Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: MP3 Player

Test Model: M8

Environmental Conditions

Temperature:	23.5 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan

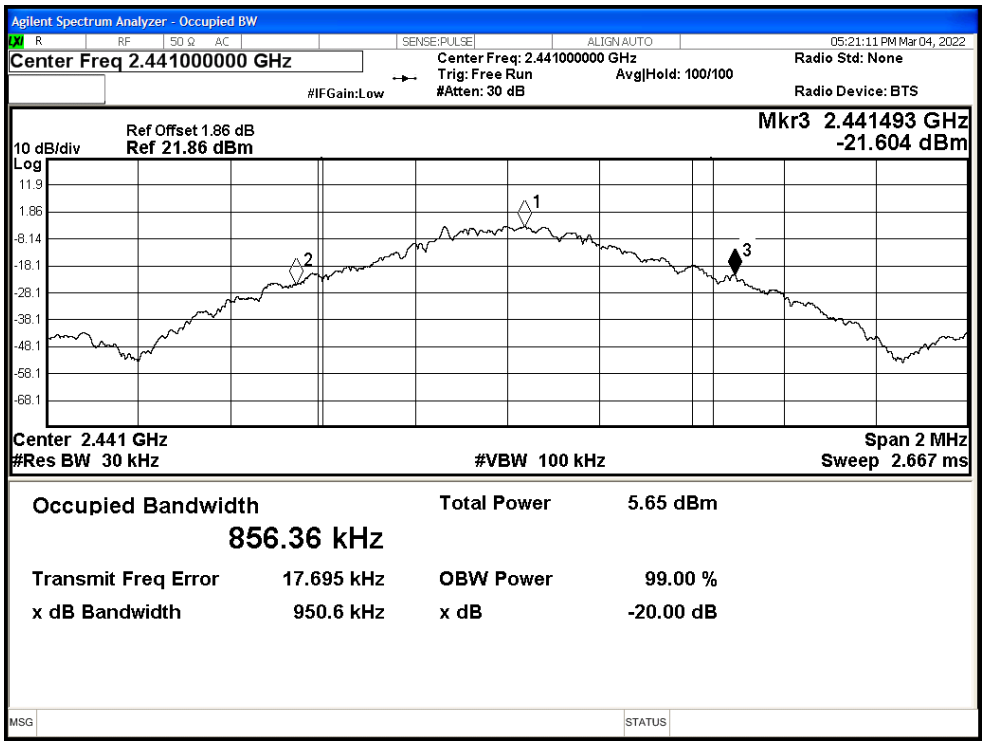
A.1 -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.942	Pass
NVNT	1-DH5	2441	Ant1	0.951	Pass
NVNT	1-DH5	2480	Ant1	0.945	Pass
NVNT	2-DH5	2402	Ant1	1.31	Pass
NVNT	2-DH5	2441	Ant1	1.301	Pass
NVNT	2-DH5	2480	Ant1	1.303	Pass
NVNT	3-DH5	2402	Ant1	1.284	Pass
NVNT	3-DH5	2441	Ant1	1.297	Pass
NVNT	3-DH5	2480	Ant1	1.287	Pass

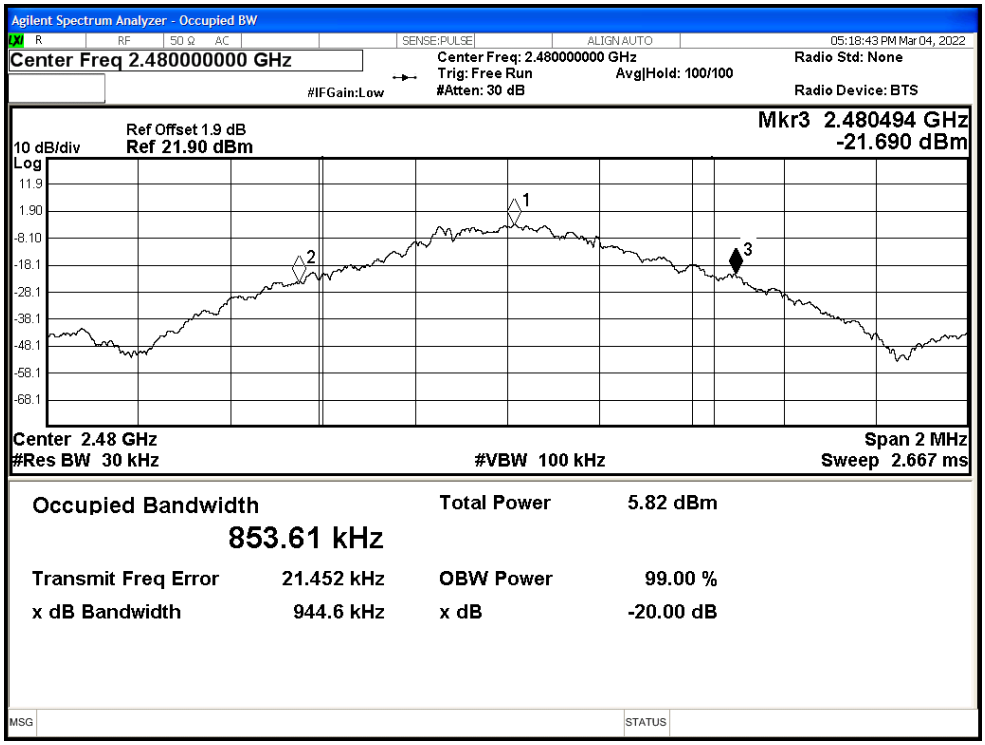
Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

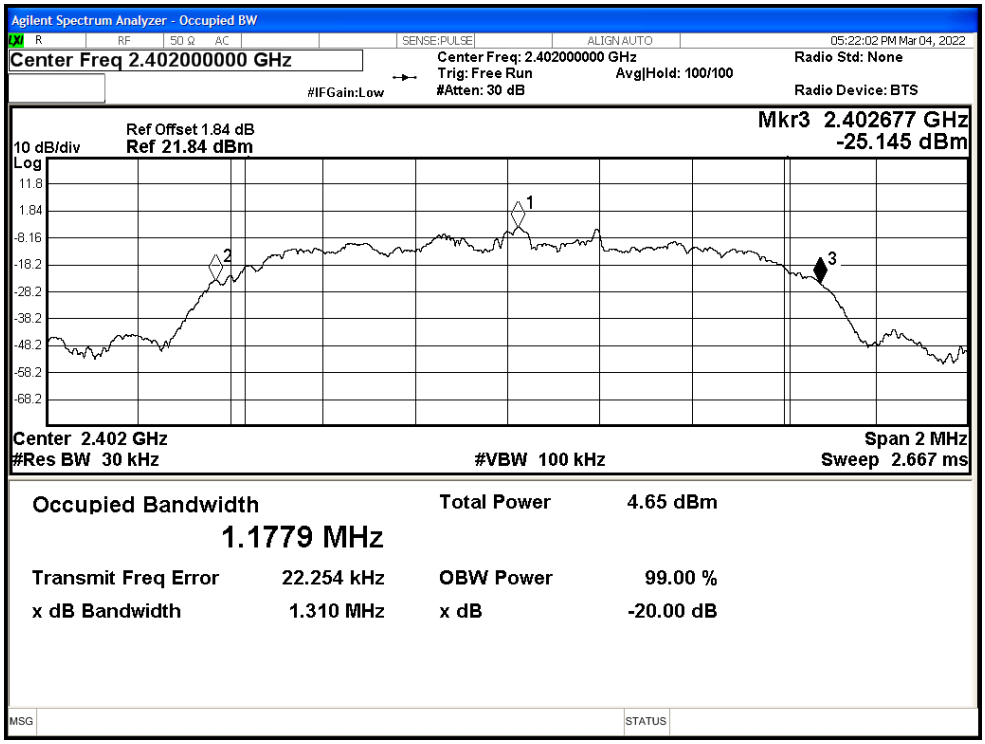
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



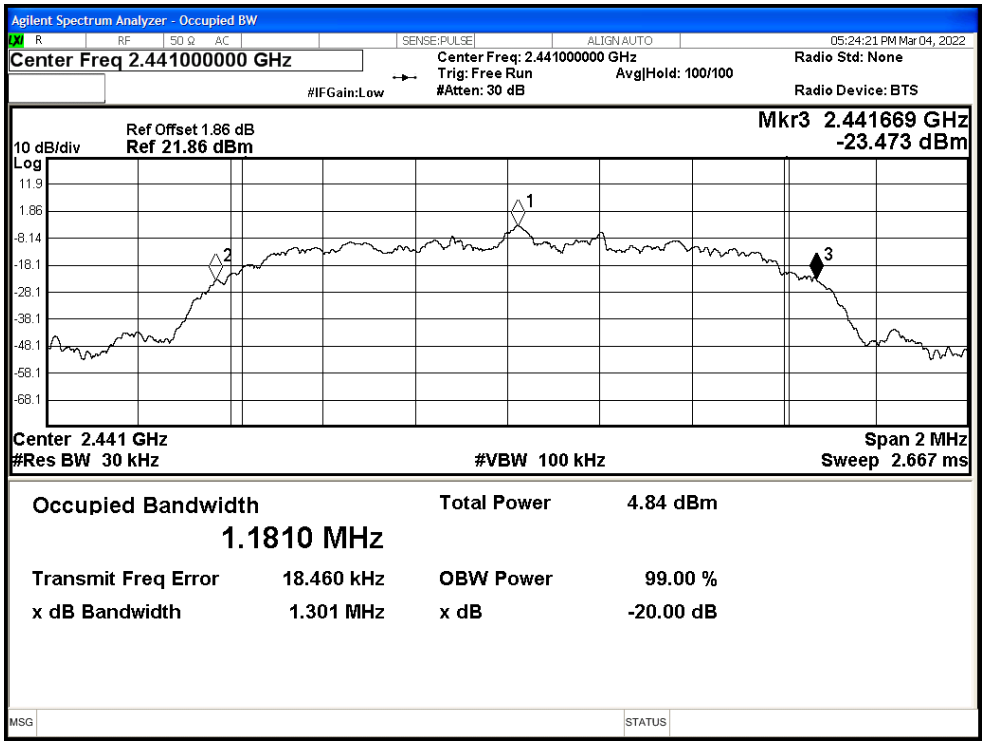
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



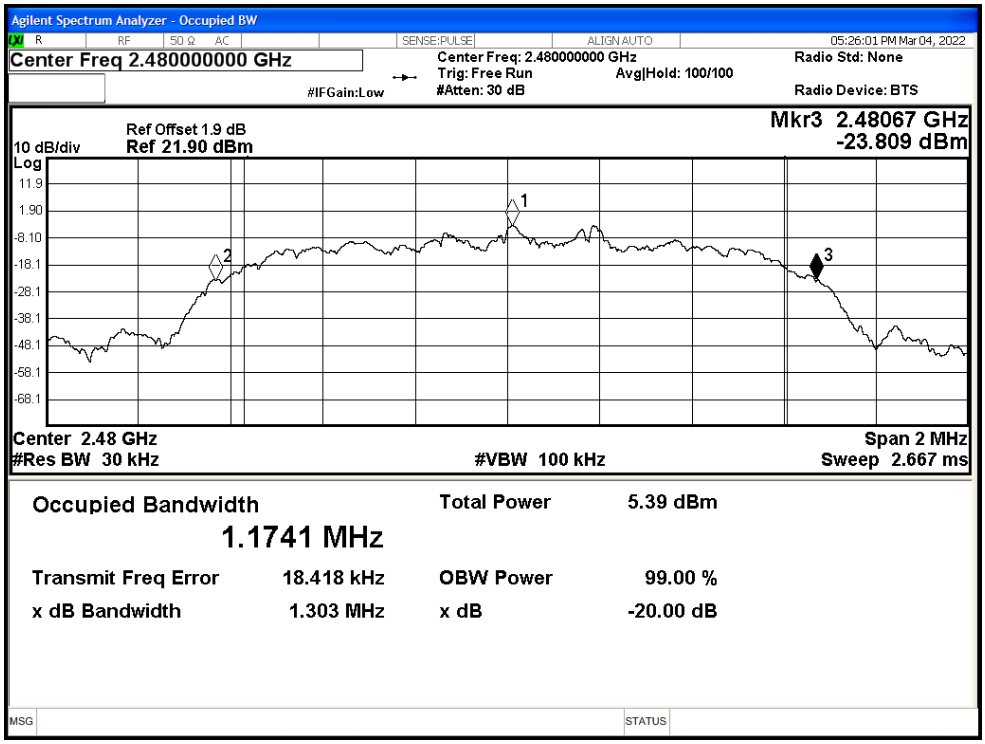
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



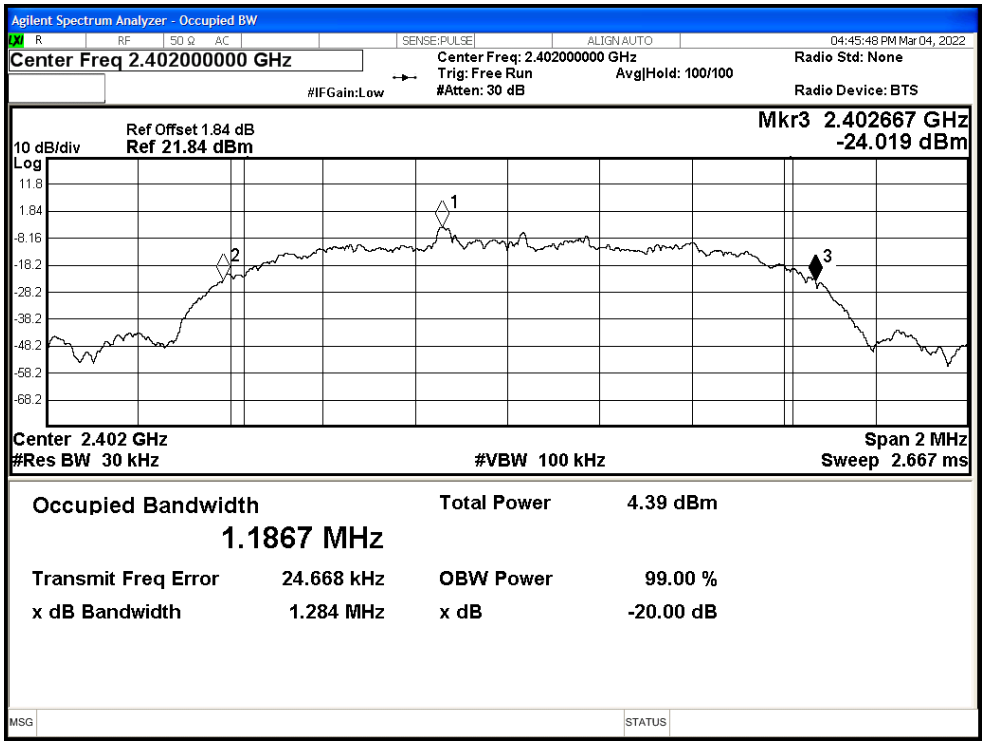
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



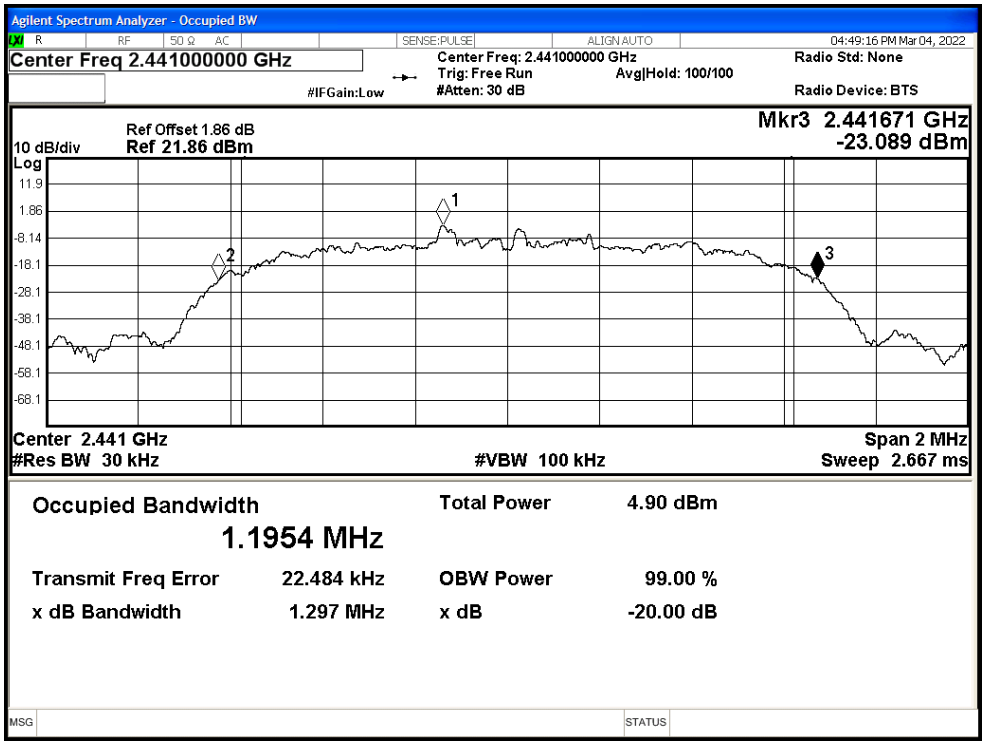
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



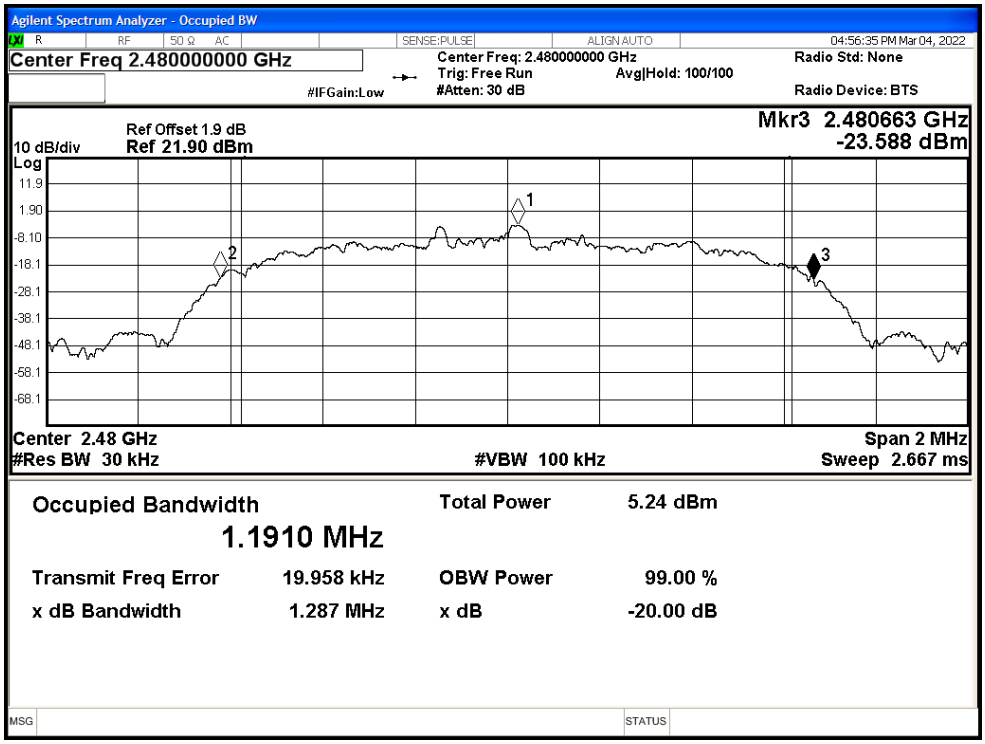
-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1

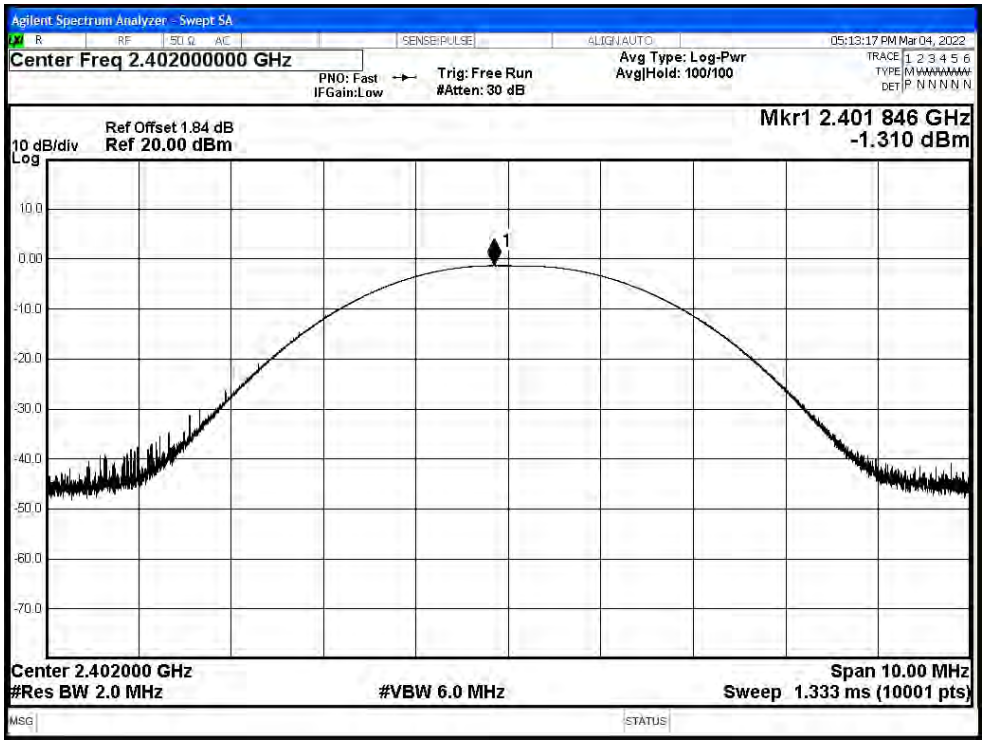


A.2 Maximum Peak Conducted Output Power

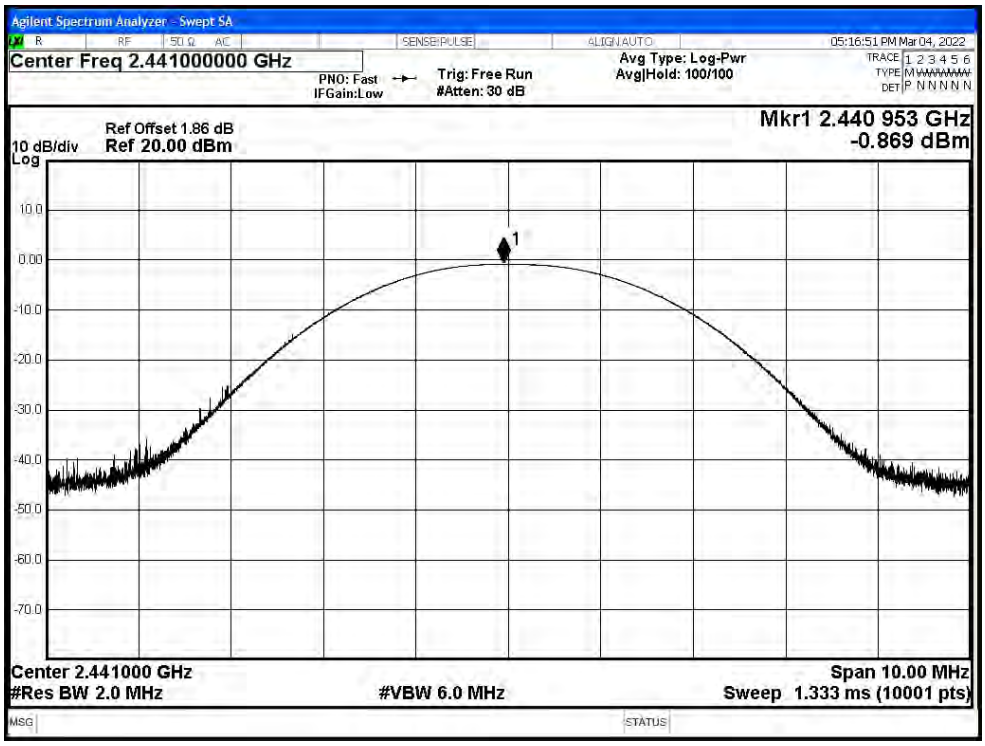
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-1.31	0	-1.31	21	Pass
NVNT	1-DH5	2441	Ant1	-0.87	0	-0.87	21	Pass
NVNT	1-DH5	2480	Ant1	-0.82	0	-0.82	21	Pass
NVNT	2-DH5	2402	Ant1	-0.48	0	-0.48	21	Pass
NVNT	2-DH5	2441	Ant1	0.03	0	0.03	21	Pass
NVNT	2-DH5	2480	Ant1	0.02	0	0.02	21	Pass
NVNT	3-DH5	2402	Ant1	-0.04	0	-0.04	21	Pass
NVNT	3-DH5	2441	Ant1	0.46	0	0.46	21	Pass
NVNT	3-DH5	2480	Ant1	0.53	0	0.53	21	Pass

