



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Bluetooth headset

Test Model: X7

Environmental Conditions

Temperature:	23.8°C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
Supervised by:	Nick Peng





A.1 -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.945	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.955	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.947	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.329	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.328	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.314	N/A	Pass





Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

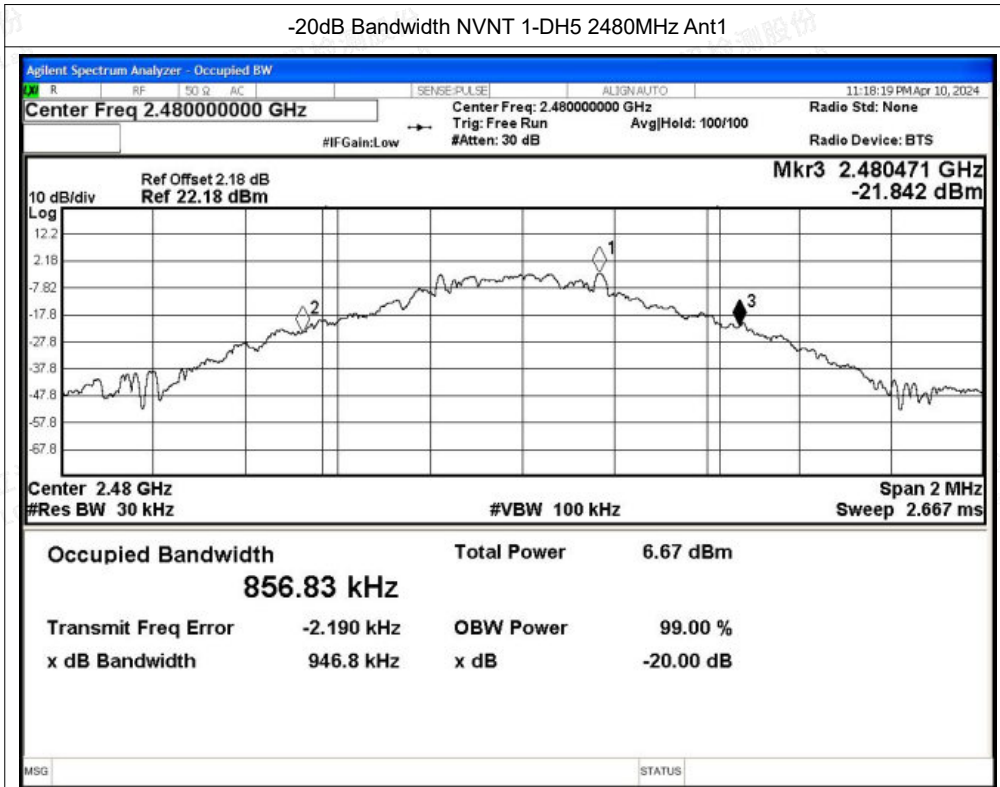


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

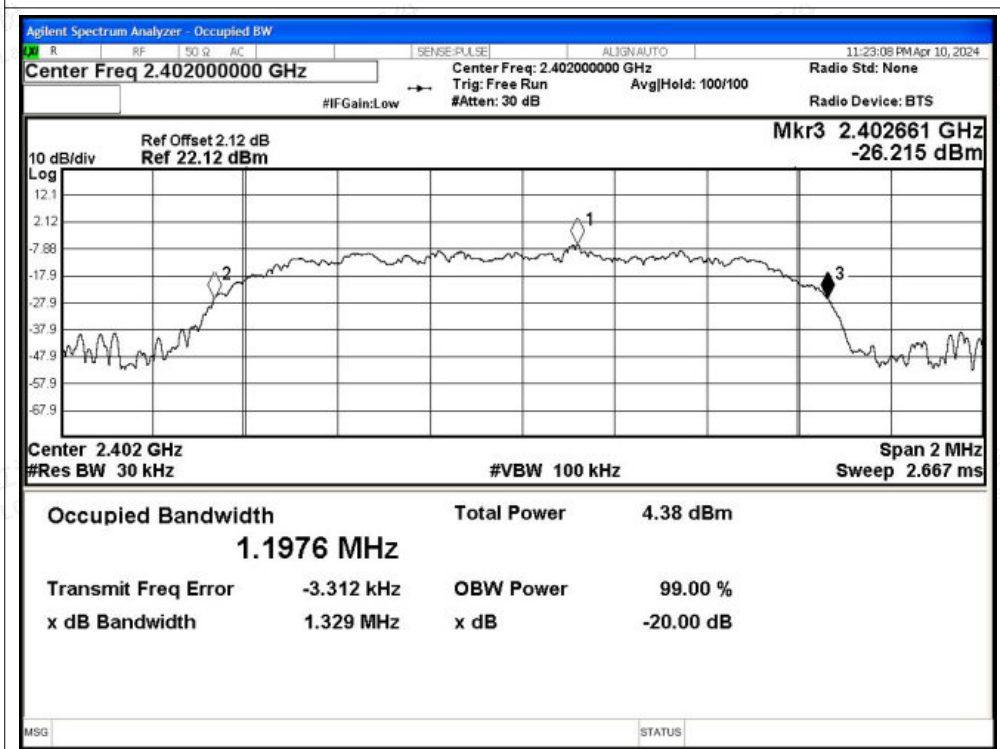




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

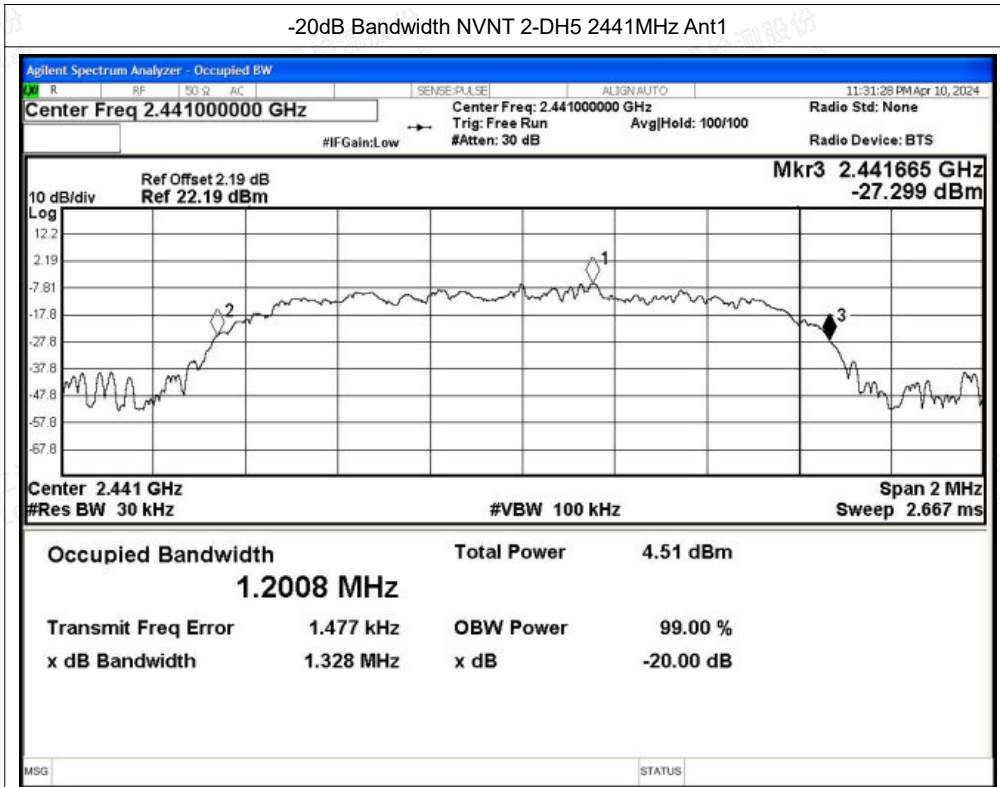


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

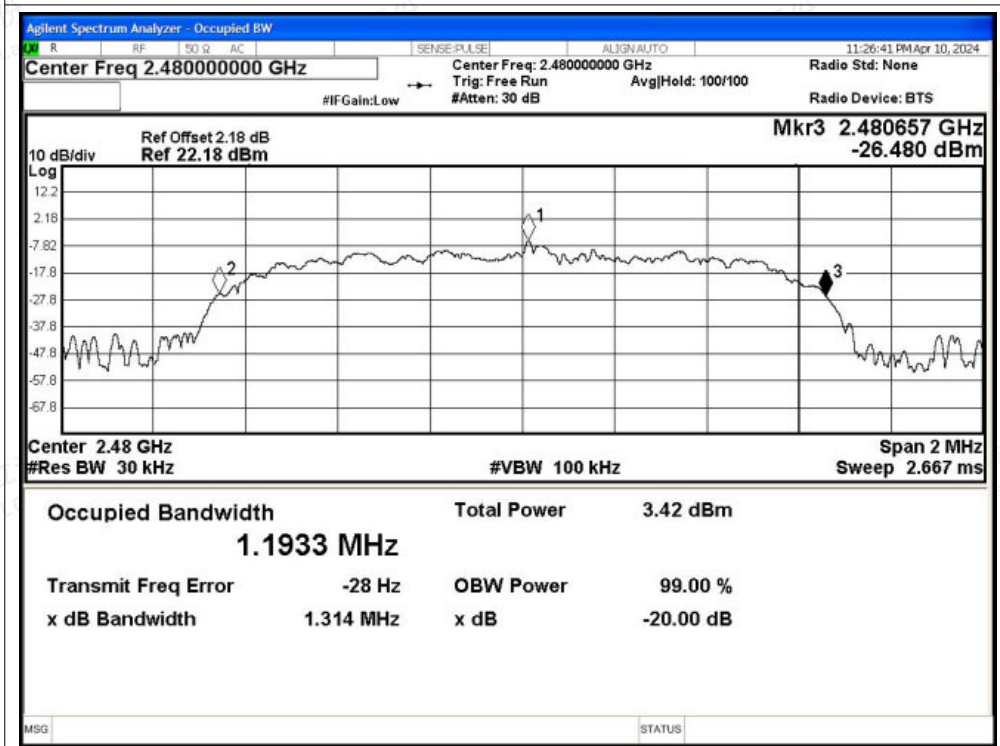




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1





A.2 Maximum Conducted Output Power

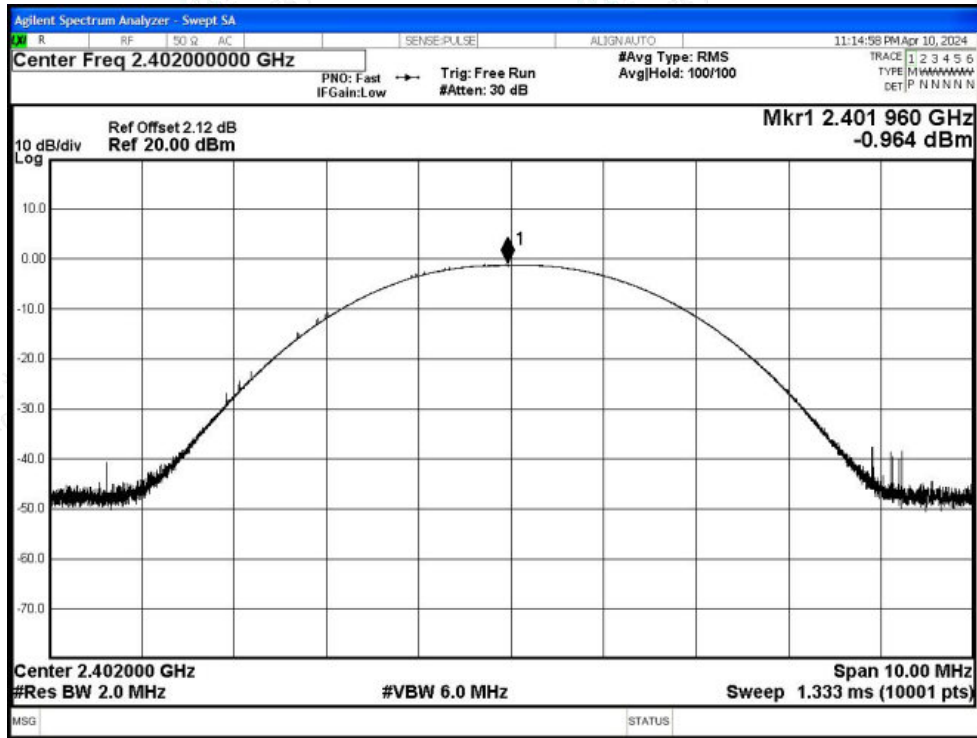
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.96	21	Pass
NVNT	1-DH5	2441	Ant1	-0.75	21	Pass
NVNT	1-DH5	2480	Ant1	0.41	21	Pass
NVNT	2-DH5	2402	Ant1	0.73	21	Pass
NVNT	2-DH5	2441	Ant1	0.51	21	Pass
NVNT	2-DH5	2480	Ant1	-0.61	21	Pass



