Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: smart handheld terminal

Test Model: KP36

Environmental Conditions

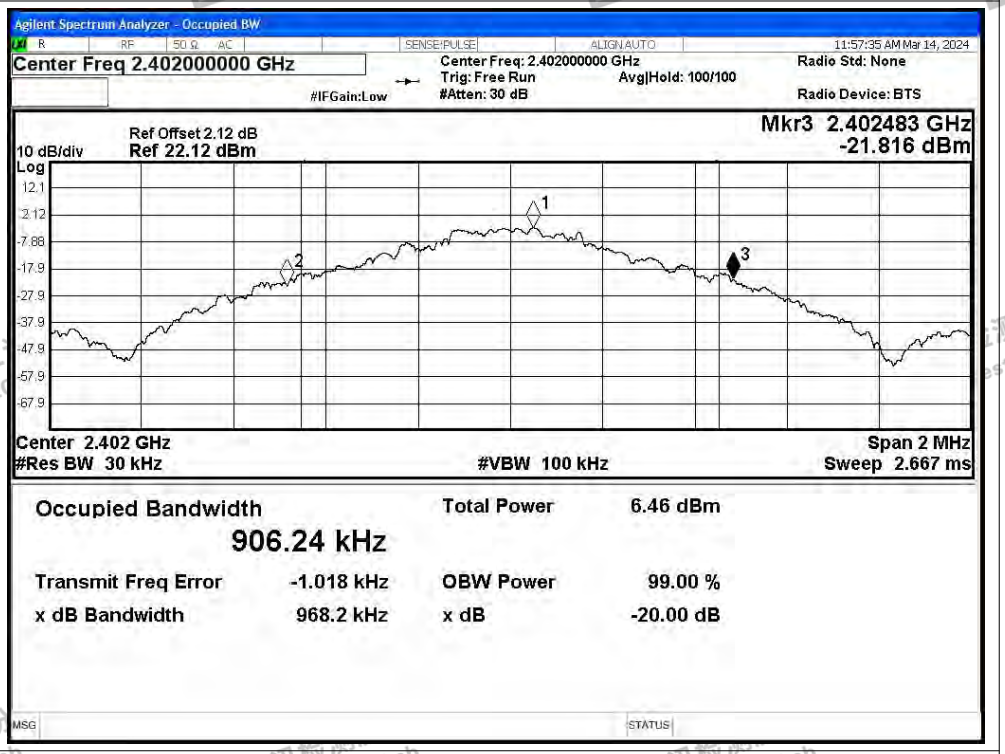
Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
Supervised by:	Nick Peng

A.1 -20dB Bandwidth

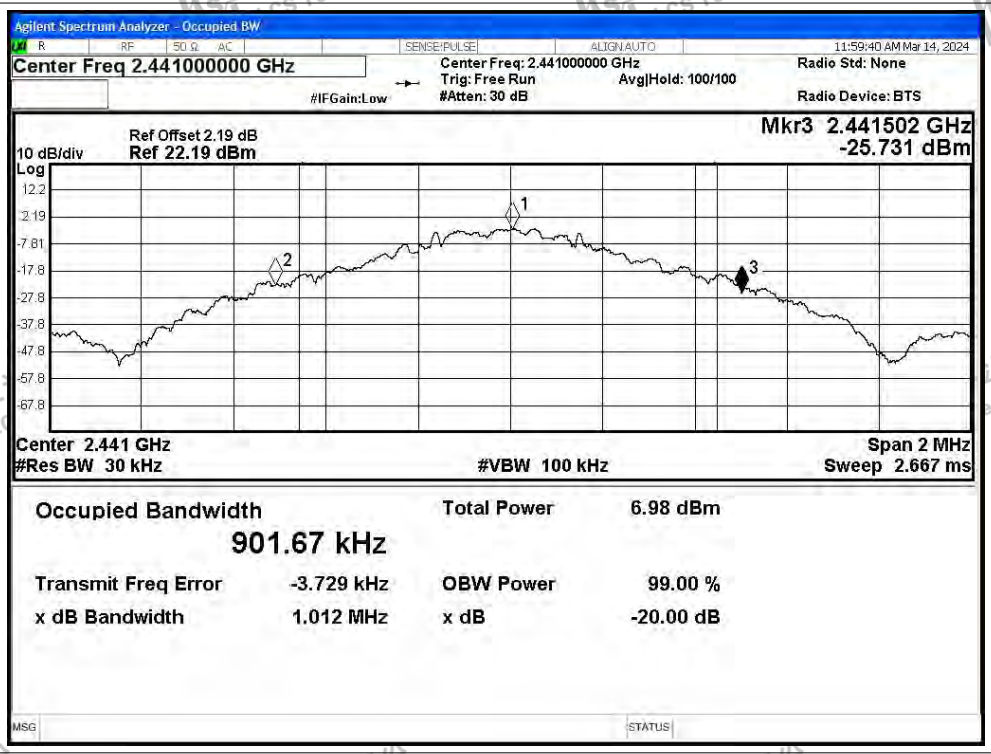
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.968	N/A	Pass
NVNT	1-DH5	2441	Ant1	1.012	N/A	Pass
NVNT	1-DH5	2480	Ant1	1.019	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.286	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.306	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.281	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.281	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.294	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.277	N/A	Pass

Test Graphs

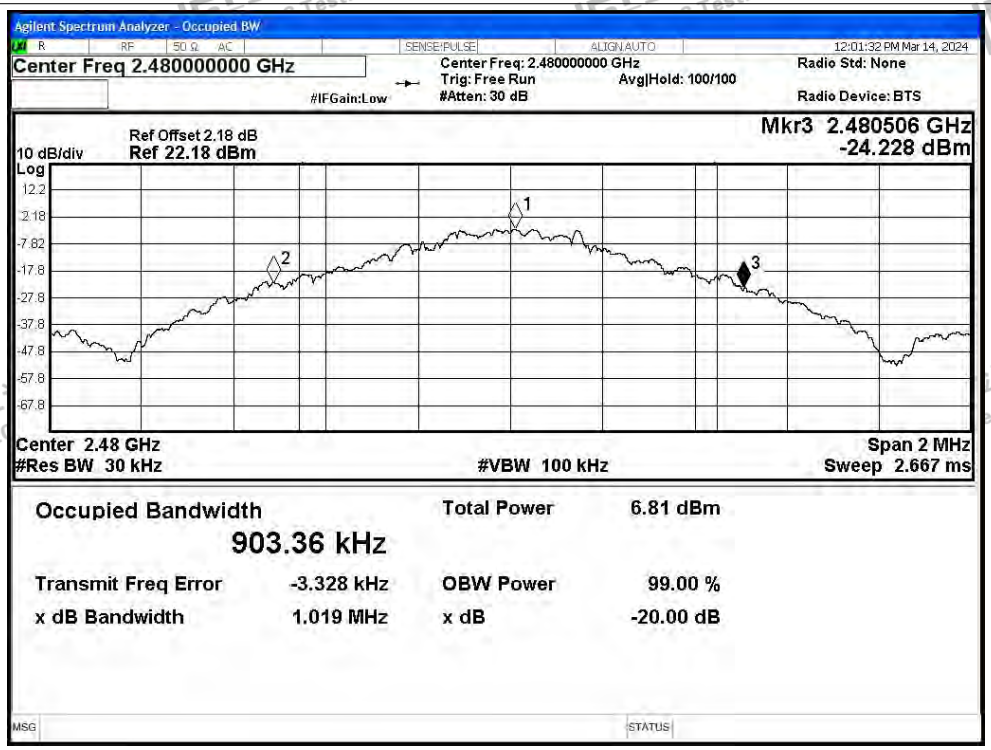
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



