



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Portable Speaker

Test Model: ZQS6212

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	<i>Nick Peng</i> Nick Peng
Supervised by:	<i>Ling Zhu</i> Ling Zhu





A.1 -20dB Bandwidth

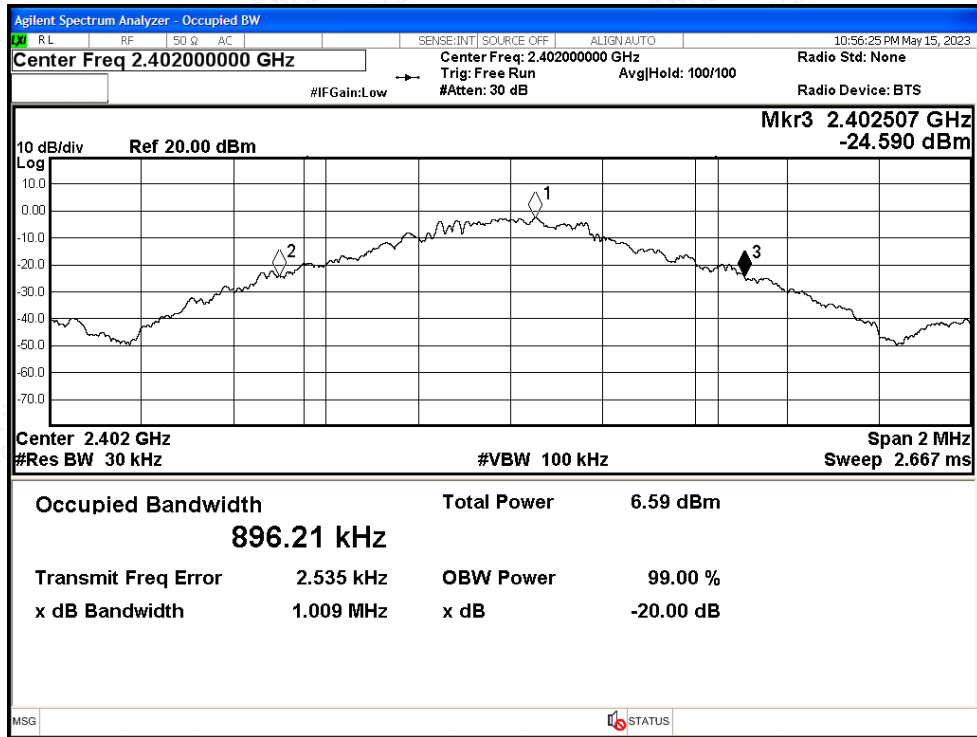
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	1.009	0	Pass
NVNT	1-DH5	2441	Ant1	0.993	0	Pass
NVNT	1-DH5	2480	Ant1	1.03	0	Pass
NVNT	2-DH5	2402	Ant1	1.283	0	Pass
NVNT	2-DH5	2441	Ant1	1.314	0	Pass
NVNT	2-DH5	2480	Ant1	1.319	0	Pass
NVNT	3-DH5	2402	Ant1	1.308	0	Pass
NVNT	3-DH5	2441	Ant1	1.31	0	Pass
NVNT	3-DH5	2480	Ant1	1.291	0	Pass



