Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: BONESOUNDZ AWARE

Test Model: BONESOUNDZ AWARE

Environmental Conditions

Temperature:	23.8°C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Luo
Supervised by:	Nick Peng

A.1 -20dB Bandwidth

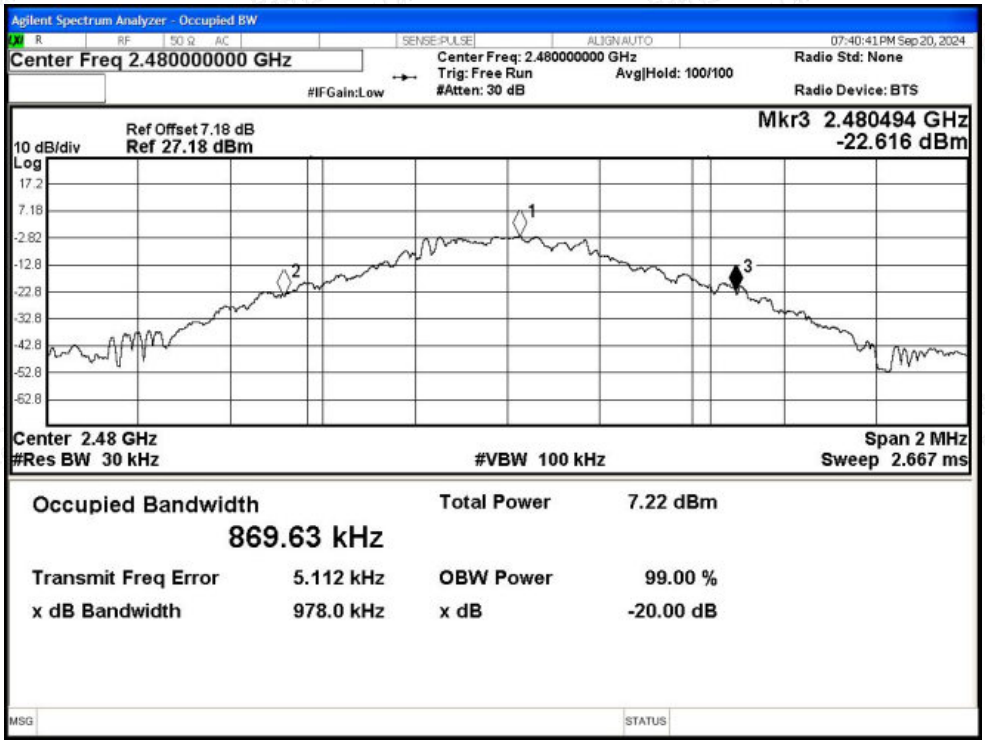
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.964	N/A	Pass
NVNT	1-DH5	2441	Ant1	1.009	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.978	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.285	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.286	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.319	N/A	Pass

Test Graphs

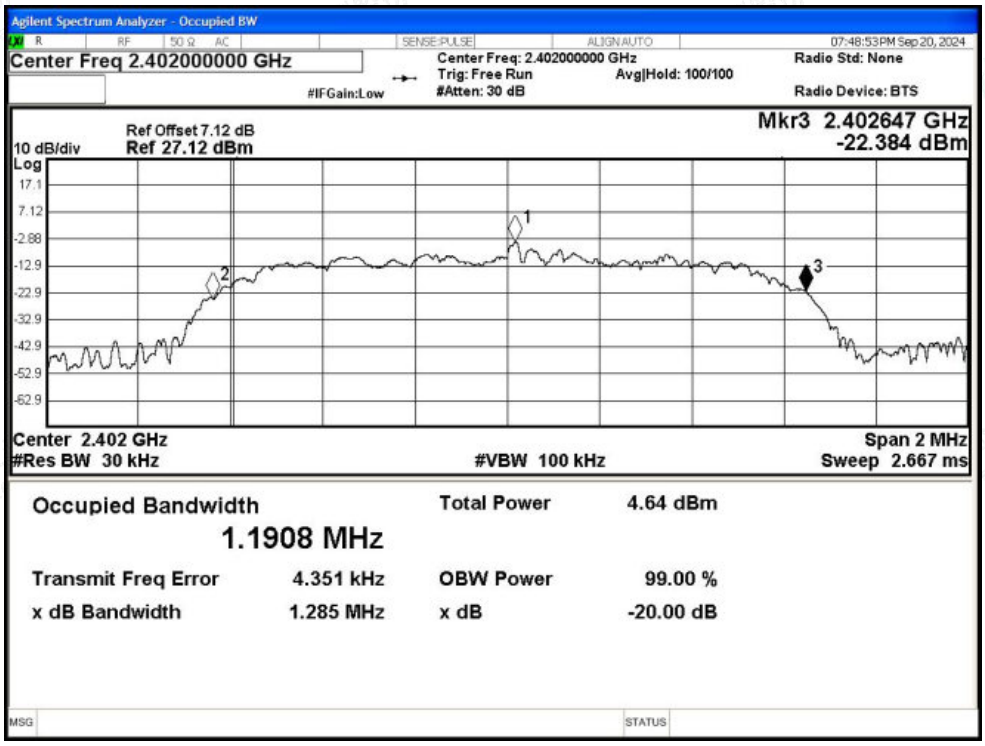
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

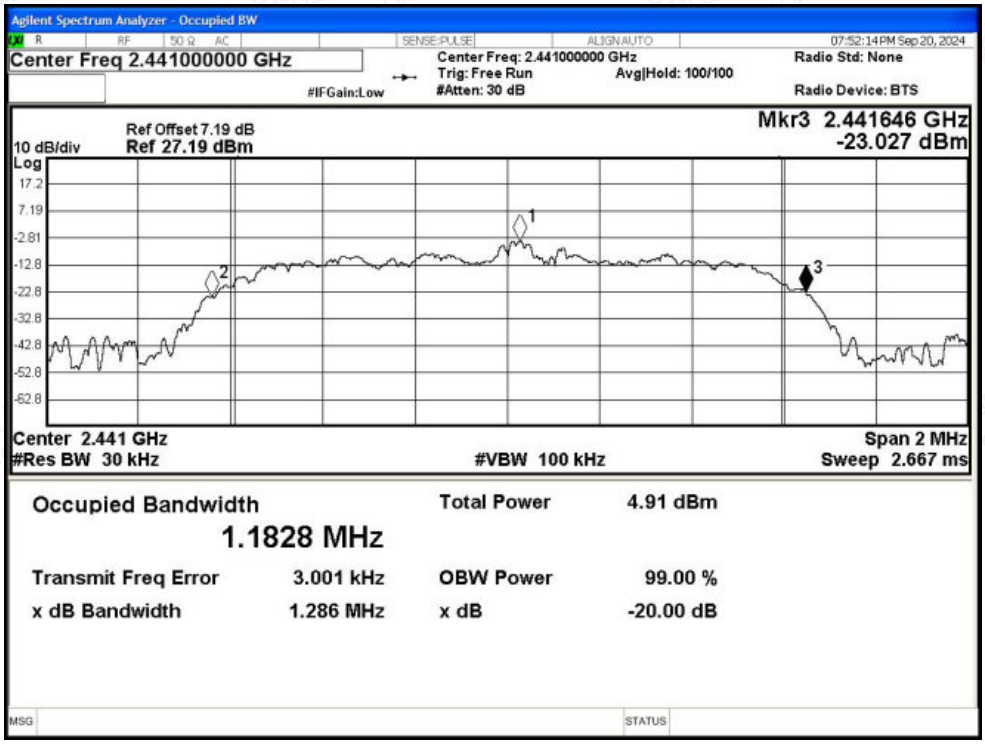
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



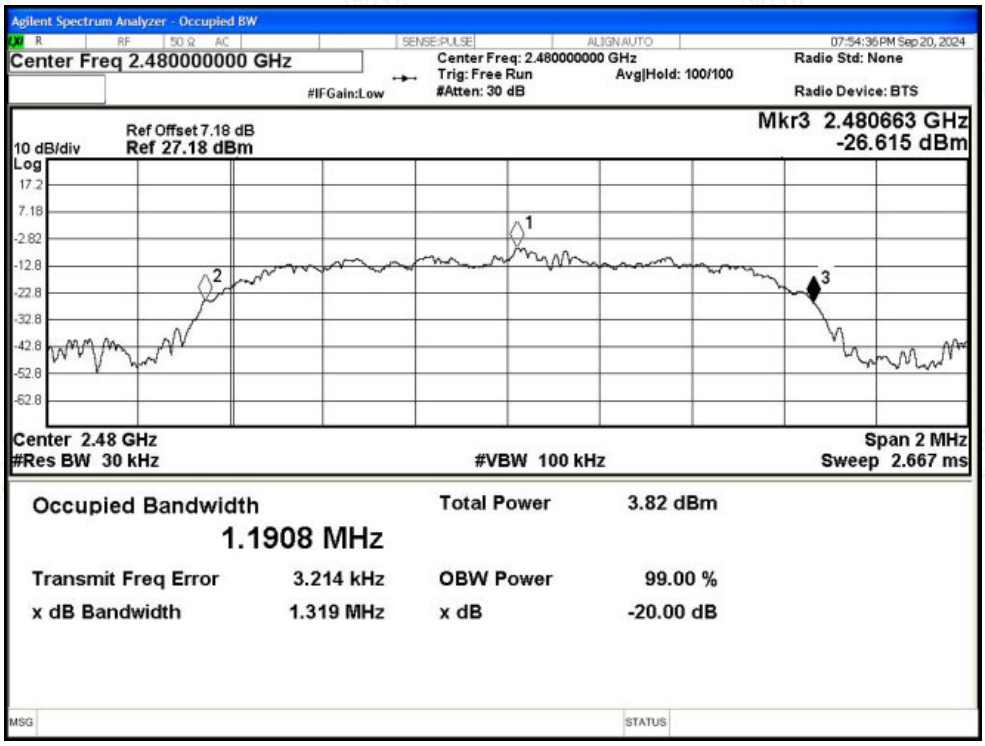
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

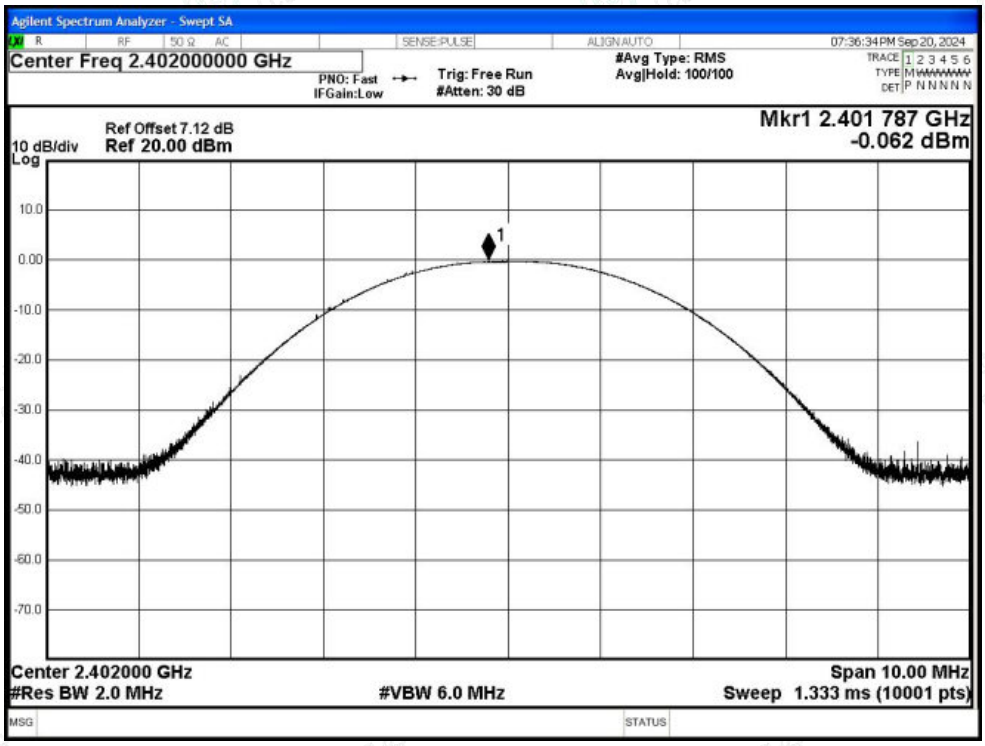


A.2 Maximum Peak Conducted Output Power

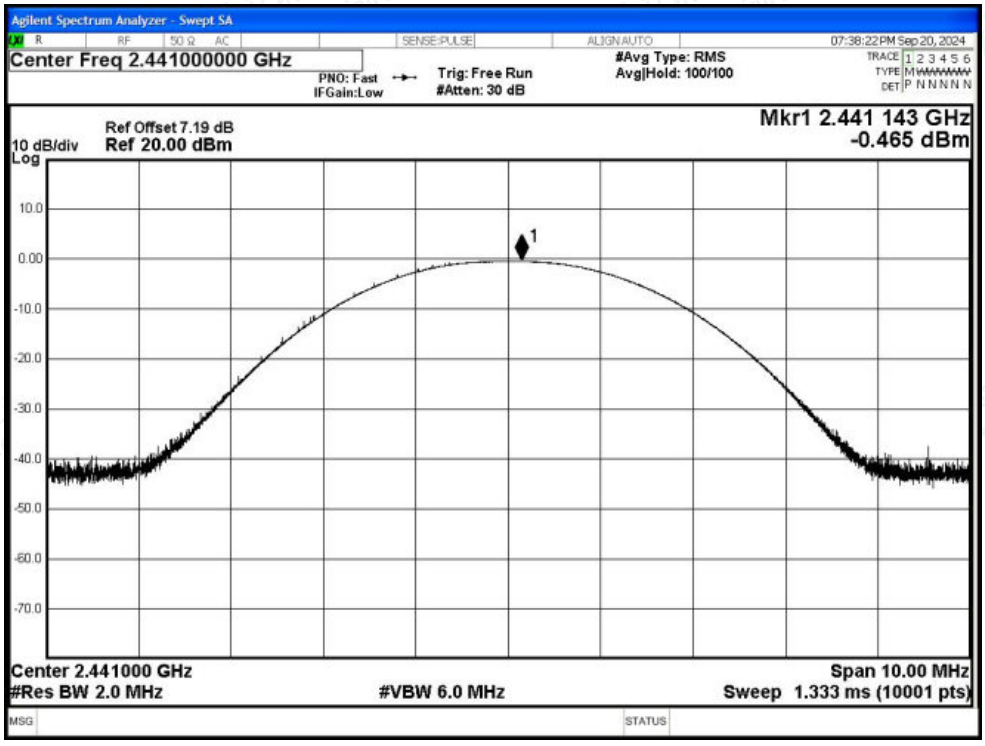
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.06	21	Pass
NVNT	1-DH5	2441	Ant1	-0.47	21	Pass
NVNT	1-DH5	2480	Ant1	0.89	21	Pass
NVNT	2-DH5	2402	Ant1	0.5	21	Pass
NVNT	2-DH5	2441	Ant1	0.55	21	Pass
NVNT	2-DH5	2480	Ant1	-0.24	21	Pass

