Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Flame Speaker

Test Model: AJ220B

Environmental Conditions

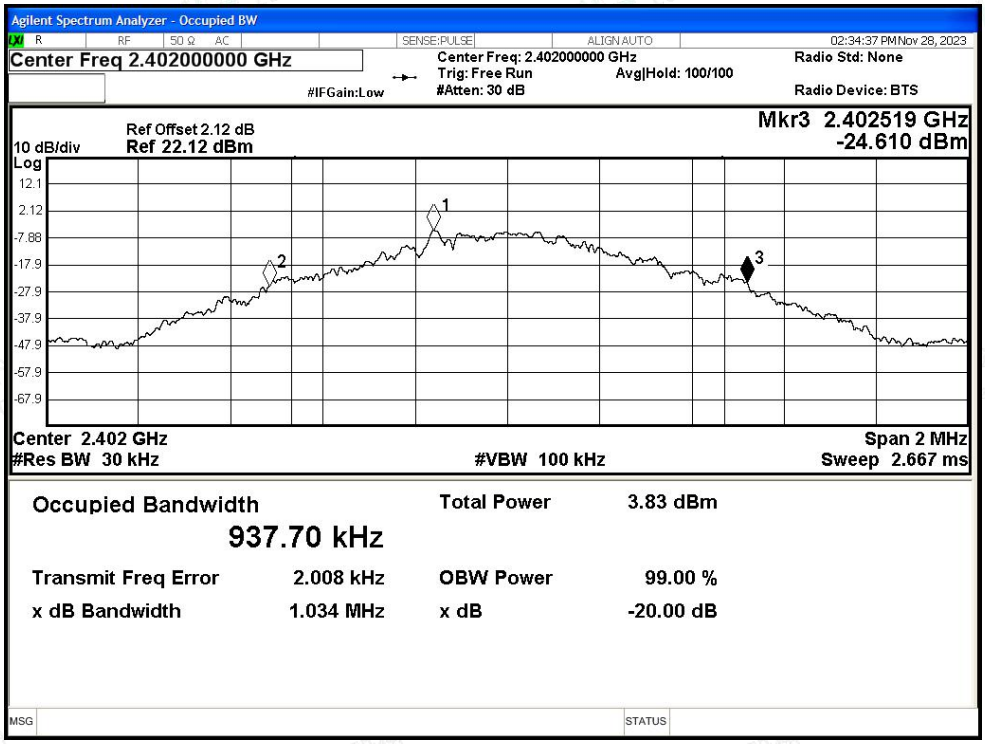
Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Summer Wu
Supervised by:	Nick Peng

A.1 -20dB Bandwidth

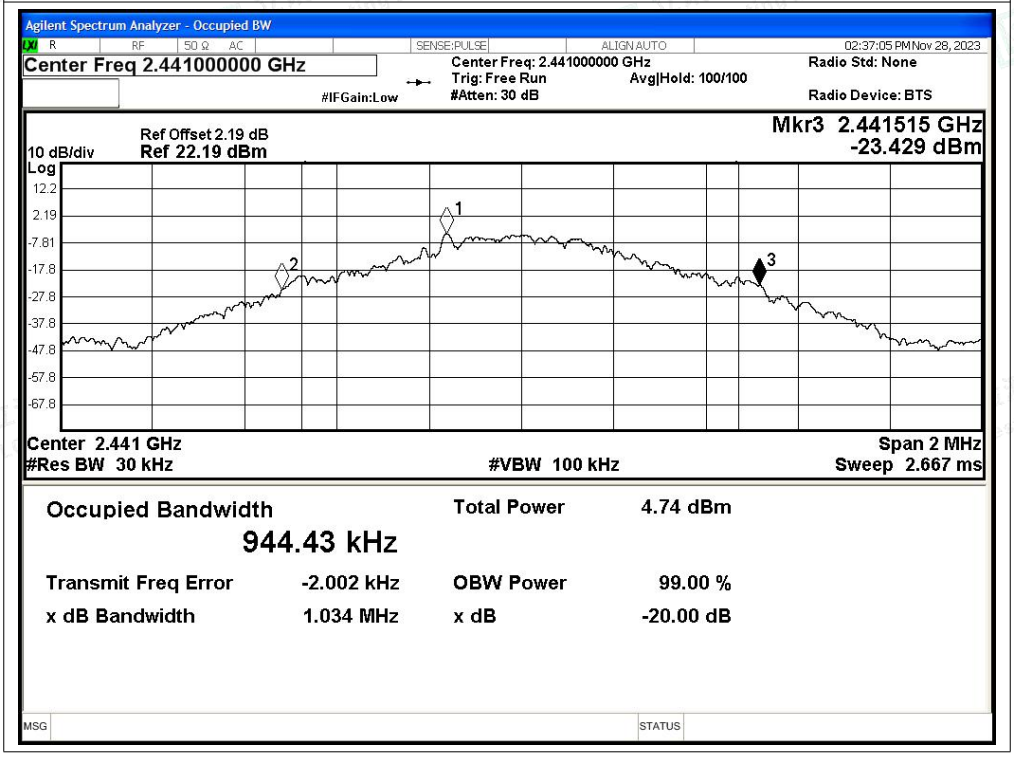
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	1.034	N/A	Pass
NVNT	1-DH5	2441	Ant1	1.034	N/A	Pass
NVNT	1-DH5	2480	Ant1	1.04	N/A	Pass

Test Graphs

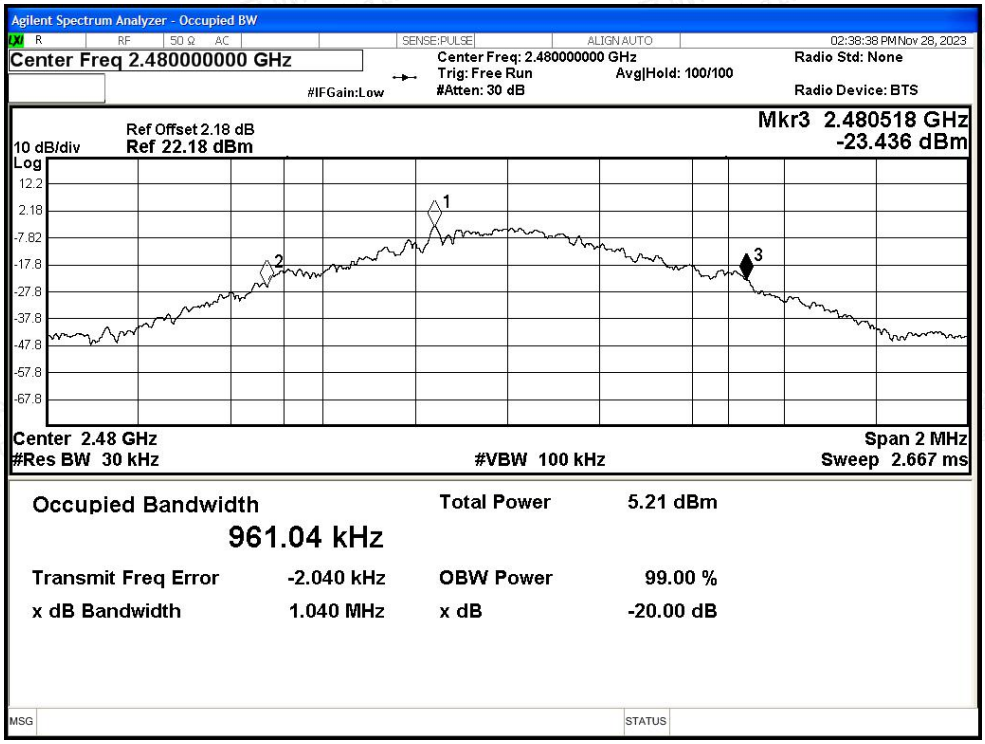
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

