



## Appendix A

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

Product Name: Solar Lantern Bluetooth Speaker w/ Ground Stake and LED Light

Test Model: SKY426SLR

#### Environmental Conditions

Temperature:	23.5° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Bill Zhu
Supervised by:	Li Huan



## A.1 20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	1.026	0	Pass
NVNT	1-DH5	2441	Ant1	1.037	0	Pass
NVNT	1-DH5	2480	Ant1	1.027	0	Pass
NVNT	2-DH5	2402	Ant1	1.285	0	Pass
NVNT	2-DH5	2441	Ant1	1.291	0	Pass
NVNT	2-DH5	2480	Ant1	1.282	0	Pass
NVNT	3-DH5	2402	Ant1	1.308	0	Pass
NVNT	3-DH5	2441	Ant1	1.286	0	Pass
NVNT	3-DH5	2480	Ant1	1.273	0	Pass

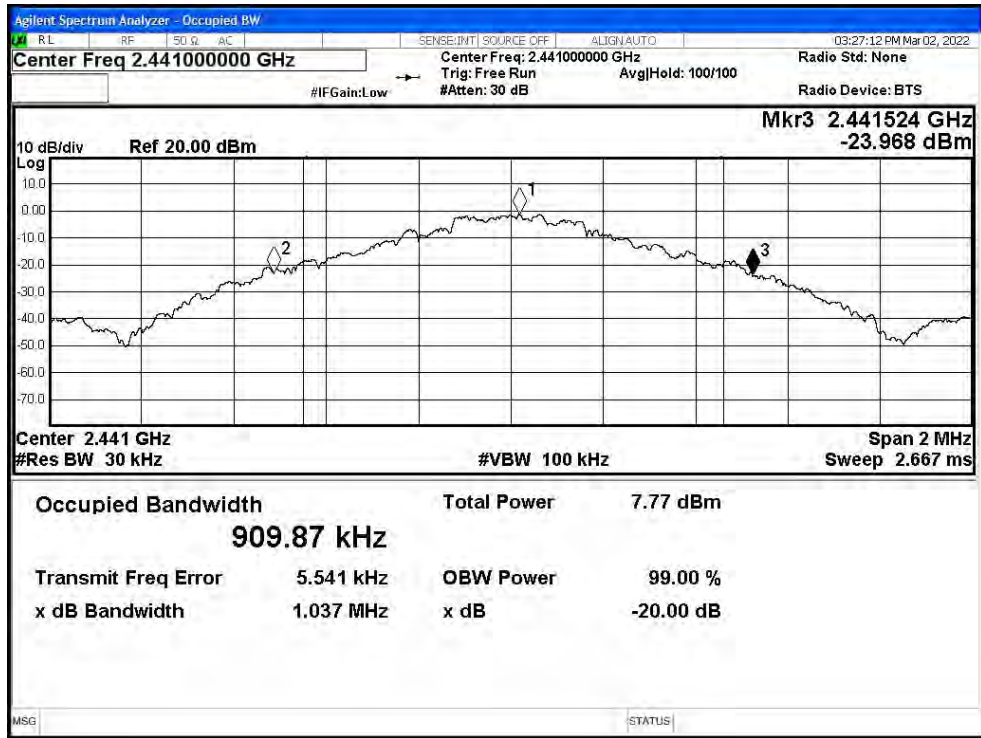


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

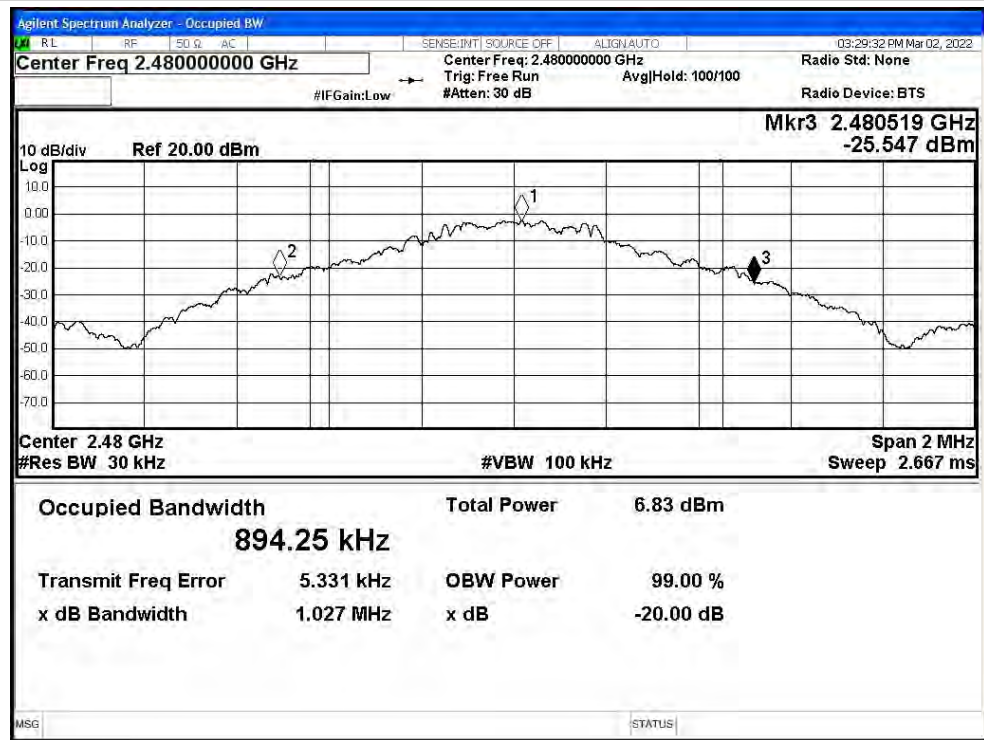


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

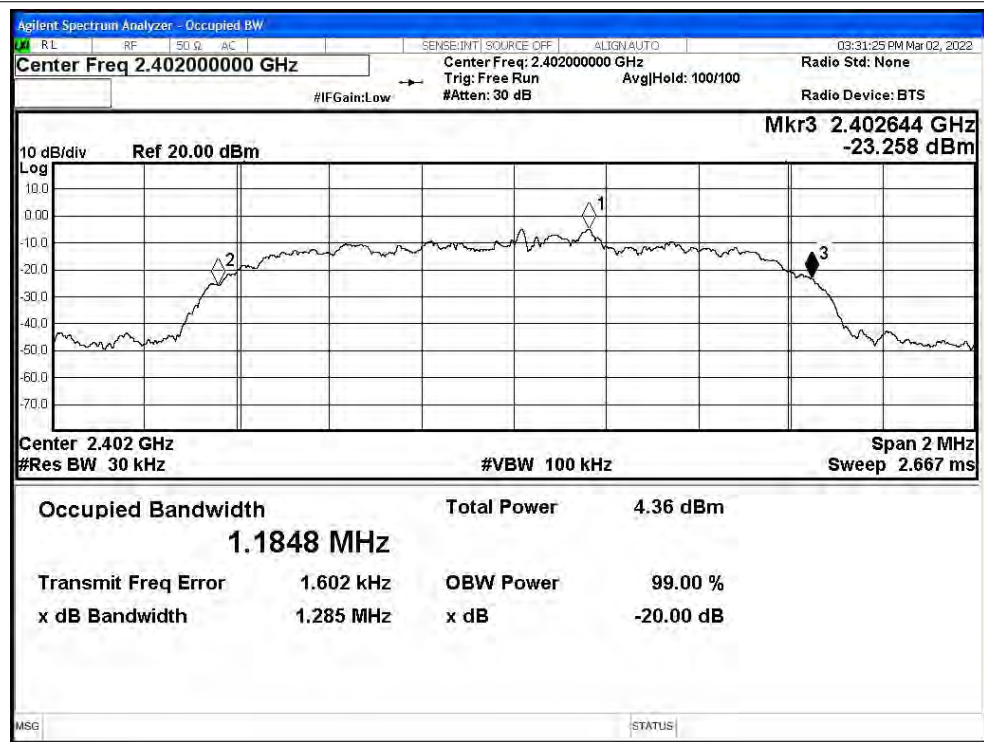




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

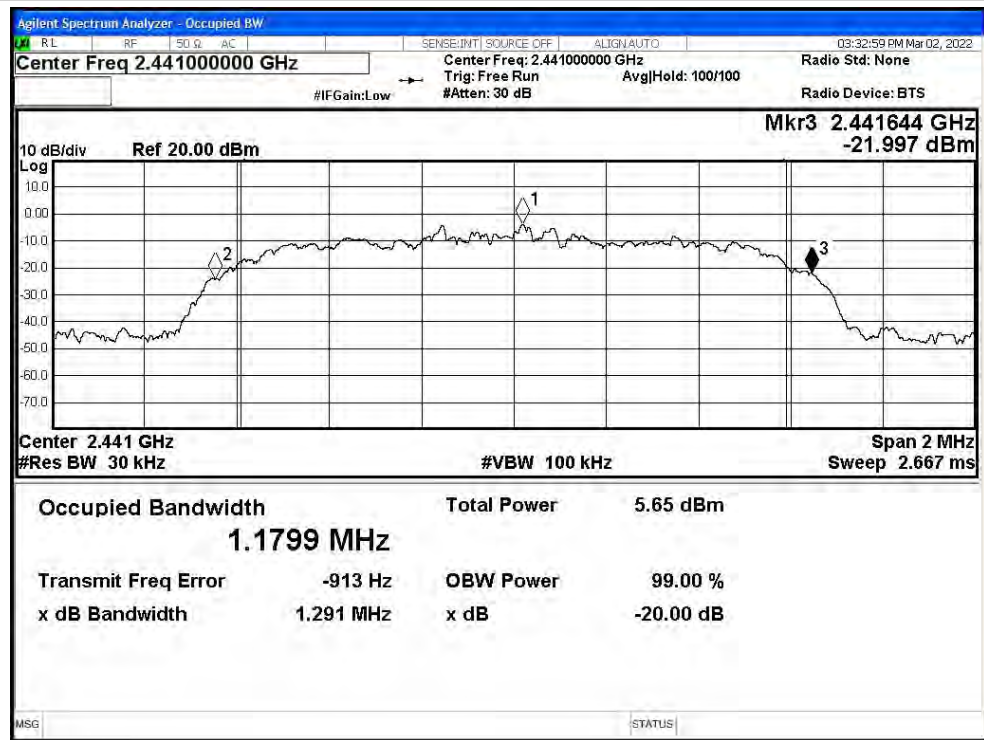


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

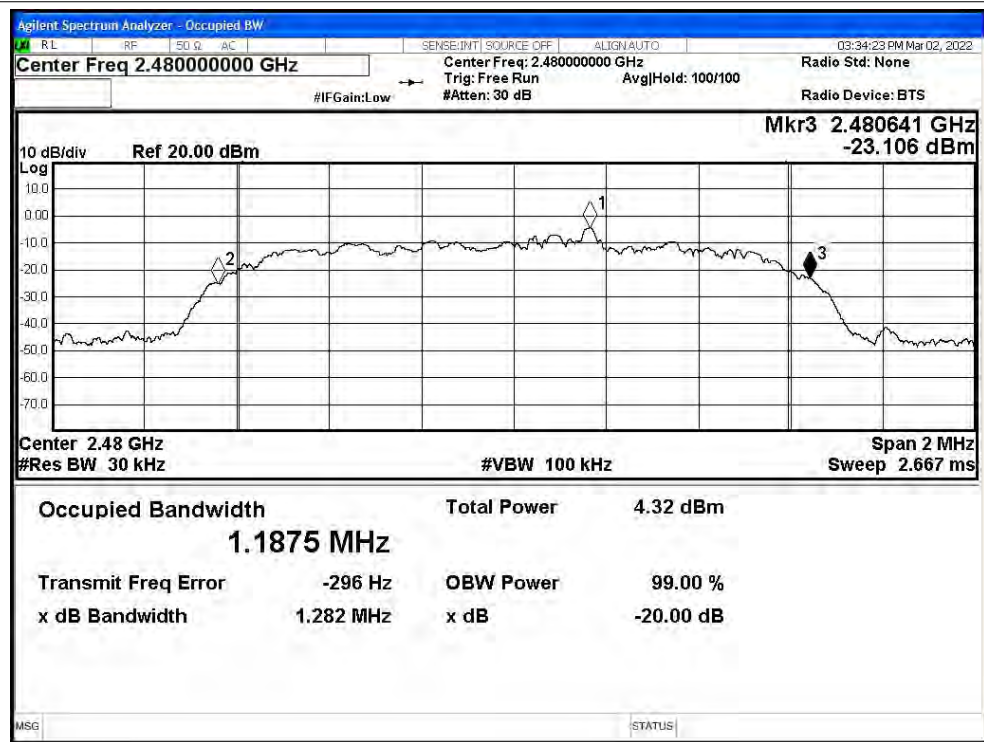




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

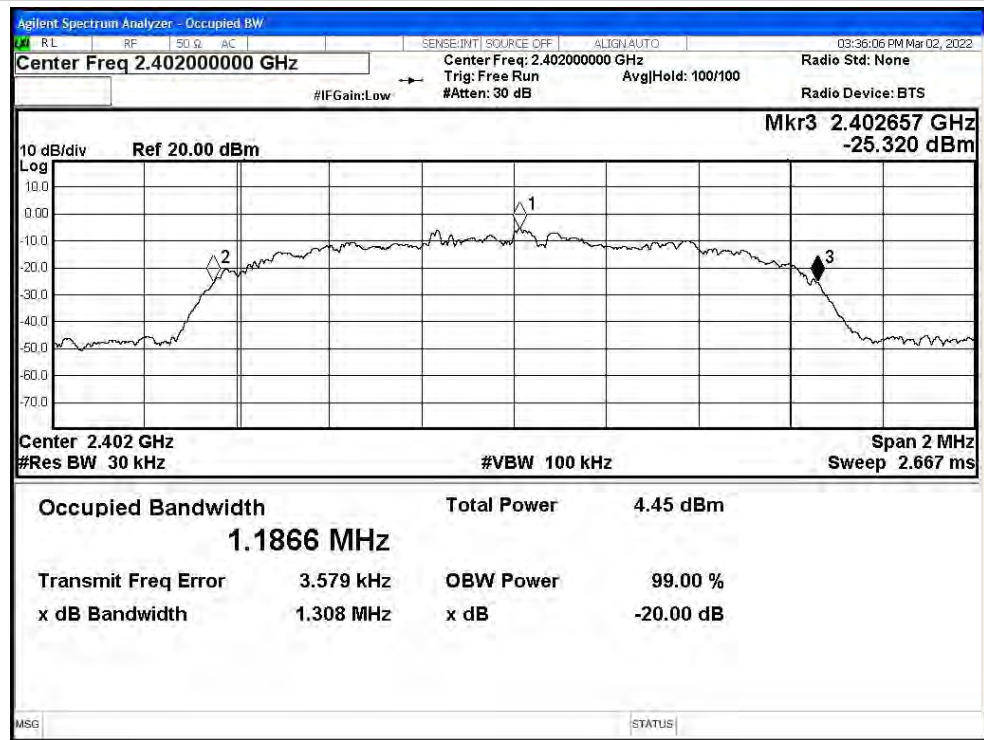


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

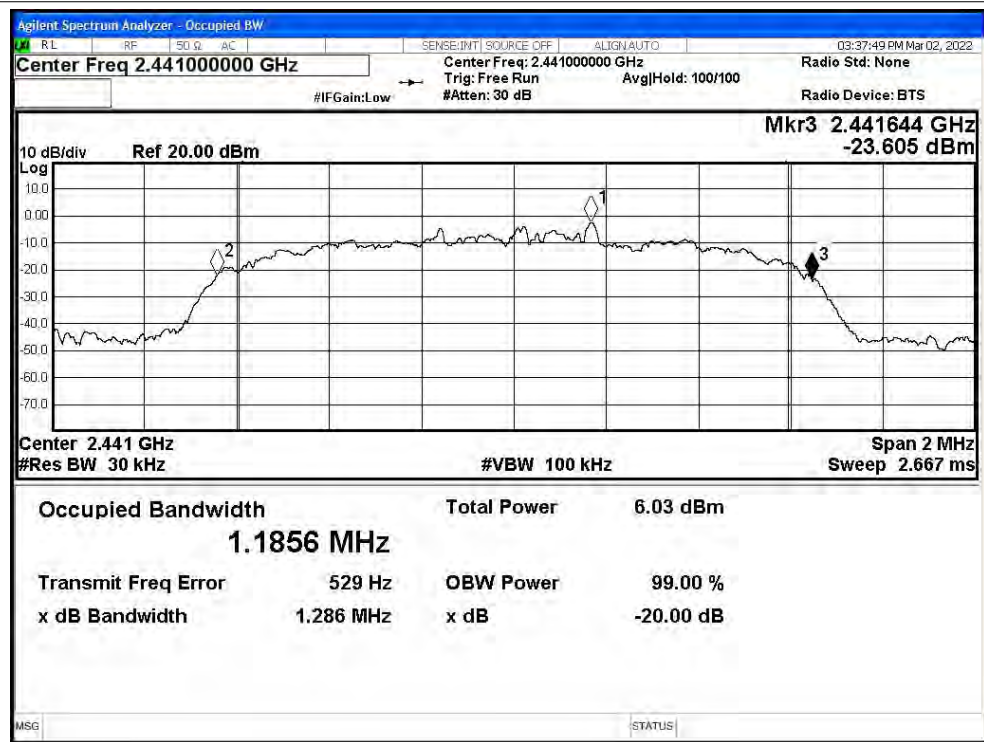


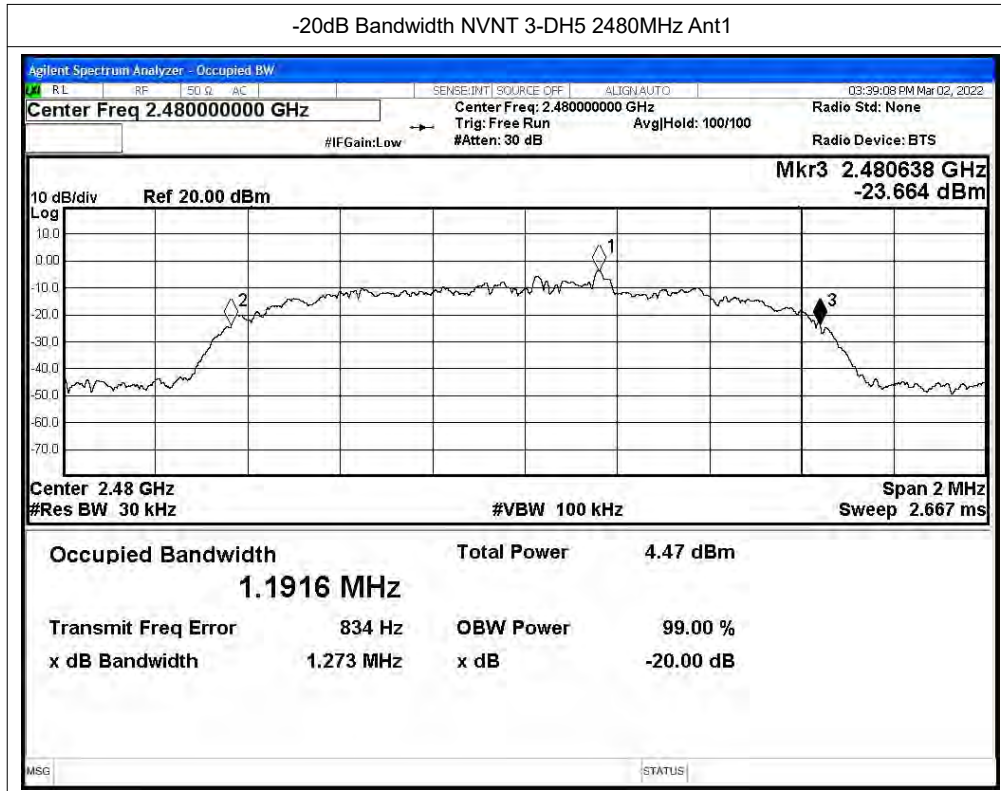


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1







## A.2 Maximum Conducted Output Power

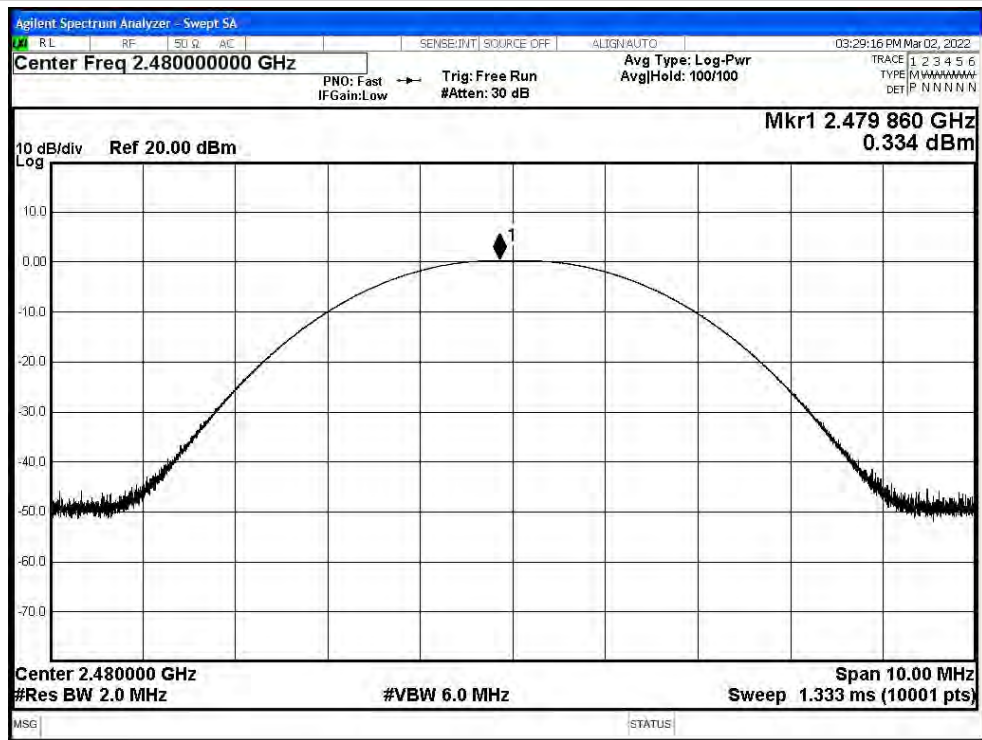
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	0.39	0	0.39	21	Pass
NVNT	1-DH5	2441	Ant1	1.74	0	1.74	21	Pass
NVNT	1-DH5	2480	Ant1	0.33	0	0.33	21	Pass
NVNT	2-DH5	2402	Ant1	-0.47	0	-0.47	21	Pass
NVNT	2-DH5	2441	Ant1	0.92	0	0.92	21	Pass
NVNT	2-DH5	2480	Ant1	-0.43	0	-0.43	21	Pass
NVNT	3-DH5	2402	Ant1	-0.33	0	-0.33	21	Pass
NVNT	3-DH5	2441	Ant1	1.03	0	1.03	21	Pass
NVNT	3-DH5	2480	Ant1	-0.3	0	-0.3	21	Pass



