Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Automend Pro OBDII Diagnostic Module

Test Model: 30284

Environmental Conditions

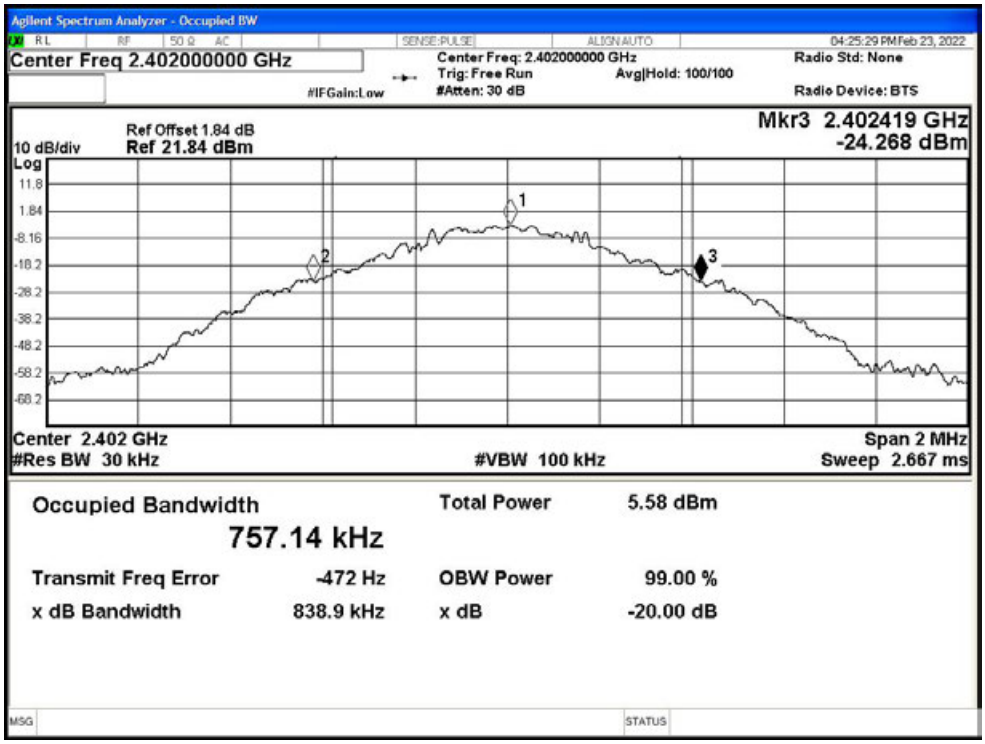
Temperature:	23.5° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Monkey Li
Supervised by:	Li Huan

A.1 20dB Bandwidth

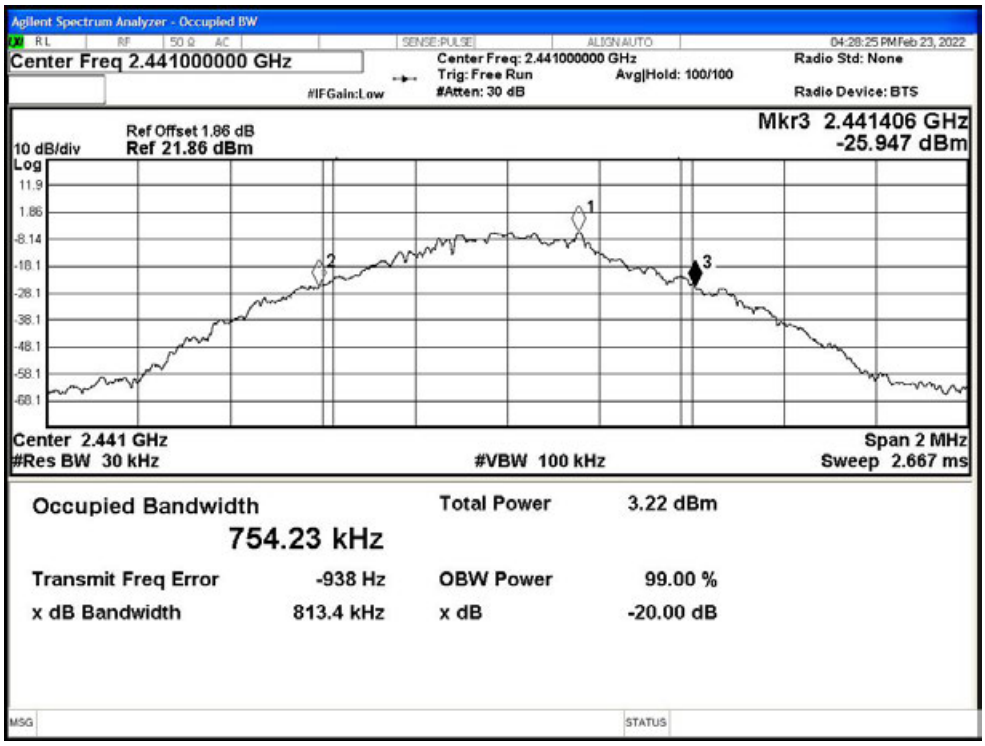
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.839	0	Pass
NVNT	1-DH5	2441	Ant1	0.813	0	Pass
NVNT	1-DH5	2480	Ant1	0.84	0	Pass
NVNT	2-DH5	2402	Ant1	1.285	0	Pass
NVNT	2-DH5	2441	Ant1	1.264	0	Pass
NVNT	2-DH5	2480	Ant1	1.268	0	Pass
NVNT	3-DH5	2402	Ant1	1.304	0	Pass
NVNT	3-DH5	2441	Ant1	1.286	0	Pass
NVNT	3-DH5	2480	Ant1	1.28	0	Pass

Test Graphs

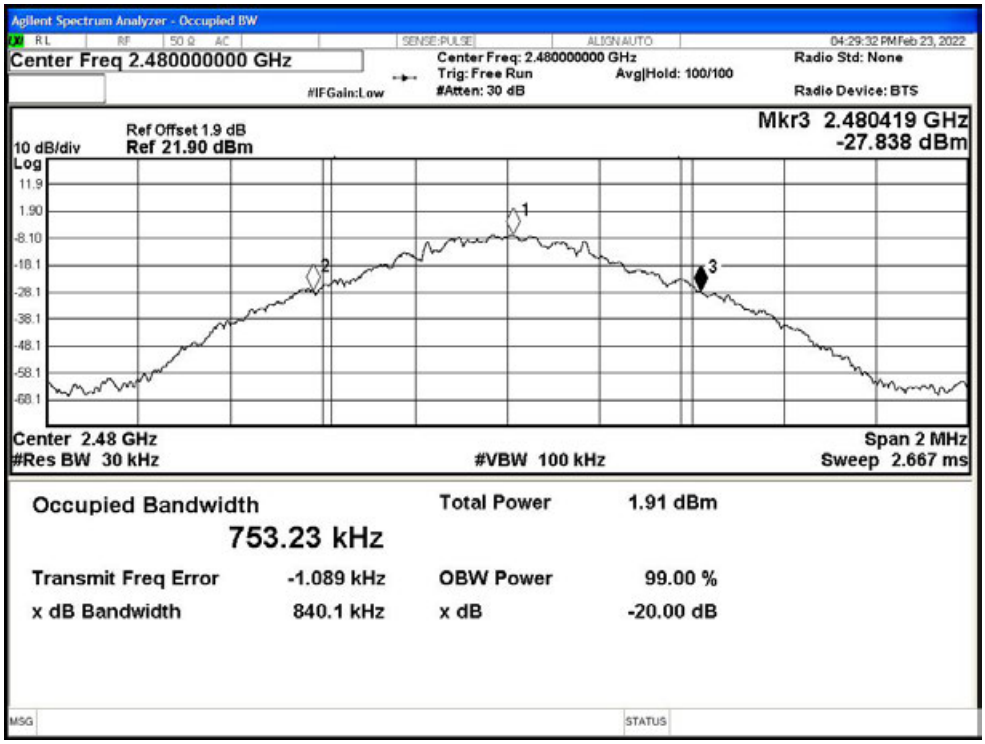
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



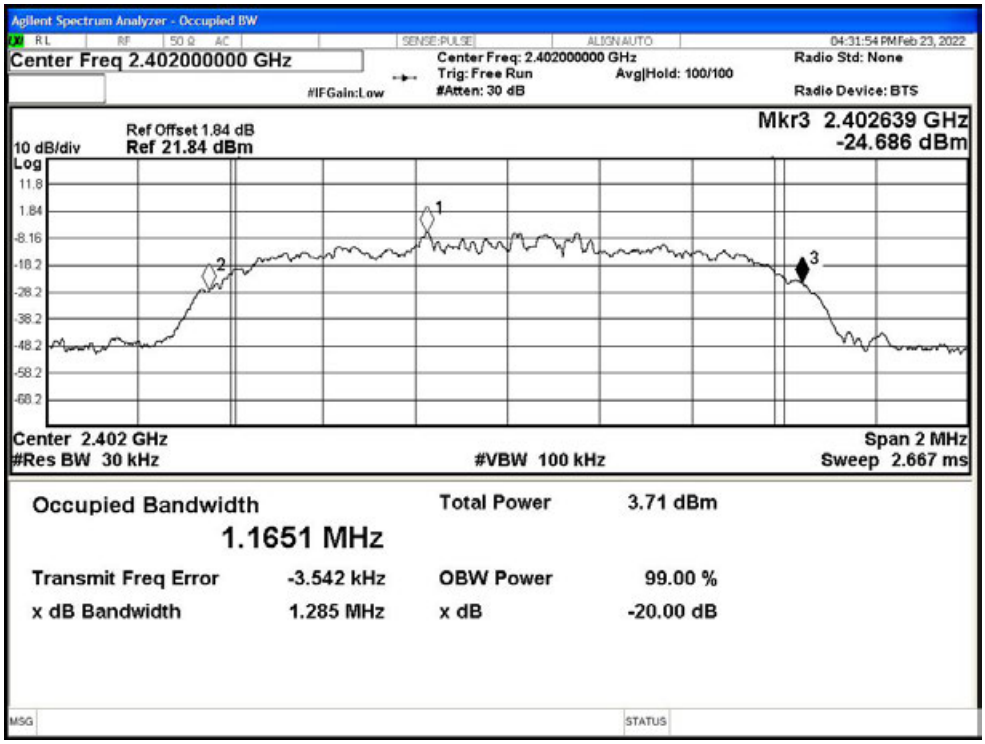
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



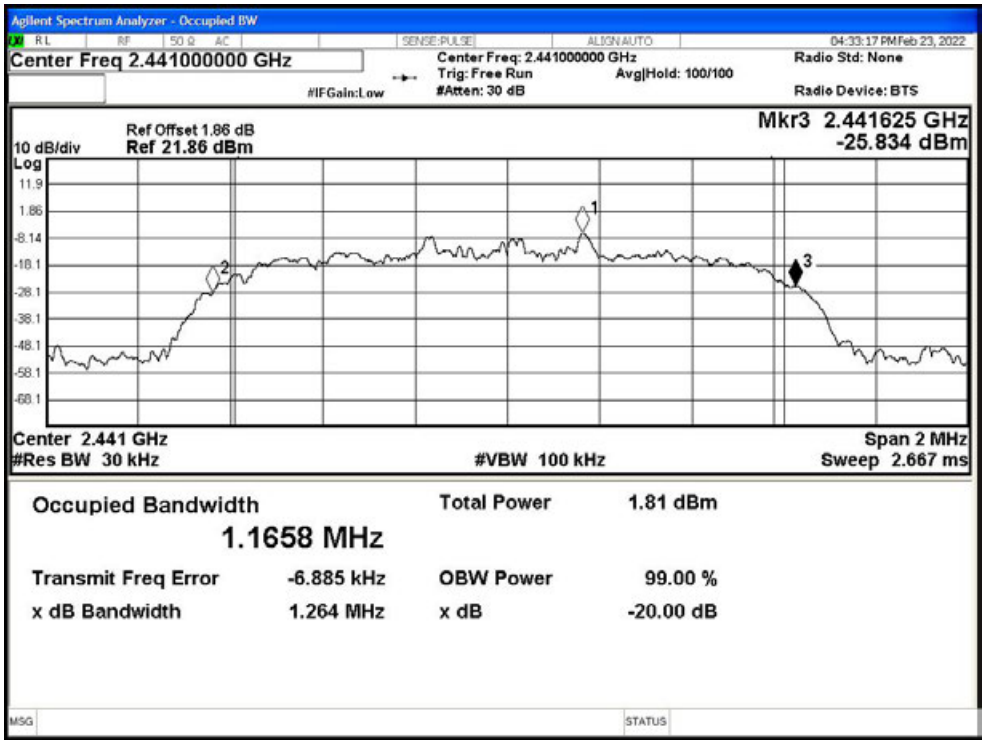
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



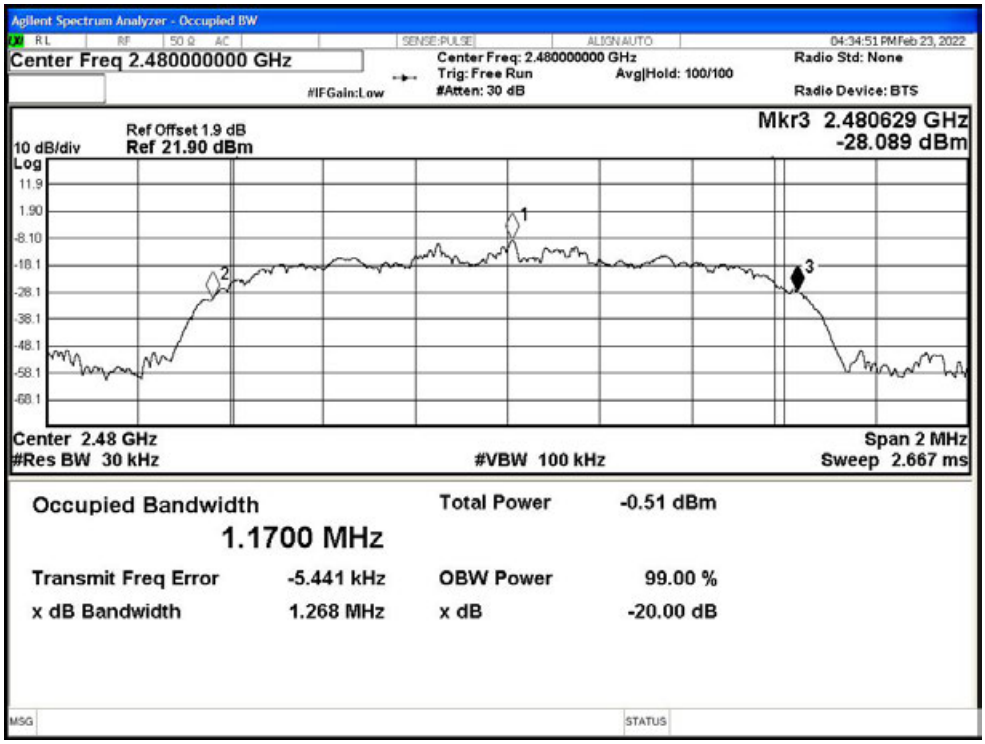
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



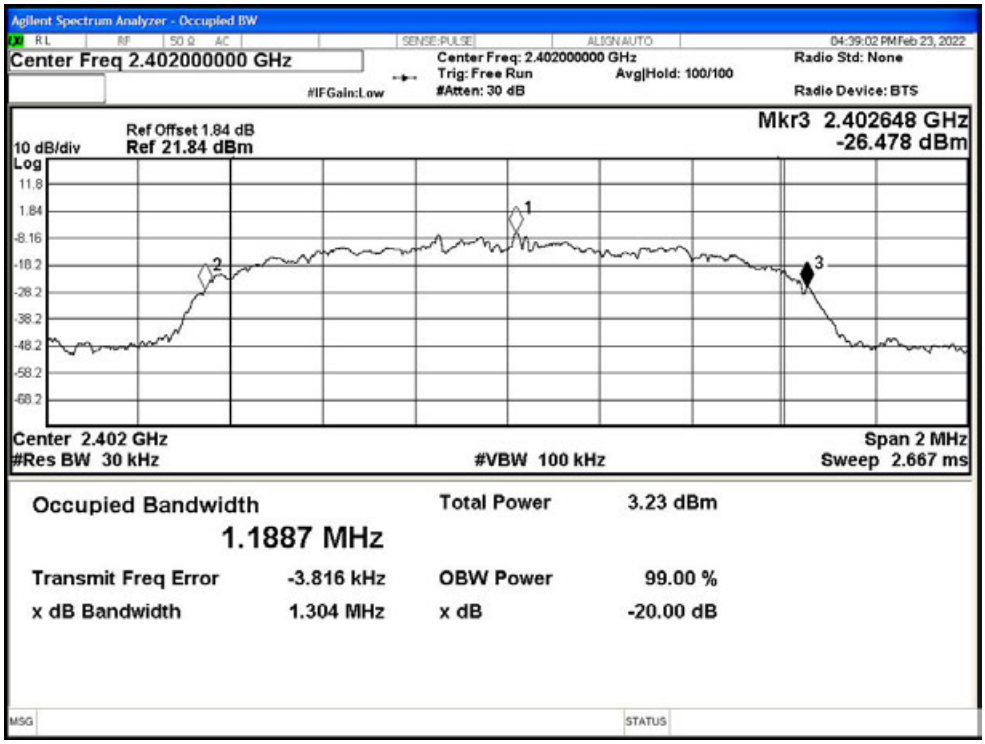
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



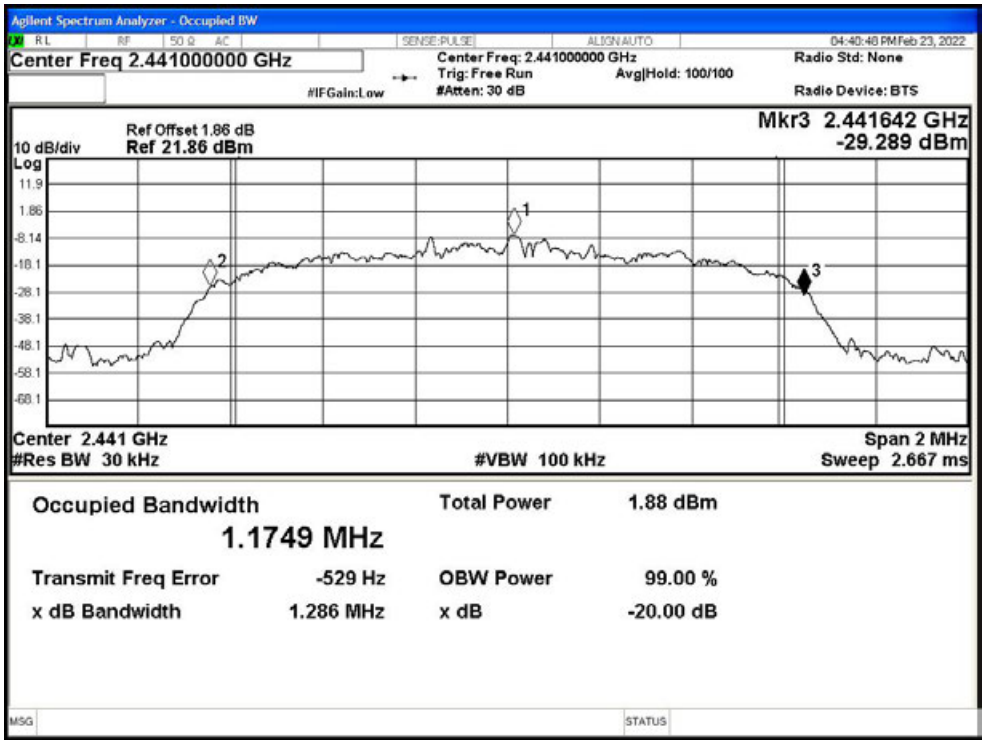
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