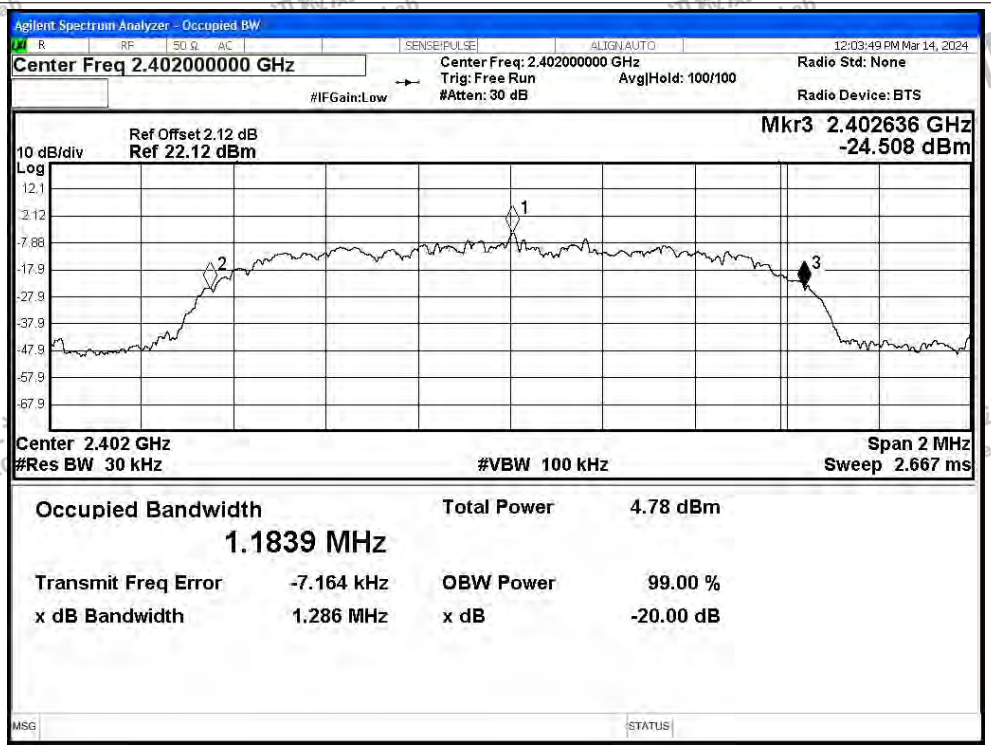
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



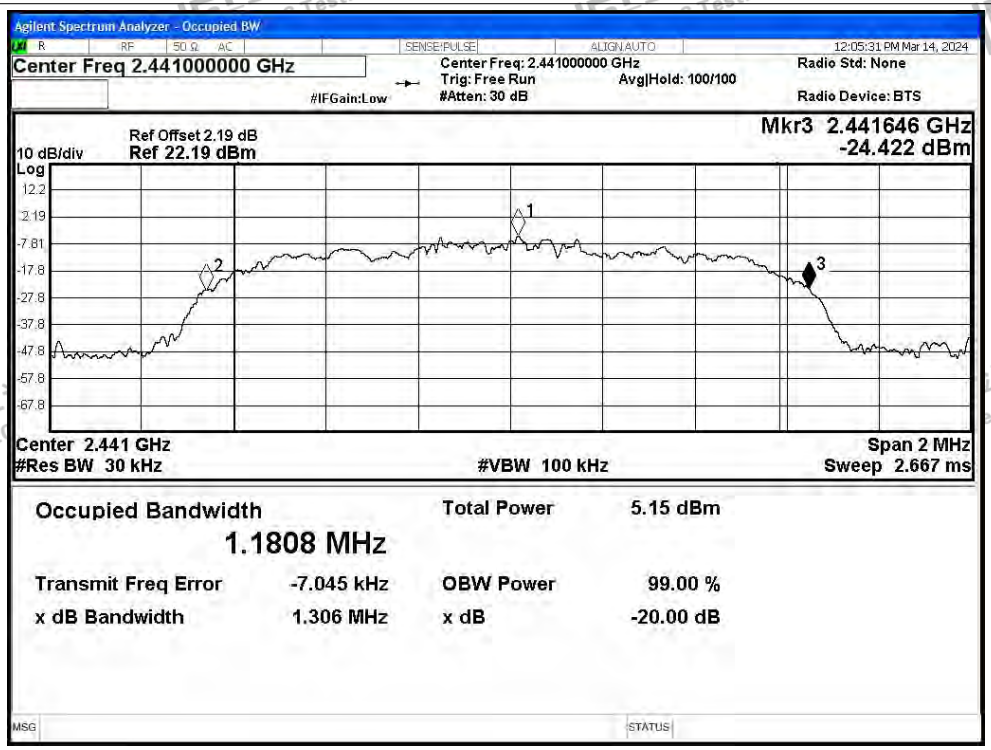
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



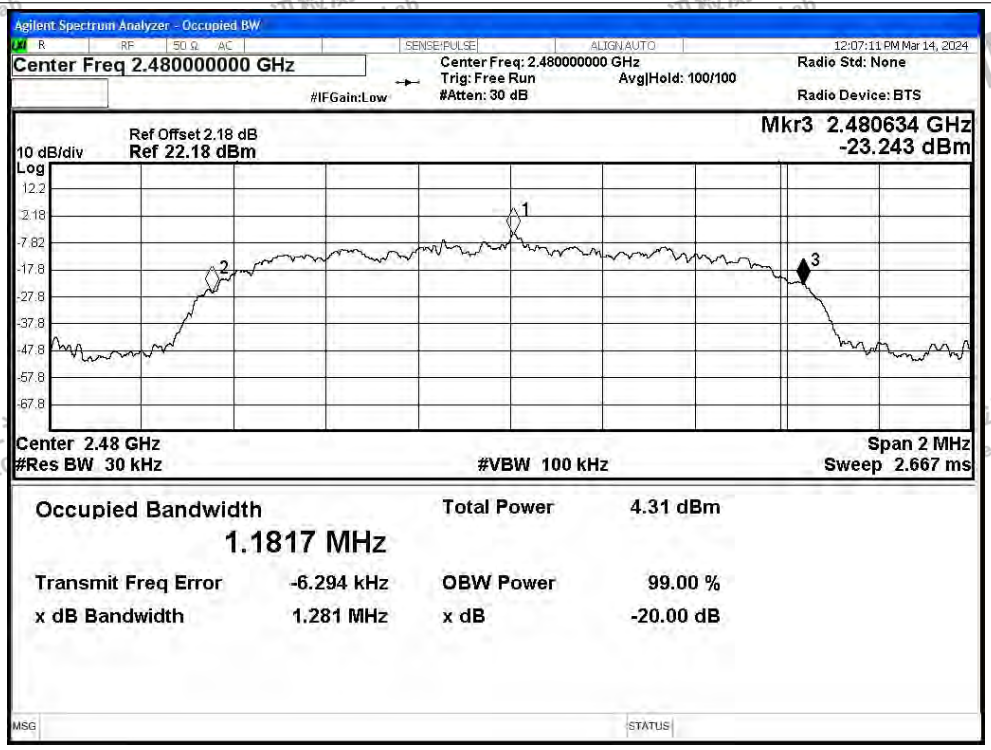
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



