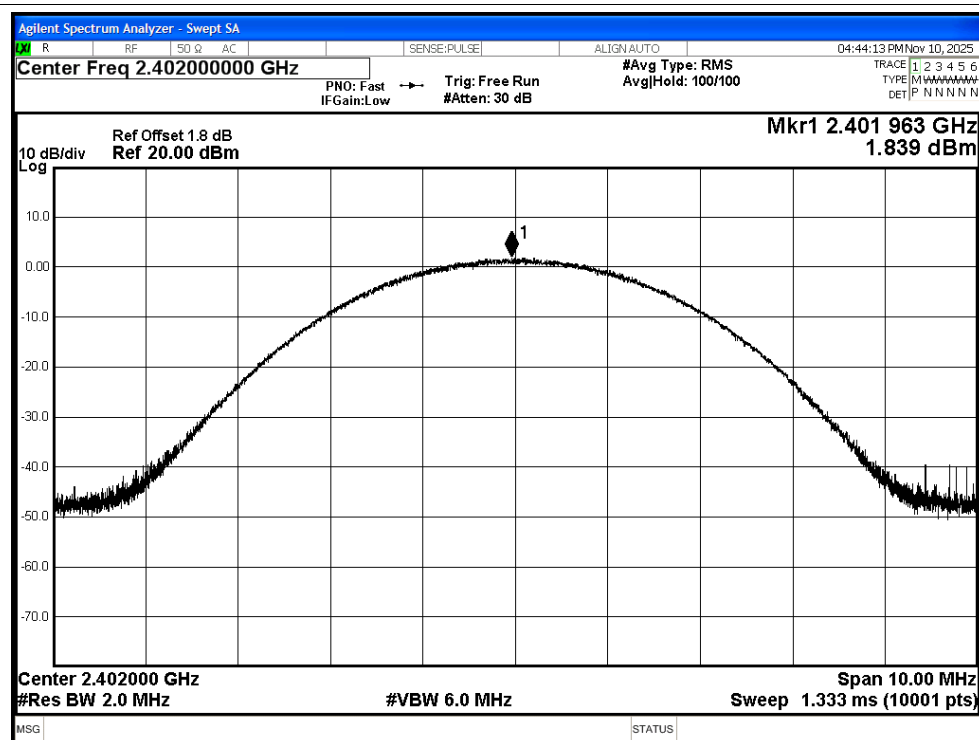


Power NVNT 2-DH5 2402MHz Ant1

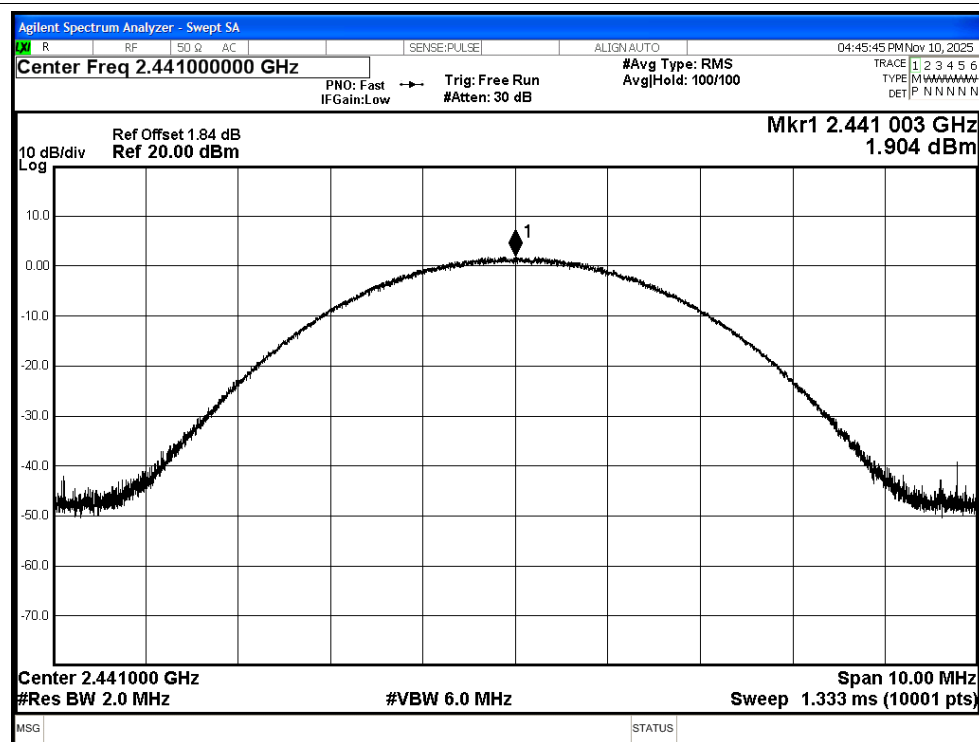


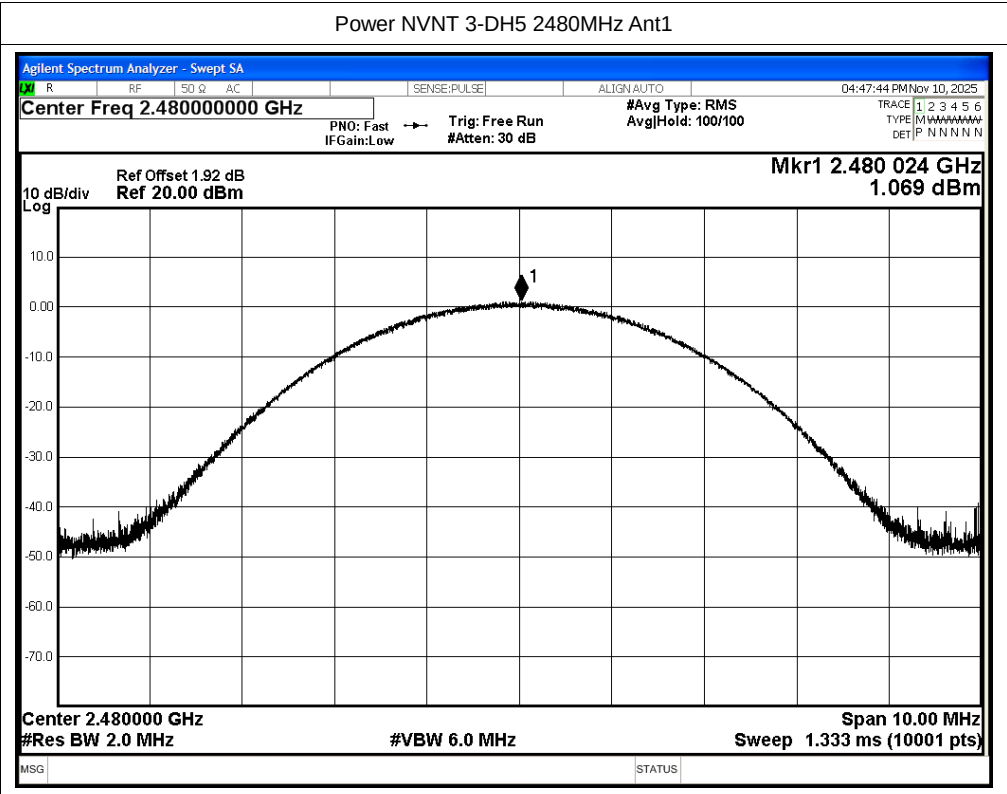


Power NVNT 3-DH5 2402MHz Ant1



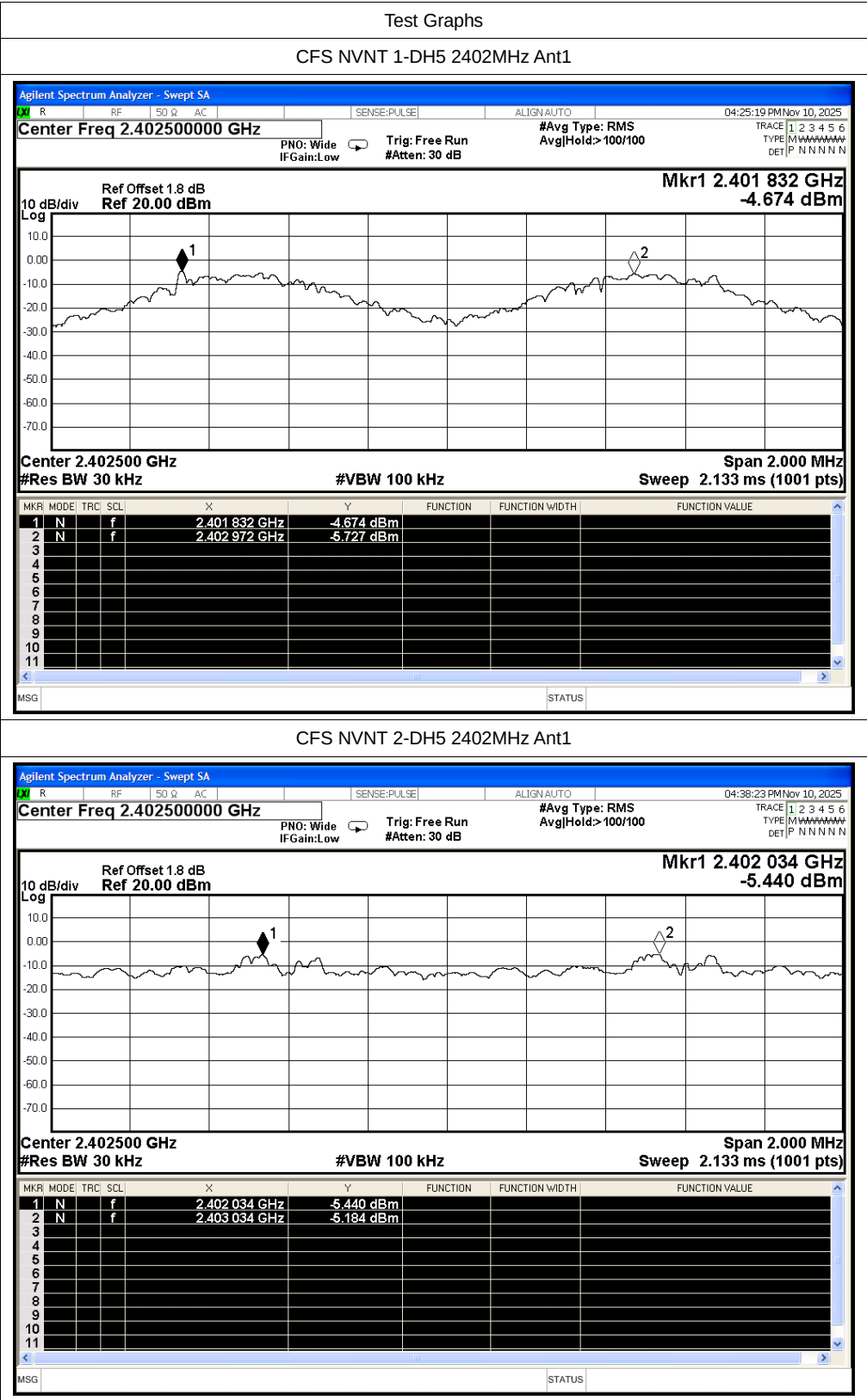
Power NVNT 3-DH5 2441MHz Ant1

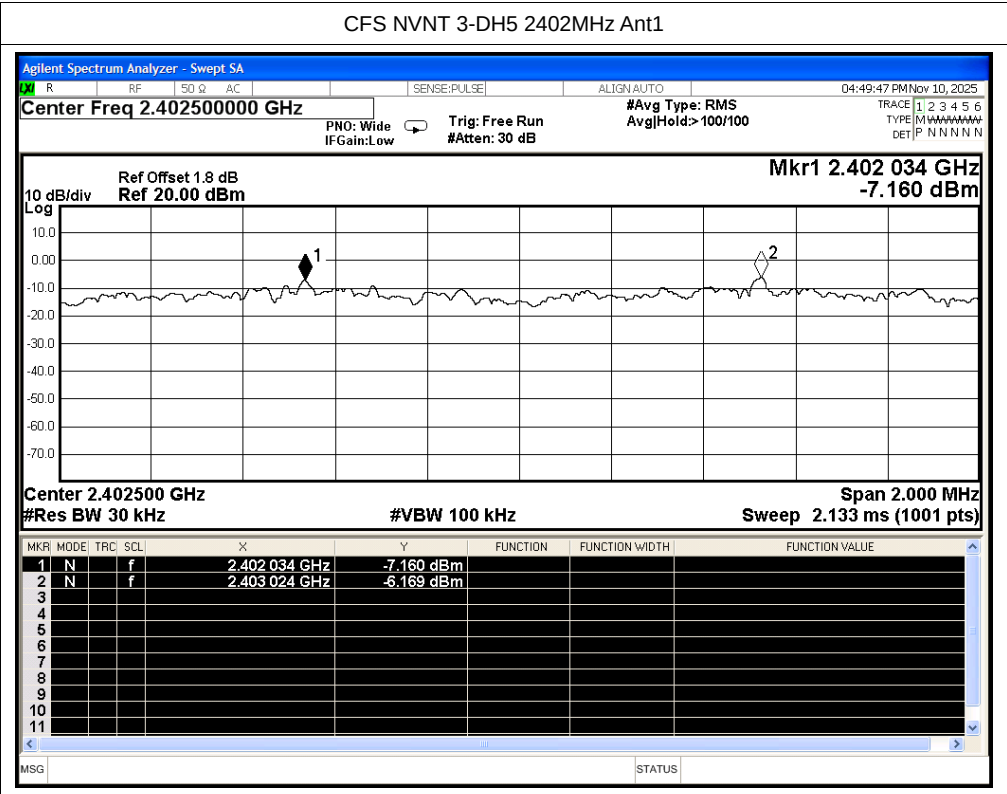




A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.832	2402.972	1.14	0.686	Pass
NVNT	2-DH5	Ant1	2402.034	2403.034	1	0.876	Pass
NVNT	3-DH5	Ant1	2402.034	2403.024	0.99	0.867	Pass

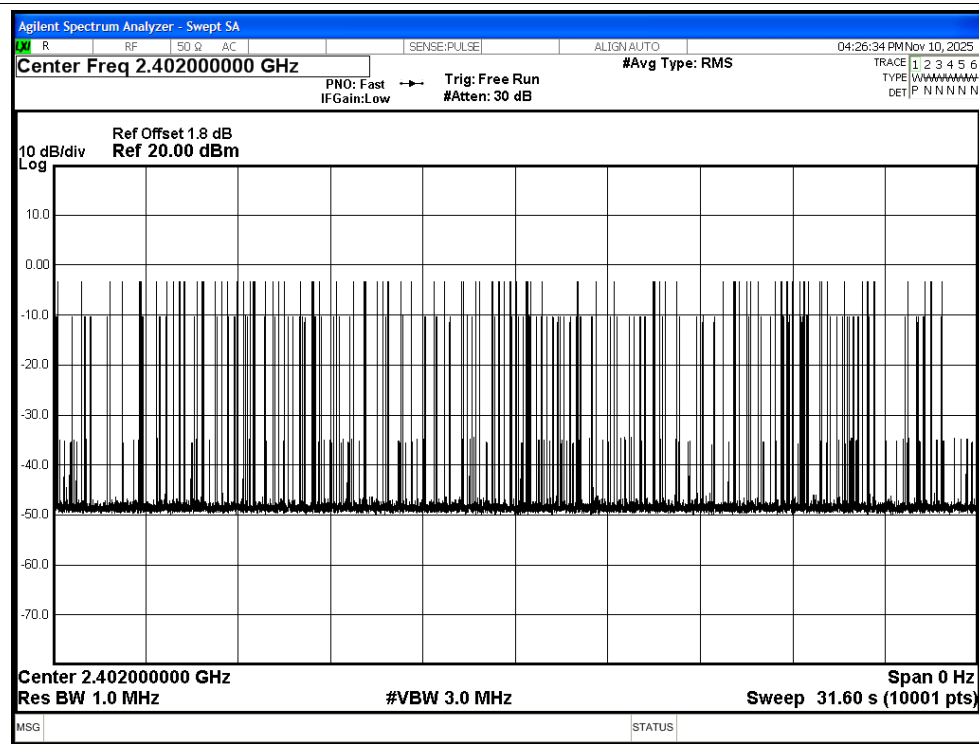
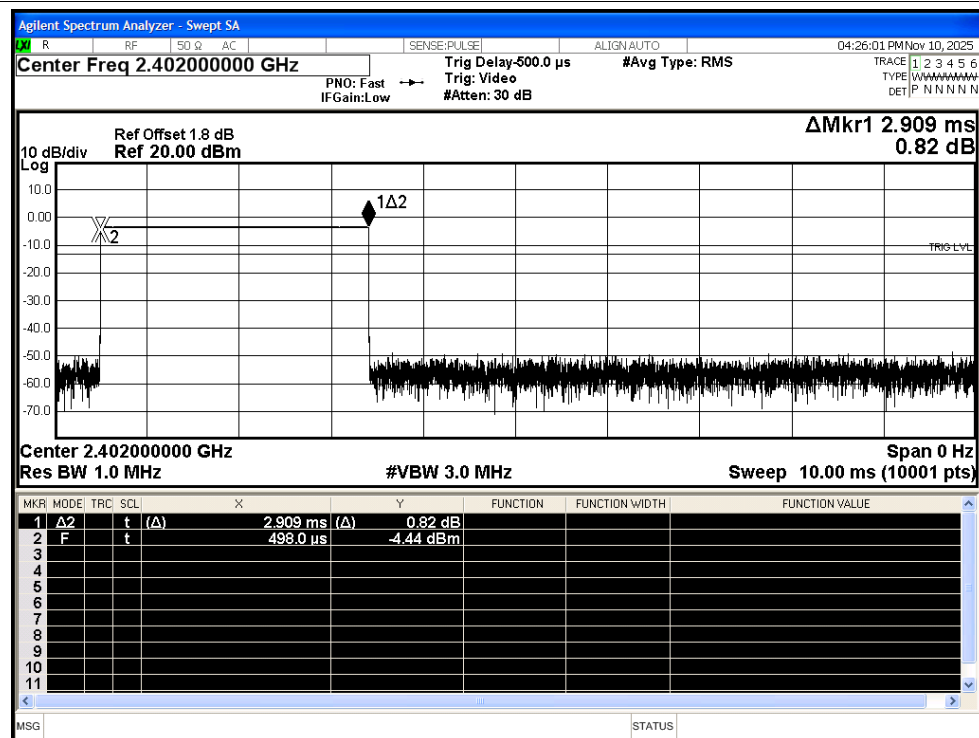