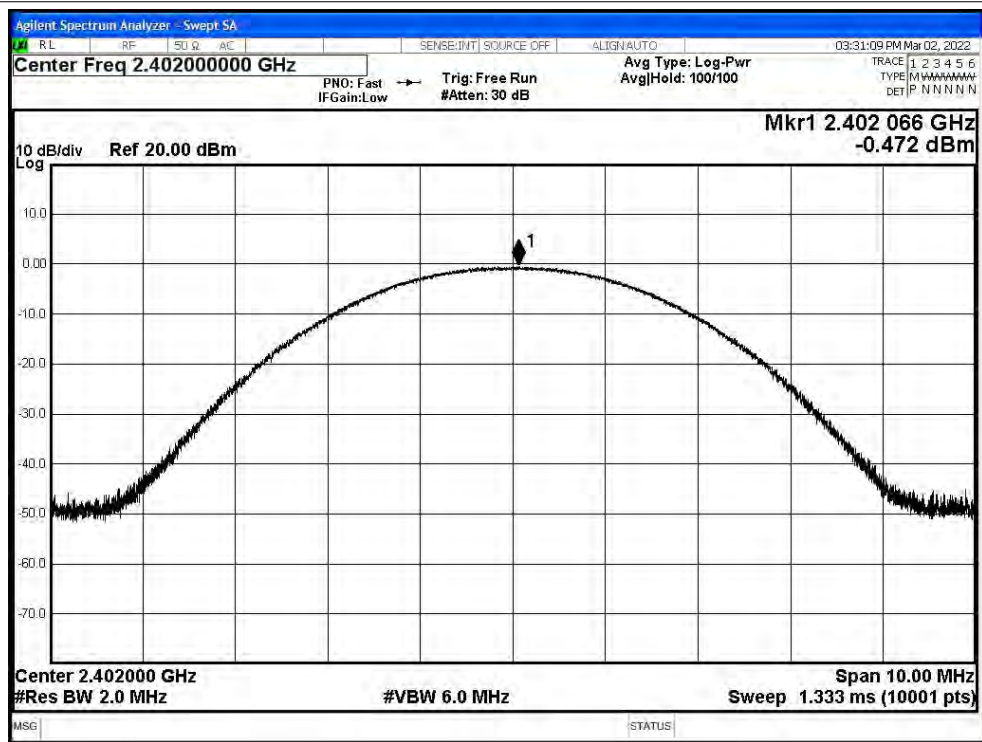




Power NVNT 1-DH5 2480MHz Ant1

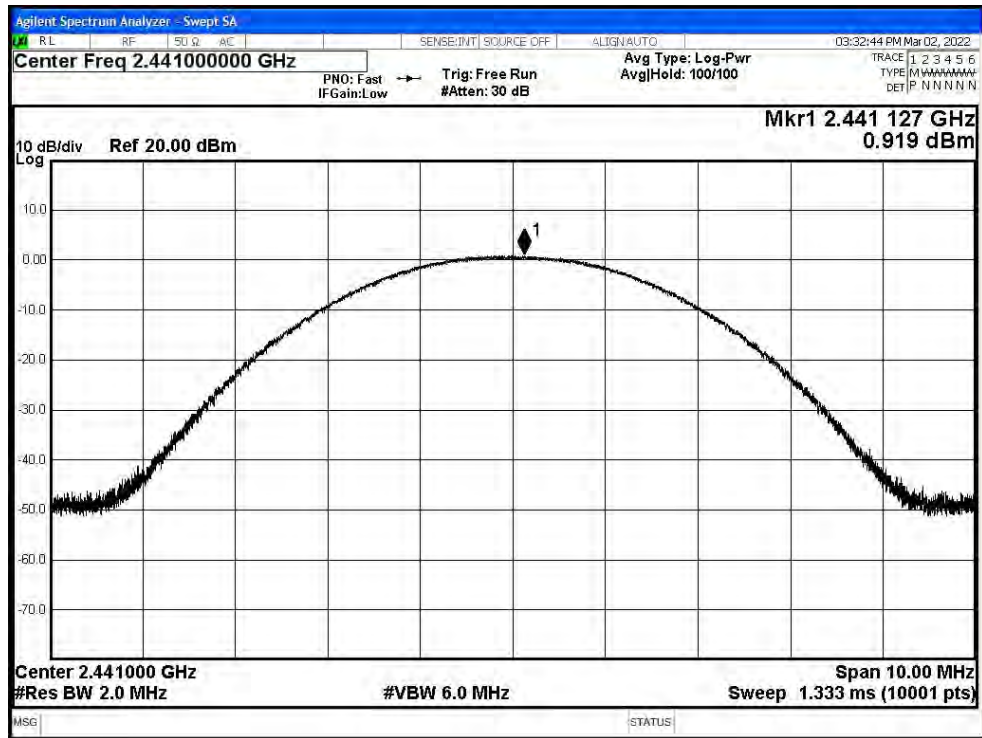


Power NVNT 2-DH5 2402MHz Ant1

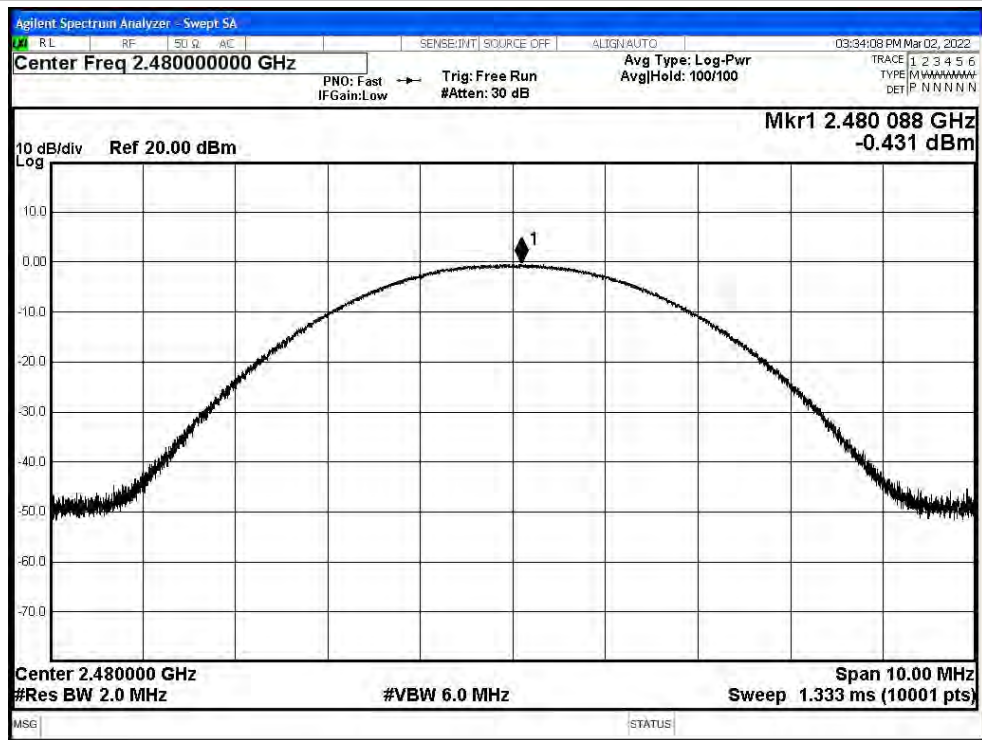




Power NVNT 2-DH5 2441MHz Ant1

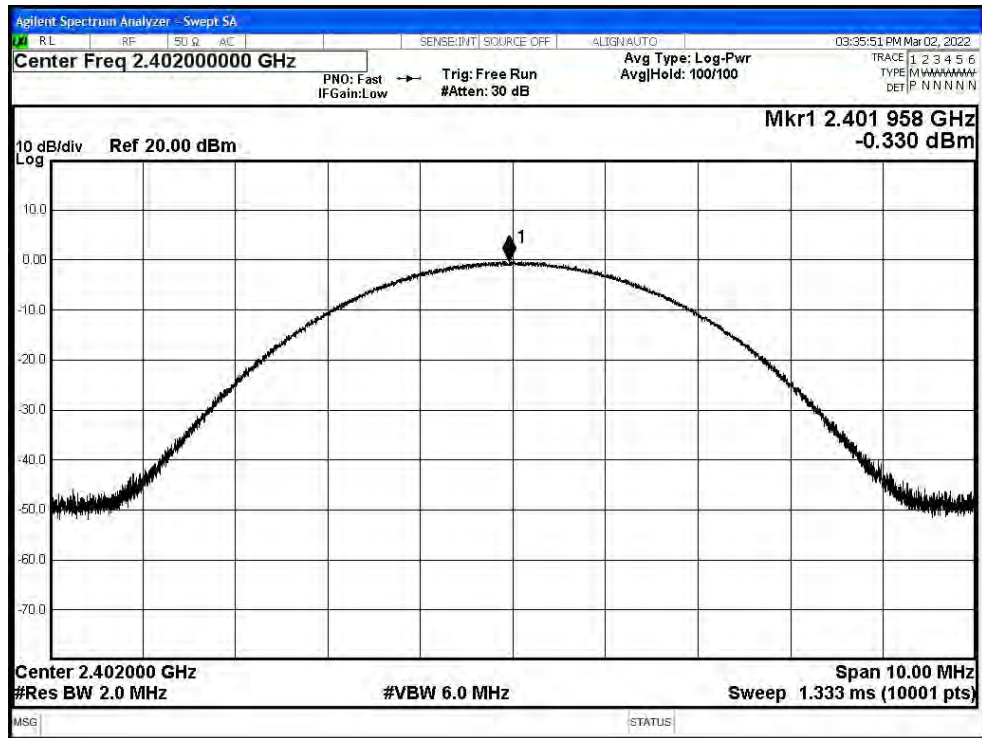


Power NVNT 2-DH5 2480MHz Ant1

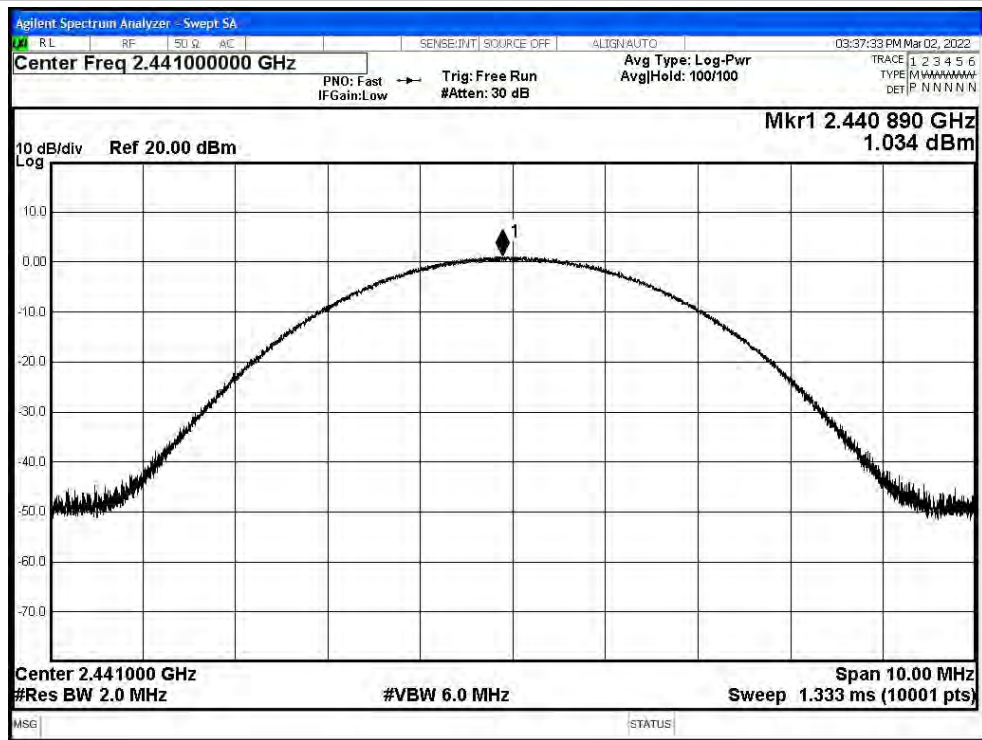


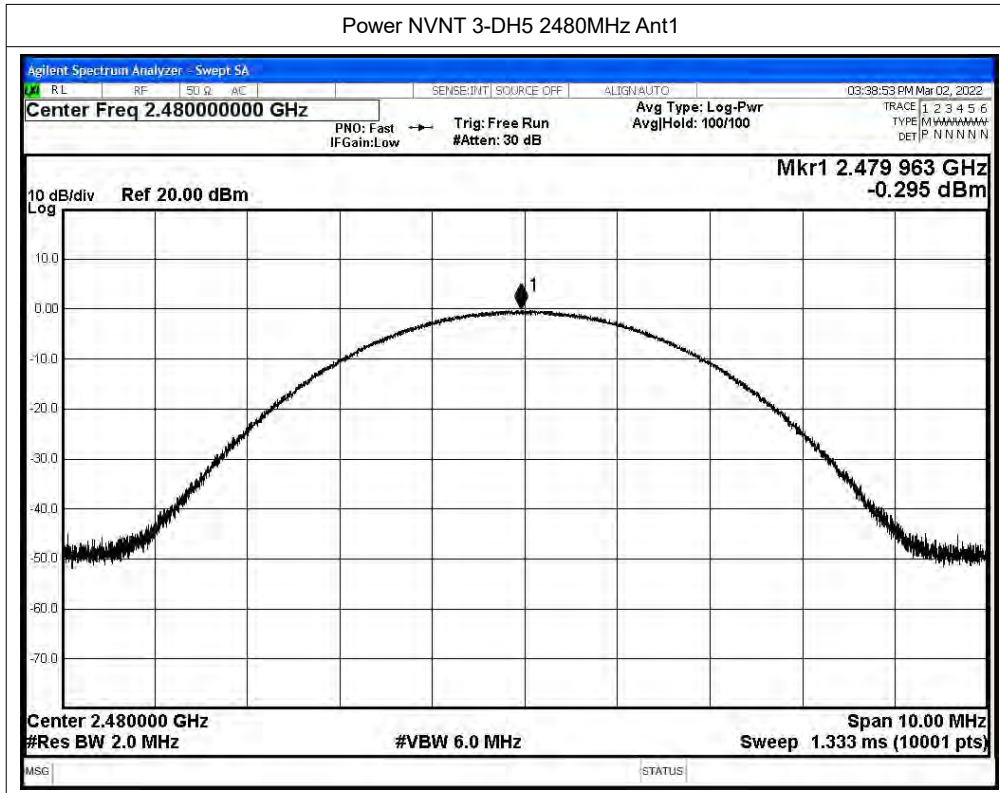


Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1







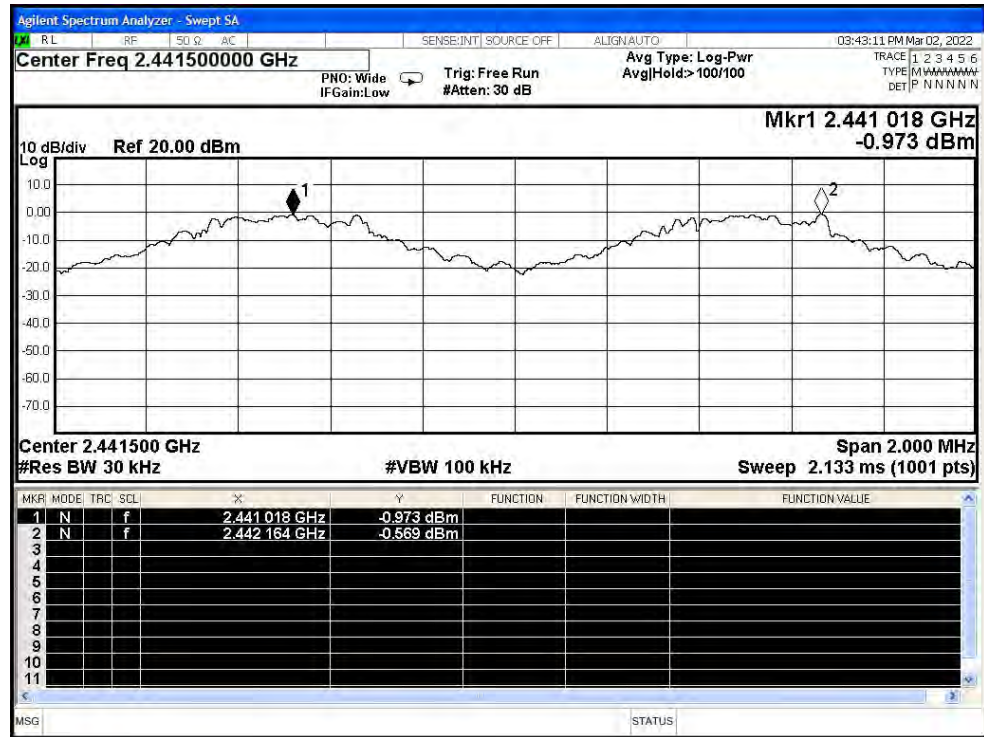
## A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2441.018	2442.164	1.146	0.691	Pass
NVNT	2-DH5	Ant1	2441.03	2442.022	0.992	0.861	Pass
NVNT	3-DH5	Ant1	2441.162	2442.158	0.996	0.857	Pass

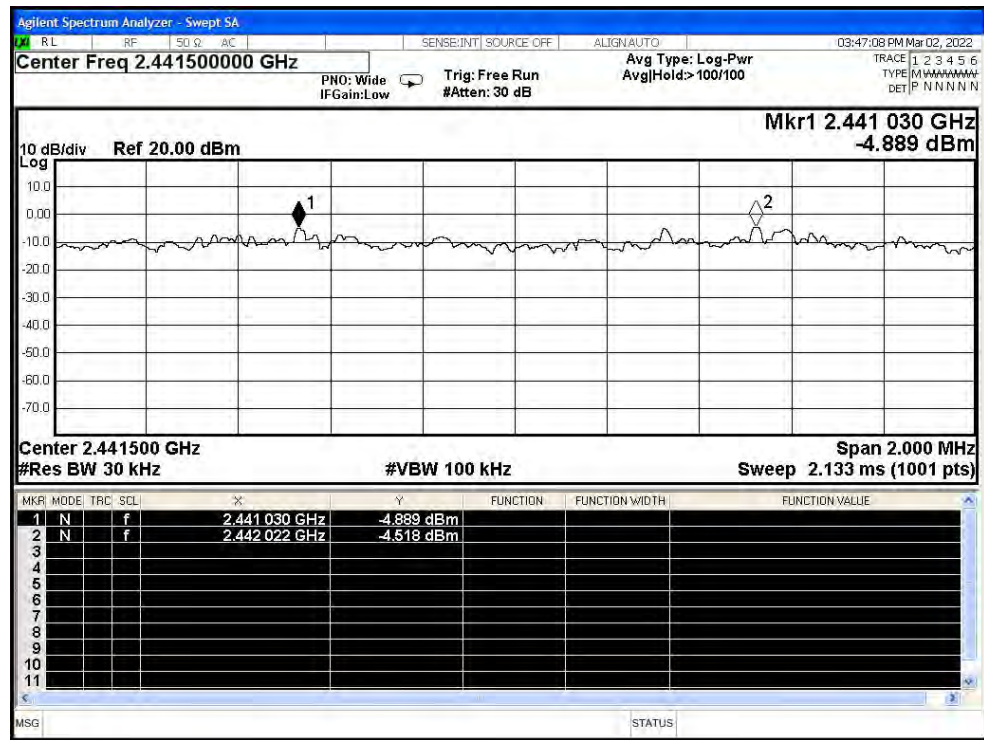


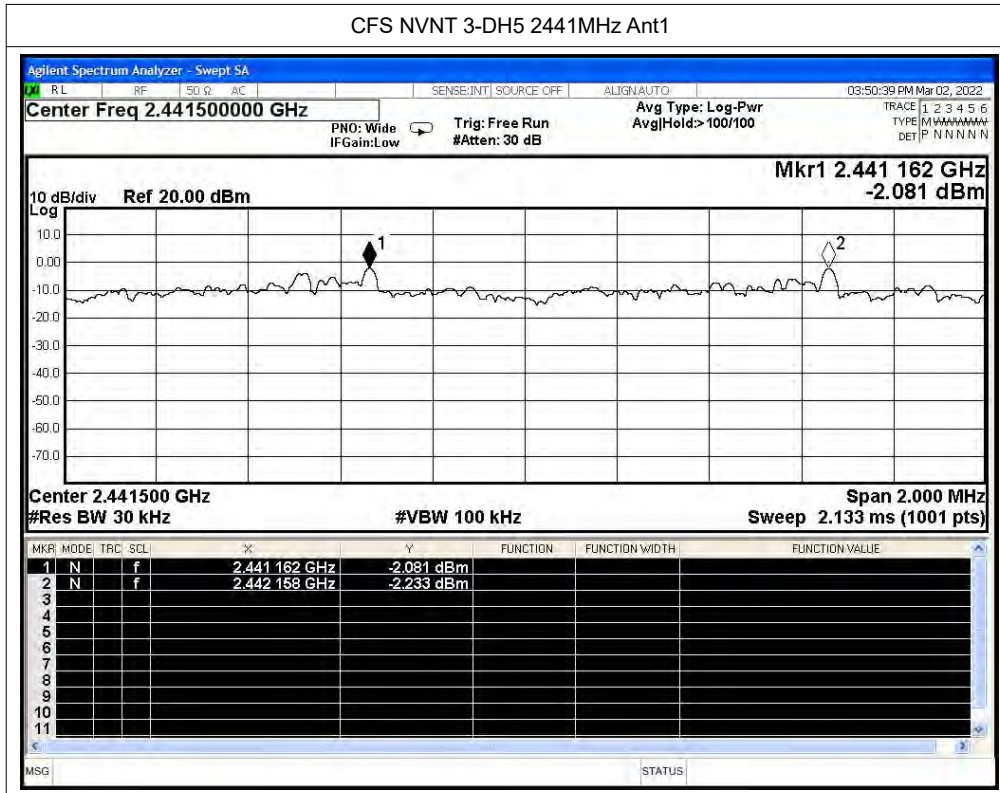
Test Graphs

CFS NVNT 1-DH5 2441MHz Ant1



CFS NVNT 2-DH5 2441MHz Ant1









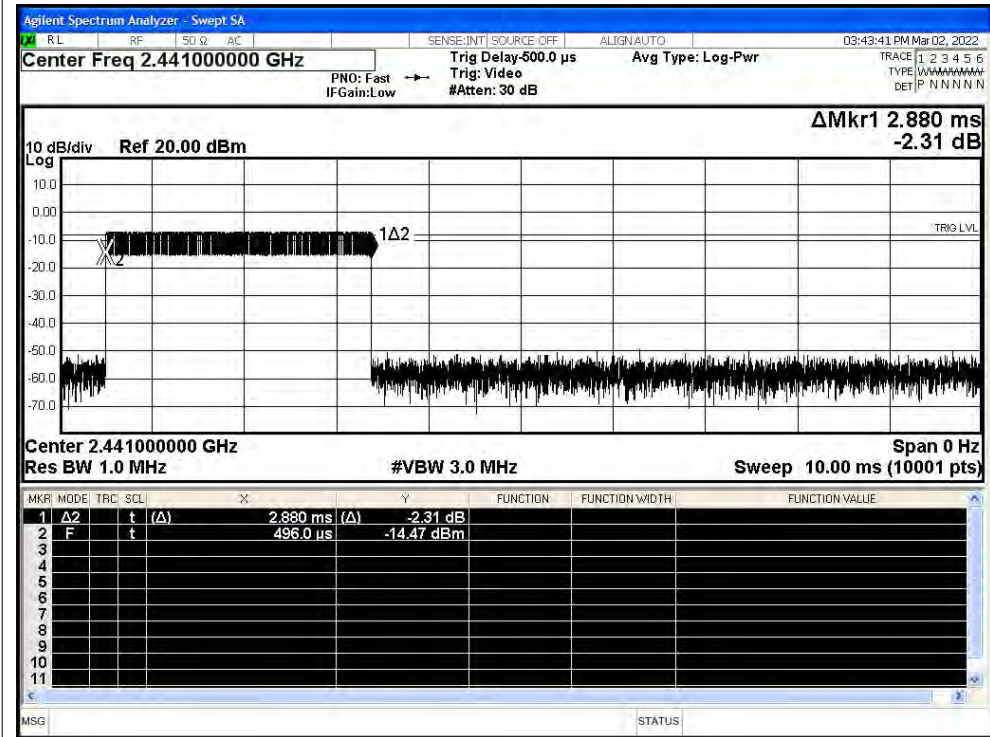
## A.4 Dwell Time

Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2441	Ant1	2.88	296.64	103	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.881	322.672	112	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.886	300.144	104	31600	400	Pass

