Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Smart TV BOX

Test Model: T9

Environmental Conditions

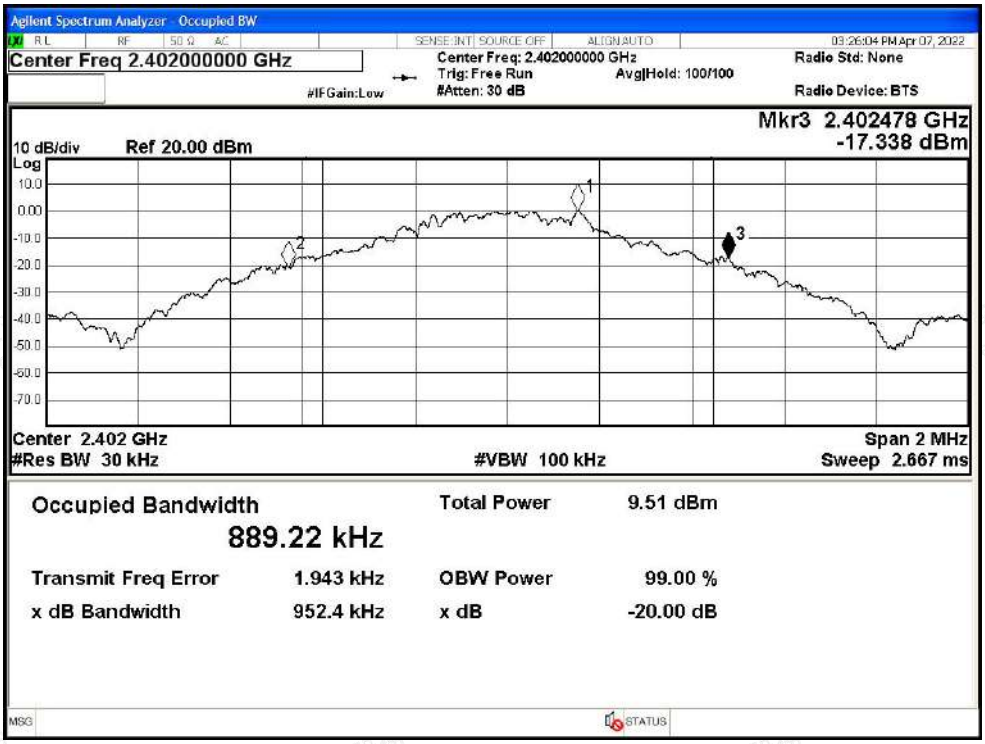
Temperature:	23.5℃
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan

A.1 -20dB Bandwidth

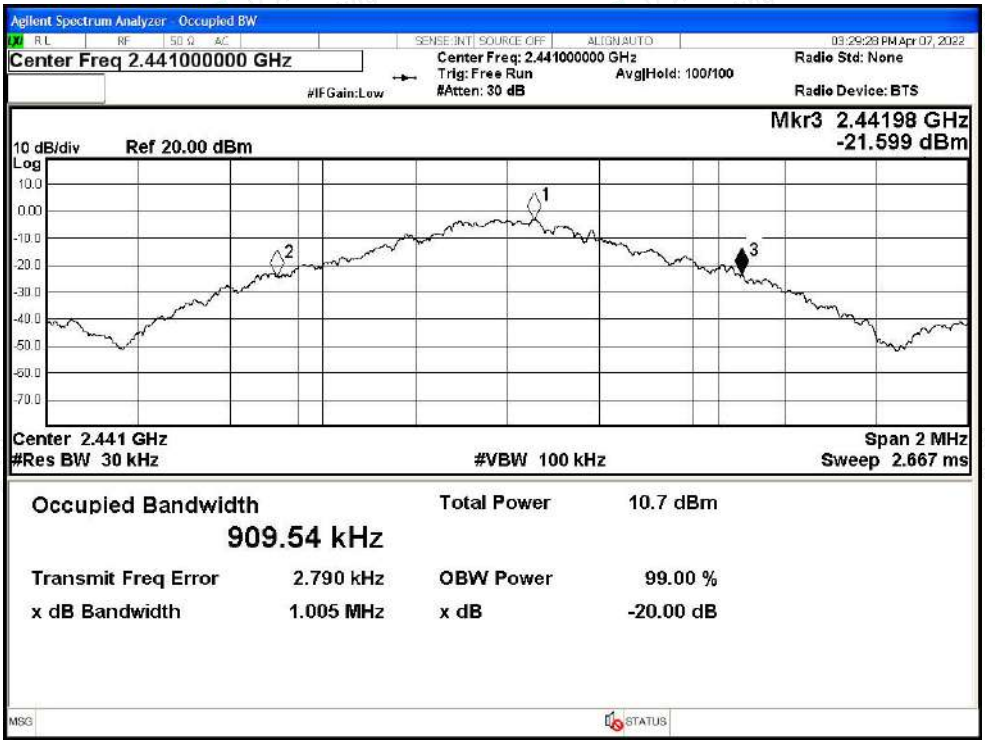
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.952	---	Pass
NVNT	1-DH5	2441	Ant1	1.005	---	Pass
NVNT	1-DH5	2480	Ant1	1.023	---	Pass
NVNT	2-DH5	2402	Ant1	1.288	---	Pass
NVNT	2-DH5	2441	Ant1	1.262	---	Pass
NVNT	2-DH5	2480	Ant1	1.288	---	Pass
NVNT	3-DH5	2402	Ant1	1.298	---	Pass
NVNT	3-DH5	2441	Ant1	1.296	---	Pass
NVNT	3-DH5	2480	Ant1	1.29	---	Pass

Test Graphs

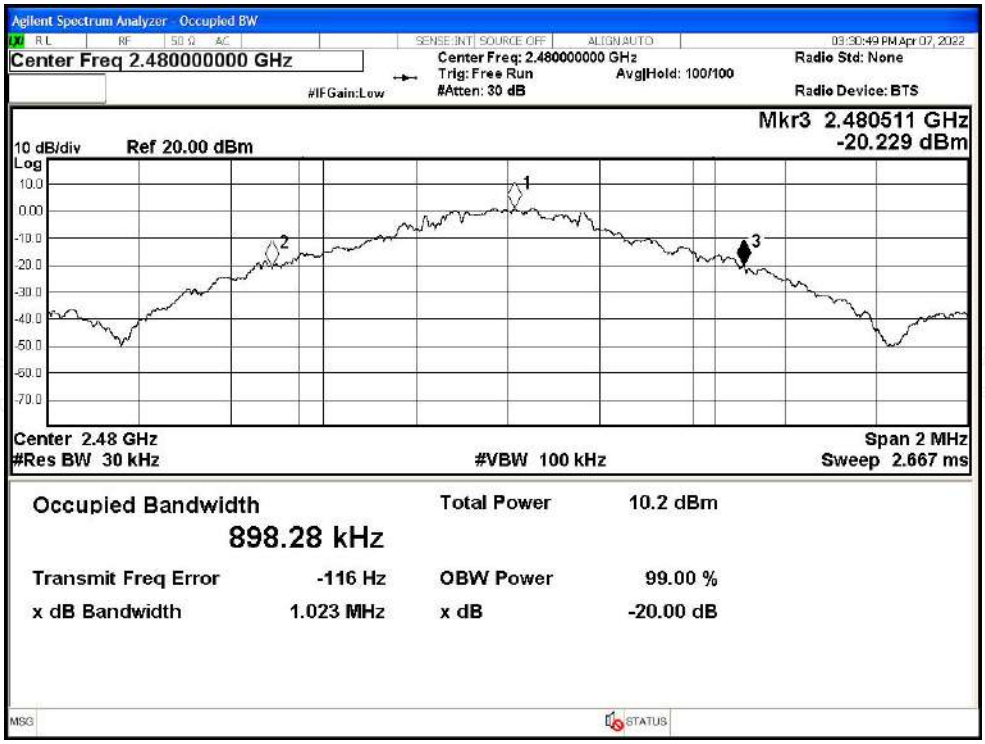
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



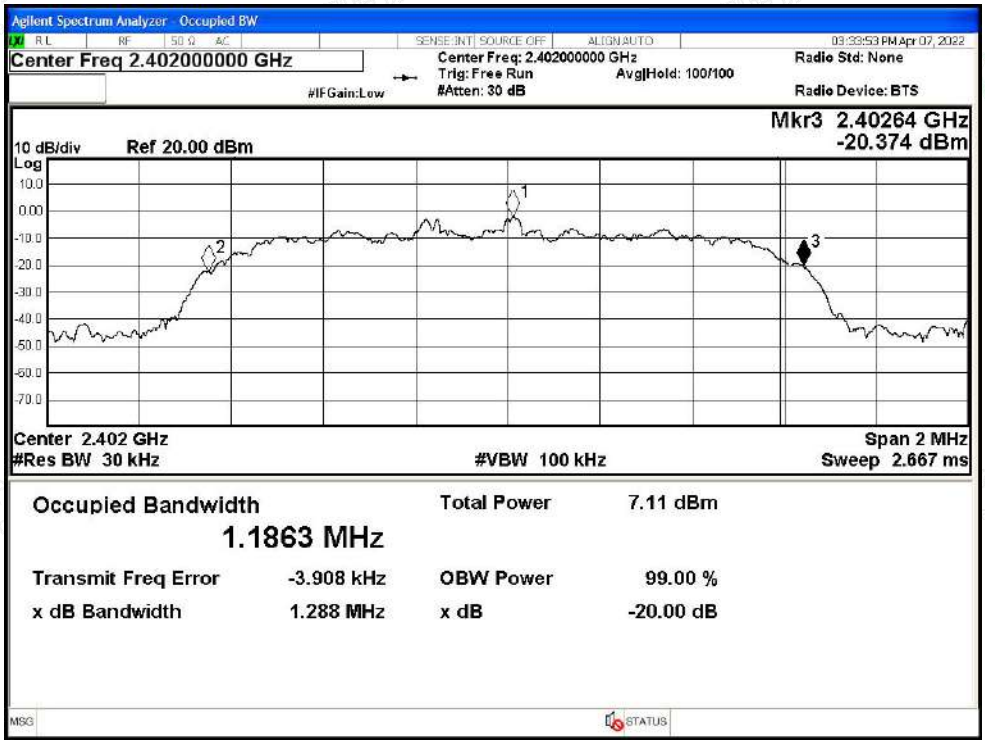
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



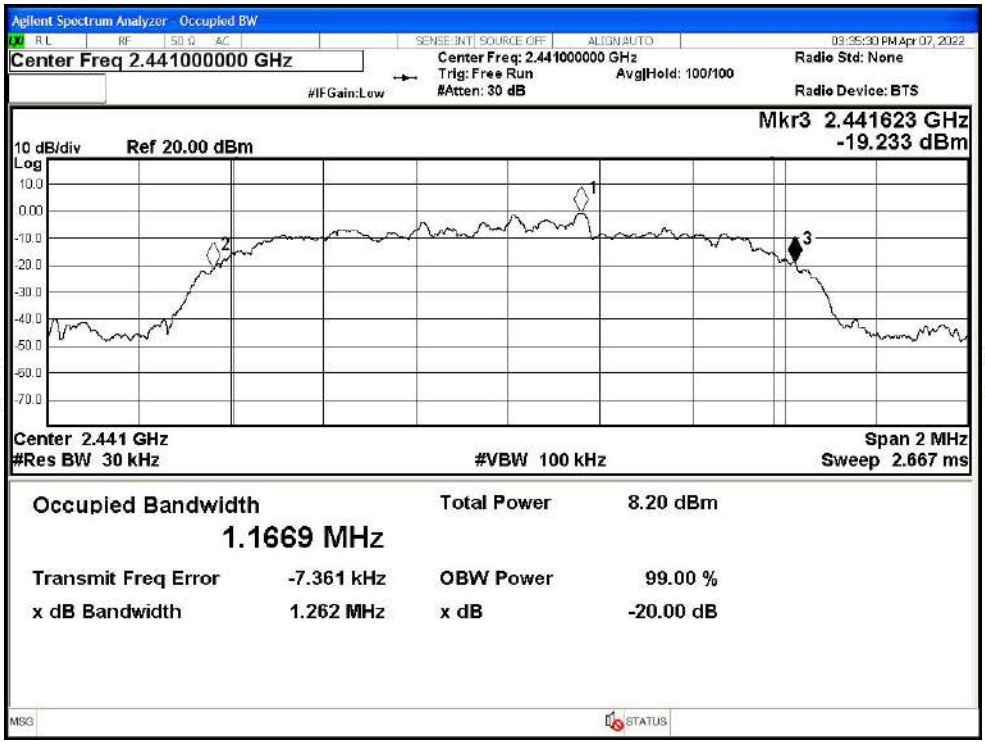
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



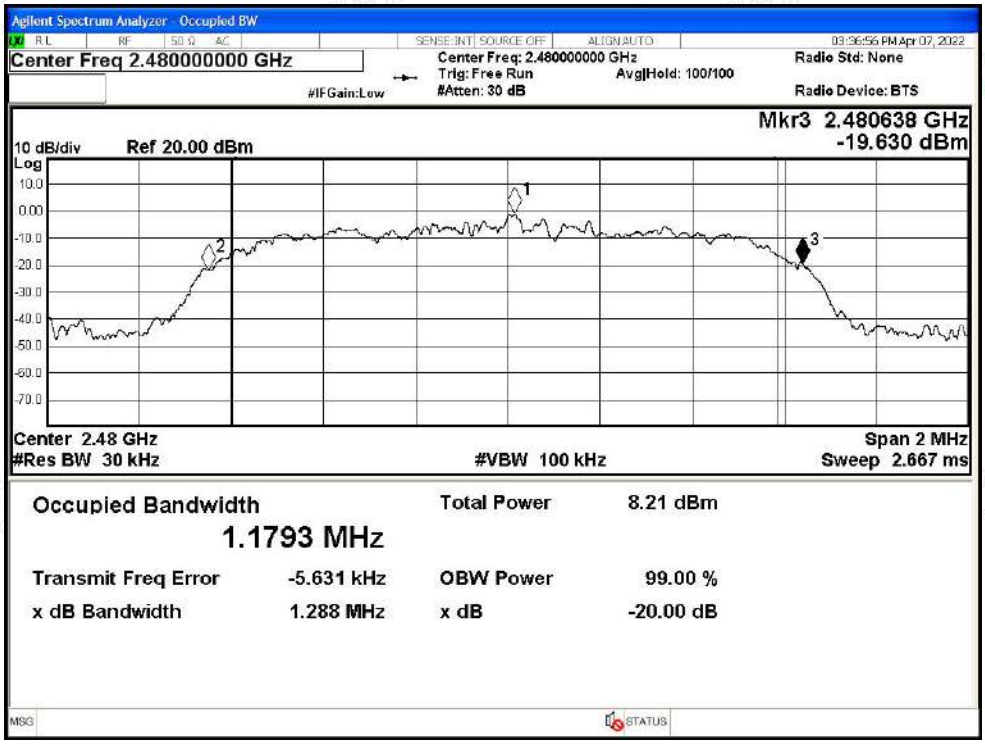
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



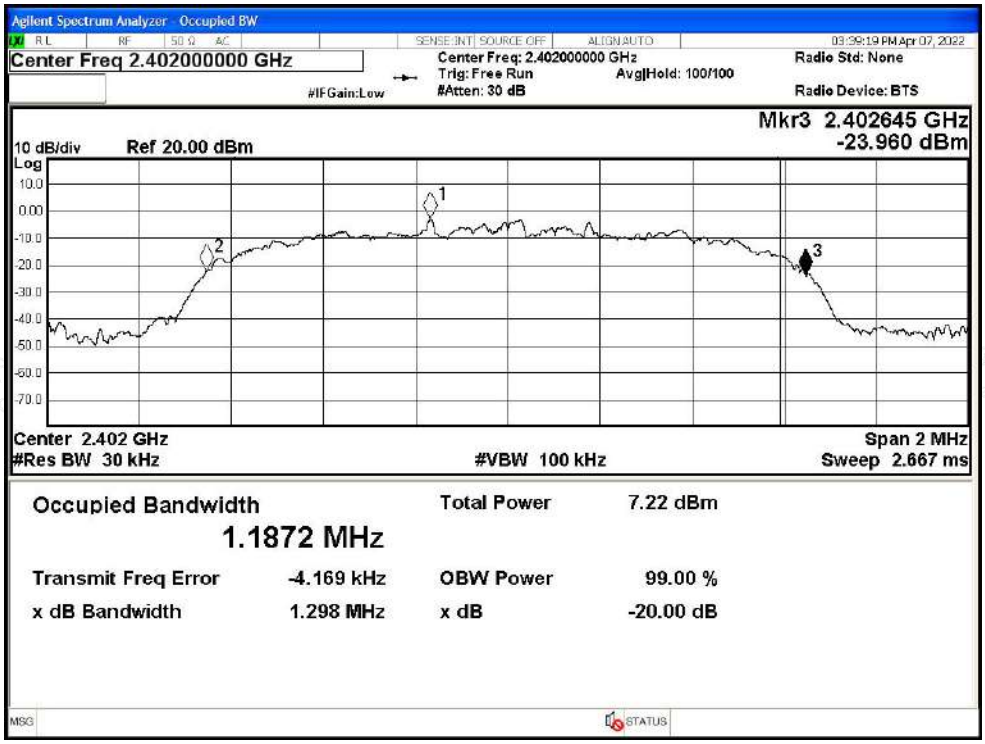
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



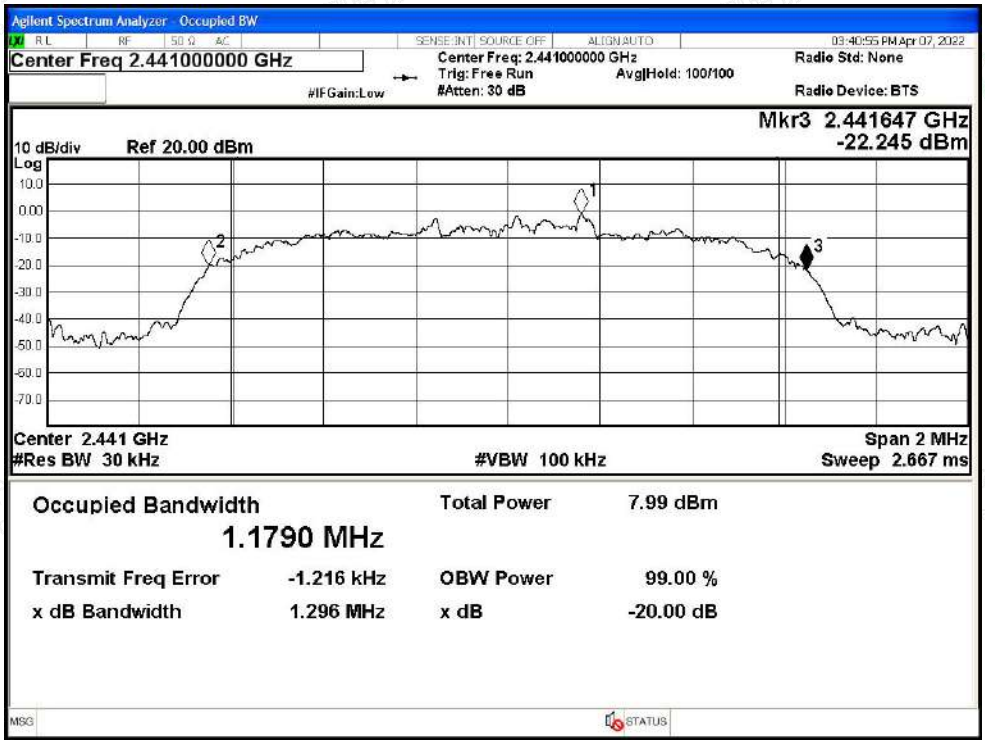
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



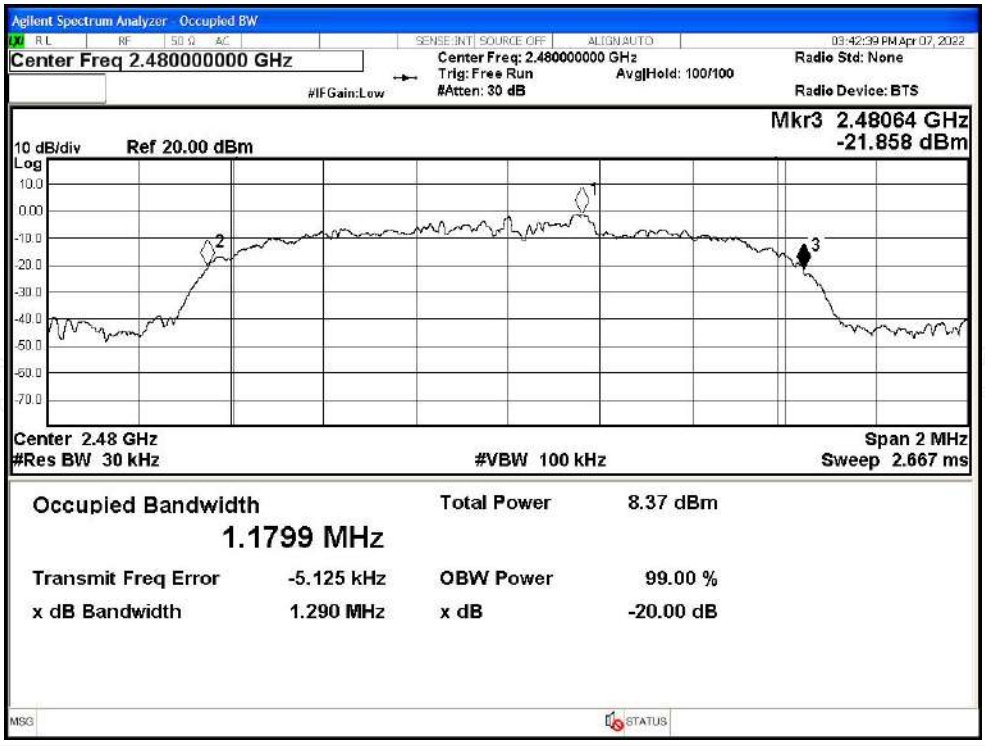
-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1

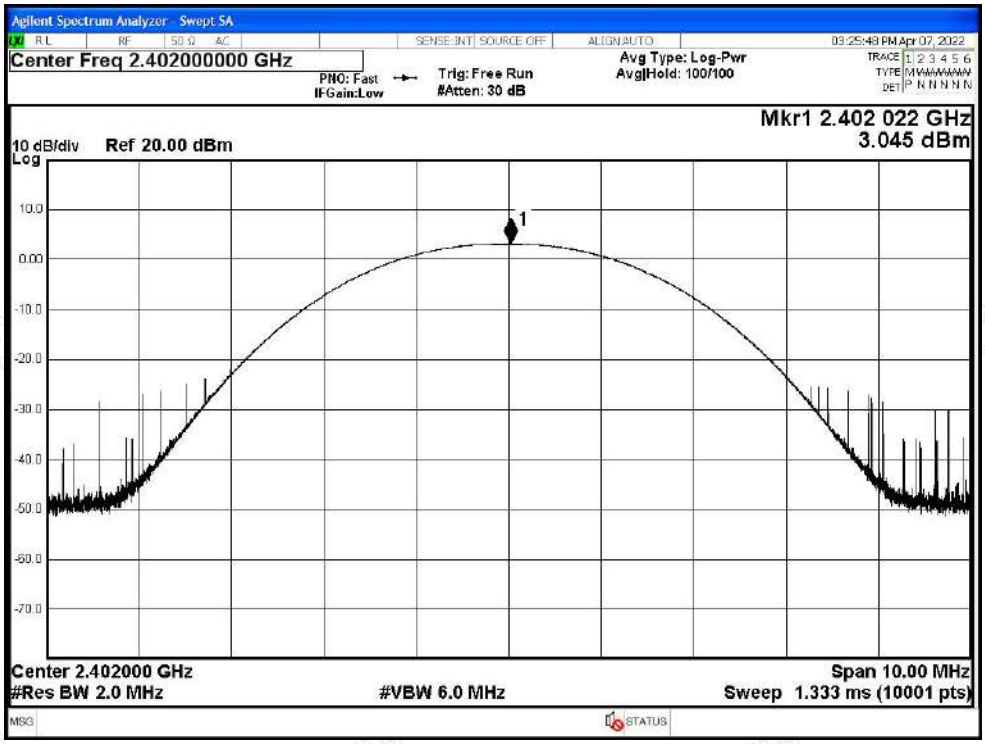


A.2 Maximum Peak Conducted Output Power

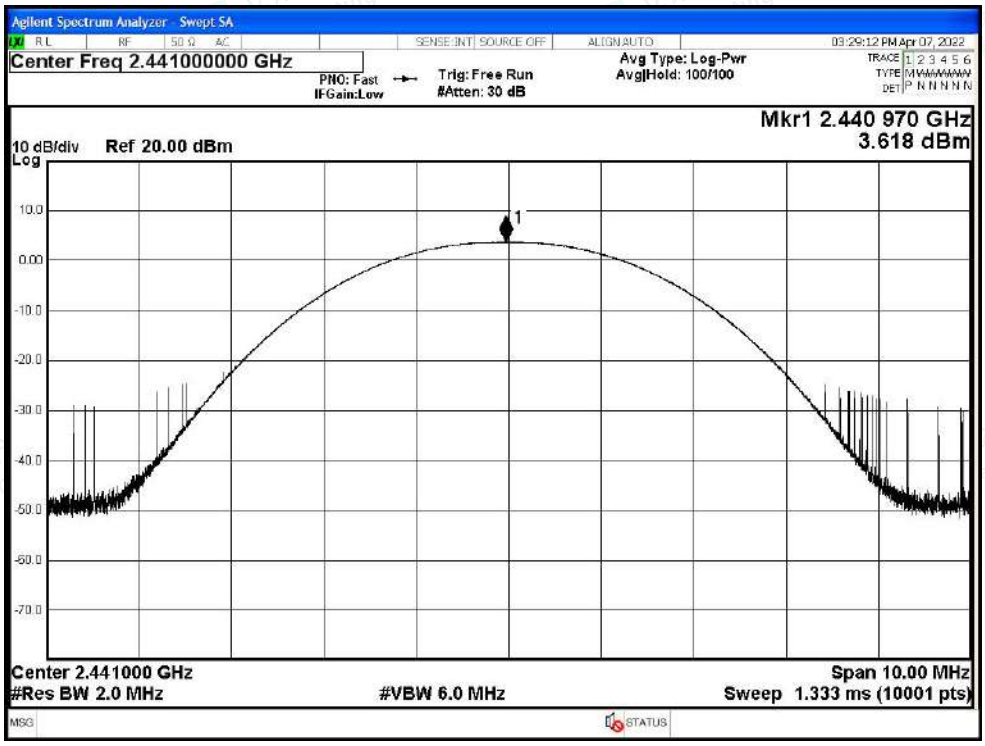
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	3.05	21	Pass
NVNT	1-DH5	2441	Ant1	3.62	21	Pass
NVNT	1-DH5	2480	Ant1	4	21	Pass
NVNT	2-DH5	2402	Ant1	2.83	21	Pass
NVNT	2-DH5	2441	Ant1	3.43	21	Pass
NVNT	2-DH5	2480	Ant1	3.78	21	Pass
NVNT	3-DH5	2402	Ant1	2.95	21	Pass
NVNT	3-DH5	2441	Ant1	3.53	21	Pass
NVNT	3-DH5	2480	Ant1	3.91	21	Pass

