



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Multi-function projector

Test Model: NeoPix 130

Environmental Conditions

Temperature:	23.1° C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Eason Zhou
Supervised by:	Nick Peng





A.1 -20dB Bandwidth

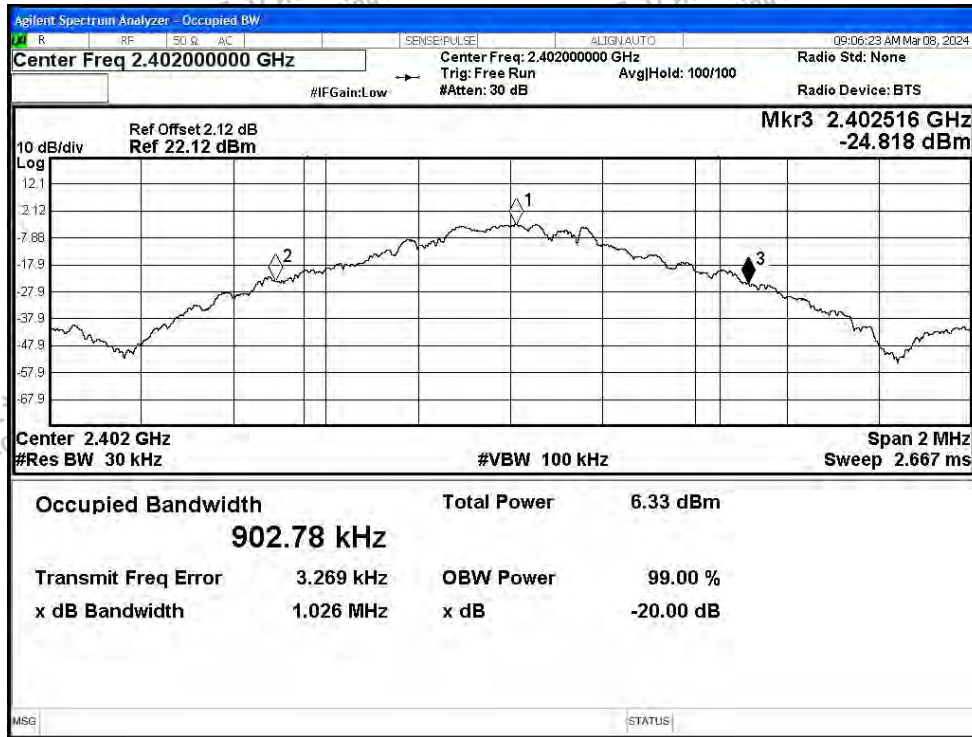
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant2	1.026	N/A	Pass
NVNT	1-DH5	2441	Ant2	0.959	N/A	Pass
NVNT	1-DH5	2480	Ant2	0.956	N/A	Pass
NVNT	2-DH5	2402	Ant2	1.283	N/A	Pass
NVNT	2-DH5	2441	Ant2	1.288	N/A	Pass
NVNT	2-DH5	2480	Ant2	1.305	N/A	Pass
NVNT	3-DH5	2402	Ant2	1.281	N/A	Pass
NVNT	3-DH5	2441	Ant2	1.281	N/A	Pass
NVNT	3-DH5	2480	Ant2	1.277	N/A	Pass





Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant2



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant2

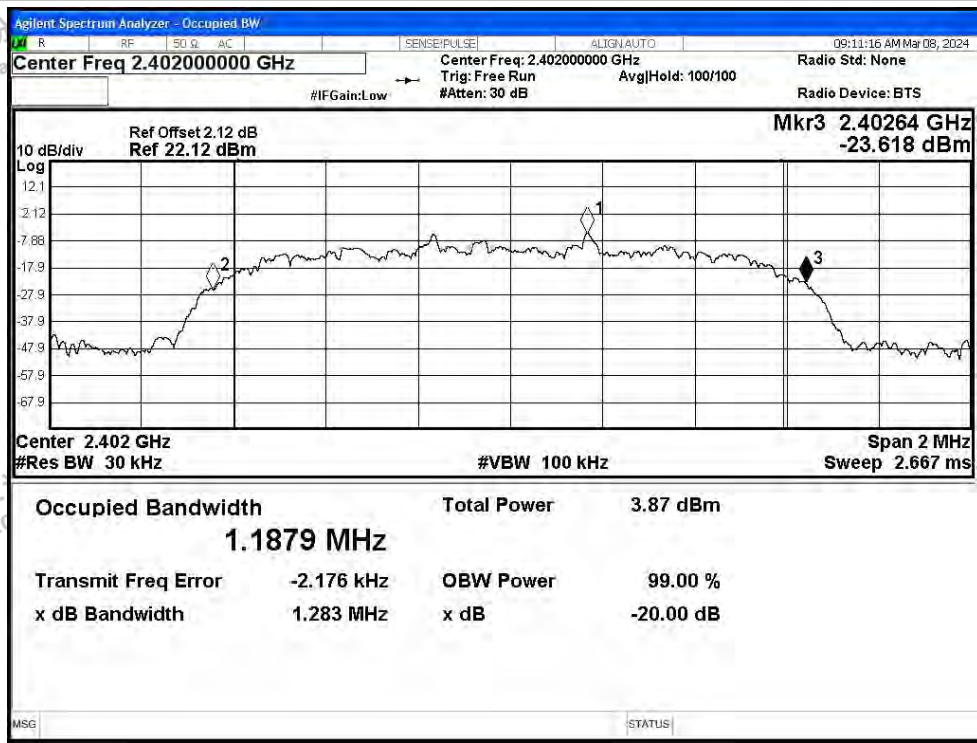




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant2

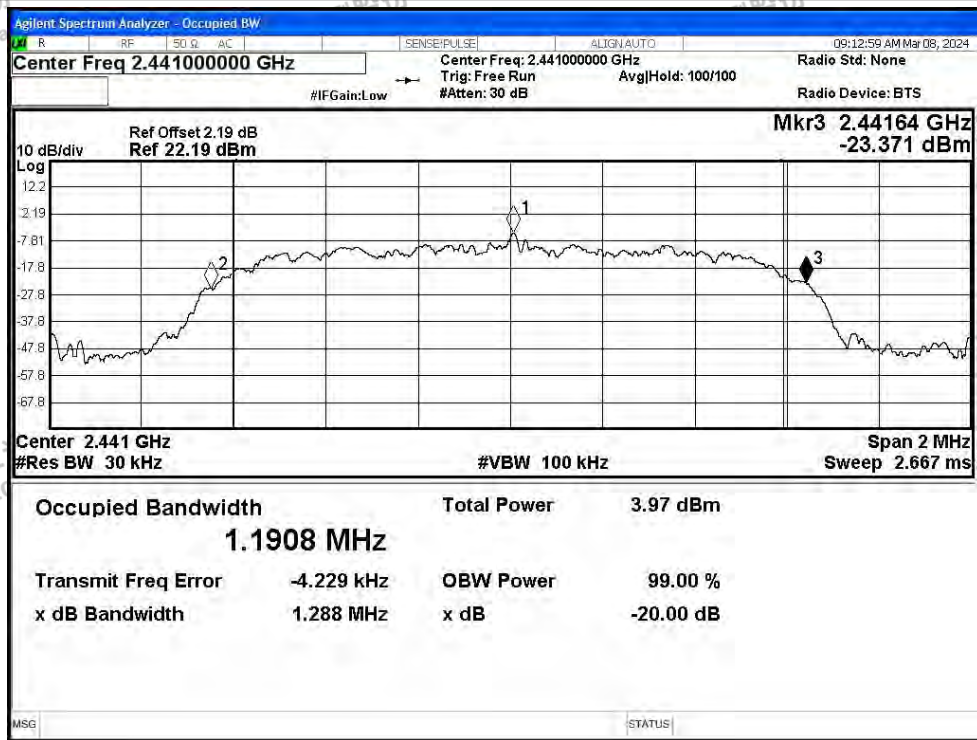


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant2

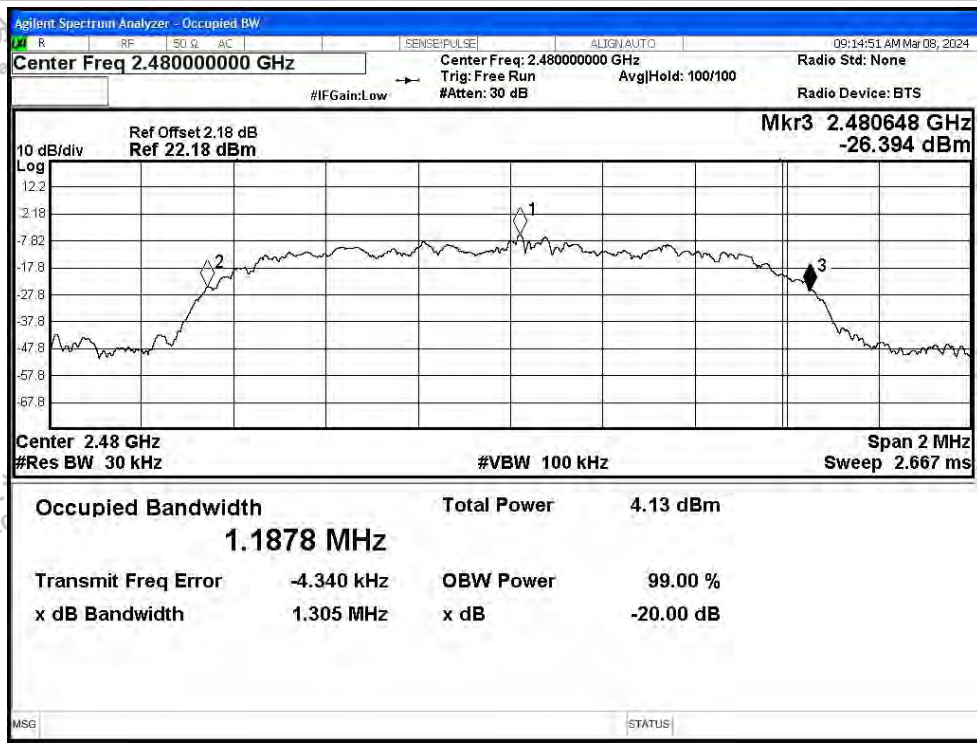




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant2

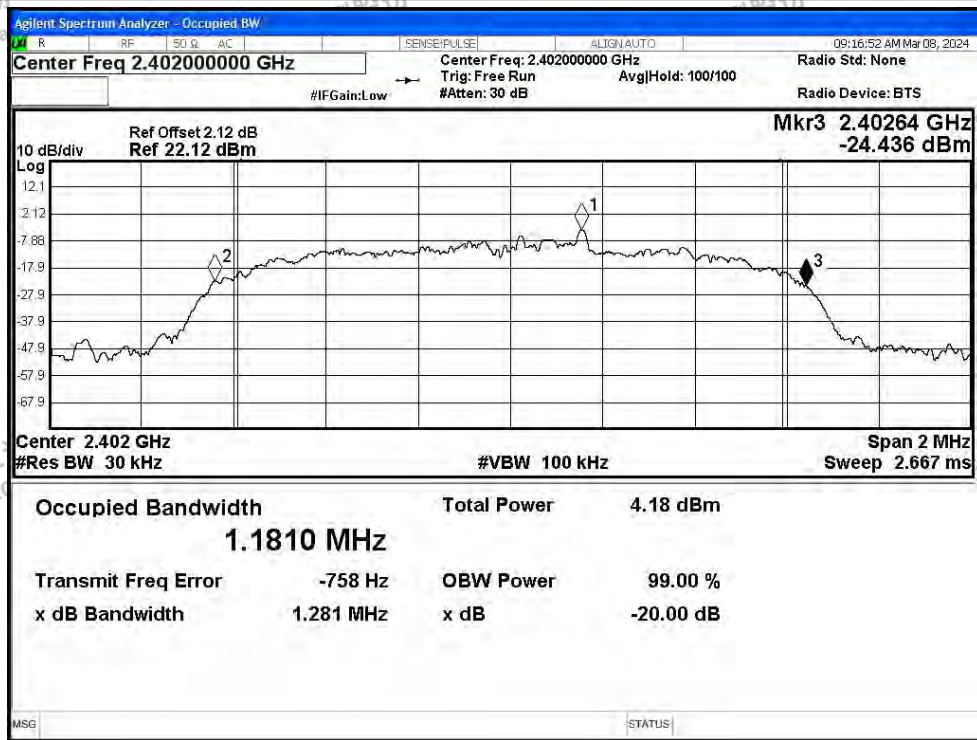


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant2

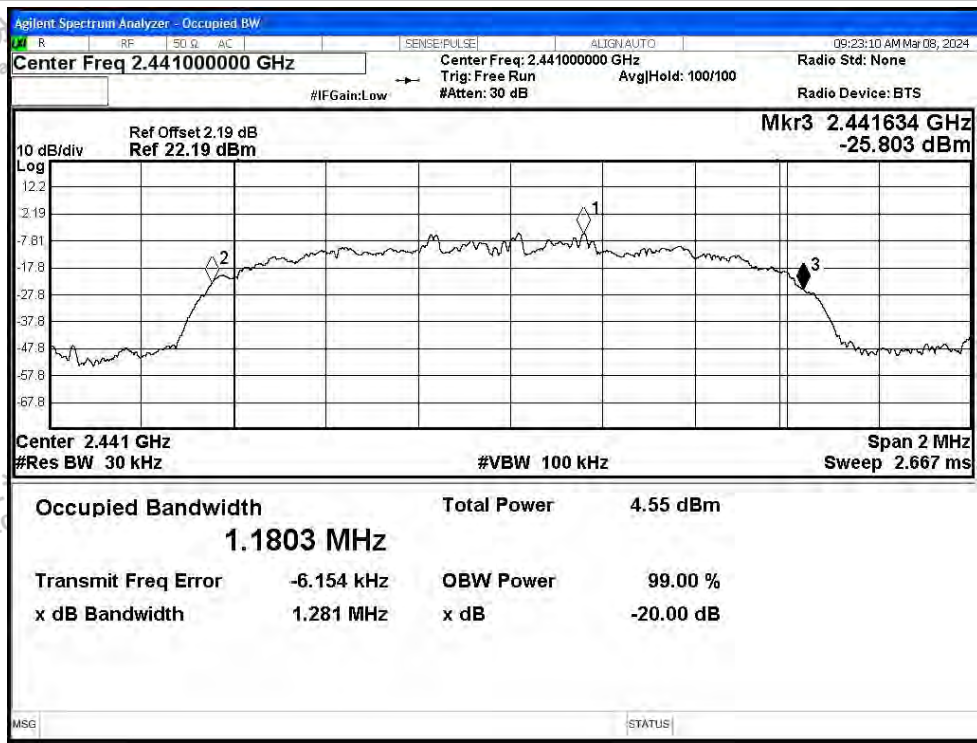




-20dB Bandwidth NVNT 3-DH5 2402MHz Ant2

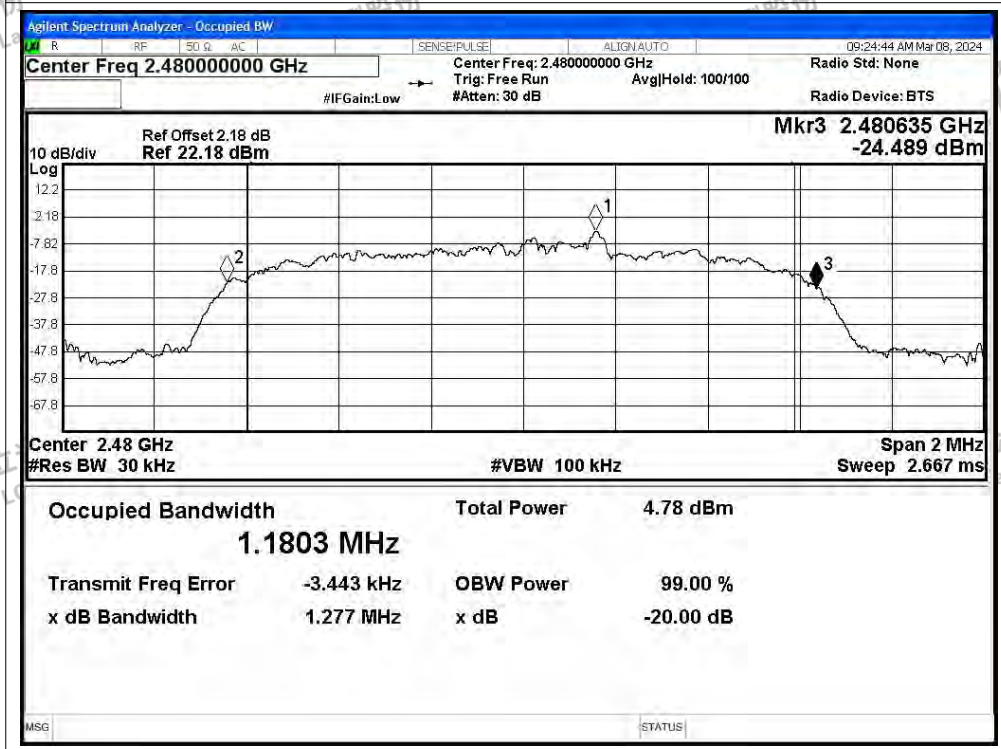


-20dB Bandwidth NVNT 3-DH5 2441MHz Ant2





-20dB Bandwidth NVNT 3-DH5 2480MHz Ant2





A.2 Maximum Peak Conducted Output Power

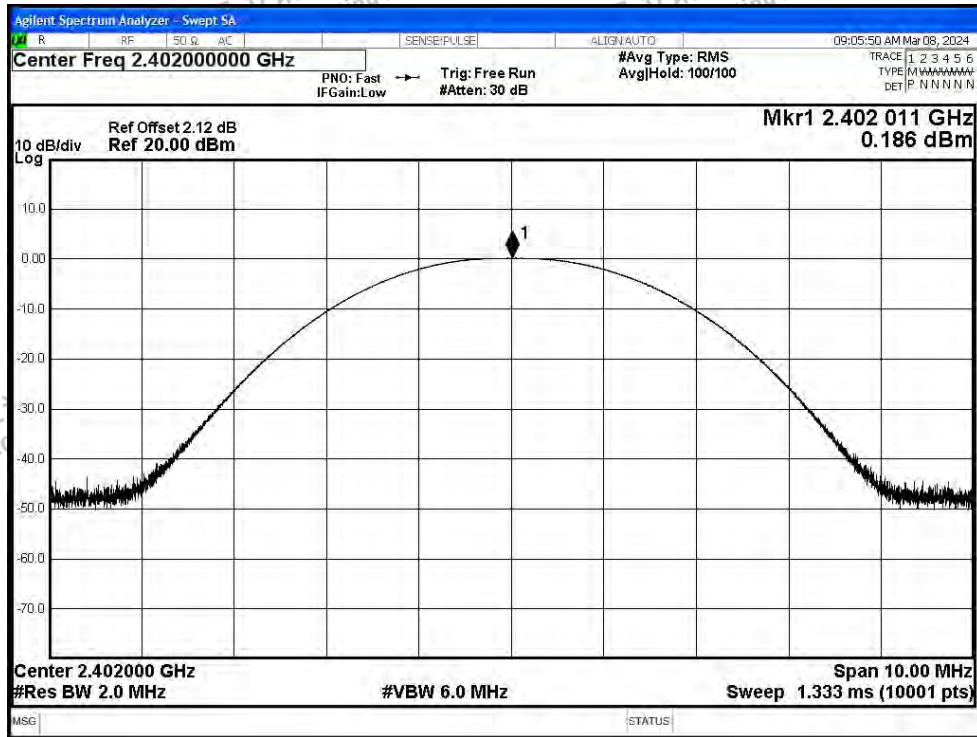
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant2	0.19	21	Pass
NVNT	1-DH5	2441	Ant2	0.45	21	Pass
NVNT	1-DH5	2480	Ant2	0.39	21	Pass
NVNT	2-DH5	2402	Ant2	-0.23	21	Pass
NVNT	2-DH5	2441	Ant2	0.07	21	Pass
NVNT	2-DH5	2480	Ant2	0.14	21	Pass
NVNT	3-DH5	2402	Ant2	-0.23	21	Pass
NVNT	3-DH5	2441	Ant2	0.21	21	Pass
NVNT	3-DH5	2480	Ant2	0.2	21	Pass



