



## Appendix A

### RF Test Data for BT (Conducted Measurement)

Product Name: Mechanical keyboard

Test Model: K75Pro

#### Environmental Conditions

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





### A.1 -20dB Bandwidth

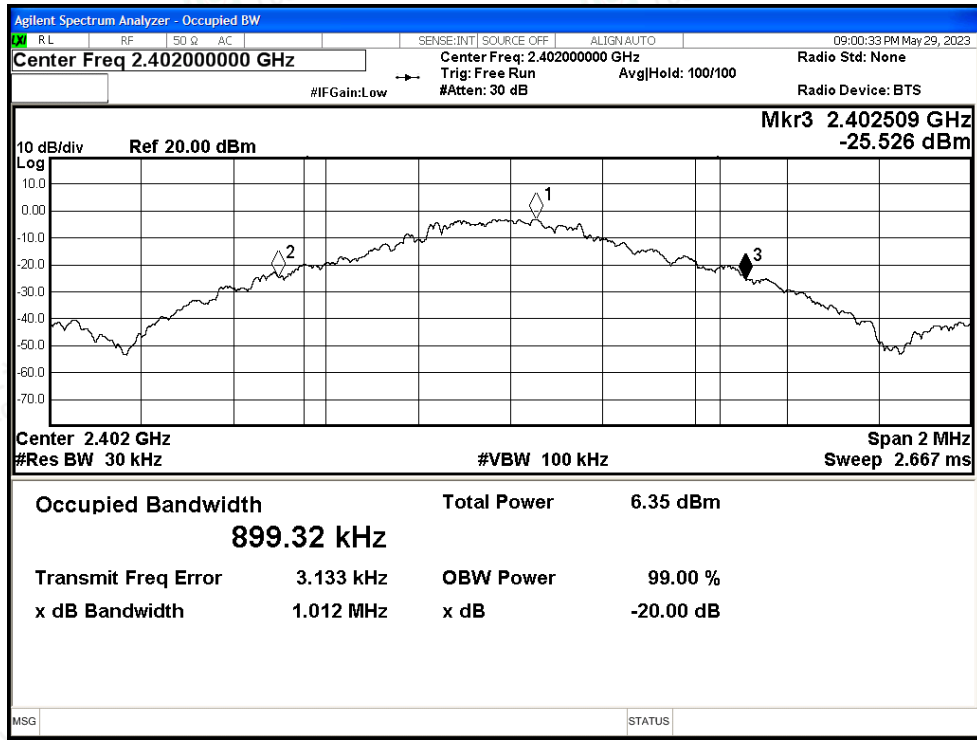
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	1.012	0	Pass
NVNT	1-DH5	2441	Ant1	0.958	0	Pass
NVNT	1-DH5	2480	Ant1	1.028	0	Pass
NVNT	2-DH5	2402	Ant1	1.279	0	Pass
NVNT	2-DH5	2441	Ant1	1.318	0	Pass
NVNT	2-DH5	2480	Ant1	1.31	0	Pass
NVNT	3-DH5	2402	Ant1	1.299	0	Pass
NVNT	3-DH5	2441	Ant1	1.295	0	Pass
NVNT	3-DH5	2480	Ant1	1.293	0	Pass



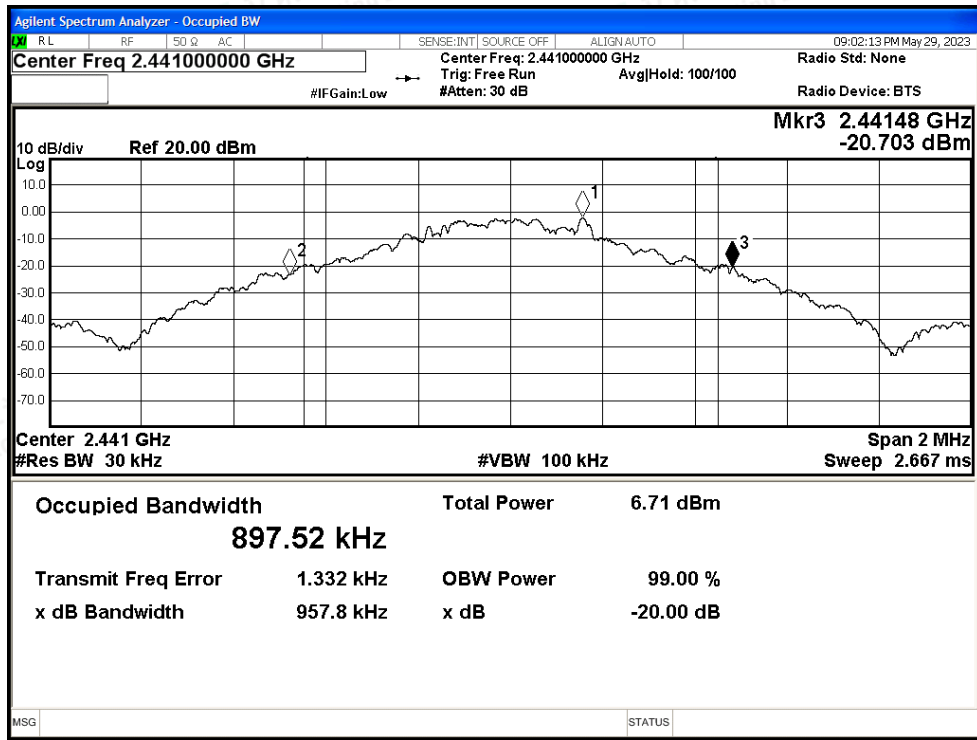


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

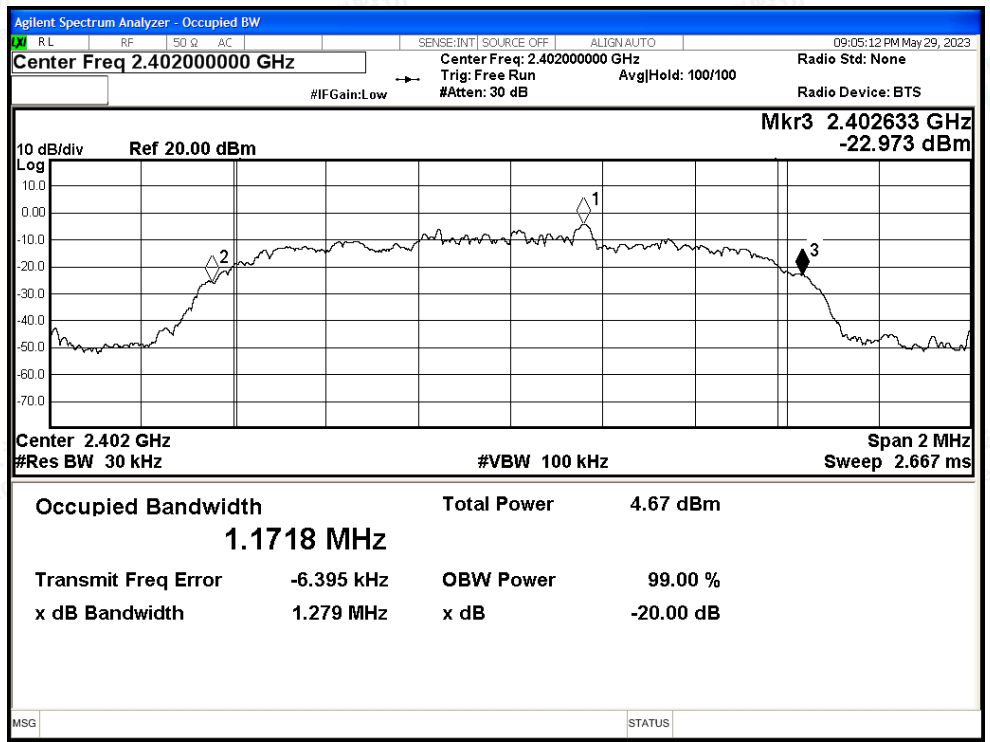




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

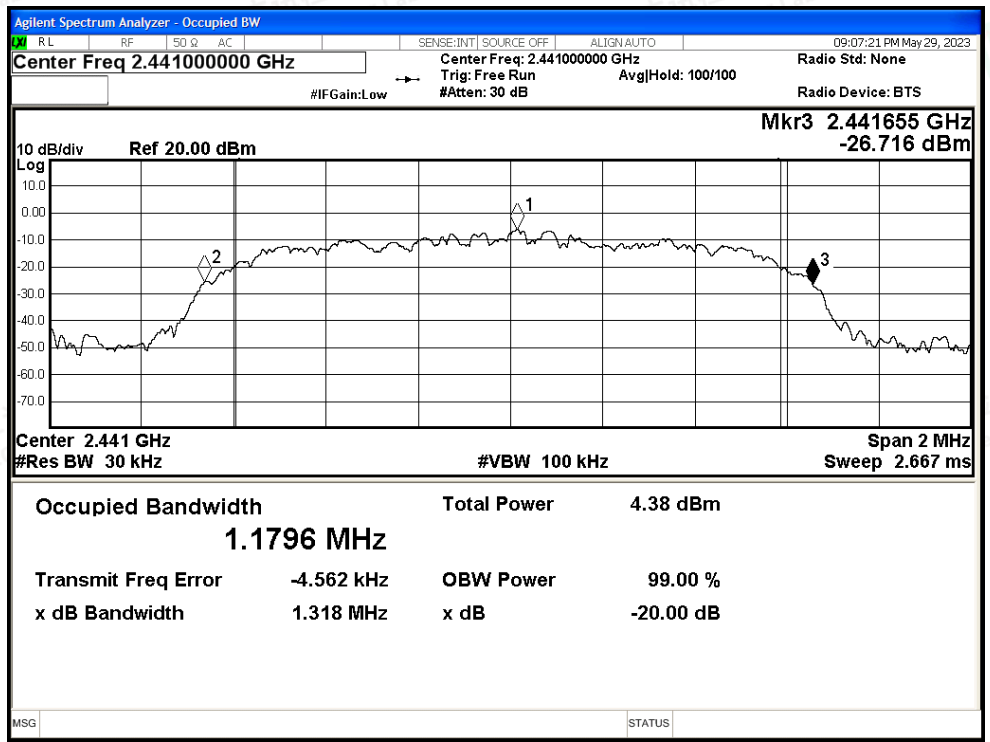


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

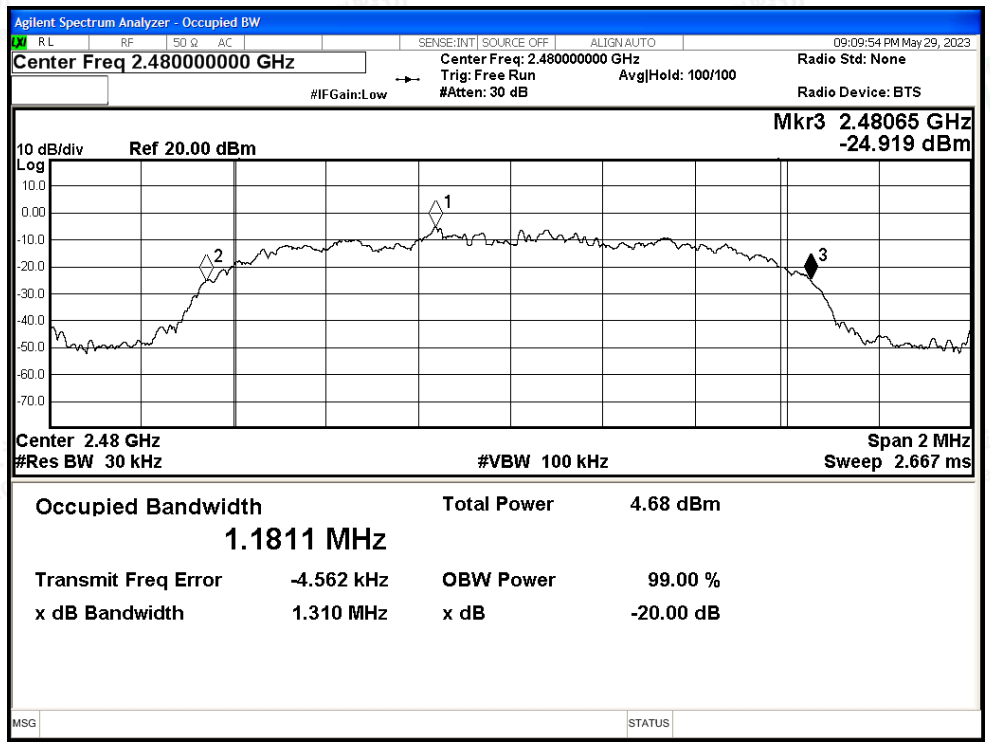




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

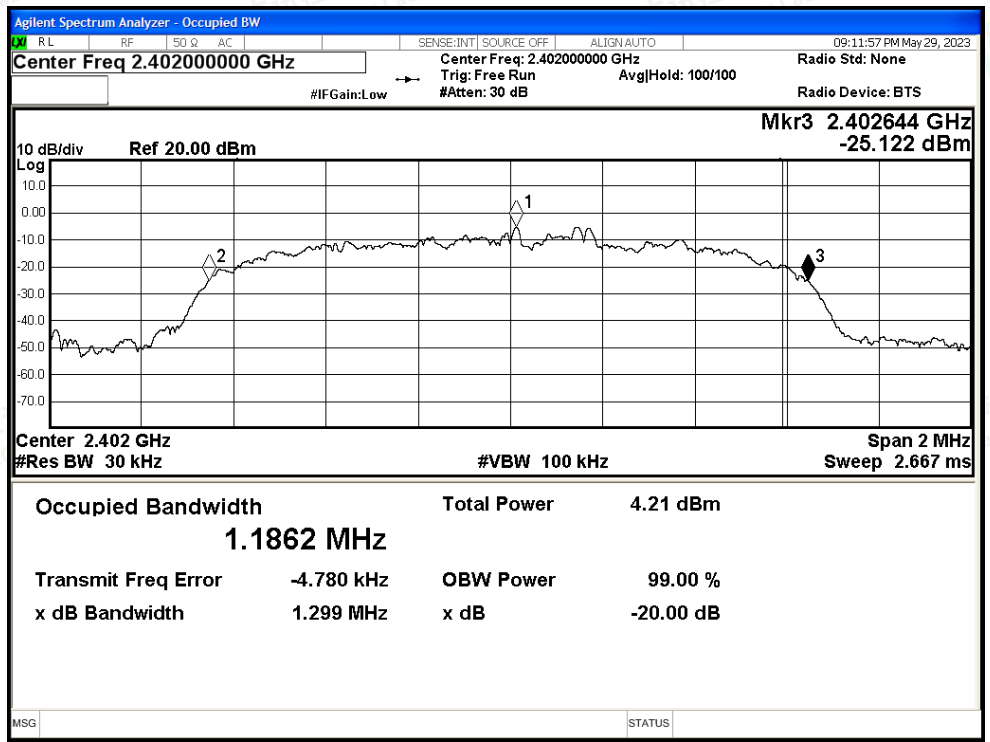


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

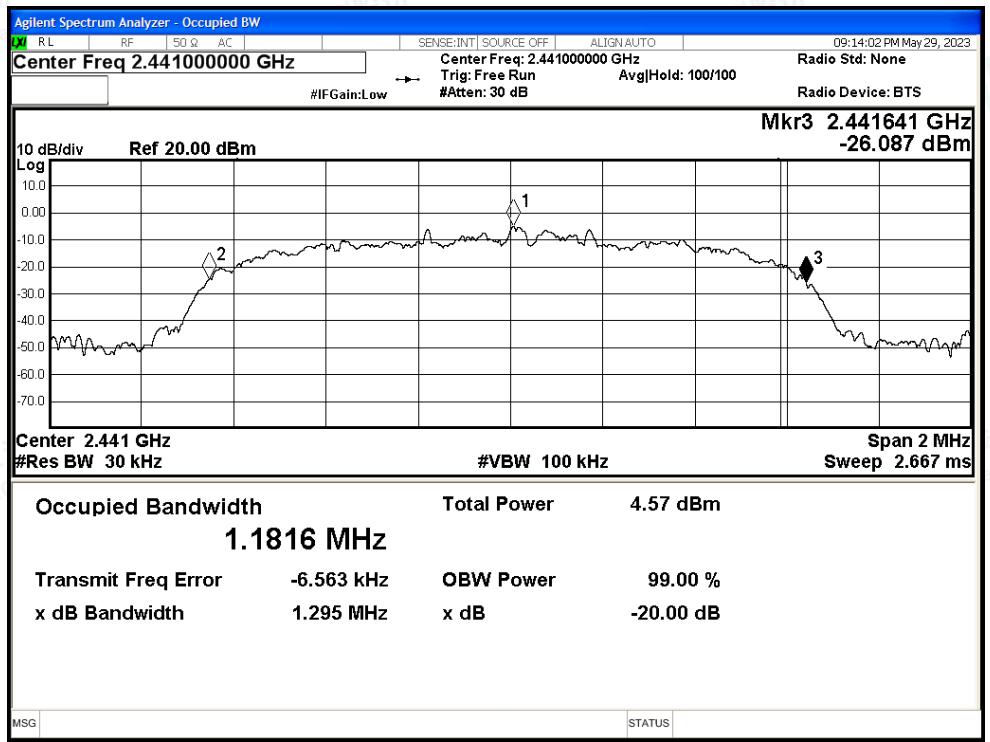


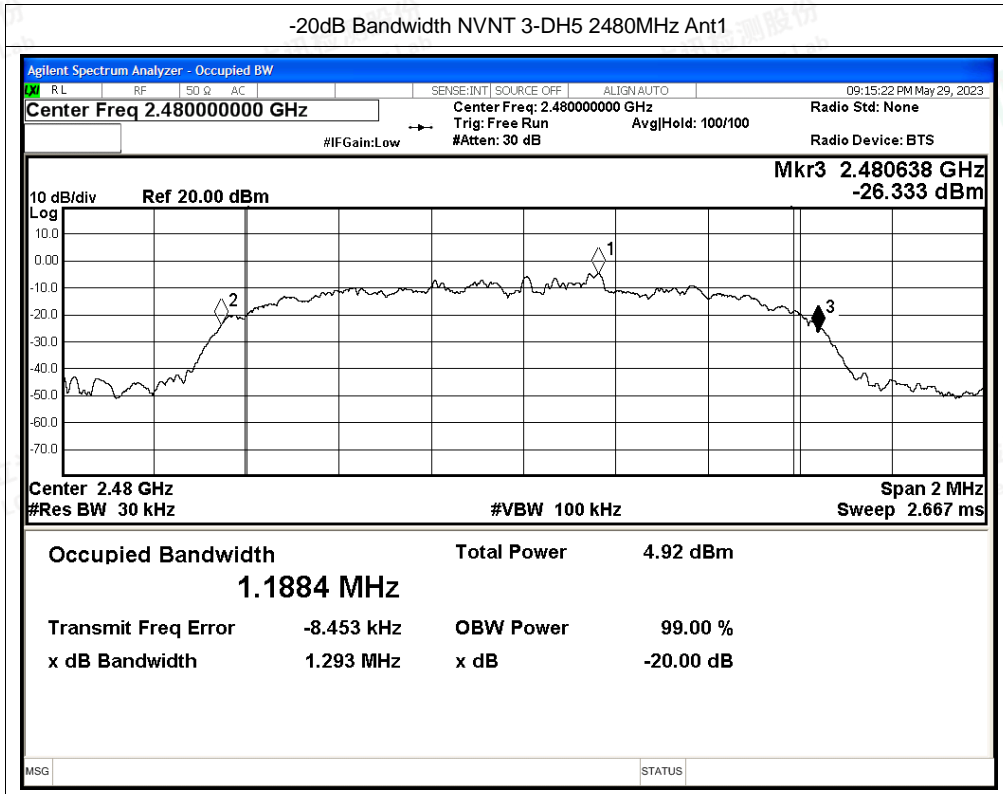


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-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	-0.02	21	Pass
NVNT	1-DH5	2441	Ant1	0.33	21	Pass
NVNT	1-DH5	2480	Ant1	0.47	21	Pass
NVNT	2-DH5	2402	Ant1	-0.26	21	Pass
NVNT	2-DH5	2441	Ant1	0.11	21	Pass
NVNT	2-DH5	2480	Ant1	0.24	21	Pass
NVNT	3-DH5	2402	Ant1	-0.16	21	Pass
NVNT	3-DH5	2441	Ant1	0.16	21	Pass
NVNT	3-DH5	2480	Ant1	0.59	21	Pass

