Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Wireless Earphone

Test Model: C1Pro

Environmental Conditions

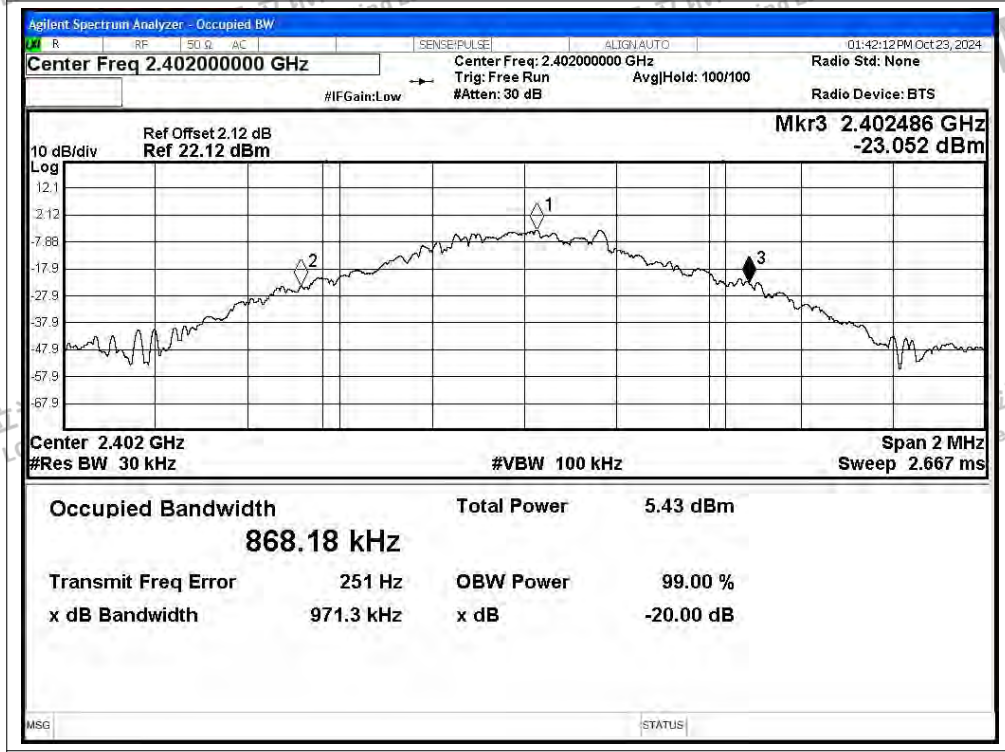
Temperature:	23.8° C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
Supervised by:	Nick Peng

A.1 -20dB Bandwidth

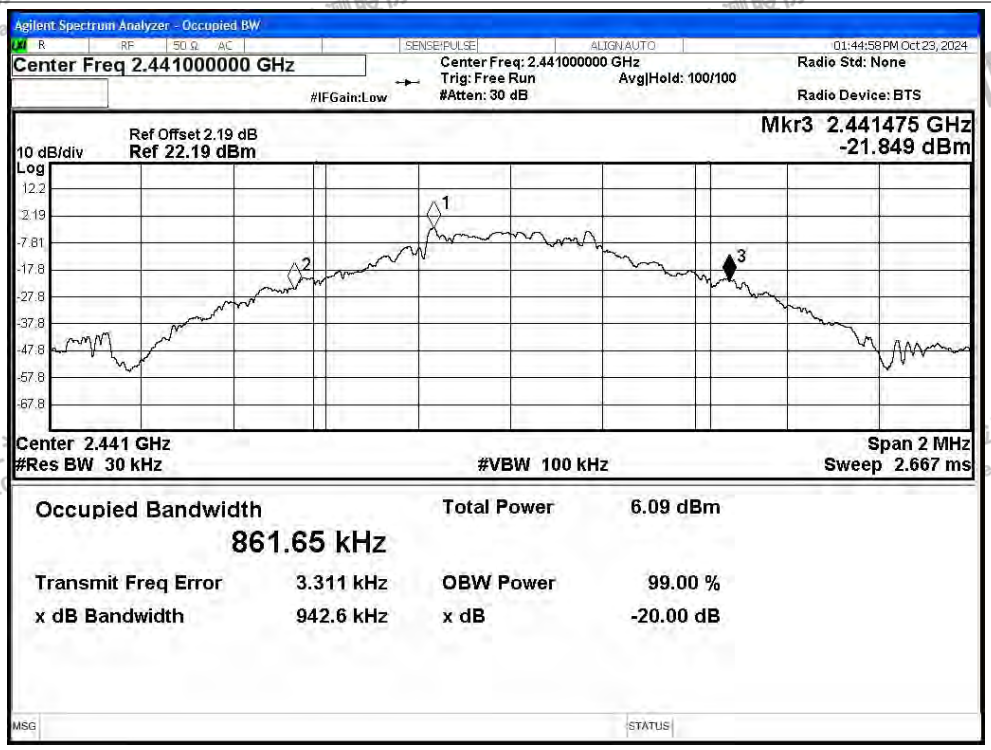
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.971	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.943	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.938	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.282	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.29	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.305	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.305	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.302	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.284	N/A	Pass

Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

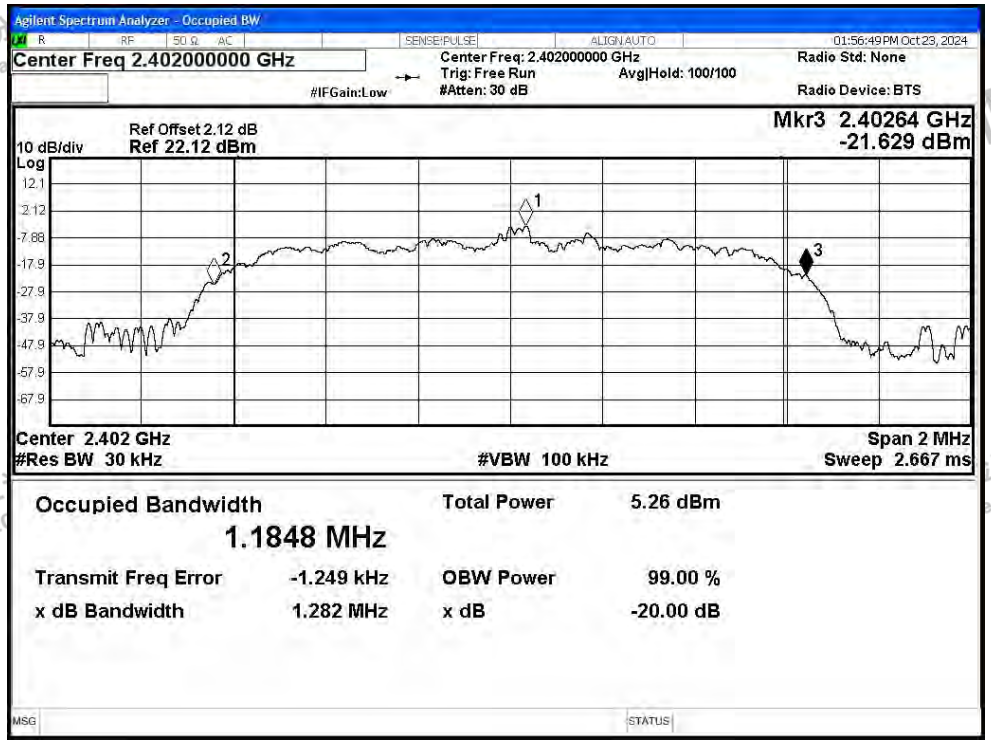


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

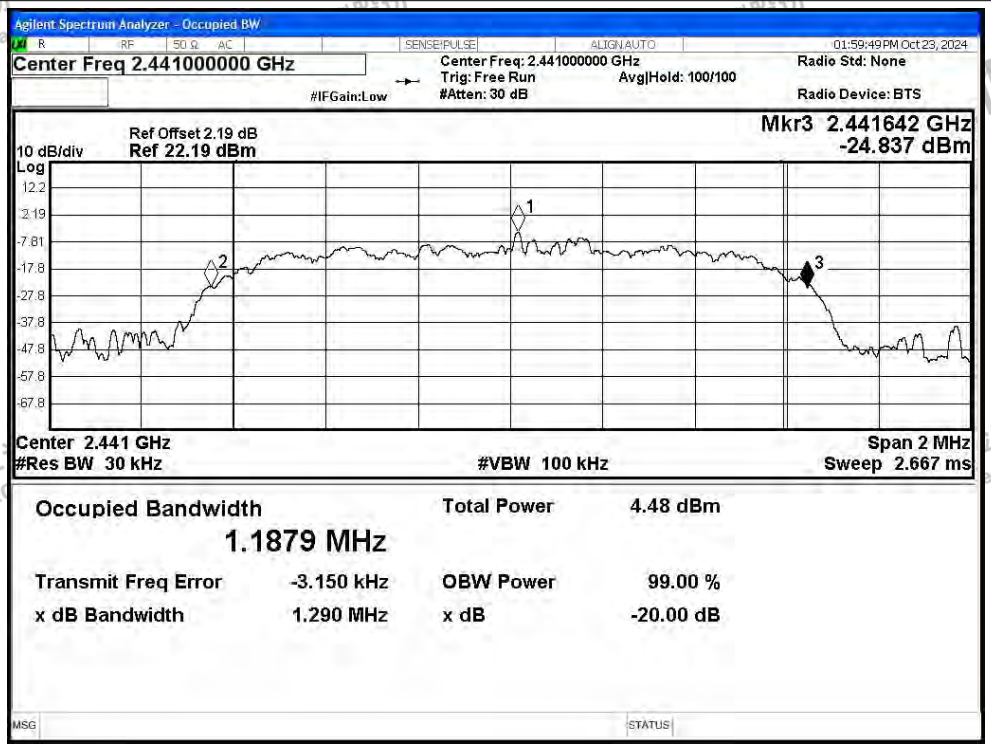


-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

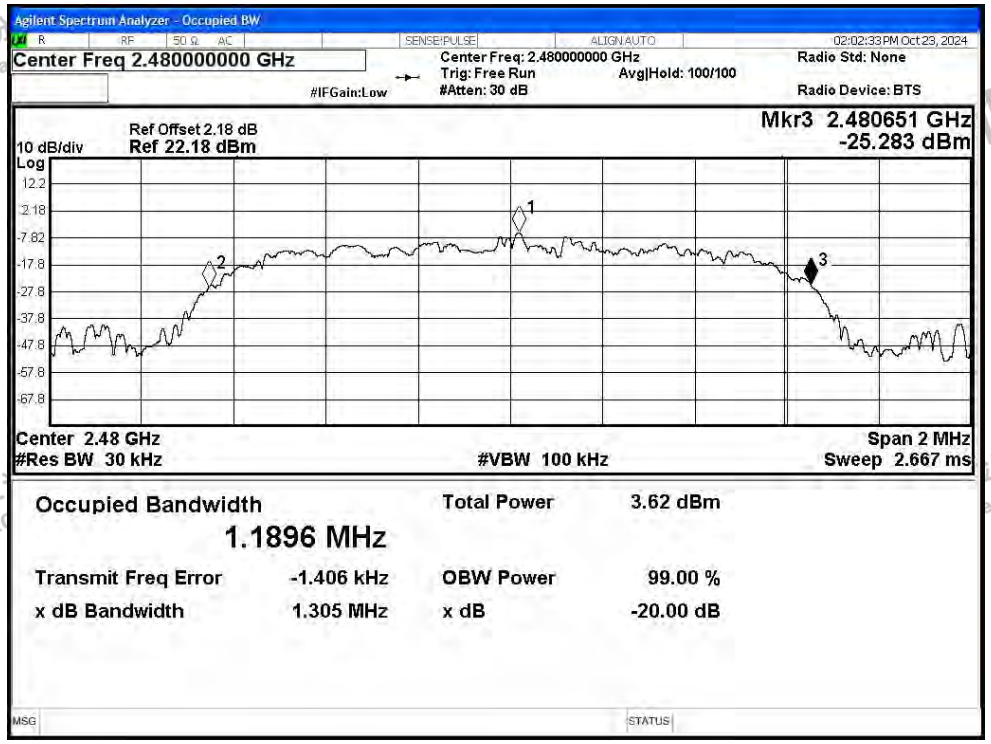
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



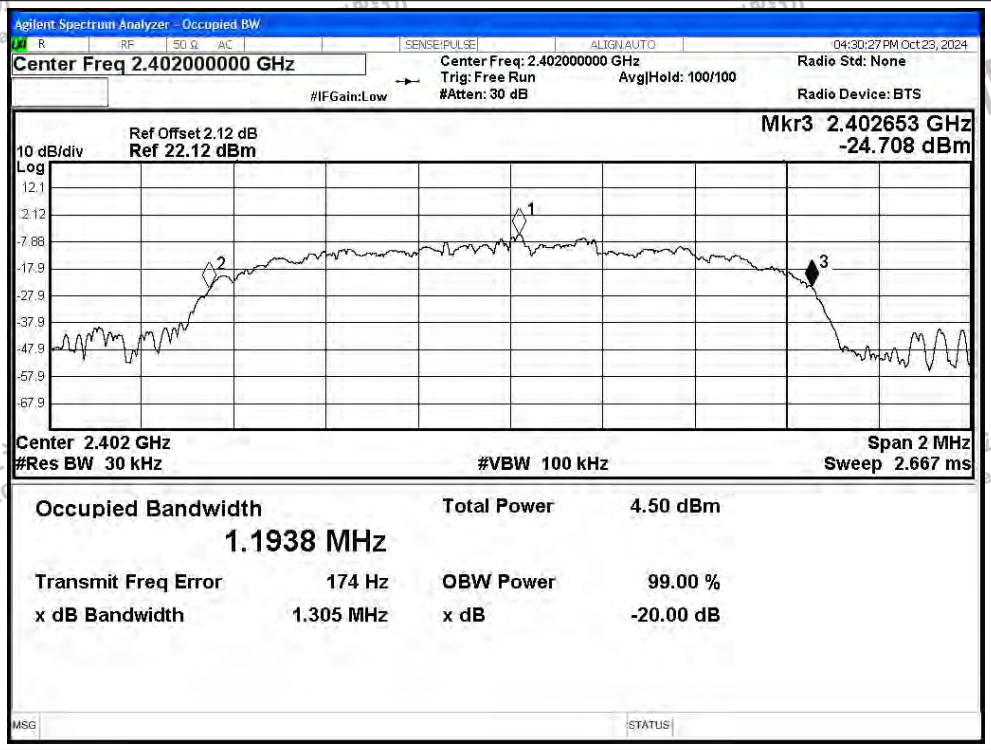
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



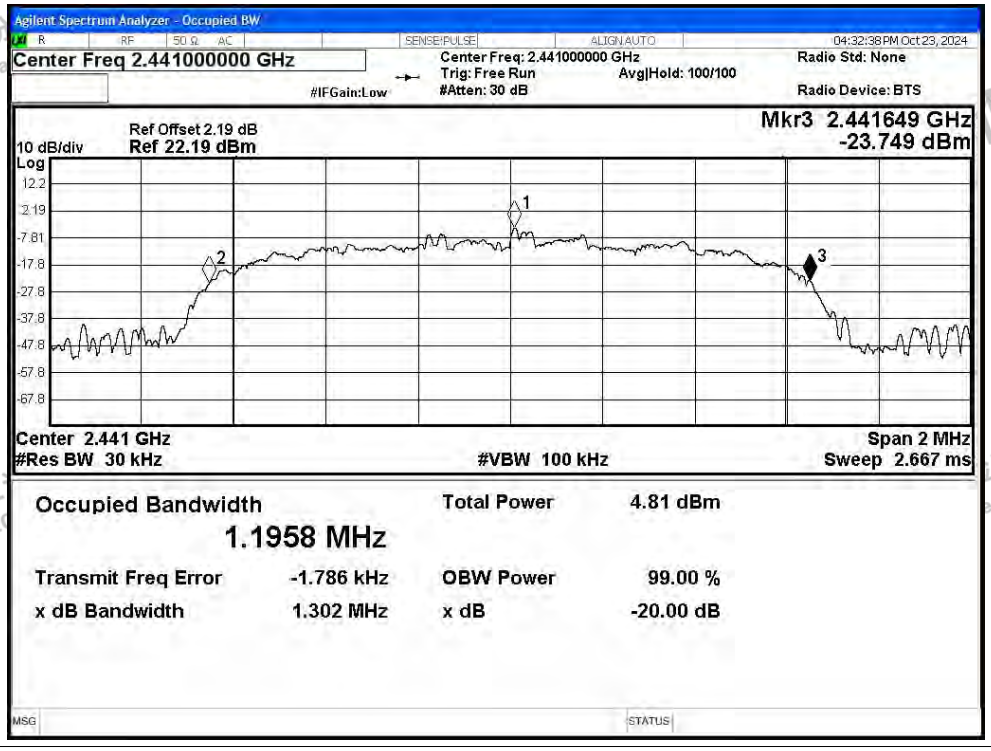
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



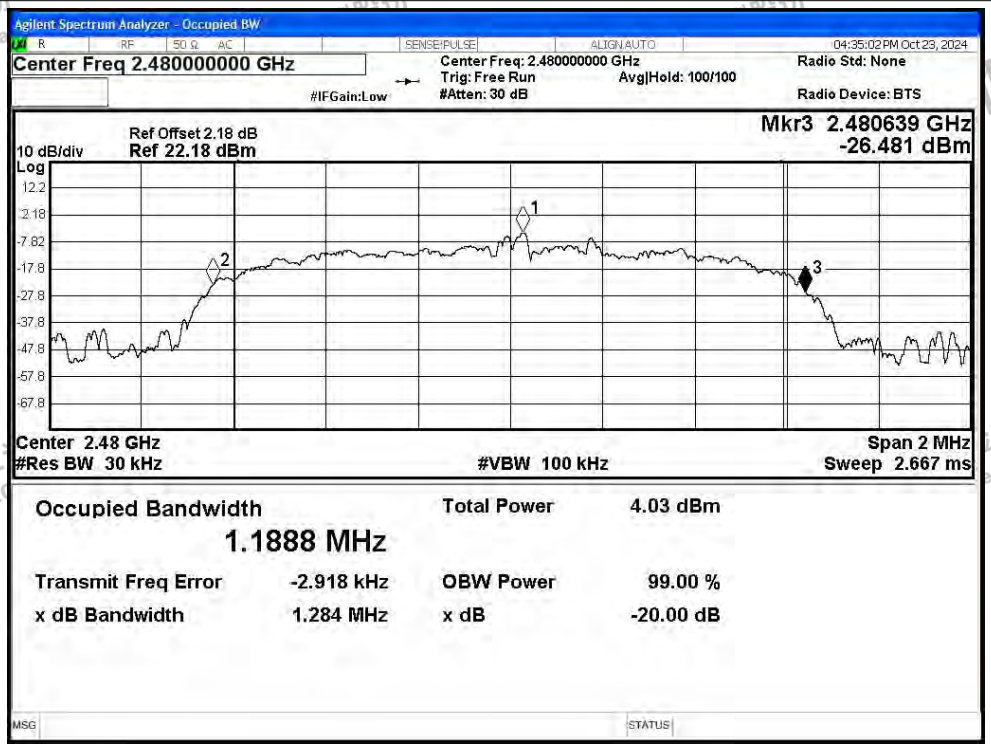
-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1

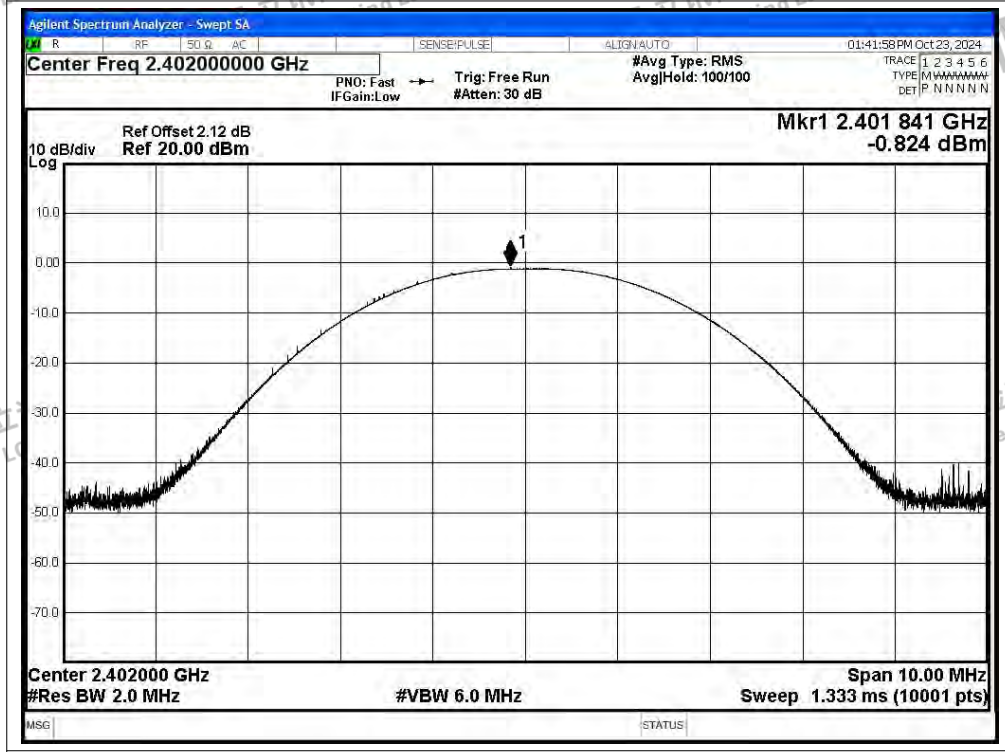


A.2 Maximum Peak Conducted Output Power

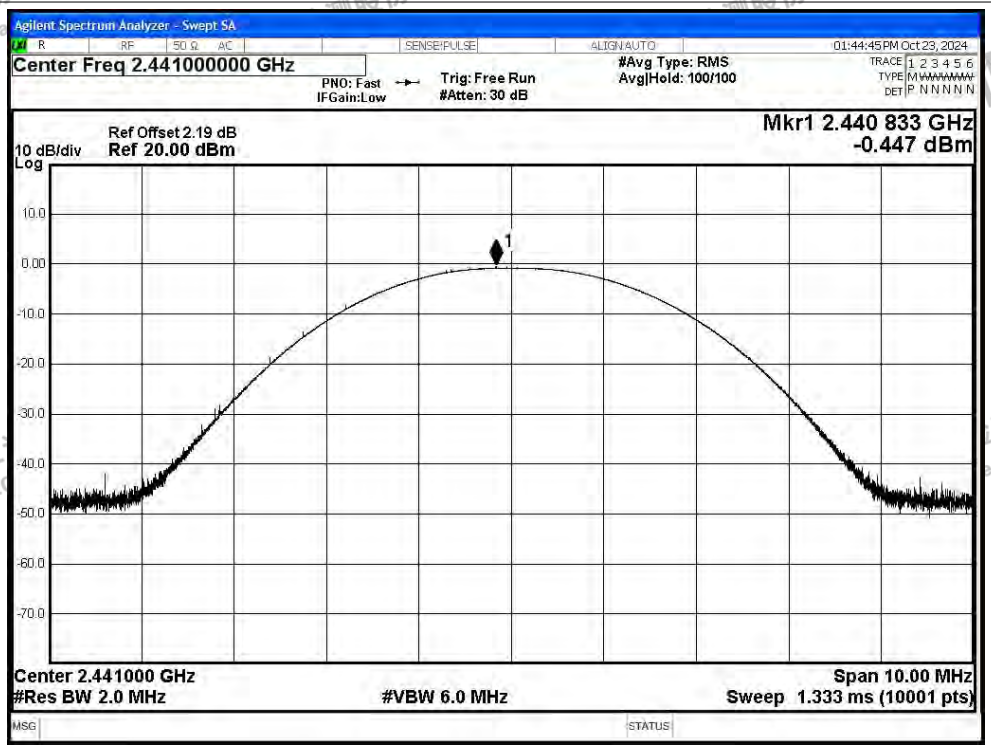
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.82	21	Pass
NVNT	1-DH5	2441	Ant1	-0.45	21	Pass
NVNT	1-DH5	2480	Ant1	1.0	21	Pass
NVNT	2-DH5	2402	Ant1	0.89	21	Pass
NVNT	2-DH5	2441	Ant1	0.44	21	Pass
NVNT	2-DH5	2480	Ant1	-0.42	21	Pass
NVNT	3-DH5	2402	Ant1	0.36	21	Pass
NVNT	3-DH5	2441	Ant1	0.75	21	Pass
NVNT	3-DH5	2480	Ant1	-0.14	21	Pass