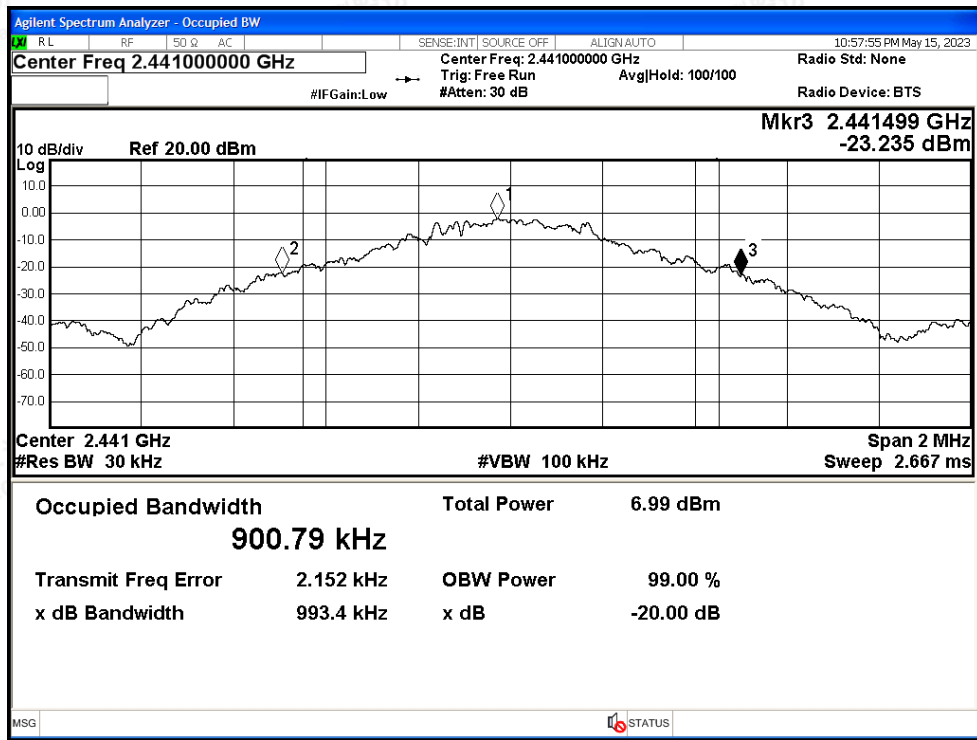


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

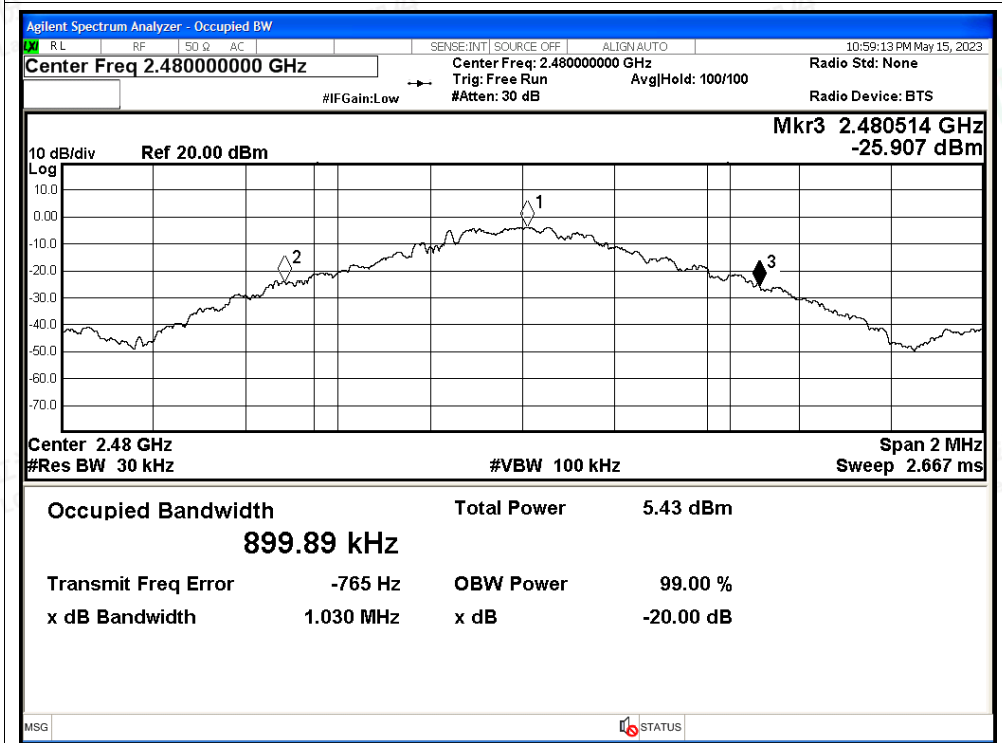


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

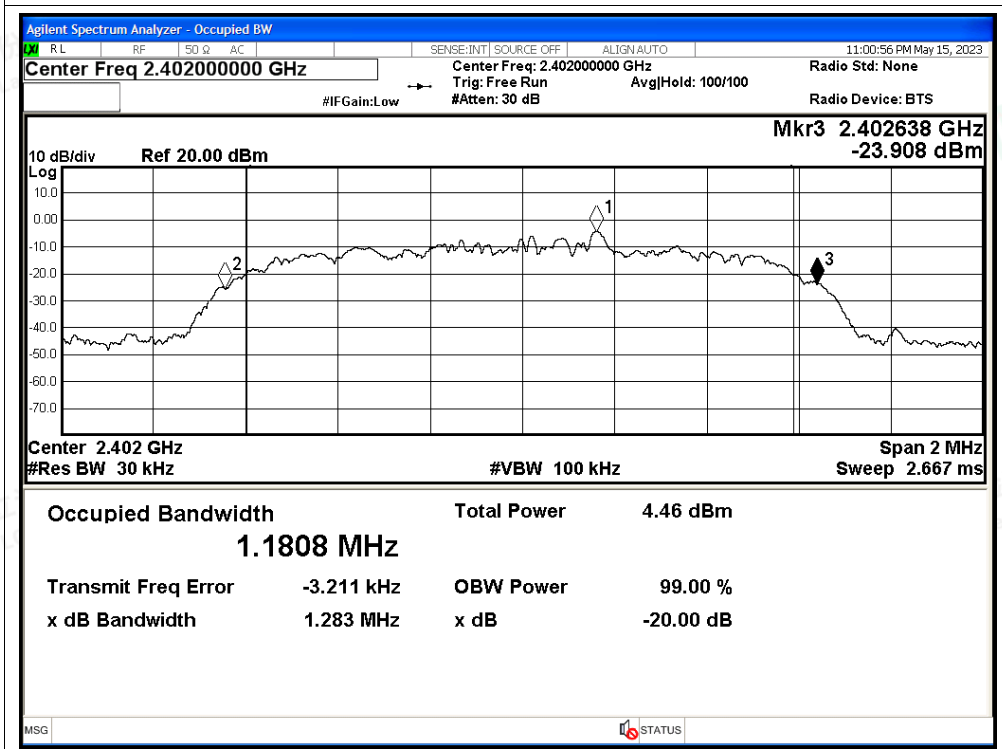




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

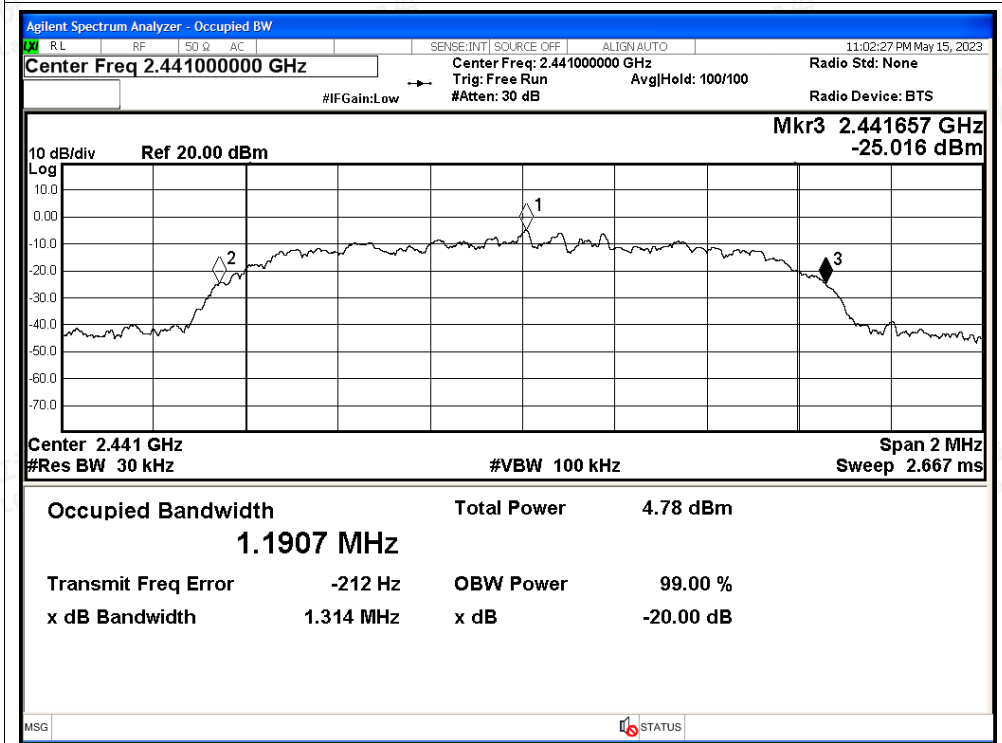


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

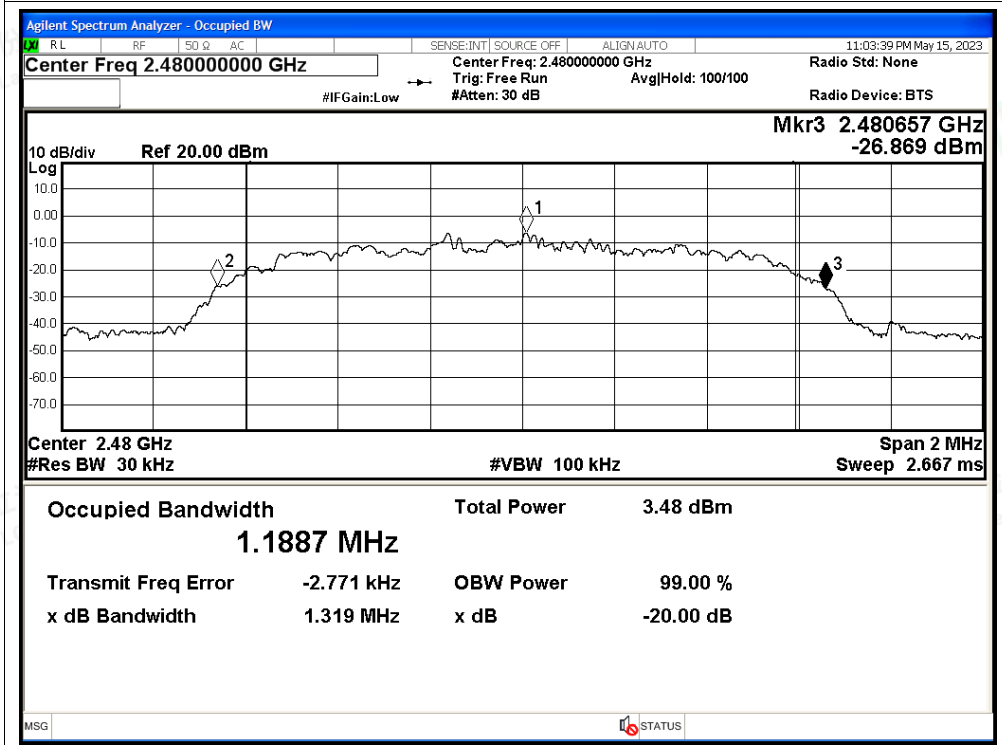




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

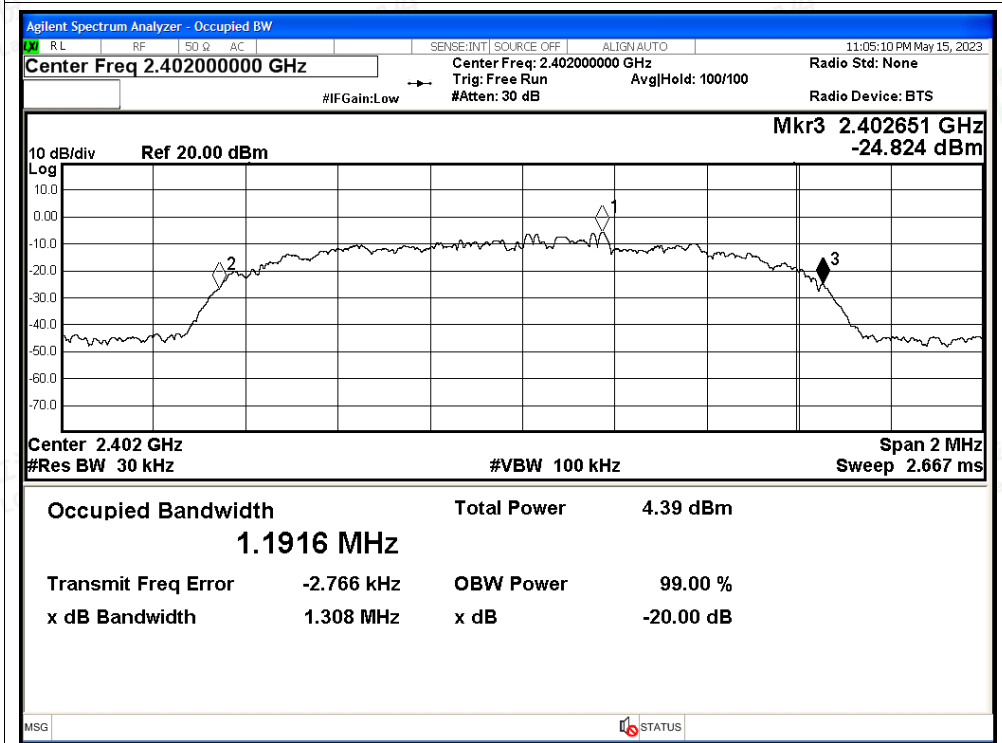


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

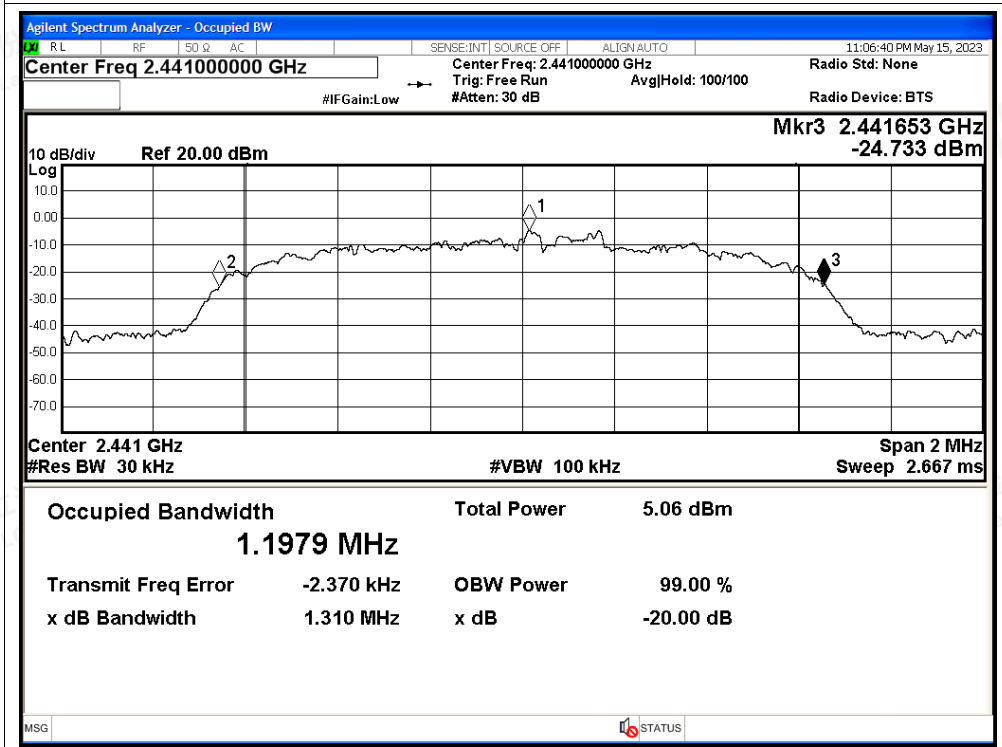


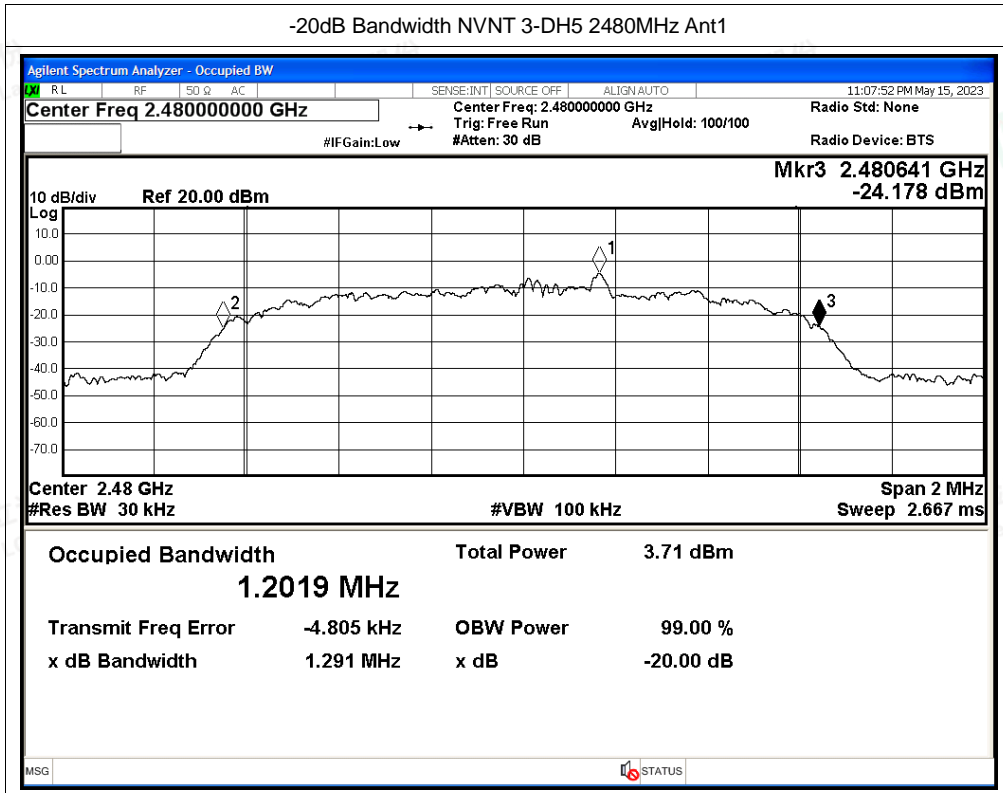


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



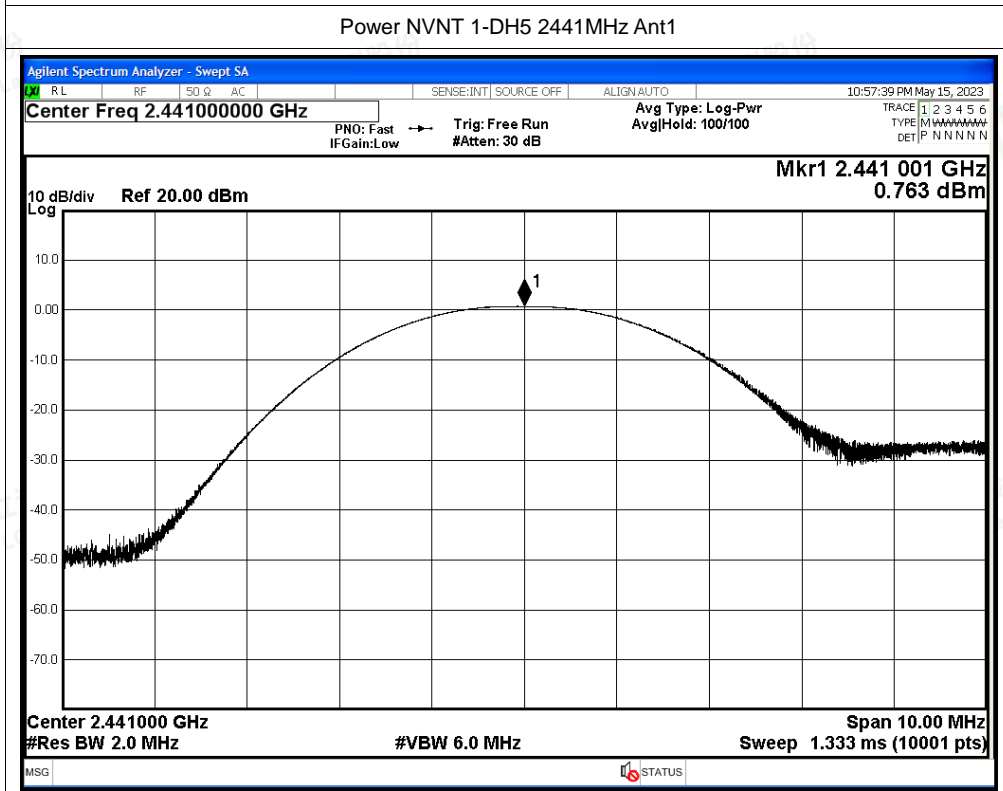
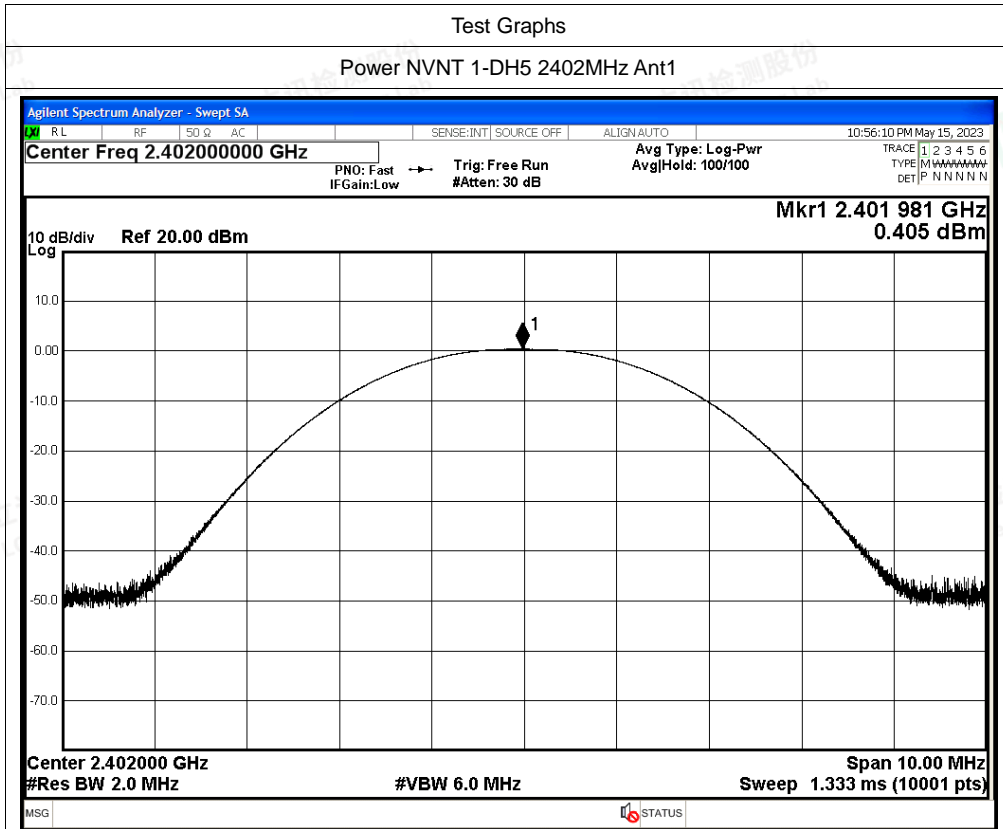


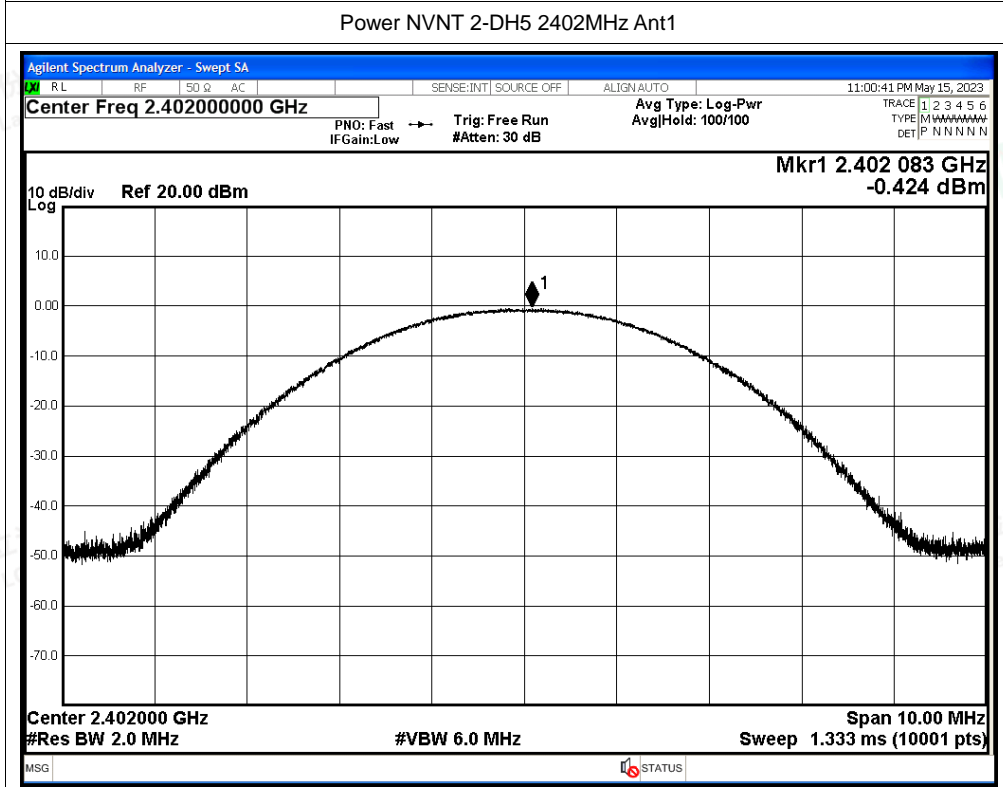
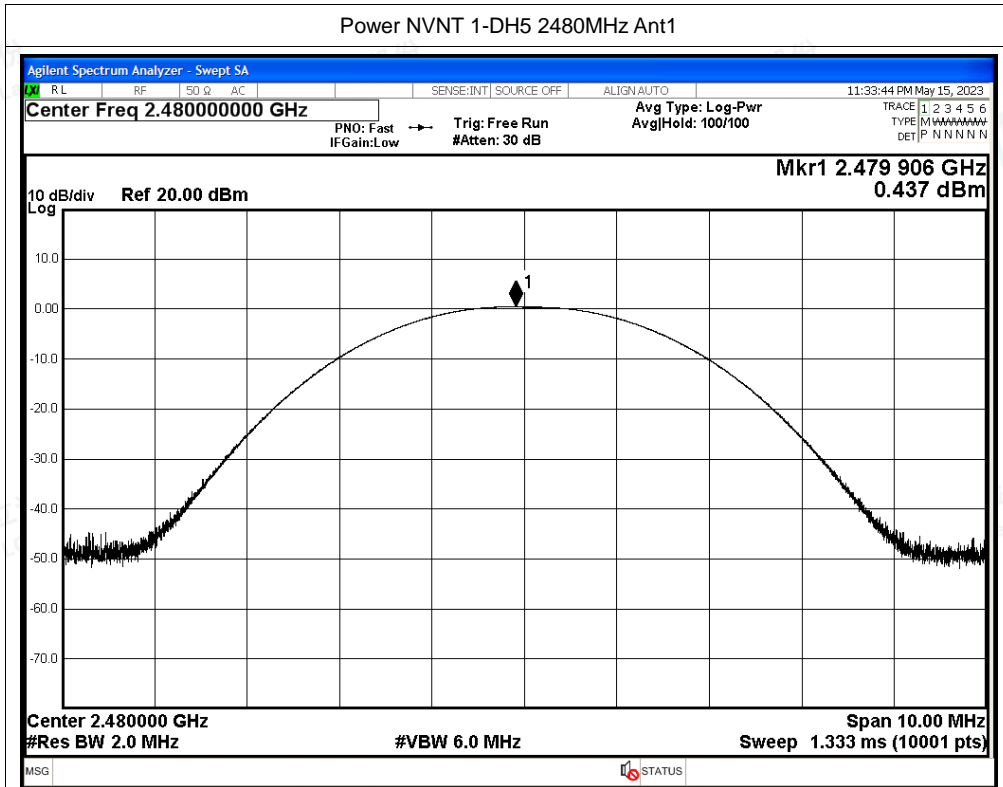


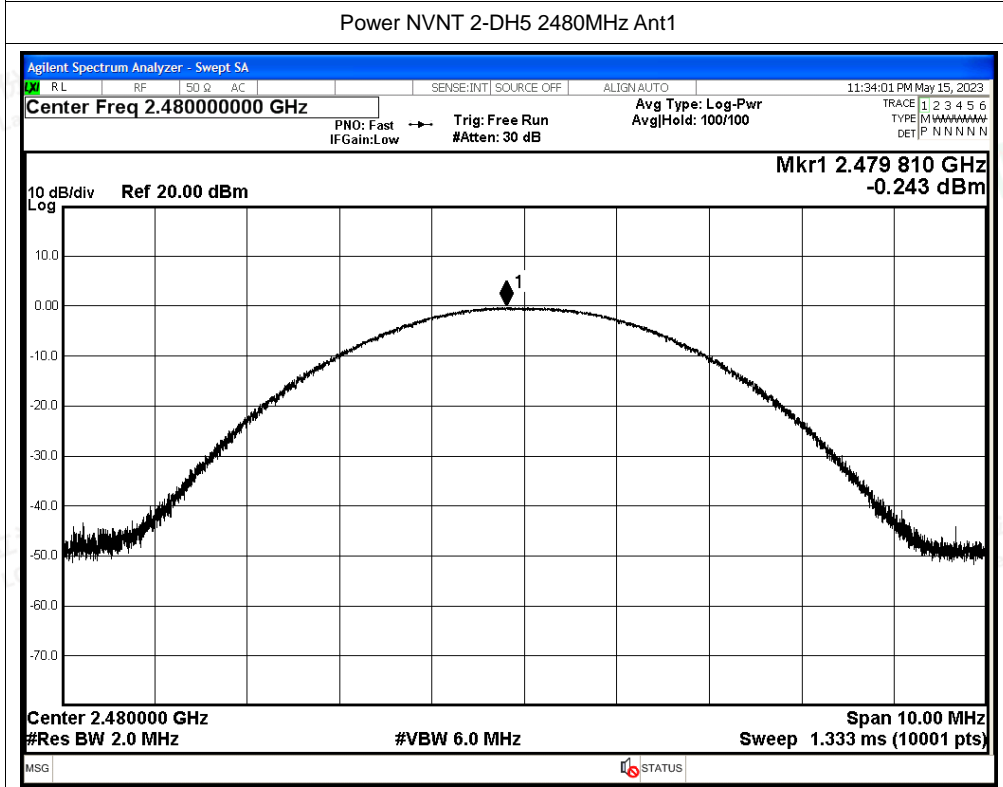
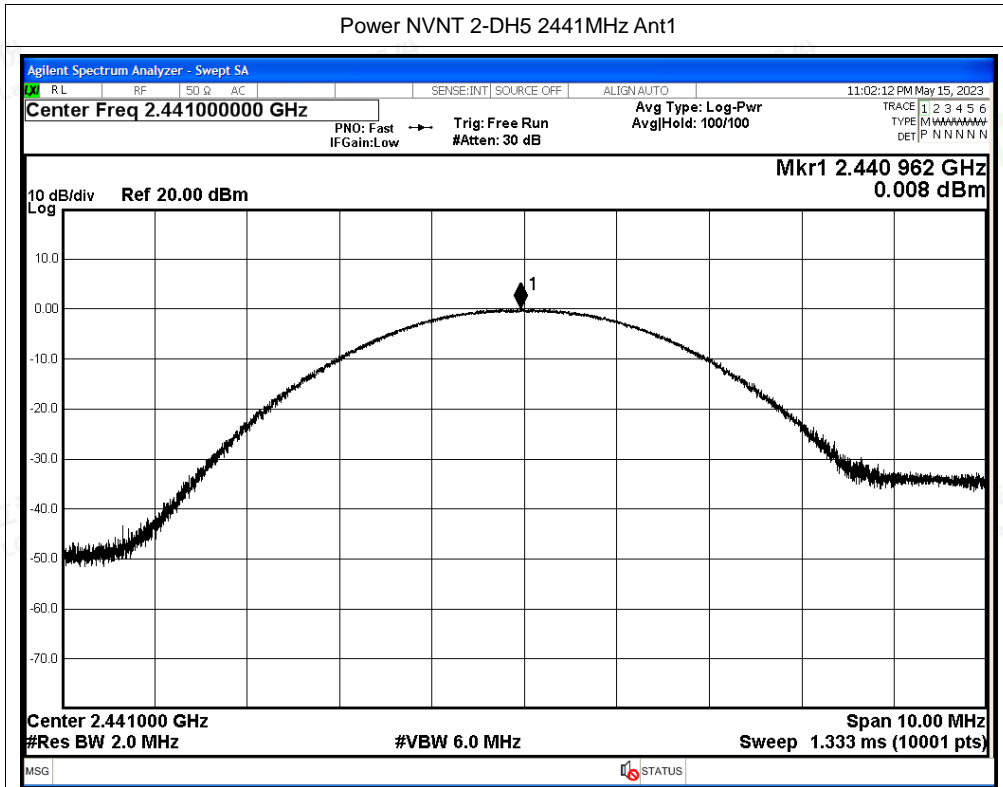
A.2 Maximum Conducted Output Power

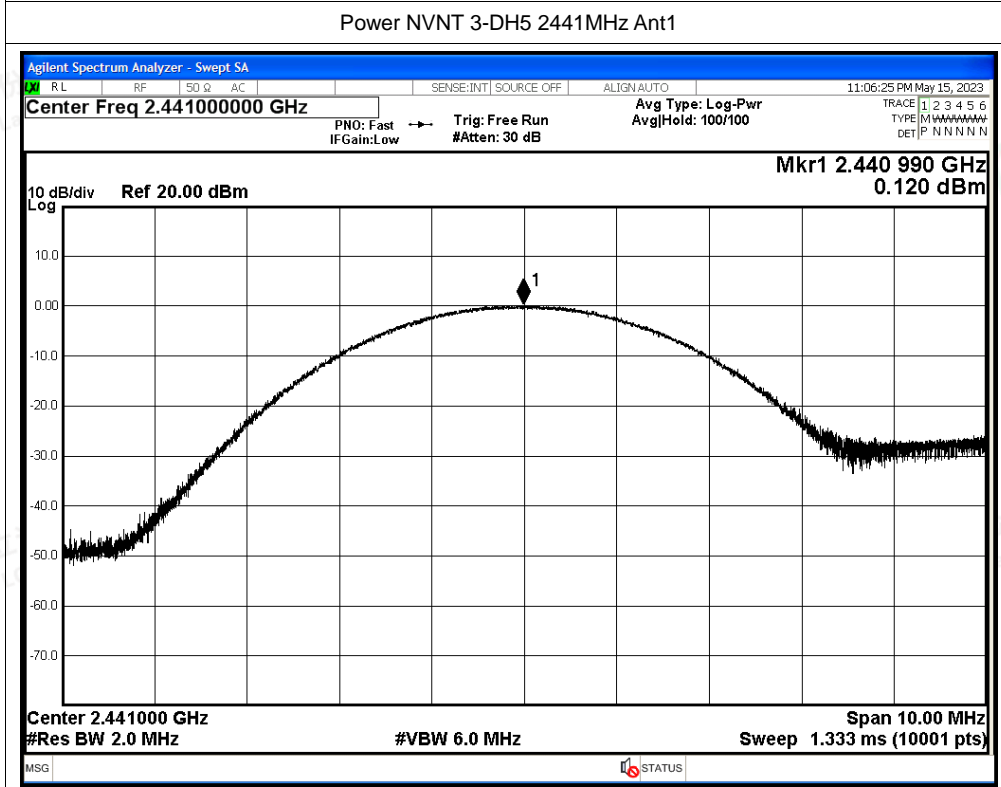
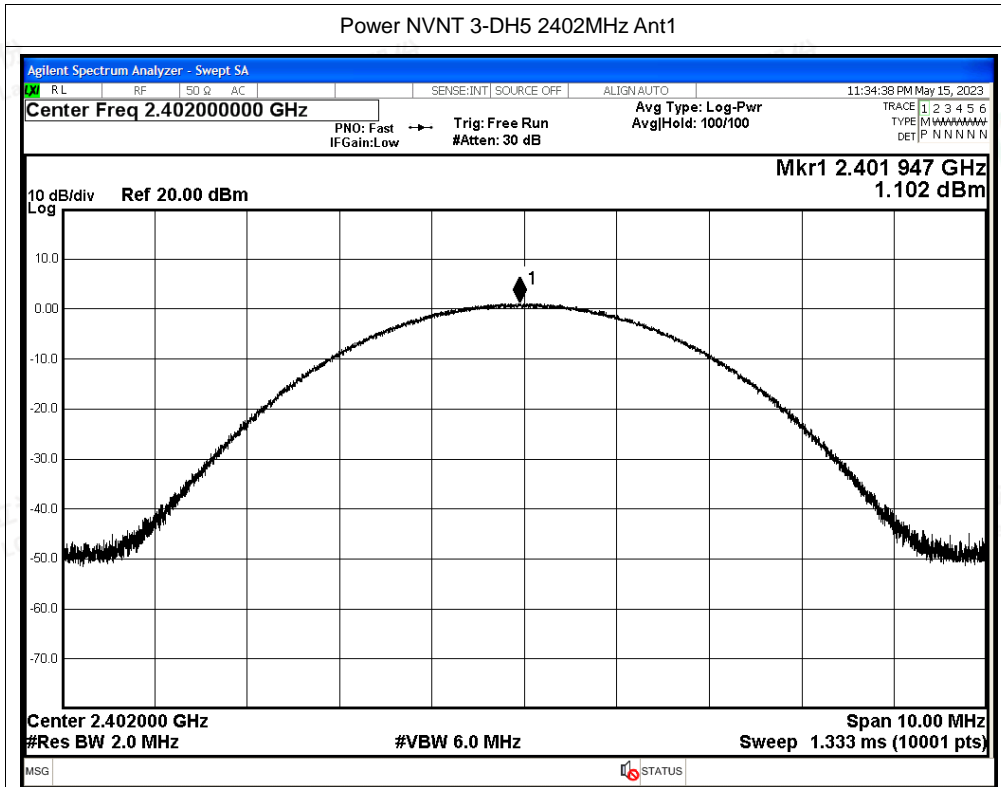
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	0.41	21	Pass
NVNT	1-DH5	2441	Ant1	0.76	21	Pass
NVNT	1-DH5	2480	Ant1	0.44	21	Pass
NVNT	2-DH5	2402	Ant1	-0.42	21	Pass
NVNT	2-DH5	2441	Ant1	0.01	21	Pass
NVNT	2-DH5	2480	Ant1	-0.24	21	Pass
NVNT	3-DH5	2402	Ant1	1.1	21	Pass
NVNT	3-DH5	2441	Ant1	0.12	21	Pass
NVNT	3-DH5	2480	Ant1	-0.11	21	Pass