Test Graphs

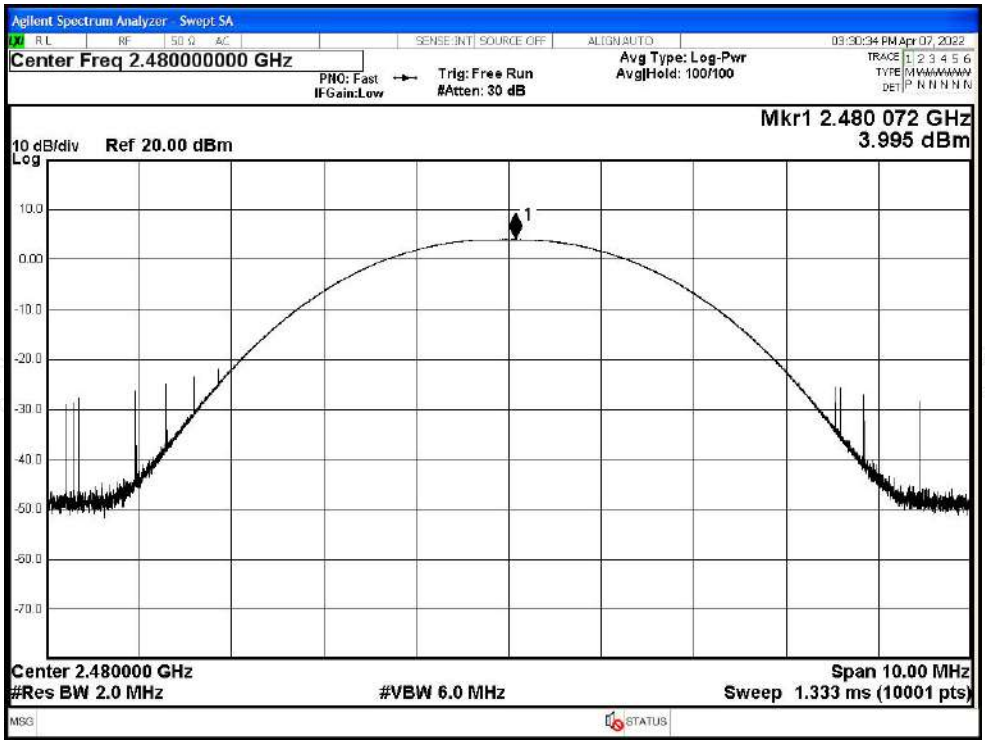
Power NVNT 1-DH5 2402MHz Ant1



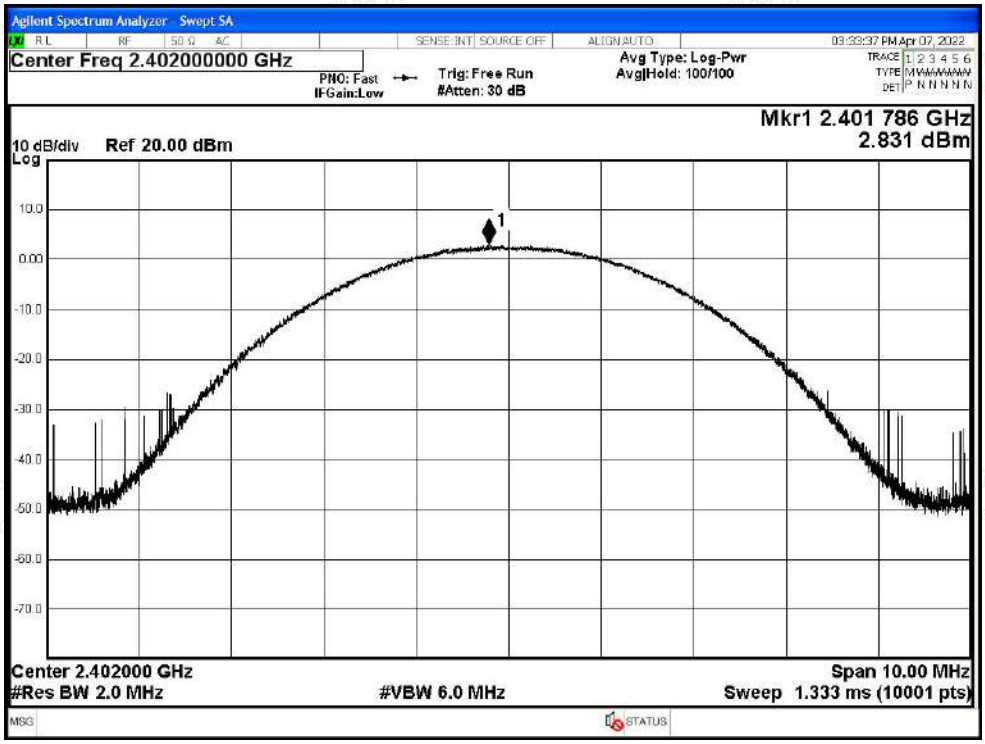
Power NVNT 1-DH5 2441MHz Ant1



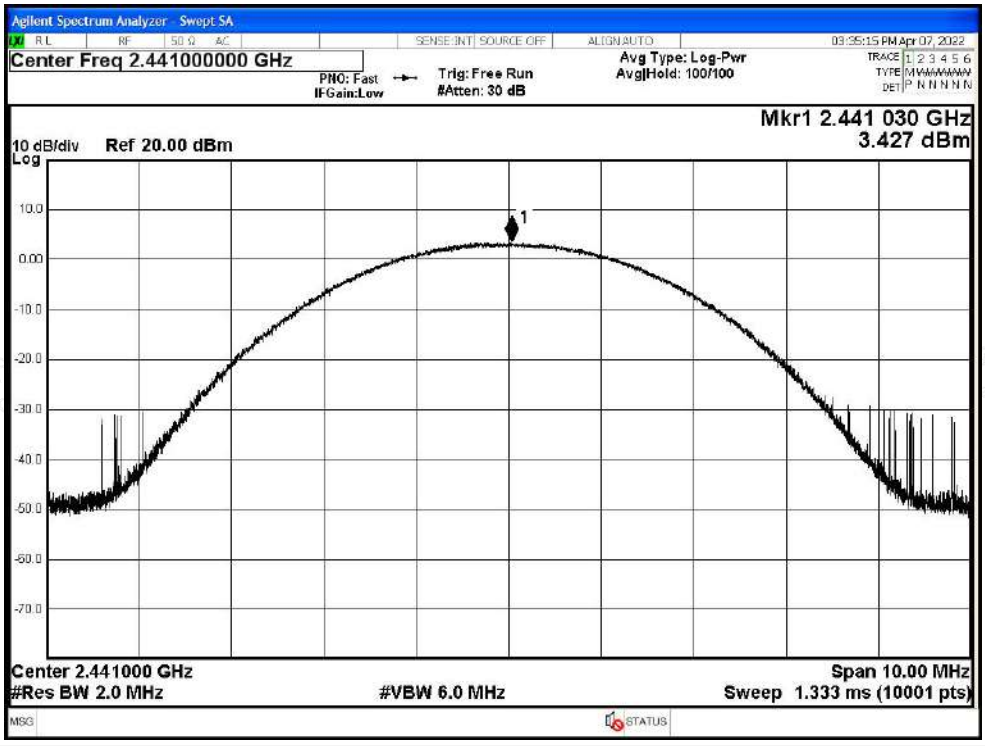
Power NVNT 1-DH5 2480MHz Ant1



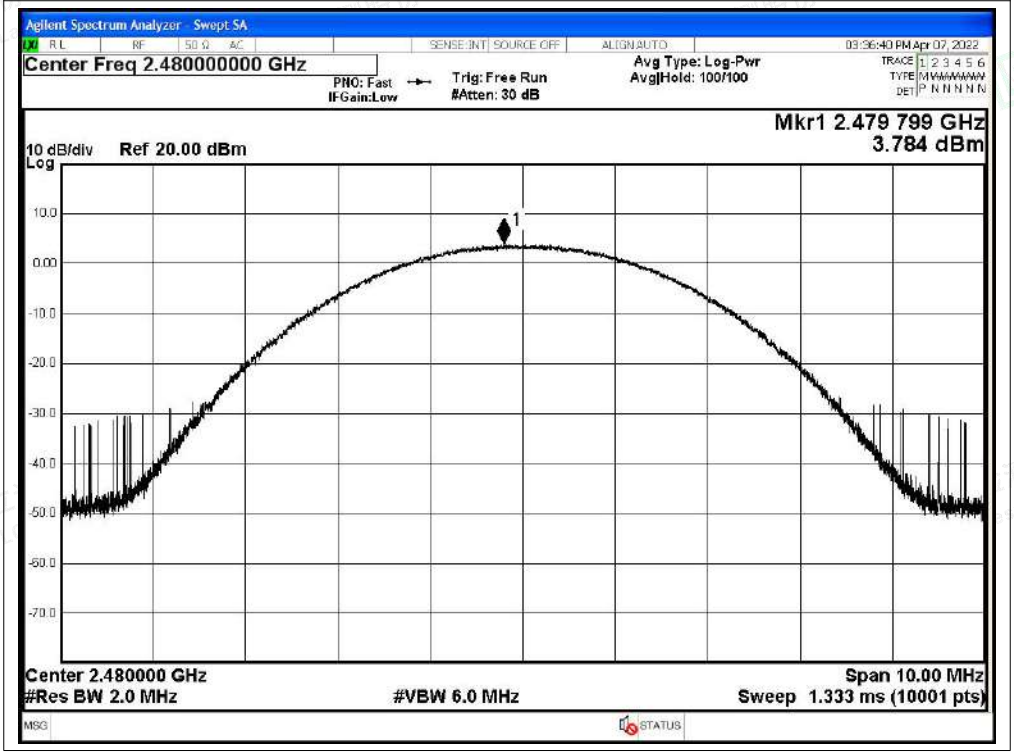
Power NVNT 2-DH5 2402MHz Ant1



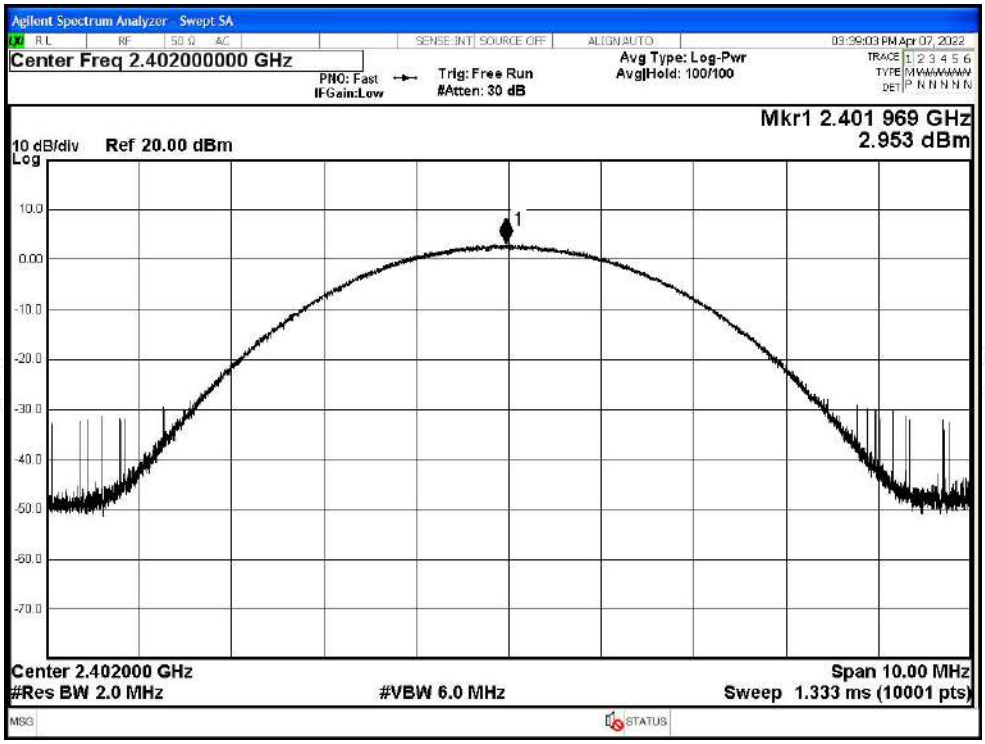
Power NVNT 2-DH5 2441MHz Ant1



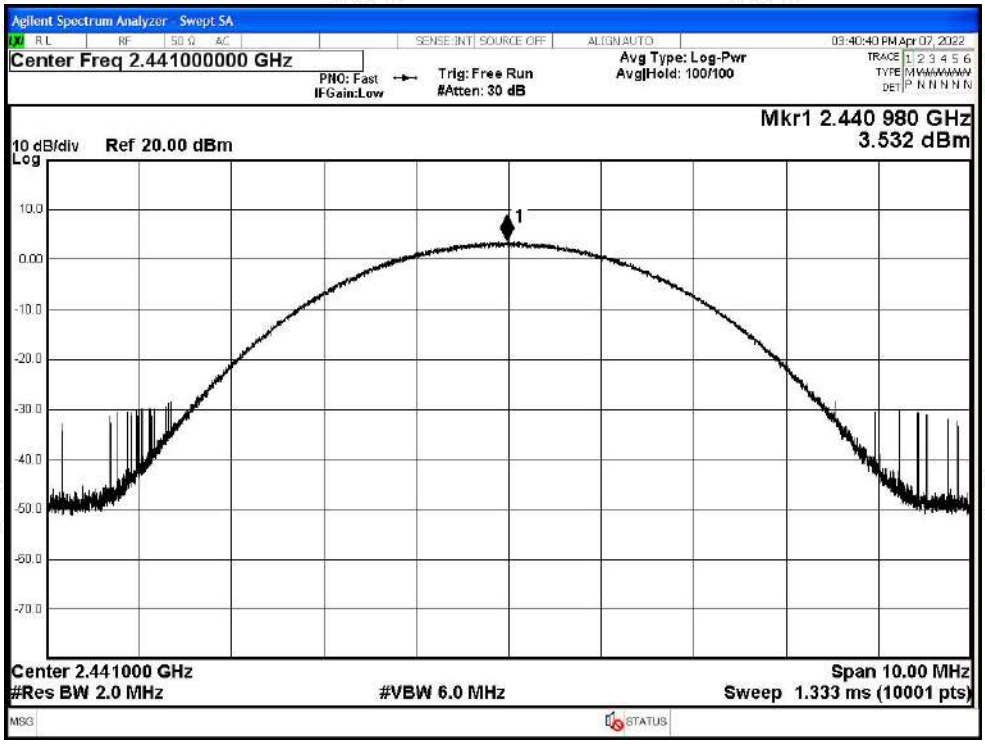
Power NVNT 2-DH5 2480MHz Ant1



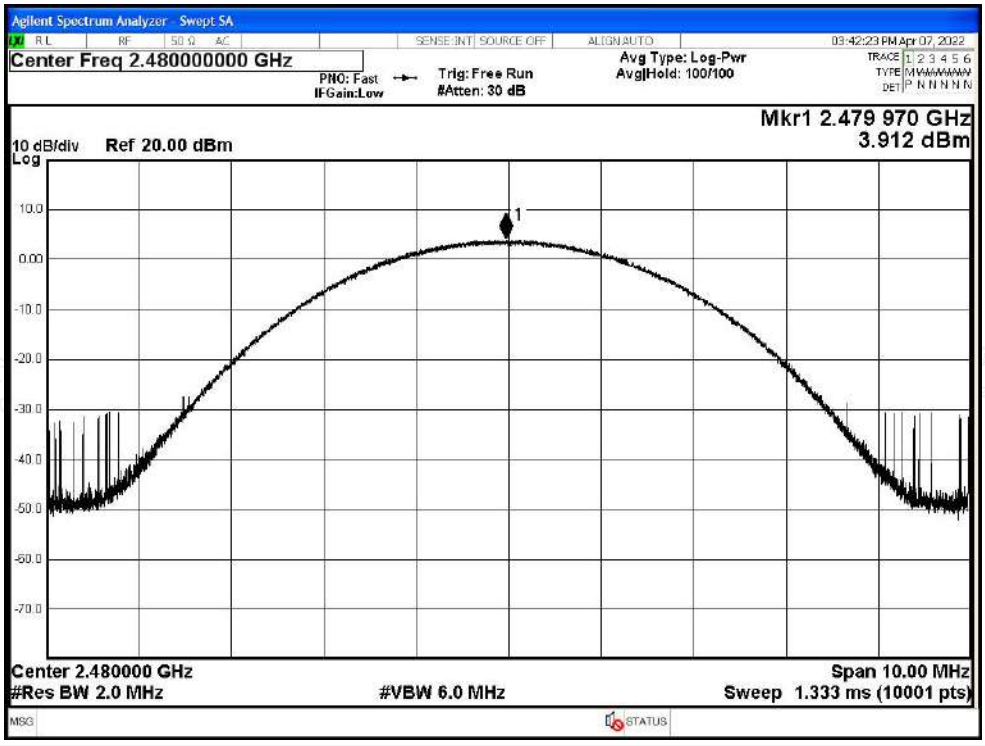
Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1



Power NVNT 3-DH5 2480MHz Ant1

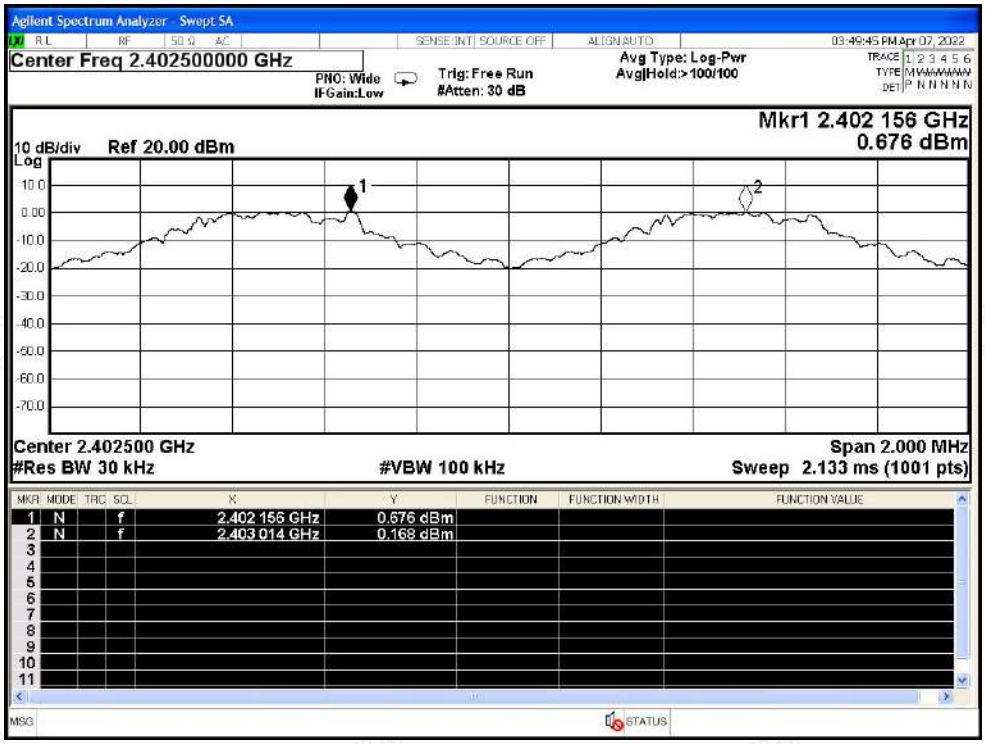


A.3 Carrier Frequencies Separation

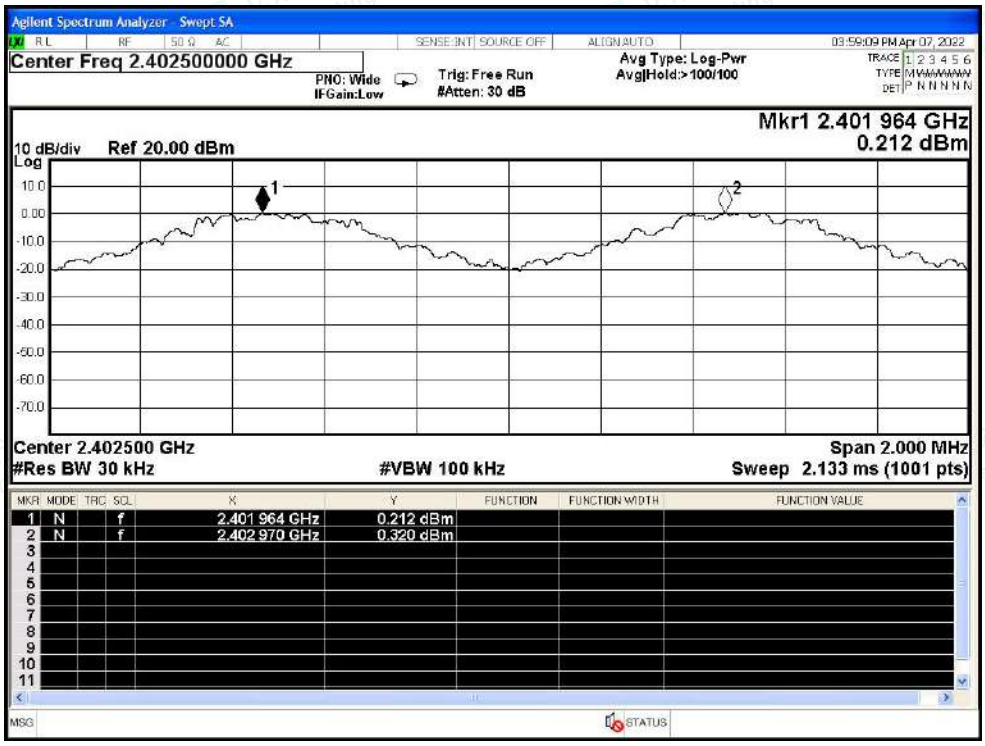
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.156	2403.014	0.858	0.682	Pass
NVNT	2-DH5	Ant1	2401.964	2402.97	1.006	0.859	Pass
NVNT	3-DH5	Ant1	2402.16	2403.168	1.008	0.865	Pass

Test Graphs

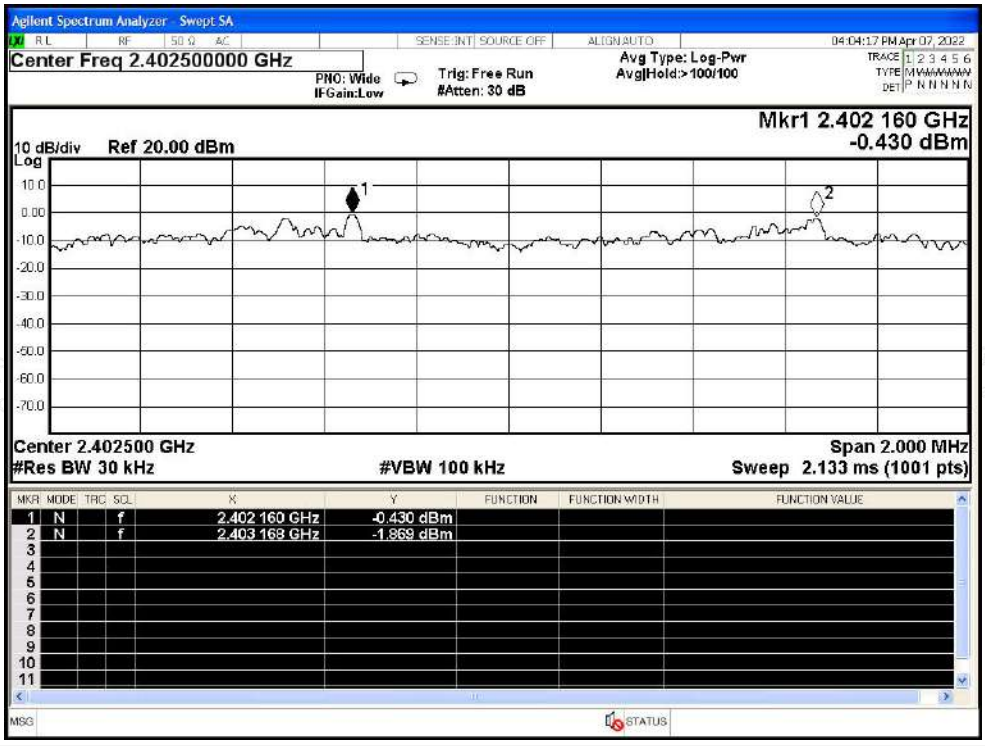
CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1



CFS NVNT 3-DH5 2402MHz Ant1

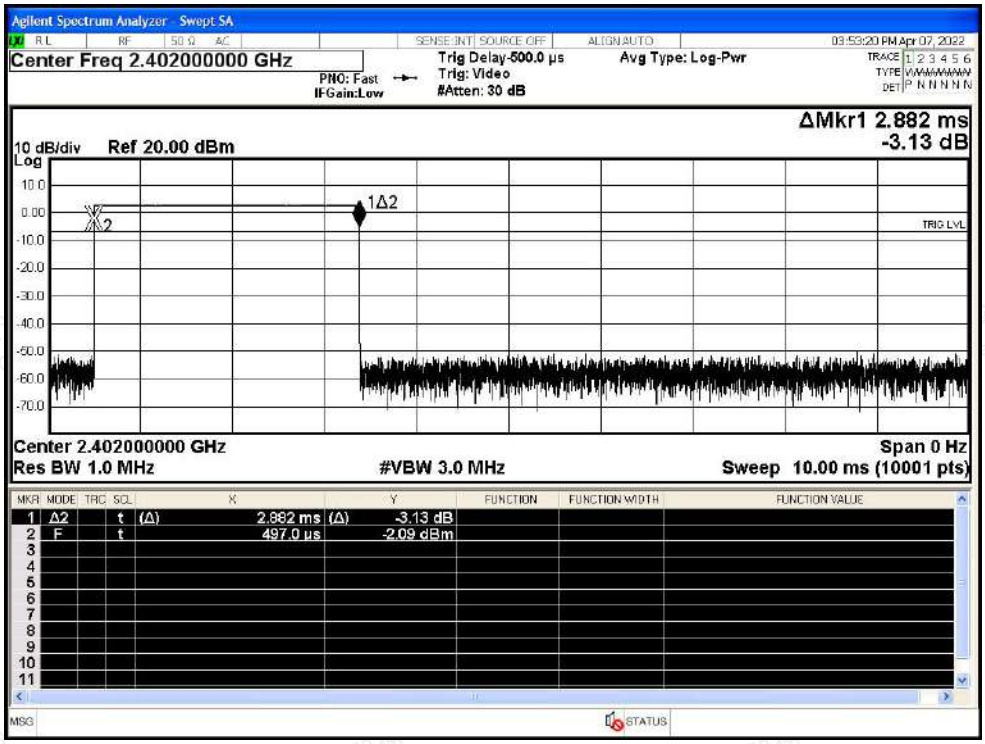


A.4 Dwell Time

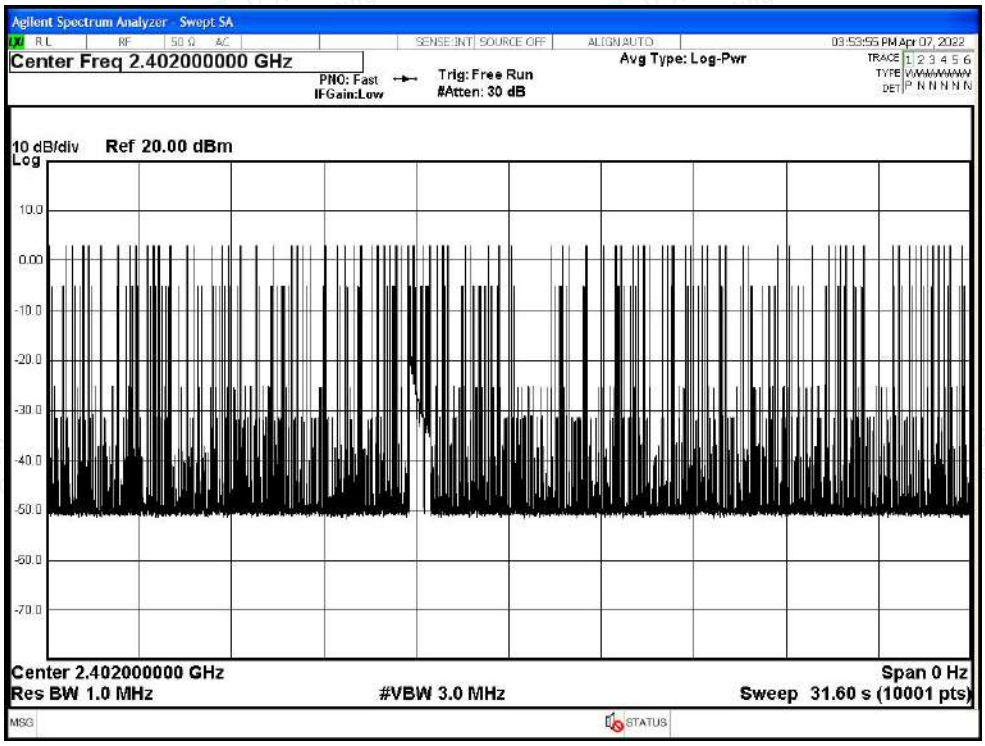
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.882	351.604	122	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.882	282.436	98	31600	400	Pass
NVNT	1-DH5	2480	Ant1	2.88	273.6	95	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.882	262.262	91	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.882	328.548	114	31600	400	Pass
NVNT	2-DH5	2480	Ant1	2.882	314.138	109	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.886	320.346	111	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.887	343.553	119	31600	400	Pass
NVNT	3-DH5	2480	Ant1	2.886	331.89	115	31600	400	Pass