Test Graphs

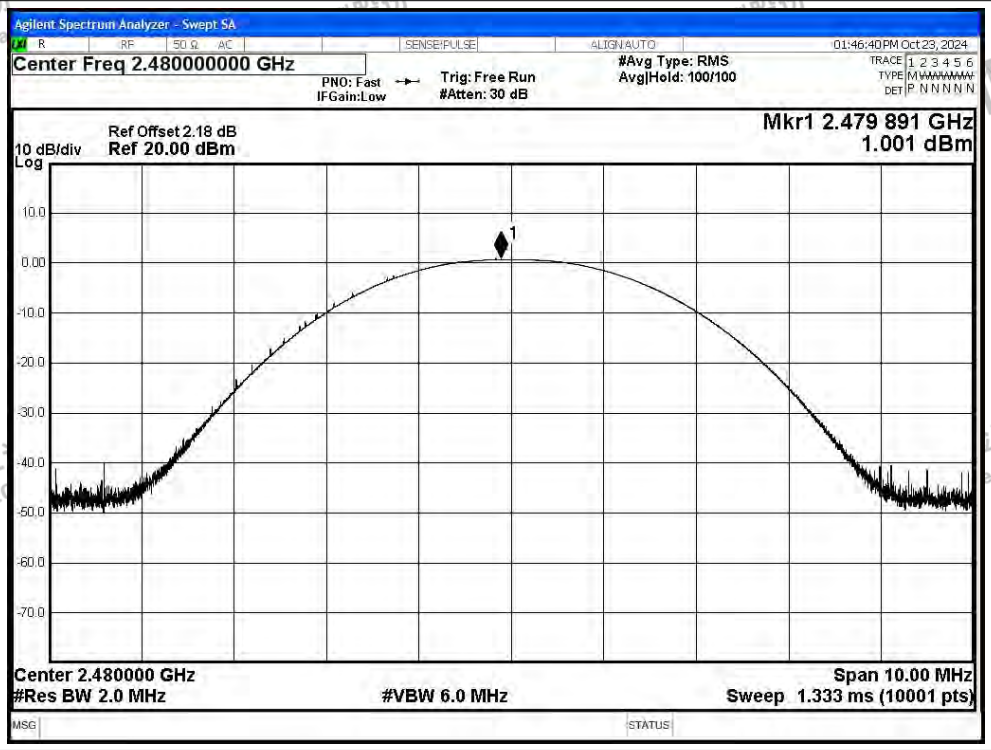
Power NVNT 1-DH5 2402MHz Ant1



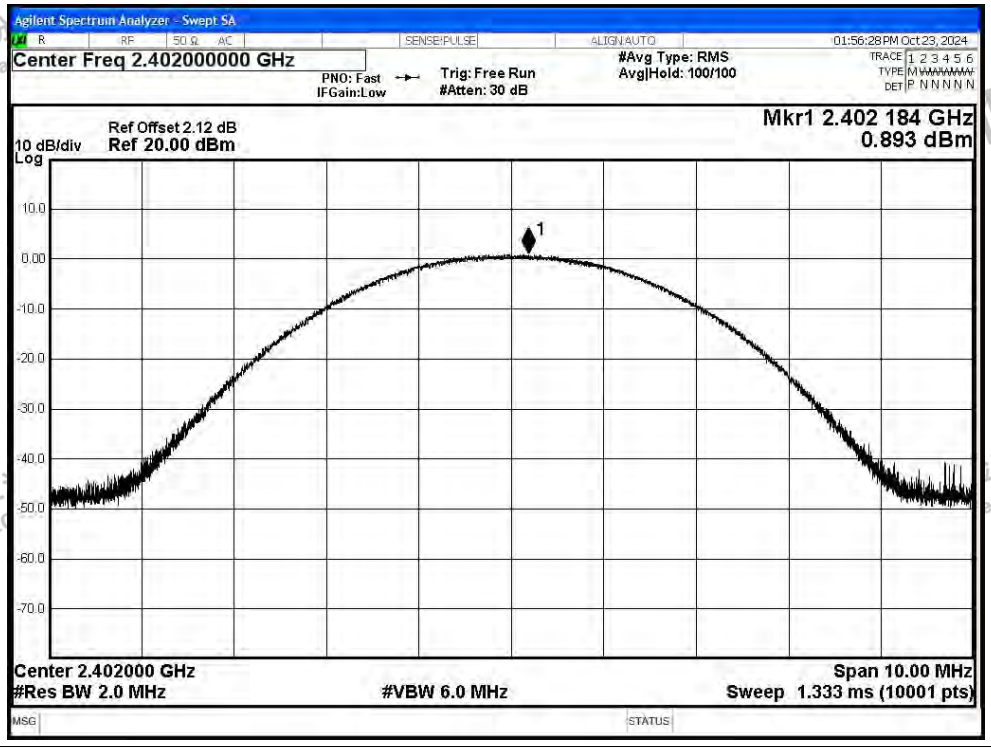
Power NVNT 1-DH5 2441MHz Ant1



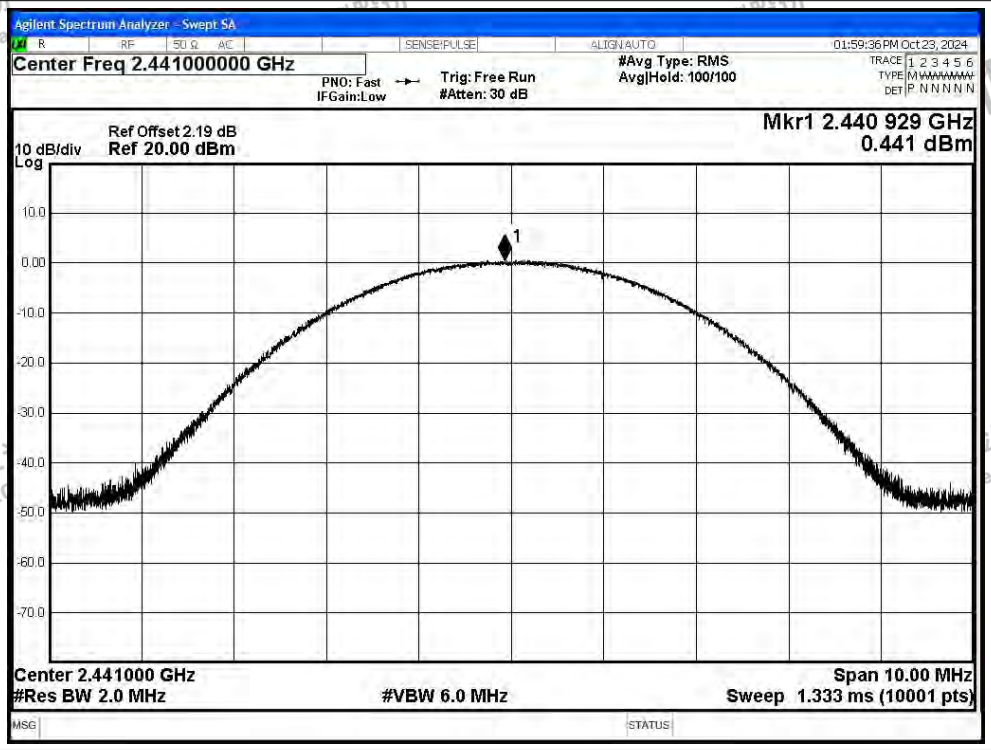
Power NVNT 1-DH5 2480MHz Ant1



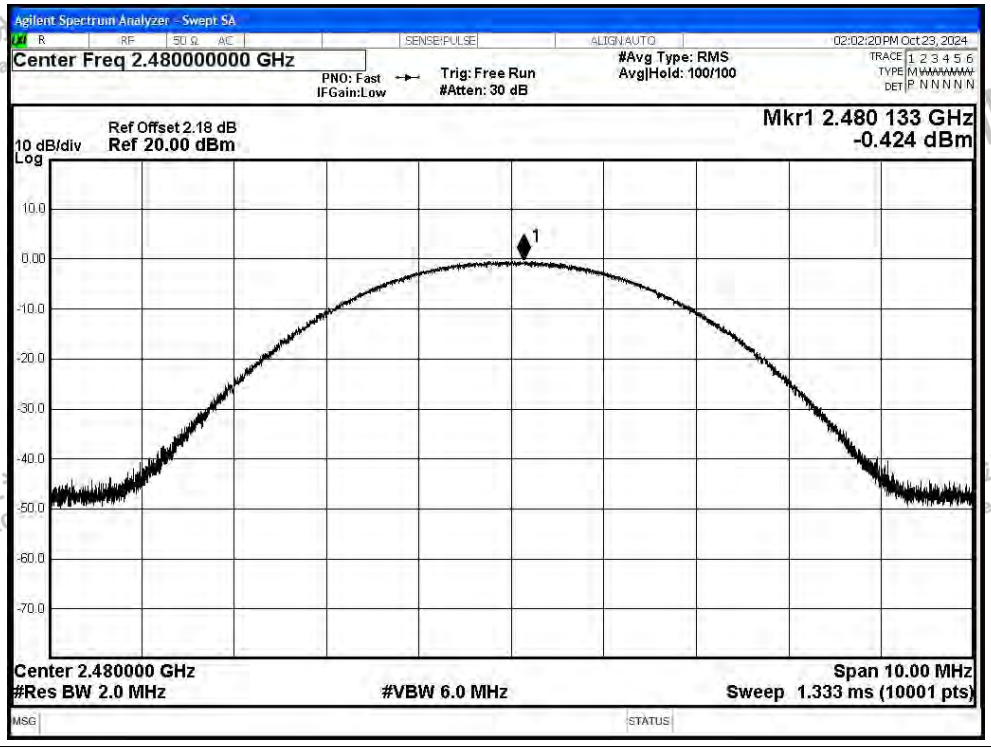
Power NVNT 2-DH5 2402MHz Ant1



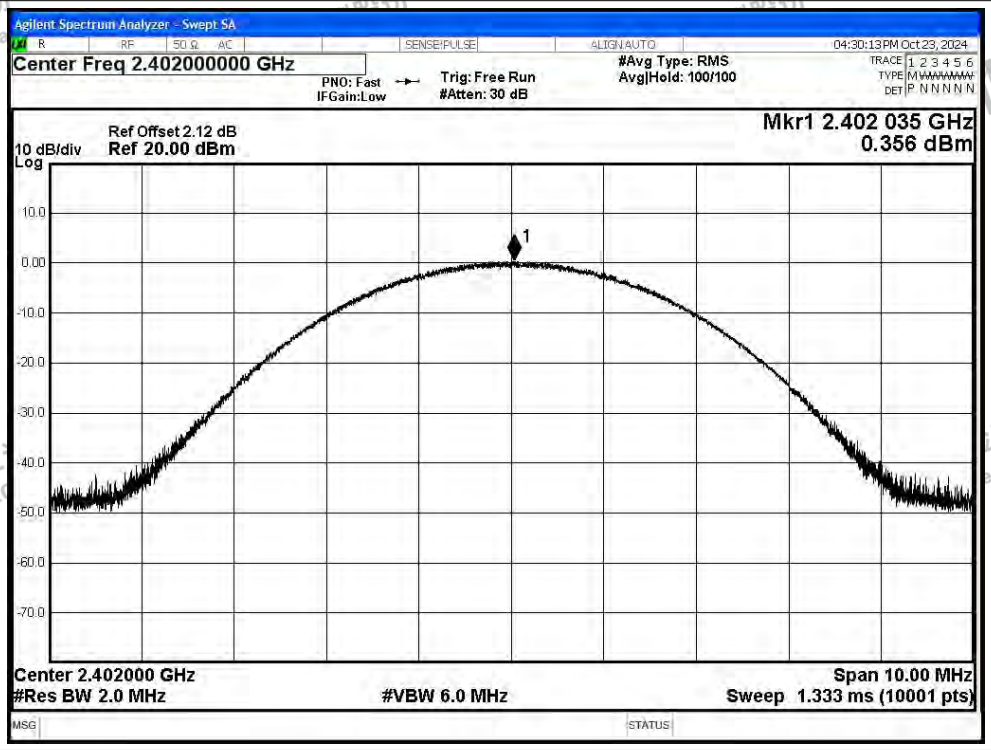
Power NVNT 2-DH5 2441MHz Ant1



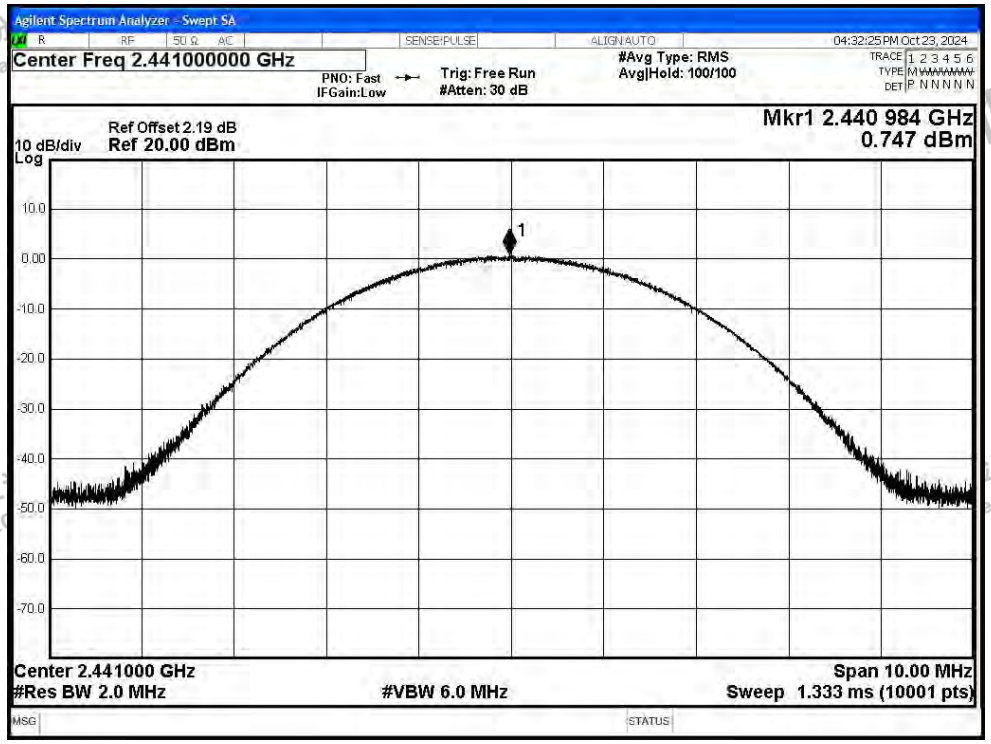
Power NVNT 2-DH5 2480MHz Ant1



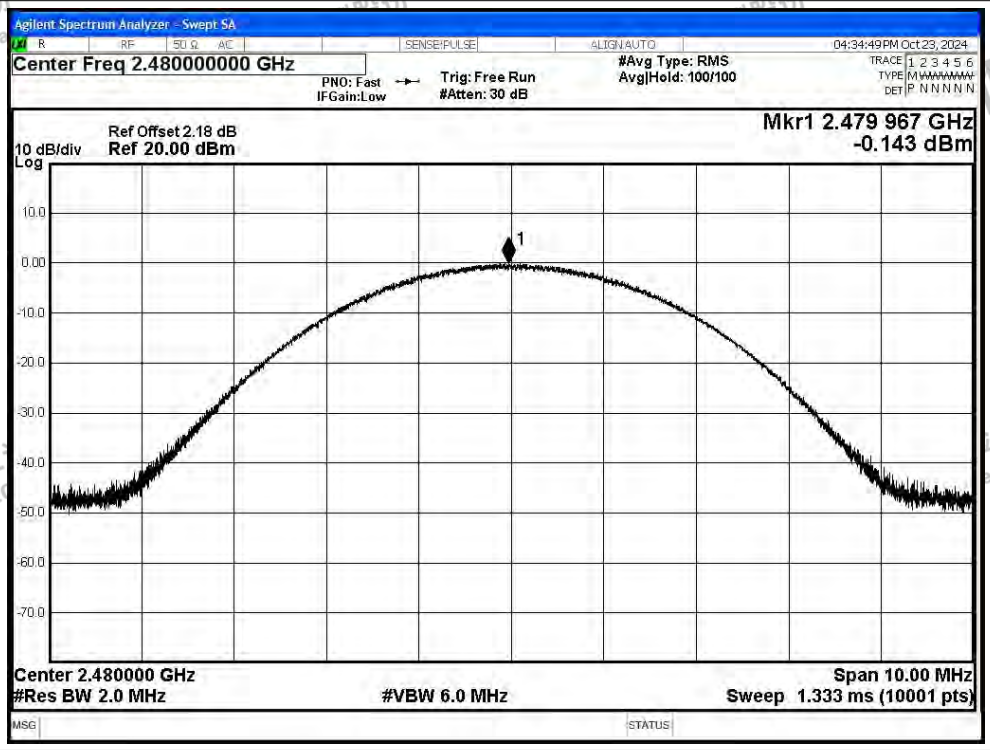
Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1



Power NVNT 3-DH5 2480MHz Ant1

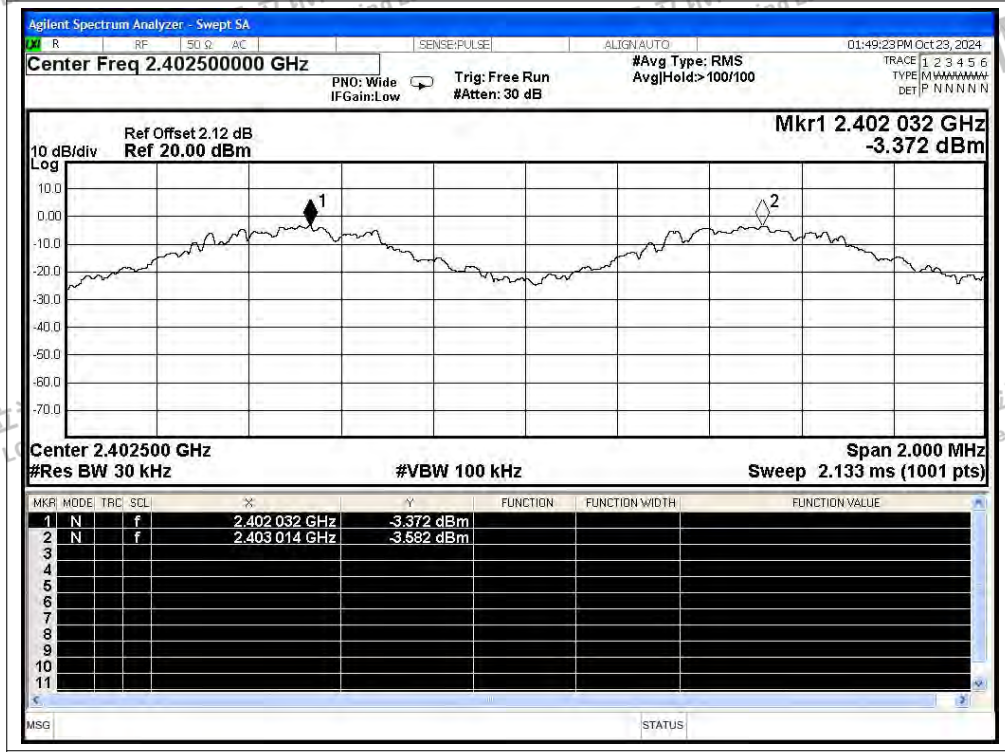


A.3 Carrier Frequencies Separation

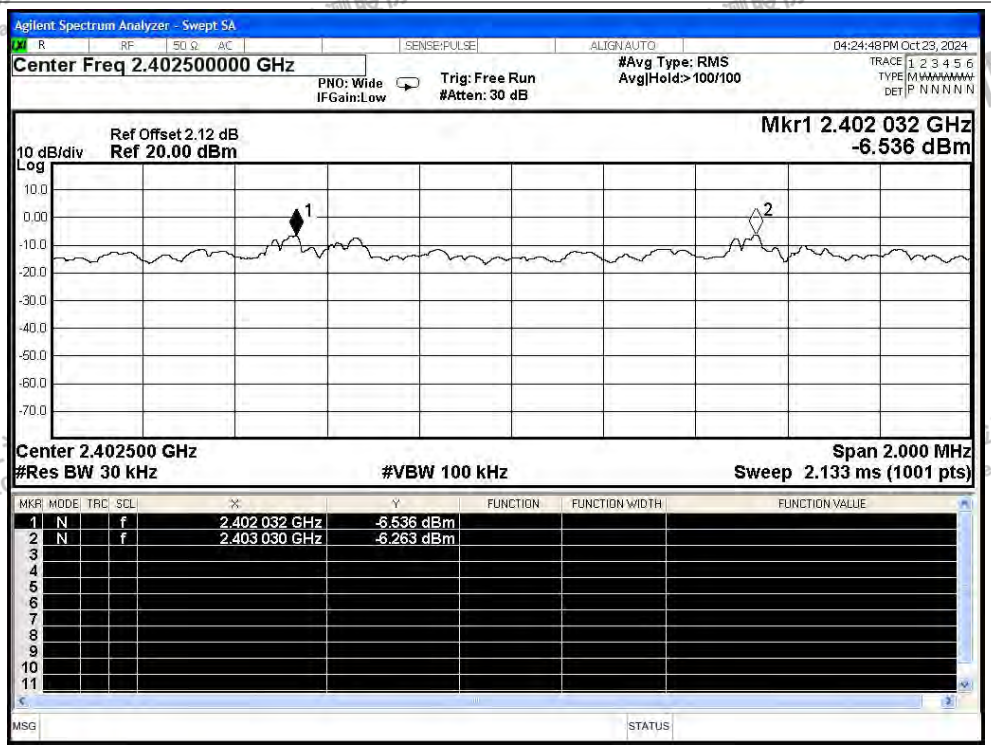
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.032	2403.014	0.982	0.647	Pass
NVNT	2-DH5	Ant1	2402.032	2403.03	0.998	0.855	Pass
NVNT	3-DH5	Ant1	2402.022	2403.026	1.004	0.87	Pass

Test Graphs

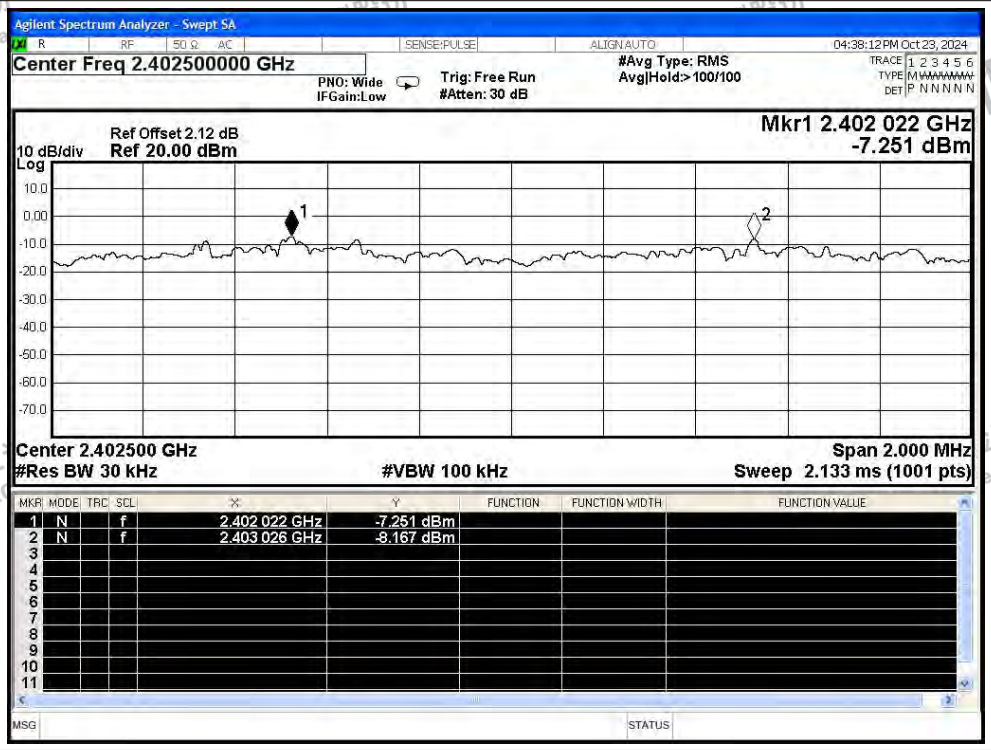
CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1



CFS NVNT 3-DH5 2402MHz Ant1

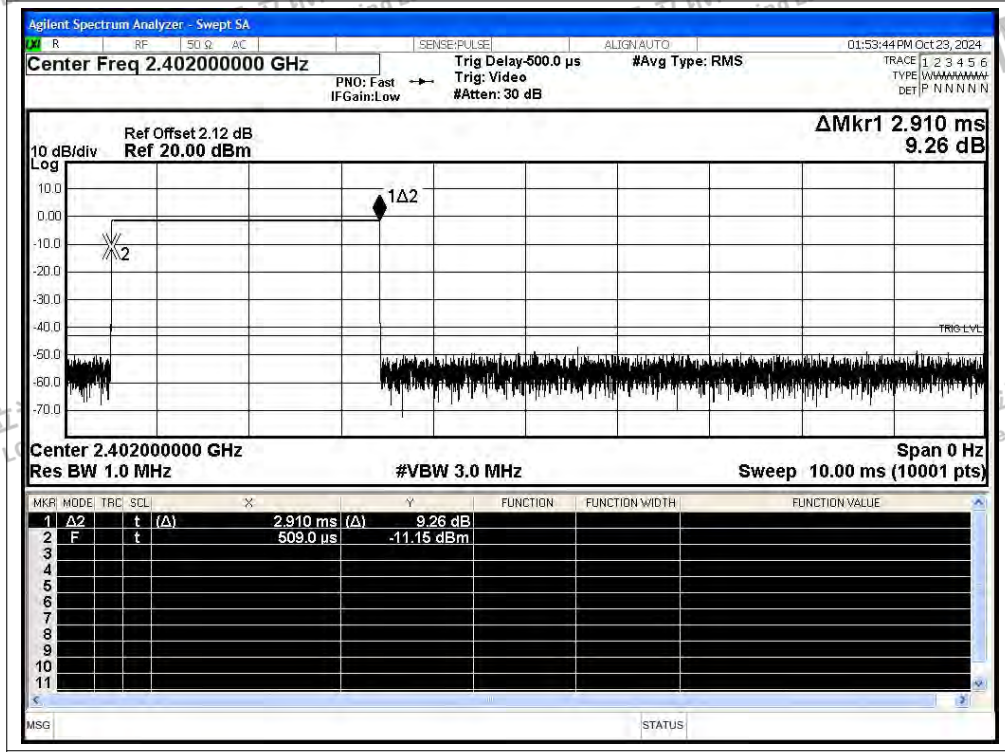


A.4 Dwell Time

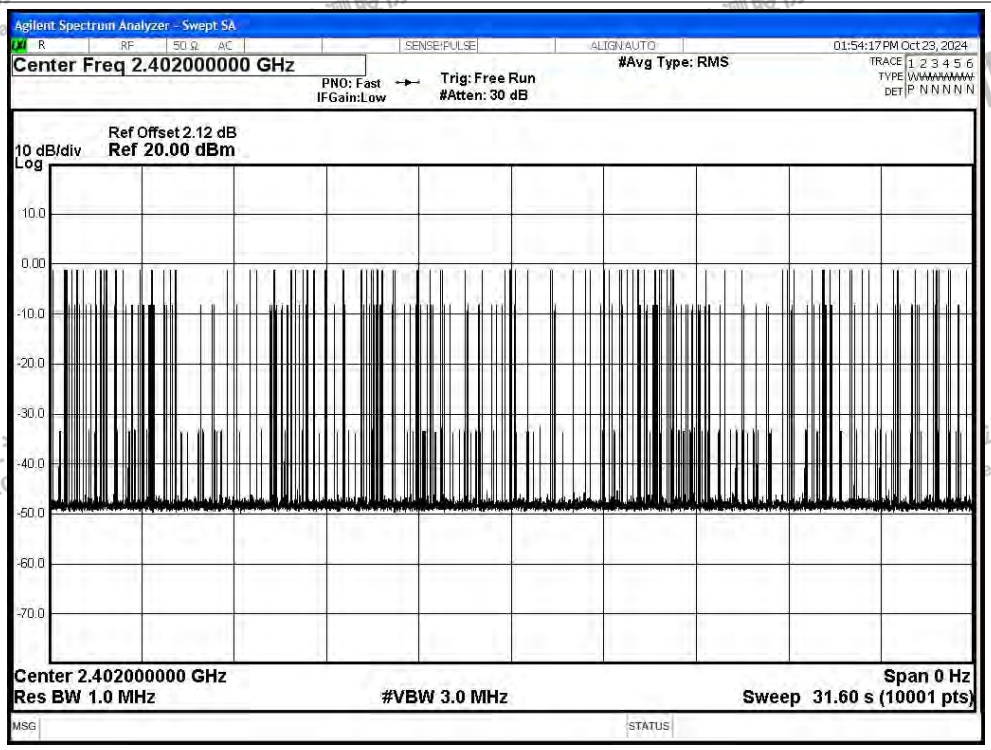
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.91	296.82	102	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	304.29	105	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.896	306.976	106	31600	400	Pass