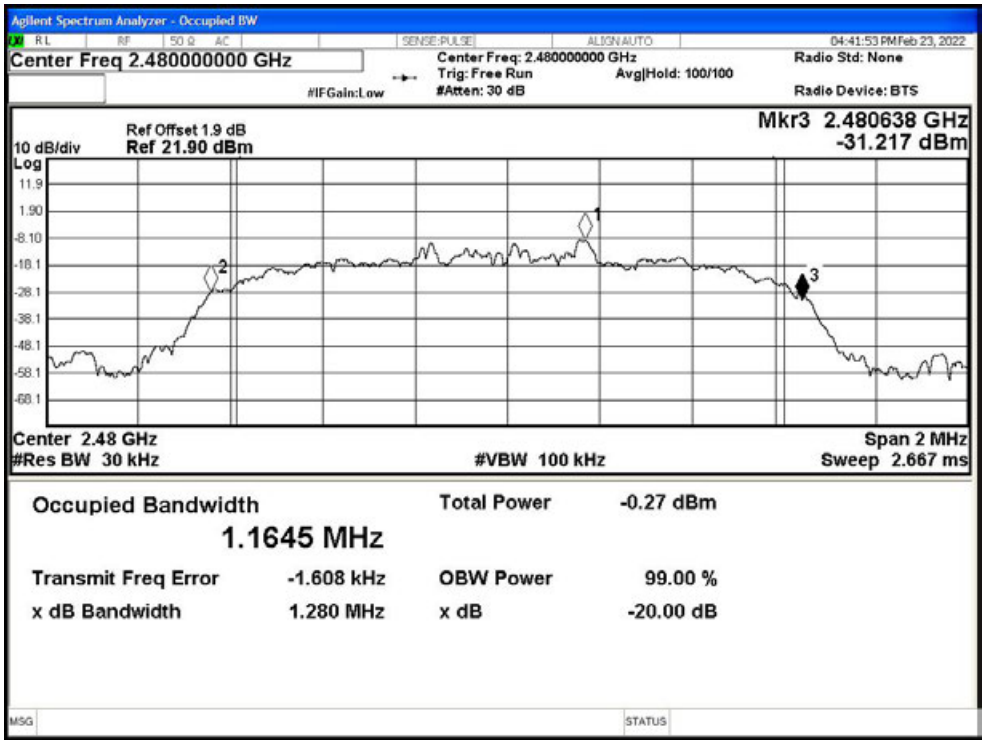
-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1

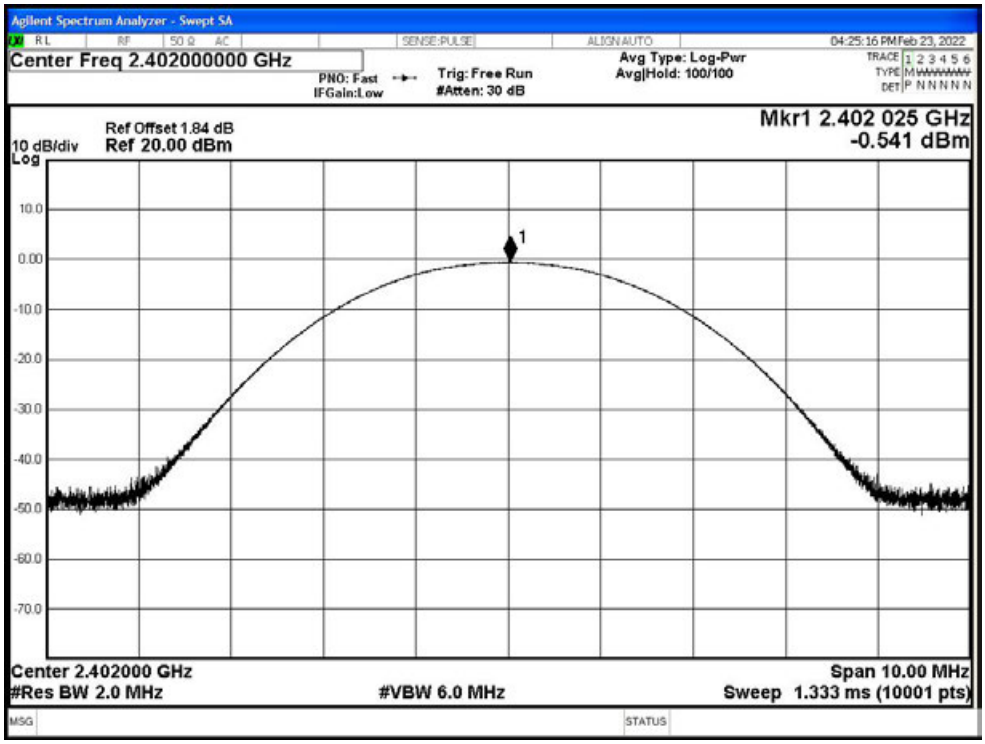


A.2 Maximum Conducted Output Power

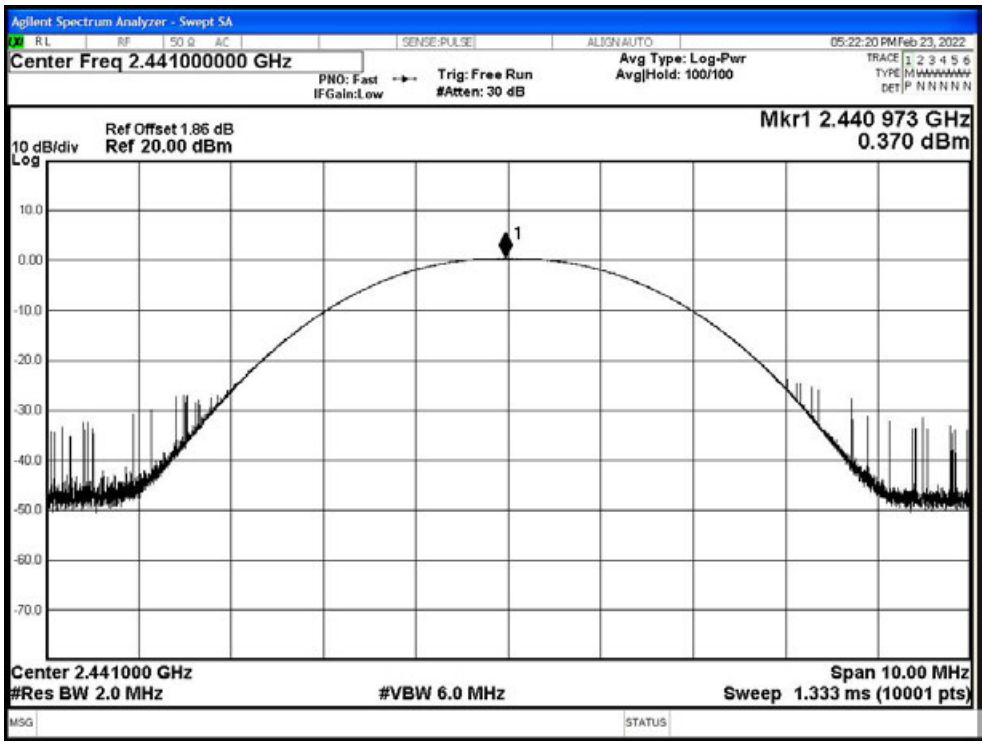
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.54	0	-0.54	21	Pass
NVNT	1-DH5	2441	Ant1	0.37	0	0.37	21	Pass
NVNT	1-DH5	2480	Ant1	0.14	0	0.14	21	Pass
NVNT	2-DH5	2402	Ant1	-0.23	0	-0.23	21	Pass
NVNT	2-DH5	2441	Ant1	-0.03	0	-0.03	21	Pass
NVNT	2-DH5	2480	Ant1	-0.12	0	-0.12	21	Pass
NVNT	3-DH5	2402	Ant1	-0.14	0	-0.14	21	Pass
NVNT	3-DH5	2441	Ant1	0.18	0	0.18	21	Pass
NVNT	3-DH5	2480	Ant1	-0.17	0	-0.17	21	Pass

