

Appendix A

RF Test Data for BT(Conducted Measurement)

Product Name: Translator Earbuds

Test Model: A8

Environmental Conditions

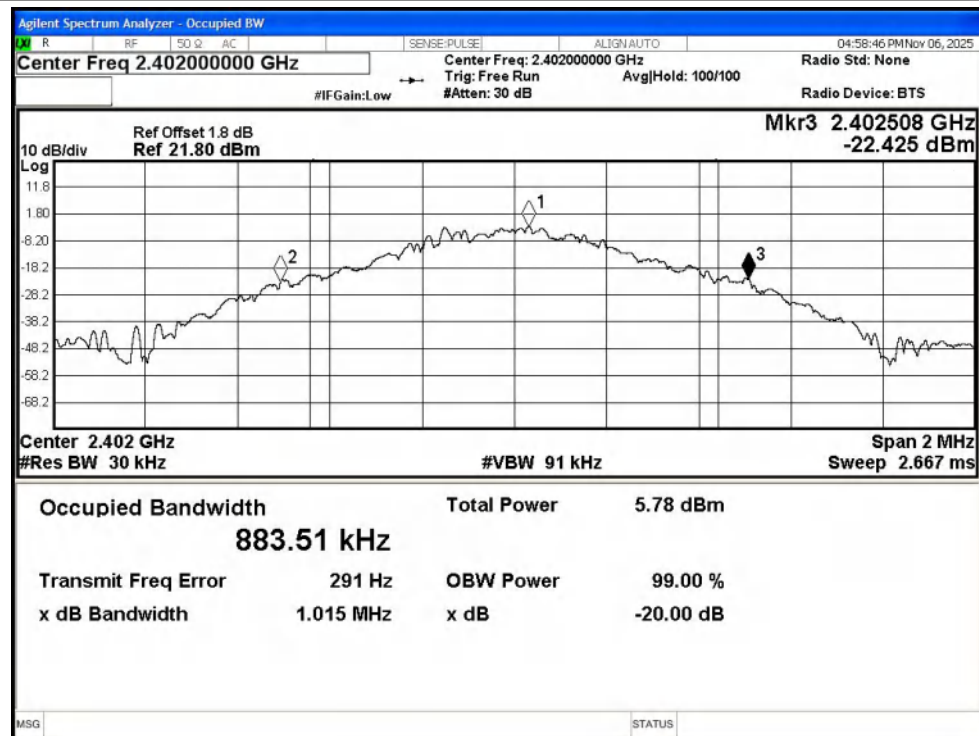
Temperature:	23.8°C
Relative Humidity:	52.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Yan Chen

A.1 -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	1.015	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.951	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.947	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.283	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.283	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.331	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.303	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.295	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.302	N/A	Pass

Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



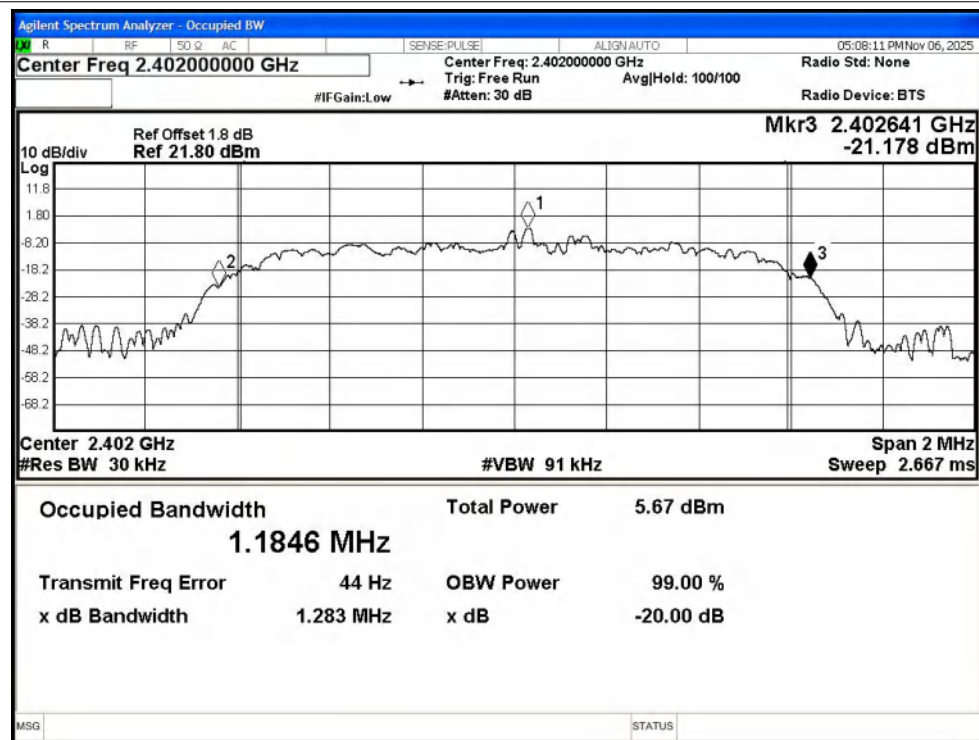
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



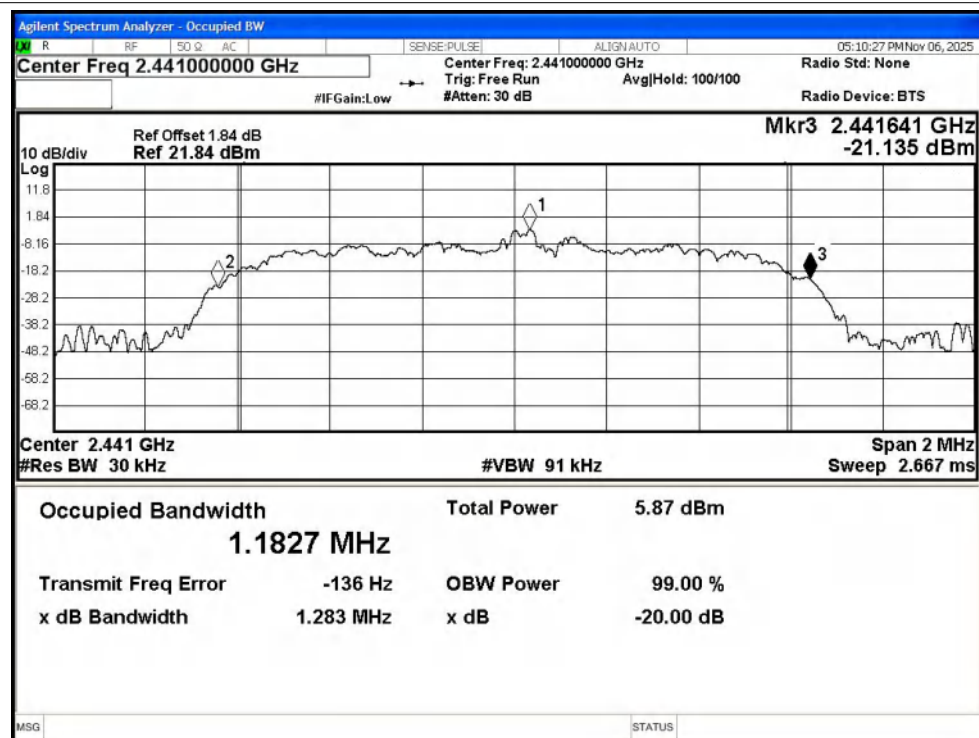
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



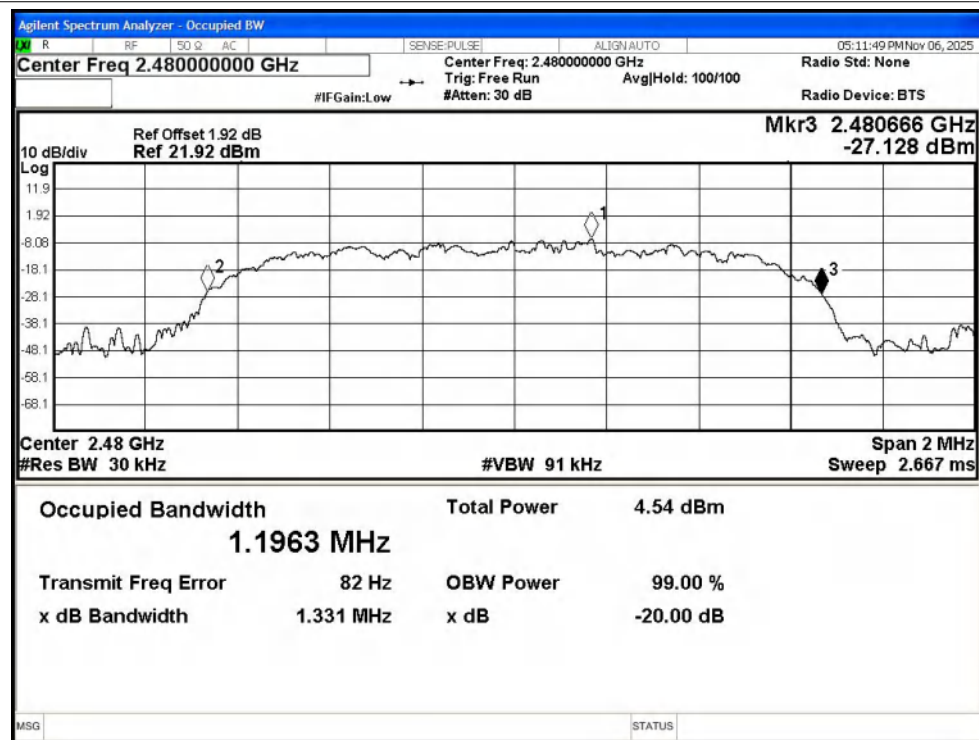
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



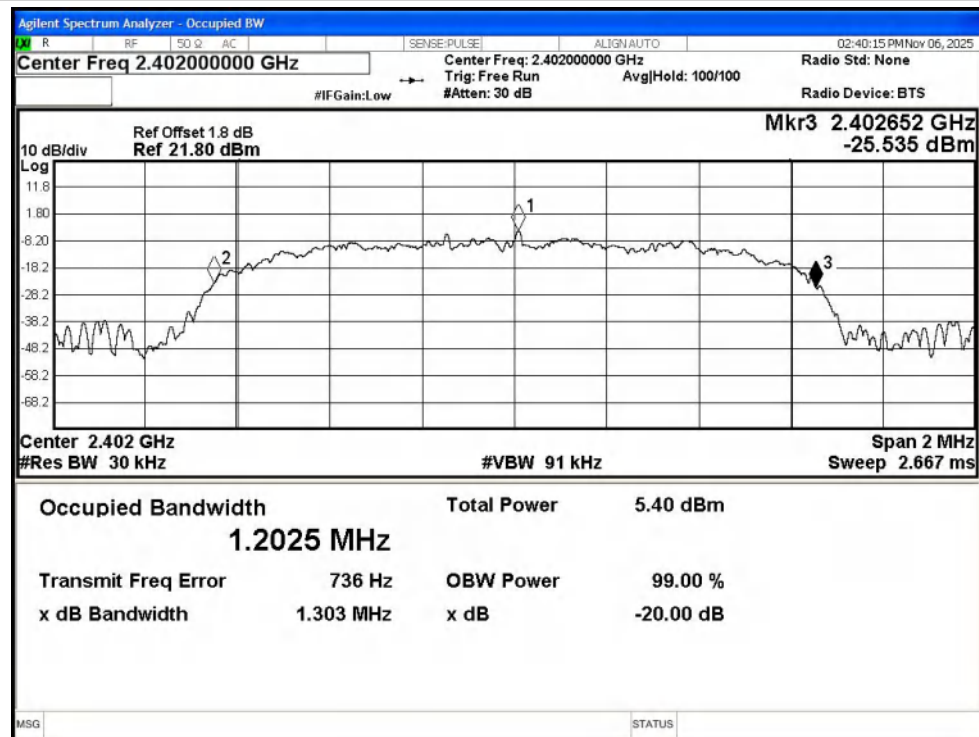
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



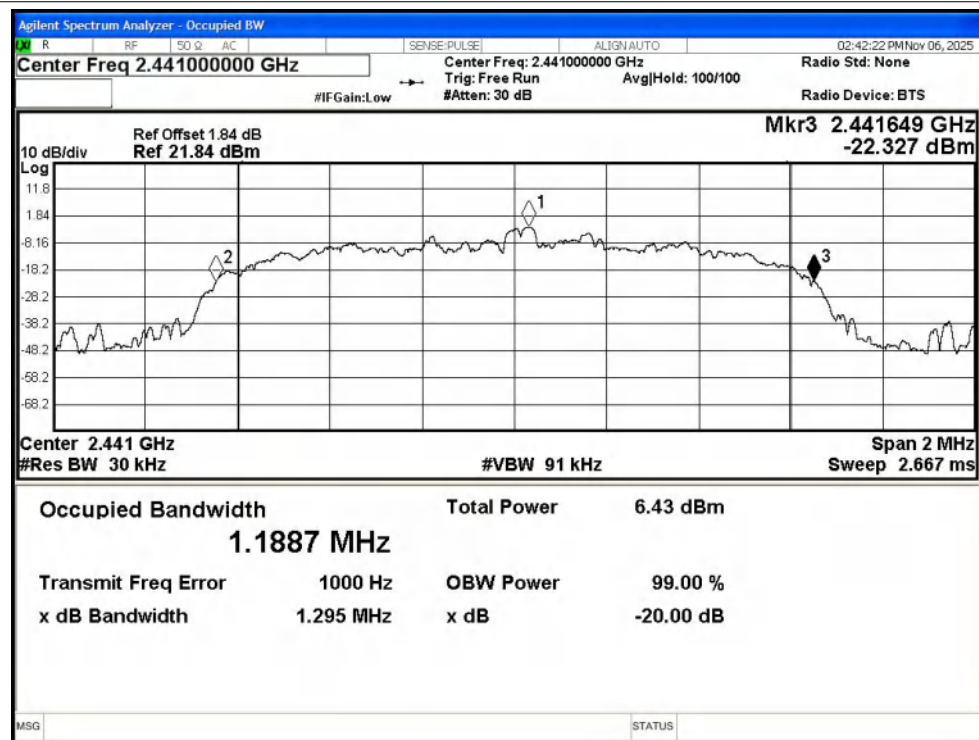
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

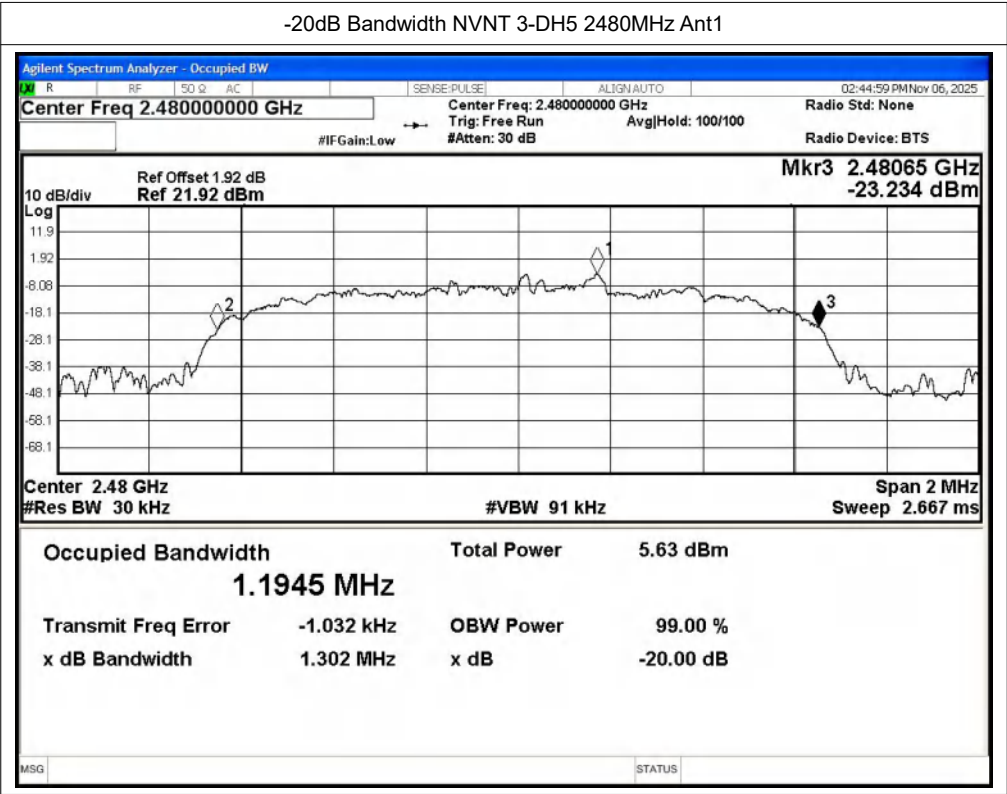


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



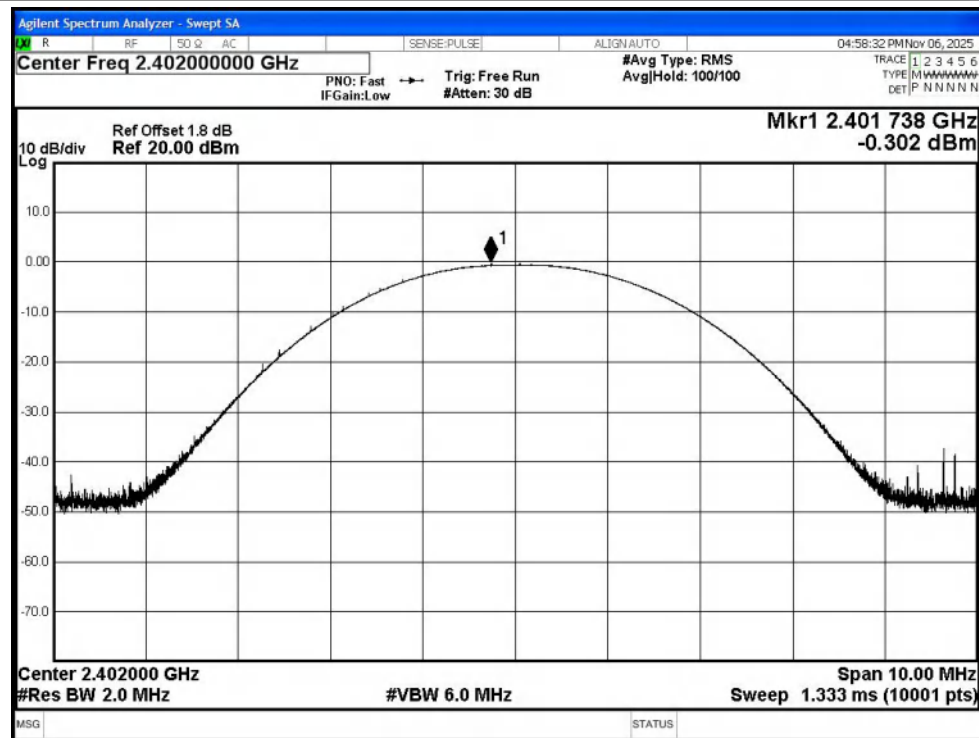


A.2 Maximum Peak Conducted Output Power

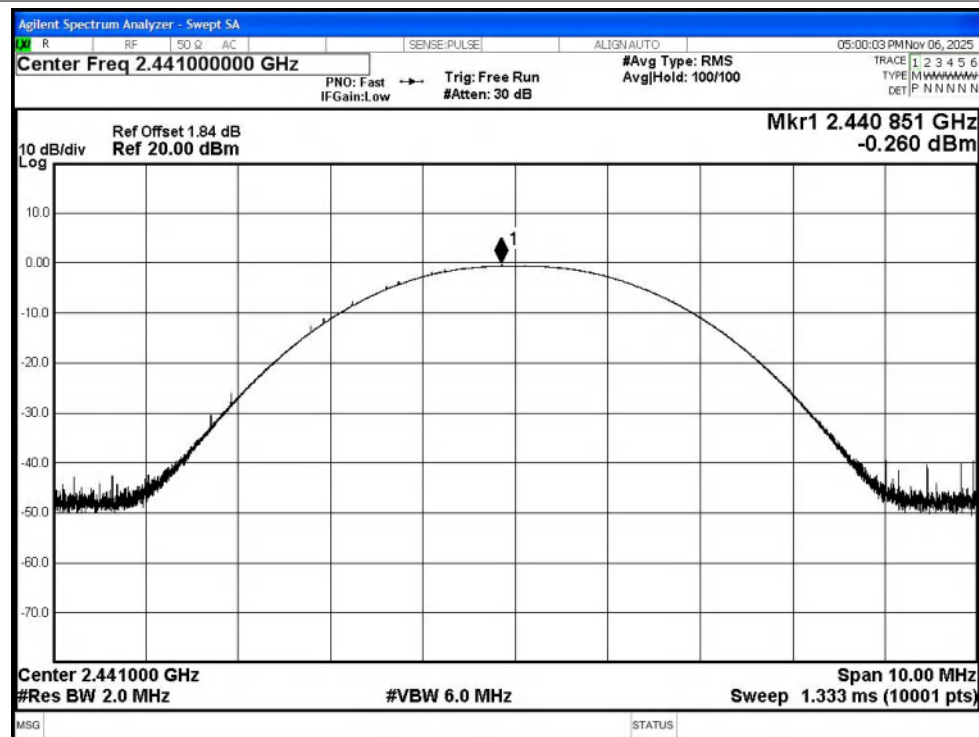
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.3	21	Pass
NVNT	1-DH5	2441	Ant1	-0.26	21	Pass
NVNT	1-DH5	2480	Ant1	-1.37	21	Pass
NVNT	2-DH5	2402	Ant1	1.52	21	Pass
NVNT	2-DH5	2441	Ant1	1.5	21	Pass
NVNT	2-DH5	2480	Ant1	0.68	21	Pass
NVNT	3-DH5	2402	Ant1	2	21	Pass
NVNT	3-DH5	2441	Ant1	2.34	21	Pass
NVNT	3-DH5	2480	Ant1	1.56	21	Pass