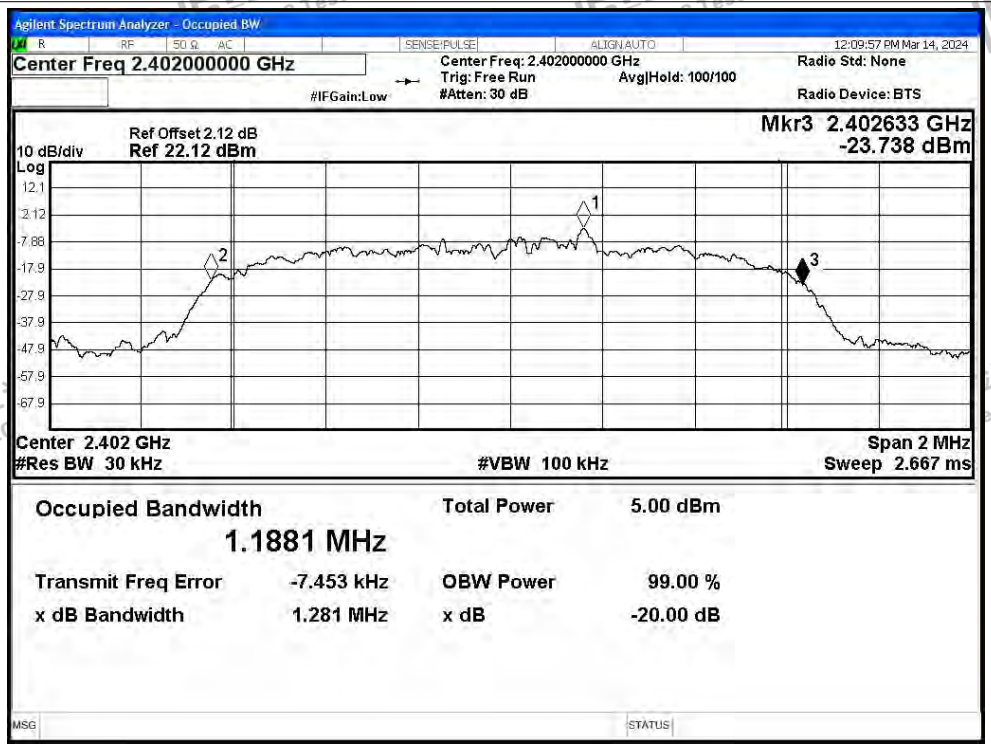
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



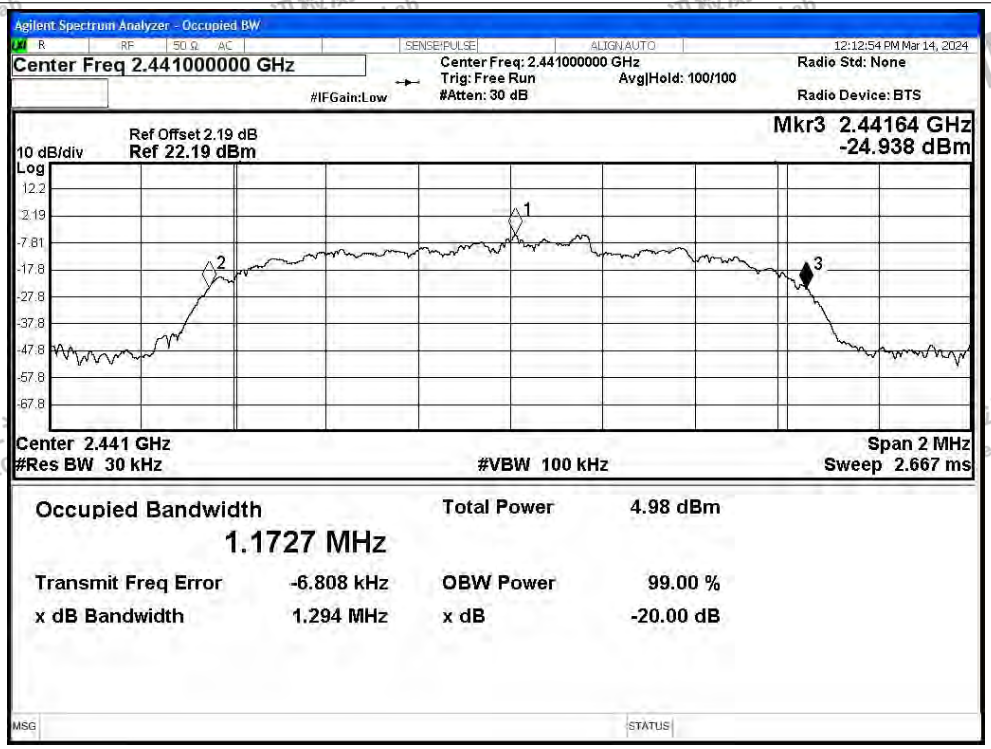
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