Test Graphs

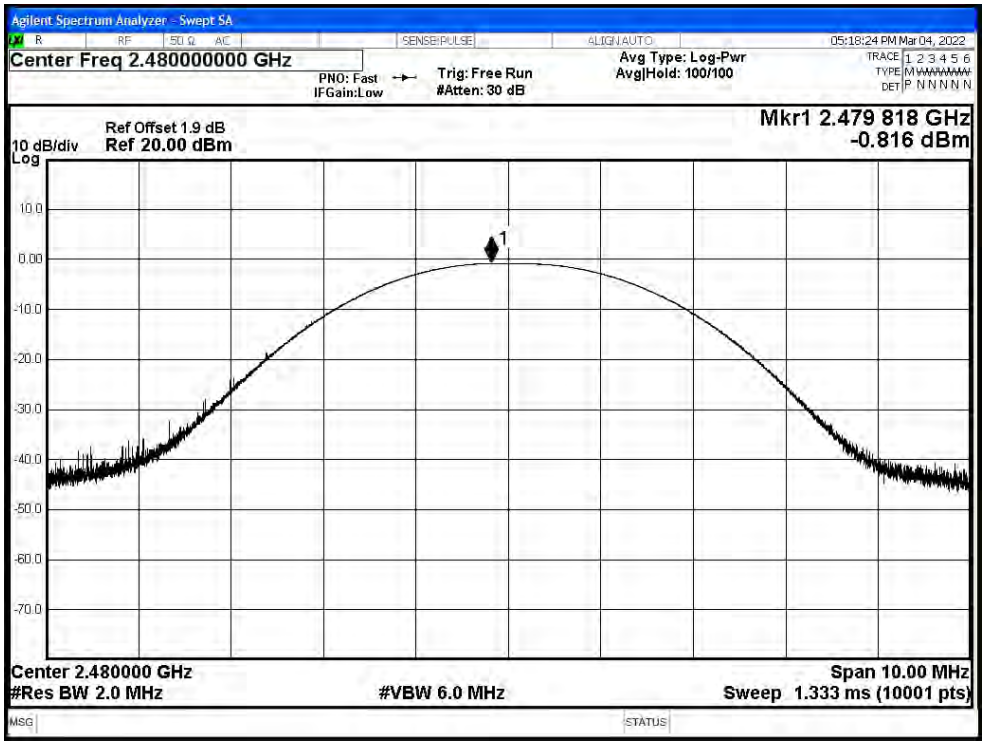
Power NVNT 1-DH5 2402MHz Ant1



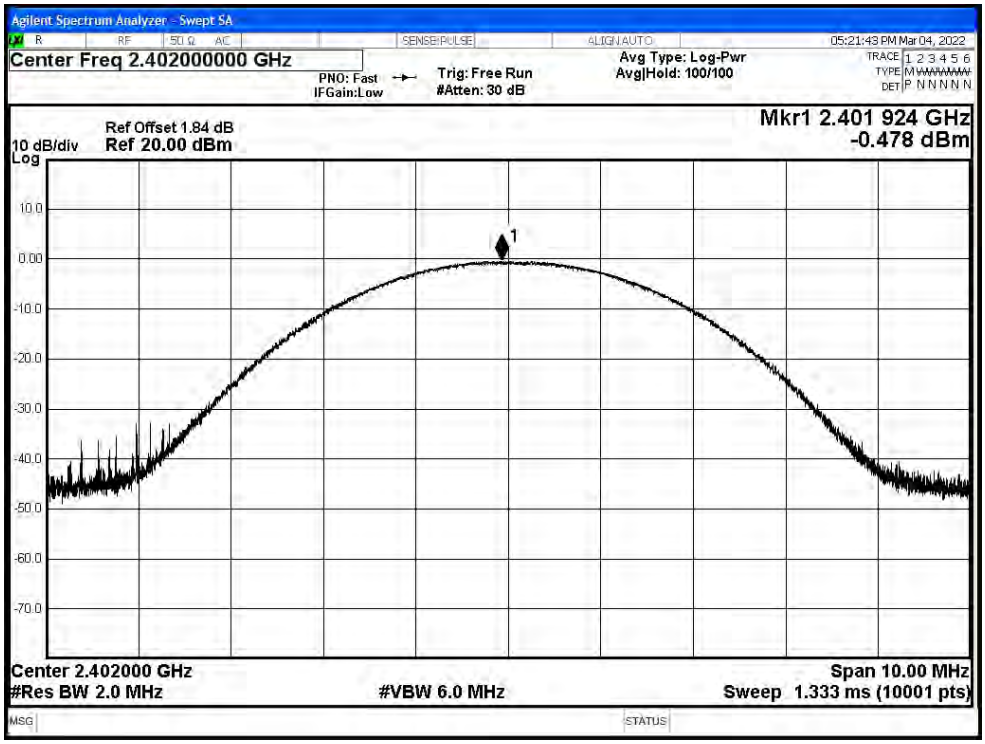
Power NVNT 1-DH5 2441MHz Ant1



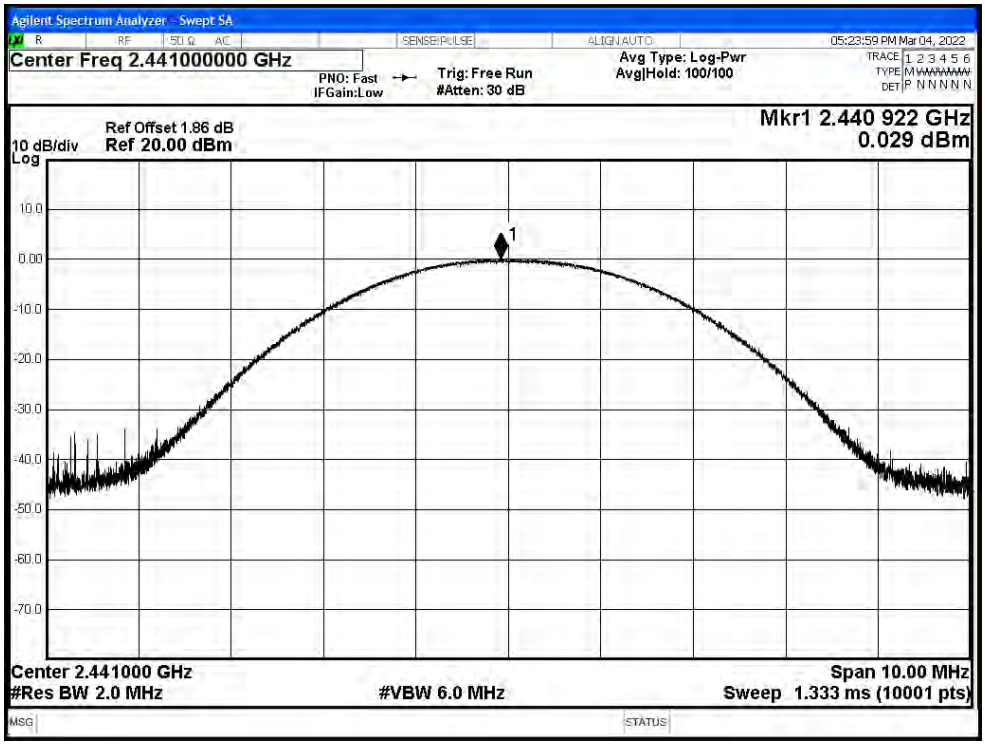
Power NVNT 1-DH5 2480MHz Ant1



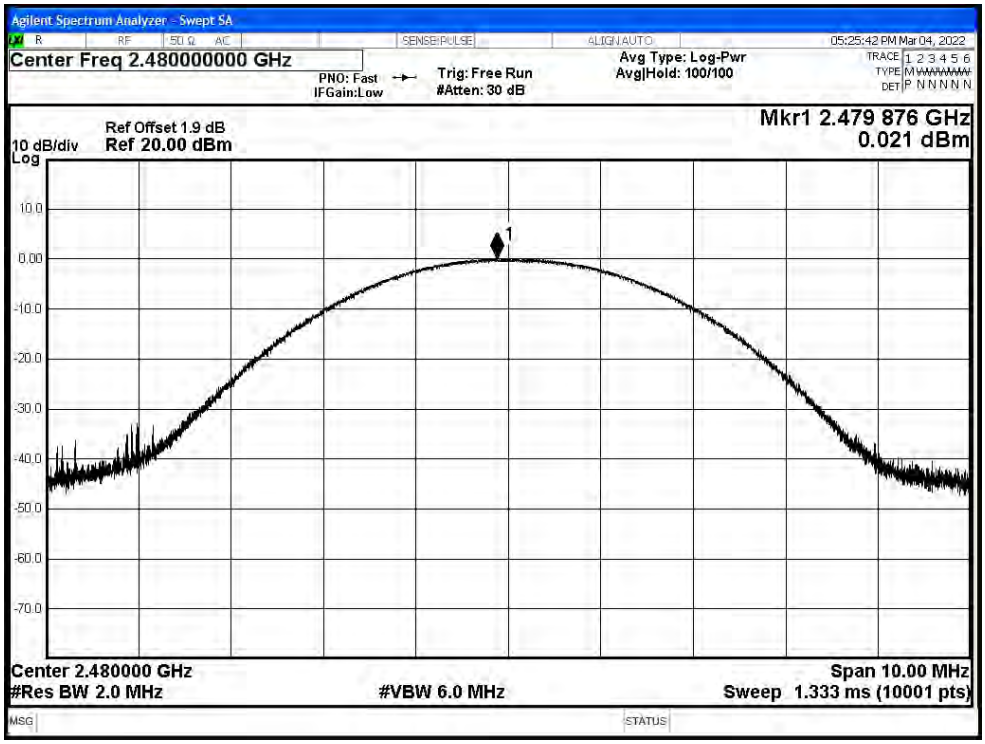
Power NVNT 2-DH5 2402MHz Ant1



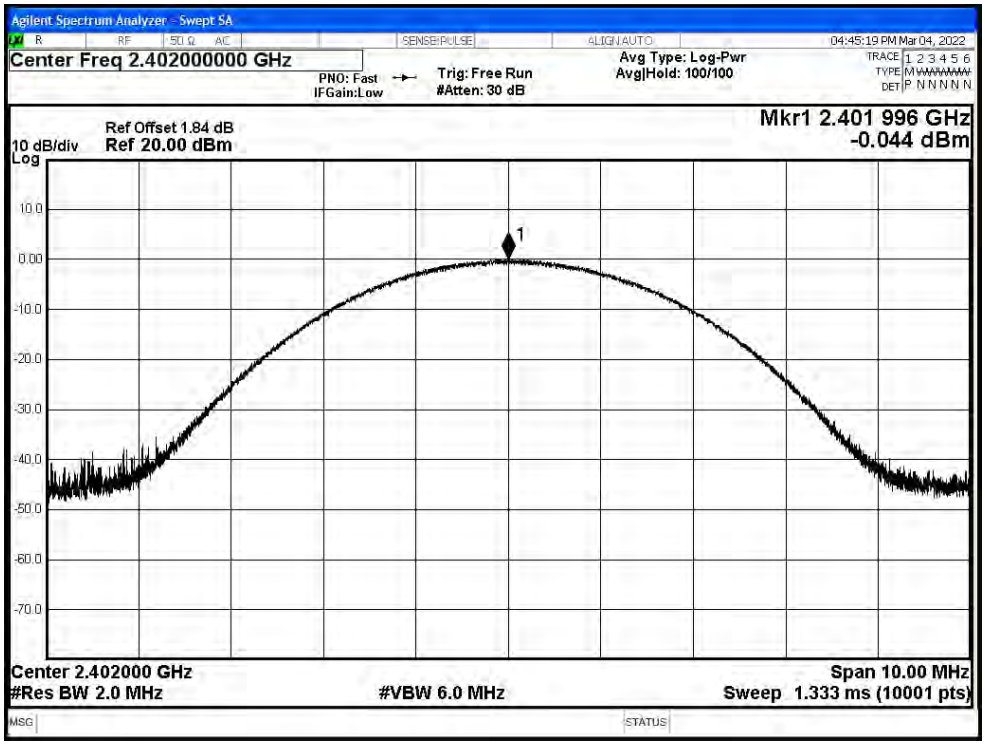
Power NVNT 2-DH5 2441MHz Ant1



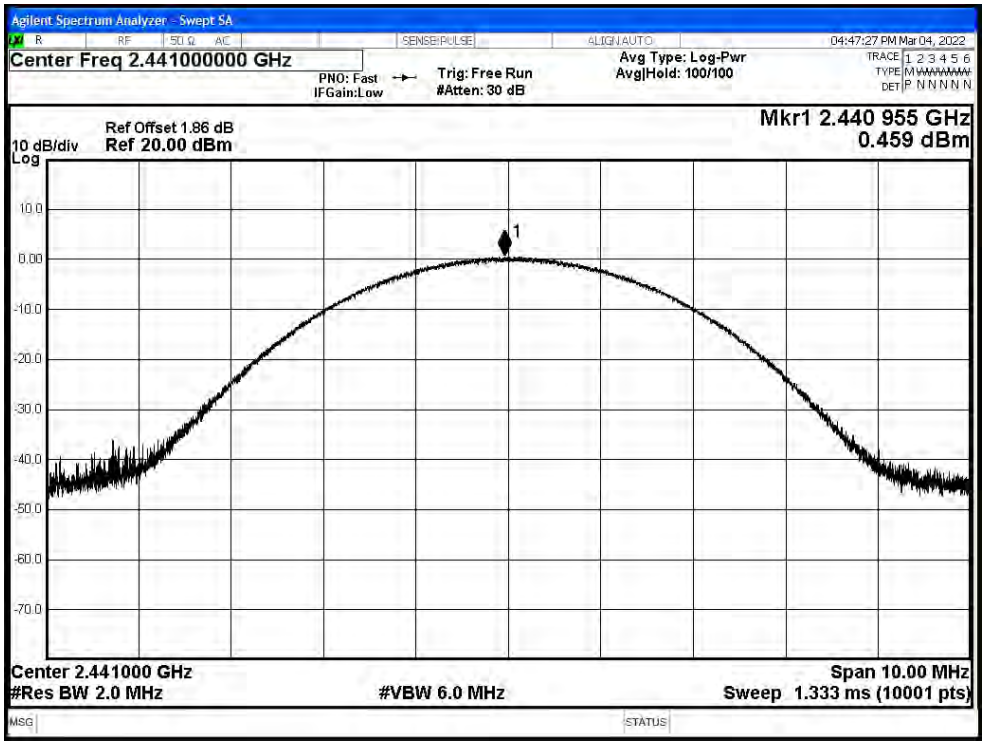
Power NVNT 2-DH5 2480MHz Ant1



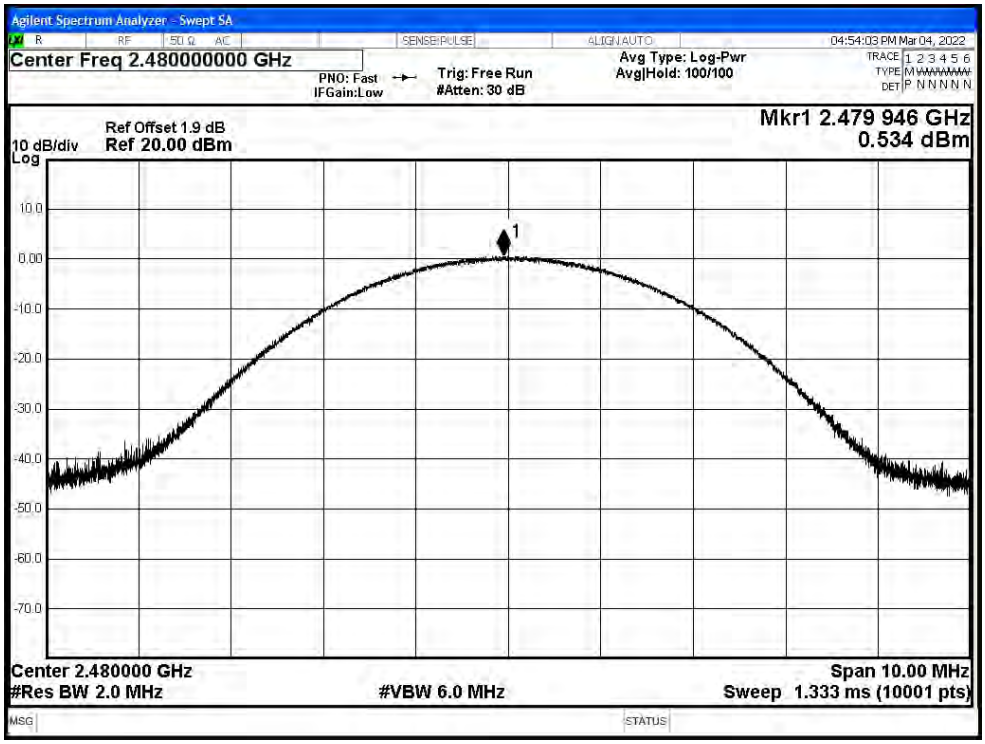
Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1



Power NVNT 3-DH5 2480MHz Ant1

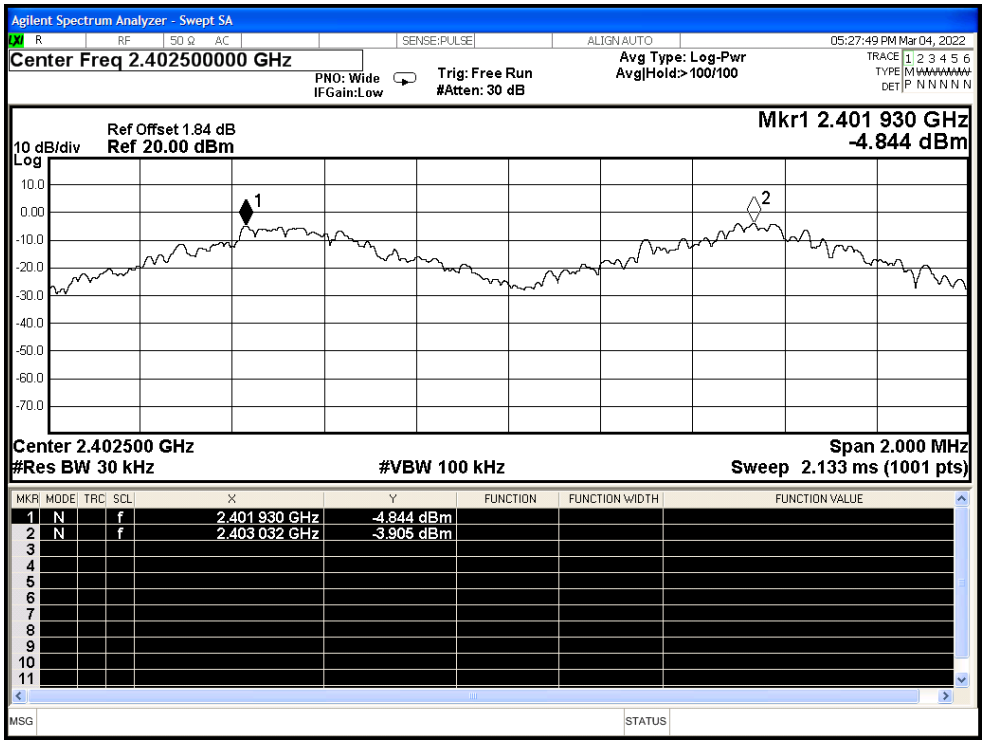


A.3 Carrier Frequencies Separation

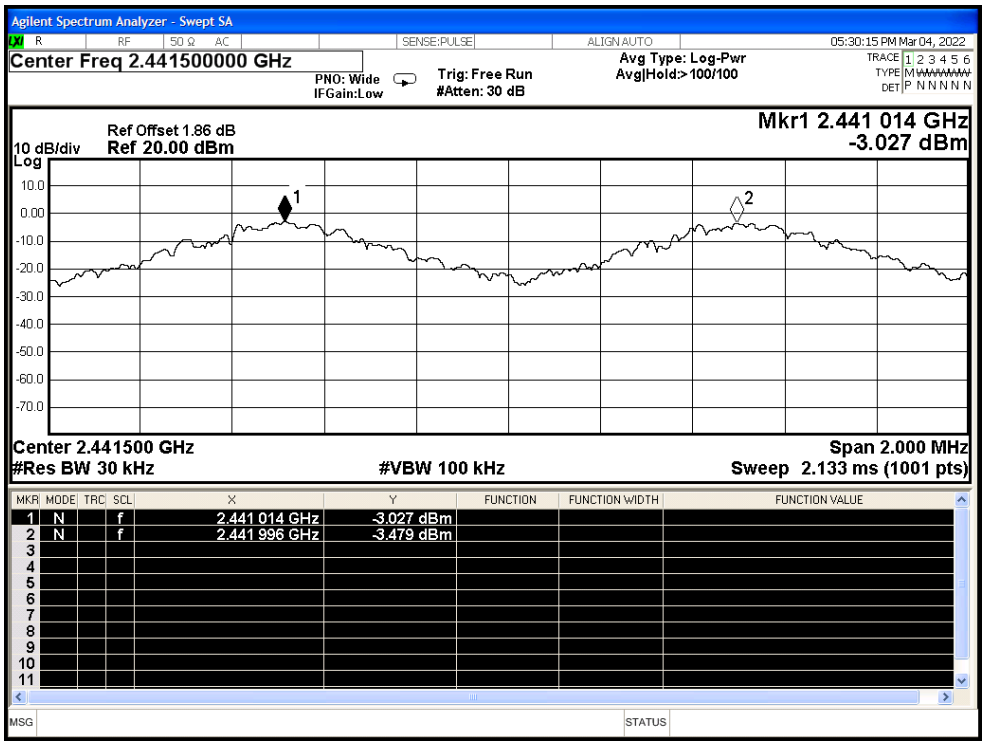
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.93	2403.032	1.102	0.628	Pass
NVNT	1-DH5	Ant1	2441.014	2441.996	0.982	0.634	Pass
NVNT	1-DH5	Ant1	2478.916	2480.086	1.17	0.63	Pass
NVNT	2-DH5	Ant1	2401.86	2402.858	0.998	0.873	Pass
NVNT	2-DH5	Ant1	2441.36	2442.362	1.002	0.867	Pass
NVNT	2-DH5	Ant1	2479.16	2480.164	1.004	0.869	Pass
NVNT	3-DH5	Ant1	2401.94	2402.85	0.91	0.856	Pass
NVNT	3-DH5	Ant1	2440.856	2441.992	1.136	0.865	Pass
NVNT	3-DH5	Ant1	2478.872	2480.016	1.144	0.858	Pass

