



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: SMART PROJECTOR

Test Model: L010

Environmental Conditions

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





A.1 -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	1.003	N/A	Pass
NVNT	1-DH5	2441	Ant1	1.017	N/A	Pass
NVNT	1-DH5	2480	Ant1	1.005	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.318	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.314	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.283	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.283	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.276	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.307	N/A	Pass





Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

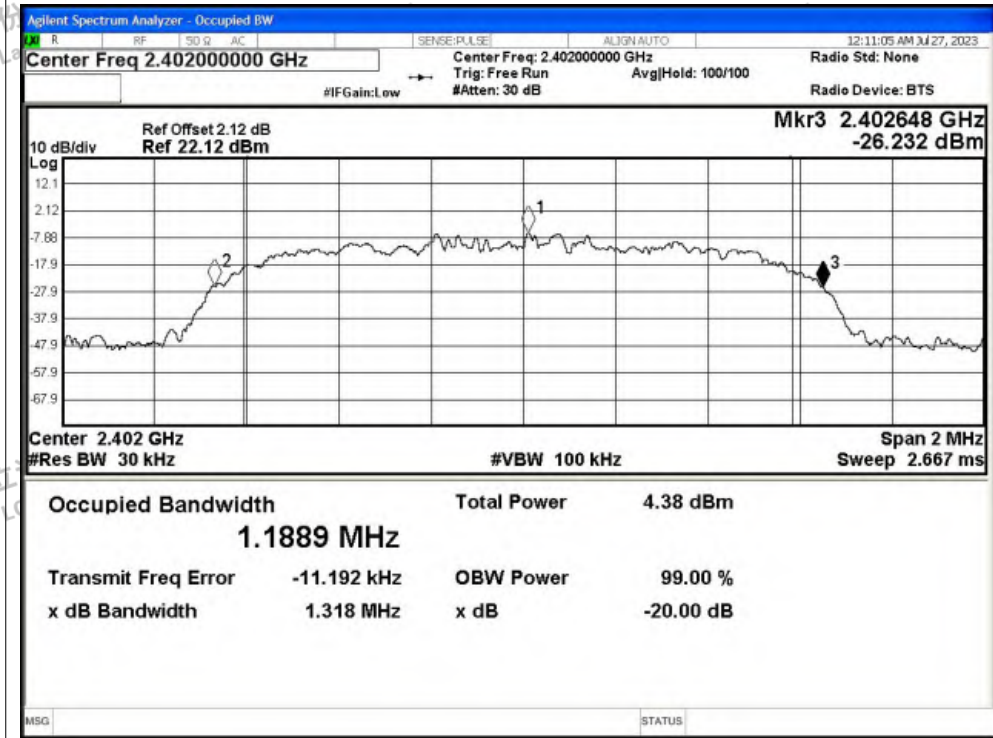




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

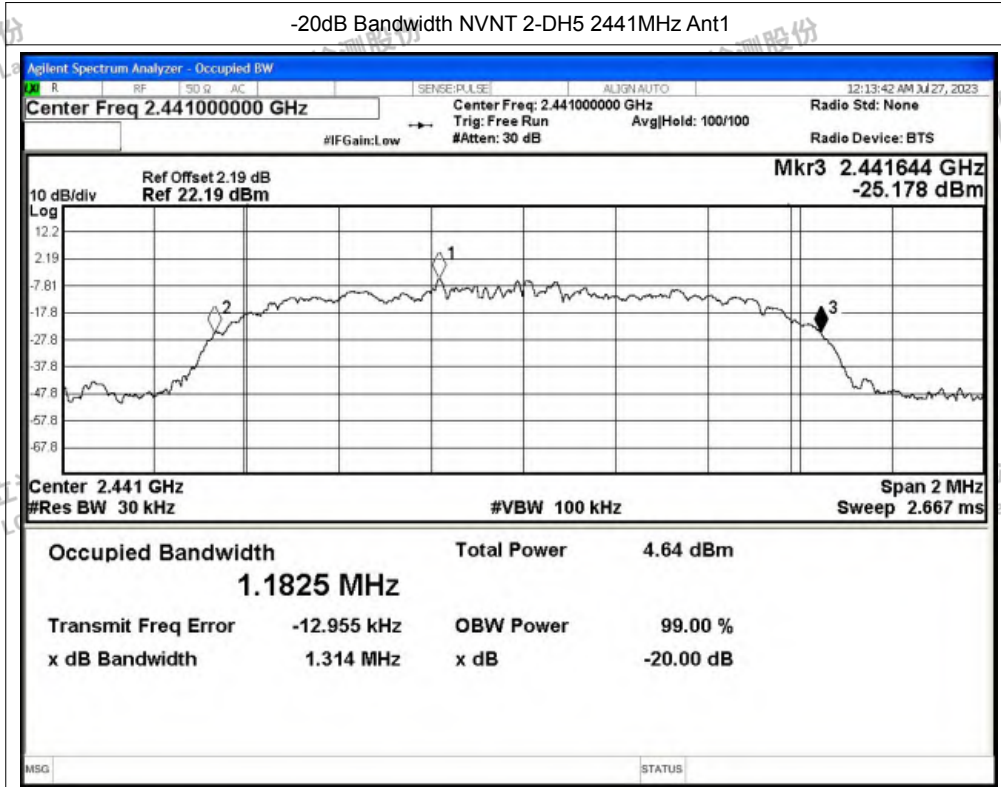


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1





-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

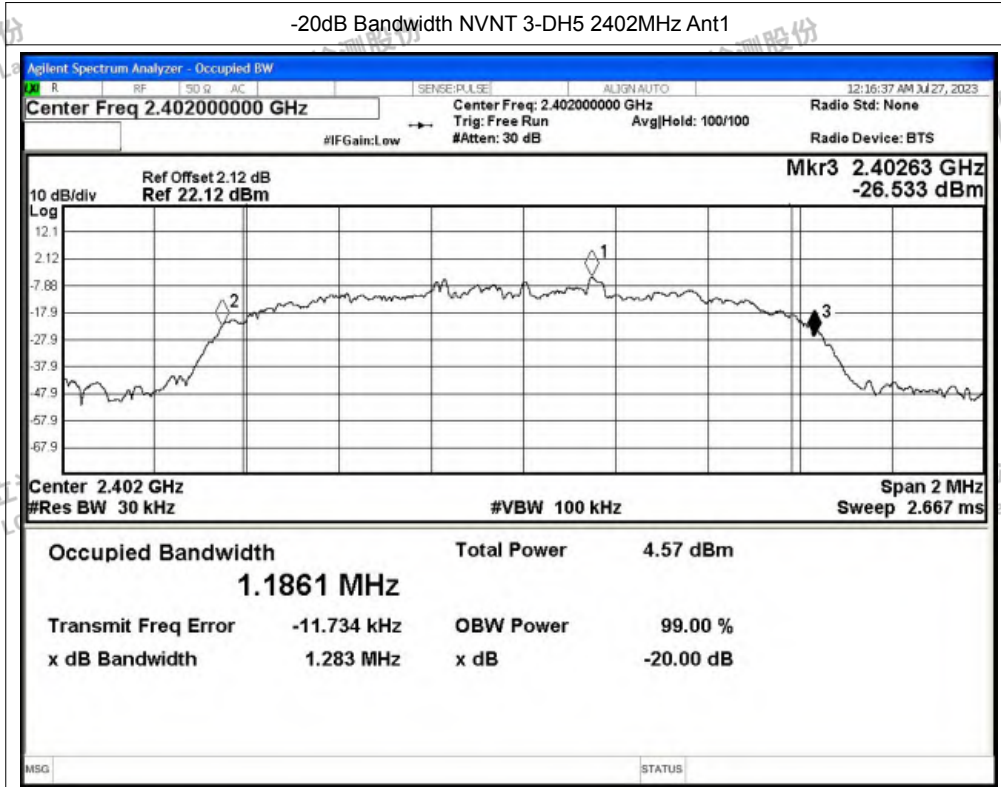


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

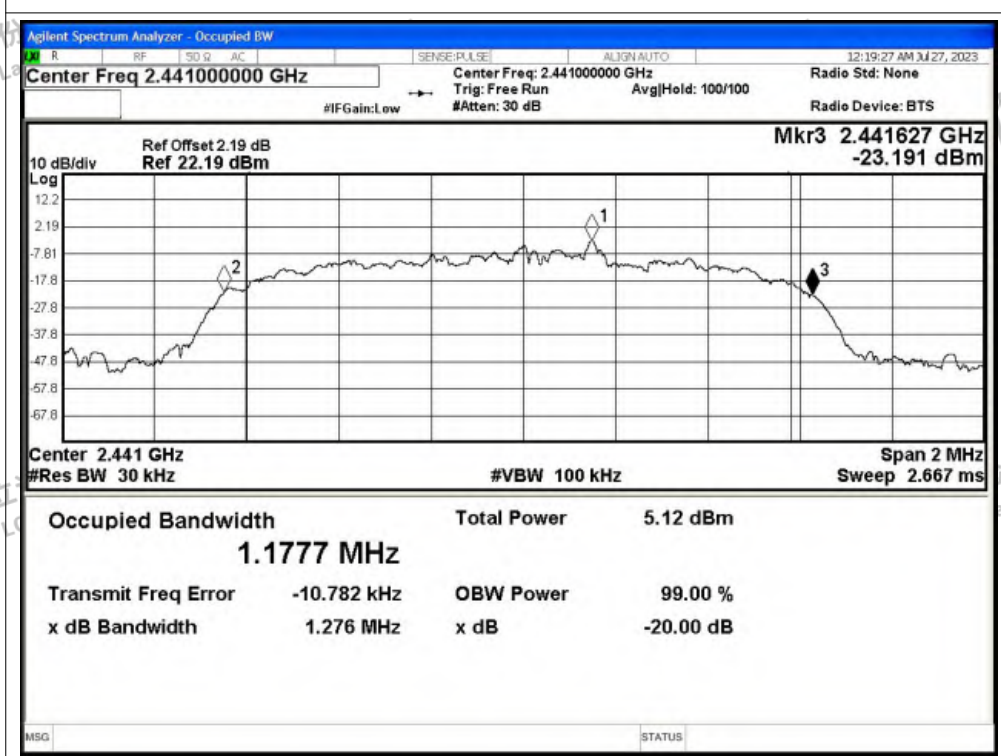




-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1

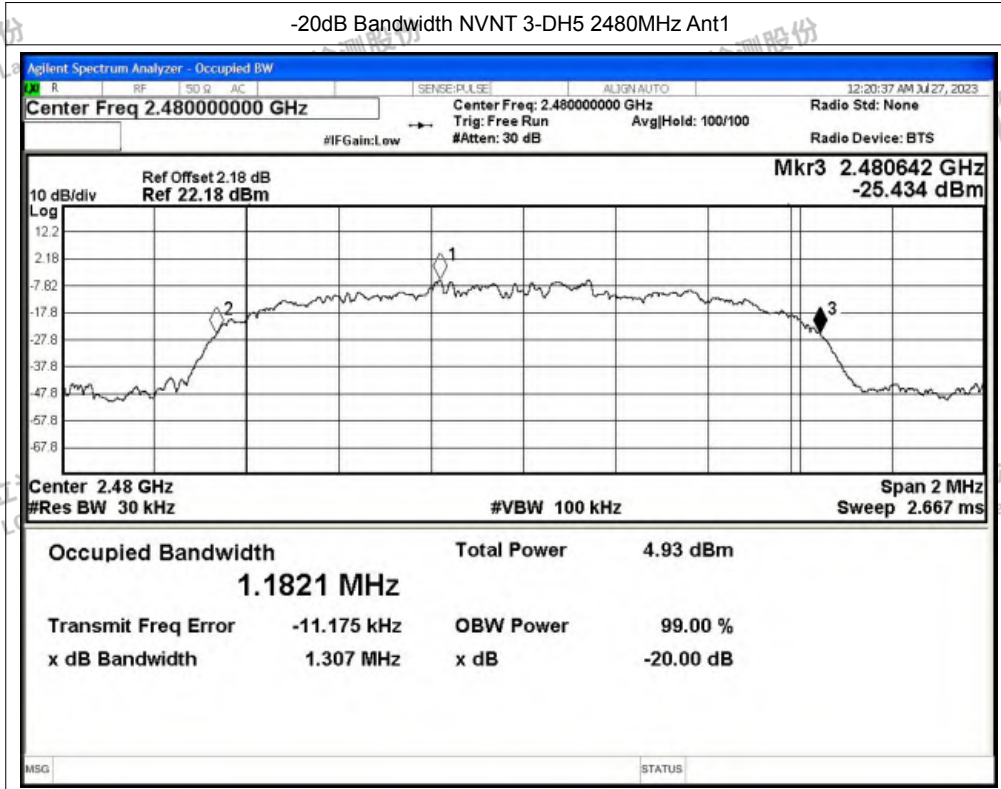


-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1





-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1





A.2 Maximum Conducted Output Power

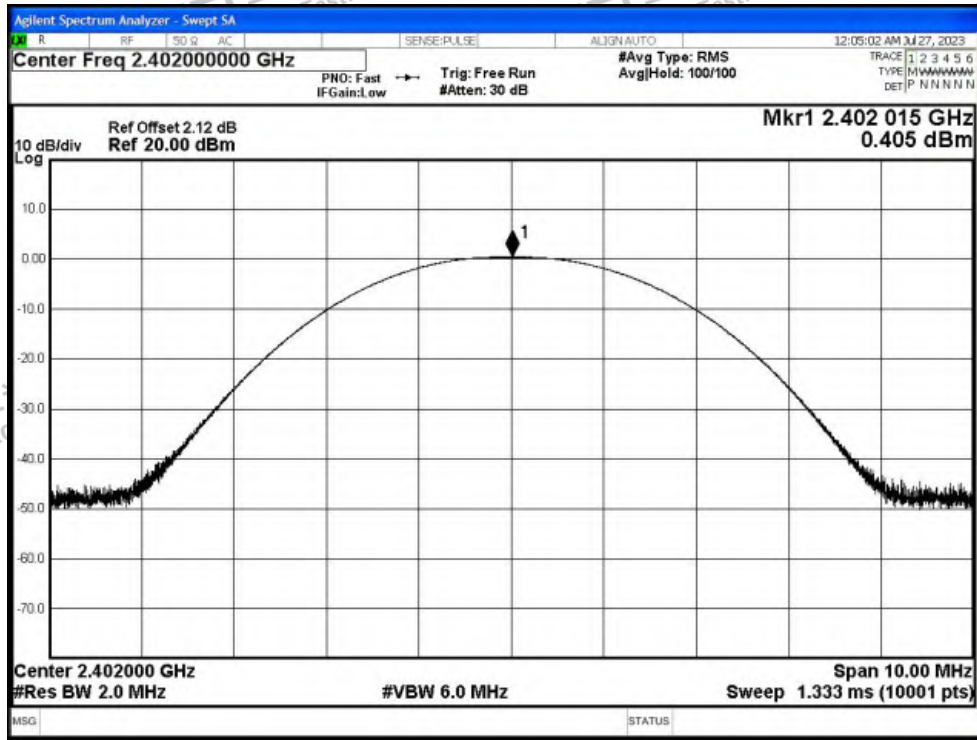
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	0.41	21	Pass
NVNT	1-DH5	2441	Ant1	0.57	21	Pass
NVNT	1-DH5	2480	Ant1	0.53	21	Pass
NVNT	2-DH5	2402	Ant1	0.14	21	Pass
NVNT	2-DH5	2441	Ant1	0.32	21	Pass
NVNT	2-DH5	2480	Ant1	0.24	21	Pass
NVNT	3-DH5	2402	Ant1	0.16	21	Pass
NVNT	3-DH5	2441	Ant1	0.36	21	Pass
NVNT	3-DH5	2480	Ant1	0.33	21	Pass