Test Graphs

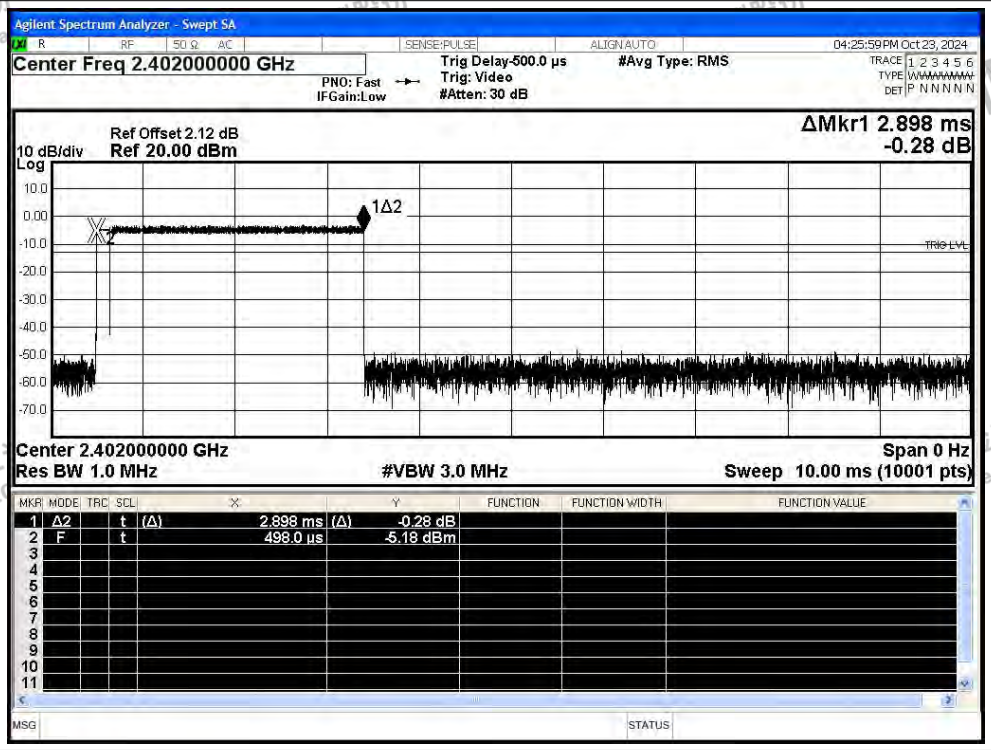
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



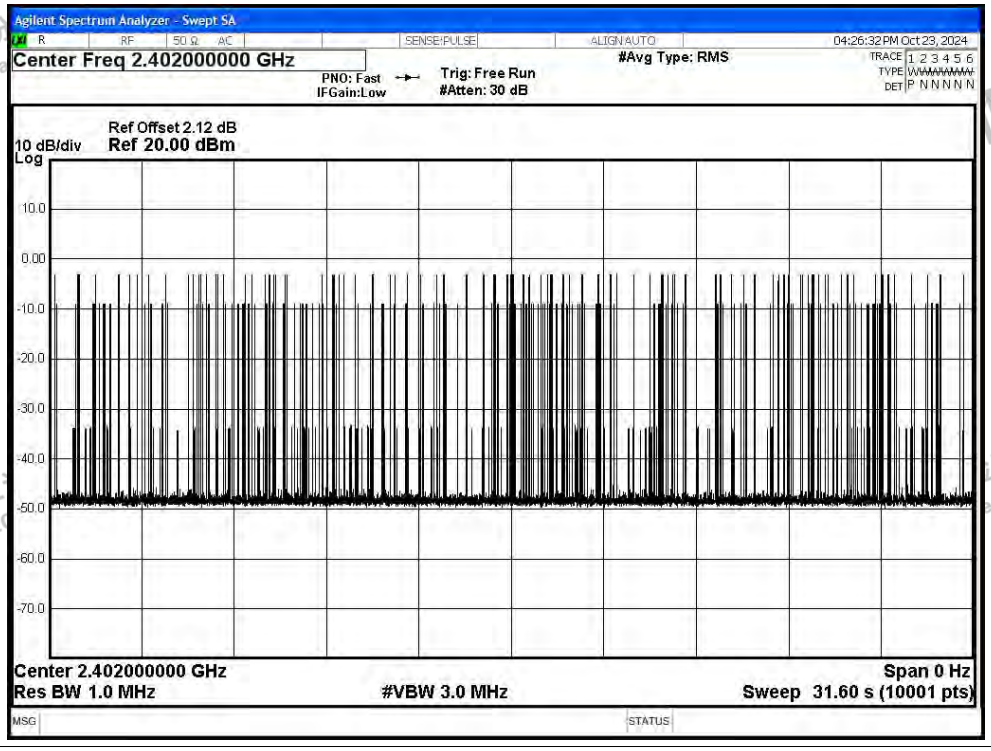
Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



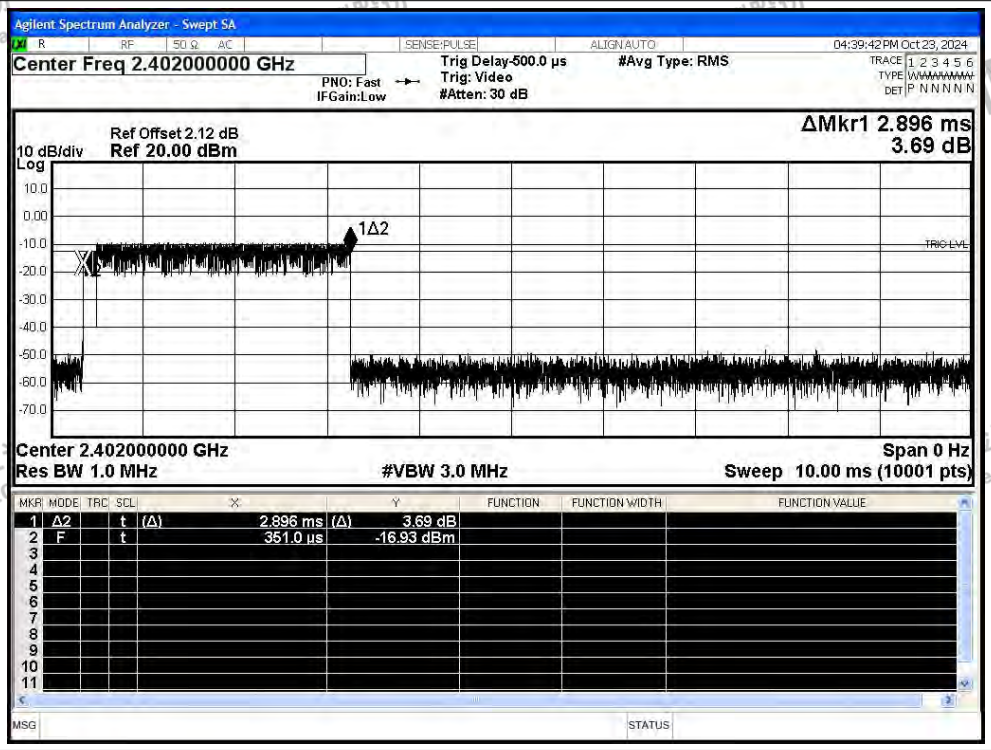
Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



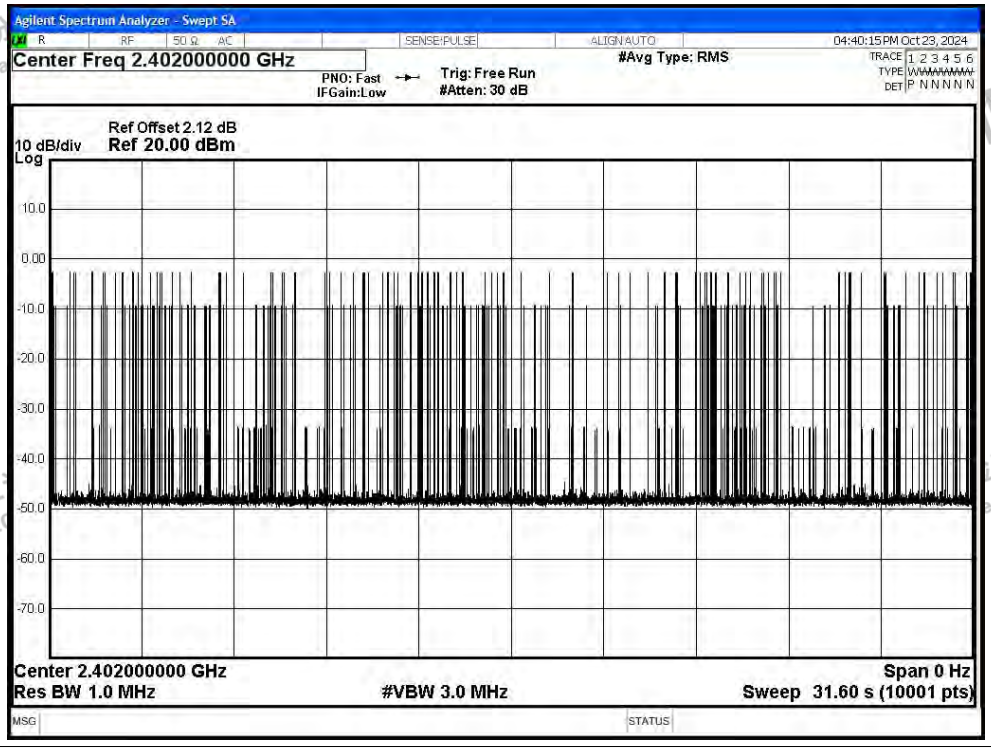
Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated

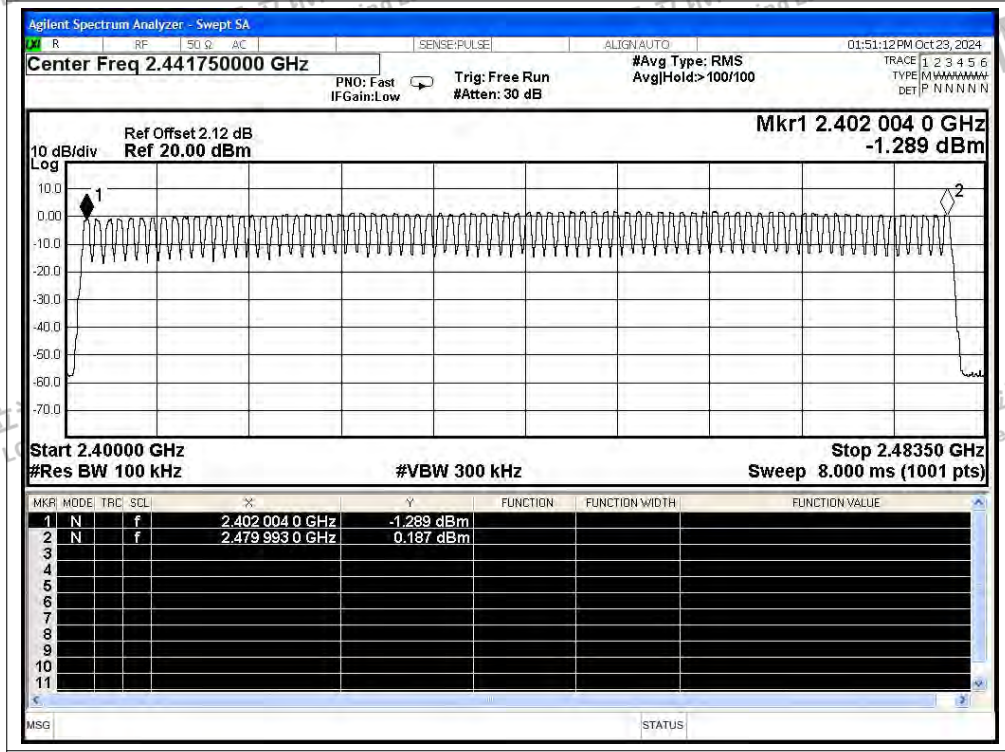


A.5 Number of Hopping Channel

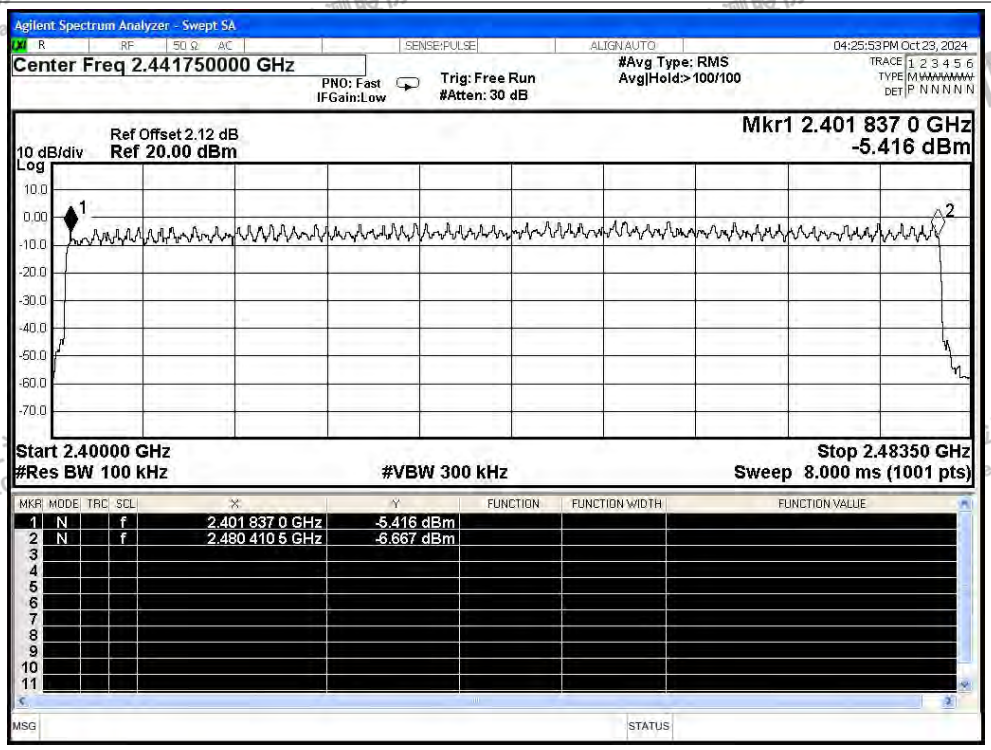
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

Test Graphs

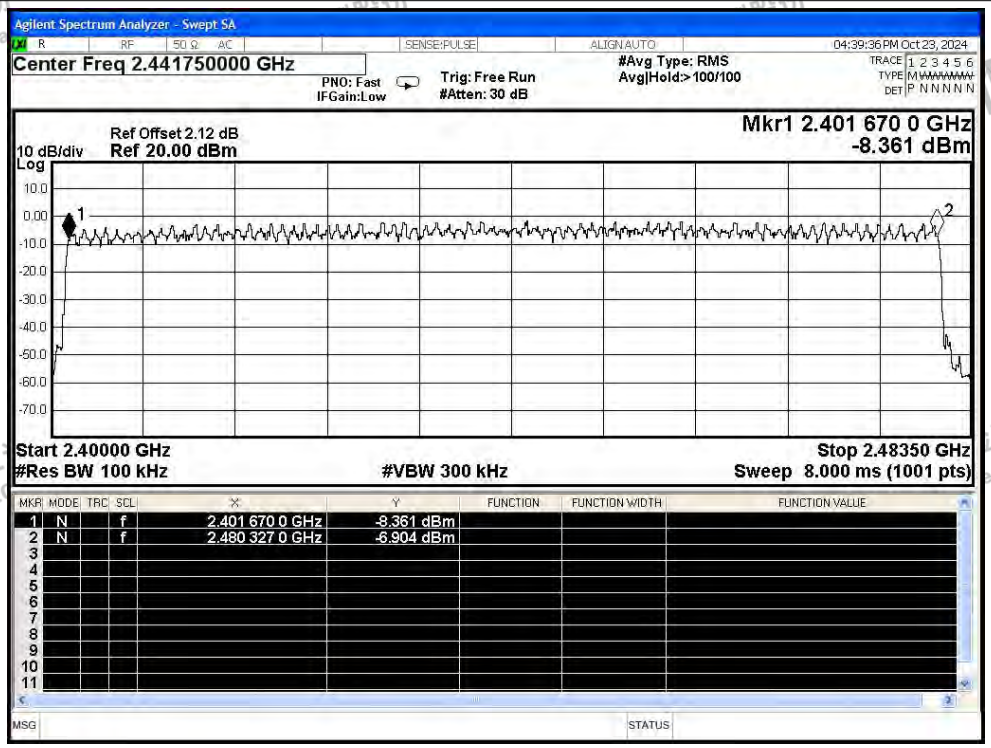
Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1



Hopping No. NVNT 3-DH5 2402MHz Ant1

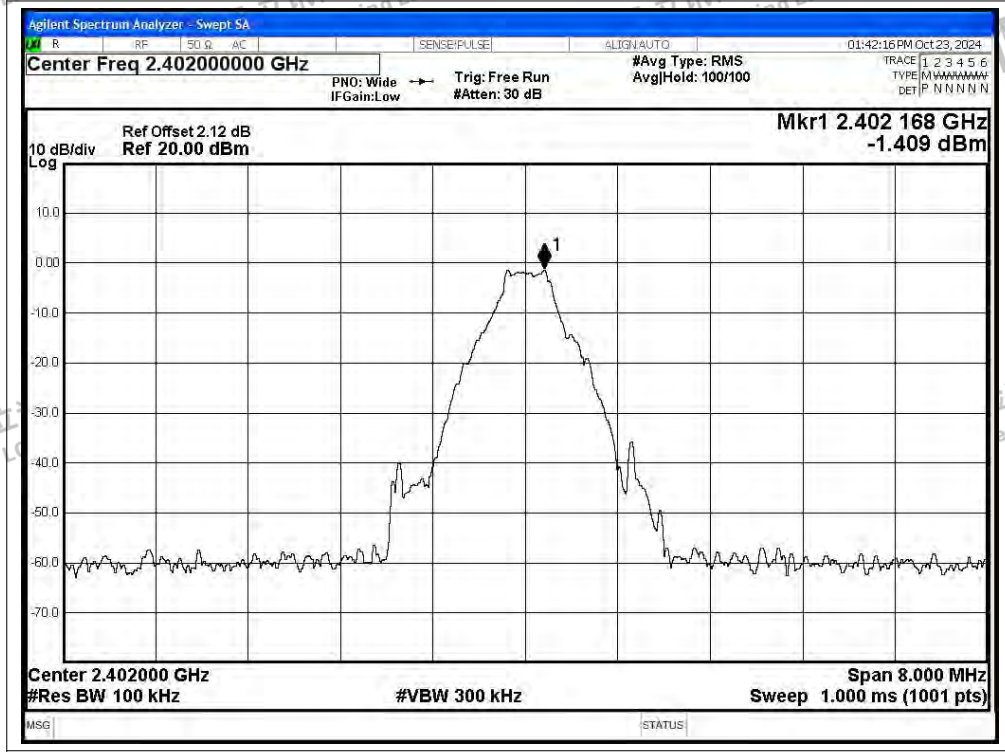


A.6 Band Edge

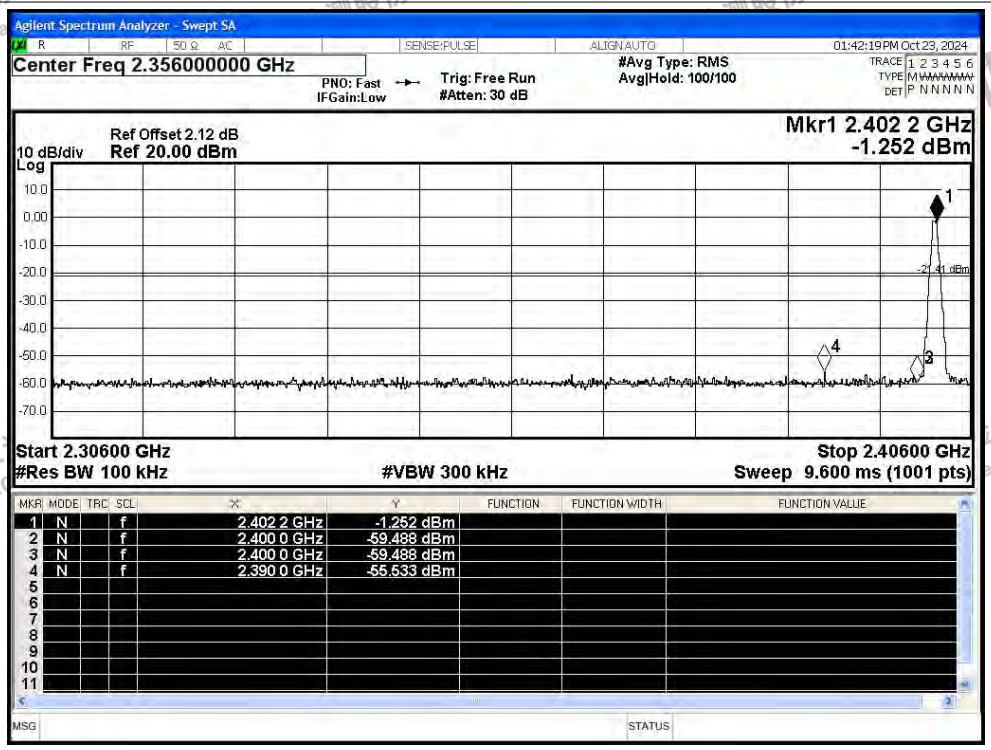
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-54.12	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-57.59	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-51.93	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-52.92	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-50.69	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-52.08	-20	Pass

Test Graphs

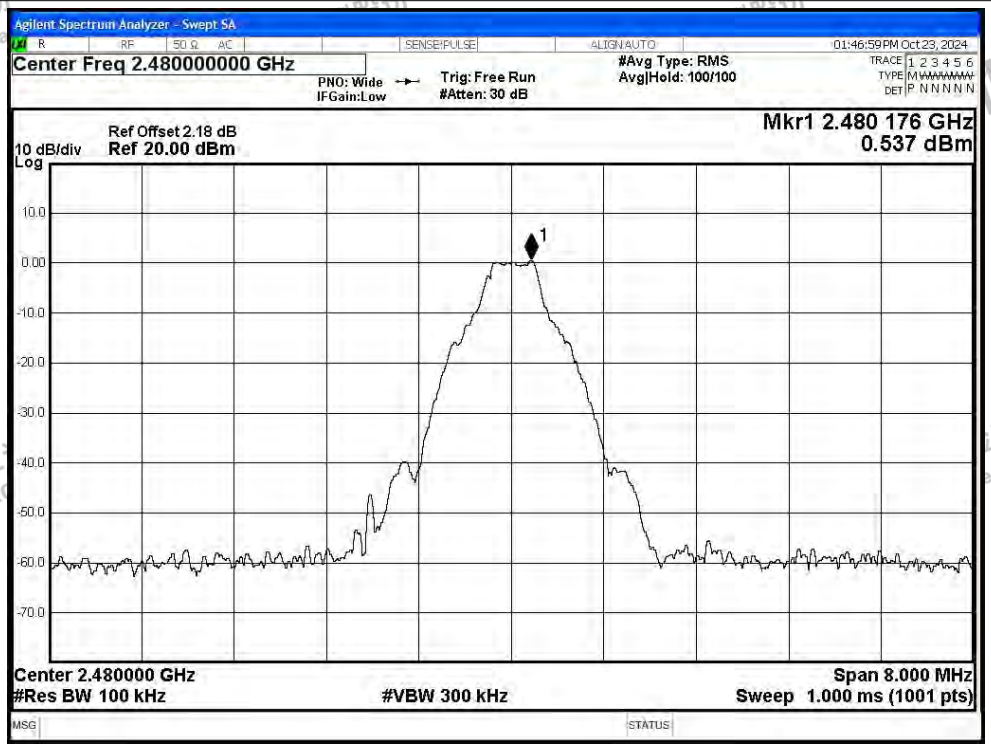
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



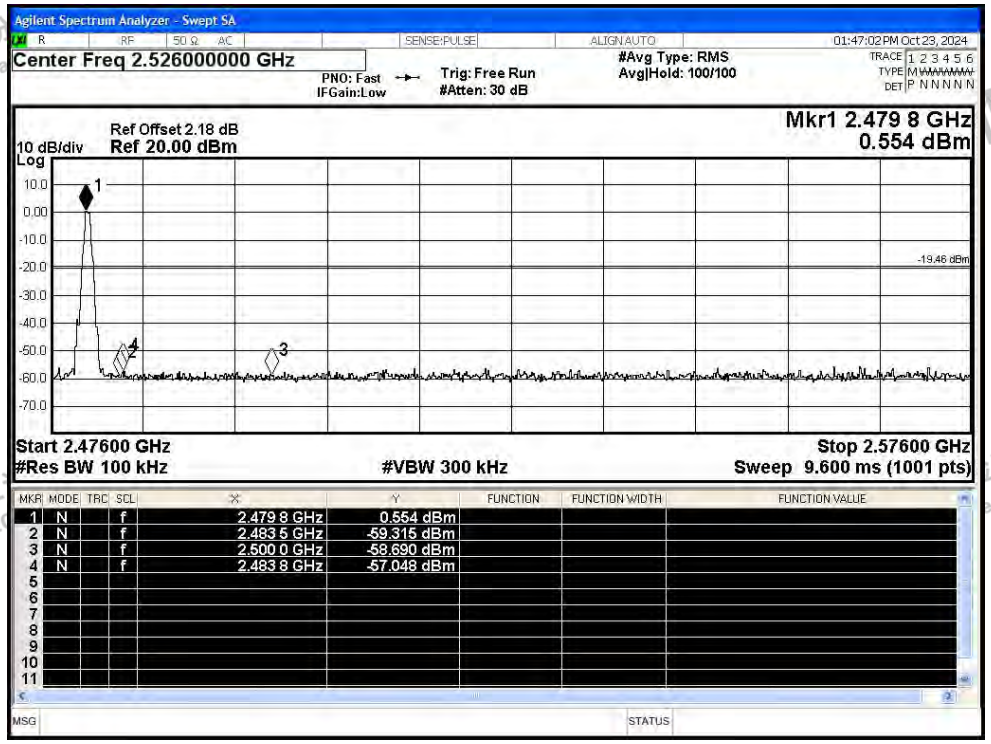
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