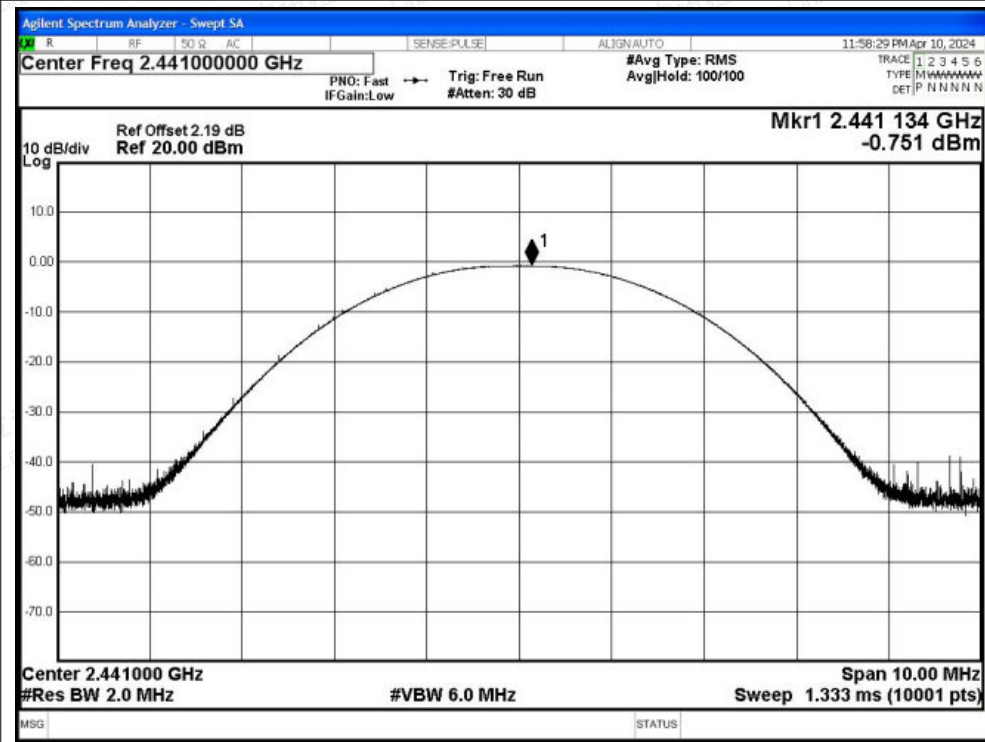


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

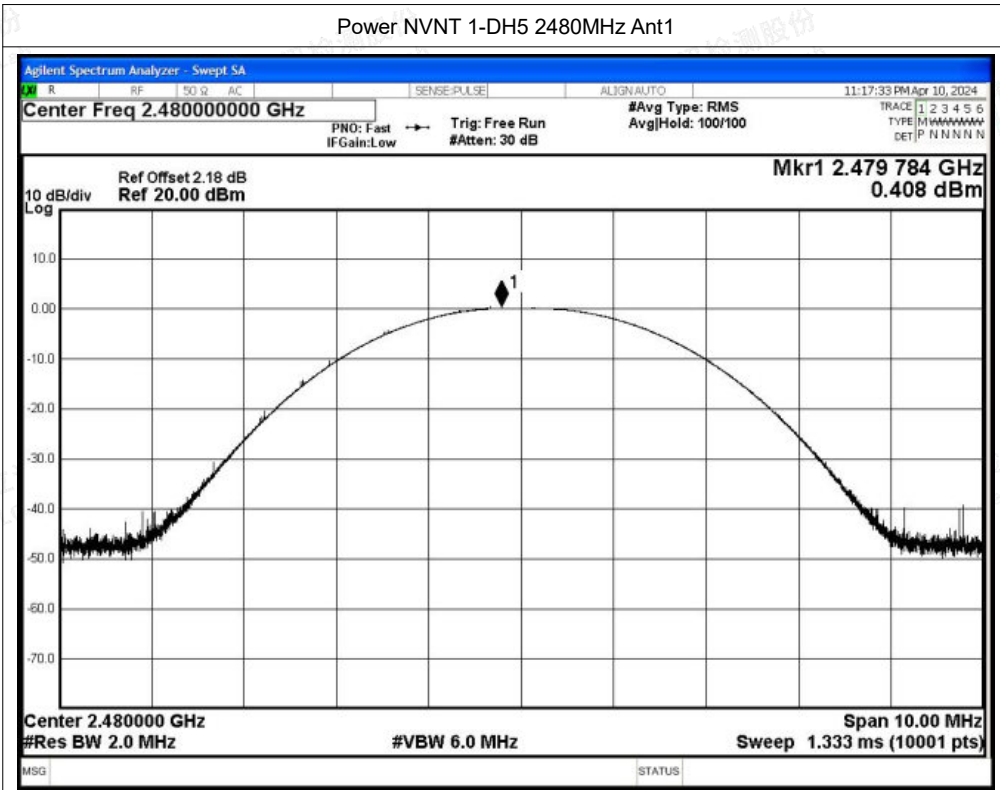


Power NVNT 1-DH5 2441MHz Ant1

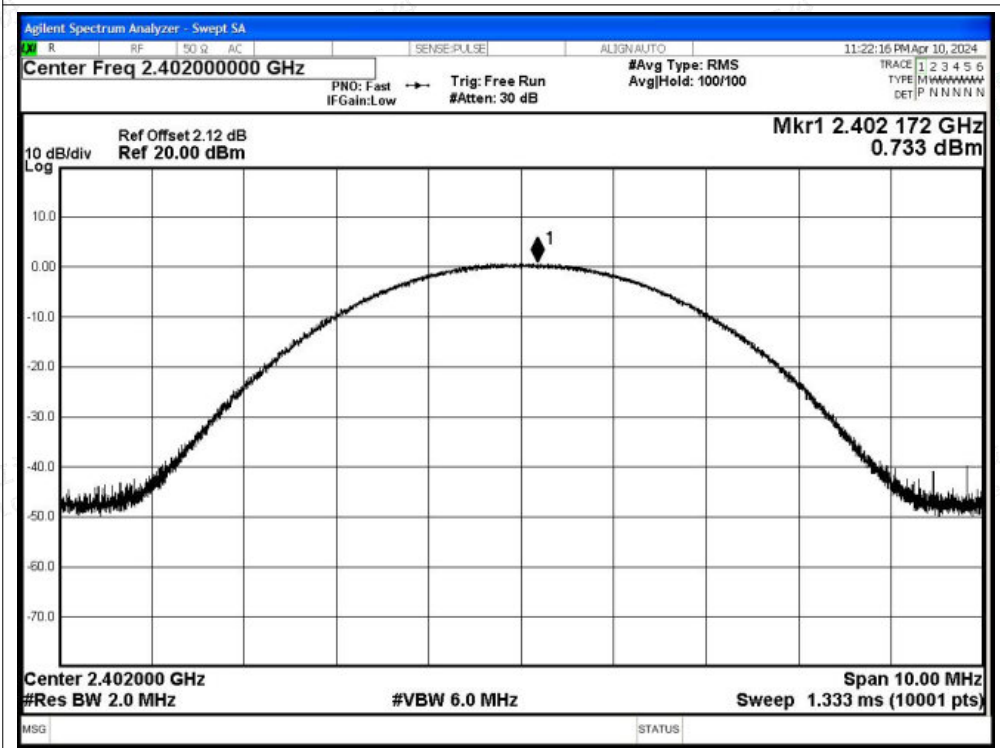




Power NVNT 1-DH5 2480MHz Ant1

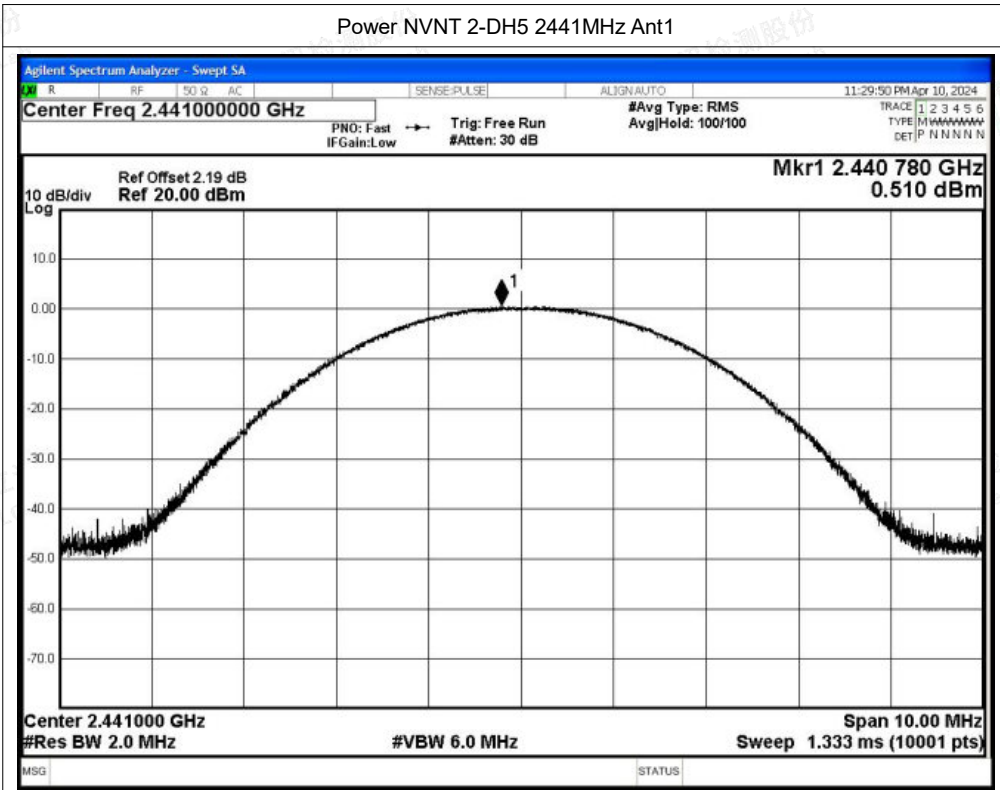


Power NVNT 2-DH5 2402MHz Ant1

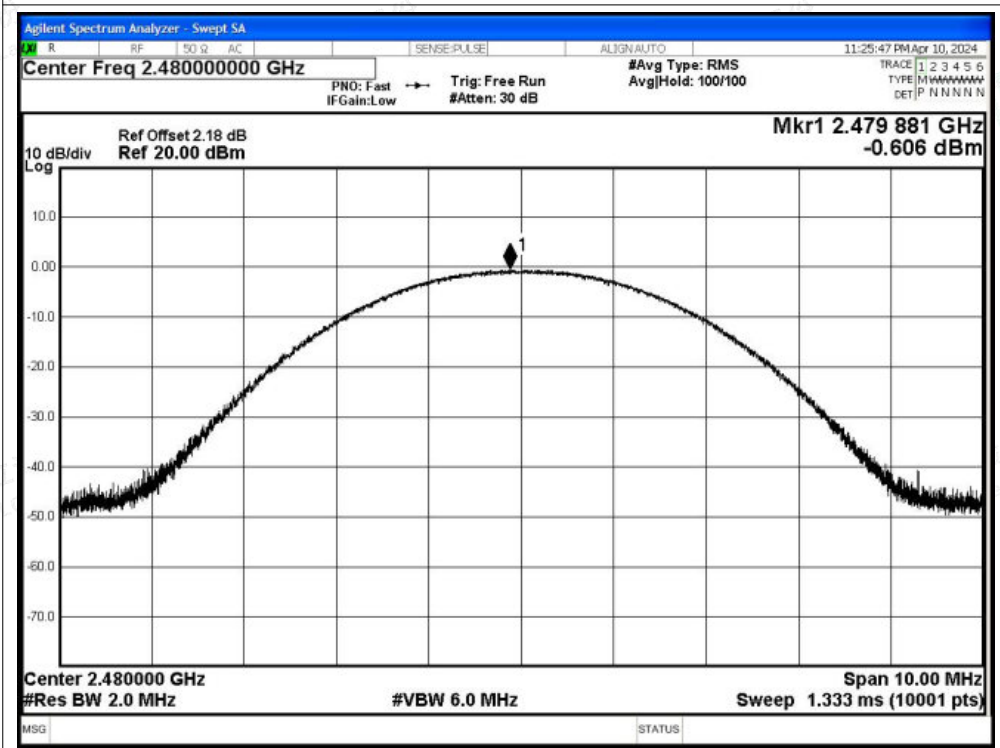




Power NVNT 2-DH5 2441MHz Ant1



Power NVNT 2-DH5 2480MHz Ant1





A.3 Carrier Frequencies Separation

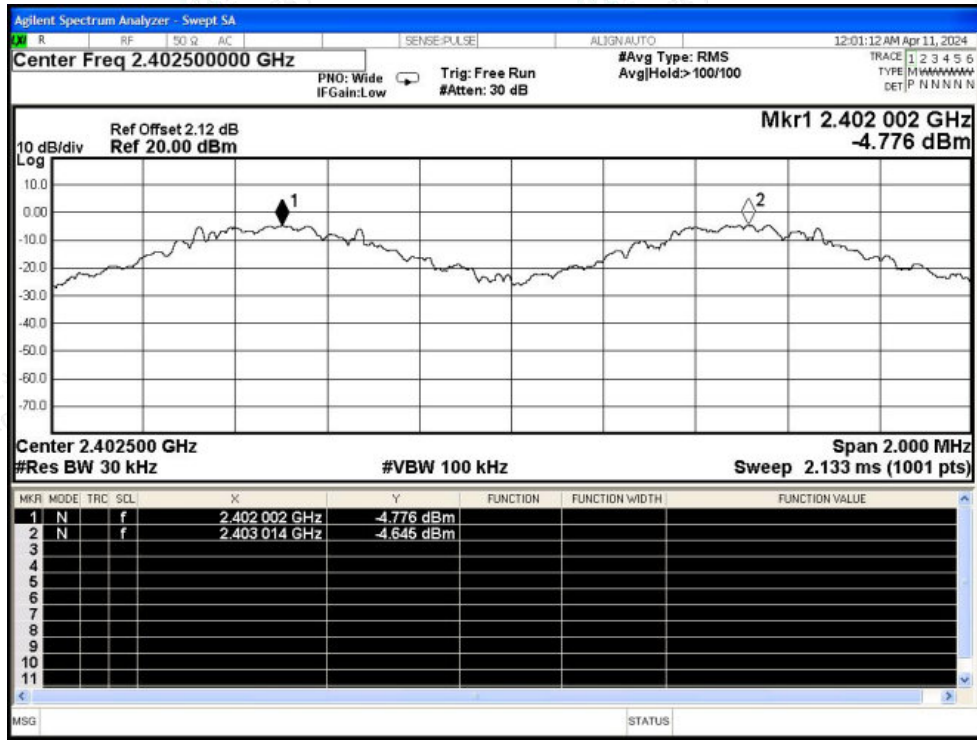
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.002	2403.014	1.012	0.637	Pass
NVNT	2-DH5	Ant1	2402.02	2403.018	0.998	0.886	Pass



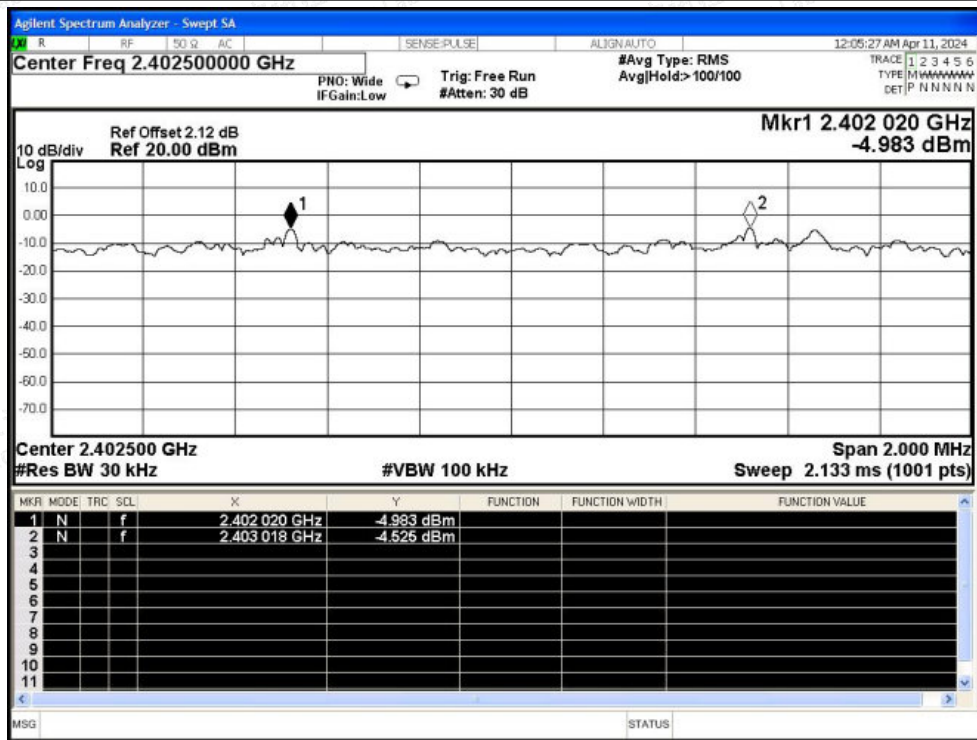


Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1





A.4 Dwell Time

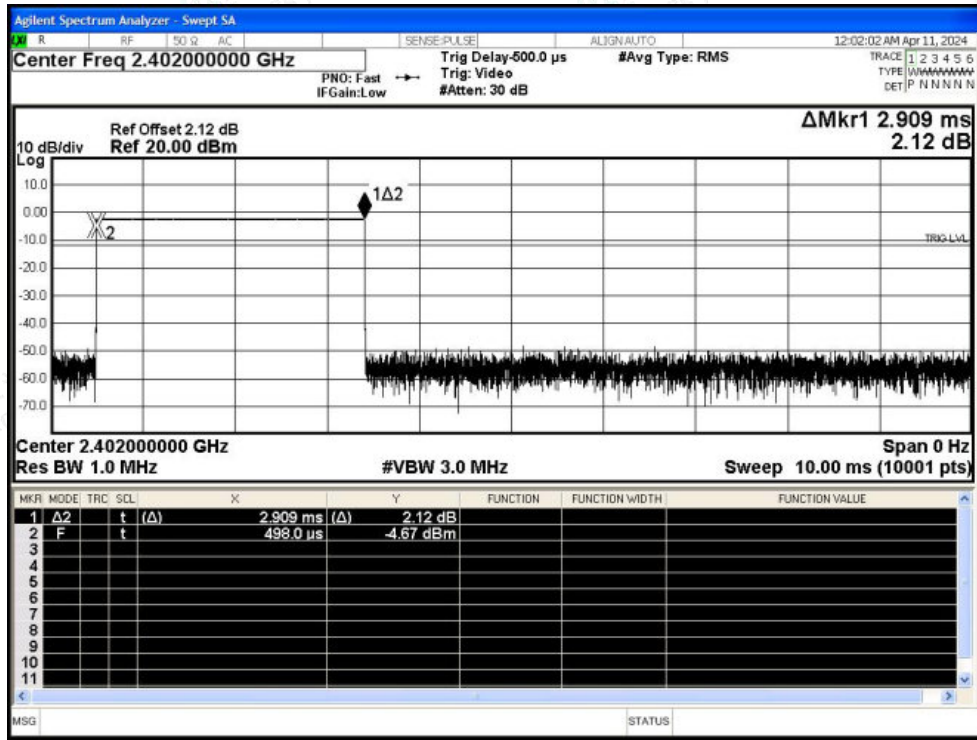
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.909	282.173	97	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.899	263.809	91	31600	400	Pass



