

Appendix RF Test Data for BT

Company: : AGRES SISTEMAS ELETRONICOS S.A.
EUT : 12.3-inch Rugged Embedded Computer
Model Number : agroNave 12W
FCC ID : 2BDDS-AGRONAVE12W
Report No. : CTA25081101715
Reviewed By : Eric Wang

1 -20dB Bandwidth

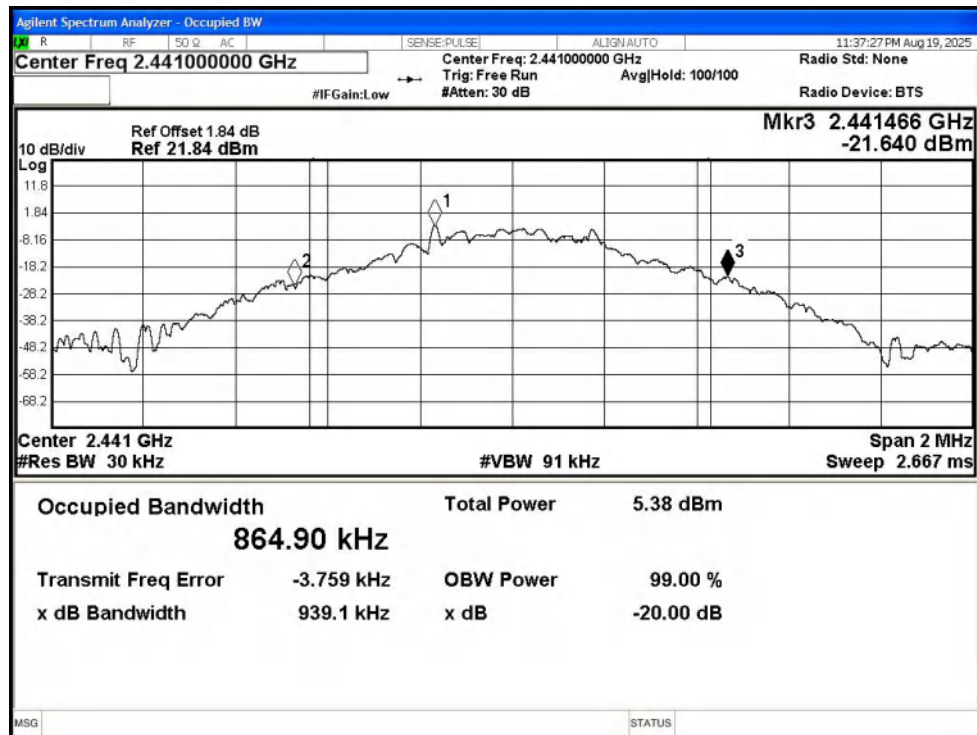
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.975	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.939	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.946	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.284	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.286	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.287	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.298	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.288	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.302	N/A	Pass

Test Graphs

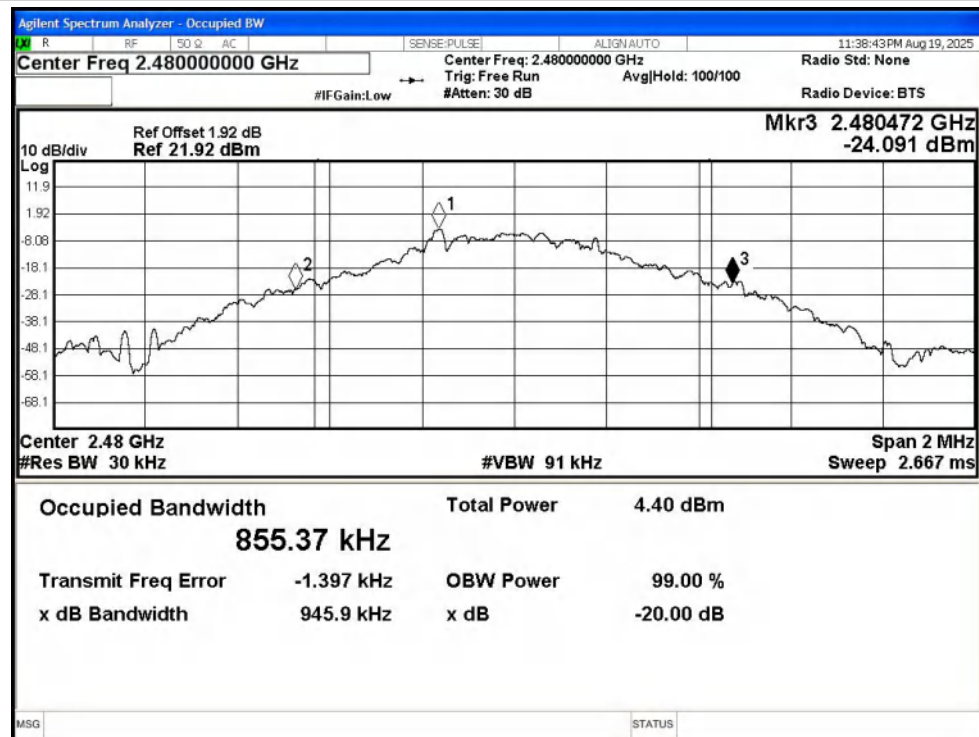
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



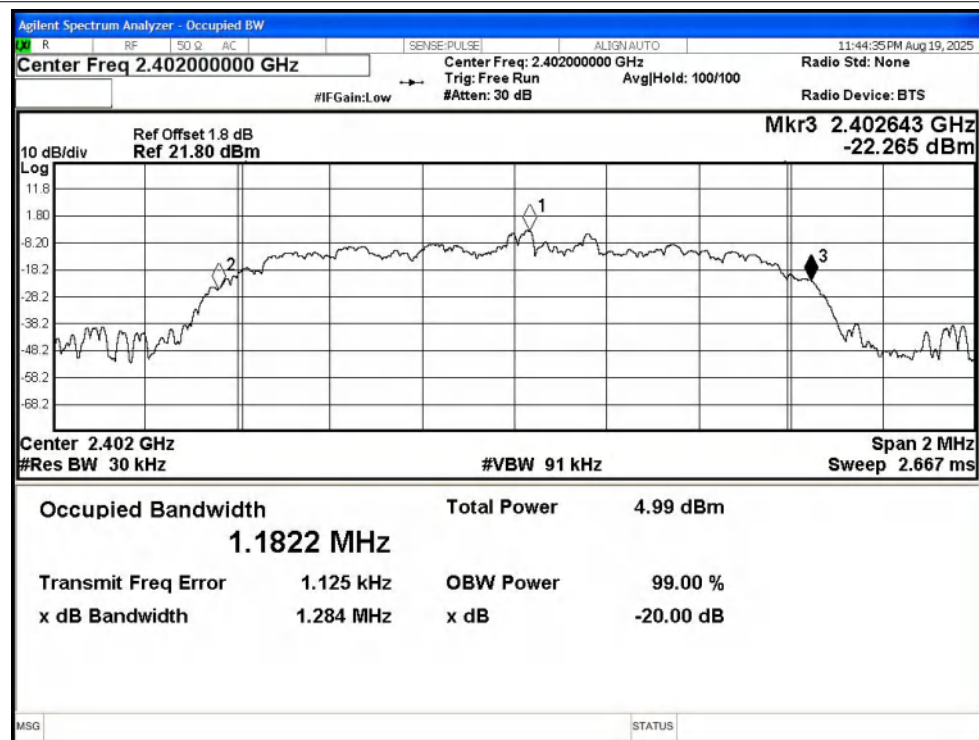
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



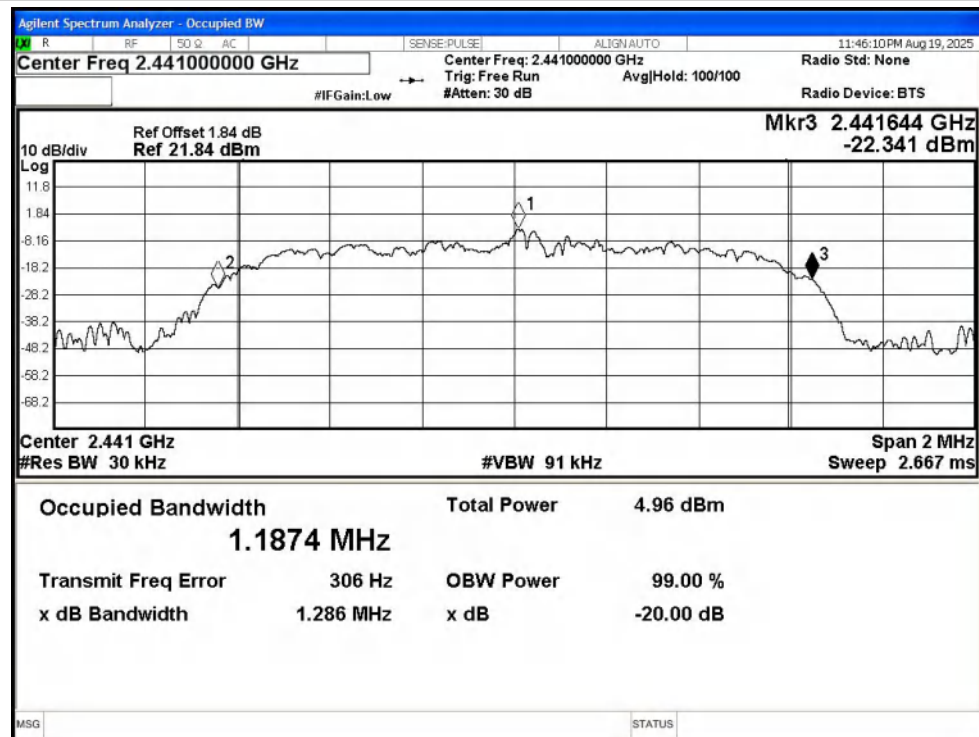
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



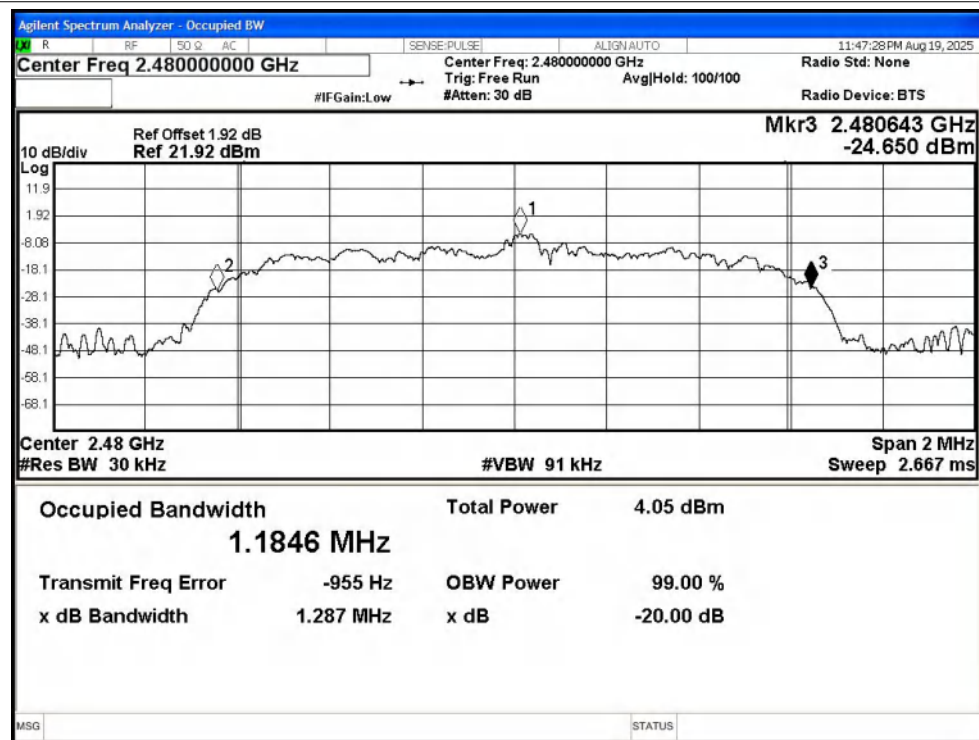
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



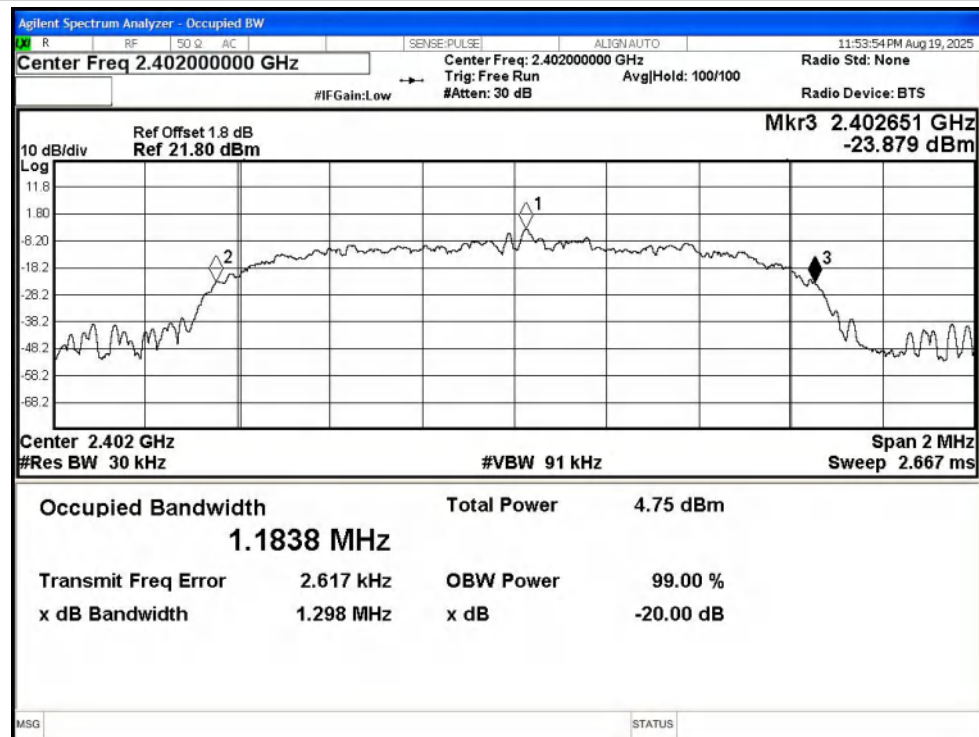
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



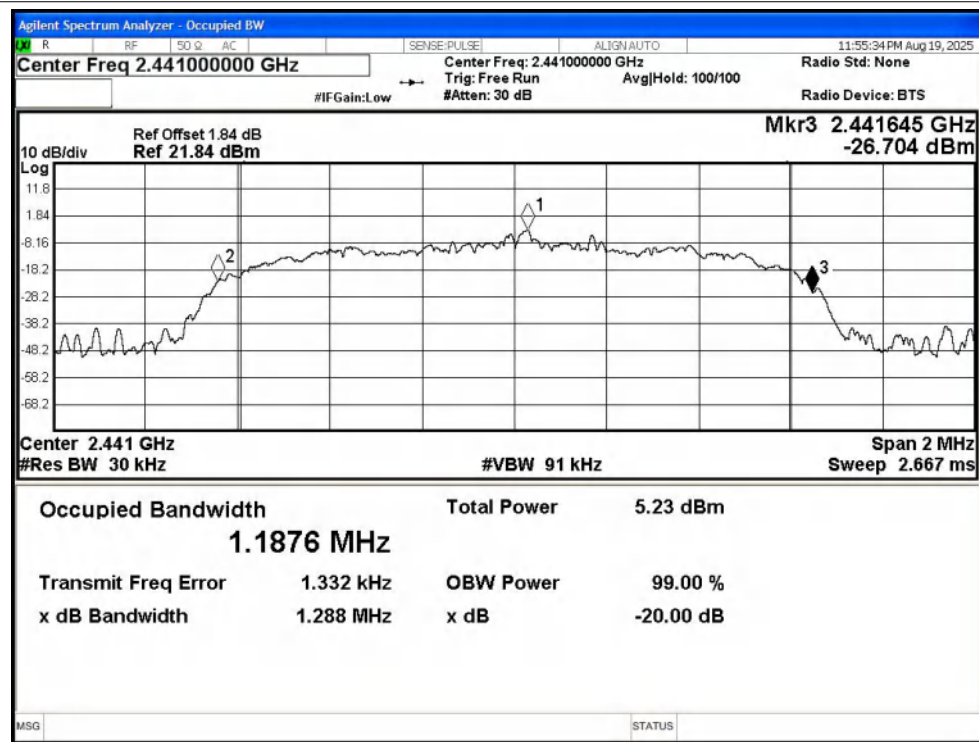
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



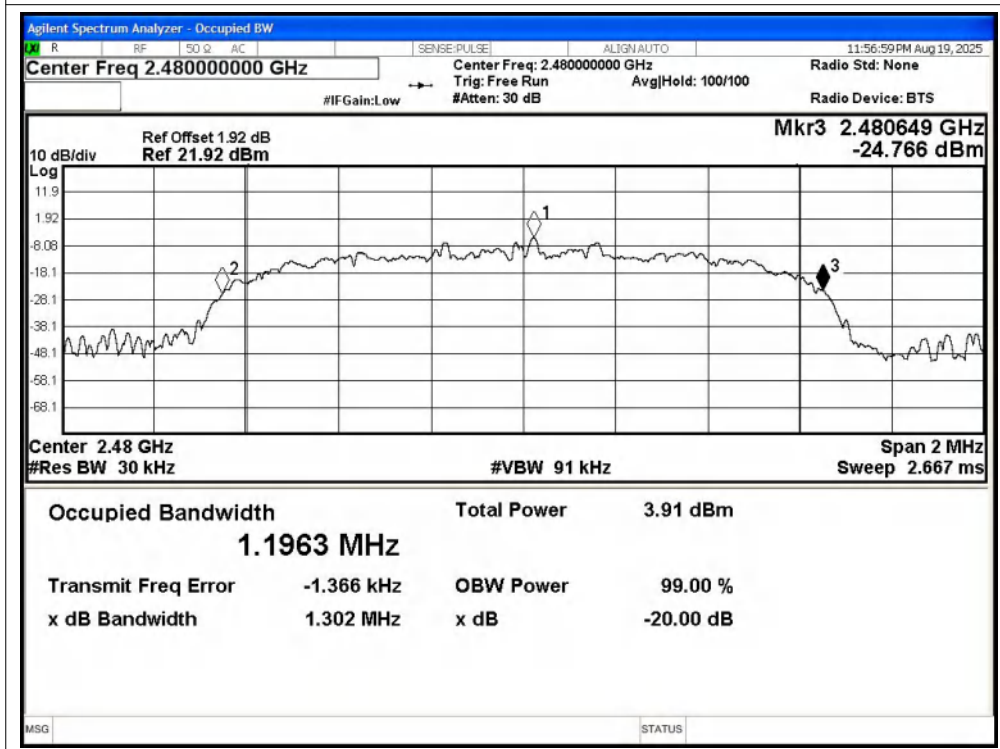
-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1



2 Maximum Peak Conducted Output Power

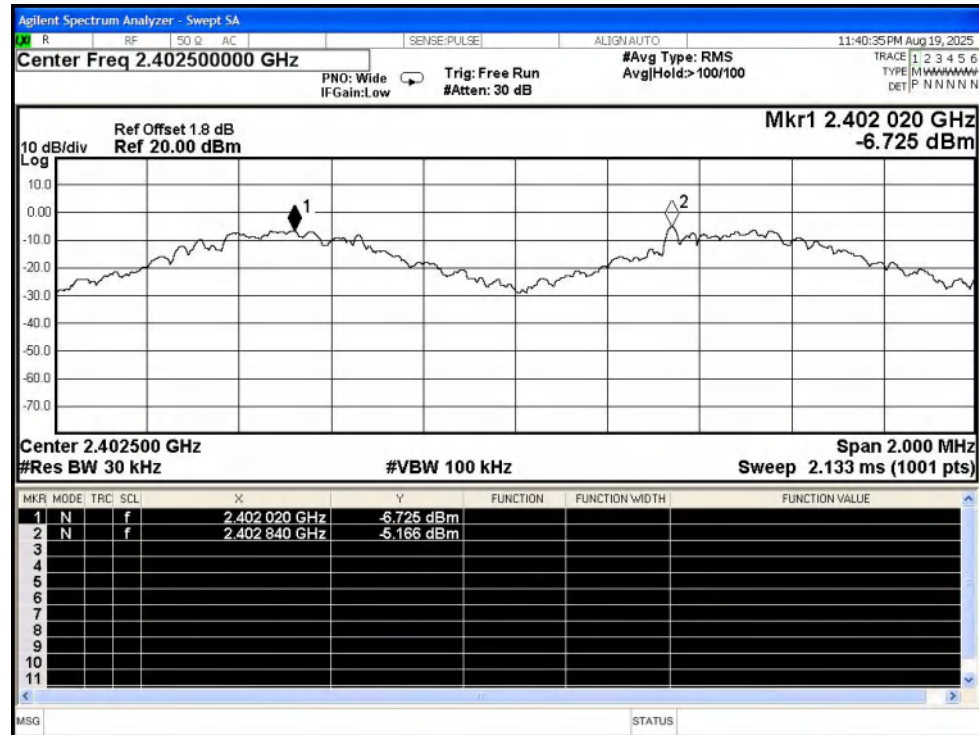
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-1.25	21	Pass
NVNT	1-DH5	2441	Ant1	-1.25	21	Pass
NVNT	1-DH5	2480	Ant1	-2.03	21	Pass
NVNT	2-DH5	2402	Ant1	0.61	21	Pass
NVNT	2-DH5	2441	Ant1	0.87	21	Pass
NVNT	2-DH5	2480	Ant1	-0.21	21	Pass
NVNT	3-DH5	2402	Ant1	1.01	21	Pass
NVNT	3-DH5	2441	Ant1	1.24	21	Pass
NVNT	3-DH5	2480	Ant1	0.16	21	Pass

3 Carrier Frequencies Separation

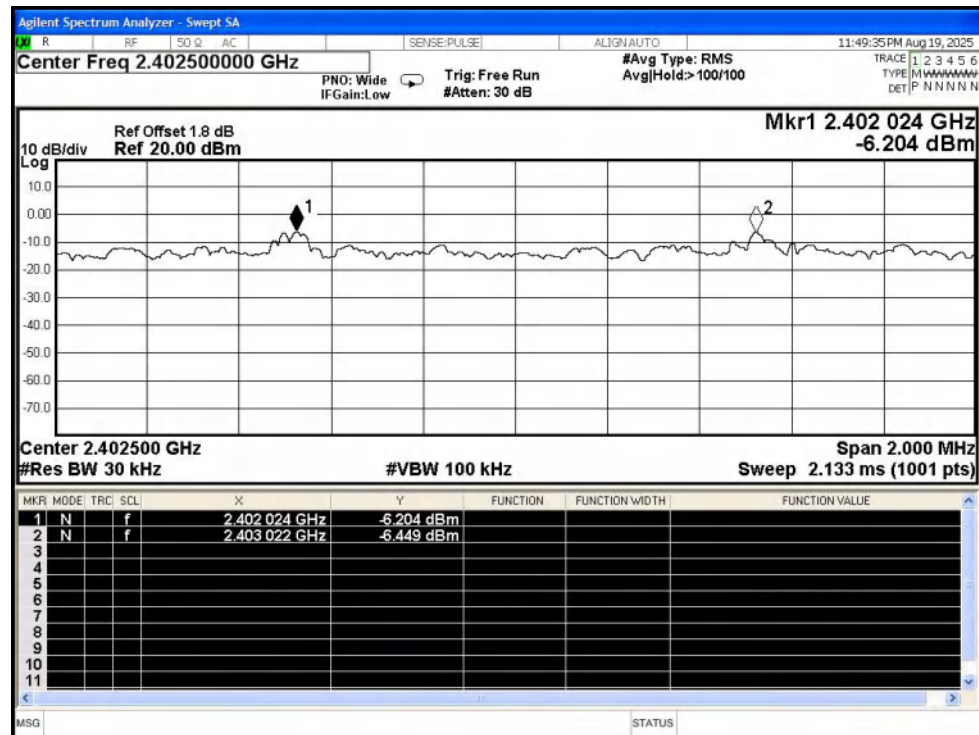
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.02	2402.84	0.82	0.650	Pass
NVNT	2-DH5	Ant1	2402.024	2403.022	0.998	0.858	Pass
NVNT	3-DH5	Ant1	2402.006	2403.164	1.158	0.868	Pass