Test Graphs

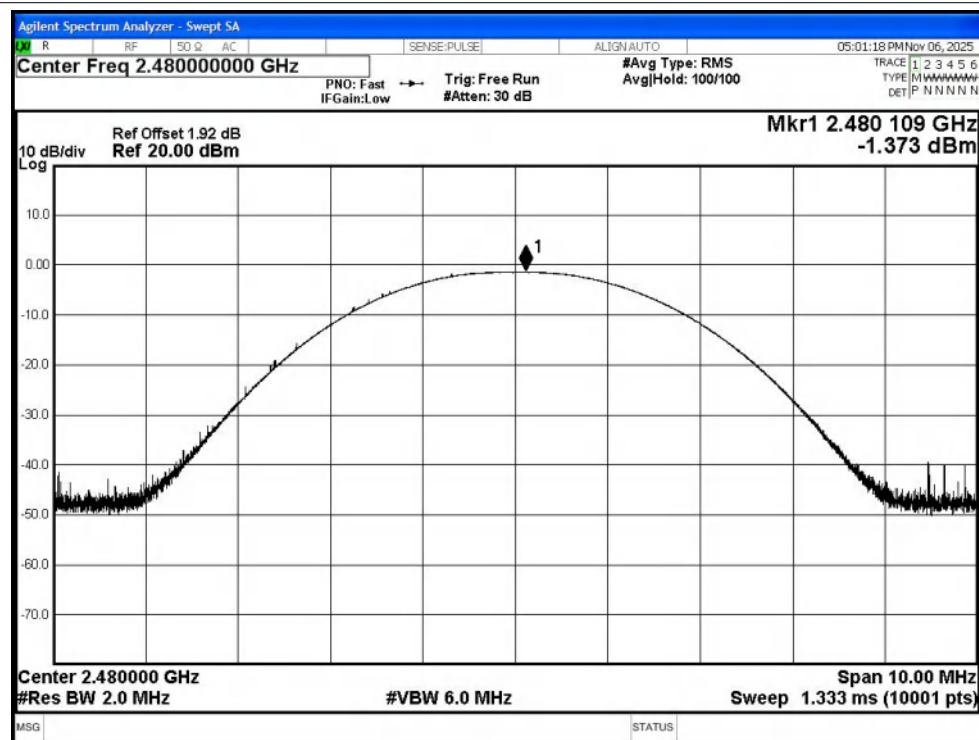
Power NVNT 1-DH5 2402MHz Ant1



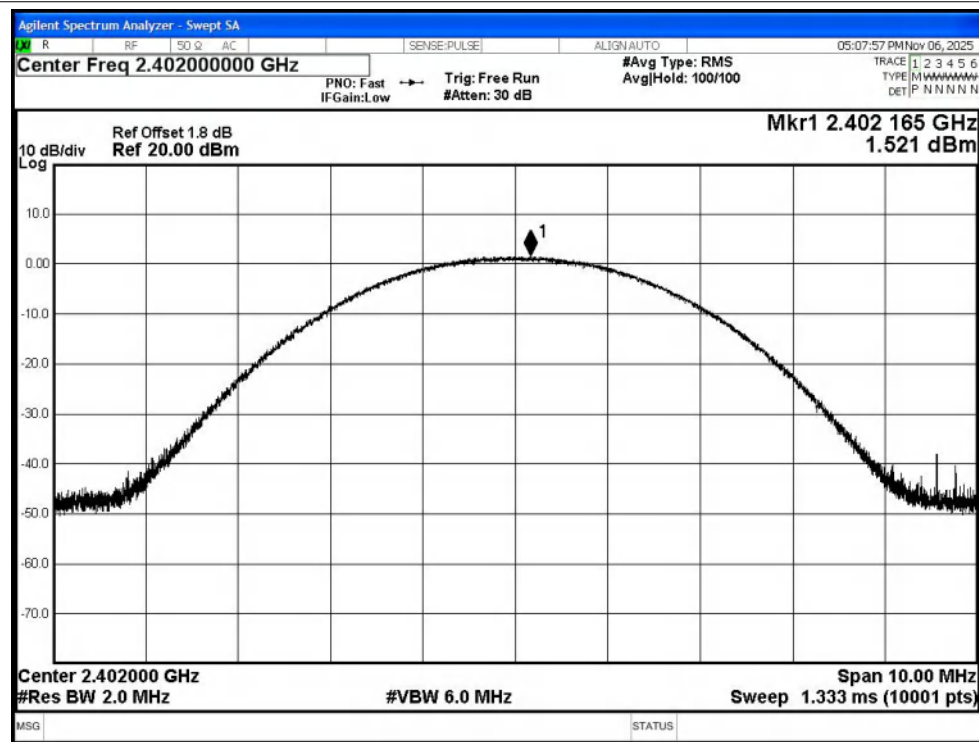
Power NVNT 1-DH5 2441MHz Ant1



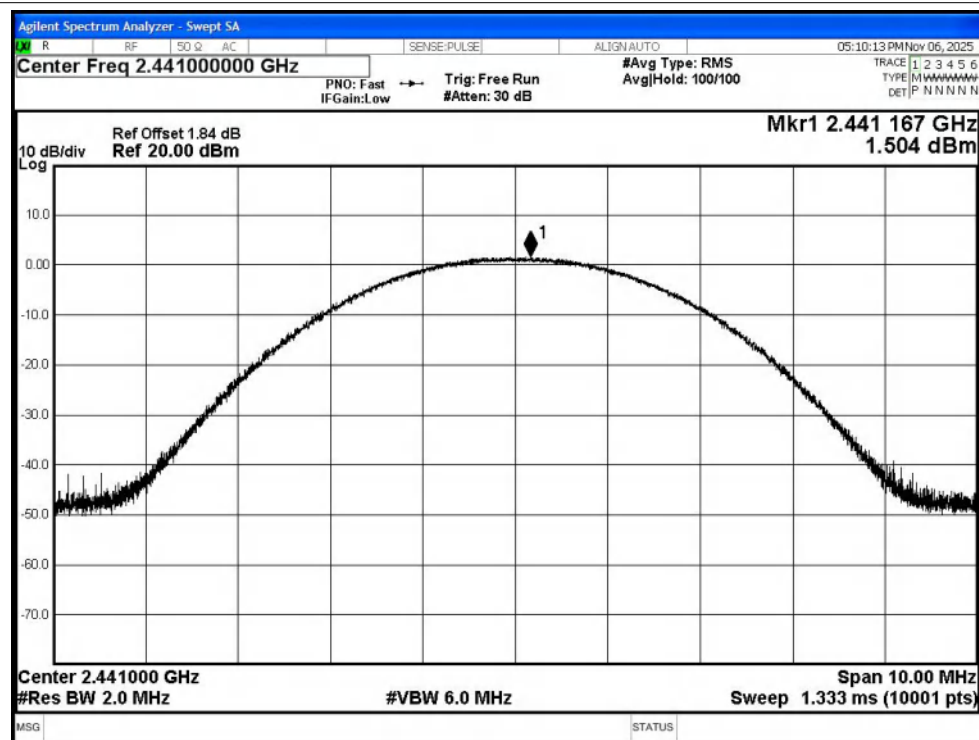
Power NVNT 1-DH5 2480MHz Ant1



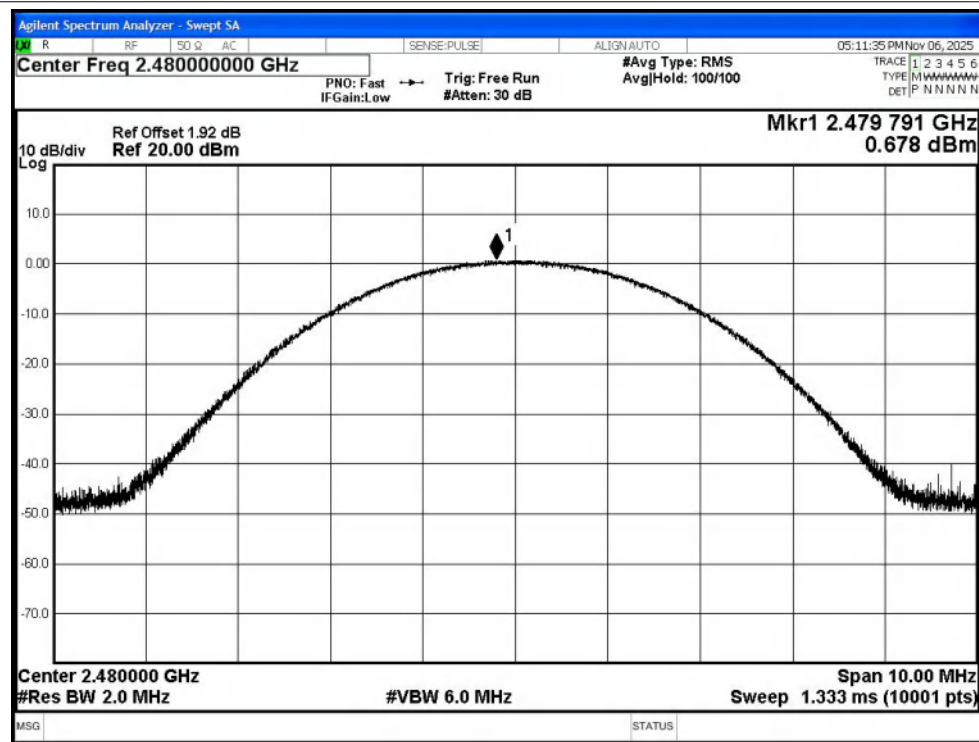
Power NVNT 2-DH5 2402MHz Ant1



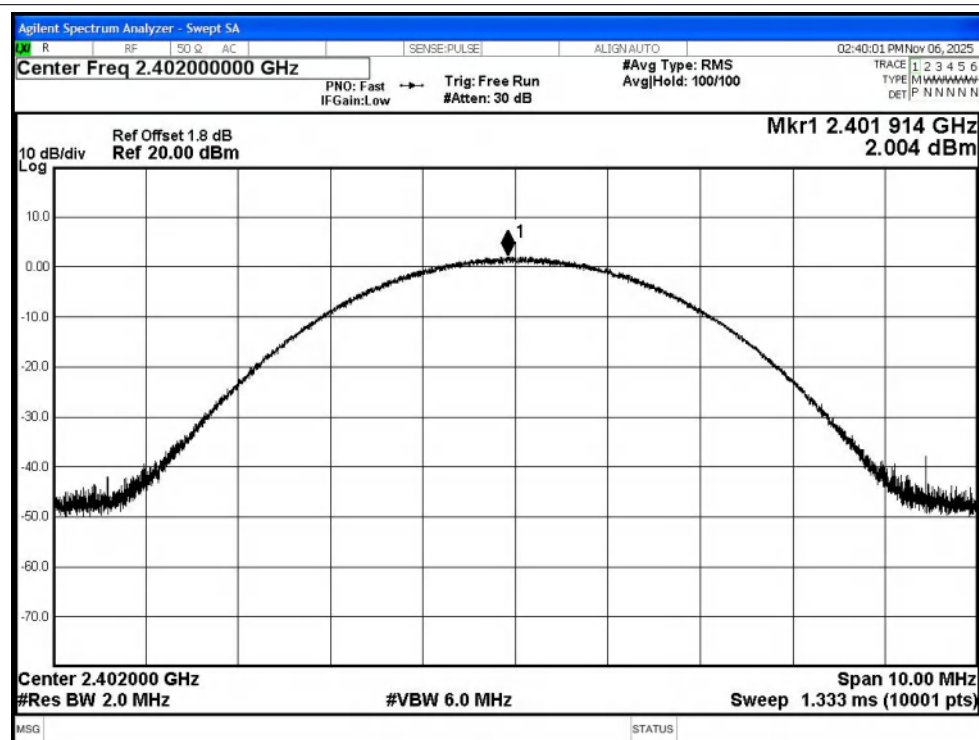
Power NVNT 2-DH5 2441MHz Ant1



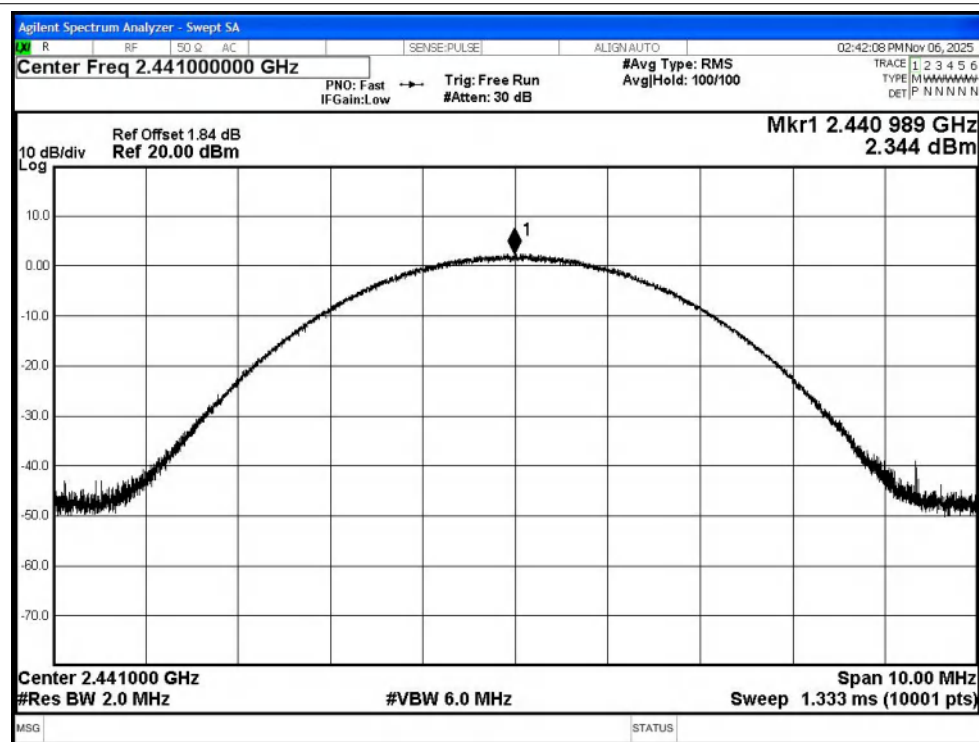
Power NVNT 2-DH5 2480MHz Ant1

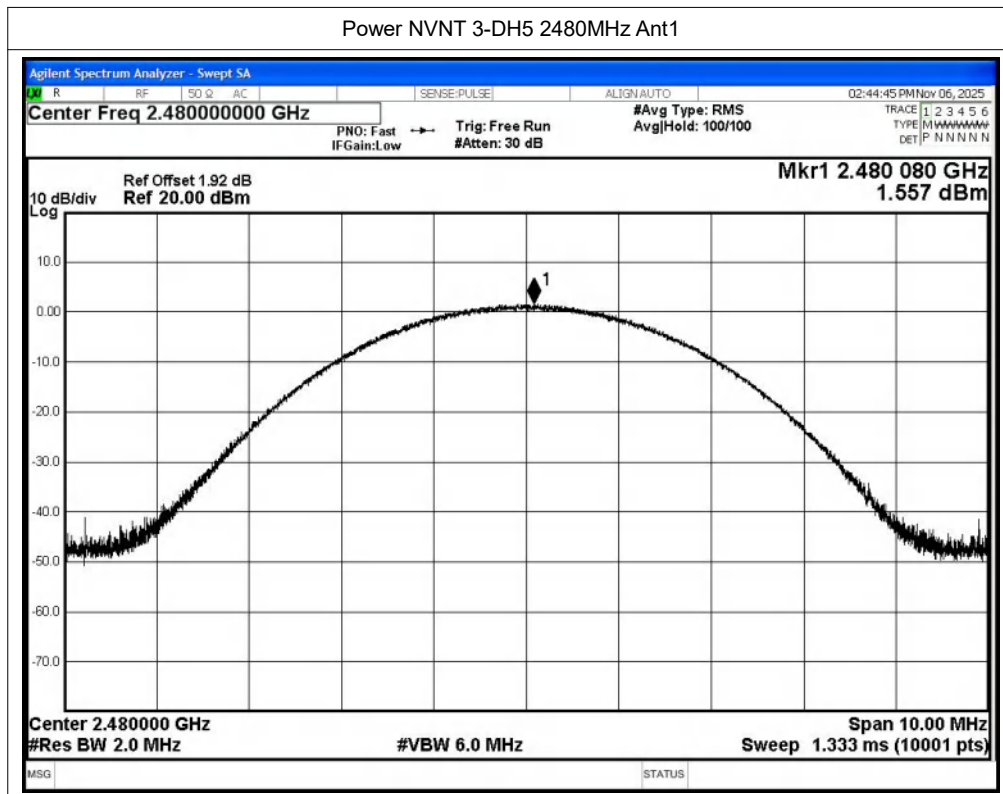


Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1



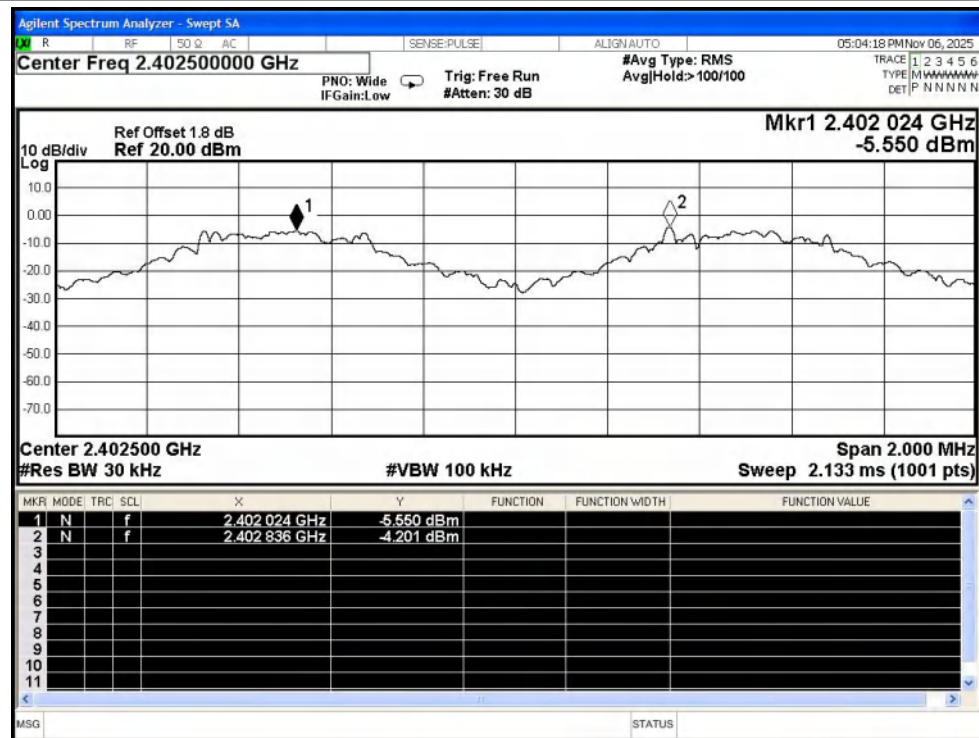


A.3 Carrier Frequencies Separation

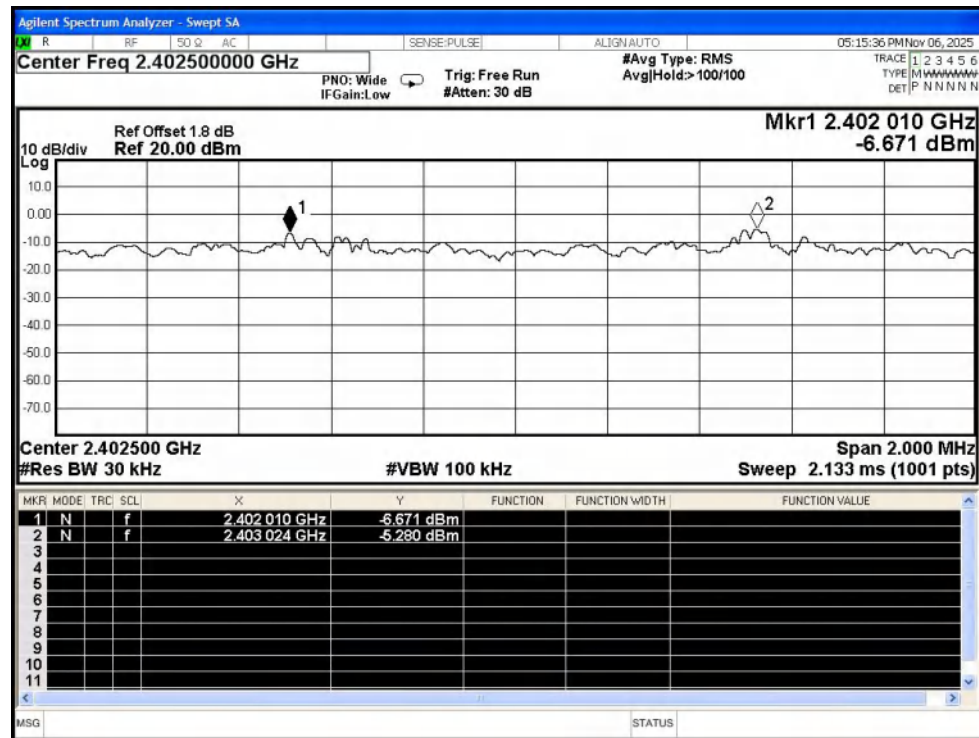
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.024	2402.836	0.812	0.677	Pass
NVNT	2-DH5	Ant1	2402.01	2403.024	1.014	0.887	Pass
NVNT	3-DH5	Ant1	2402.006	2403.128	1.122	0.869	Pass

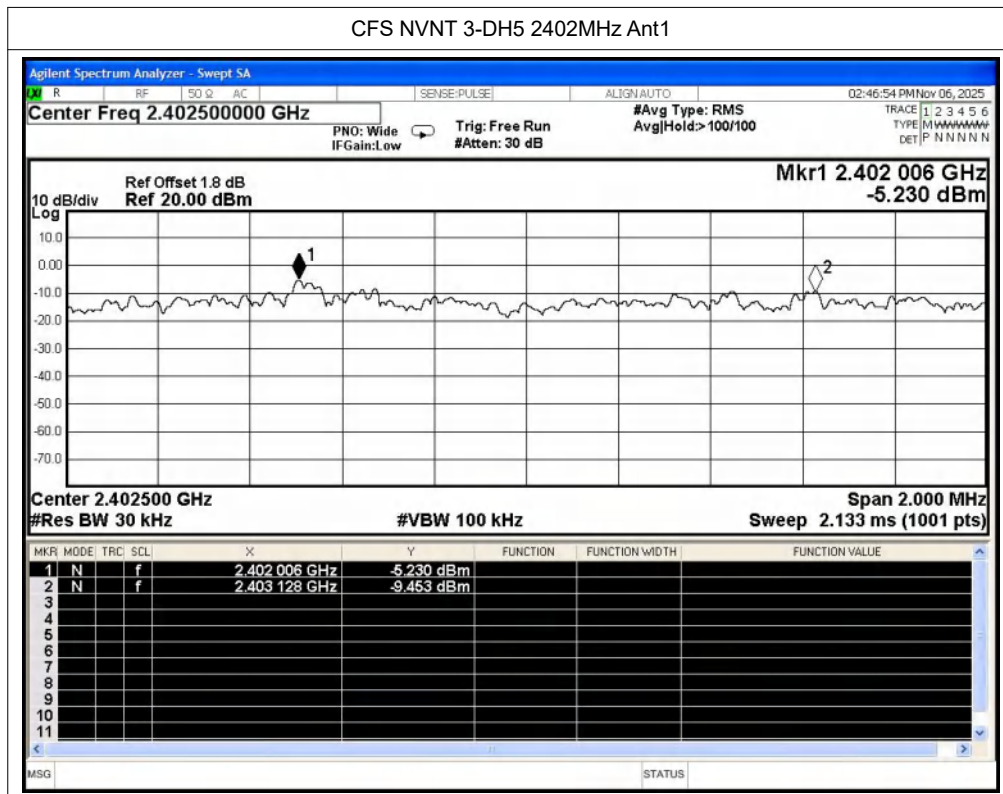
Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1



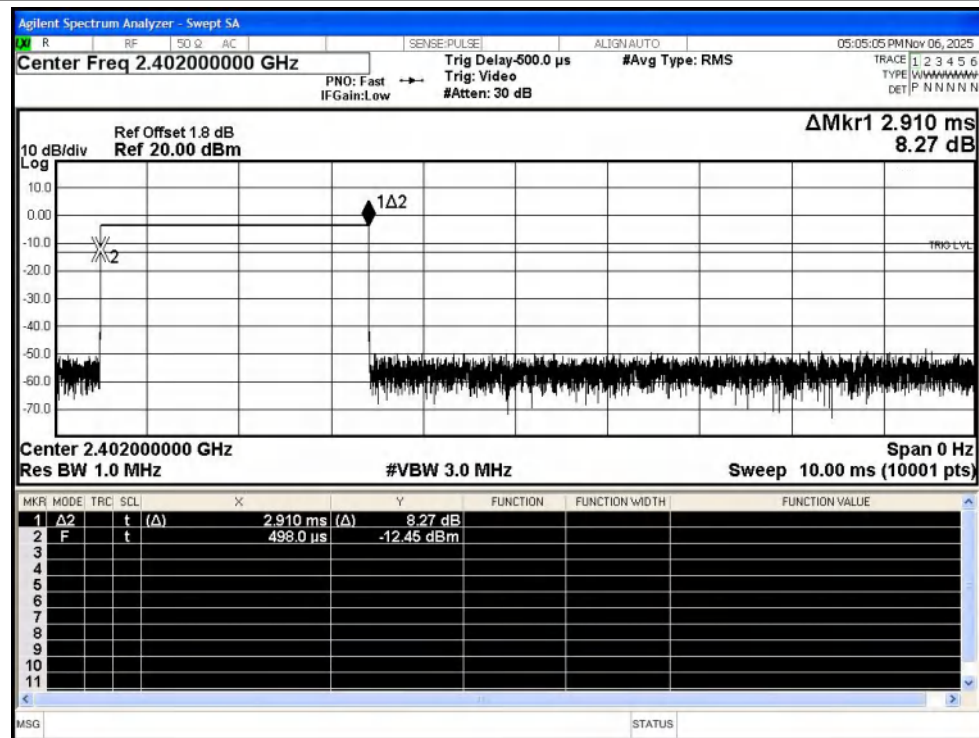


A.4 Dwell Time

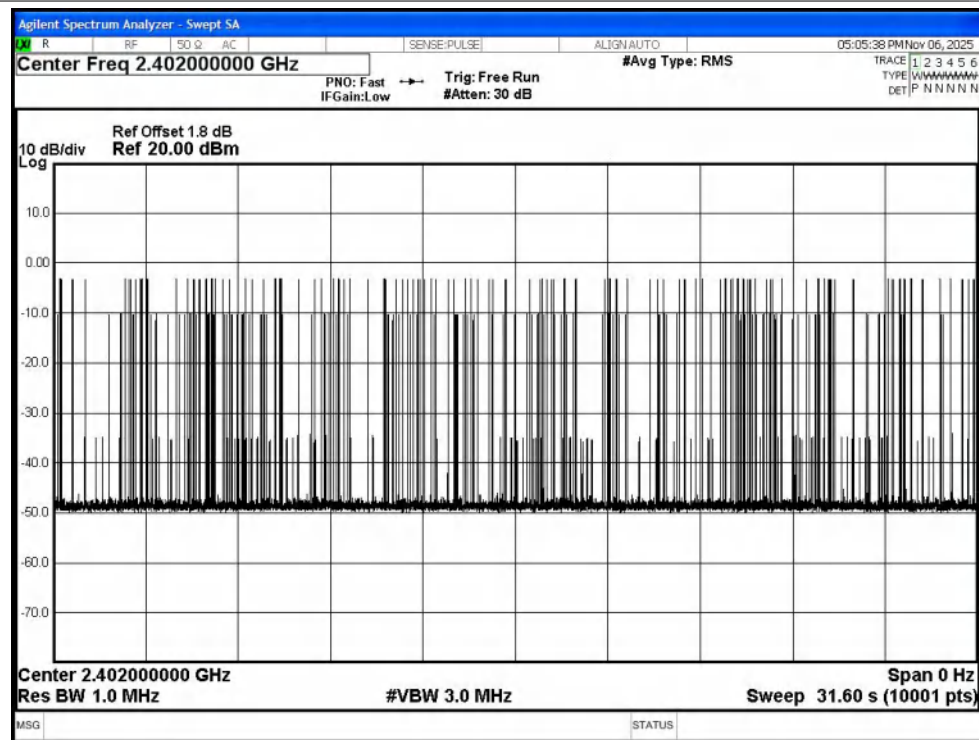
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.91	352.11	121	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	298.494	103	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.897	295.494	102	31600	400	Pass