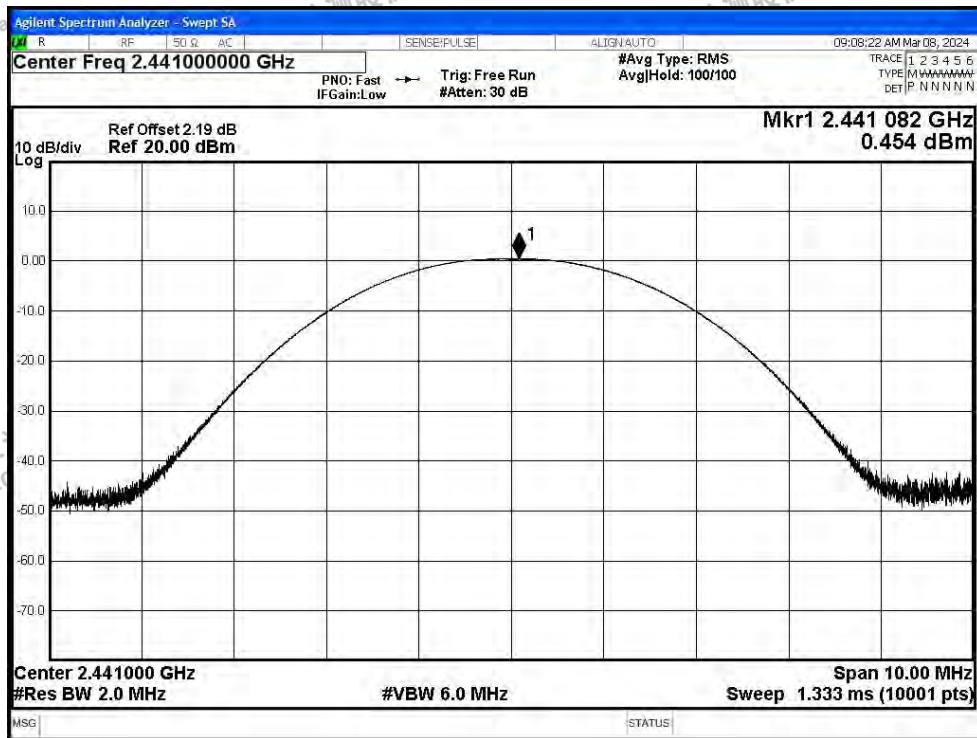


Test Graphs

Power NVNT 1-DH5 2402MHz Ant2

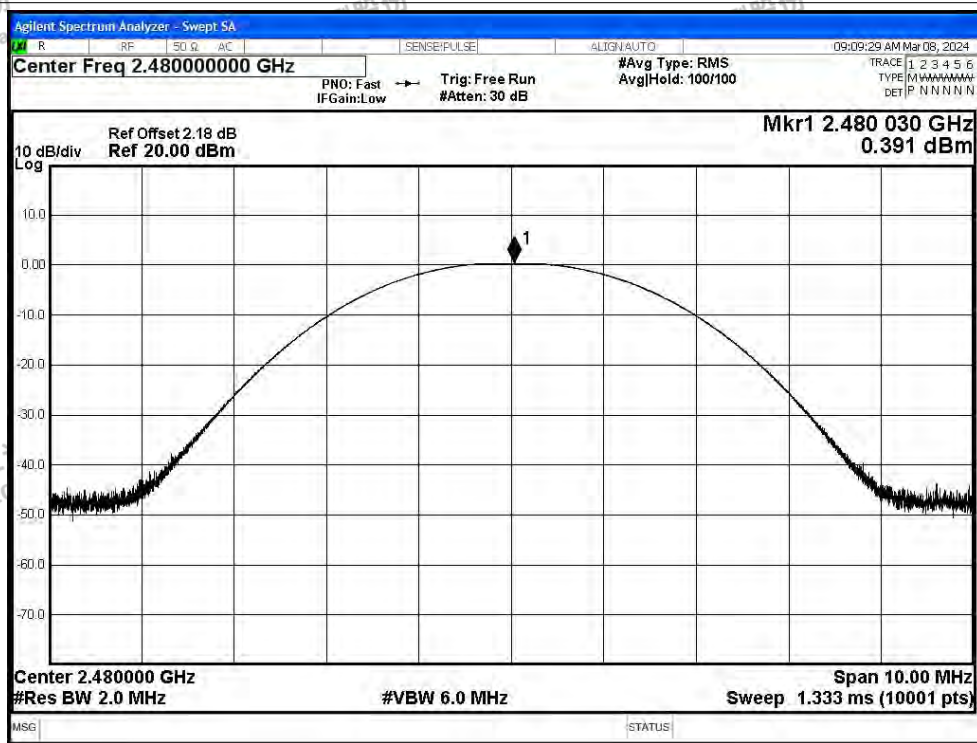


Power NVNT 1-DH5 2441MHz Ant2

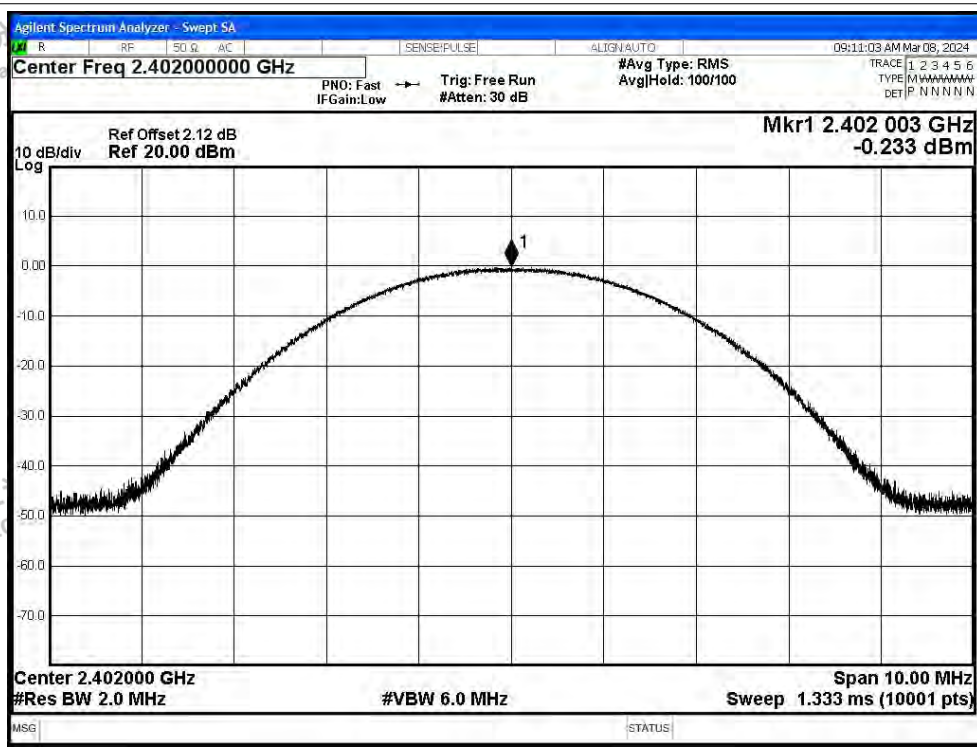




Power NVNT 1-DH5 2480MHz Ant2

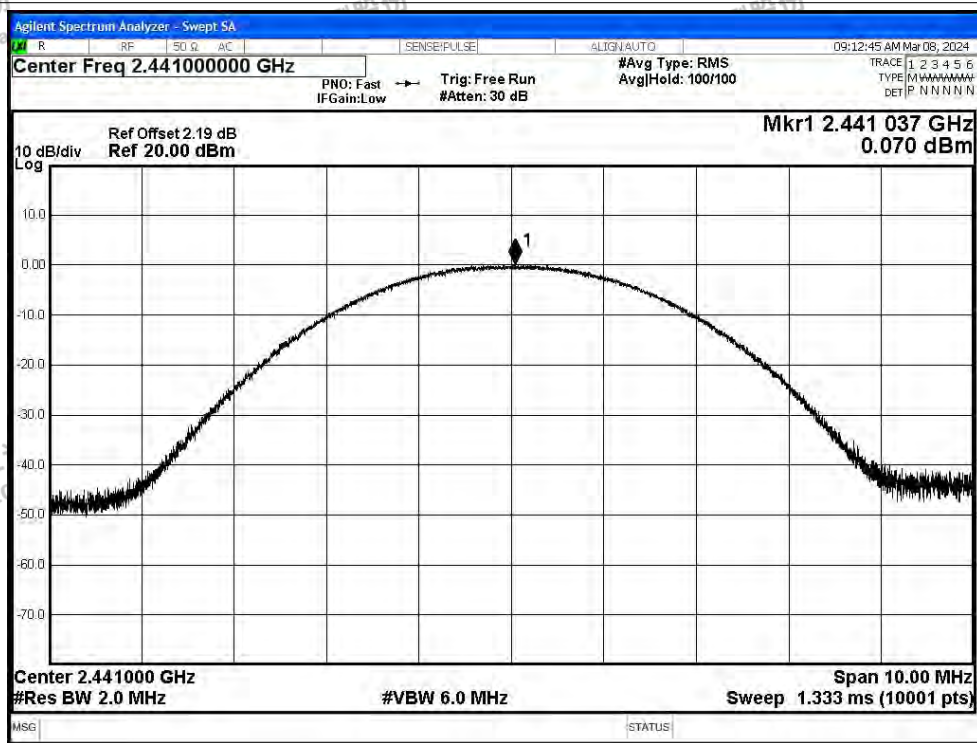


Power NVNT 2-DH5 2402MHz Ant2

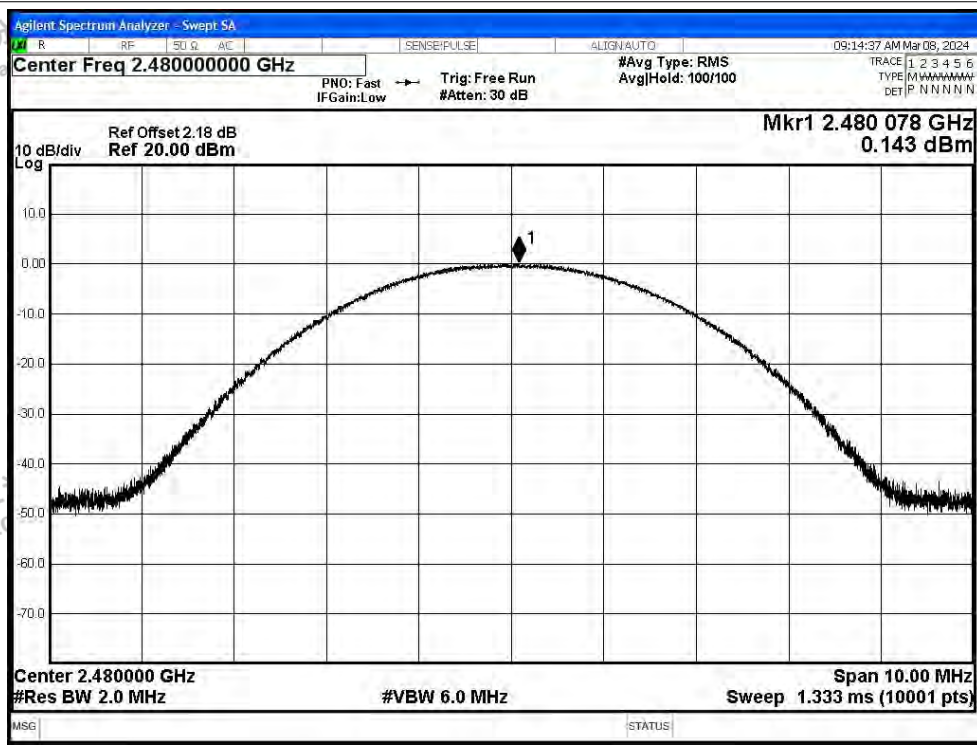




Power NVNT 2-DH5 2441MHz Ant2

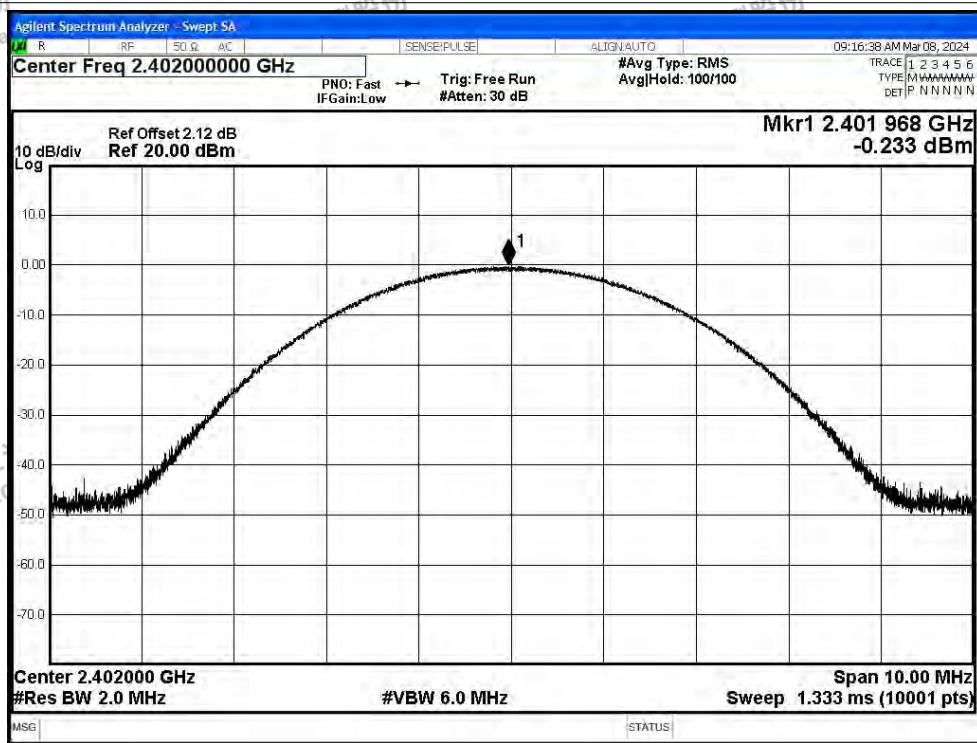


Power NVNT 2-DH5 2480MHz Ant2

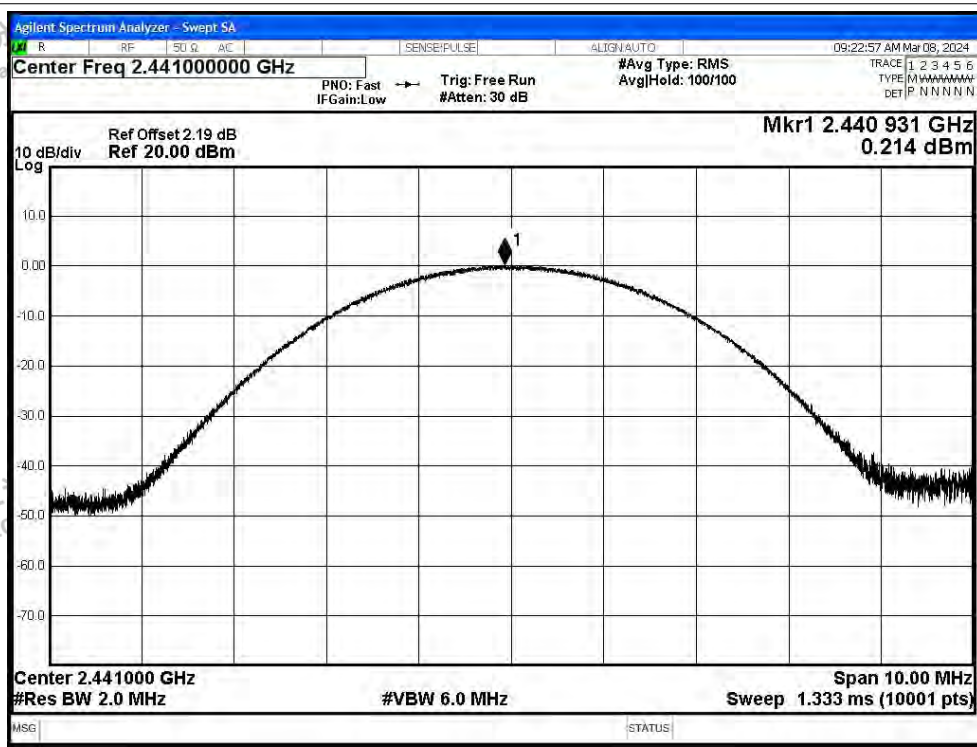


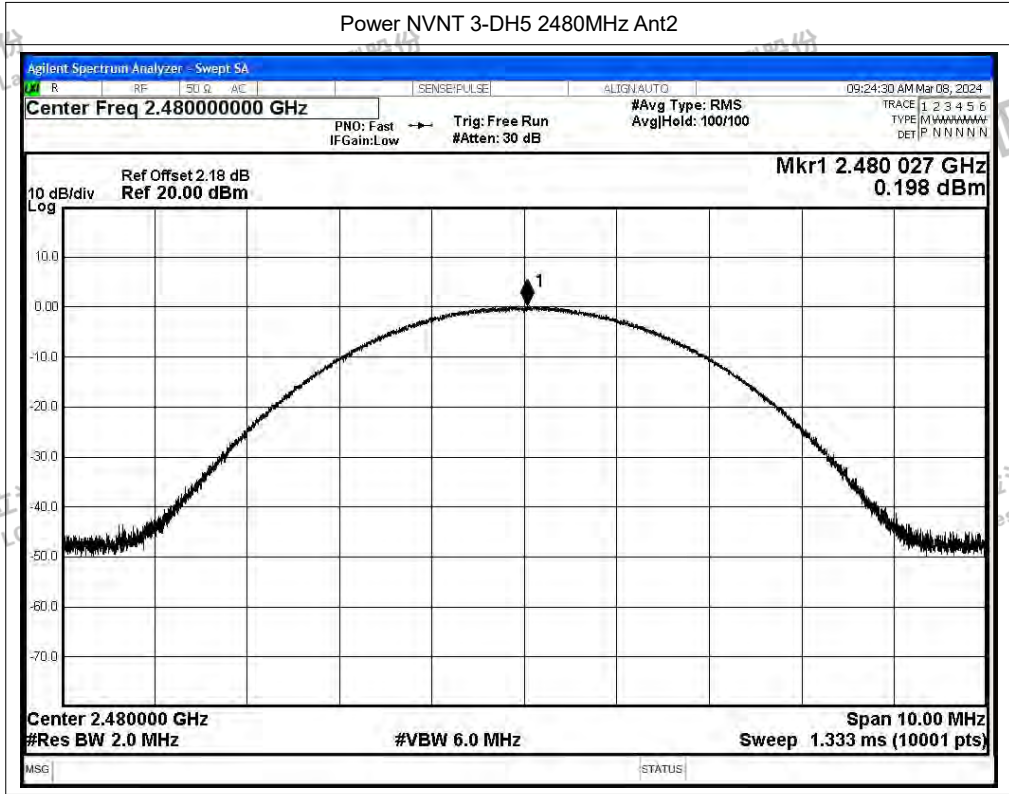


Power NVNT 3-DH5 2402MHz Ant2



Power NVNT 3-DH5 2441MHz Ant2







A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant2	2401.898	2402.984	1.086	0.684	Pass
NVNT	2-DH5	Ant2	2402.03	2403.008	0.978	0.870	Pass
NVNT	3-DH5	Ant2	2402.002	2403.164	1.162	0.854	Pass



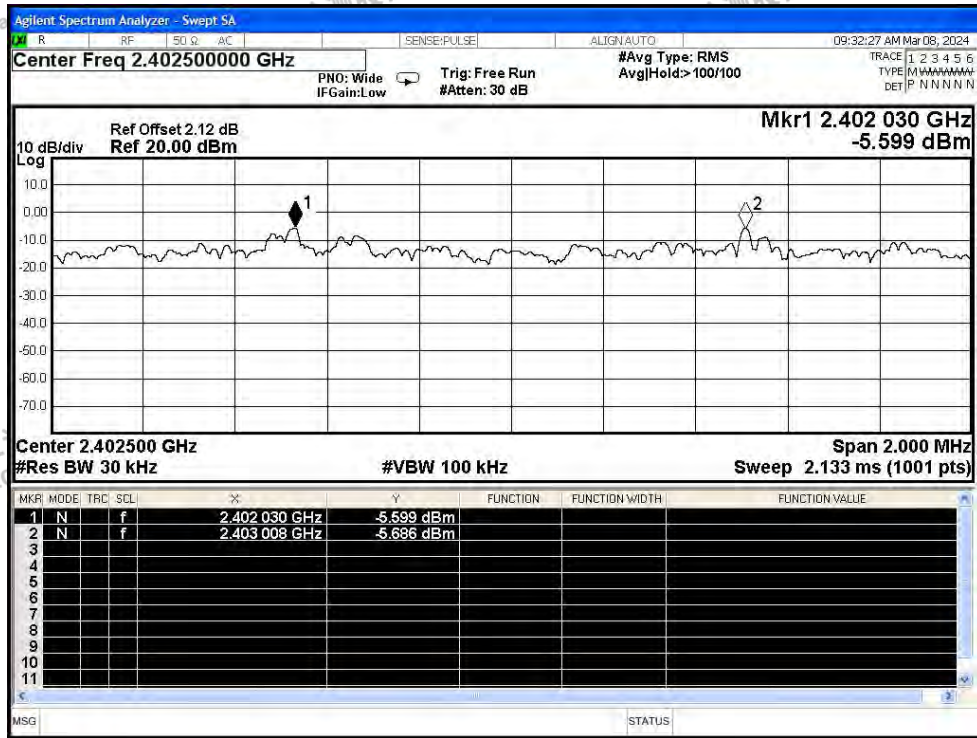


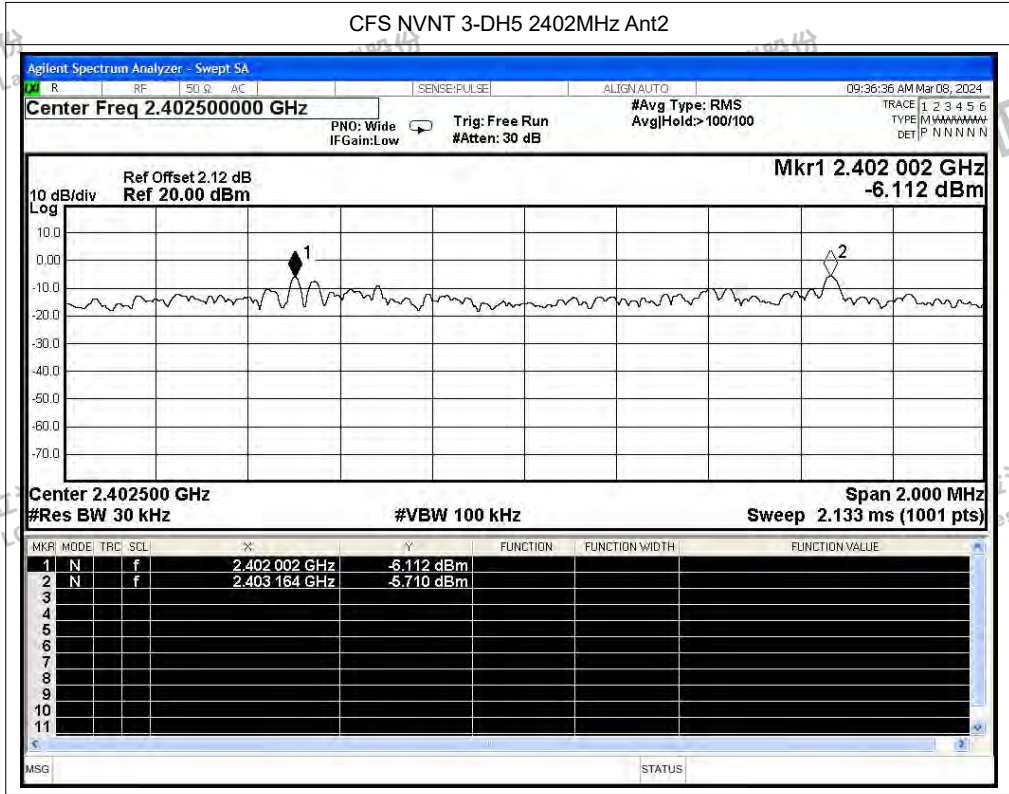
Test Graphs

CFS NVNT 1-DH5 2402MHz Ant2



CFS NVNT 2-DH5 2402MHz Ant2







A.4 Dwell Time

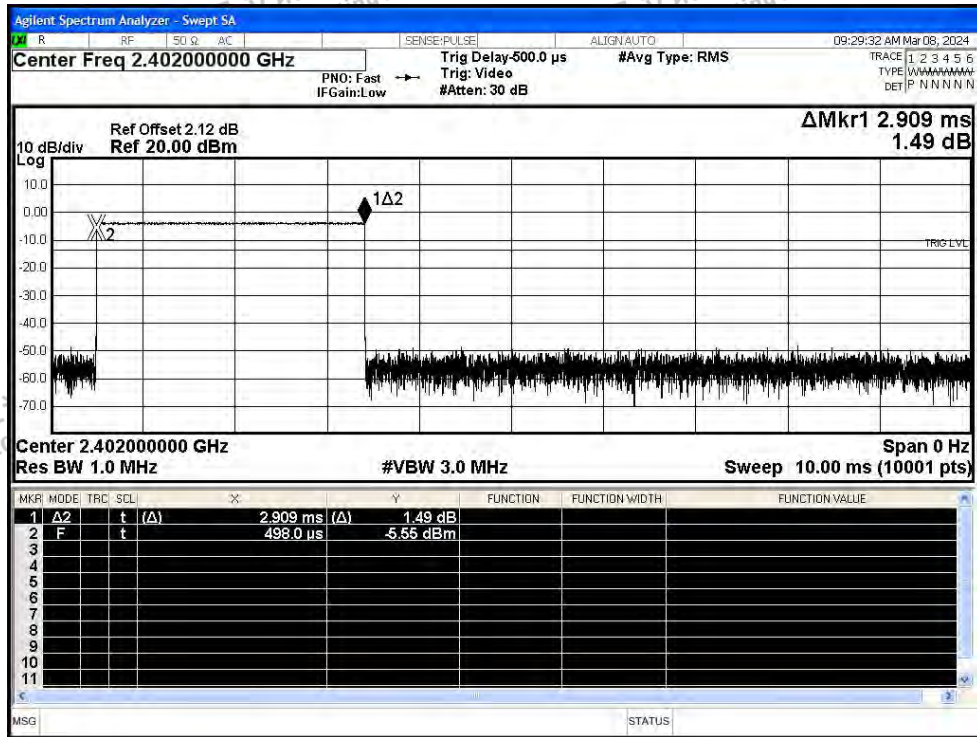
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant2	2.909	340.353	117	31600	400	Pass
NVNT	2-DH5	2402	Ant2	2.898	295.596	102	31600	400	Pass
NVNT	3-DH5	2402	Ant2	2.897	309.979	107	31600	400	Pass