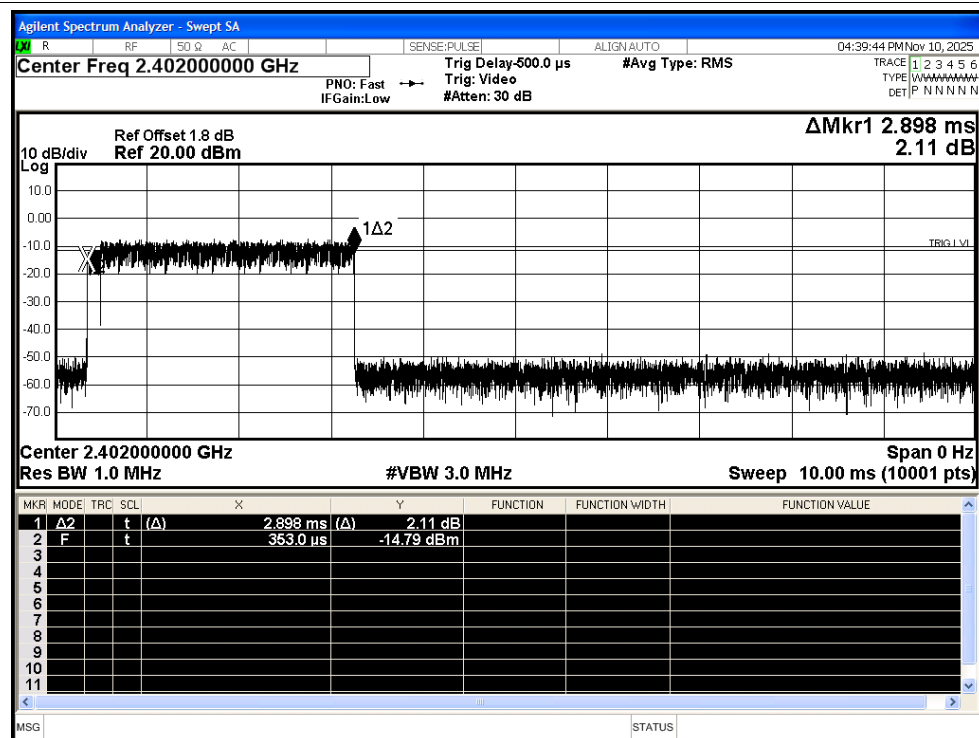
A.4 Dwell Time

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	290.9	100	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	327.474	113	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.897	298.391	103	31600	400	Pass

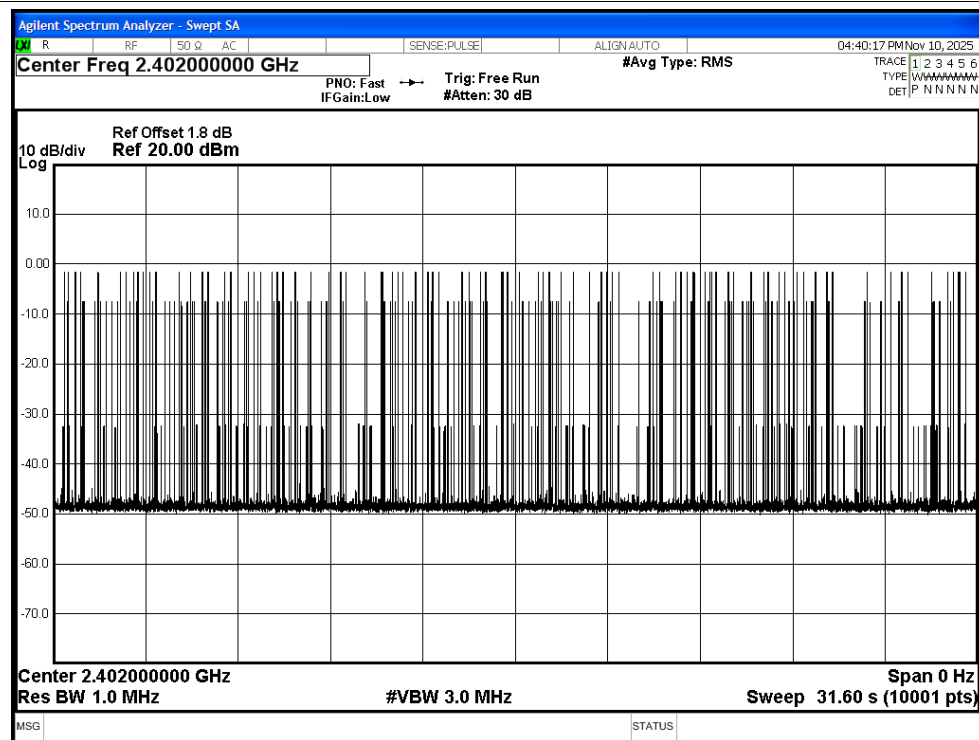
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



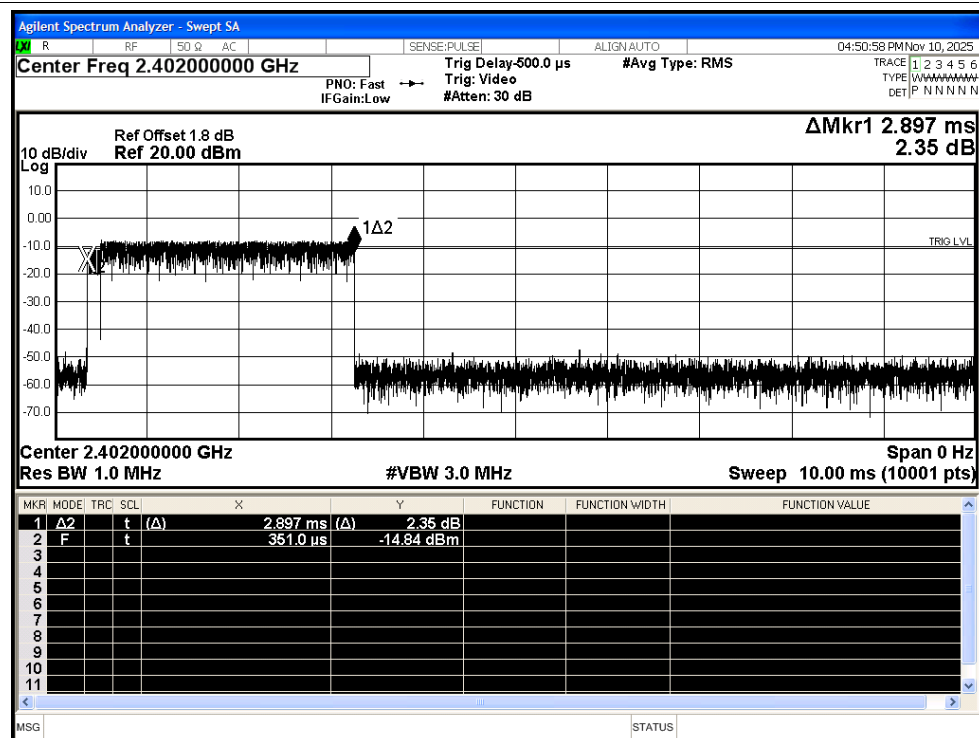
Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



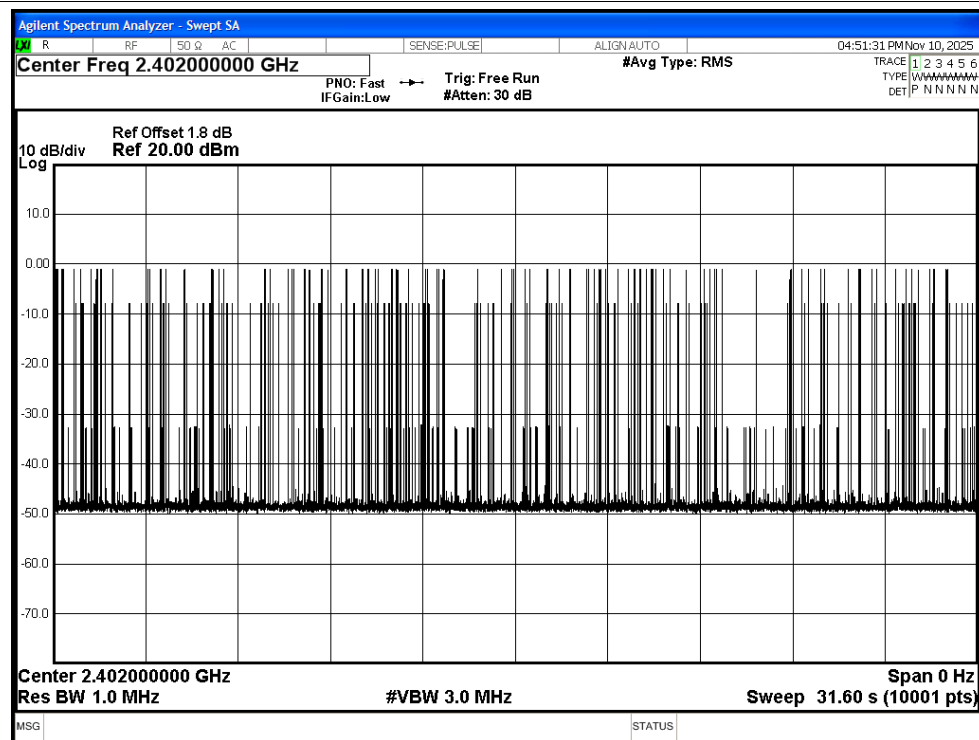
Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2402MHz Ant1 One Burst

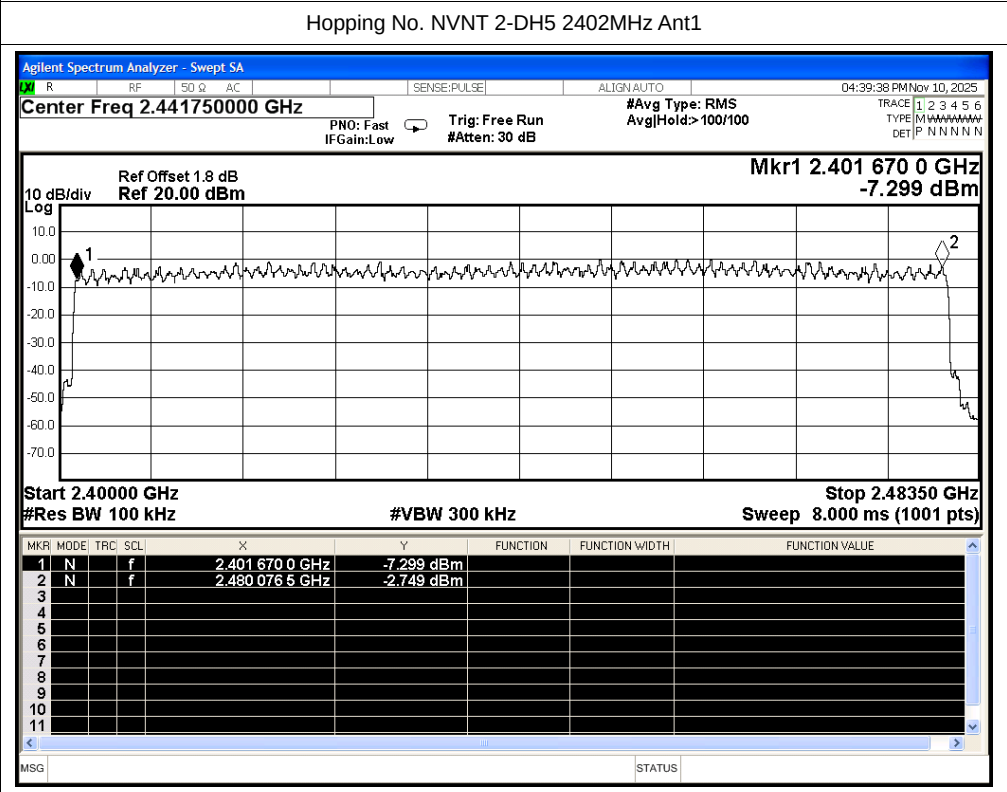
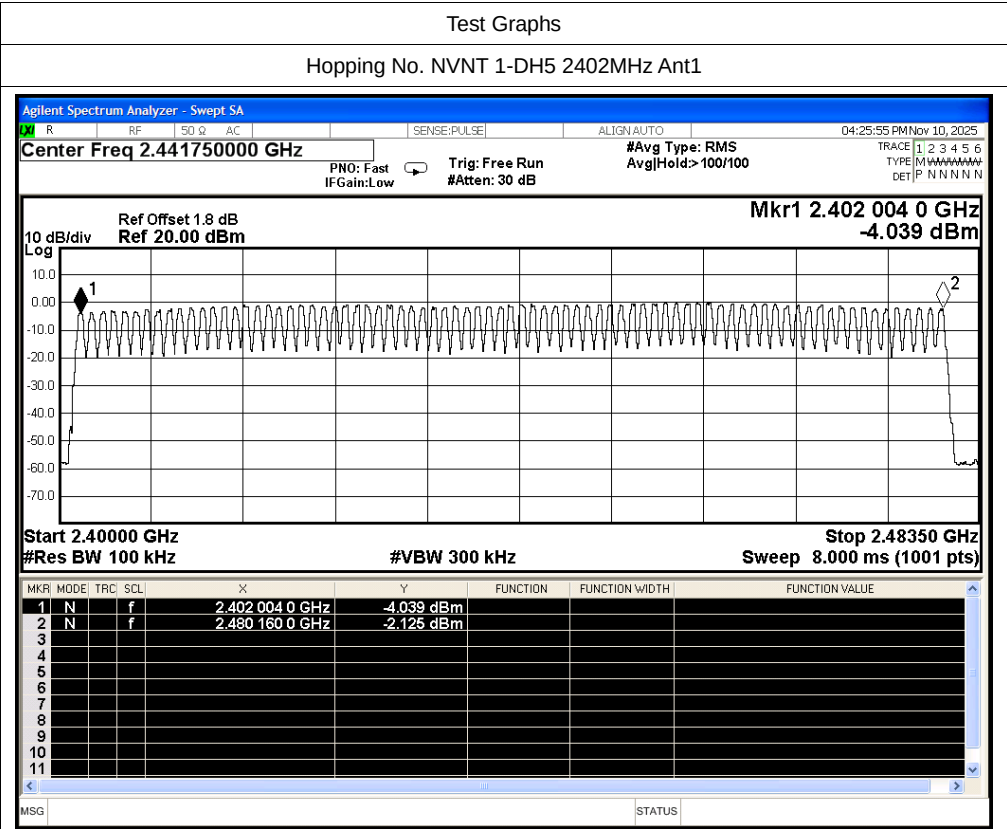


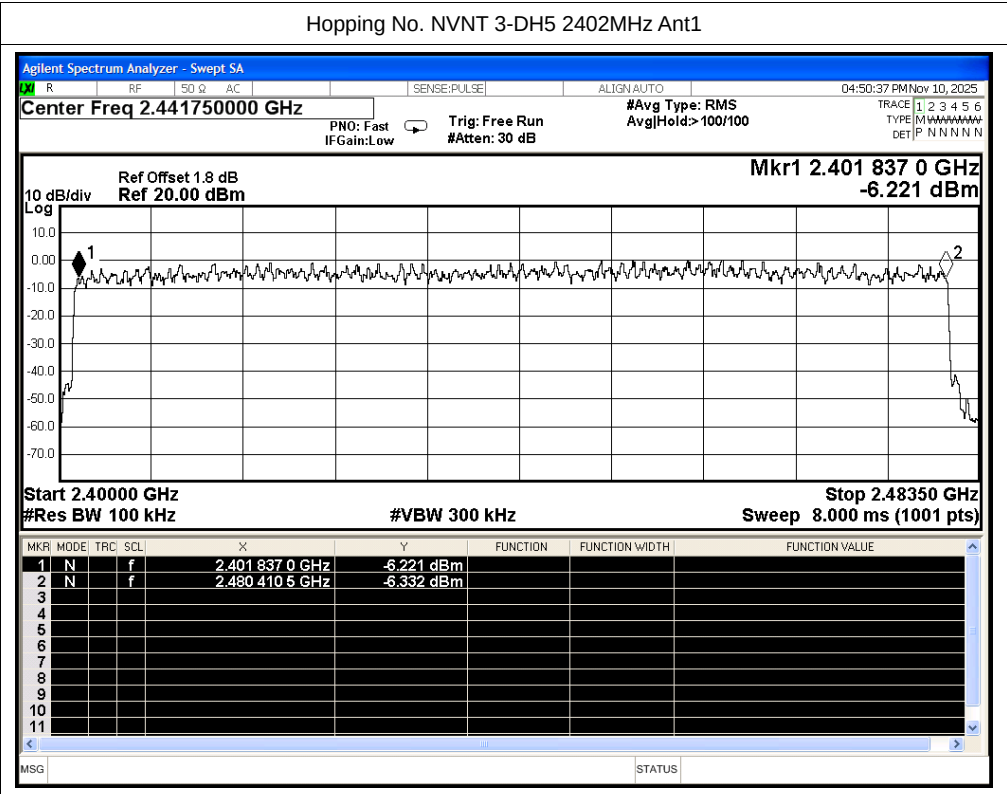
Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated



A.5 Number of Hopping Channel

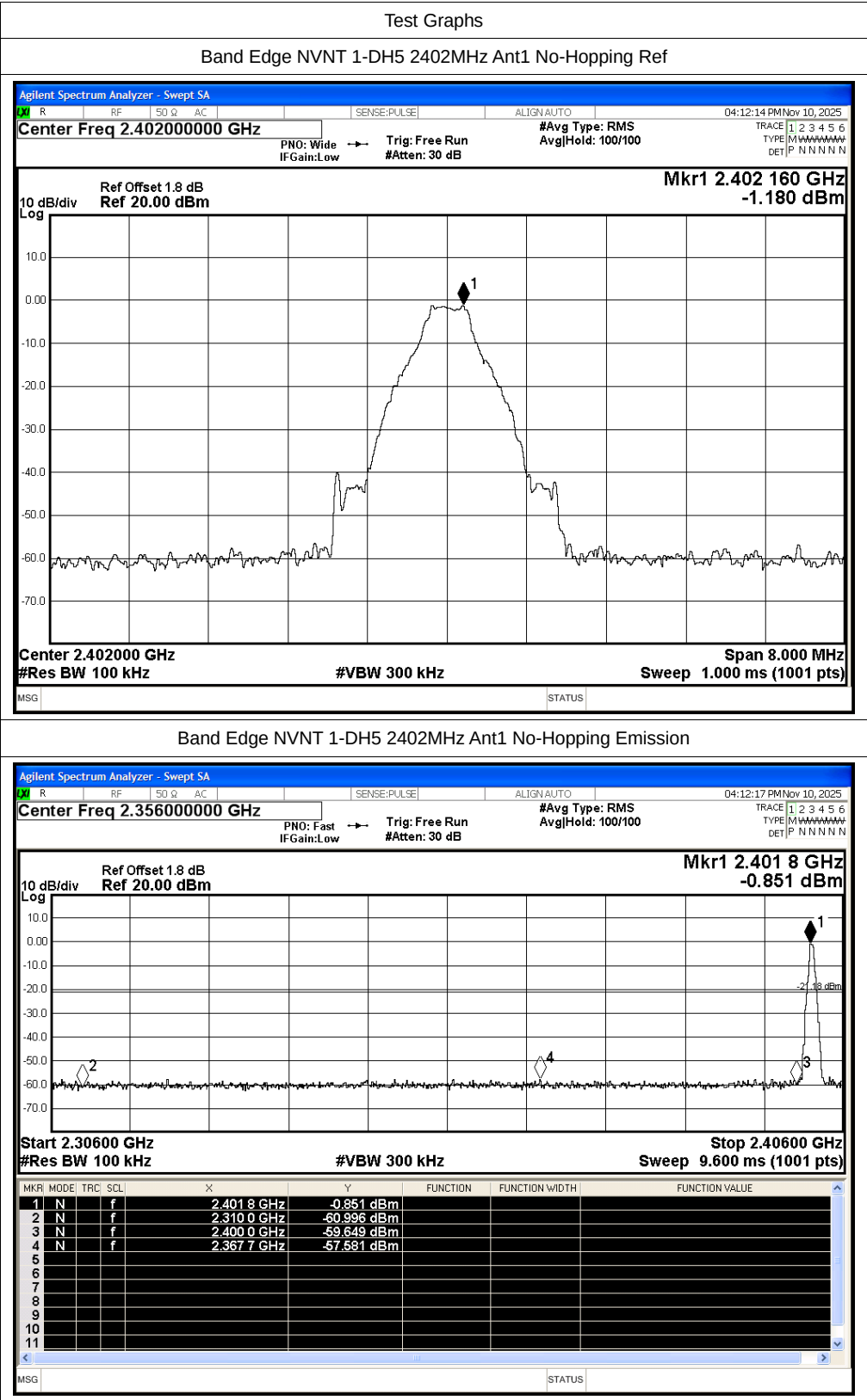
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