Test Graphs

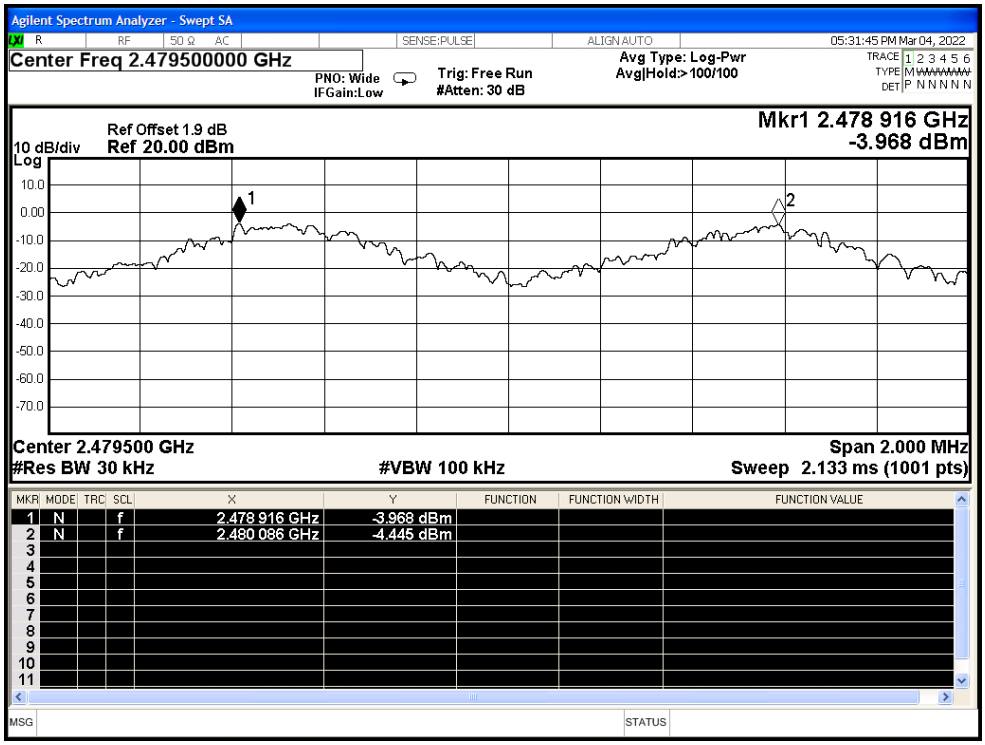
CFS NVNT 1-DH5 2402MHz Ant1



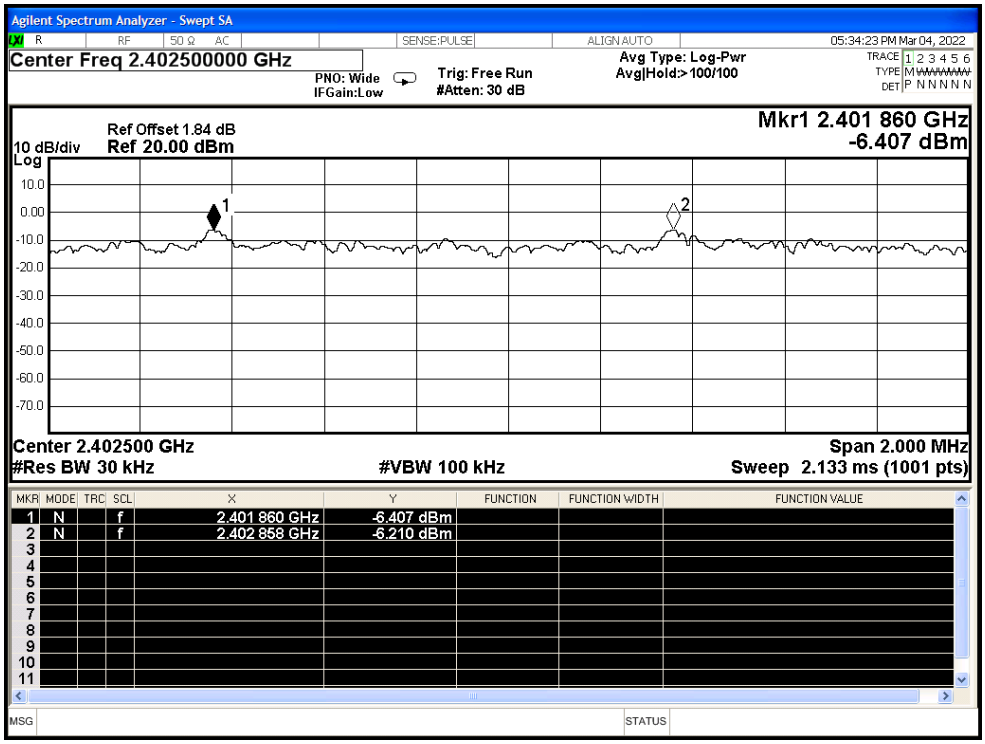
CFS NVNT 1-DH5 2441MHz Ant1



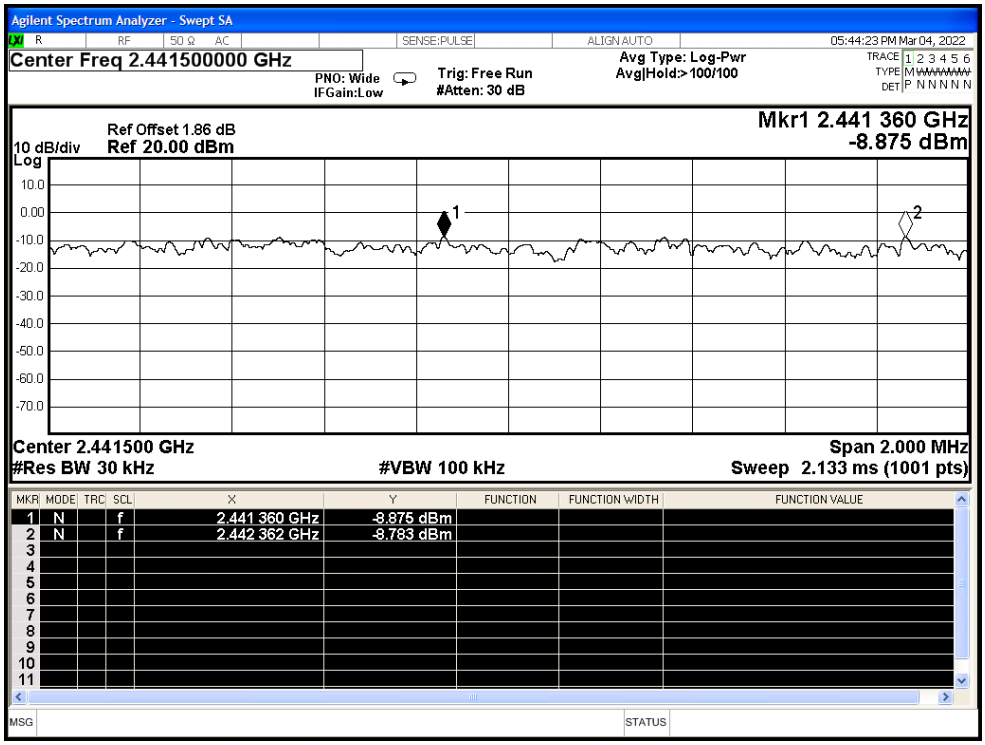
CFS NVNT 1-DH5 2480MHz Ant1



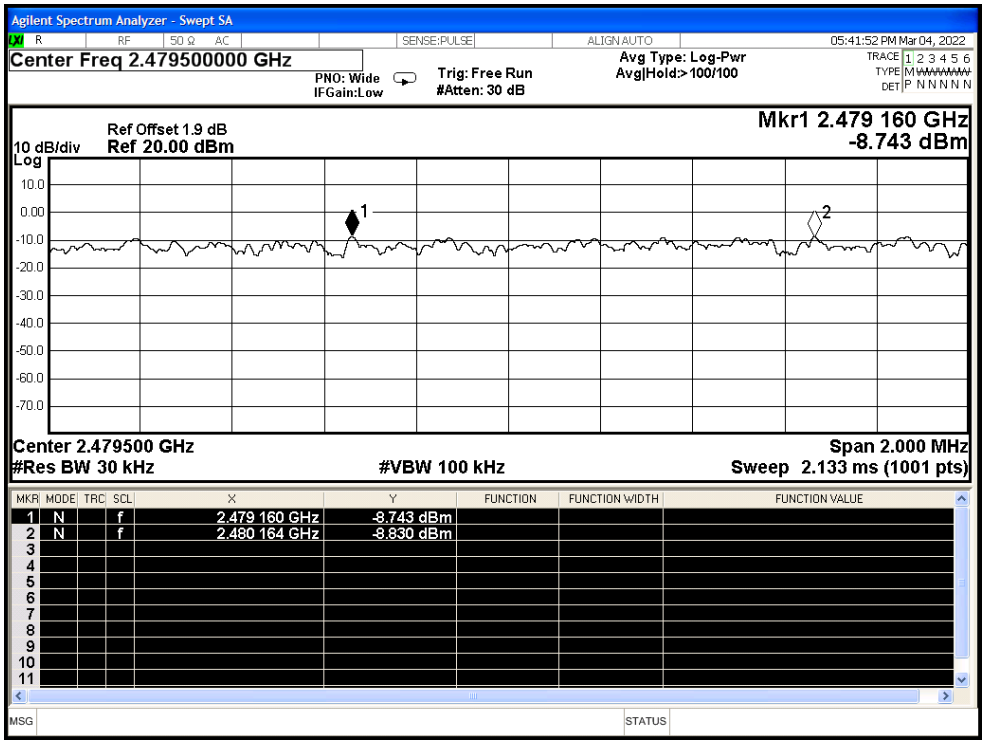
CFS NVNT 2-DH5 2402MHz Ant1



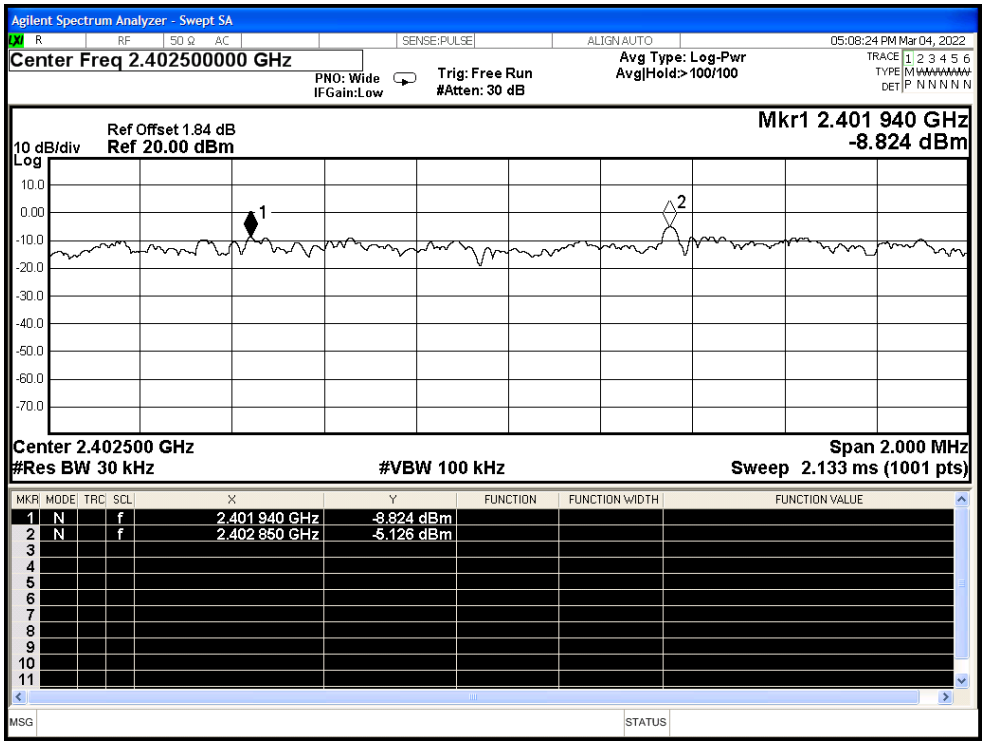
CFS NVNT 2-DH5 2441MHz Ant1



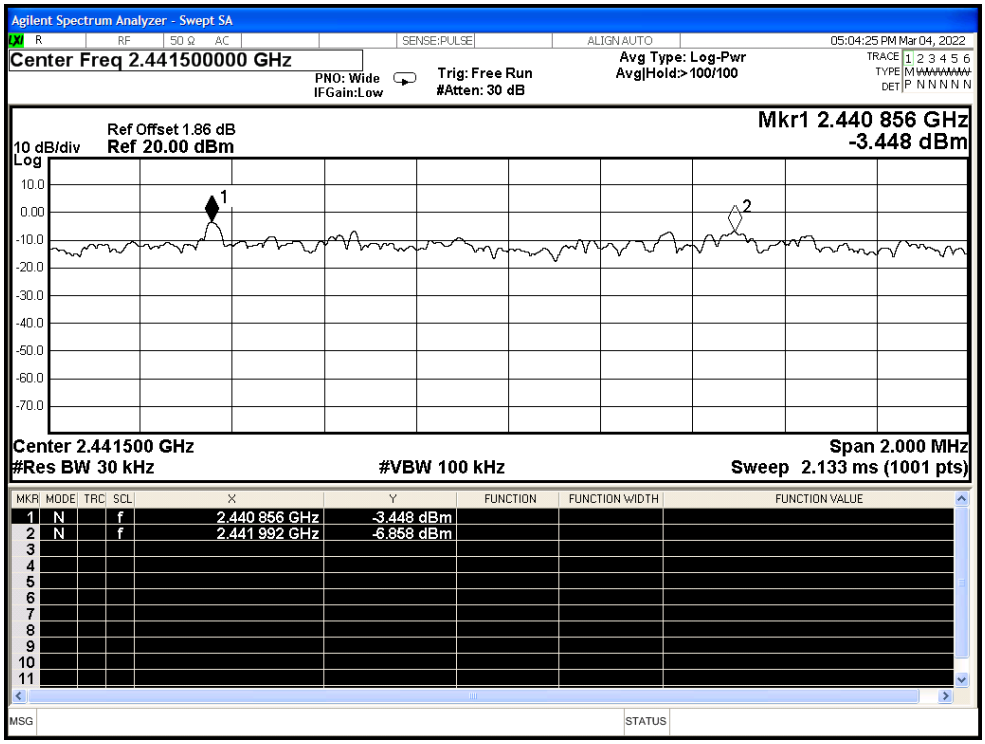
CFS NVNT 2-DH5 2480MHz Ant1



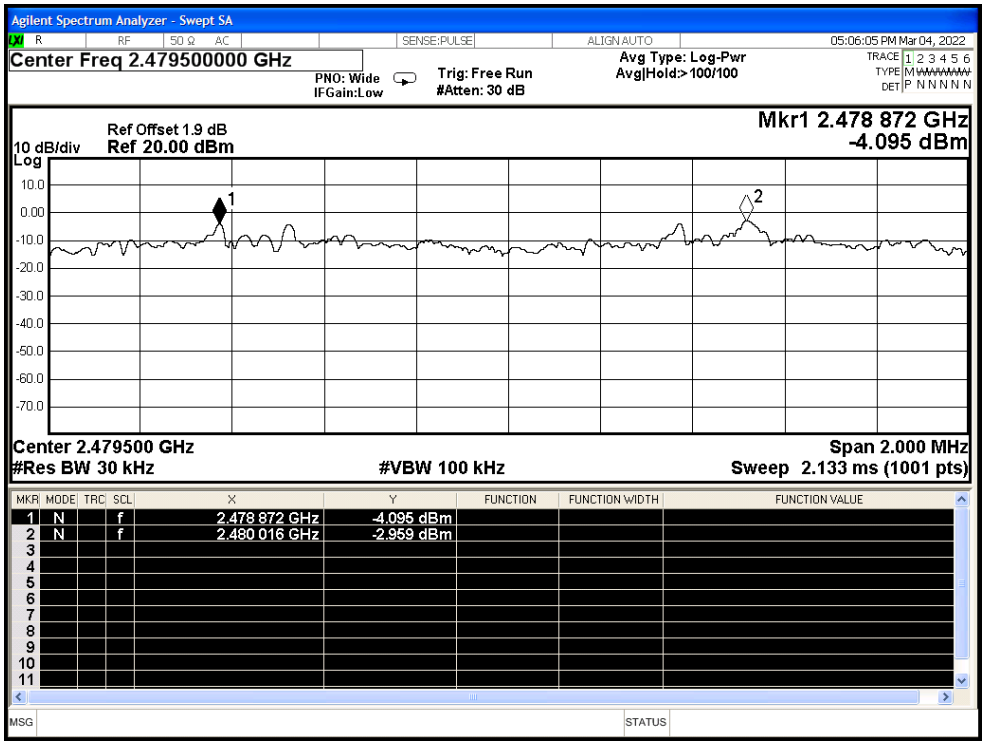
CFS NVNT 3-DH5 2402MHz Ant1



CFS NVNT 3-DH5 2441MHz Ant1



CFS NVNT 3-DH5 2480MHz Ant1

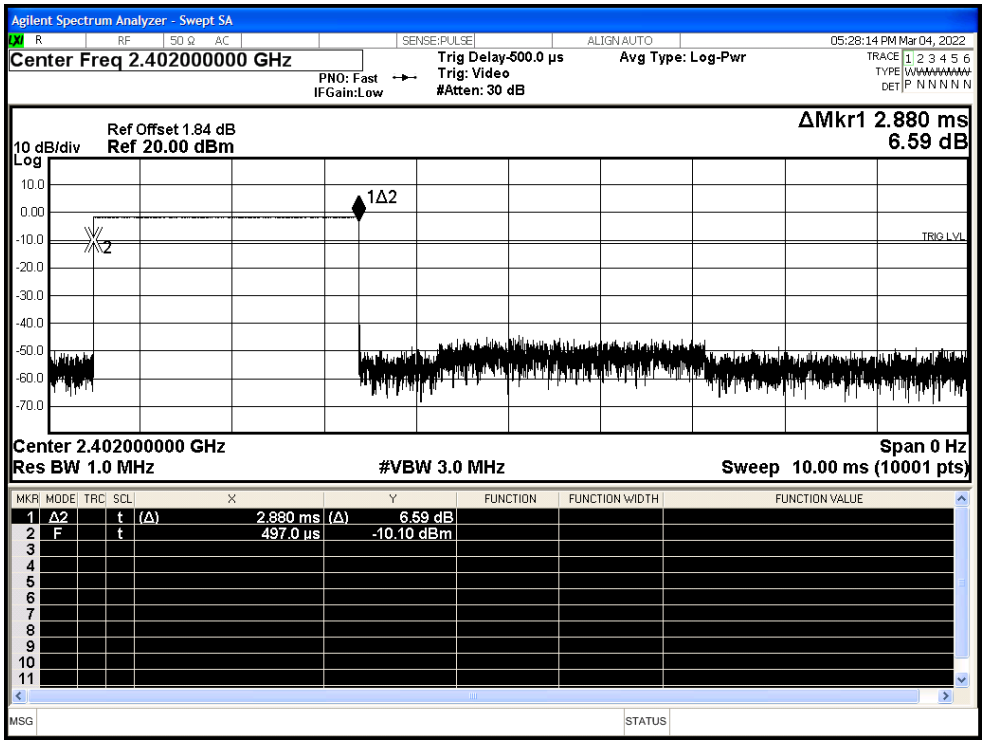


A.4 Dwell Time

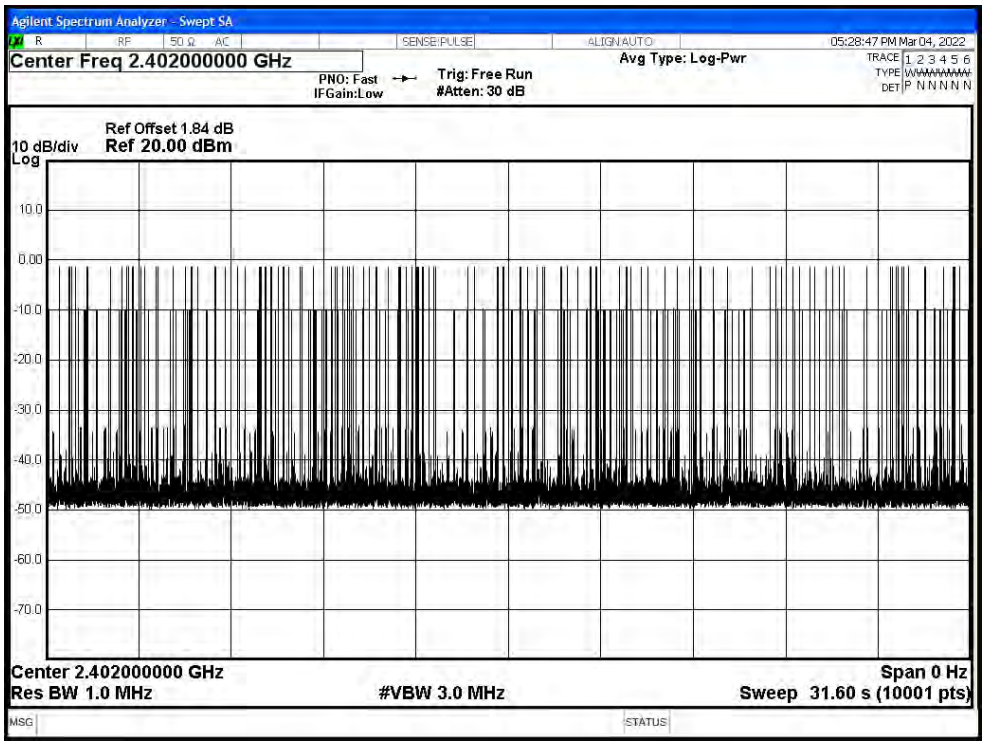
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.88	325.44	113	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.88	311.04	108	31600	400	Pass
NVNT	1-DH5	2480	Ant1	1.79	186.16	104	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.885	340.43	118	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.878	293.556	102	31600	400	Pass
NVNT	2-DH5	2480	Ant1	2.885	337.545	117	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.887	308.909	107	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.887	311.796	108	31600	400	Pass
NVNT	3-DH5	2480	Ant1	2.887	346.44	120	31600	400	Pass

Test Graphs

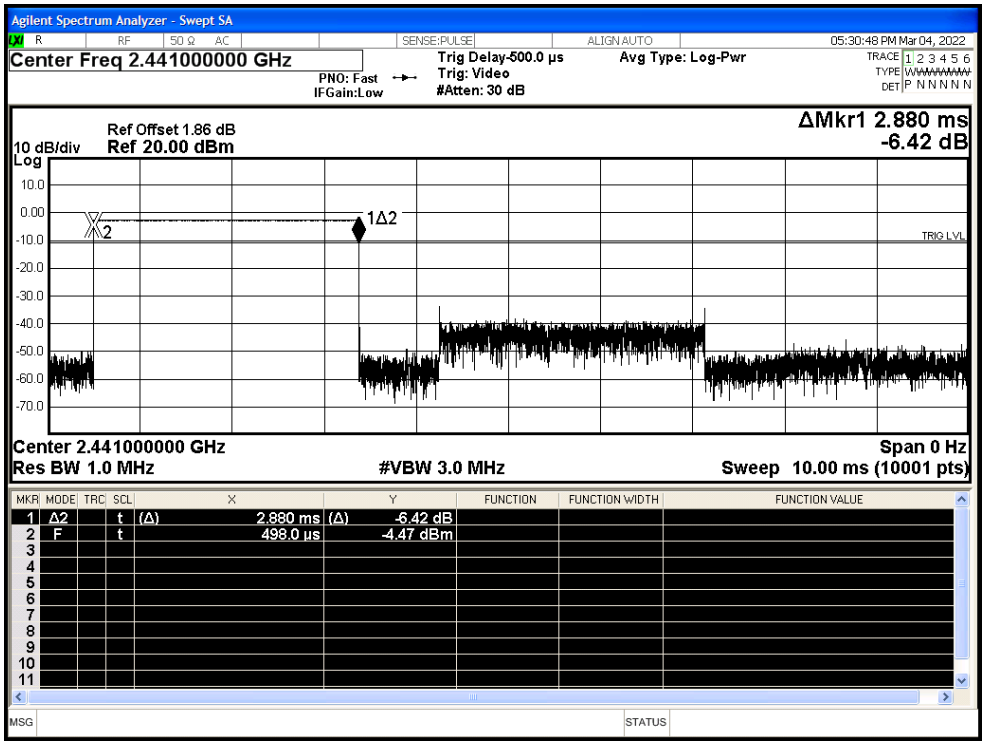
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



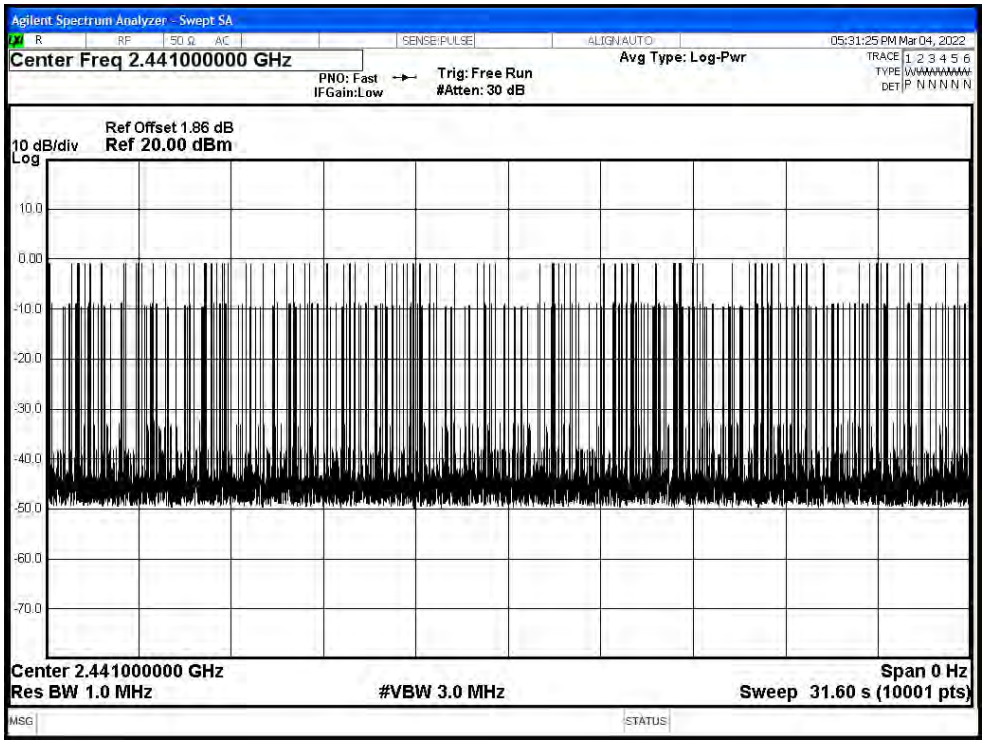
Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



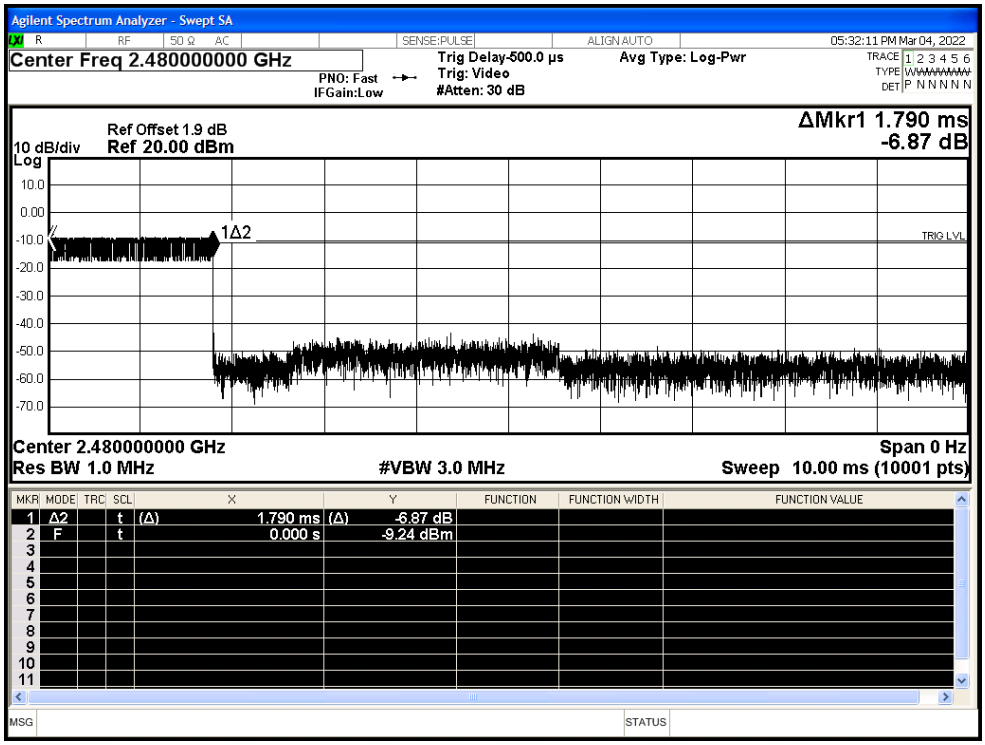
Dwell NVNT 1-DH5 2441MHz Ant1 One Burst



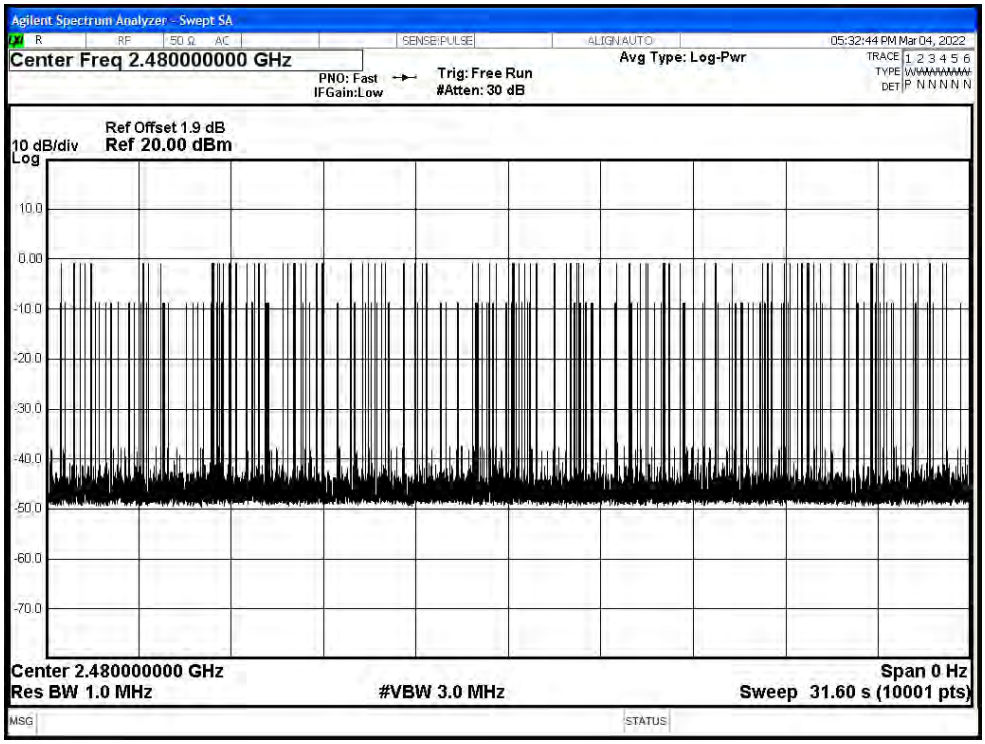
Dwell NVNT 1-DH5 2441MHz Ant1 Accumulated



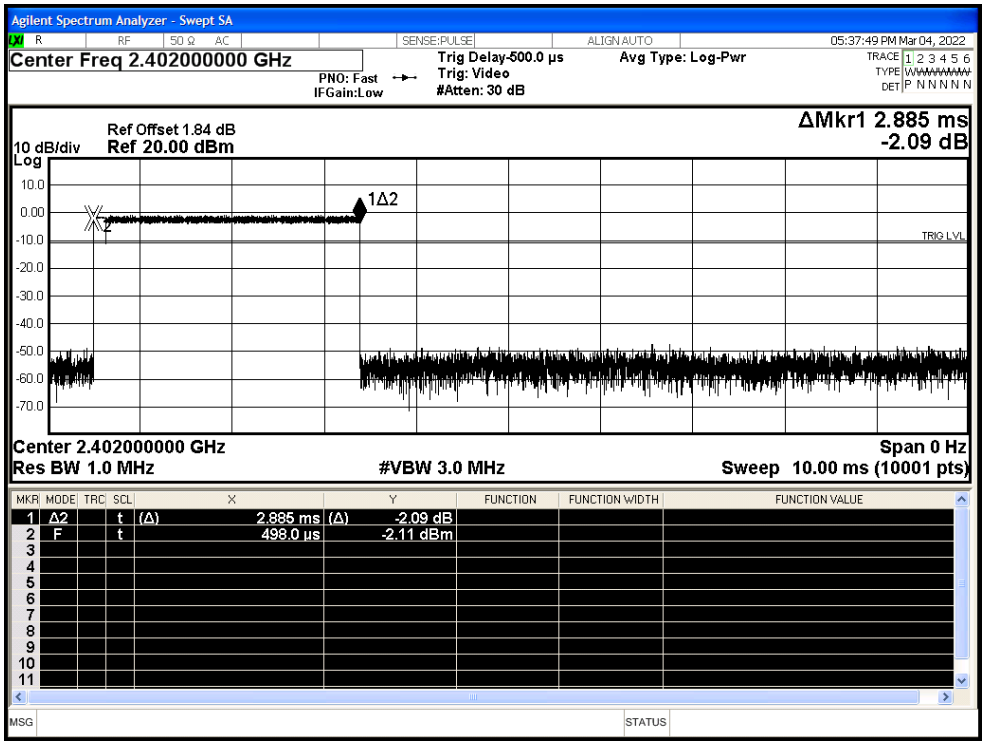
Dwell NVNT 1-DH5 2480MHz Ant1 One Burst



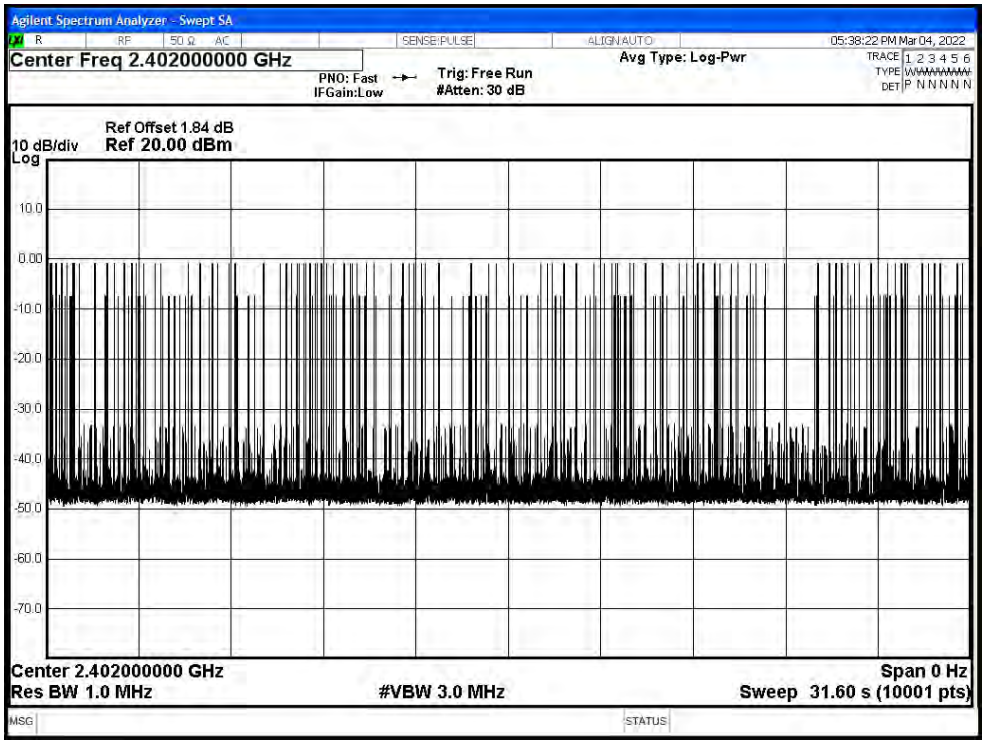
Dwell NVNT 1-DH5 2480MHz Ant1 Accumulated



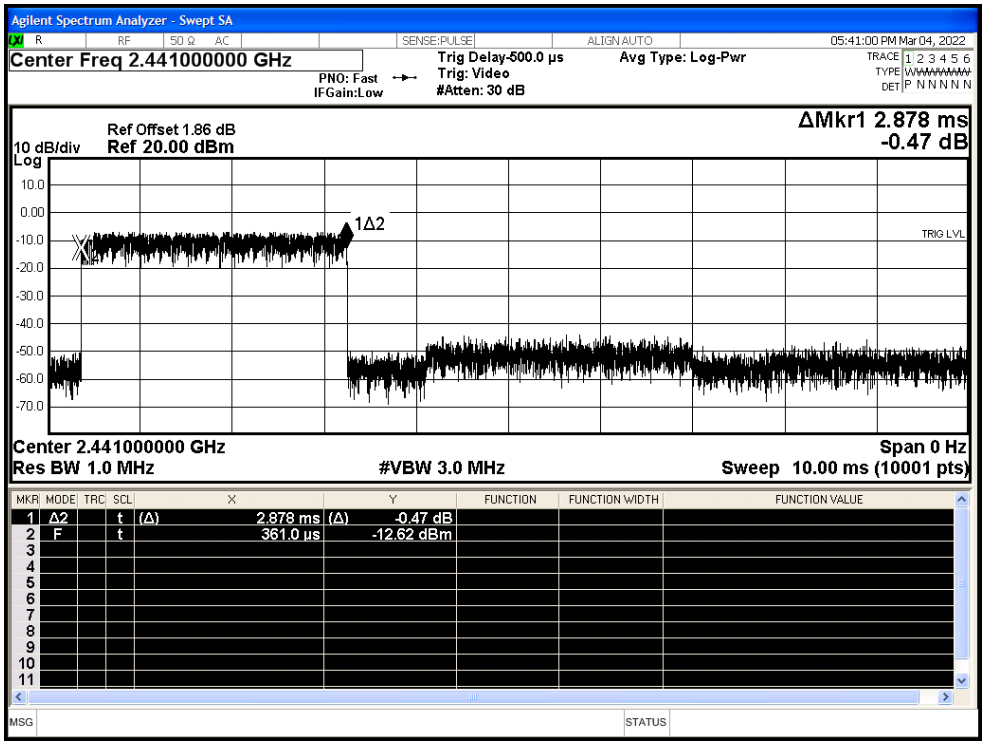
Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



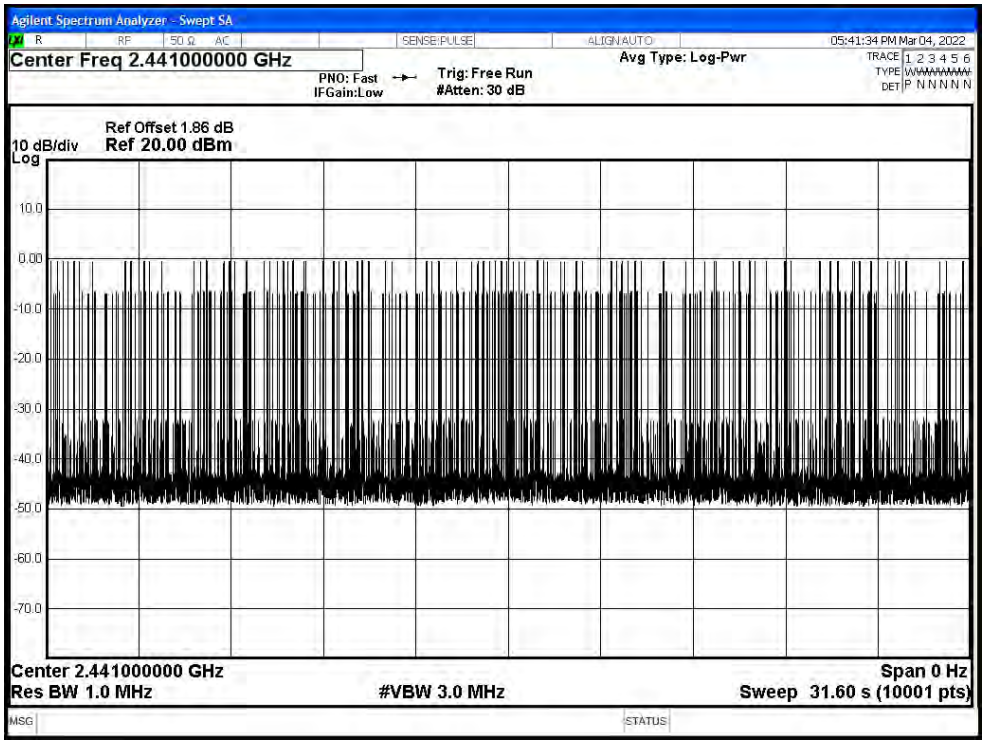
Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



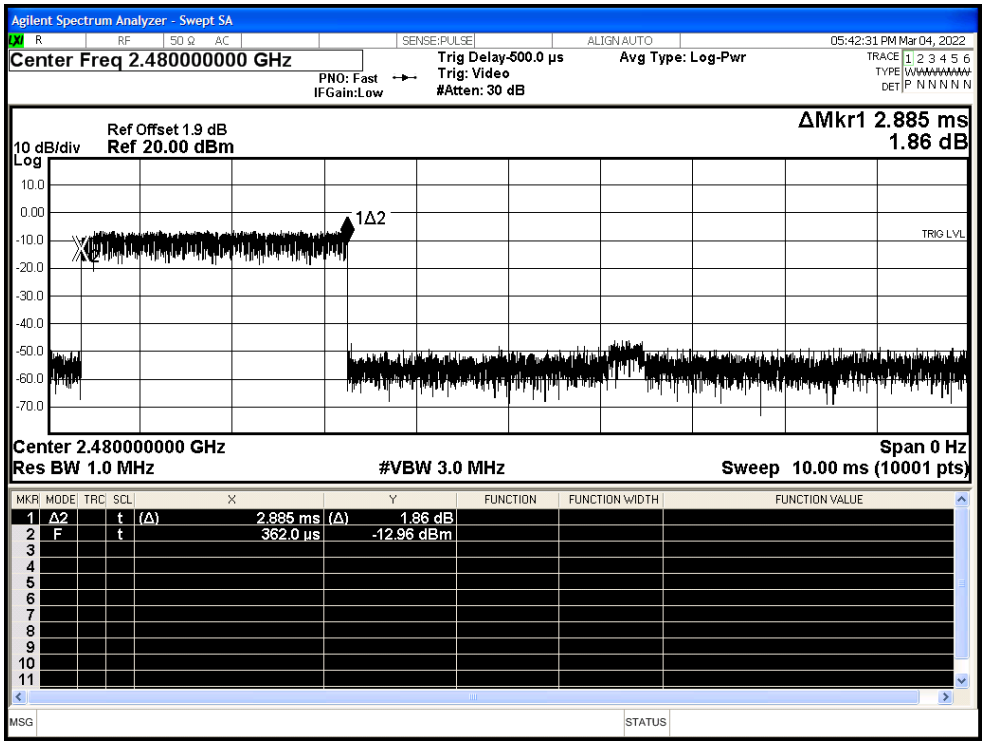
Dwell NVNT 2-DH5 2441MHz Ant1 One Burst



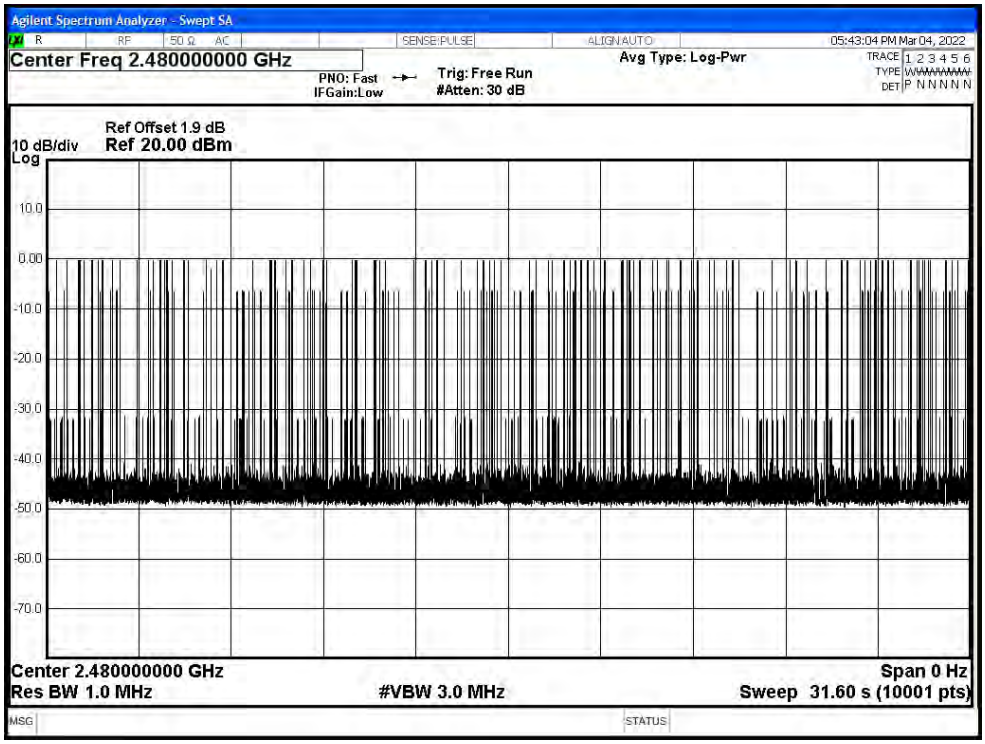
Dwell NVNT 2-DH5 2441MHz Ant1 Accumulated