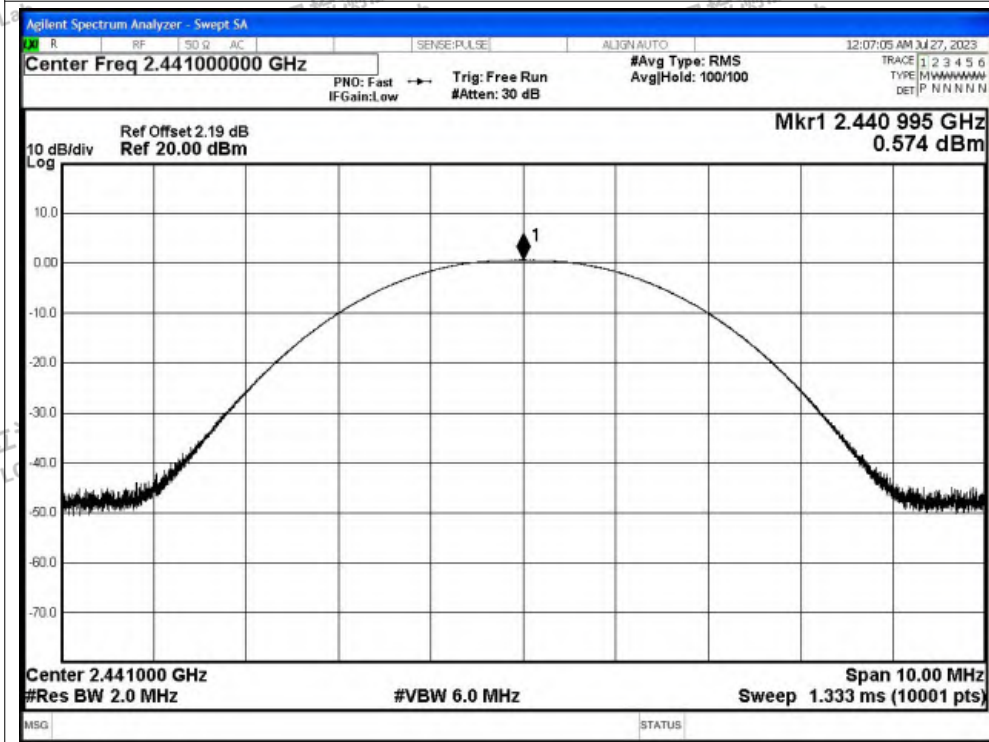


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

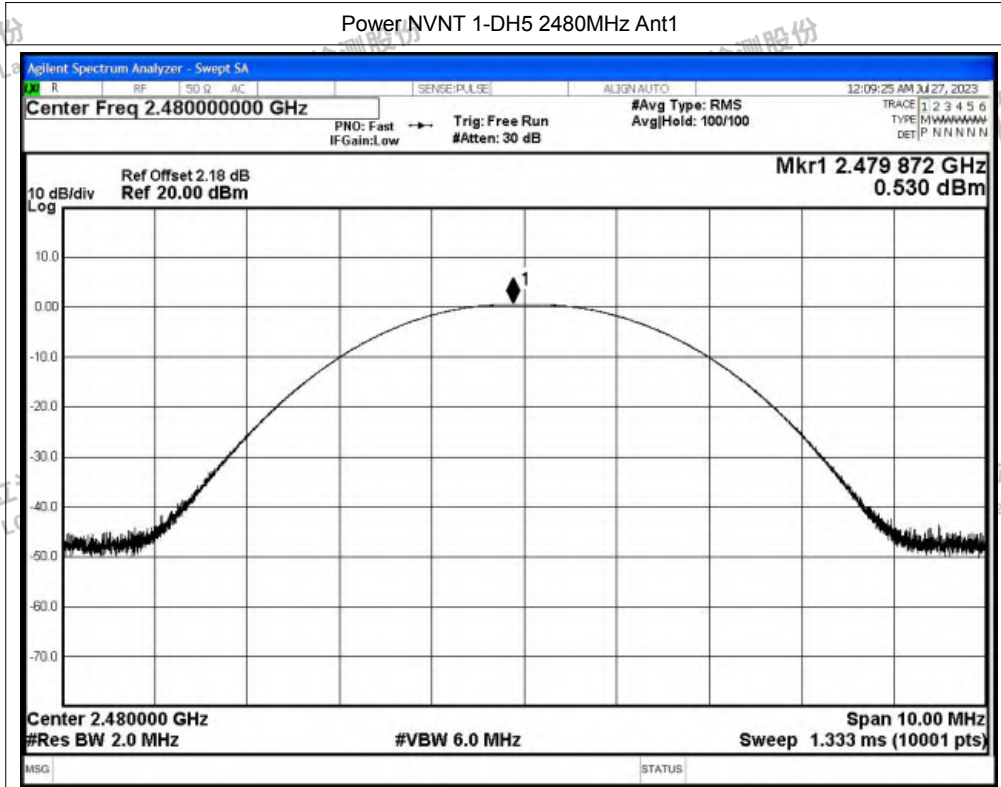


Power NVNT 1-DH5 2441MHz Ant1

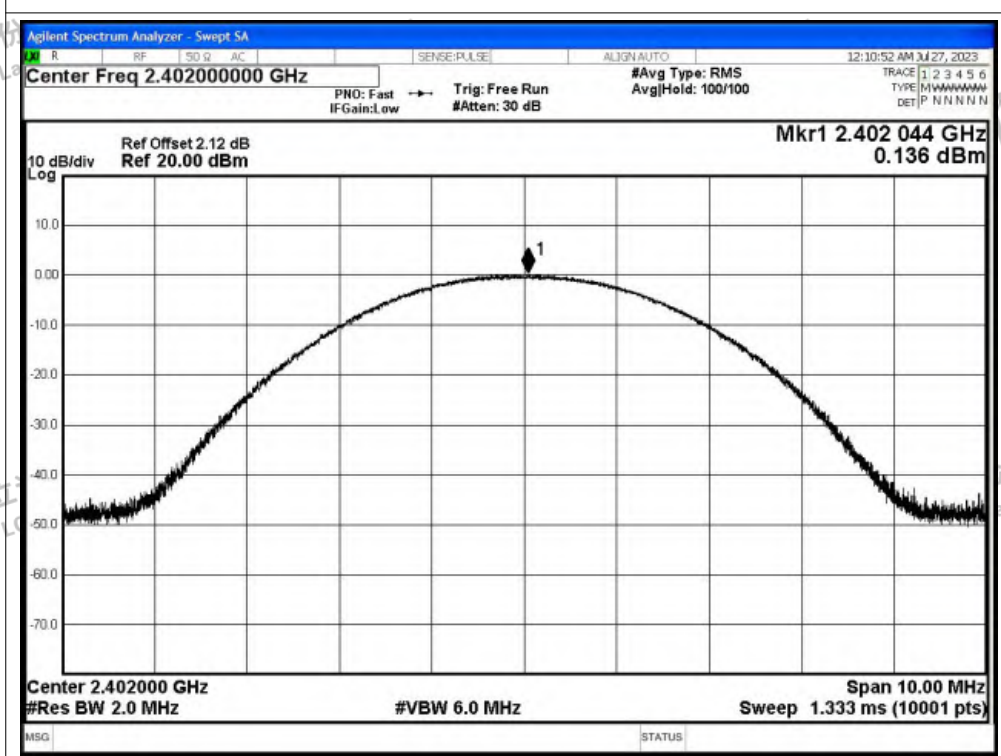




Power NVNT 1-DH5 2480MHz Ant1

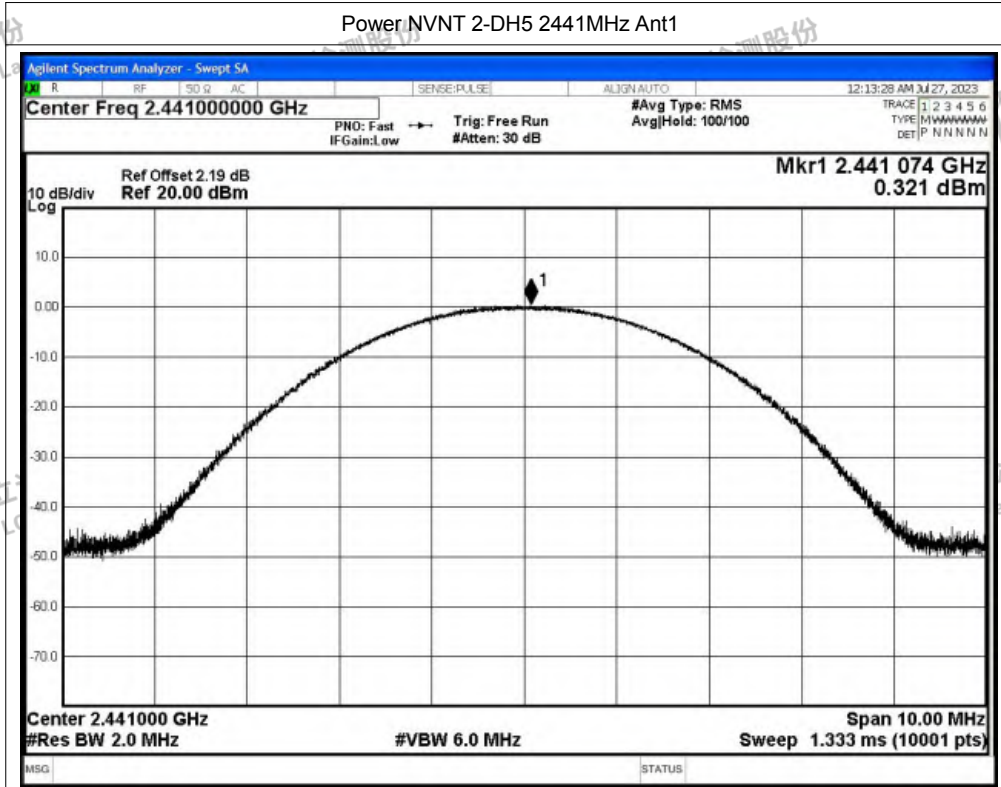


Power NVNT 2-DH5 2402MHz Ant1

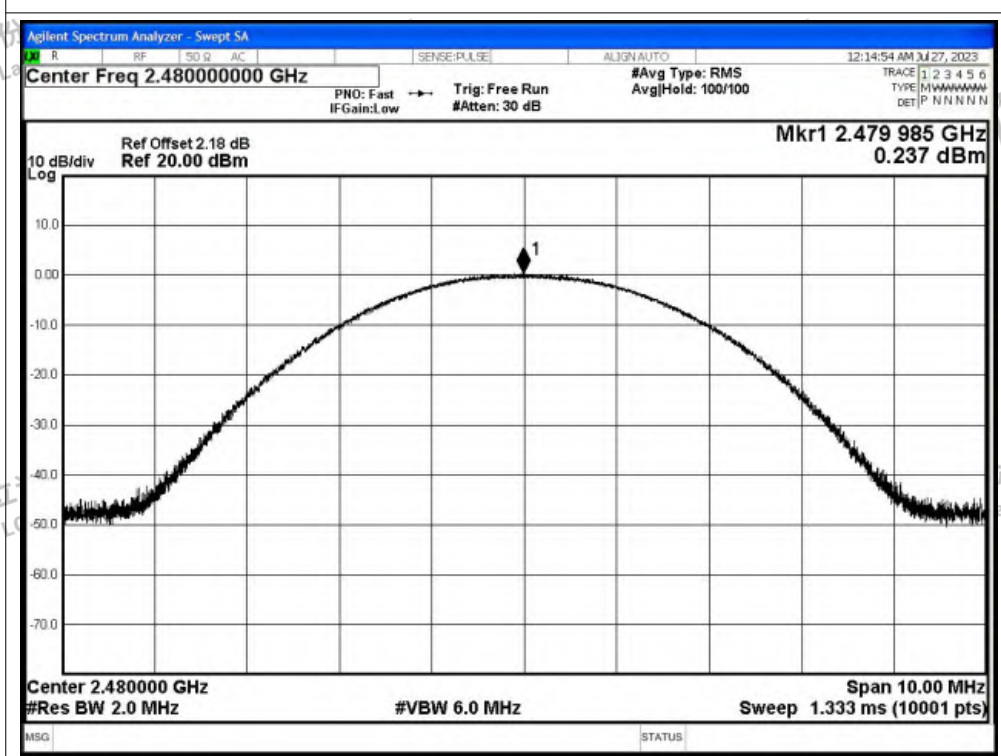




Power NVNT 2-DH5 2441MHz Ant1

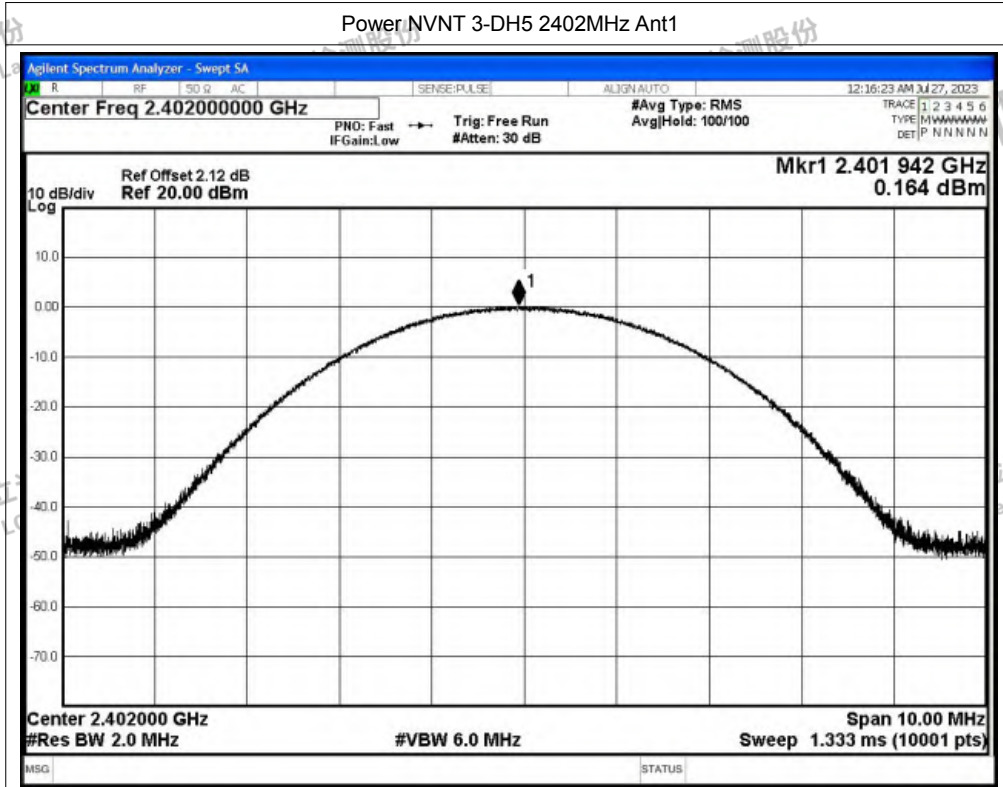


Power NVNT 2-DH5 2480MHz Ant1

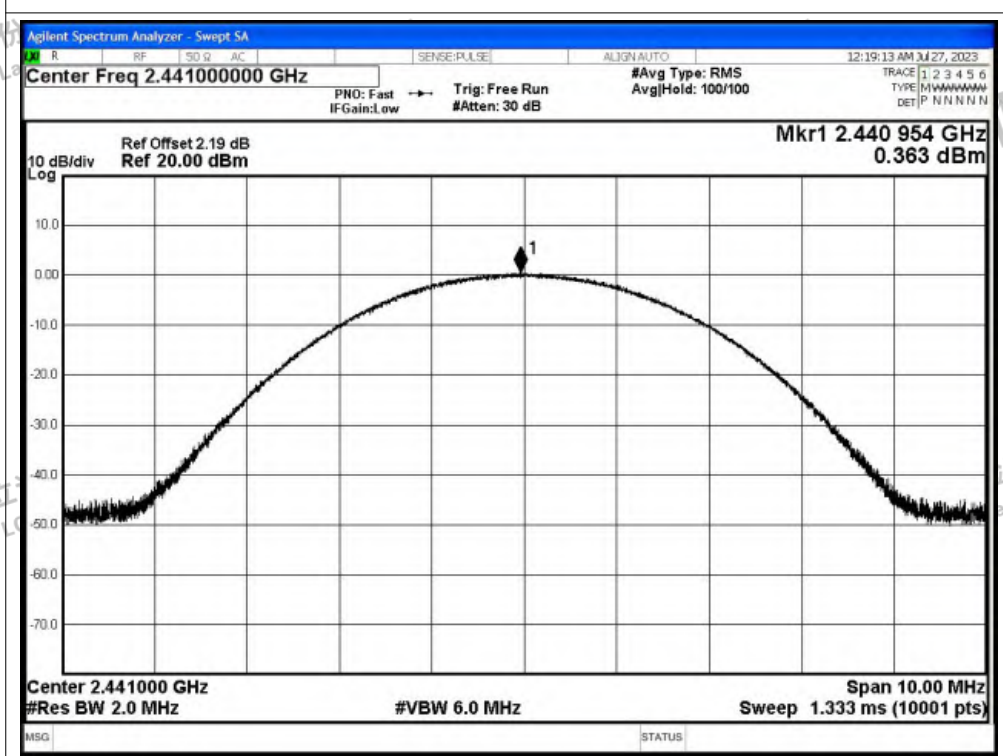


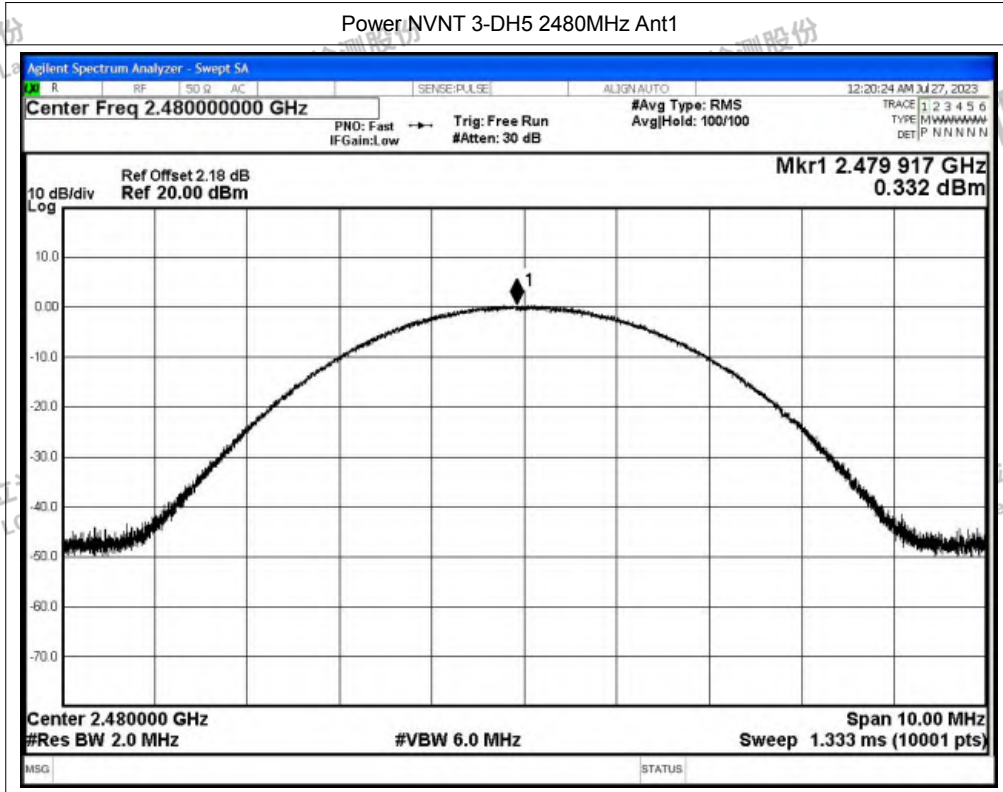


Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1







A.3 Carrier Frequencies Separation

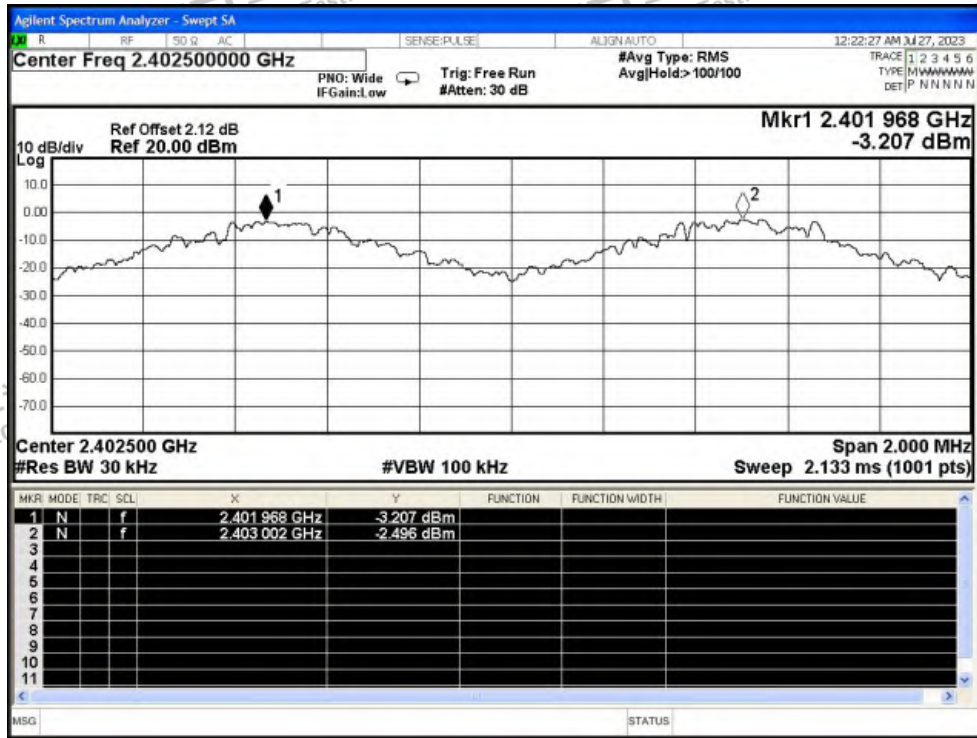
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.968	2403.002	1.034	0.678	Pass
NVNT	2-DH5	Ant1	2401.814	2402.842	1.028	0.879	Pass
NVNT	3-DH5	Ant1	2402.018	2403.014	0.996	0.871	Pass



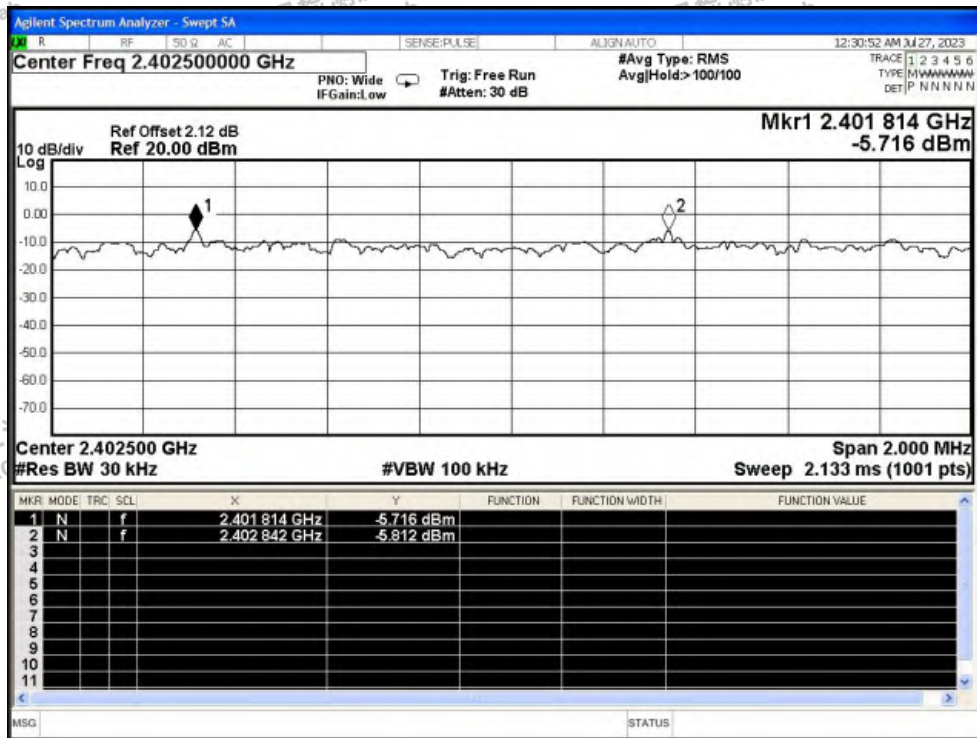


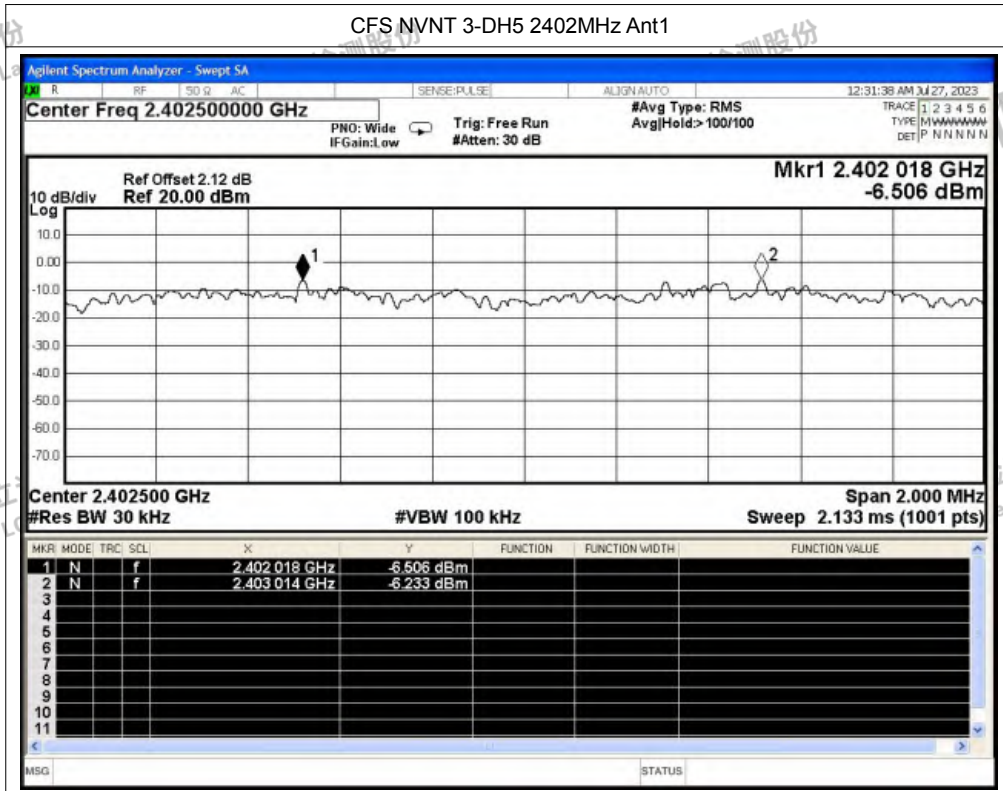
Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1







A.4 Dwell Time

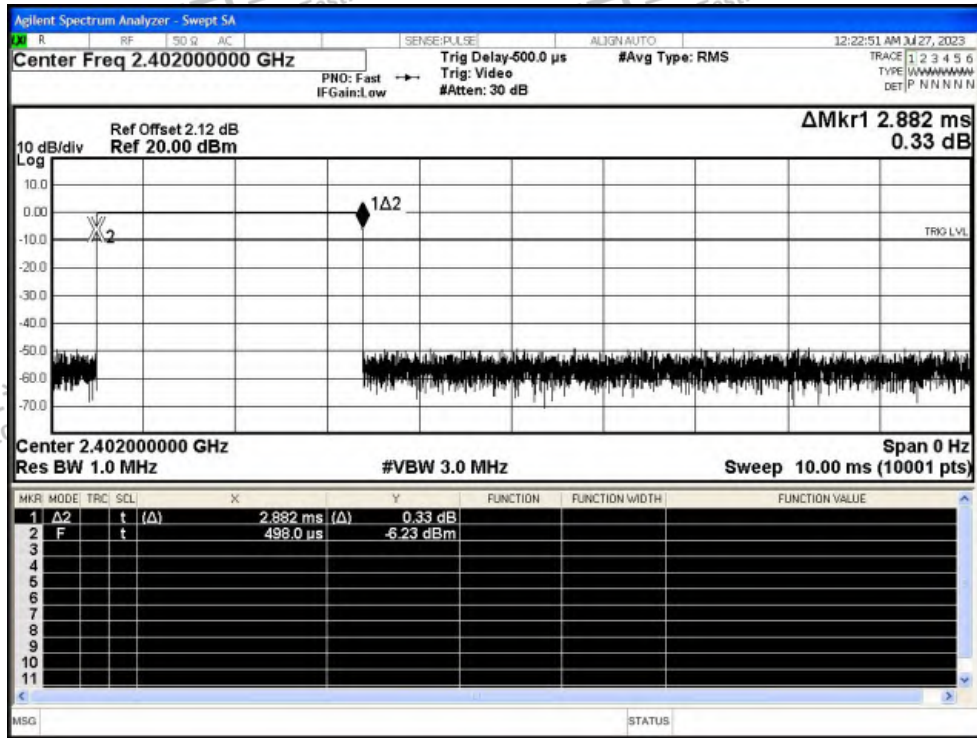
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.882	296.846	103	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.88	302.4	105	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.887	303.135	105	31600	400	Pass