Test Graphs

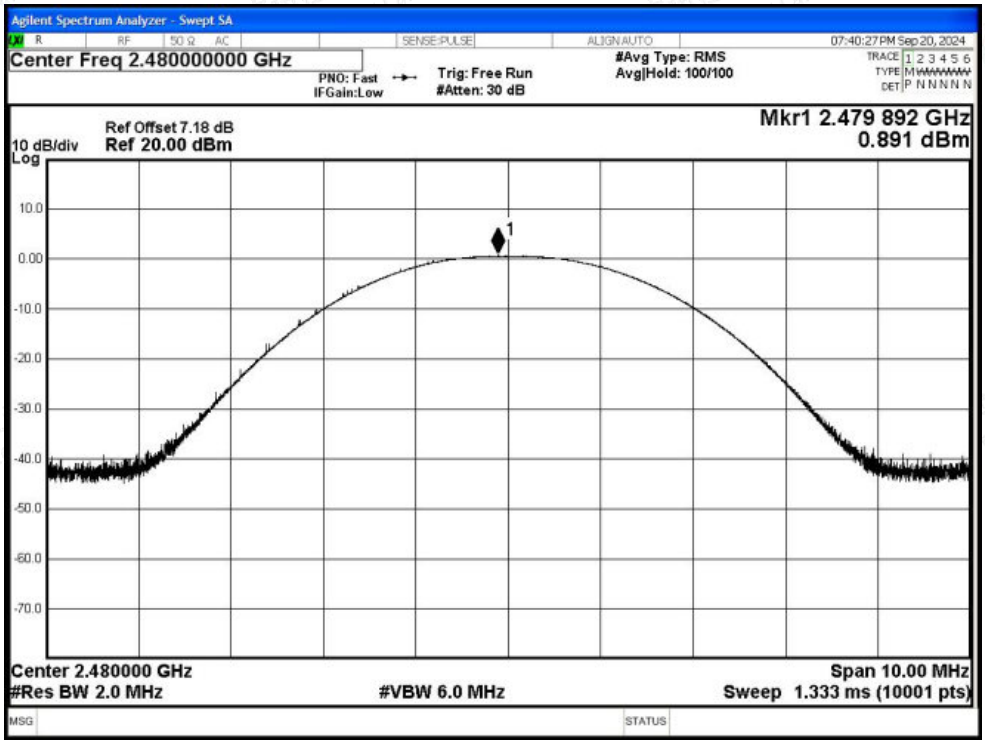
Power NVNT 1-DH5 2402MHz Ant1



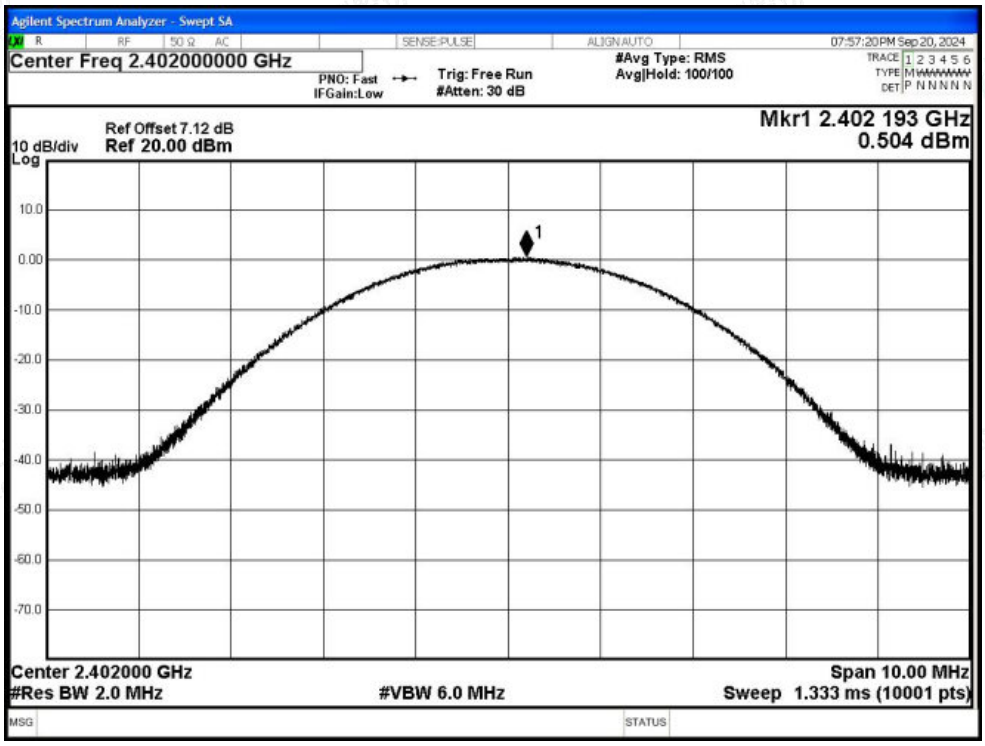
Power NVNT 1-DH5 2441MHz Ant1



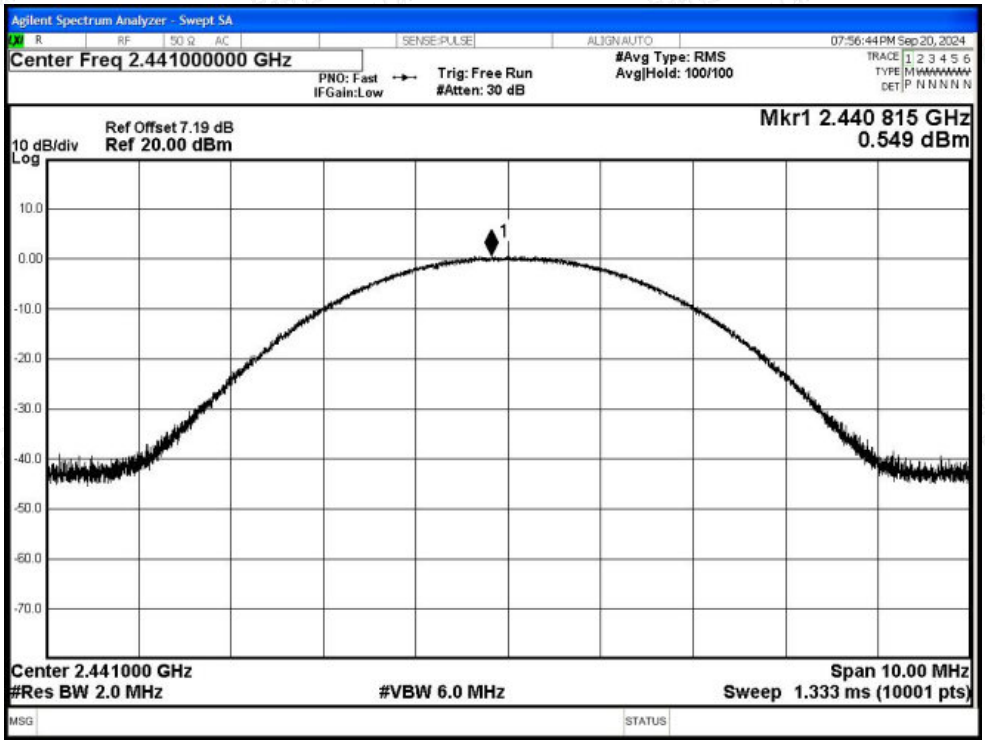
Power NVNT 1-DH5 2480MHz Ant1



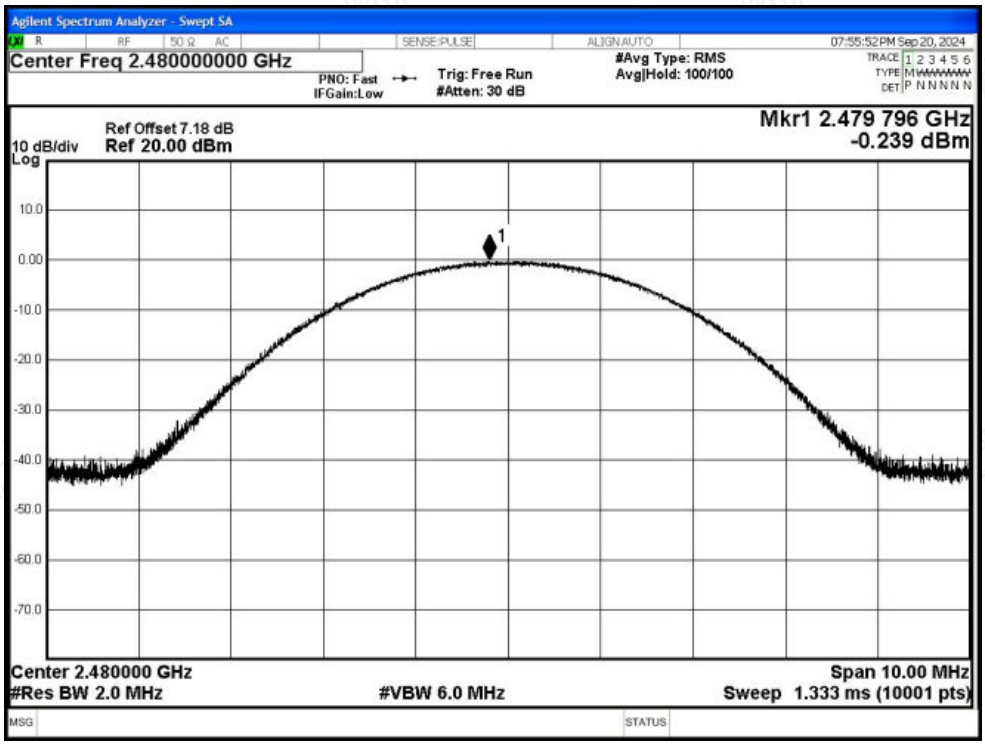
Power NVNT 2-DH5 2402MHz Ant1



Power NVNT 2-DH5 2441MHz Ant1



Power NVNT 2-DH5 2480MHz Ant1

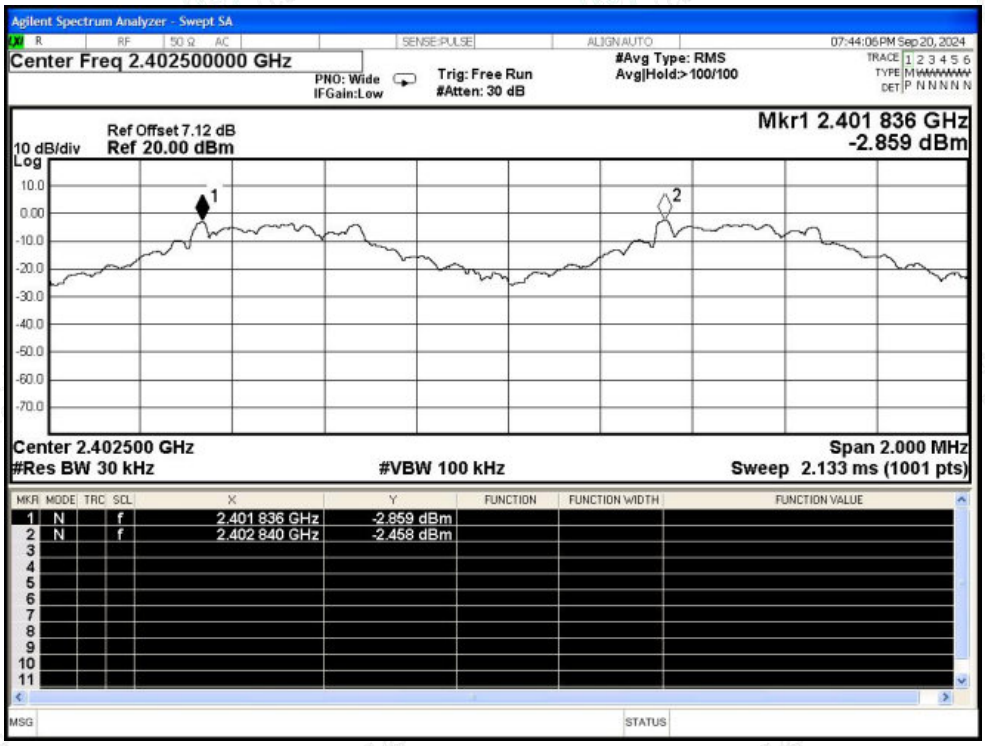


A.3 Carrier Frequencies Separation

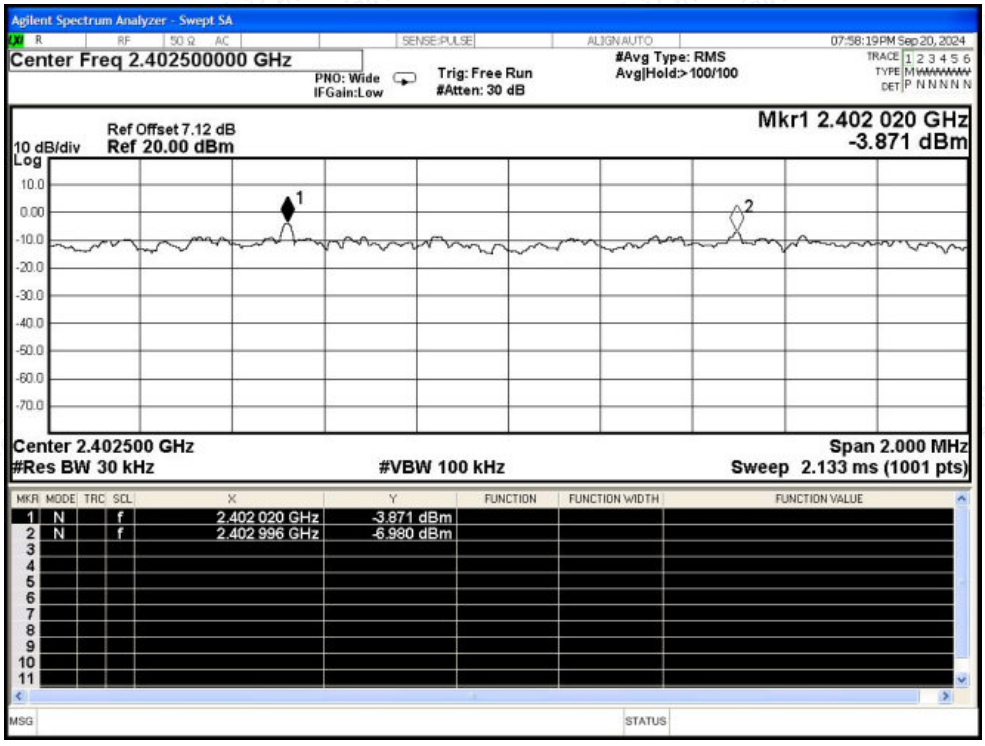
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.836	2402.84	1.004	0.673	Pass
NVNT	2-DH5	Ant1	2402.02	2402.996	0.976	0.879	Pass

Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1

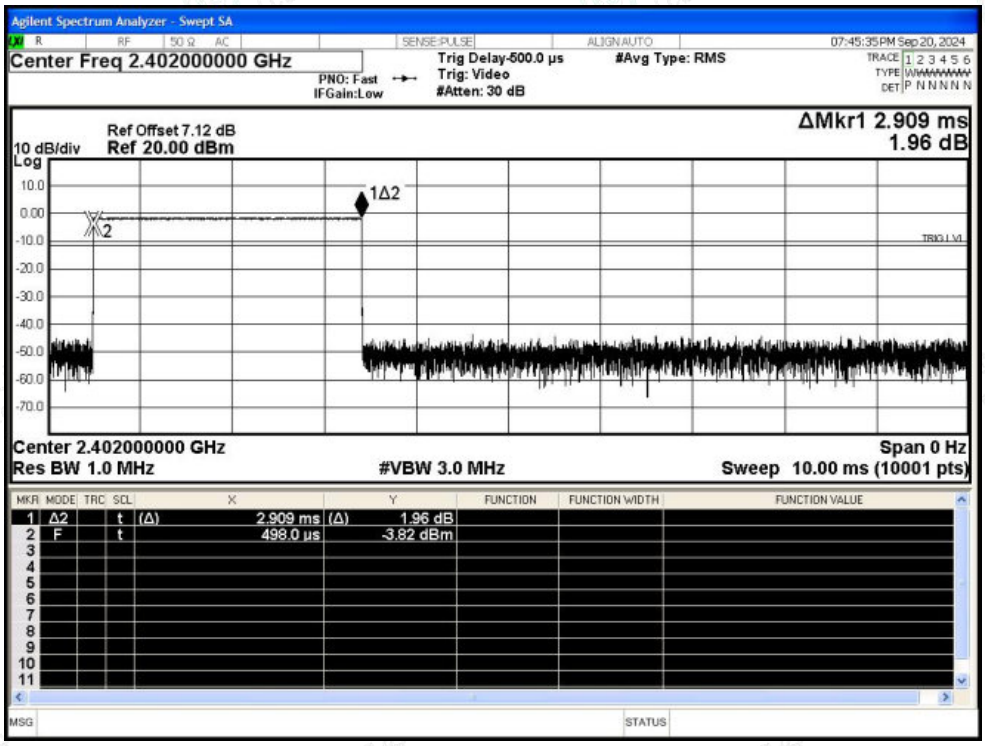


A.4 Dwell Time

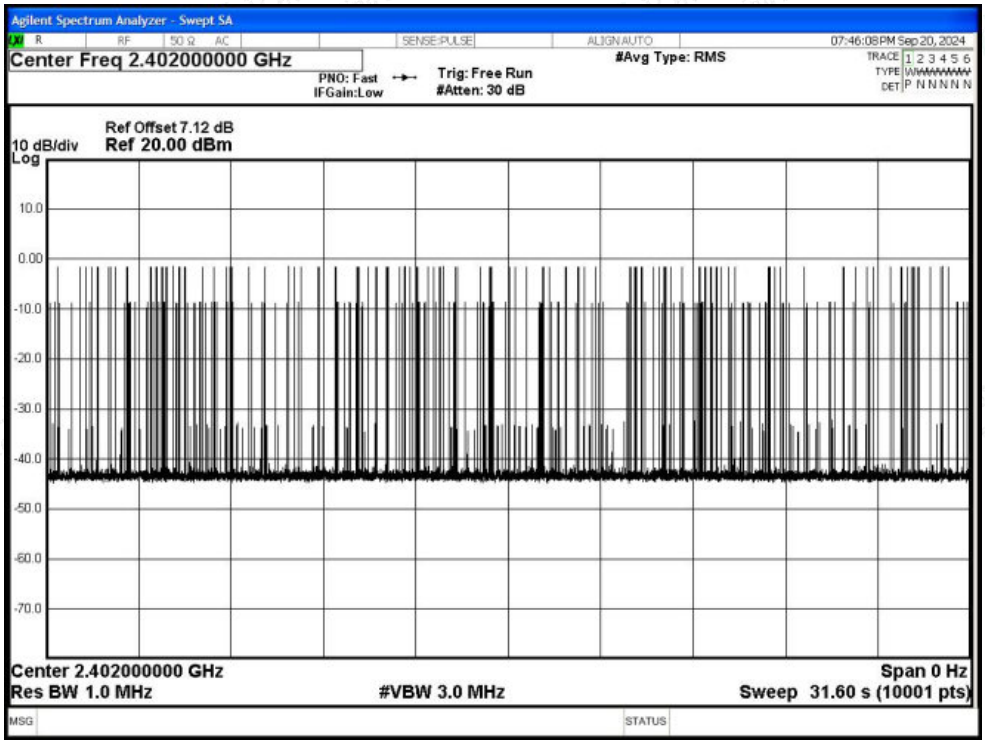
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.909	319.99	110	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	333.27	115	31600	400	Pass

Test Graphs

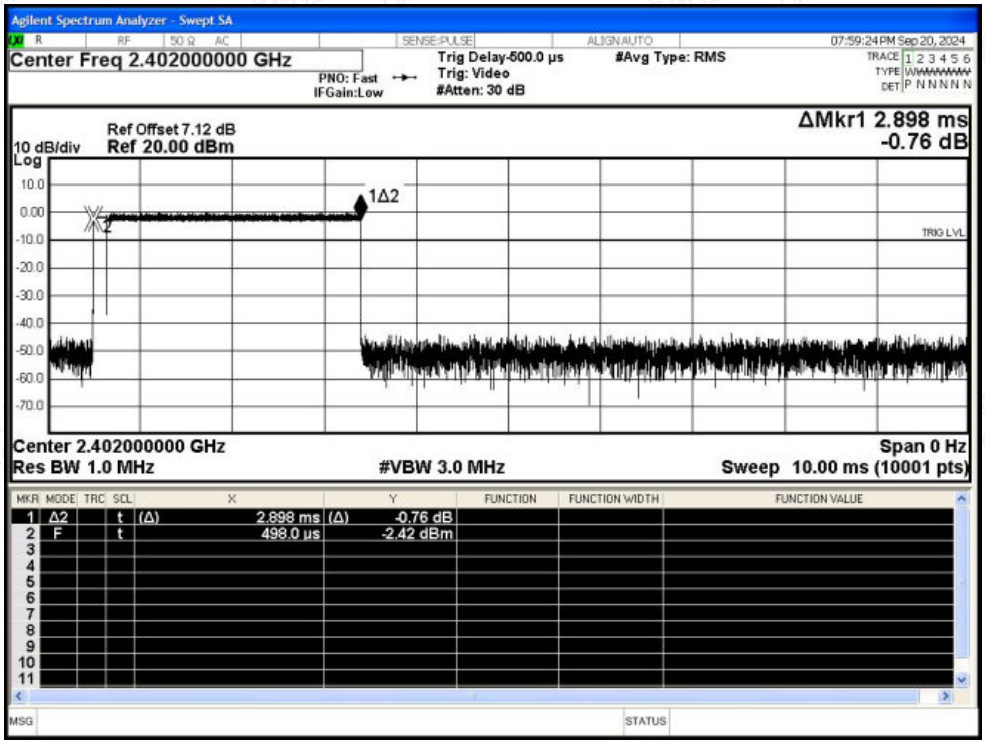
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



