Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Portable Party Speaker

Test Model: T502PRO

Environmental Conditions

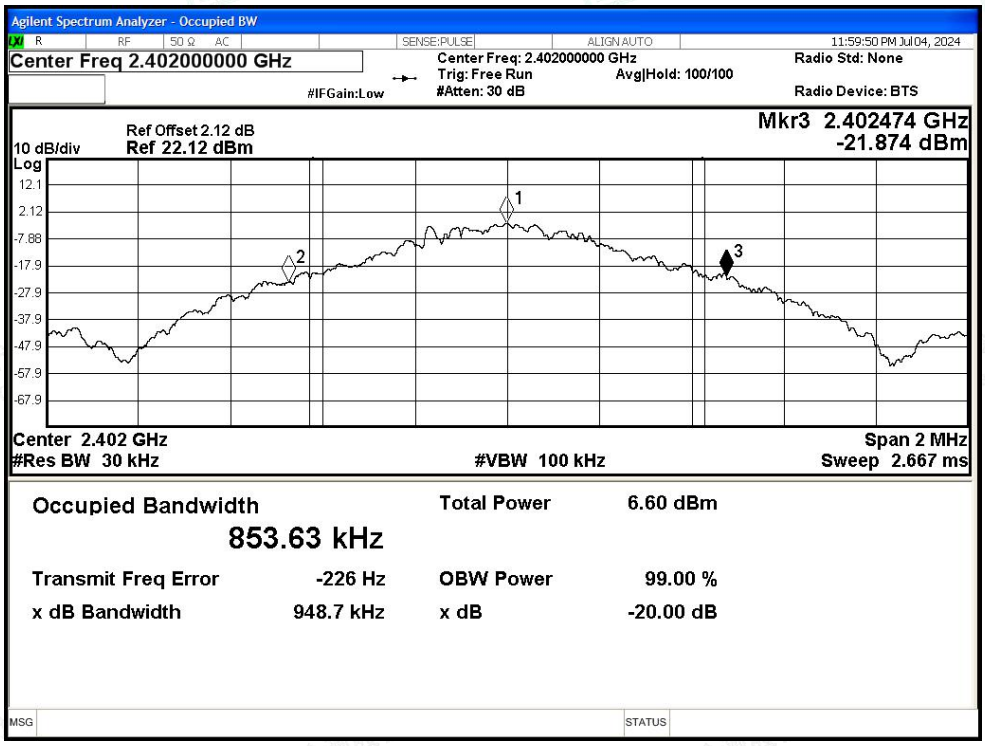
Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
Supervised by:	Nick Peng

A.1 -20dB Bandwidth

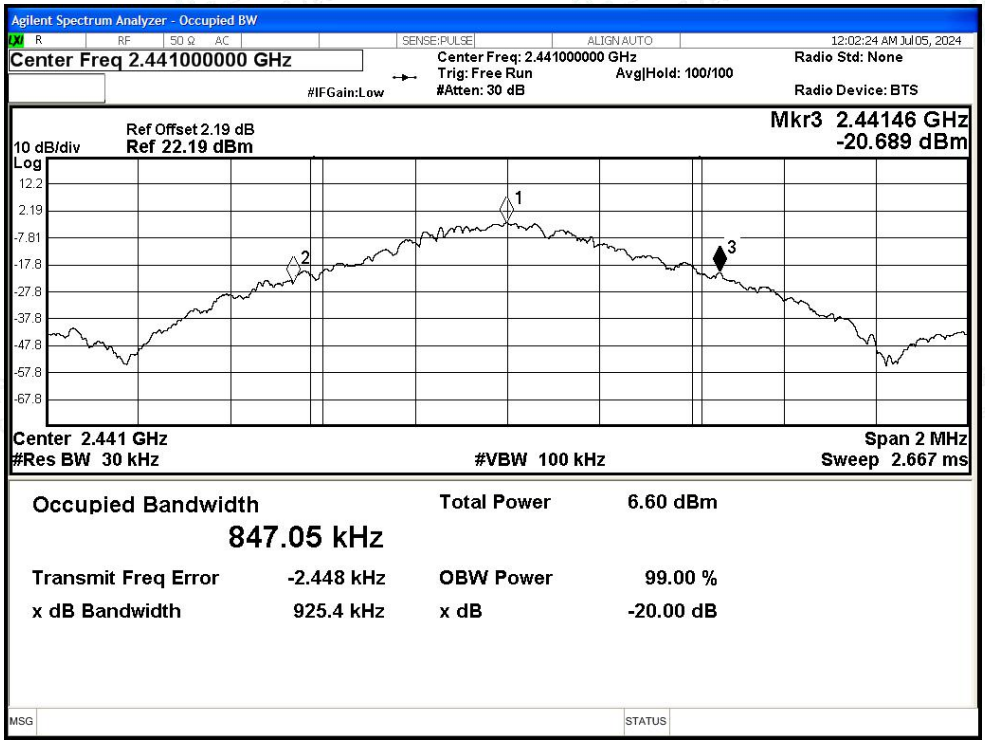
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.949	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.925	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.934	N/A	Pass

Test Graphs

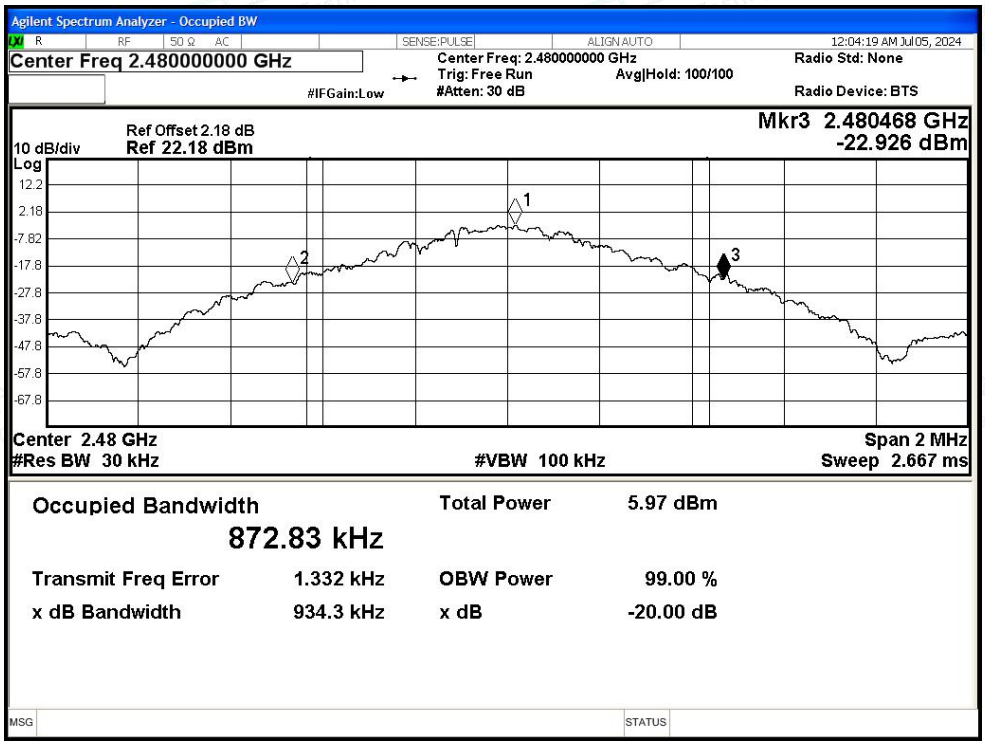
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