Test Graphs

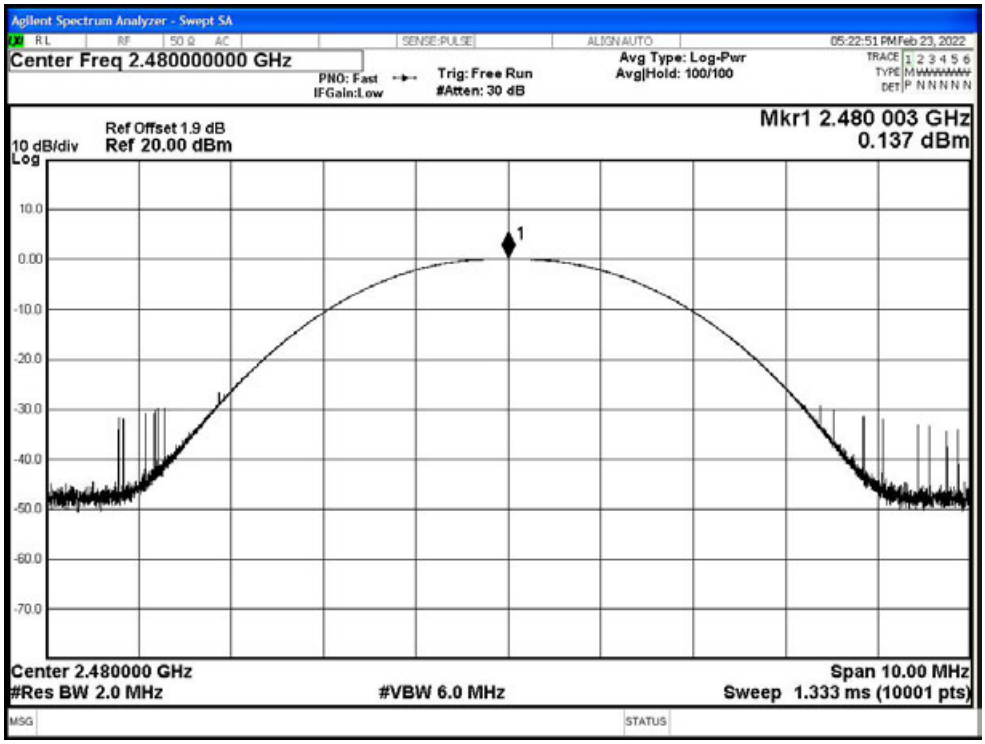
Power NVNT 1-DH5 2402MHz Ant1



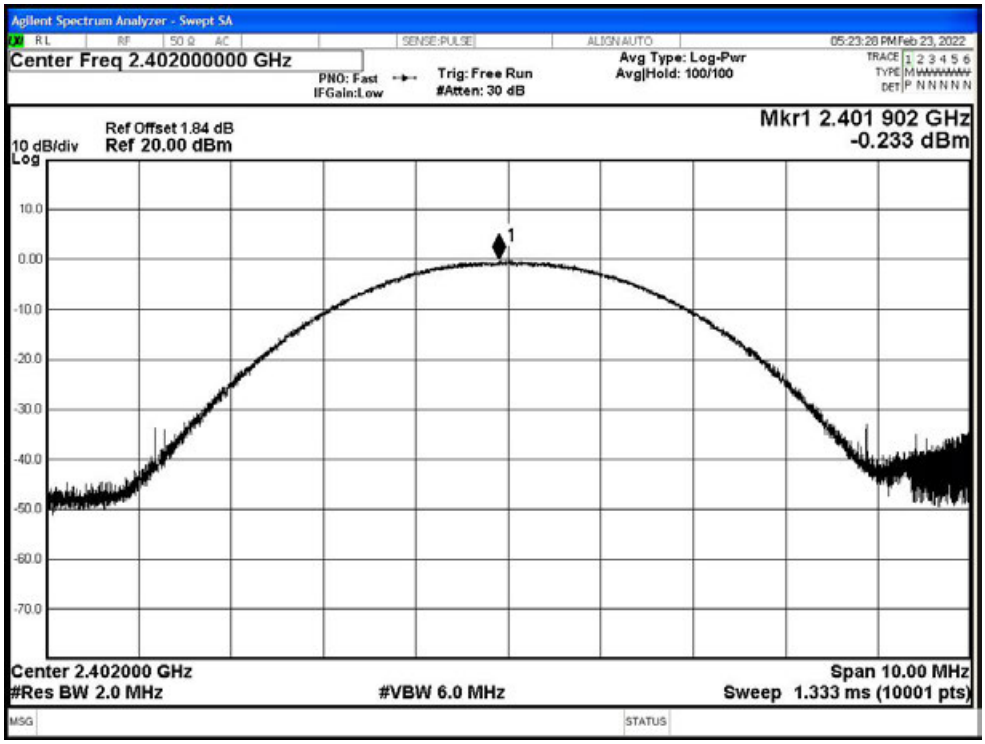
Power NVNT 1-DH5 2441MHz Ant1



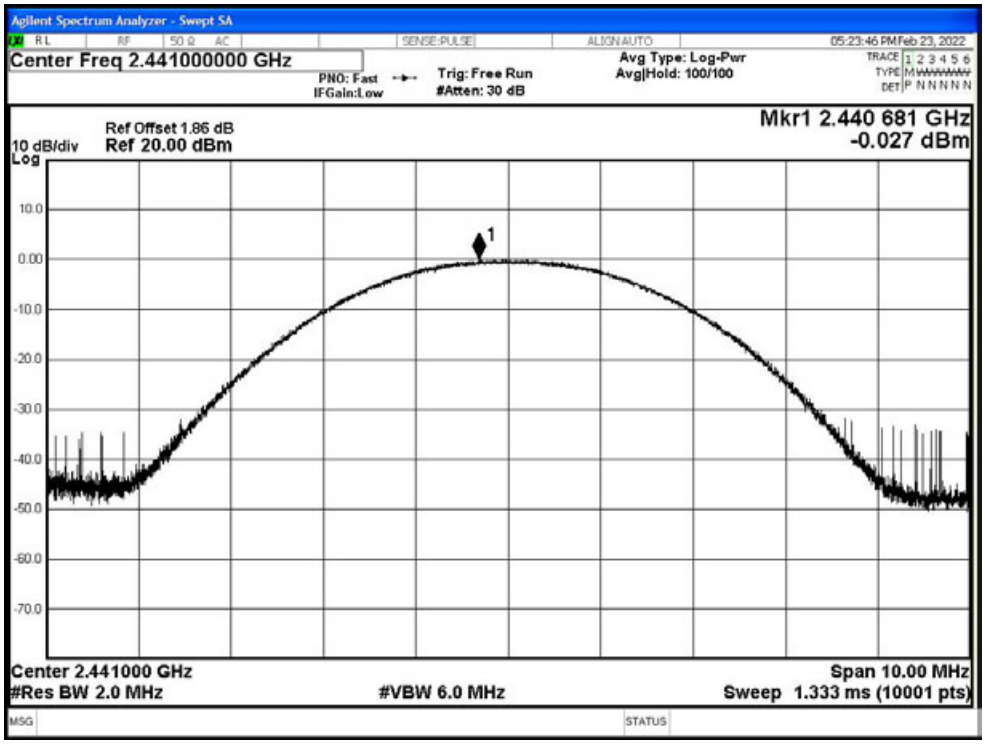
Power NVNT 1-DH5 2480MHz Ant1



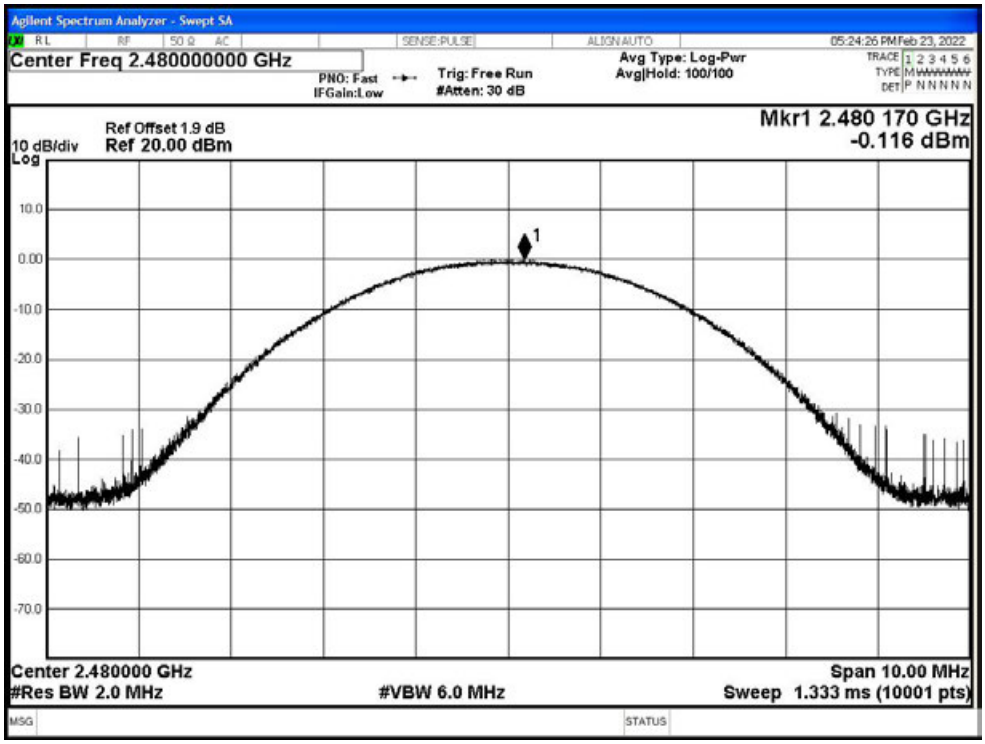
Power NVNT 2-DH5 2402MHz Ant1



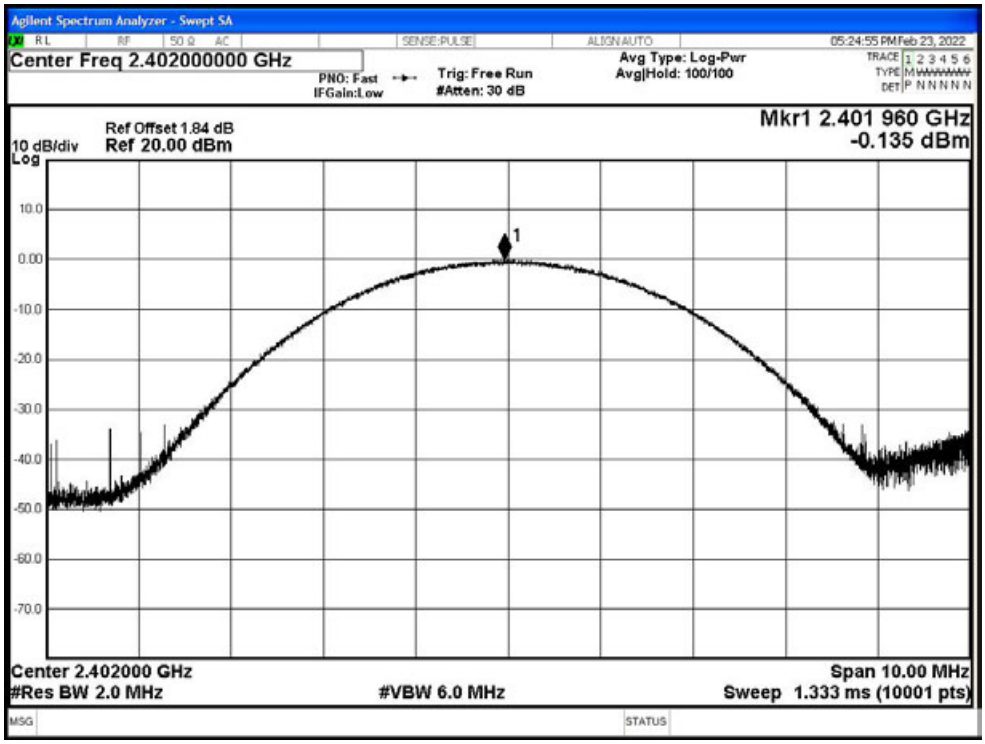
Power NVNT 2-DH5 2441MHz Ant1



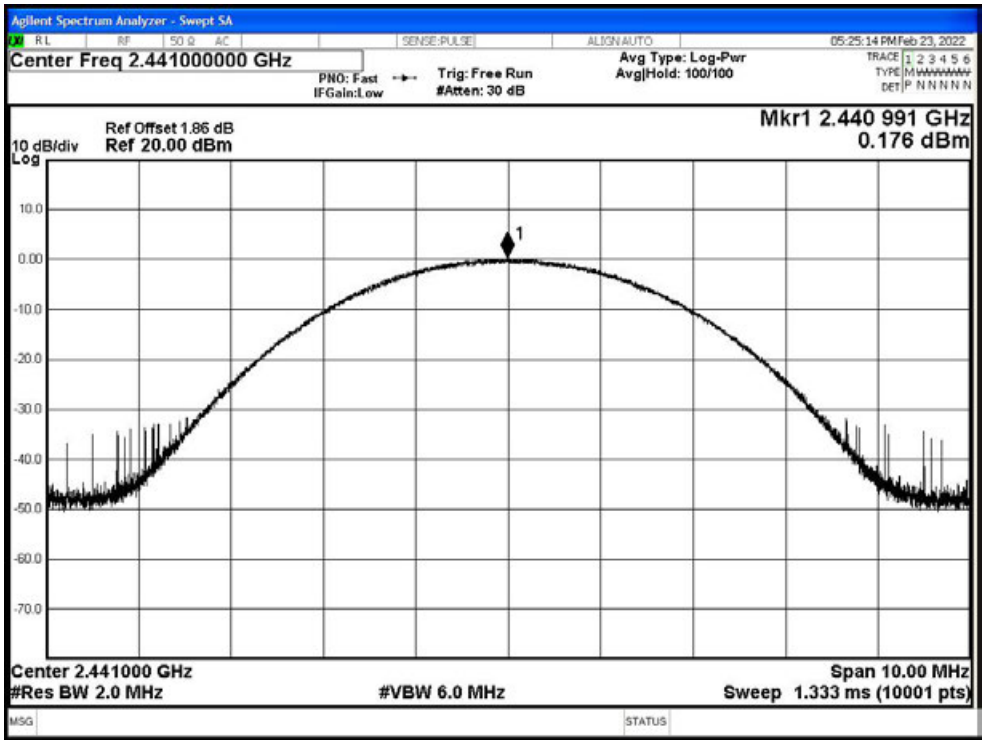
Power NVNT 2-DH5 2480MHz Ant1



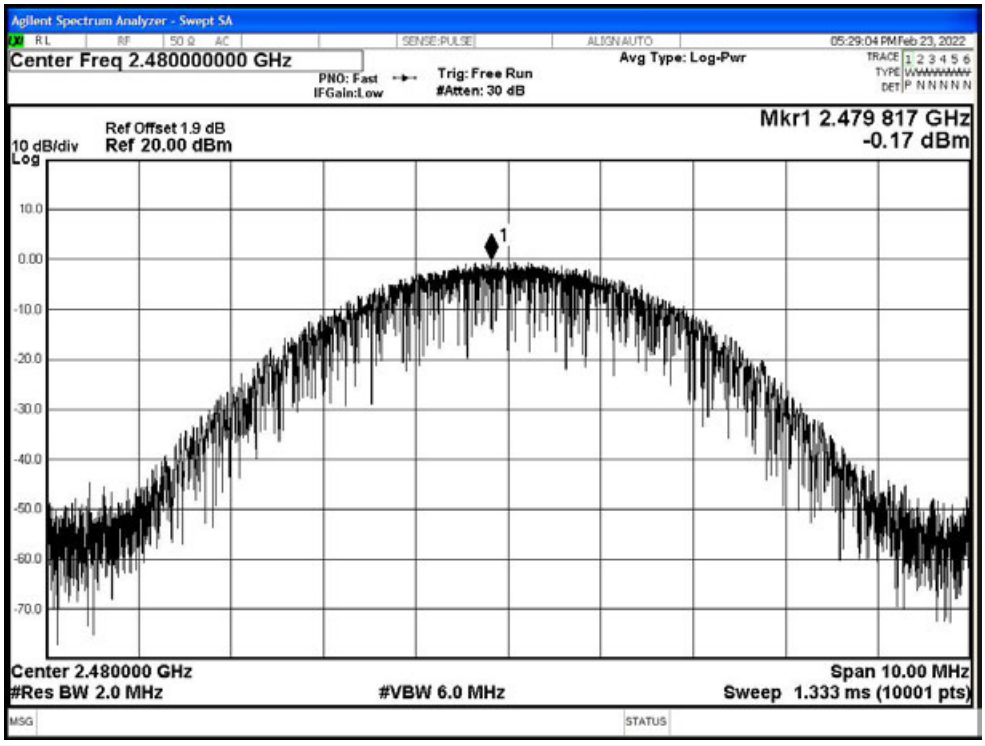
Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1



Power NVNT 3-DH5 2480MHz Ant1

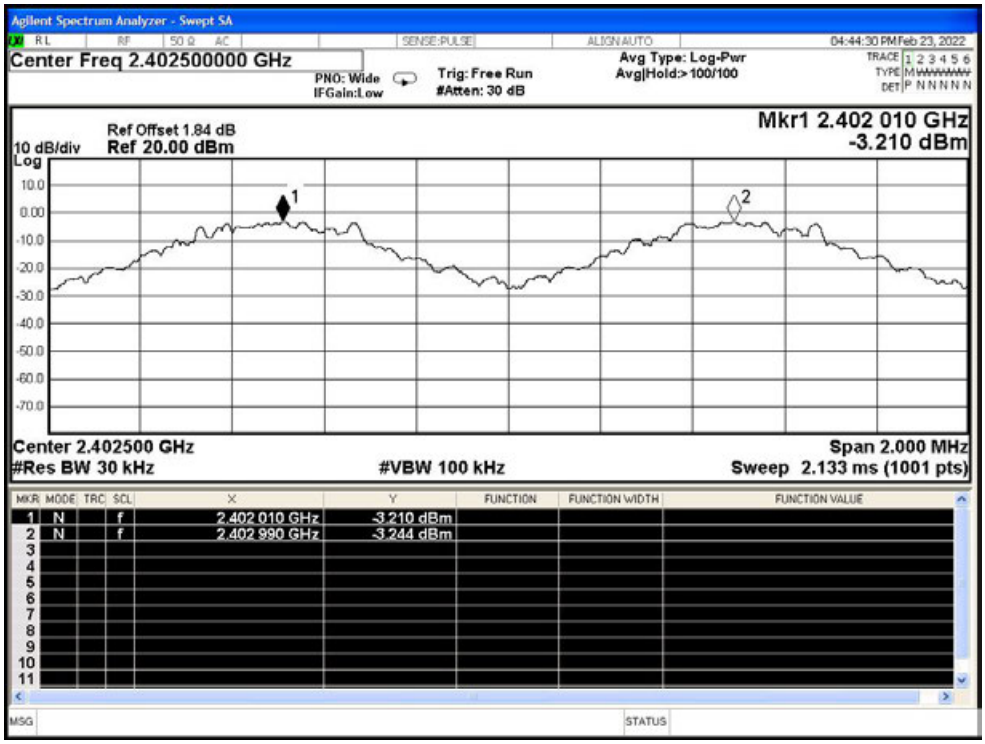


A.3 Frequencies Separation

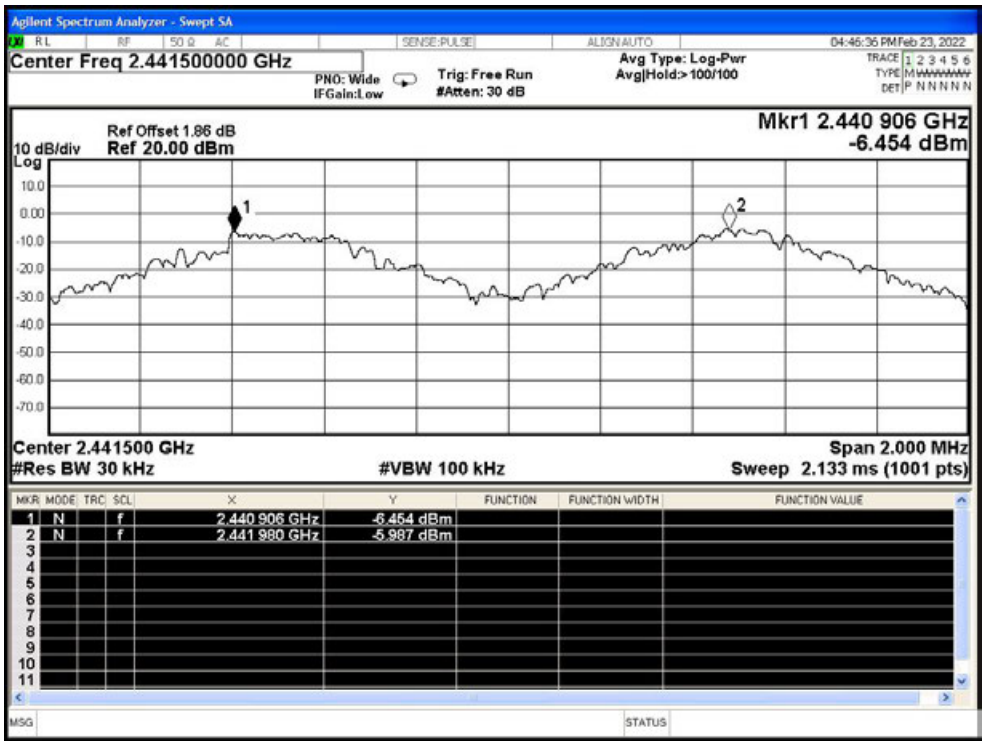
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.01	2402.99	0.98	0.559	Pass
NVNT	1-DH5	Ant1	2440.906	2441.98	1.074	0.542	Pass
NVNT	1-DH5	Ant1	2479.014	2480.012	0.998	0.56	Pass
NVNT	2-DH5	Ant1	2402.014	2403.002	0.988	0.857	Pass
NVNT	2-DH5	Ant1	2441.022	2442.014	0.992	0.843	Pass
NVNT	2-DH5	Ant1	2479.18	2480.158	0.978	0.845	Pass
NVNT	3-DH5	Ant1	2402.032	2403.166	1.134	0.869	Pass
NVNT	3-DH5	Ant1	2441.166	2442.128	0.962	0.857	Pass
NVNT	3-DH5	Ant1	2479.024	2480.024	1	0.853	Pass