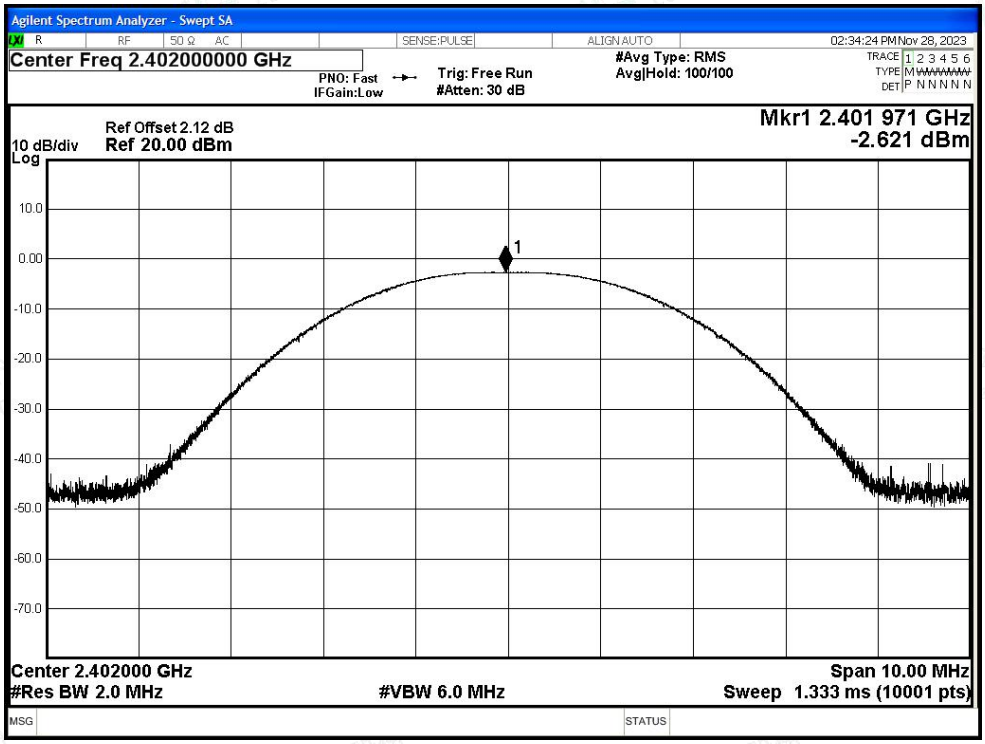


A.2 Maximum Peak Conducted Output Power

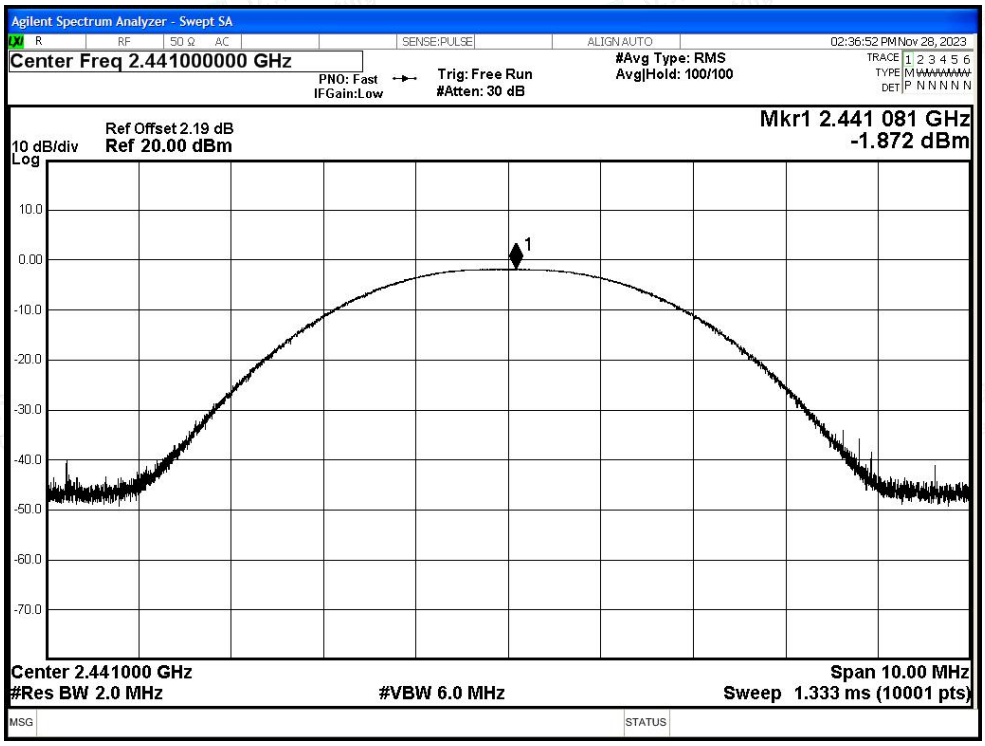
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-2.62	21	Pass
NVNT	1-DH5	2441	Ant1	-1.87	21	Pass
NVNT	1-DH5	2480	Ant1	-1.3	21	Pass

Test Graphs

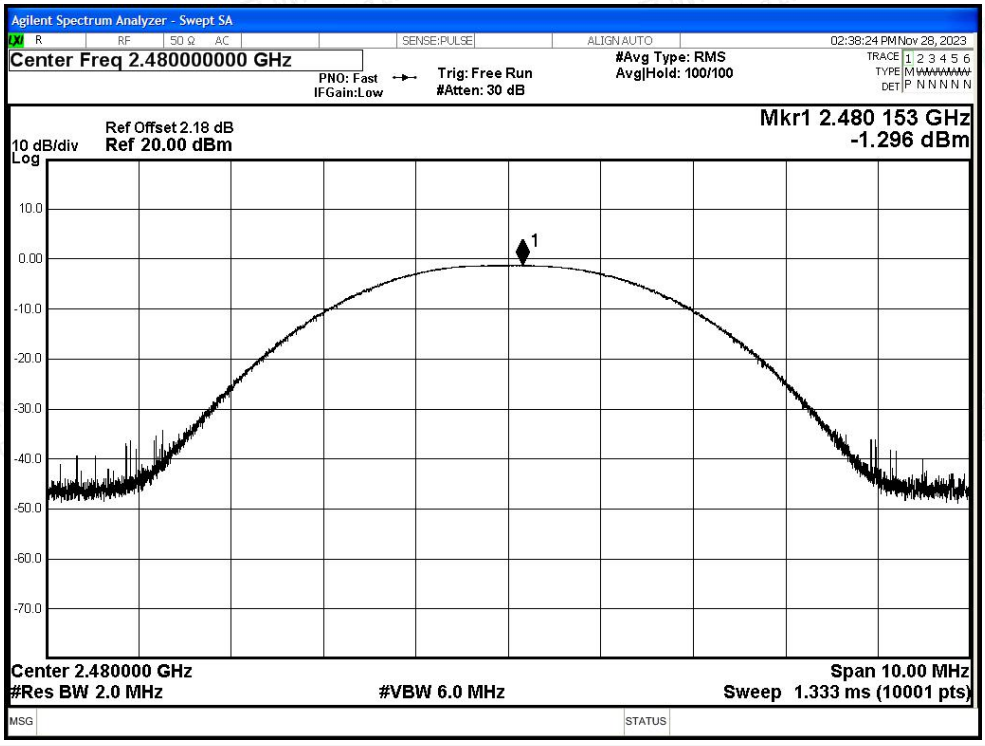
Power NVNT 1-DH5 2402MHz Ant1



Power NVNT 1-DH5 2441MHz Ant1



Power NVNT 1-DH5 2480MHz Ant1

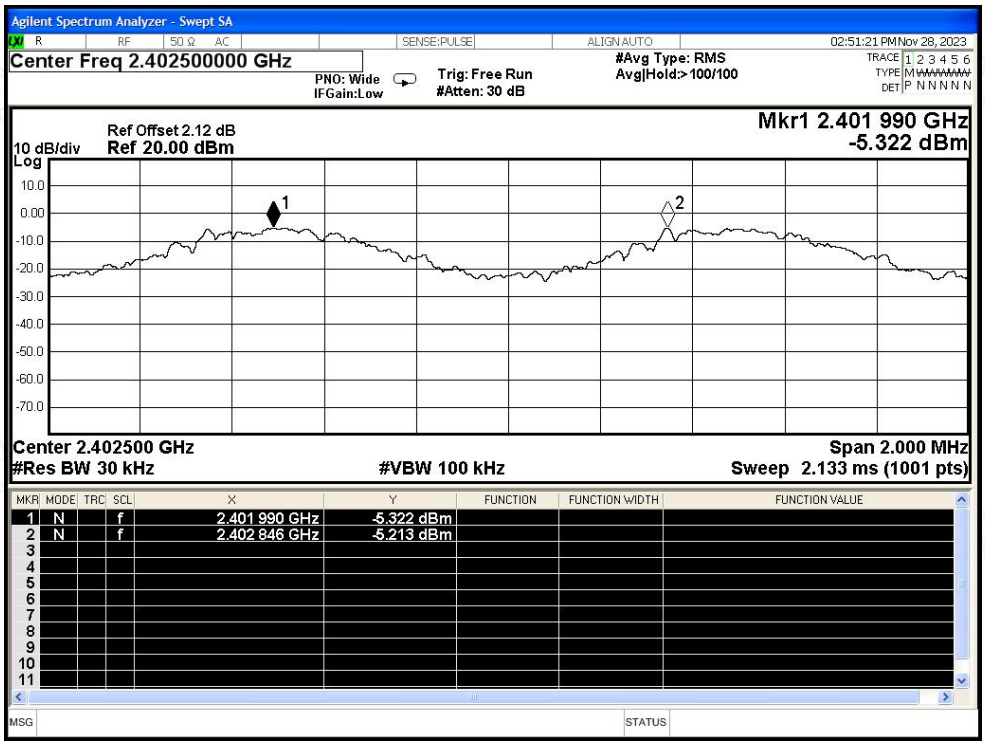


A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.99	2402.846	0.856	0.693	Pass

Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1

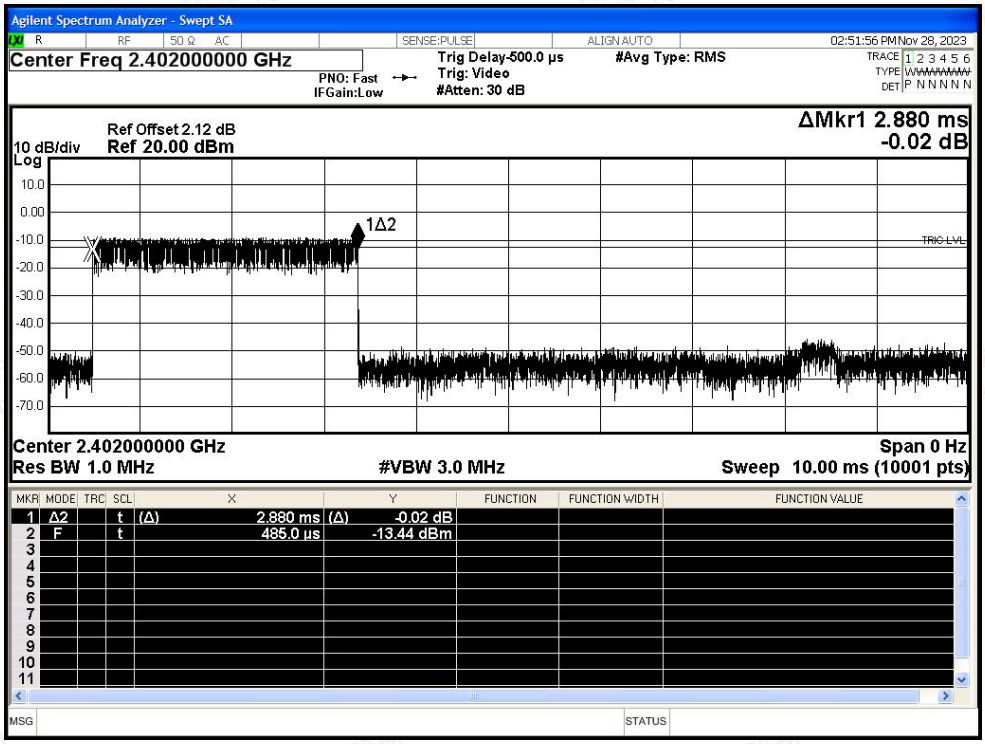


A.4 Dwell Time

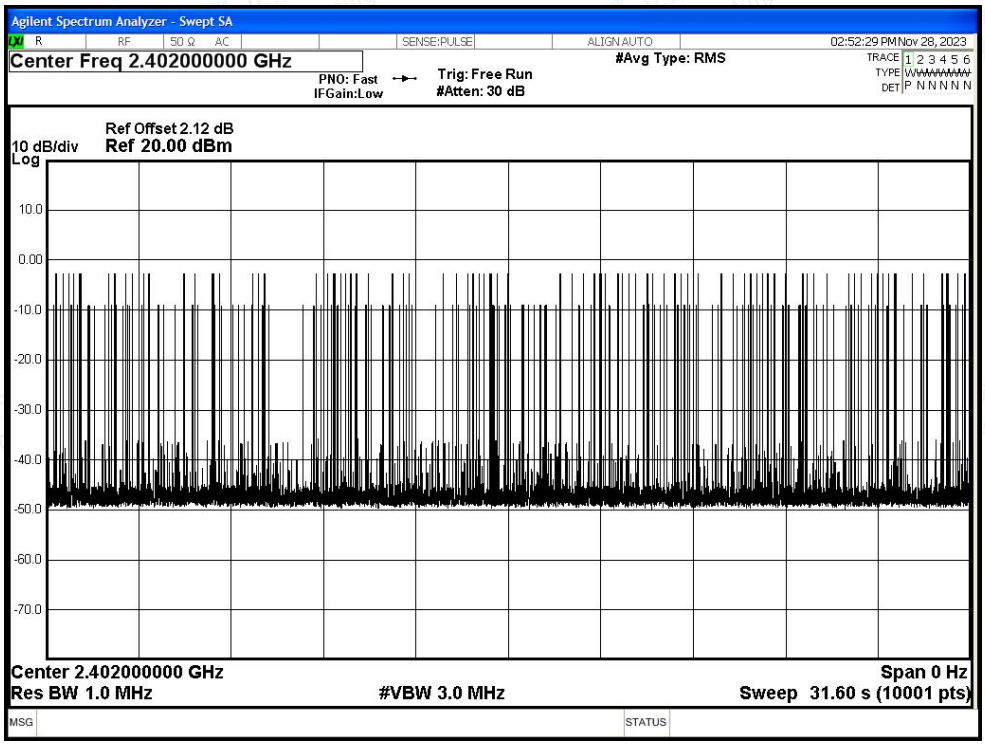
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.88	293.76	102	31600	400	Pass

Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

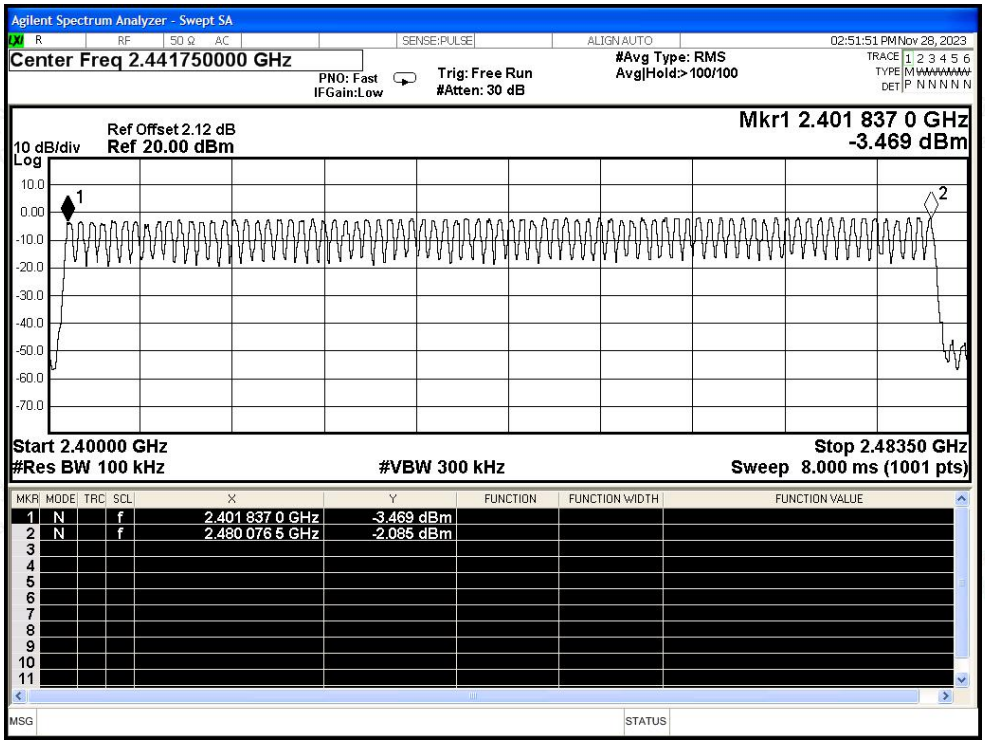


A.5 Number of Hopping Channel

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

Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1

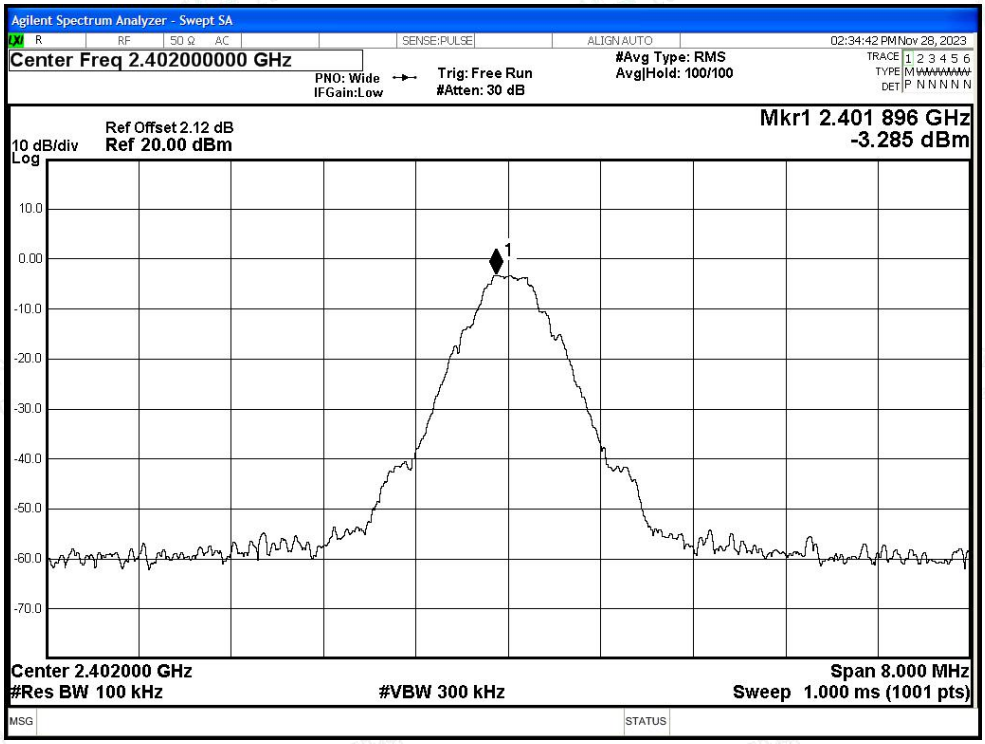


A.6 Band Edge

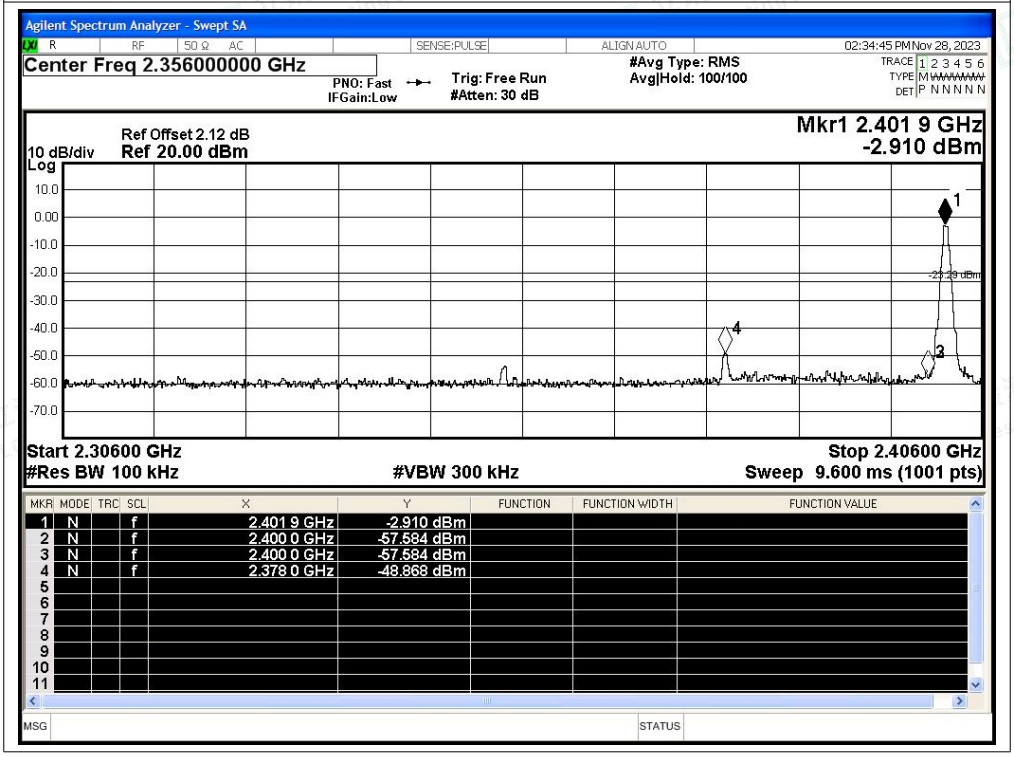
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-45.58	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-52.7	-20	Pass