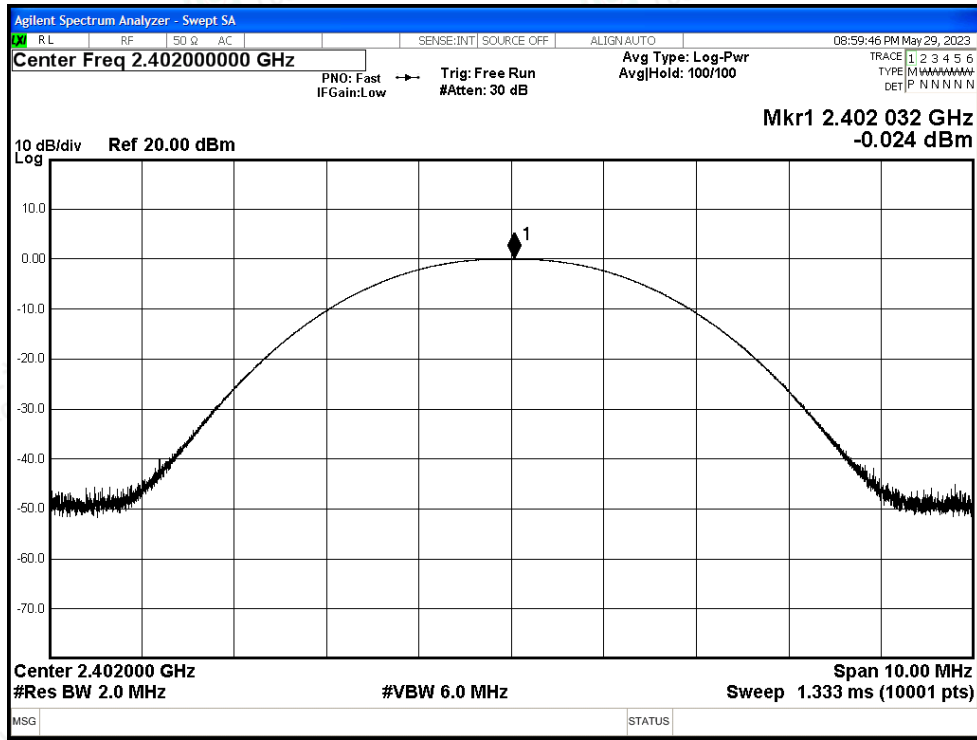




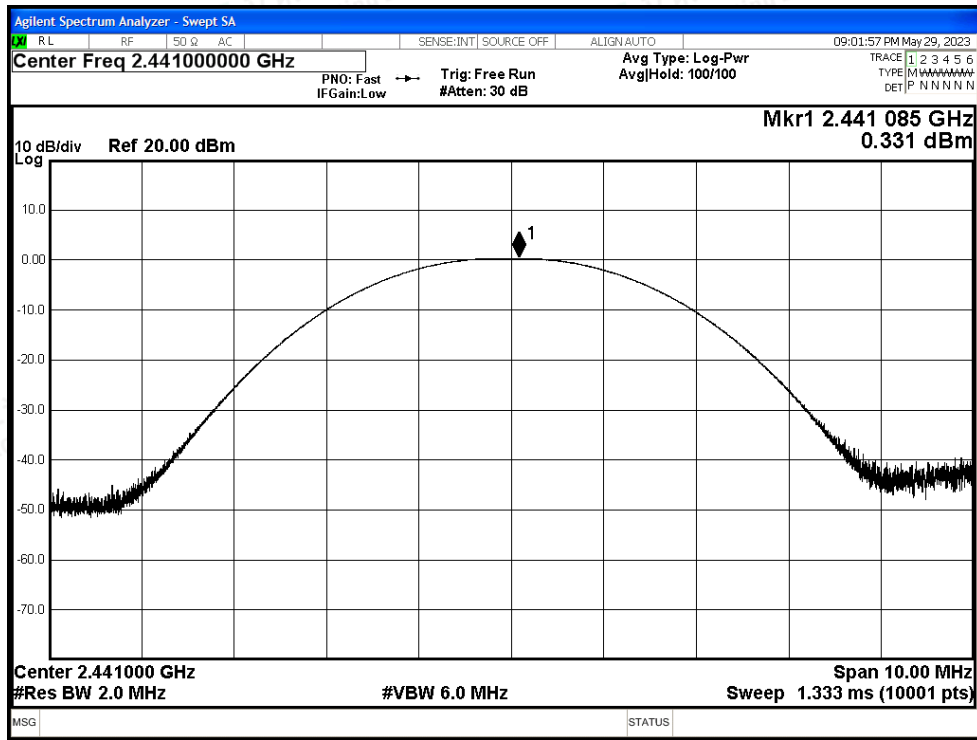


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

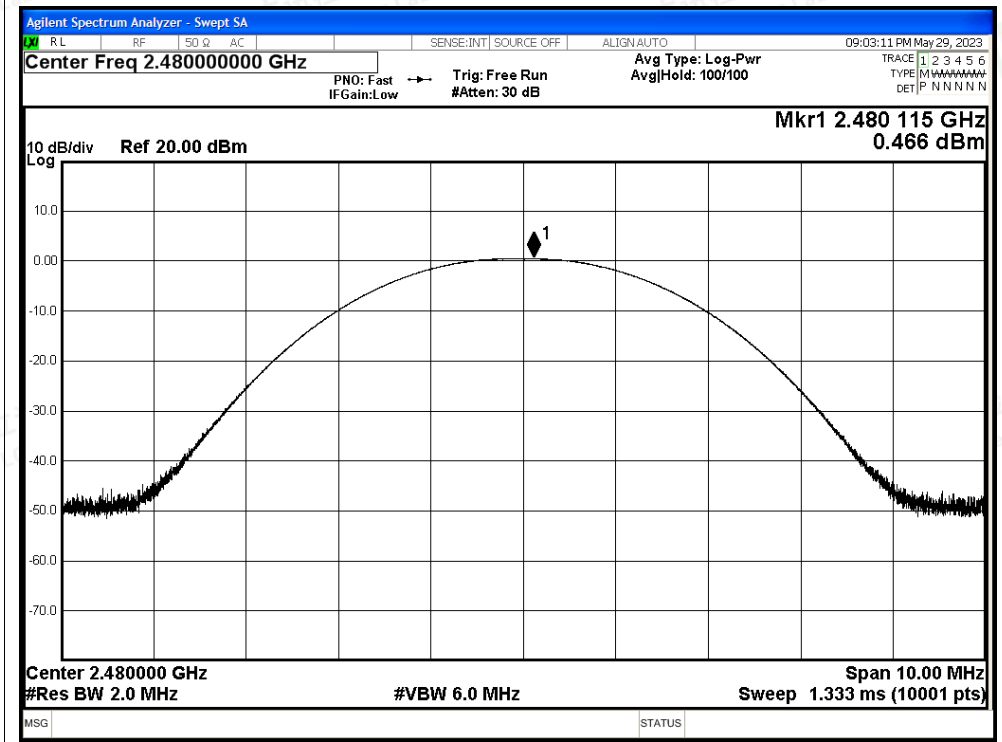


Power NVNT 1-DH5 2441MHz Ant1

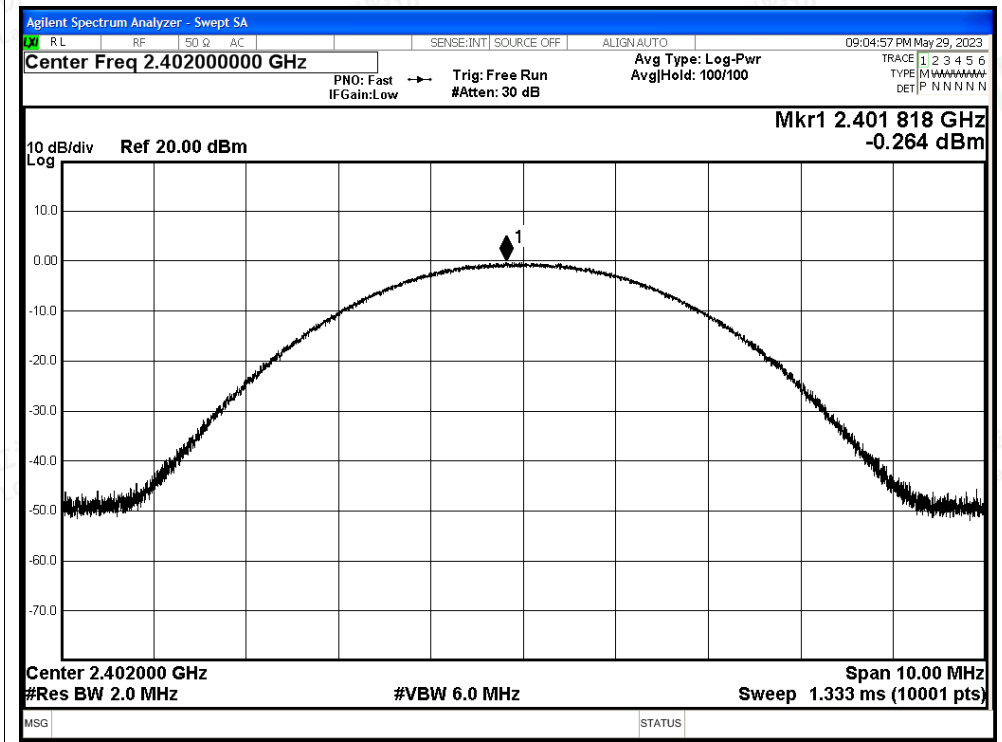




Power NVNT 1-DH5 2480MHz Ant1

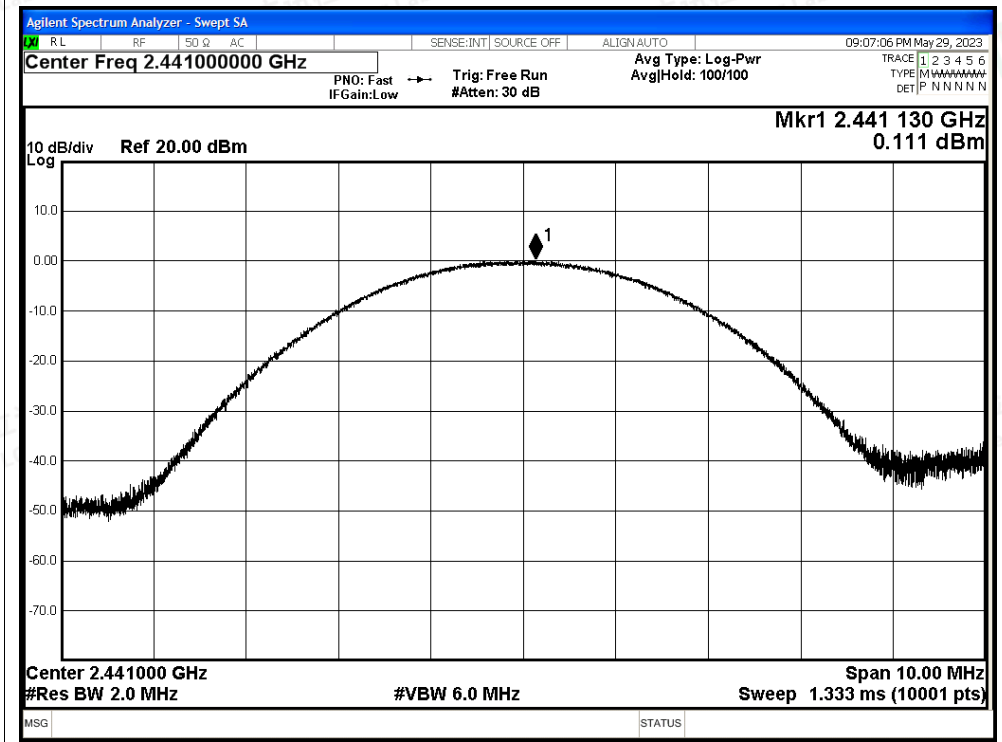


Power NVNT 2-DH5 2402MHz Ant1

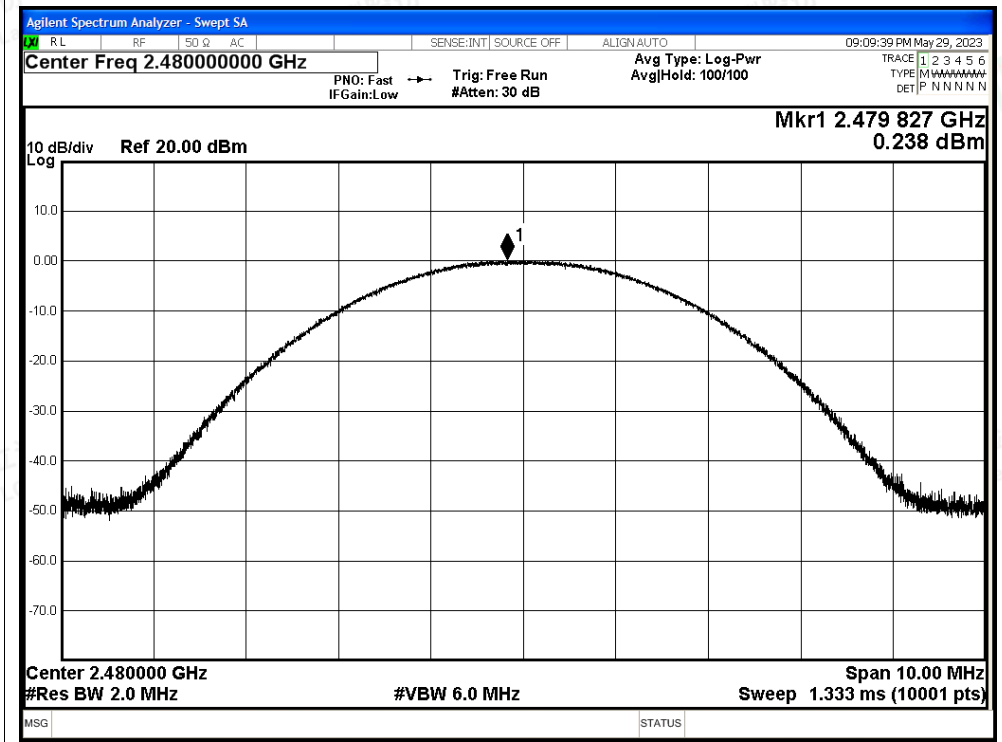




Power NVNT 2-DH5 2441MHz Ant1

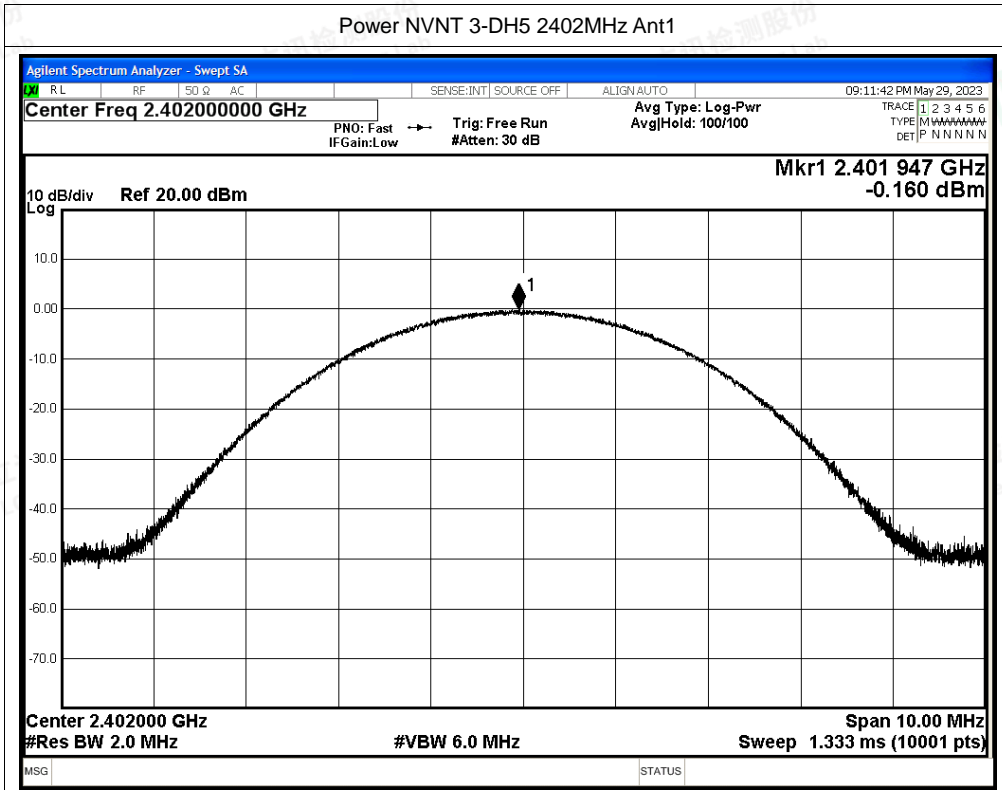


Power NVNT 2-DH5 2480MHz Ant1

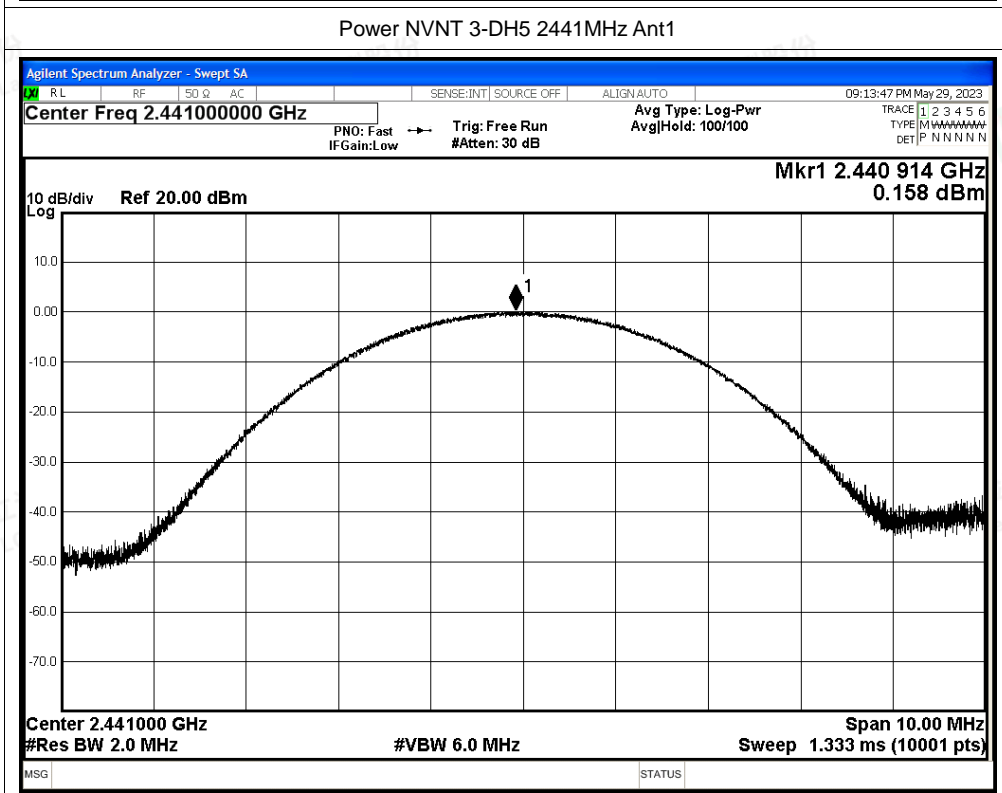


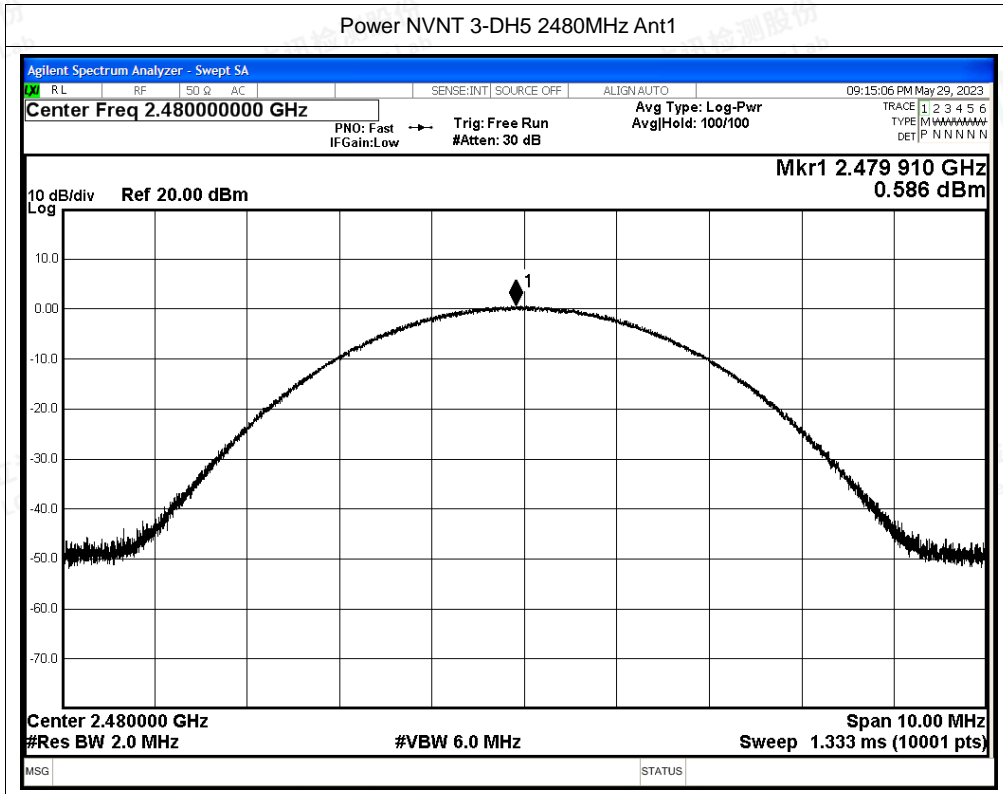


Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1







### A.3 Carrier Frequencies Separation

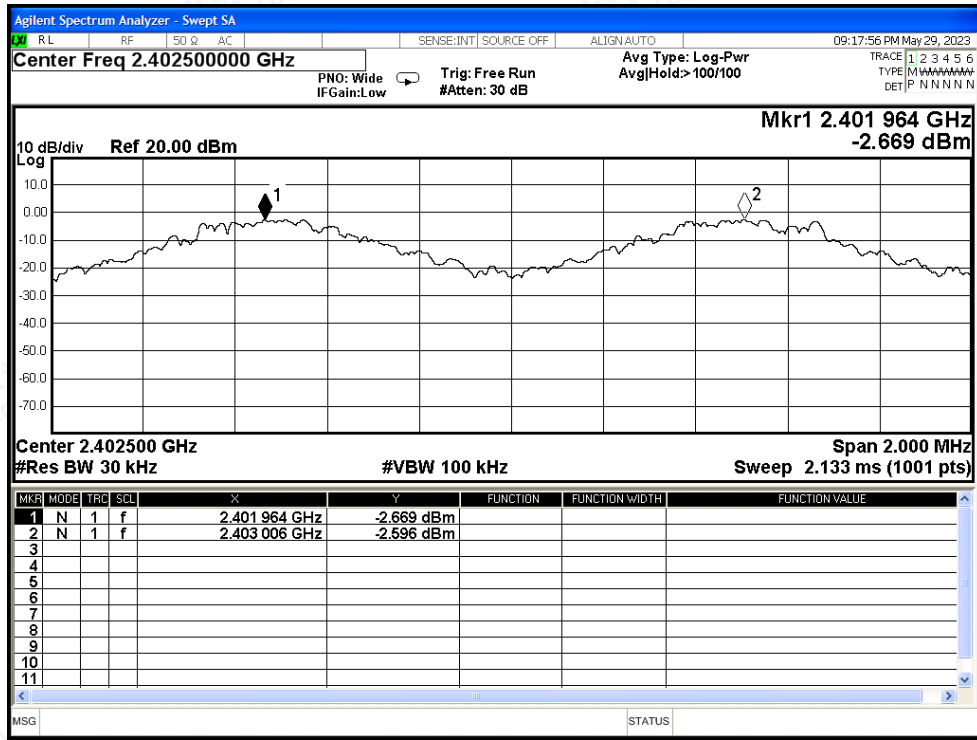
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.964	2403.006	1.042	0.685	Pass
NVNT	2-DH5	Ant1	2401.934	2403.004	1.07	0.879	Pass
NVNT	3-DH5	Ant1	2402.016	2403.002	0.986	0.866	Pass



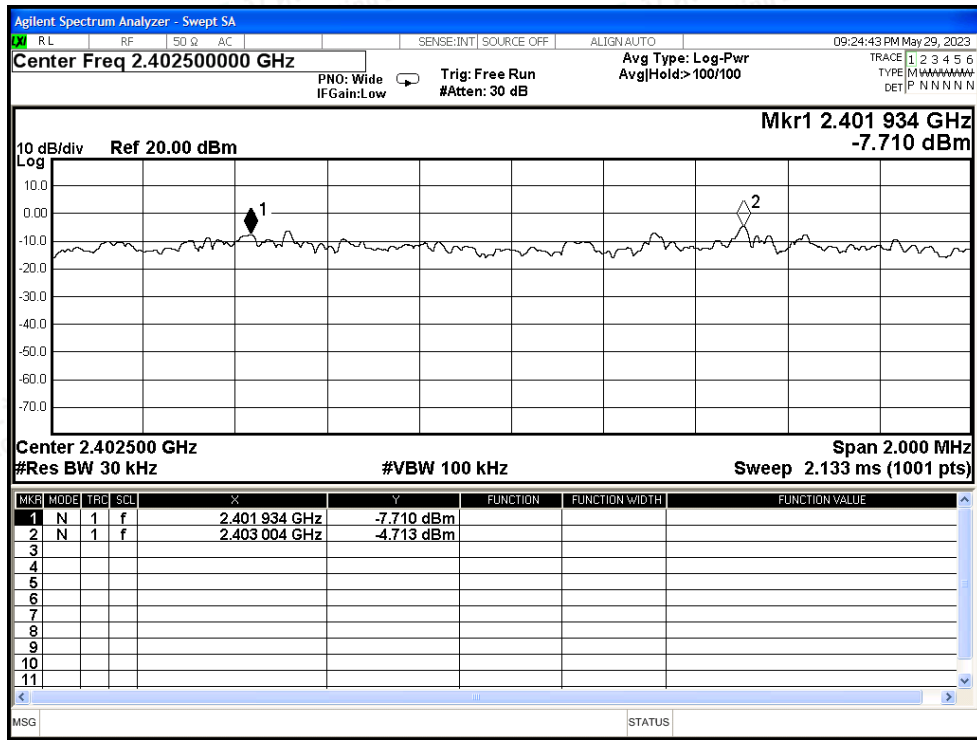


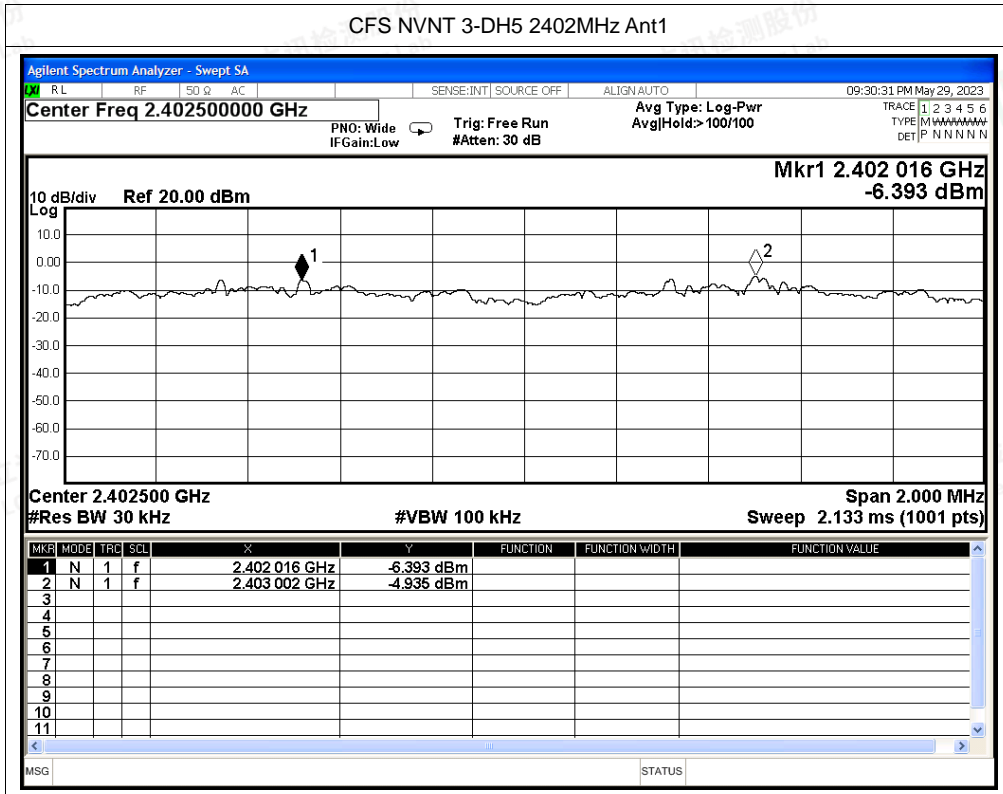
Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1









