Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Smart watch

Test Model: MT90

Environmental Conditions

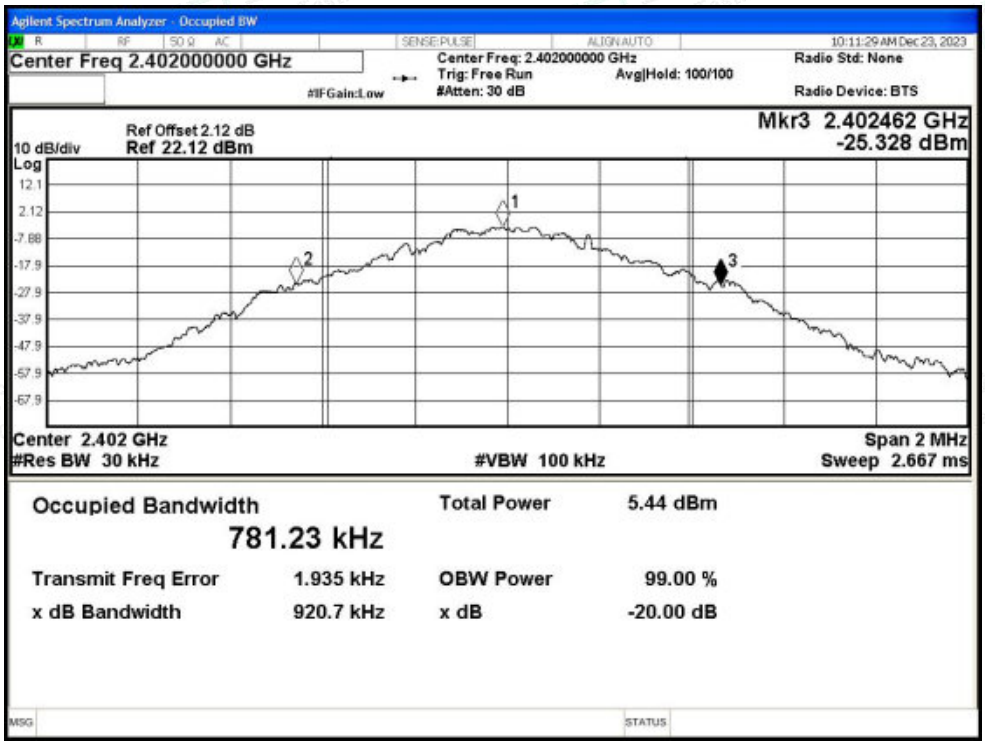
Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Nick Peng
Supervised by:	Joker Hu

A.1 -20dB Bandwidth

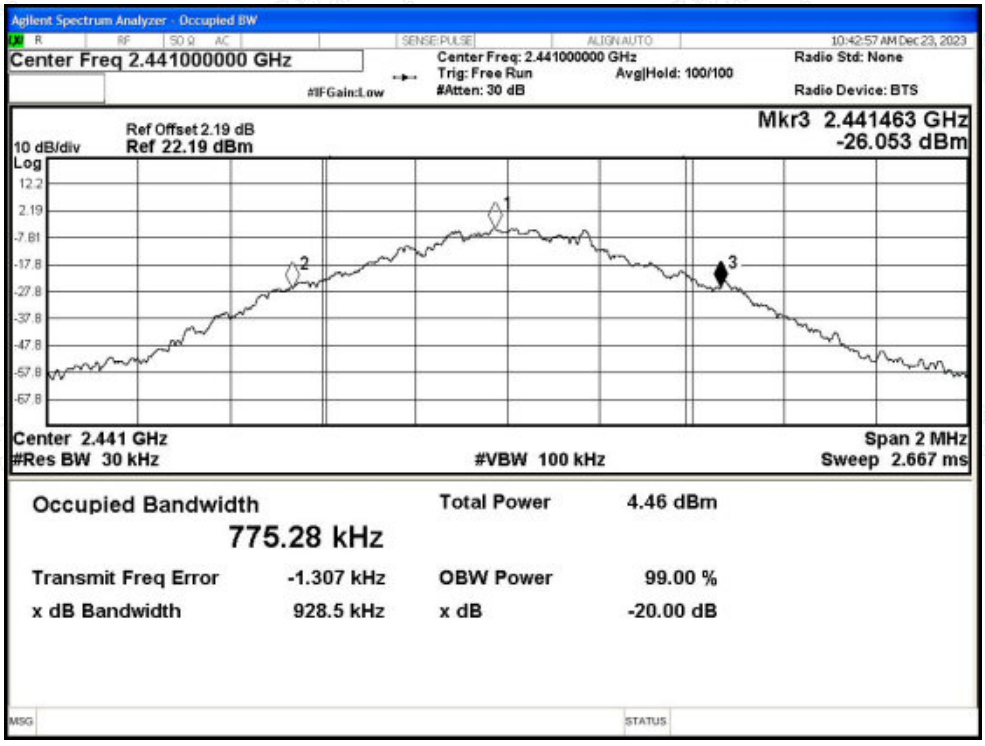
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.921	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.929	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.881	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.262	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.29	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.274	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.301	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.29	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.282	N/A	Pass

Test Graphs

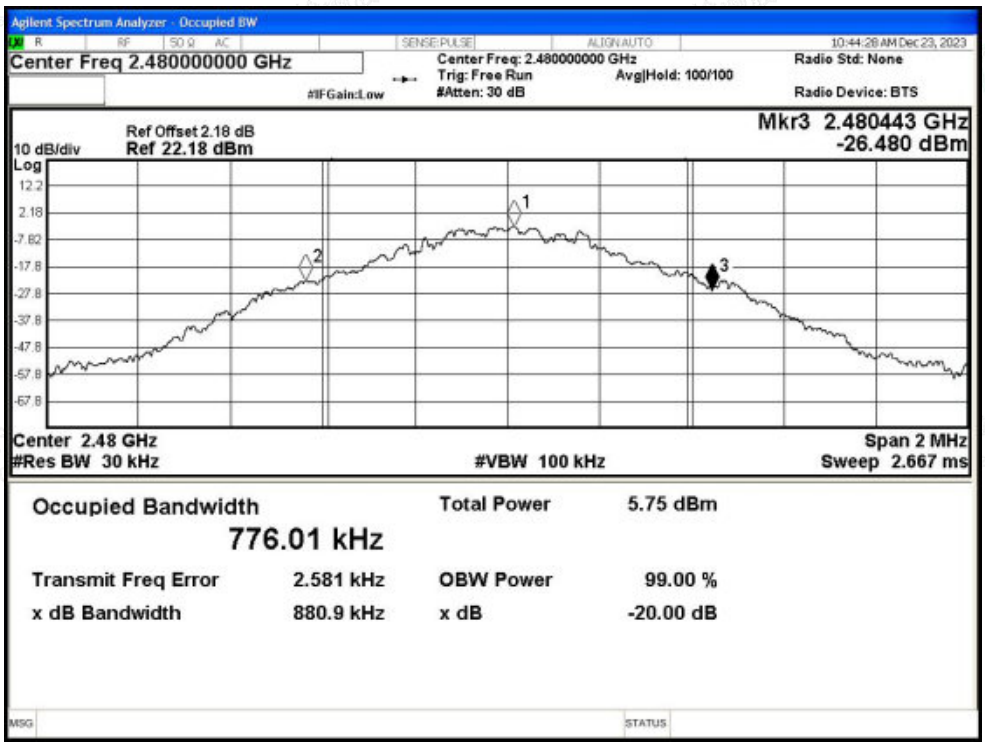
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



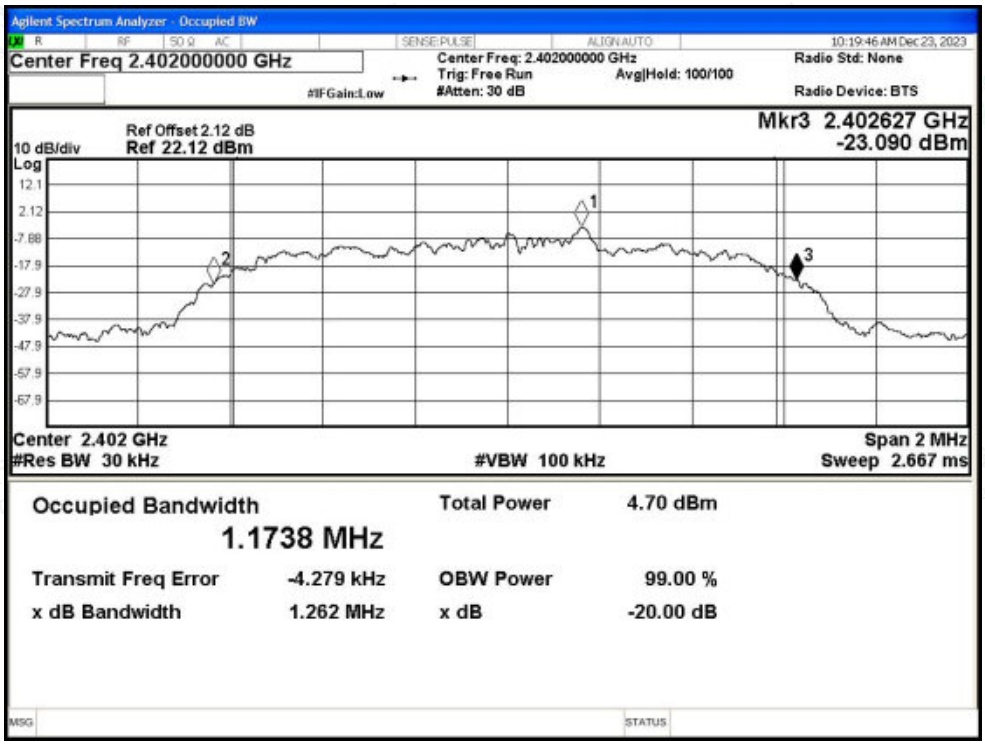
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



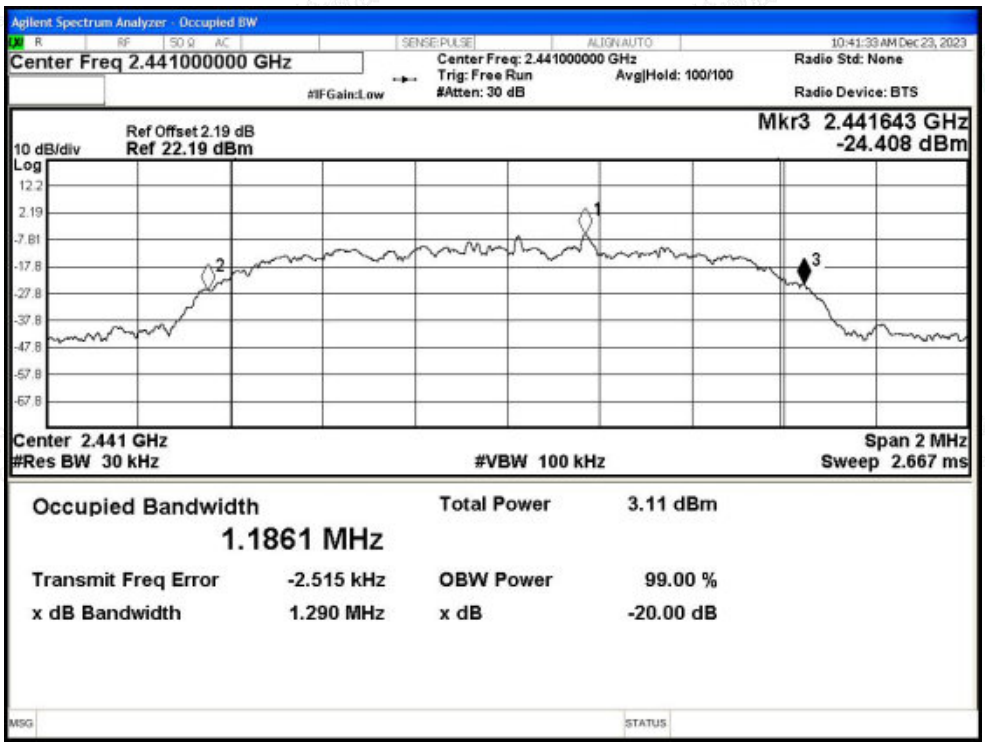
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



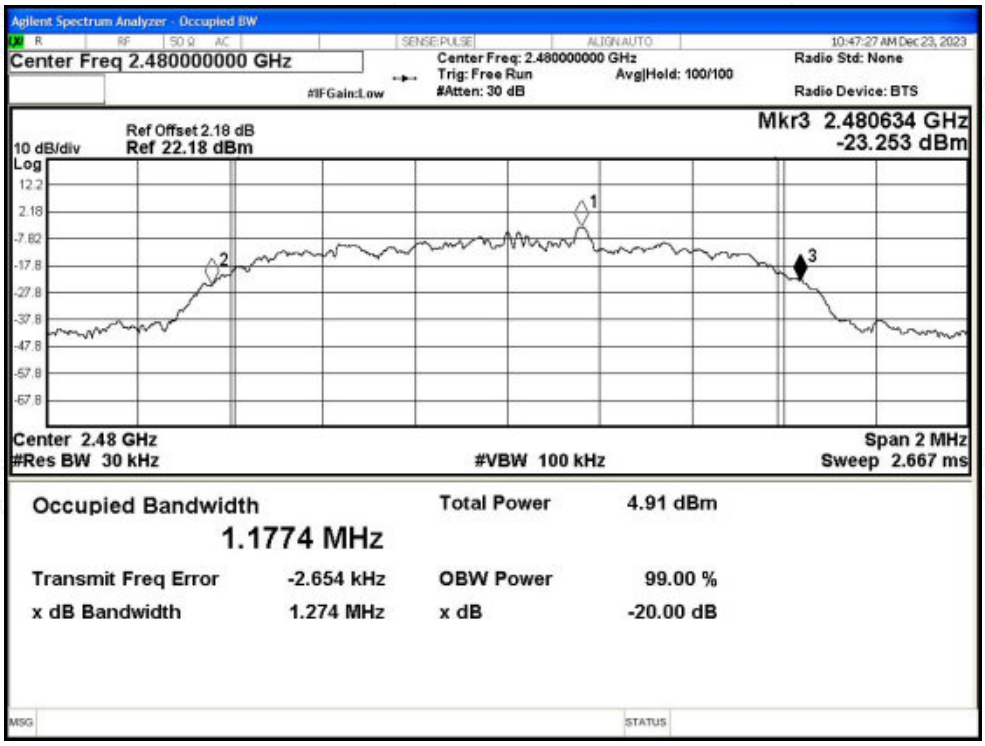
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



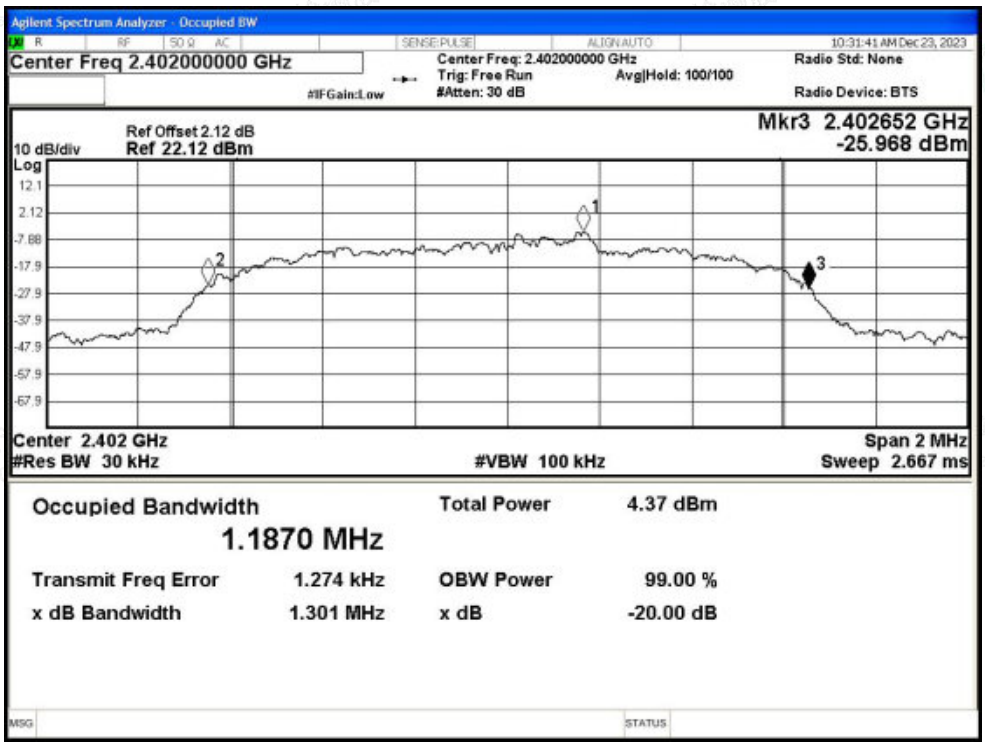
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



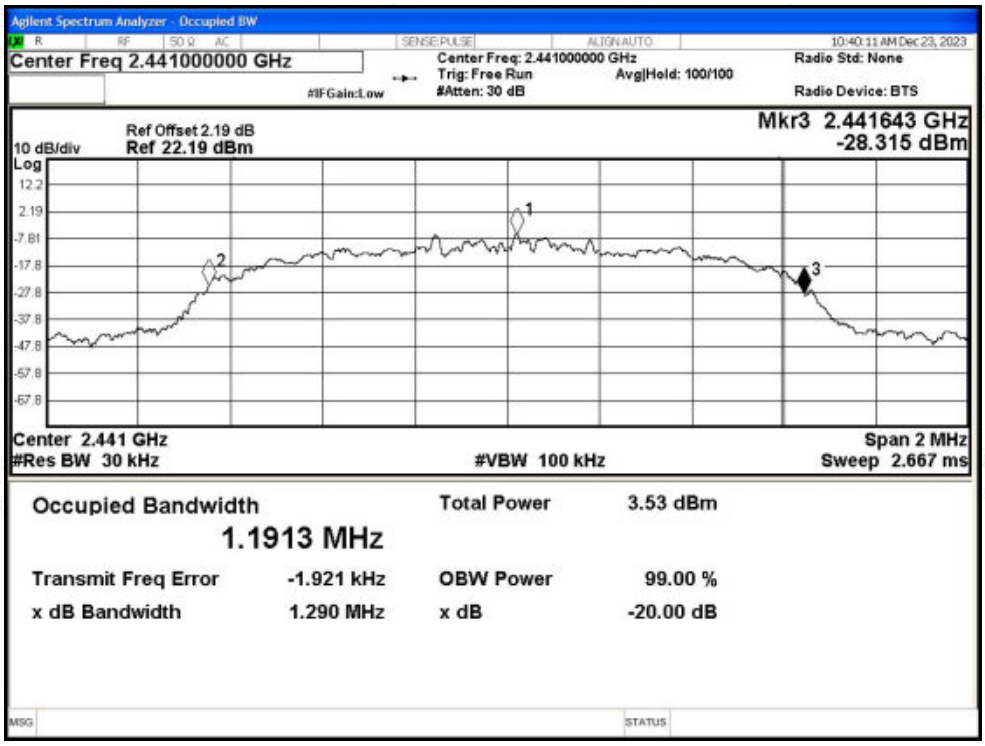
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



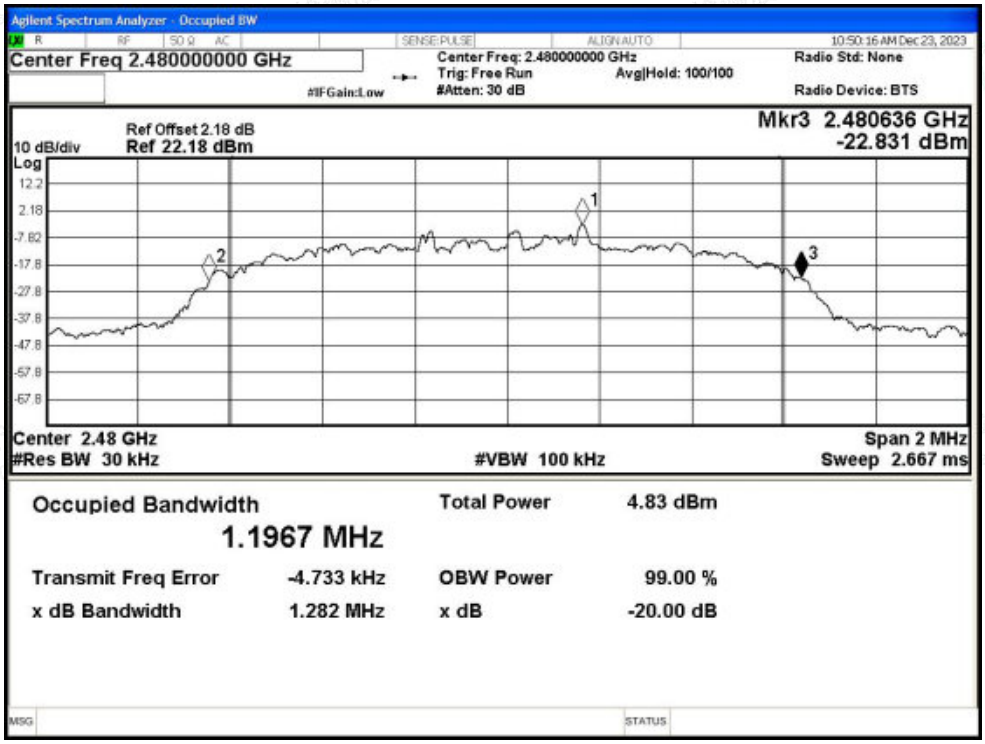
-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1

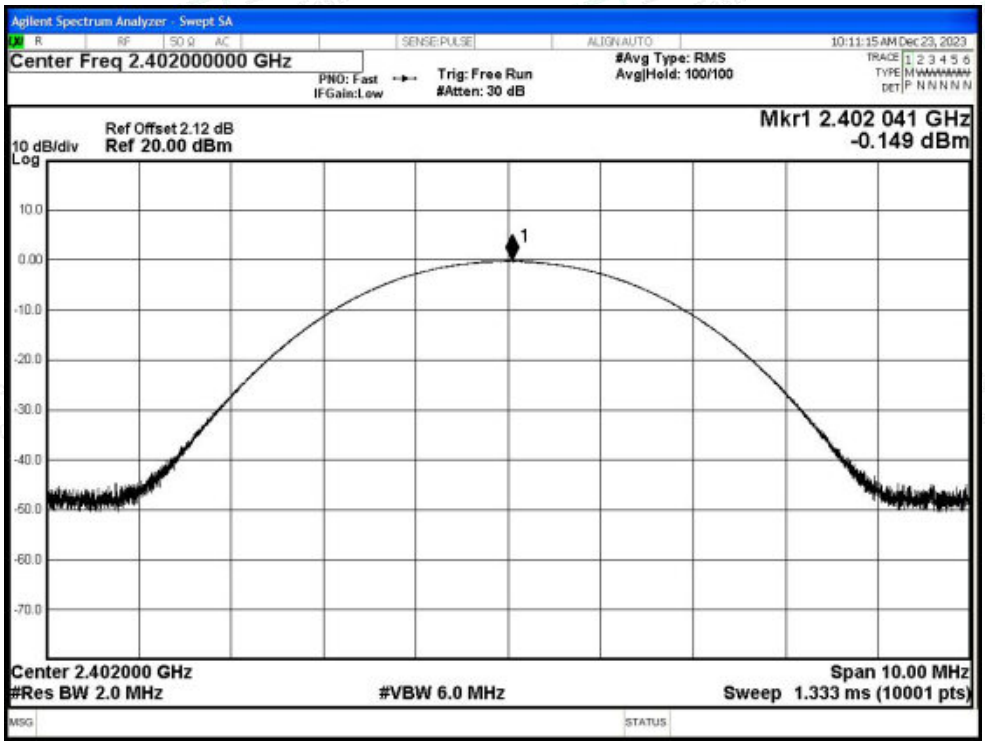


A.2 Maximum peak Conducted Output Power

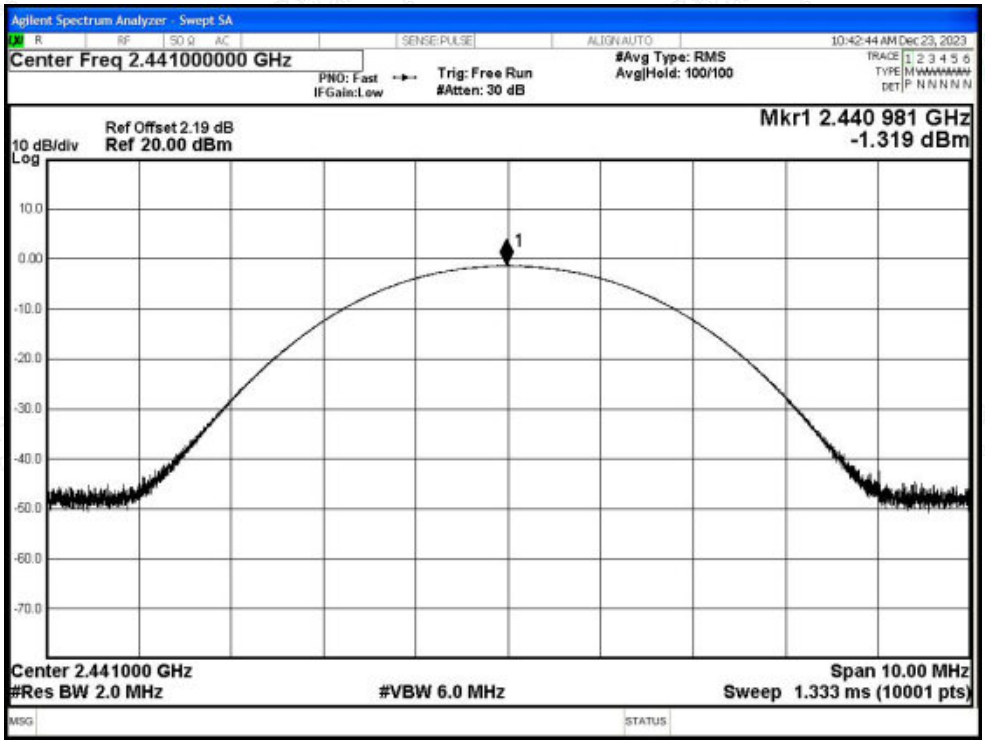
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.15	21	Pass
NVNT	1-DH5	2441	Ant1	-1.32	21	Pass
NVNT	1-DH5	2480	Ant1	-0.03	21	Pass
NVNT	2-DH5	2402	Ant1	-0.1	21	Pass
NVNT	2-DH5	2441	Ant1	-1.22	21	Pass
NVNT	2-DH5	2480	Ant1	0.03	21	Pass
NVNT	3-DH5	2402	Ant1	-0.42	21	Pass
NVNT	3-DH5	2441	Ant1	-1.23	21	Pass
NVNT	3-DH5	2480	Ant1	-0.01	21	Pass