Test Graphs

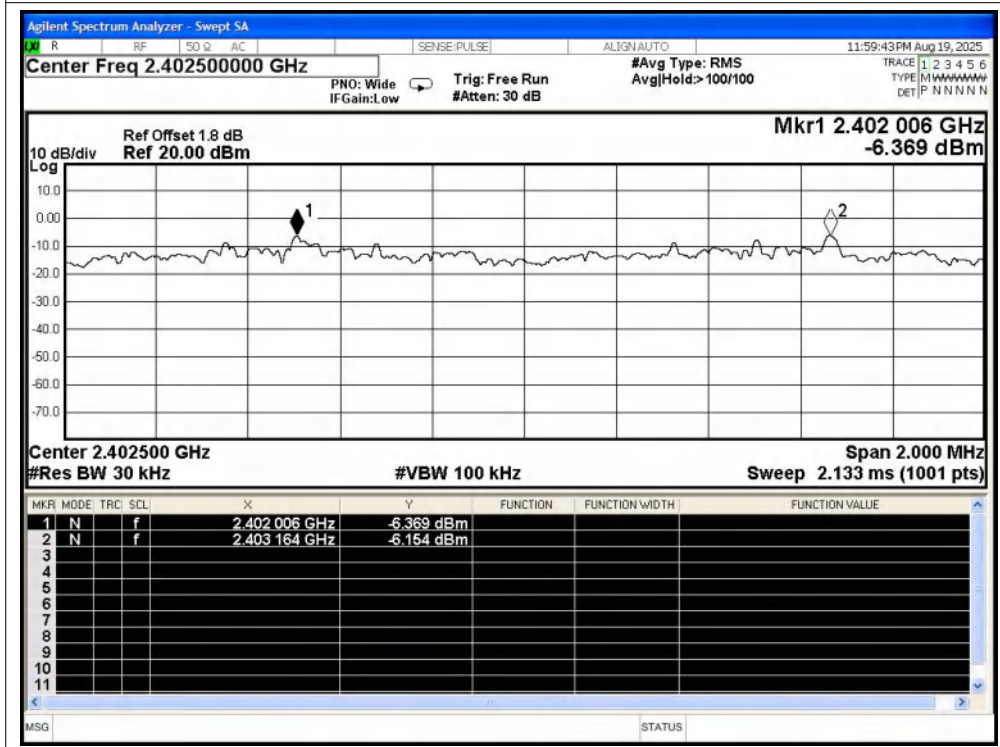
CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1



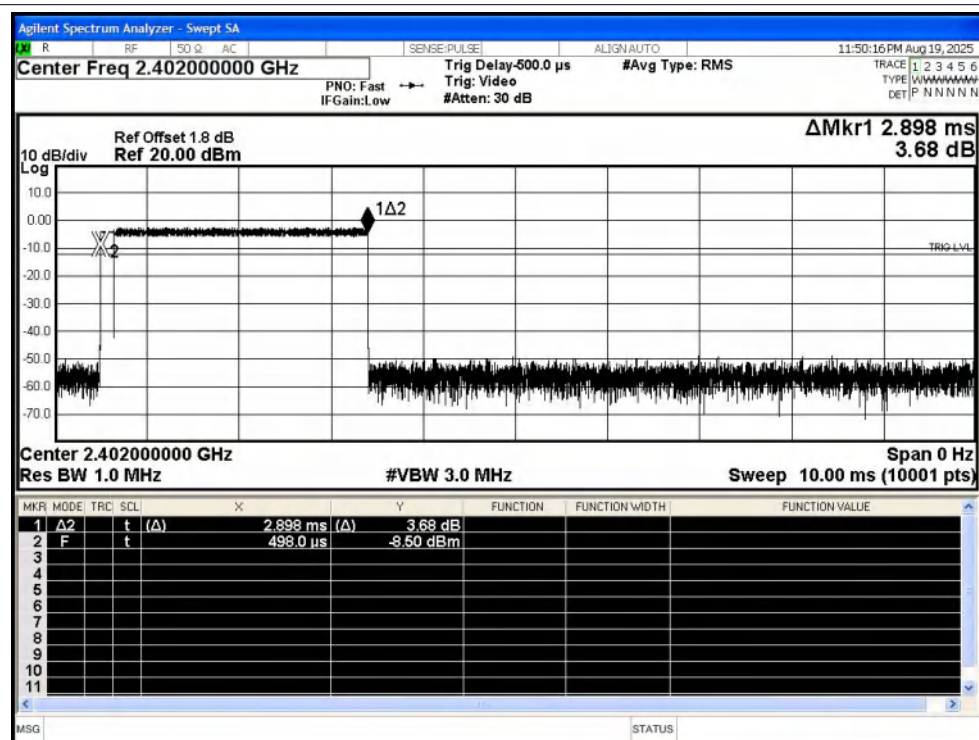
CFS NVNT 3-DH5 2402MHz Ant1



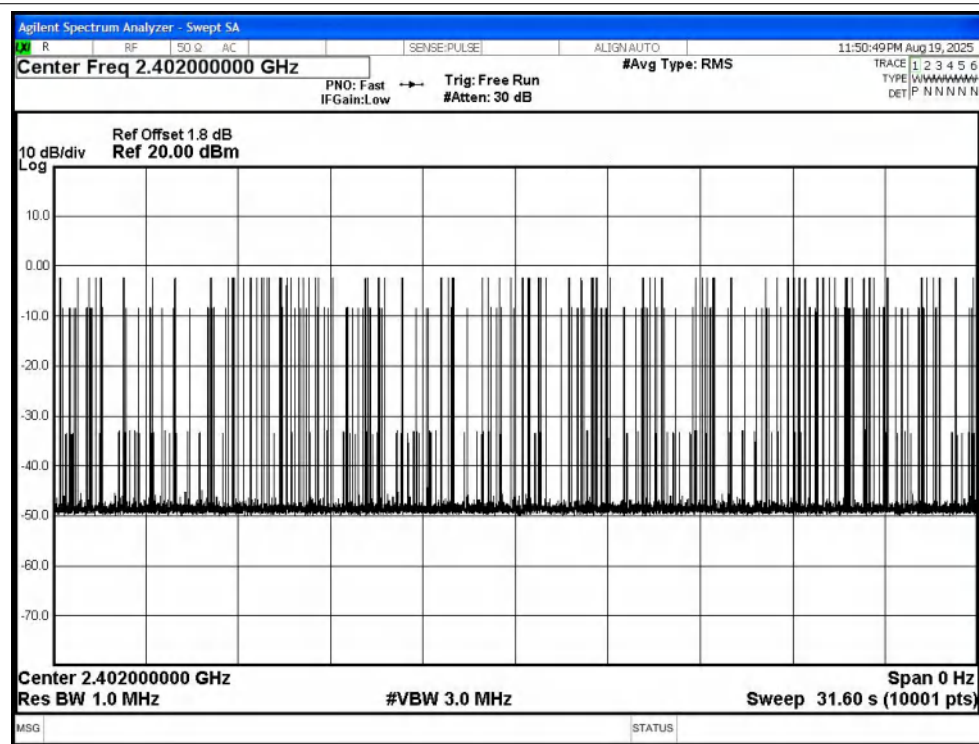
4 Dwell Time

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	351.989	121	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	295.596	102	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.897	289.7	100	31600	400	Pass

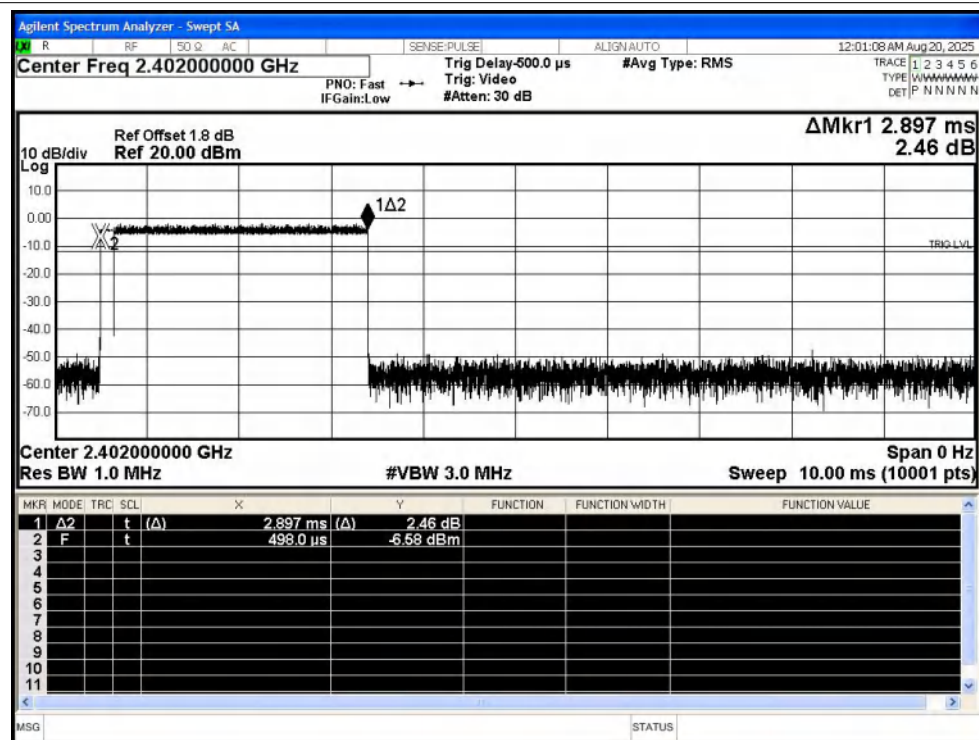
Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



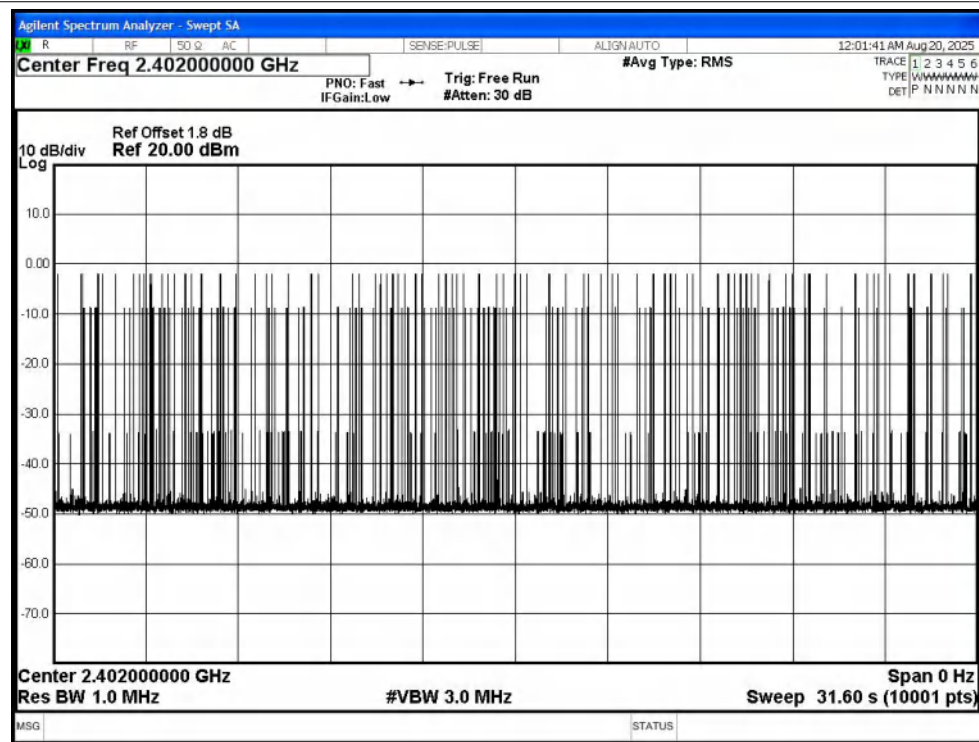
Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated

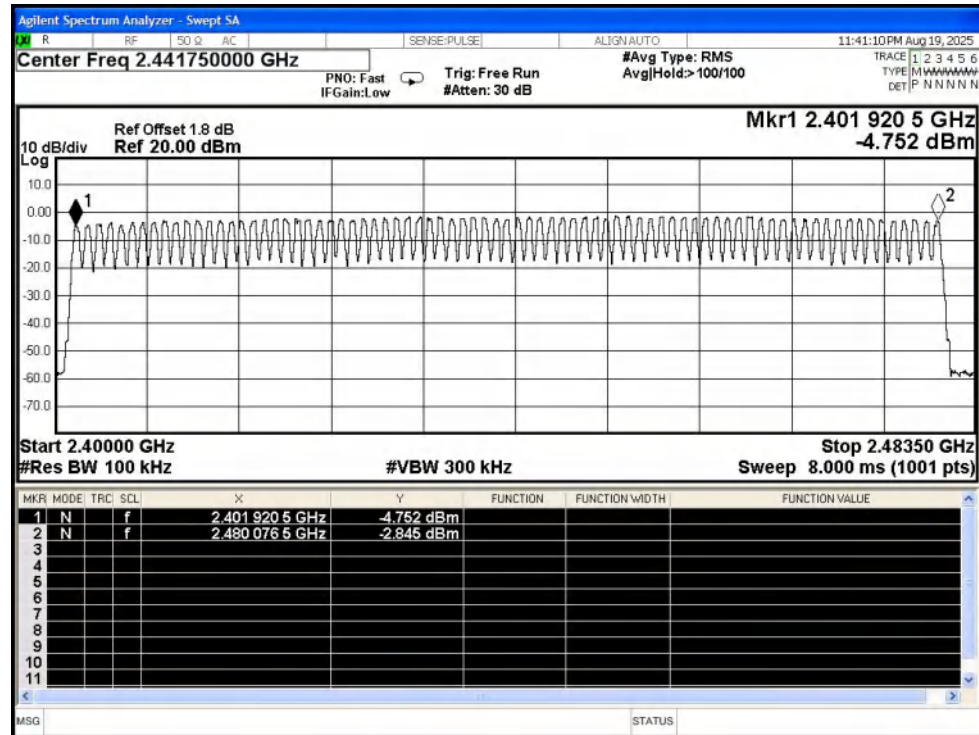


5 Number of Hopping Channel

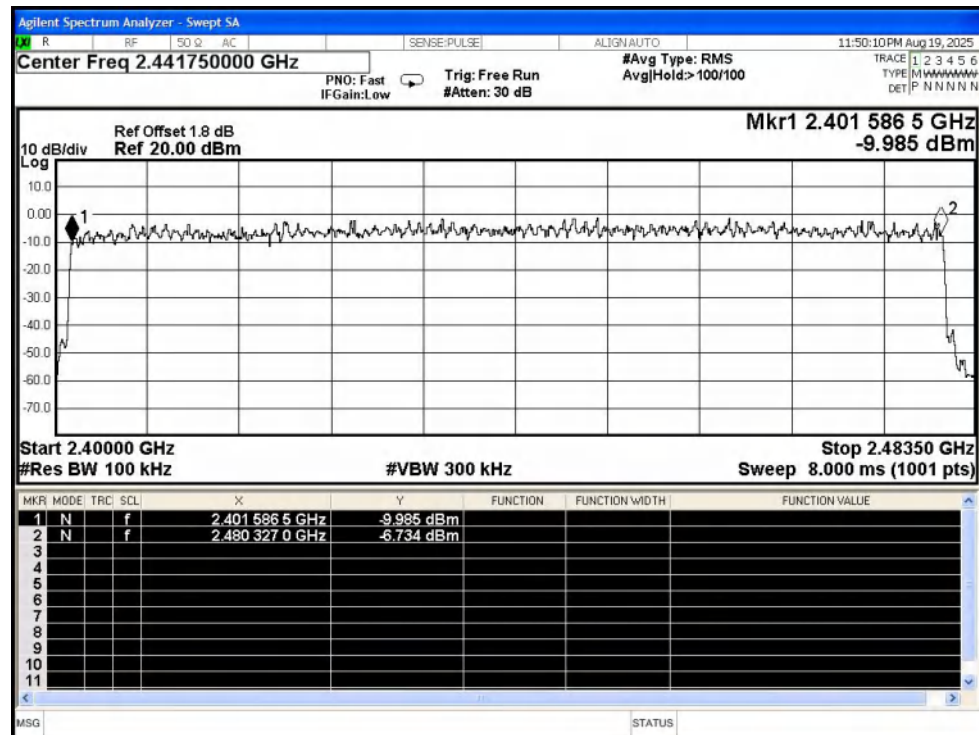
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

Test Graphs

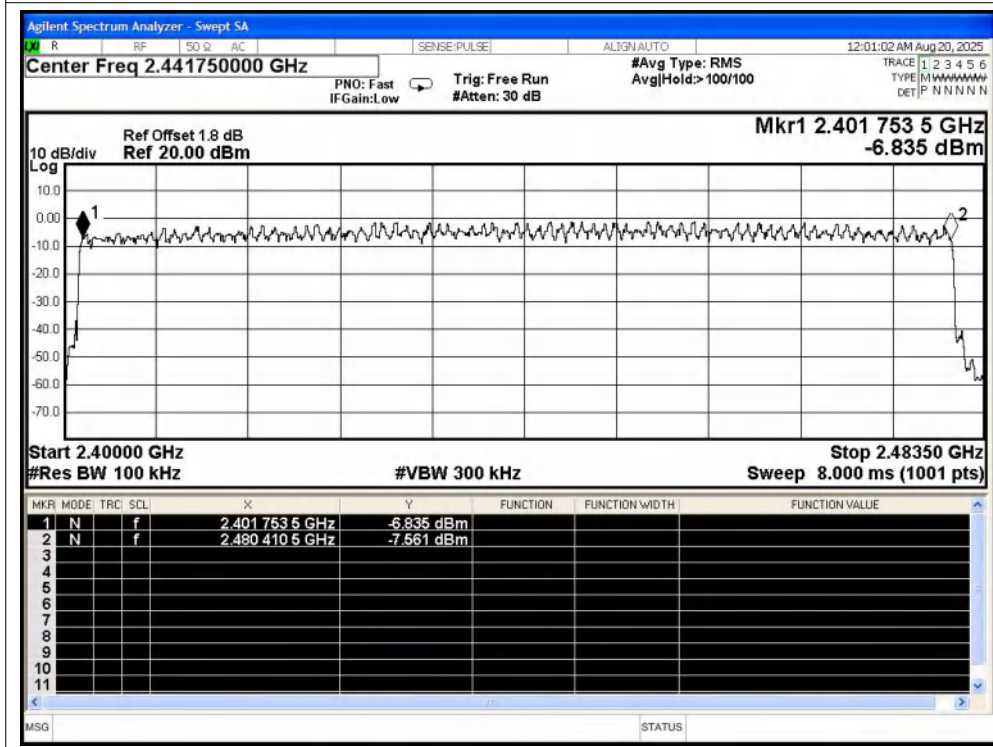
Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1



Hopping No. NVNT 3-DH5 2402MHz Ant1

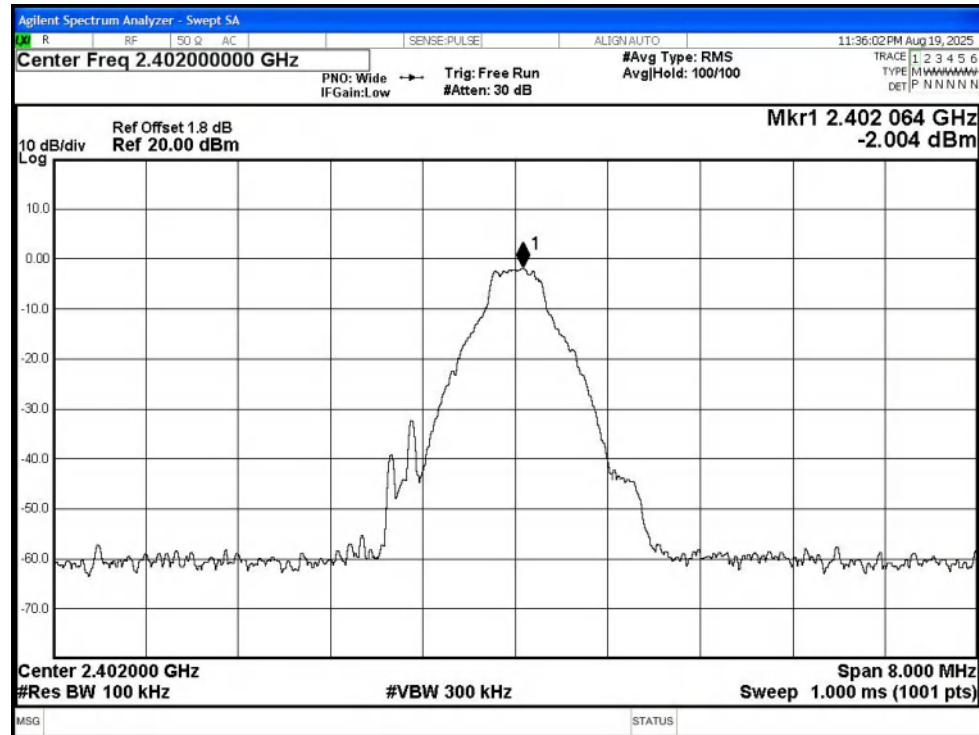


6 Band Edge

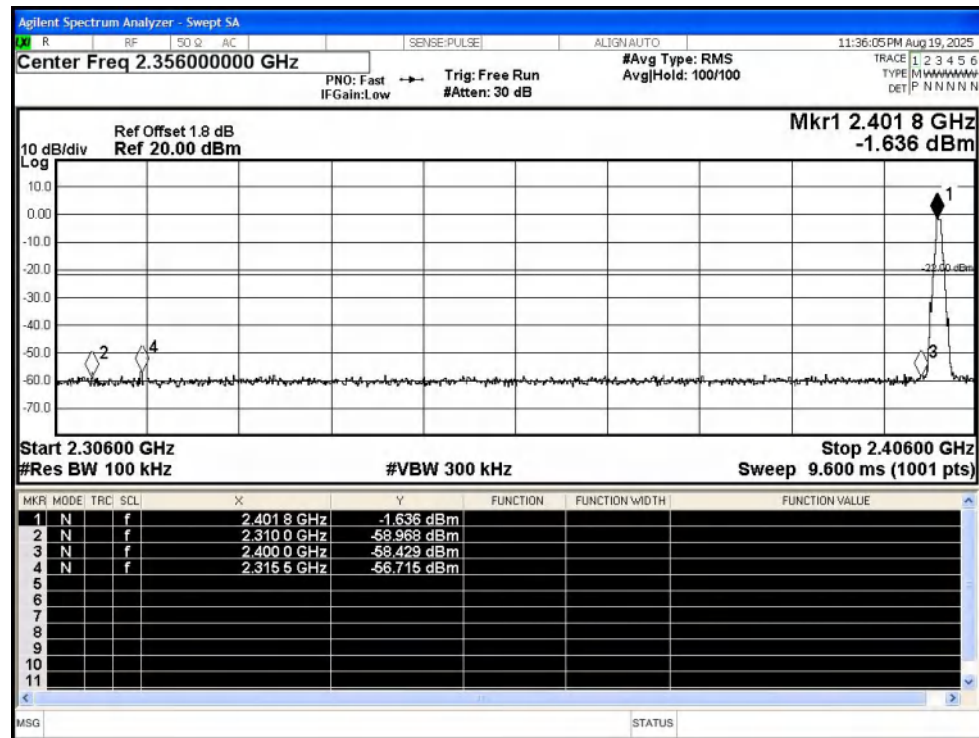
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-54.71	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-53.69	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-49.72	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-53.38	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-52.57	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-54.61	-20	Pass