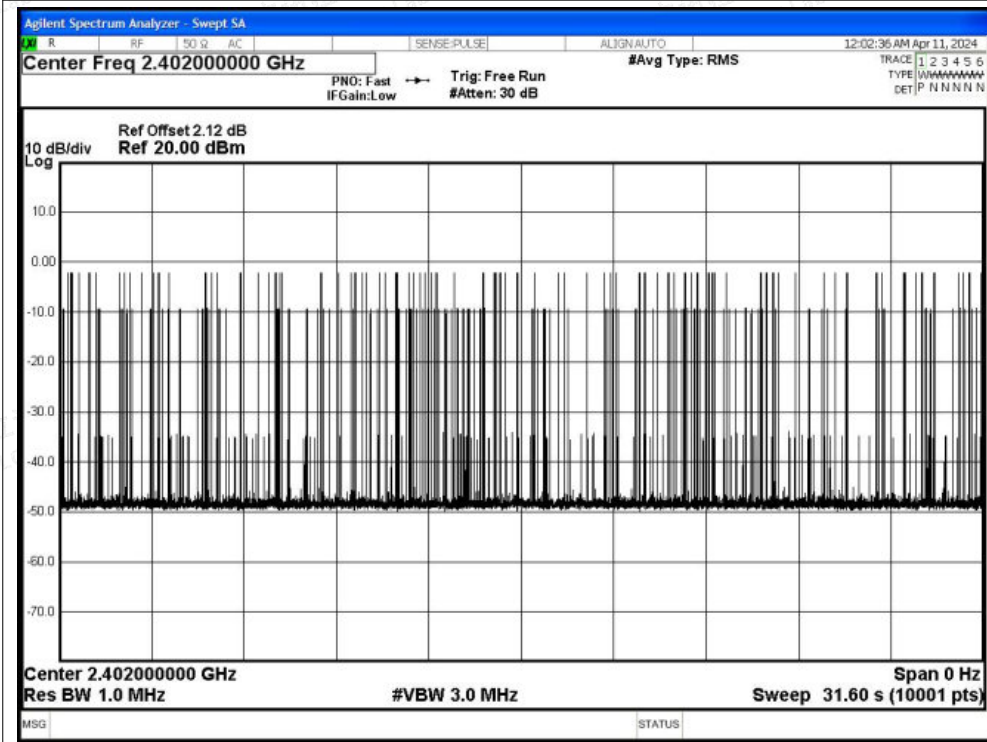


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

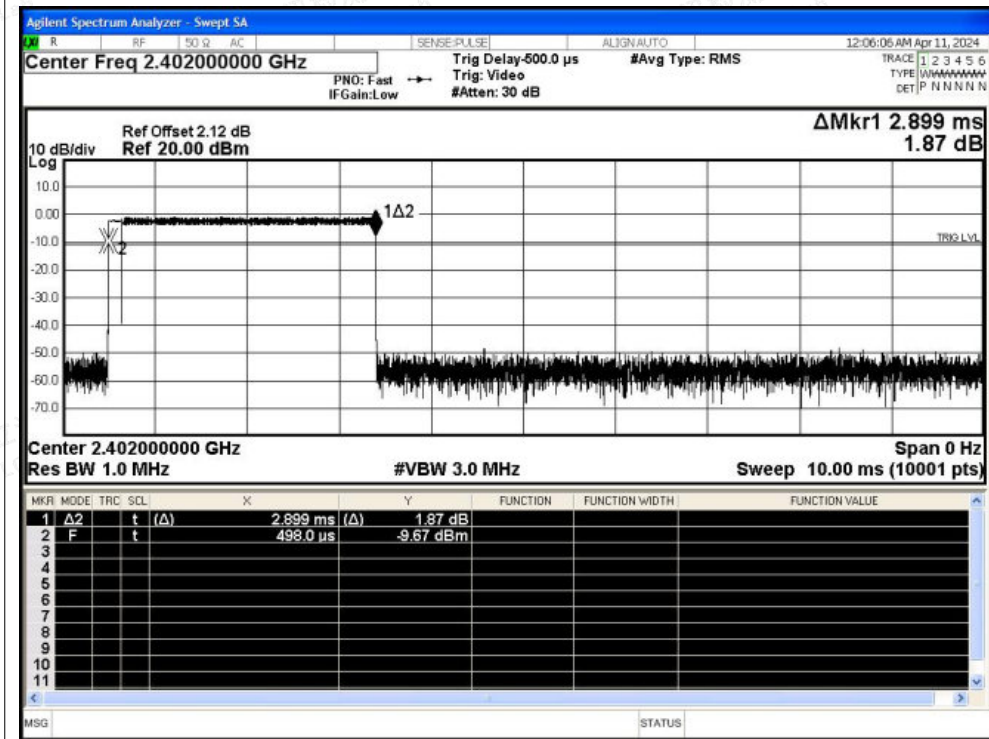


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

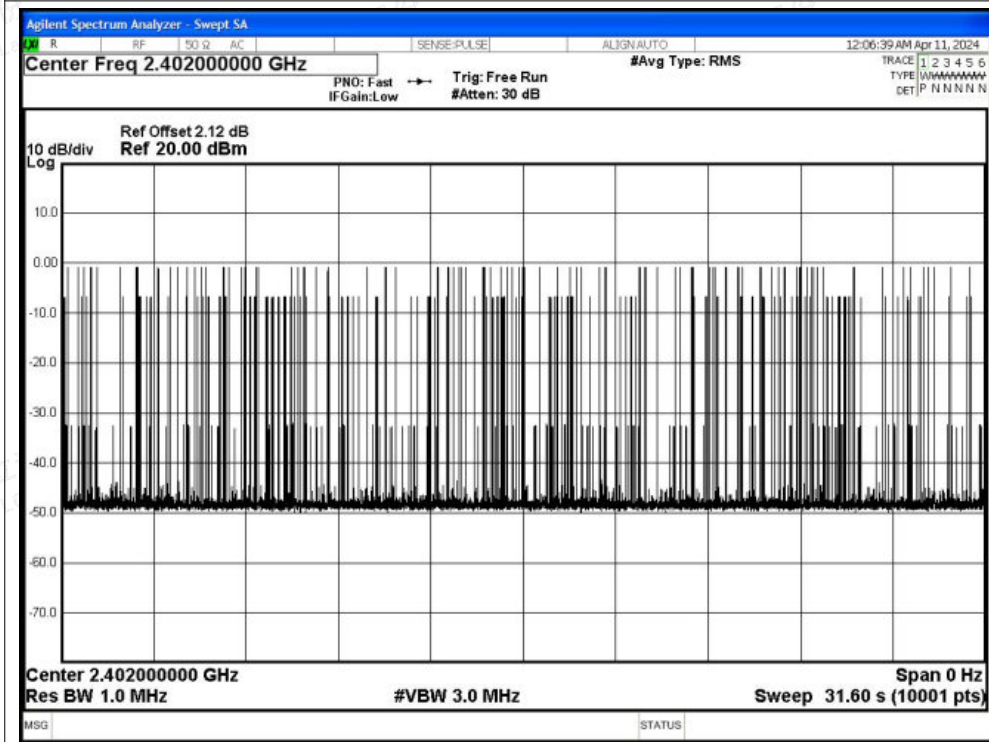




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated





A.5 Number of Hopping Channel

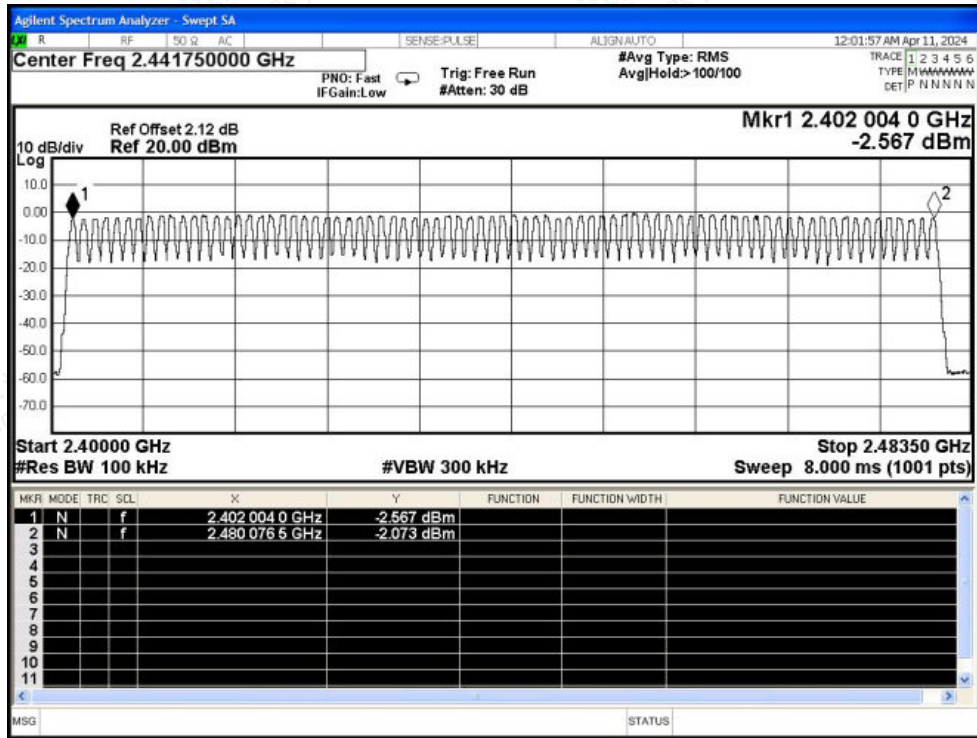
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass



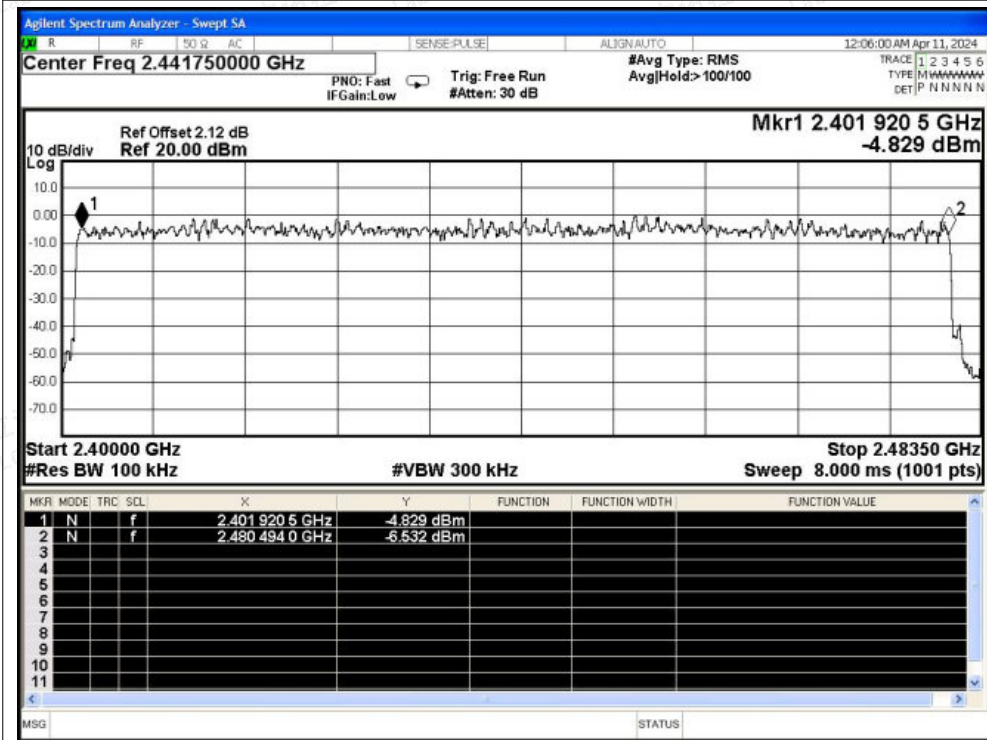


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1





A.6 Band Edge

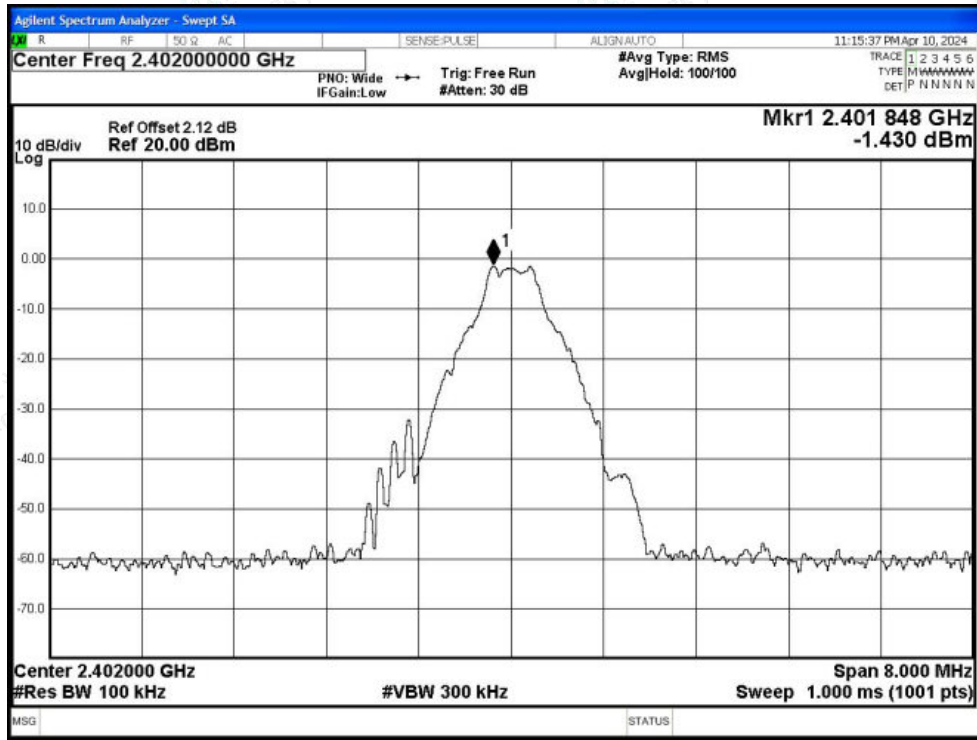
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-55.39	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-56.8	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-52.28	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-52.8	-20	Pass