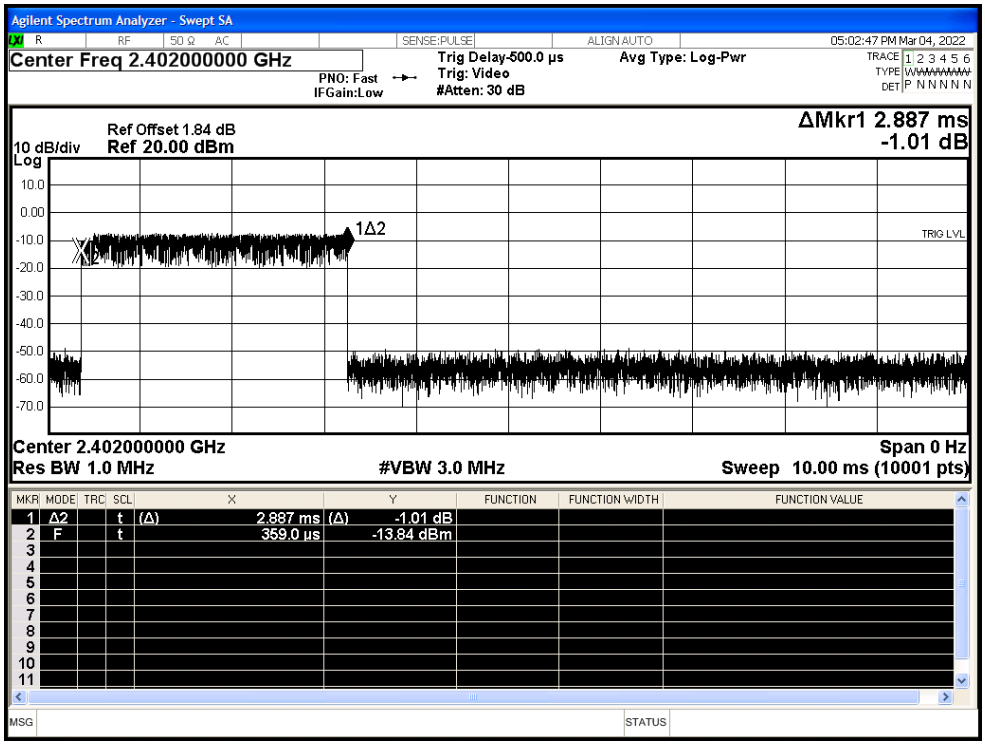
Dwell NVNT 2-DH5 2480MHz Ant1 One Burst



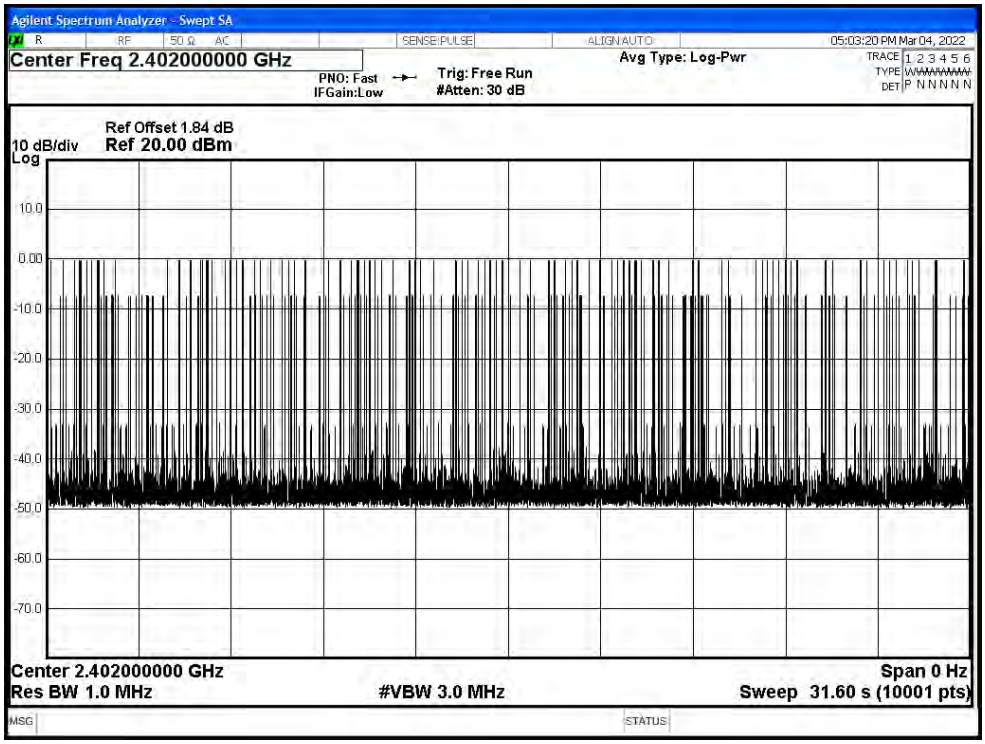
Dwell NVNT 2-DH5 2480MHz Ant1 Accumulated



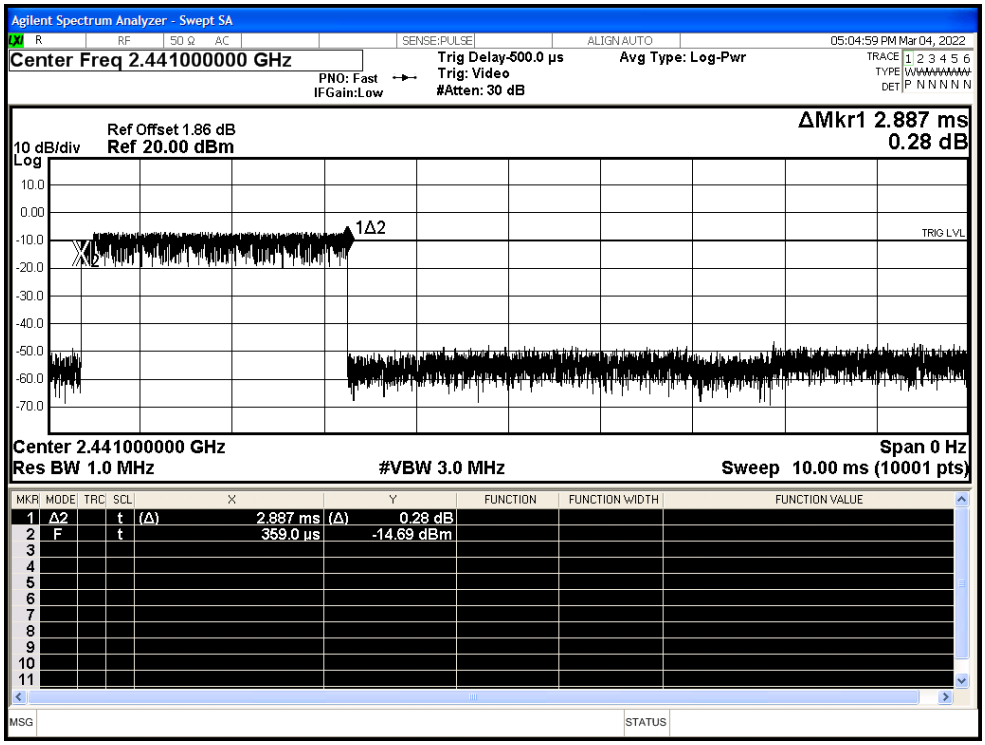
Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



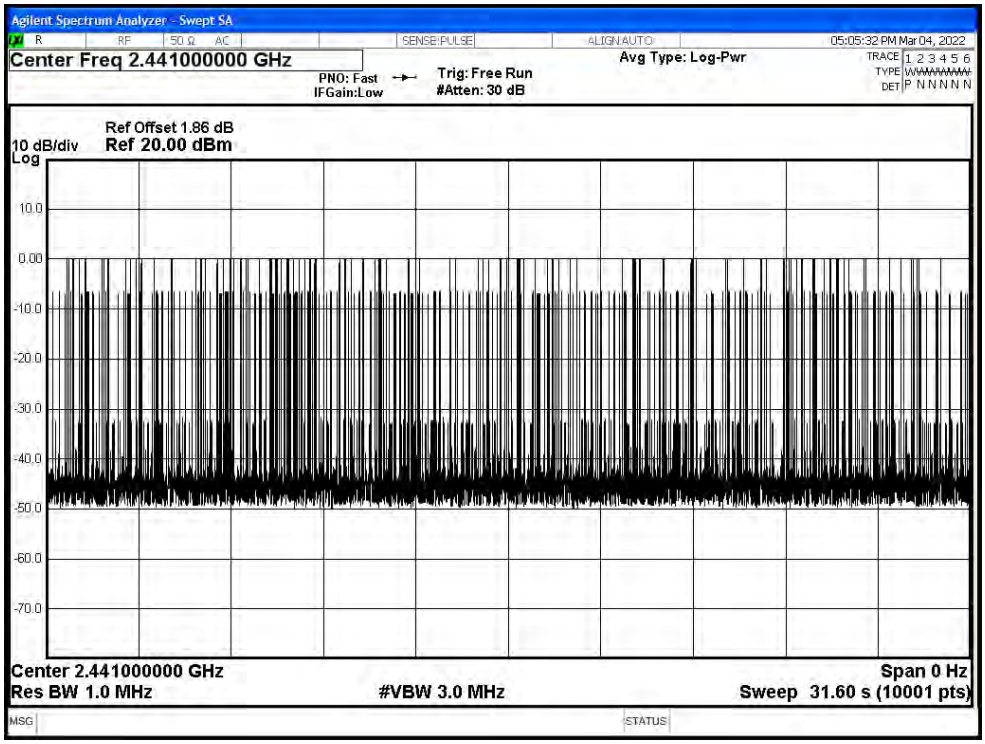
Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated



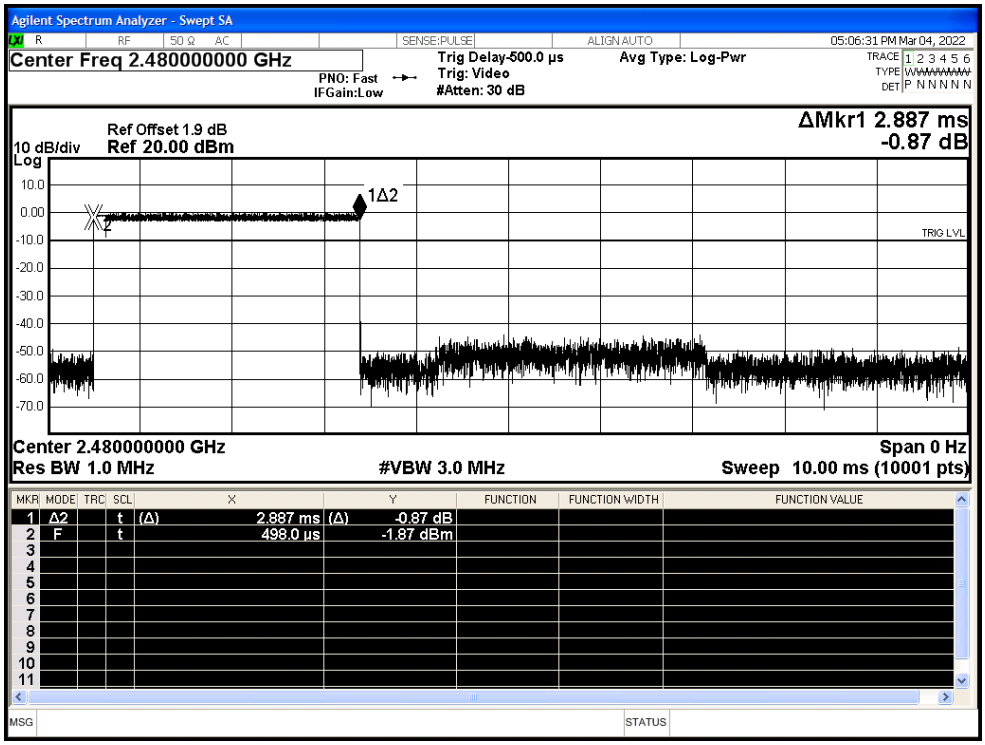
Dwell NVNT 3-DH5 2441MHz Ant1 One Burst



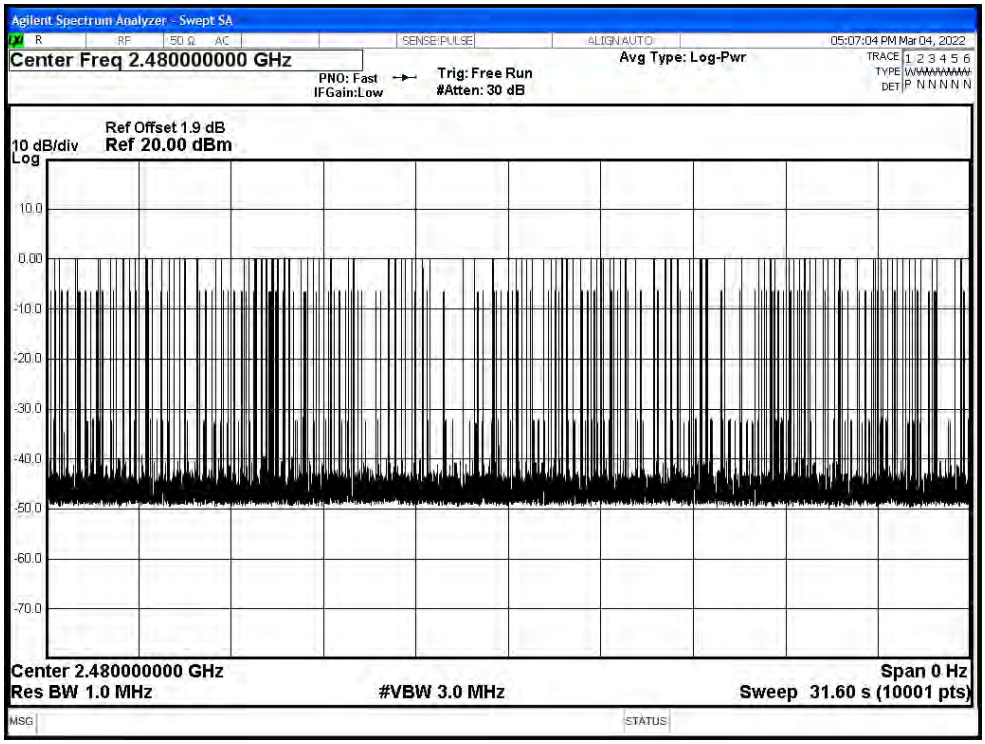
Dwell NVNT 3-DH5 2441MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2480MHz Ant1 One Burst



Dwell NVNT 3-DH5 2480MHz Ant1 Accumulated

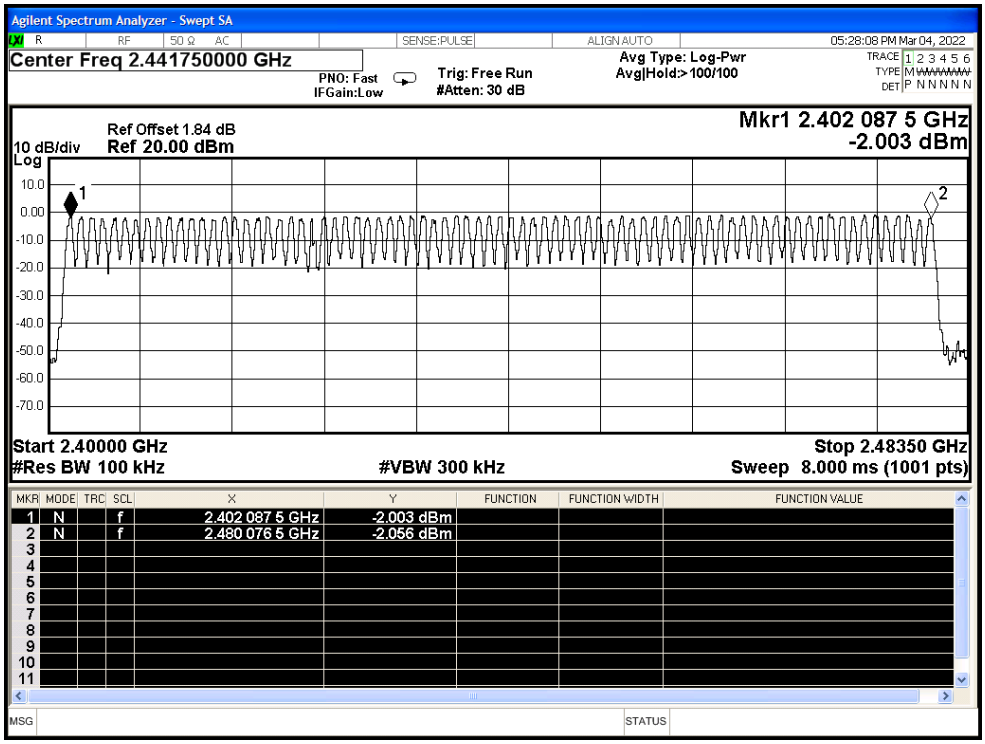


A.5 Number of Hopping Channel

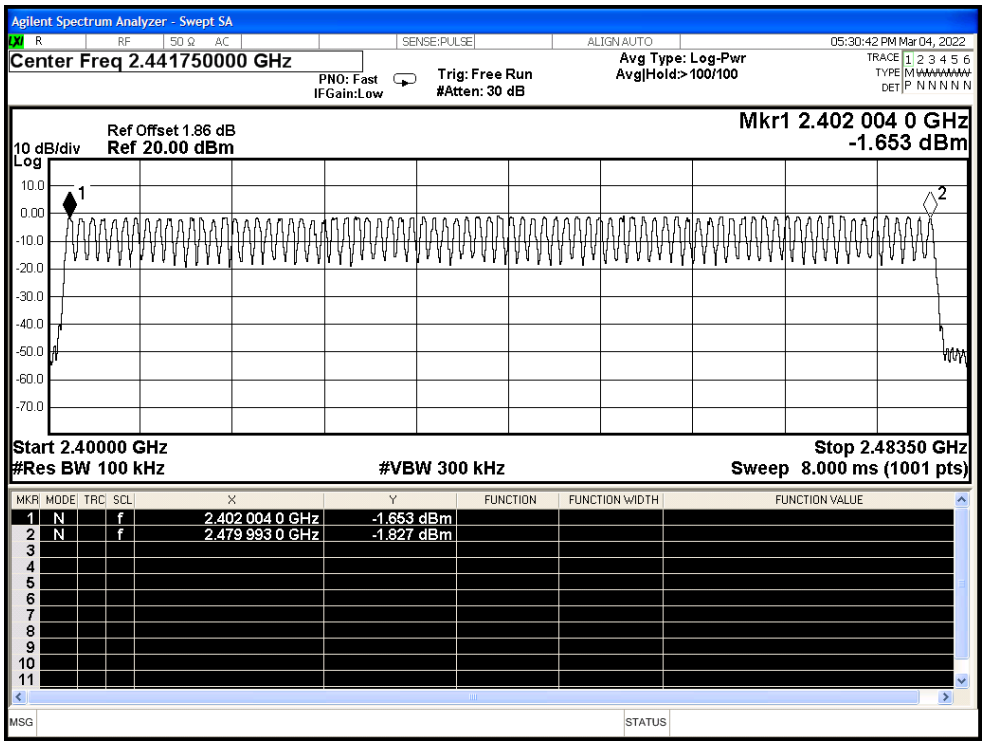
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