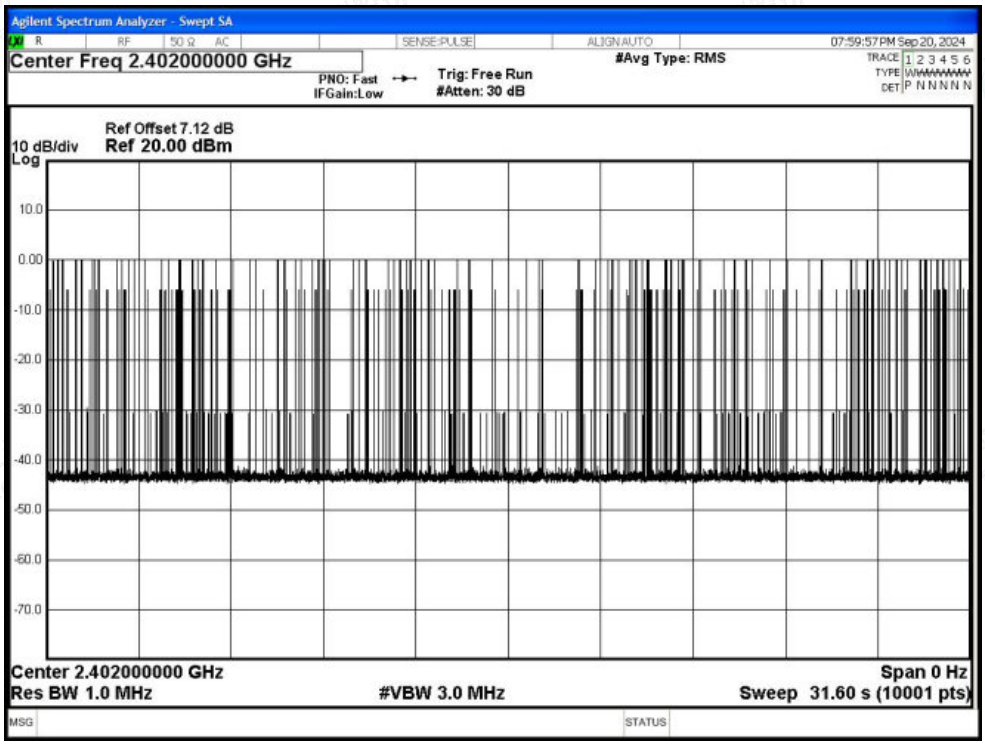
Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

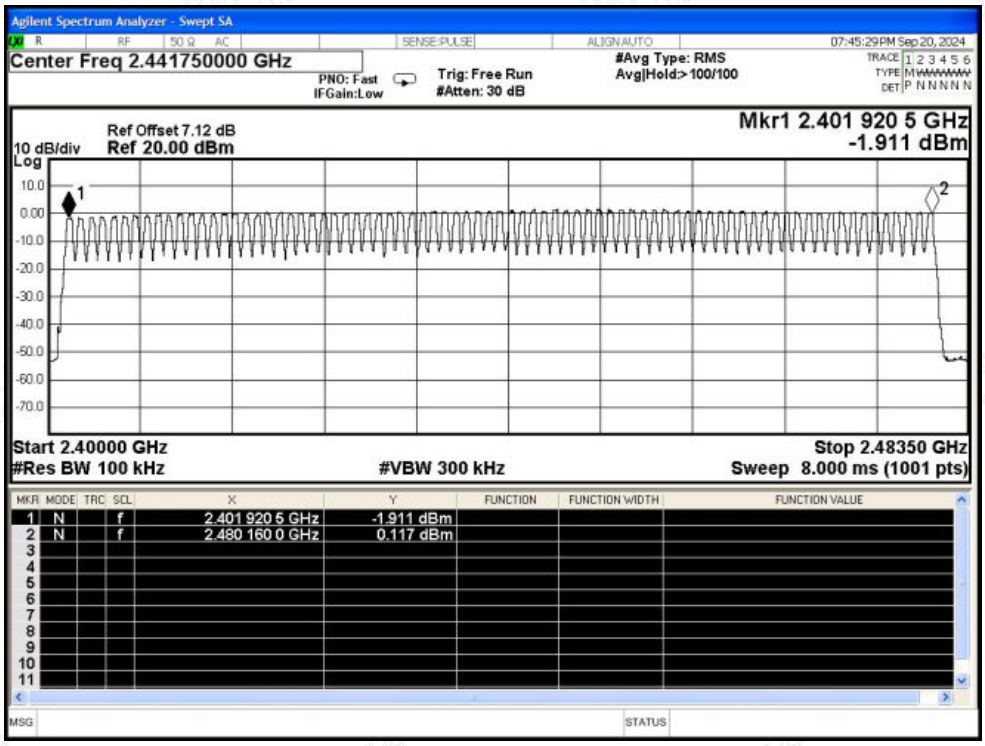


A.5 Number of Hopping Channel

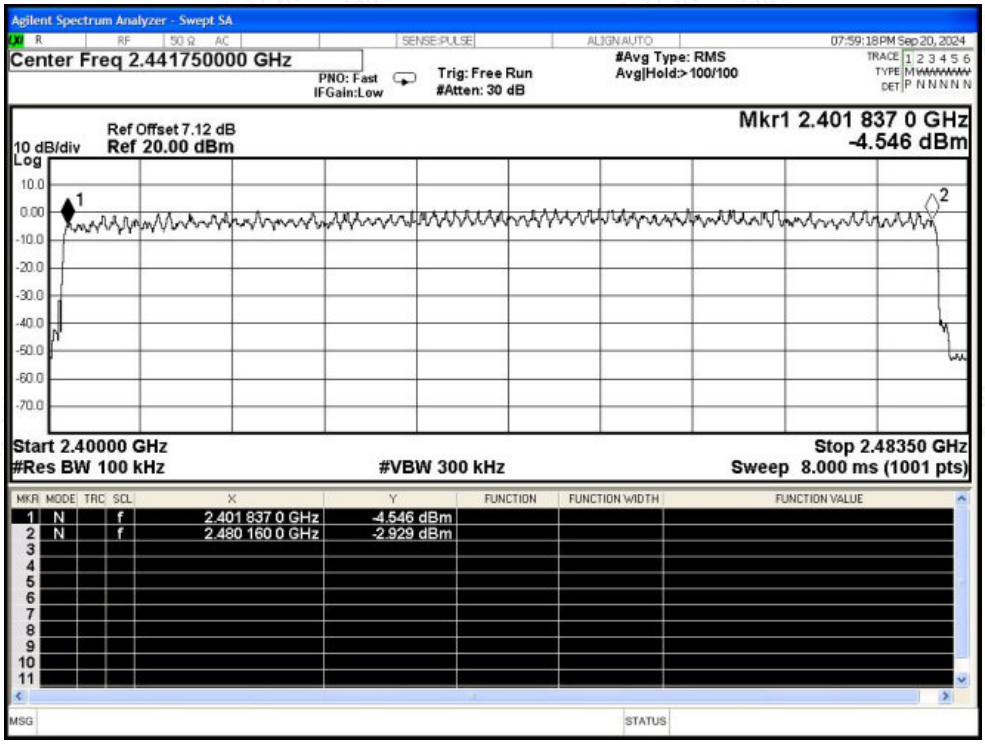
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass

Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1

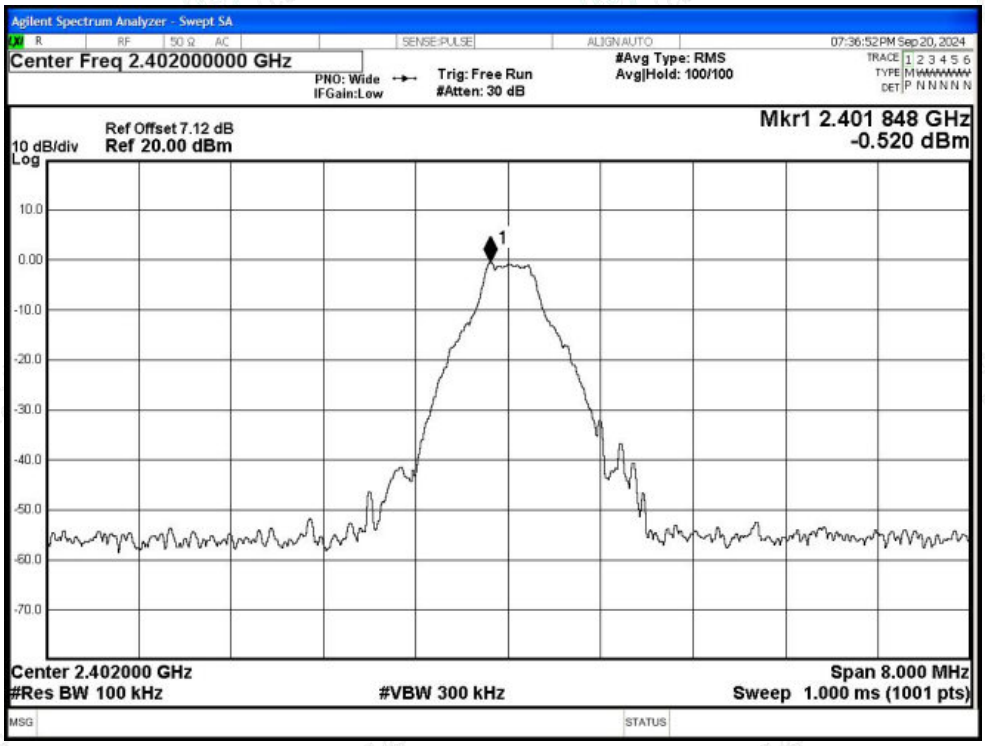


A.6 Band Edge

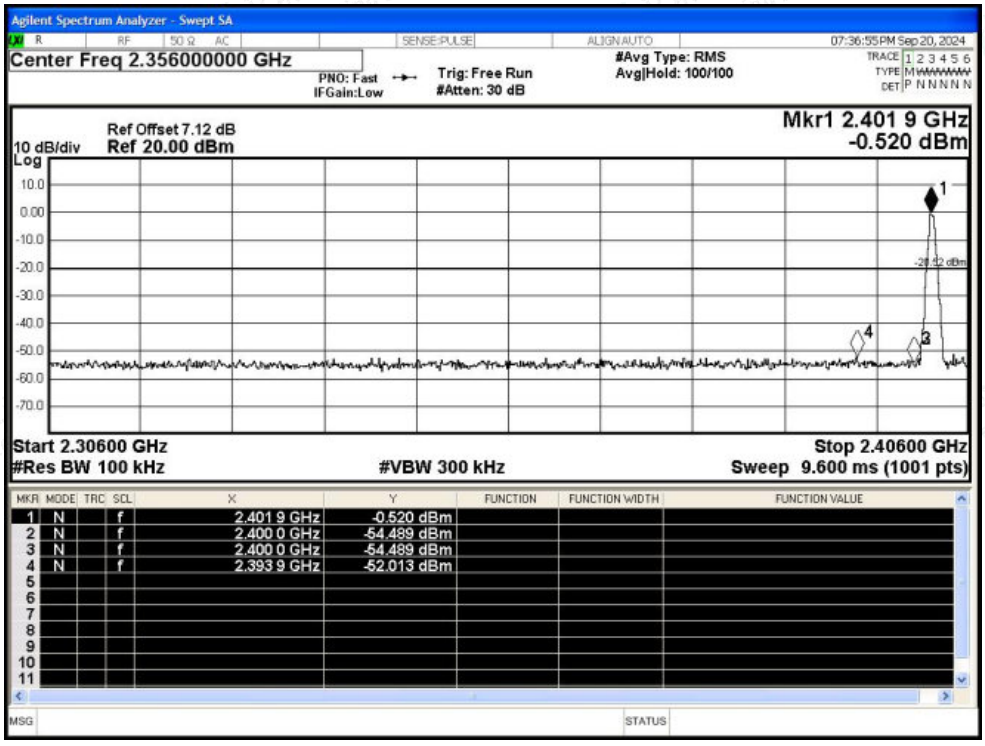
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-51.49	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-51.16	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-47.58	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-49.53	-20	Pass

Test Graphs

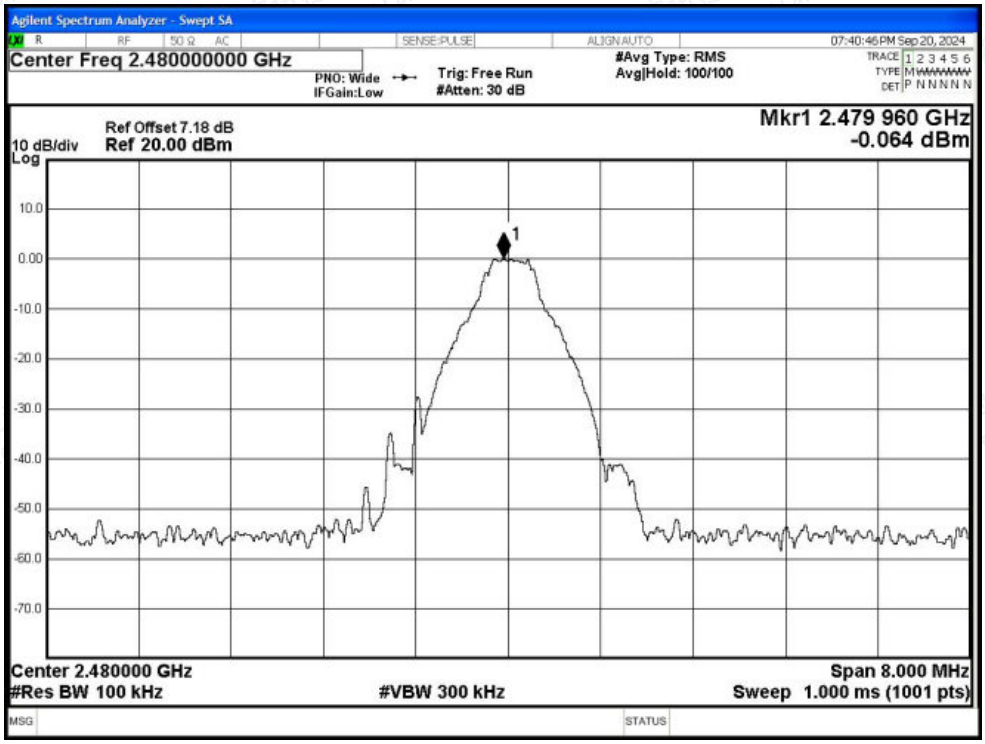
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



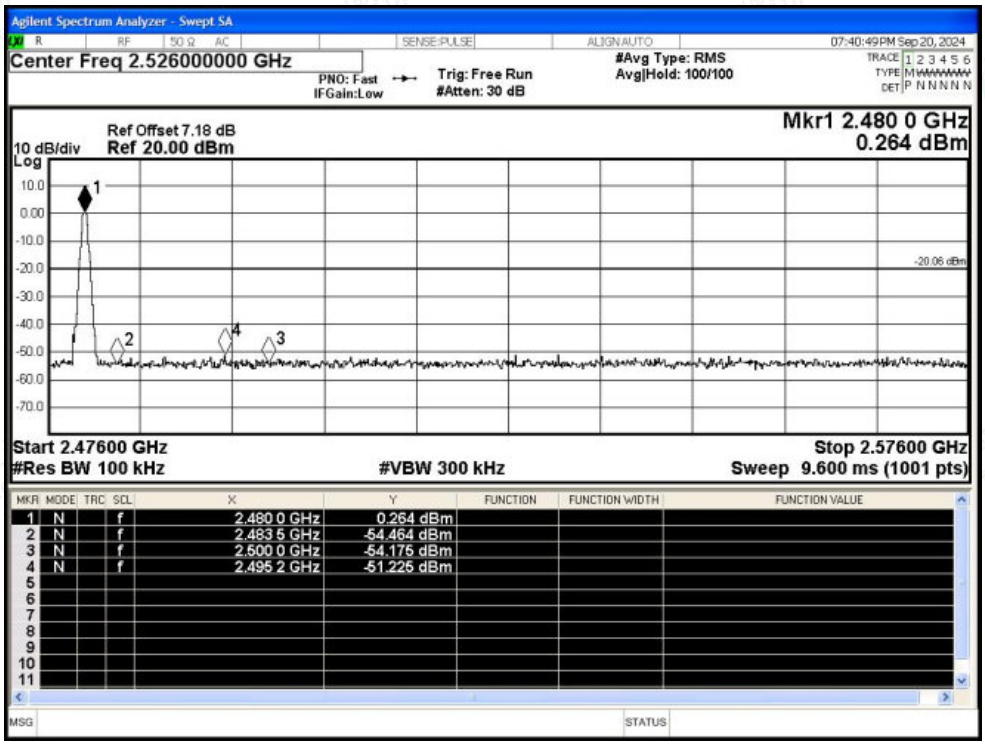
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