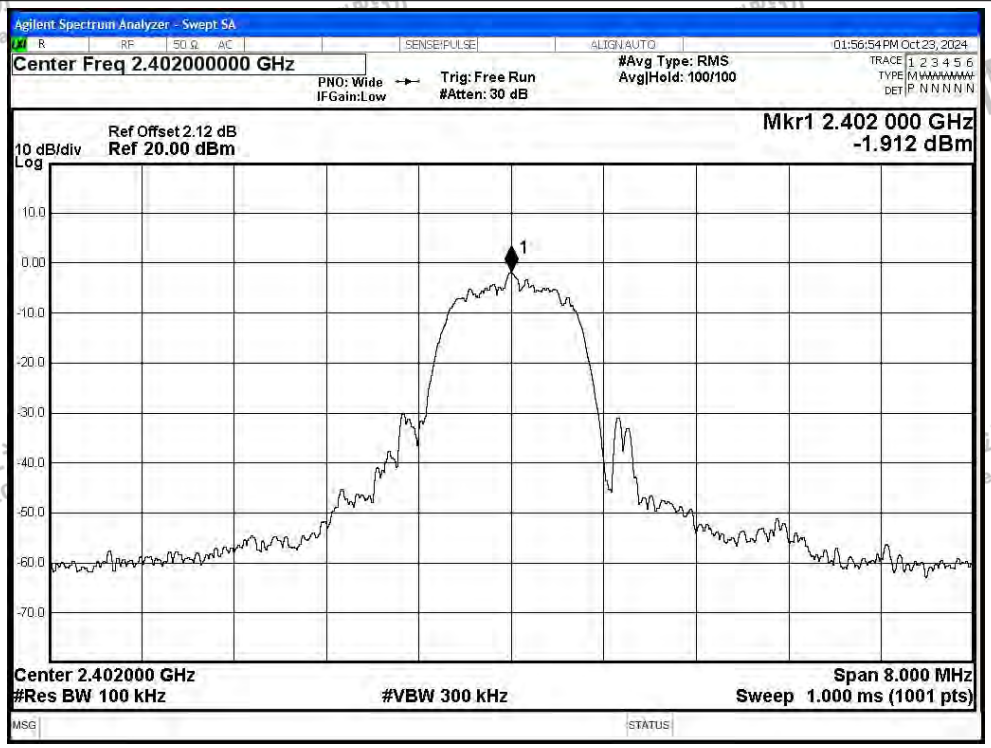
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



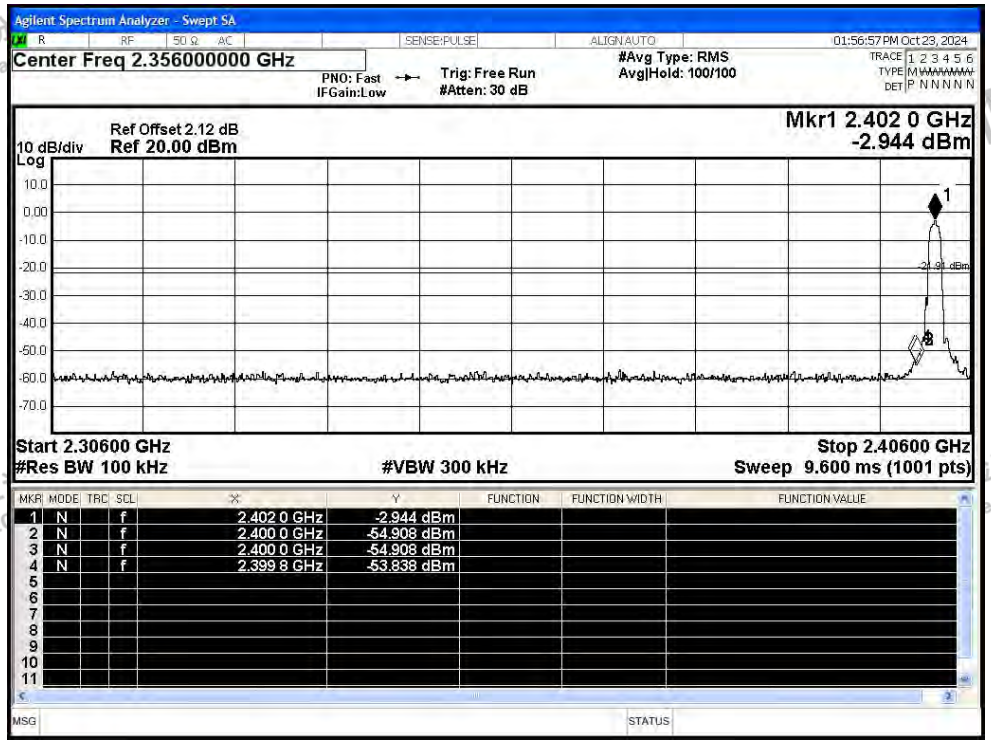
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



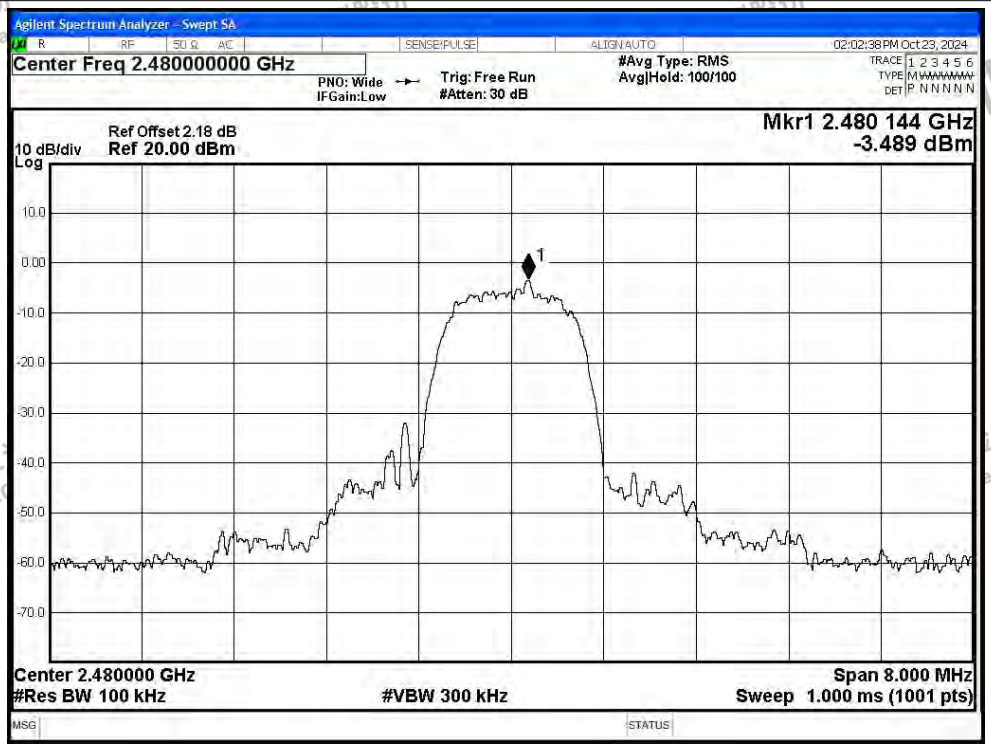
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



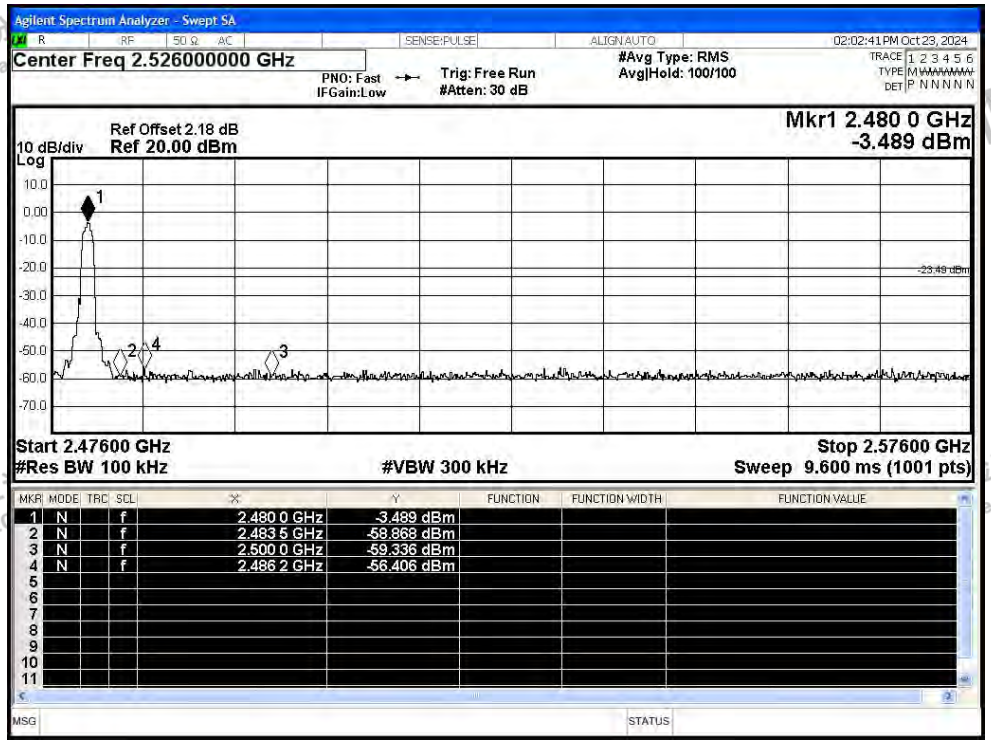
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



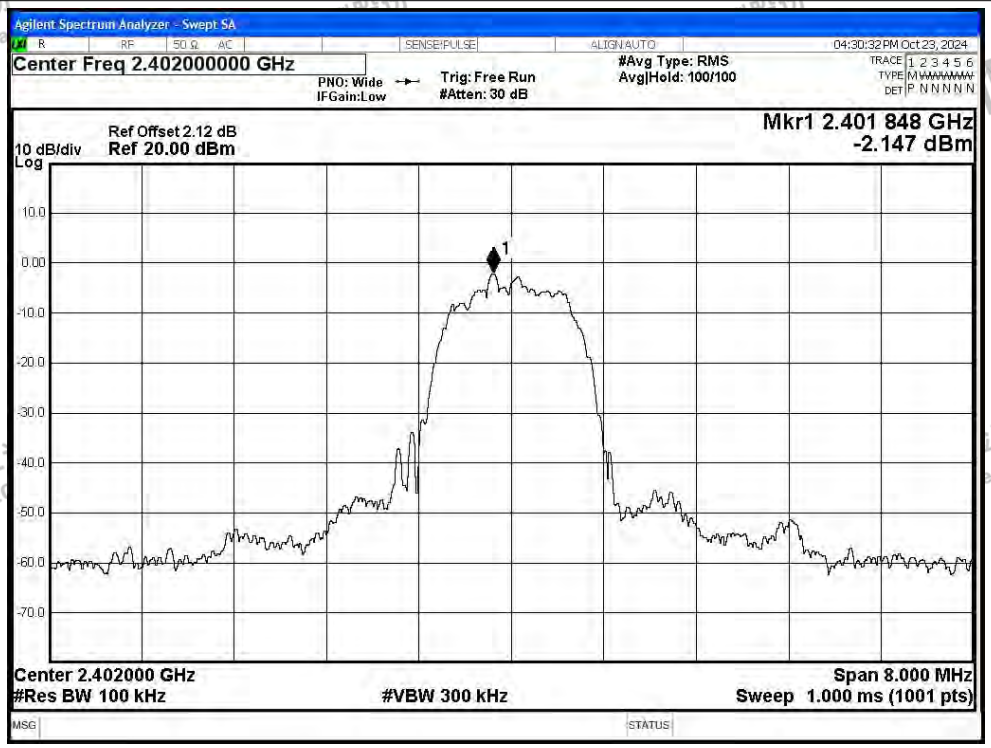
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



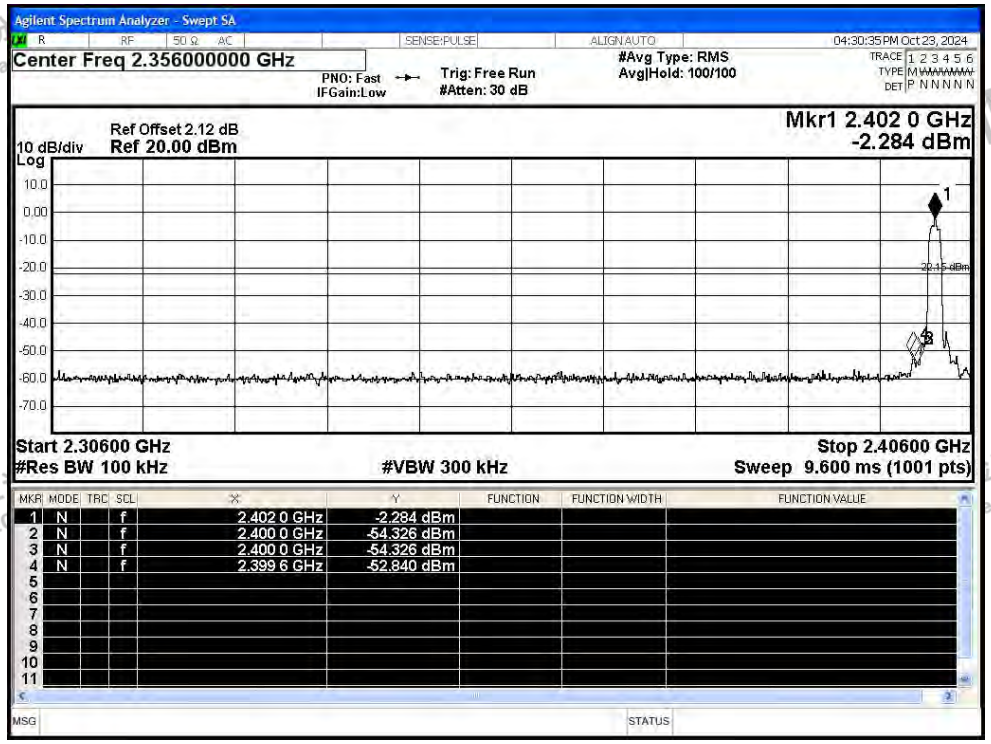
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



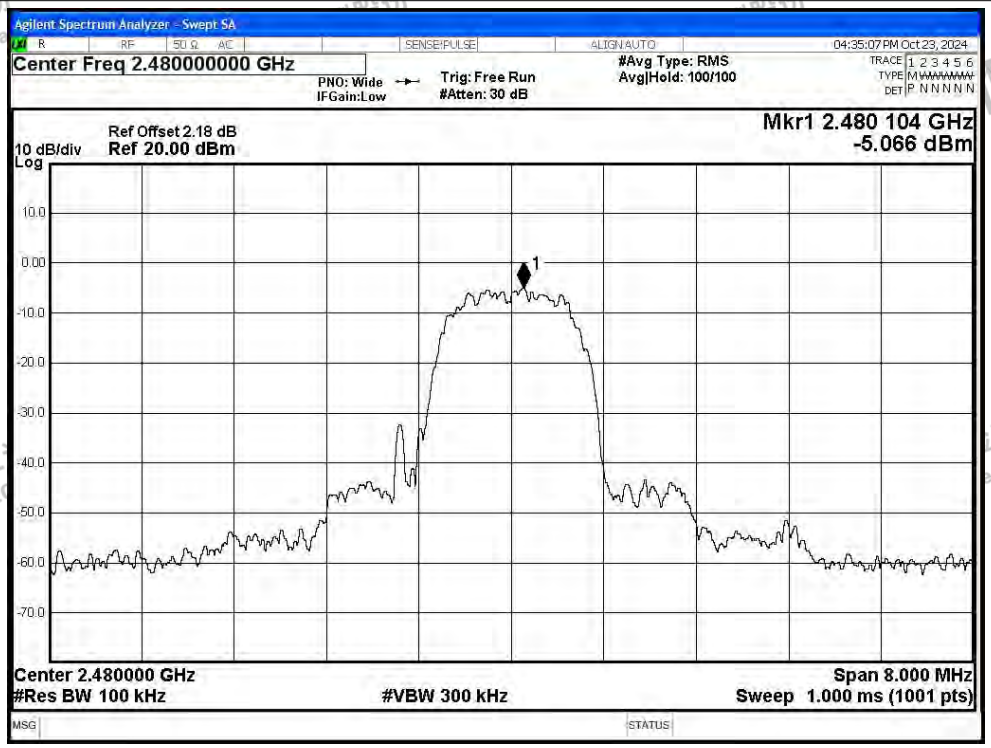
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



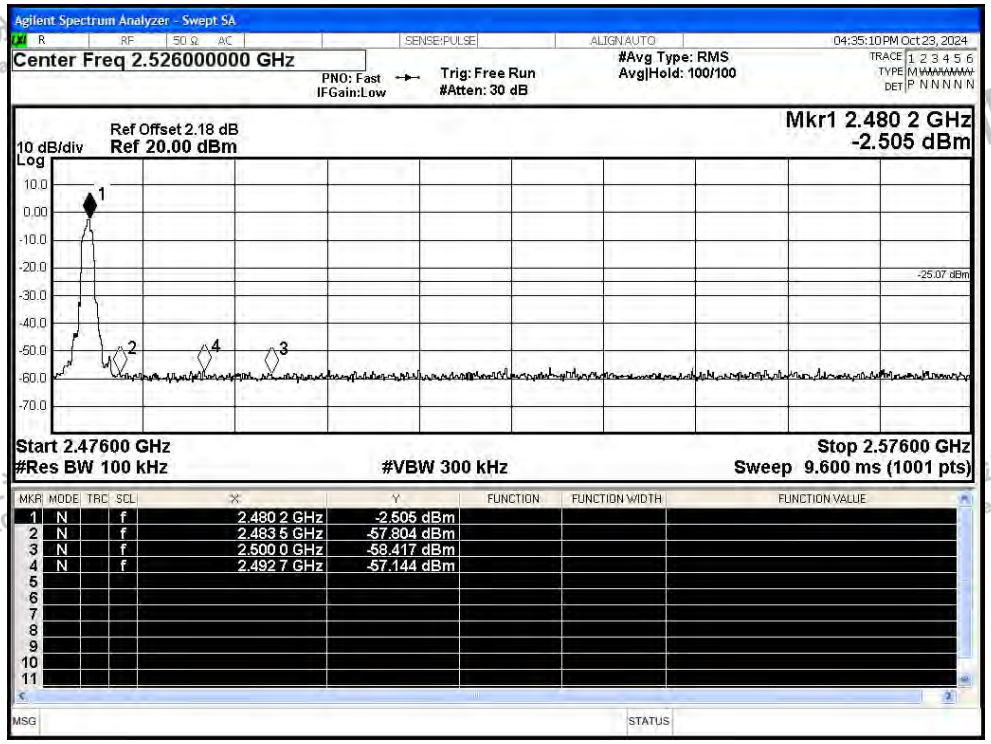
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



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



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

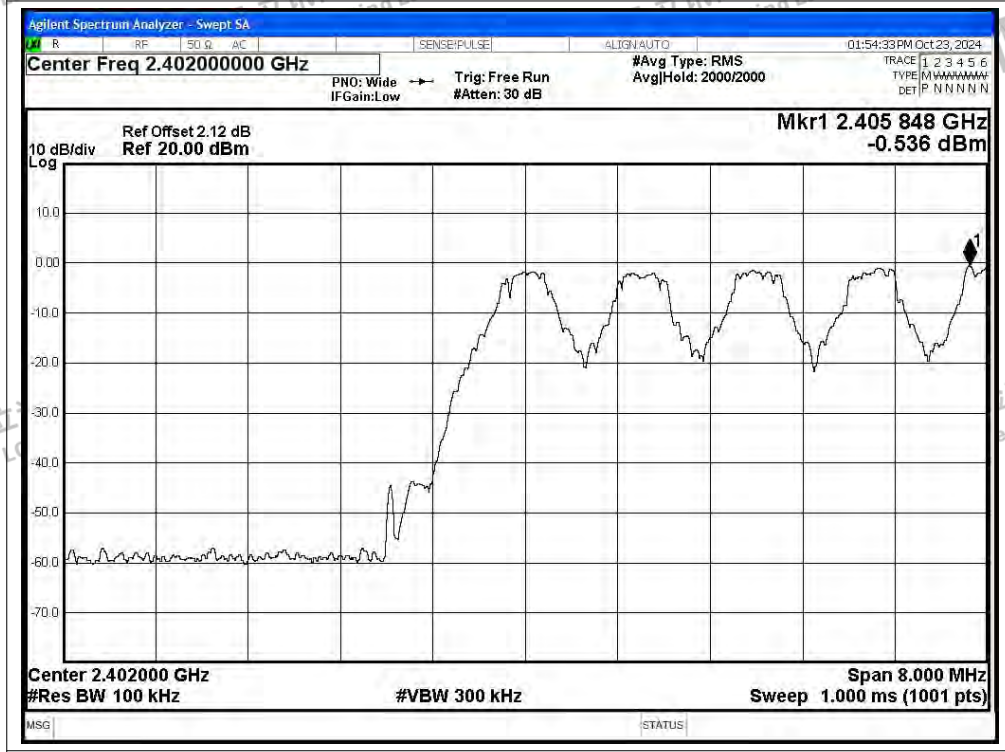


(Hopping)

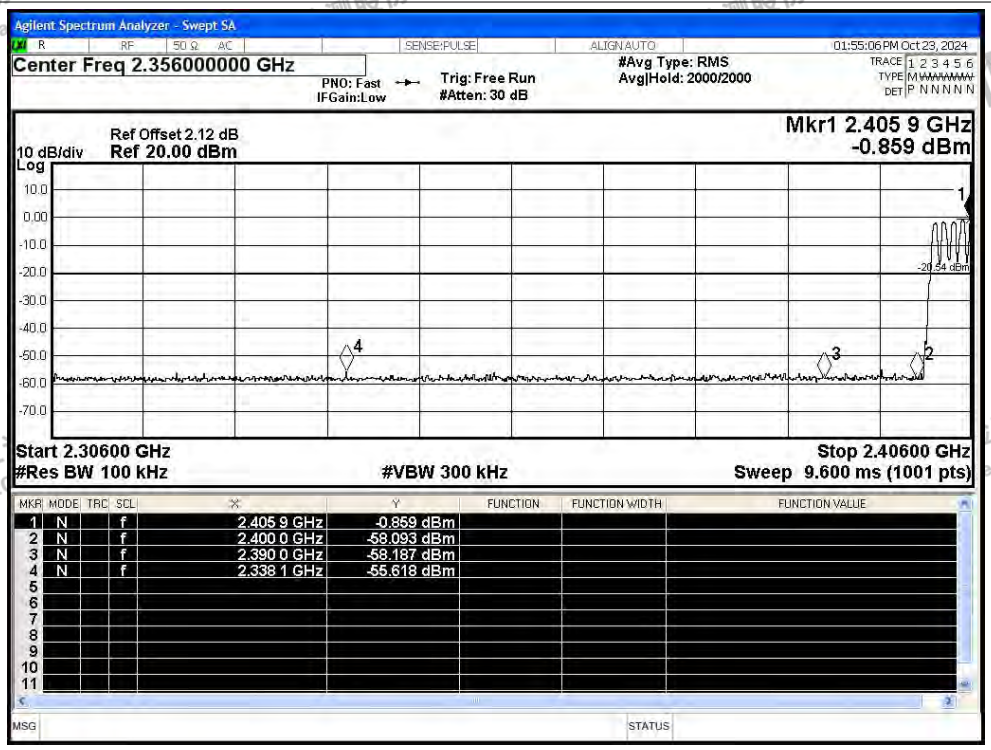
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-55.08	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-56.37	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-51.72	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-53.3	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-52.04	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-52.59	-20	Pass

Test Graphs

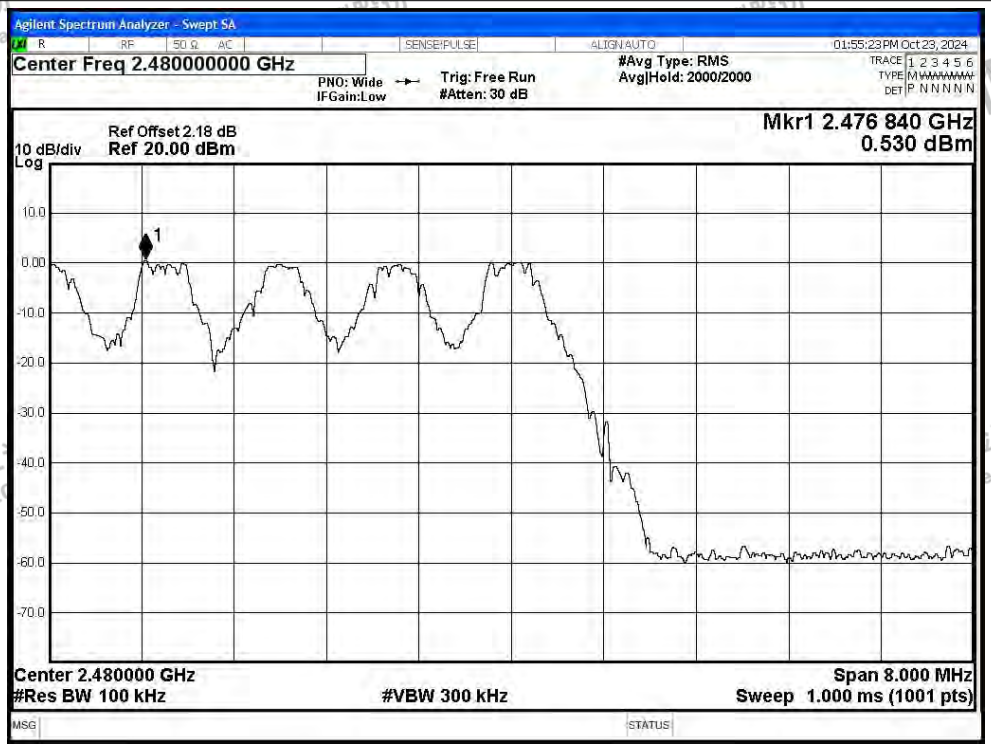
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



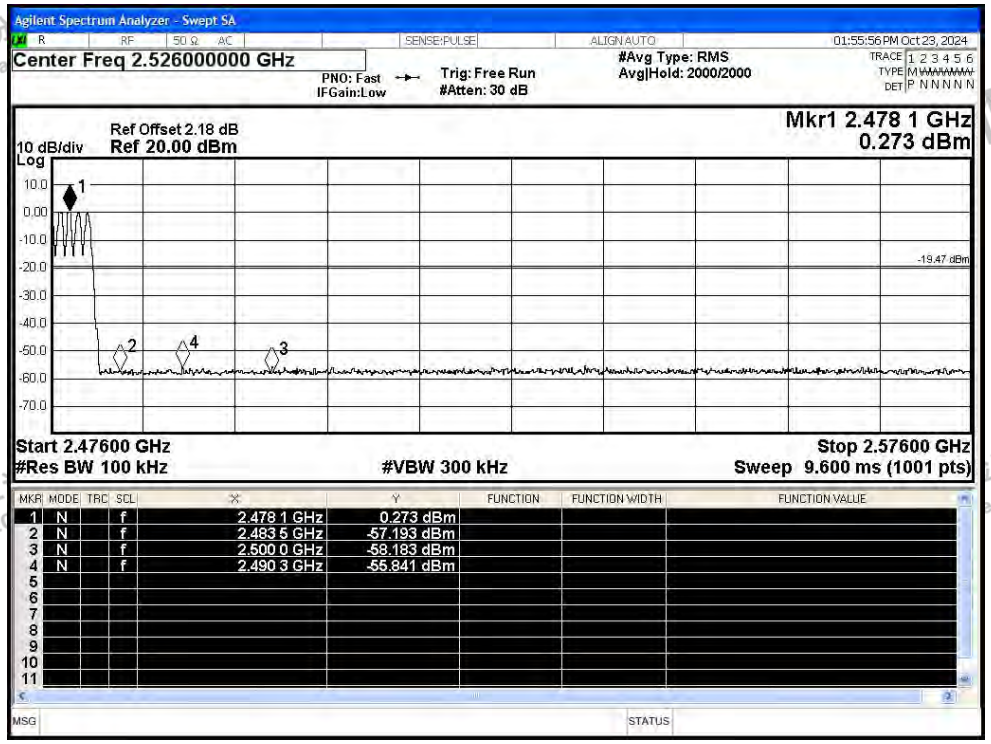
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