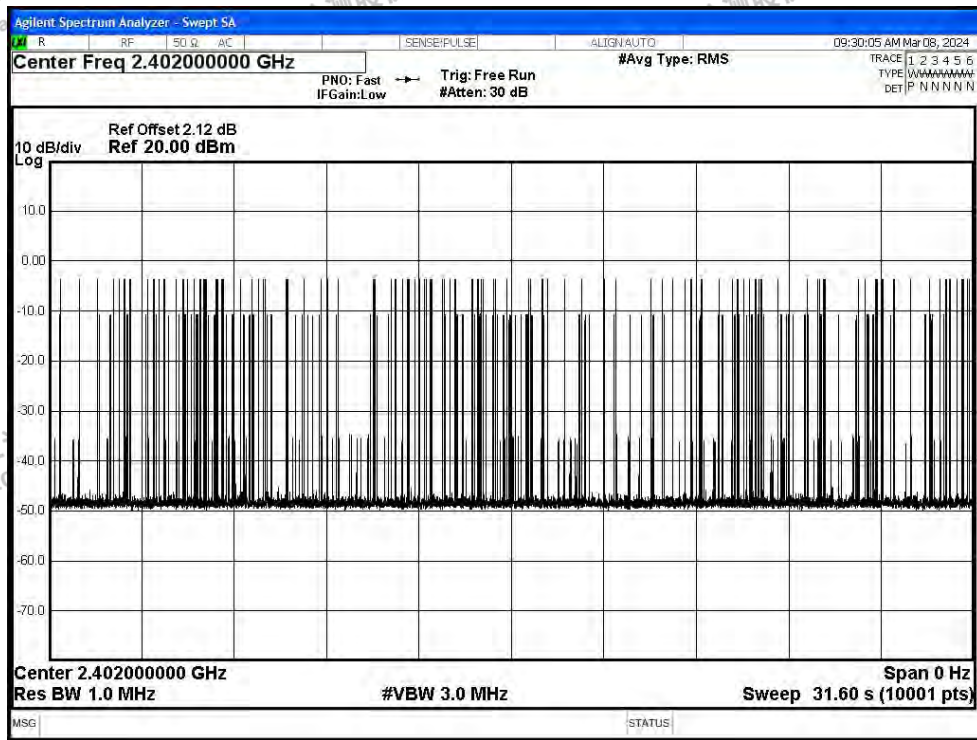


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant2 One Burst

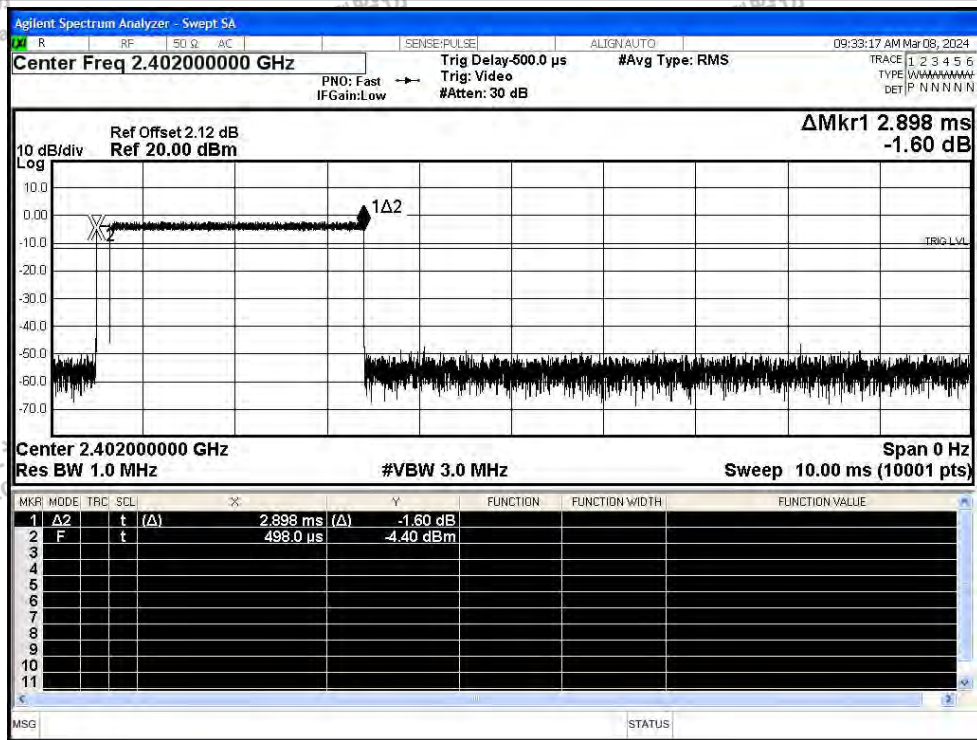


Dwell NVNT 1-DH5 2402MHz Ant2 Accumulated

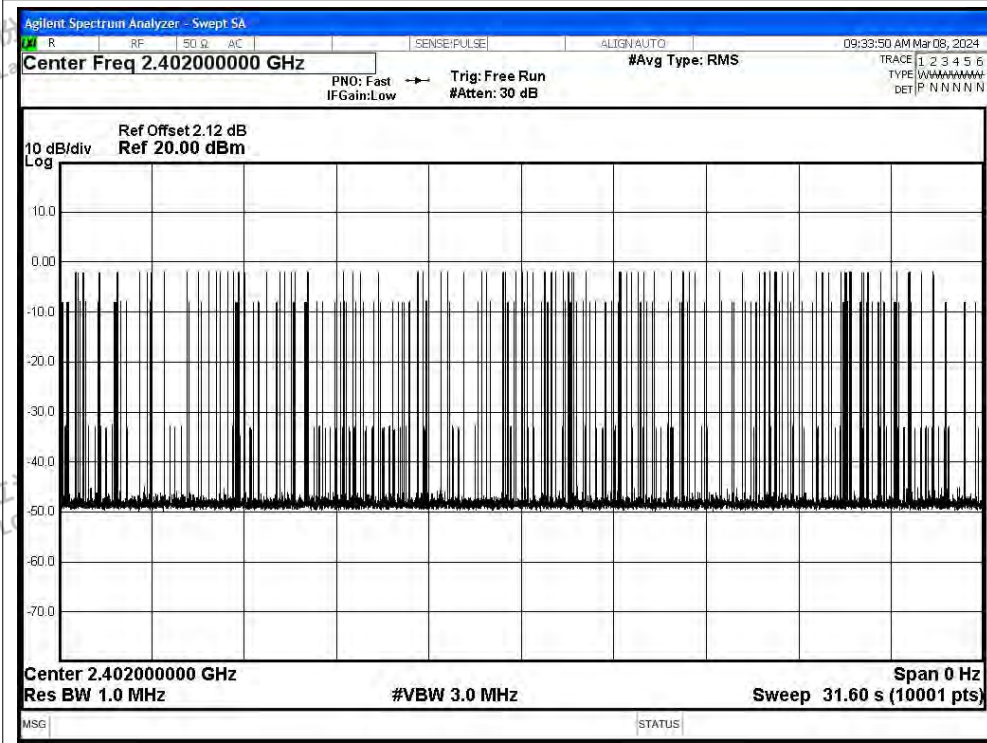




Dwell NVNT 2-DH5 2402MHz Ant2 One Burst

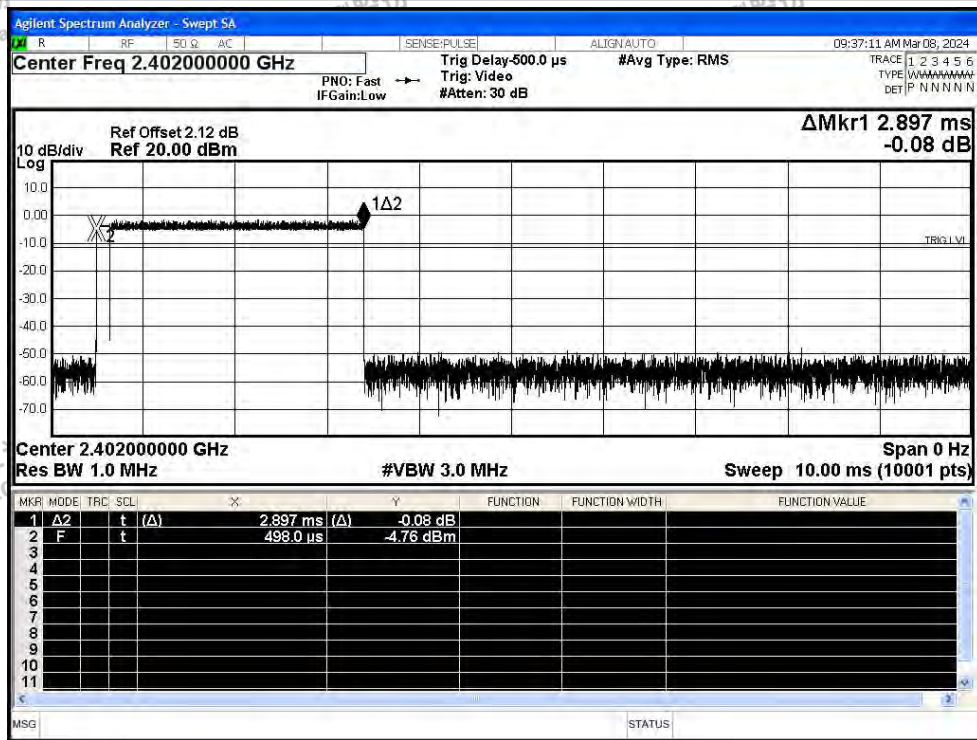


Dwell NVNT 2-DH5 2402MHz Ant2 Accumulated

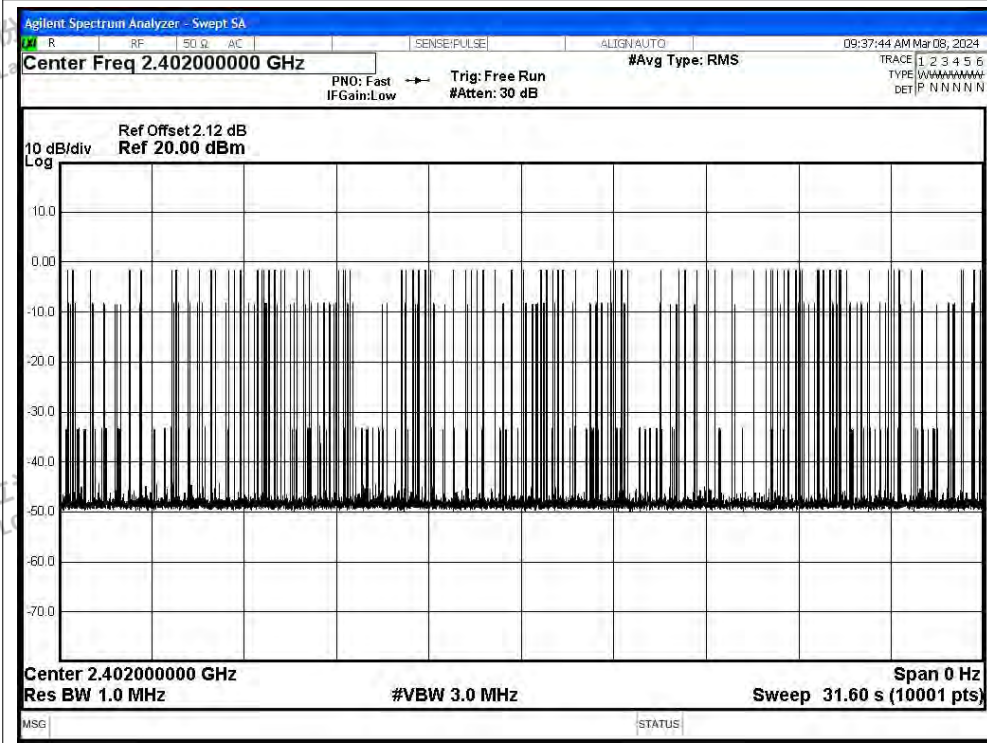




Dwell NVNT 3-DH5 2402MHz Ant2 One Burst



Dwell NVNT 3-DH5 2402MHz Ant2 Accumulated





A.5 Number of Hopping Channel

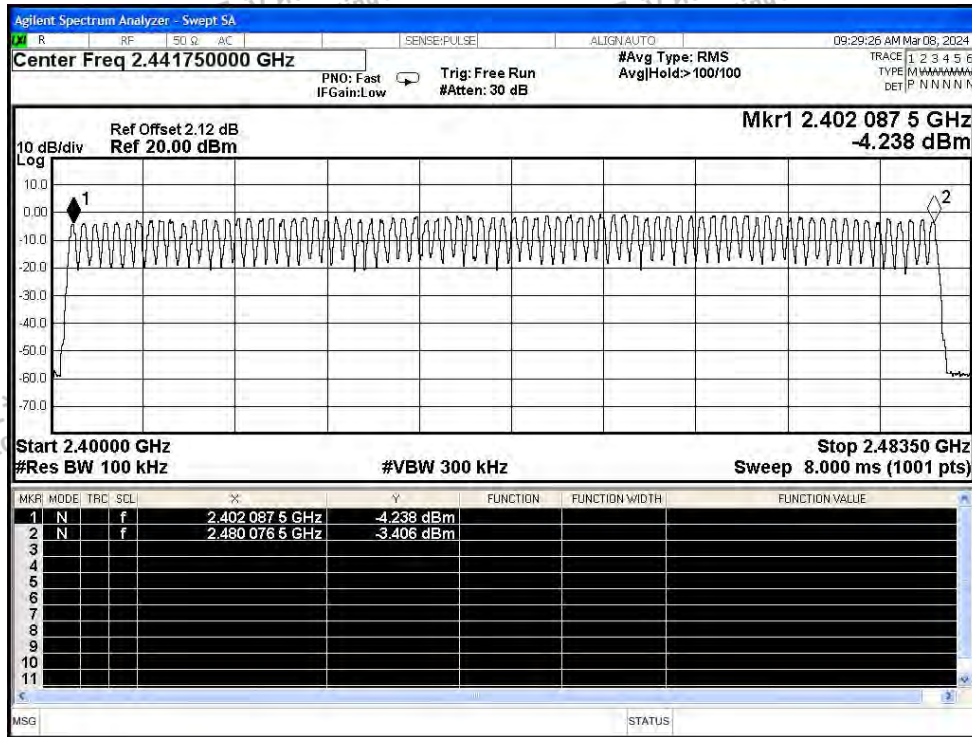
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant2	79	15	Pass
NVNT	2-DH5	Ant2	79	15	Pass
NVNT	3-DH5	Ant2	79	15	Pass



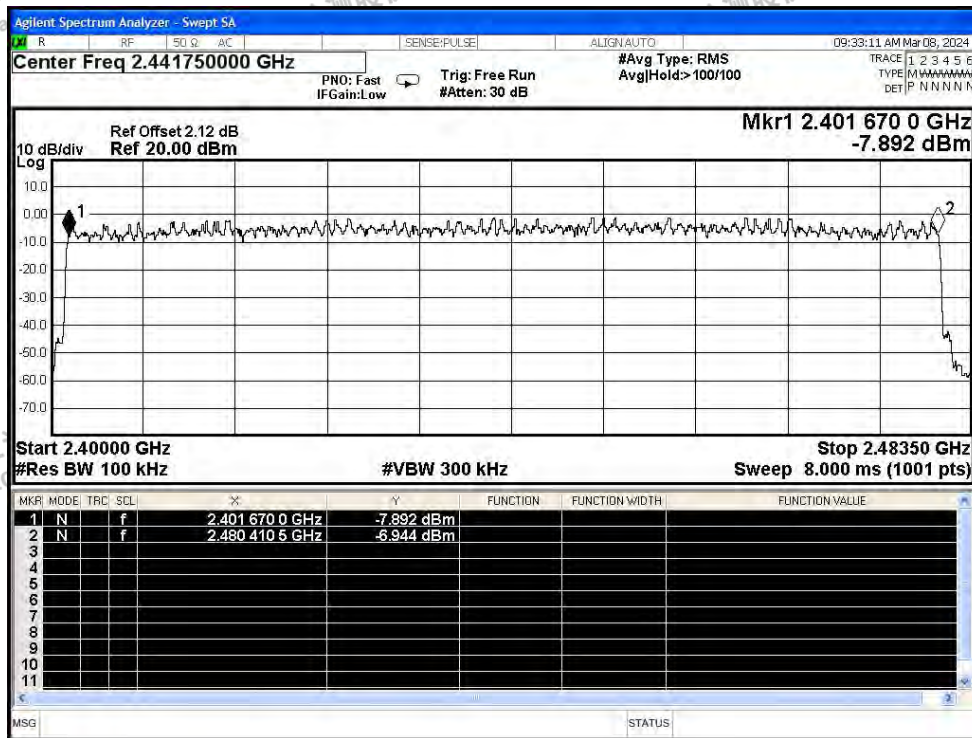


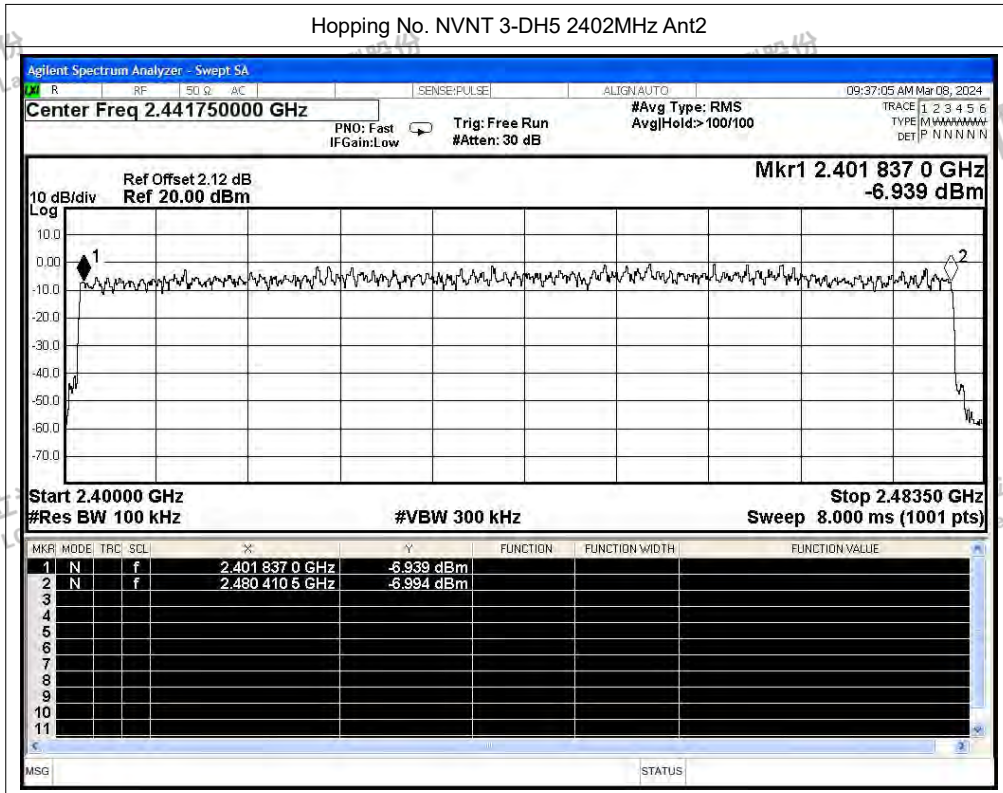
Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant2



Hopping No. NVNT 2-DH5 2402MHz Ant2







A.6 Band Edge

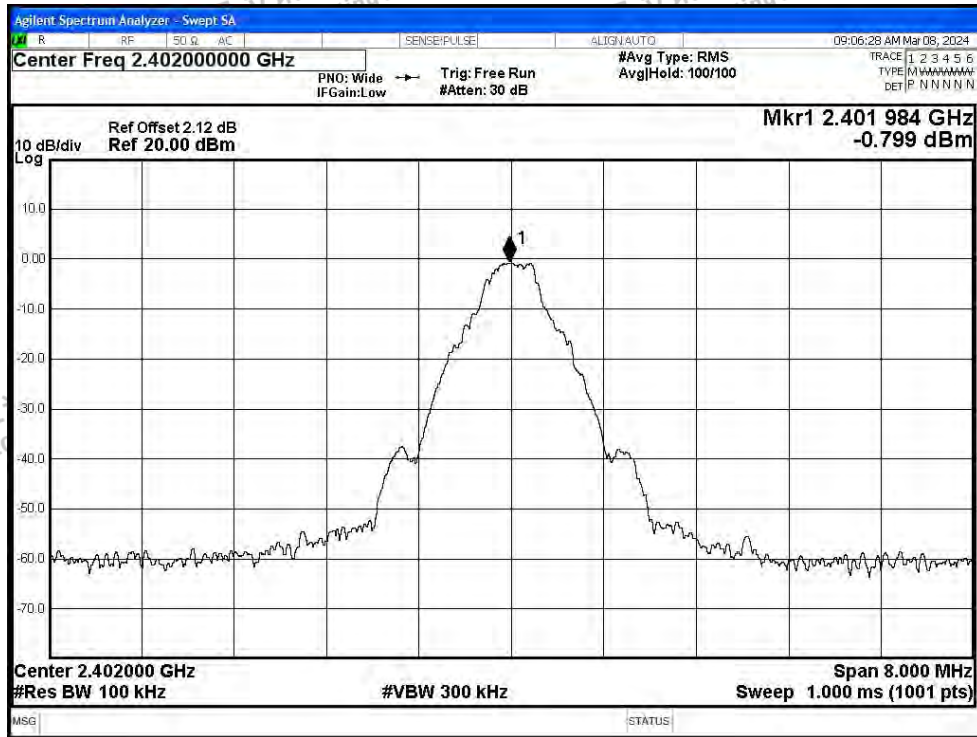
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant2	No-Hopping	-56.05	-20	Pass
NVNT	1-DH5	2480	Ant2	No-Hopping	-56.58	-20	Pass
NVNT	2-DH5	2402	Ant2	No-Hopping	-51.85	-20	Pass
NVNT	2-DH5	2480	Ant2	No-Hopping	-55.13	-20	Pass
NVNT	3-DH5	2402	Ant2	No-Hopping	-54.1	-20	Pass
NVNT	3-DH5	2480	Ant2	No-Hopping	-54.79	-20	Pass