Test Graphs

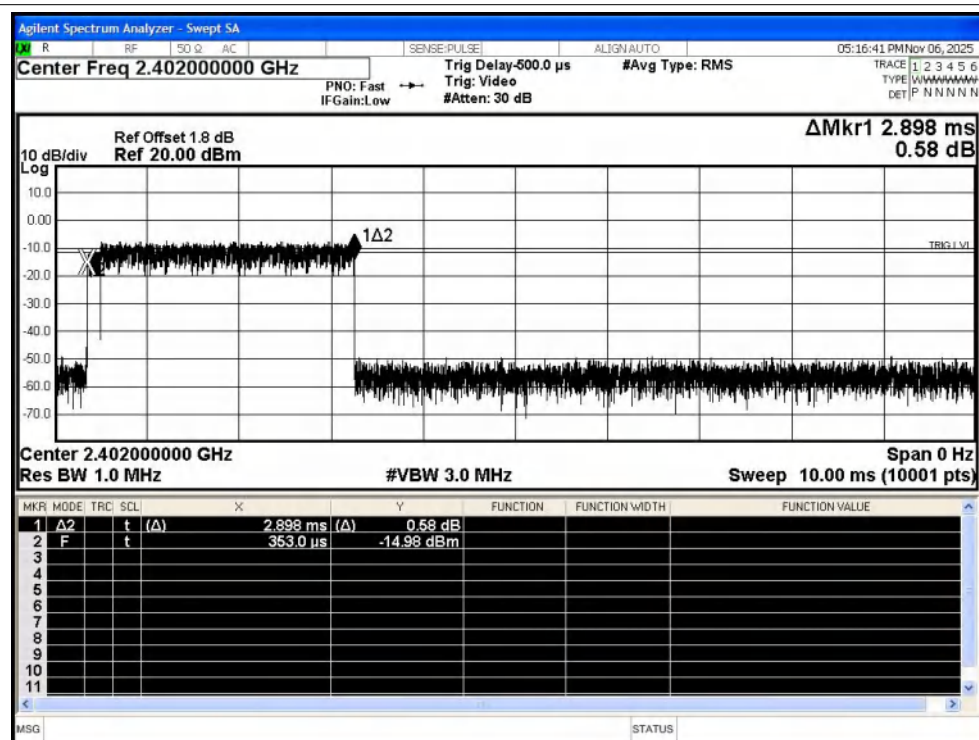
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



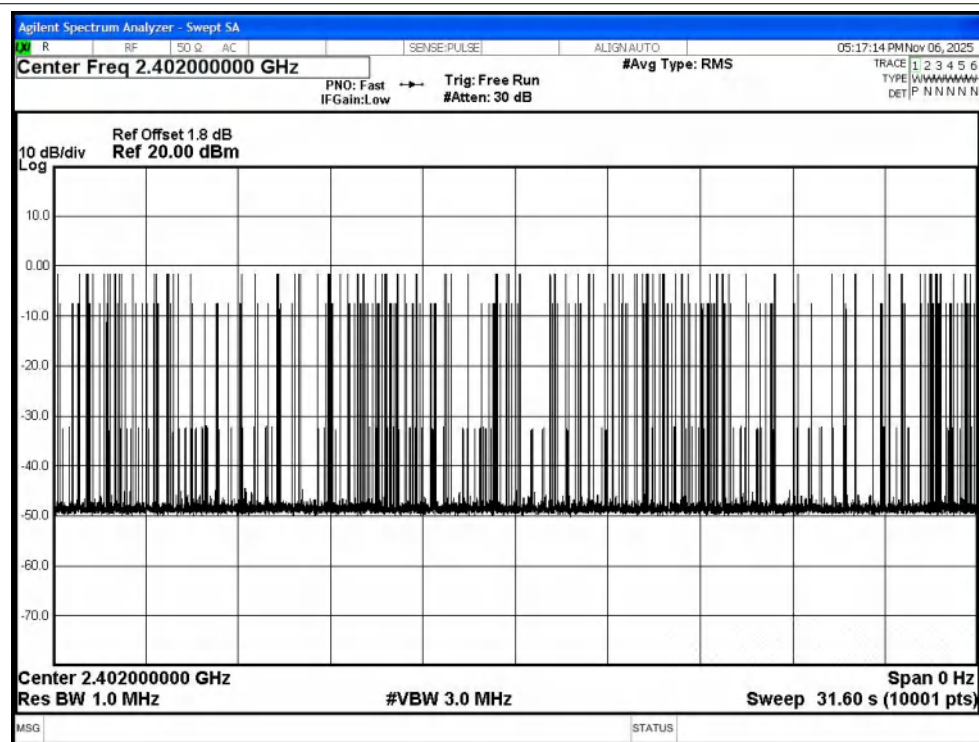
Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



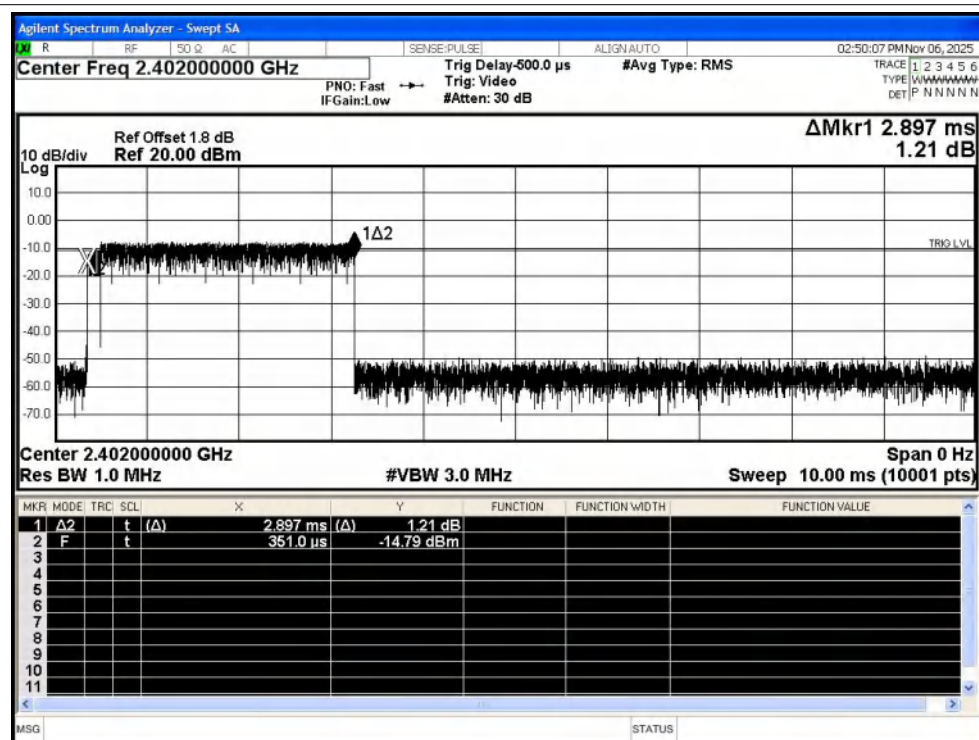
Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



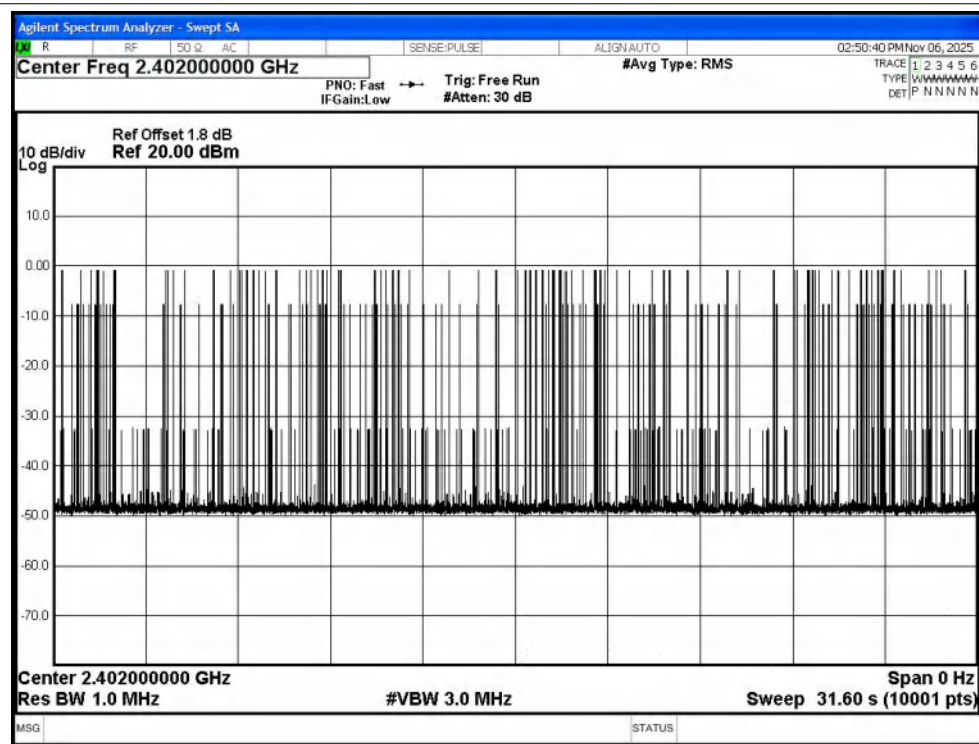
Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated

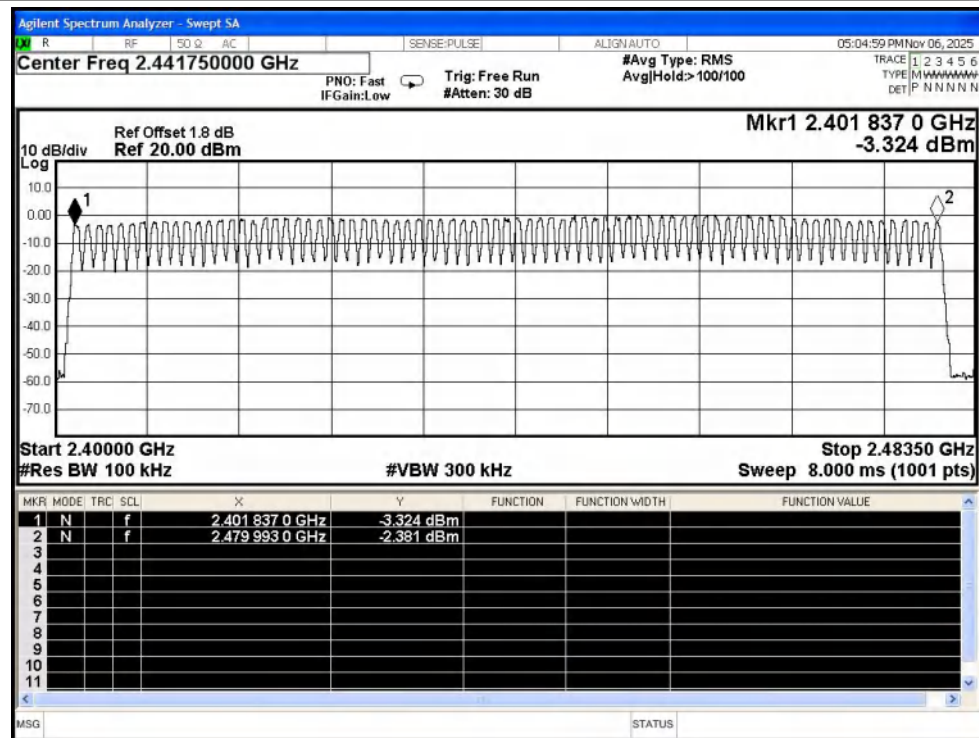


A.5 Number of Hopping Channel

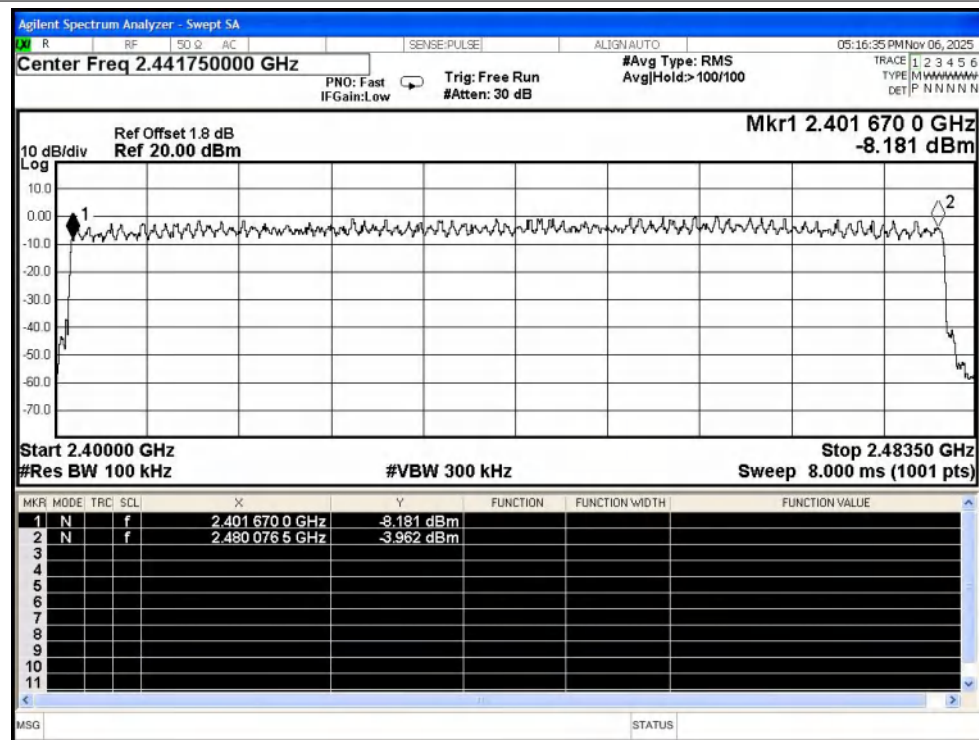
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

Test Graphs

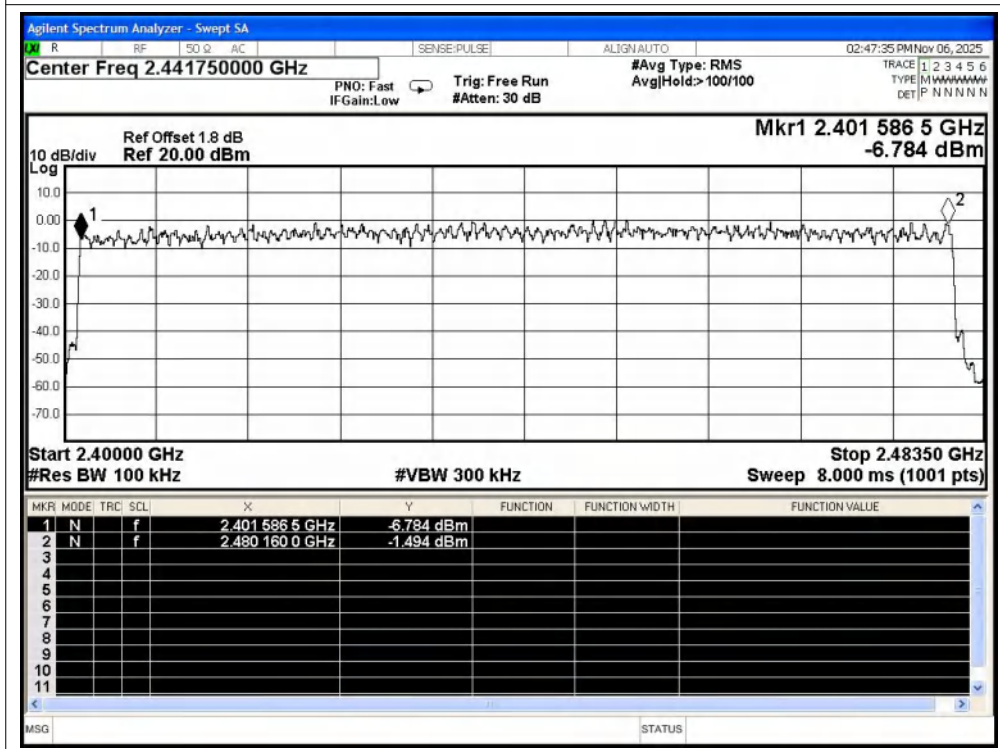
Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1



Hopping No. NVNT 3-DH5 2402MHz Ant1

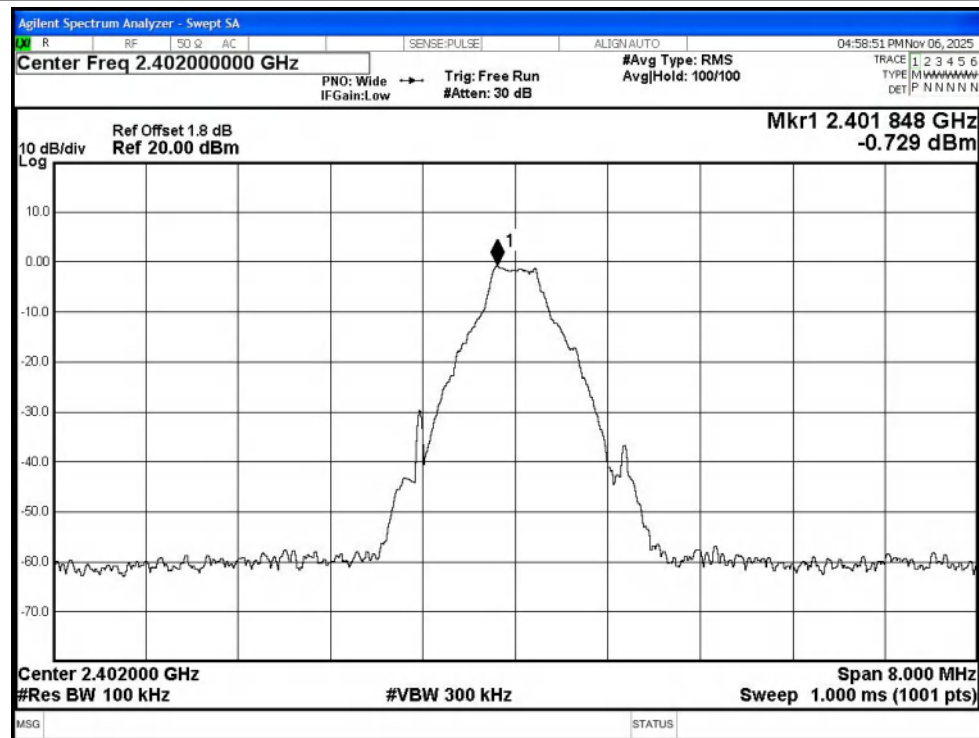


A.6 Band Edge

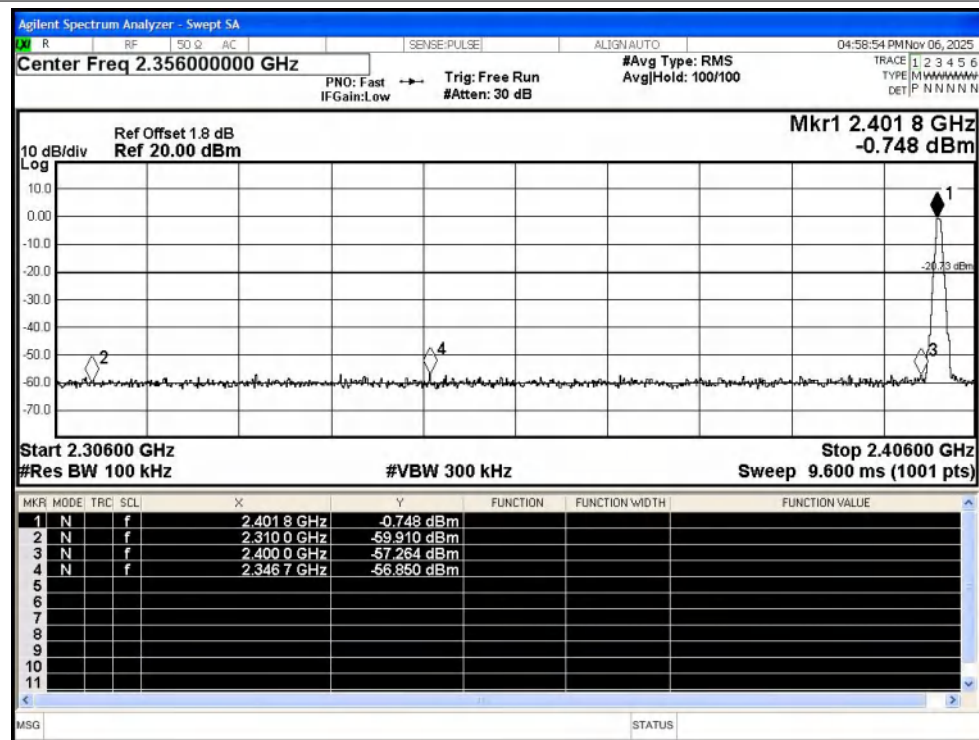
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-56.12	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-54.29	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-52.07	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-52.76	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-52.33	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-55.45	-20	Pass

Test Graphs

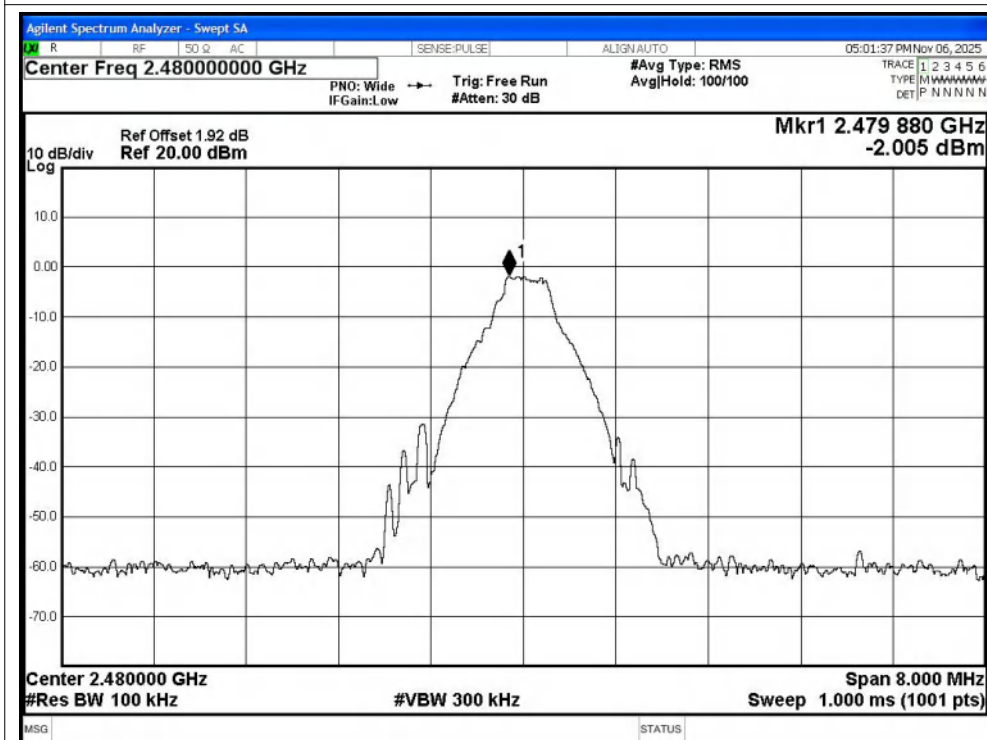
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



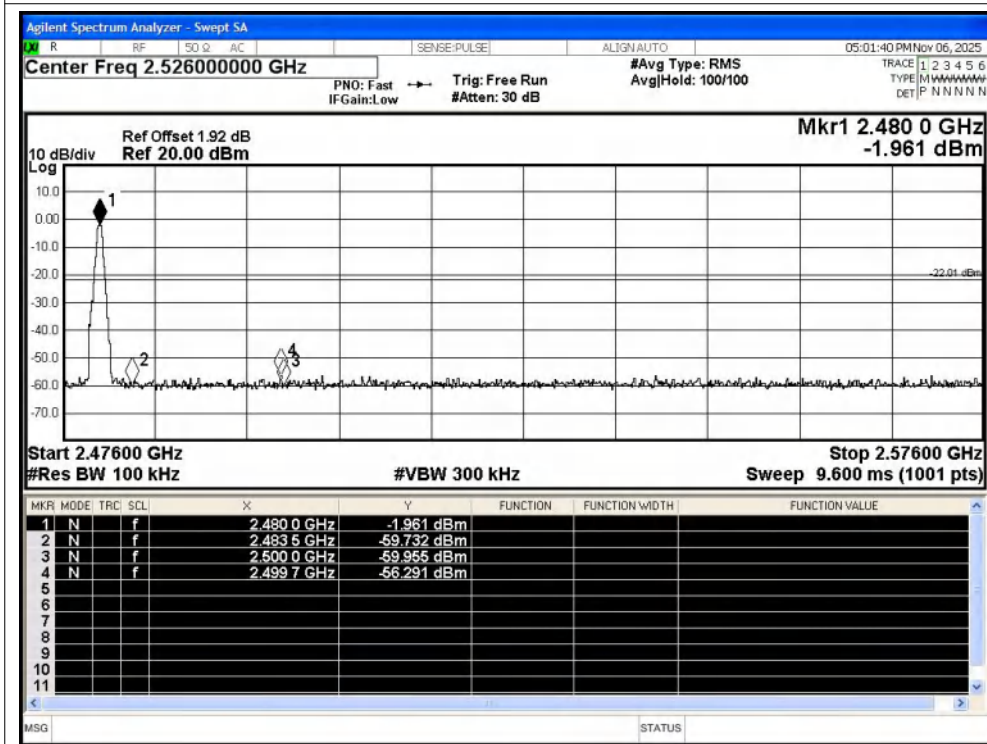
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