### A.4 Dwell Time

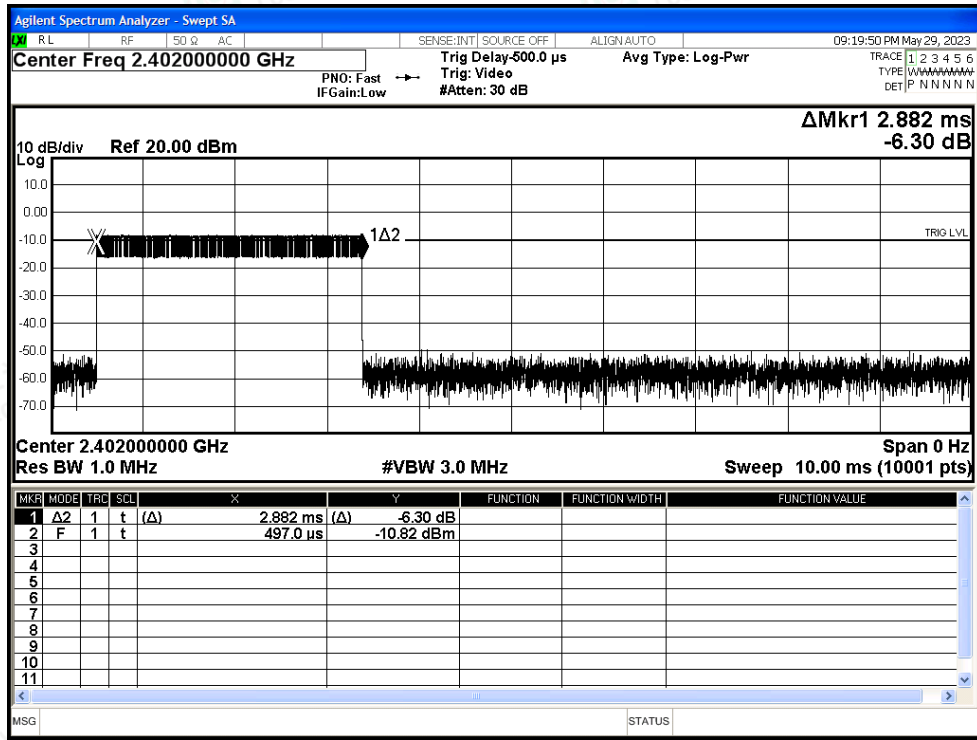
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.882	305.492	106	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.885	300.04	104	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.886	300.144	104	31600	400	Pass



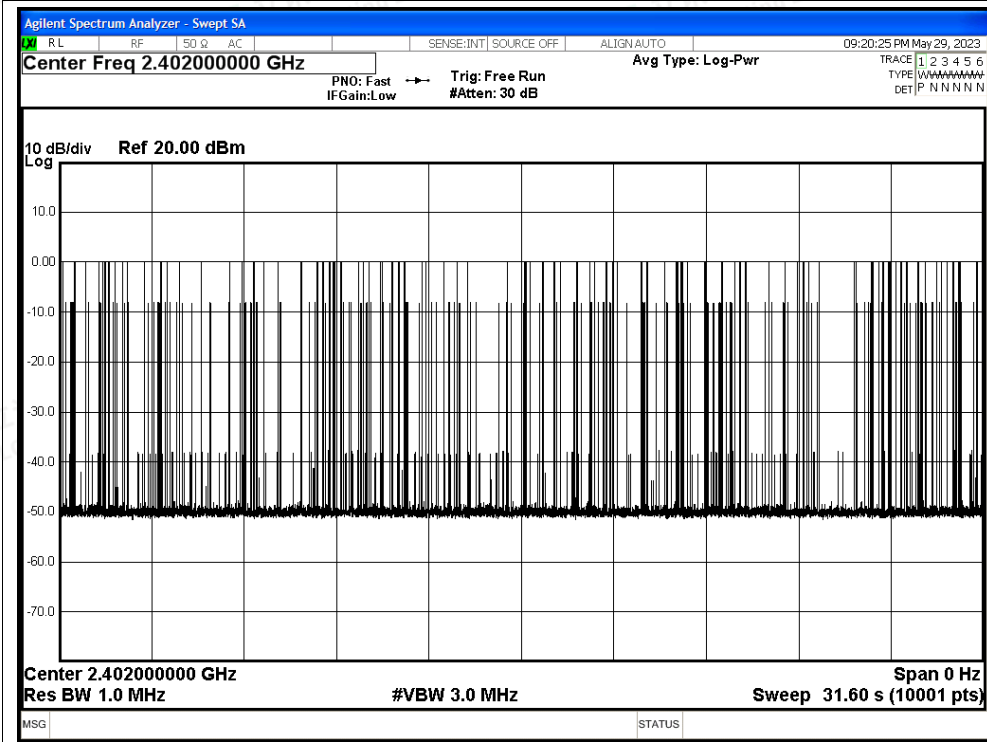


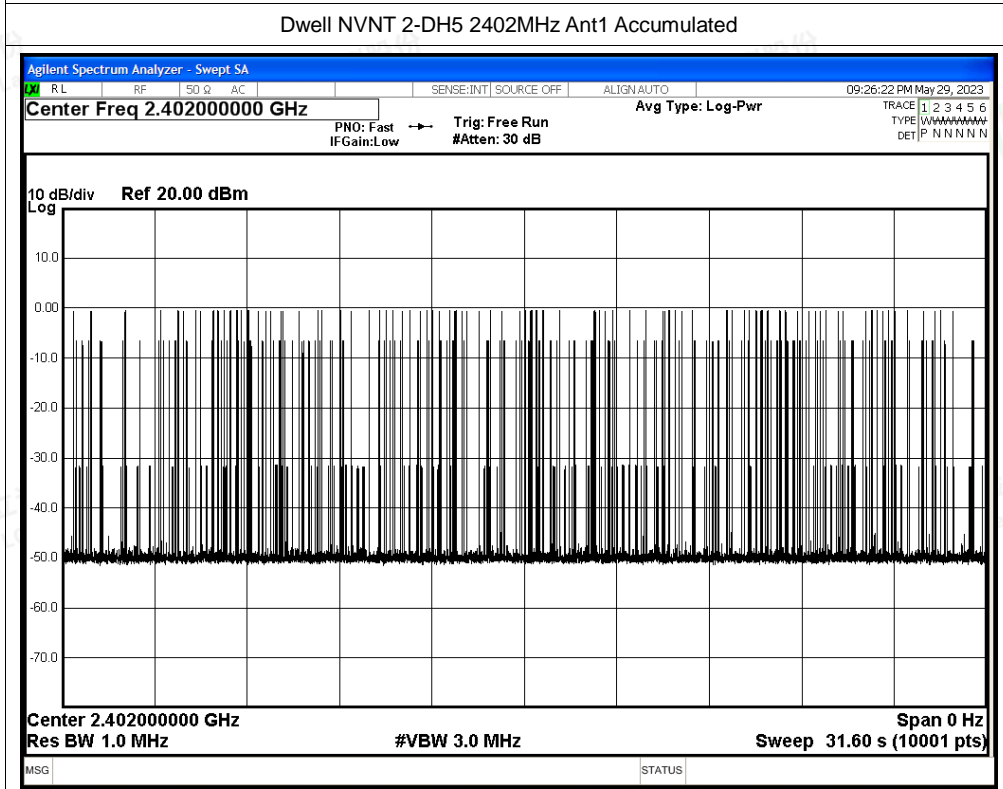
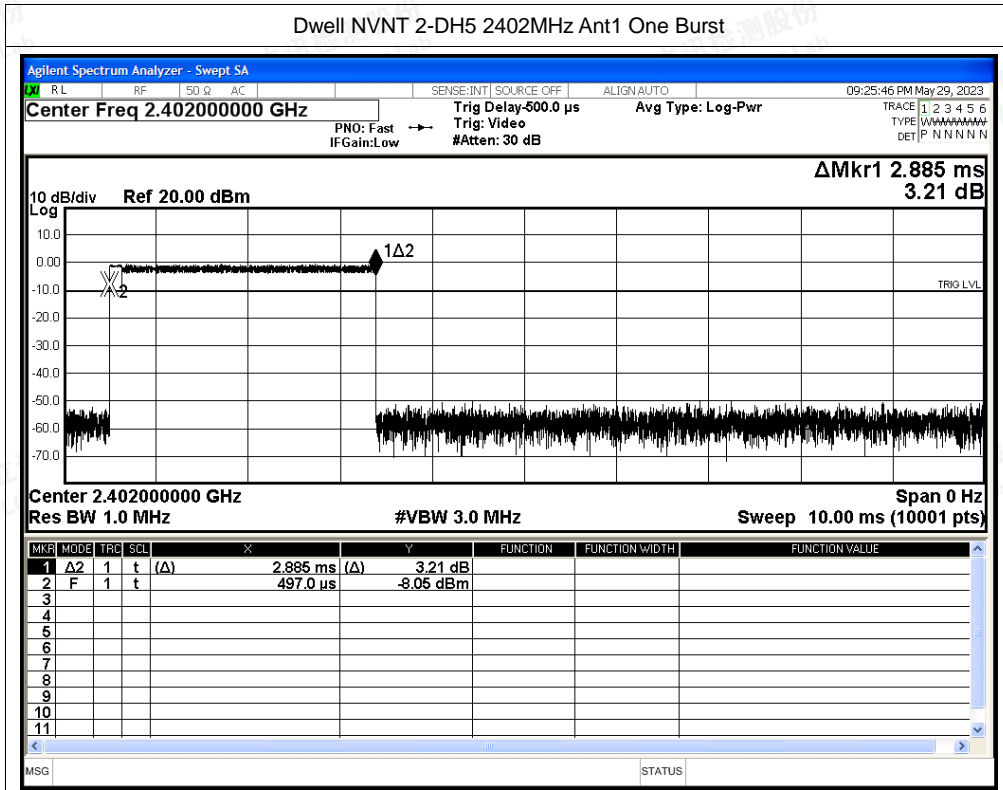
Test Graphs

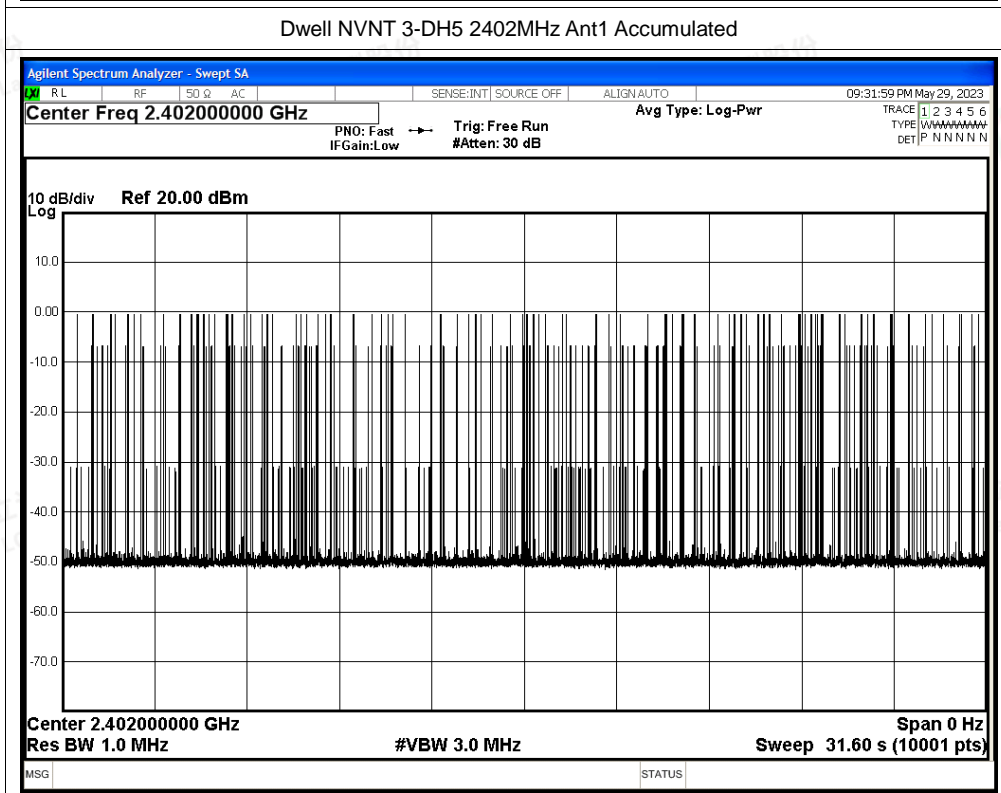
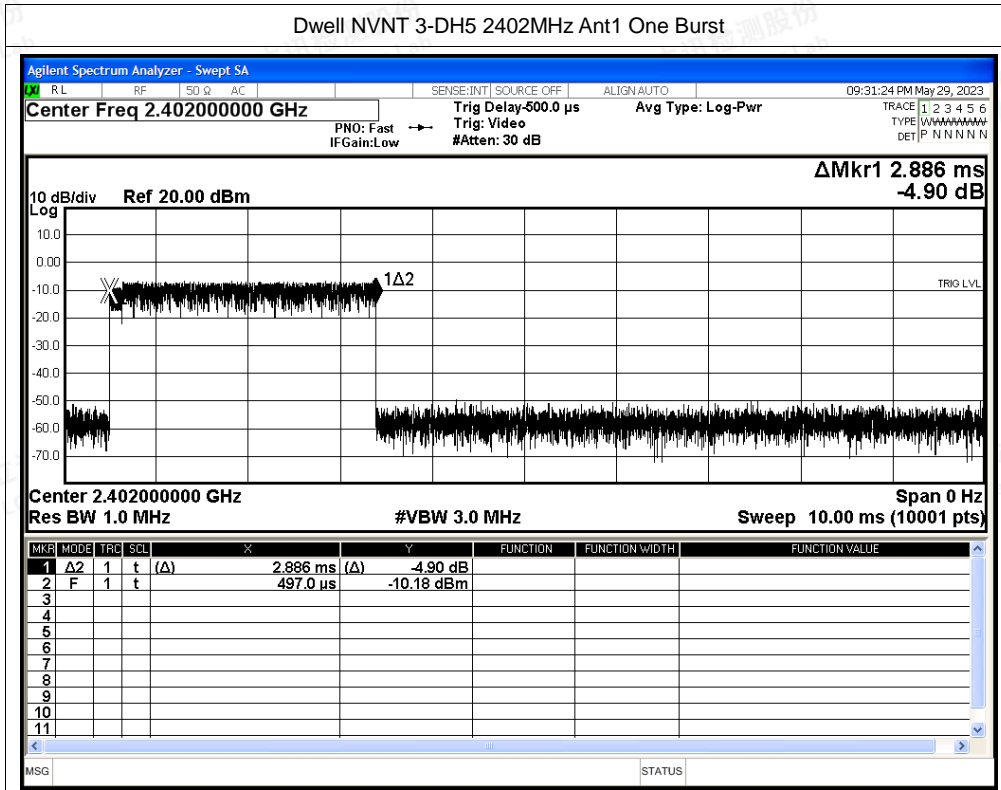
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated









## A.5 Number of Hopping Channel

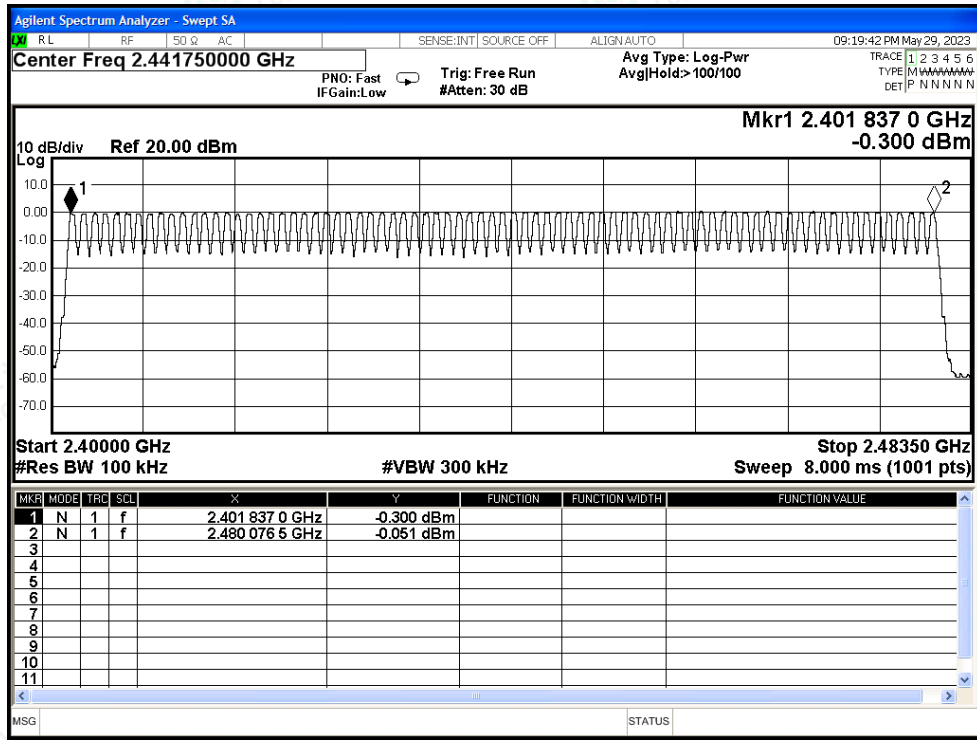
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass



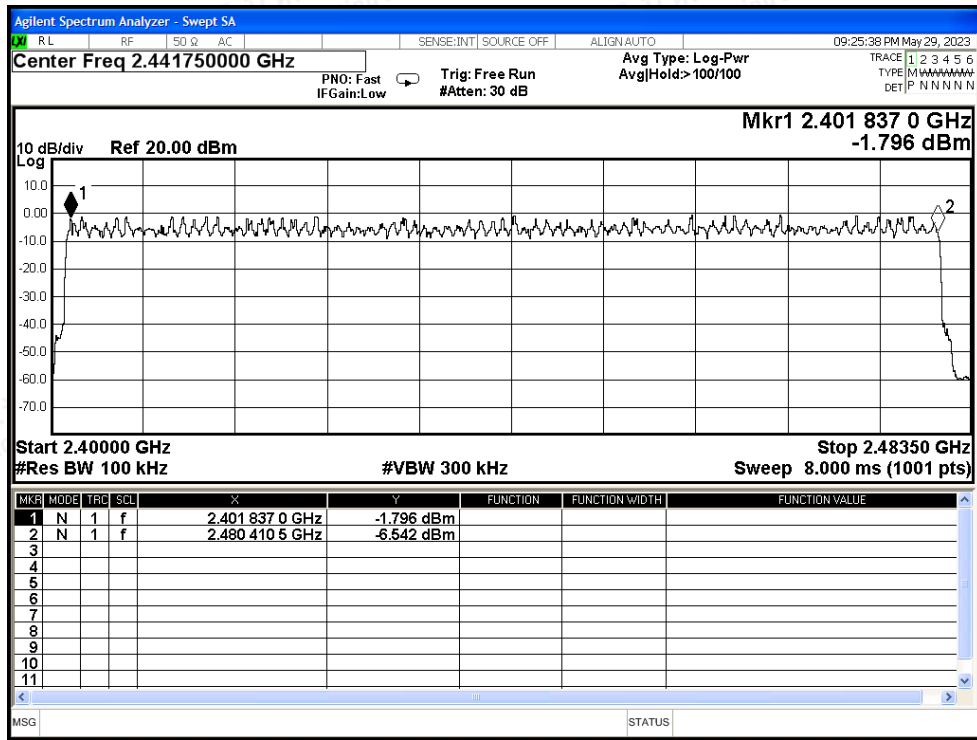


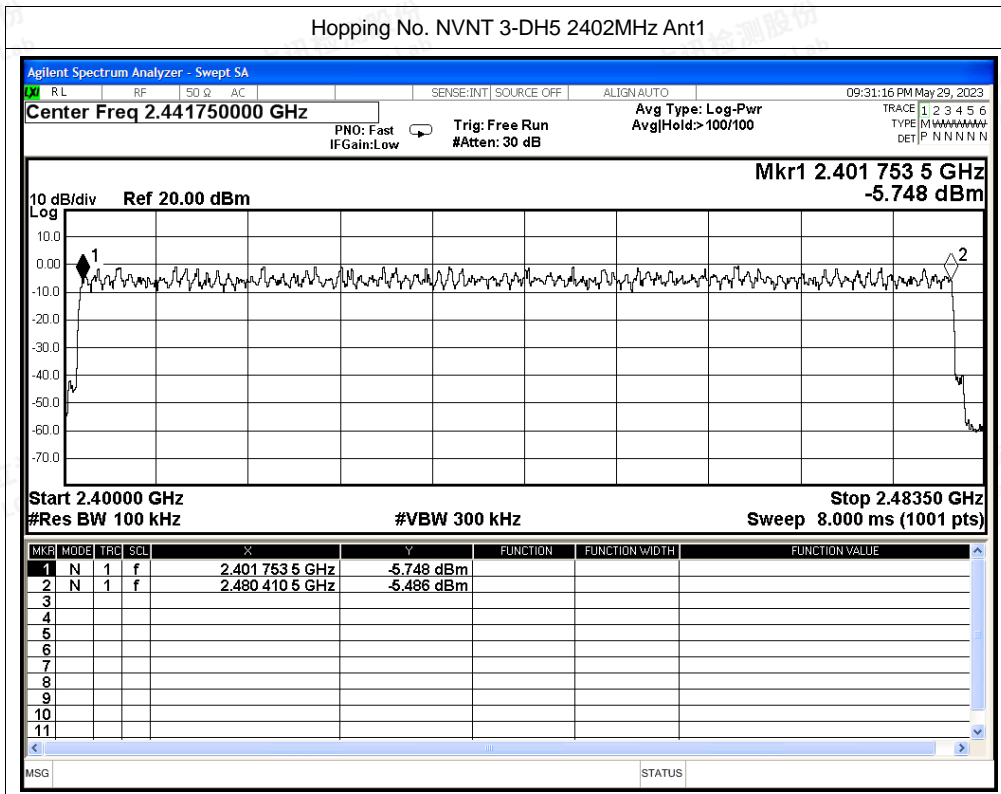
Test Graphs

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	-56.99	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-58.26	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-56.04	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-57.3	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-55.14	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-57.86	-20	Pass