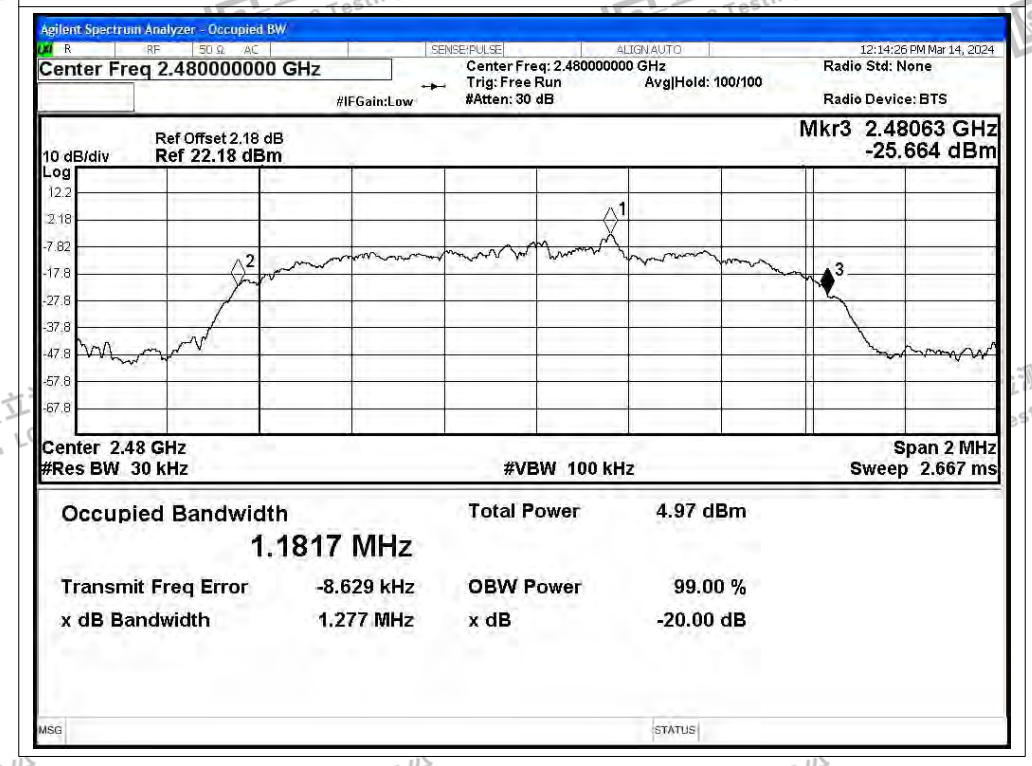
-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1

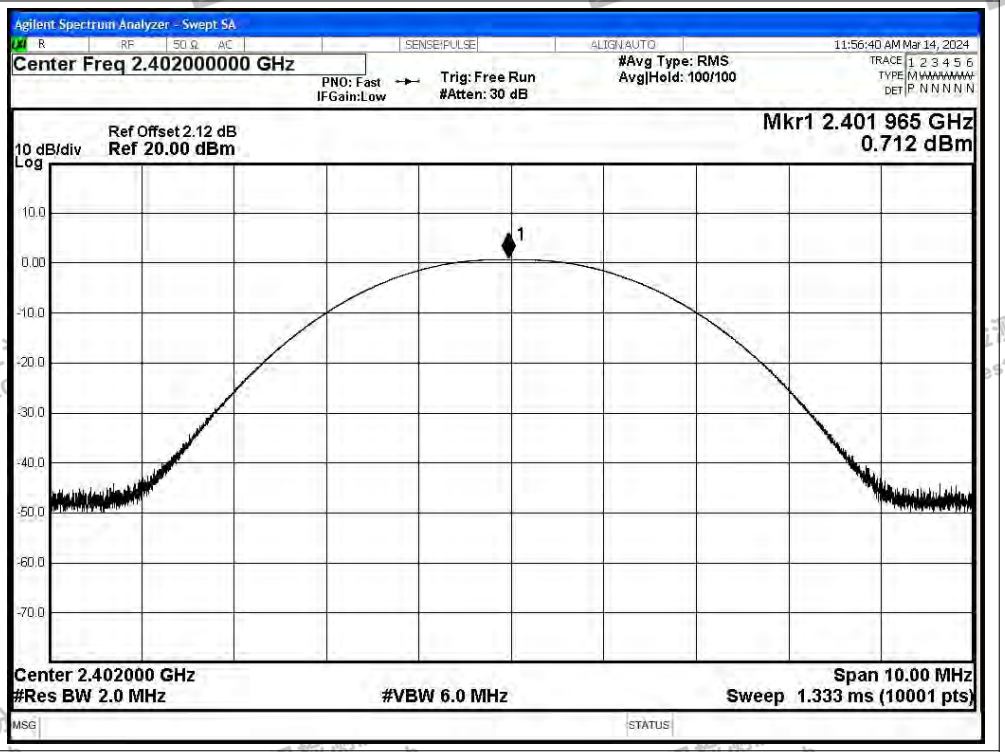


A.2 Maximum Conducted Output Power

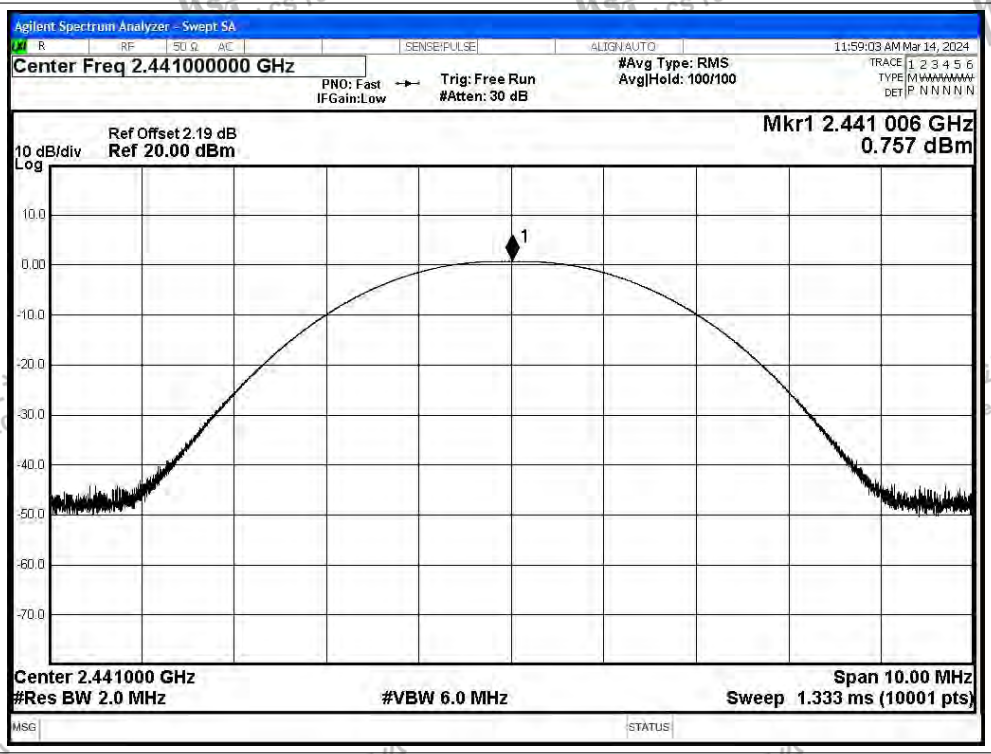
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	0.71	21	Pass
NVNT	1-DH5	2441	Ant1	0.76	21	Pass
NVNT	1-DH5	2480	Ant1	0.57	21	Pass
NVNT	2-DH5	2402	Ant1	0.43	21	Pass
NVNT	2-DH5	2441	Ant1	0.13	21	Pass
NVNT	2-DH5	2480	Ant1	0.32	21	Pass
NVNT	3-DH5	2402	Ant1	0.55	21	Pass
NVNT	3-DH5	2441	Ant1	0.64	21	Pass
NVNT	3-DH5	2480	Ant1	0.15	21	Pass

