Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Smart Watch

Test Model: LW51

Environmental Conditions

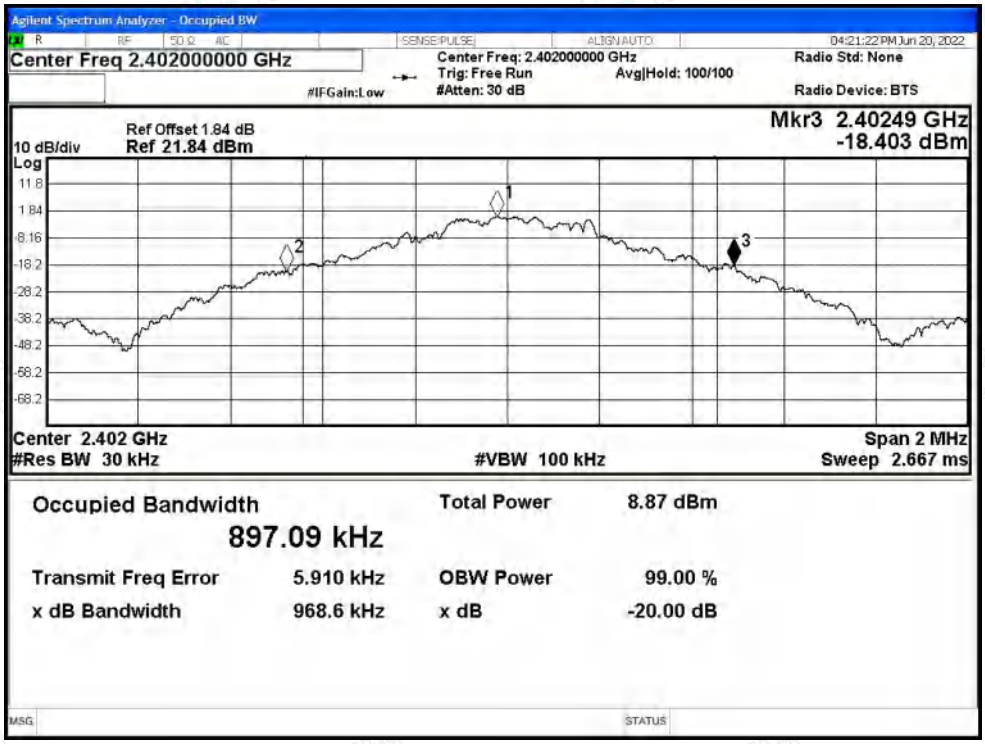
Temperature:	23.8 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan

A.1 -20dB Bandwidth

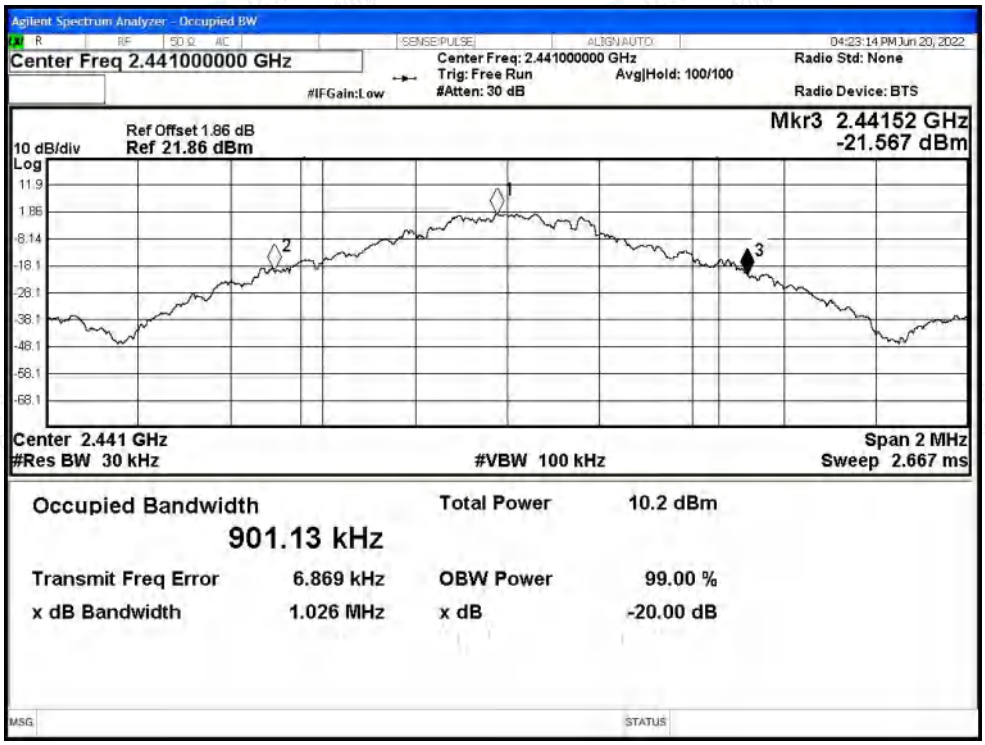
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.969	N/A	Pass
NVNT	1-DH5	2441	Ant1	1.026	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.962	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.311	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.317	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.28	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.309	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.285	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.323	N/A	Pass

Test Graphs

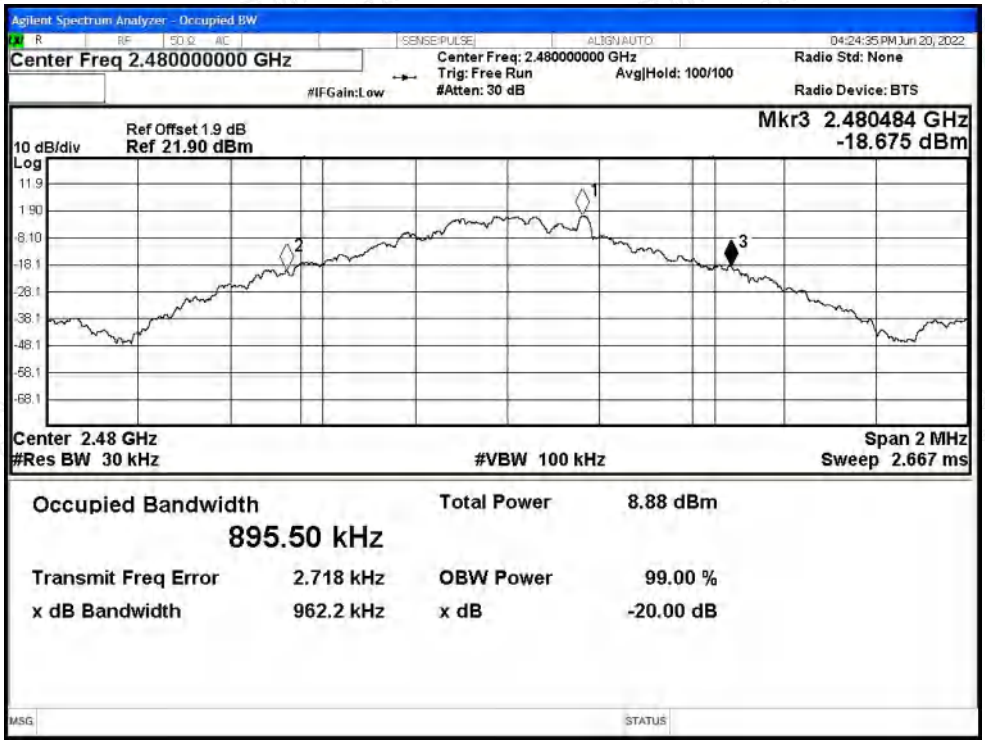
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



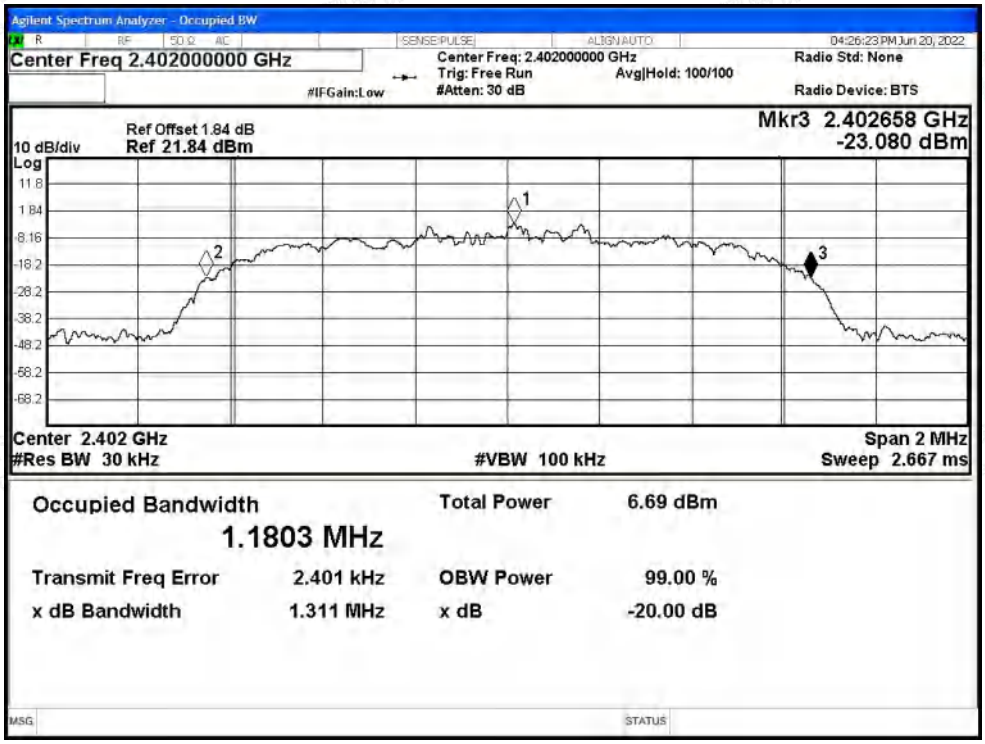
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



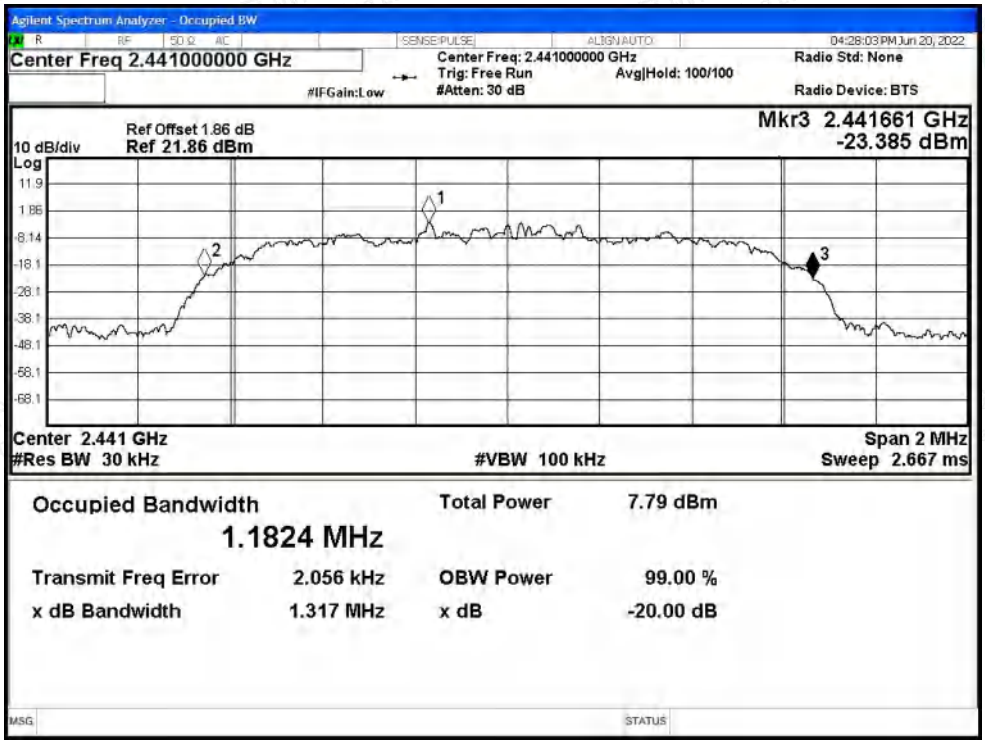
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



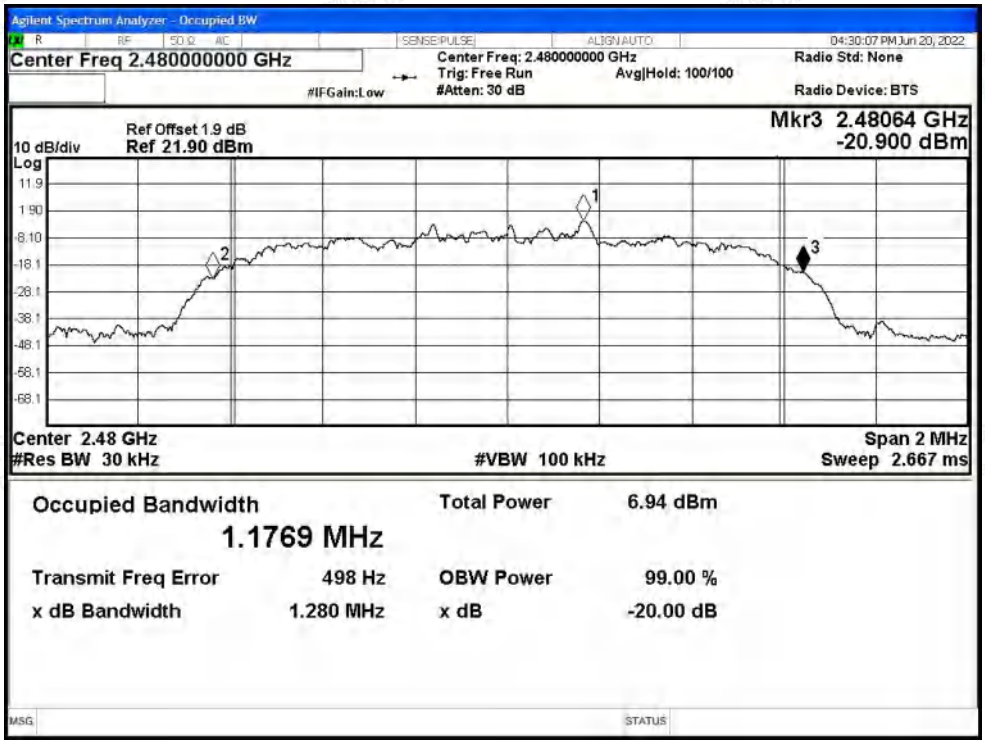
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



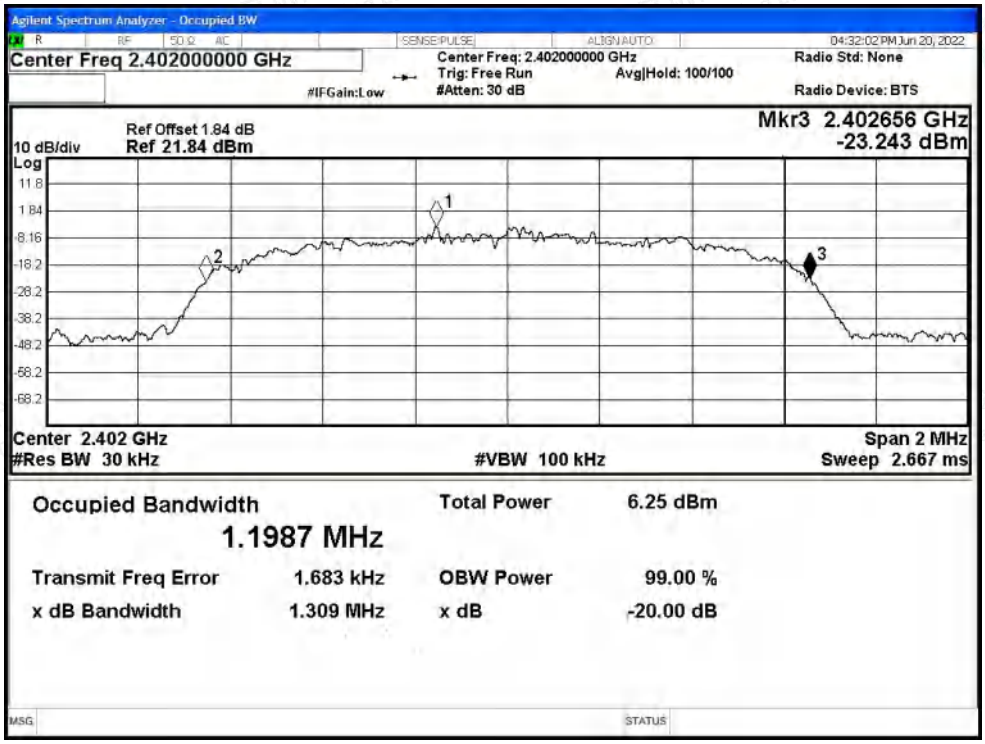
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



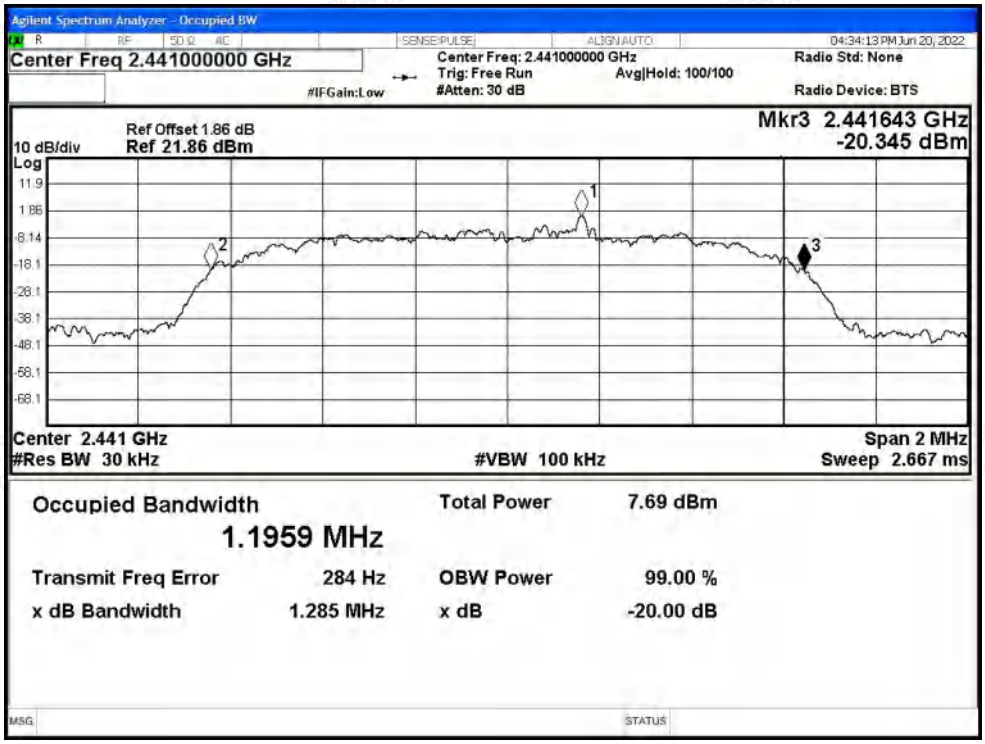
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



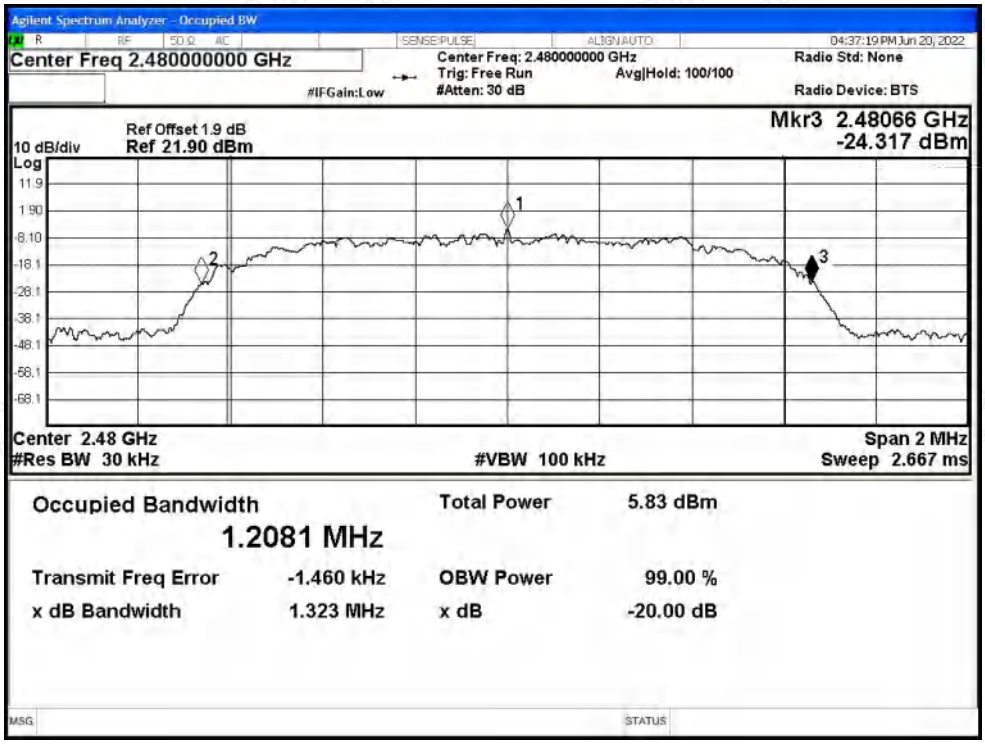
-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



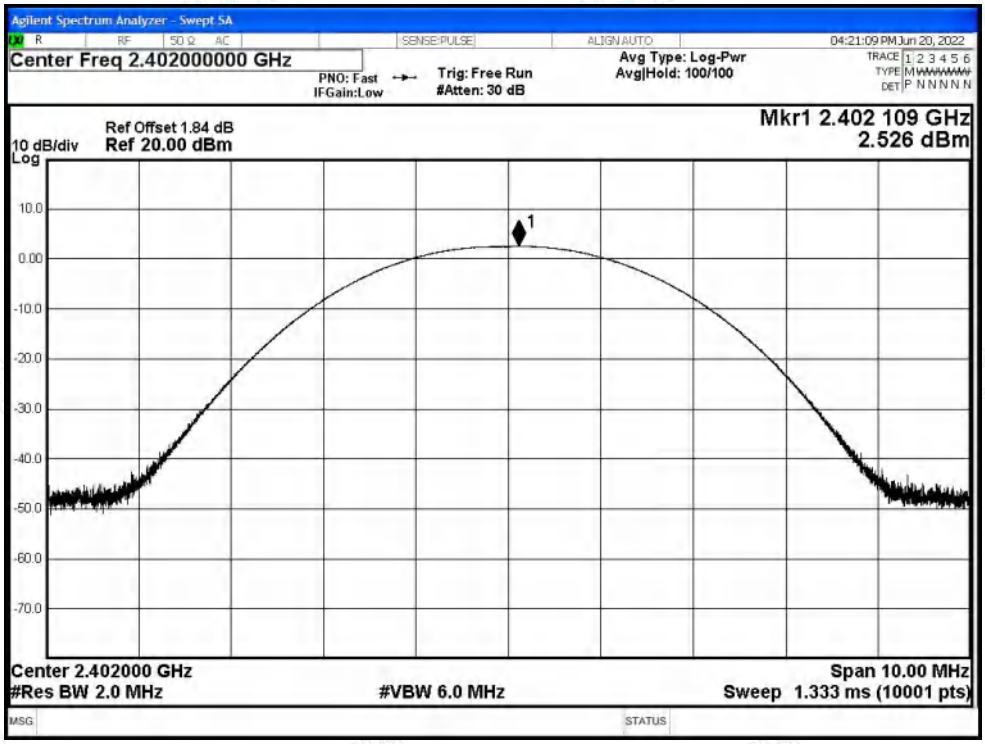
-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1



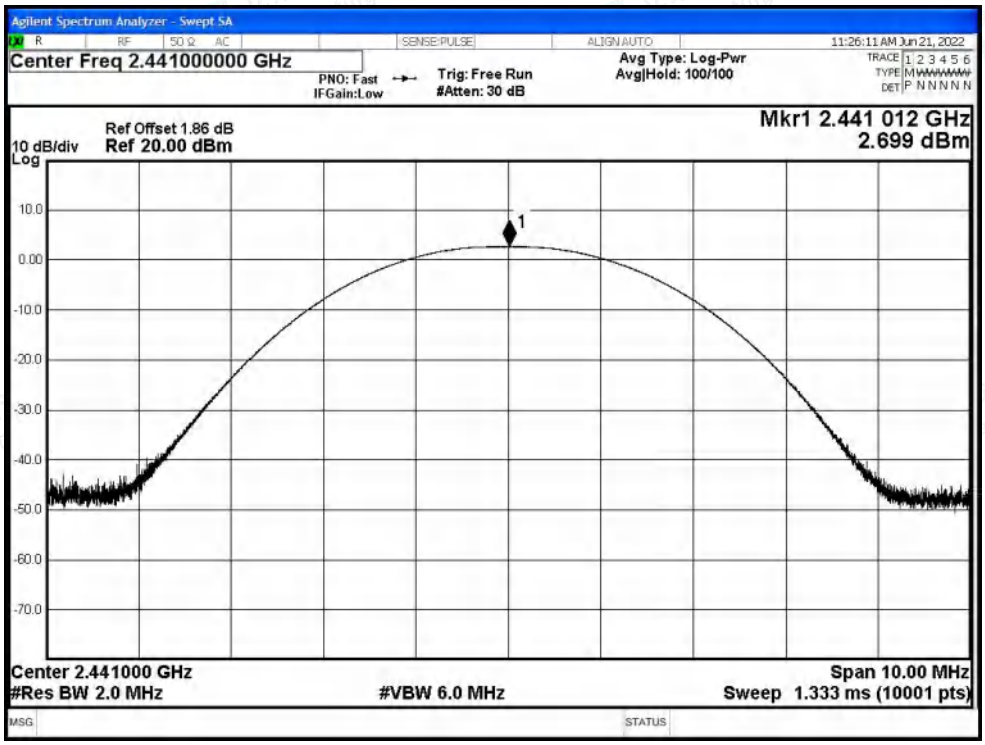
A.2 Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	2.53	21	Pass
NVNT	1-DH5	2441	Ant1	2.7	21	Pass
NVNT	1-DH5	2480	Ant1	2.54	21	Pass
NVNT	2-DH5	2402	Ant1	1.6	21	Pass
NVNT	2-DH5	2441	Ant1	2.55	21	Pass
NVNT	2-DH5	2480	Ant1	1.74	21	Pass
NVNT	3-DH5	2402	Ant1	1.81	21	Pass
NVNT	3-DH5	2441	Ant1	2.59	21	Pass
NVNT	3-DH5	2480	Ant1	1.88	21	Pass

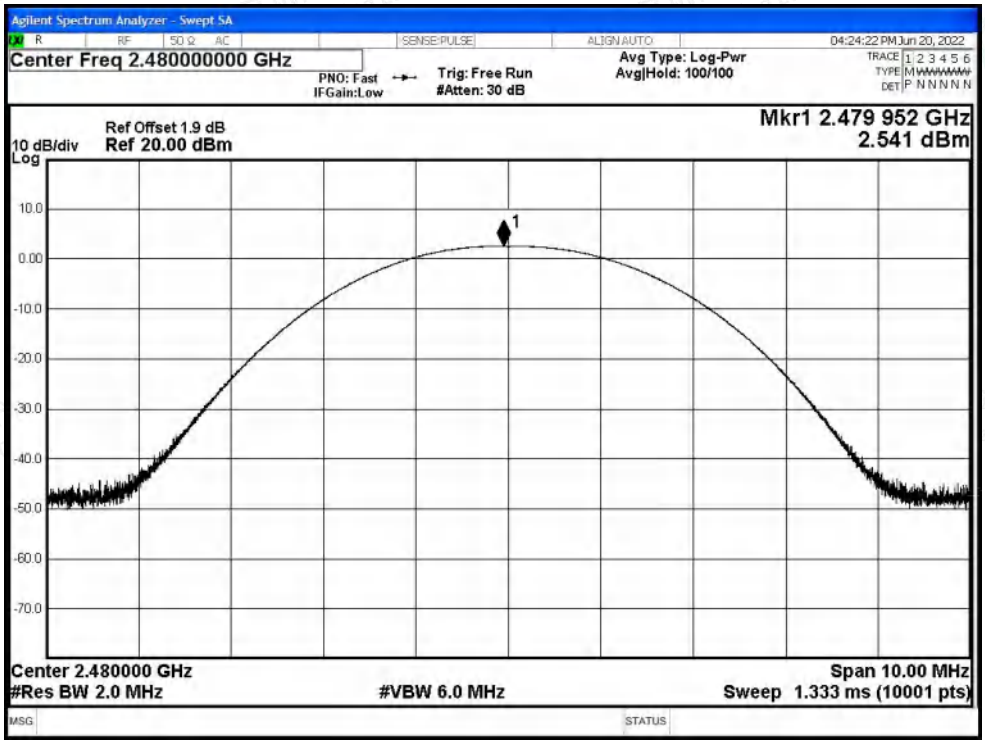
Test Graphs
Power NVNT 1-DH5 2402MHz Ant1