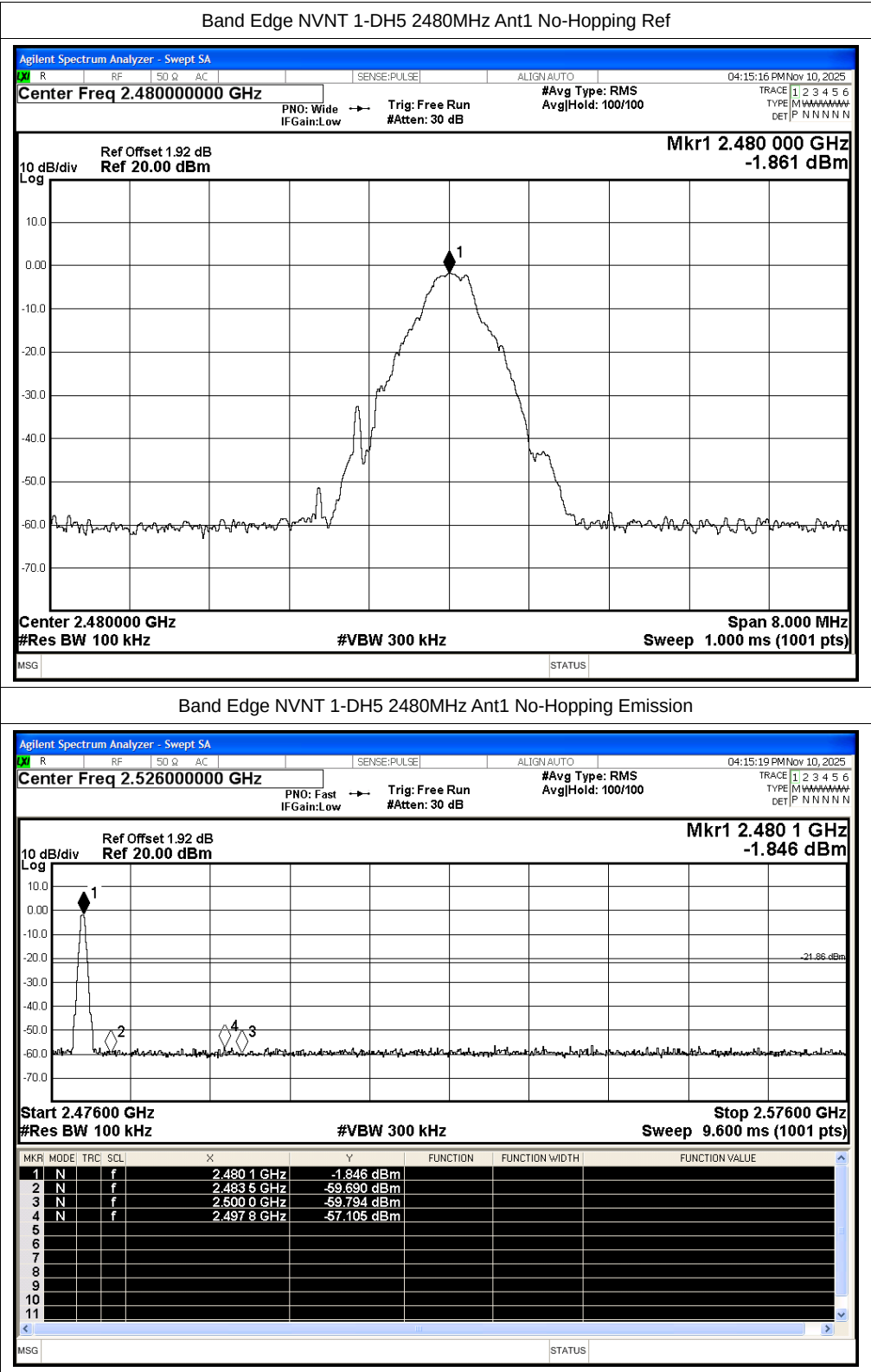


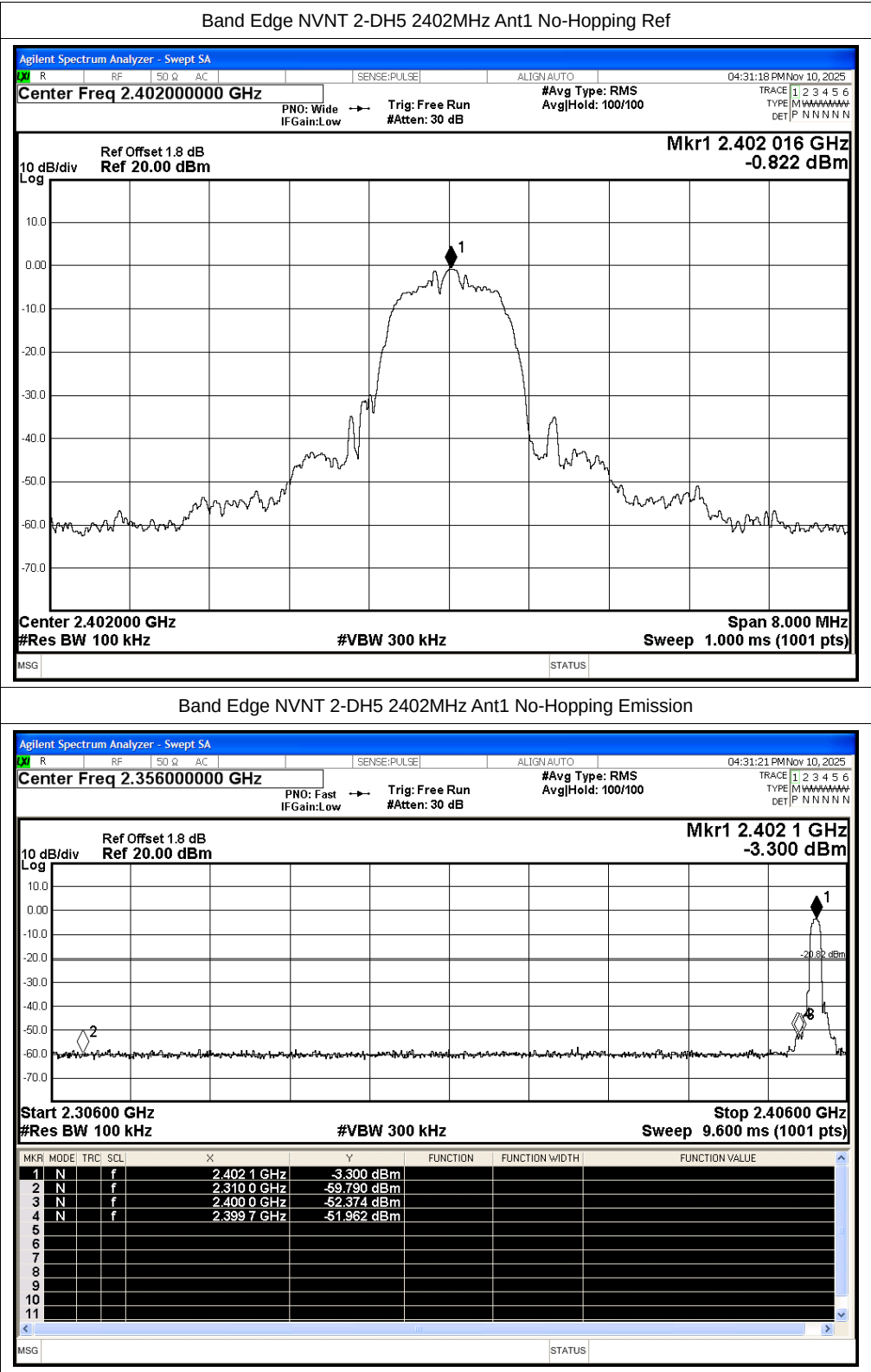


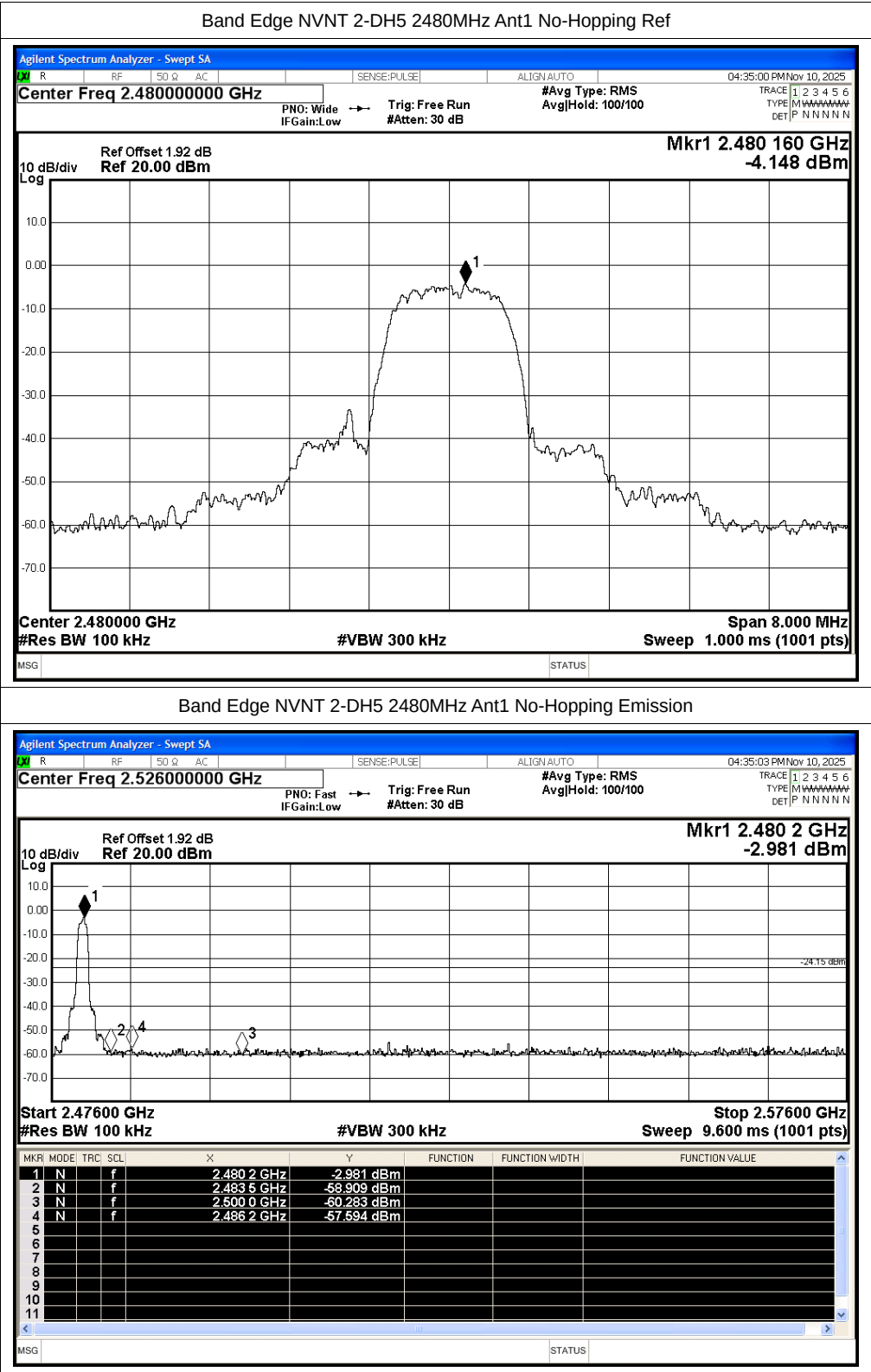
A.6 Band Edge

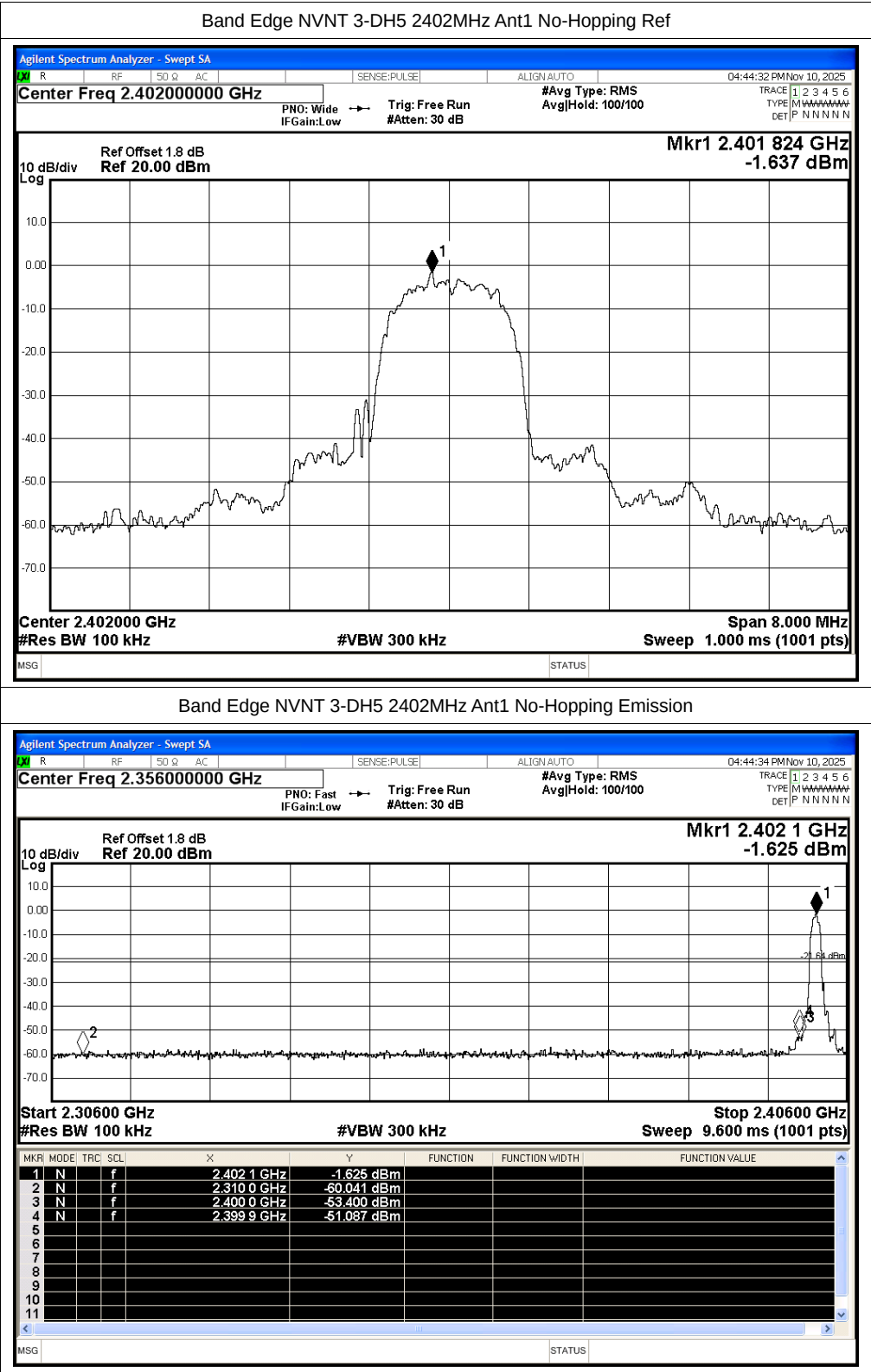
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-56.4	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-55.24	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-51.14	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-53.45	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-49.45	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-54.95	-20	Pass