Test Graphs

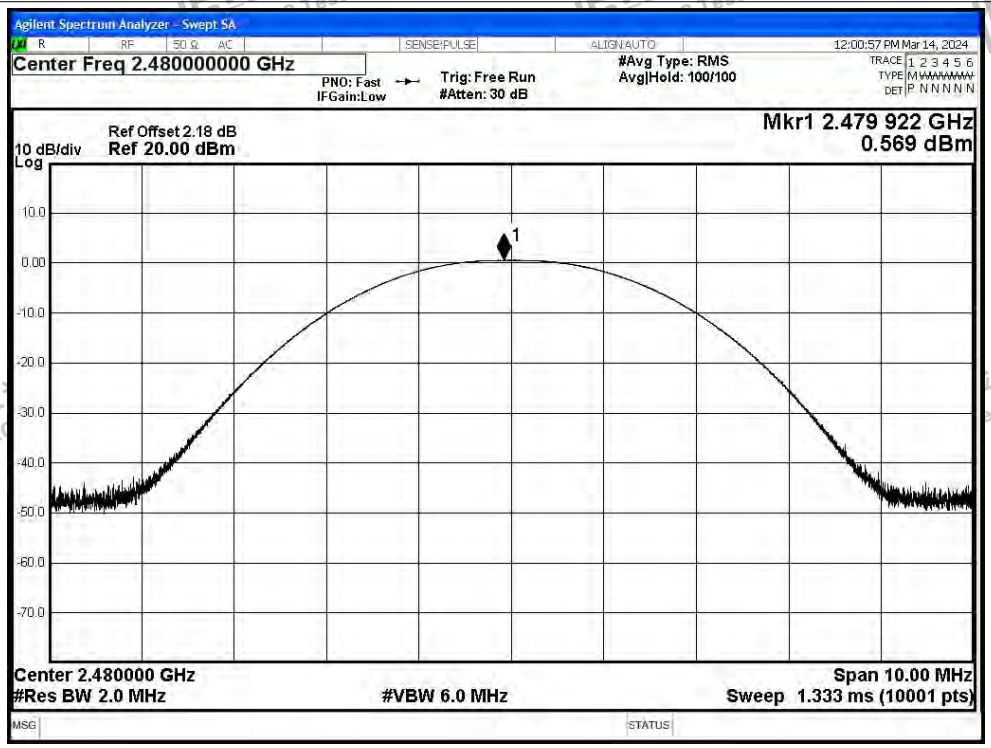
Power NVNT 1-DH5 2402MHz Ant1



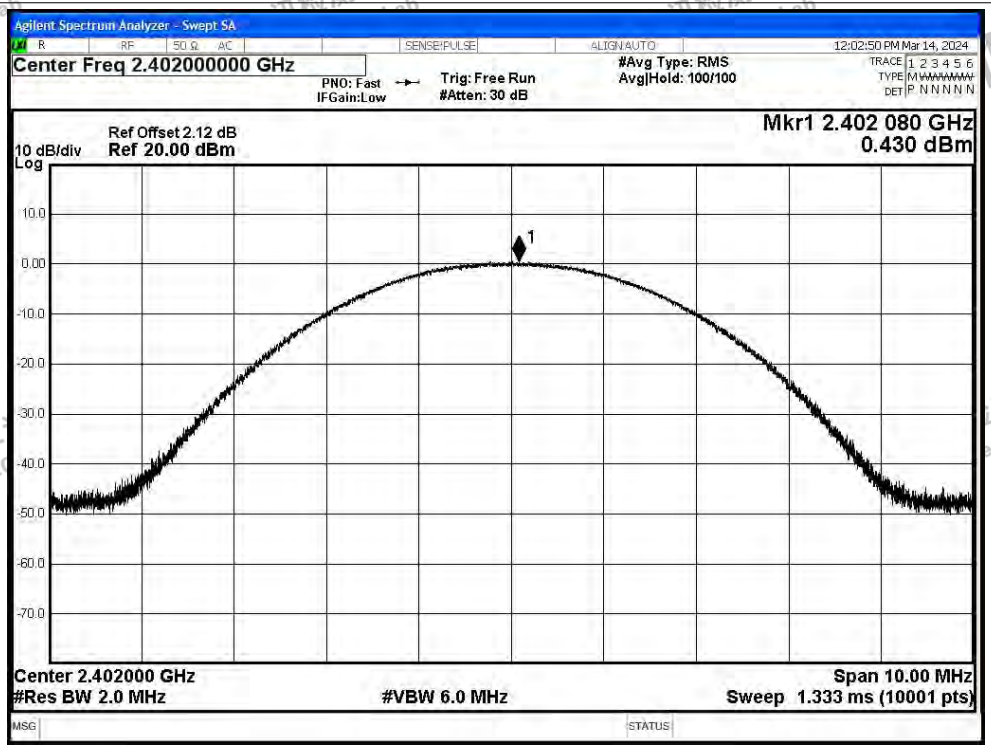
Power NVNT 1-DH5 2441MHz Ant1



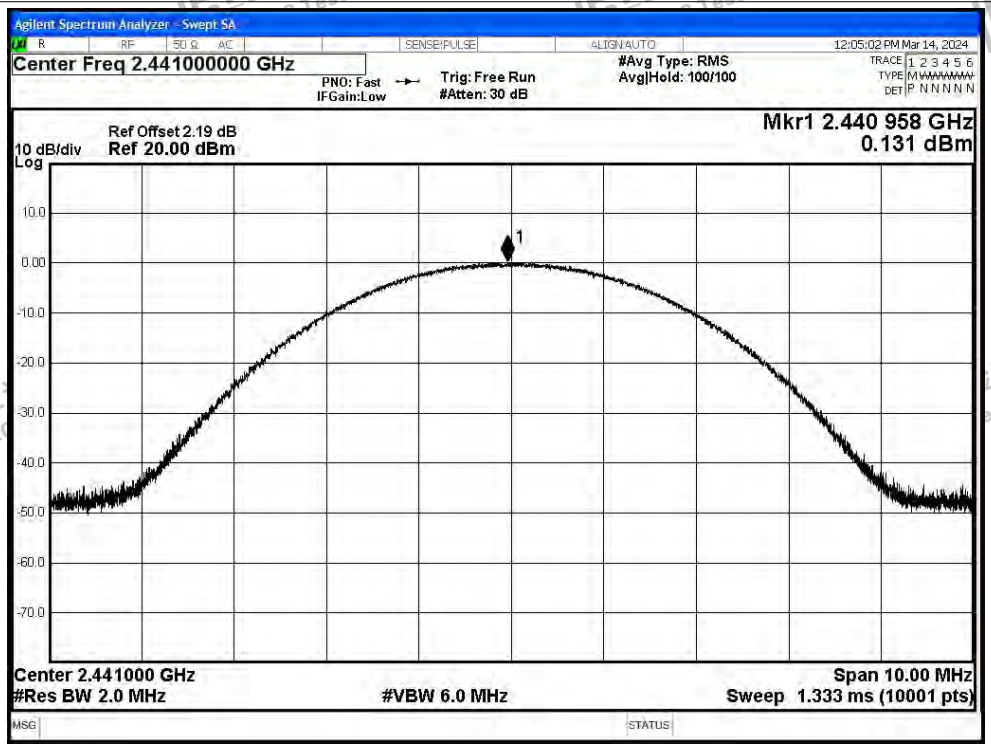