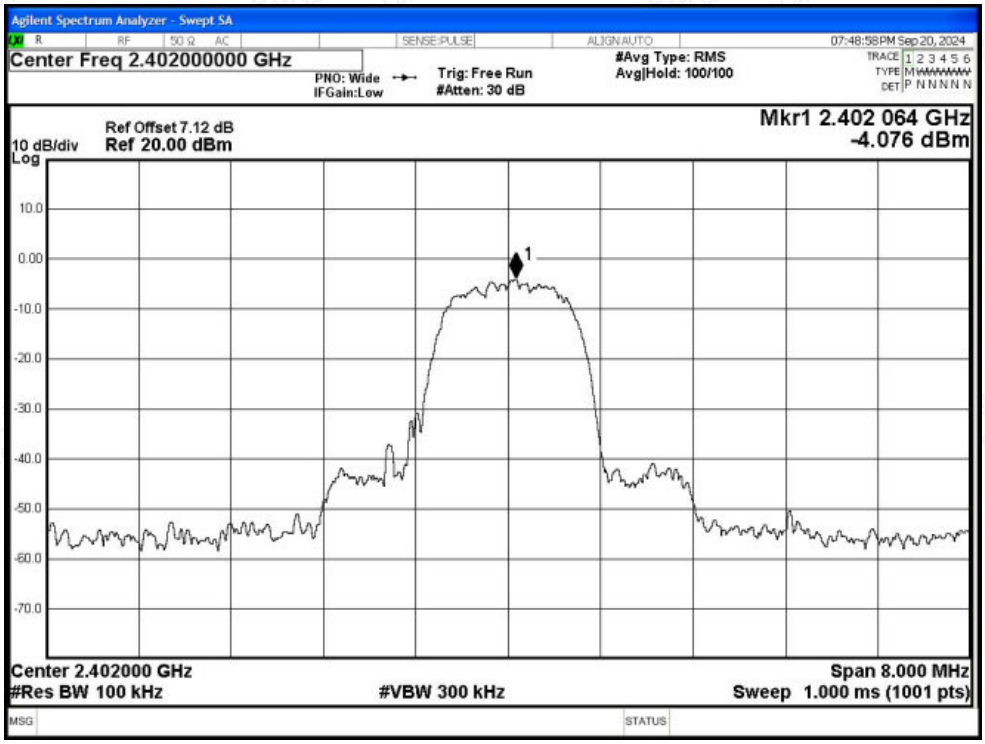
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



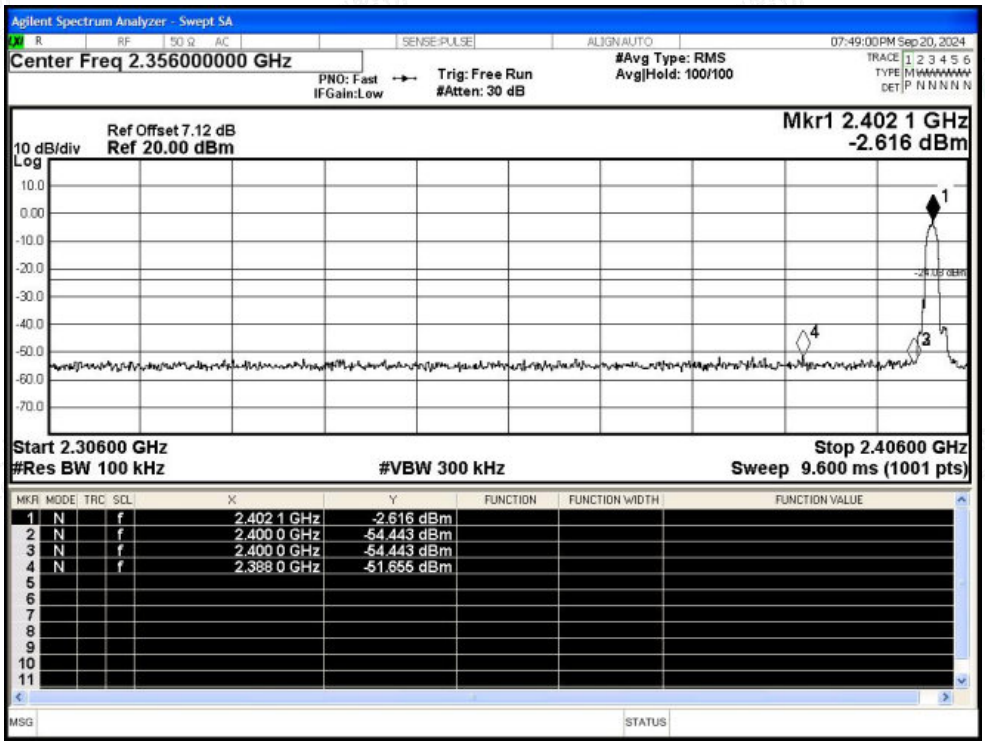
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



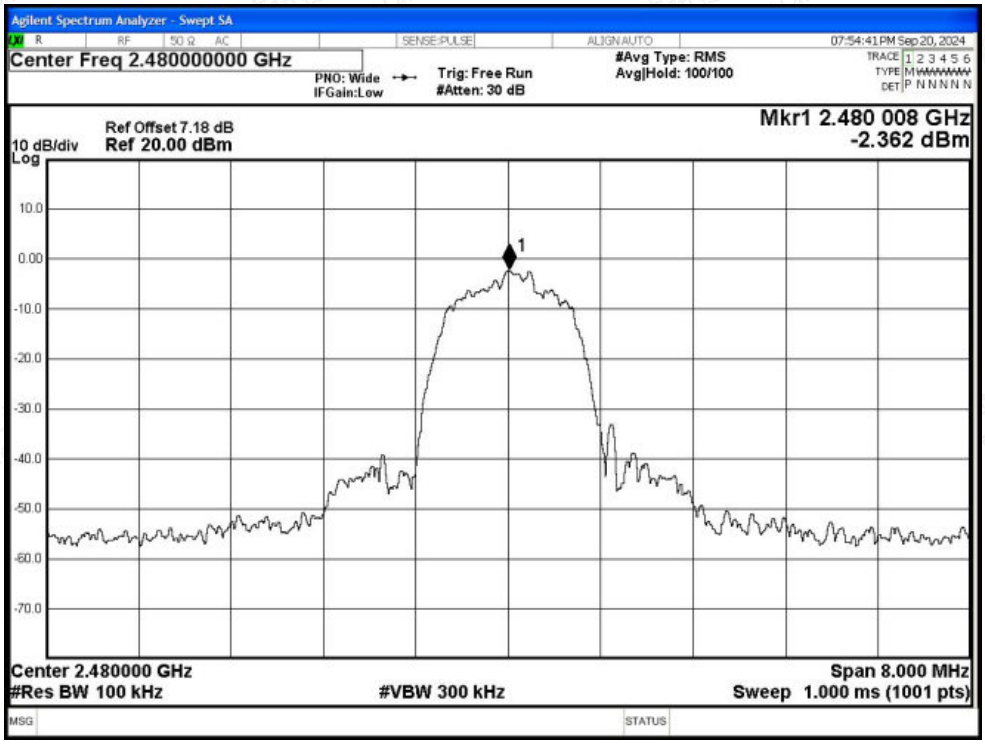
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



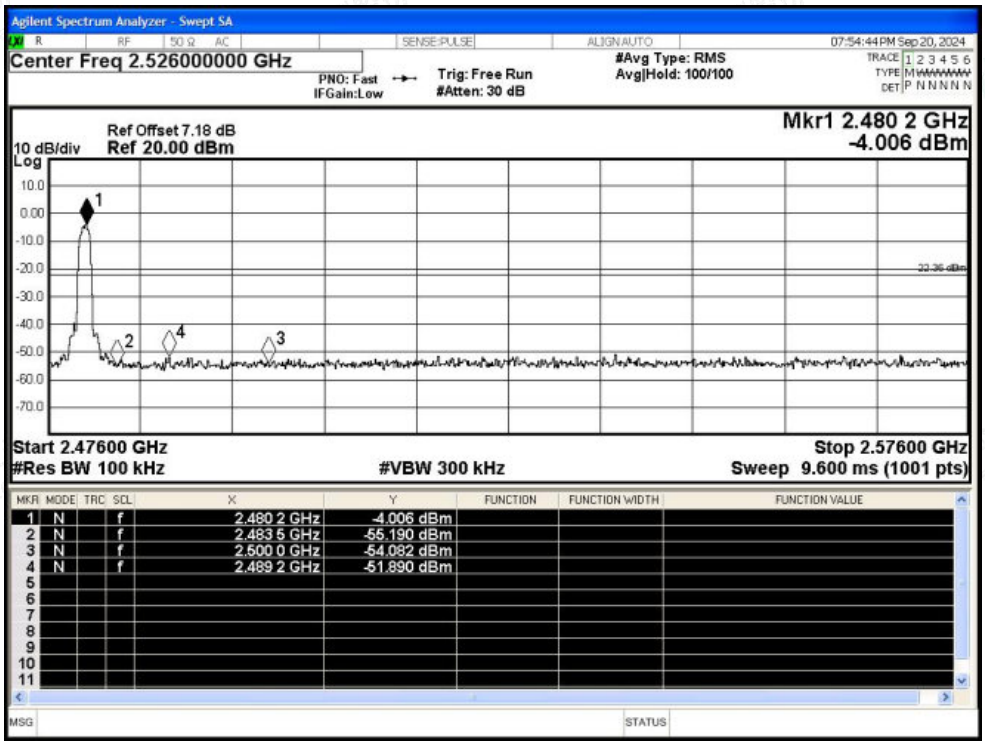
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



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



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

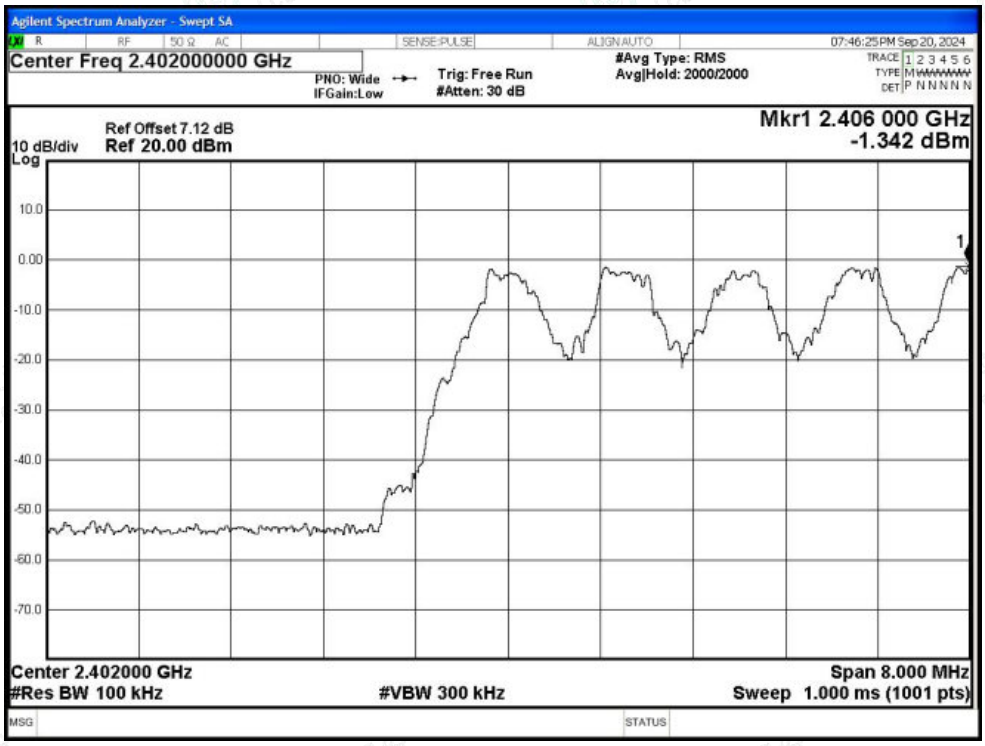


(Hopping)

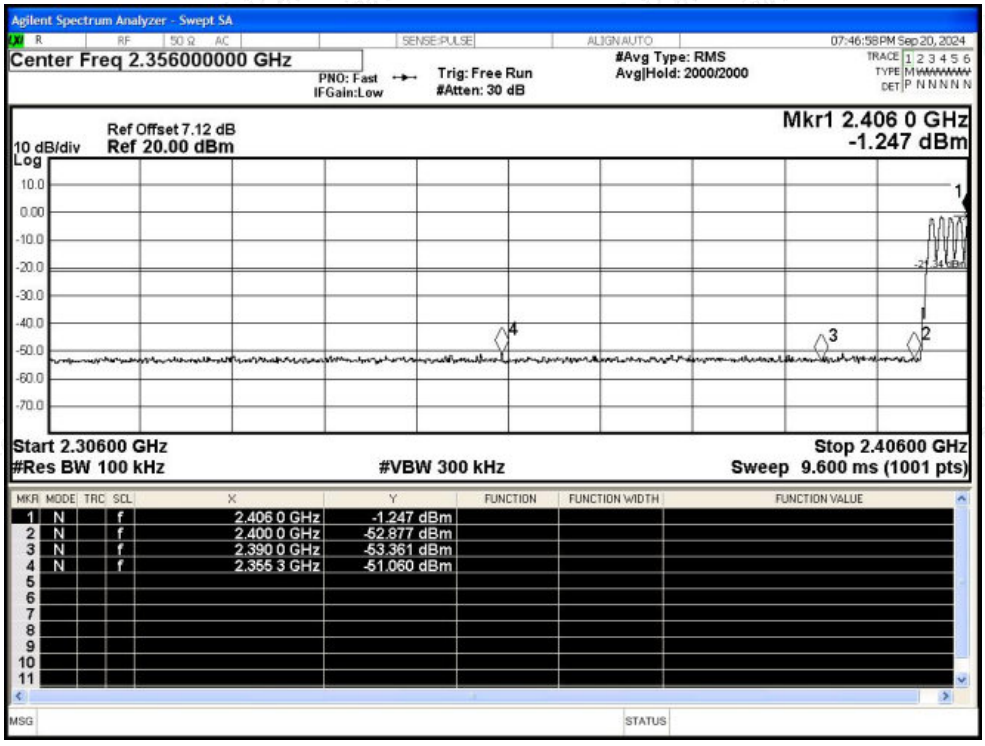
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-49.72	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-51.21	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-48.95	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-50.08	-20	Pass

Test Graphs

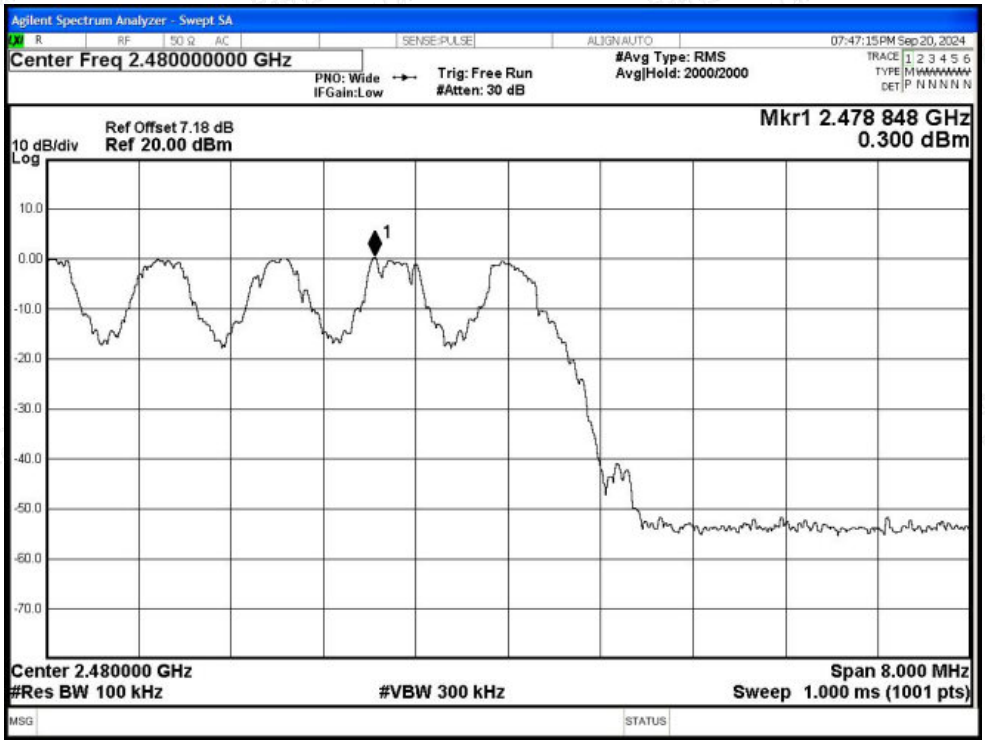
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



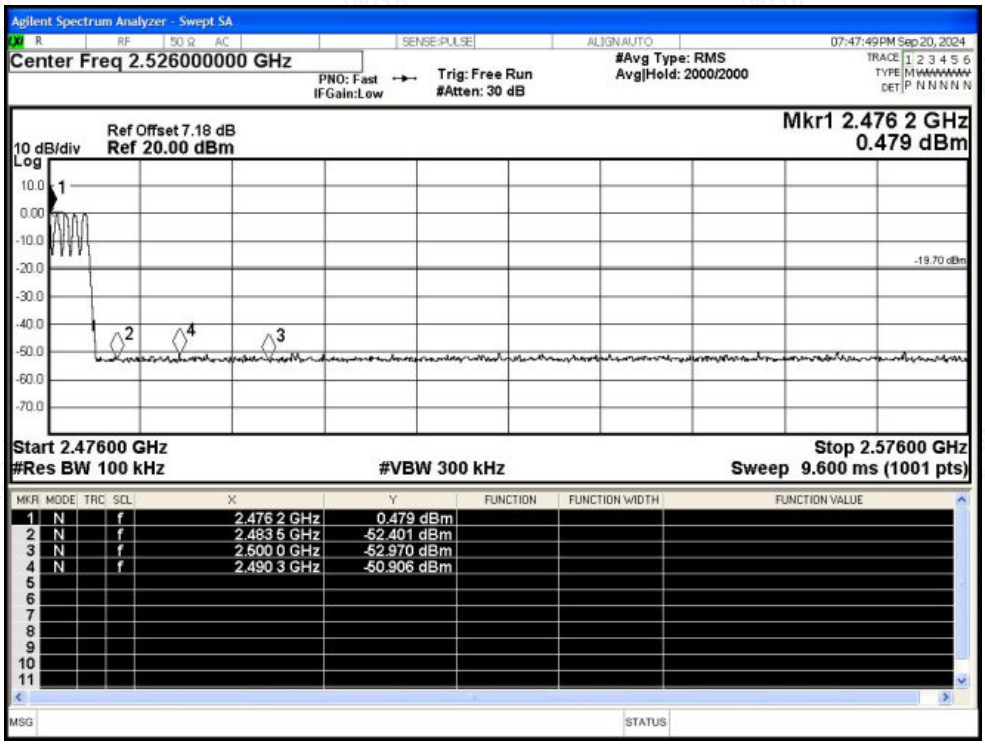
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



