



## Appendix A

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

Product Name: Wireless Headphone

Test Model: HP-8003

#### Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
Supervised by:	Nick Peng





### A.1 -20dB Bandwidth

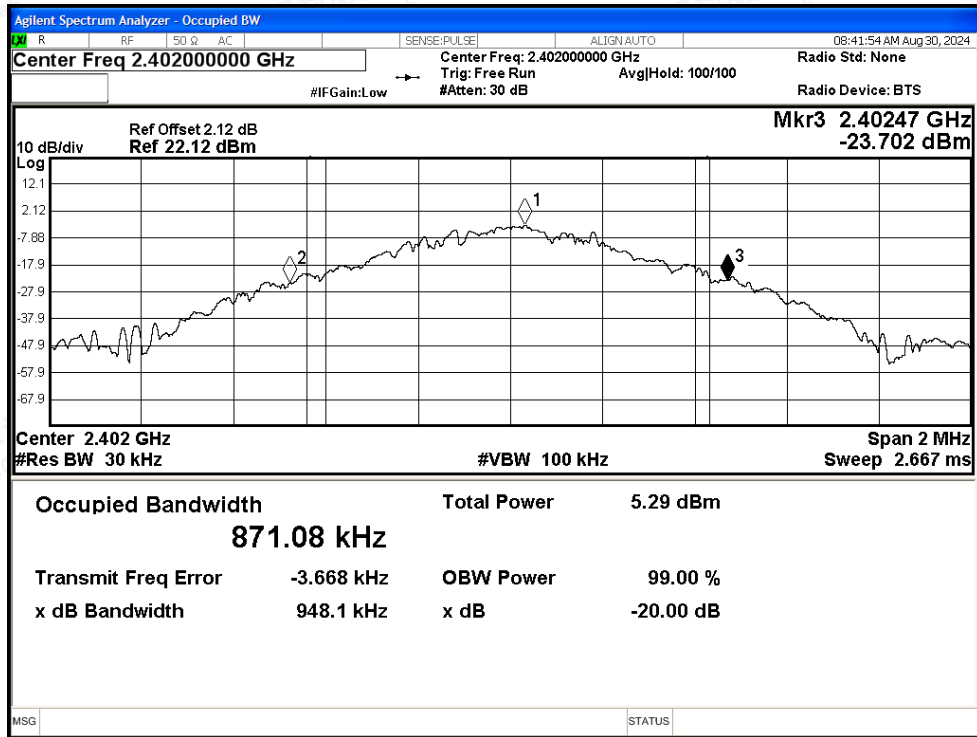
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant	0.948	N/A	Pass
NVNT	1-DH5	2441	Ant	0.949	N/A	Pass
NVNT	1-DH5	2480	Ant	0.944	N/A	Pass
NVNT	2-DH5	2402	Ant	1.29	N/A	Pass
NVNT	2-DH5	2441	Ant	1.285	N/A	Pass
NVNT	2-DH5	2480	Ant	1.282	N/A	Pass
NVNT	3-DH5	2402	Ant	1.292	N/A	Pass
NVNT	3-DH5	2441	Ant	1.302	N/A	Pass
NVNT	3-DH5	2480	Ant	1.296	N/A	Pass



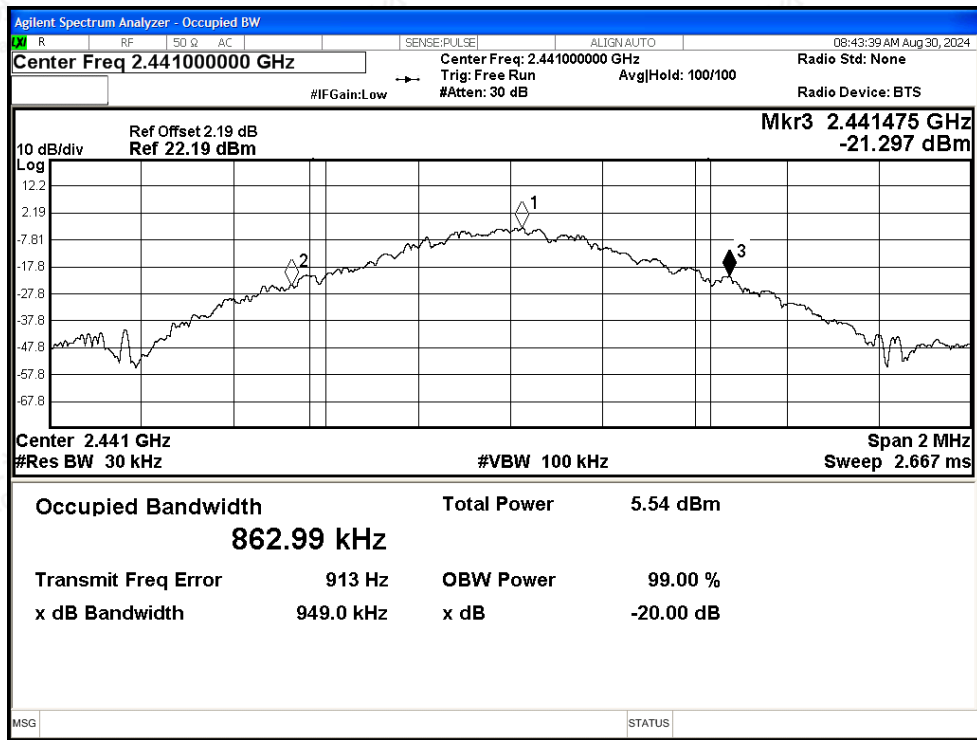


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant

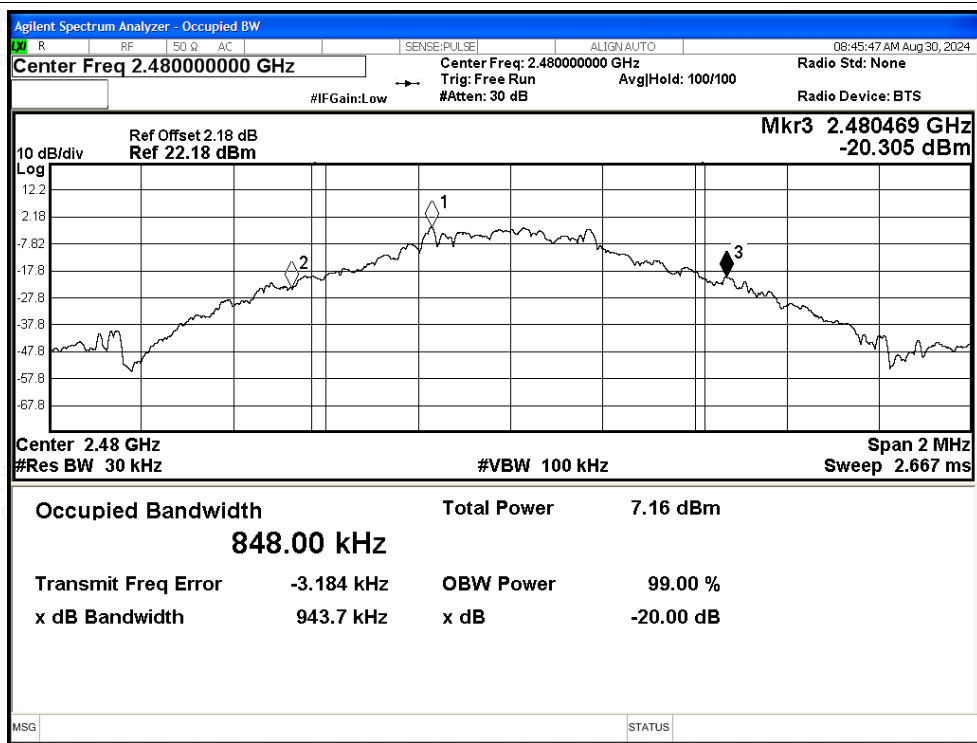


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant

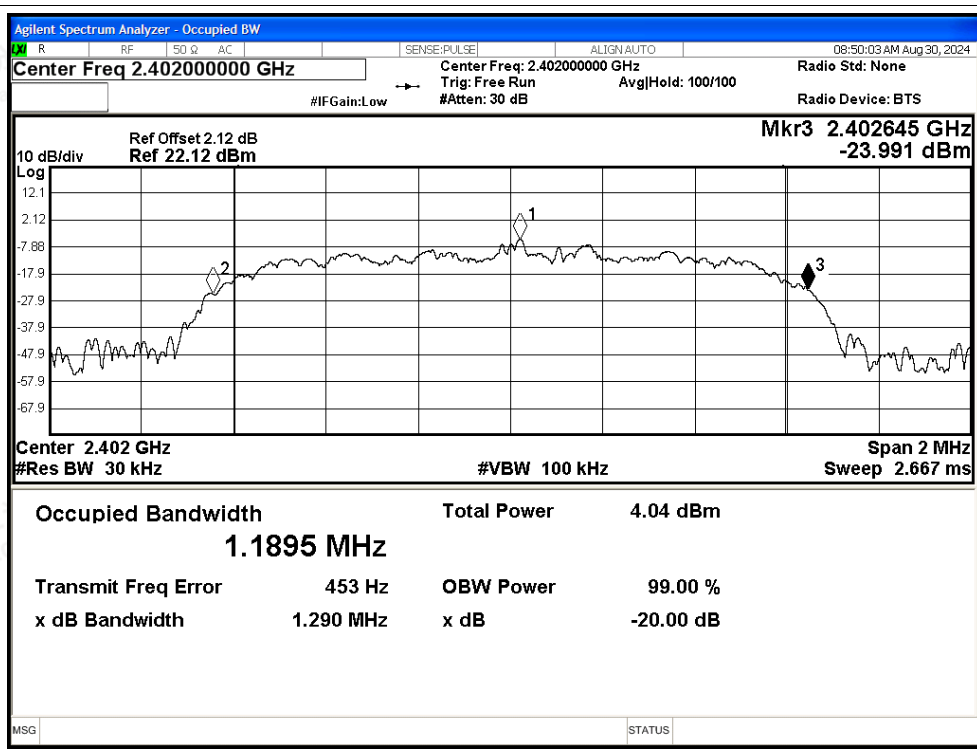




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant

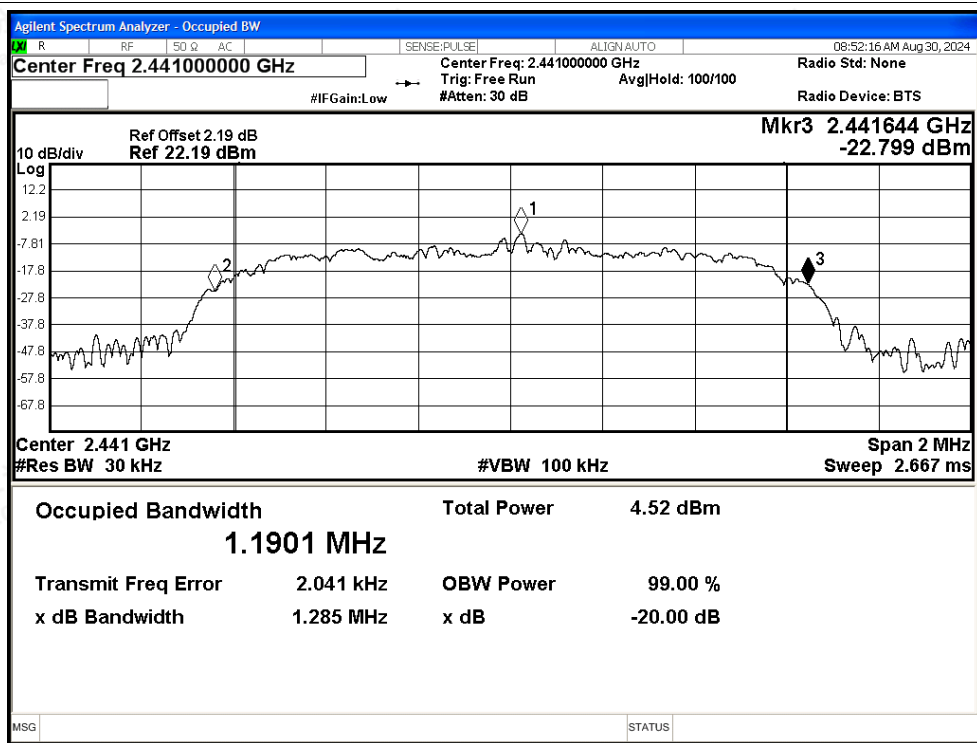


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant

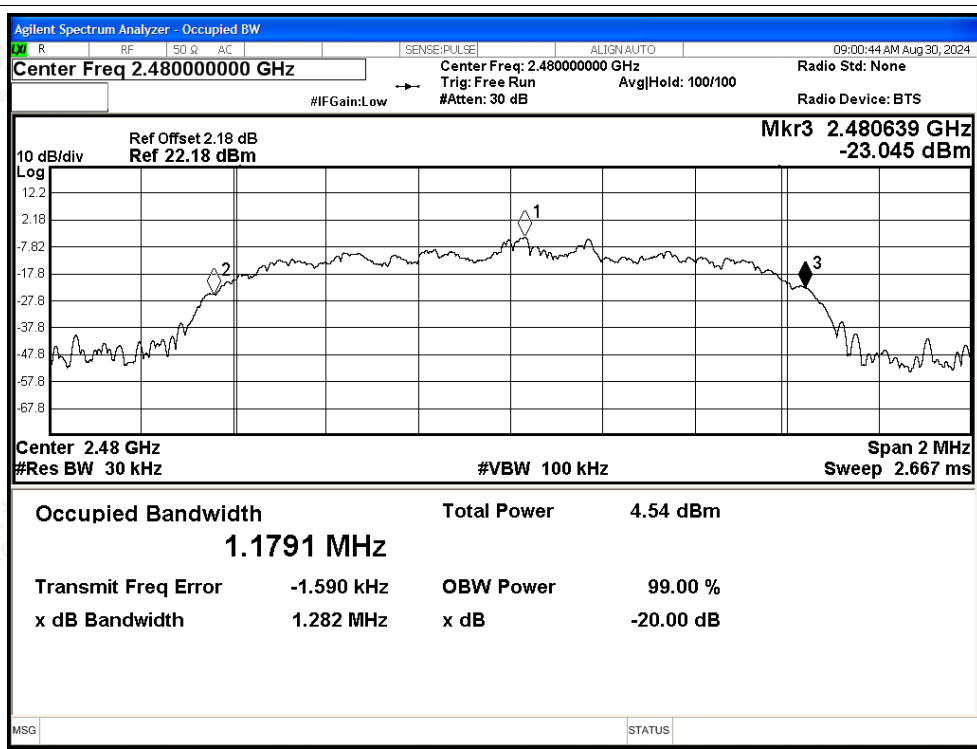




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant

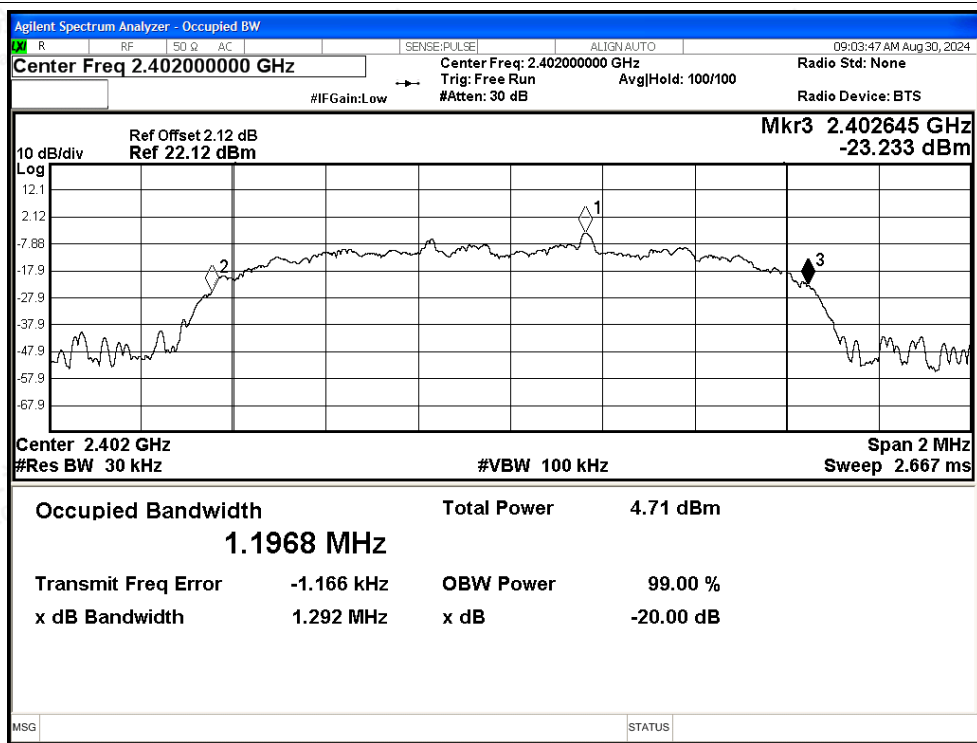


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant

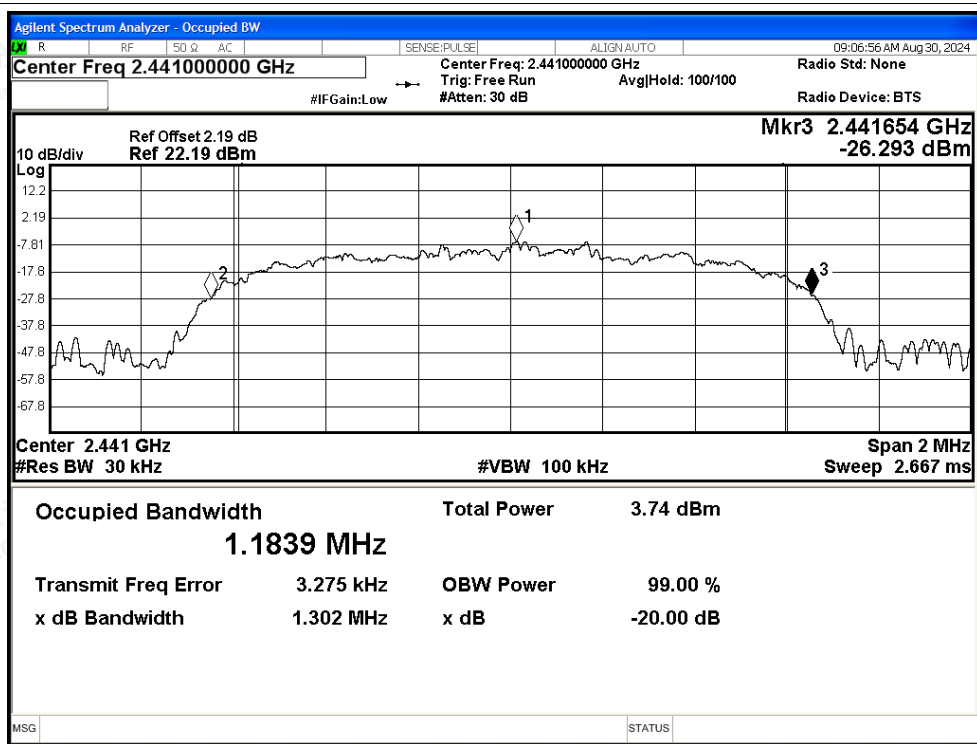


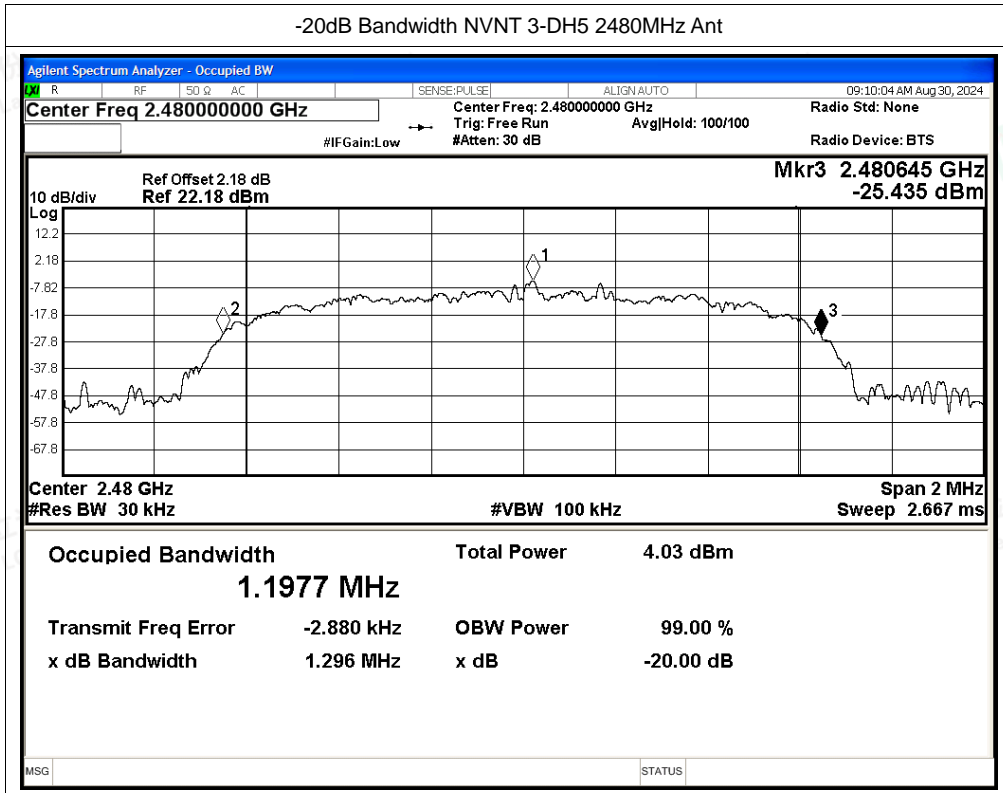


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant







## A.2 Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant	-0.69	21	Pass
NVNT	1-DH5	2441	Ant	-0.75	21	Pass
NVNT	1-DH5	2480	Ant	0.46	21	Pass
NVNT	2-DH5	2402	Ant	-0.14	21	Pass
NVNT	2-DH5	2441	Ant	0.39	21	Pass
NVNT	2-DH5	2480	Ant	0.02	21	Pass
NVNT	3-DH5	2402	Ant	0.77	21	Pass
NVNT	3-DH5	2441	Ant	-0.61	21	Pass
NVNT	3-DH5	2480	Ant	0.02	21	Pass