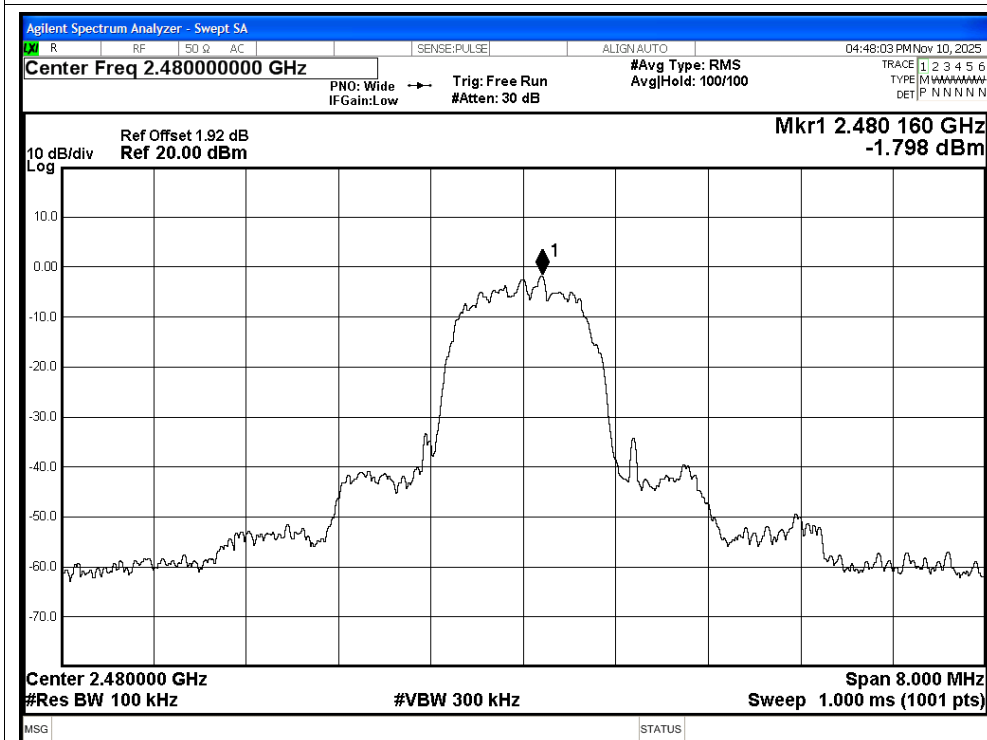




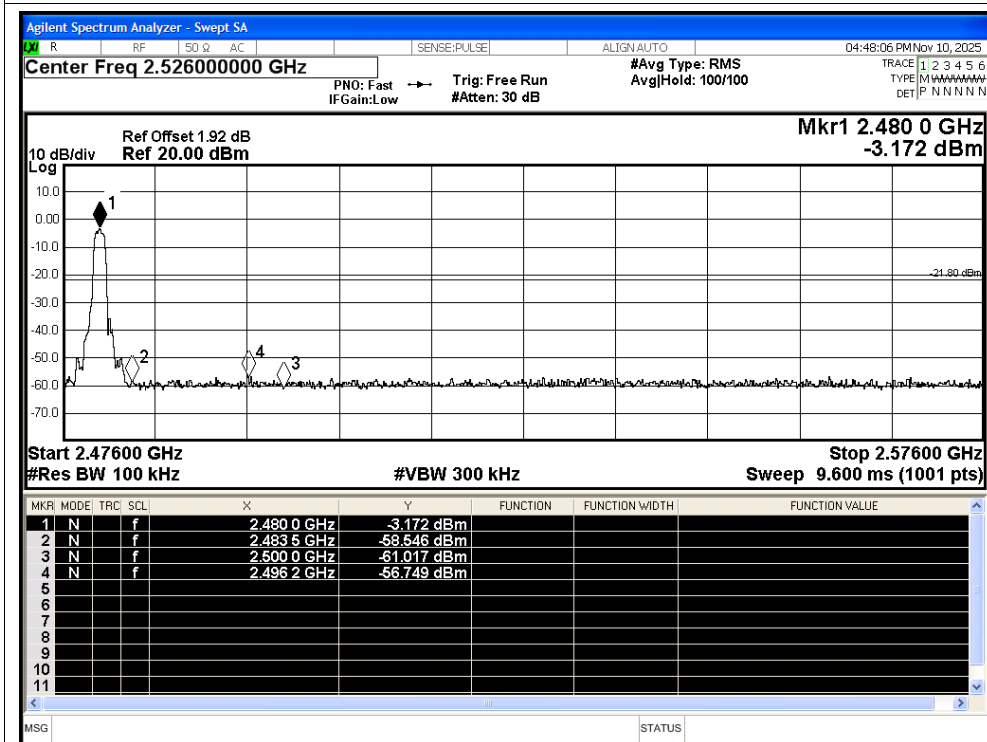




Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref

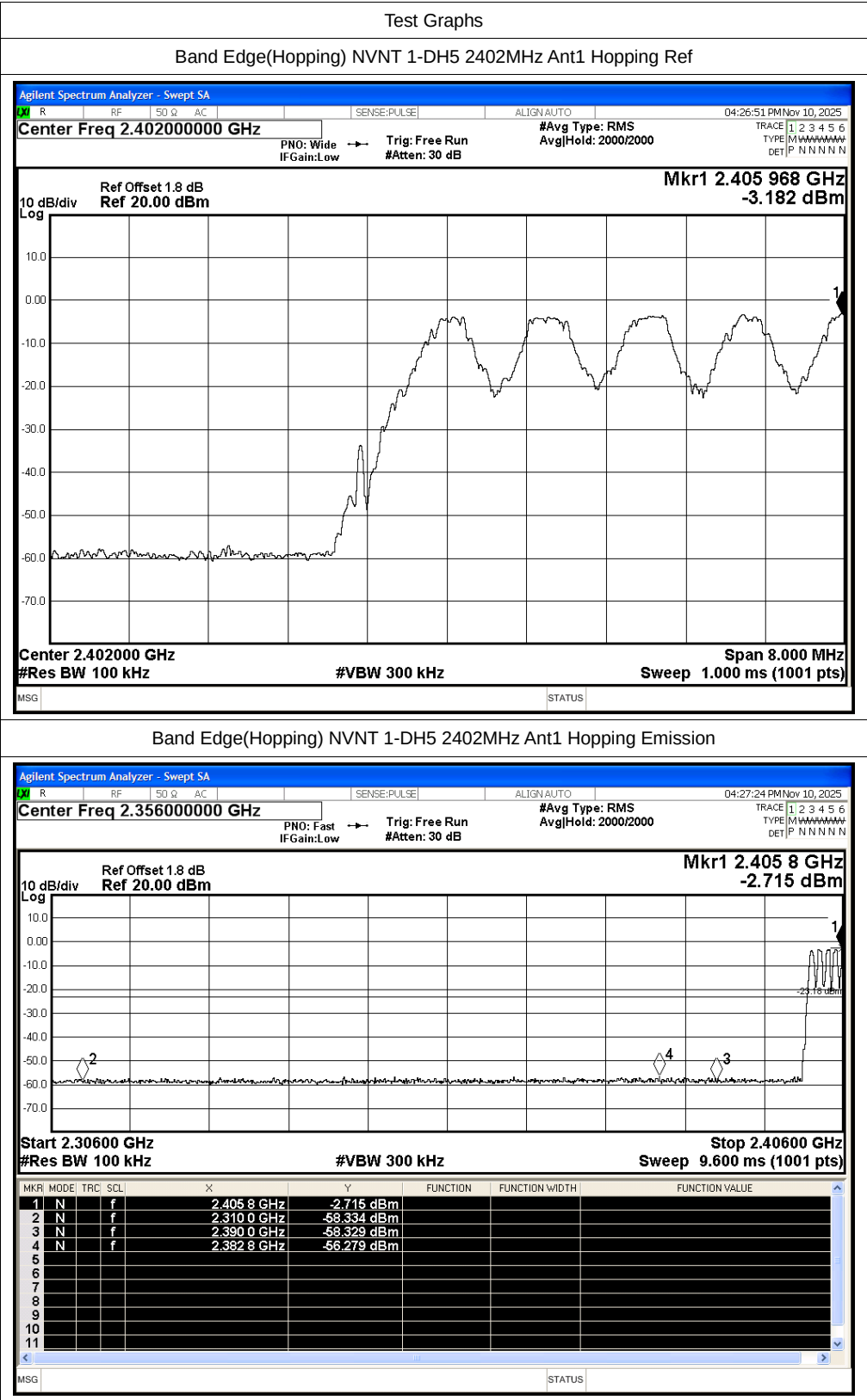


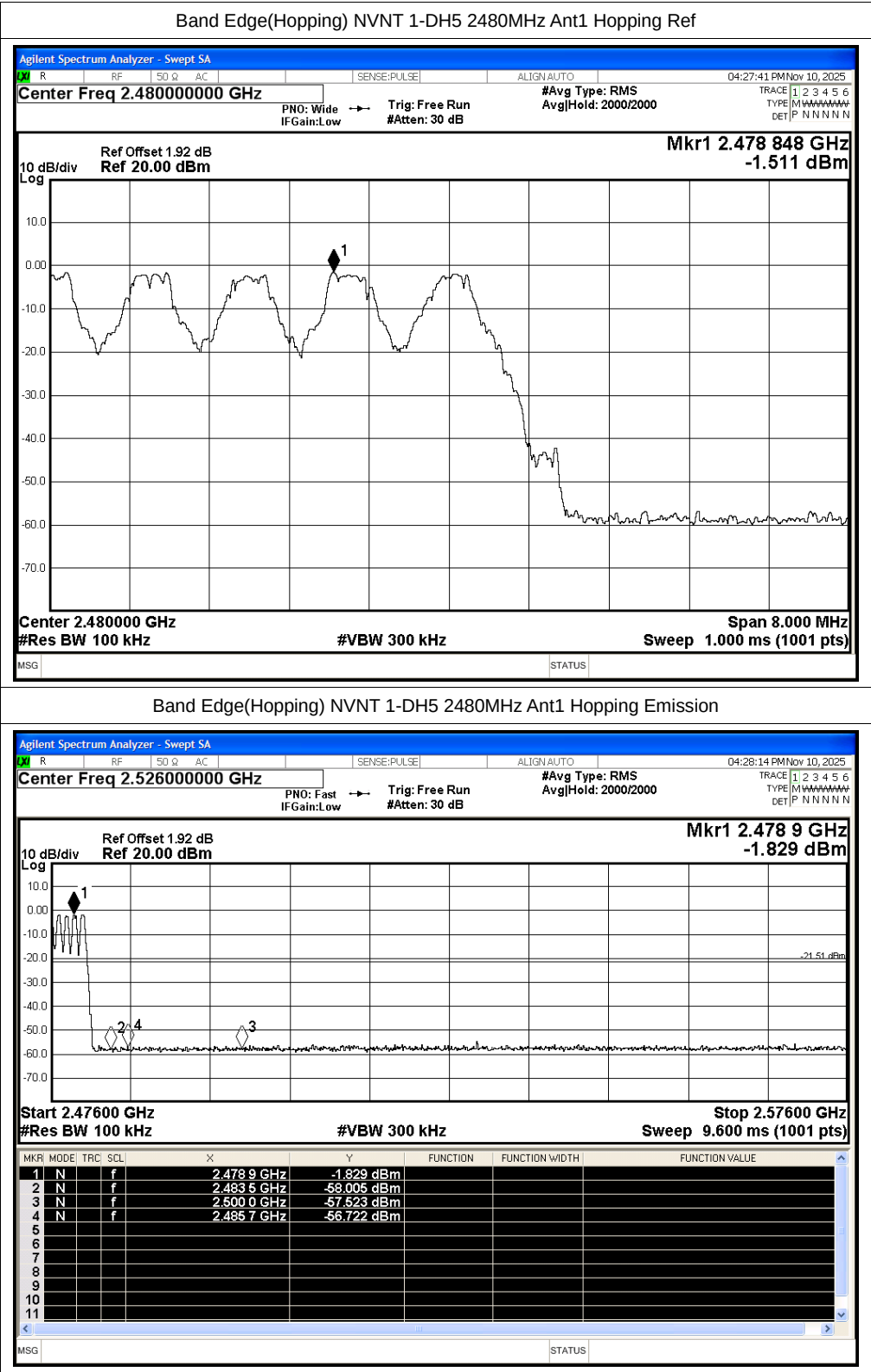
Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Emission

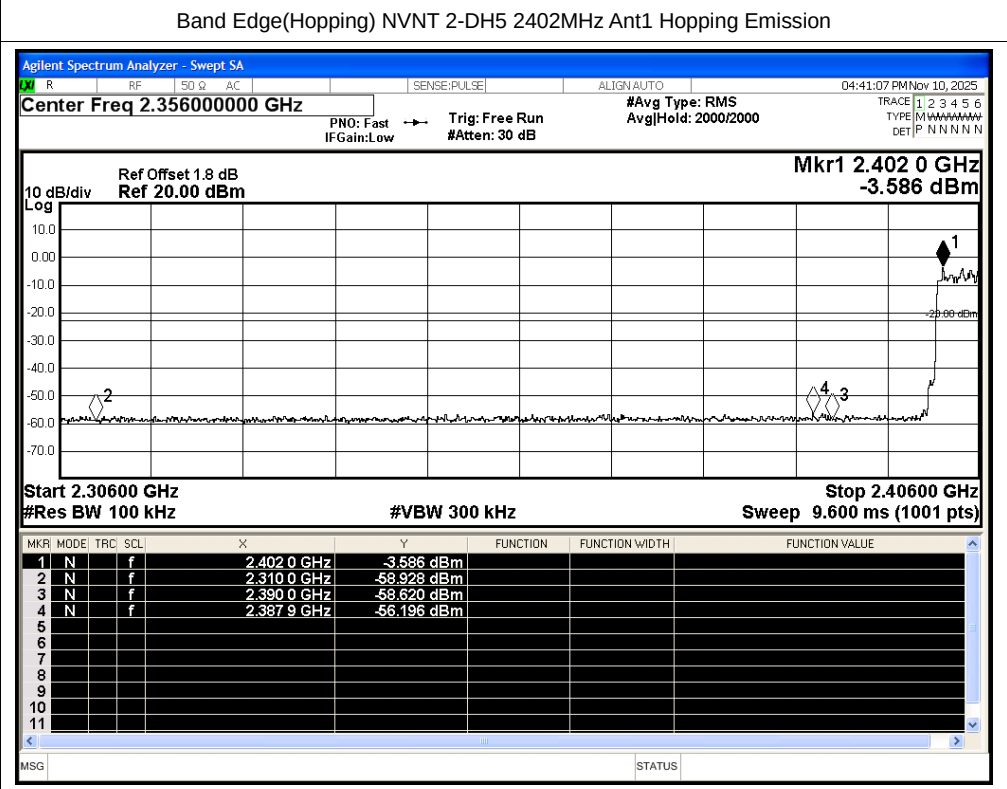
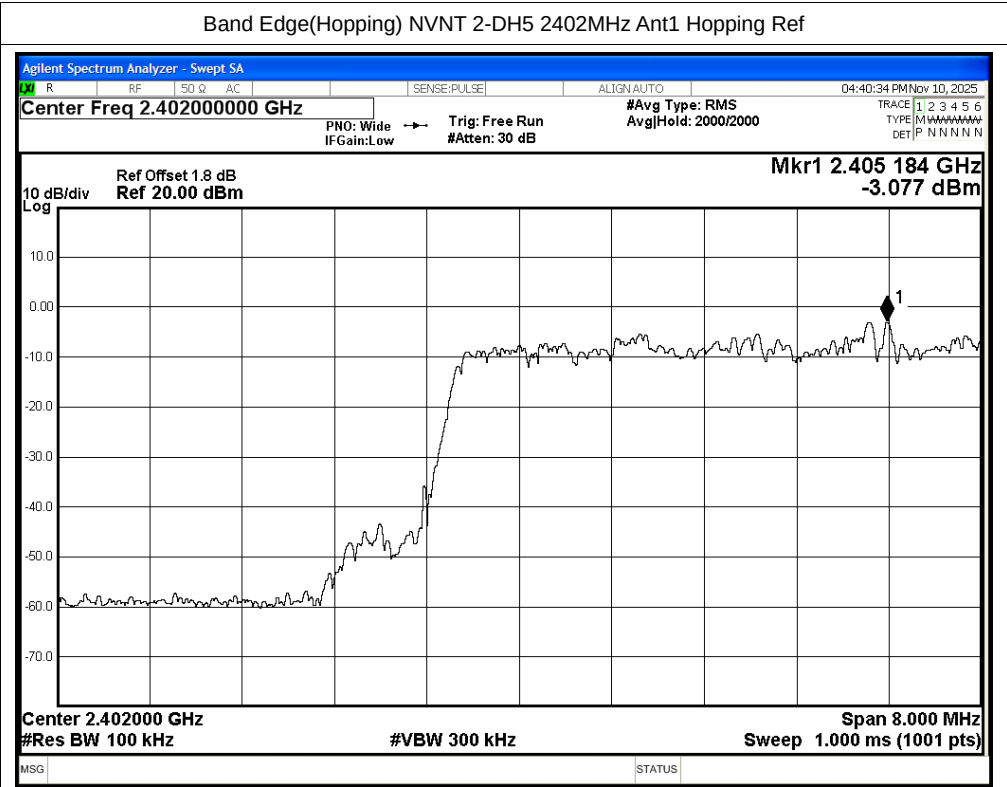


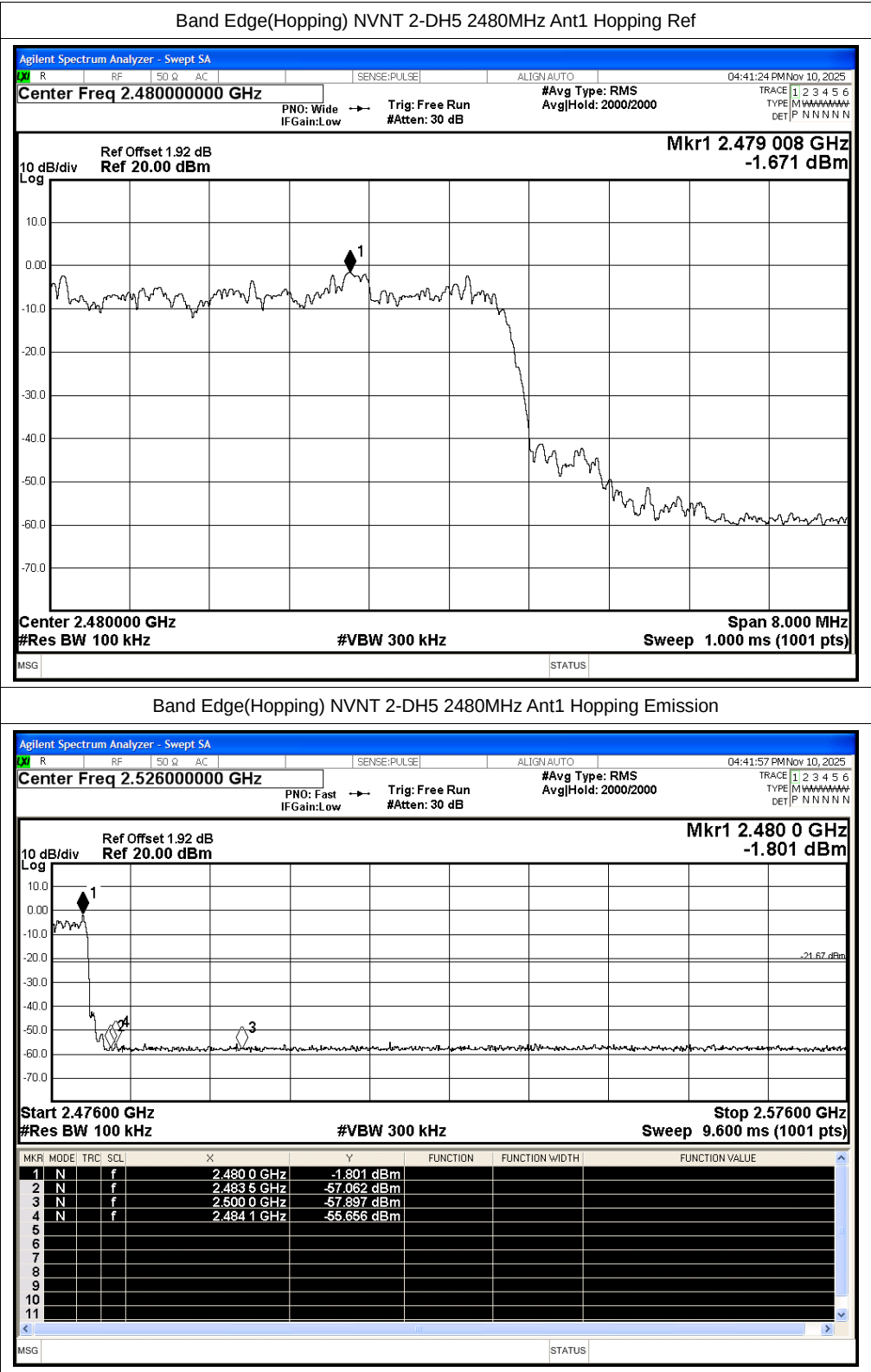
(Hopping)