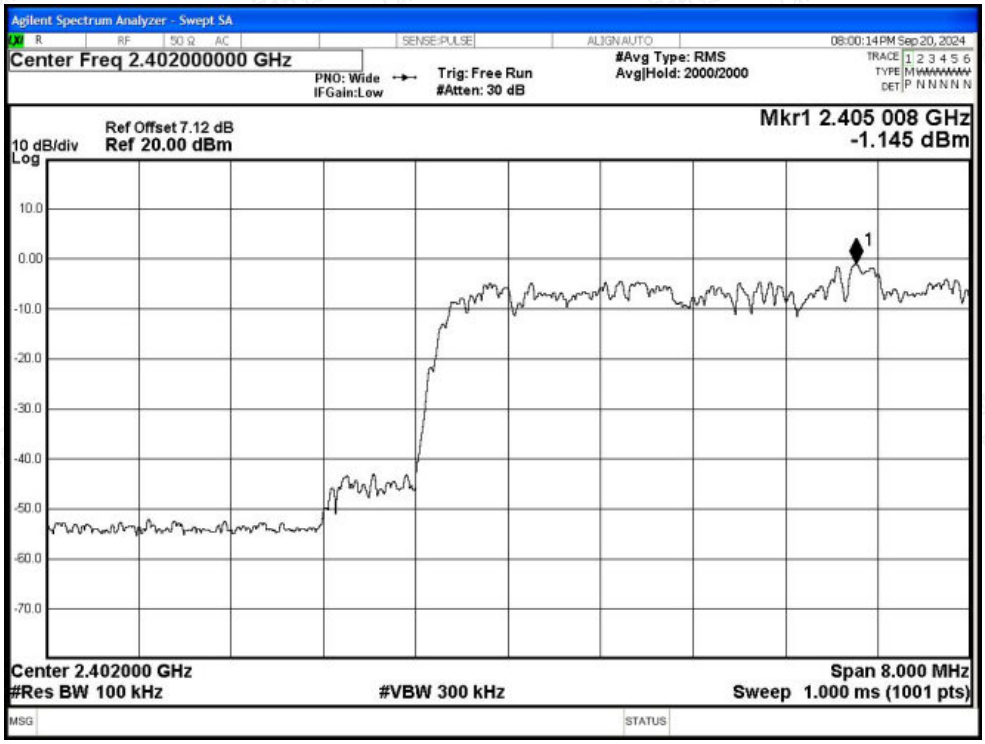
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



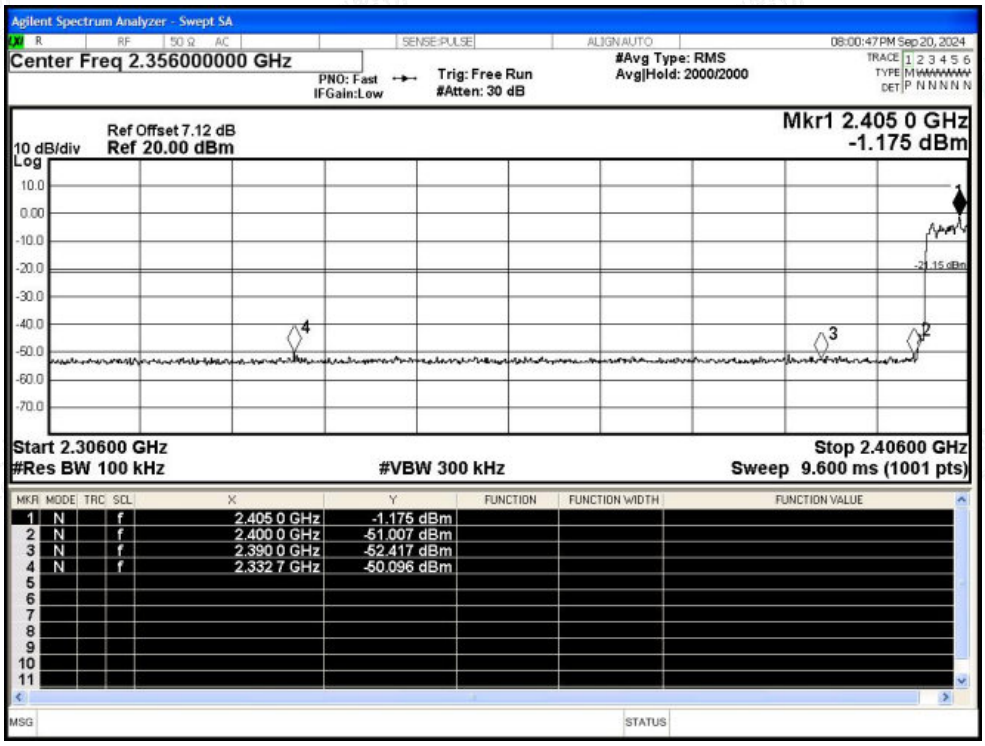
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



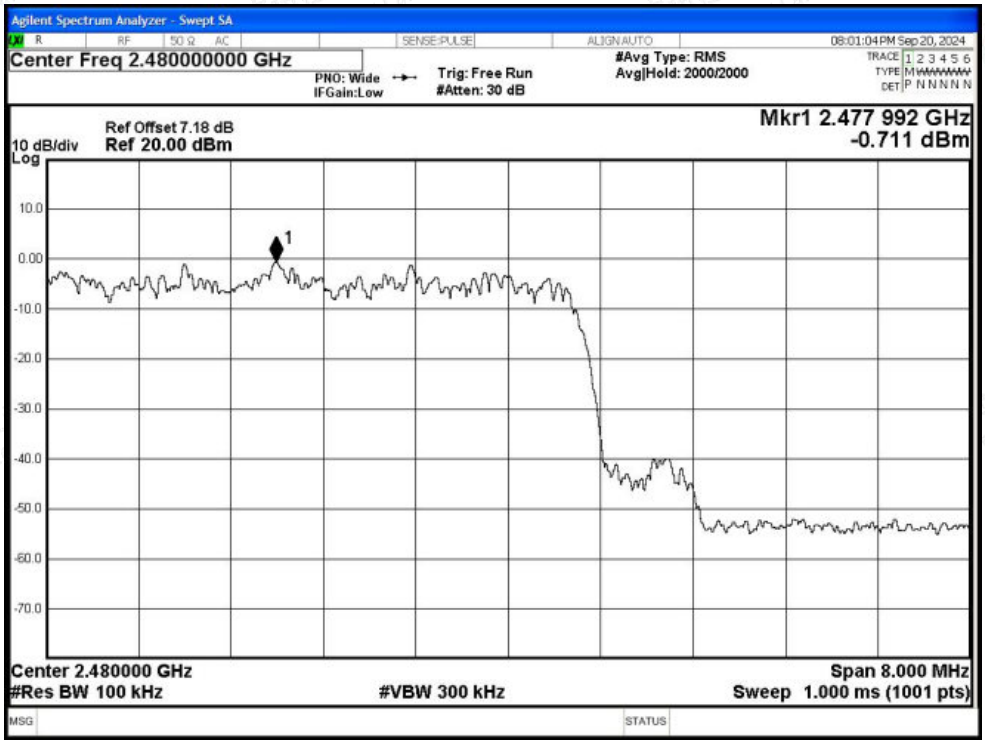
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



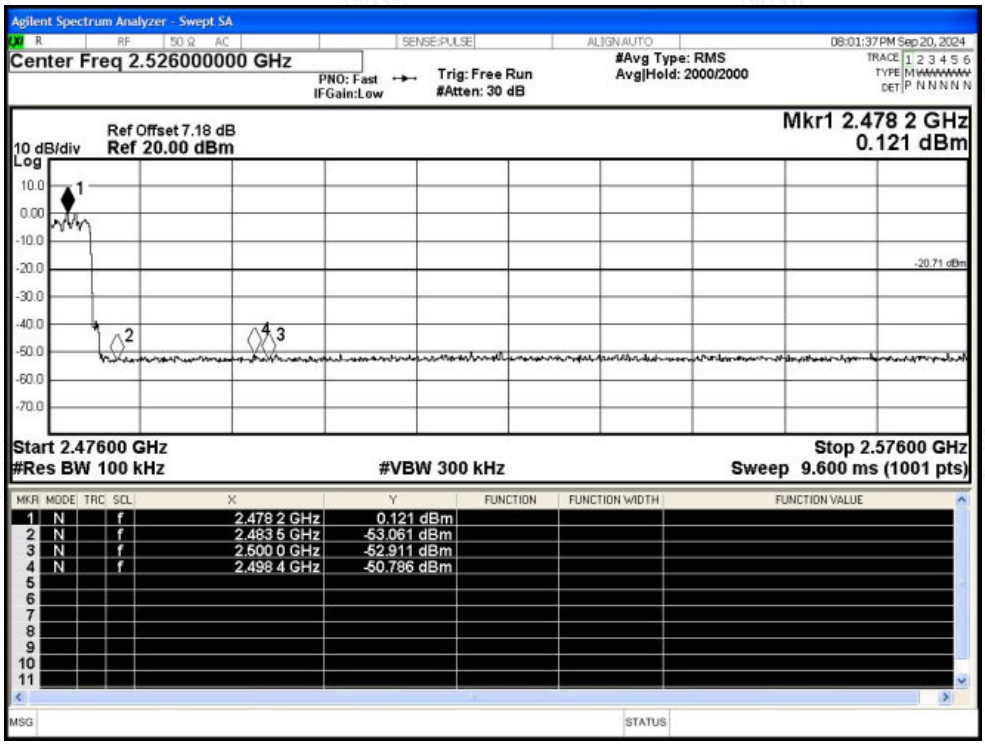
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



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



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

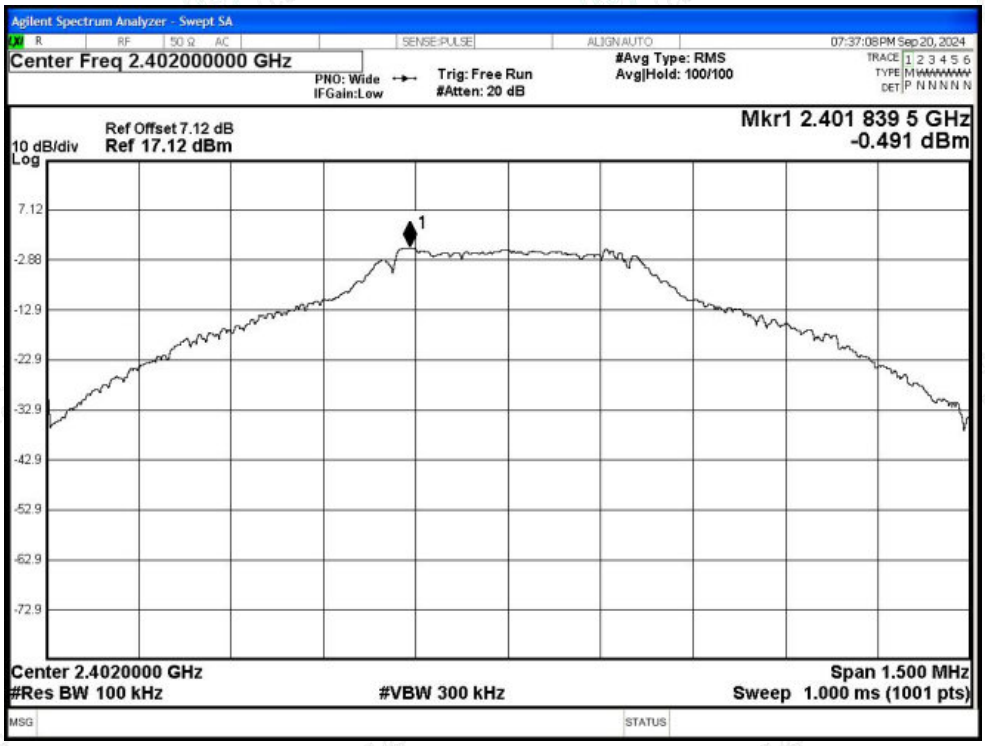


A.7 Conducted RF Spurious Emission

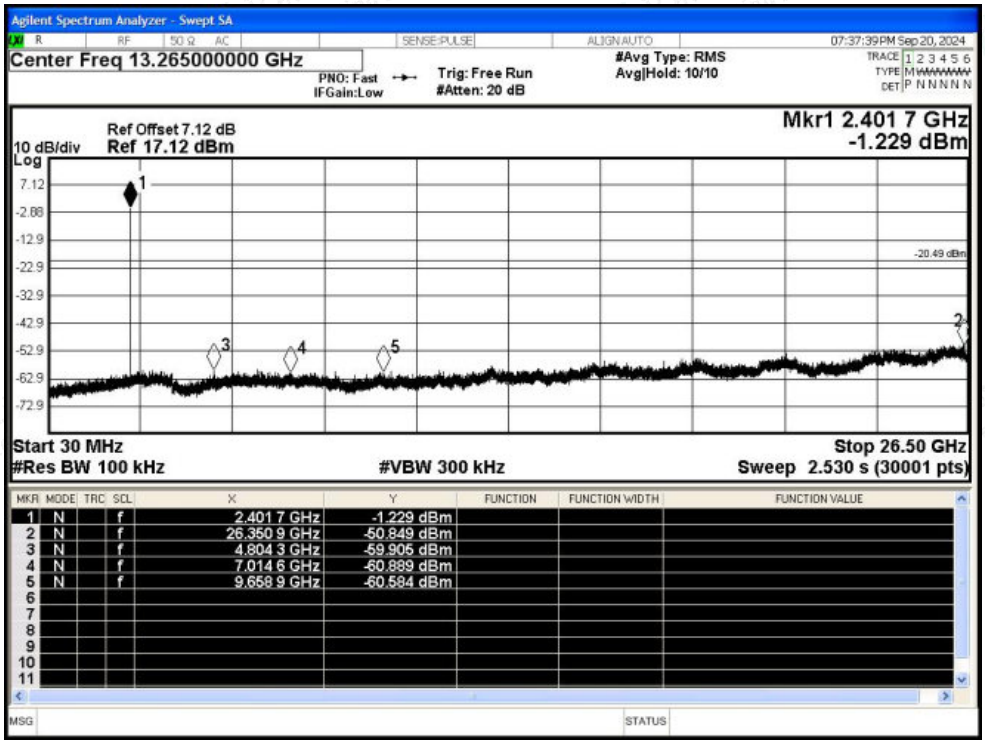
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-50.36	-20	Pass
NVNT	1-DH5	2441	Ant1	-49.53	-20	Pass
NVNT	1-DH5	2480	Ant1	-48.61	-20	Pass
NVNT	2-DH5	2402	Ant1	-48.32	-20	Pass
NVNT	2-DH5	2441	Ant1	-48.19	-20	Pass
NVNT	2-DH5	2480	Ant1	-47.49	-20	Pass

Test Graphs

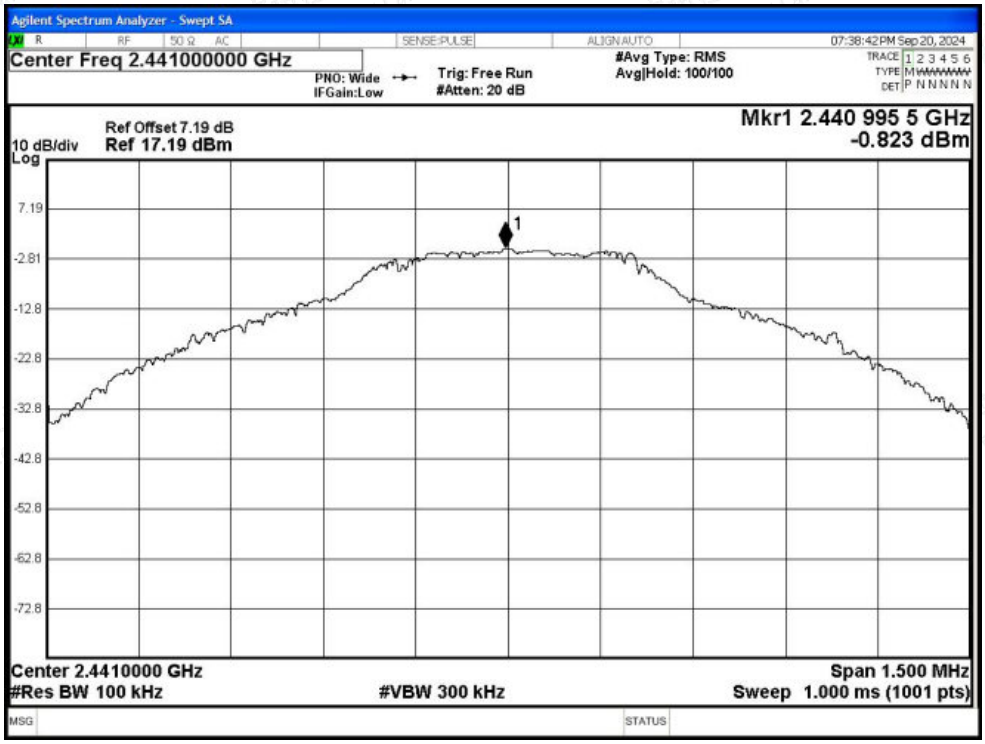
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



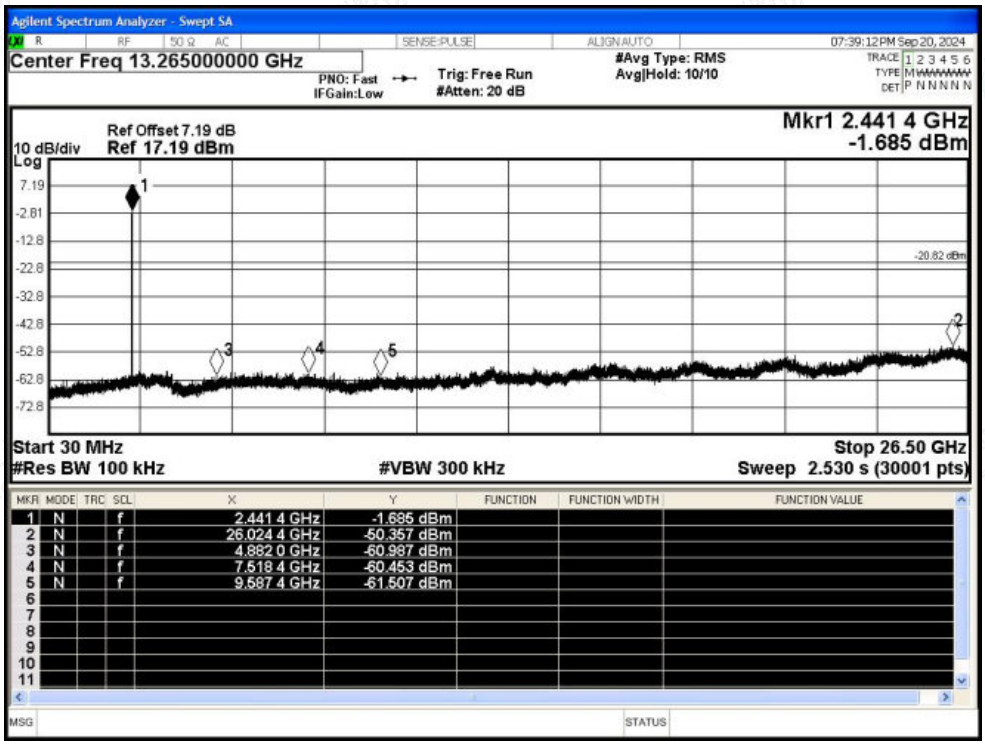
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