Test Graphs

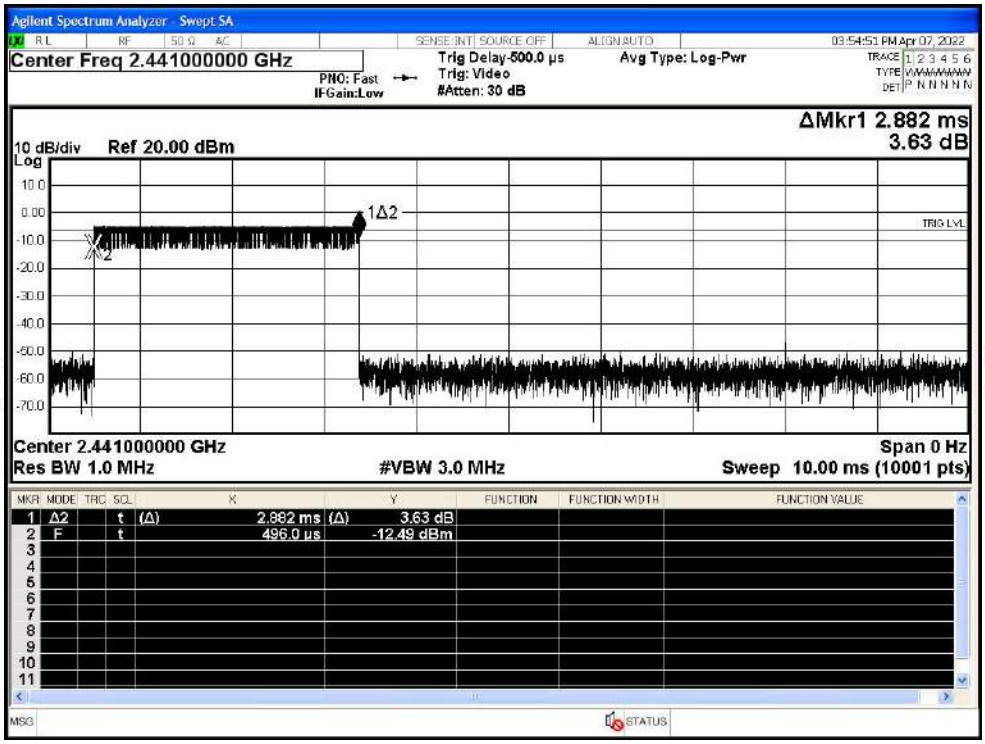
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



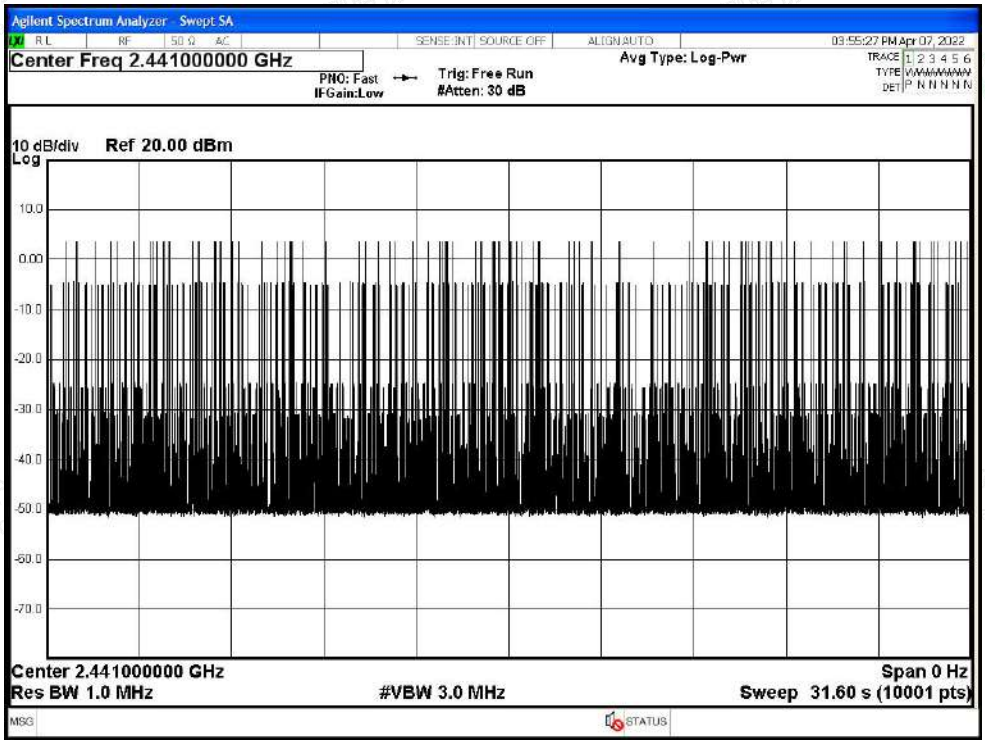
Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



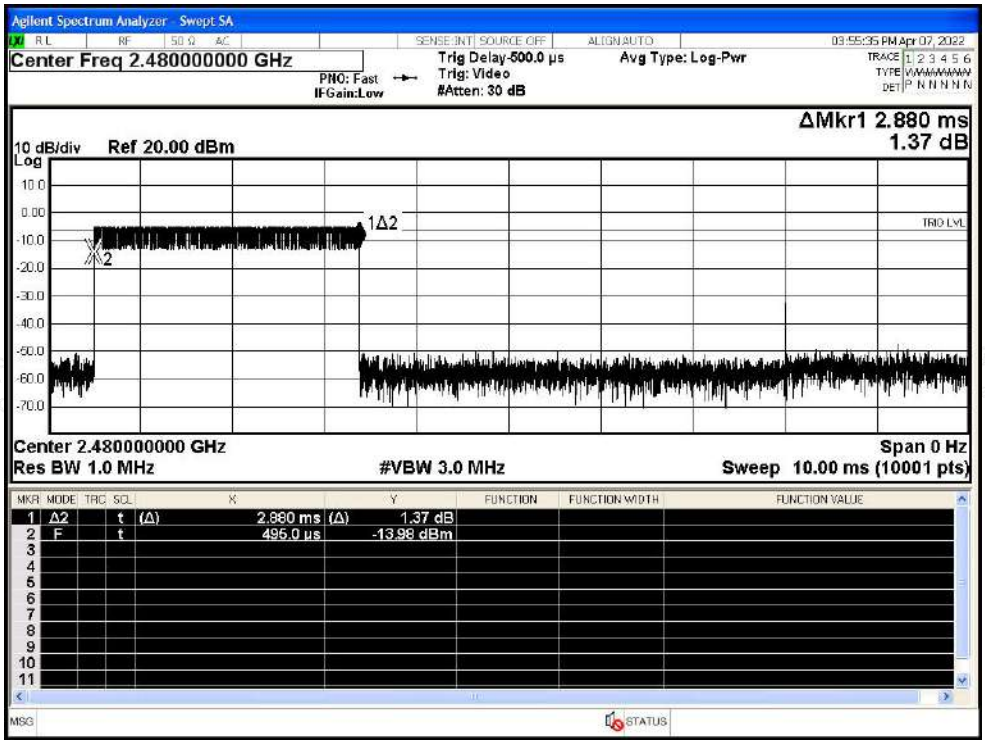
Dwell NVNT 1-DH5 2441MHz Ant1 One Burst



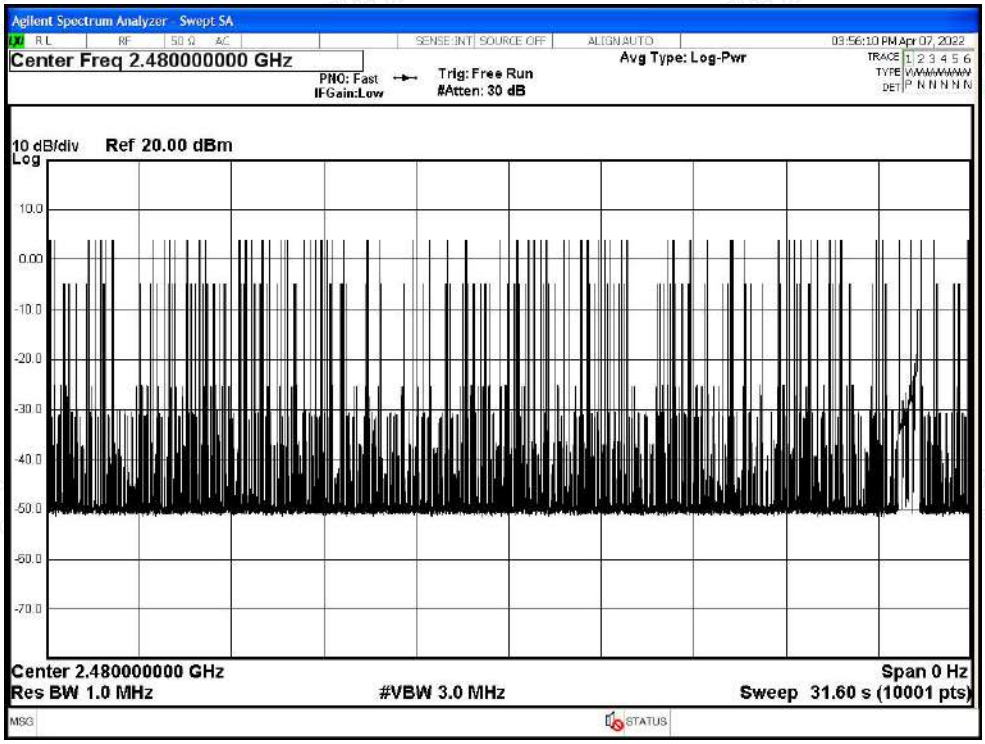
Dwell NVNT 1-DH5 2441MHz Ant1 Accumulated



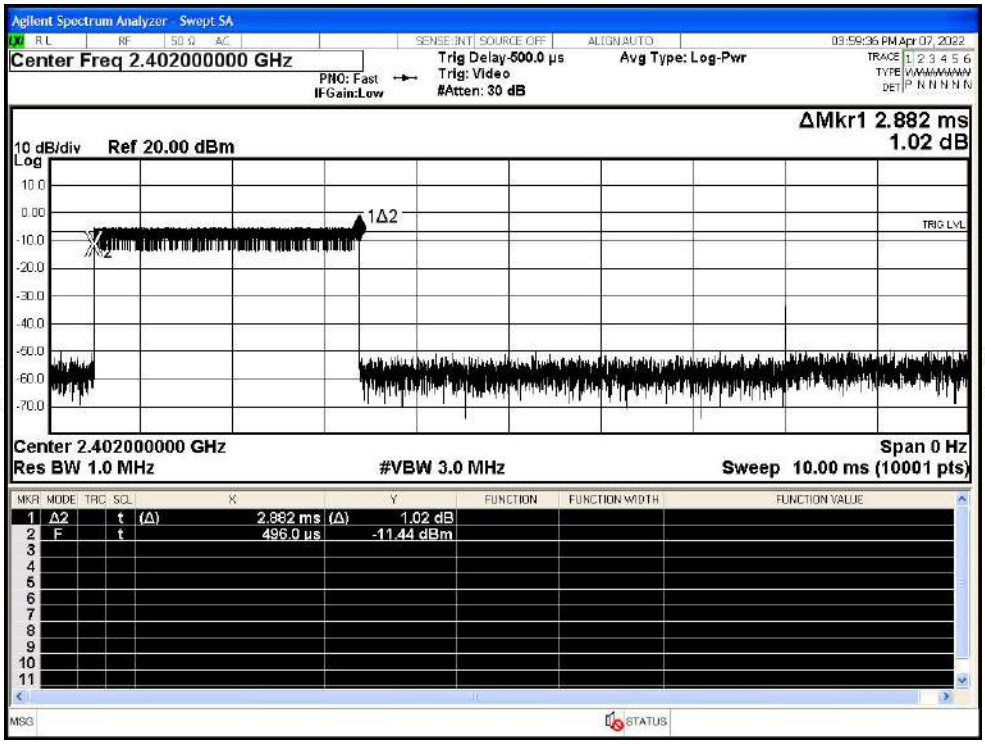
Dwell NVNT 1-DH5 2480MHz Ant1 One Burst



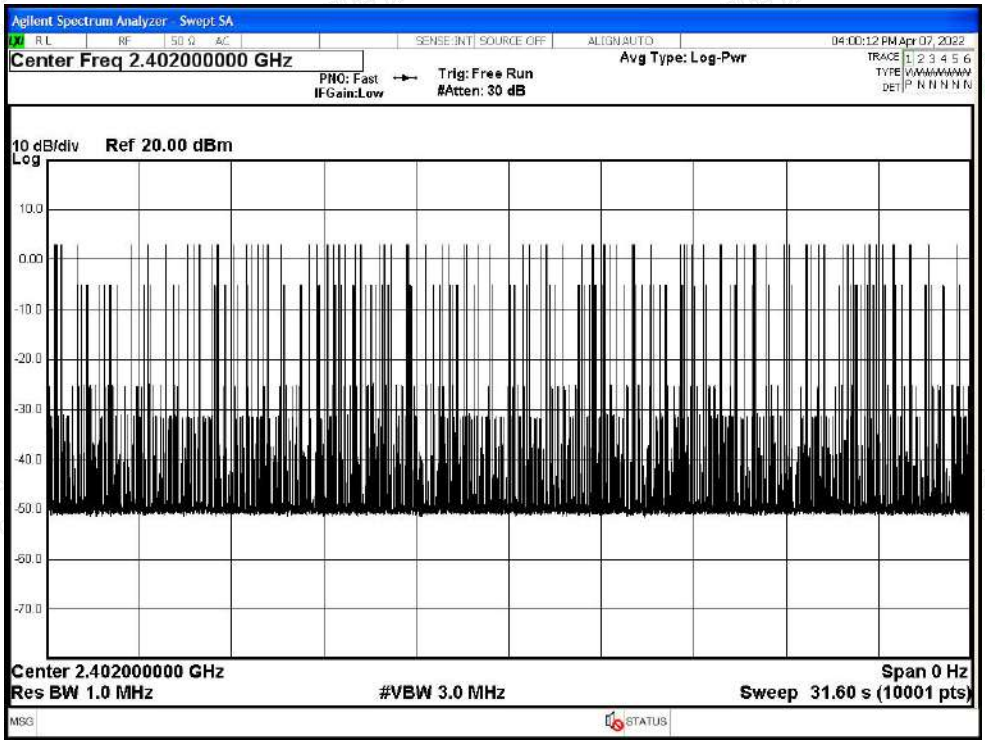
Dwell NVNT 1-DH5 2480MHz Ant1 Accumulated



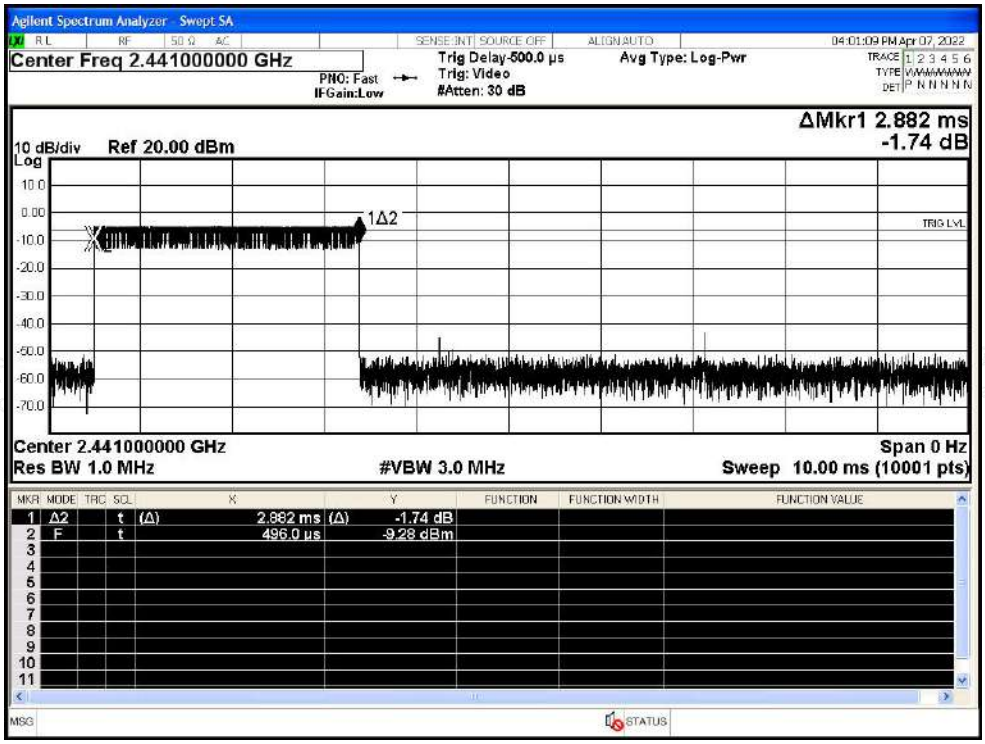
Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



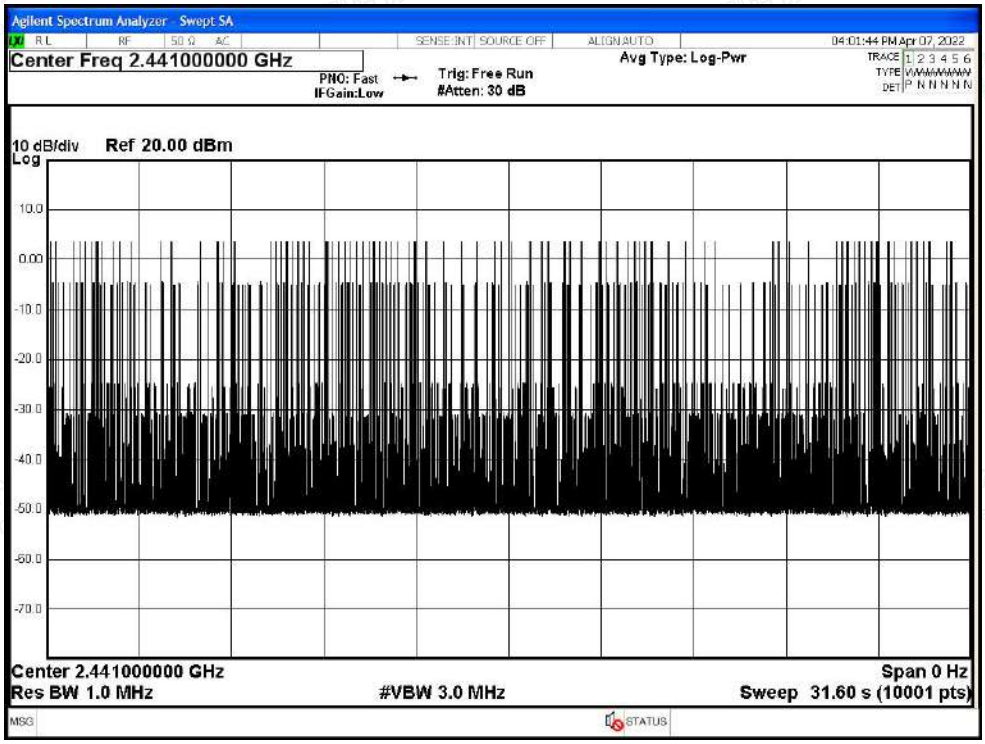
Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



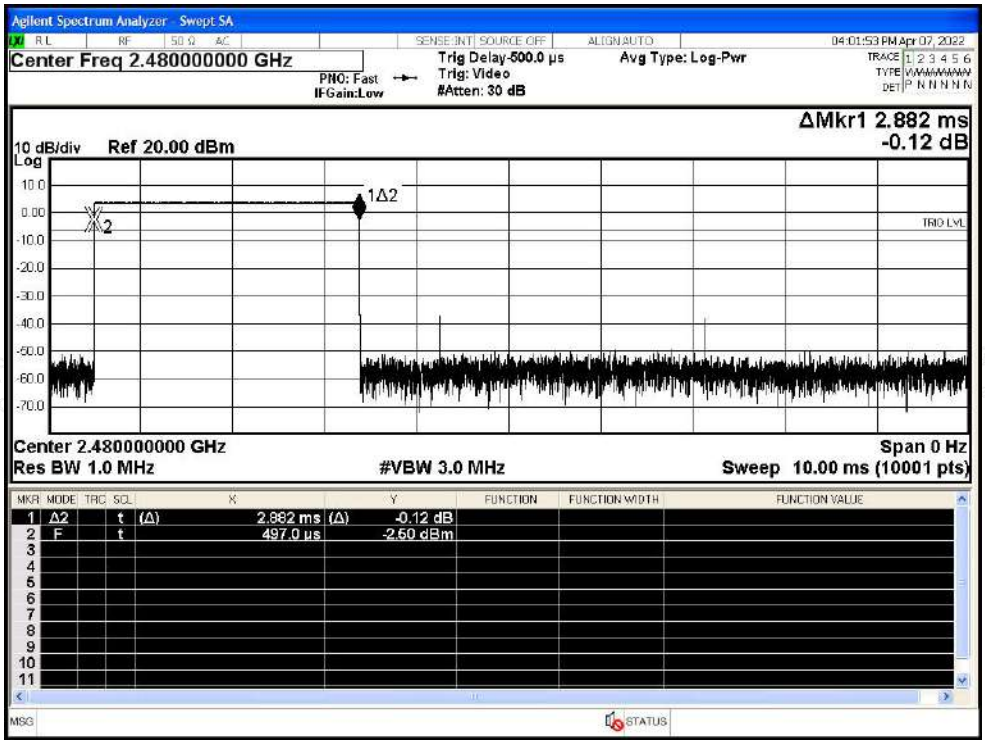
Dwell NVNT 2-DH5 2441MHz Ant1 One Burst



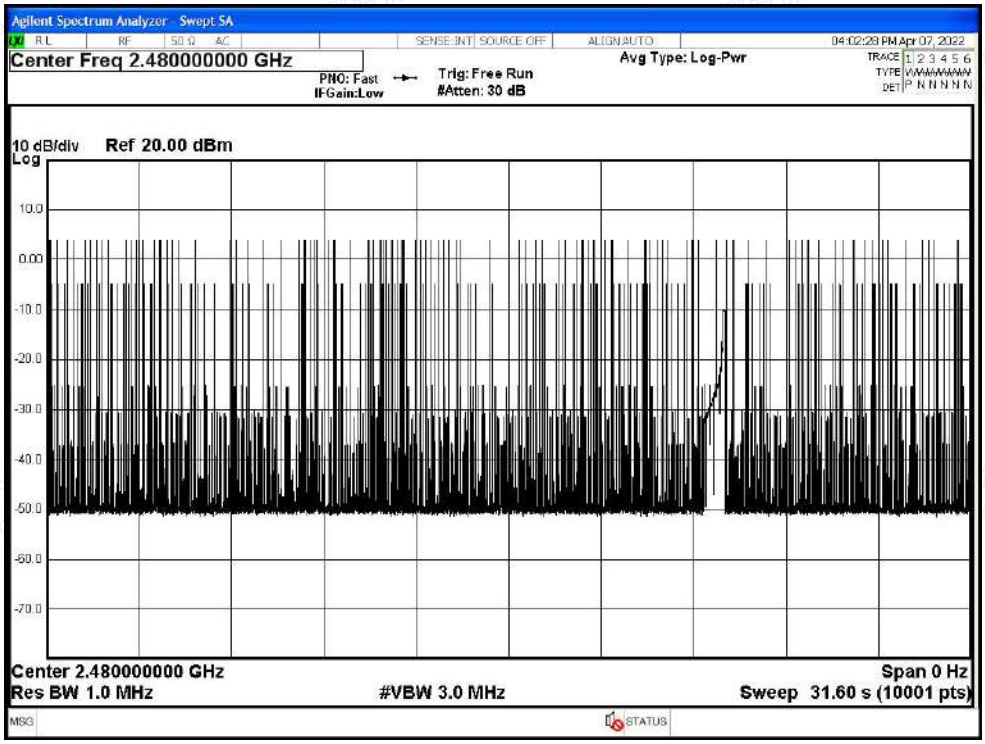
Dwell NVNT 2-DH5 2441MHz Ant1 Accumulated



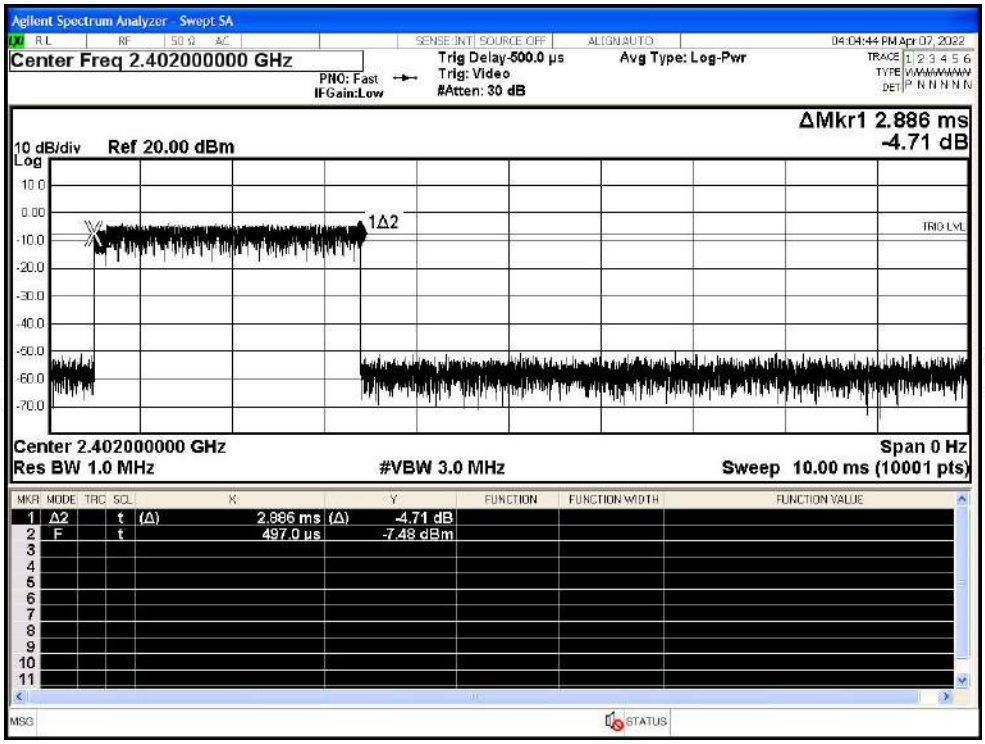
Dwell NVNT 2-DH5 2480MHz Ant1 One Burst



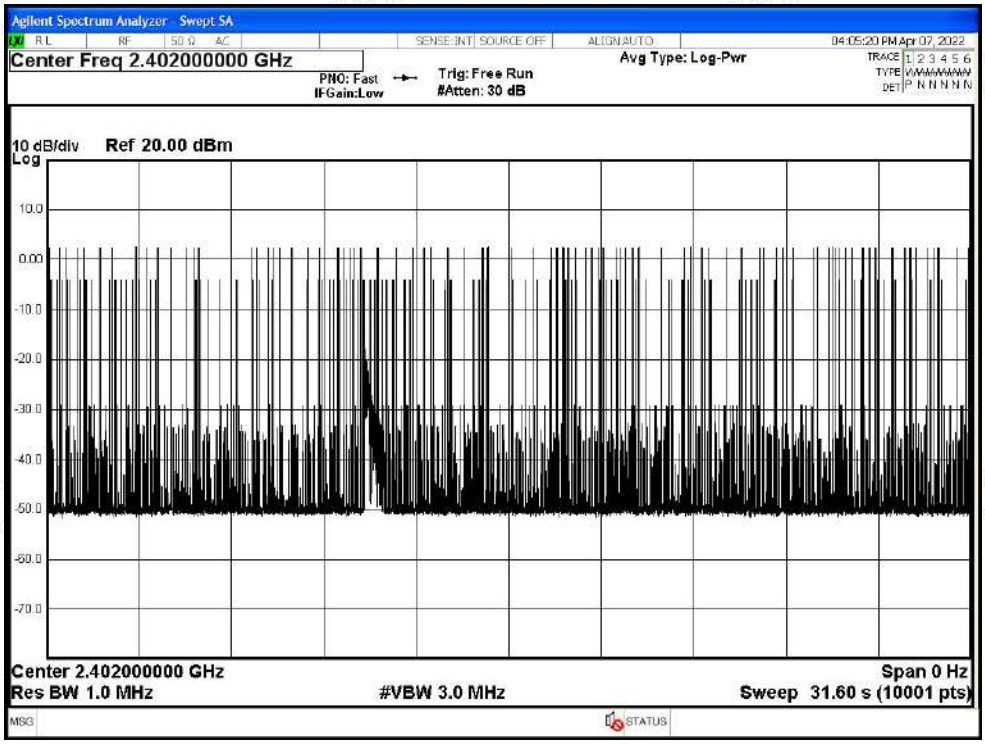
Dwell NVNT 2-DH5 2480MHz Ant1 Accumulated