Test Graphs

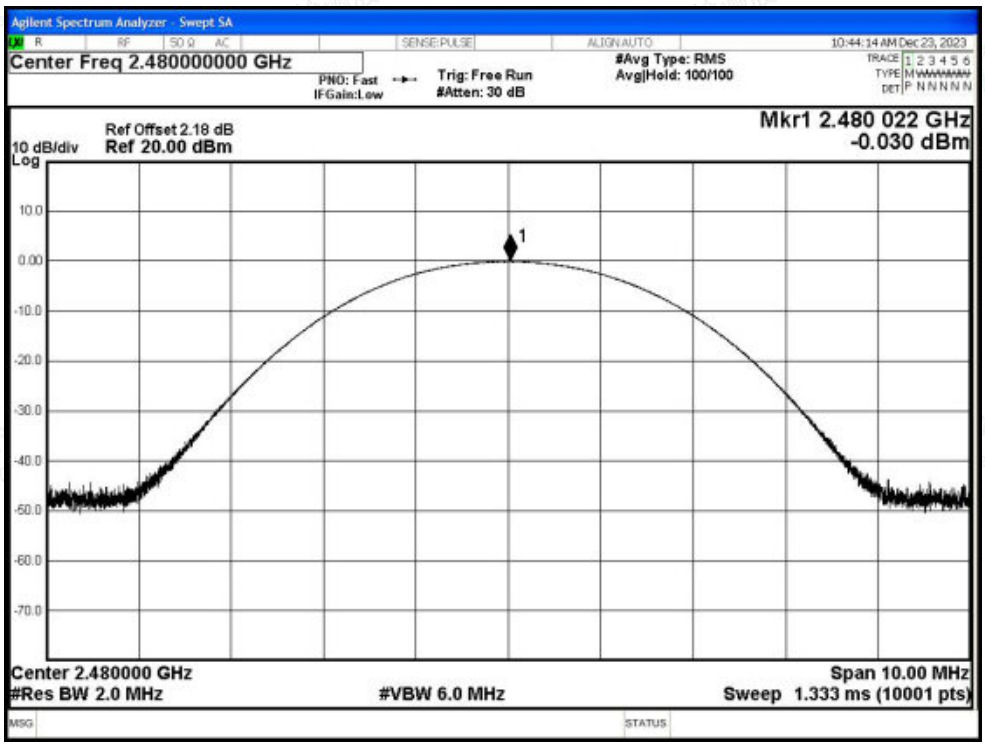
Power NVNT 1-DH5 2402MHz Ant1



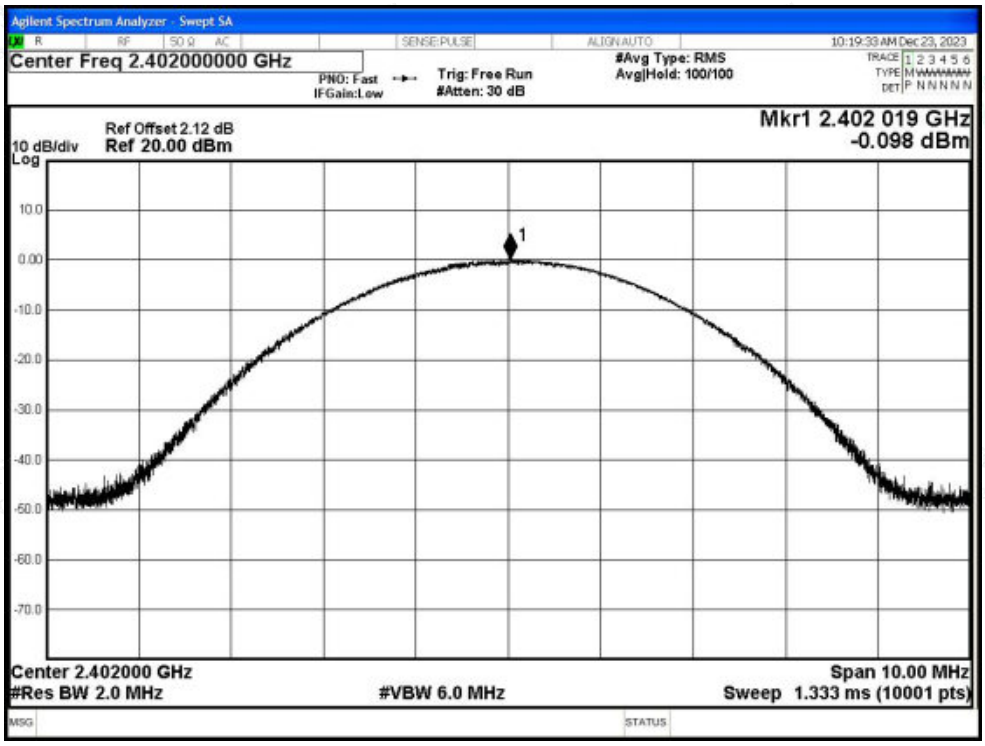
Power NVNT 1-DH5 2441MHz Ant1



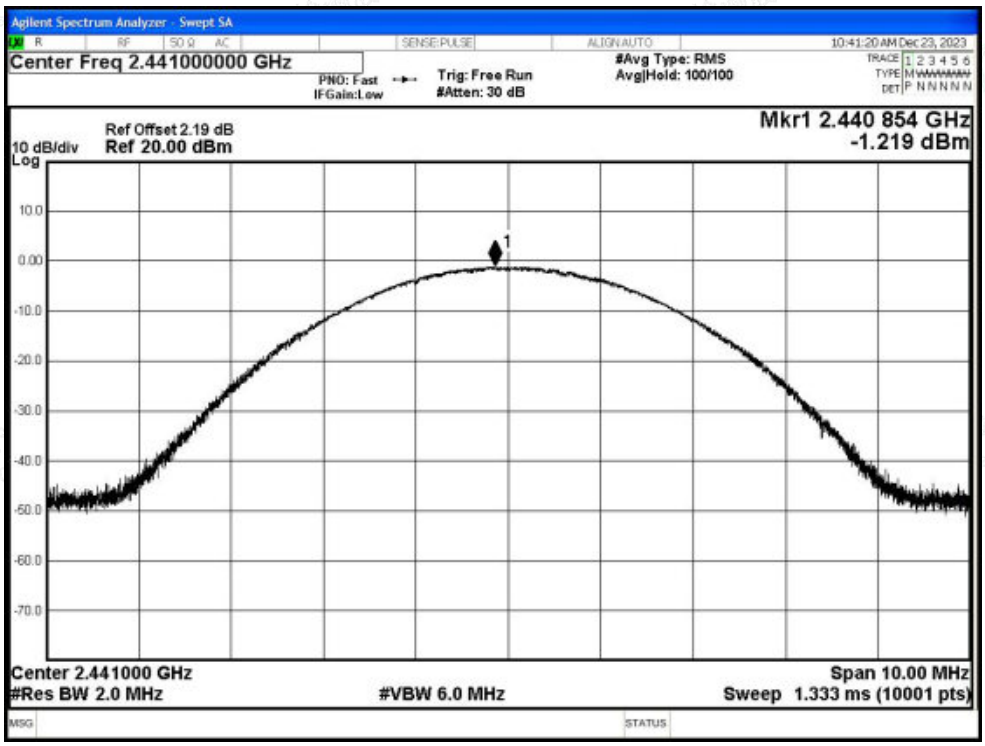
Power NVNT 1-DH5 2480MHz Ant1



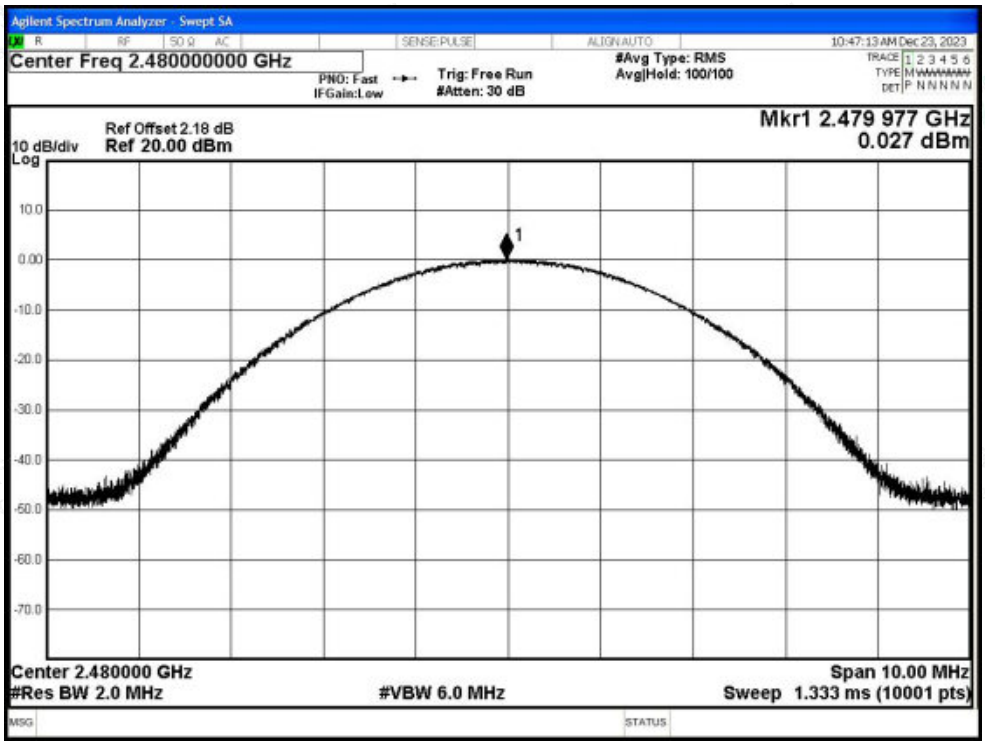
Power NVNT 2-DH5 2402MHz Ant1



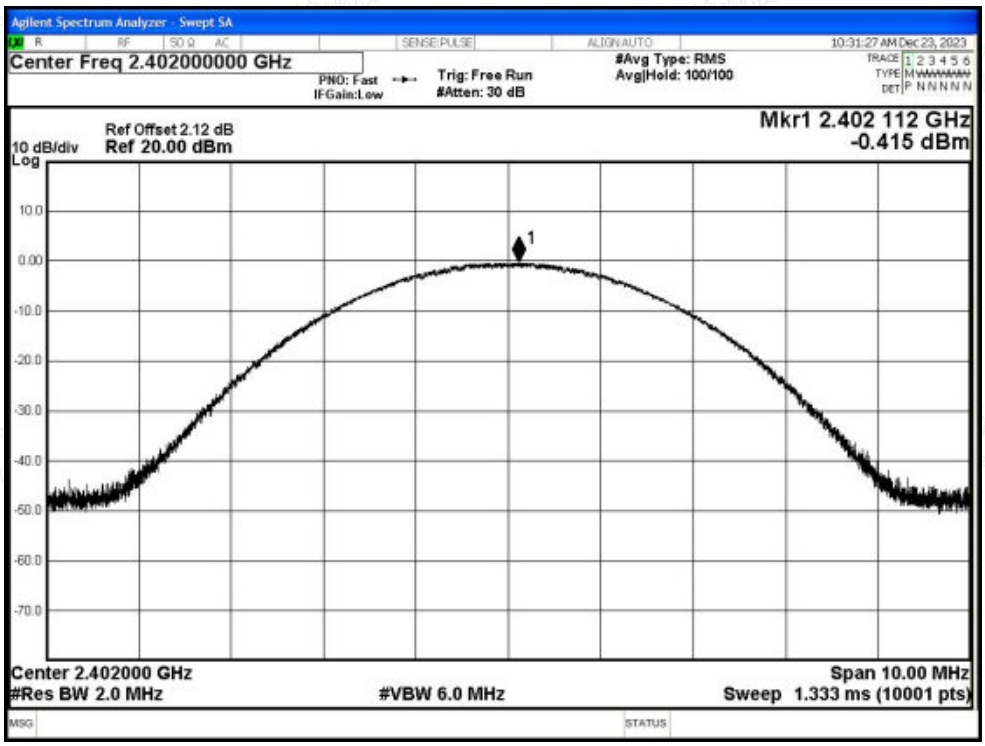
Power NVNT 2-DH5 2441MHz Ant1



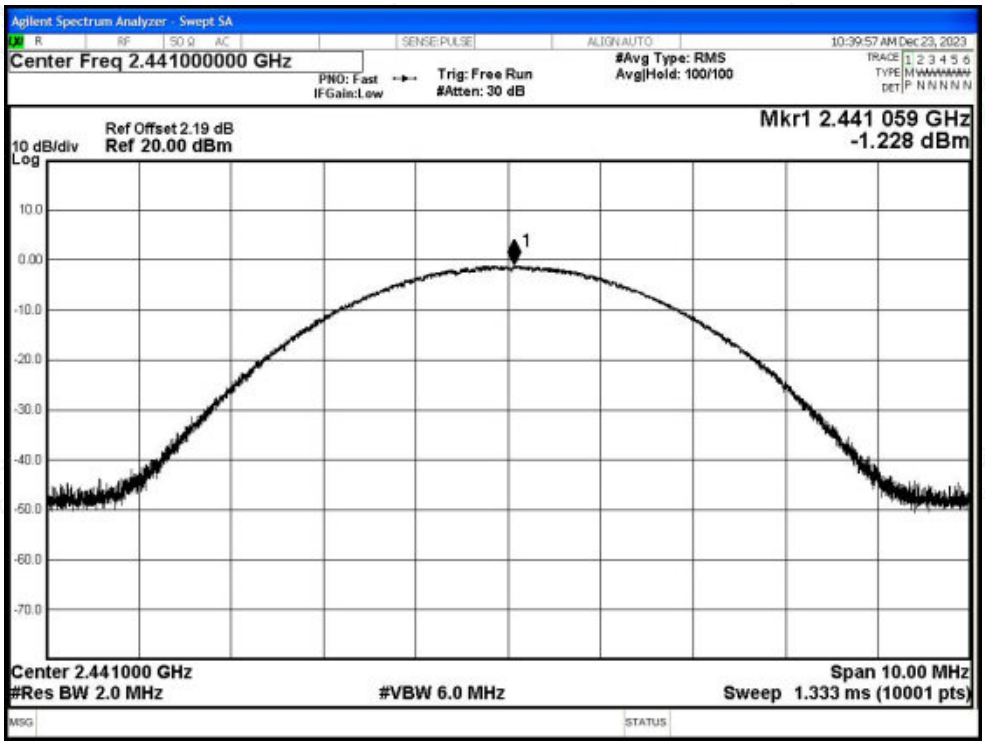
Power NVNT 2-DH5 2480MHz Ant1



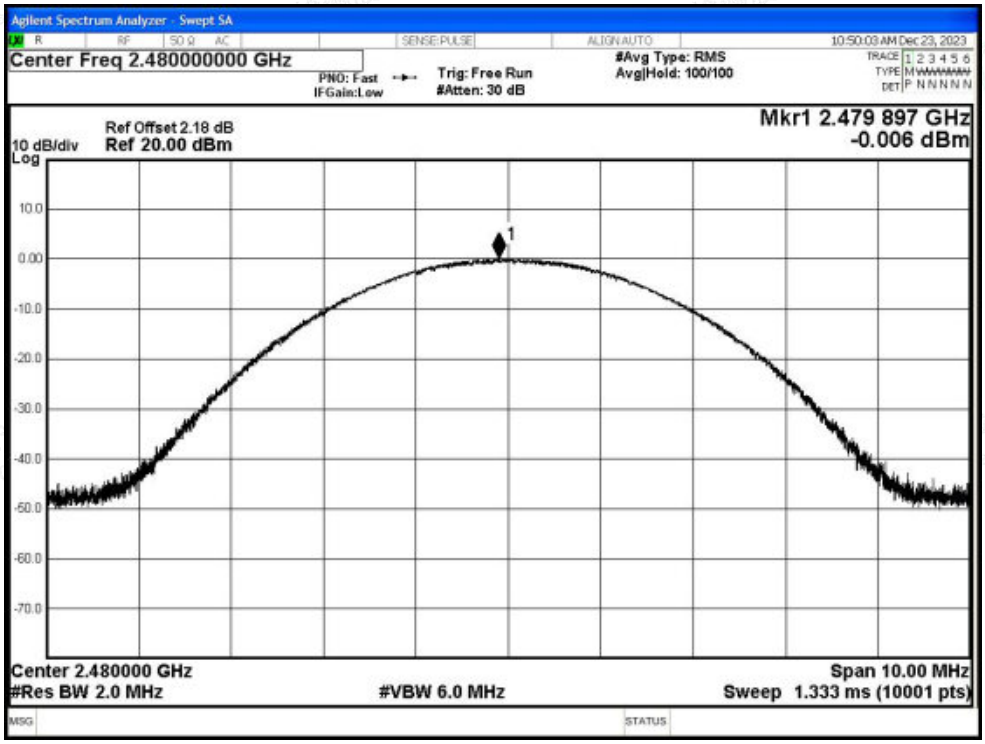
Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1



Power NVNT 3-DH5 2480MHz Ant1

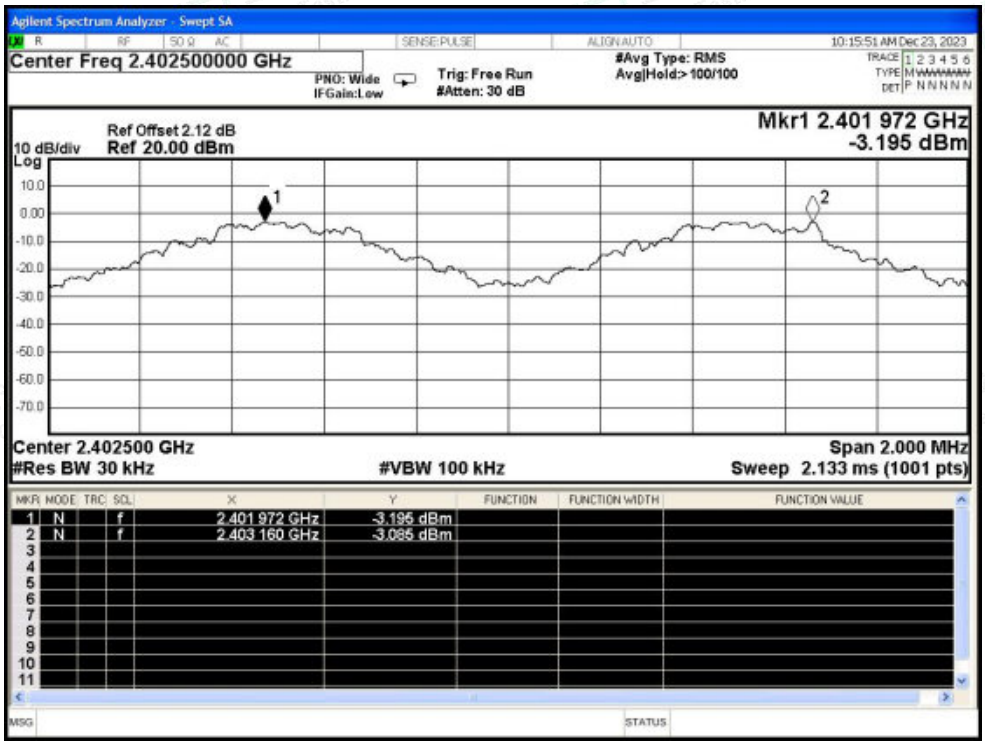


A.3 Carrier Frequencies Separation

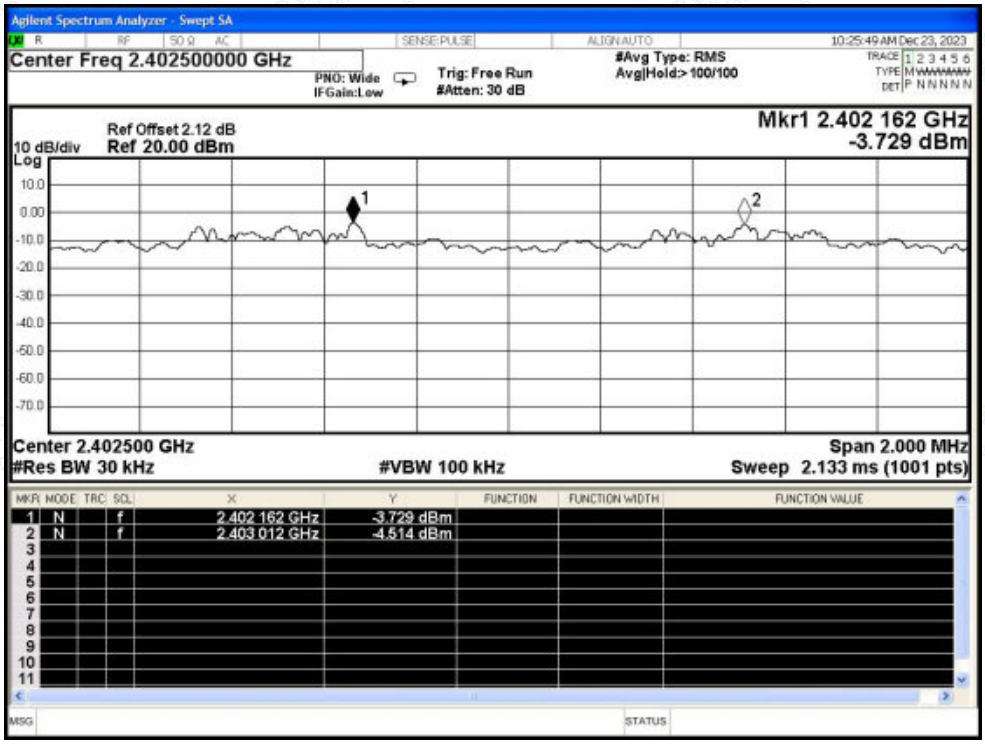
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.972	2403.16	1.188	0.614	Pass
NVNT	2-DH5	Ant1	2402.162	2403.012	0.85	0.841	Pass
NVNT	3-DH5	Ant1	2402.158	2403.17	1.012	0.867	Pass

Test Graphs

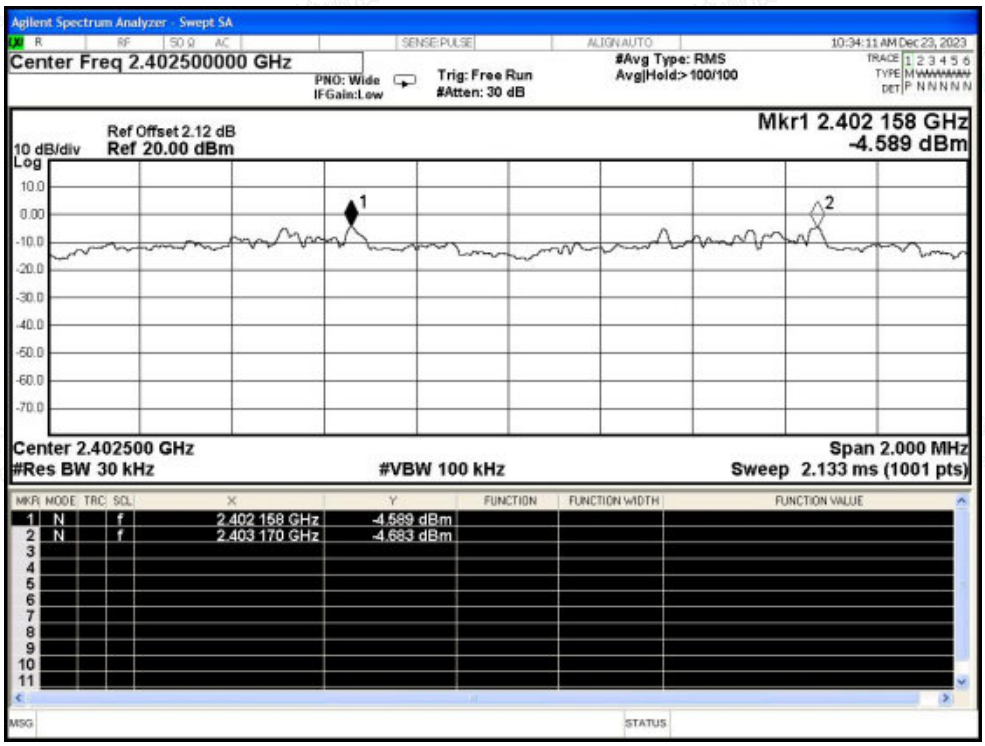
CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1