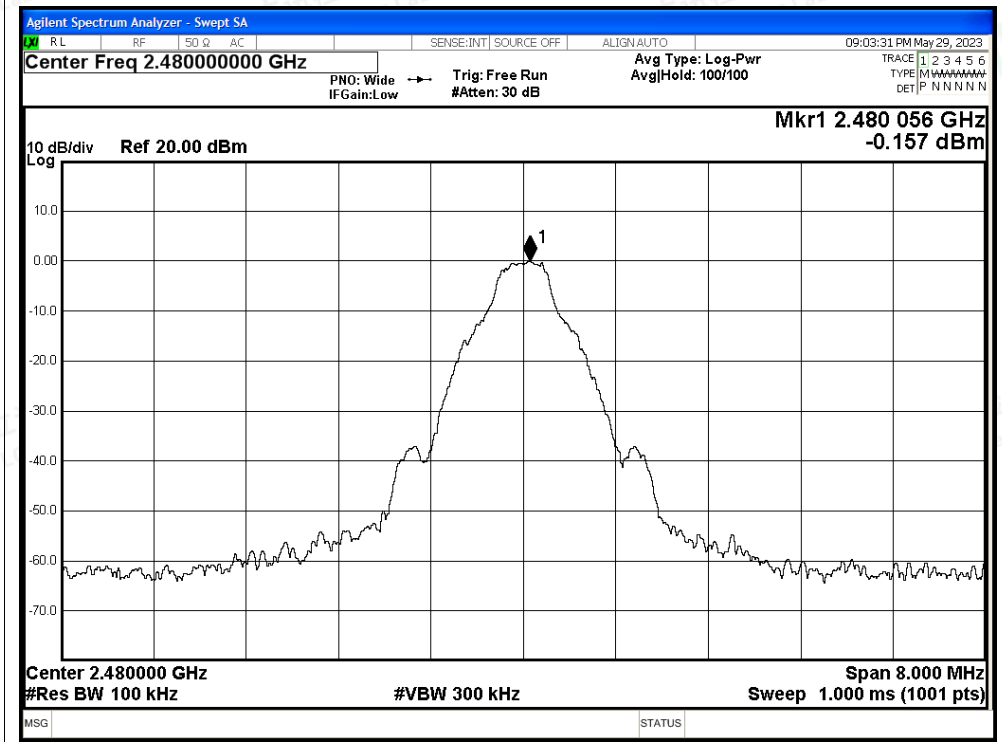




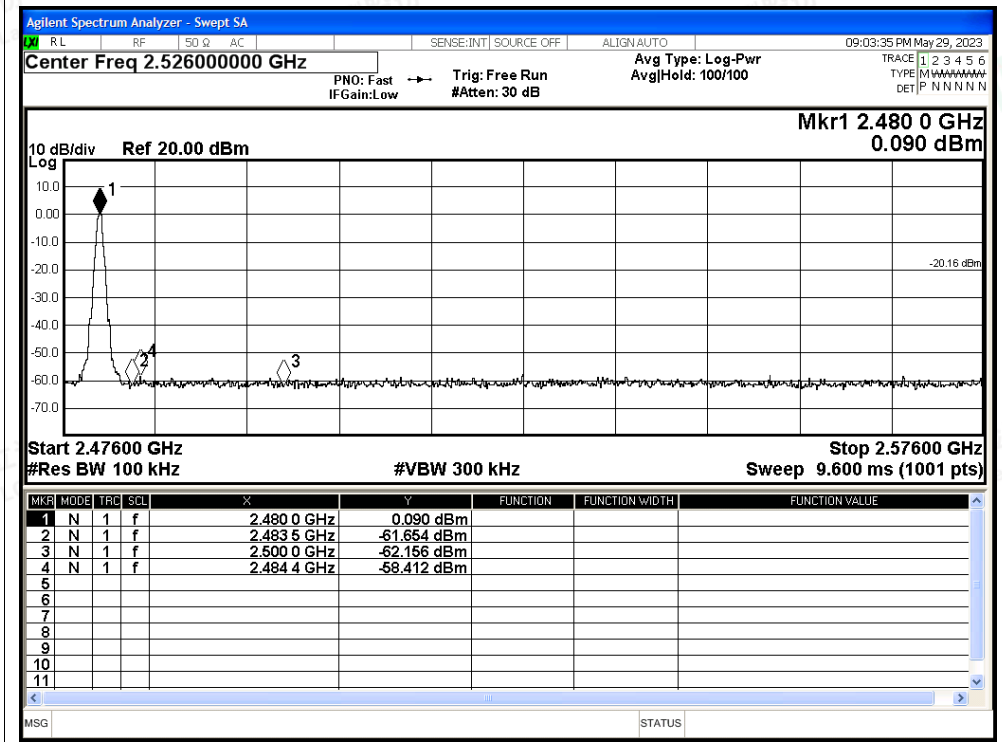




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

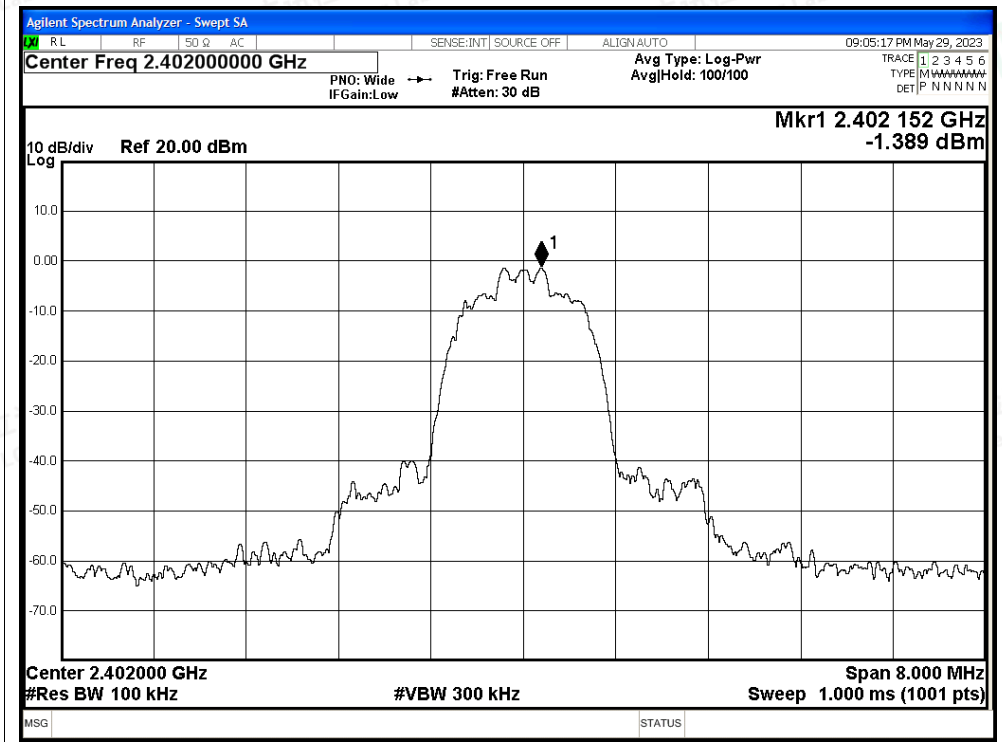


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

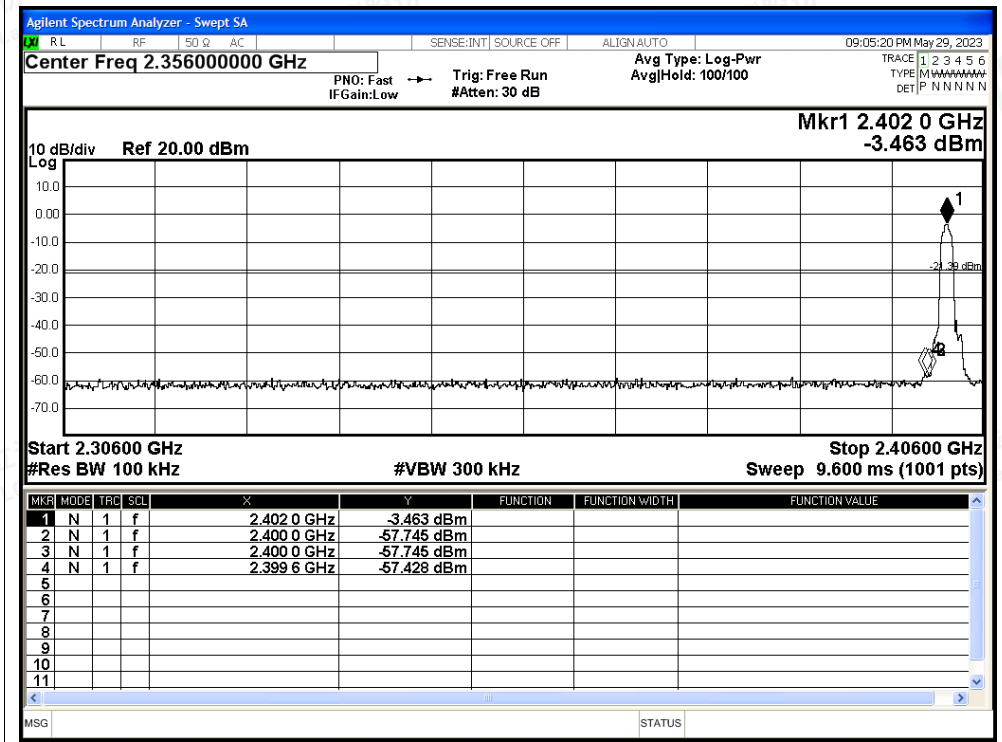




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

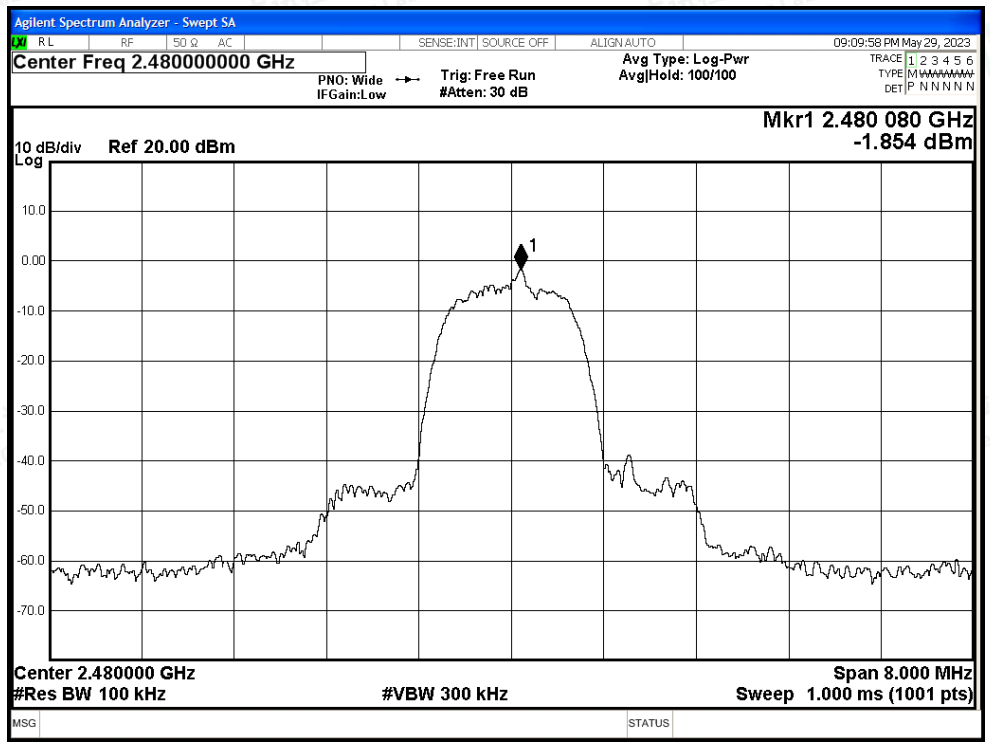


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

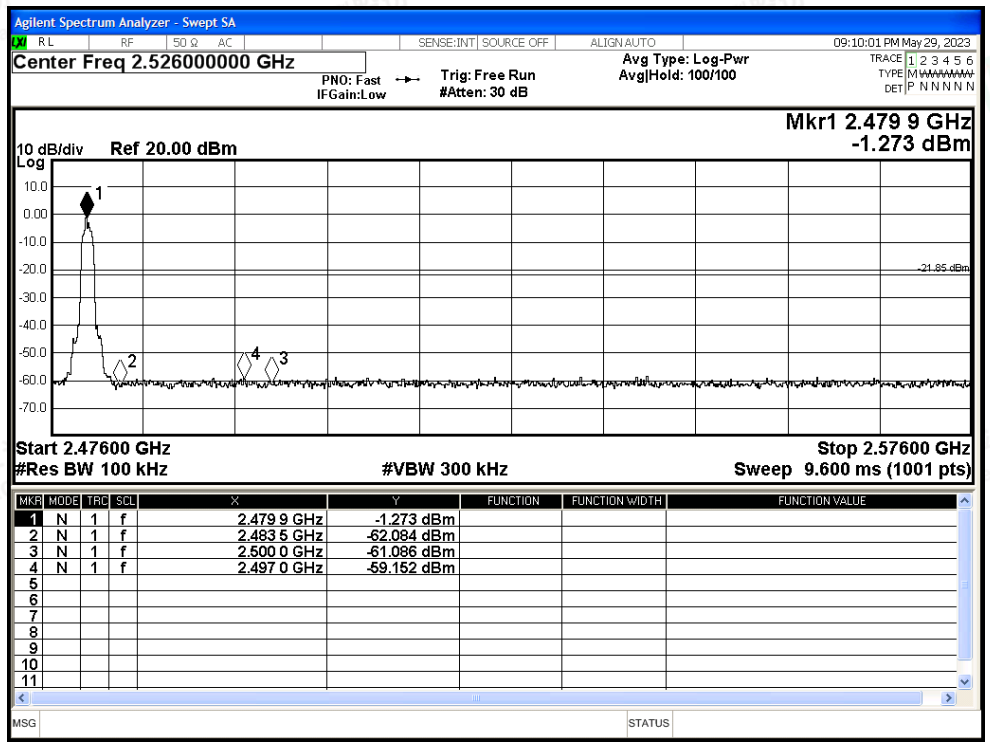




Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref

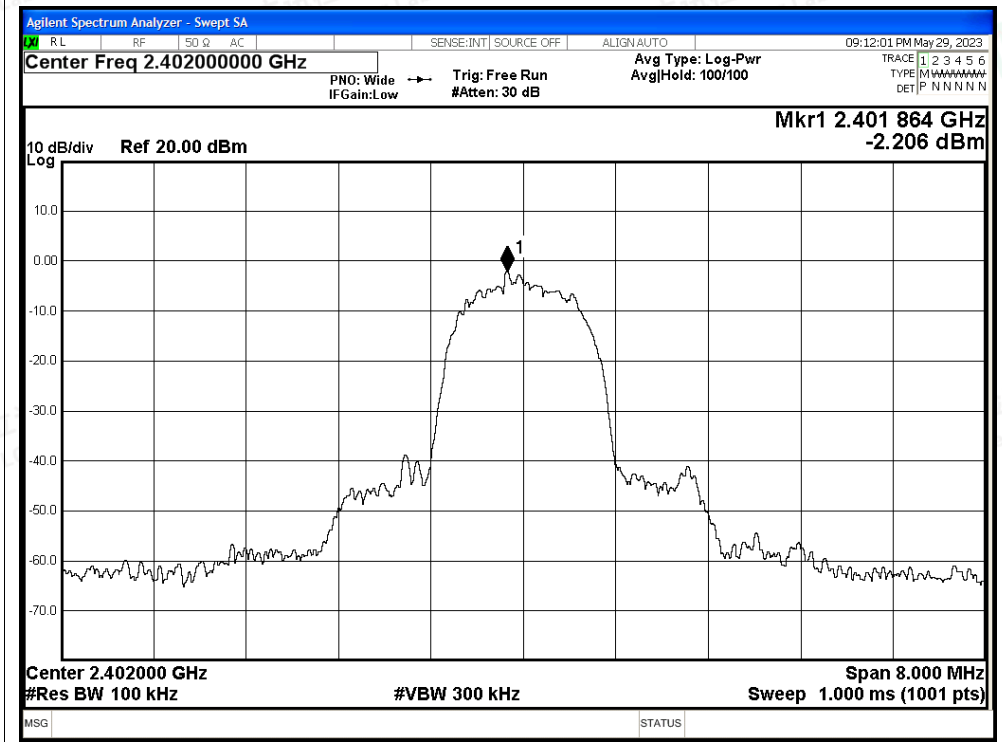


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

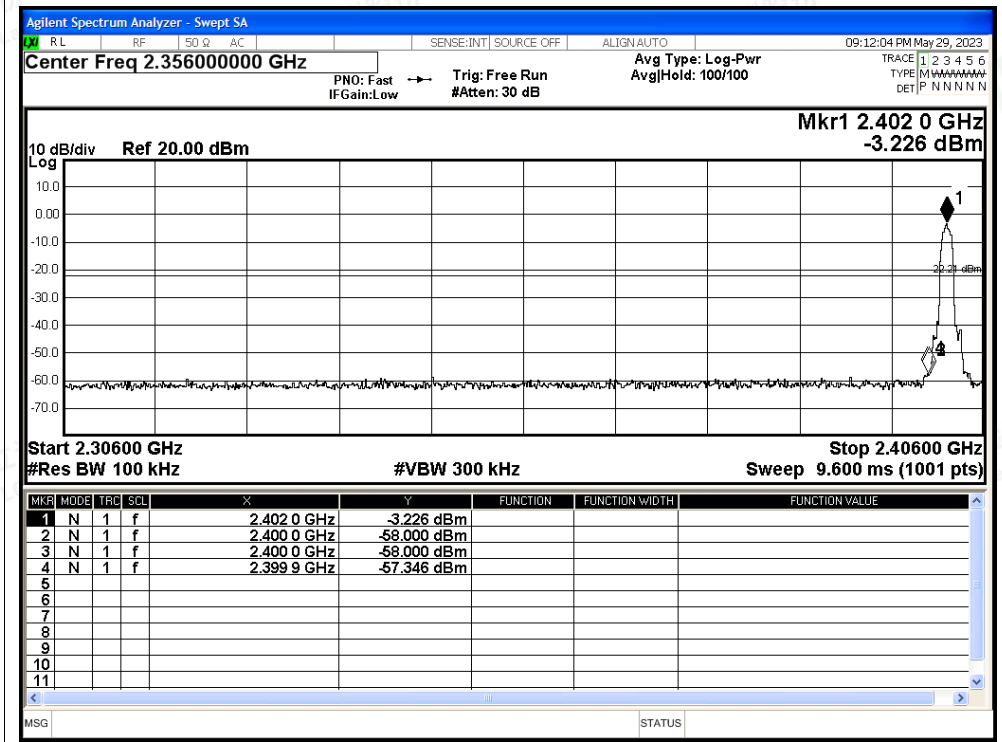




Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref

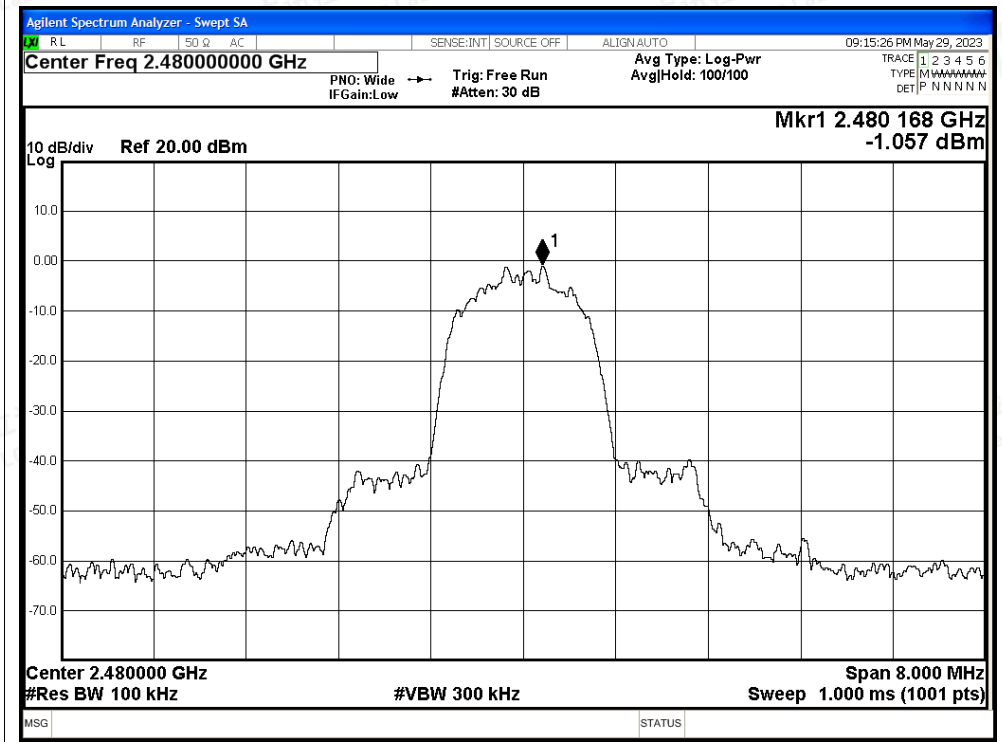


Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission

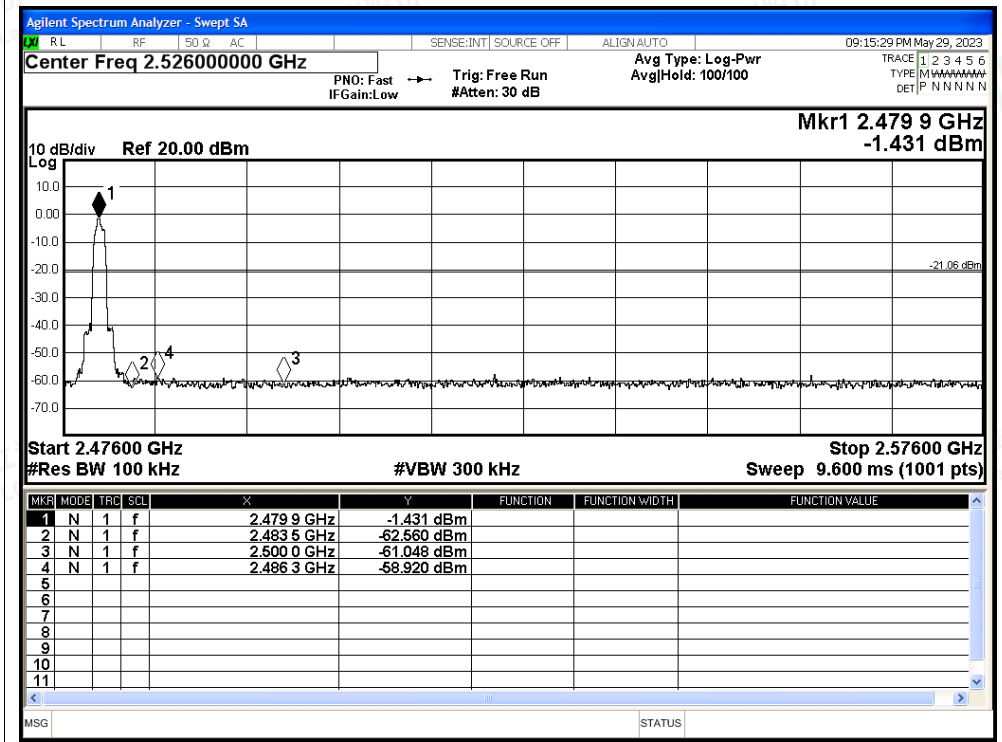




Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



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





### (Hopping)

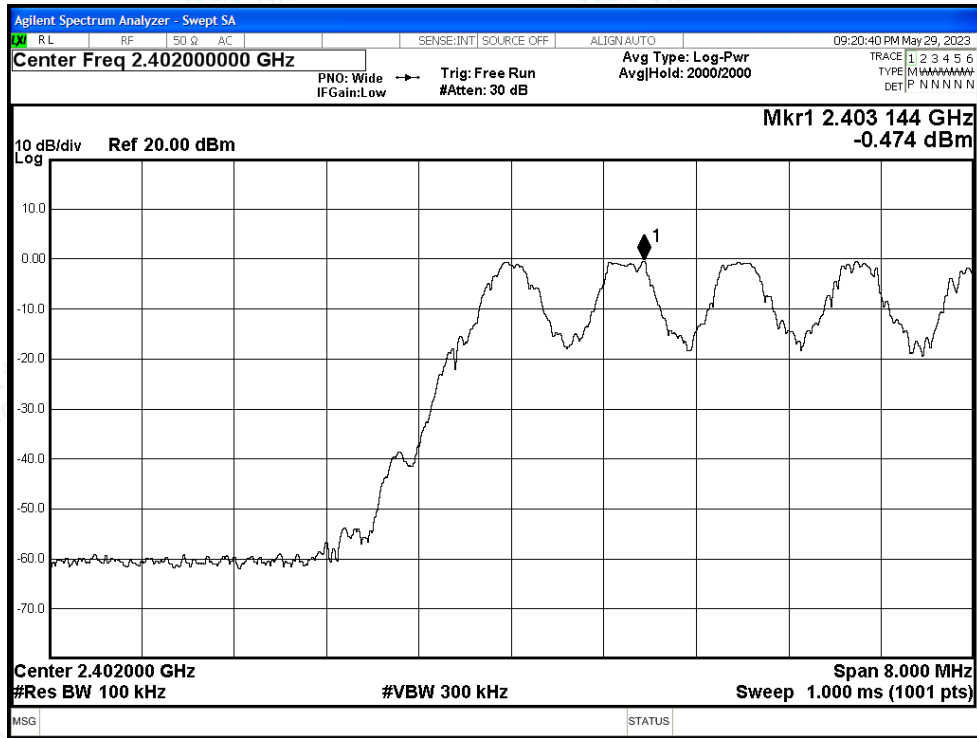
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-56.69	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-58.15	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-55.35	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-56.62	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-56.58	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-55.8	-20	Pass



