Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Wireless voice amplifier

Test Model: YS-121S

Environmental Conditions

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

A.1 -20dB Bandwidth

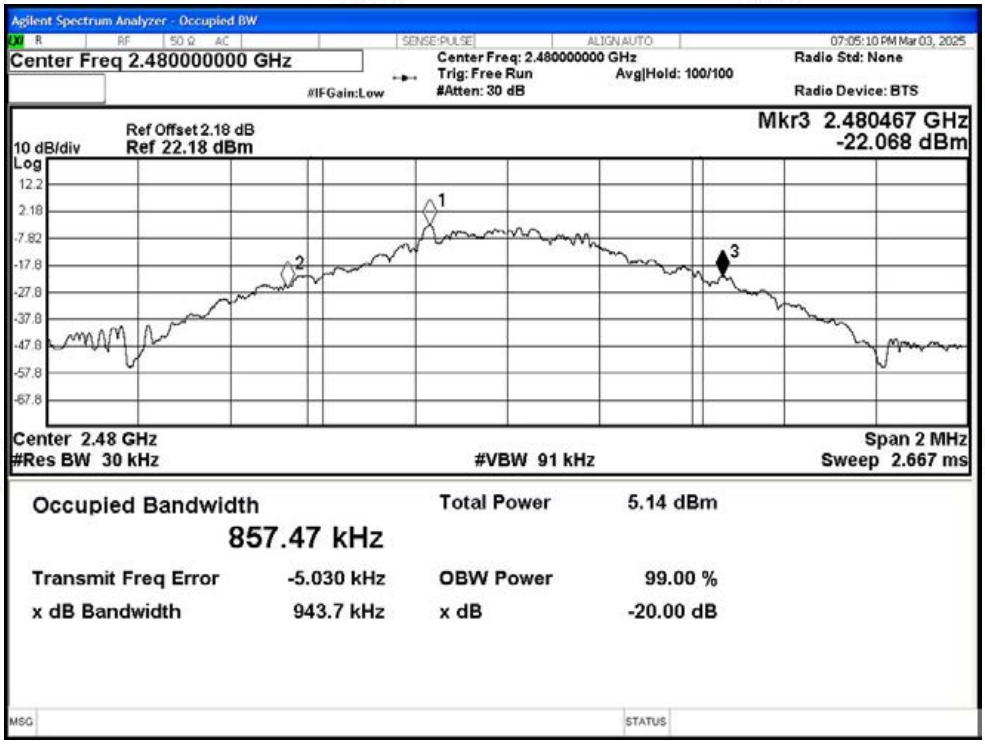
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.998	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.945	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.944	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.284	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.281	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.298	N/A	Pass

Test Graphs

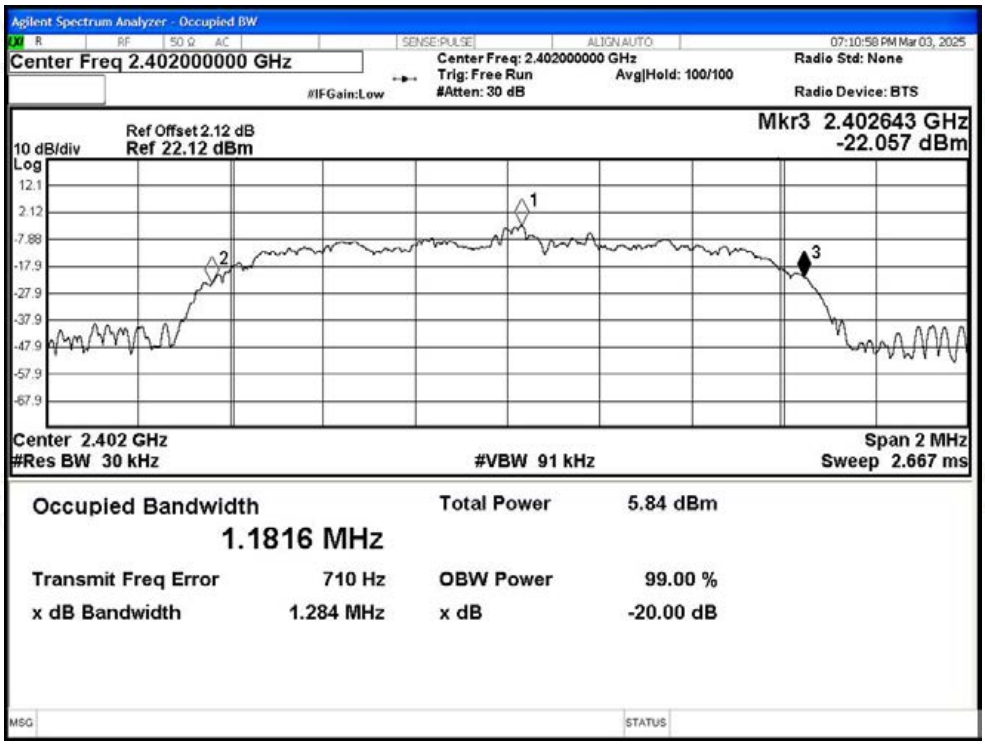
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

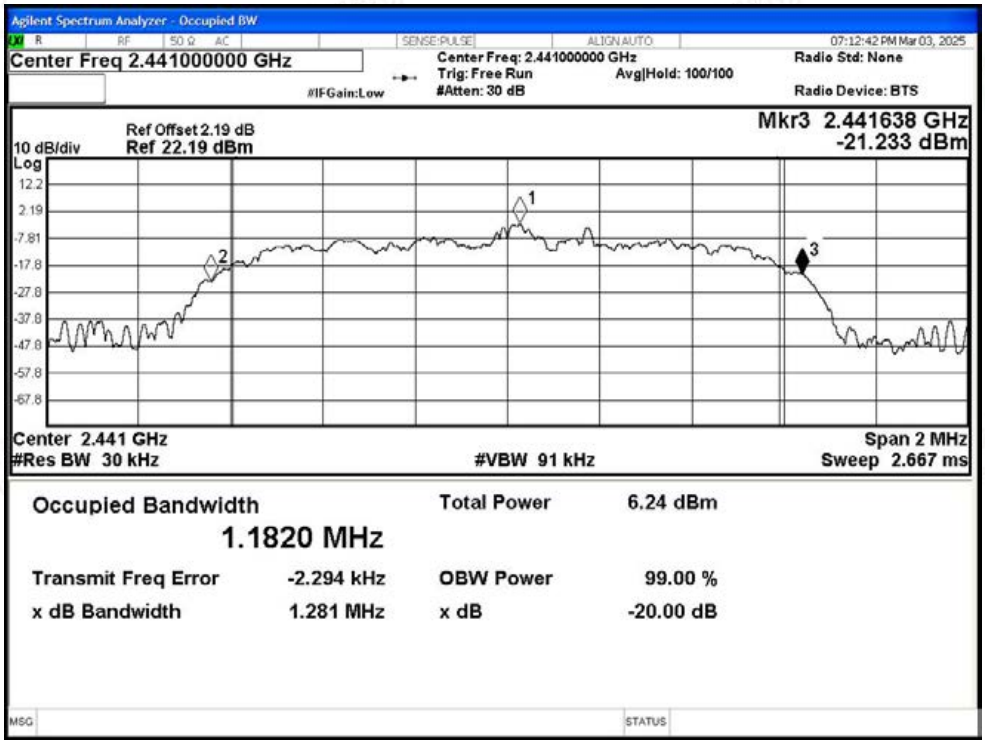
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



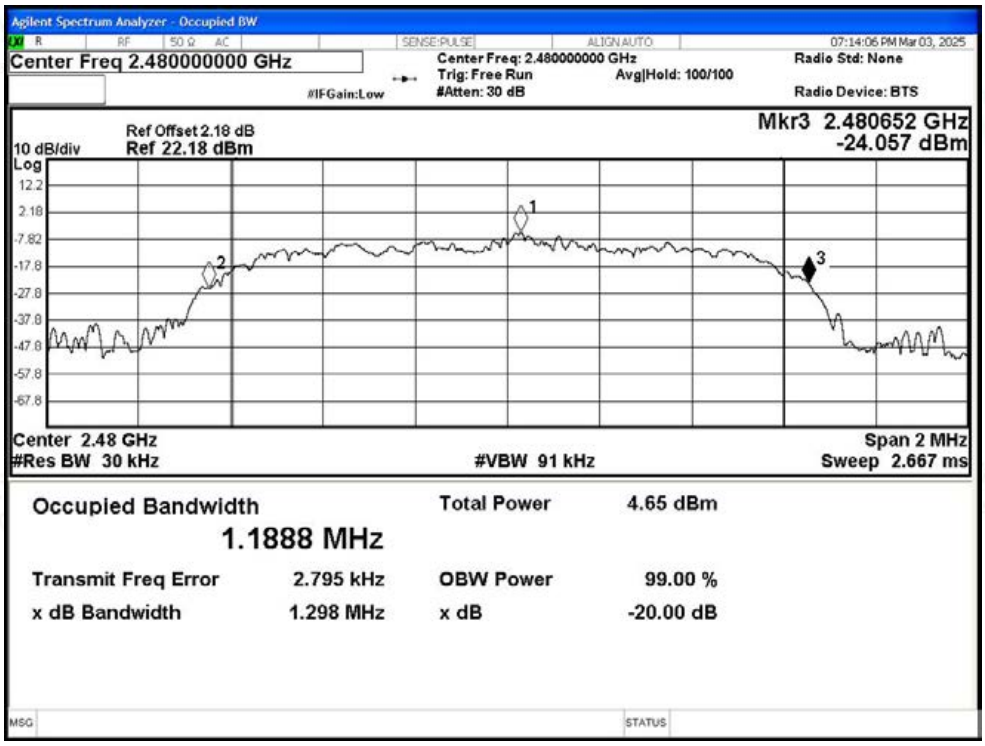
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

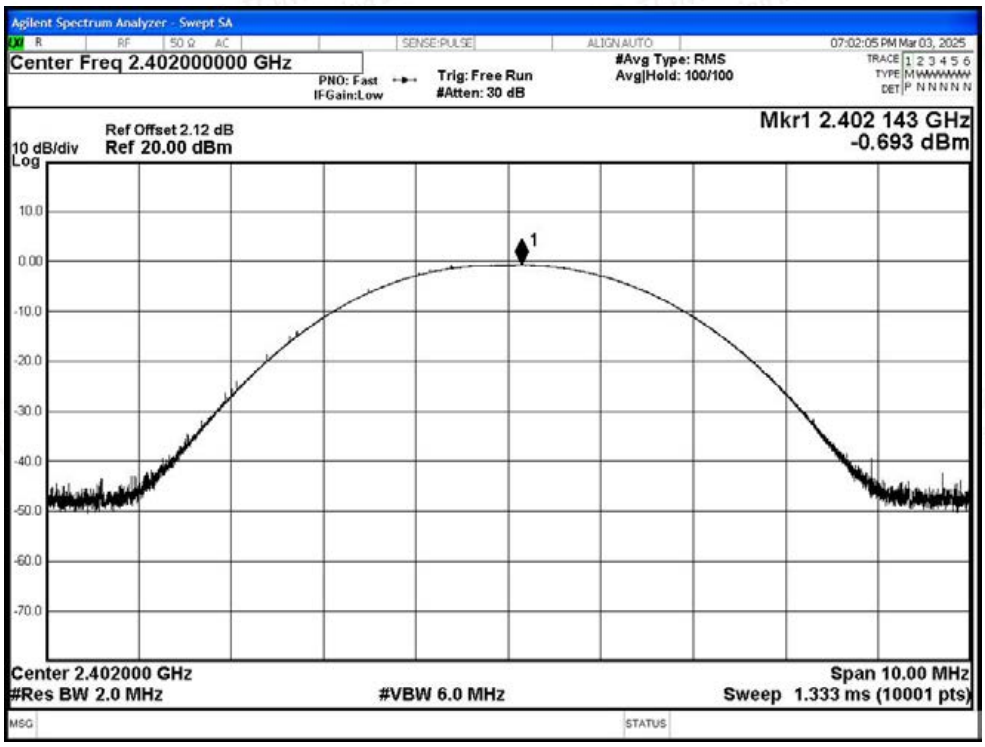


A.2 Maximum Peak Conducted Output Power

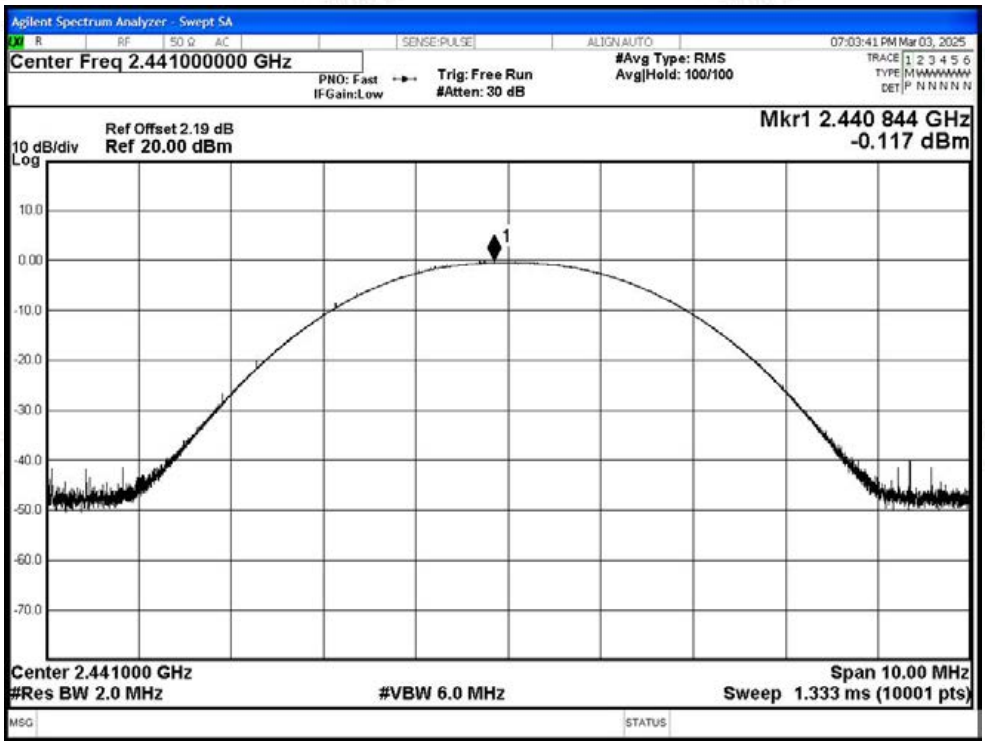
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.69	21	Pass
NVNT	1-DH5	2441	Ant1	-0.12	21	Pass
NVNT	1-DH5	2480	Ant1	-1.42	21	Pass
NVNT	2-DH5	2402	Ant1	1.45	21	Pass
NVNT	2-DH5	2441	Ant1	1.71	21	Pass
NVNT	2-DH5	2480	Ant1	0.51	21	Pass