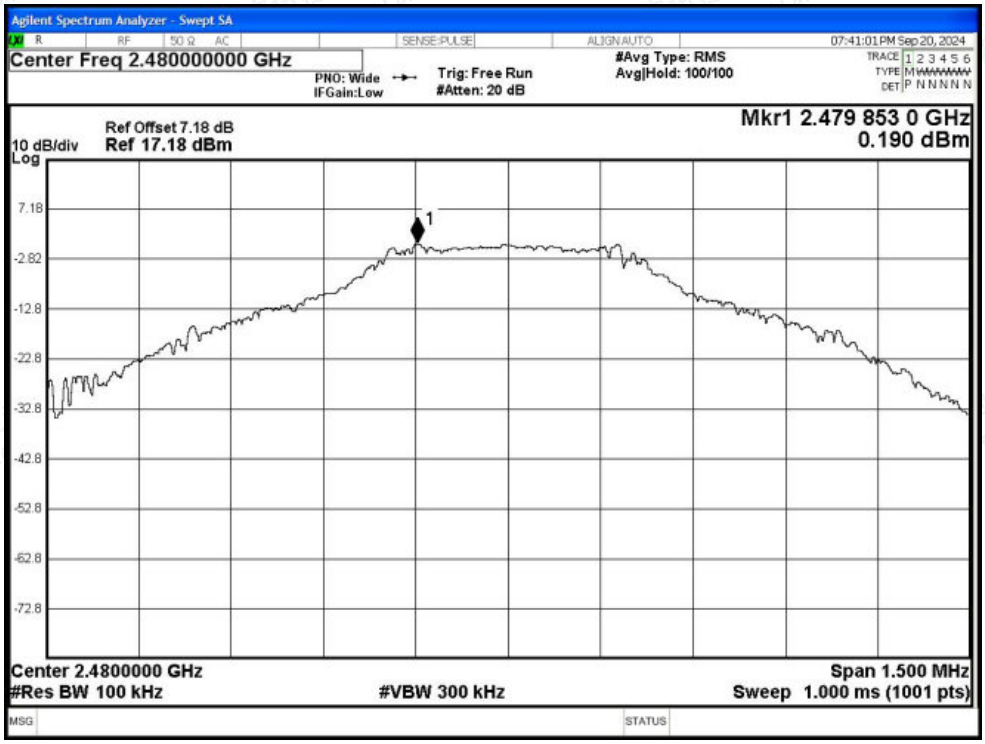
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



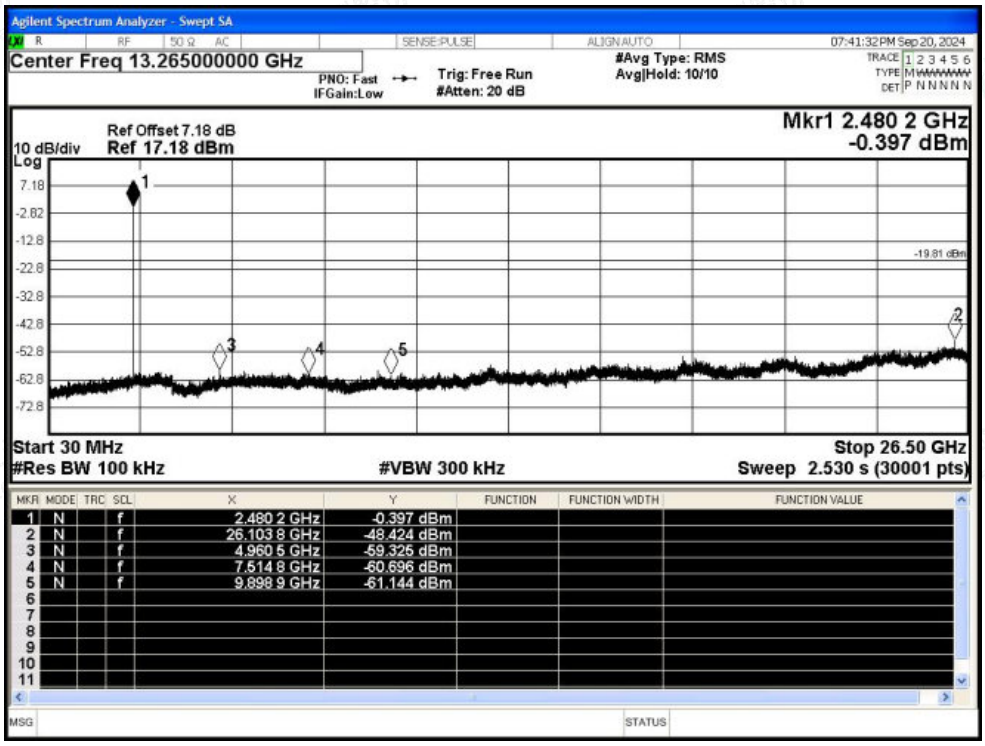
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



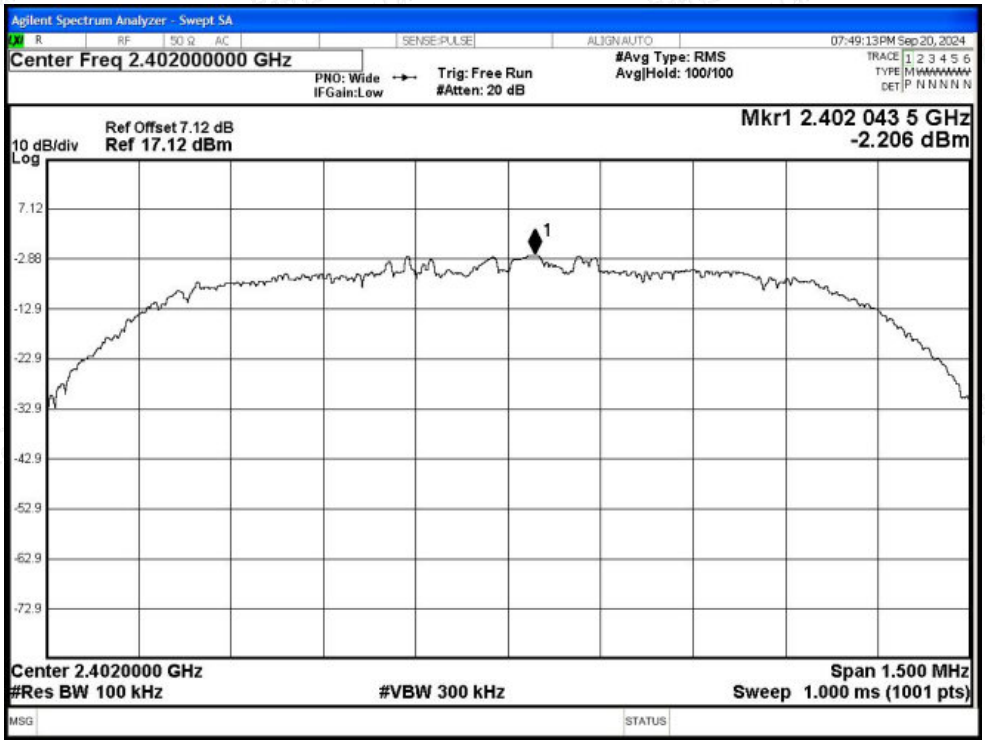
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



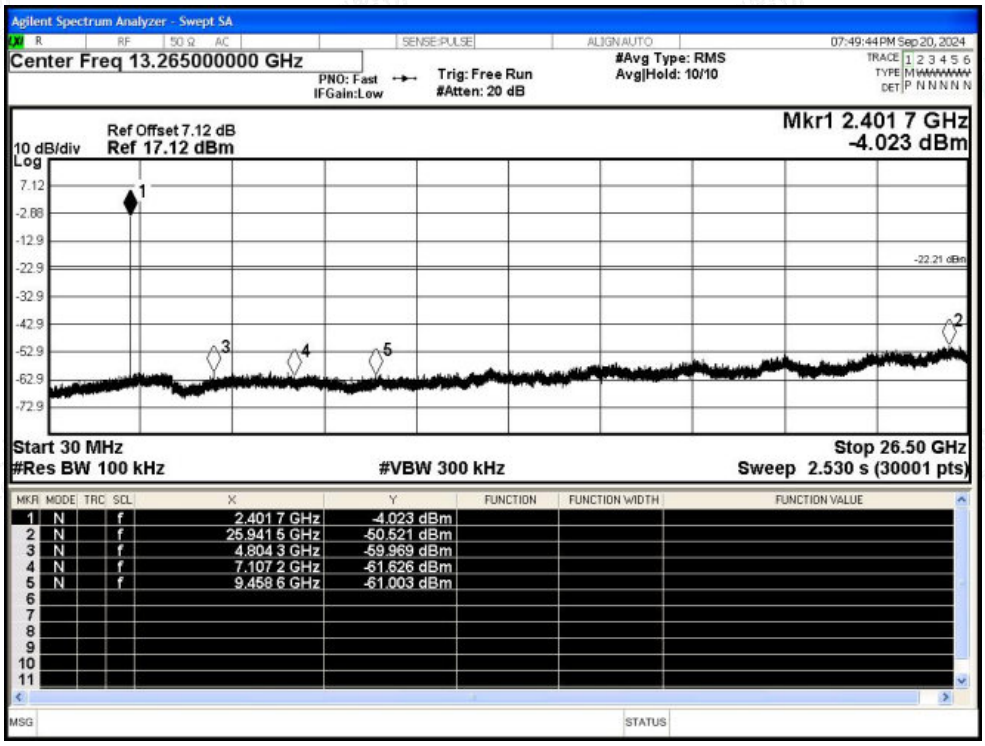
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



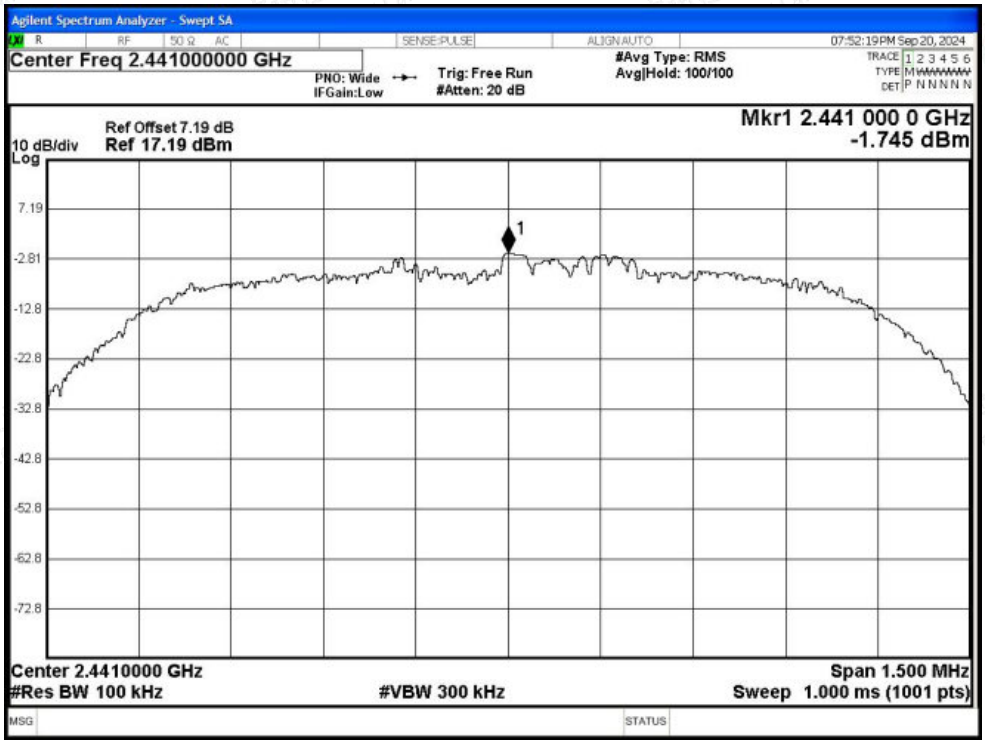
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



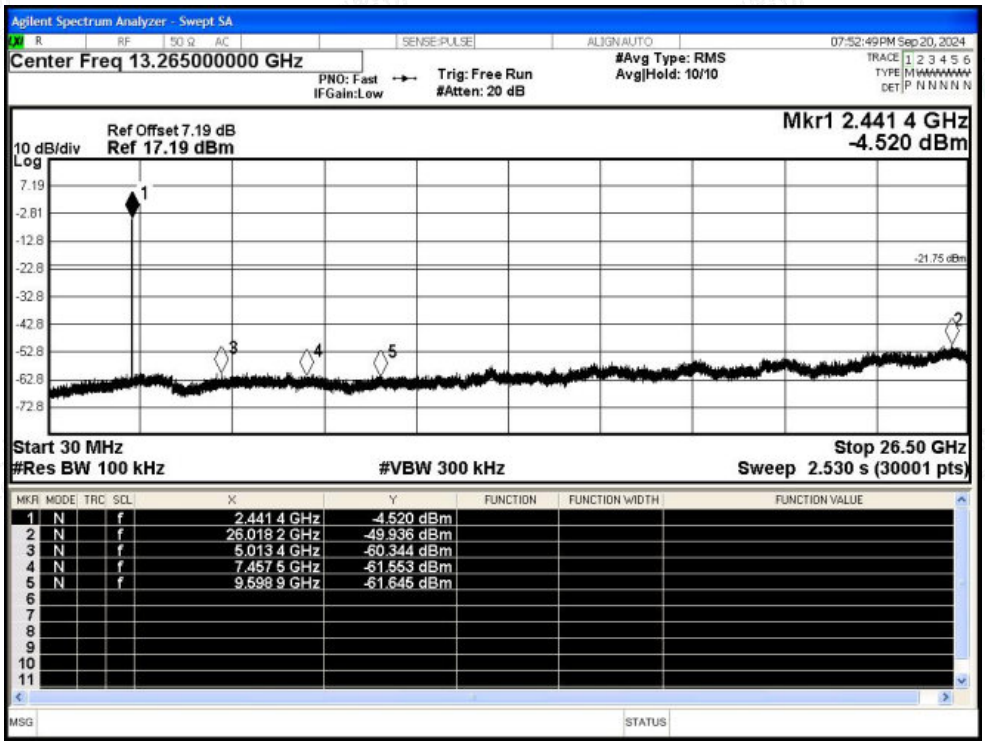
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



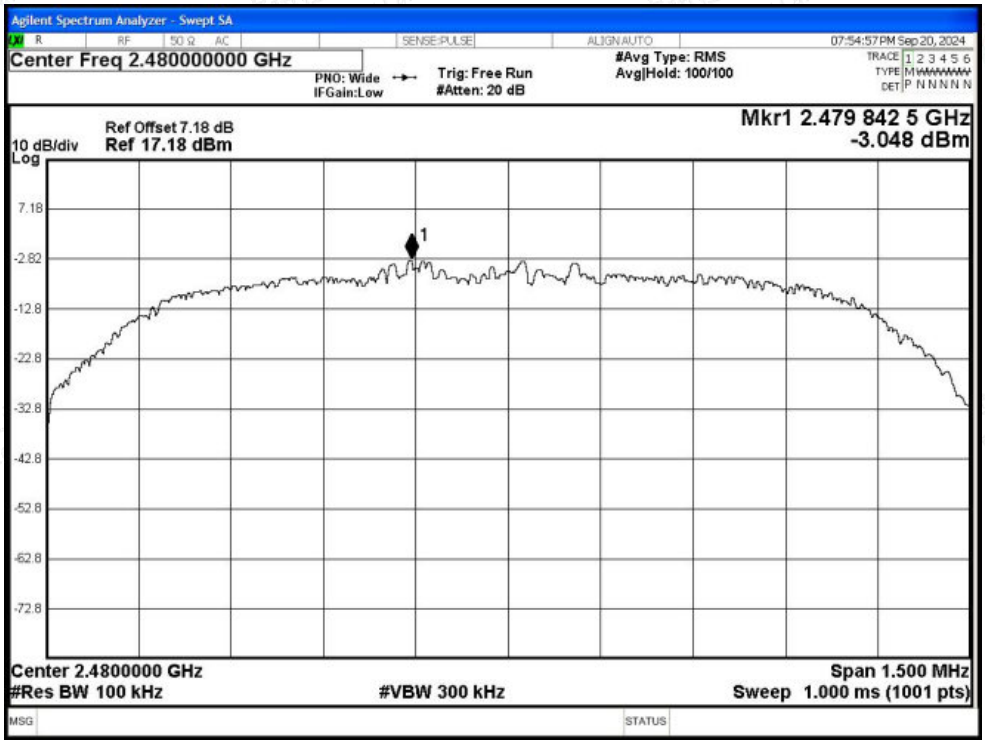
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