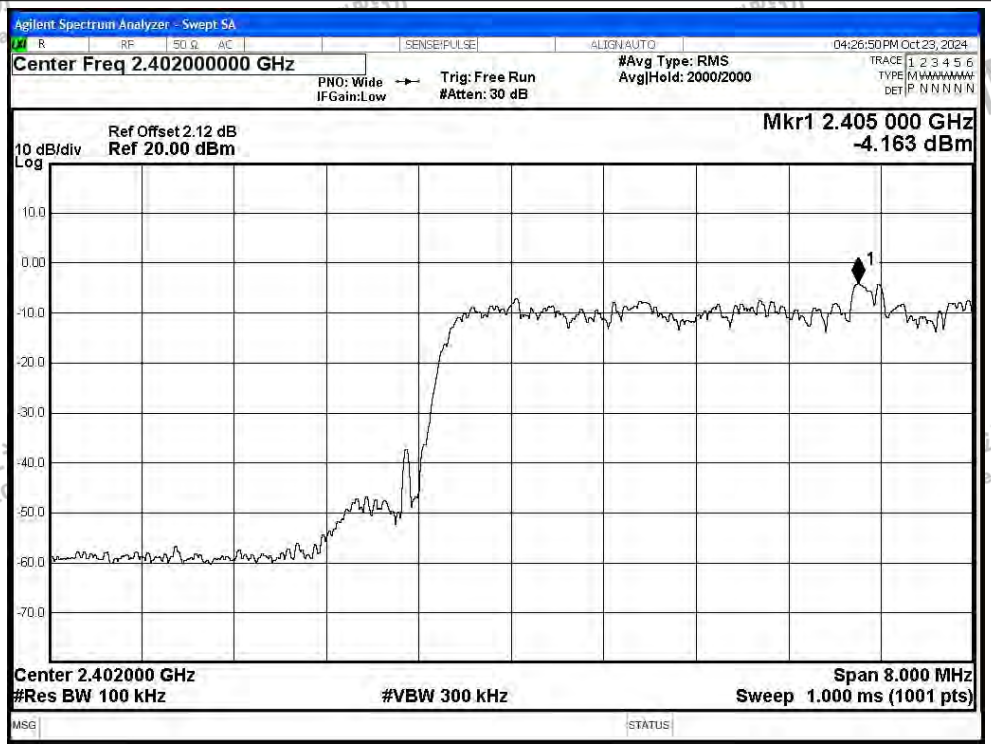
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



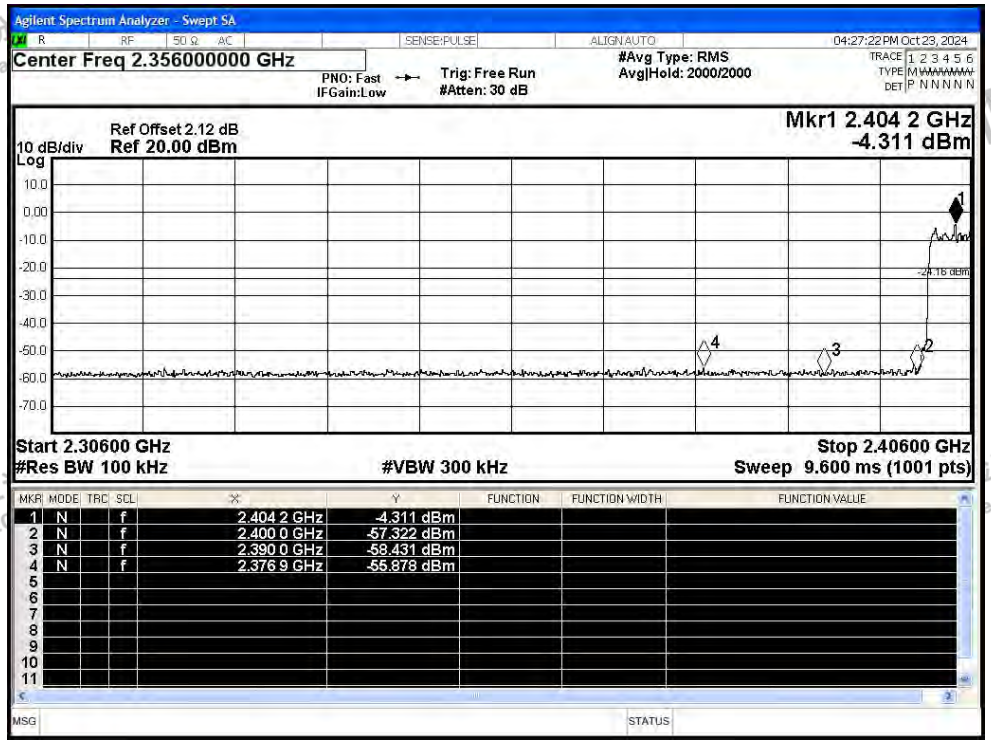
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



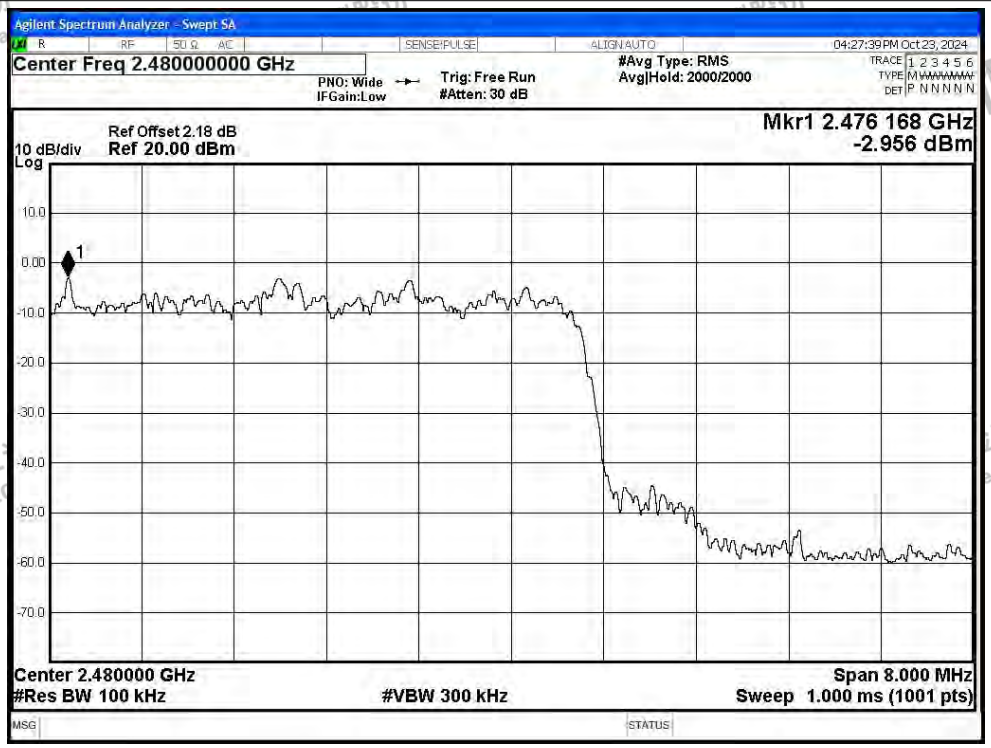
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



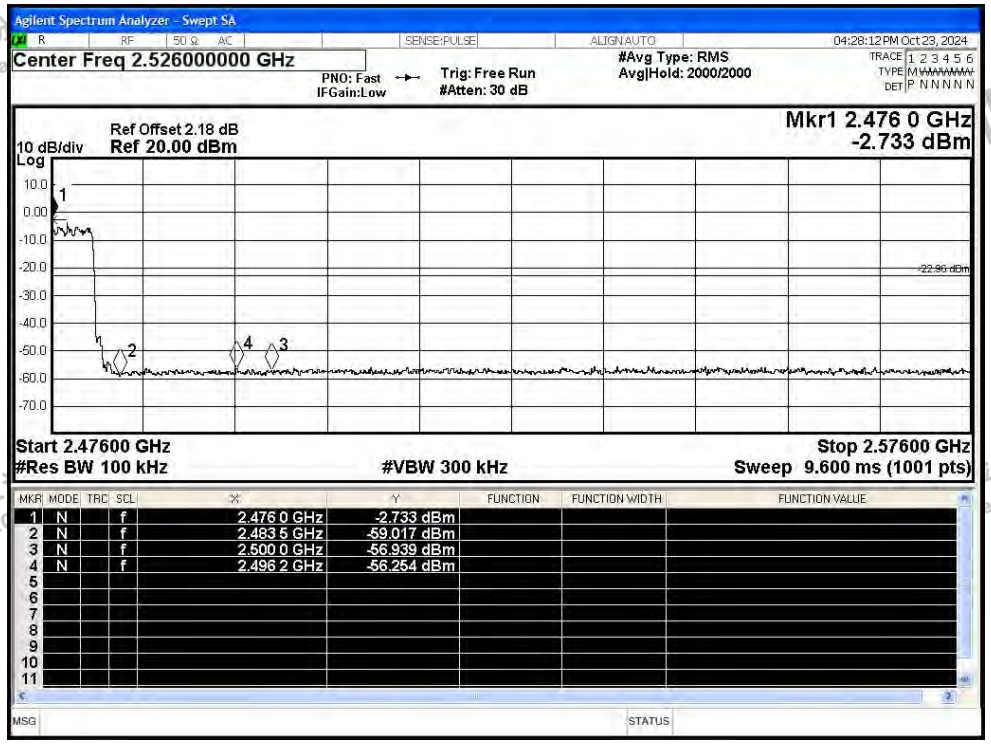
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



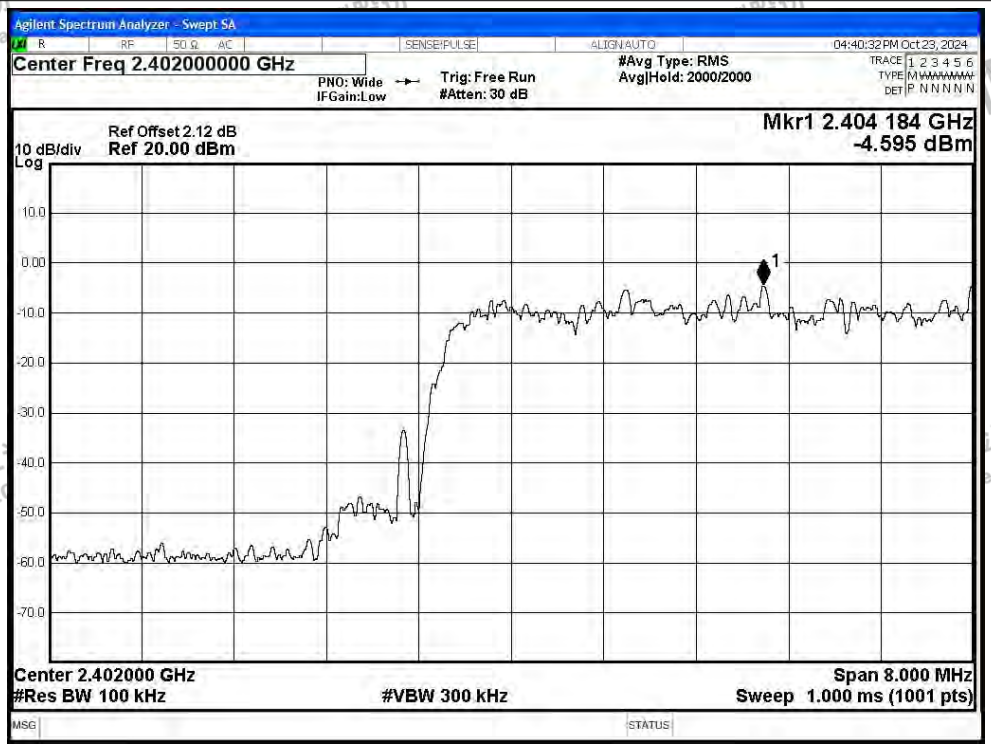
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



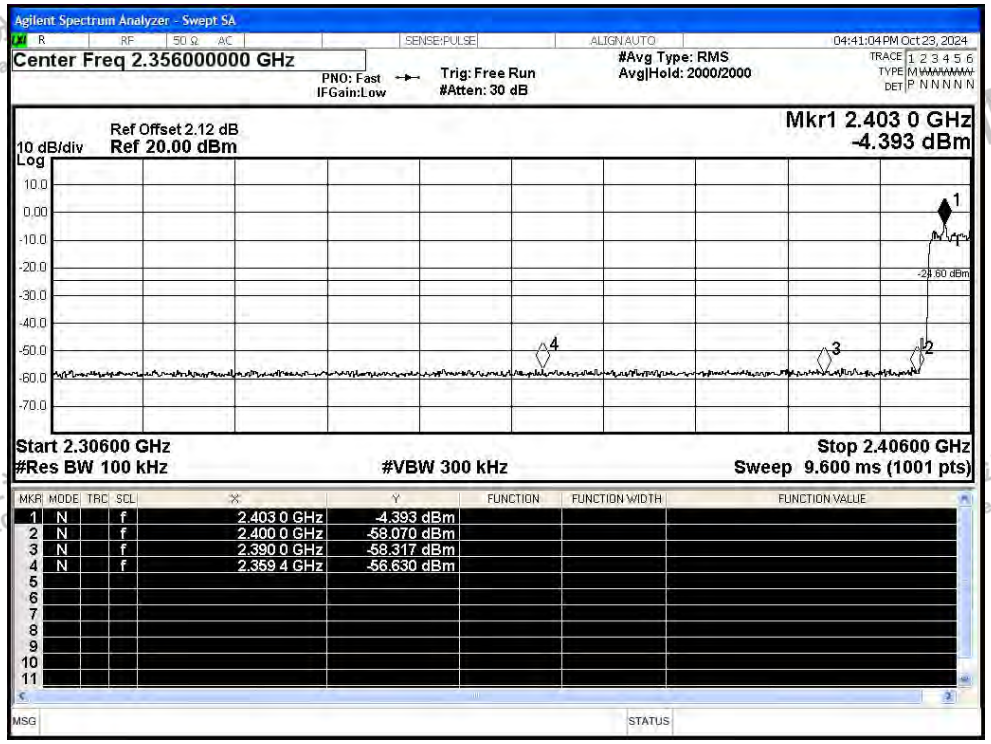
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission



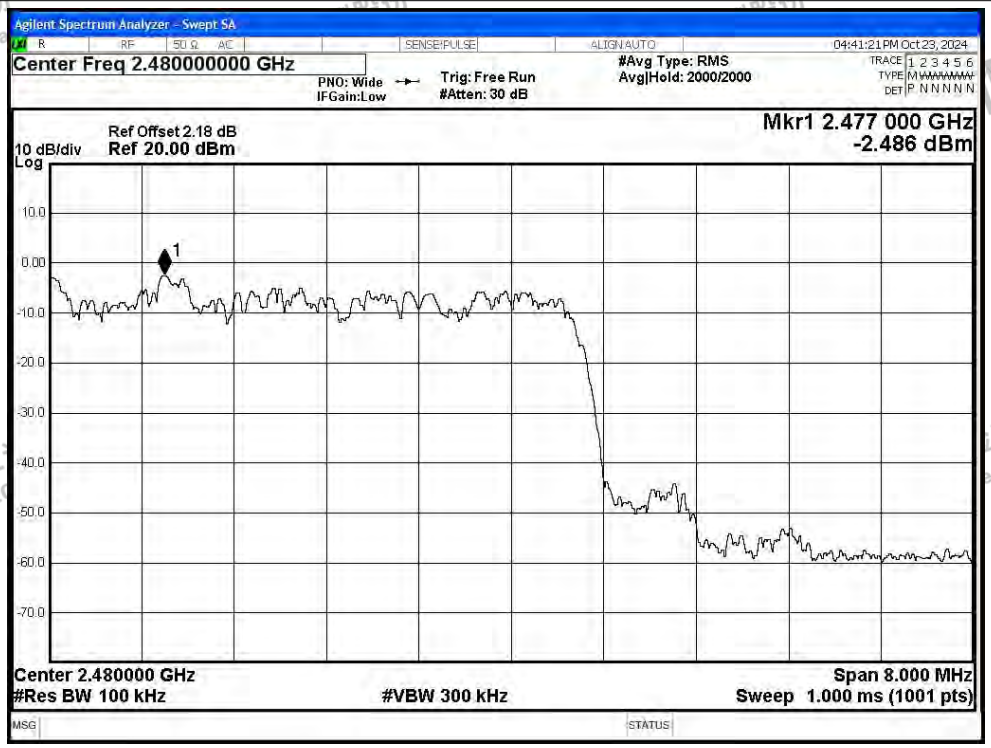
Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref



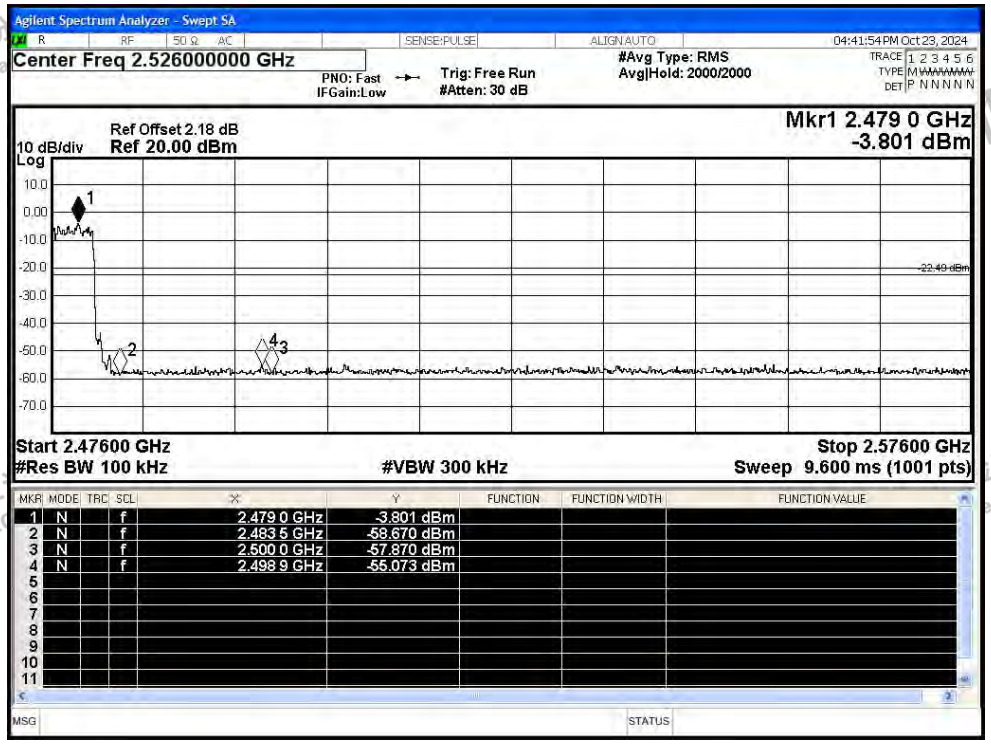
Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission



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



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



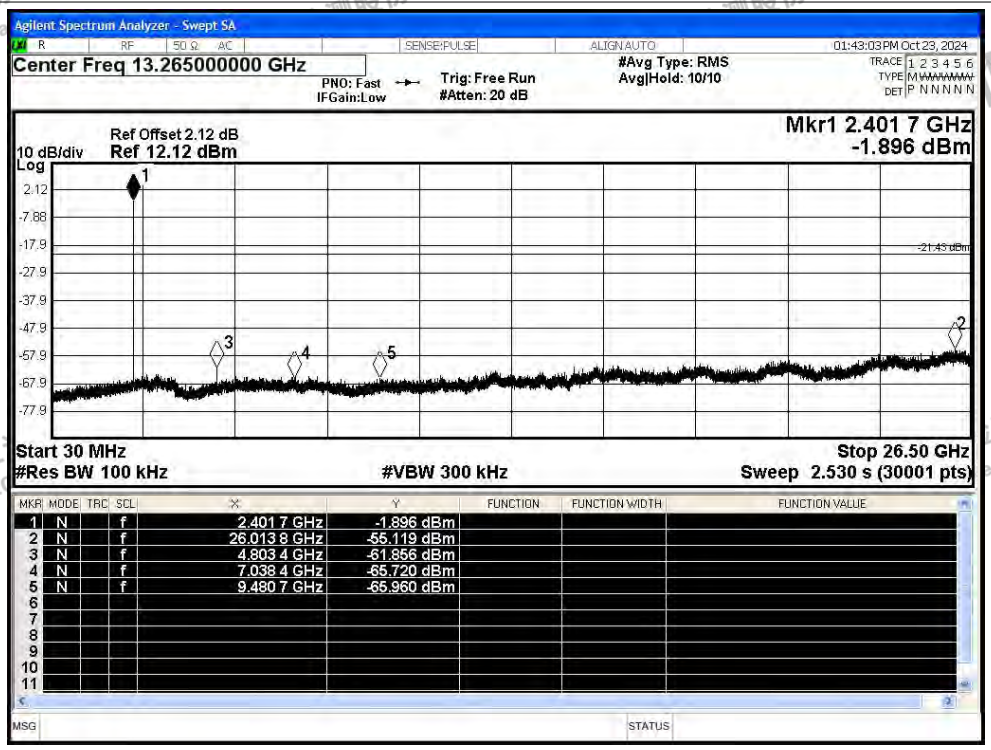
A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-53.69	-20	Pass
NVNT	1-DH5	2441	Ant1	-54.75	-20	Pass
NVNT	1-DH5	2480	Ant1	-55.04	-20	Pass
NVNT	2-DH5	2402	Ant1	-54.33	-20	Pass
NVNT	2-DH5	2441	Ant1	-53.85	-20	Pass
NVNT	2-DH5	2480	Ant1	-52.59	-20	Pass
NVNT	3-DH5	2402	Ant1	-53.17	-20	Pass
NVNT	3-DH5	2441	Ant1	-53.53	-20	Pass
NVNT	3-DH5	2480	Ant1	-50.9	-20	Pass

Test Graphs

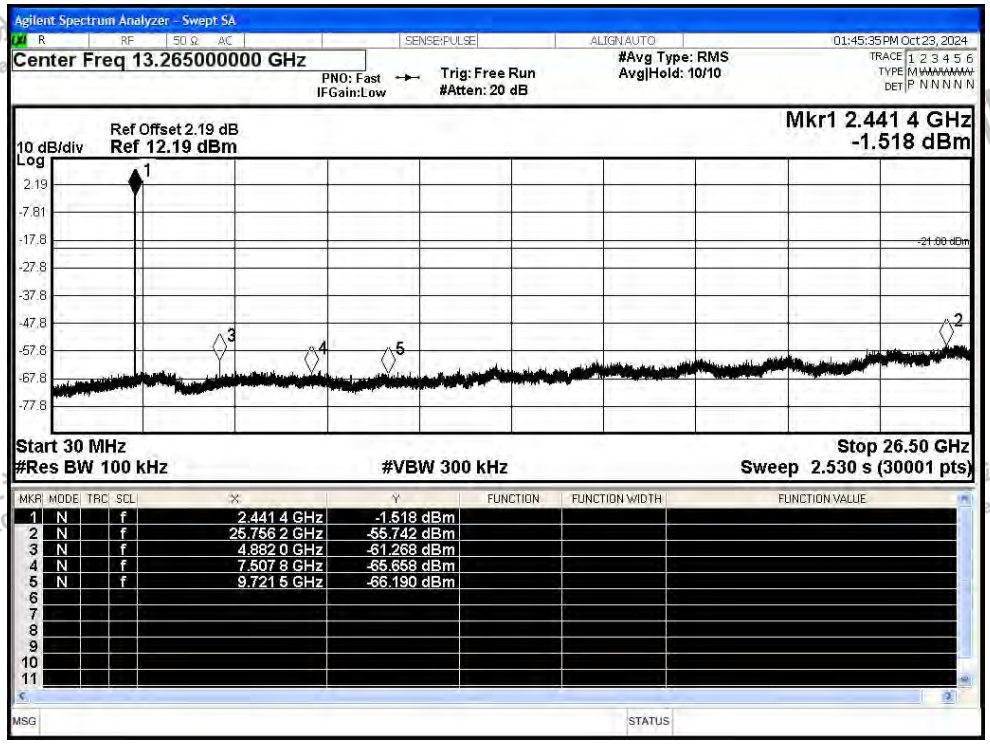
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