CFS NVNT 3-DH5 2402MHz Ant1

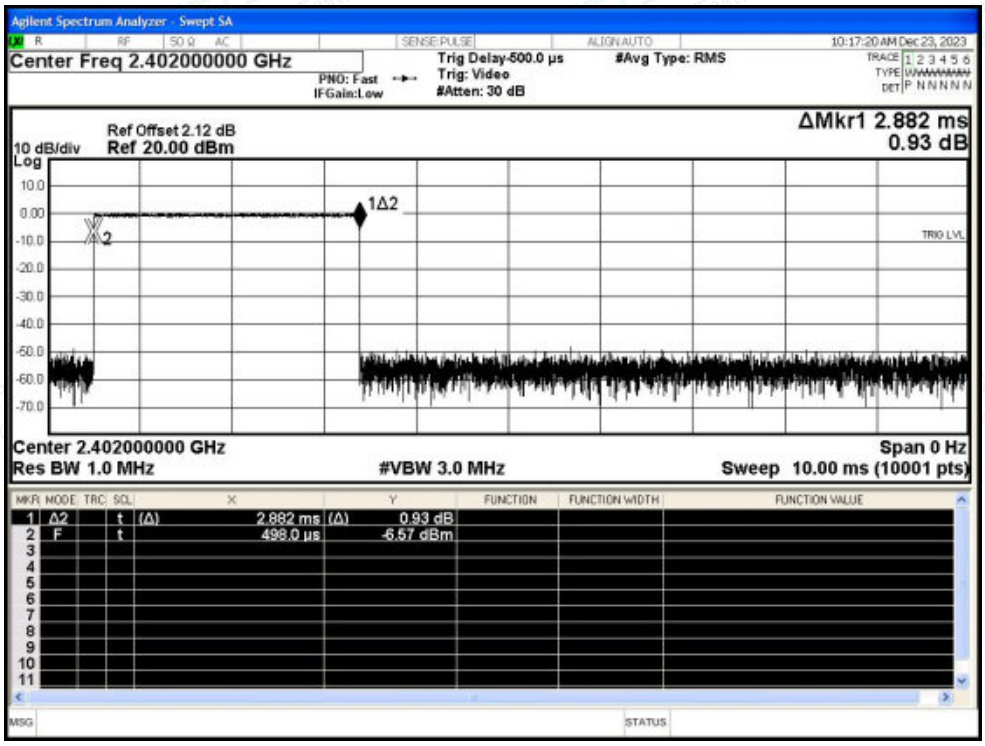


A.4 Dwell Time

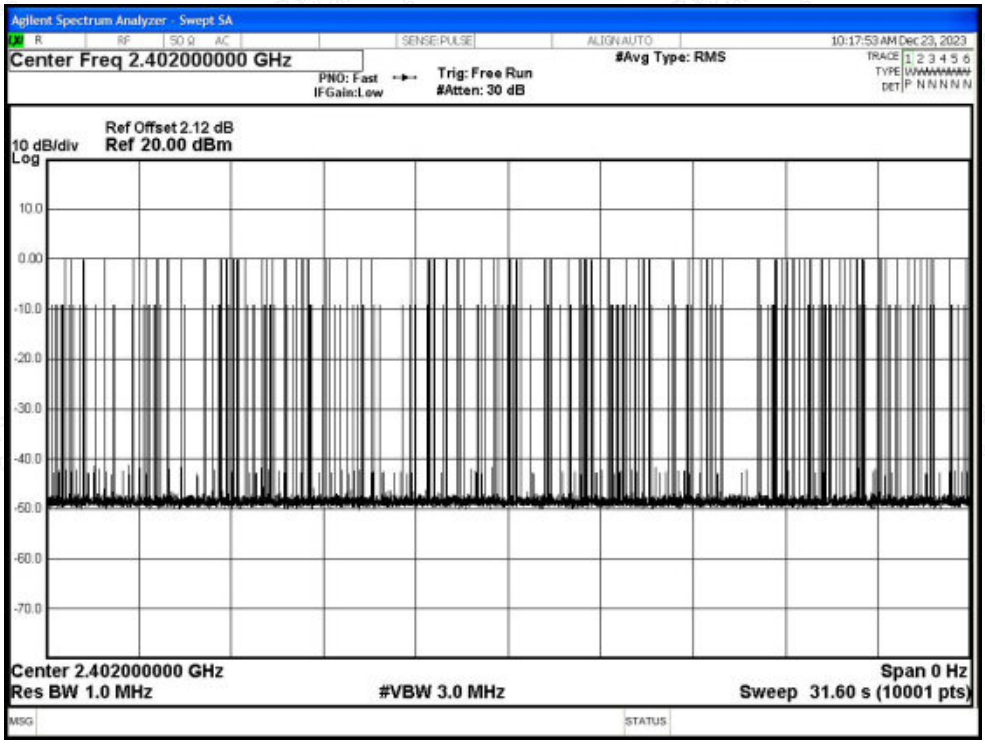
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.882	299.728	104	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.885	279.845	97	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.887	291.587	101	31600	400	Pass

Test Graphs

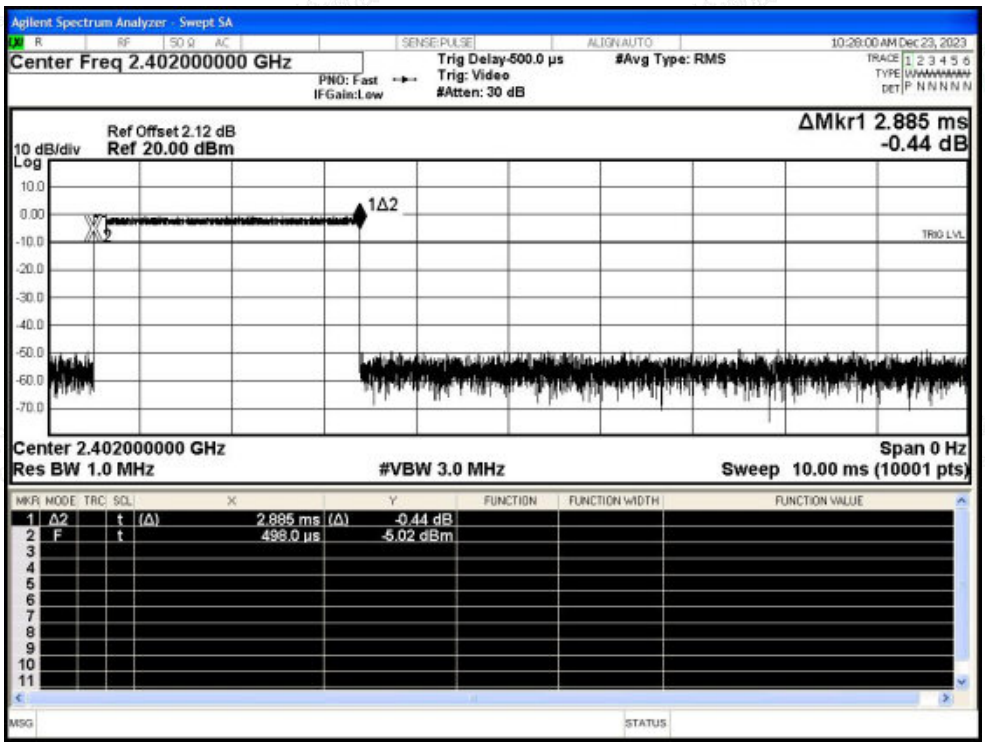
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



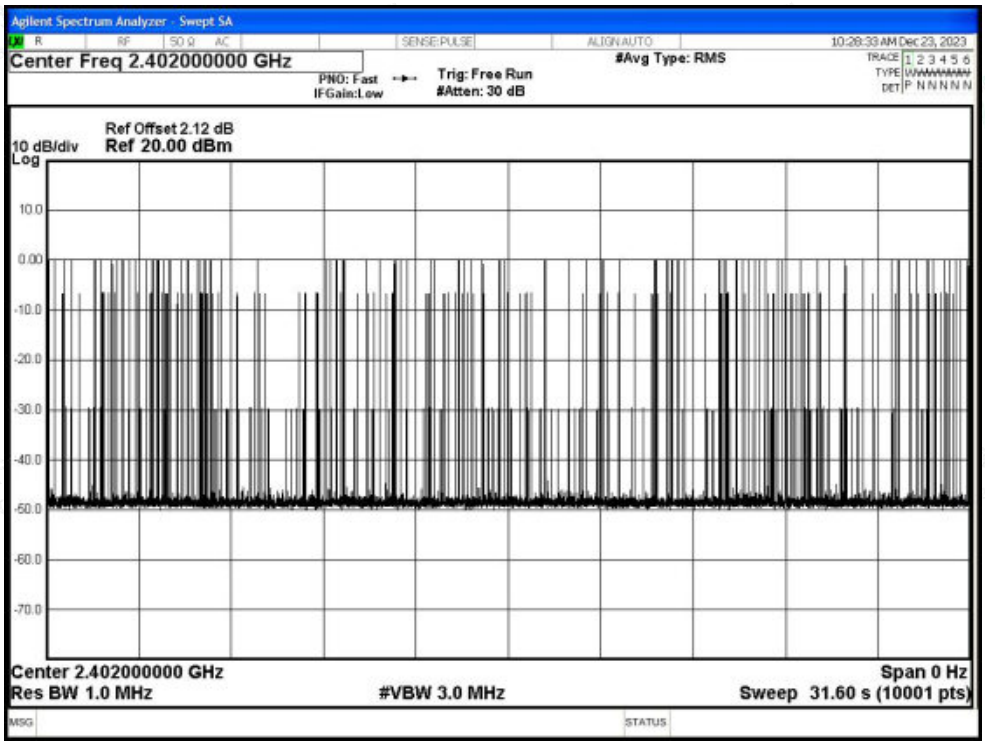
Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



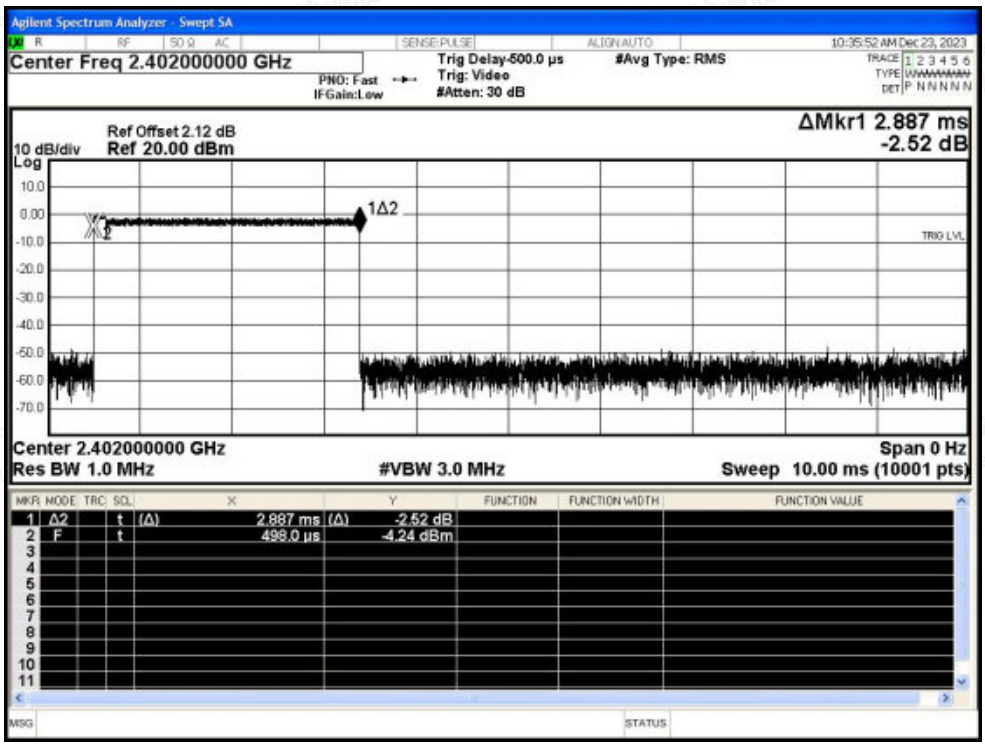
Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



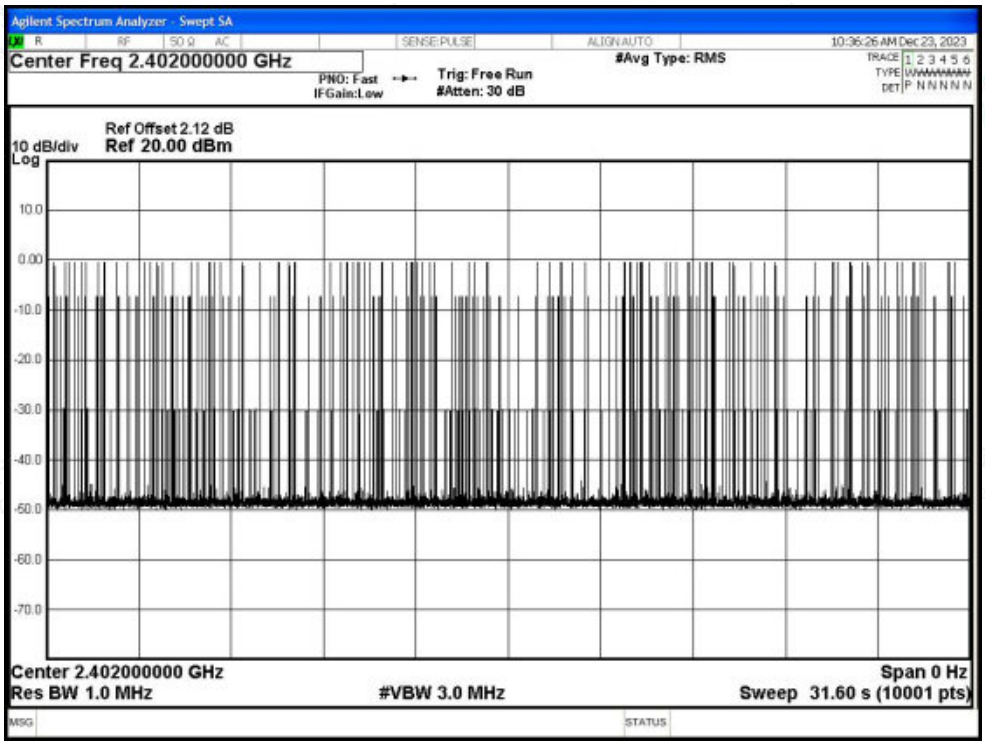
Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated

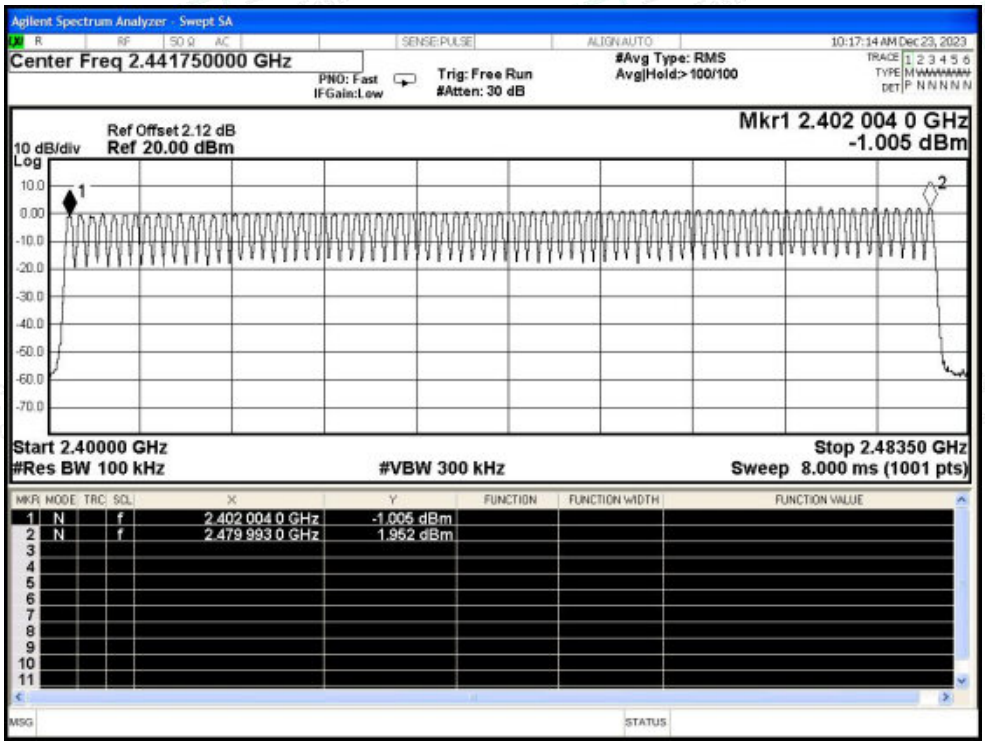


A.5 Number of Hopping Channel

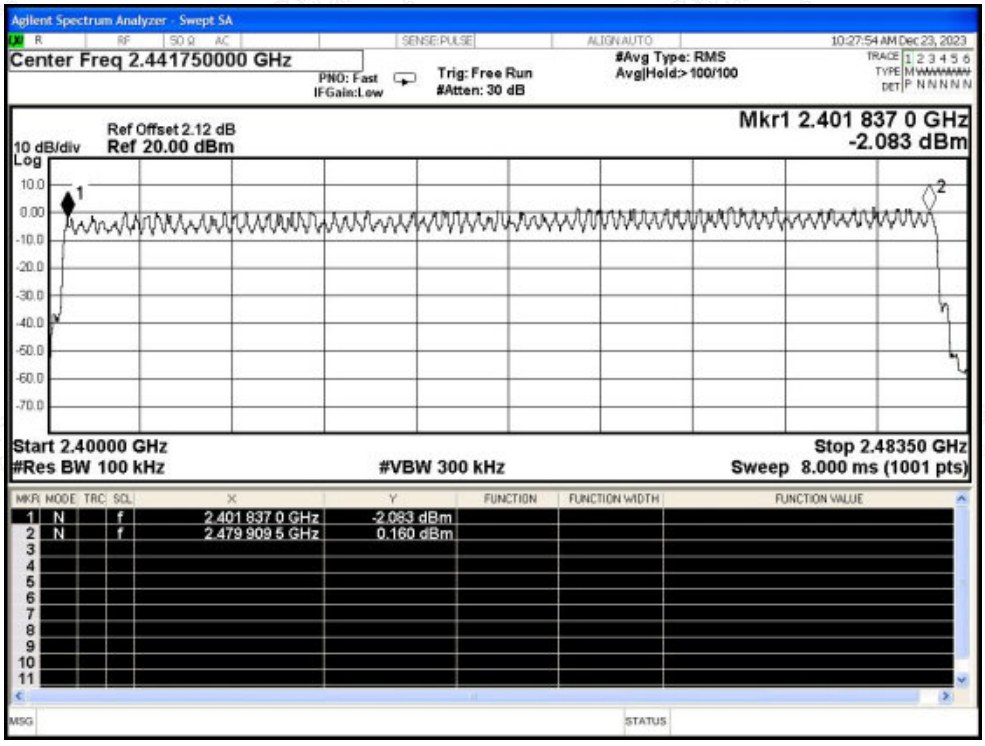
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

Test Graphs

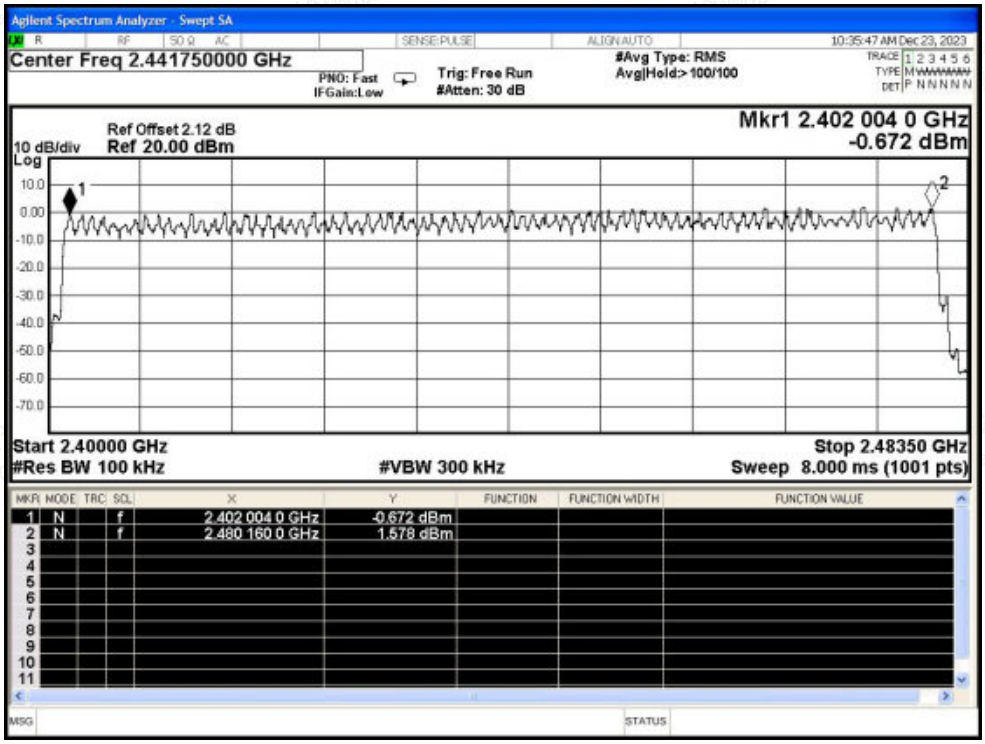
Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1