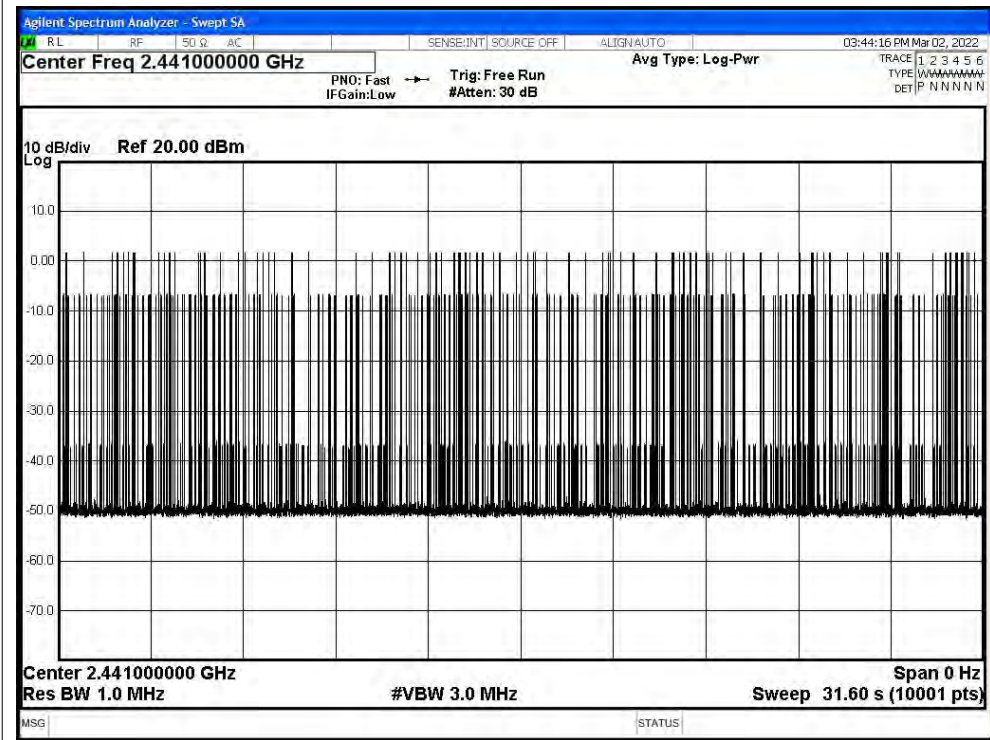


Test Graphs

Dwell NVNT 1-DH5 2441MHz Ant1 One Burst

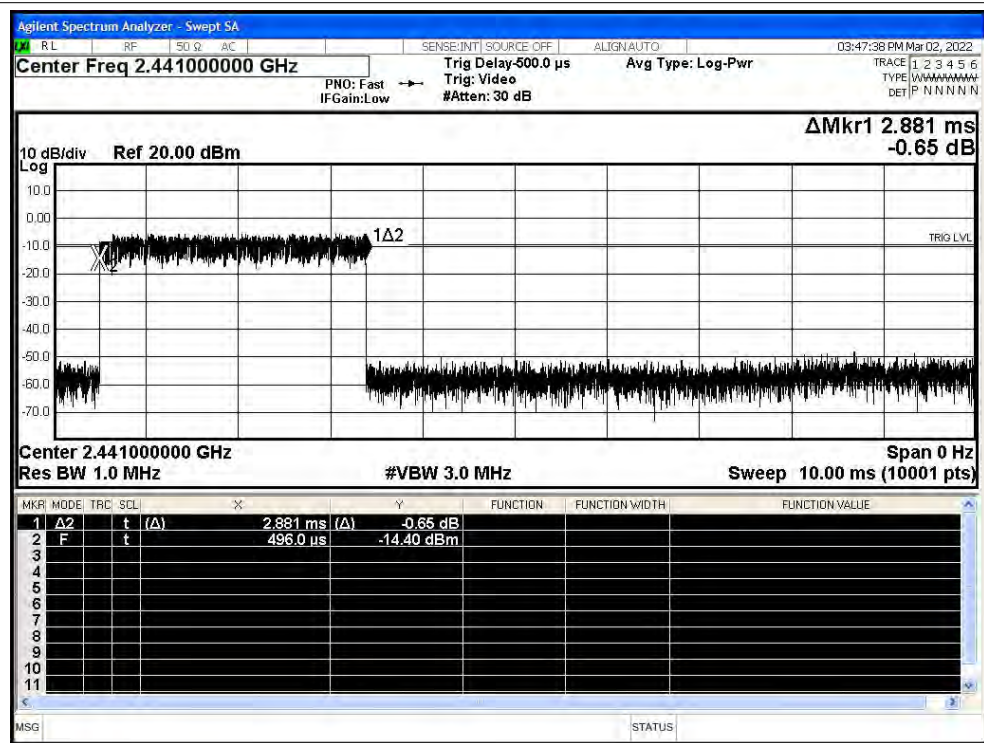


Dwell NVNT 1-DH5 2441MHz Ant1 Accumulated

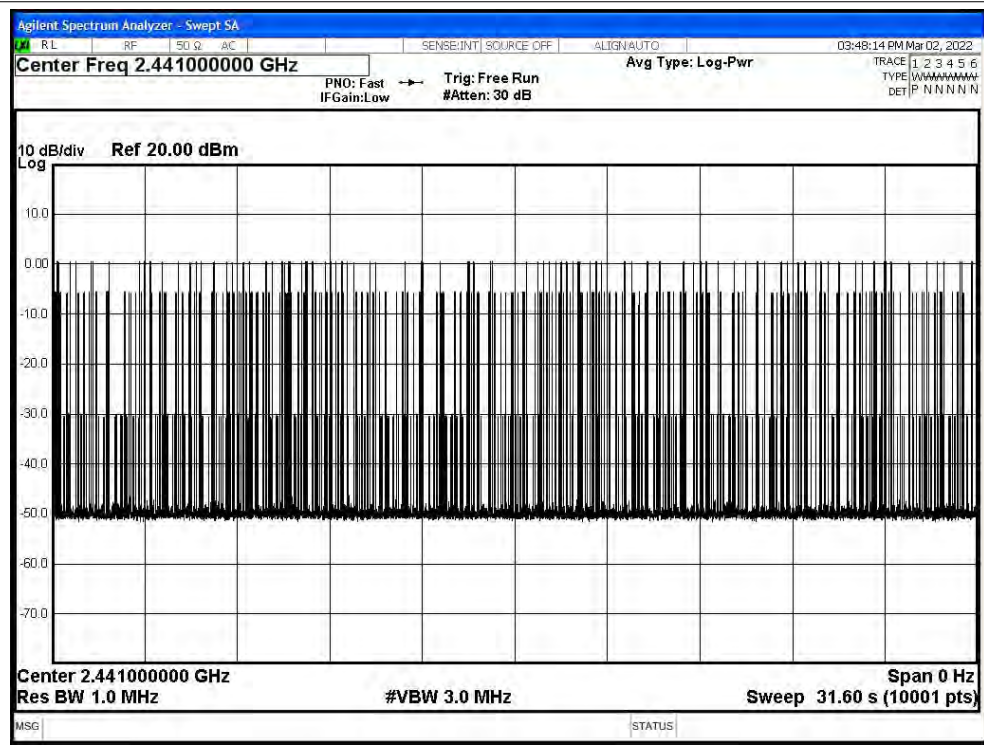




Dwell NVNT 2-DH5 2441MHz Ant1 One Burst

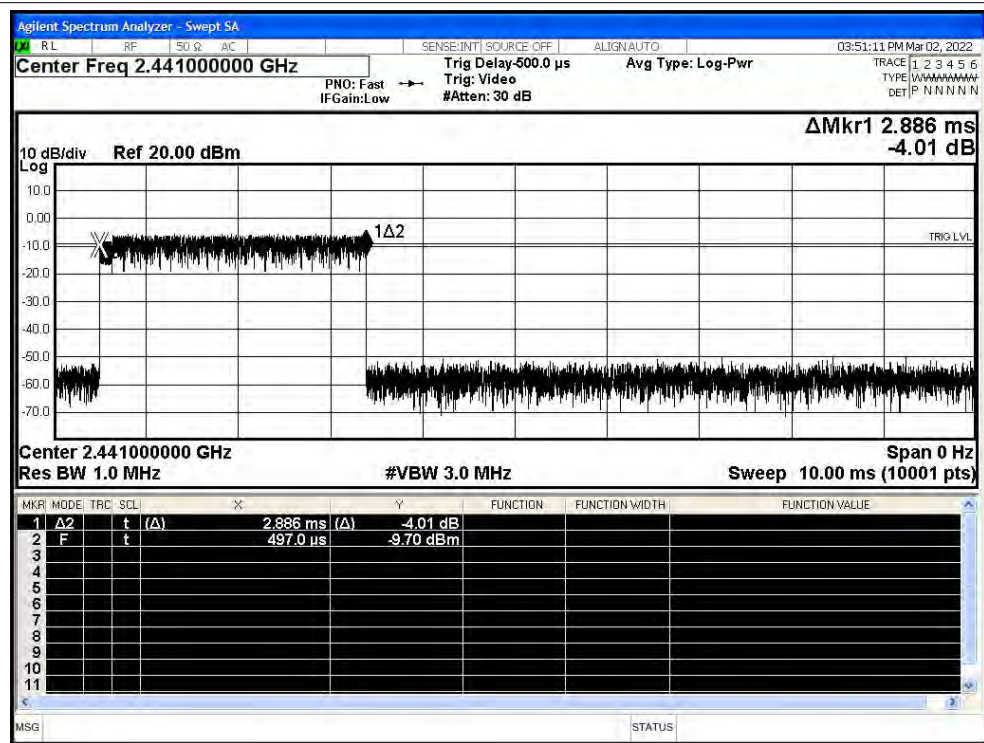


Dwell NVNT 2-DH5 2441MHz Ant1 Accumulated

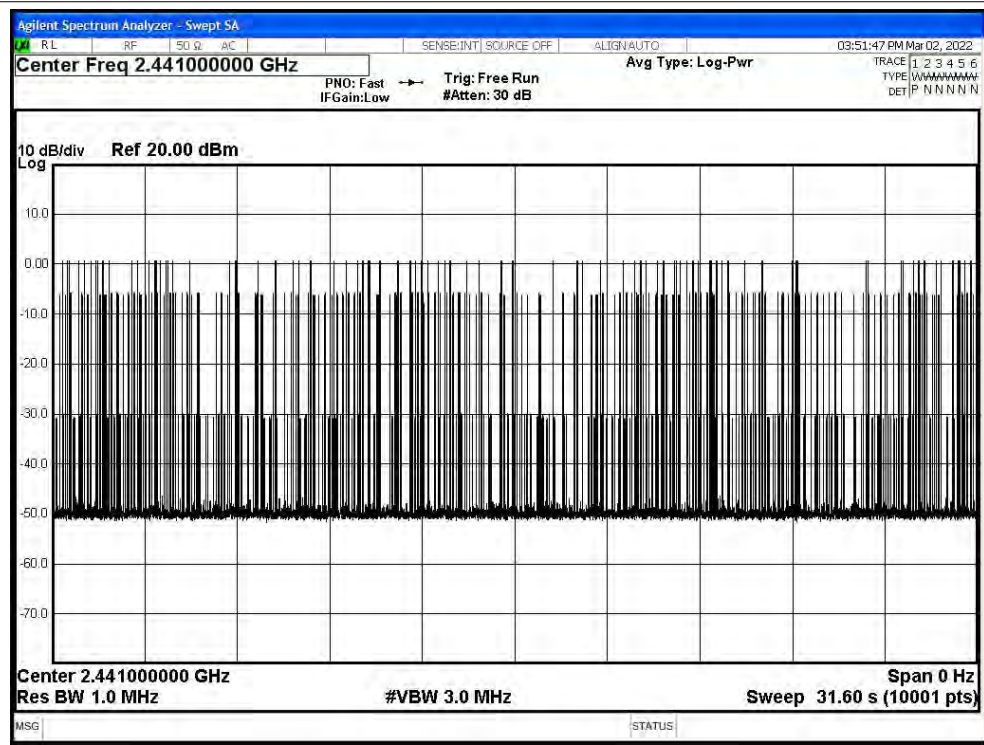




Dwell NVNT 3-DH5 2441MHz Ant1 One Burst



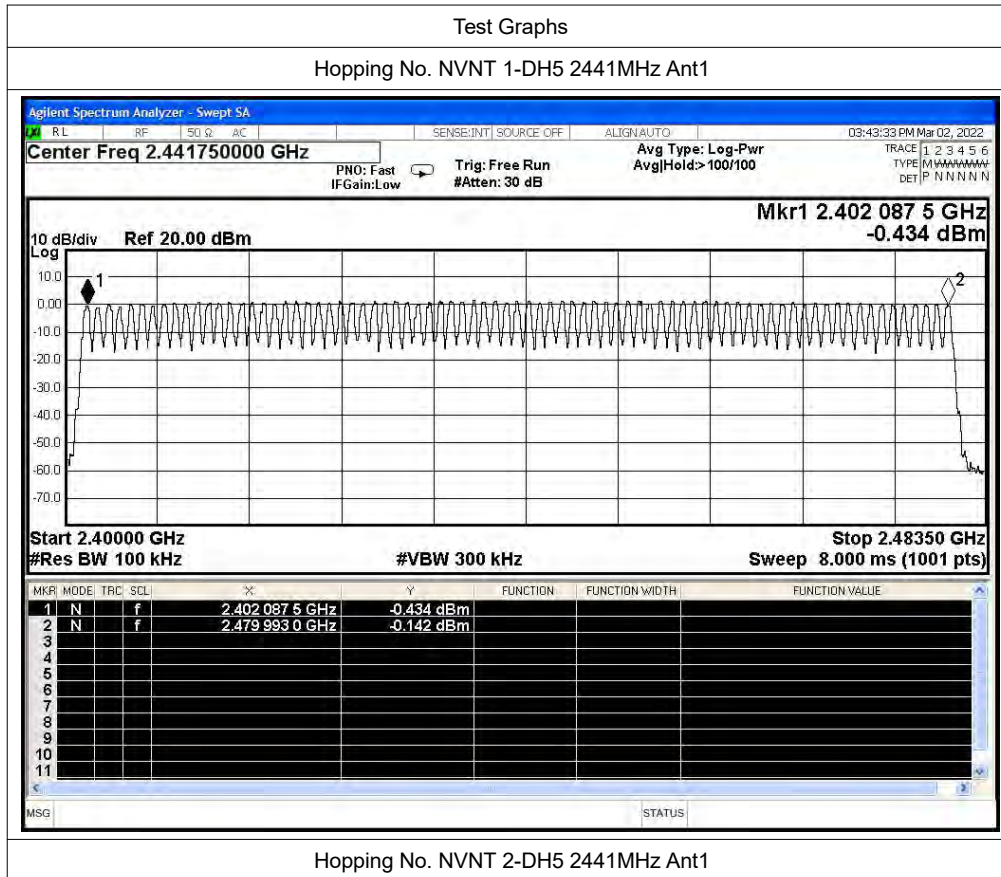
Dwell NVNT 3-DH5 2441MHz Ant1 Accumulated

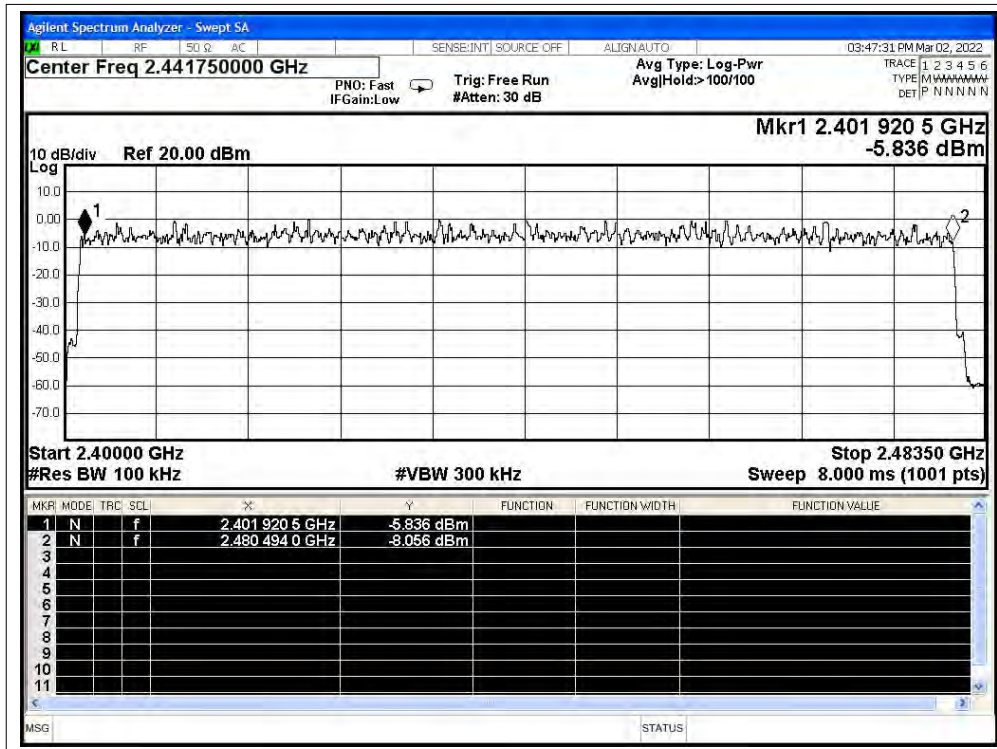




## A.5 Number of Hopping Channel

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









## A.6 Band Edge

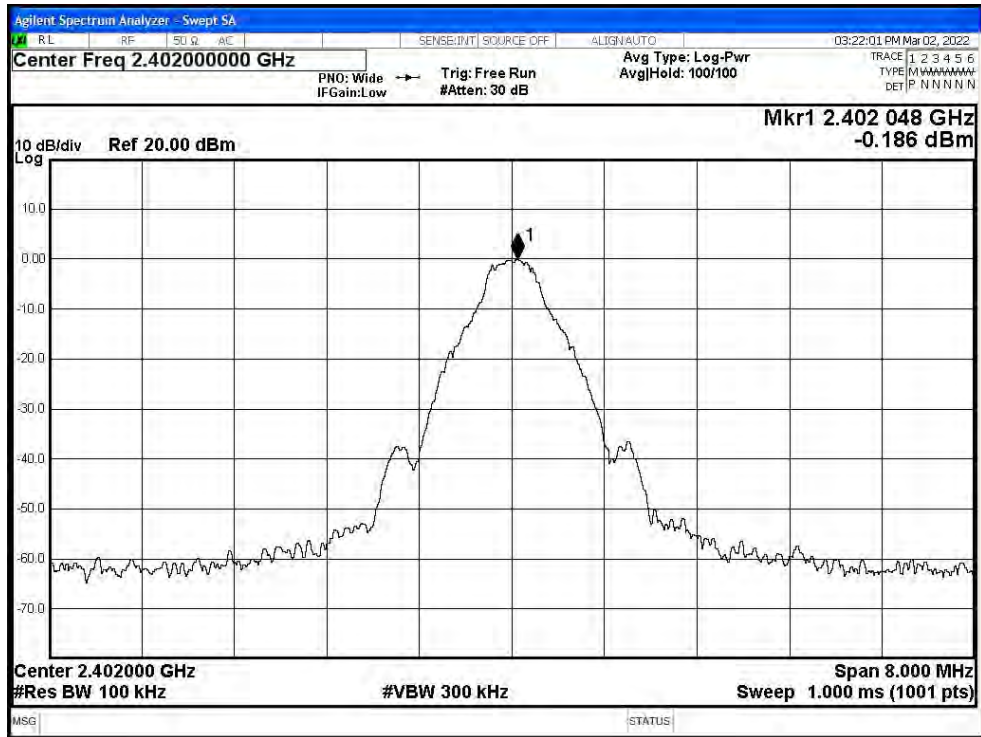
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-55.84	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-58.36	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-53.4	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-56.94	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-52.81	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-54.75	-20	Pass