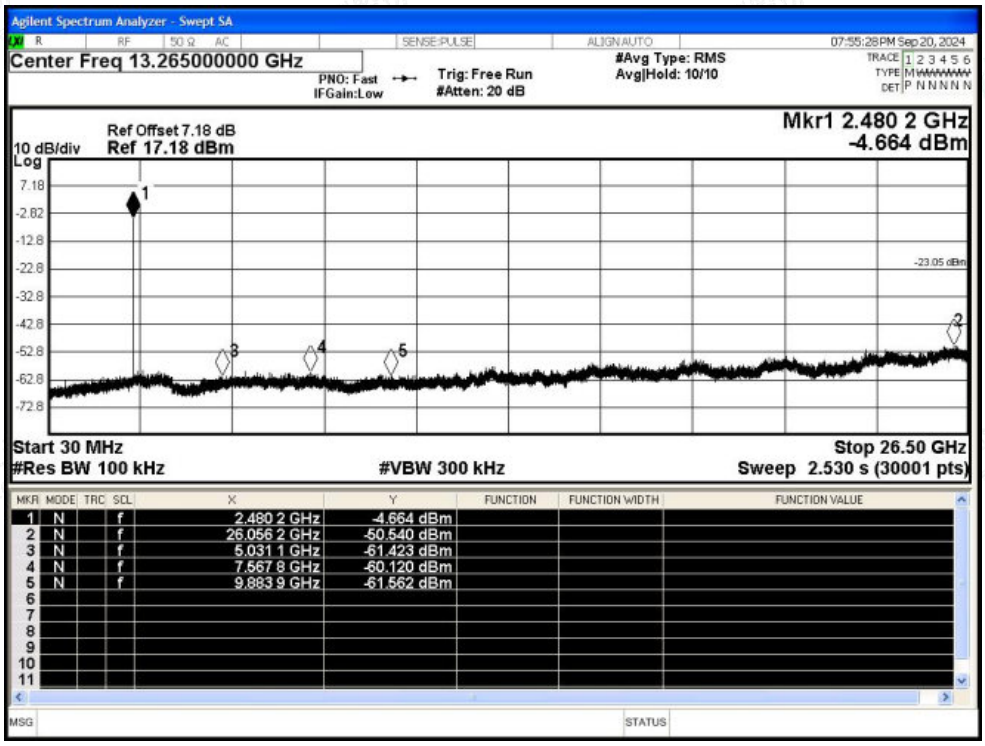
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission

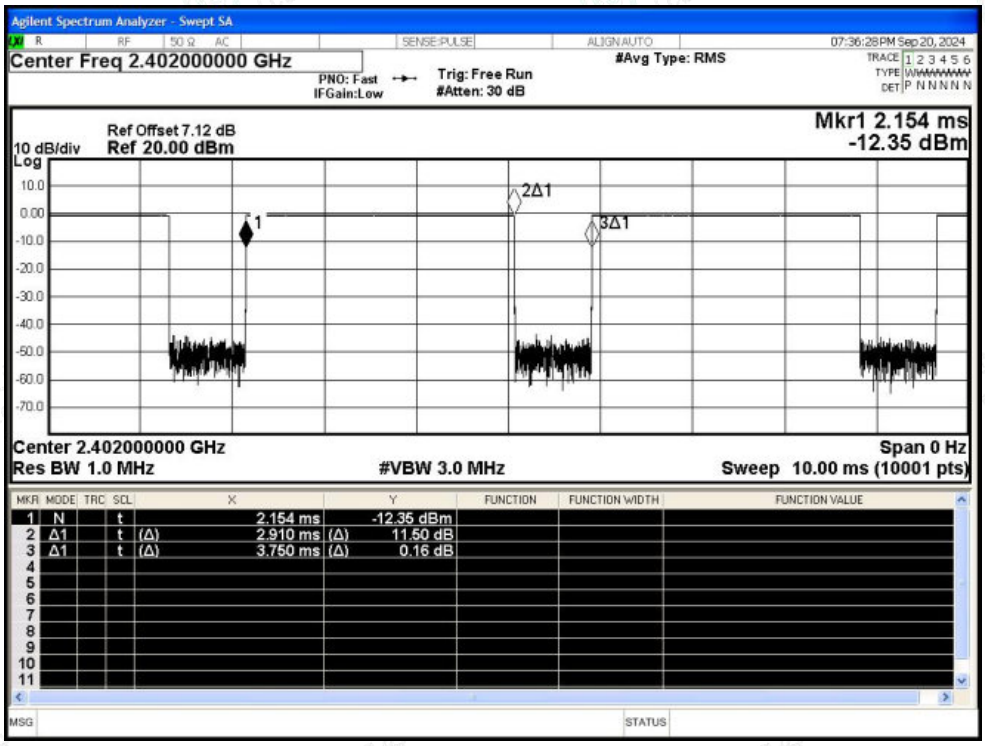


A.8 Duty Cycle

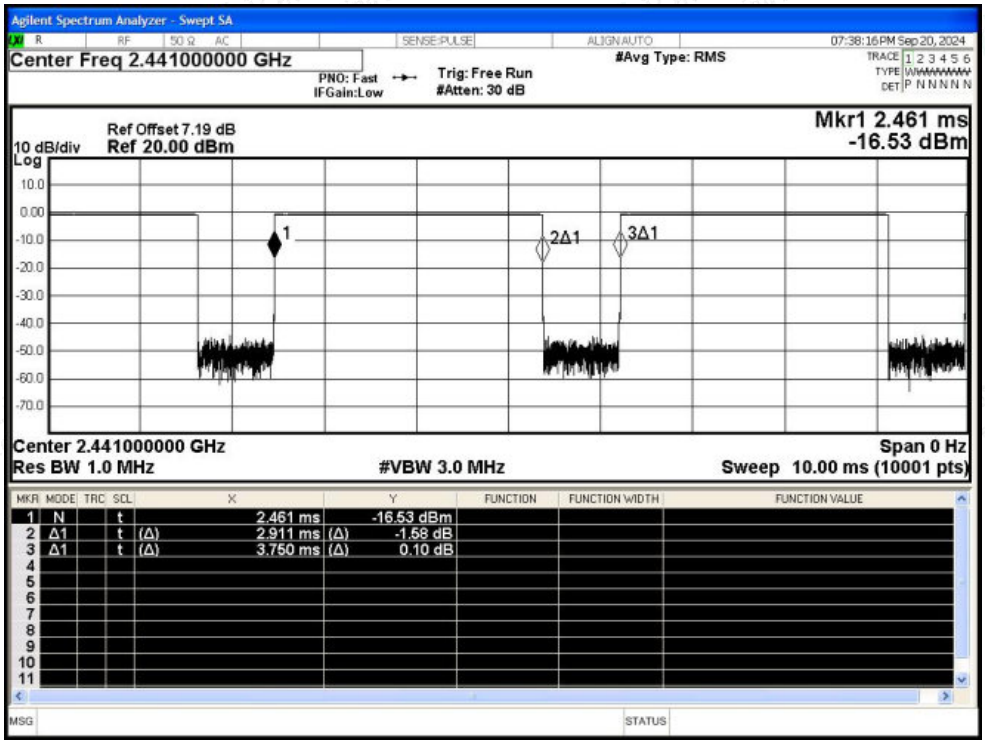
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.63	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.63	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2441	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2480	Ant1	77.28	1.12	0.35