Test Graphs

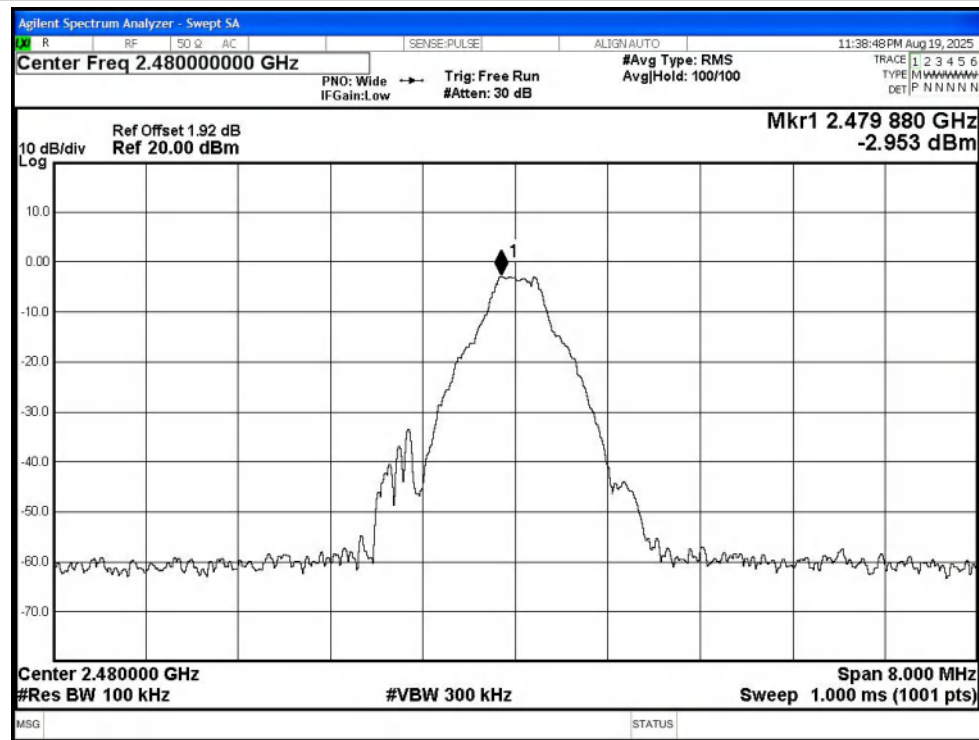
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



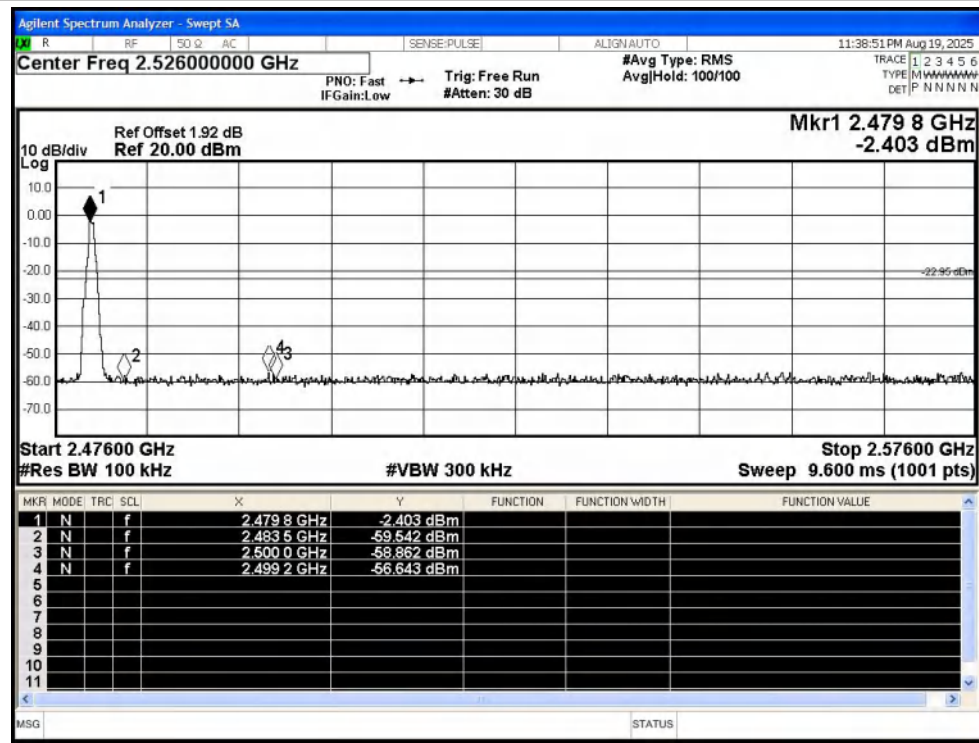
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



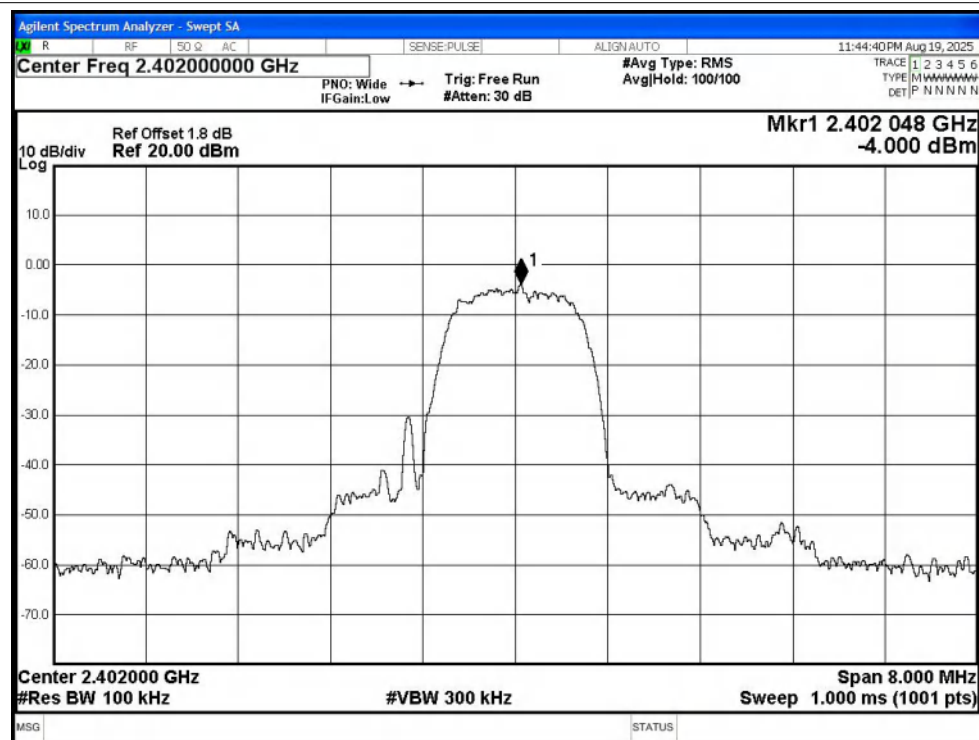
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



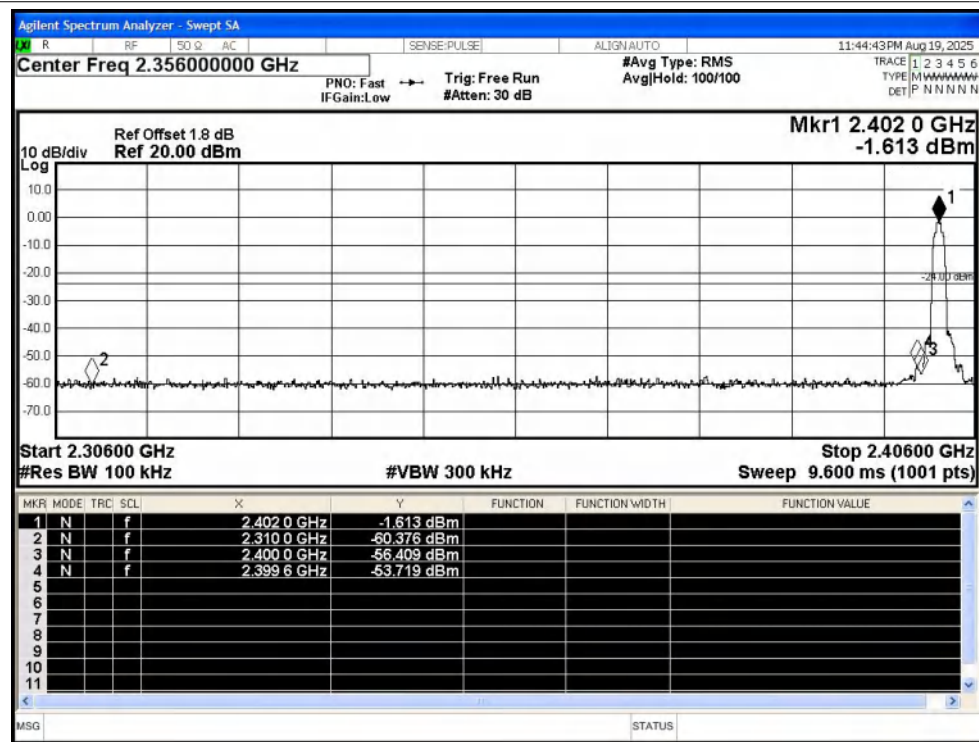
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



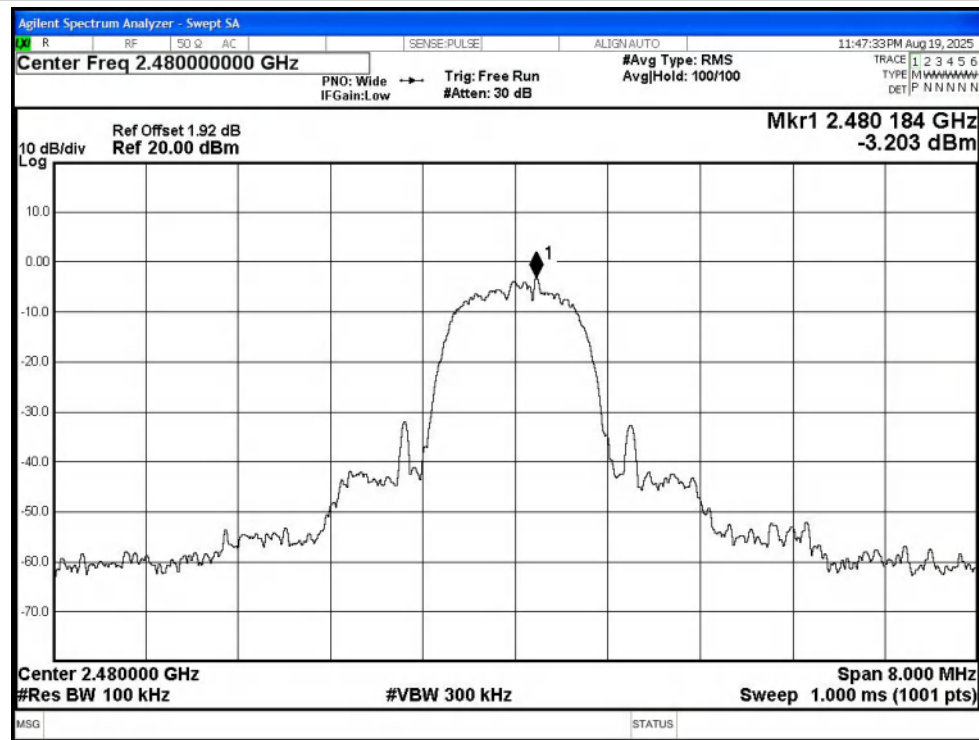
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



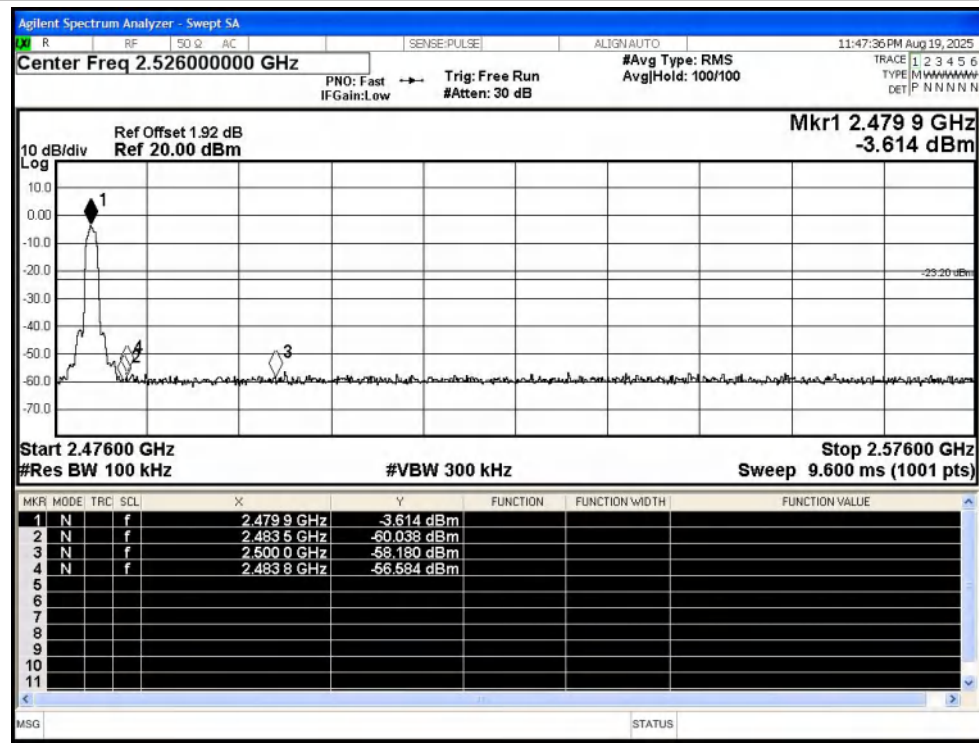
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



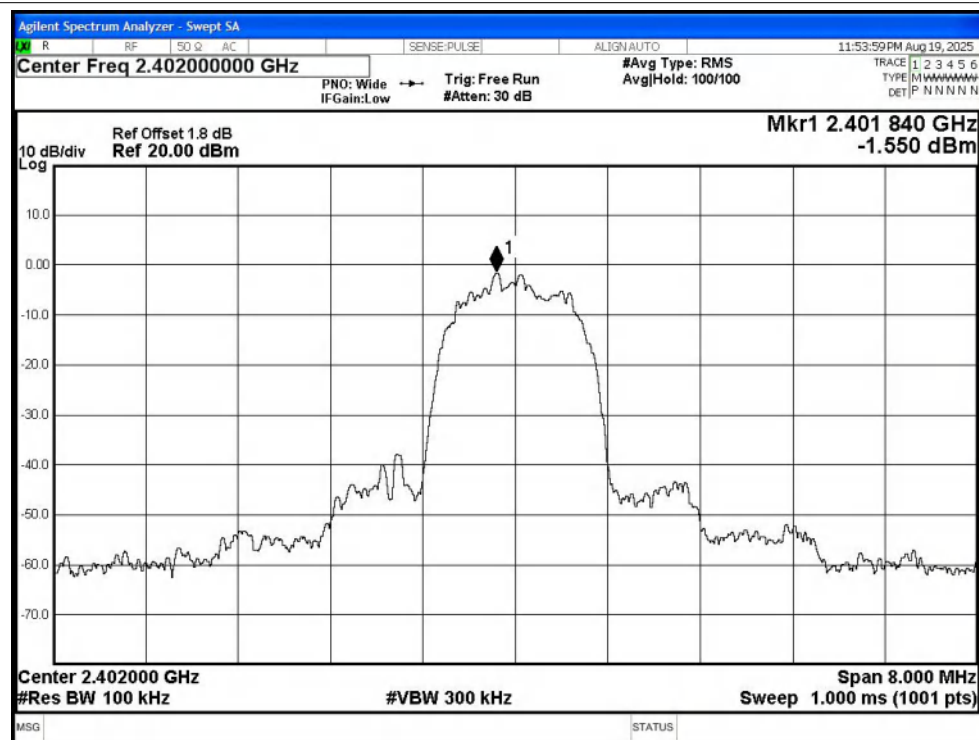
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



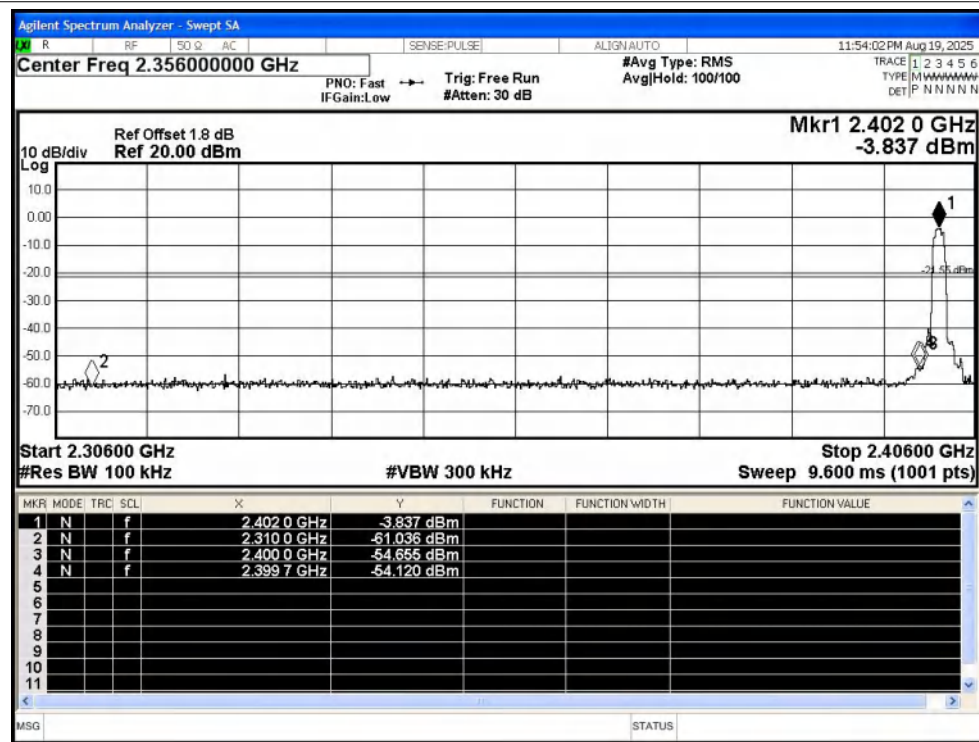
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



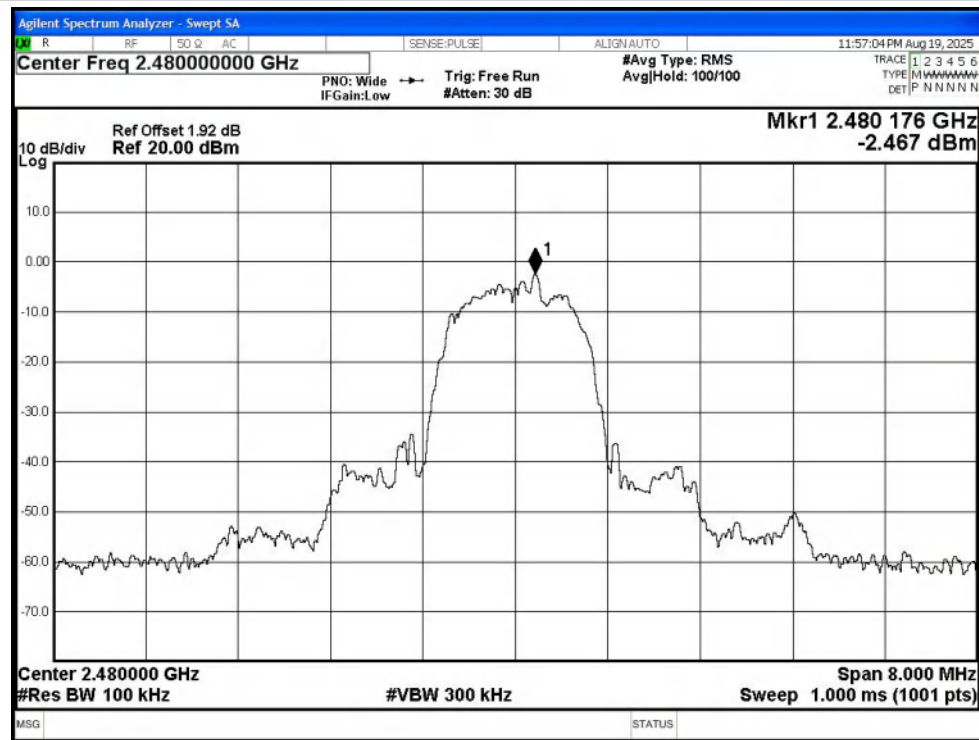
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



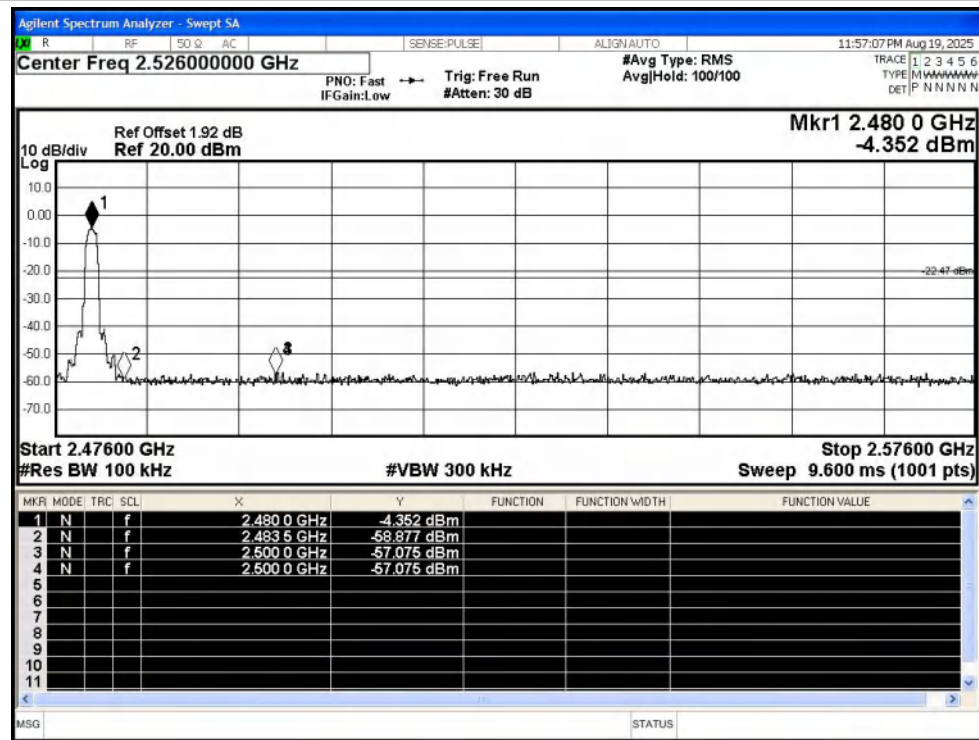
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