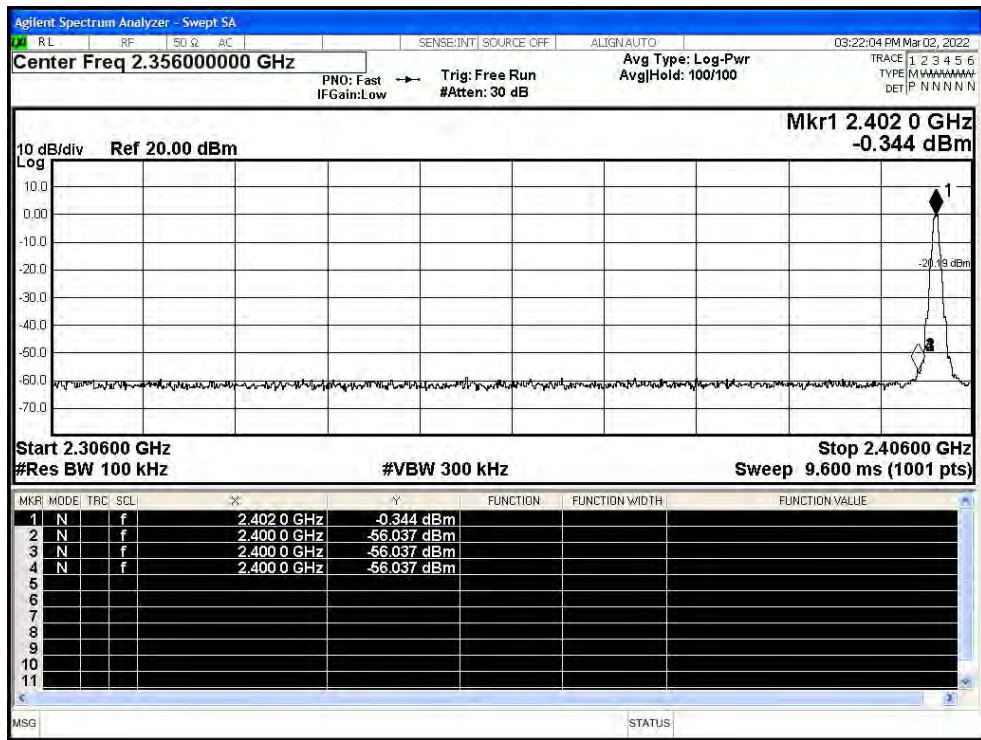


Test Graphs

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

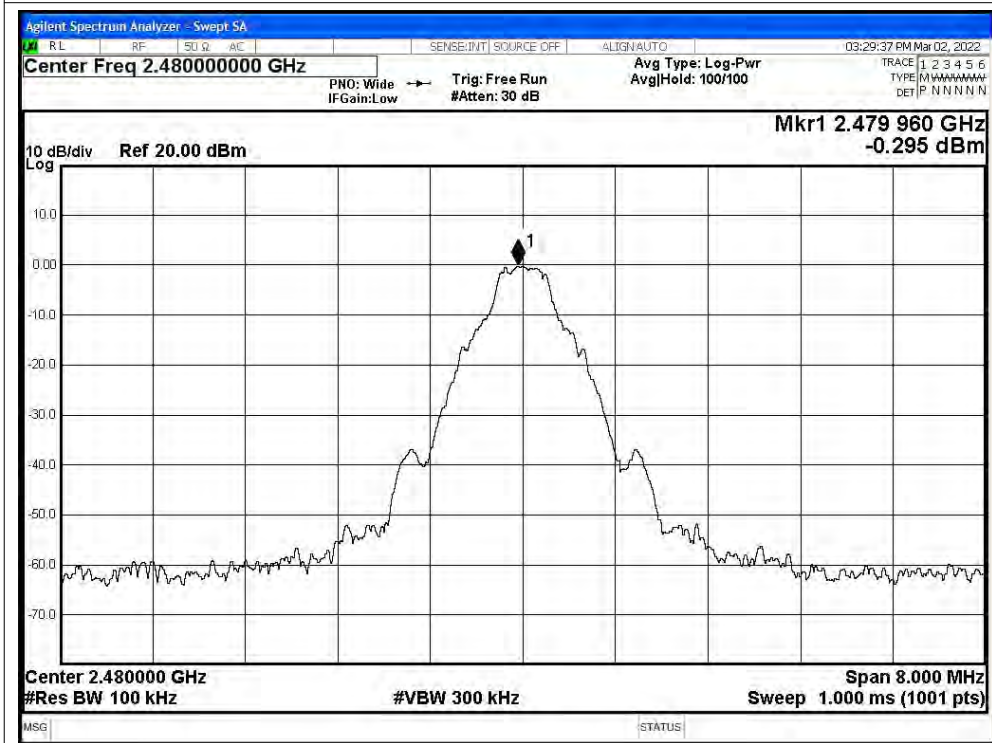


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

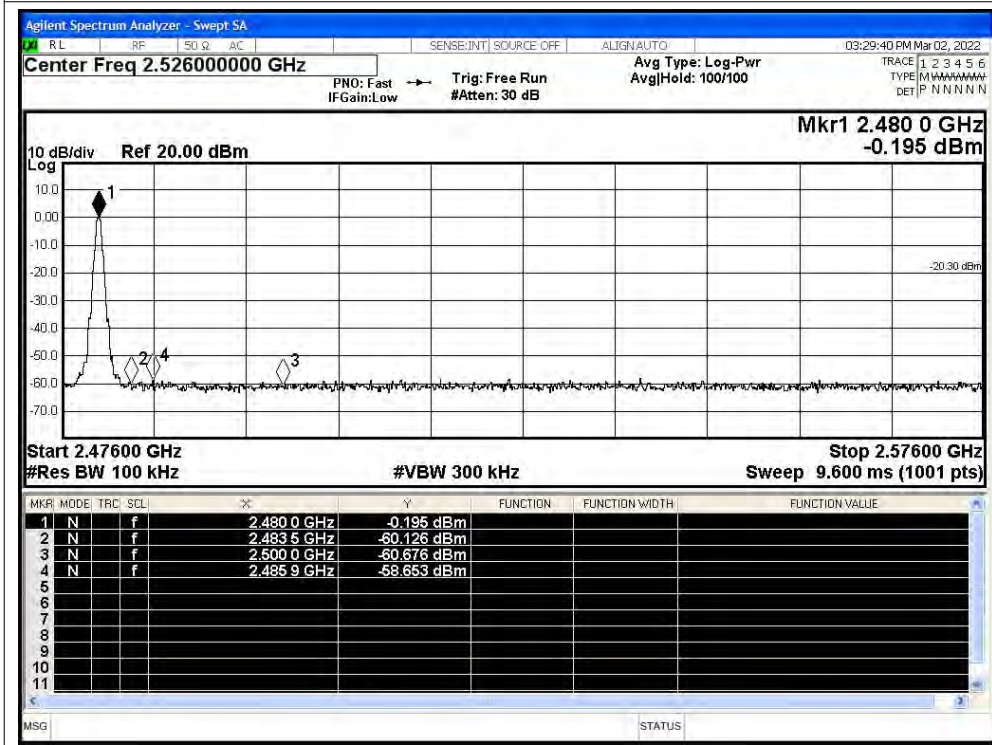




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

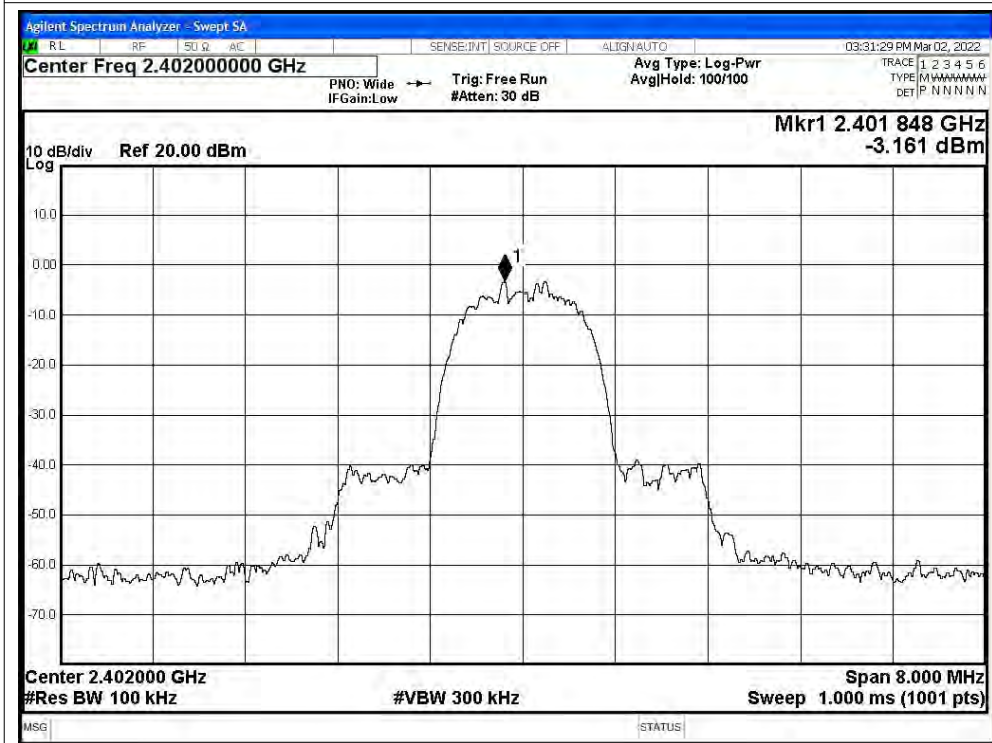


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

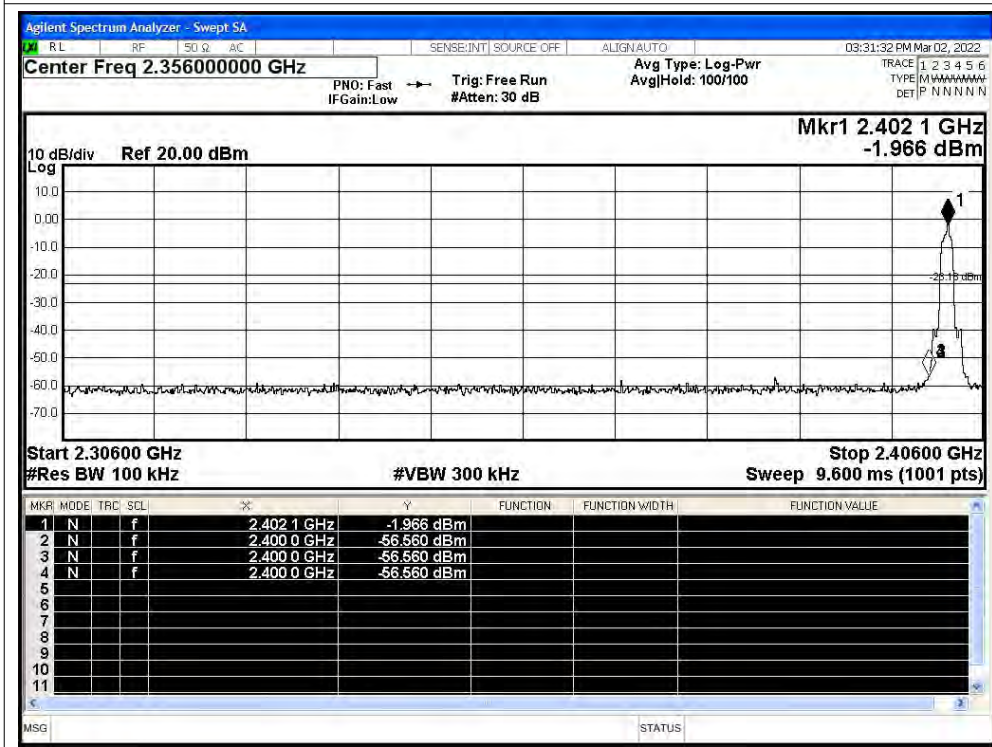




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

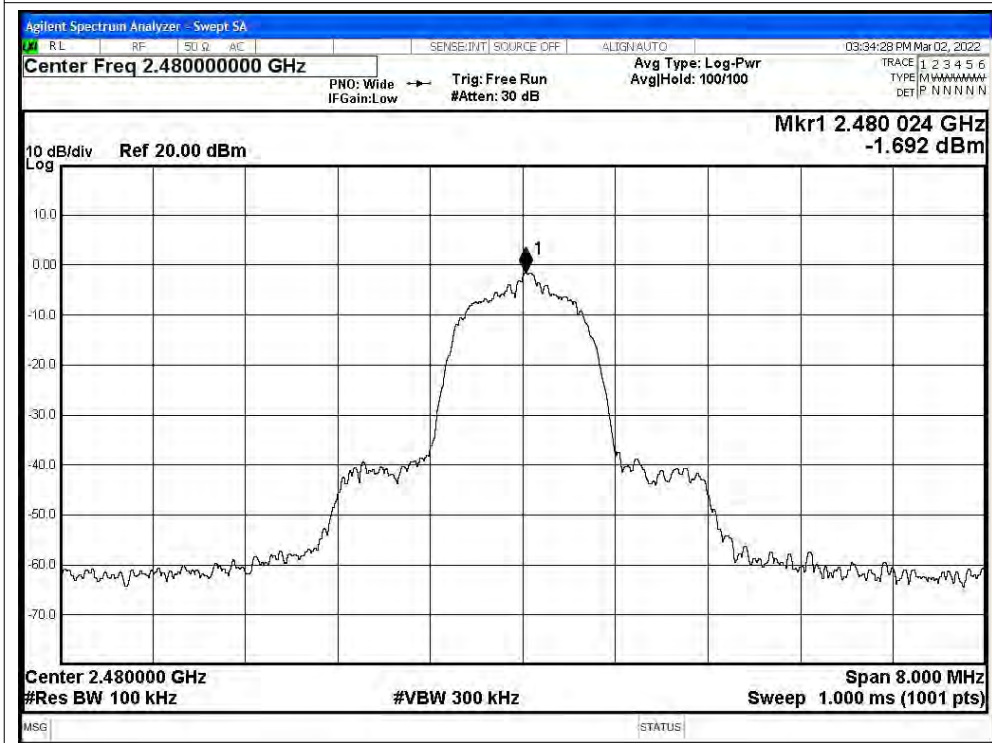


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

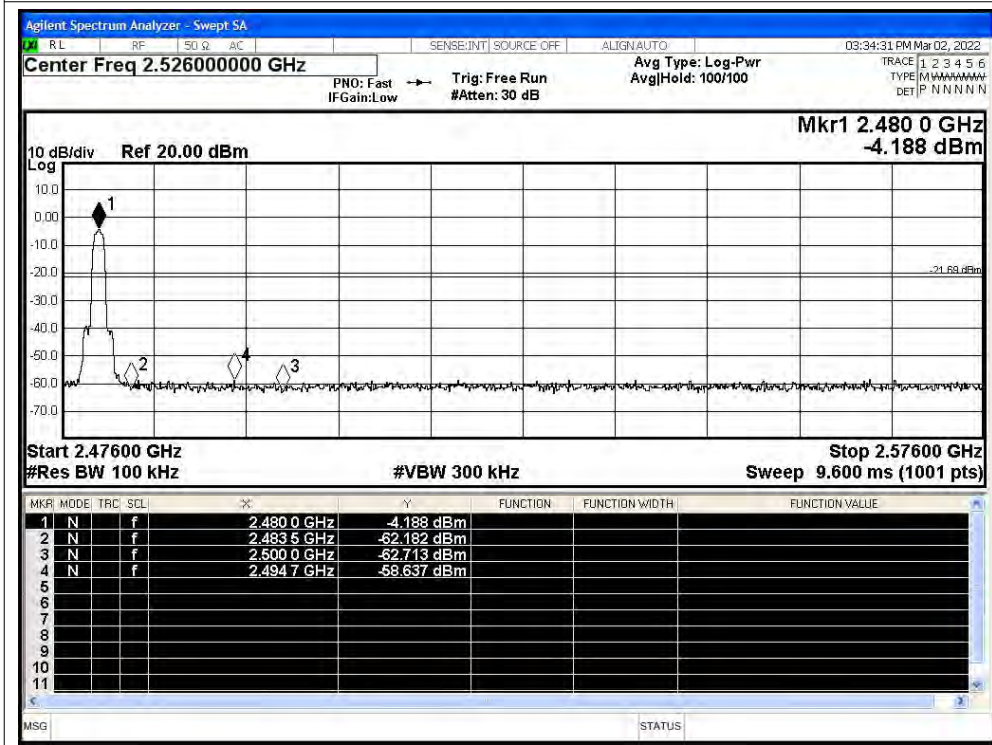




Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref

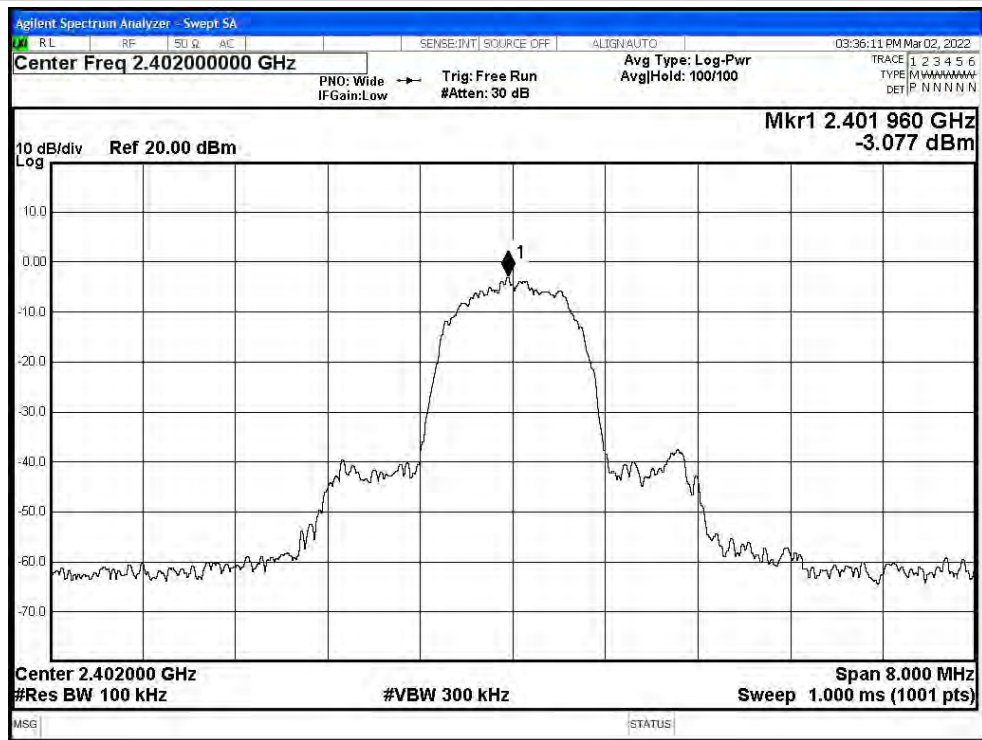


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

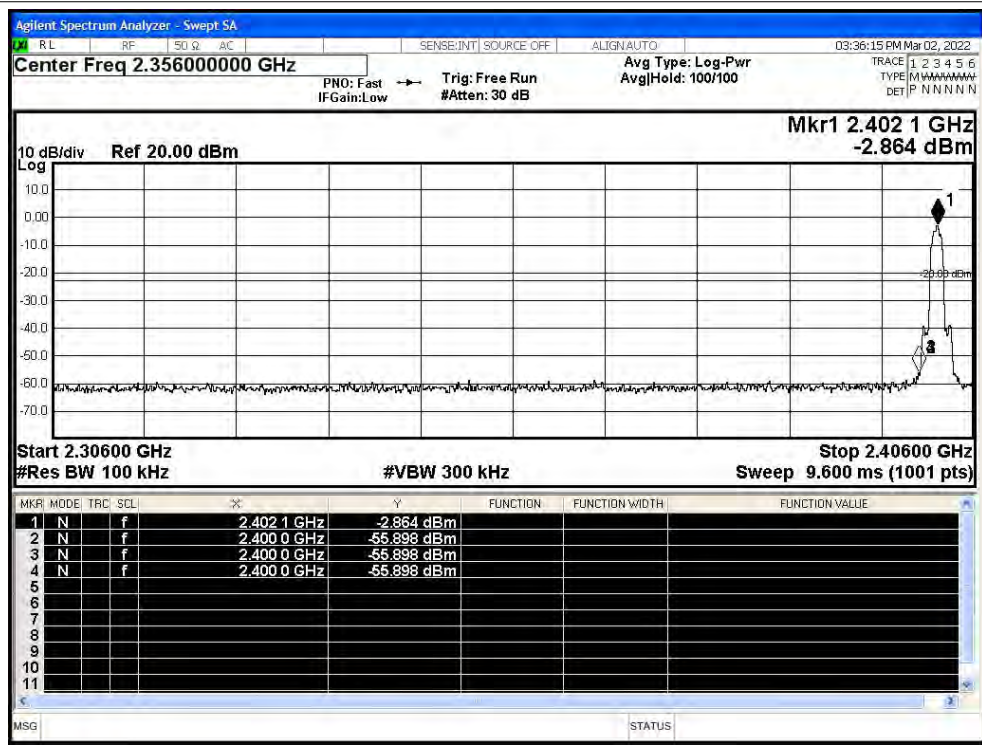




Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref

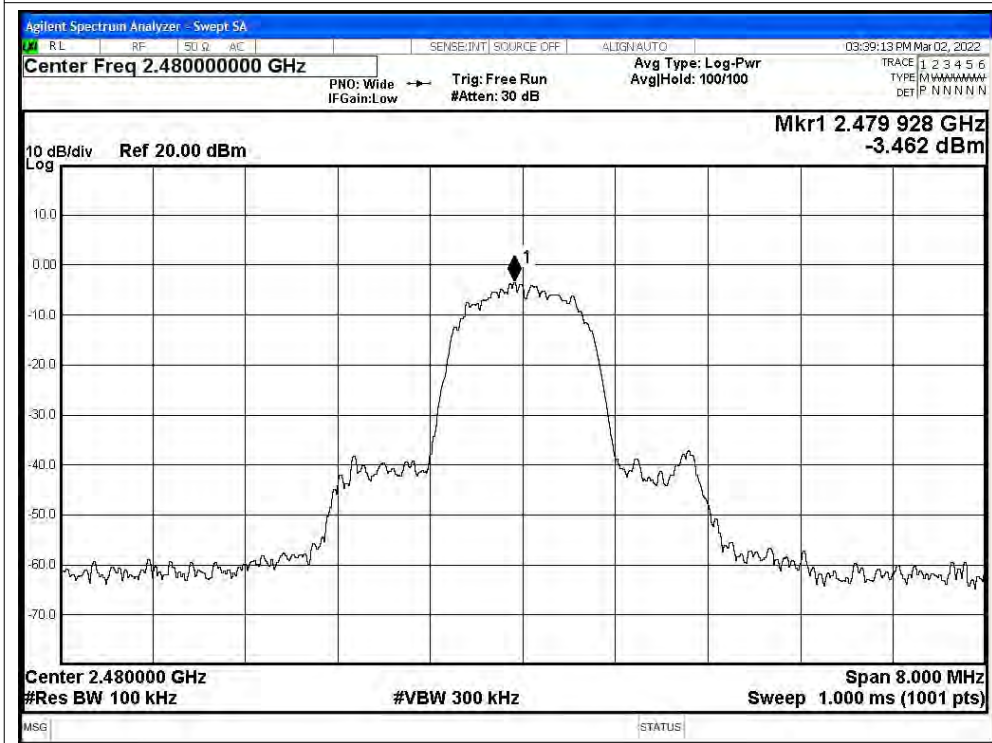


Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission

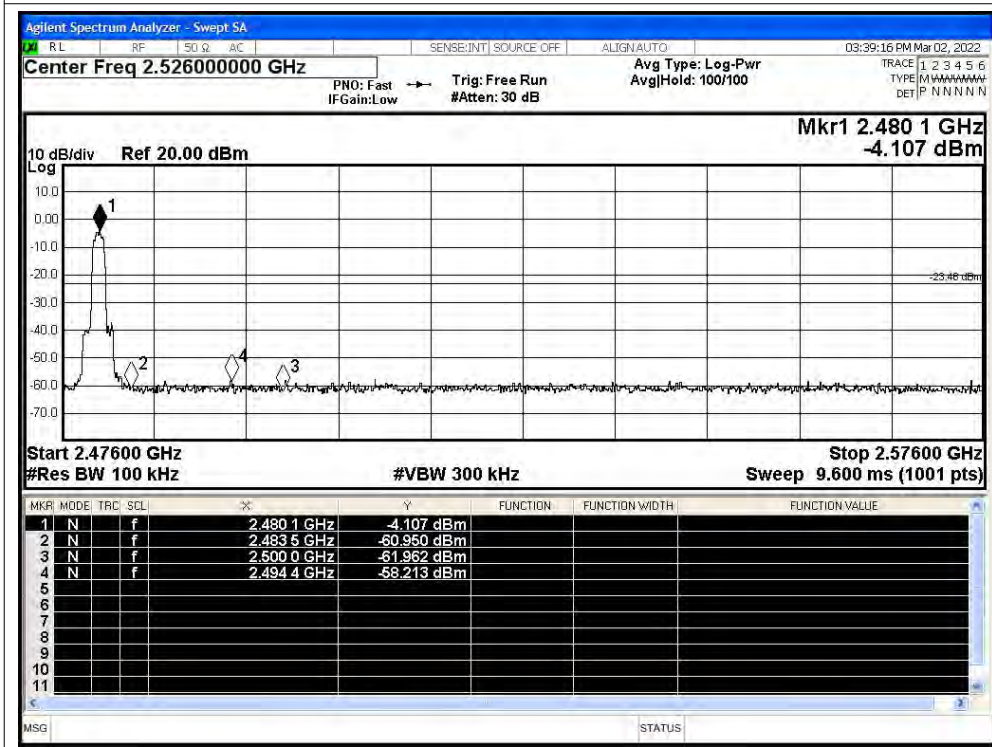




Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



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





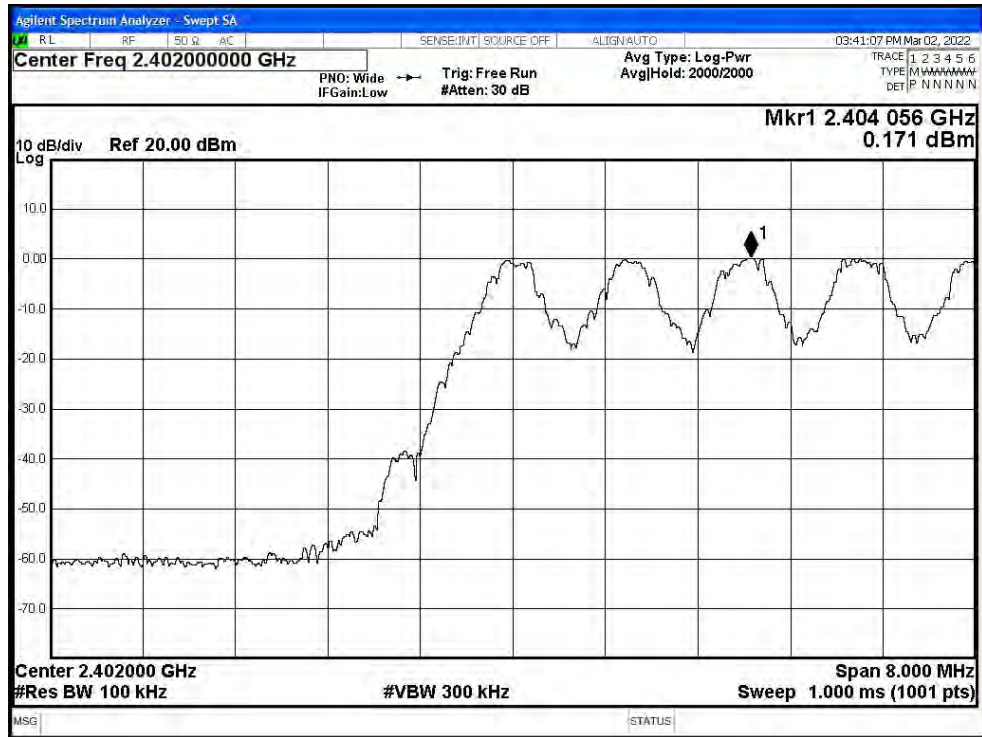
## (Hopping)