Test Graphs

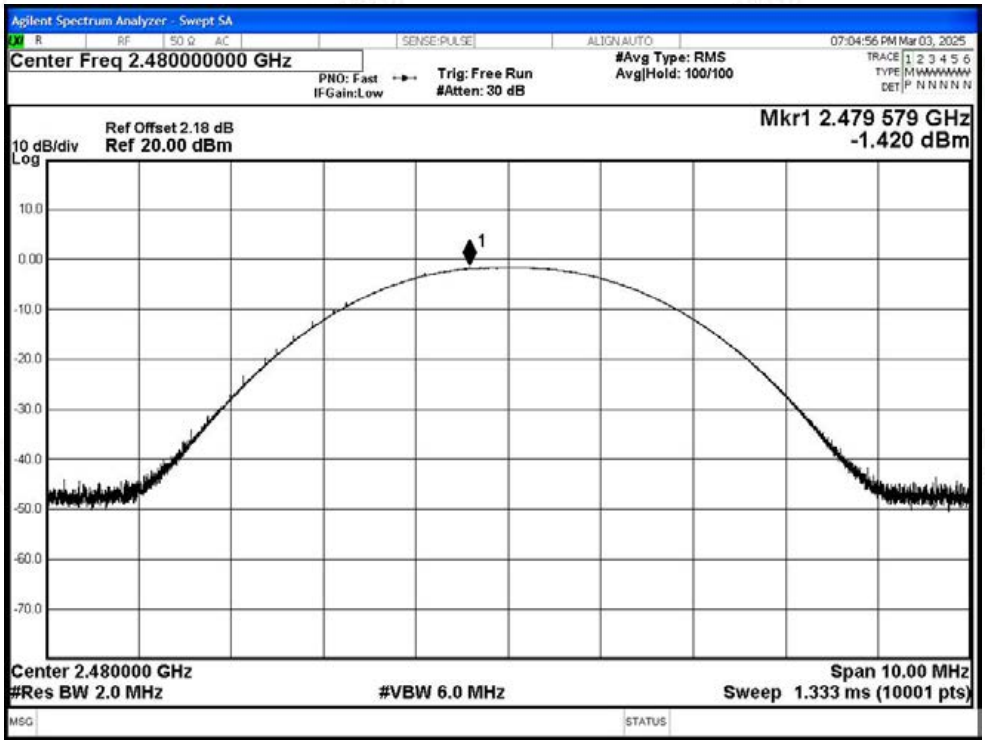
Power NVNT 1-DH5 2402MHz Ant1



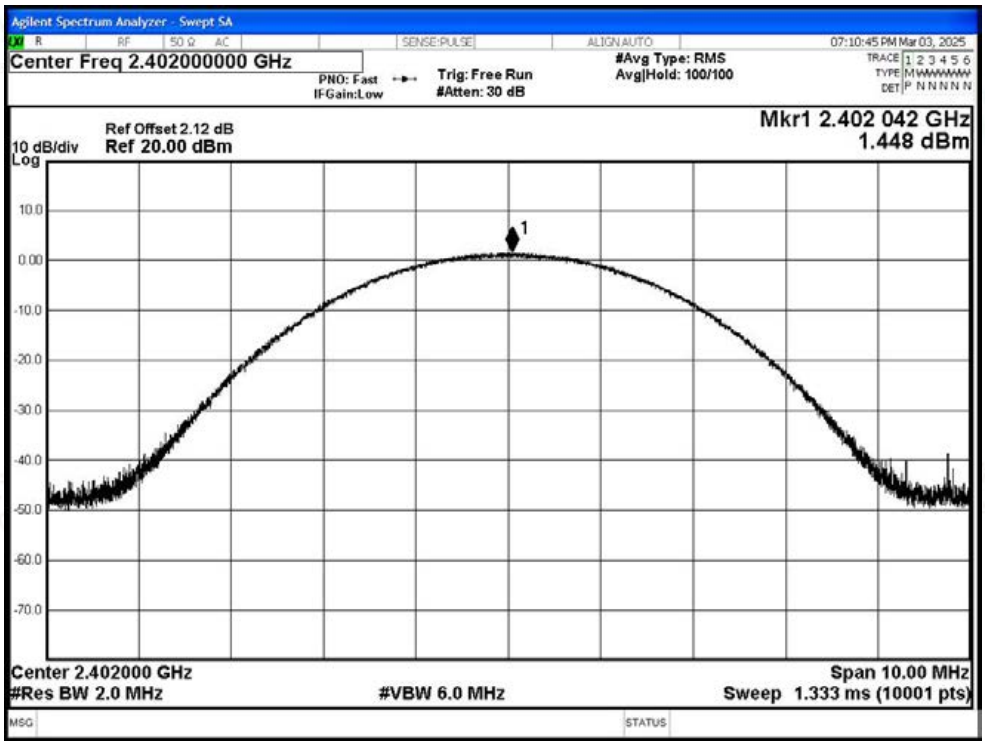
Power NVNT 1-DH5 2441MHz Ant1



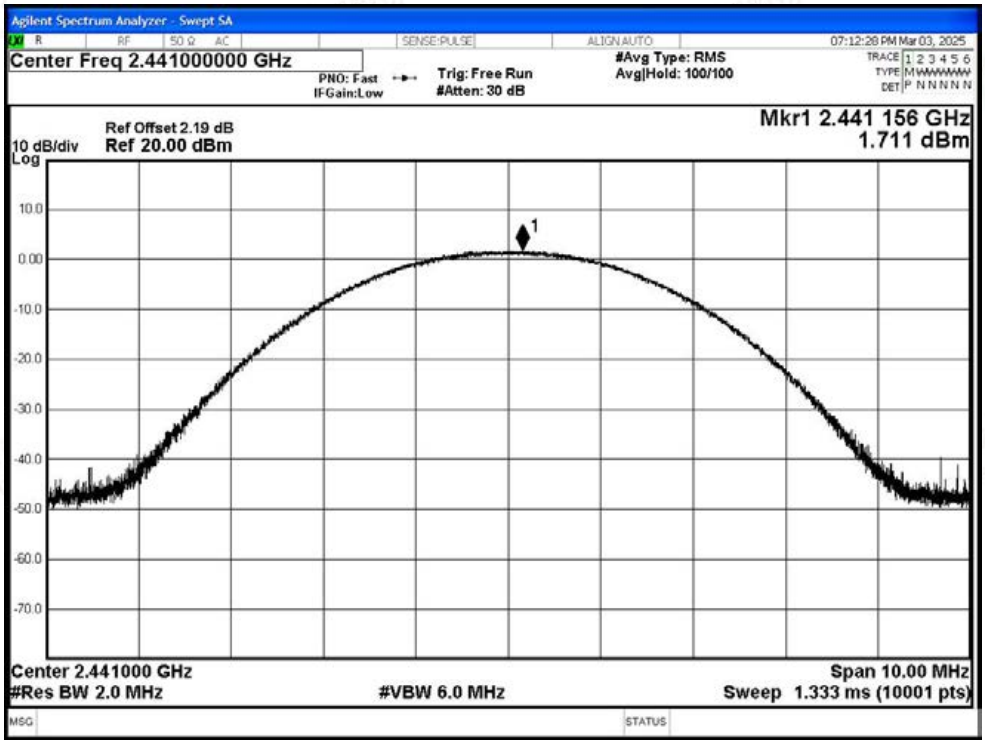
Power NVNT 1-DH5 2480MHz Ant1



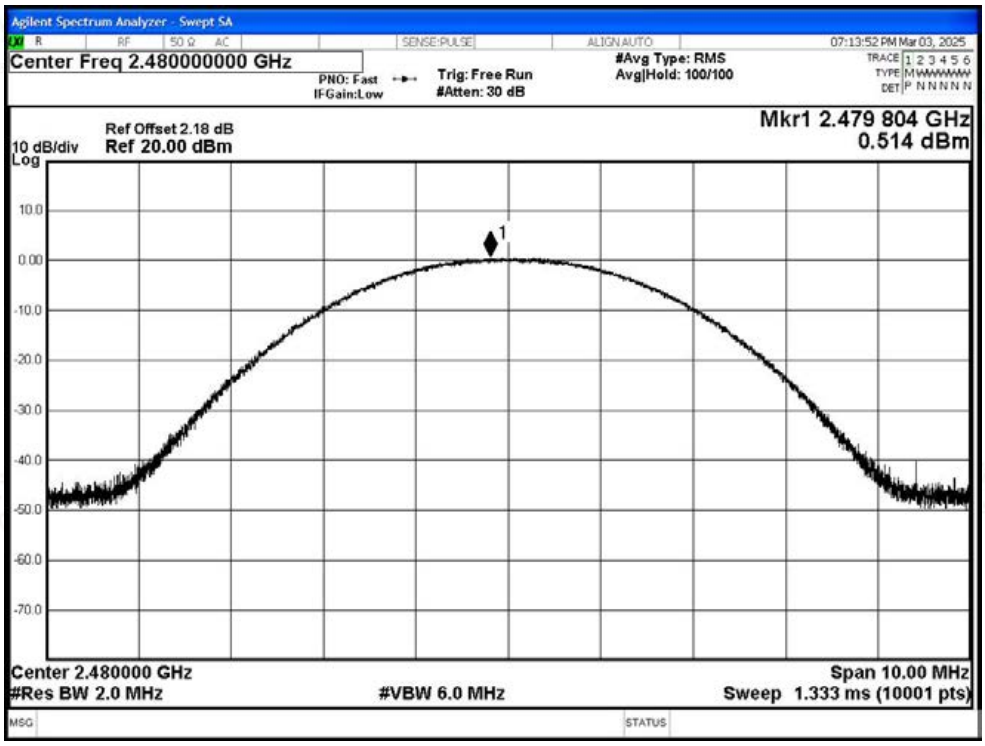
Power NVNT 2-DH5 2402MHz Ant1



Power NVNT 2-DH5 2441MHz Ant1



Power NVNT 2-DH5 2480MHz Ant1

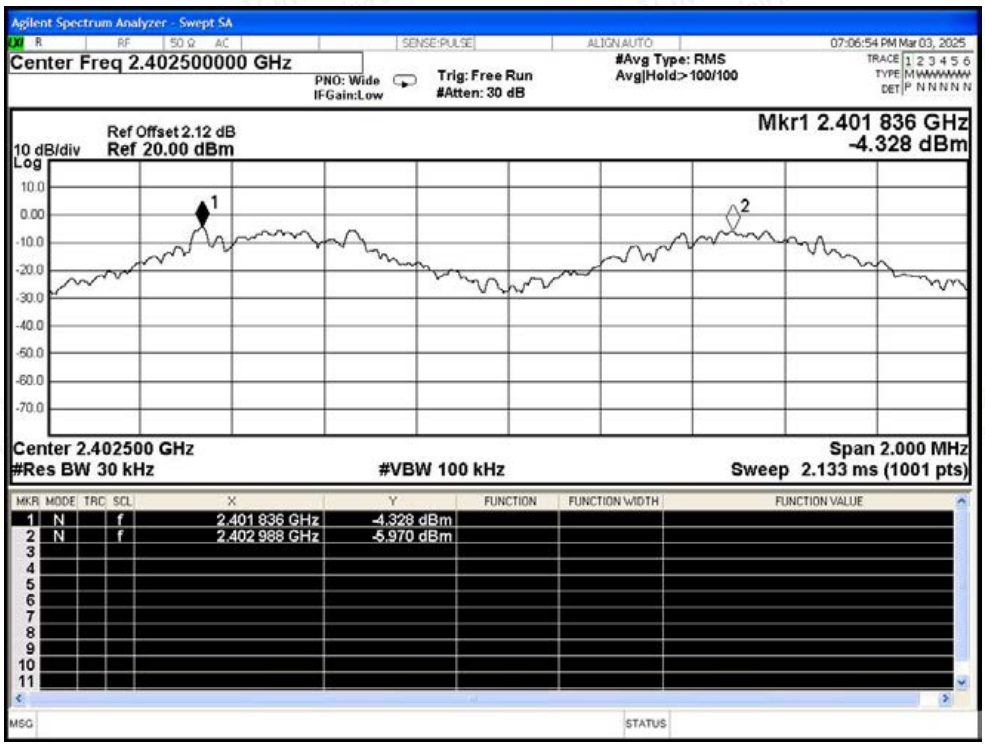


A.3 Carrier Frequencies Separation

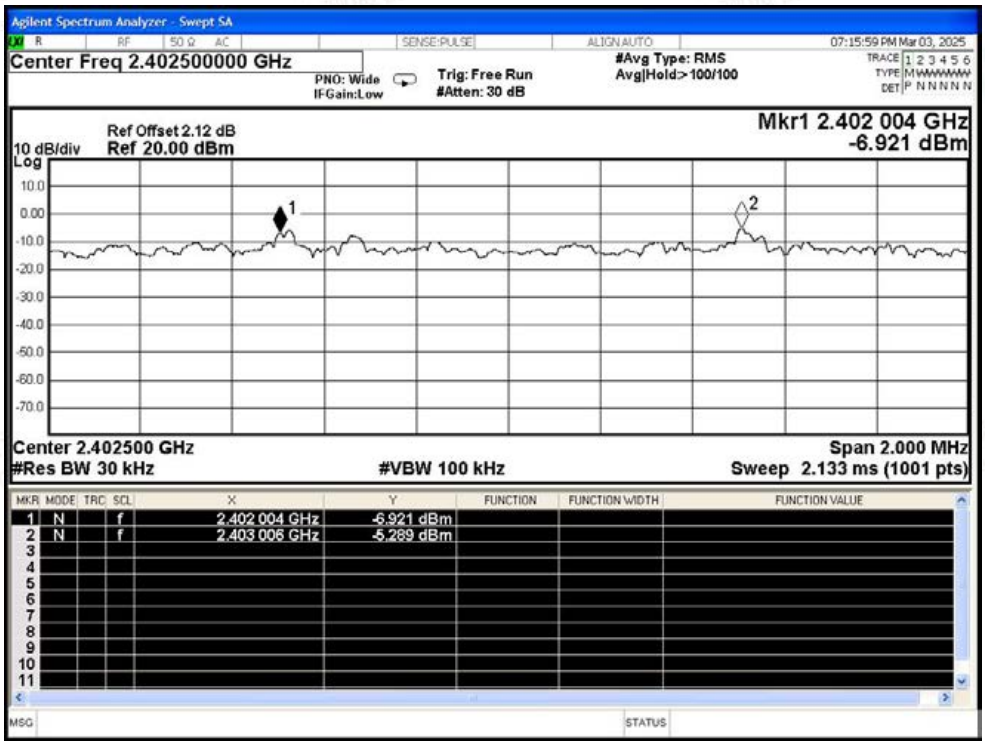
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.836	2402.988	1.152	0.665	Pass
NVNT	2-DH5	Ant1	2402.004	2403.006	1.002	0.865	Pass

Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1

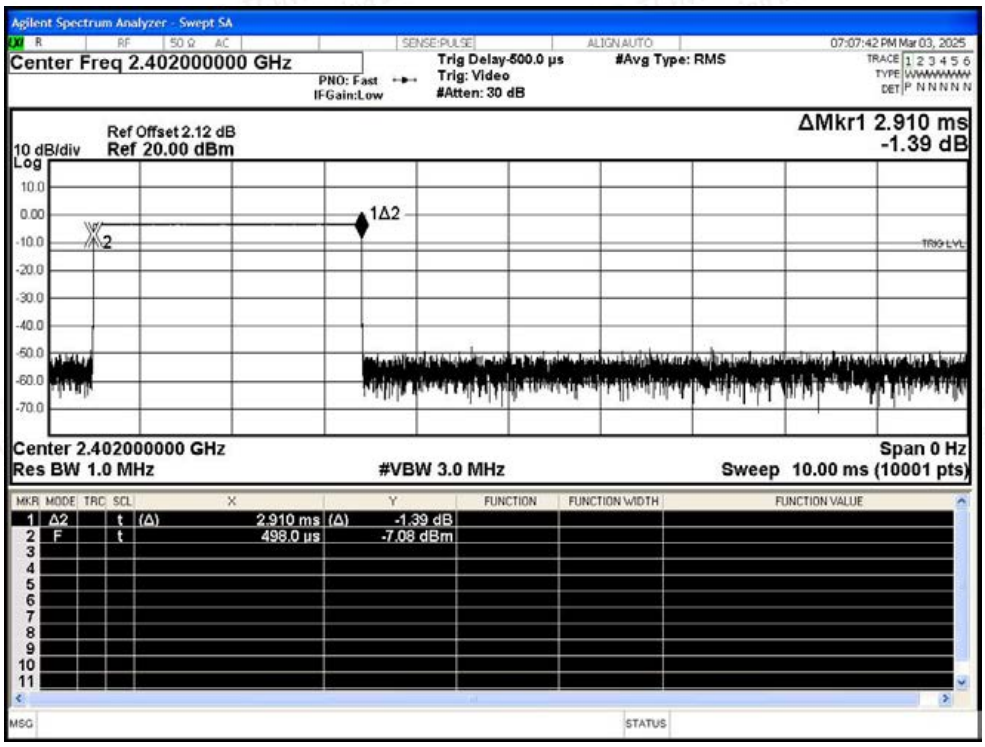


A.4 Dwell Time

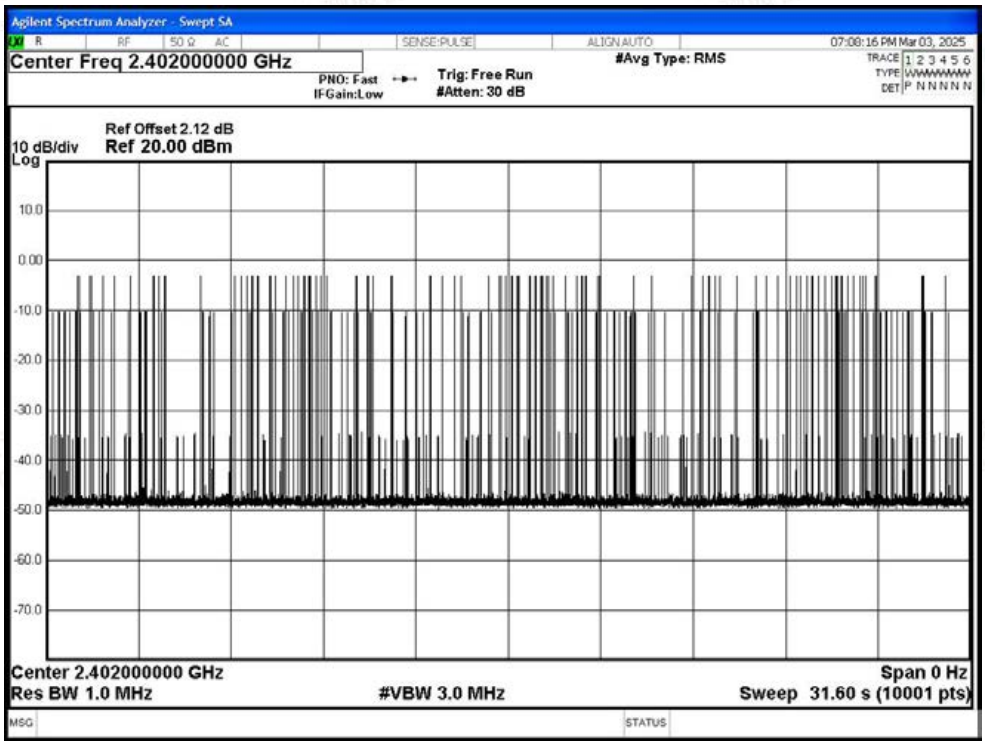
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.91	285.18	98	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	289.8	100	31600	400	Pass

Test Graphs

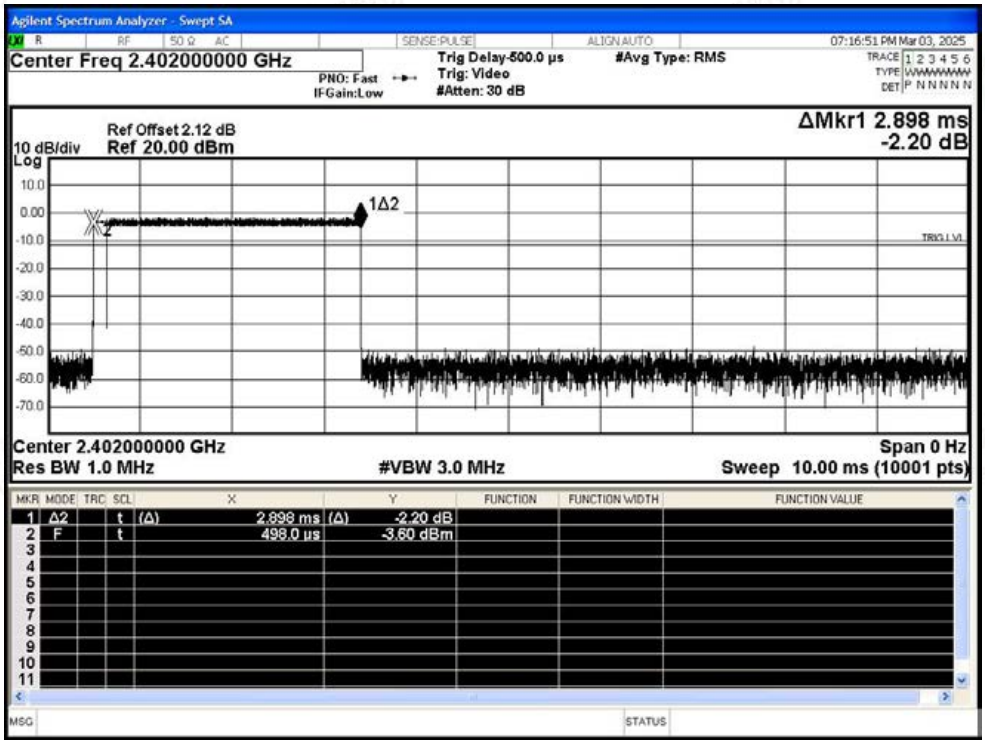
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