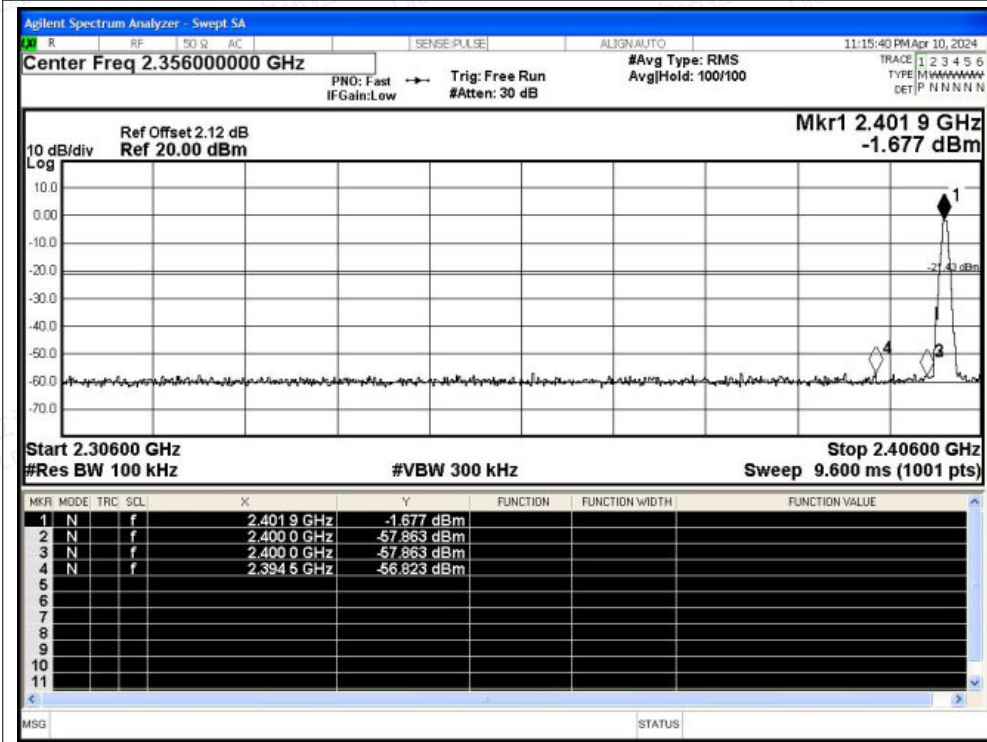


Test Graphs

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

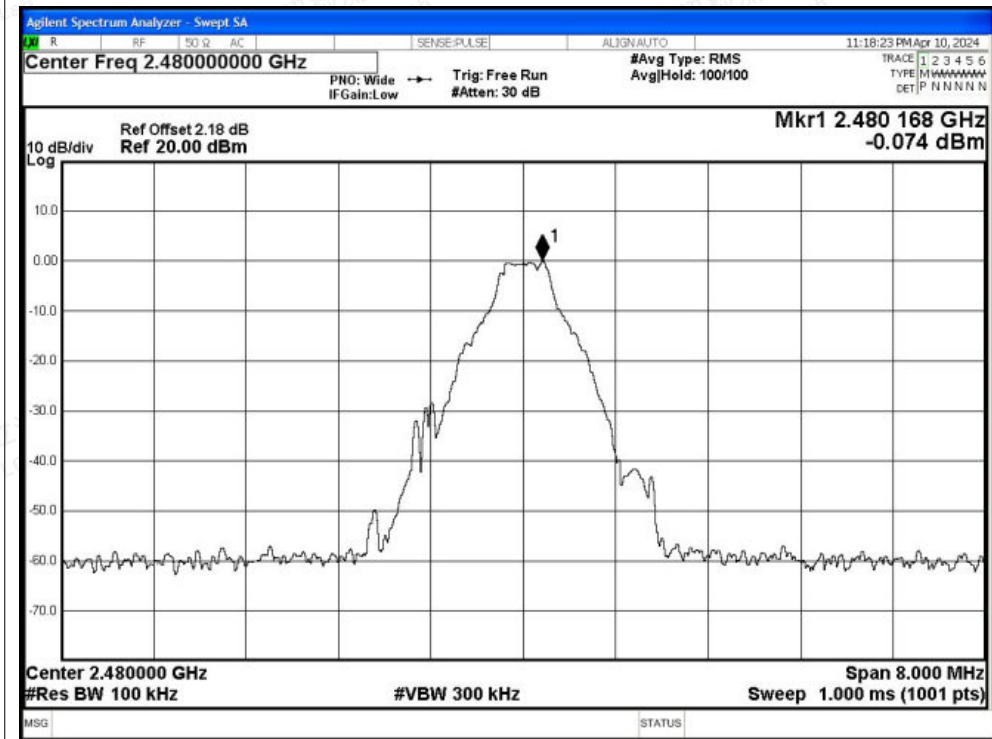


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

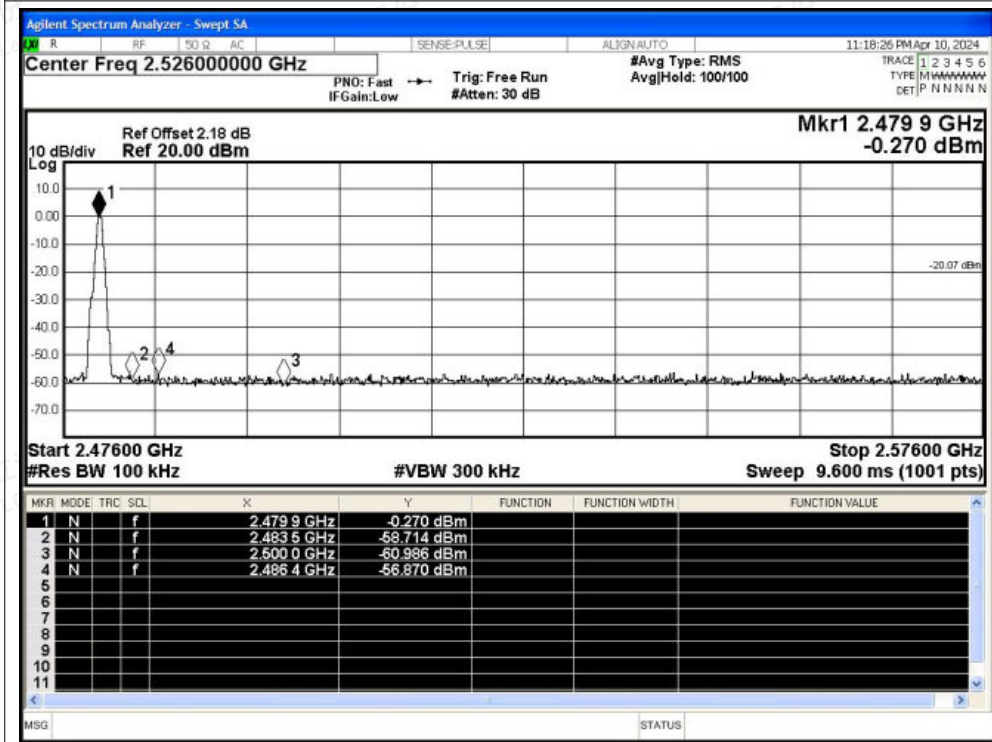




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



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

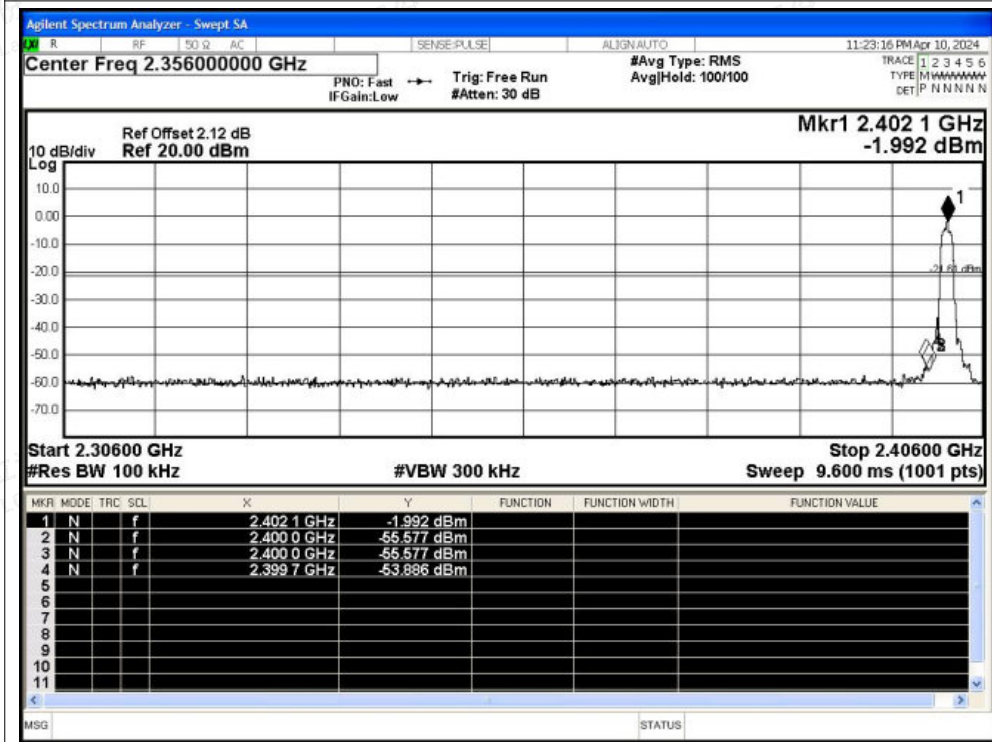




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

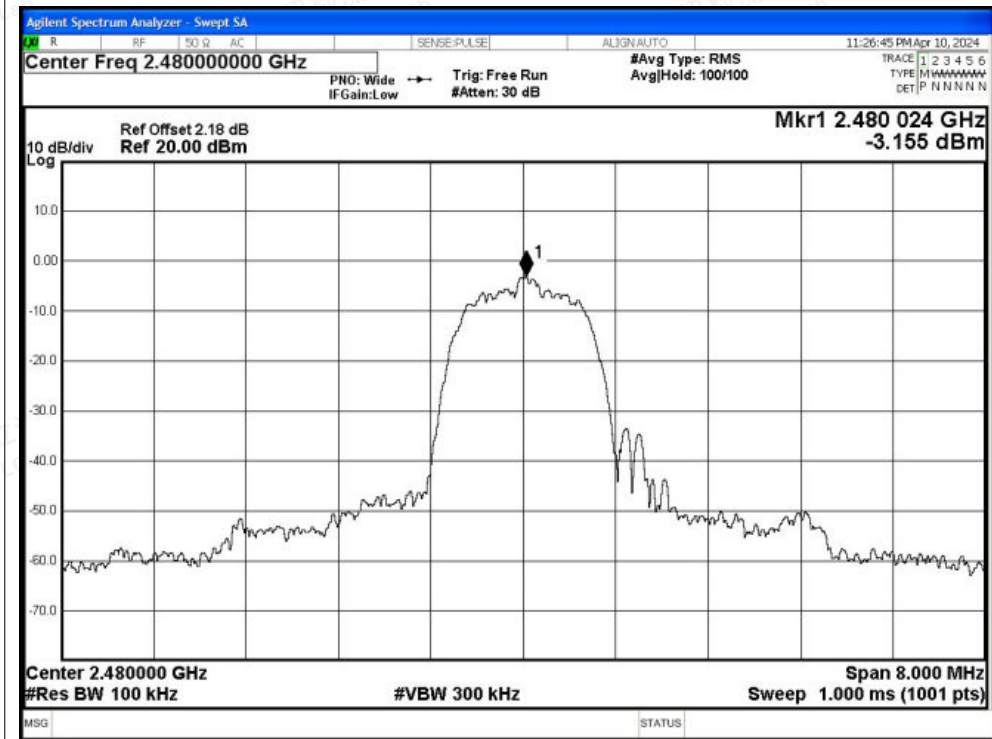


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

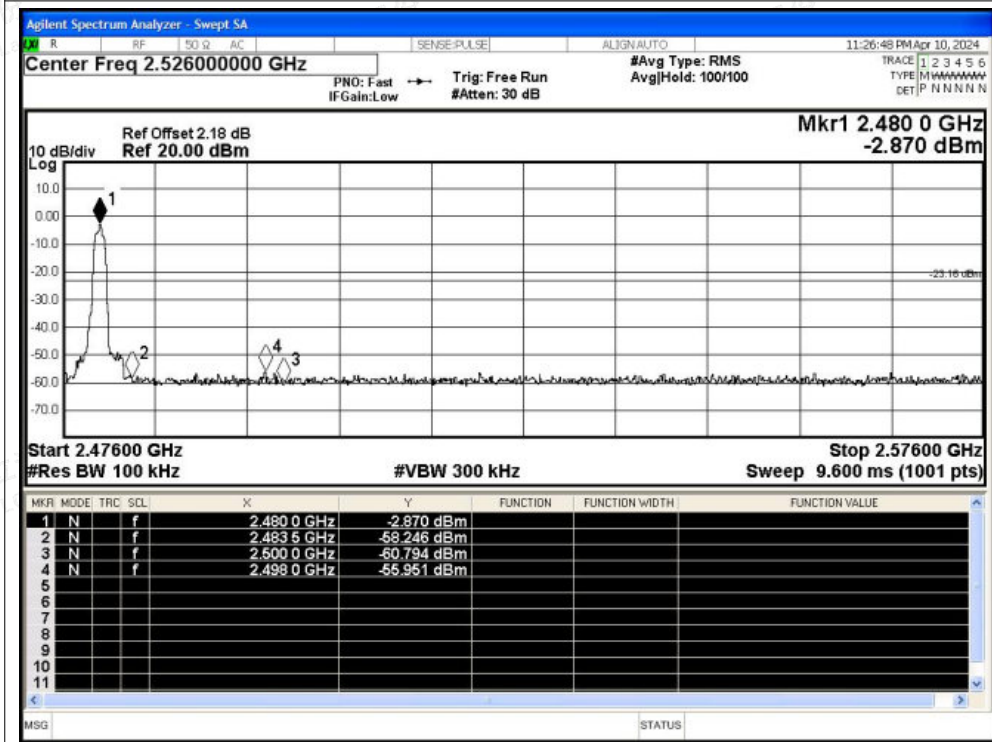




Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



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





(Hopping)

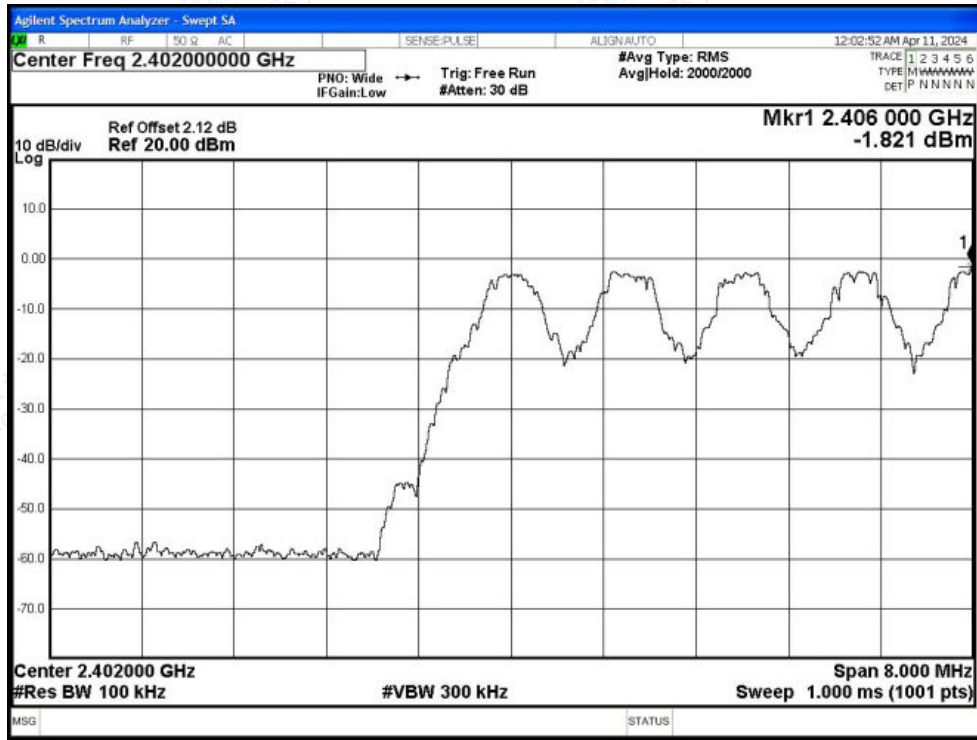
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-53.95	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-54.63	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-53.1	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-52.38	-20	Pass