Test Graphs

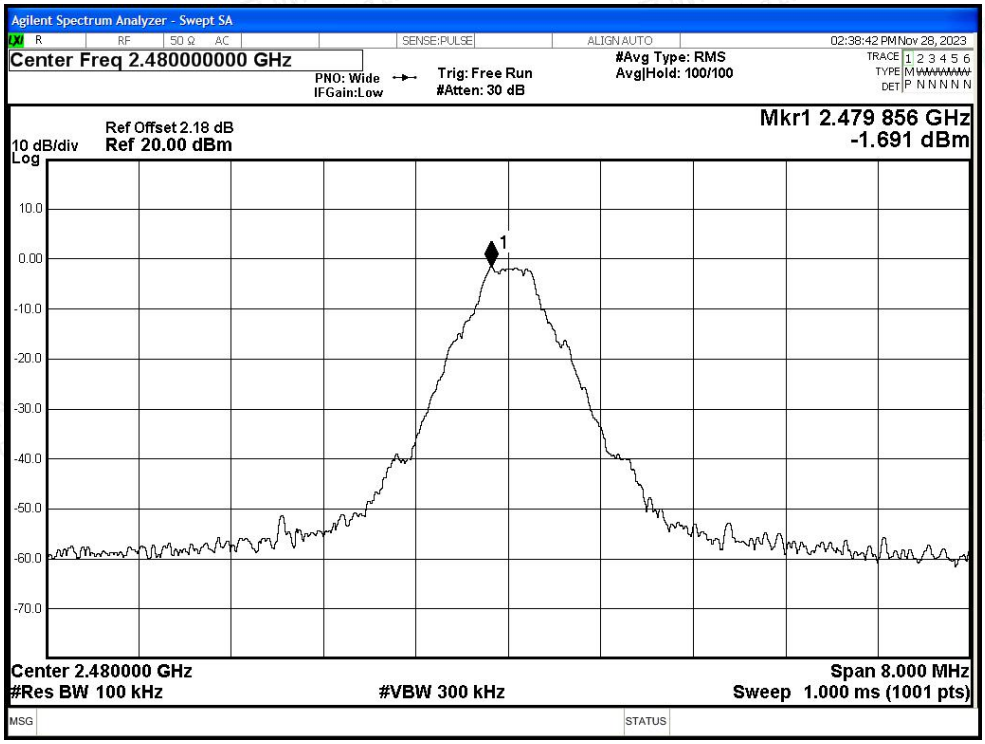
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



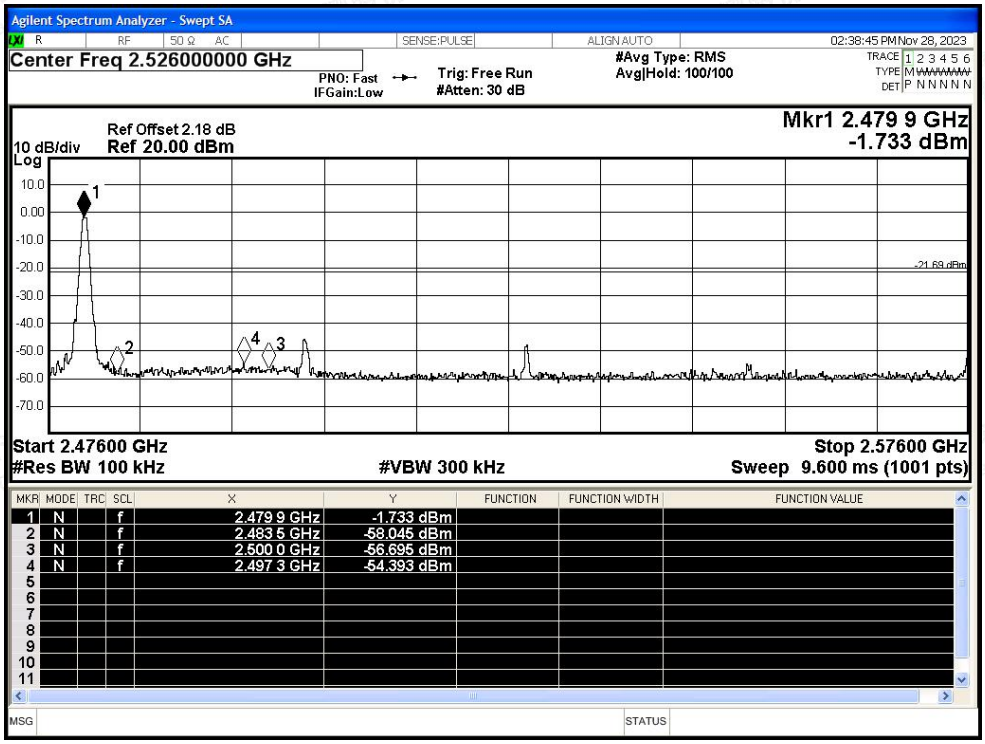
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



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



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

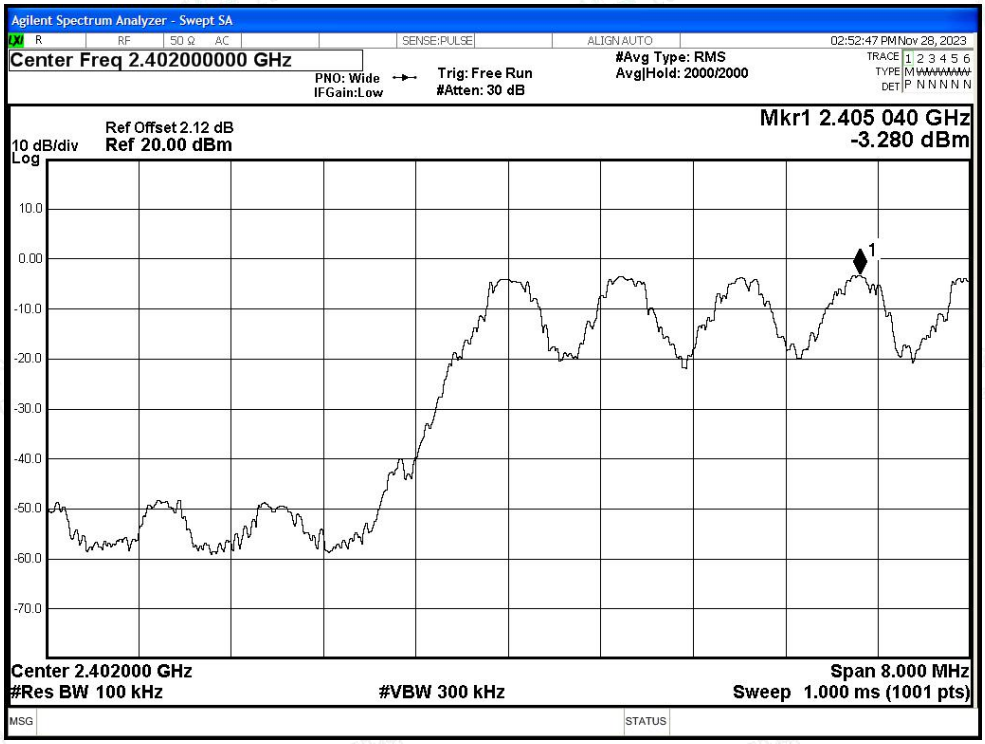


Band Edge(Hopping)