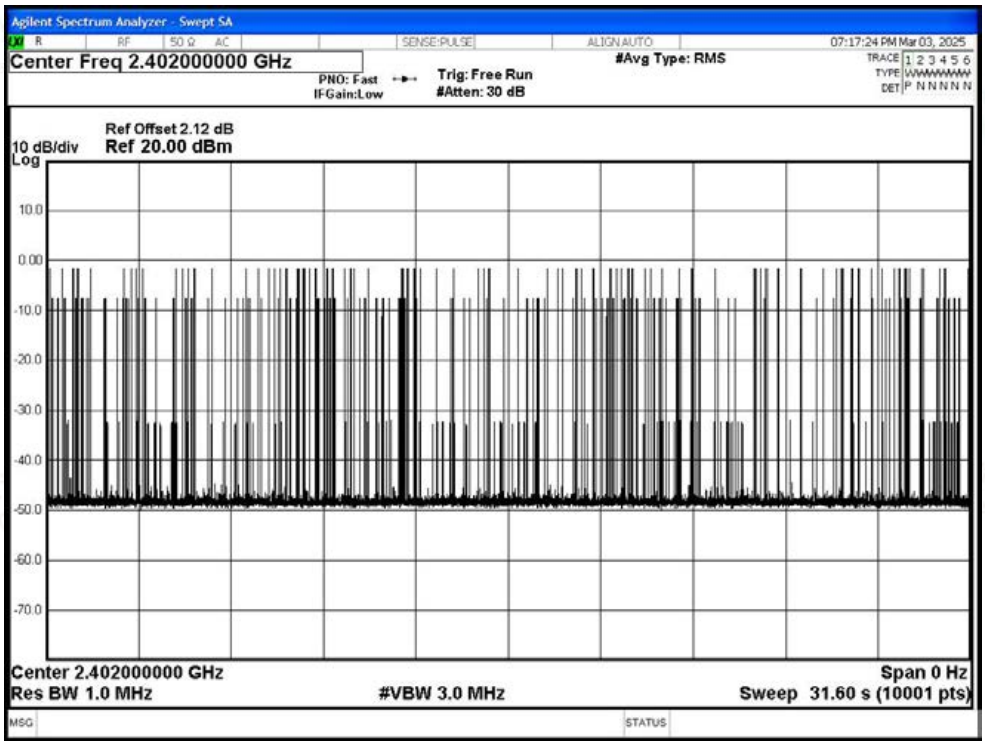
Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

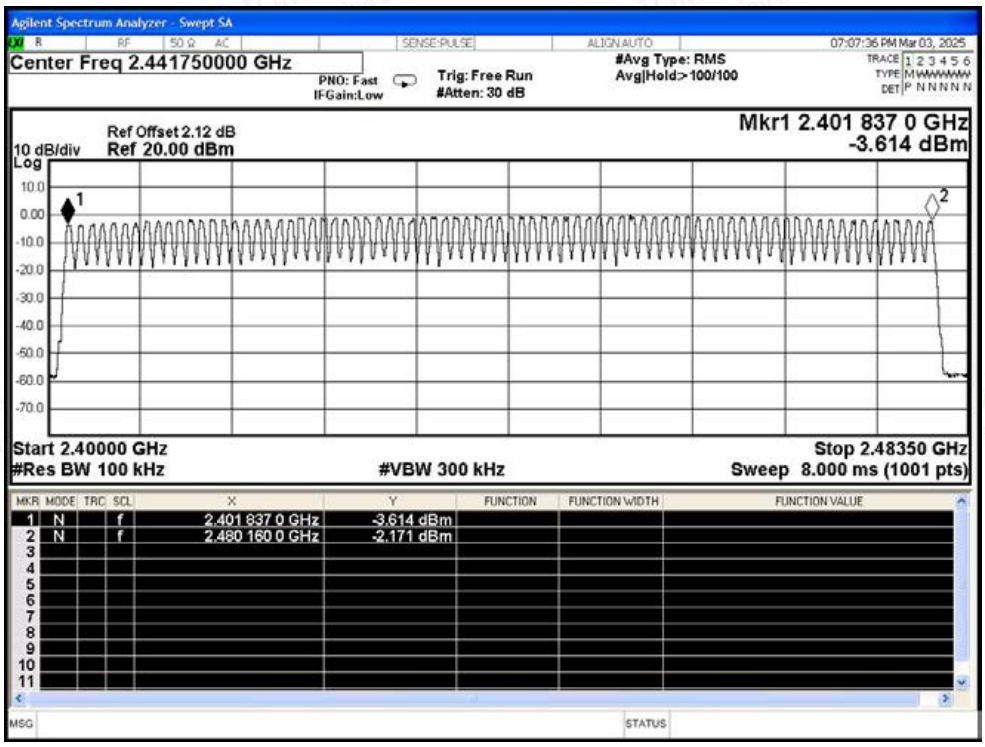


A.5 Number of Hopping Channel

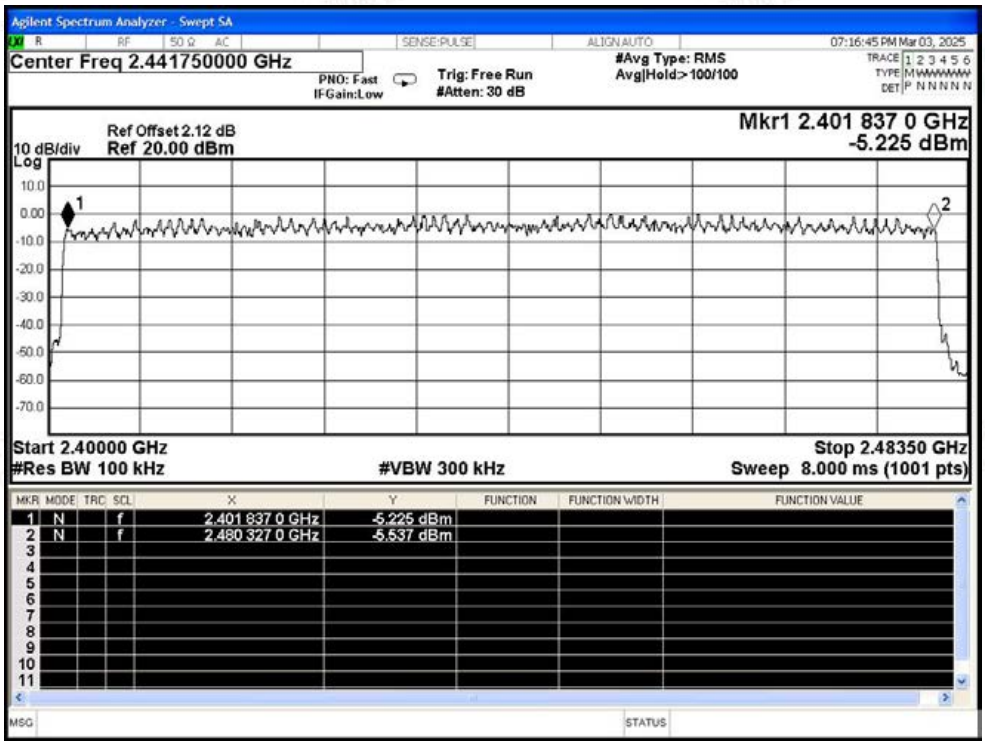
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass

Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1

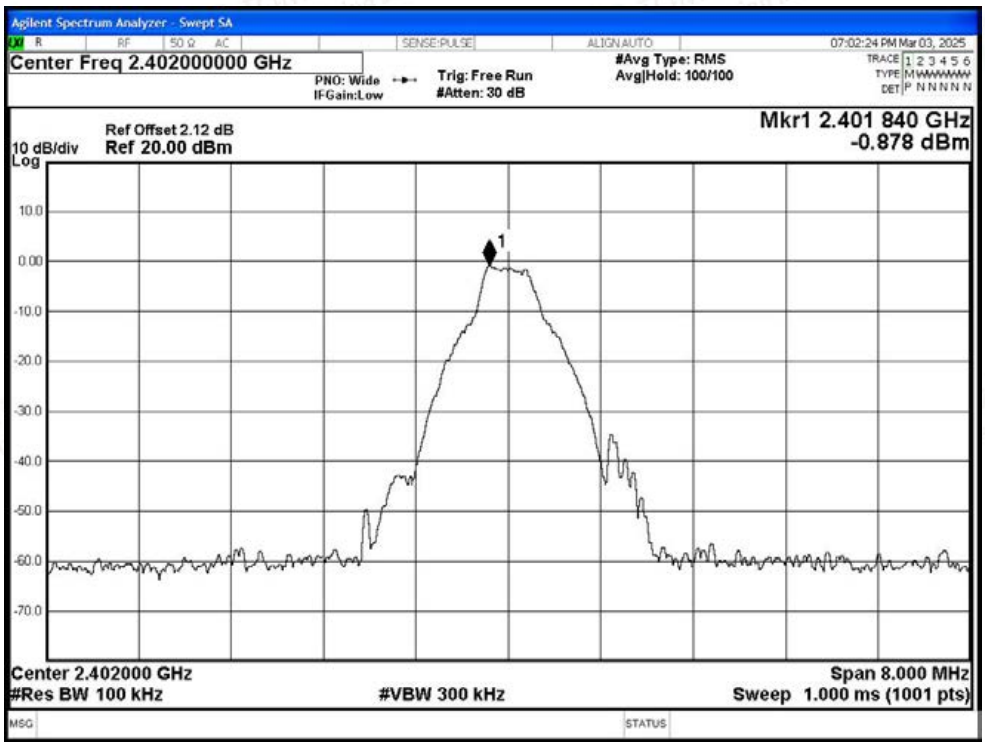


A.6 Band Edge

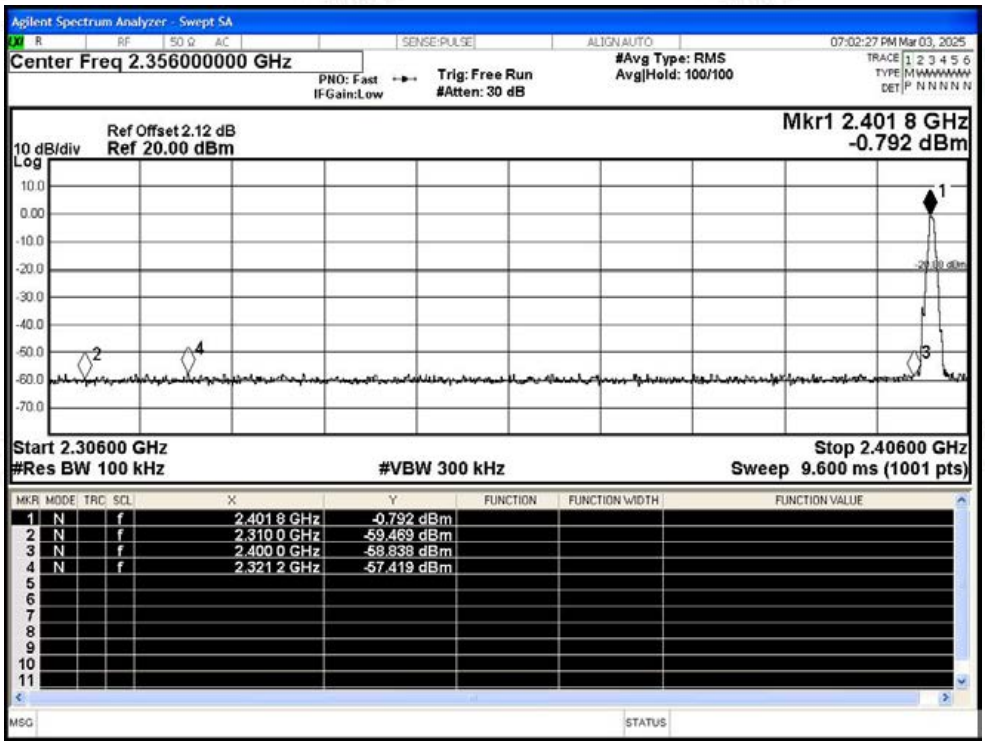
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-56.54	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-55.36	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-52.31	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-55.57	-20	Pass

Test Graphs

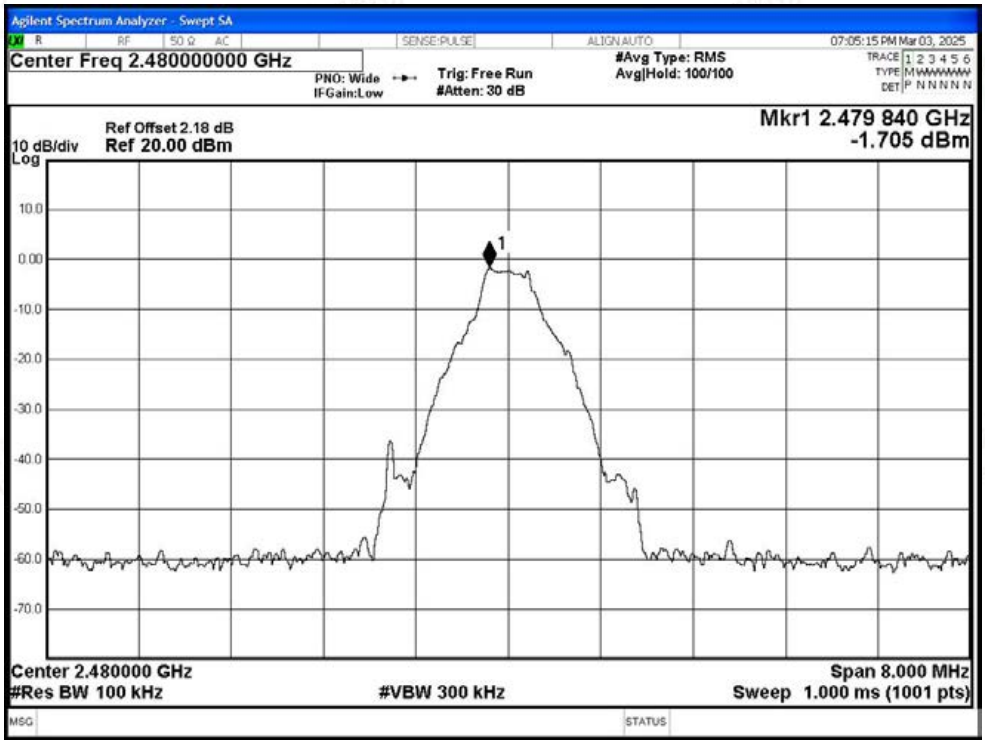
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



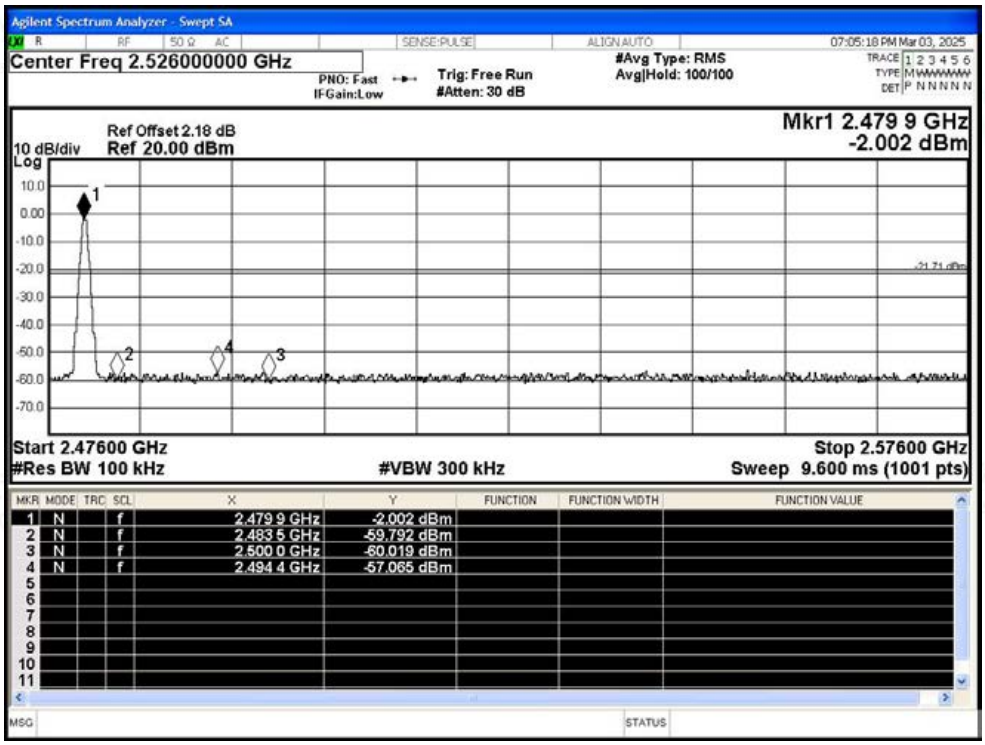
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