Hopping No. NVNT 3-DH5 2402MHz Ant1

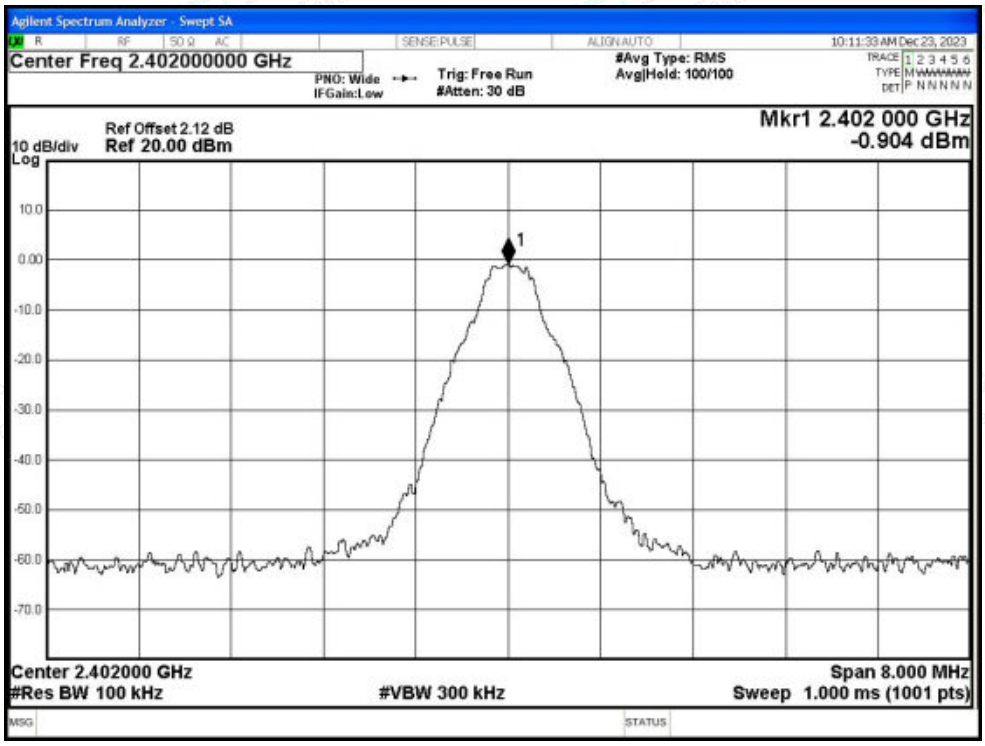


A.6 Band Edge

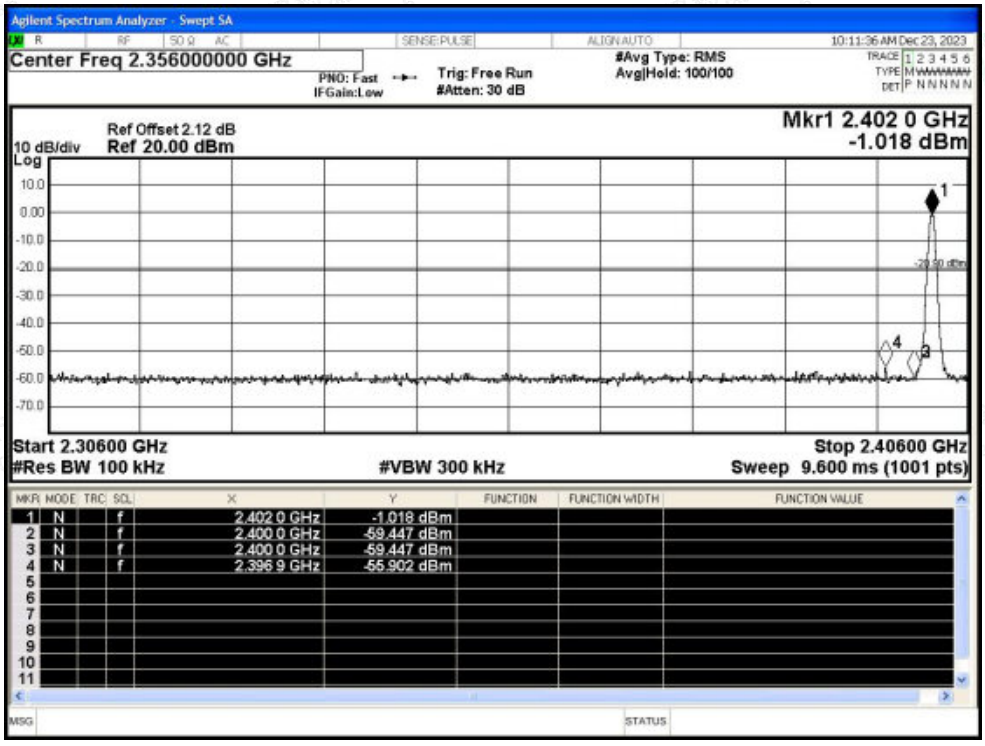
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-55	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-55.6	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-51.55	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-56.26	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-52.96	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-54.9	-20	Pass

Test Graphs

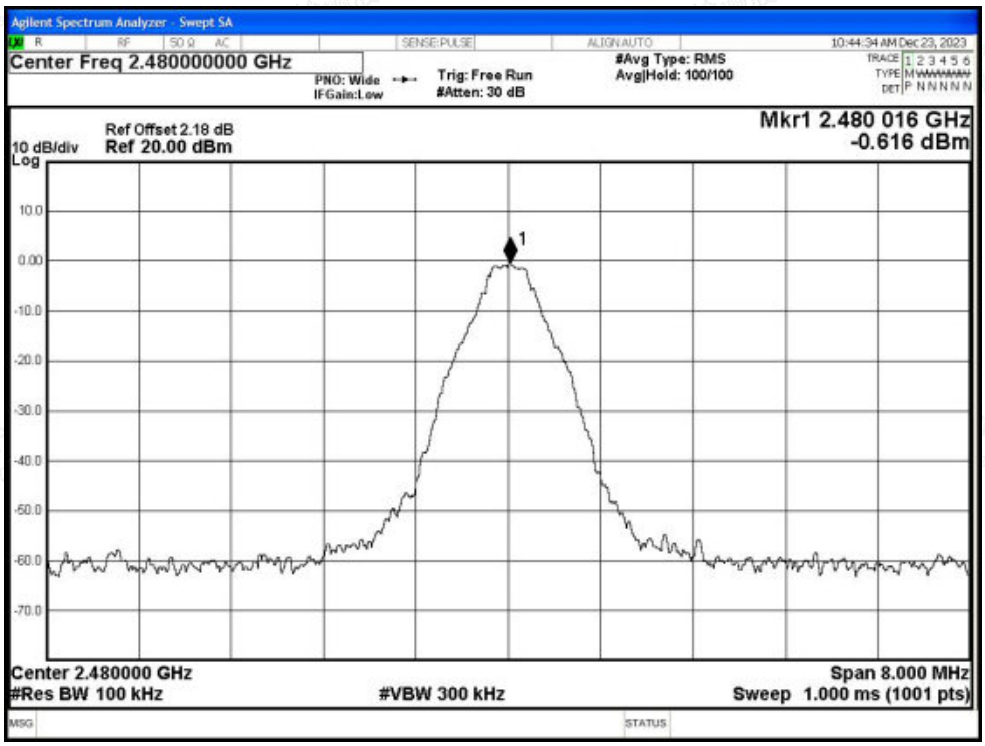
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



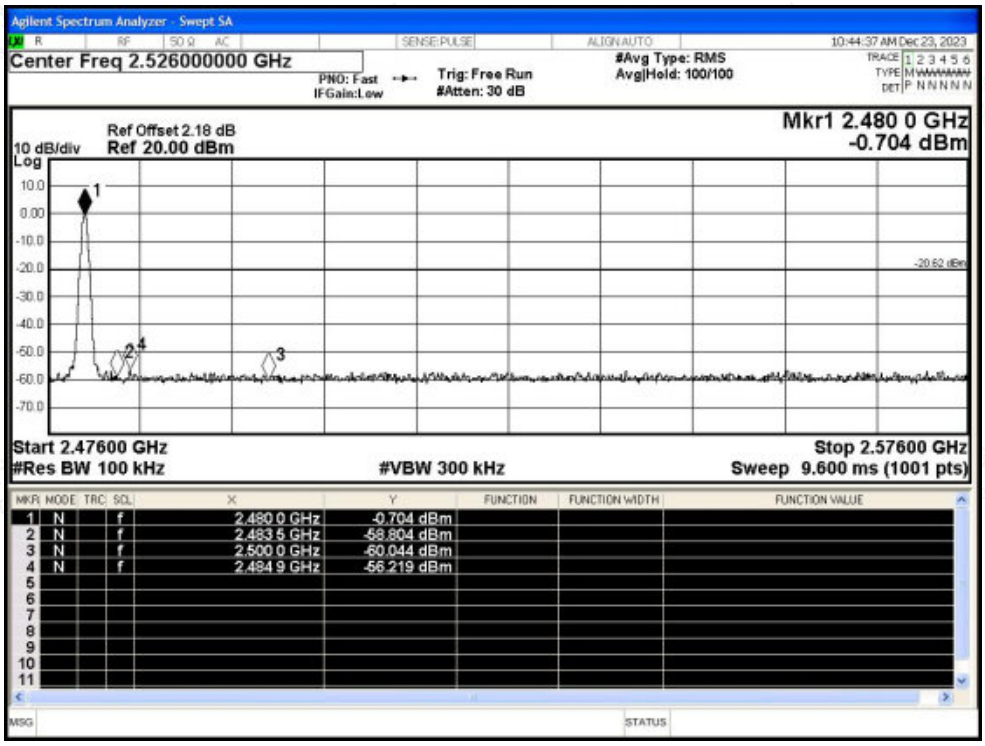
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



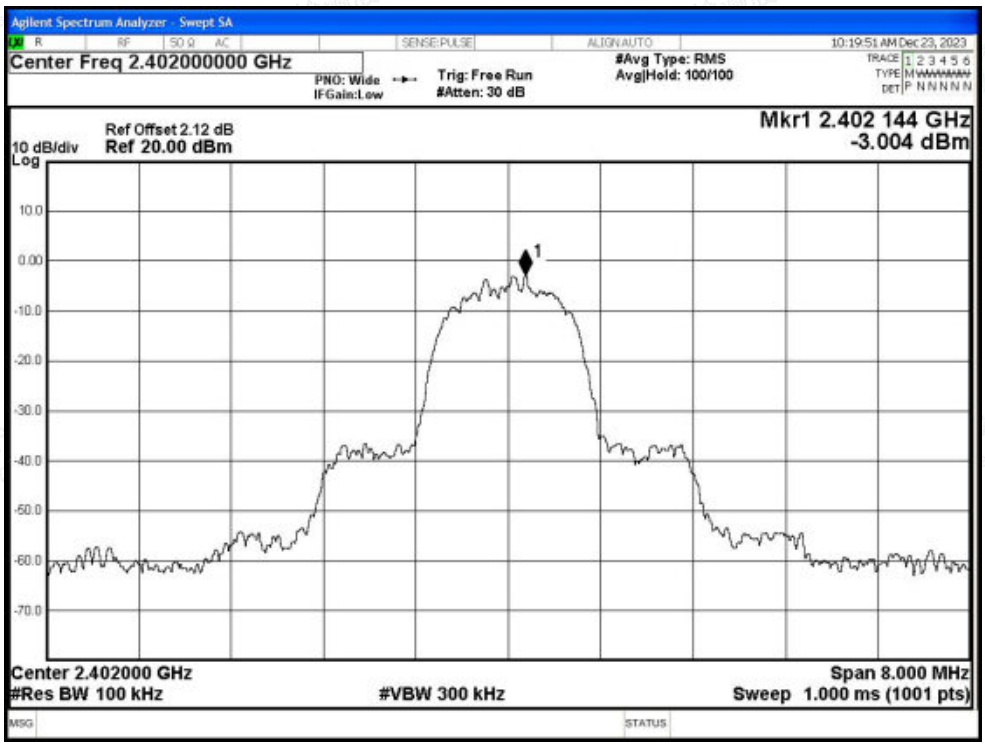
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



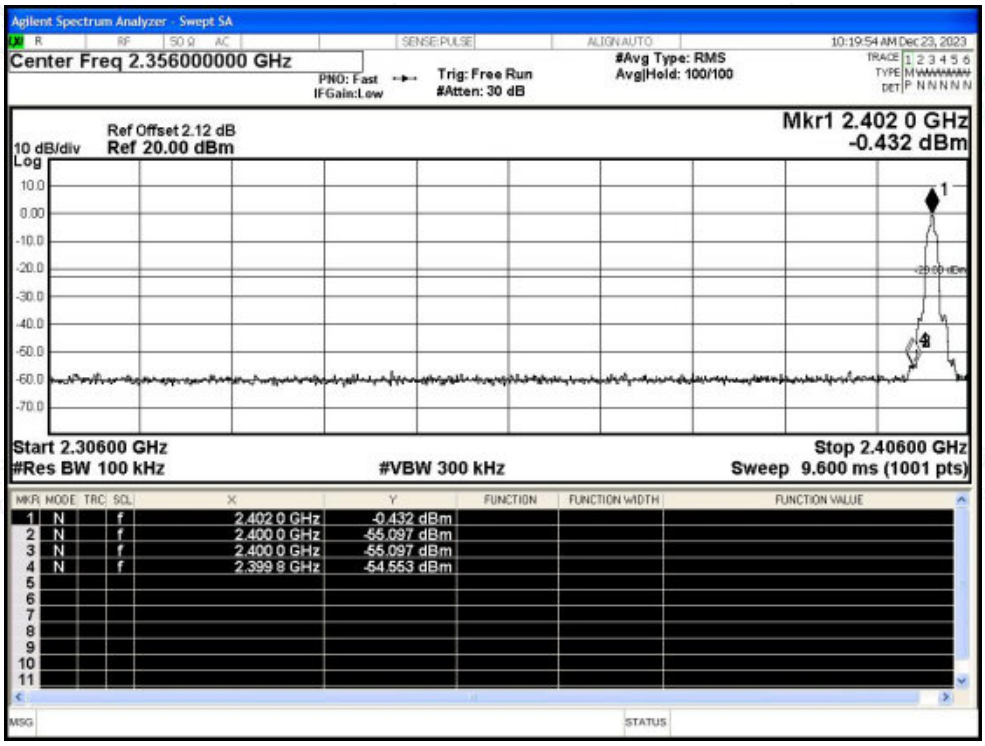
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



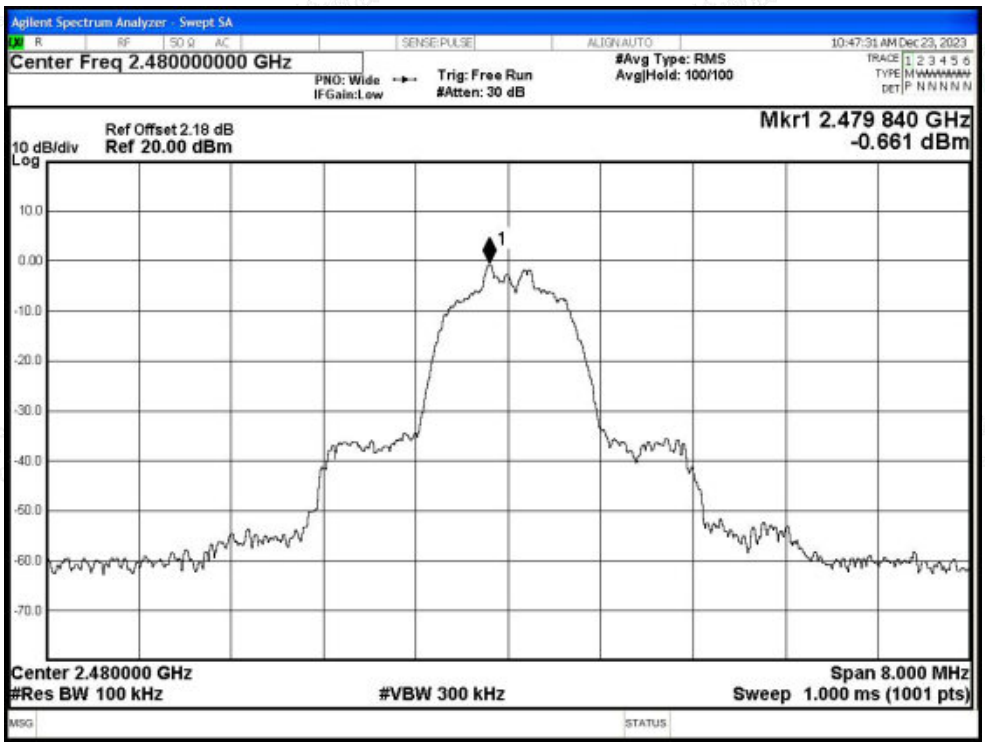
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



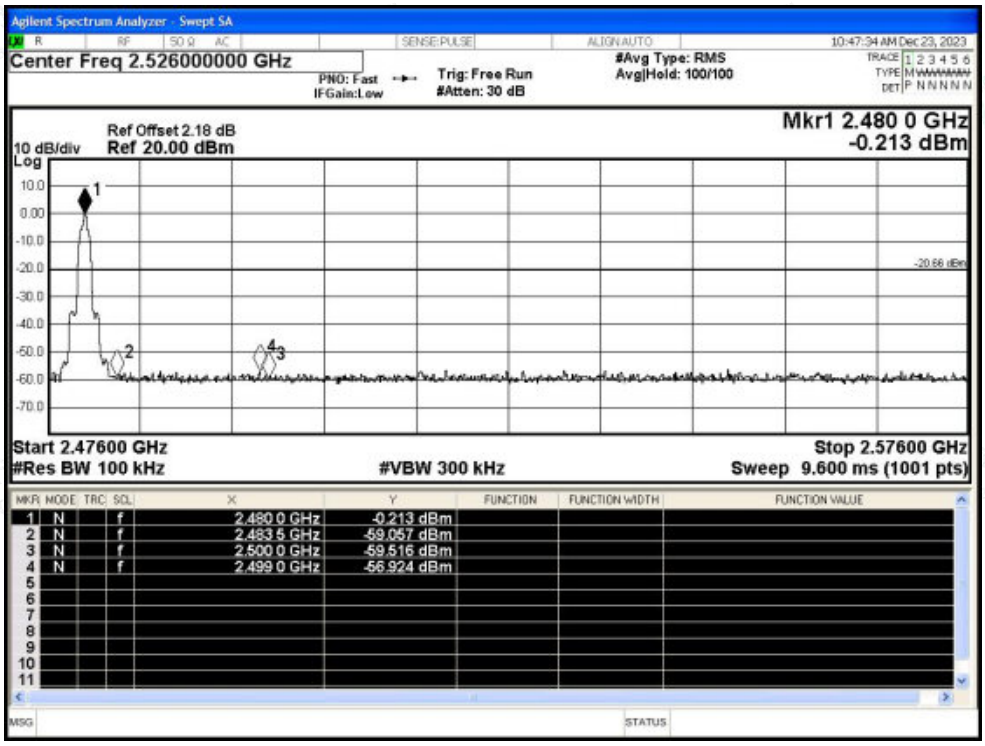
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



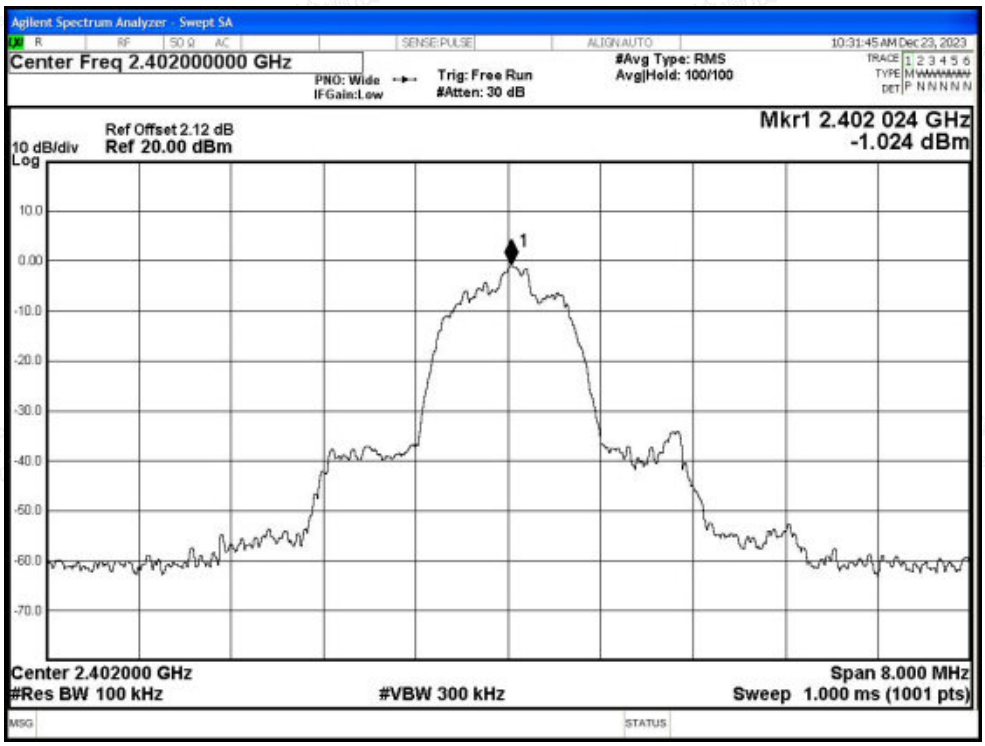
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



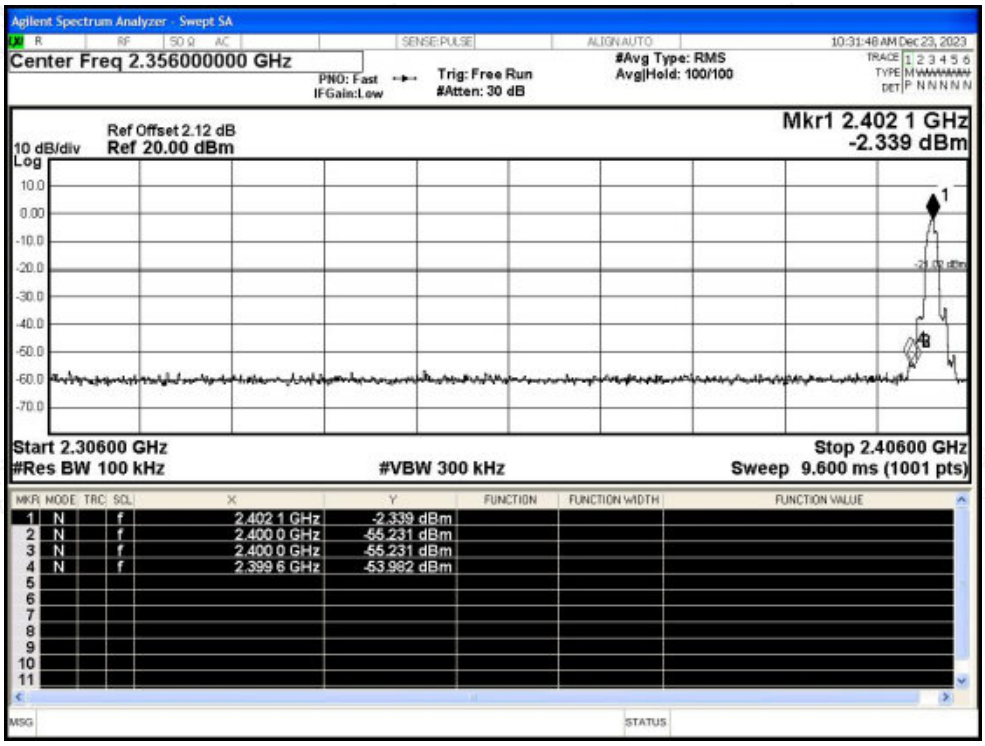
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



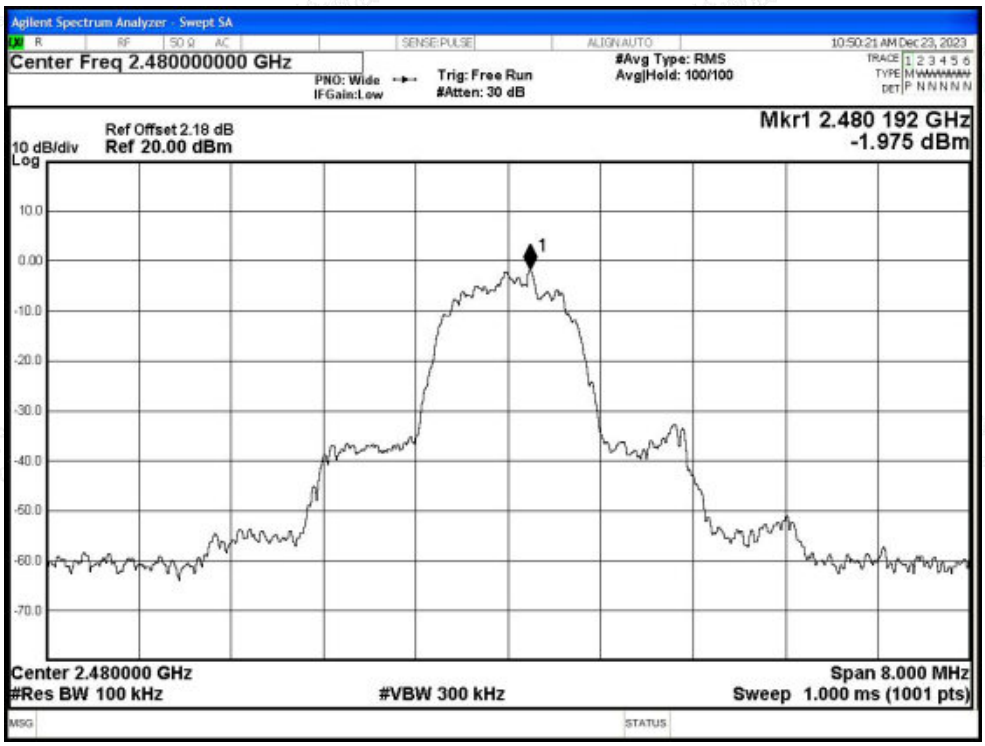
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



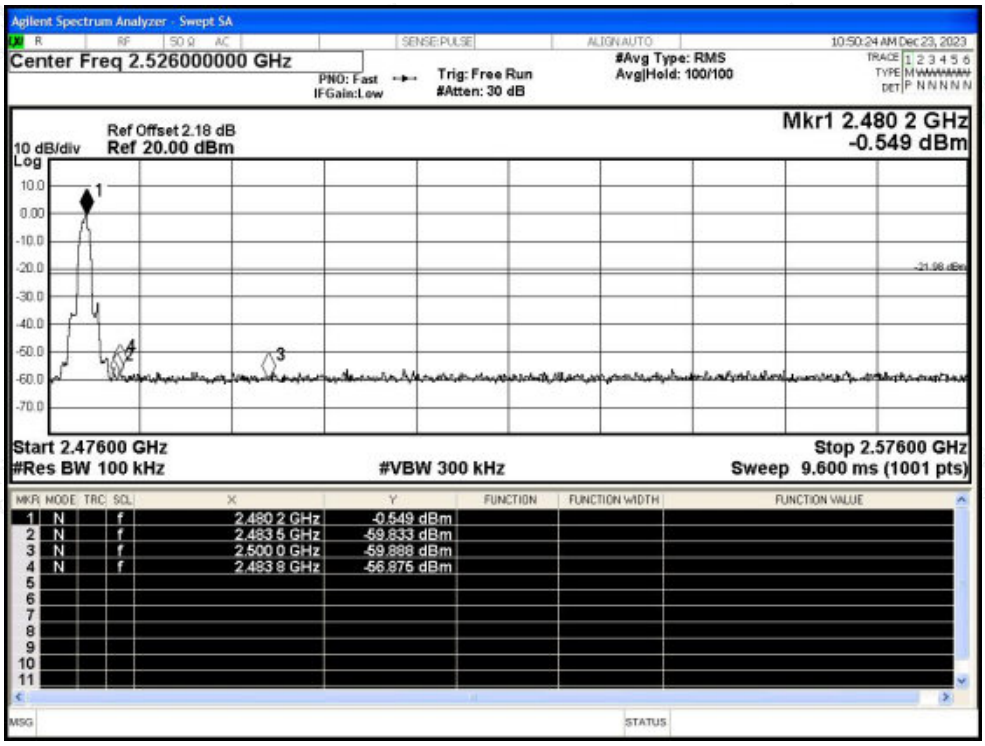
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