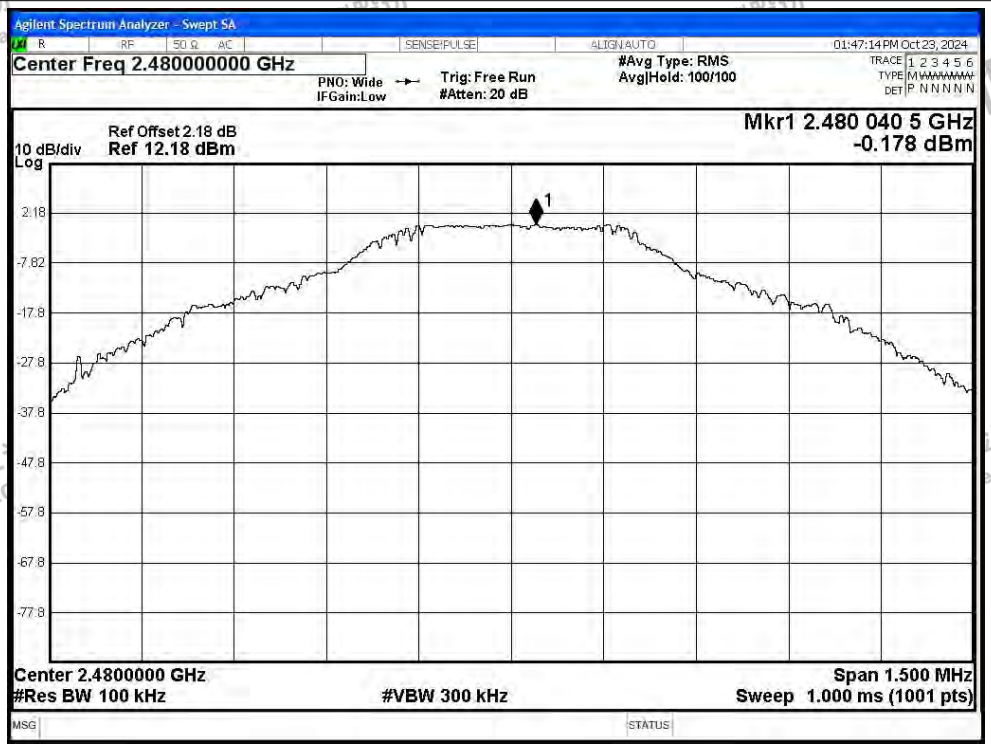


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

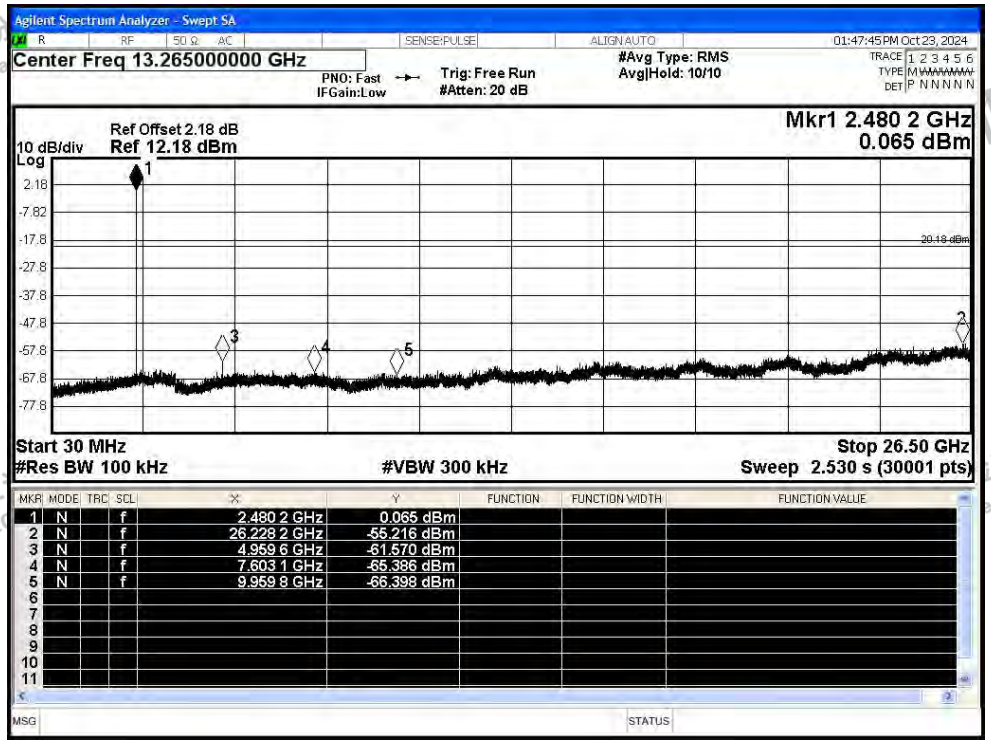
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



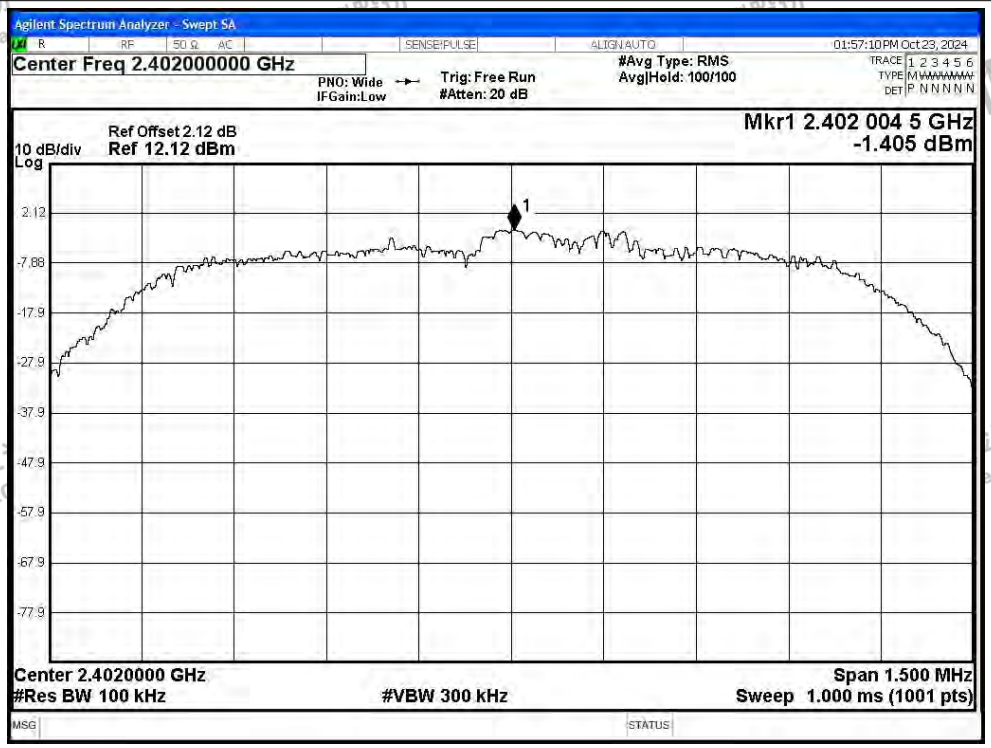
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



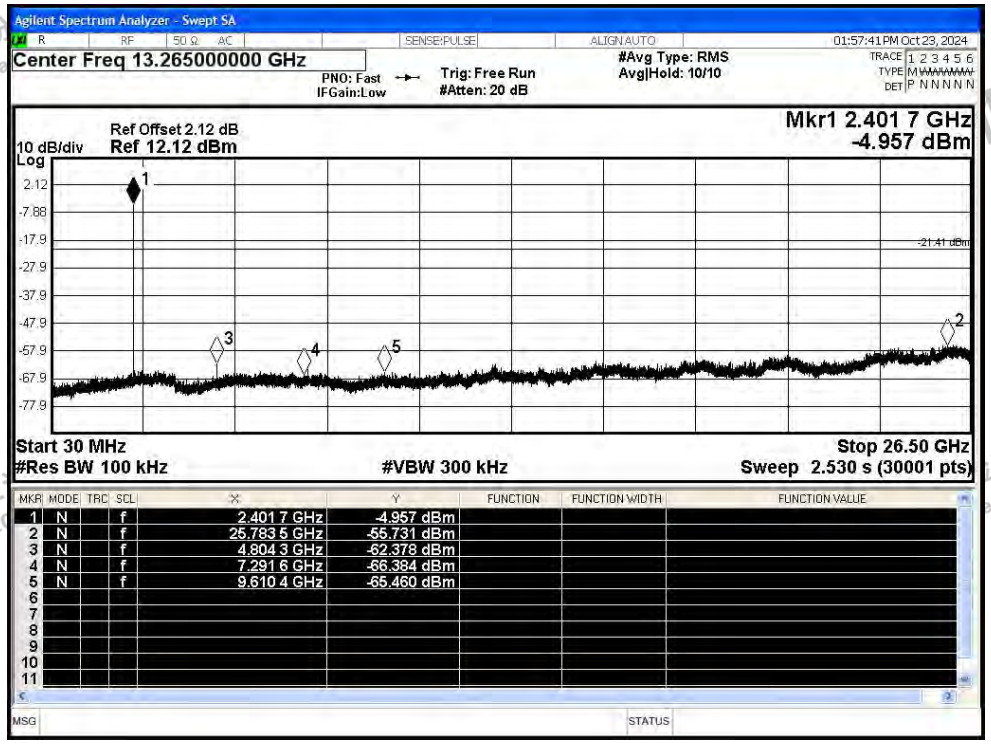
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



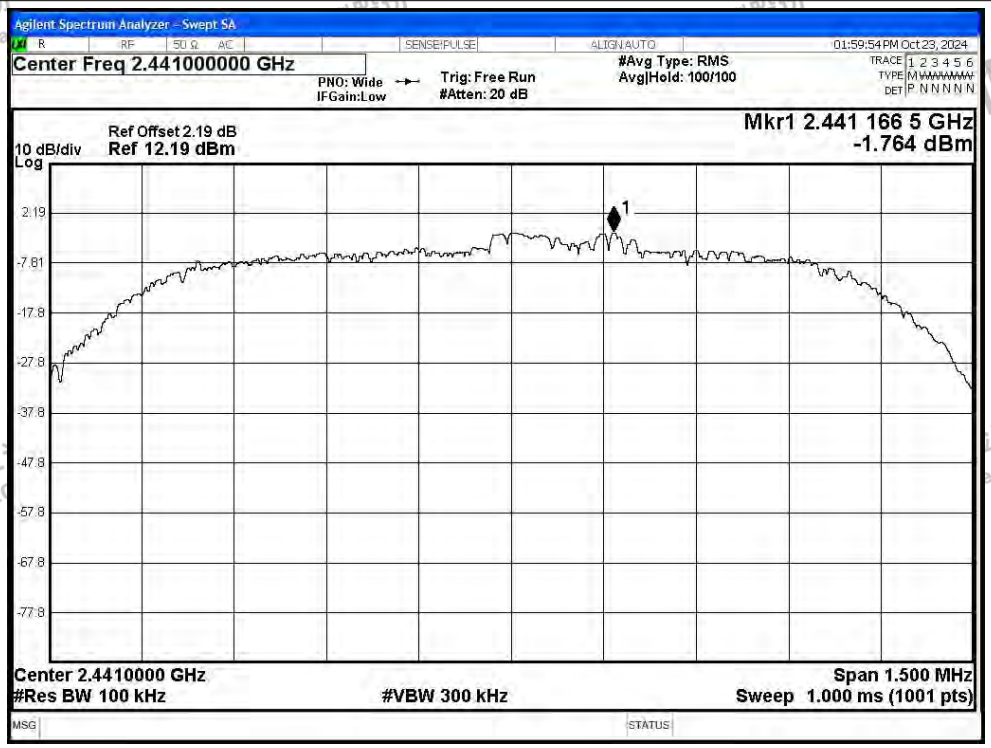
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



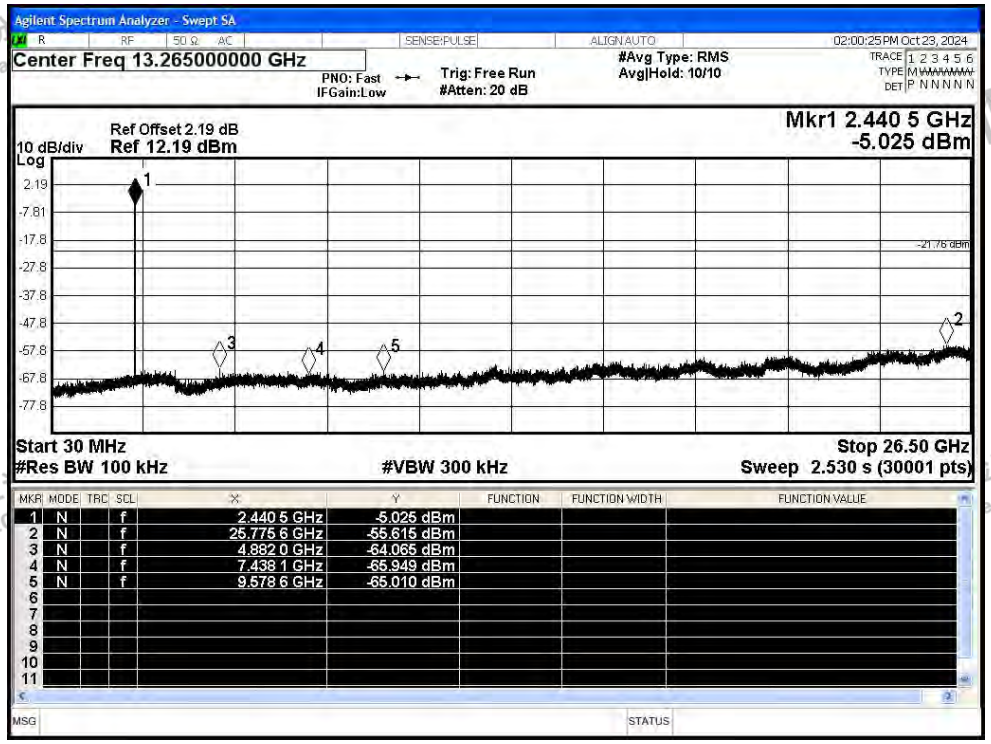
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



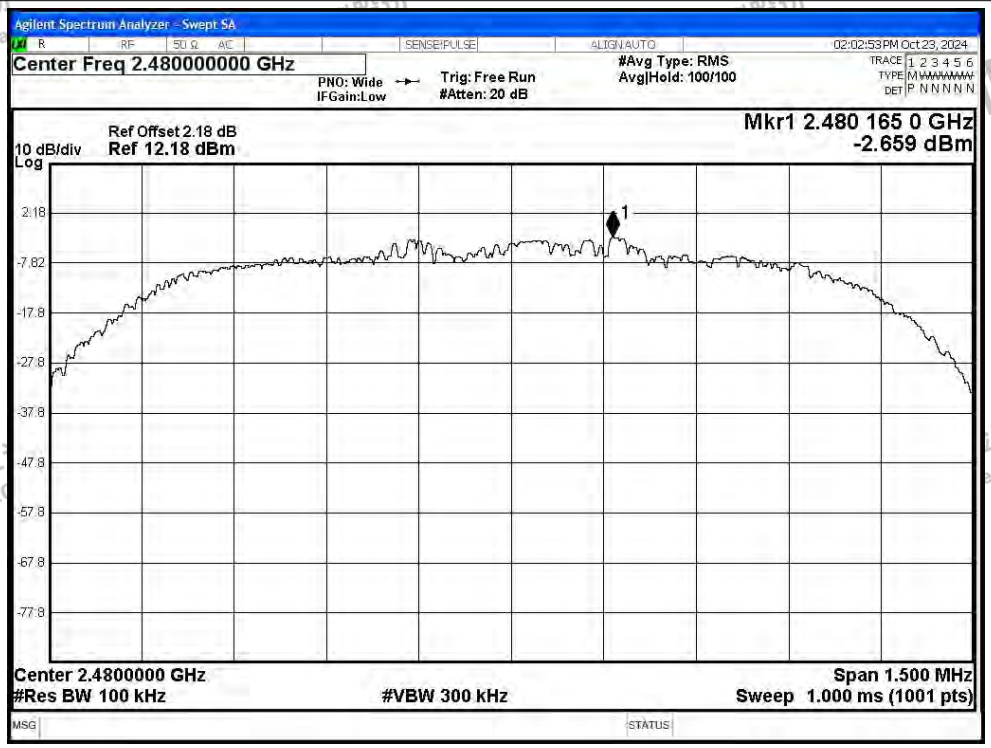
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



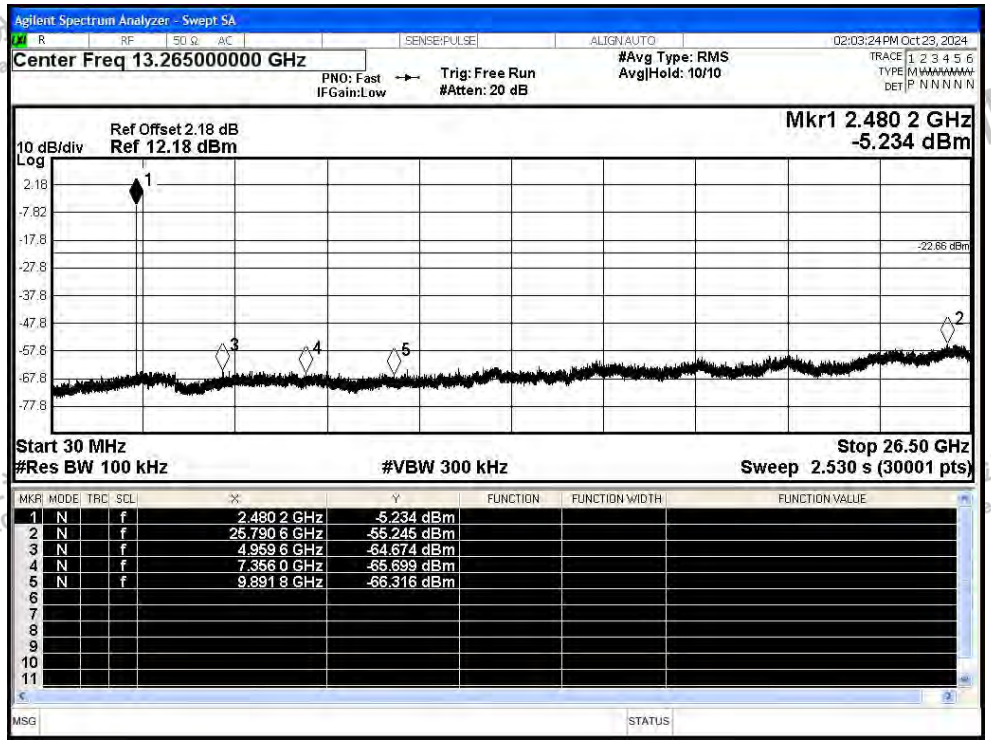
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



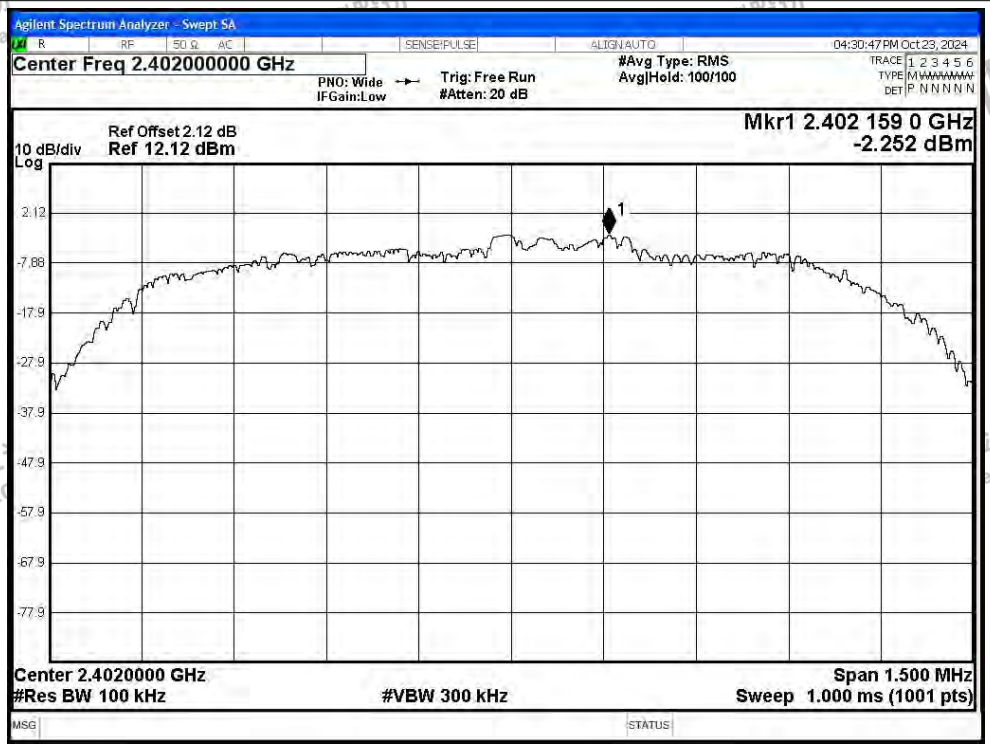
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



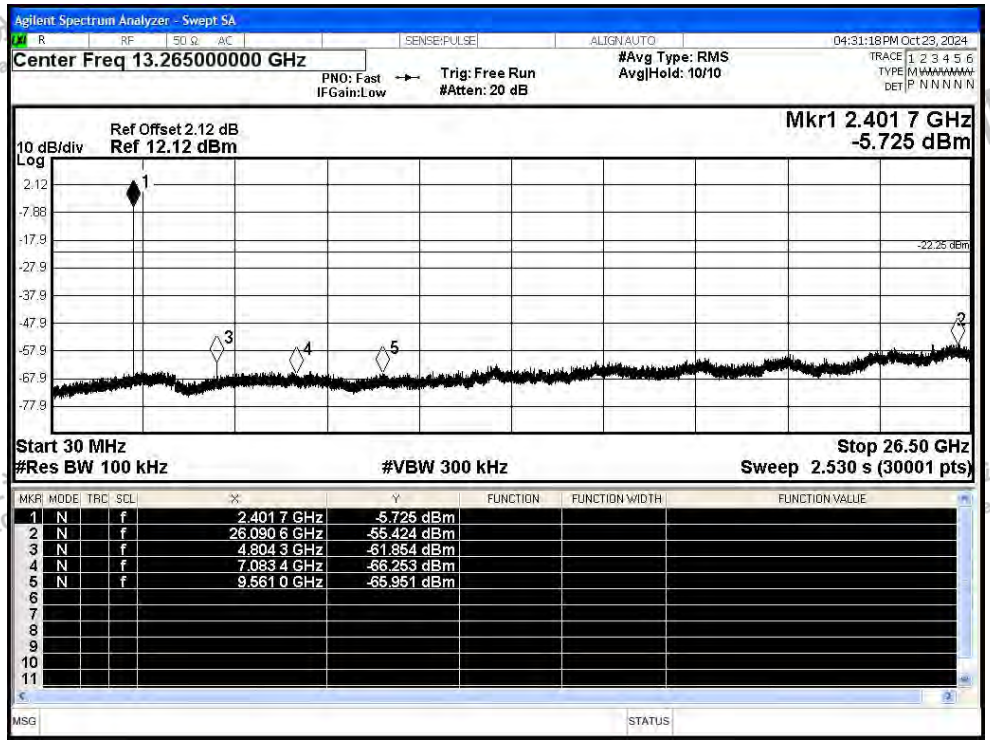
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref

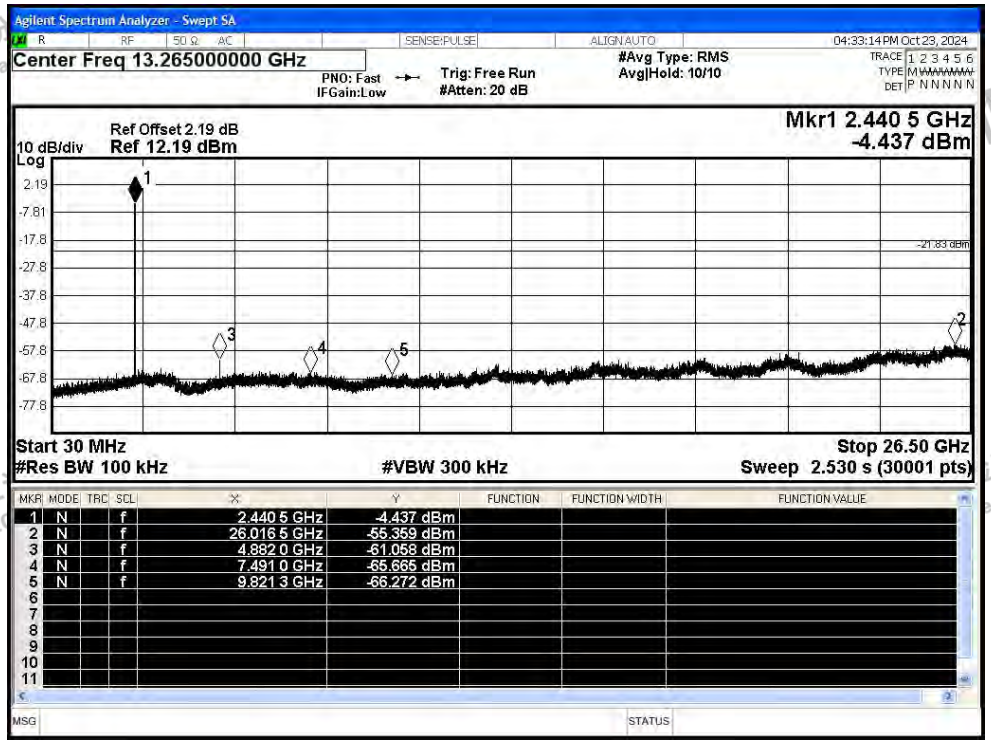


Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission

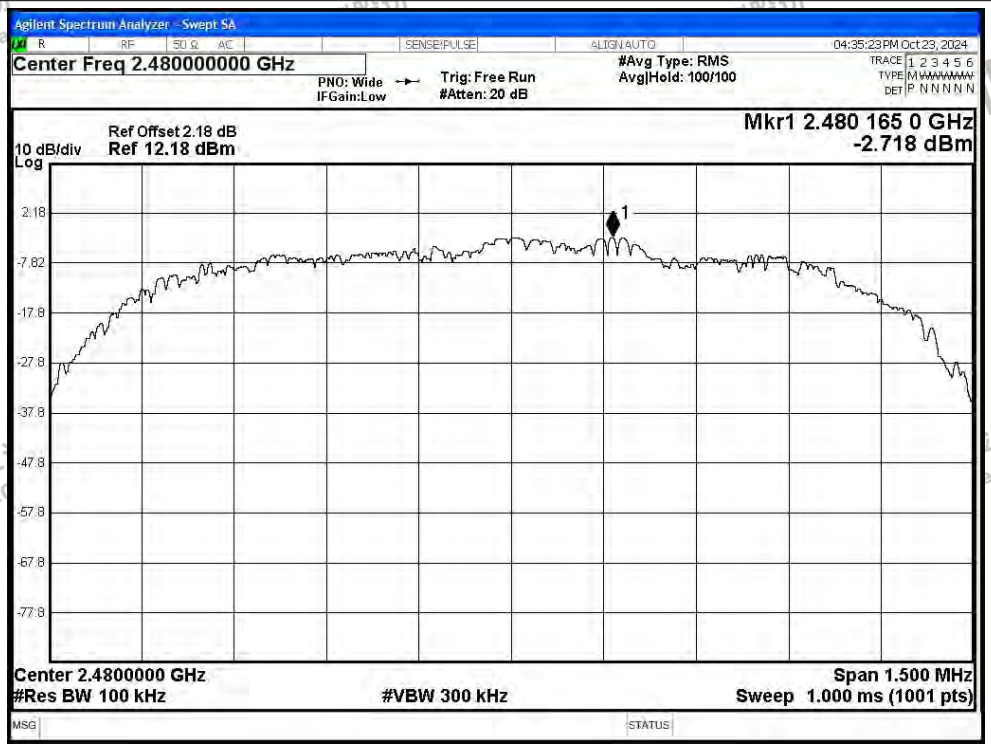


Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref

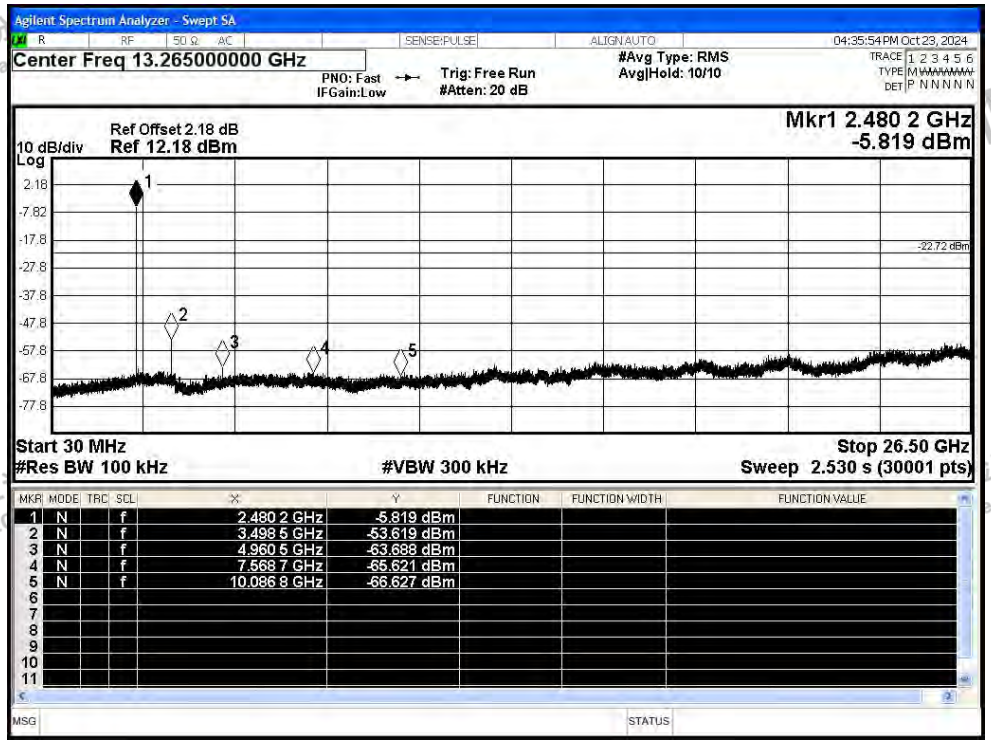
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission