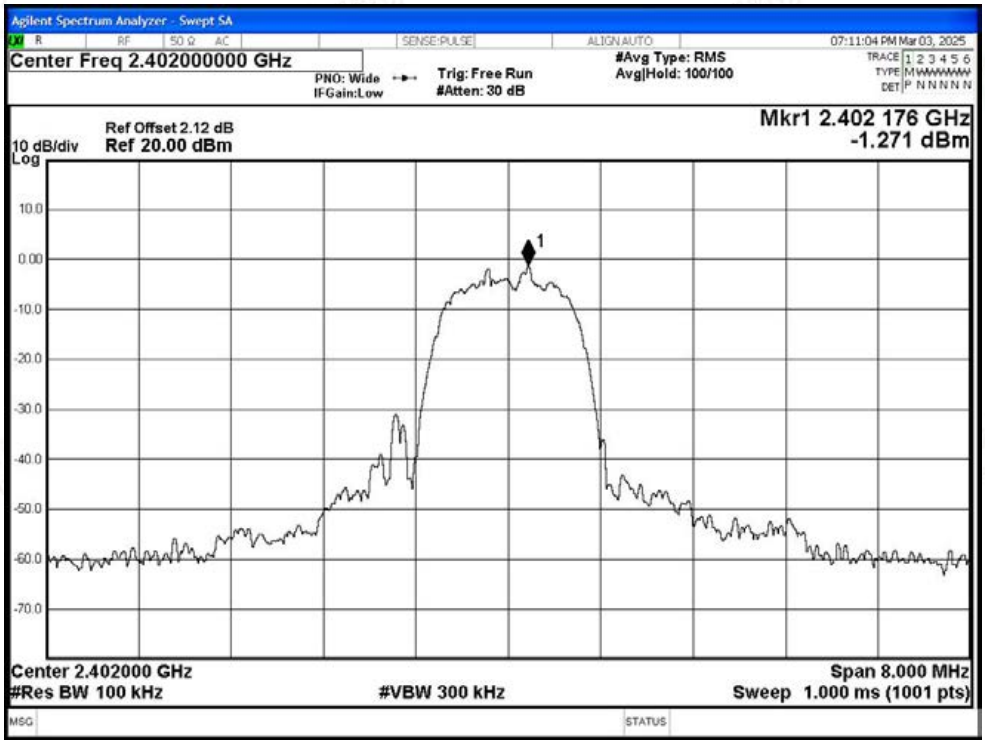
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



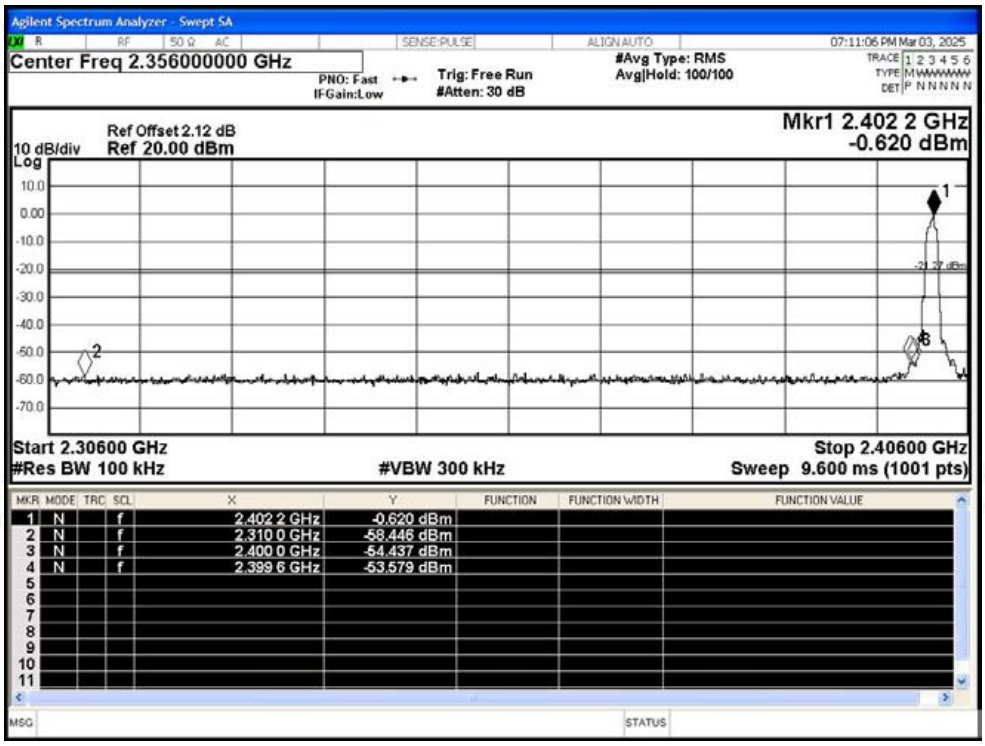
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



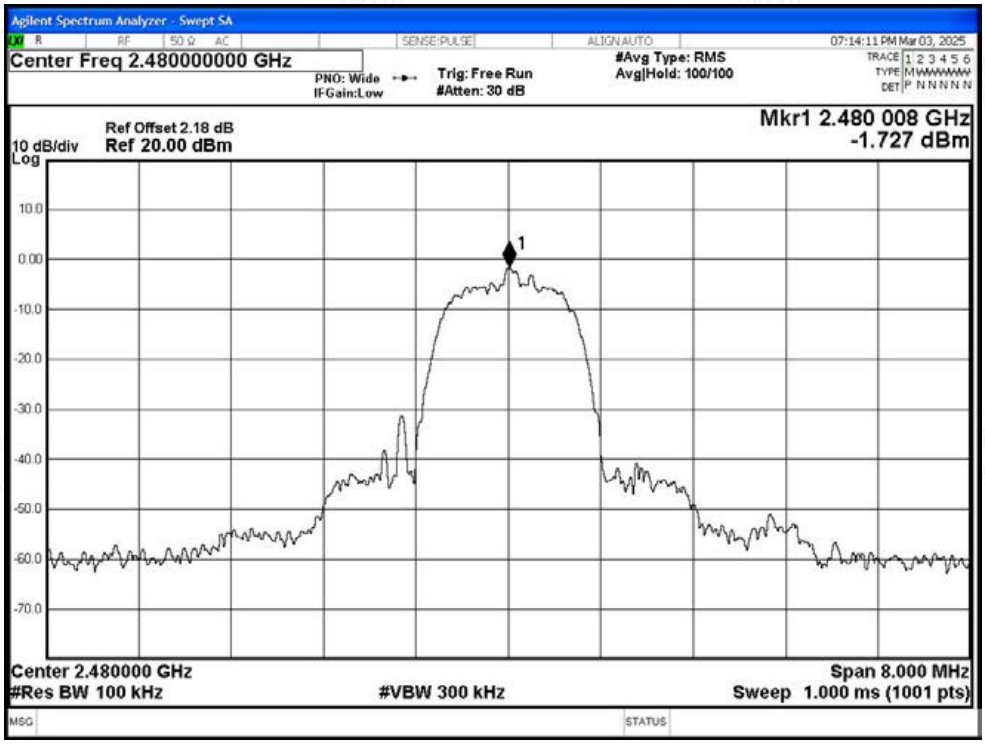
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



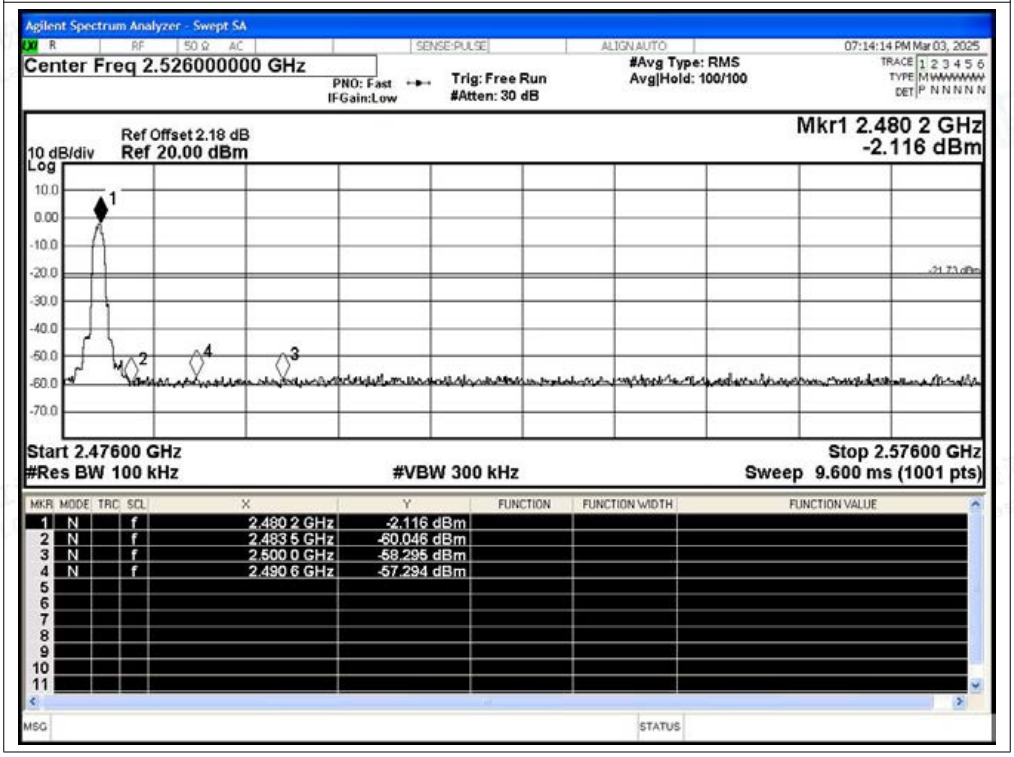
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



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



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

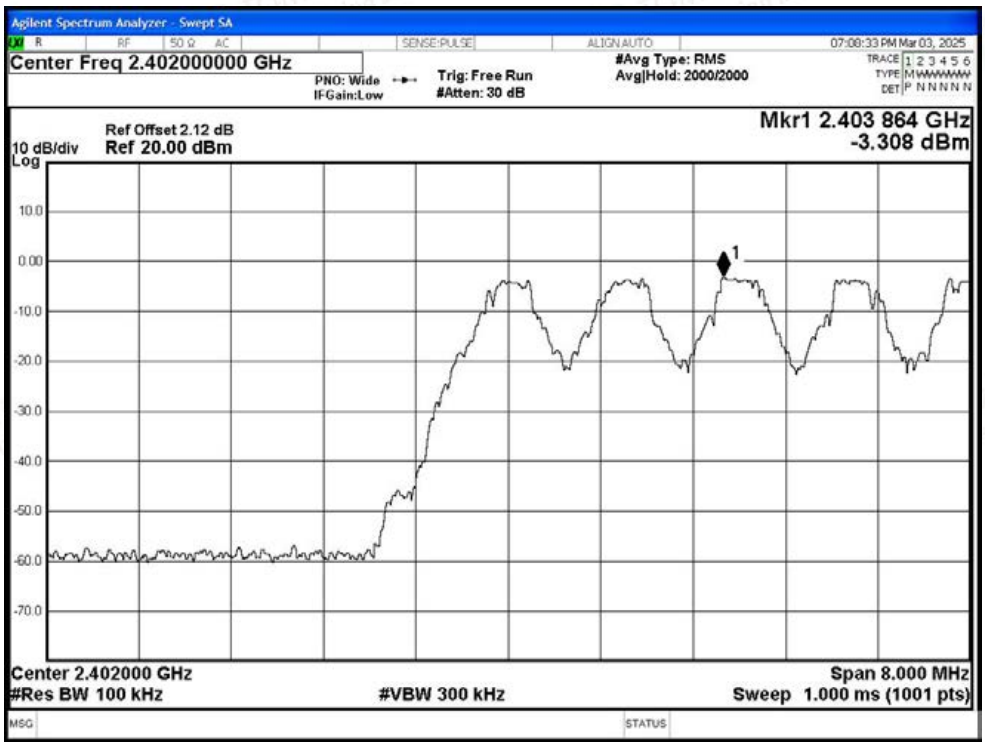


(Hopping)

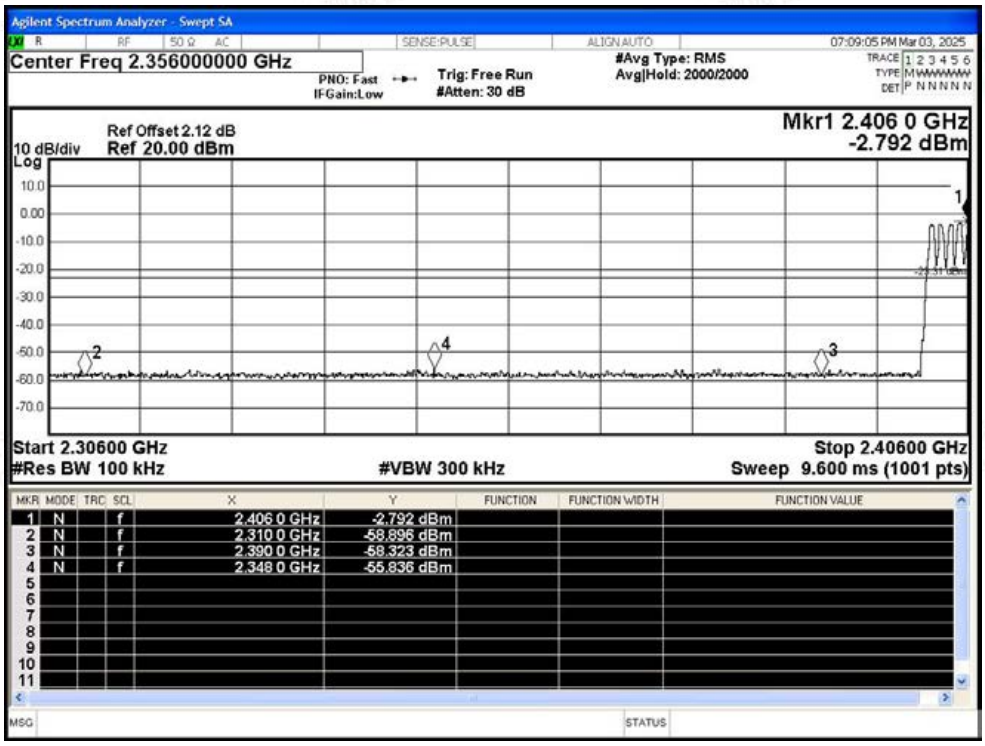
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-52.53	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-54.78	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-52.56	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-53.88	-20	Pass

Test Graphs

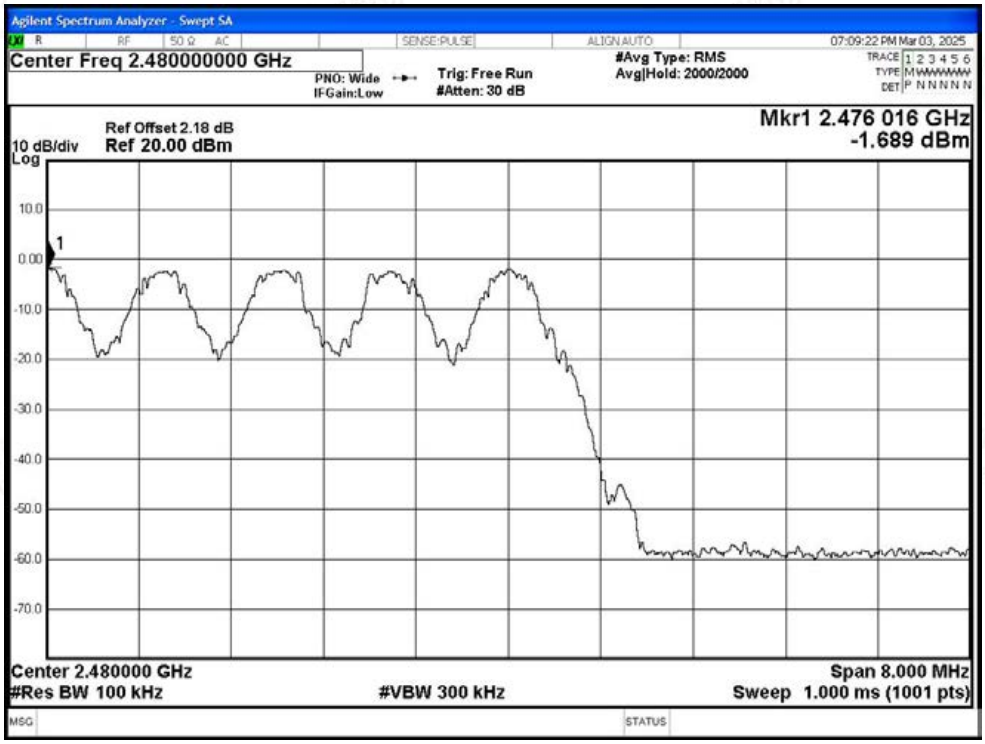
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



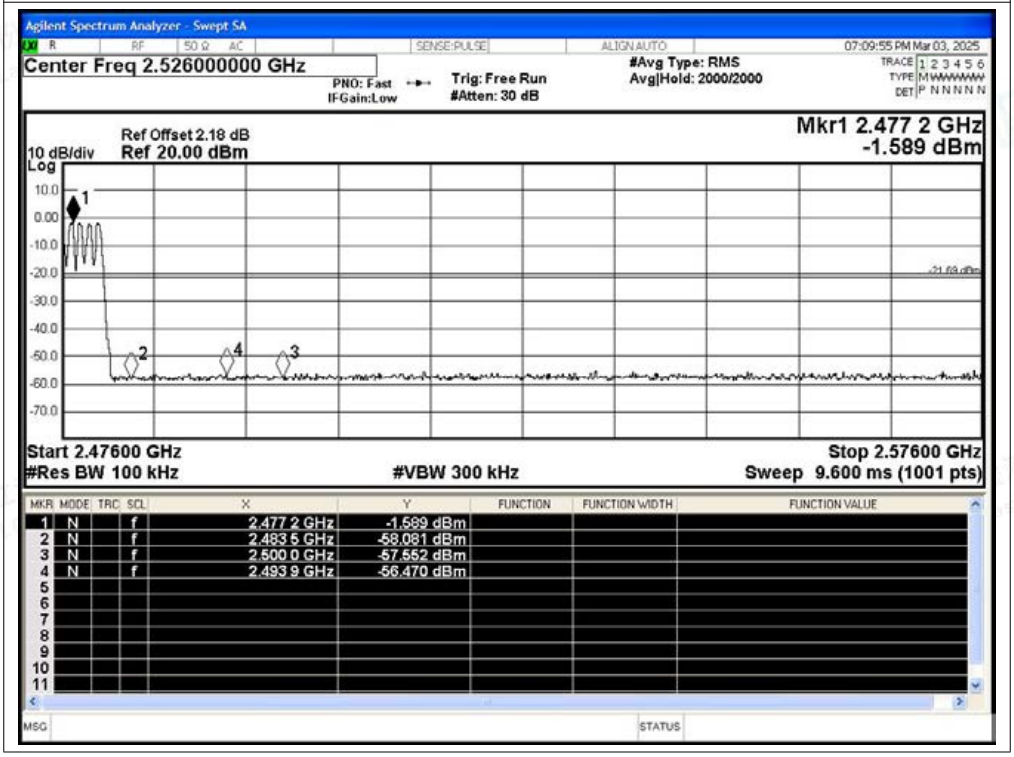
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