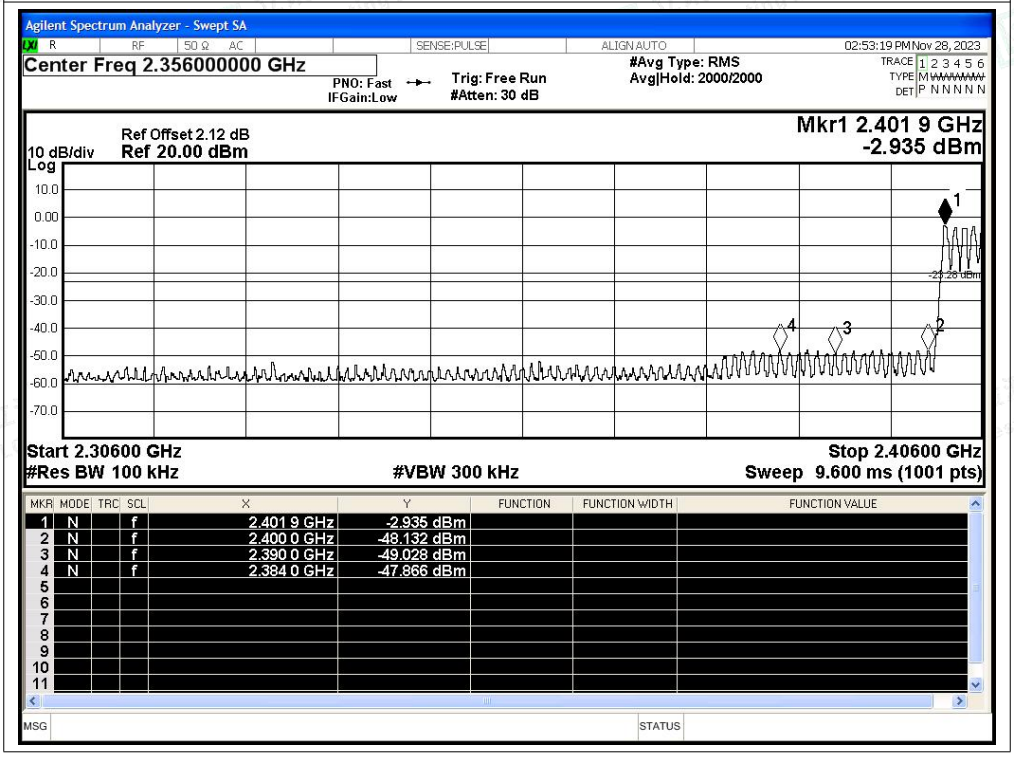
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-44.59	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-44.2	-20	Pass

Test Graphs

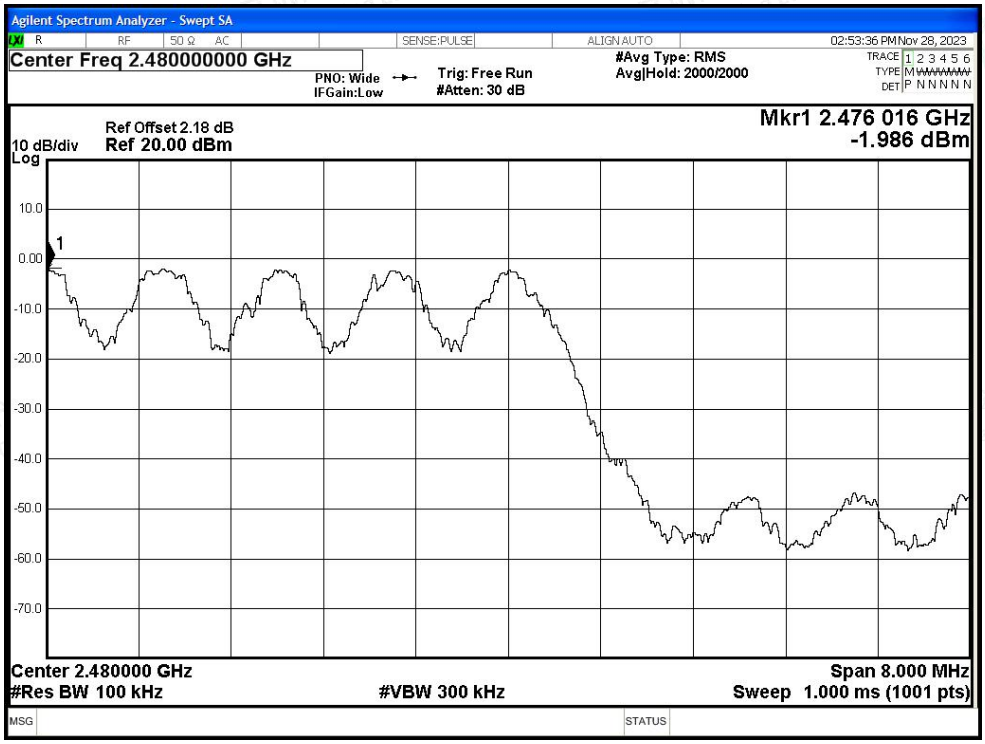
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



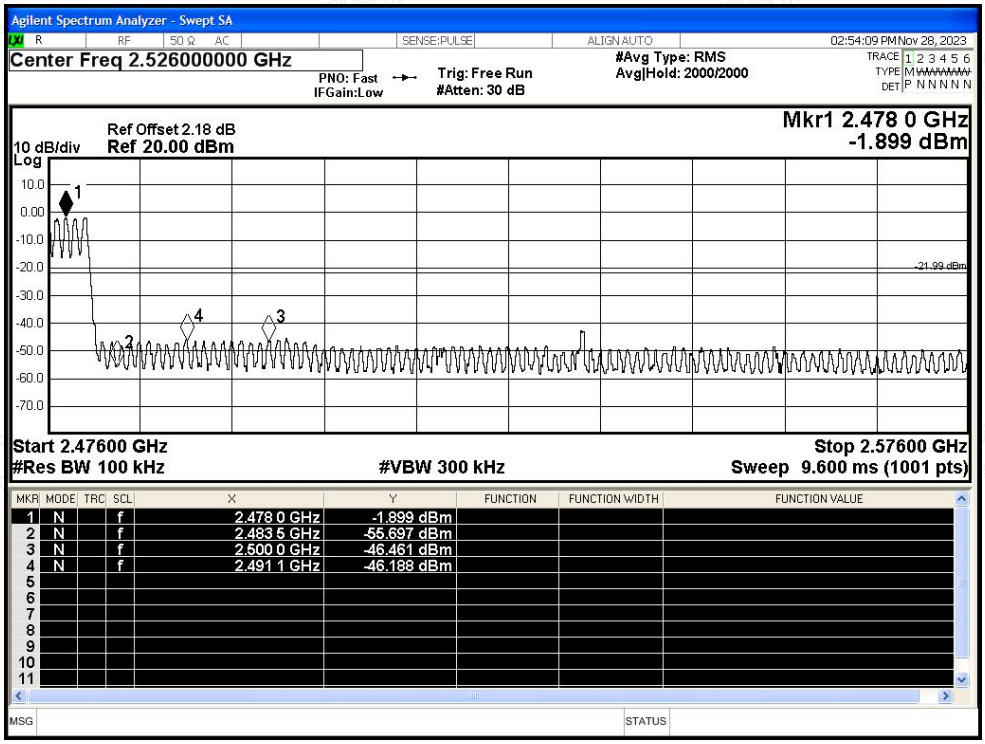
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