Test Graphs

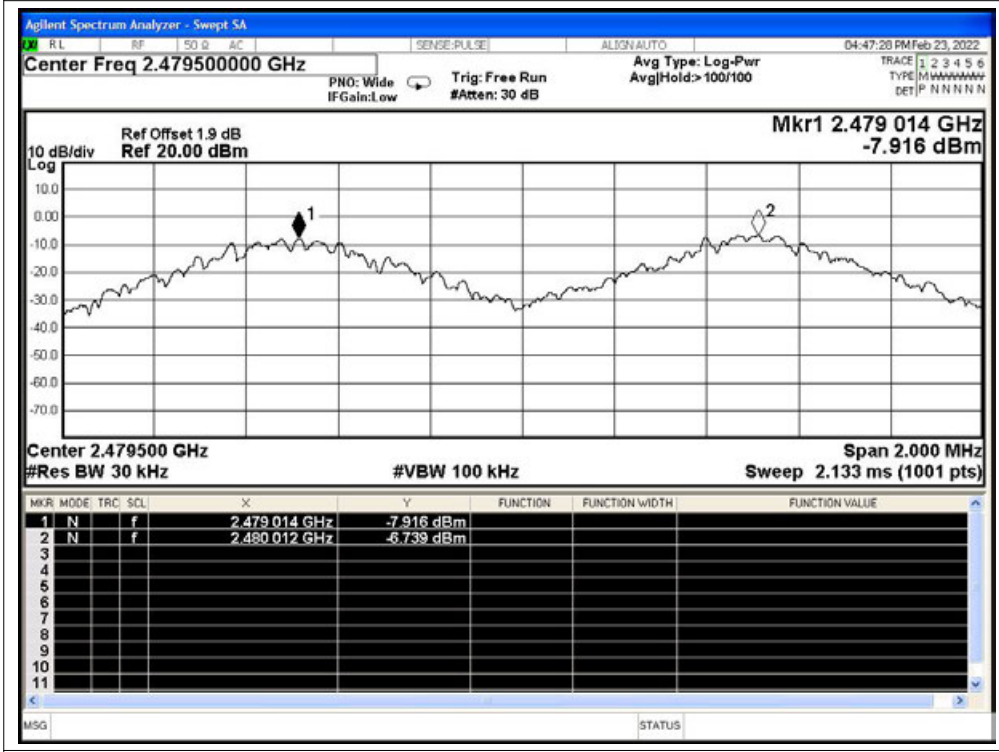
CFS NVNT 1-DH5 2402MHz Ant1



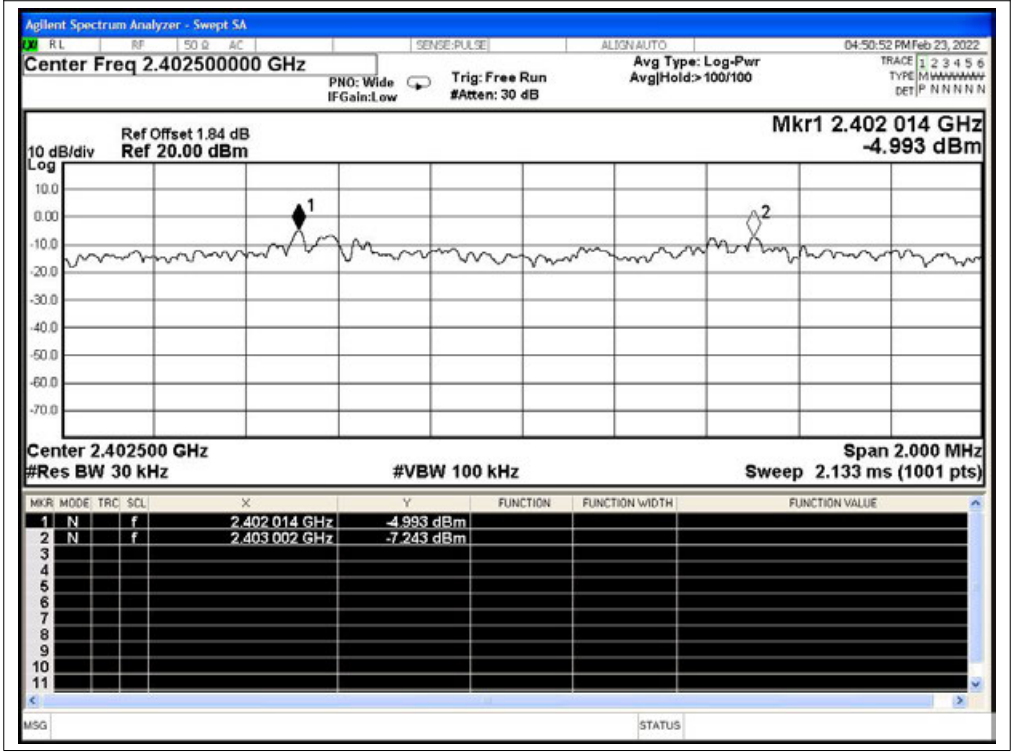
CFS NVNT 1-DH5 2441MHz Ant1



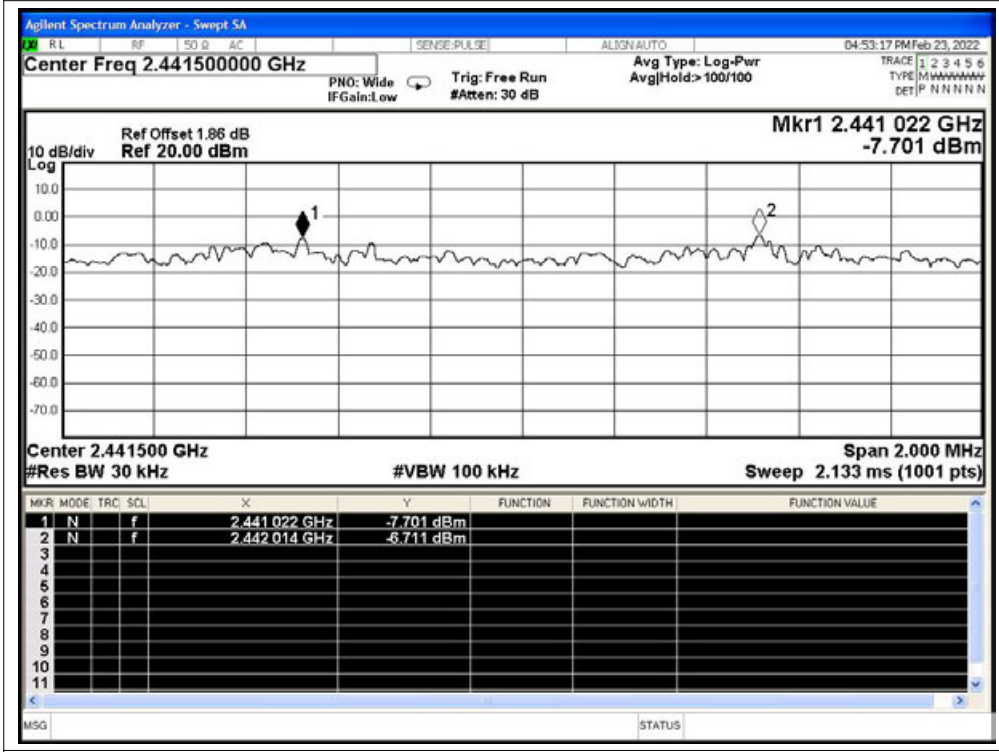
CFS NVNT 1-DH5 2480MHz Ant1



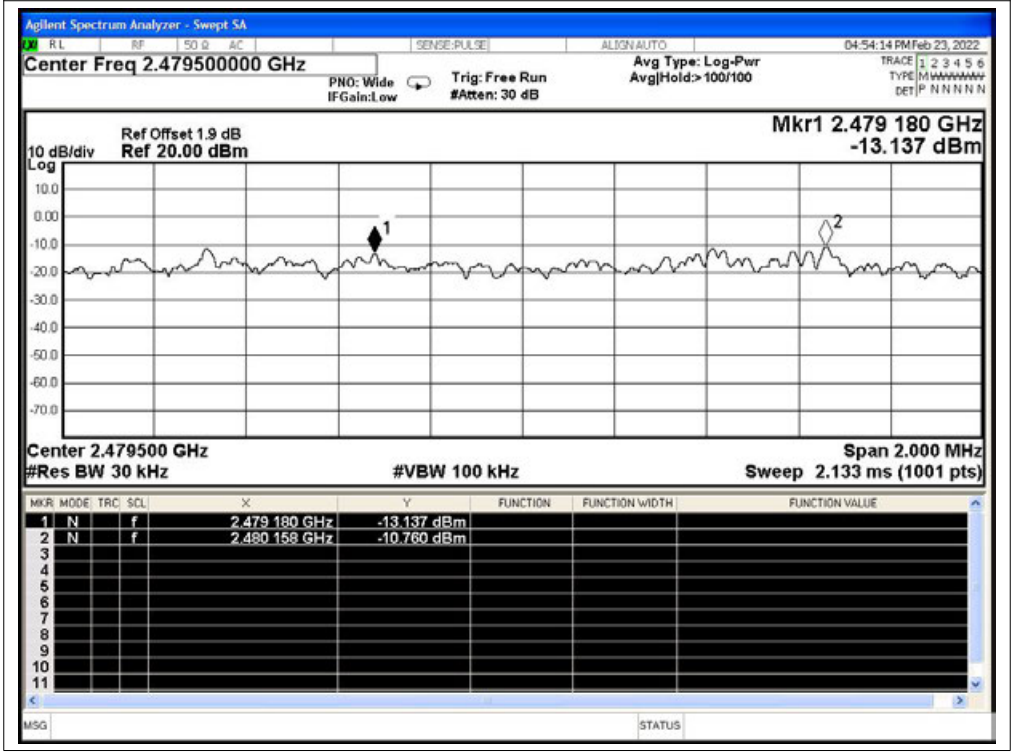
CFS NVNT 2-DH5 2402MHz Ant1



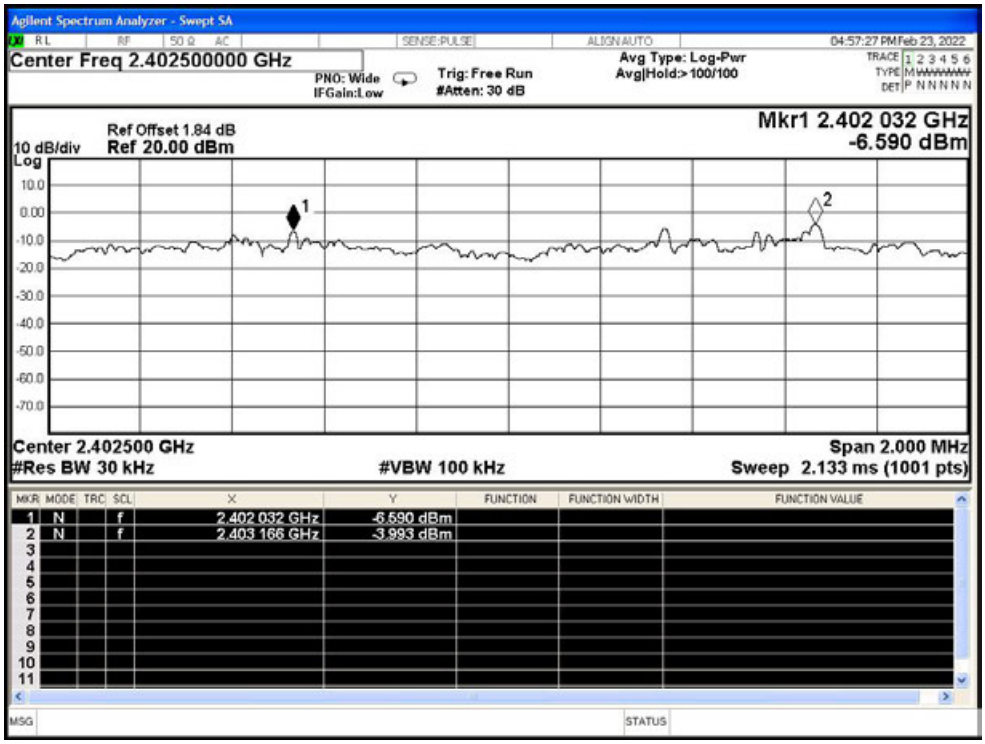
CFS NVNT 2-DH5 2441MHz Ant1



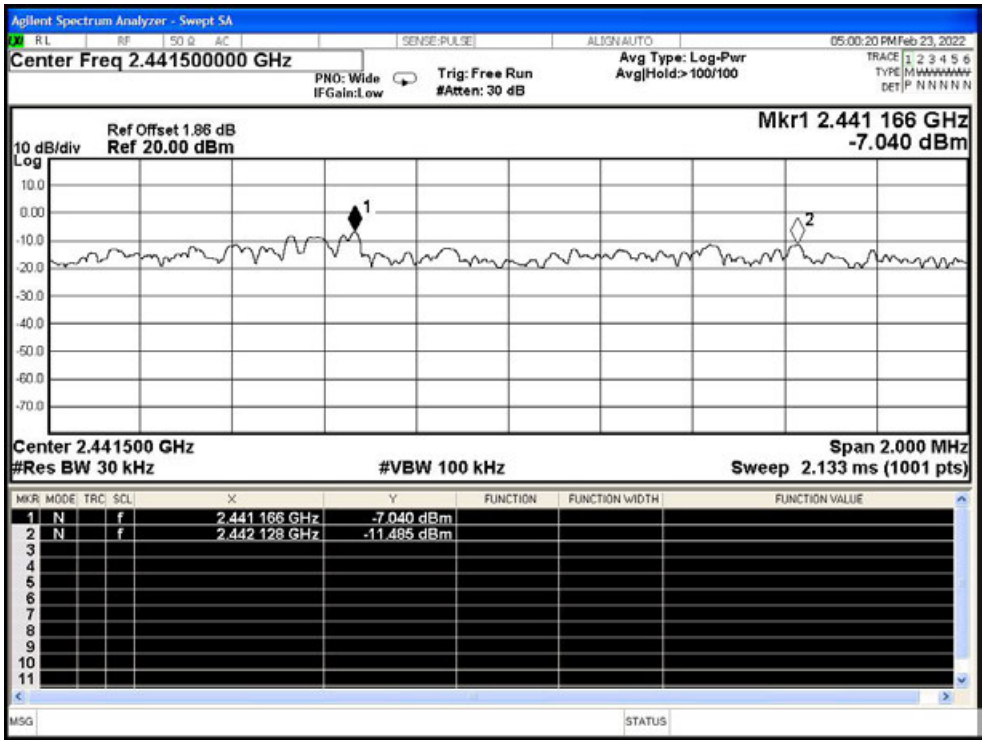
CFS NVNT 2-DH5 2480MHz Ant1



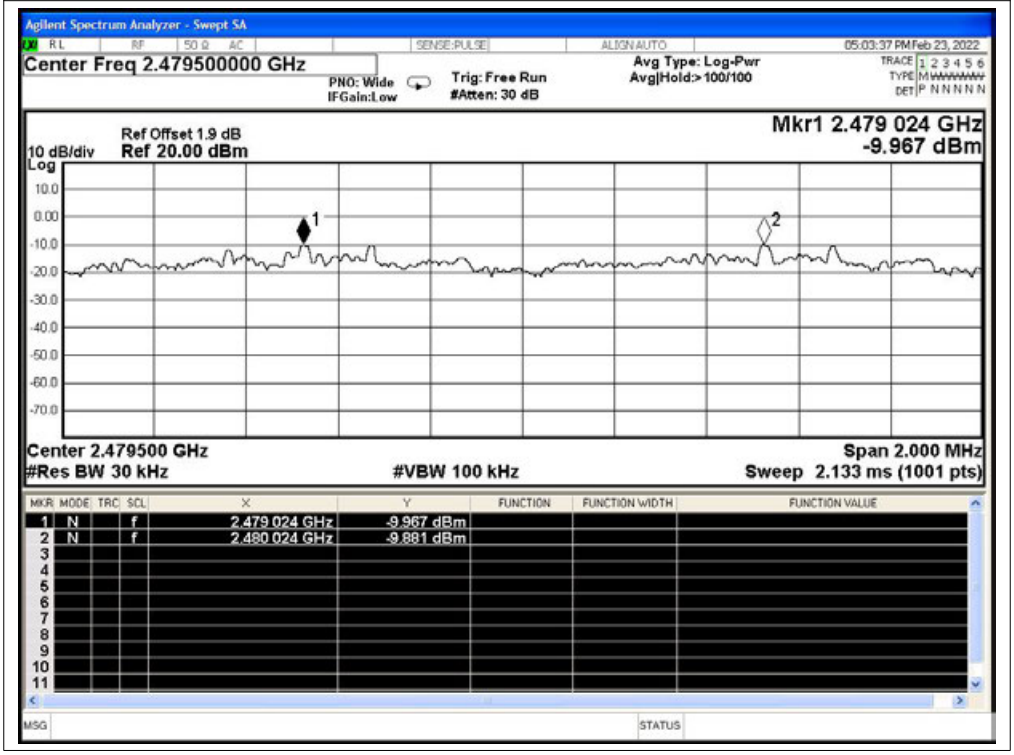
CFS NVNT 3-DH5 2402MHz Ant1



CFS NVNT 3-DH5 2441MHz Ant1



CFS NVNT 3-DH5 2480MHz Ant1

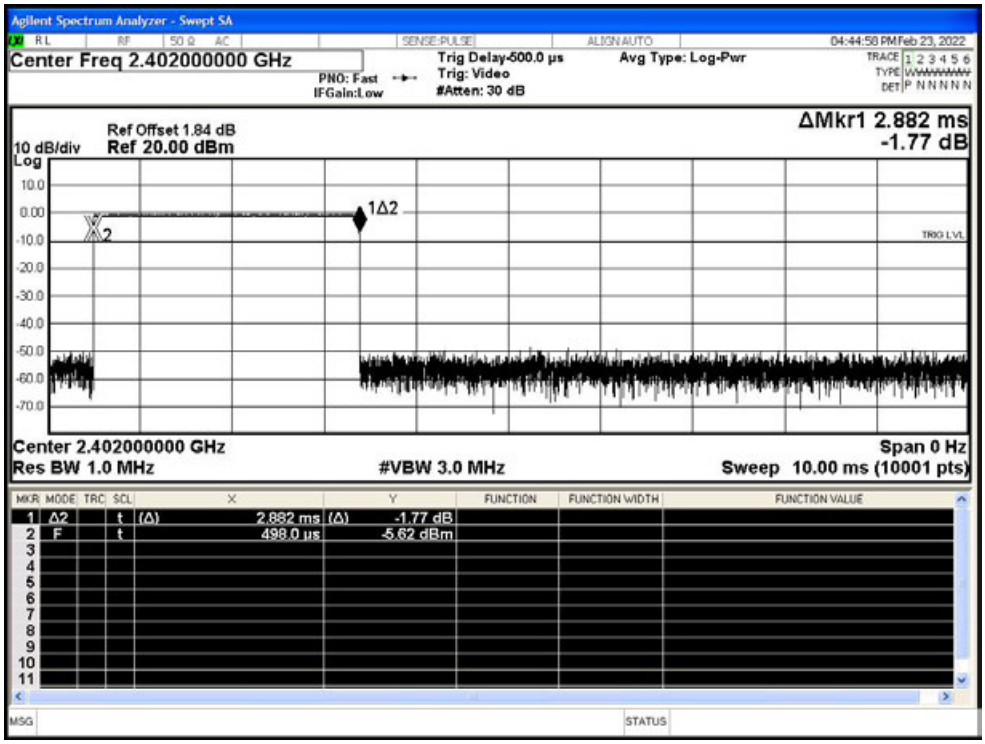


A.4 Dwell Time

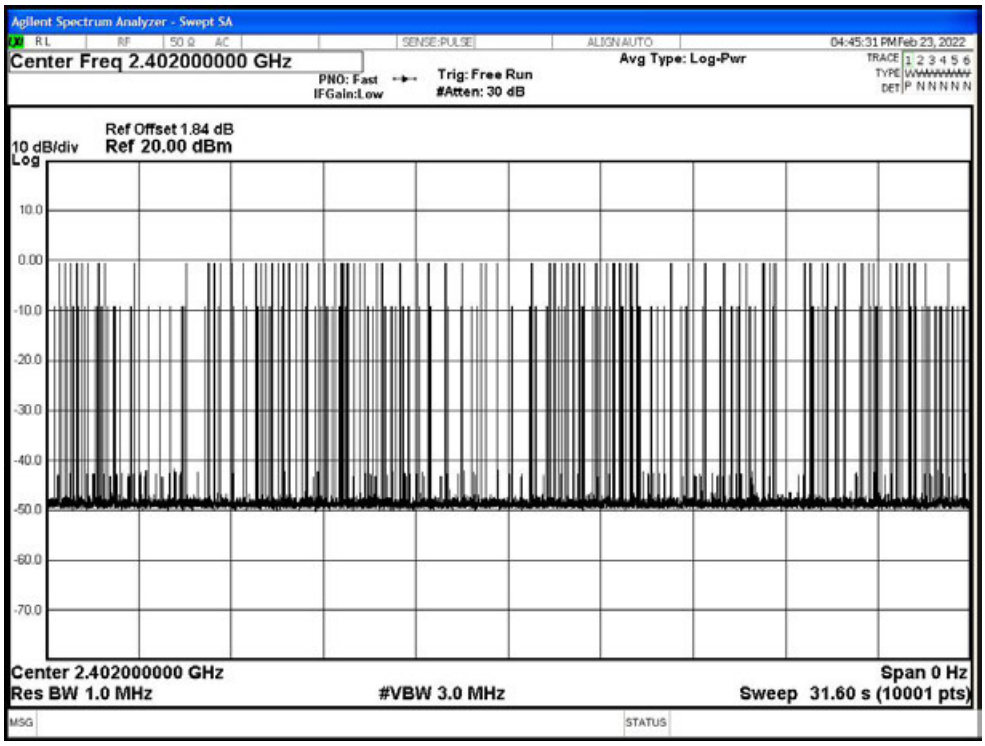
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.882	325.666	113	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.882	305.492	106	31600	400	Pass
NVNT	1-DH5	2480	Ant1	2.881	276.576	96	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.881	299.624	104	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.882	288.2	100	31600	400	Pass
NVNT	2-DH5	2480	Ant1	2.884	265.328	92	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.887	311.796	108	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.886	311.688	108	31600	400	Pass
NVNT	3-DH5	2480	Ant1	2.887	294.474	102	31600	400	Pass

Test Graphs

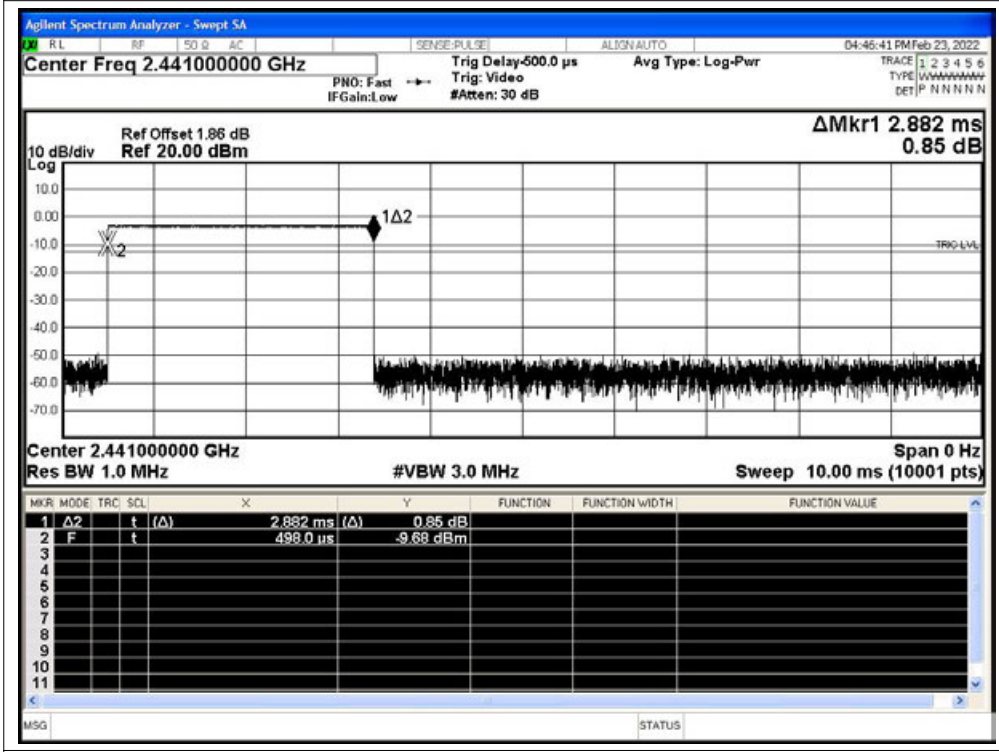
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



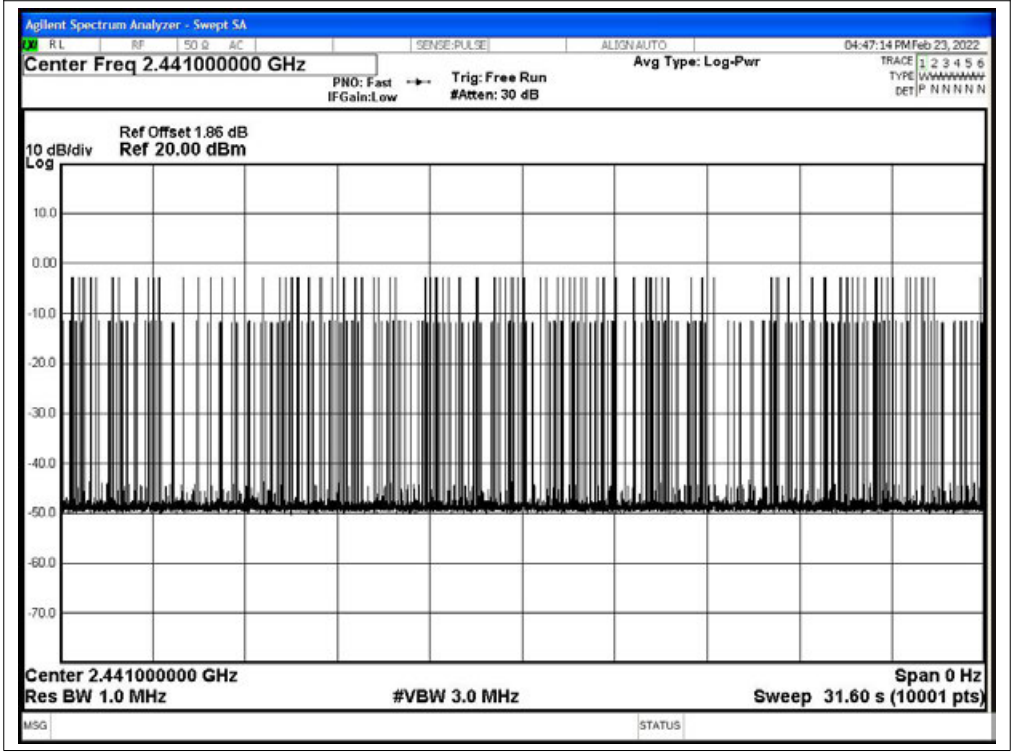
Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