Power NVNT 1-DH5 2480MHz Ant1



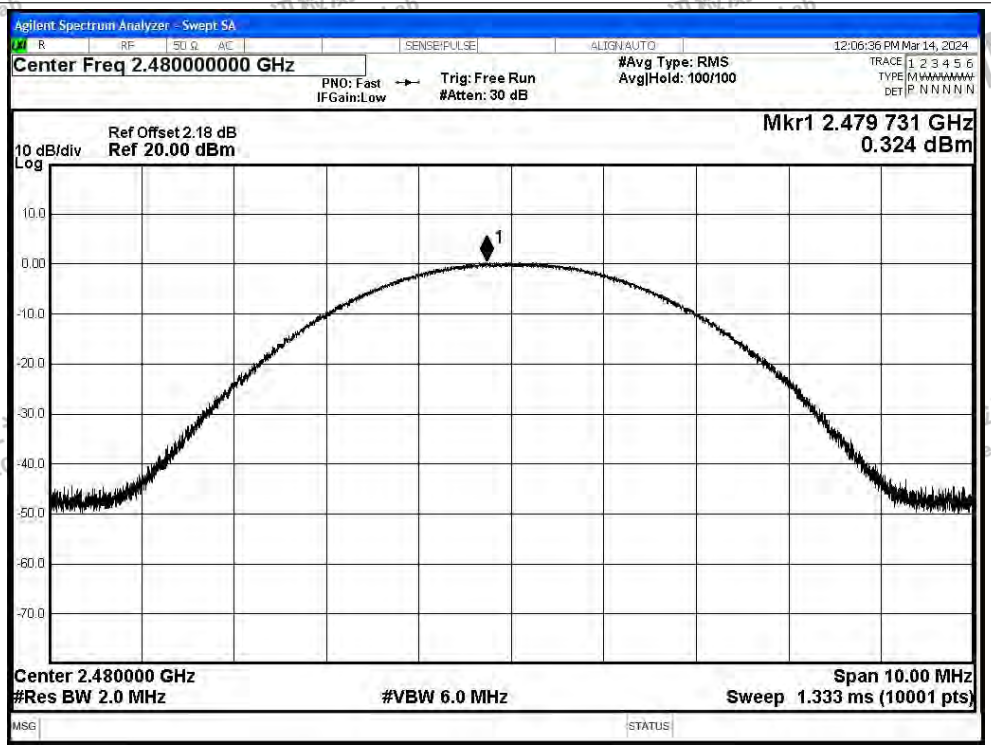
Power NVNT 2-DH5 2402MHz Ant1



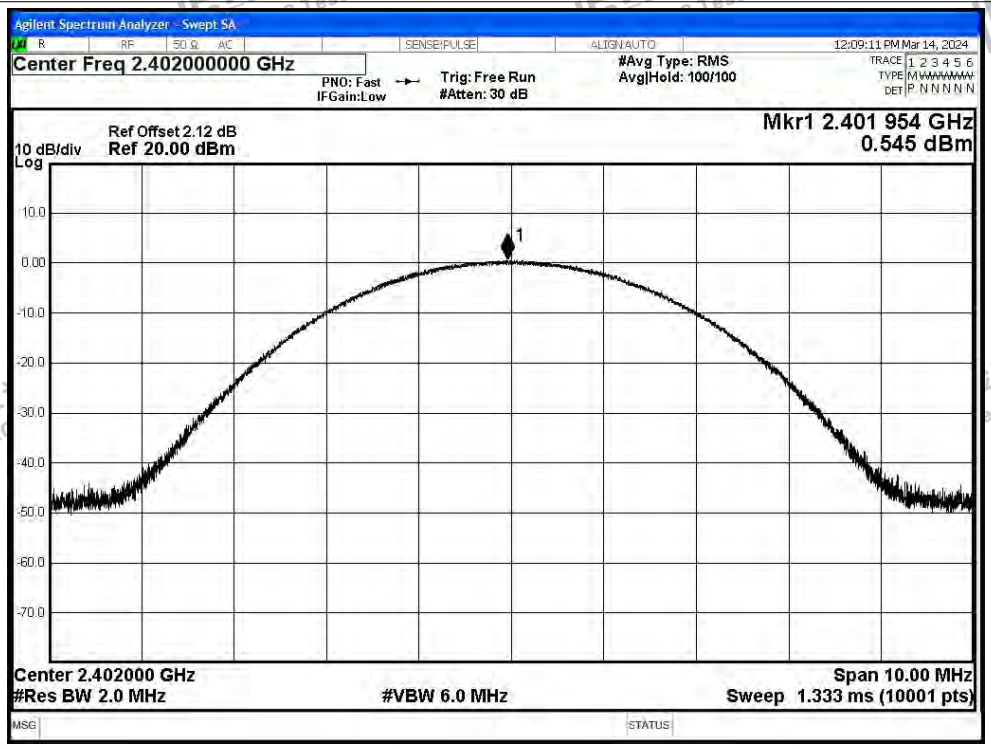
Power NVNT 2-DH5 2441MHz Ant1