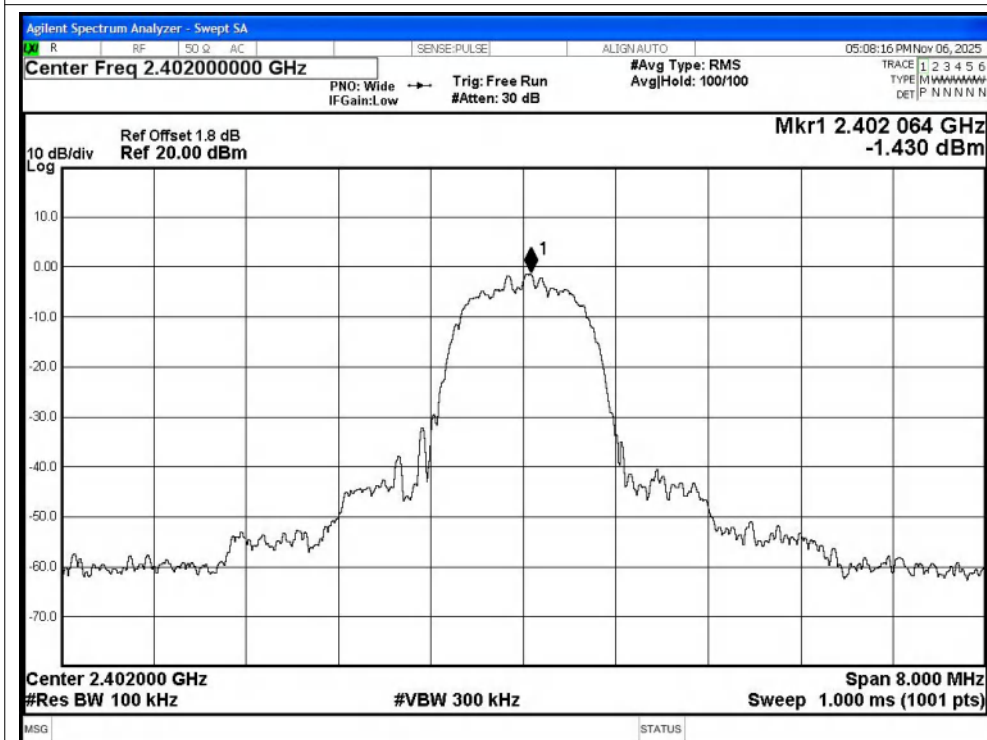
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



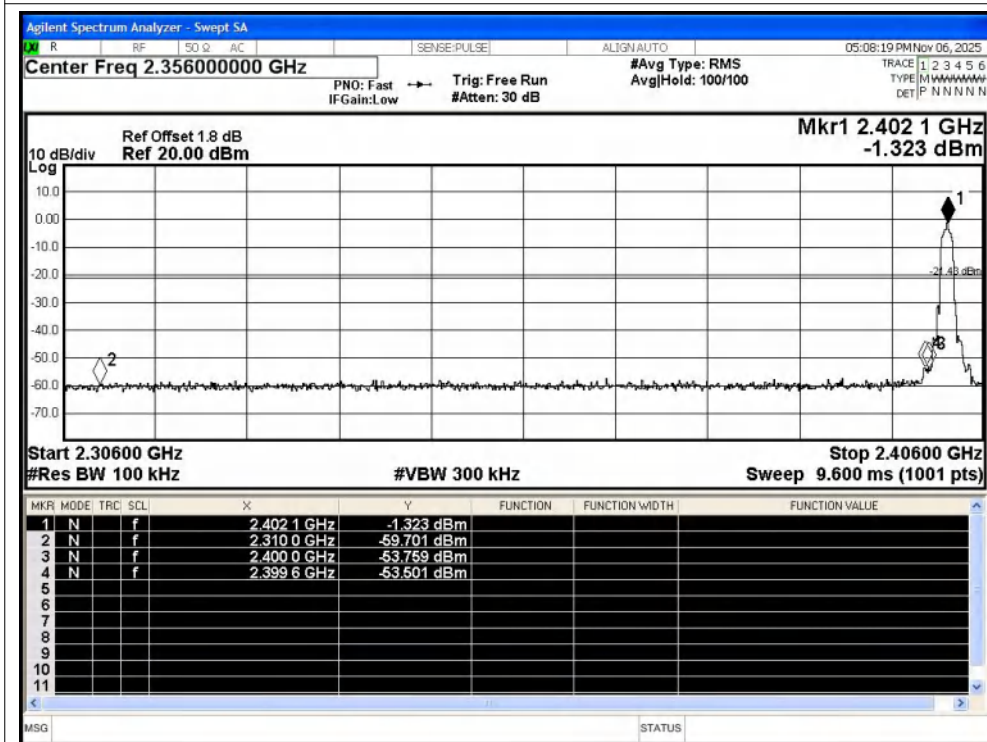
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



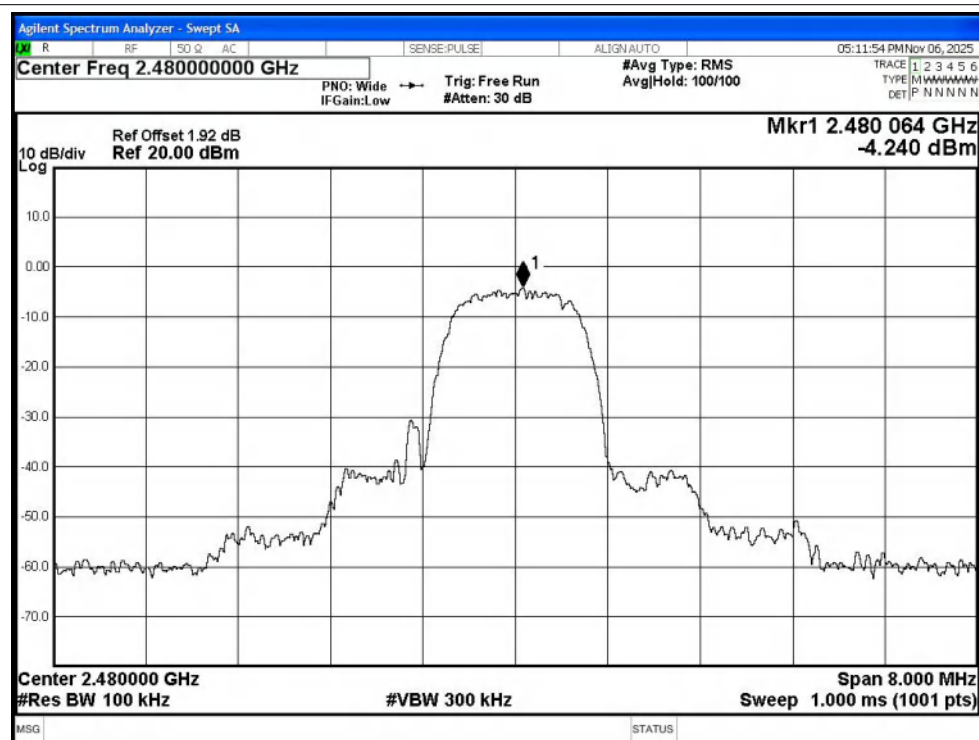
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



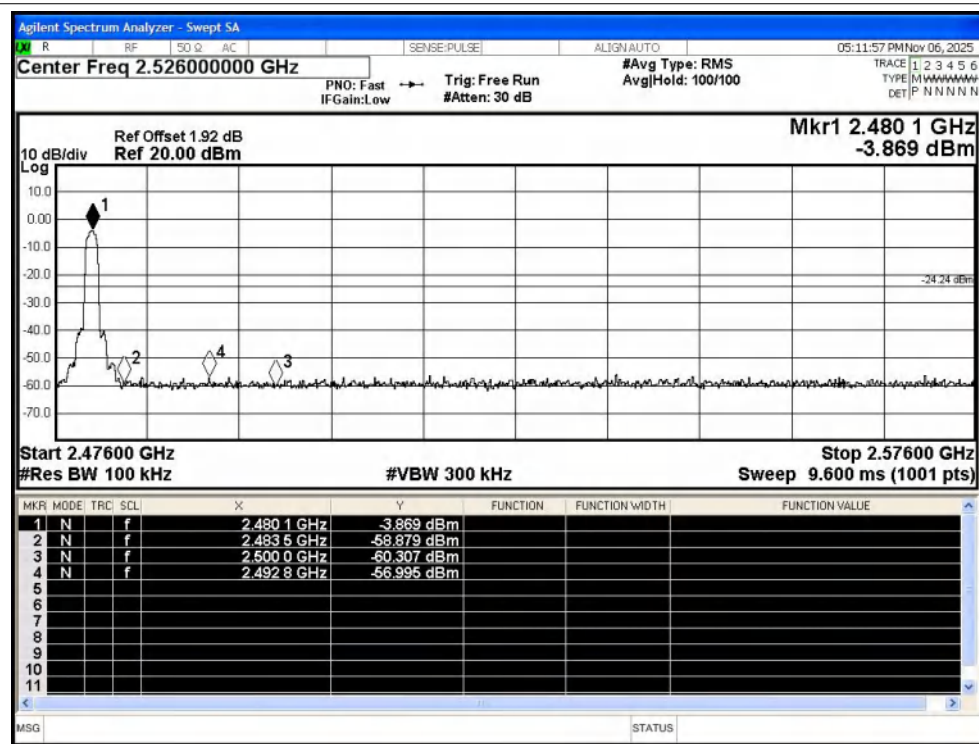
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



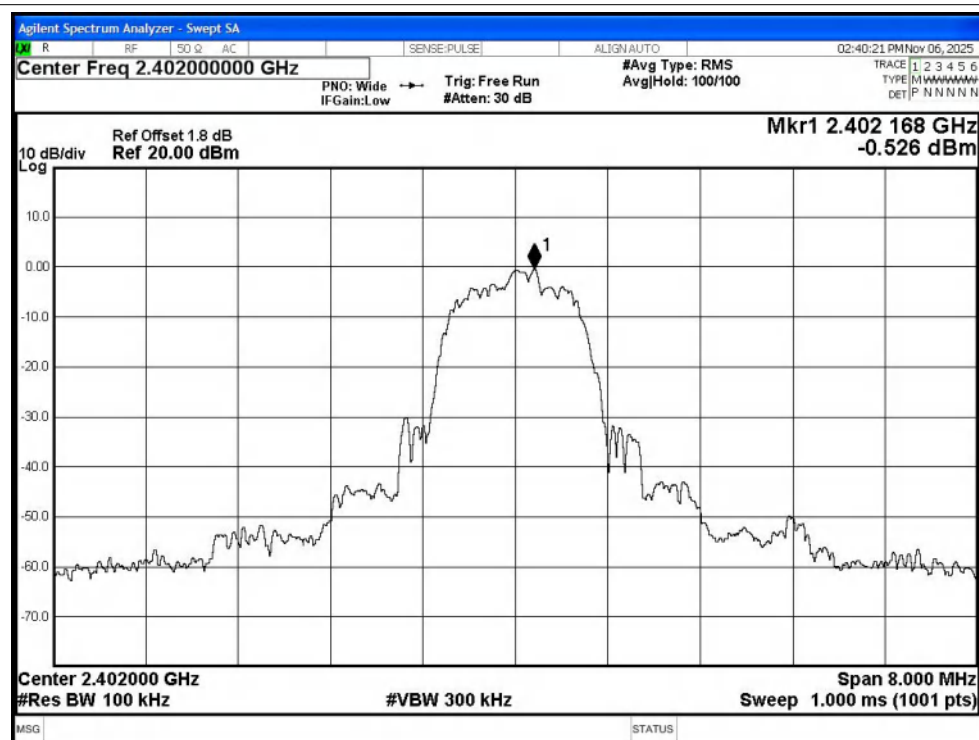
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



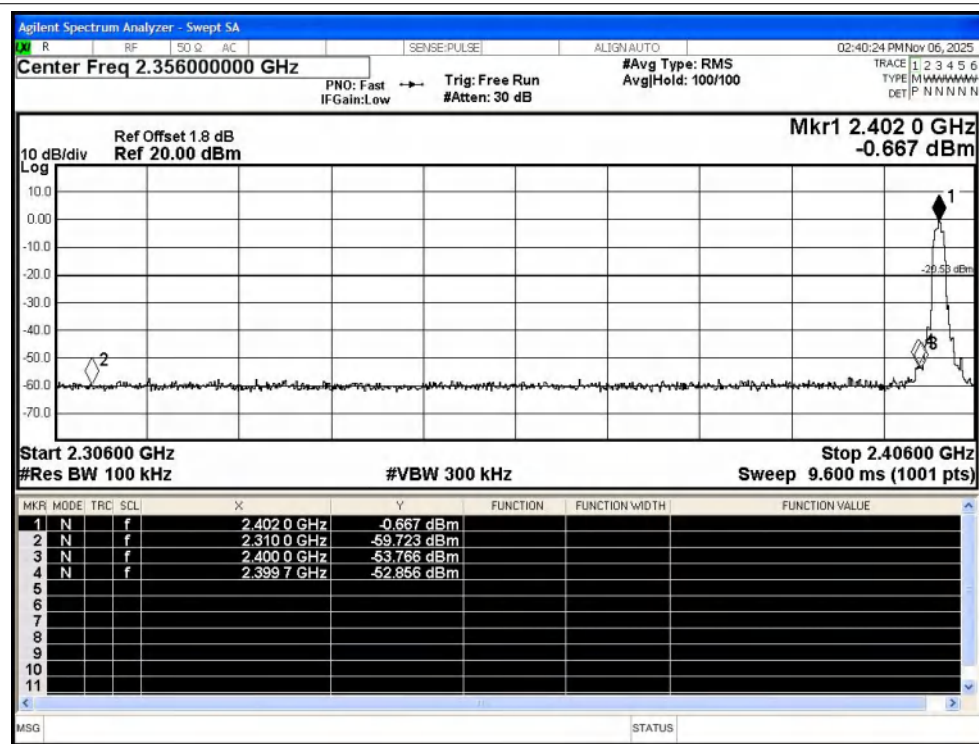
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



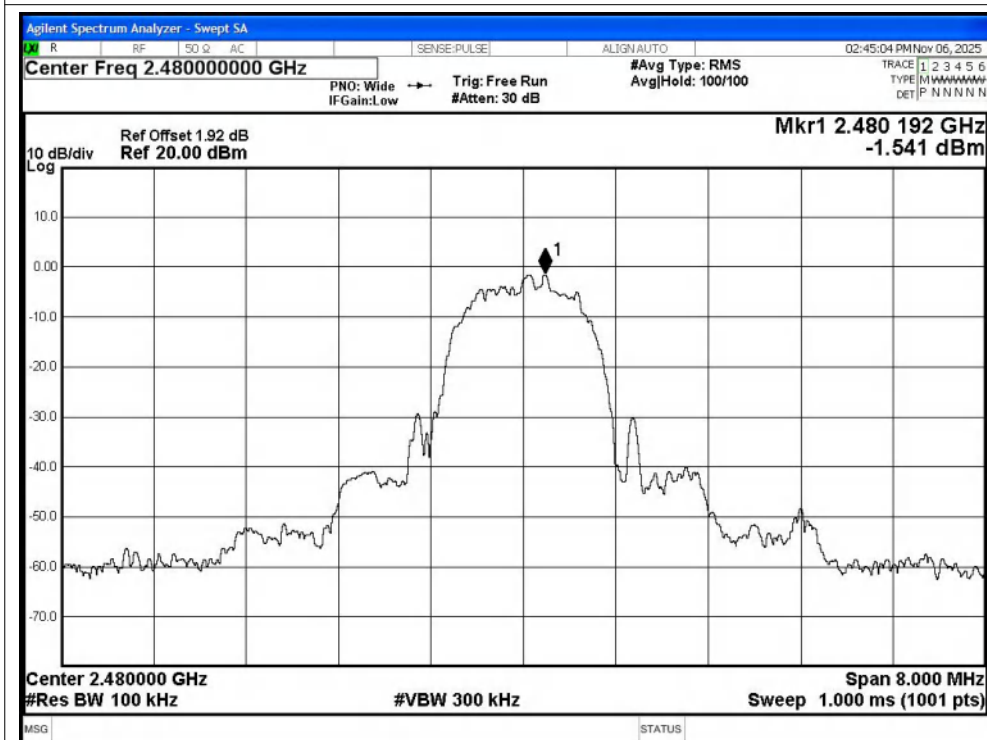
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



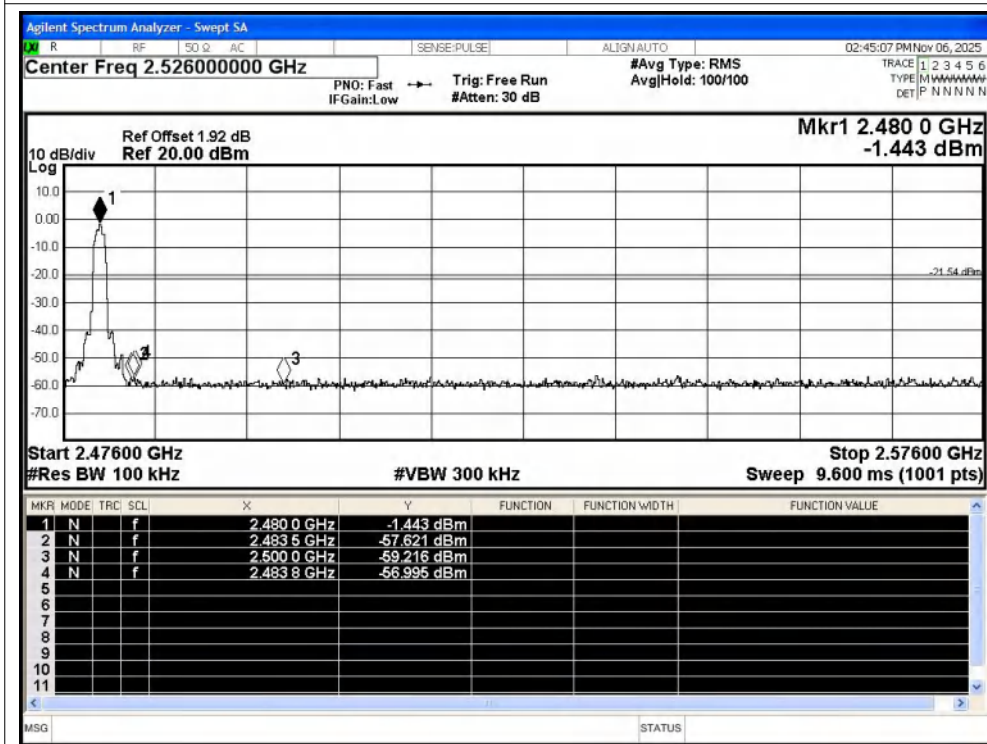
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



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



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

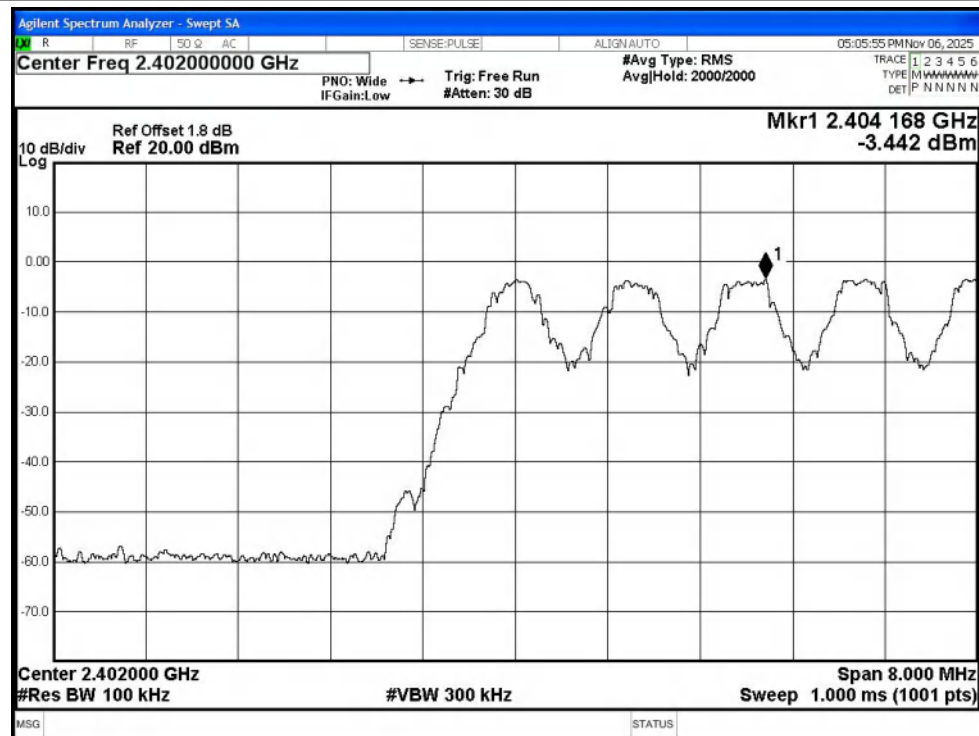


(Hopping)

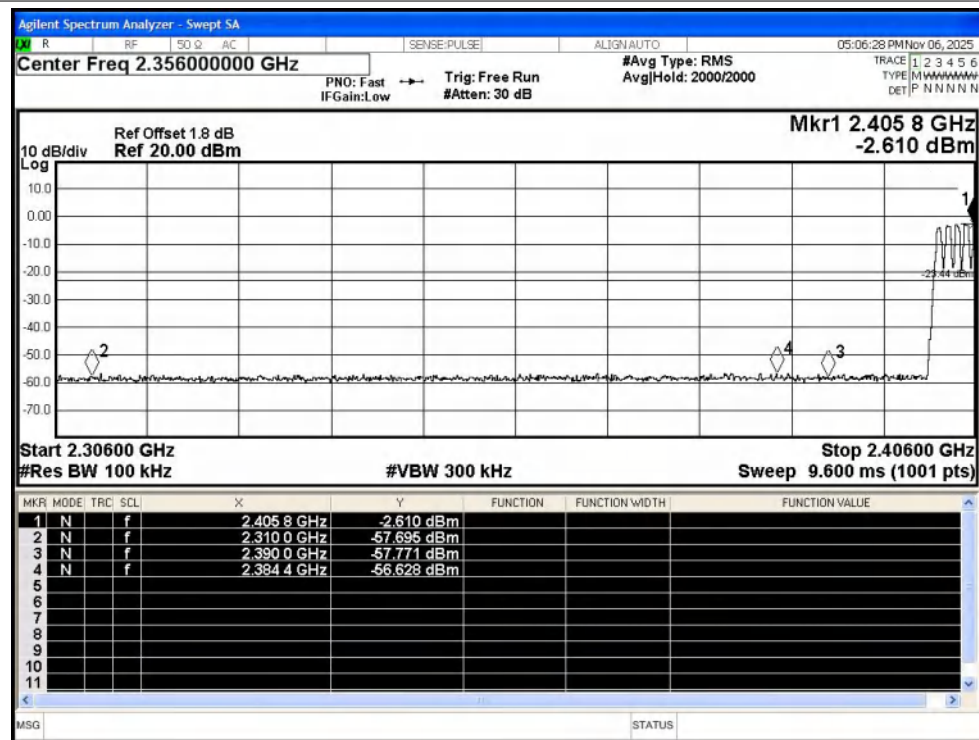
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-53.19	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-54.96	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-52.87	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-54.21	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-51.96	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-55.4	-20	Pass

Test Graphs

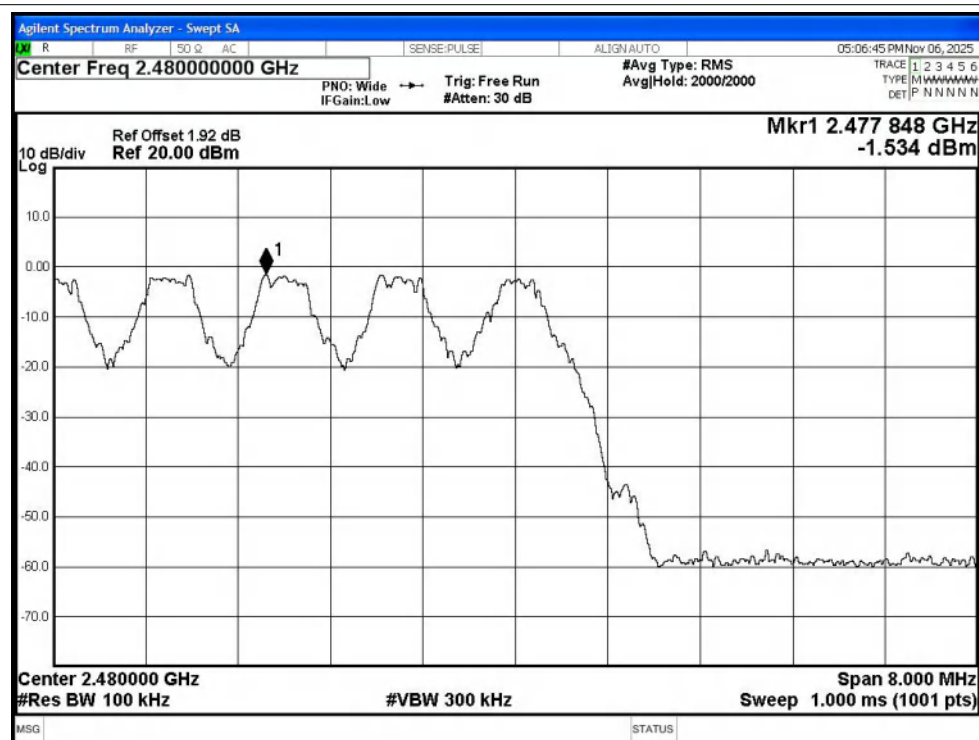
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