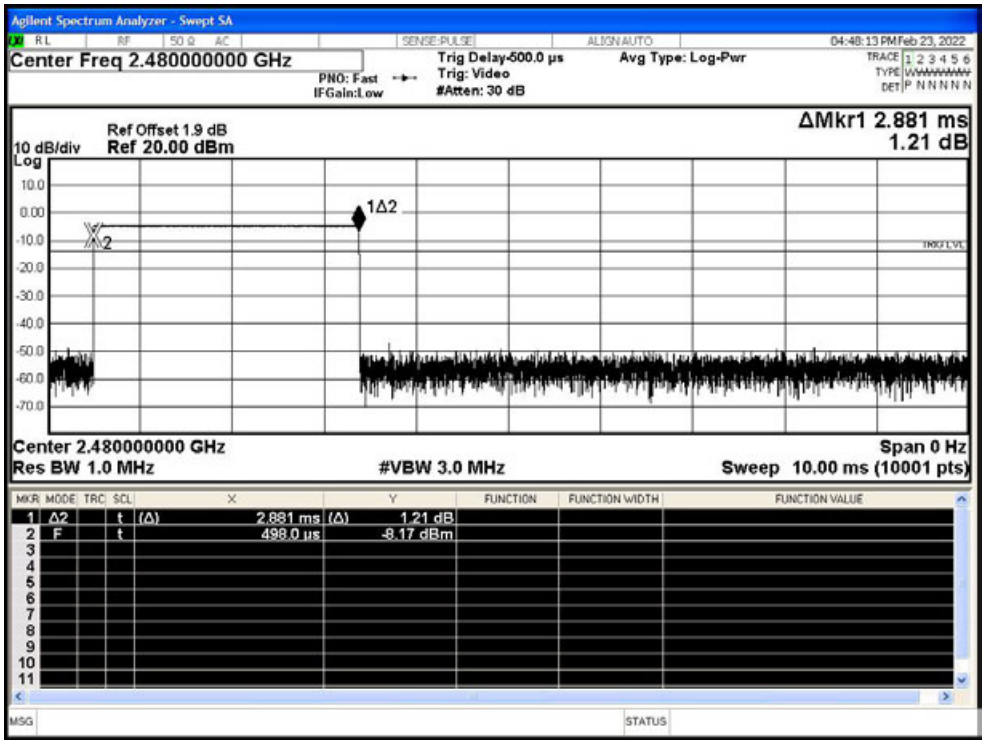
Dwell NVNT 1-DH5 2441MHz Ant1 One Burst



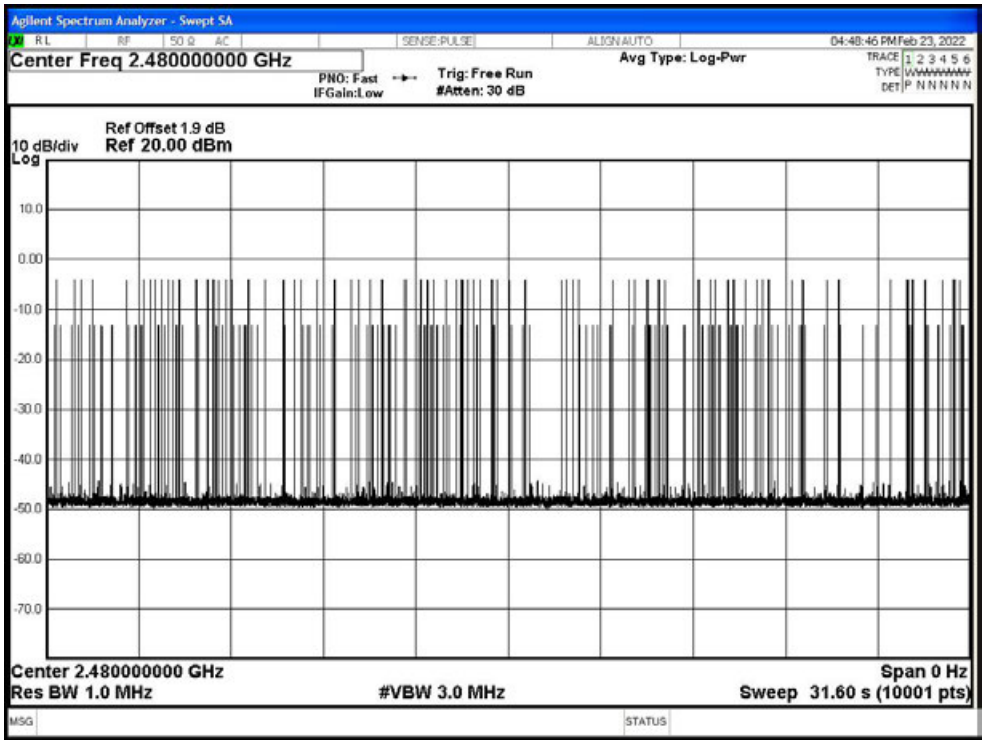
Dwell NVNT 1-DH5 2441MHz Ant1 Accumulated



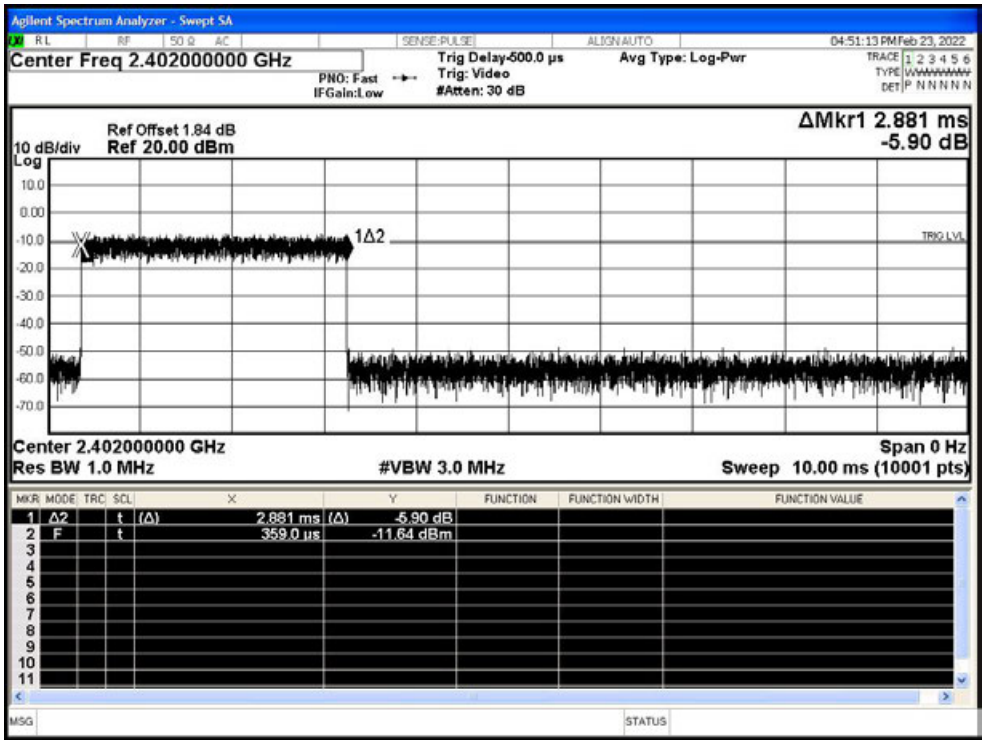
Dwell NVNT 1-DH5 2480MHz Ant1 One Burst



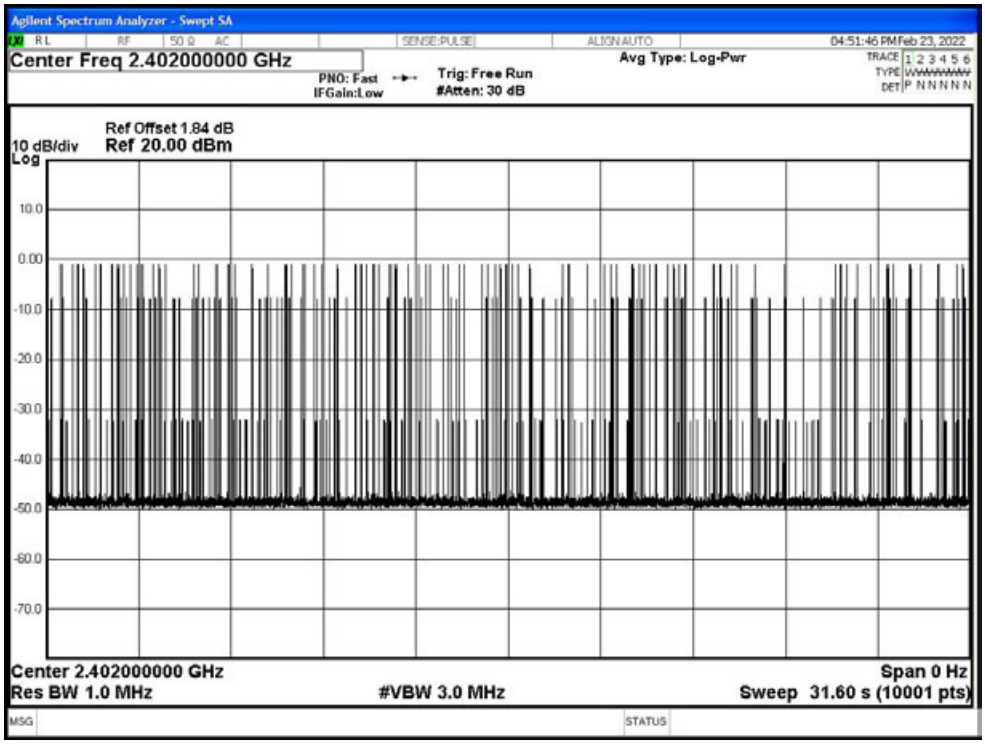
Dwell NVNT 1-DH5 2480MHz Ant1 Accumulated



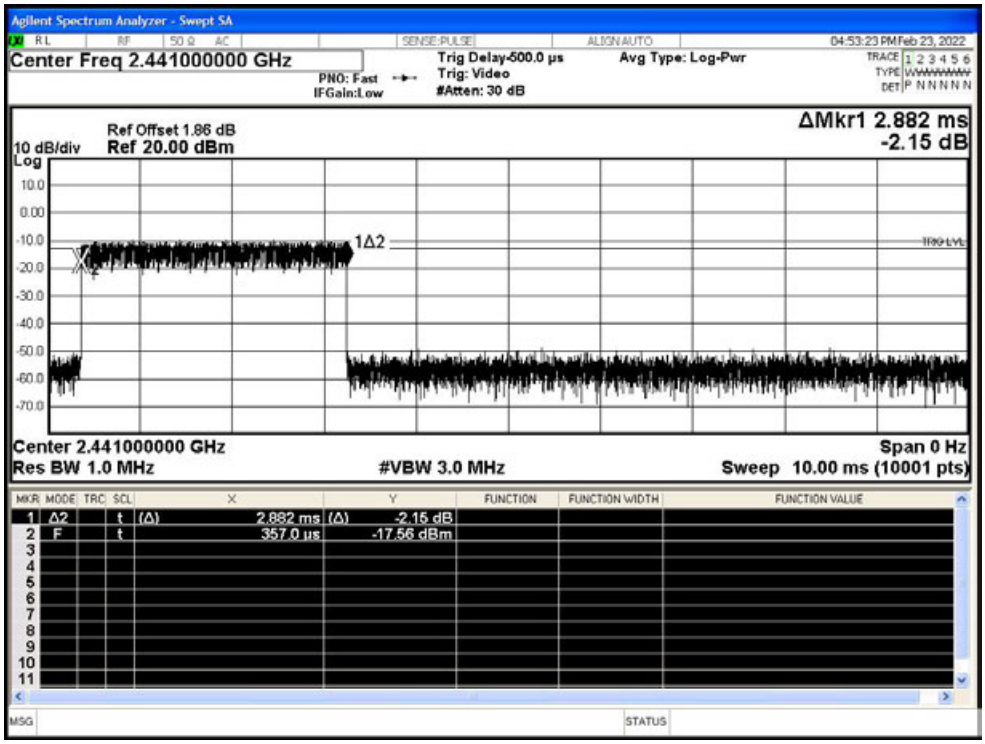
Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



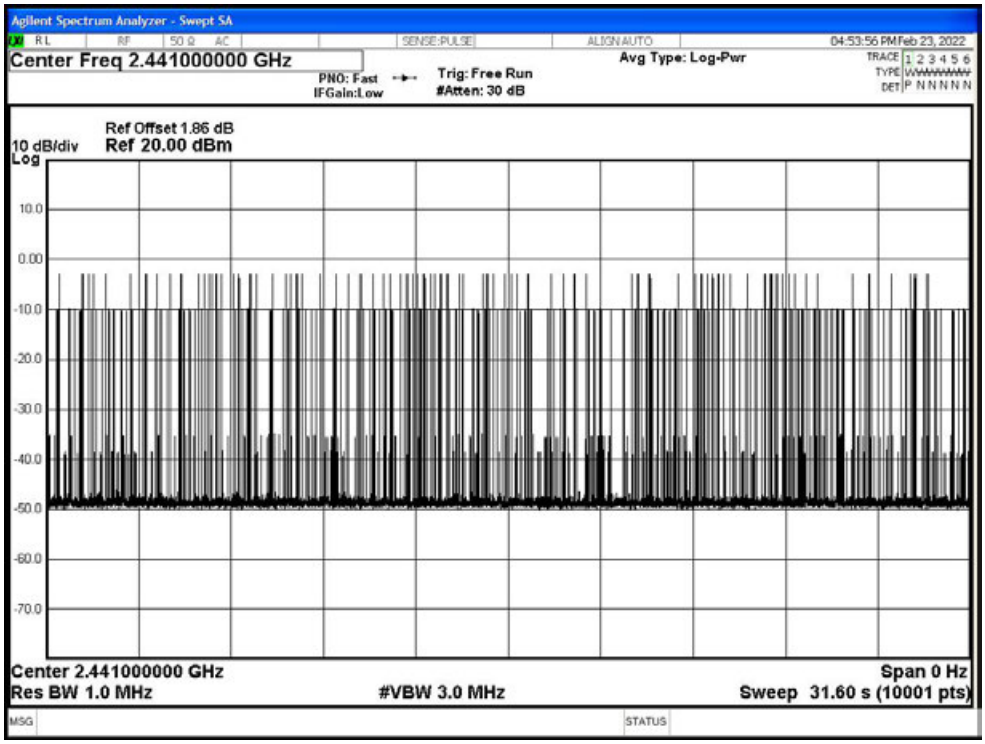
Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



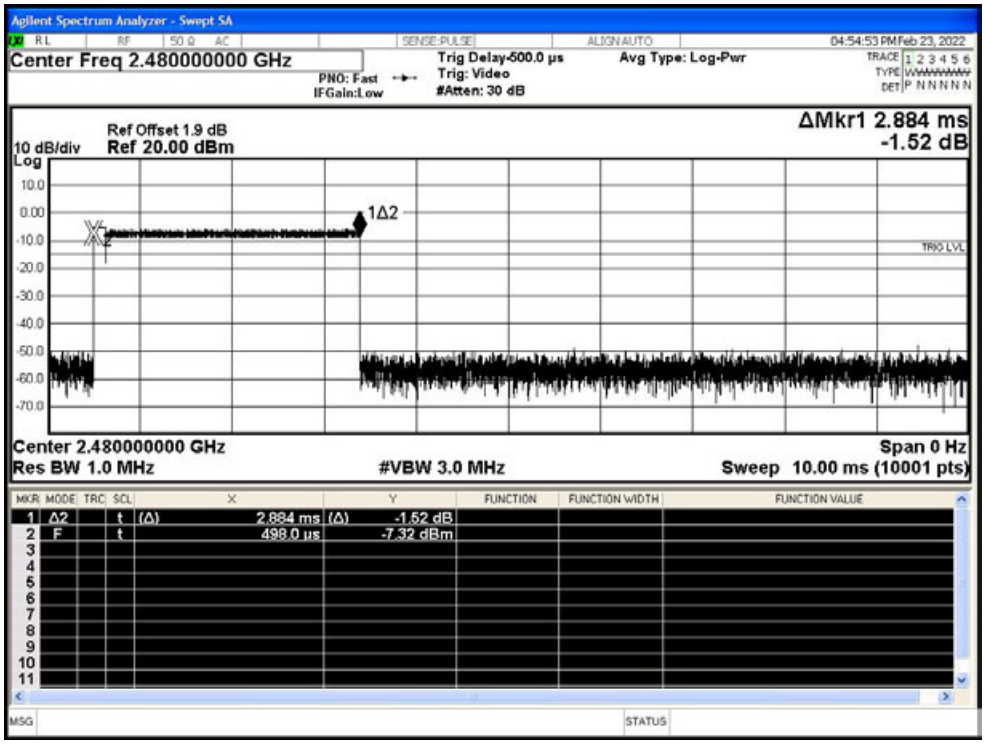
Dwell NVNT 2-DH5 2441MHz Ant1 One Burst



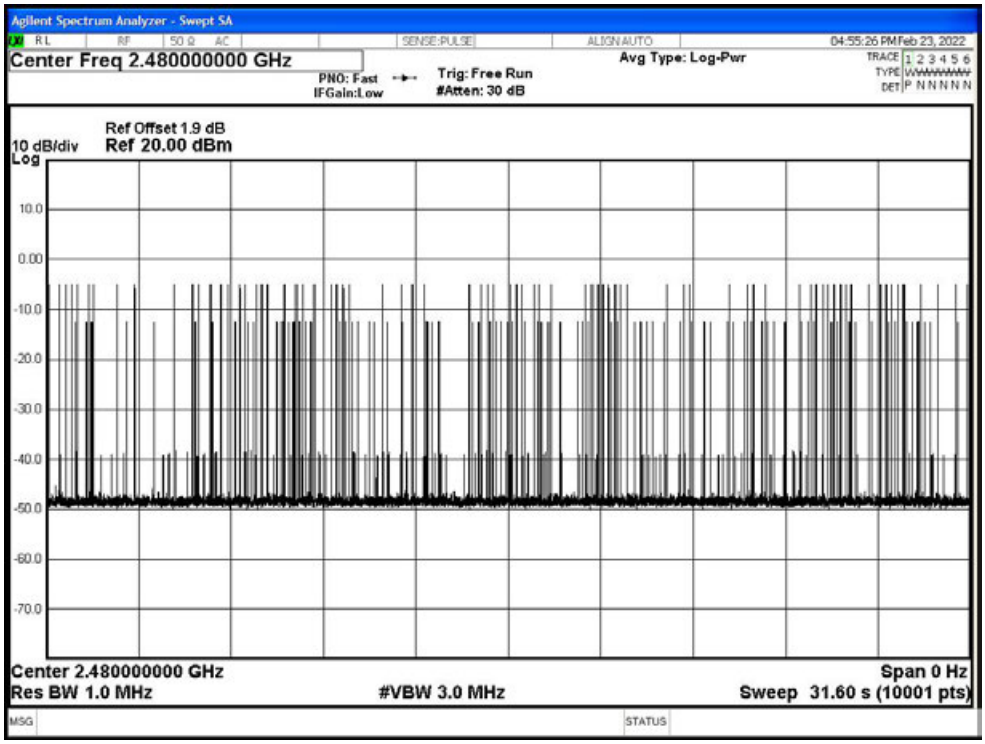
Dwell NVNT 2-DH5 2441MHz Ant1 Accumulated