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-57.98	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-58.07	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-54.49	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-55.61	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-56.55	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-54.1	-20	Pass

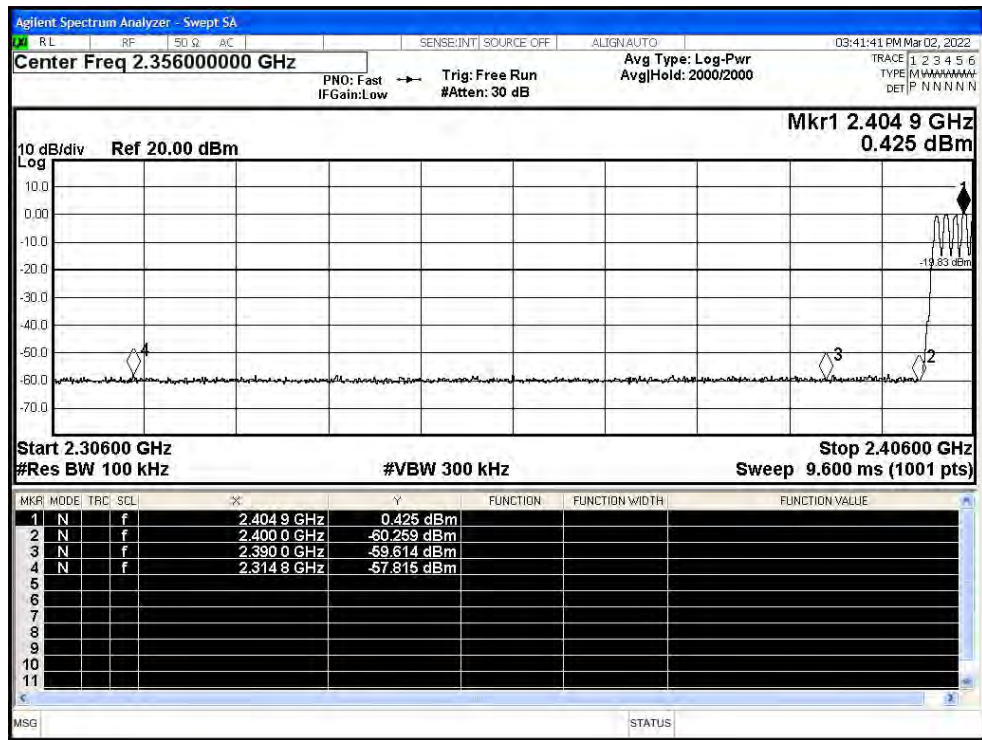


Test Graphs

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



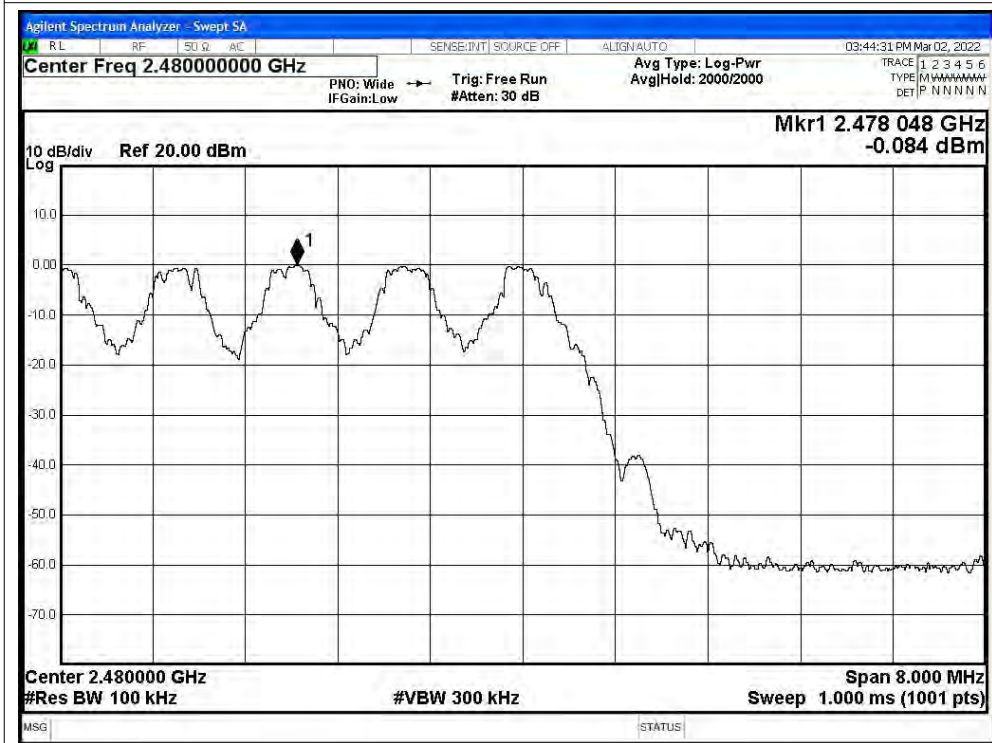
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



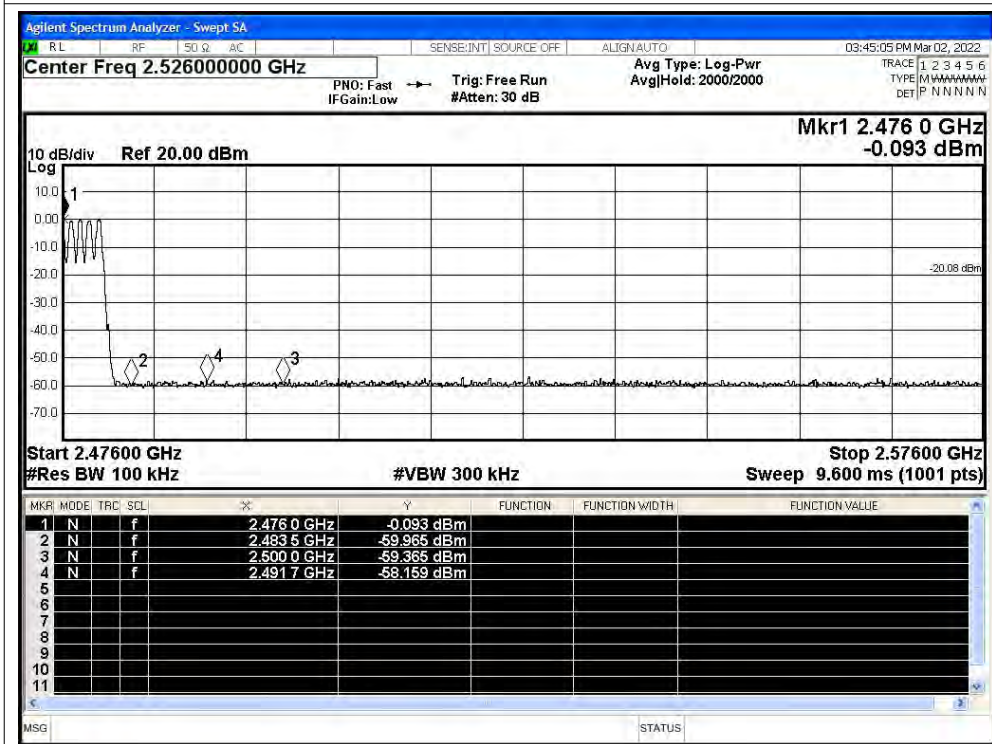




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



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

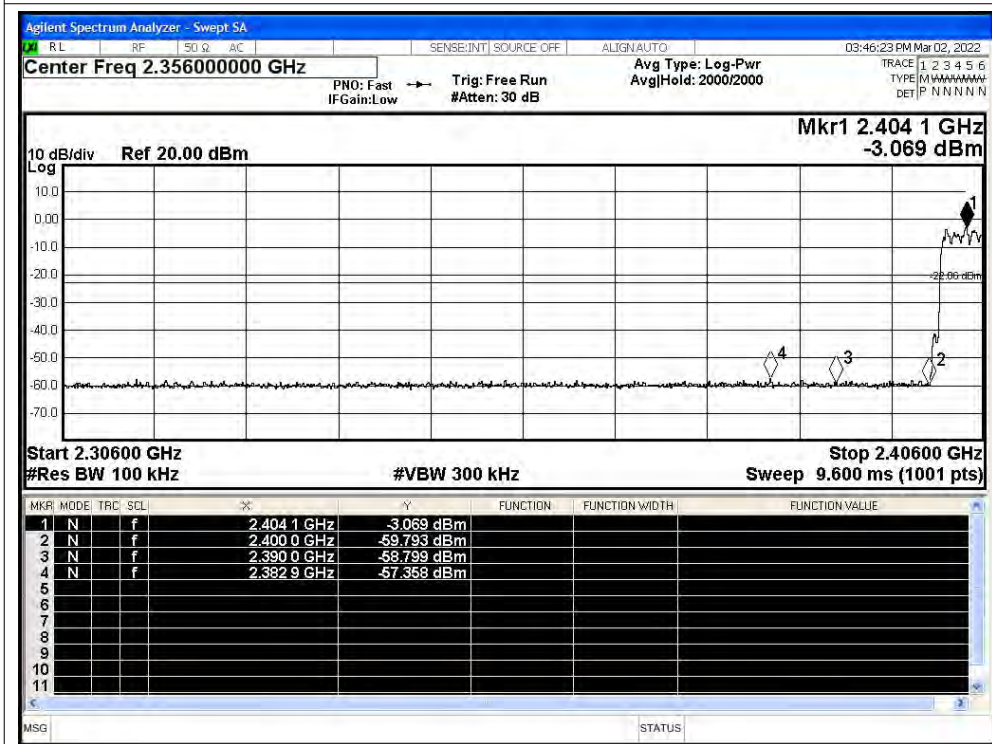




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref

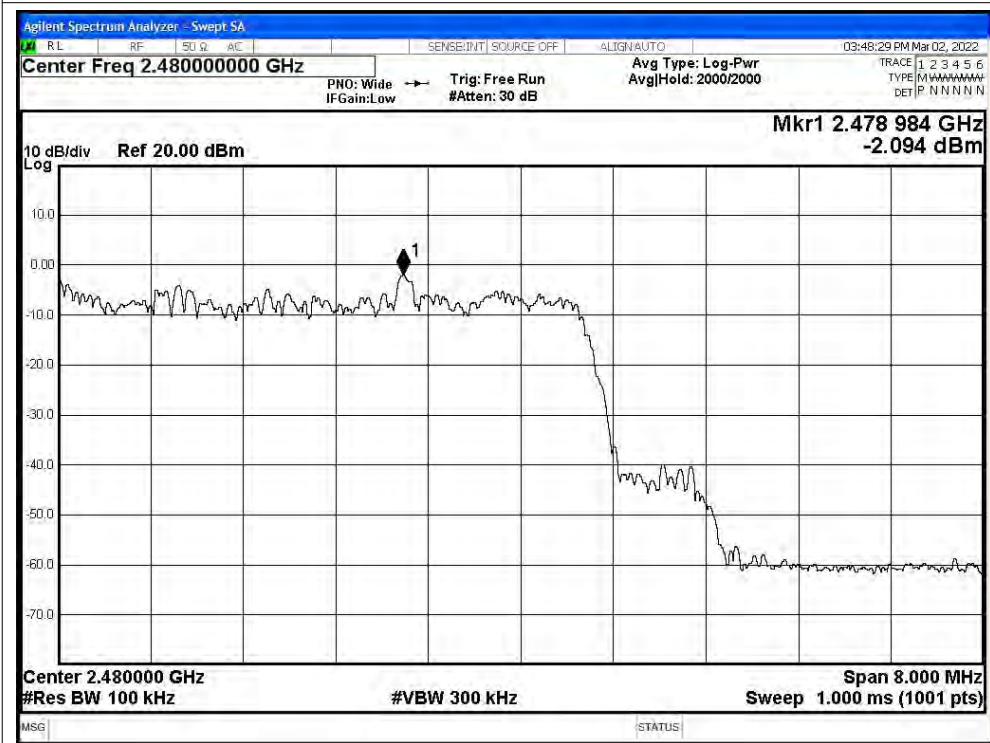


Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission

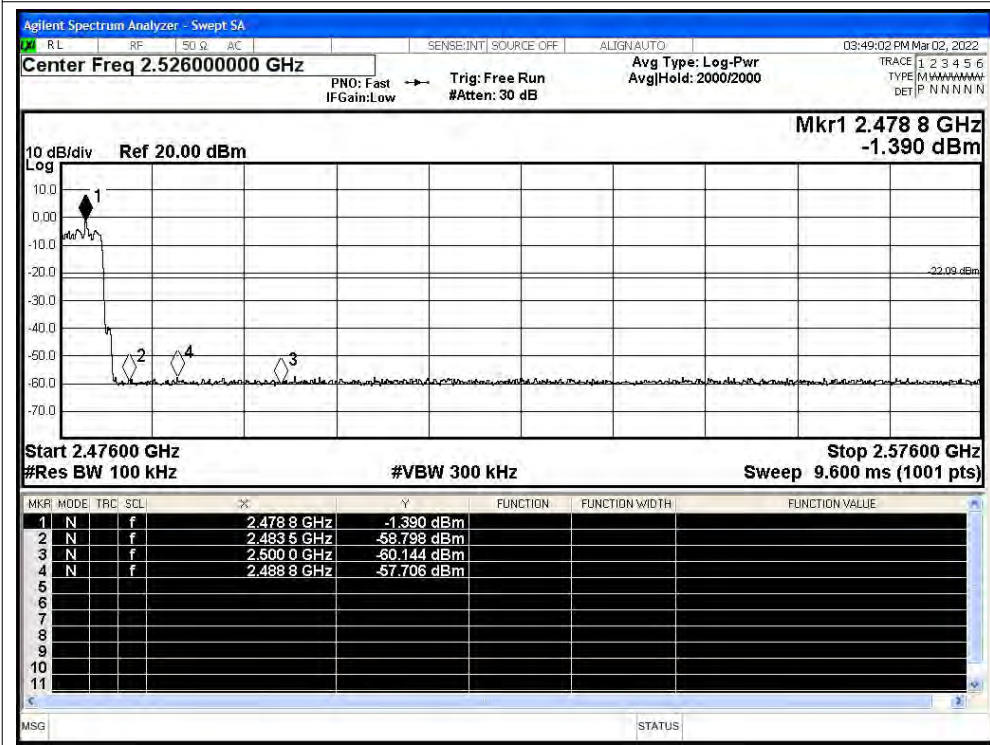




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



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

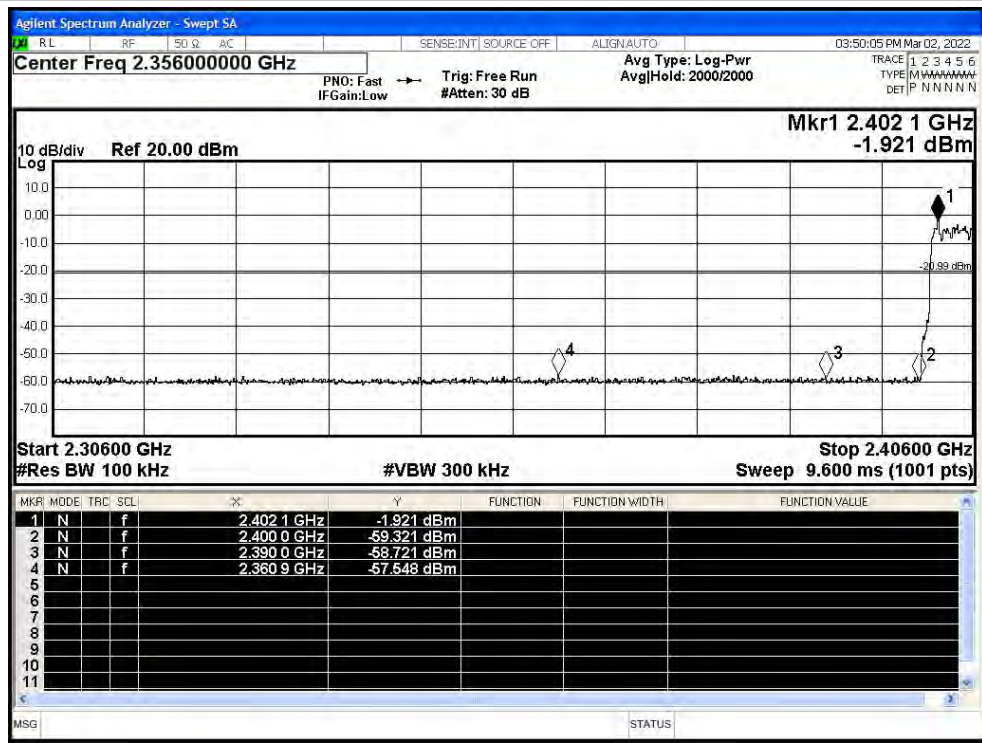




Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref

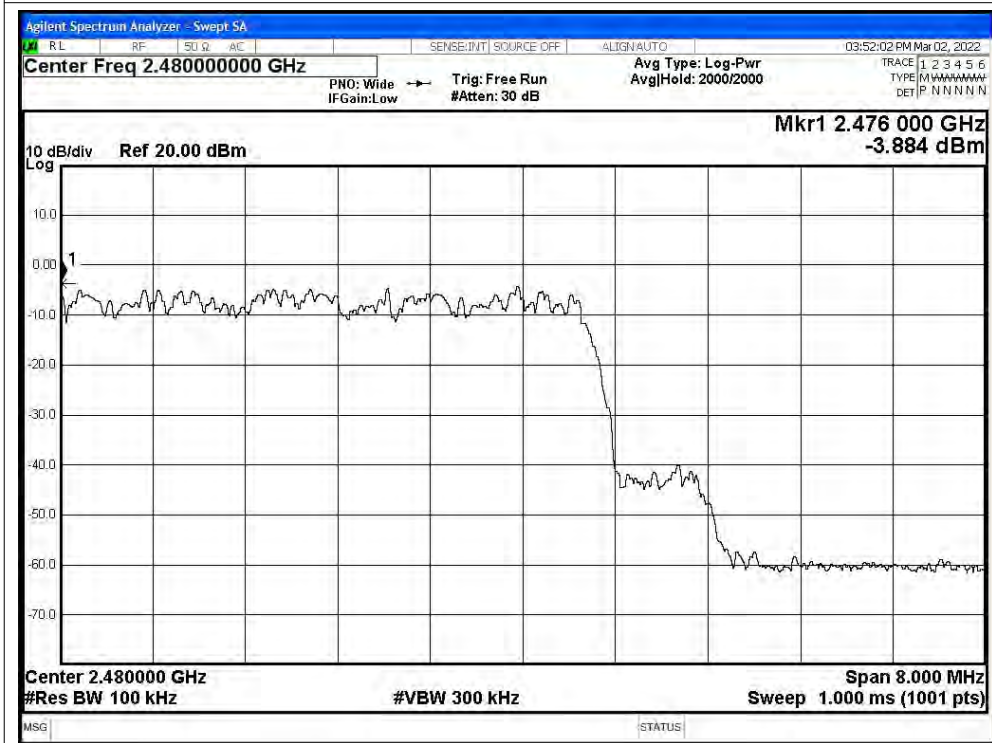


Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission

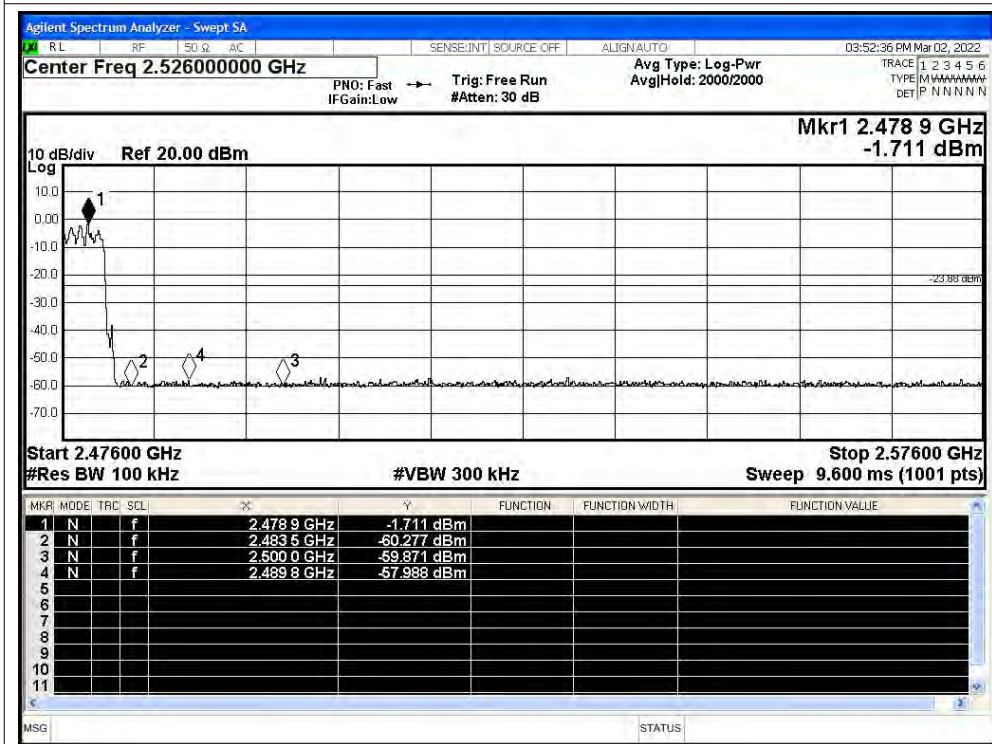




Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



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





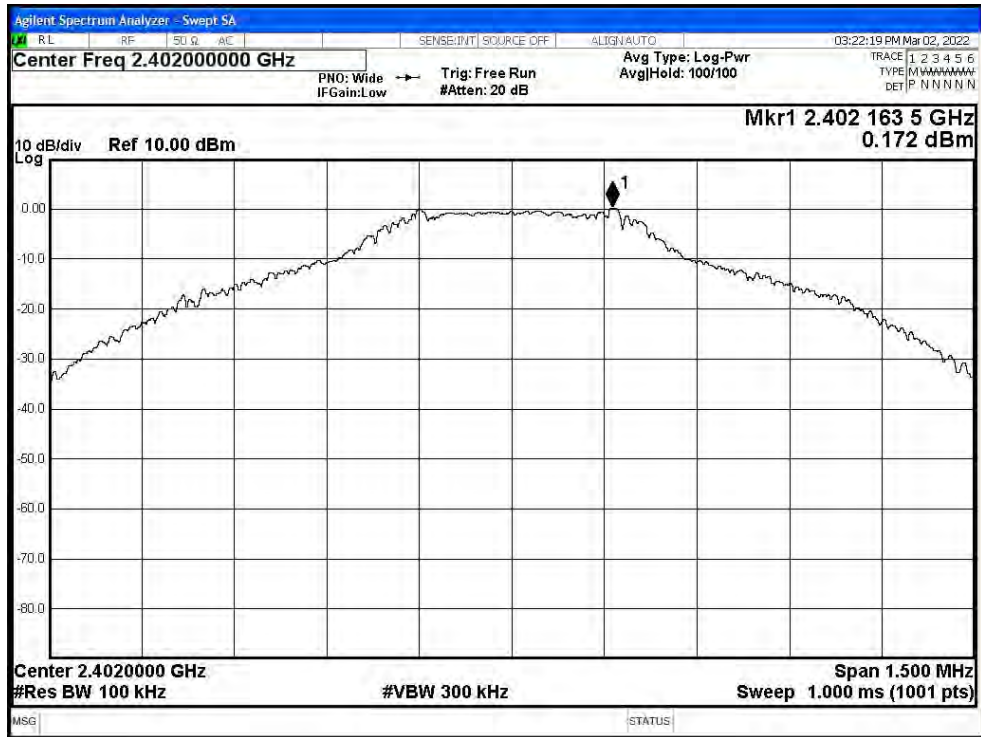
## A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-57.57	-20	Pass
NVNT	1-DH5	2441	Ant1	-56.85	-20	Pass
NVNT	1-DH5	2480	Ant1	-56.81	-20	Pass
NVNT	2-DH5	2402	Ant1	-54.52	-20	Pass
NVNT	2-DH5	2441	Ant1	-57.28	-20	Pass
NVNT	2-DH5	2480	Ant1	-55.45	-20	Pass
NVNT	3-DH5	2402	Ant1	-55.26	-20	Pass
NVNT	3-DH5	2441	Ant1	-56.53	-20	Pass
NVNT	3-DH5	2480	Ant1	-55.89	-20	Pass