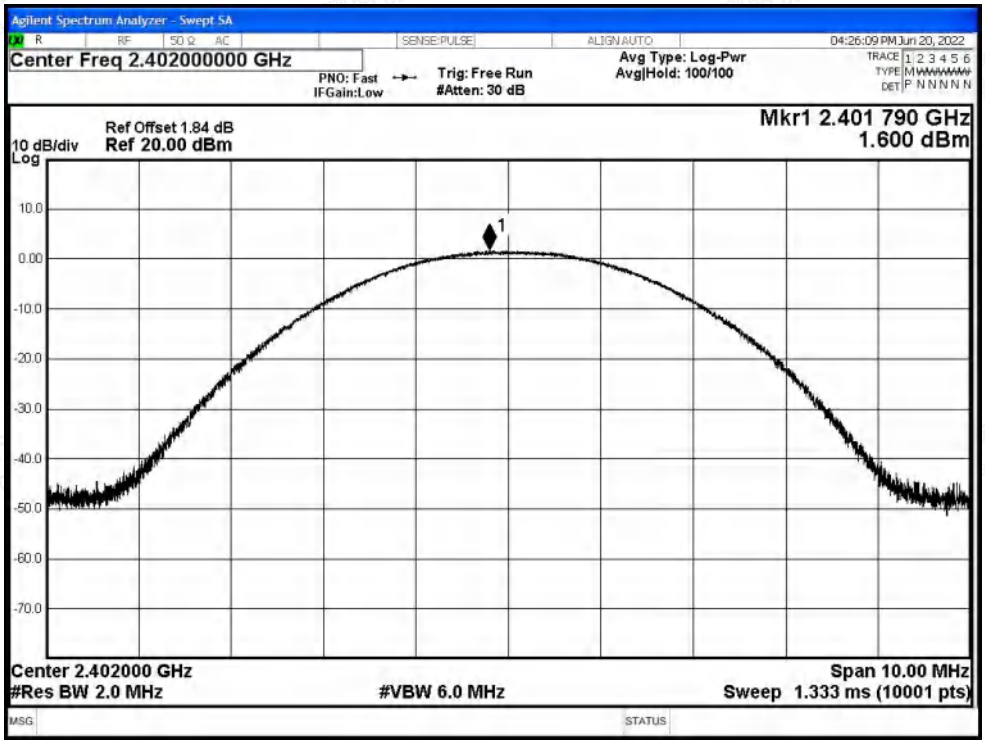
Power NVNT 1-DH5 2441MHz Ant1



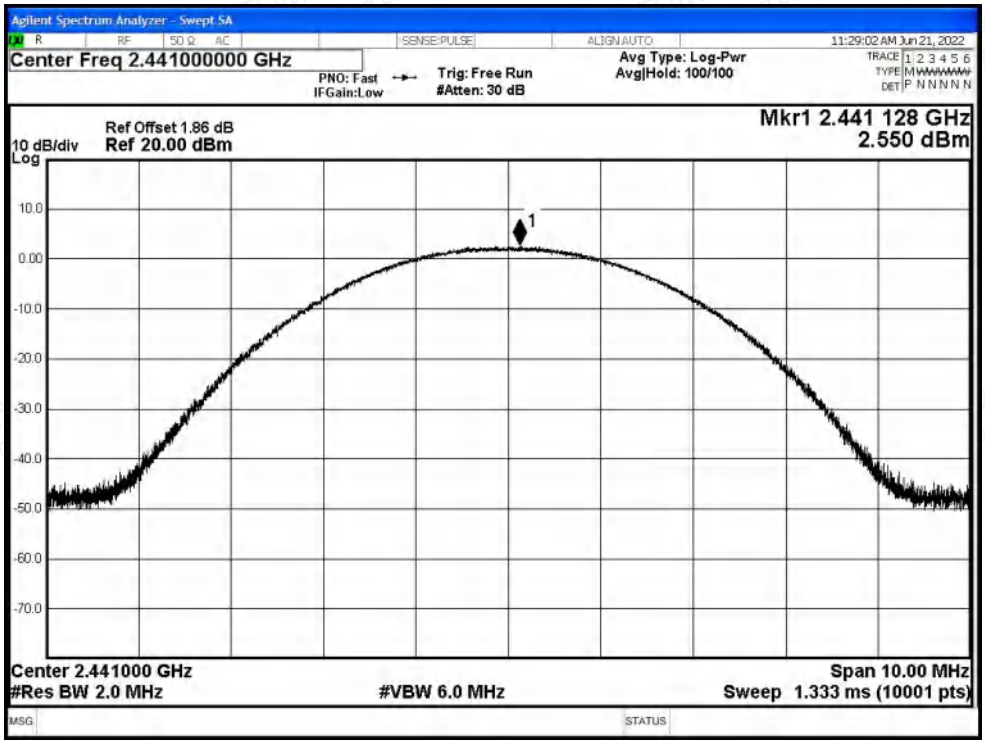
Power NVNT 1-DH5 2480MHz Ant1



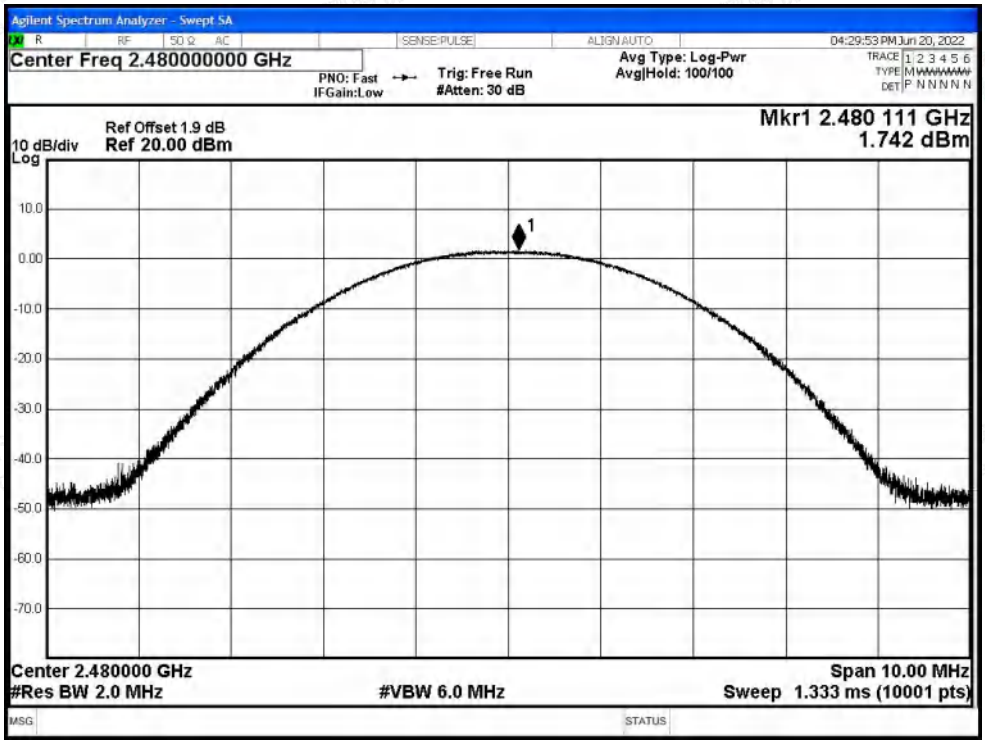
Power NVNT 2-DH5 2402MHz Ant1



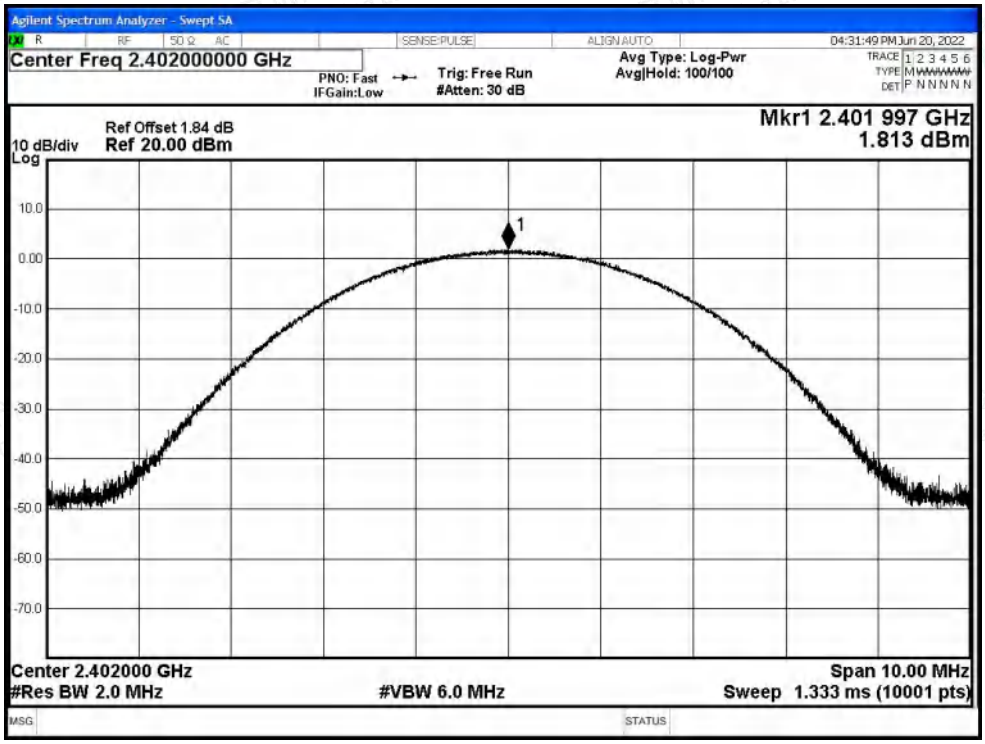
Power NVNT 2-DH5 2441MHz Ant1



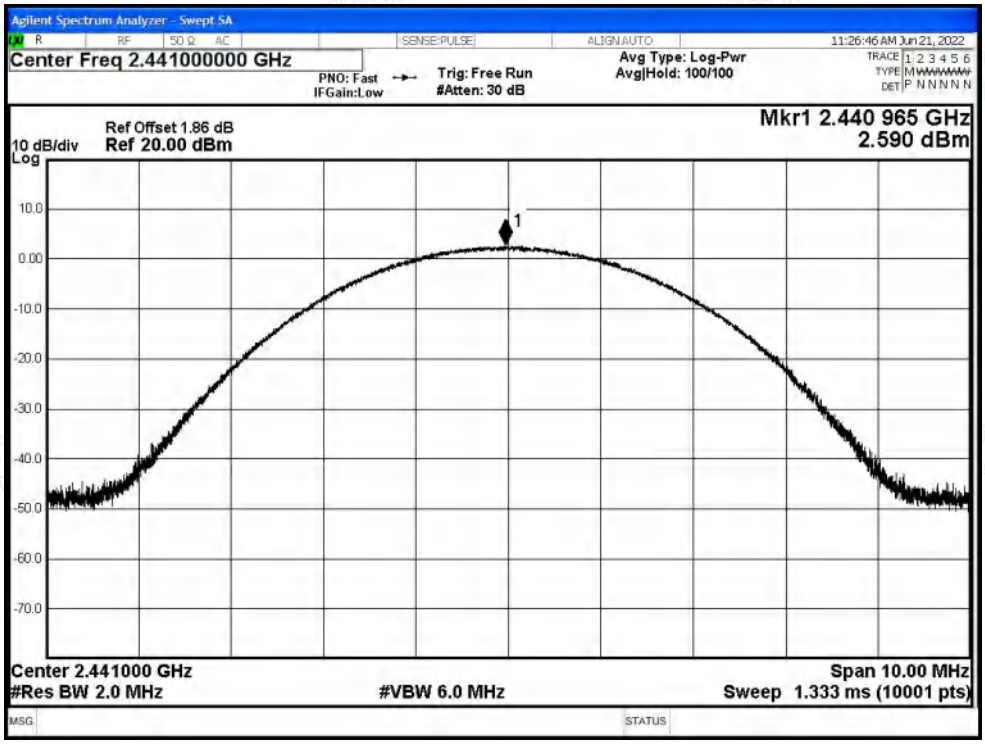
Power NVNT 2-DH5 2480MHz Ant1



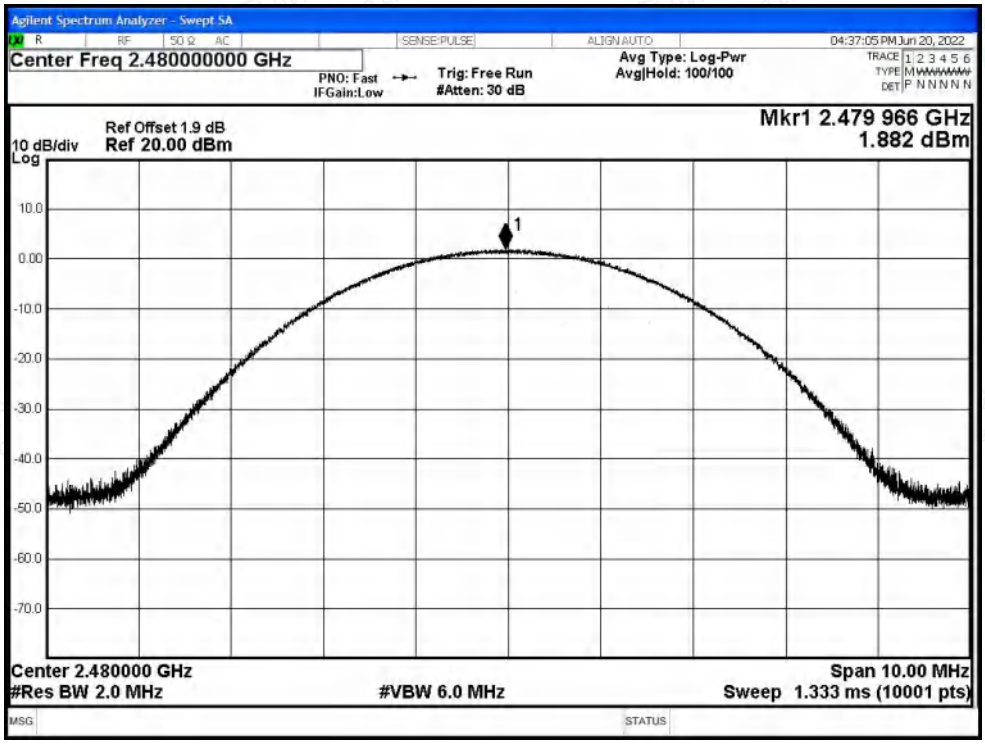
Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1



Power NVNT 3-DH5 2480MHz Ant1

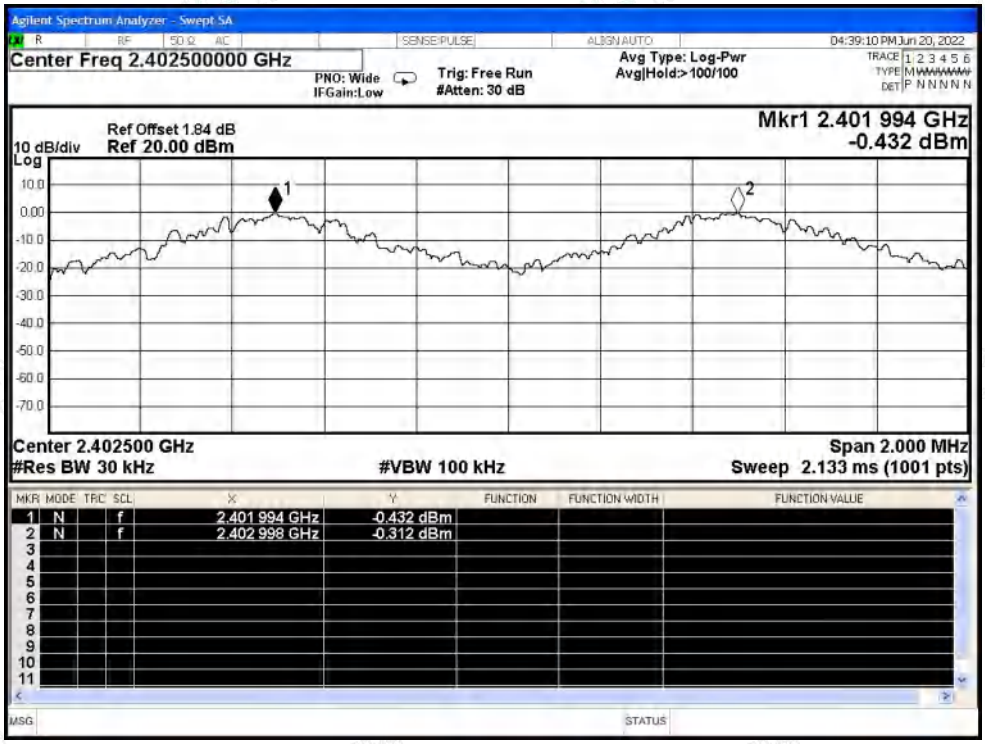


A.3 Carrier Frequencies Separation

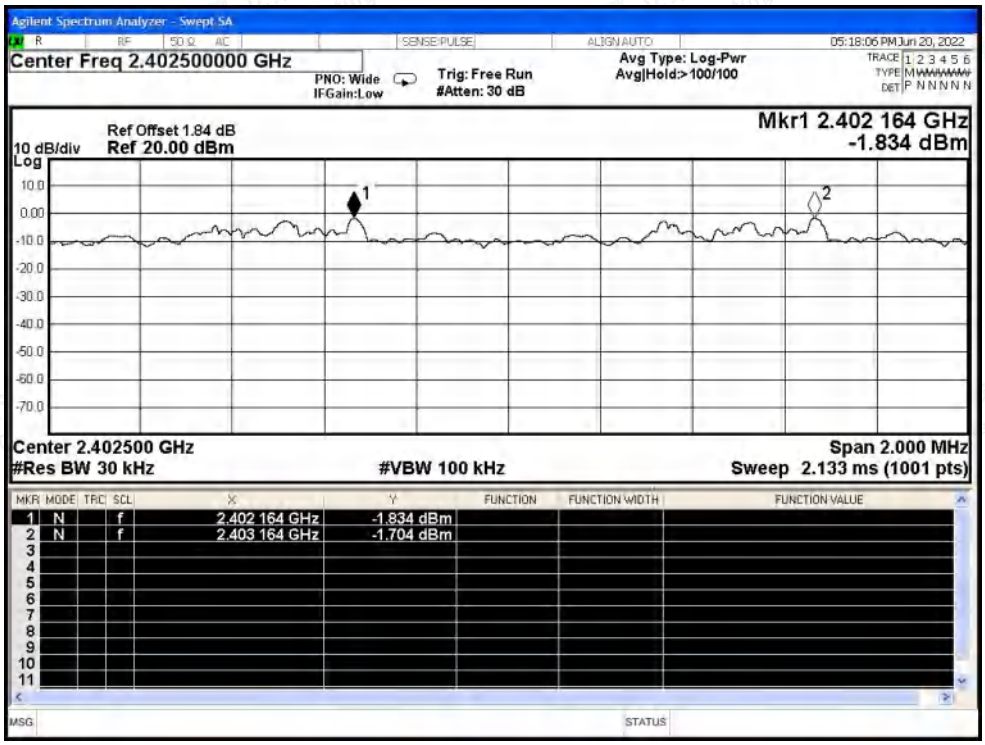
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.994	2402.998	1.004	0.646	Pass
NVNT	2-DH5	Ant1	2402.164	2403.164	1	0.874	Pass
NVNT	3-DH5	Ant1	2402.032	2403.17	1.138	0.873	Pass

Test Graphs

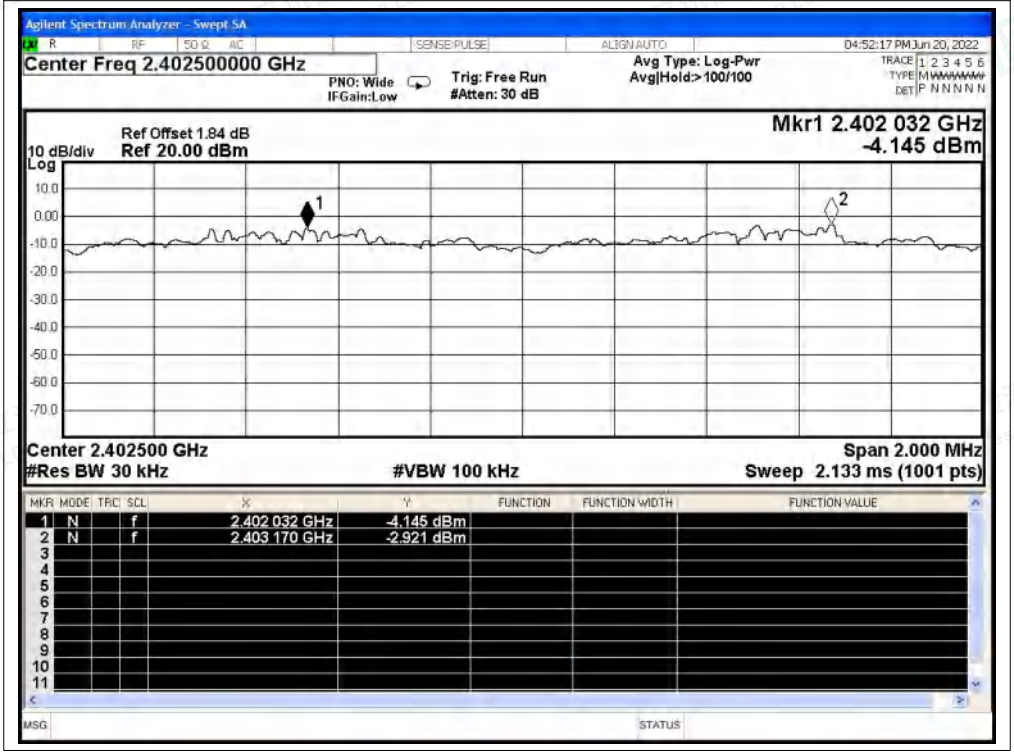
CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1



CFS NVNT 3-DH5 2402MHz Ant1

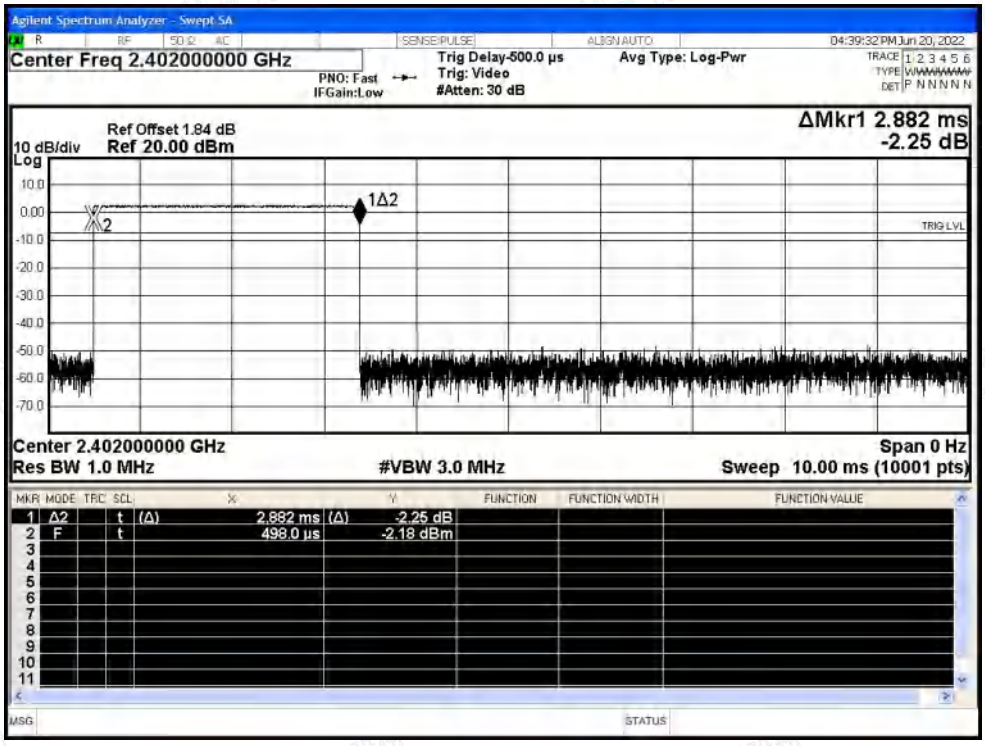


A.4 Dwell Time

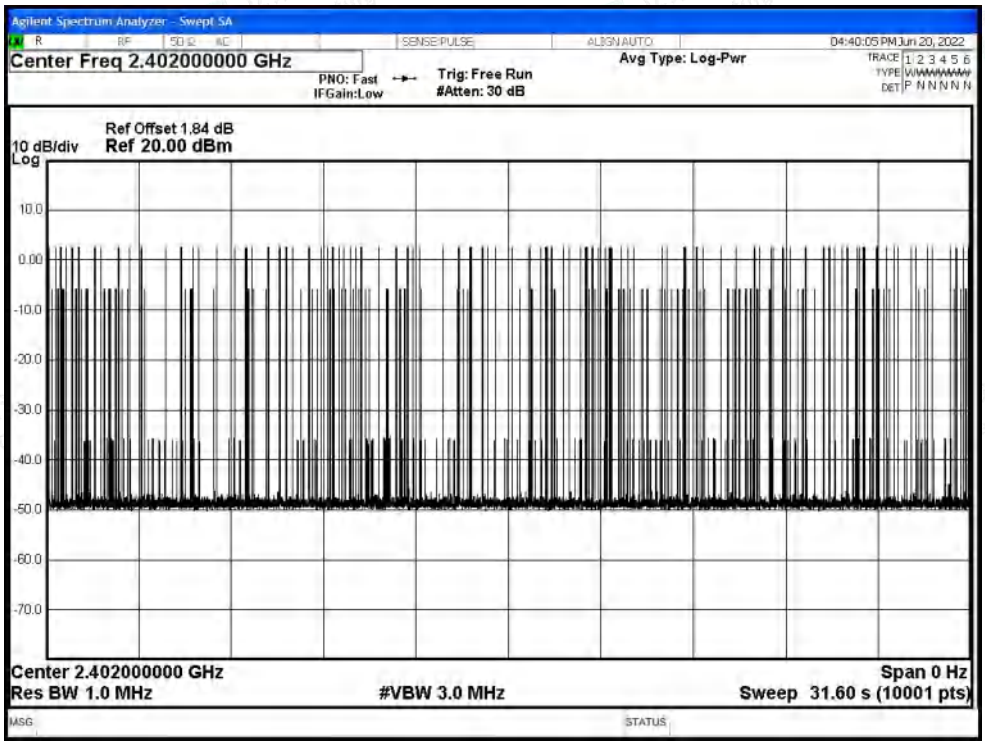
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.882	328.548	114	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.882	282.436	98	31600	400	Pass
NVNT	1-DH5	2480	Ant1	2.882	293.964	102	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.88	305.28	106	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.881	305.386	106	31600	400	Pass
NVNT	2-DH5	2480	Ant1	2.885	317.35	110	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.886	294.372	102	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.885	328.89	114	31600	400	Pass
NVNT	3-DH5	2480	Ant1	1.513	133.144	88	31600	400	Pass

Test Graphs

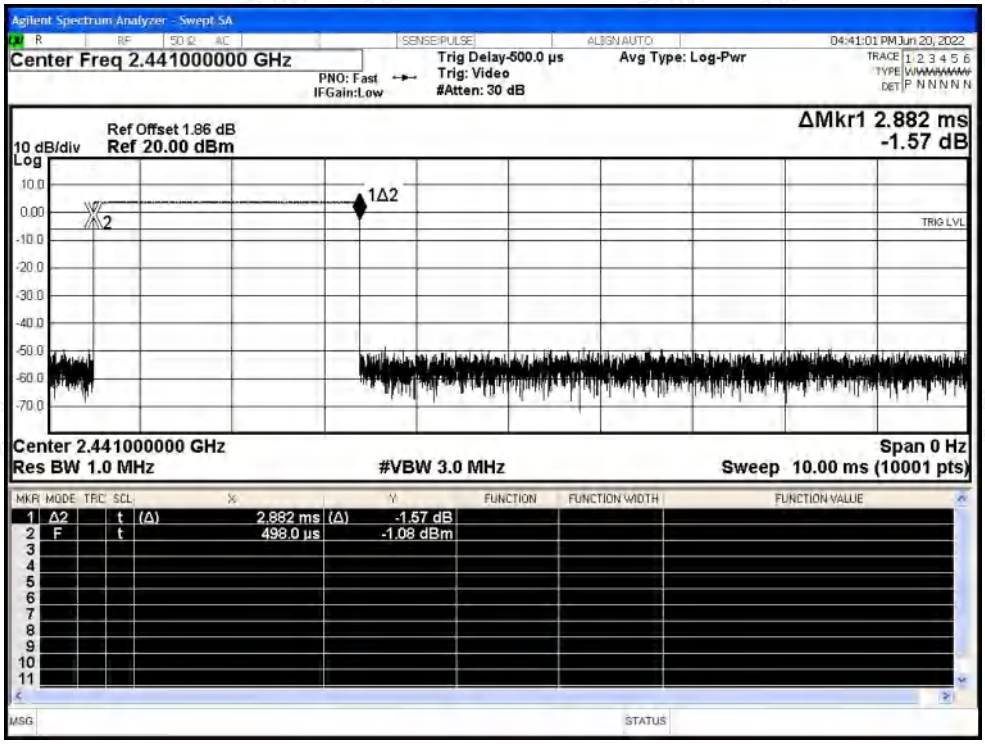
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