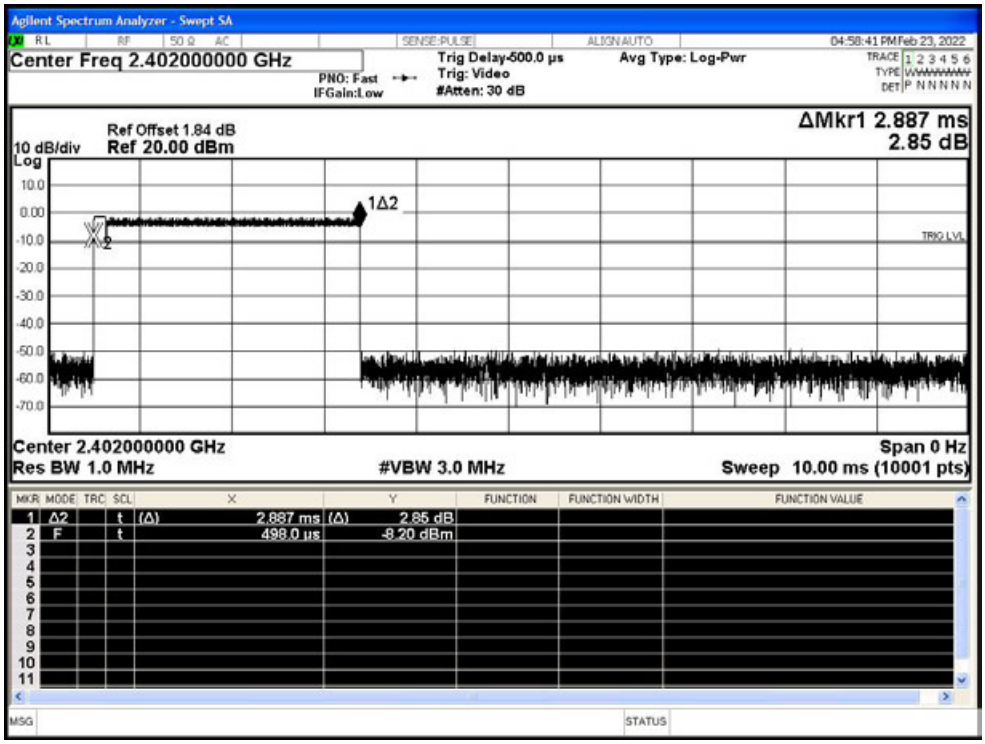
Dwell NVNT 2-DH5 2480MHz Ant1 One Burst



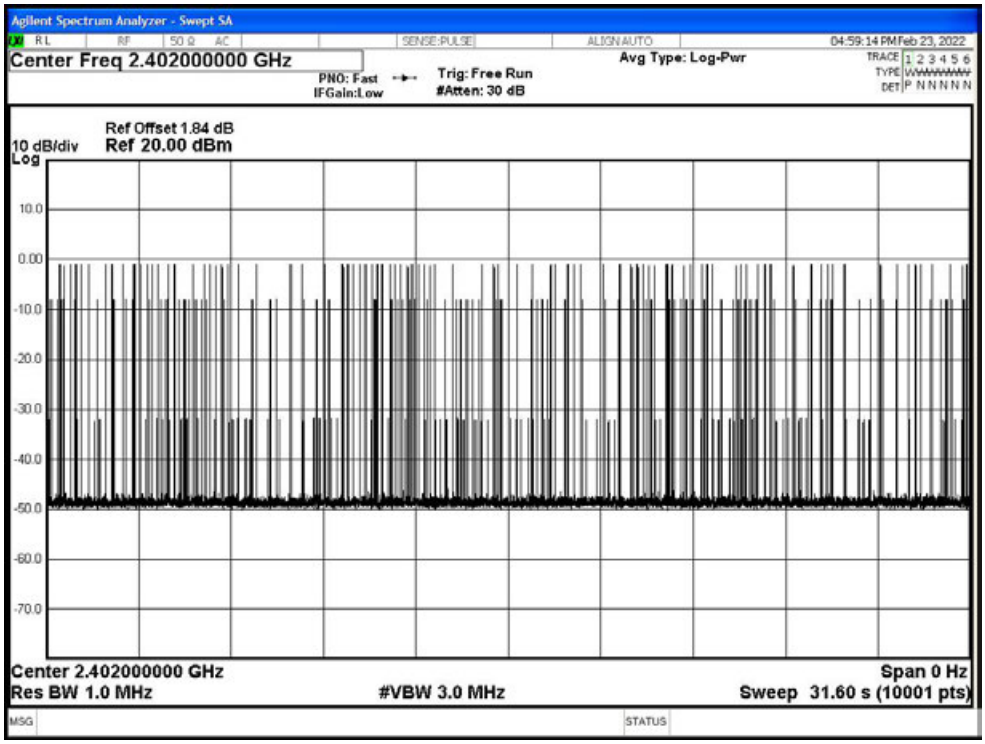
Dwell NVNT 2-DH5 2480MHz Ant1 Accumulated



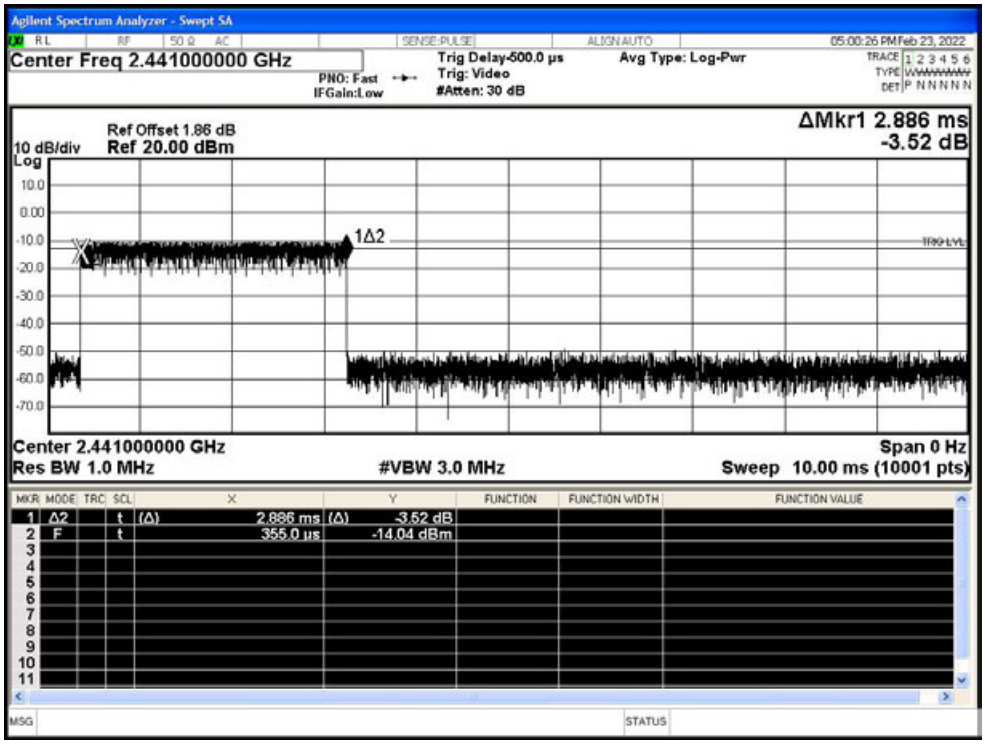
Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



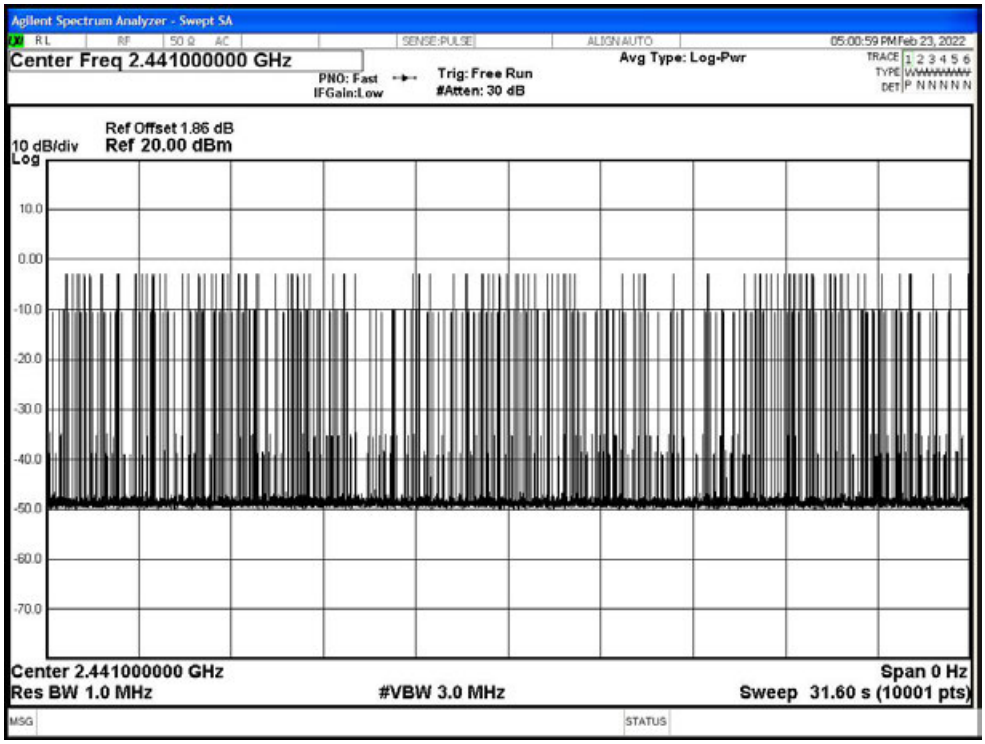
Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated



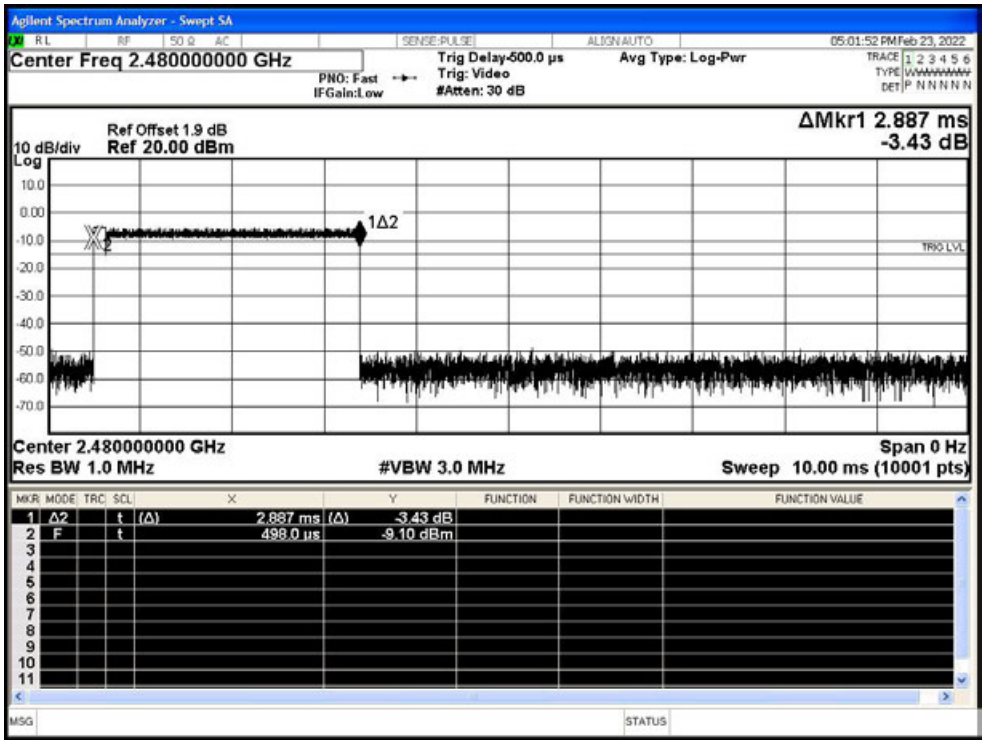
Dwell NVNT 3-DH5 2441MHz Ant1 One Burst



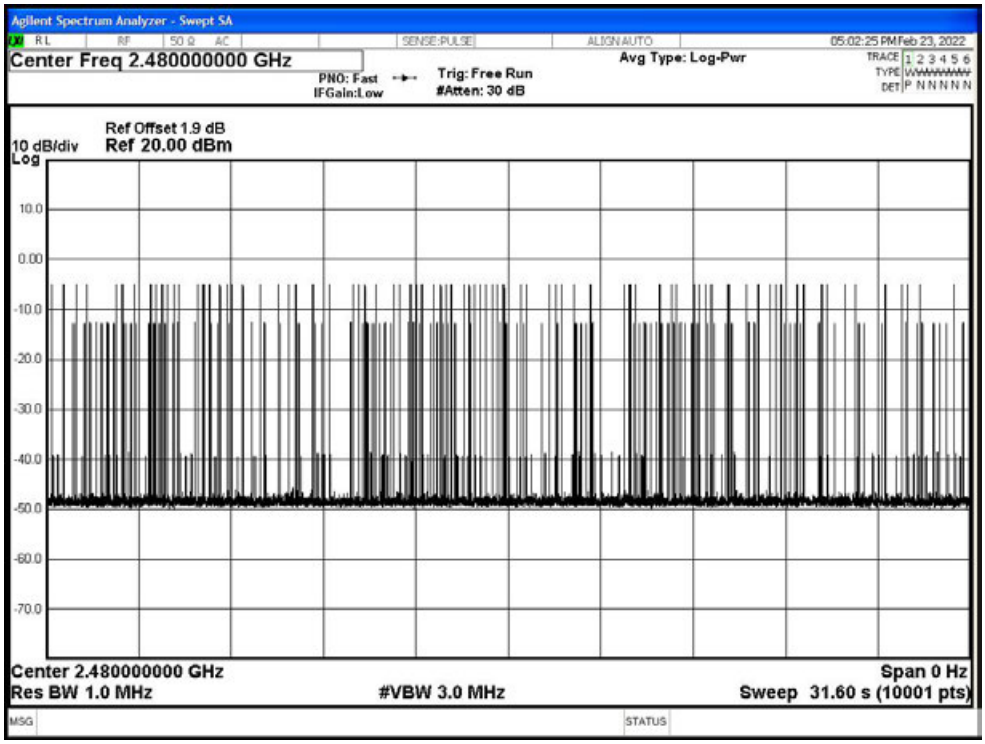
Dwell NVNT 3-DH5 2441MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2480MHz Ant1 One Burst



Dwell NVNT 3-DH5 2480MHz Ant1 Accumulated

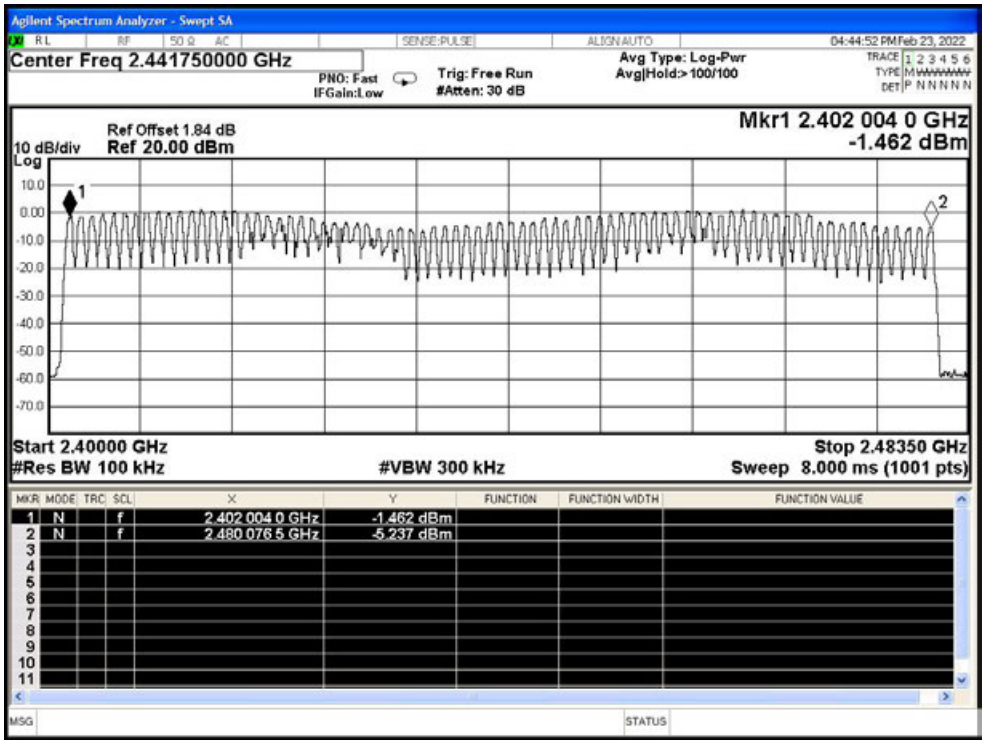


A.5 Number of Hopping Channel

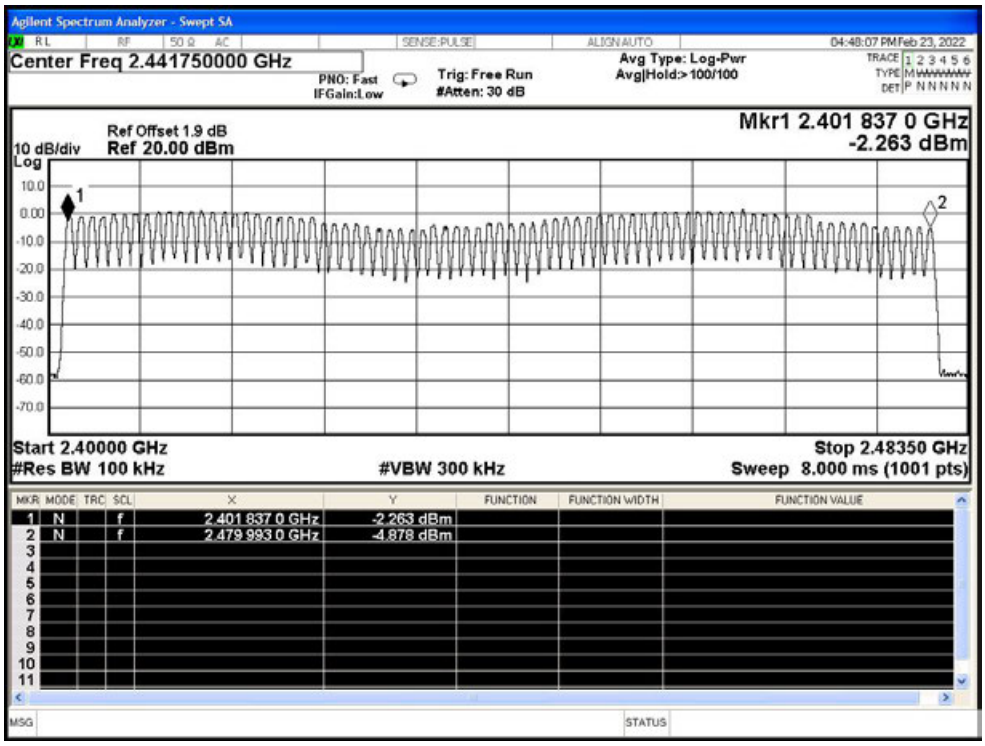
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