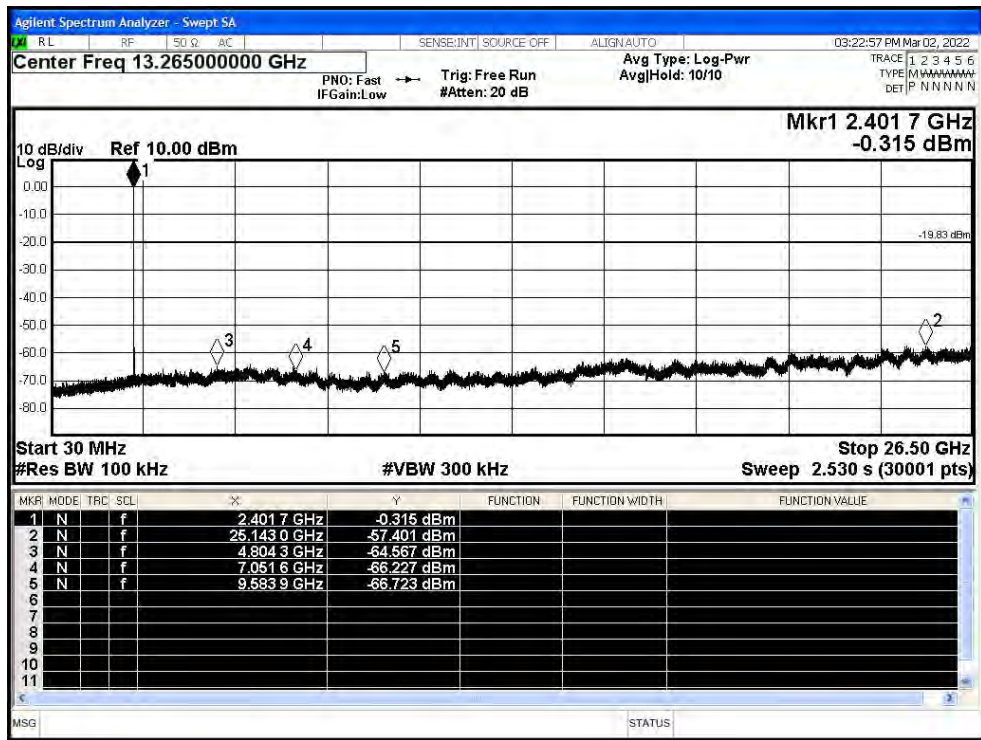


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

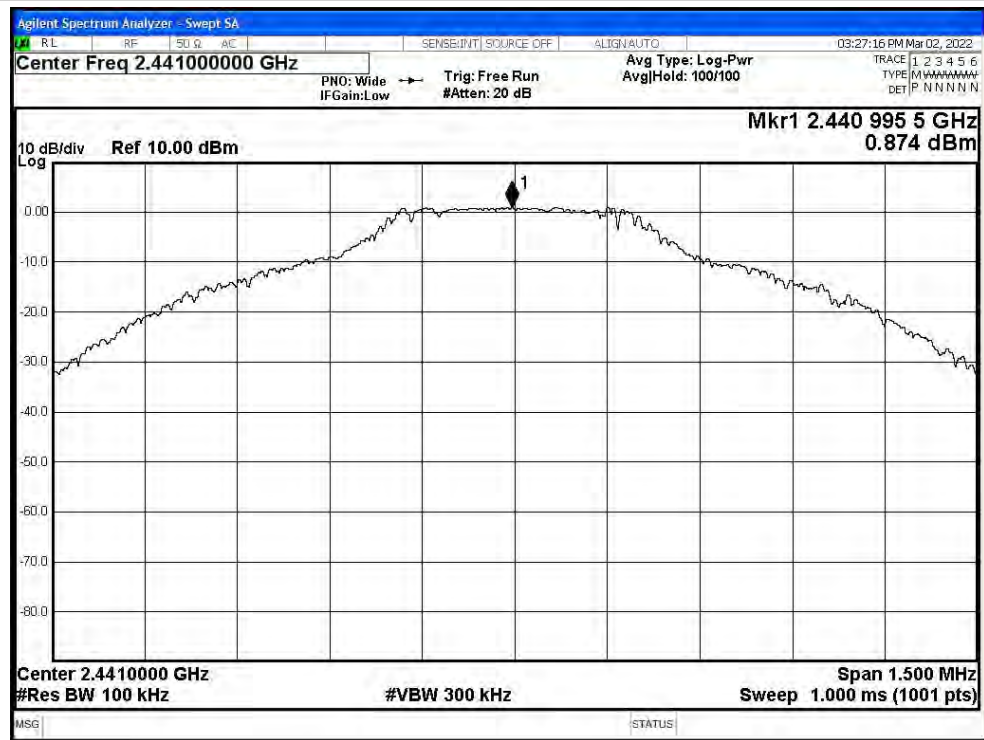


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

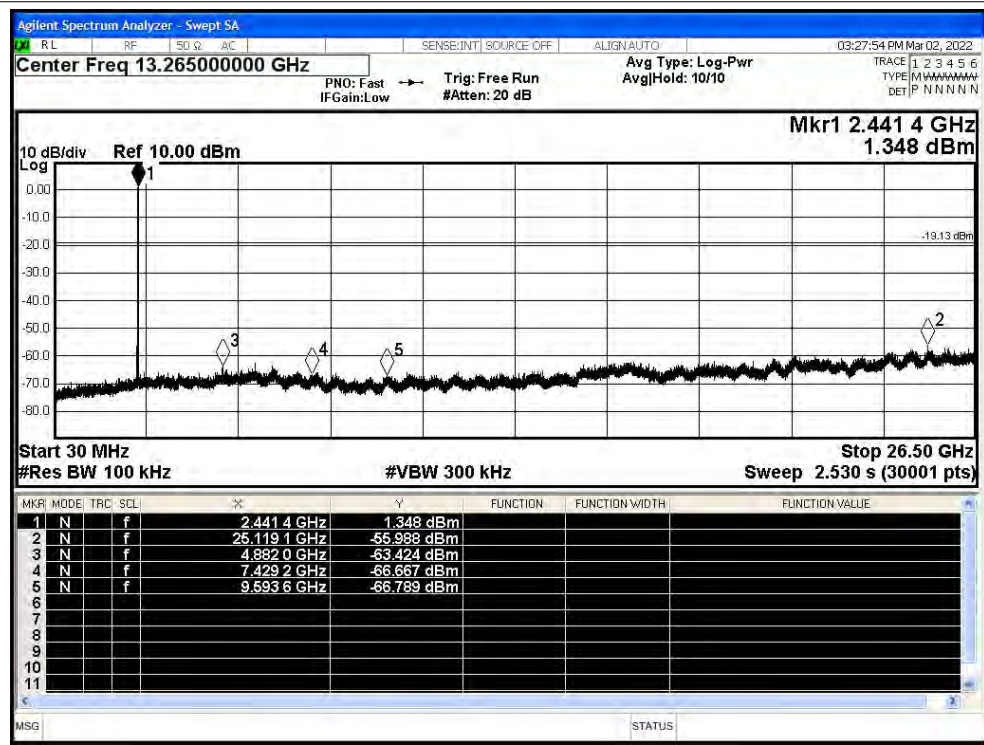




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



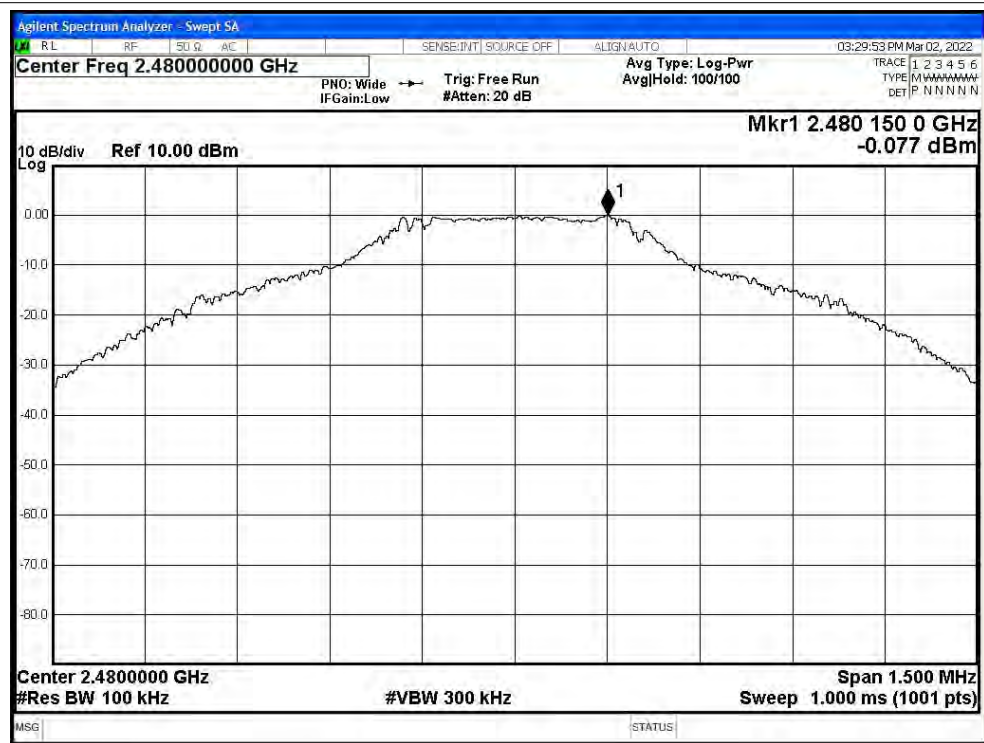
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