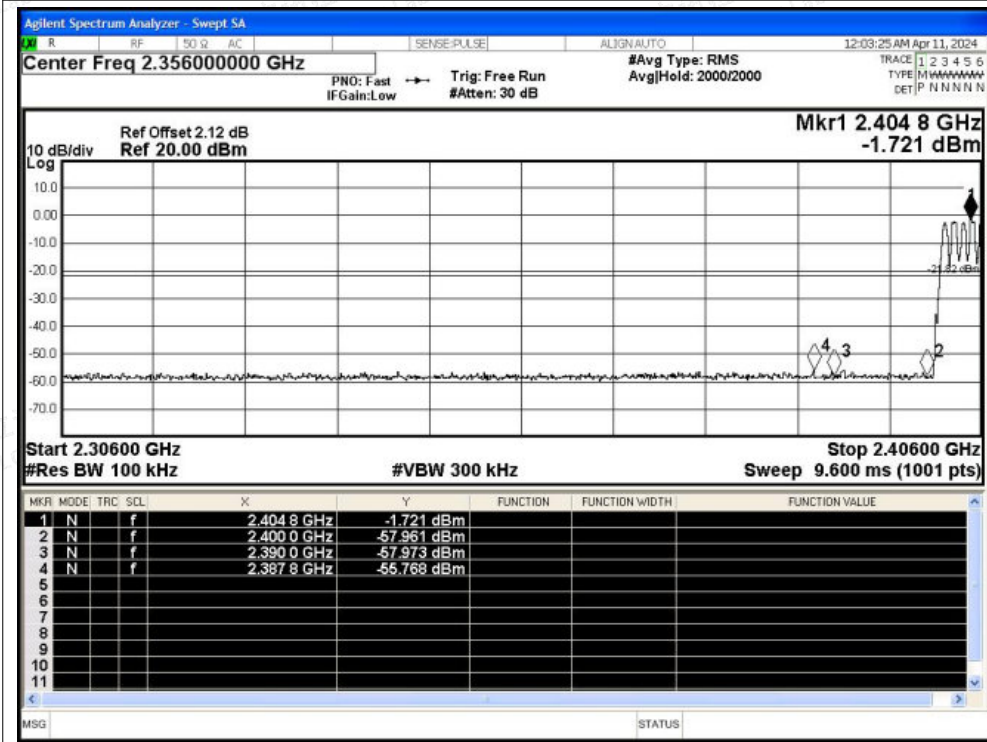


Test Graphs

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

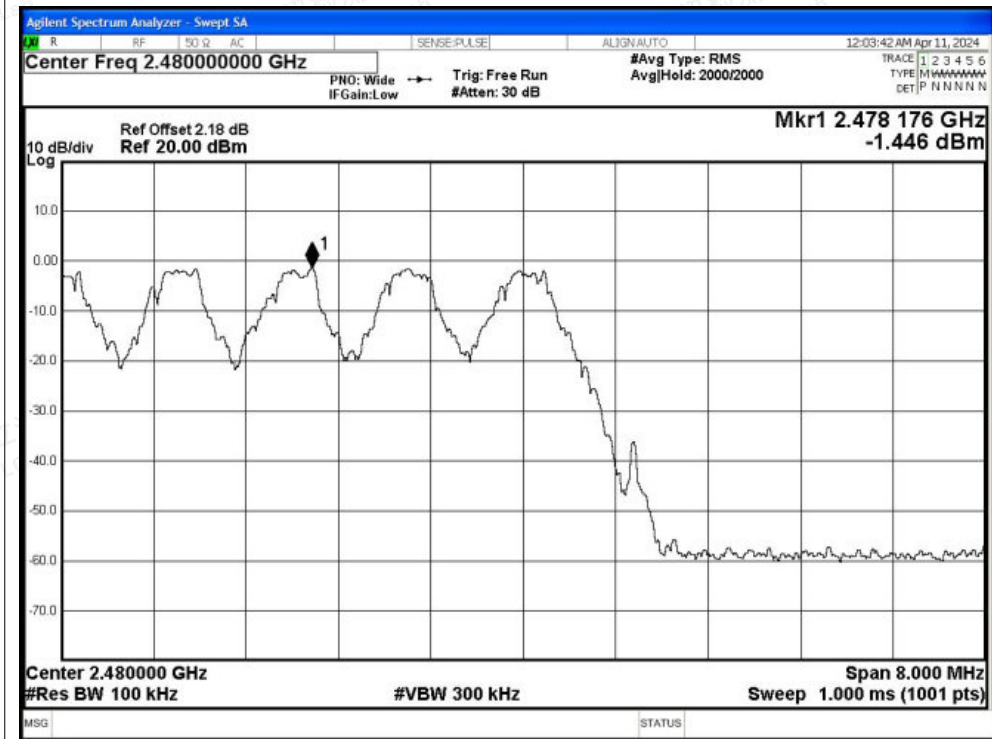


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

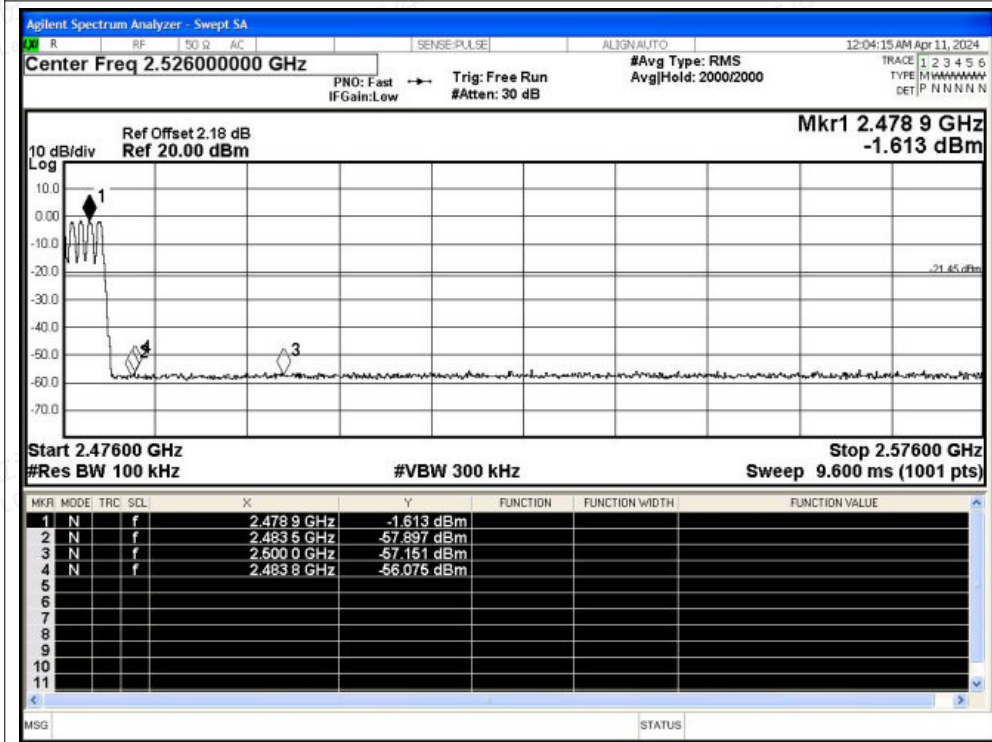




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref

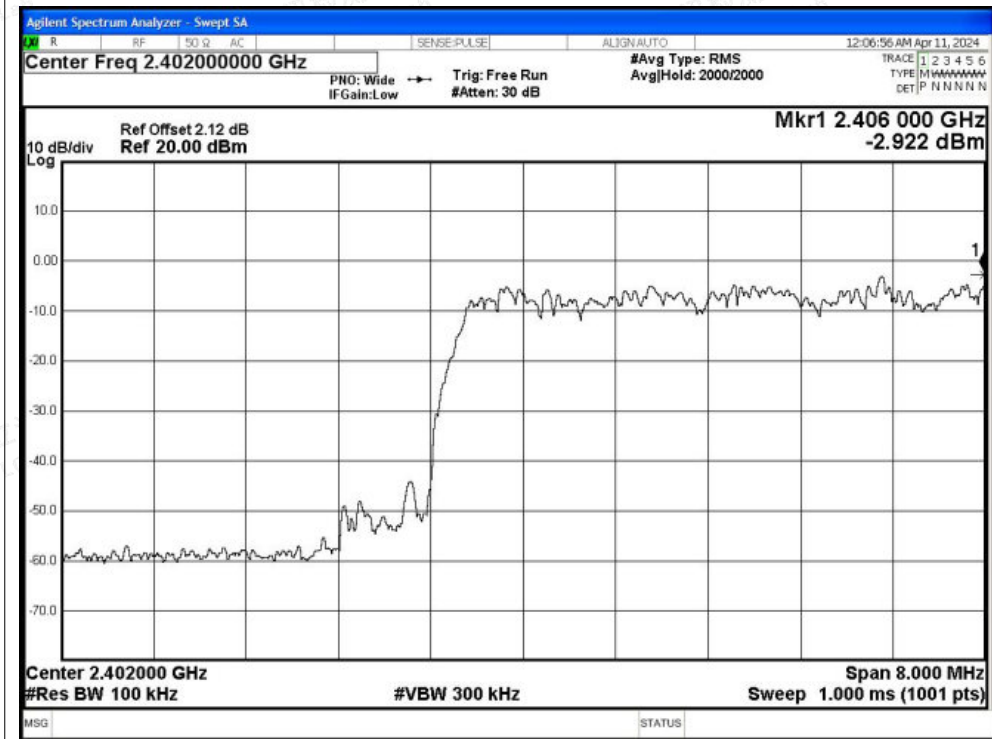


Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission

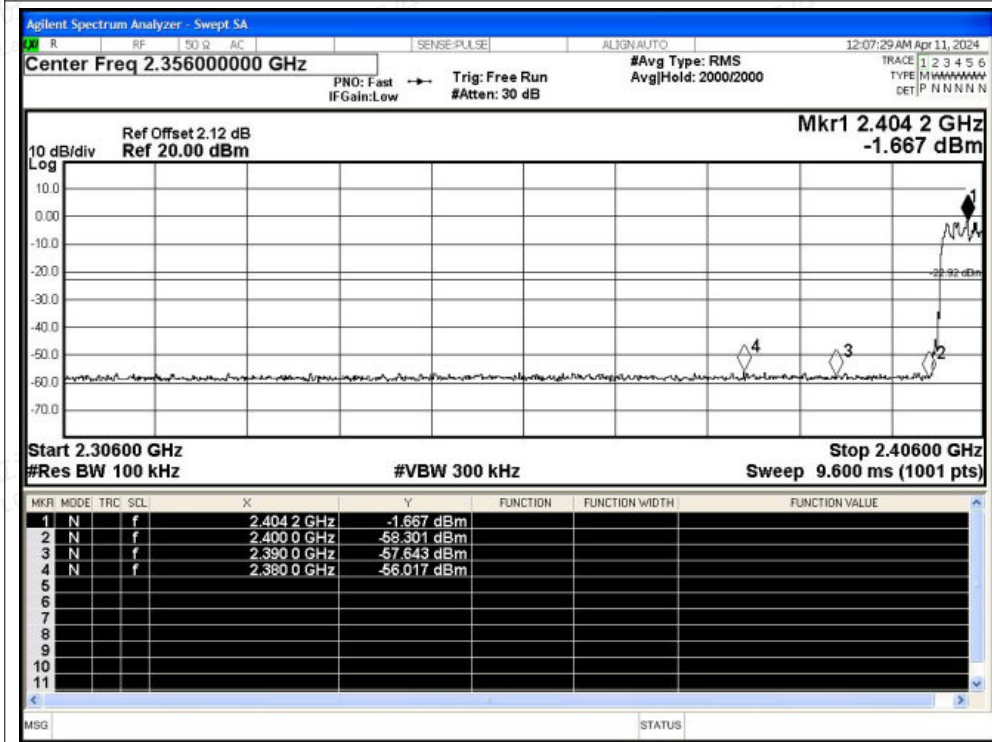




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



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

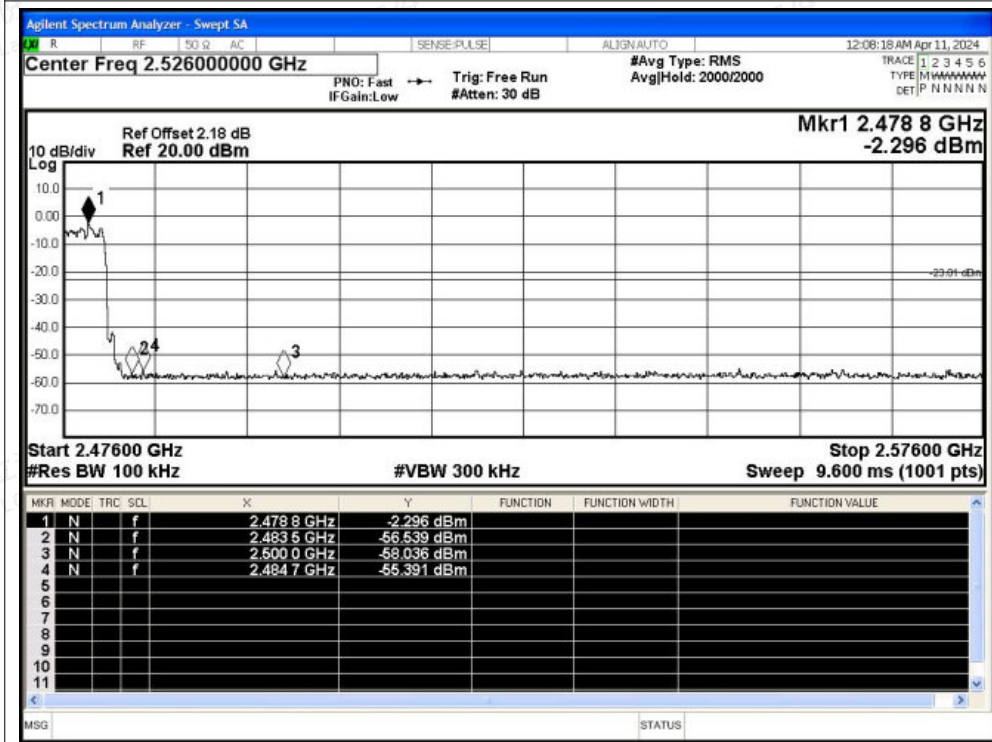




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



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





A.7 Conducted RF Spurious Emission

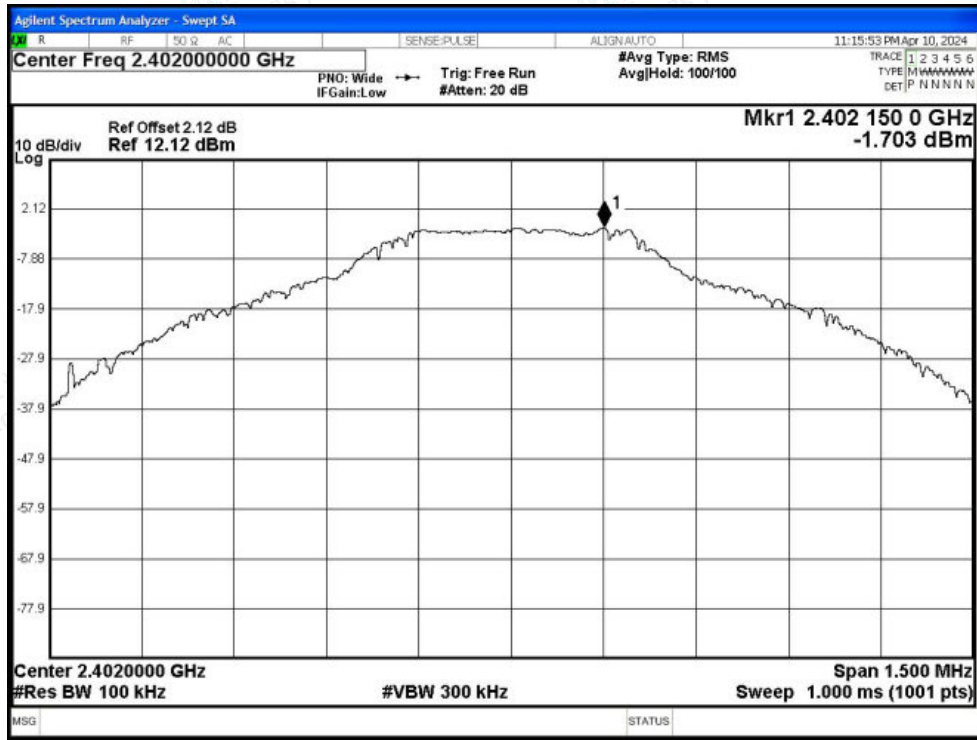
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-53.86	-20	Pass
NVNT	1-DH5	2441	Ant1	-54.42	-20	Pass
NVNT	1-DH5	2480	Ant1	-55.32	-20	Pass
NVNT	2-DH5	2402	Ant1	-53.25	-20	Pass
NVNT	2-DH5	2441	Ant1	-52.85	-20	Pass
NVNT	2-DH5	2480	Ant1	-52.24	-20	Pass