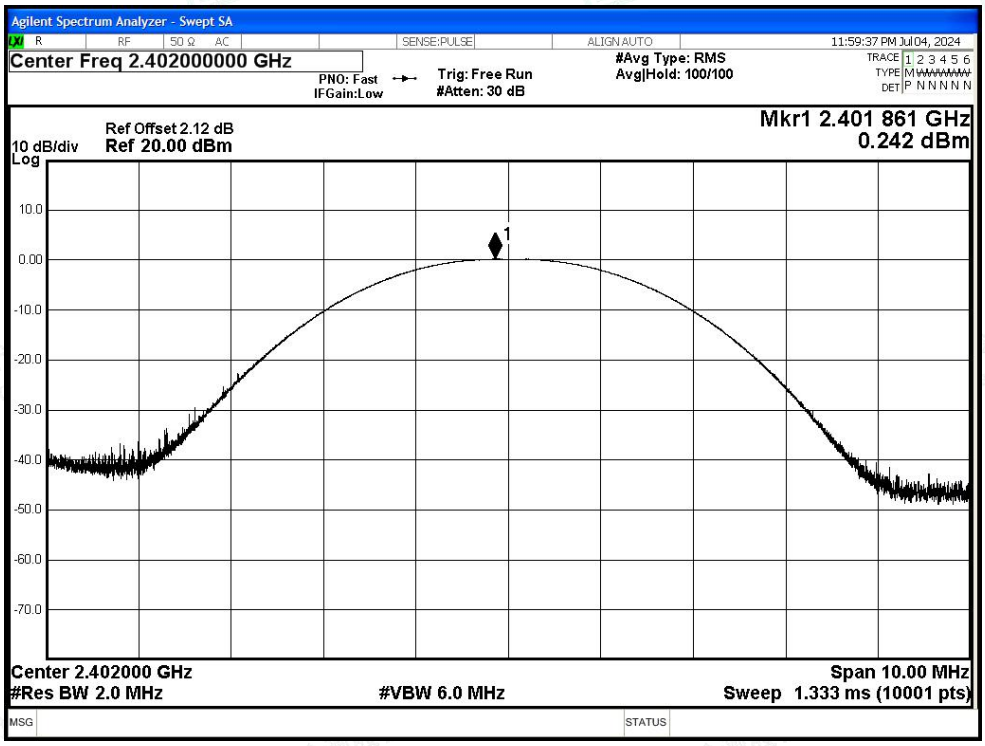


A.2 Maximum Conducted Output Power

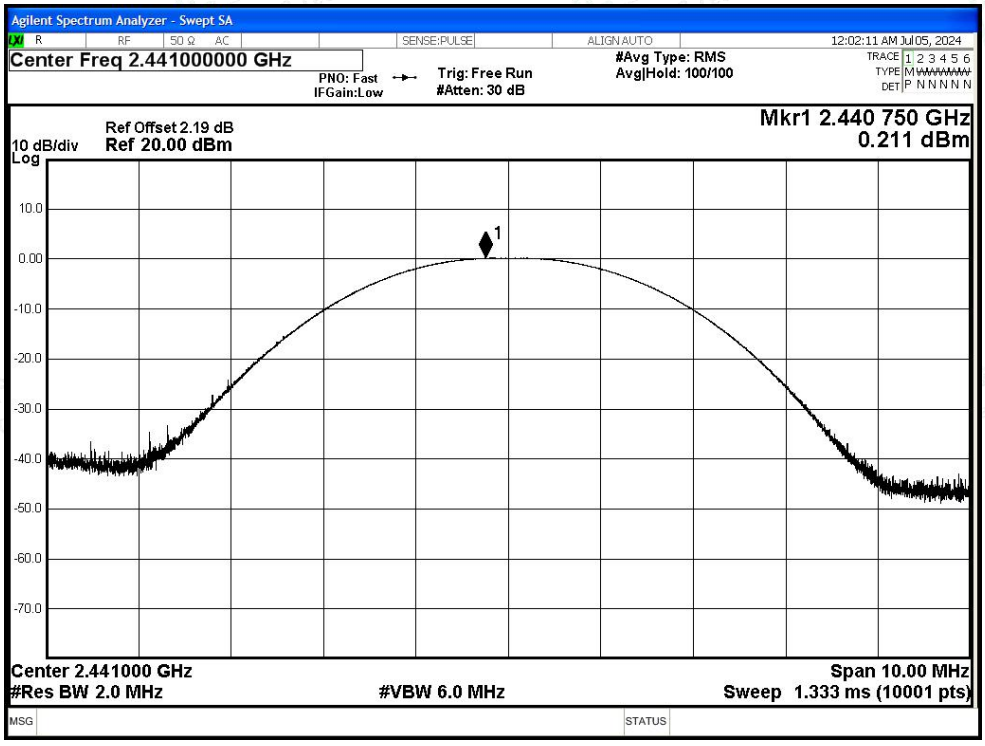
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	0.24	0	0.24	21	Pass
NVNT	1-DH5	2441	Ant1	0.21	0	0.21	21	Pass
NVNT	1-DH5	2480	Ant1	0.15	0	0.15	21	Pass

Test Graphs

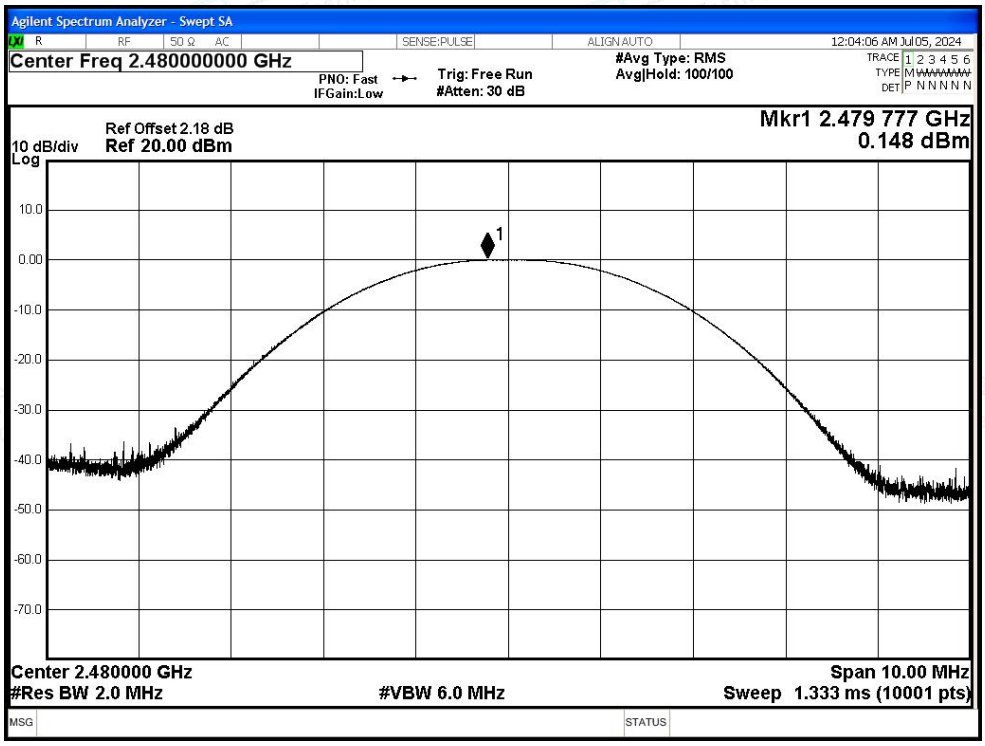
Power NVNT 1-DH5 2402MHz Ant1



Power NVNT 1-DH5 2441MHz Ant1



Power NVNT 1-DH5 2480MHz Ant1

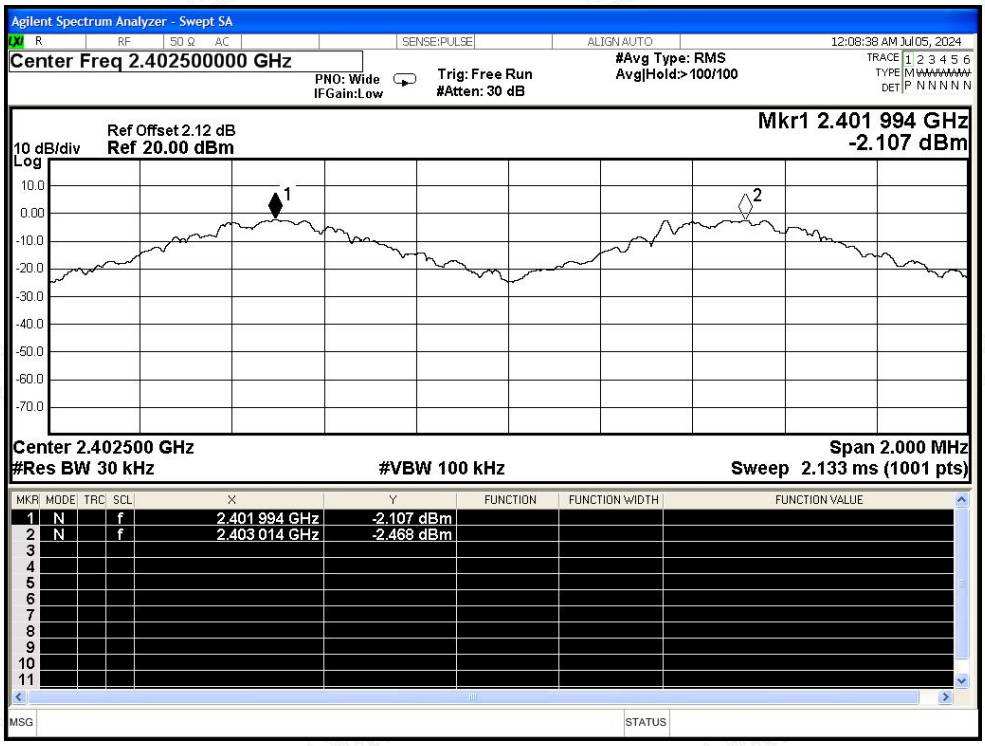


A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.994	2403.014	1.02	0.633	Pass

Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1

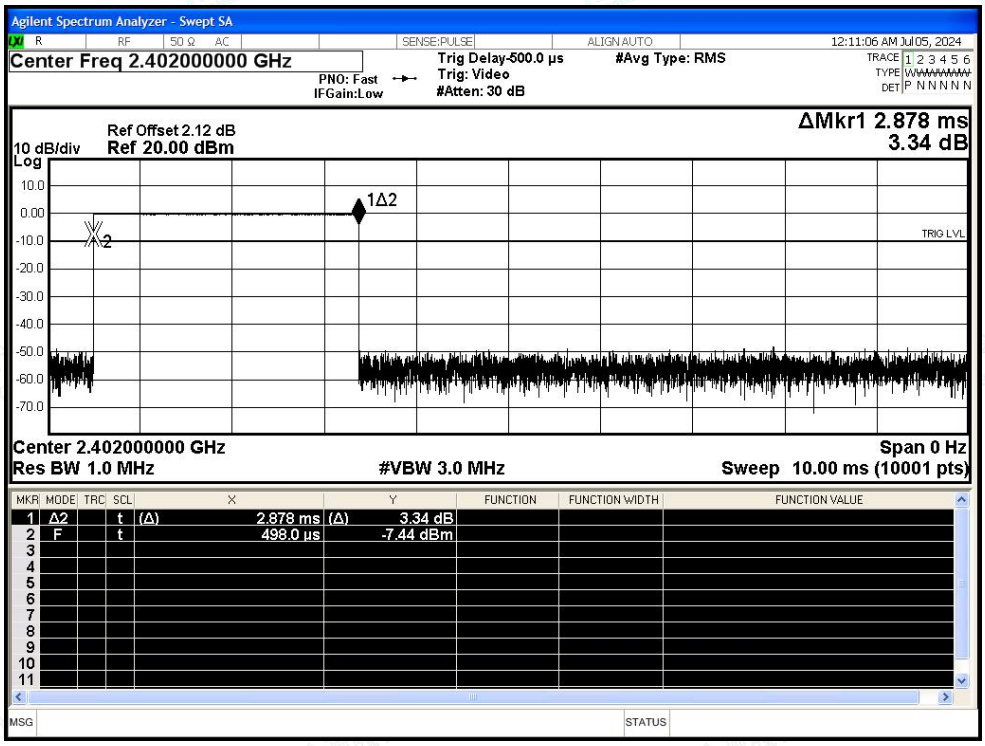


A.4 Dwell Time

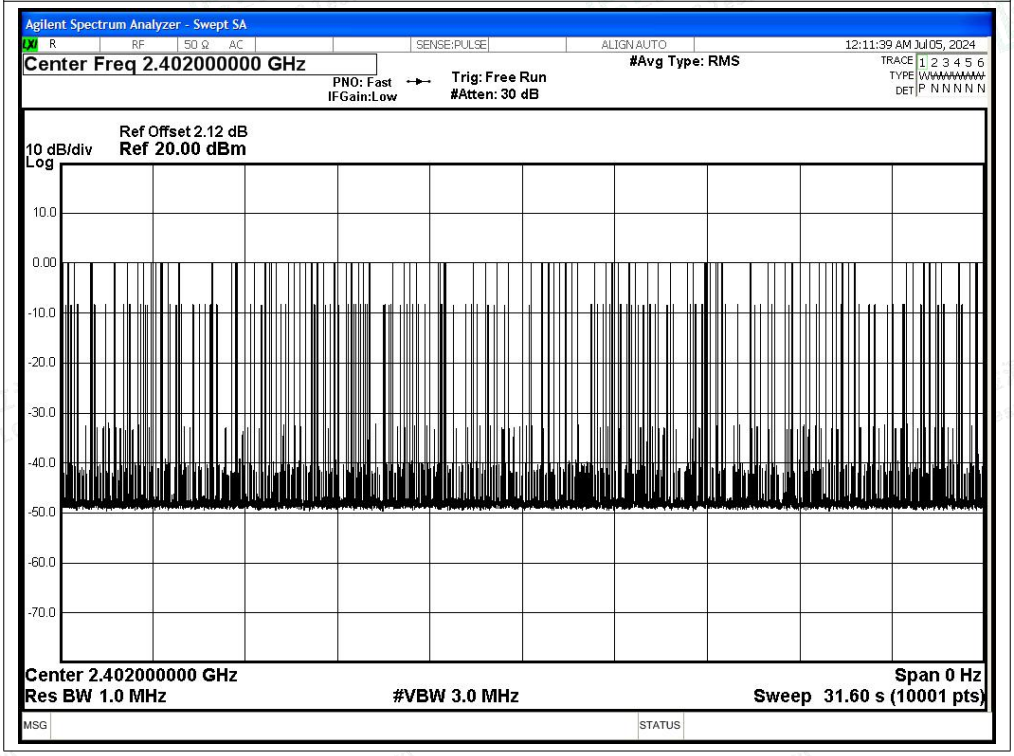
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.878	296.434	103	31600	400	Pass

Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

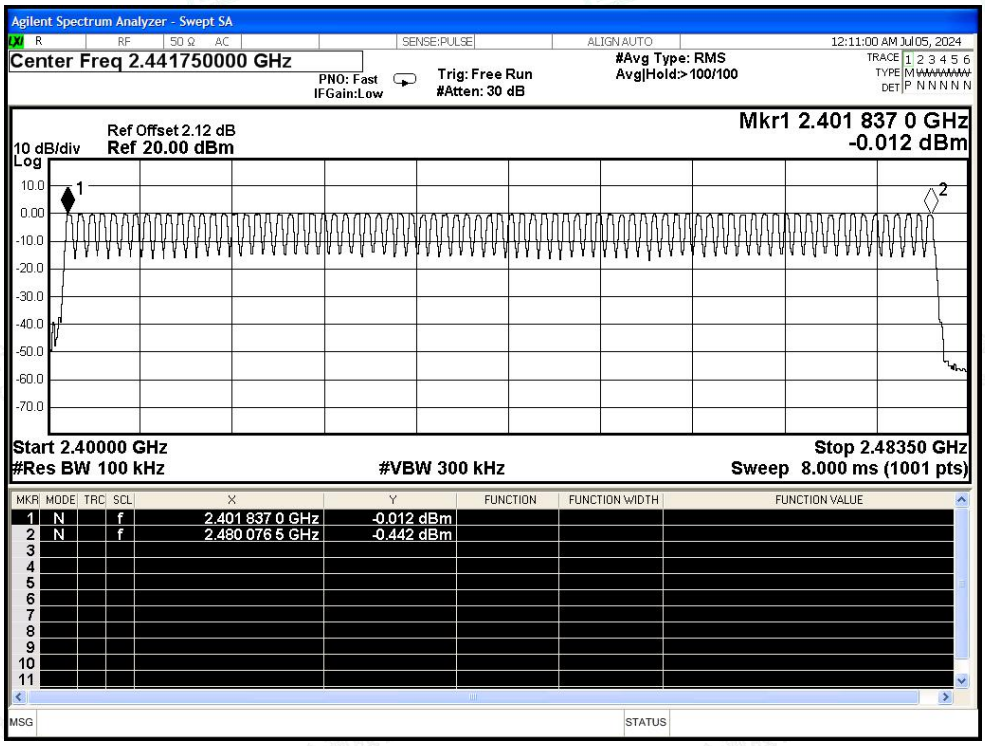


A.5 Number of Hopping Channel

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

Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1

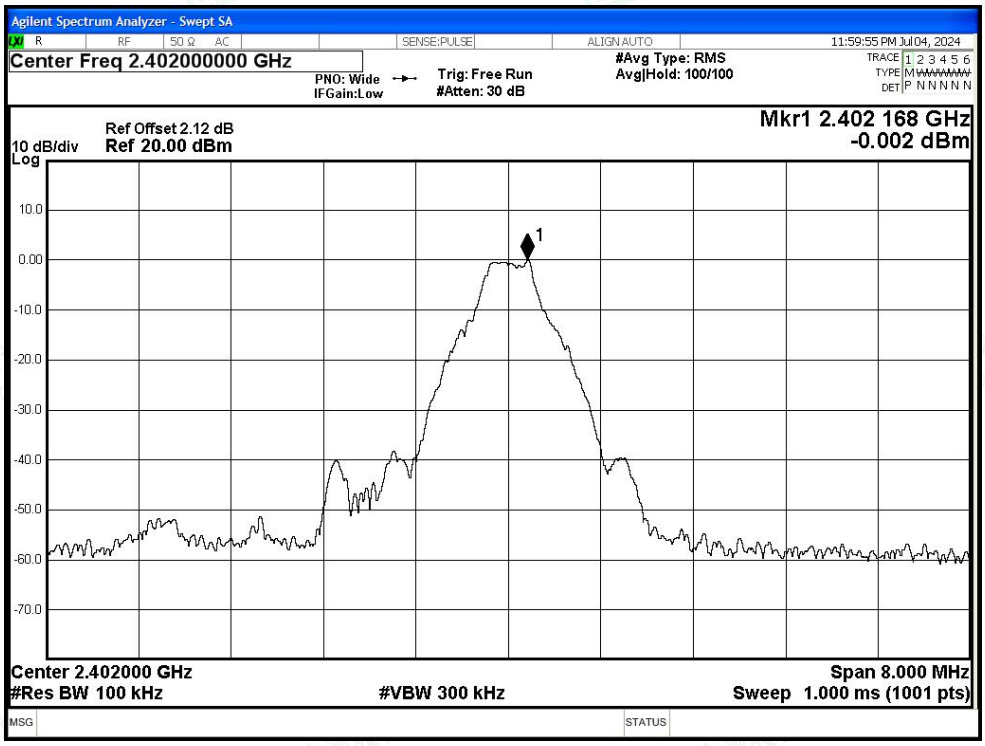


A.6 Band Edge

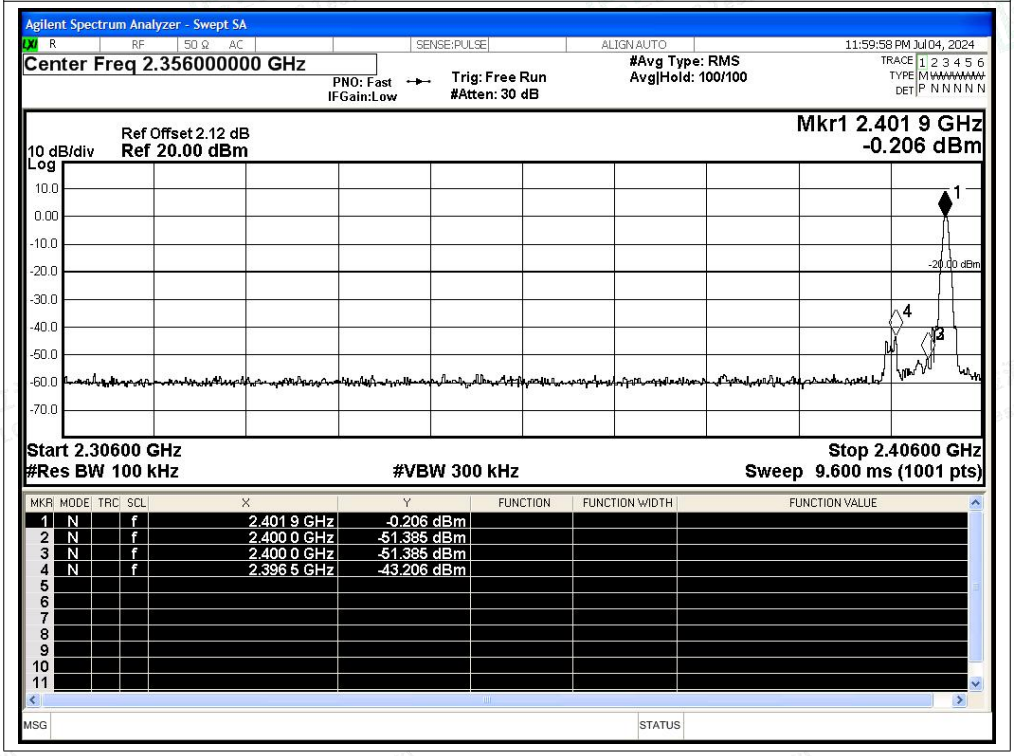
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-43.2	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-55.75	-20	Pass