Test Graphs

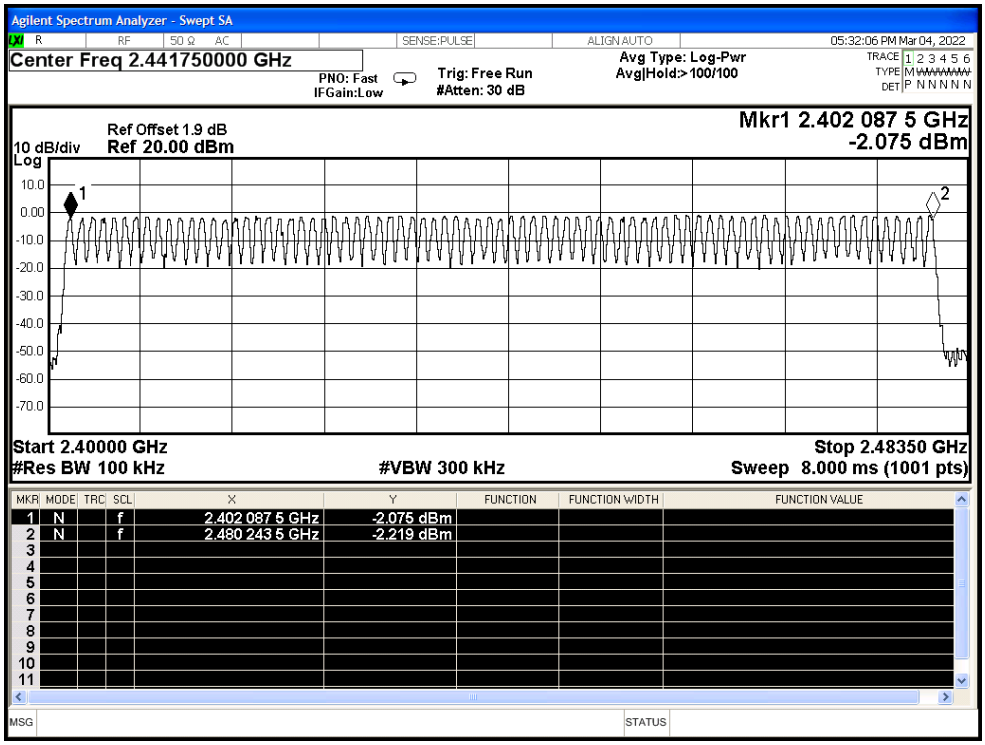
Hopping No. NVNT 1-DH5 2402MHz Ant1



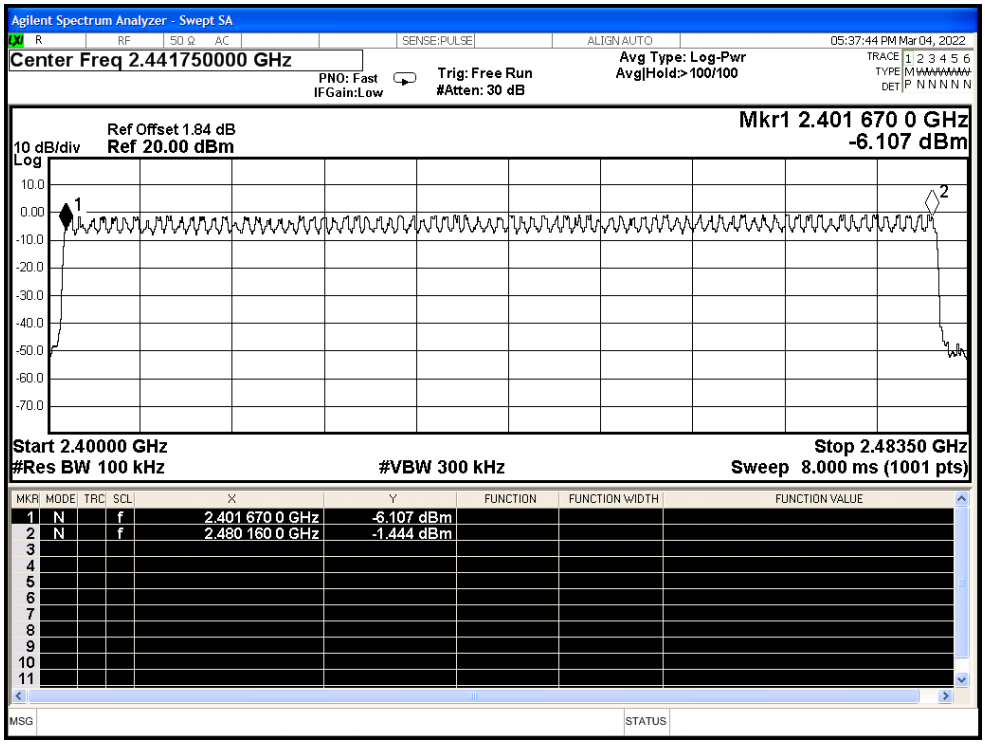
Hopping No. NVNT 1-DH5 2441MHz Ant1



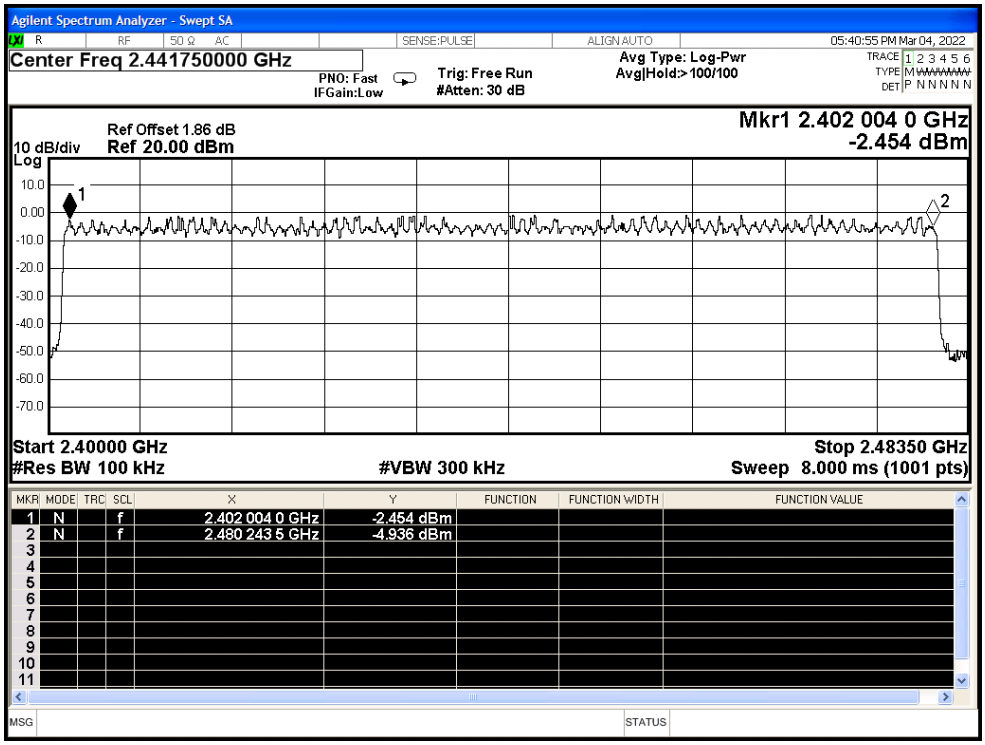
Hopping No. NVNT 1-DH5 2480MHz Ant1



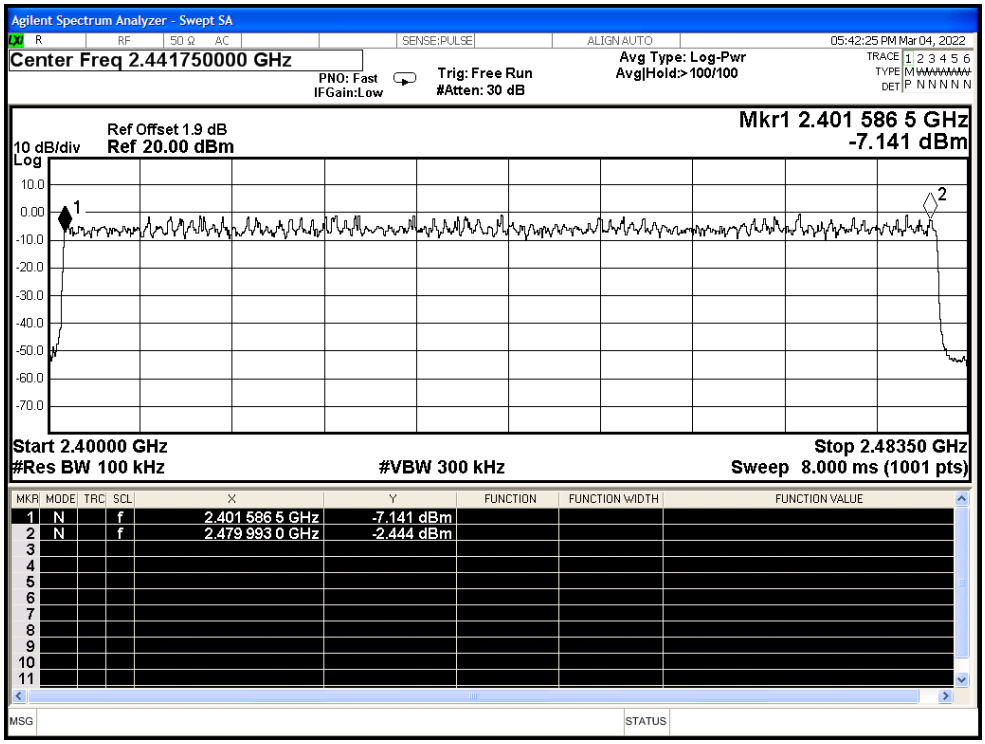
Hopping No. NVNT 2-DH5 2402MHz Ant1



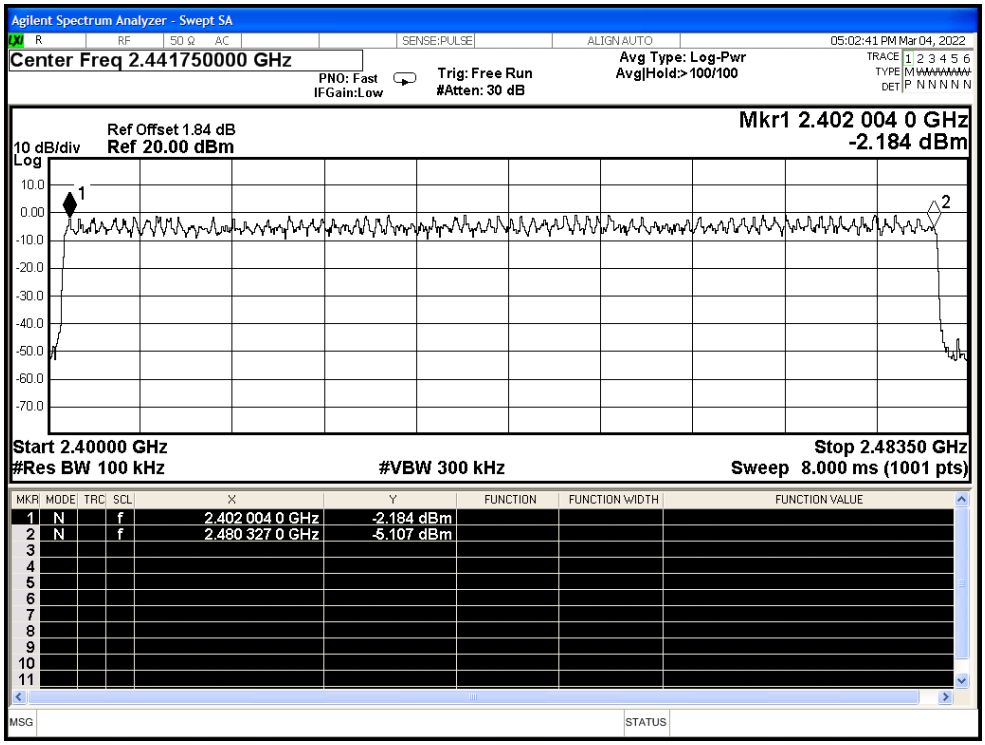
Hopping No. NVNT 2-DH5 2441MHz Ant1



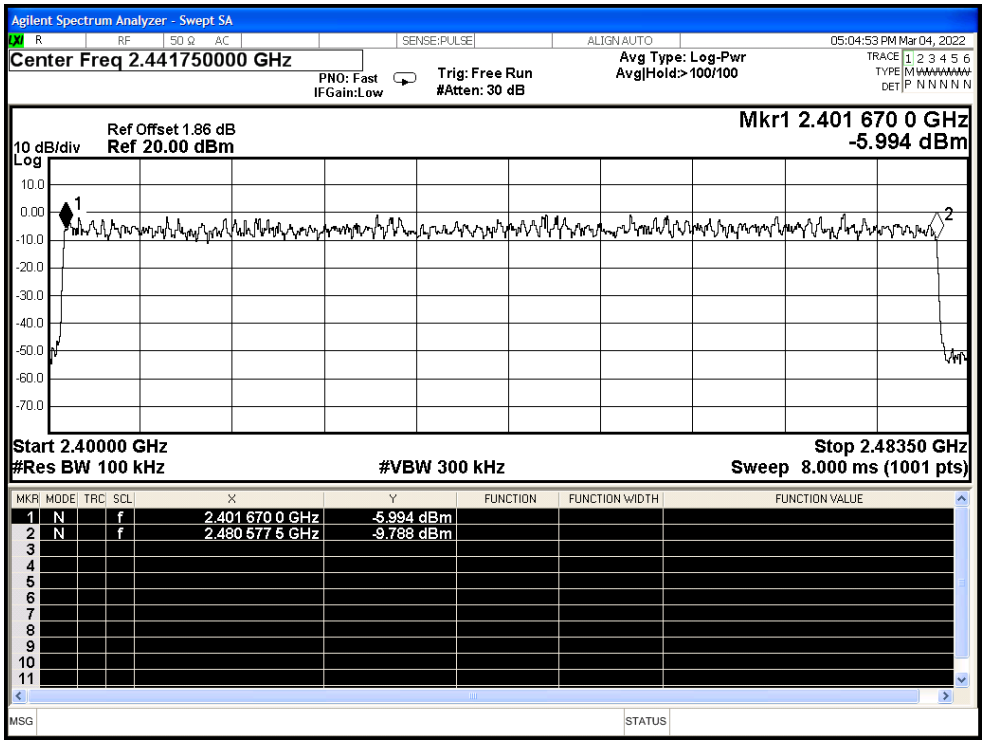
Hopping No. NVNT 2-DH5 2480MHz Ant1



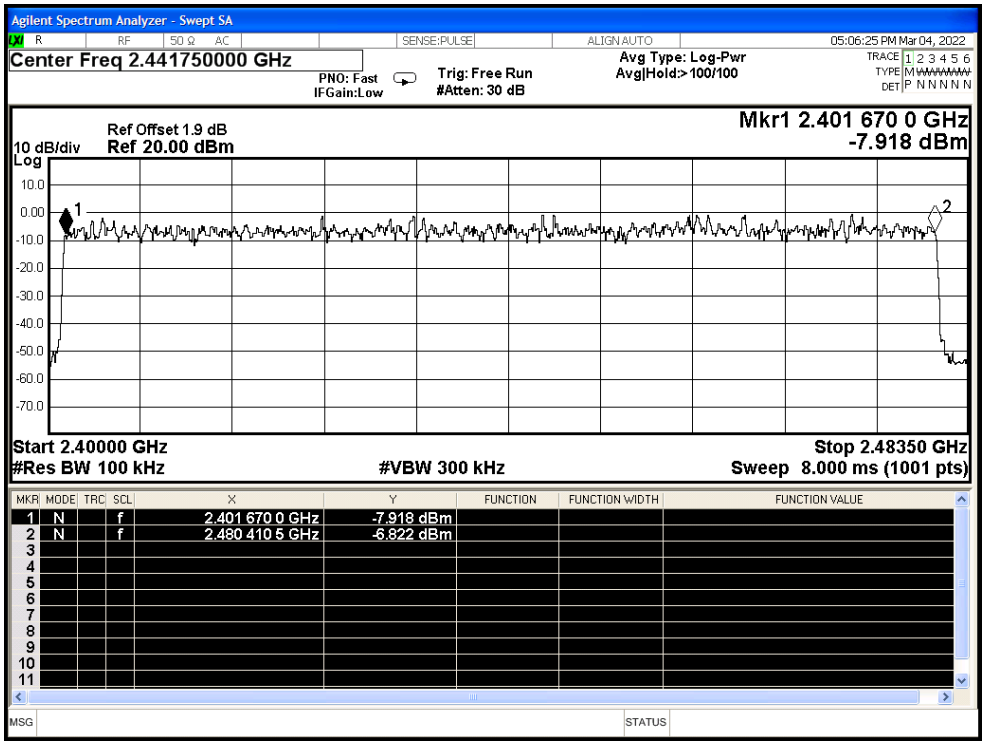
Hopping No. NVNT 3-DH5 2402MHz Ant1



Hopping No. NVNT 3-DH5 2441MHz Ant1



Hopping No. NVNT 3-DH5 2480MHz Ant1

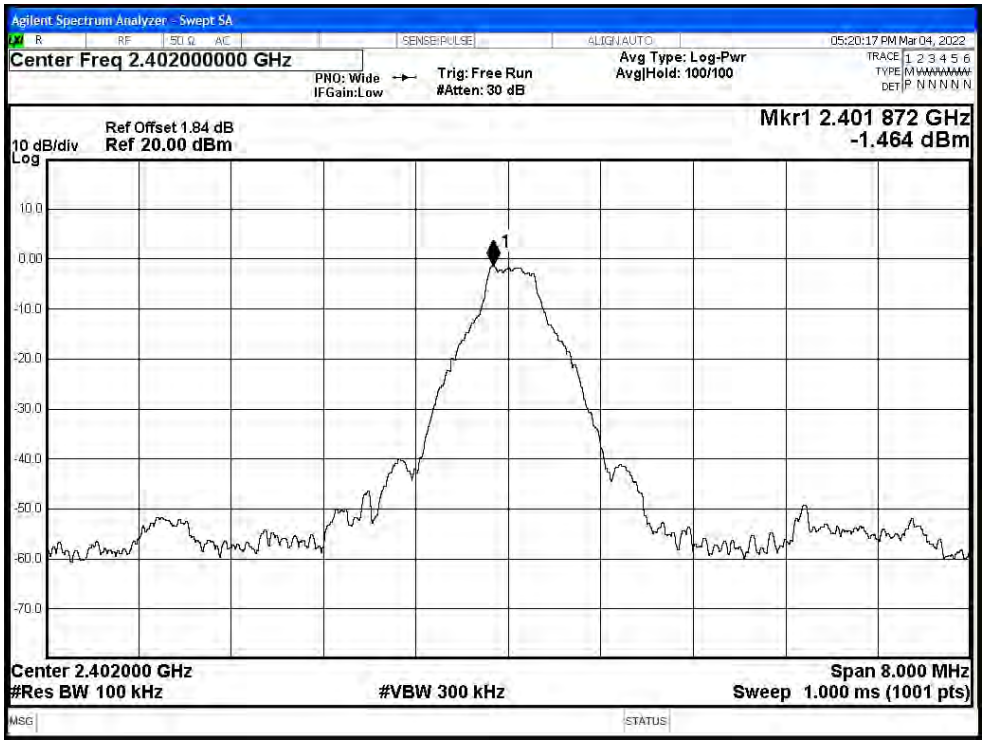


A.6 Band Edge

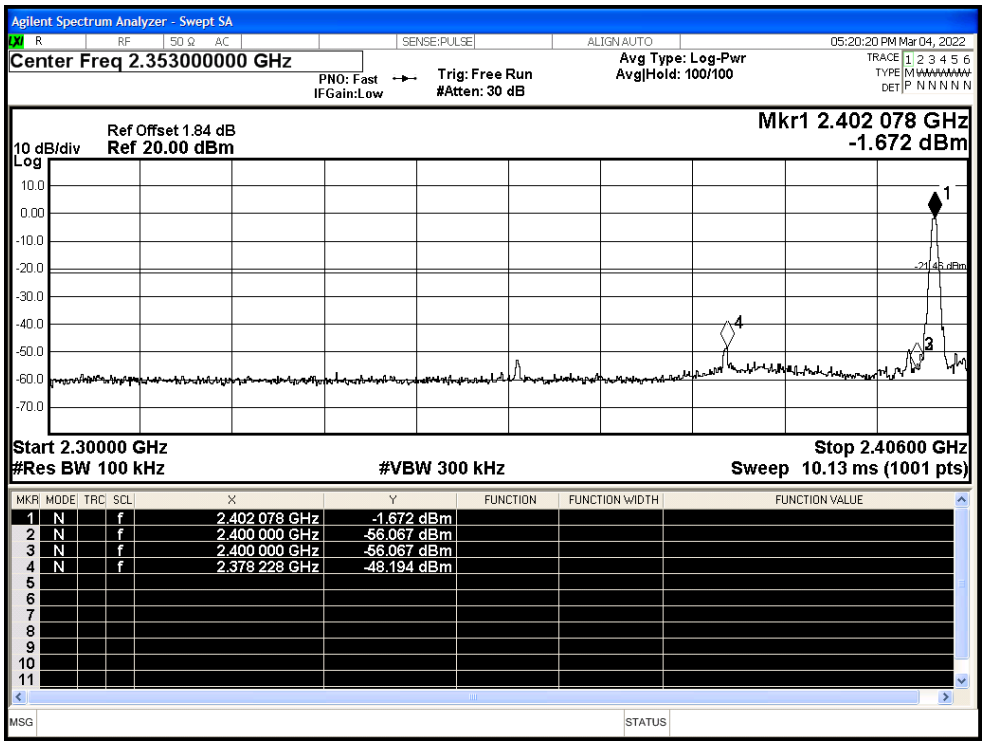
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-46.73	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-47.49	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-46.37	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-48.74	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-48.15	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-51.14	-20	Pass

Test Graphs

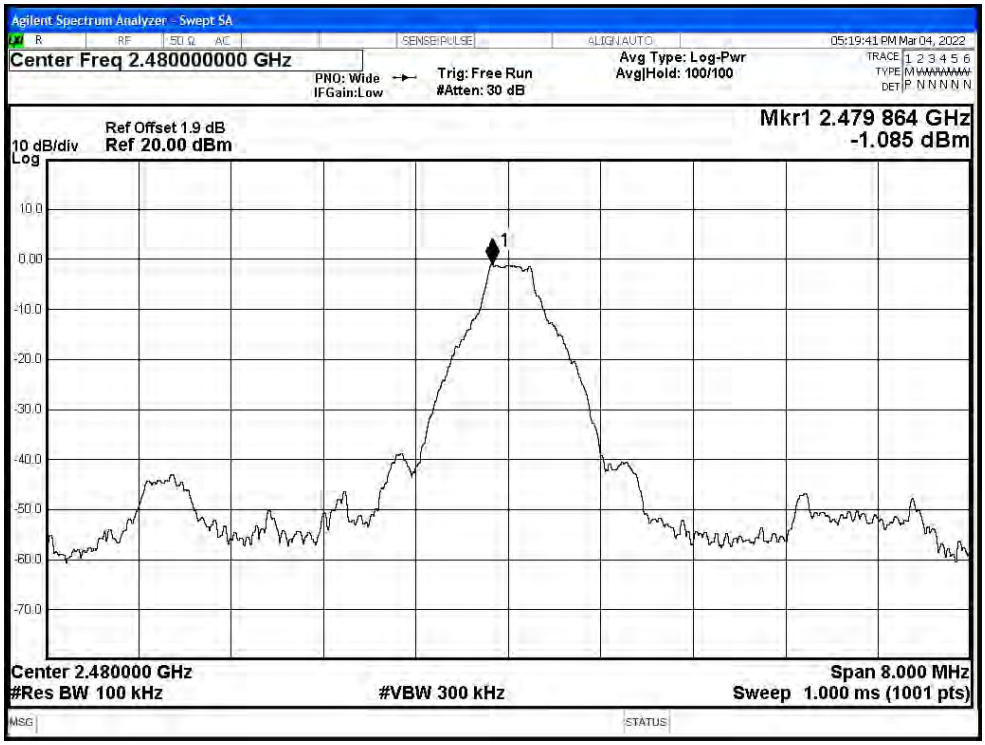
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



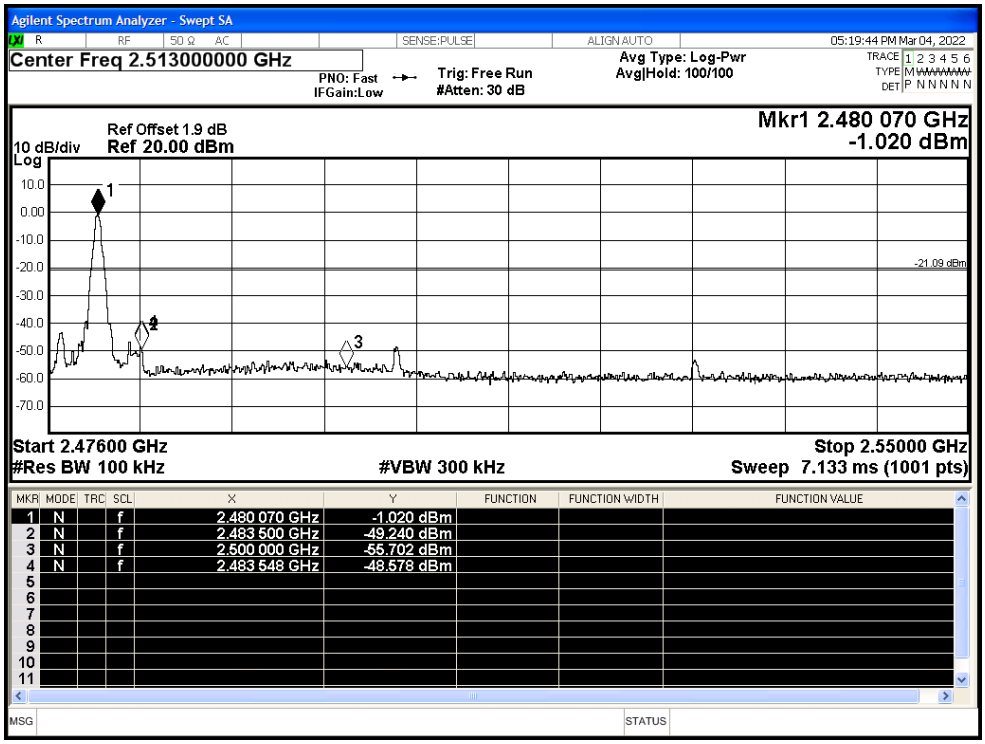
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



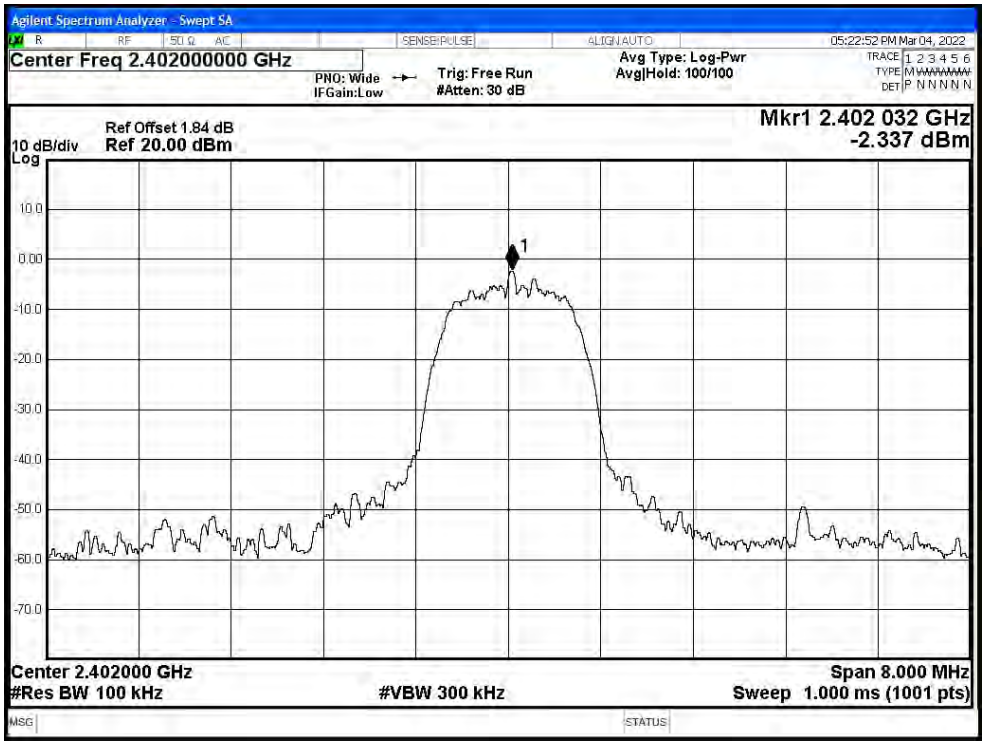
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



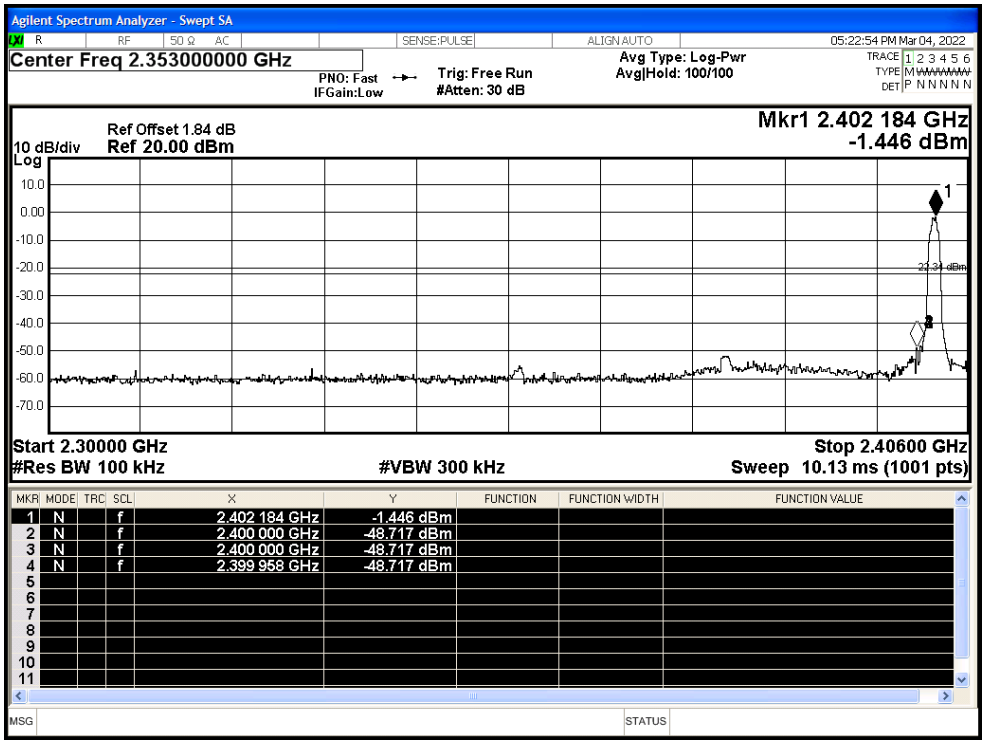
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



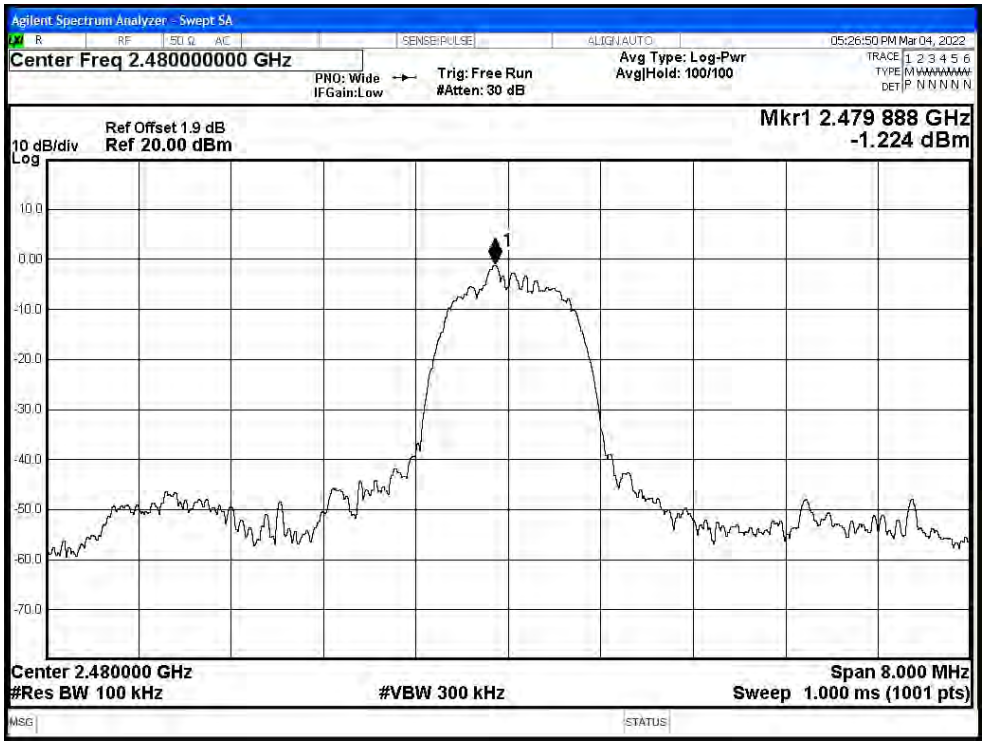
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



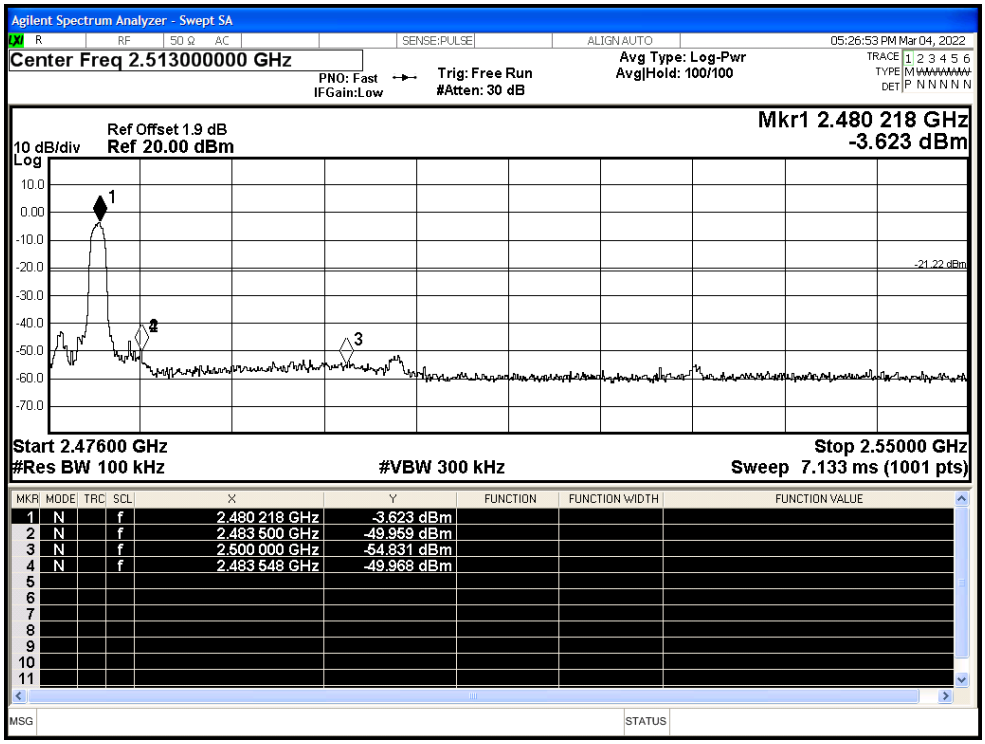
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



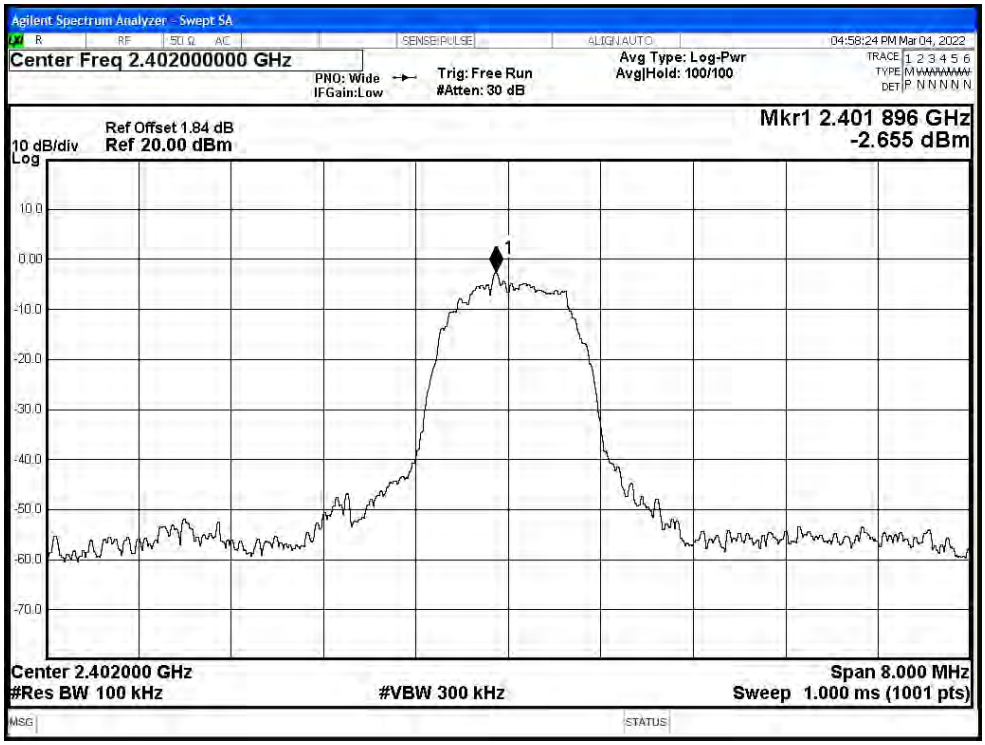
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



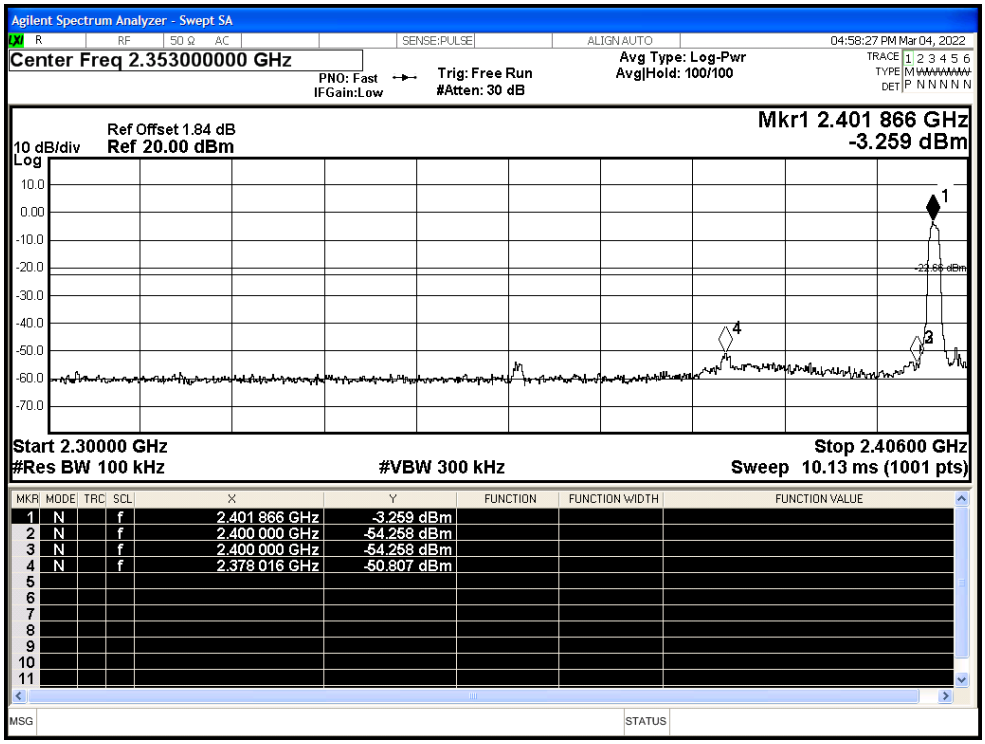
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



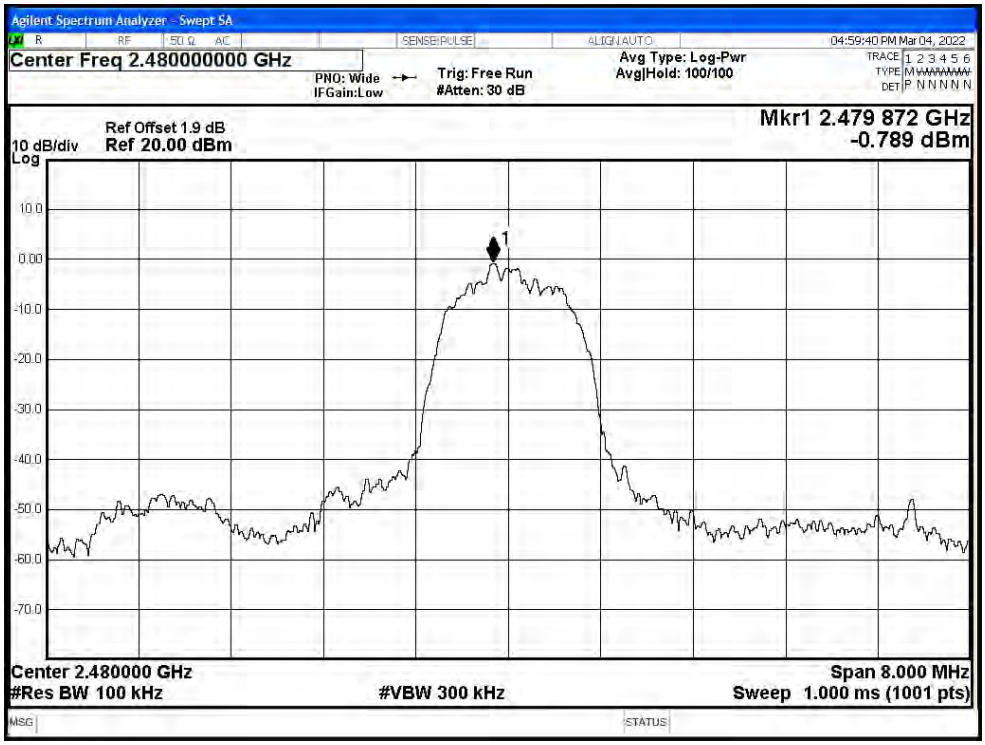
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



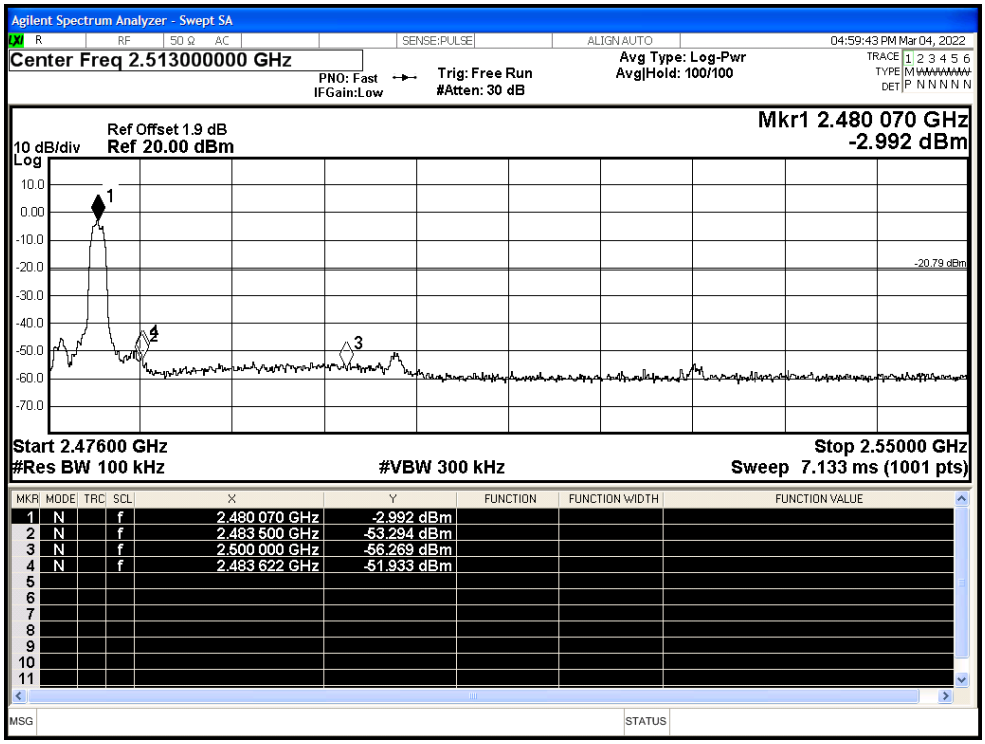
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