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



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

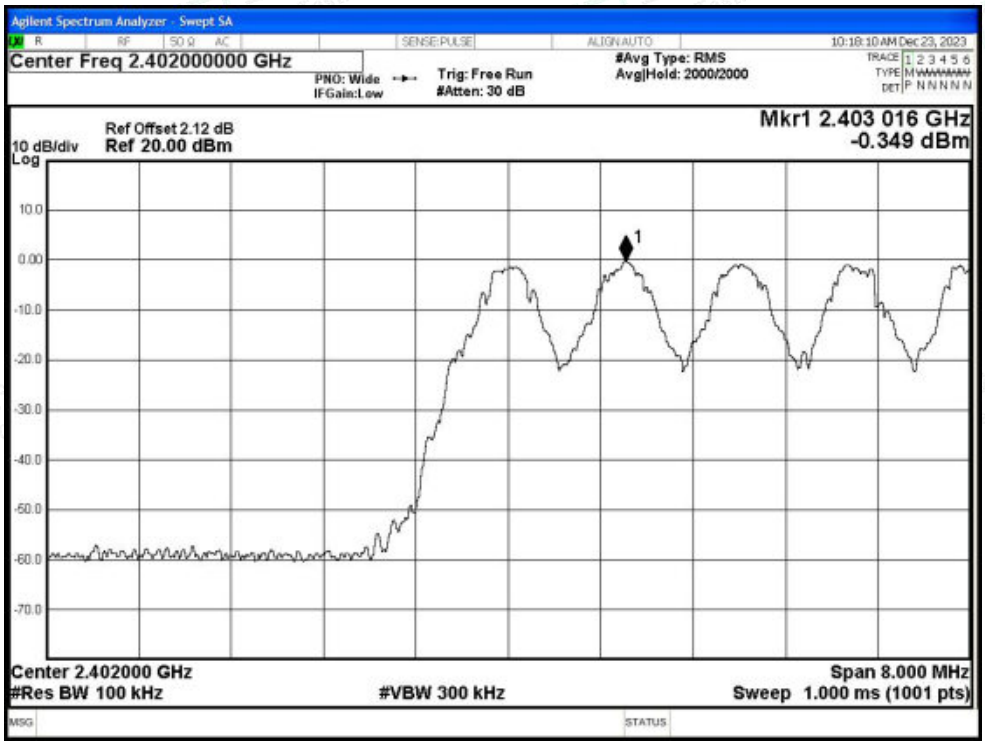


(Hopping)

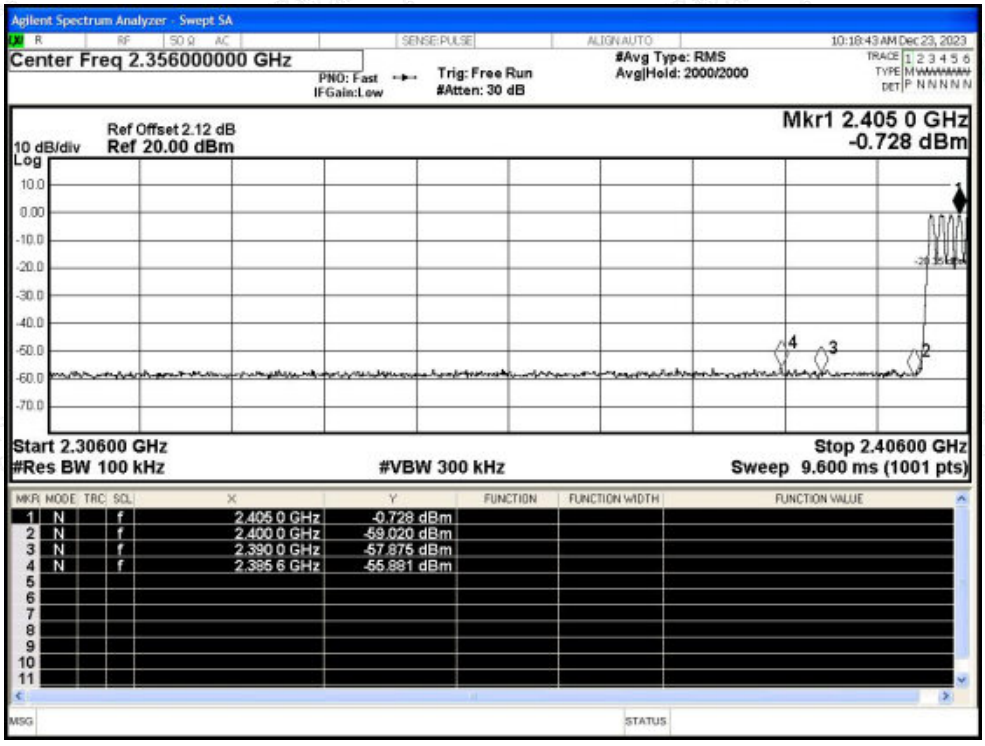
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-55.53	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-55.44	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-54.21	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-54.29	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-54.46	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-55.41	-20	Pass

Test Graphs

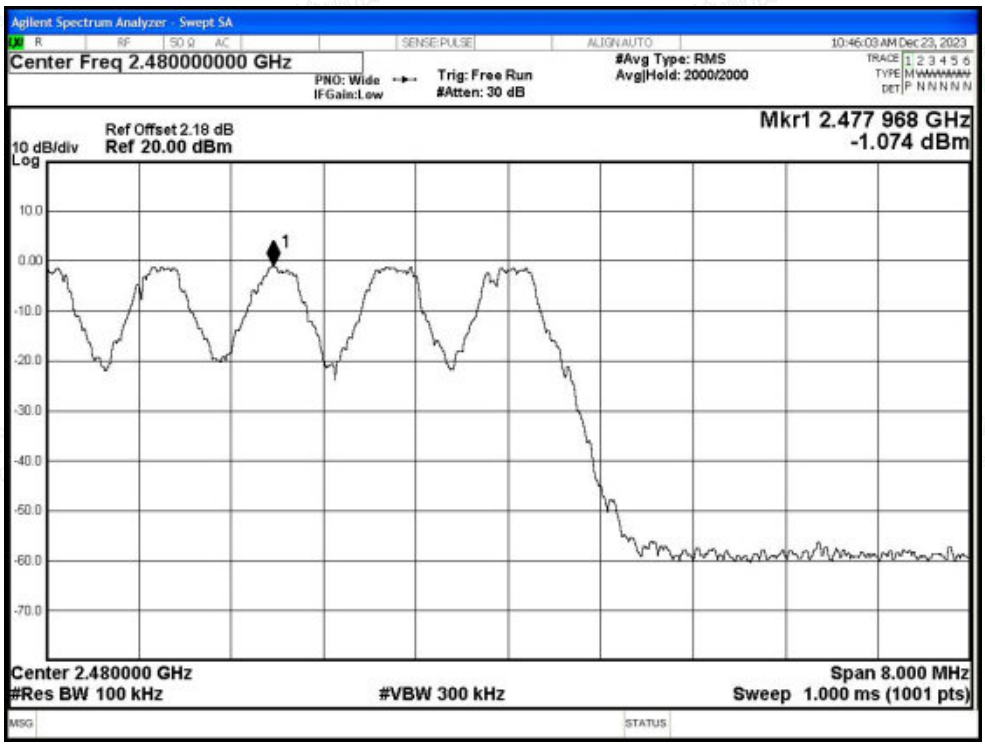
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



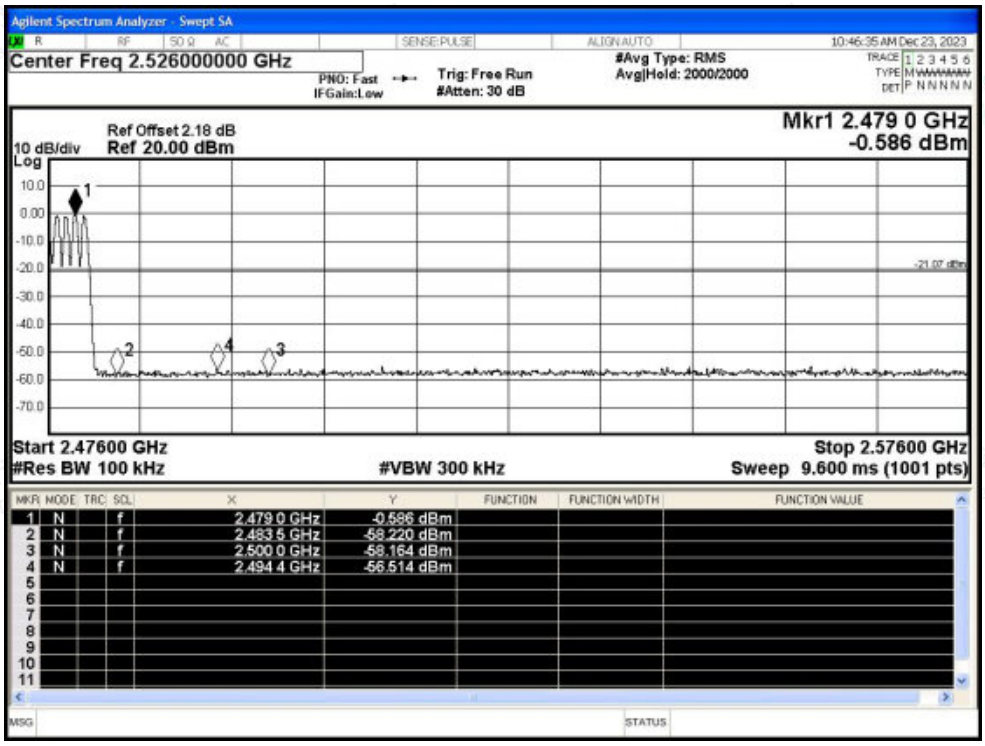
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



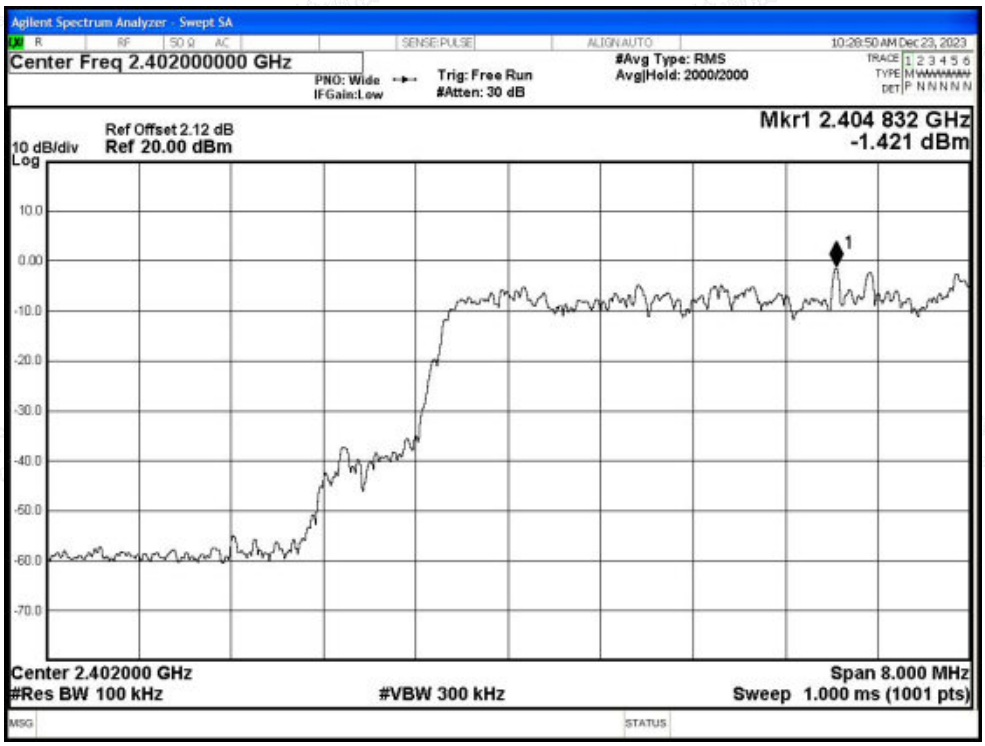
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



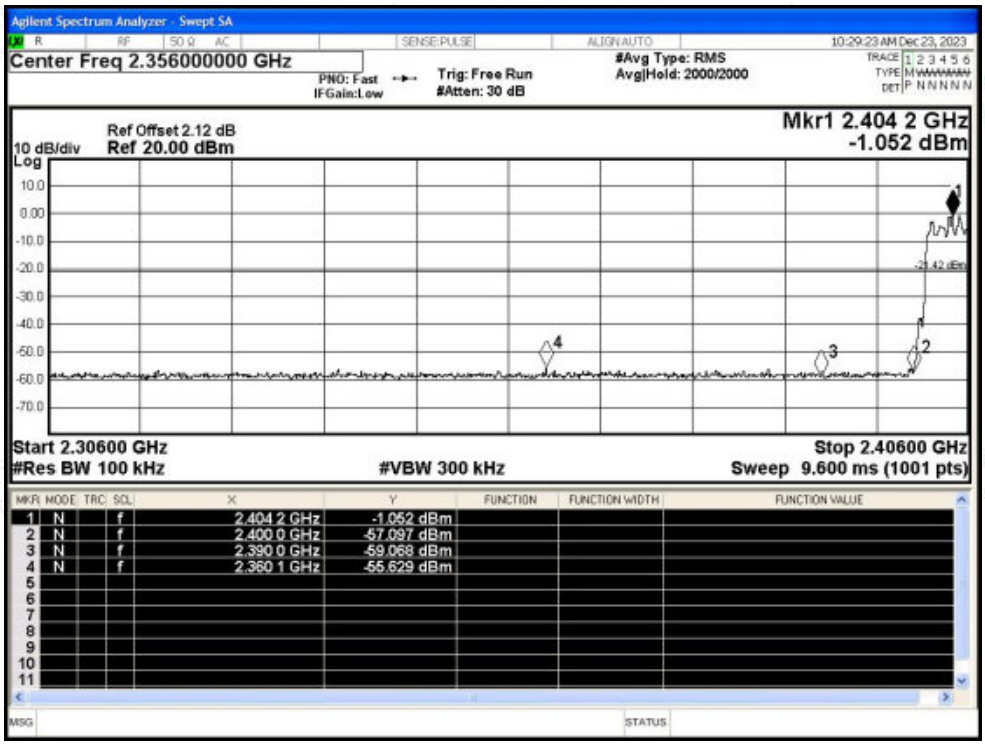
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



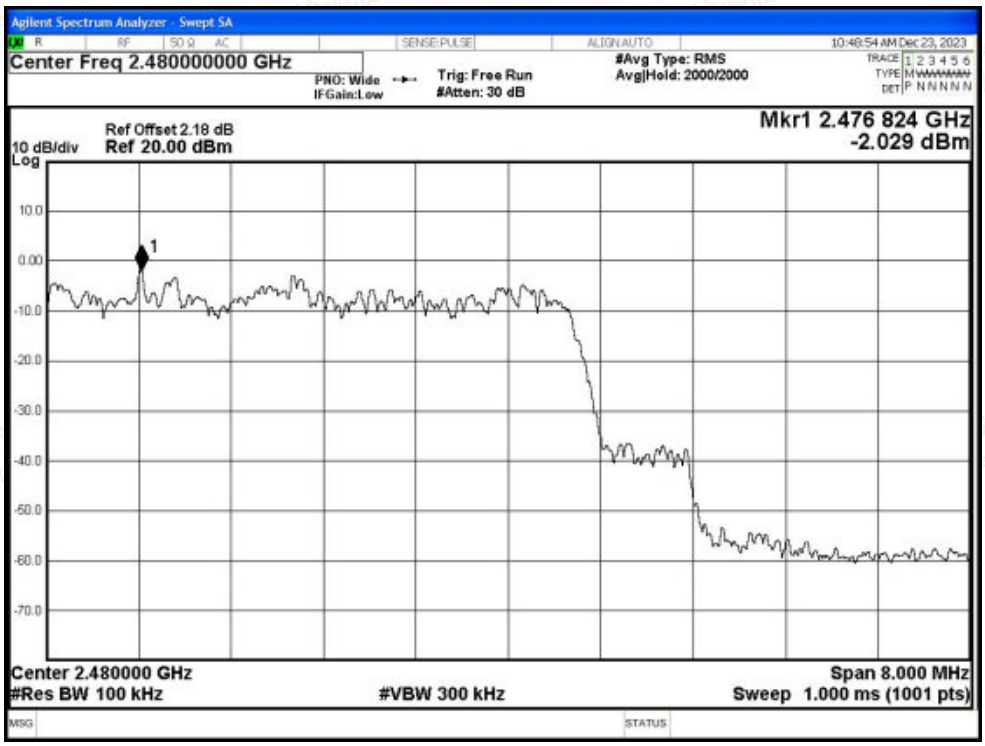
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



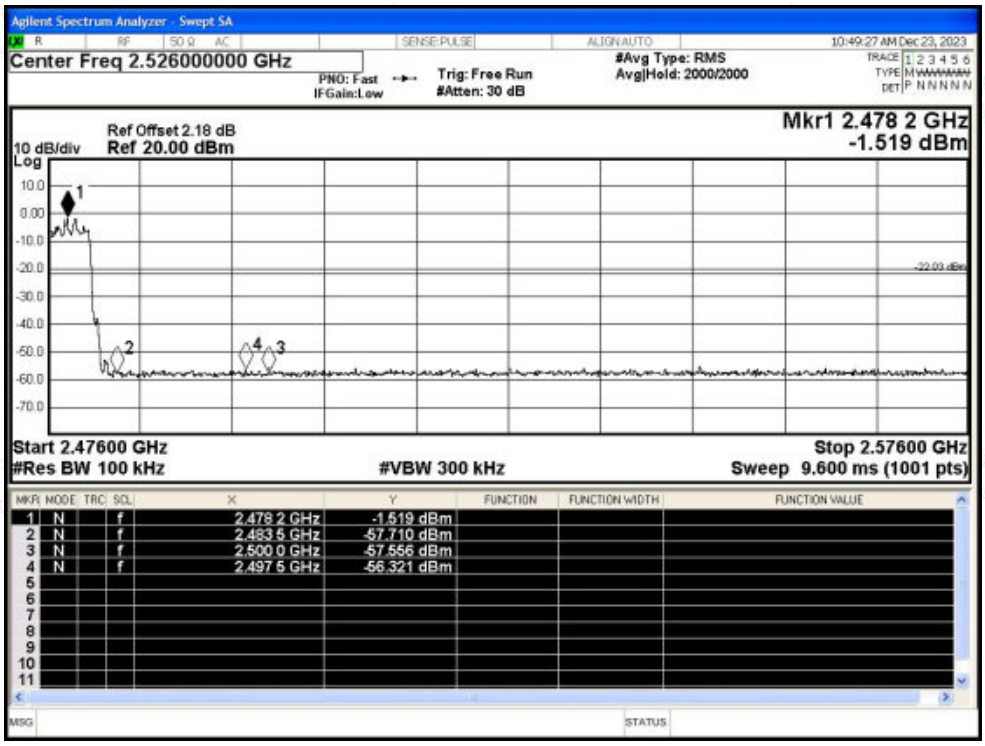
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



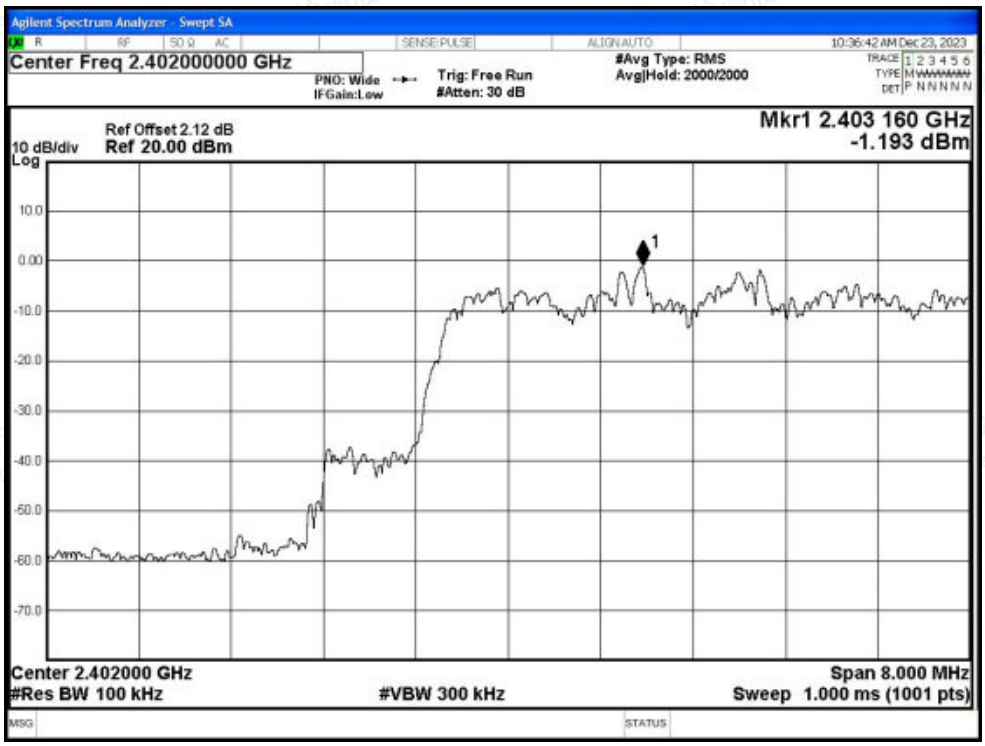
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



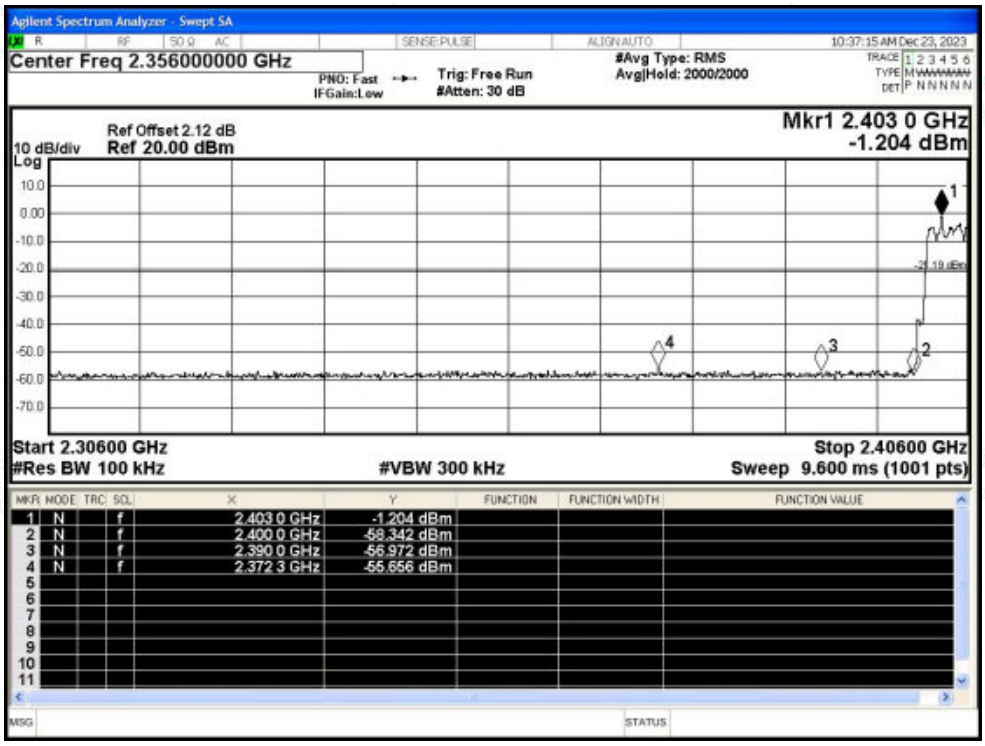
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission