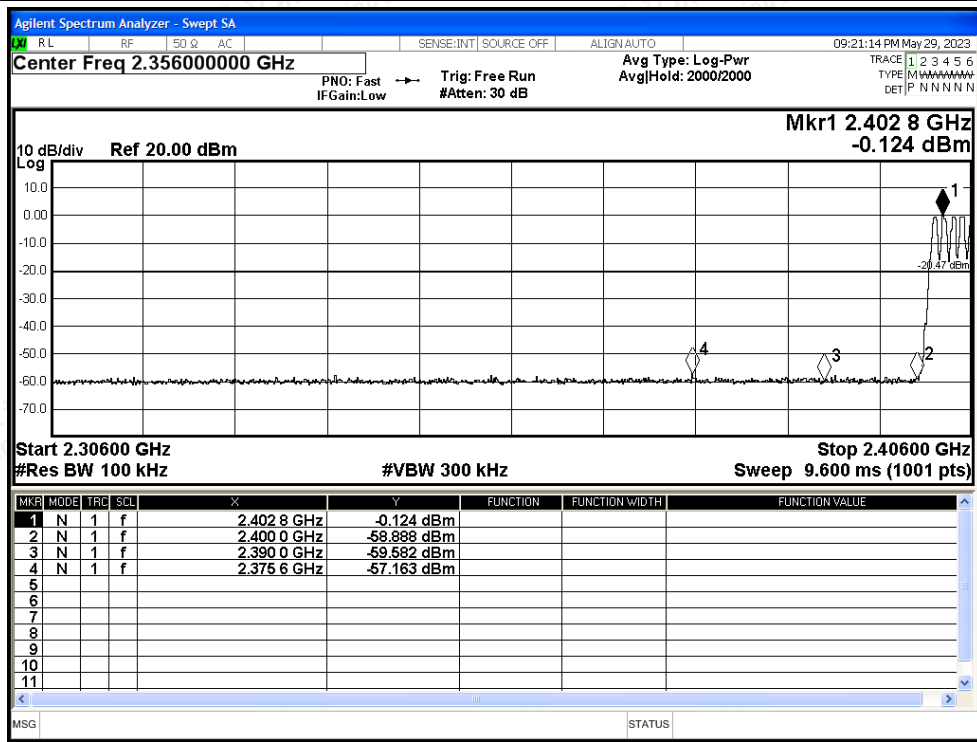


Test Graphs

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



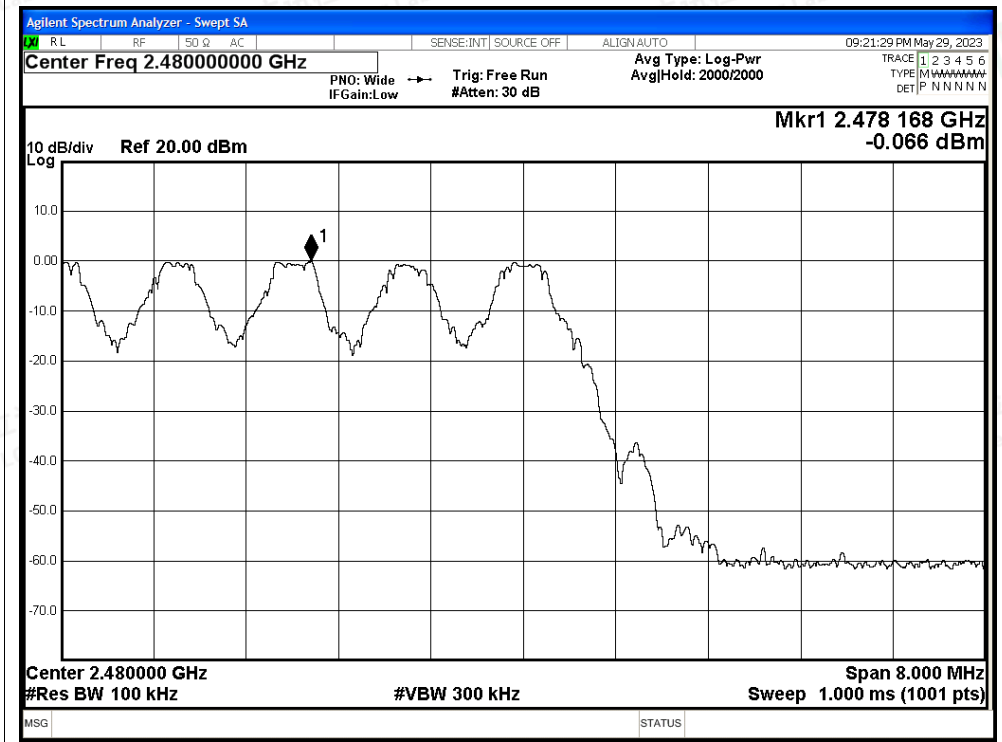
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