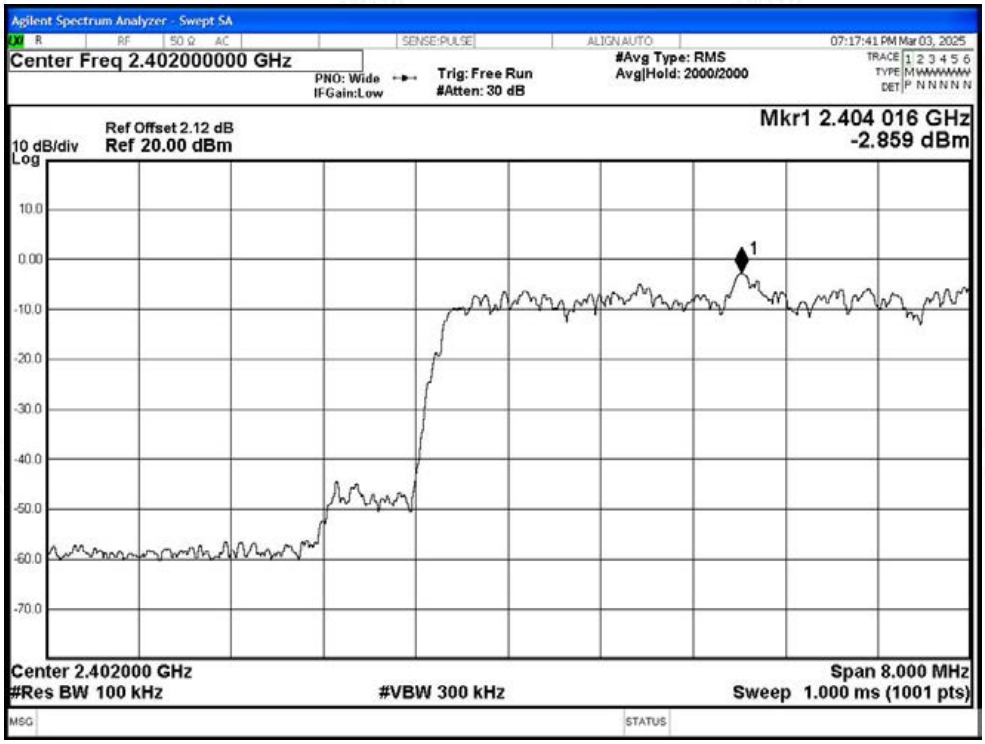
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



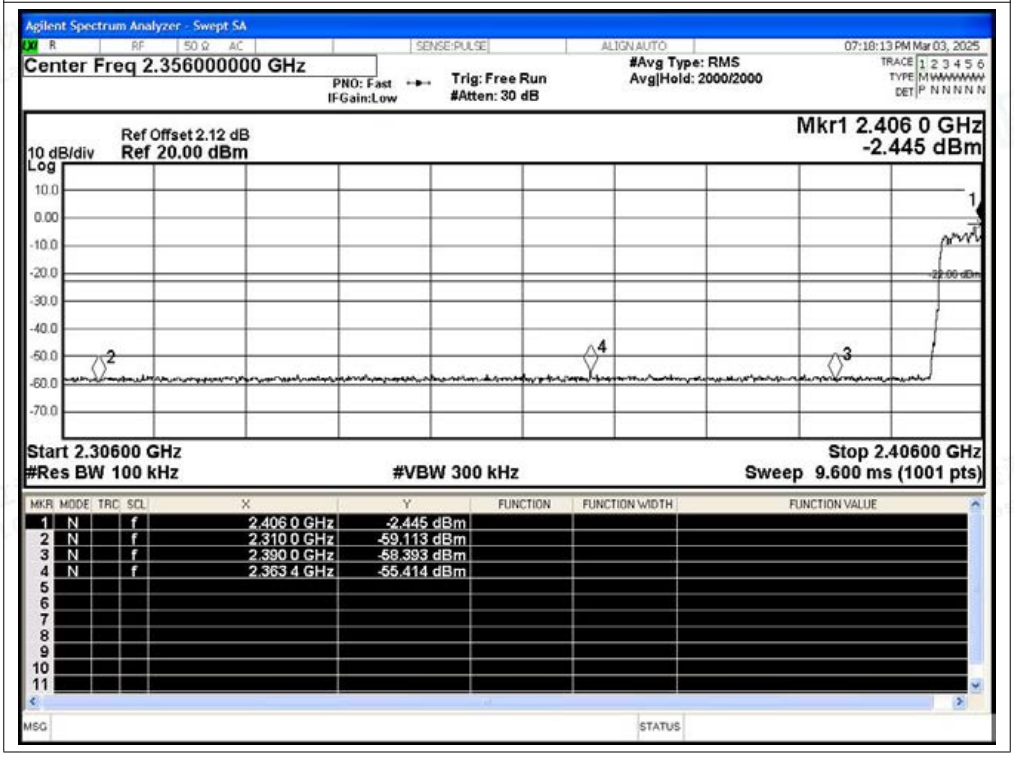
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



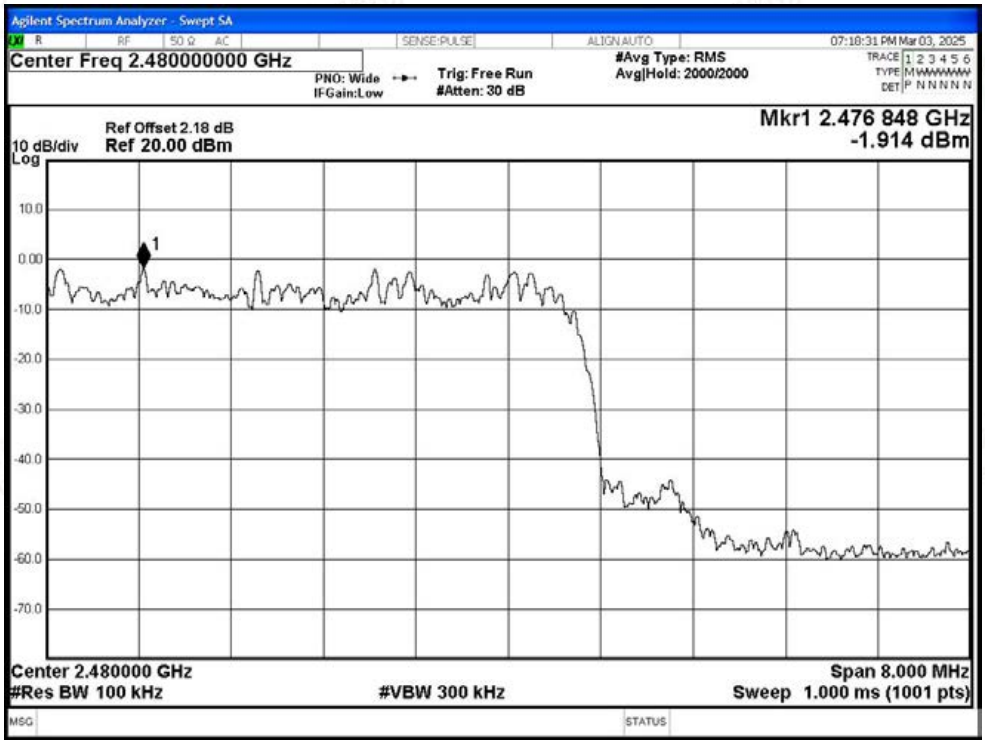
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



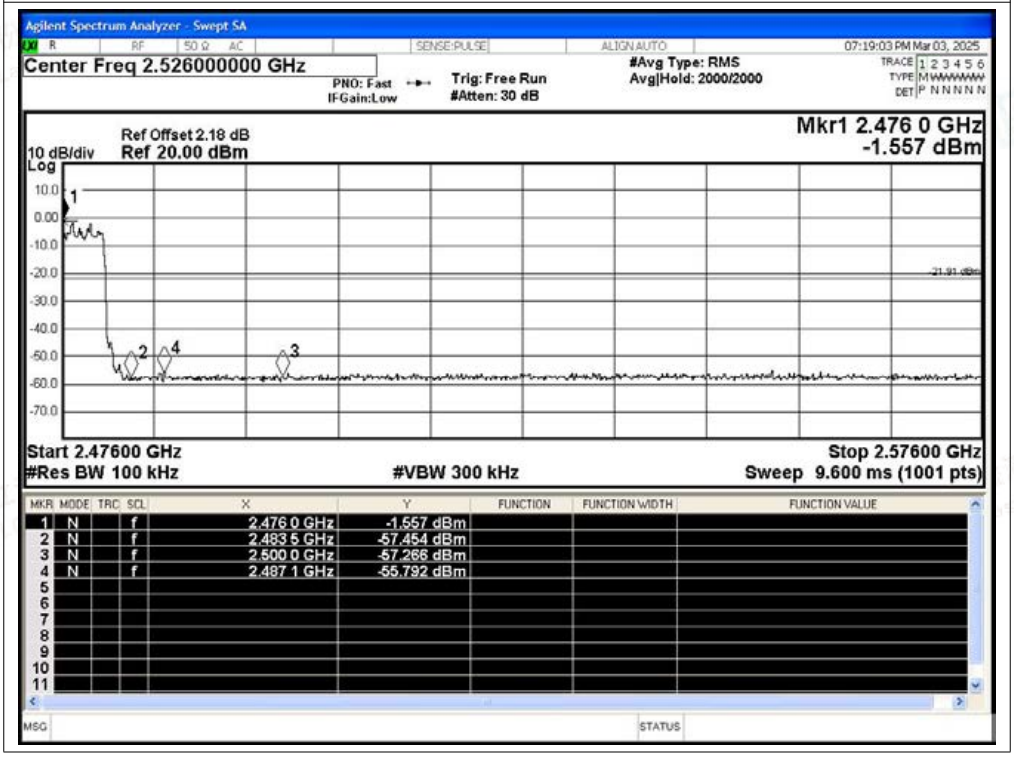
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



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



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



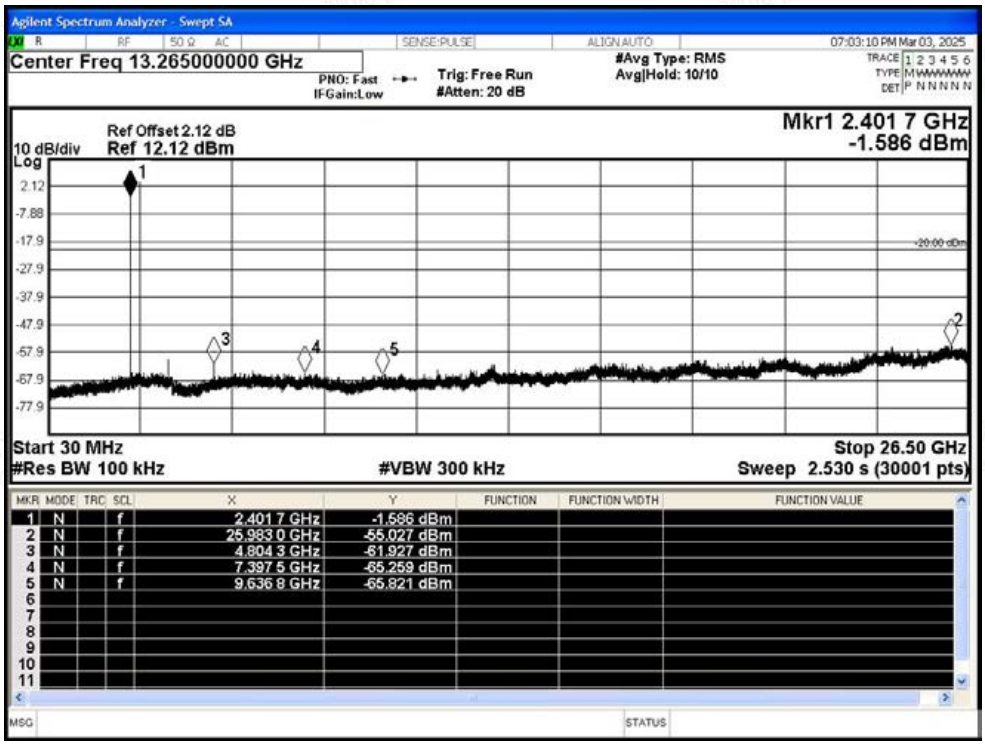
A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-54.23	-20	Pass
NVNT	1-DH5	2441	Ant1	-53.23	-20	Pass
NVNT	1-DH5	2480	Ant1	-53.96	-20	Pass
NVNT	2-DH5	2402	Ant1	-52.46	-20	Pass
NVNT	2-DH5	2441	Ant1	-53.91	-20	Pass
NVNT	2-DH5	2480	Ant1	-51.06	-20	Pass

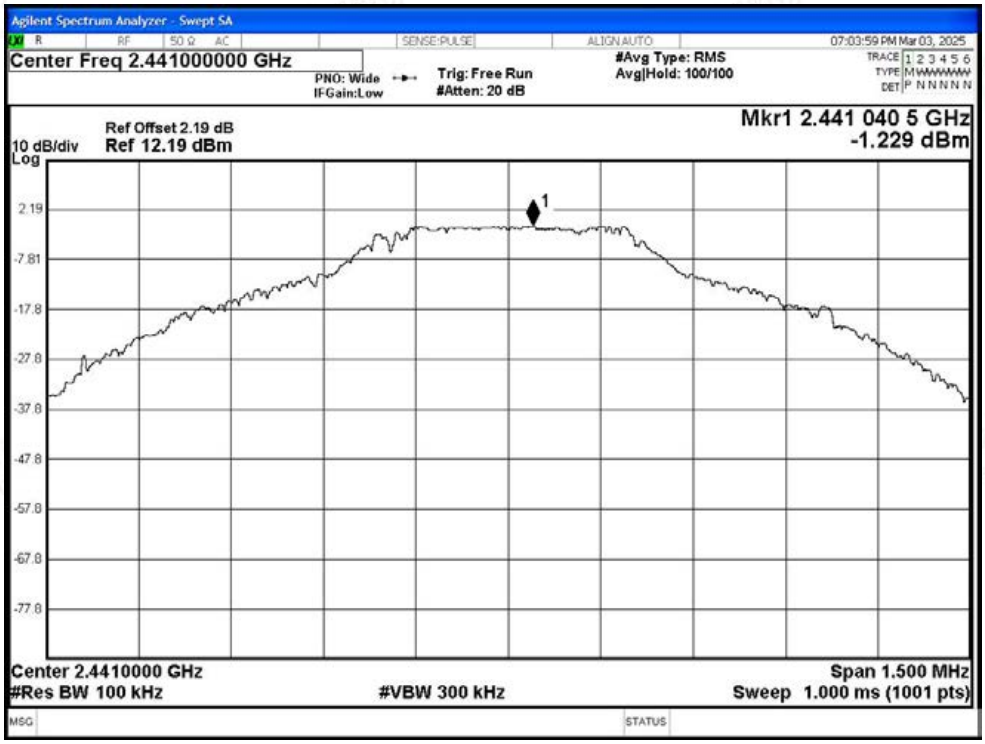
Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

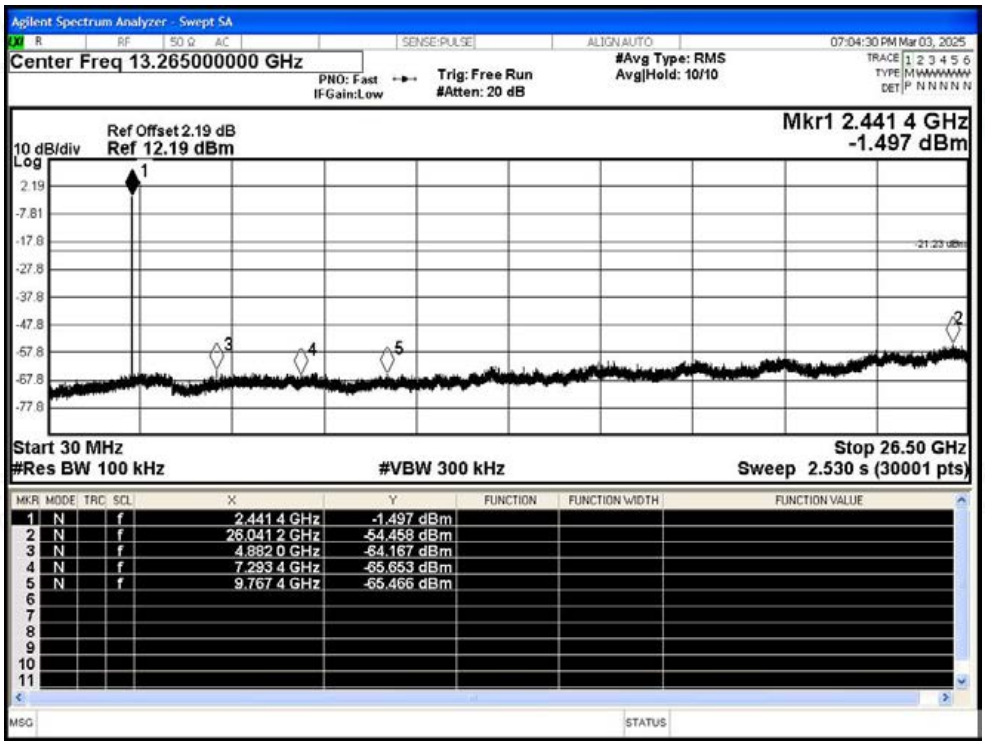
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