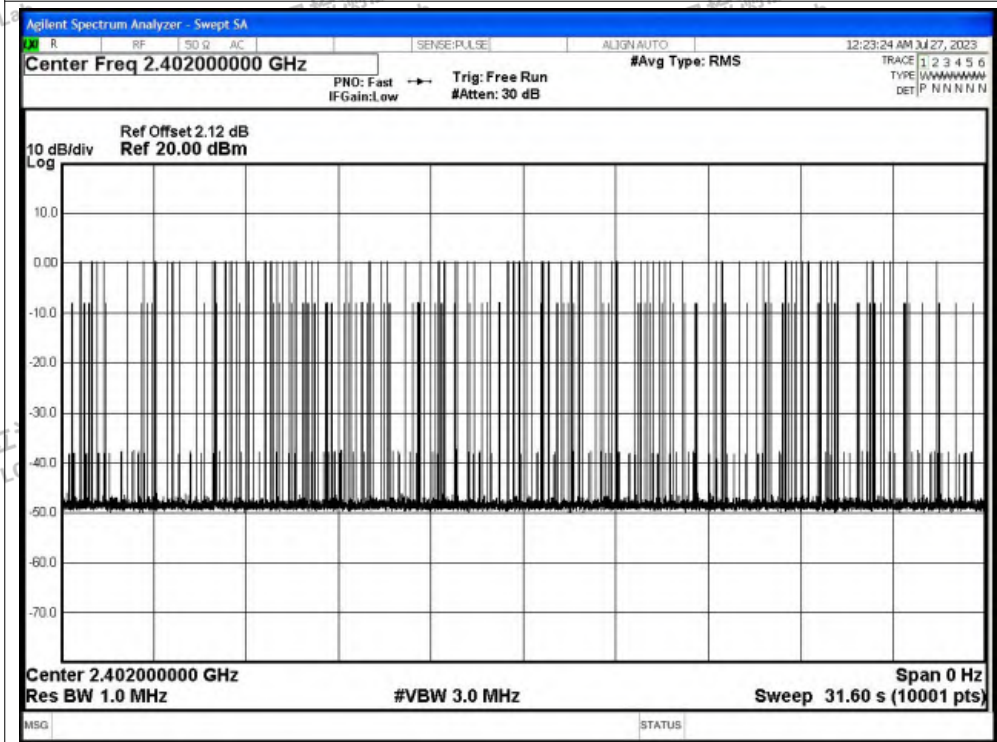


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

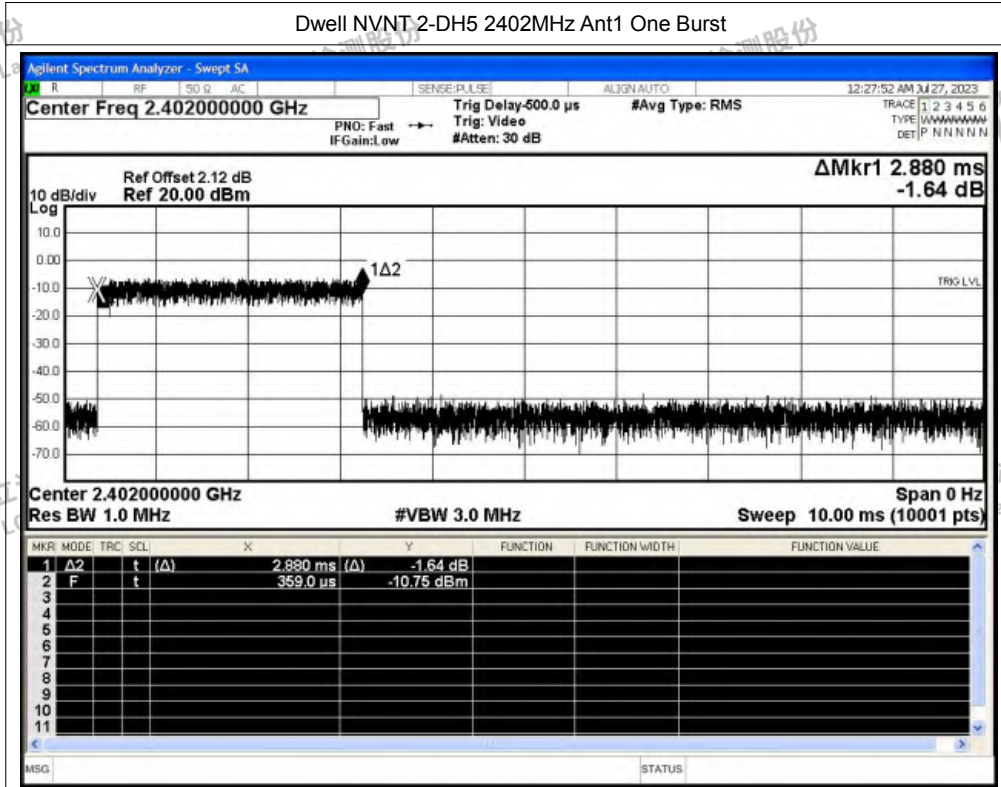


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

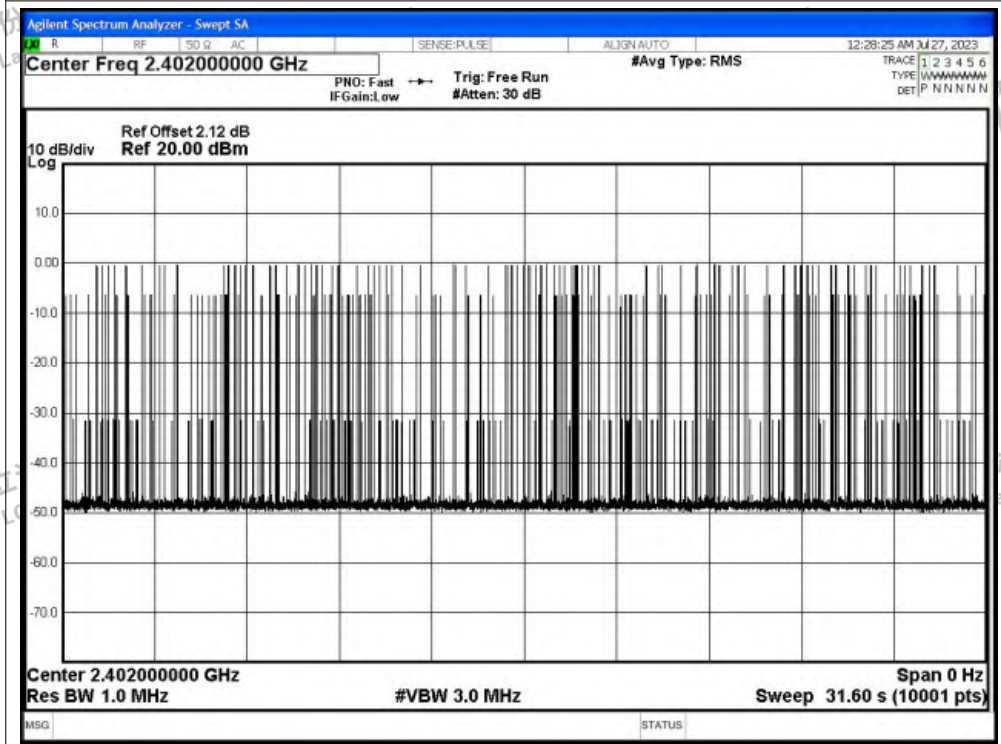




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst

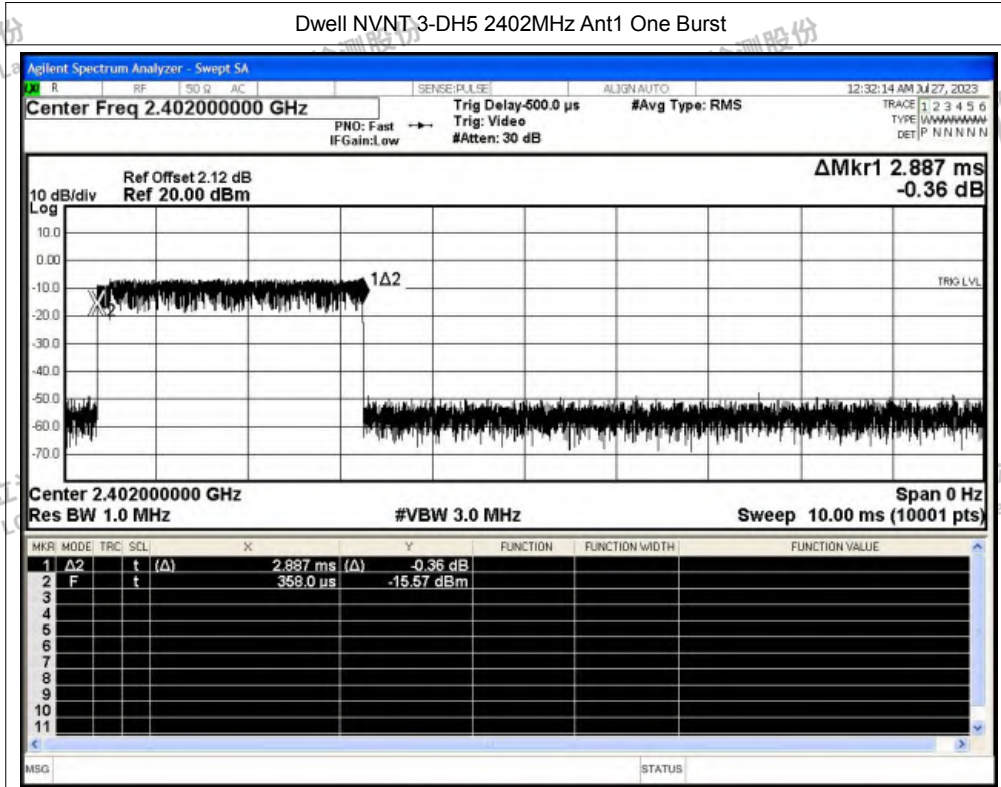


Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

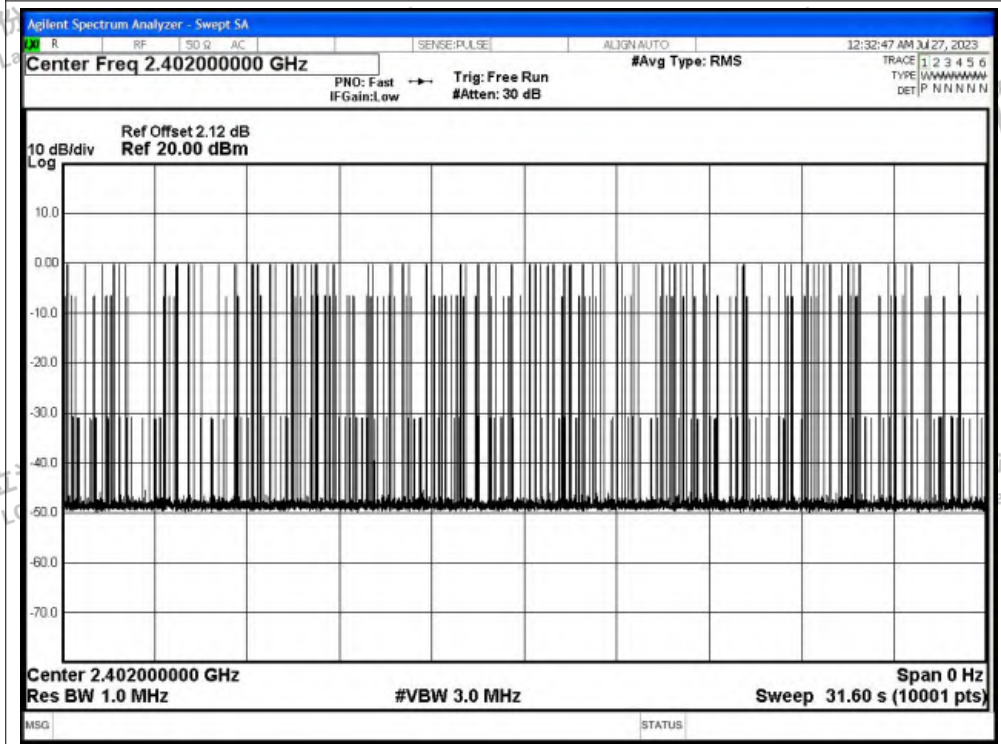




Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated





A.5 Number of Hopping Channel

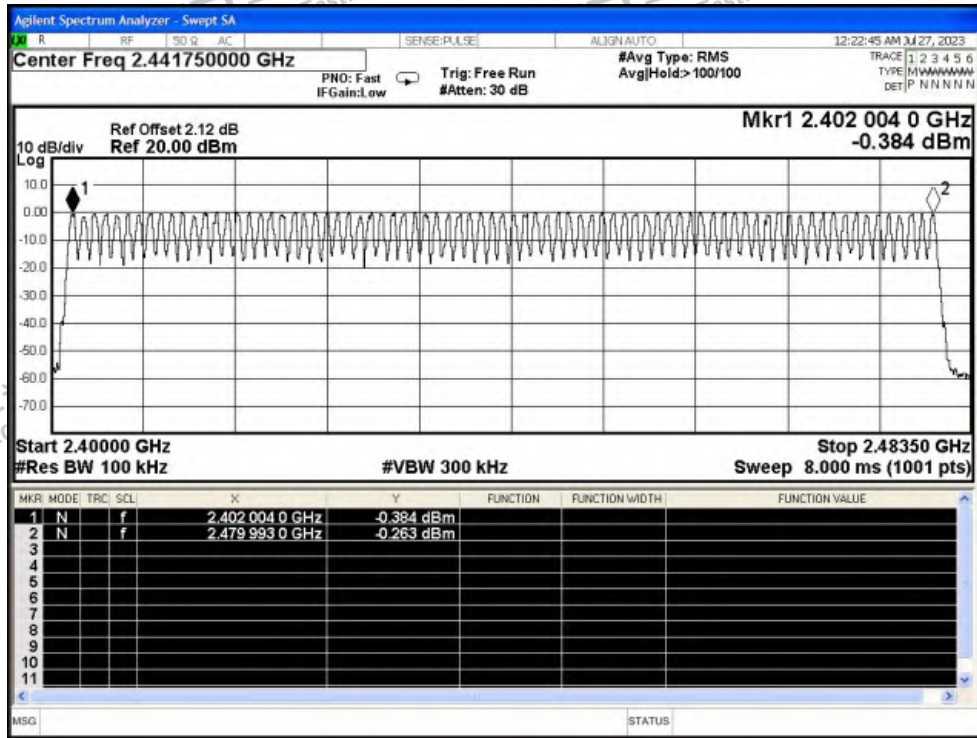
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass



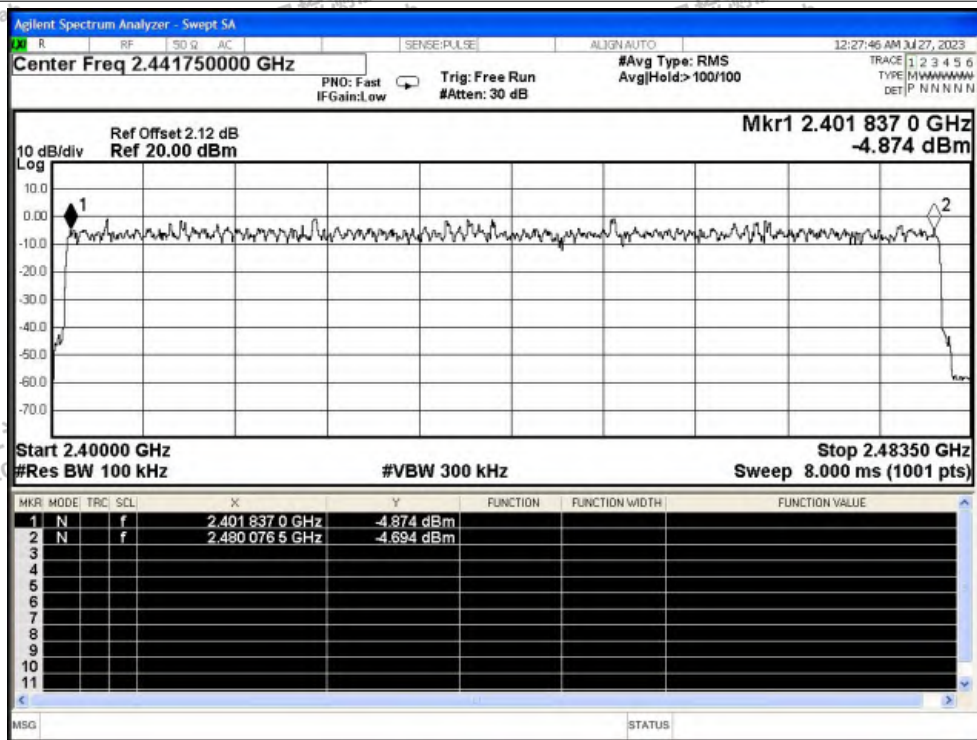


Test Graphs

Hopping No: NVNT 1-DH5 2402MHz Ant1

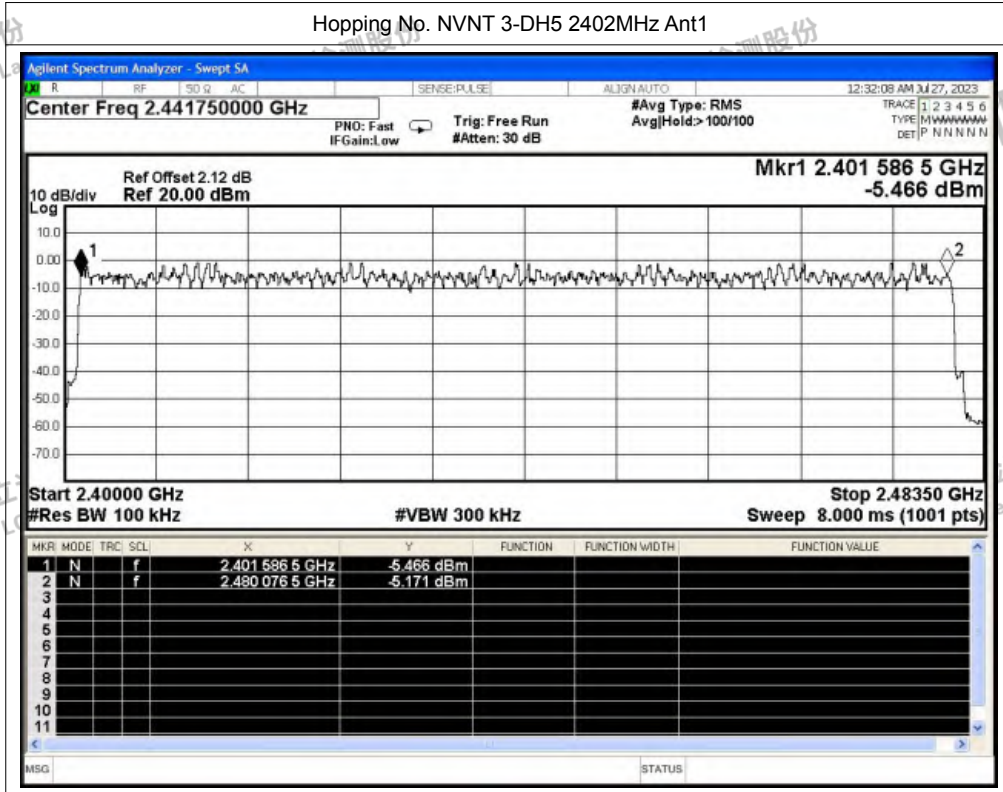


Hopping No: NVNT 2-DH5 2402MHz Ant1





Hopping No. NVNT 3-DH5 2402MHz Ant1





A.6 Band Edge

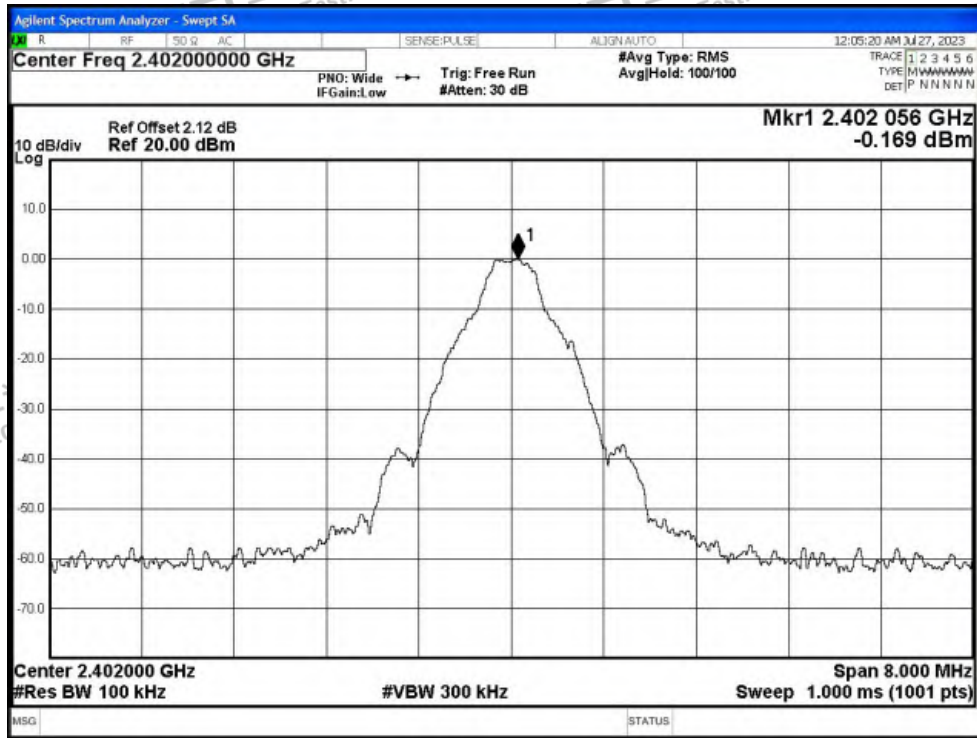
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-55.23	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-56.96	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-55.09	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-52.01	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-52.11	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-55.21	-20	Pass