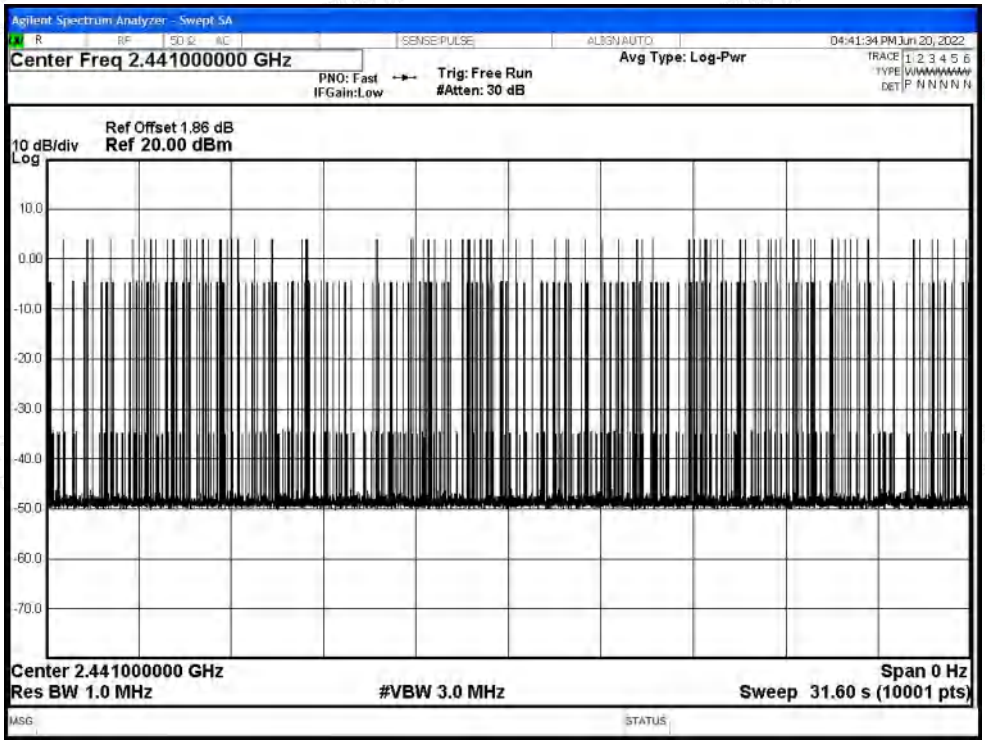
Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



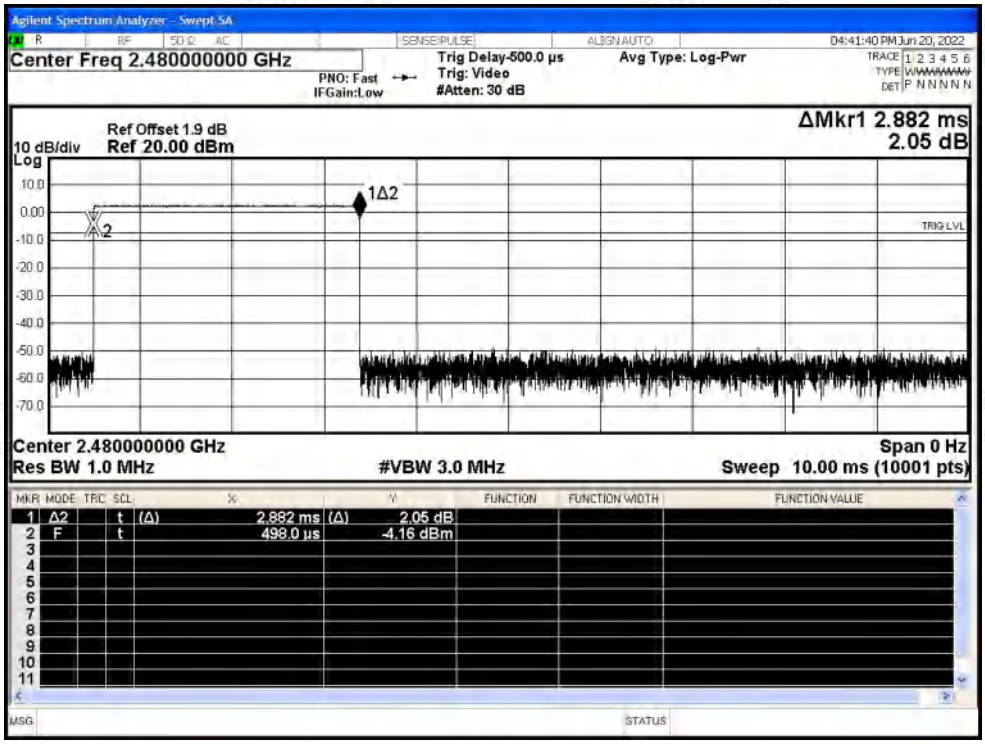
Dwell NVNT 1-DH5 2441MHz Ant1 One Burst



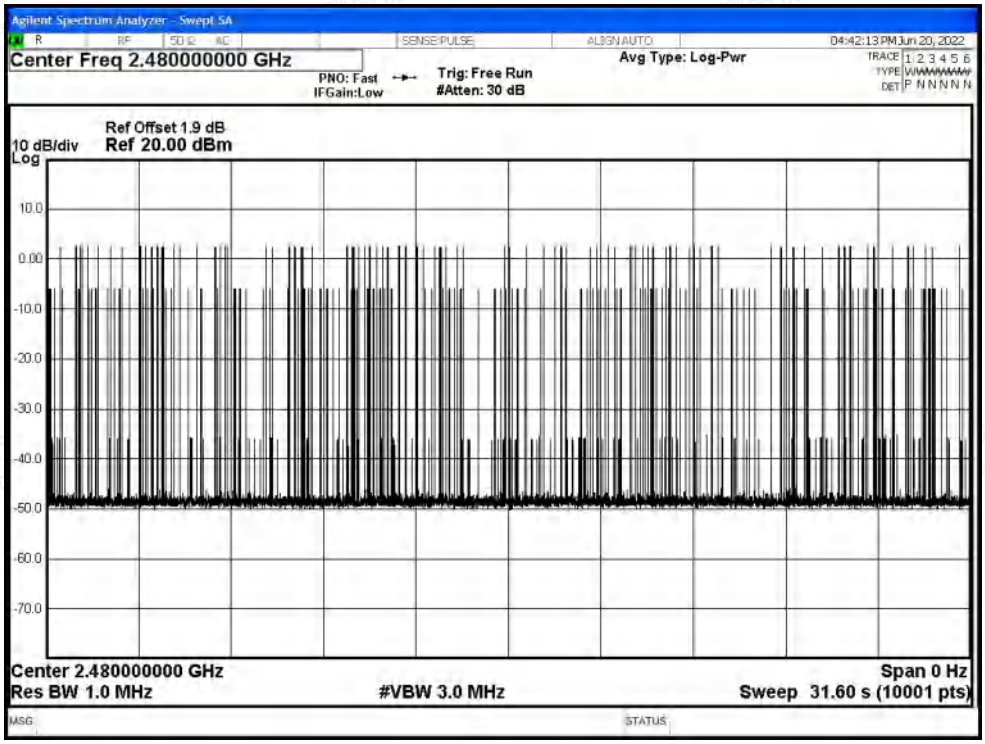
Dwell NVNT 1-DH5 2441MHz Ant1 Accumulated



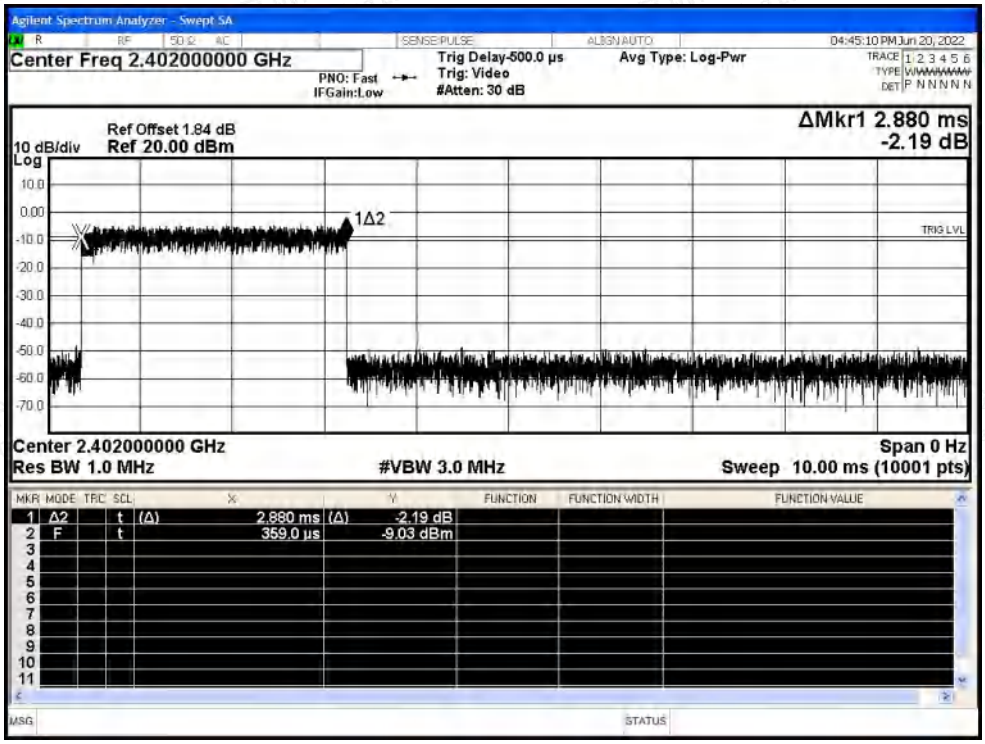
Dwell NVNT 1-DH5 2480MHz Ant1 One Burst



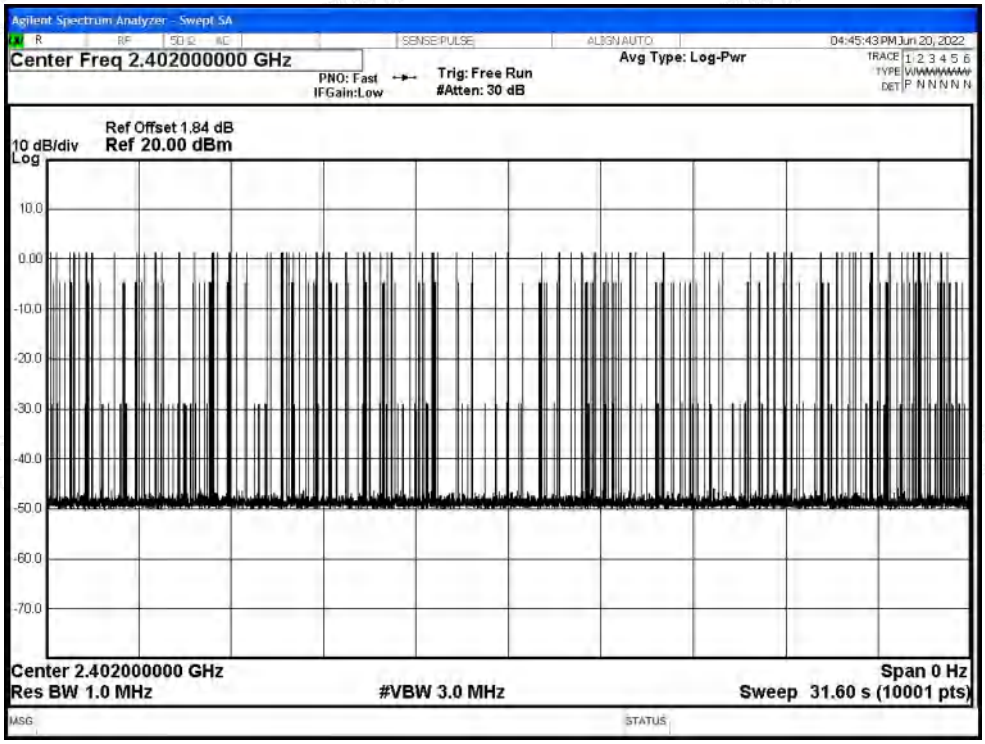
Dwell NVNT 1-DH5 2480MHz Ant1 Accumulated



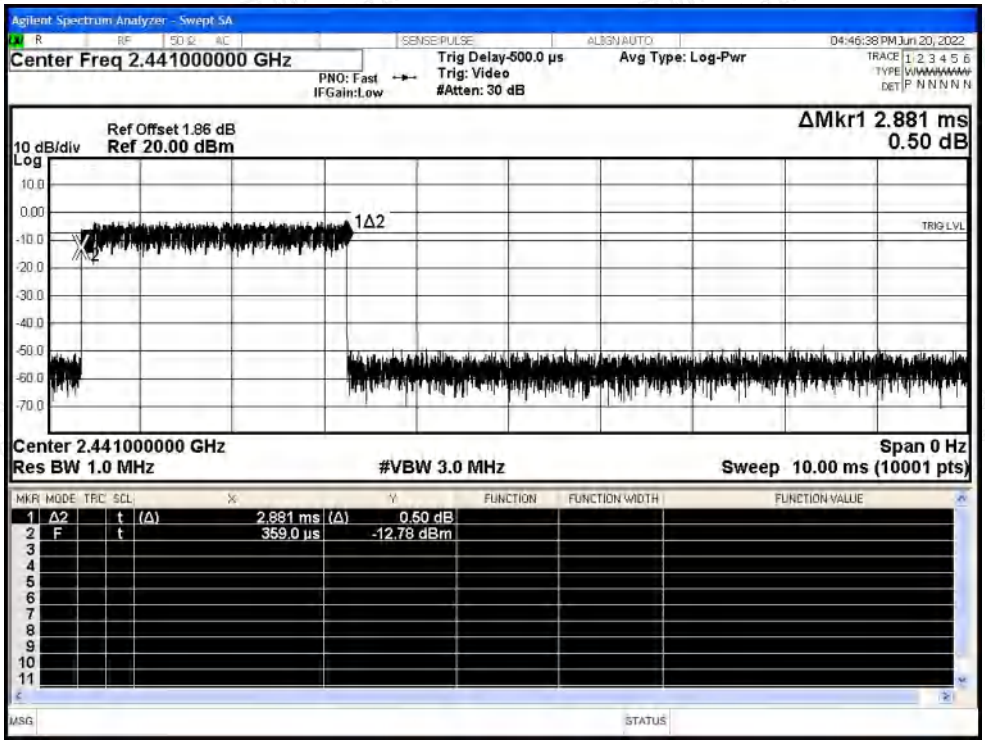
Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



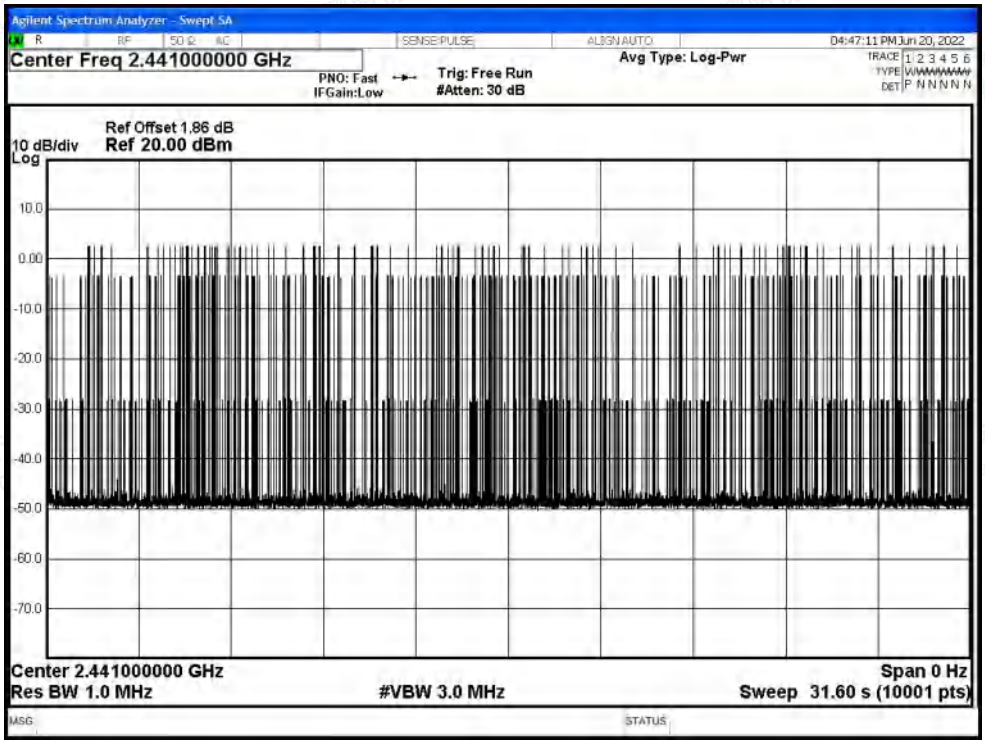
Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



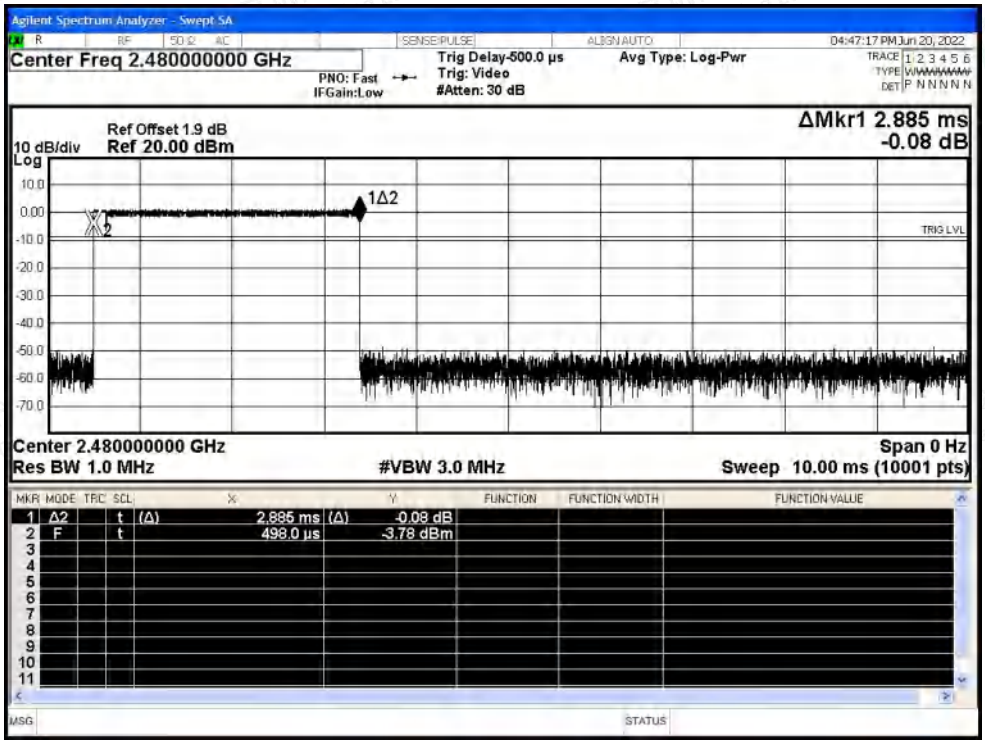
Dwell NVNT 2-DH5 2441MHz Ant1 One Burst



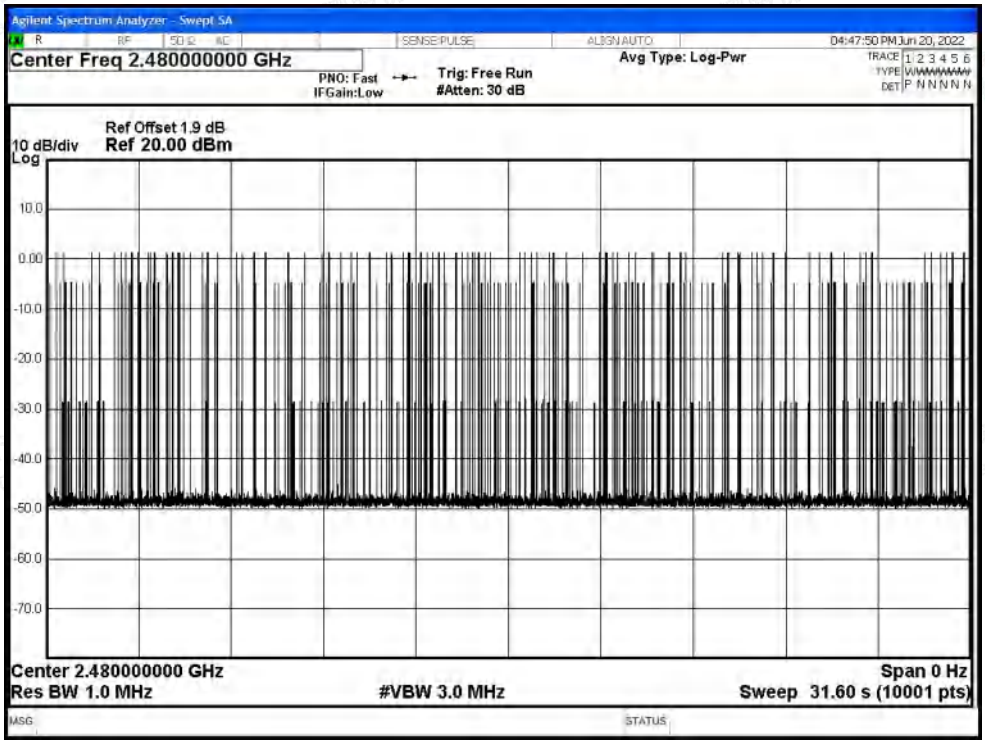
Dwell NVNT 2-DH5 2441MHz Ant1 Accumulated



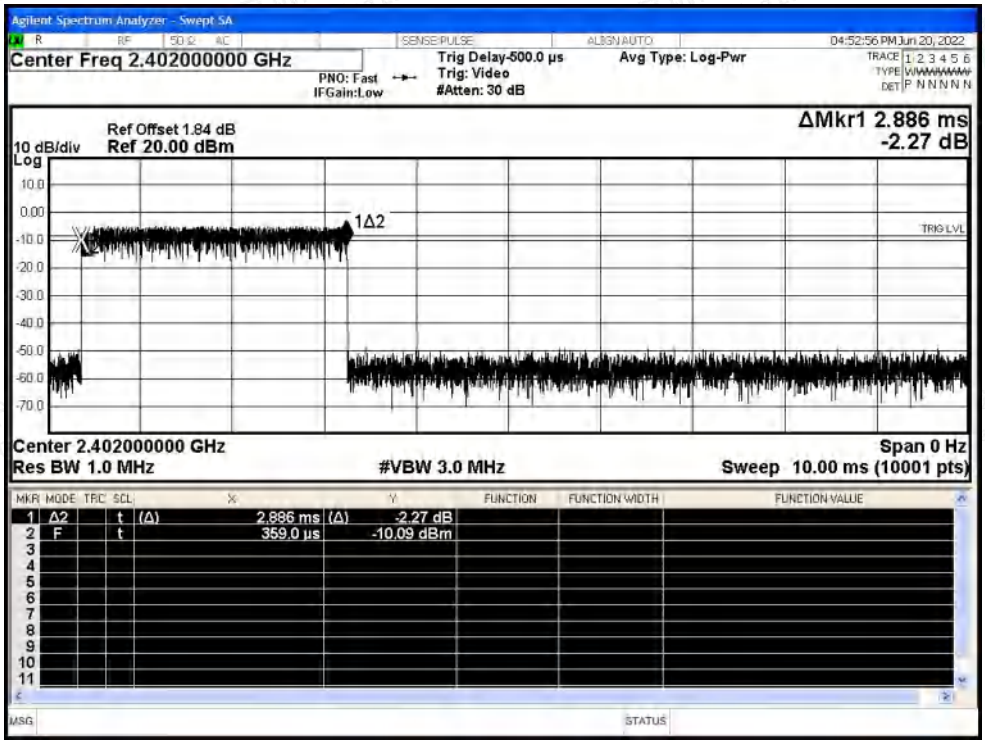
Dwell NVNT 2-DH5 2480MHz Ant1 One Burst



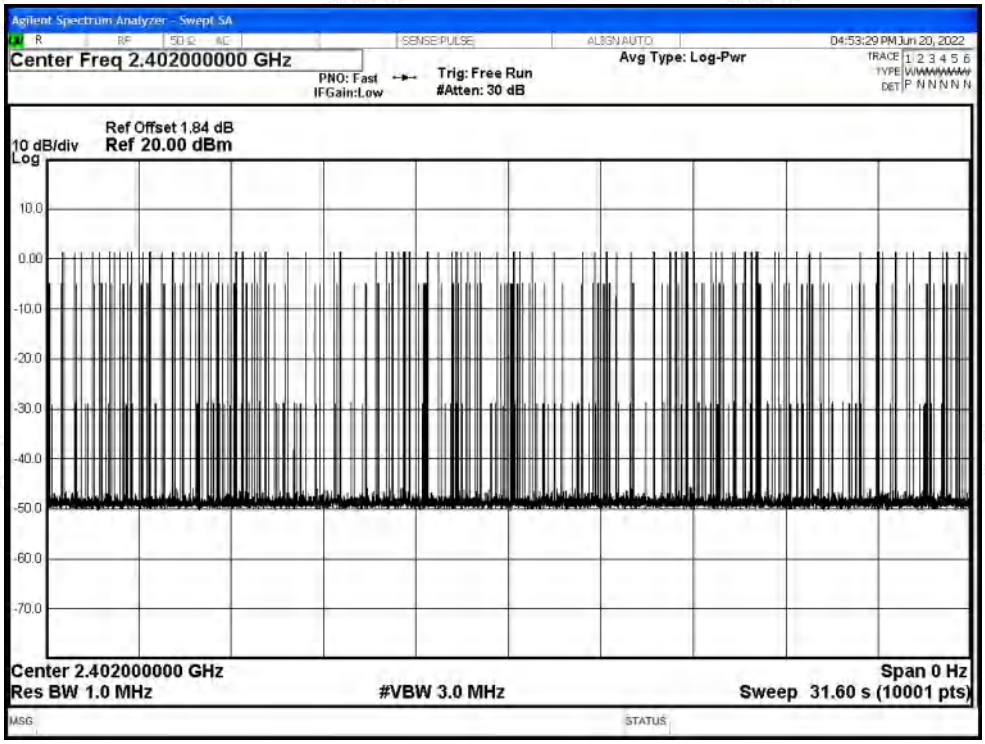
Dwell NVNT 2-DH5 2480MHz Ant1 Accumulated



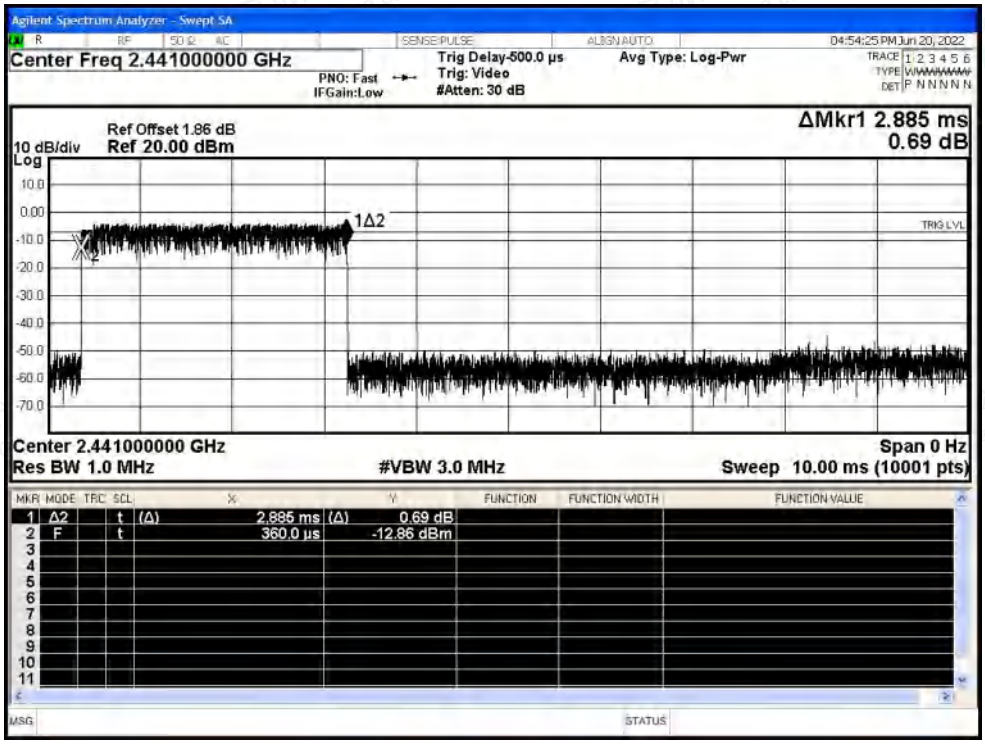
Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