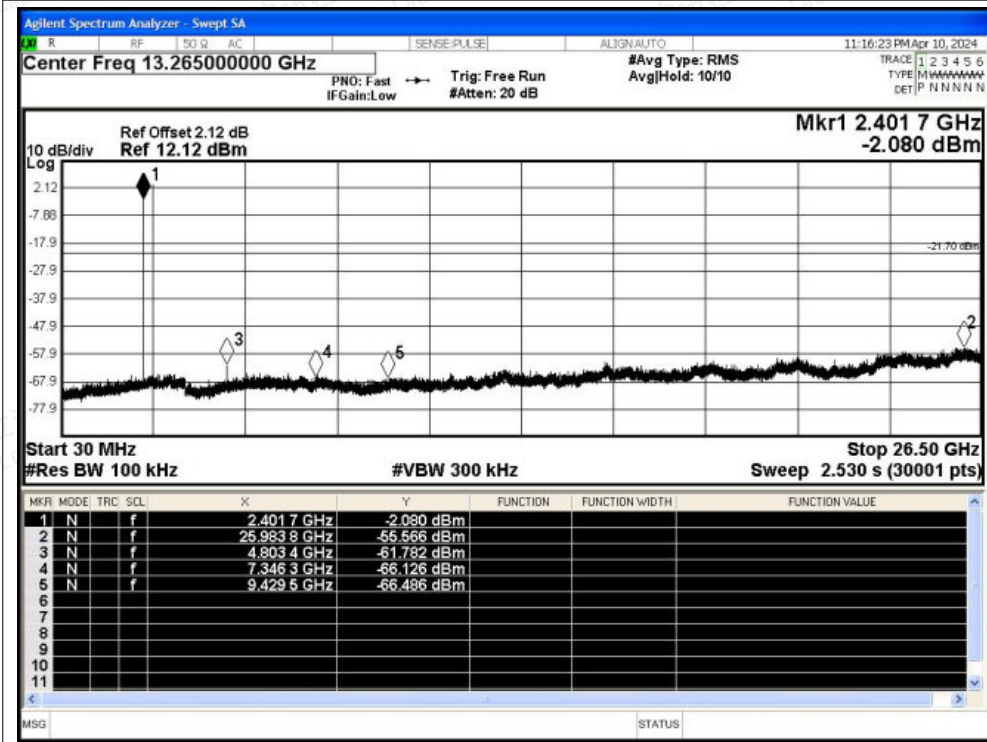


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

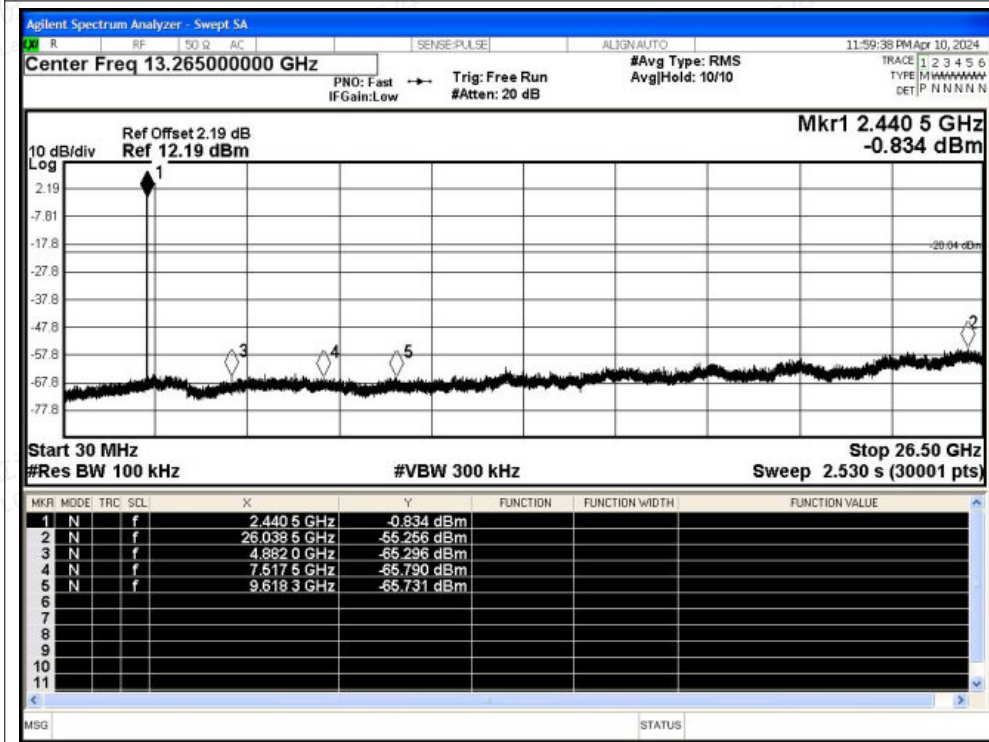




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

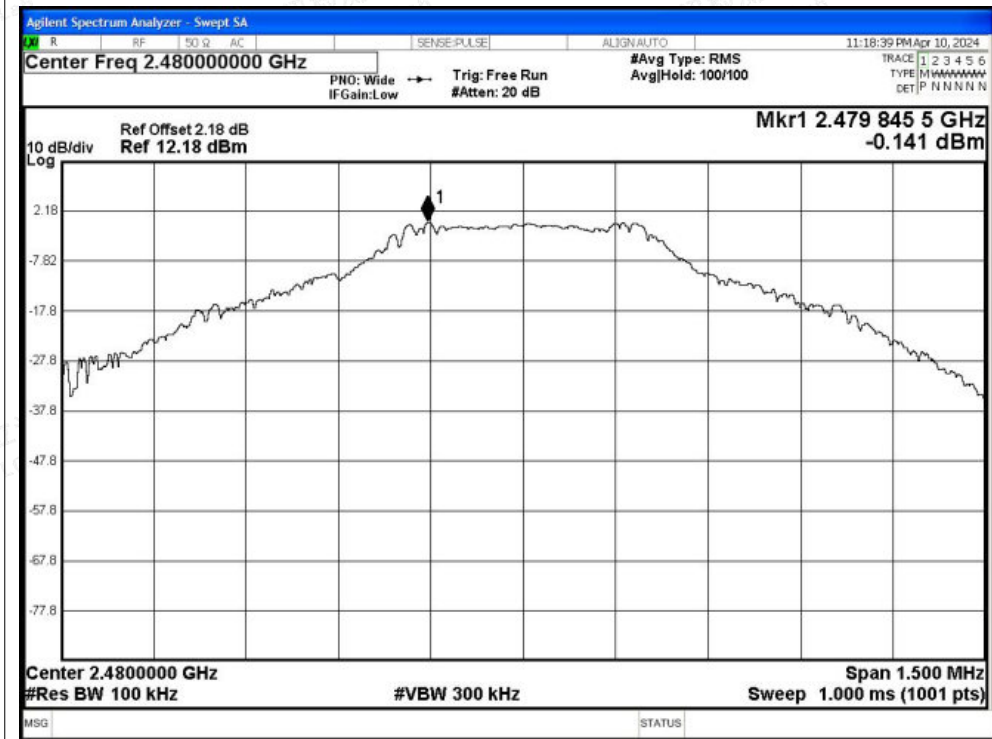


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

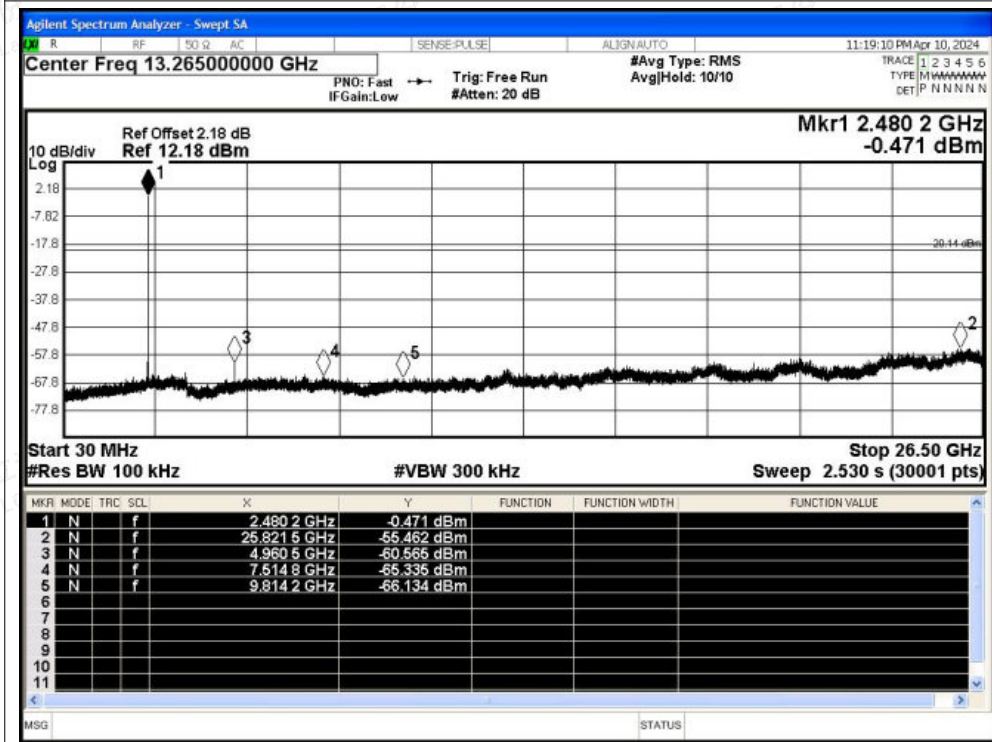




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

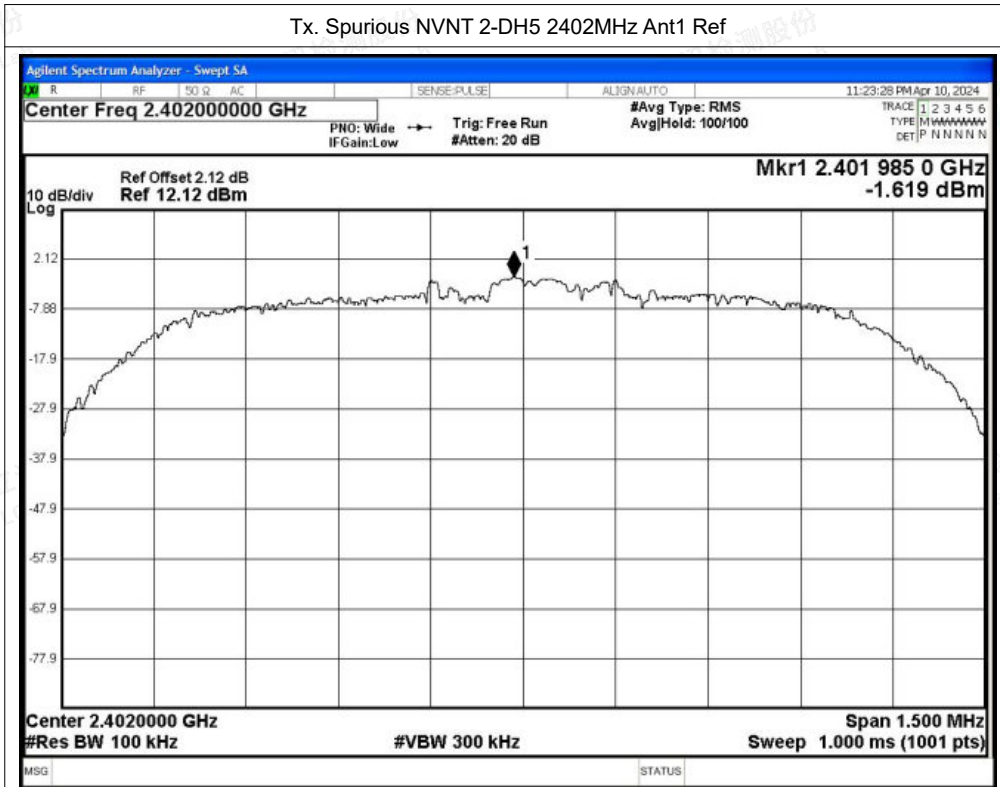


Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission

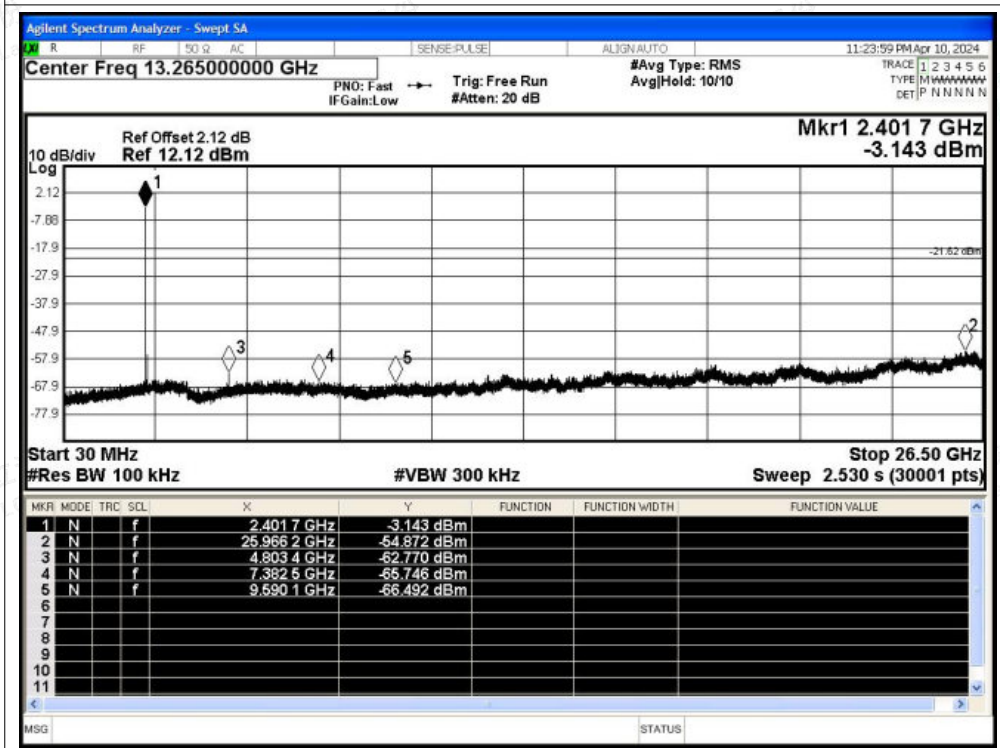




Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref

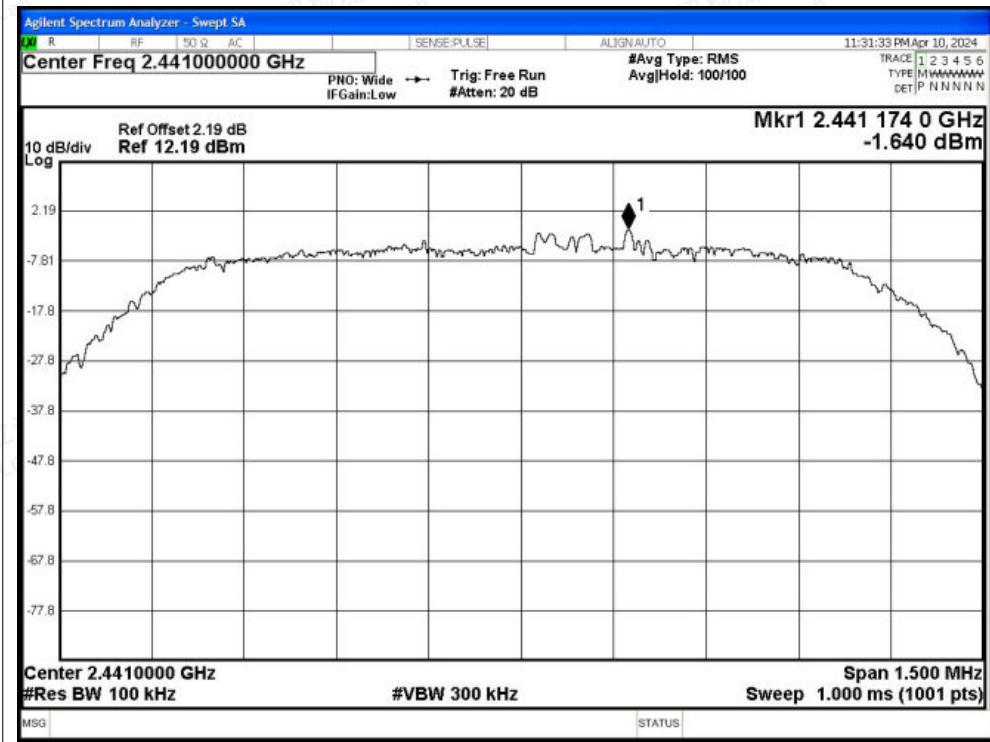


Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission

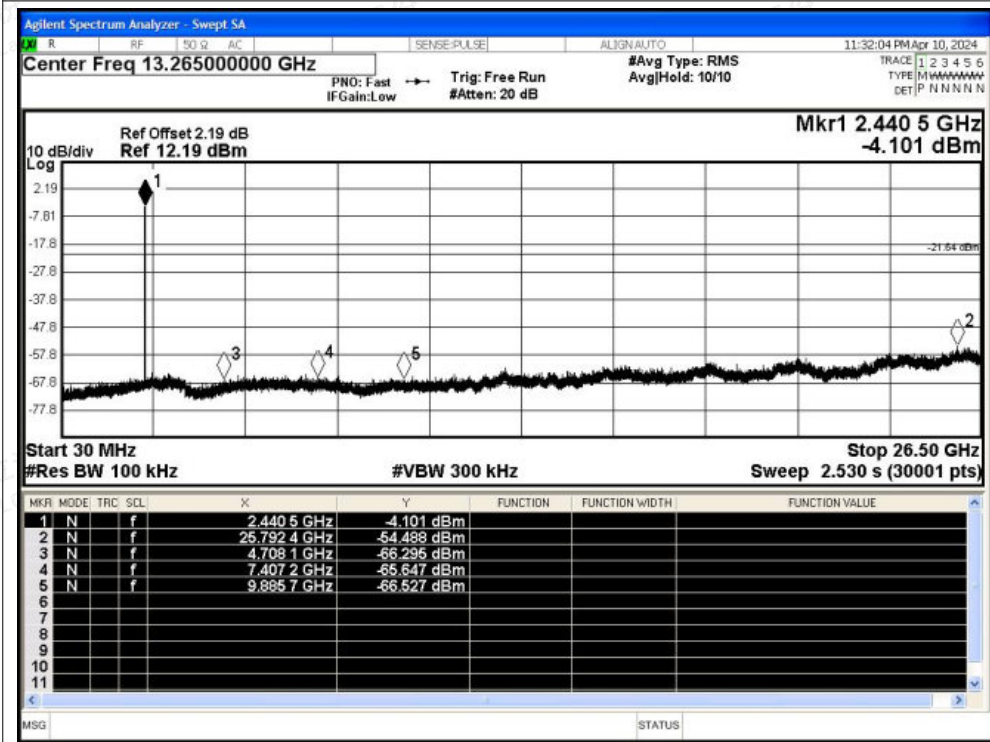




Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref

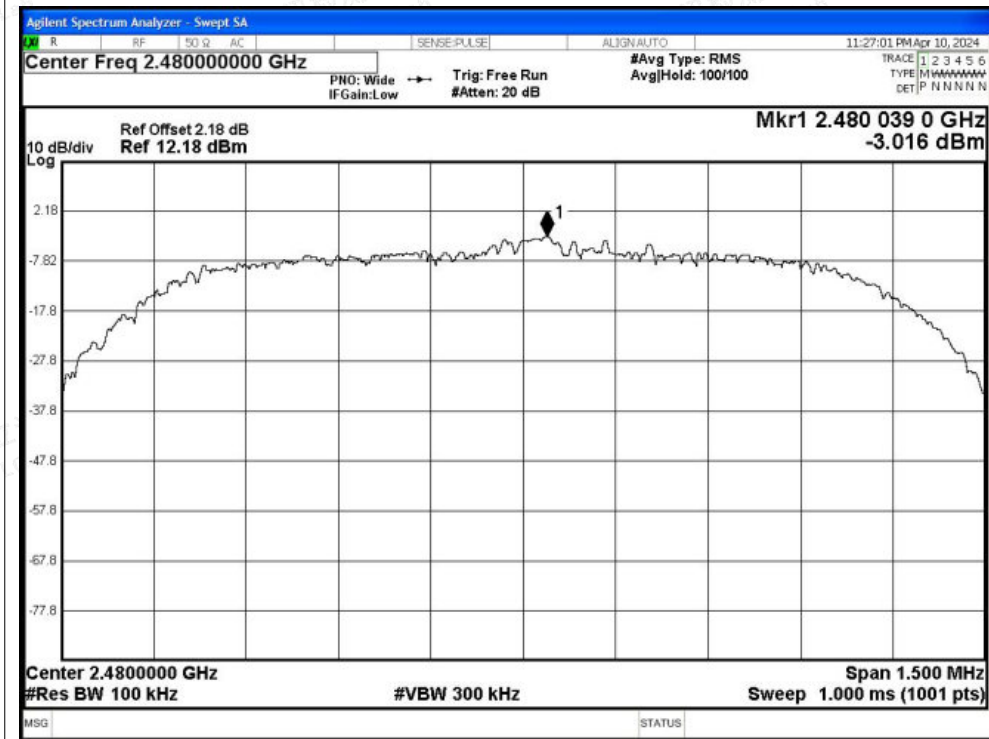


Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission

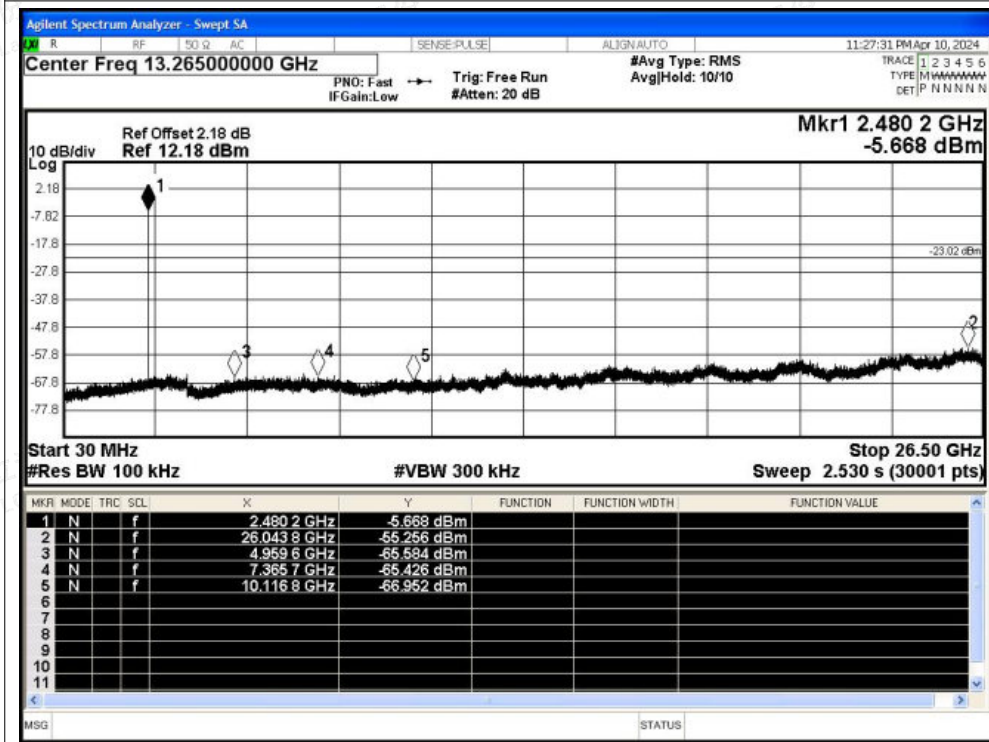




Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission





A.8 Duty Cycle

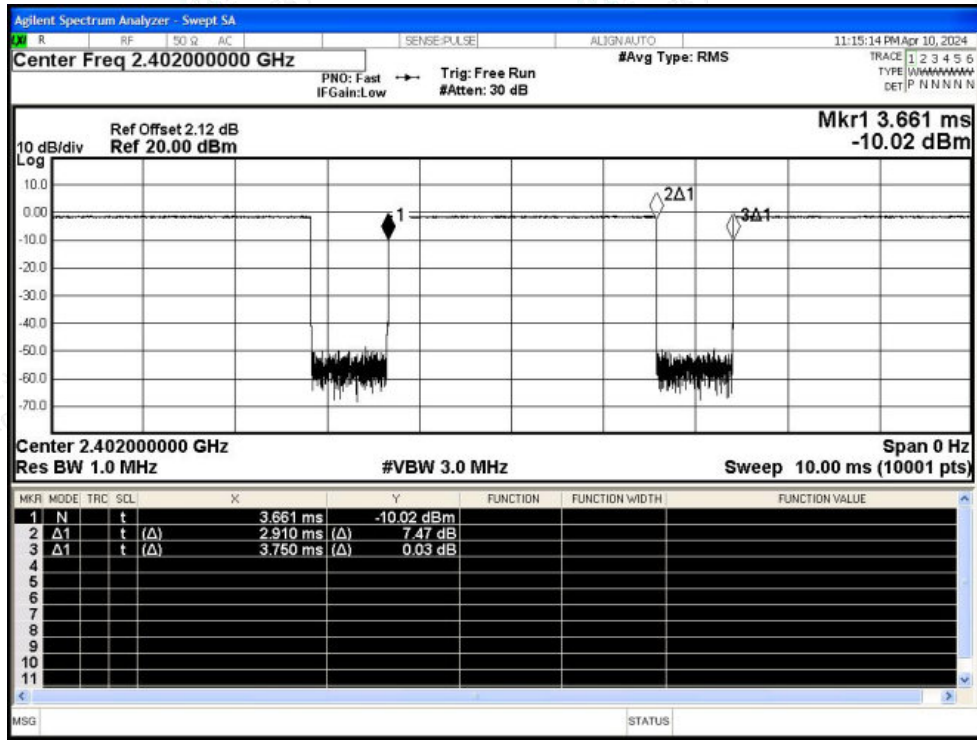
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.6	1.1	0.34
NVNT	2-DH5	2402	Ant1	76.41	1.17	0.36
NVNT	2-DH5	2441	Ant1	76.4	1.17	0.36
NVNT	2-DH5	2480	Ant1	76.4	1.17	0.36