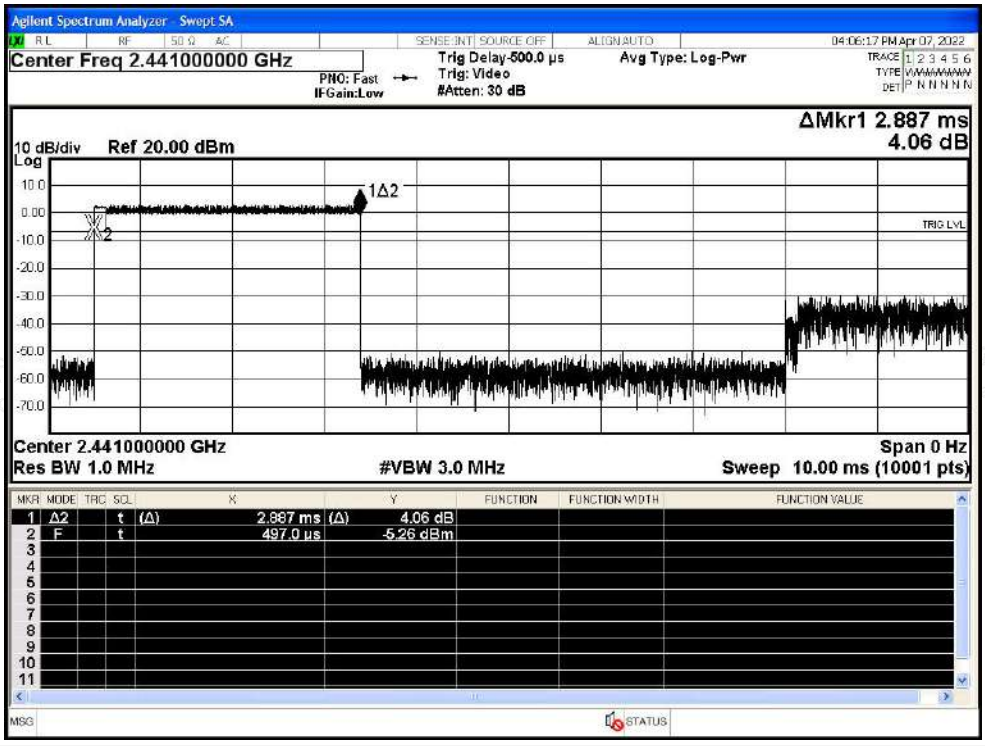
Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



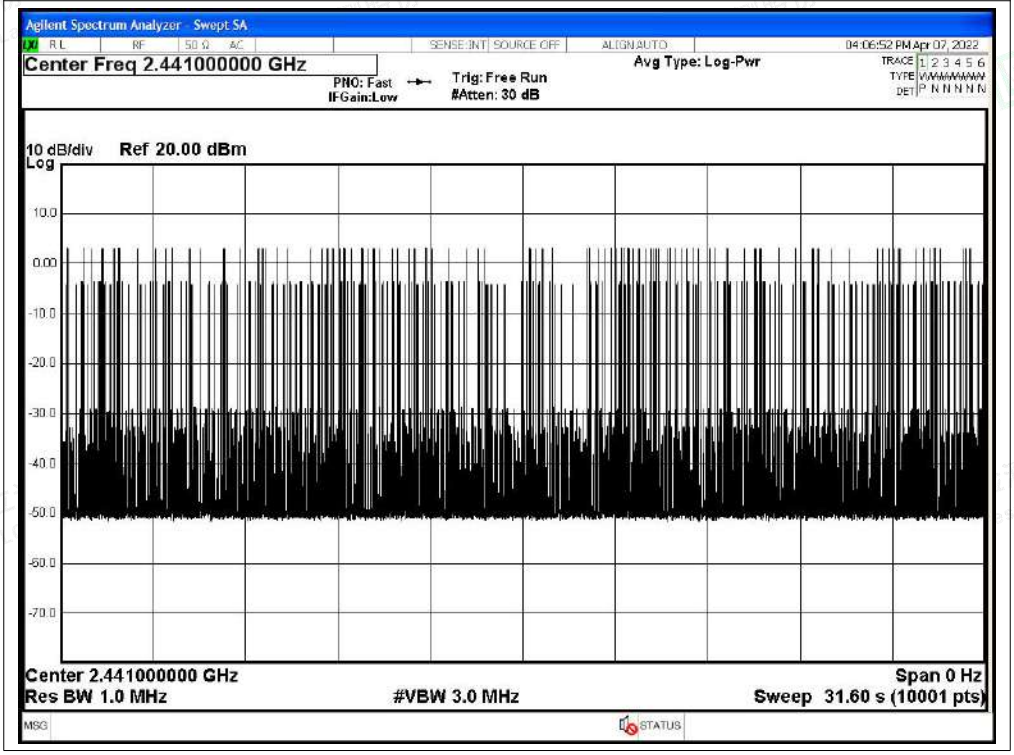
Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated



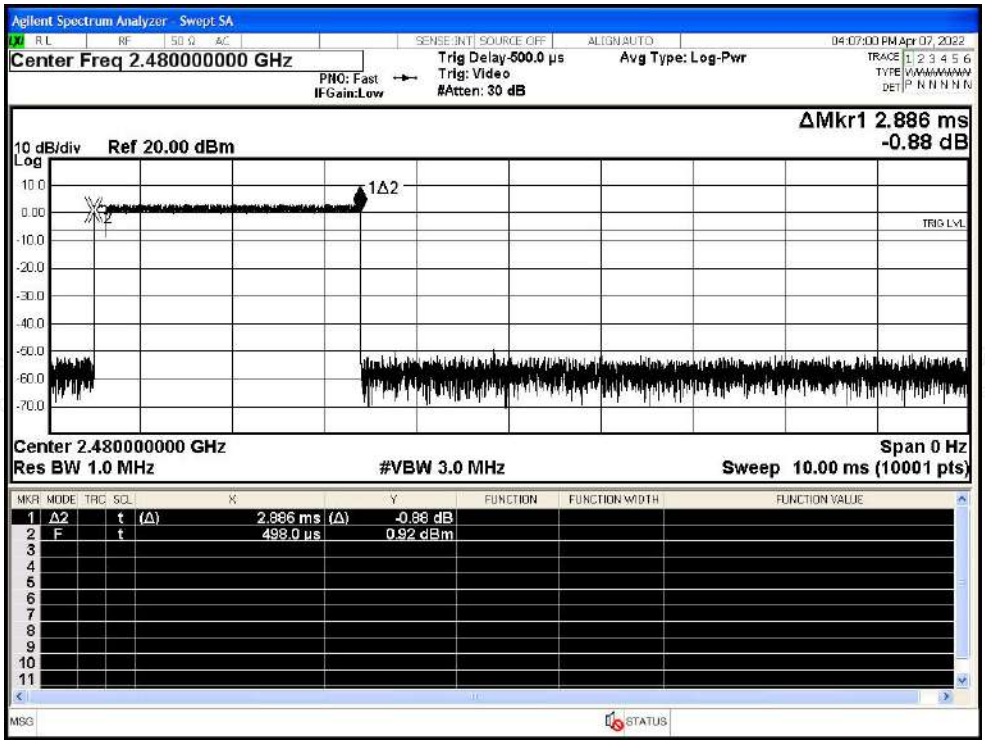
Dwell NVNT 3-DH5 2441MHz Ant1 One Burst



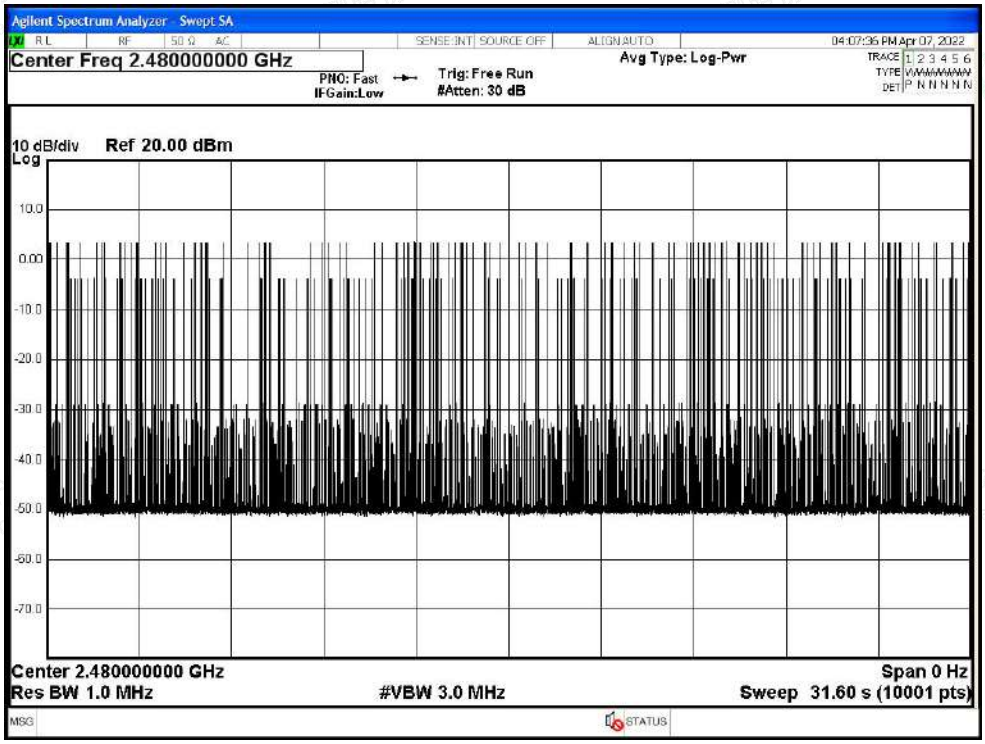
Dwell NVNT 3-DH5 2441MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2480MHz Ant1 One Burst



Dwell NVNT 3-DH5 2480MHz Ant1 Accumulated

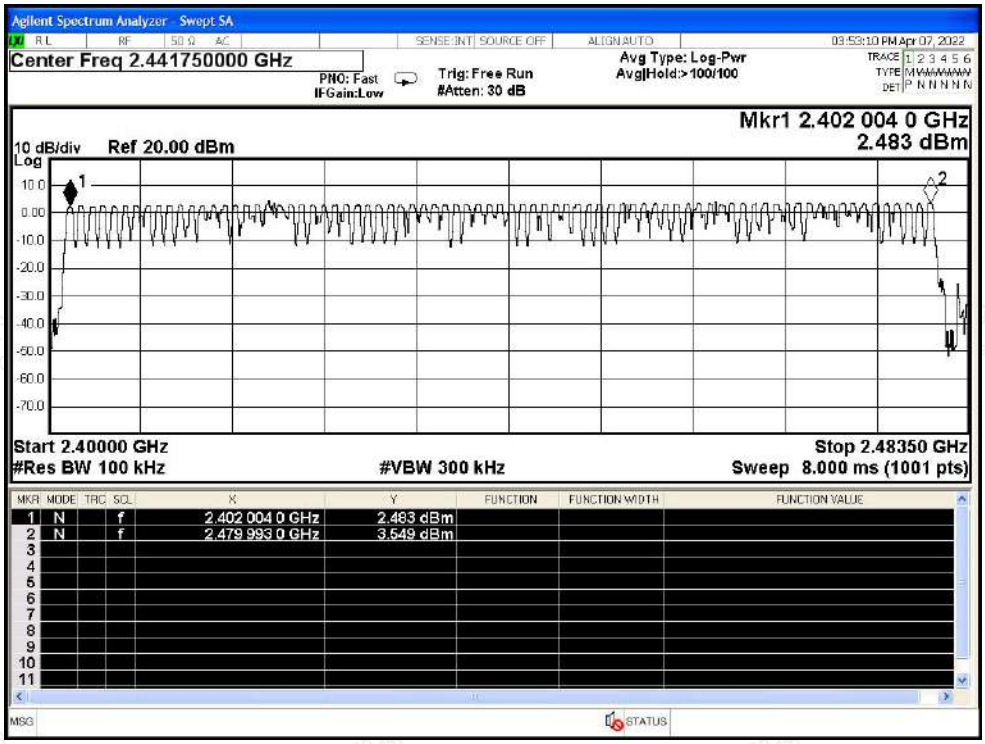


A.5 Number of Hopping Channel

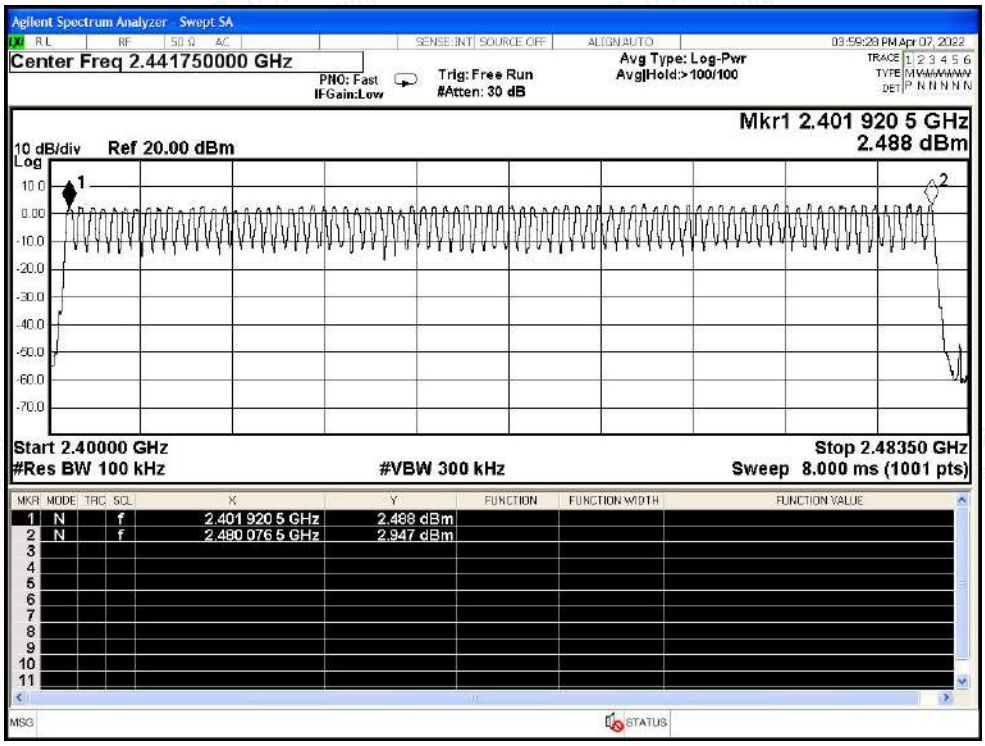
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

Test Graphs

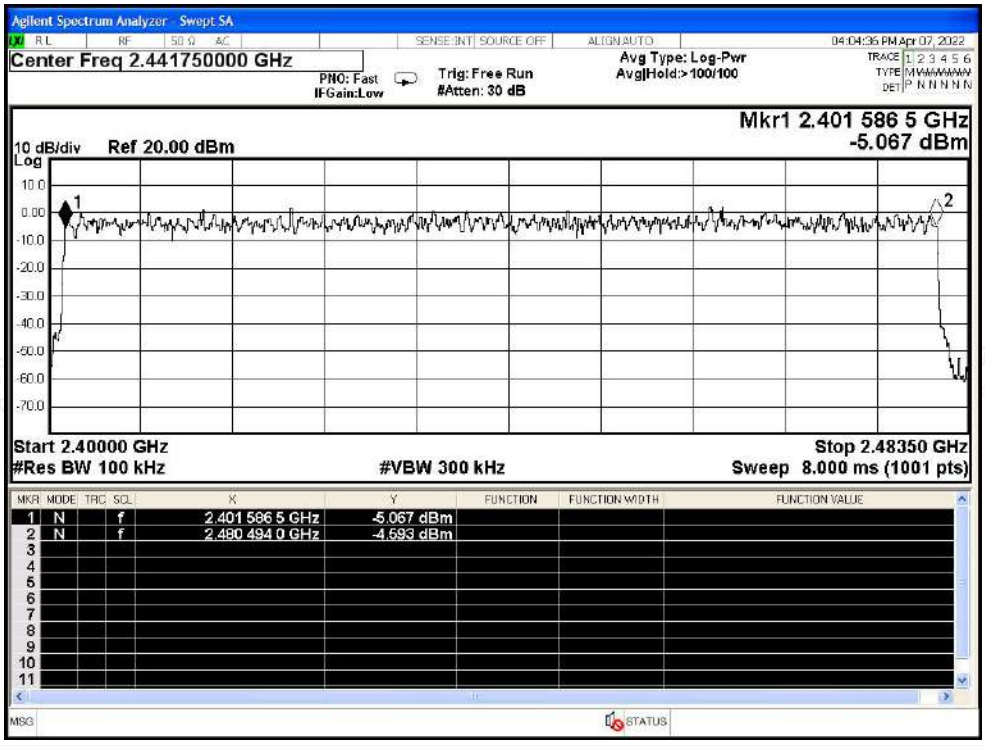
Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1



Hopping No. NVNT 3-DH5 2402MHz Ant1

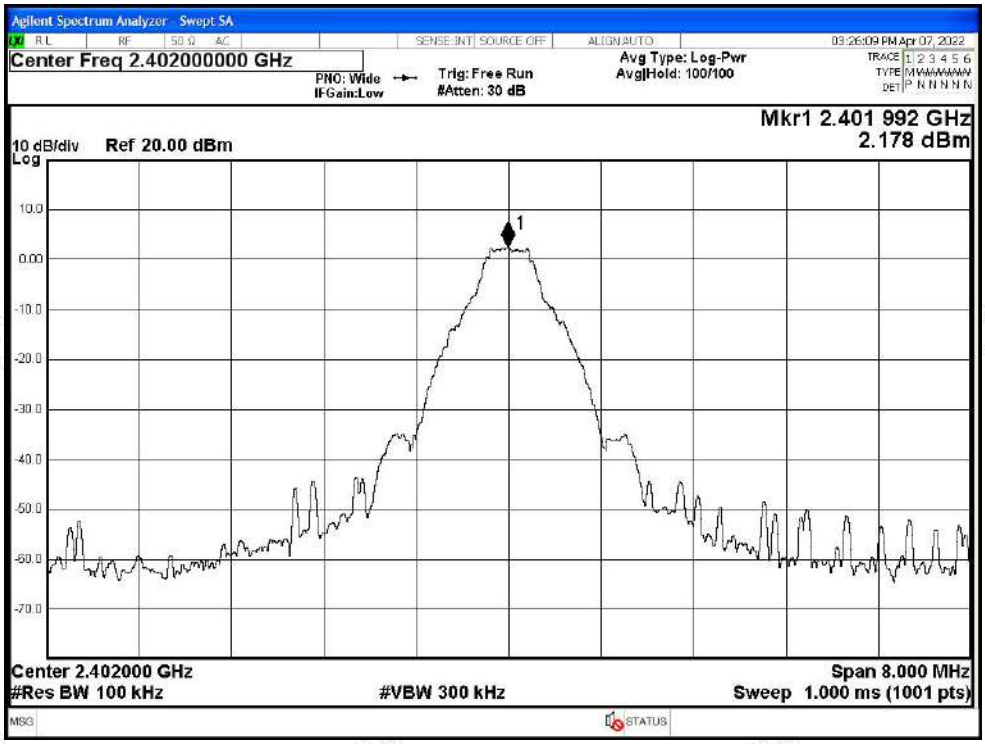


A.6 Band Edge

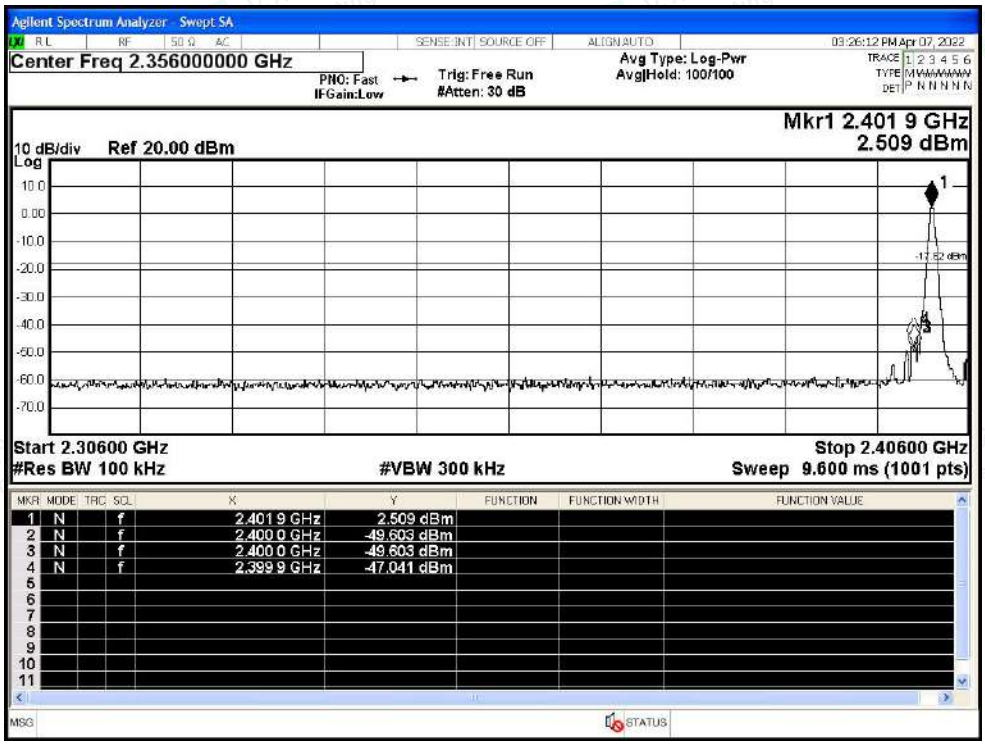
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-49.22	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-54.39	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-47.34	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-51.87	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-45.9	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-53.64	-20	Pass

Test Graphs

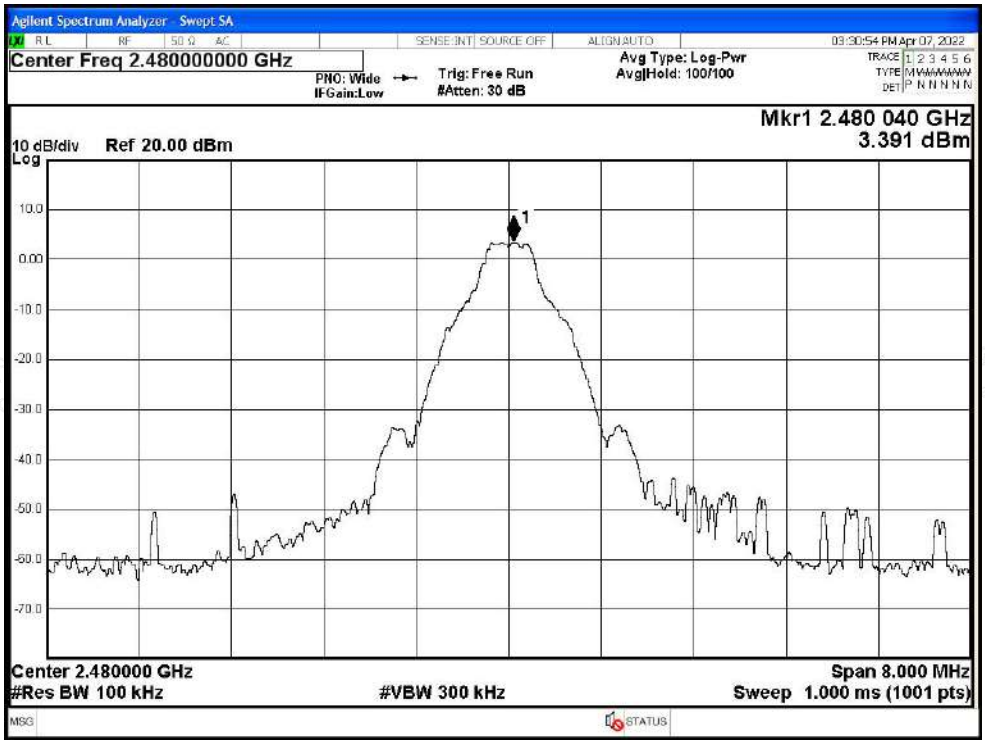
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



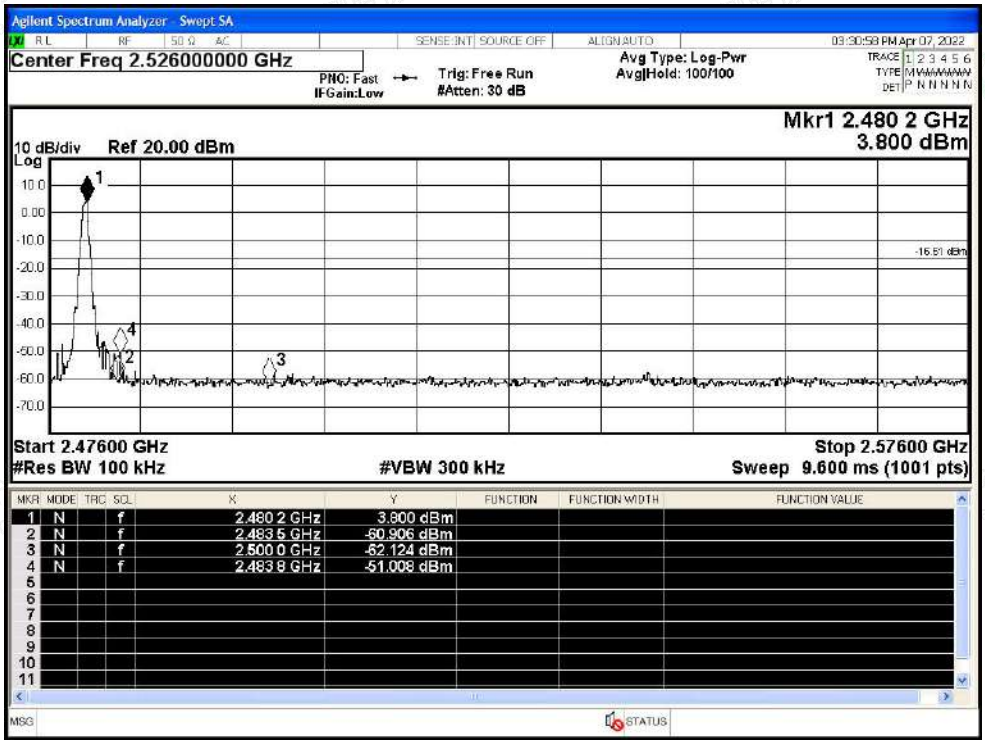
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



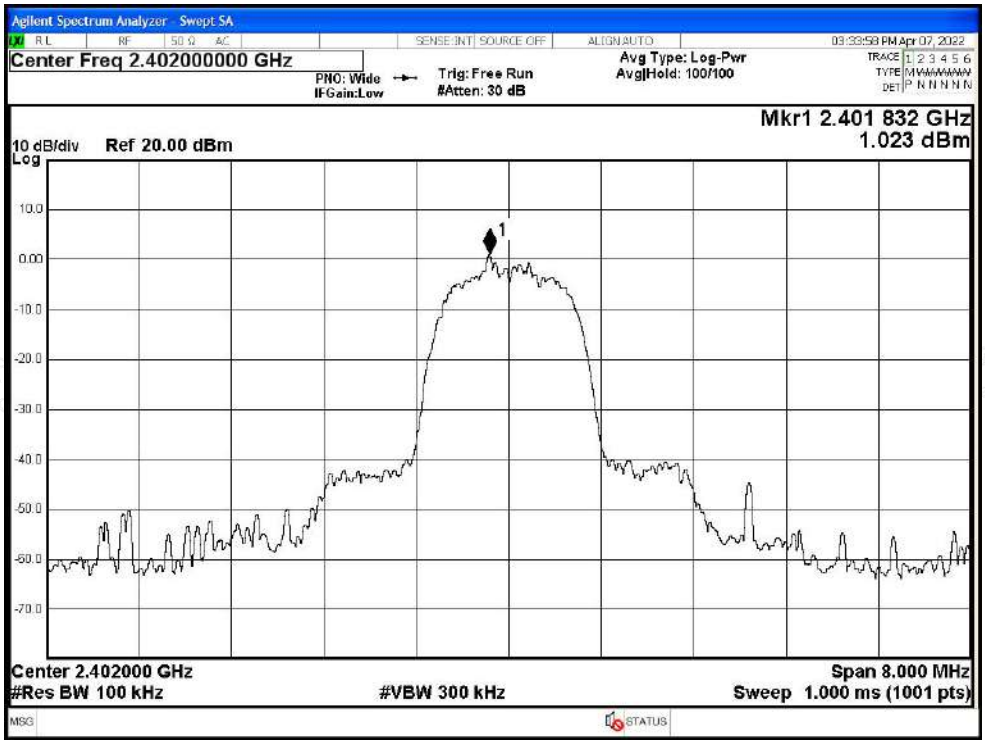
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