Test Graphs

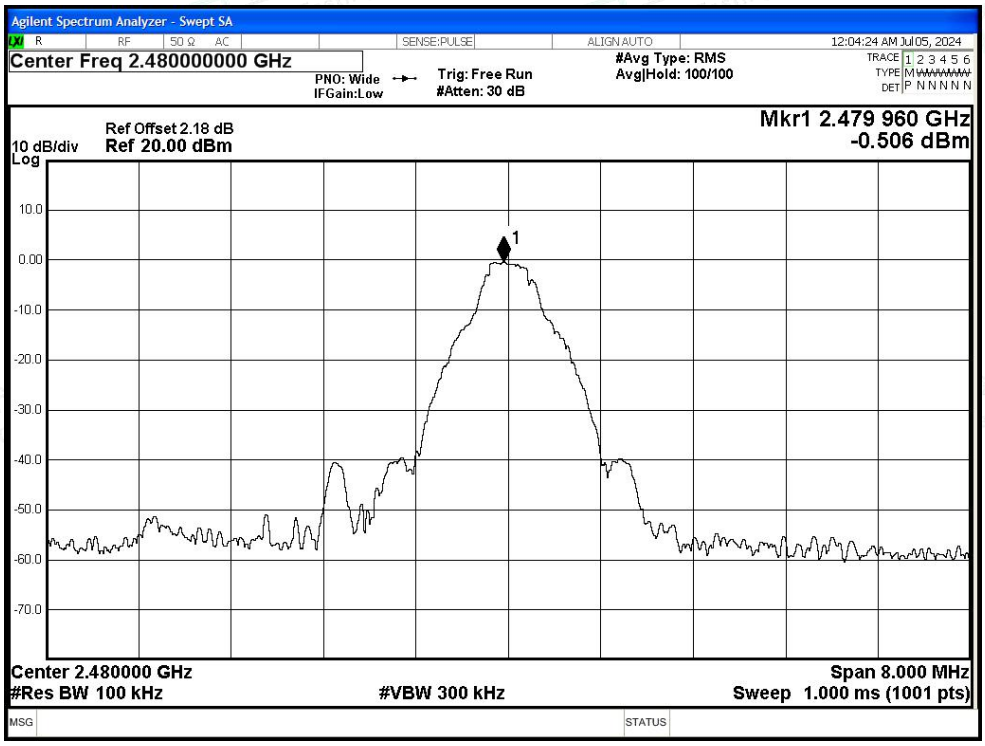
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



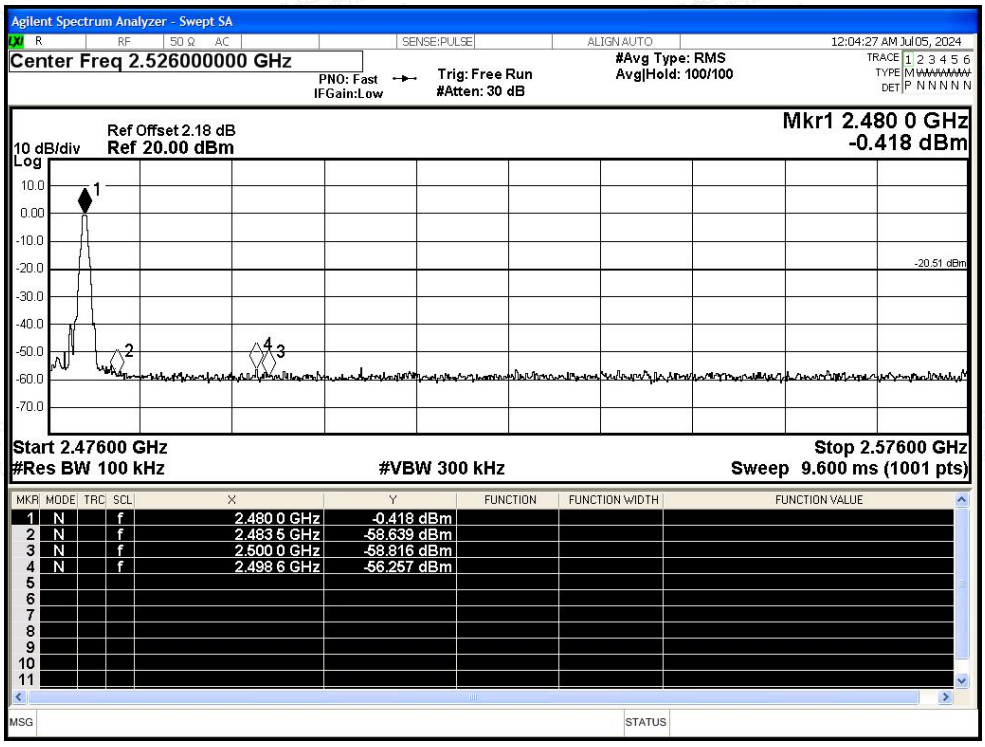
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



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



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

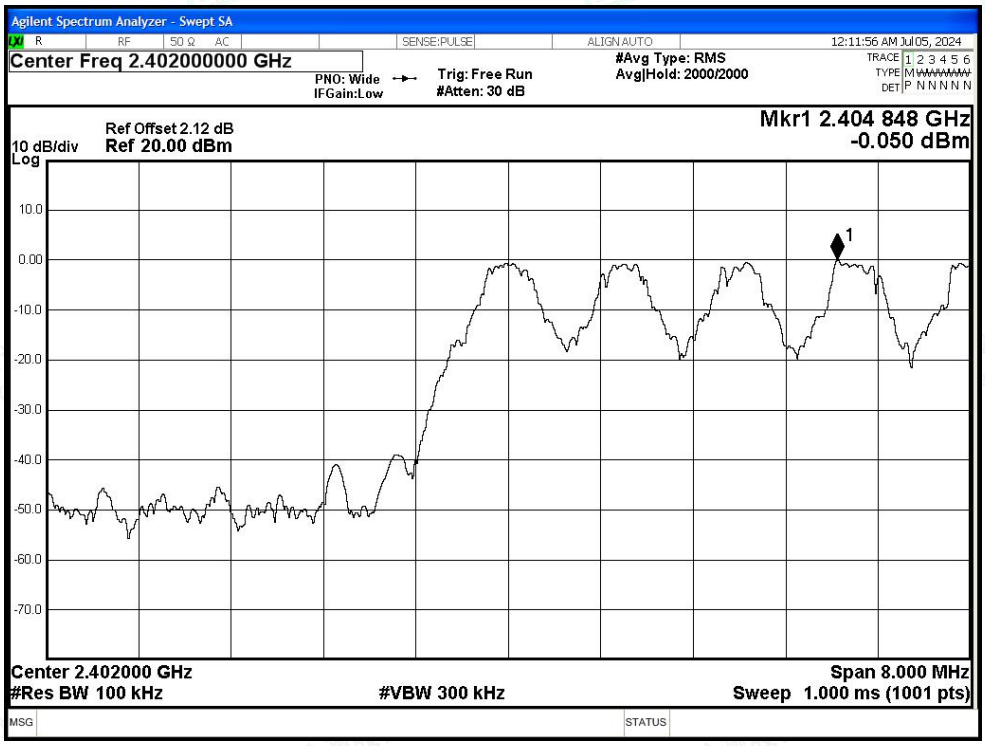


(Hopping)

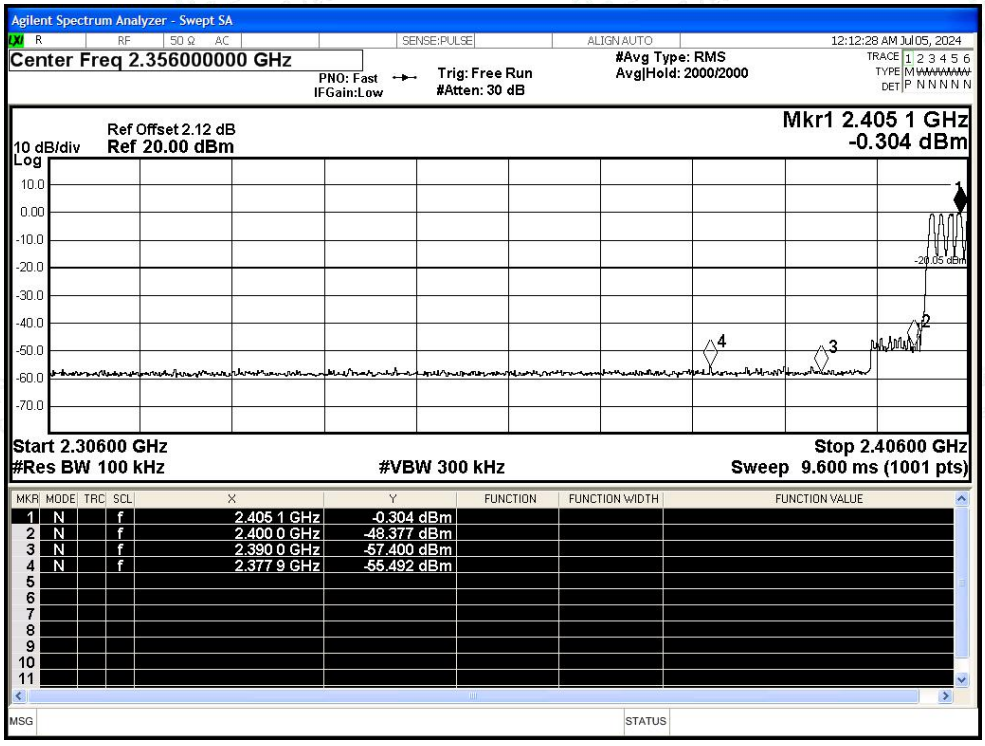
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-55.44	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-55.16	-20	Pass