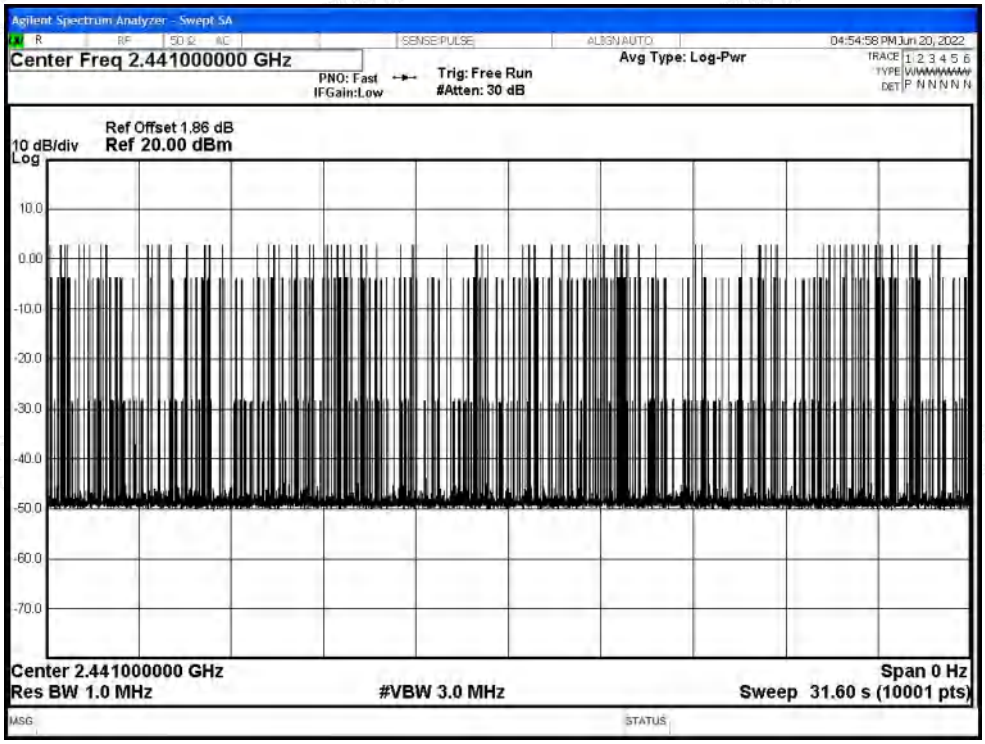
Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated



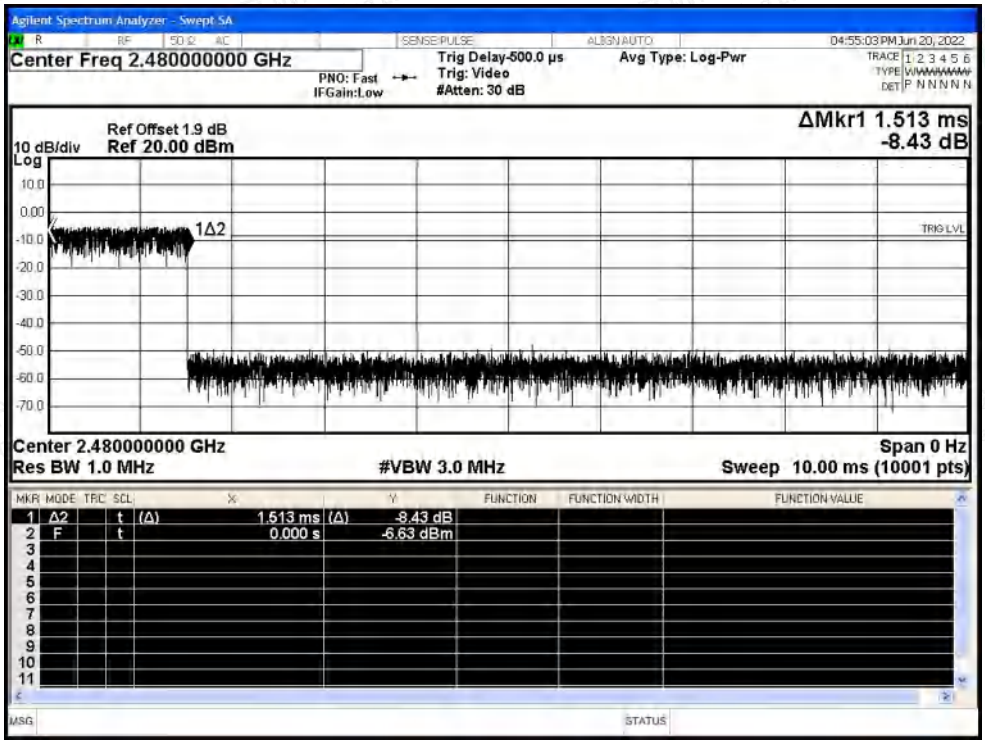
Dwell NVNT 3-DH5 2441MHz Ant1 One Burst



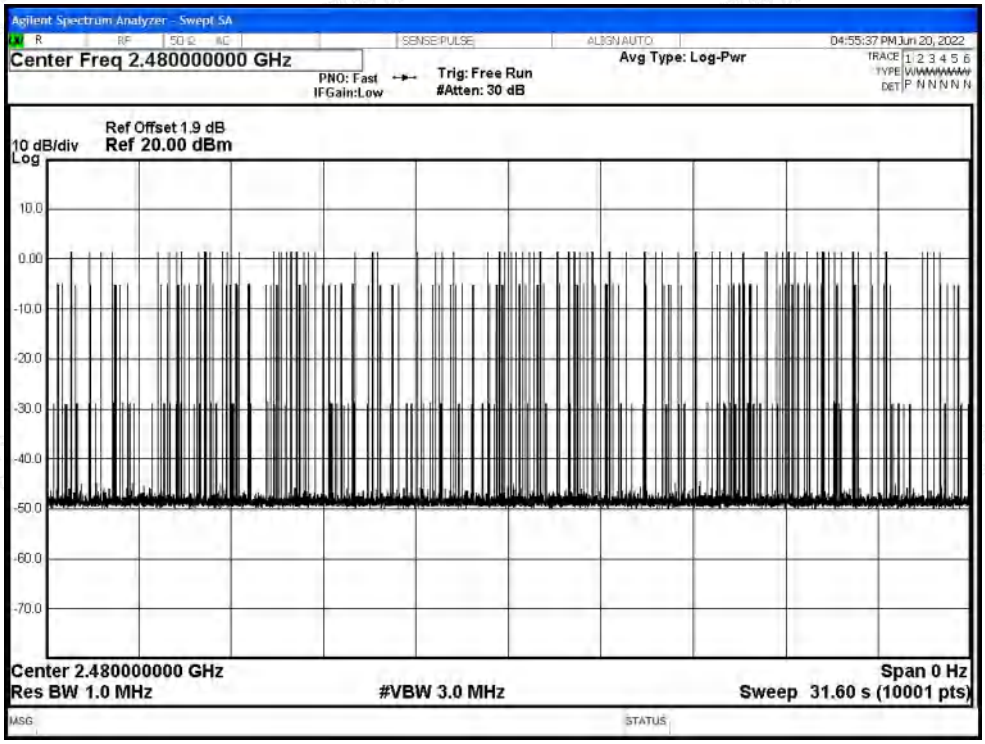
Dwell NVNT 3-DH5 2441MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2480MHz Ant1 One Burst



Dwell NVNT 3-DH5 2480MHz Ant1 Accumulated

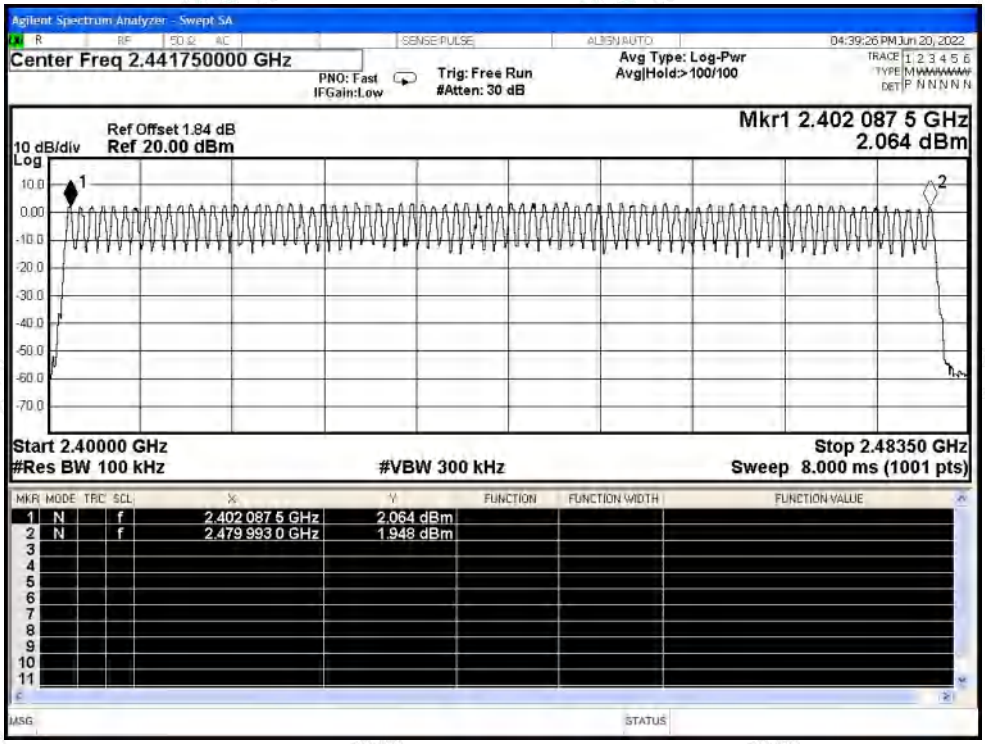


A.5 Number of Hopping Channel

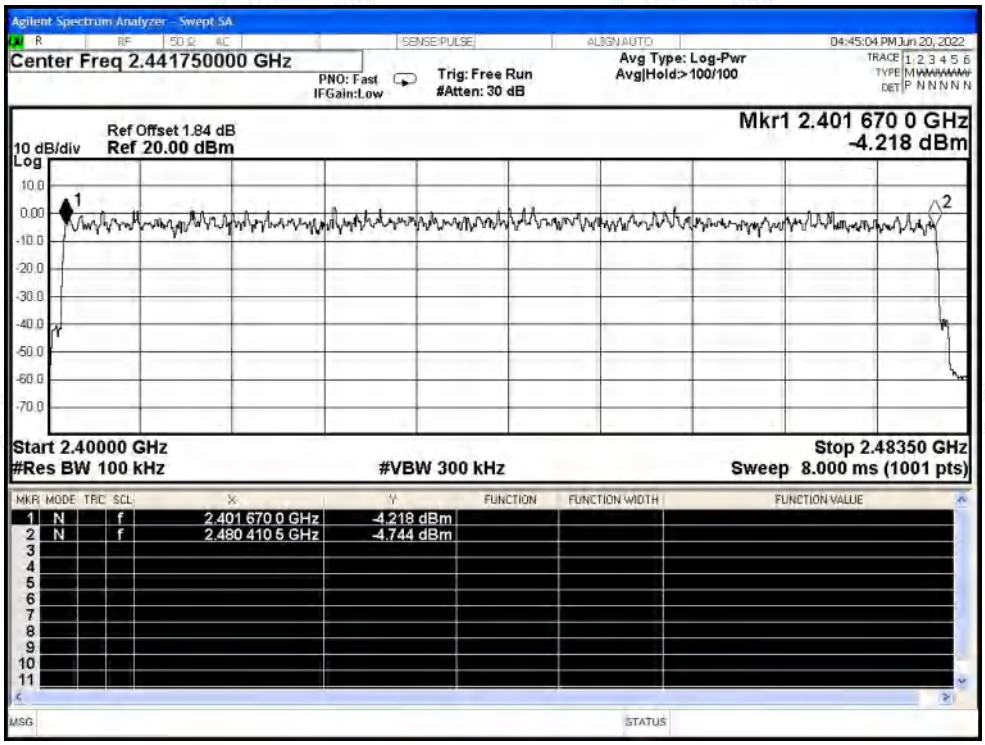
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

Test Graphs

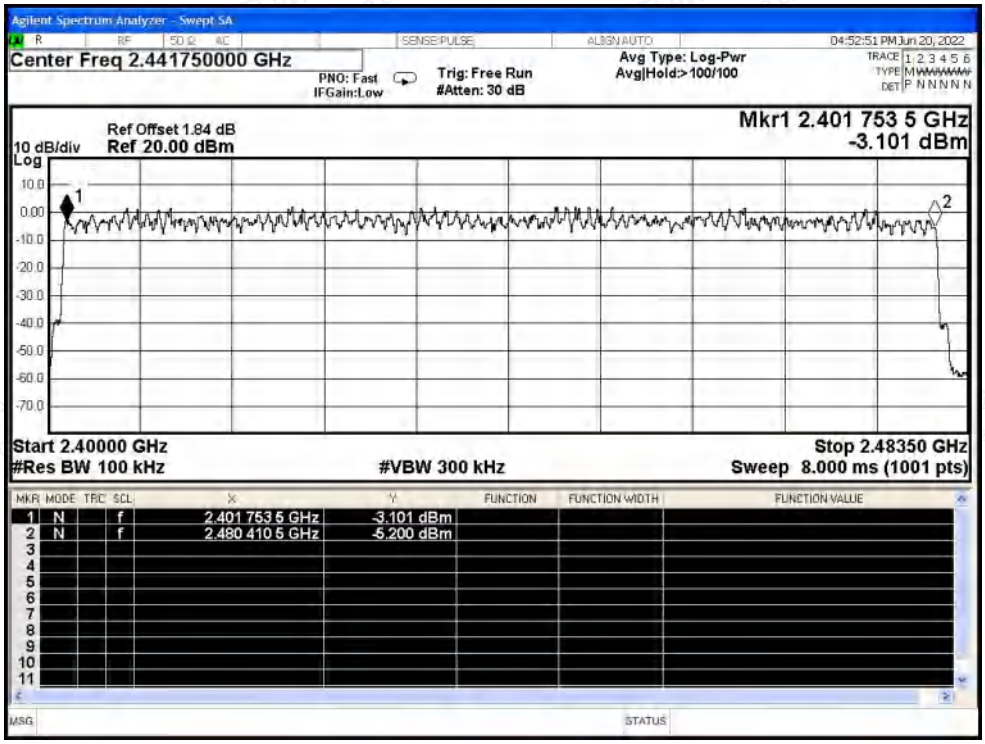
Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1



Hopping No. NVNT 3-DH5 2402MHz Ant1

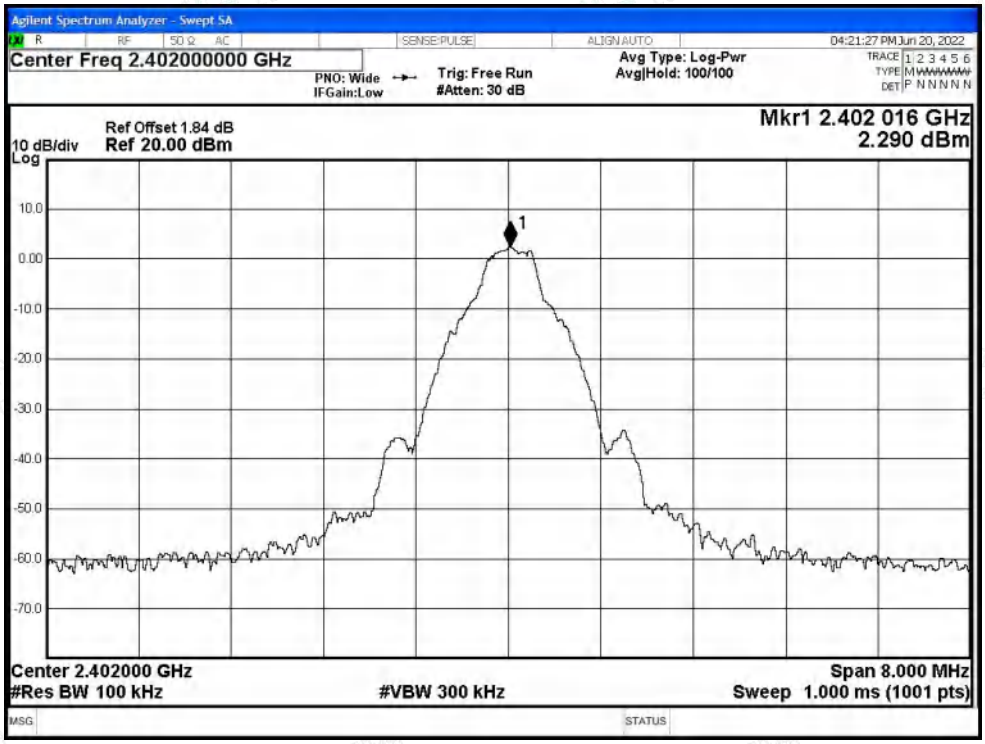


A.6 Band Edge

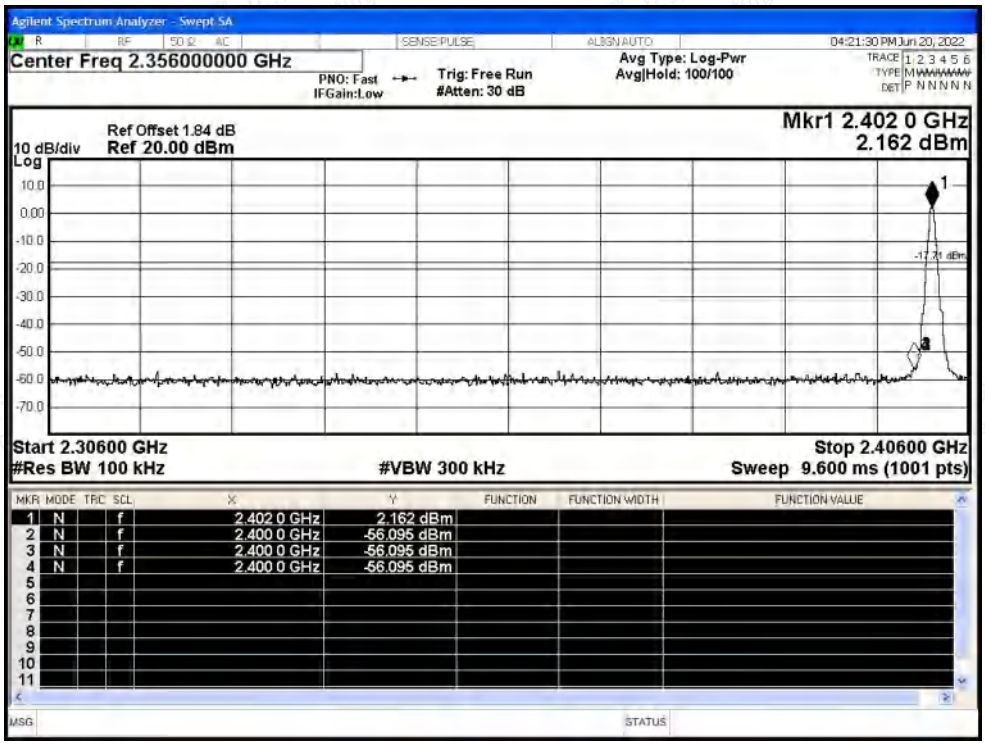
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-58.39	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-59.23	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-55.98	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-58.08	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-55.42	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-58.5	-20	Pass

Test Graphs

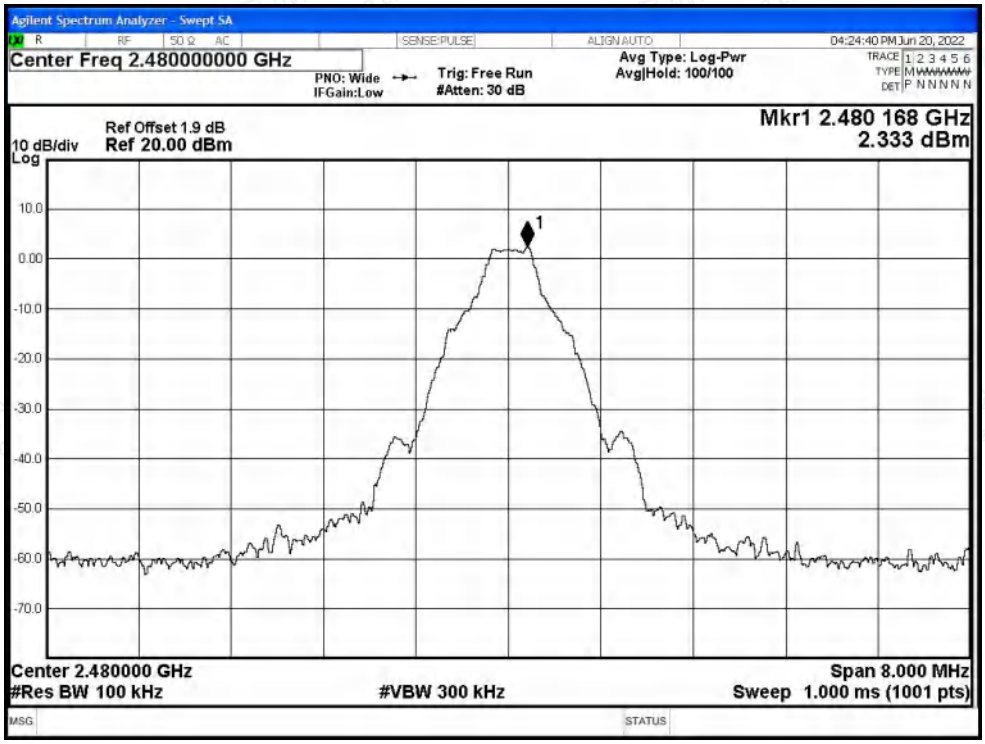
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



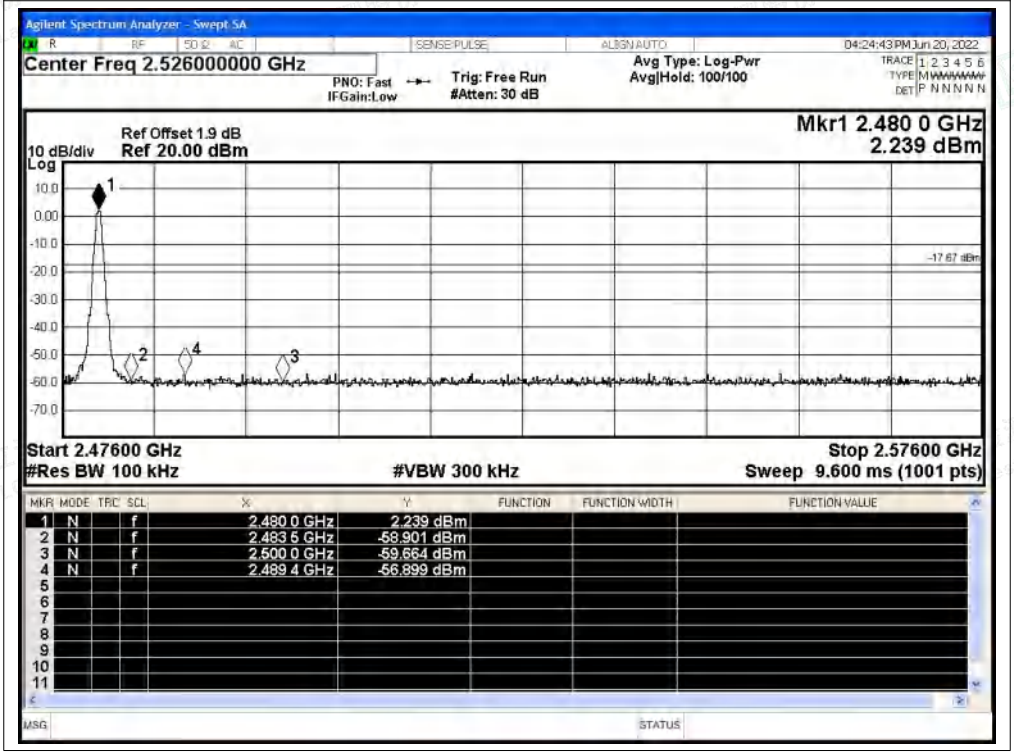
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



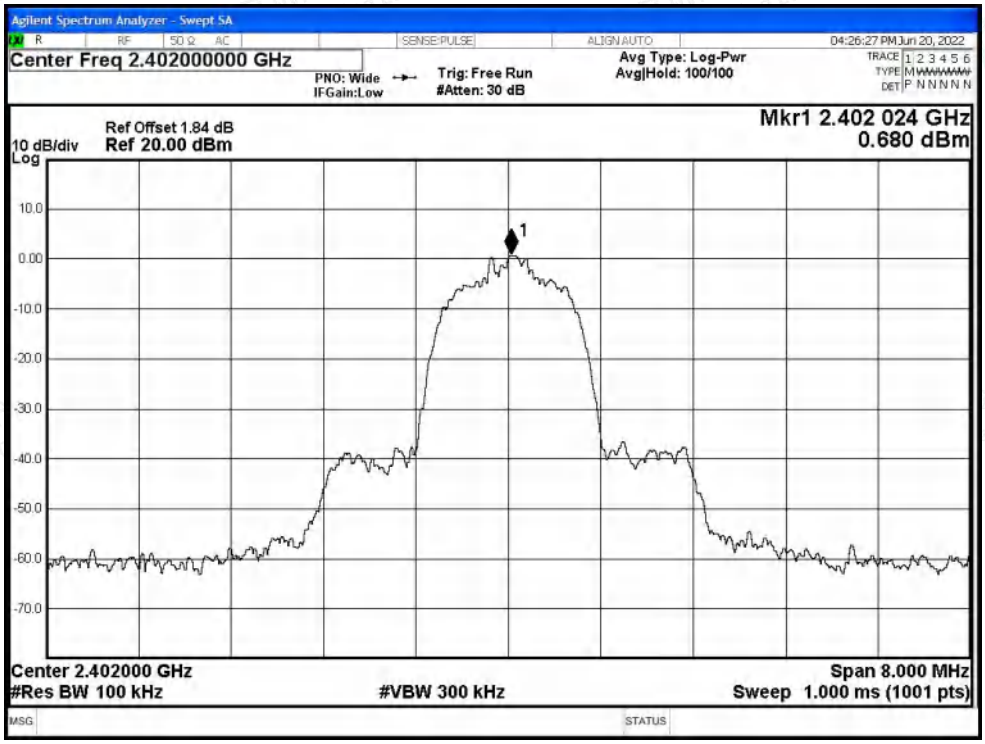
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



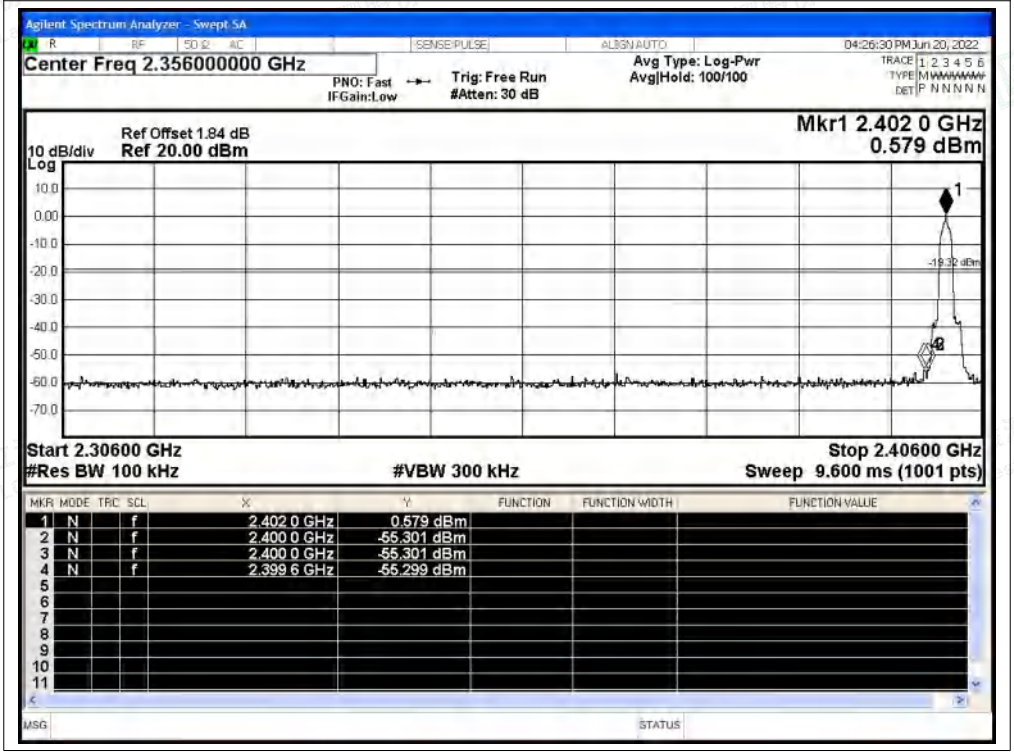
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