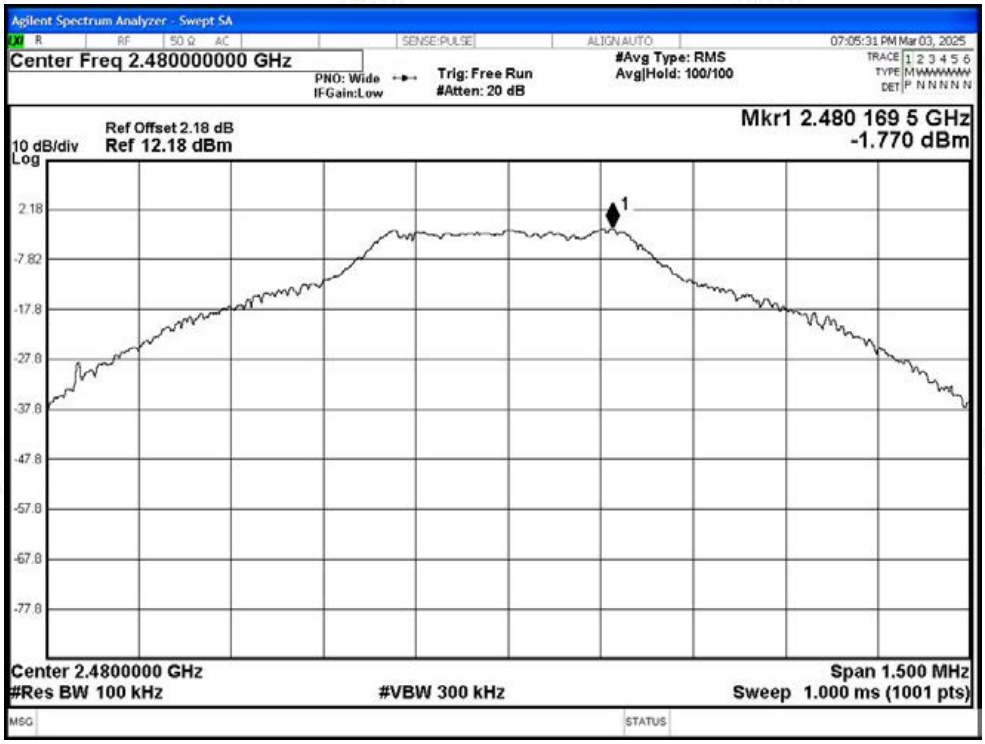
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



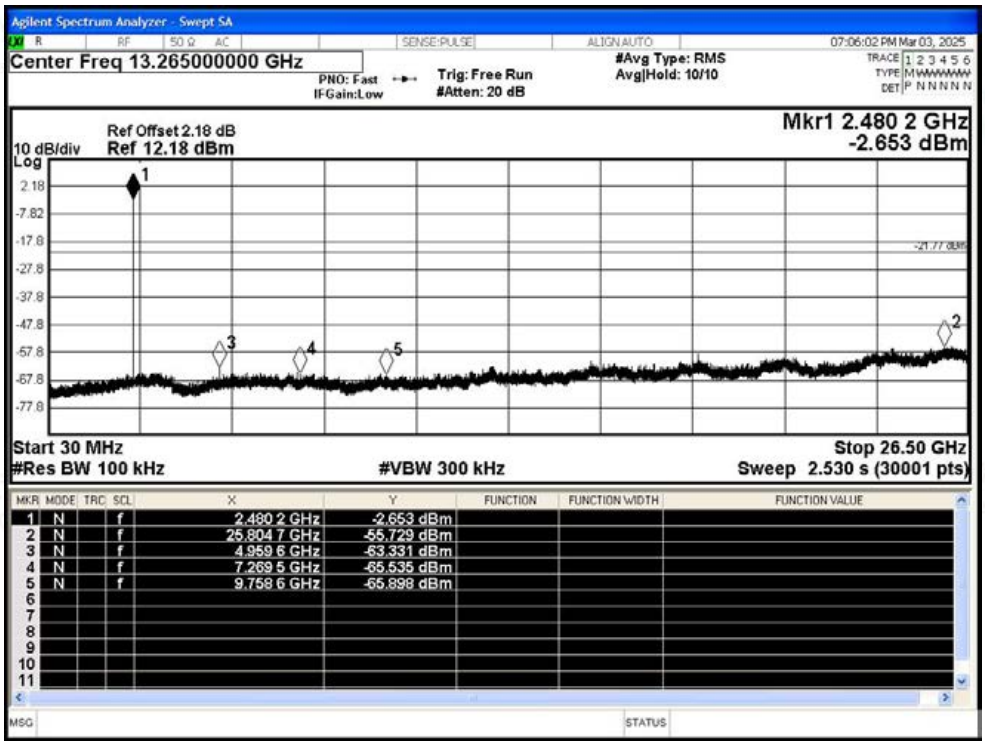
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



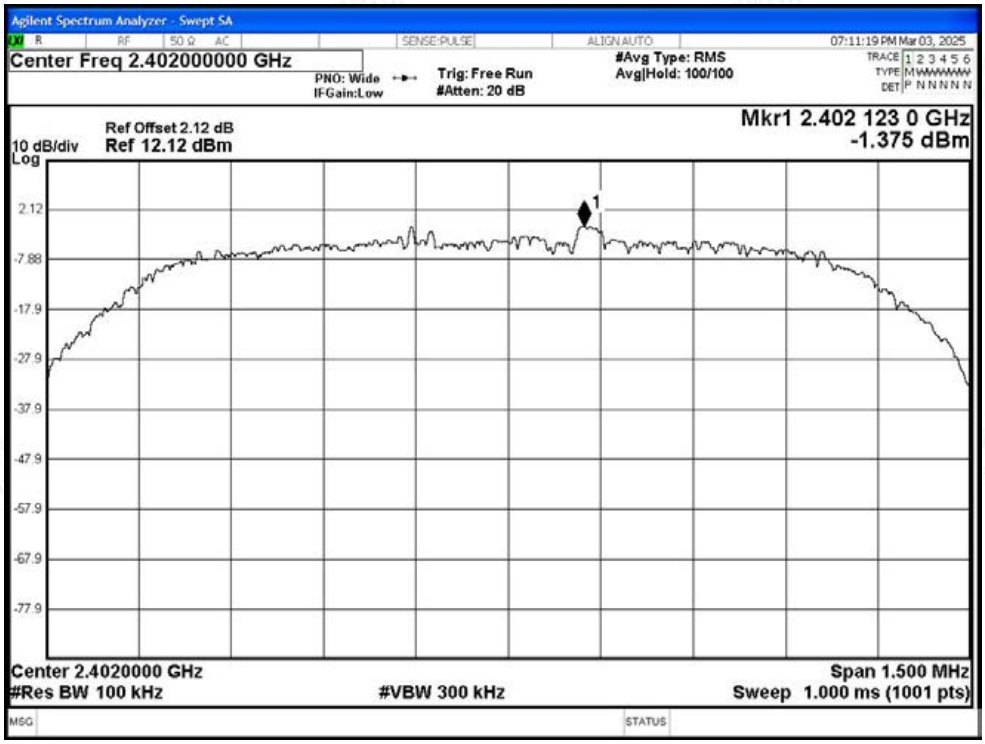
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



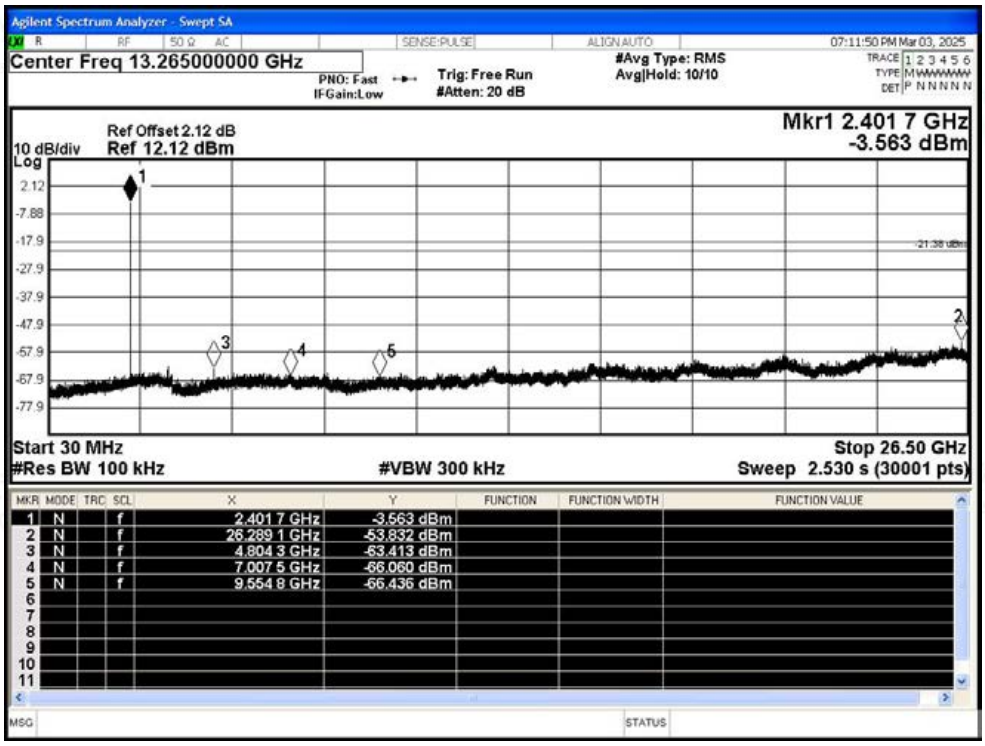
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



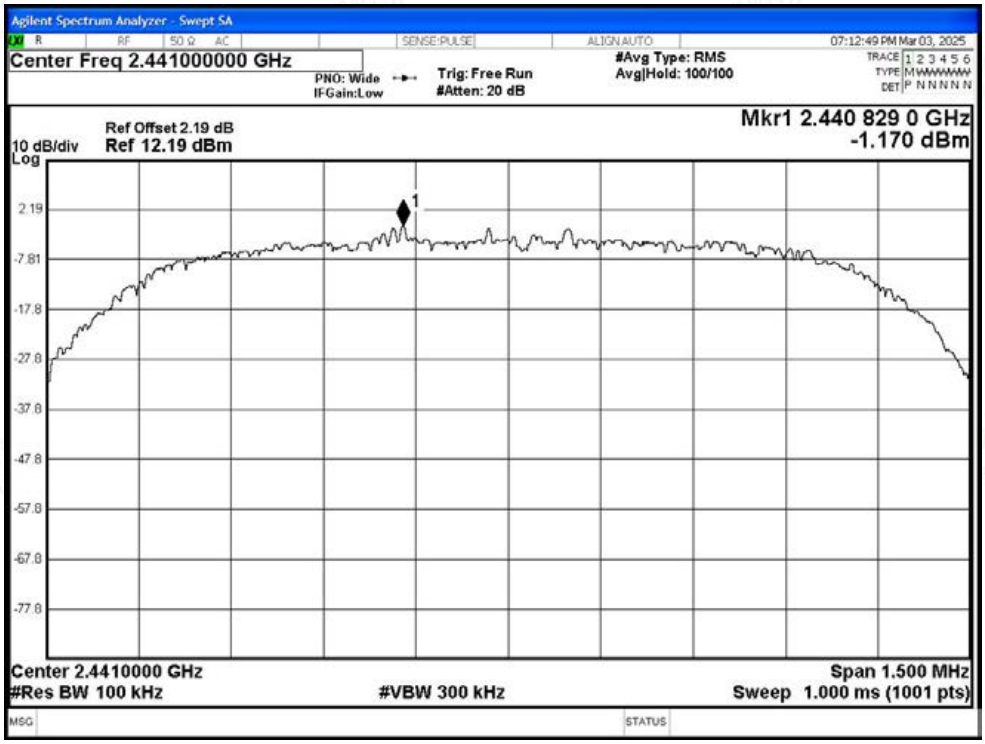
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



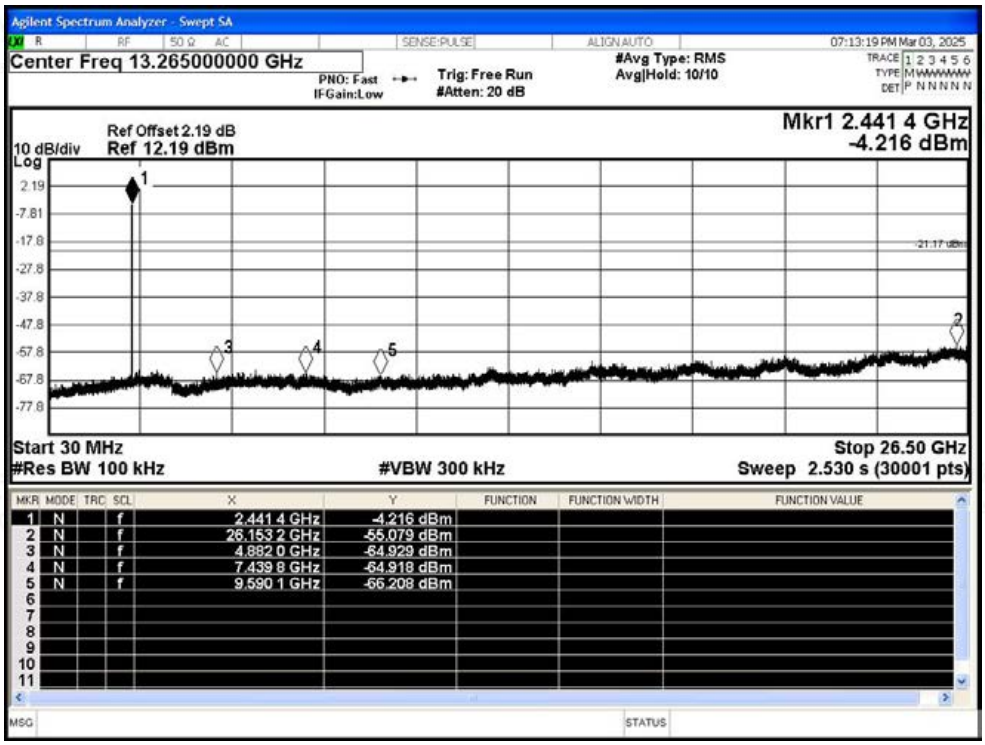
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



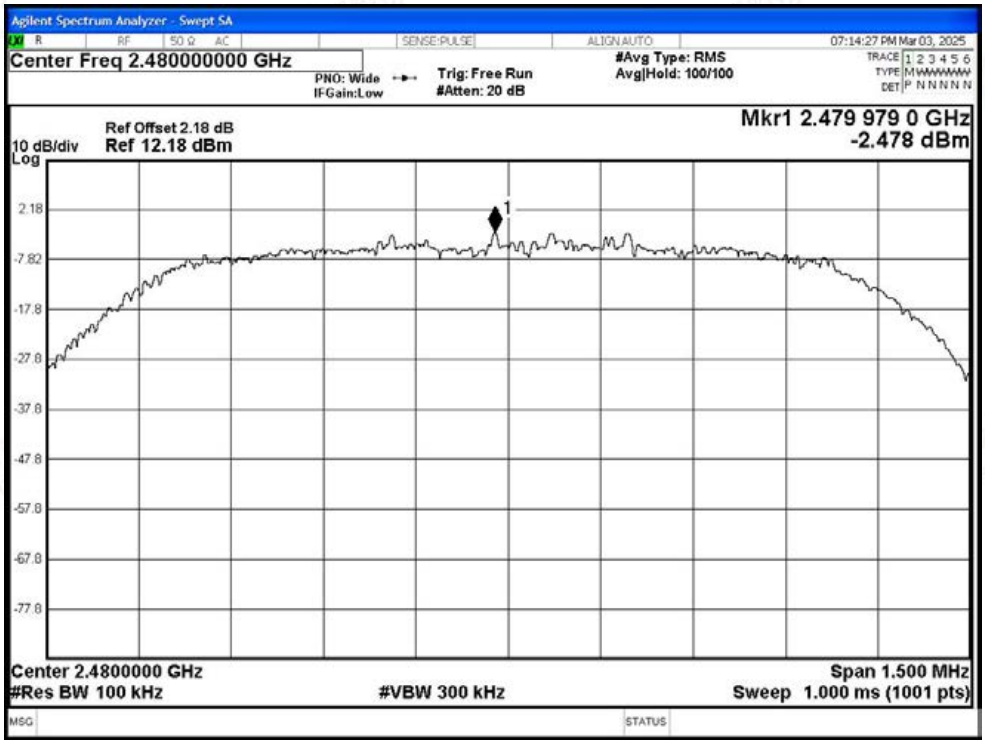
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



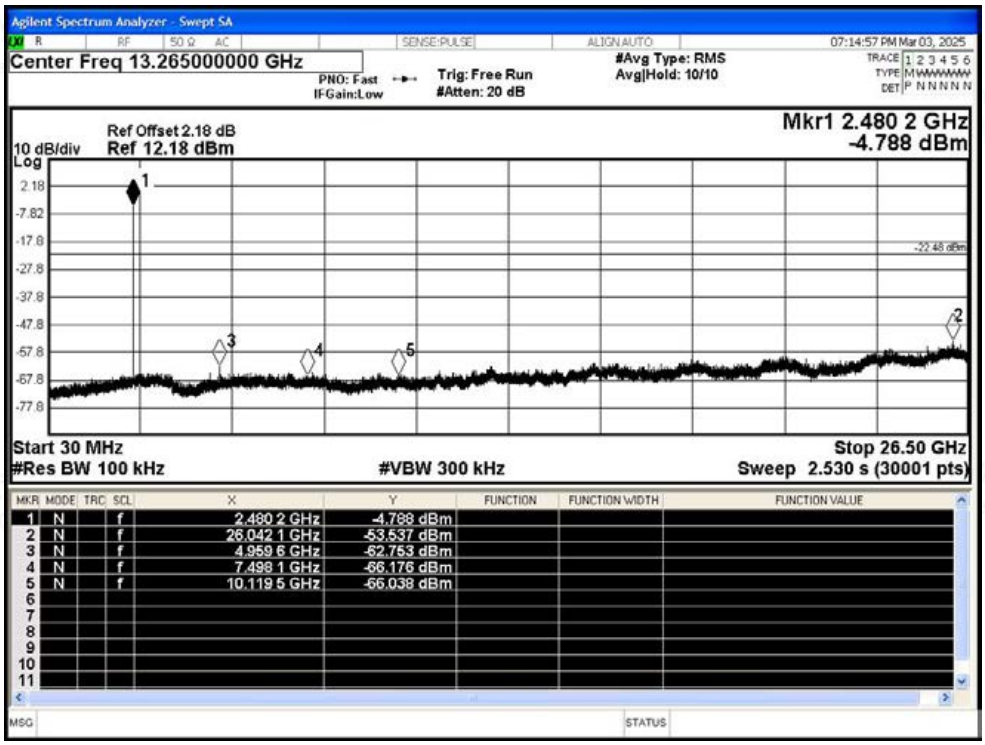
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission