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



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

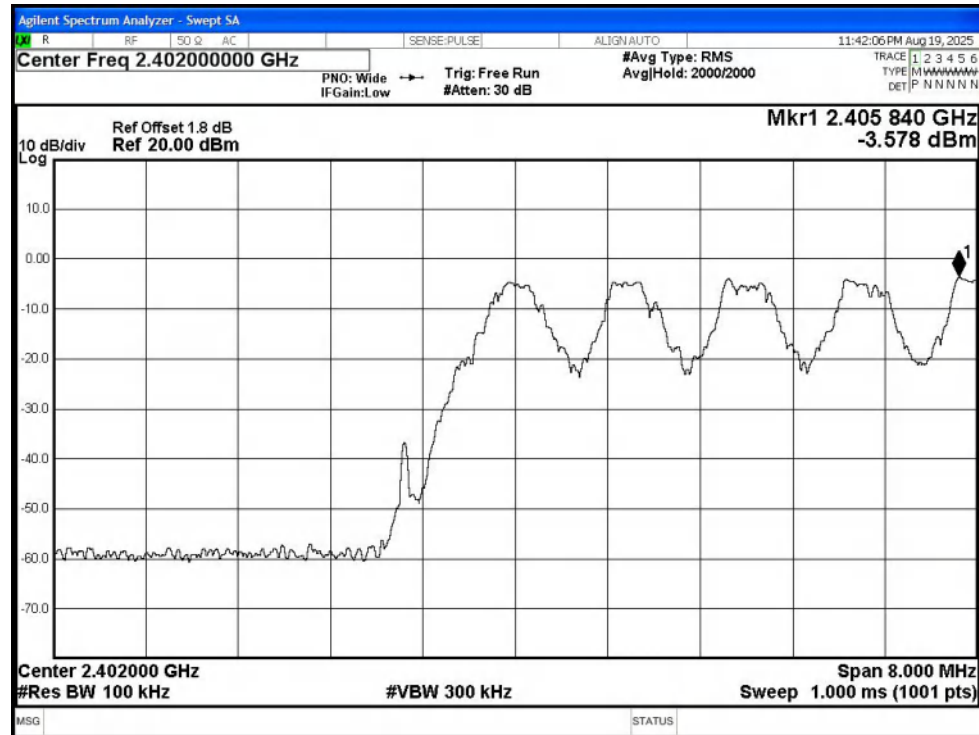


(Hopping)

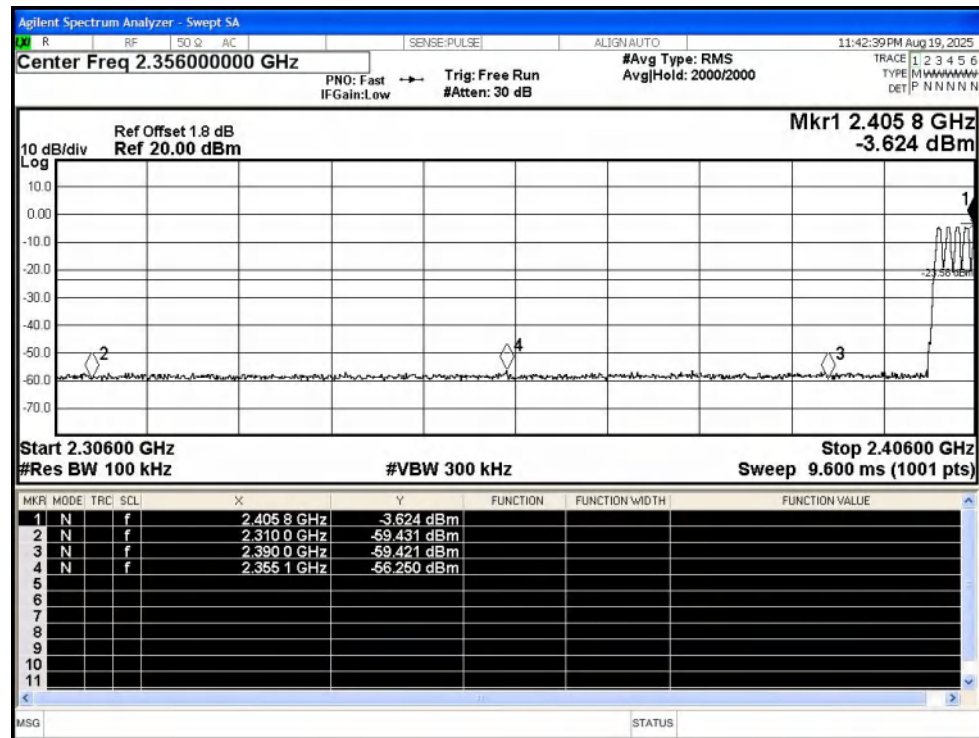
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-52.67	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-53.57	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-52.48	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-53.52	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-52.31	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-53.76	-20	Pass

Test Graphs

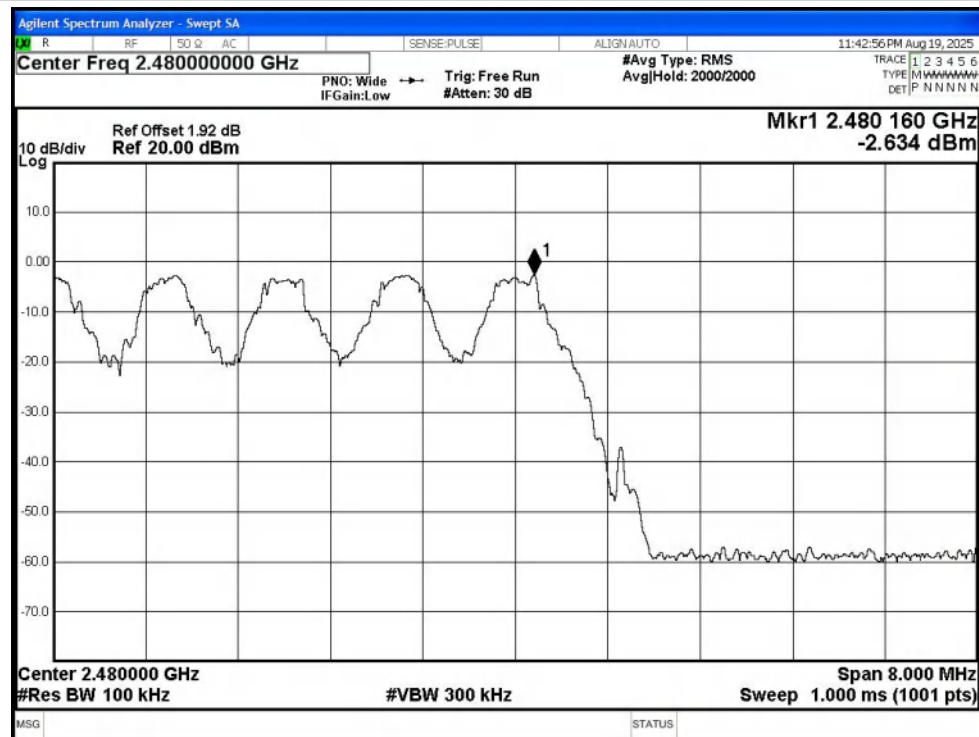
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



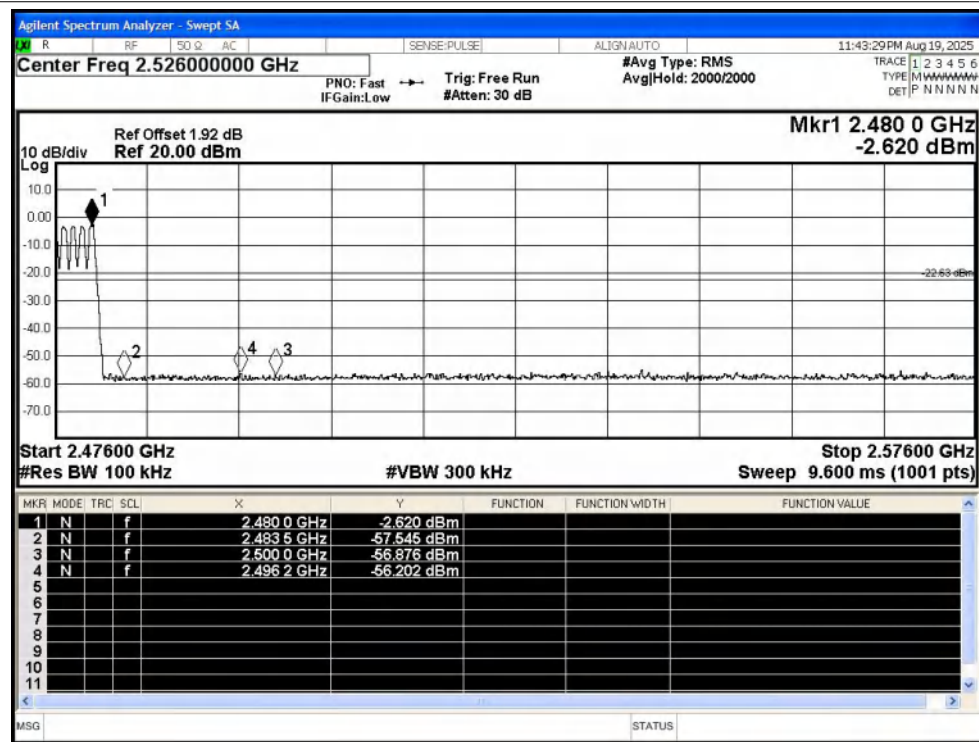
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



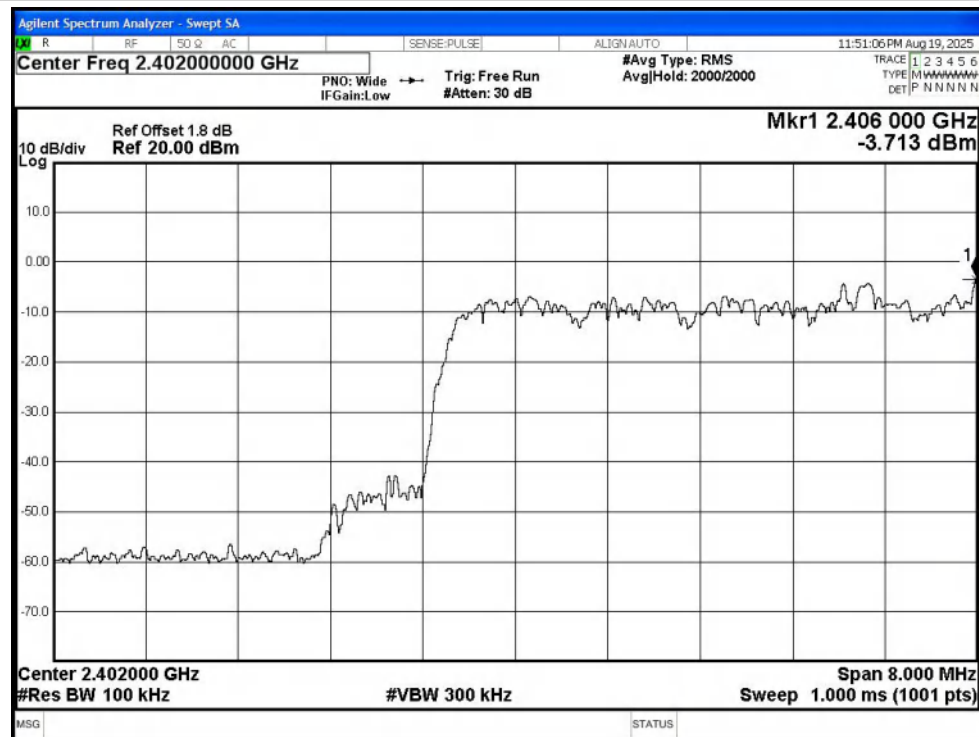
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



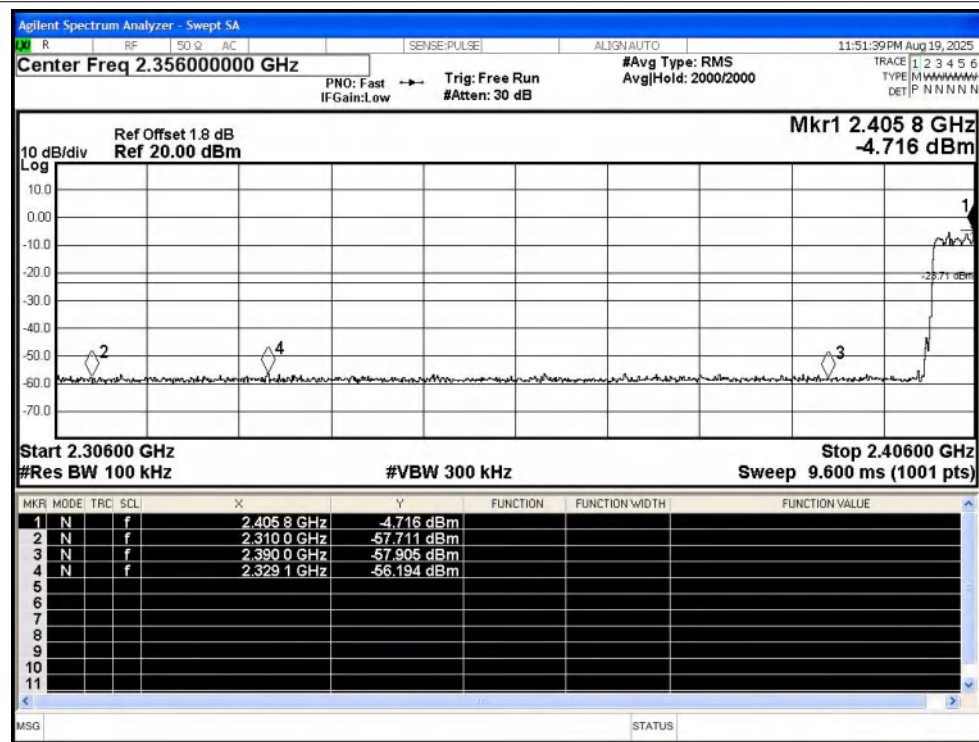
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



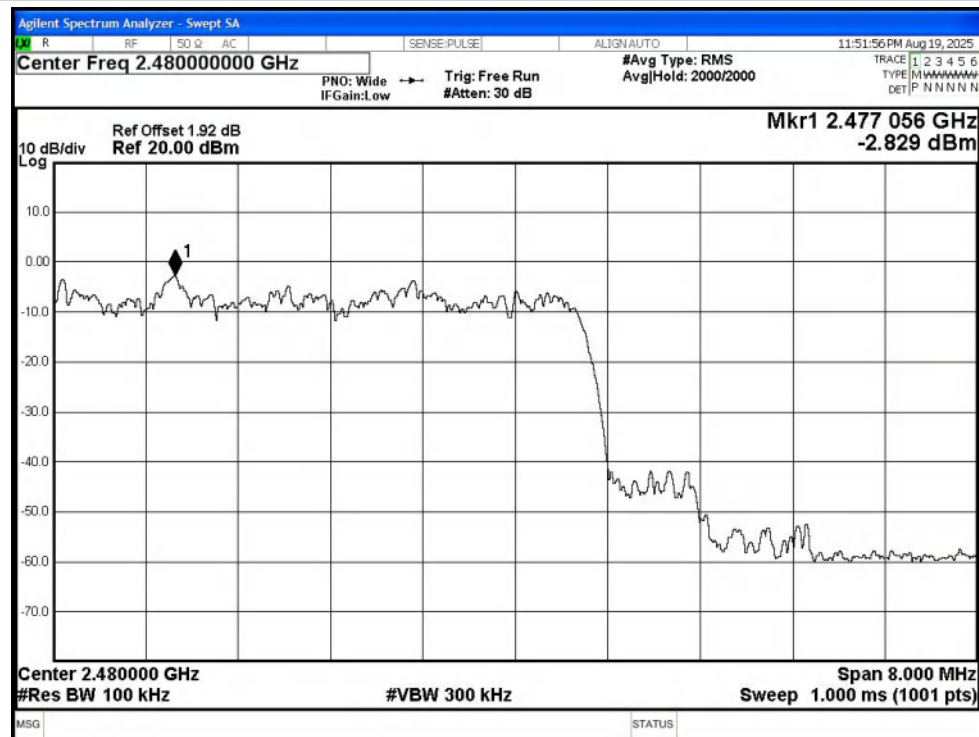
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



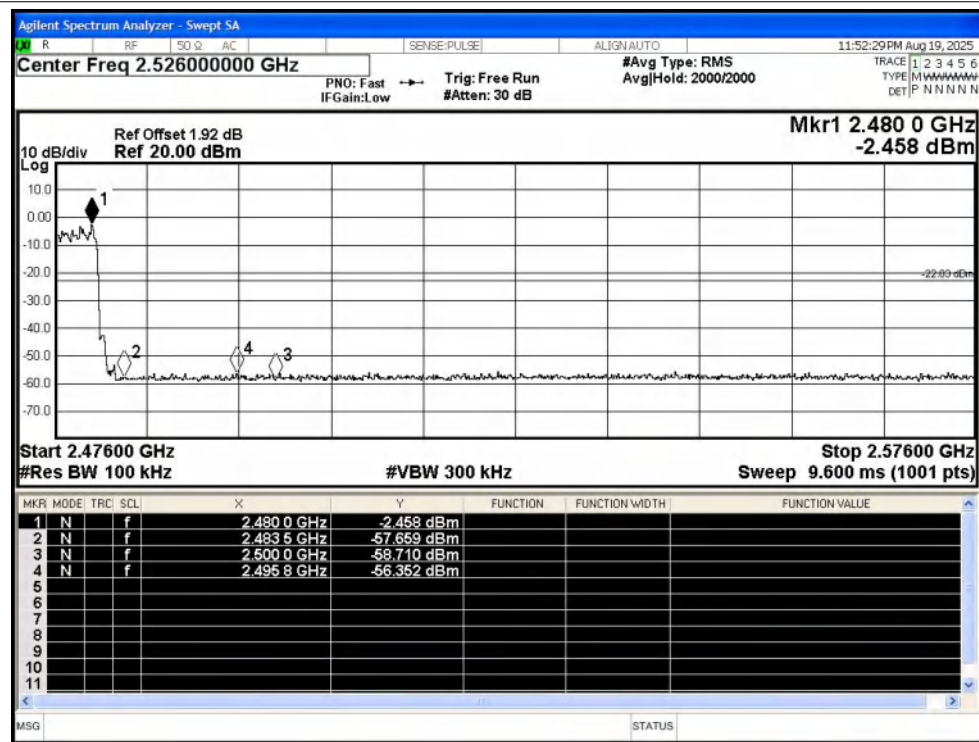
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



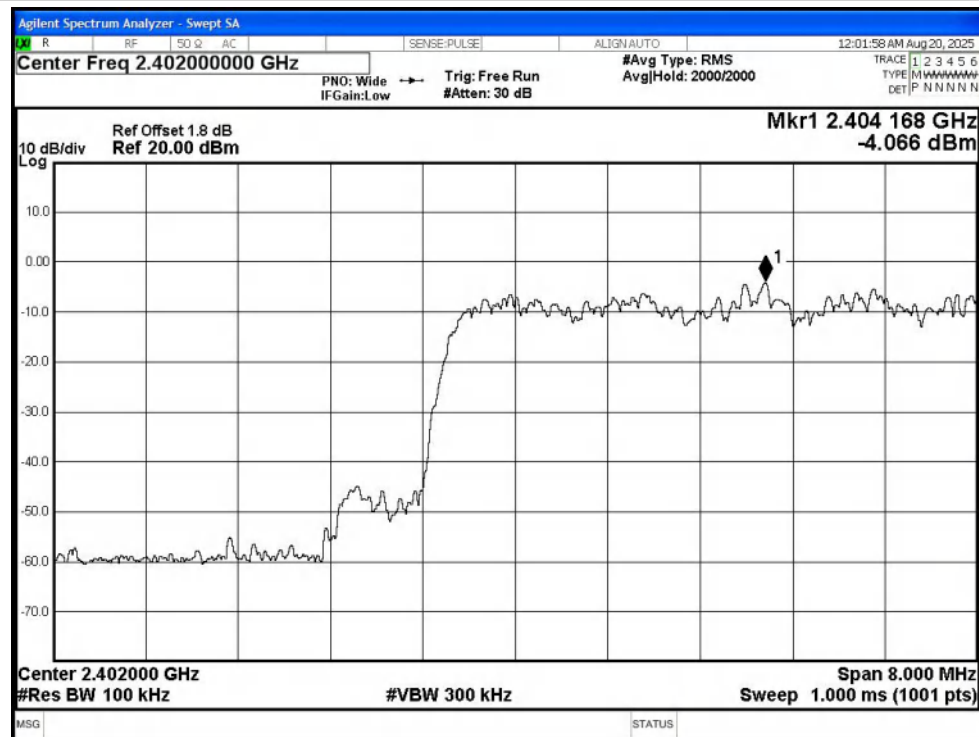
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



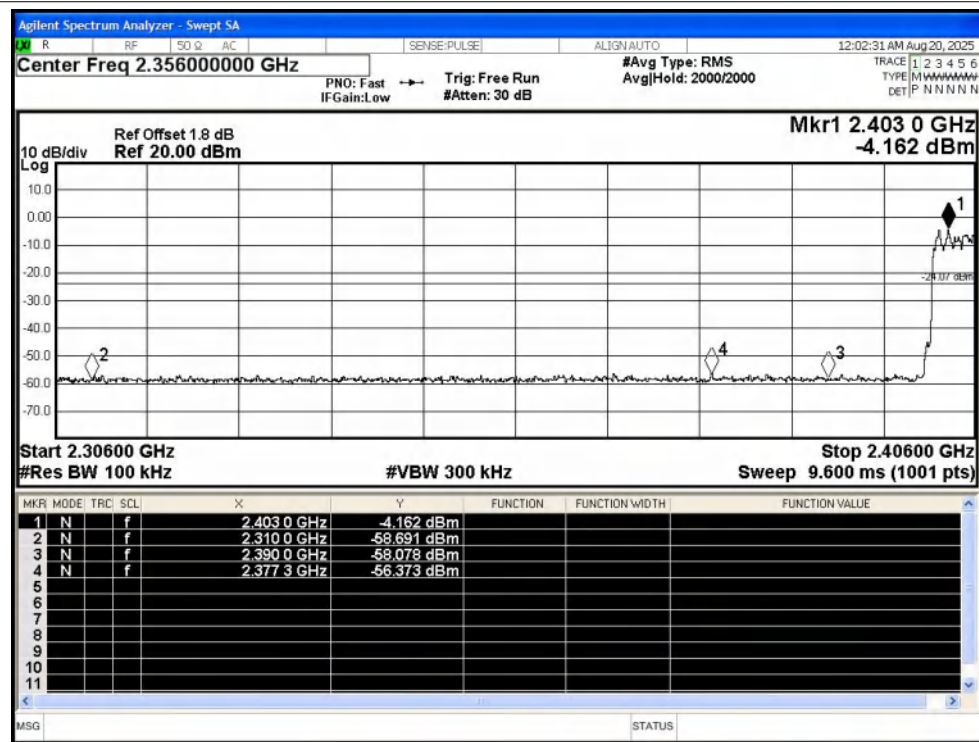
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission