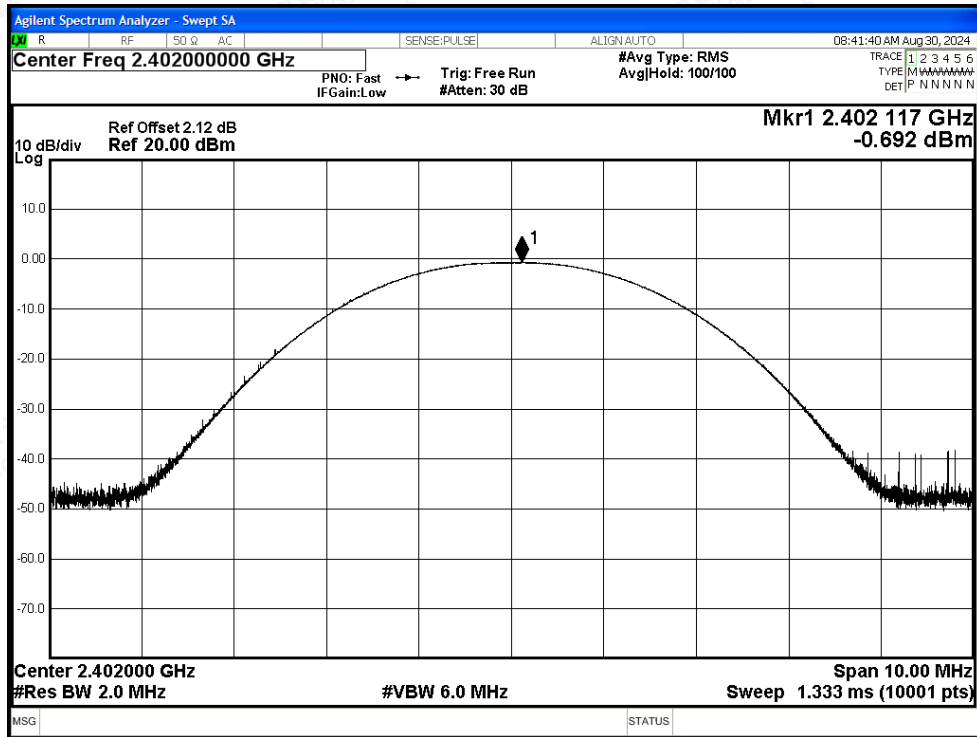




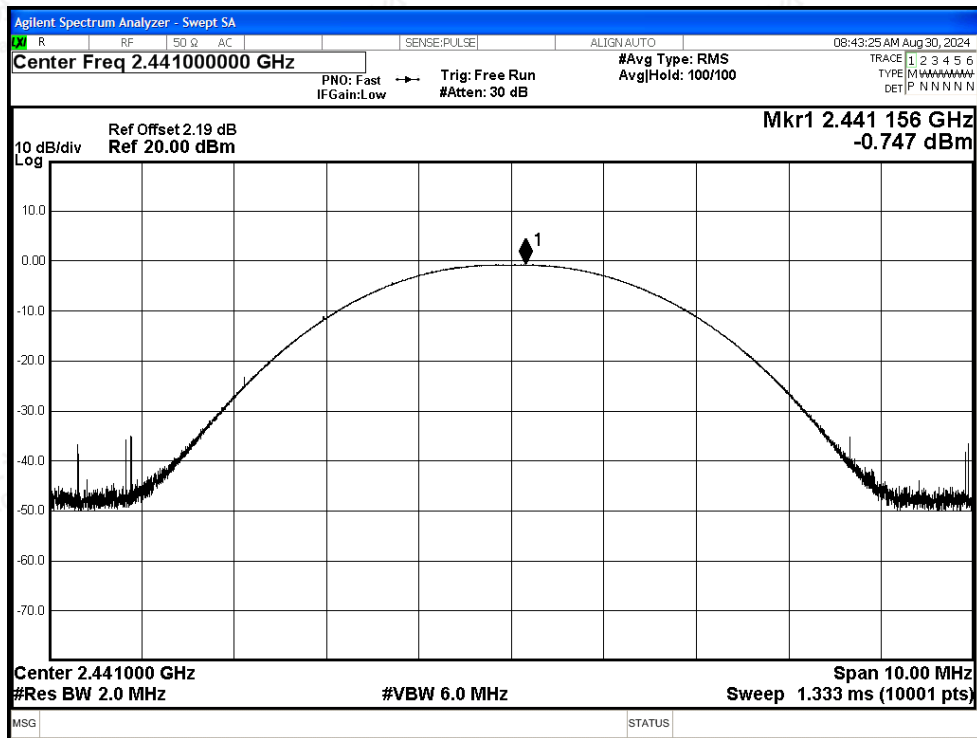


Test Graphs

Power NVNT 1-DH5 2402MHz Ant

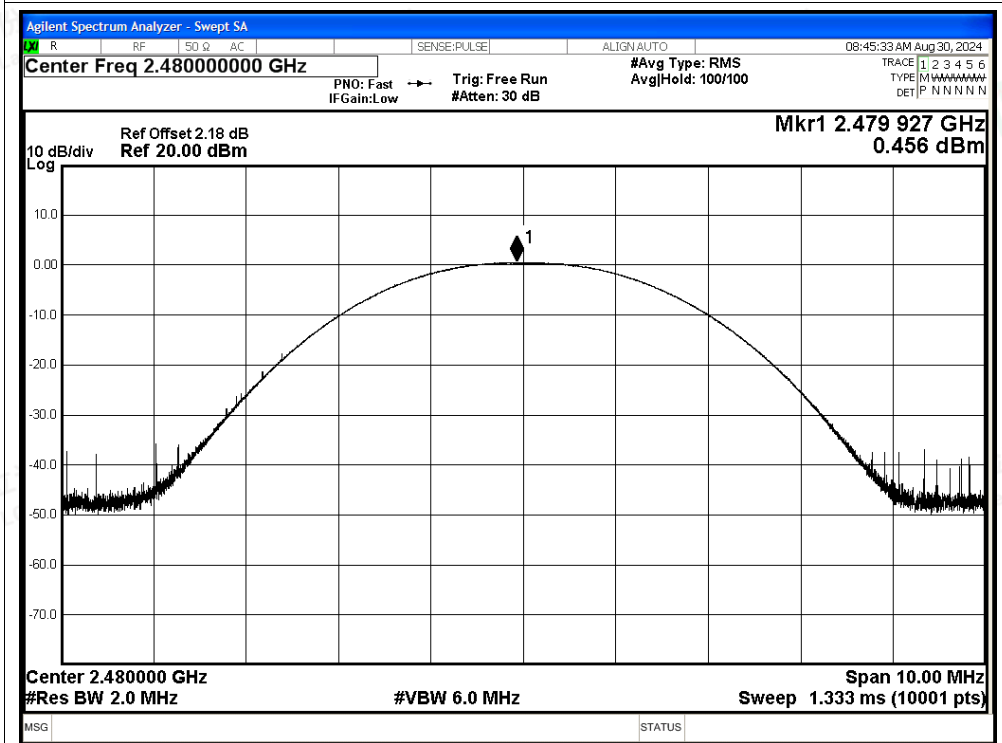


Power NVNT 1-DH5 2441MHz Ant

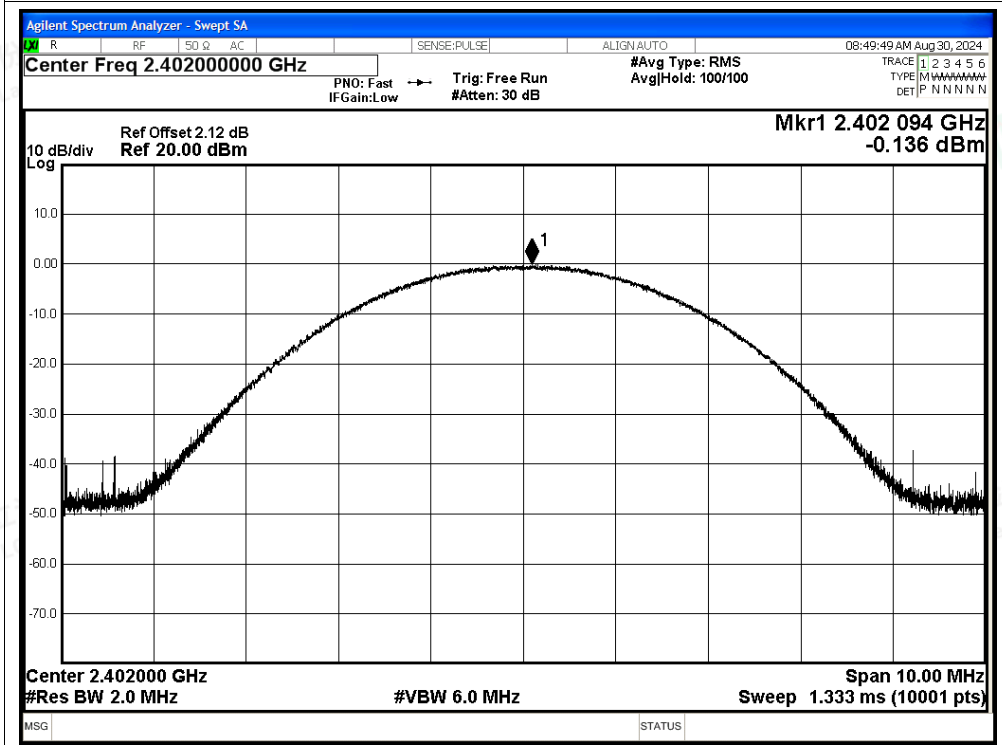




Power NVNT 1-DH5 2480MHz Ant

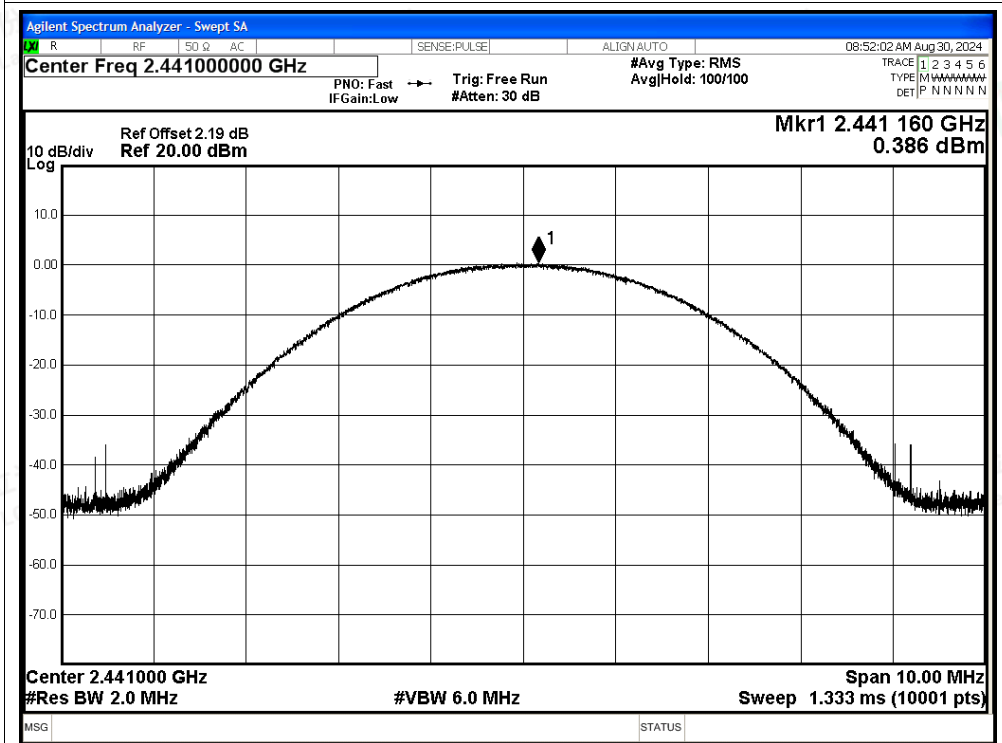


Power NVNT 2-DH5 2402MHz Ant

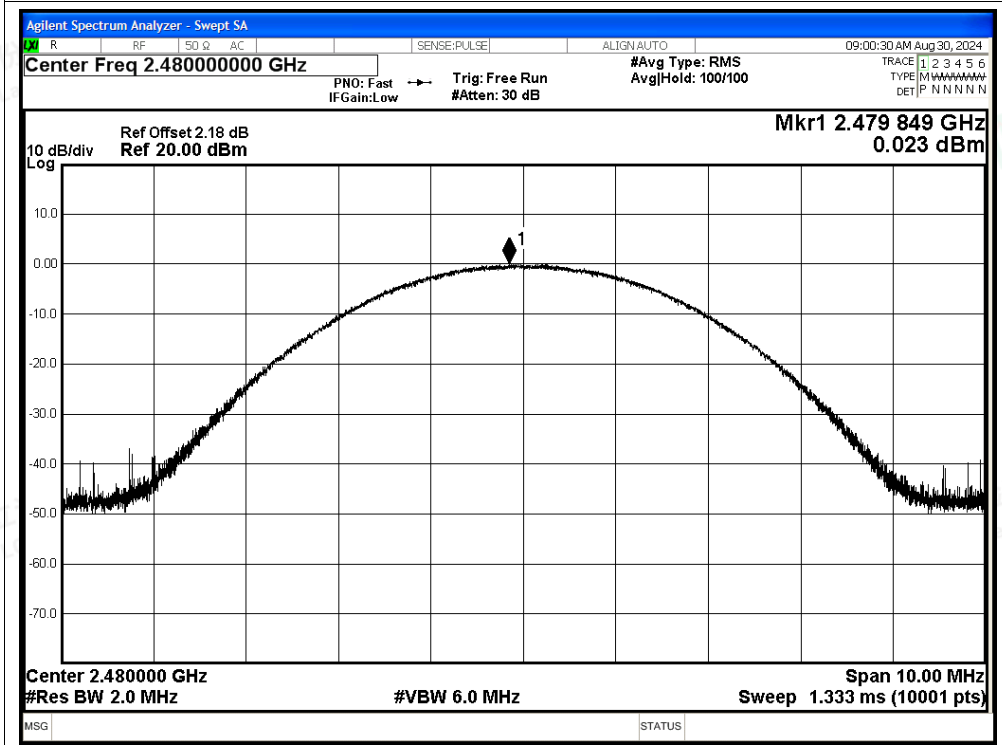




Power NVNT 2-DH5 2441MHz Ant

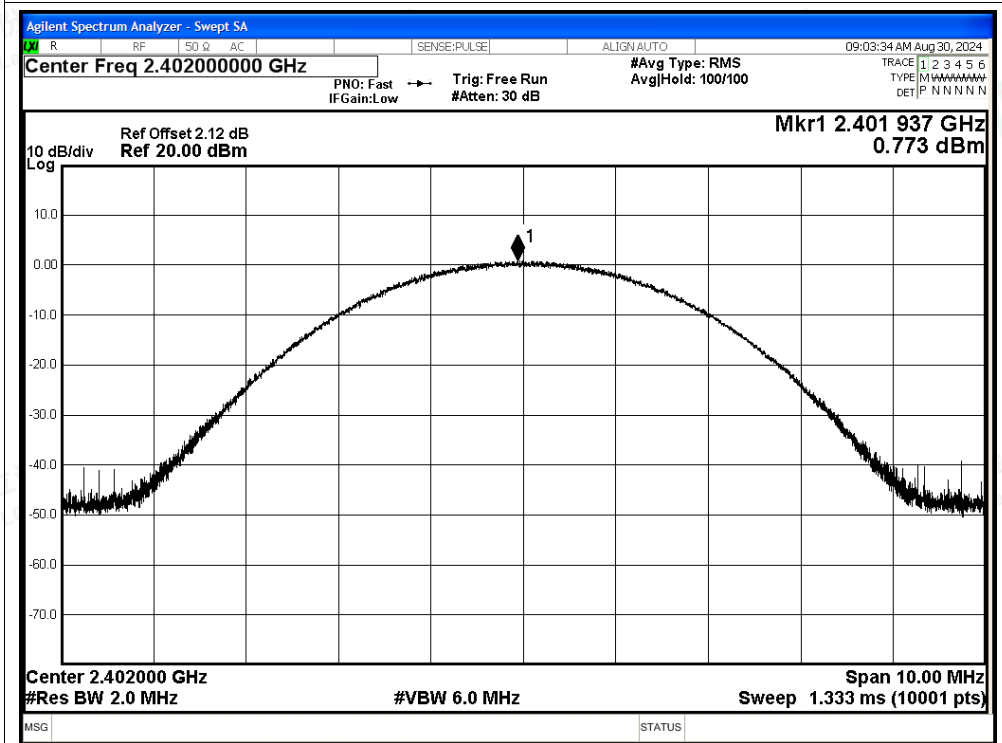


Power NVNT 2-DH5 2480MHz Ant

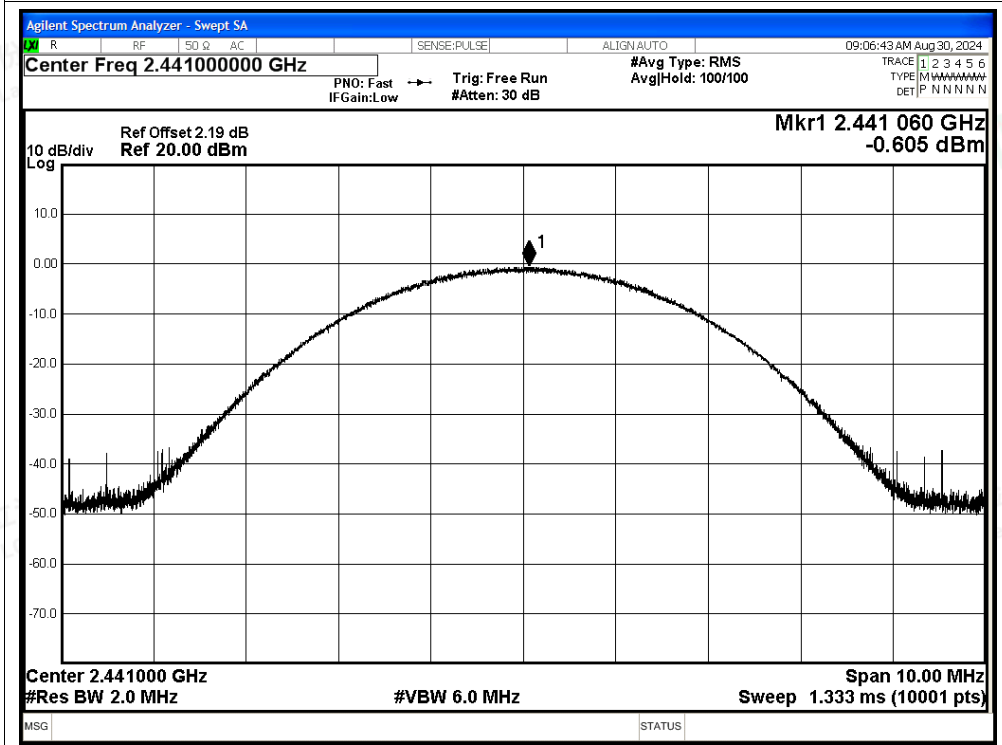


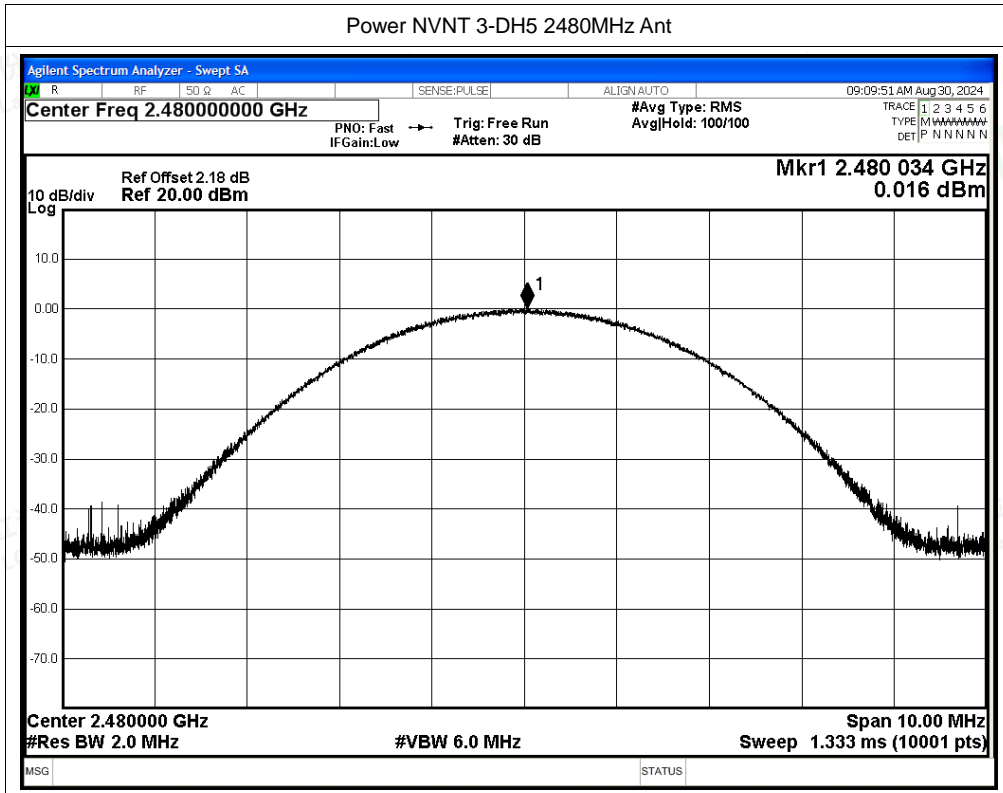


Power NVNT 3-DH5 2402MHz Ant



Power NVNT 3-DH5 2441MHz Ant







### A.3 Carrier Frequencies Separation

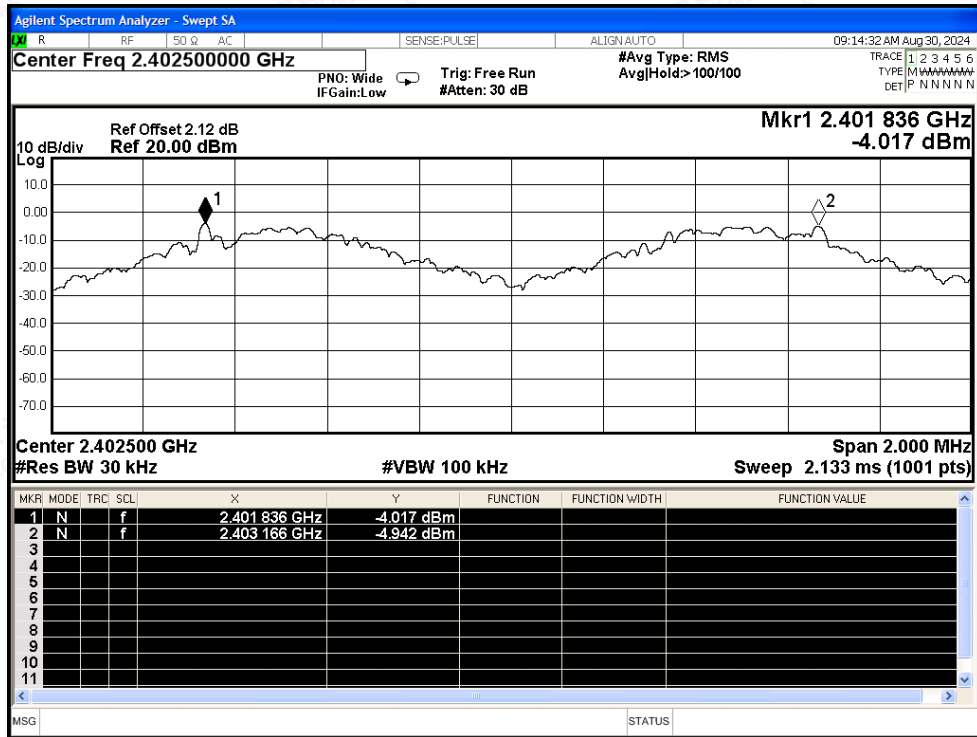
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant	2401.836	2403.166	1.33	0.632	Pass
NVNT	2-DH5	Ant	2402.014	2403.014	1	0.86	Pass
NVNT	3-DH5	Ant	2401.914	2403.002	1.088	0.861	Pass



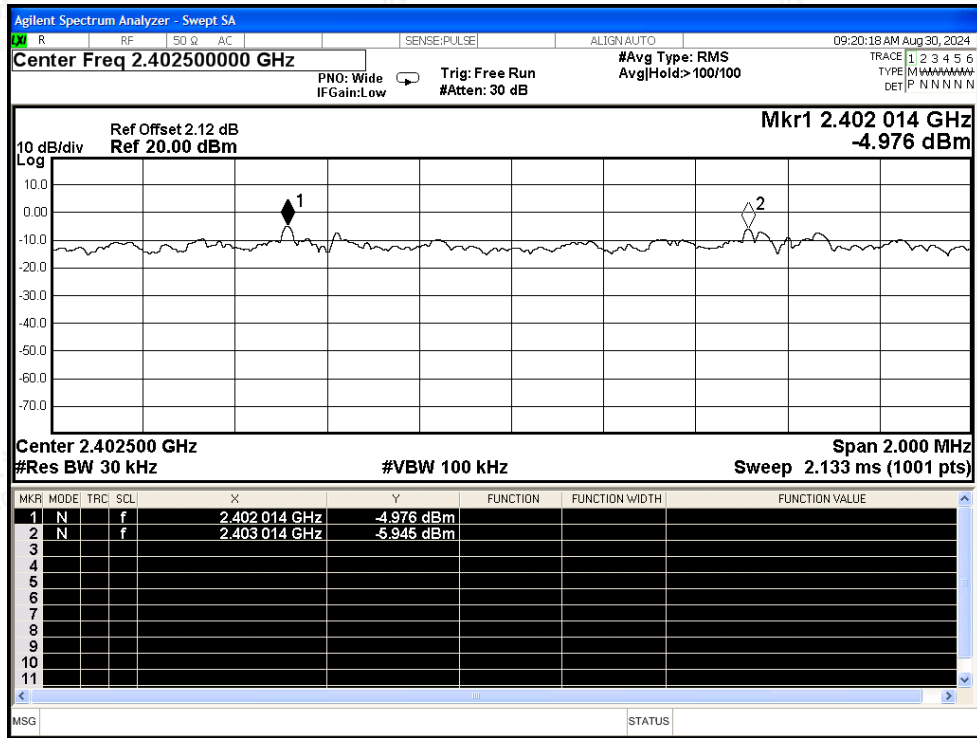


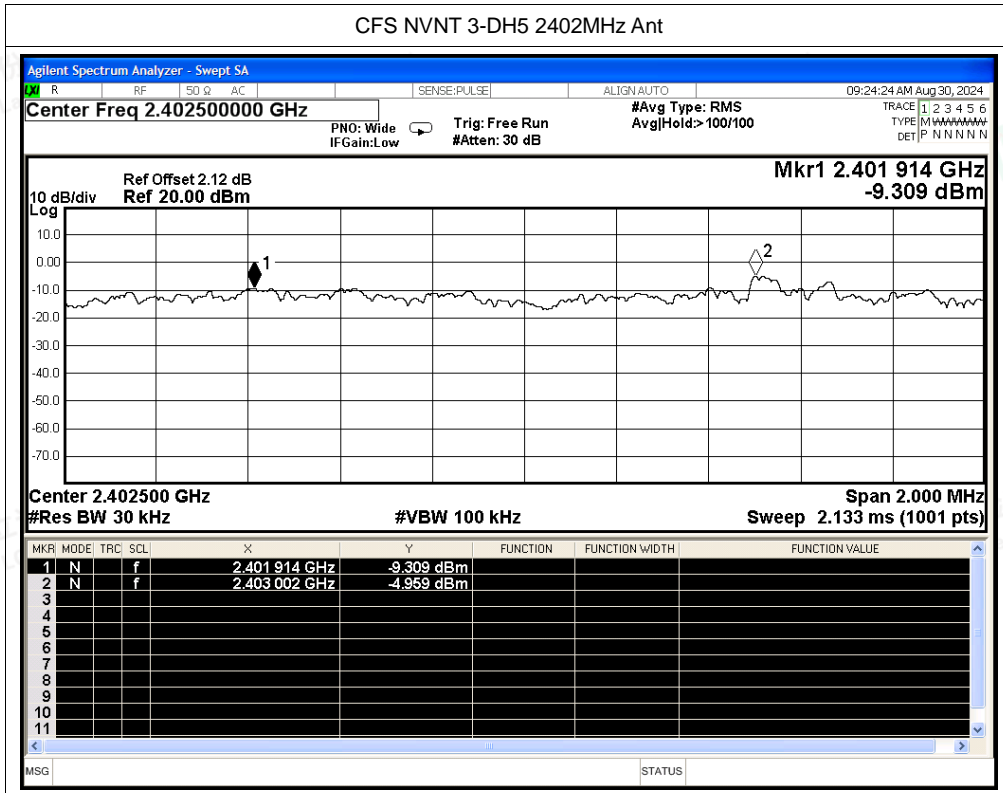
Test Graphs

CFS NVNT 1-DH5 2402MHz Ant



CFS NVNT 2-DH5 2402MHz Ant









### A.4 Dwell Time

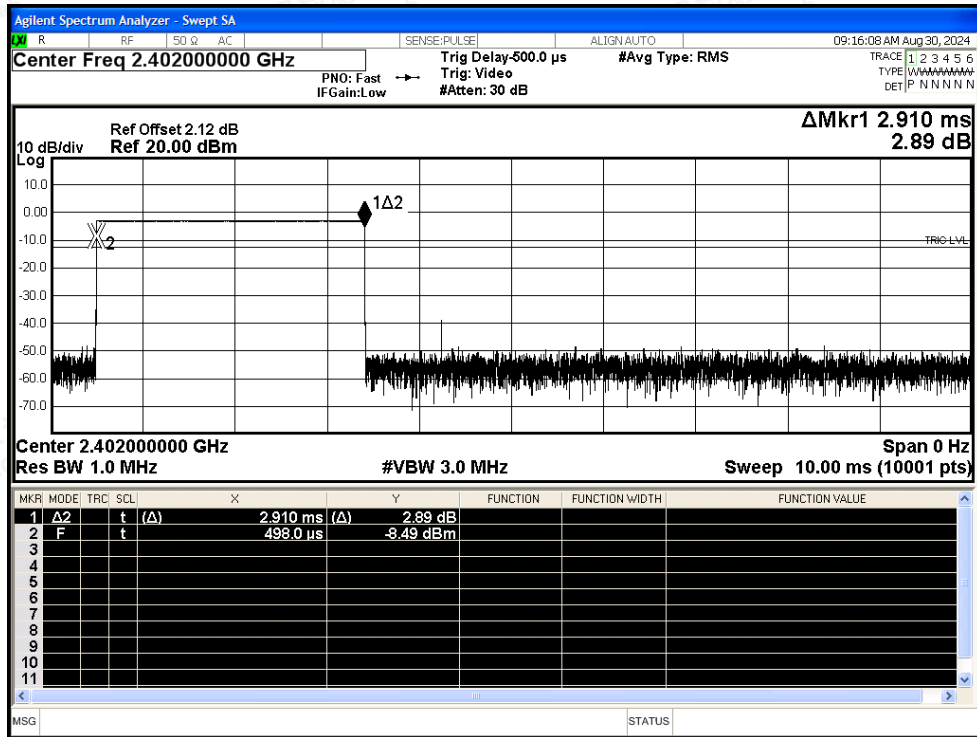
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant	2.91	317.19	109	31600	400	Pass
NVNT	2-DH5	2402	Ant	2.898	315.882	109	31600	400	Pass
NVNT	3-DH5	2402	Ant	2.897	315.773	109	31600	400	Pass