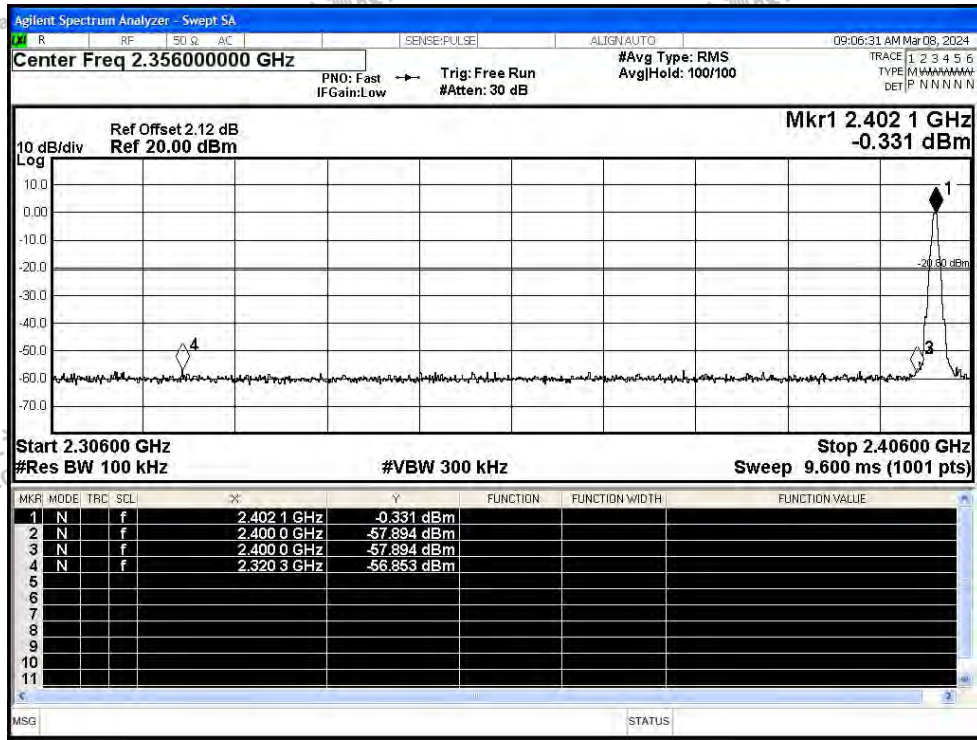


Test Graphs

Band Edge NVNT 1-DH5 2402MHz Ant2 No-Hopping Ref

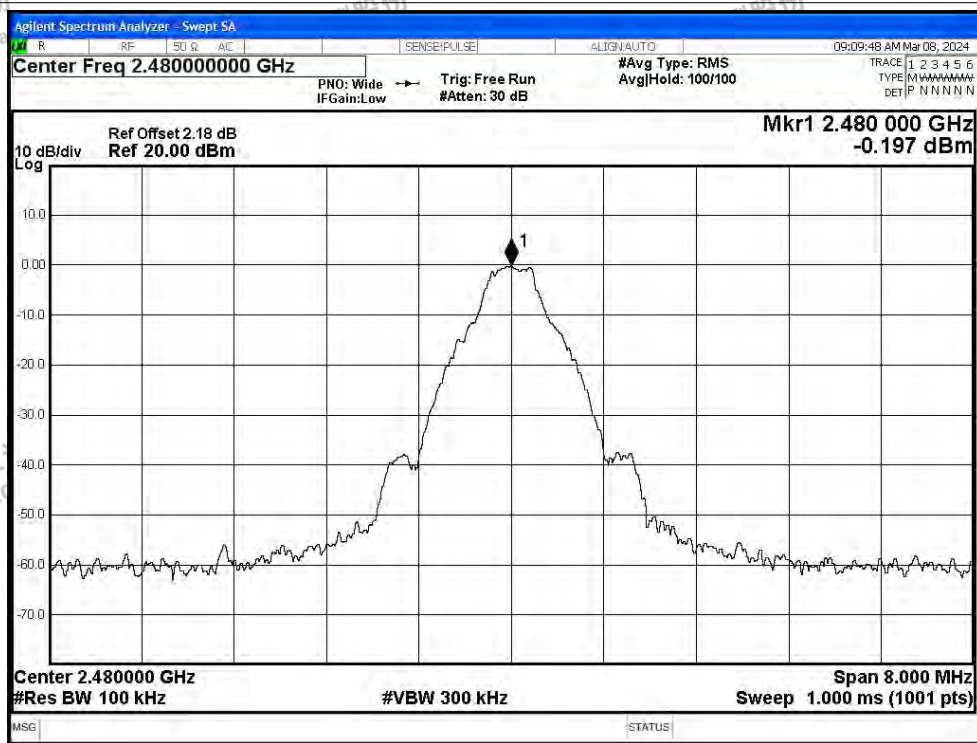


Band Edge NVNT 1-DH5 2402MHz Ant2 No-Hopping Emission

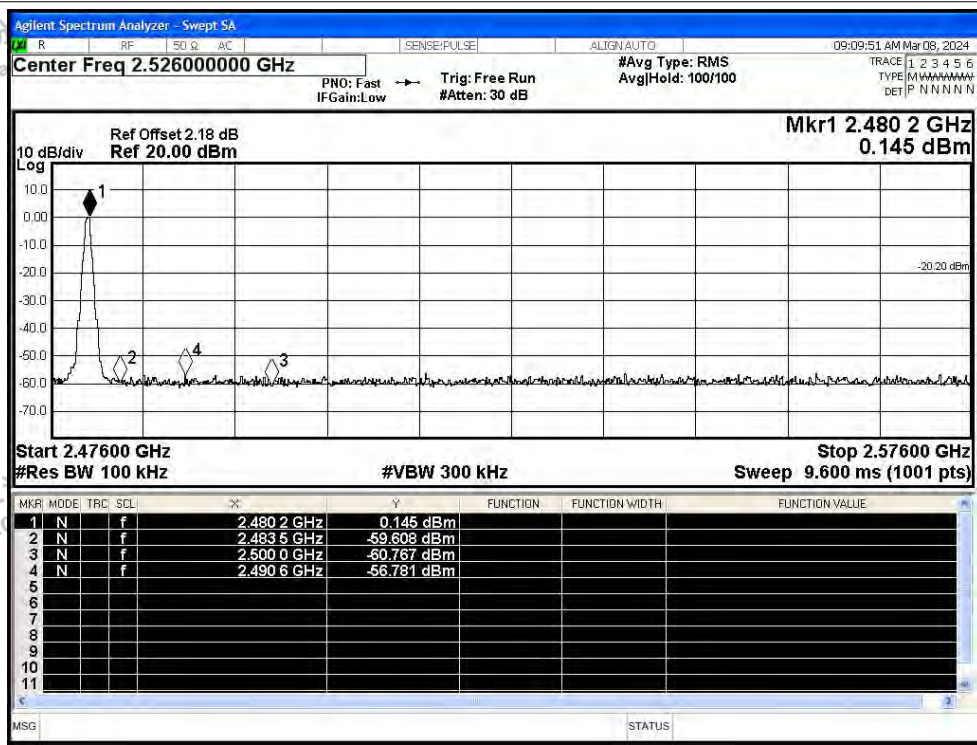




Band Edge NVNT 1-DH5 2480MHz Ant2 No-Hopping Ref



Band Edge NVNT 1-DH5 2480MHz Ant2 No-Hopping Emission

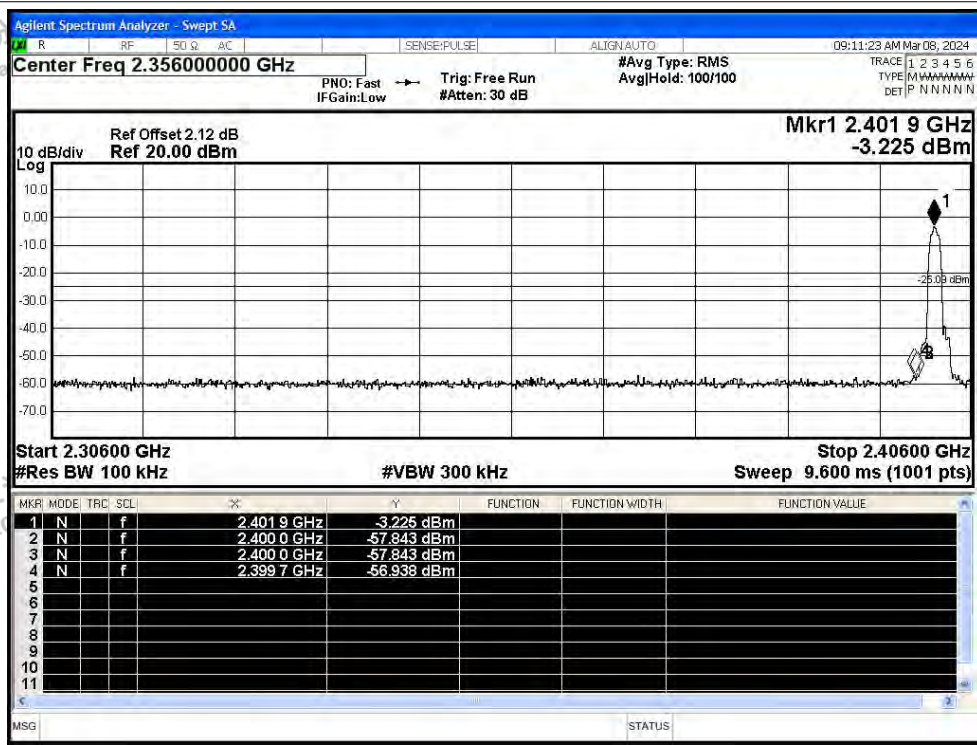




Band Edge NVNT 2-DH5 2402MHz Ant2 No-Hopping Ref

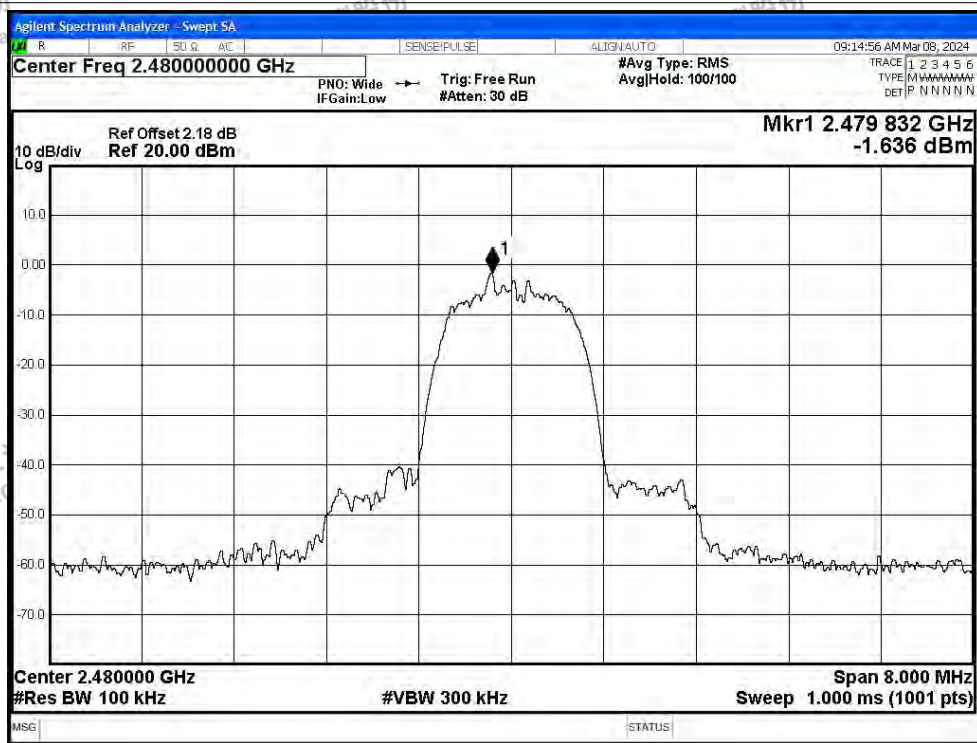


Band Edge NVNT 2-DH5 2402MHz Ant2 No-Hopping Emission

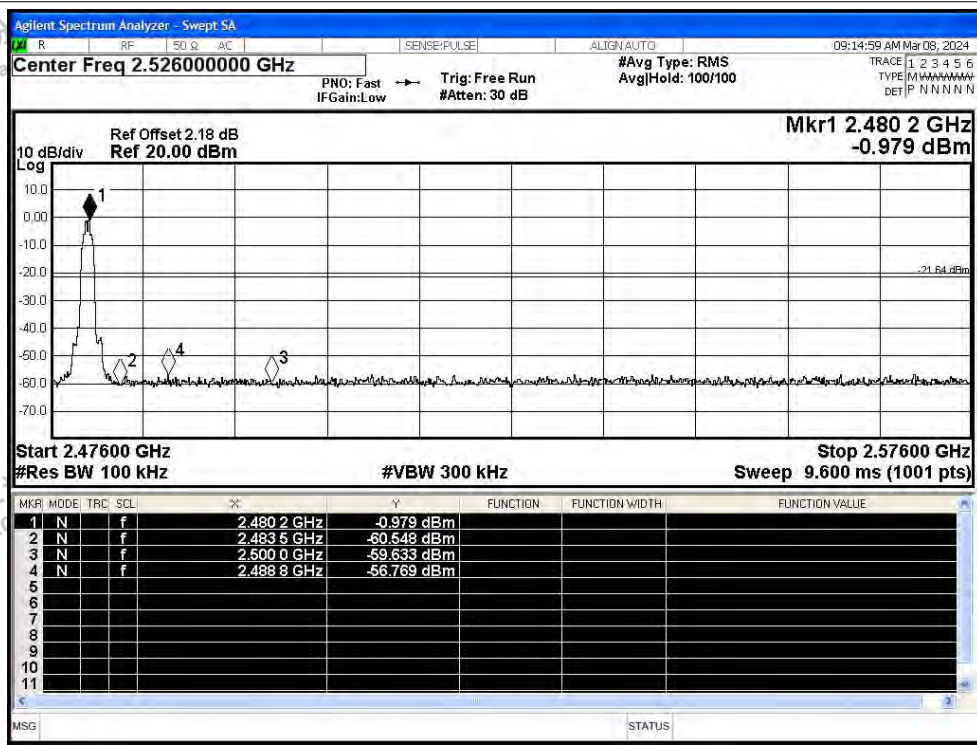




Band Edge NVNT 2-DH5 2480MHz Ant2 No-Hopping Ref

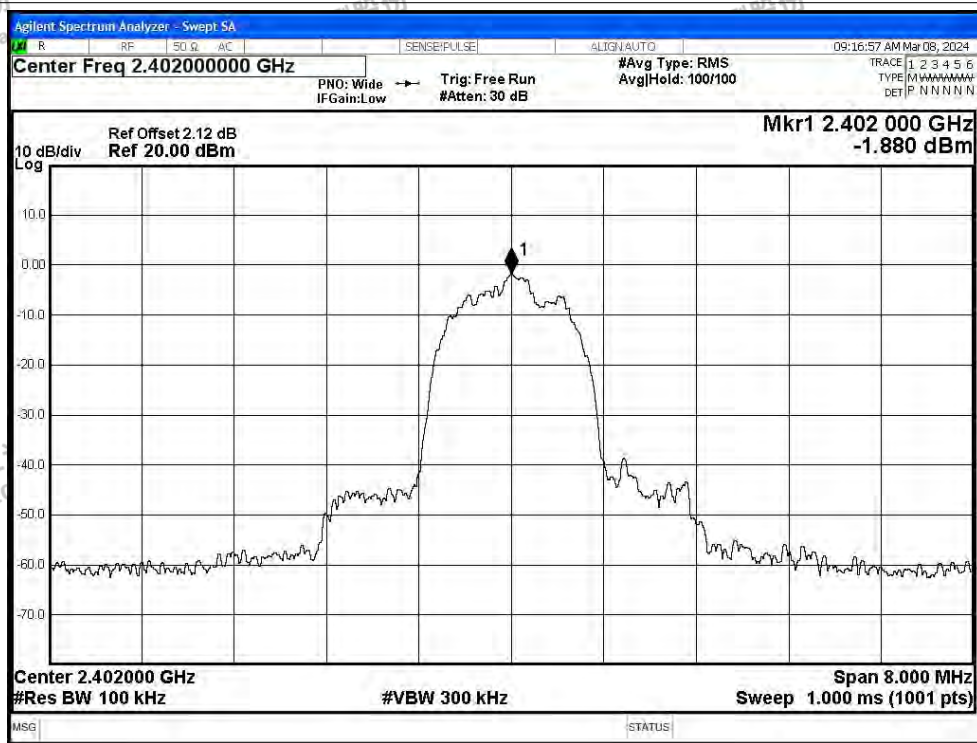


Band Edge NVNT 2-DH5 2480MHz Ant2 No-Hopping Emission

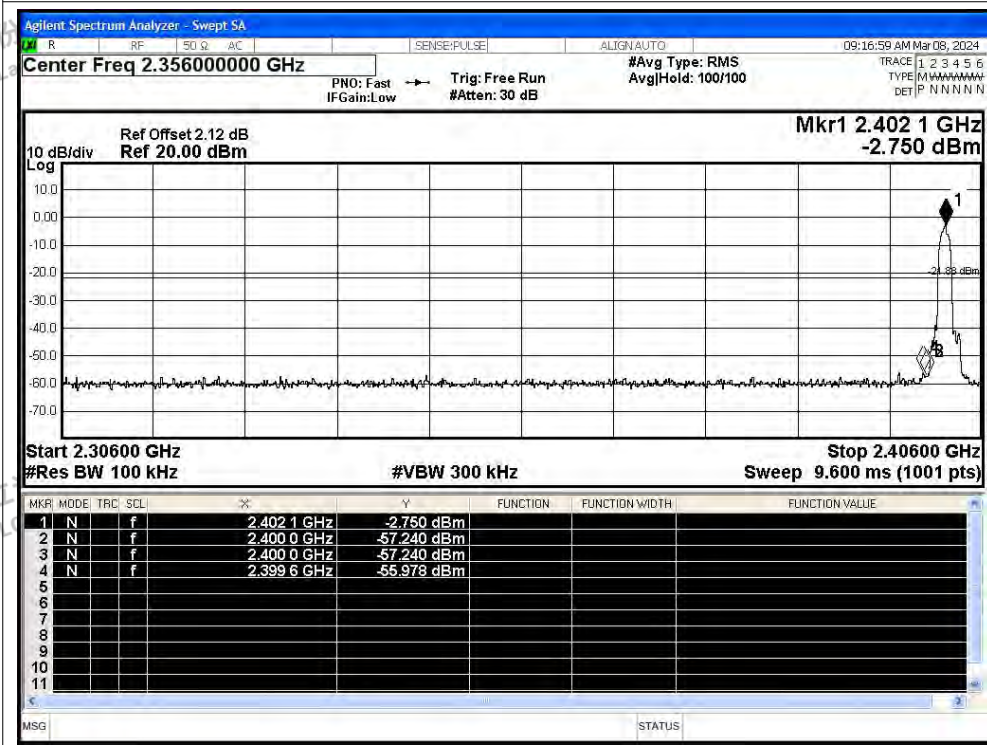




Band Edge NVNT 3-DH5 2402MHz Ant2 No-Hopping Ref



Band Edge NVNT 3-DH5 2402MHz Ant2 No-Hopping Emission

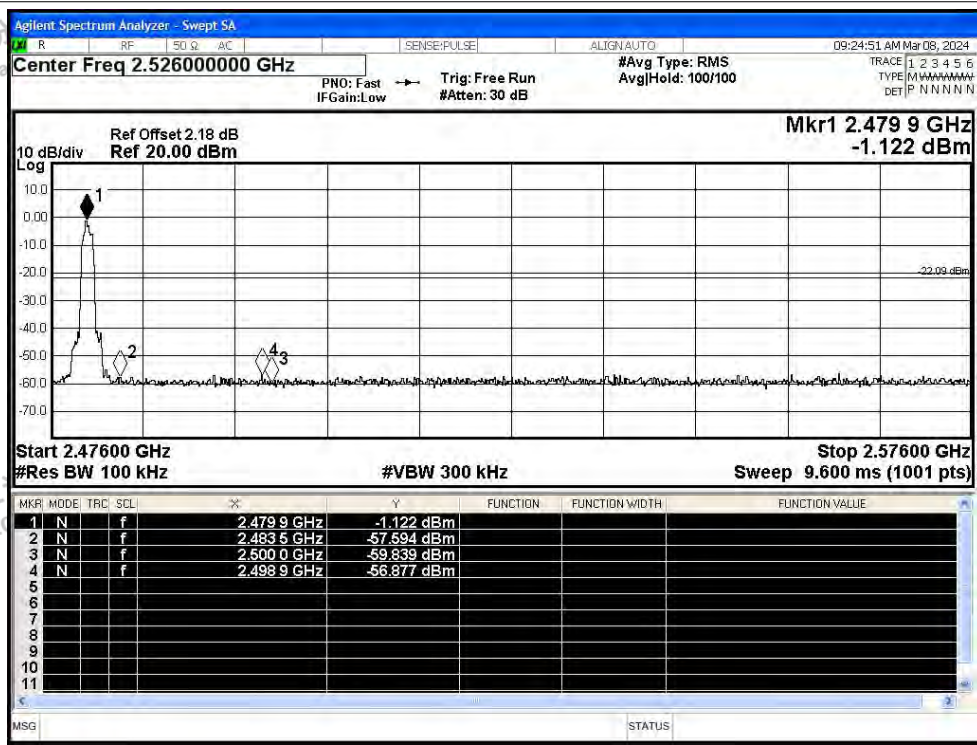




Band Edge NVNT 3-DH5 2480MHz Ant2 No-Hopping Ref



Band Edge NVNT 3-DH5 2480MHz Ant2 No-Hopping Emission





(Hopping)

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant2	Hopping	-52.33	-20	Pass
NVNT	1-DH5	2480	Ant2	Hopping	-53.82	-20	Pass
NVNT	2-DH5	2402	Ant2	Hopping	-52.58	-20	Pass
NVNT	2-DH5	2480	Ant2	Hopping	-53.39	-20	Pass
NVNT	3-DH5	2402	Ant2	Hopping	-52.12	-20	Pass
NVNT	3-DH5	2480	Ant2	Hopping	-53.35	-20	Pass