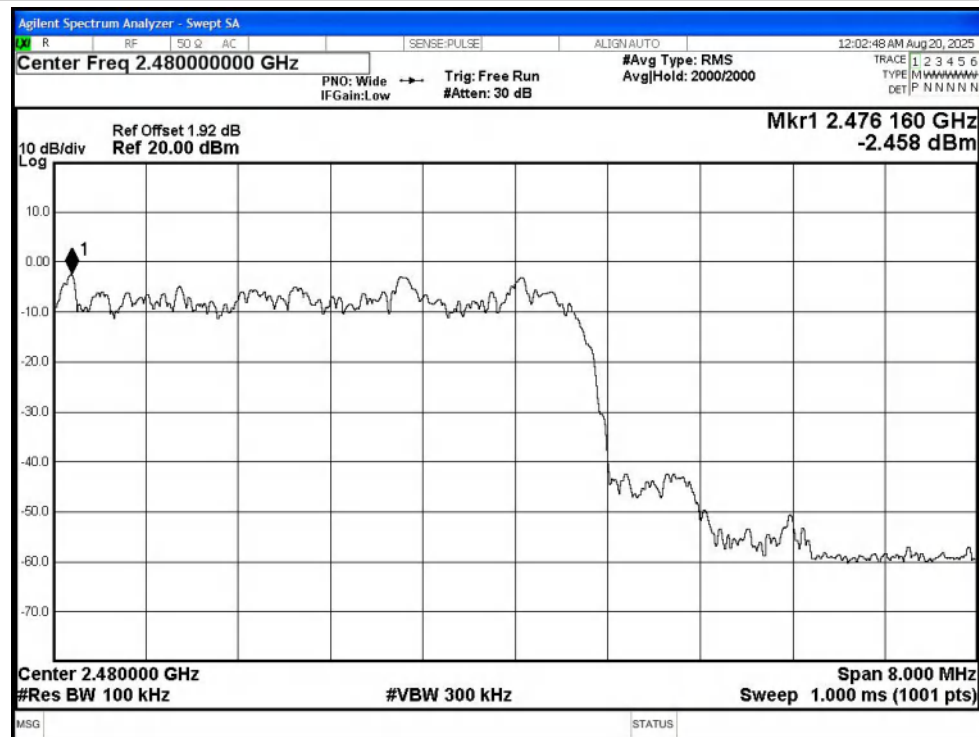
Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref



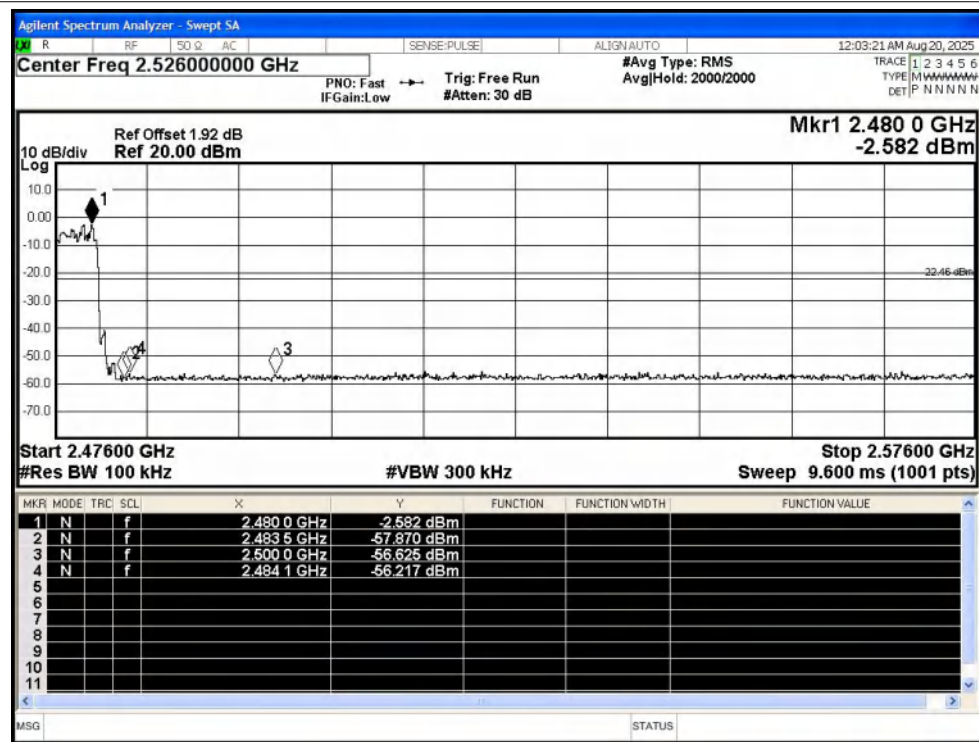
Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission



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



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

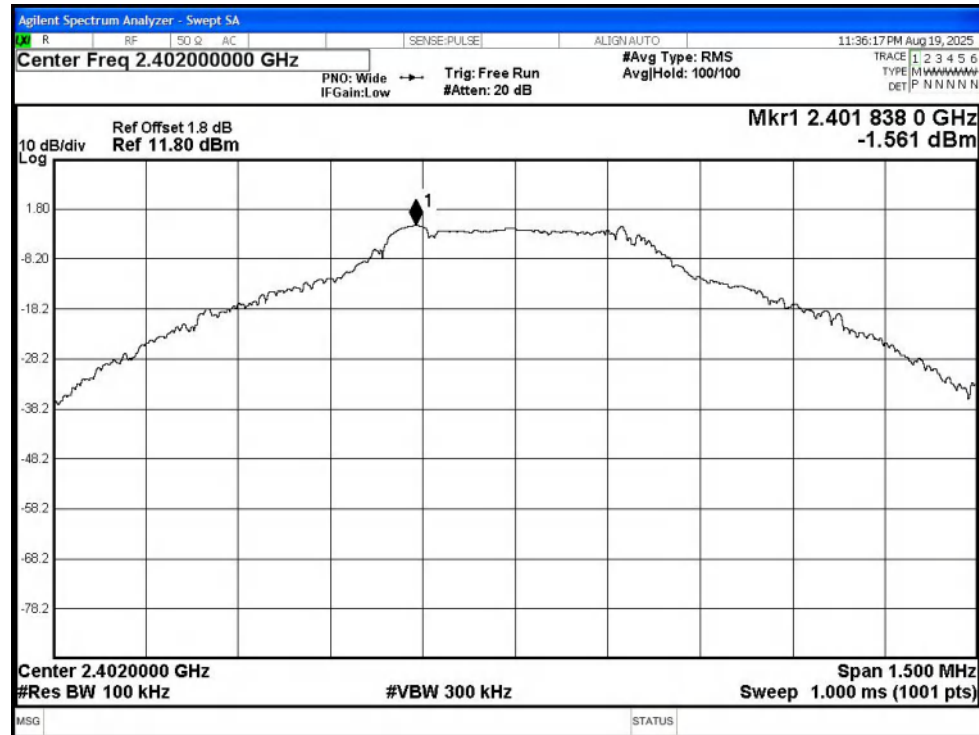


7 Conducted RF Spurious Emission

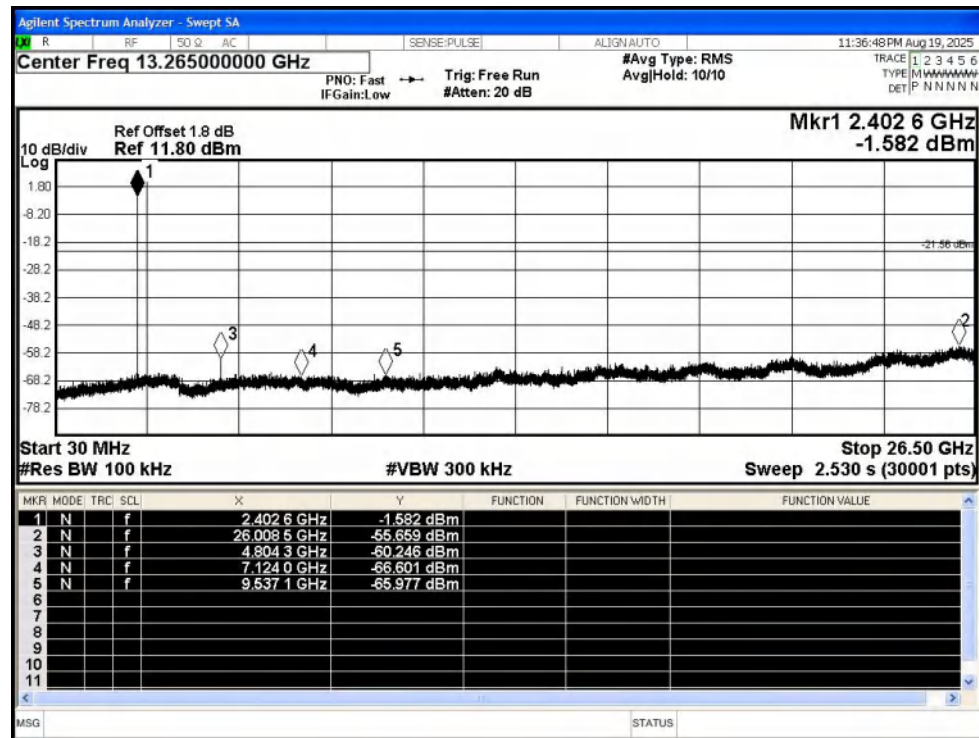
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-54.1	-20	Pass
NVNT	1-DH5	2441	Ant1	-53.53	-20	Pass
NVNT	1-DH5	2480	Ant1	-52.27	-20	Pass
NVNT	2-DH5	2402	Ant1	-53.35	-20	Pass
NVNT	2-DH5	2441	Ant1	-54.54	-20	Pass
NVNT	2-DH5	2480	Ant1	-53.07	-20	Pass
NVNT	3-DH5	2402	Ant1	-53.35	-20	Pass
NVNT	3-DH5	2441	Ant1	-53.63	-20	Pass
NVNT	3-DH5	2480	Ant1	-53.01	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



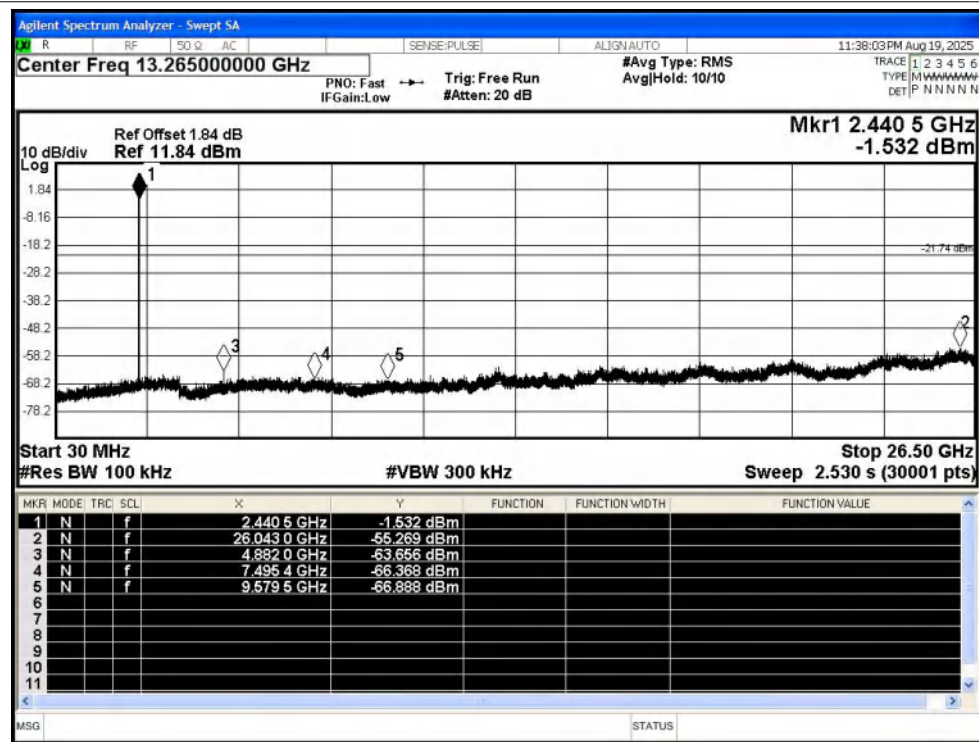
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



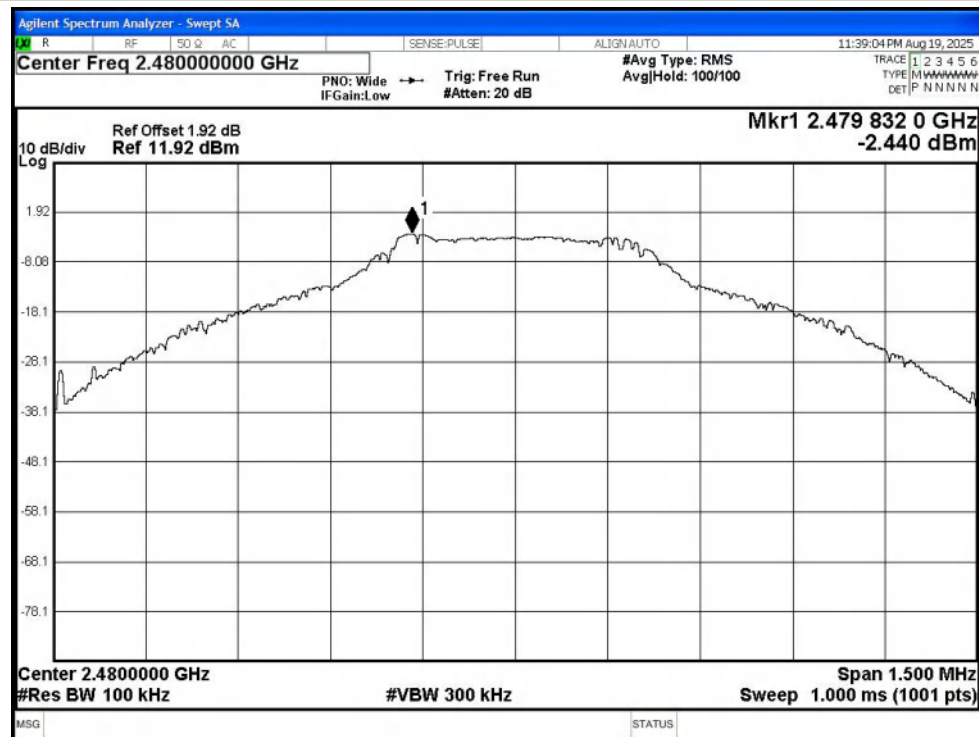
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



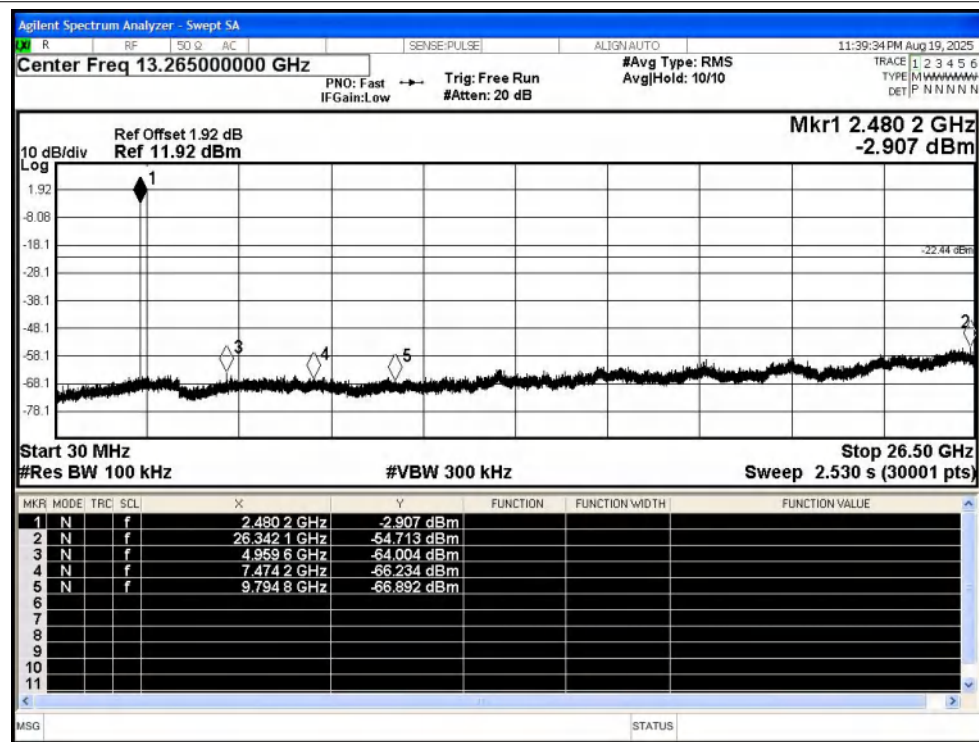
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



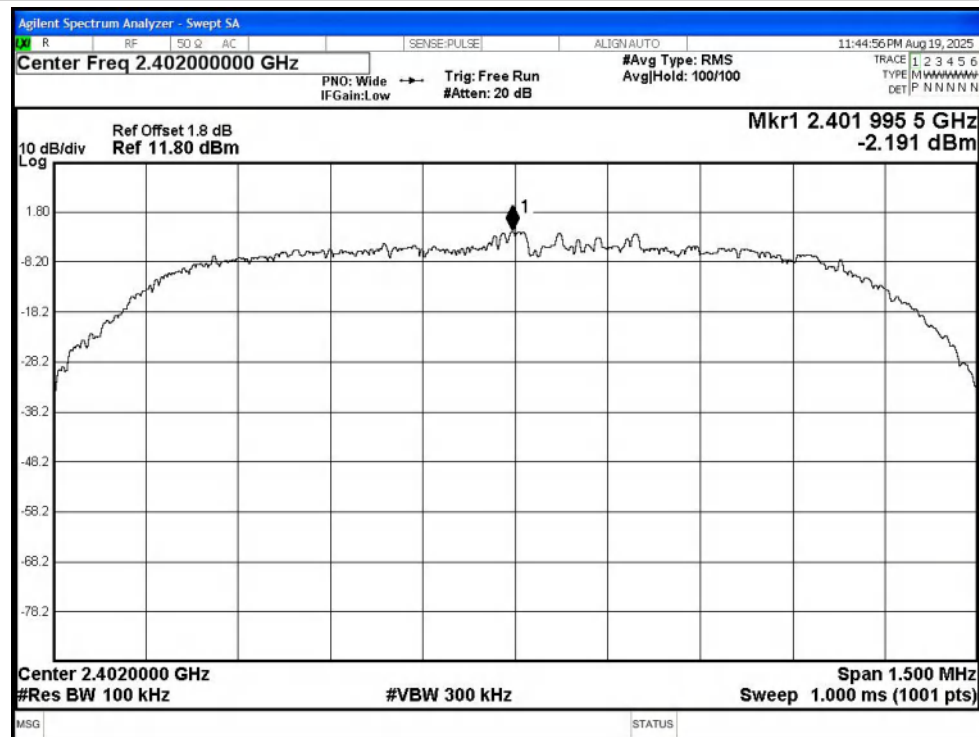
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



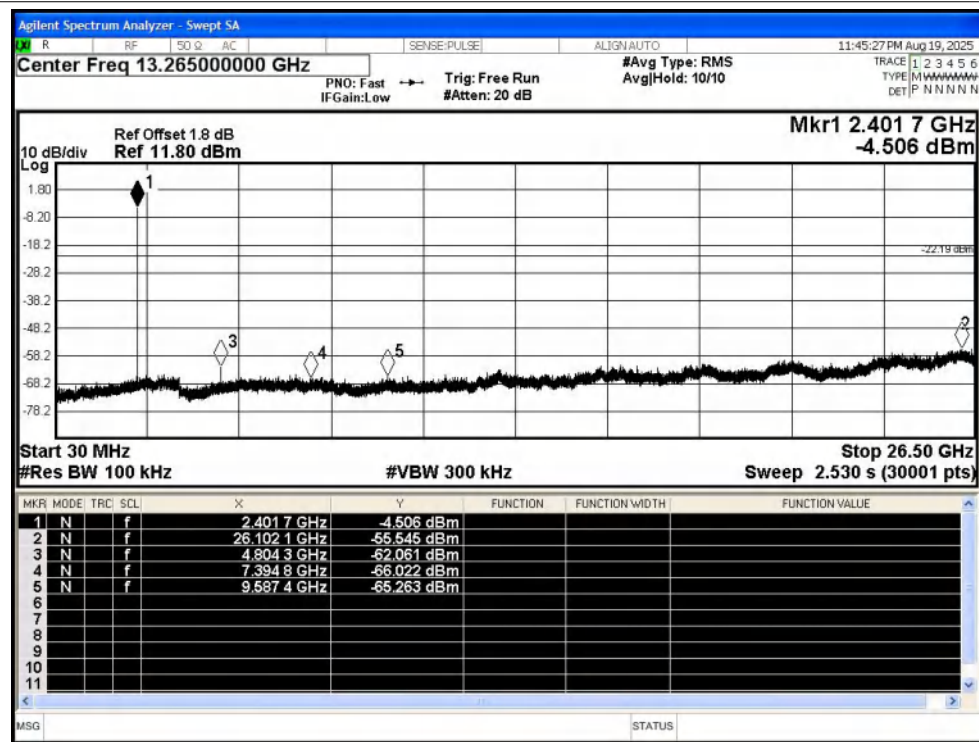
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



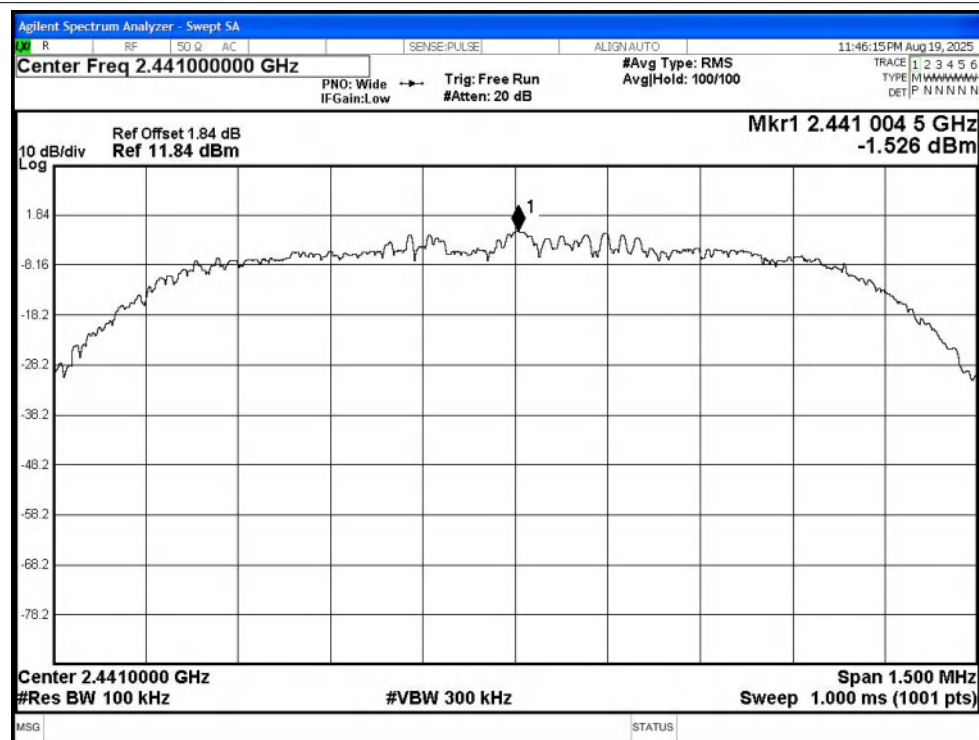
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