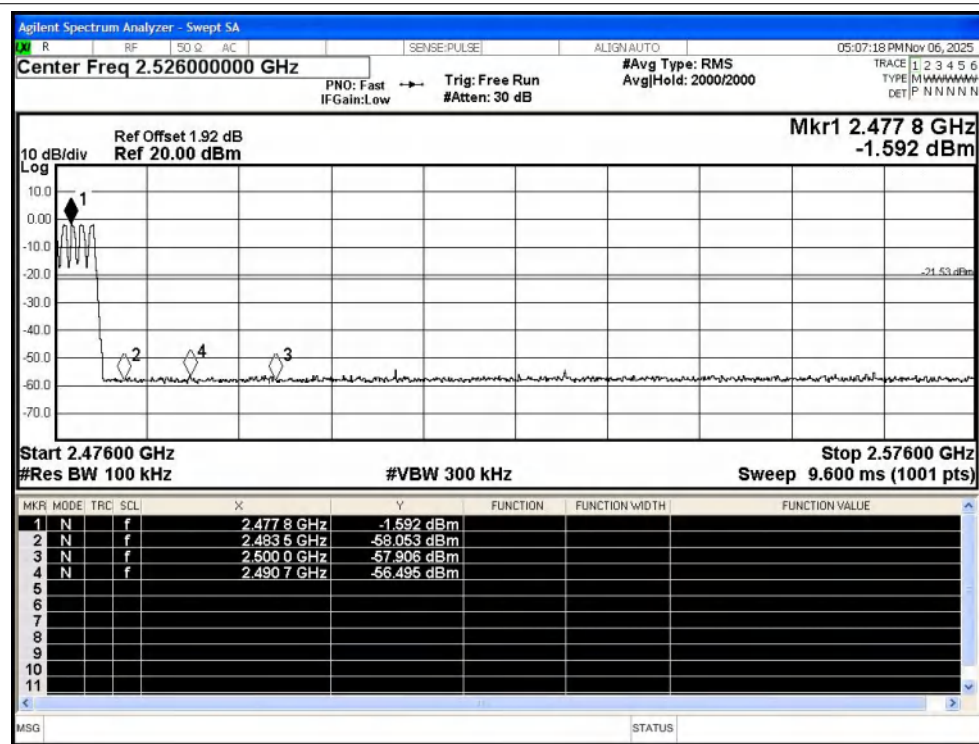
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



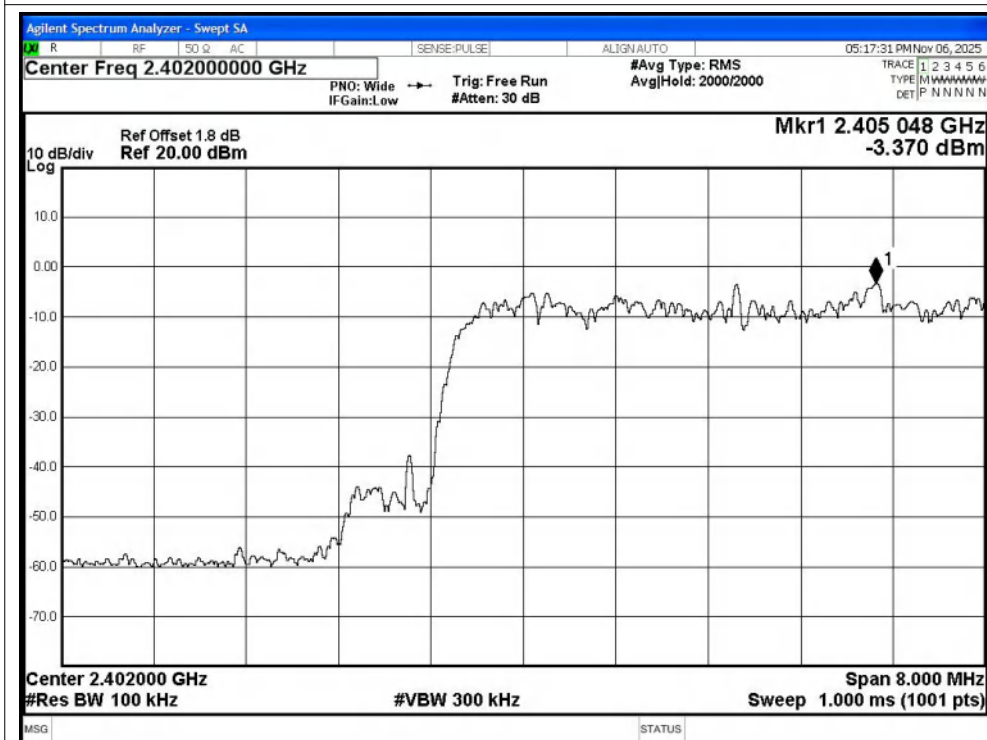
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



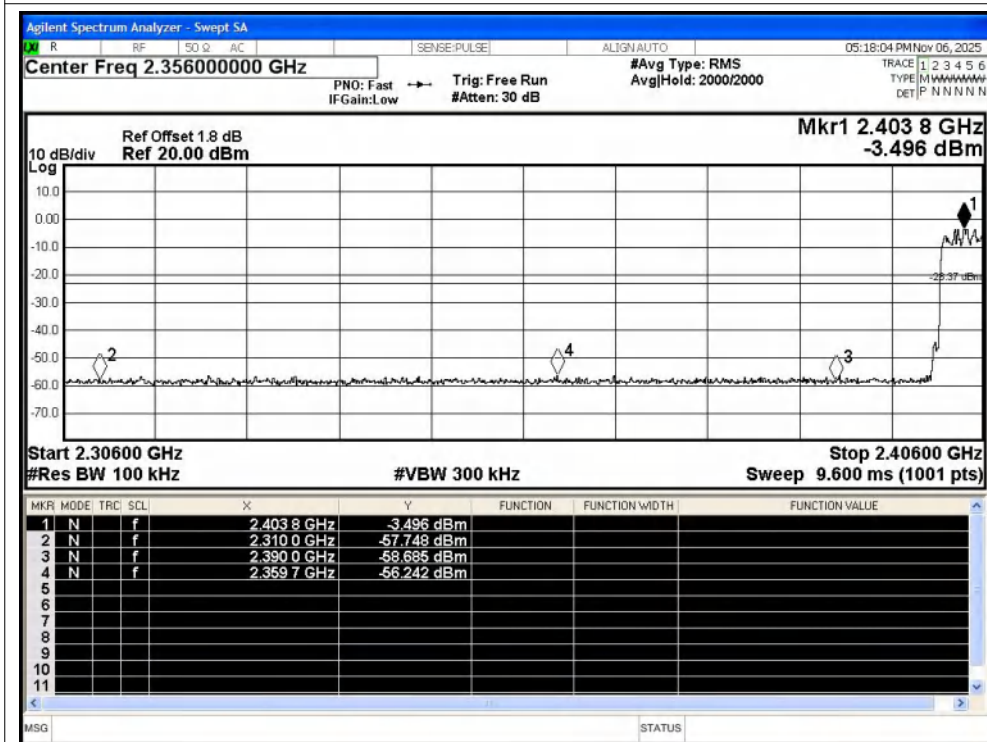
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



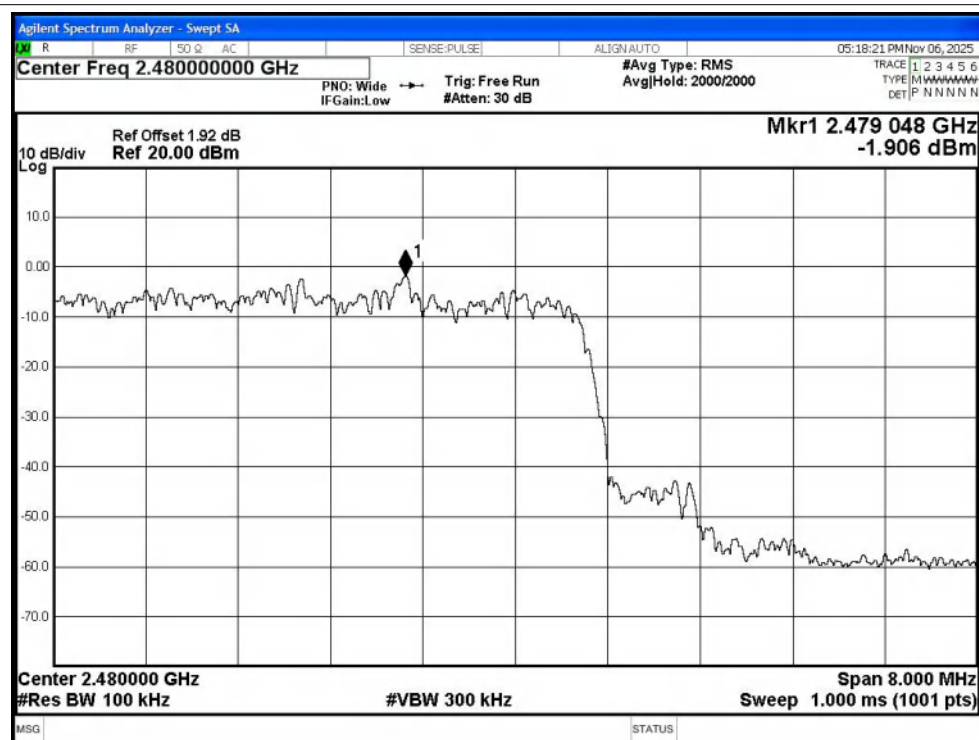
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



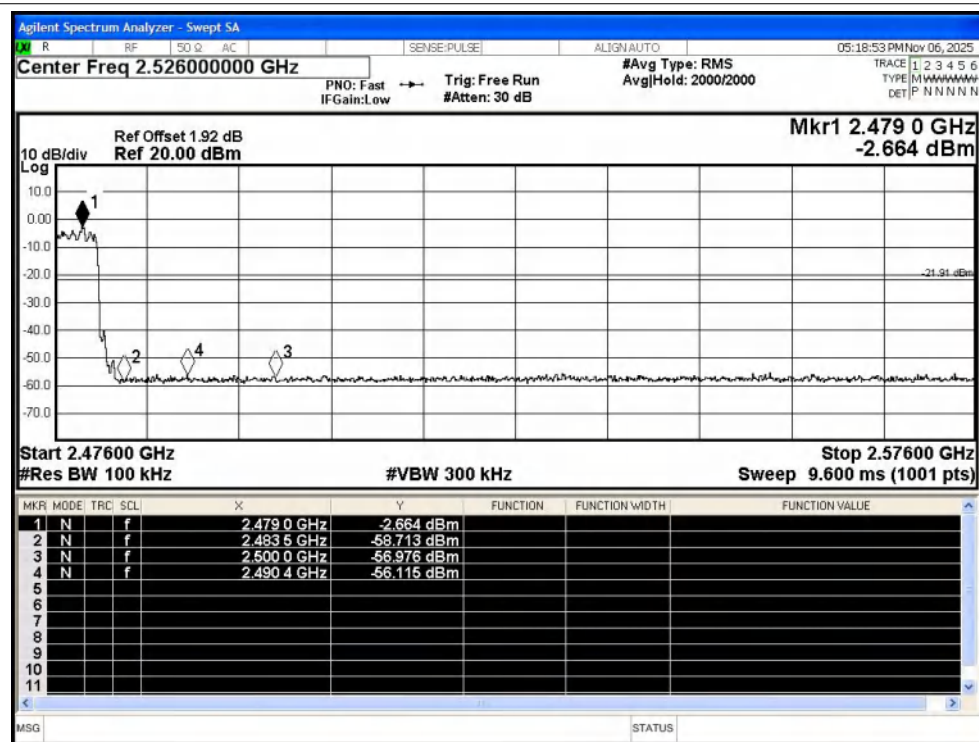
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



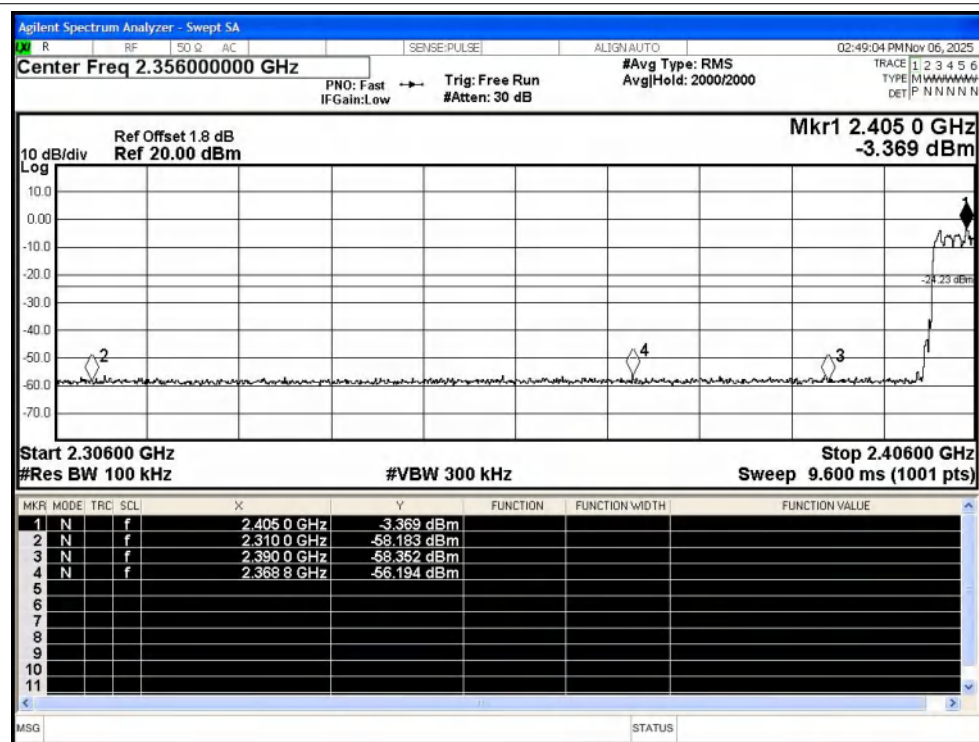
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref



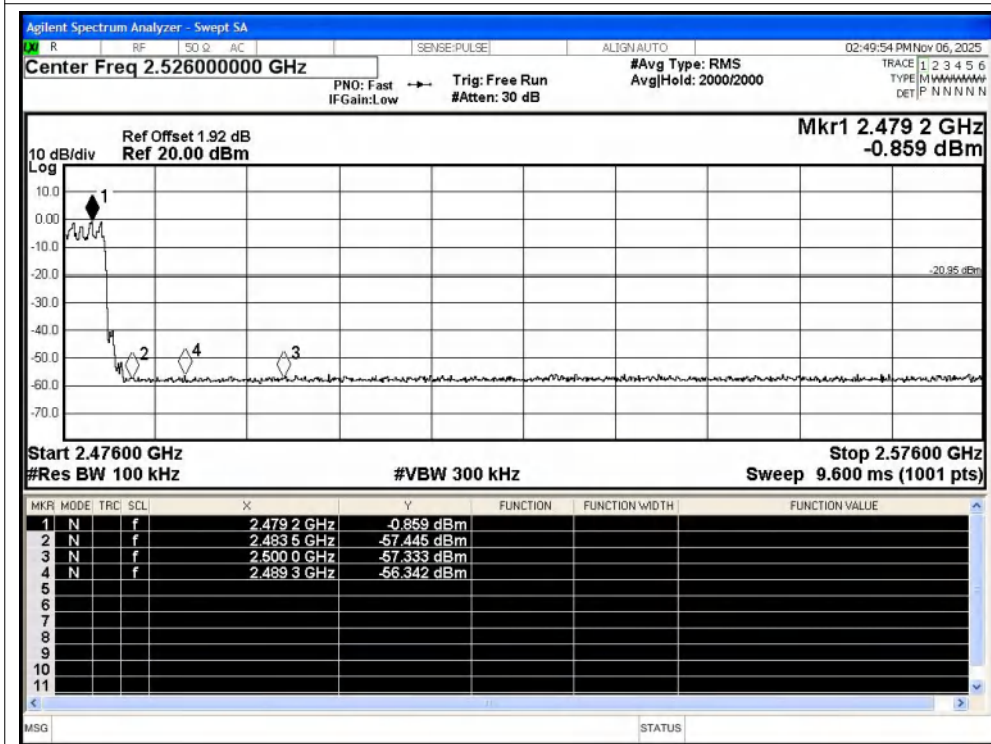
Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Emission

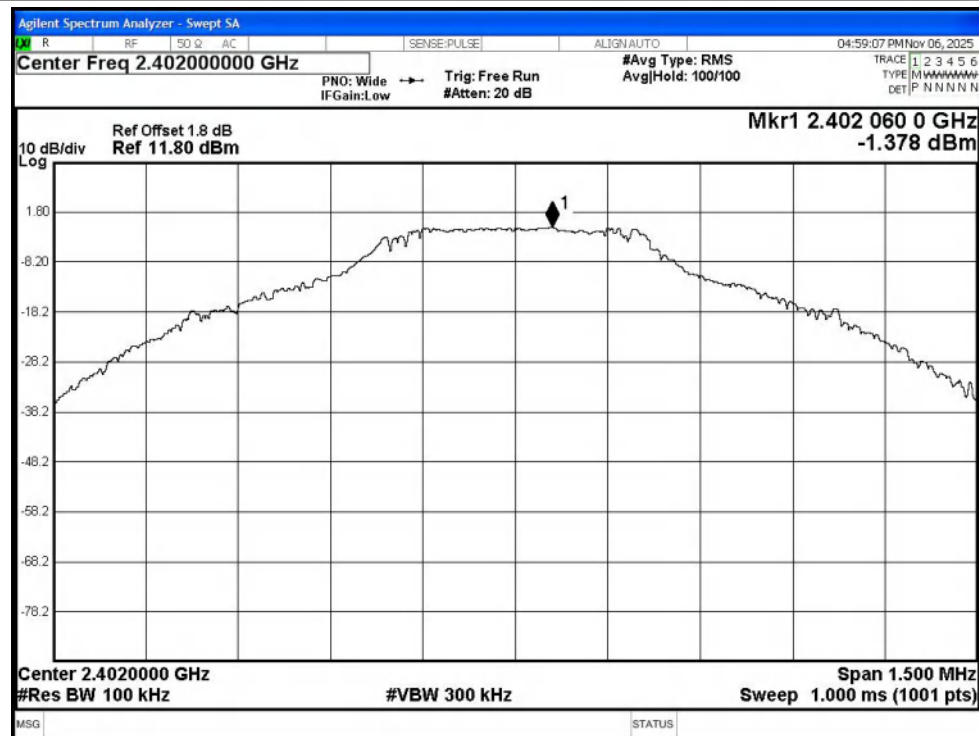


A.7 Conducted RF Spurious Emission

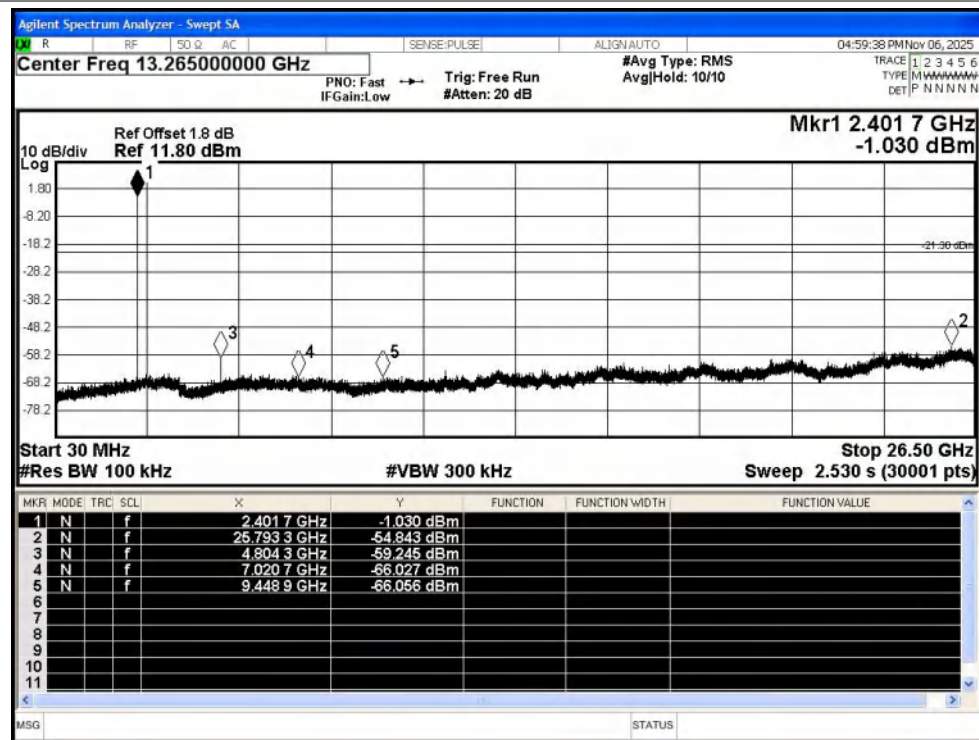
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-53.47	-20	Pass
NVNT	1-DH5	2441	Ant1	-54.41	-20	Pass
NVNT	1-DH5	2480	Ant1	-53.03	-20	Pass
NVNT	2-DH5	2402	Ant1	-53.25	-20	Pass
NVNT	2-DH5	2441	Ant1	-53.75	-20	Pass
NVNT	2-DH5	2480	Ant1	-53.52	-20	Pass
NVNT	3-DH5	2402	Ant1	-51.59	-20	Pass
NVNT	3-DH5	2441	Ant1	-52.31	-20	Pass
NVNT	3-DH5	2480	Ant1	-52.12	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



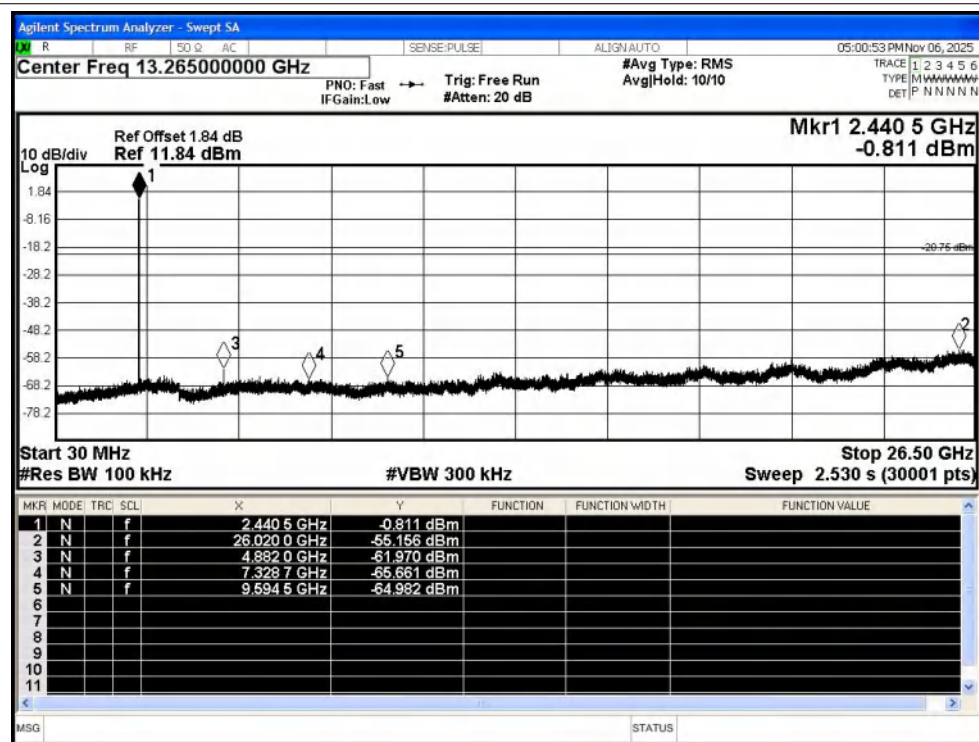
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