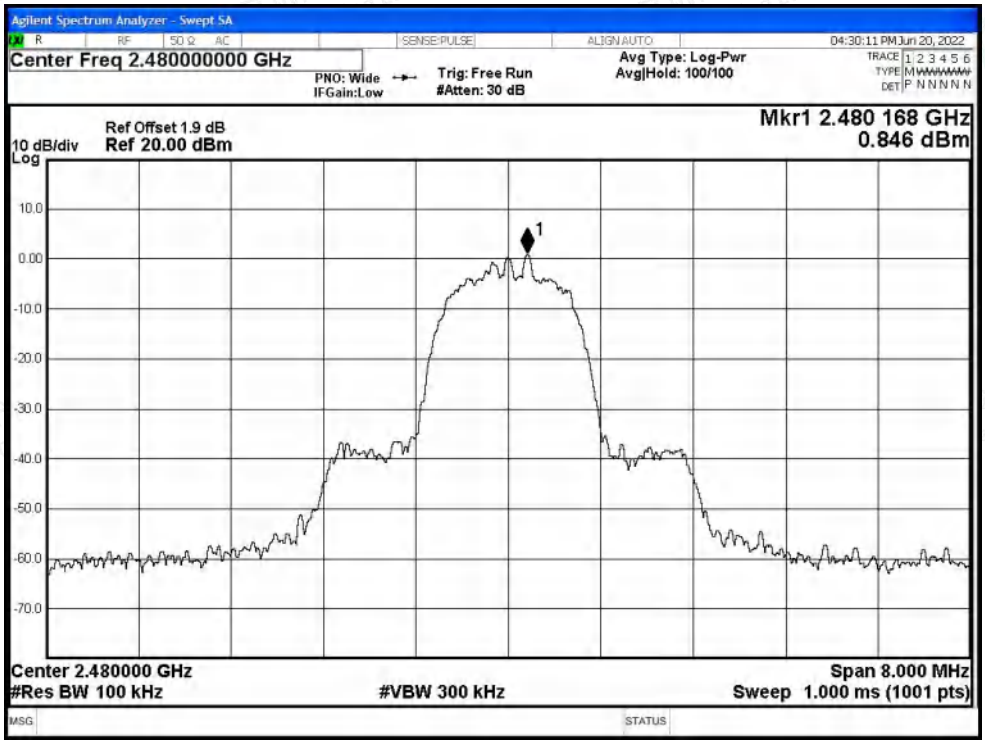
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



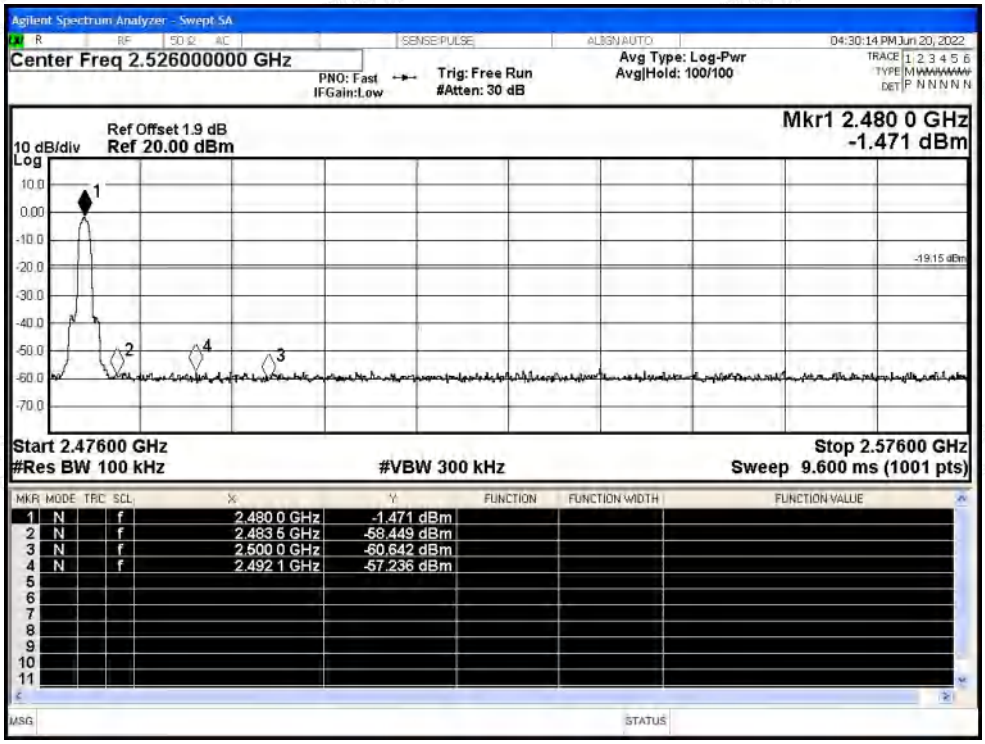
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



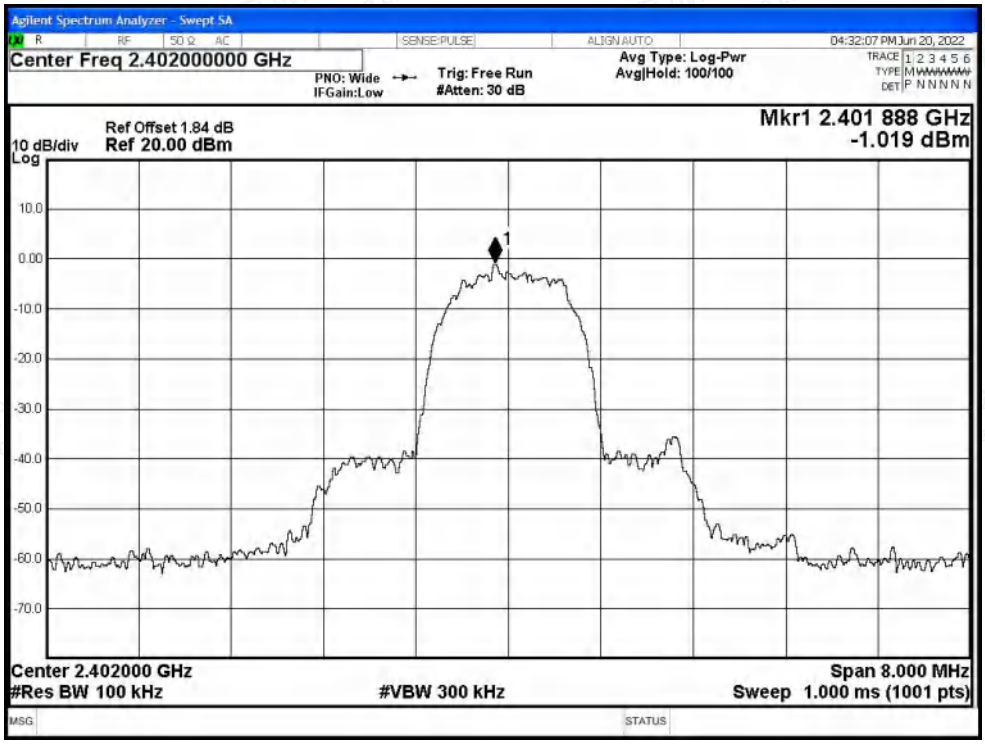
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



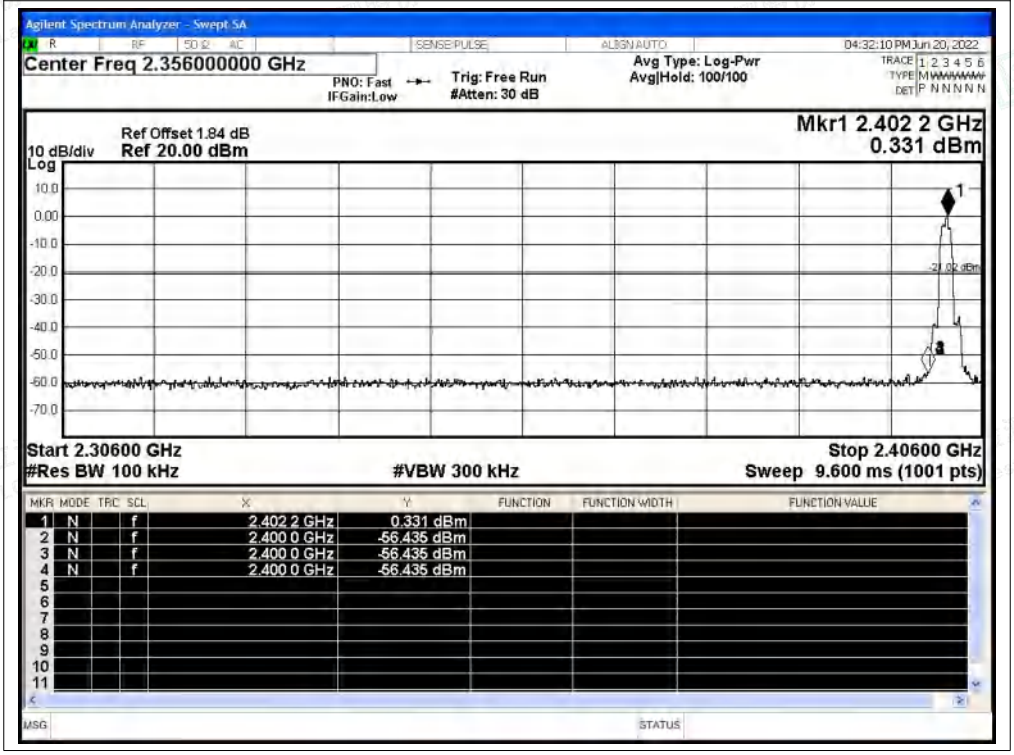
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



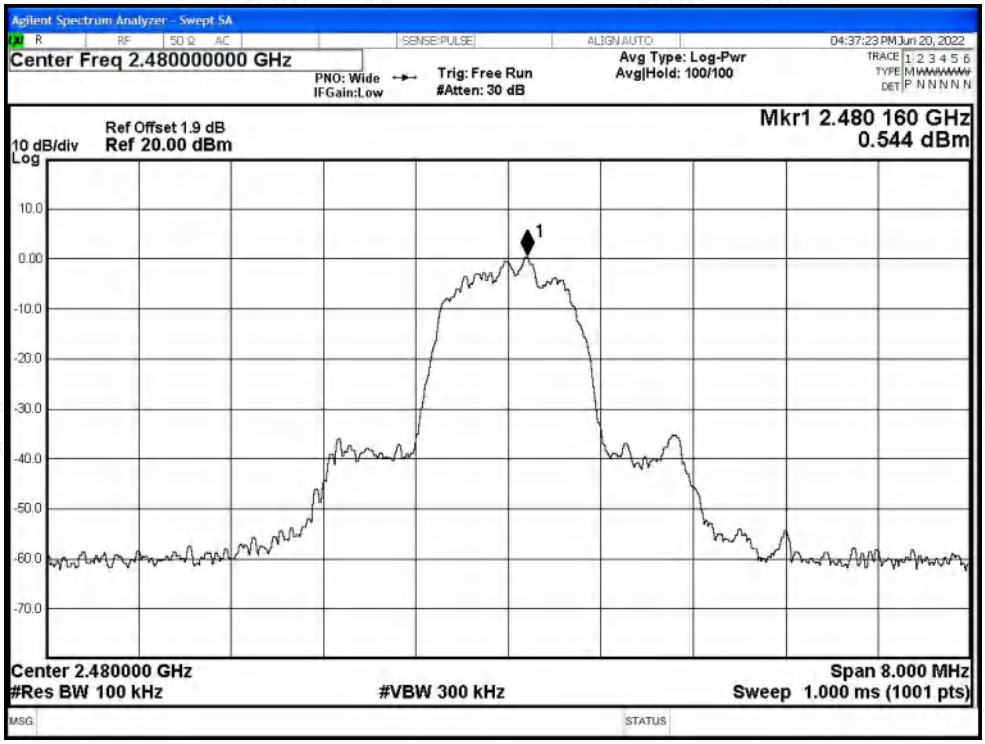
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



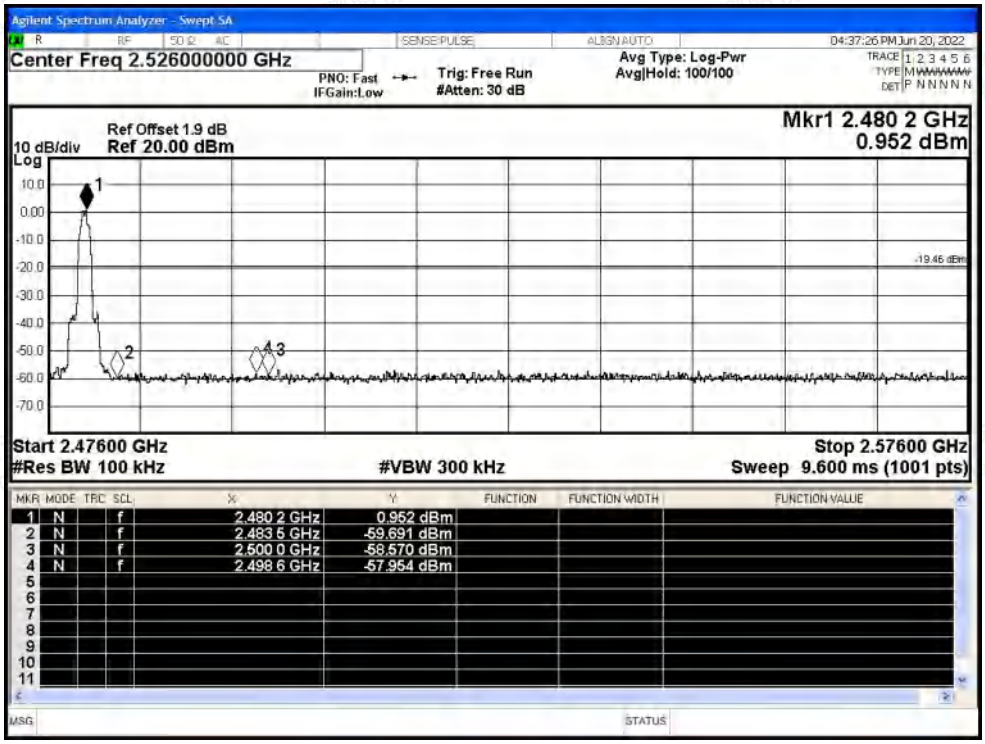
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



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



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

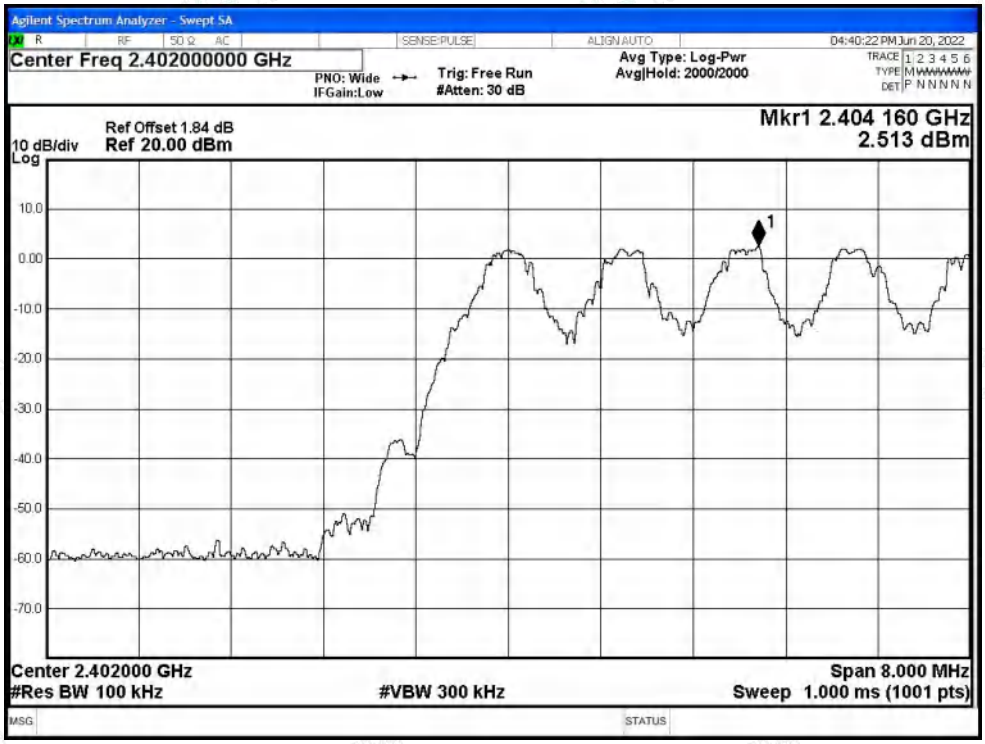


(Hopping)

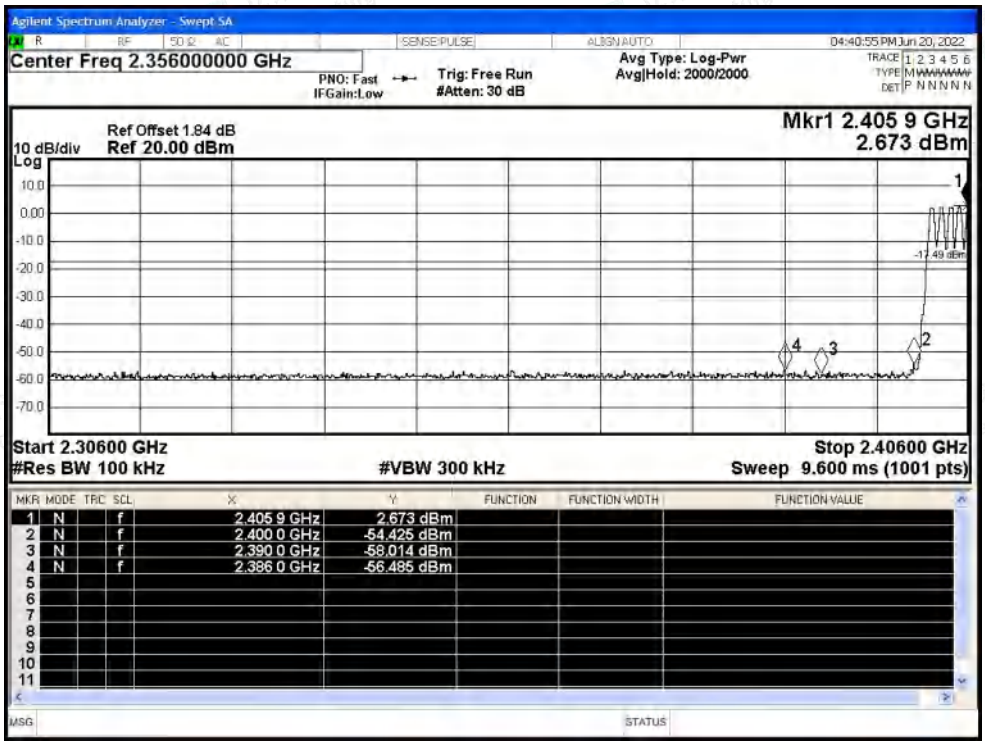
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-59	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-58.29	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-57.19	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-57.05	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-56.82	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-57.04	-20	Pass

Test Graphs

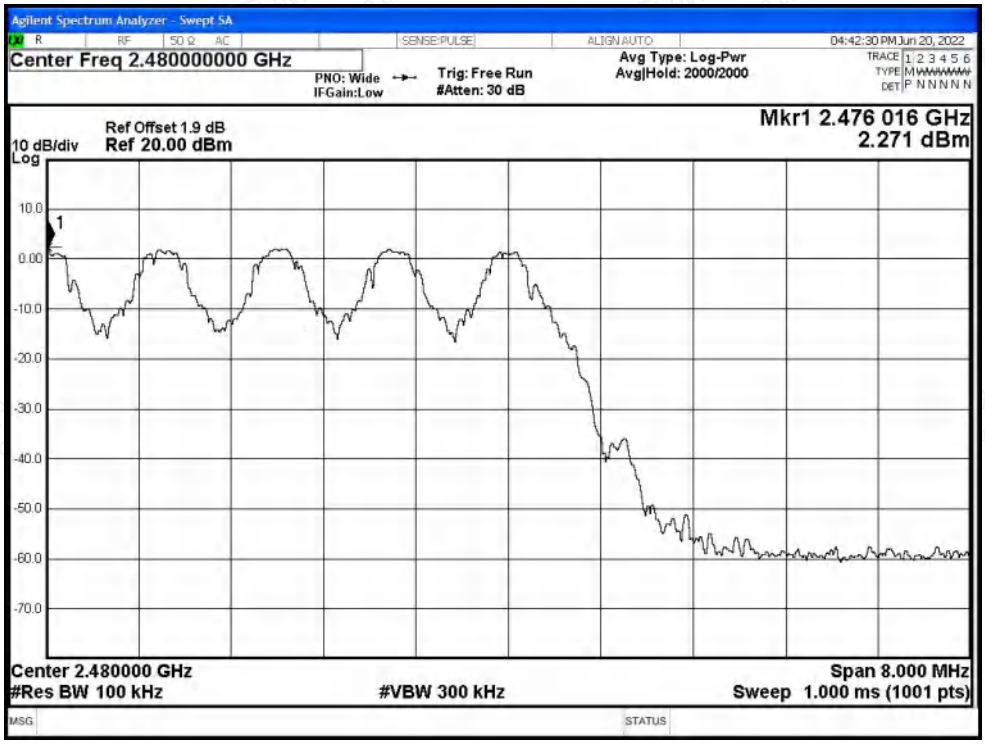
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



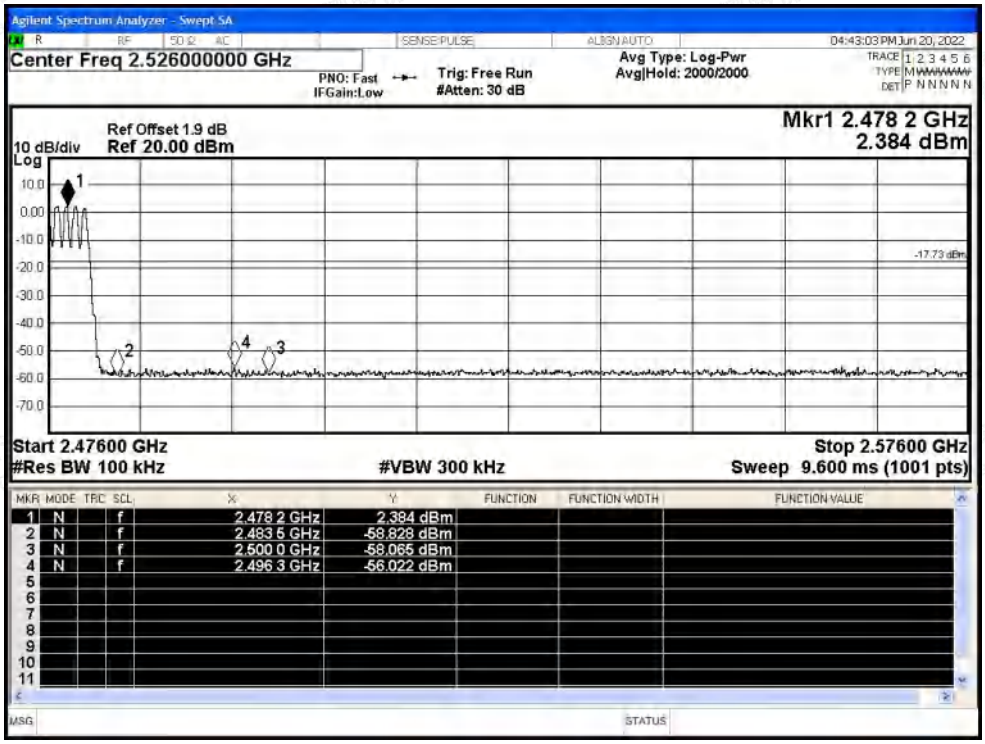
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



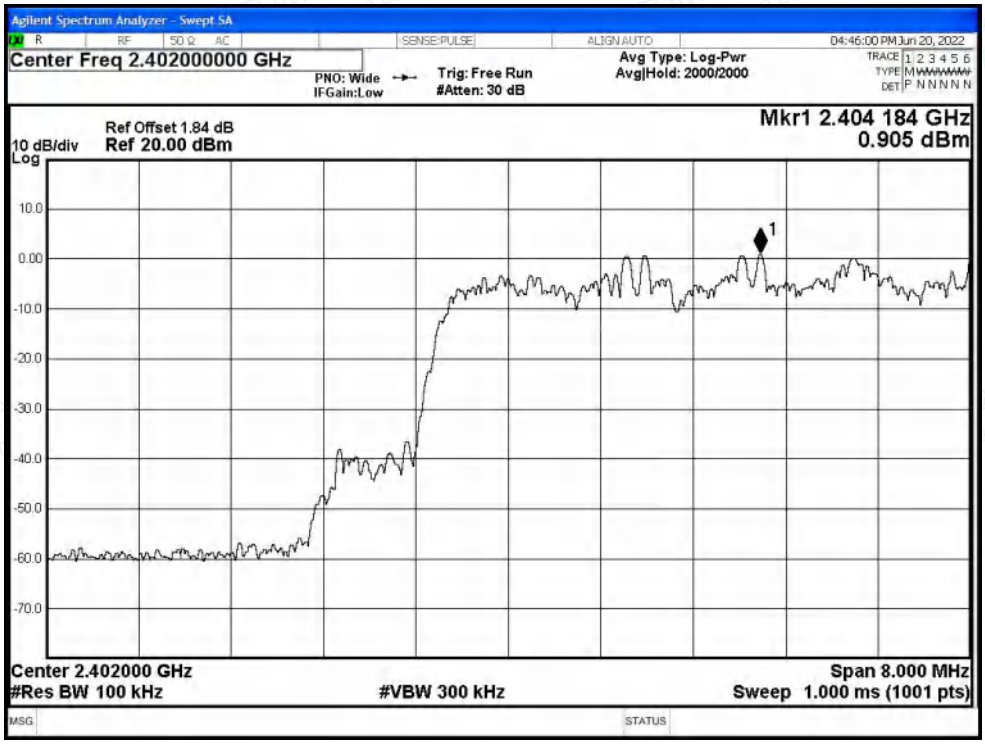
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



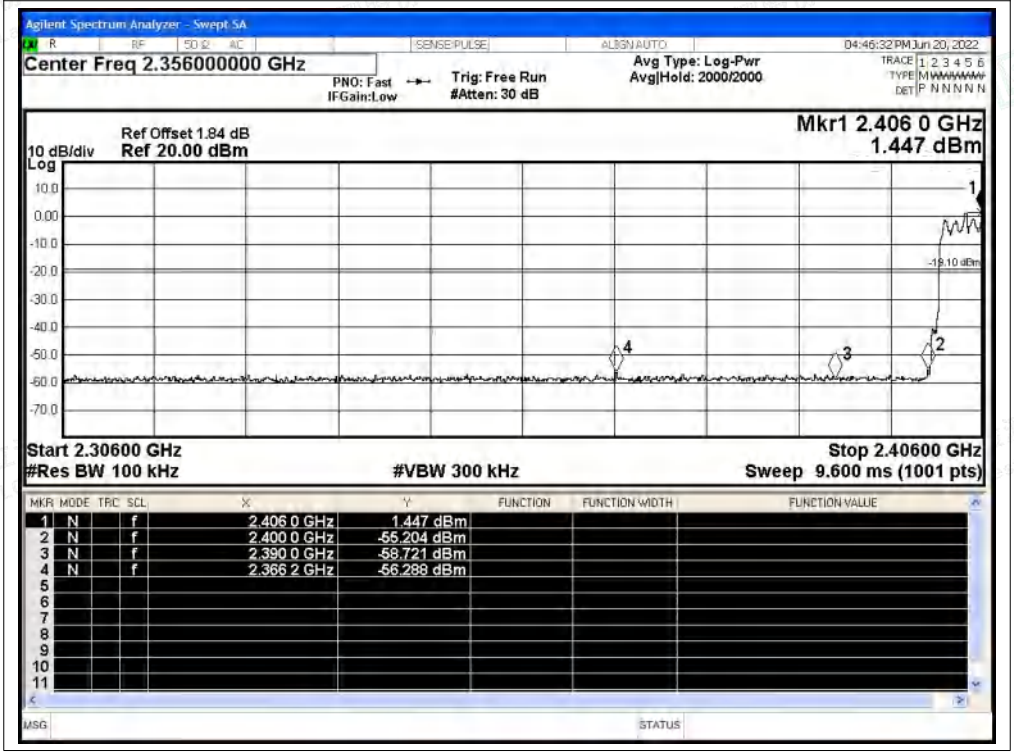
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