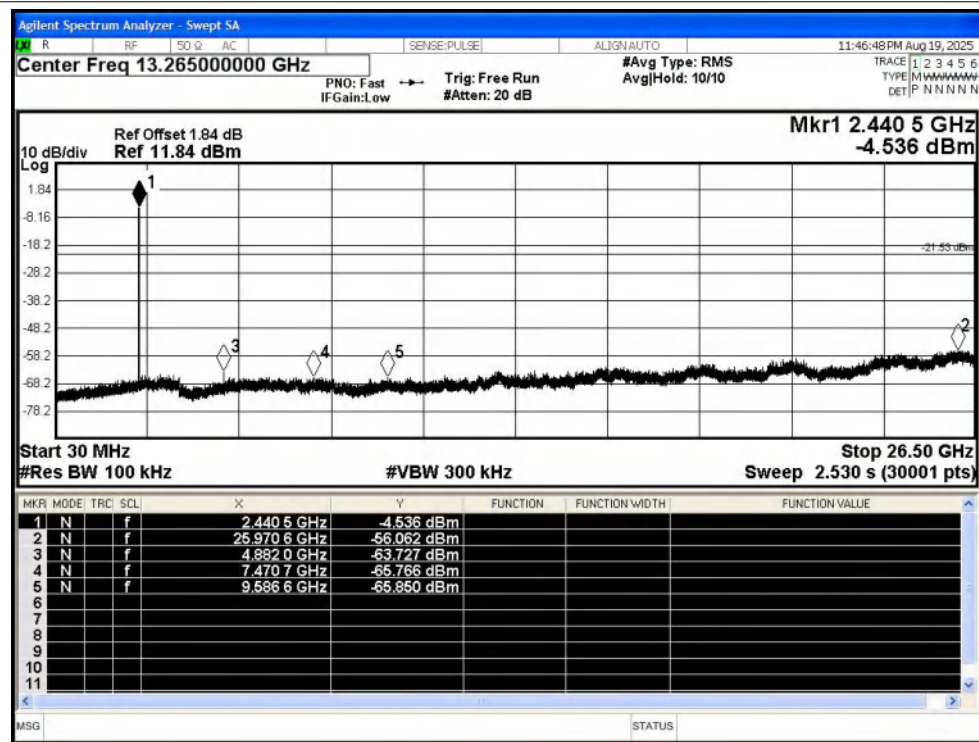
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



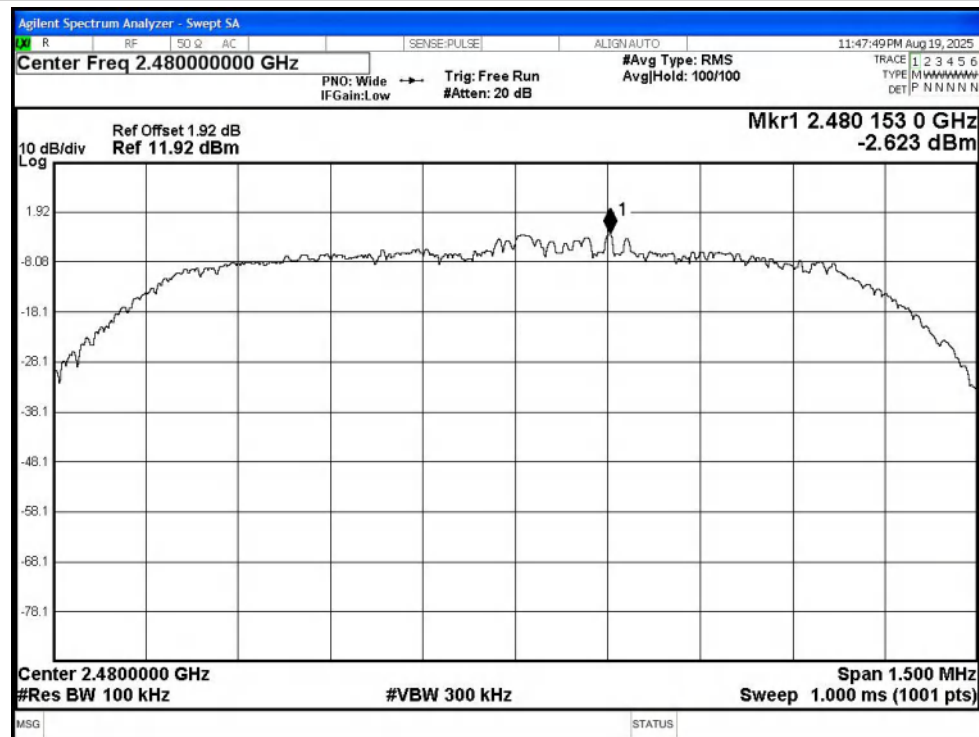
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



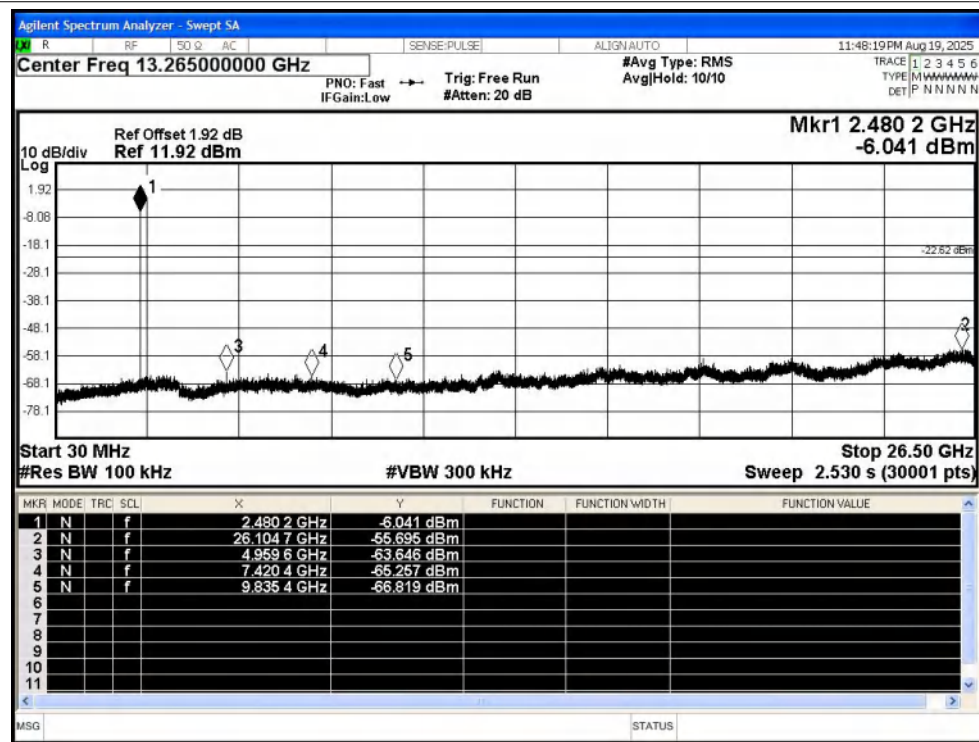
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



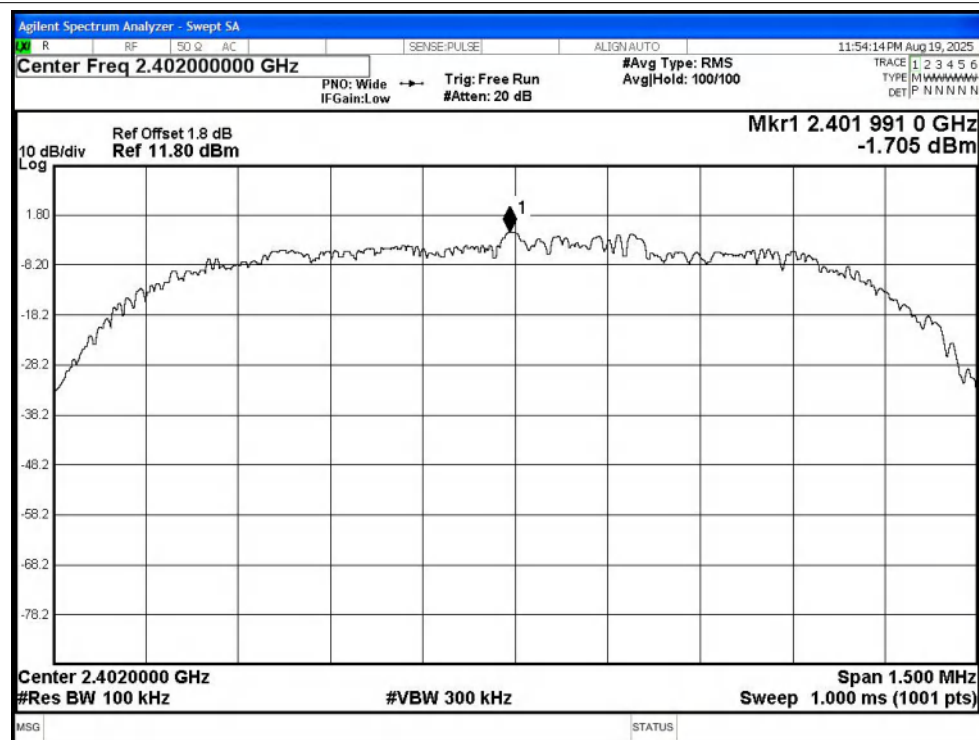
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



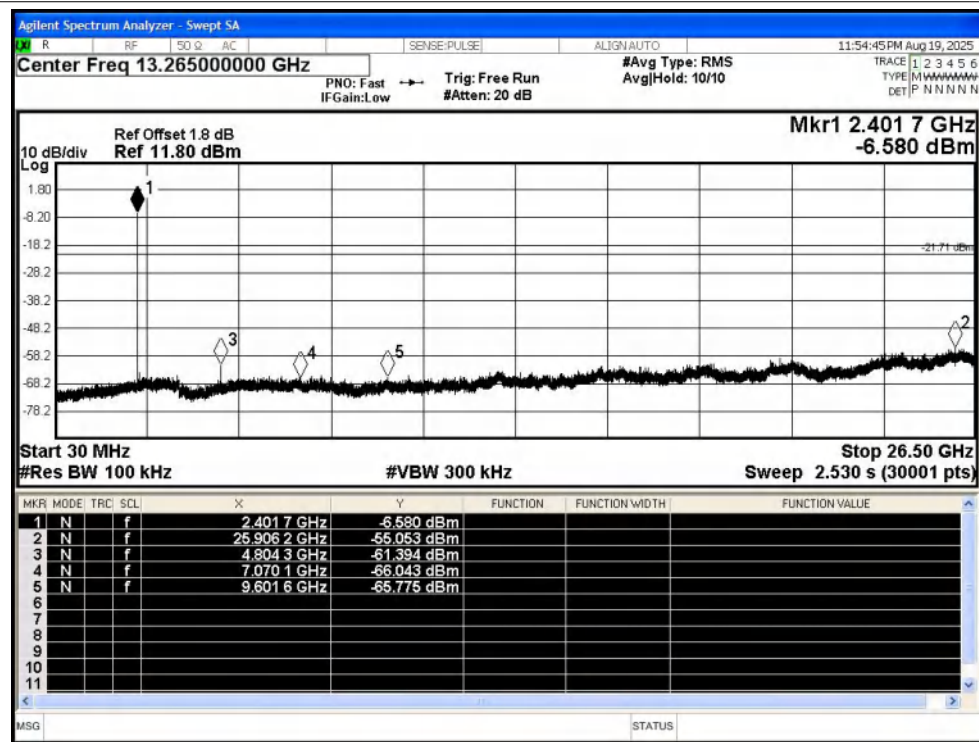
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



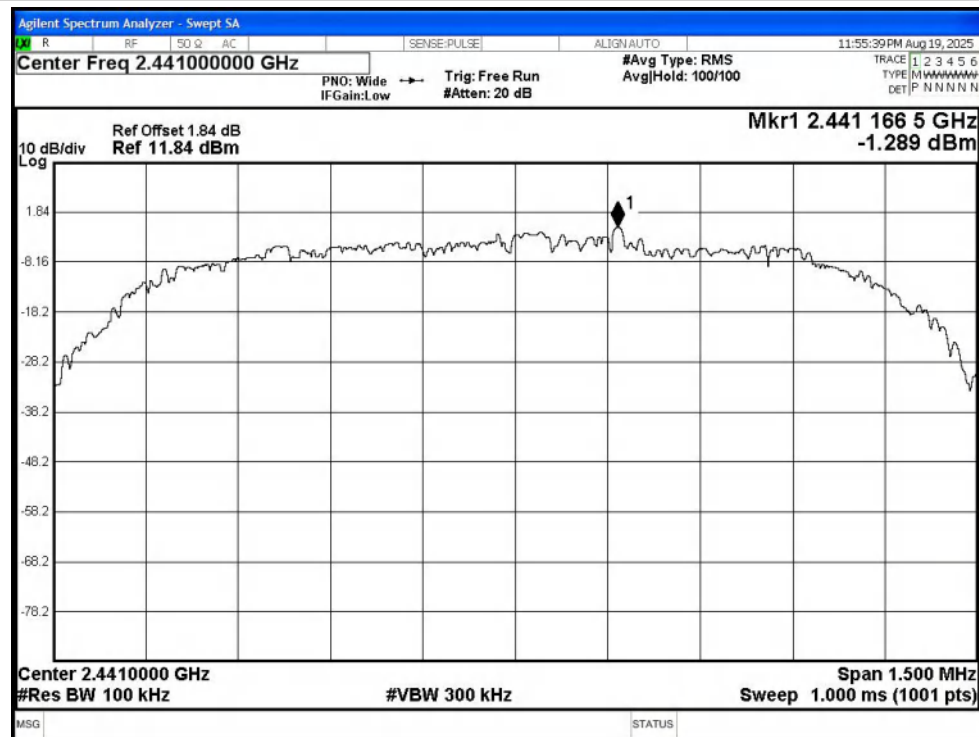
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



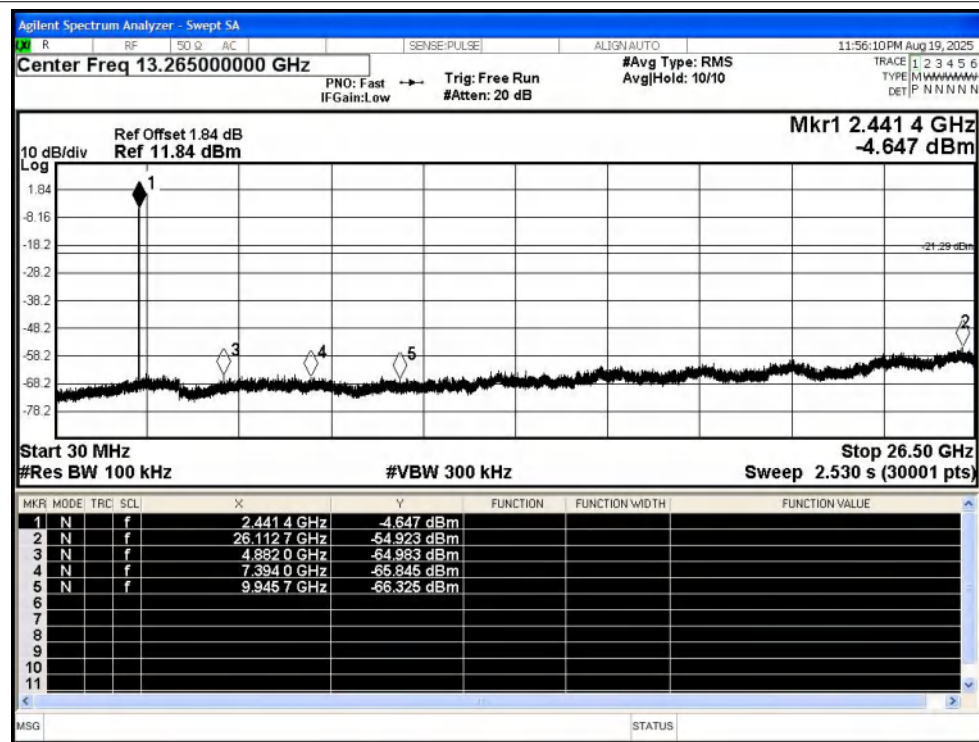
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission



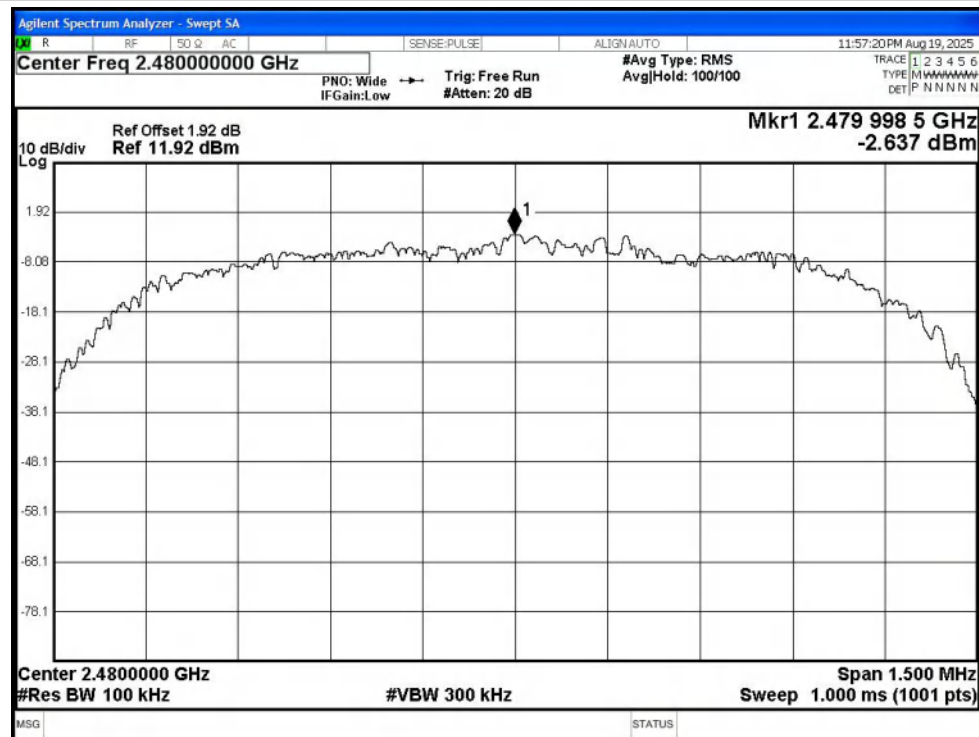
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



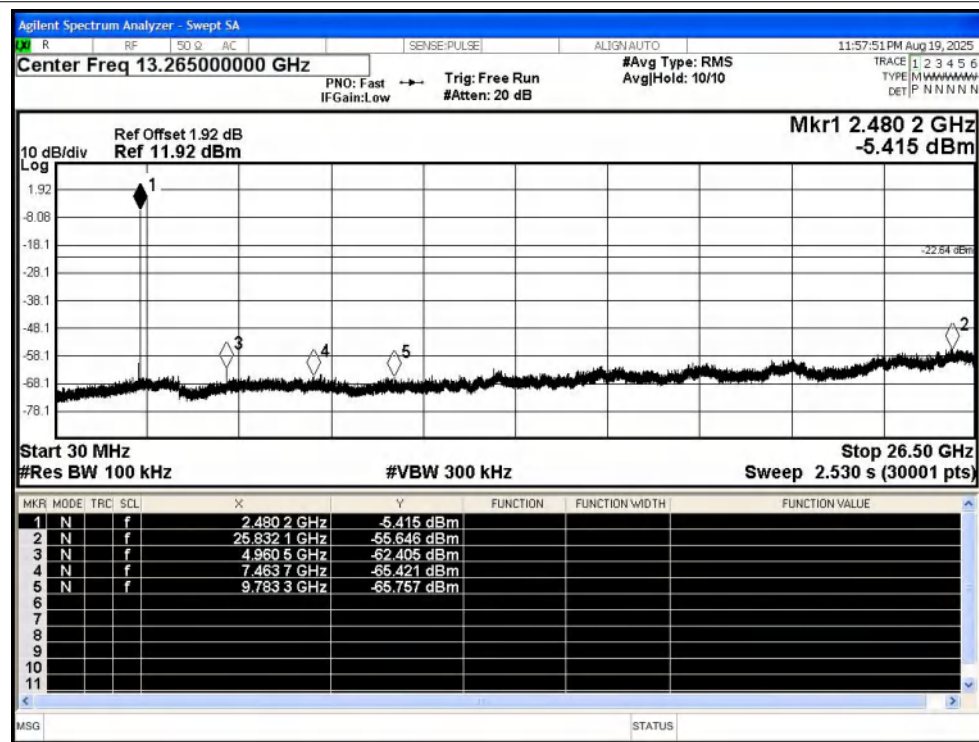
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission