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



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

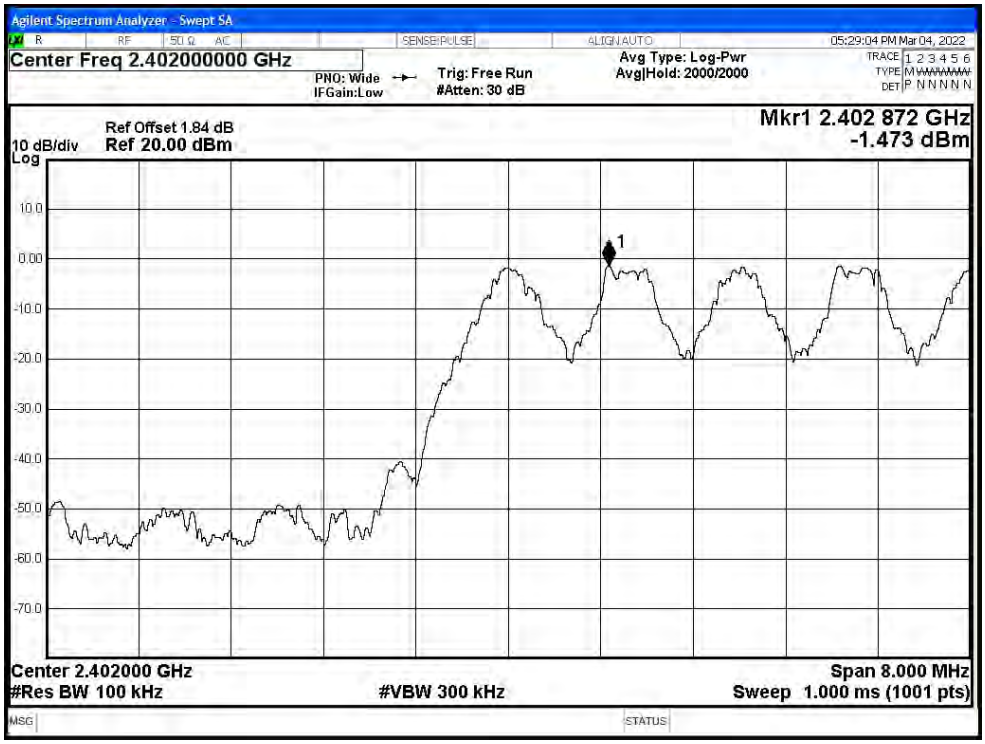


(Hopping)

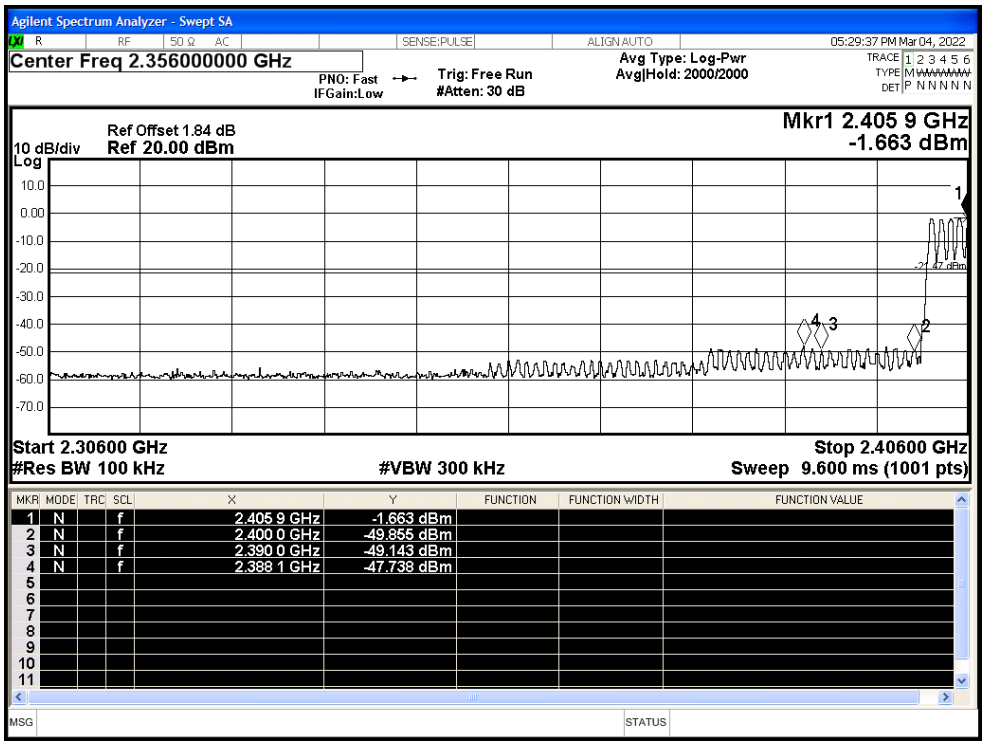
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-46.26	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-47.95	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-47.18	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-49.05	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-48.32	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-46.55	-20	Pass

Test Graphs

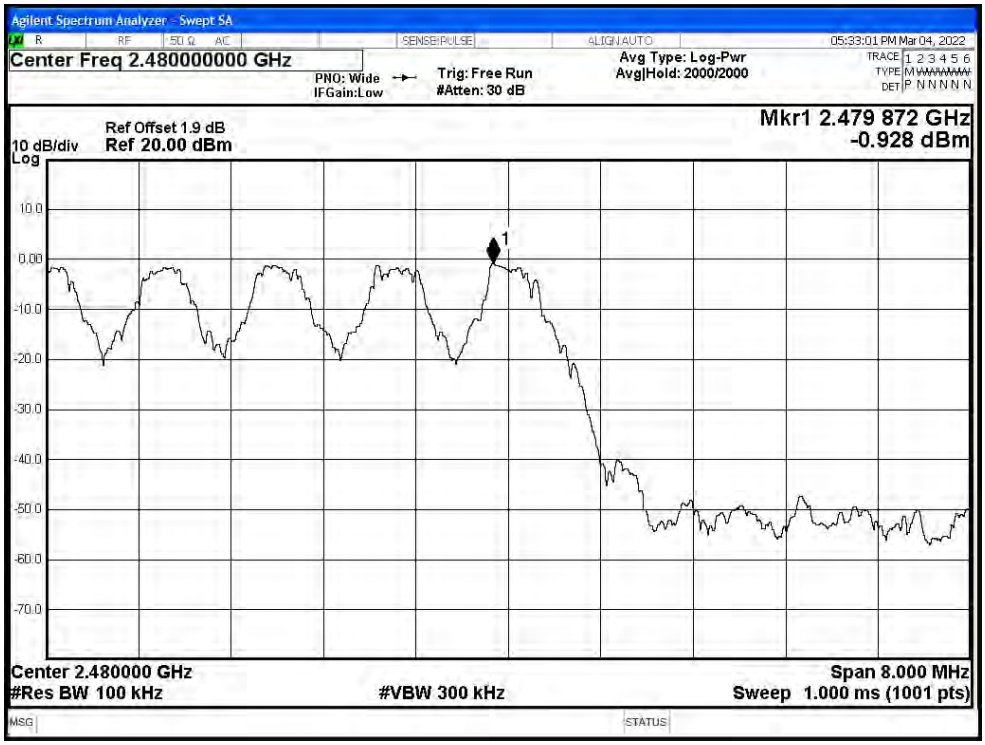
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



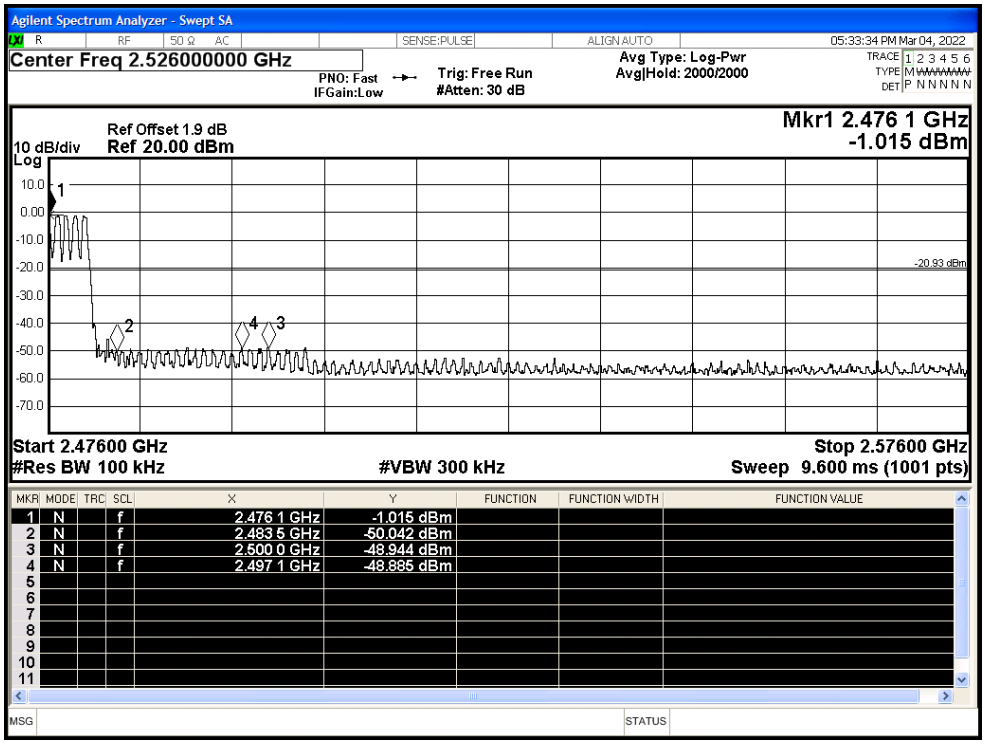
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



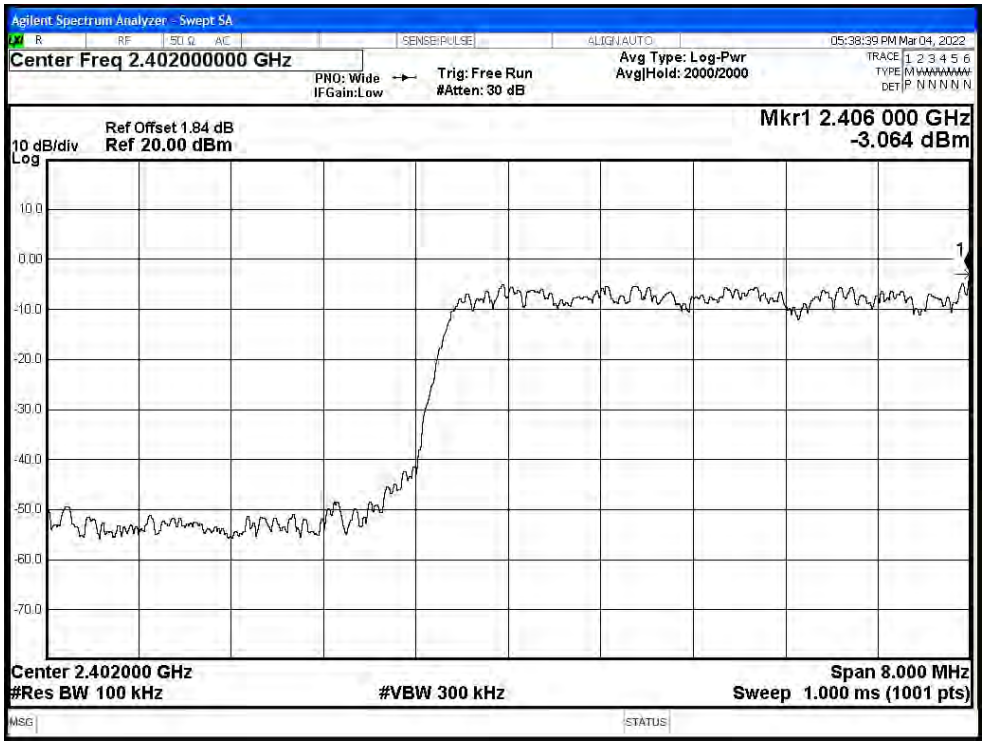
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



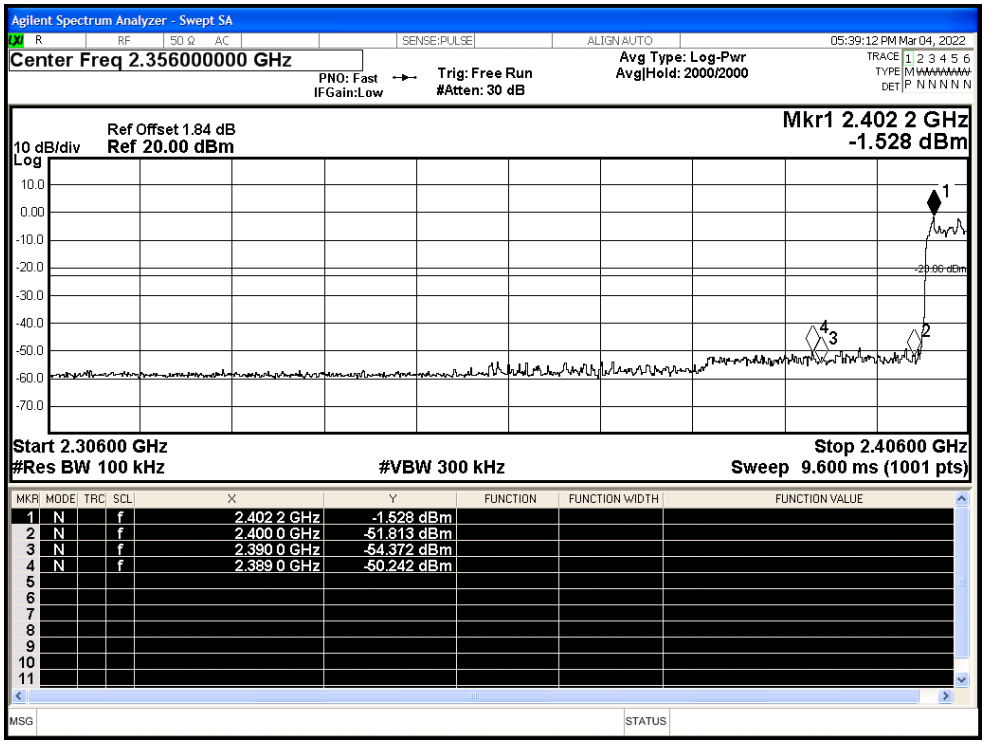
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



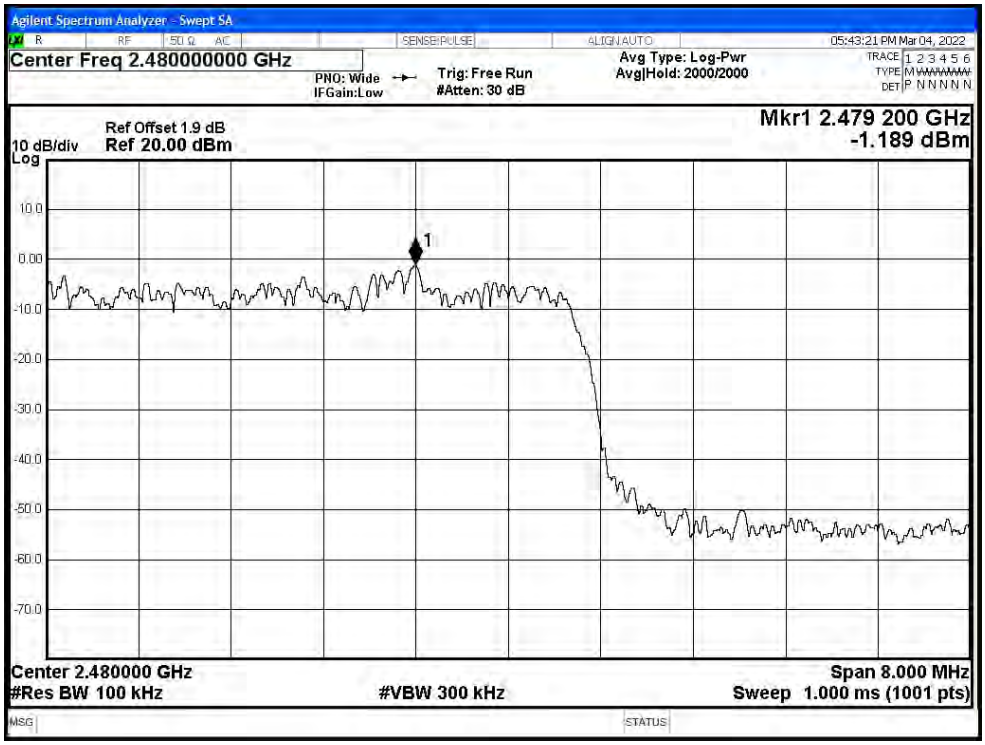
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



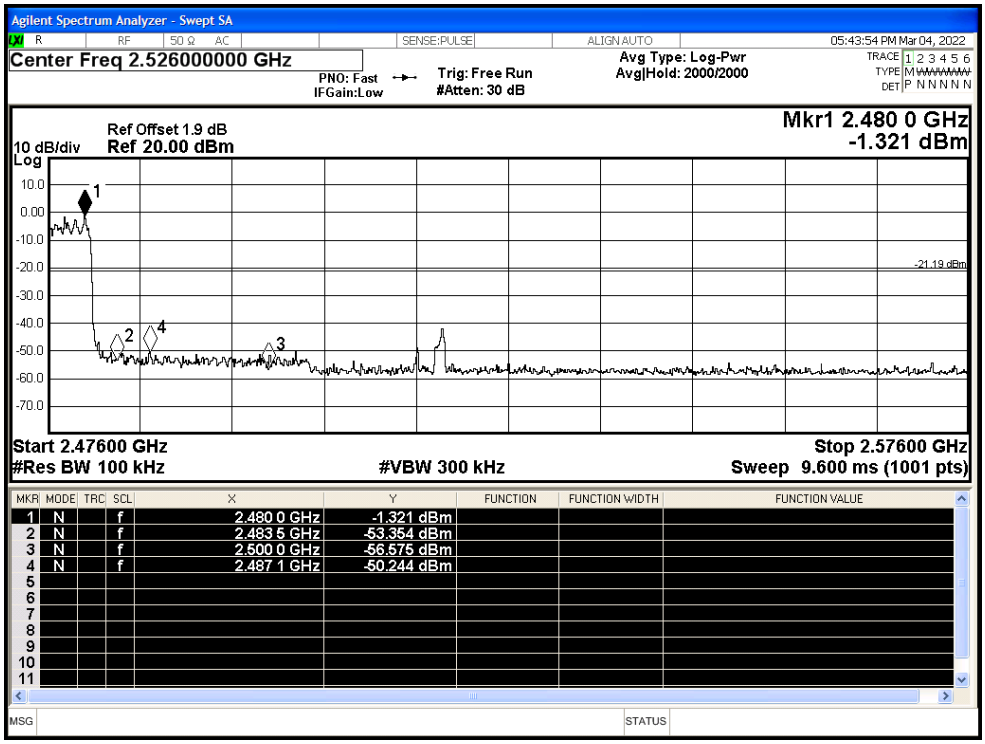
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



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

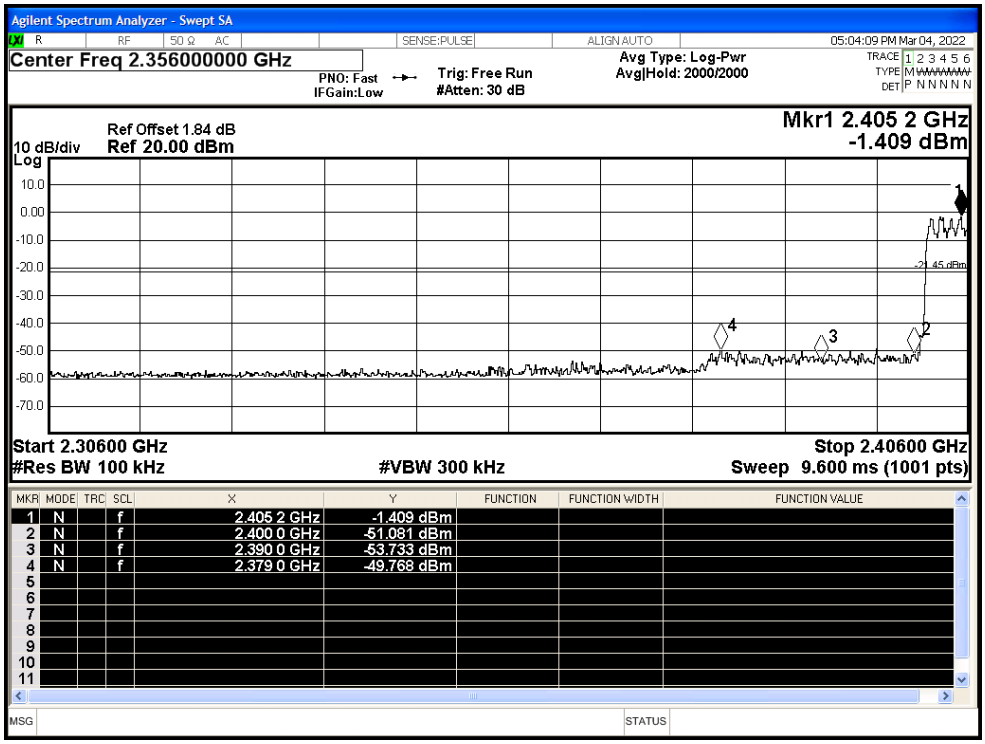


Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission

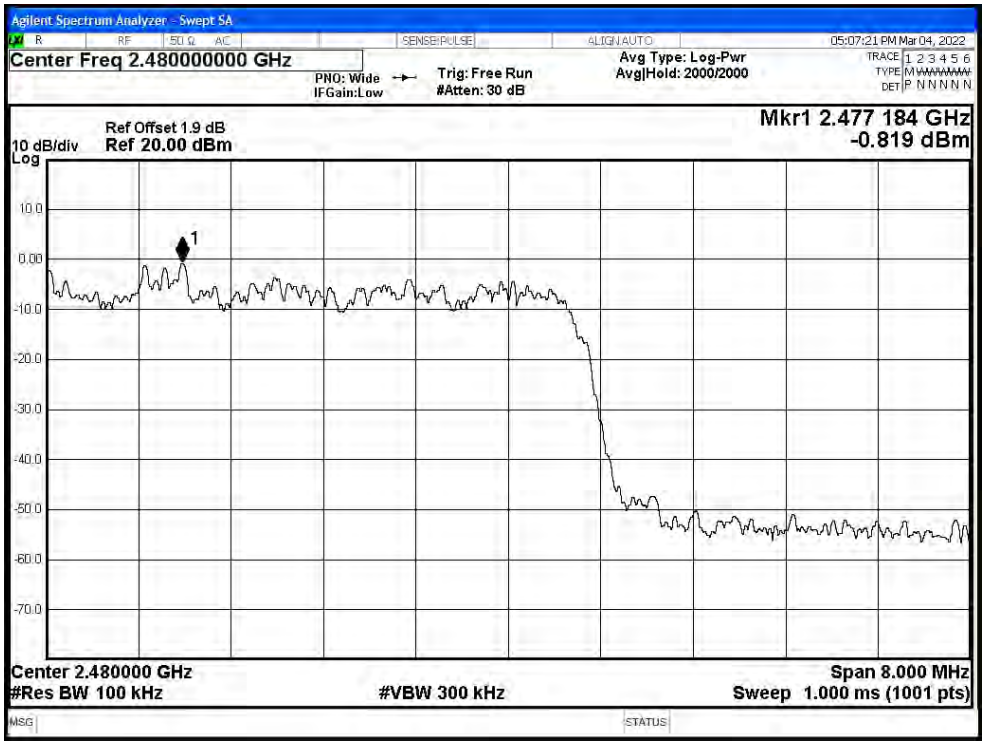


Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref

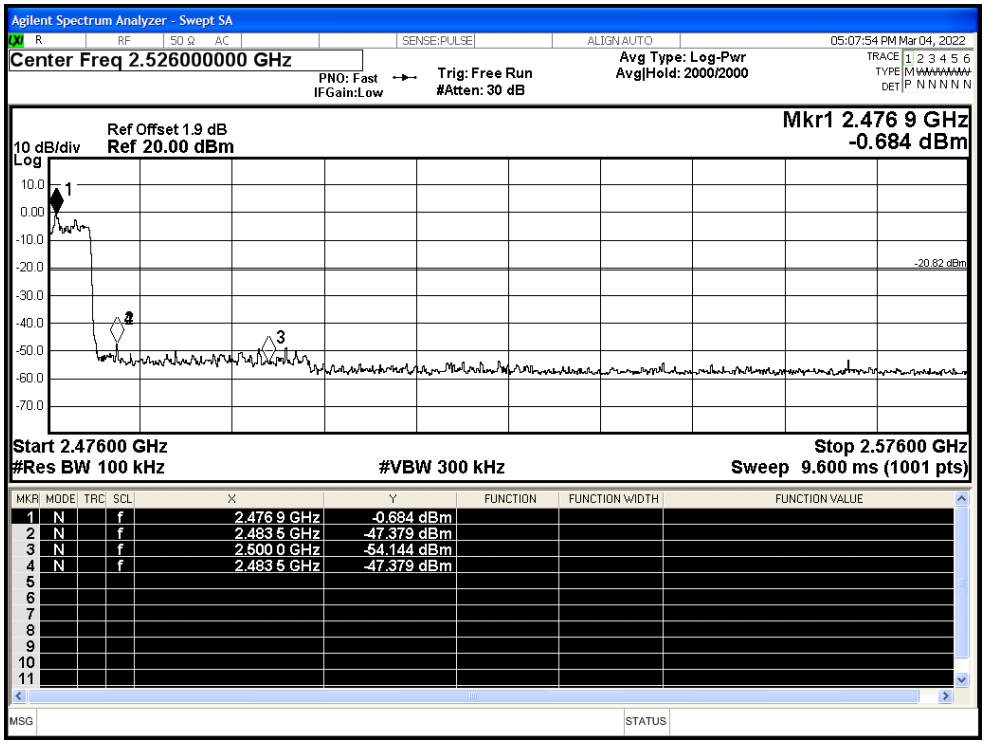
Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission



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



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

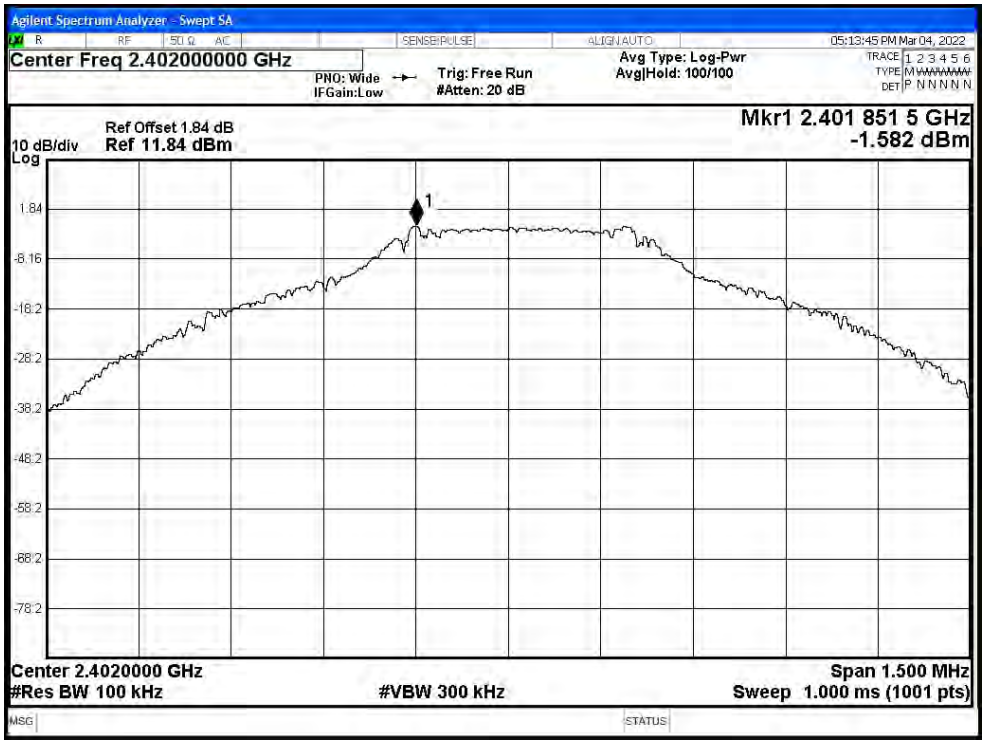


A.7 Conducted RF Spurious Emission

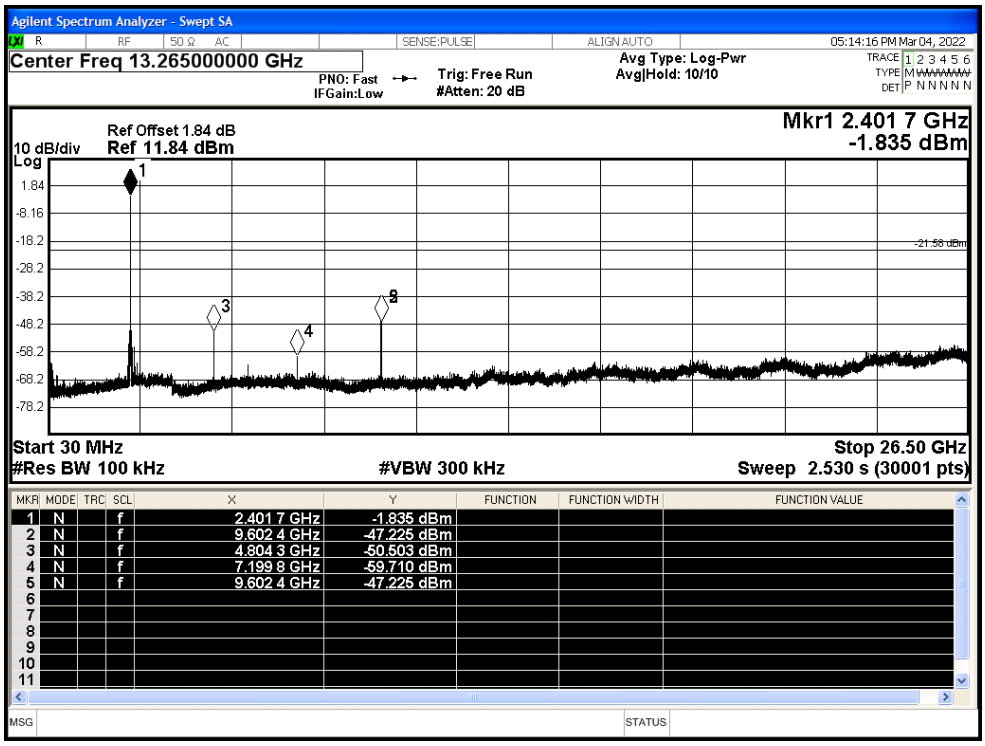
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-45.64	-20	Pass
NVNT	1-DH5	2441	Ant1	-45.46	-20	Pass
NVNT	1-DH5	2480	Ant1	-45.13	-20	Pass
NVNT	2-DH5	2402	Ant1	-45.31	-20	Pass
NVNT	2-DH5	2441	Ant1	-44.93	-20	Pass
NVNT	2-DH5	2480	Ant1	-45.02	-20	Pass
NVNT	3-DH5	2402	Ant1	-45.16	-20	Pass
NVNT	3-DH5	2441	Ant1	-43.68	-20	Pass
NVNT	3-DH5	2480	Ant1	-26.38	-20	Pass

Test Graphs

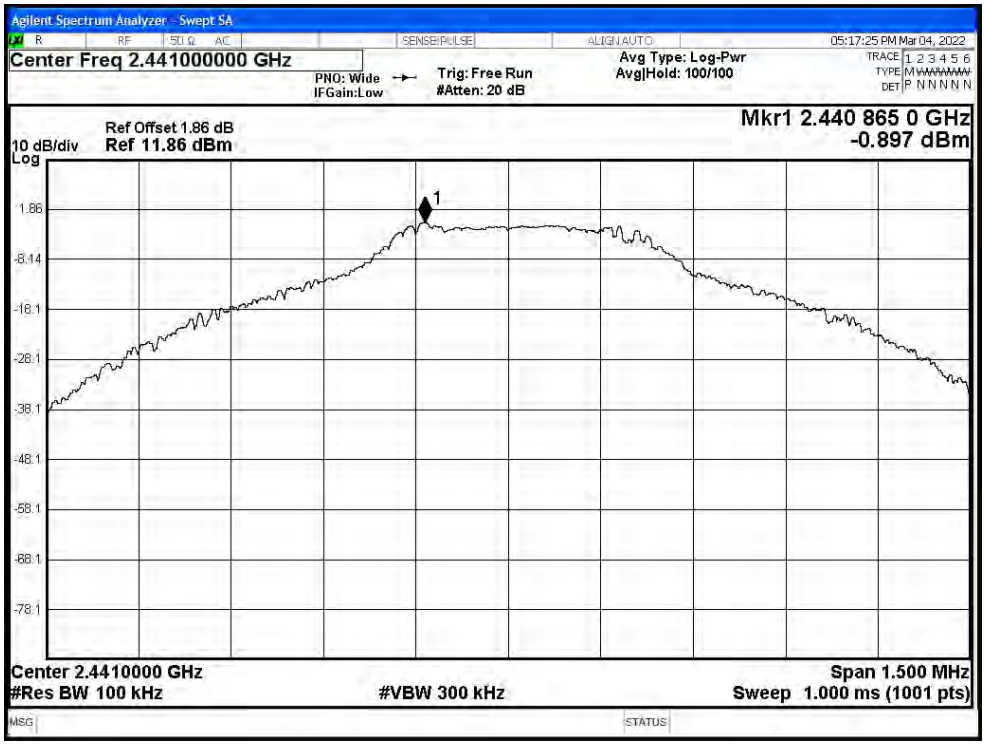
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