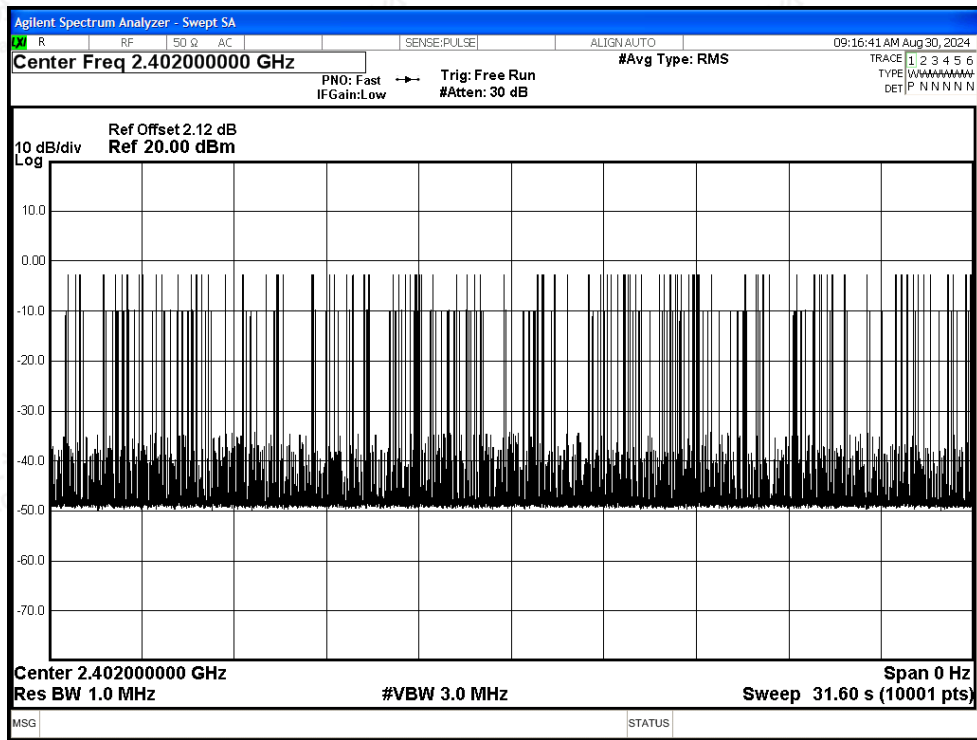


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant One Burst

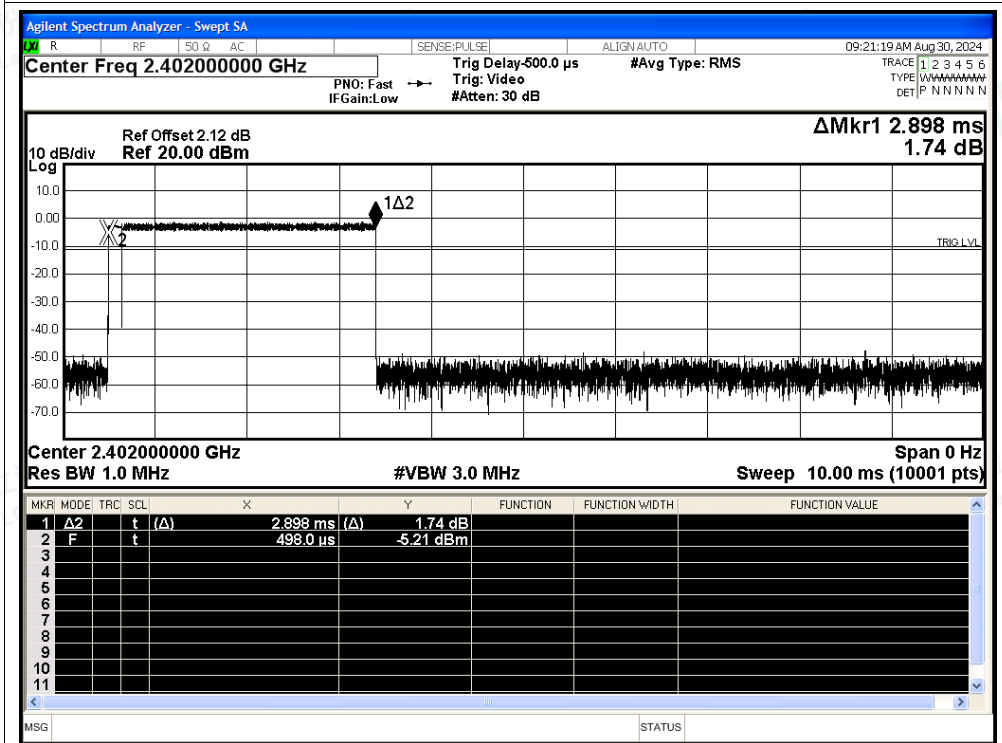


Dwell NVNT 1-DH5 2402MHz Ant Accumulated

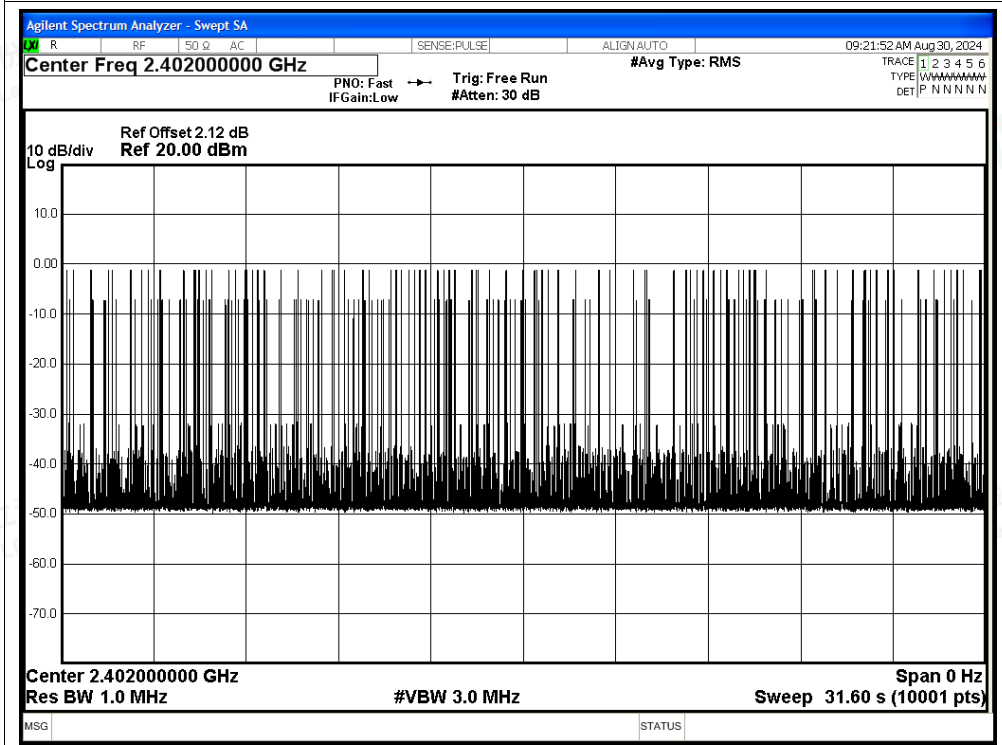




Dwell NVNT 2-DH5 2402MHz Ant One Burst

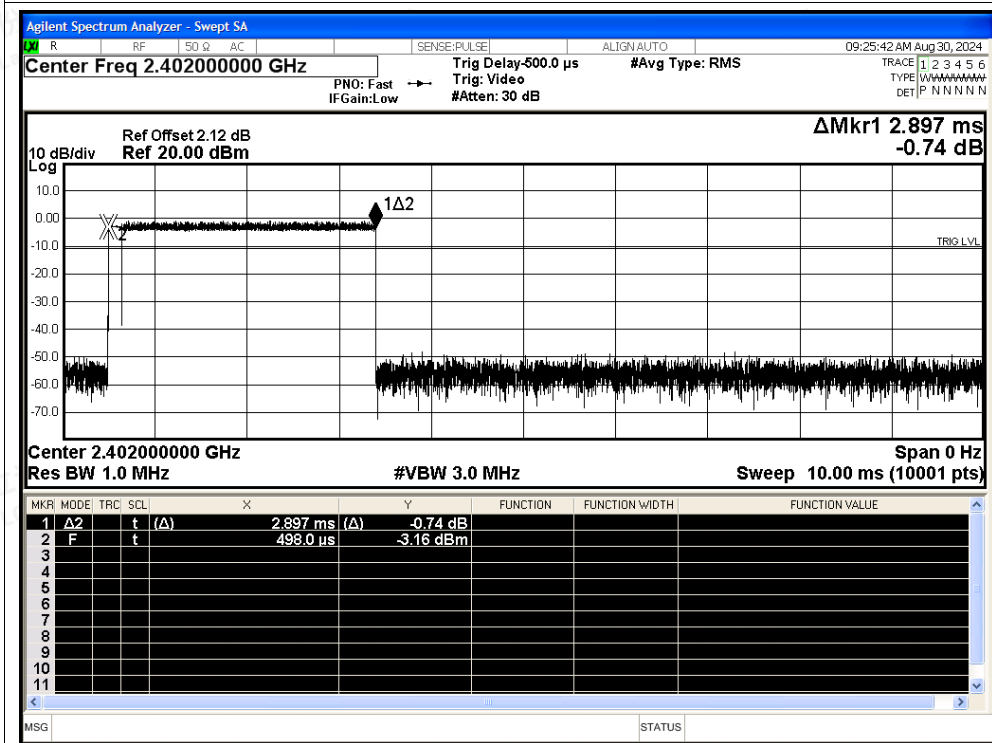


Dwell NVNT 2-DH5 2402MHz Ant Accumulated

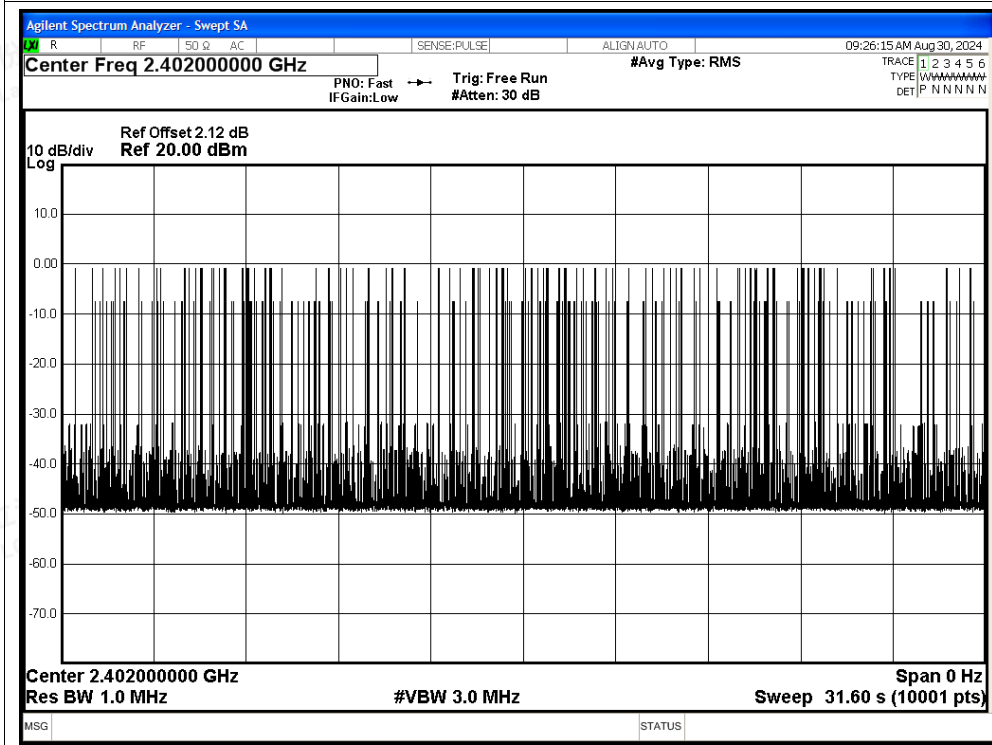




Dwell NVNT 3-DH5 2402MHz Ant One Burst



Dwell NVNT 3-DH5 2402MHz Ant Accumulated





## A.5 Number of Hopping Channel

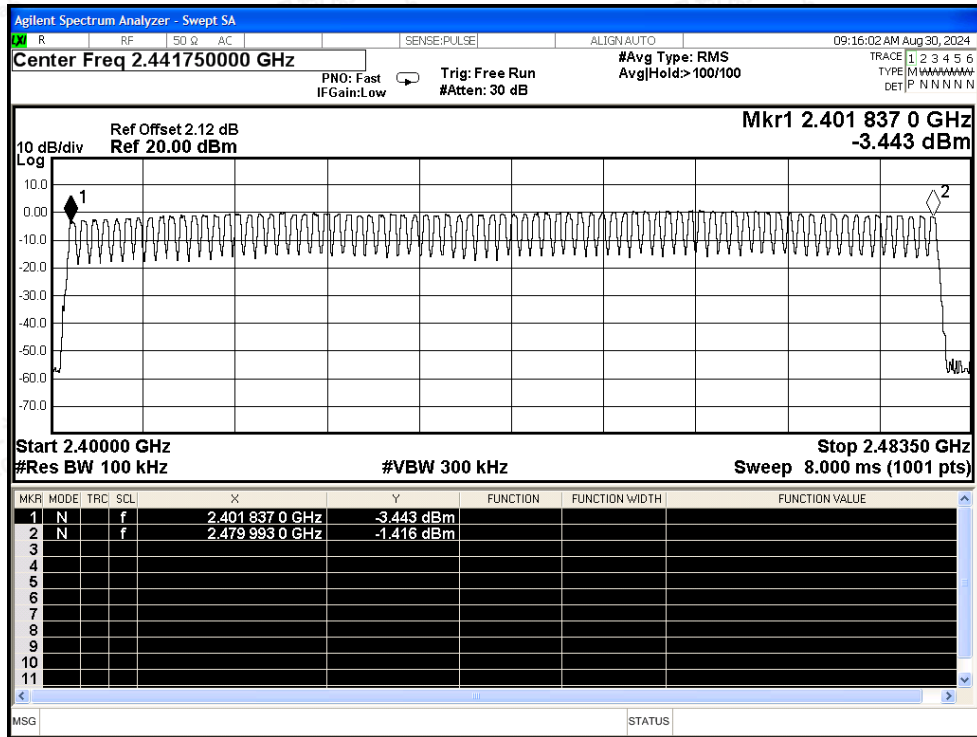
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant	79	15	Pass
NVNT	2-DH5	Ant	79	15	Pass
NVNT	3-DH5	Ant	79	15	Pass



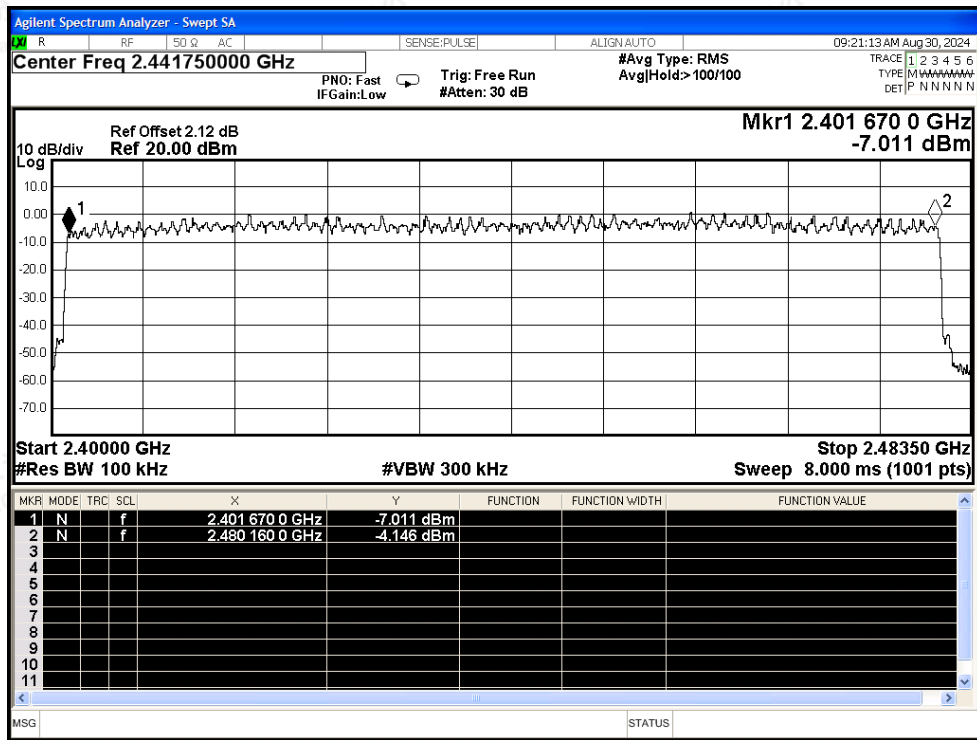


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant

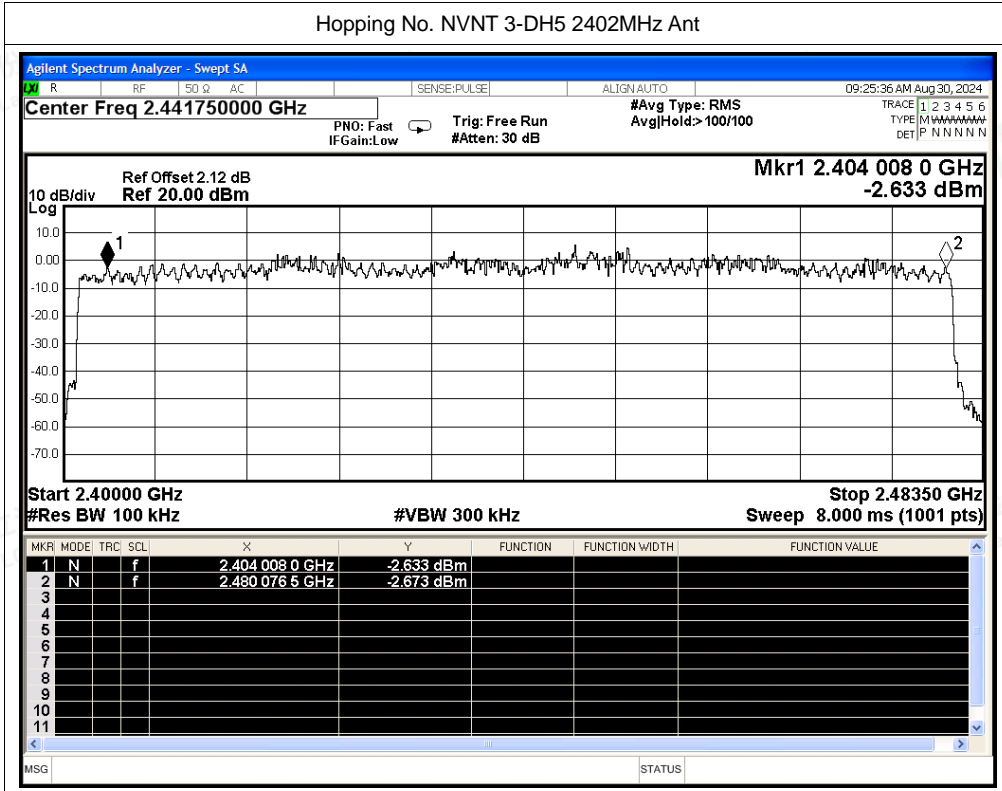


Hopping No. NVNT 2-DH5 2402MHz Ant





Hopping No. NVNT 3-DH5 2402MHz Ant





## A.6 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant	No-Hopping	-54.79	-20	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	-56.9	-20	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	-53.65	-20	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	-53.44	-20	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	-52.15	-20	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	-53.61	-20	Pass