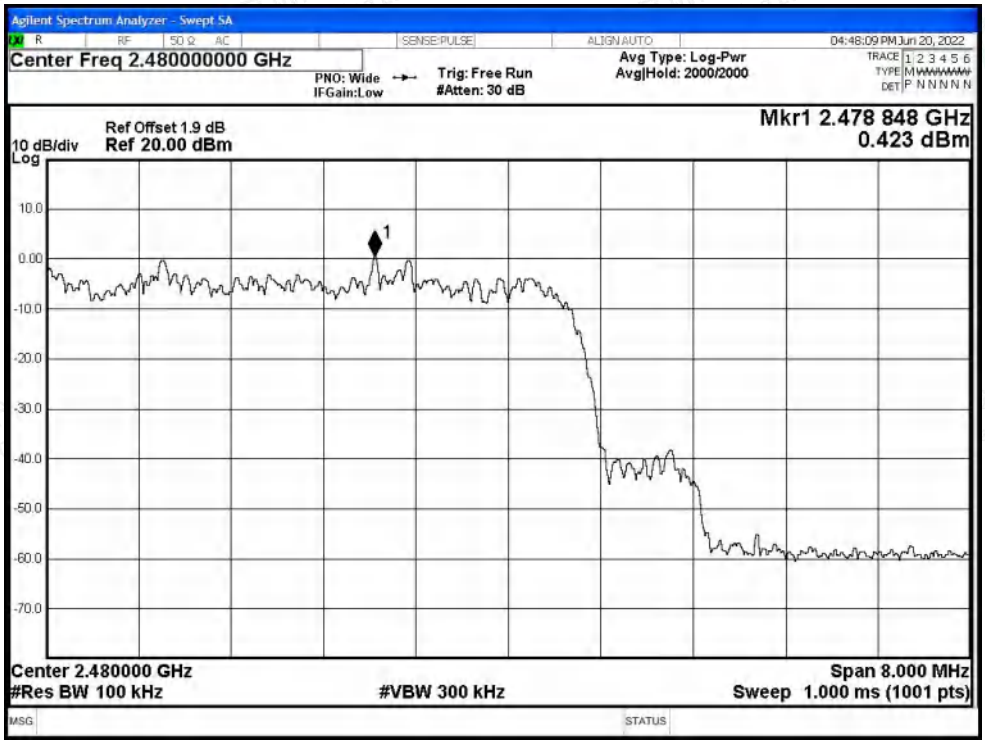
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



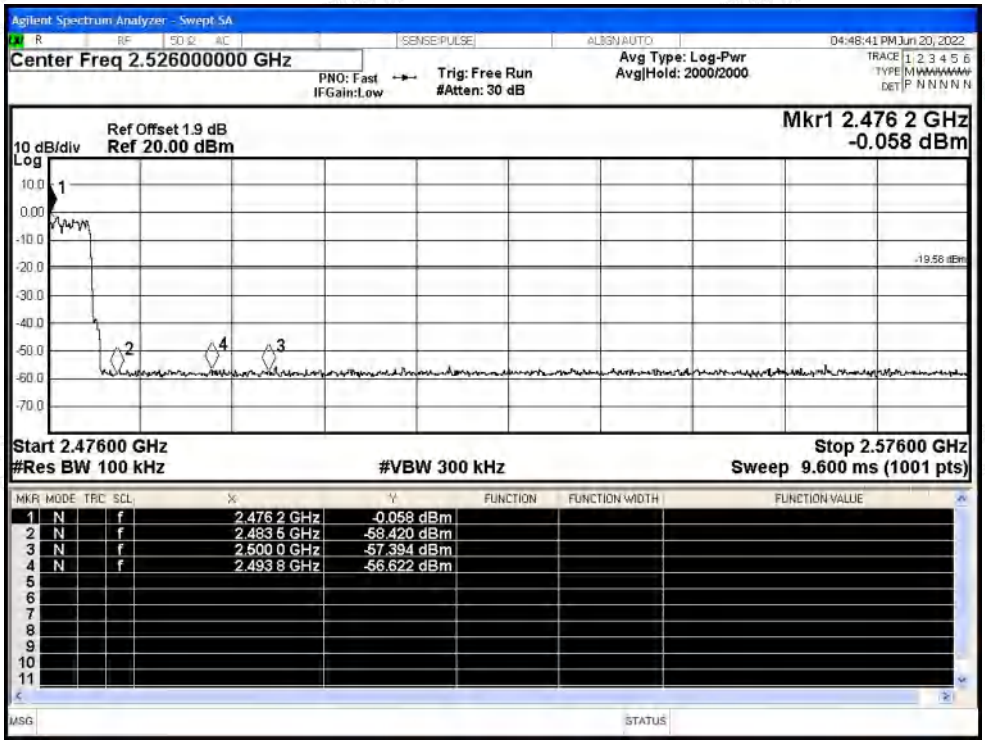
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



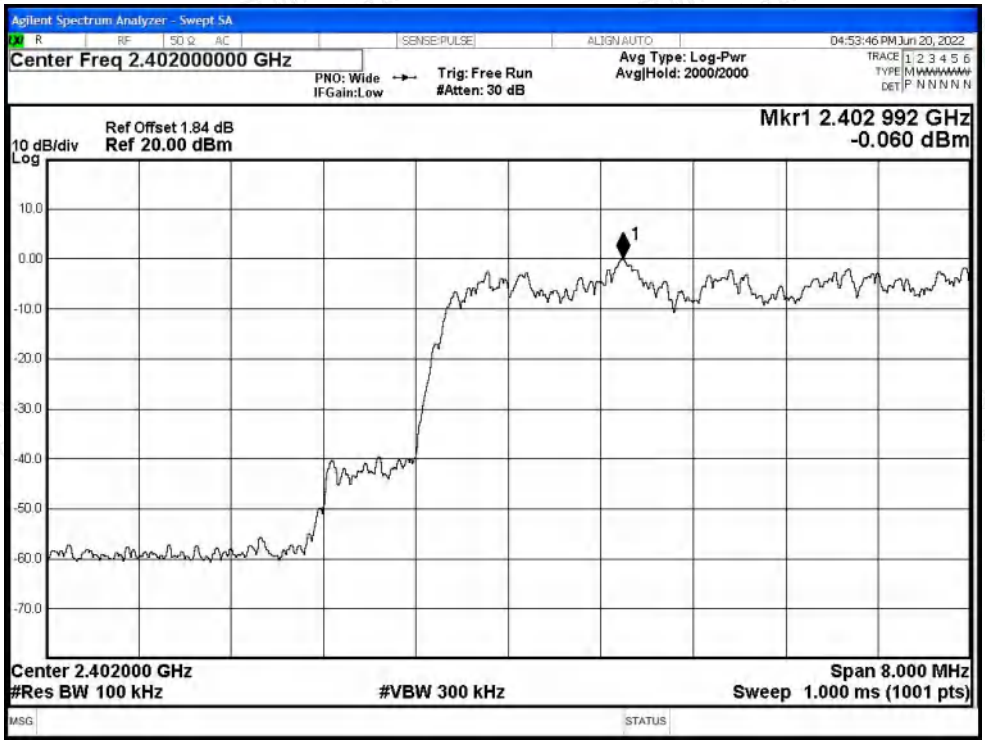
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



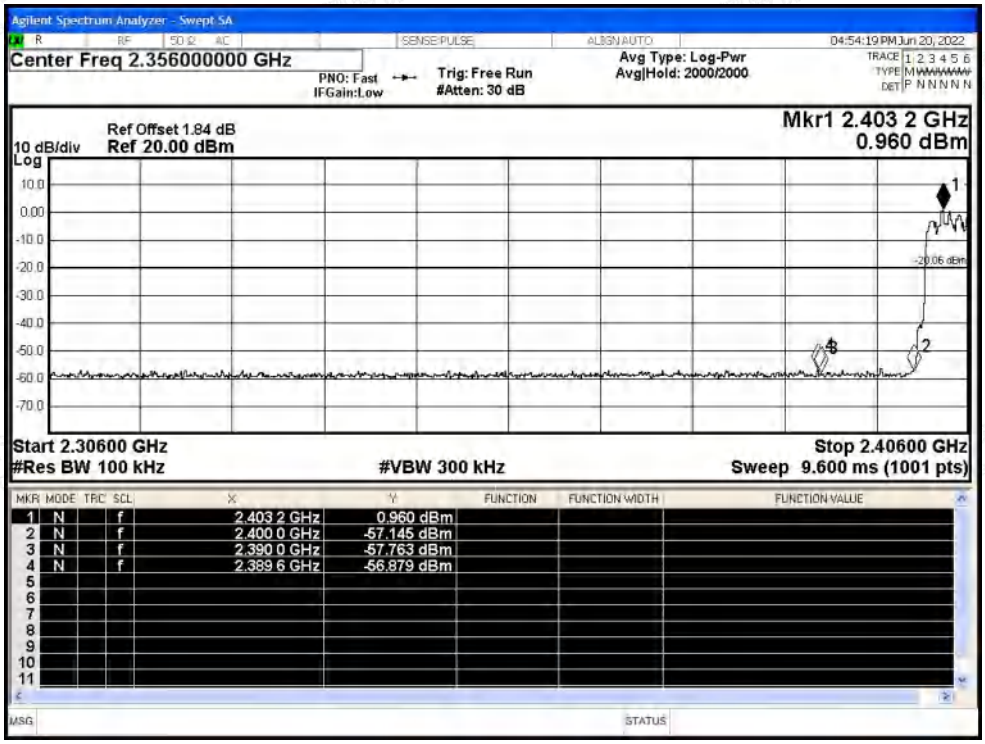
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission



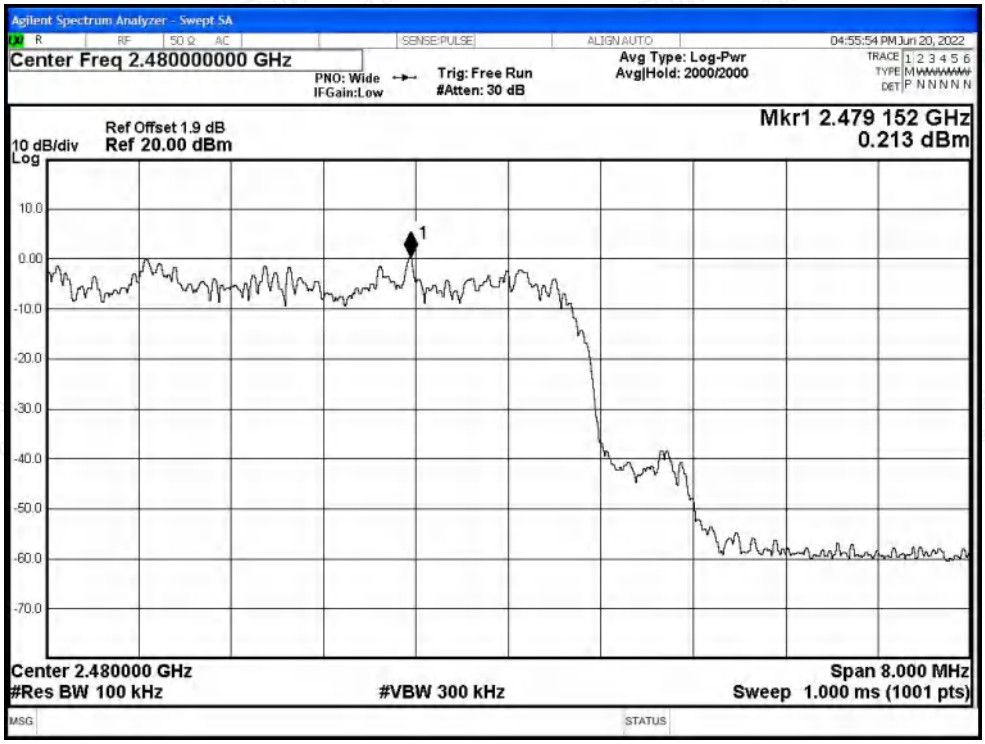
Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref



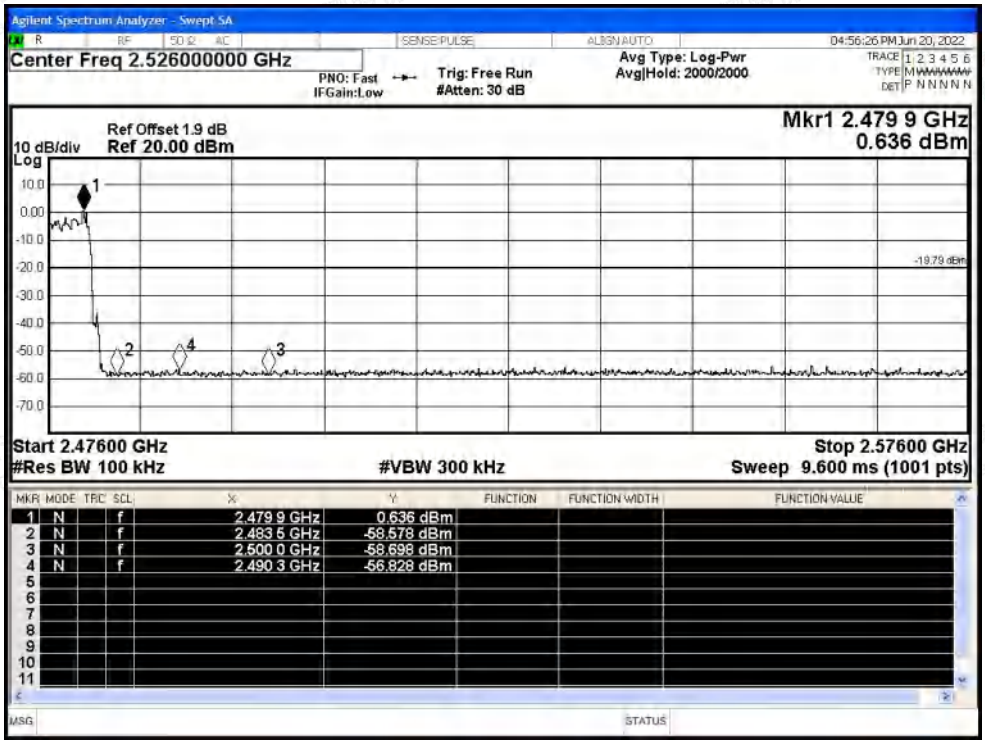
Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission



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



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

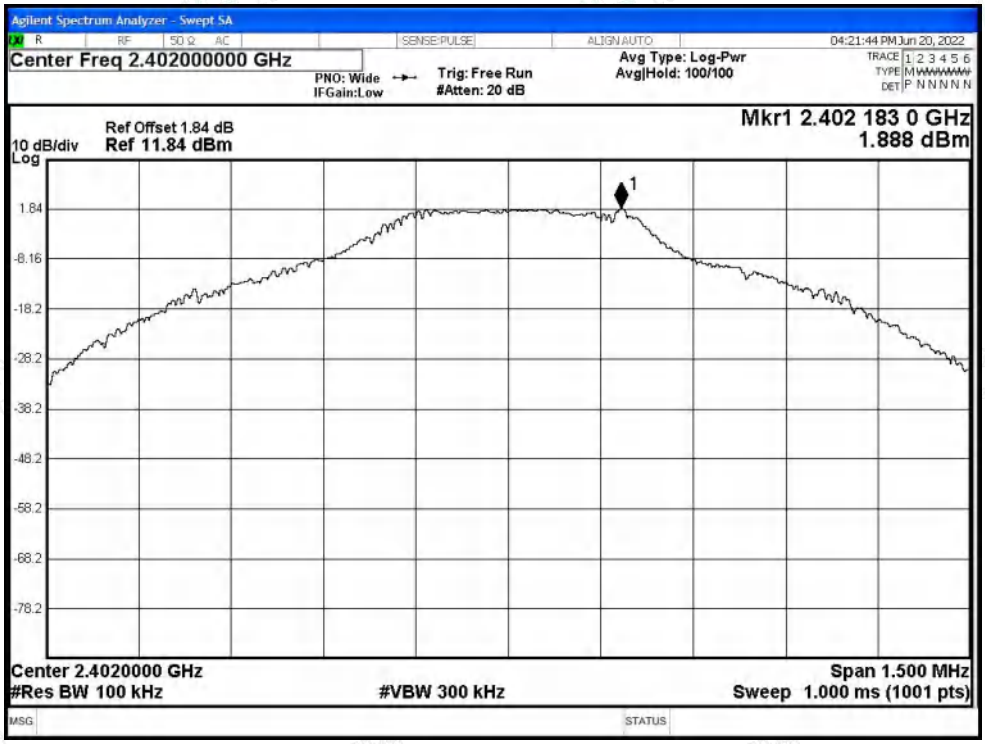


A.7 Conducted RF Spurious Emission

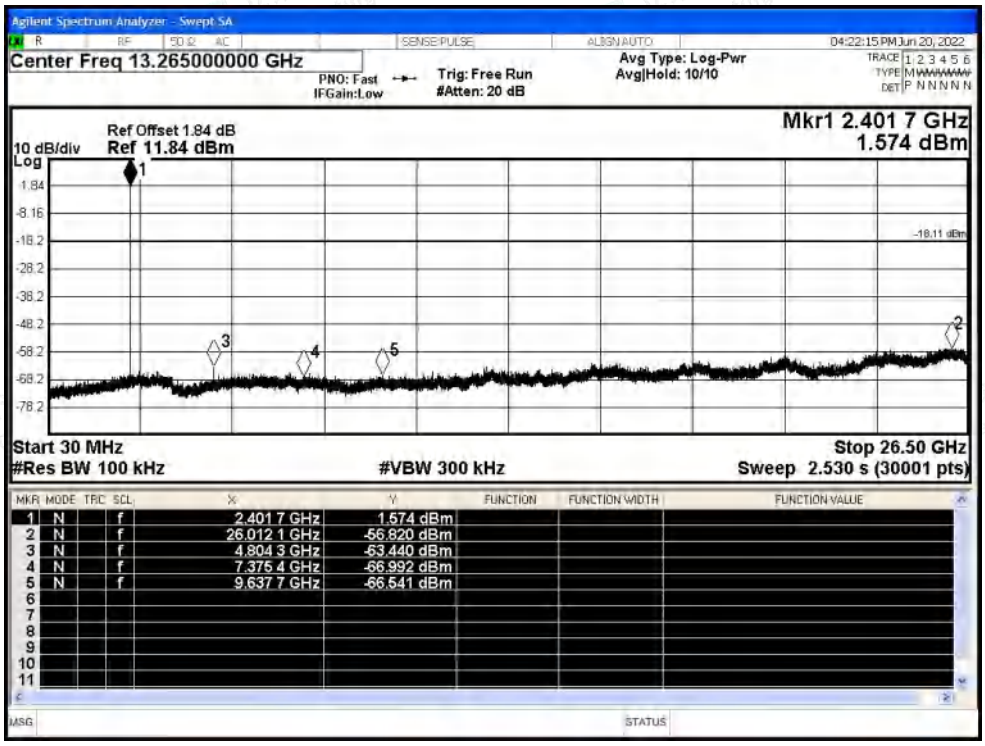
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-58.71	-20	Pass
NVNT	1-DH5	2441	Ant1	-59.15	-20	Pass
NVNT	1-DH5	2480	Ant1	-57.86	-20	Pass
NVNT	2-DH5	2402	Ant1	-55.59	-20	Pass
NVNT	2-DH5	2441	Ant1	-57.85	-20	Pass
NVNT	2-DH5	2480	Ant1	-57	-20	Pass
NVNT	3-DH5	2402	Ant1	-56.98	-20	Pass
NVNT	3-DH5	2441	Ant1	-57.87	-20	Pass
NVNT	3-DH5	2480	Ant1	-56.1	-20	Pass

Test Graphs

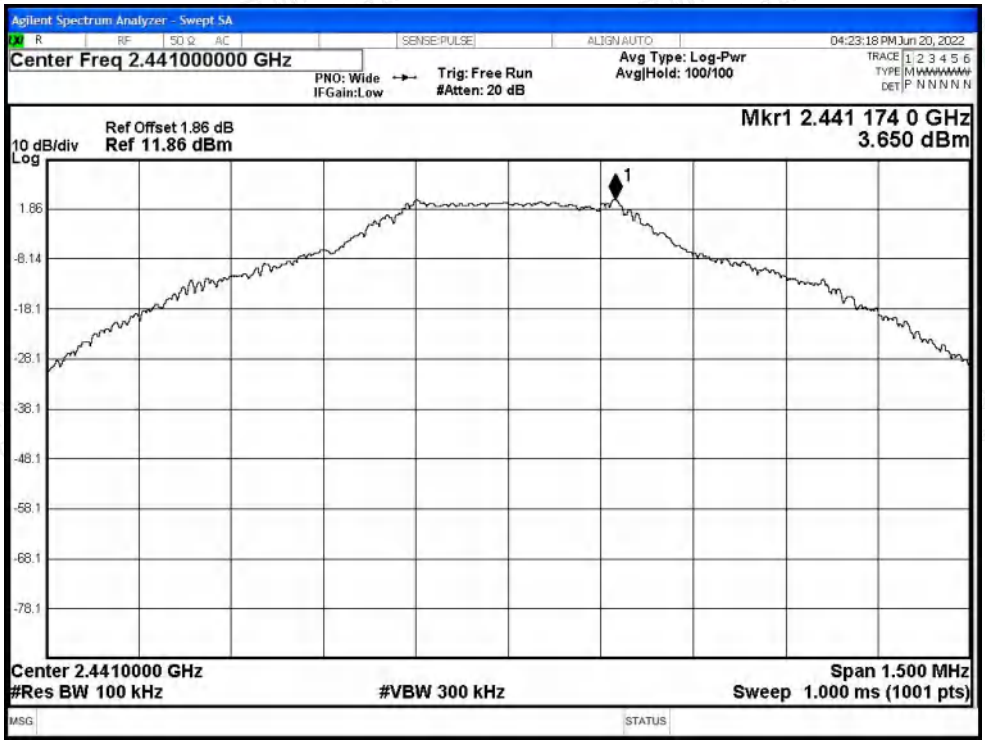
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



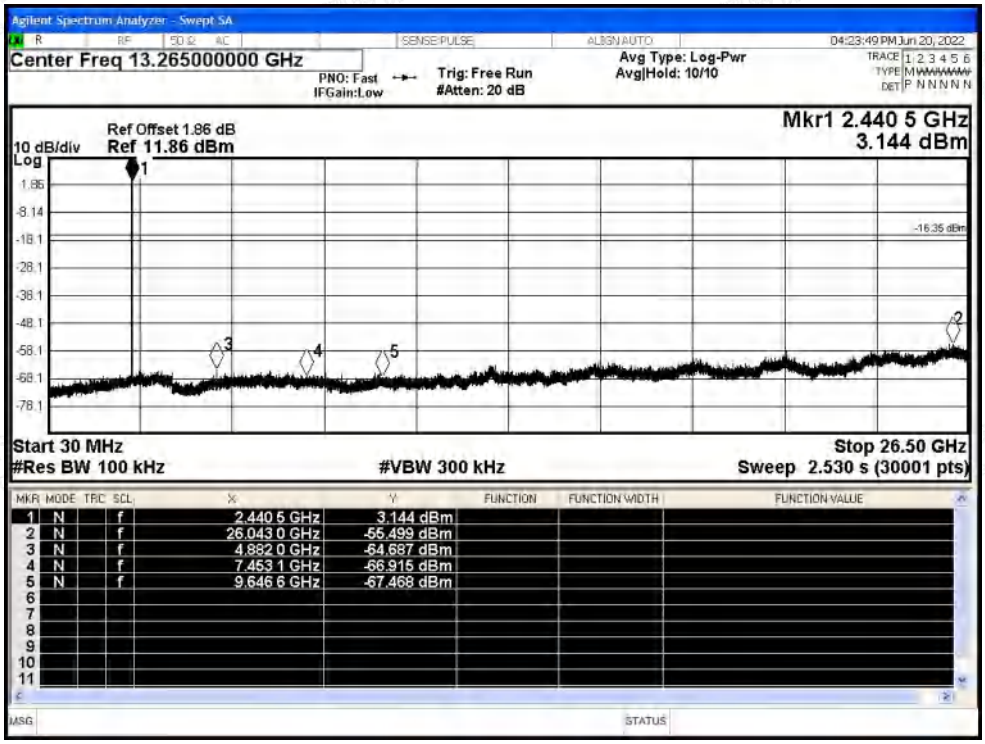
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



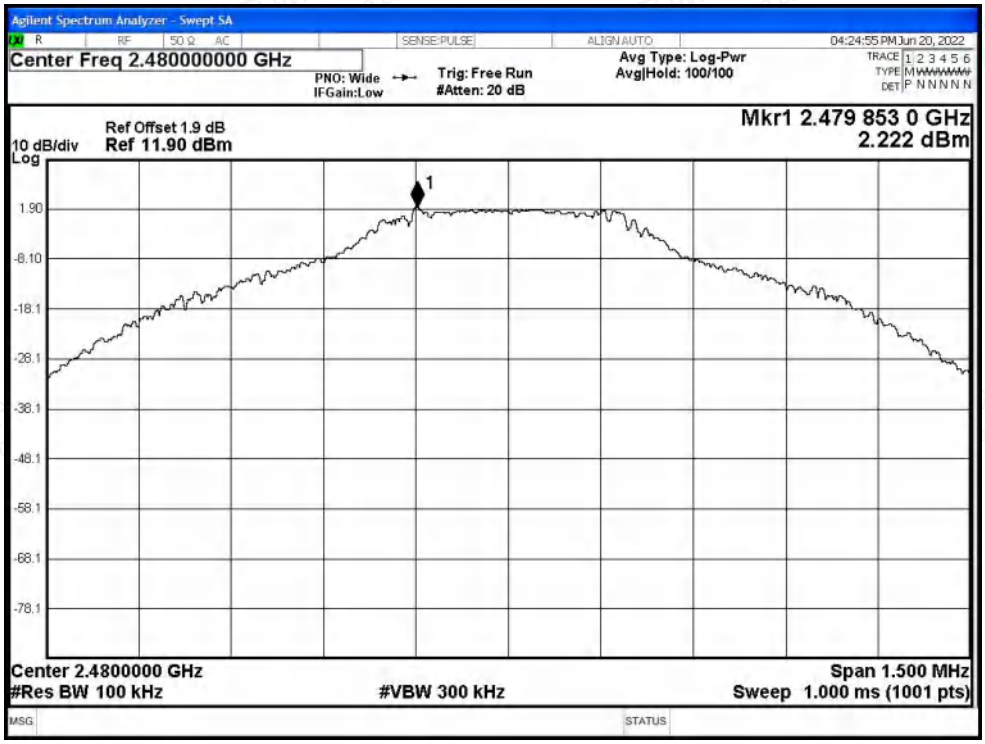
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



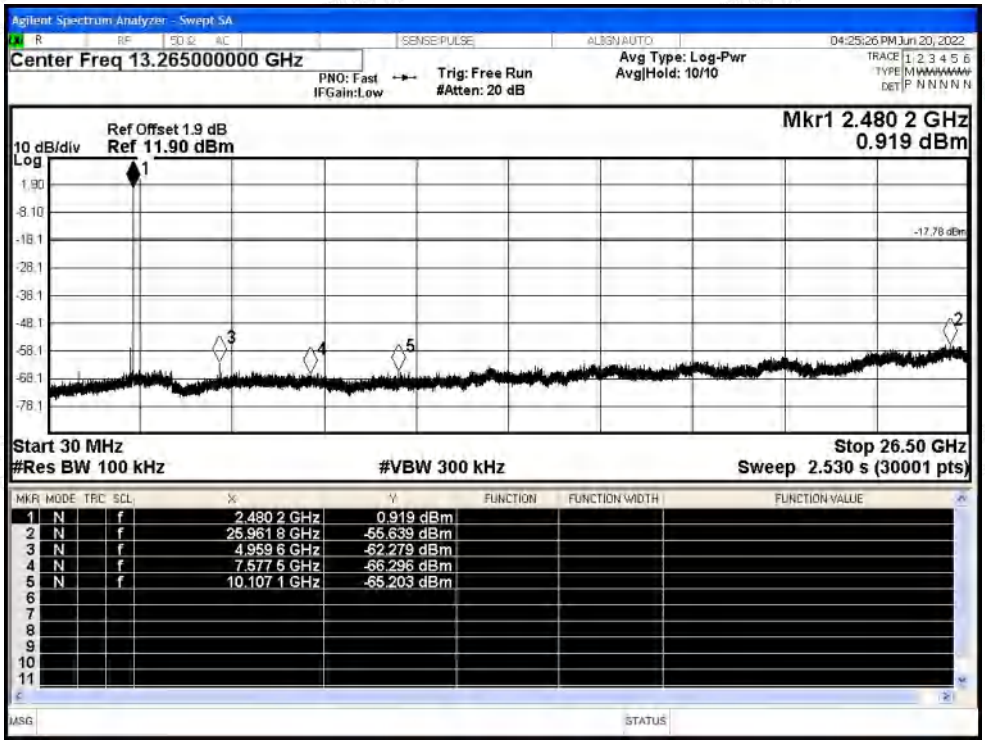
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