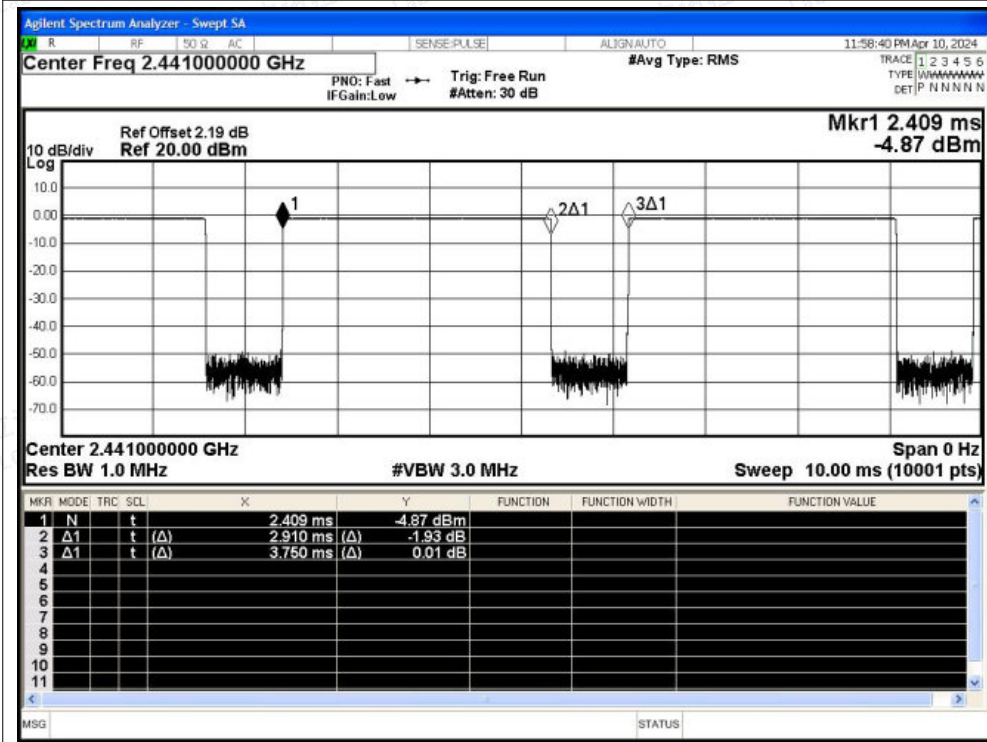


Test Graphs

Duty Cycle NVNT 1-DH5 2402MHz Ant1

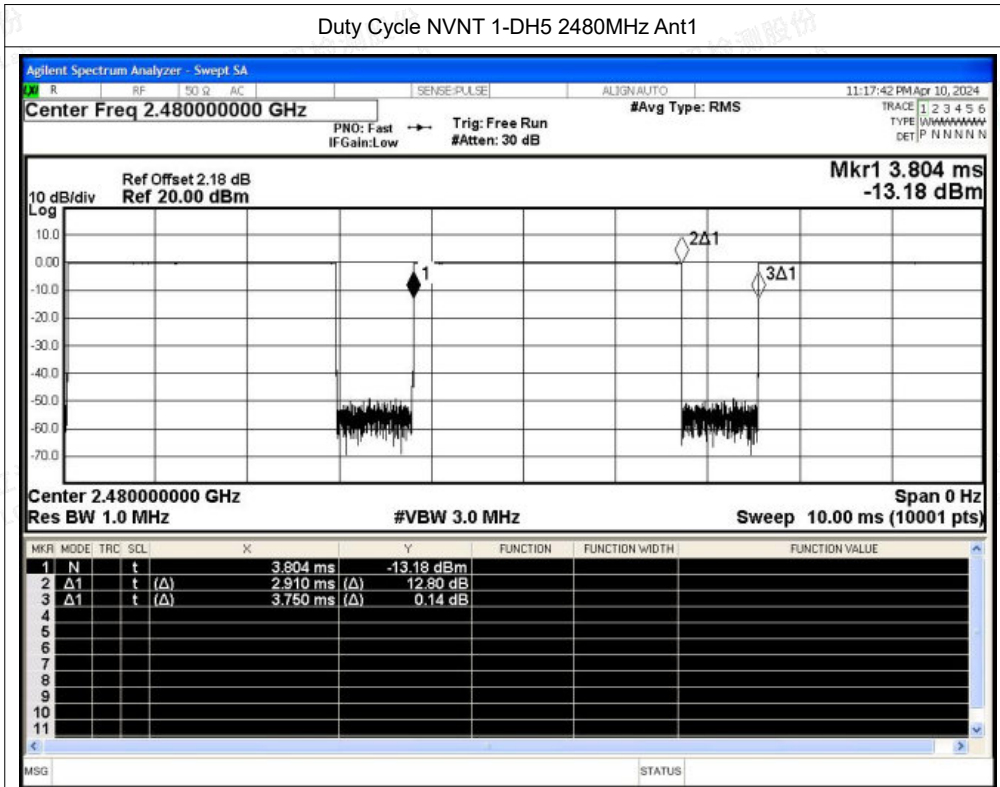


Duty Cycle NVNT 1-DH5 2441MHz Ant1

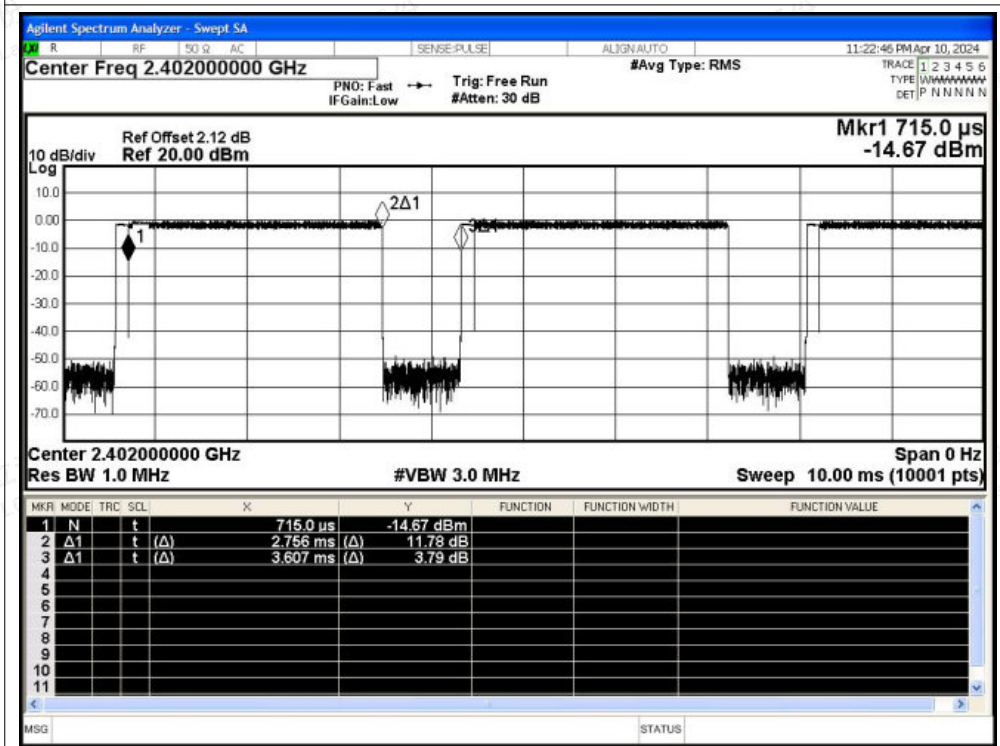




Duty Cycle NVNT 1-DH5 2480MHz Ant1

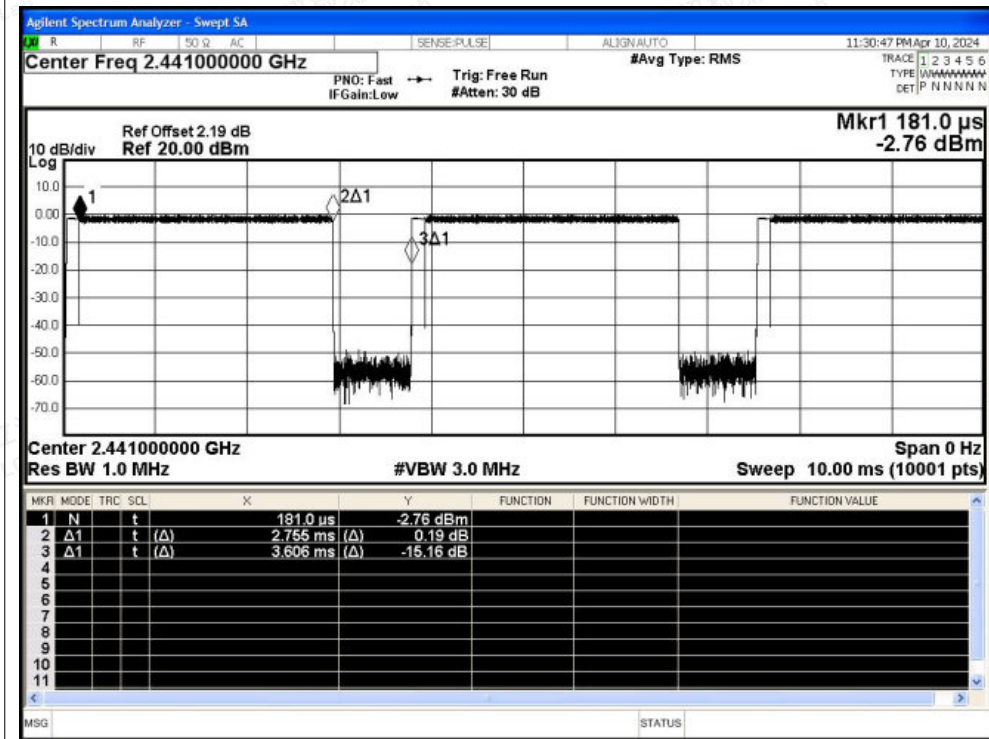


Duty Cycle NVNT 2-DH5 2402MHz Ant1

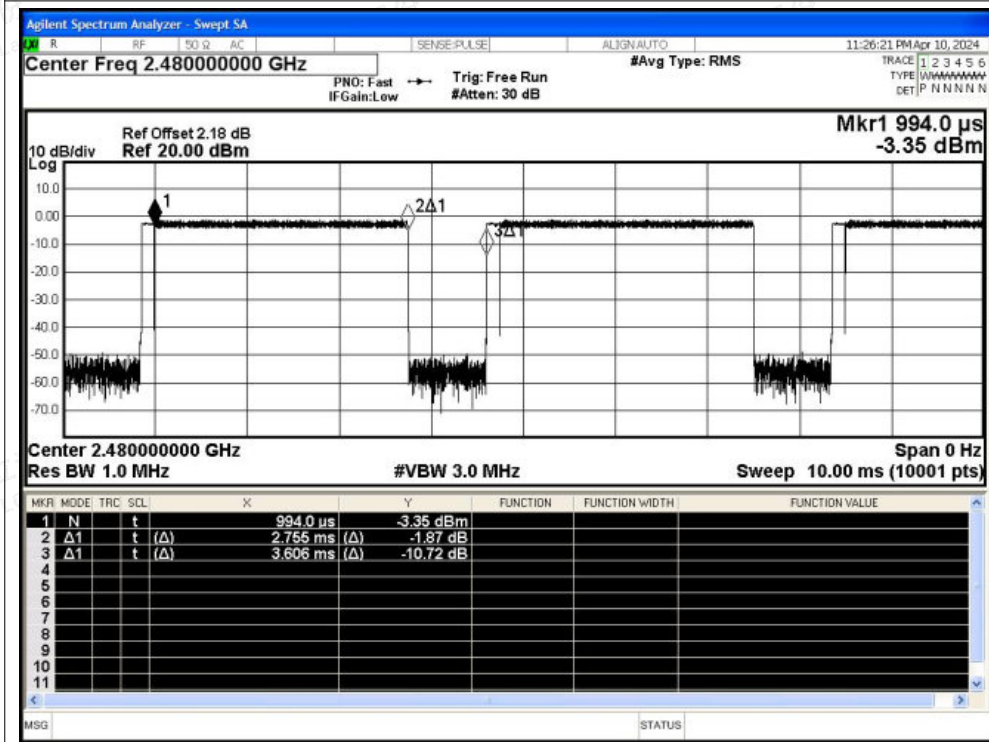




Duty Cycle NVNT 2-DH5 2441MHz Ant1



Duty Cycle NVNT 2-DH5 2480MHz Ant1





A.9 Restrict Band

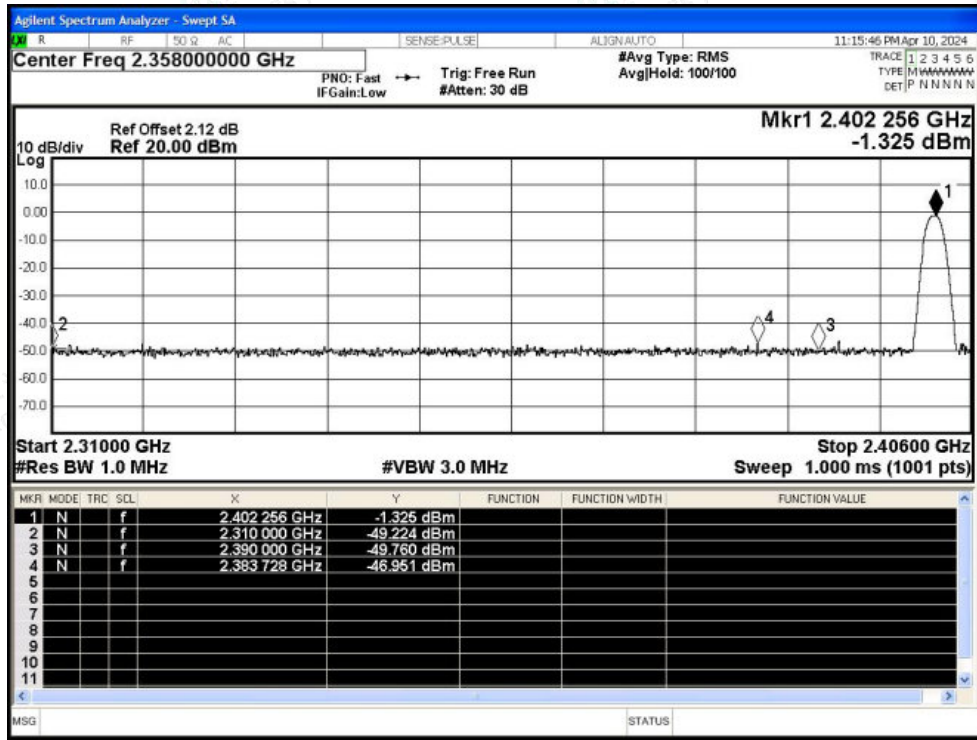
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-49.22	2.50	-	48.54	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.41	2.50	1.1	40.45	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2383.728	-46.95	2.50	-	50.81	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2388.24	-57.55	2.50	1.1	41.31	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-49.76	2.50	-	48.00	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-58.39	2.50	1.1	40.47	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-48.1	2.50	-	49.66	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-57.46	2.50	1.1	41.40	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2484.304	-45.04	2.50	-	52.72	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2492.608	-57.07	2.50	1.1	41.79	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-49.2	2.50	-	48.56	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-57.7	2.50	1.1	41.16	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-48.96	2.50	-	48.80	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-58.33	