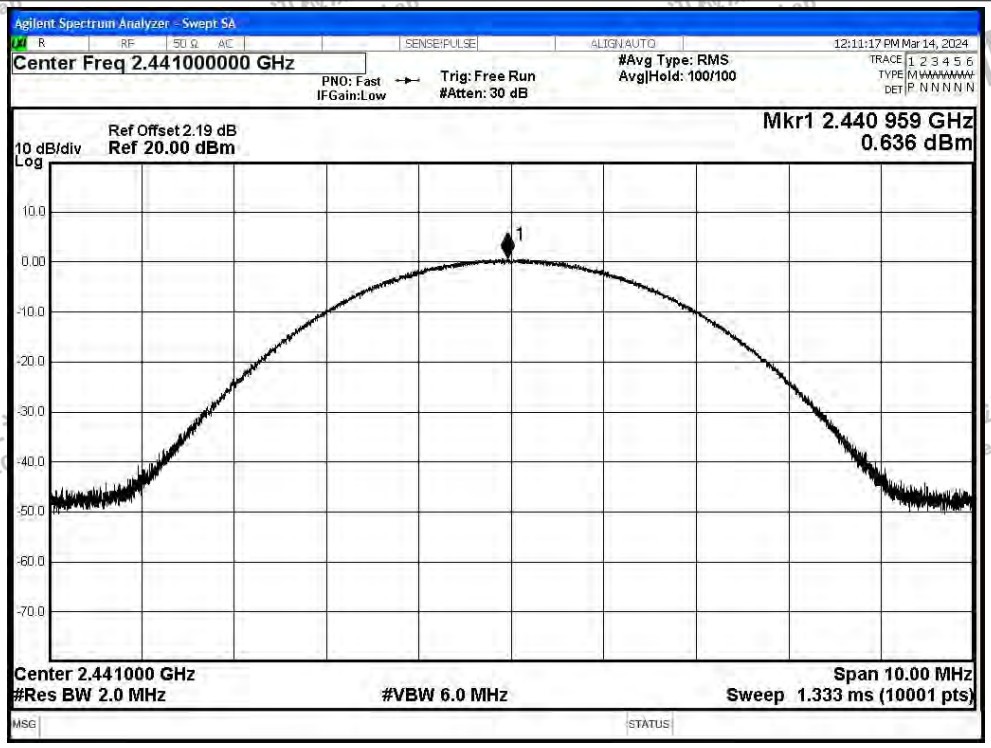
Power NVNT 2-DH5 2480MHz Ant1



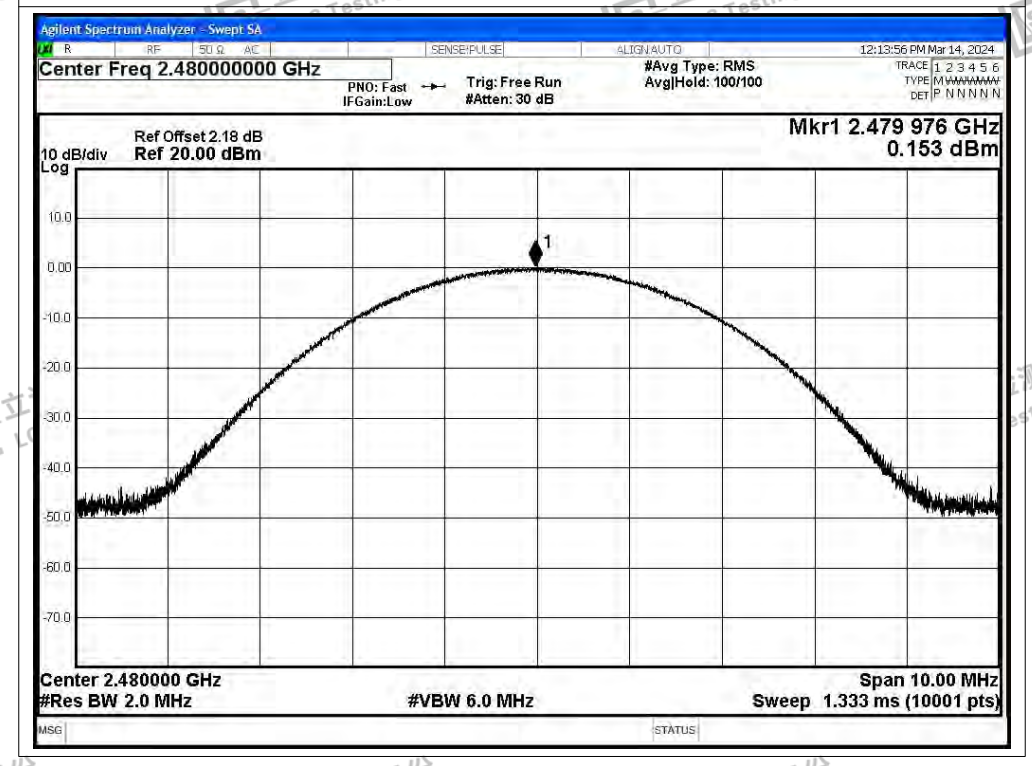
Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1