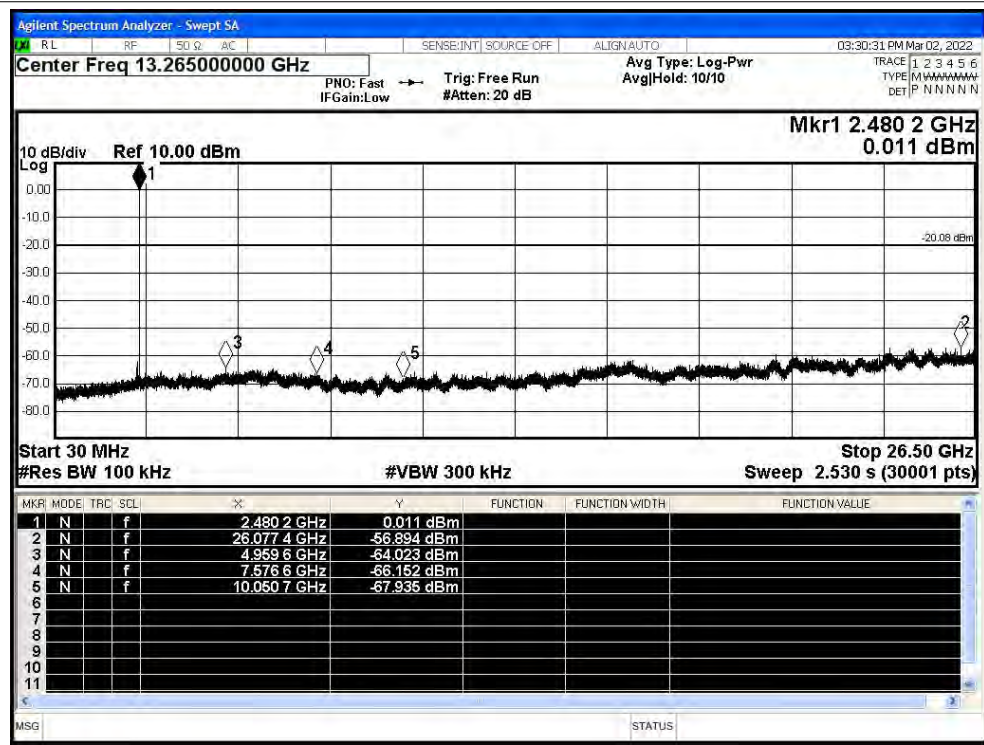




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

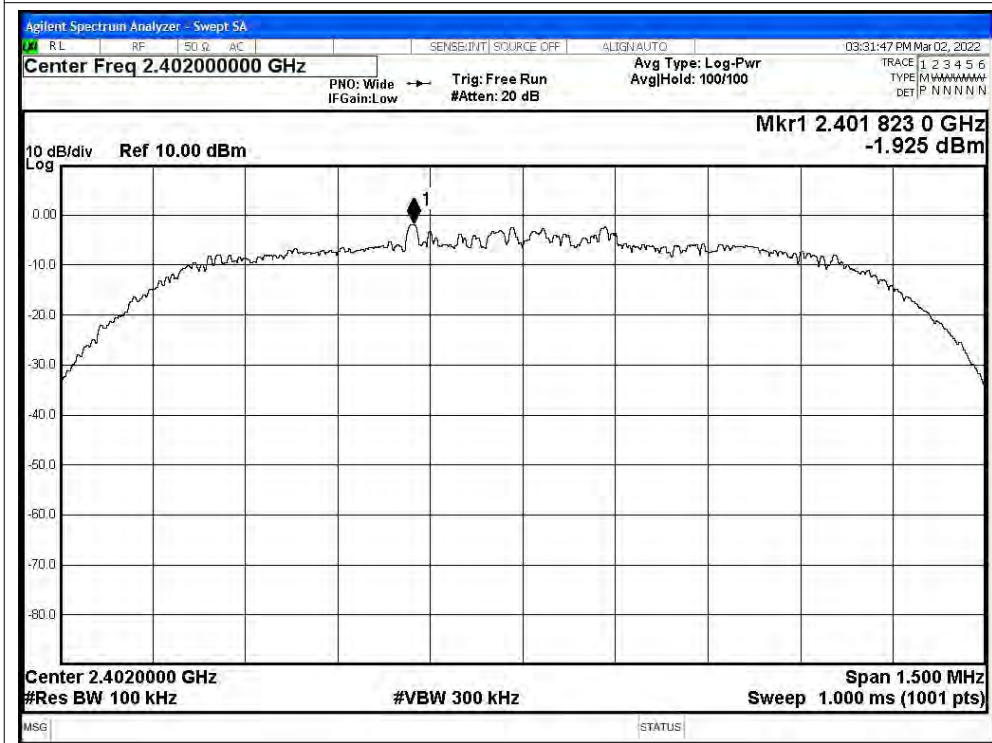


Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission

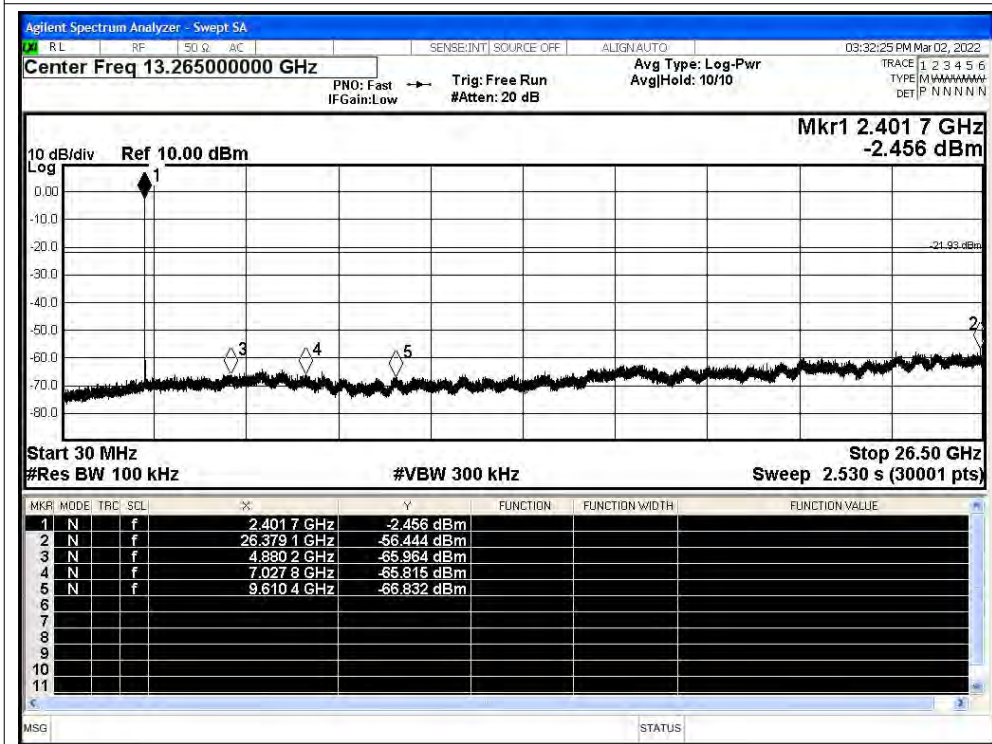




Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref

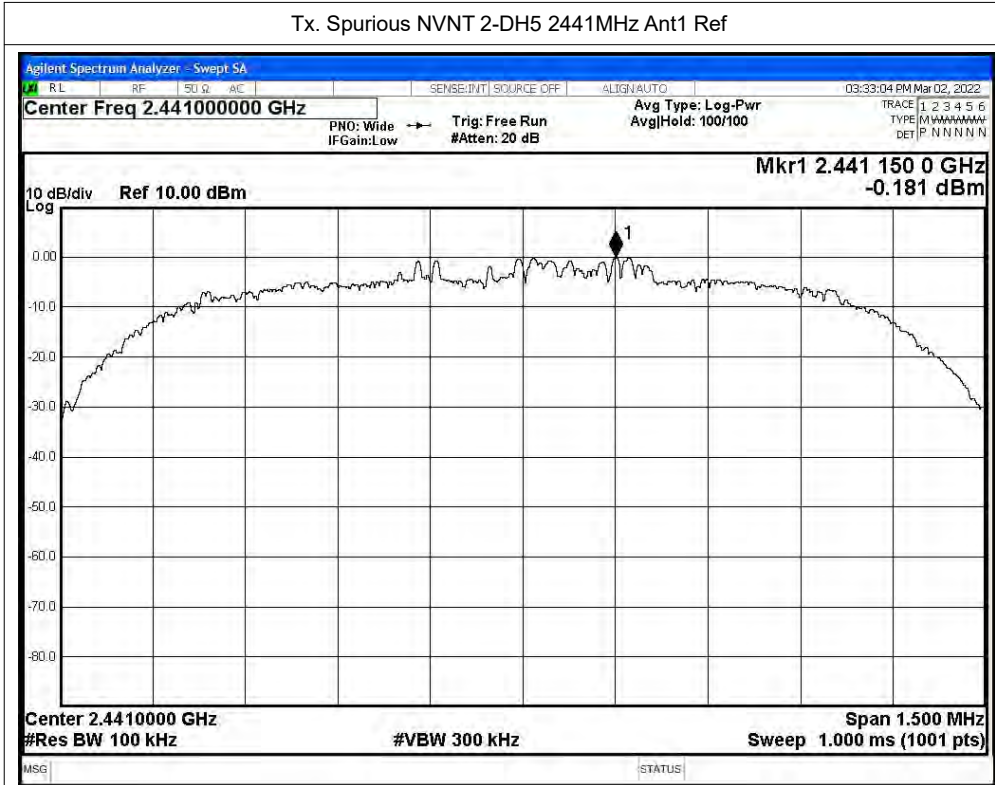


Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission

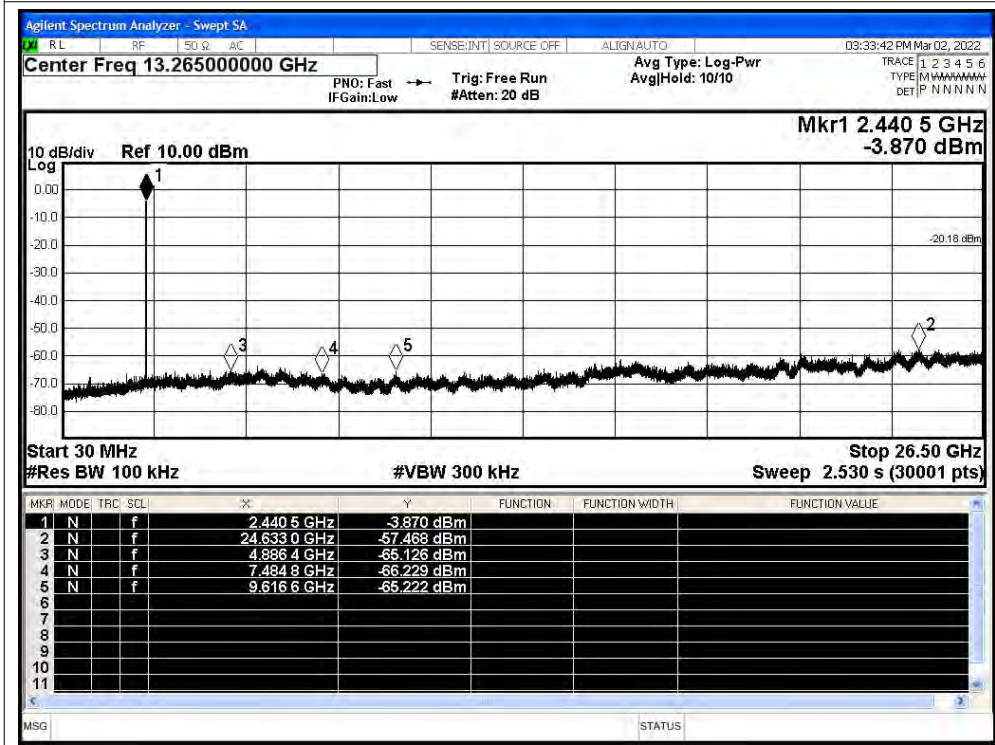




Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref

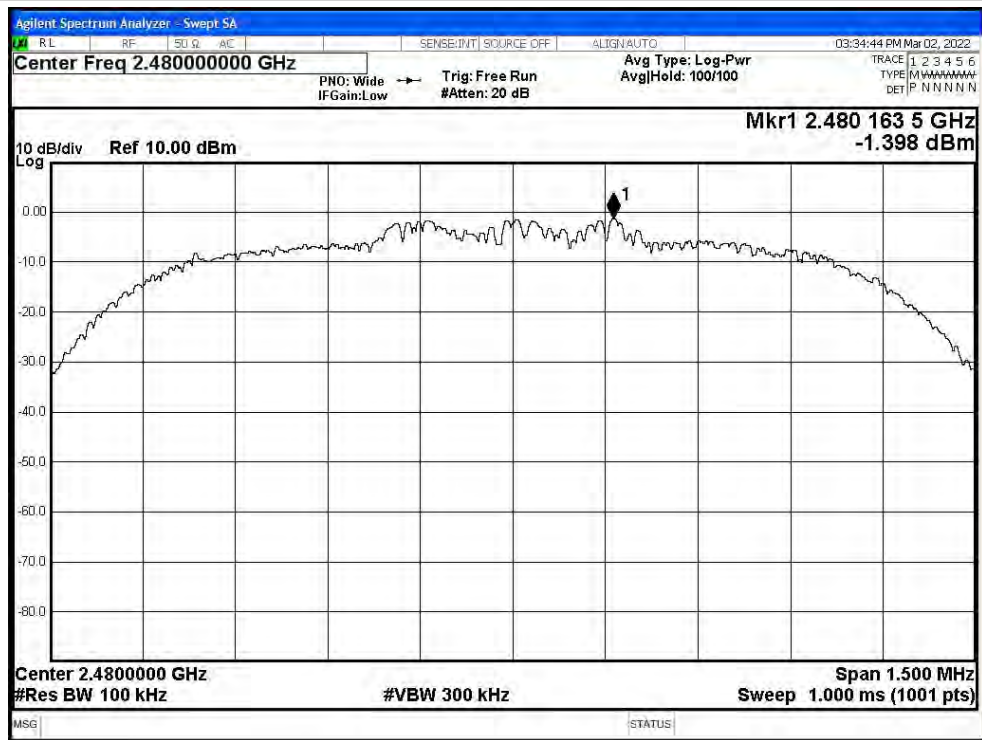


Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission

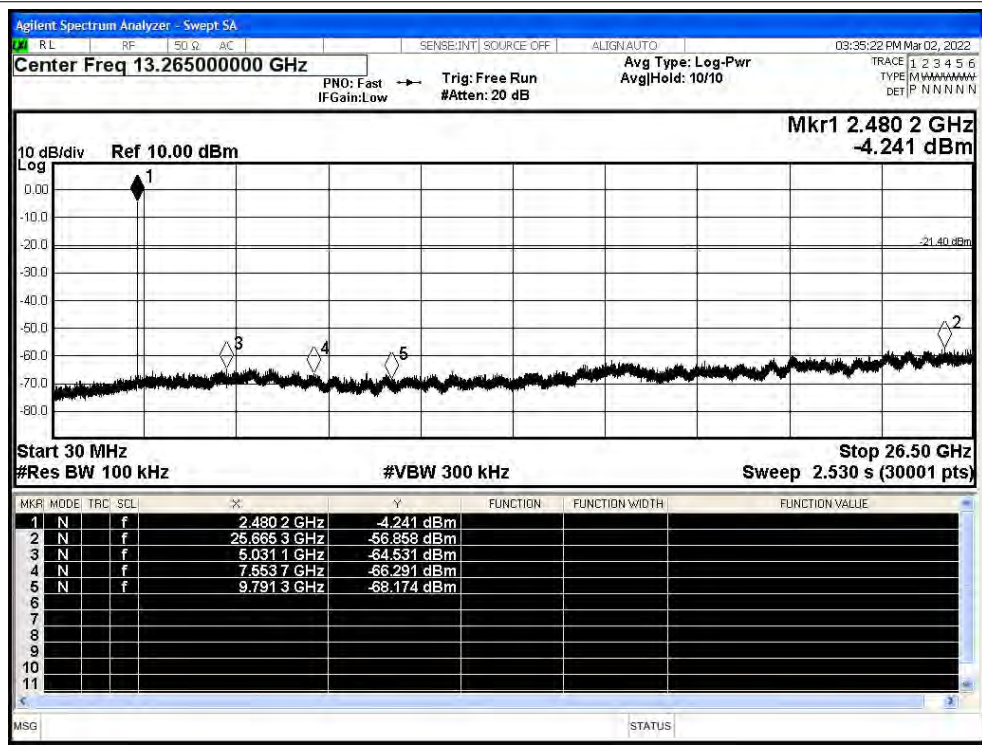




Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref

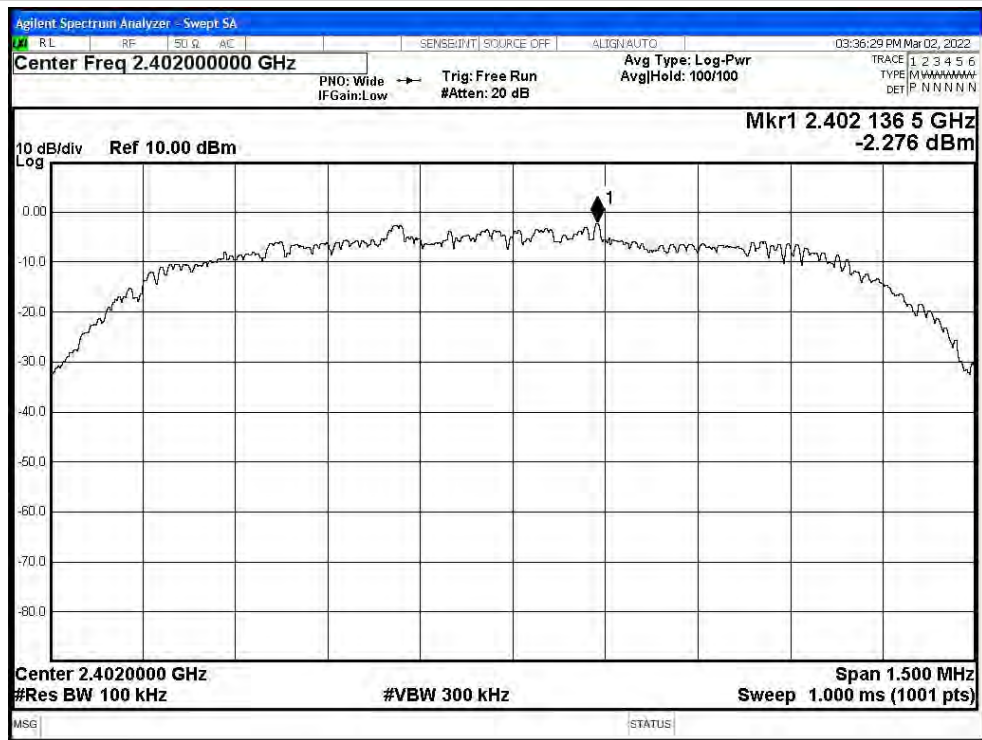


Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission

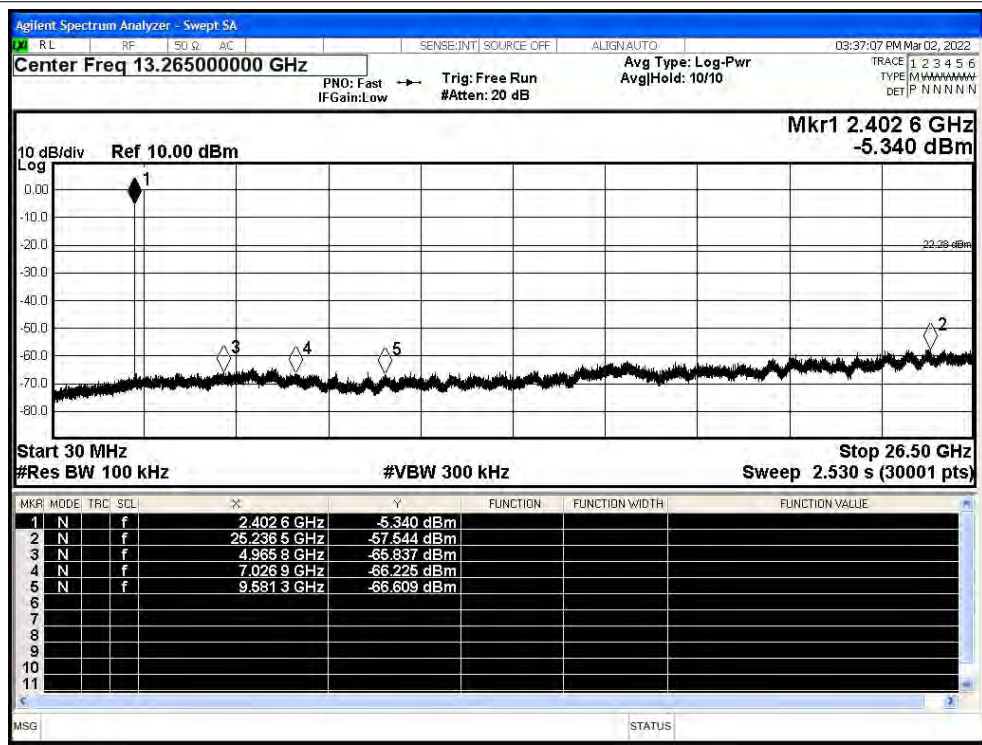




Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref

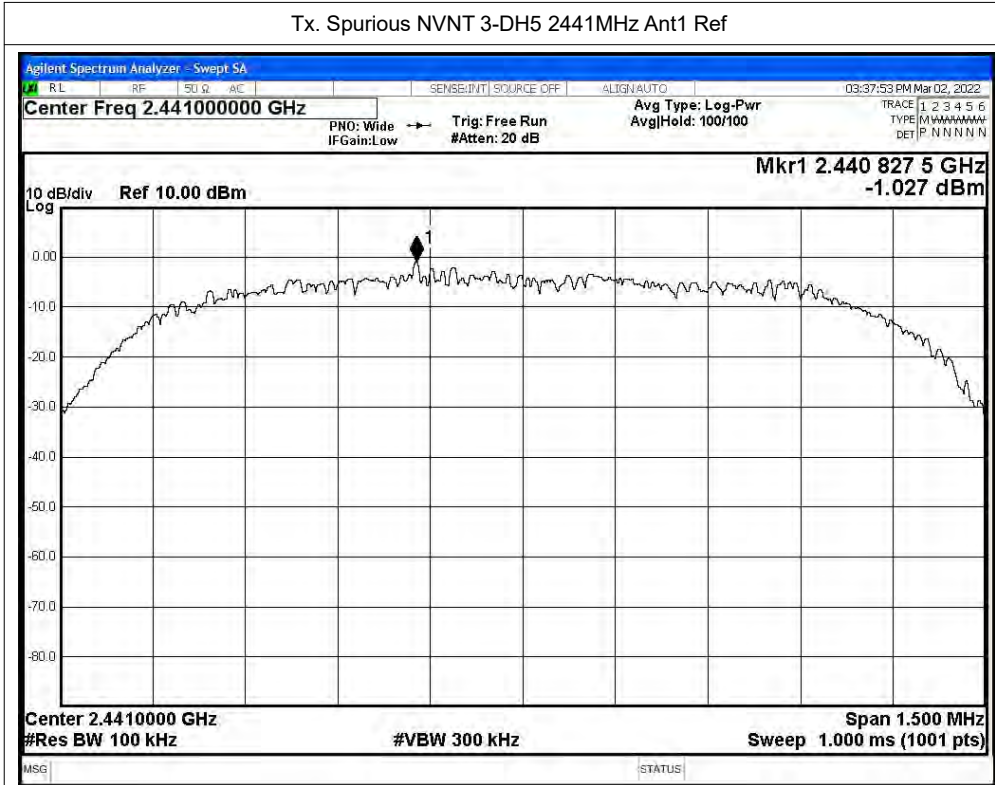


Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission

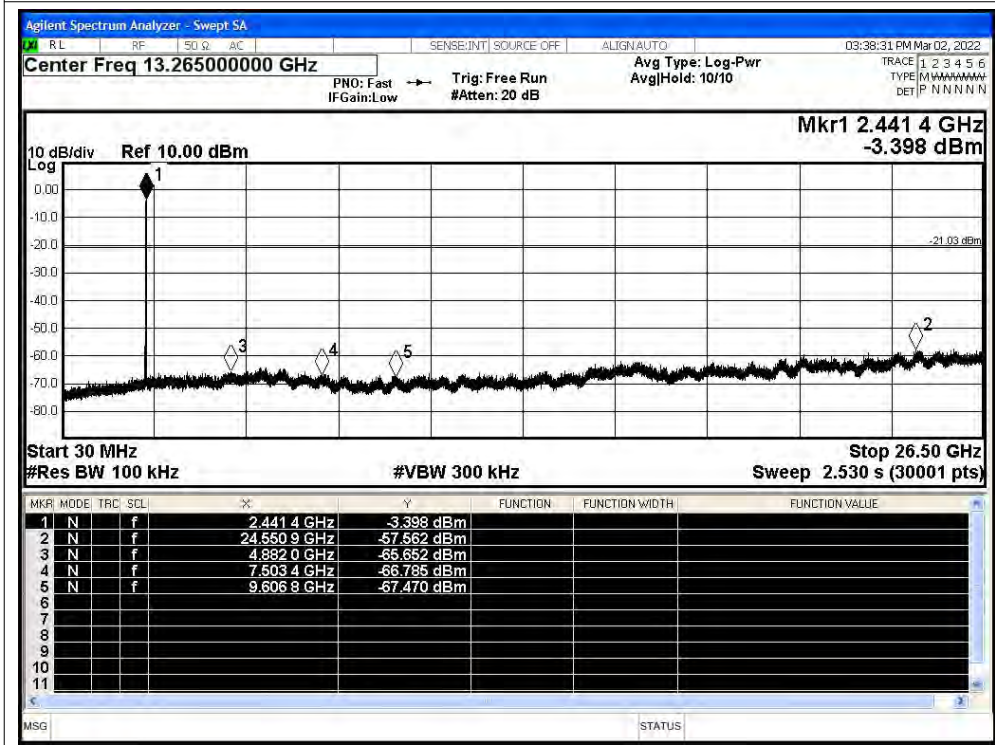




Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref

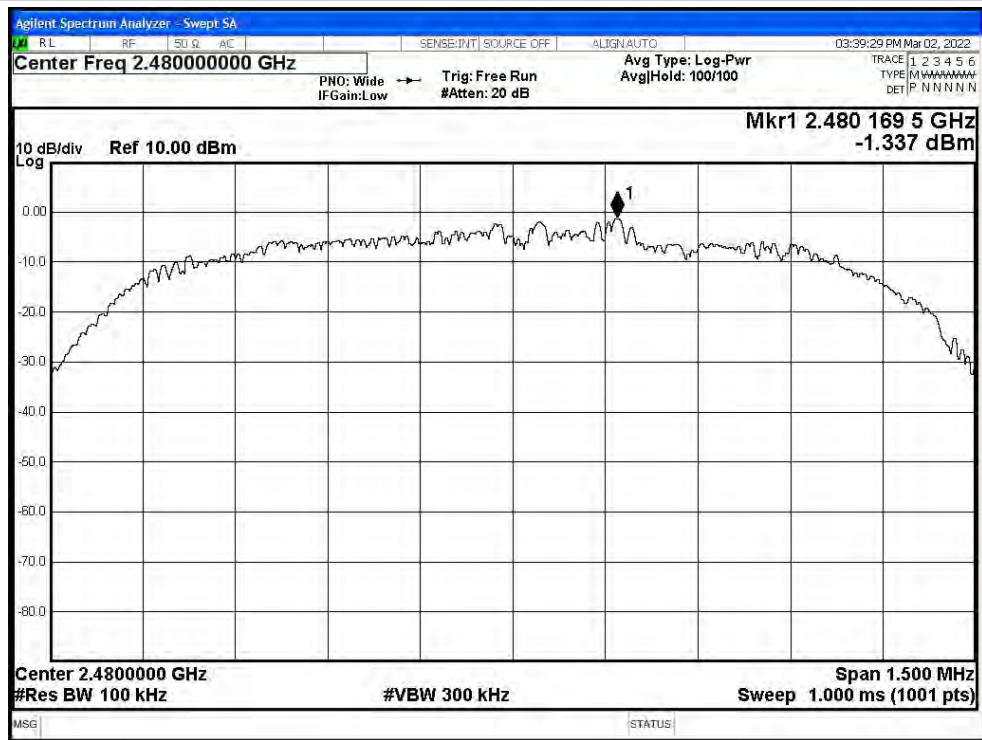


Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission

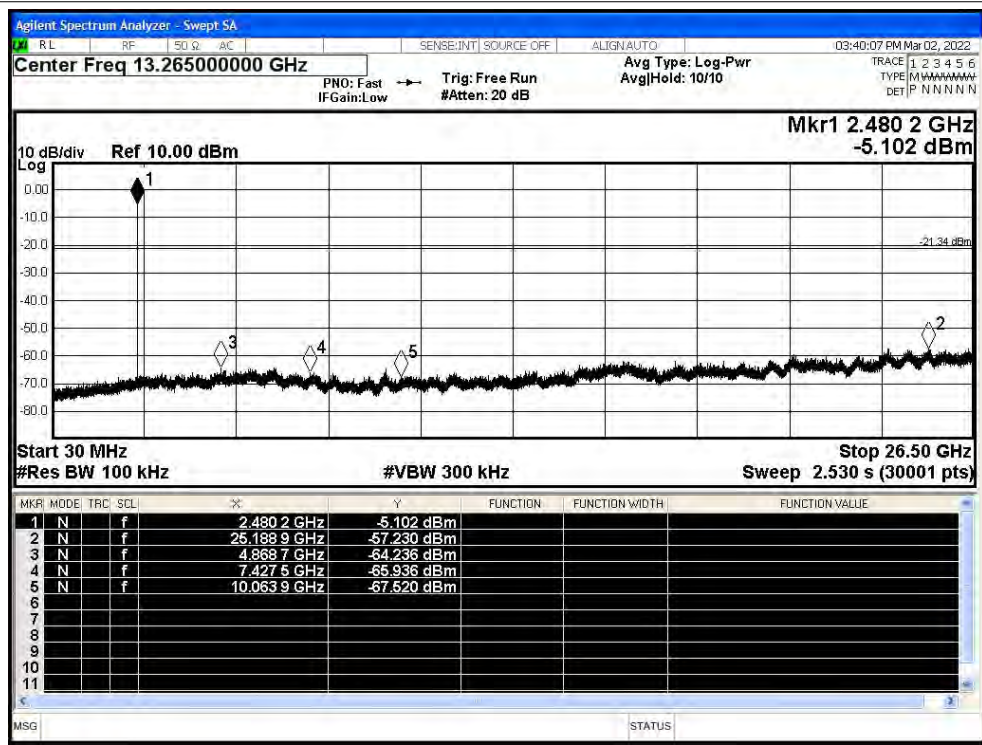




Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission





## A.8 Emissions at Restricted Band

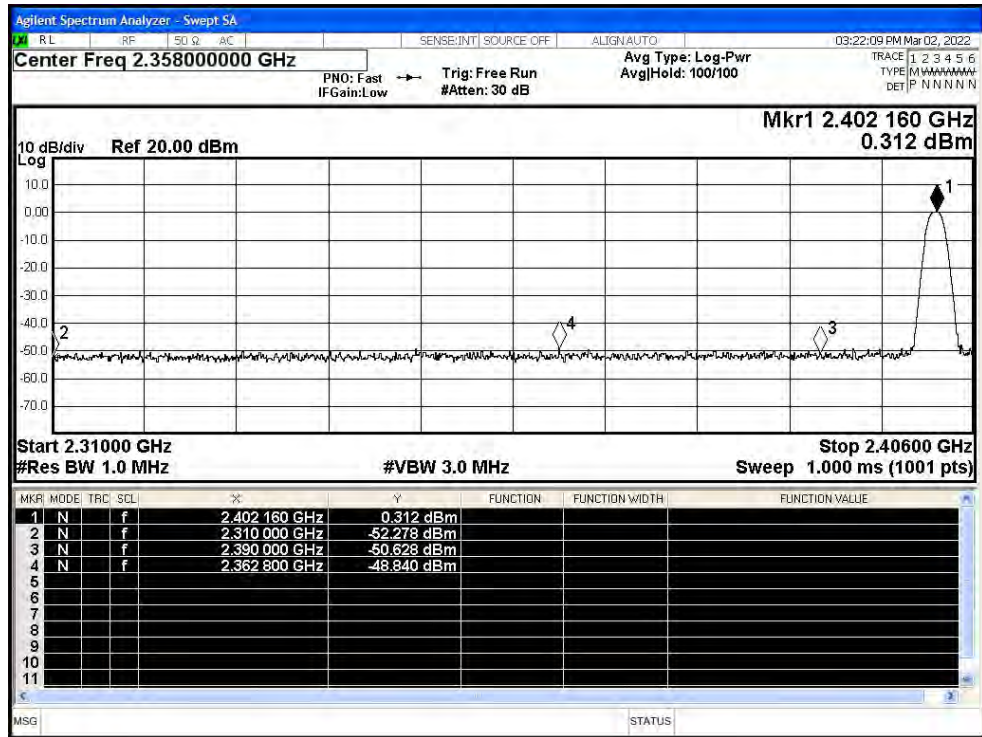
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-52.27	2	44.99	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-62.11	2	35.15	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2362.8	-48.83	2	48.43	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2386.608	-61.51	2	35.75	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-51.29	2	45.97	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-61.56	2	35.7	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-50.24	2	47.02	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-61.11	2	36.15	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2493.808	-49.19	2	48.07	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.68	-60.97	2	36.29	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-51.27	2	45.99	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-61.54	2	35.72	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-51.4	2	45.86	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-61.7	2	35.56	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2332.272	-49.25	2	48.01	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2380.176	-61.56	2	35.7	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-51.01	2	46.25	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-61.68	2	35.58	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-51.88	2	45.38	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-60.82	2	36.44	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2485.624	-49.36	2	47.9	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.536	-60.8	2	36.46	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-52.22	2	45.04	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-61.65	2	35.61	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-52.86	2	44.4	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-62.07	2	35.19	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2379.216	-49.16	2	48.1	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2388.816	-61.51	2	35.75	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-52.14	2	45.12	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-61.71	2	35.55	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-50.89	2	46.37	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-60.9	2	36.36	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2492.872	-48.63	2	48.63	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.512	-60.9	2	36.36	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-50.95	2	46.31	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-61.52	2	35.74	Average	54	Pass