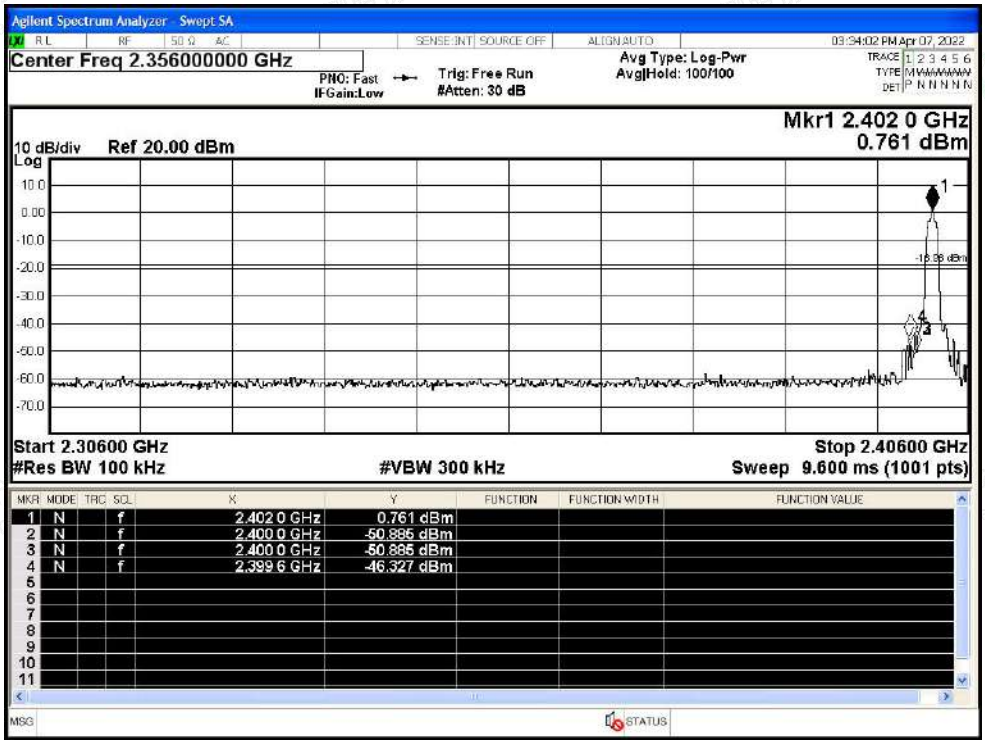
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



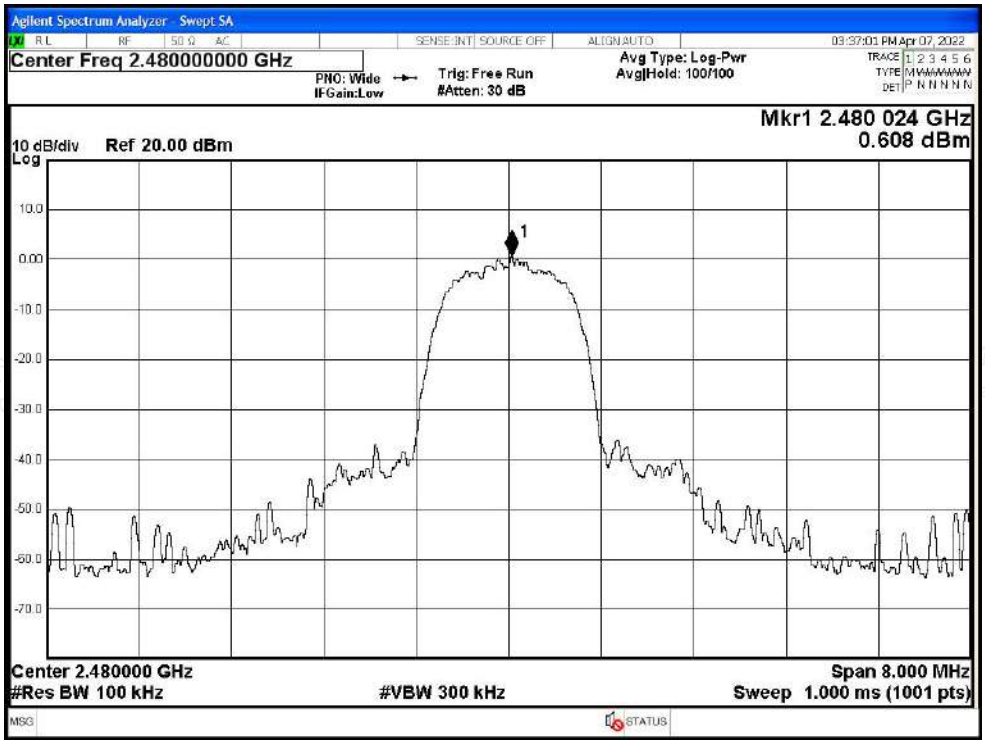
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



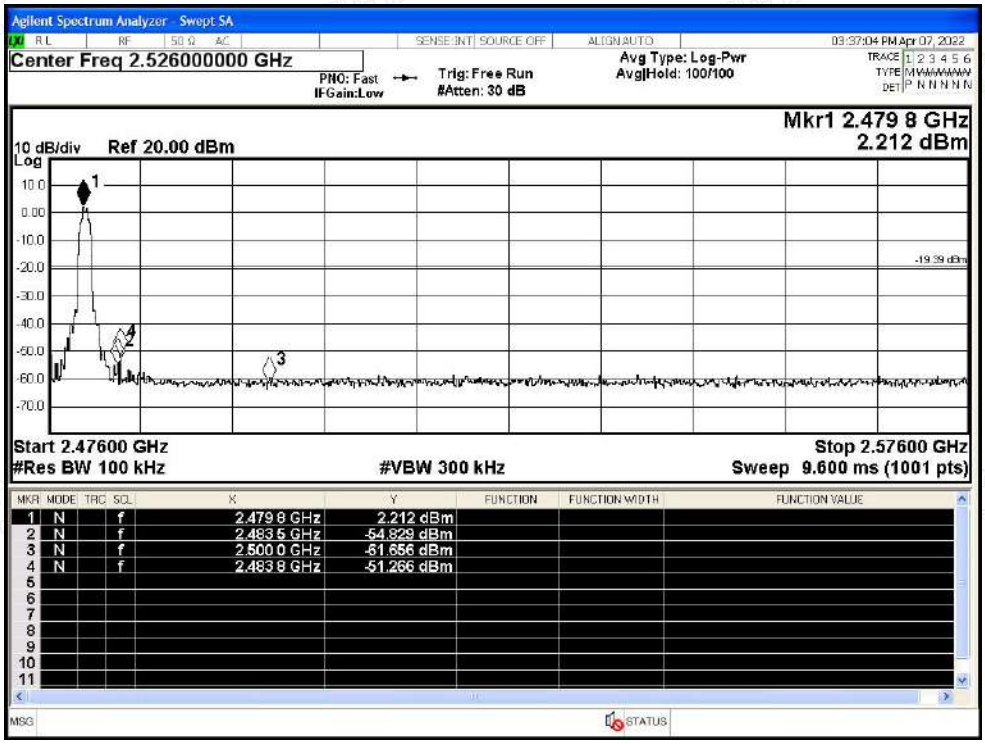
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



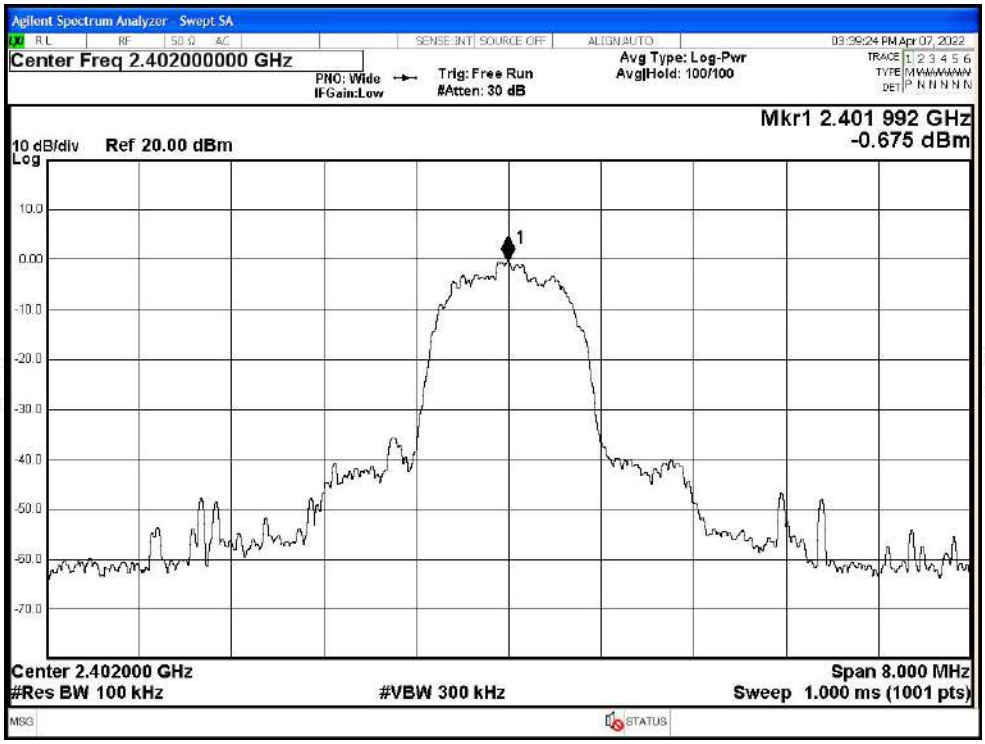
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



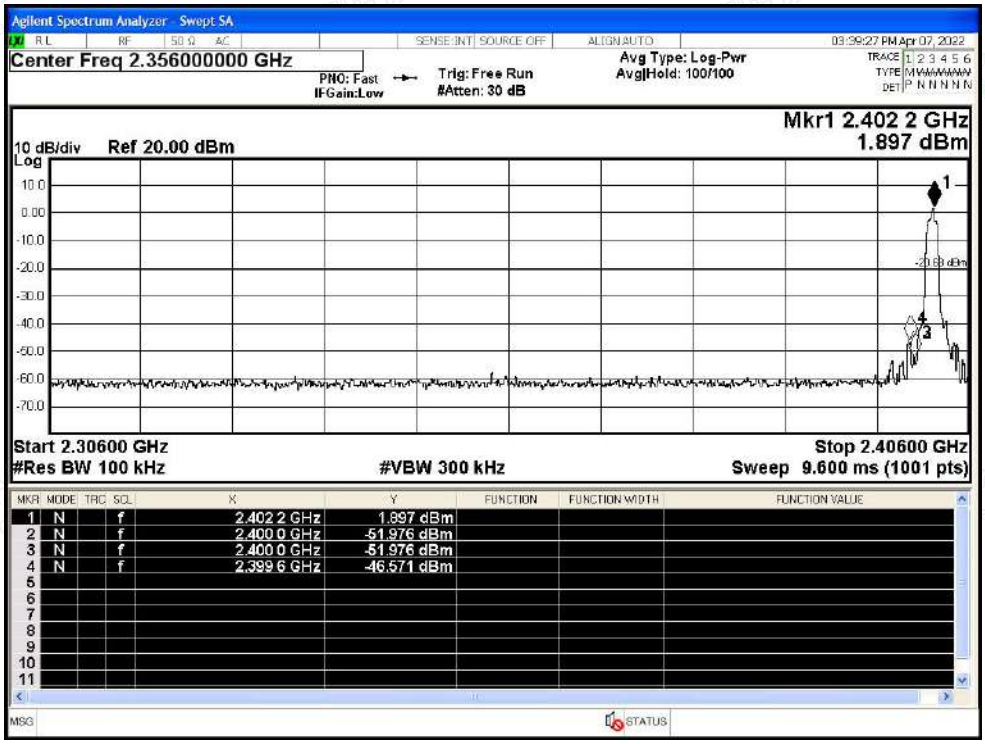
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



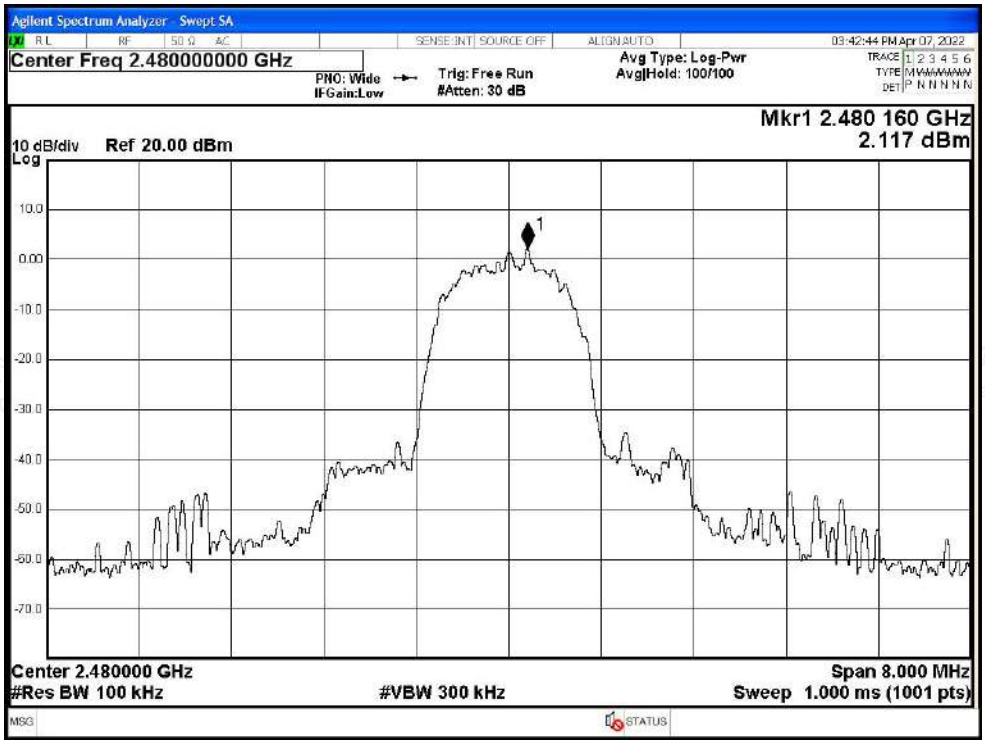
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



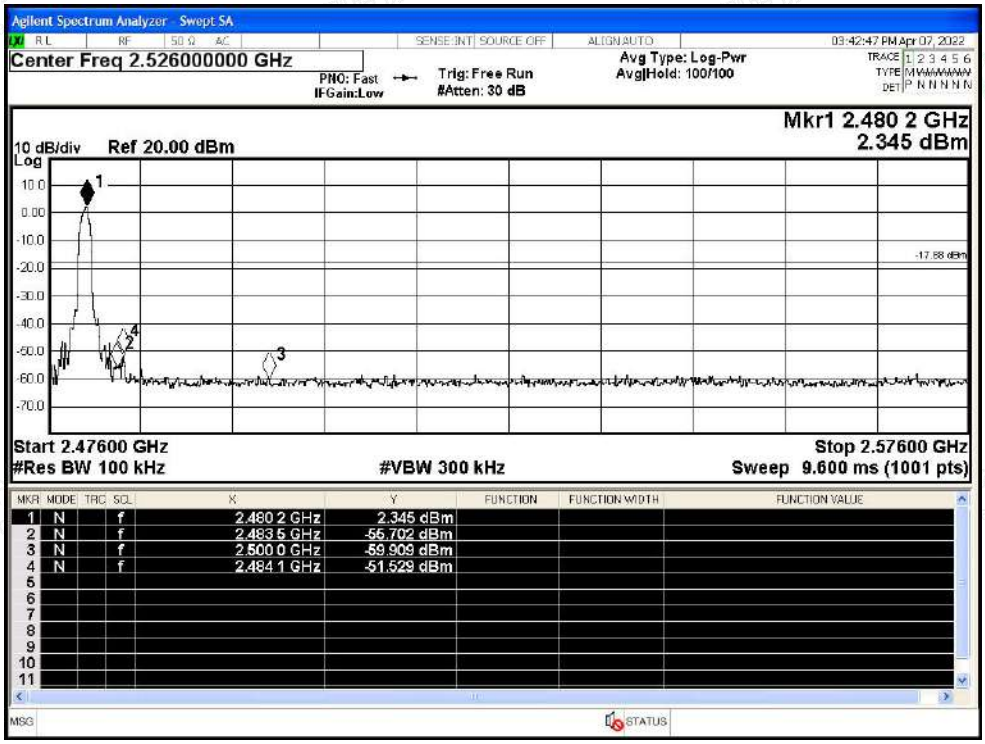
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



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



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

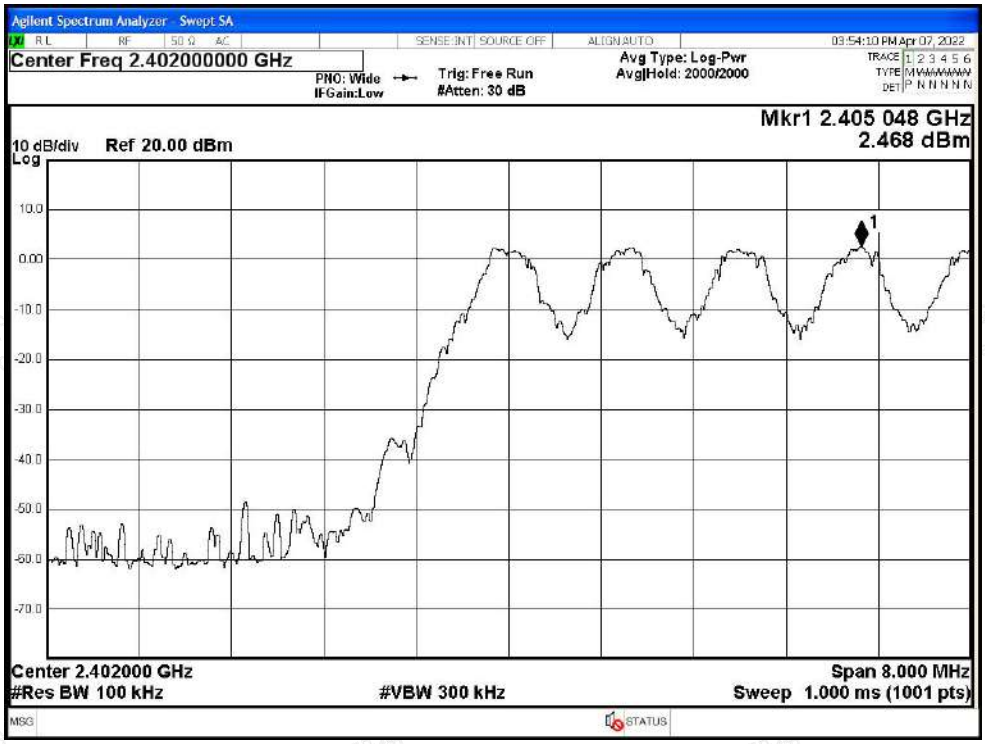


(Hopping)

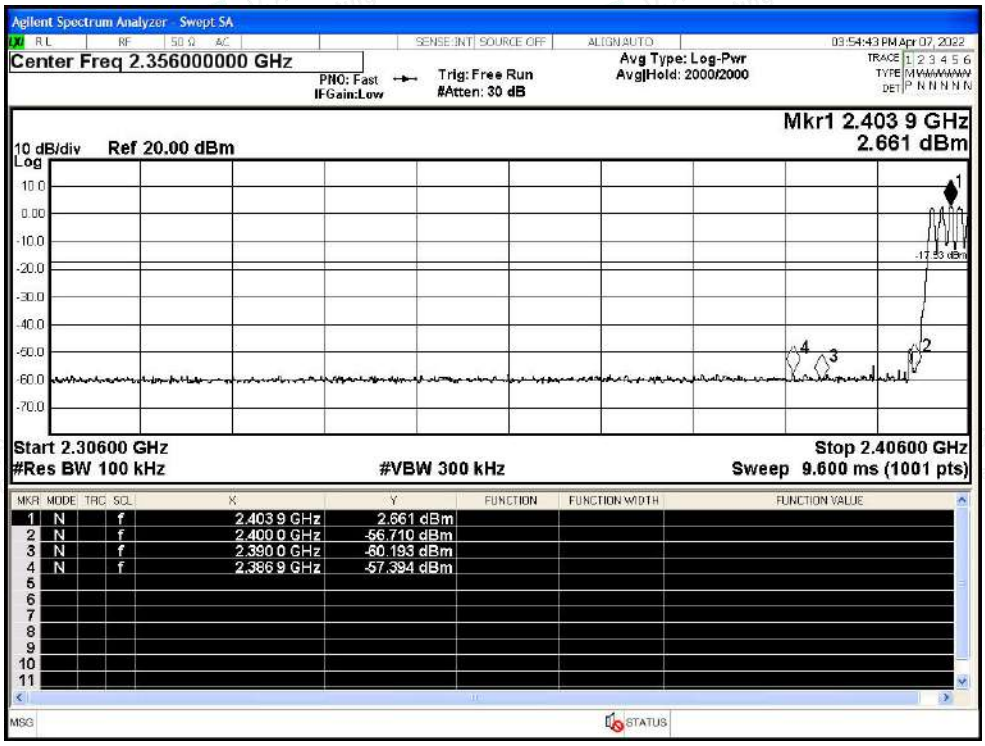
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-59.86	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-31.04	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-60.43	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-50.75	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-59.51	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-55.11	-20	Pass

Test Graphs

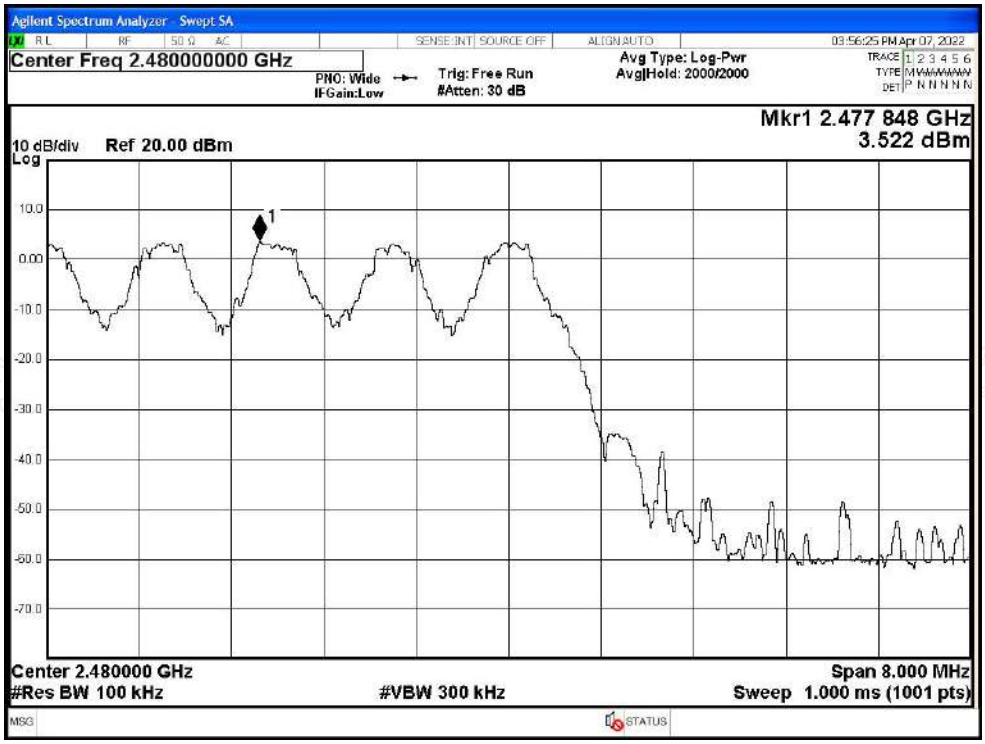
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



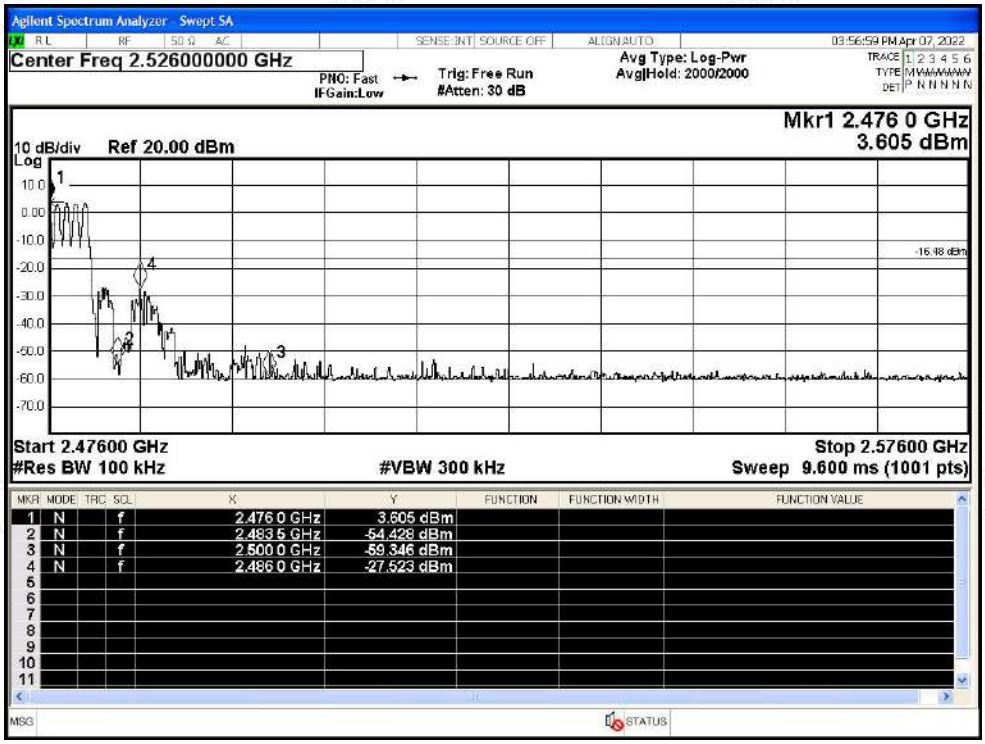
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



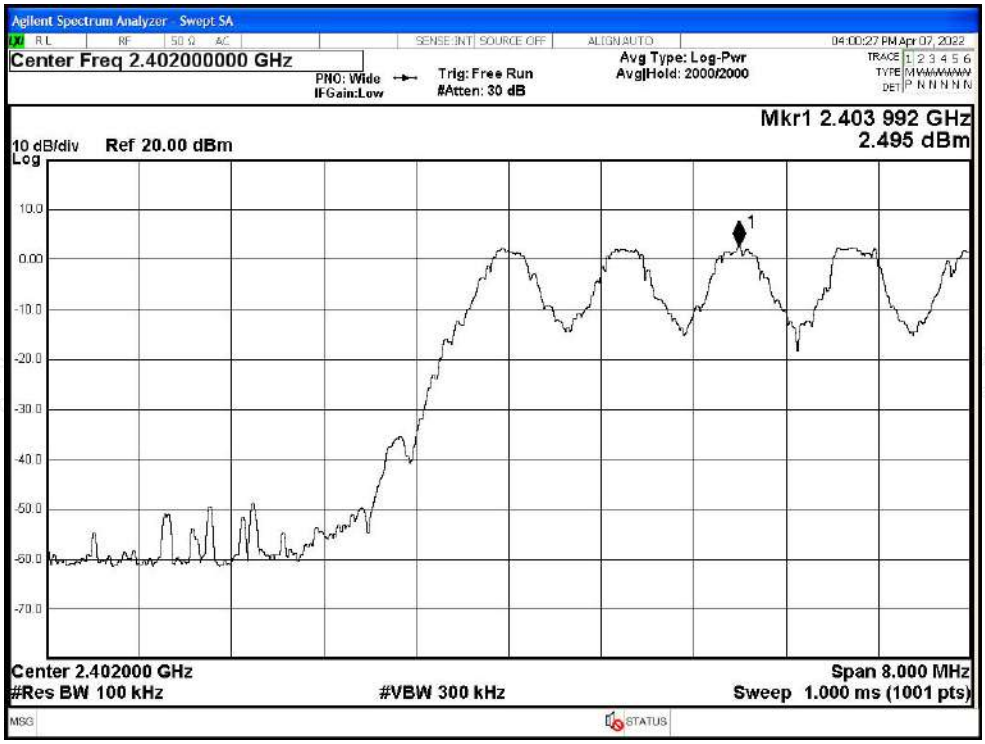
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