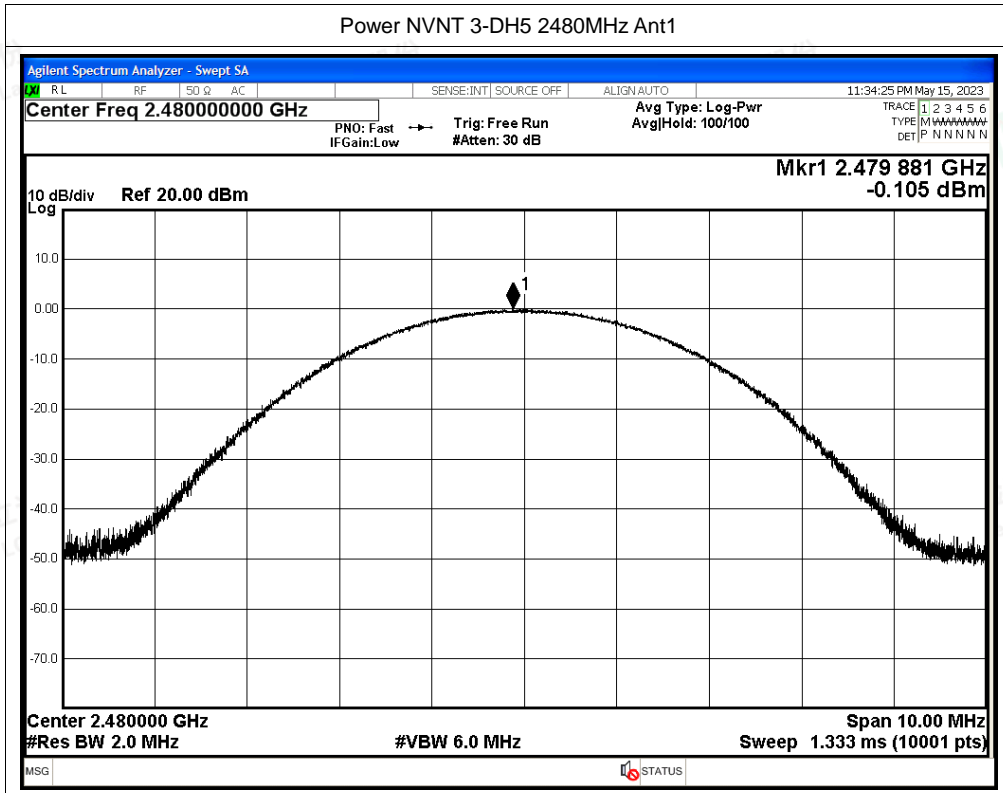














A.3 Carrier Frequencies Separation

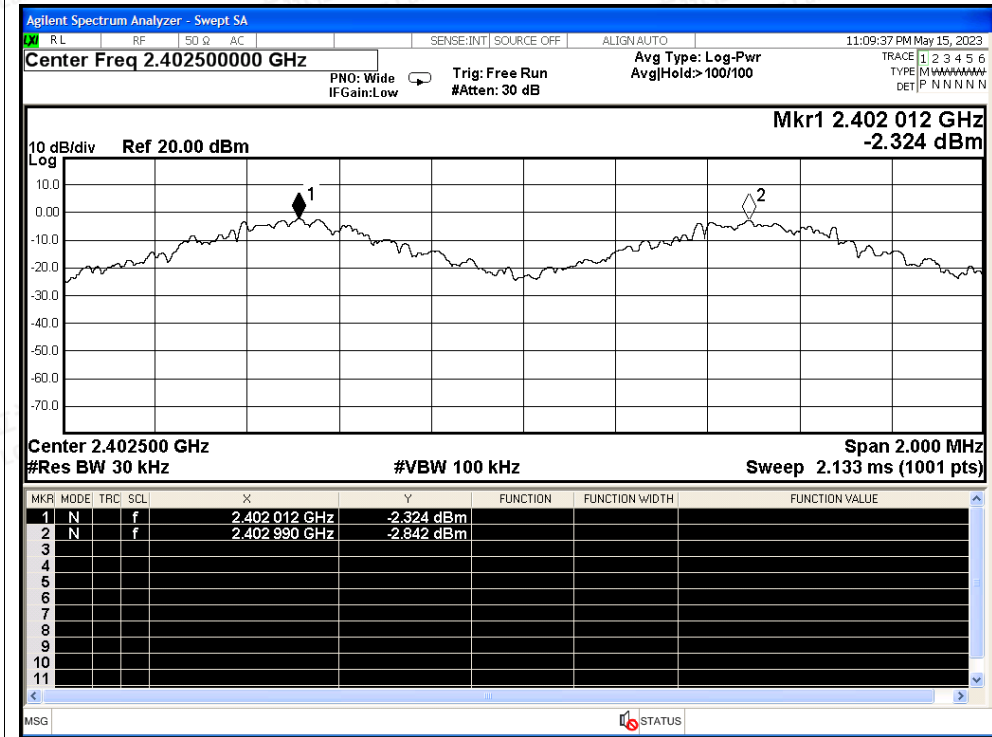
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.012	2402.99	0.978	0.687	Pass
NVNT	2-DH5	Ant1	2402.162	2403.044	0.882	0.879	Pass
NVNT	3-DH5	Ant1	2402.158	2403.154	0.996	0.873	Pass



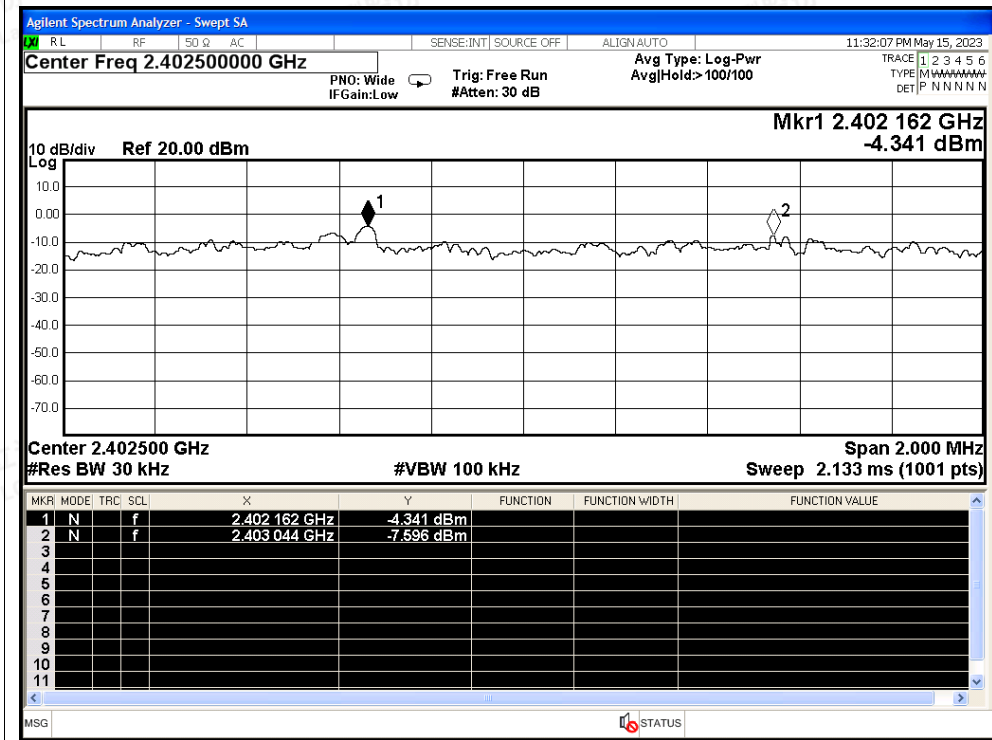


Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1





A.4 Dwell Time

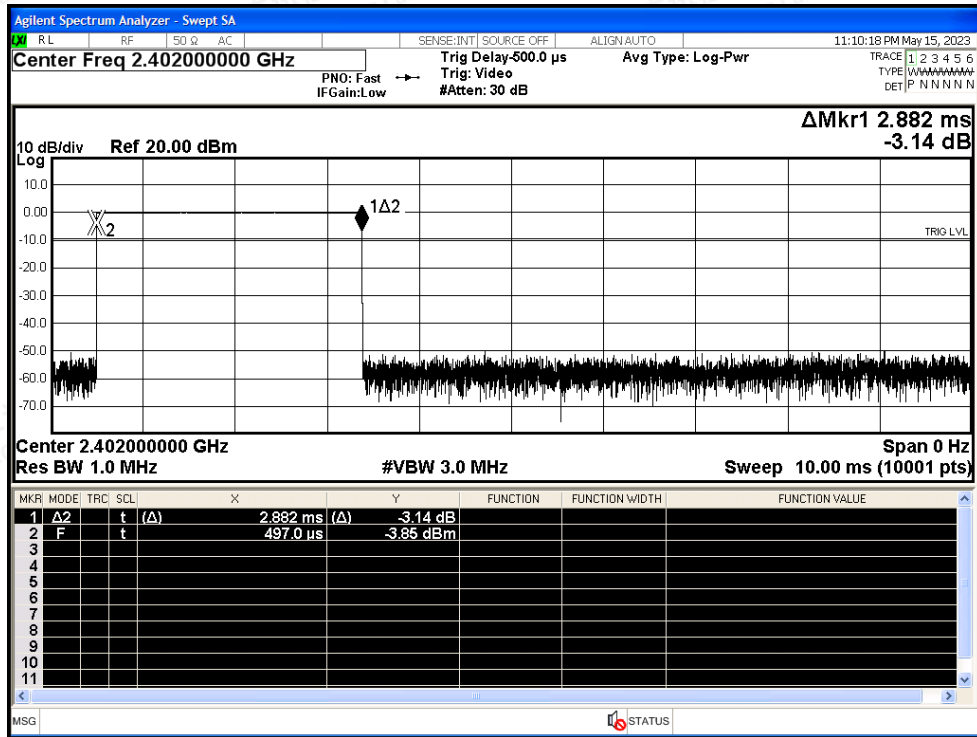
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.882	273.79	95	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.885	308.695	107	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.887	314.683	109	31600	400	Pass



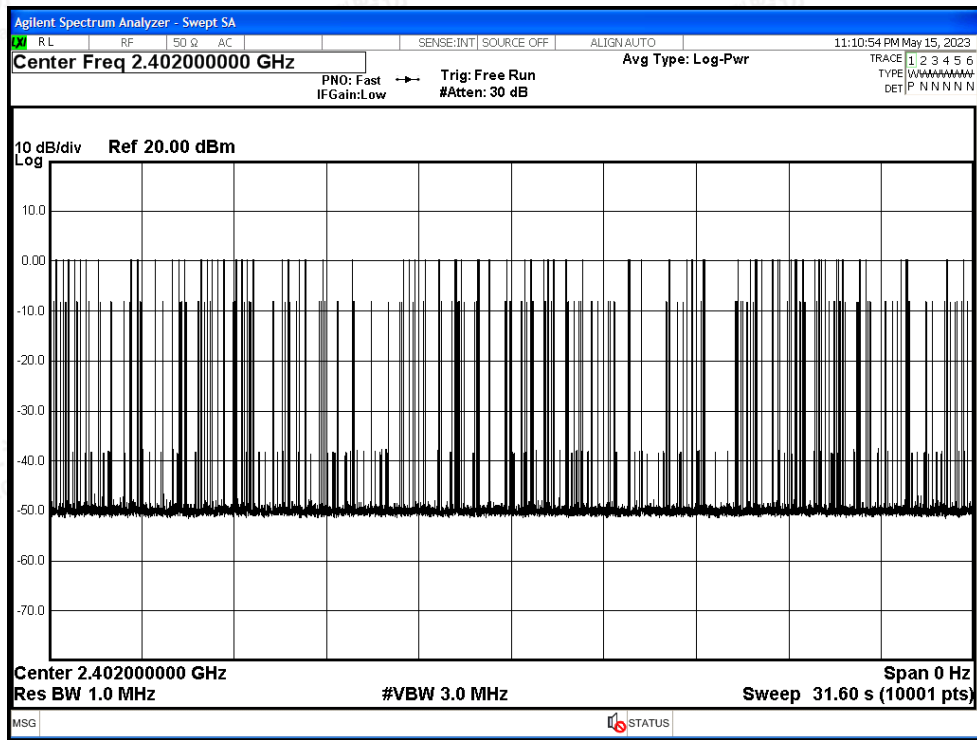


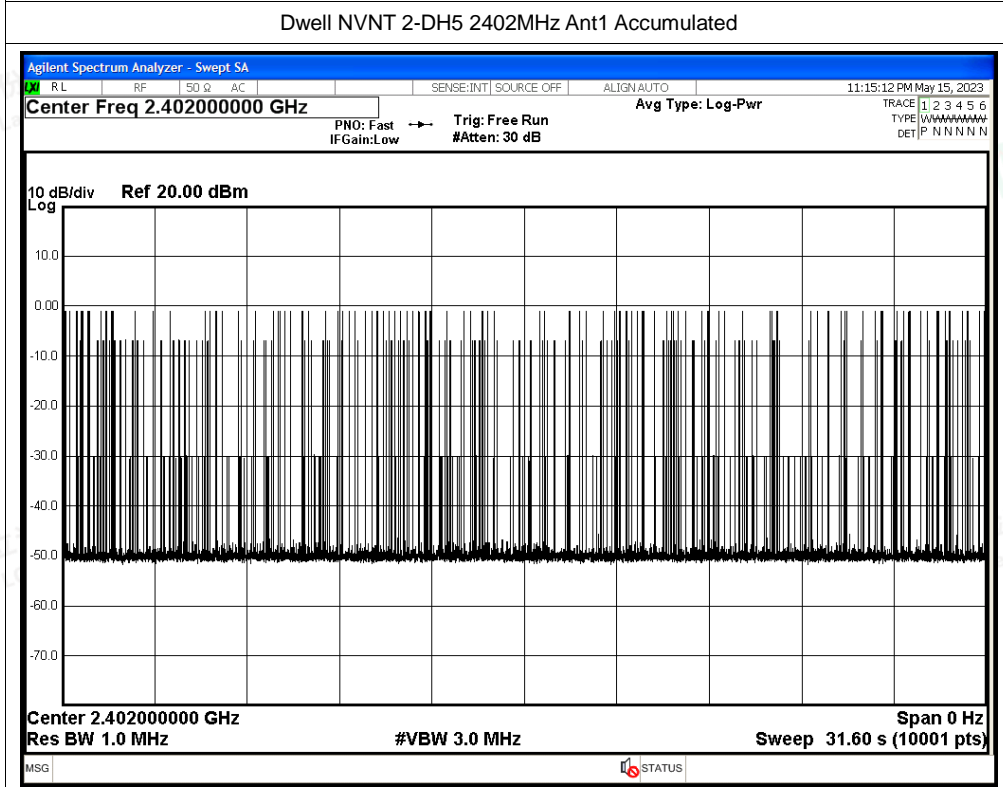
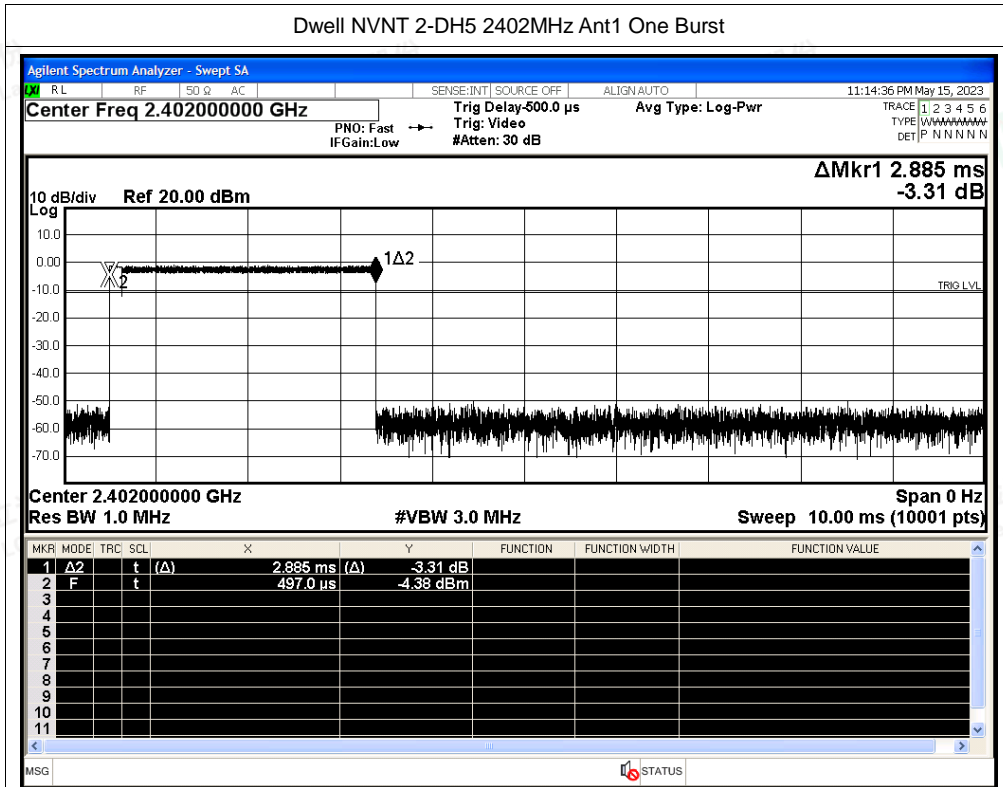
Test Graphs

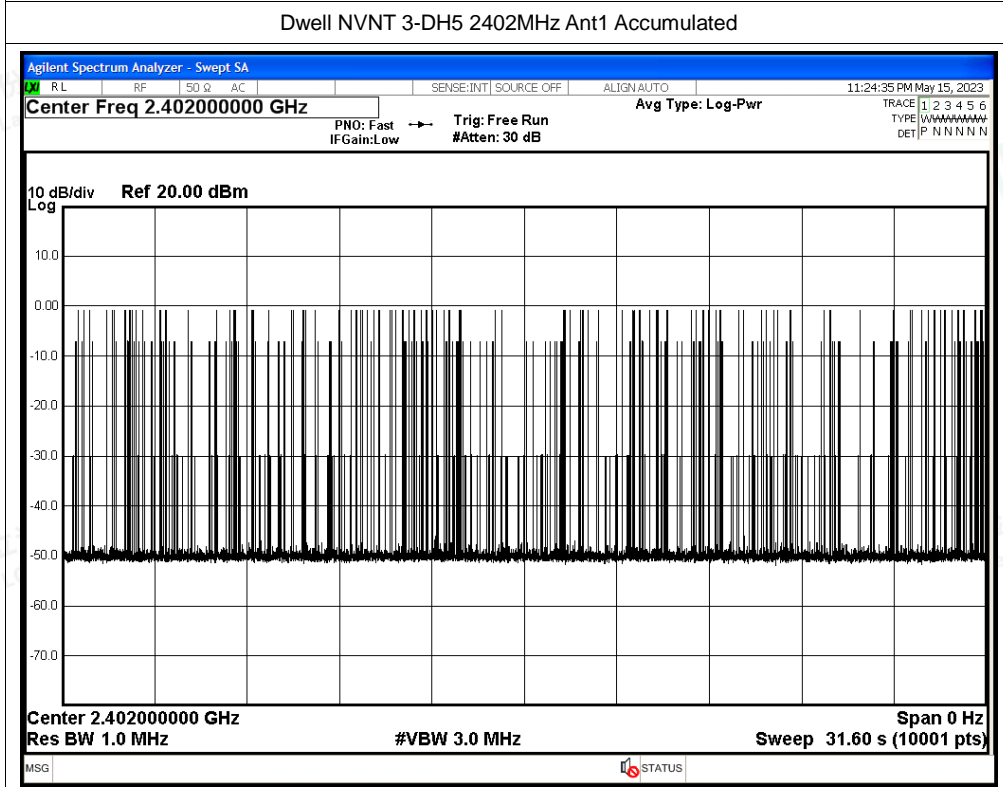
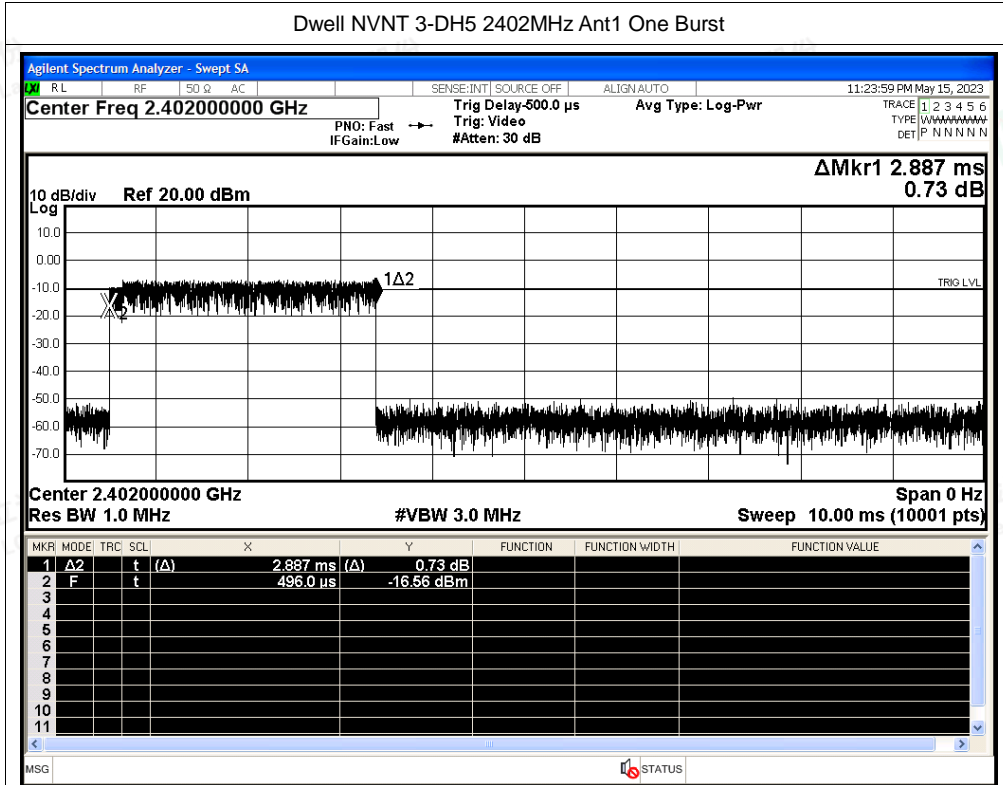
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated