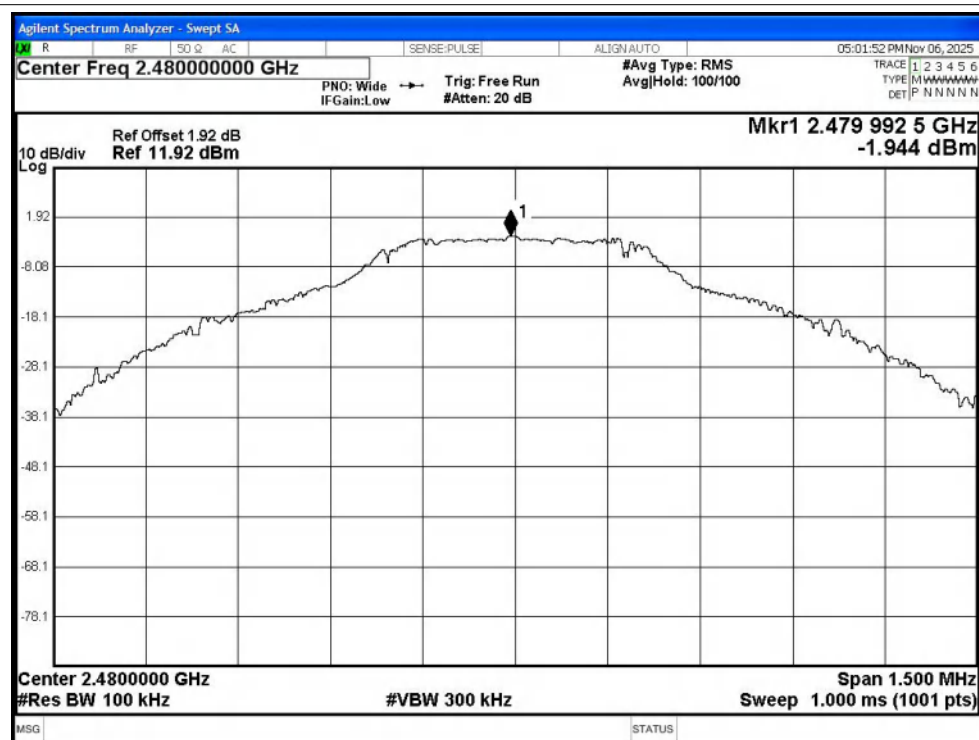
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



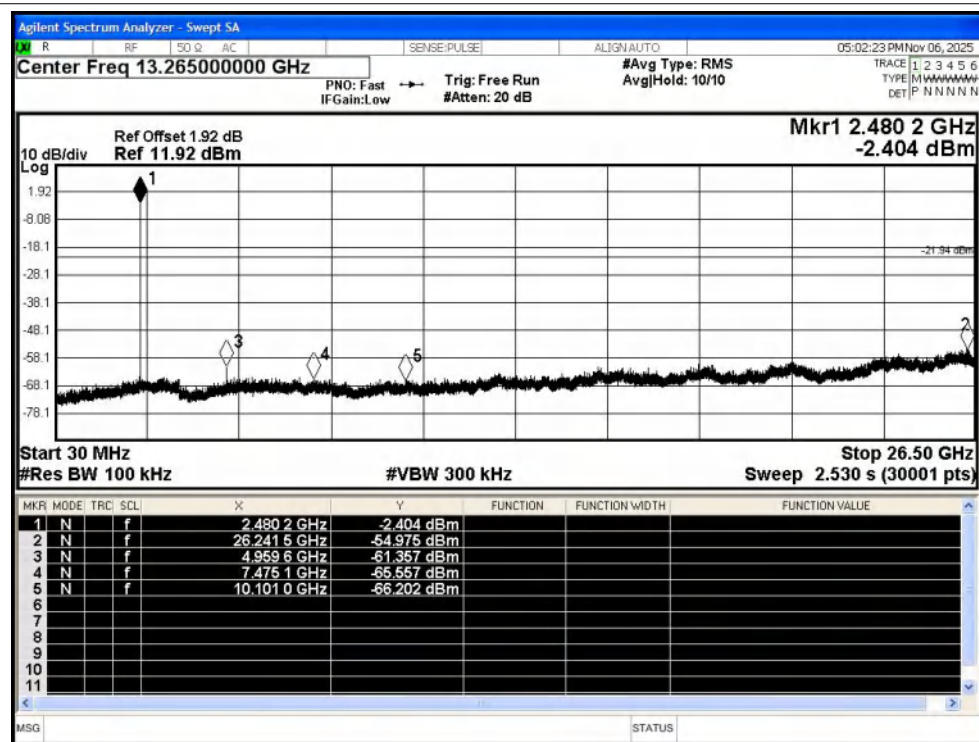
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



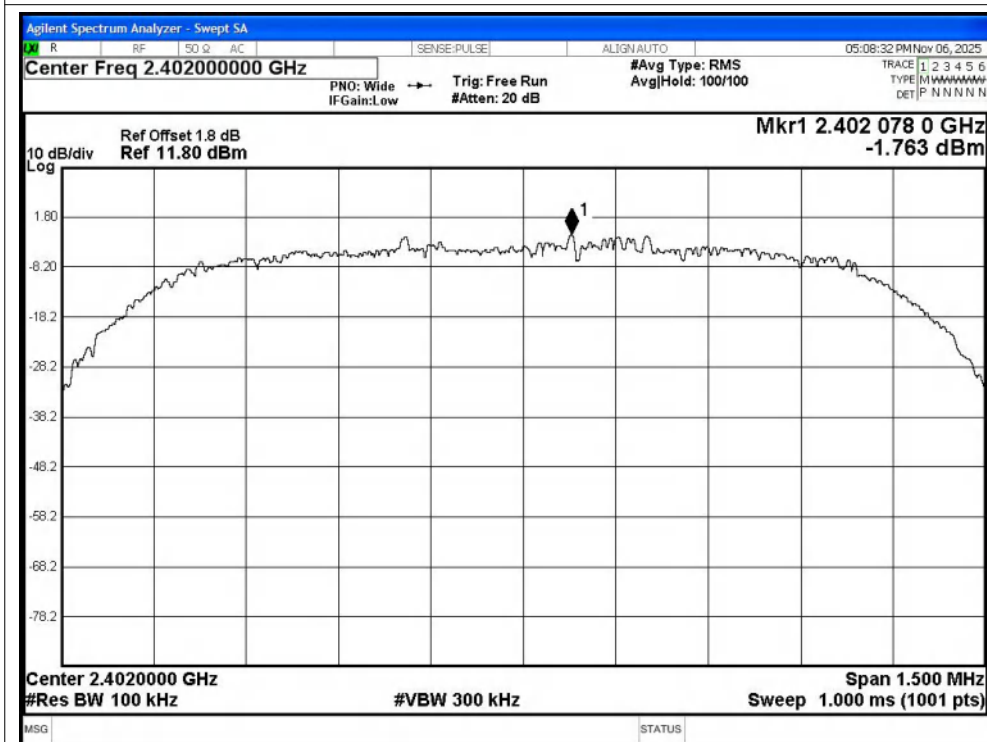
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



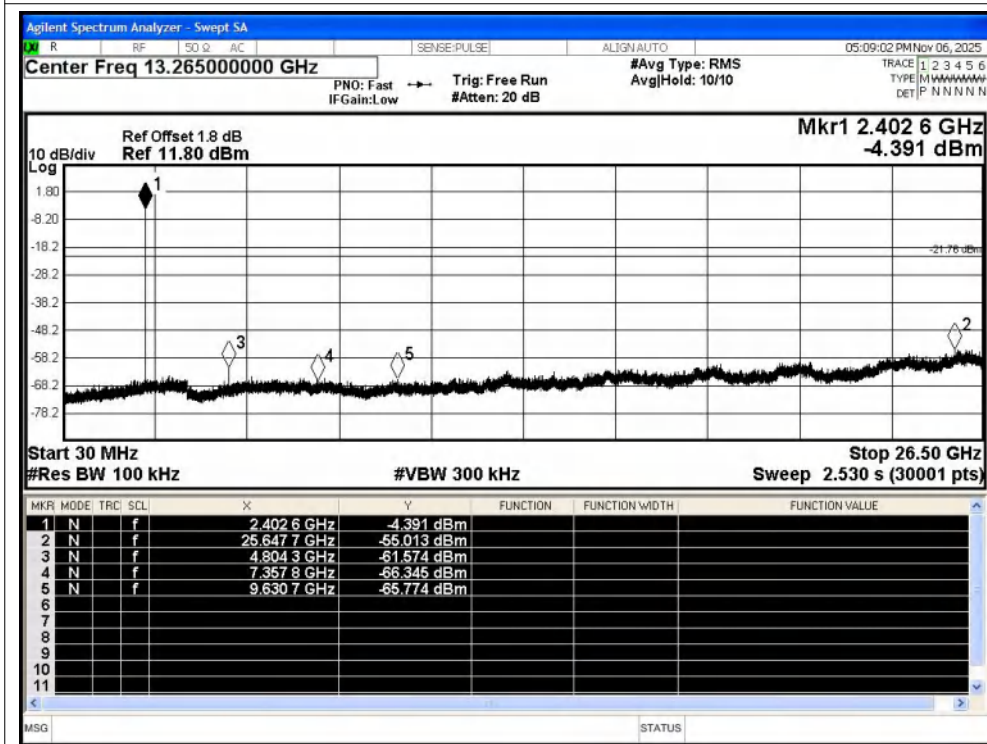
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



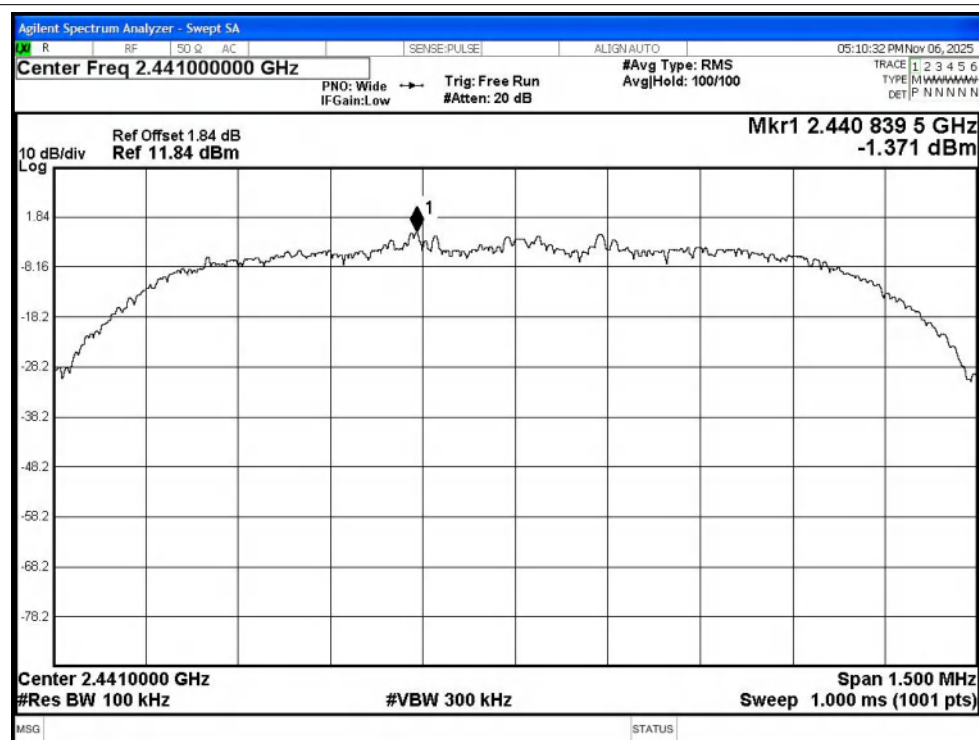
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



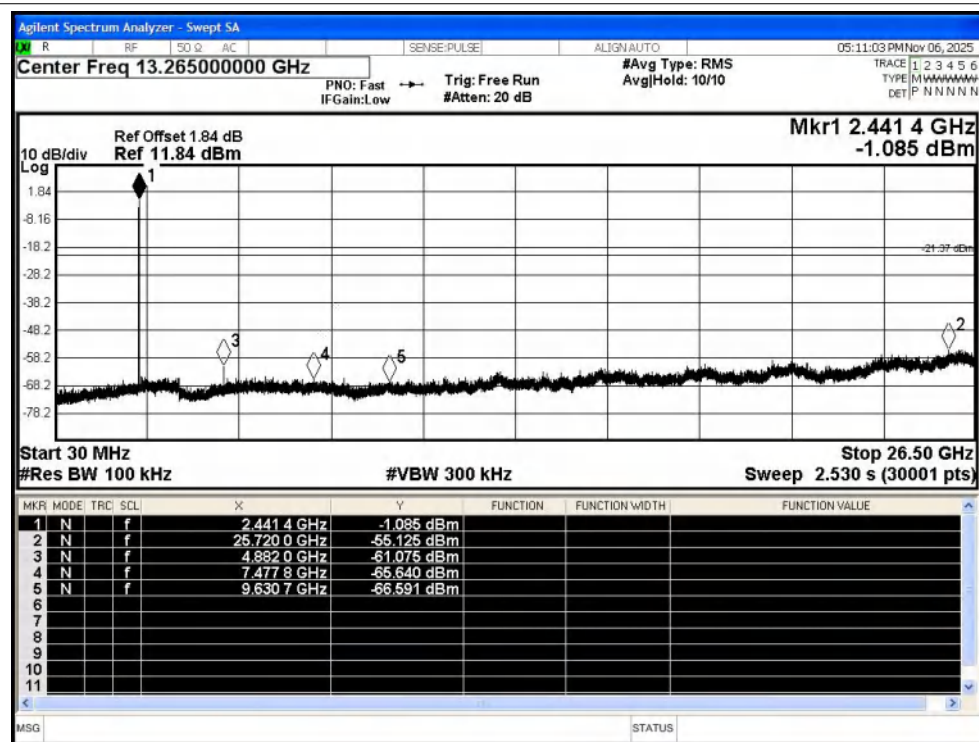
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



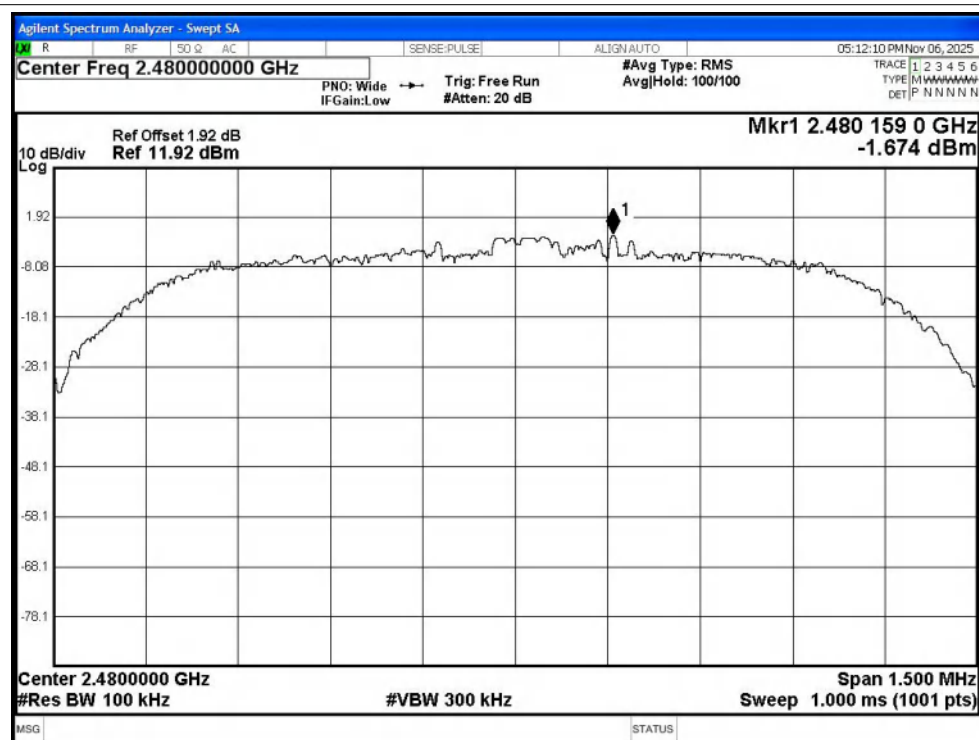
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



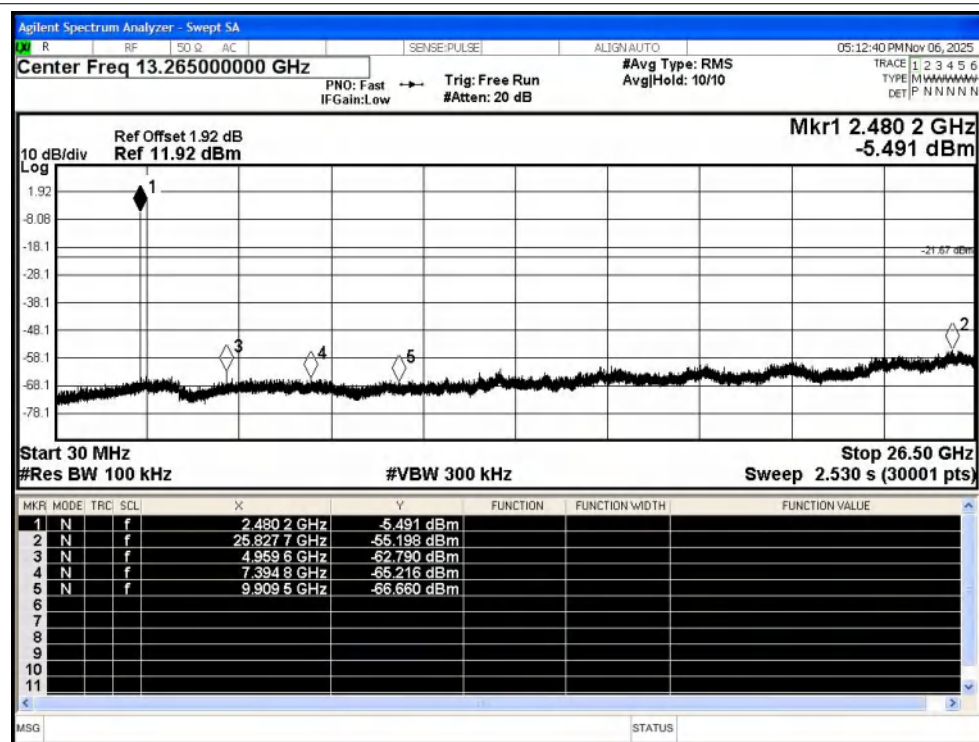
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



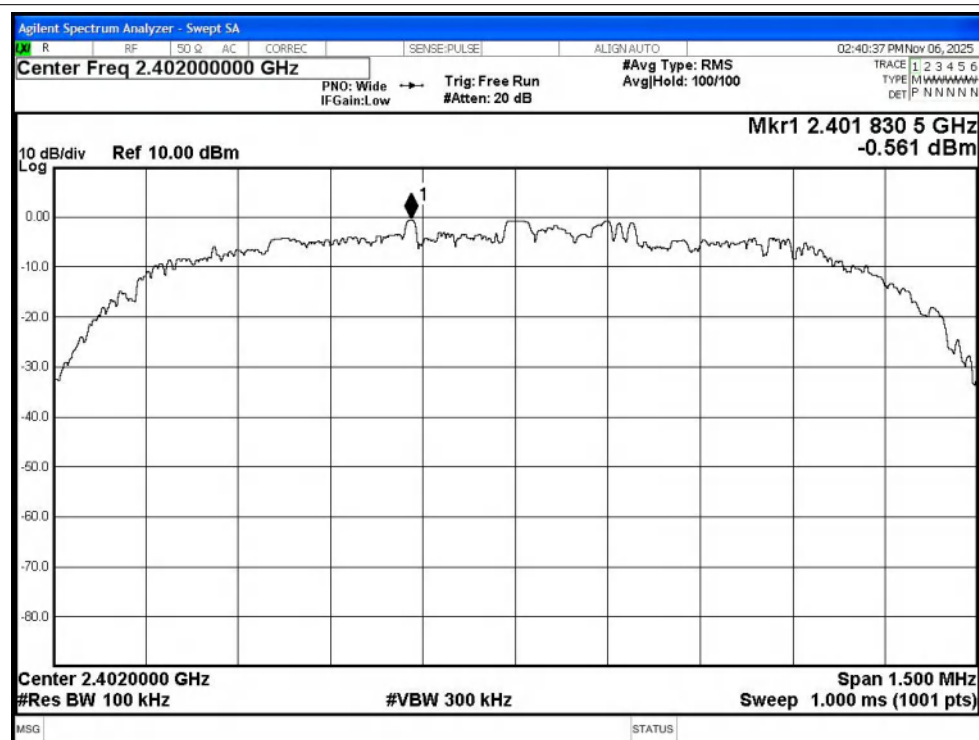
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



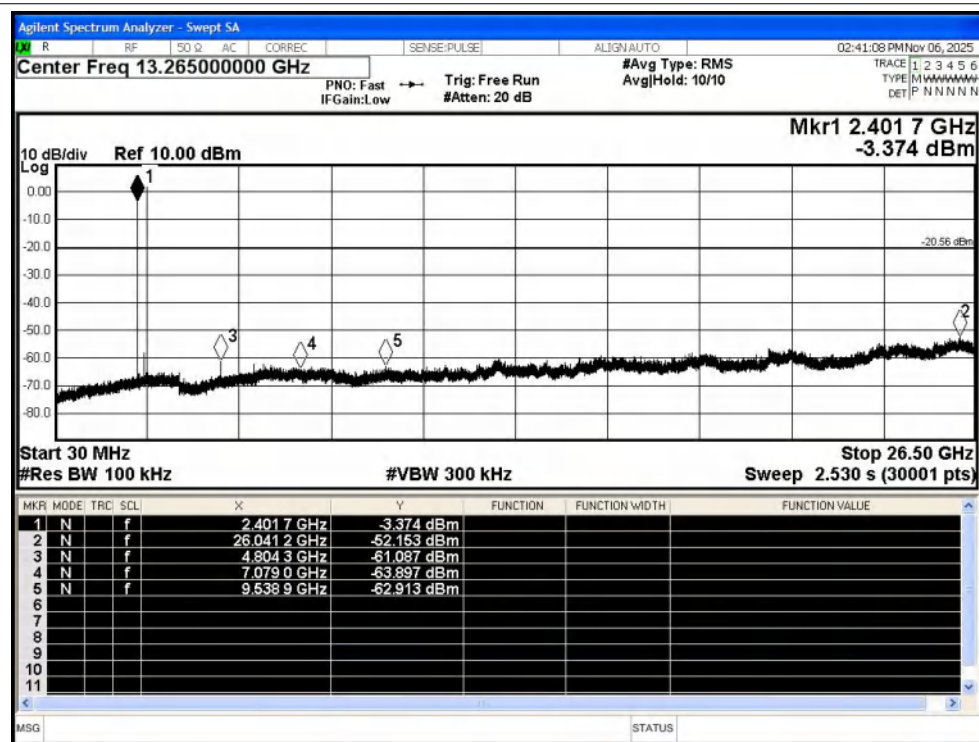
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



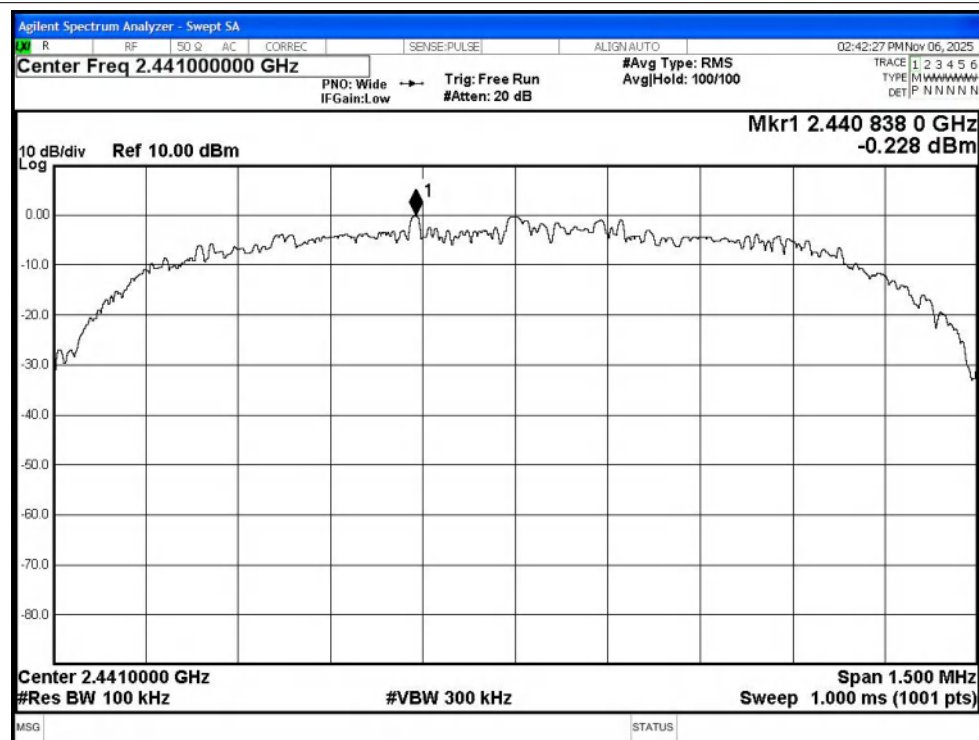
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