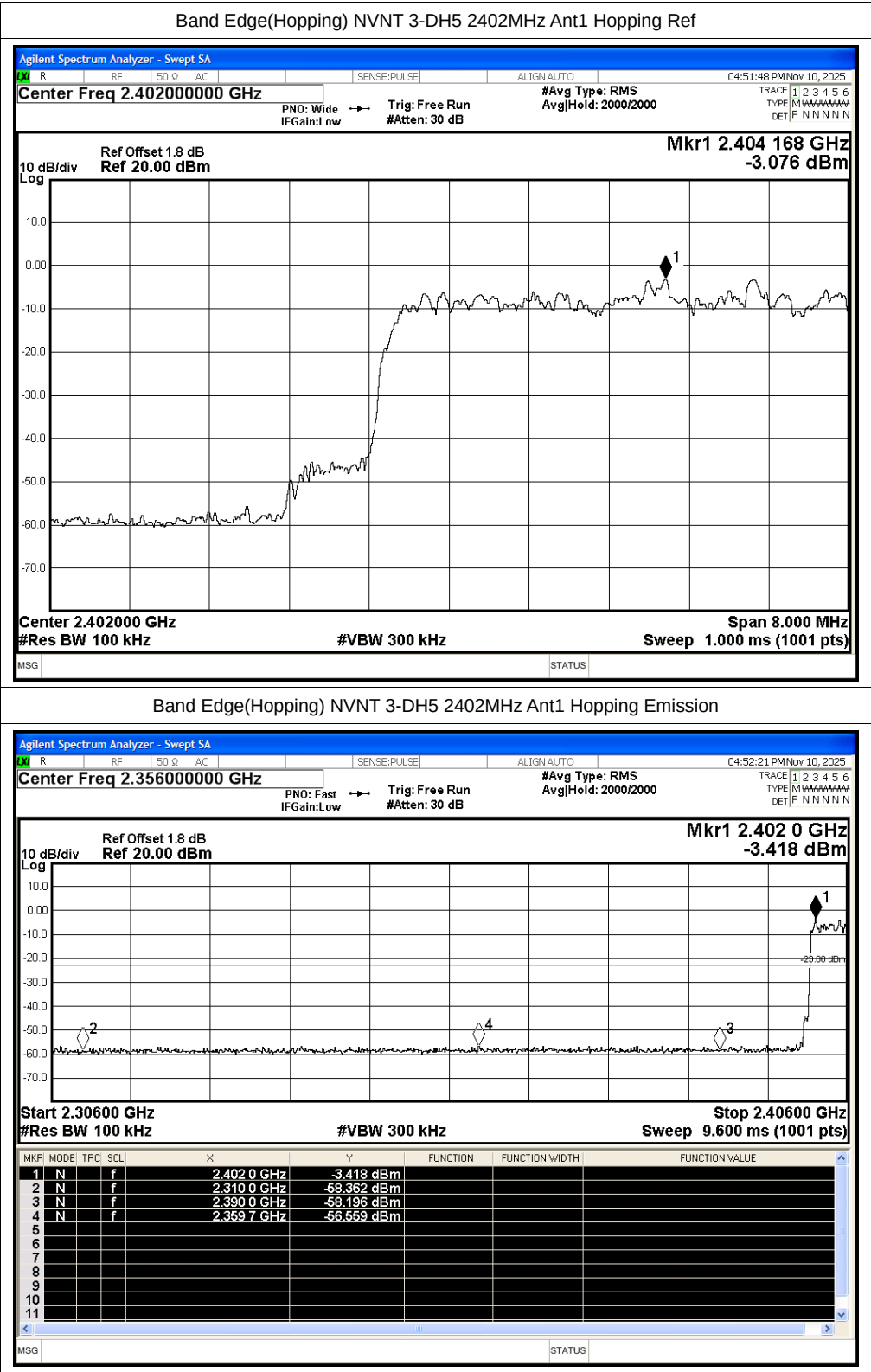
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-53.1	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-55.21	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-53.12	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-53.99	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-53.48	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-53.56	-20	Pass

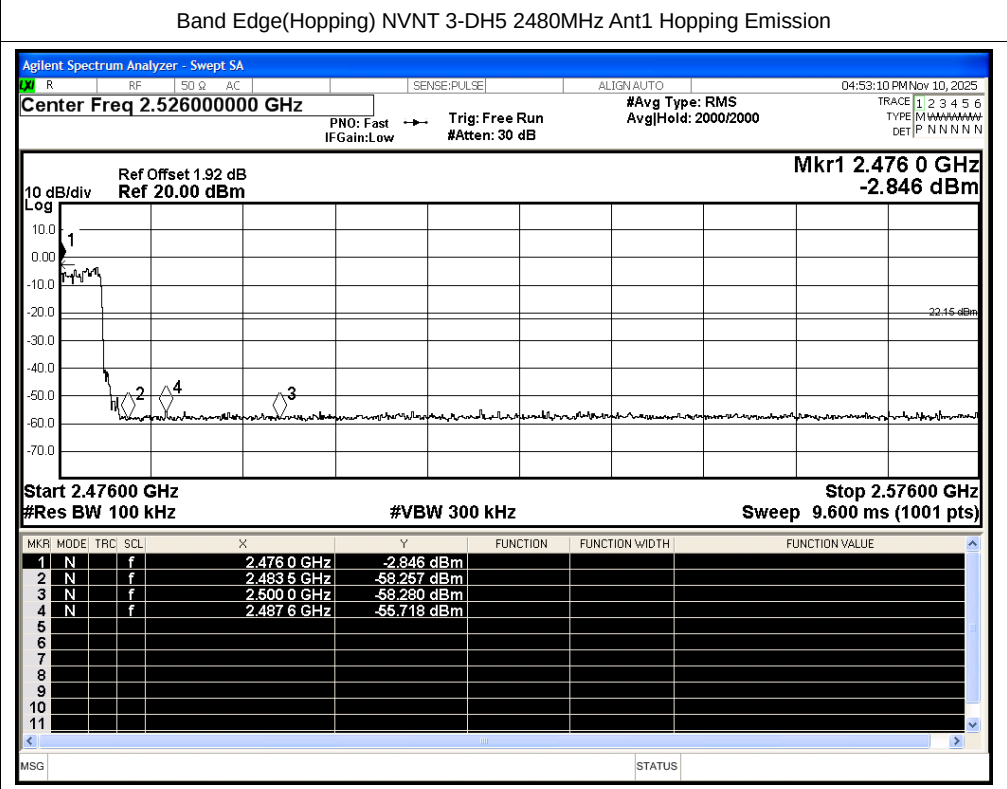
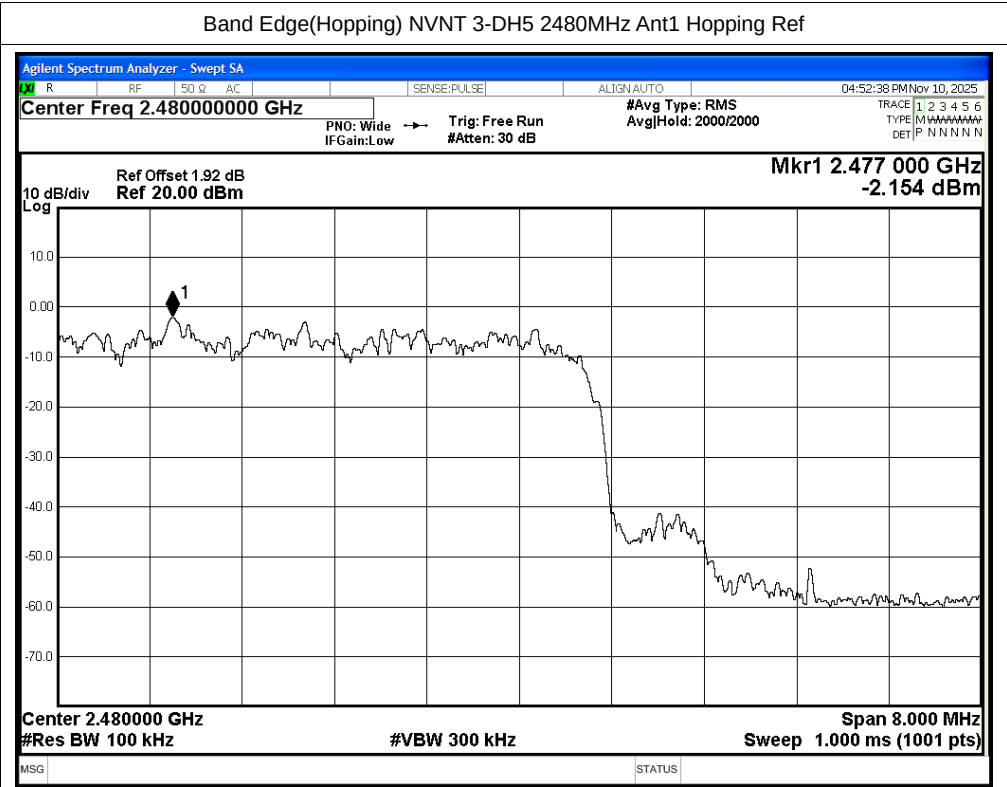