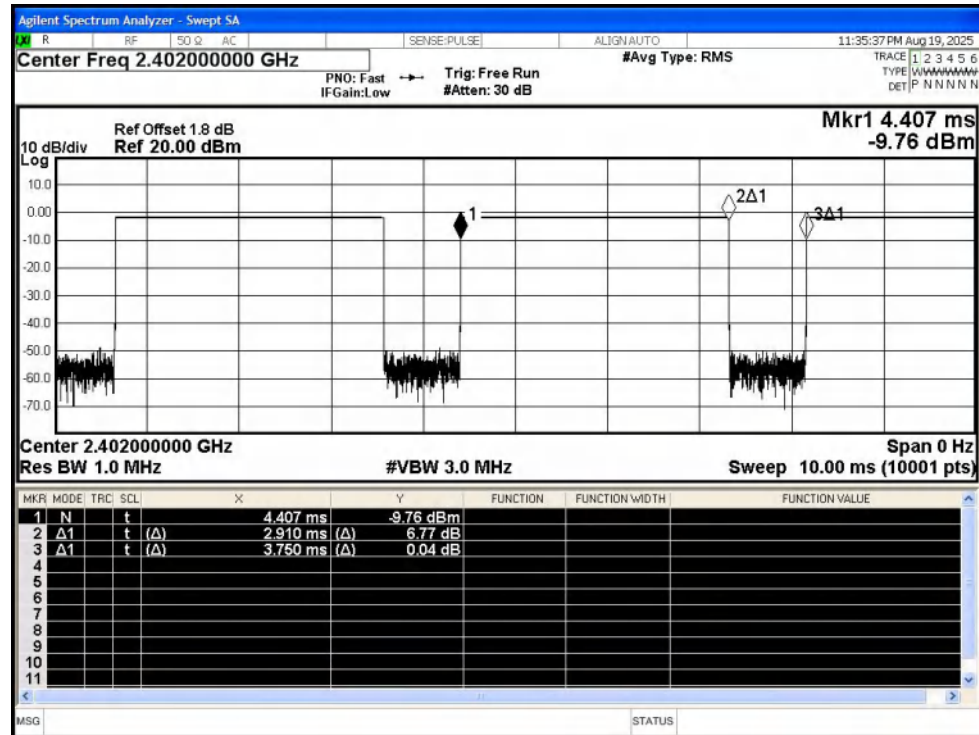


8 Duty Cycle

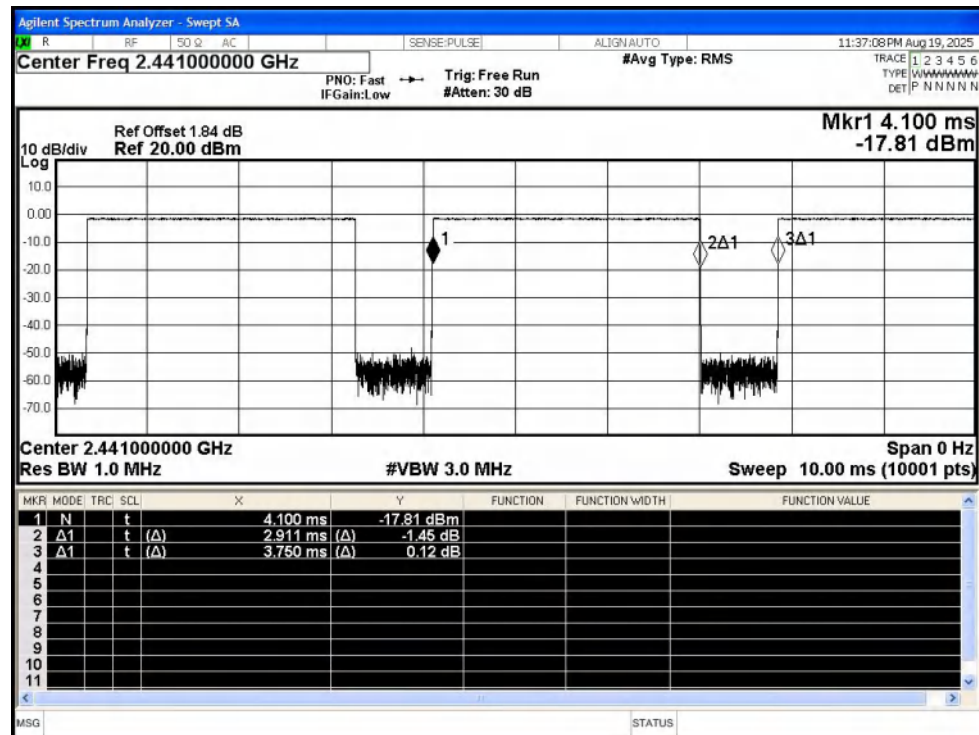
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.63	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.6	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.33	1.12	0.34
NVNT	2-DH5	2441	Ant1	77.33	1.12	0.34
NVNT	2-DH5	2480	Ant1	77.28	1.12	0.35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

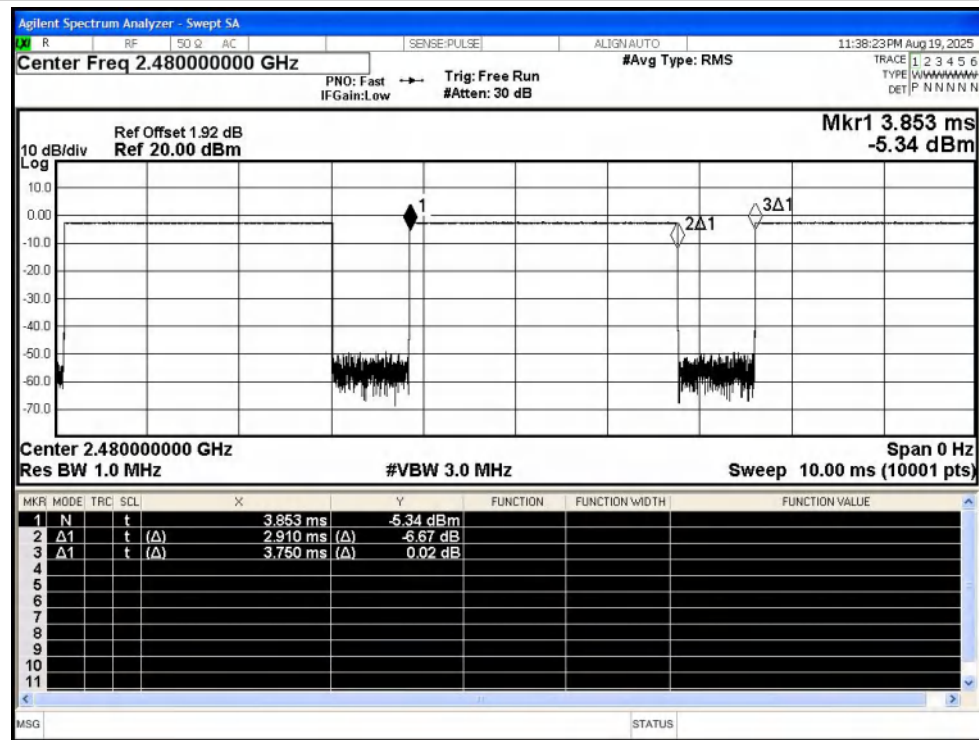
Duty Cycle NVNT 1-DH5 2402MHz Ant1



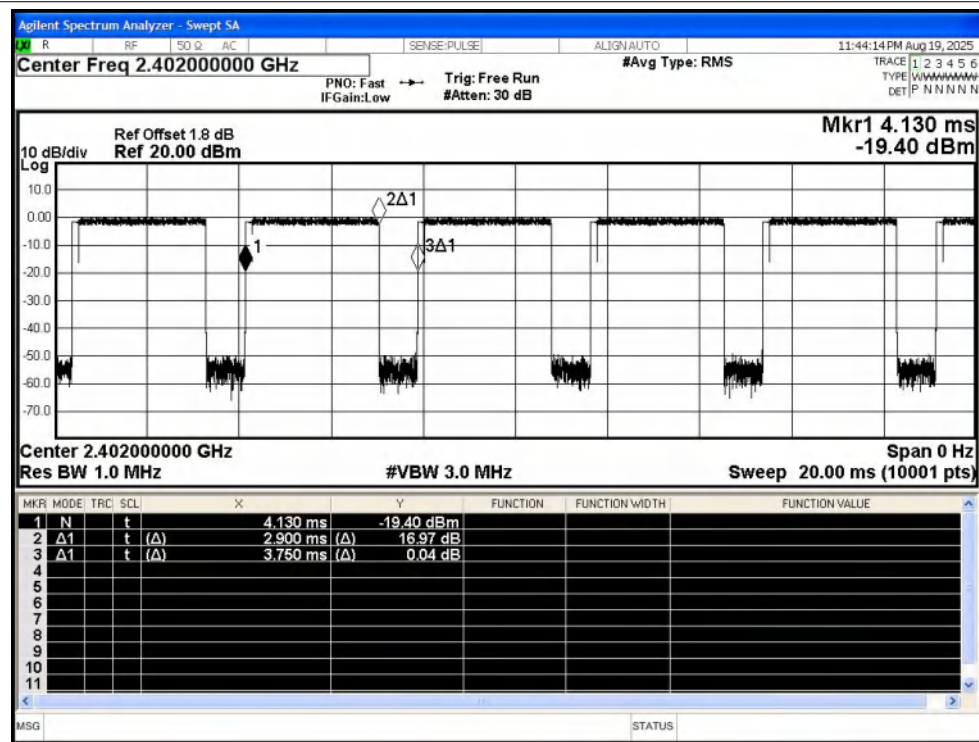
Duty Cycle NVNT 1-DH5 2441MHz Ant1



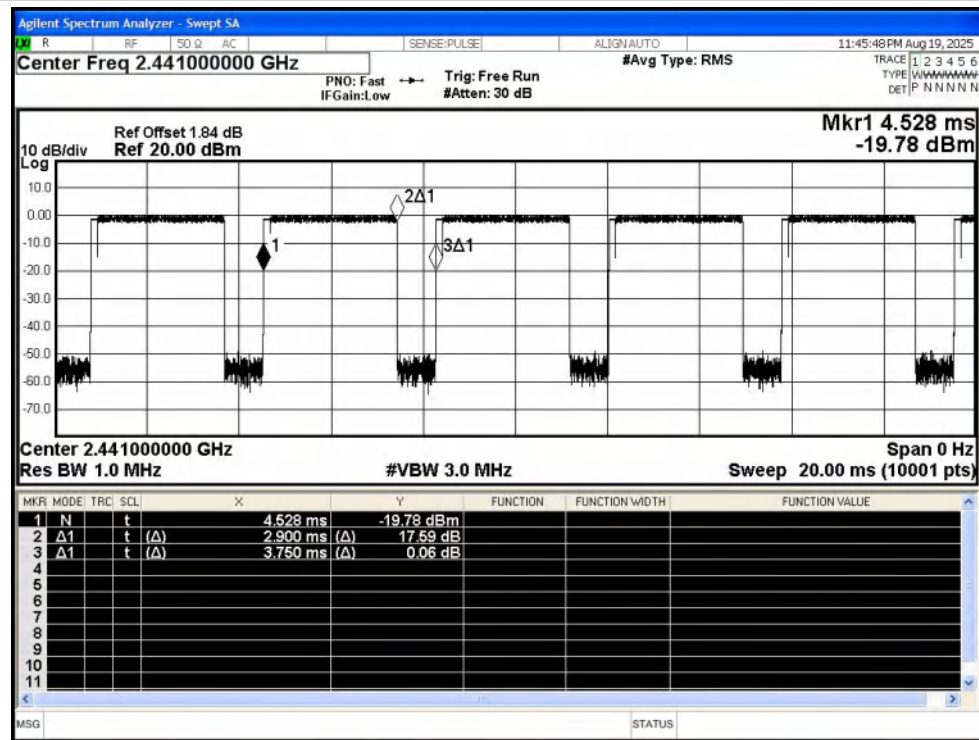
Duty Cycle NVNT 1-DH5 2480MHz Ant1



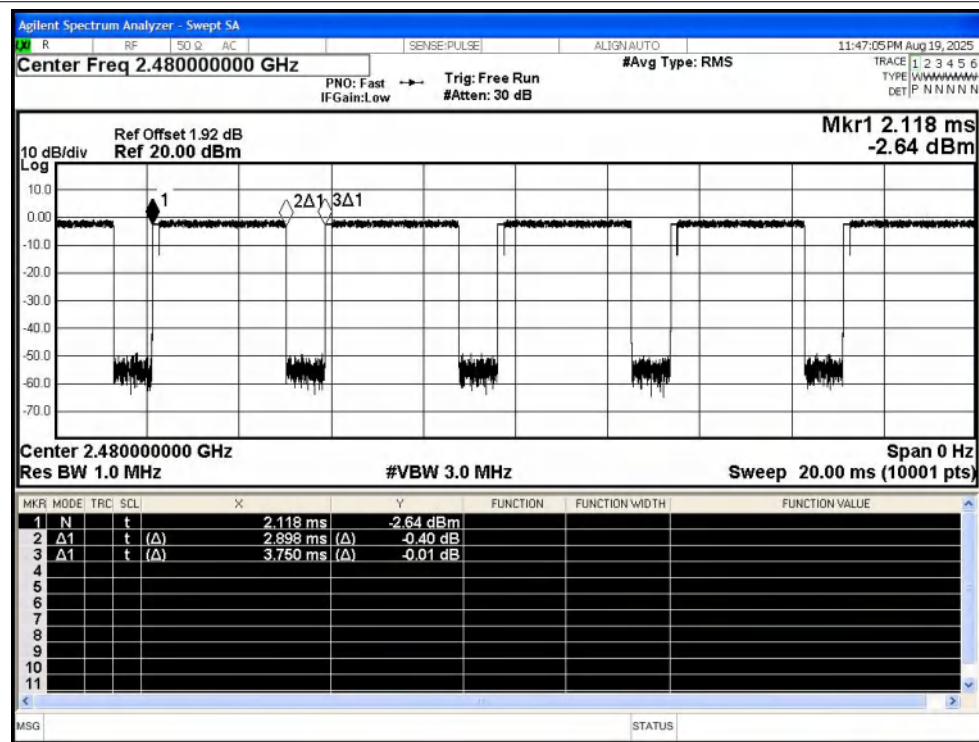
Duty Cycle NVNT 2-DH5 2402MHz Ant1



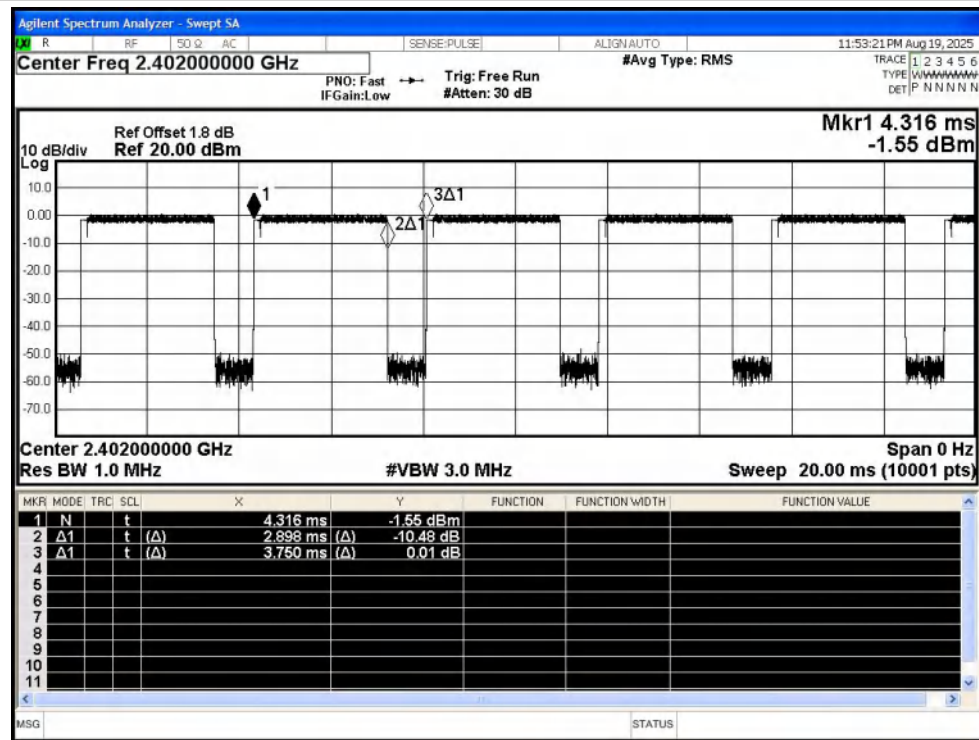
Duty Cycle NVNT 2-DH5 2441MHz Ant1



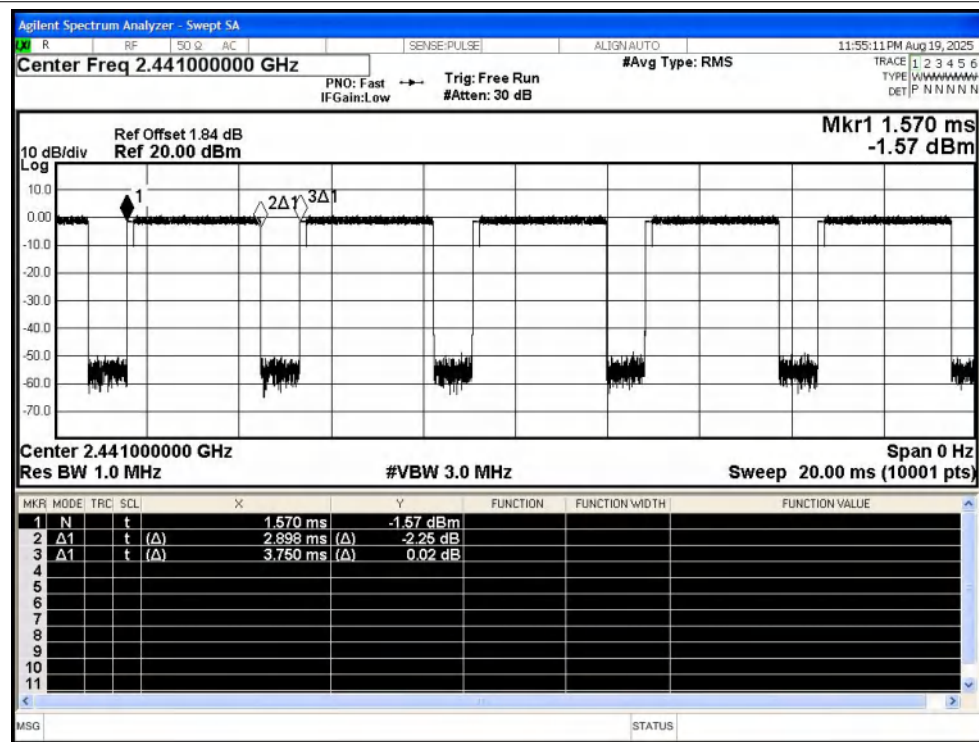
Duty Cycle NVNT 2-DH5 2480MHz Ant1



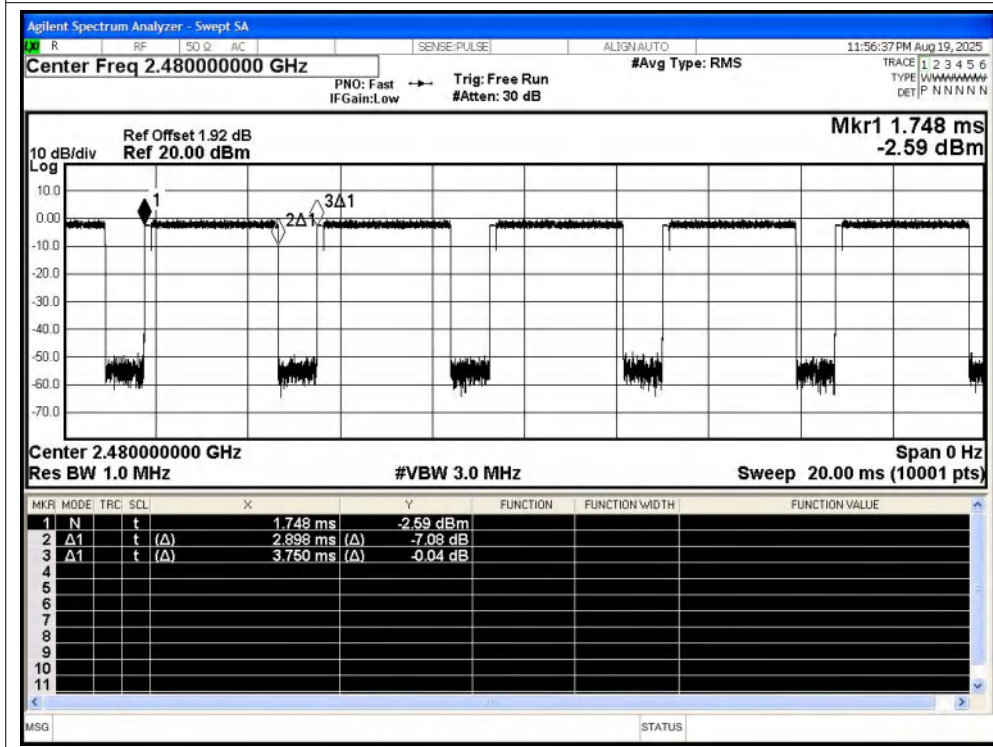
Duty Cycle NVNT 3-DH5 2402MHz Ant1



Duty Cycle NVNT 3-DH5 2441MHz Ant1



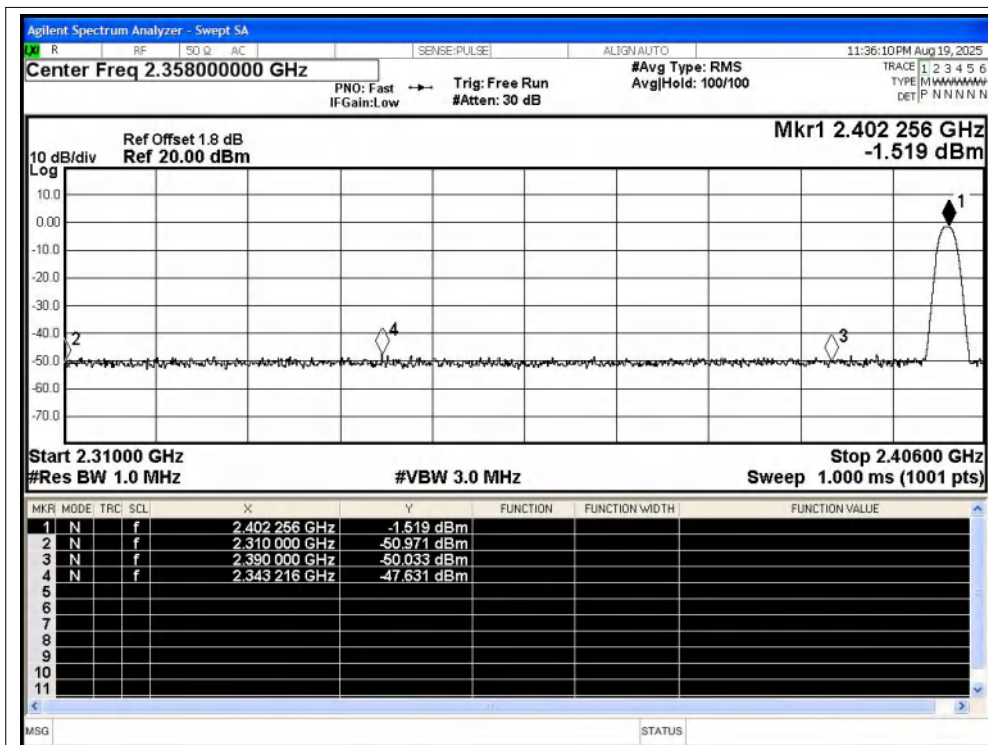
Duty Cycle NVNT 3-DH5 2480MHz Ant1



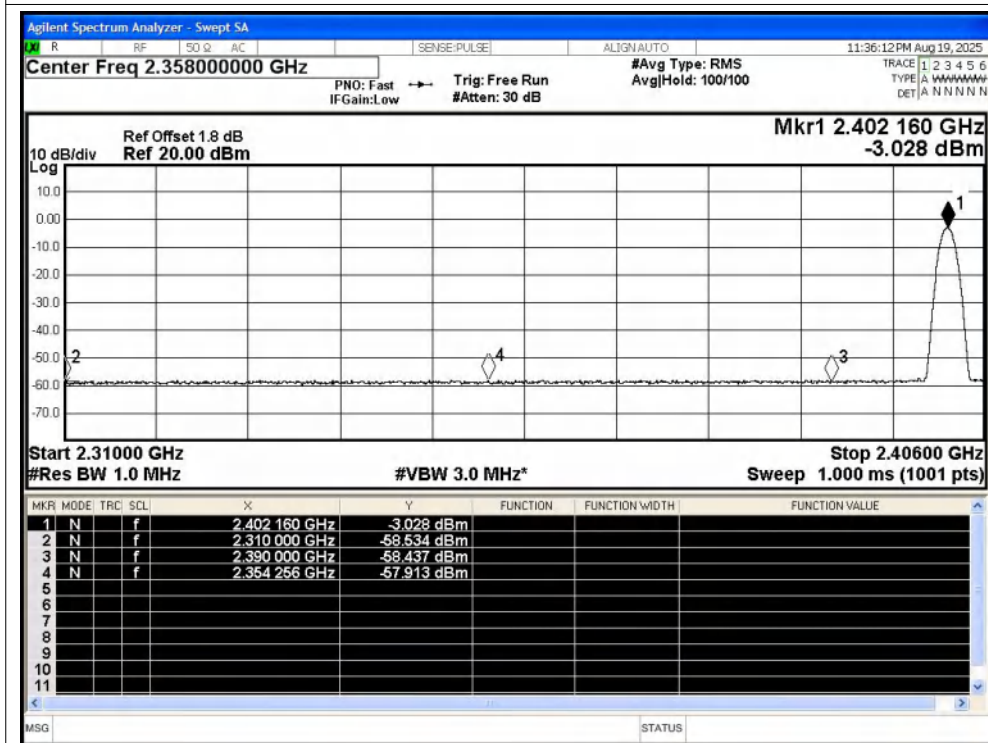
9 Restrict Band

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	-50.97	2.73	-	47.02	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.53	2.73	1.1	40.56	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2343.216	-47.63	2.73	-	50.36	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2354.256	-57.91	2.73	1.1	41.18	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-50.03	2.73	-	47.96	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-58.44	2.73	1.1	40.65	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-49.09	2.73	-	48.90	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-57.99	2.73	1.1	41.10	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.92	-45.35	2.73	-	52.64	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.584	-57.1	2.73	1.1	41.99	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-48.9	2.73	-	49.09	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-57.79	2.73	1.1	41.30	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-51.69	2.73	-	46.30	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-59.39	2.73	1.12	39.72	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2386.608	-47.48	2.73	-	50.51	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2369.232	-57.8	2.73	1.12	41.31	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-50.99	2.73	-	47.00	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-58.55	2.73	1.12	40.56	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-48.67	2.73	-	49.32	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-58.11	2.73	1.12	41.00	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2484.016	-45.65	2.73	-	52.34	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2495.536	-57.33	2.73	1.12	41.78	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-49.82	2.73	-	48.17	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-57.73	2.73	1.12	41.38	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-50.32	2.73	-	47.67	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-58.78	2.73	1.12	40.33	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2318.064	-46.51	2.73	-	51.48	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2386.32	-57.93	2.73	1.12	41.18	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-48.65	2.73	-	49.34	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-58.49	2.73	1.12	40.62	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-48.63	2.73	-	49.36	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-57.78	2.73	1.12	41.33	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2485.072	-46.09	2.73	-	51.90	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.968	-57.25	2.73	1.12	41.86	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-48.21	2.73	-	49.78	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-57.99	2.73	1.12	41.12	Average	54	Pass