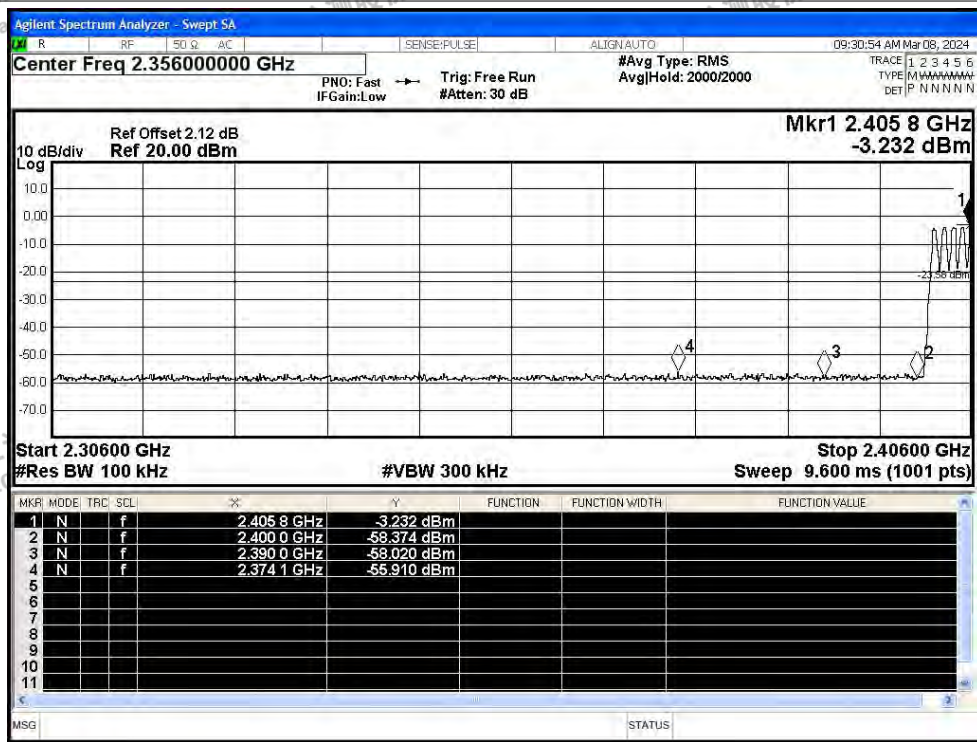


Test Graphs

Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant2 Hopping Ref

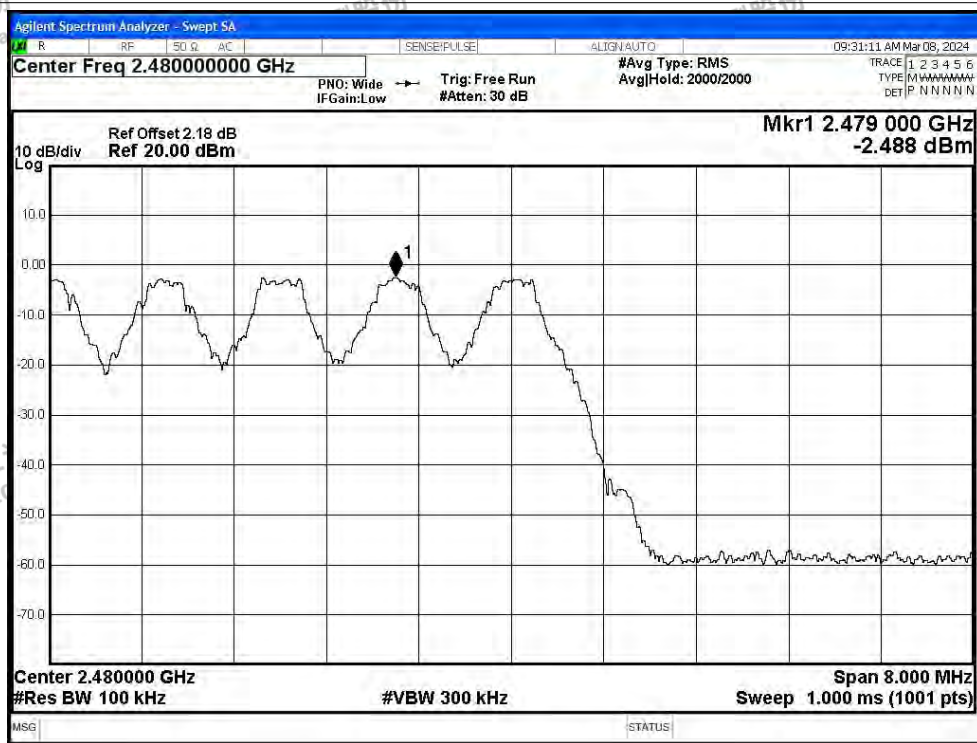


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant2 Hopping Emission

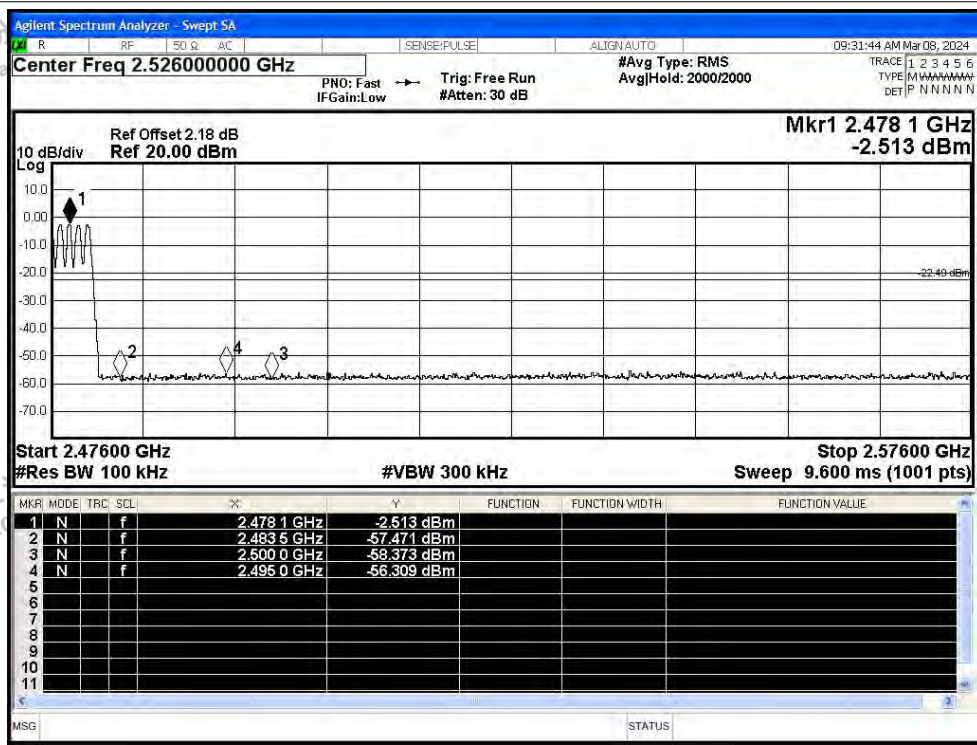




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant2 Hopping Ref



Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant2 Hopping Emission

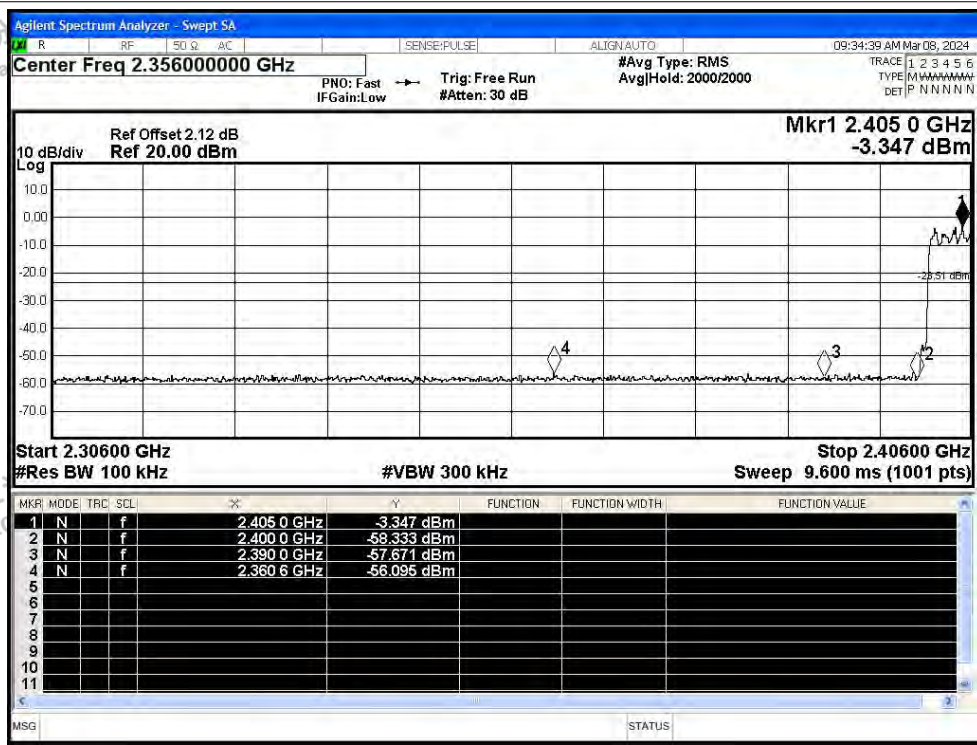




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant2 Hopping Ref

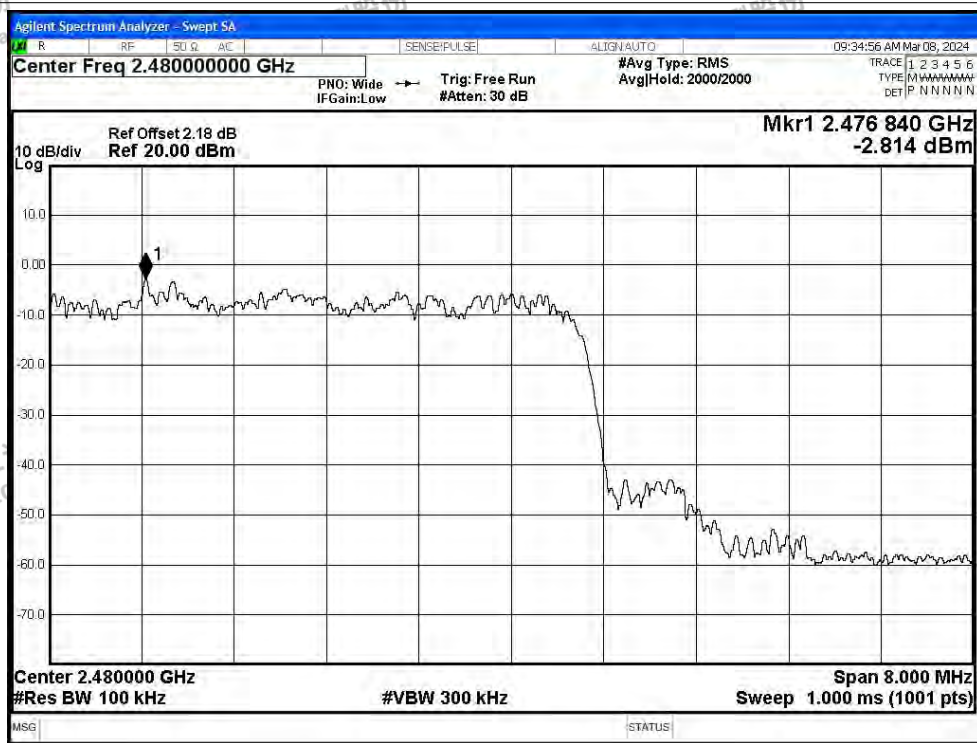


Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant2 Hopping Emission

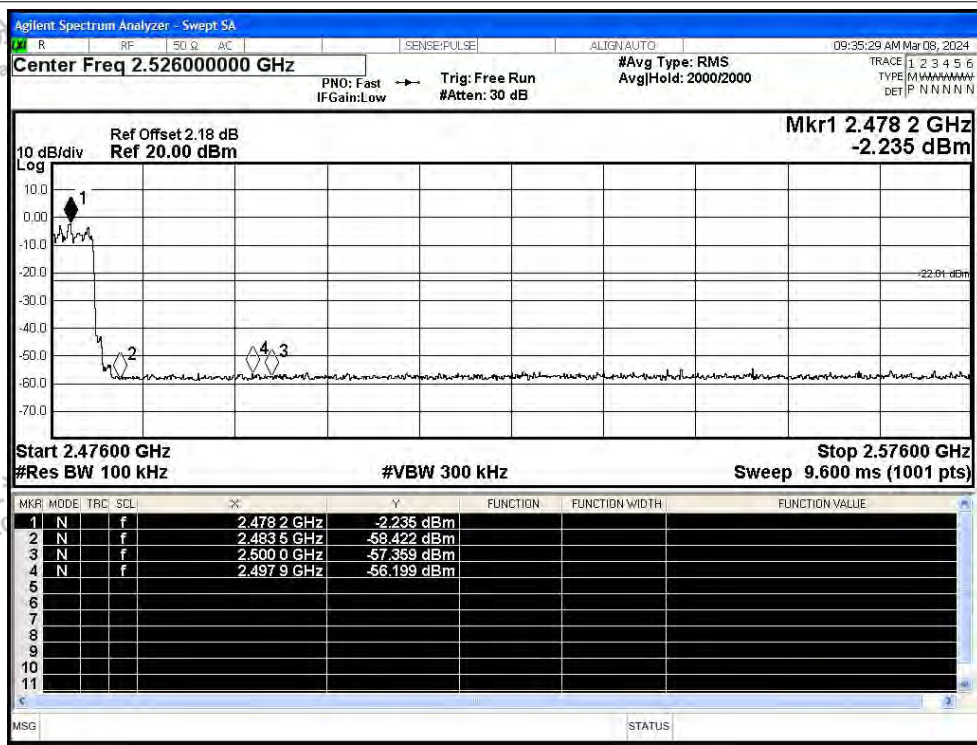




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant2 Hopping Ref



Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant2 Hopping Emission

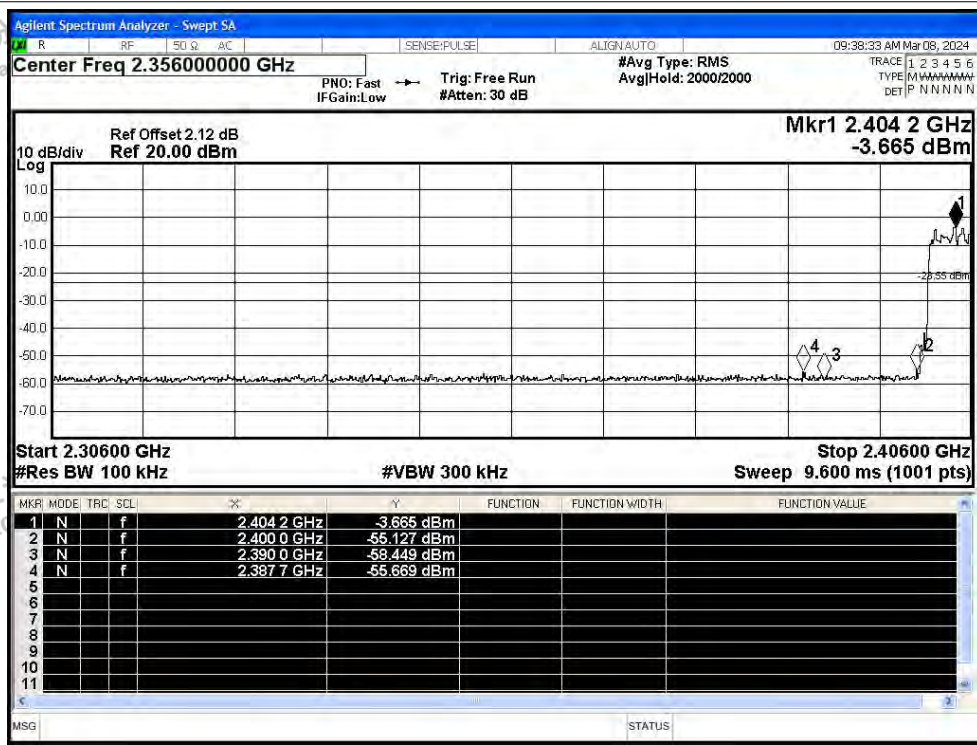




Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant2 Hopping Ref

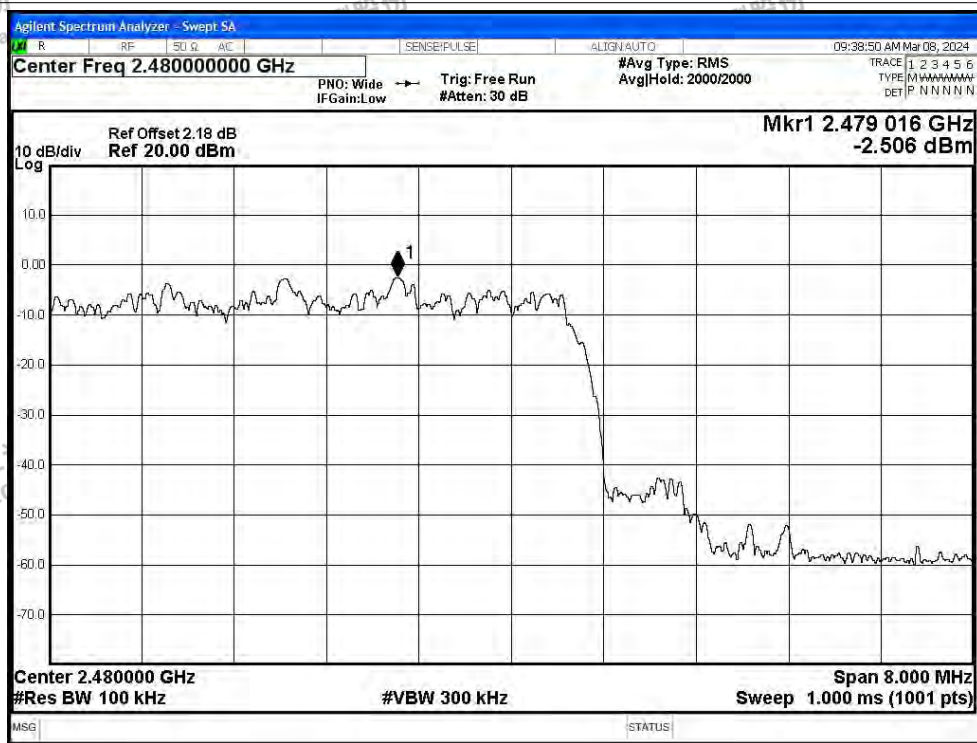


Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant2 Hopping Emission

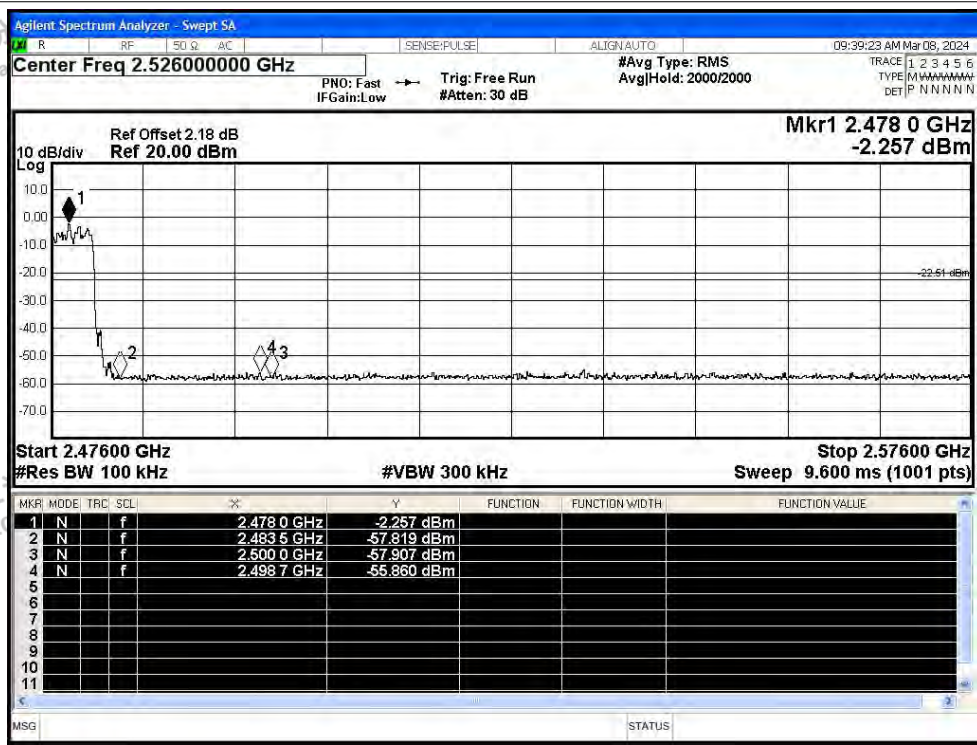




Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant2 Hopping Ref



Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant2 Hopping Emission





A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant2	-54.71	-20	Pass
NVNT	1-DH5	2441	Ant2	-55.3	-20	Pass
NVNT	1-DH5	2480	Ant2	-54.97	-20	Pass
NVNT	2-DH5	2402	Ant2	-53.7	-20	Pass
NVNT	2-DH5	2441	Ant2	-53.98	-20	Pass
NVNT	2-DH5	2480	Ant2	-52.67	-20	Pass
NVNT	3-DH5	2402	Ant2	-54.31	-20	Pass
NVNT	3-DH5	2441	Ant2	-52.58	-20	Pass
NVNT	3-DH5	2480	Ant2	-54.73	-20	Pass