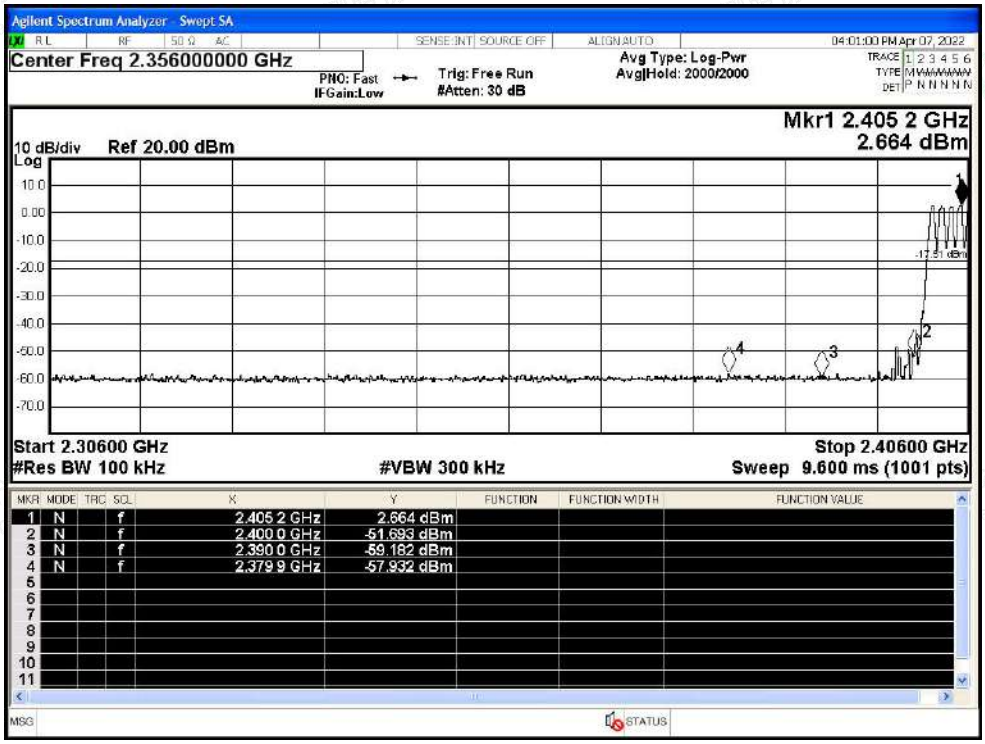
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



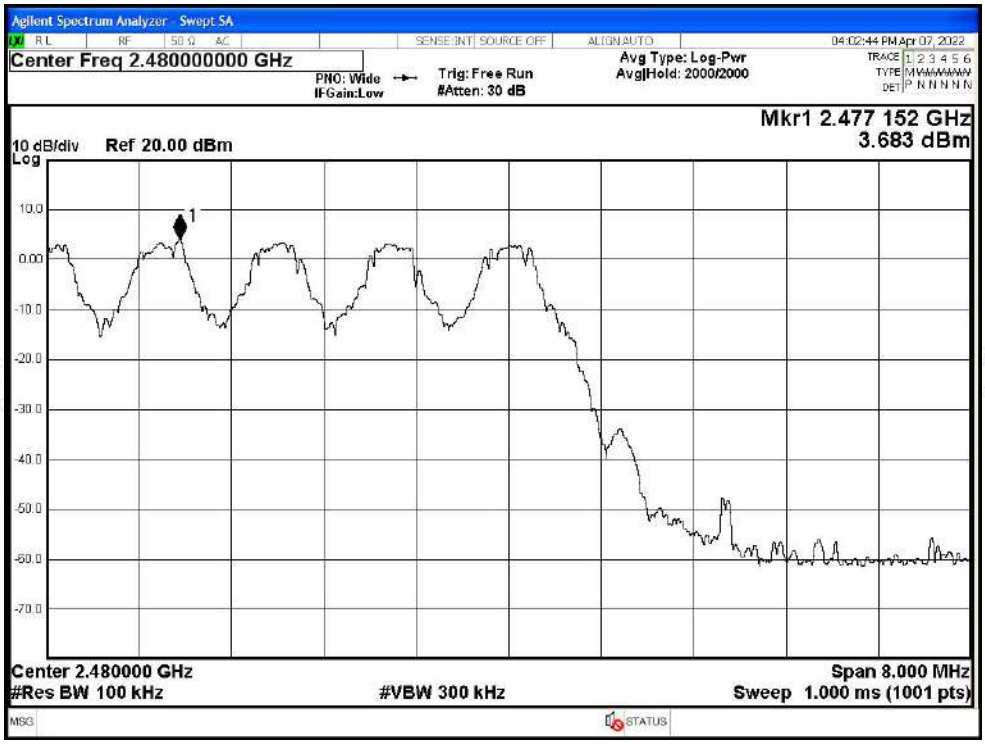
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



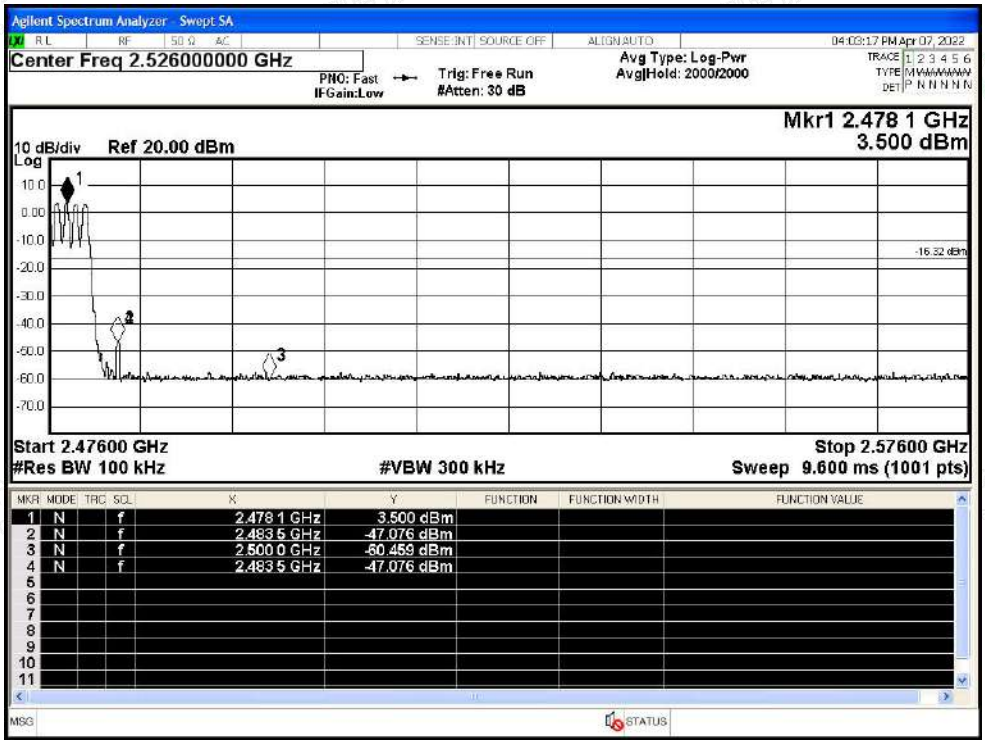
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



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

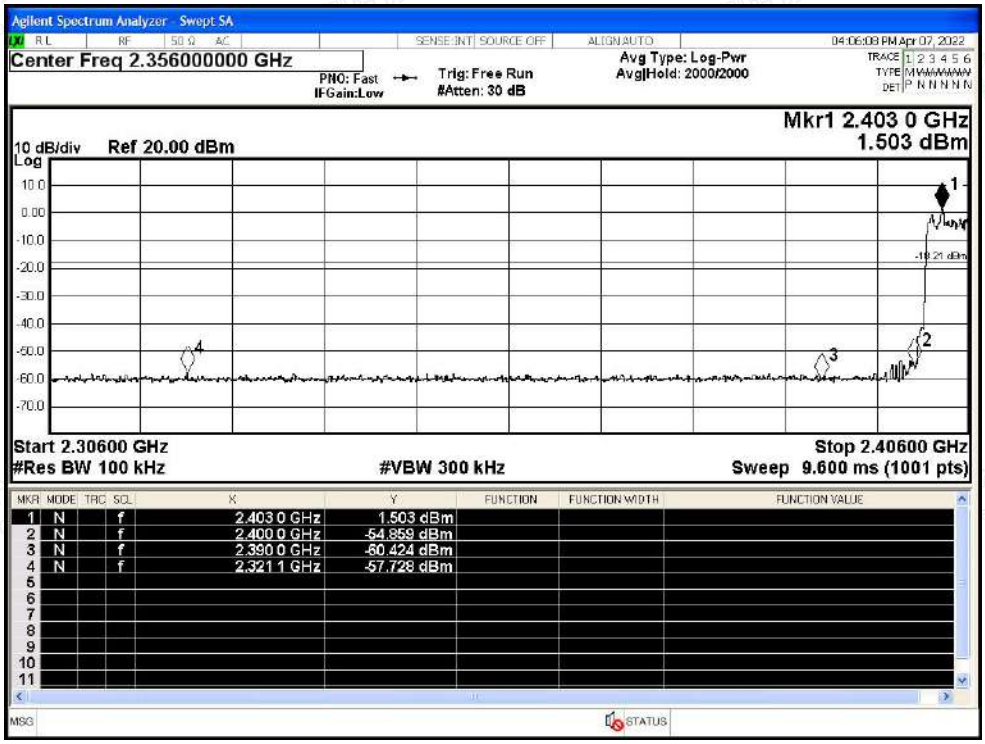


Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission

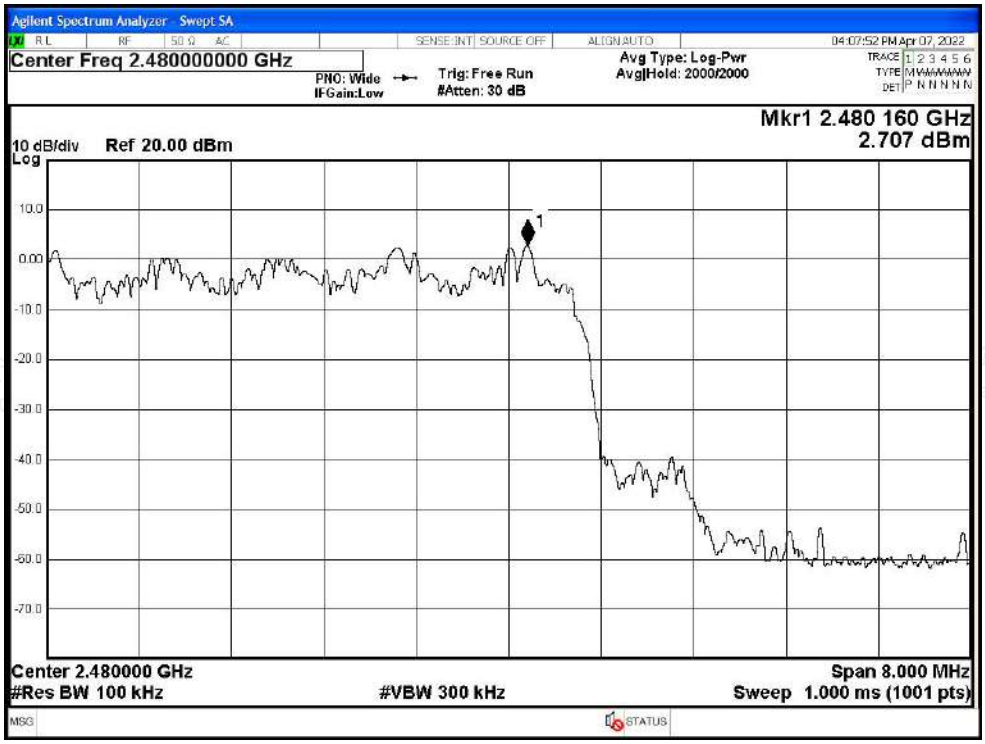


Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref

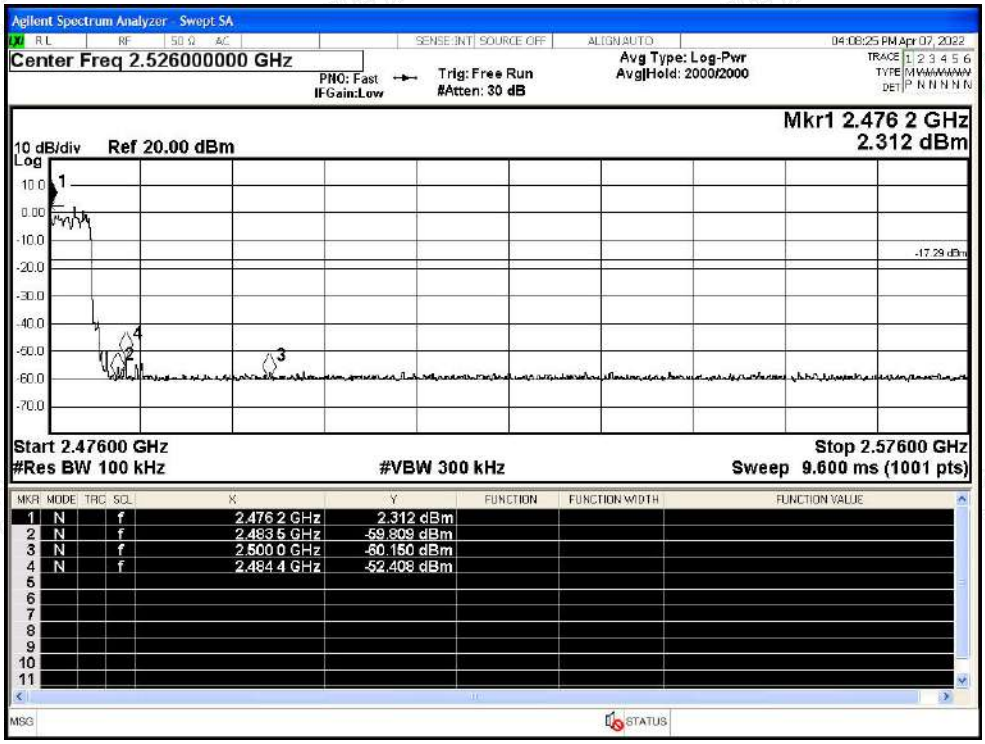
Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission



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



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

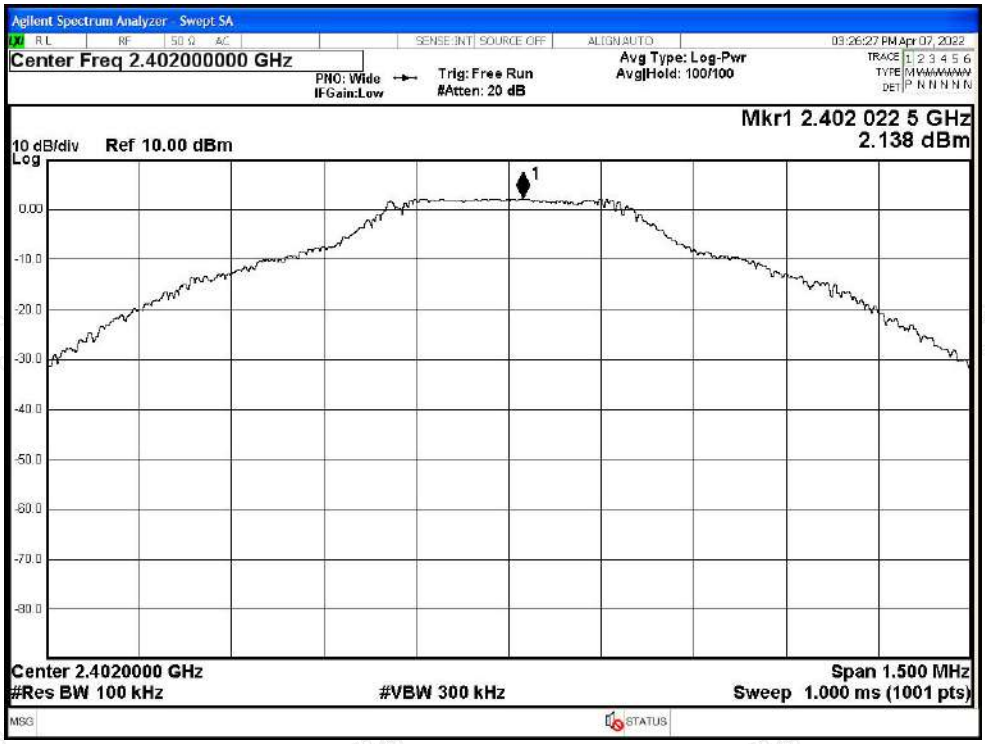


A.7 Conducted RF Spurious Emission

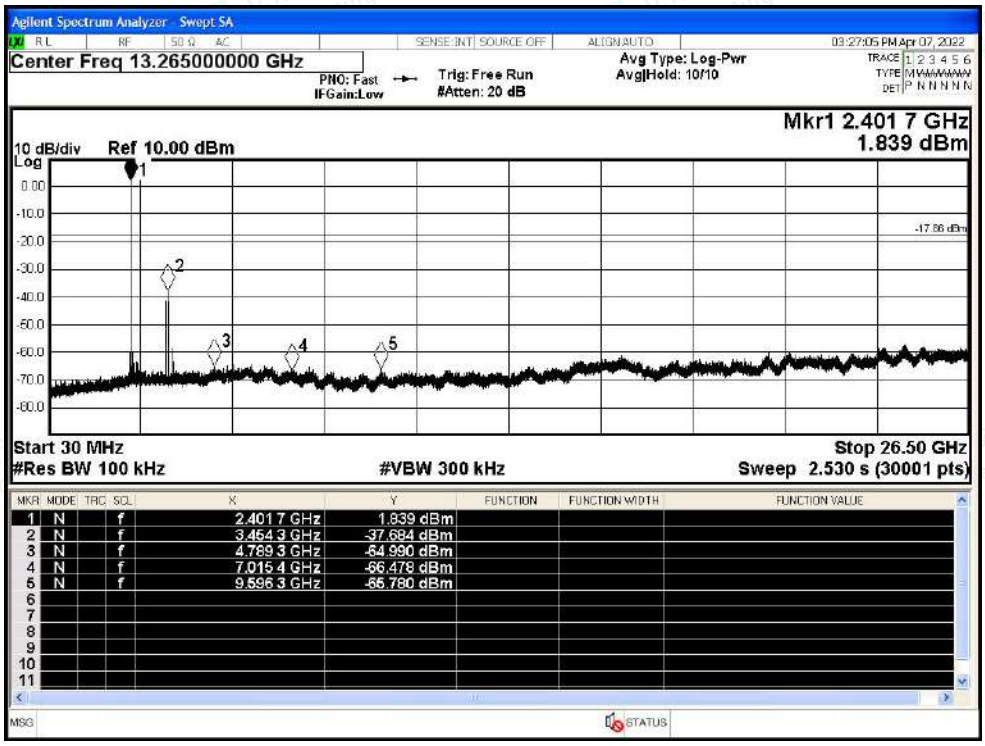
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-39.82	-20	Pass
NVNT	1-DH5	2441	Ant1	-50.41	-20	Pass
NVNT	1-DH5	2480	Ant1	-56.79	-20	Pass
NVNT	2-DH5	2402	Ant1	-57.65	-20	Pass
NVNT	2-DH5	2441	Ant1	-59.76	-20	Pass
NVNT	2-DH5	2480	Ant1	-58.85	-20	Pass
NVNT	3-DH5	2402	Ant1	-57.89	-20	Pass
NVNT	3-DH5	2441	Ant1	-60	-20	Pass
NVNT	3-DH5	2480	Ant1	-59.96	-20	Pass

Test Graphs

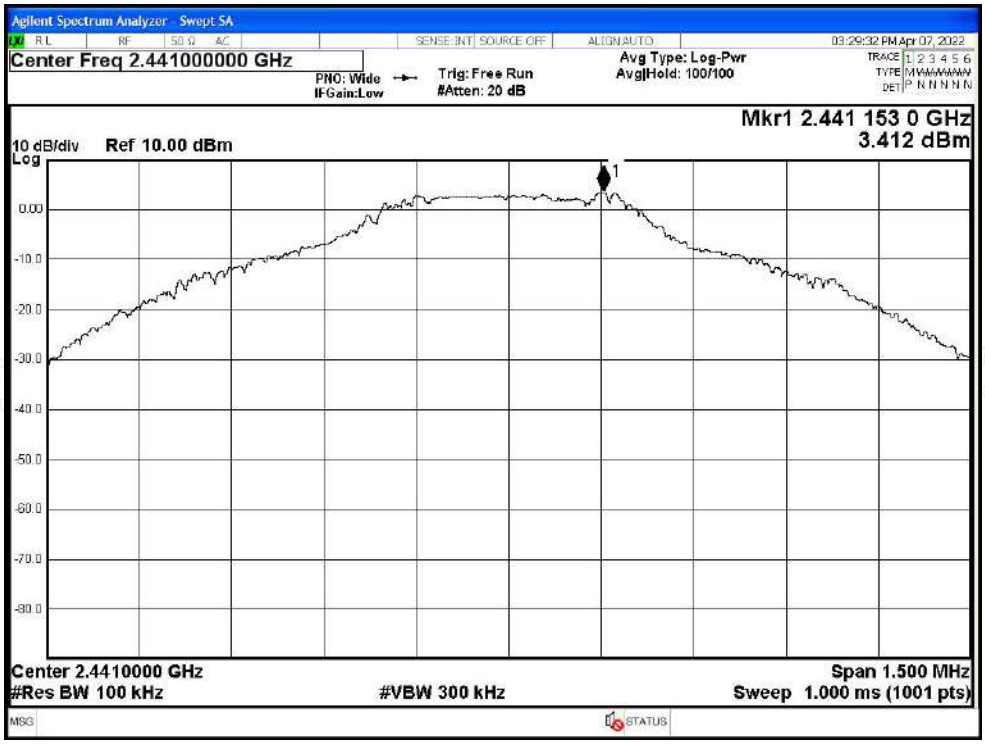
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



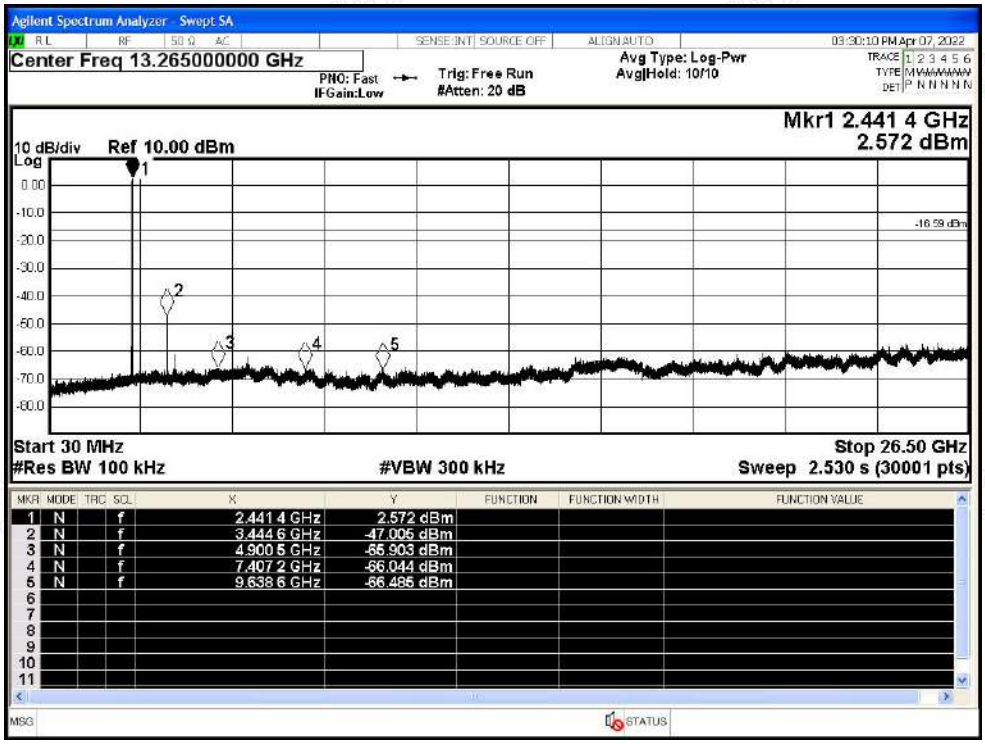
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



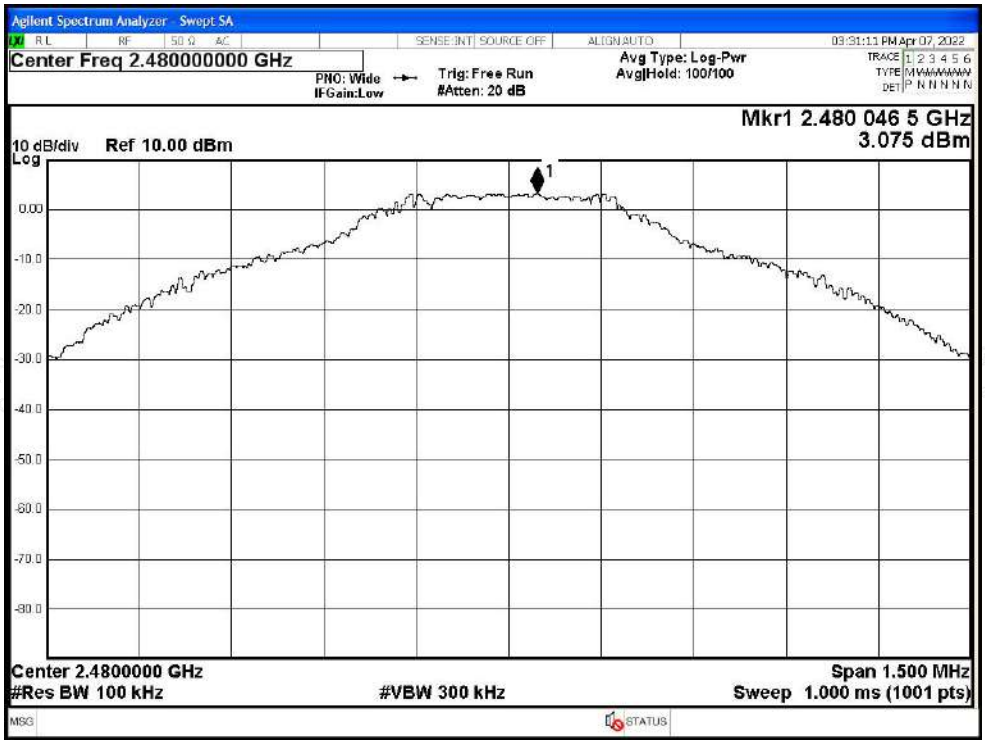
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



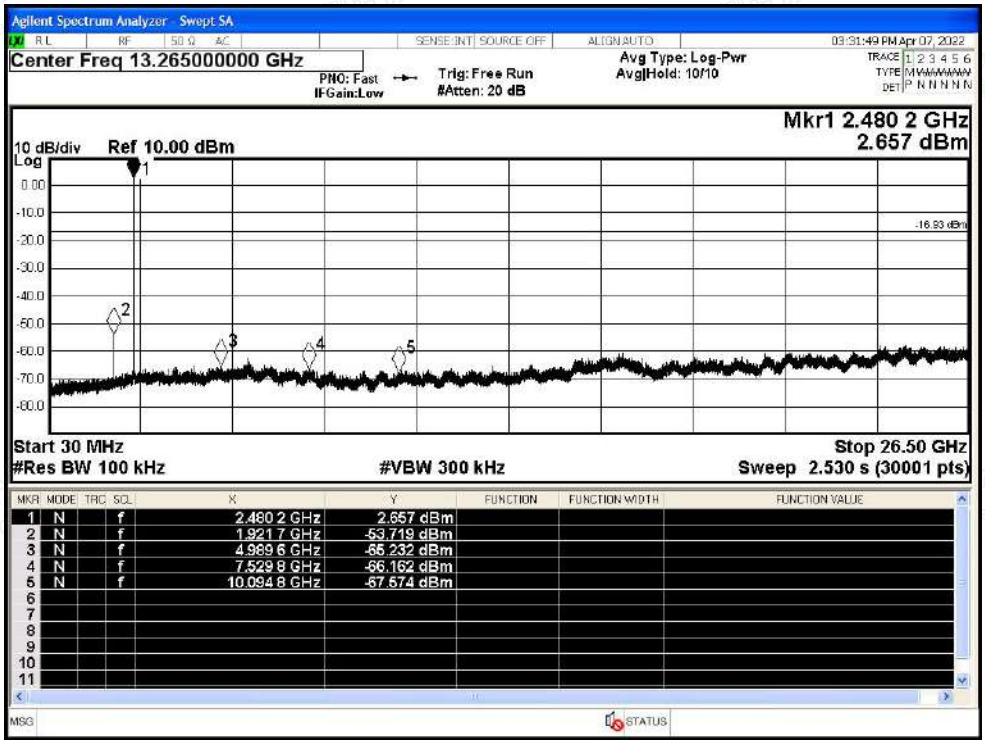
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