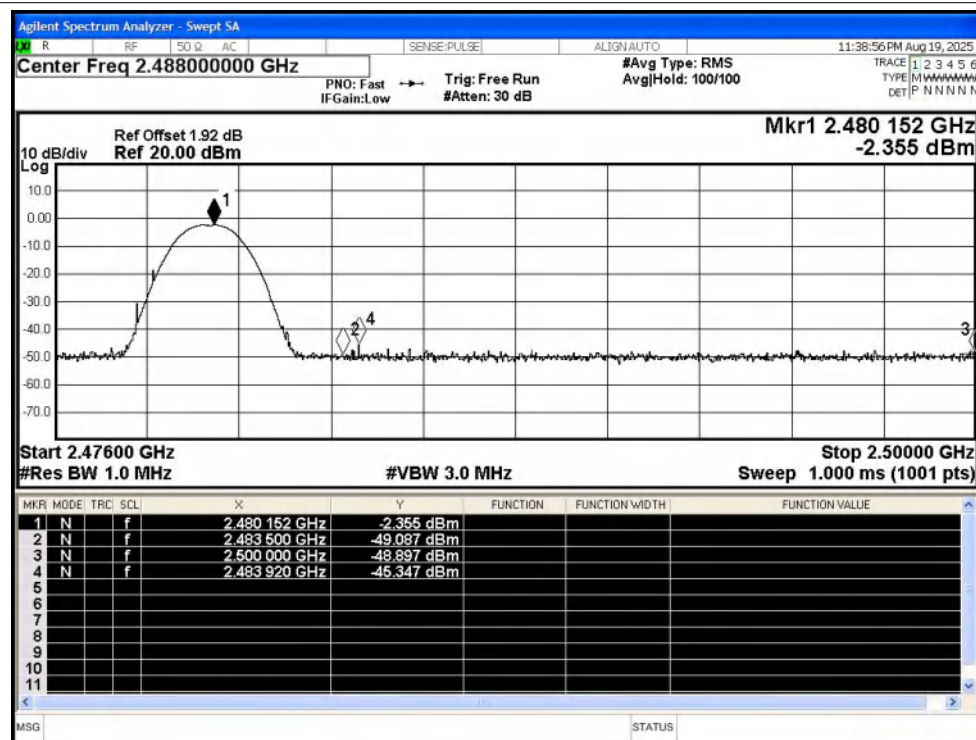
Test Graphs
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



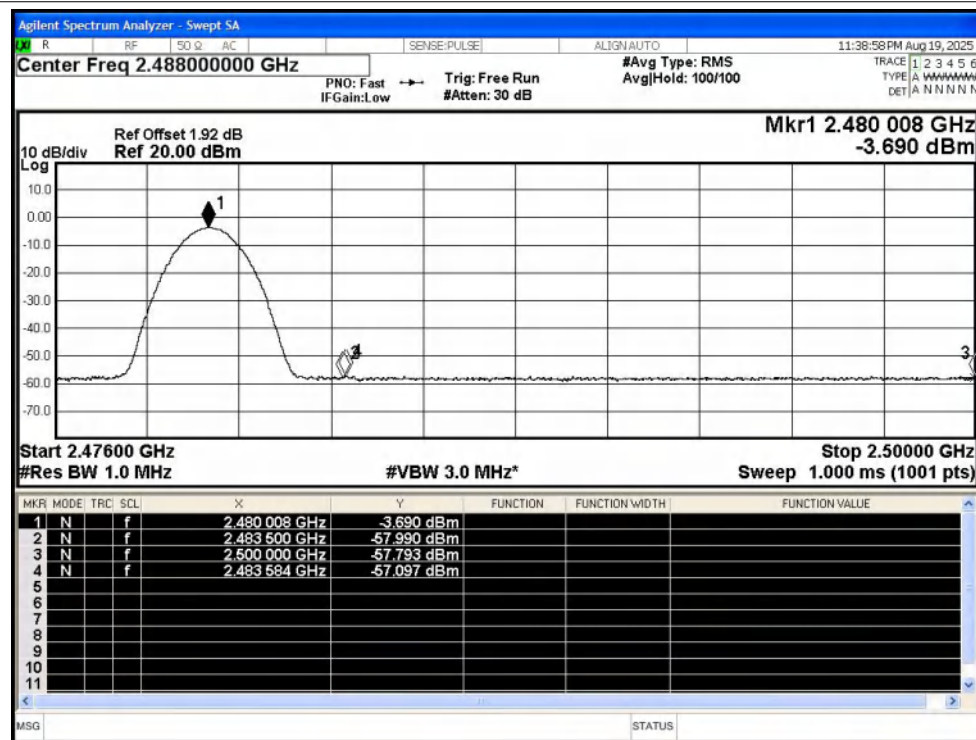
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



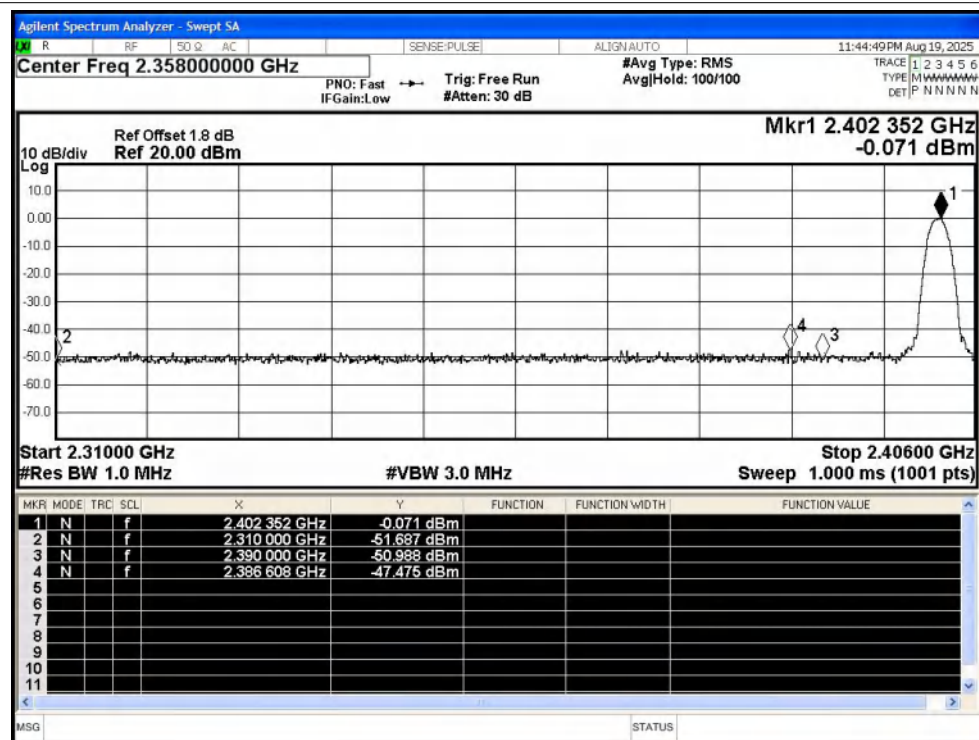
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



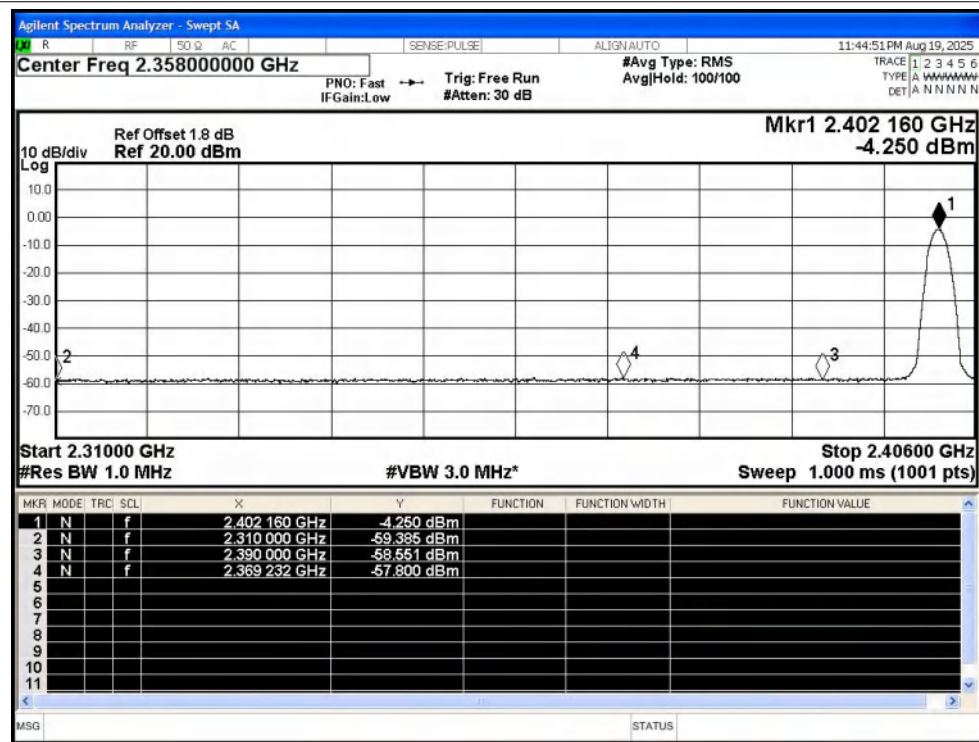
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



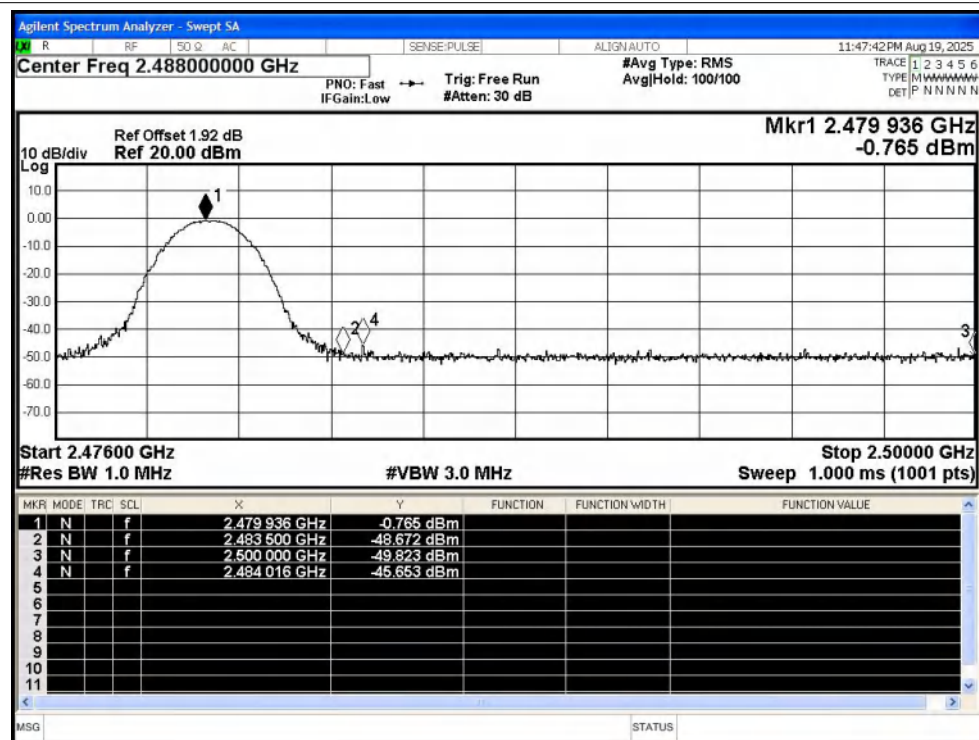
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



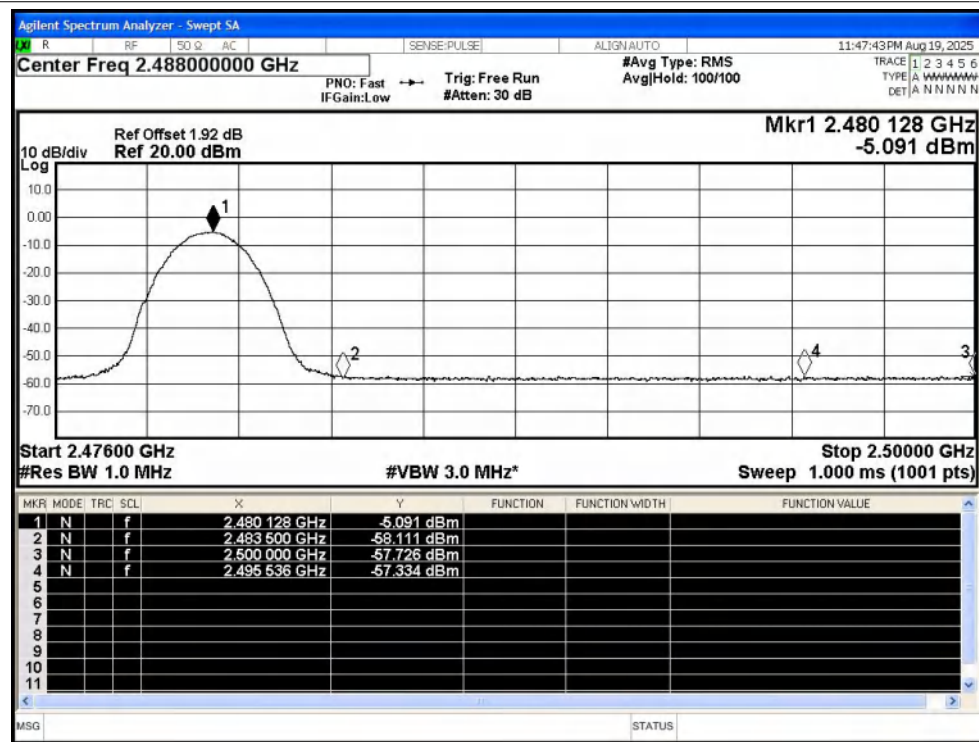
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average



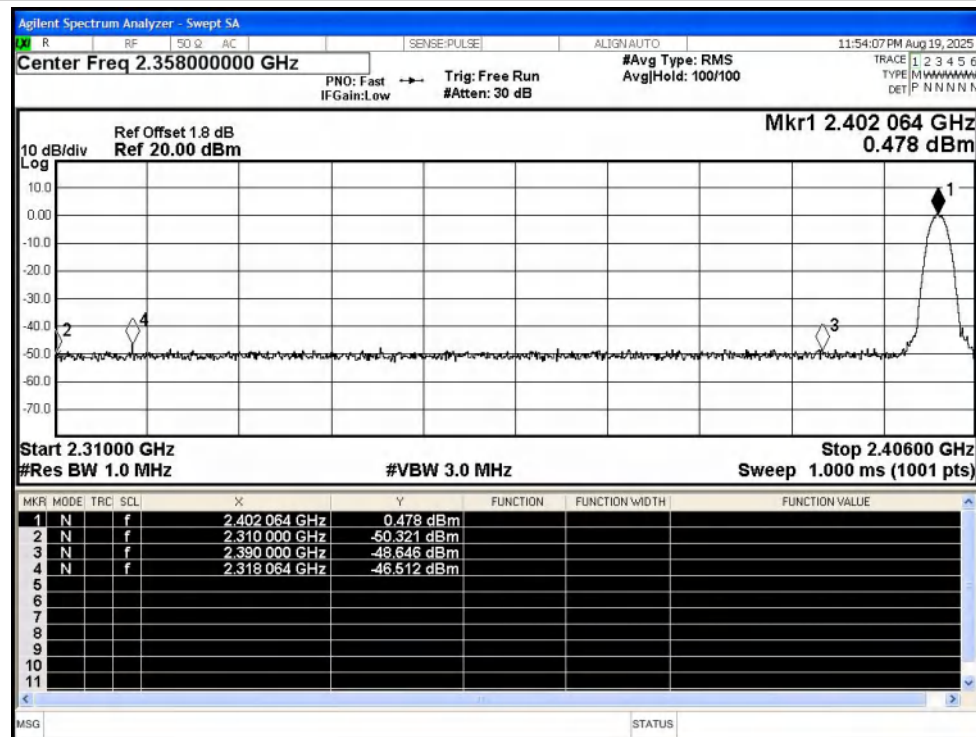
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak



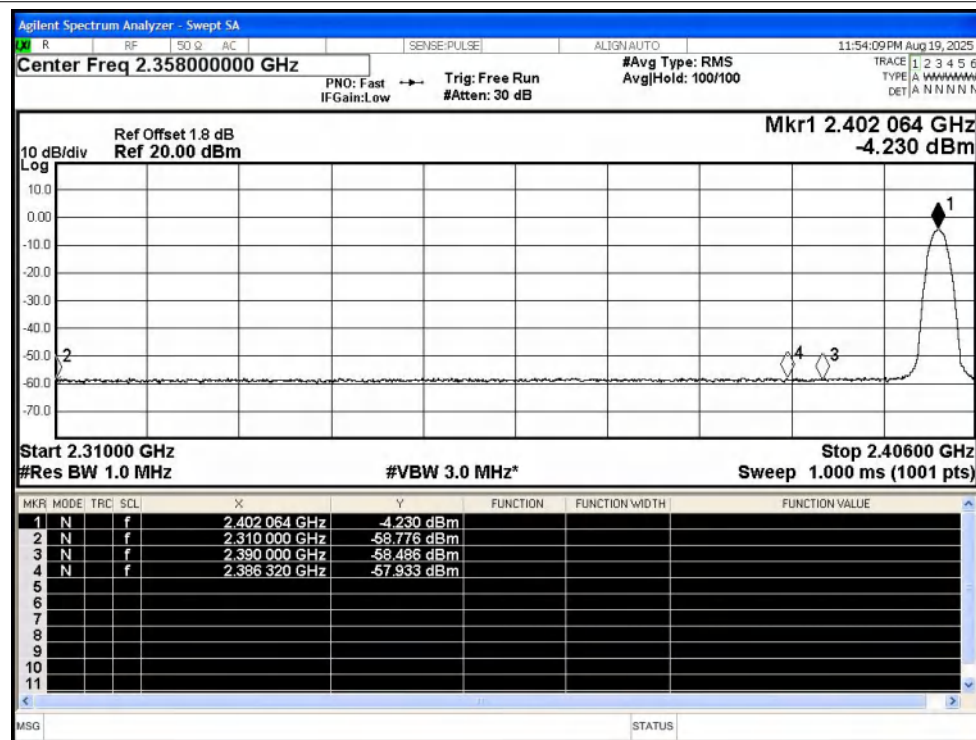
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Average



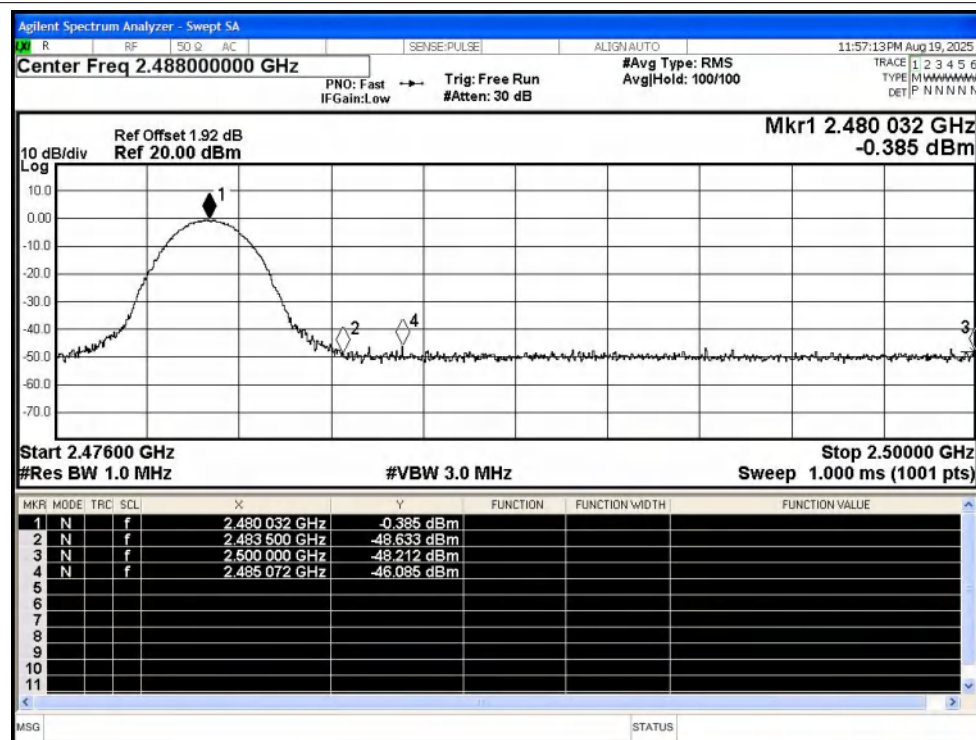
Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak



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