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

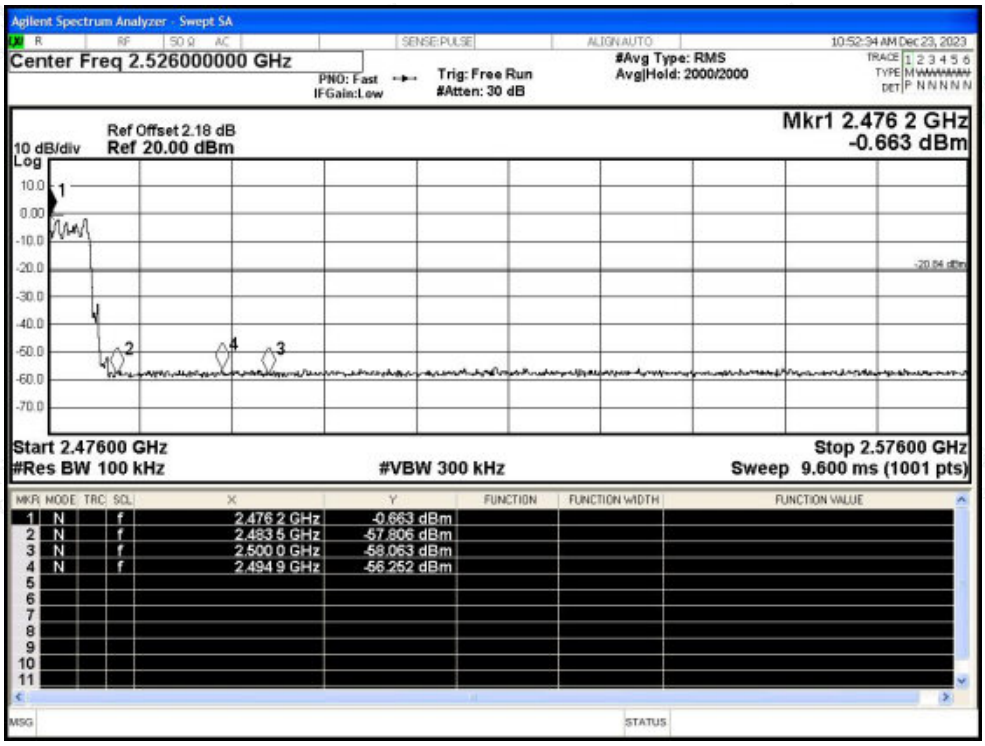


Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission



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

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

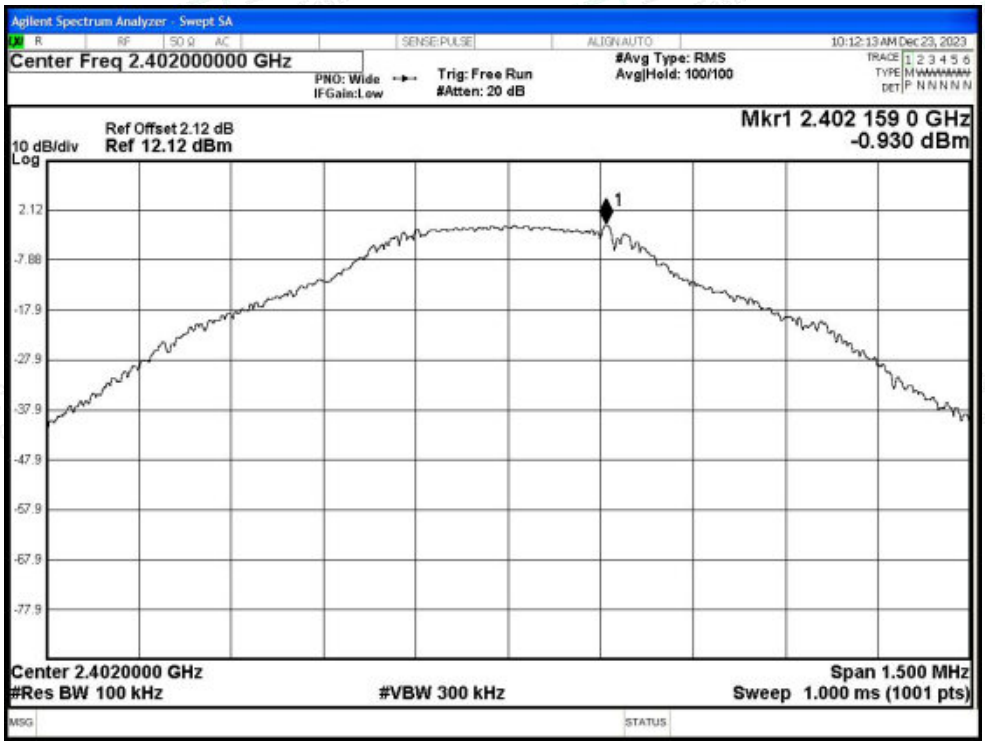


A.7 Conducted RF Spurious Emission

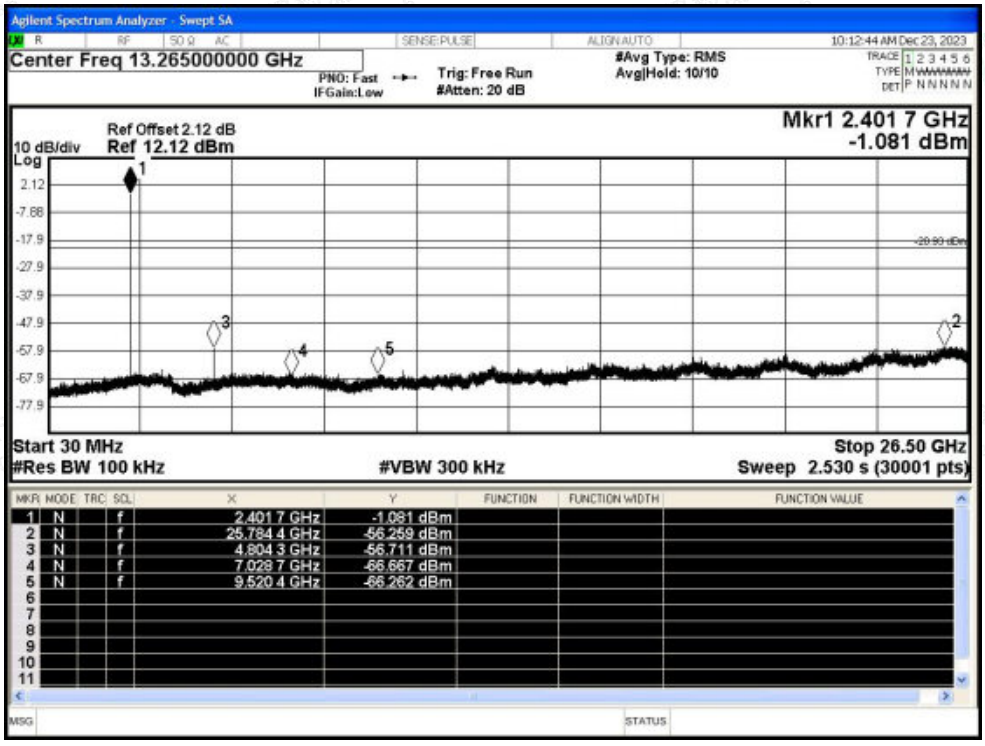
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-55.33	-20	Pass
NVNT	1-DH5	2441	Ant1	-53.83	-20	Pass
NVNT	1-DH5	2480	Ant1	-54.91	-20	Pass
NVNT	2-DH5	2402	Ant1	-53.88	-20	Pass
NVNT	2-DH5	2441	Ant1	-53.47	-20	Pass
NVNT	2-DH5	2480	Ant1	-55.03	-20	Pass
NVNT	3-DH5	2402	Ant1	-54.51	-20	Pass
NVNT	3-DH5	2441	Ant1	-50.76	-20	Pass
NVNT	3-DH5	2480	Ant1	-55.41	-20	Pass

Test Graphs

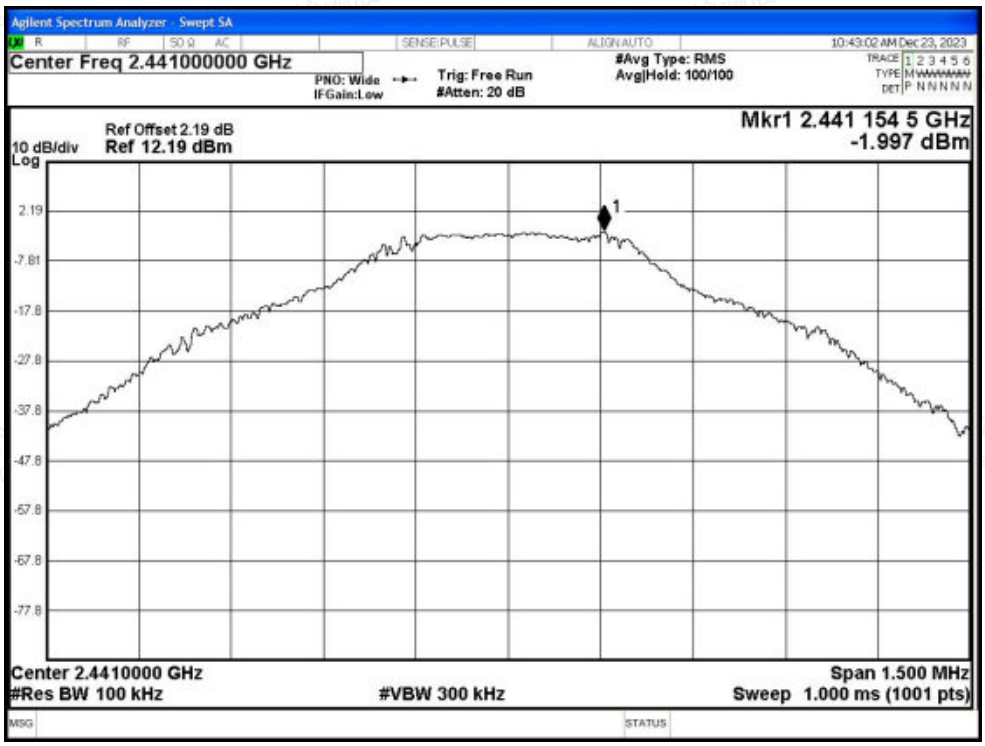
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



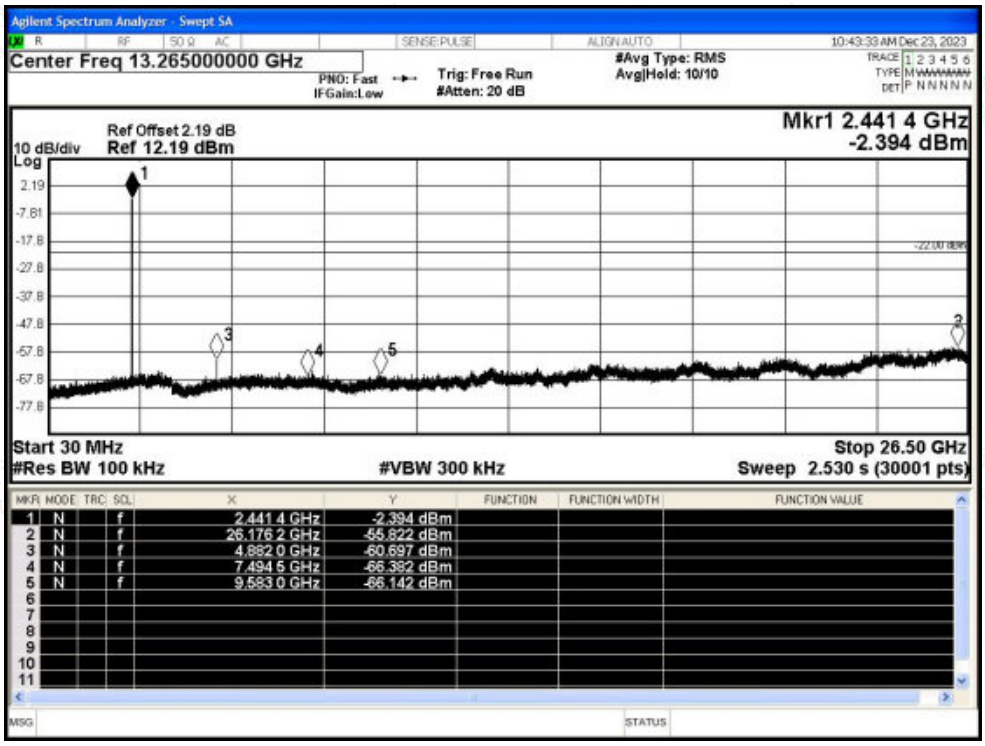
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



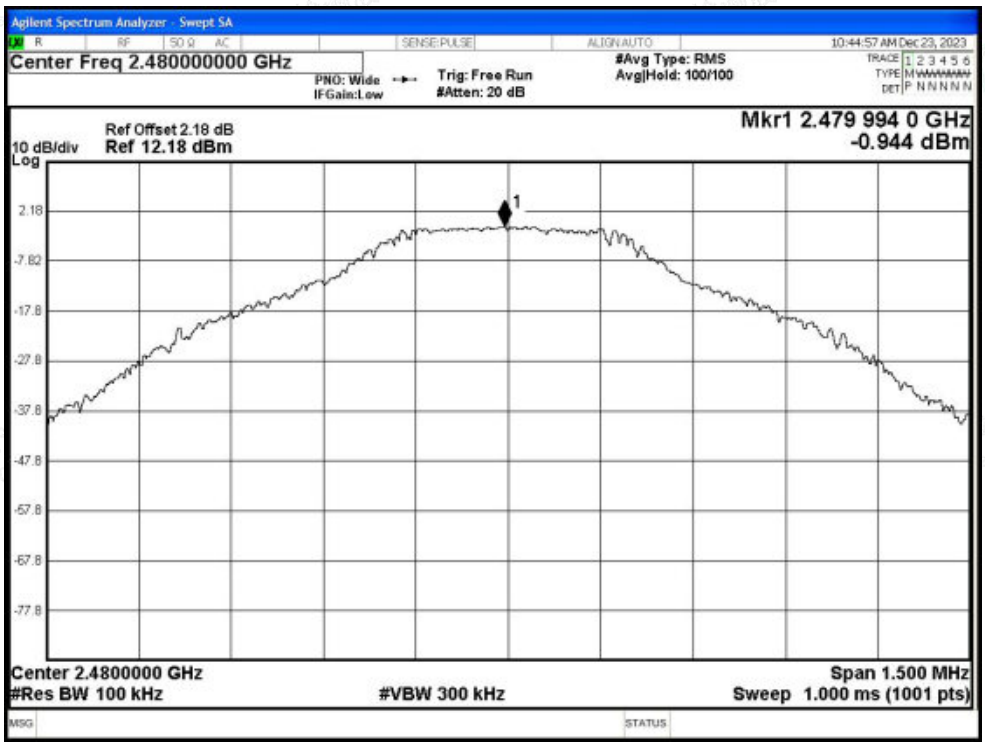
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



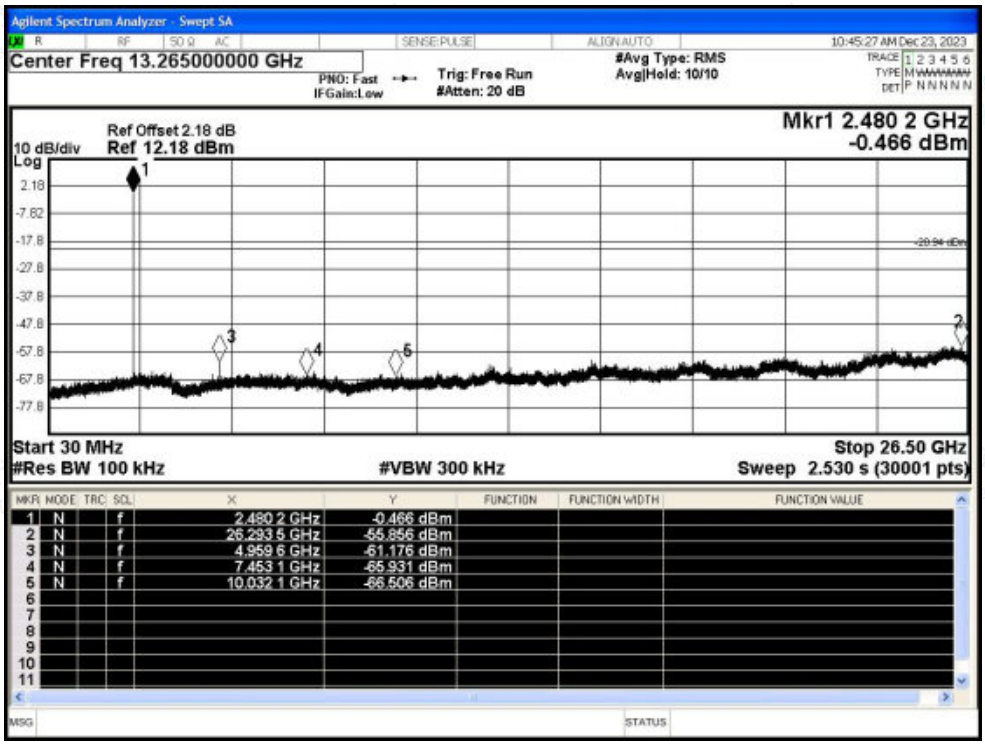
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



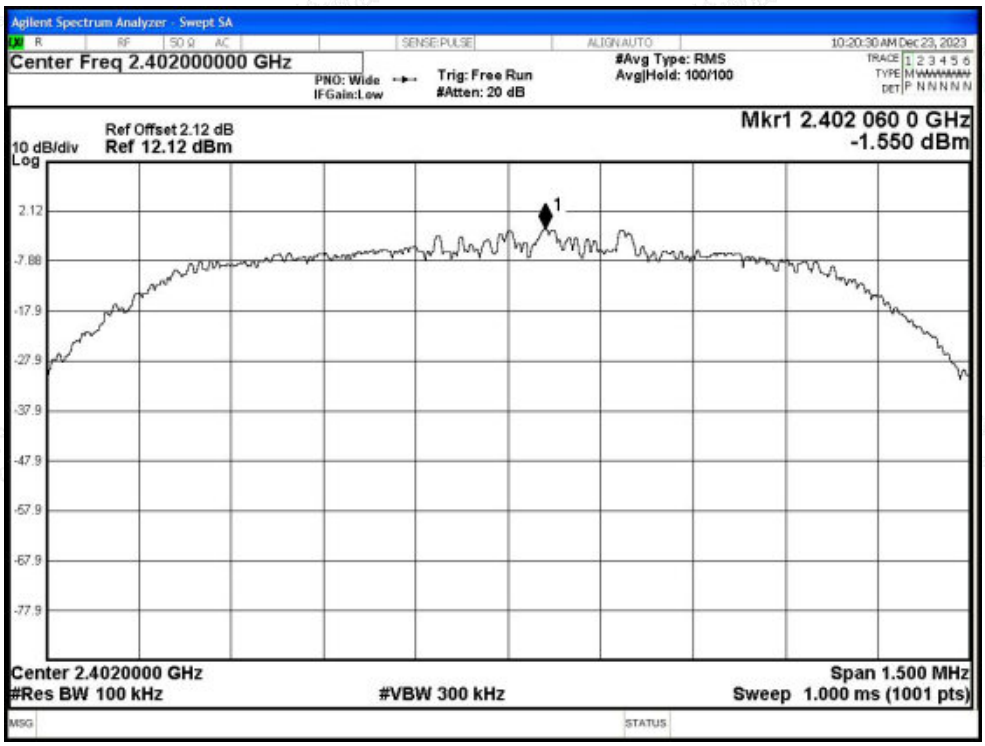
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



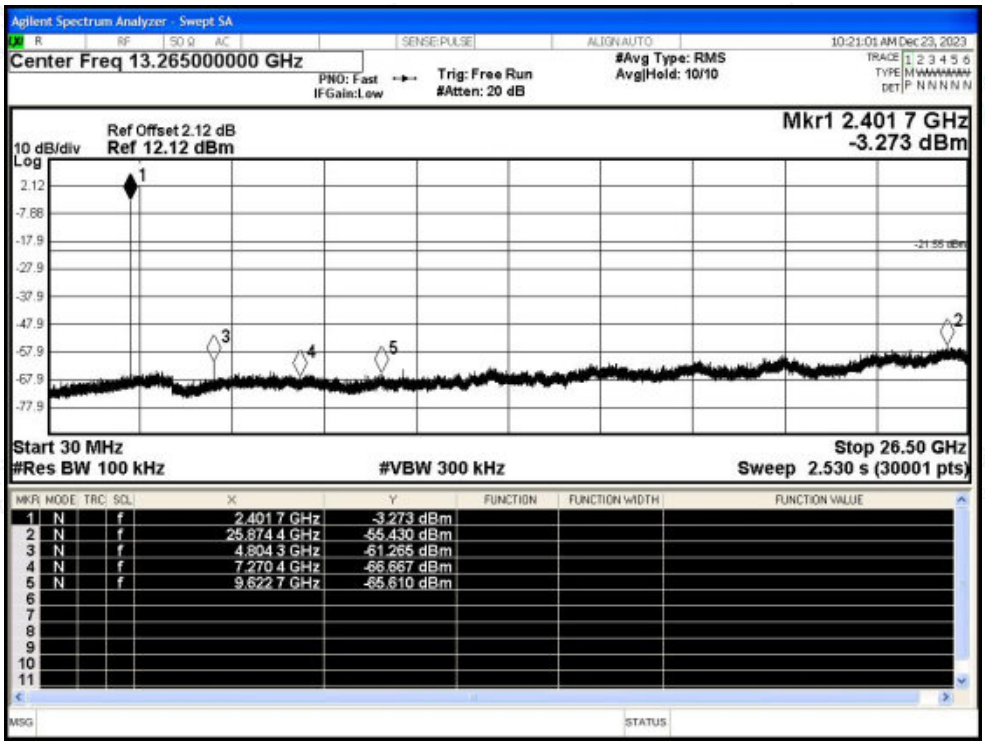
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



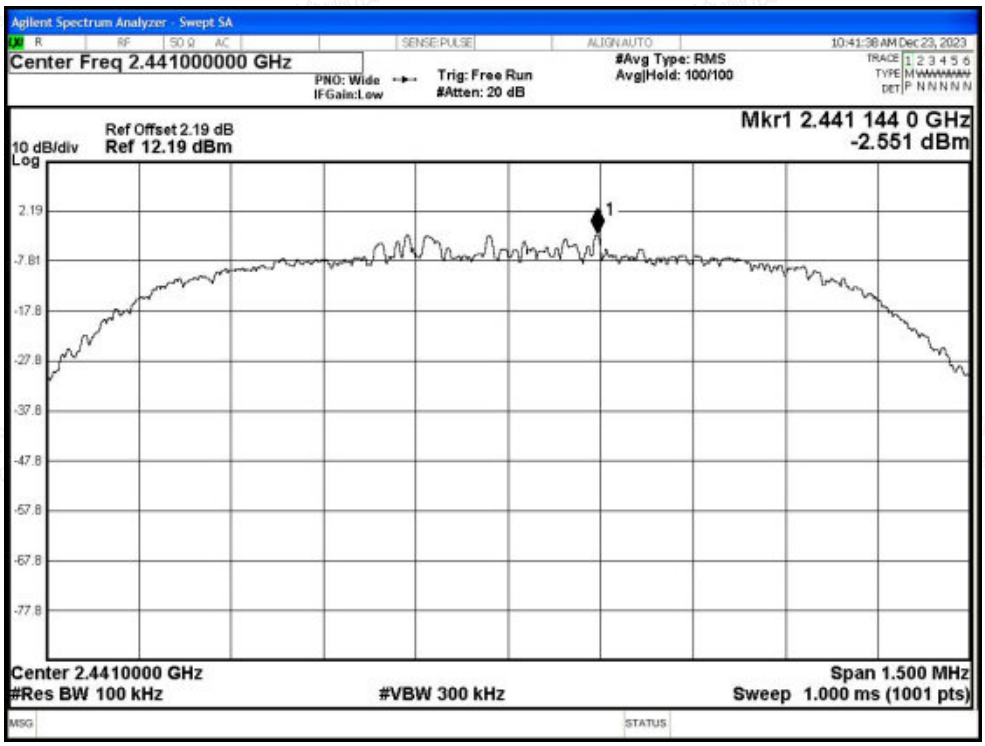
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