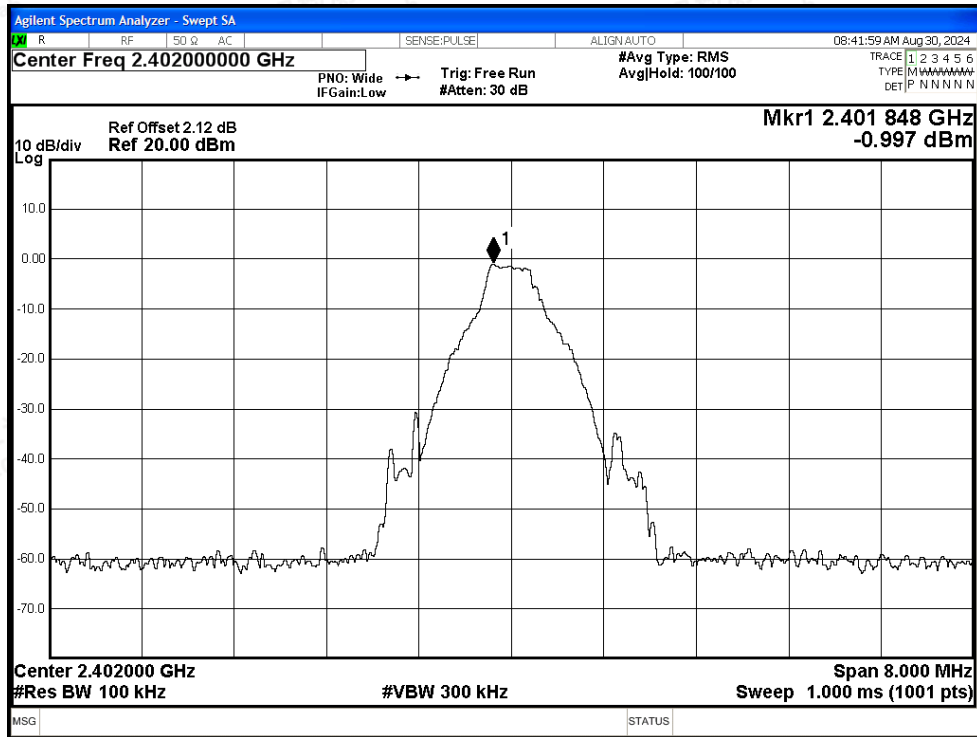




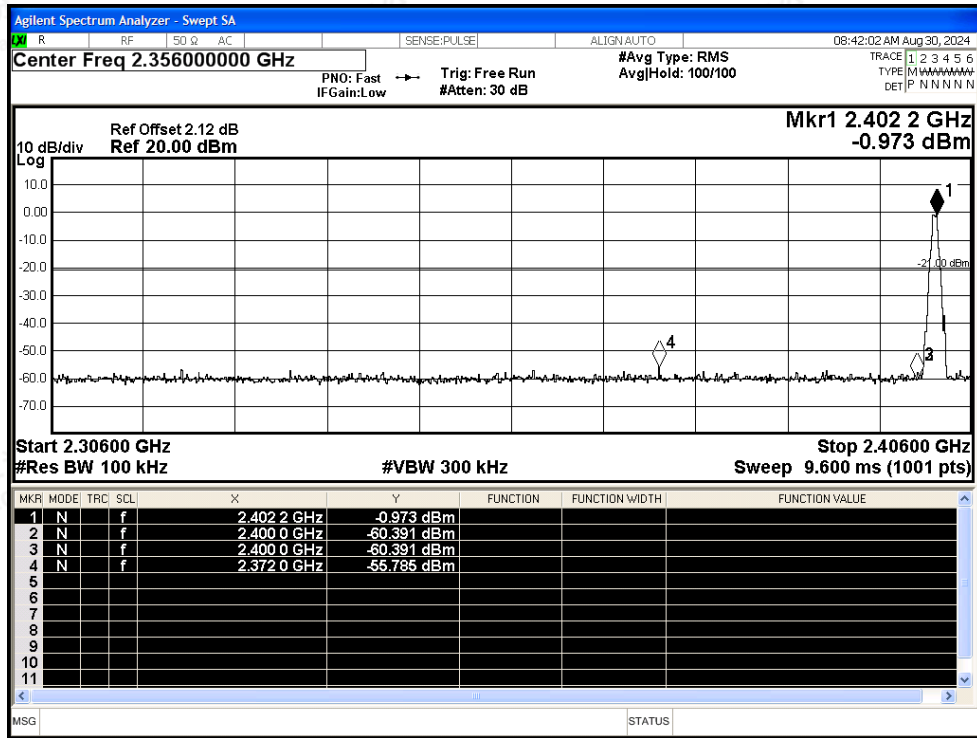


Test Graphs

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

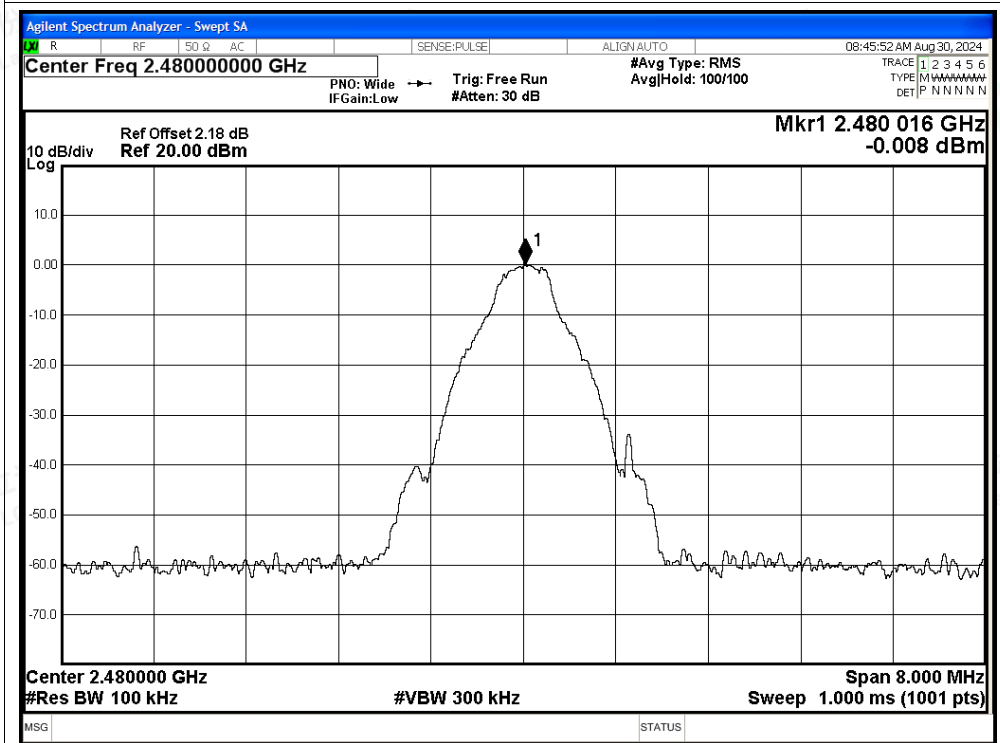


Band Edge NVNT 1-DH5 2402MHz Ant No-Hopping Emission

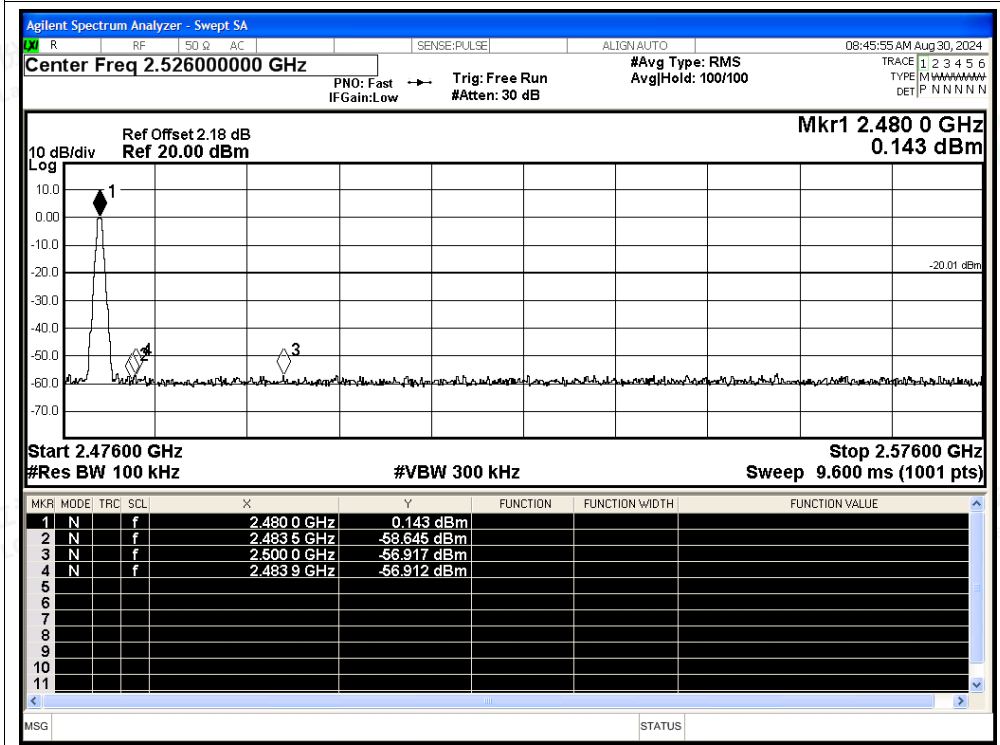




Band Edge NVNT 1-DH5 2480MHz Ant No-Hopping Ref

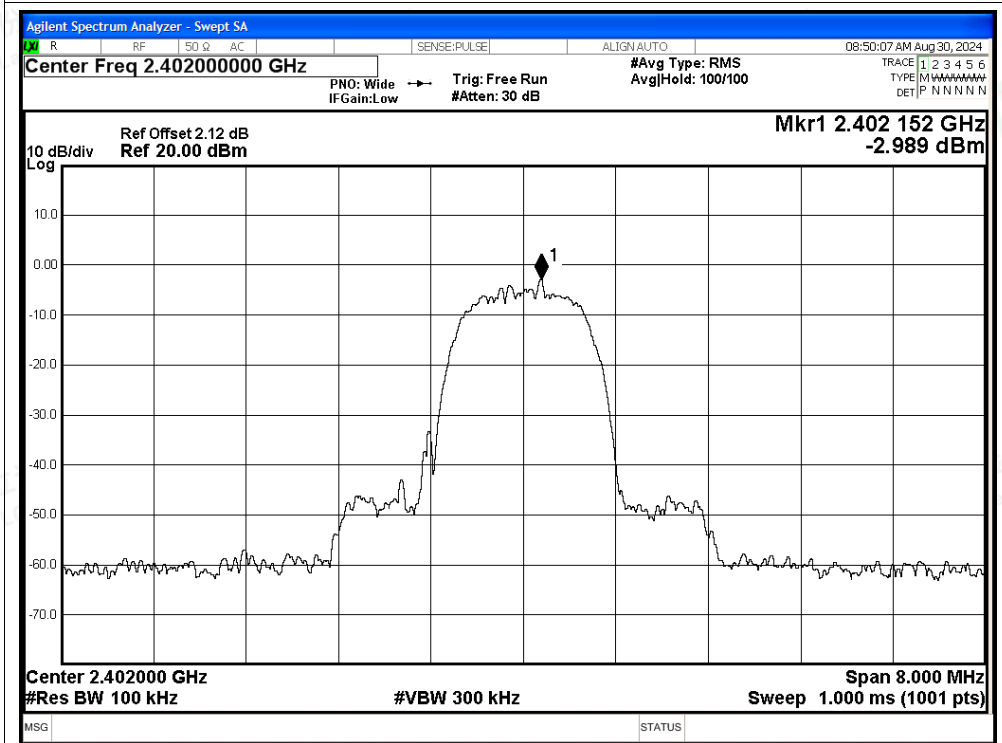


Band Edge NVNT 1-DH5 2480MHz Ant No-Hopping Emission

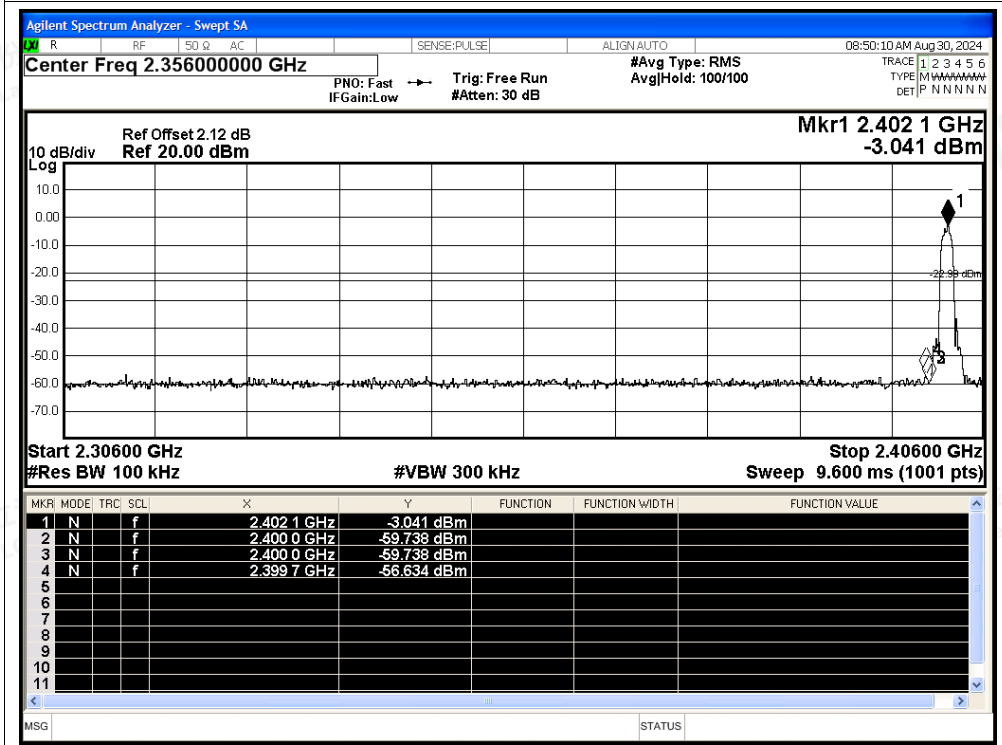




Band Edge NVNT 2-DH5 2402MHz Ant No-Hopping Ref

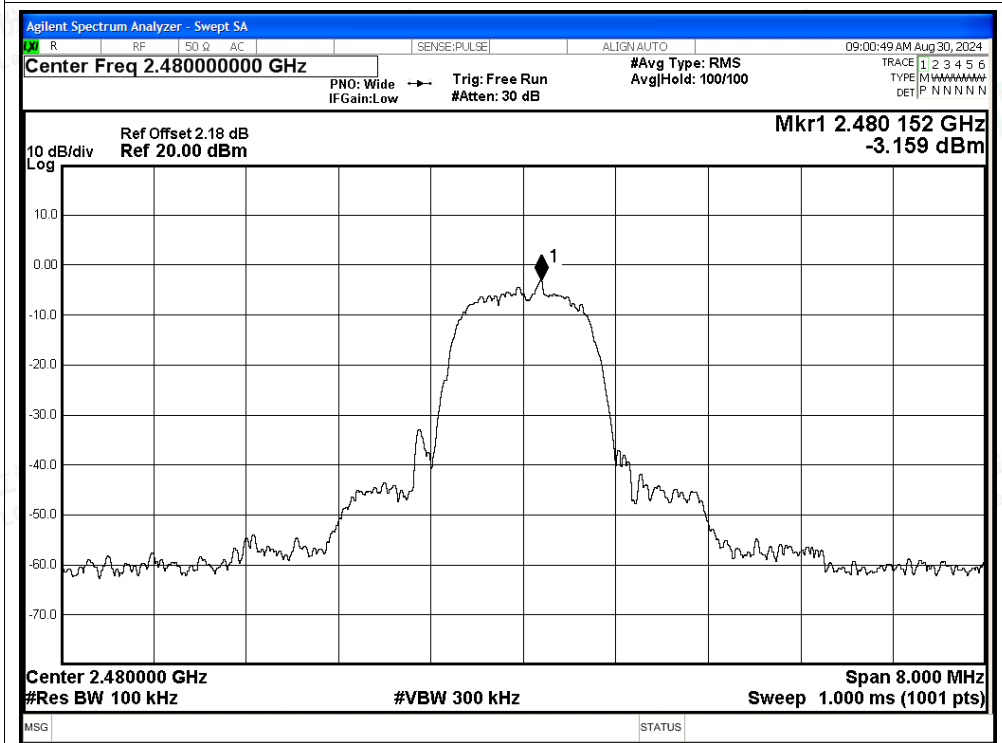


Band Edge NVNT 2-DH5 2402MHz Ant No-Hopping Emission

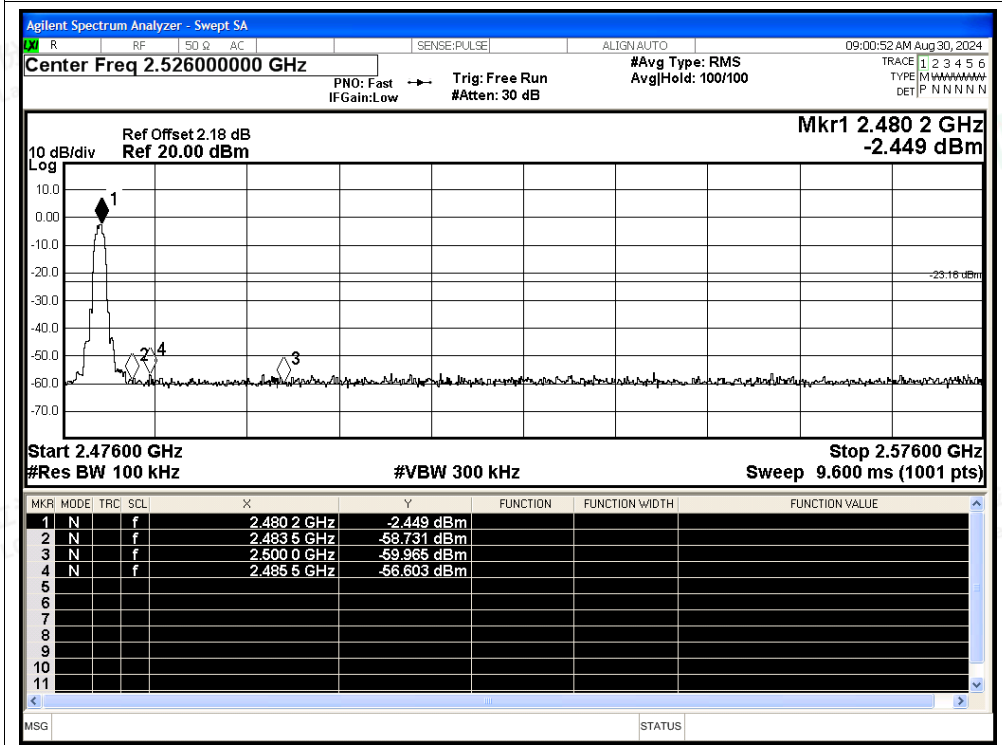




Band Edge NVNT 2-DH5 2480MHz Ant No-Hopping Ref

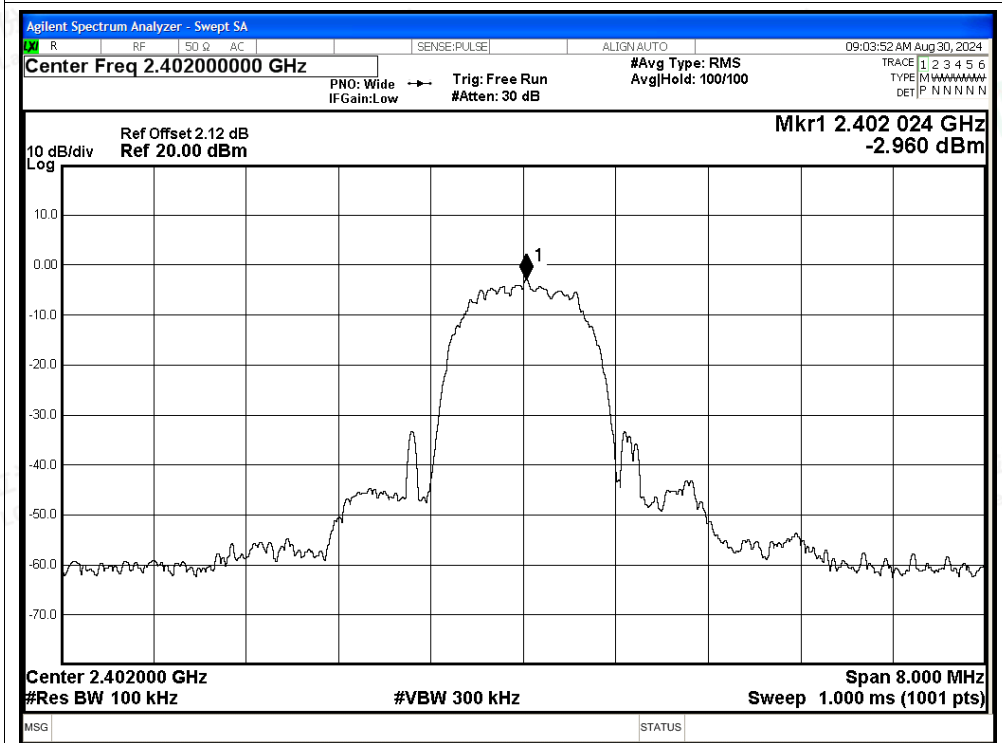


Band Edge NVNT 2-DH5 2480MHz Ant No-Hopping Emission

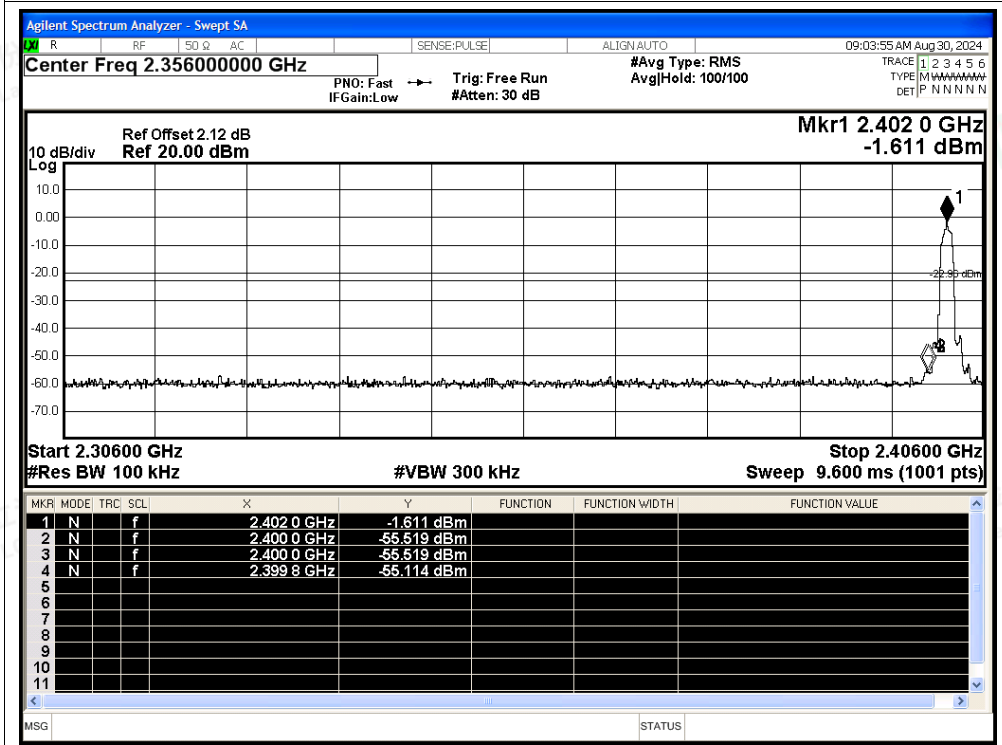




Band Edge NVNT 3-DH5 2402MHz Ant No-Hopping Ref

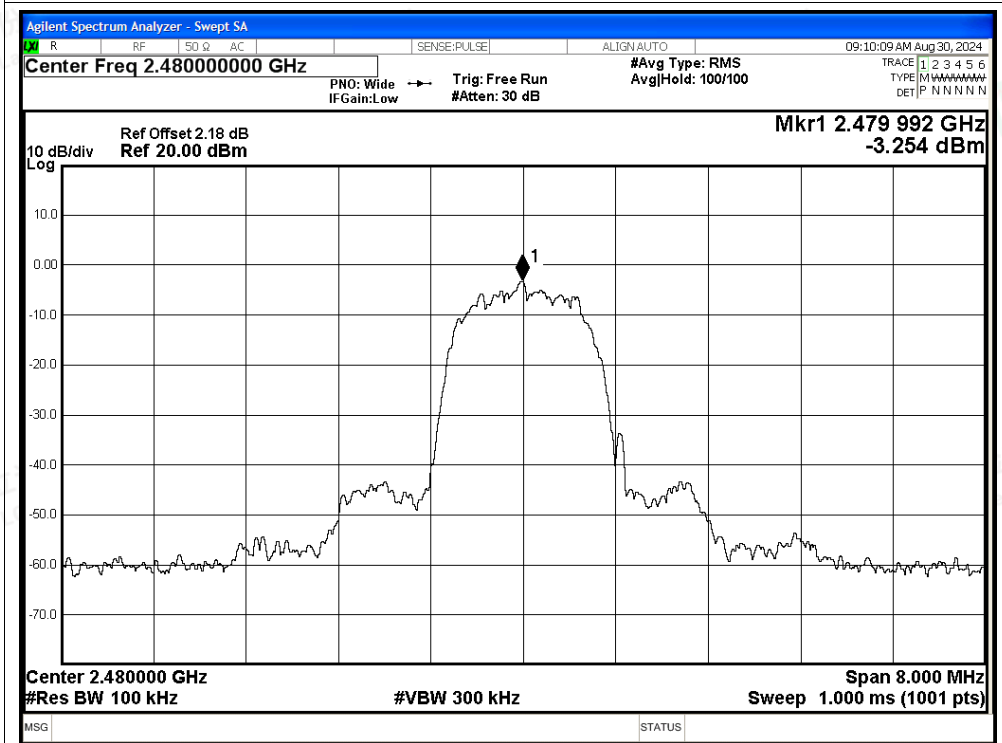


Band Edge NVNT 3-DH5 2402MHz Ant No-Hopping Emission

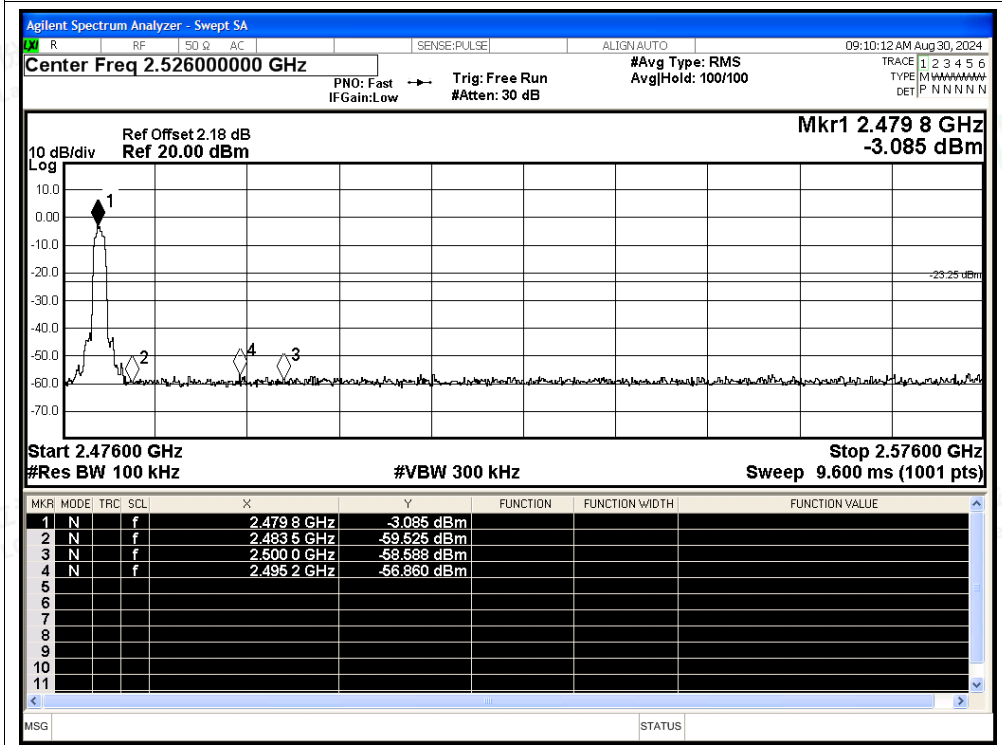




Band Edge NVNT 3-DH5 2480MHz Ant No-Hopping Ref



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





### (Hopping)

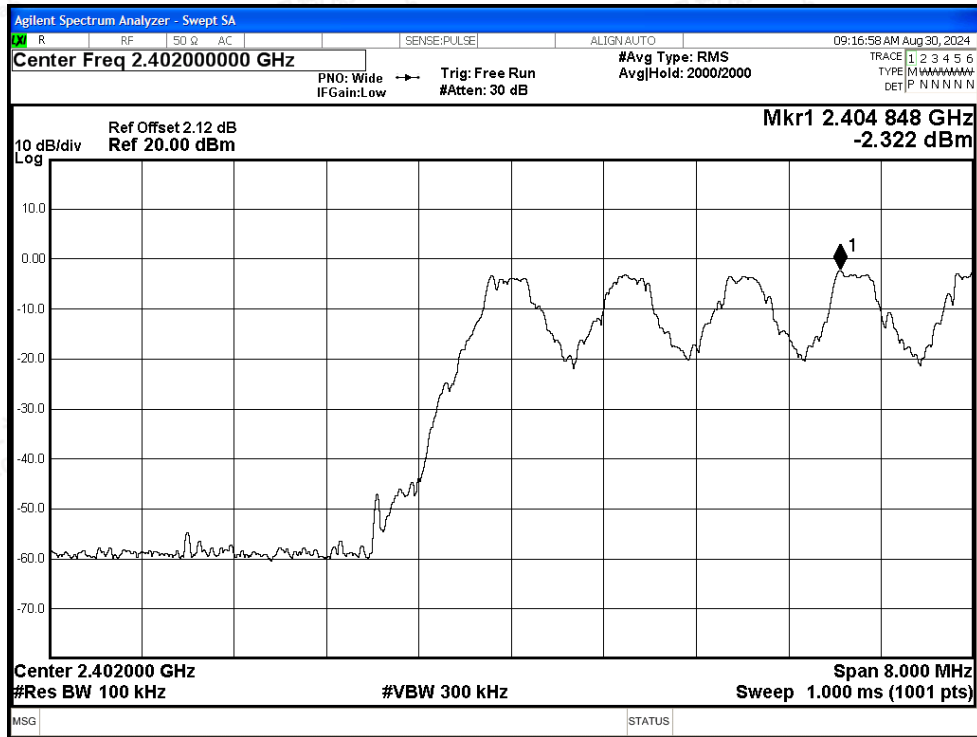
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant	Hopping	-53.11	-20	Pass
NVNT	1-DH5	2480	Ant	Hopping	-53.18	-20	Pass
NVNT	2-DH5	2402	Ant	Hopping	-52.46	-20	Pass
NVNT	2-DH5	2480	Ant	Hopping	-53.22	-20	Pass
NVNT	3-DH5	2402	Ant	Hopping	-52.73	-20	Pass
NVNT	3-DH5	2480	Ant	Hopping	-53.41	-20	Pass



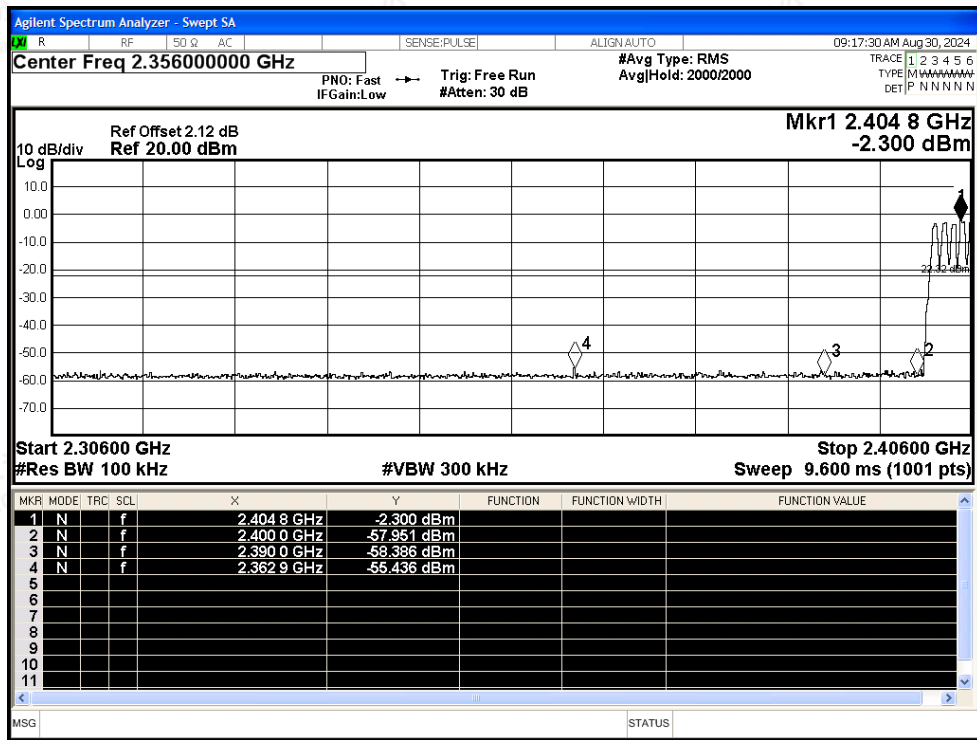


Test Graphs

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



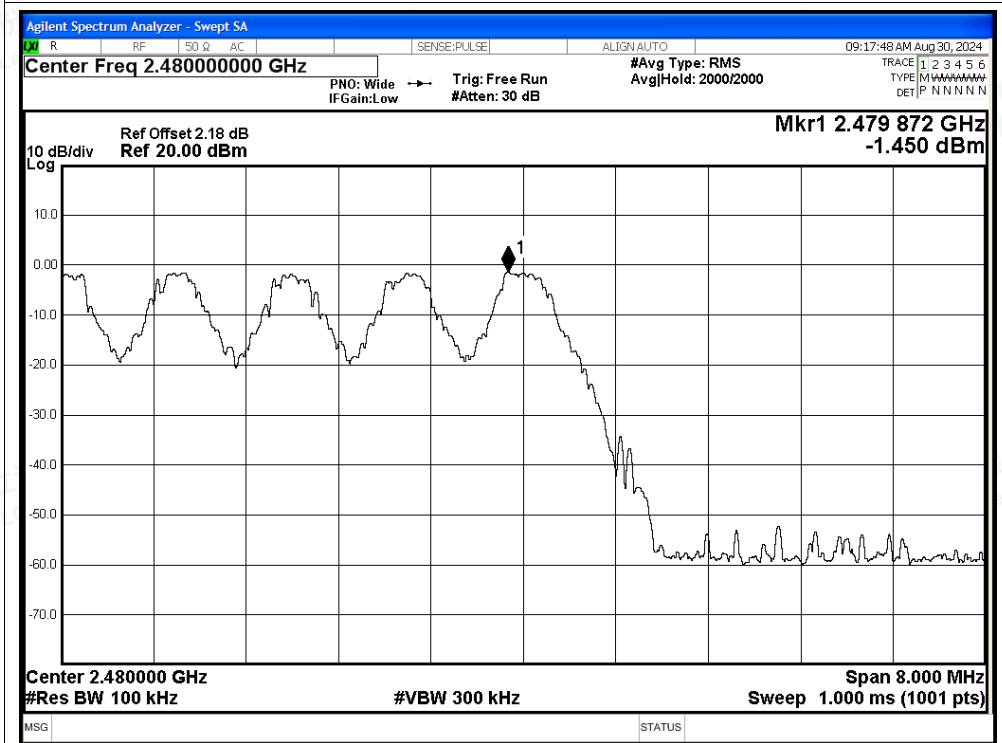
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant Hopping Emission