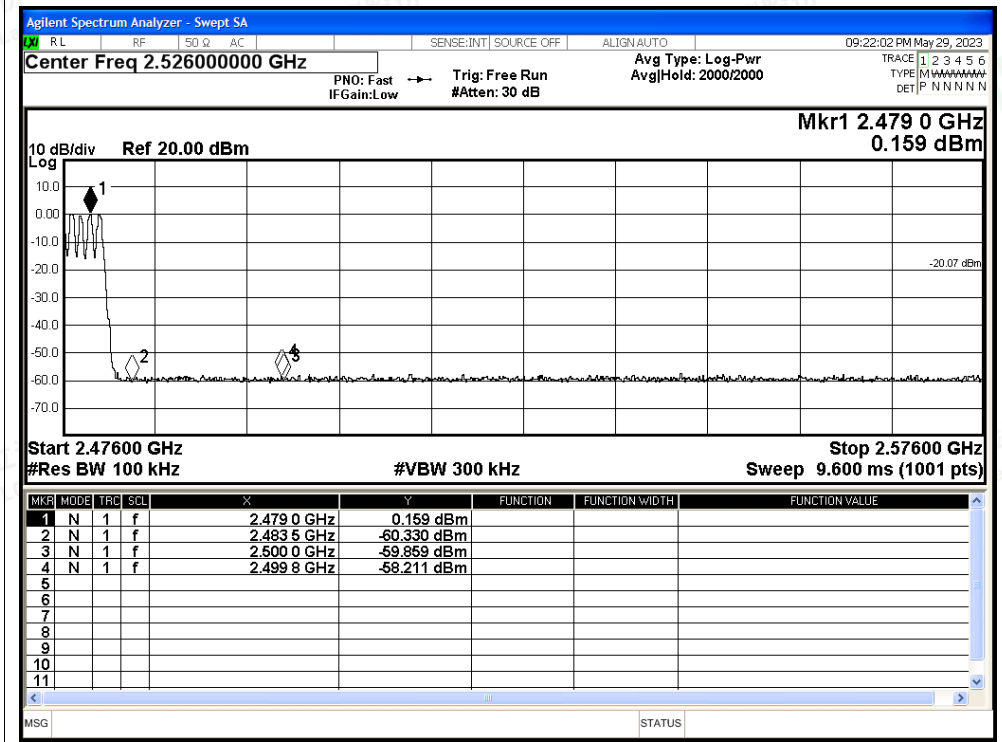




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref

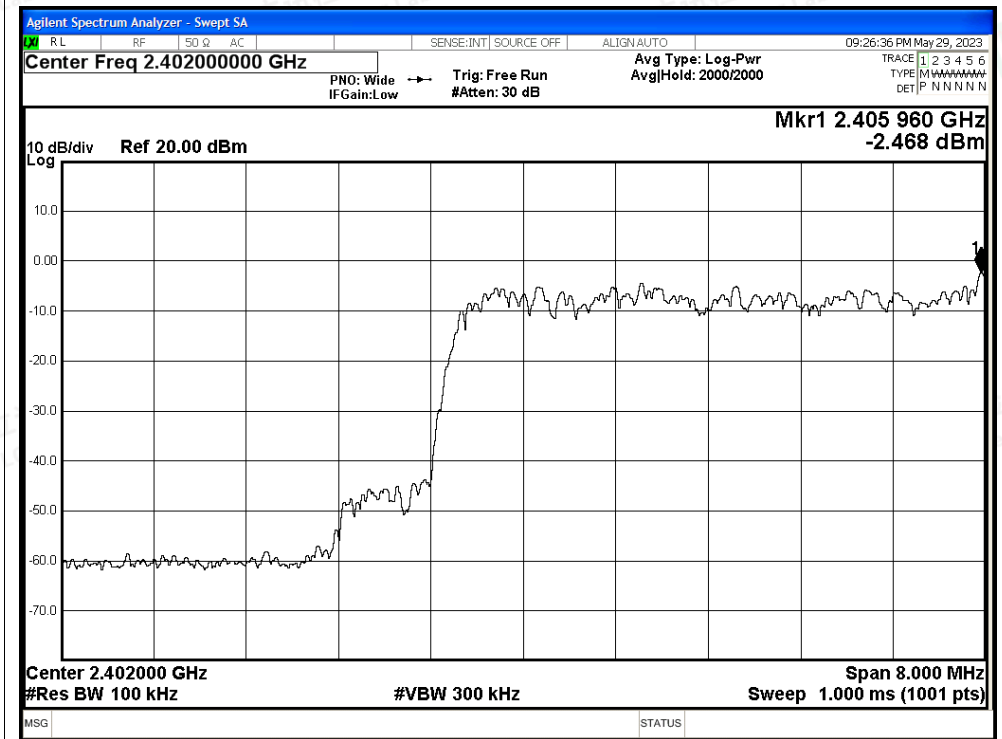


Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission

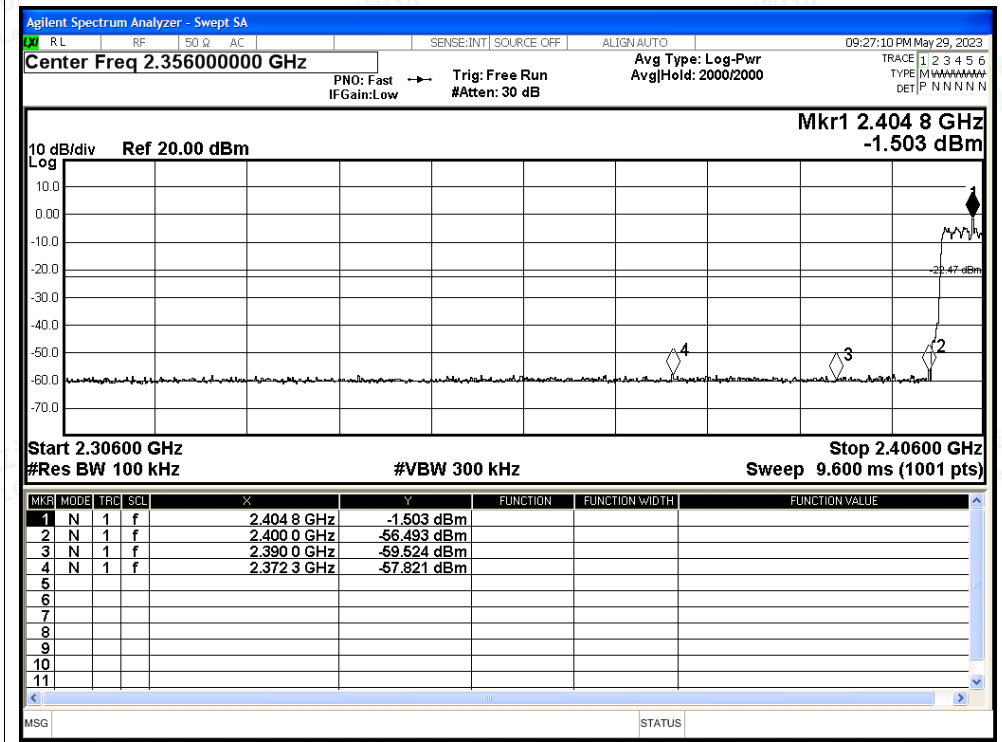




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



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

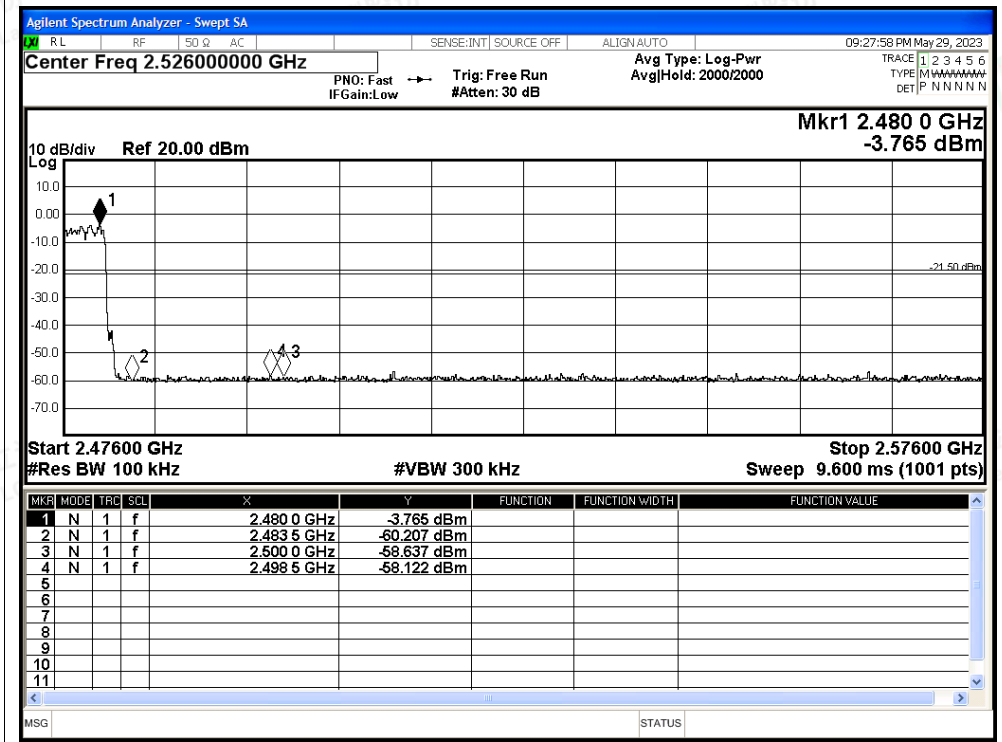




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref

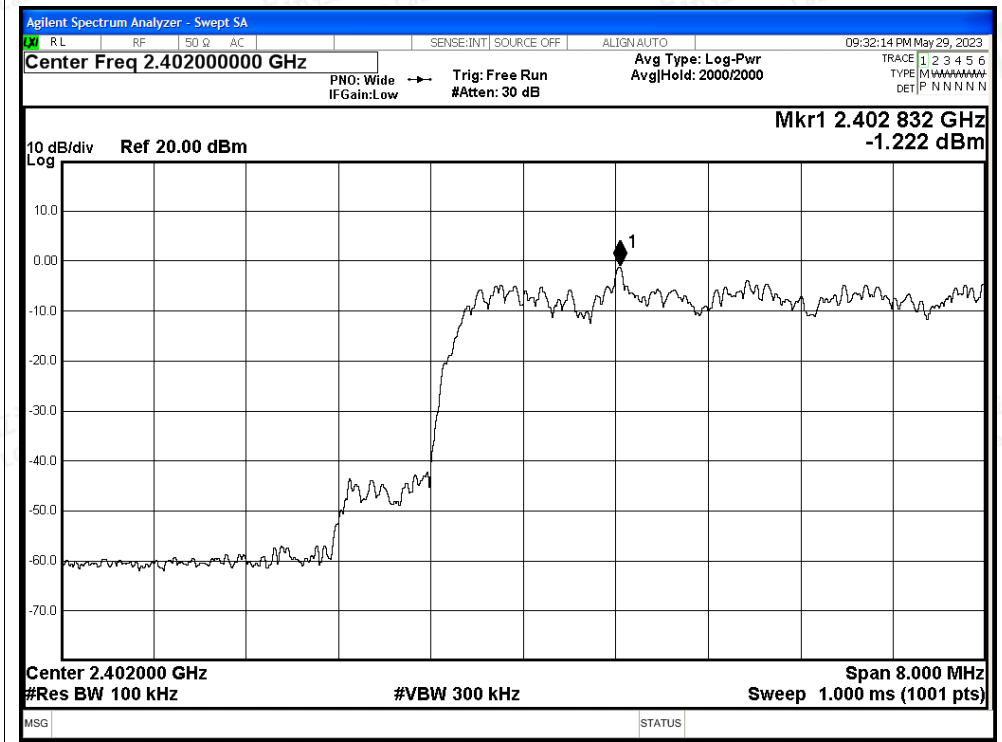


Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission

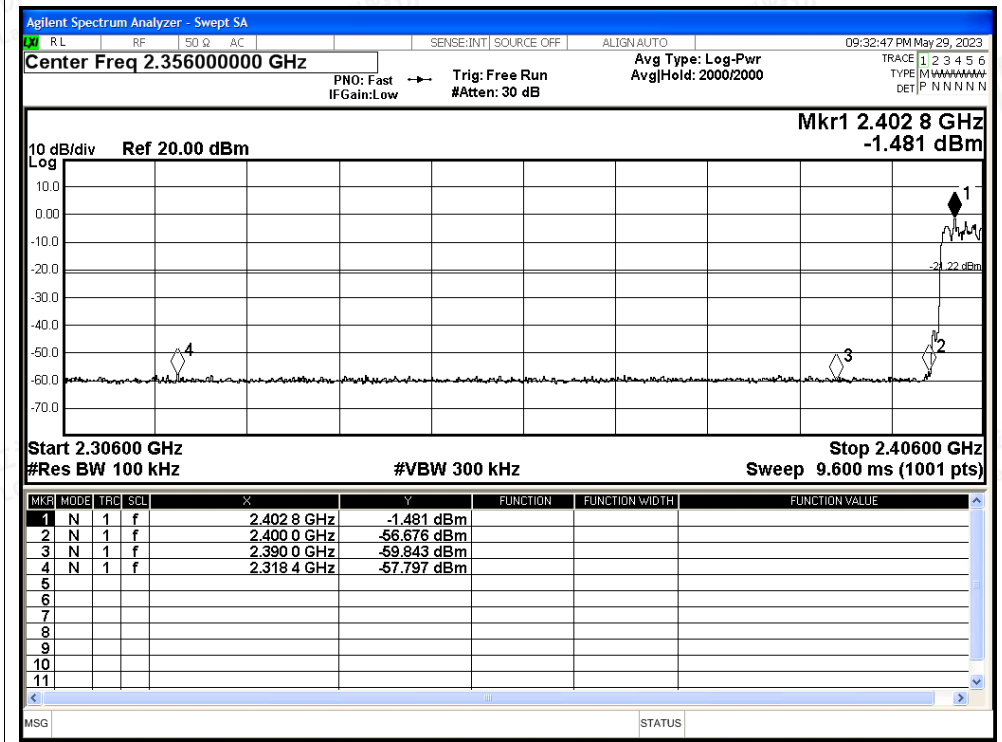




Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref

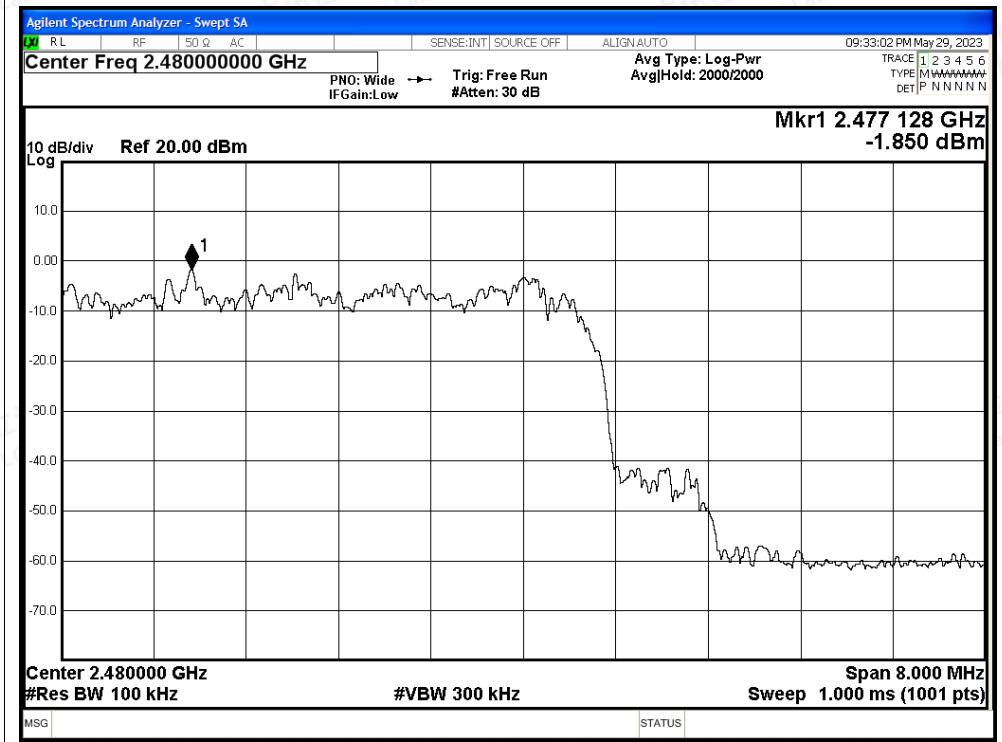


Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission

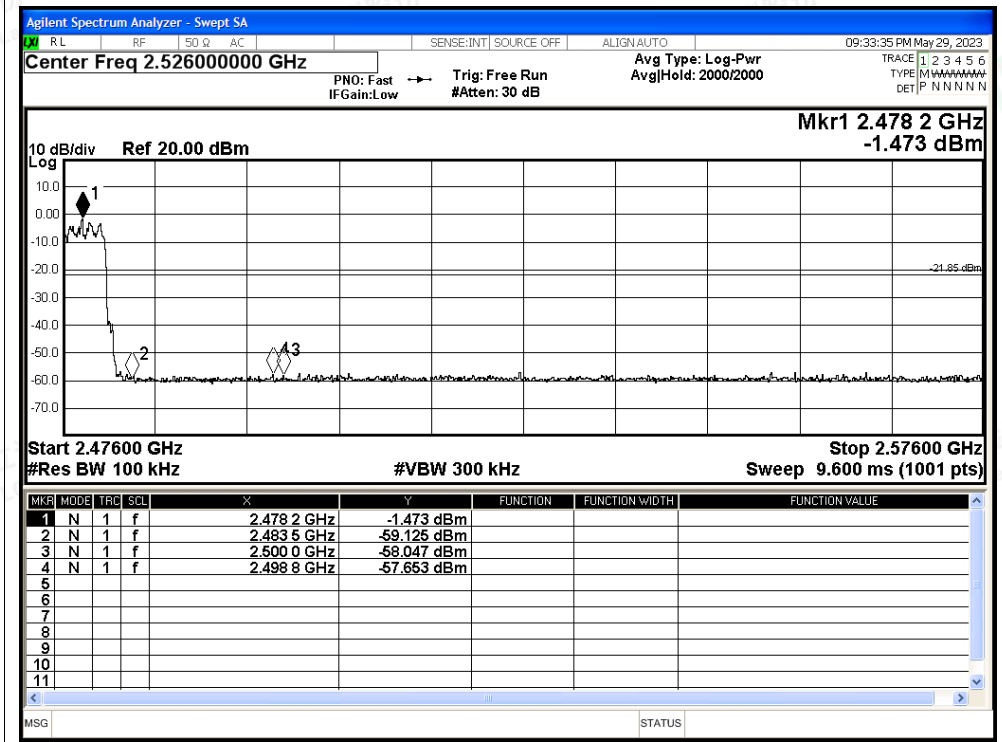




Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



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





## A.7 Conducted RF Spurious Emission

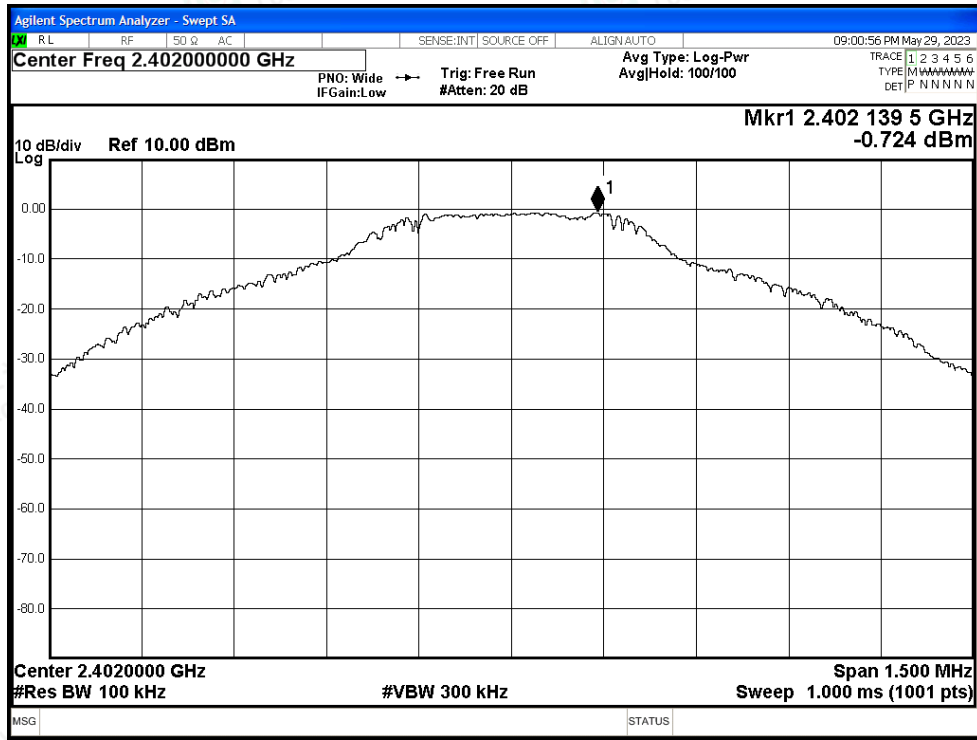
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-56.69	-20	Pass
NVNT	1-DH5	2441	Ant1	-56.12	-20	Pass
NVNT	1-DH5	2480	Ant1	-55.5	-20	Pass
NVNT	2-DH5	2402	Ant1	-55.89	-20	Pass
NVNT	2-DH5	2441	Ant1	-53.55	-20	Pass
NVNT	2-DH5	2480	Ant1	-56.64	-20	Pass
NVNT	3-DH5	2402	Ant1	-55.99	-20	Pass
NVNT	3-DH5	2441	Ant1	-56.23	-20	Pass
NVNT	3-DH5	2480	Ant1	-45.51	-20	Pass



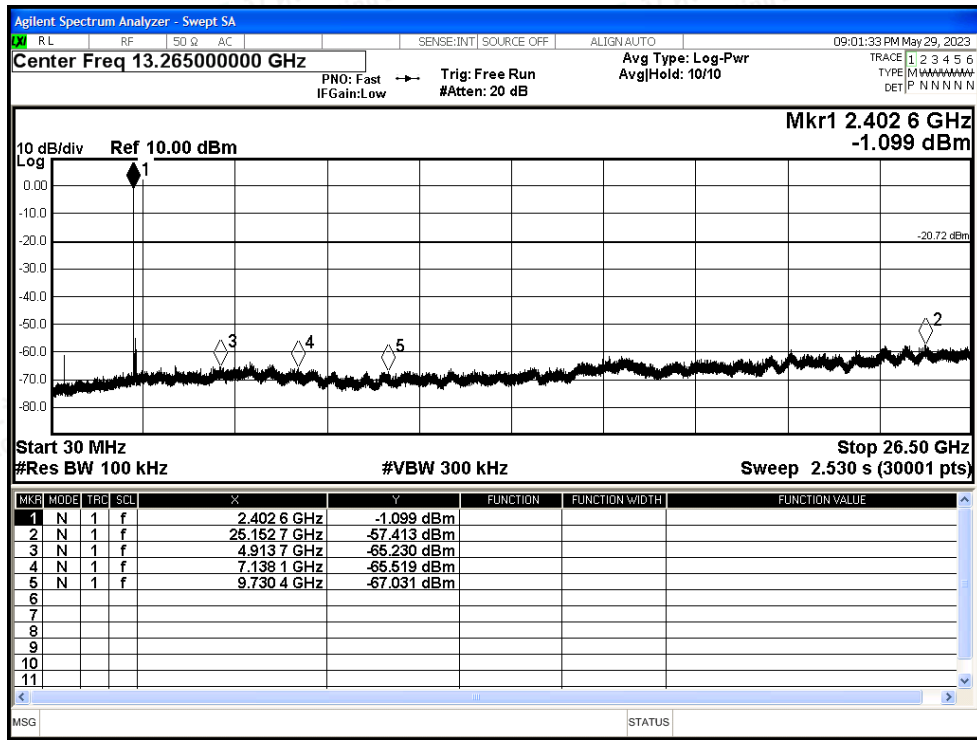


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

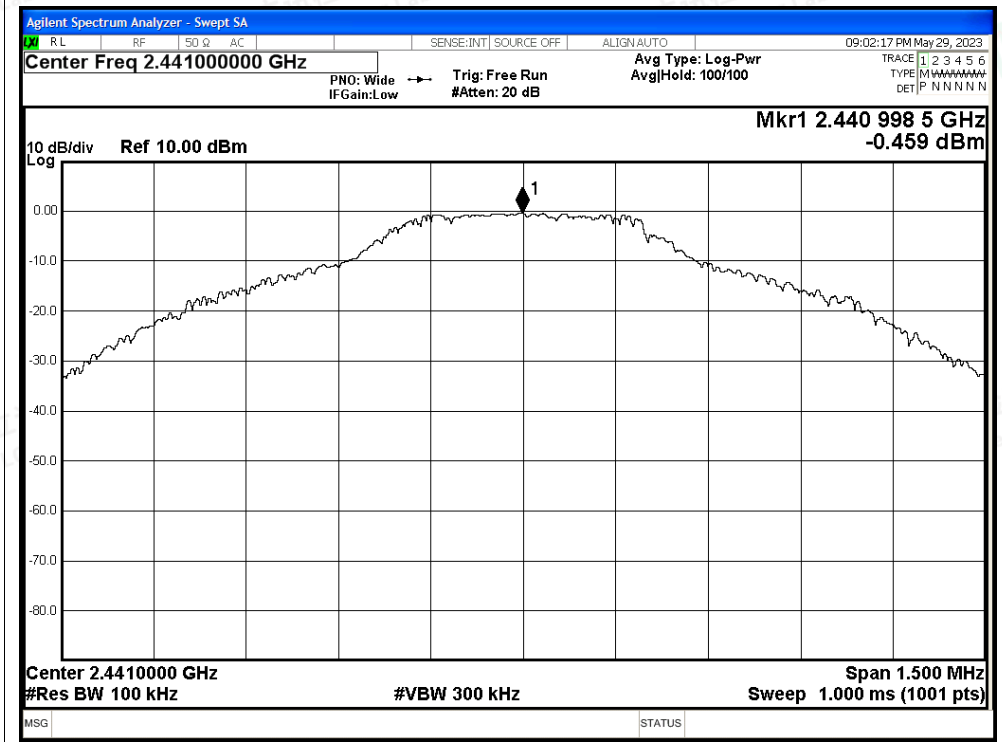


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

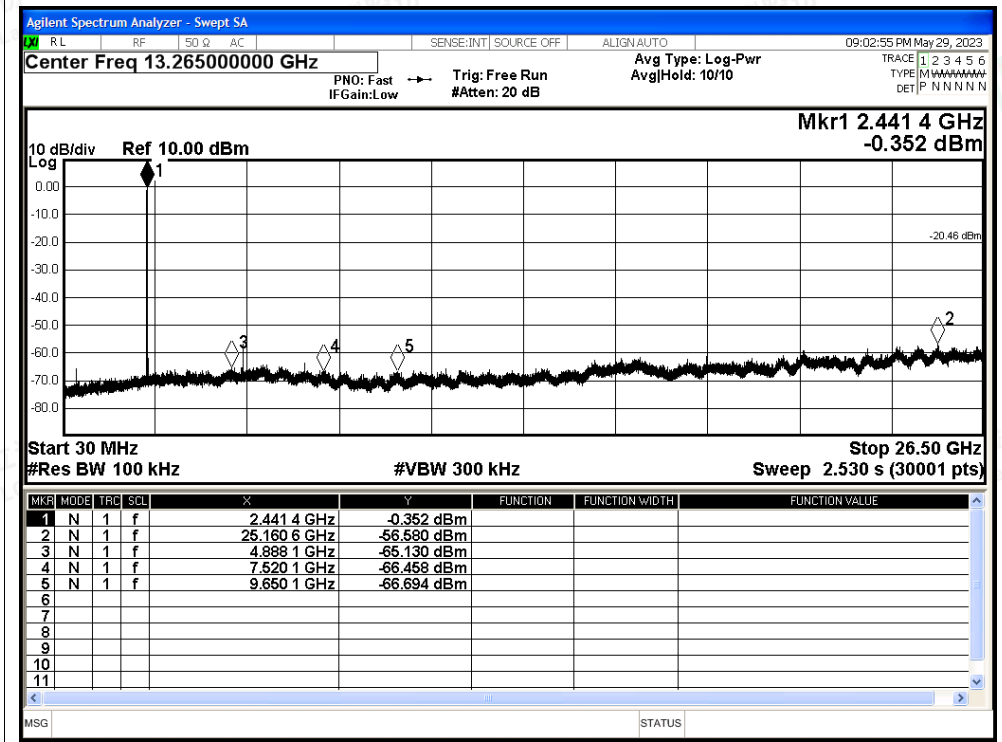




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



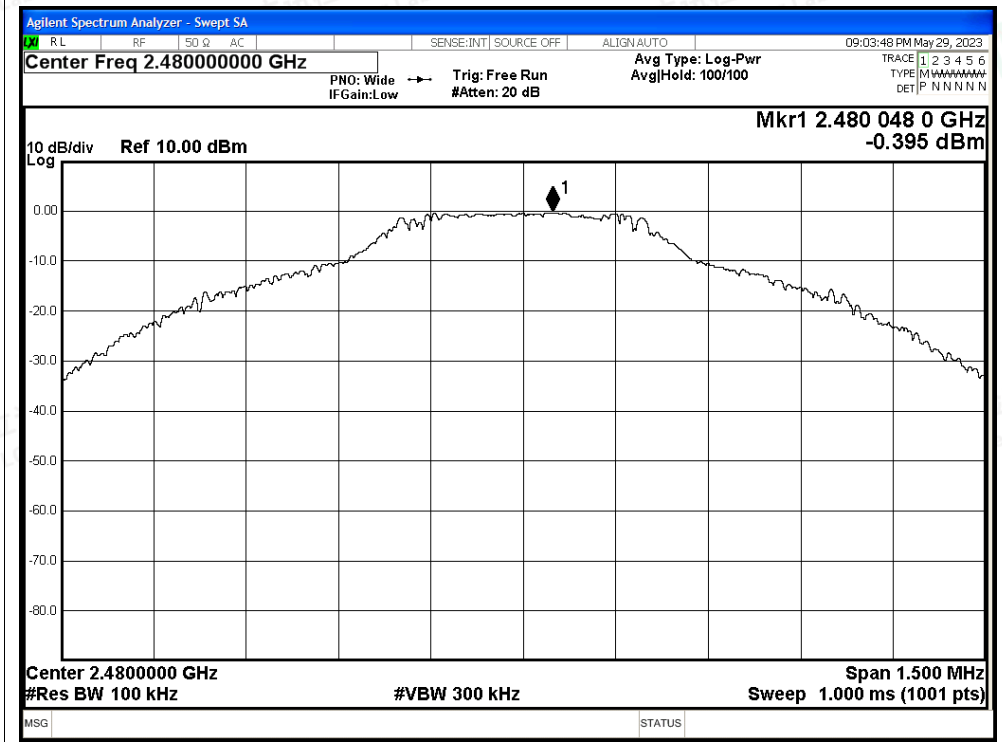
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