A.5 Number of Hopping Channel

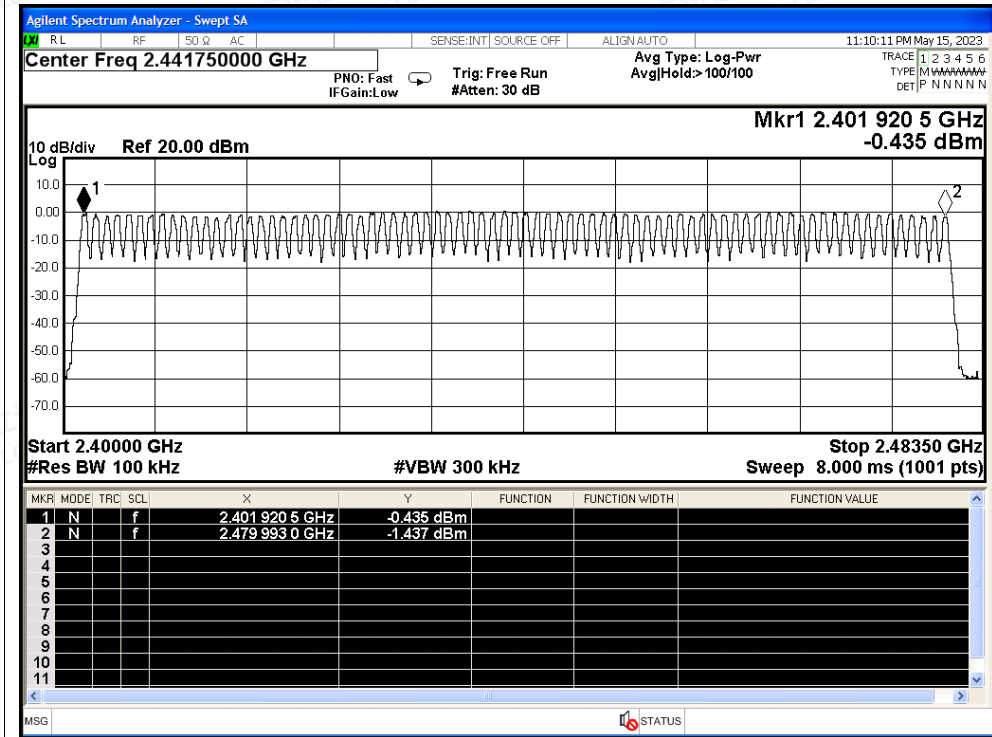
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass



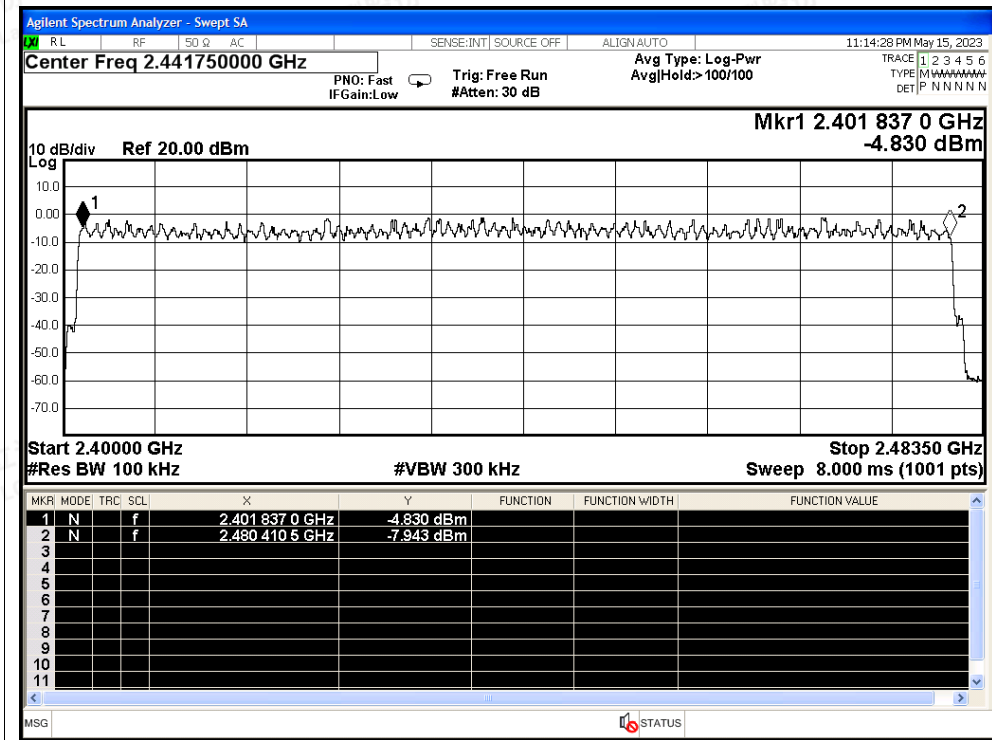


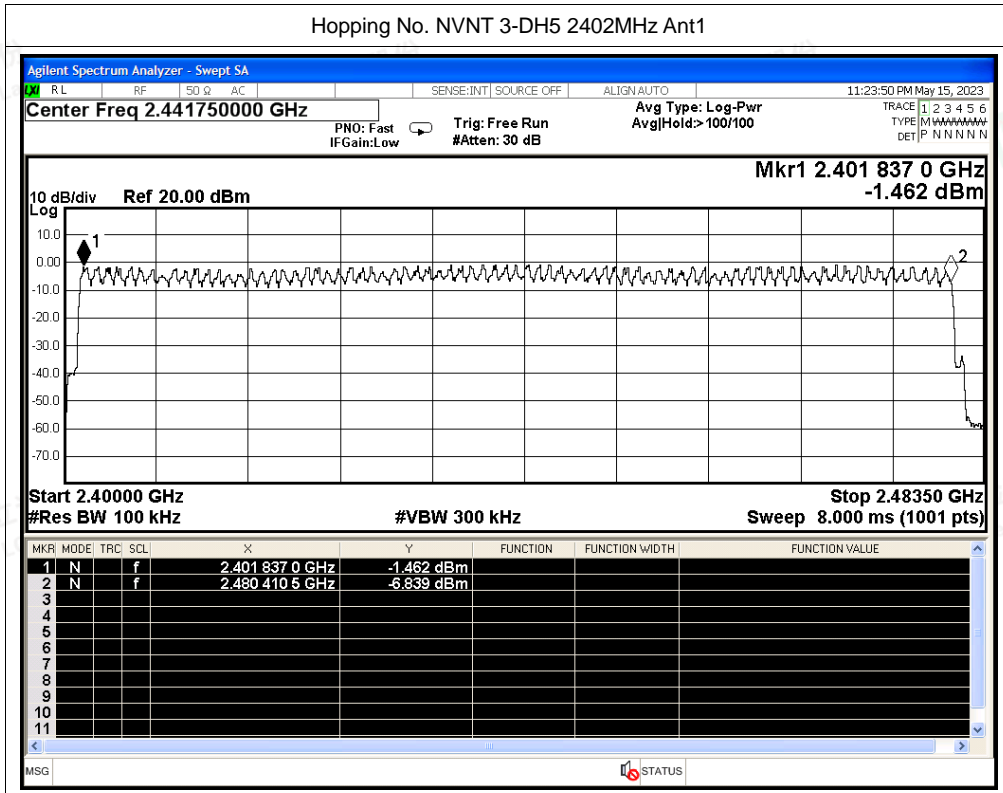
Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1







A.6 Band Edge

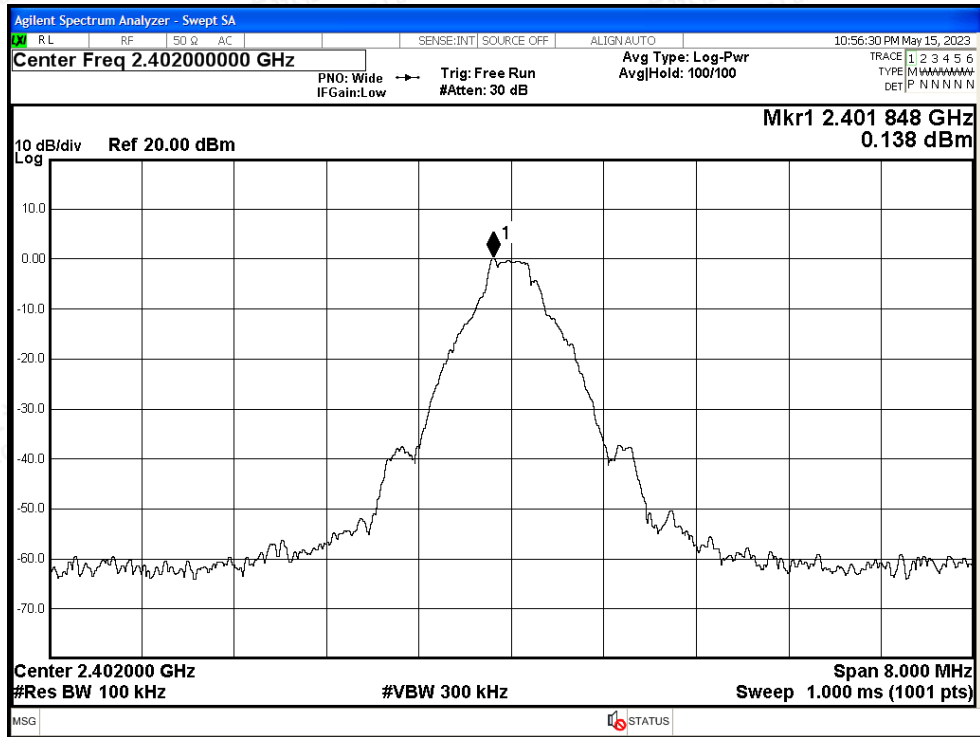
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-57.49	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-57.97	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-56.53	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-56.8	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-55.41	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-53.43	-20	Pass



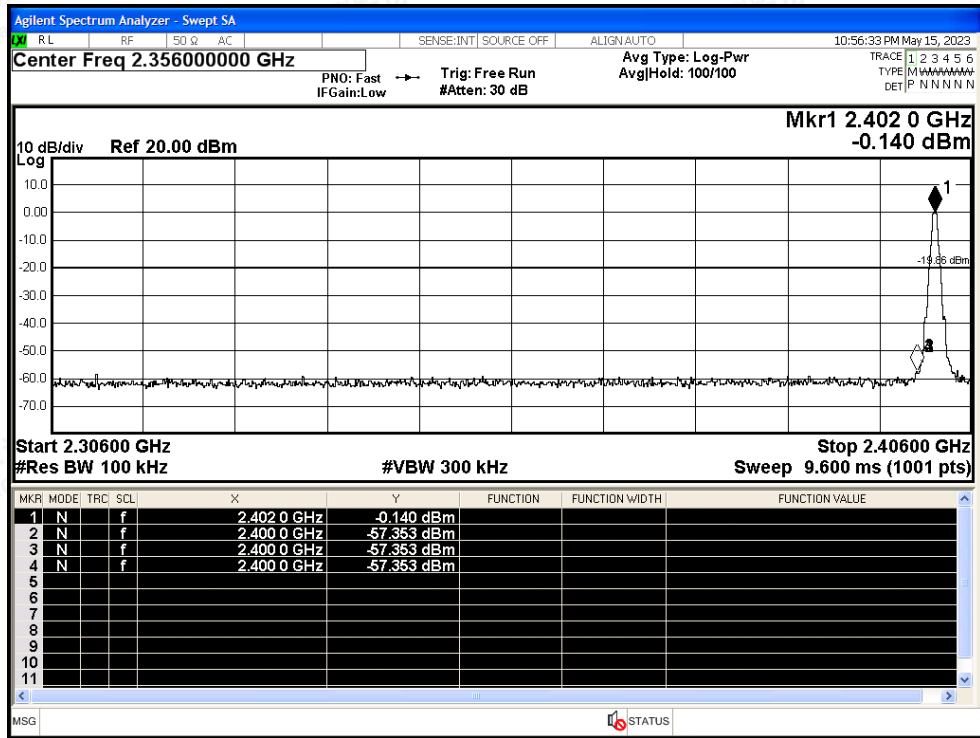


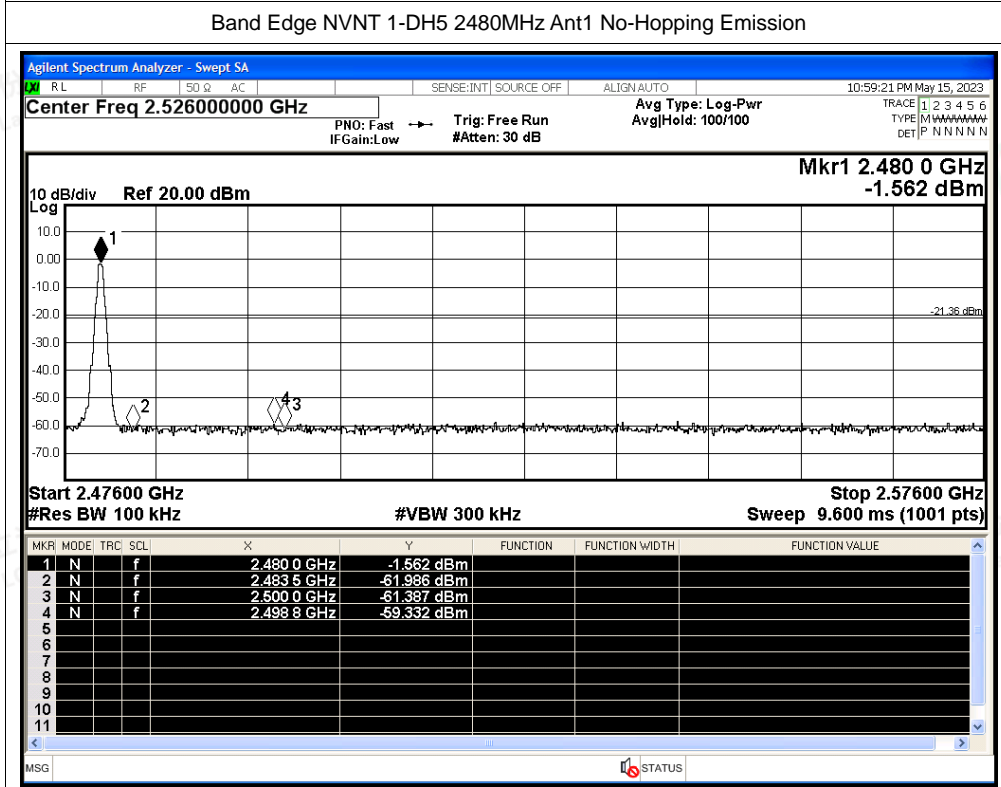
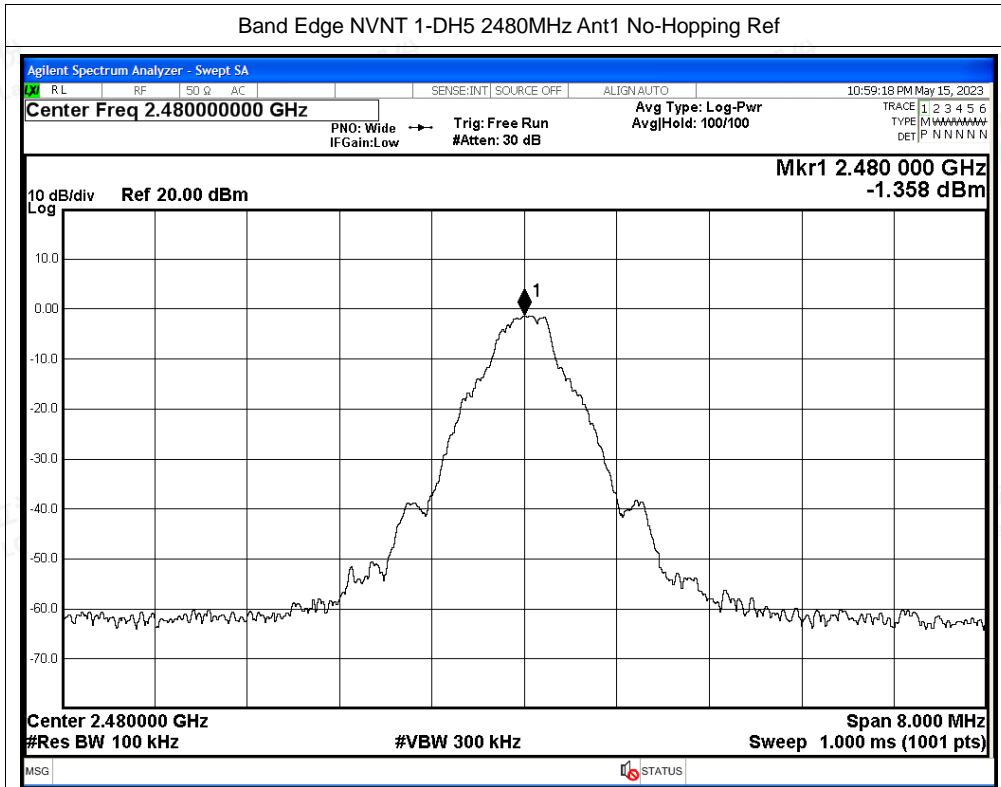
Test Graphs

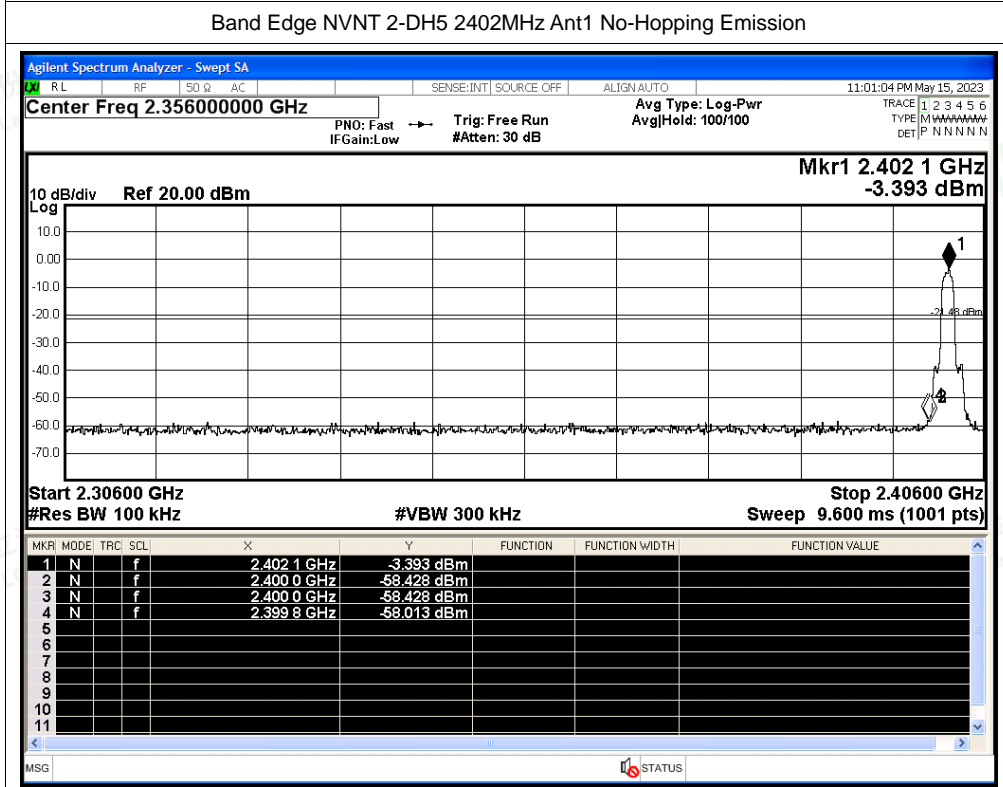
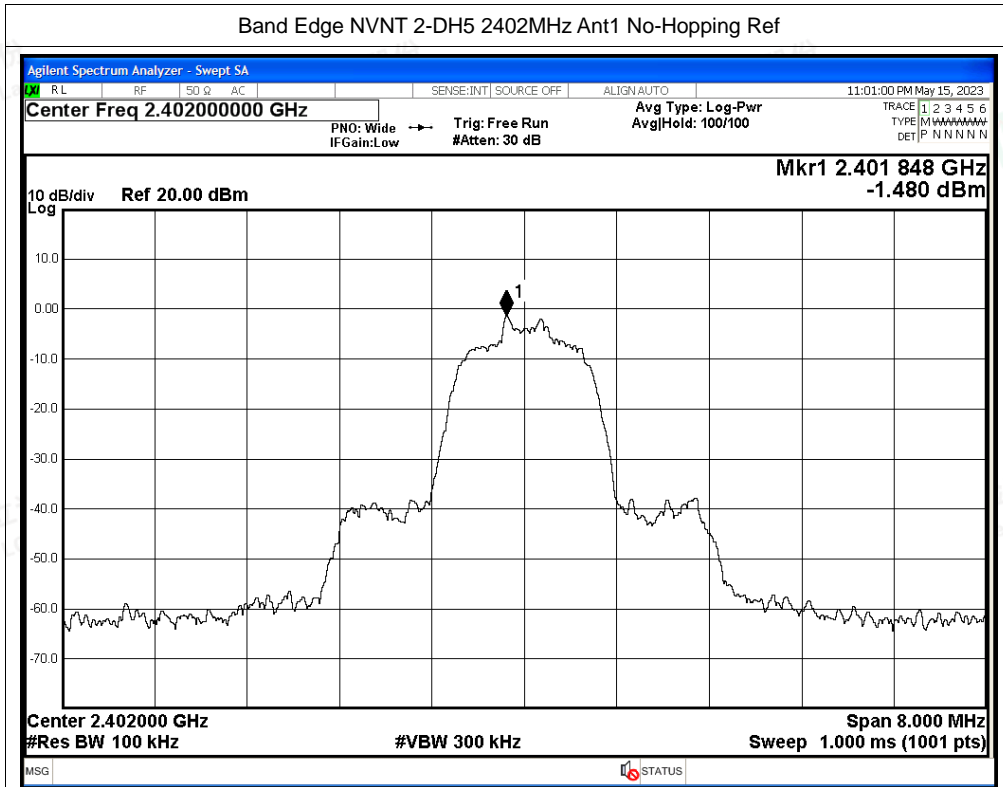
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref