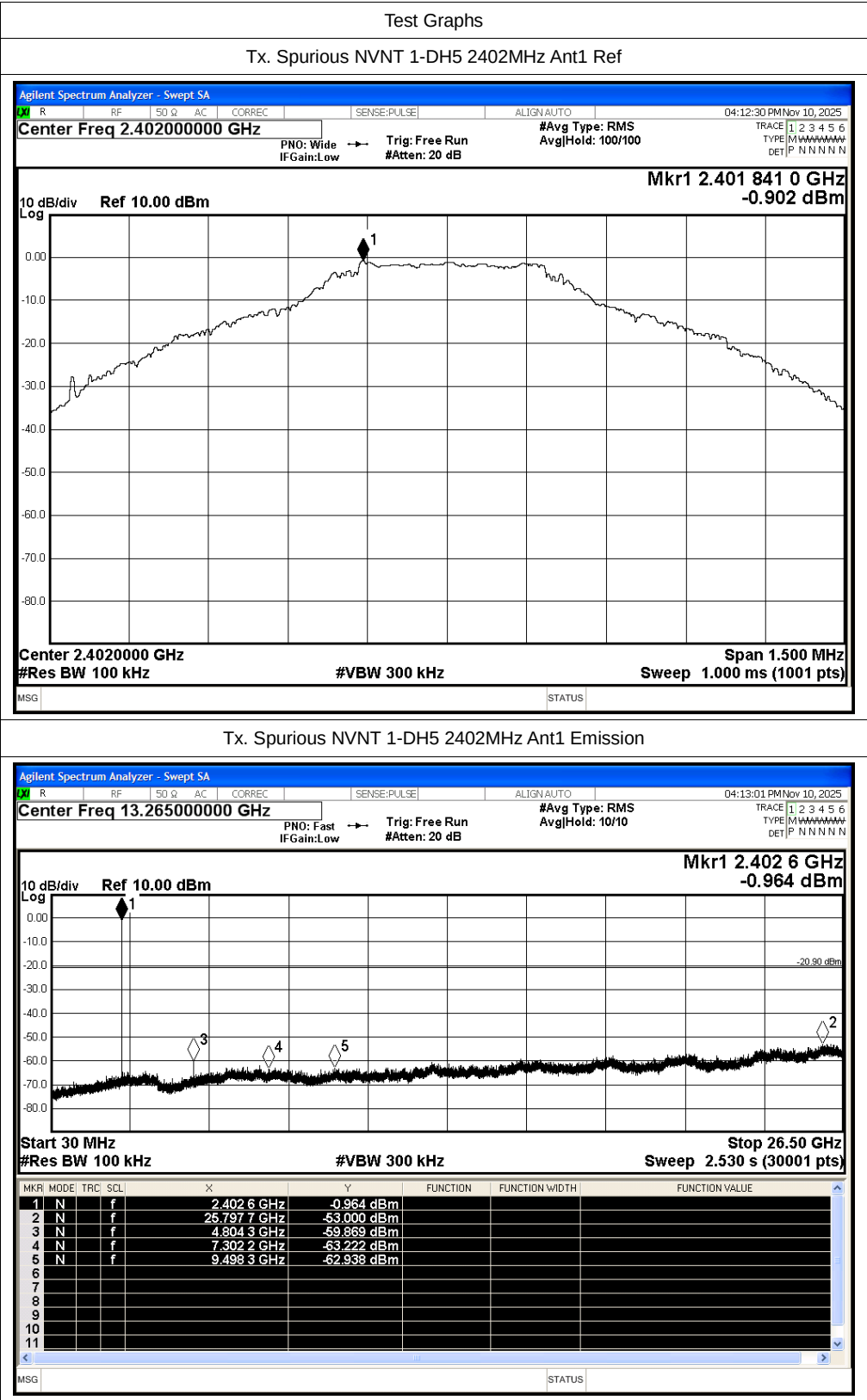


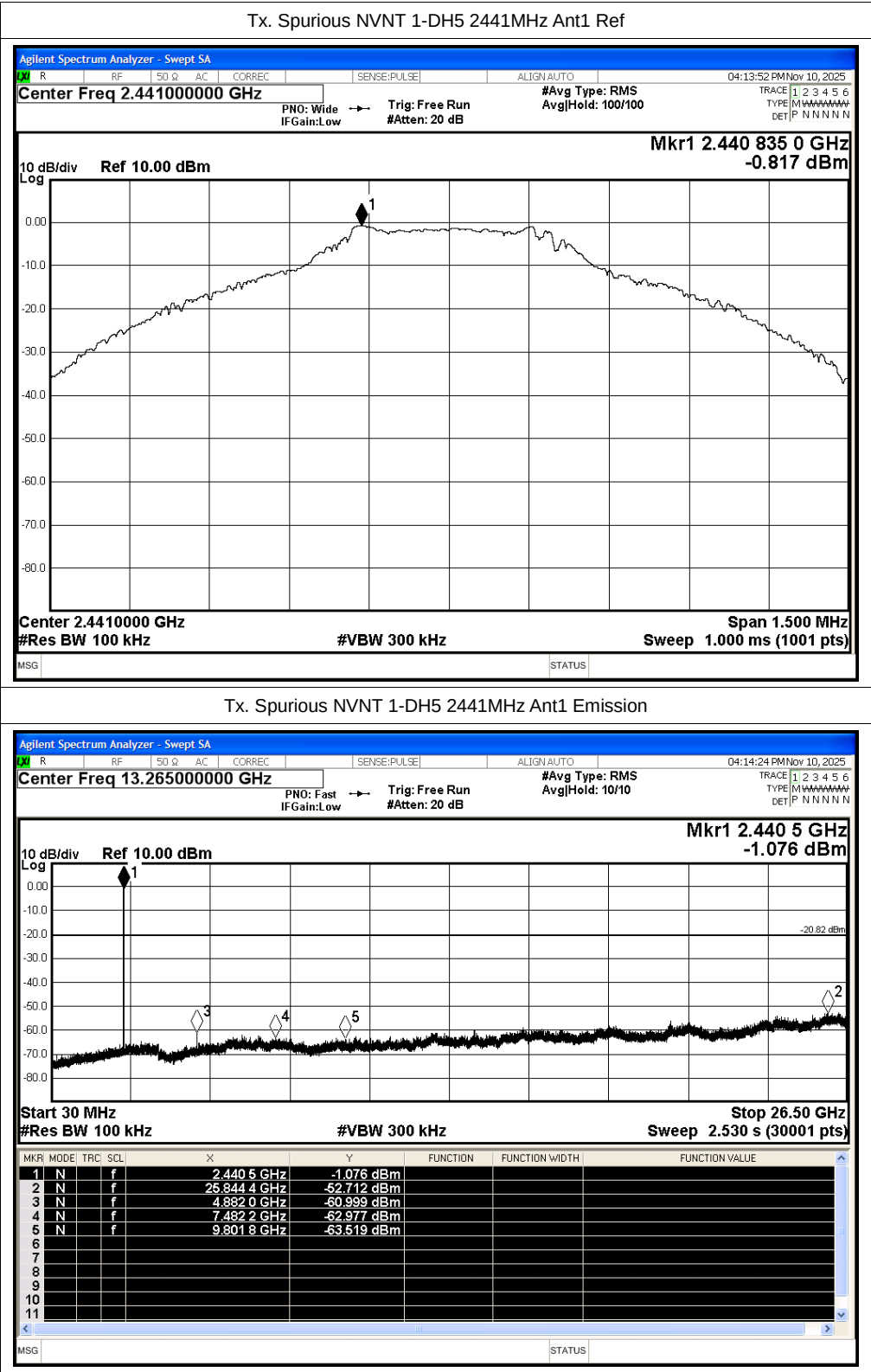


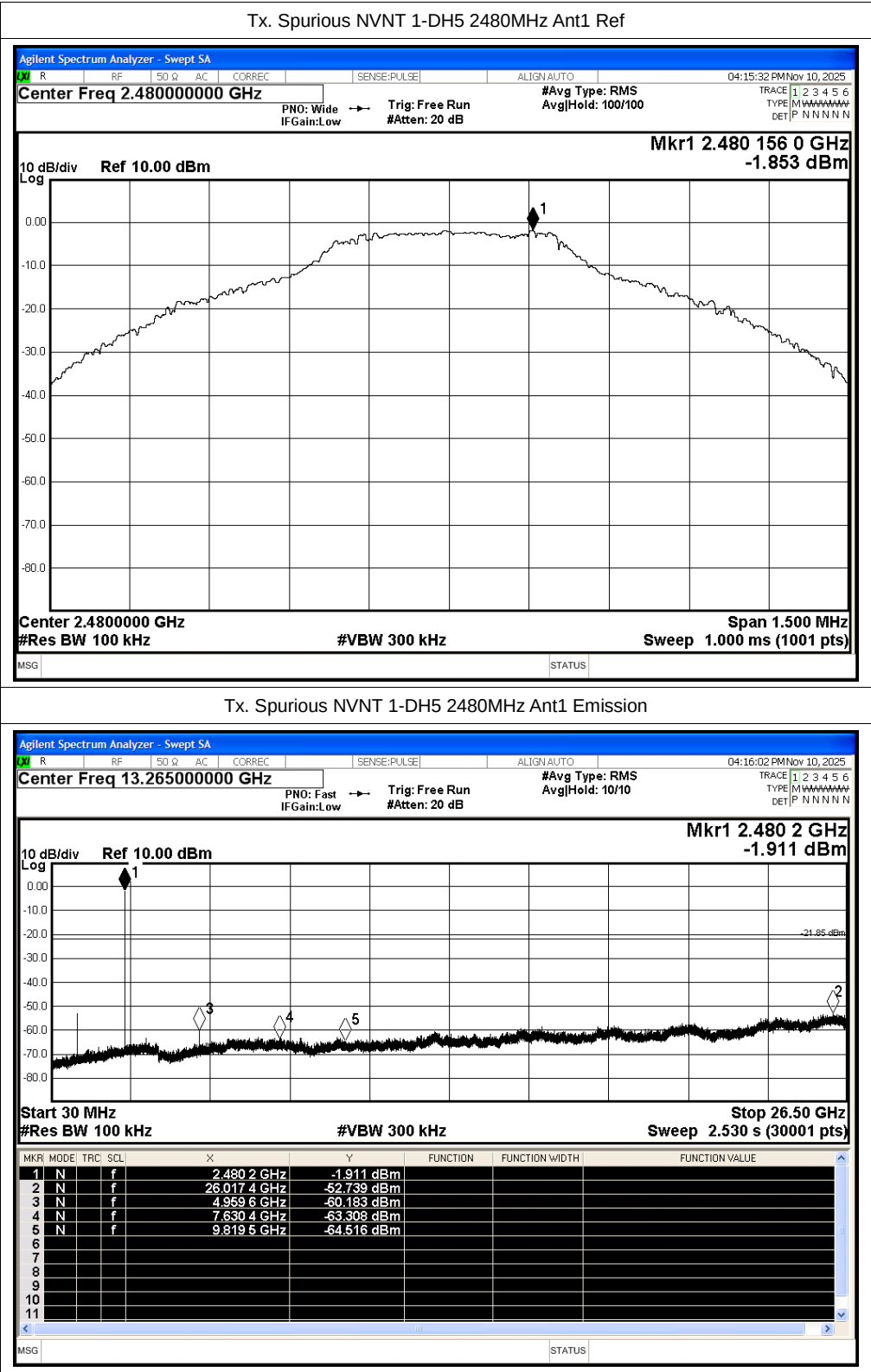


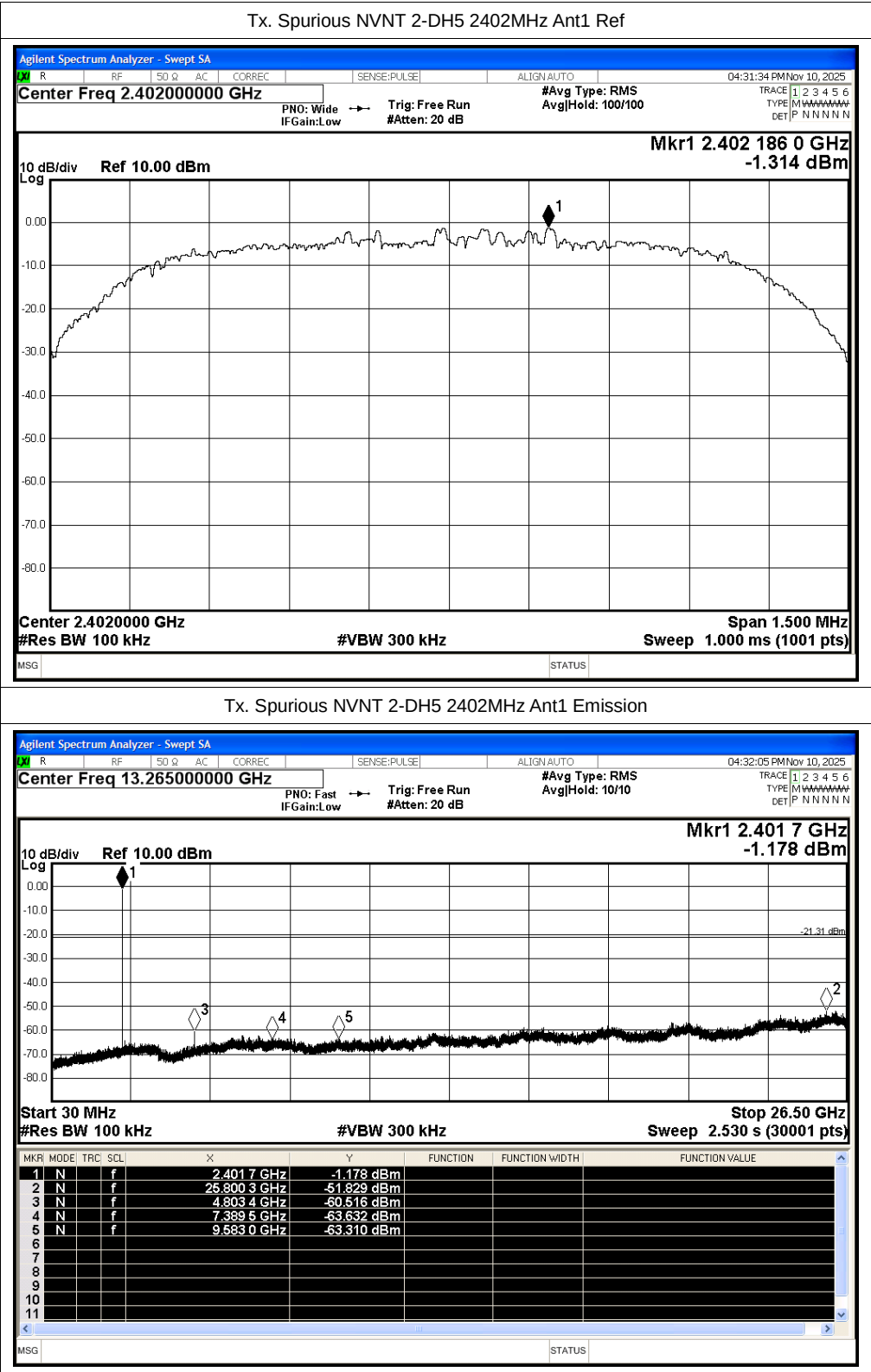
A.7 Conducted RF Spurious Emission

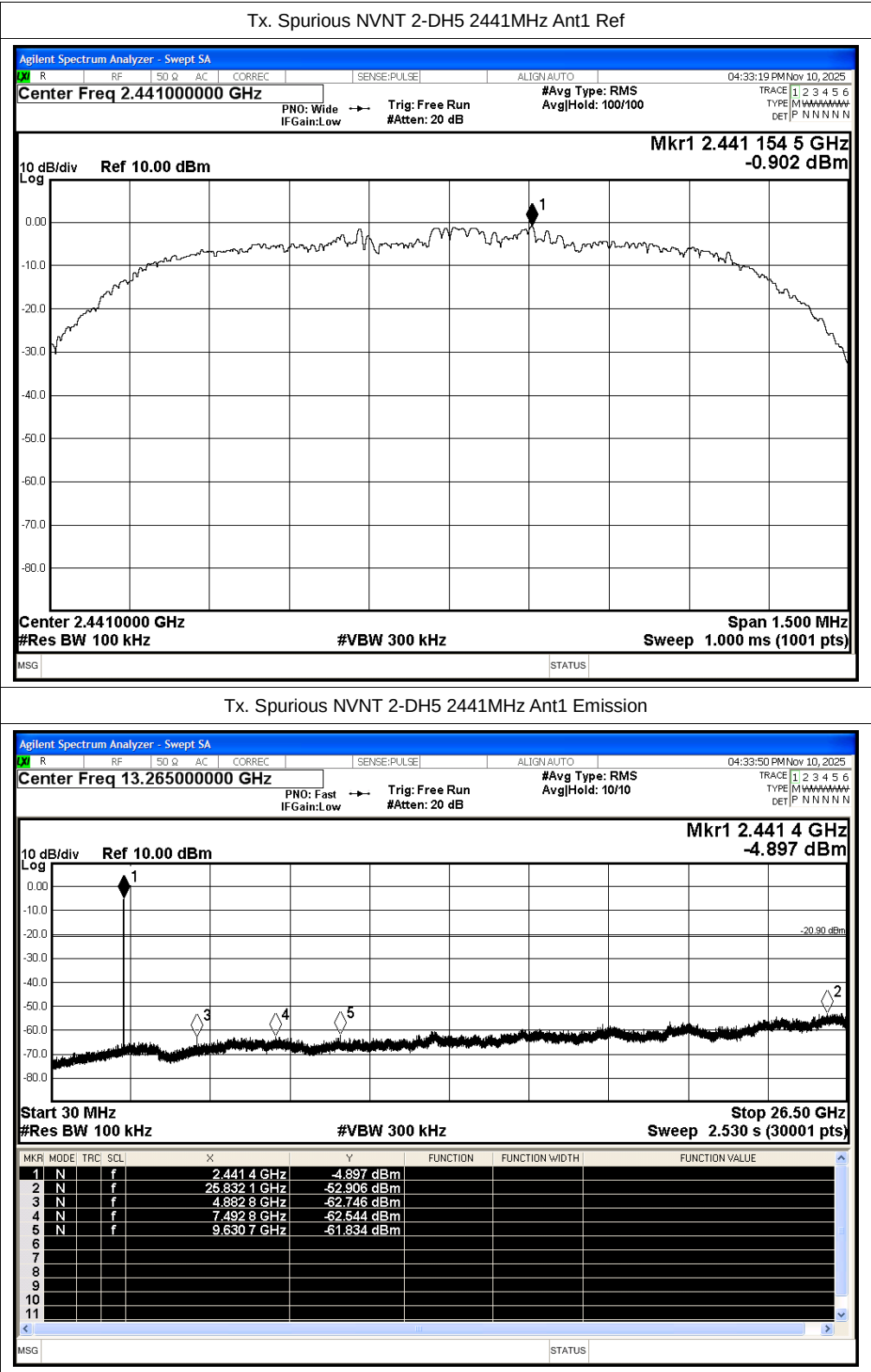
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-52.1	-20	Pass
NVNT	1-DH5	2441	Ant1	-51.9	-20	Pass
NVNT	1-DH5	2480	Ant1	-50.89	-20	Pass
NVNT	2-DH5	2402	Ant1	-50.52	-20	Pass
NVNT	2-DH5	2441	Ant1	-52	-20	Pass
NVNT	2-DH5	2480	Ant1	-50.82	-20	Pass
NVNT	3-DH5	2402	Ant1	-49.65	-20	Pass
NVNT	3-DH5	2441	Ant1	-52	-20	Pass
NVNT	3-DH5	2480	Ant1	-50.85	-20	Pass