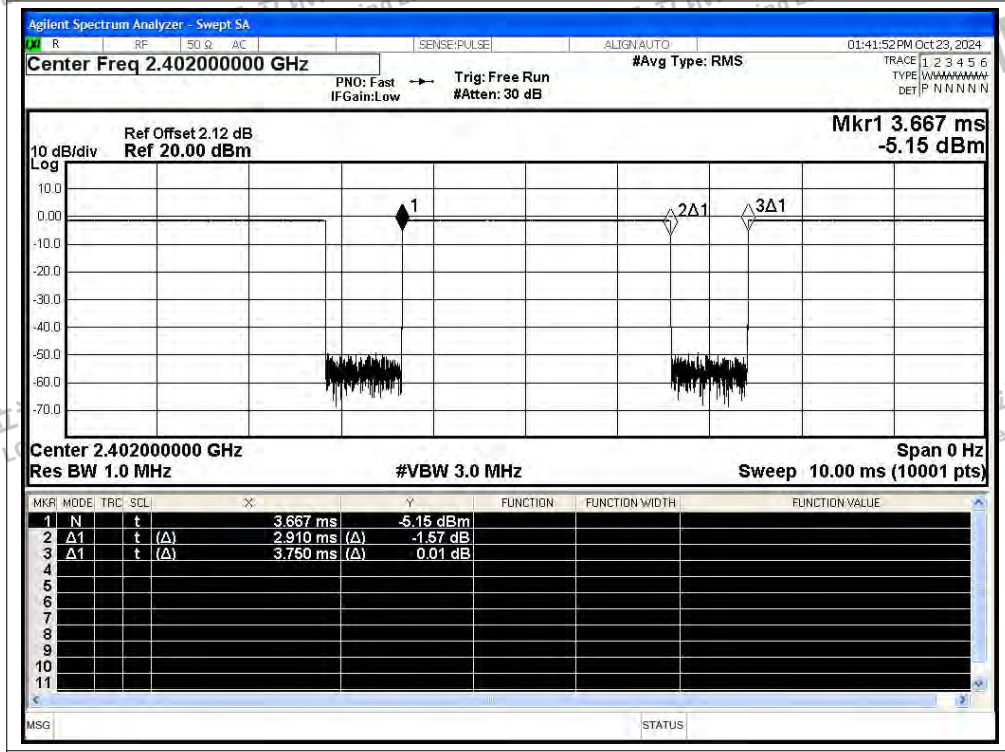


A.8 Duty Cycle

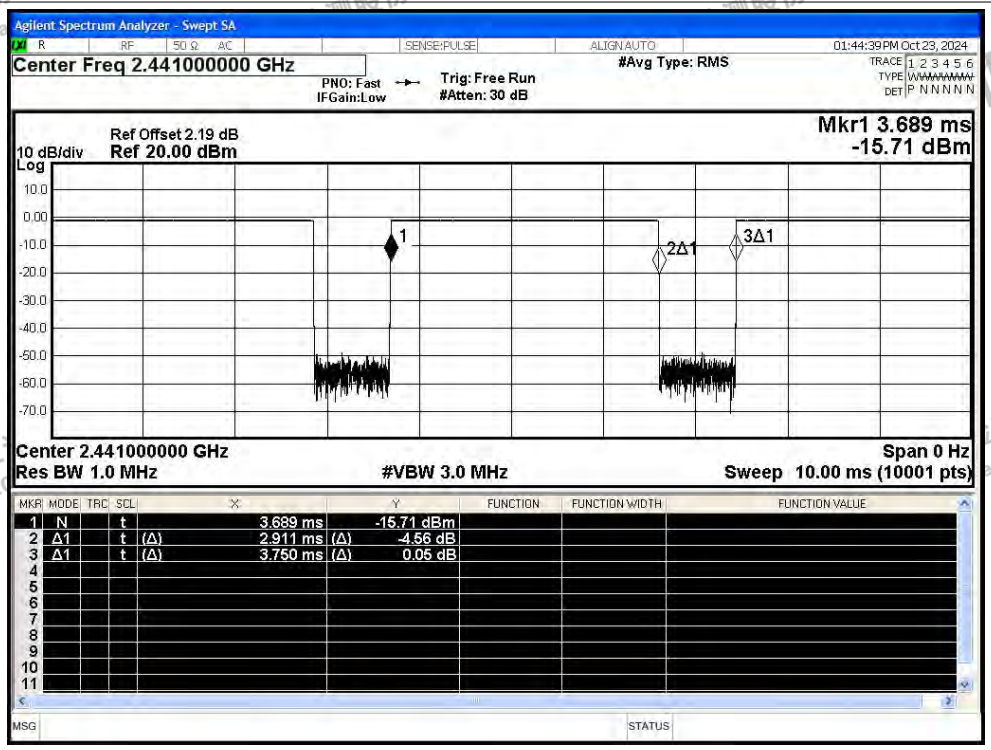
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.63	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.6	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2441	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2480	Ant1	77.33	1.12	0.34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

Test Graphs

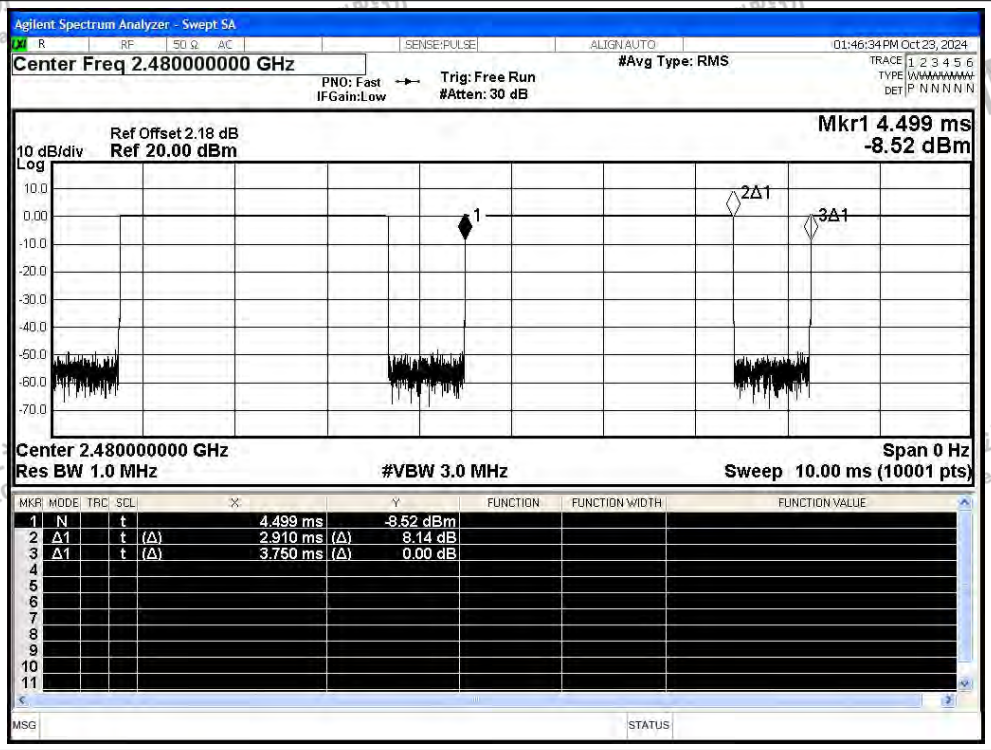
Duty Cycle NVNT 1-DH5 2402MHz Ant1



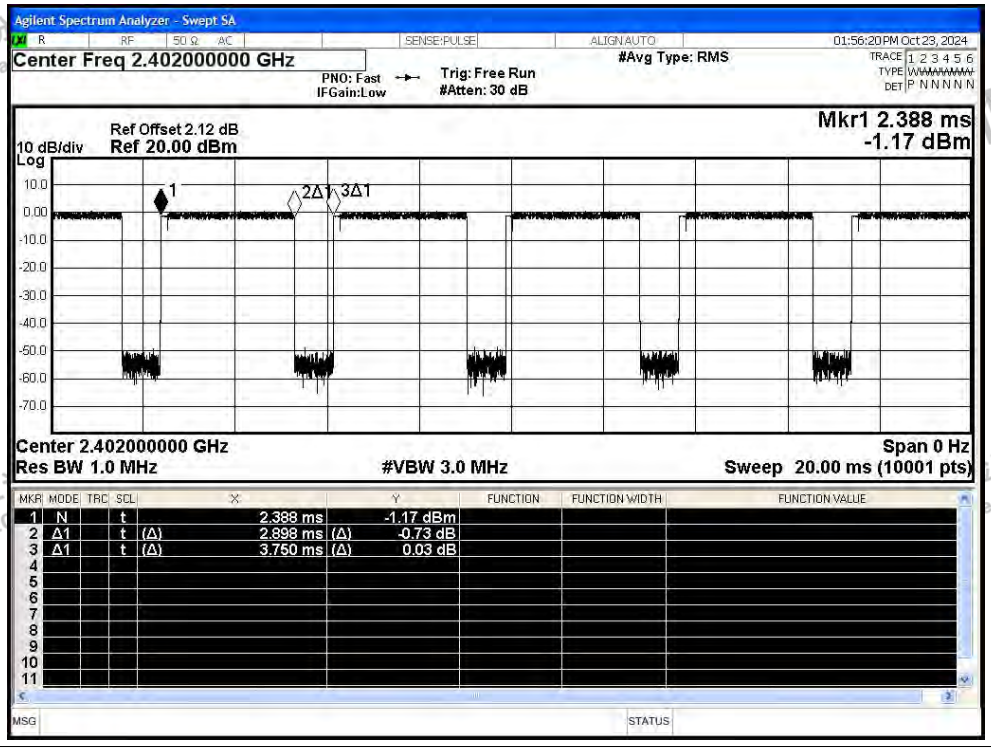
Duty Cycle NVNT 1-DH5 2441MHz Ant1



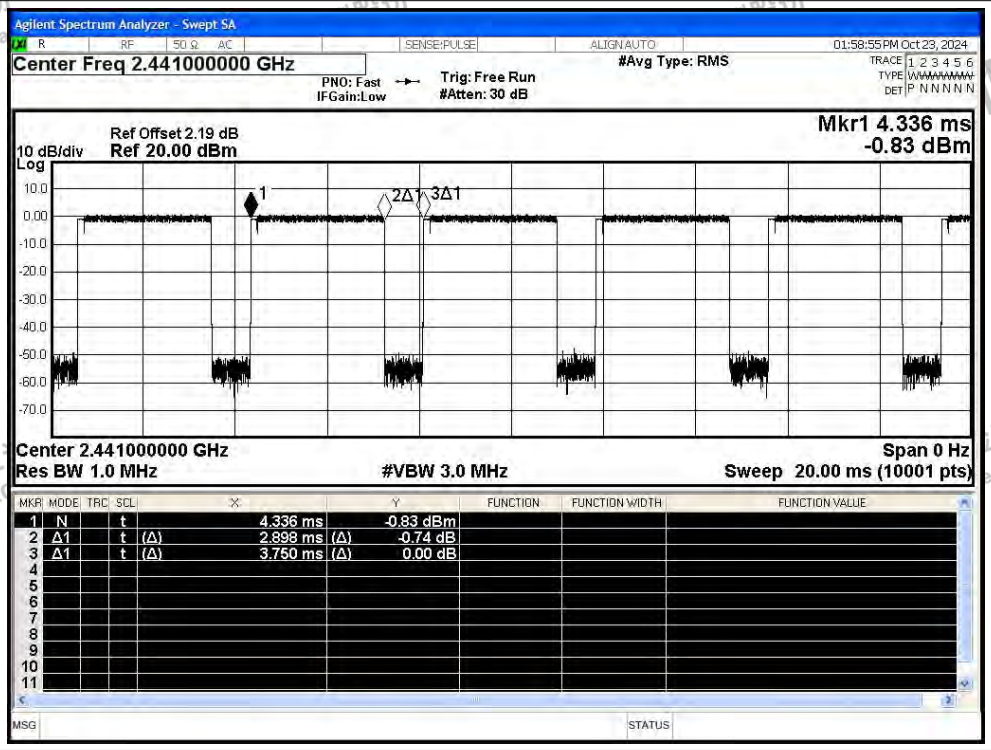
Duty Cycle NVNT 1-DH5 2480MHz Ant1



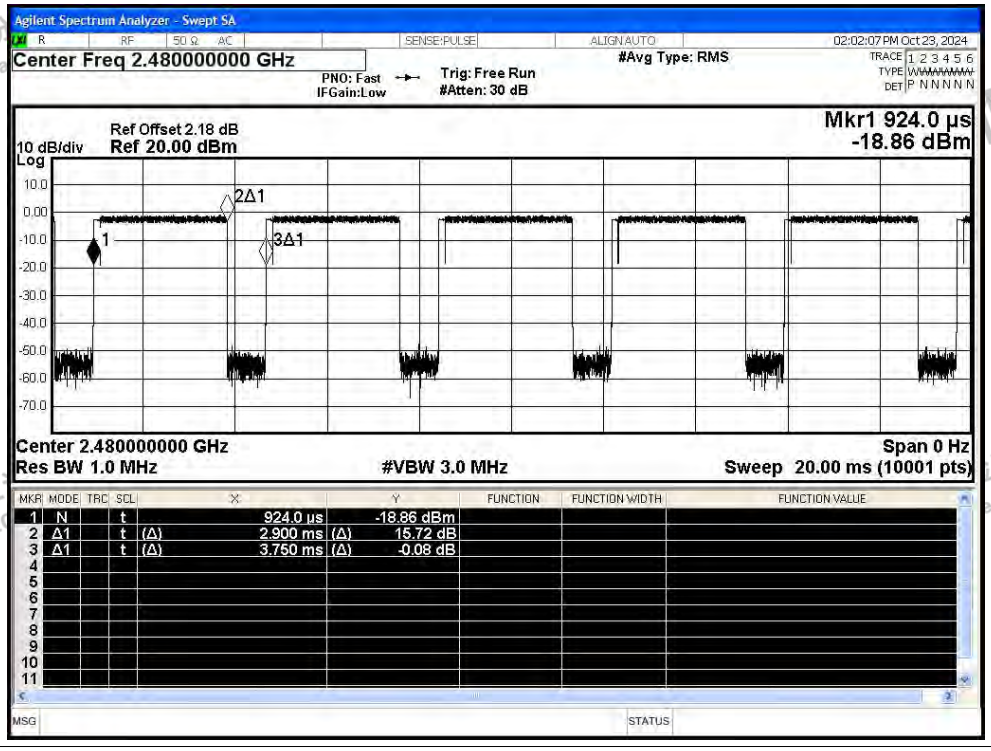
Duty Cycle NVNT 2-DH5 2402MHz Ant1



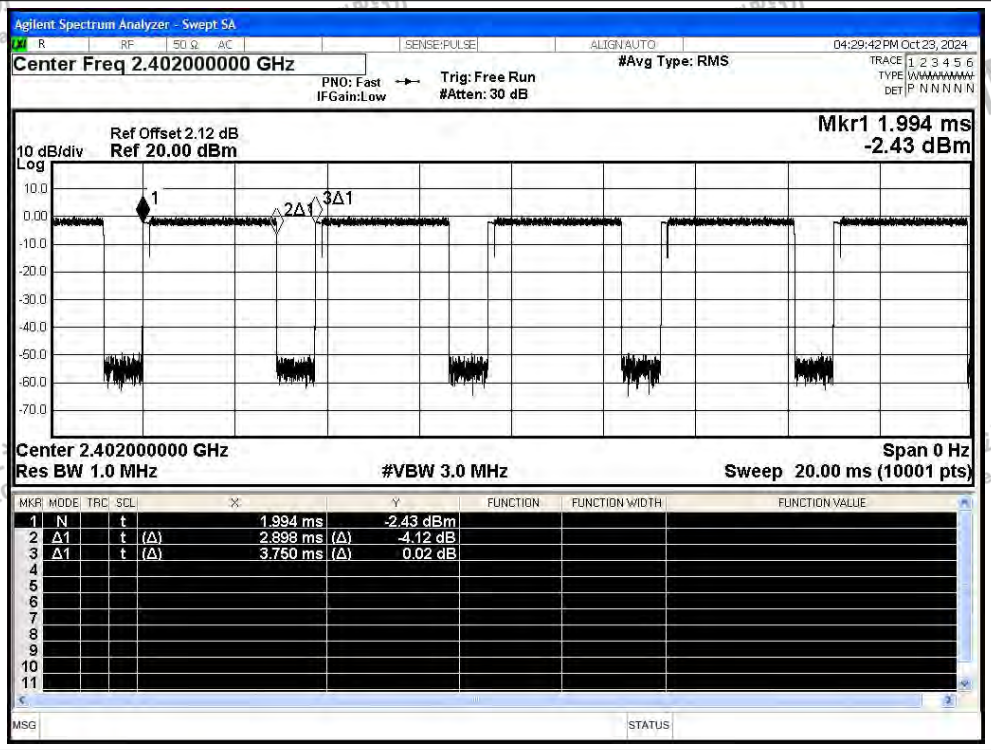
Duty Cycle NVNT 2-DH5 2441MHz Ant1



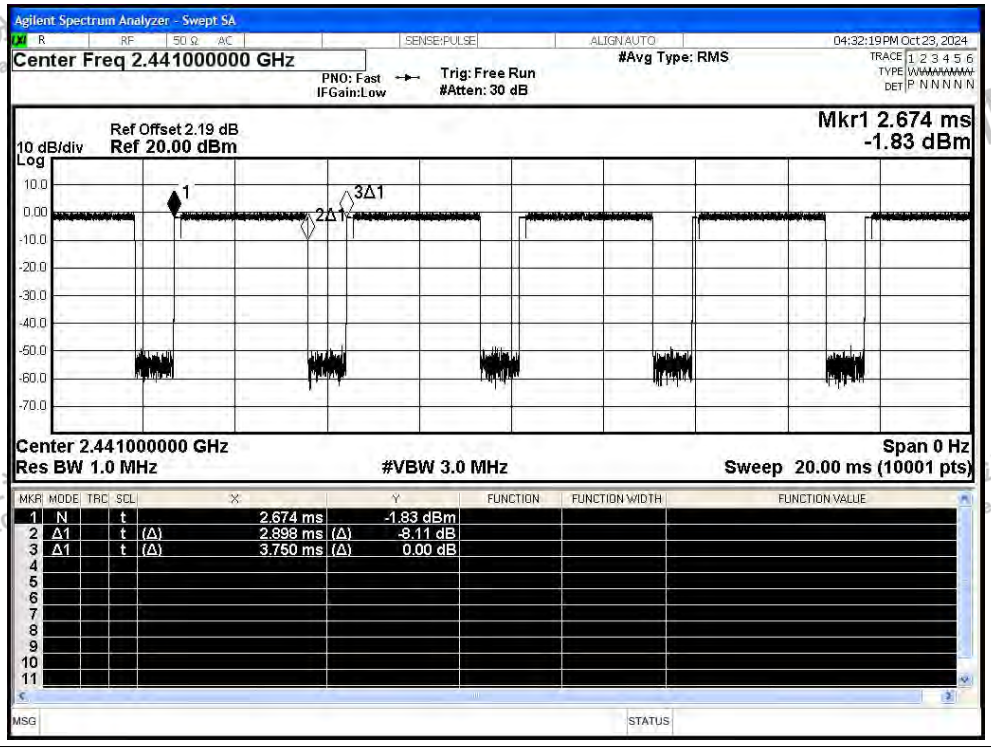
Duty Cycle NVNT 2-DH5 2480MHz Ant1



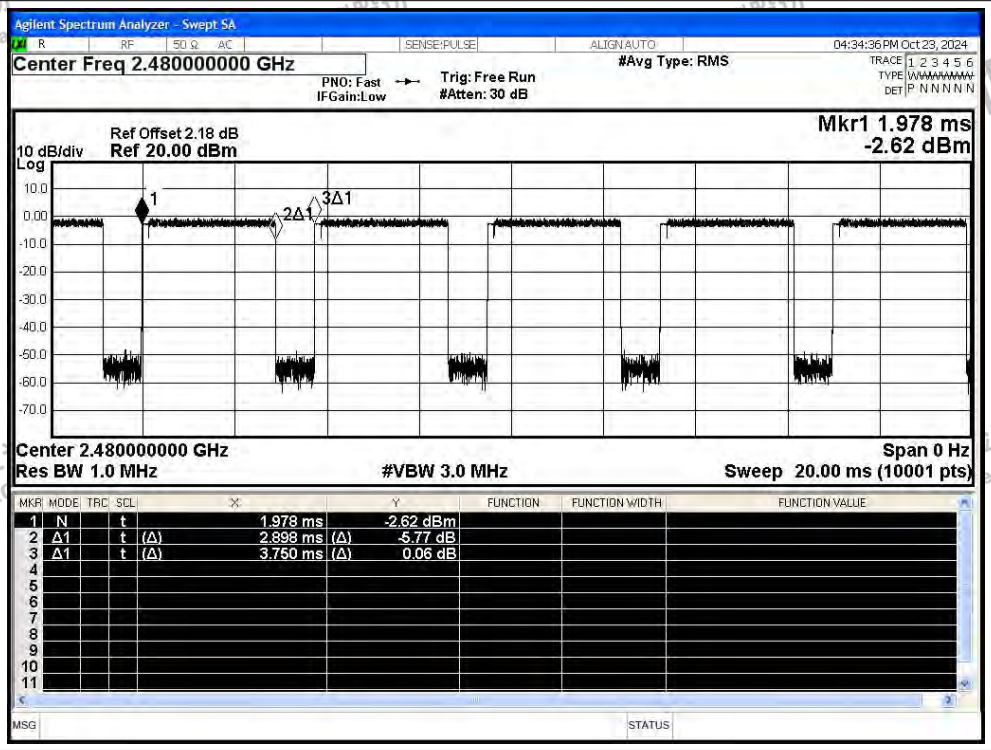
Duty Cycle NVNT 3-DH5 2402MHz Ant1



Duty Cycle NVNT 3-DH5 2441MHz Ant1



Duty Cycle NVNT 3-DH5 2480MHz Ant1

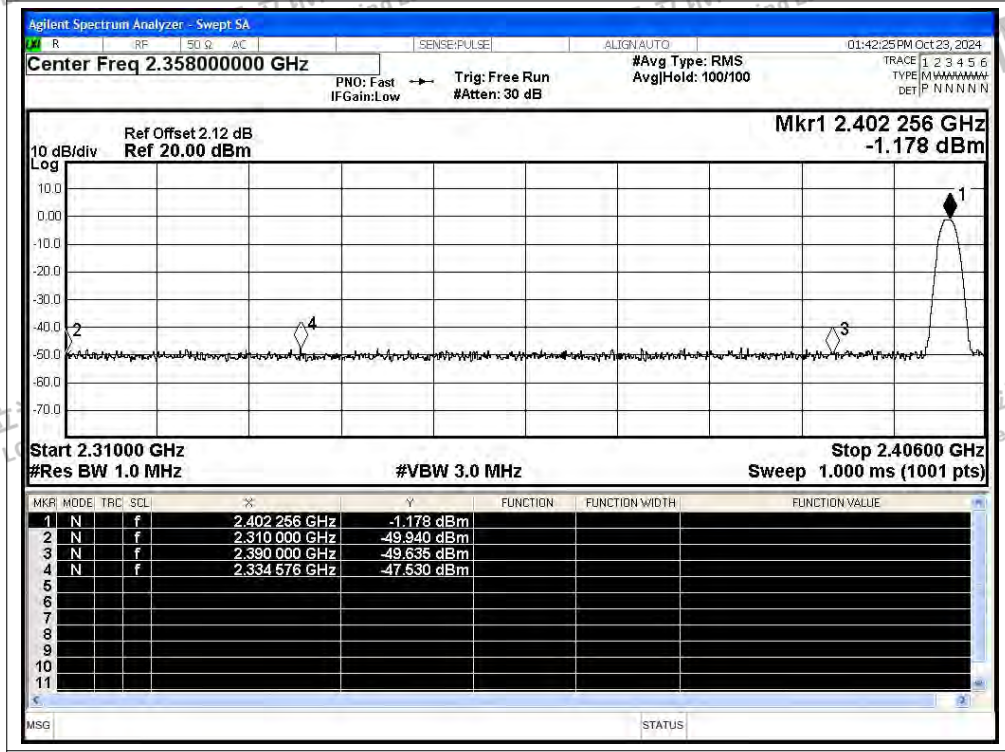


A.9 Restrict Band

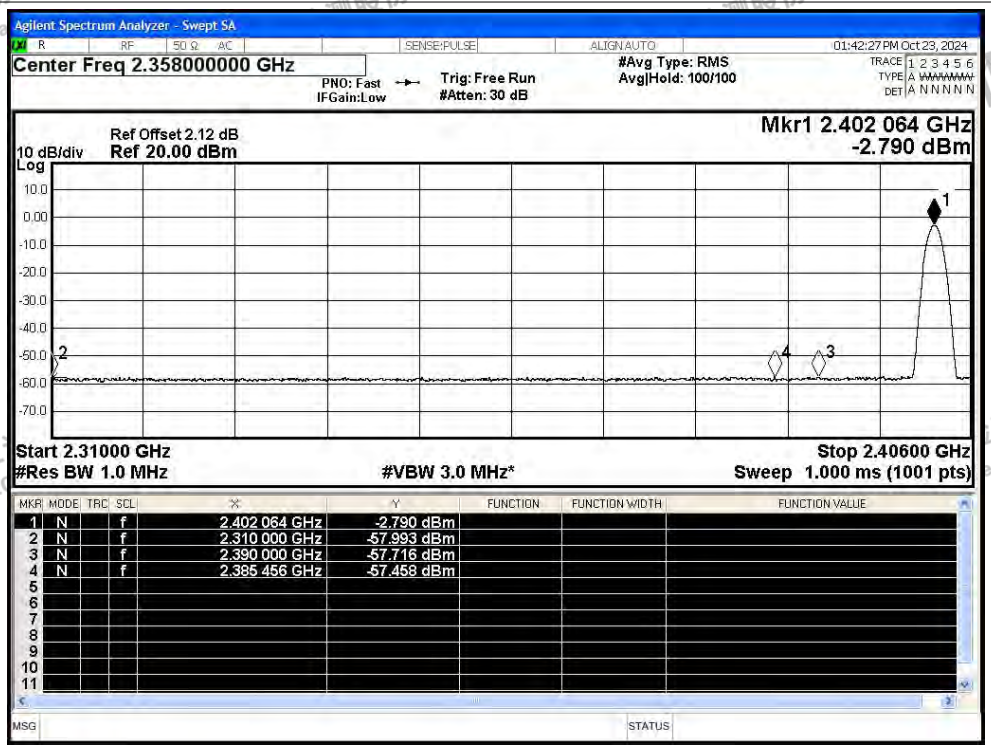
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-49.94	2.48	-	47.8	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-57.99	2.48	1.1	40.85	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2334.576	-47.53	2.48	-	50.21	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2385.456	-57.46	2.48	1.1	41.38	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-49.64	2.48	-	48.1	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-57.72	2.48	1.1	41.12	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-49.47	2.48	-	48.27	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-57.94	2.48	1.1	40.9	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2489.704	-46.32	2.48	-	51.42	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2484.832	-57.01	2.48	1.1	41.83	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-49.23	2.48	-	48.51	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-57.94	2.48	1.1	40.9	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-51.29	2.48	-	46.45	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-58.28	2.48	1.12	40.58	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2312.88	-47.68	2.48	-	50.06	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2377.2	-57.52	2.48	1.12	41.34	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-49.36	2.48	-	48.38	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-57.54	2.48	1.12	41.32	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-49.04	2.48	-	48.7	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-57.2	2.48	1.12	41.66	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2485.096	-47.21	2.48	-	50.53	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2497.696	-56.96	2.48	1.12	41.9	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-49.8	2.48	-	47.94	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-57.72	2.48	1.12	41.14	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-48.28	2.48	-	49.46	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-58.83	2.48	1.12	40.03	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2319.504	-47.63	2.48	-	50.11	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2350.896	-57.36	2.48	1.12	41.5	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-50.16	2.48	-	47.58	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-58.32	2.48	1.12	40.54	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-49.76	2.48	-	47.98	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-57.95	2.48	1.12	40.91	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2495.92	-46.41	2.48	-	51.33	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2496.136	-56.98	2.48	1.12	41.88	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-50.34	2.48	-	47.4	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-57.57	2.48	1.12	41.29	Average	54	Pass