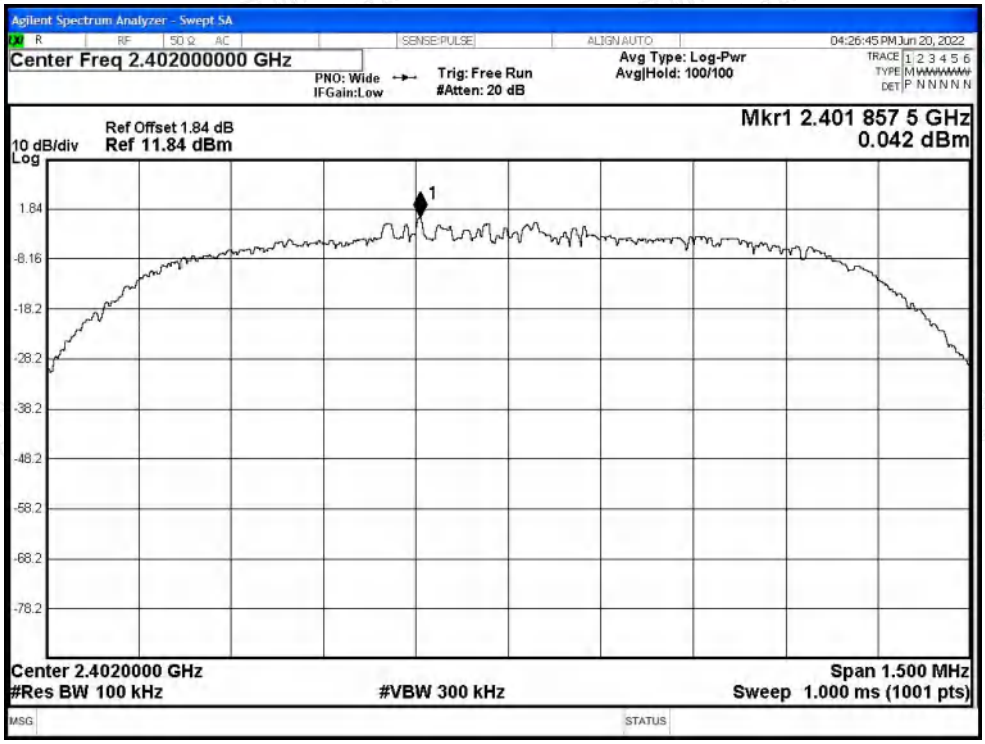
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



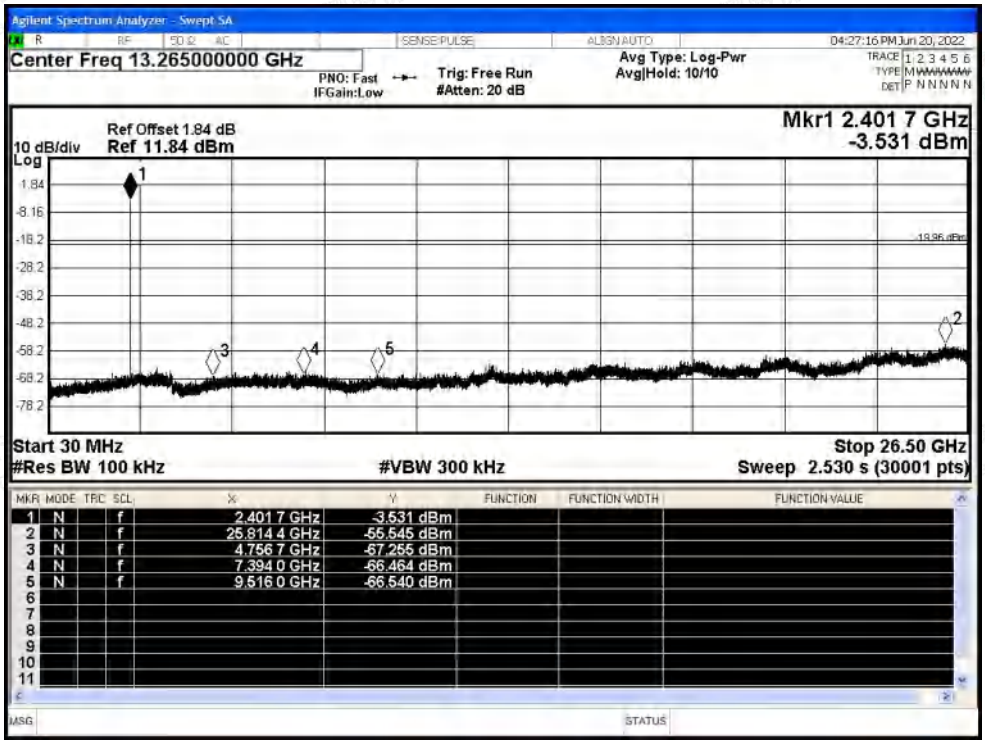
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



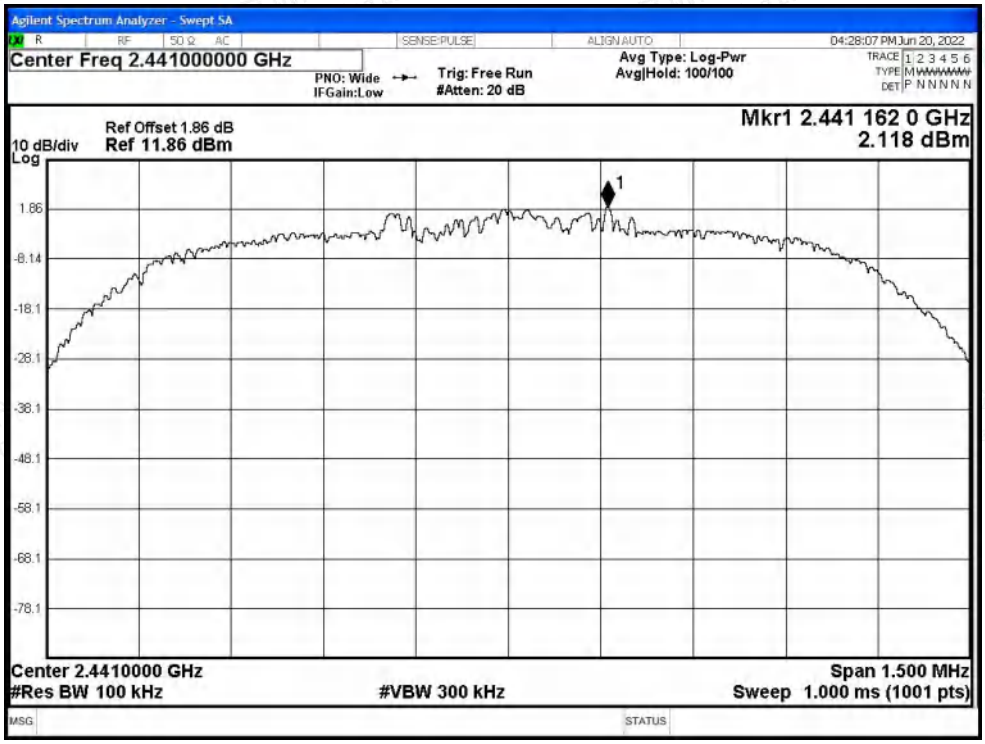
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



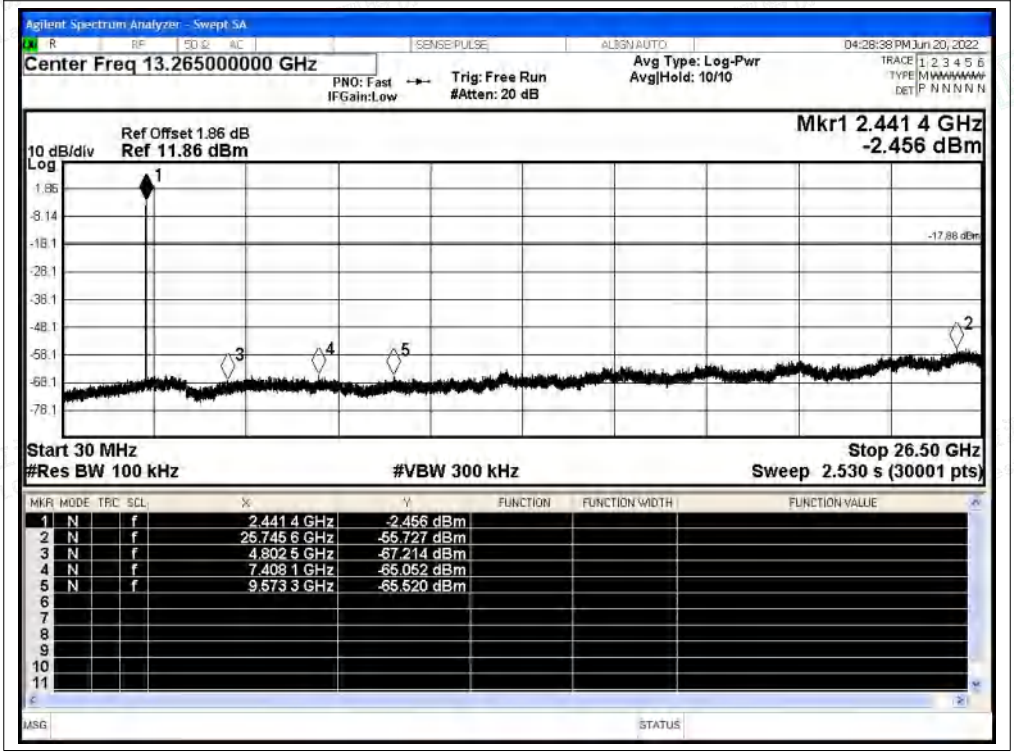
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



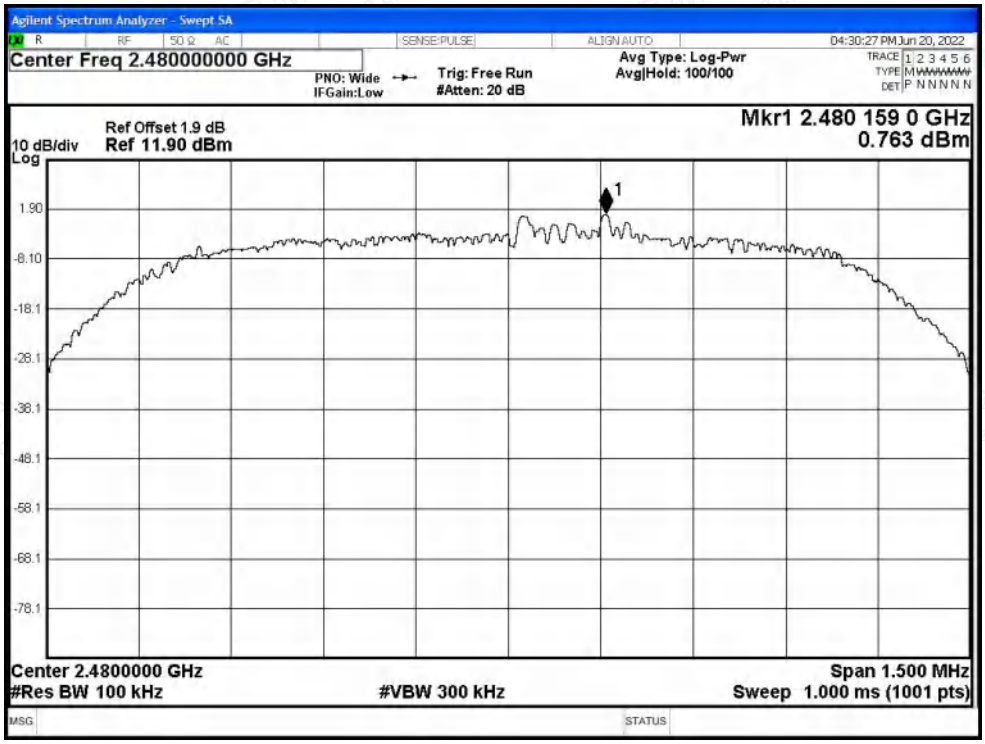
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



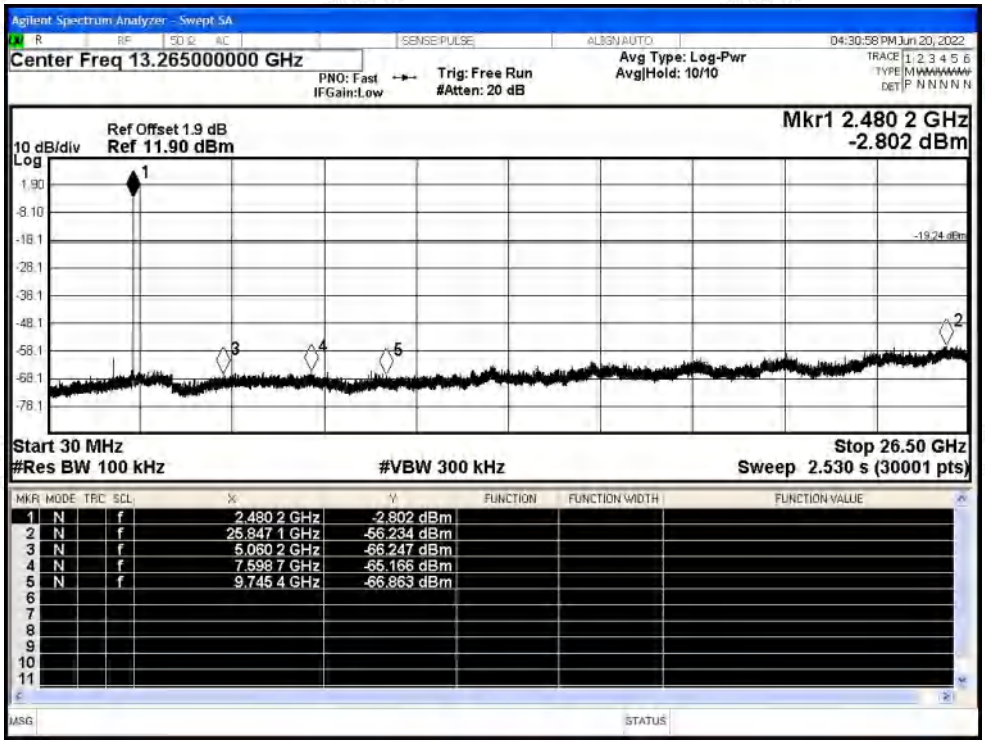
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



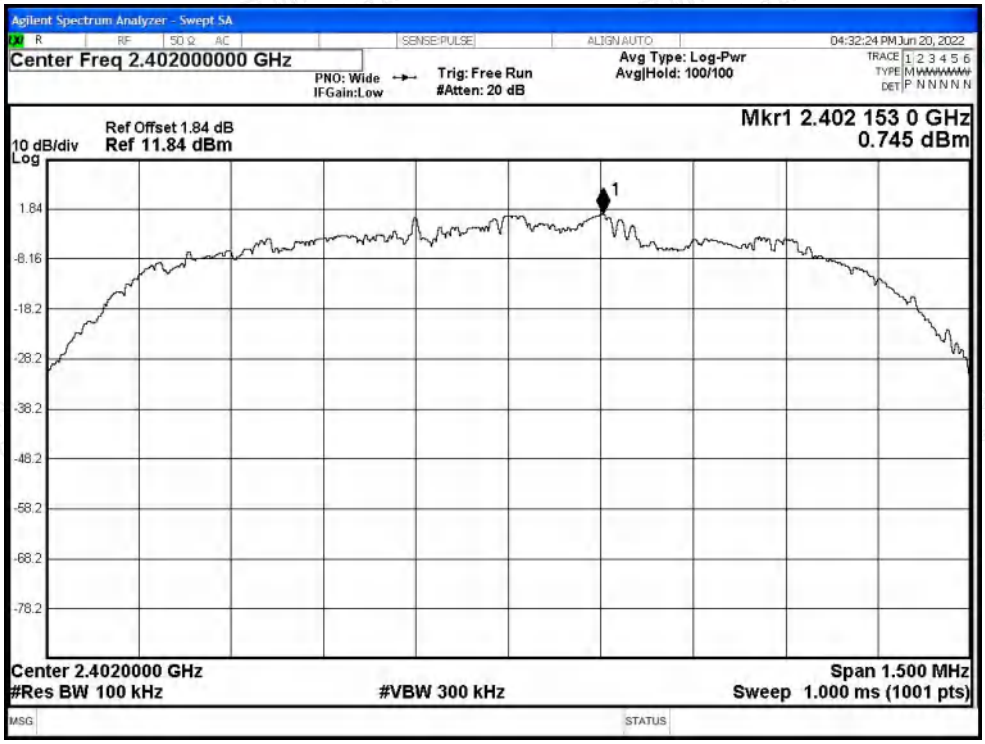
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



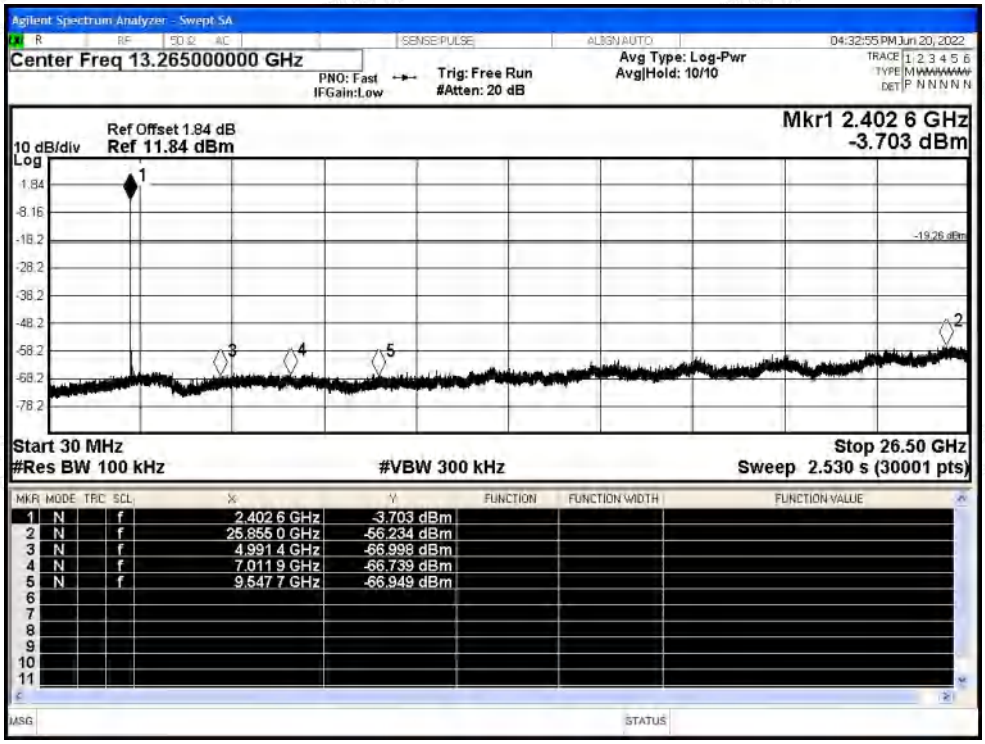
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



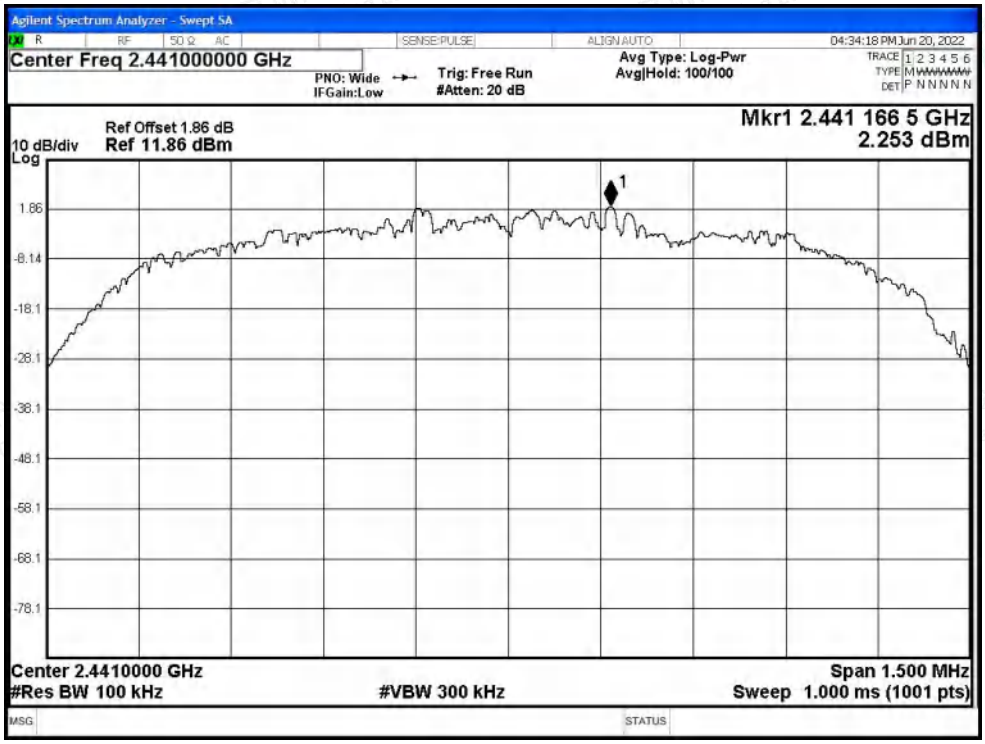
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



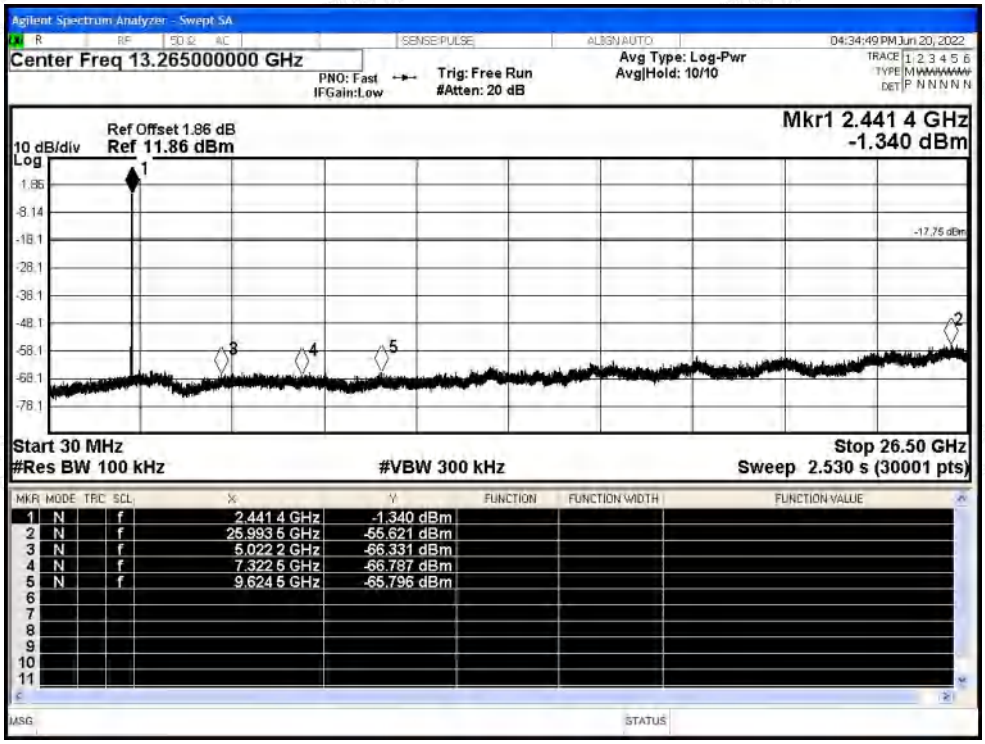
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission



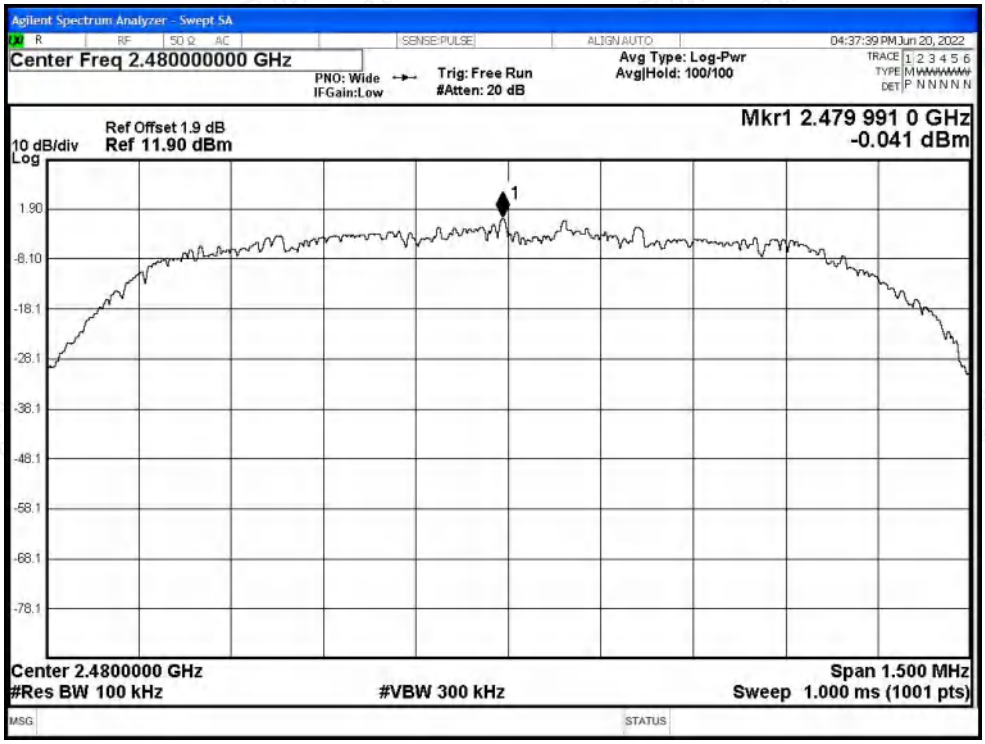
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



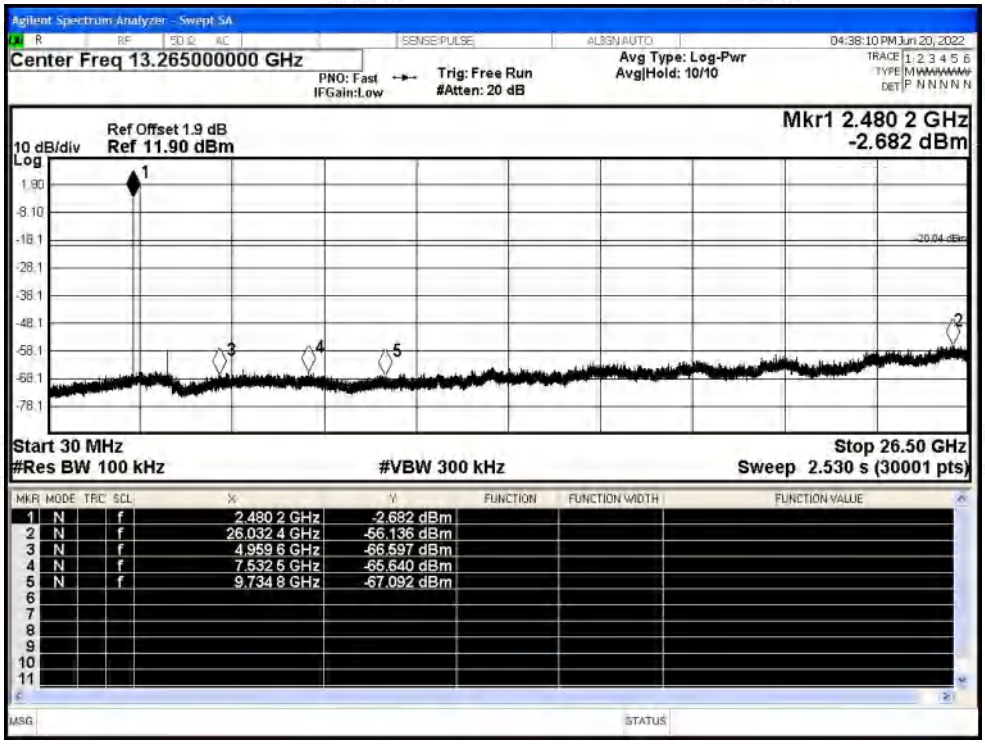
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission