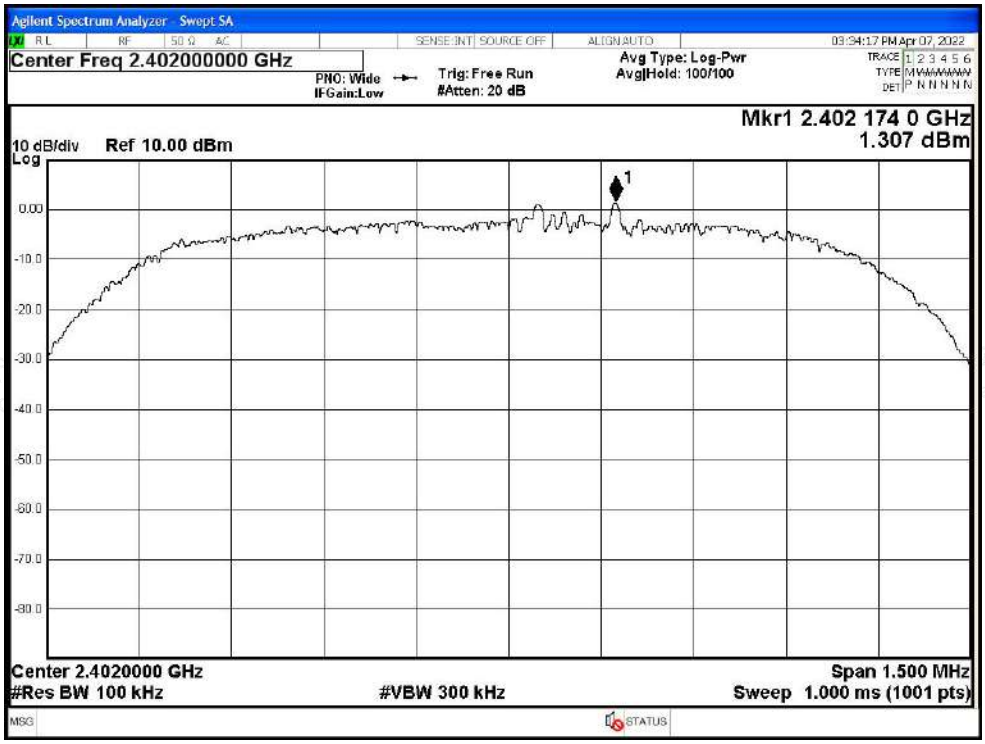
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



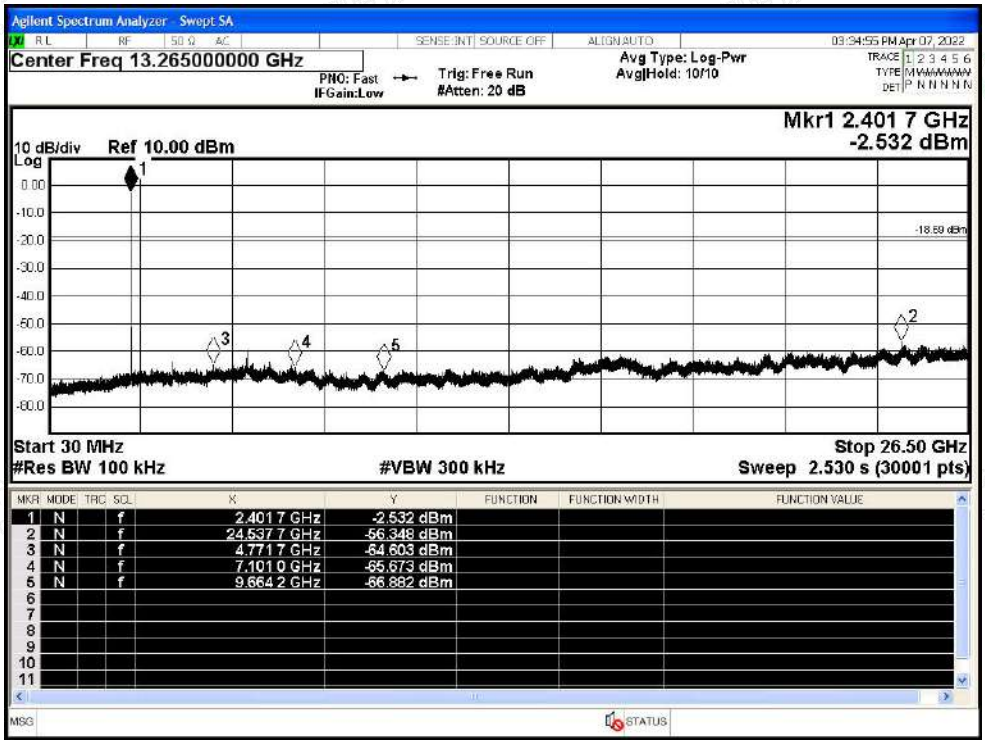
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



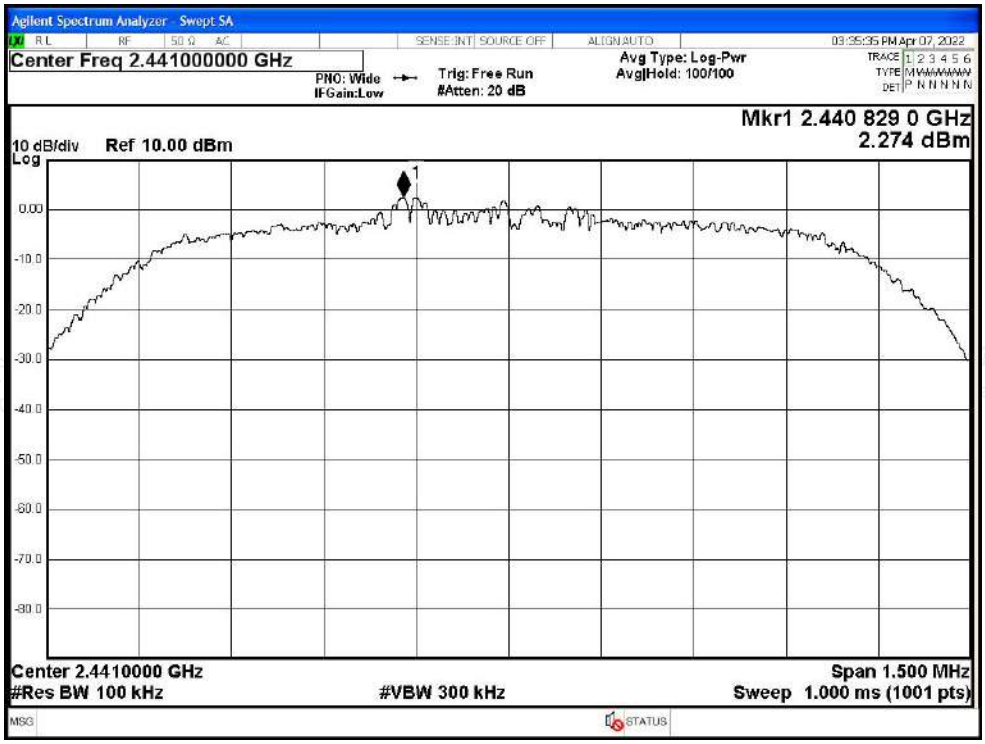
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



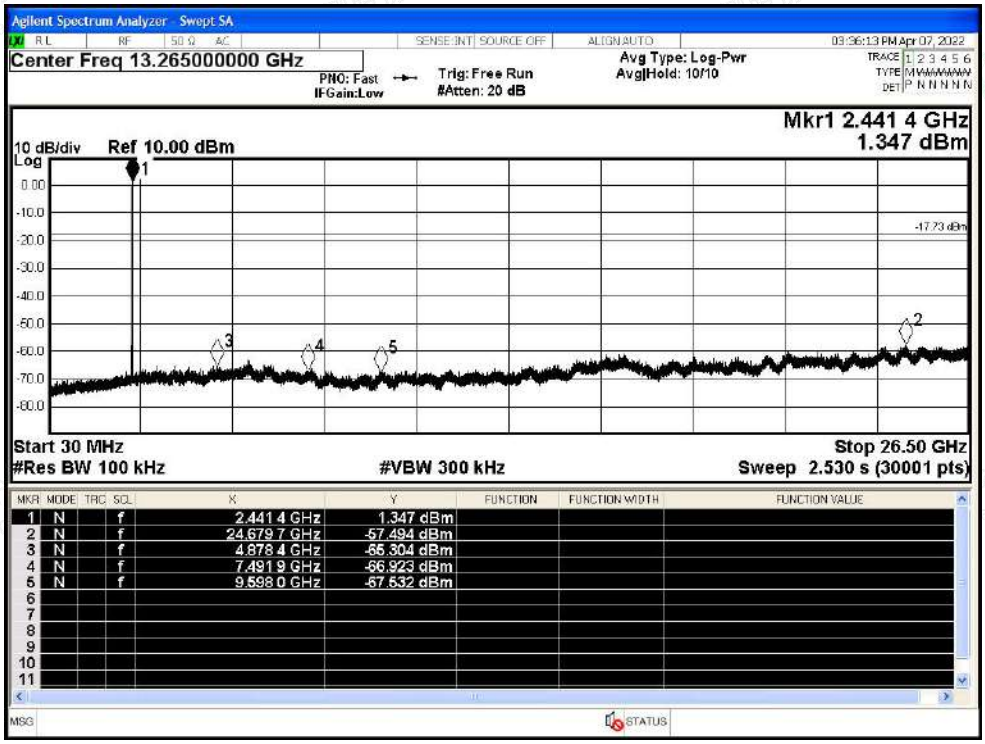
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



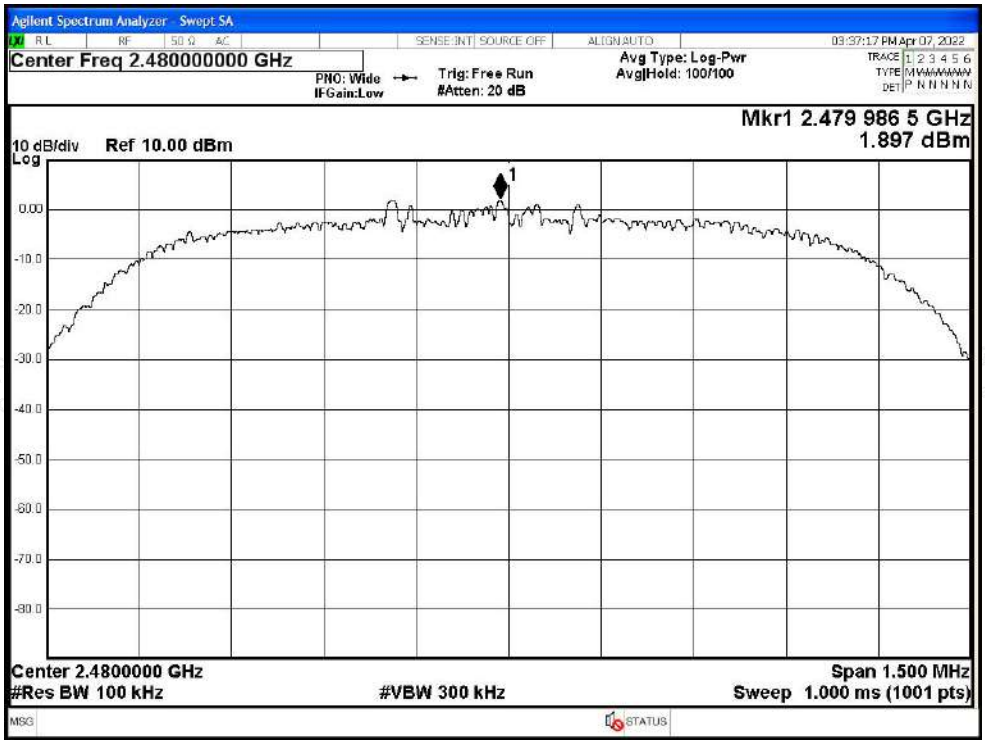
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



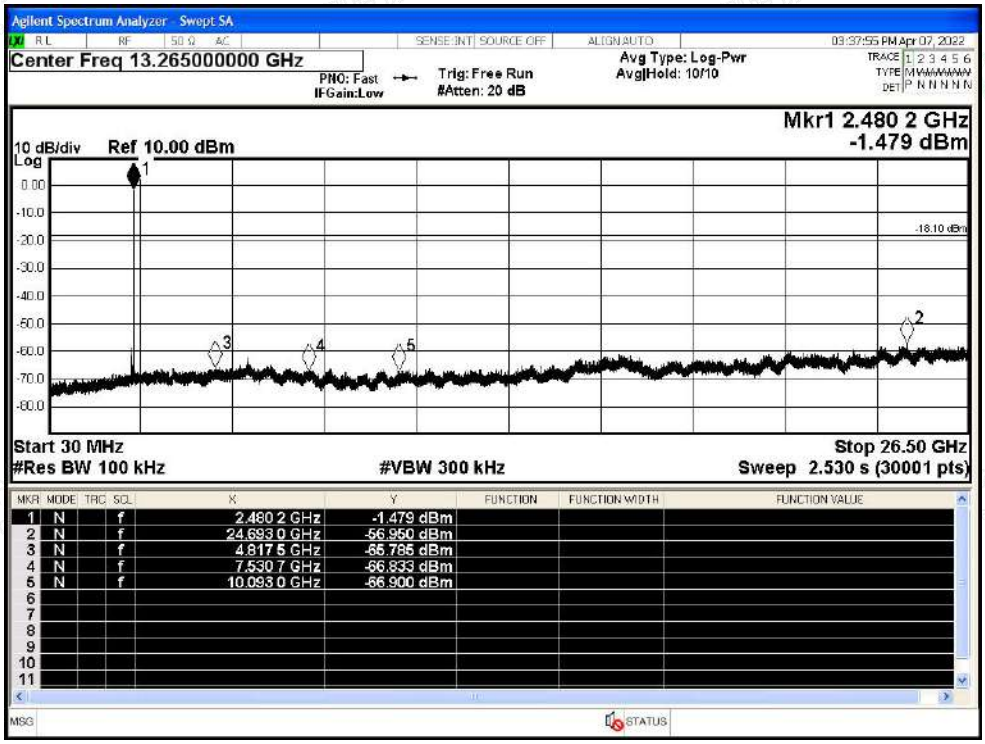
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



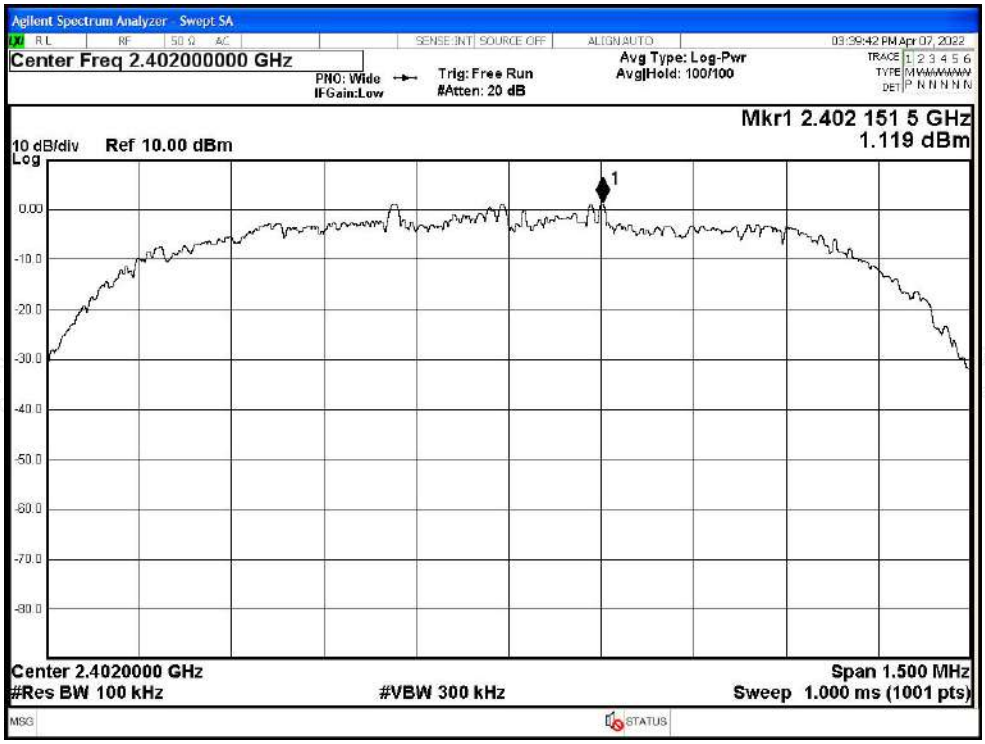
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



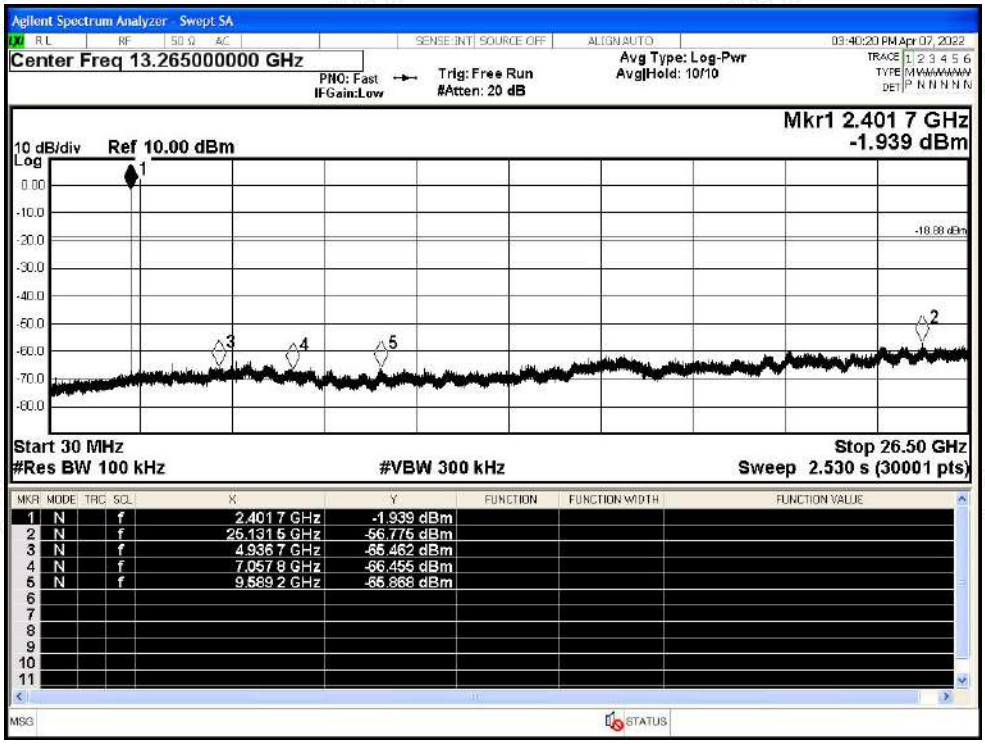
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



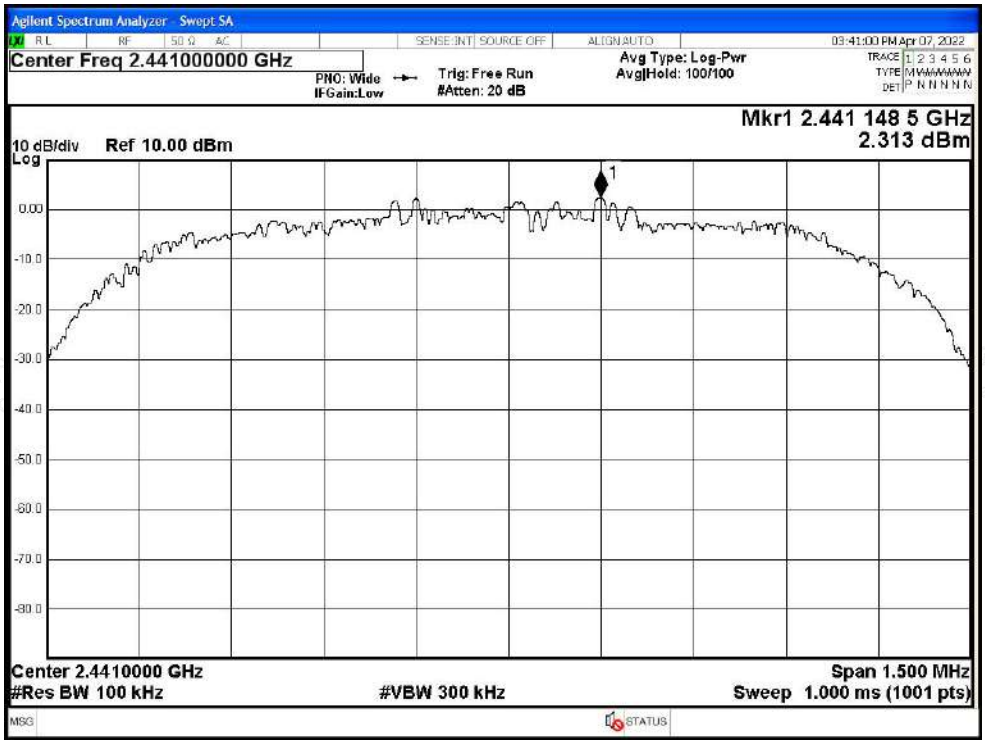
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



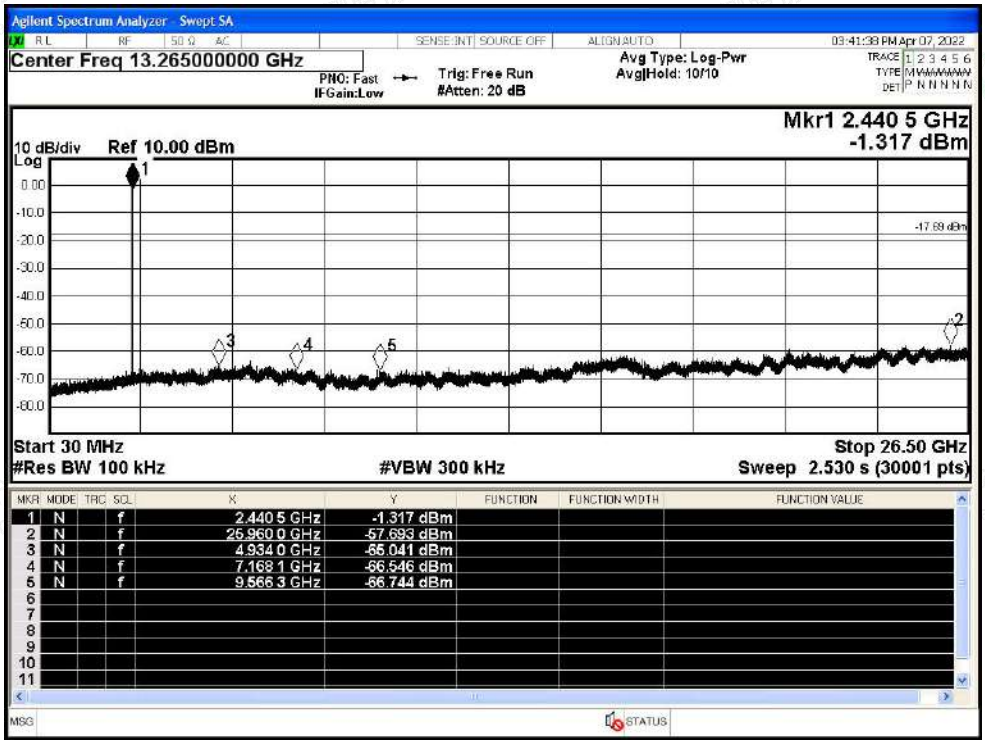
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission



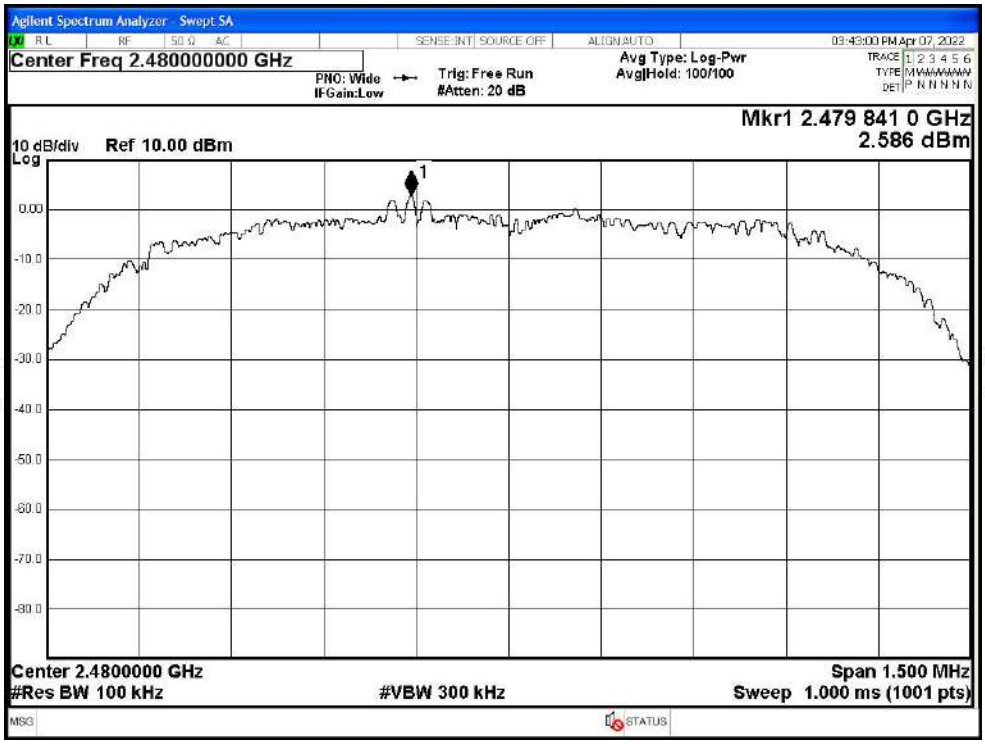
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



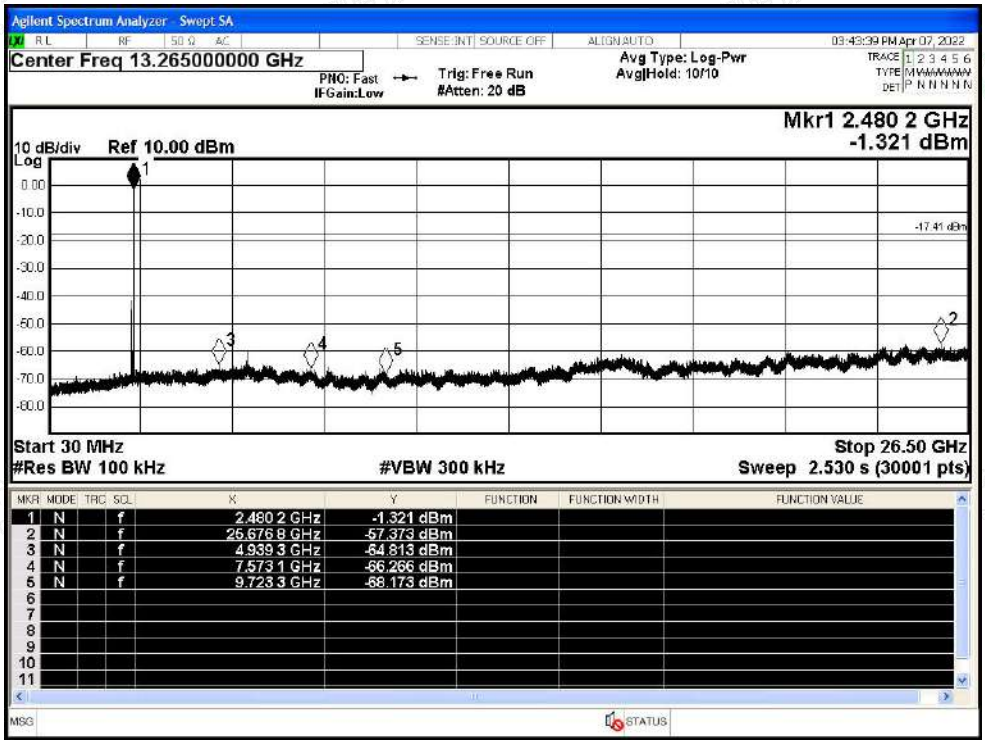
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission