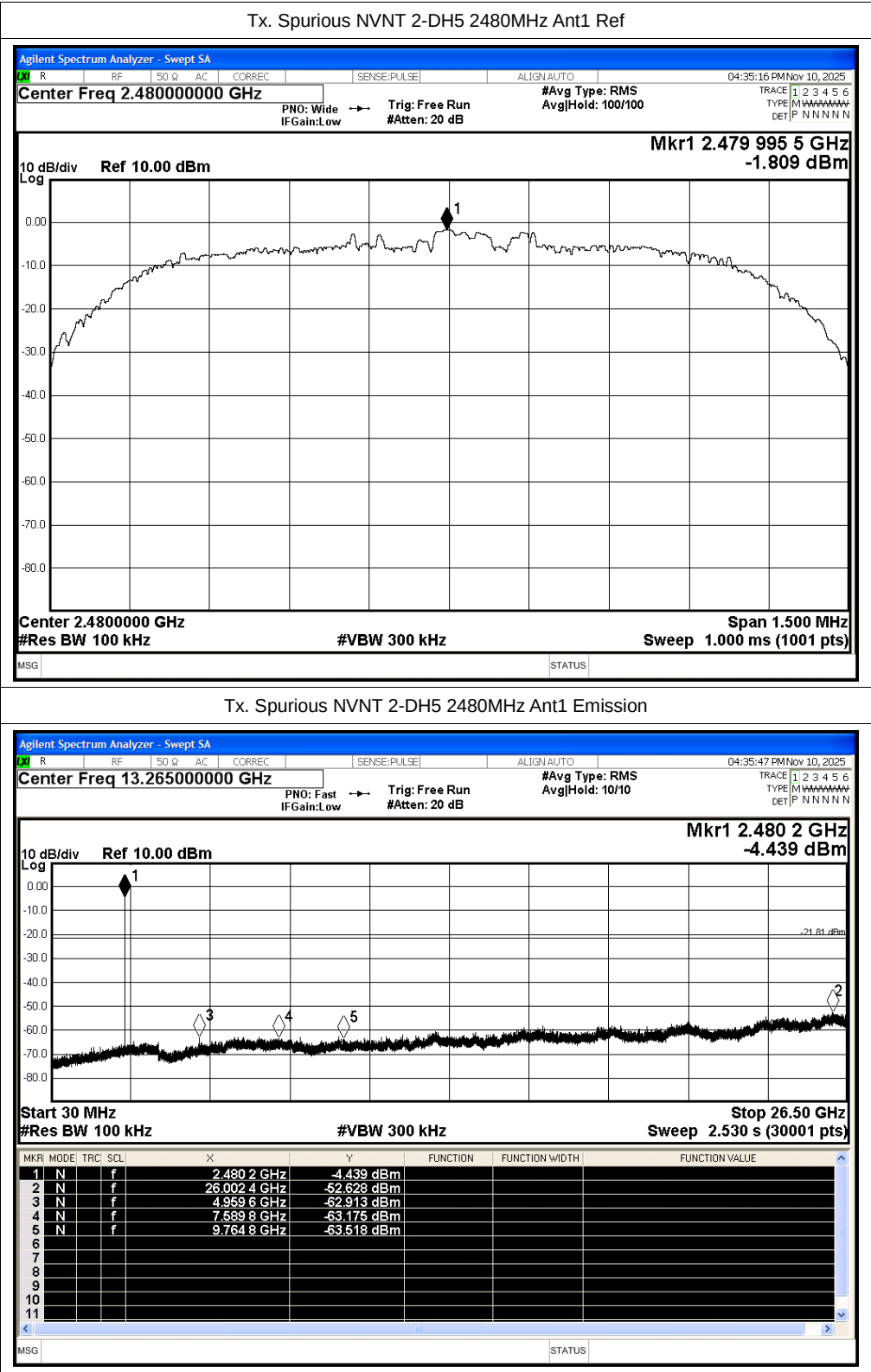


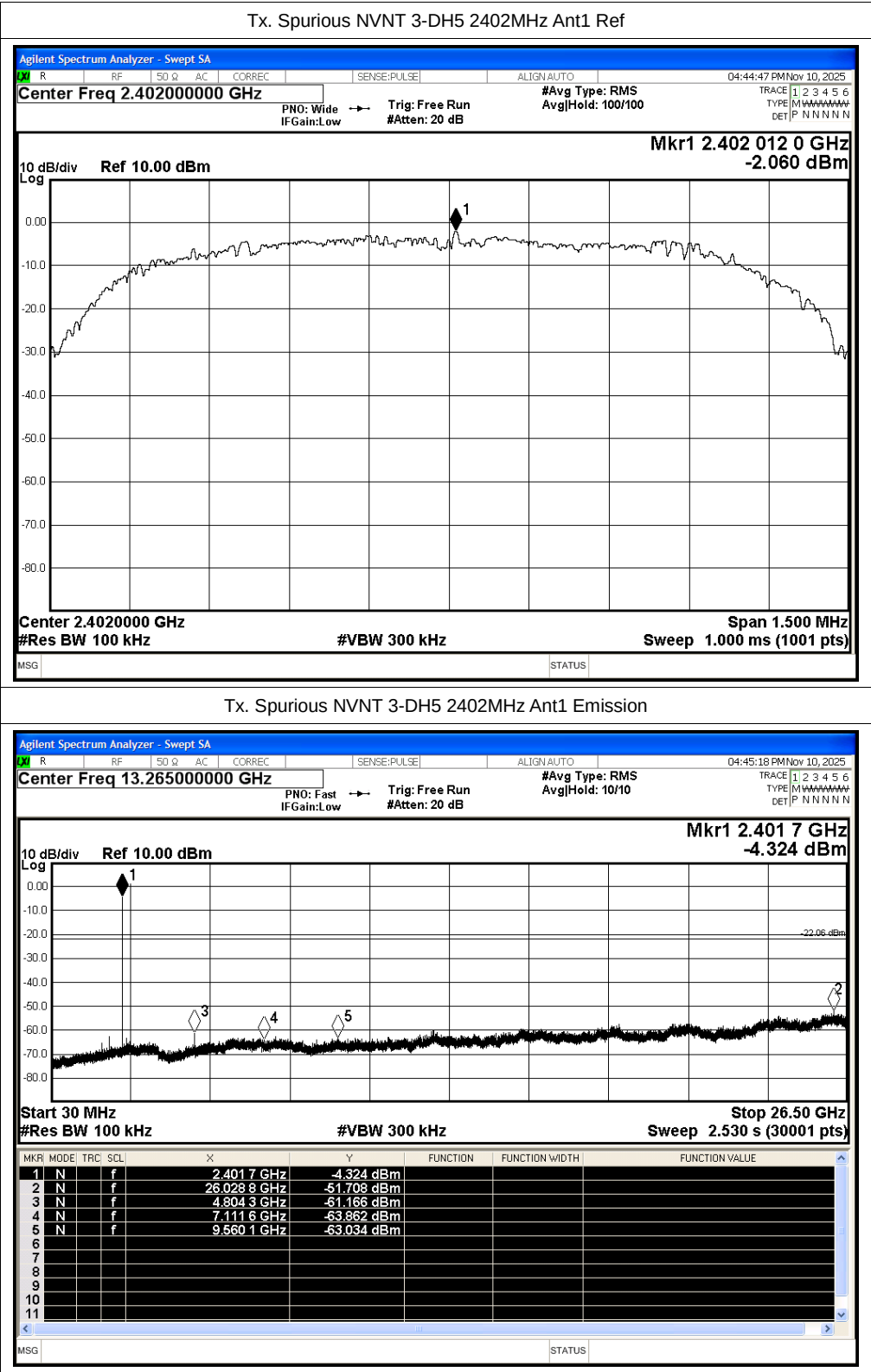


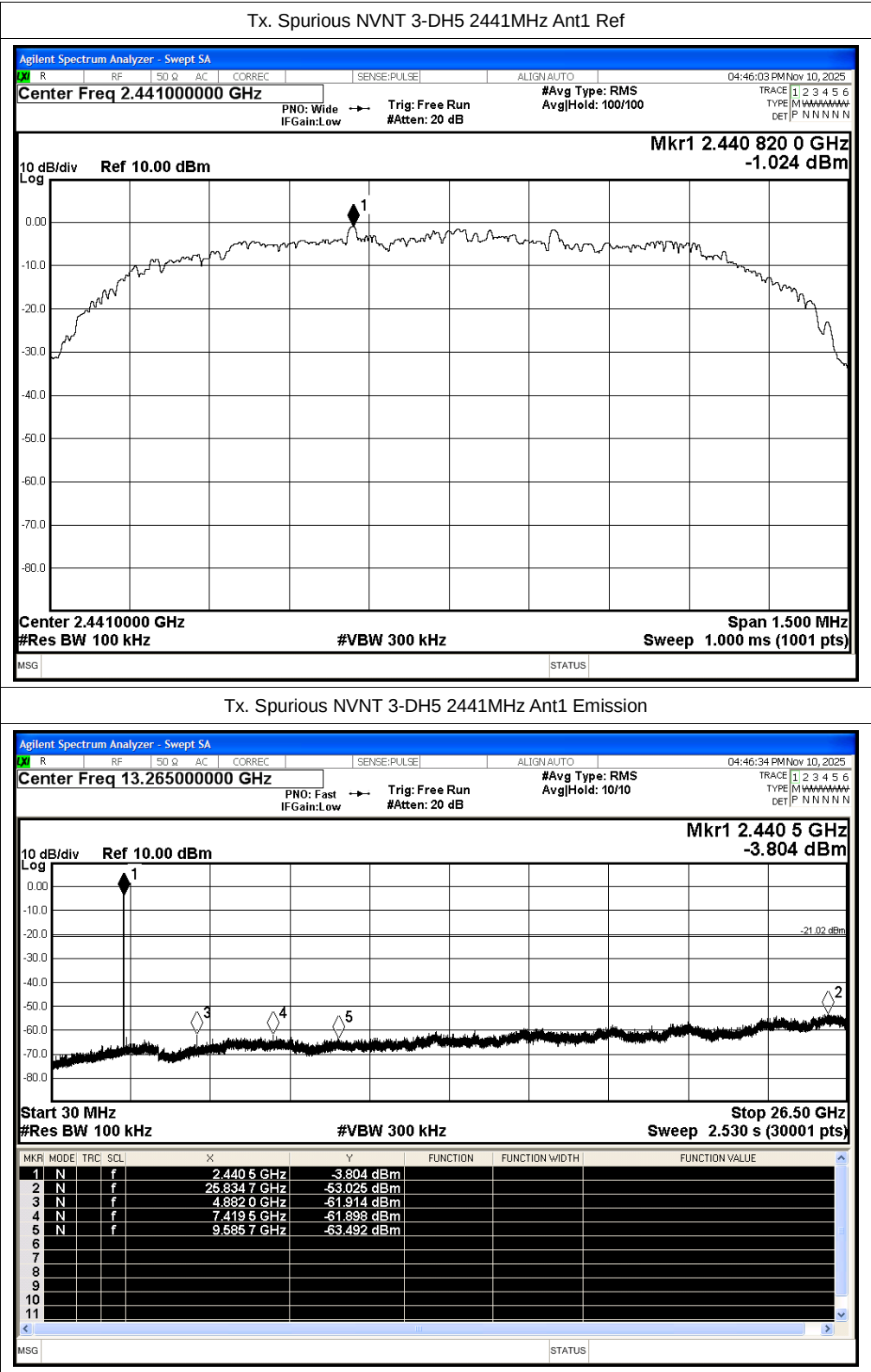


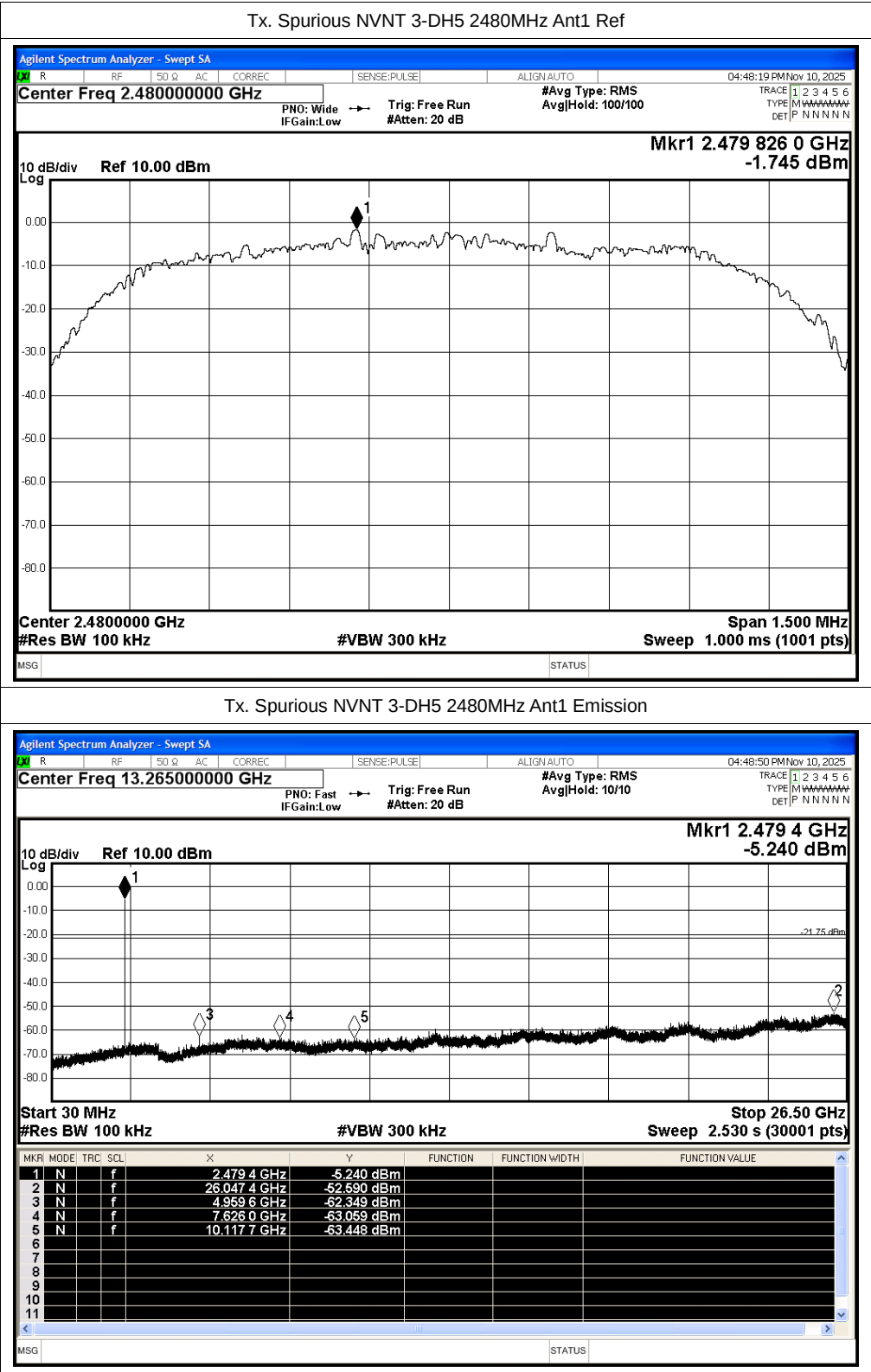






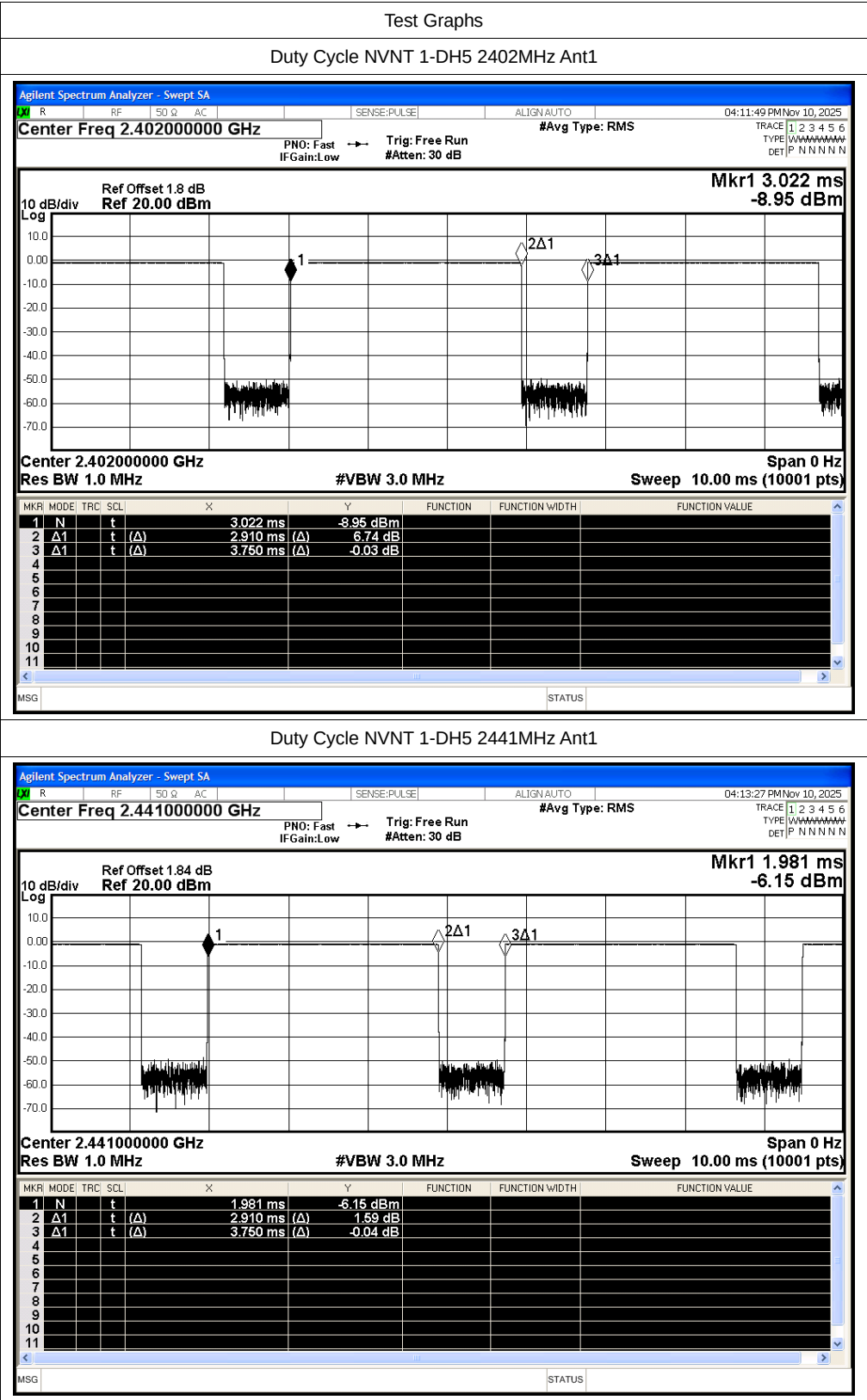




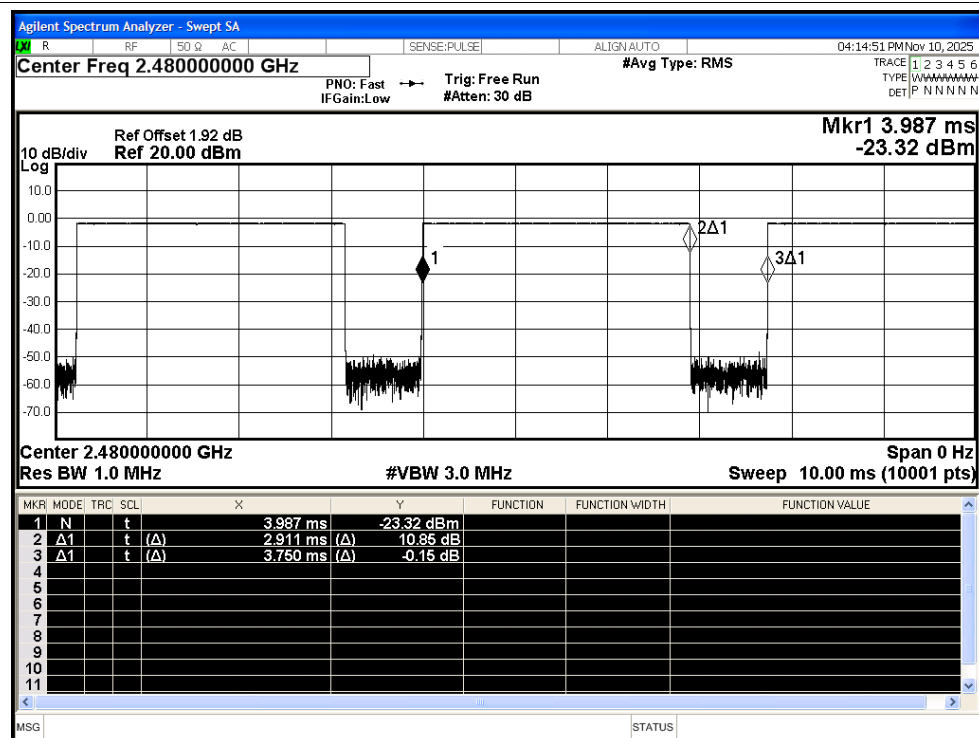


A.8 Duty Cycle

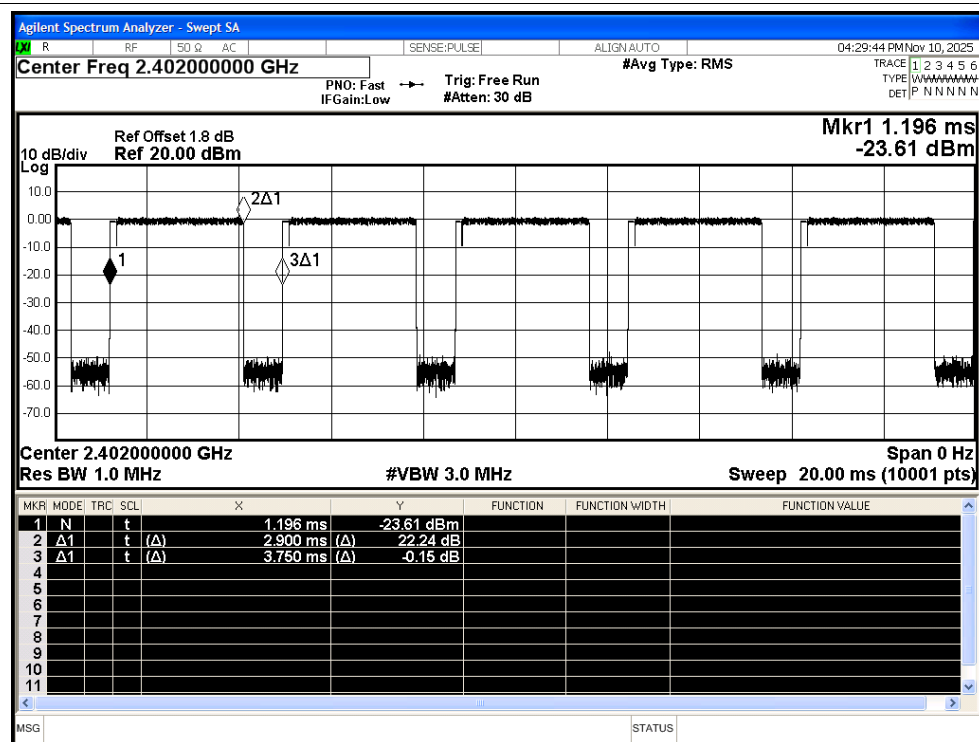
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.63	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.33	1.12	0.34
NVNT	2-DH5	2441	Ant1	77.33	1.12	0.34
NVNT	2-DH5	2480	Ant1	77.33	1.12	0.34
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	77.28	1.12	0.35