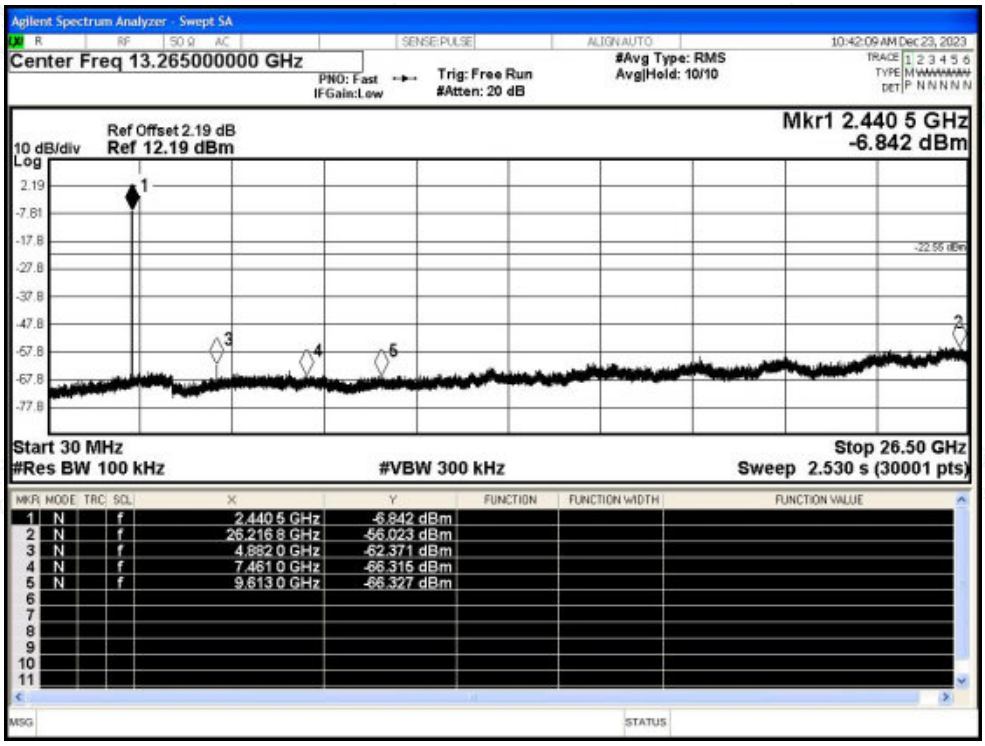
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



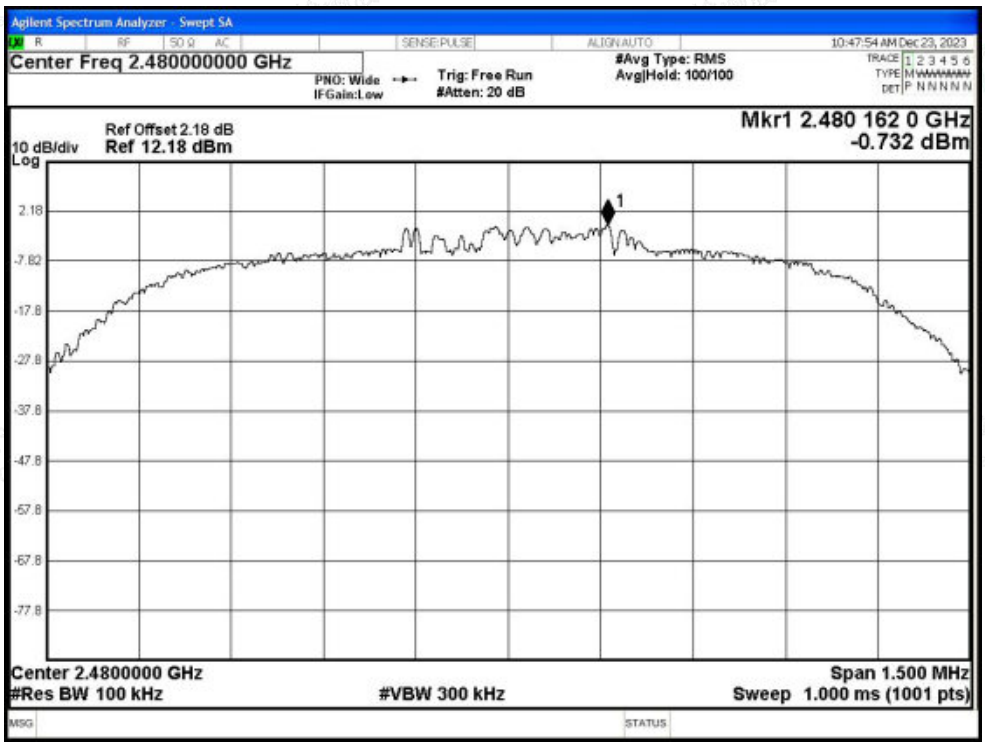
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



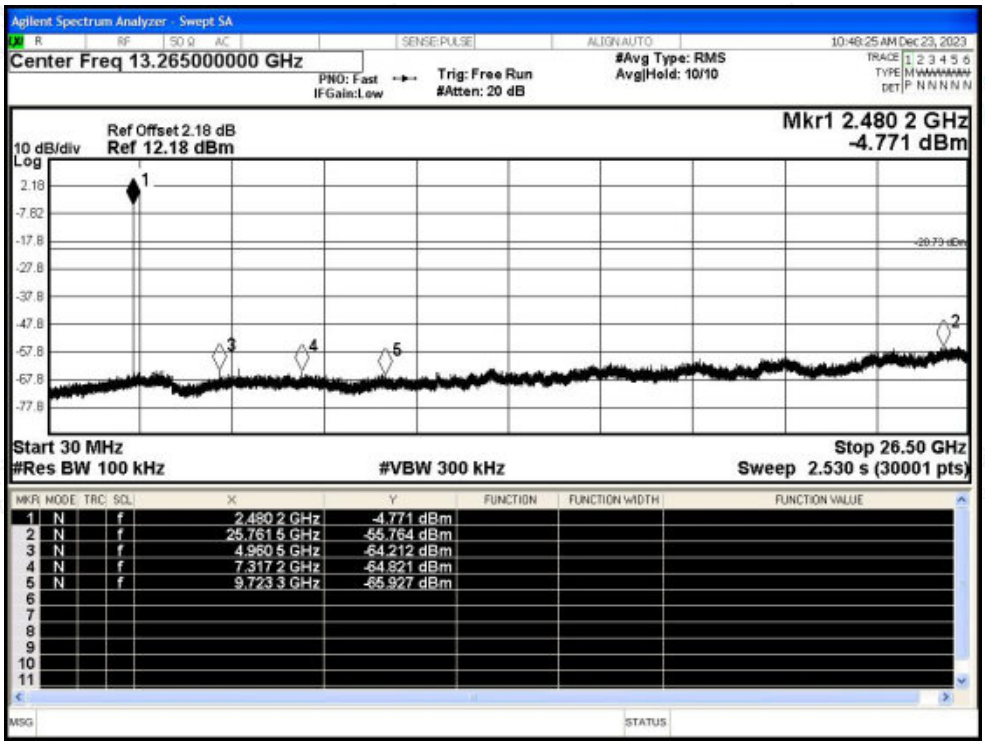
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



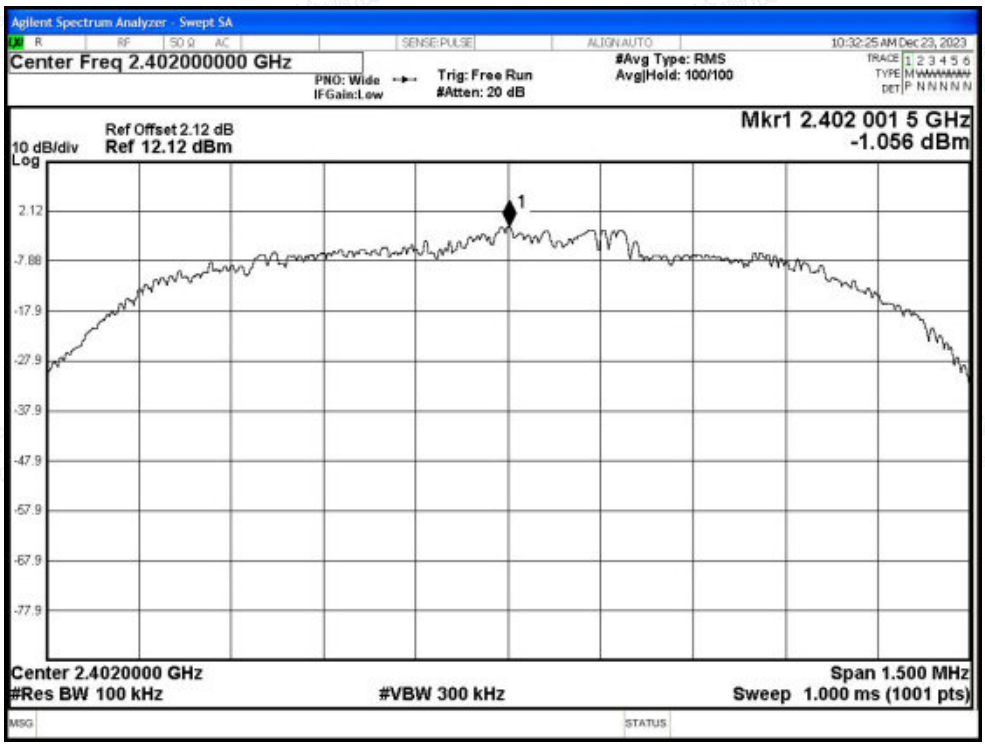
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



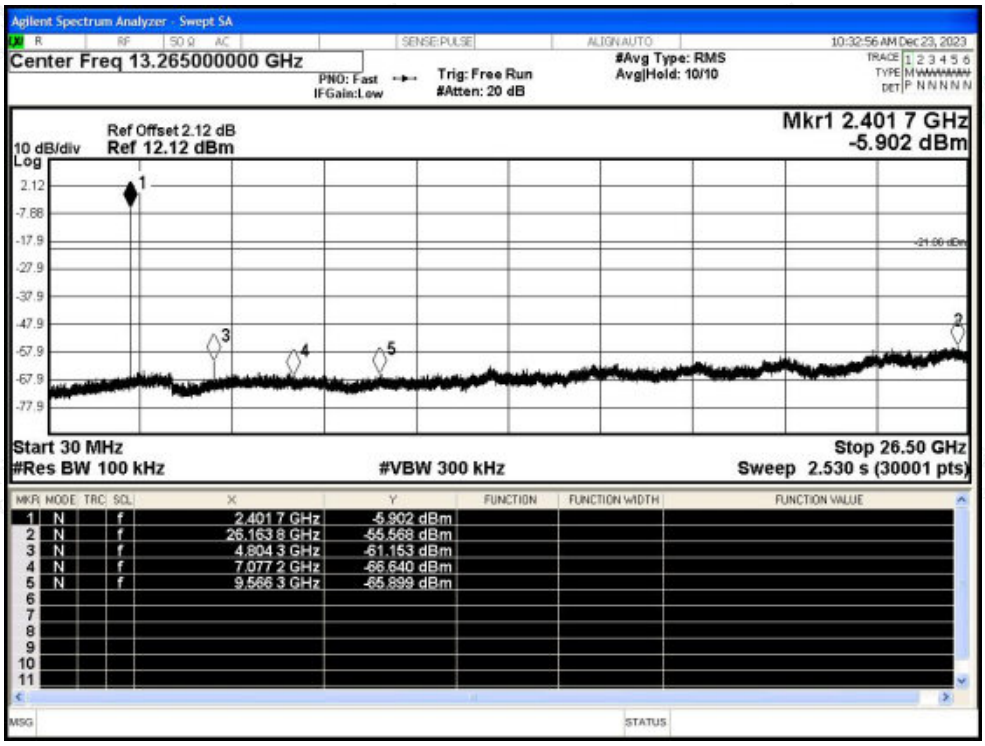
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



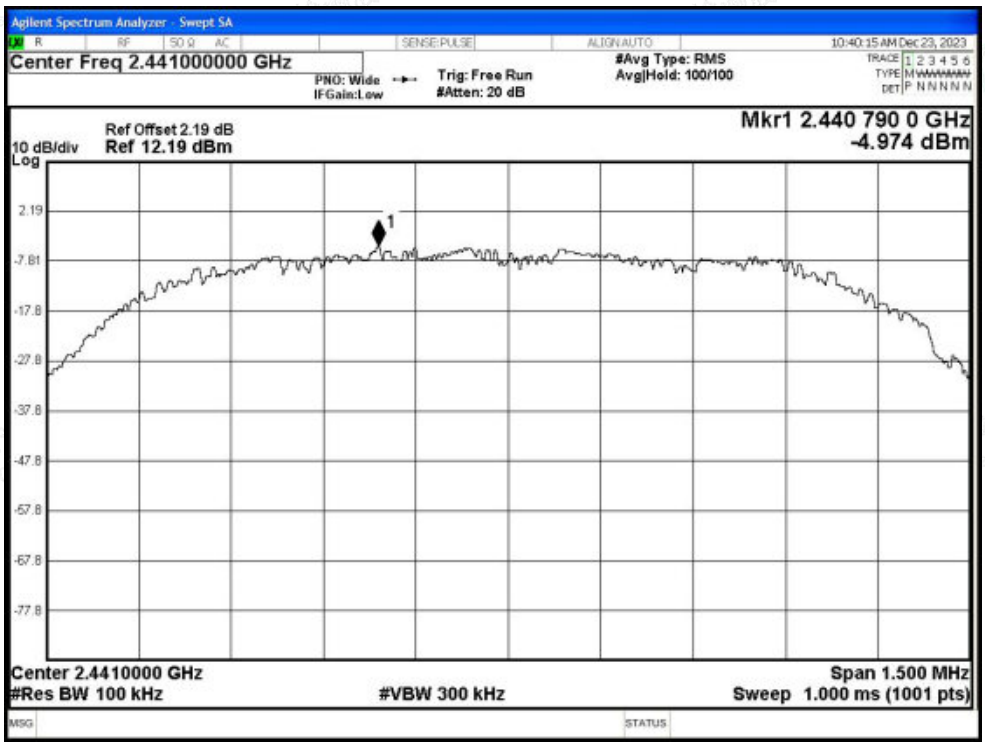
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



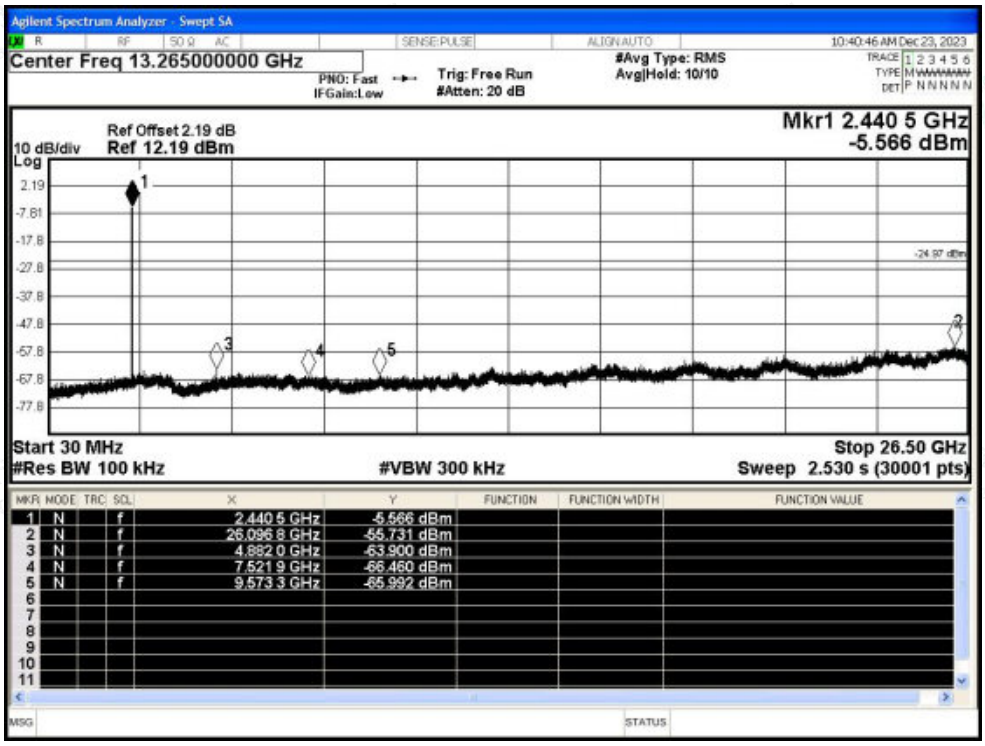
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission



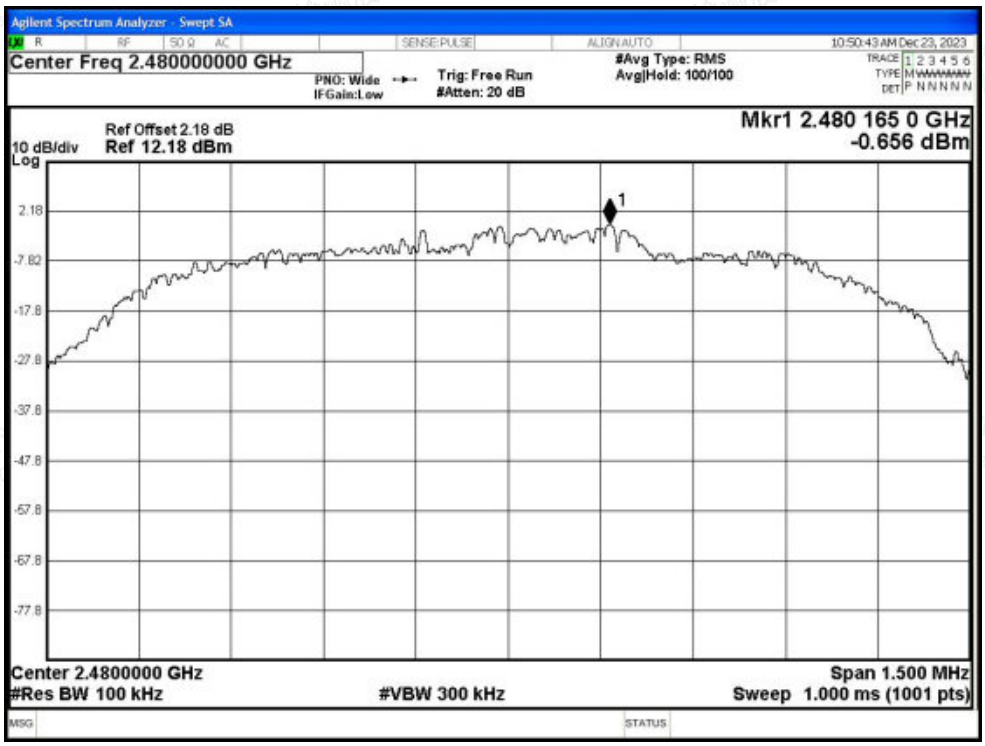
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



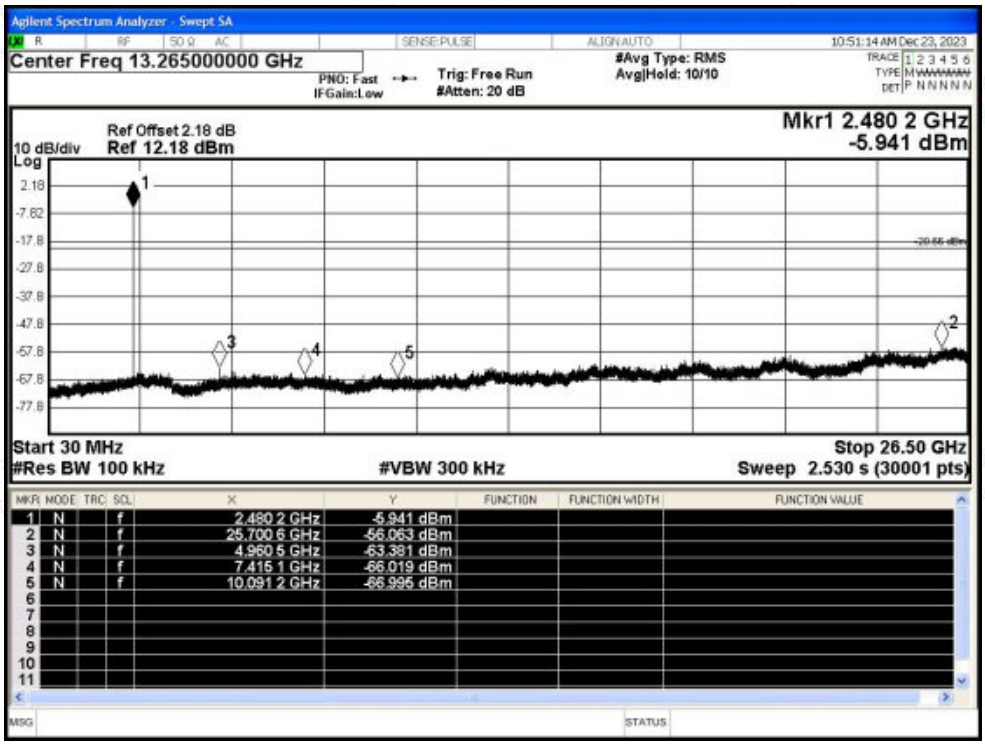
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission

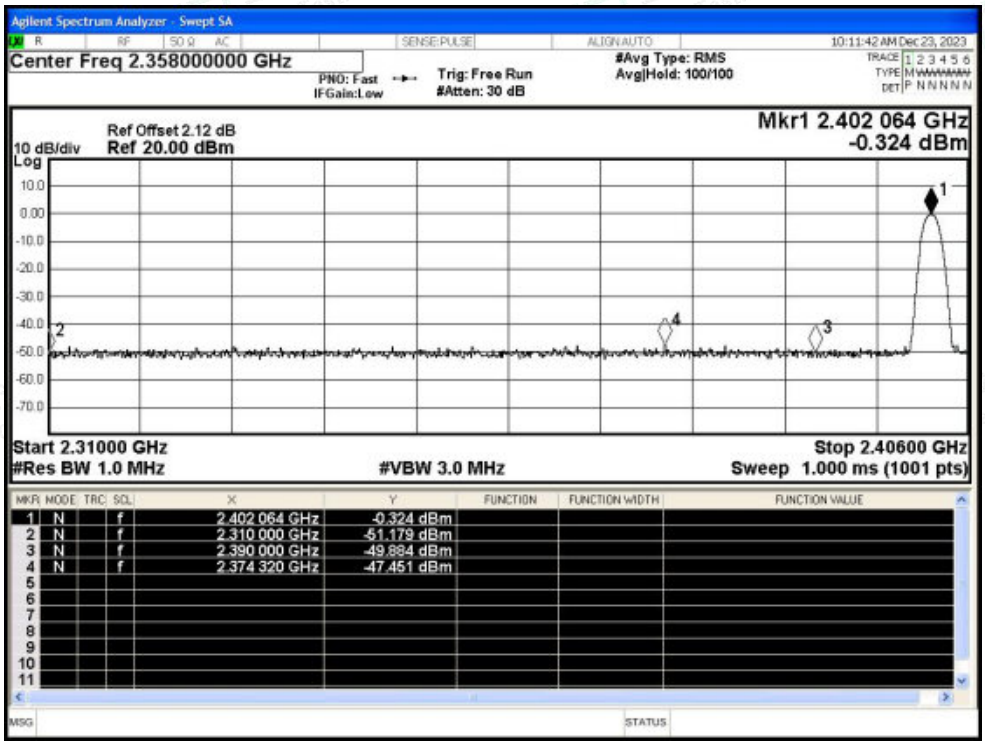


A.8 Restrict Band

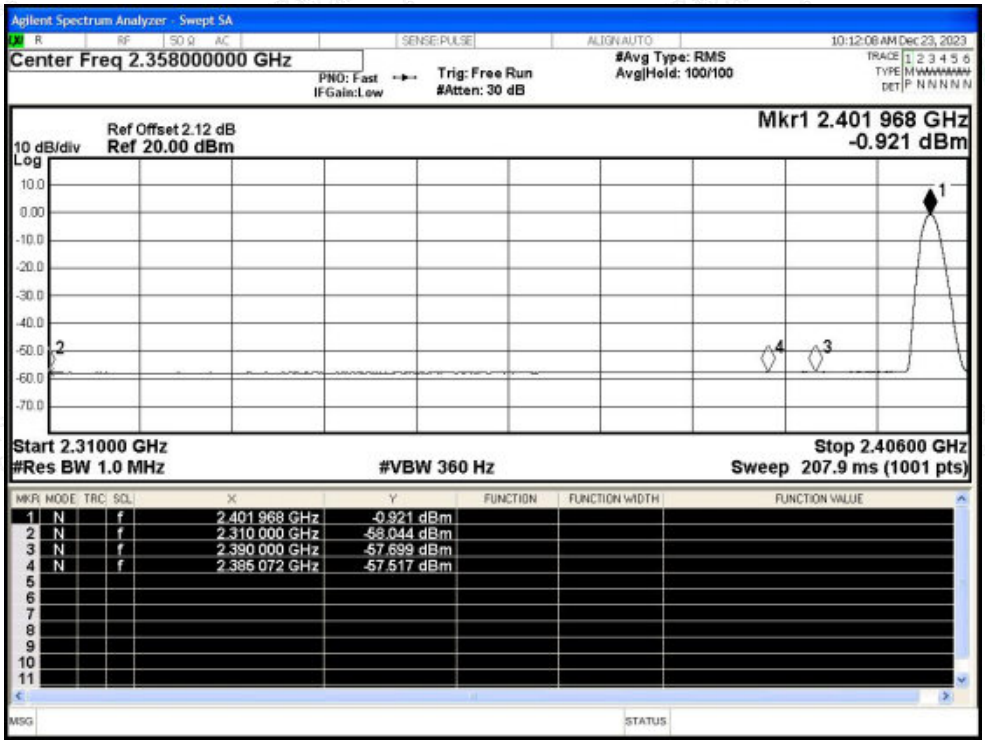
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-51.18	2	46.08	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.04	2	39.22	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2374.32	-47.45	2	49.81	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2385.072	-57.52	2	39.74	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-49.88	2	47.38	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-57.7	2	39.56	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-50.62	2	46.64	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-56.23	2	41.03	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2485.672	-46.83	2	50.43	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.512	-56.23	2	41.03	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-49.39	2	47.87	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-57.27	2	39.99	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-51.84	2	45.42	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-57.98	2	39.28	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2322.288	-47.1	2	50.16	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2379.504	-57.53	2	39.73	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-50.45	2	46.81	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-57.66	2	39.6	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-50.08	2	47.18	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-55.5	2	41.76	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2499.448	-47.43	2	49.83	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.512	-55.5	2	41.76	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-49.68	2	47.58	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-57.27	2	39.99	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-51.02	2	46.24	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-57.96	2	39.3	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2385.456	-47.41	2	49.85	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2389.392	-57.45	2	39.81	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-51.9	2	45.36	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-57.59	2	39.67	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-47.99	2	49.27	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-55.39	2	41.87	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2490.016	-46.73	2	50.53	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.512	-55.39	2	41.87	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-48.56	2	48.7	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-57.13	2	40.13	Average	54	Pass