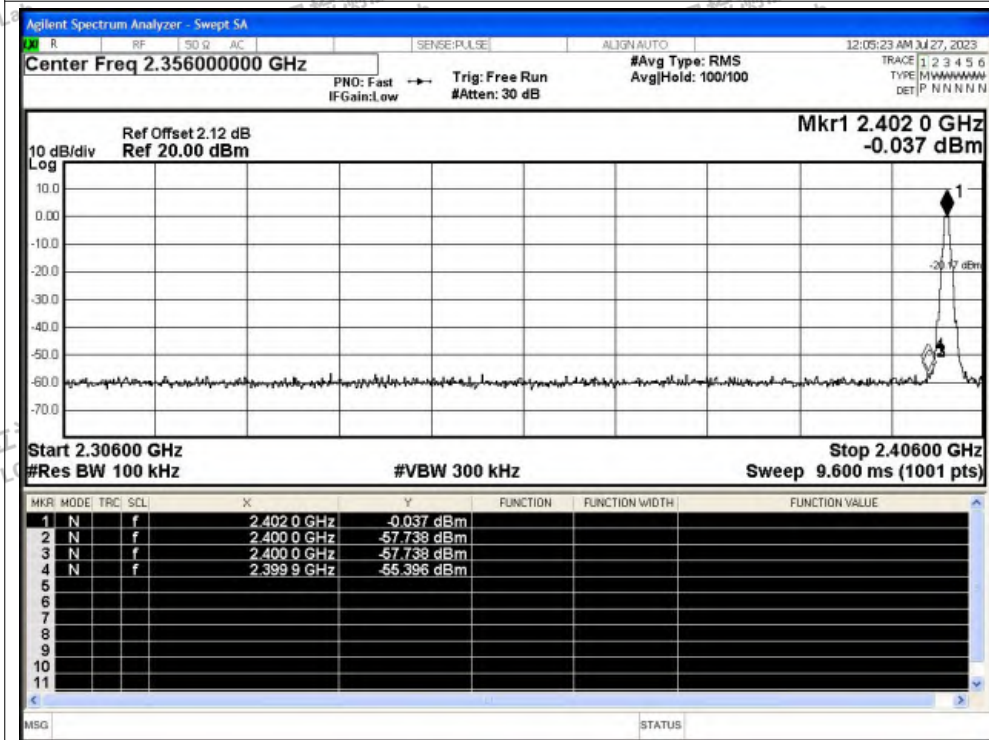


Test Graphs

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

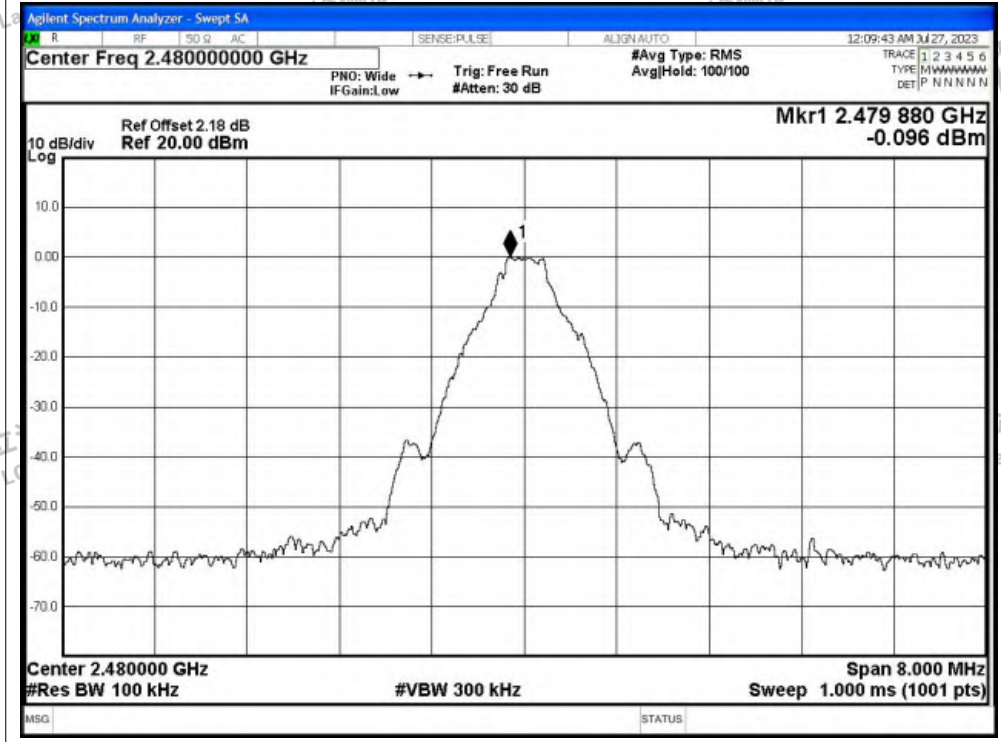


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

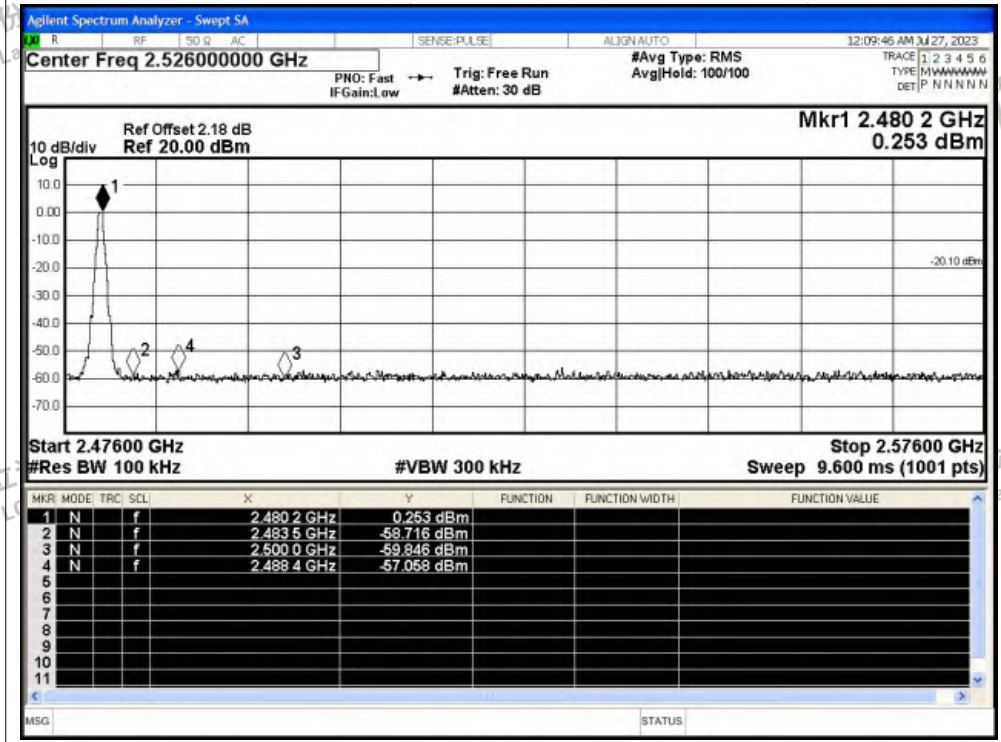




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

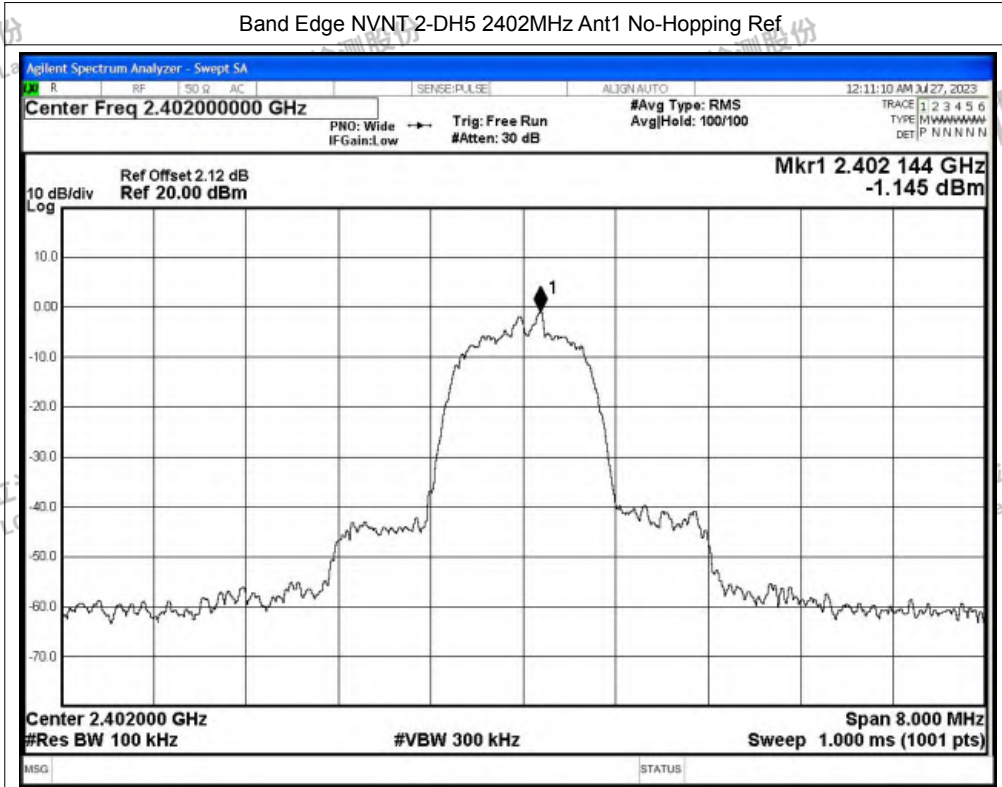


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

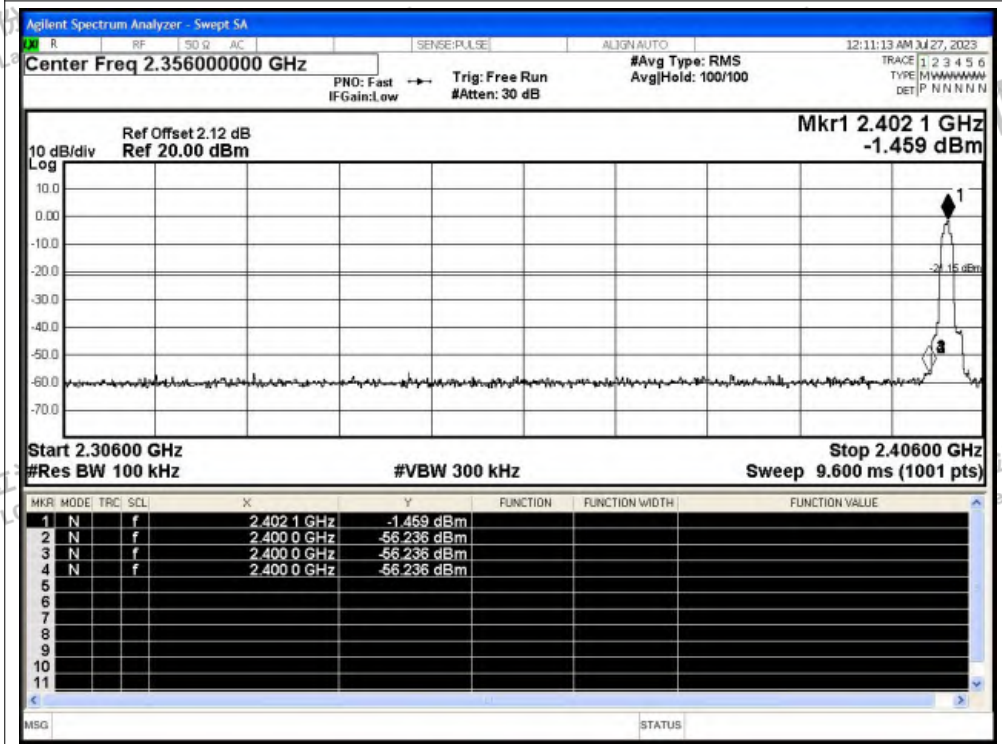




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

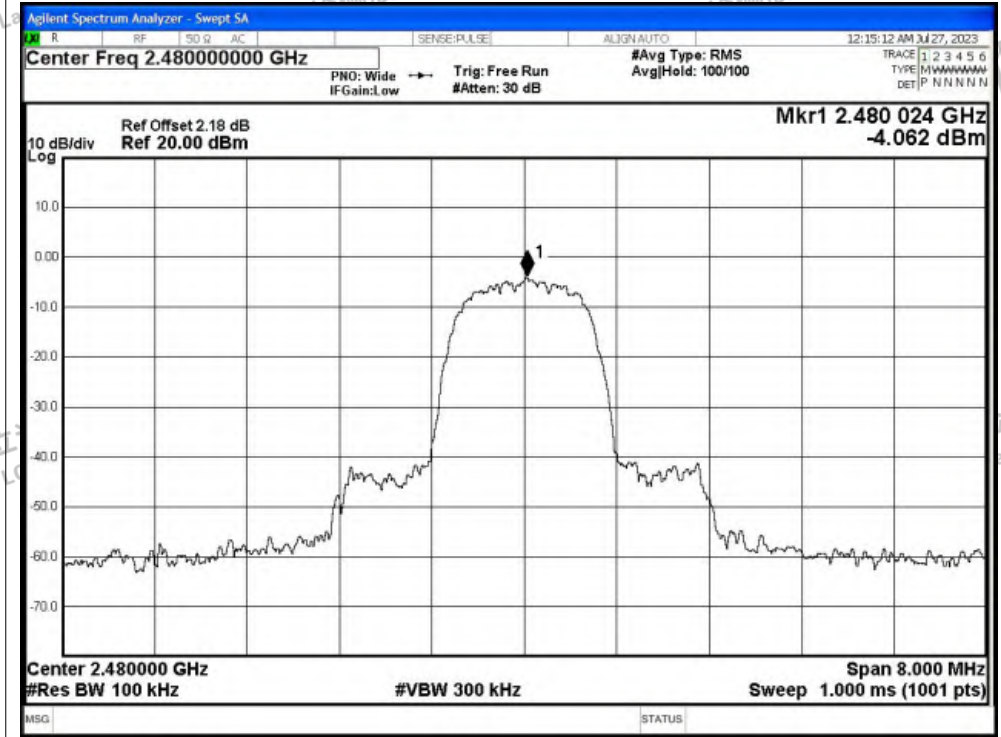


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

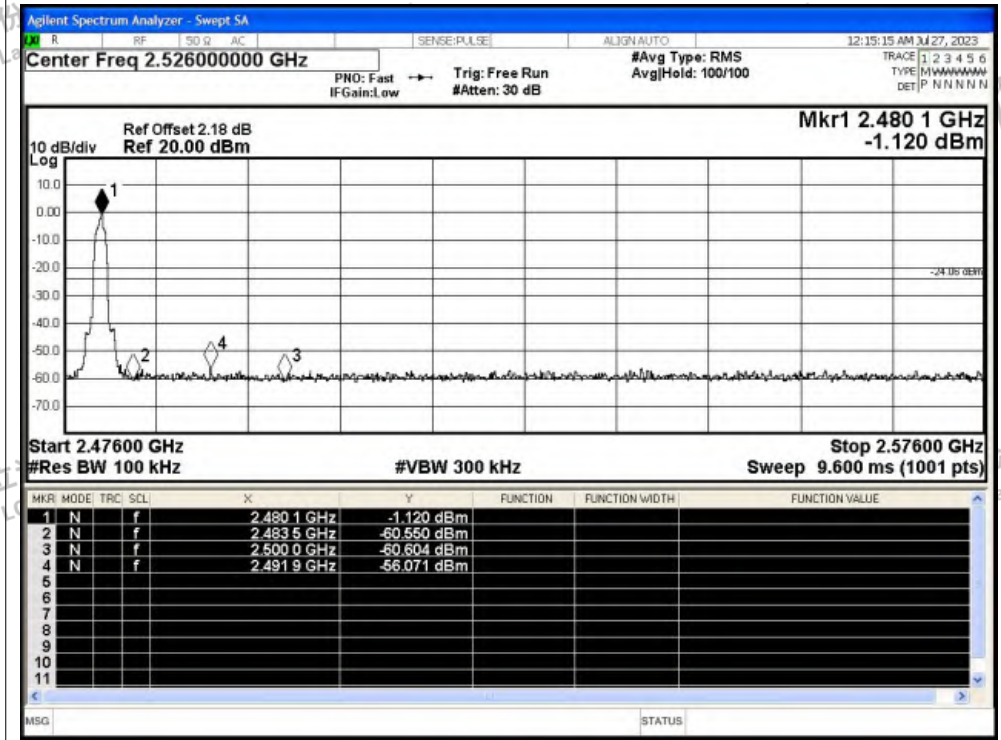




Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref

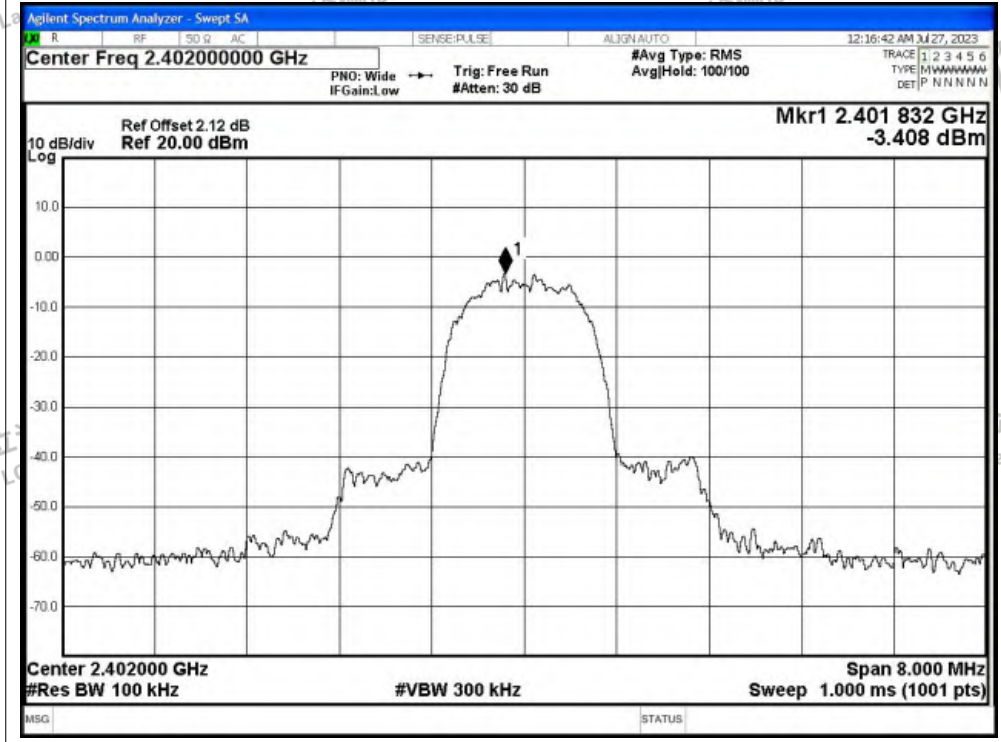


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

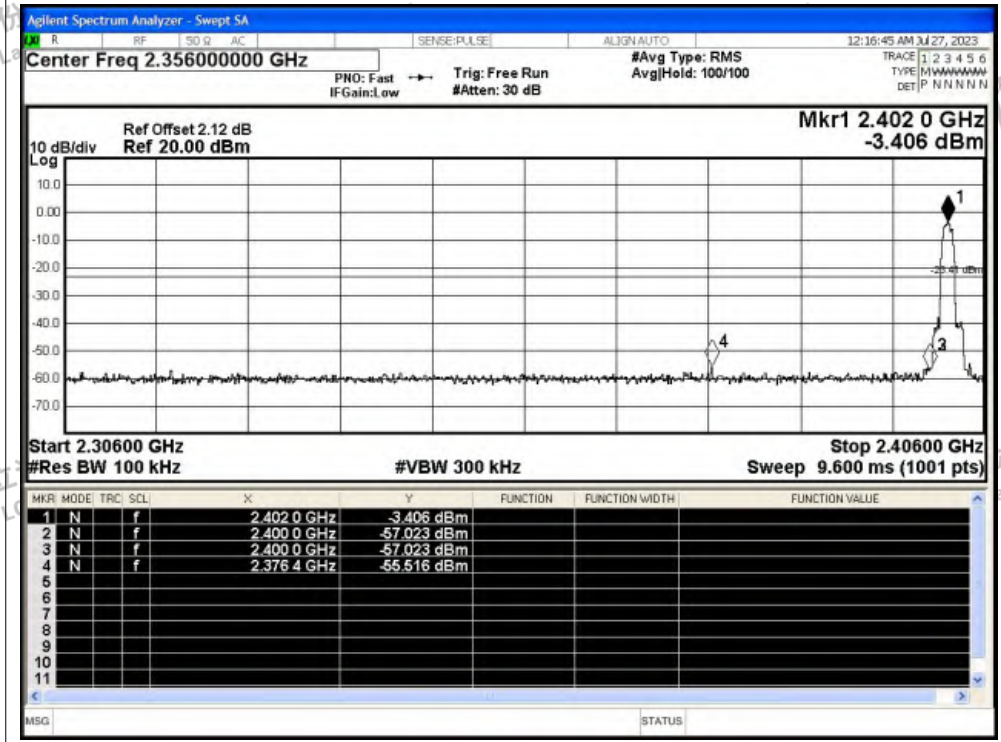




Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref

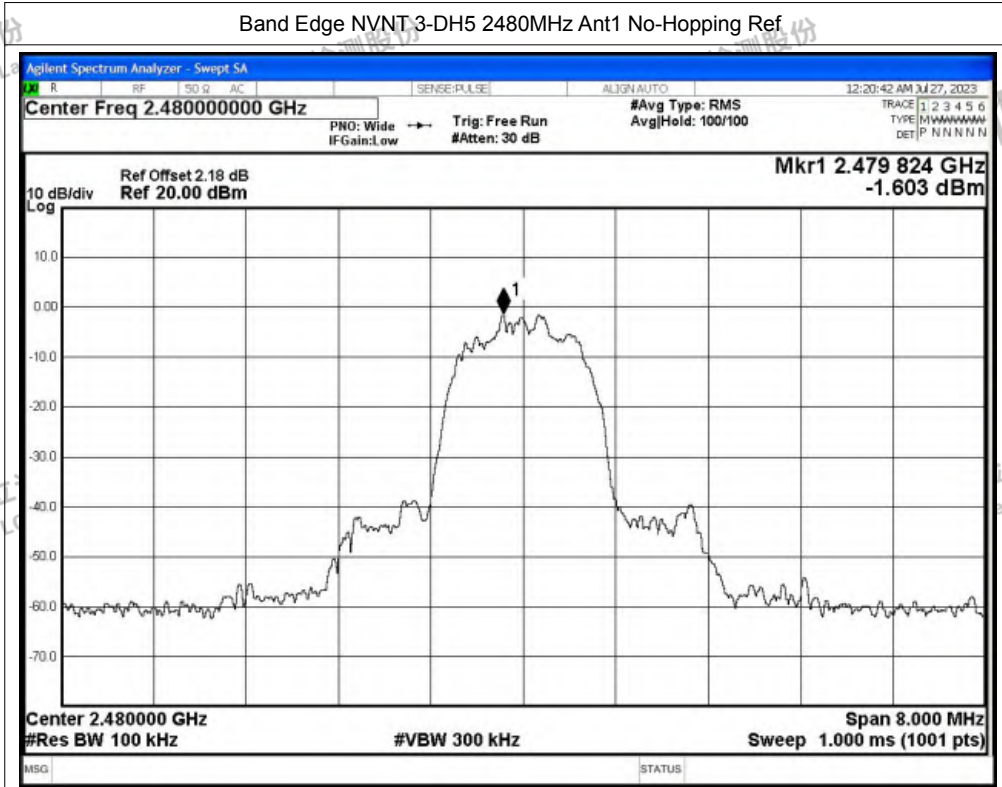


Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission

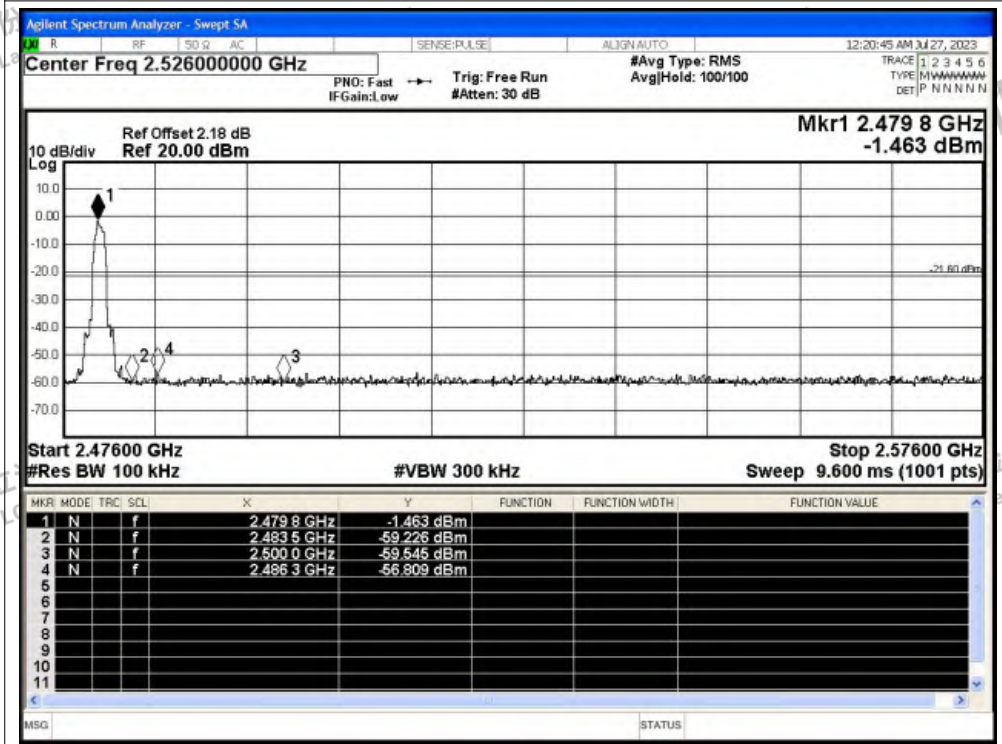




Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



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	-56.07	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-55.72	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-55.03	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-54.76	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-54.92	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-54.45	-20	Pass