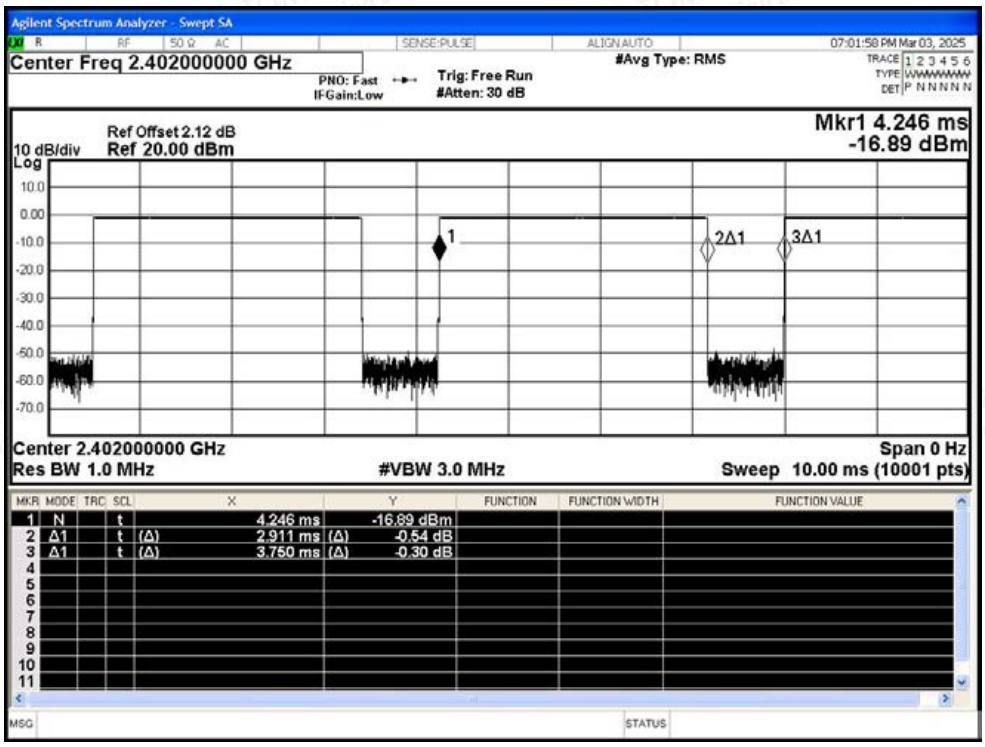


A.8 Duty Cycle

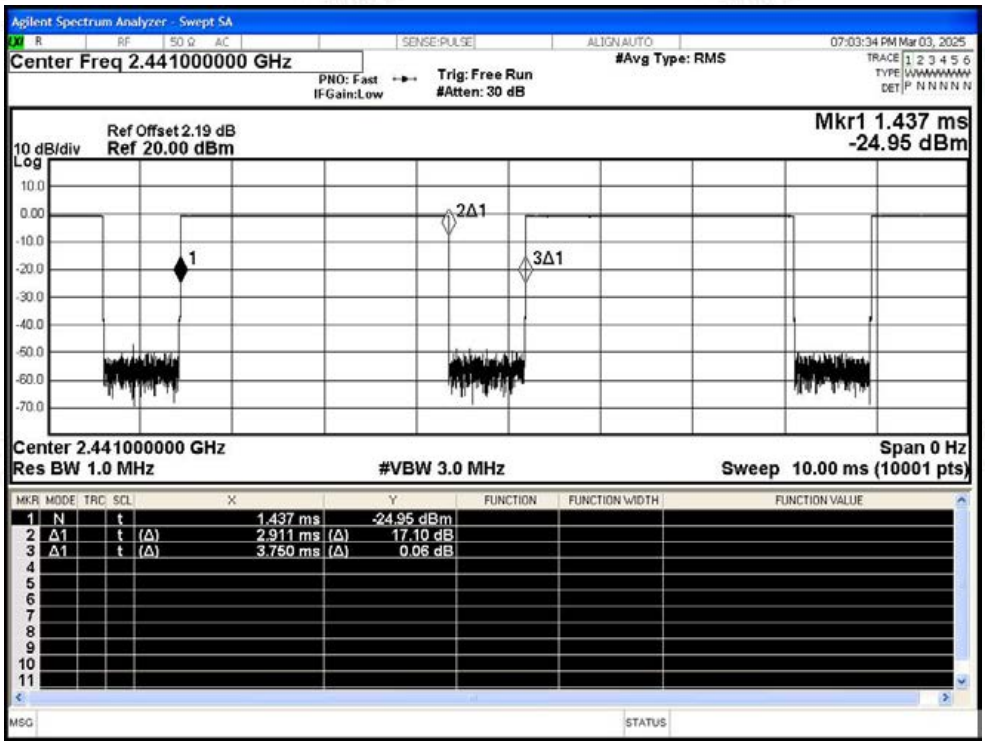
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.63	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.63	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.6	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.33	1.12	0.34
NVNT	2-DH5	2441	Ant1	77.33	1.12	0.34
NVNT	2-DH5	2480	Ant1	77.28	1.12	0.35