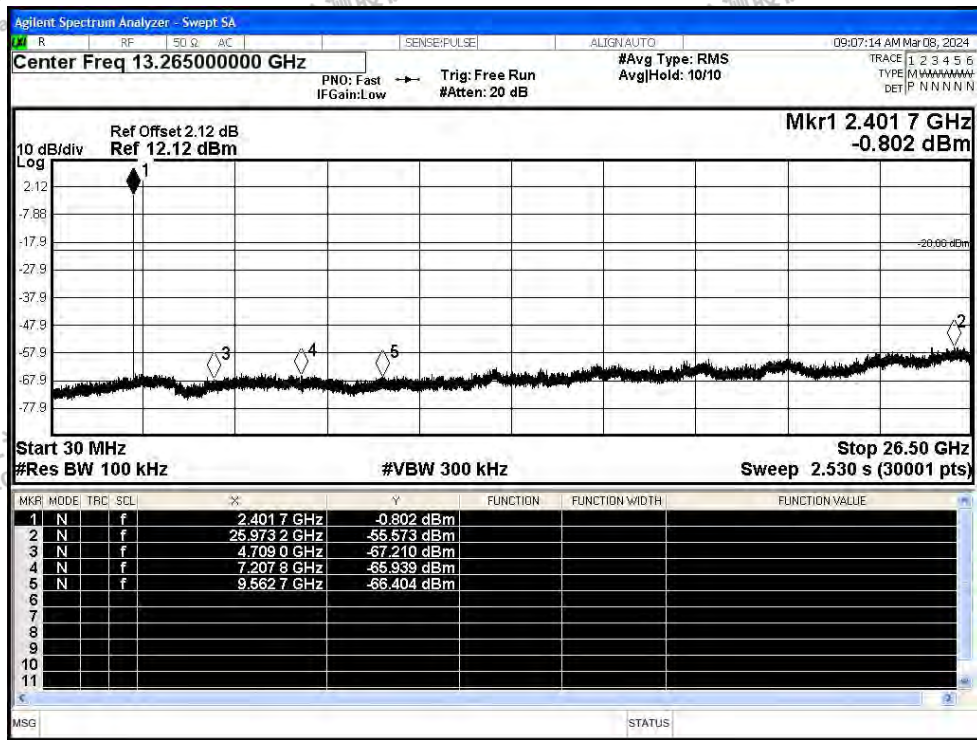


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant2 Ref



Tx. Spurious NVNT 1-DH5 2402MHz Ant2 Emission

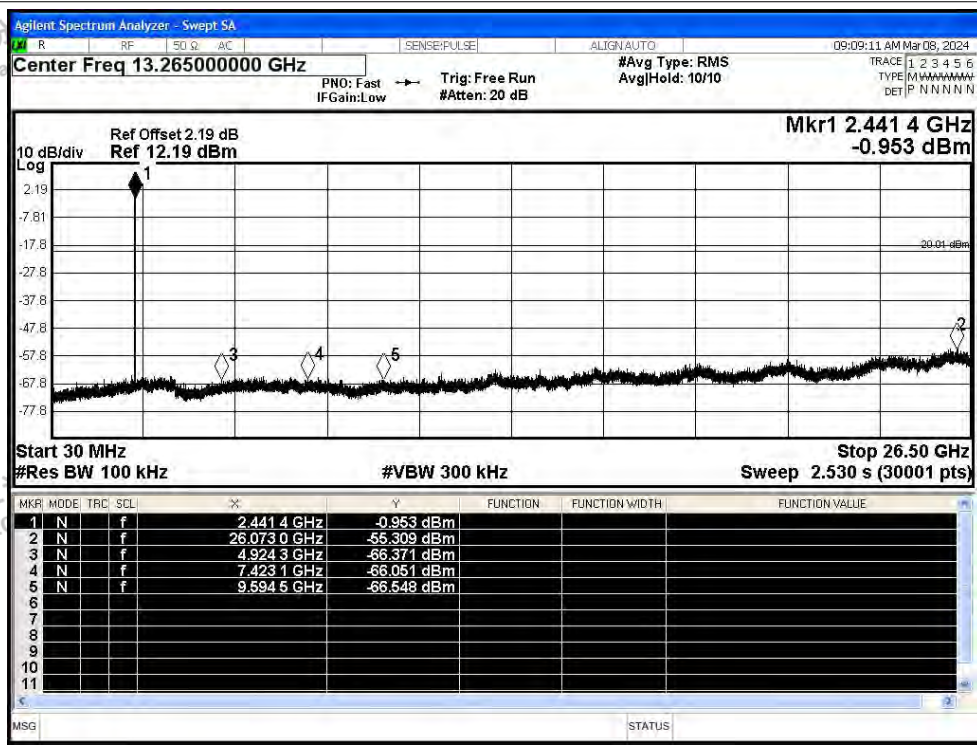




Tx. Spurious NVNT 1-DH5 2441MHz Ant2 Ref

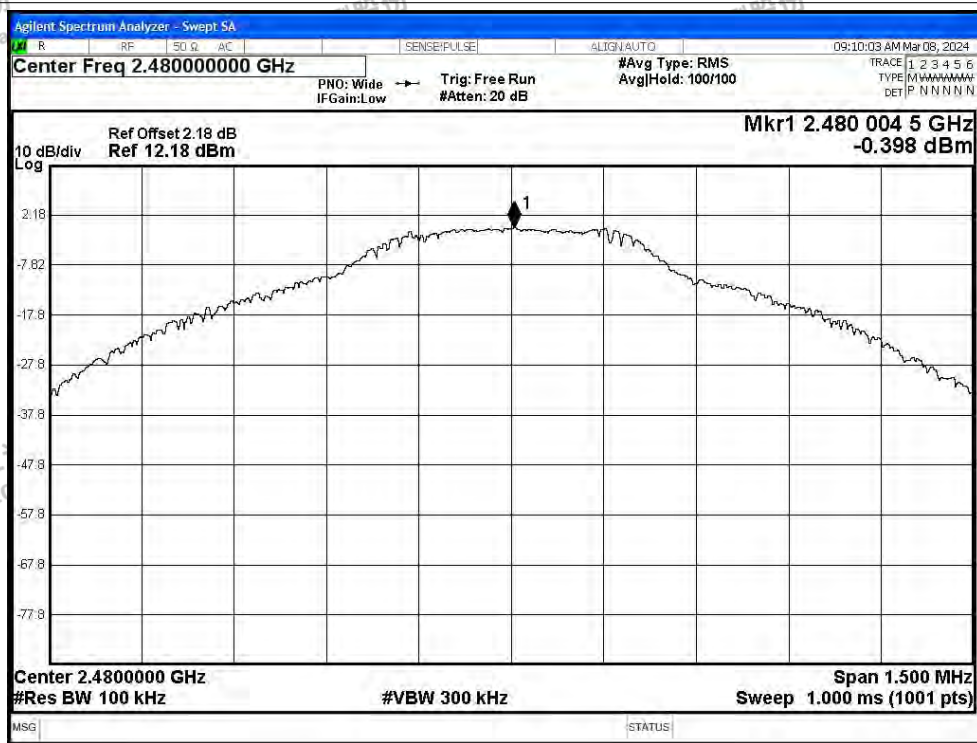


Tx. Spurious NVNT 1-DH5 2441MHz Ant2 Emission

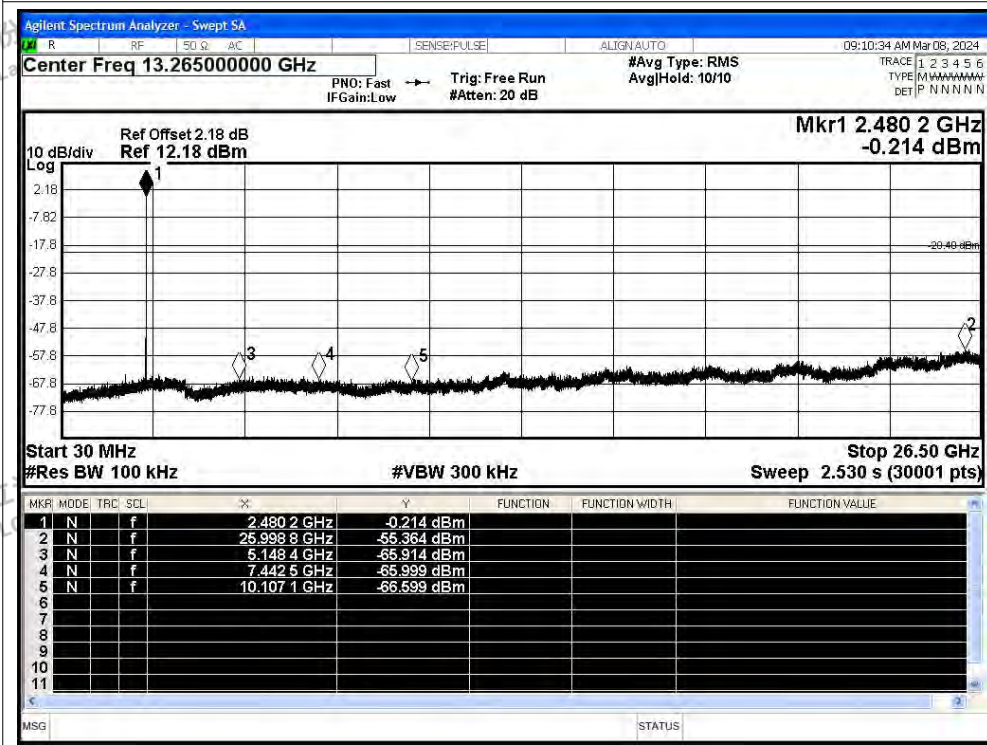




Tx. Spurious NVNT 1-DH5 2480MHz Ant2 Ref

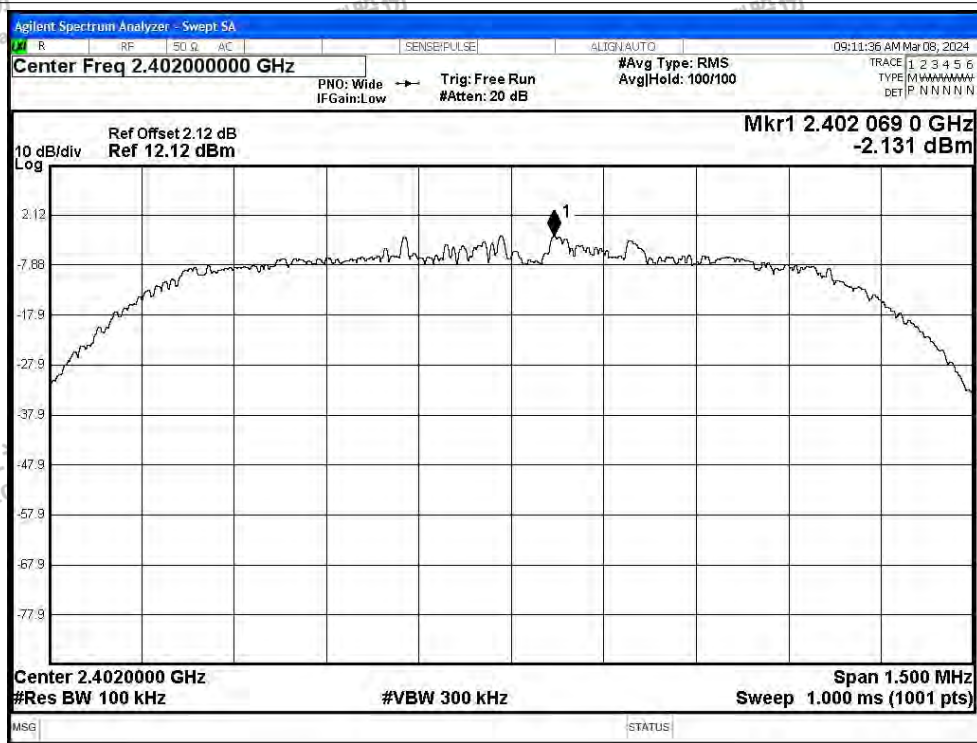


Tx. Spurious NVNT 1-DH5 2480MHz Ant2 Emission

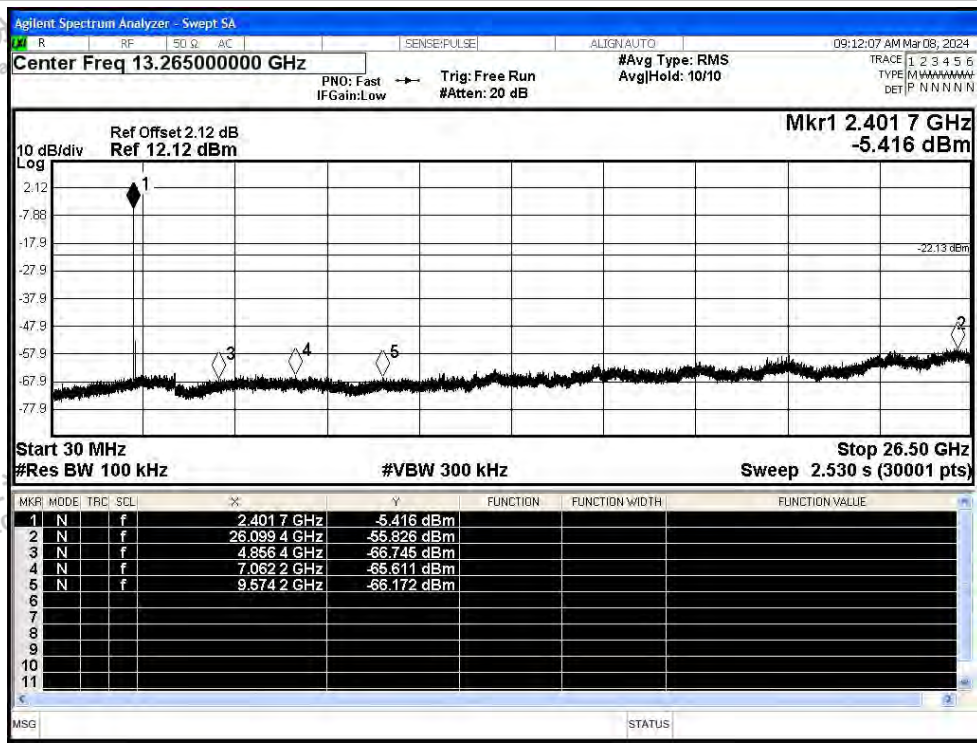




Tx. Spurious NVNT 2-DH5 2402MHz Ant2 Ref

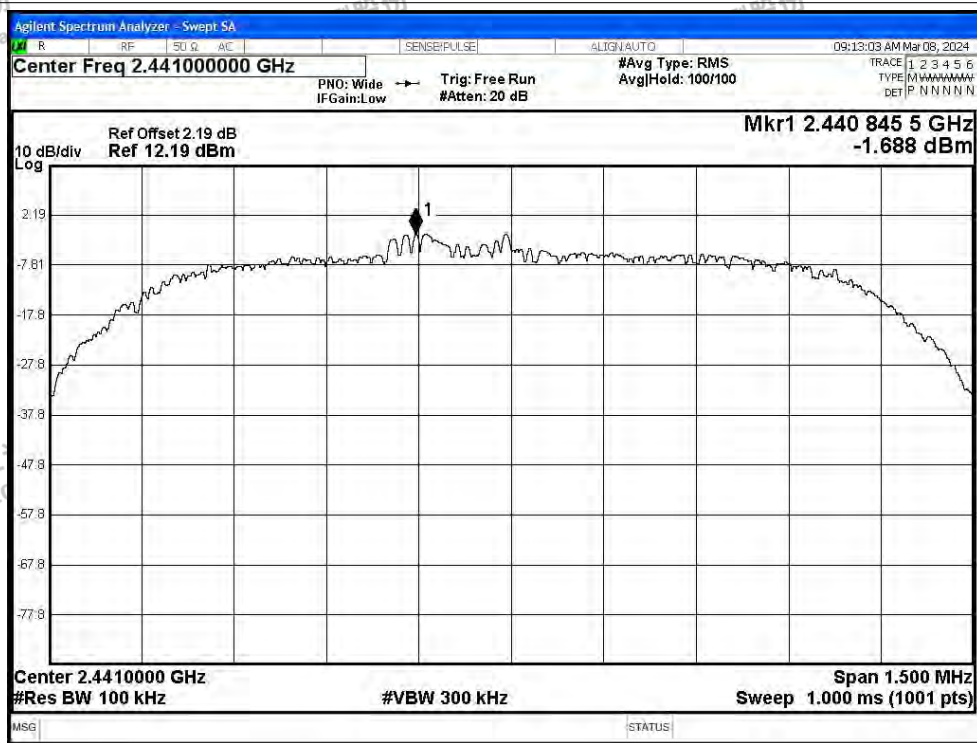


Tx. Spurious NVNT 2-DH5 2402MHz Ant2 Emission

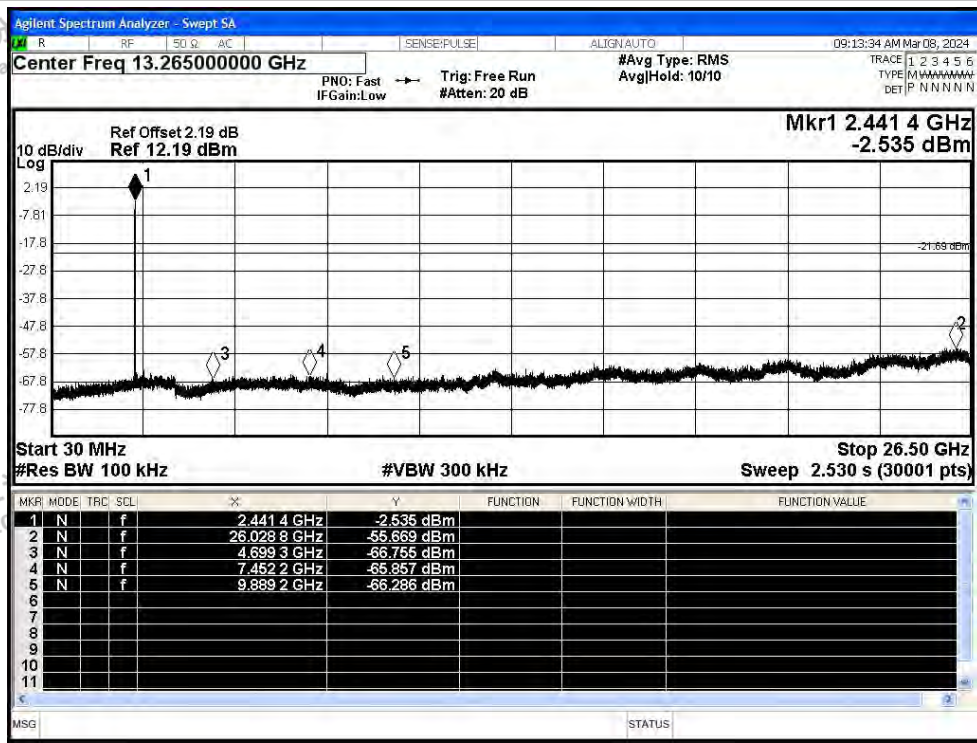




Tx. Spurious NVNT 2-DH5 2441MHz Ant2 Ref

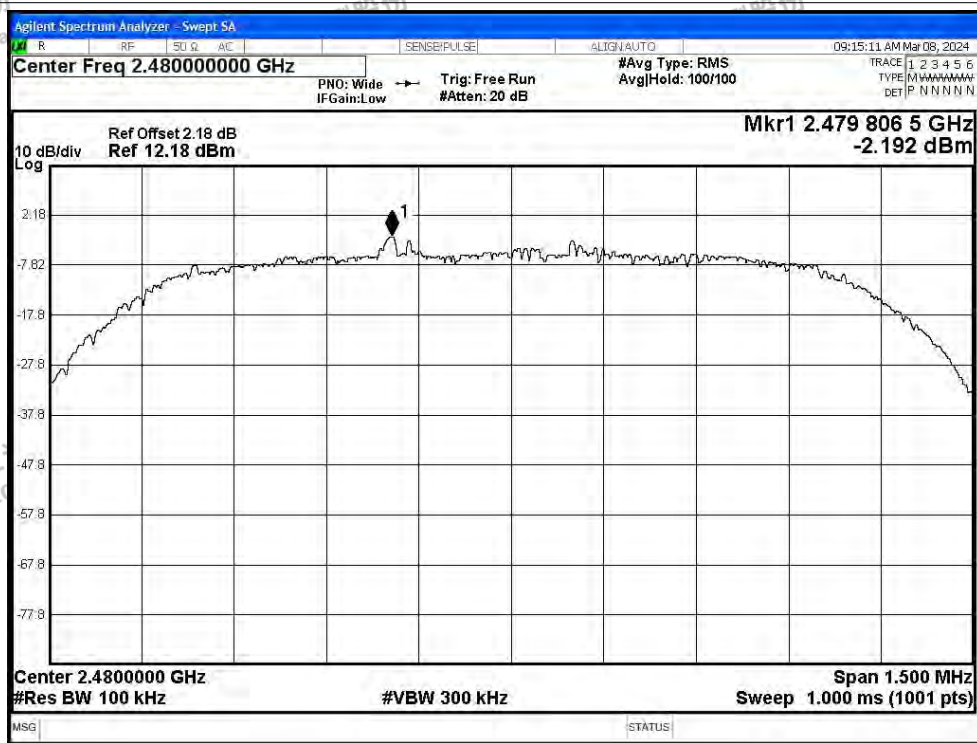


Tx. Spurious NVNT 2-DH5 2441MHz Ant2 Emission

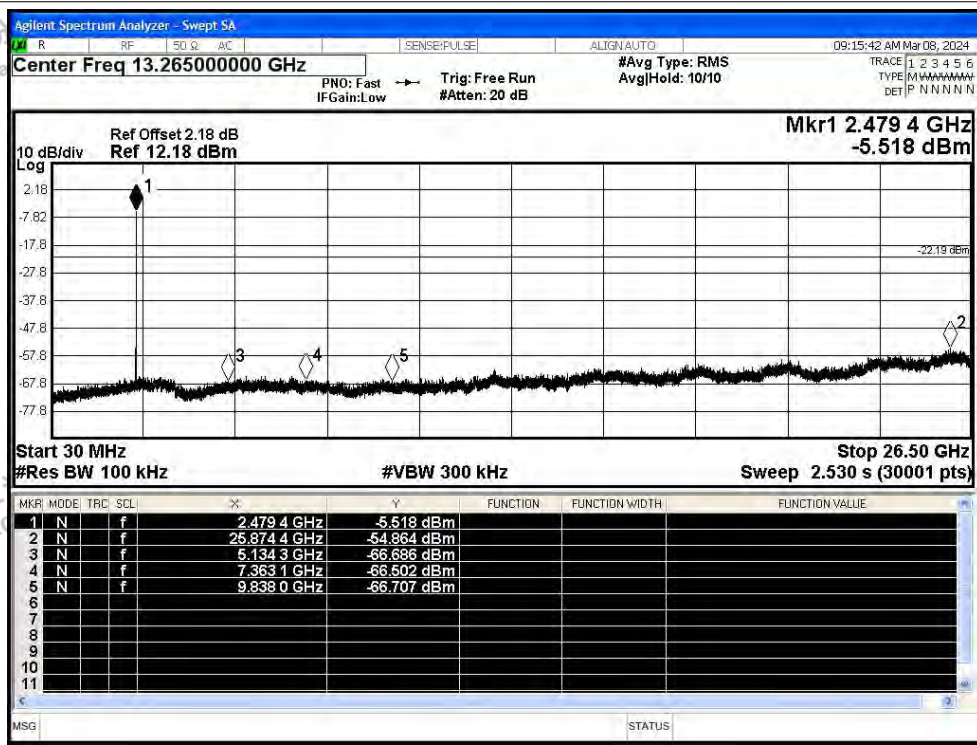




Tx. Spurious NVNT 2-DH5 2480MHz Ant2 Ref

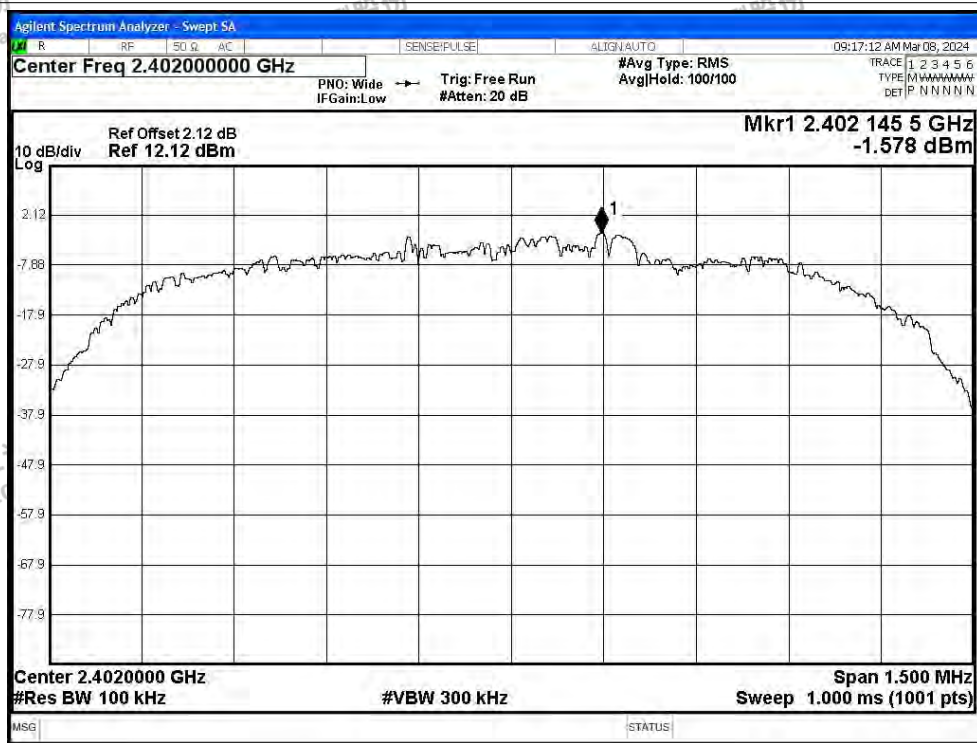


Tx. Spurious NVNT 2-DH5 2480MHz Ant2 Emission

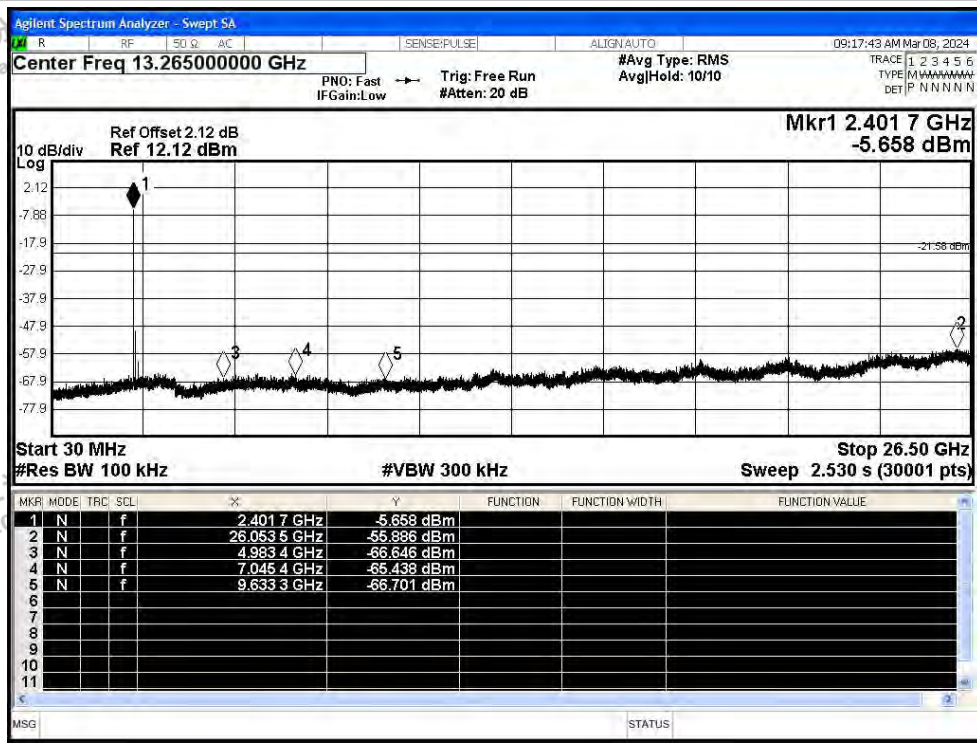




Tx. Spurious NVNT 3-DH5 2402MHz Ant2 Ref

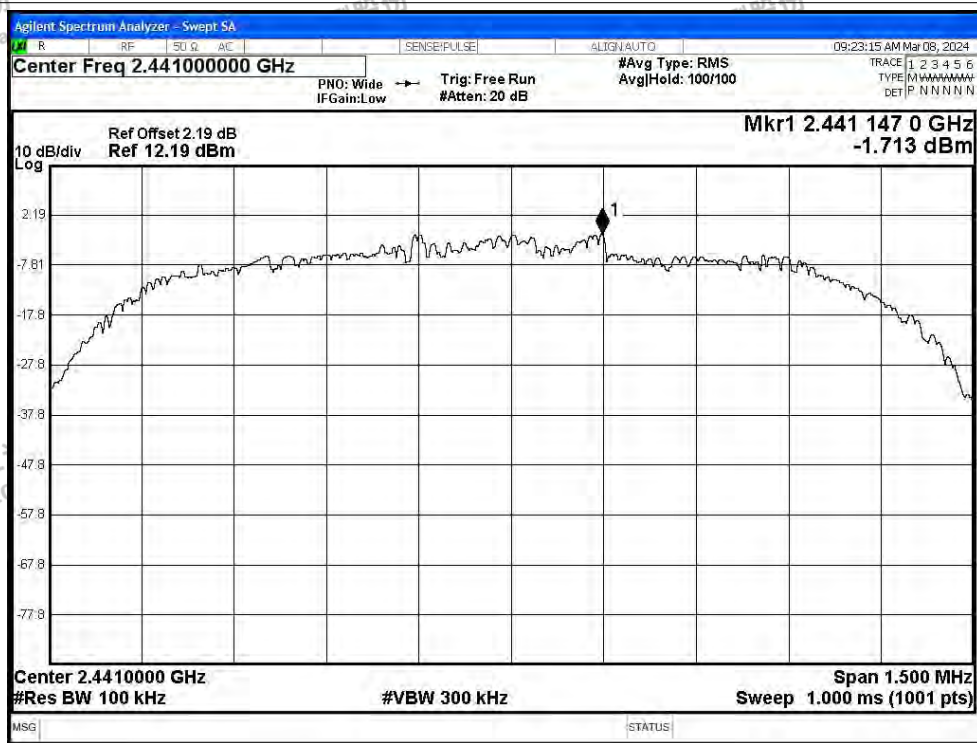


Tx. Spurious NVNT 3-DH5 2402MHz Ant2 Emission

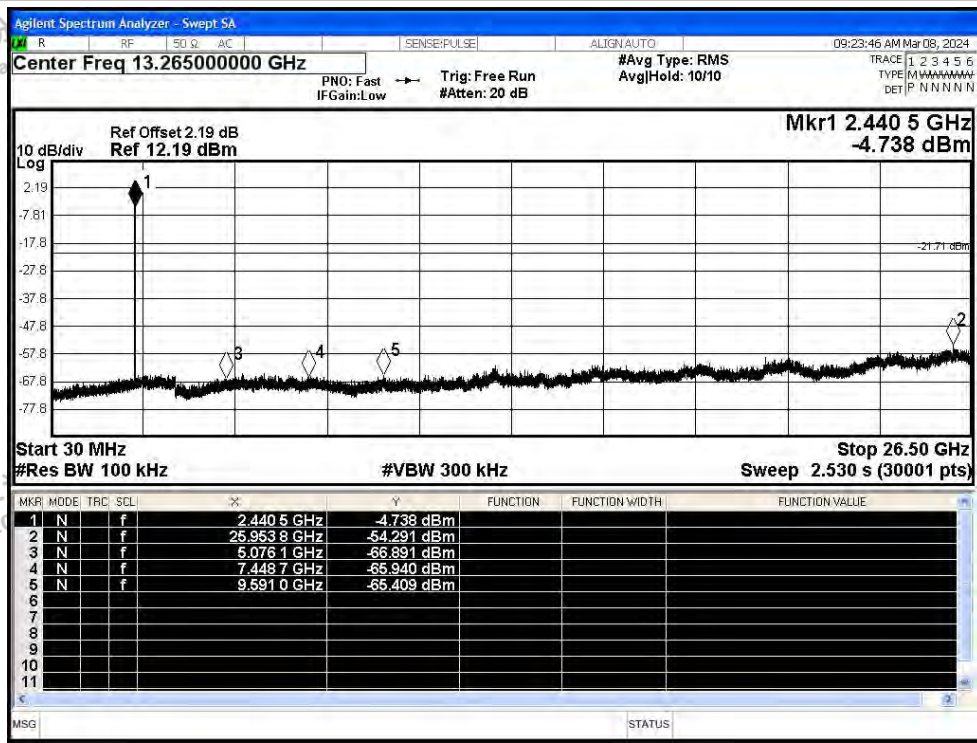




Tx. Spurious NVNT 3-DH5 2441MHz Ant2 Ref

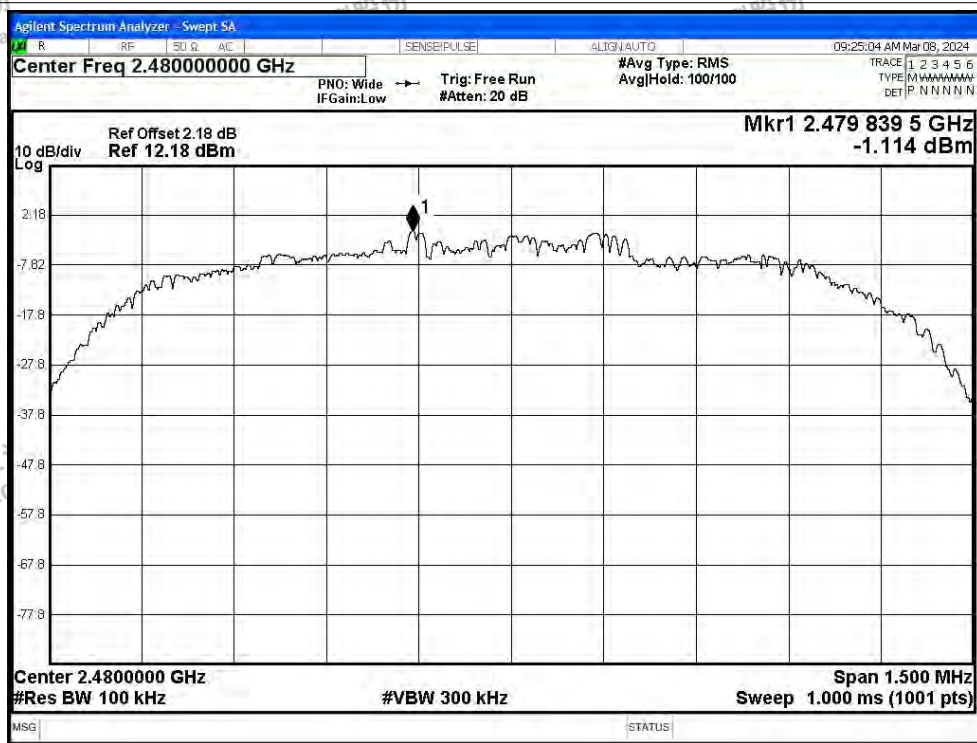


Tx. Spurious NVNT 3-DH5 2441MHz Ant2 Emission

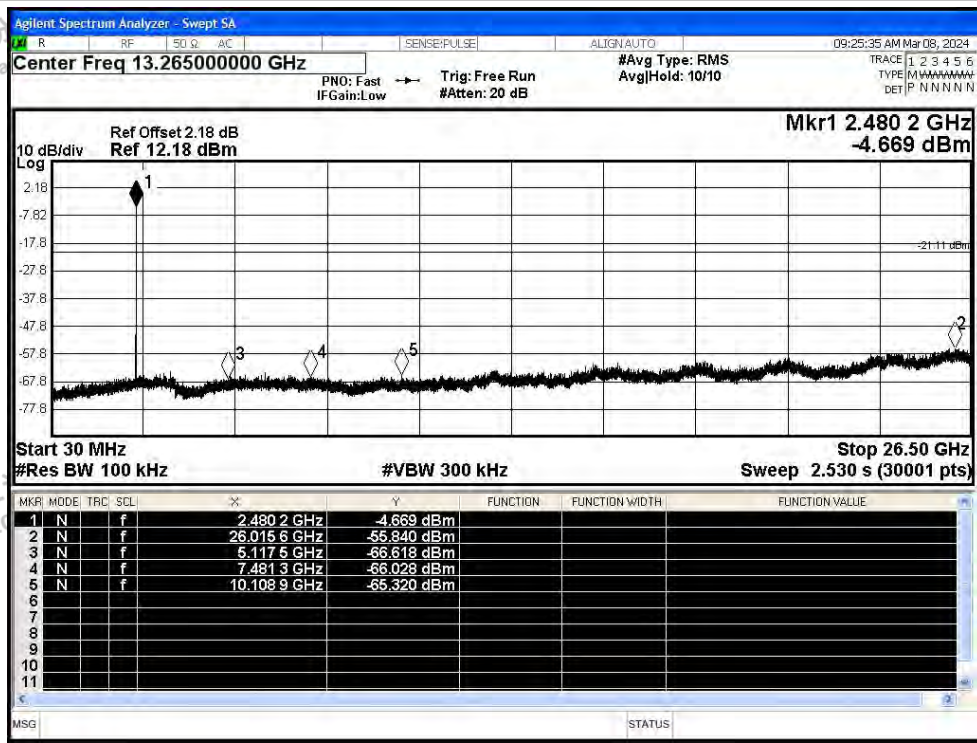




Tx. Spurious NVNT 3-DH5 2480MHz Ant2 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant2 Emission





A.8 Duty Cycle

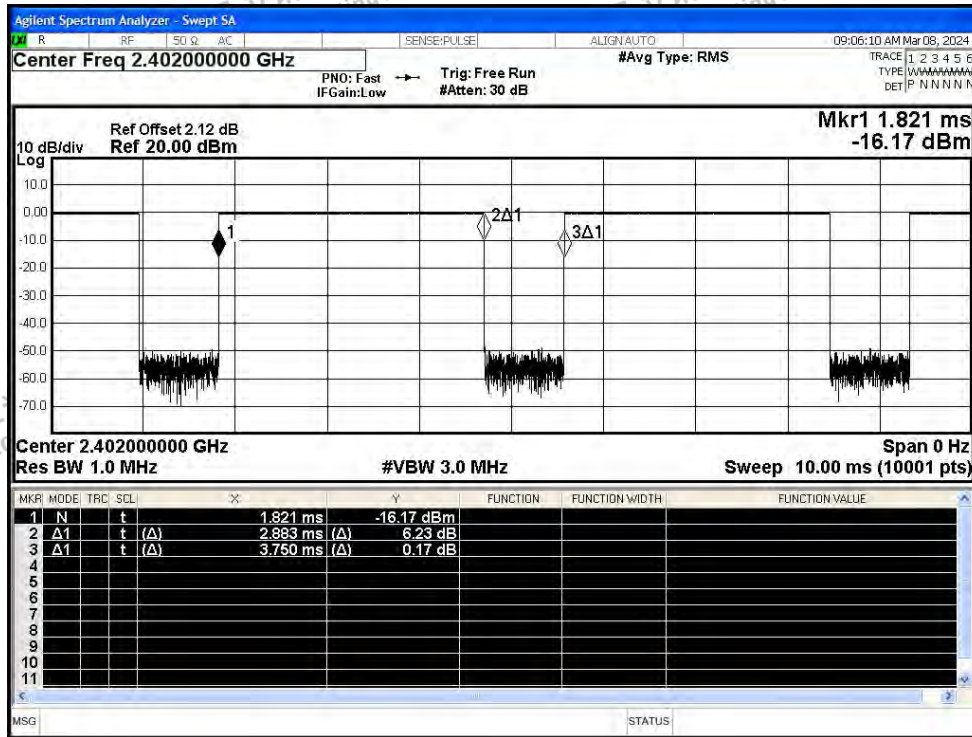
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant2	76.88	1.14	0.35
NVNT	1-DH5	2441	Ant2	76.88	1.14	0.35
NVNT	1-DH5	2480	Ant2	76.88	1.14	0.35
NVNT	2-DH5	2402	Ant2	76.96	1.14	0.35
NVNT	2-DH5	2441	Ant2	76.96	1.14	0.35
NVNT	2-DH5	2480	Ant2	76.96	1.14	0.35
NVNT	3-DH5	2402	Ant2	77.01	1.13	0.35
NVNT	3-DH5	2441	Ant2	77.01	1.13	0.35
NVNT	3-DH5	2480	Ant2	77.01	1.13	0.35