Test Graphs

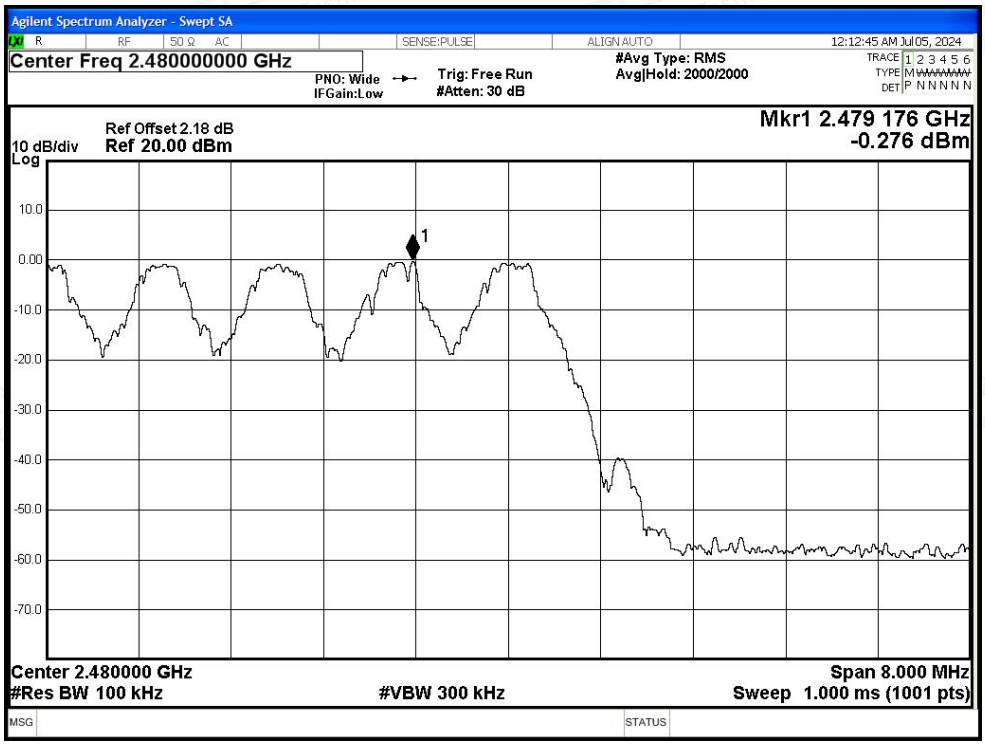
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



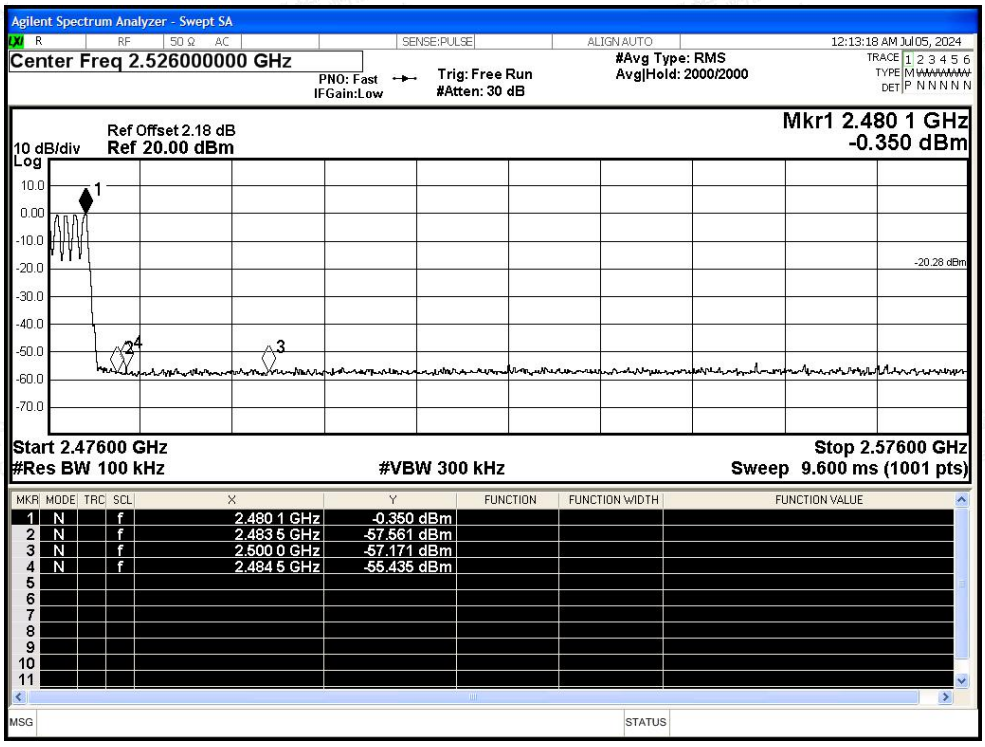
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



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



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

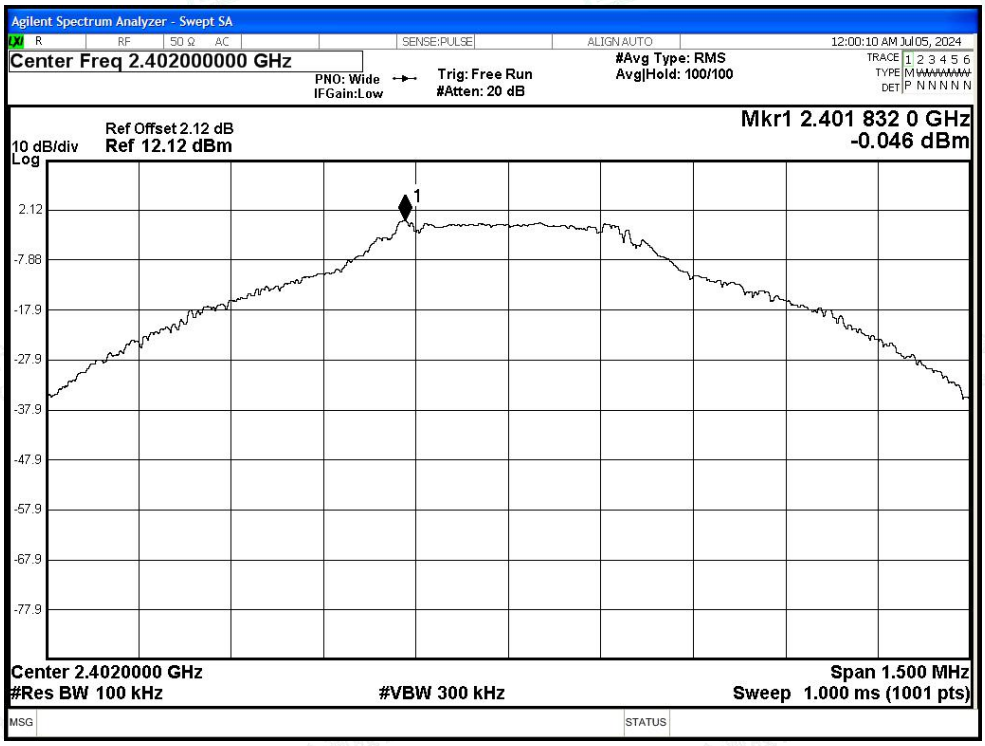


A.7 Conducted RF Spurious Emission

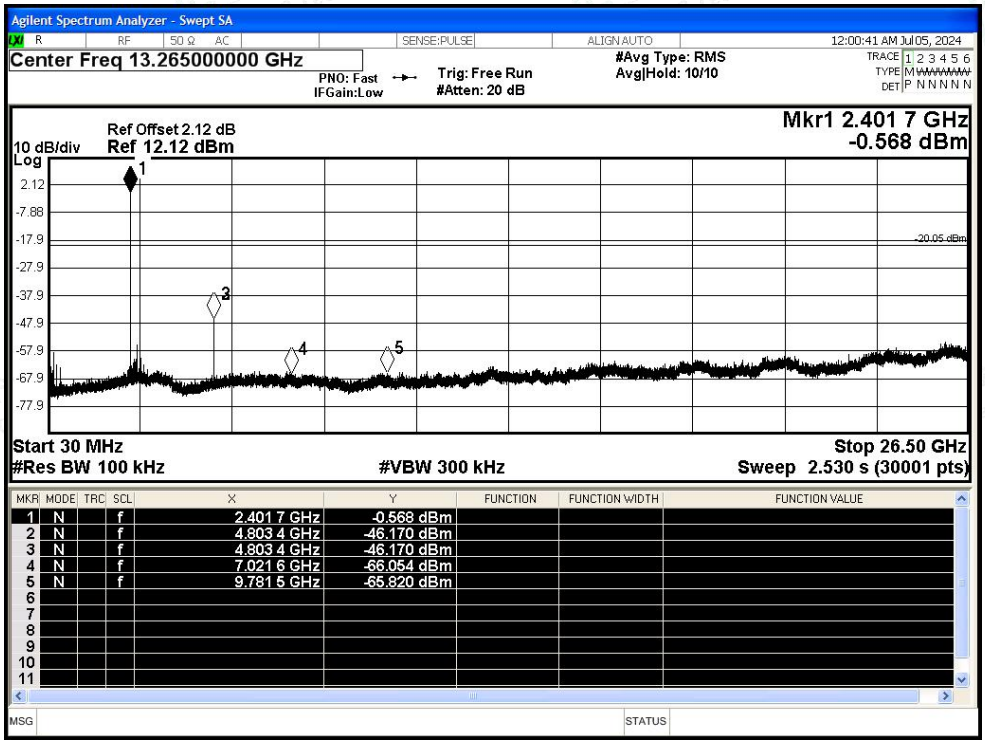
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-46.12	-20	Pass
NVNT	1-DH5	2441	Ant1	-46.92	-20	Pass
NVNT	1-DH5	2480	Ant1	-46.72	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