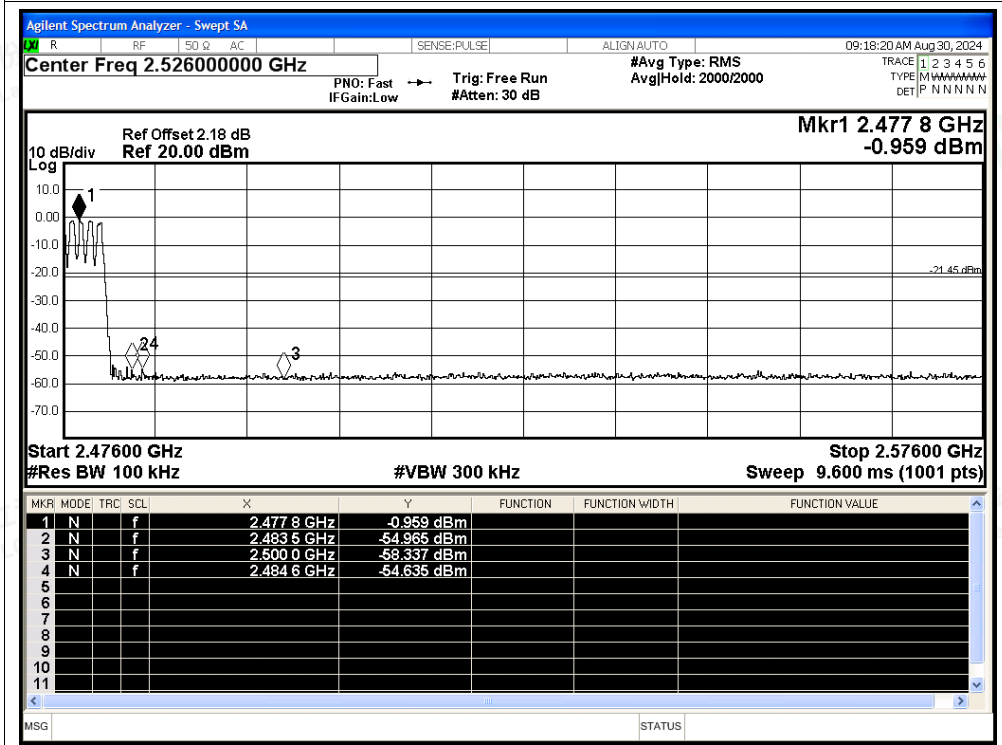




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant Hopping Ref

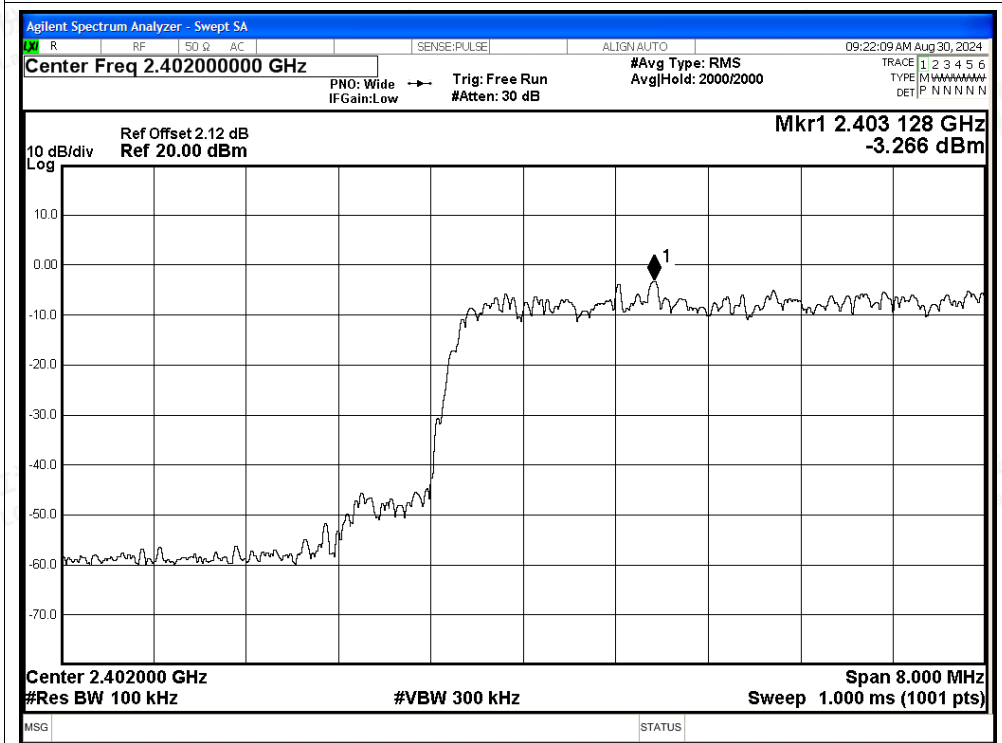


Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant Hopping Emission

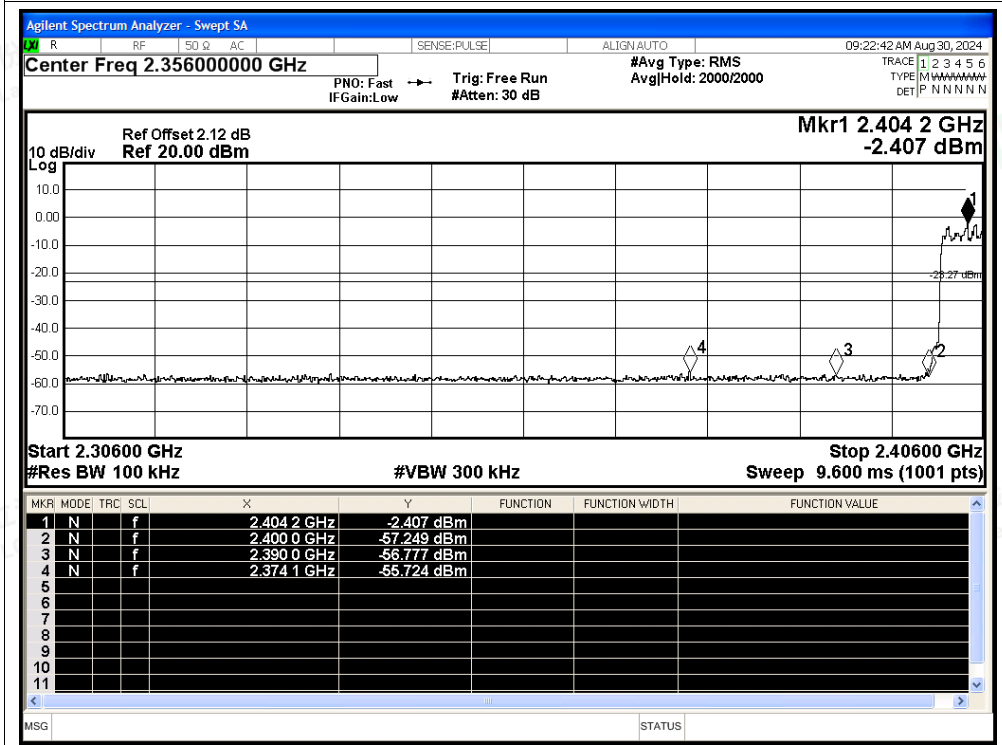




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant Hopping Ref



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

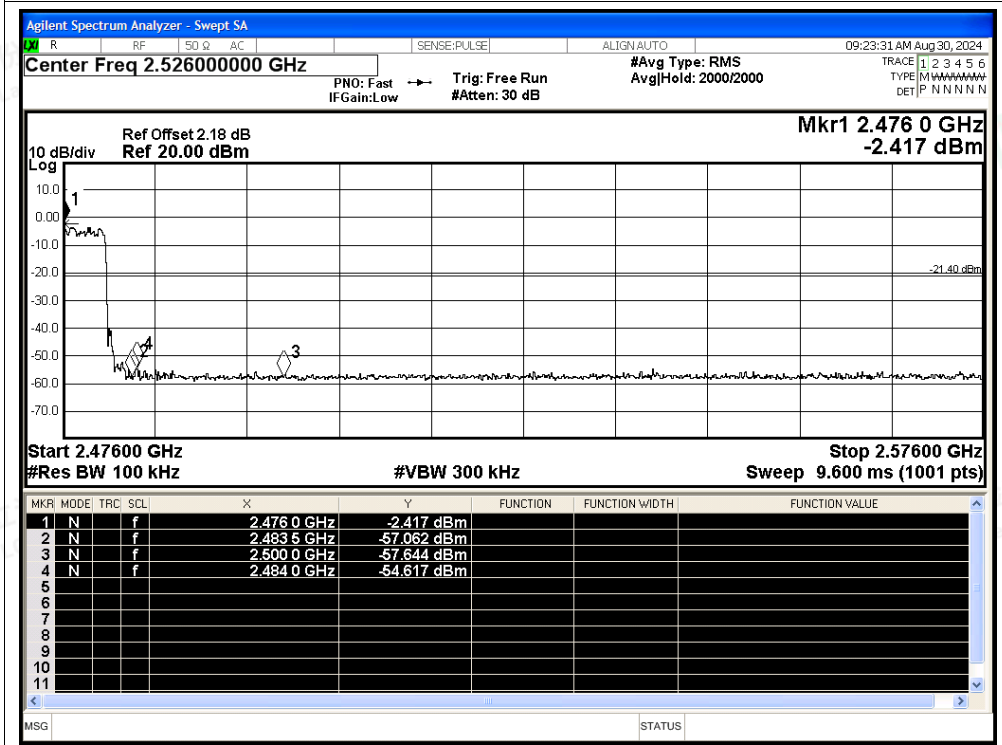




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant Hopping Ref

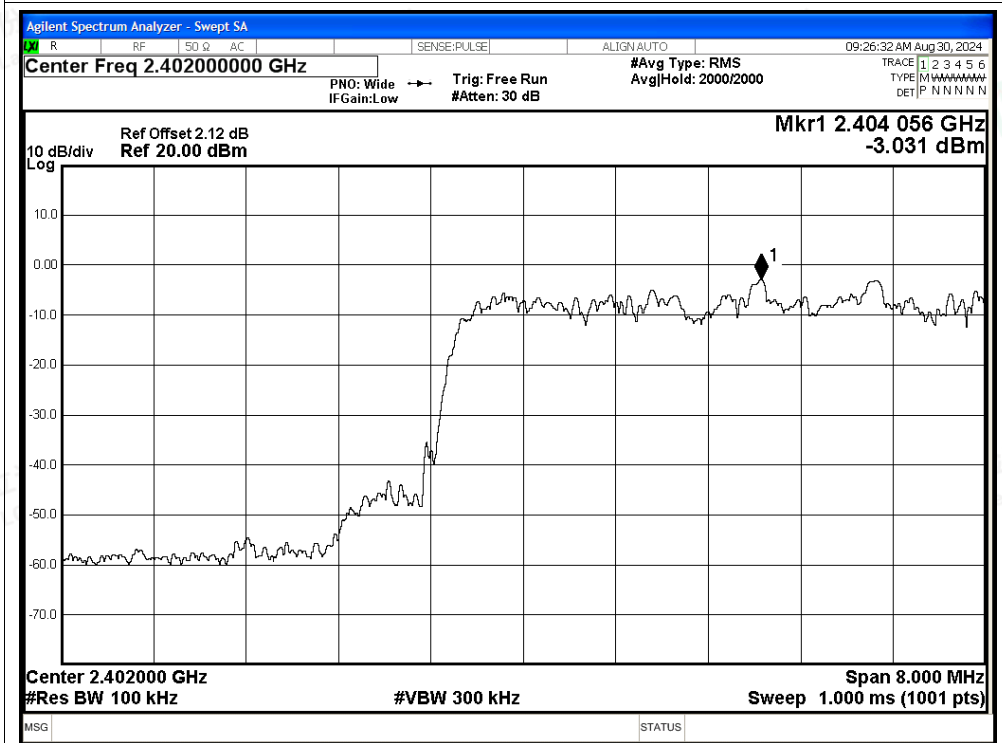


Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant Hopping Emission

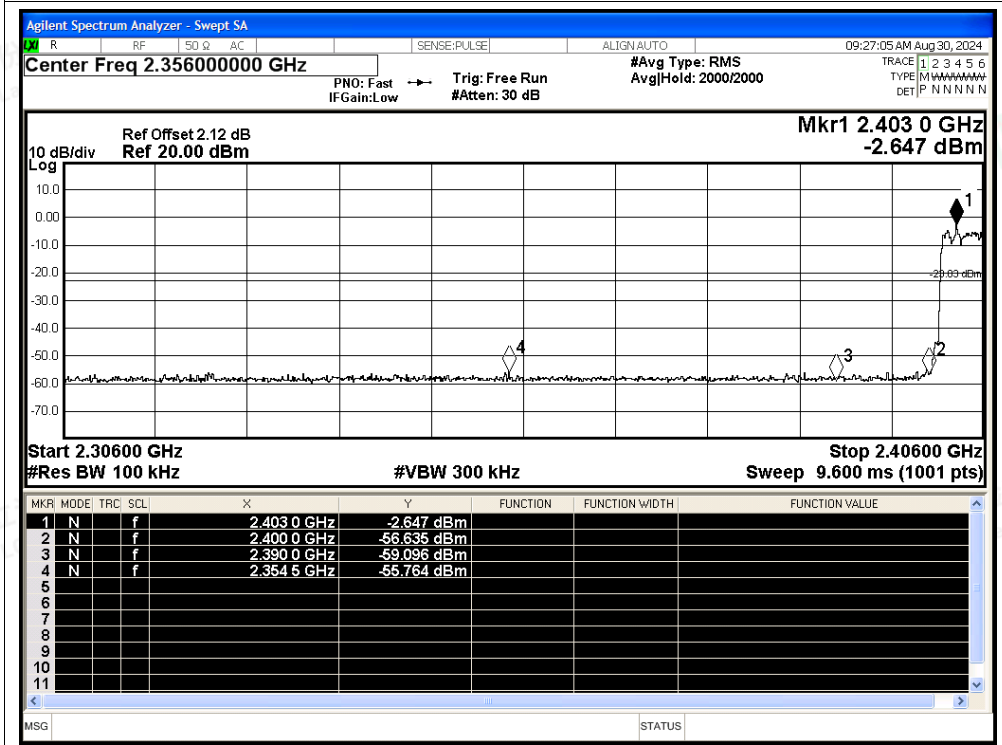




Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant Hopping Ref

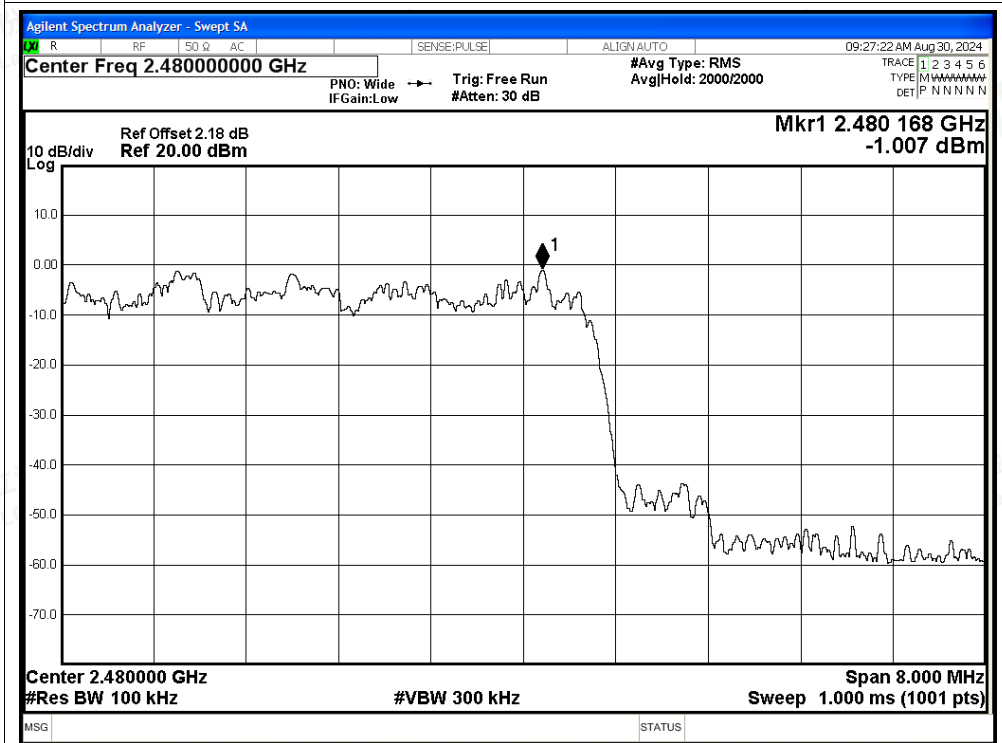


Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant Hopping Emission

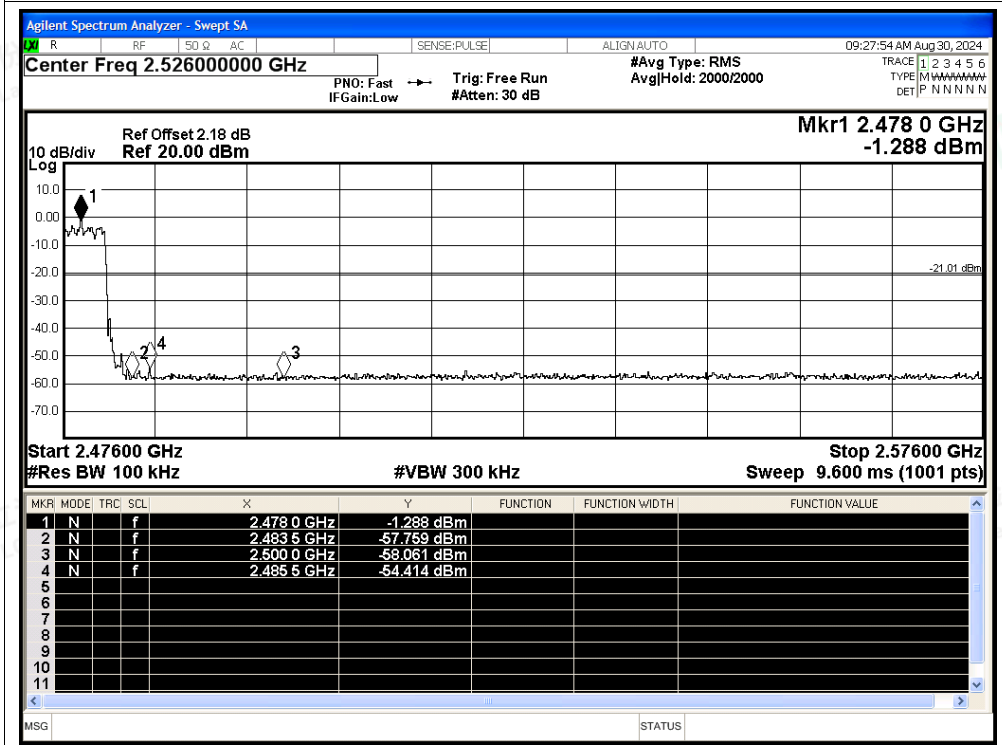




Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant Hopping Ref



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





### A.7 Conducted RF Spurious Emission

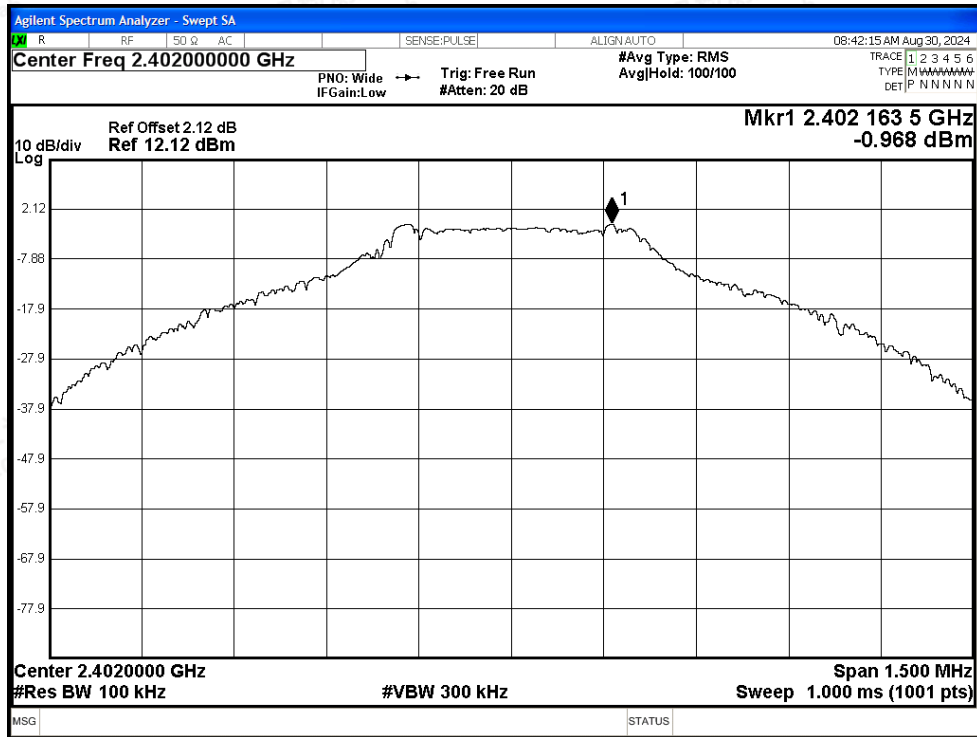
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant	-53.73	-20	Pass
NVNT	1-DH5	2441	Ant	-53.98	-20	Pass
NVNT	1-DH5	2480	Ant	-54.23	-20	Pass
NVNT	2-DH5	2402	Ant	-53.12	-20	Pass
NVNT	2-DH5	2441	Ant	-52.93	-20	Pass
NVNT	2-DH5	2480	Ant	-52.06	-20	Pass
NVNT	3-DH5	2402	Ant	-54.04	-20	Pass
NVNT	3-DH5	2441	Ant	-52.62	-20	Pass
NVNT	3-DH5	2480	Ant	-53.37	-20	Pass