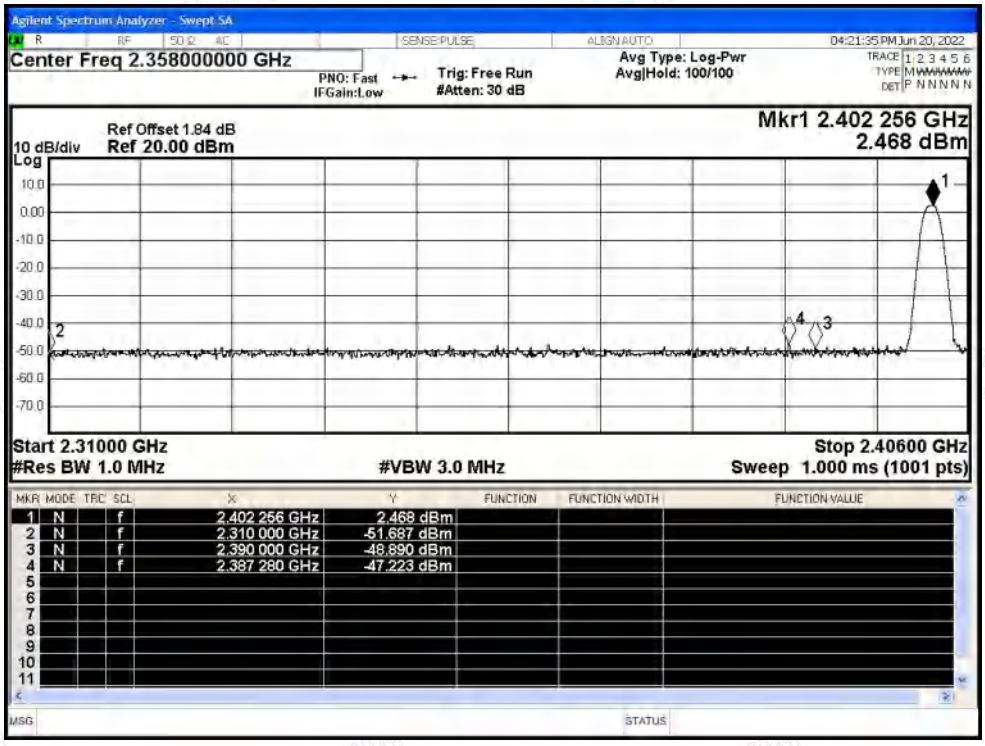


A.8 Restrict Band

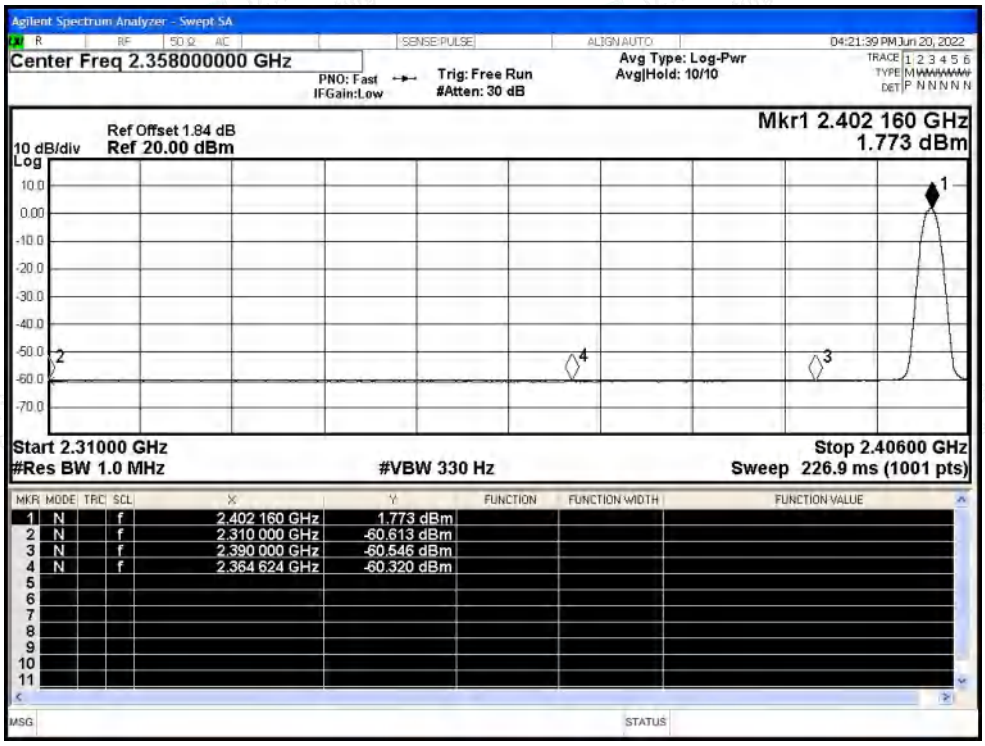
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-51.69	2	45.57	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-60.61	2	36.65	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2387.28	-47.22	2	50.04	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2364.624	-60.32	2	36.94	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-50.98	2	46.28	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-60.55	2	36.71	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-51.17	2	46.09	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-59.64	2	37.62	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2489.488	-47.3	2	49.96	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2484.064	-59.56	2	37.7	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-51.23	2	46.03	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-60.14	2	37.12	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-50.18	2	47.08	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-60.95	2	36.31	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2377.2	-47.95	2	49.31	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2383.536	-60.29	2	36.97	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-51.63	2	45.63	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-60.34	2	36.92	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-49.78	2	47.48	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-59.64	2	37.62	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2495.944	-46	2	51.26	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.728	-59.59	2	37.67	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-50.34	2	46.92	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-60.24	2	37.02	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-51.22	2	46.04	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-60.85	2	36.41	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2360.112	-47.74	2	49.52	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2389.776	-60.25	2	37.01	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-50.49	2	46.77	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-60.47	2	36.79	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-48.12	2	49.14	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-59.48	2	37.78	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2489.296	-47.28	2	49.98	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.536	-59.47	2	37.79	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-49.09	2	48.17	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-60.16	2	37.1	Average	54	Pass

Test Graphs

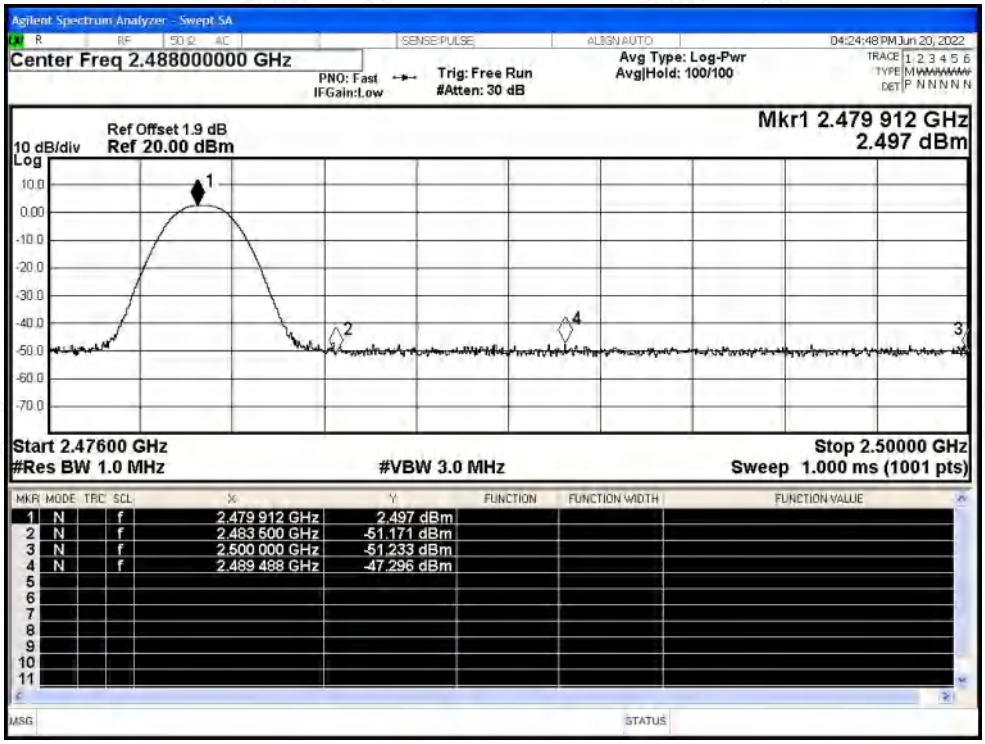
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



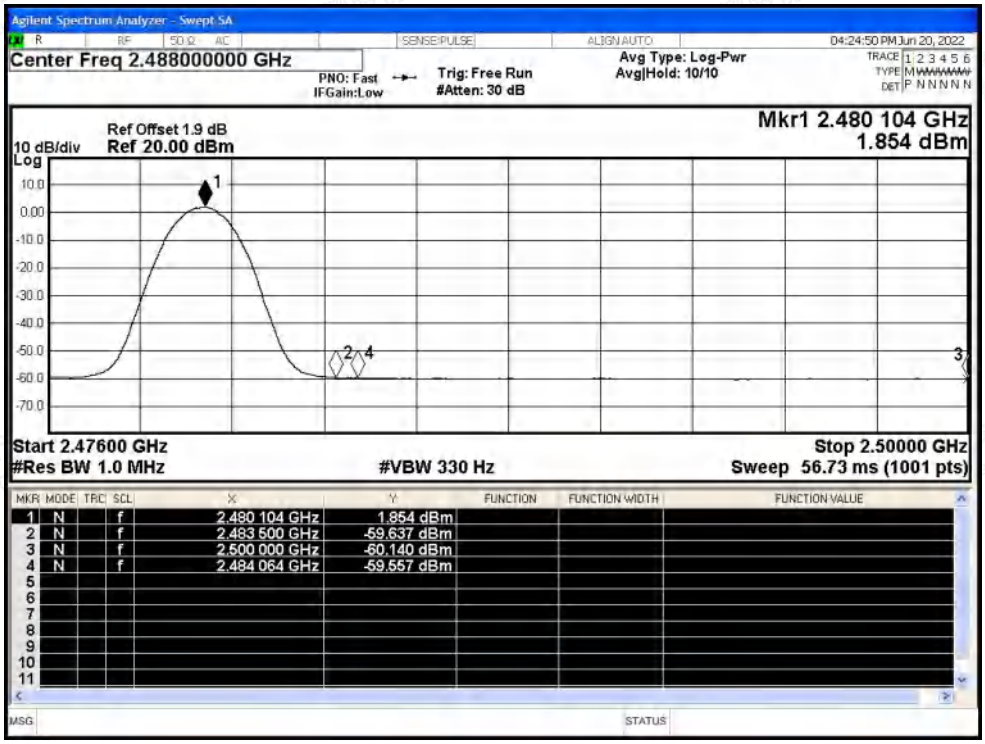
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



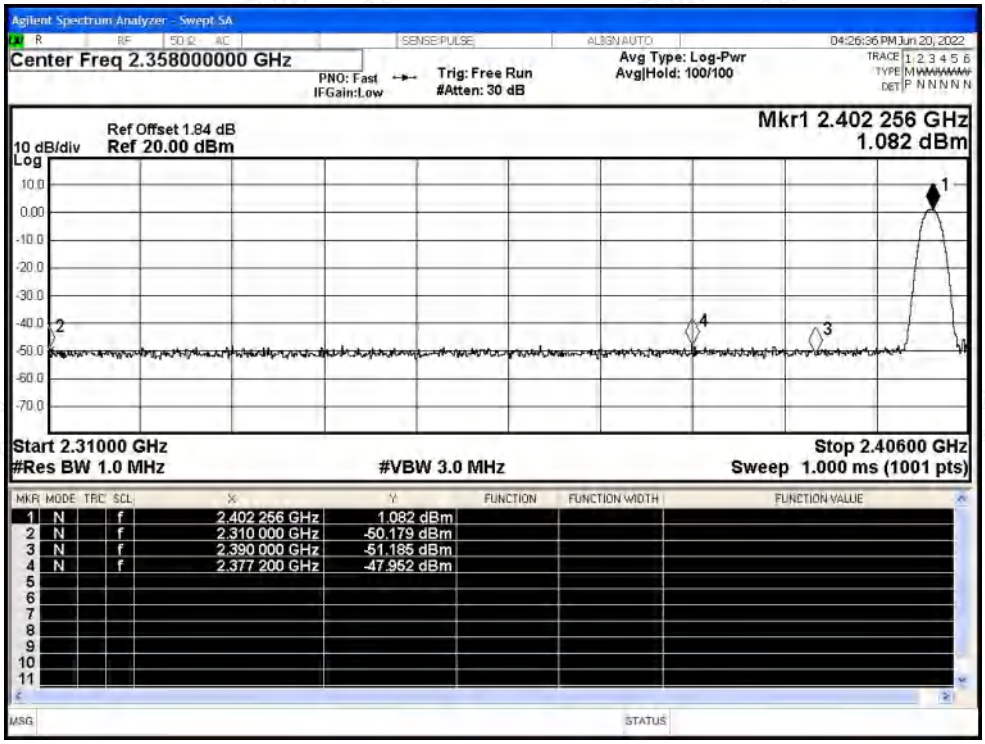
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



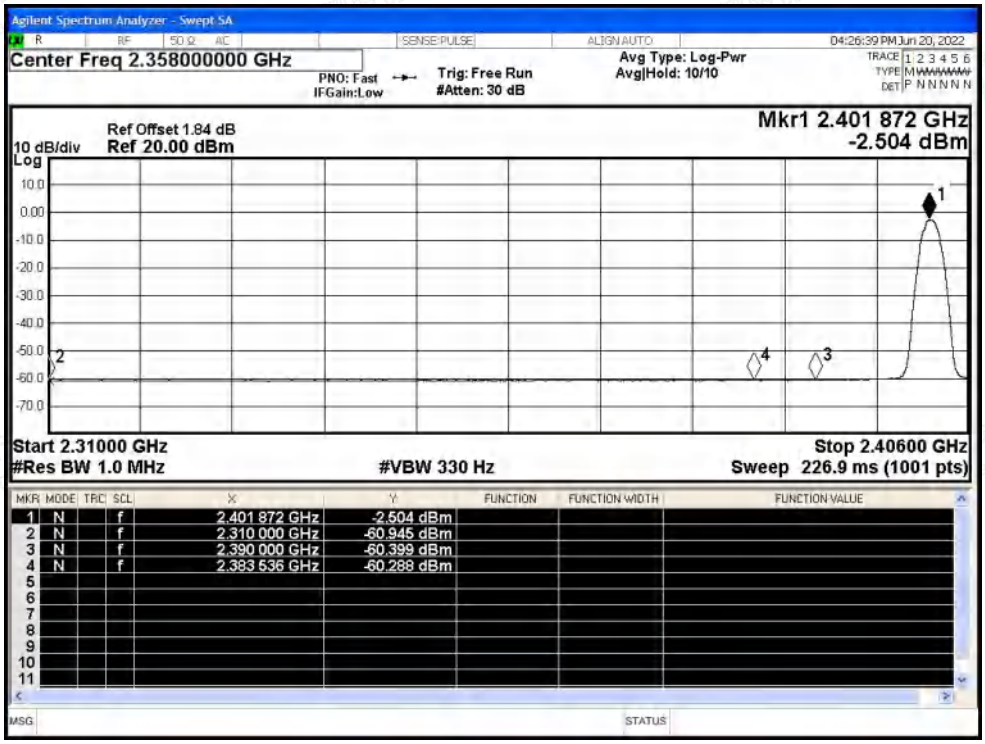
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



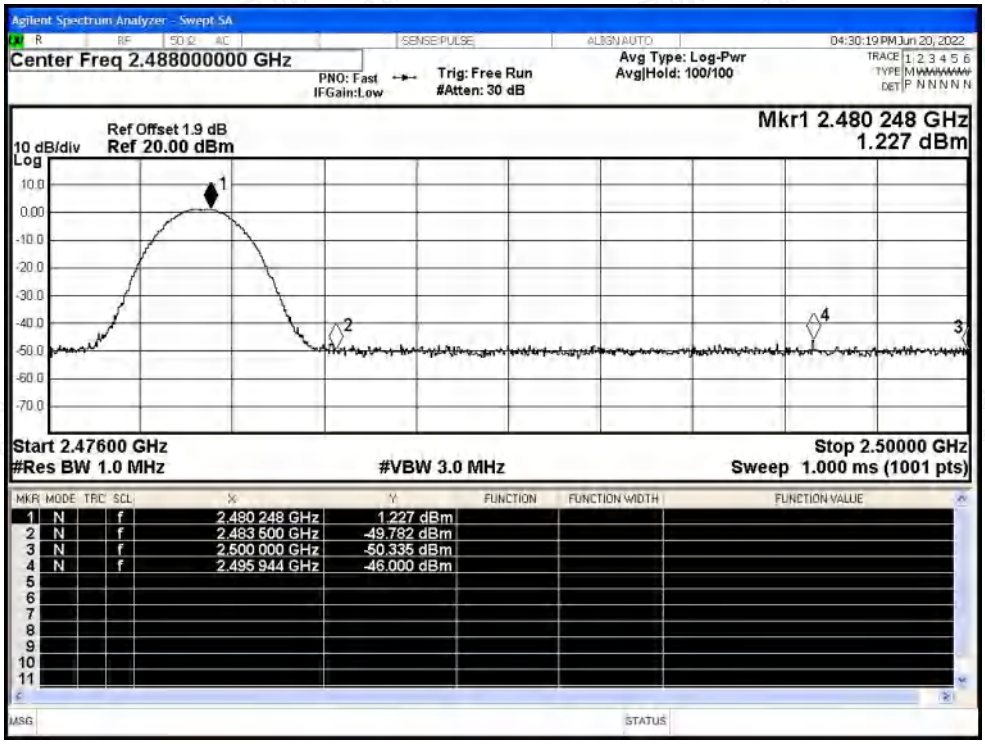
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



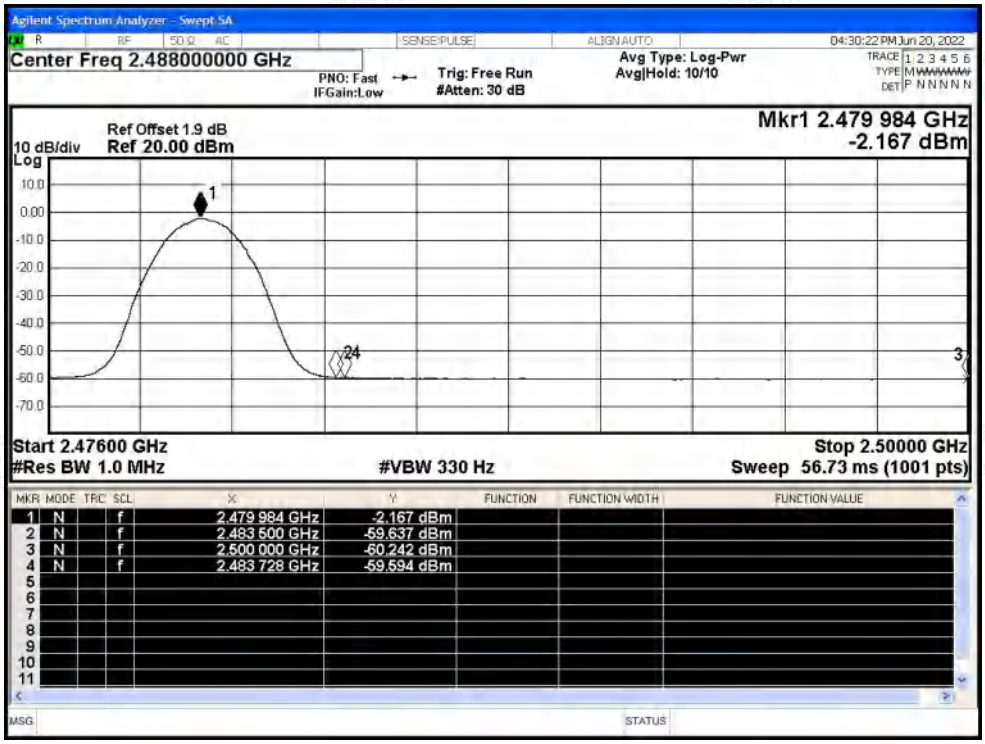
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average



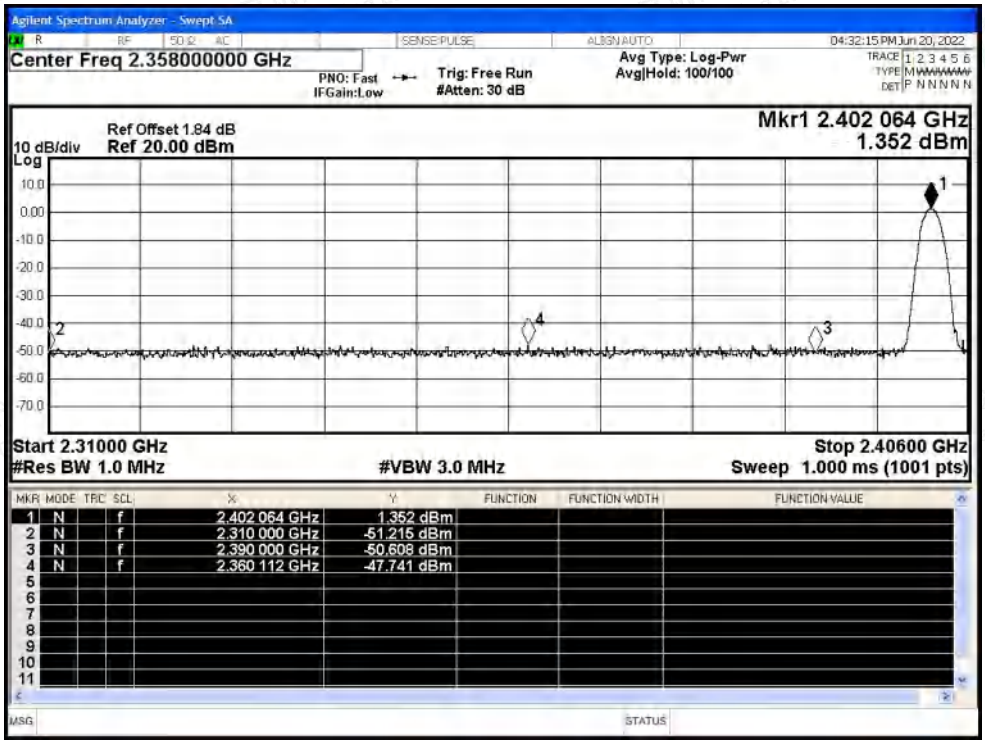
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak



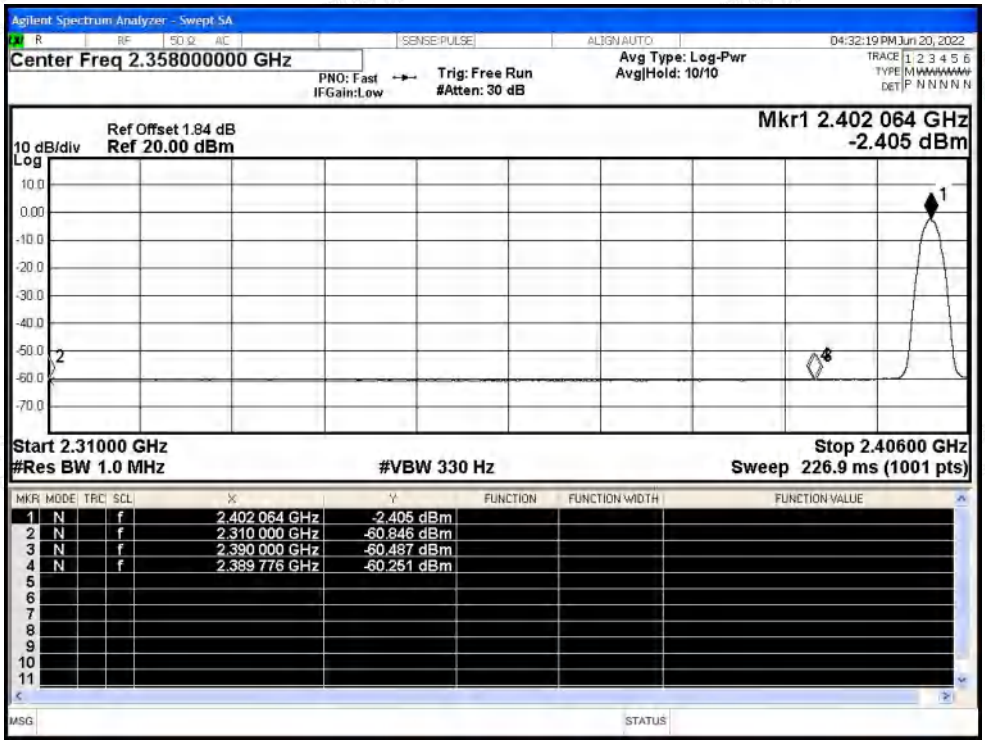
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Average



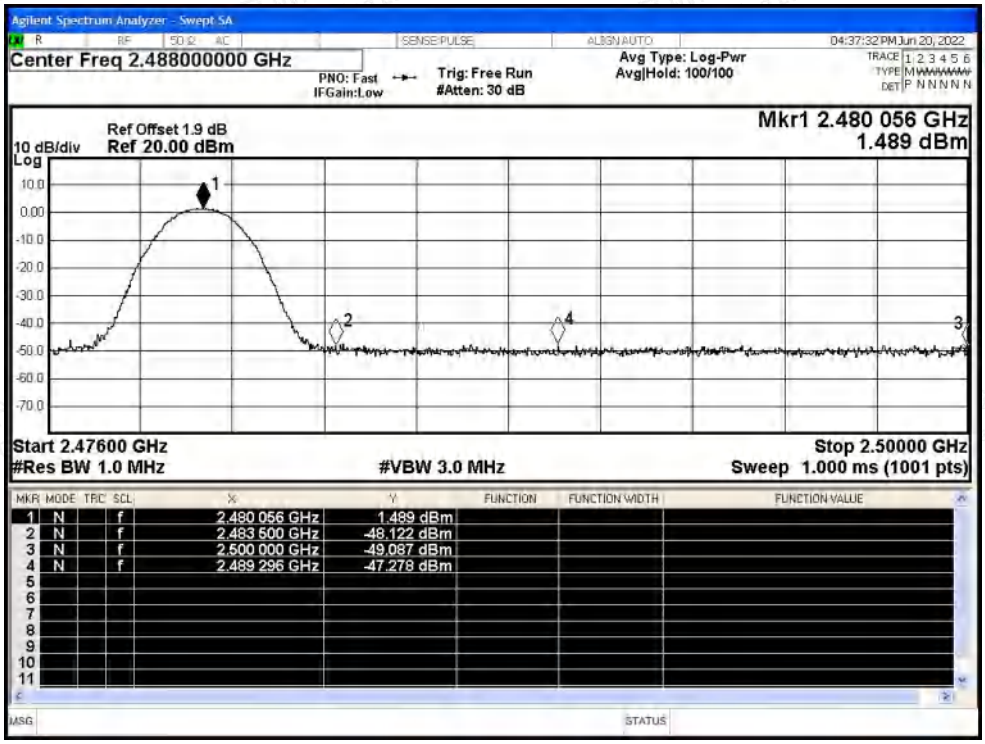
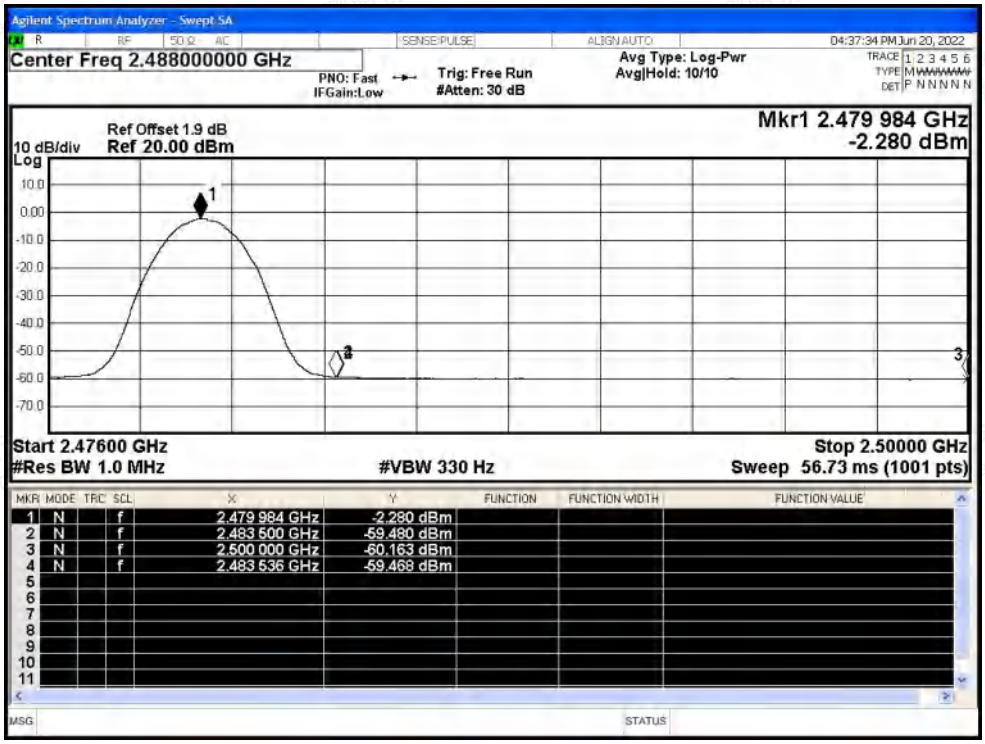
Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak



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