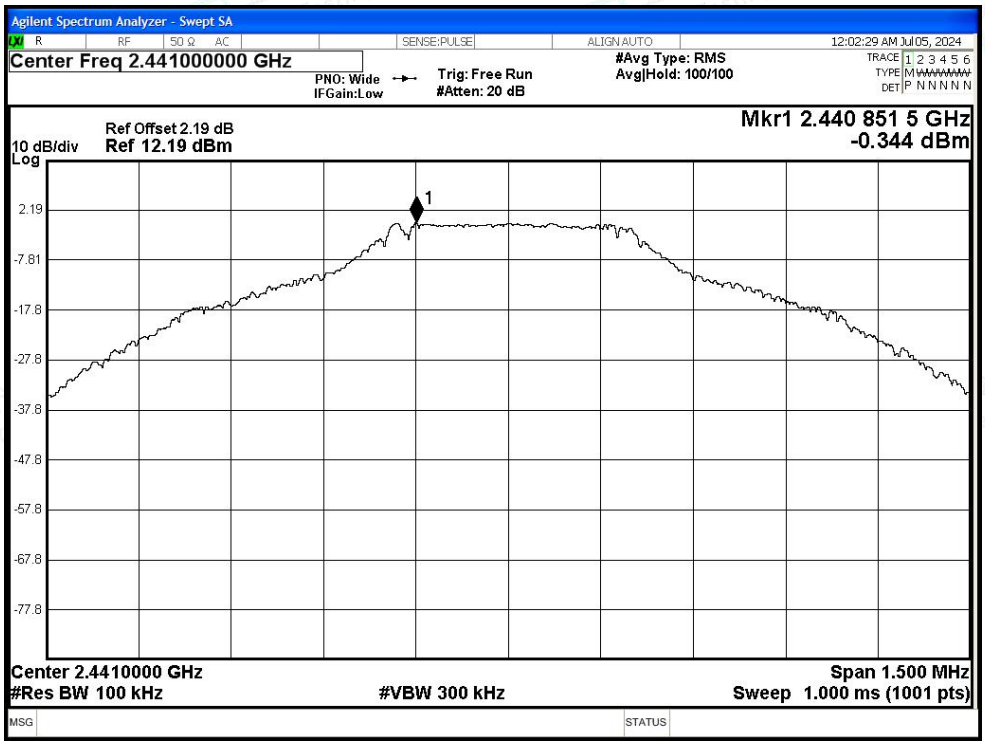


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

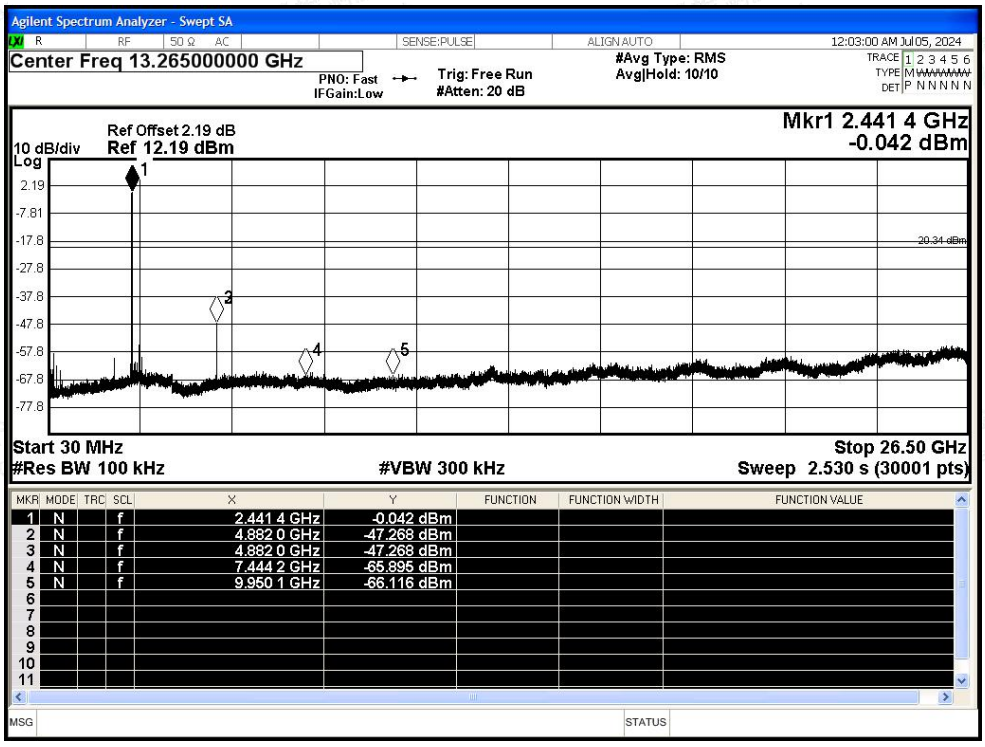


MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N		f	2.401 7 GHz	-0.568 dBm			
2	N		f	4.803 4 GHz	-46.170 dBm			
3	N		f	4.803 4 GHz	-46.170 dBm			
4	N		f	7.021 6 GHz	-66.054 dBm			
5	N		f	9.781 5 GHz	-65.820 dBm			
6								
7								
8								
9								
10								
11								

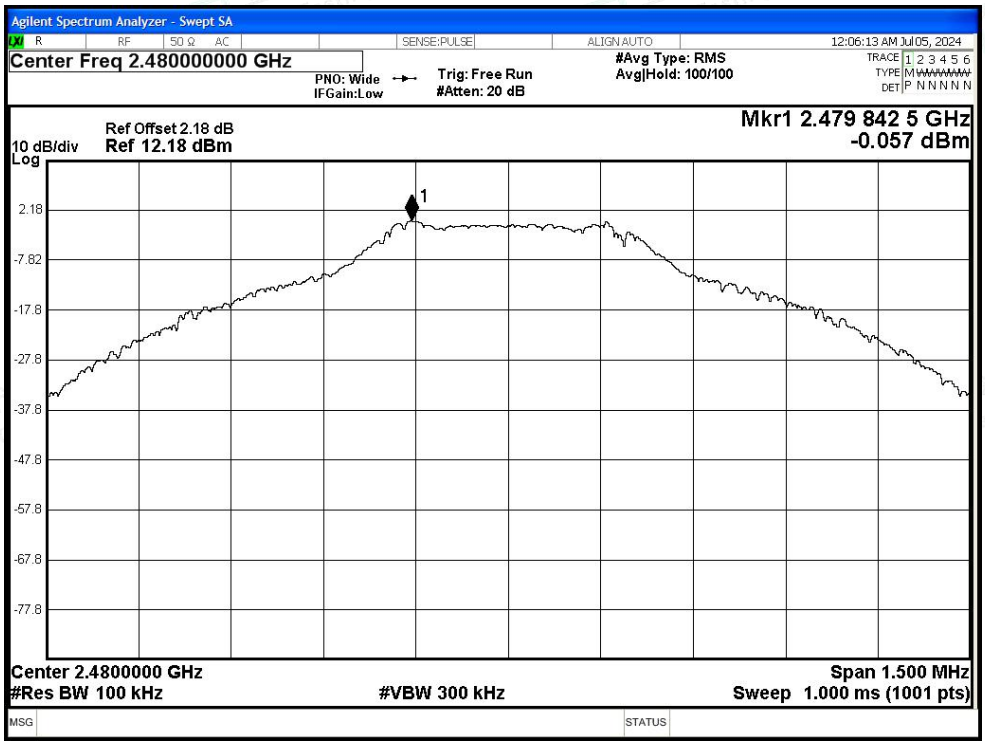
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