Test Graphs

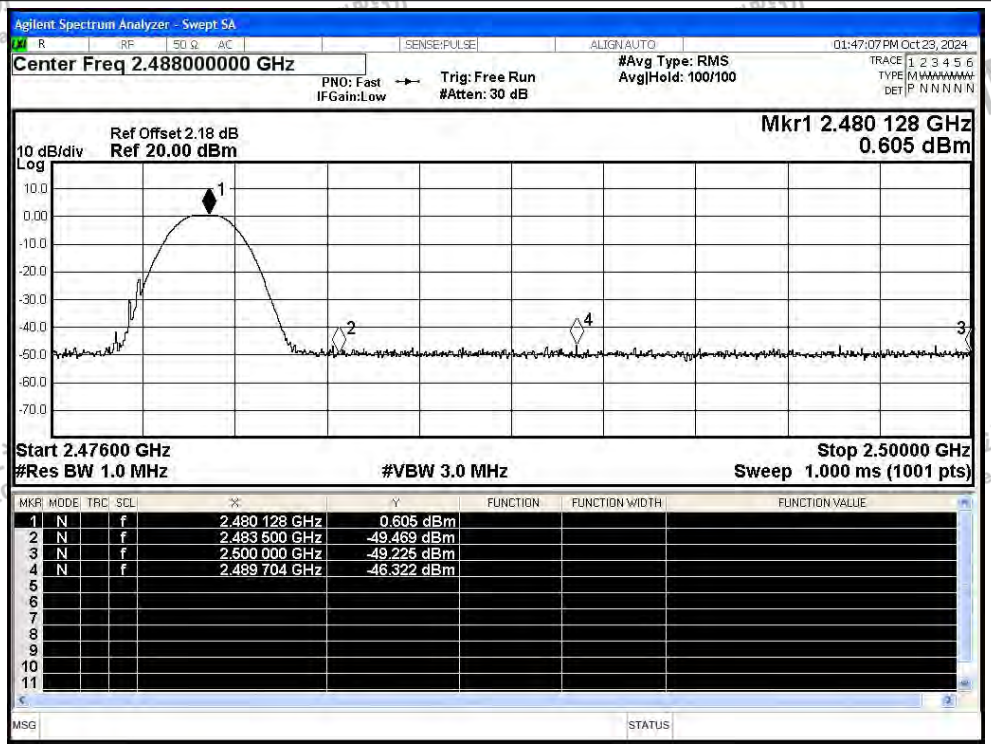
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



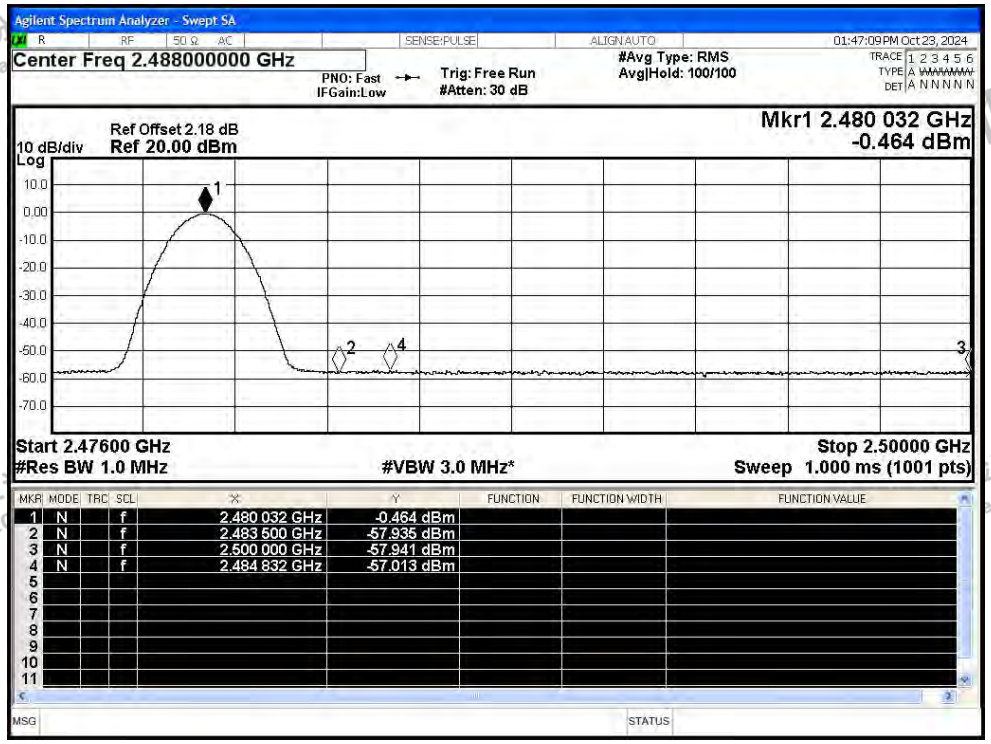
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



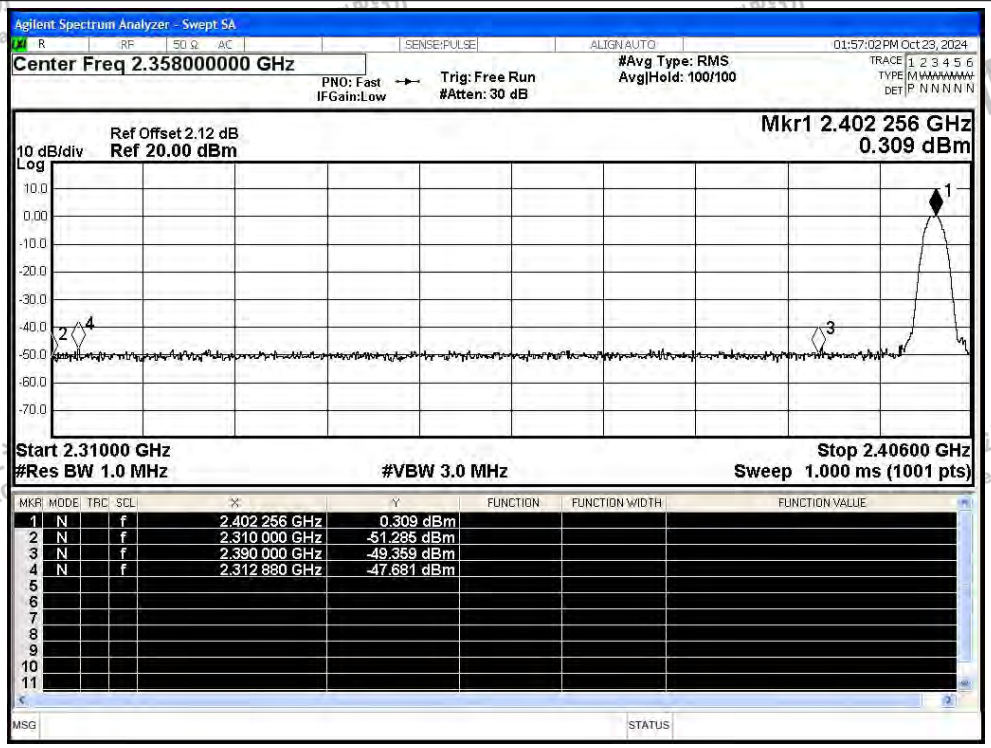
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



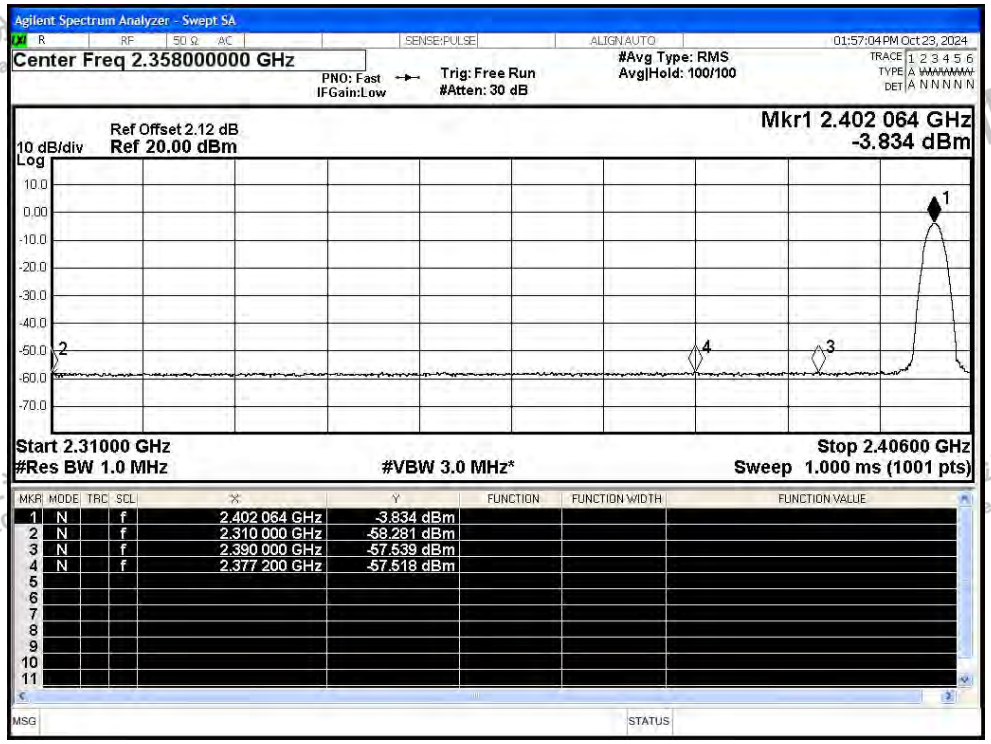
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



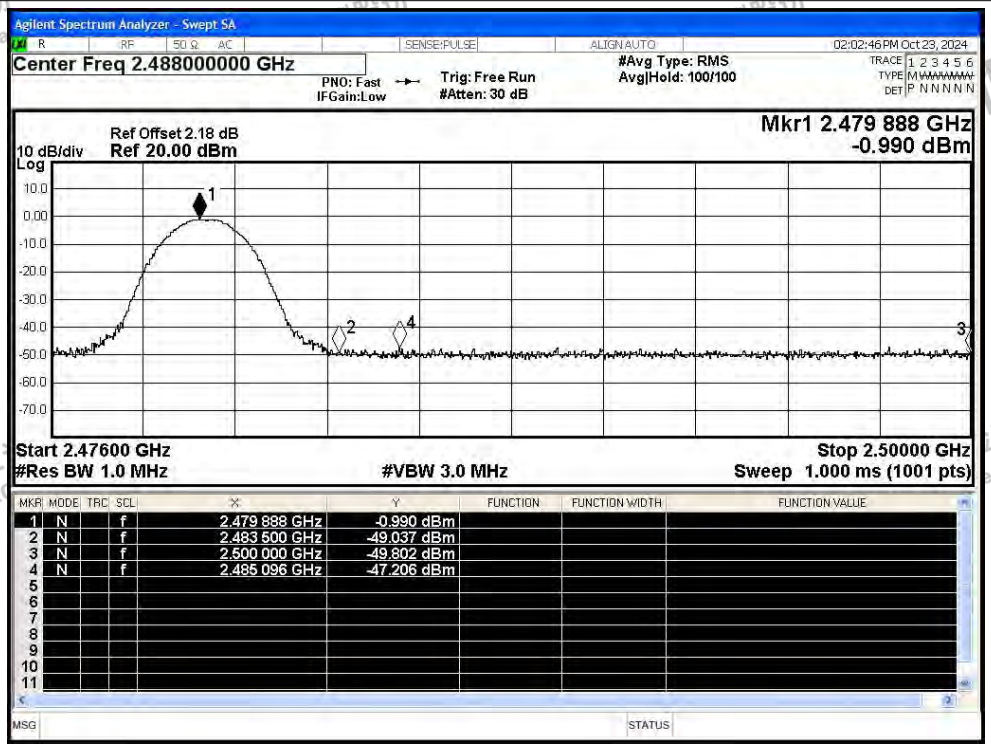
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



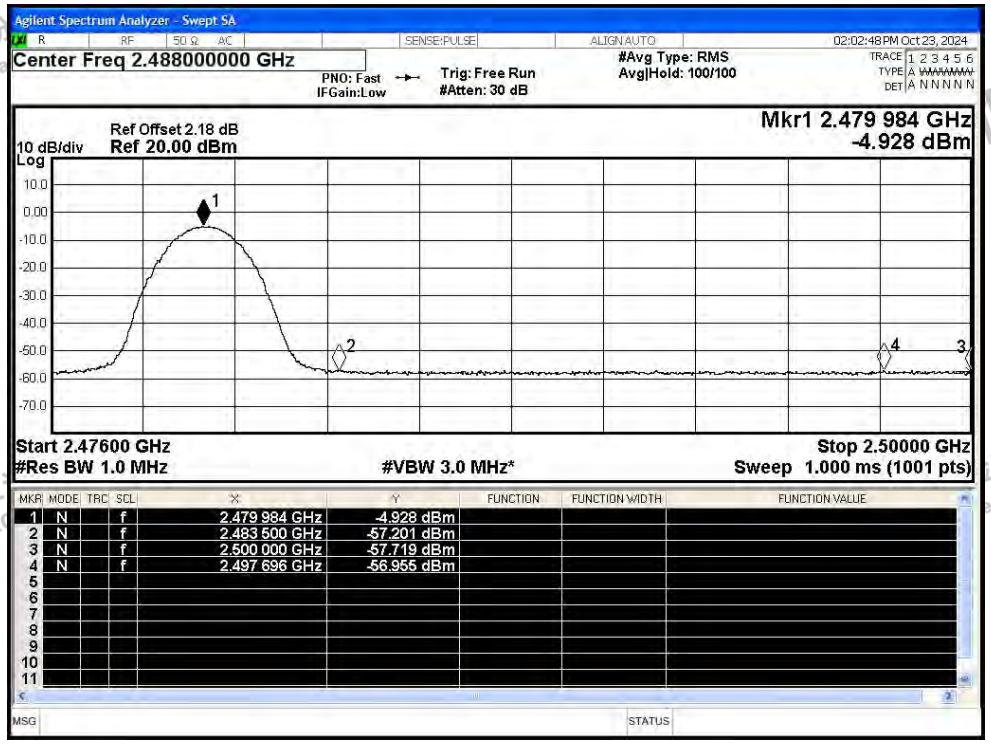
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average



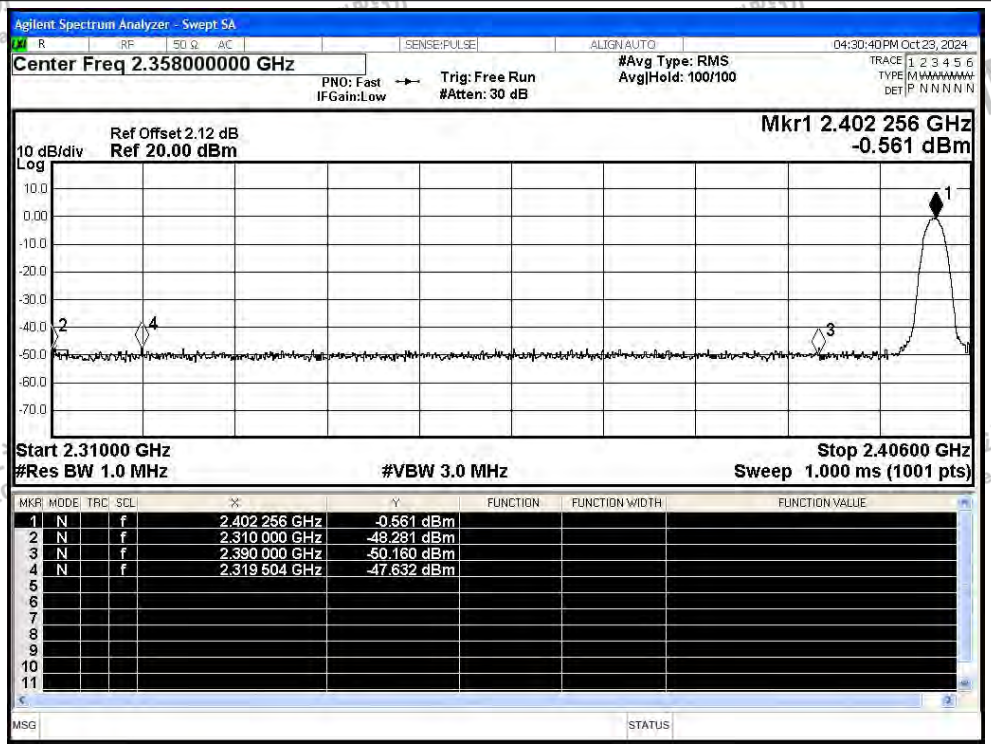
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak



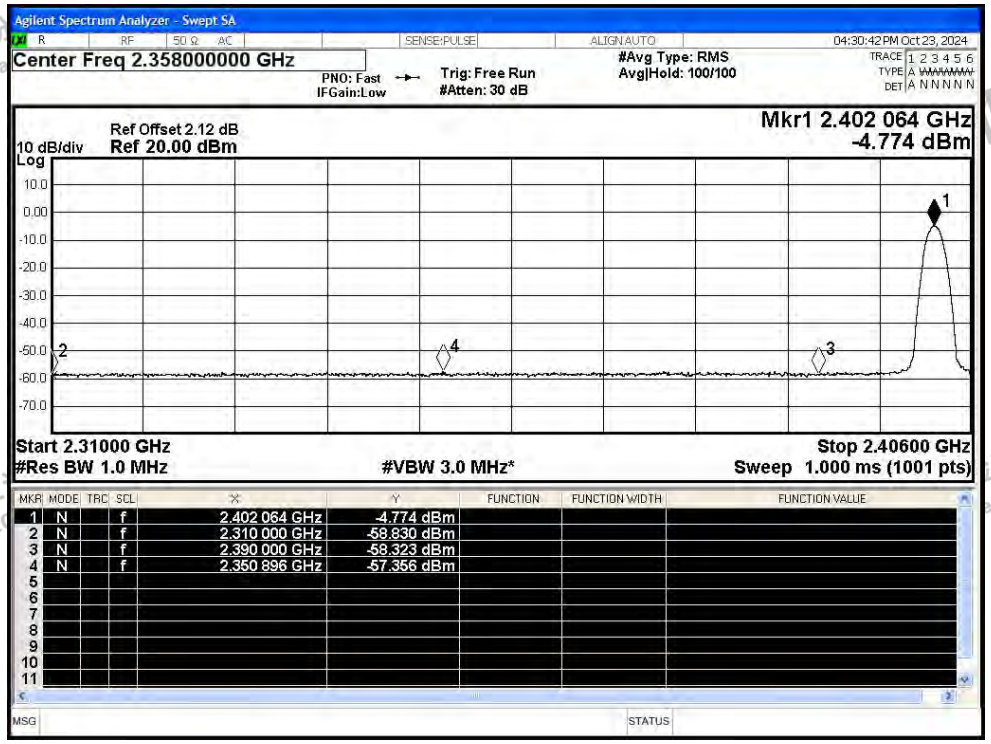
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Average



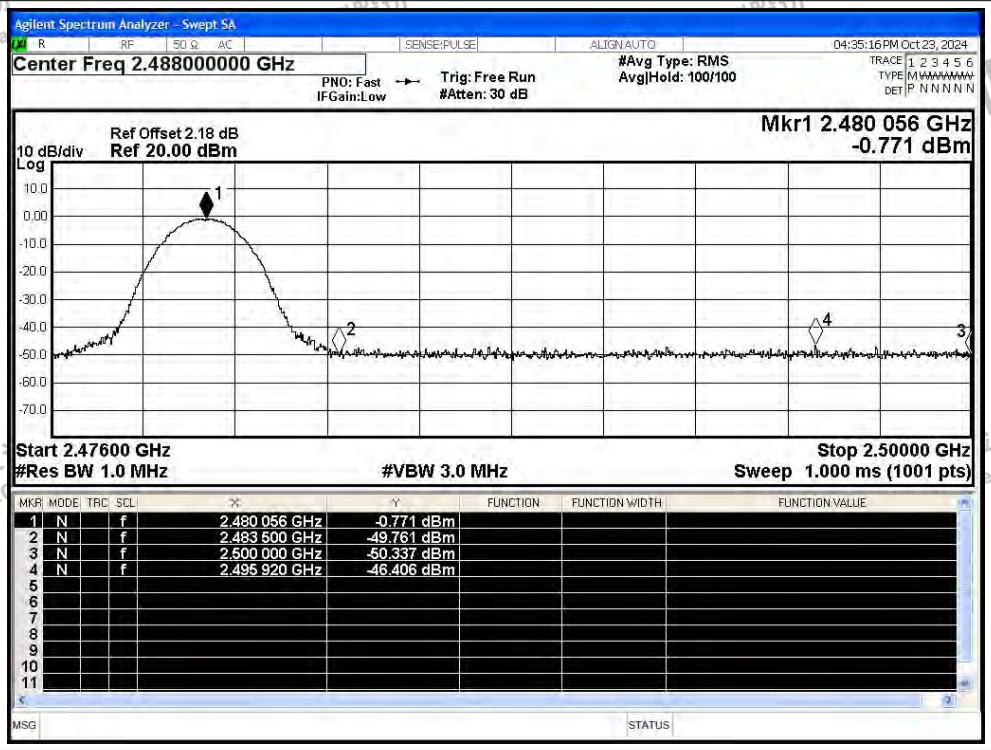
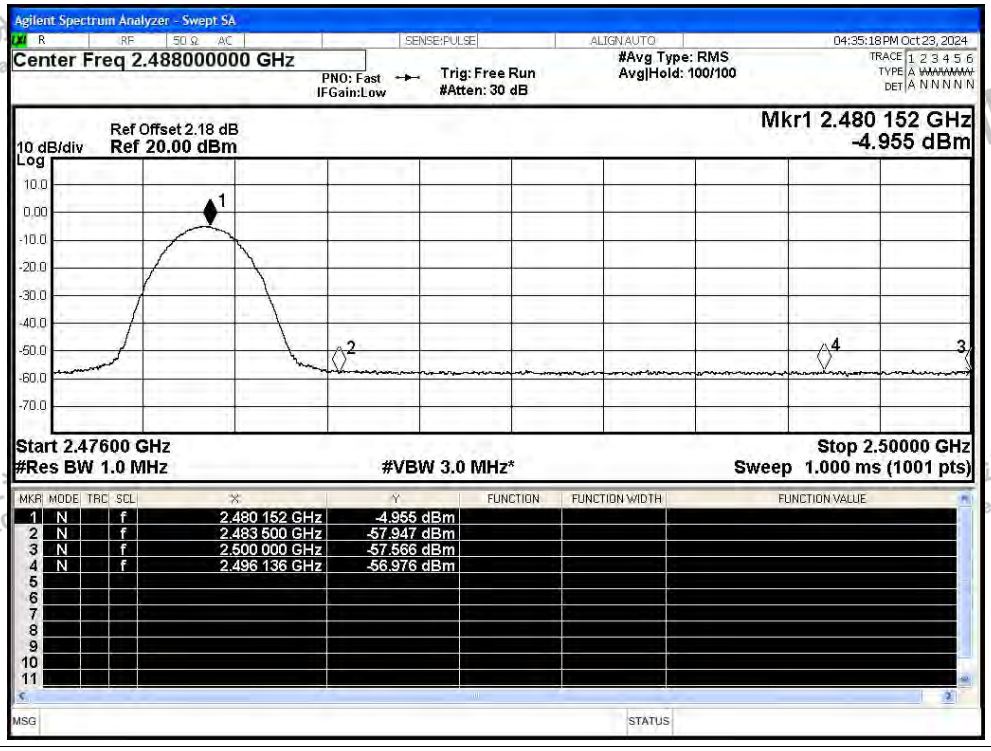
Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak



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