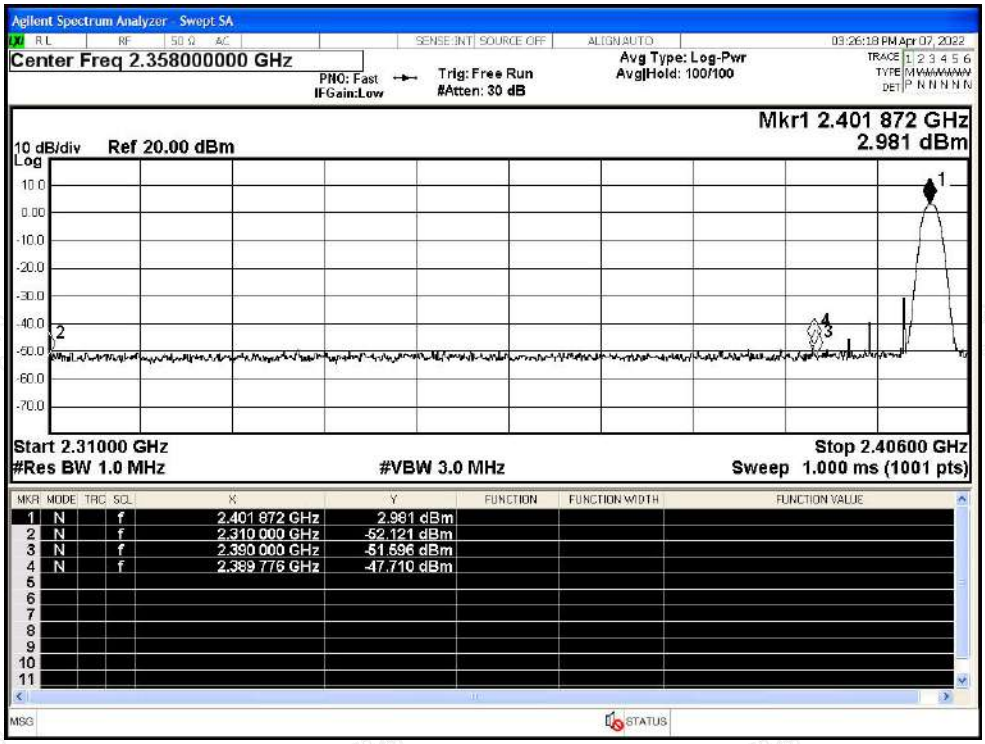


A.8 Restrict Band

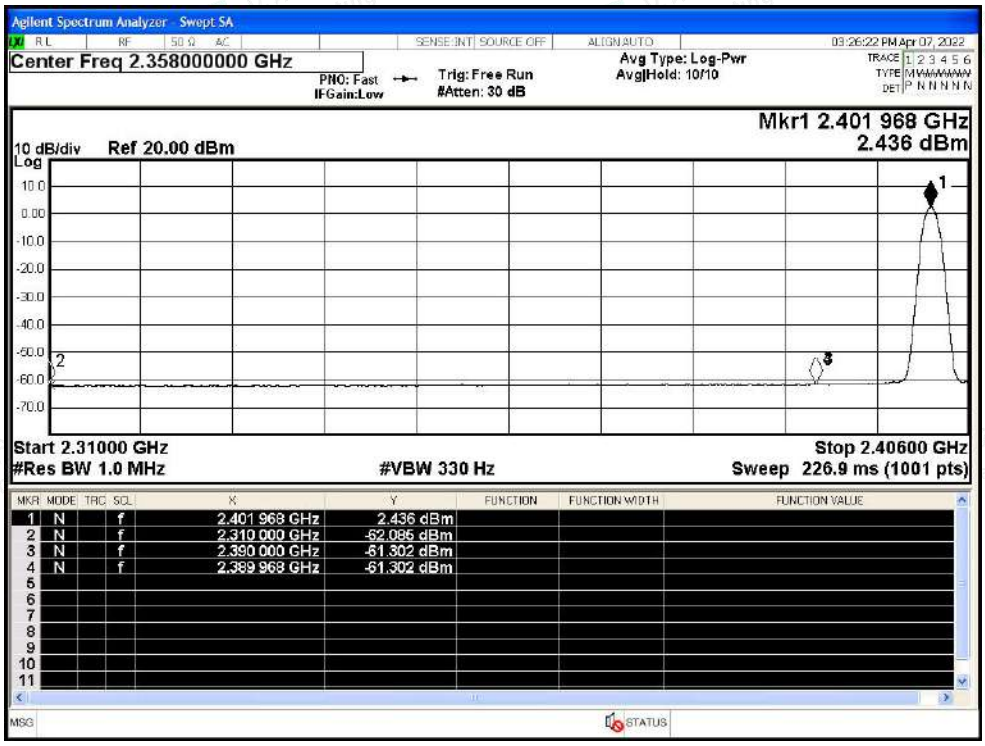
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-52.12	2	45.14	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-62.08	2	35.18	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2389.776	-47.71	2	49.55	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2389.968	-61.3	2	35.96	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-52.37	2	44.89	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-61.29	2	35.97	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-52.17	2	45.09	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-60.39	2	36.87	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2484.4	-35.29	2	61.97	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.512	-60.39	2	36.87	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-52.36	2	44.9	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-61.69	2	35.57	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-52.14	2	45.12	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-61.96	2	35.3	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2334.096	-48.46	2	48.8	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2389.776	-61.48	2	35.78	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-51.39	2	45.87	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-61.67	2	35.59	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-50.47	2	46.79	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-60.67	2	36.59	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.704	-33.05	2	64.21	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.824	-60.54	2	36.72	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-51.77	2	45.49	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-61.55	2	35.71	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-51.81	2	45.45	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-62.08	2	35.18	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2379.504	-48.45	2	48.81	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2381.904	-61.42	2	35.84	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-50.56	2	46.7	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-61.68	2	35.58	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-50.33	2	46.93	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-60.57	2	36.69	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2484.736	-36.87	2	60.39	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.512	-60.57	2	36.69	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-51.89	2	45.37	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-61.53	2	35.73	Average	54	Pass

Test Graphs

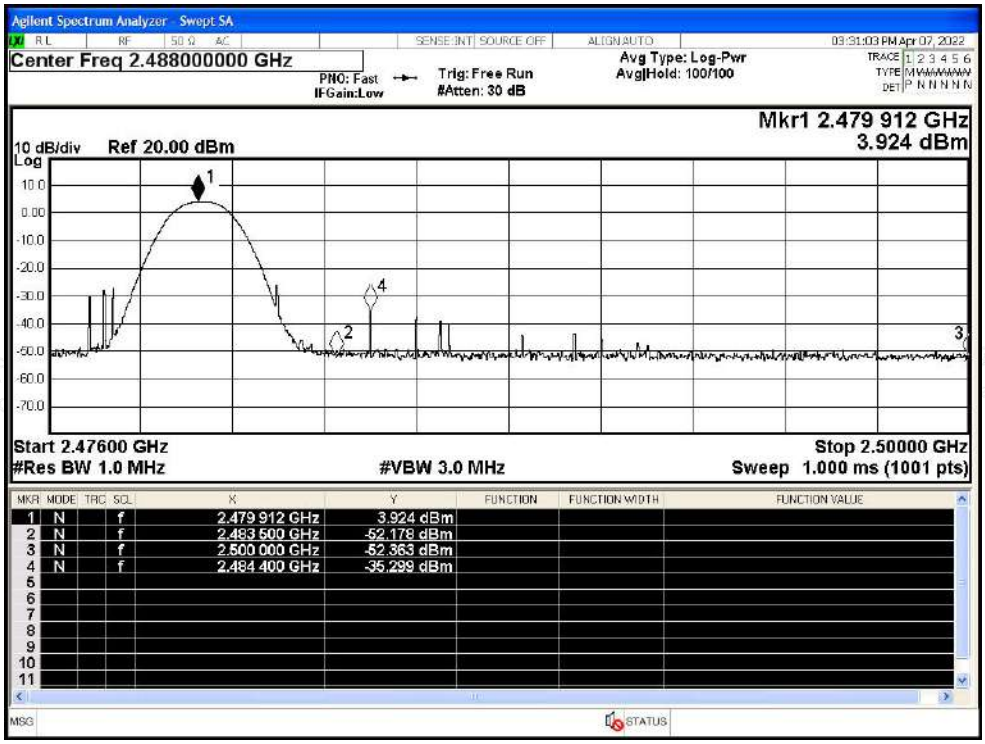
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



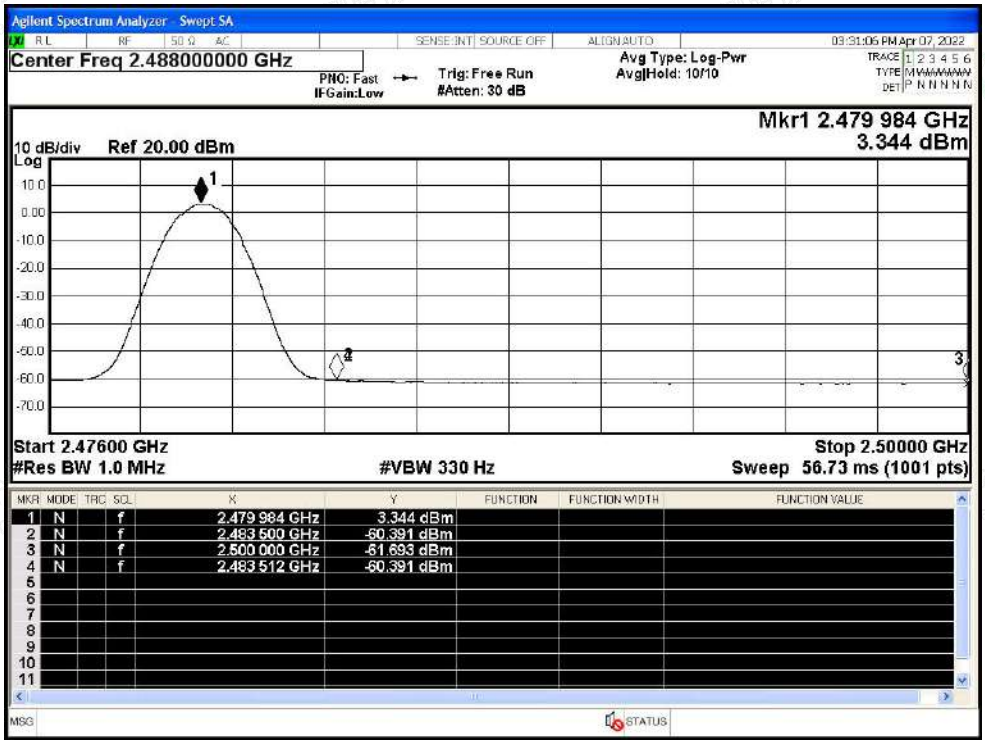
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



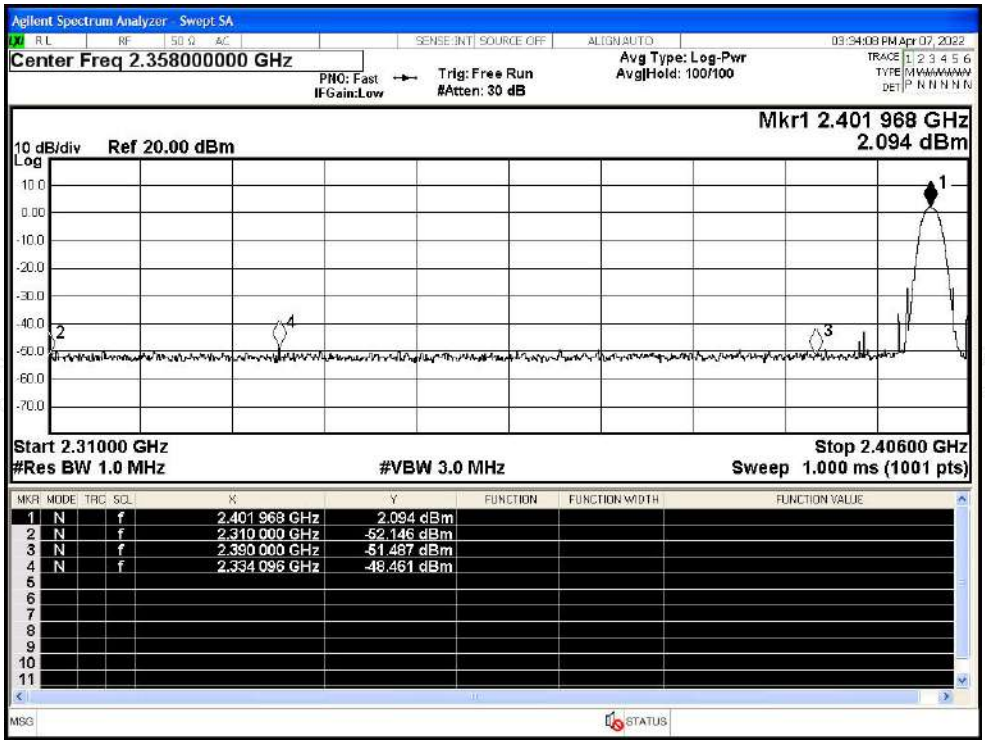
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



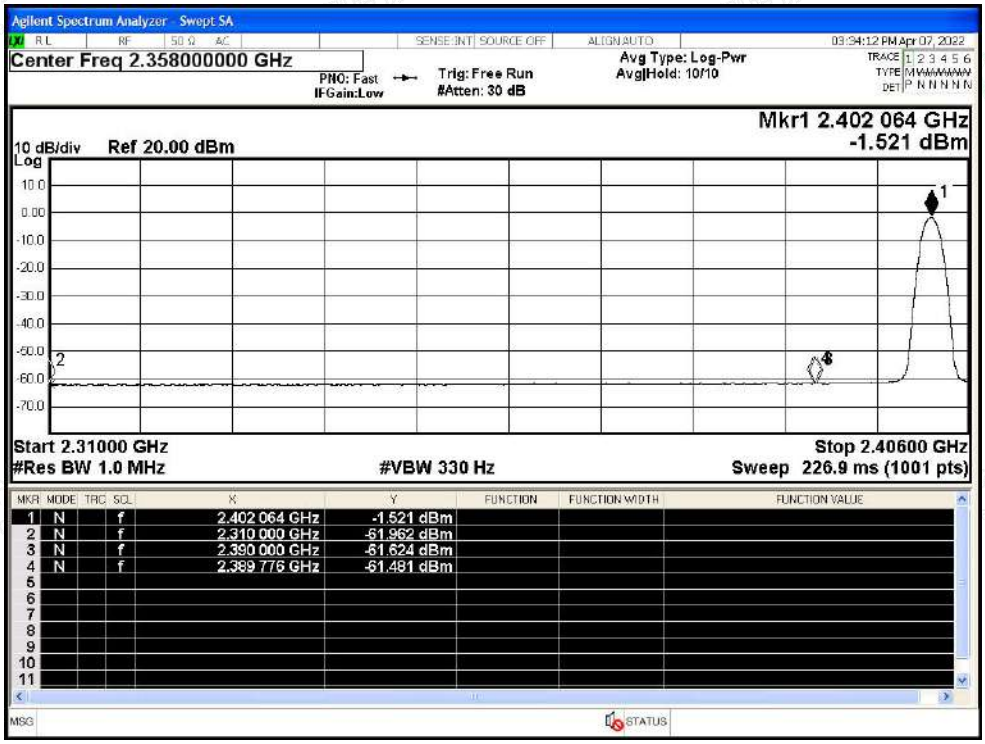
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



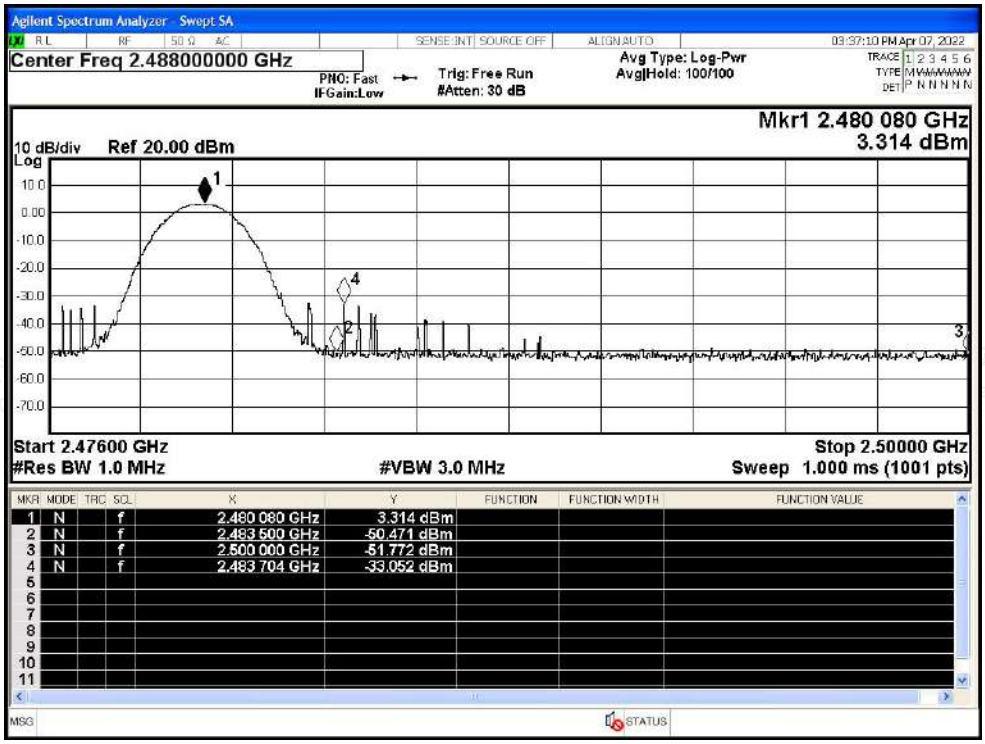
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



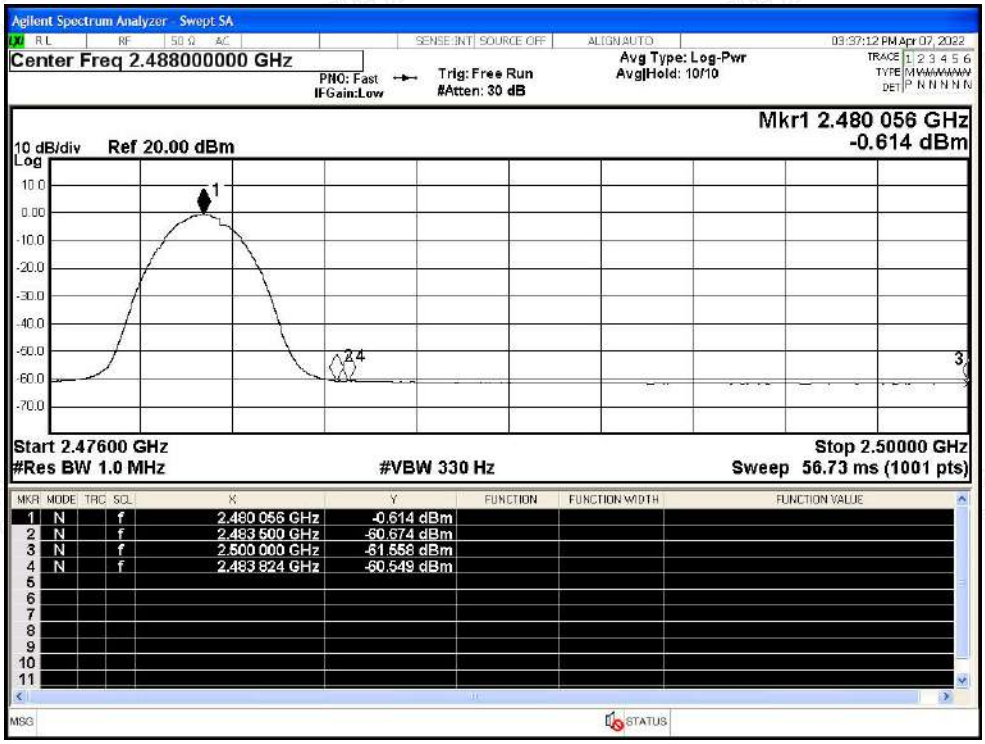
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average



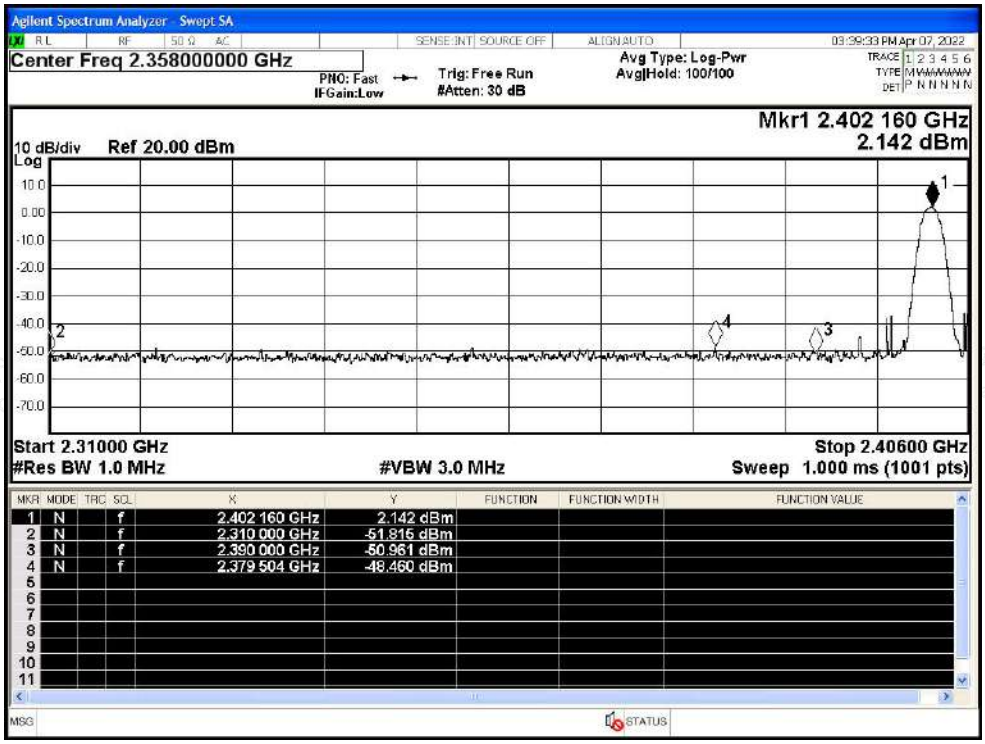
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak



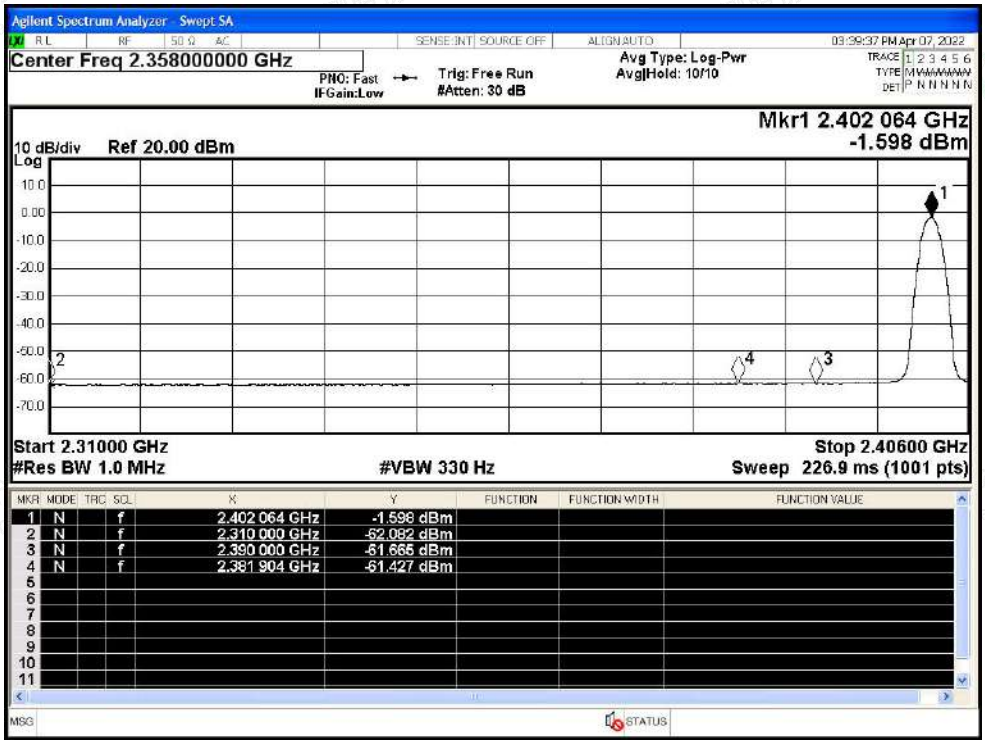
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Average



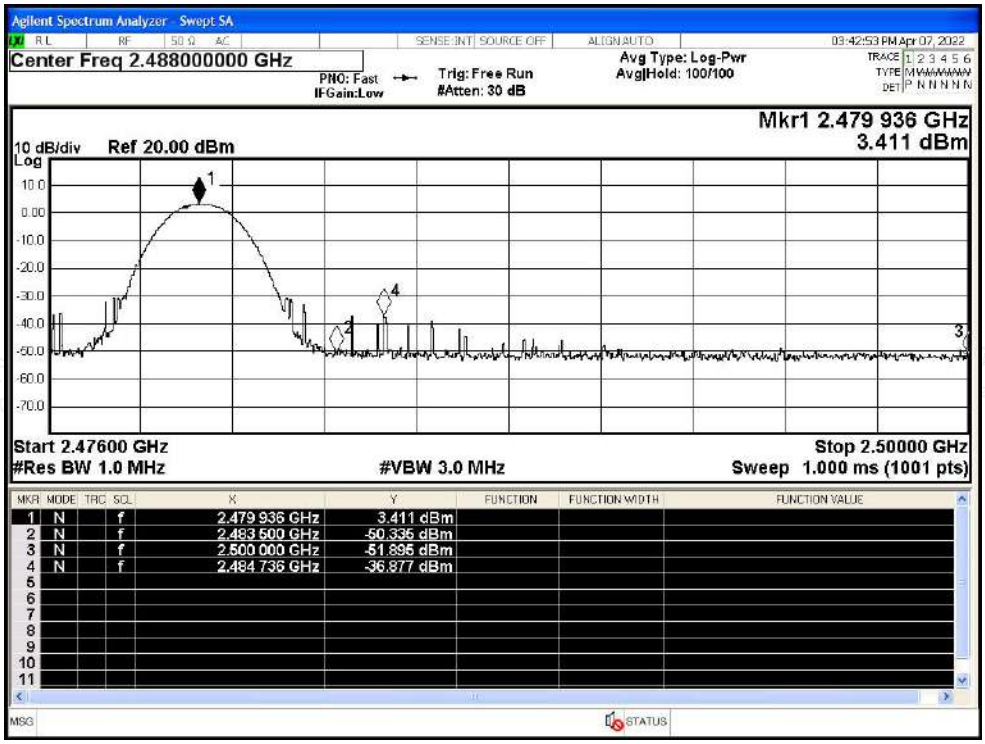
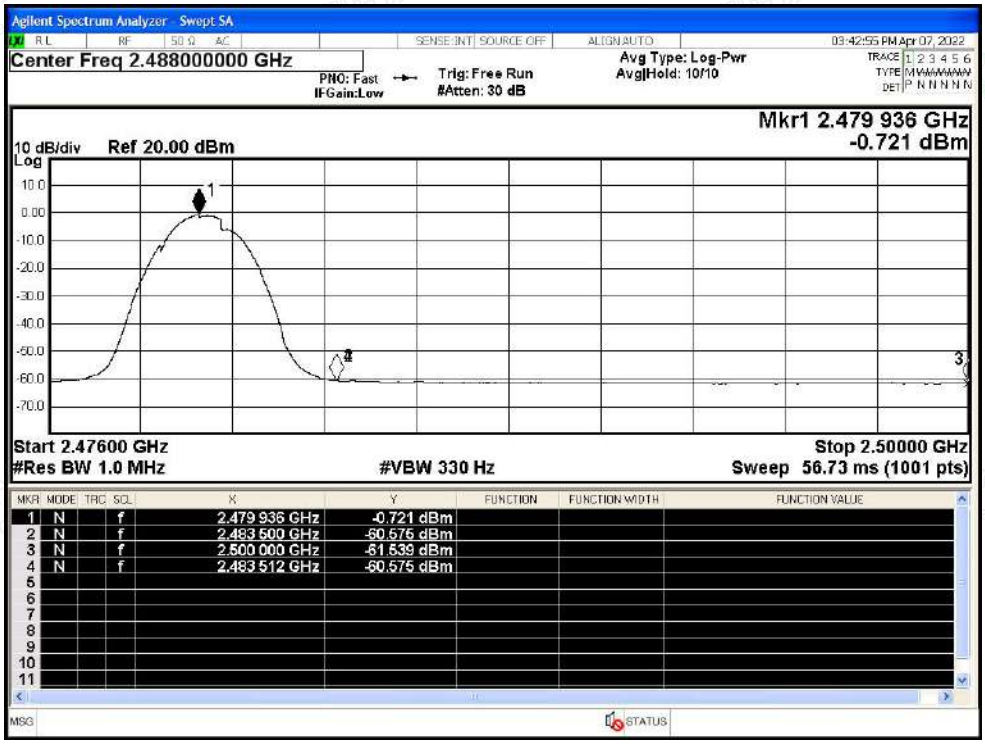
Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak



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