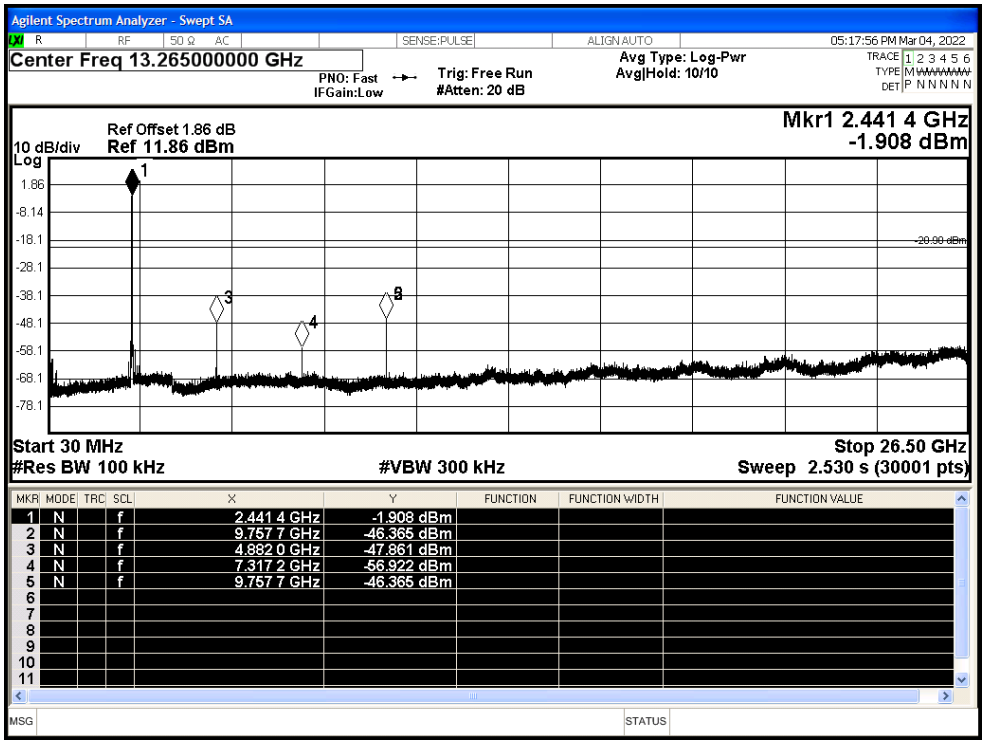
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



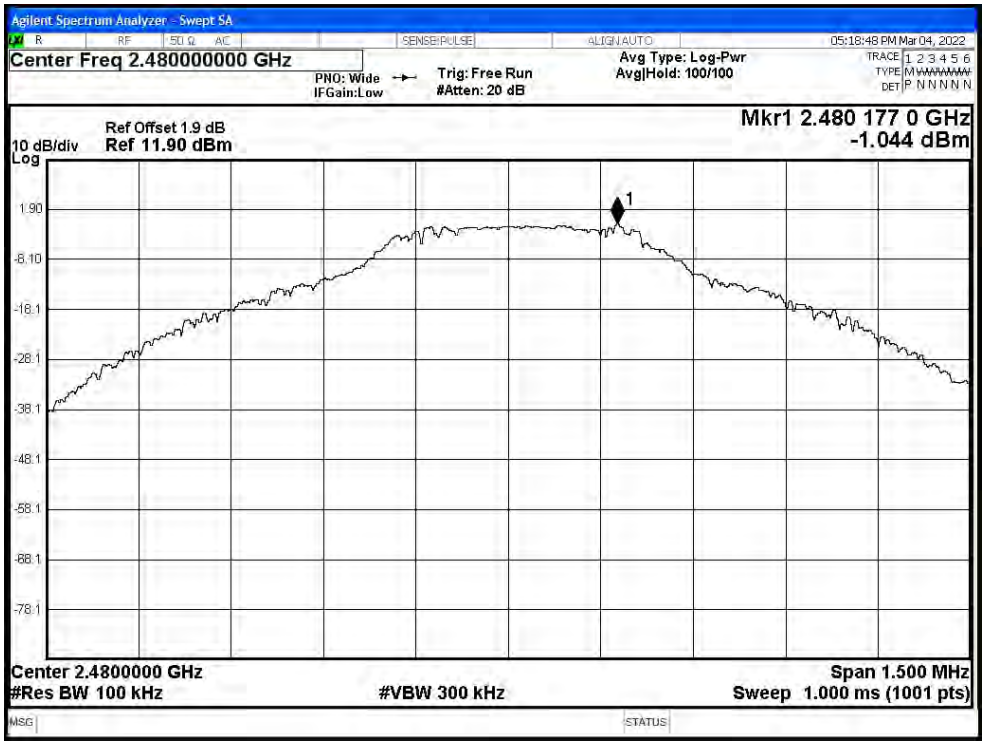
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



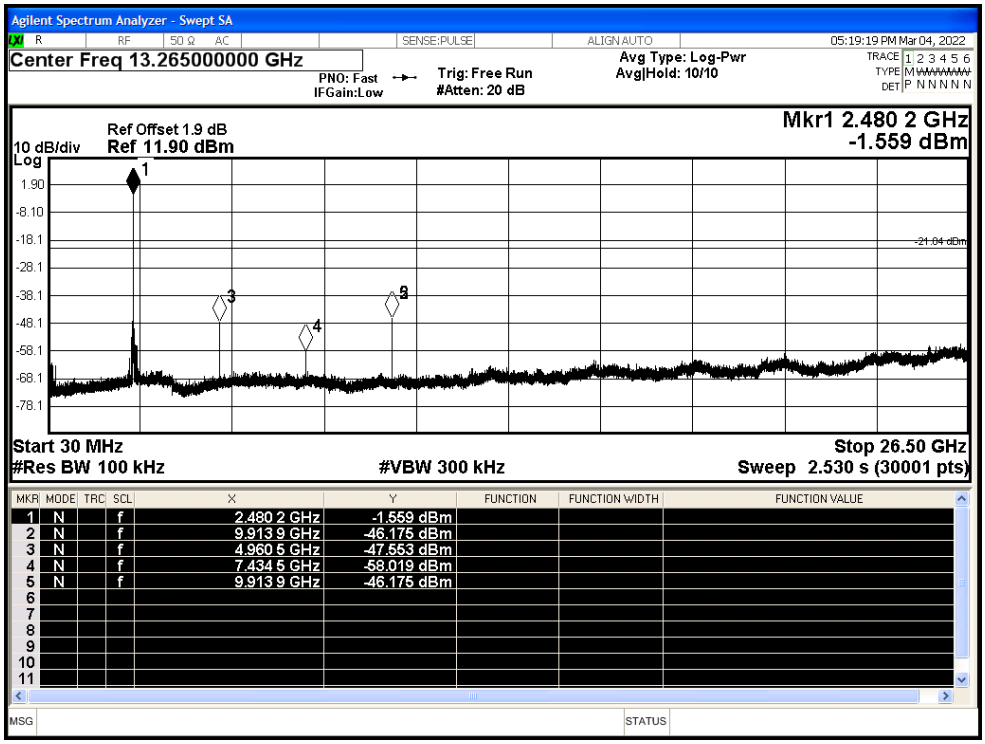
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



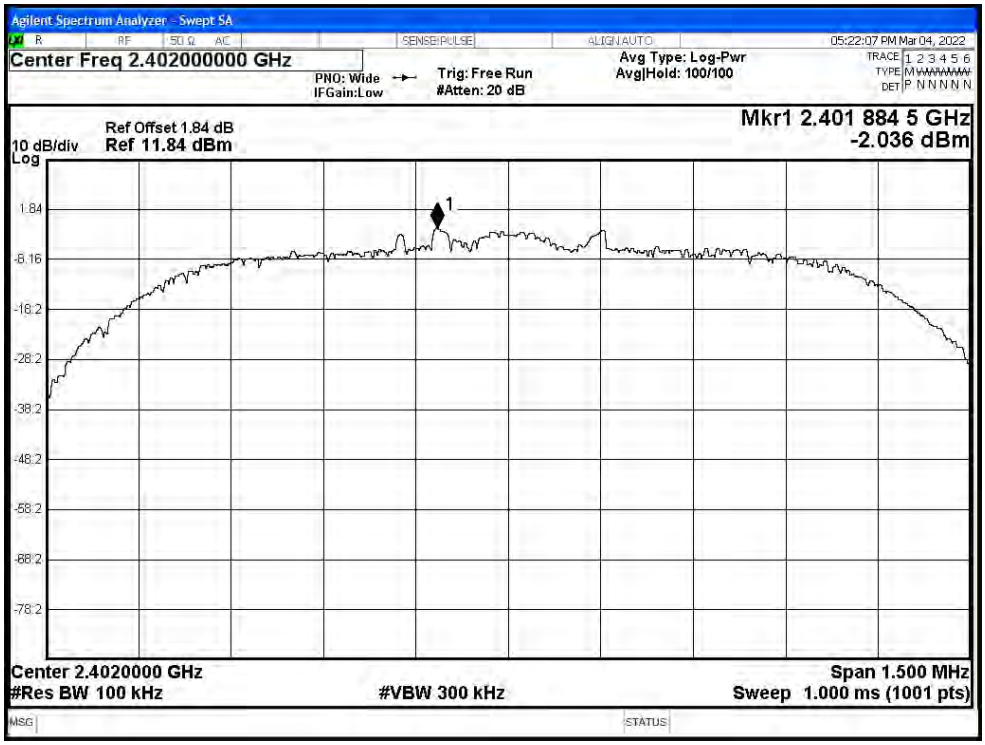
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



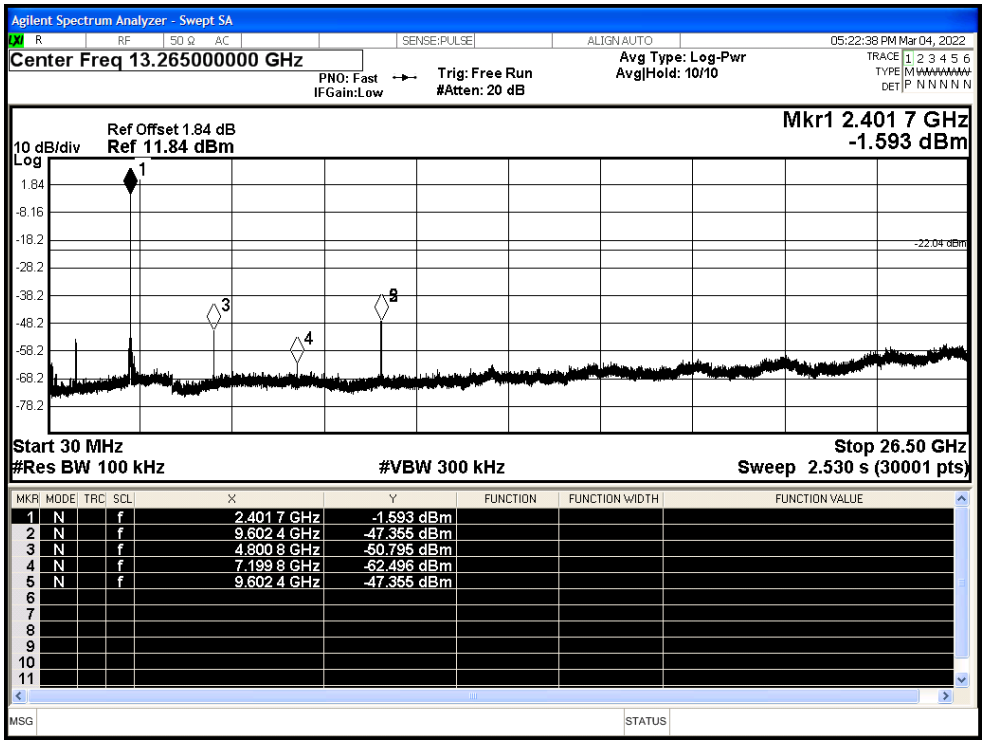
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



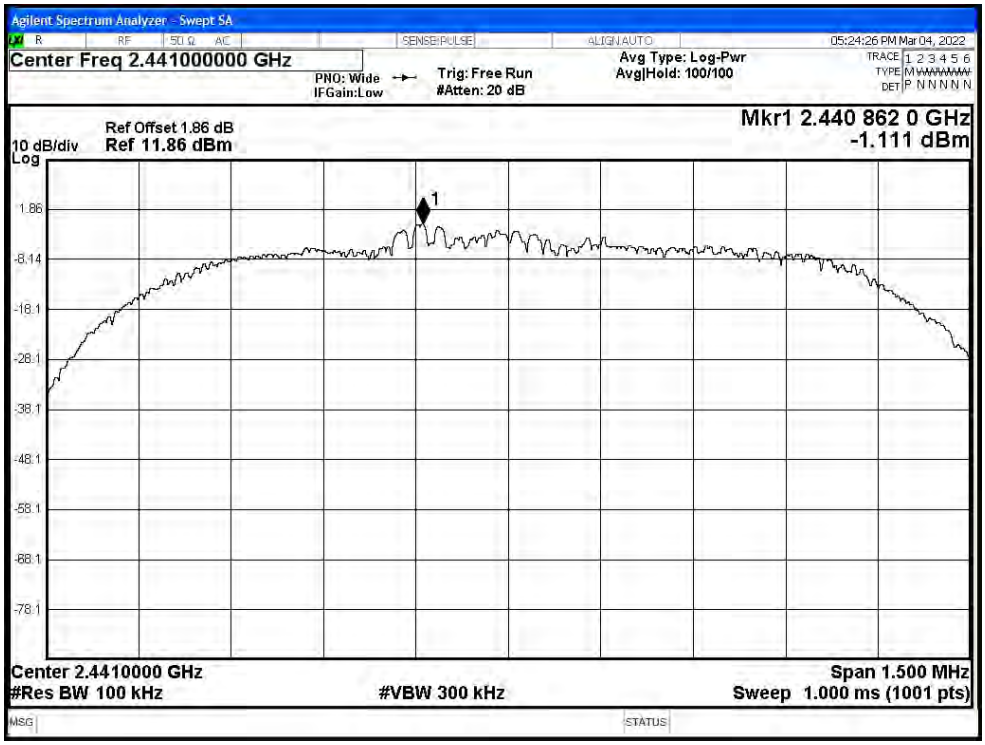
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



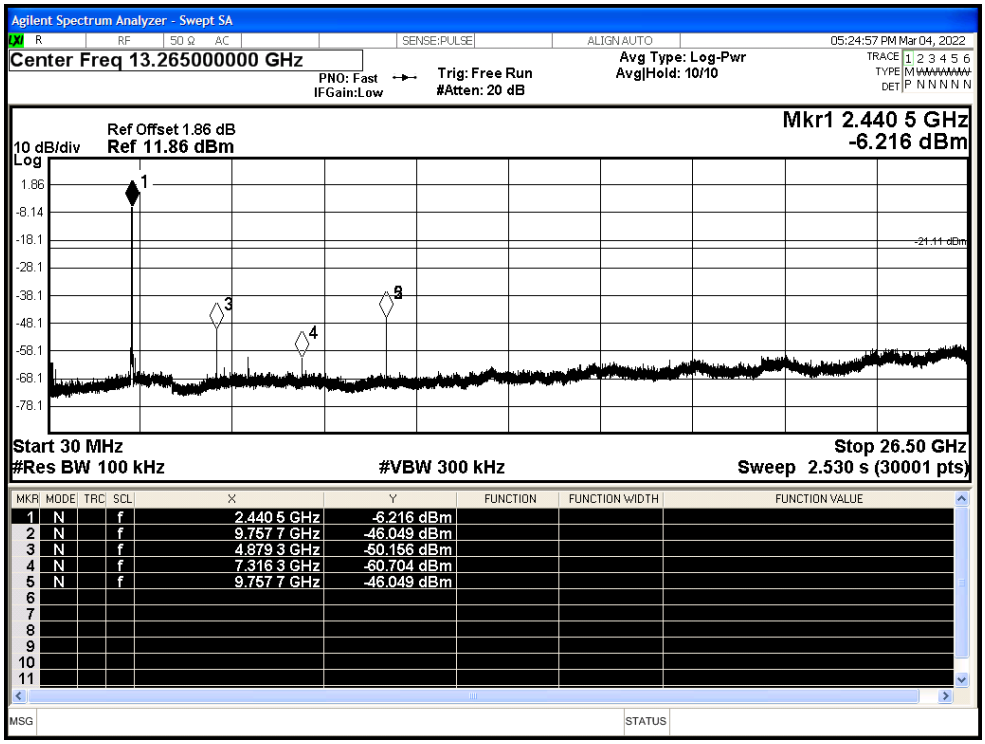
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



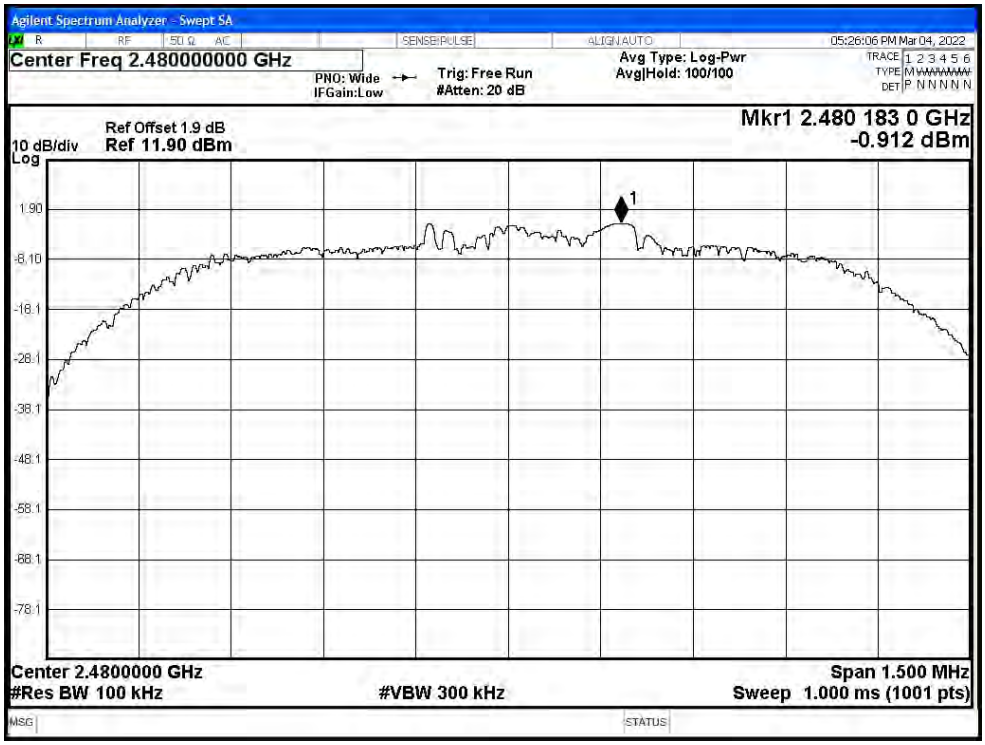
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



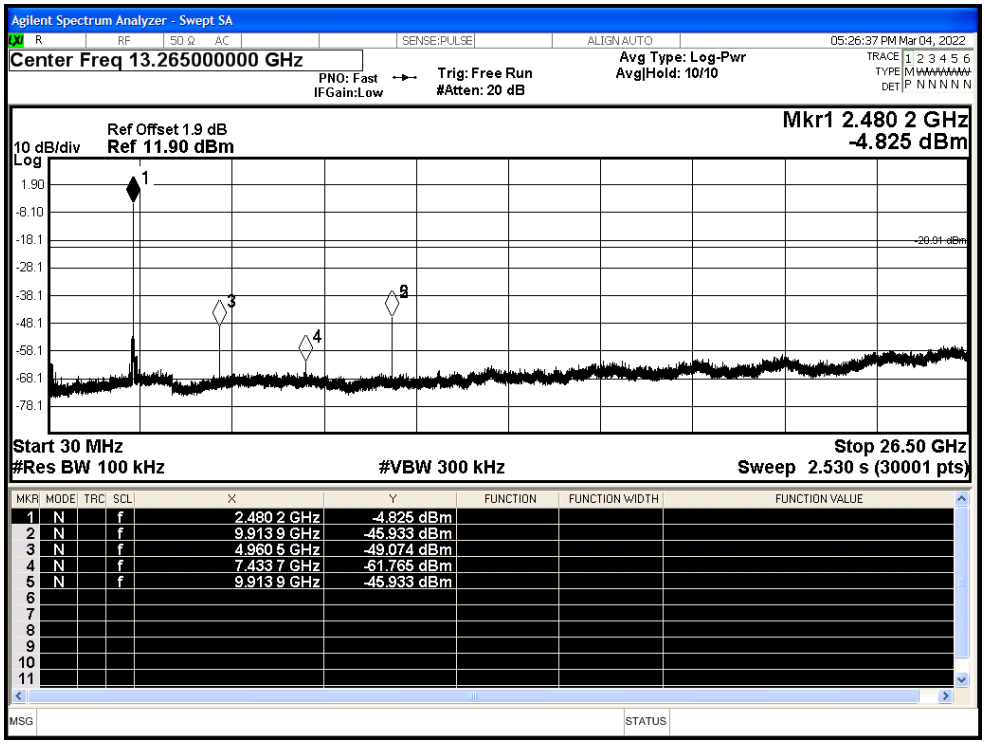
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



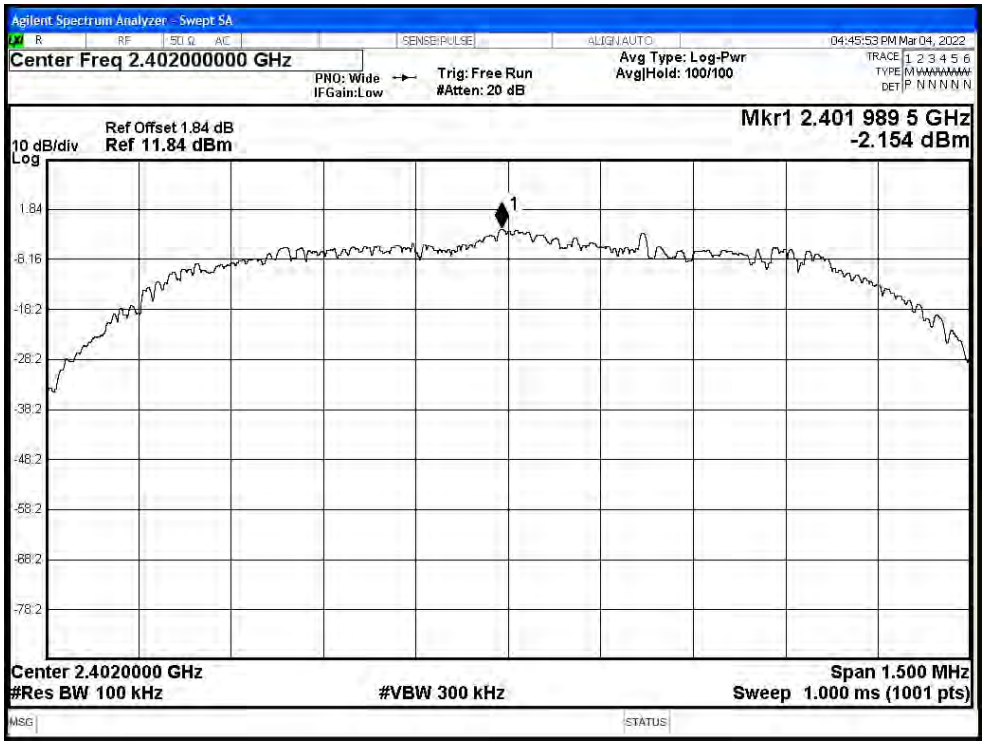
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



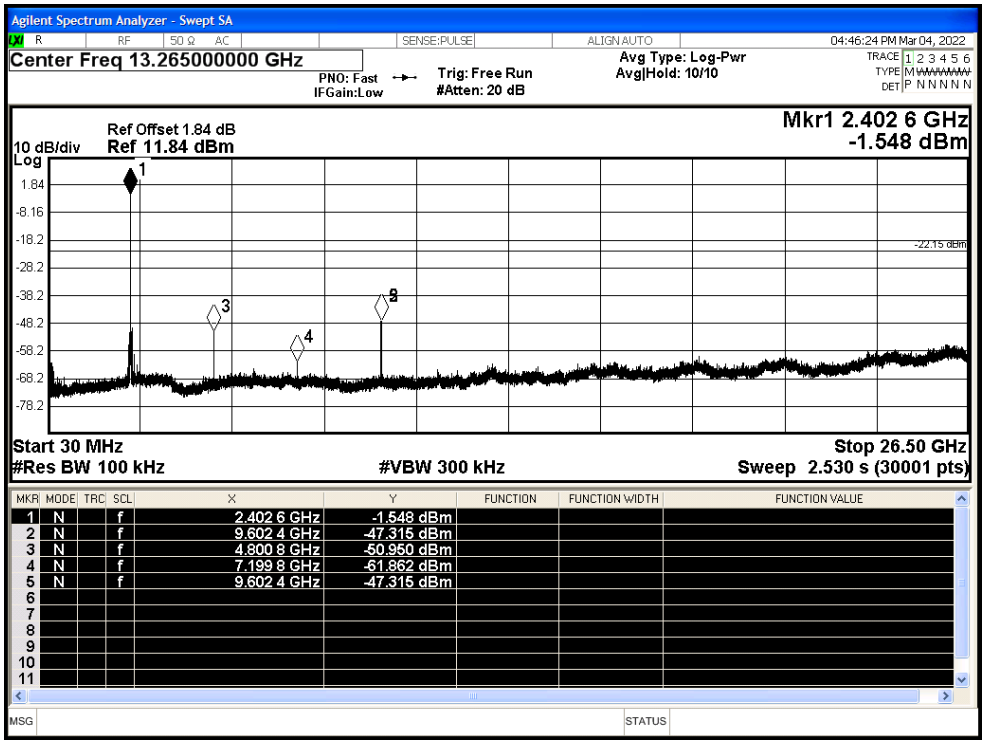
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



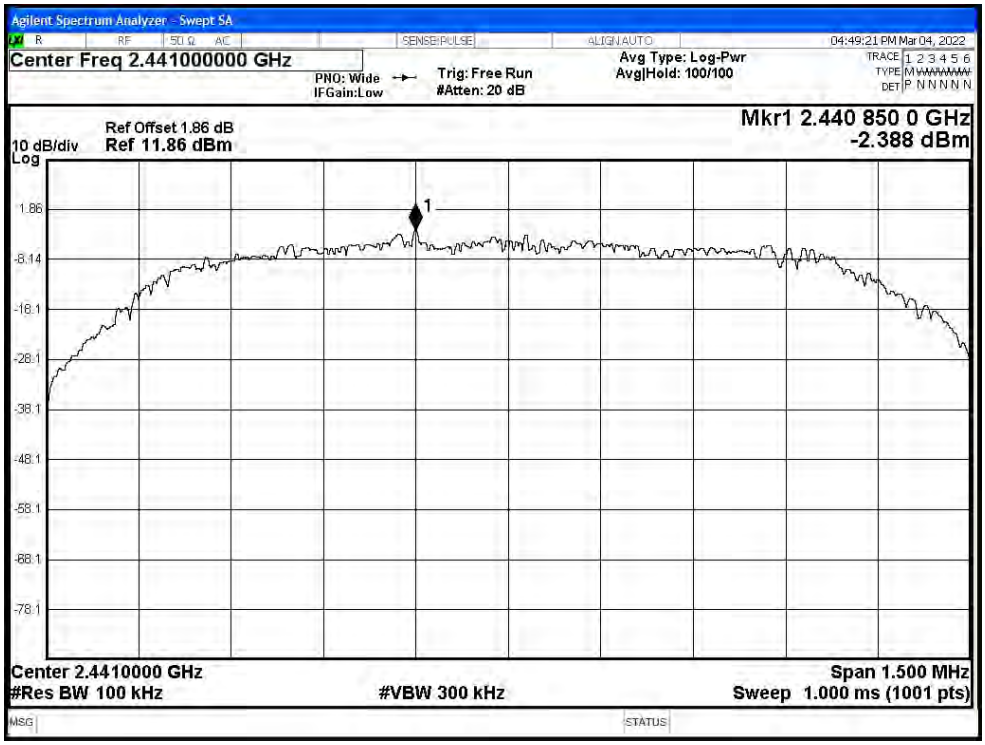
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



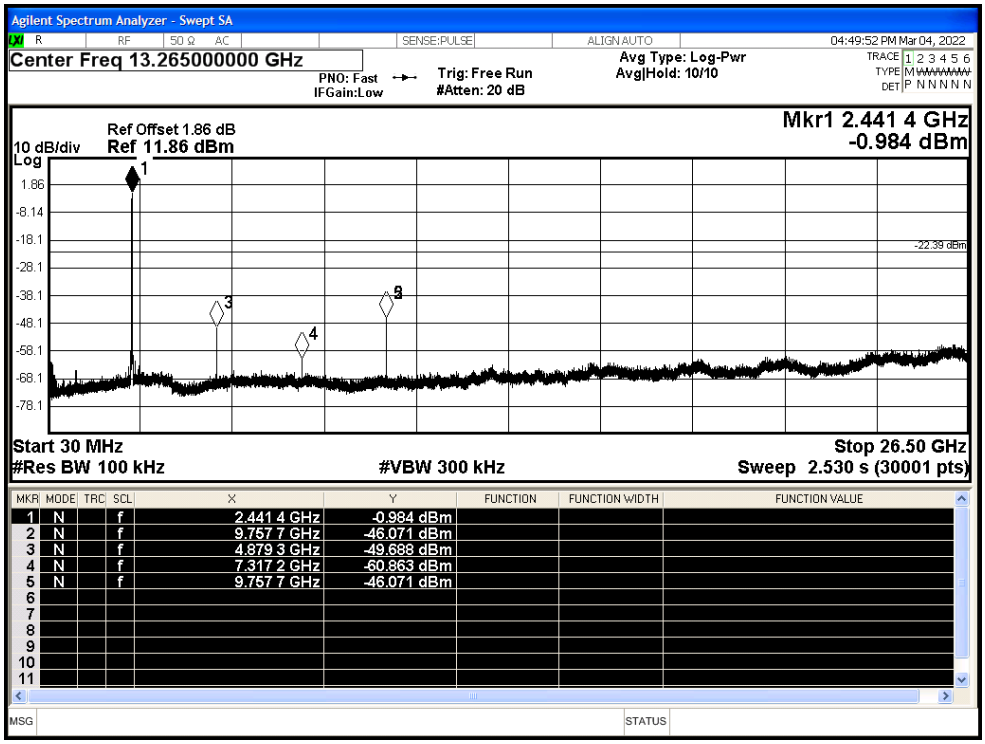
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref