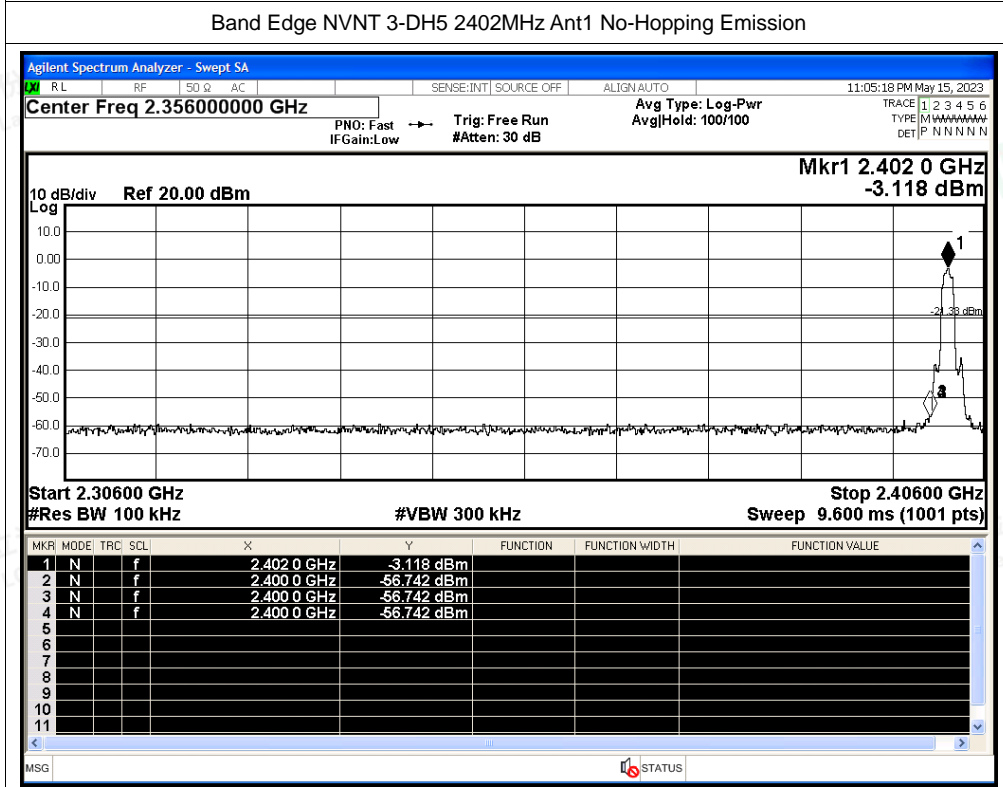
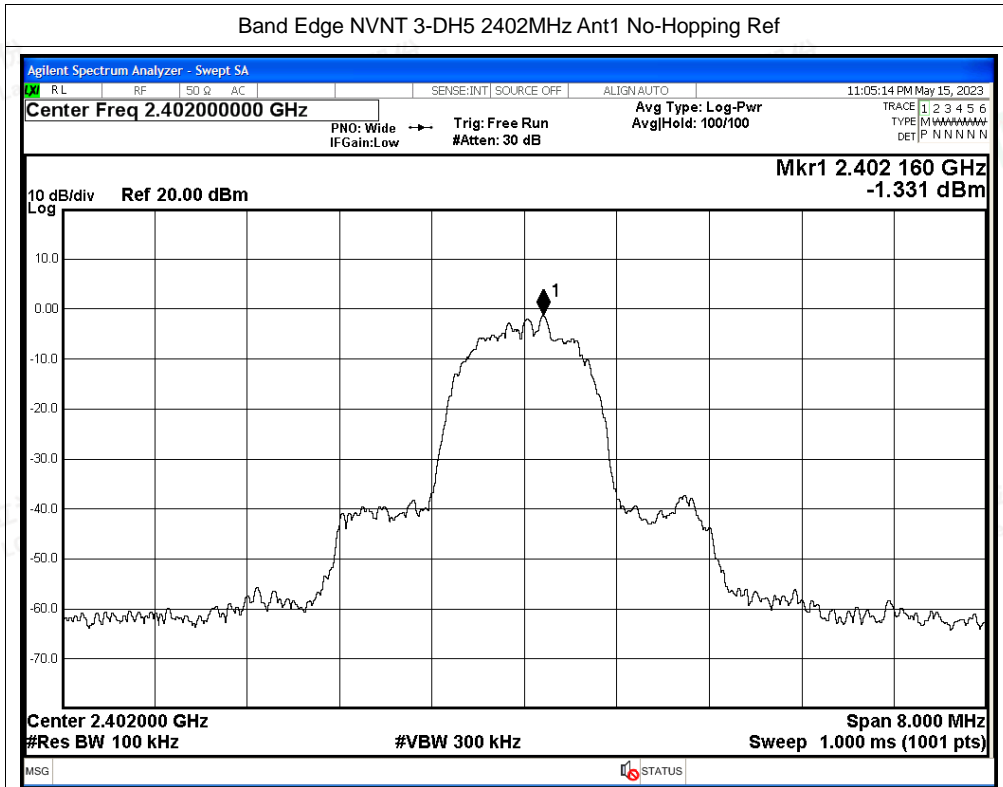


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission











(Hopping)

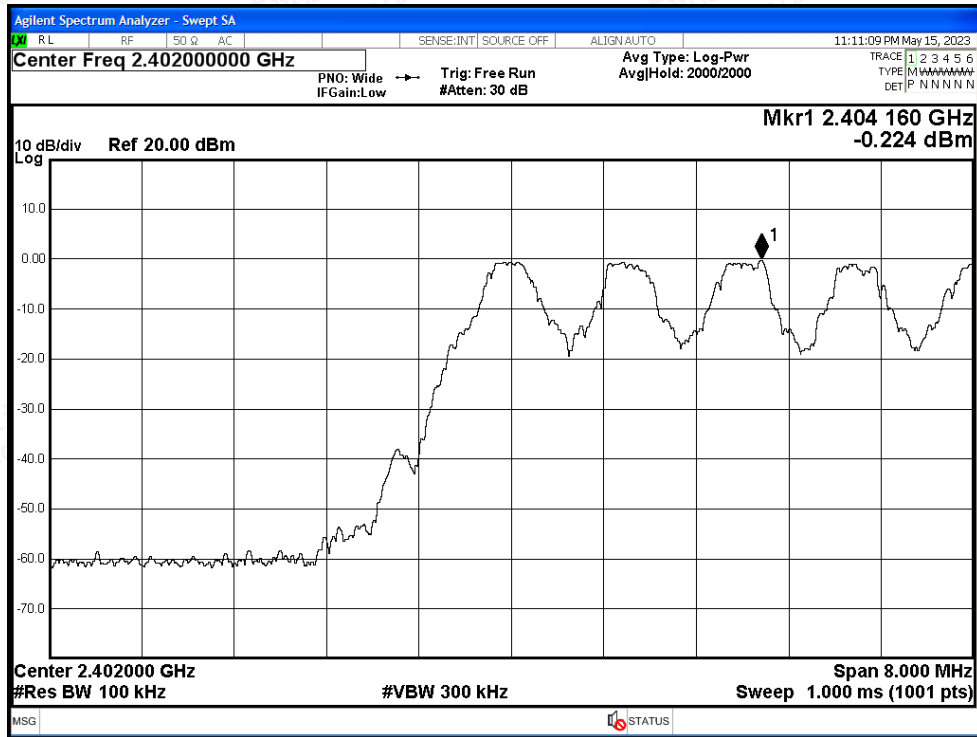
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-57.43	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-56.75	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-52.66	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-55.14	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-55.1	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-54.58	-20	Pass



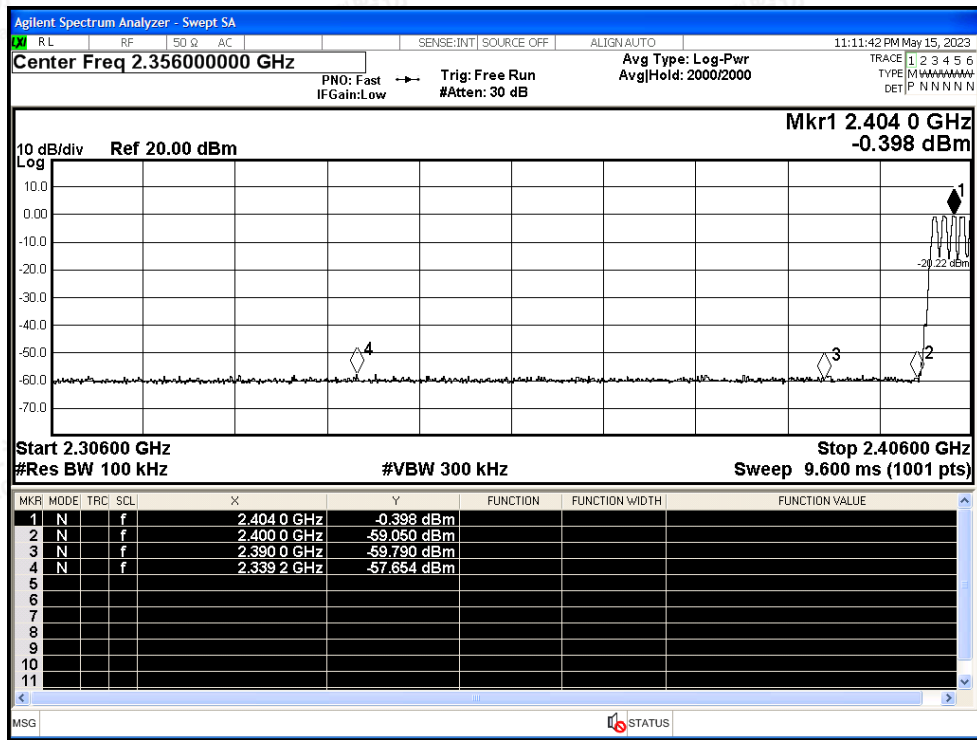


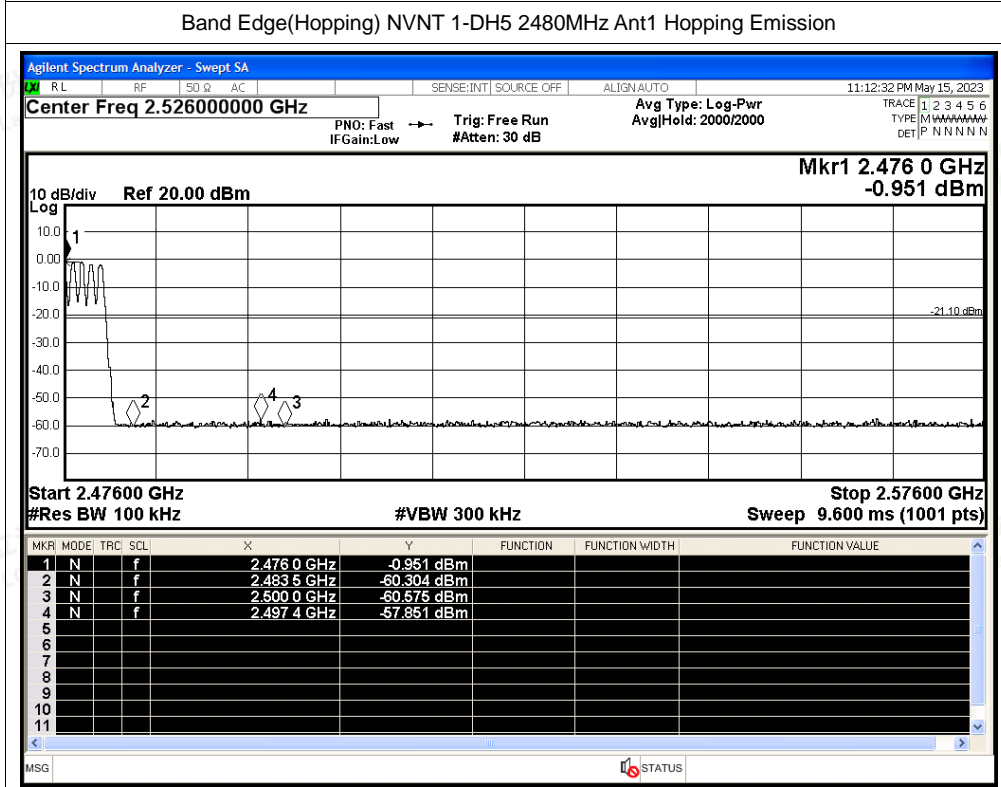
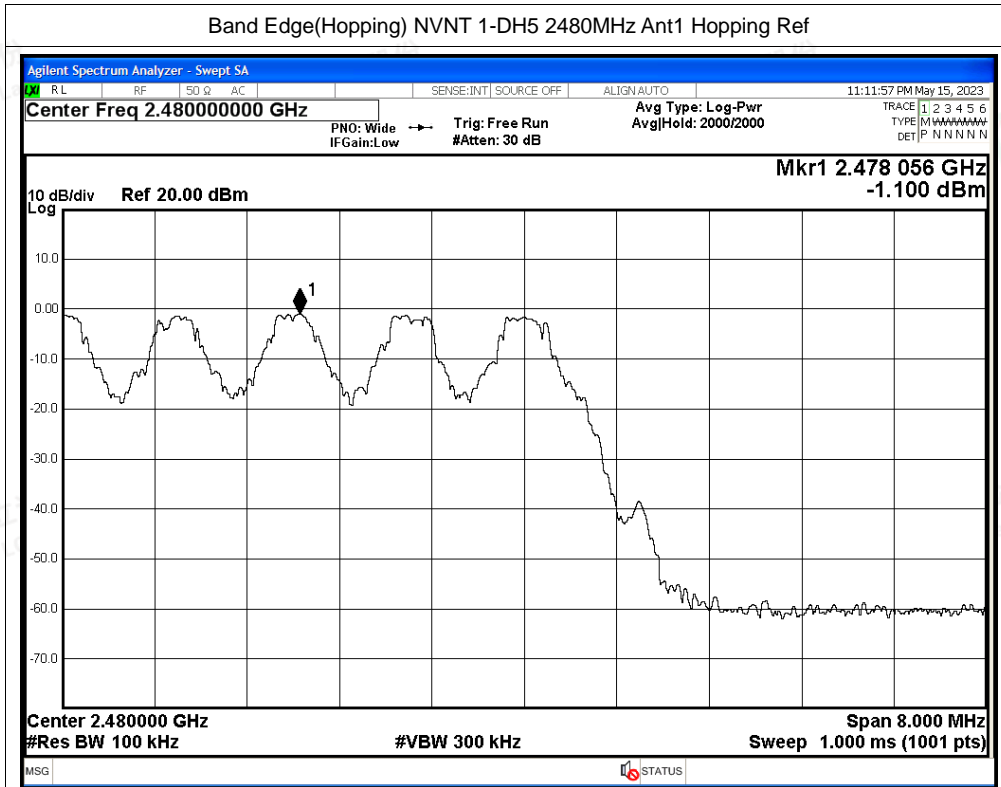
Test Graphs

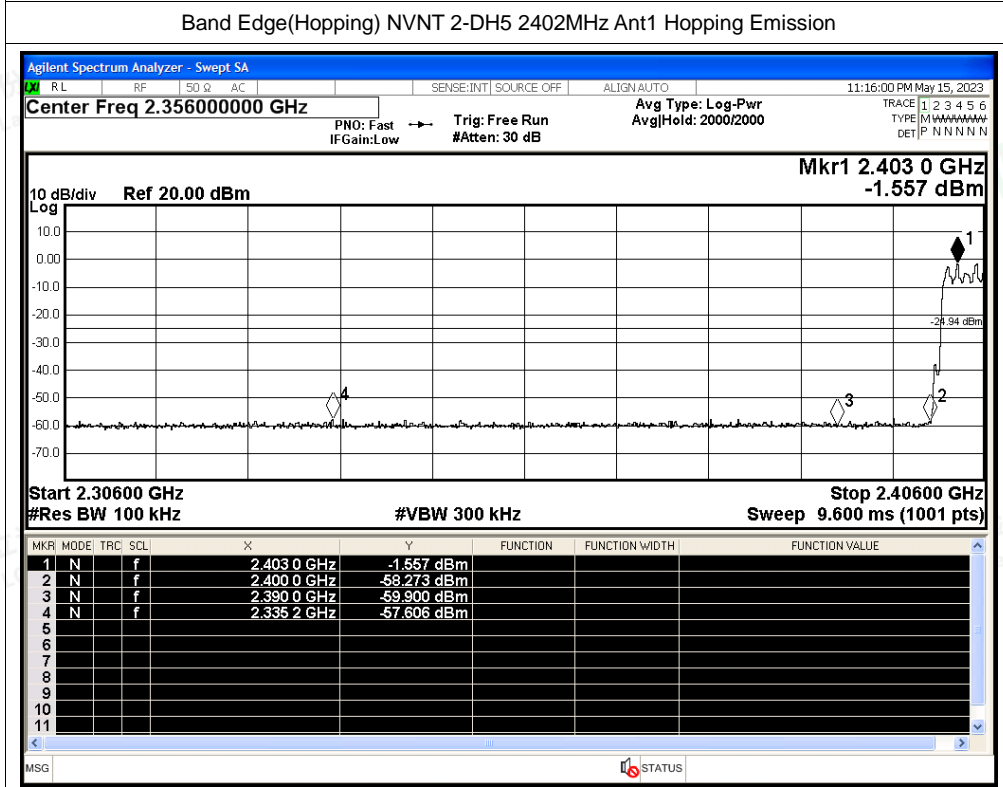
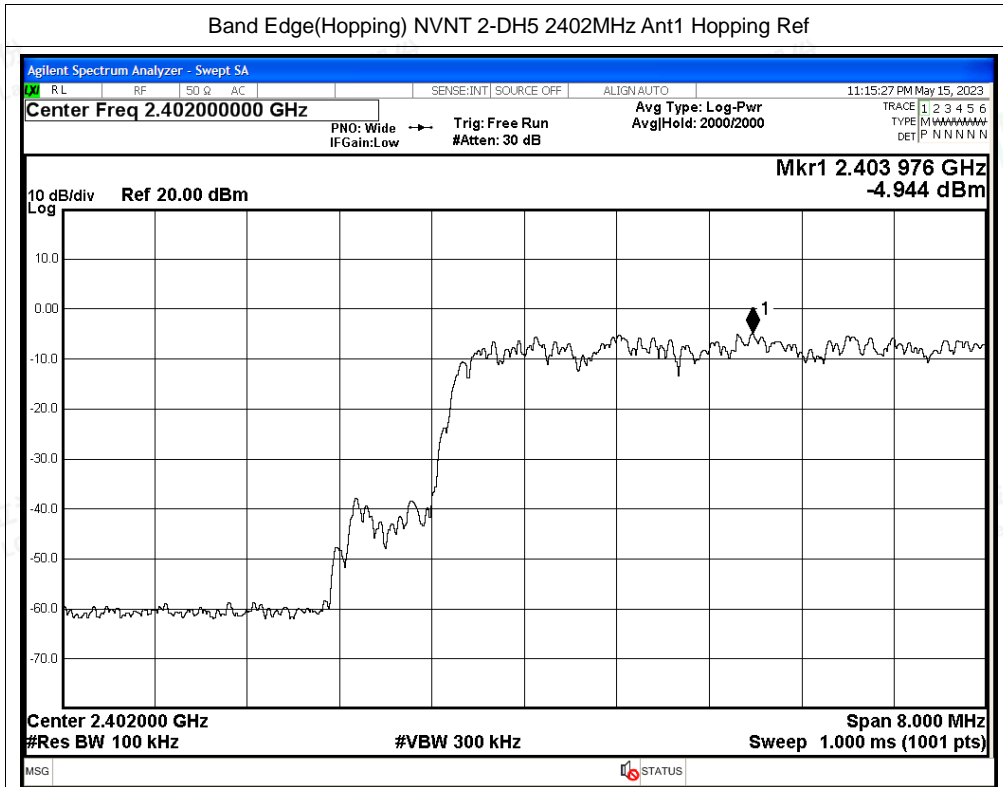
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref

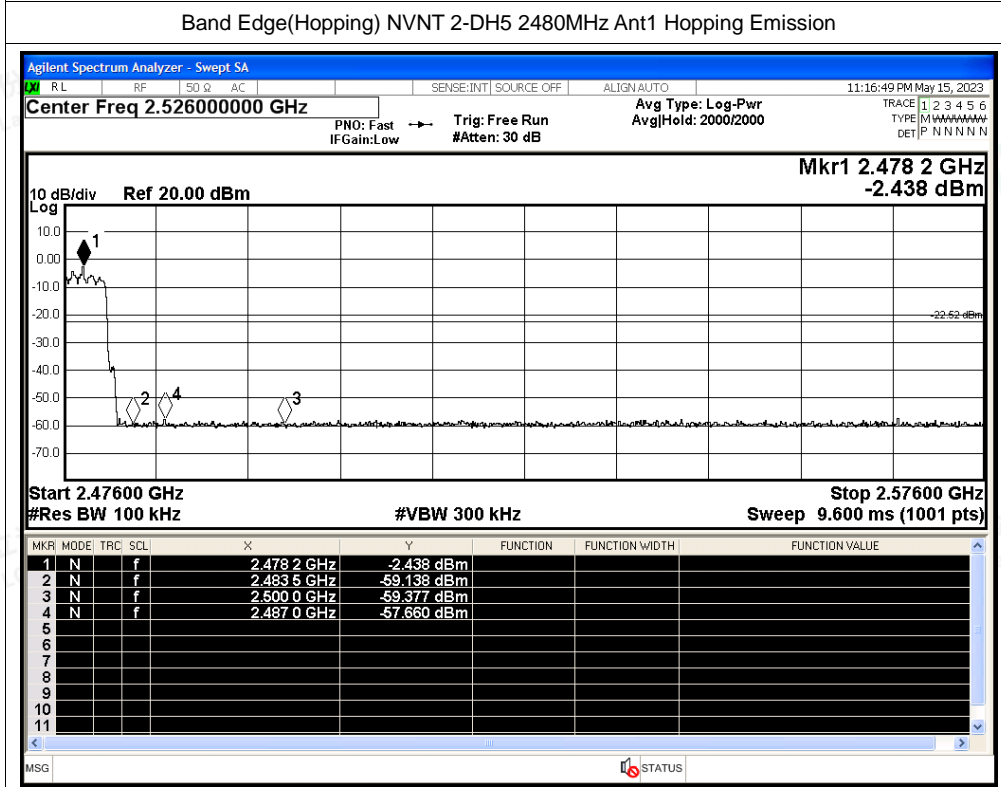
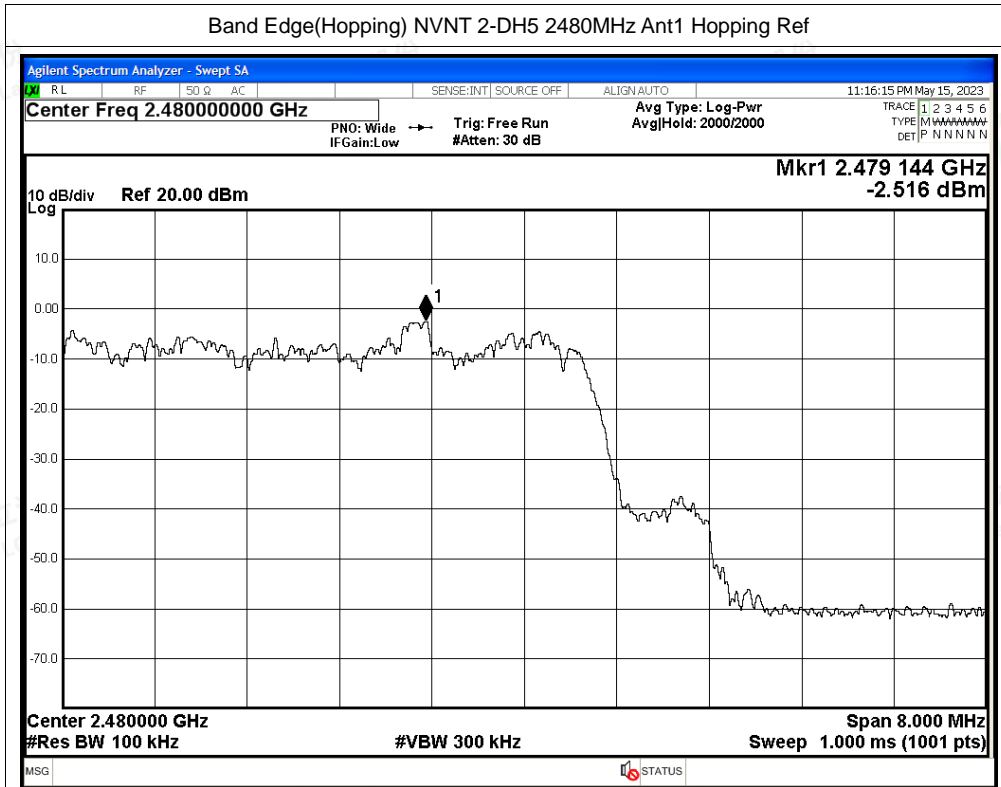


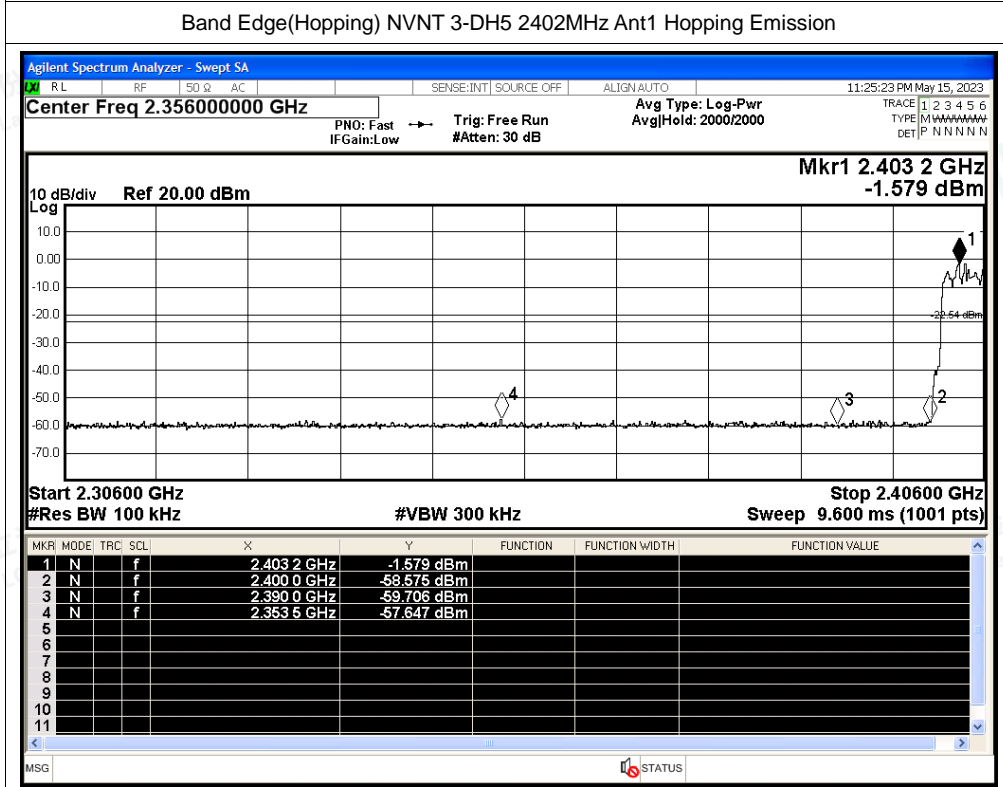
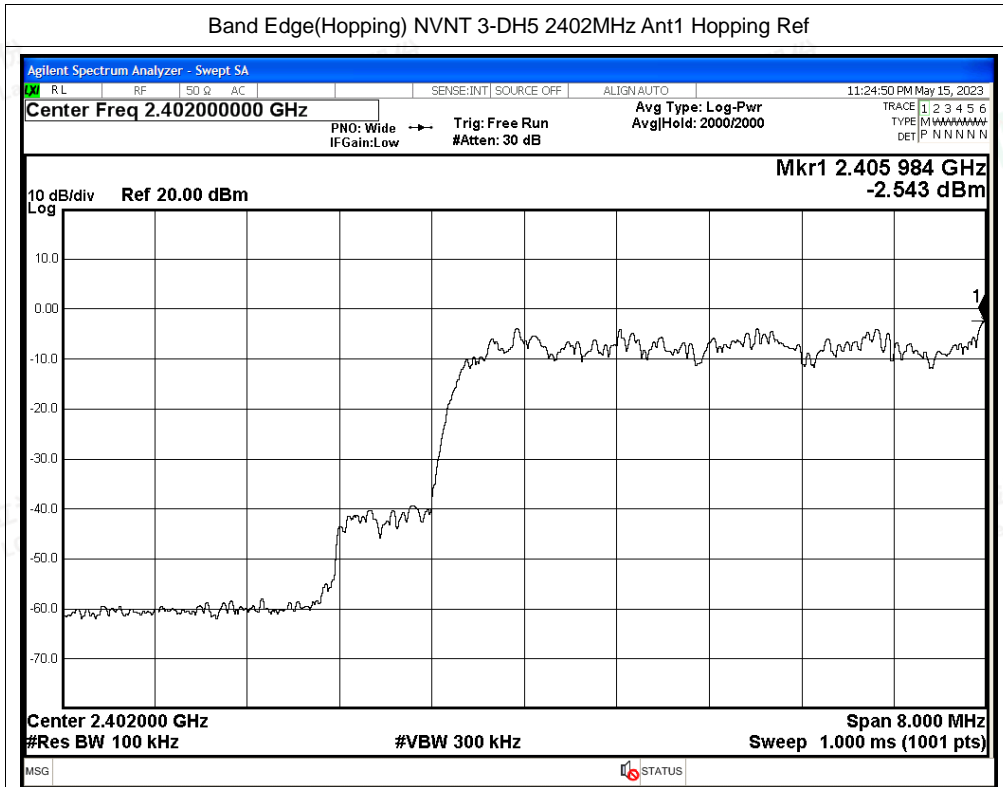
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

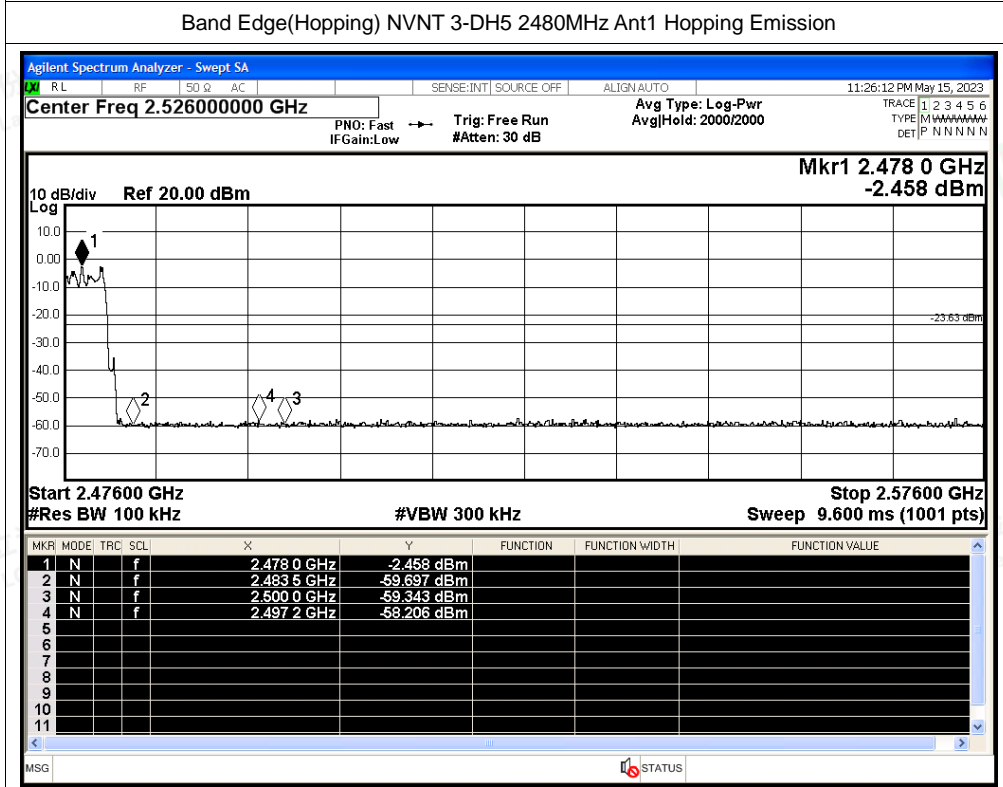
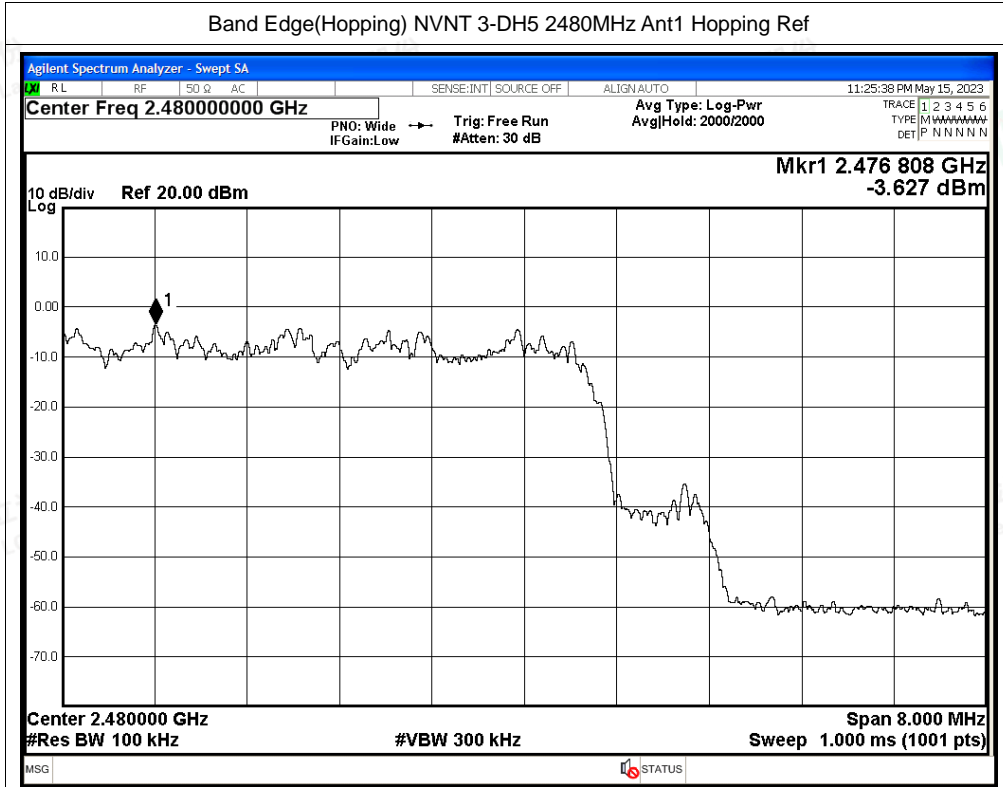














A.7 Conducted RF Spurious Emission

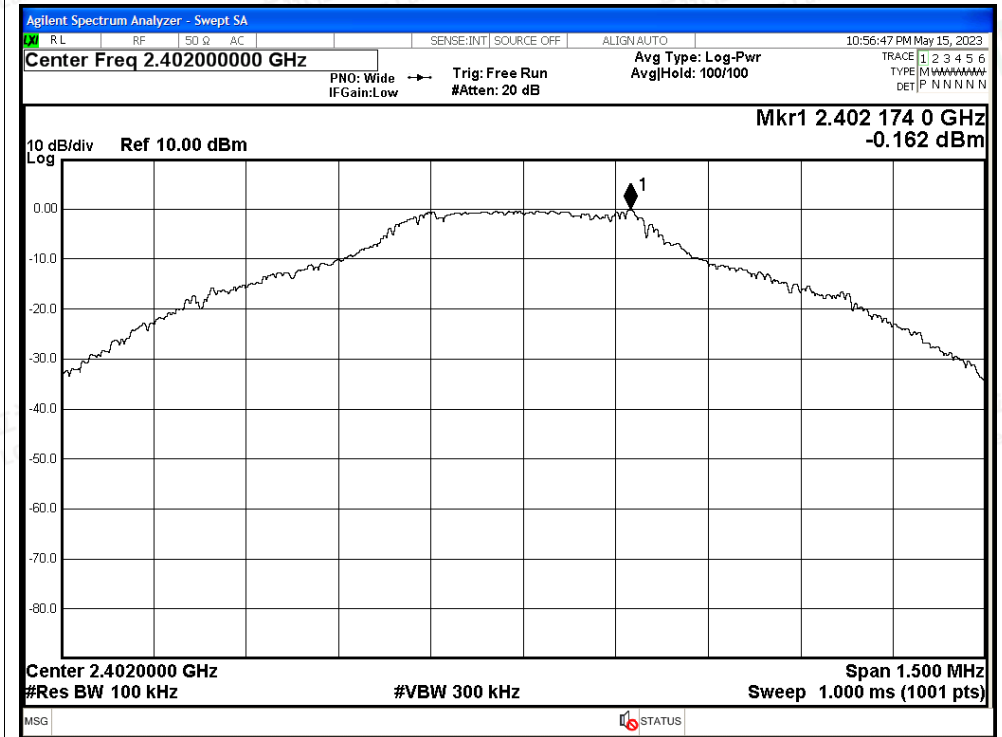
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-57.22	-20	Pass
NVNT	1-DH5	2441	Ant1	-57.49	-20	Pass
NVNT	1-DH5	2480	Ant1	-55.95	-20	Pass
NVNT	2-DH5	2402	Ant1	-55.77	-20	Pass
NVNT	2-DH5	2441	Ant1	-56.23	-20	Pass
NVNT	2-DH5	2480	Ant1	-54.17	-20	Pass
NVNT	3-DH5	2402	Ant1	-48.51	-20	Pass
NVNT	3-DH5	2441	Ant1	-53.76	-20	Pass
NVNT	3-DH5	2480	Ant1	-55.13	-20	Pass