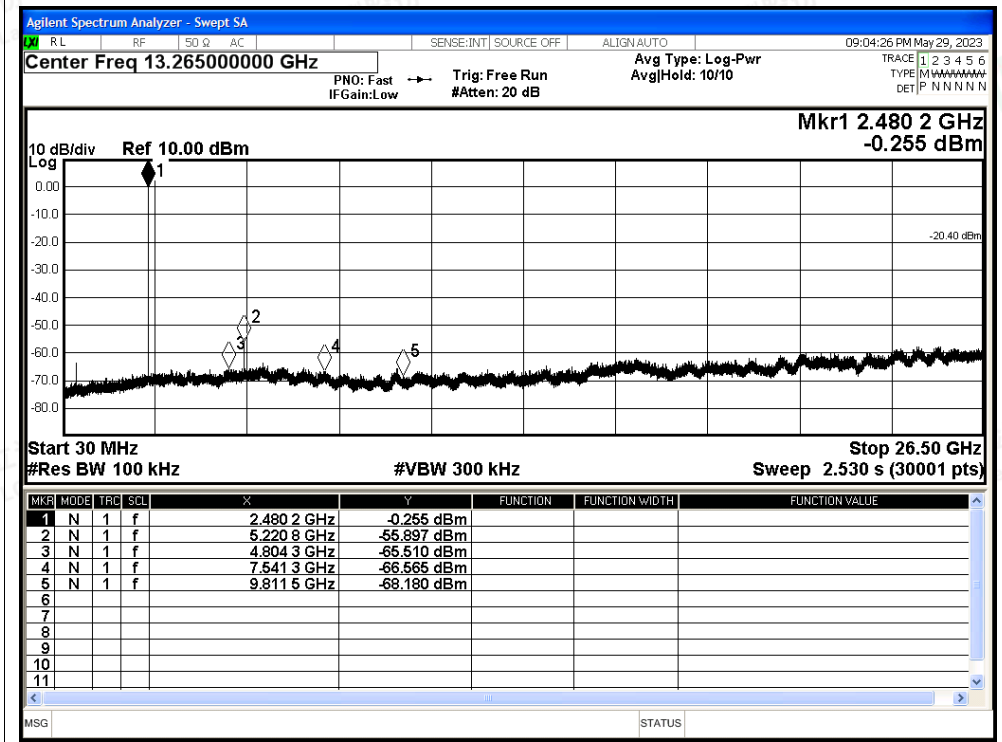




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

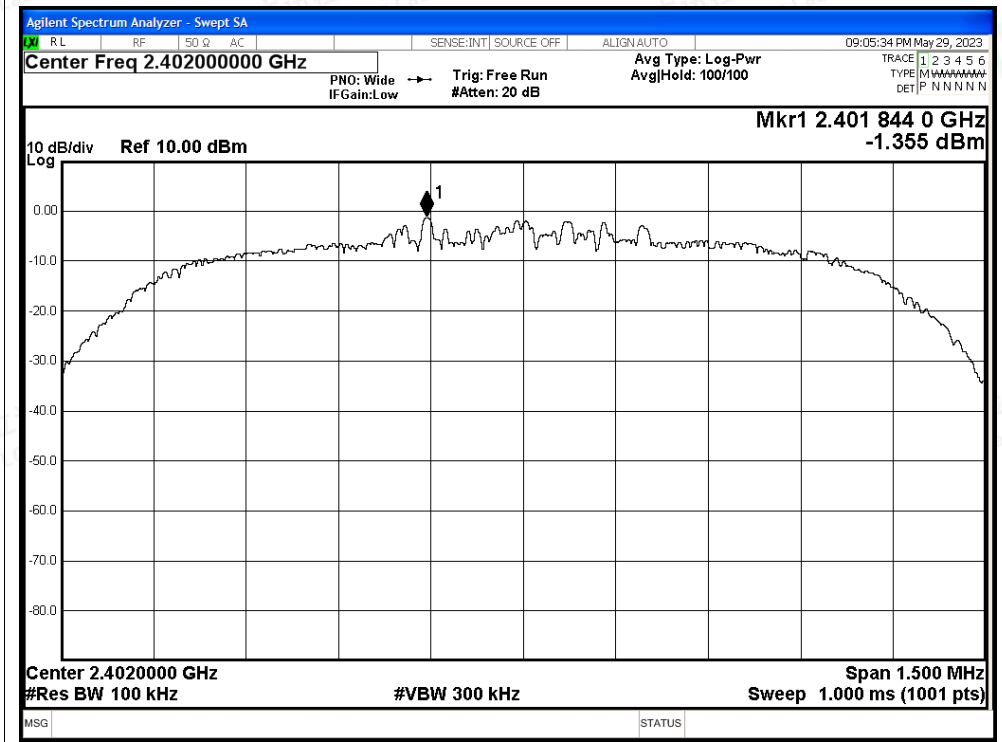


Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission

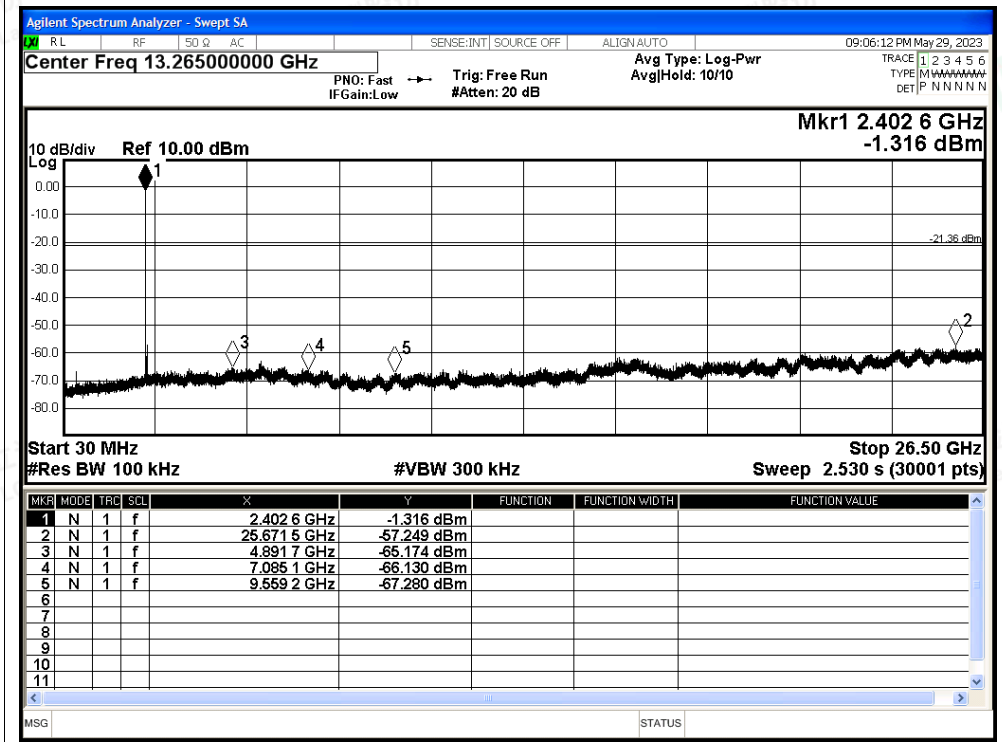




Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref

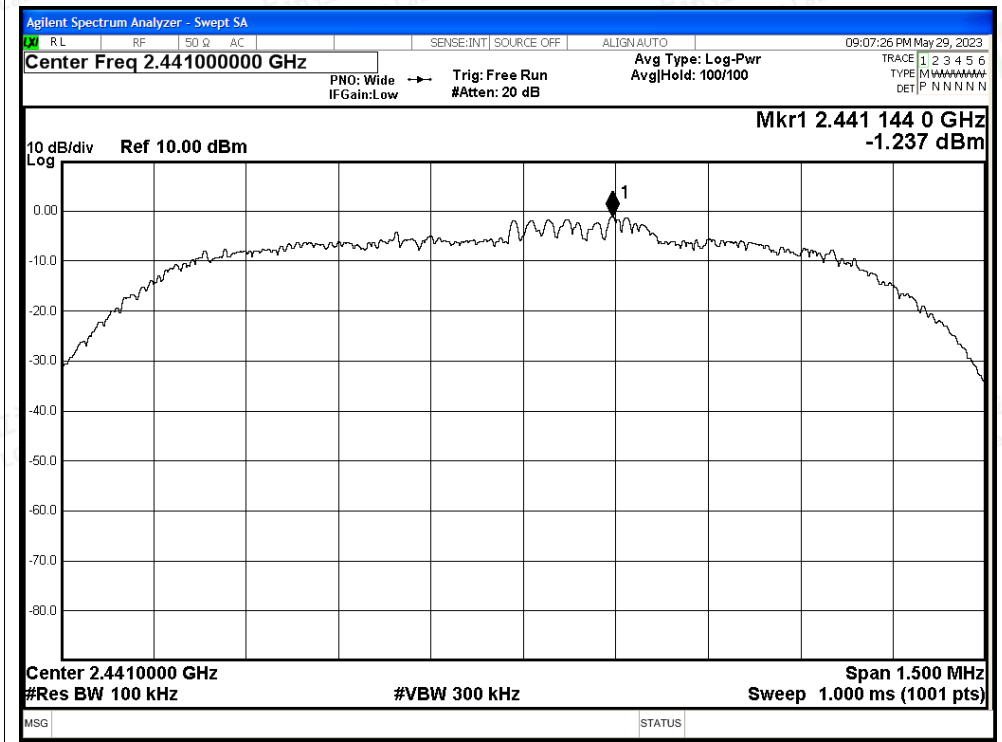


Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission

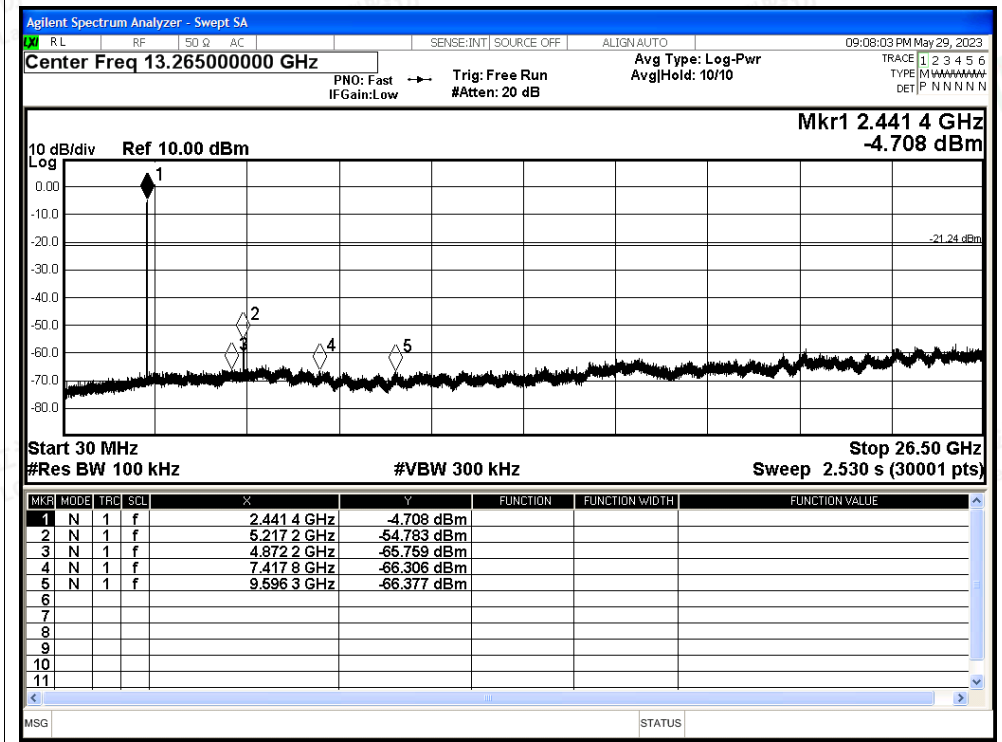




Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref

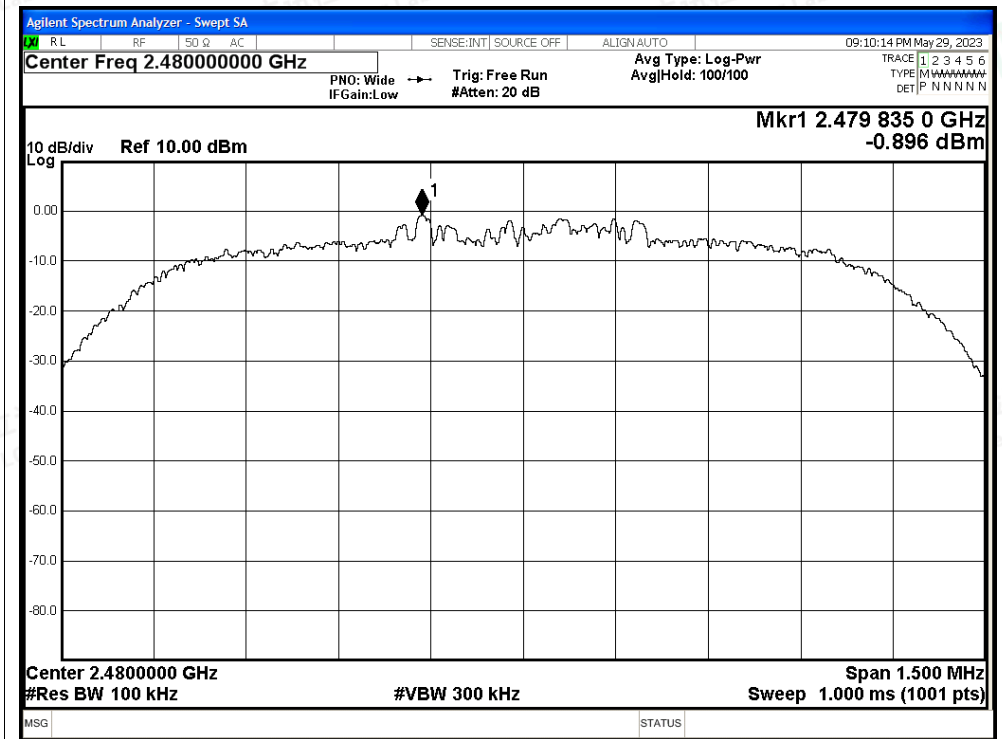


Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission

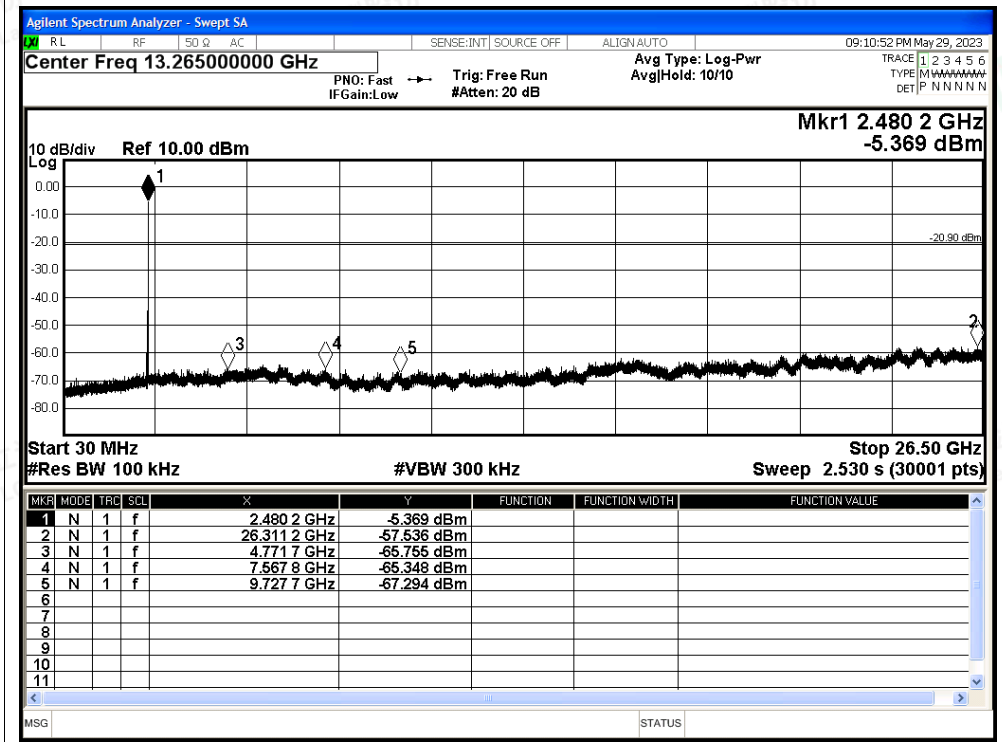




Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref

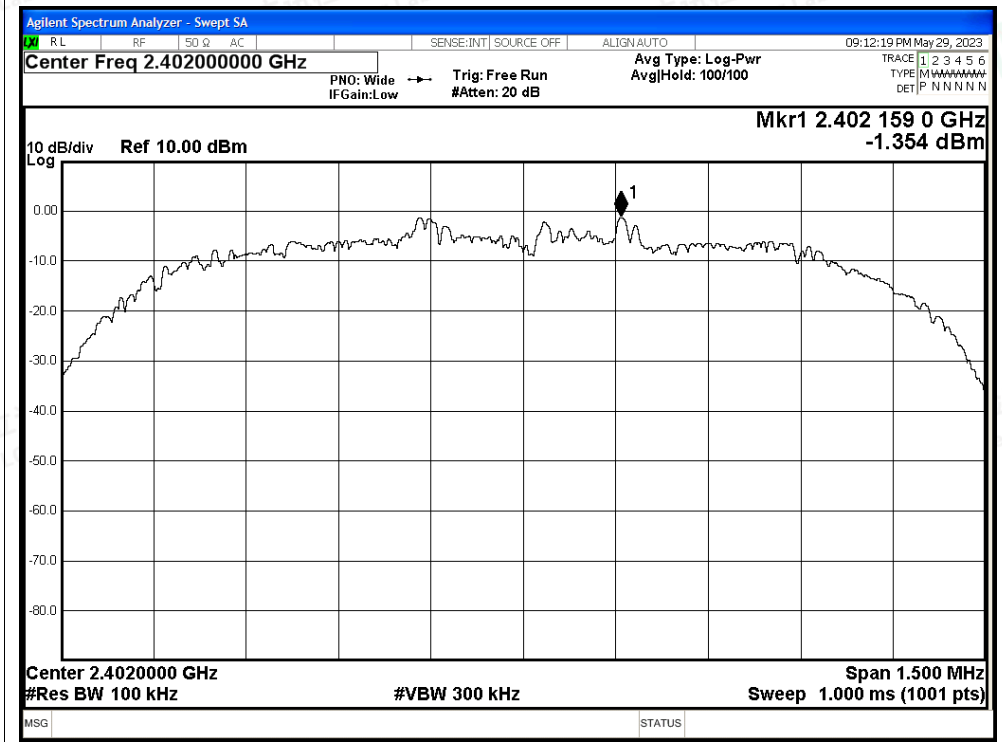


Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission

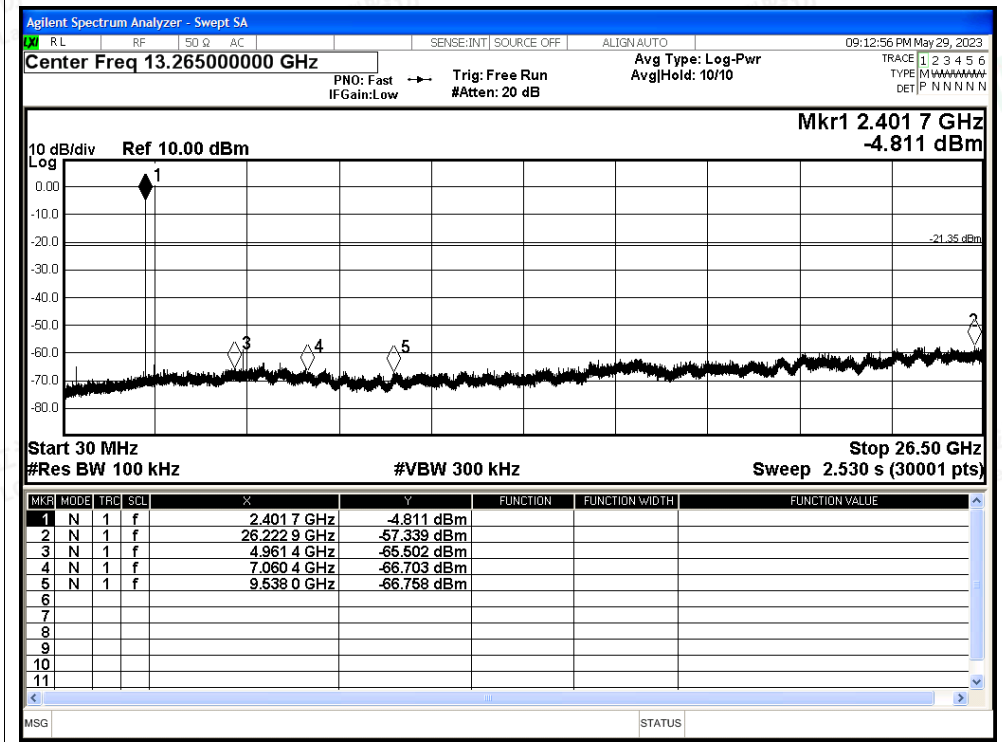




Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref

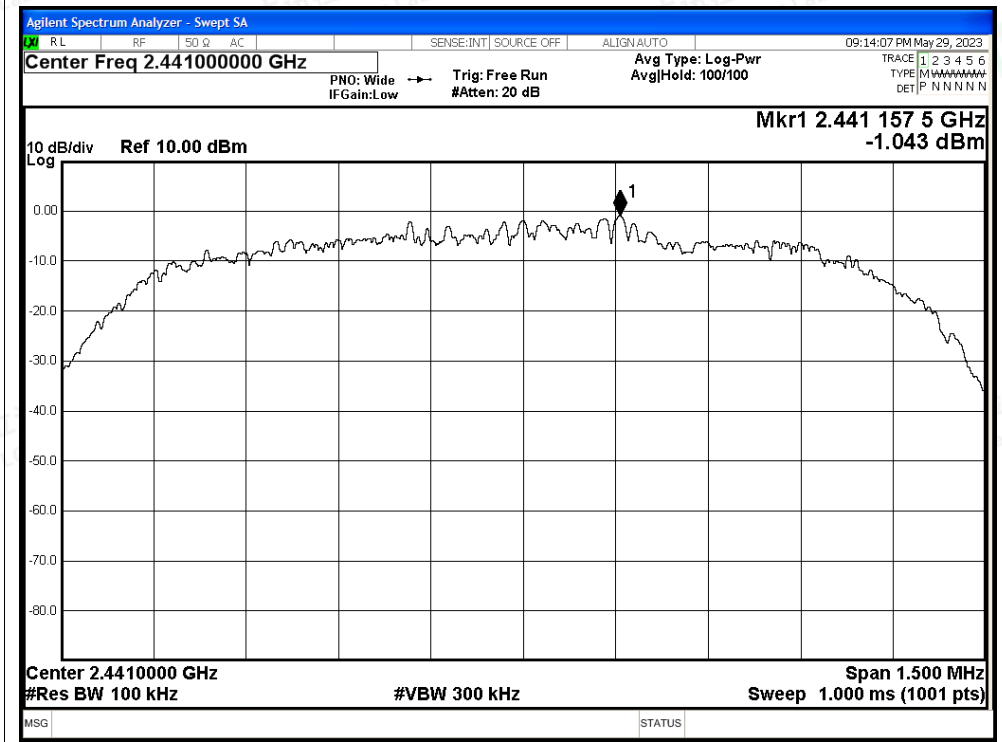


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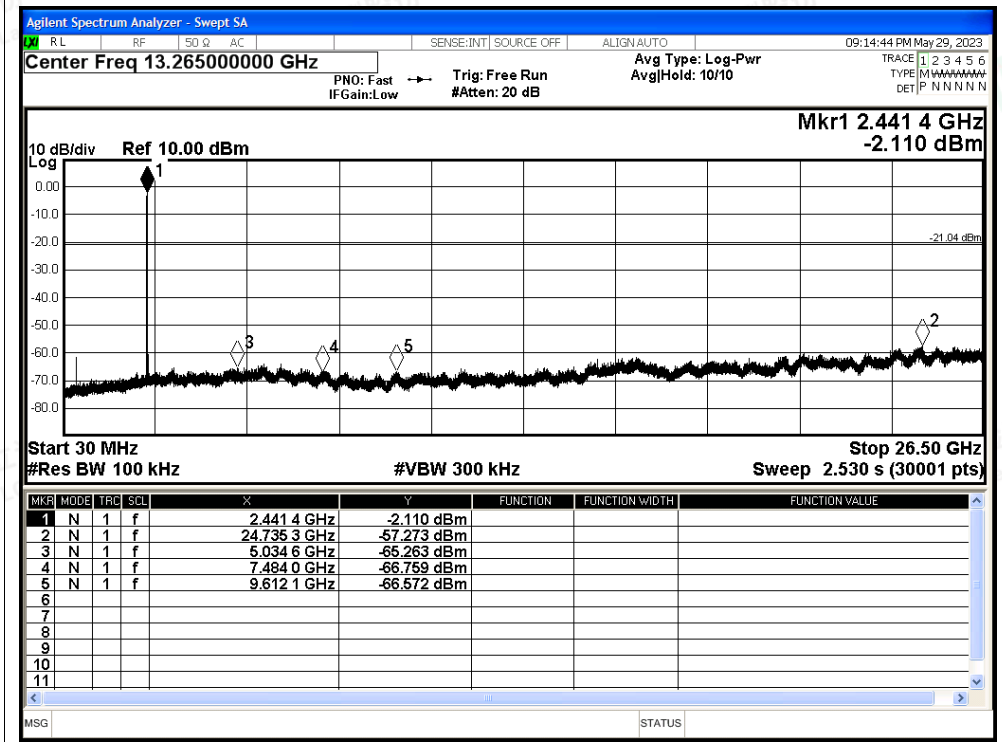




Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref

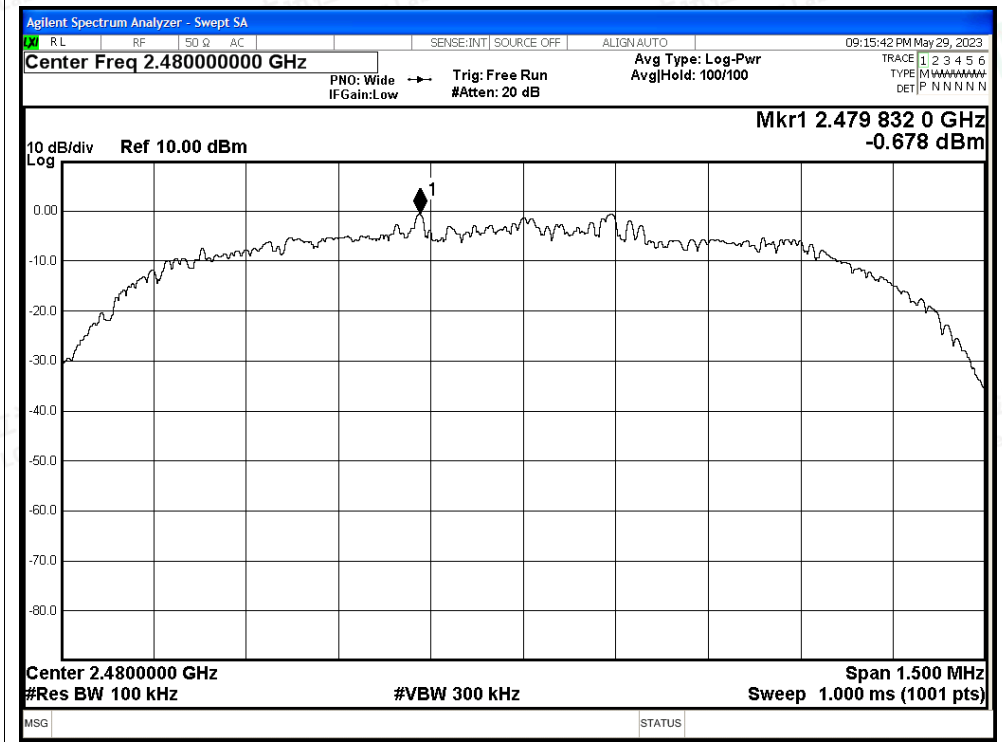


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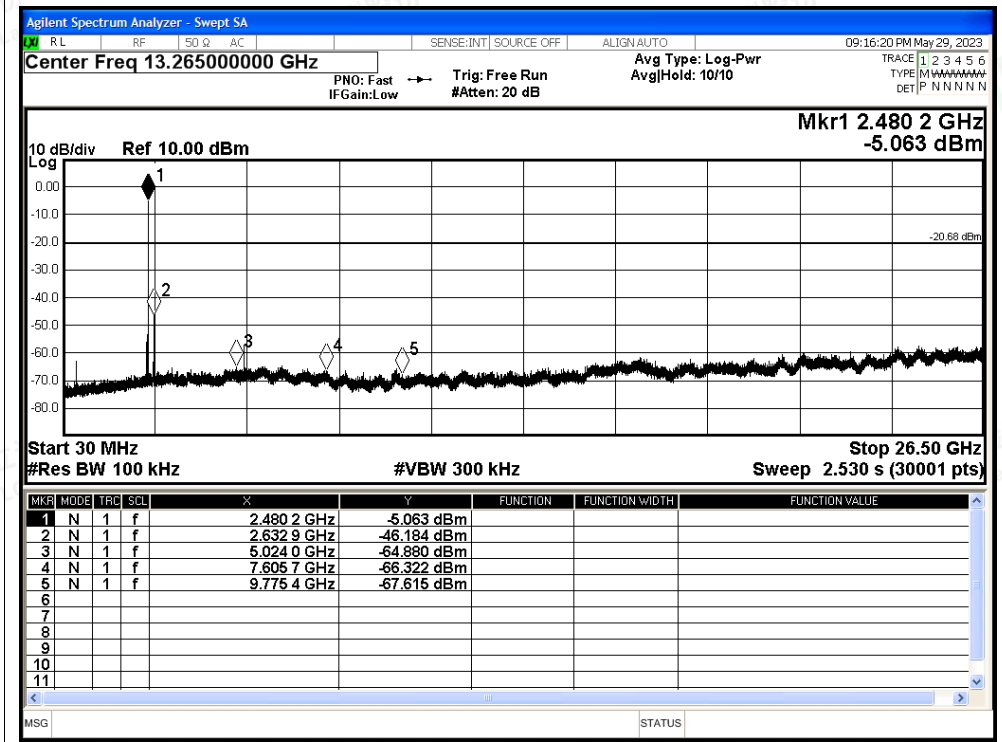




Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



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	-52.2	2.34	45.40	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-62.06	2.34	35.54	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2358.096	-49.49	2.34	48.11	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2370.768	-61.45	2.34	36.15	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-51.54	2.34	46.06	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-61.66	2.34	35.94	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-51.7	2.34	45.90	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-61.19	2.34	36.41	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2489.392	-48.74	2.34	48.86	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2484.568	-60.96	2.34	36.64	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-51.63	2.34	45.97	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-61.55	2.34	36.05	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-53.57	2.34	44.03	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-62.03	2.34	35.57	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2333.808	-49.23	2.34	48.37	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2389.776	-61.42	2.34	36.18	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-53.06	2.34	44.54	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-61.68	2.34	35.92	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-52.01	2.34	45.59	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-61.32	2.34	36.28	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2484.256	-48.98	2.34	48.62	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2484.592	-61.12	2.34	36.48	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-51.5	2.34	46.10	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-61.54	2.34	36.06	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-52.48	2.34	45.12	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-62.05	2.34	35.55	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2375.28	-49.29	2.34	48.31	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2389.68	-61.37	2.34	36.23	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-50.47	2.34	47.13	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-61.68	2.34	35.92	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-51.67	2.34	45.93	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-61.04	2.34	36.56	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2486.896	-48.54	2.34	49.06	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.512	-61.04	2.34	36.56	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-52.65	2.34	44.95	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-61.52	2.34	36.08	Average	54	Pass