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



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

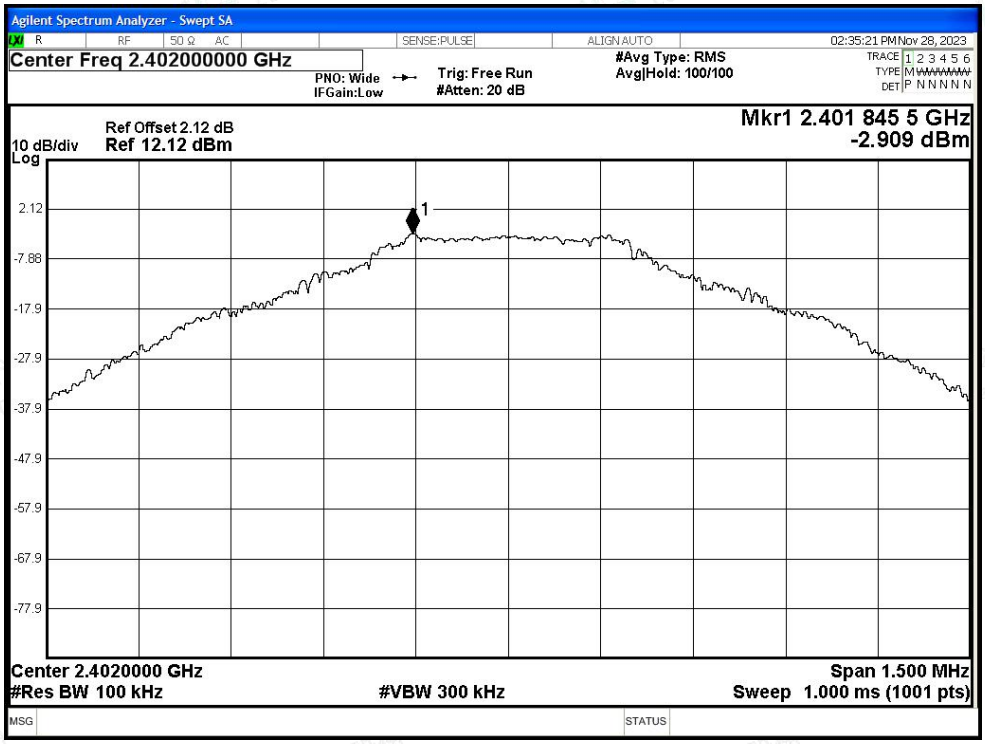


A.7 Conducted RF Spurious Emission

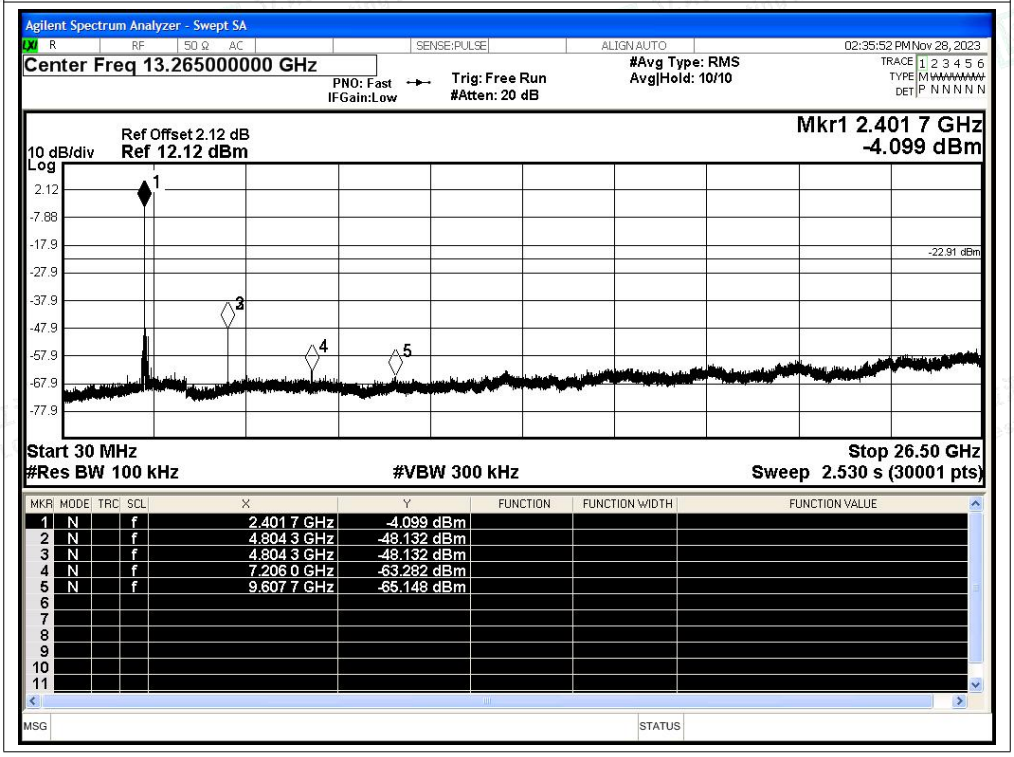
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-45.22	-20	Pass
NVNT	1-DH5	2441	Ant1	-45.72	-20	Pass
NVNT	1-DH5	2480	Ant1	-43.79	-20	Pass

Test Graphs

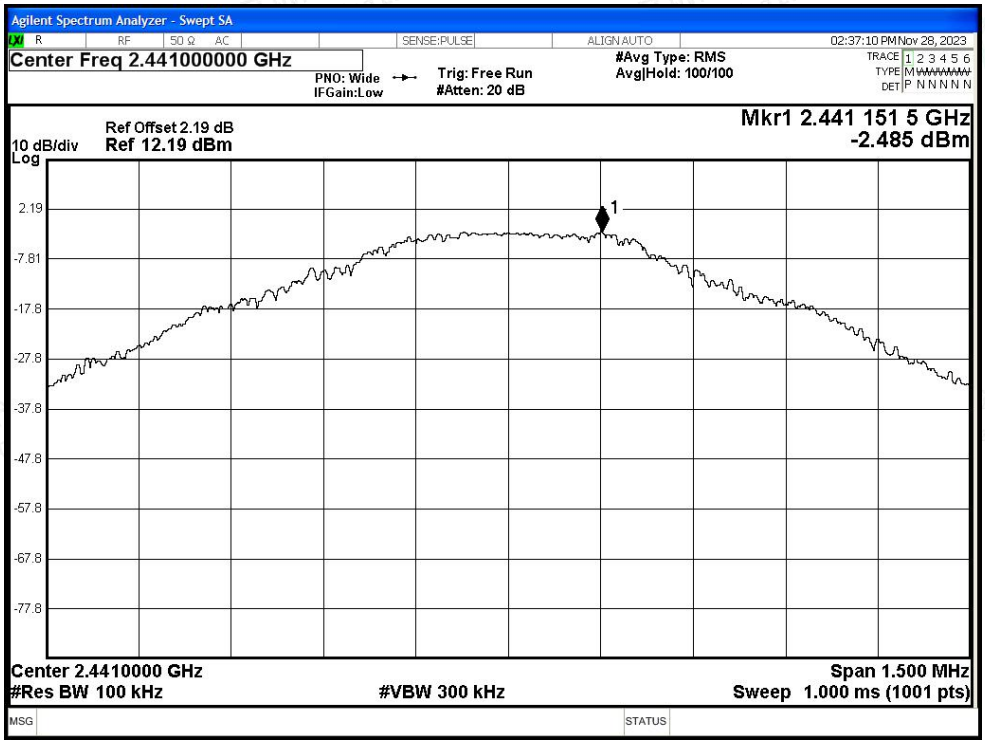
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



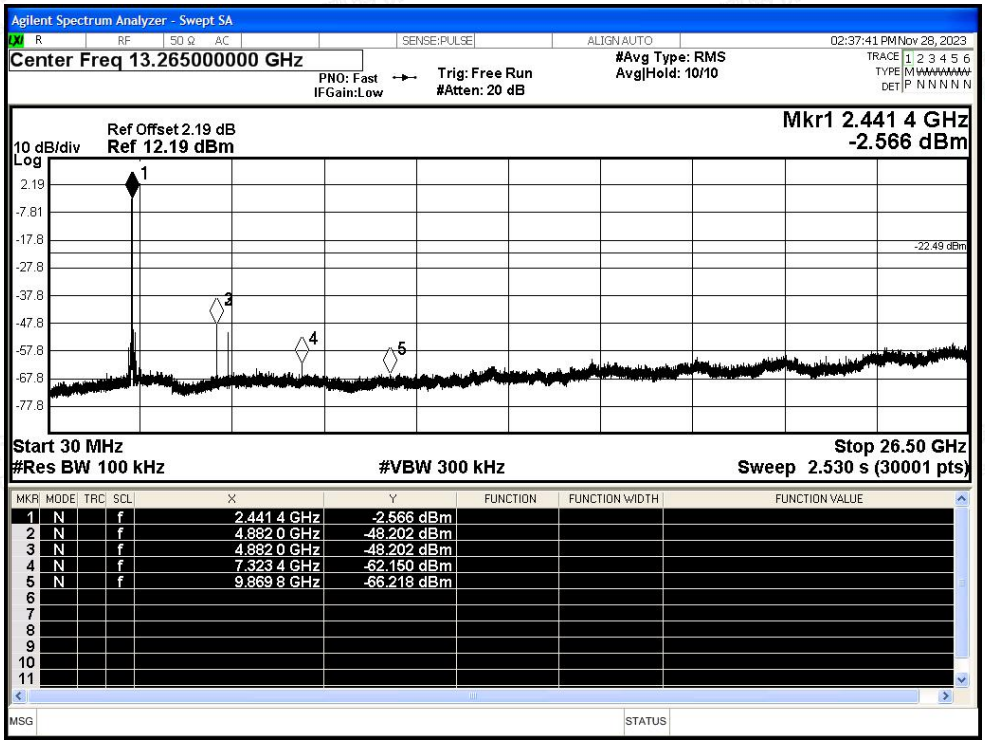
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



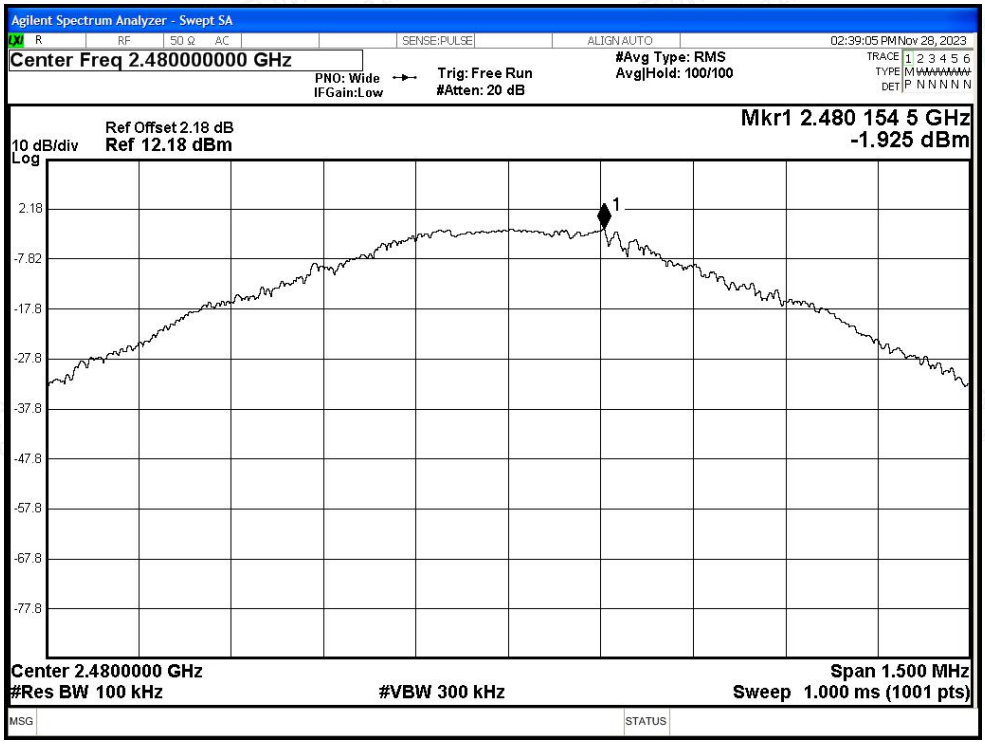
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