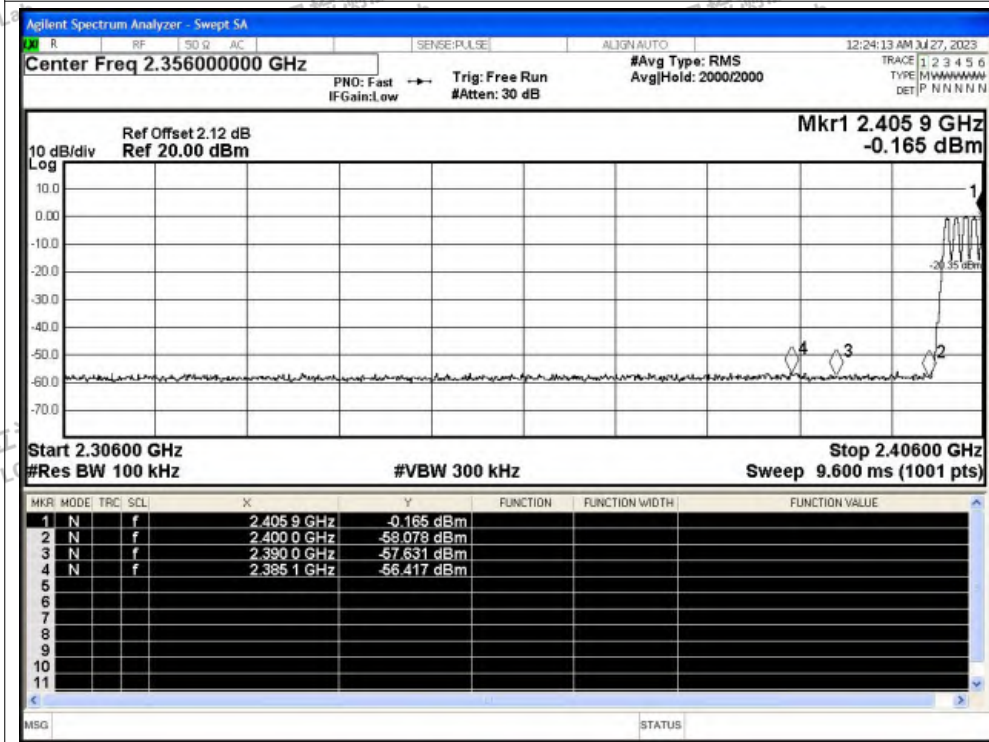


Test Graphs

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

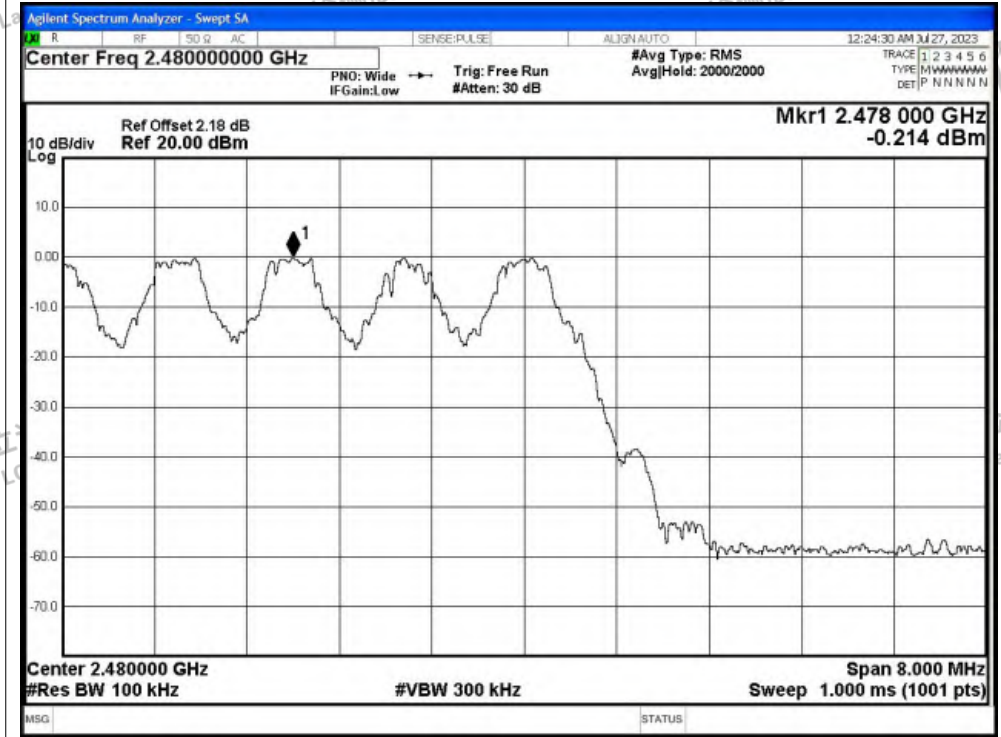


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

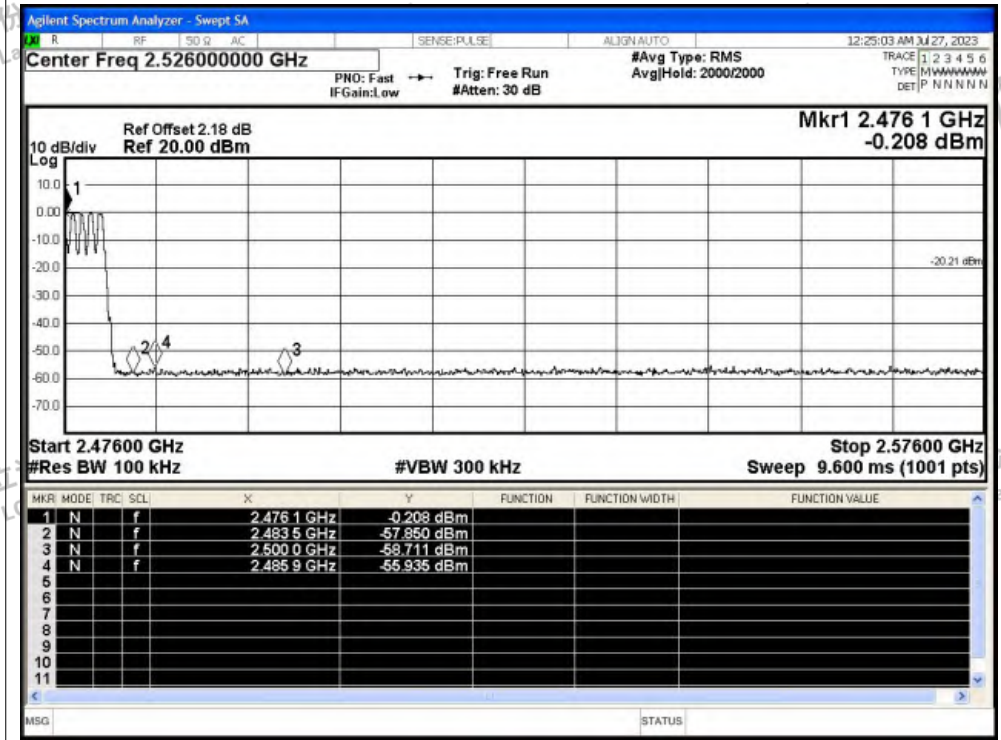




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



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

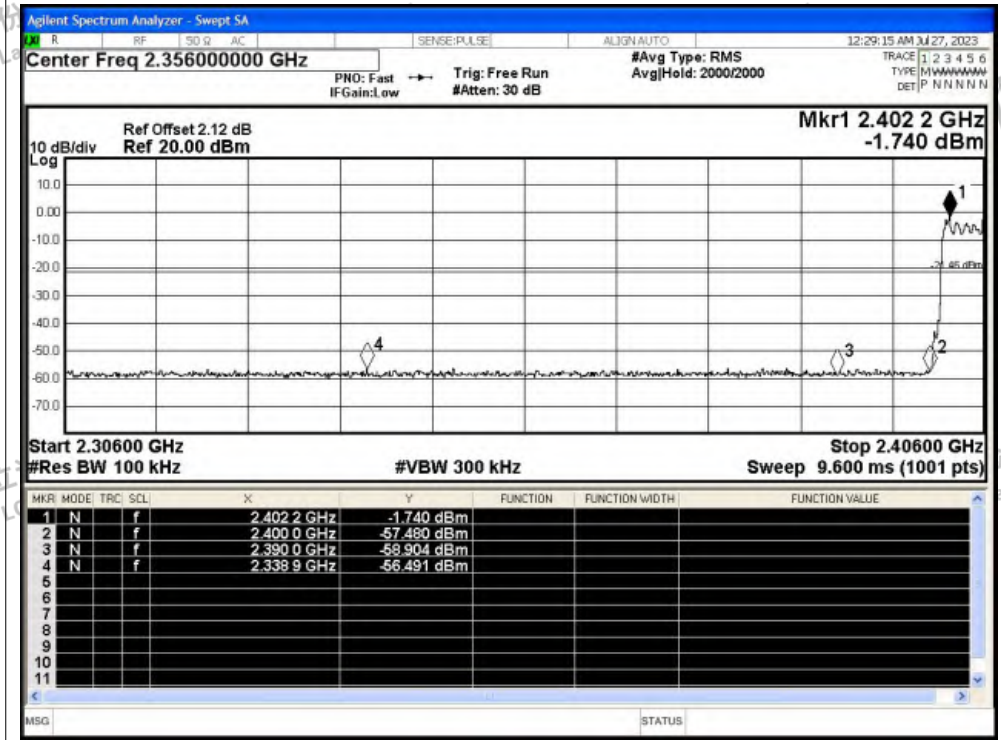




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref

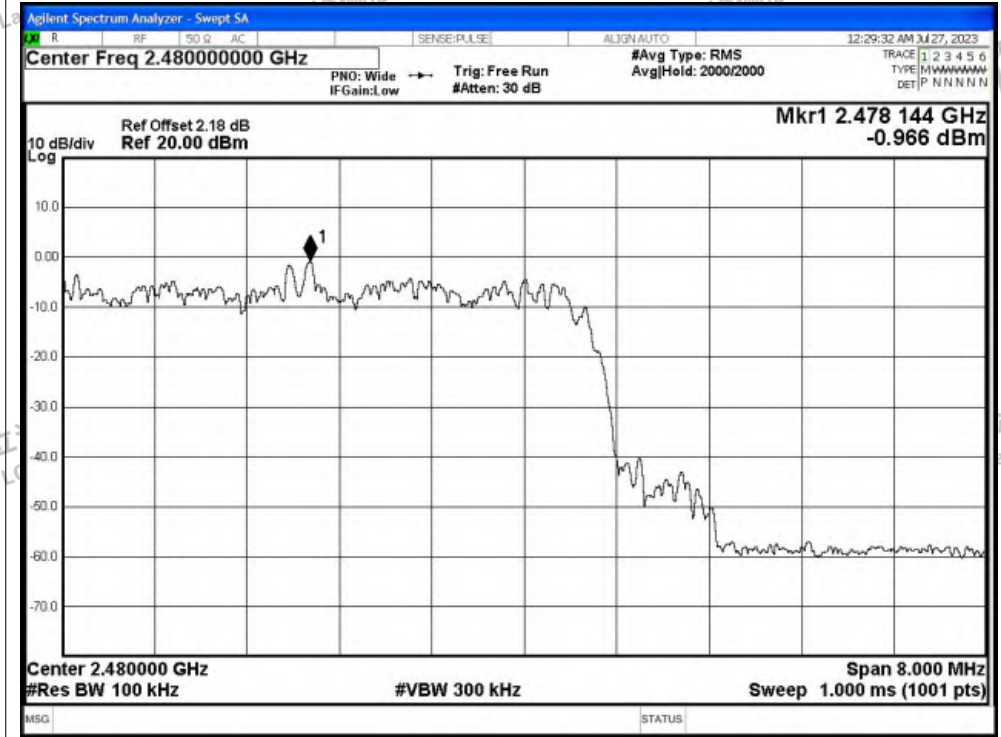


Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission

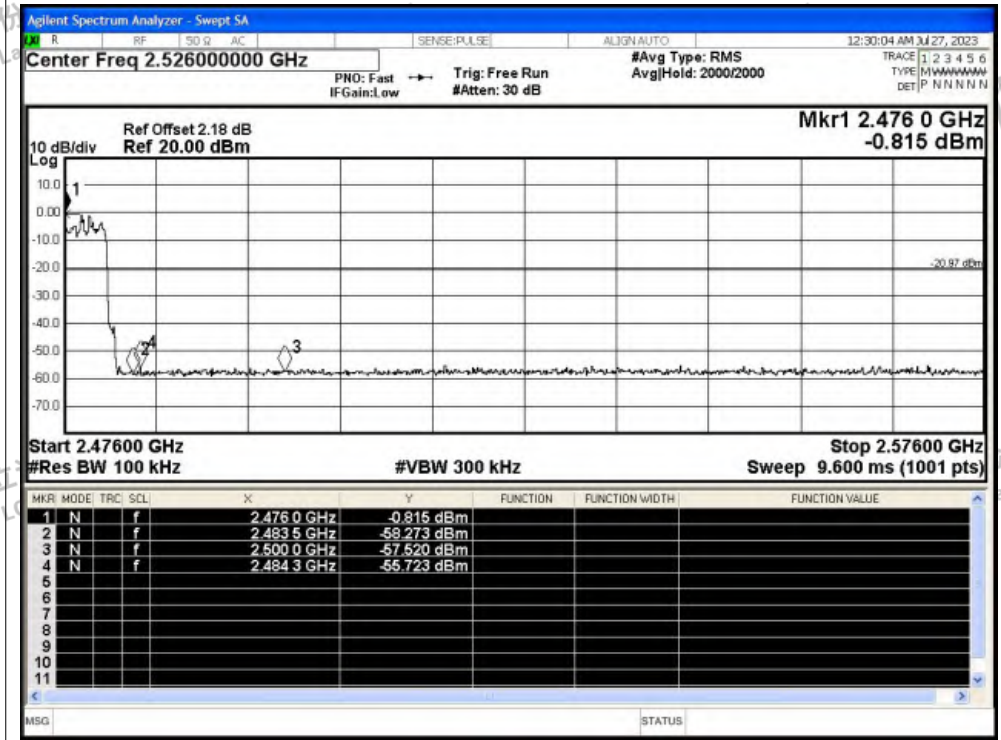




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref

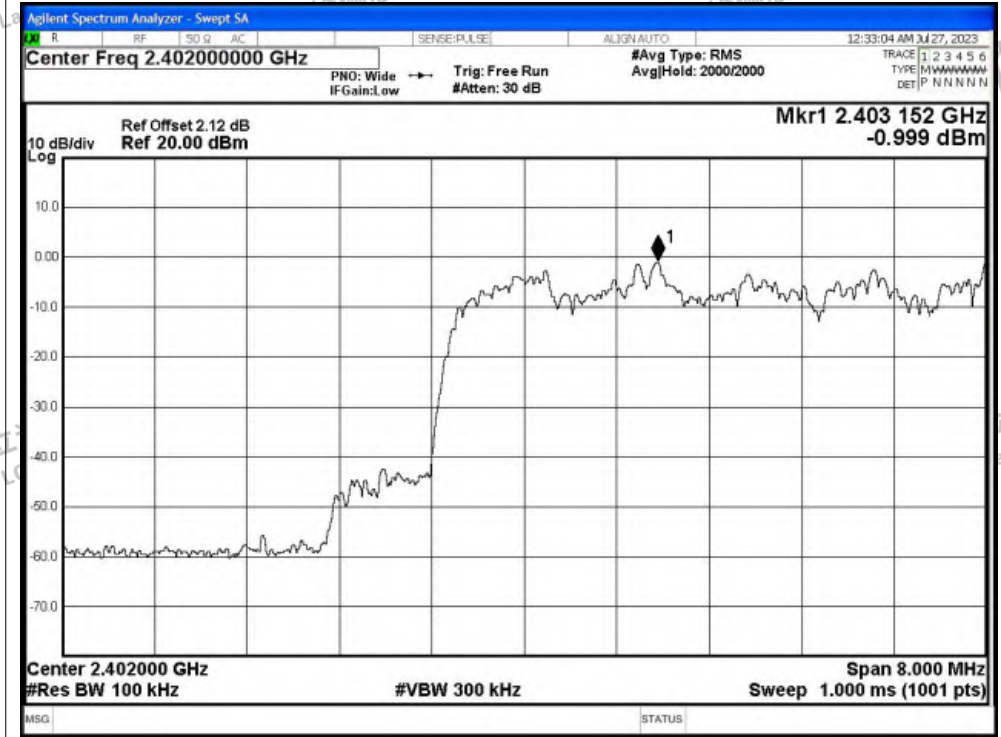


Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission

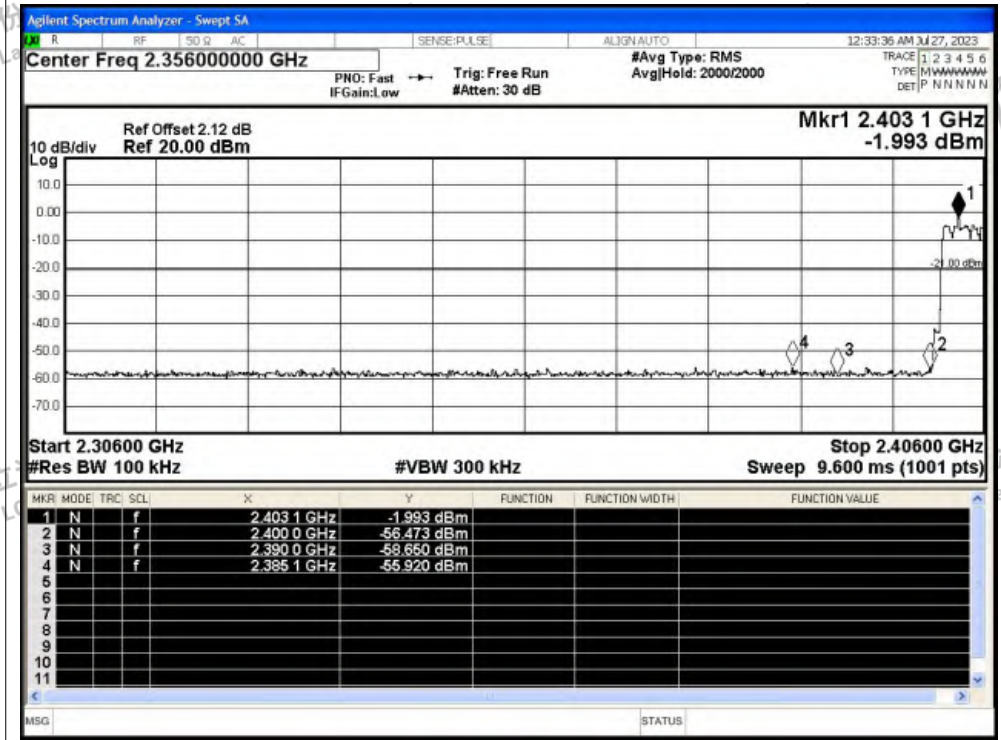




Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref

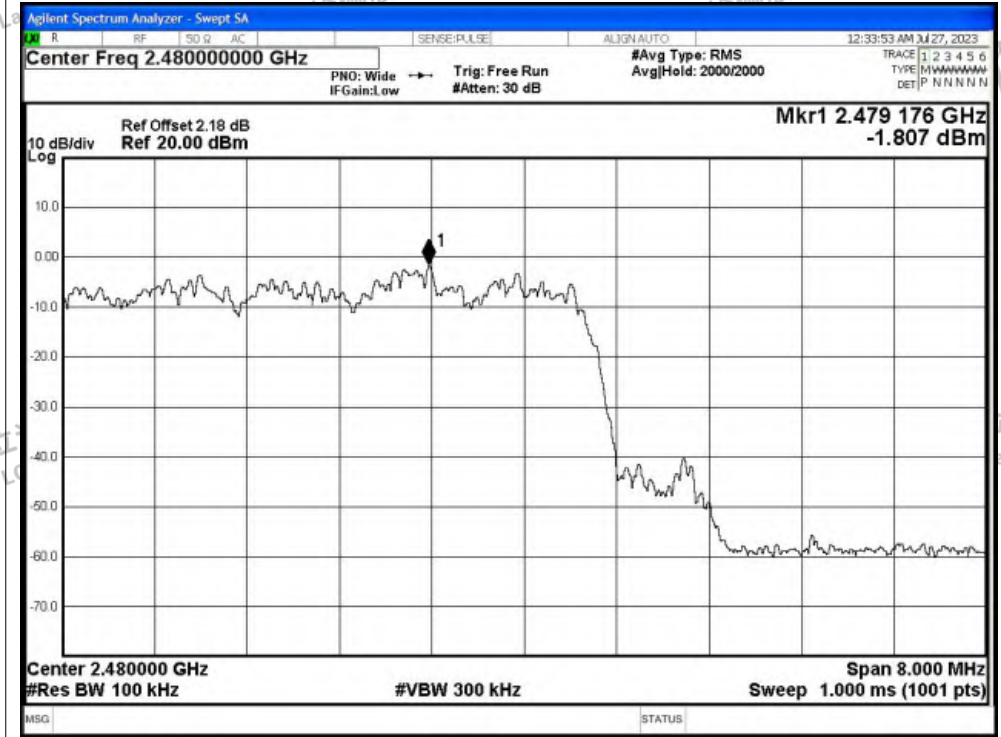


Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission

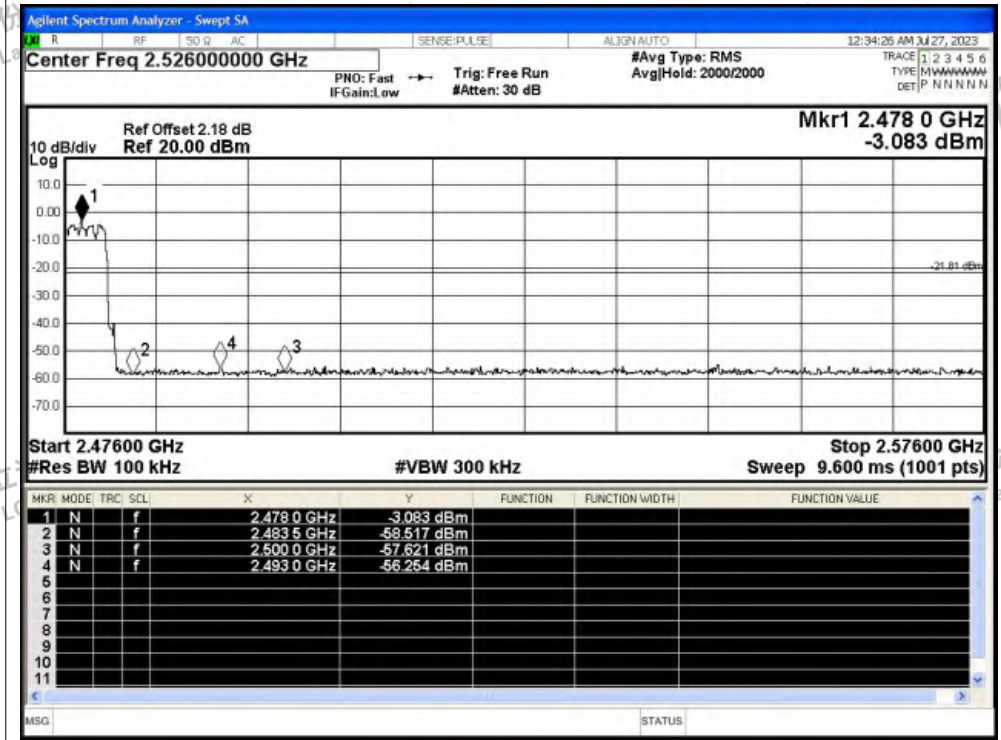




Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



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





A.7 Conducted RF Spurious Emission

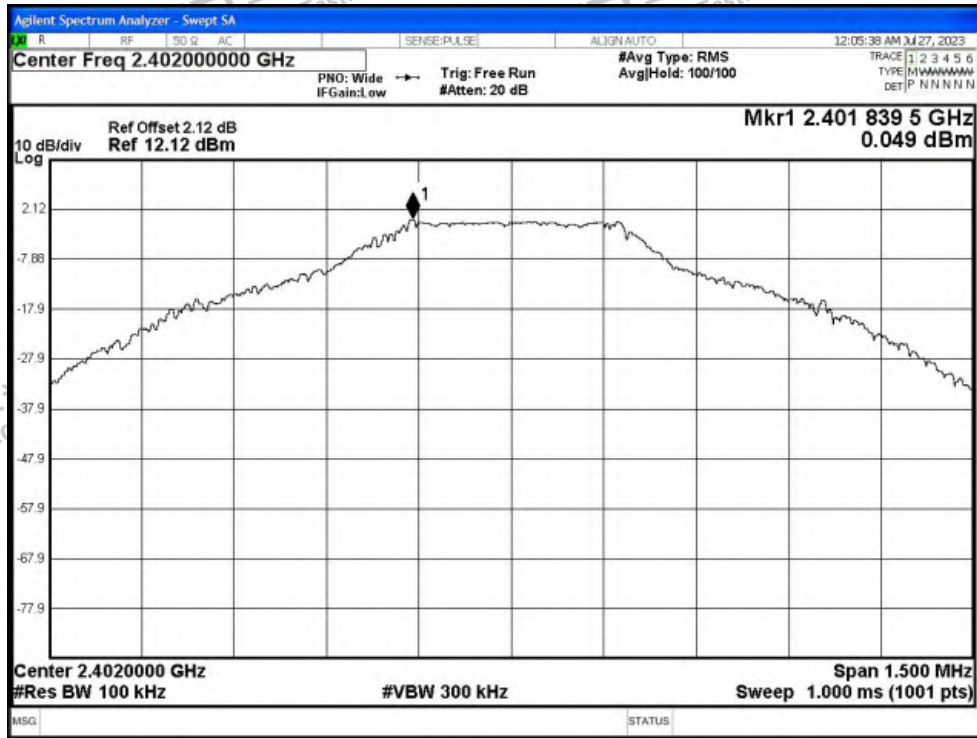
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-56.02	-20	Pass
NVNT	1-DH5	2441	Ant1	-56.47	-20	Pass
NVNT	1-DH5	2480	Ant1	-55.3	-20	Pass
NVNT	2-DH5	2402	Ant1	-53.16	-20	Pass
NVNT	2-DH5	2441	Ant1	-53.91	-20	Pass
NVNT	2-DH5	2480	Ant1	-54.4	-20	Pass
NVNT	3-DH5	2402	Ant1	-52.68	-20	Pass
NVNT	3-DH5	2441	Ant1	-54.03	-20	Pass
NVNT	3-DH5	2480	Ant1	-53.74	-20	Pass