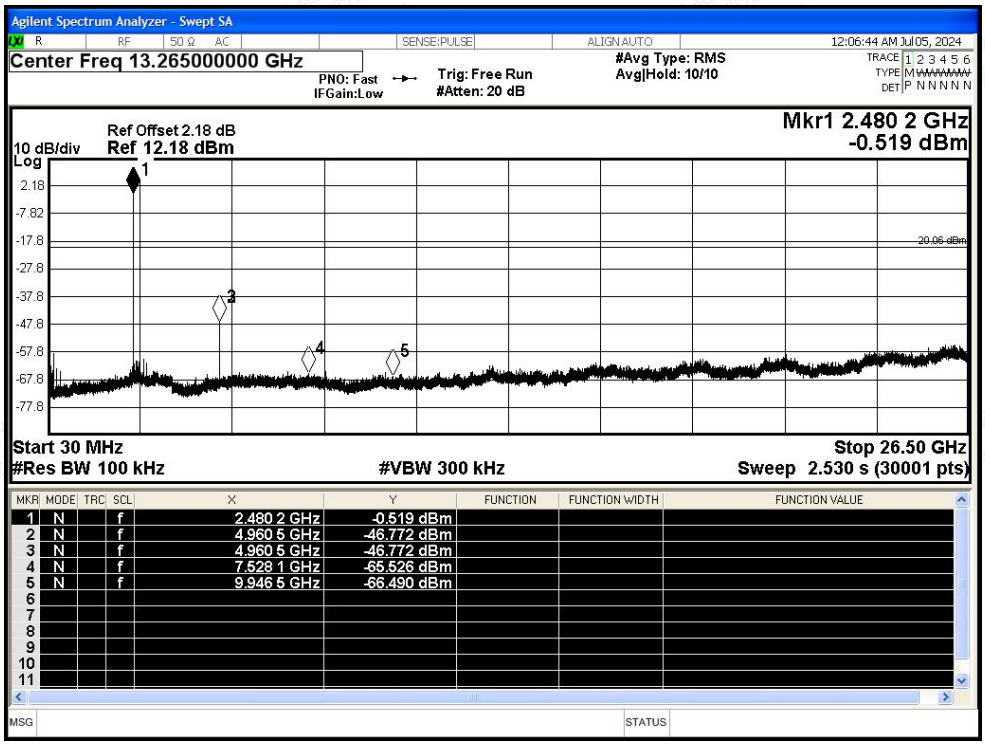
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission

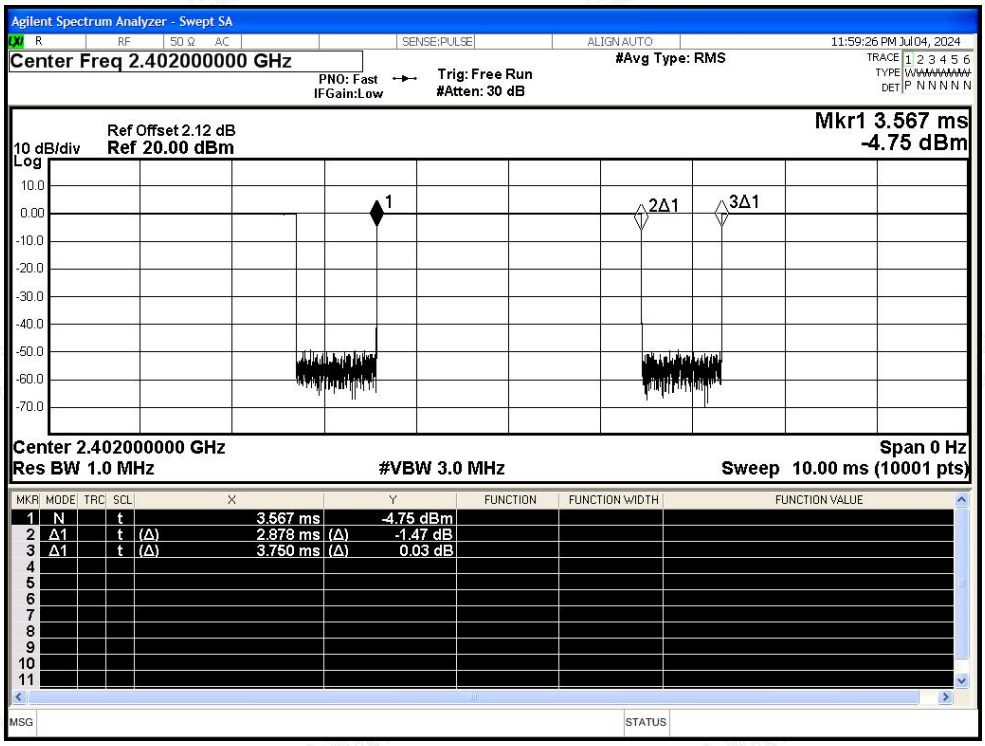


A.8 Duty Cycle

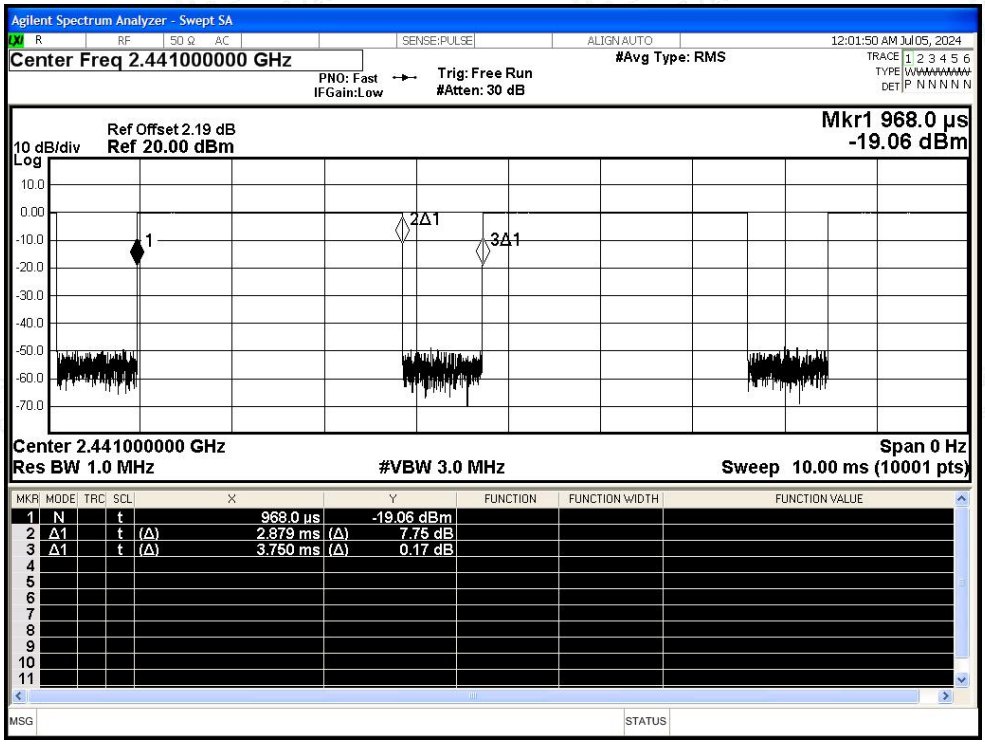
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	76.75	1.15	0.35
NVNT	1-DH5	2441	Ant1	76.77	1.15	0.35
NVNT	1-DH5	2480	Ant1	76.77	1.15	0.35