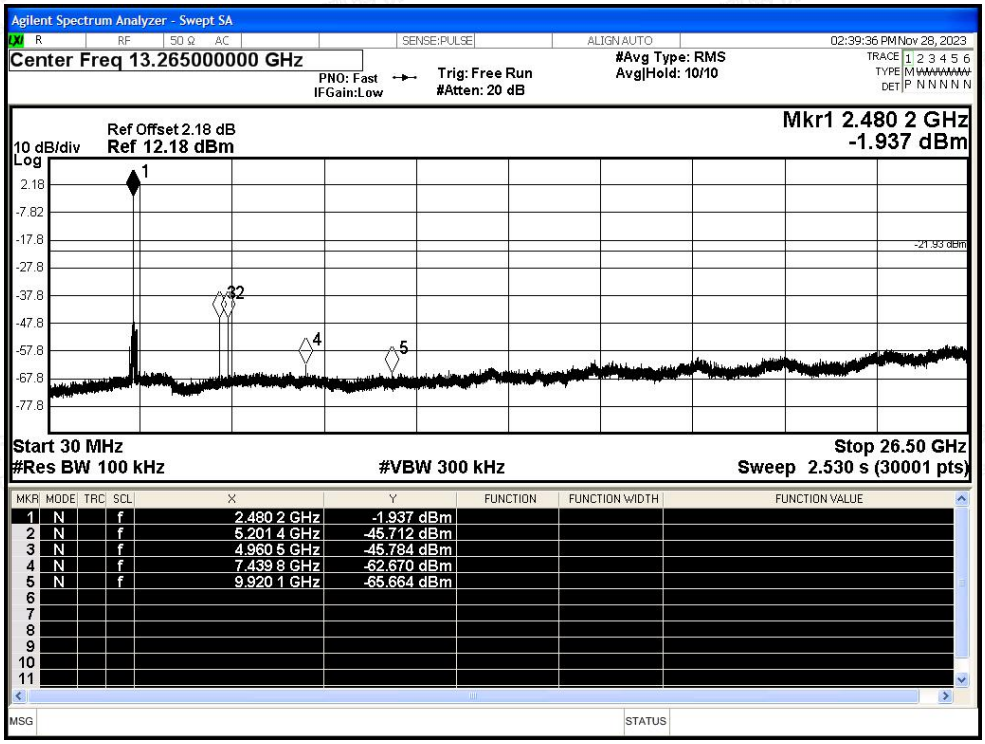
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission

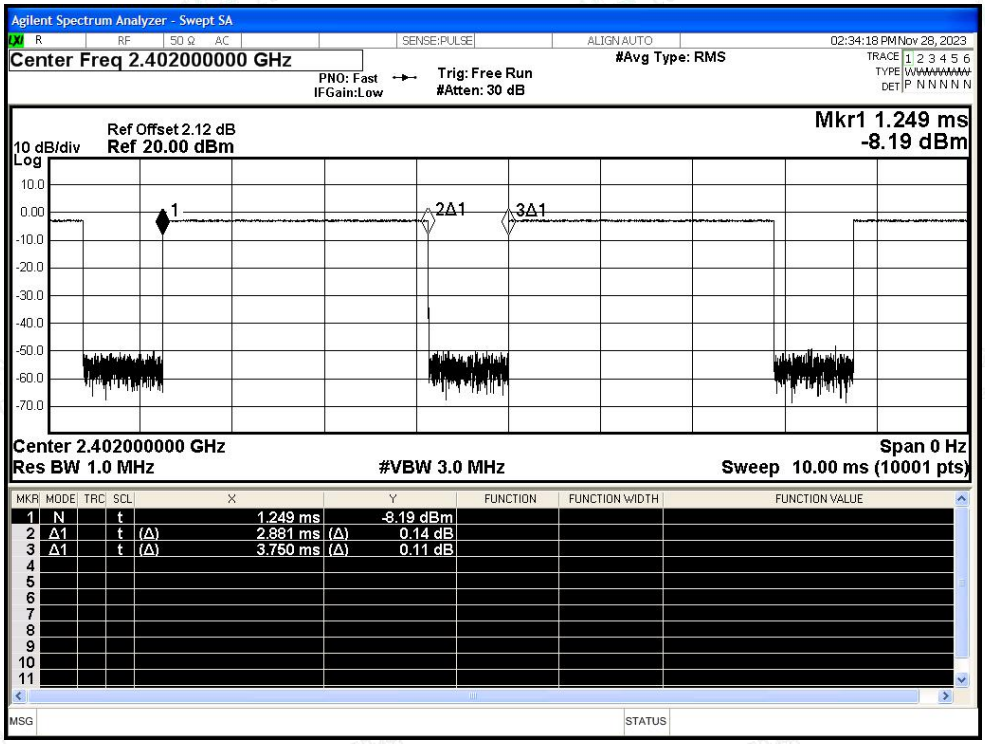


A.8 Duty Cycle

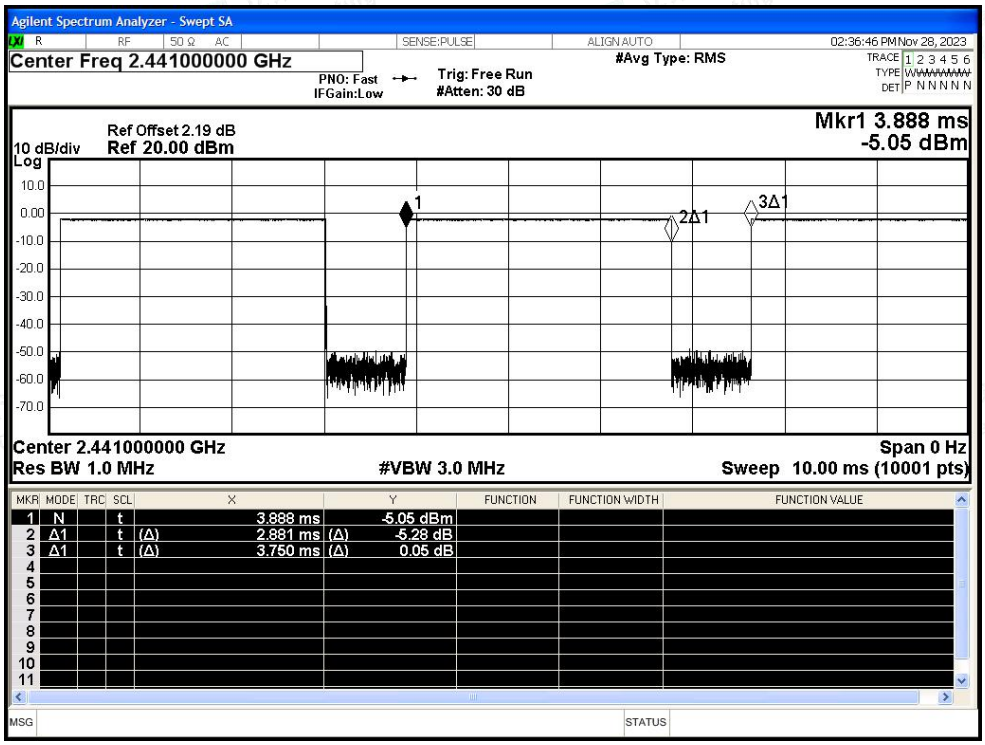
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	76.83	1.14	0.35
NVNT	1-DH5	2441	Ant1	76.83	1.14	0.35
NVNT	1-DH5	2480	Ant1	76.85	1.14	0.35