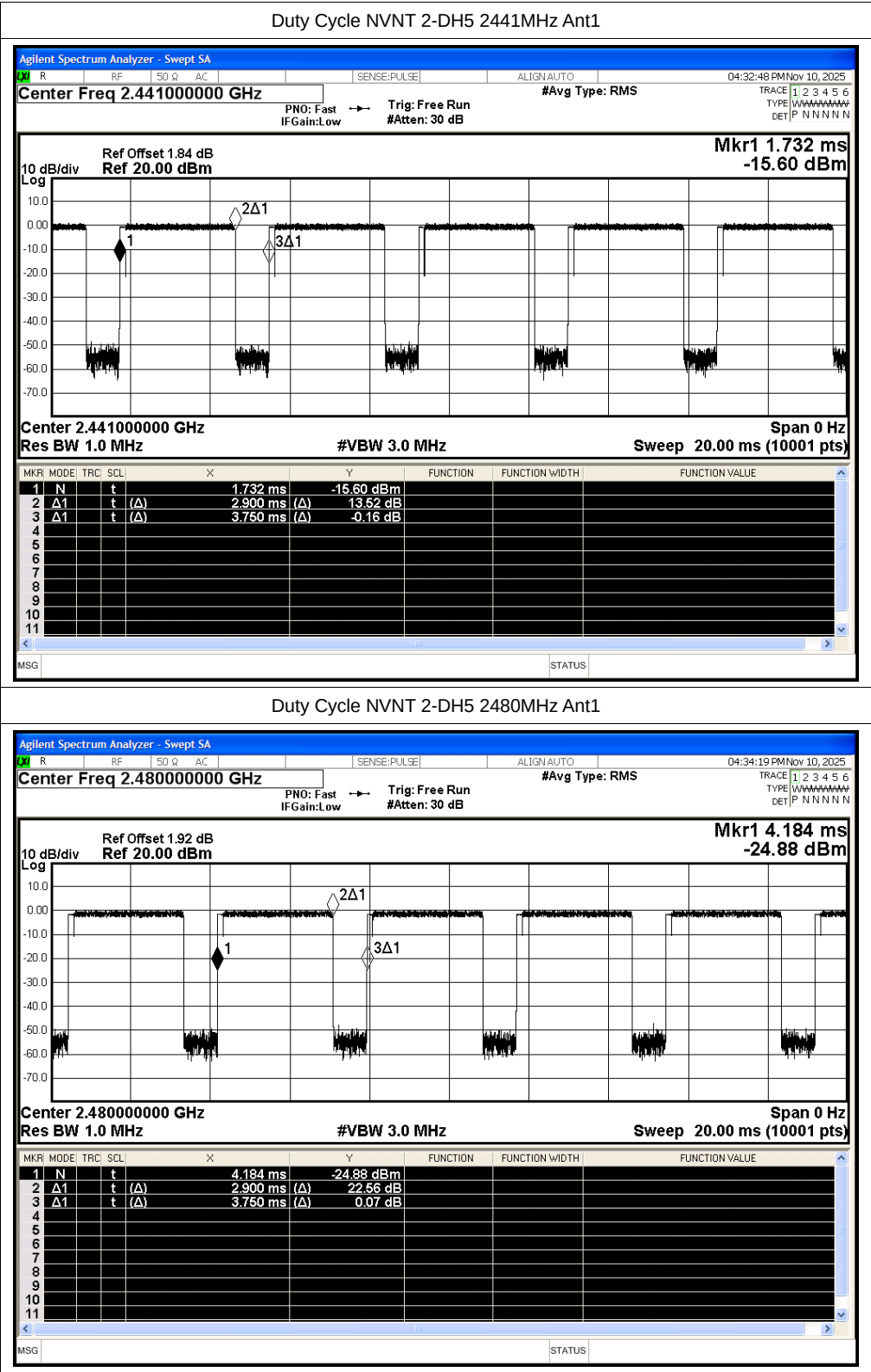


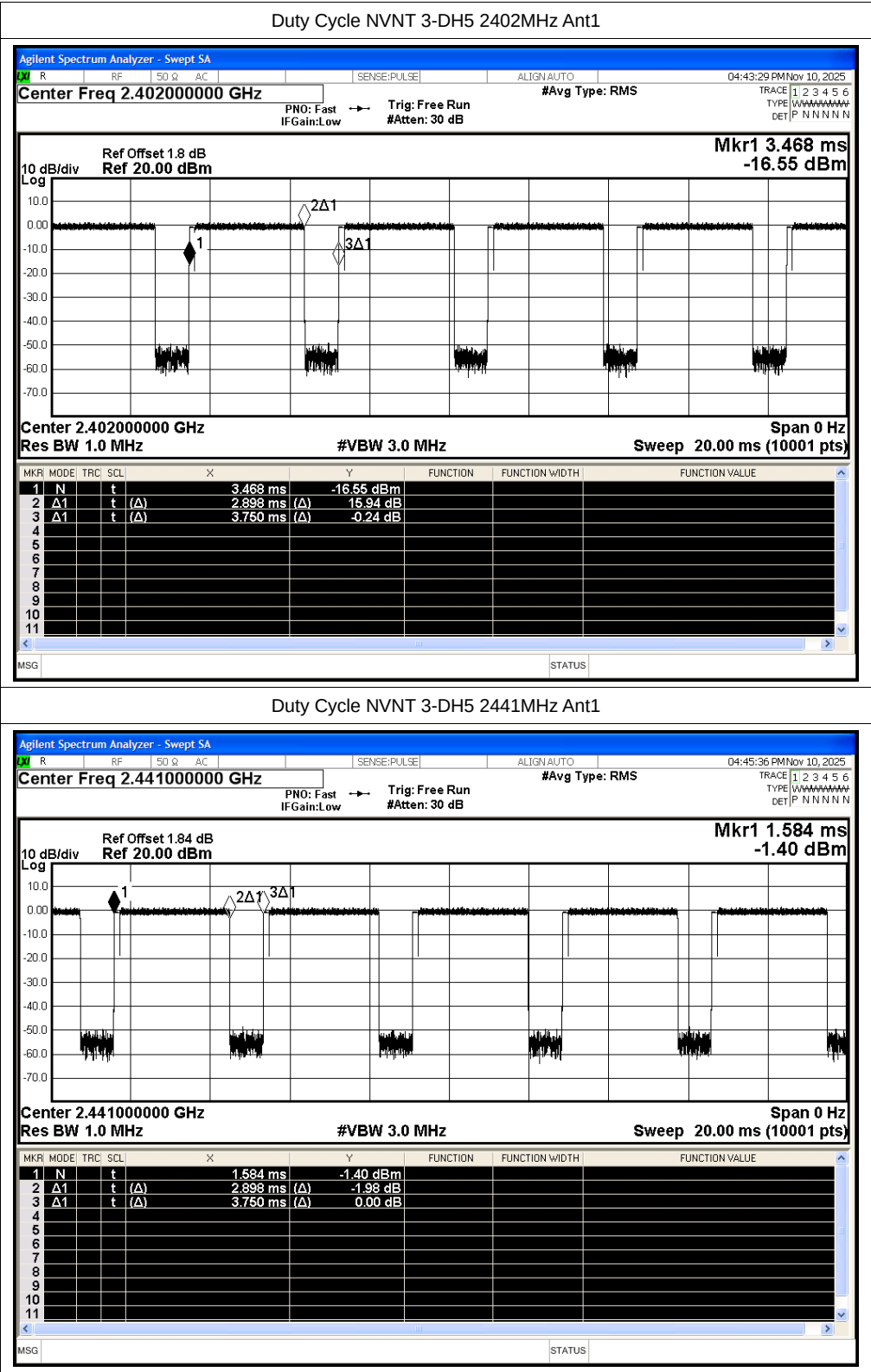
Duty Cycle NVNT 1-DH5 2480MHz Ant1

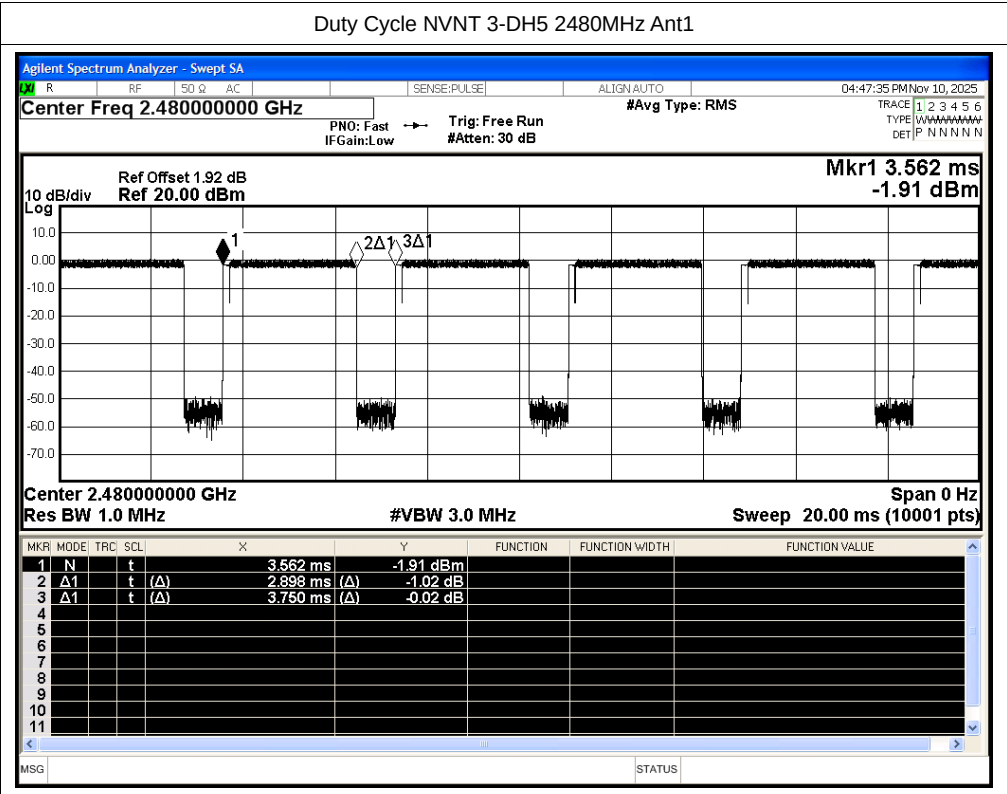


Duty Cycle NVNT 2-DH5 2402MHz Ant1



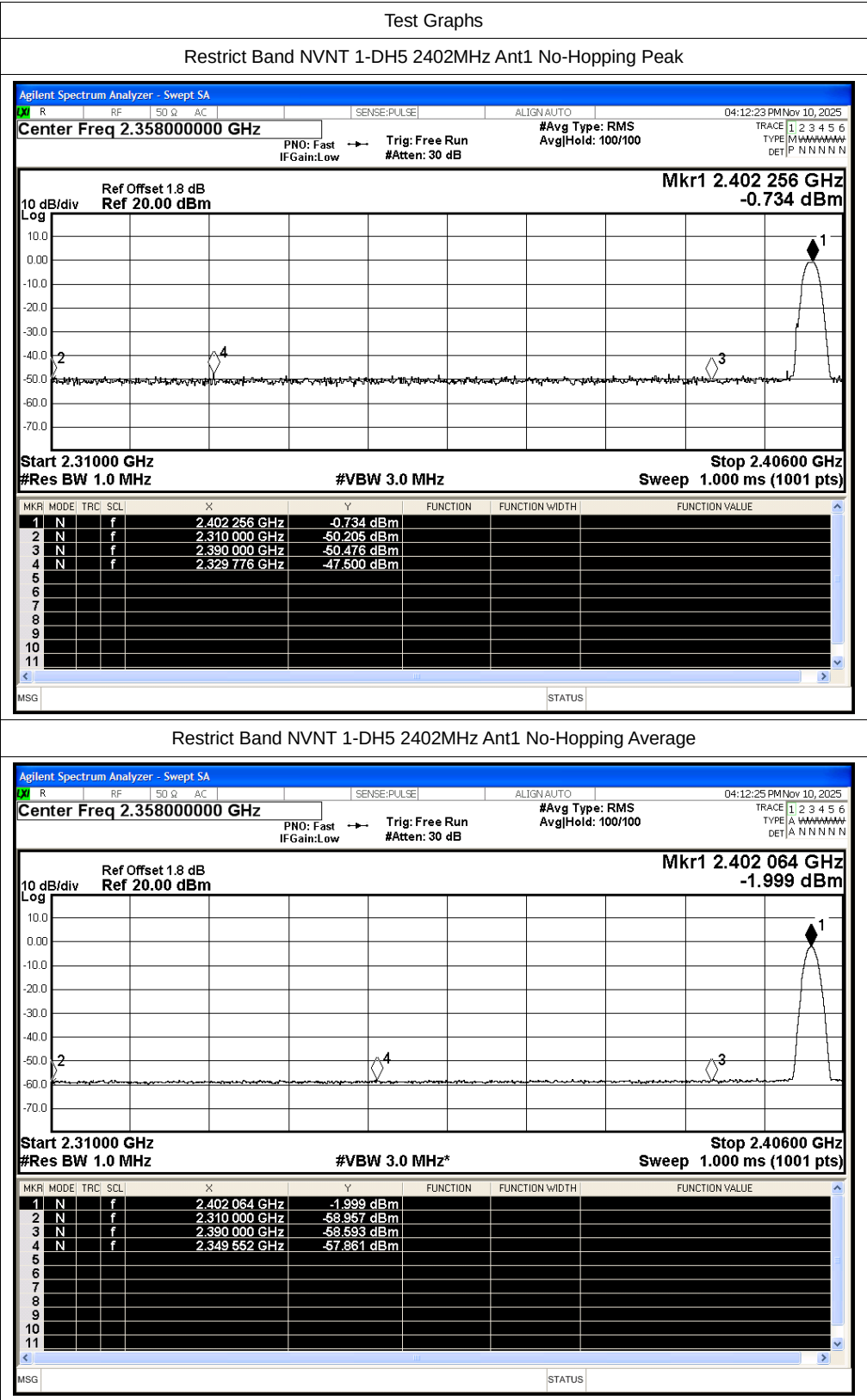




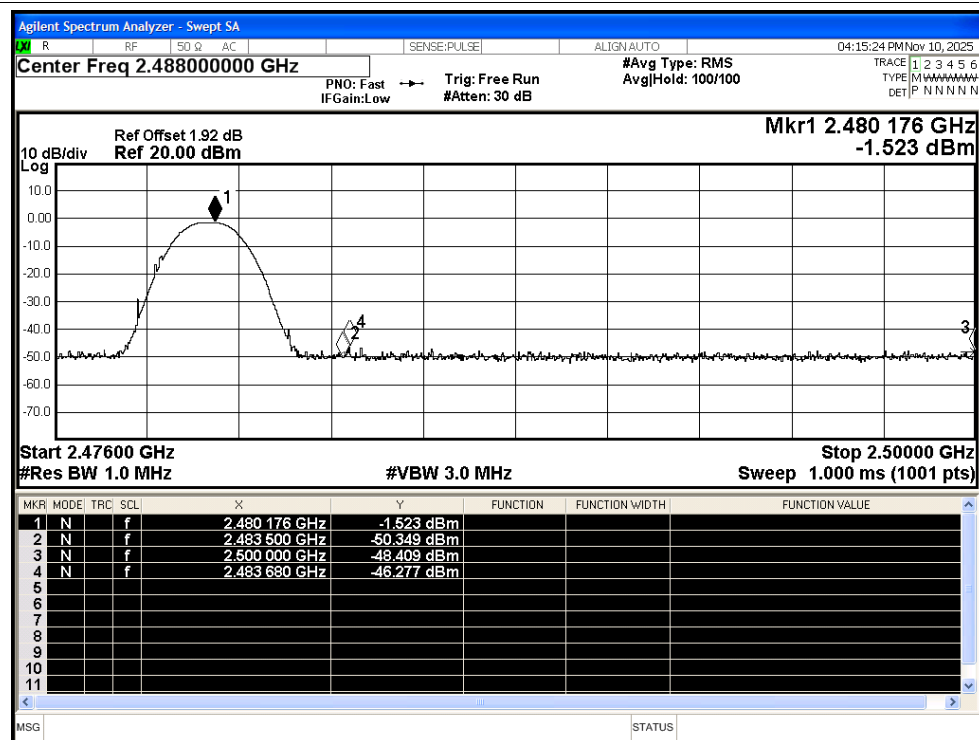


A.9 Restrict Band

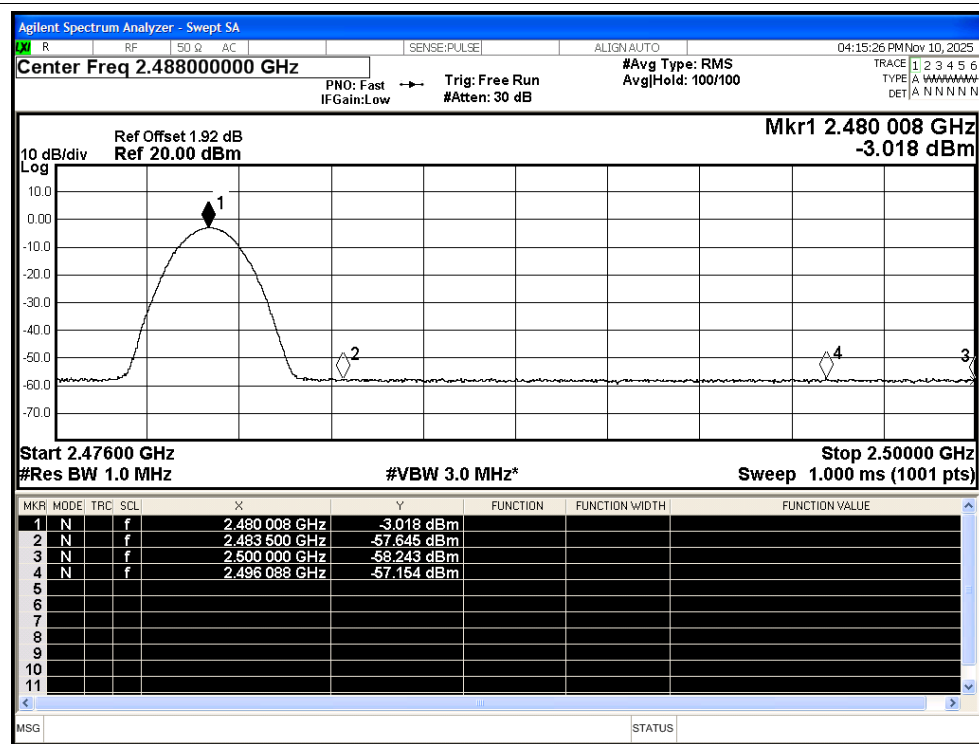
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-50.21	2	-	47.05	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.96	2	1.1	39.4	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2329.776	-47.5	2	-	49.76	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2349.552	-57.86	2	1.1	40.5	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-50.48	2	-	46.78	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-58.59	2	1.1	39.77	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-50.35	2	-	46.91	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-57.65	2	1.1	40.71	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.68	-46.28	2	-	50.98	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2496.088	-57.15	2	1.1	41.21	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-48.41	2	-	48.85	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-58.24	2	1.1	40.12	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-50.65	2	-	46.61	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-59	2	1.12	39.38	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2347.056	-47.34	2	-	49.92	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2349.36	-57.88	2	1.12	40.5	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-49.95	2	-	47.31	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-58.62	2	1.12	39.76	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-49.67	2	-	47.59	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-57.13	2	1.12	41.25	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.608	-46.24	2	-	51.02	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2485.384	-56.93	2	1.12	41.45	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-49.8	2	-	47.46	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-58.23	2	1.12	40.15	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-49.6	2	-	47.66	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-59.22	2	1.12	39.16	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2368.944	-48	2	-	49.26	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2360.4	-57.81	2	1.12	40.57	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-50.09	2	-	47.17	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-58.04	2	1.12	40.34	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-48.82	2	-	48.44	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-57.69	2	1.12	40.69	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2487.184	-46.91	2	-	50.35	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.8	-57.05	2	1.12	41.33	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-50.87	2	-	46.39	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-58.61	2	1.12	39.77	Average	54	Pass



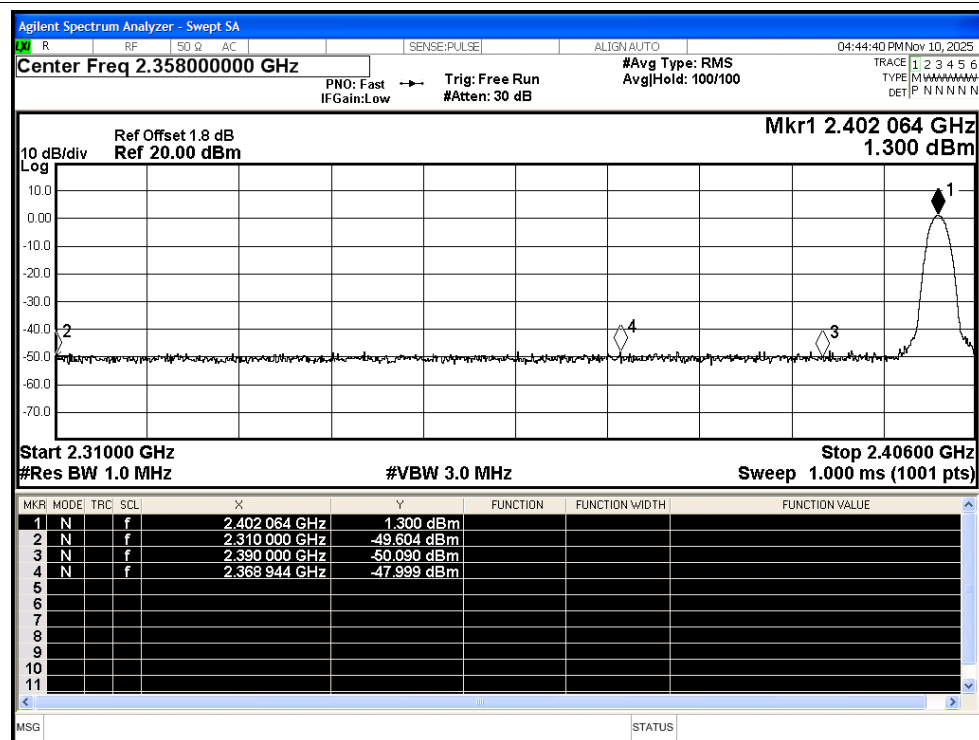
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



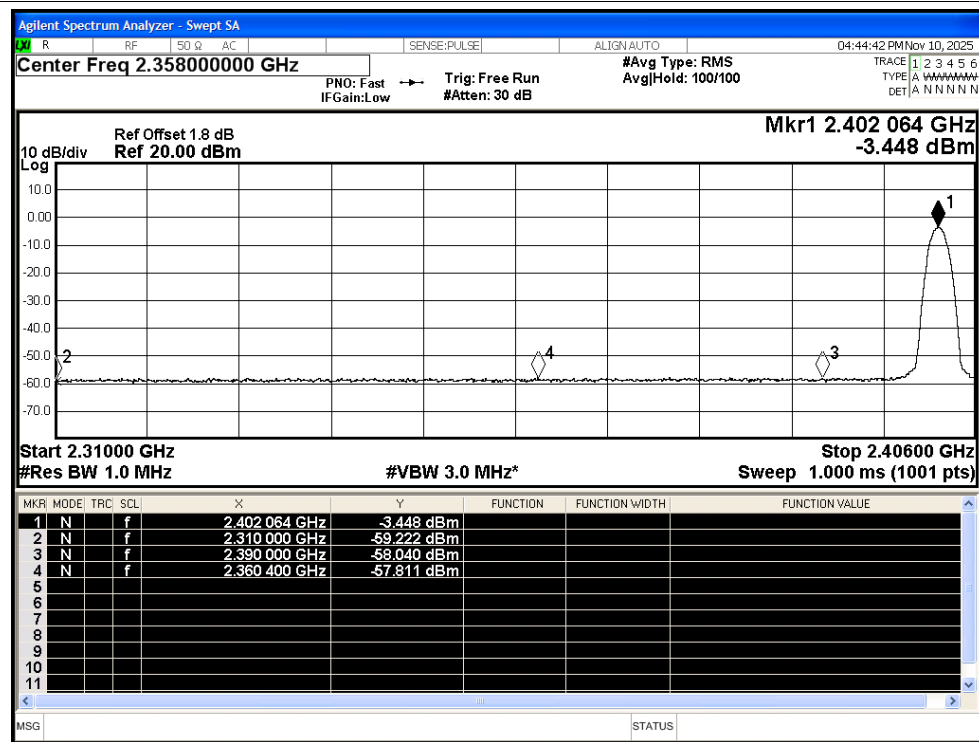
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



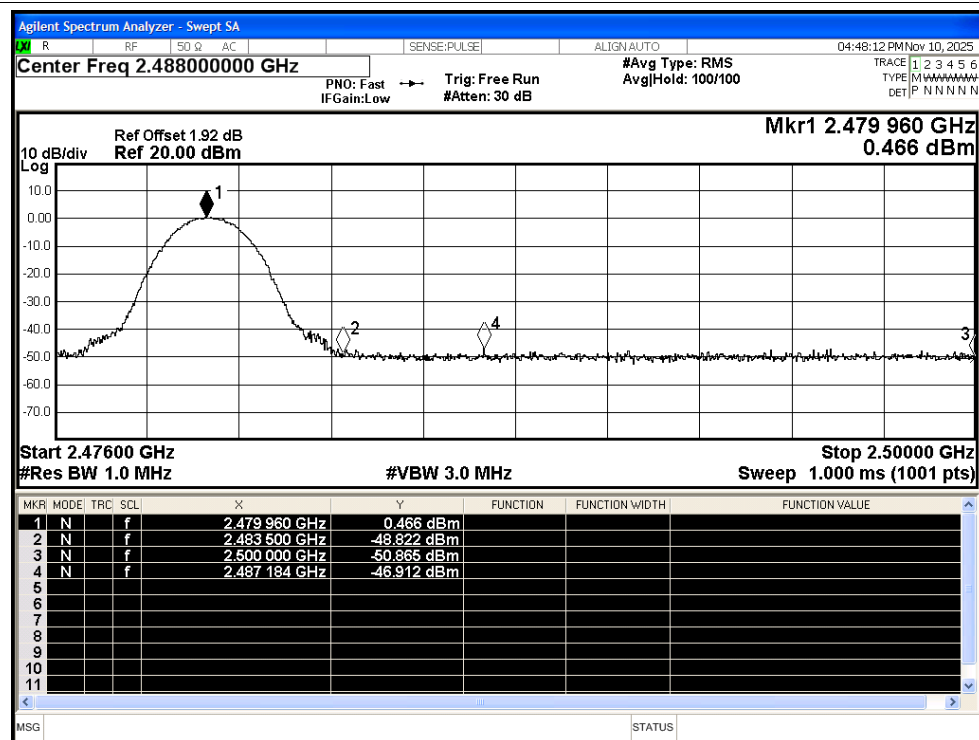
Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak



Restrict Band NVNT 3-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