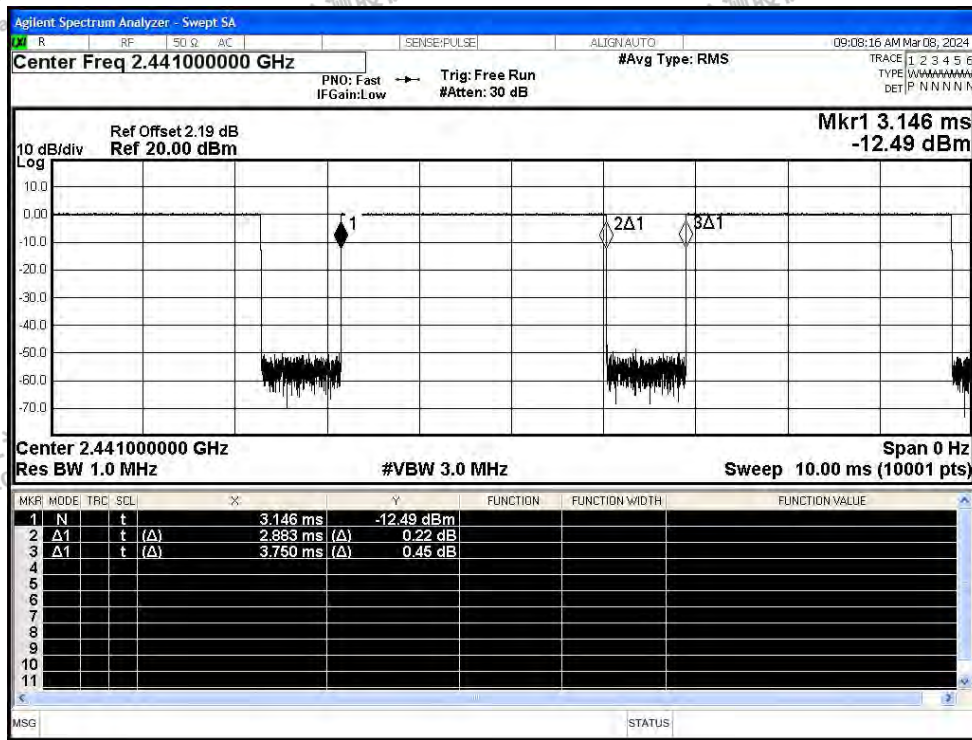


Test Graphs

Duty Cycle NVNT 1-DH5 2402MHz Ant2

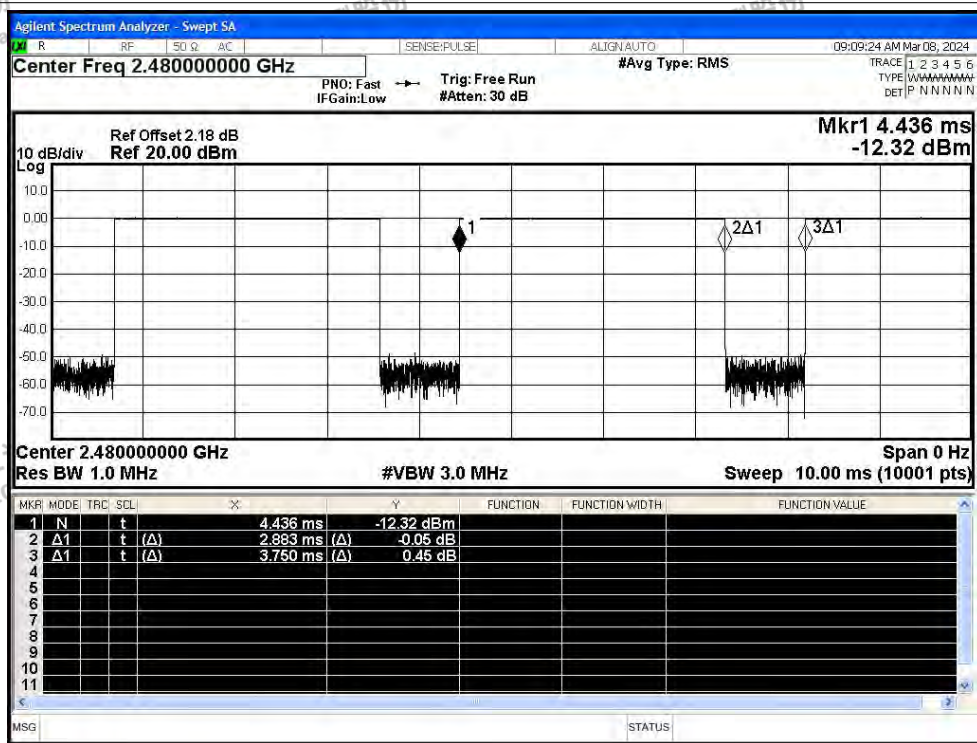


Duty Cycle NVNT 1-DH5 2441MHz Ant2

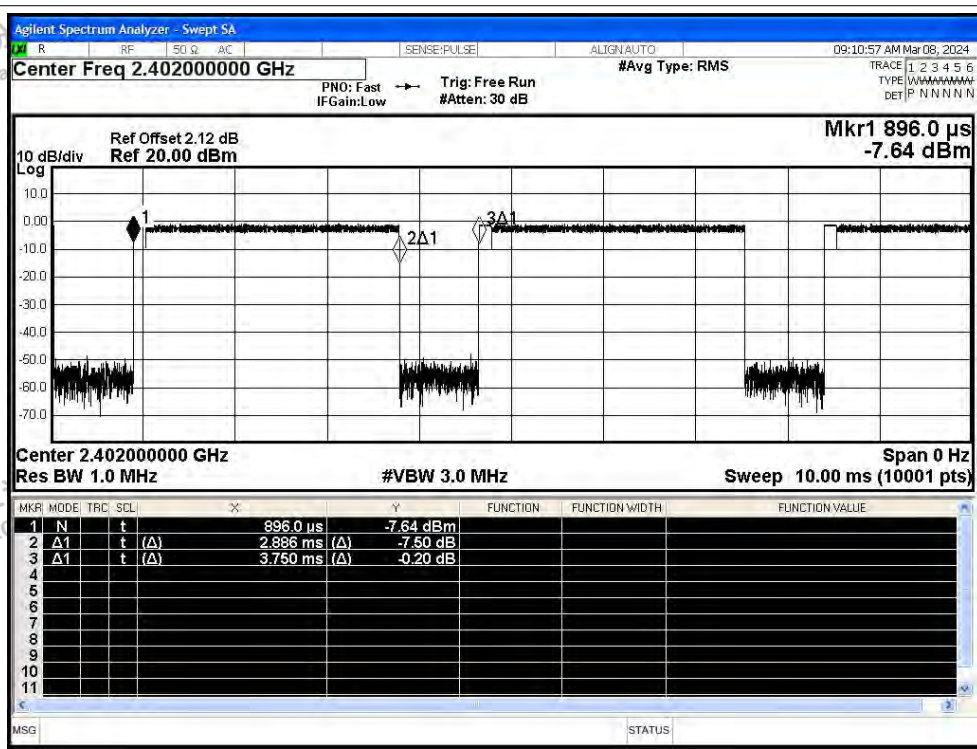




Duty Cycle NVNT 1-DH5 2480MHz Ant2

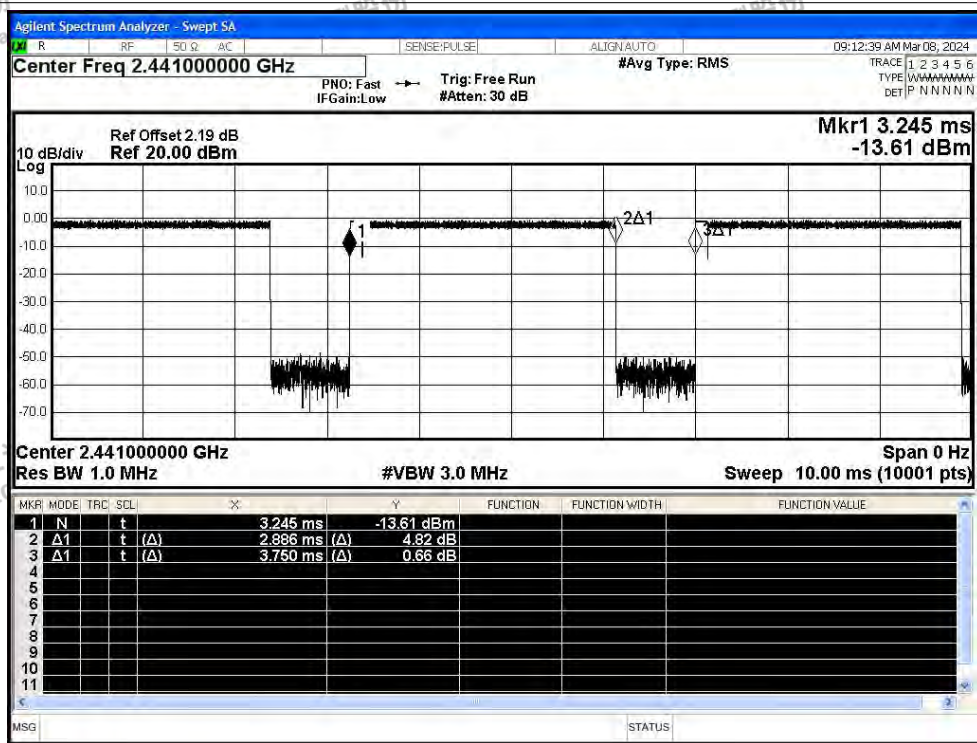


Duty Cycle NVNT 2-DH5 2402MHz Ant2

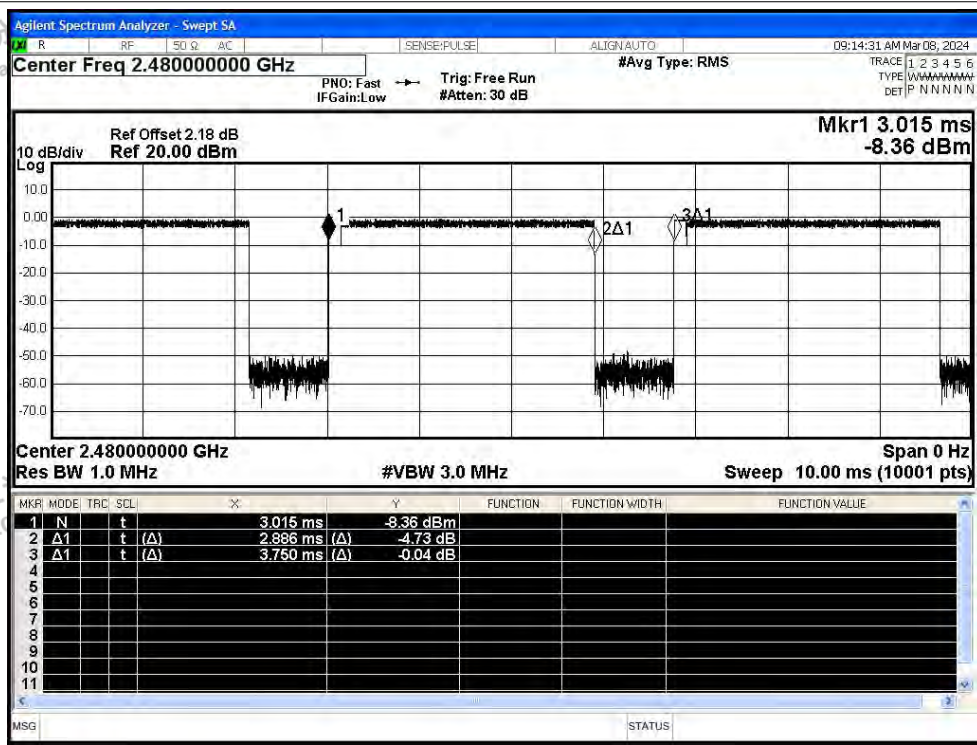




Duty Cycle NVNT 2-DH5 2441MHz Ant2

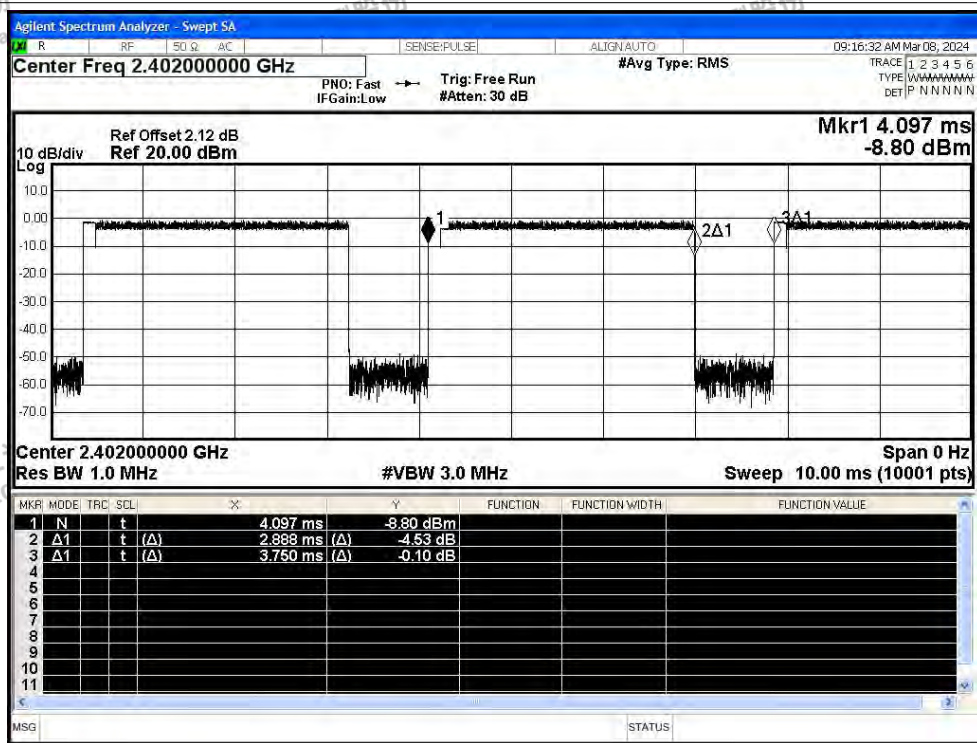


Duty Cycle NVNT 2-DH5 2480MHz Ant2

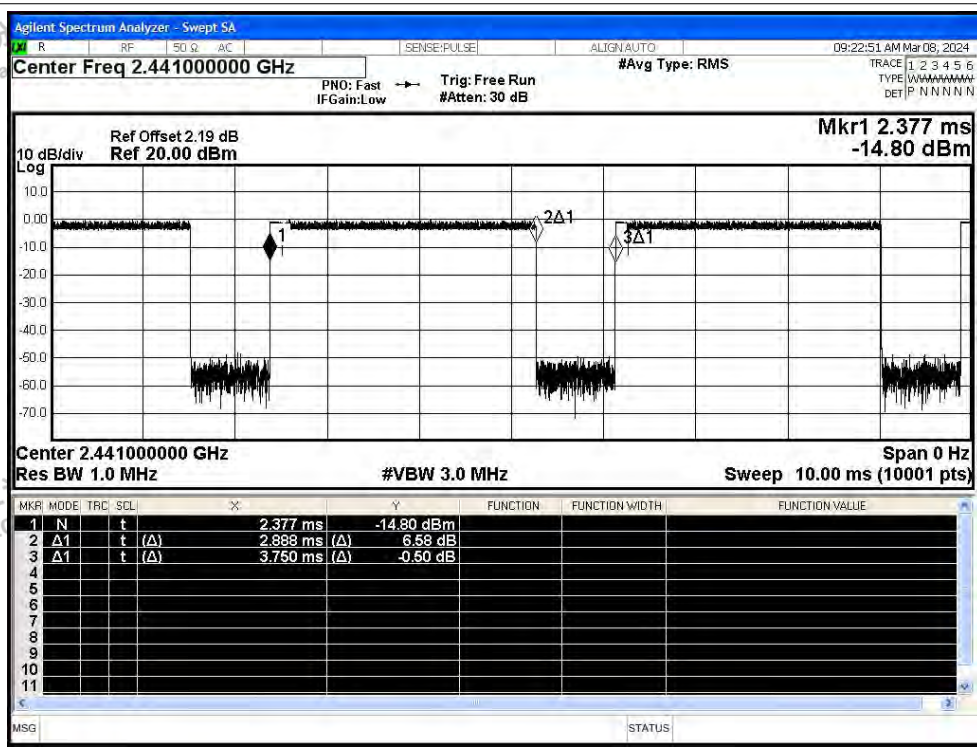




Duty Cycle NVNT 3-DH5 2402MHz Ant2

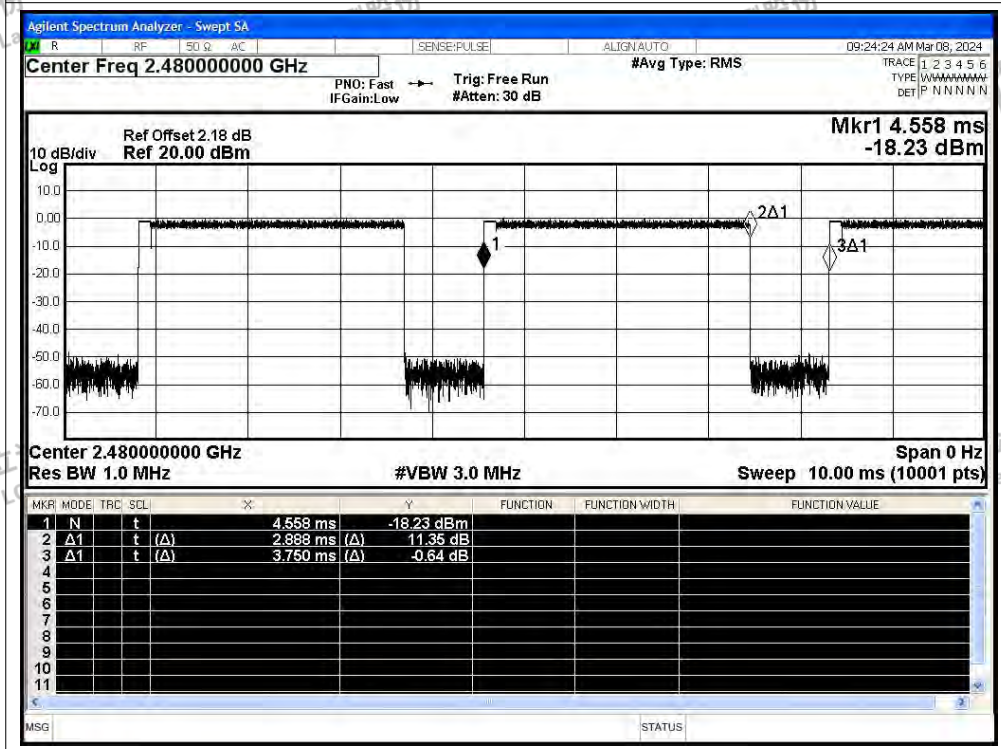


Duty Cycle NVNT 3-DH5 2441MHz Ant2





Duty Cycle NVNT 3-DH5 2480MHz Ant2





A.9 Restrict Band

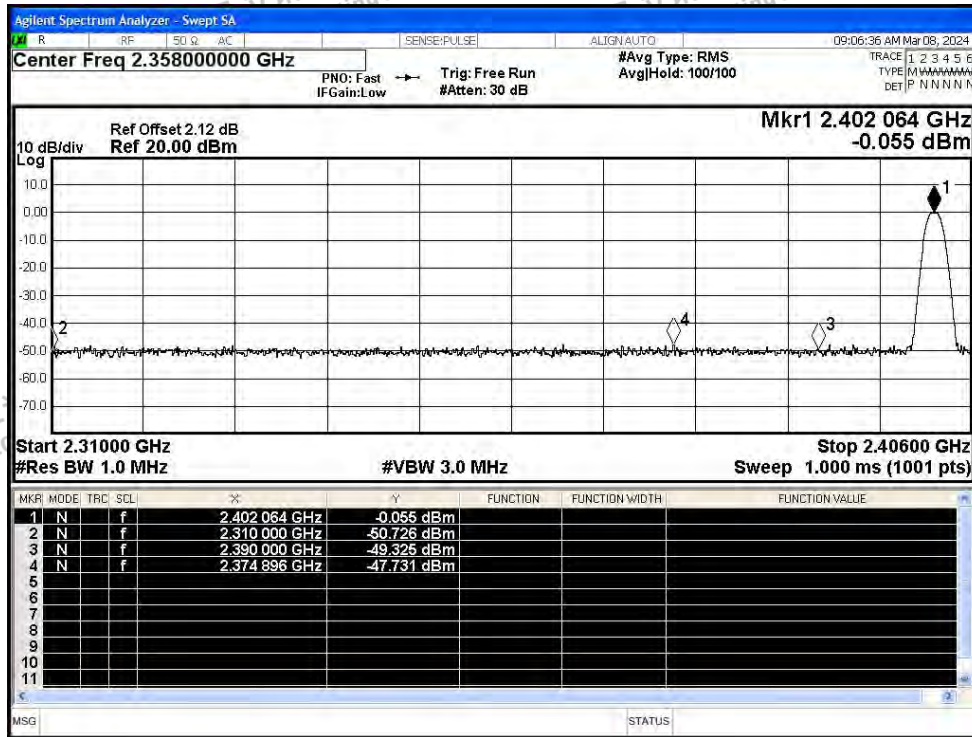
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBUV/m)	Detector	Limit (dBUV/m)	Verdict
NVNT	1-DH5	2402	Ant2	No-Hopping	2310	-50.73	2	-	46.53	Peak	74	Pass
NVNT	1-DH5	2402	Ant2	No-Hopping	2310	-58.63	2	1.14	39.77	Average	54	Pass
NVNT	1-DH5	2402	Ant2	No-Hopping	2374.896	-47.73	2	-	49.53	Peak	74	Pass
NVNT	1-DH5	2402	Ant2	No-Hopping	2383.056	-57.7	2	1.14	40.7	Average	54	Pass
NVNT	1-DH5	2402	Ant2	No-Hopping	2390	-49.33	2	-	47.93	Peak	74	Pass
NVNT	1-DH5	2402	Ant2	No-Hopping	2390	-58.47	2	1.14	39.93	Average	54	Pass
NVNT	1-DH5	2480	Ant2	No-Hopping	2483.5	-49.76	2	-	47.5	Peak	74	Pass
NVNT	1-DH5	2480	Ant2	No-Hopping	2483.5	-57.82	2	1.14	40.58	Average	54	Pass
NVNT	1-DH5	2480	Ant2	No-Hopping	2484.04	-46.98	2	-	50.28	Peak	74	Pass
NVNT	1-DH5	2480	Ant2	No-Hopping	2484.136	-57.16	2	1.14	41.24	Average	54	Pass
NVNT	1-DH5	2480	Ant2	No-Hopping	2500	-48.58	2	-	48.68	Peak	74	Pass
NVNT	1-DH5	2480	Ant2	No-Hopping	2500	-58.08	2	1.14	40.32	Average	54	Pass
NVNT	2-DH5	2402	Ant2	No-Hopping	2310	-51.25	2	-	46.01	Peak	74	Pass
NVNT	2-DH5	2402	Ant2	No-Hopping	2310	-58.71	2	1.14	39.69	Average	54	Pass
NVNT	2-DH5	2402	Ant2	No-Hopping	2382	-47.38	2	-	49.88	Peak	74	Pass
NVNT	2-DH5	2402	Ant2	No-Hopping	2381.136	-57.71	2	1.14	40.69	Average	54	Pass
NVNT	2-DH5	2402	Ant2	No-Hopping	2390	-50.02	2	-	47.24	Peak	74	Pass
NVNT	2-DH5	2402	Ant2	No-Hopping	2390	-58.36	2	1.14	40.04	Average	54	Pass
NVNT	2-DH5	2480	Ant2	No-Hopping	2483.5	-50.67	2	-	46.59	Peak	74	Pass
NVNT	2-DH5	2480	Ant2	No-Hopping	2483.5	-57.57	2	1.14	40.83	Average	54	Pass
NVNT	2-DH5	2480	Ant2	No-Hopping	2498.272	-46.27	2	-	50.99	Peak	74	Pass
NVNT	2-DH5	2480	Ant2	No-Hopping	2483.608	-57.1	2	1.14	41.3	Average	54	Pass
NVNT	2-DH5	2480	Ant2	No-Hopping	2500	-50.83	2	-	46.43	Peak	74	Pass
NVNT	2-DH5	2480	Ant2	No-Hopping	2500	-57.82	2	1.14	40.58	Average	54	Pass
NVNT	3-DH5	2402	Ant2	No-Hopping	2310	-51.92	2	-	45.34	Peak	74	Pass
NVNT	3-DH5	2402	Ant2	No-Hopping	2310	-58.39	2	1.13	40	Average	54	Pass
NVNT	3-DH5	2402	Ant2	No-Hopping	2327.088	-47.38	2	-	49.88	Peak	74	Pass
NVNT	3-DH5	2402	Ant2	No-Hopping	2387.376	-57.45	2	1.13	40.94	Average	54	Pass
NVNT	3-DH5	2402	Ant2	No-Hopping	2390	-51.24	2	-	46.02	Peak	74	Pass
NVNT	3-DH5	2402	Ant2	No-Hopping	2390	-58.65	2	1.13	39.74	Average	54	Pass
NVNT	3-DH5	2480	Ant2	No-Hopping	2483.5	-49.24	2	-	48.02	Peak	74	Pass
NVNT	3-DH5	2480	Ant2	No-Hopping	2483.5	-58.39	2	1.13	40	Average	54	Pass
NVNT	3-DH5	2480	Ant2	No-Hopping	2492.392	-46.94	2	-	50.32	Peak	74	Pass
NVNT	3-DH5	2480	Ant2	No-Hopping	2485.288	-57.2	2	1.13	41.19	Average	54	Pass
NVNT	3-DH5	2480	Ant2	No-Hopping	2500	-50.5	2	-	46.76	Peak	74	Pass
NVNT	3-DH5	2480	Ant2	No-Hopping	2500	-58.38	2	1.13	40.01	Average	54	Pass