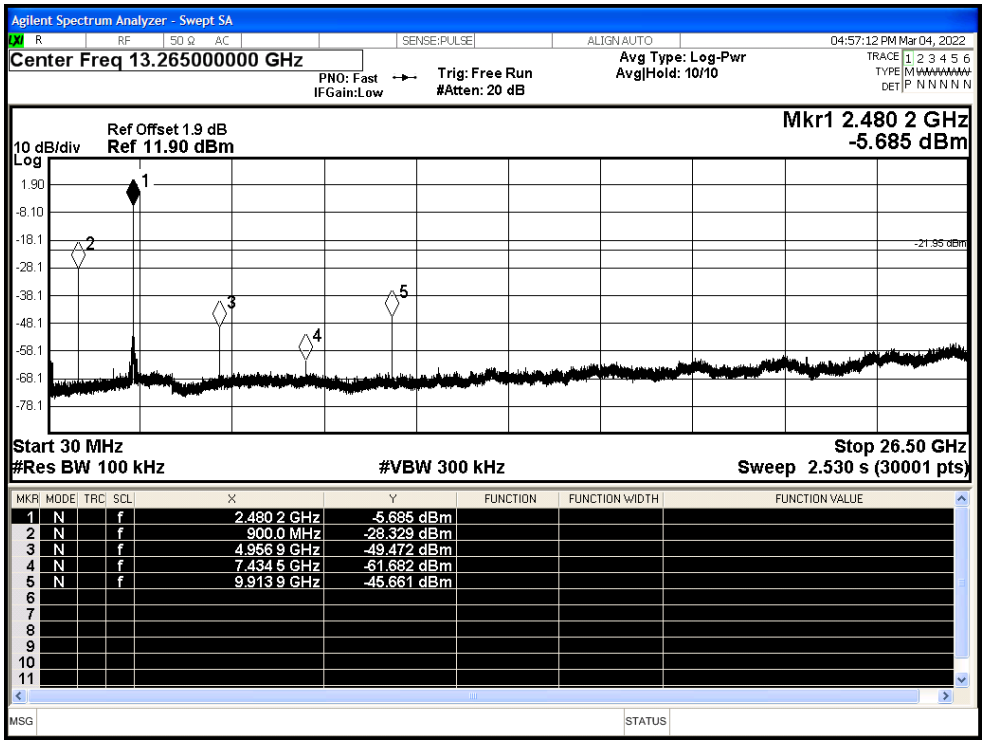


Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref

Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission

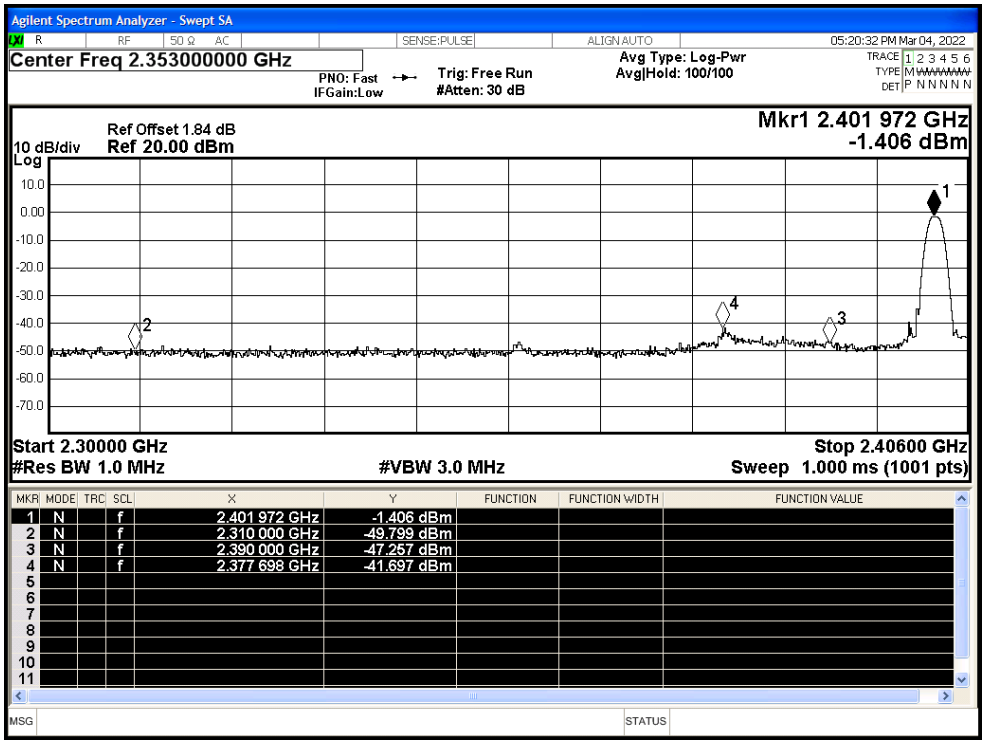


A.8 Restrict Band

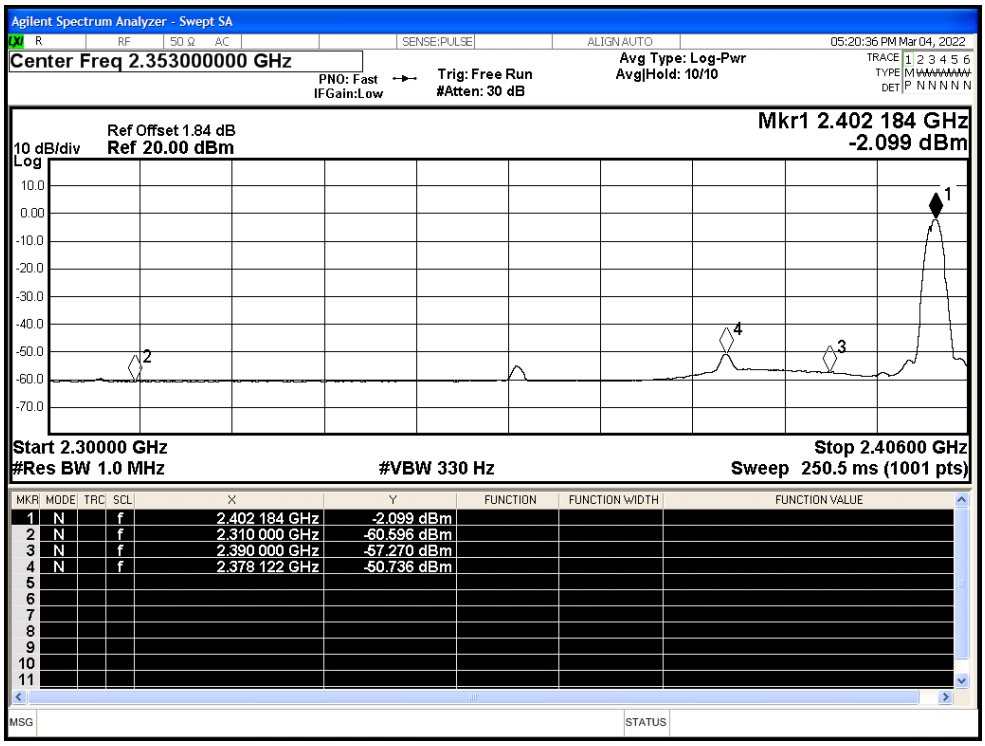
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-50.66	2	46.6	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-60.66	2	36.6	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2377.698	-41.69	2	55.57	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2378.122	-50.73	2	46.53	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-47.1	2	50.16	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-57.24	2	40.02	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-42.21	2	55.05	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-51.11	2	46.15	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.77	-42.14	2	55.12	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.548	-51.11	2	46.15	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-46.81	2	50.45	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-55.87	2	41.39	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-49.87	2	47.39	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-60.38	2	36.88	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2377.804	-43.72	2	53.54	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2378.016	-52.36	2	44.9	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-46.99	2	50.27	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-57.76	2	39.5	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-42.97	2	54.29	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-53.62	2	43.64	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.548	-42.97	2	54.29	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.548	-53.62	2	43.64	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-46.69	2	50.57	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-55.92	2	41.34	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-51.58	2	45.68	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-60.62	2	36.64	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2377.592	-43.44	2	53.82	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2378.016	-52.12	2	45.14	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-48.89	2	48.37	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-57.41	2	39.85	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-43.49	2	53.77	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-53.67	2	43.59	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2495.61	-42.89	2	54.37	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.548	-53.67	2	43.59	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-46.22	2	51.04	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-56.3	2	40.96	Average	54	Pass

Test Graphs

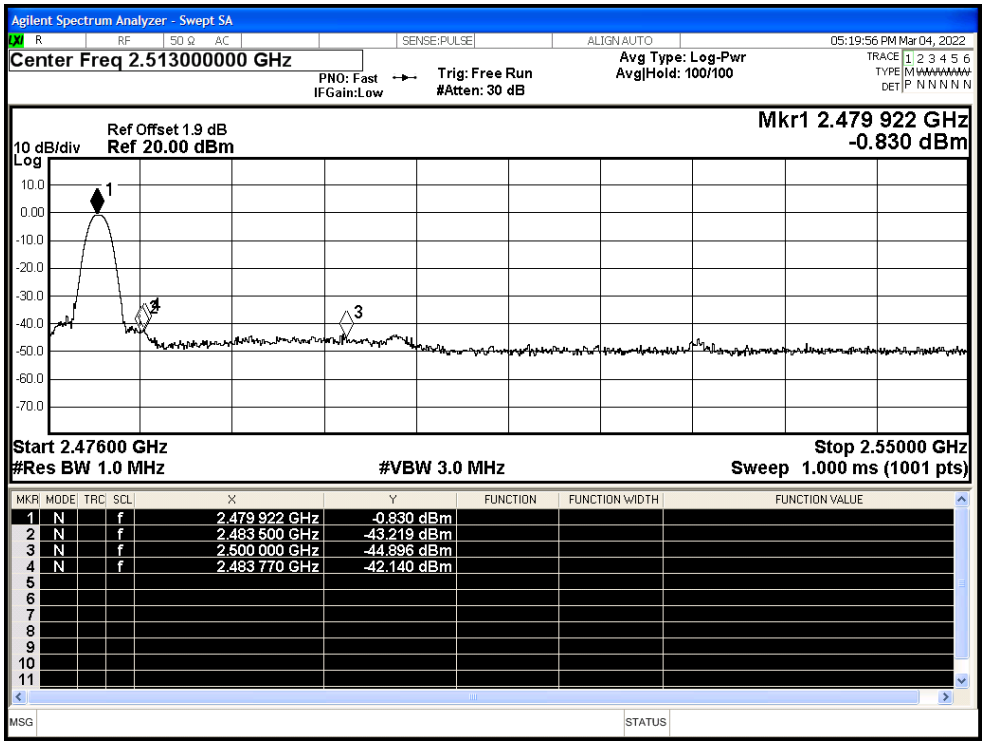
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



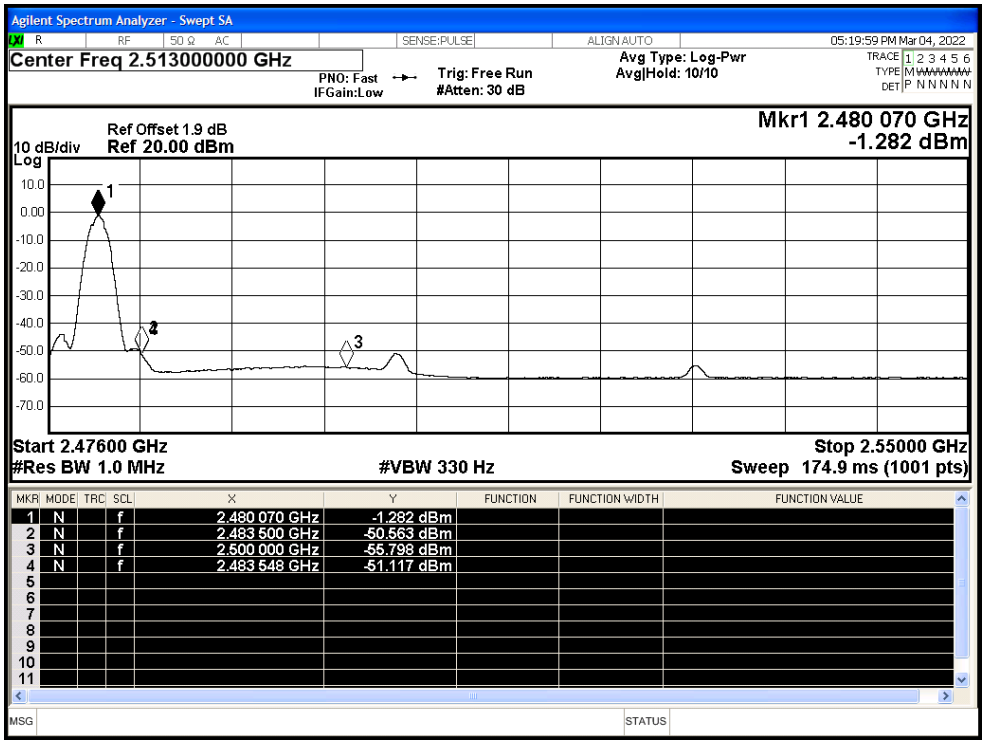
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



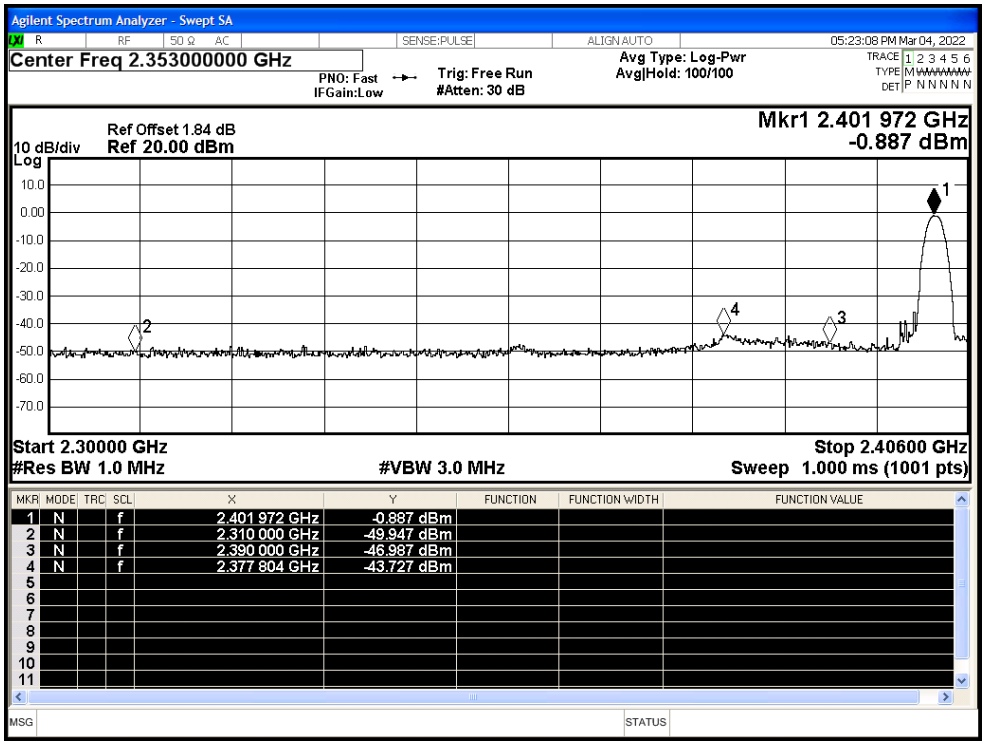
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



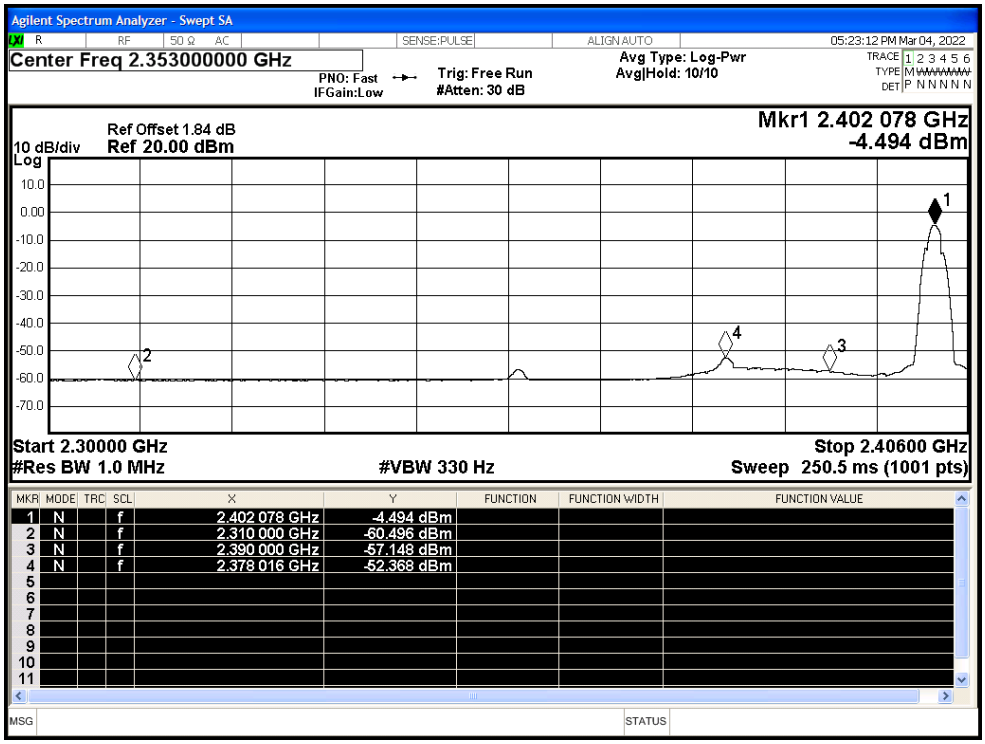
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



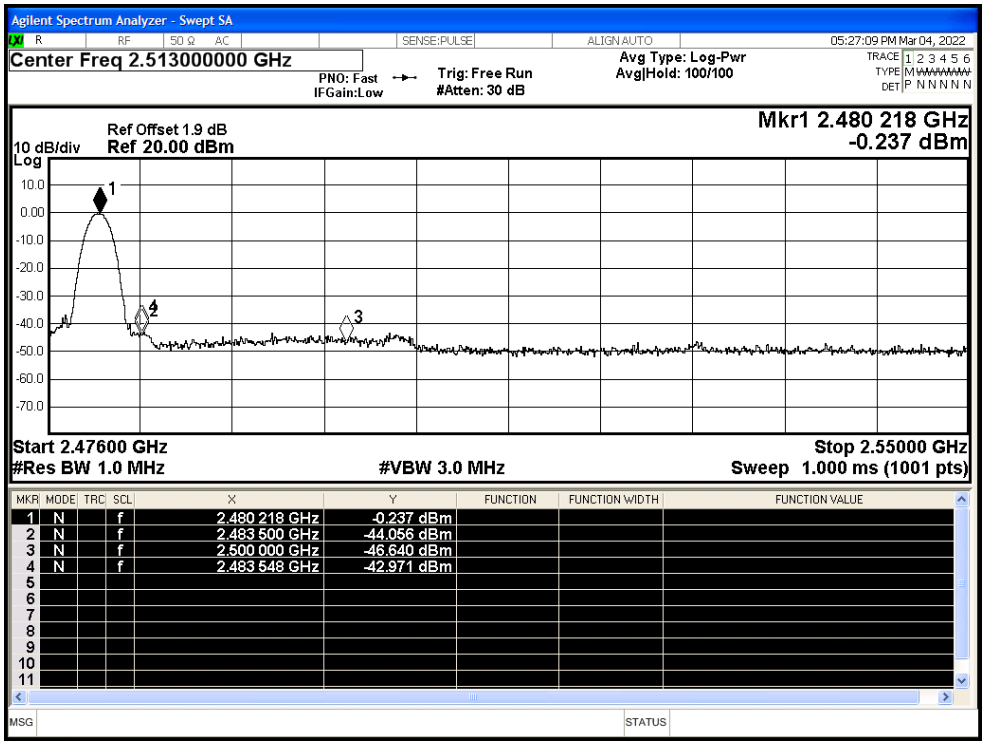
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



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



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



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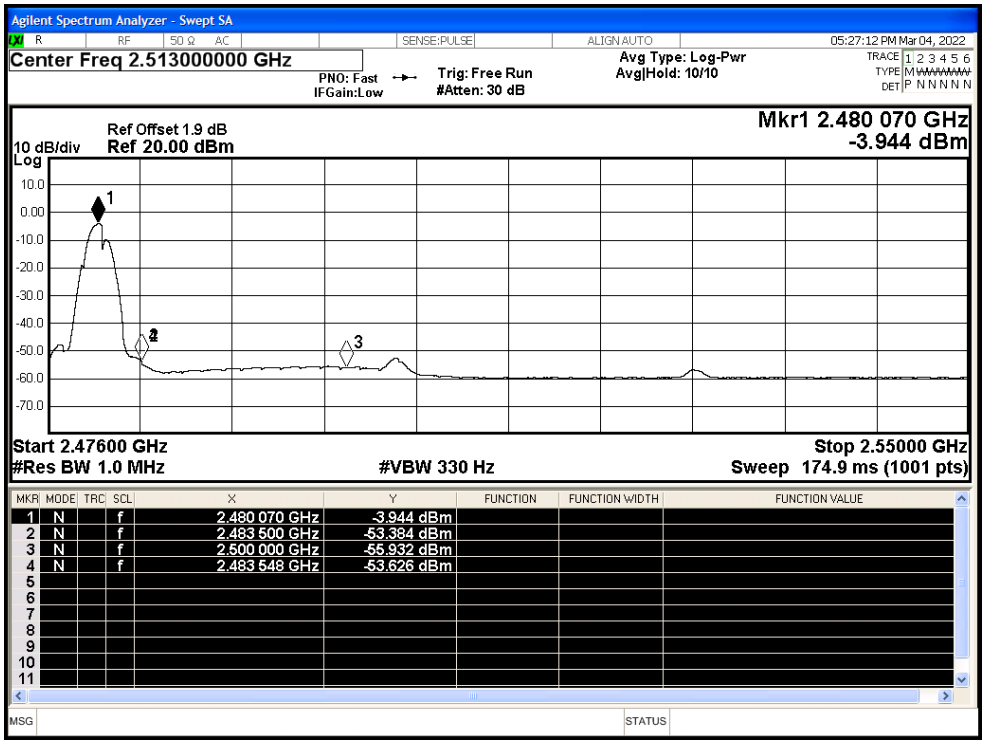
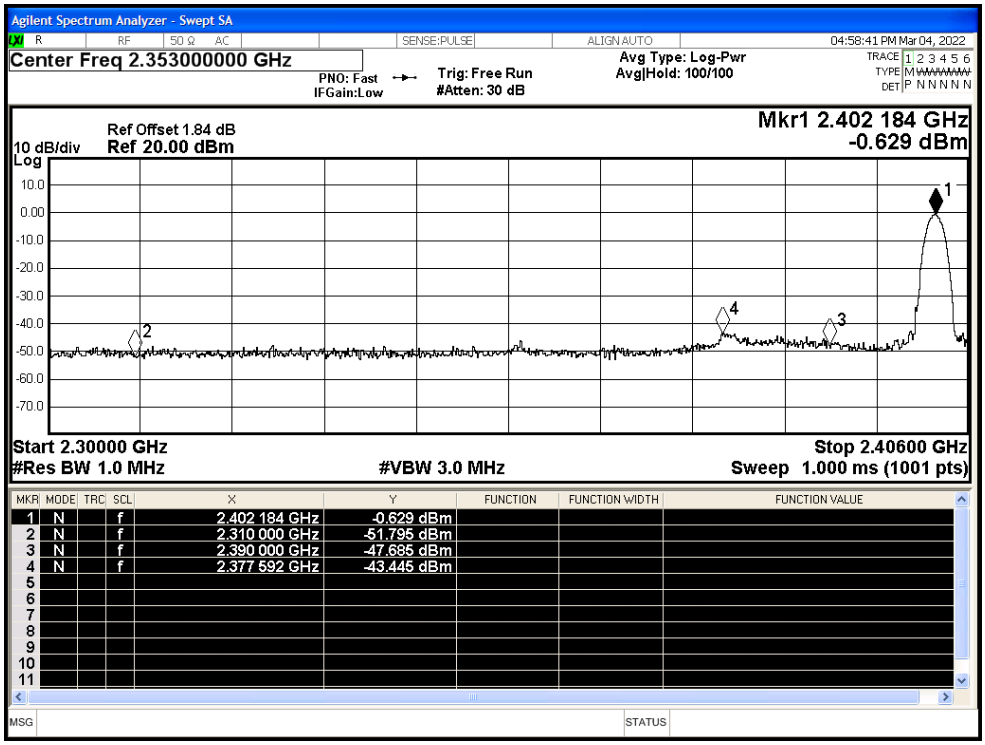
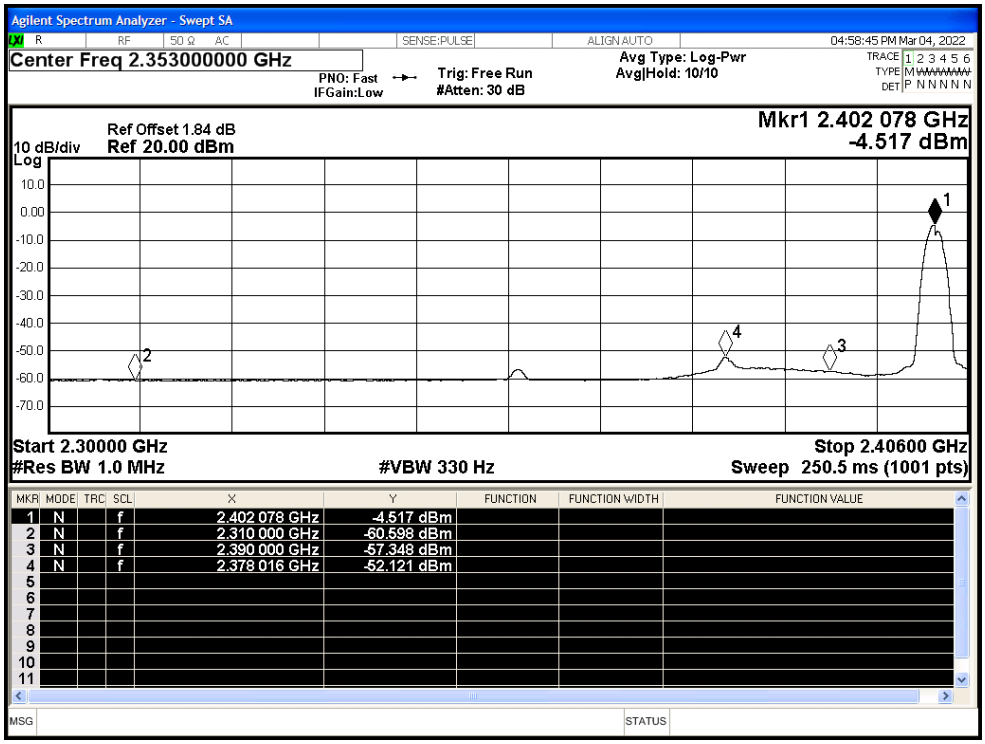


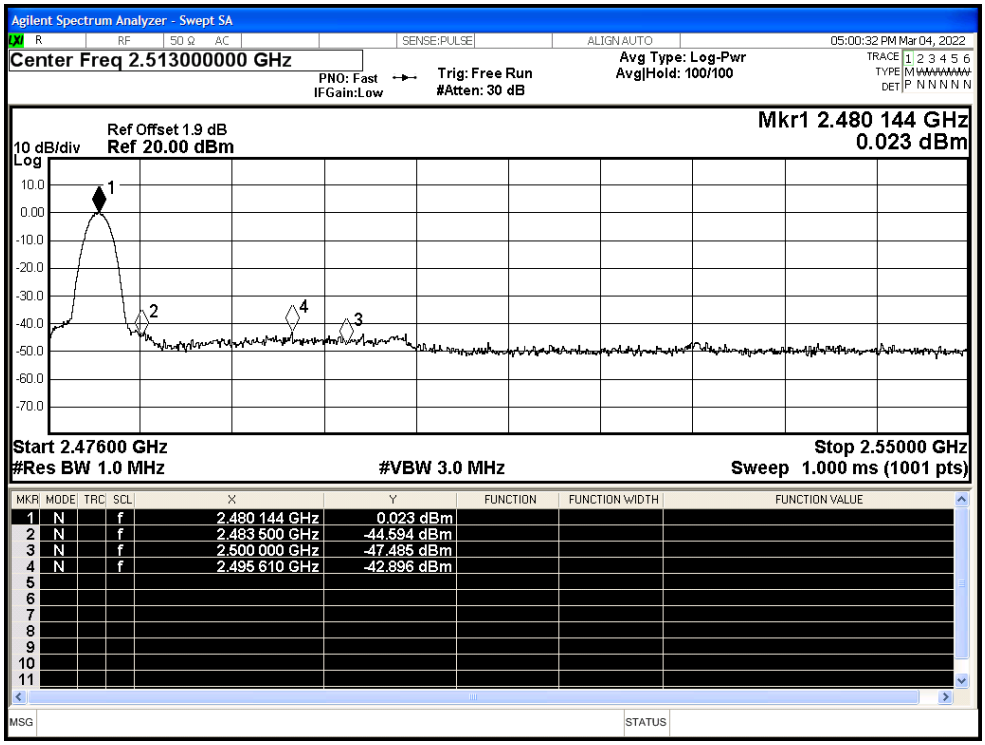
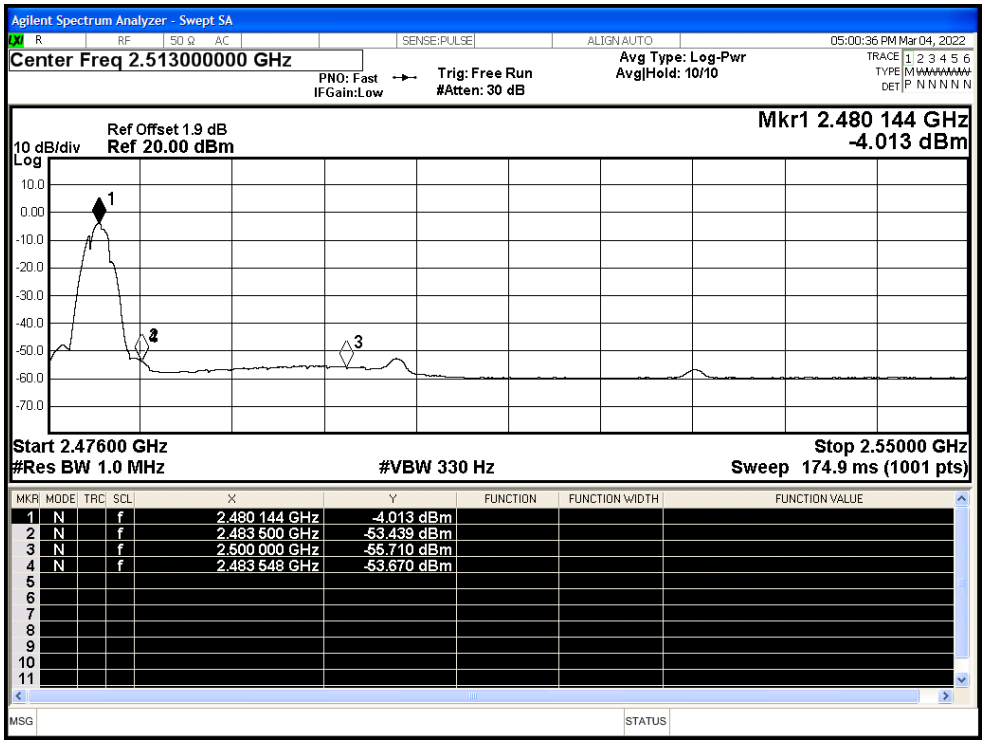
Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak



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