Test Graphs

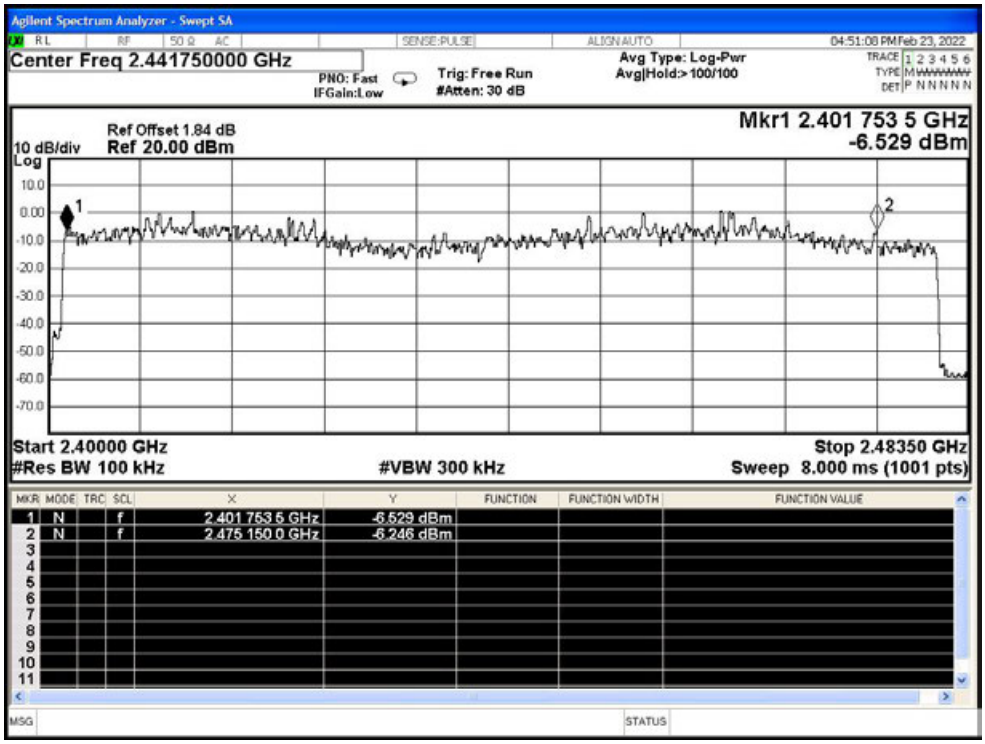
Hopping No. NVNT 1-DH5 2402MHz Ant1



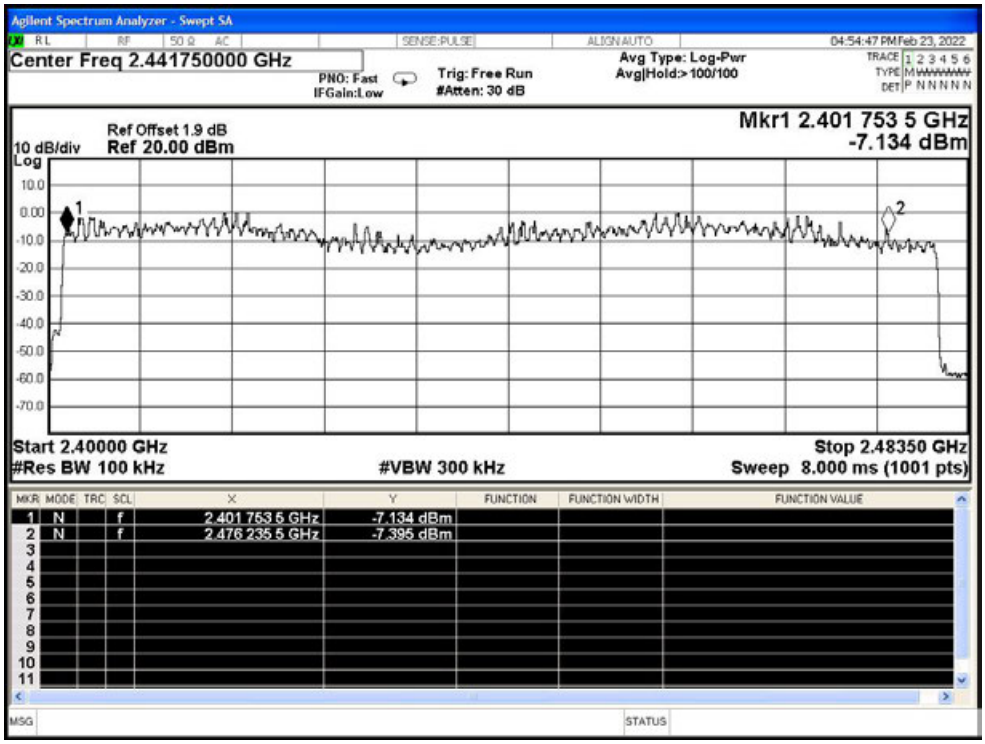
Hopping No. NVNT 1-DH5 2480MHz Ant1



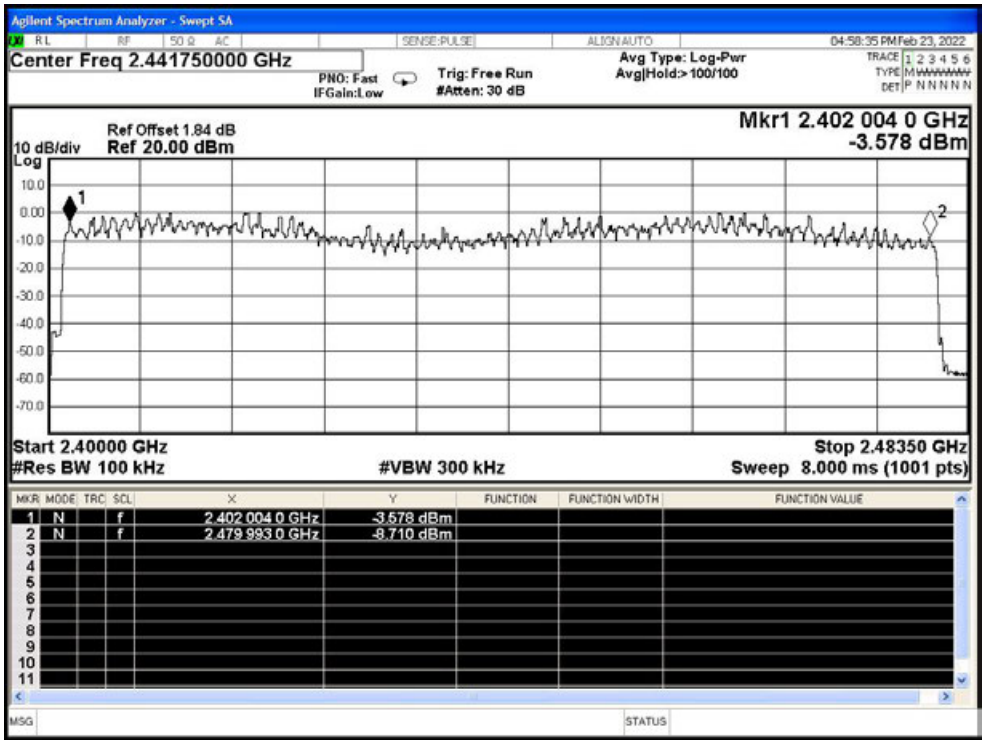
Hopping No. NVNT 2-DH5 2402MHz Ant1



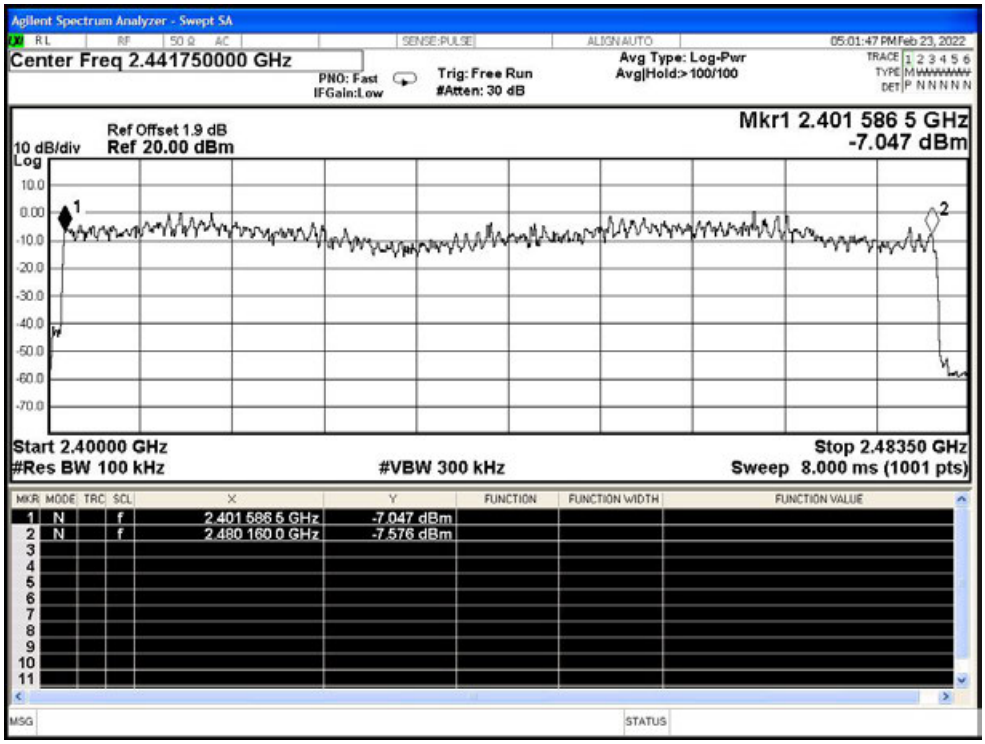
Hopping No. NVNT 2-DH5 2480MHz Ant1



Hopping No. NVNT 3-DH5 2402MHz Ant1



Hopping No. NVNT 3-DH5 2480MHz Ant1

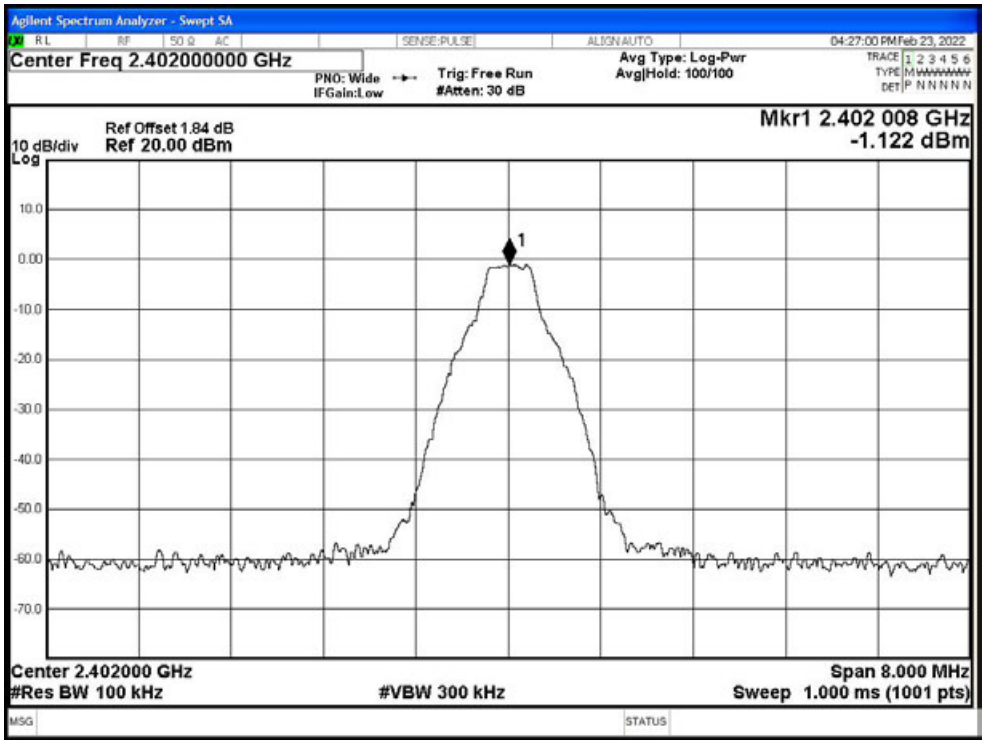


A.6 Band Edge

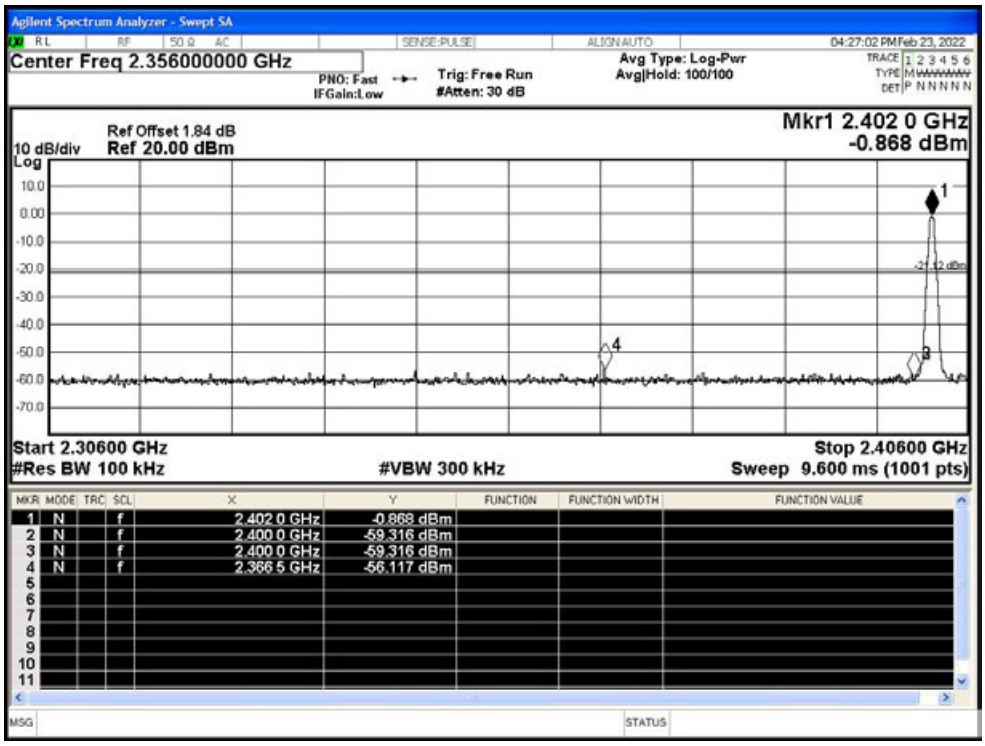
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-54.99	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-52.44	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-55.68	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-50.06	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-55.44	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-51.4	-20	Pass

Test Graphs

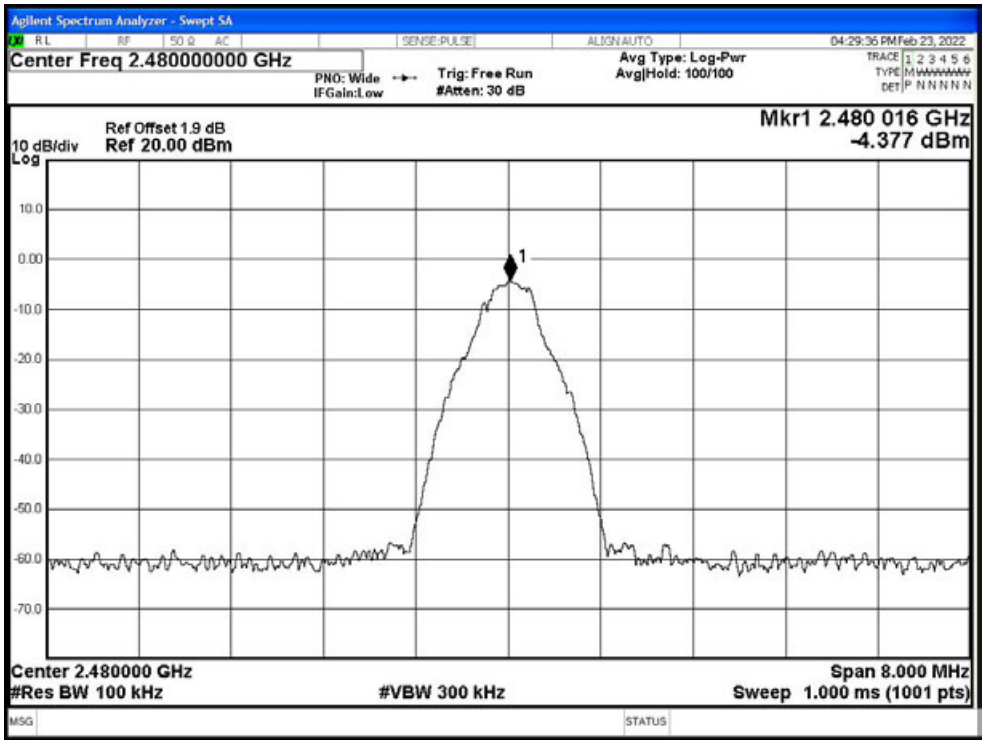
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



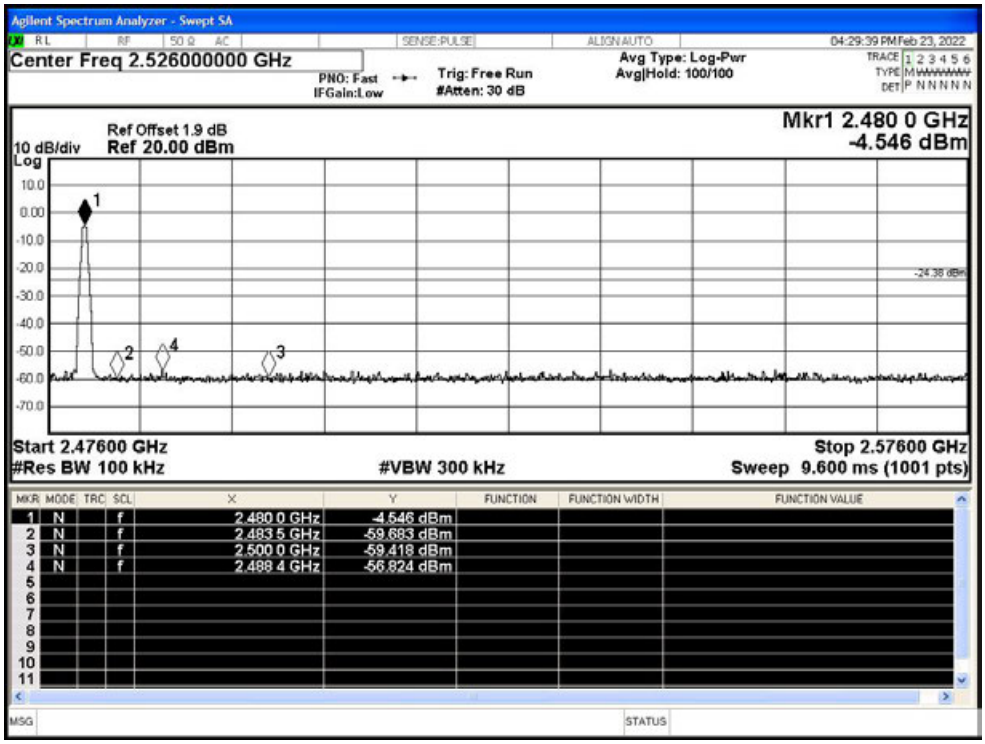
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