Test Graphs

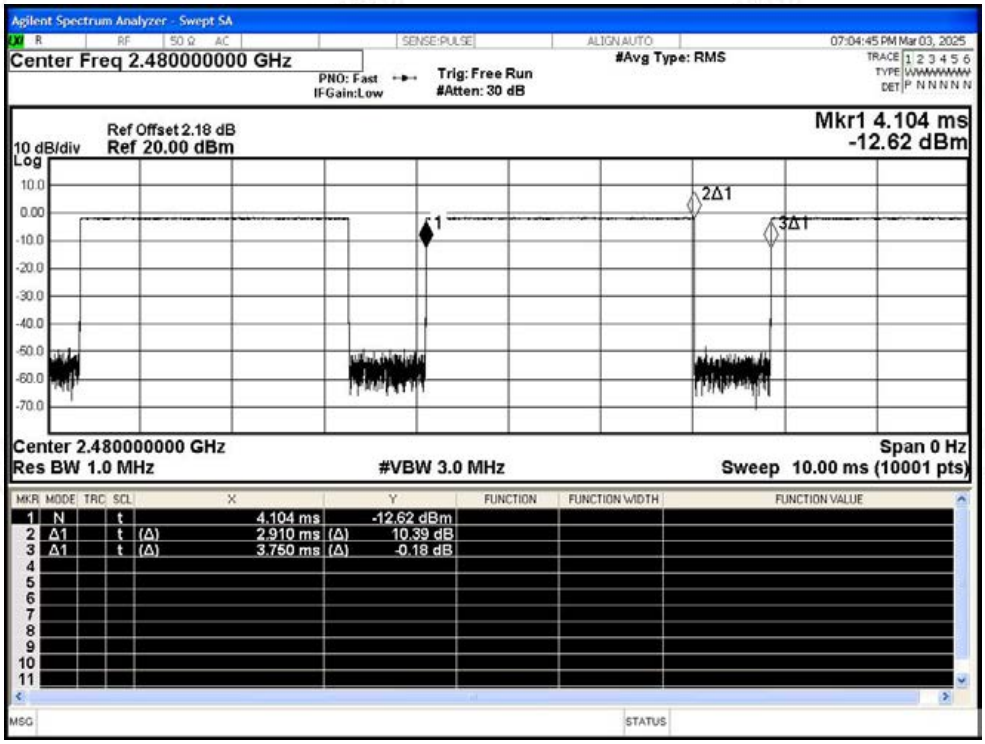
Duty Cycle NVNT 1-DH5 2402MHz Ant1



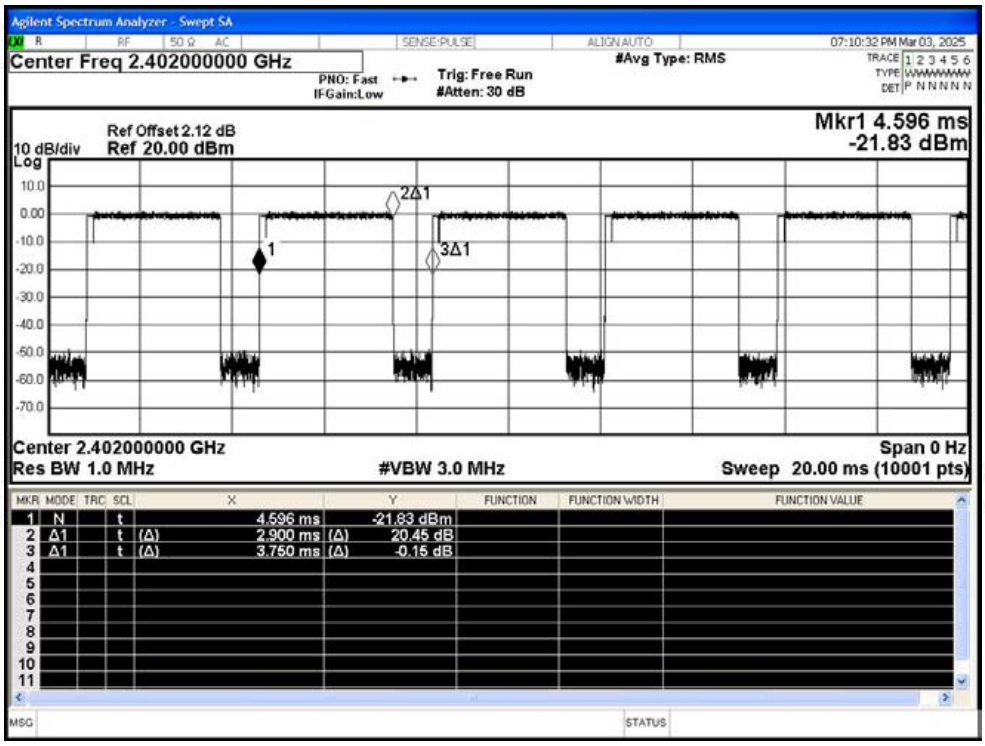
Duty Cycle NVNT 1-DH5 2441MHz Ant1



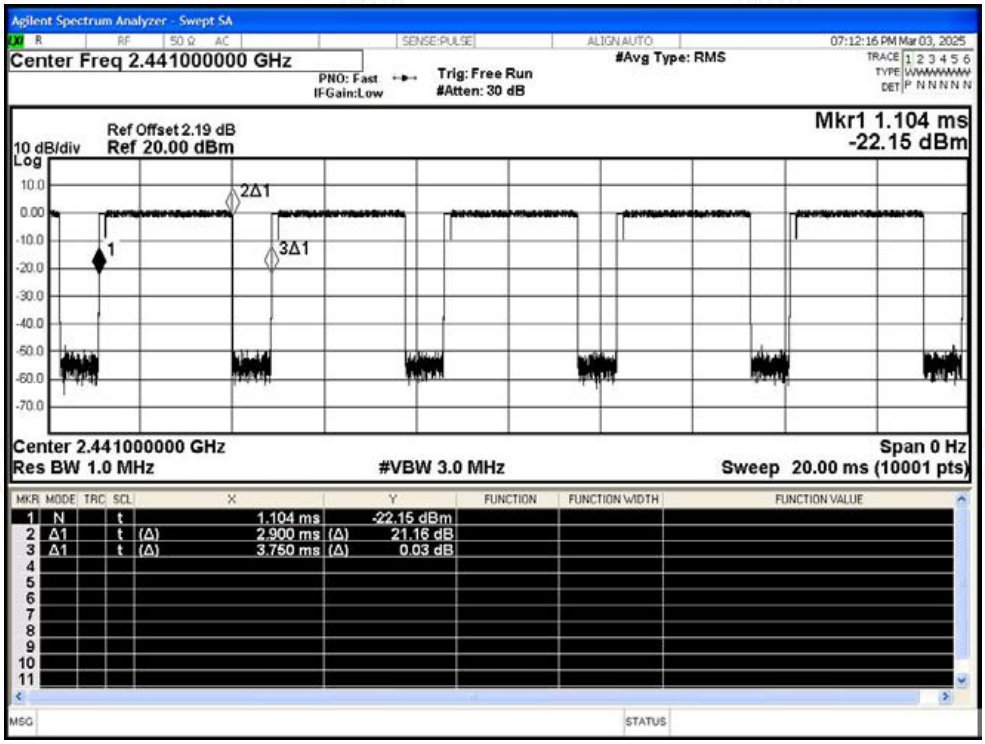
Duty Cycle NVNT 1-DH5 2480MHz Ant1



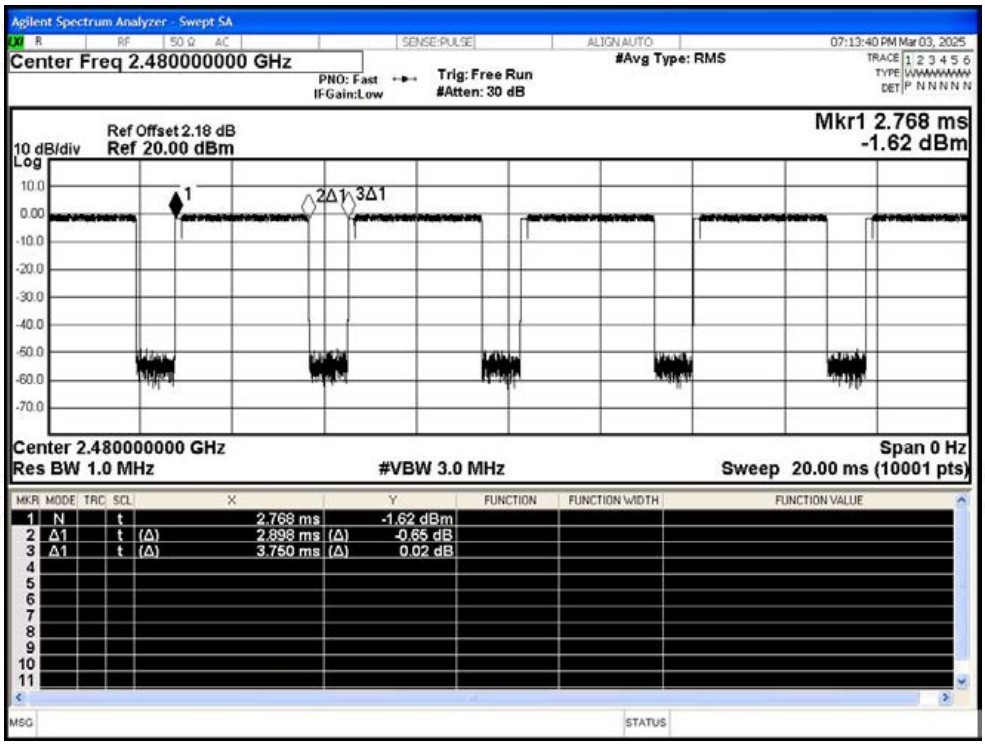
Duty Cycle NVNT 2-DH5 2402MHz Ant1



Duty Cycle NVNT 2-DH5 2441MHz Ant1



Duty Cycle NVNT 2-DH5 2480MHz Ant1

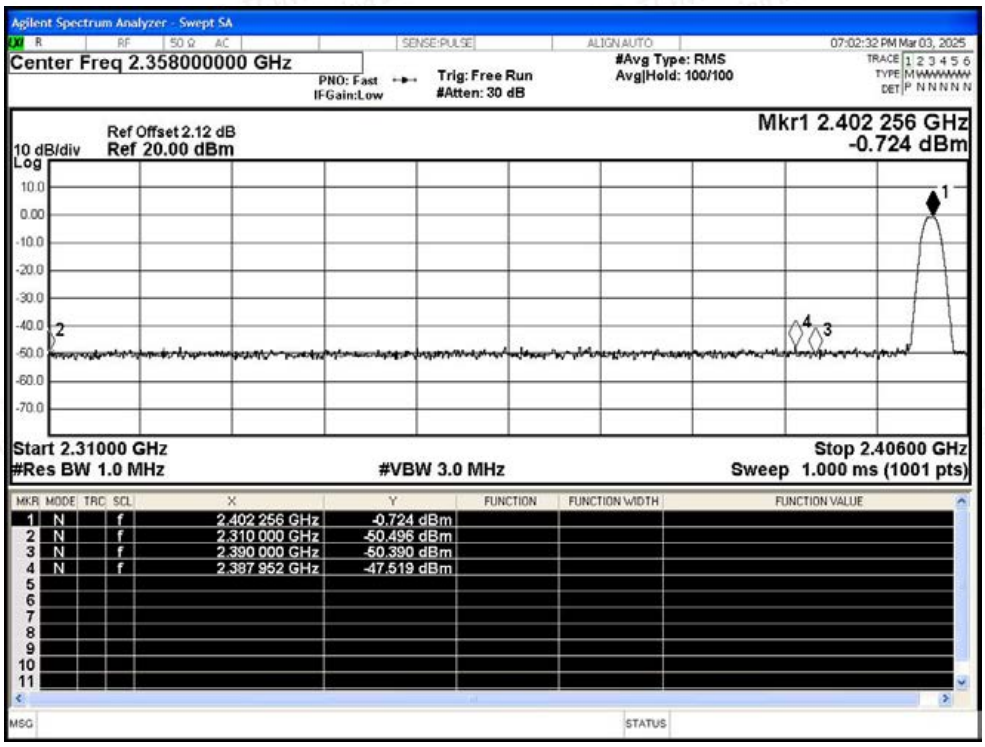


A.9 Restrict Band

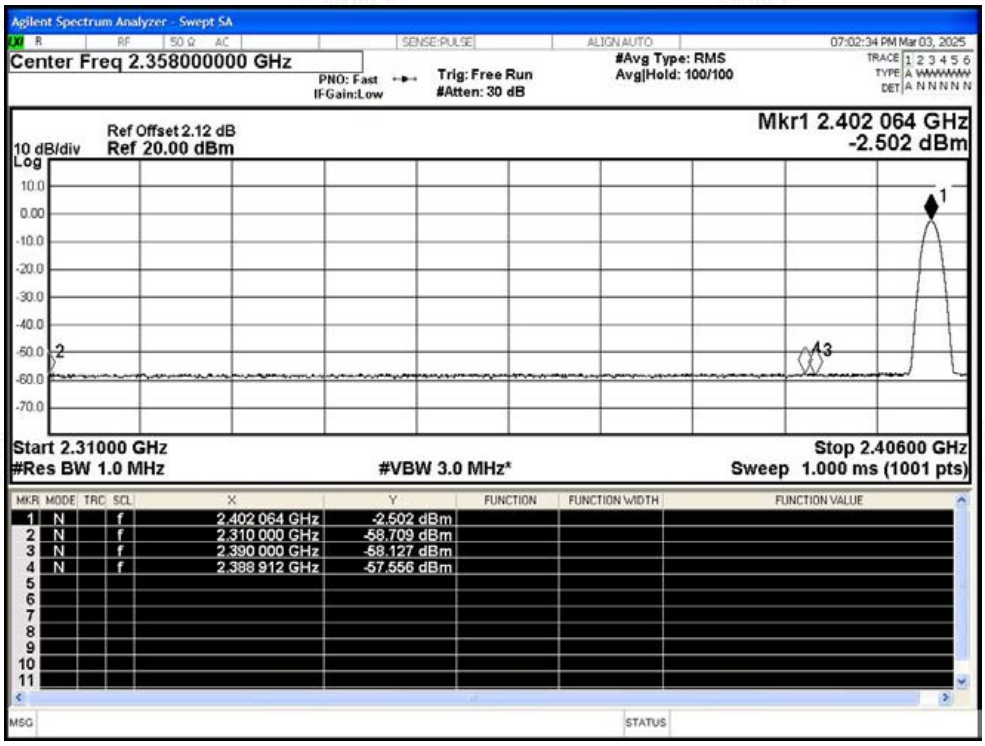
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-50.5	2	-	46.76	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.71	2	1.1	39.65	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2387.952	-47.52	2	-	49.74	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2388.912	-57.56	2	1.1	40.8	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-50.39	2	-	46.87	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-58.13	2	1.1	40.23	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-48.96	2	-	48.3	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-57.91	2	1.1	40.45	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2486.44	-46.34	2	-	50.92	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2486.512	-57.14	2	1.1	41.22	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-50.07	2	-	47.19	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-57.88	2	1.1	40.48	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-49.34	2	-	47.92	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-58.71	2	1.12	39.67	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2361.552	-46.36	2	-	50.9	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2381.232	-57.61	2	1.12	40.77	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-49.56	2	-	47.7	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-58.37	2	1.12	40.01	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-49.4	2	-	47.86	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-57.23	2	1.12	41.15	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2498.656	-47.02	2	-	50.24	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2486.704	-56.76	2	1.12	41.62	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-49.82	2	-	47.44	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-57.32	2	1.12	41.06	Average	54	Pass

Test Graphs

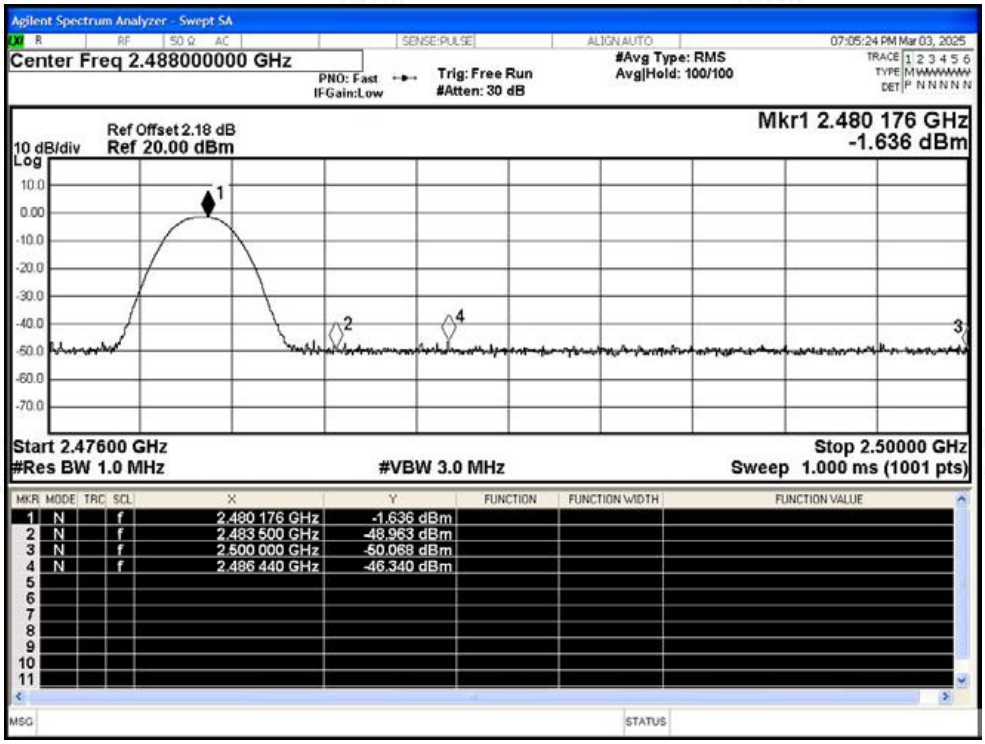
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



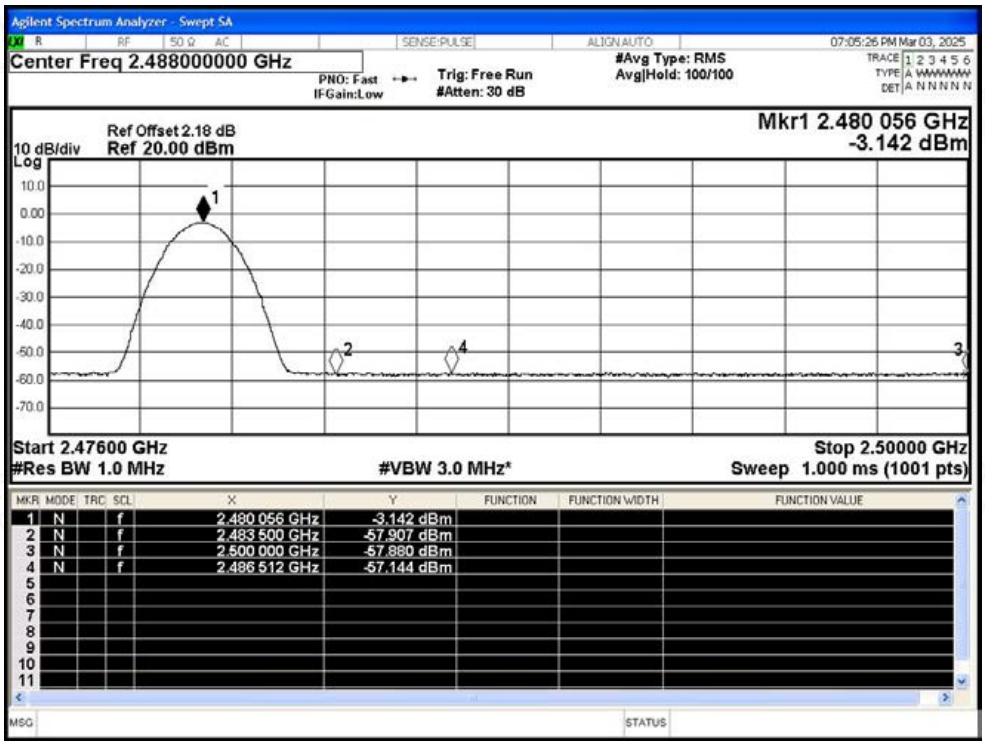
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



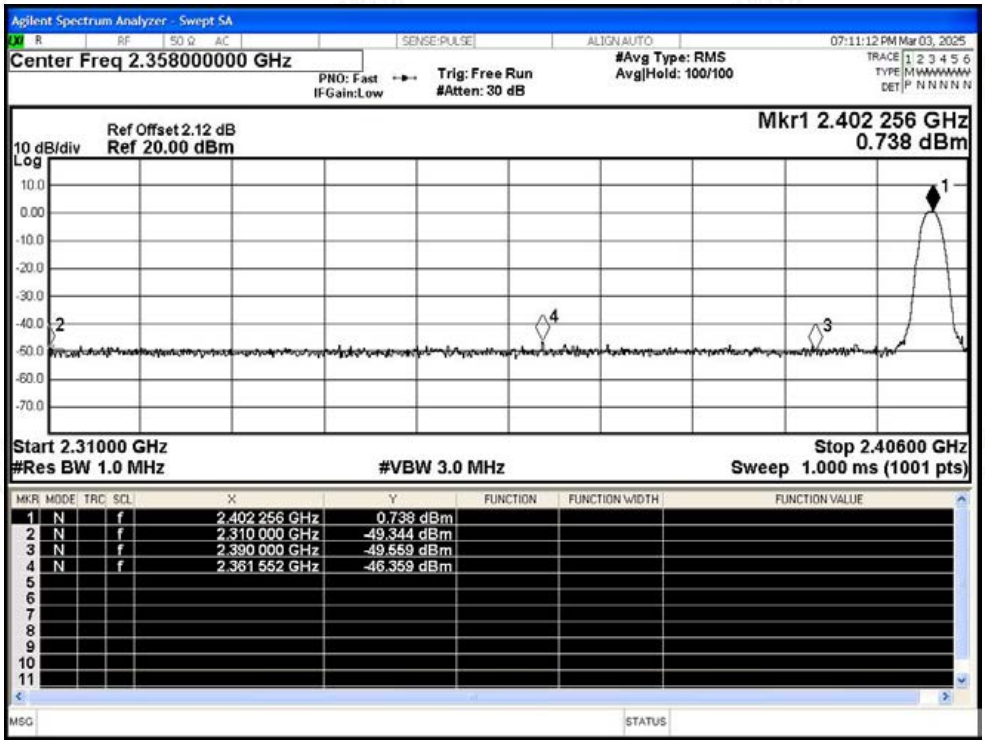
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



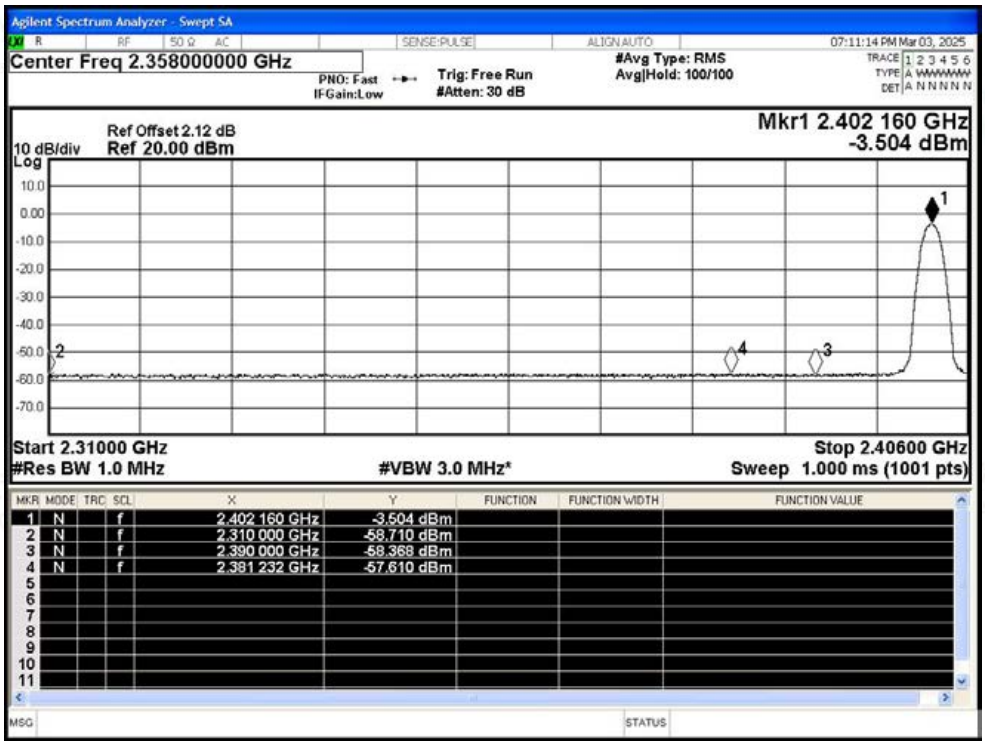
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



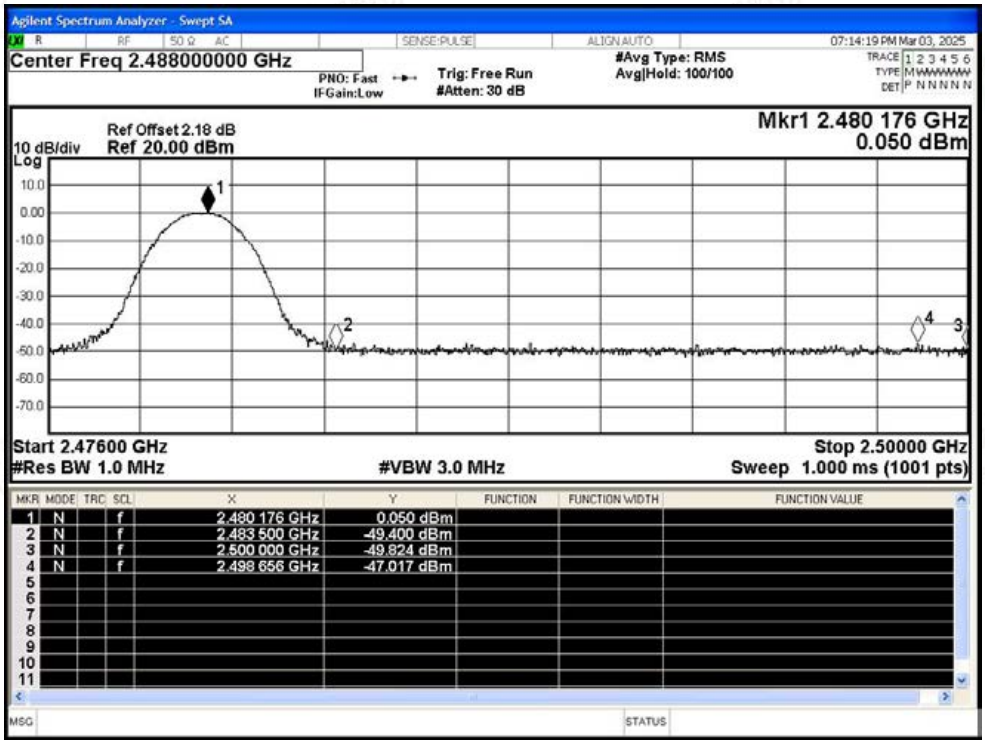
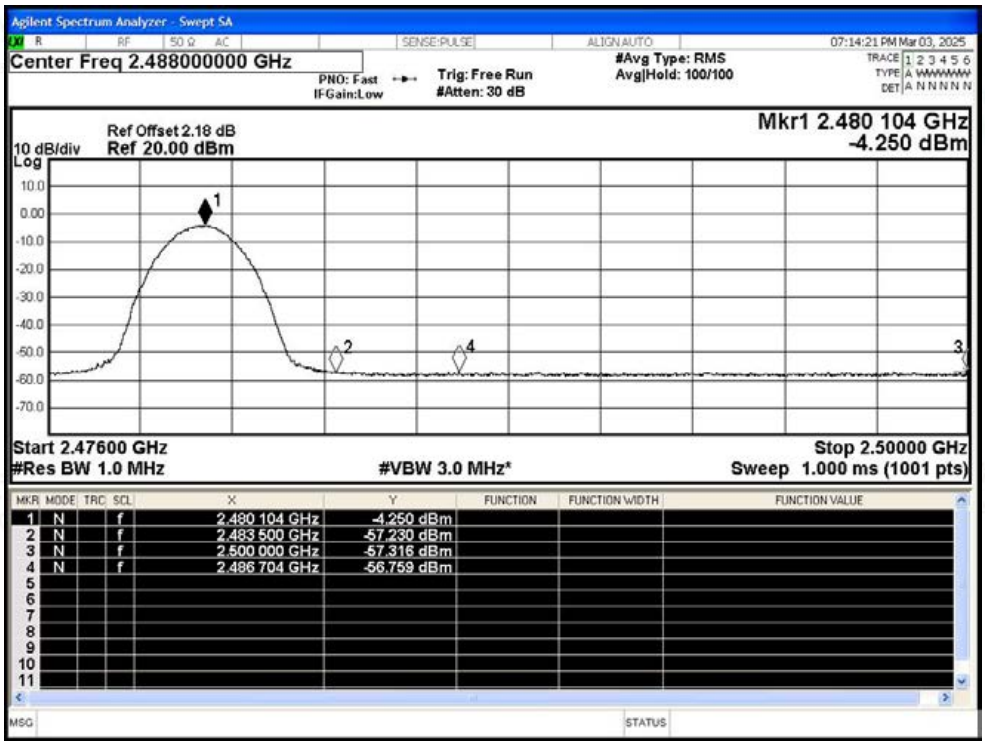
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



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