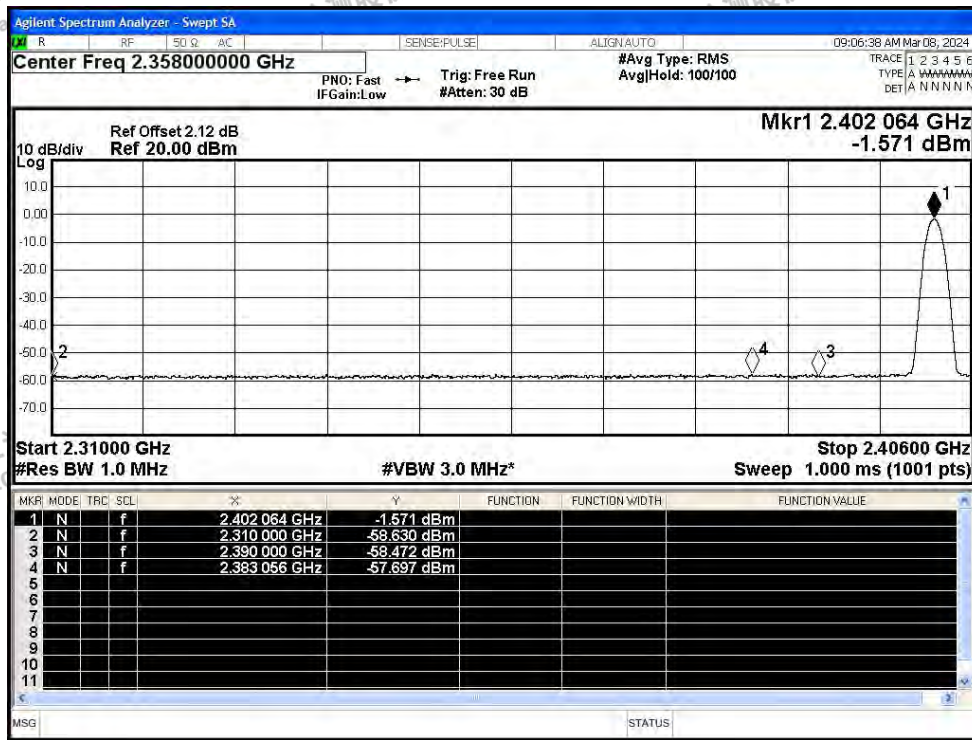


Test Graphs

Restrict Band NVNT 1-DH5 2402MHz Ant2 No-Hopping Peak

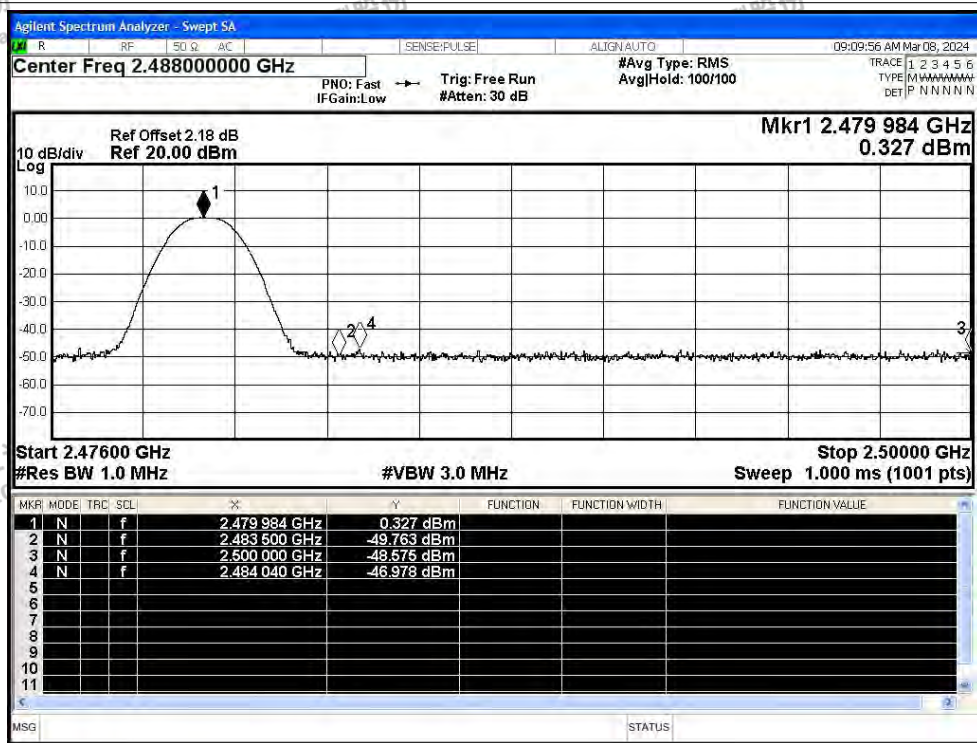


Restrict Band NVNT 1-DH5 2402MHz Ant2 No-Hopping Average

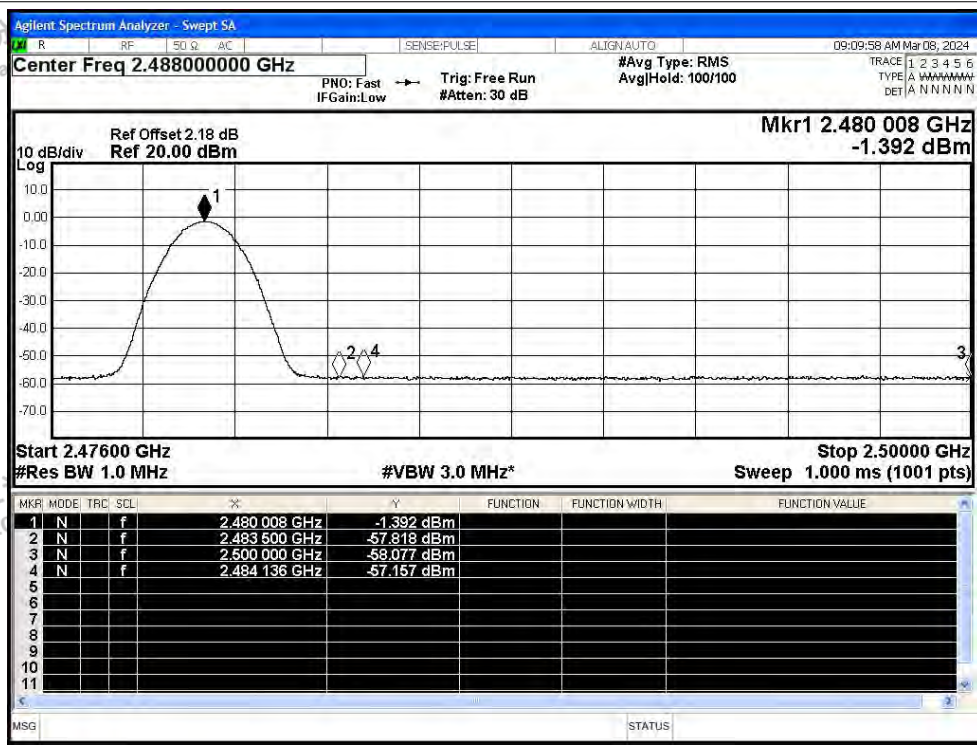




Restrict Band NVNT 1-DH5 2480MHz Ant2 No-Hopping Peak

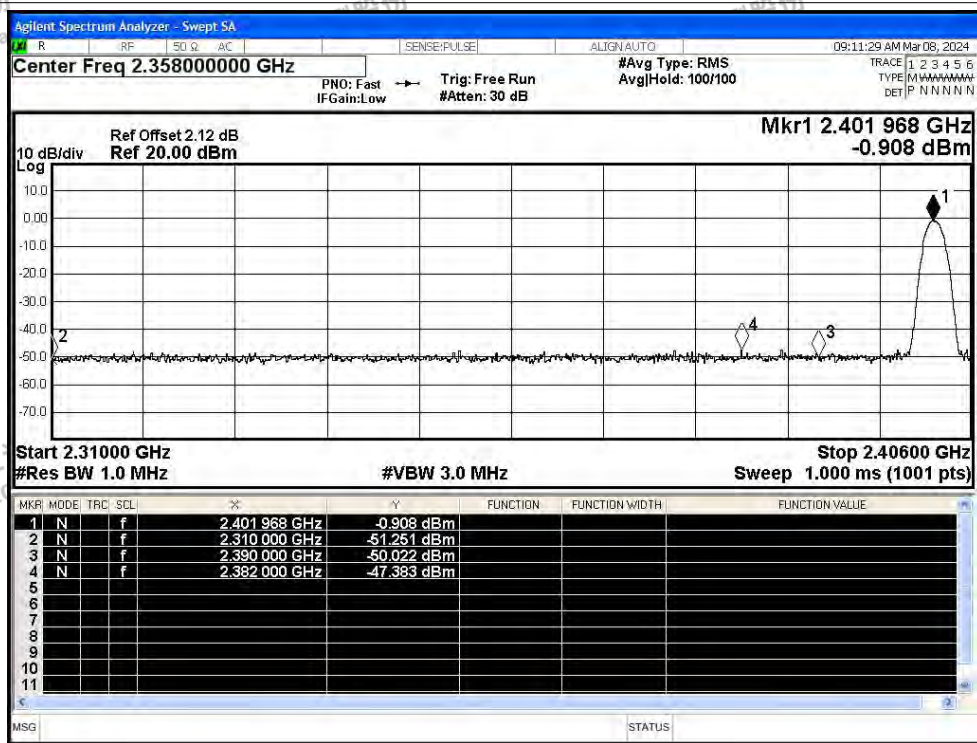


Restrict Band NVNT 1-DH5 2480MHz Ant2 No-Hopping Average

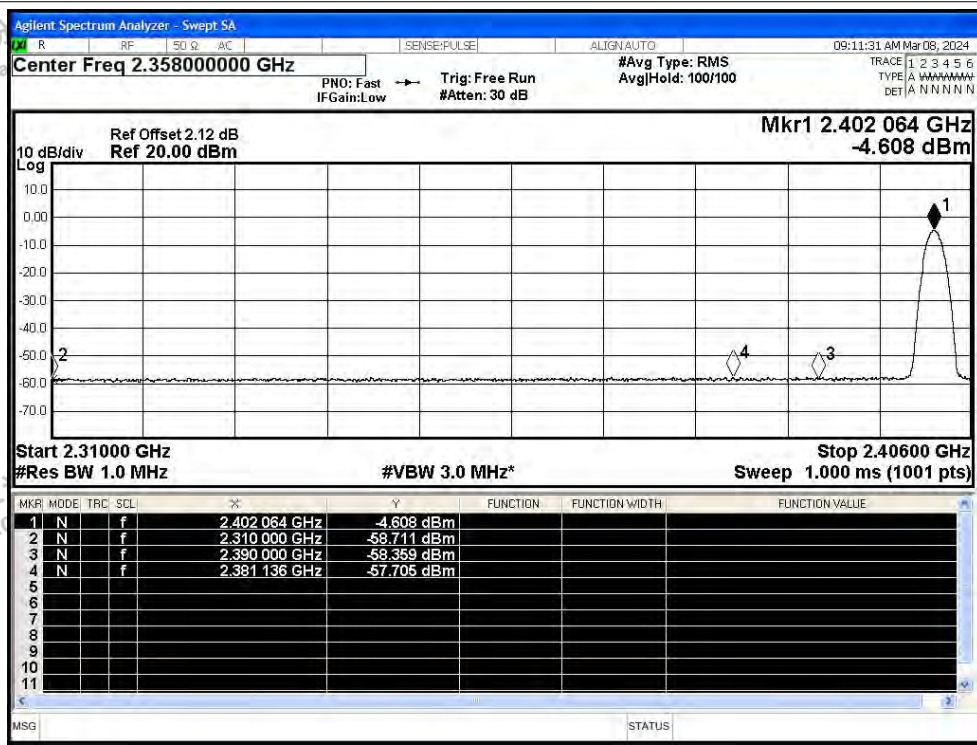




Restrict Band NVNT 2-DH5 2402MHz Ant2 No-Hopping Peak

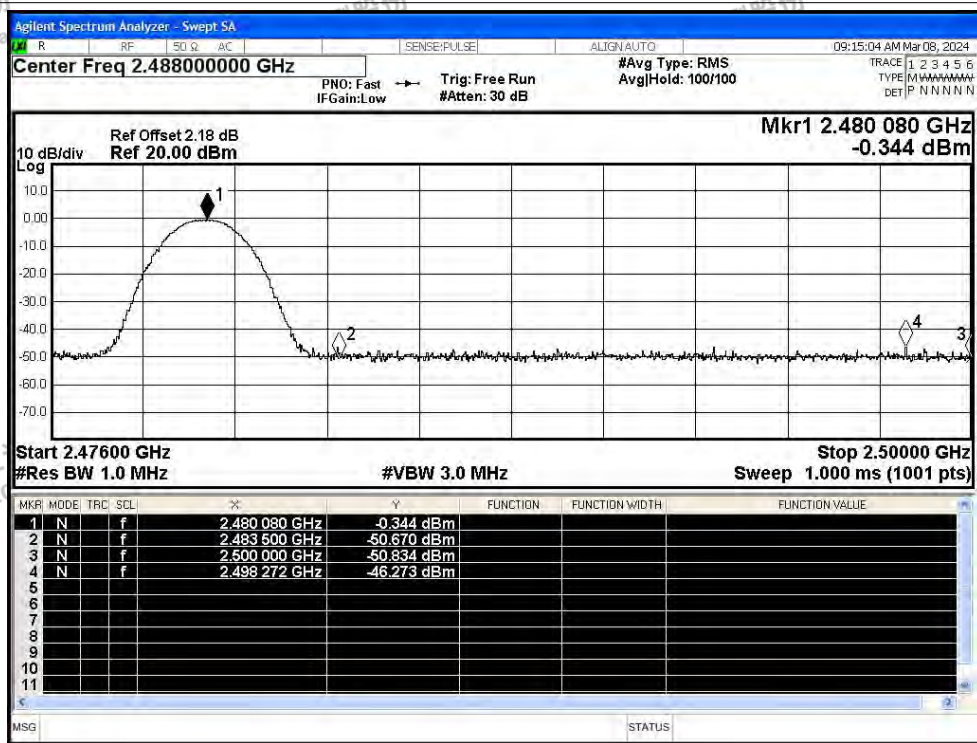


Restrict Band NVNT 2-DH5 2402MHz Ant2 No-Hopping Average

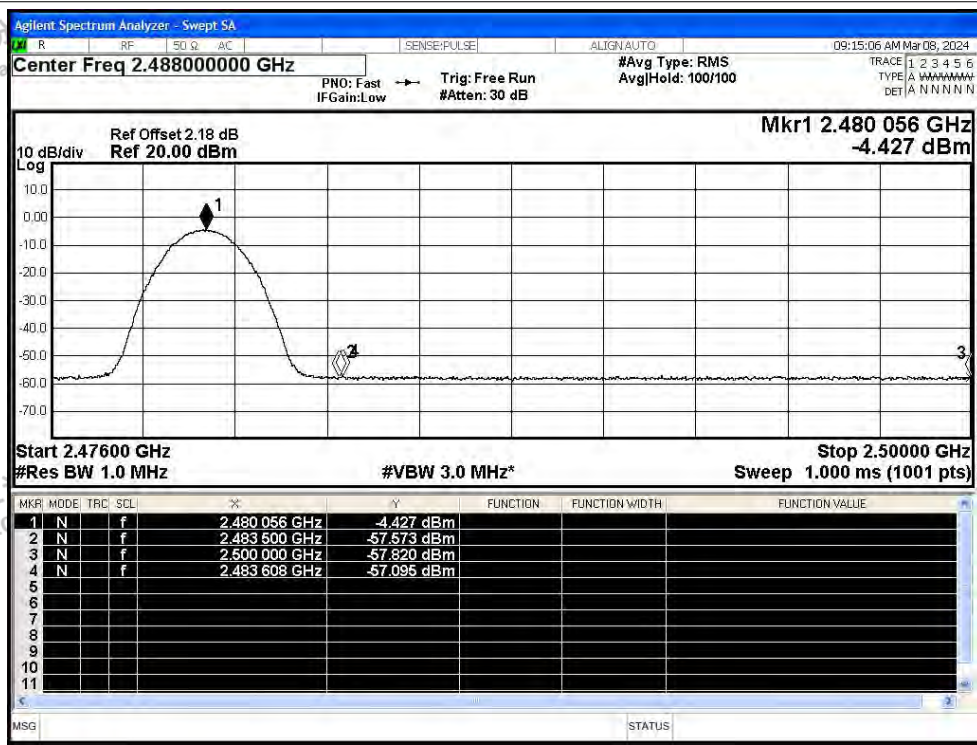




Restrict Band NVNT 2-DH5 2480MHz Ant2 No-Hopping Peak

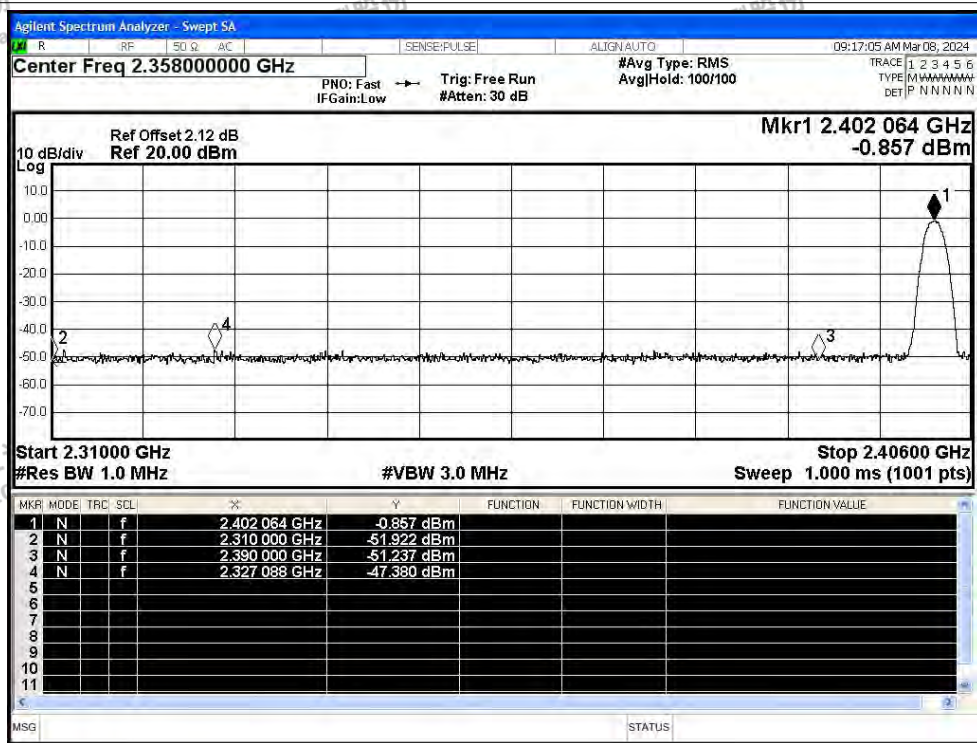


Restrict Band NVNT 2-DH5 2480MHz Ant2 No-Hopping Average

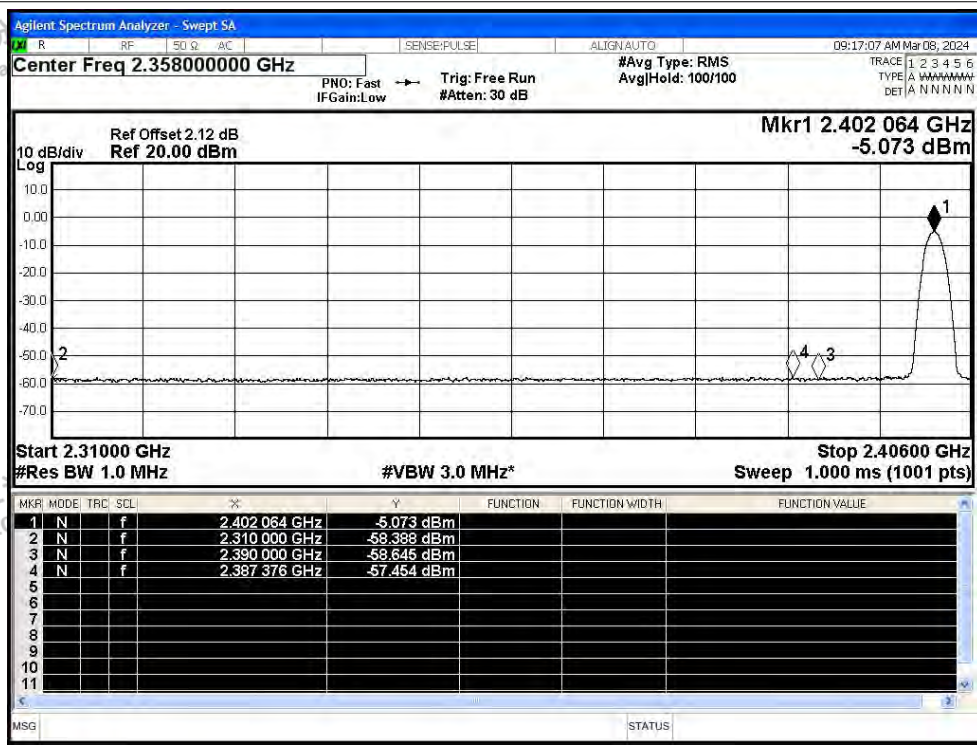




Restrict Band NVNT 3-DH5 2402MHz Ant2 No-Hopping Peak

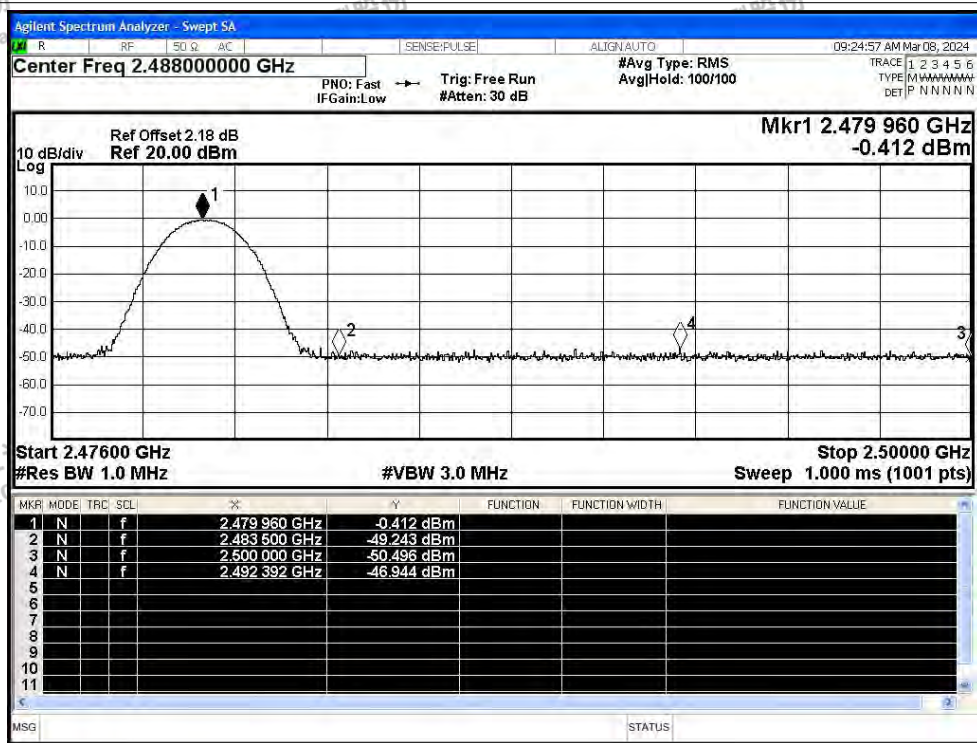


Restrict Band NVNT 3-DH5 2402MHz Ant2 No-Hopping Average





Restrict Band NVNT 3-DH5 2480MHz Ant2 No-Hopping Peak



Restrict Band NVNT 3-DH5 2480MHz Ant2 No-Hopping Average