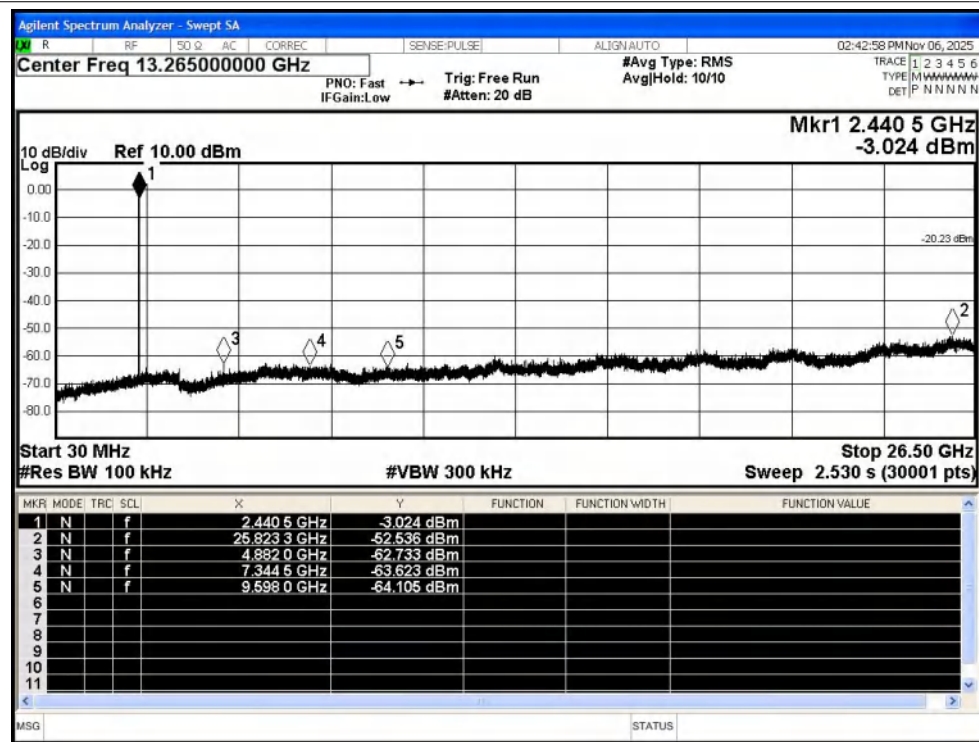
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission



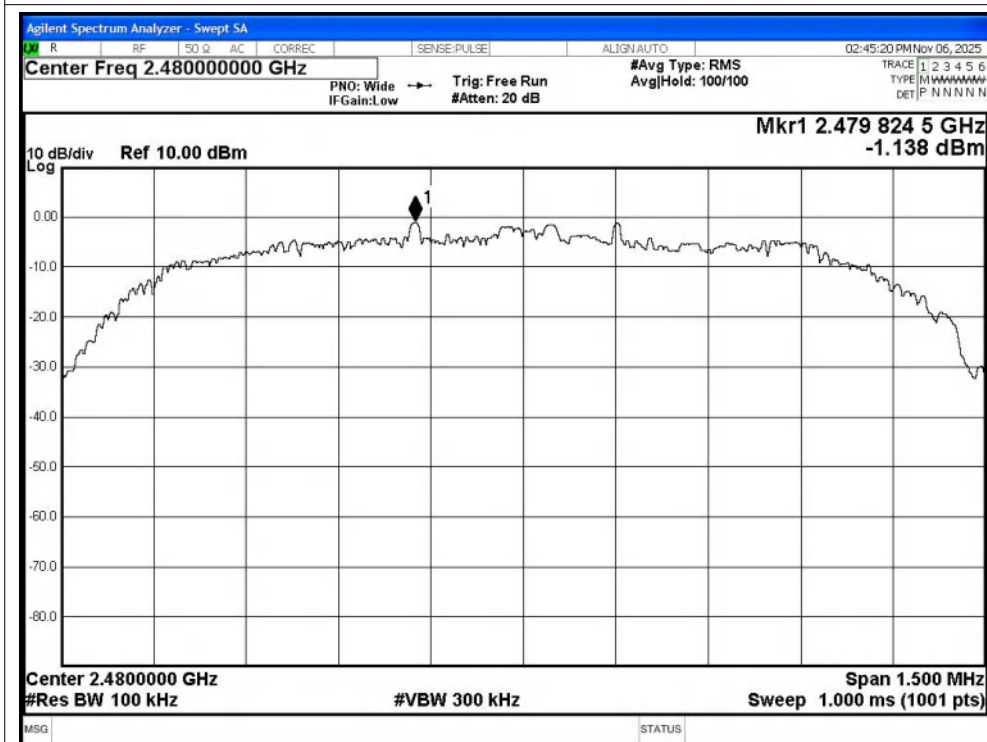
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



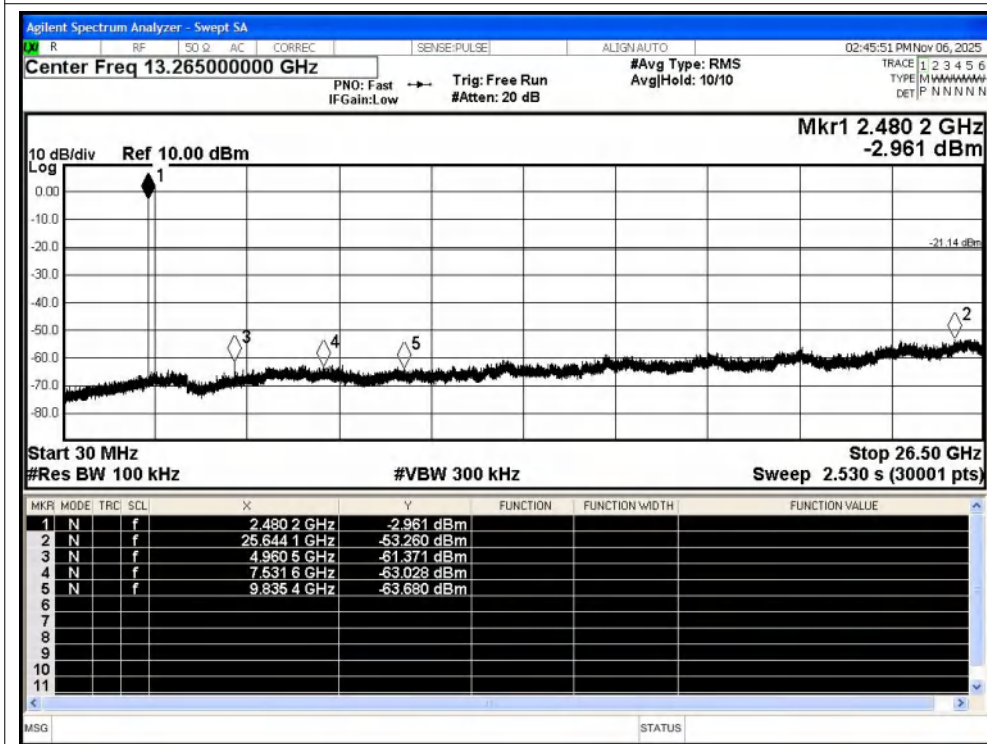
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission

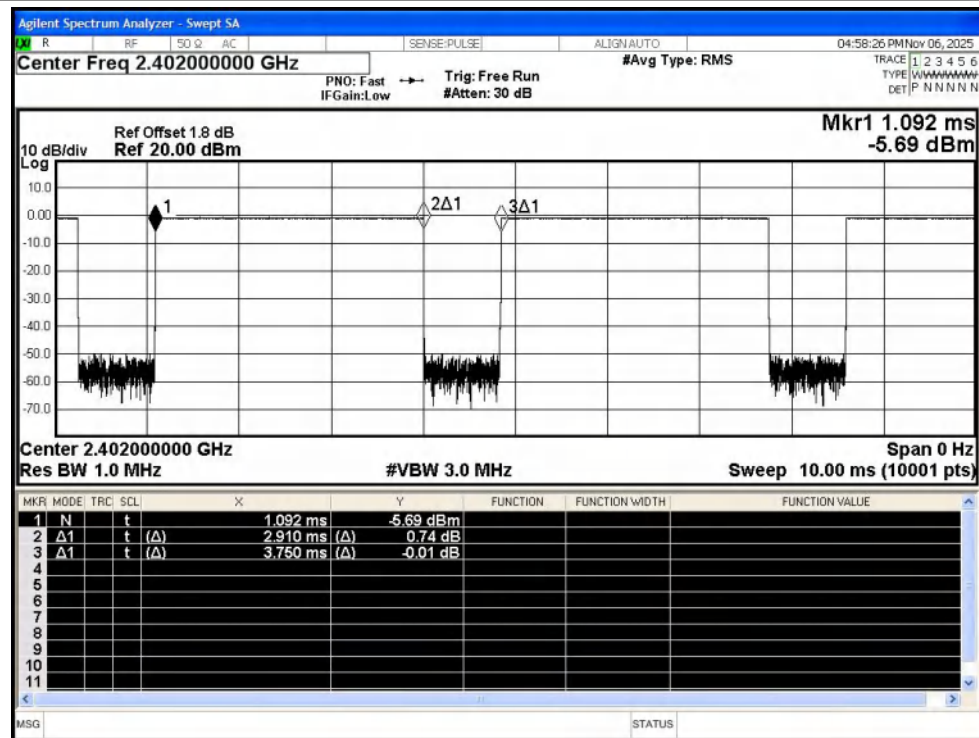


A.8 Duty Cycle

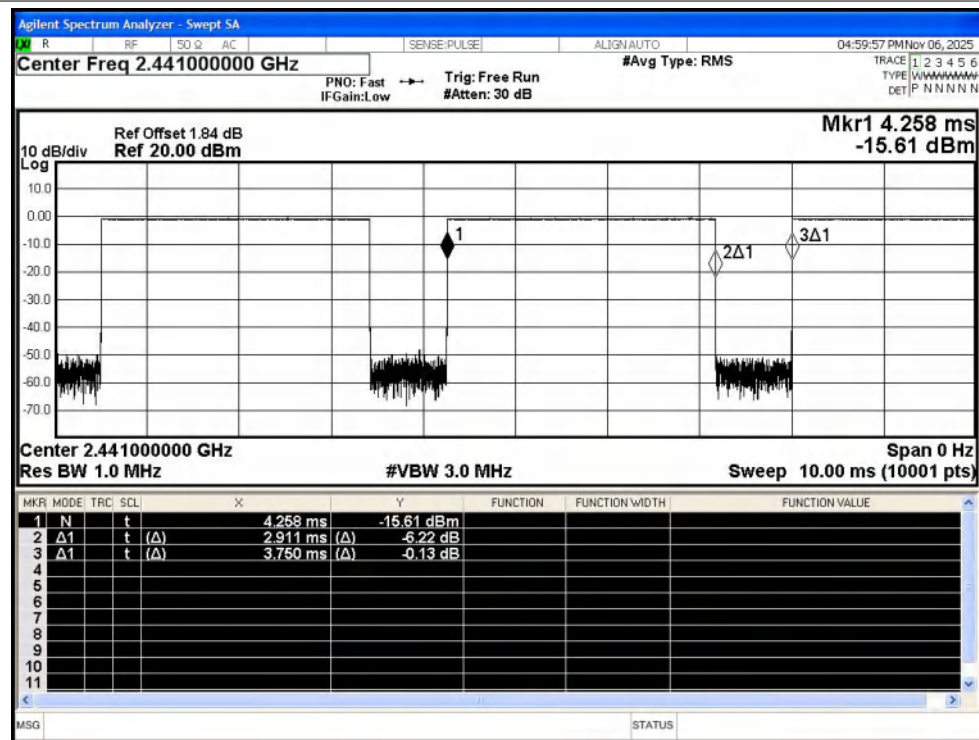
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.63	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.6	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.33	1.12	0.34
NVNT	2-DH5	2441	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2480	Ant1	77.28	1.12	0.35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

Test Graphs

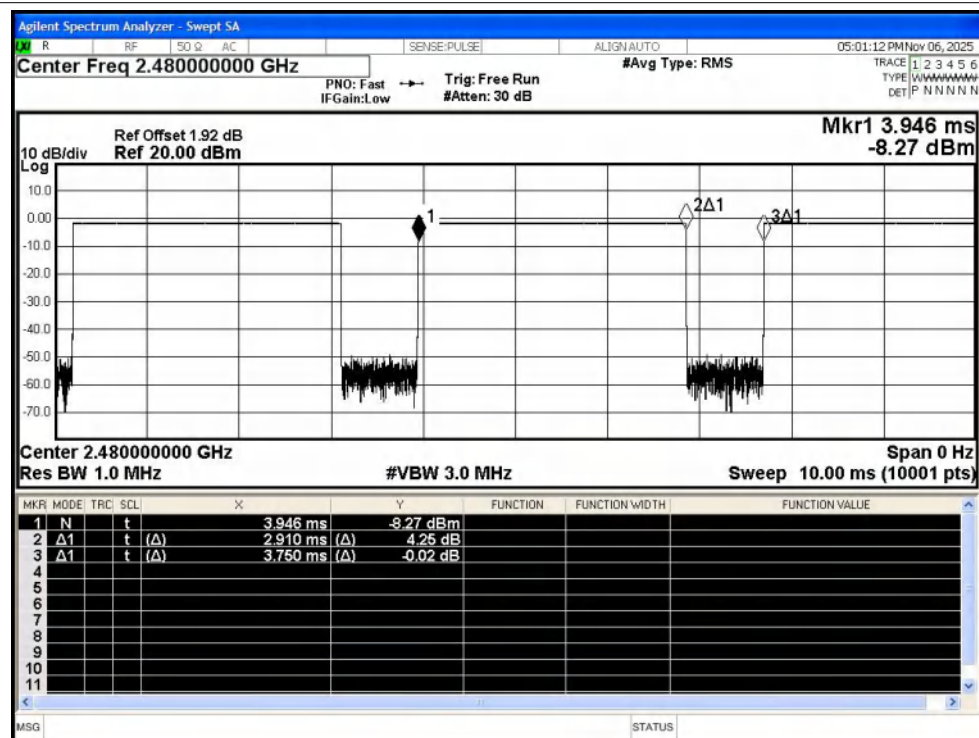
Duty Cycle NVNT 1-DH5 2402MHz Ant1



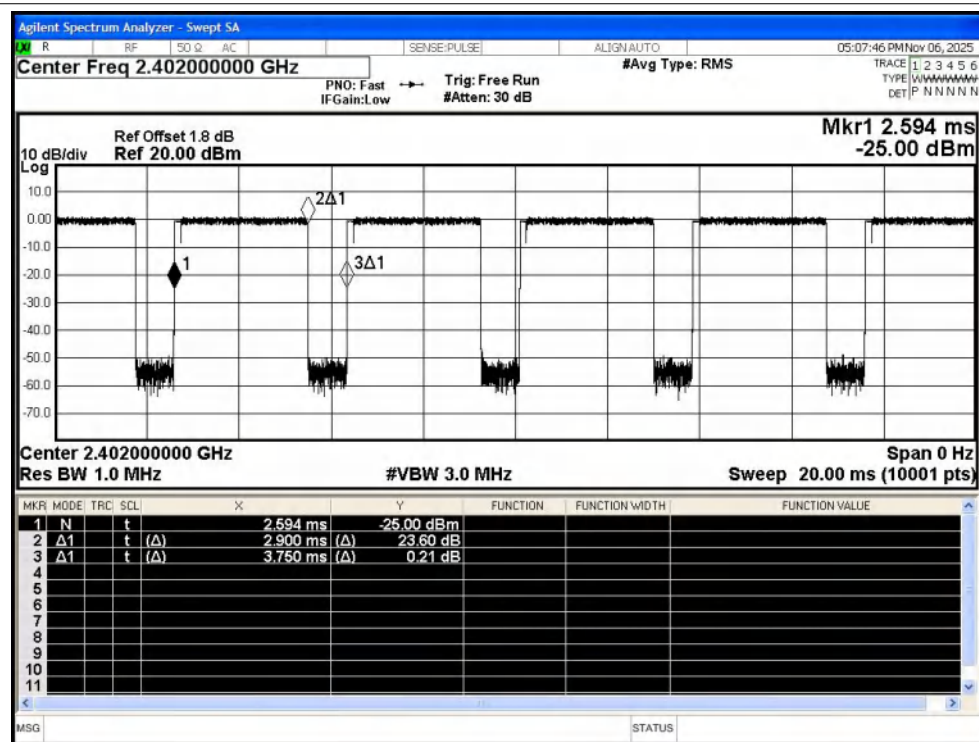
Duty Cycle NVNT 1-DH5 2441MHz Ant1



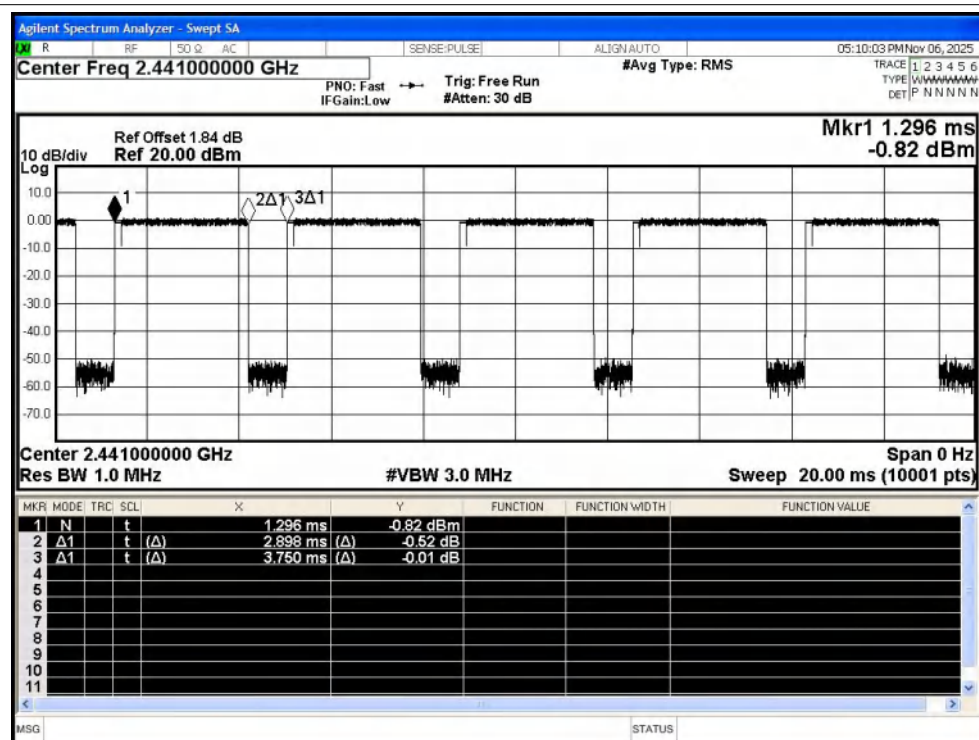
Duty Cycle NVNT 1-DH5 2480MHz Ant1



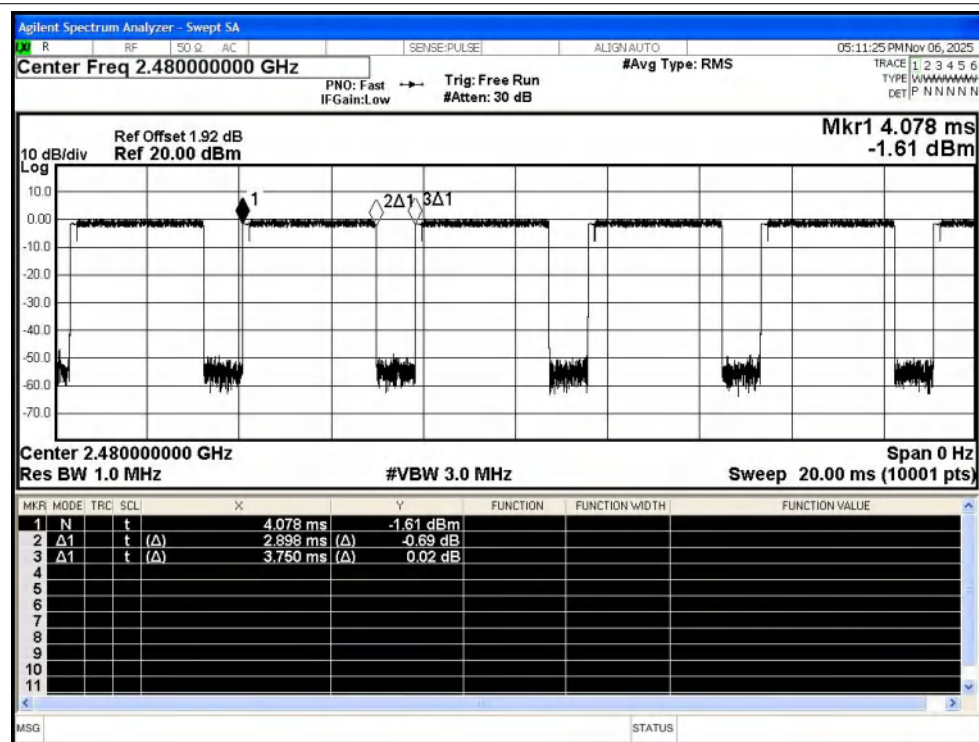
Duty Cycle NVNT 2-DH5 2402MHz Ant1



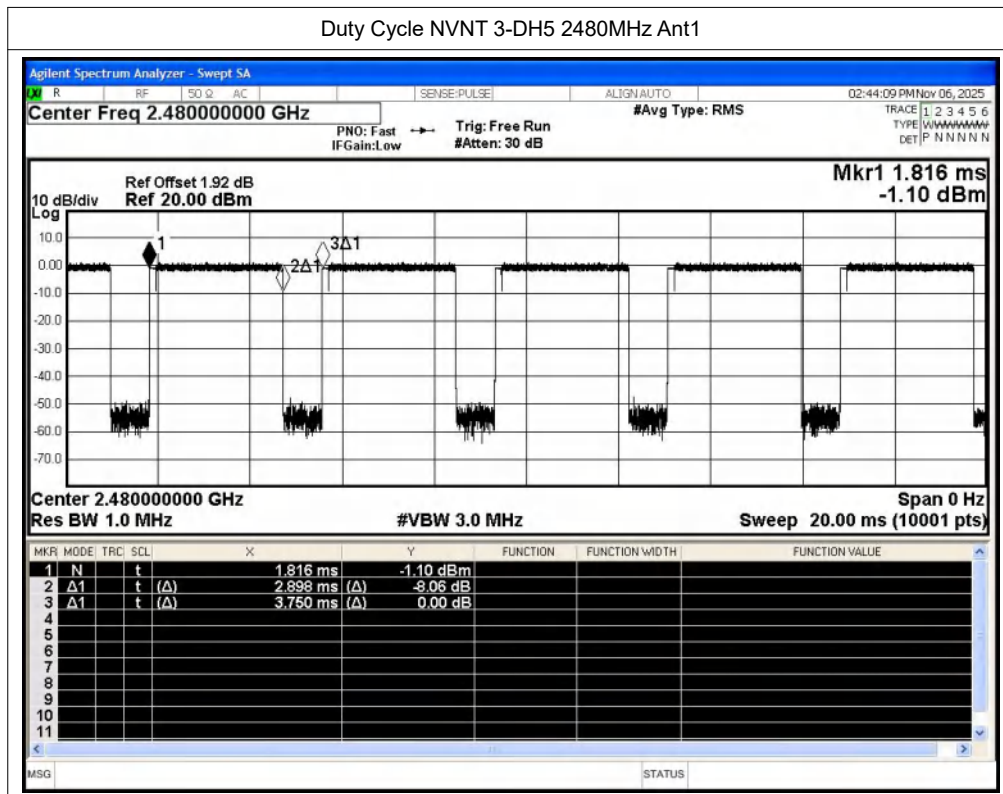
Duty Cycle NVNT 2-DH5 2441MHz Ant1



Duty Cycle NVNT 2-DH5 2480MHz Ant1



[illegible][illegible]