Test Graphs

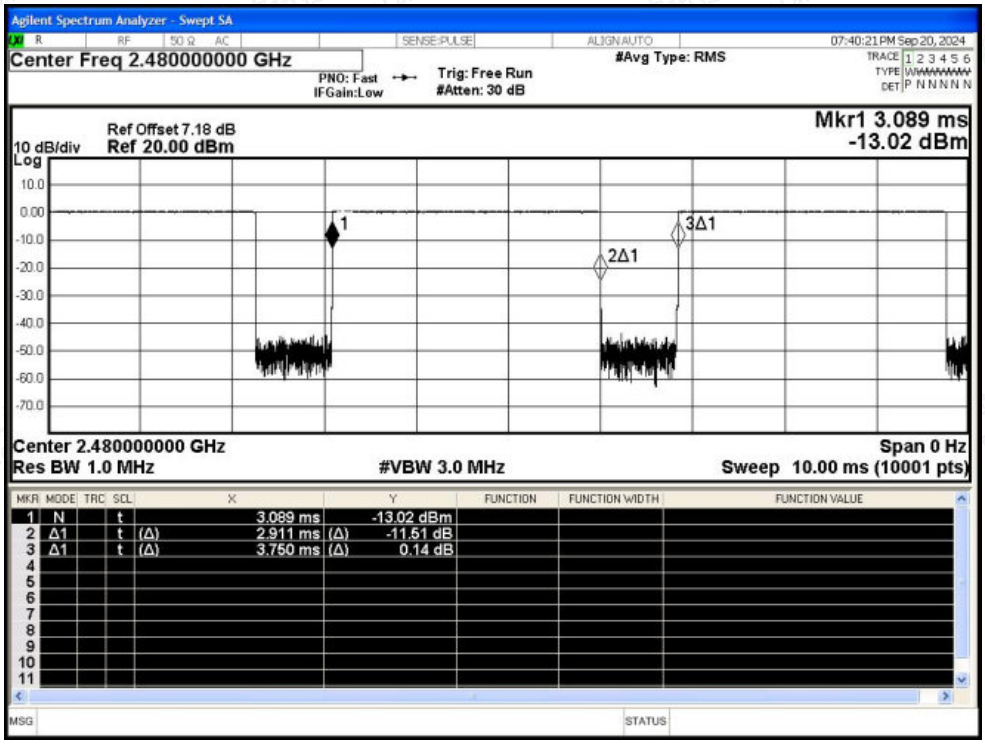
Duty Cycle NVNT 1-DH5 2402MHz Ant1



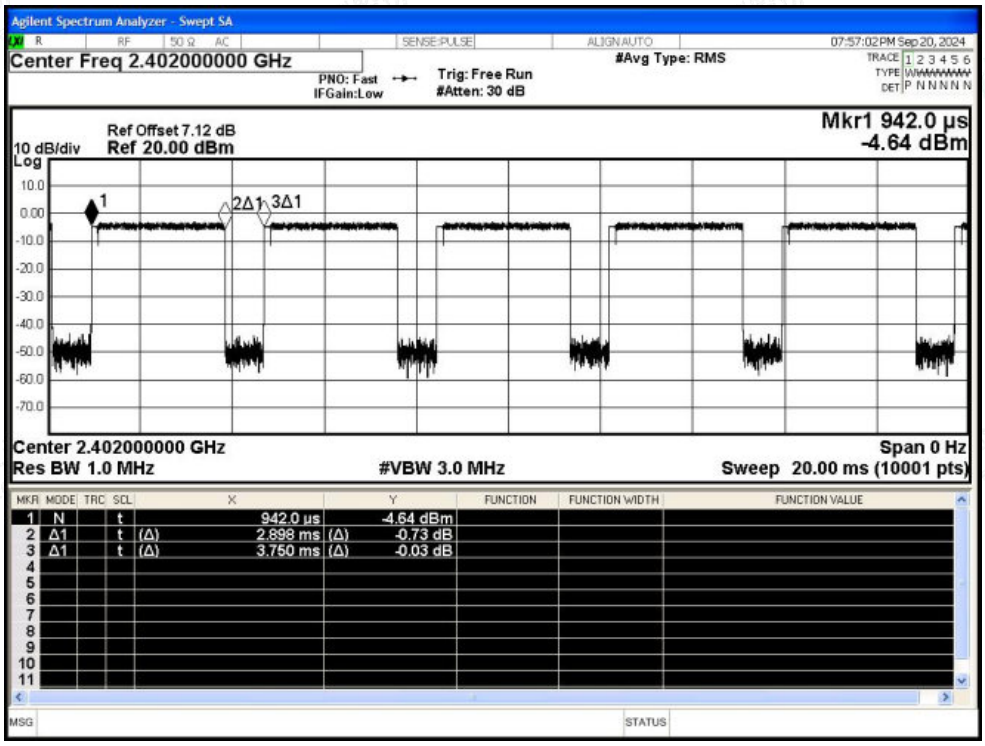
Duty Cycle NVNT 1-DH5 2441MHz Ant1



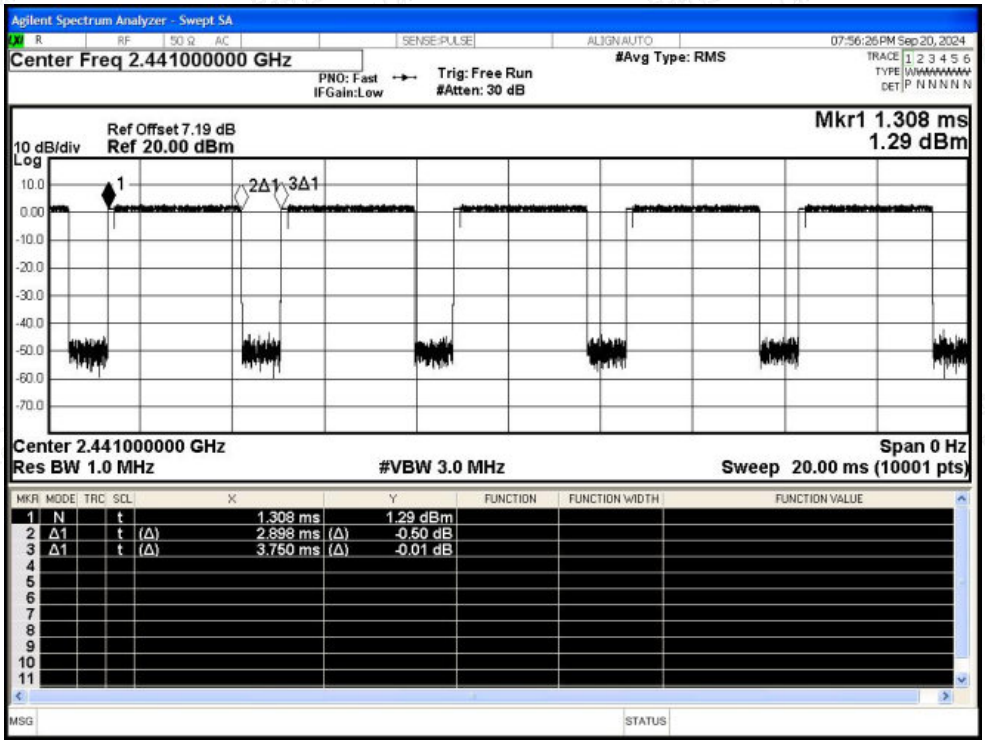
Duty Cycle NVNT 1-DH5 2480MHz Ant1



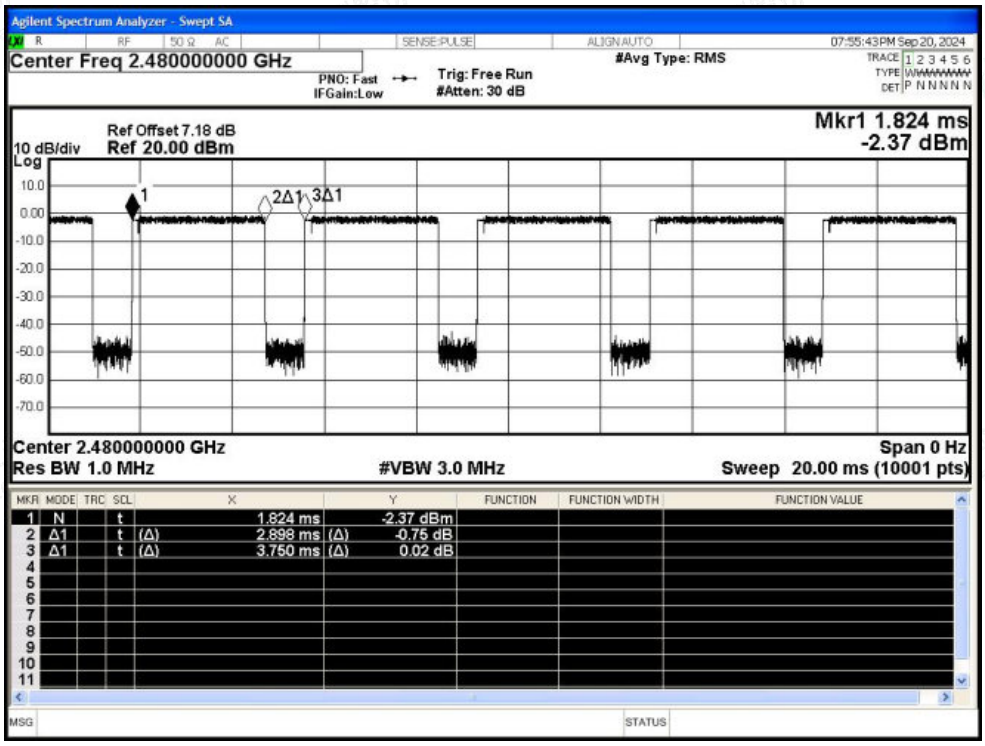
Duty Cycle NVNT 2-DH5 2402MHz Ant1



Duty Cycle NVNT 2-DH5 2441MHz Ant1



Duty Cycle NVNT 2-DH5 2480MHz Ant1

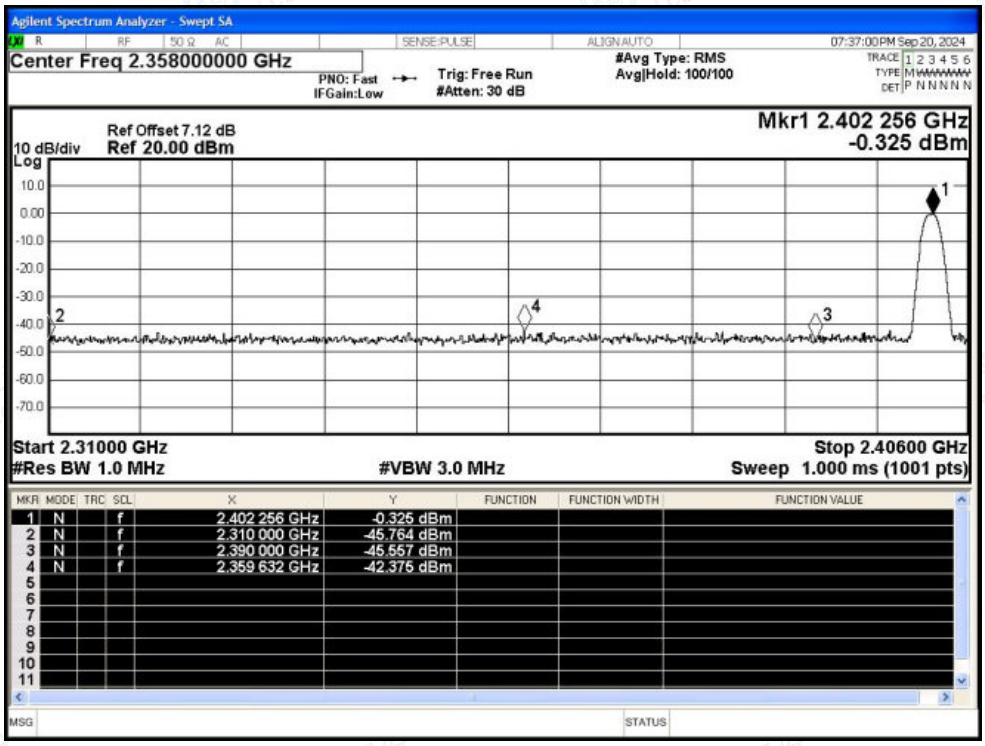


Restrict Band

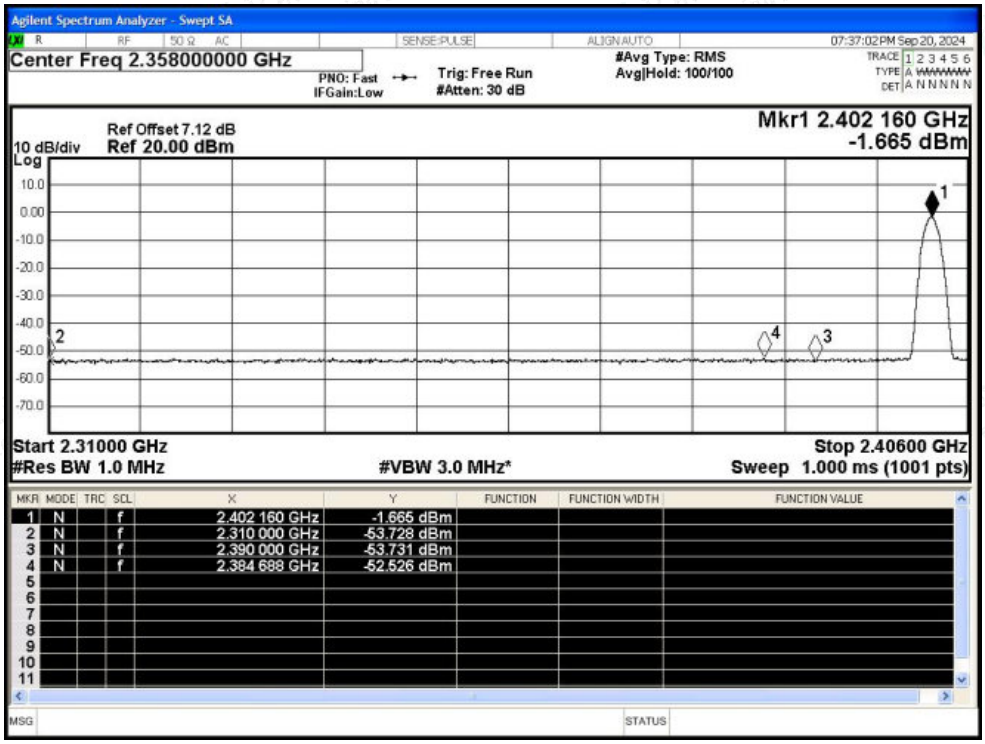
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-45.76	2.50	-	52.00	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-53.73	2.50	1.1	45.13	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2359.632	-42.38	2.50	-	55.38	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2384.688	-52.53	2.50	1.1	46.33	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-45.56	2.50	-	52.20	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-53.73	2.50	1.1	45.13	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-44.29	2.50	-	53.47	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-53.51	2.50	1.1	45.35	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2494.912	-42.14	2.50	-	55.62	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2499.016	-52.15	2.50	1.1	46.71	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-44.48	2.50	-	53.28	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-52.66	2.50	1.1	46.20	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-45.71	2.50	-	52.05	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-53.71	2.50	0.09	44.14	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2333.808	-42.47	2.50	-	55.29	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2378.16	-52.79	2.50	0.09	45.06	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-45.53	2.50	-	52.23	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-53.27	2.50	0.09	44.58	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-44.95	2.50	-	52.81	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-52.97	2.50	0.09	44.88	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2484.976	-41.43	2.50	-	56.33	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2490.28	-51.93	2.50	0.09	45.92	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-44.8	2.50	-	52.96	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-53.31	2.50	0.09	44.54	Average	54	Pass

Test Graphs

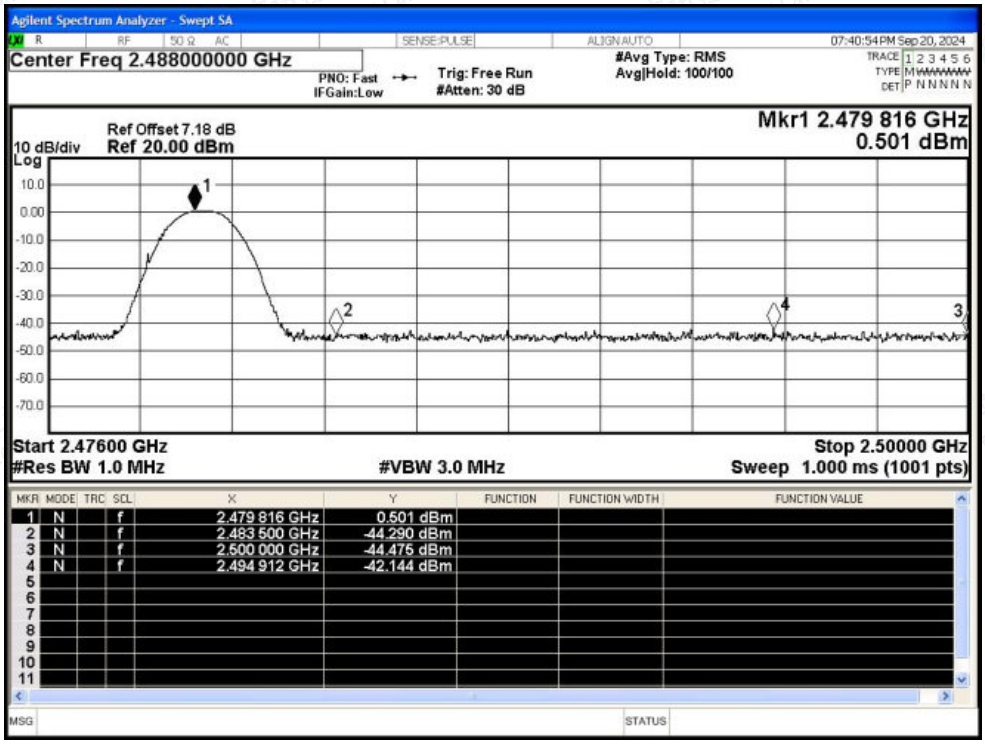
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



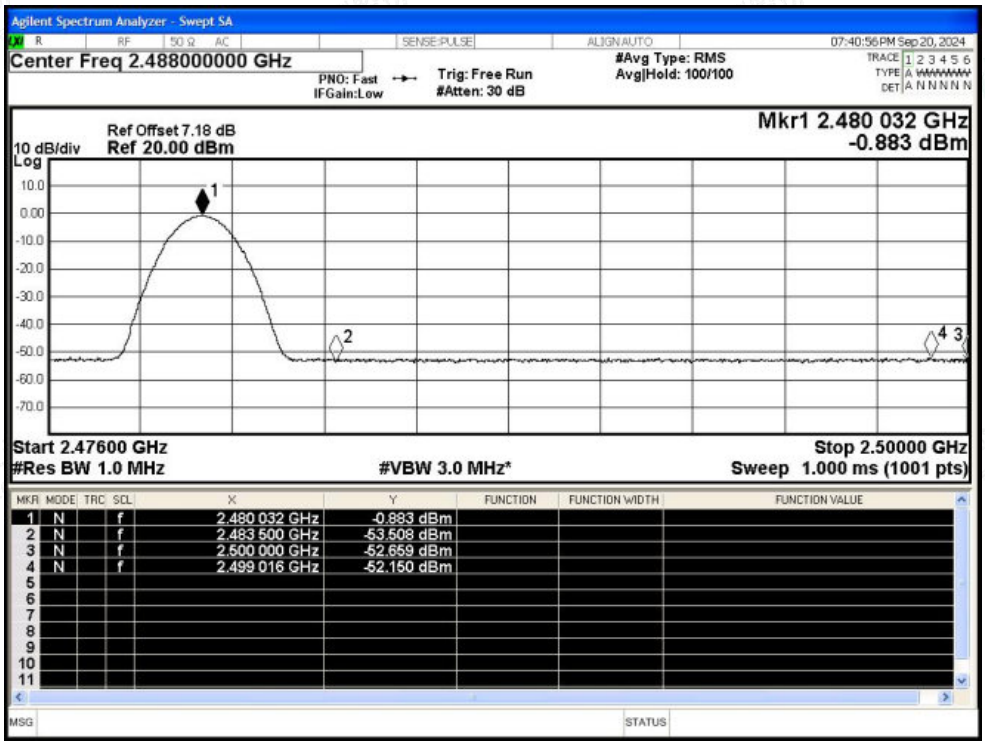
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



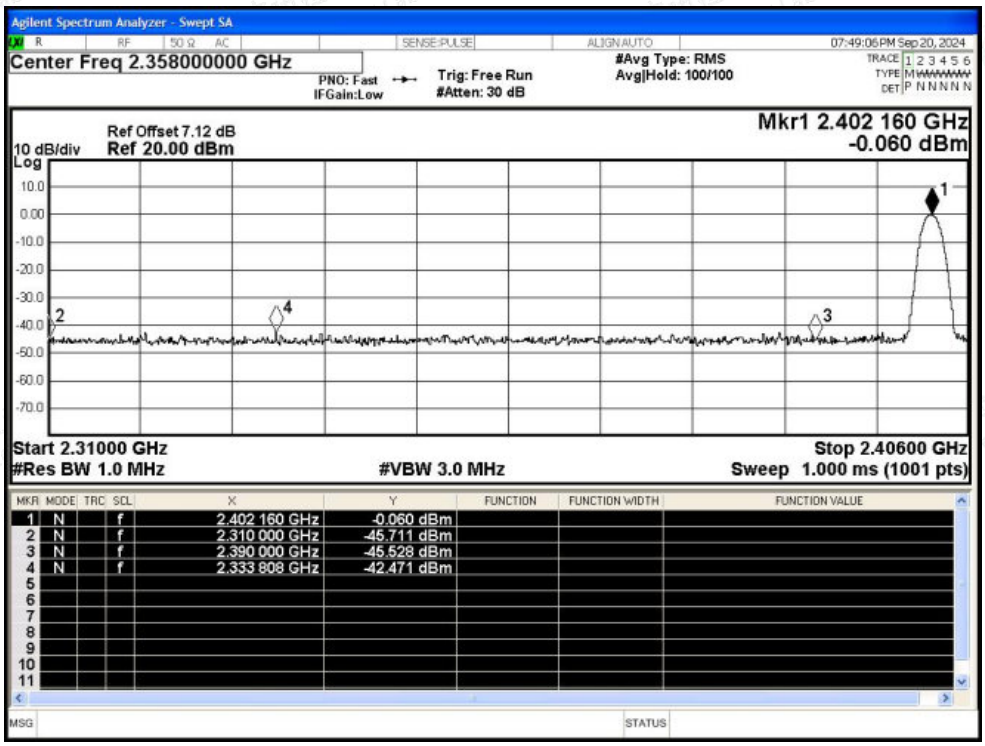
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



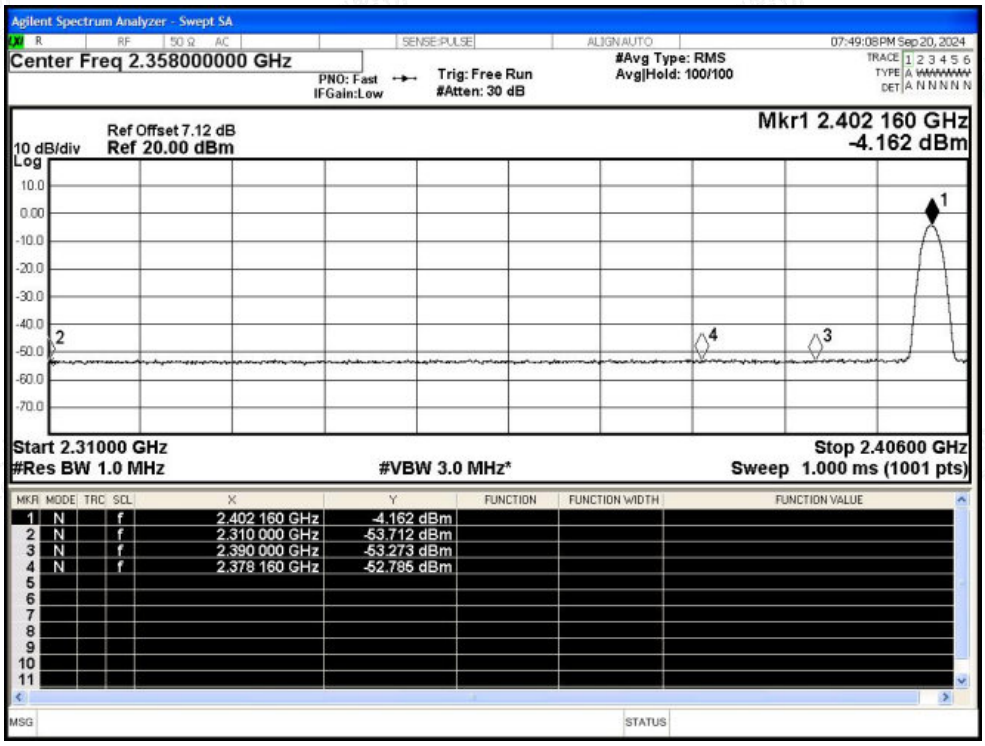
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



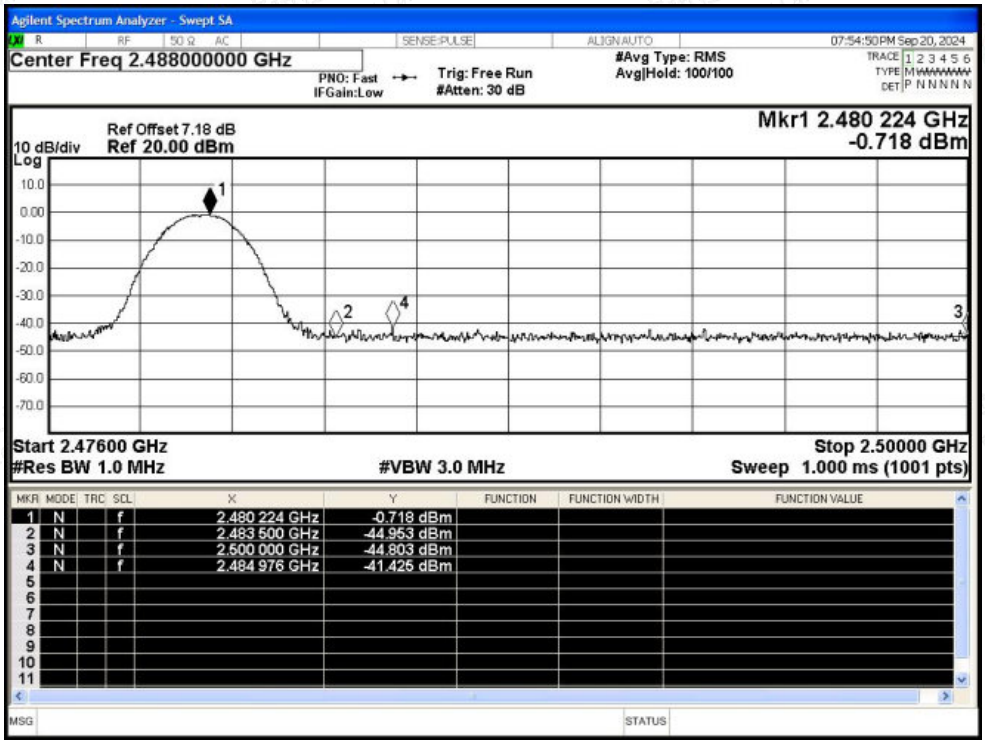
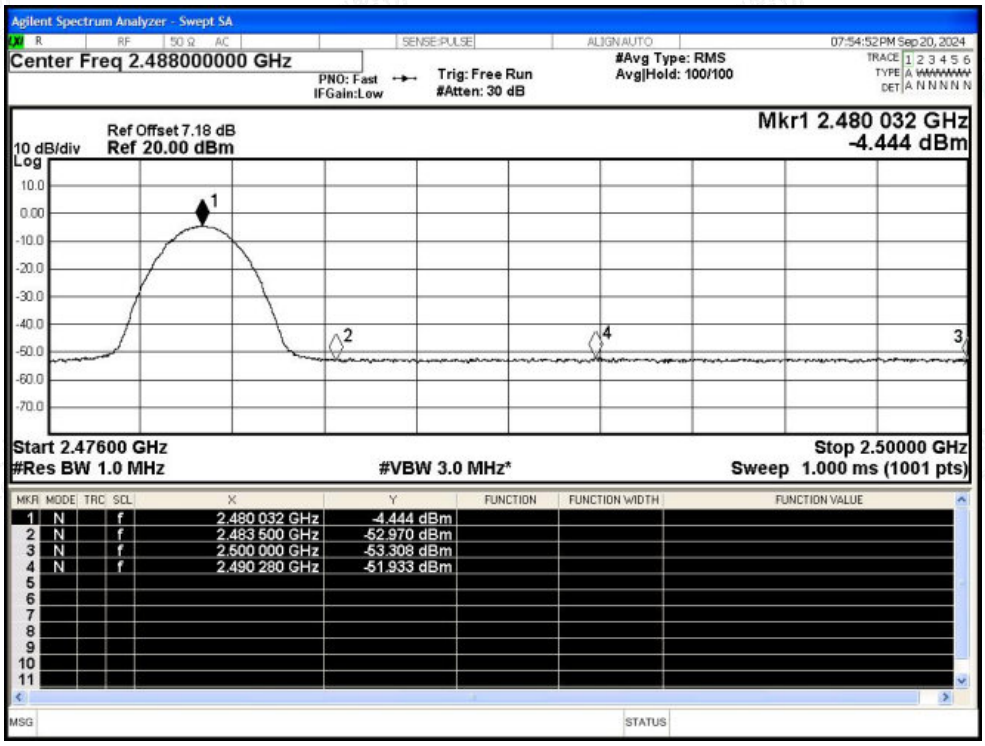
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



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