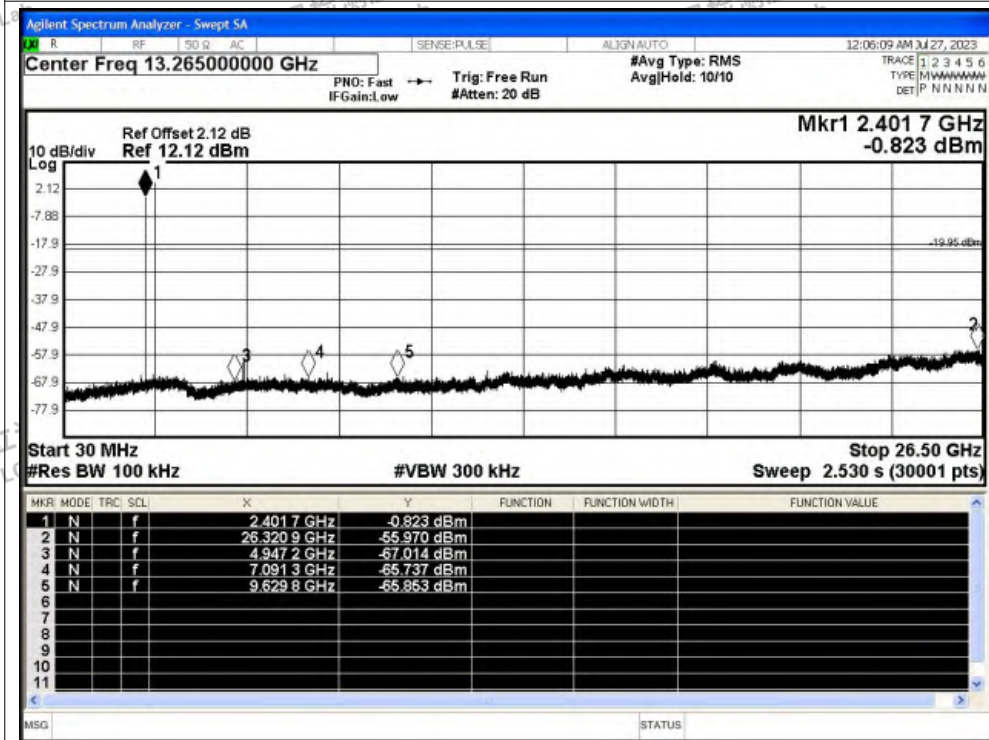


Test Graphs

Tx: Spurious NVNT 1-DH5 2402MHz Ant1 Ref

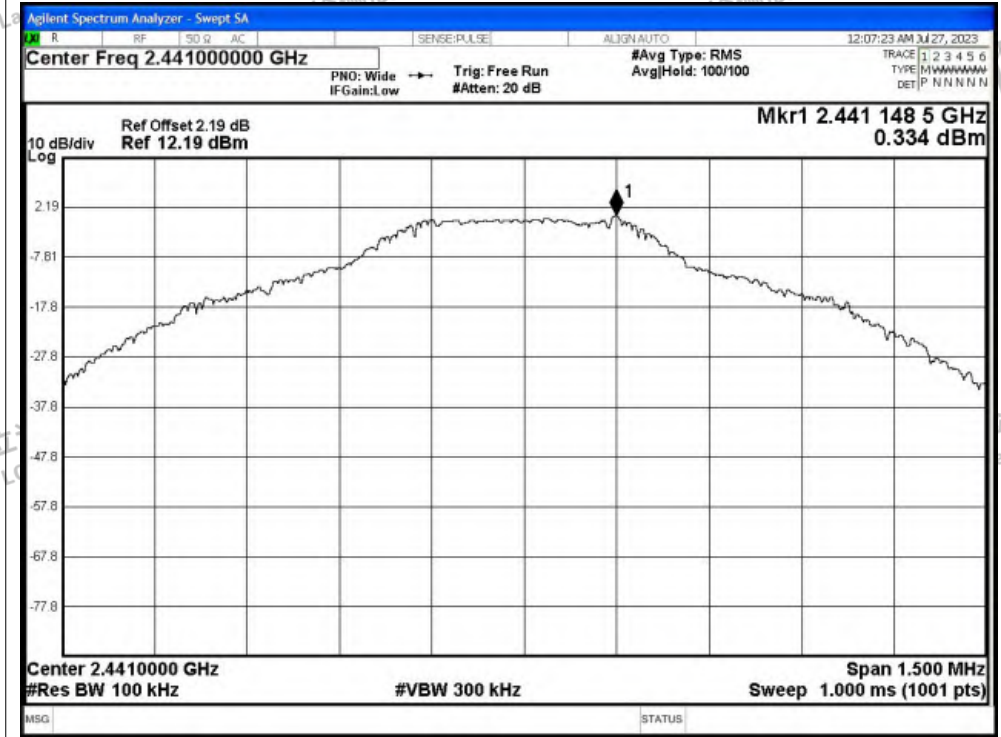


Tx: Spurious NVNT 1-DH5 2402MHz Ant1 Emission

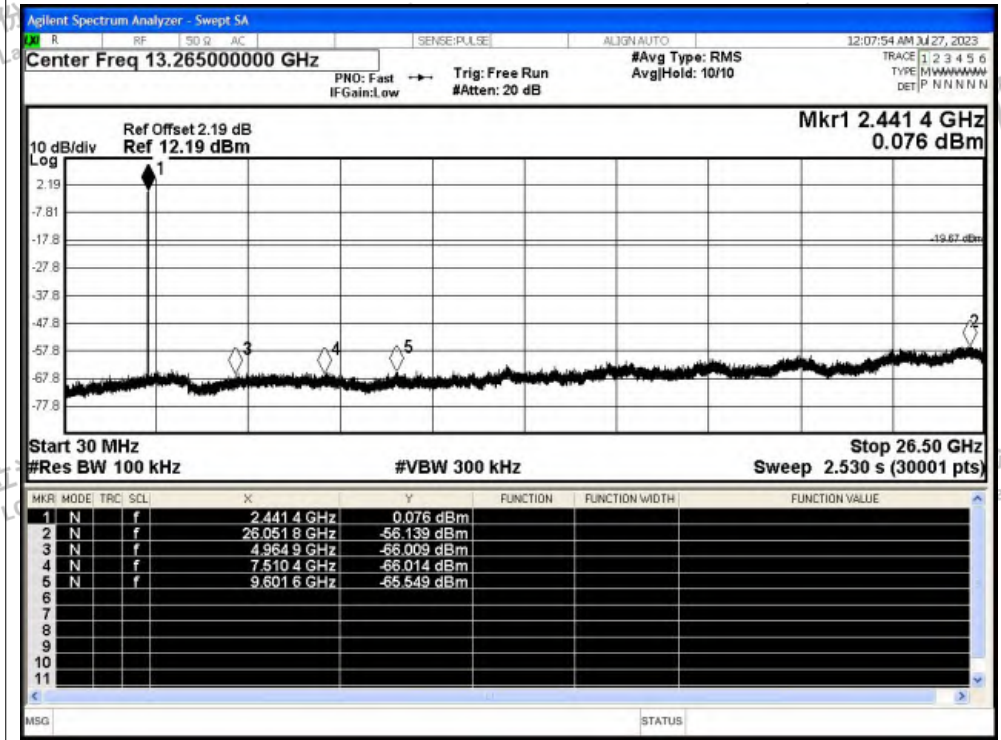




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

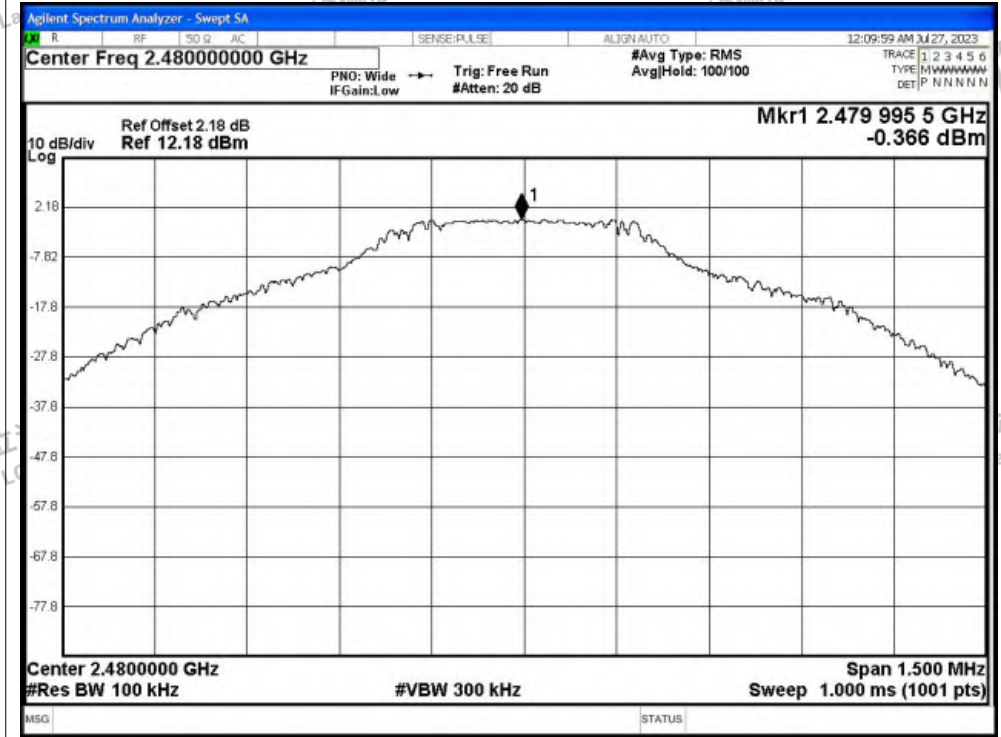


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

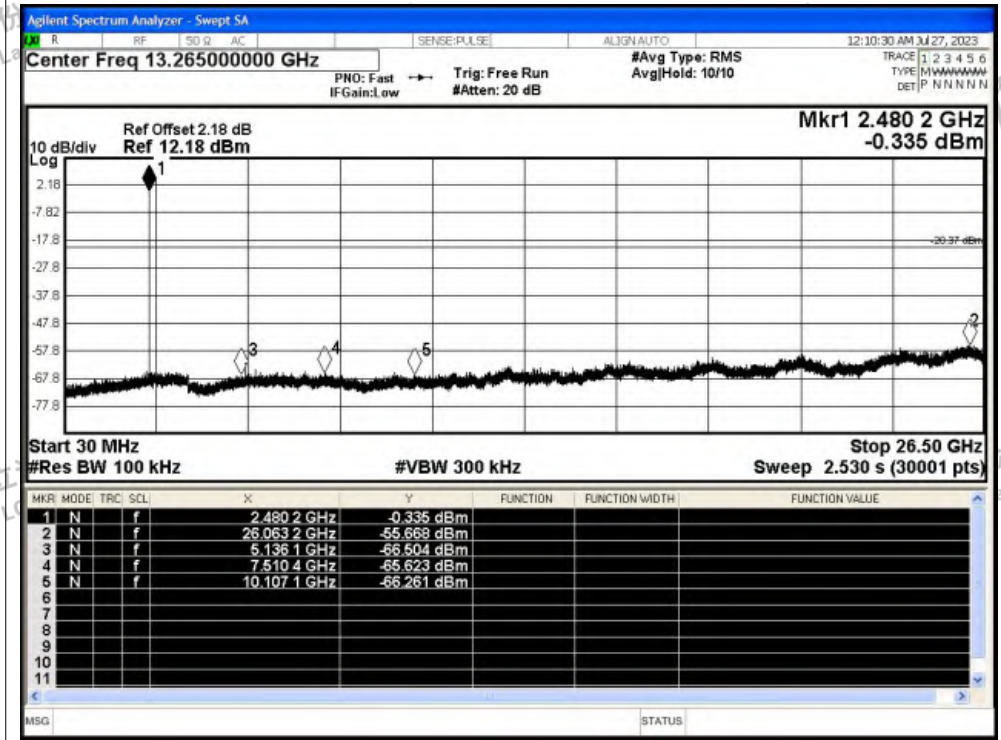




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

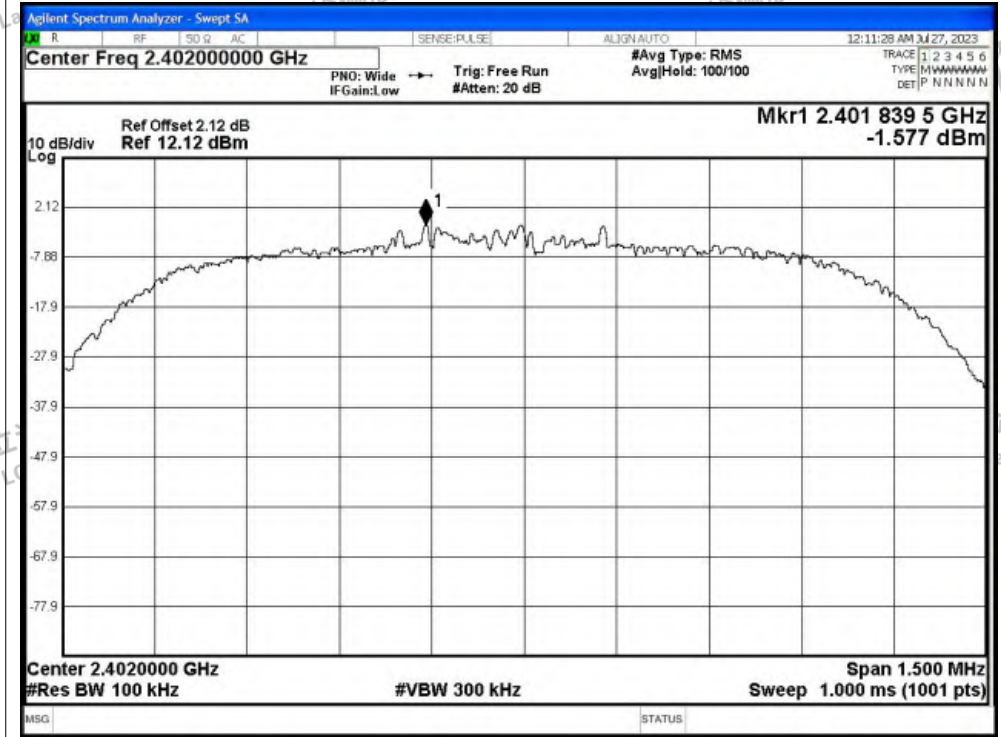


Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission

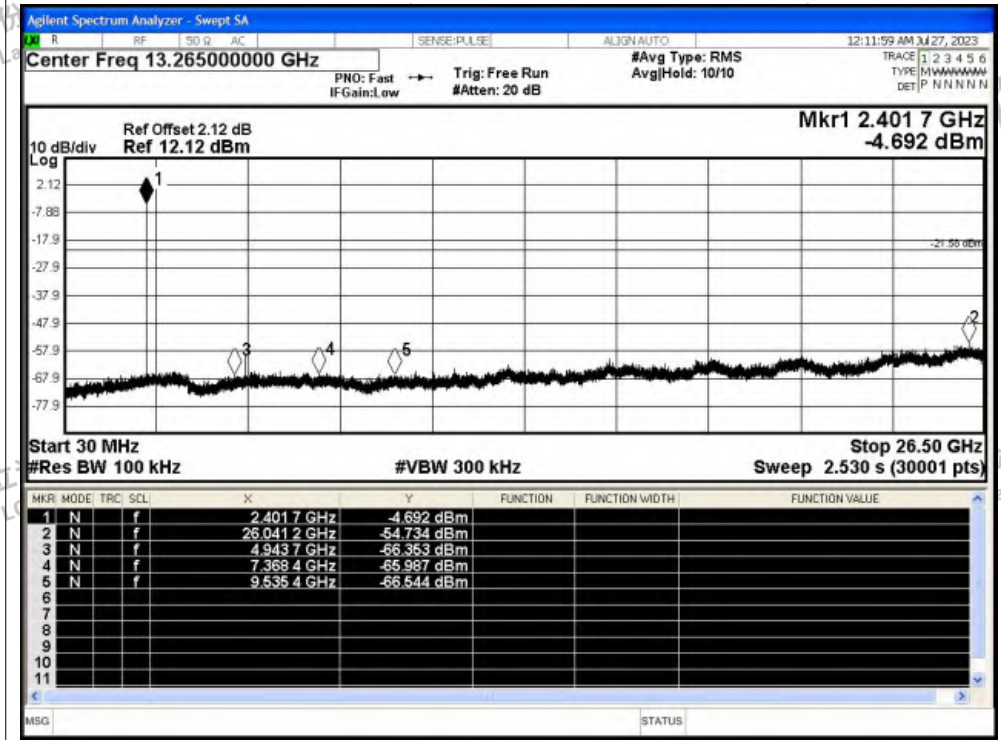




Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref

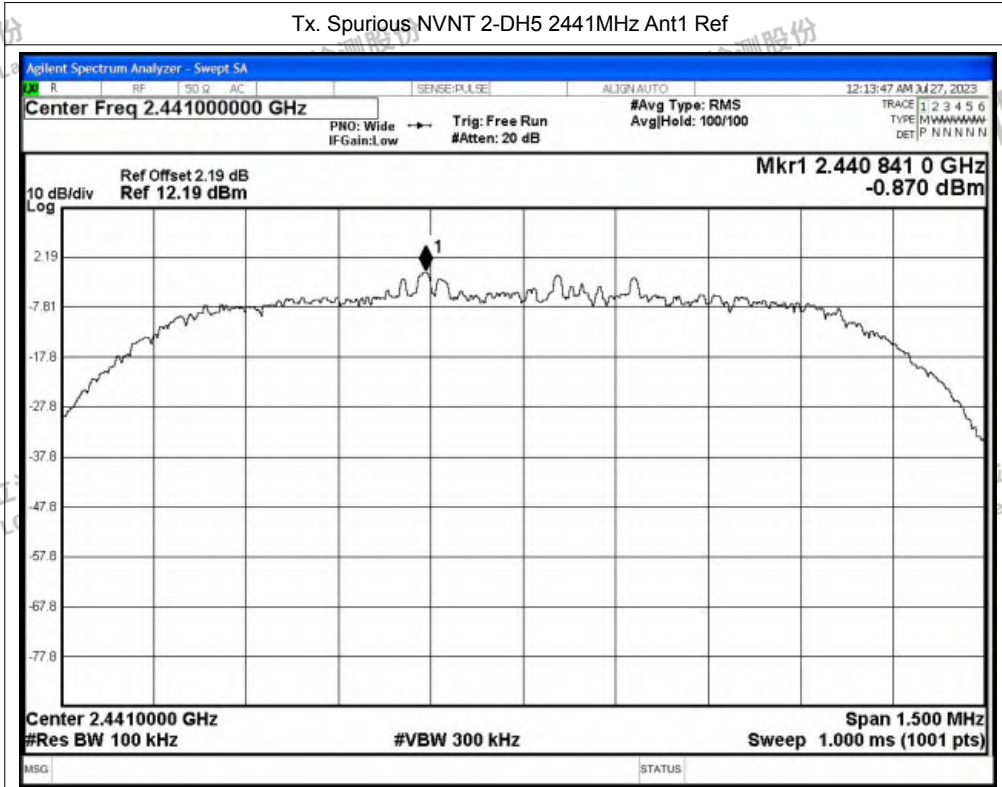


Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission

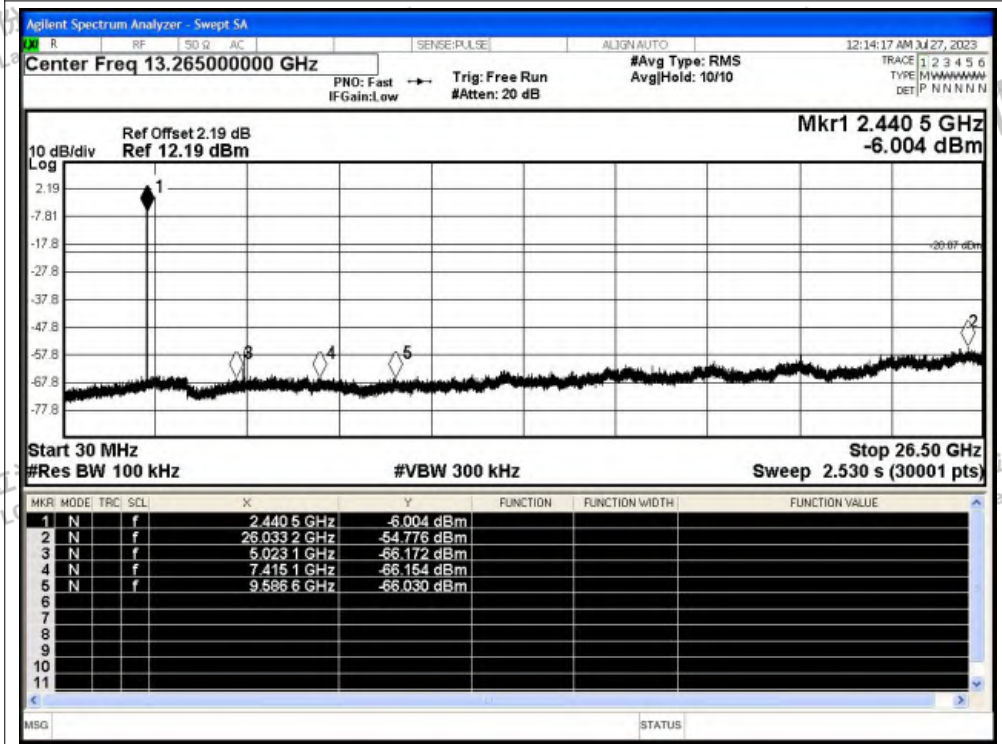




Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref

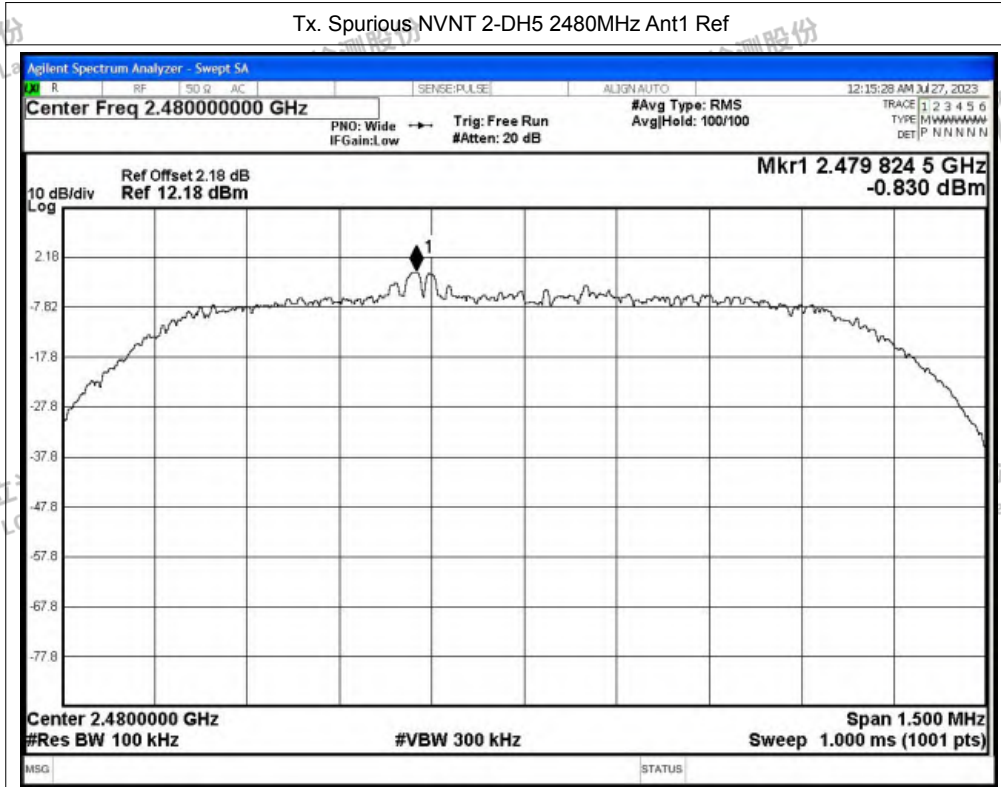


Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission

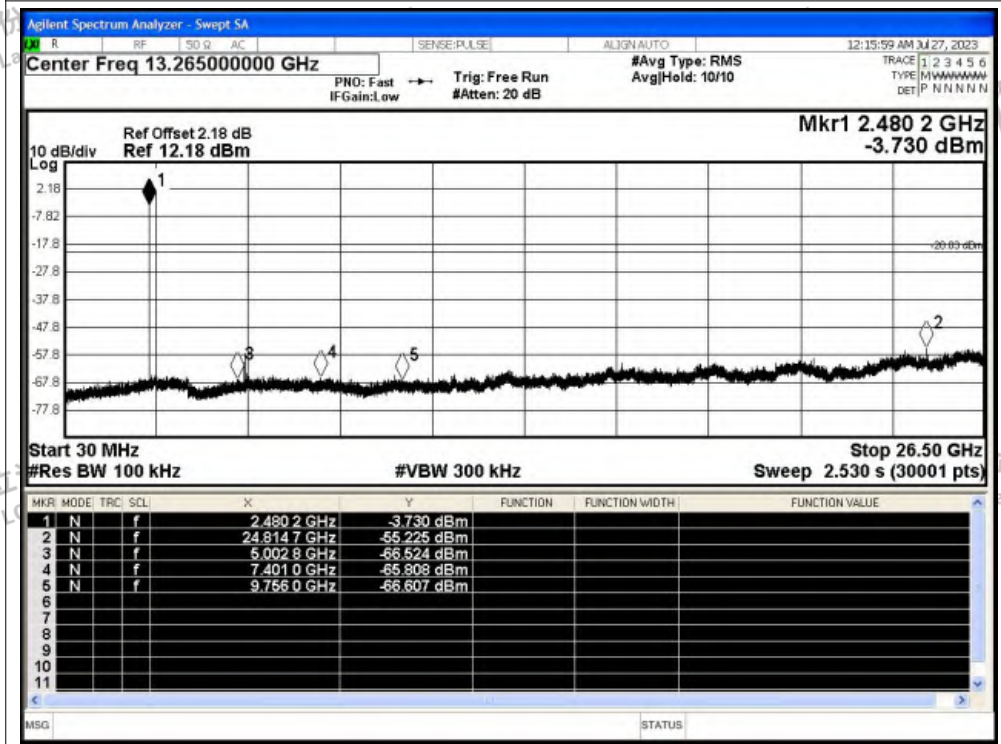




Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref

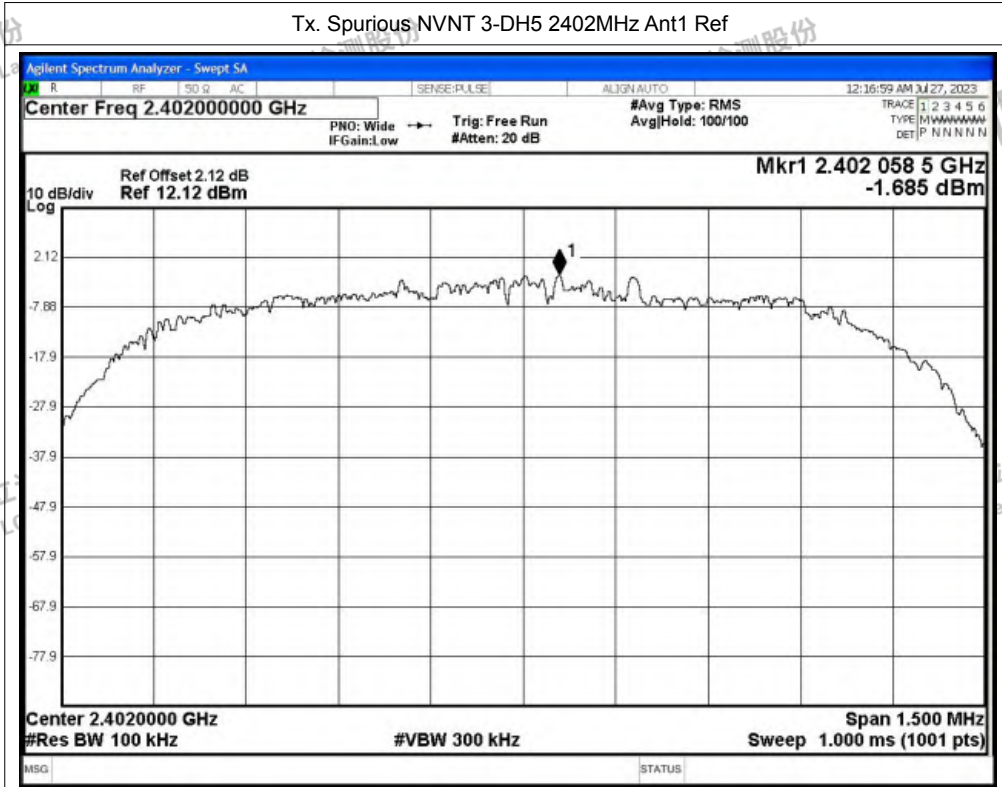


Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission

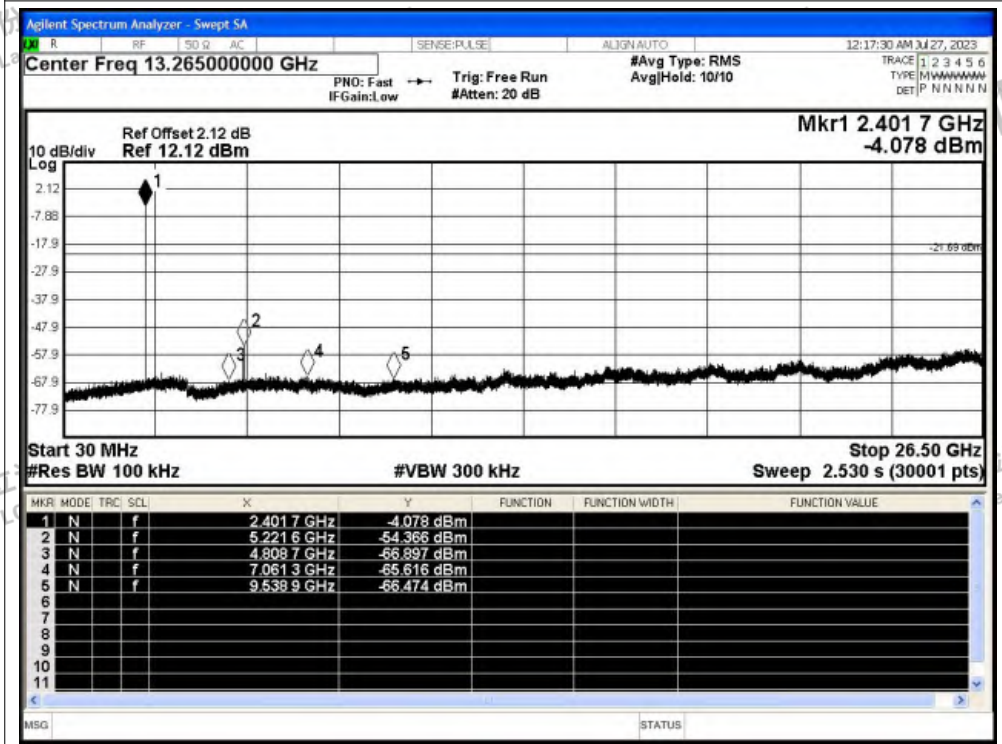




Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref

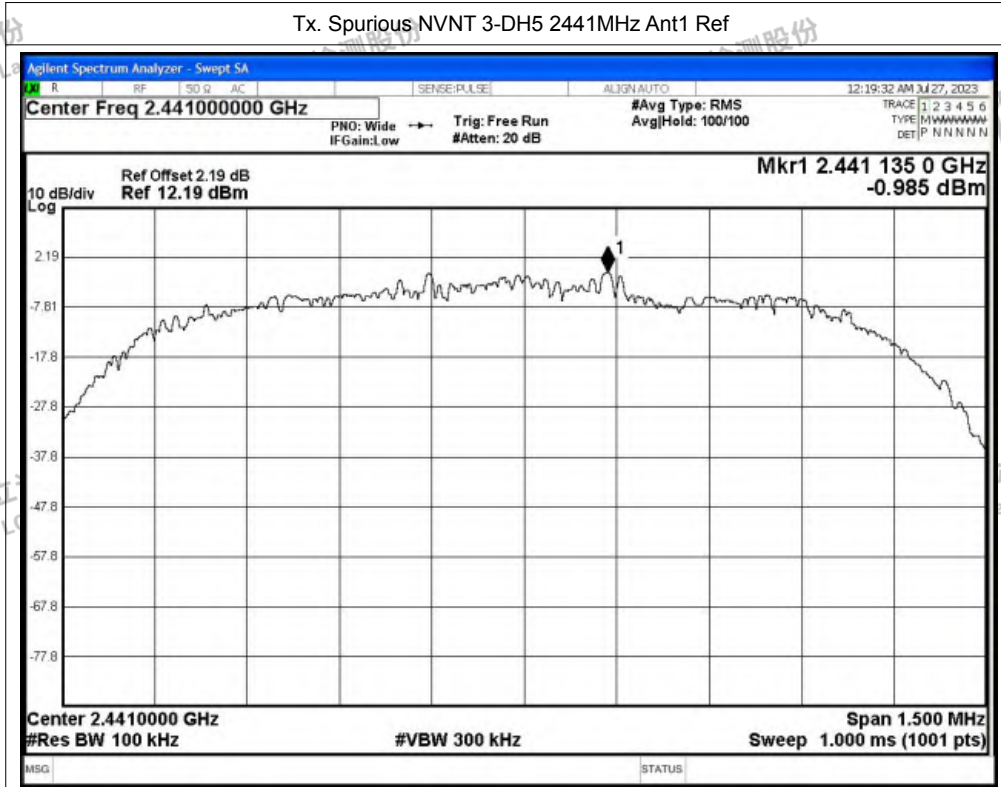


Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission

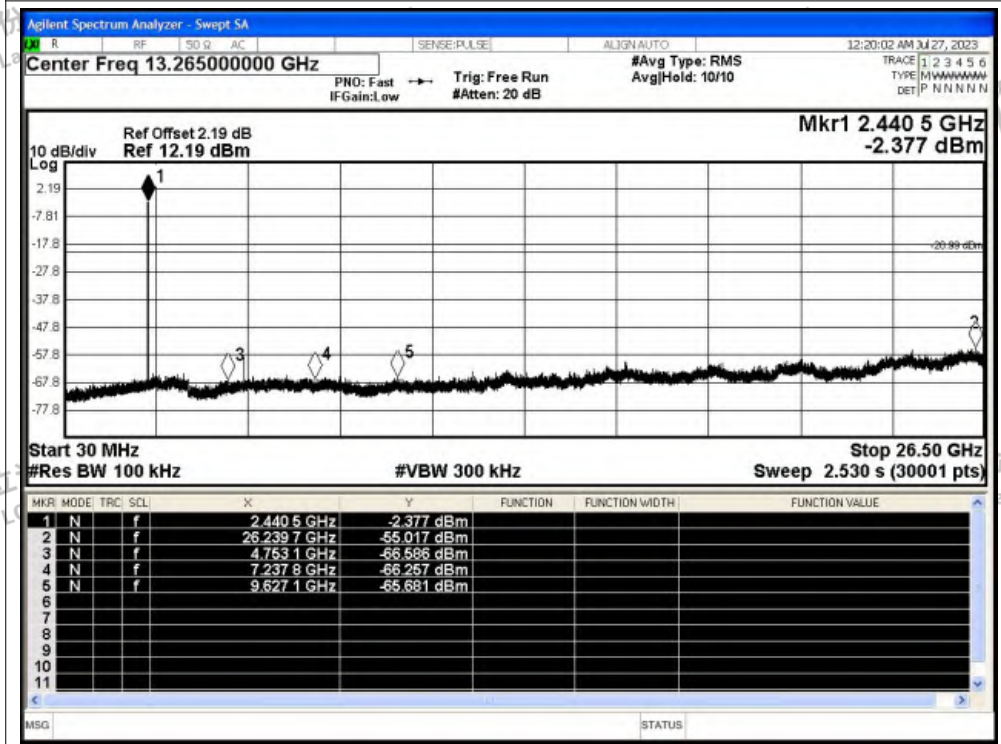




Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref

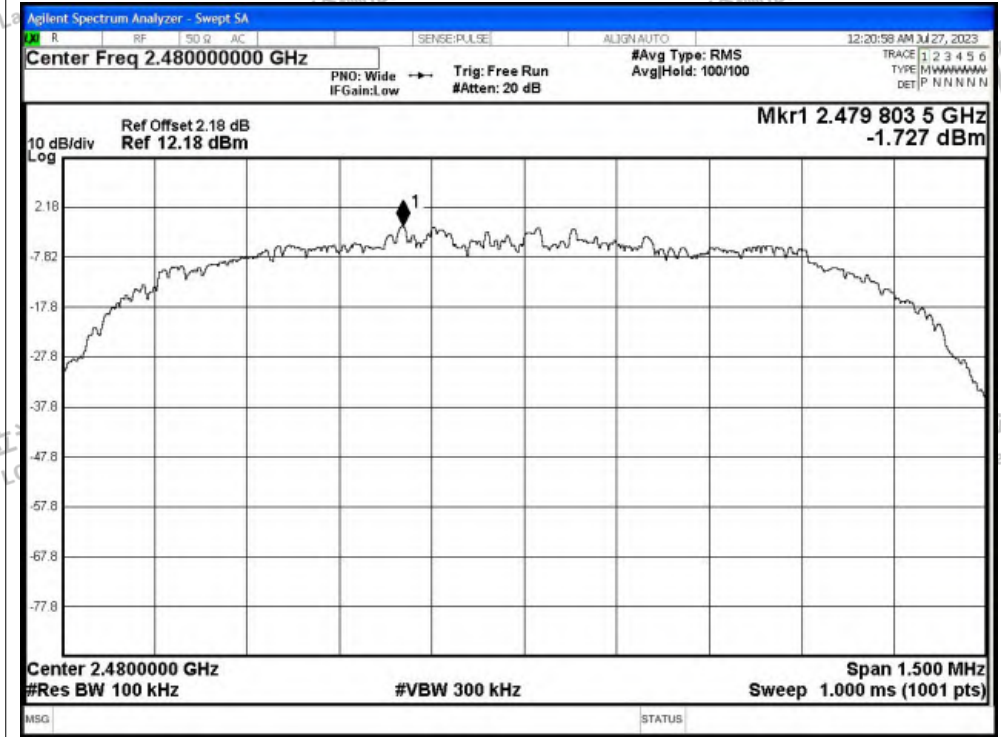


Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission

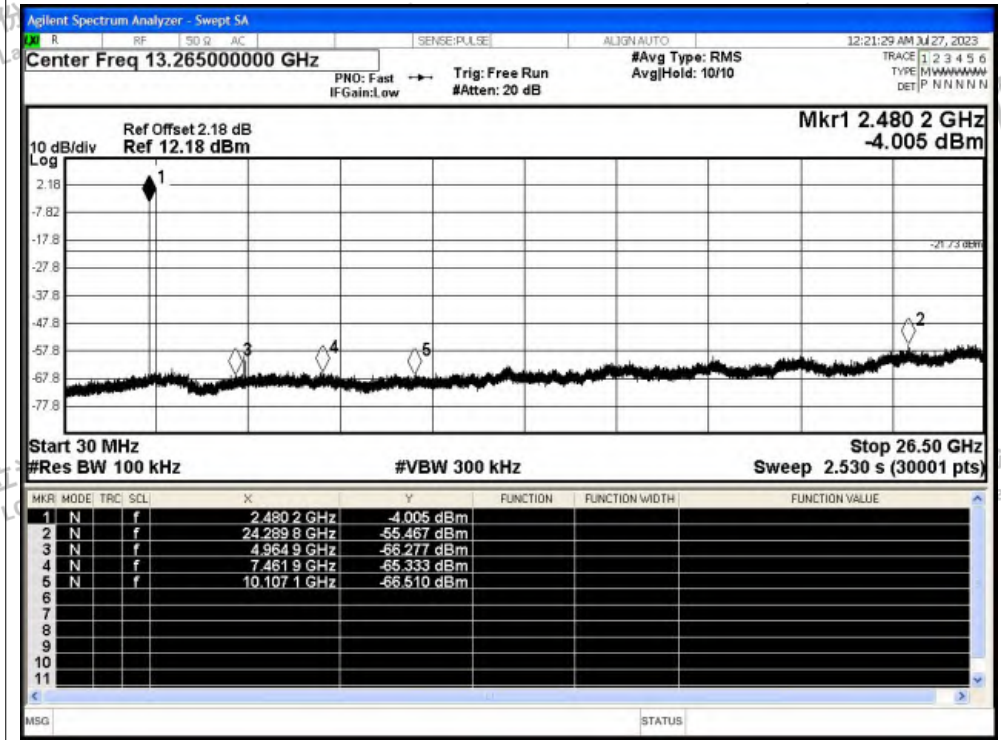




Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission





A.8 Restrict Band

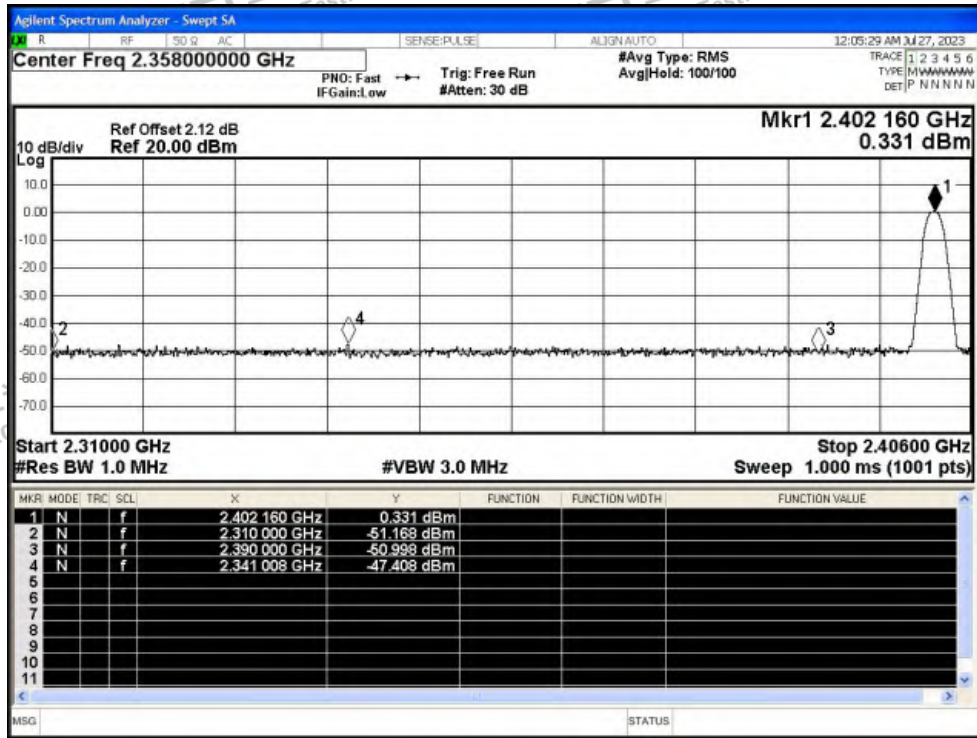
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBUV/m)	Detector	Limit (dBUV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-51.17	2	46.09	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.04	2	39.22	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2341.008	-47.41	2	49.85	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2382.48	-57.51	2	39.75	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-51	2	46.26	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-57.73	2	39.53	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-49.38	2	47.88	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-55.82	2	41.44	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2486.368	-47.07	2	50.19	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.512	-55.82	2	41.44	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-49.97	2	47.29	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-57.22	2	40.04	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-52.4	2	44.86	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-58.03	2	39.23	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2376.624	-46.3	2	50.96	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2388.528	-57.53	2	39.73	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-49.59	2	47.67	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-57.56	2	39.7	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-49.6	2	47.66	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-55.58	2	41.68	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2487.184	-46.32	2	50.94	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.512	-55.58	2	41.68	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-49.81	2	47.45	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-57.33	2	39.93	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-51.27	2	45.99	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-58.08	2	39.18	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2313.936	-46.85	2	50.41	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2375.856	-57.5	2	39.76	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-51.15	2	46.11	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-57.74	2	39.52	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-50.16	2	47.1	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-55.59	2	41.67	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2485.576	-47.07	2	50.19	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.512	-55.59	2	41.67	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-51.33	2	45.93	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-57.3	2	39.96	Average	54	Pass