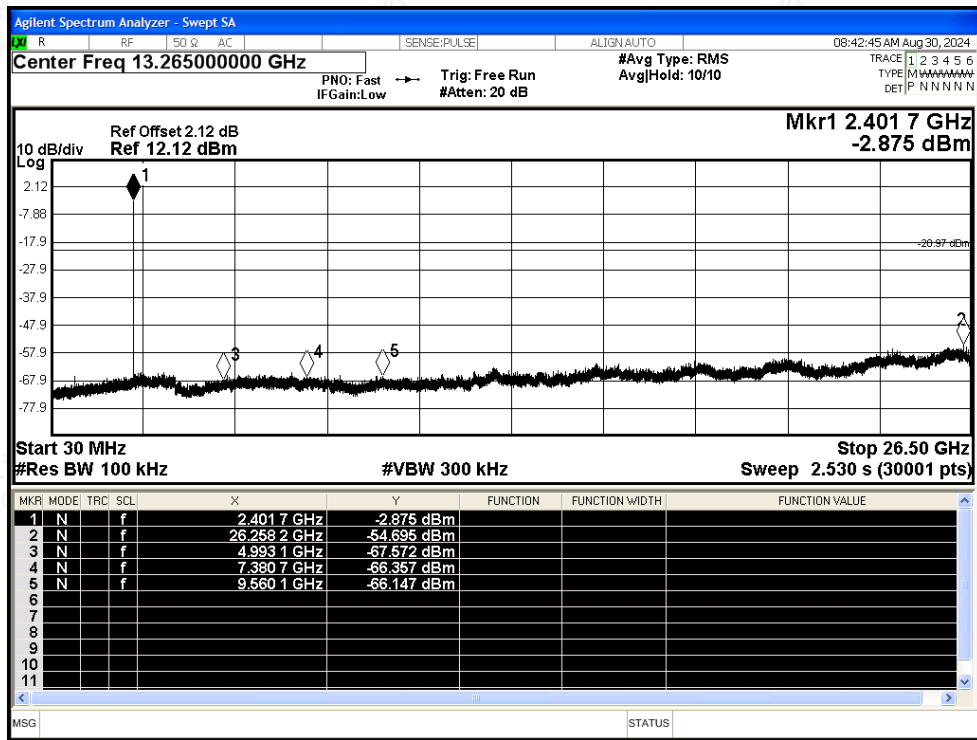


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant Ref

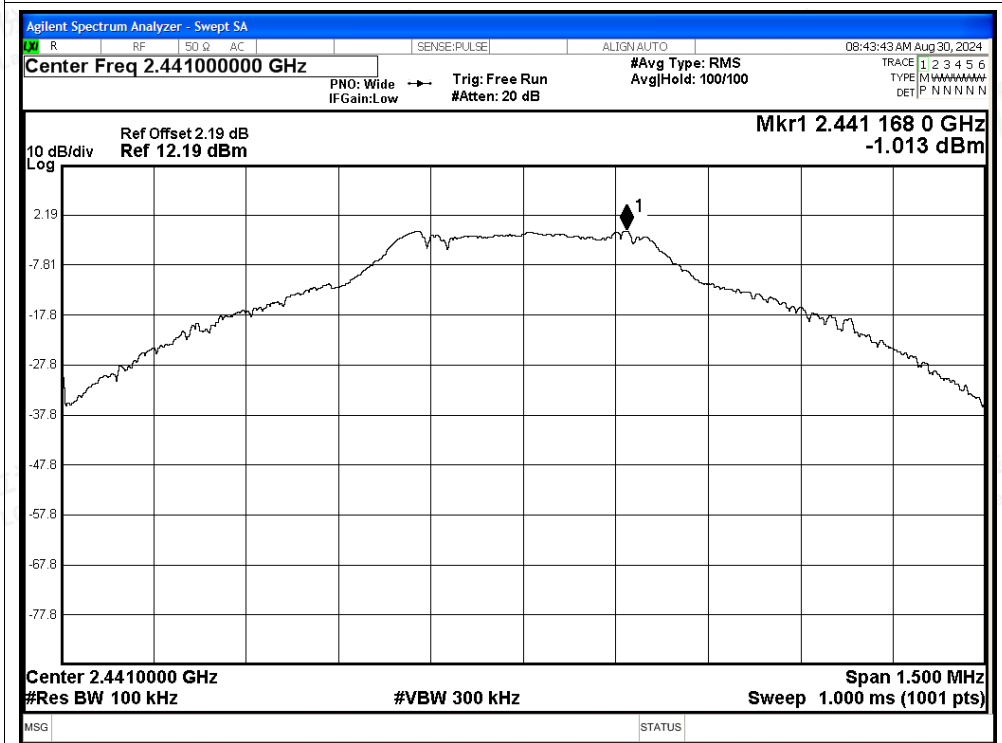


Tx. Spurious NVNT 1-DH5 2402MHz Ant Emission

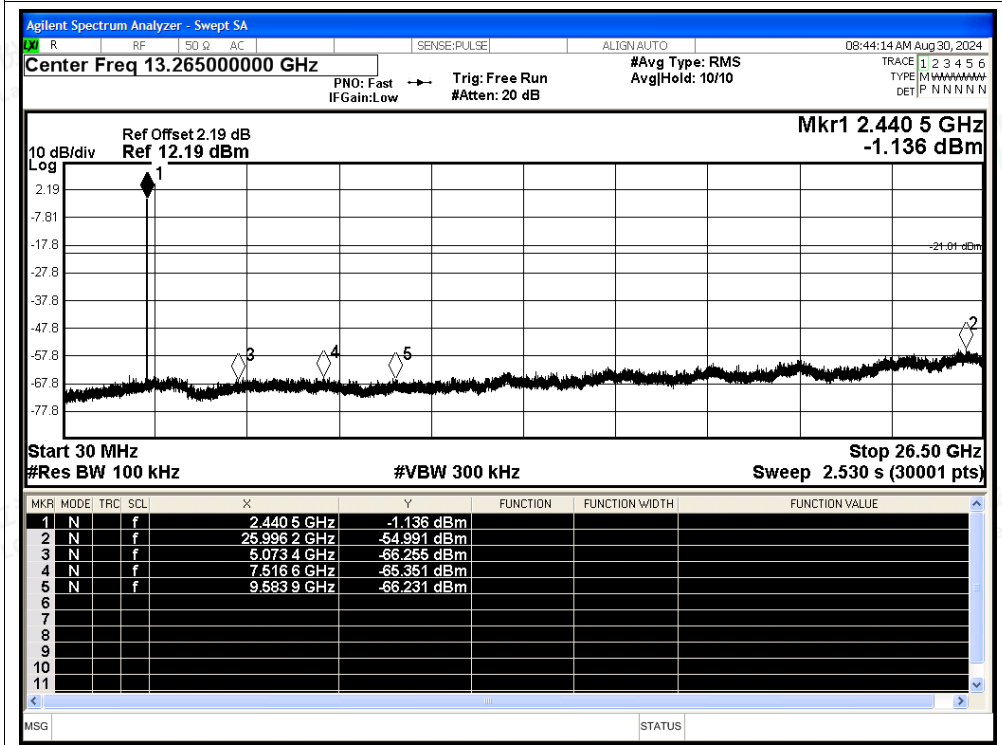




Tx. Spurious NVNT 1-DH5 2441MHz Ant Ref



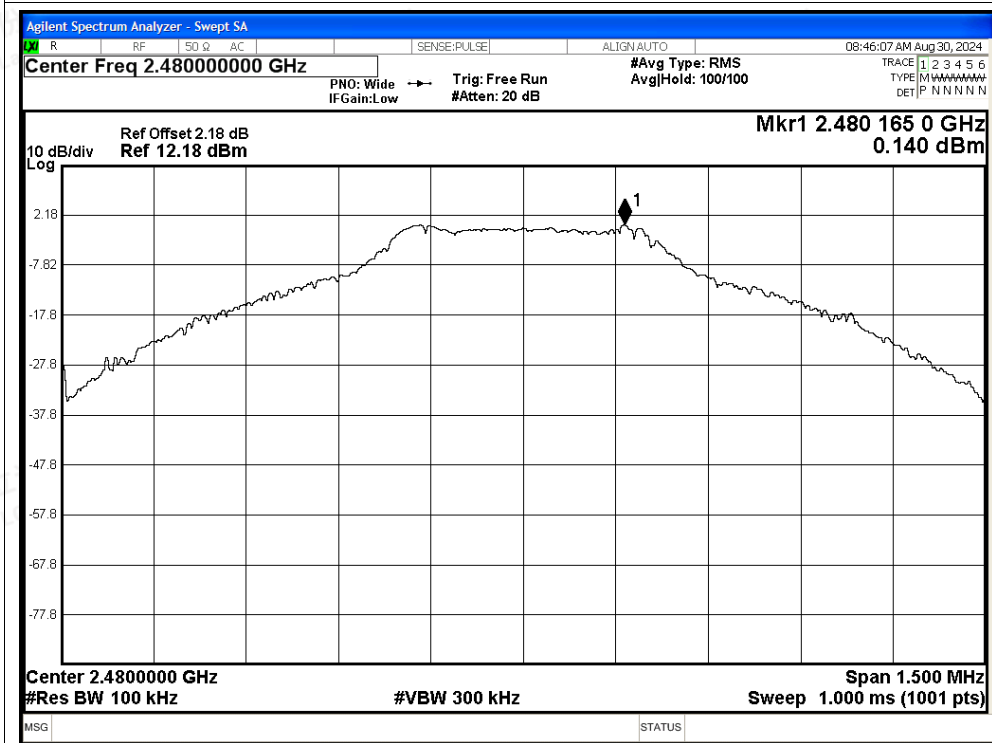
Tx. Spurious NVNT 1-DH5 2441MHz Ant Emission