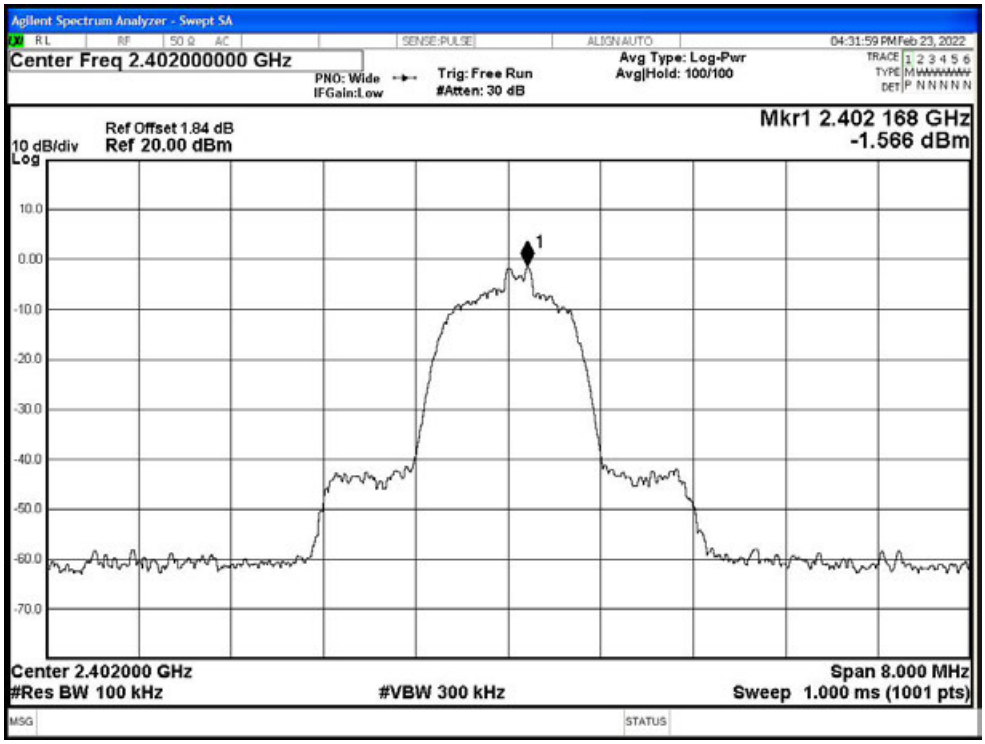
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



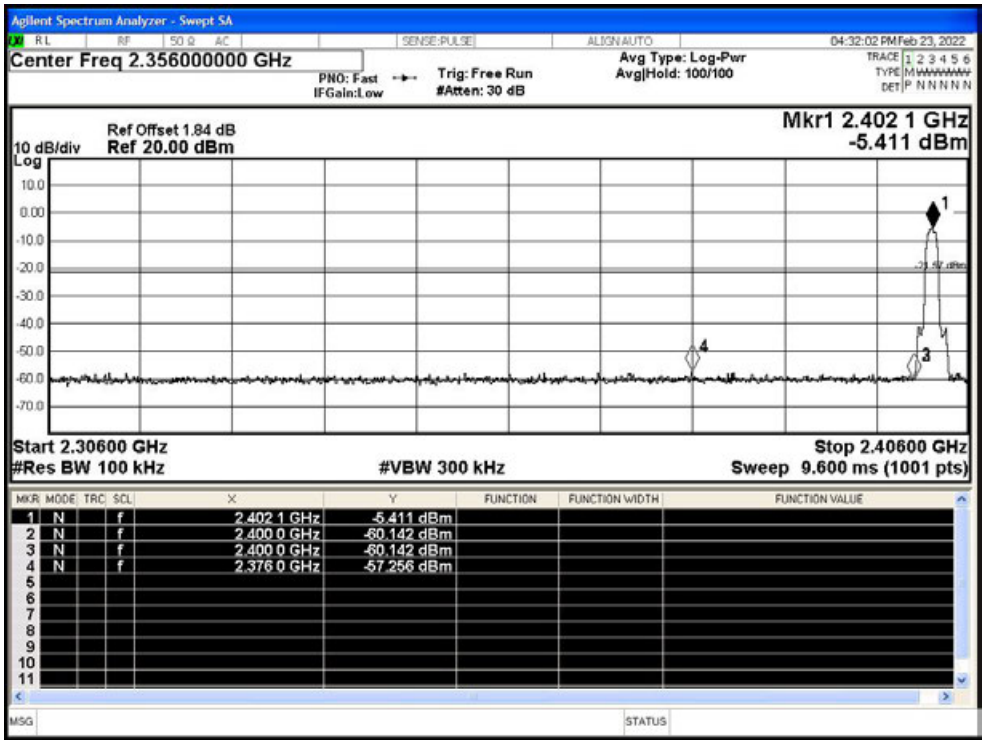
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



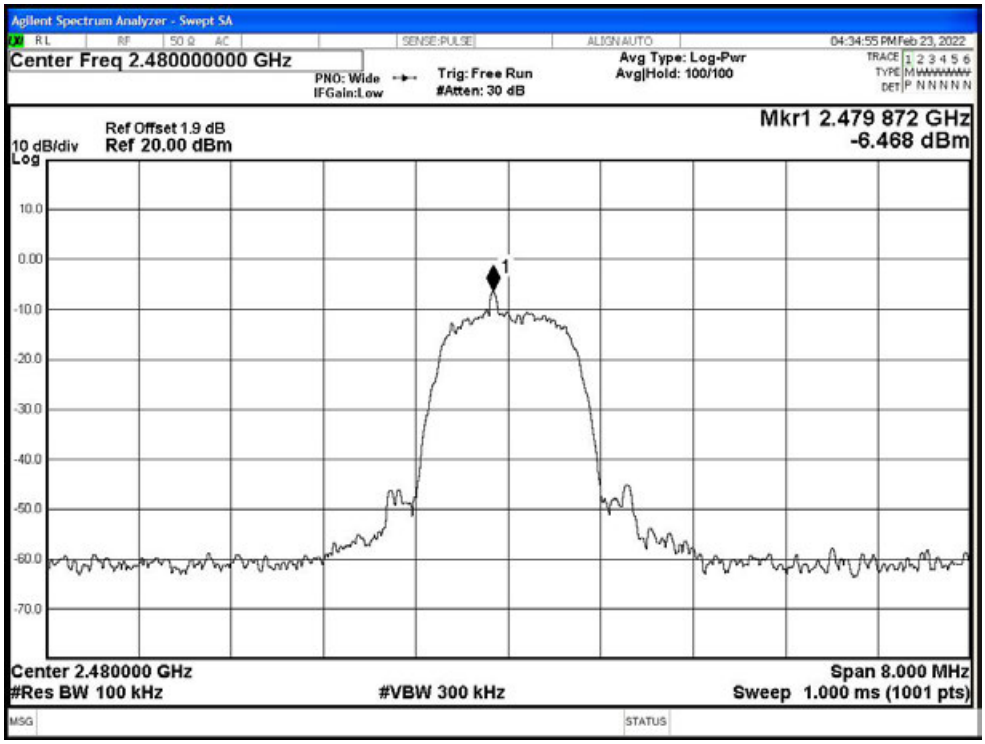
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



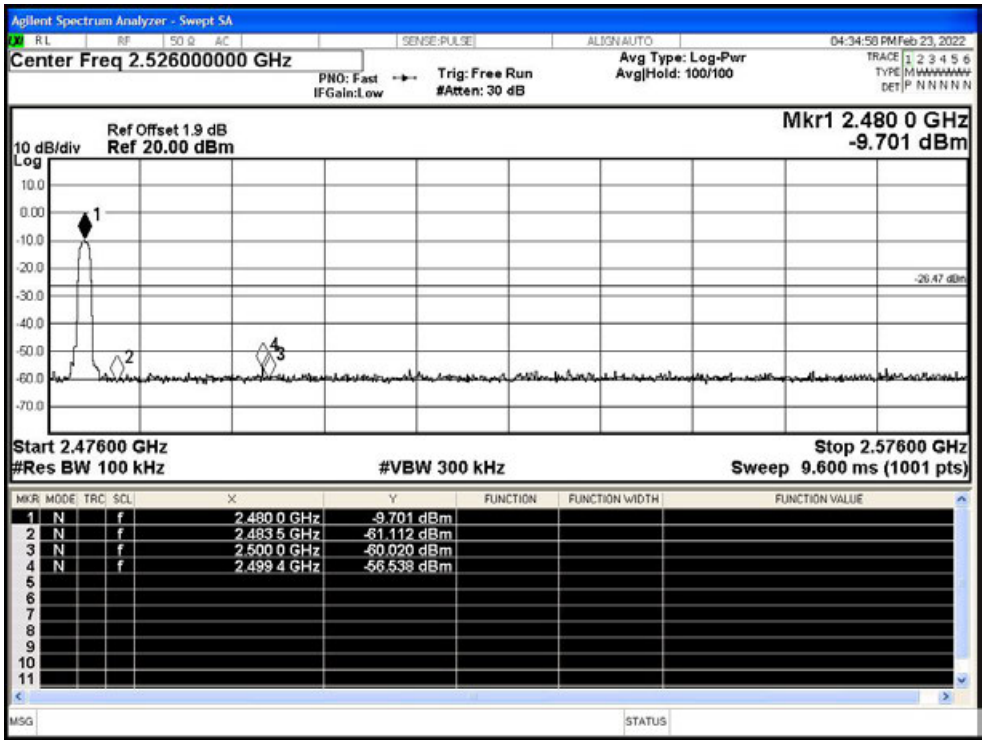
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



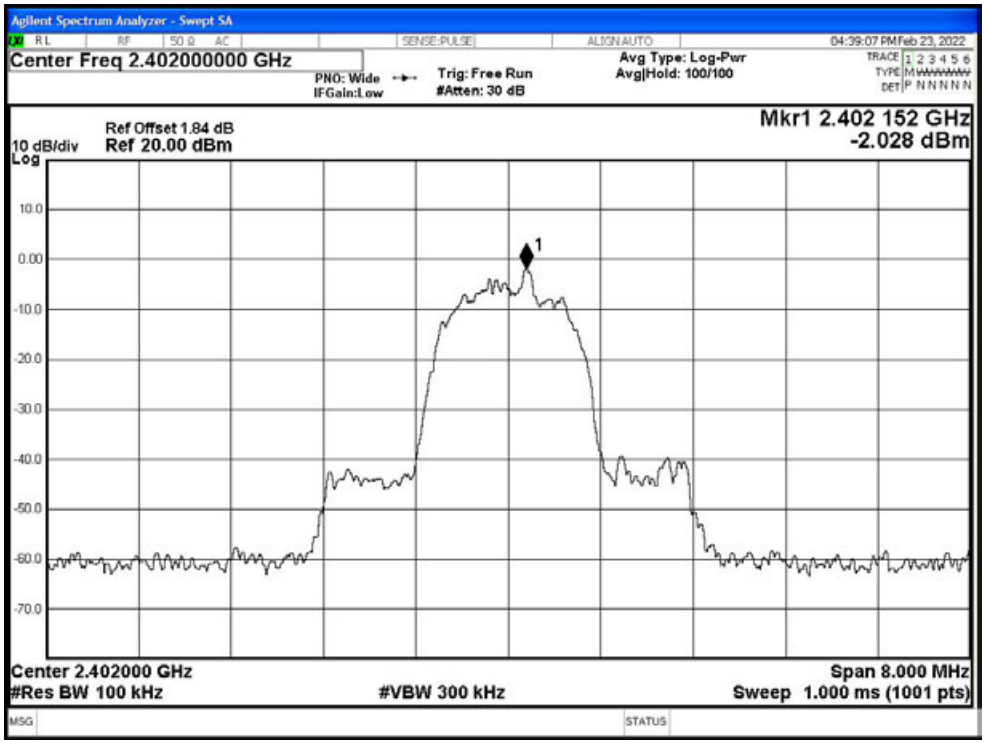
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



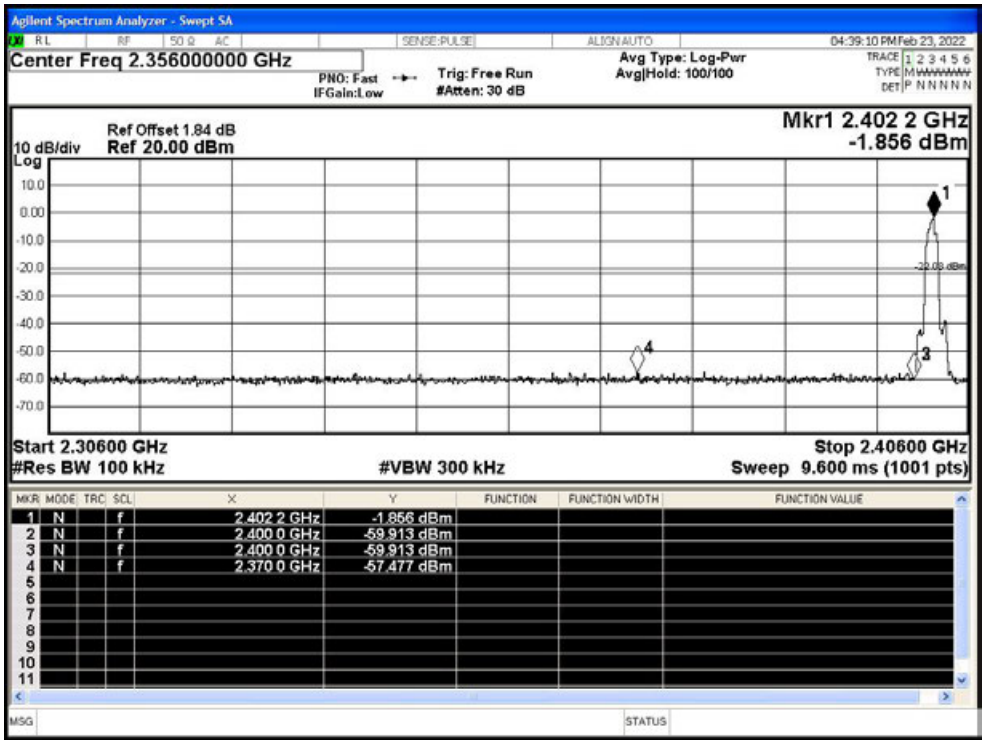
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



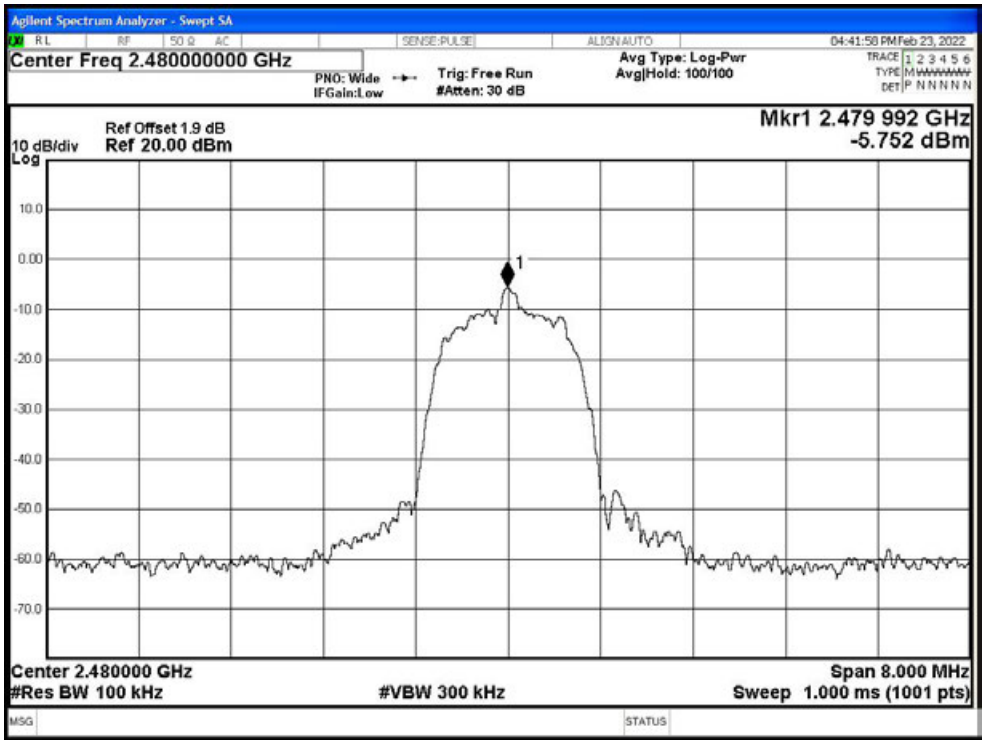
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



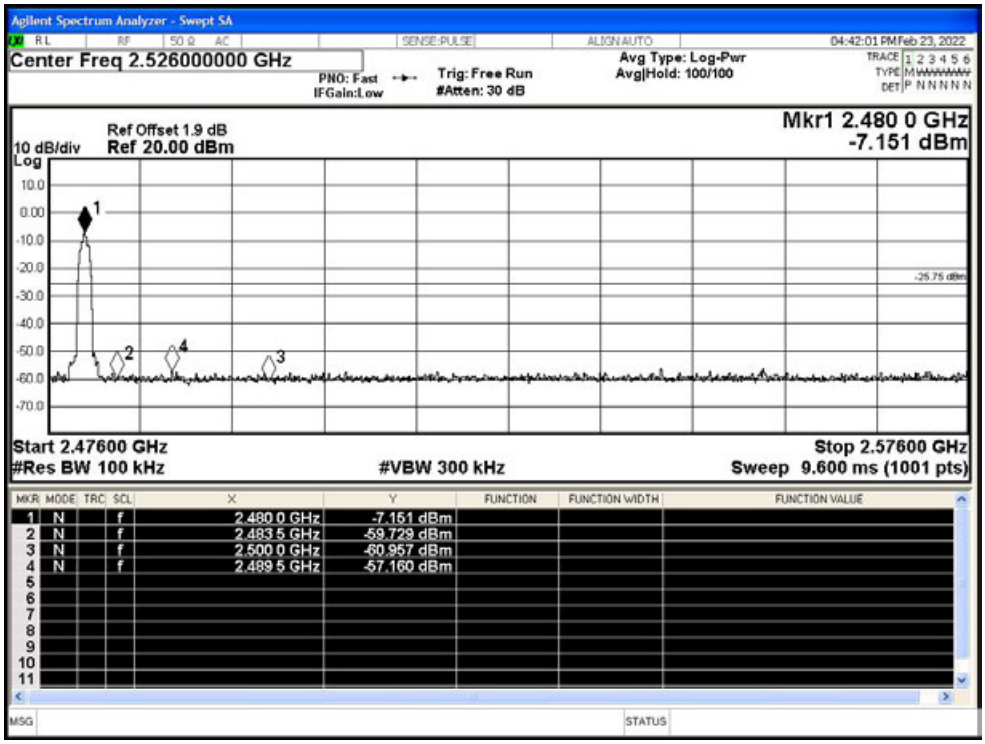
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



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	-56.1	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-51.02	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-55.28	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-51.3	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-54.9	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-51.39	-20	Pass