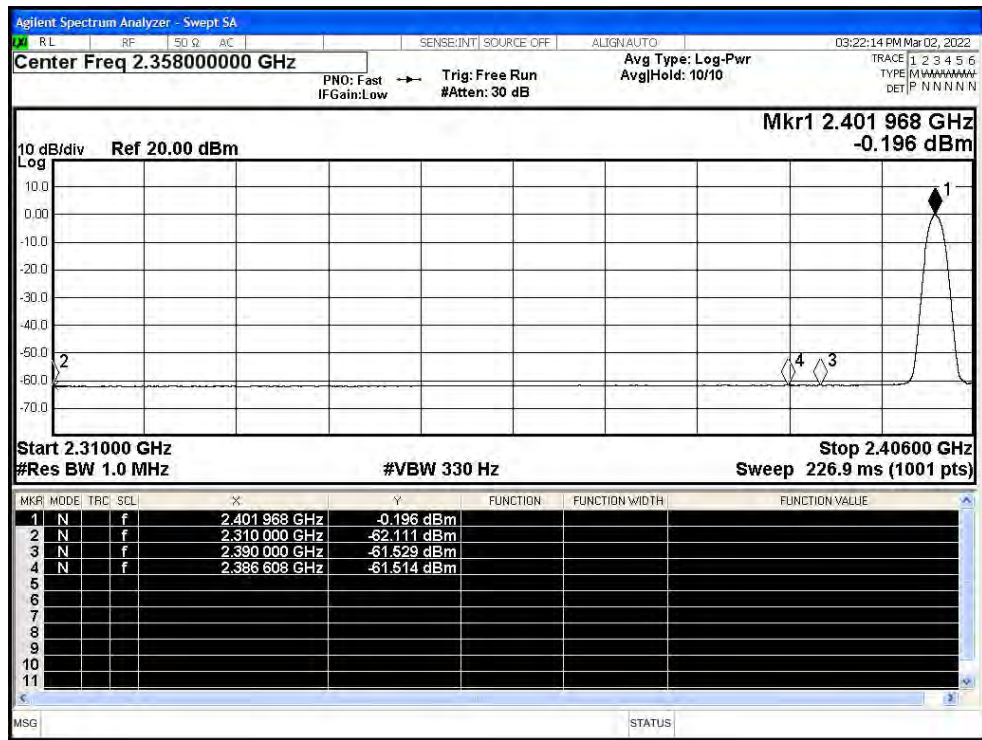


Test Graphs

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

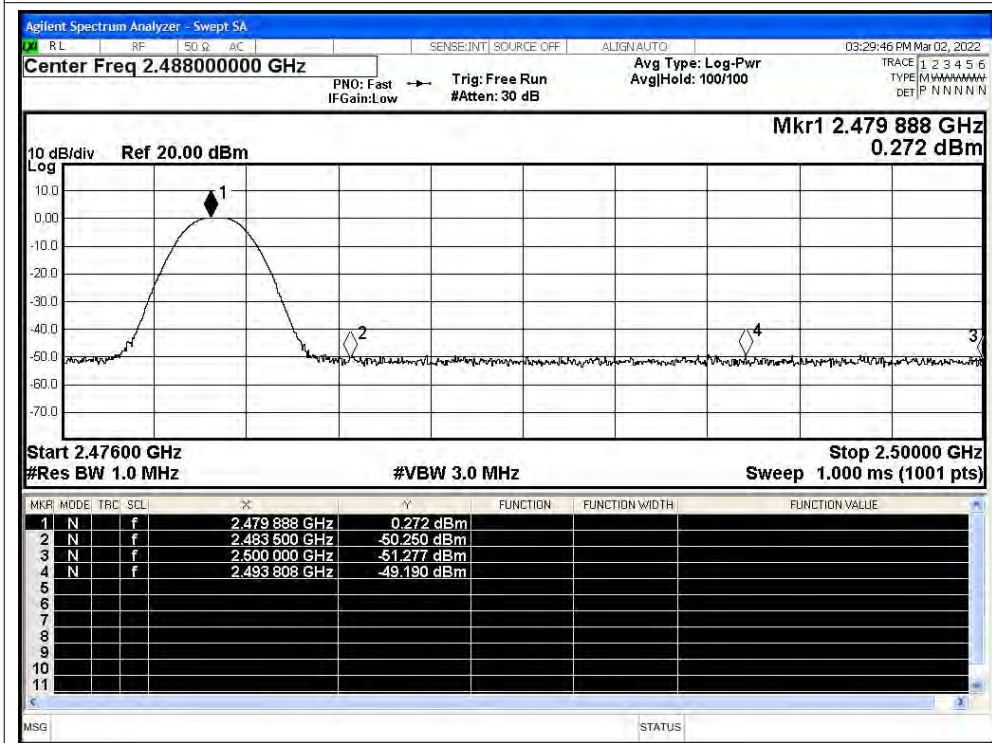


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

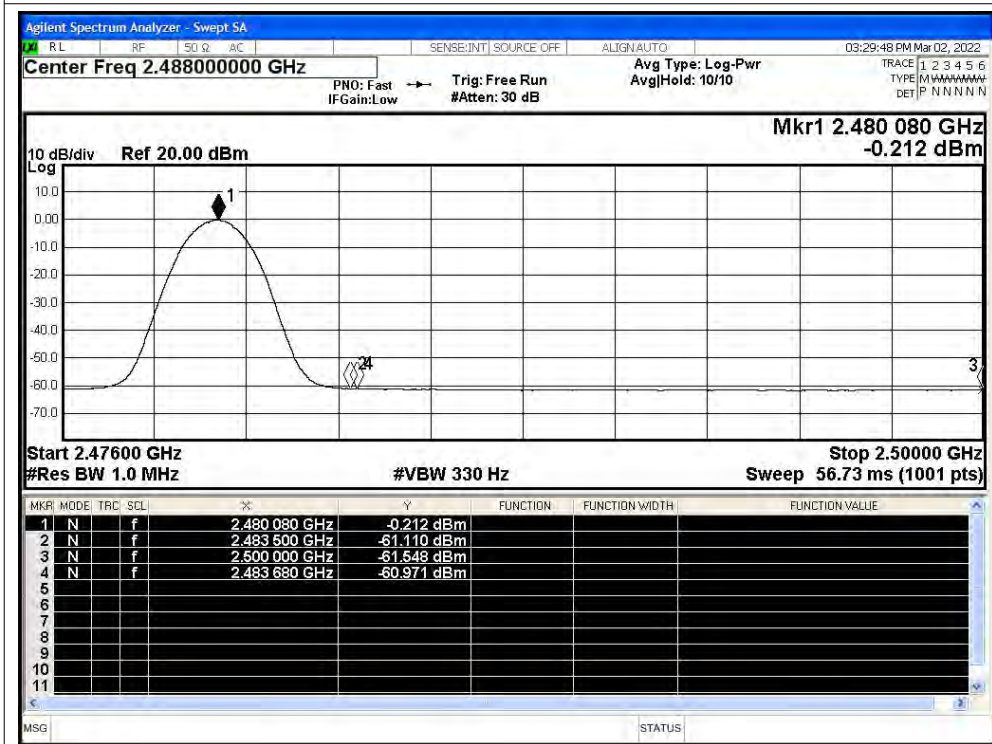




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak

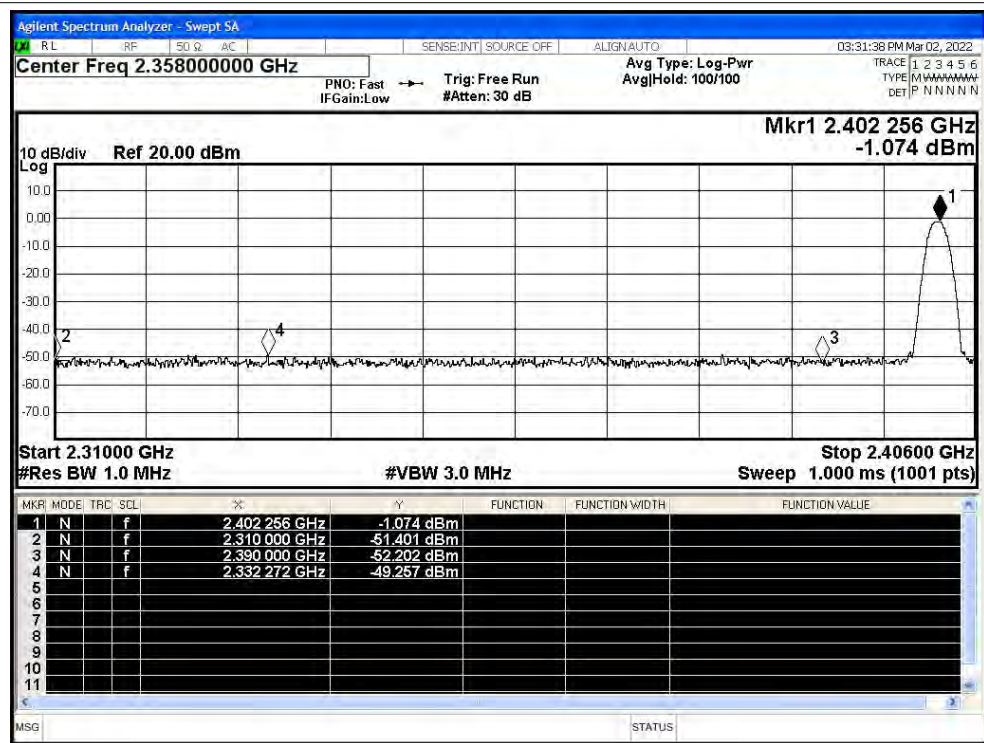


Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average

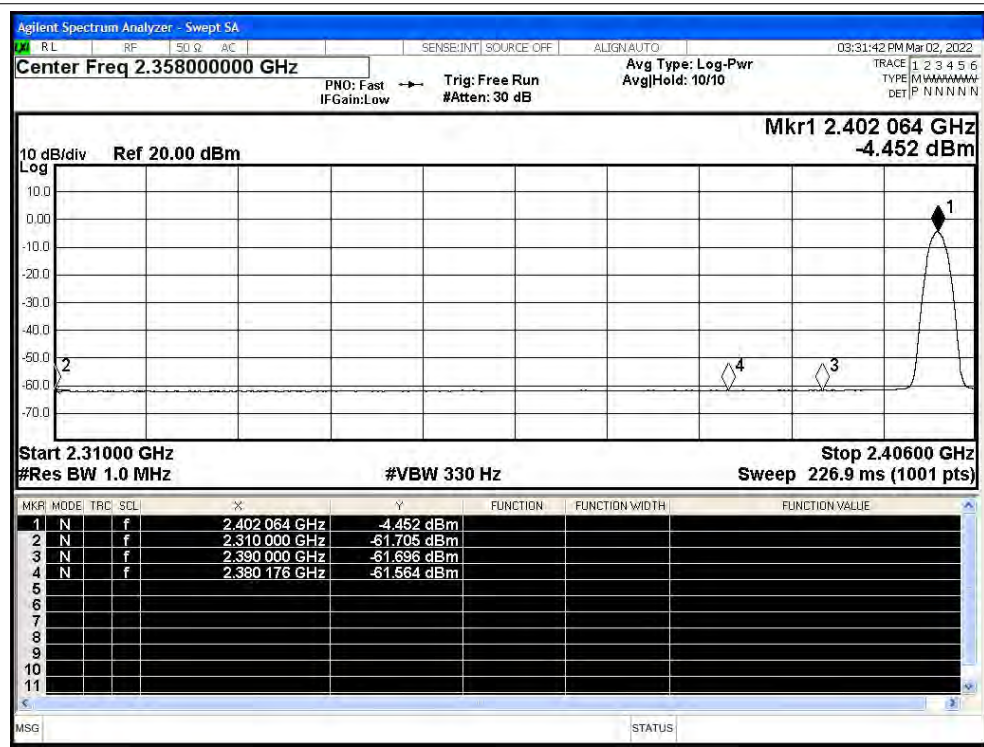




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

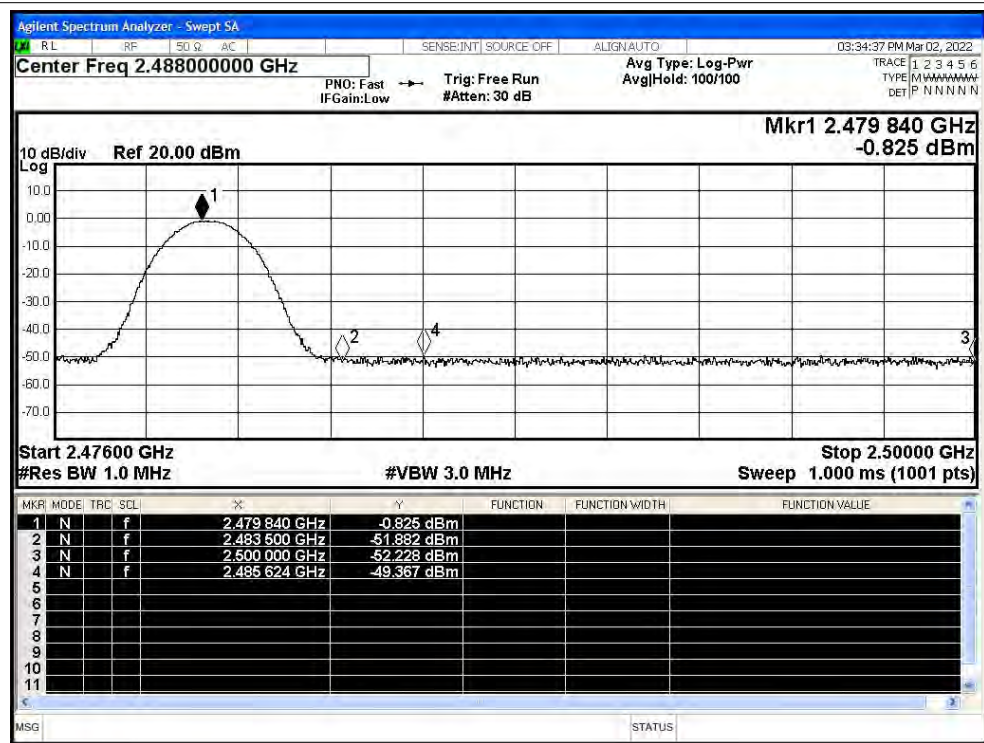


Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average

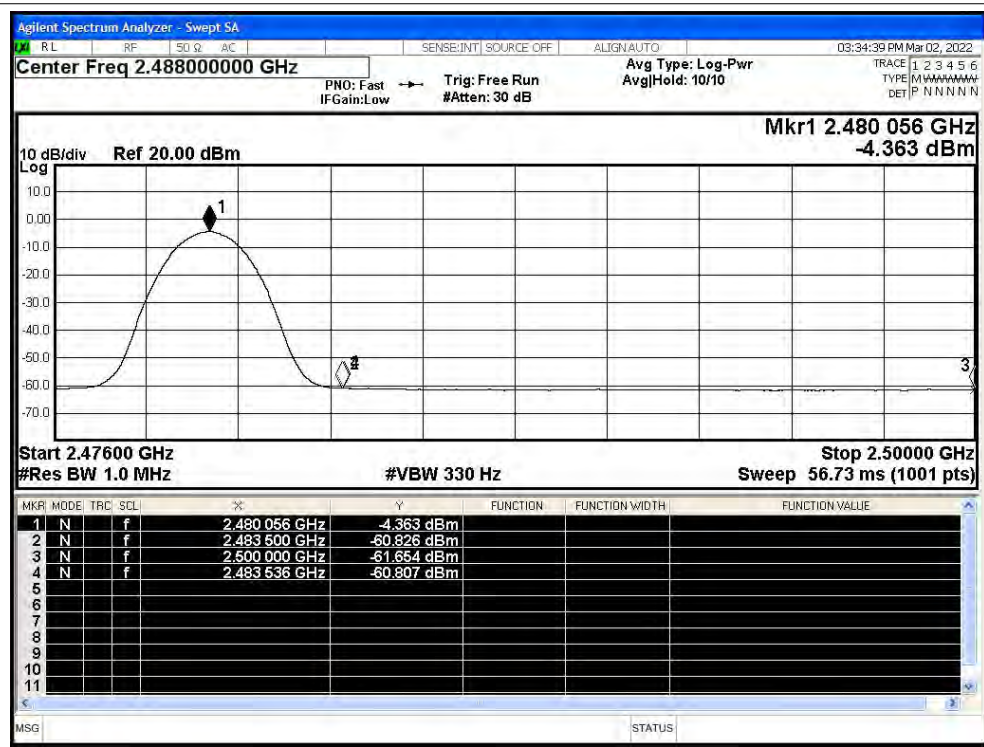




Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak

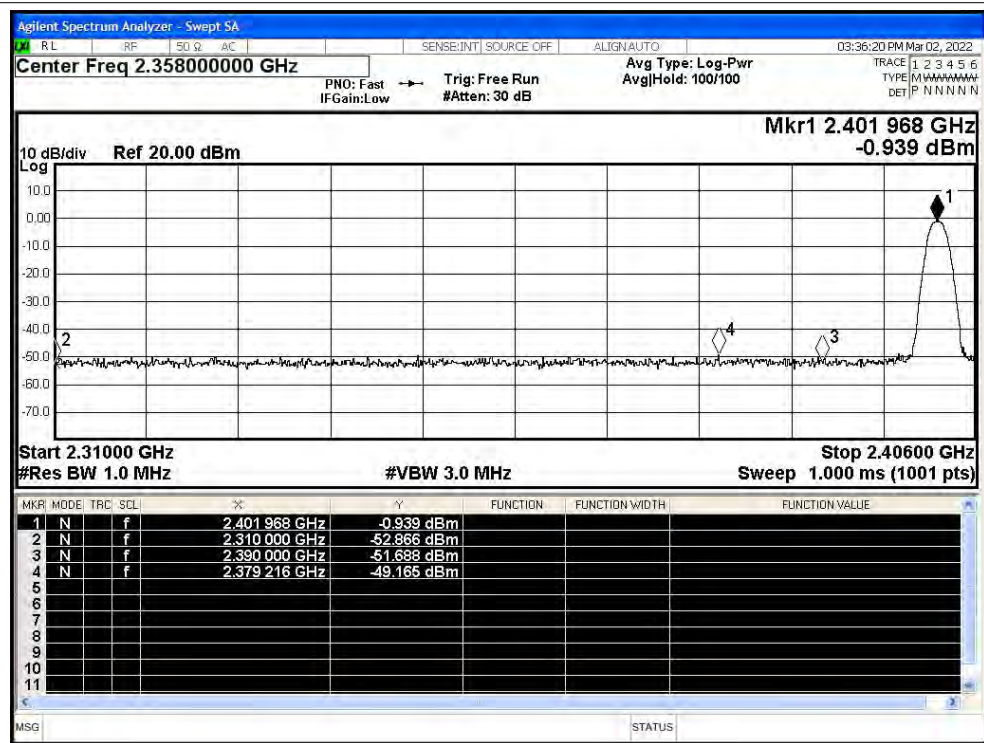


Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Average

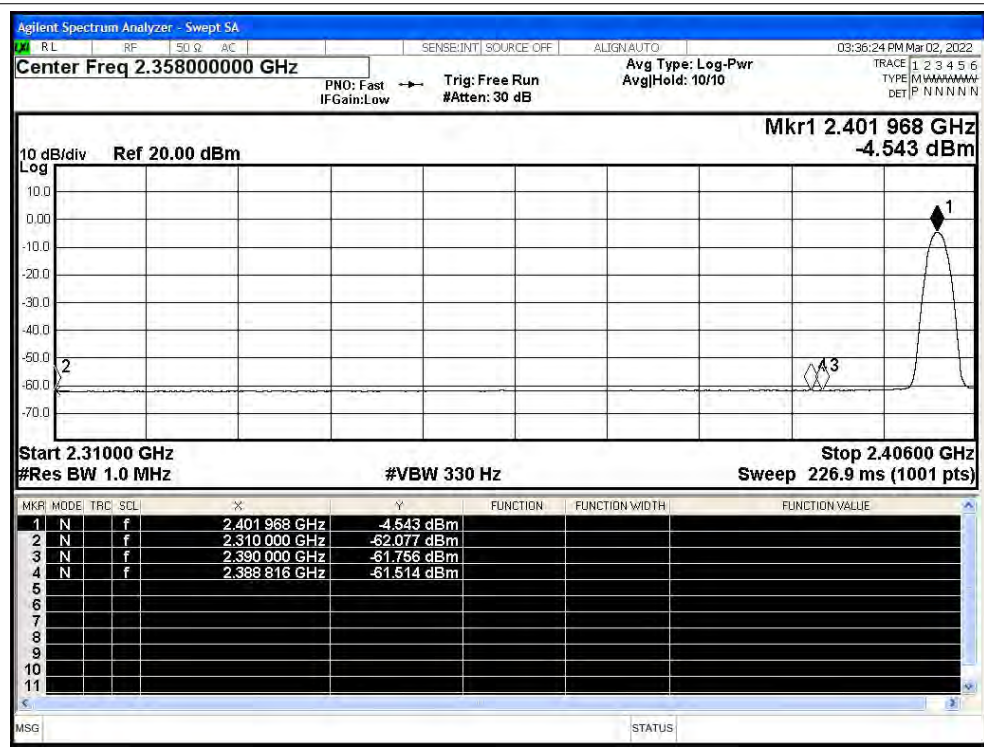




Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak

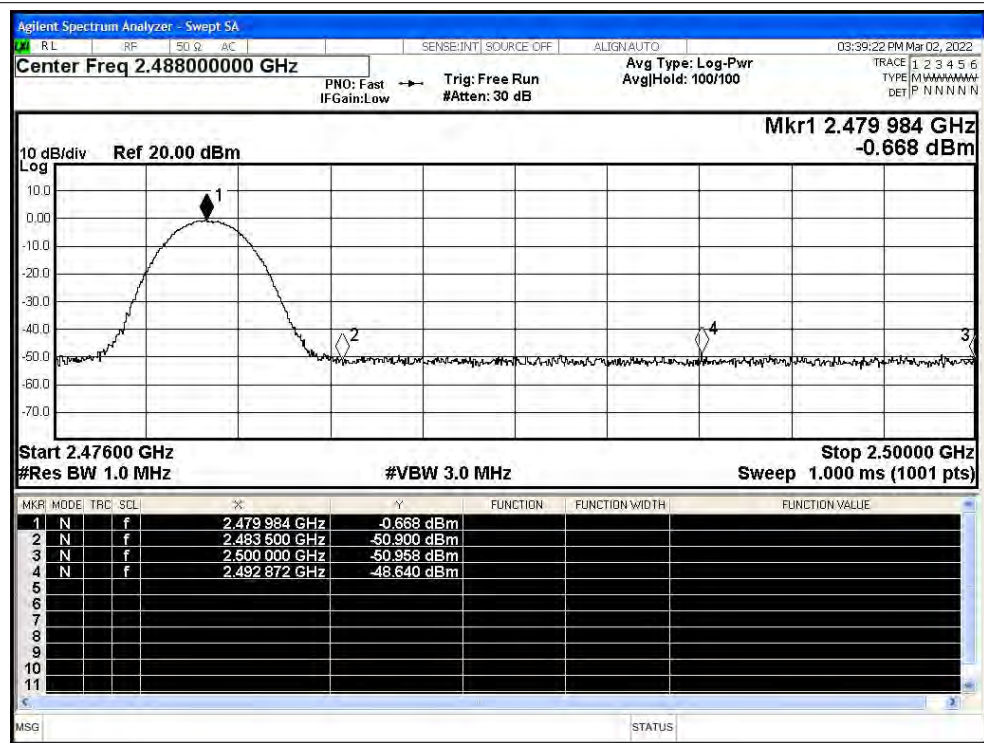


Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Average





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



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