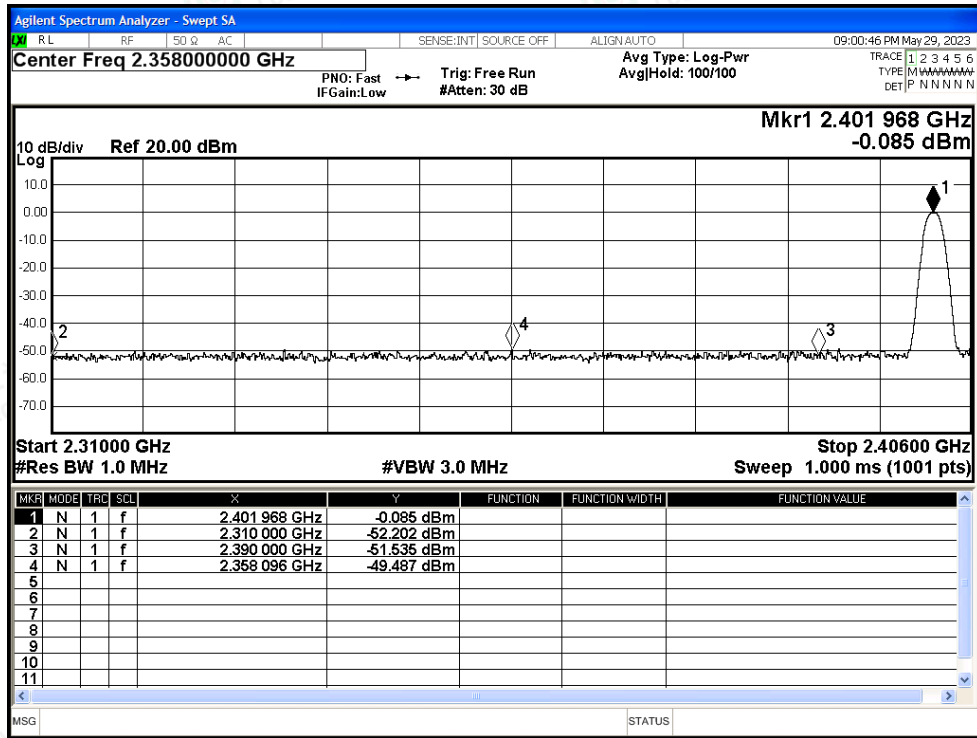




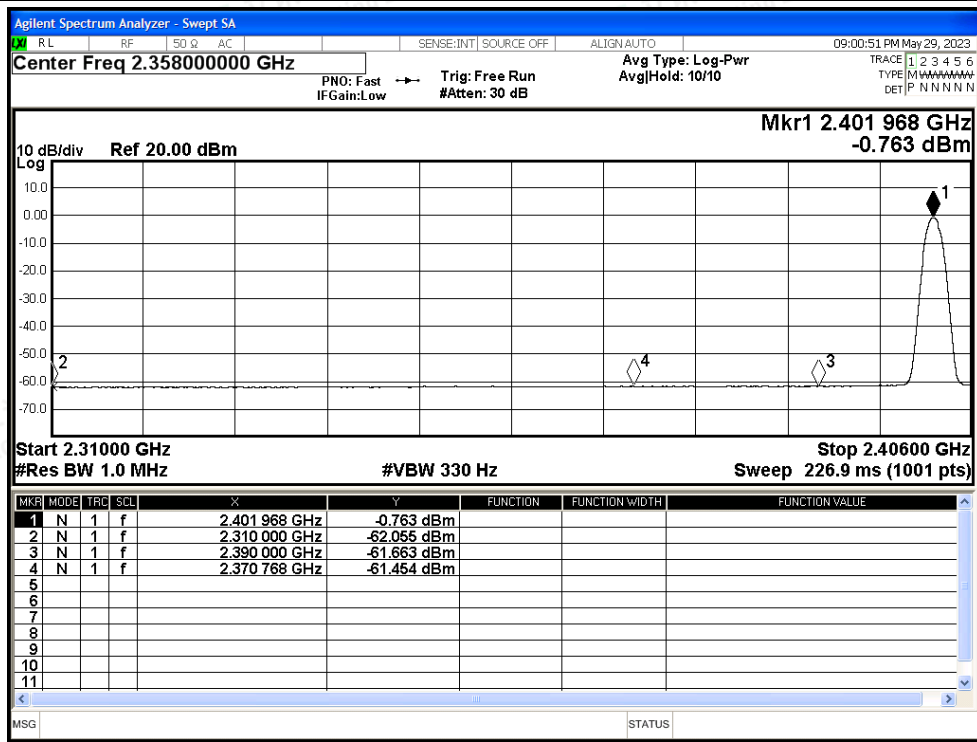


Test Graphs

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

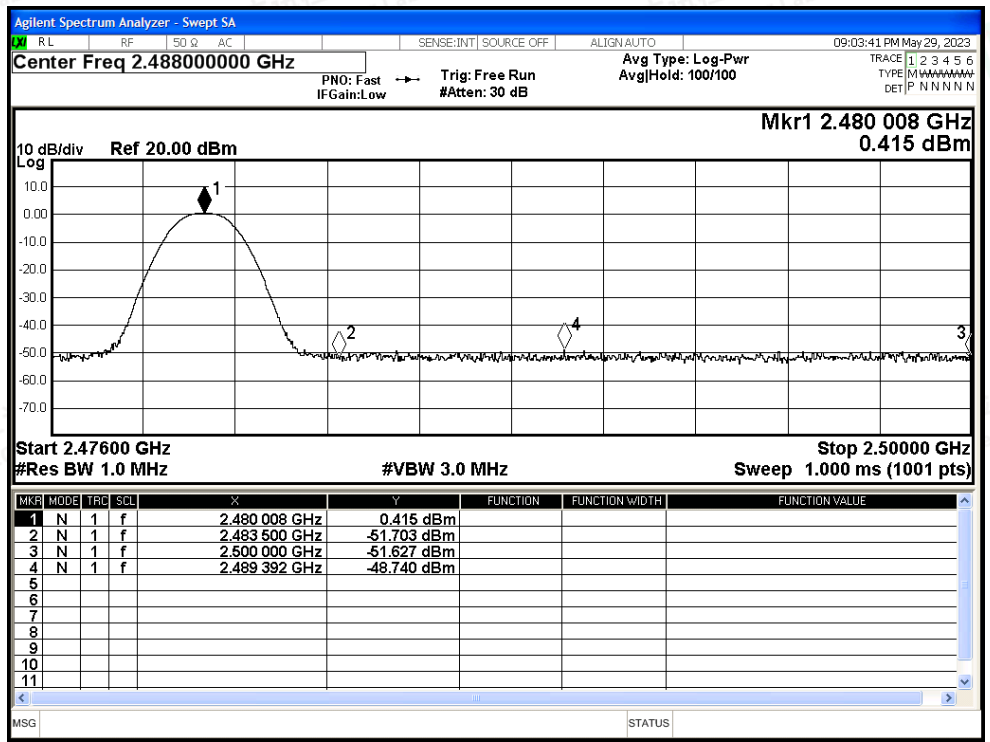


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

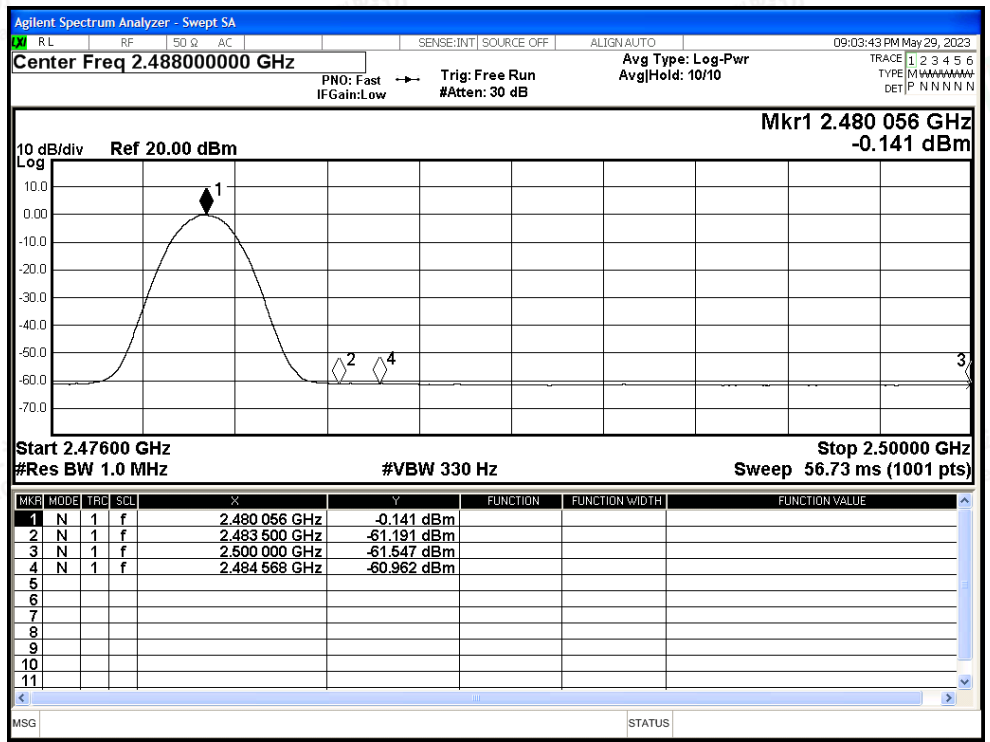




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak

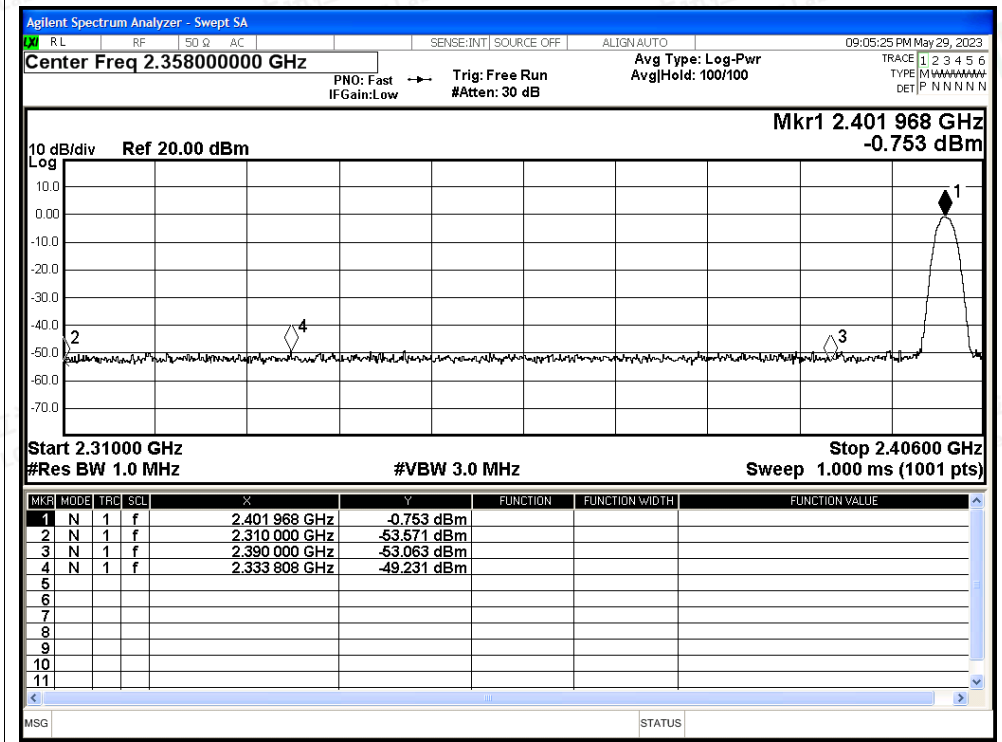


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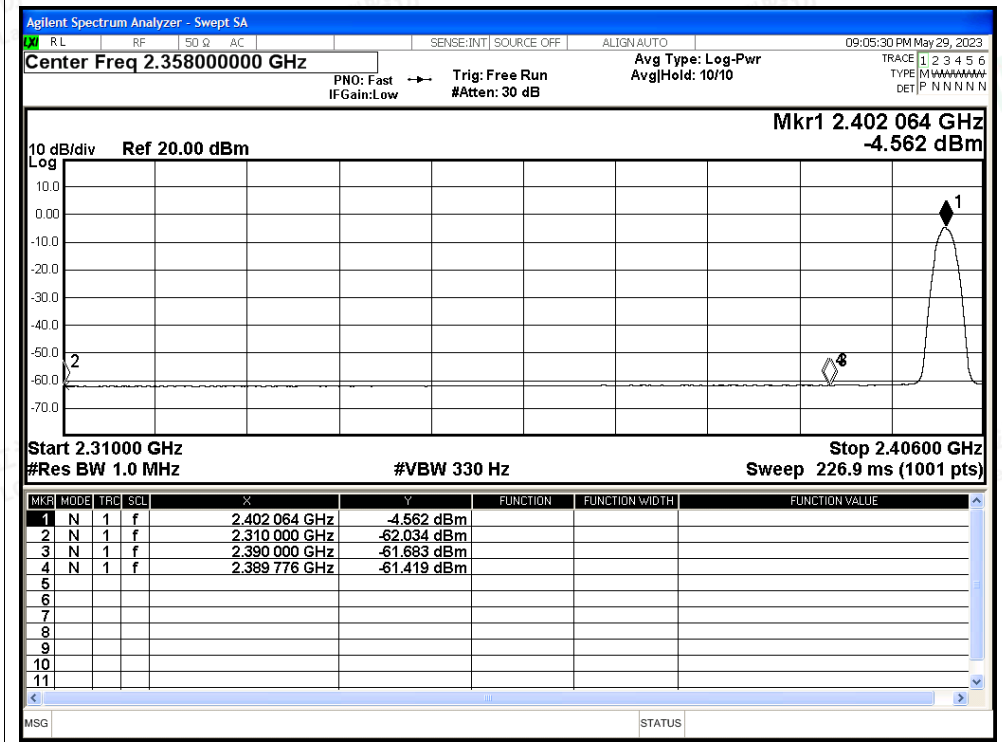




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

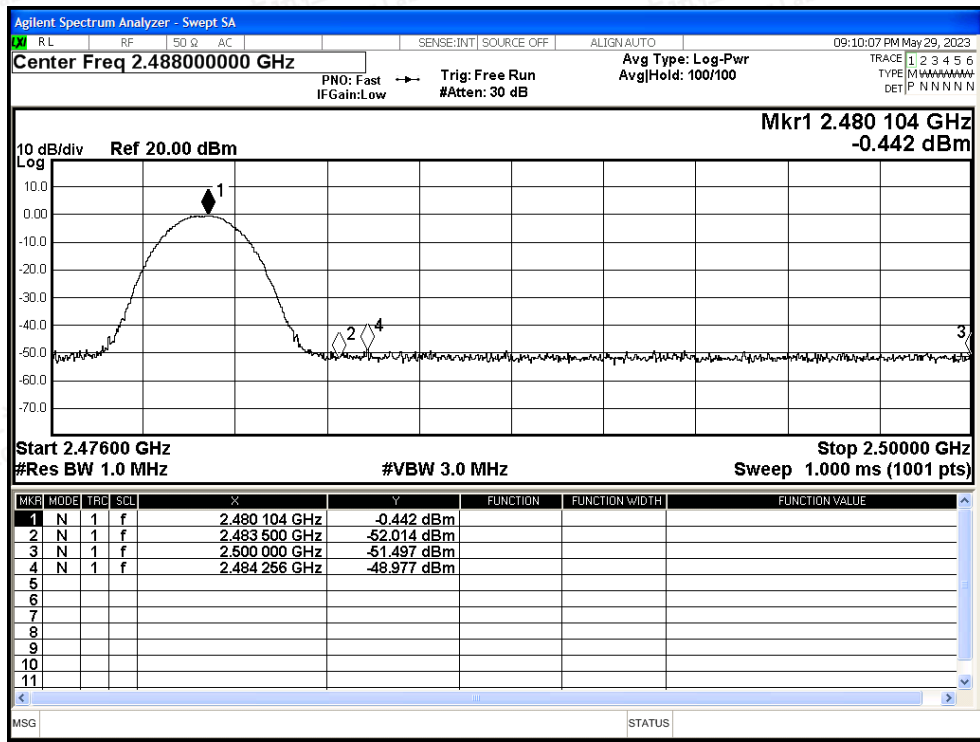


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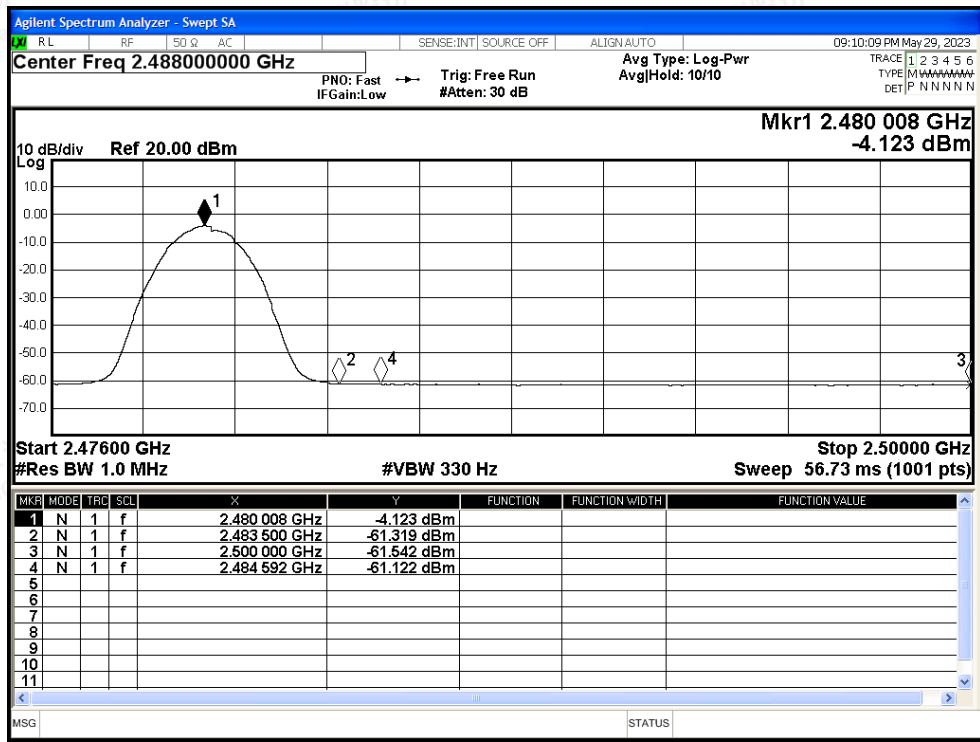




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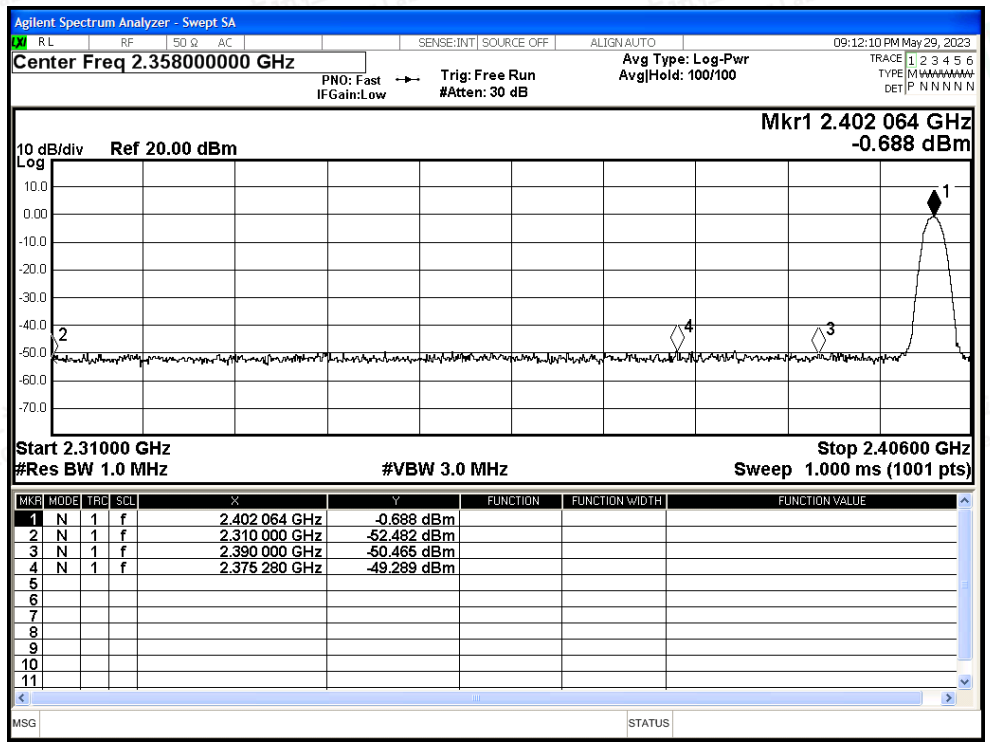


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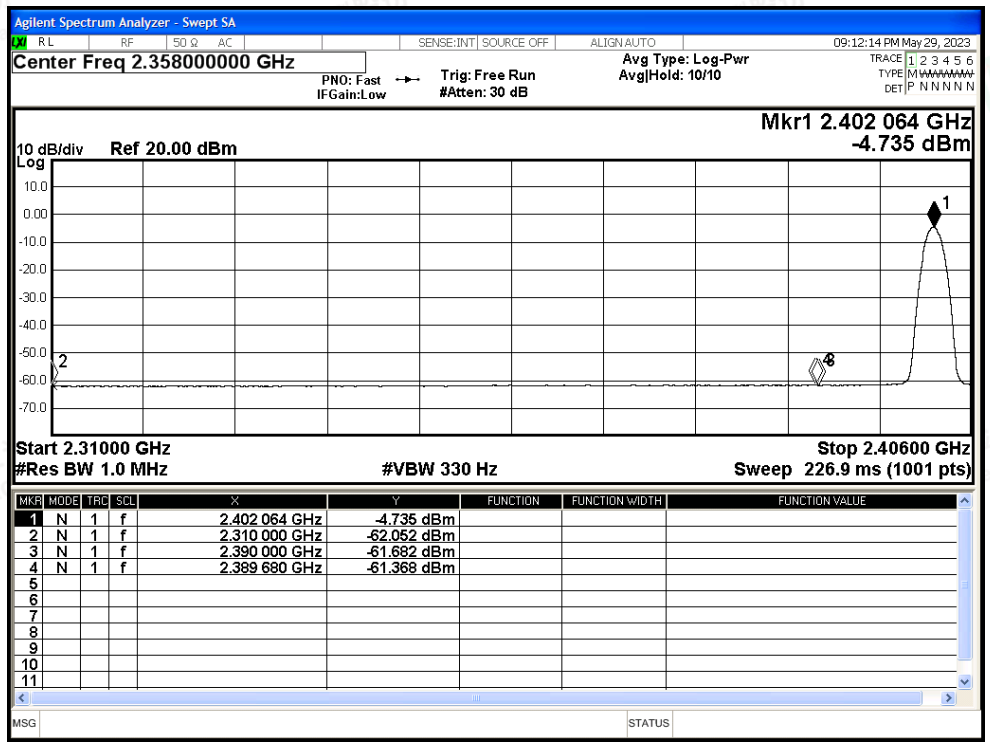




Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak

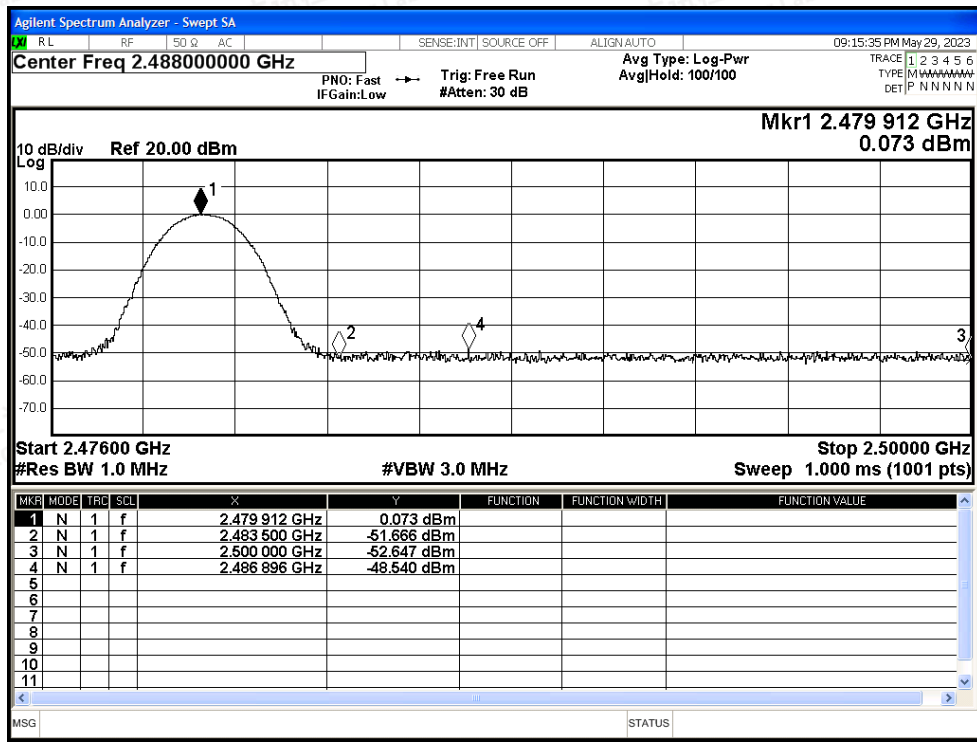


Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Average





Restrict Band NVNT 3-DH5 2480MHz Ant1 No-Hopping Peak



Restrict Band NVNT 3-DH5 2480MHz Ant1 No-Hopping Average