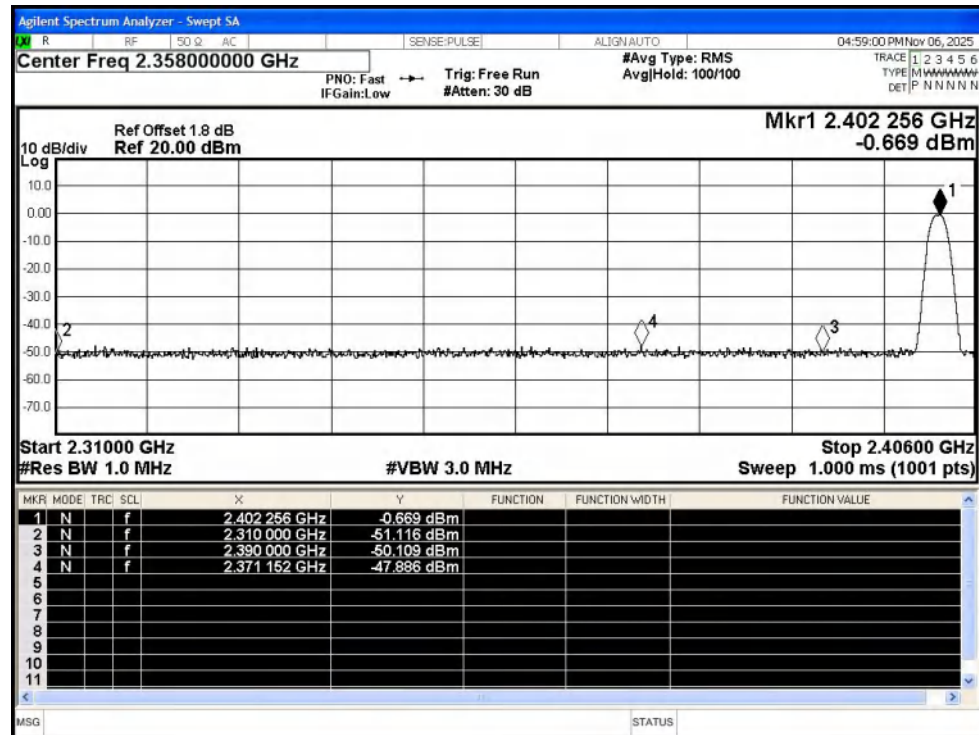


A.9 Restrict Band

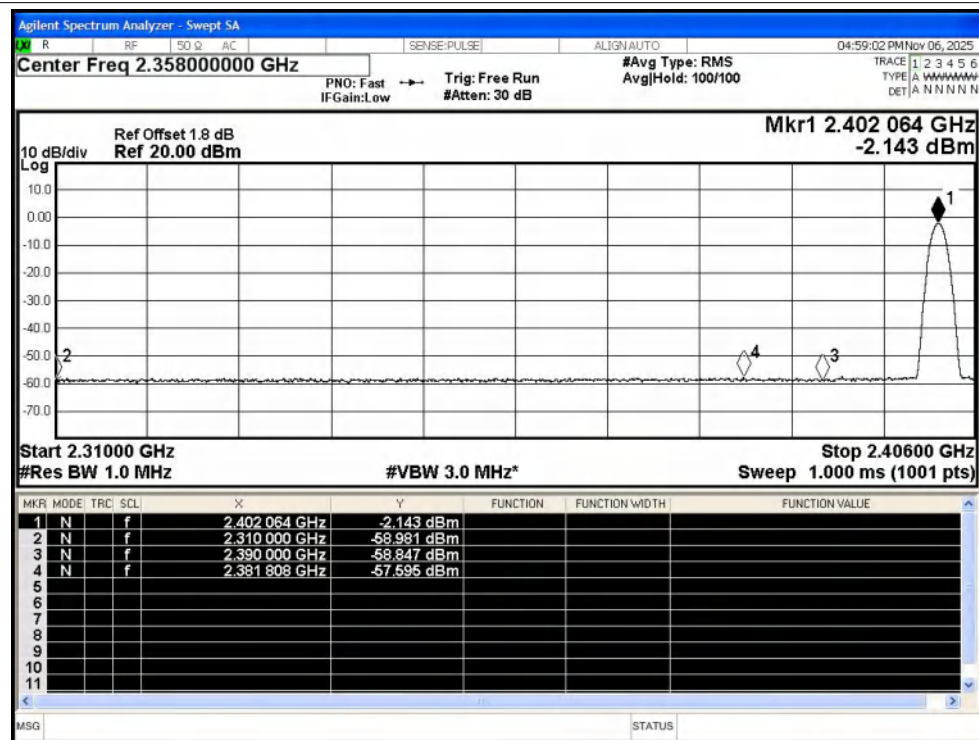
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	3.33	-	47.47	3.33	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	3.33	1.1	40.71	3.33	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2371.152	3.33	-	50.70	3.33	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2381.808	3.33	1.1	42.09	3.33	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	3.33	-	48.48	3.33	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	3.33	1.1	40.84	3.33	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	3.33	-	47.55	3.33	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	3.33	1.1	42.03	3.33	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2486.008	3.33	-	52.01	3.33	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2486.68	3.33	1.1	42.54	3.33	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	3.33	-	49.64	3.33	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	3.33	1.1	42.11	3.33	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	3.33	-	48.61	3.33	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	3.33	1.12	40.19	3.33	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2369.904	3.33	-	51.36	3.33	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2367.216	3.33	1.12	41.95	3.33	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	3.33	-	47.49	3.33	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	3.33	1.12	41.34	3.33	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	3.33	-	49.47	3.33	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	3.33	1.12	41.78	3.33	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2498.488	3.33	-	51.68	3.33	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2485.432	3.33	1.12	42.73	3.33	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	3.33	-	48.05	3.33	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	3.33	1.12	41.87	3.33	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	3.33	-	45.93	3.33	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	3.33	1.12	40.99	3.33	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2382.288	3.33	-	50.97	3.33	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2379.216	3.33	1.12	42.00	3.33	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	3.33	-	47.37	3.33	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	3.33	1.12	40.93	3.33	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	3.33	-	49.42	3.33	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	3.33	1.12	42.55	3.33	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2484.376	3.33	-	53.02	3.33	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2486.608	3.33	1.12	42.57	3.33	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	3.33	-	47.97	3.33	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	3.33	1.12	41.76	3.33	Average	54	Pass

Test Graphs

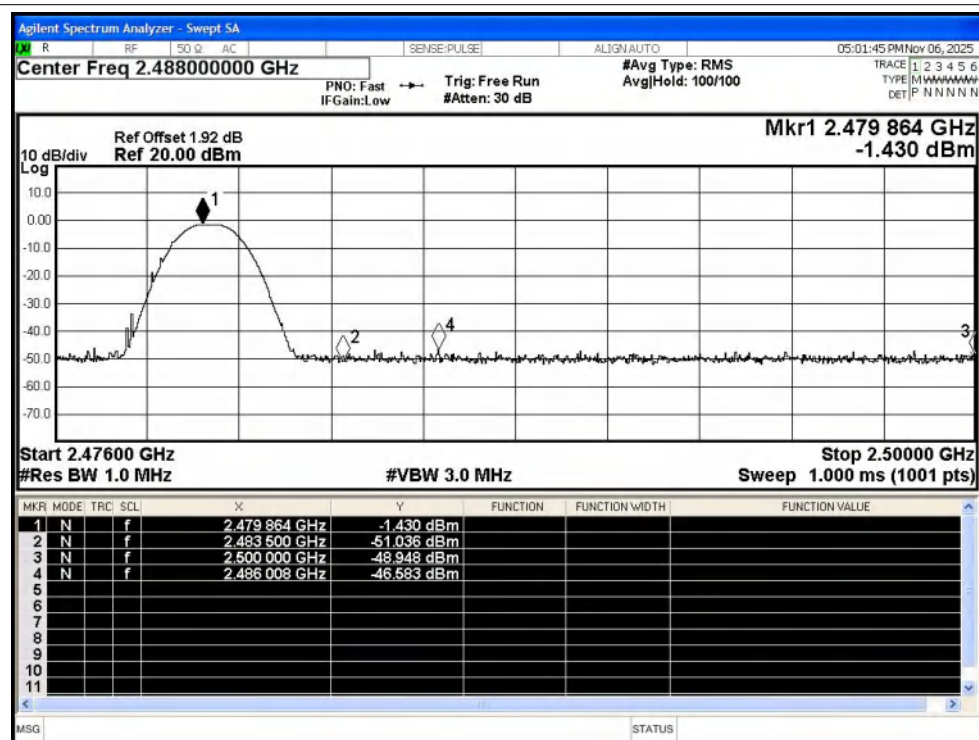
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



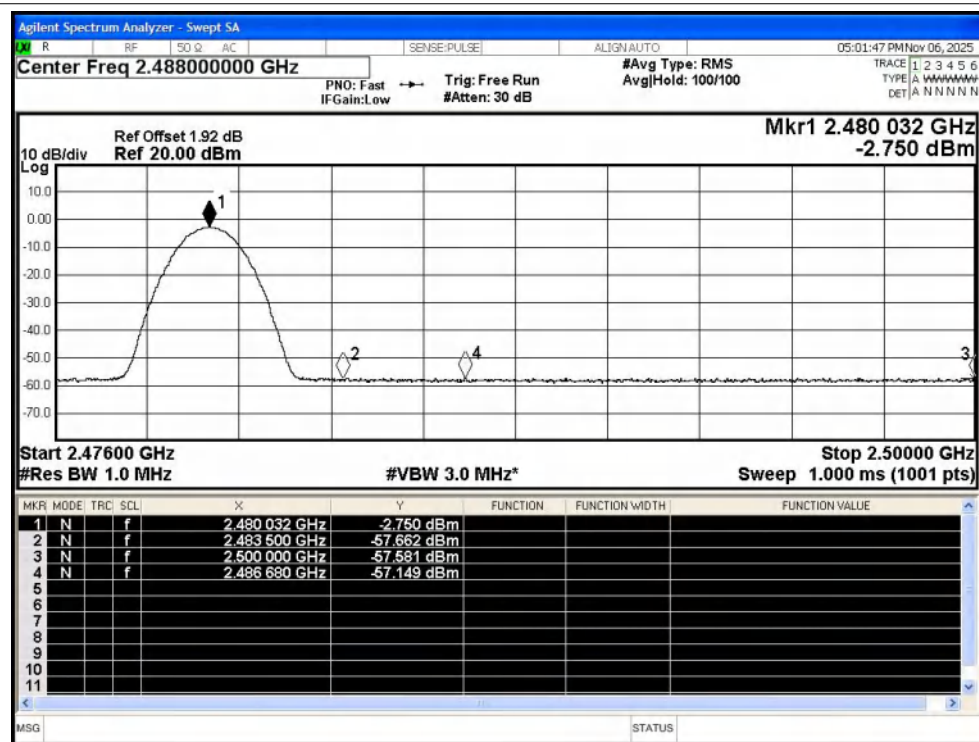
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



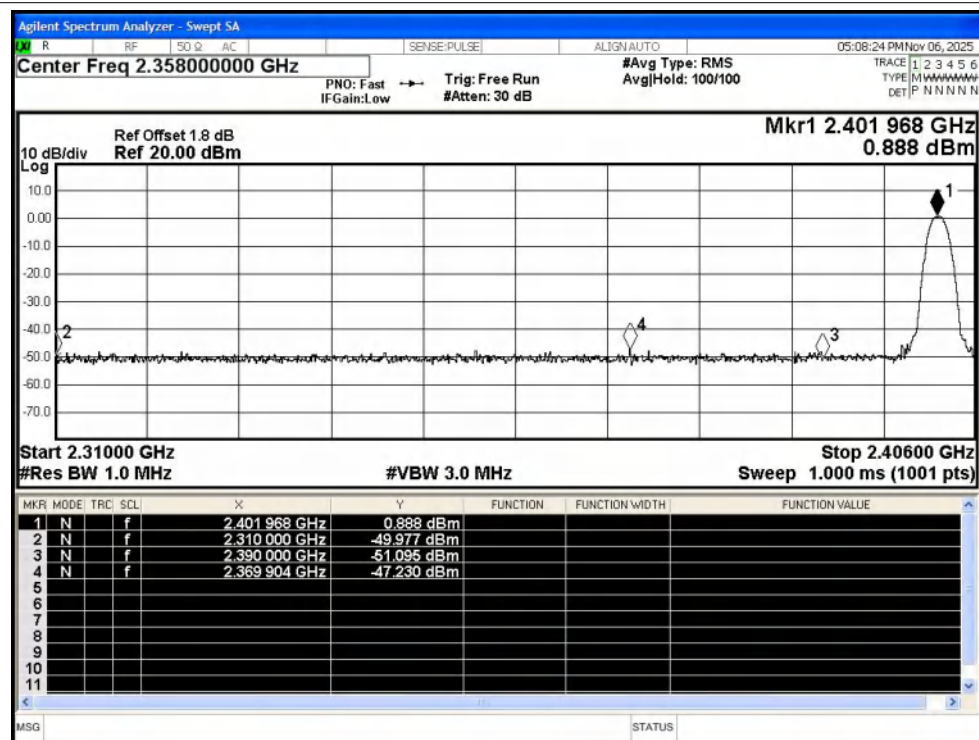
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



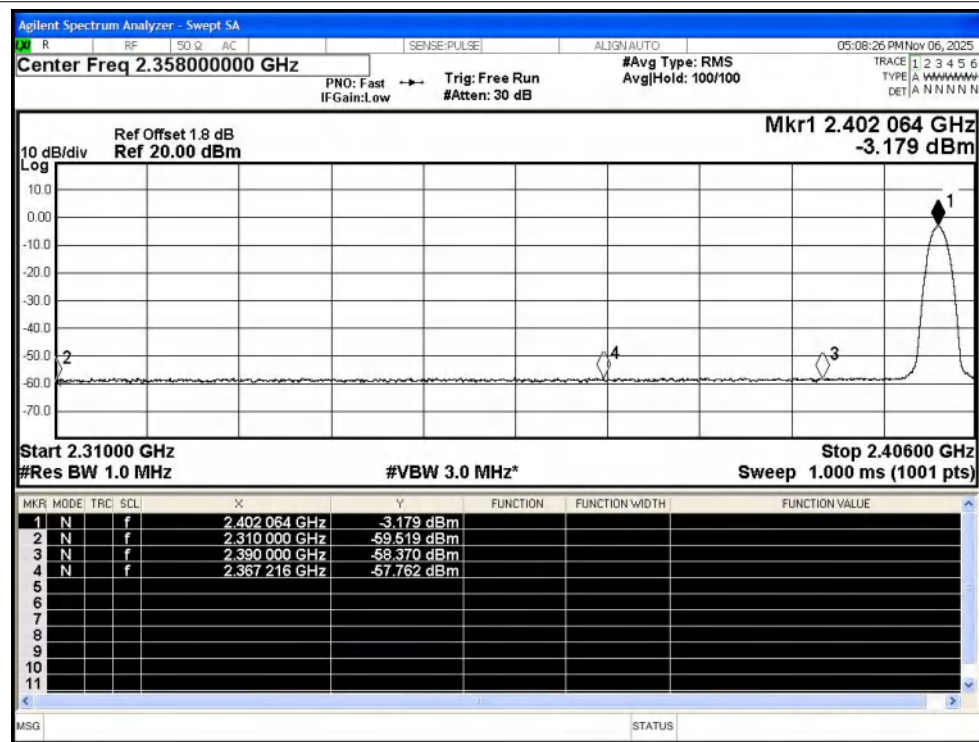
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



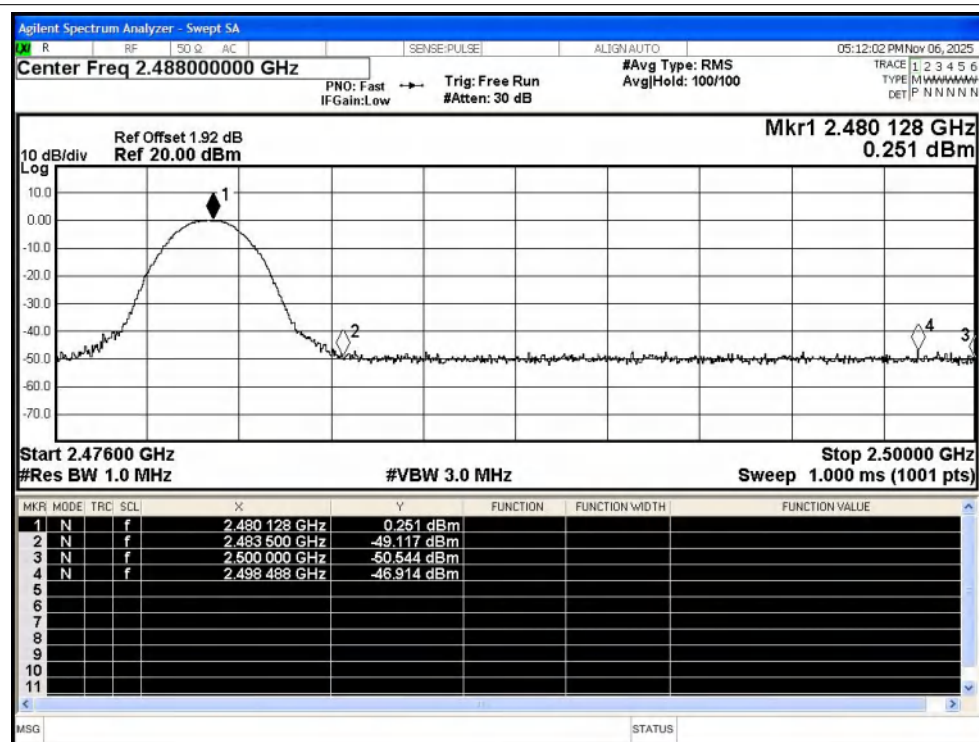
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



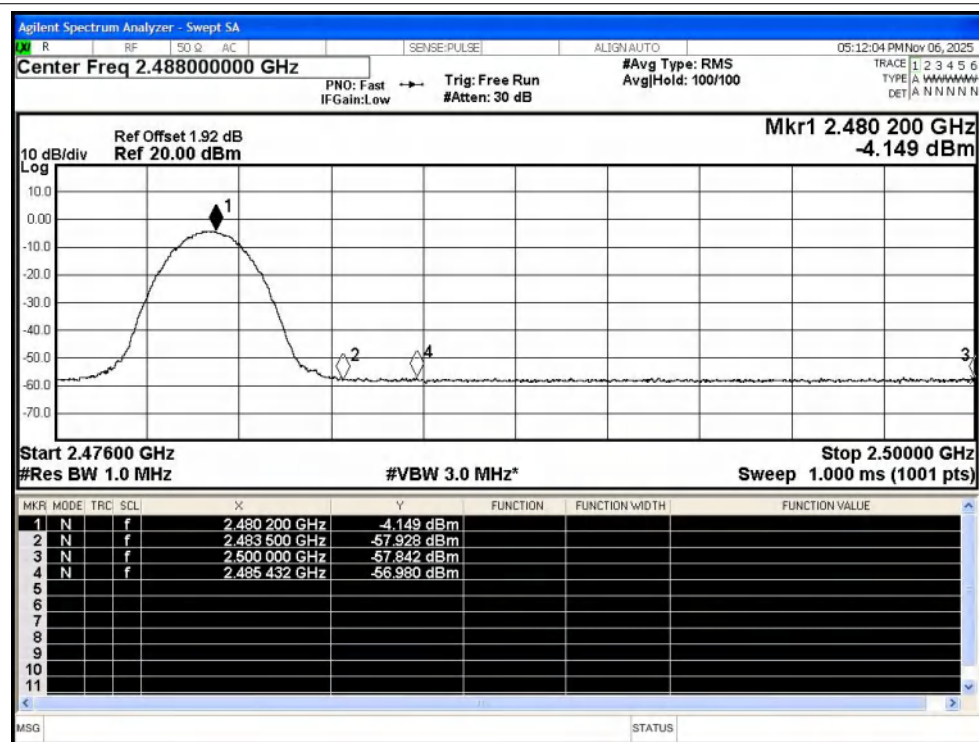
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average



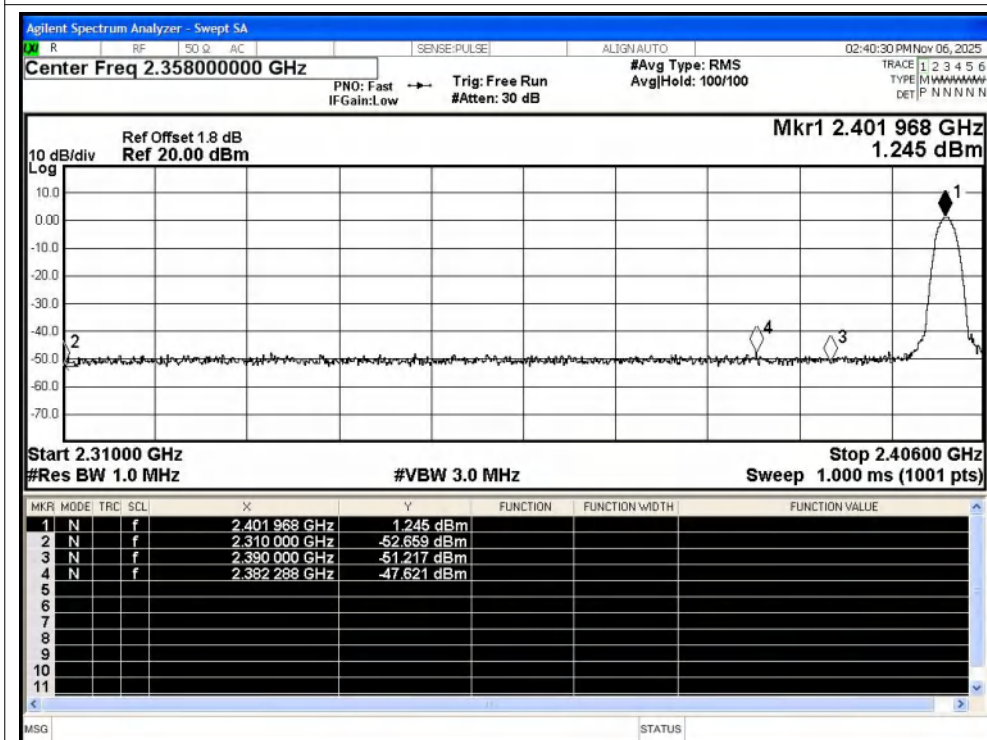
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak



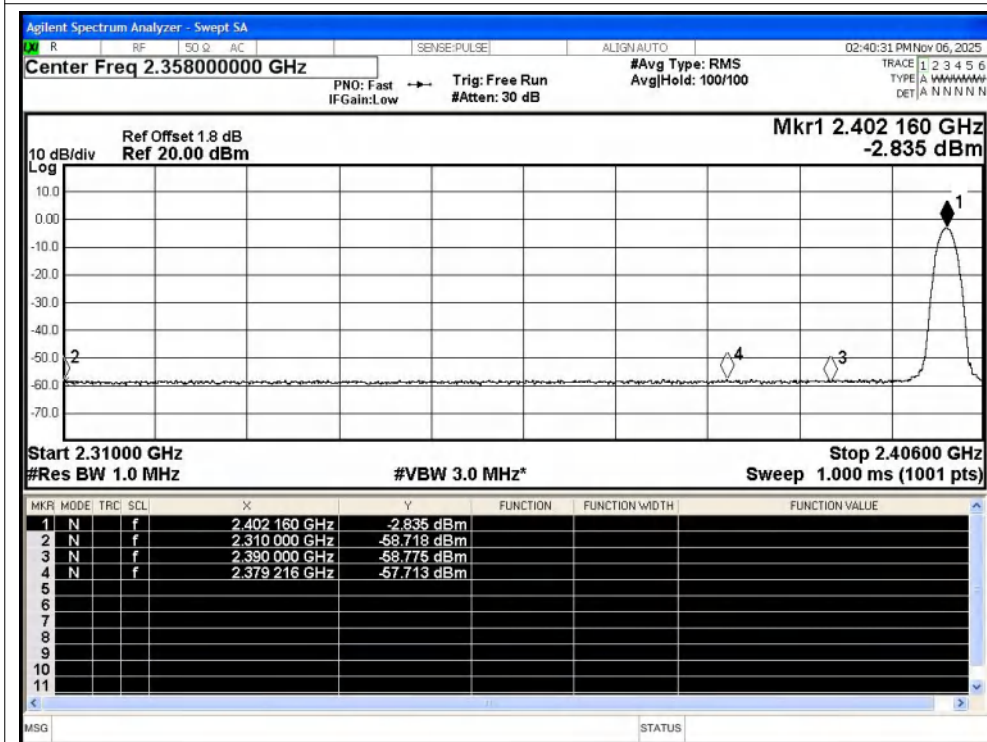
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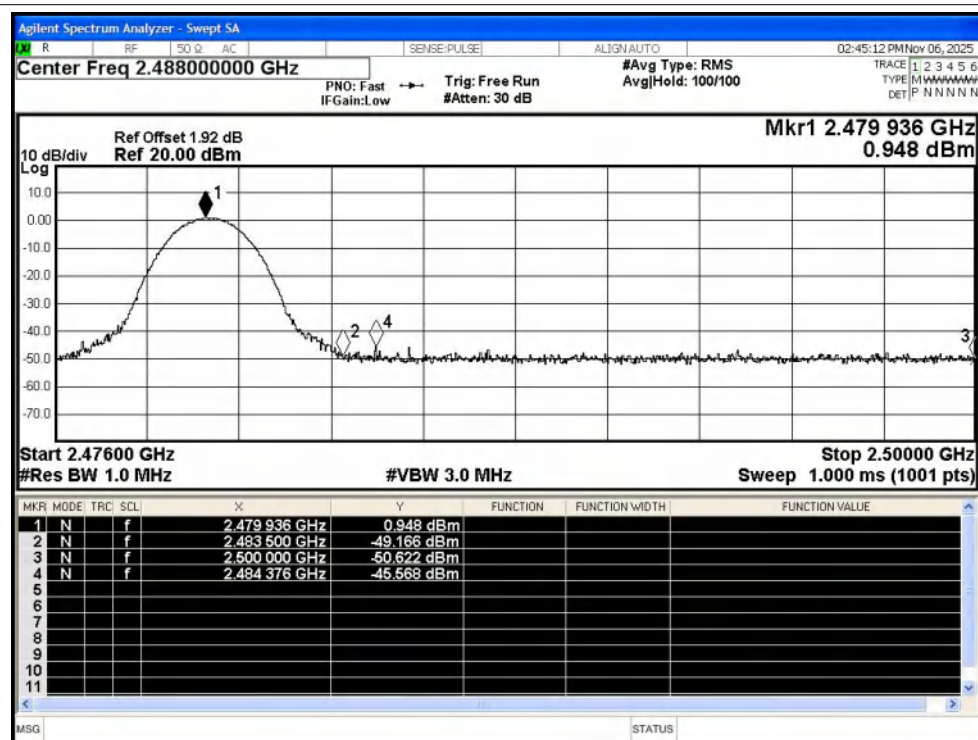
Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak



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