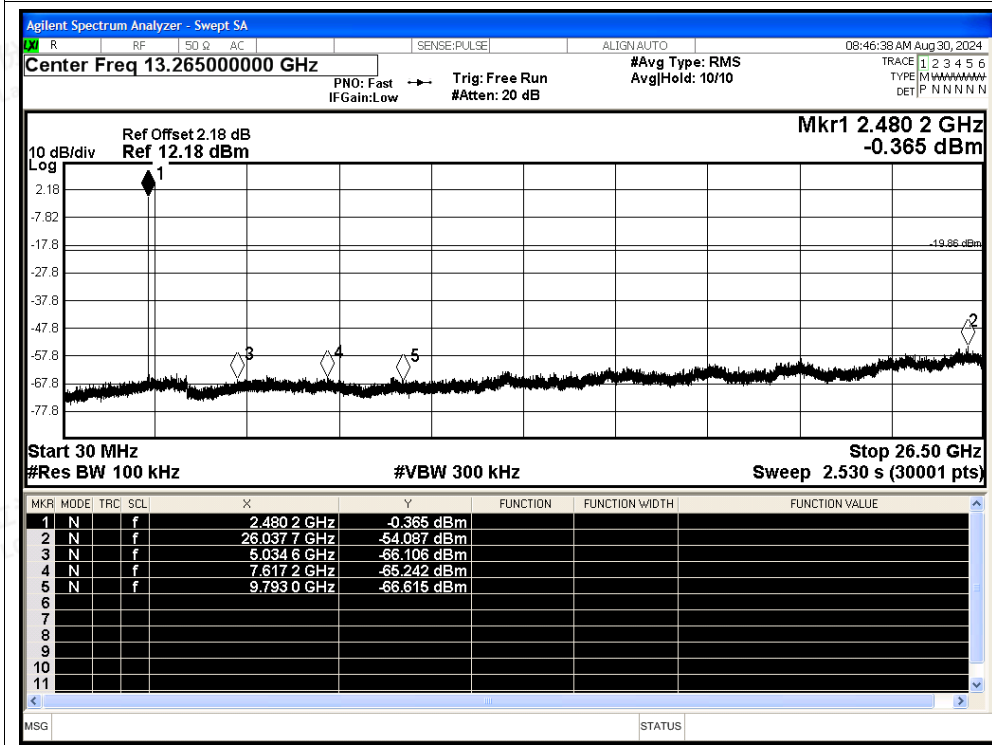




Tx. Spurious NVNT 1-DH5 2480MHz Ant Ref

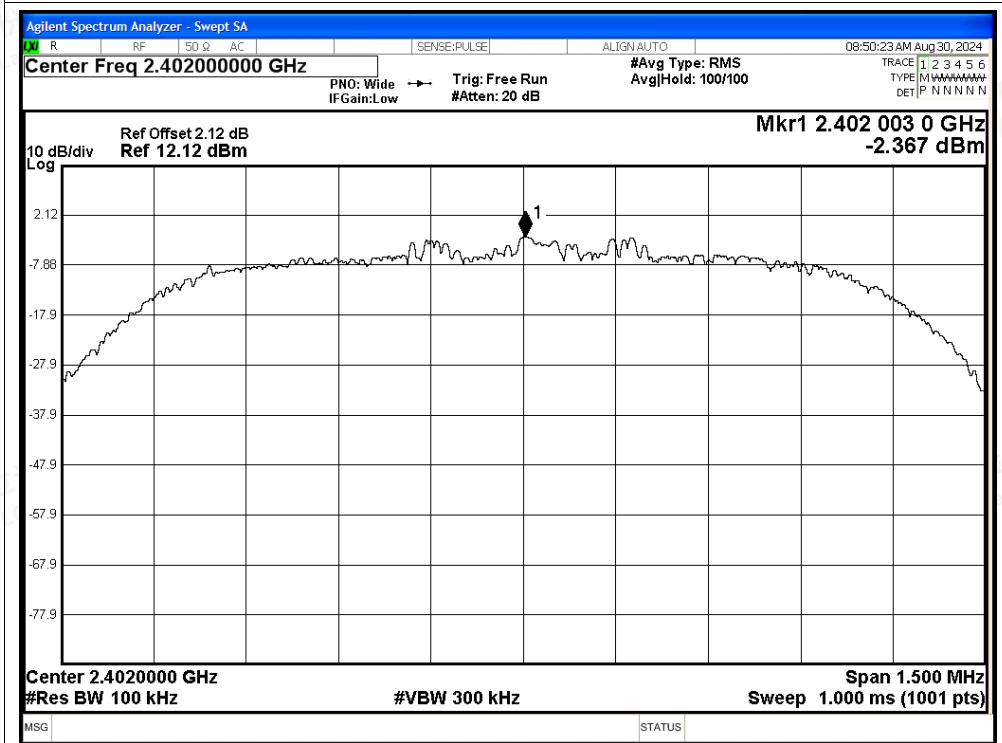


Tx. Spurious NVNT 1-DH5 2480MHz Ant Emission

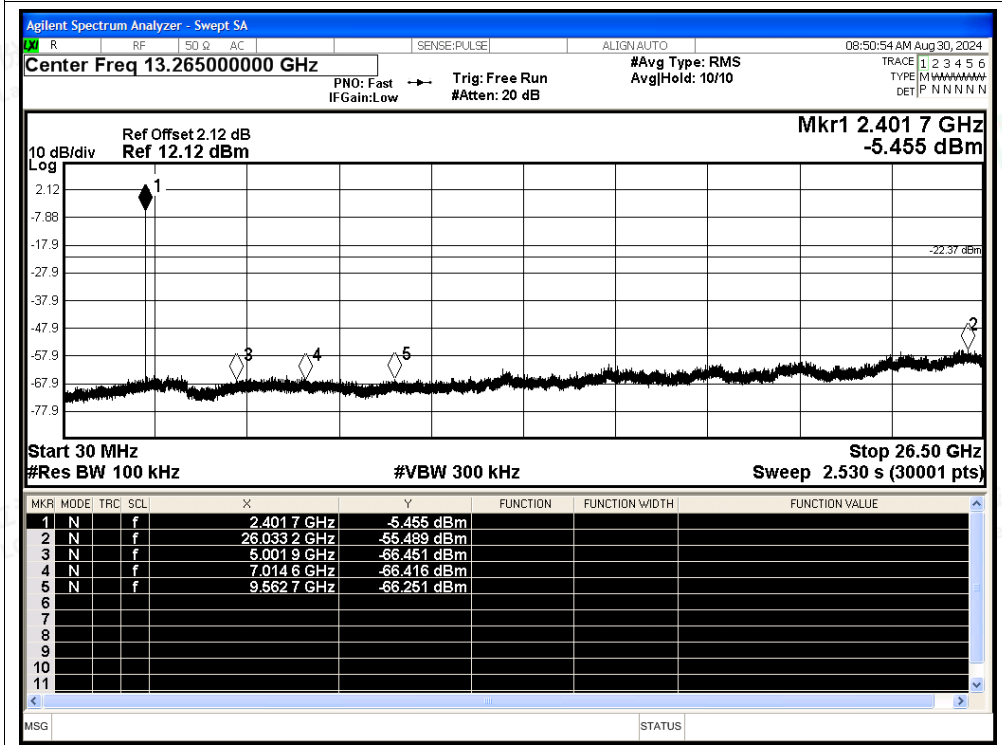




Tx. Spurious NVNT 2-DH5 2402MHz Ant Ref

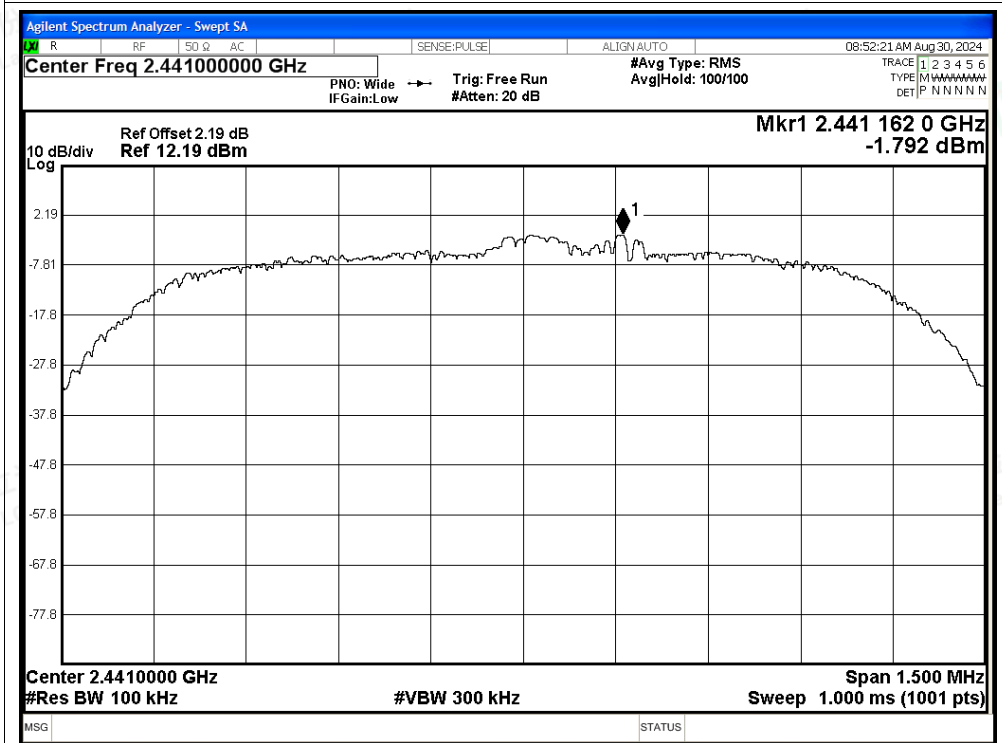


Tx. Spurious NVNT 2-DH5 2402MHz Ant Emission

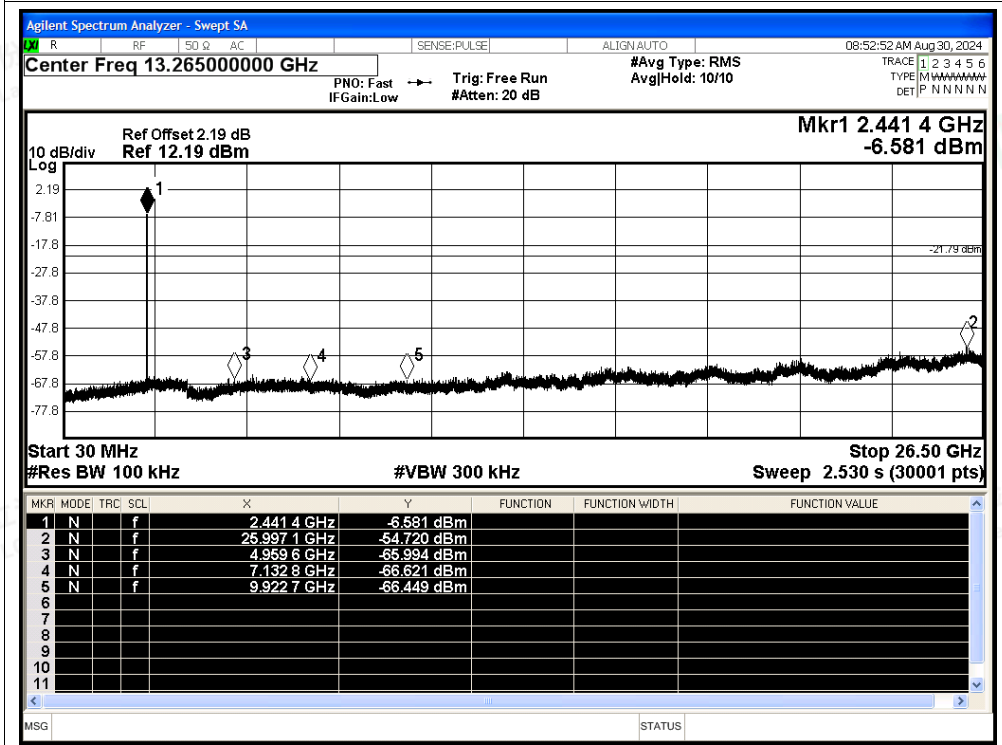




Tx. Spurious NVNT 2-DH5 2441MHz Ant Ref

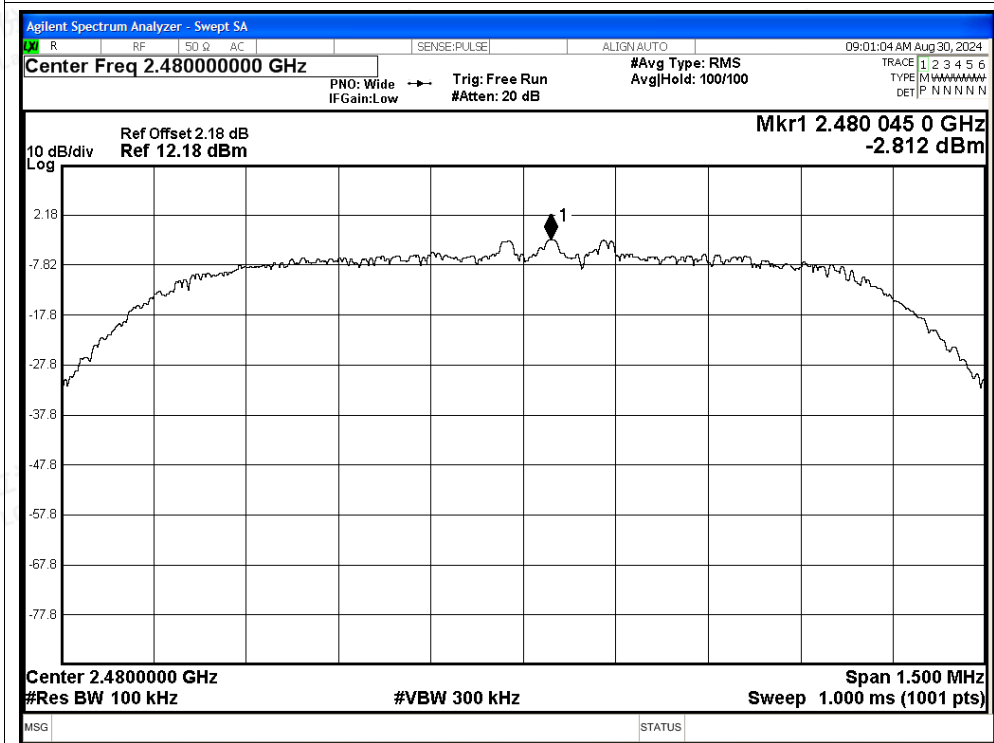


Tx. Spurious NVNT 2-DH5 2441MHz Ant Emission

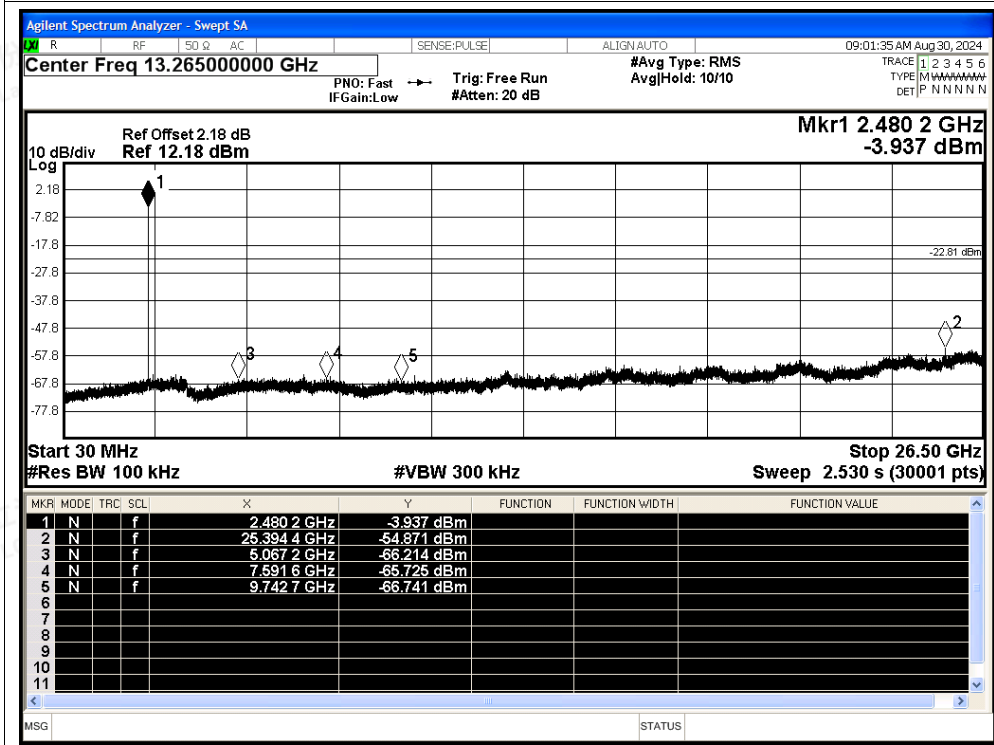




Tx. Spurious NVNT 2-DH5 2480MHz Ant Ref

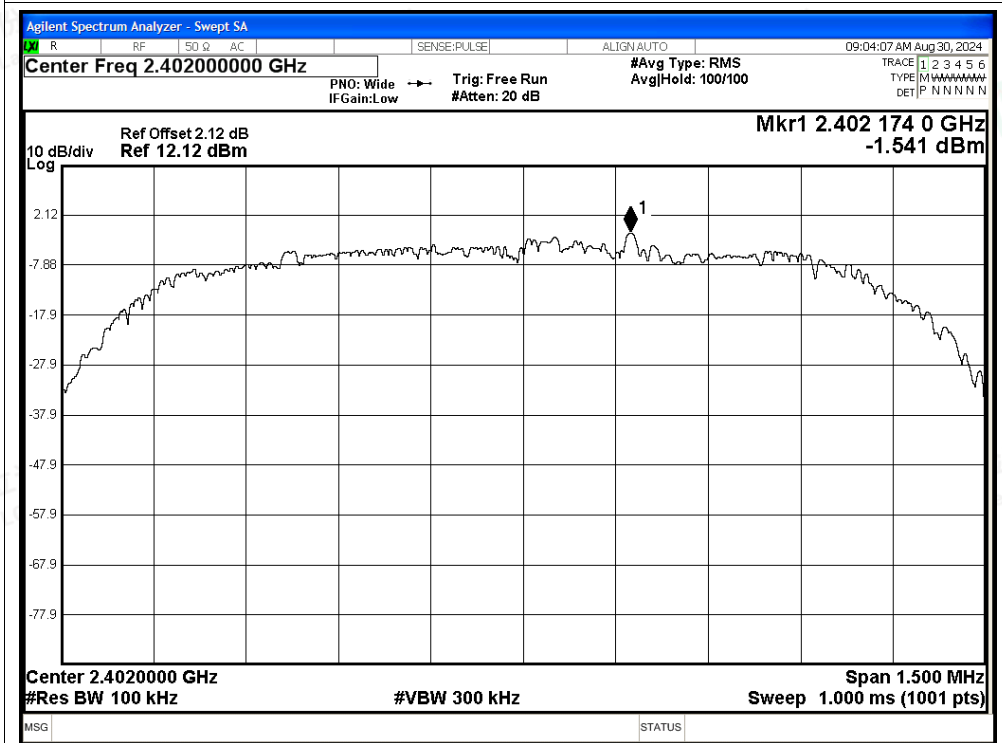


Tx. Spurious NVNT 2-DH5 2480MHz Ant Emission

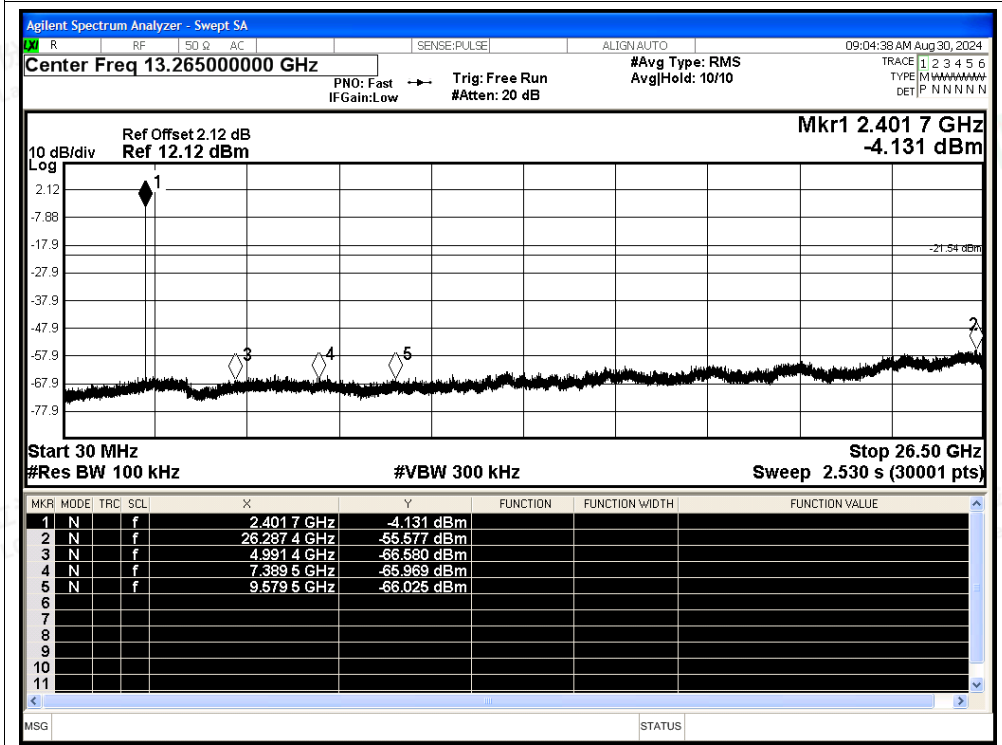




Tx. Spurious NVNT 3-DH5 2402MHz Ant Ref

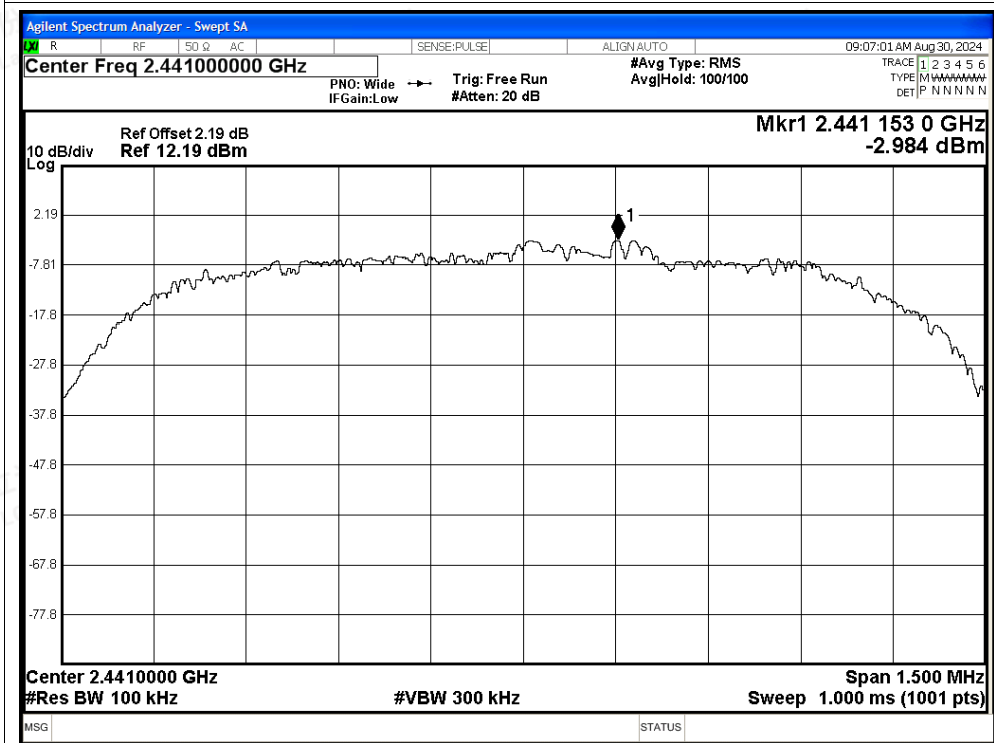


Tx. Spurious NVNT 3-DH5 2402MHz Ant Emission

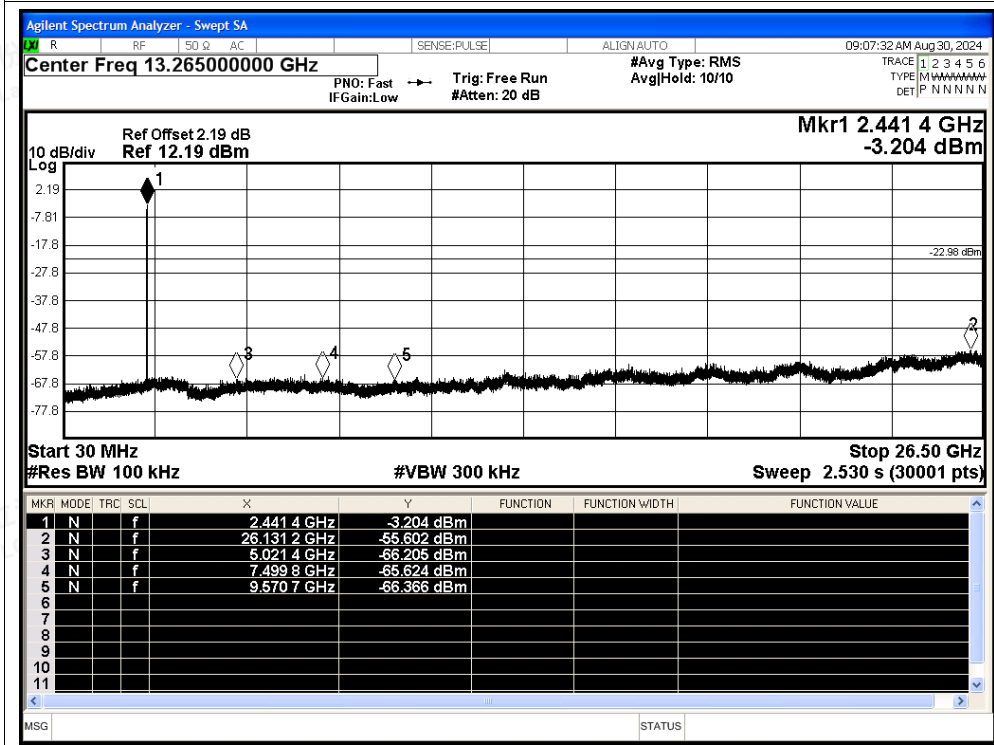




Tx. Spurious NVNT 3-DH5 2441MHz Ant Ref

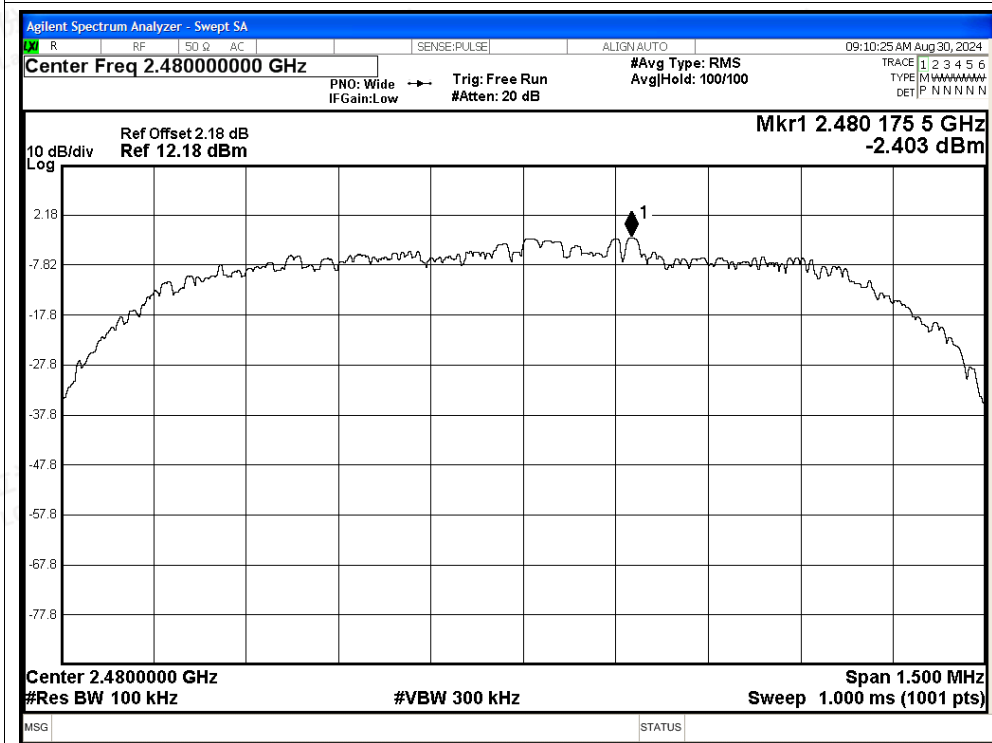


Tx. Spurious NVNT 3-DH5 2441MHz Ant Emission

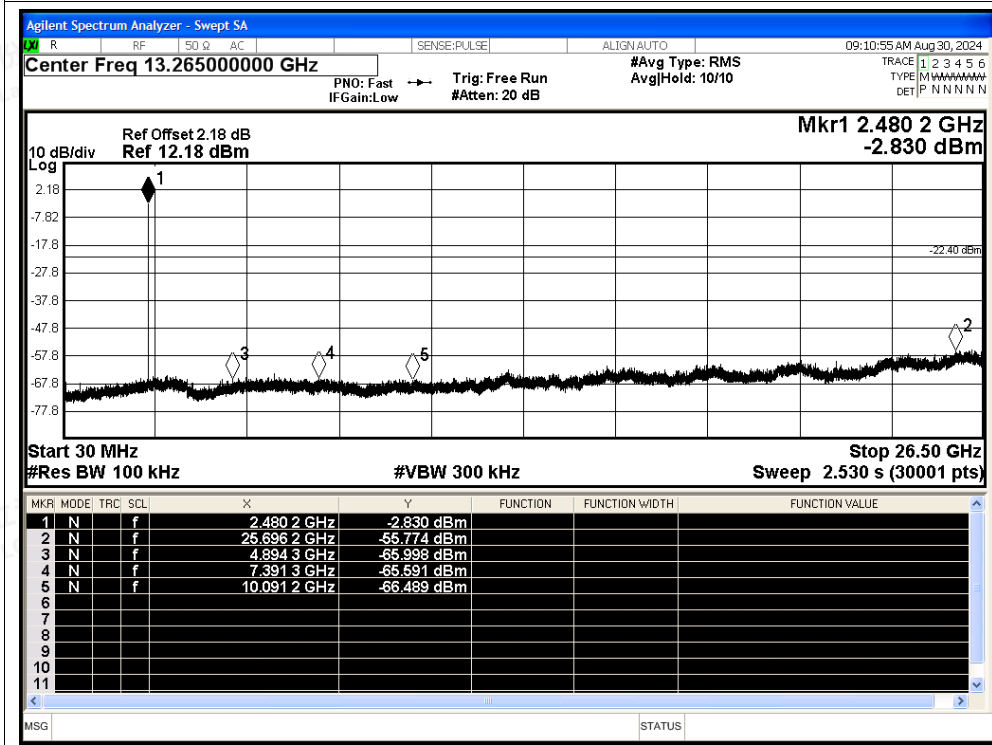




Tx. Spurious NVNT 3-DH5 2480MHz Ant Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant Emission





### A.8 Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant	77.6	1.1	0.34
NVNT	1-DH5	2441	Ant	77.6	1.1	0.34
NVNT	1-DH5	2480	Ant	77.6	1.1	0.34
NVNT	2-DH5	2402	Ant	77.28	1.12	0.35
NVNT	2-DH5	2441	Ant	77.33	1.12	0.34
NVNT	2-DH5	2480	Ant	77.33	1.12	0.34
NVNT	3-DH5	2402	Ant	77.28	1.12	0.35
NVNT	3-DH5	2441	Ant	77.28	1.12	0.35
NVNT	3-DH5	2480	Ant	77.28	1.12	0.35