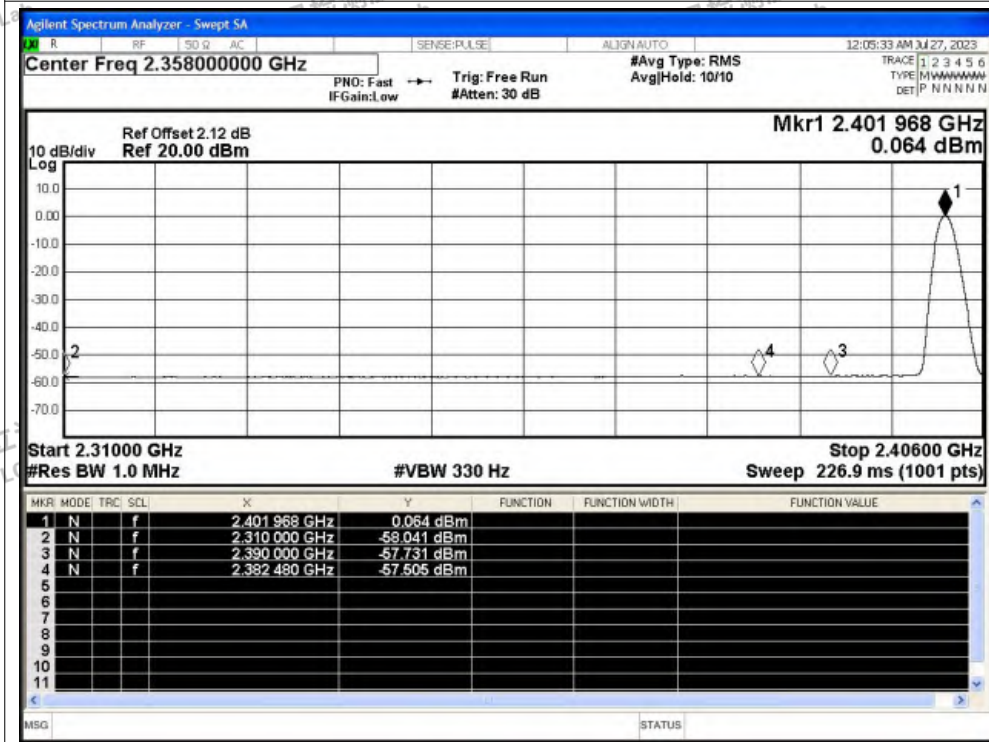


Test Graphs

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

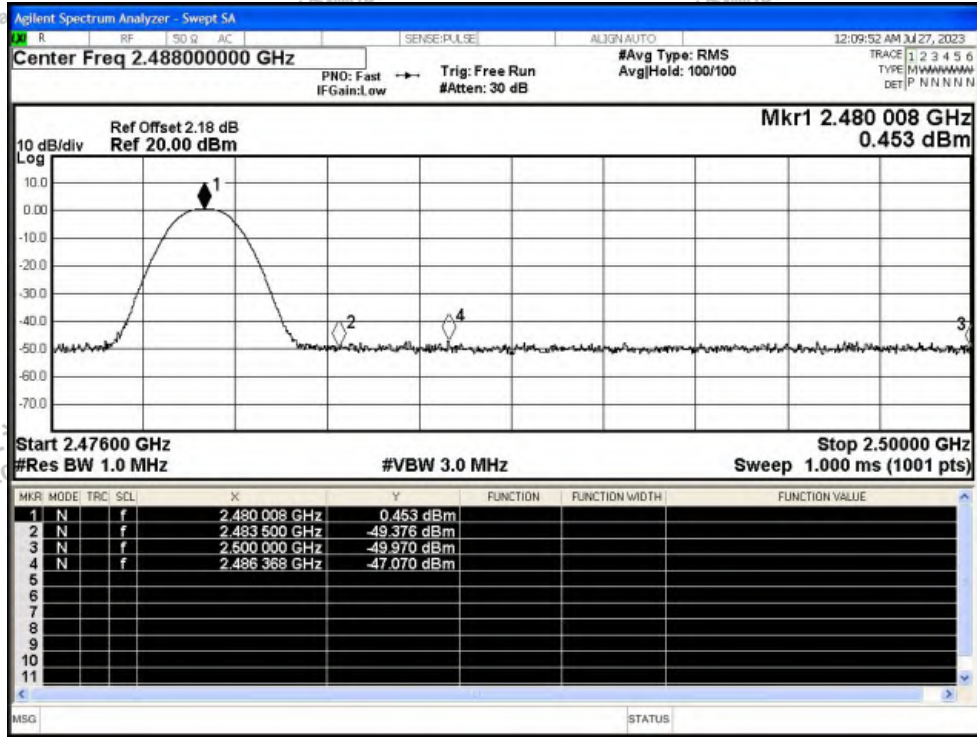


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

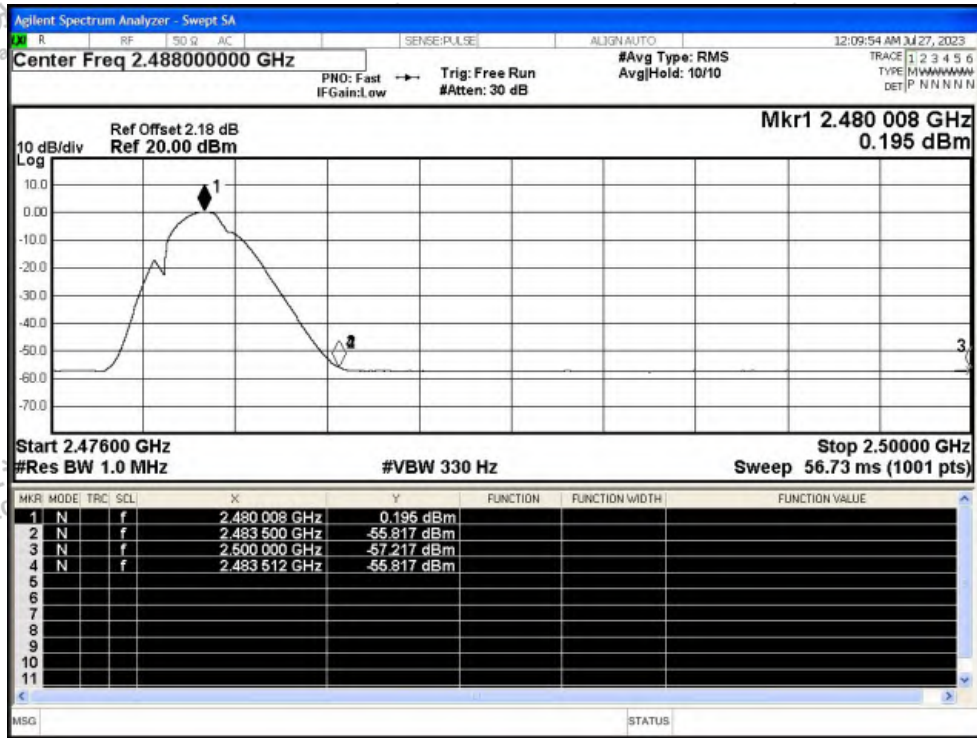




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak

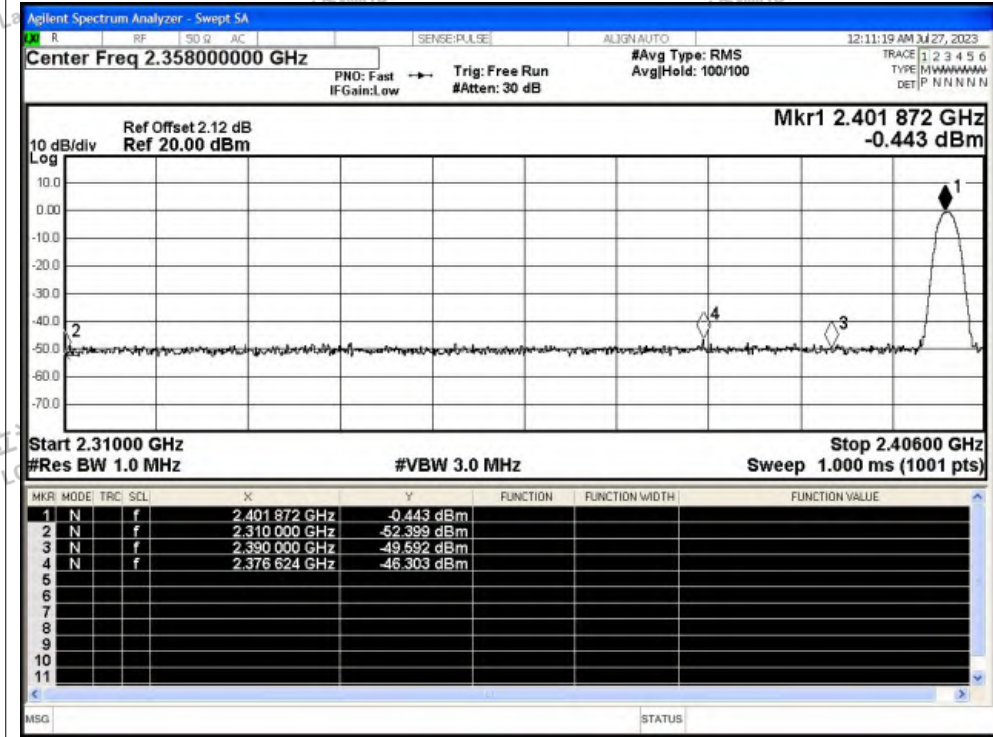


Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average

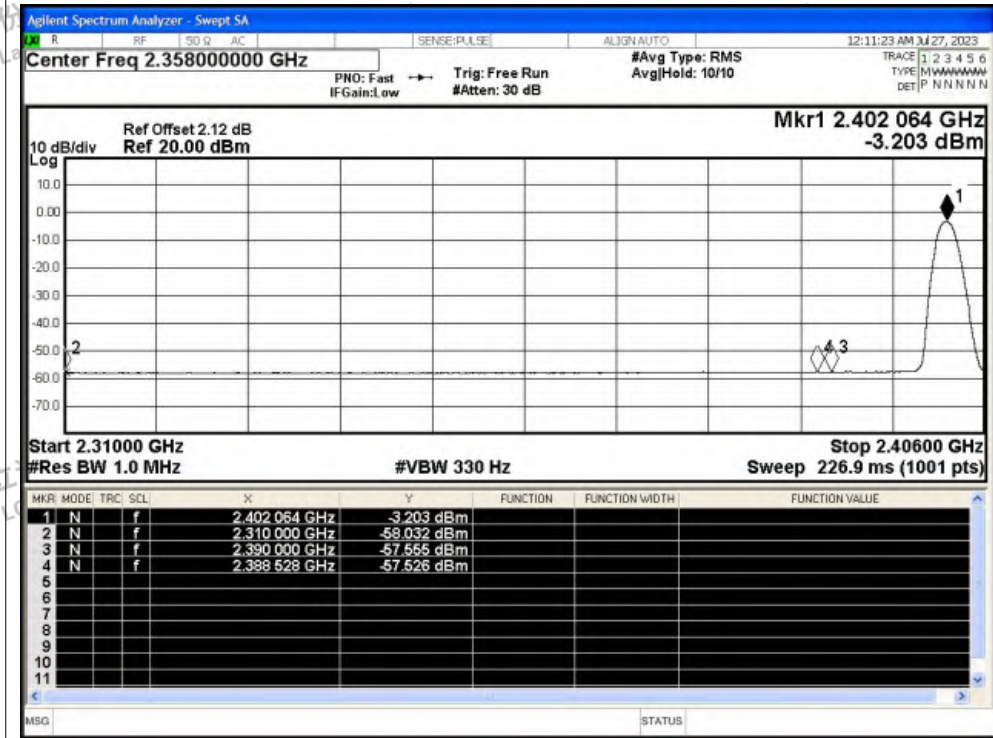




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

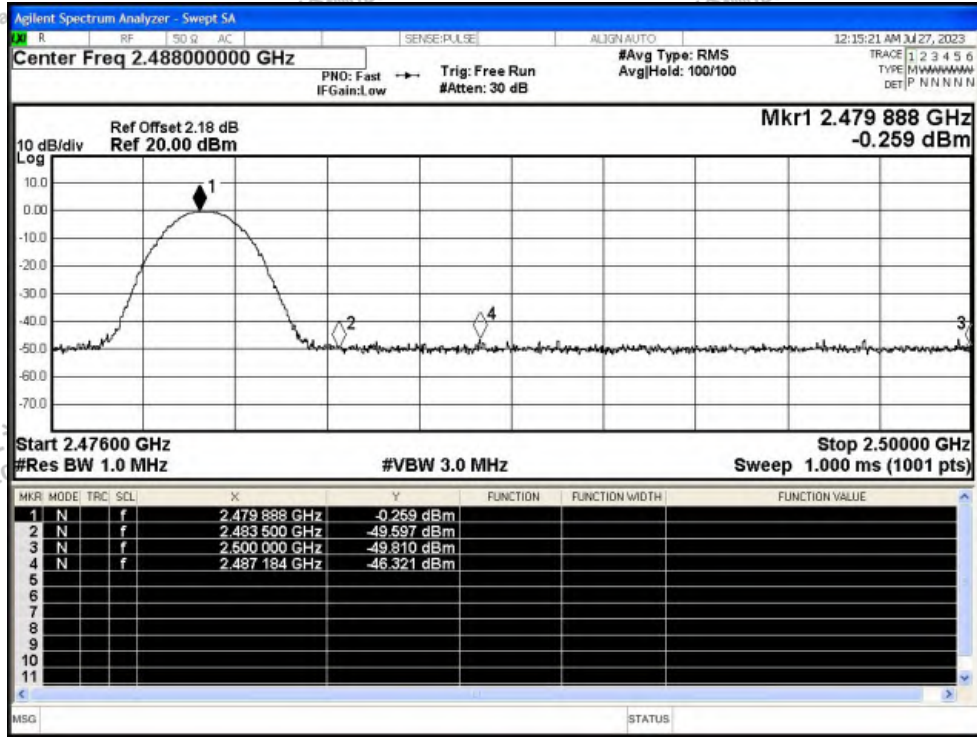


Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average

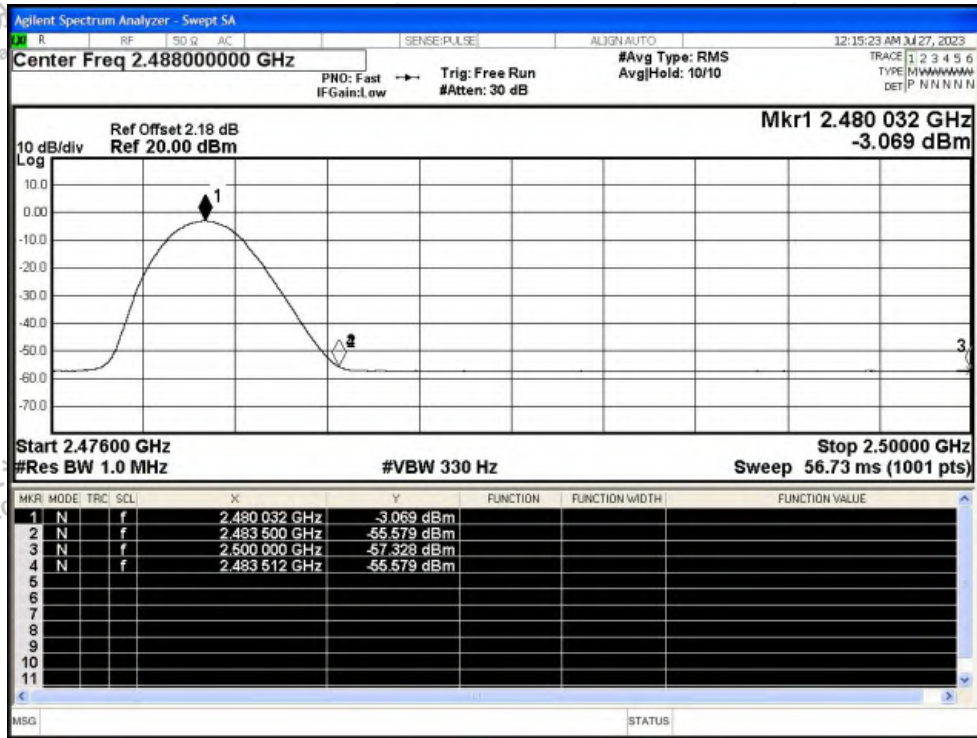




Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak

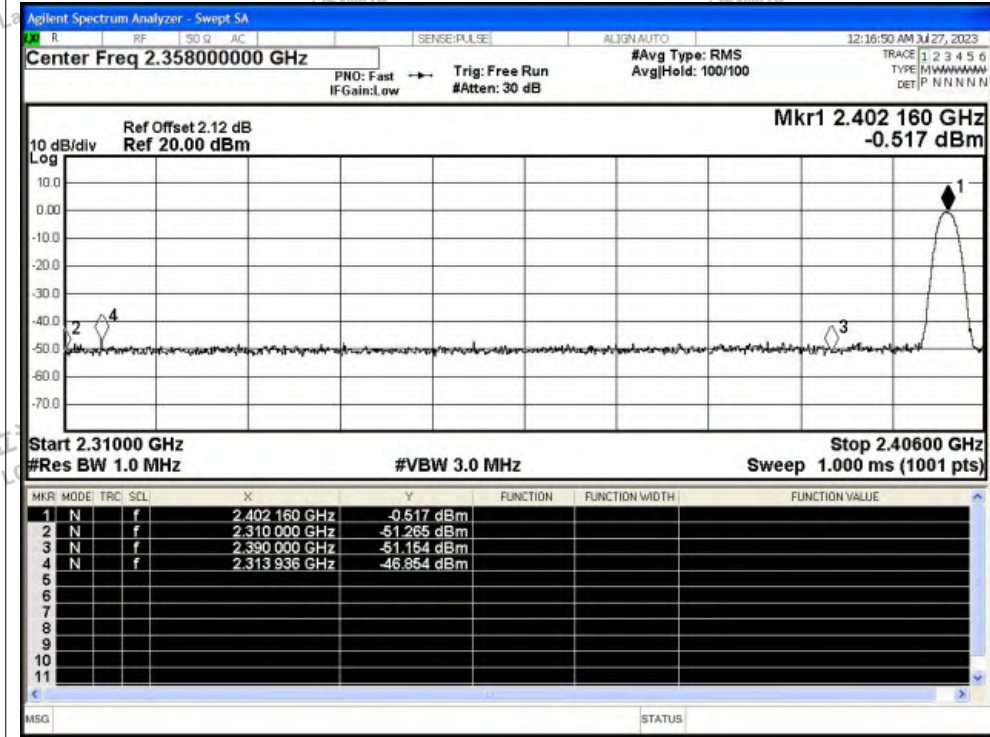


Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Average

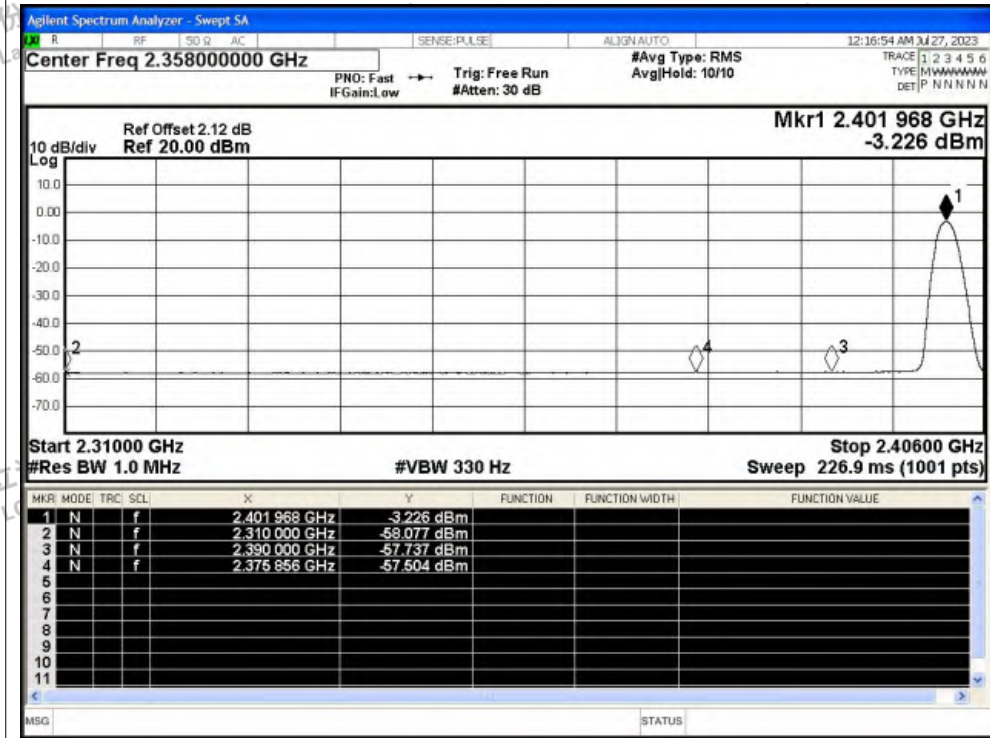




Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak

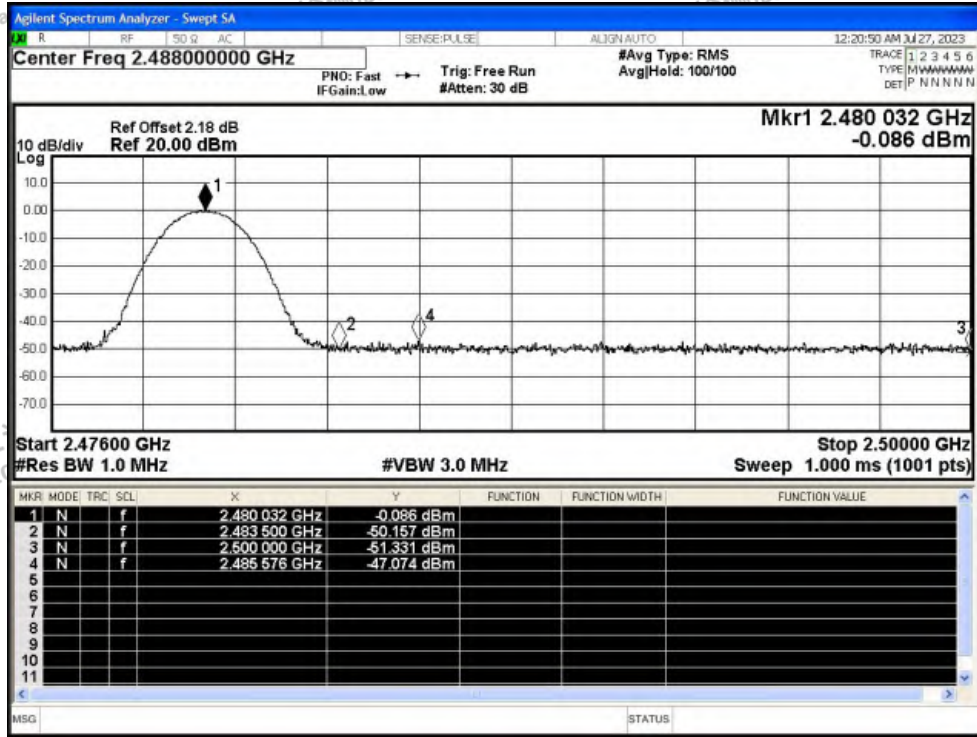


Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Average





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



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