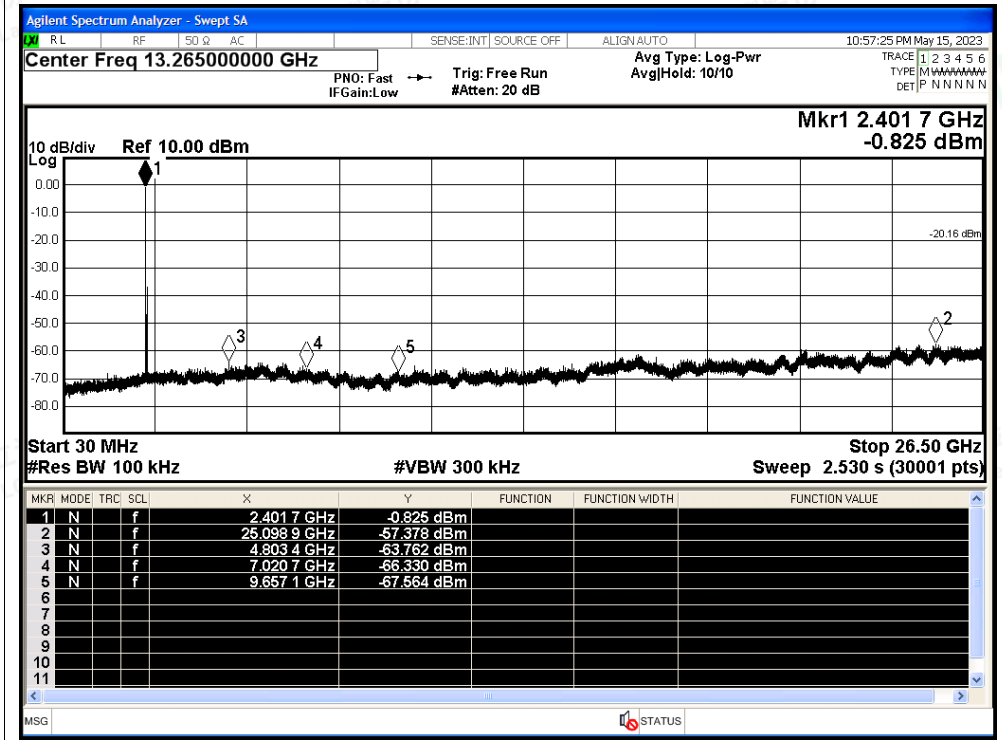


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

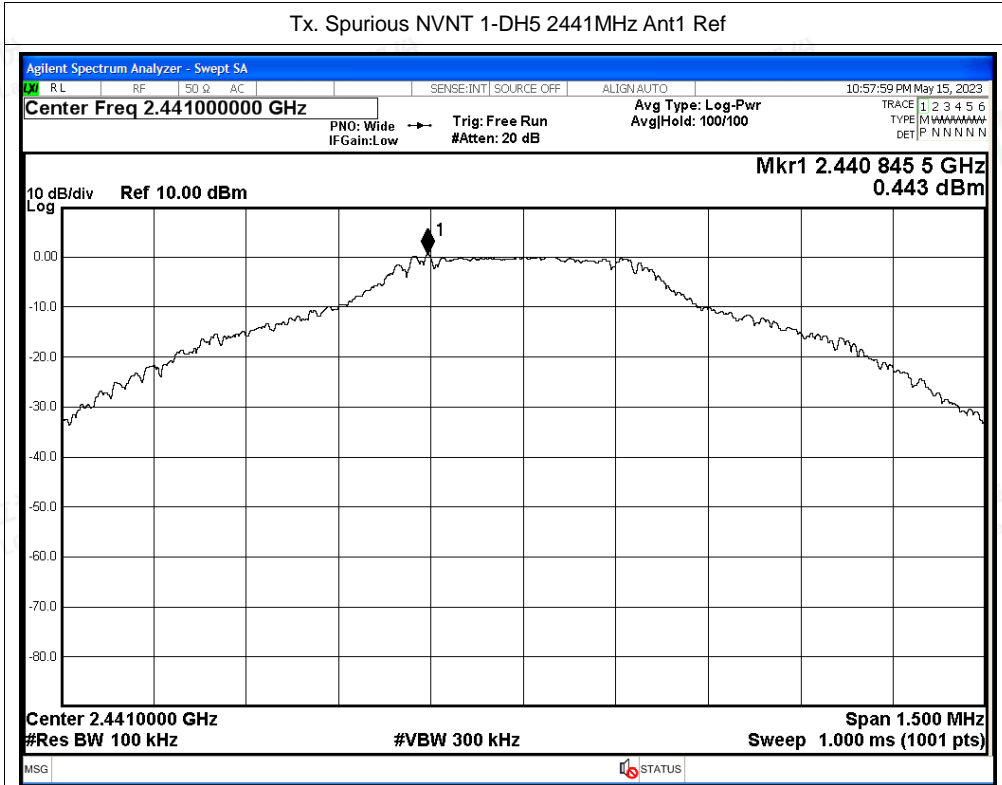


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

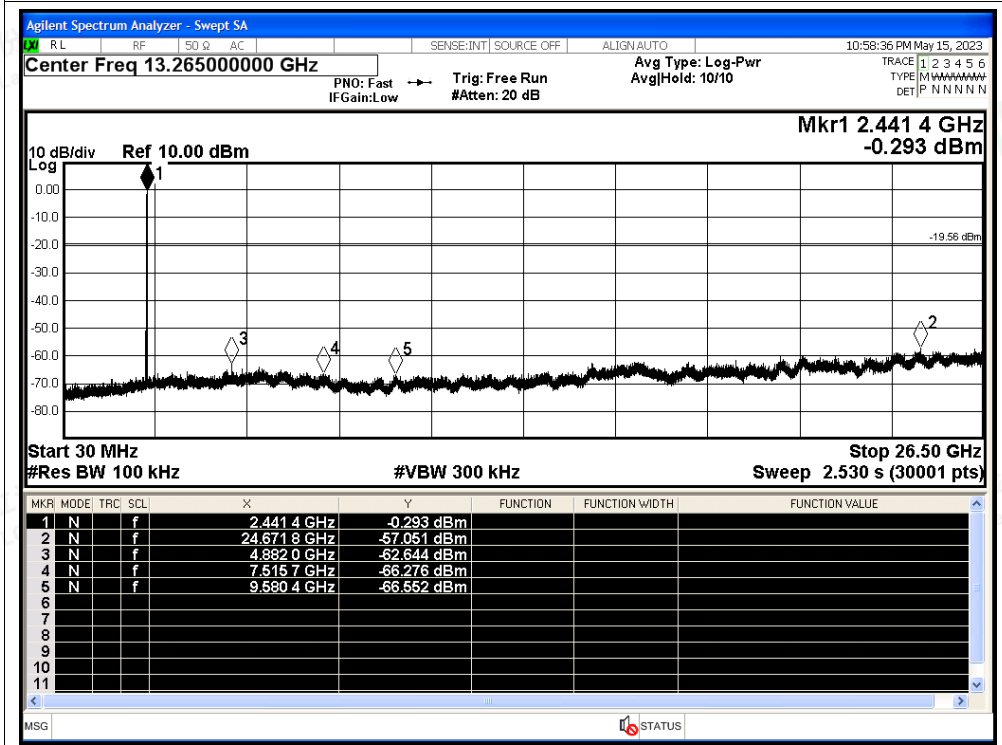




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

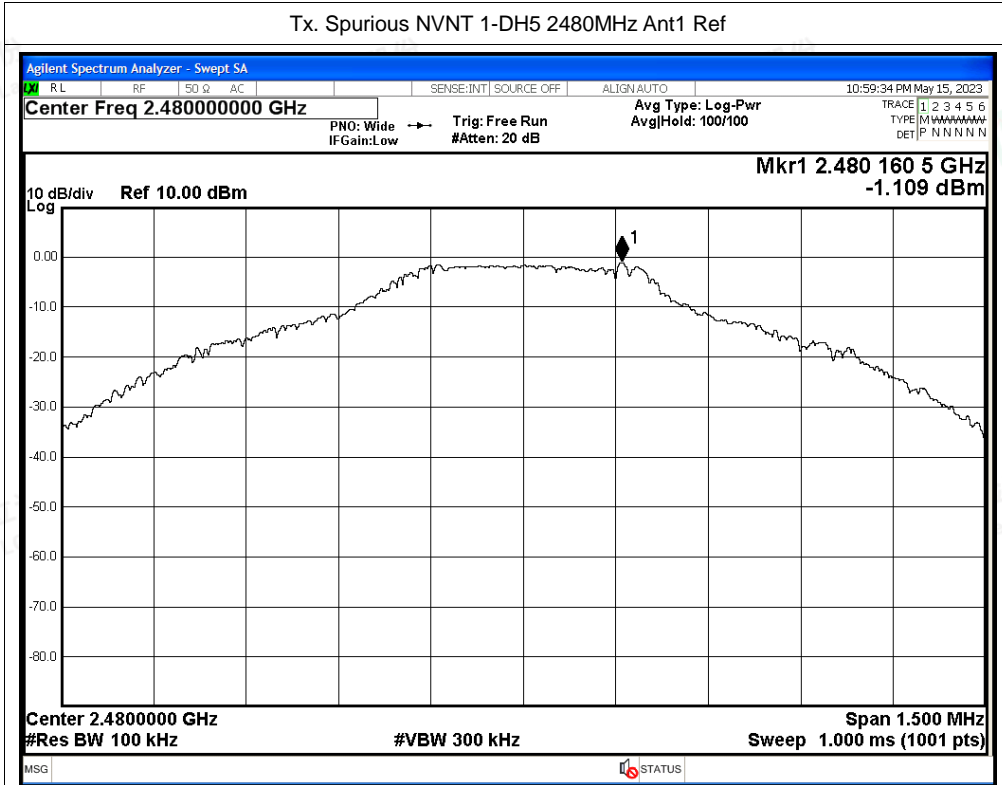


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

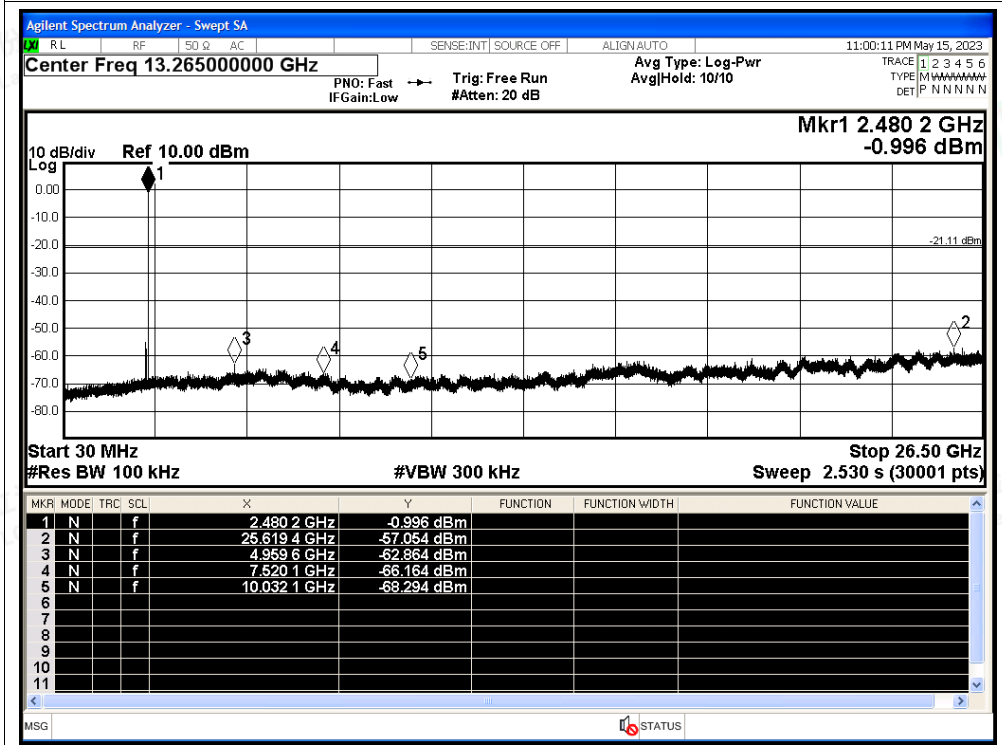




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

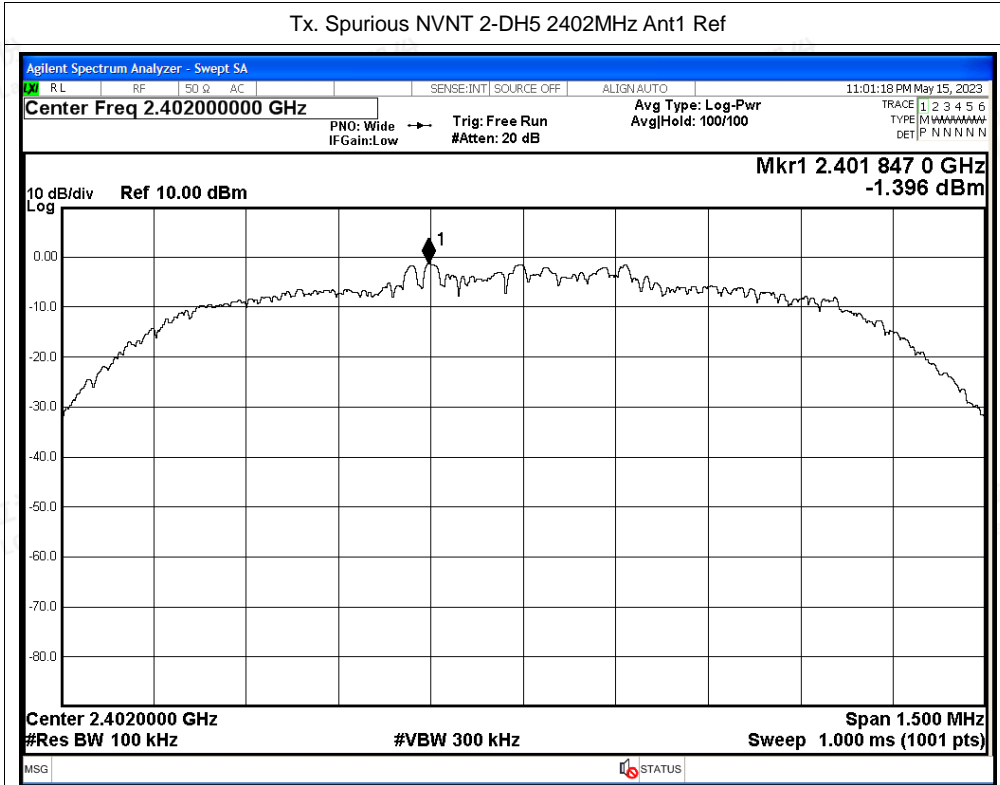


Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission

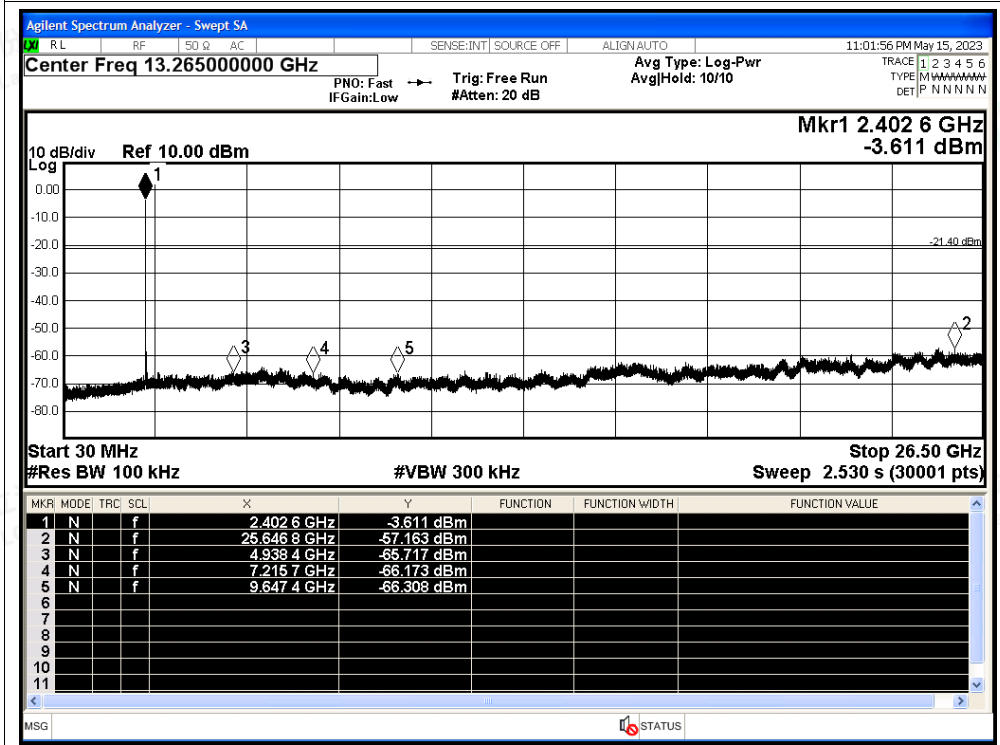




Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref

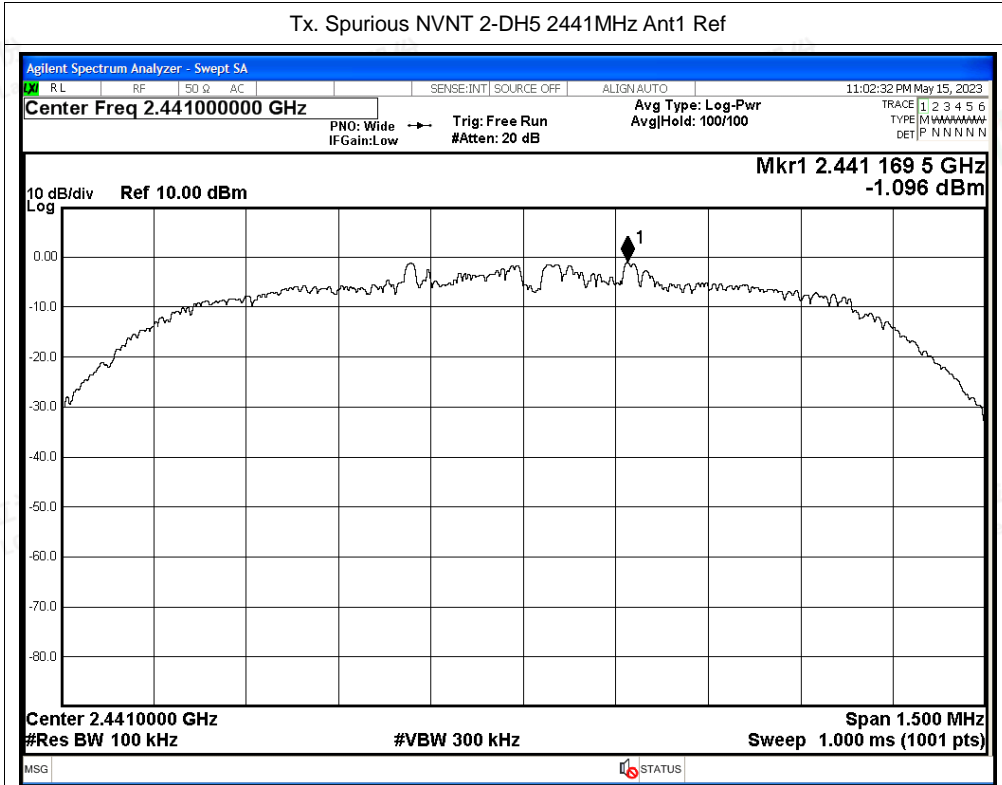


Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission

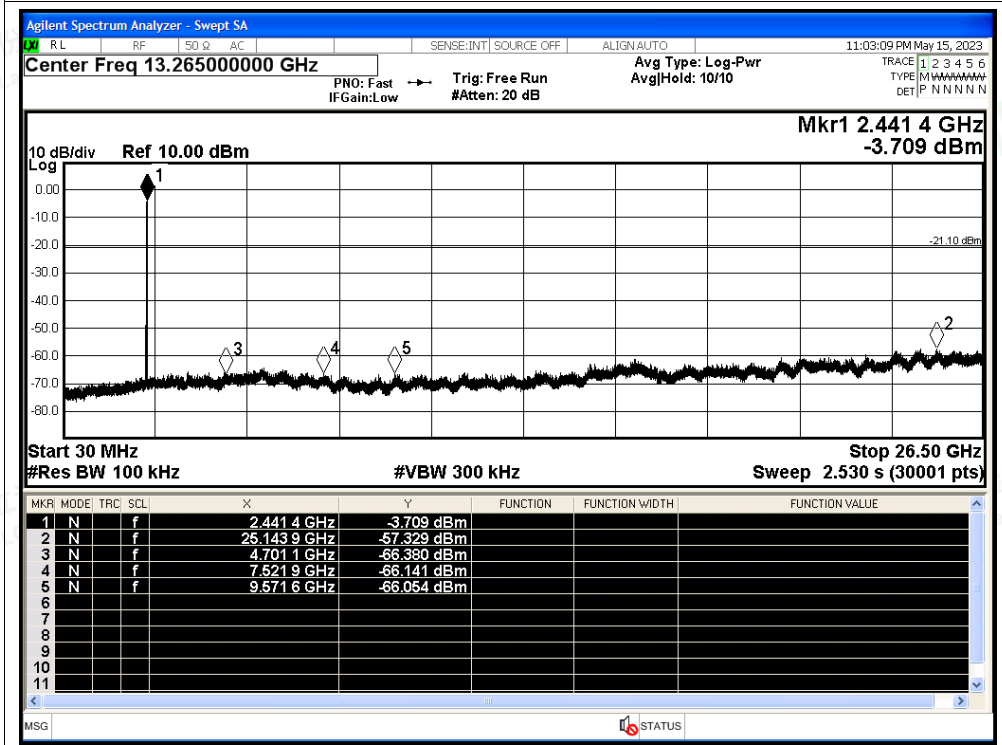




Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref

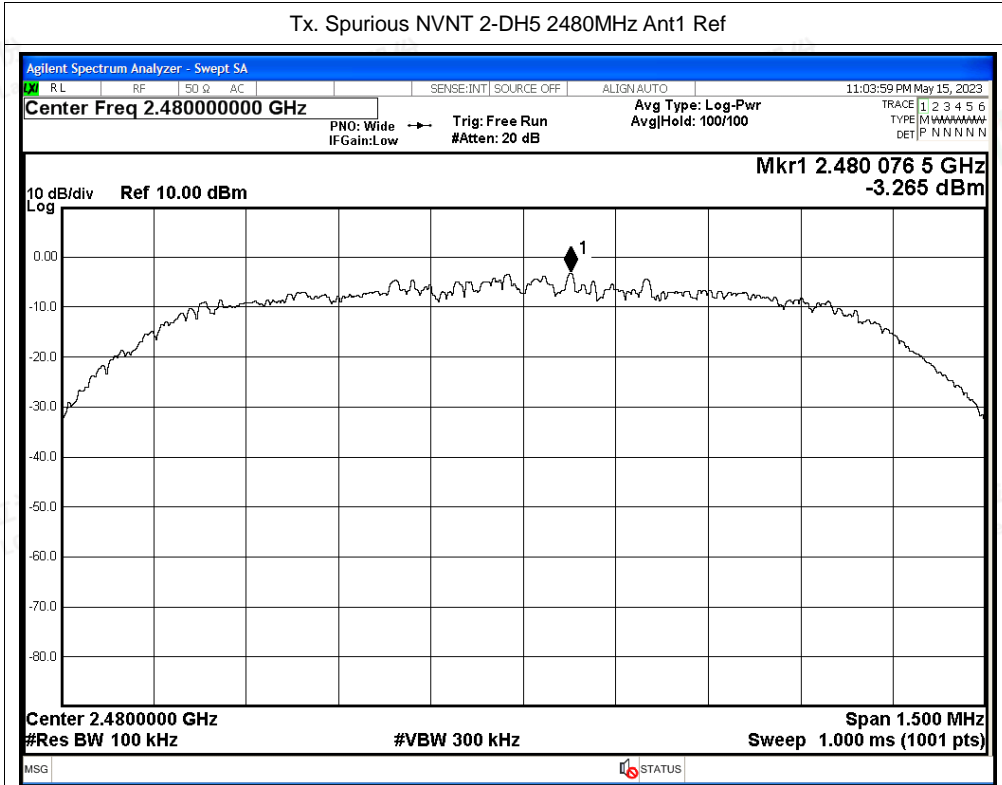


Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission

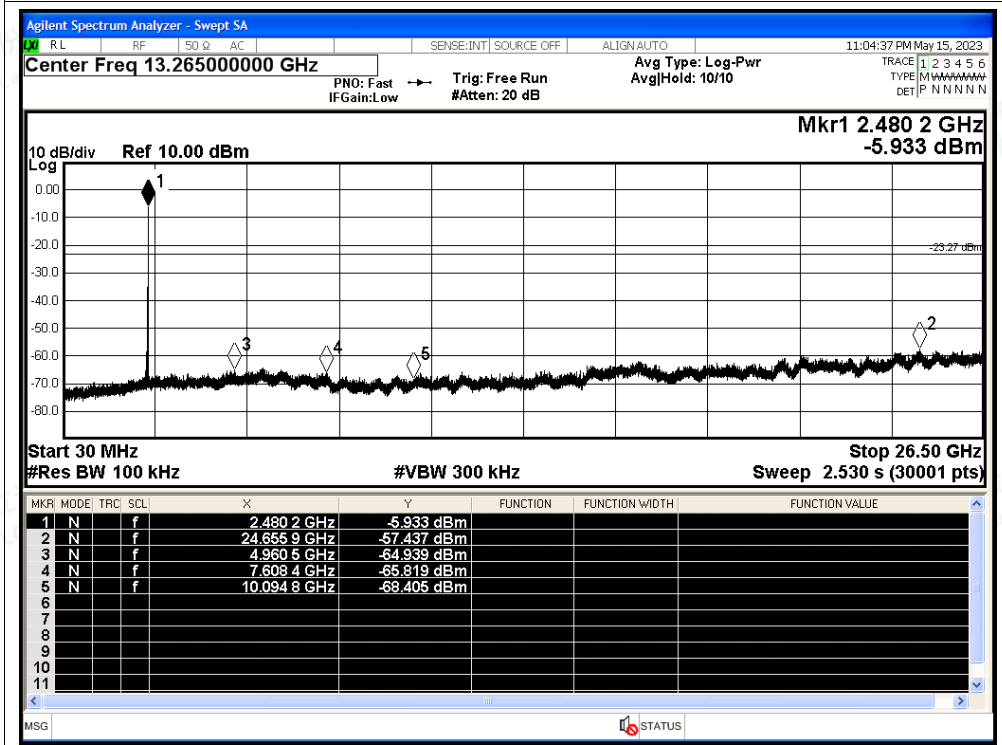




Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref

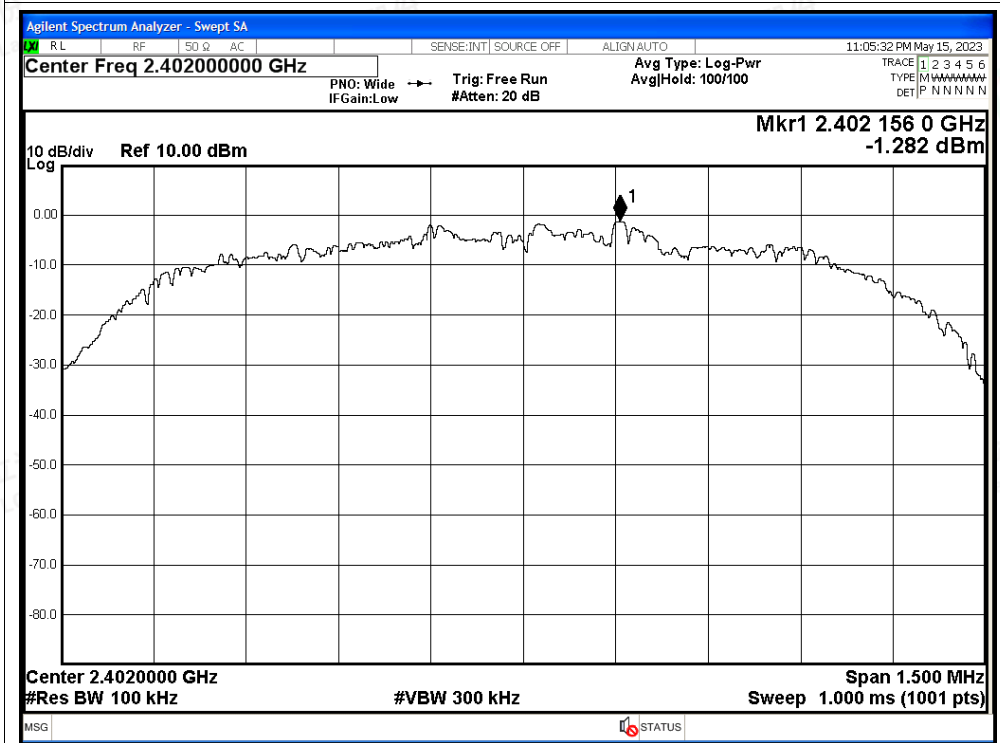


Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission

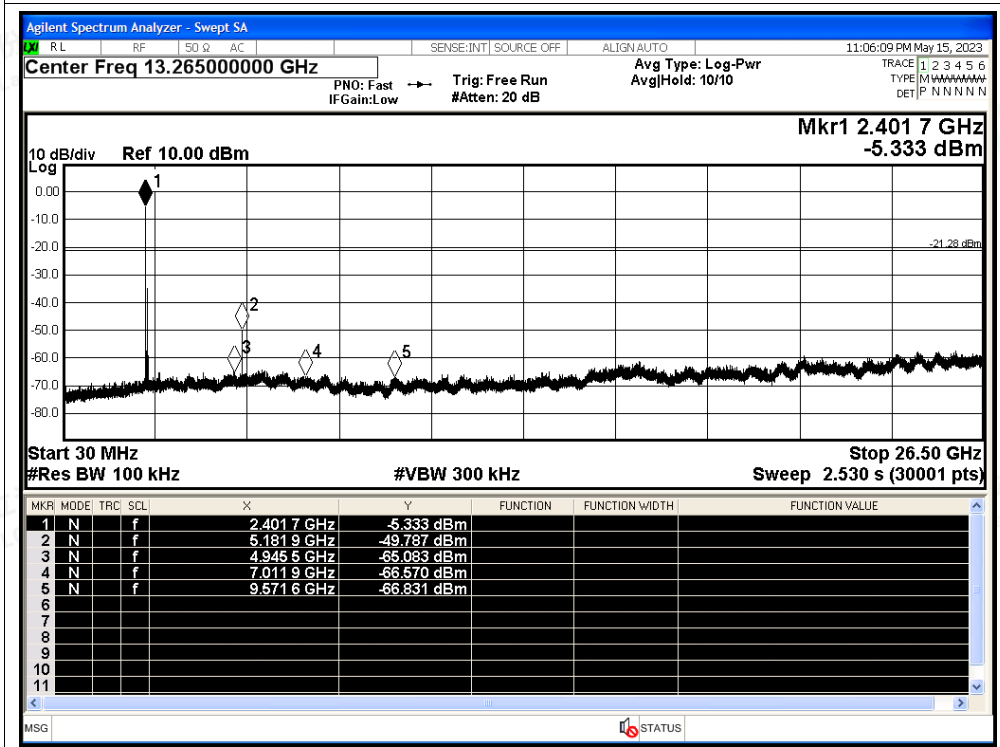




Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref

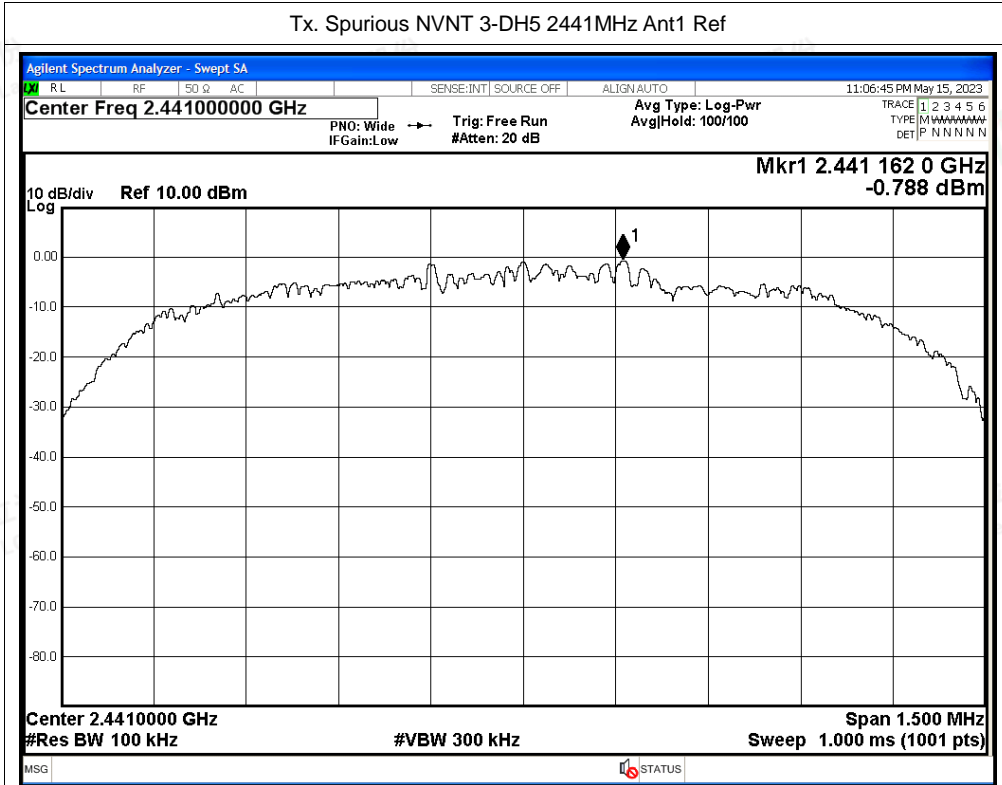


Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission

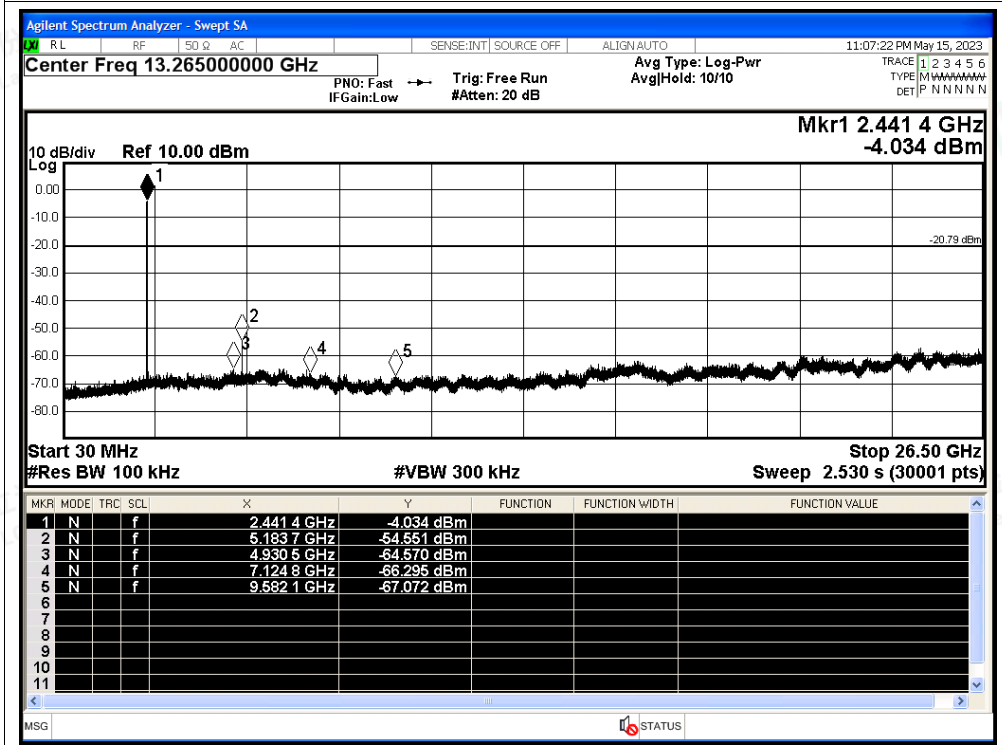




Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref

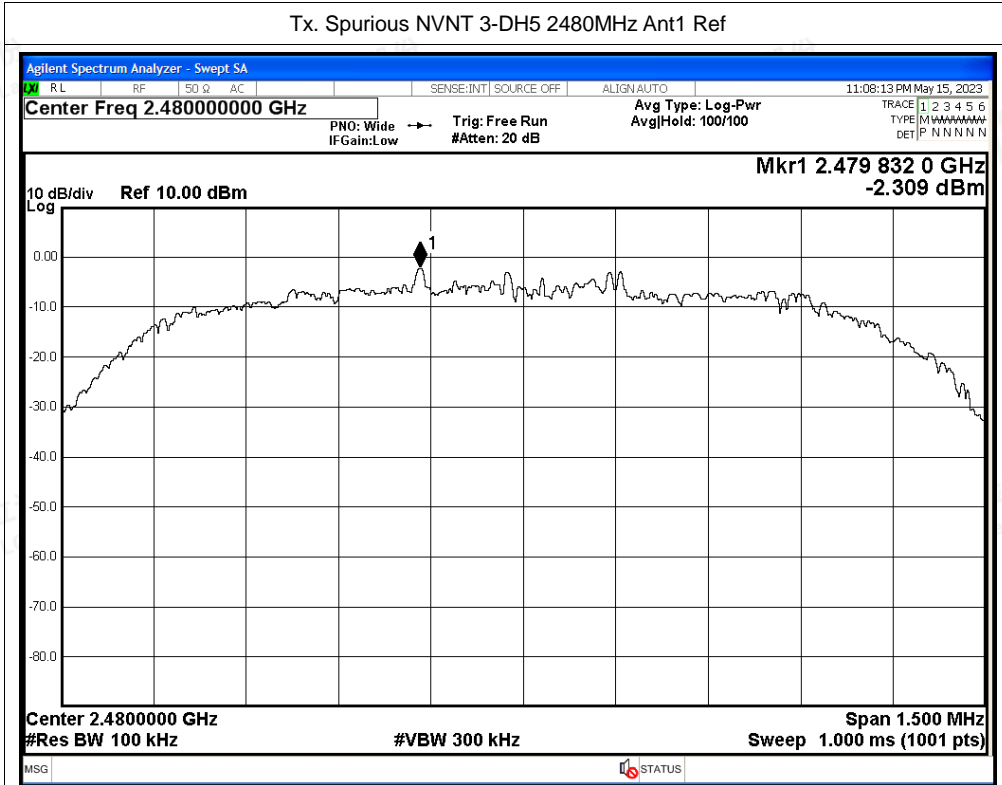


Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission

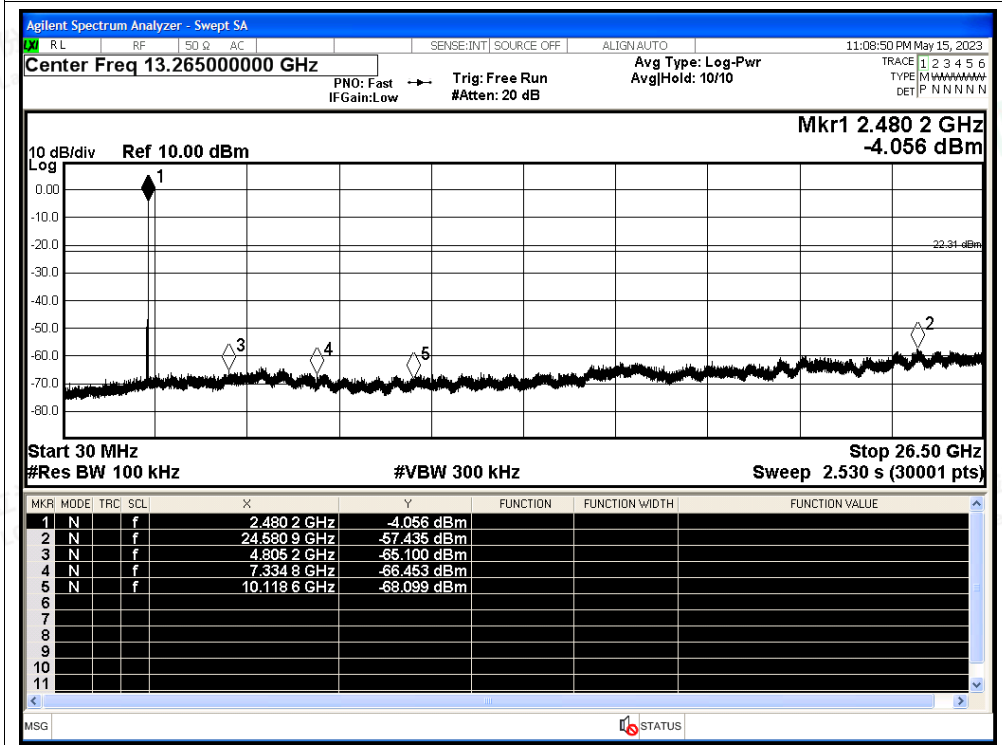




Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission





A.8 Restrict Band

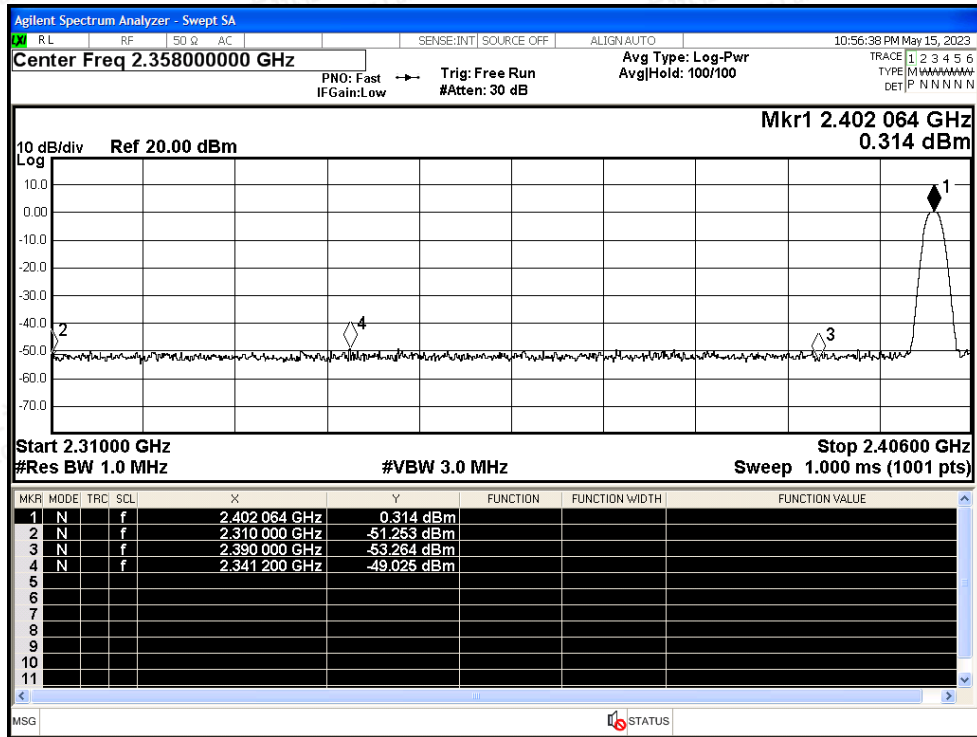
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-51.25	2	46.01	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-62.18	2	35.08	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2341.2	-49.03	2	48.23	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2382.192	-61.54	2	35.72	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-53.26	2	44	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-61.66	2	35.6	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-51.87	2	45.39	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-61.42	2	35.84	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2484.592	-48.58	2	48.68	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.992	-61.25	2	36.01	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-52.8	2	44.46	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-61.48	2	35.78	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-52.67	2	44.59	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-62.16	2	35.1	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2341.104	-48.55	2	48.71	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2388.432	-61.49	2	35.77	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-52.3	2	44.96	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-61.68	2	35.58	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-52.2	2	45.06	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-60.99	2	36.27	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2499.28	-48.57	2	48.69	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.728	-60.9	2	36.36	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-50.44	2	46.82	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-61.69	2	35.57	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-51.92	2	45.34	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	2383.152	-49.25	2	48.01	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2385.744	-61.49	2	35.77	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-51.92	2	45.34	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-61.58	2	35.68	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-52.18	2	45.08	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-61.03	2	36.23	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2485	-48.42	2	48.84	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.512	-61.03	2	36.23	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-50.97	2	46.29	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-61.6	2	35.66	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