Test Graphs

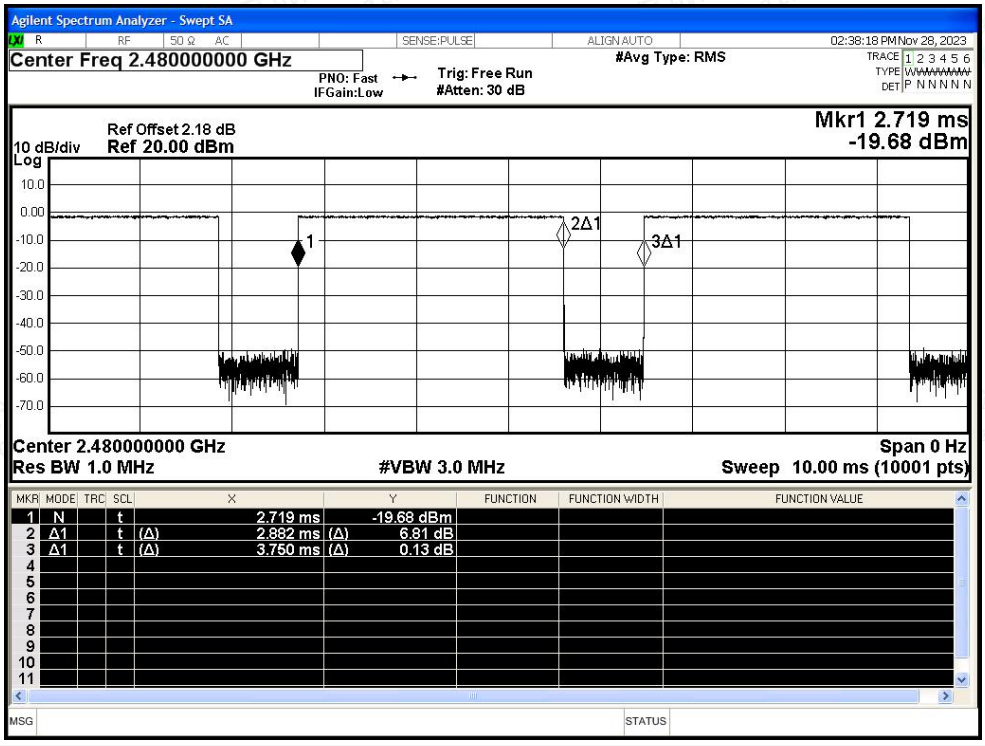
Duty Cycle NVNT 1-DH5 2402MHz Ant1



Duty Cycle NVNT 1-DH5 2441MHz Ant1



Duty Cycle NVNT 1-DH5 2480MHz Ant1

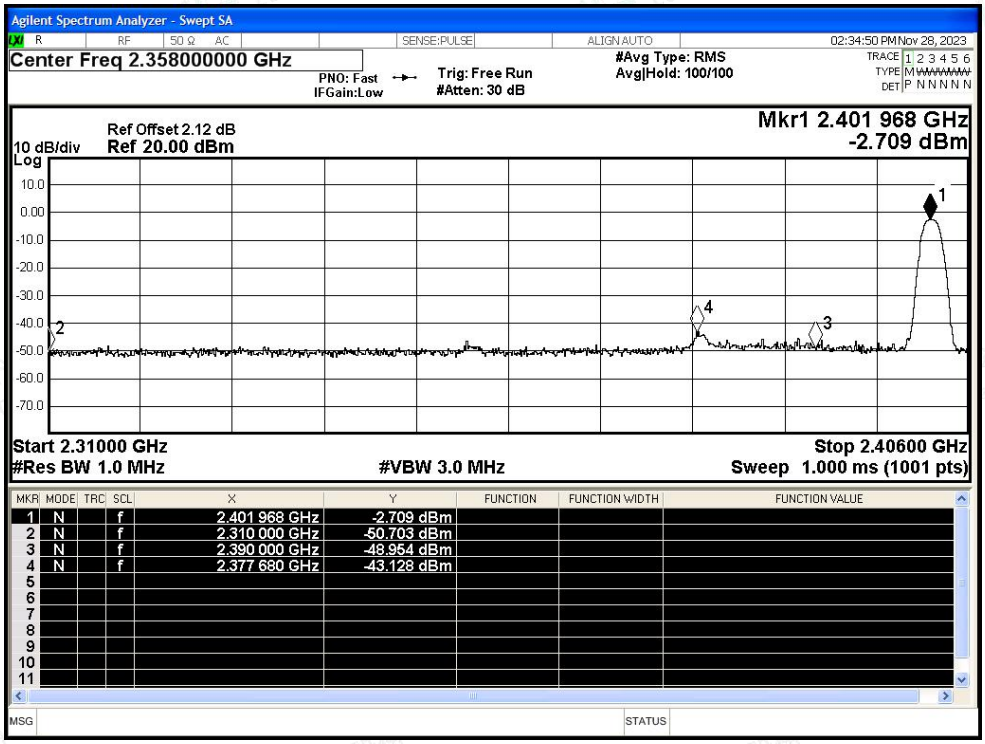


A.9 Restrict Band

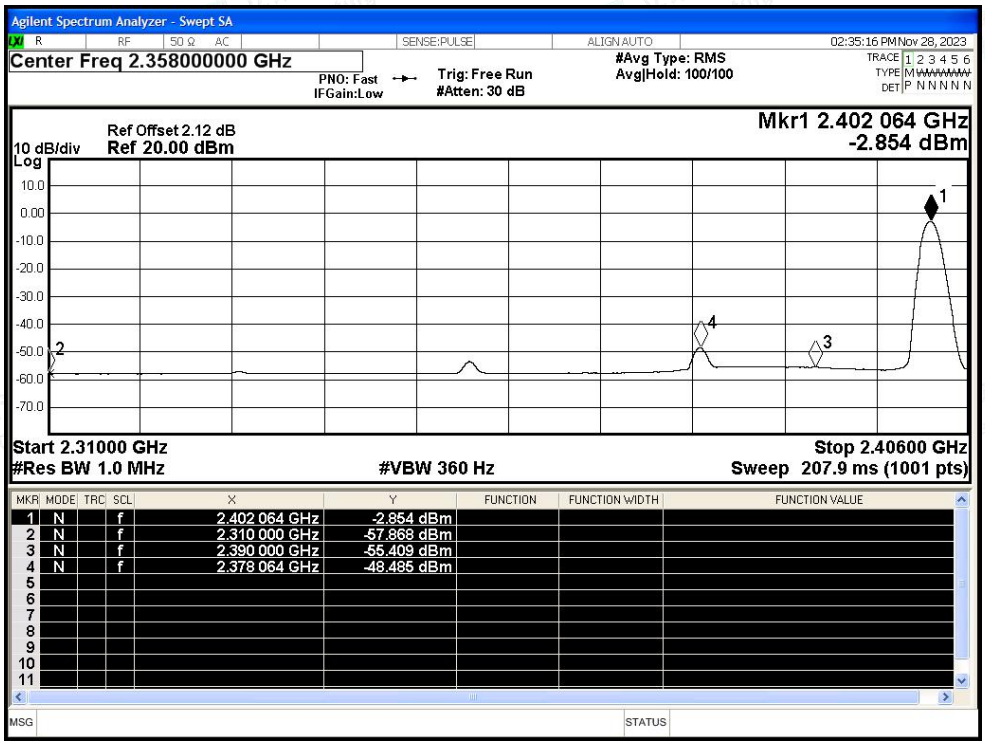
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-50.7	2	46.56	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-57.87	2	39.39	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2377.68	-43.13	2	54.13	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2378.064	-48.49	2	48.77	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-48.95	2	48.31	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-55.41	2	41.85	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-48.1	2	49.16	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-54.4	2	42.86	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2495.224	-44.63	2	52.63	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2498.92	-54.15	2	43.11	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-46.65	2	50.61	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-54.38	2	42.88	Average	54	Pass

Test Graphs

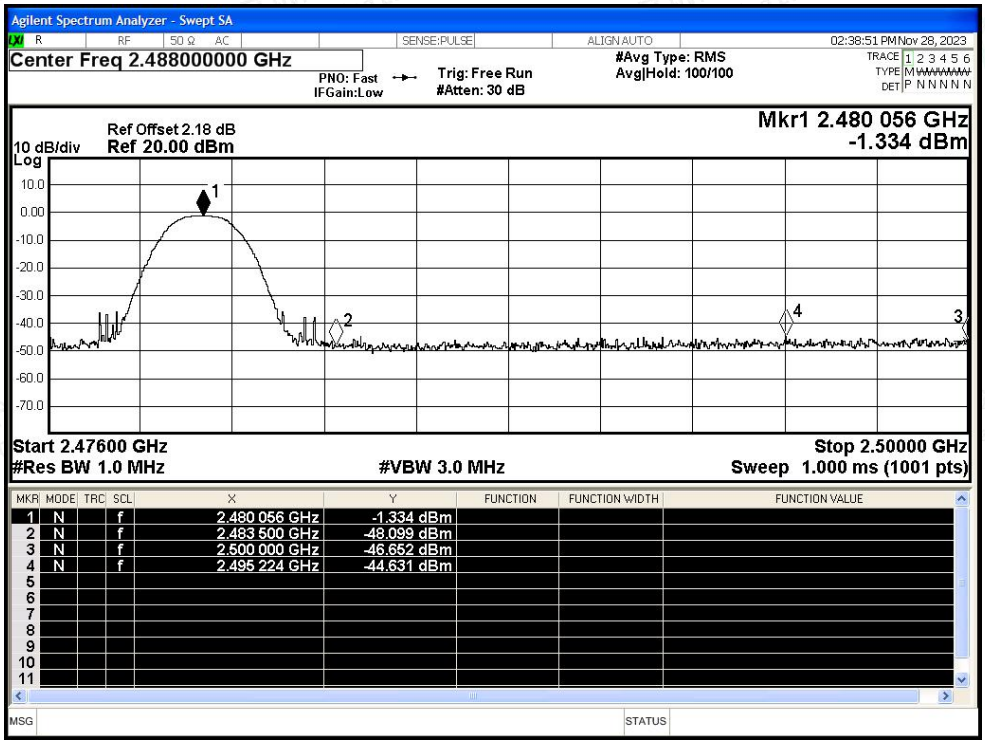
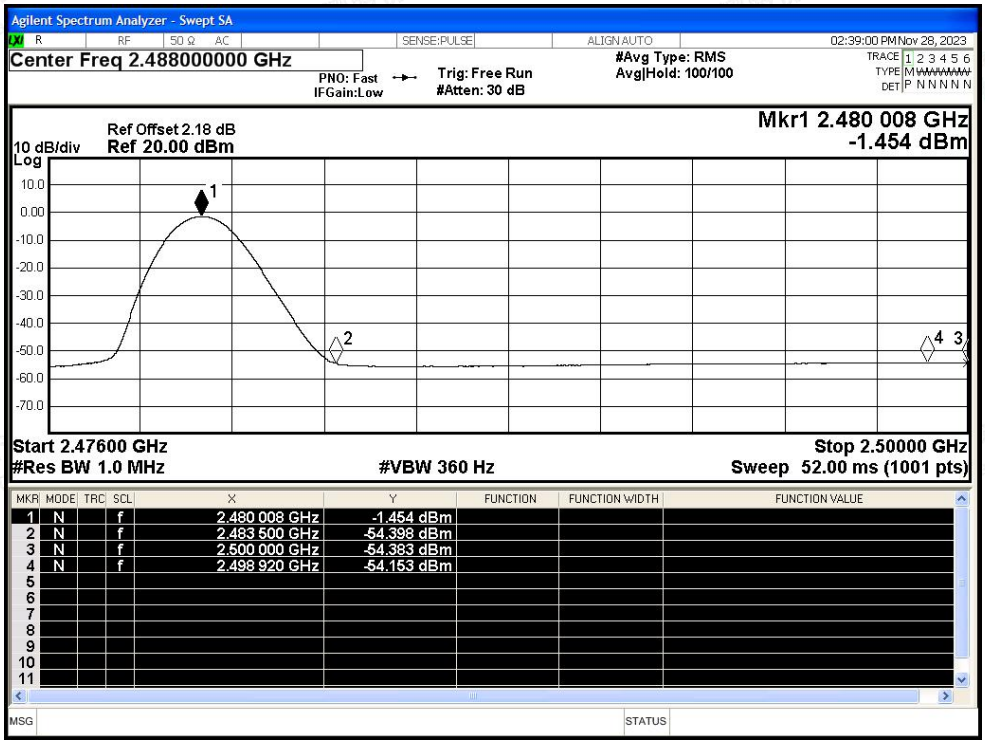
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



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