Test Graphs

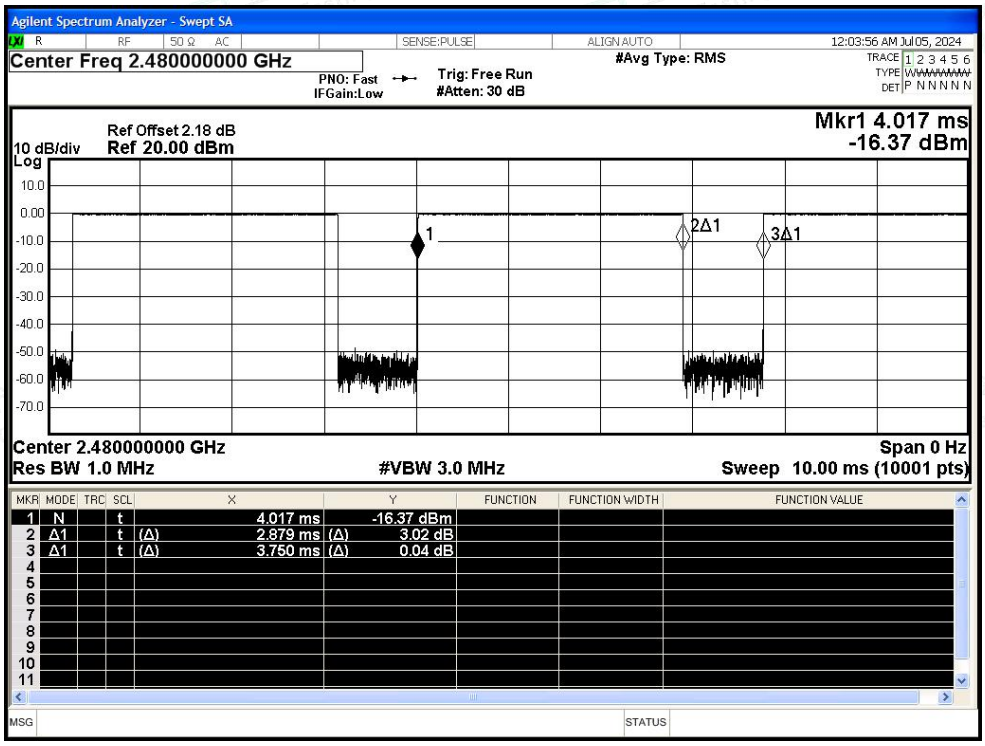
Duty Cycle NVNT 1-DH5 2402MHz Ant1



Duty Cycle NVNT 1-DH5 2441MHz Ant1



Duty Cycle NVNT 1-DH5 2480MHz Ant1

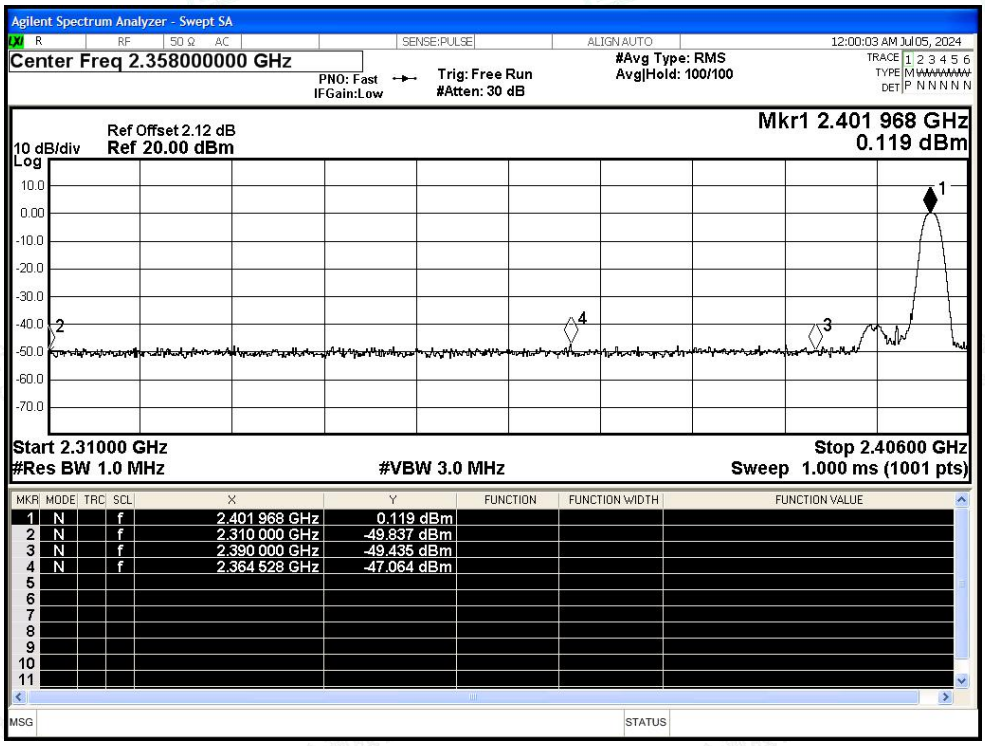


A.9 Restrict Band

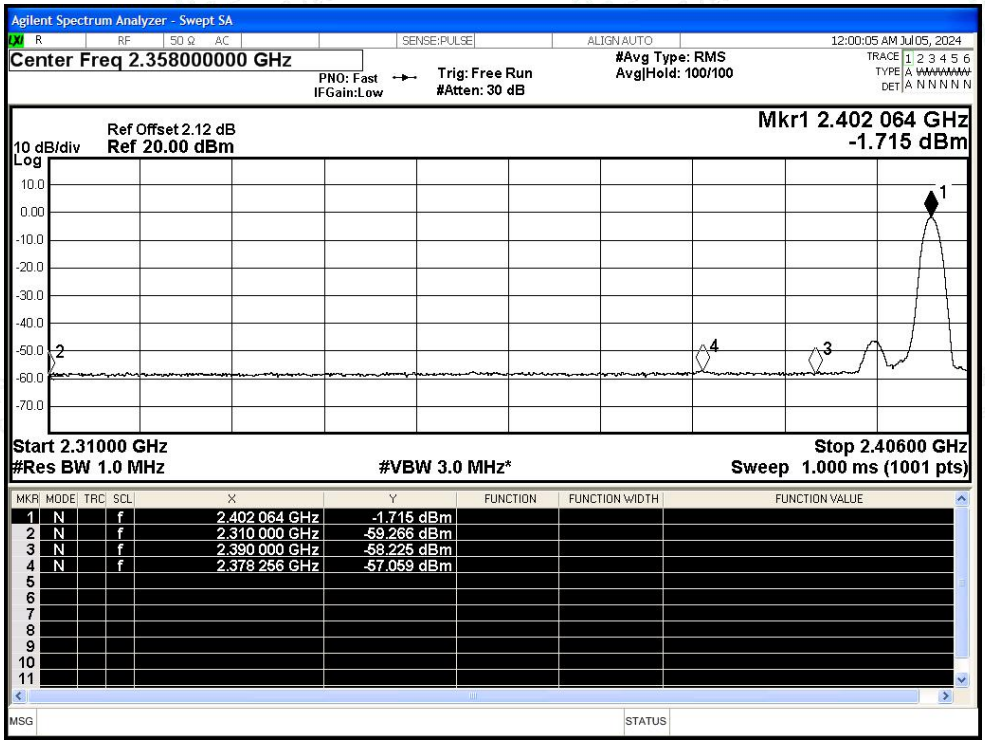
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-49.84	3.42	-	48.84	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-59.27	3.42	1.15	40.56	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2364.528	-47.06	3.42	-	51.62	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2378.256	-57.06	3.42	1.15	42.77	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-49.44	3.42	-	49.24	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-58.23	3.42	1.15	41.6	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-48.35	3.42	-	50.33	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-56.17	3.42	1.15	43.66	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2484.232	-46.29	3.42	-	52.39	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.728	-55.95	3.42	1.15	43.88	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-50.34	3.42	-	48.34	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-57.78	3.42	1.15	42.05	Average	54	Pass

Test Graphs

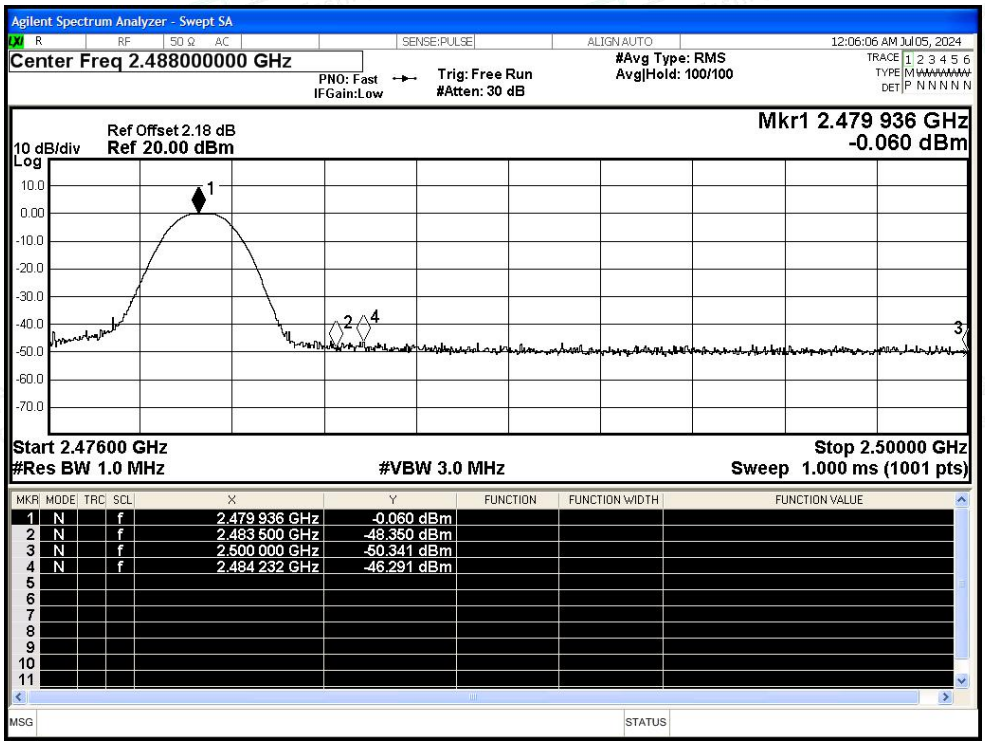
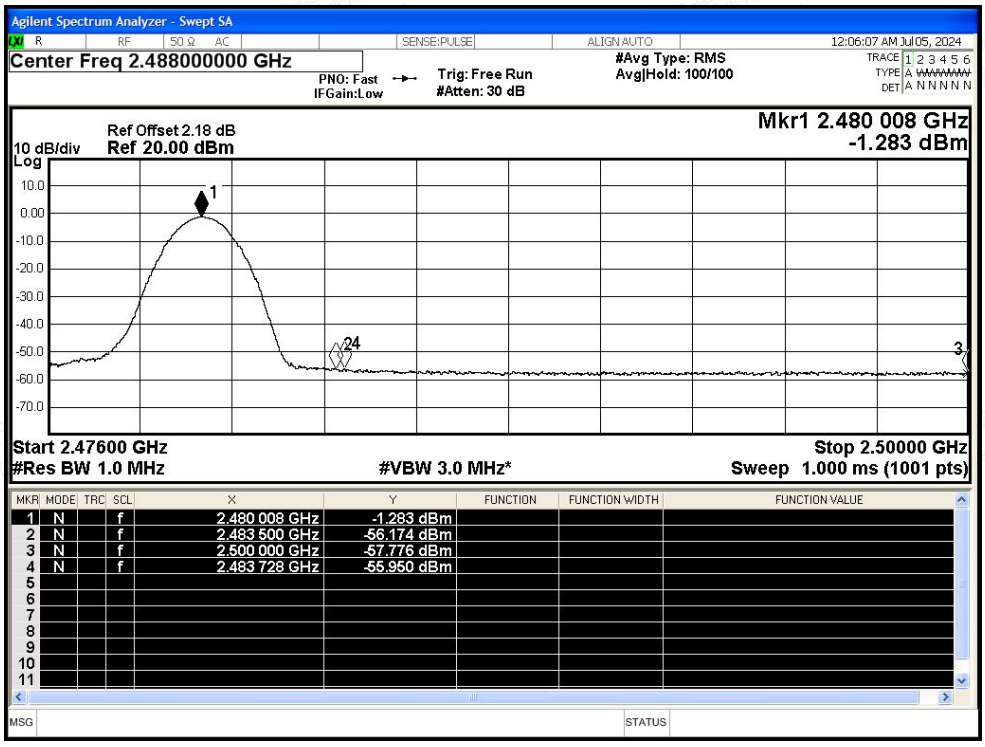
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



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