2.50	1.17	40.60	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2329.008	-46.74	2.50	-	51.02	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2371.44	-57.48	2.50	1.17	41.45	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-51.89	2.50	-	45.87	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-58.58	2.50	1.17	40.35	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-47.32	2.50	-	50.44	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-57.39	2.50	1.17	41.54	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2484.496	-46.12	2.50	-	51.64	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2492.056	-57.07	2.50	1.17	41.86	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-50.03	2.50	-	47.73	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-57.71	2.50	1.17	41.22	Average	54	Pass



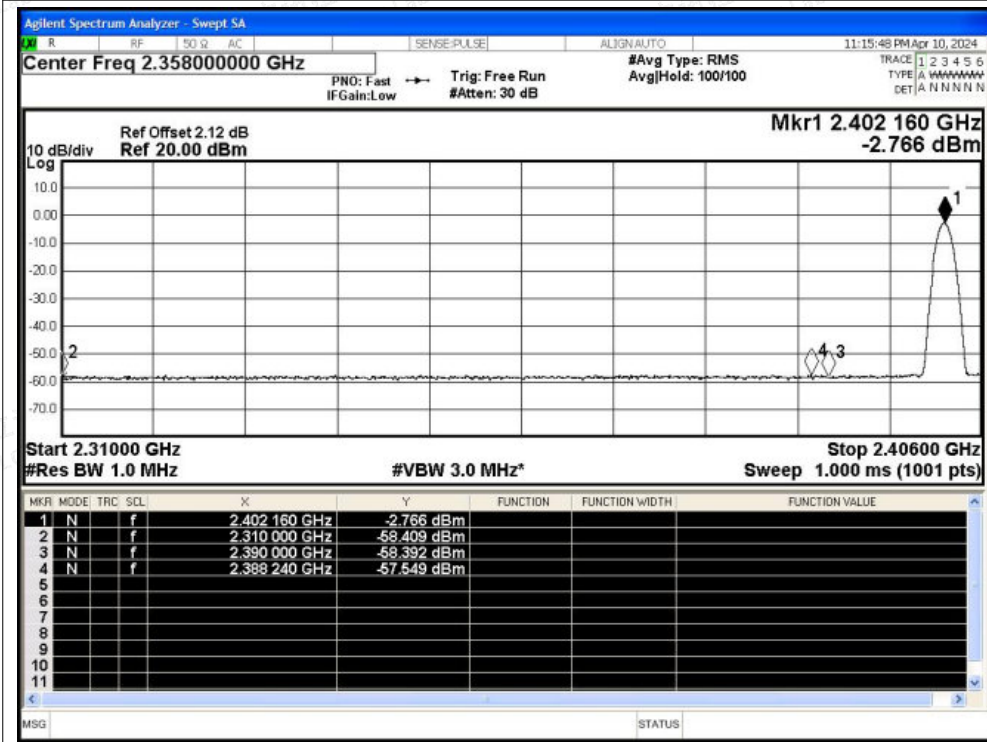


Test Graphs

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

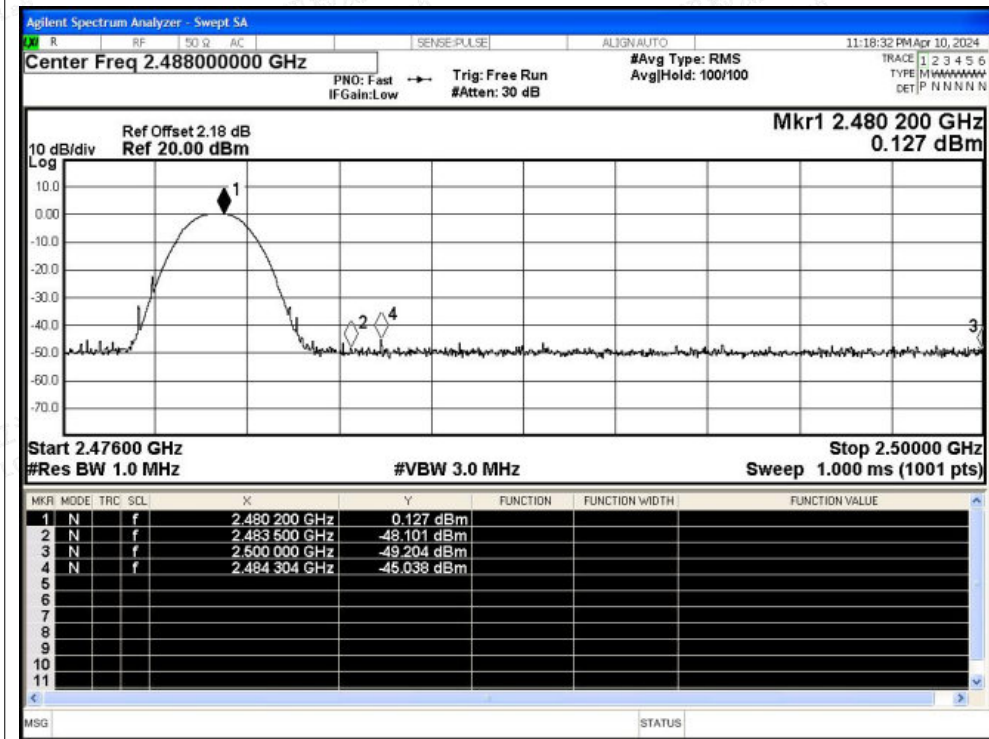


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

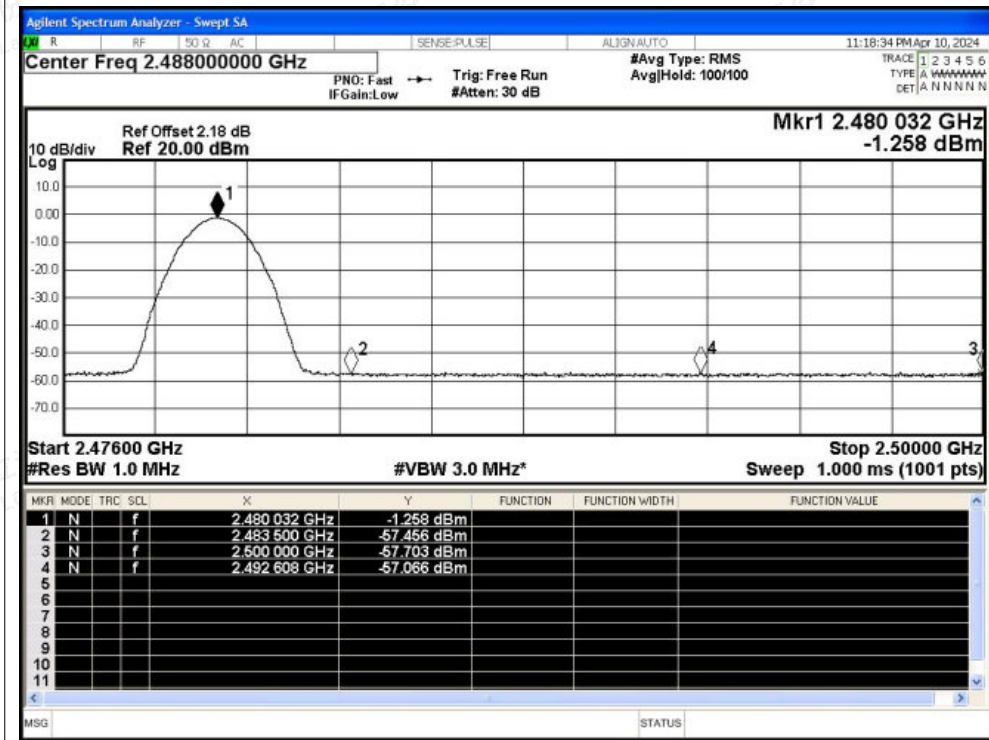




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak

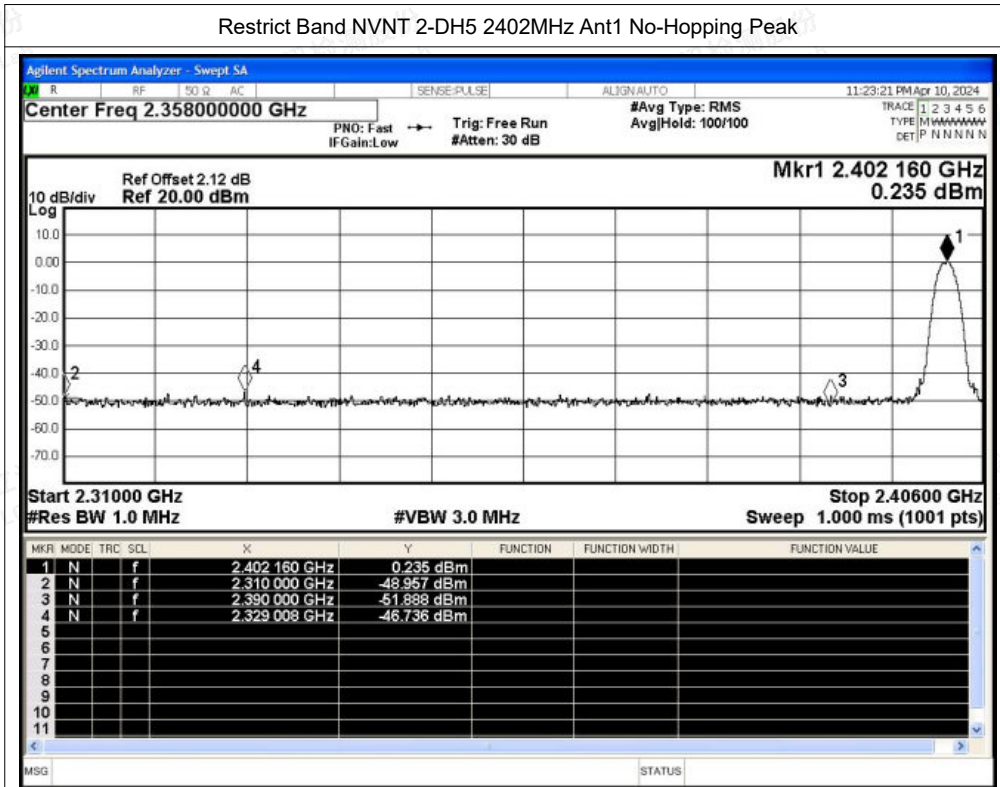


Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average

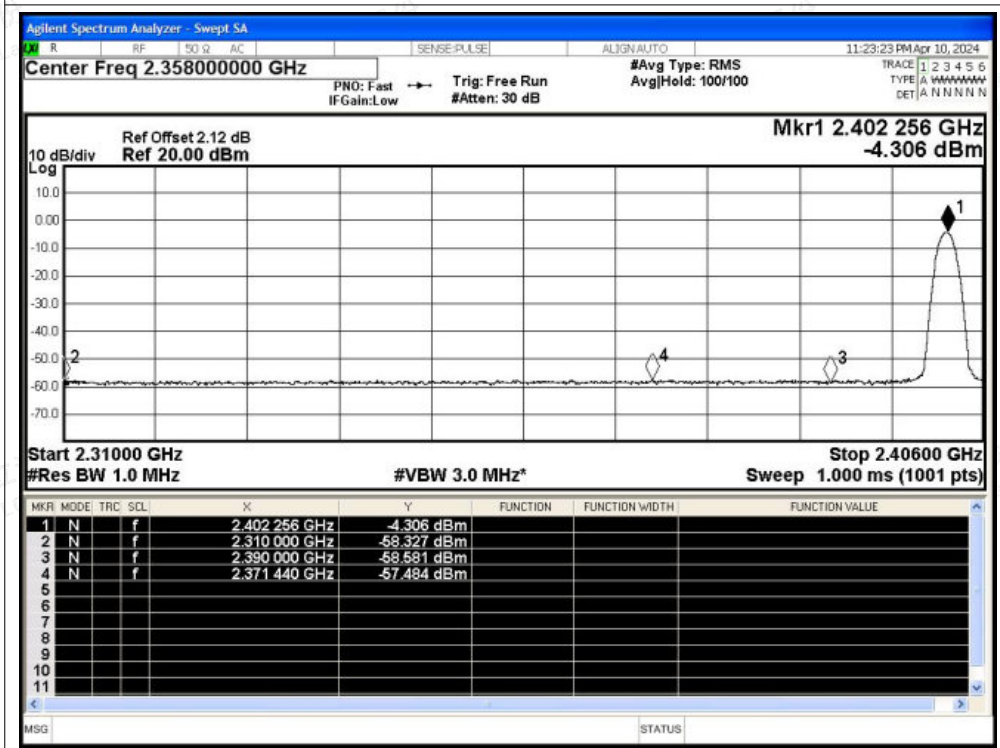




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

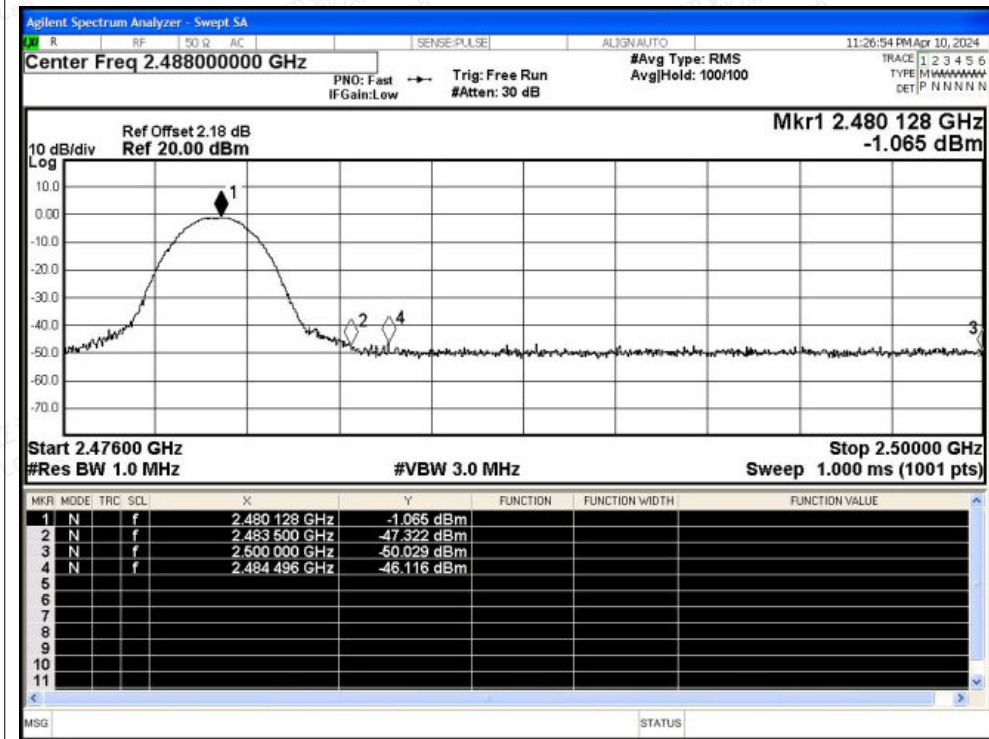


Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average





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



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