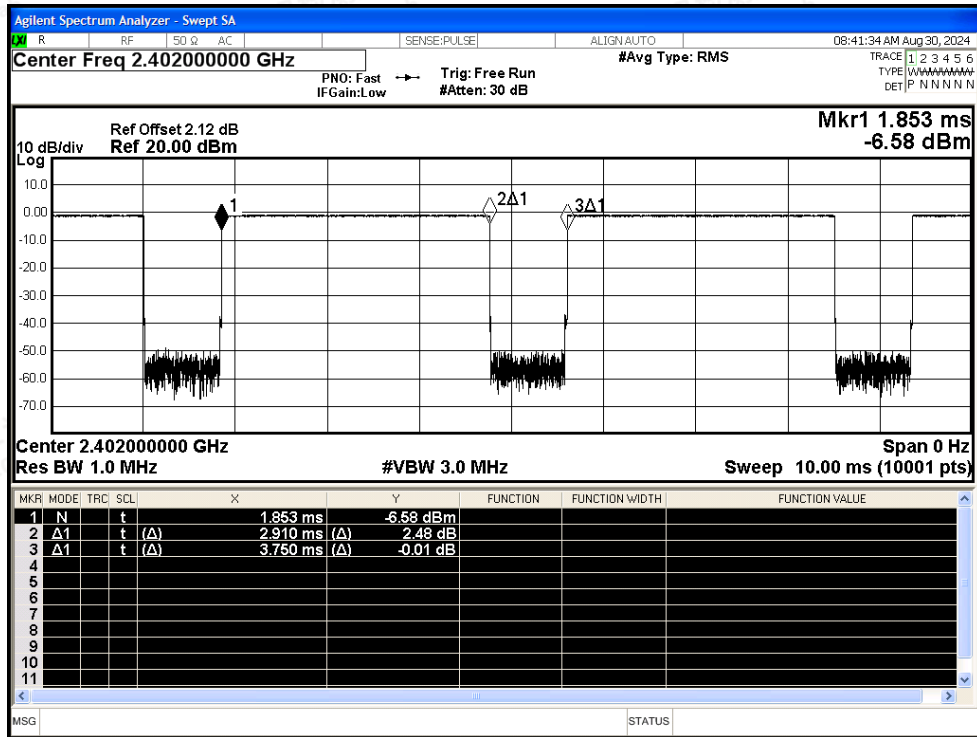




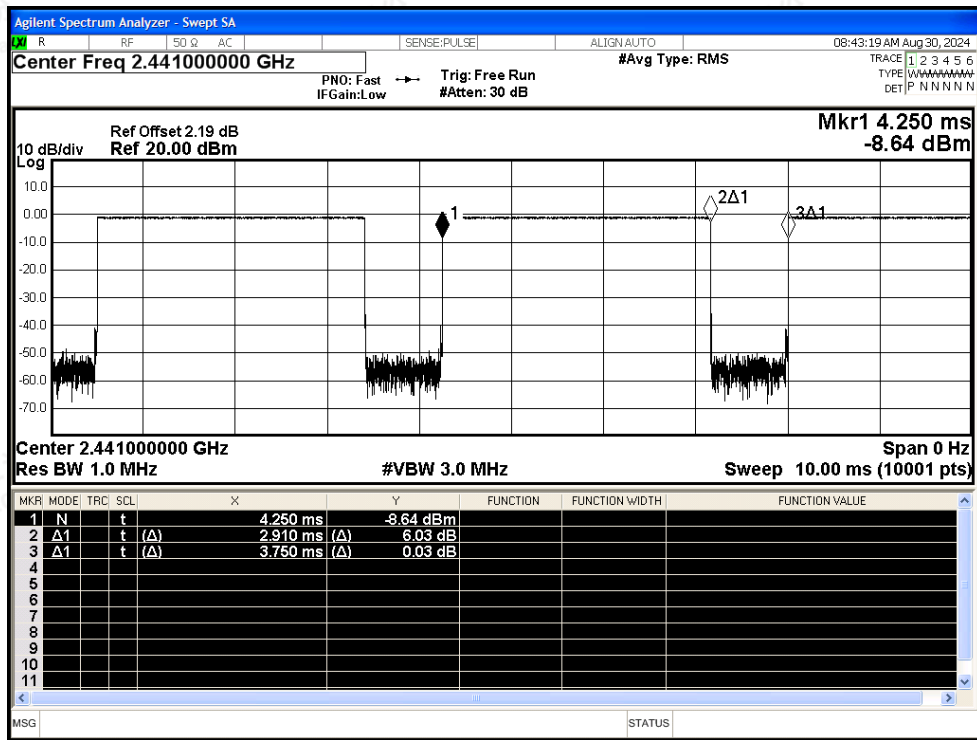


Test Graphs

Duty Cycle NVNT 1-DH5 2402MHz Ant

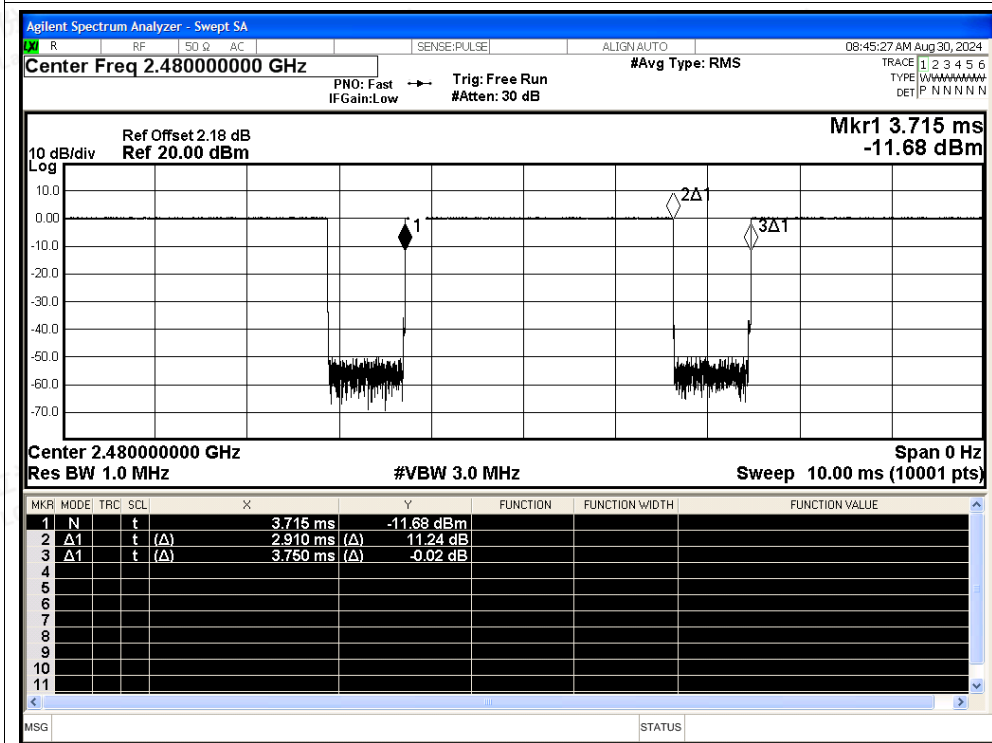


Duty Cycle NVNT 1-DH5 2441MHz Ant

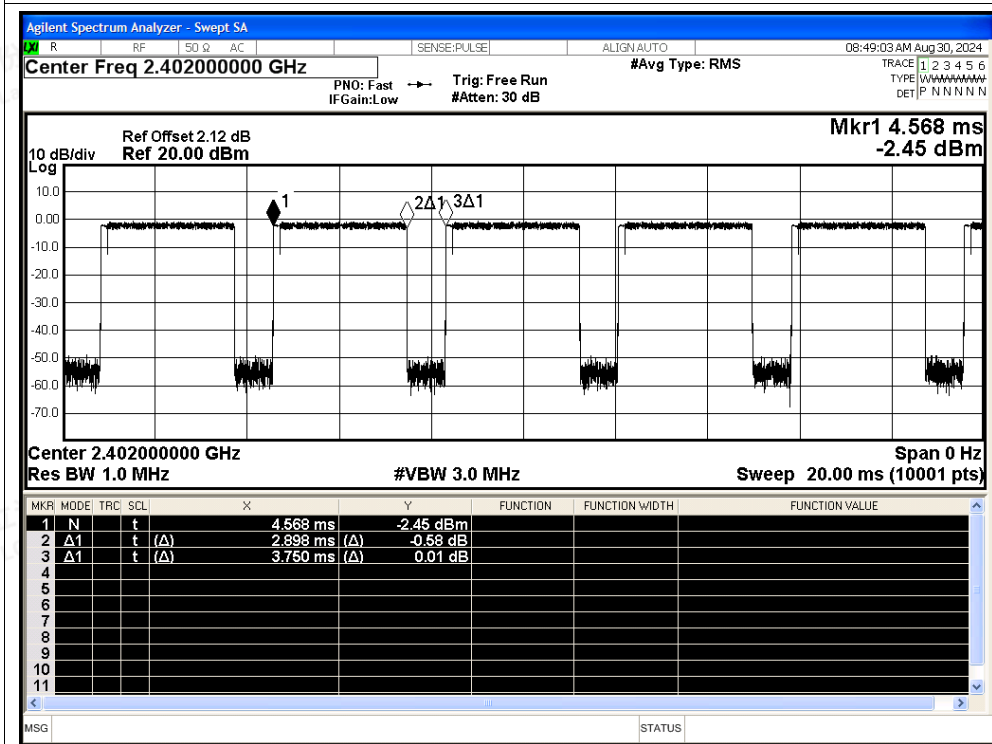




Duty Cycle NVNT 1-DH5 2480MHz Ant

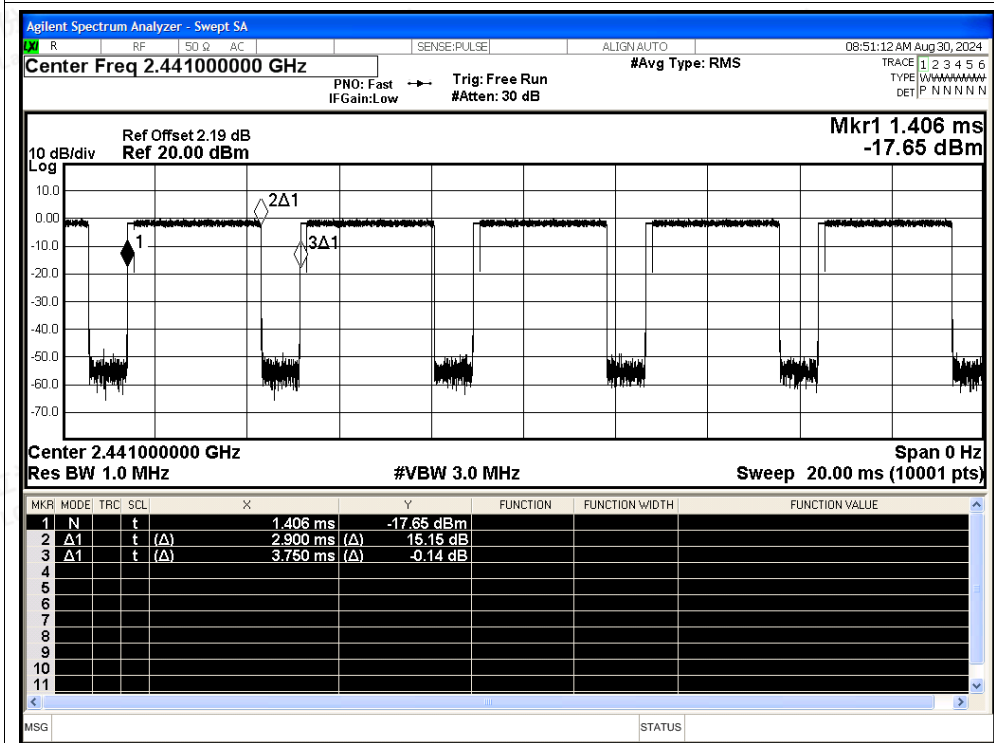


Duty Cycle NVNT 2-DH5 2402MHz Ant

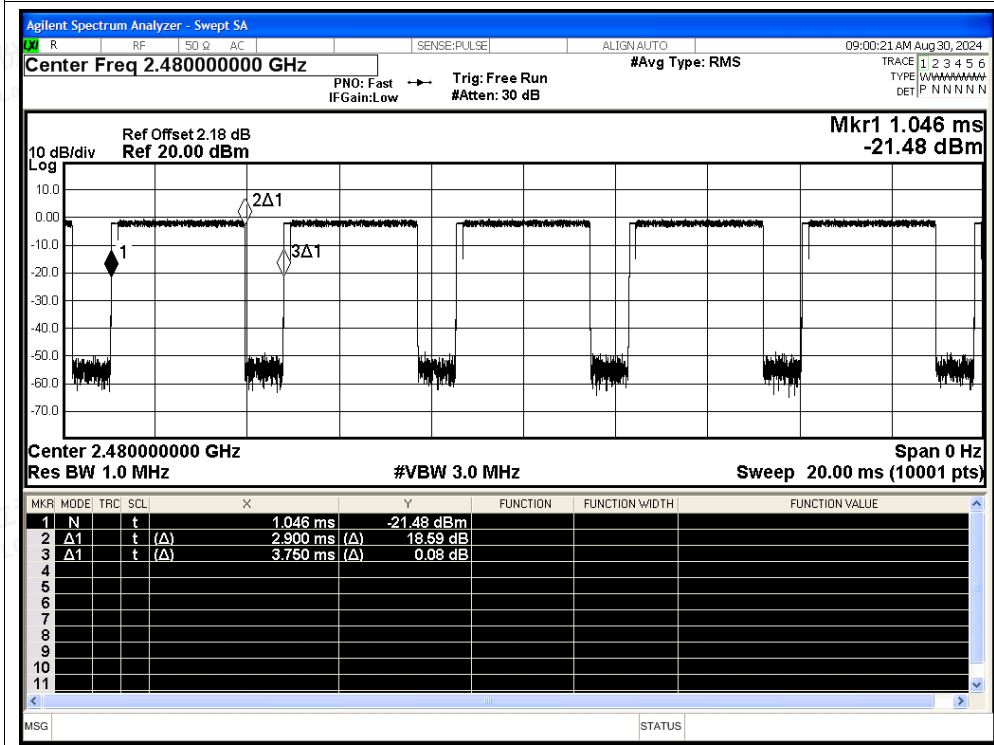




Duty Cycle NVNT 2-DH5 2441MHz Ant

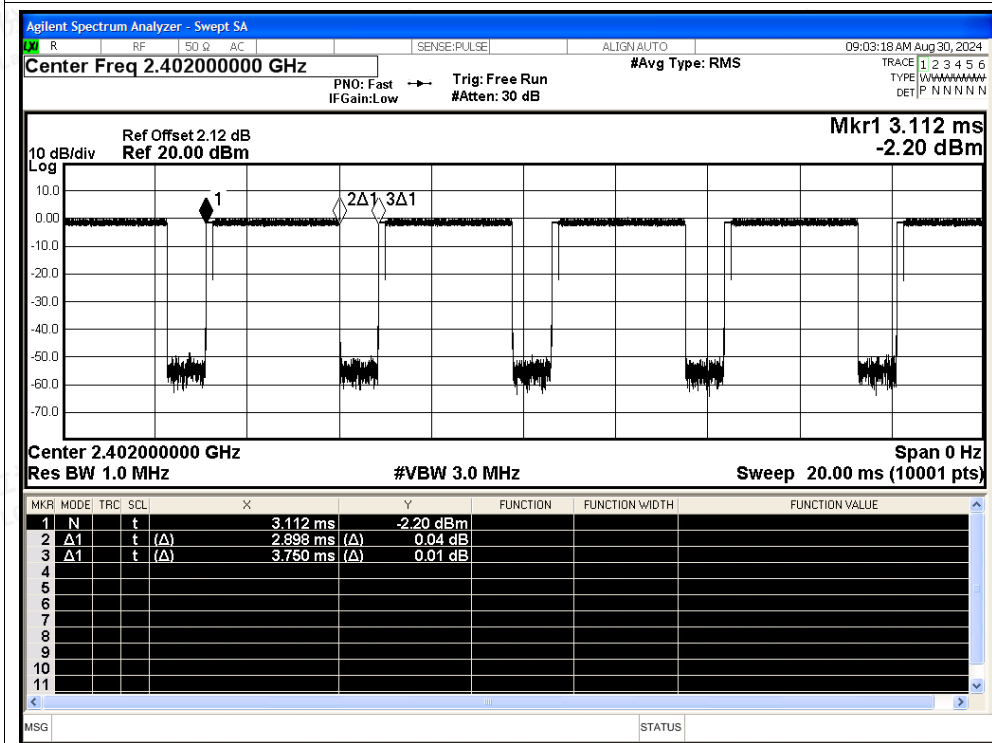


Duty Cycle NVNT 2-DH5 2480MHz Ant

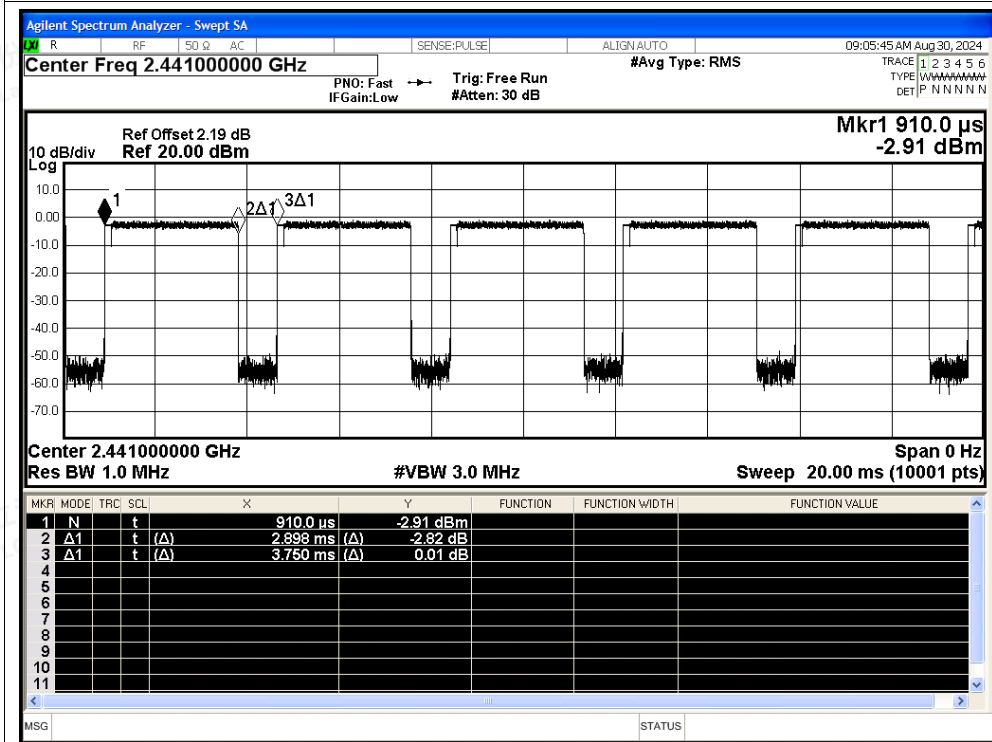


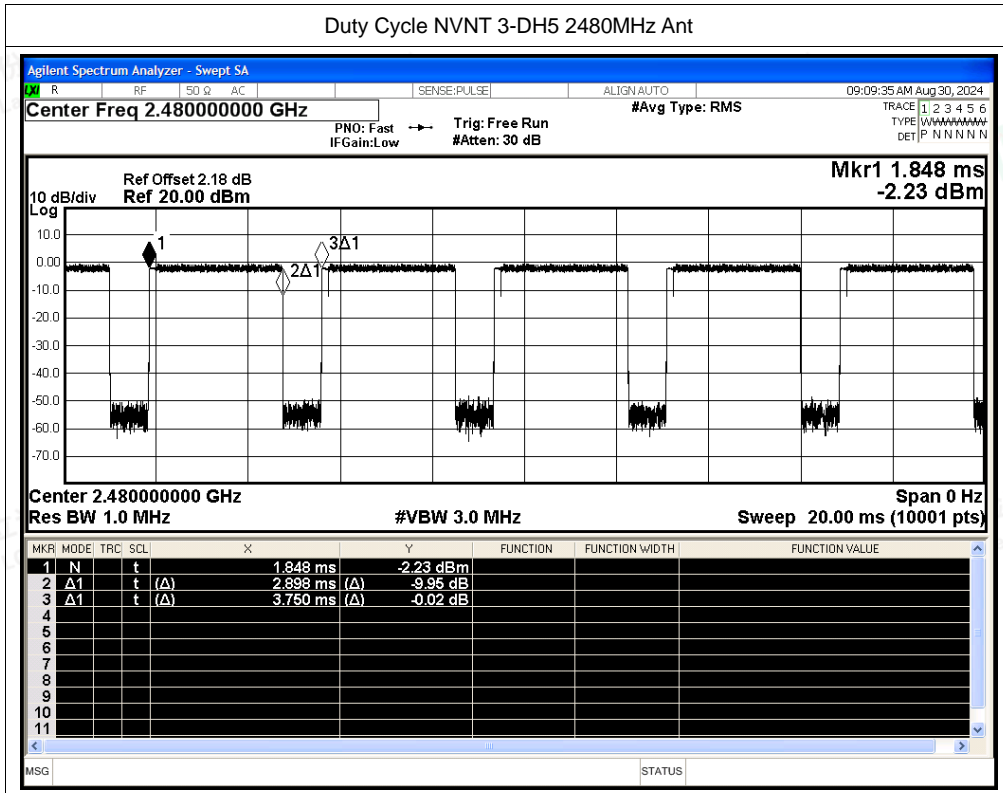


Duty Cycle NVNT 3-DH5 2402MHz Ant



Duty Cycle NVNT 3-DH5 2441MHz Ant







### A.9 Restrict Band

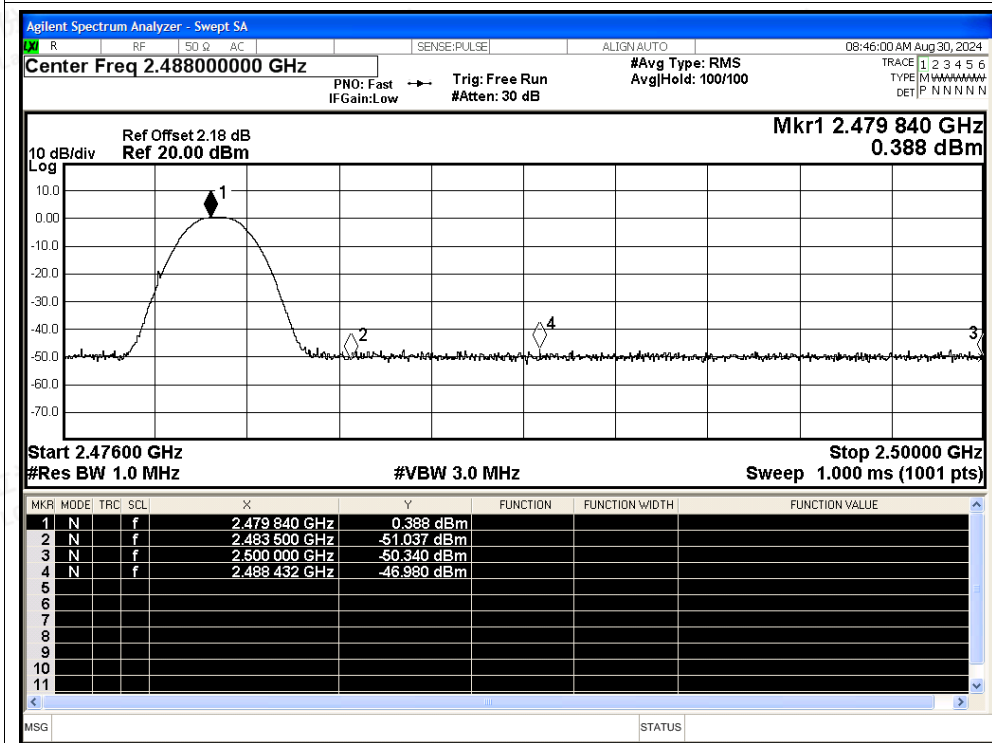
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant	No-Hopping	2310	-51.74	2	-	45.52	Peak	74	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2310	-58.44	2	1.1	39.92	Average	54	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2366.064	-47.51	2	-	49.75	Peak	74	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2379.504	-57.54	2	1.1	40.82	Average	54	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2390	-50.39	2	-	46.87	Peak	74	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2390	-58.48	2	1.1	39.88	Average	54	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2483.5	-51.04	2	-	46.22	Peak	74	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2483.5	-58.01	2	1.1	40.35	Average	54	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2488.432	-46.98	2	-	50.28	Peak	74	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2496.088	-57.14	2	1.1	41.22	Average	54	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2500	-50.34	2	-	46.92	Peak	74	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2500	-58.43	2	1.1	39.93	Average	54	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2310	-49.77	2	-	47.49	Peak	74	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2310	-58.45	2	1.12	39.93	Average	54	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2359.824	-47.41	2	-	49.85	Peak	74	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2381.328	-57.71	2	1.12	40.67	Average	54	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2390	-51.57	2	-	45.69	Peak	74	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2390	-58.45	2	1.12	39.93	Average	54	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2483.5	-51.99	2	-	45.27	Peak	74	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2483.5	-58.07	2	1.12	40.31	Average	54	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2485.456	-45.22	2	-	52.04	Peak	74	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2492.08	-57.01	2	1.12	41.37	Average	54	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2500	-49.1	2	-	48.16	Peak	74	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2500	-57.82	2	1.12	40.56	Average	54	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2310	-50.42	2	-	46.84	Peak	74	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2310	-58.66	2	1.12	39.72	Average	54	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2379.024	-46.96	2	-	50.3	Peak	74	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2385.84	-57.68	2	1.12	40.7	Average	54	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2390	-50.98	2	-	46.28	Peak	74	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2390	-58.66	2	1.12	39.72	Average	54	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2483.5	-50.45	2	-	46.81	Peak	74	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2483.5	-57.27	2	1.12	41.11	Average	54	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2499.352	-46.62	2	-	50.64	Peak	74	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2484.52	-56.86	2	1.12	41.52	Average	54	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2500	-50.06	2	-	47.2	Peak	74	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2500	-58.25	2	1.12	40.13	Average	54	Pass



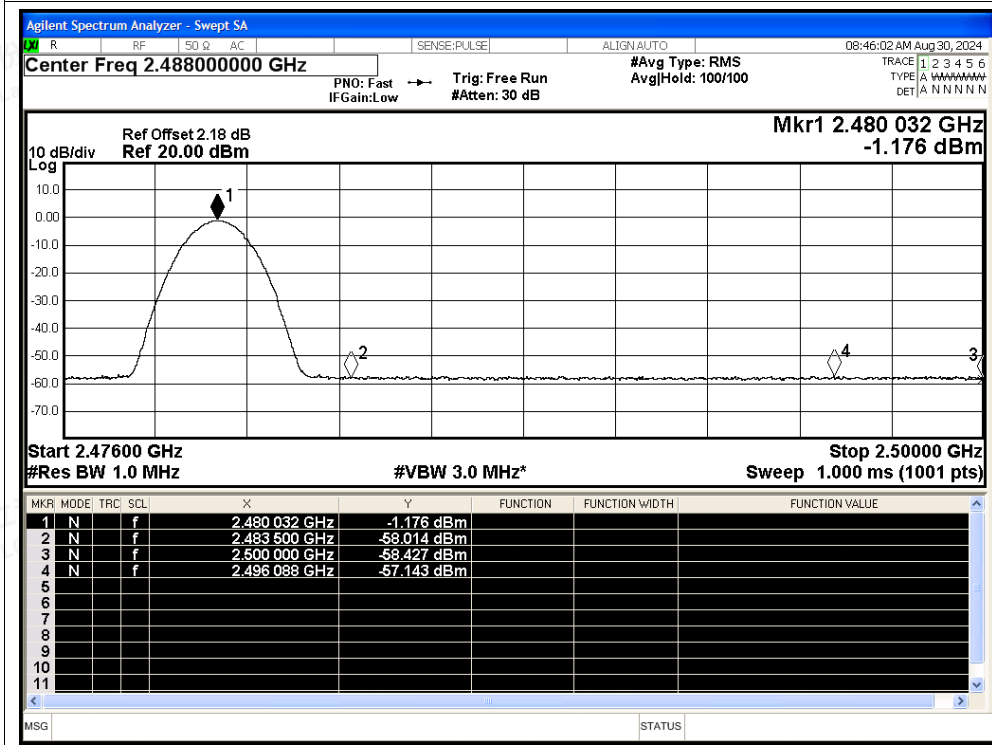




Restrict Band NVNT 1-DH5 2480MHz Ant No-Hopping Peak



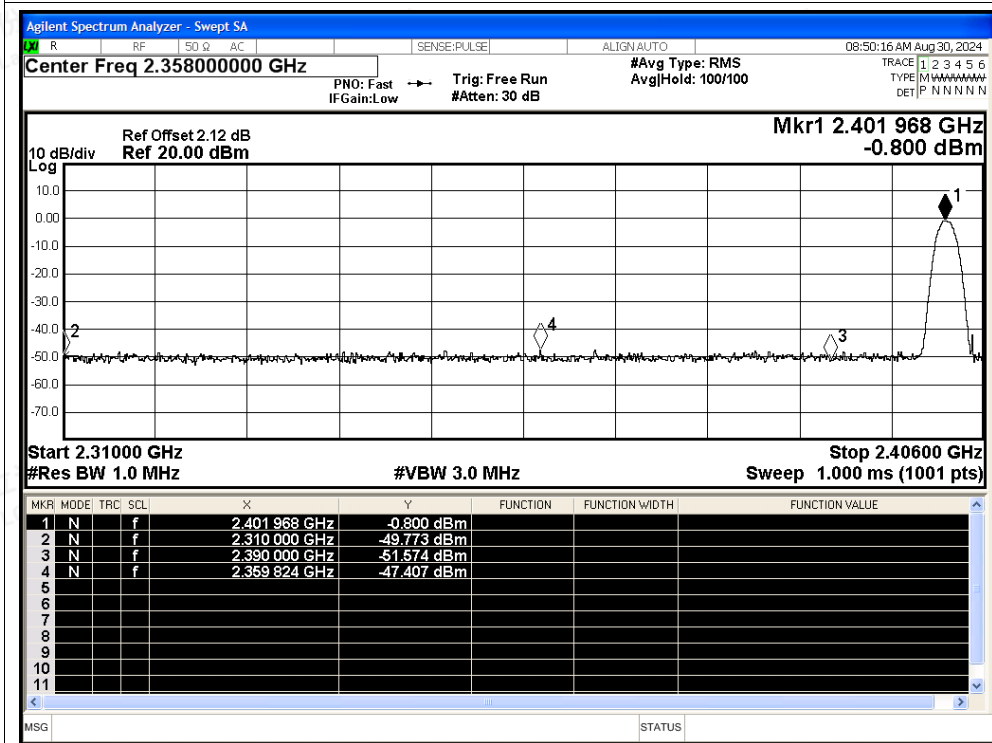
Restrict Band NVNT 1-DH5 2480MHz Ant No-Hopping Average



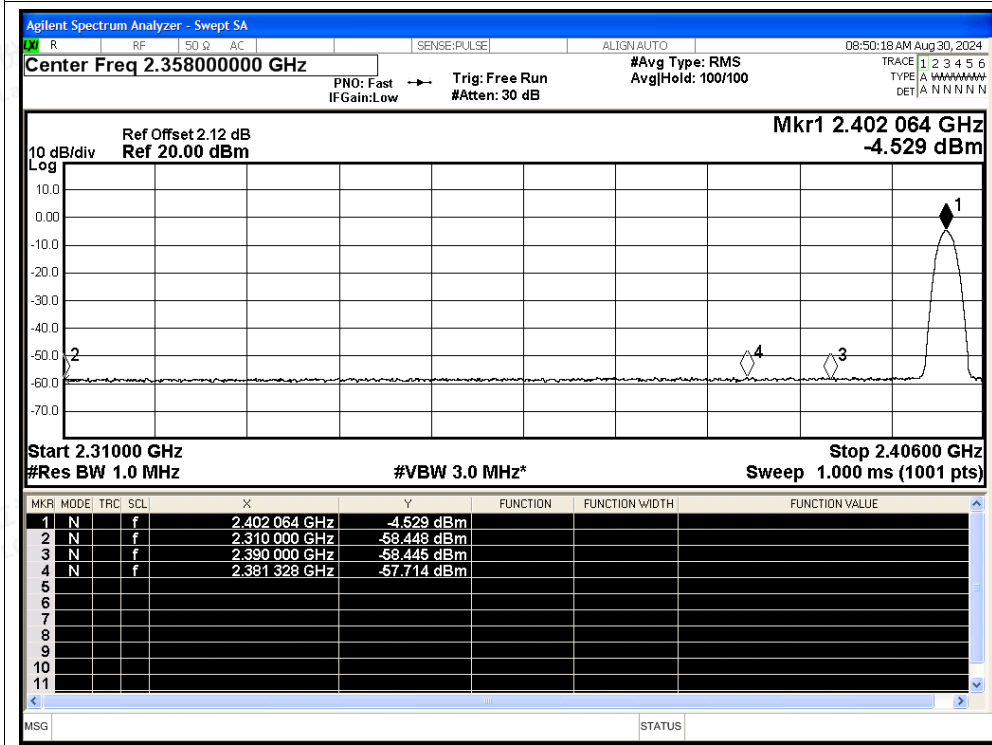




Restrict Band NVNT 2-DH5 2402MHz Ant No-Hopping Peak

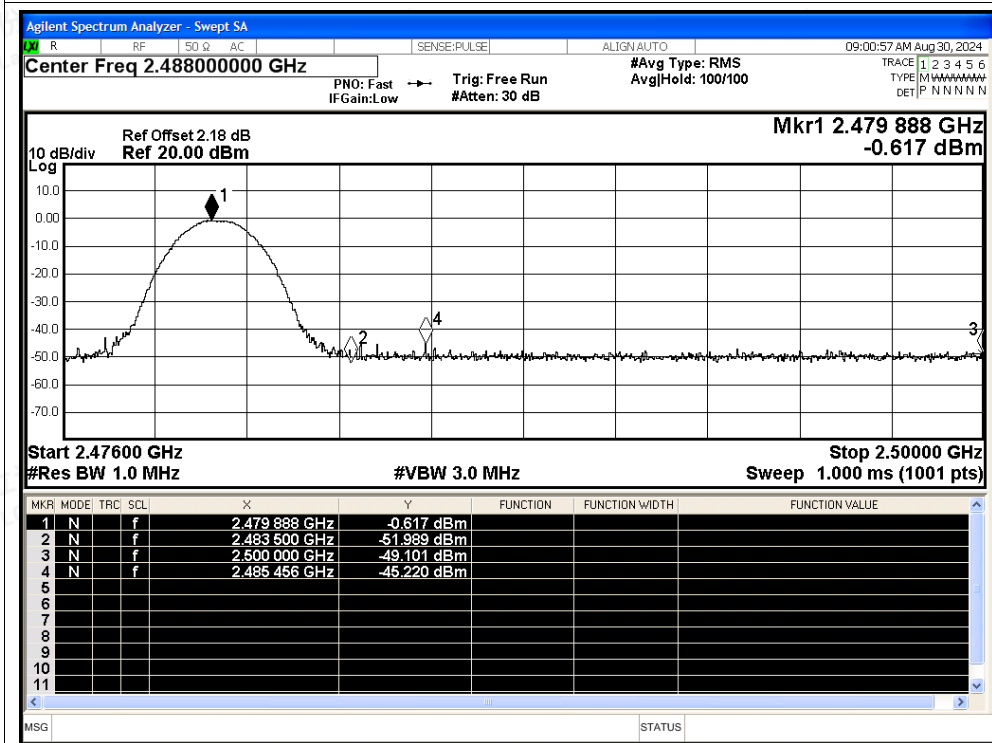


Restrict Band NVNT 2-DH5 2402MHz Ant No-Hopping Average

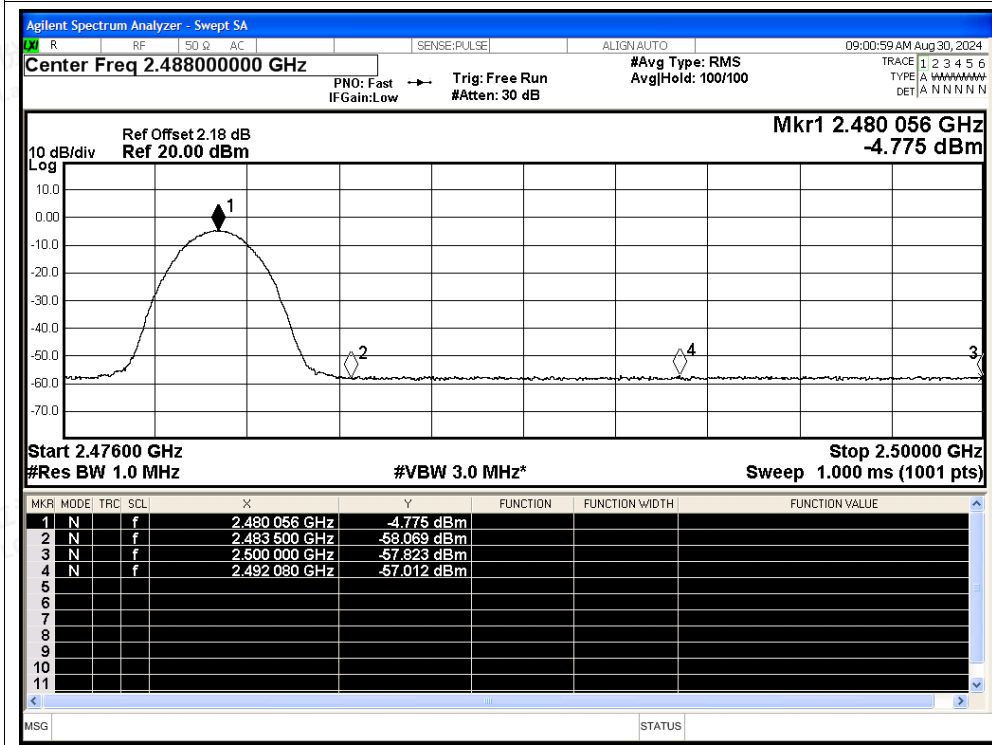




Restrict Band NVNT 2-DH5 2480MHz Ant No-Hopping Peak

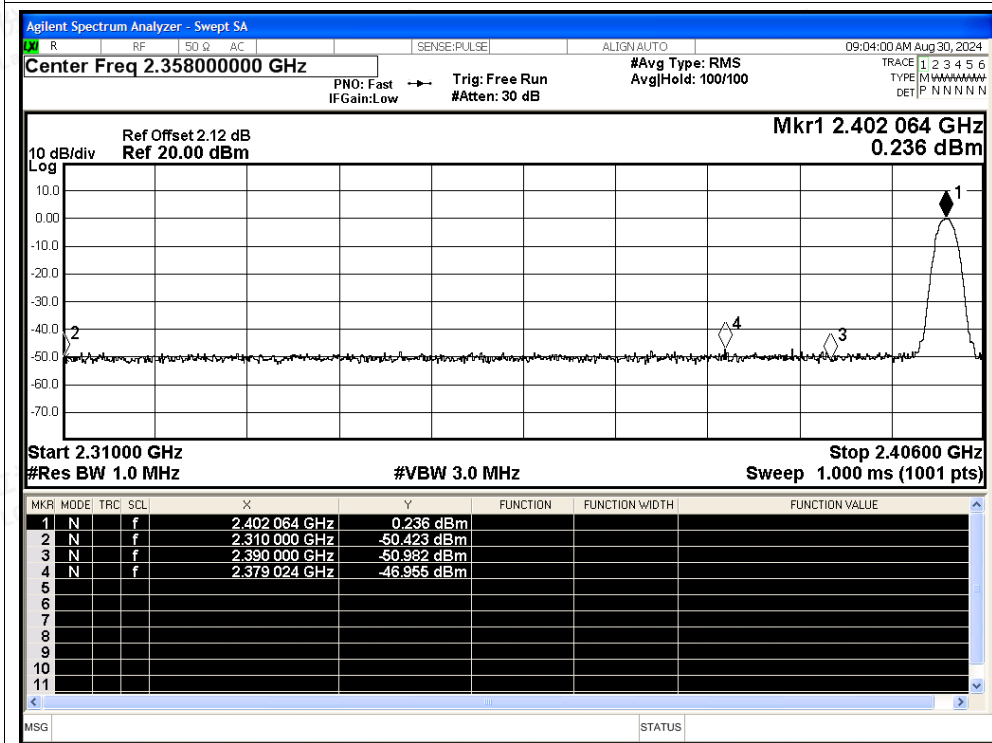


Restrict Band NVNT 2-DH5 2480MHz Ant No-Hopping Average

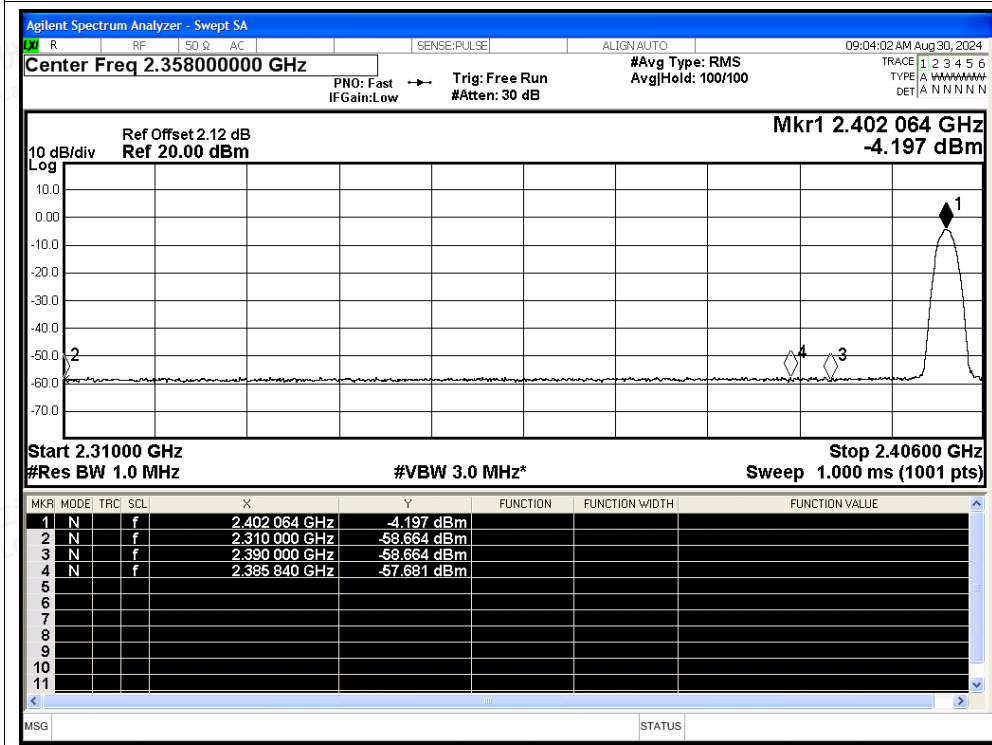




Restrict Band NVNT 3-DH5 2402MHz Ant No-Hopping Peak

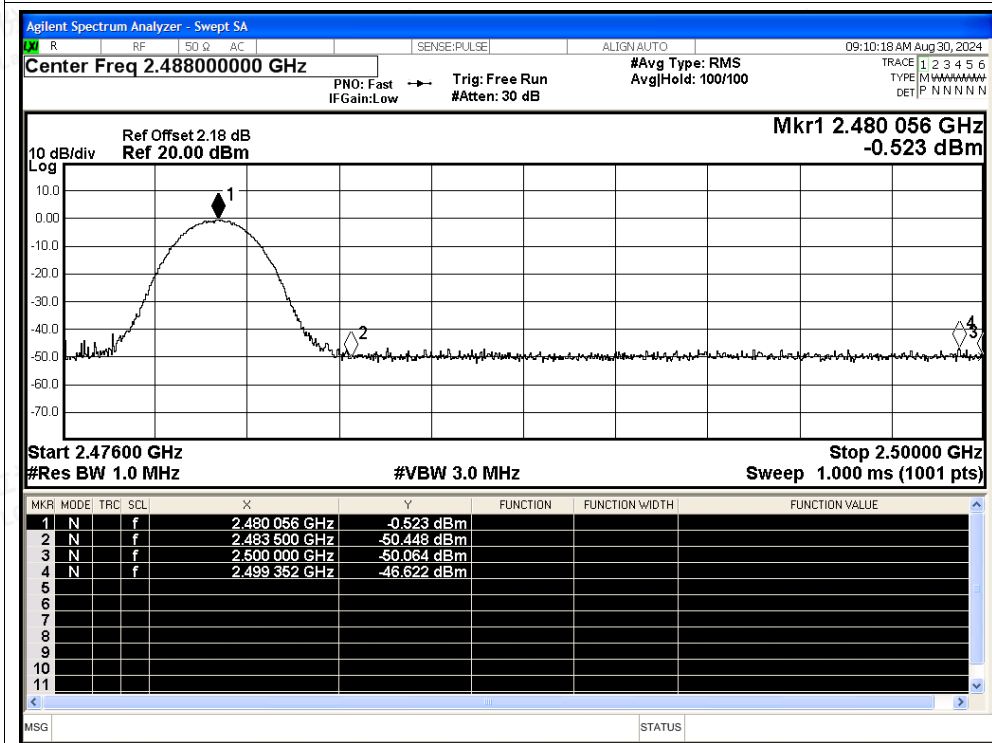


Restrict Band NVNT 3-DH5 2402MHz Ant No-Hopping Average





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



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