Test Graphs

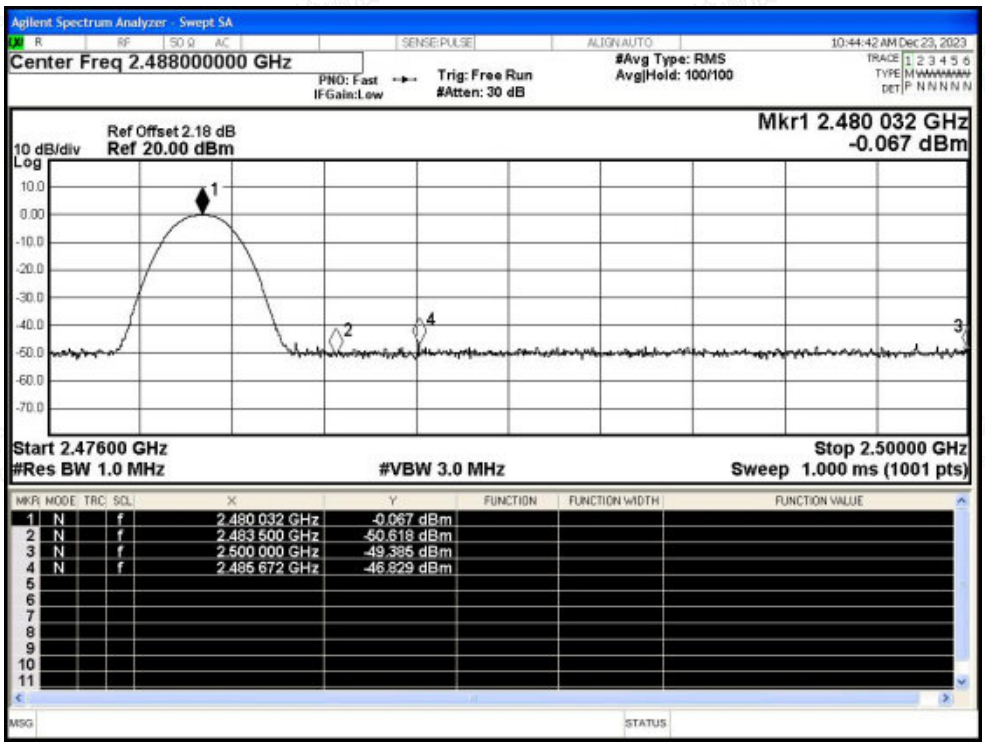
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



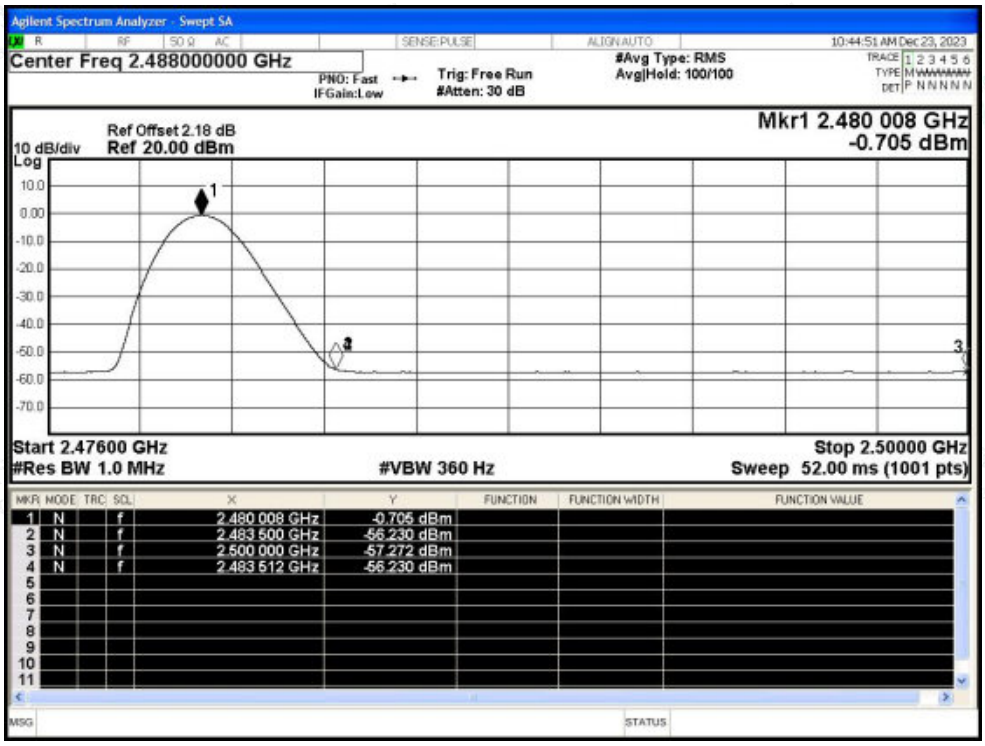
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



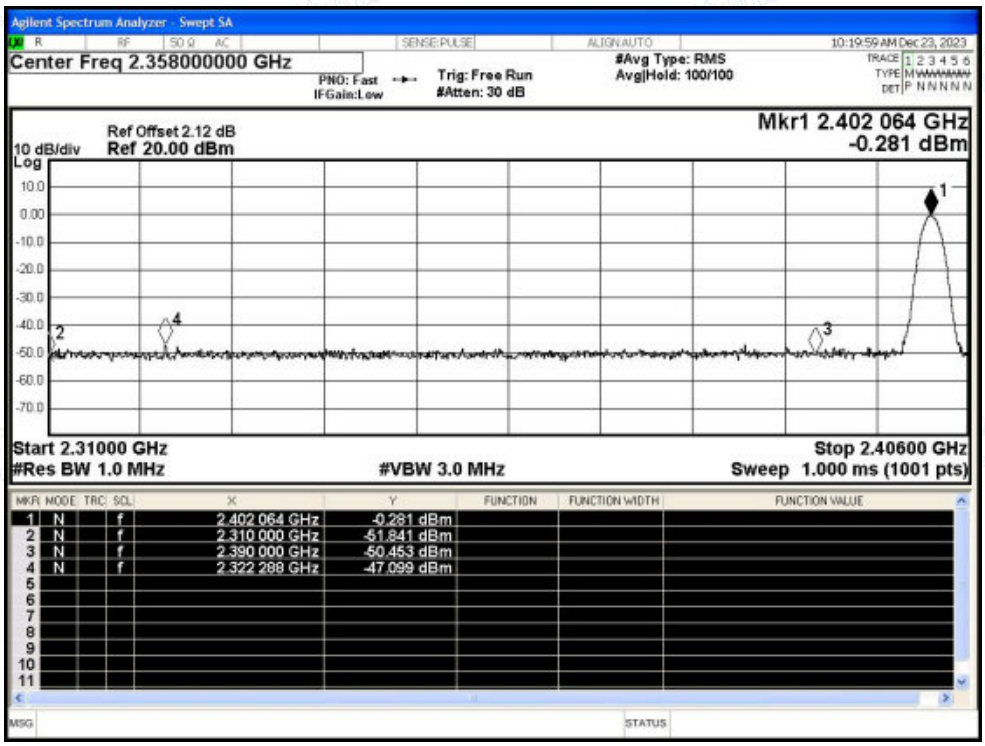
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



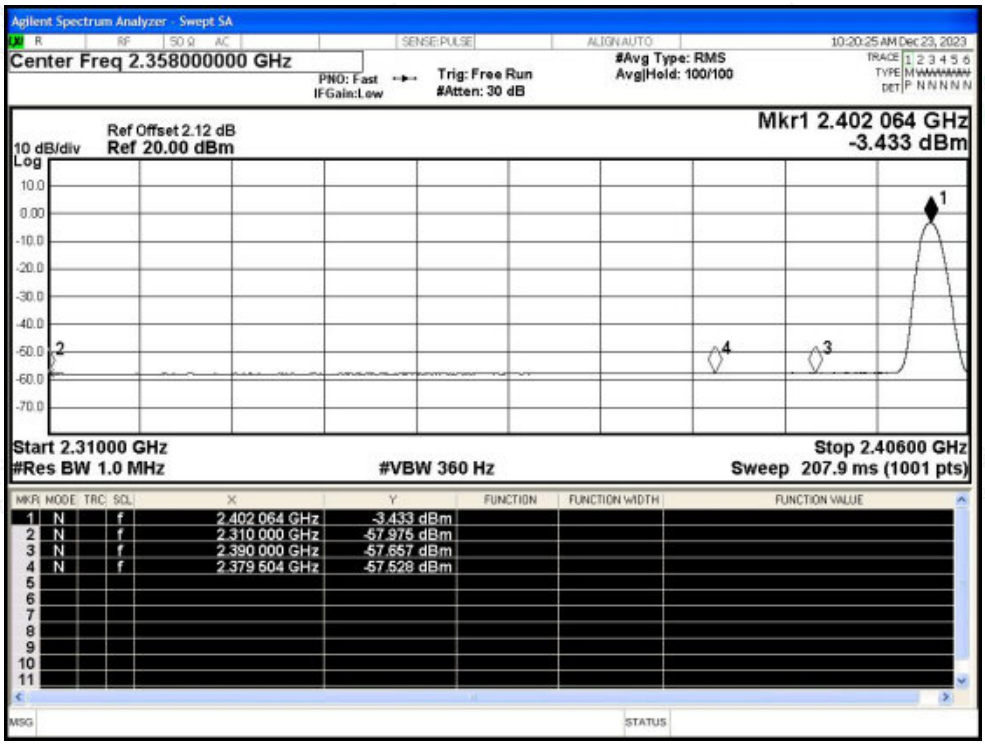
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



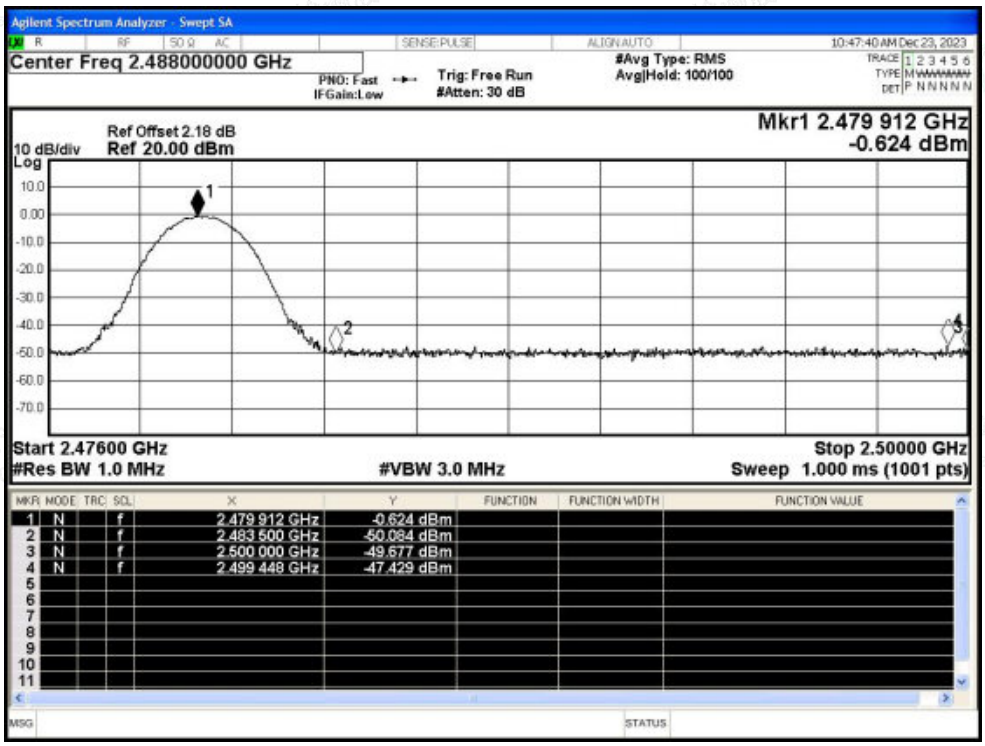
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



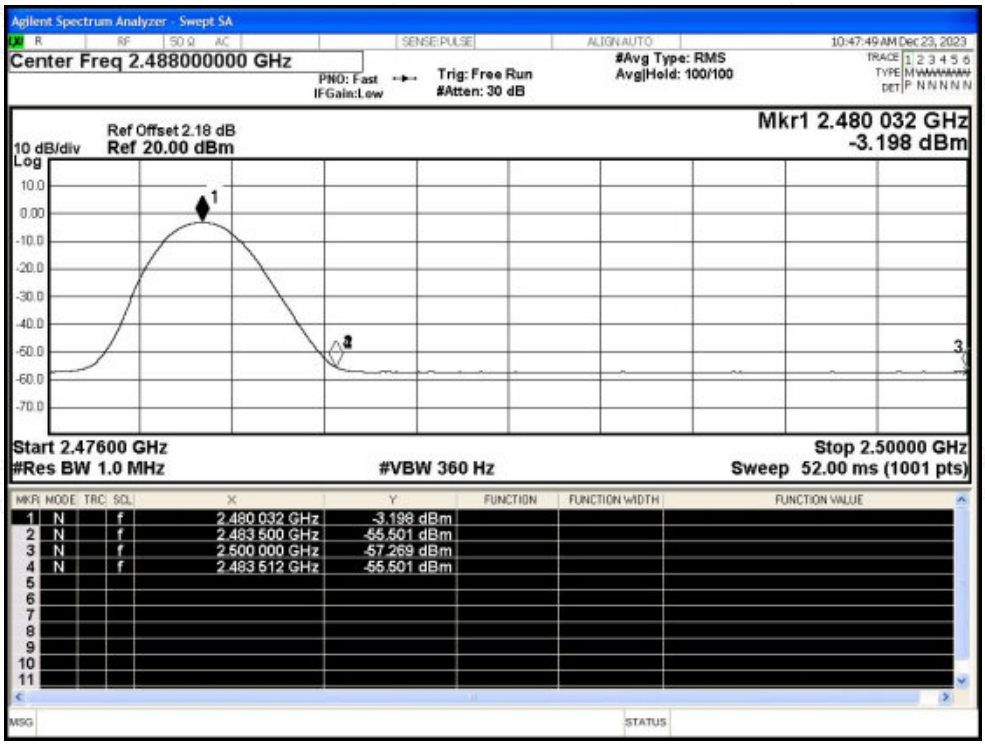
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average



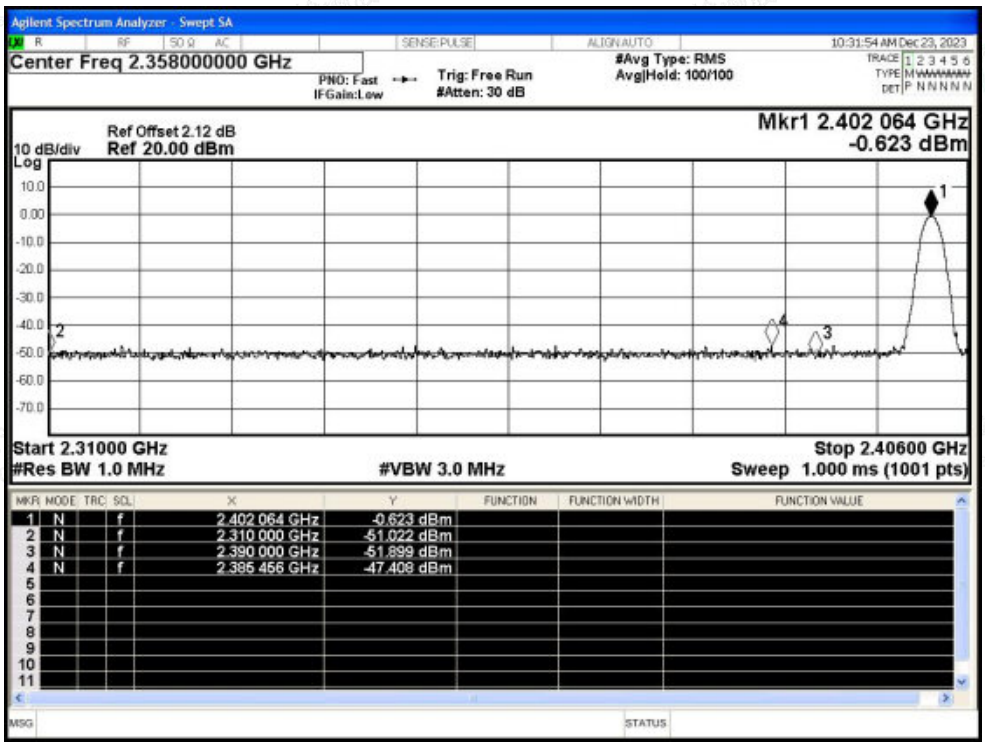
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak



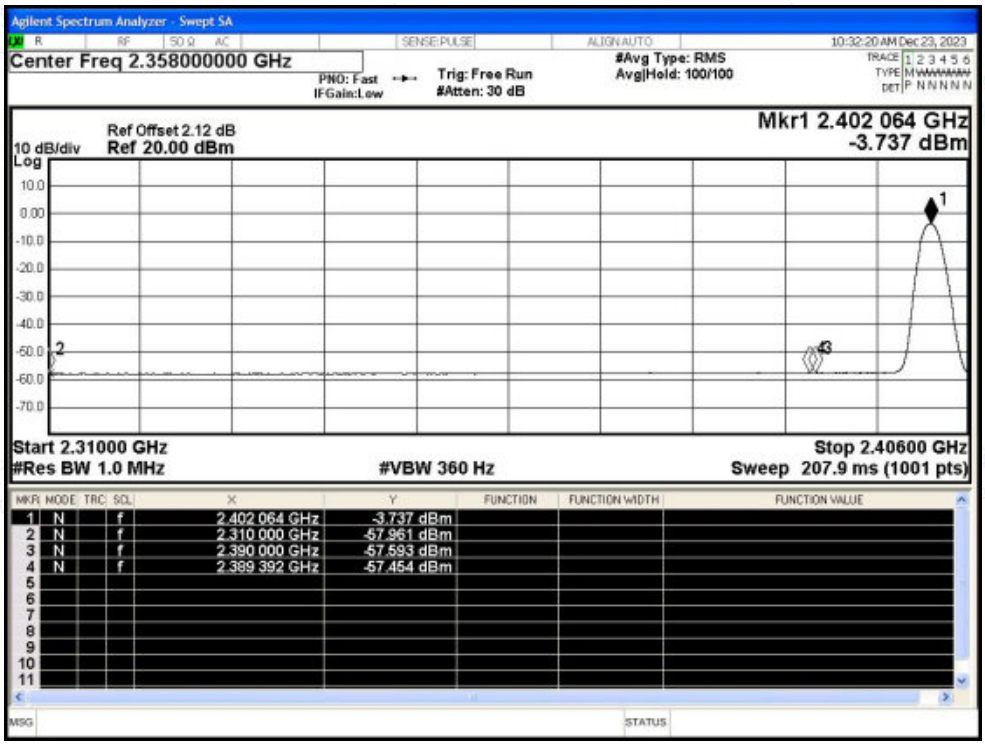
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Average



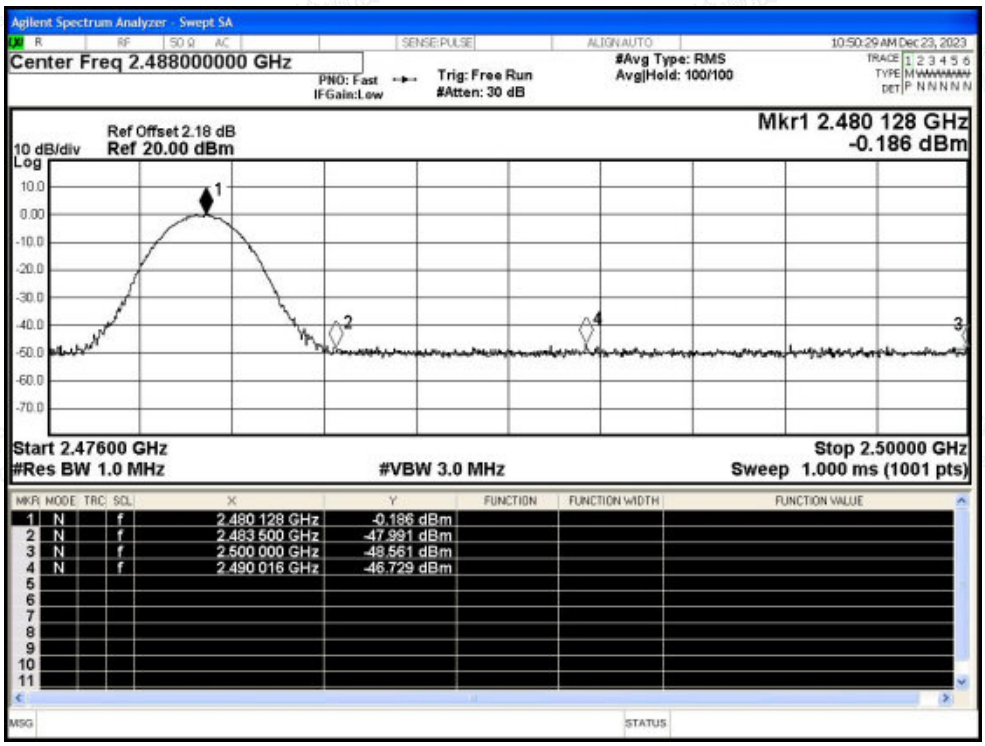
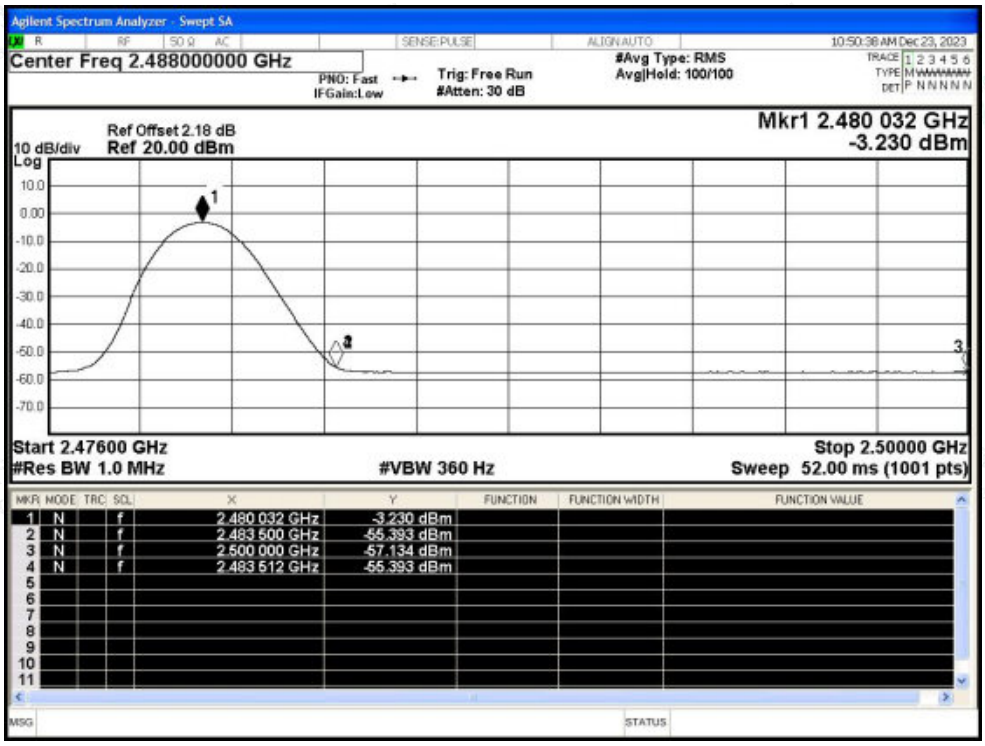
Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak



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