Power NVNT 3-DH5 2480MHz Ant1

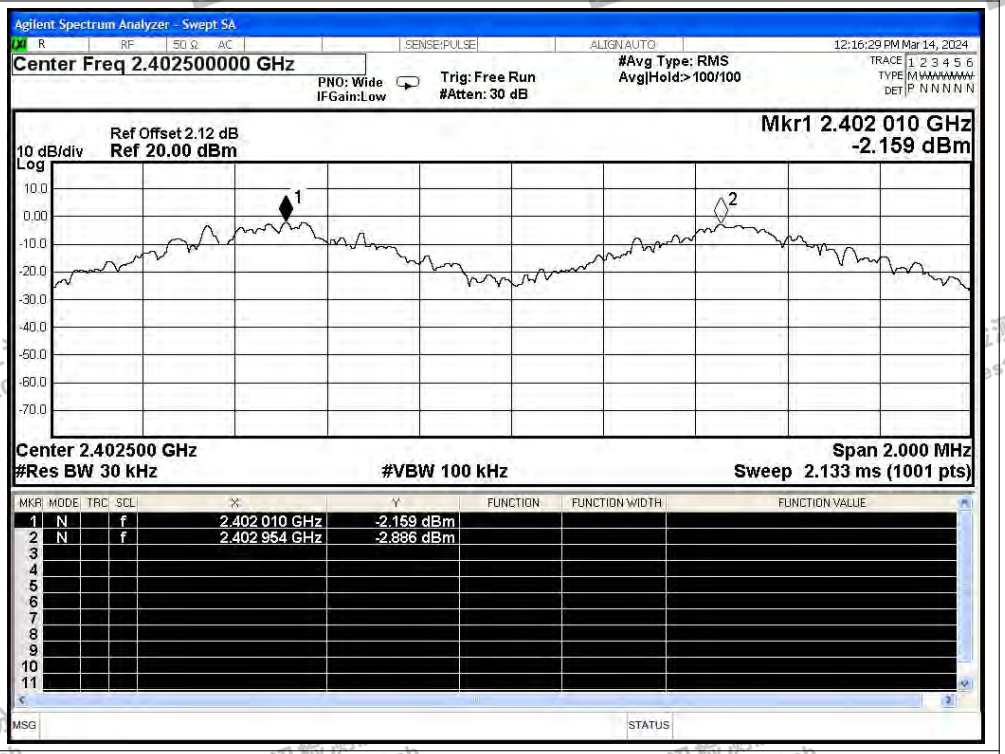


A.3 Carrier Frequencies Separation

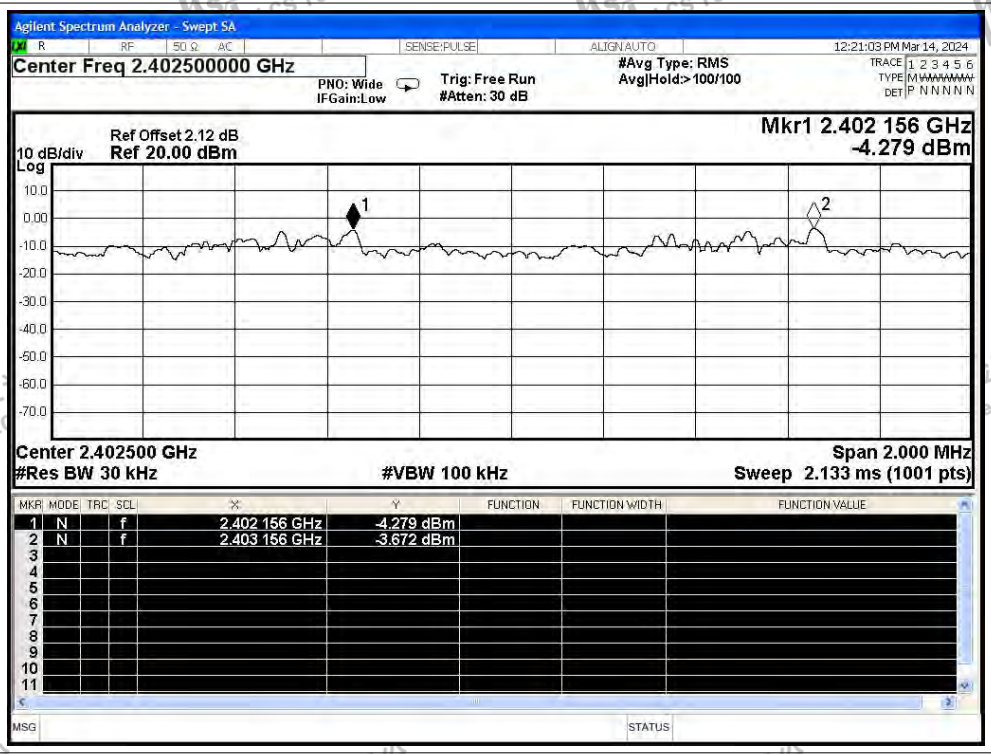
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.01	2402.954	0.944	0.679	Pass
NVNT	2-DH5	Ant1	2402.156	2403.156	1	0.871	Pass
NVNT	3-DH5	Ant1	2402.146	2403.162	1.016	0.863	Pass

Test Graphs

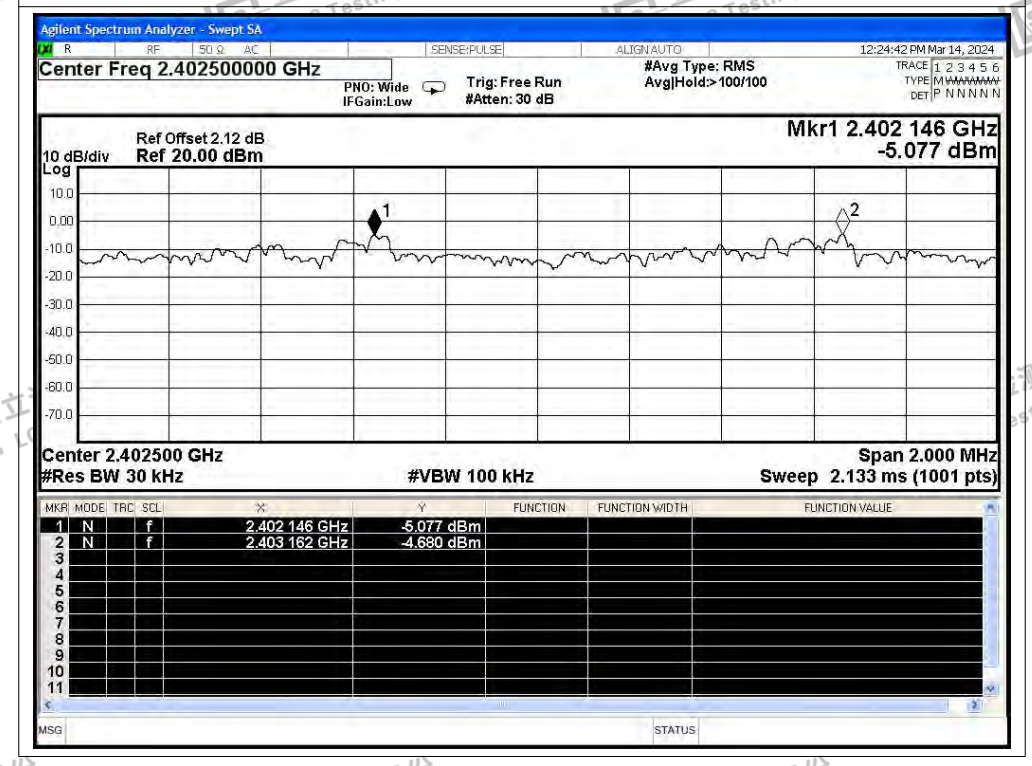
CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1



CFS NVNT 3-DH5 2402MHz Ant1

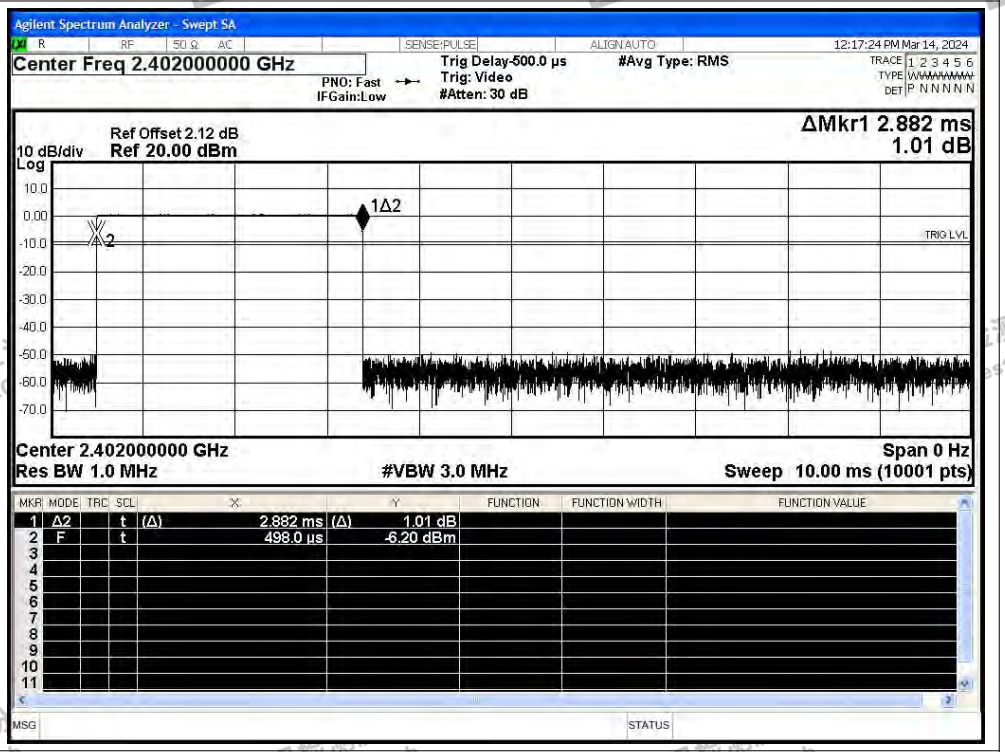


A.4 Dwell Time

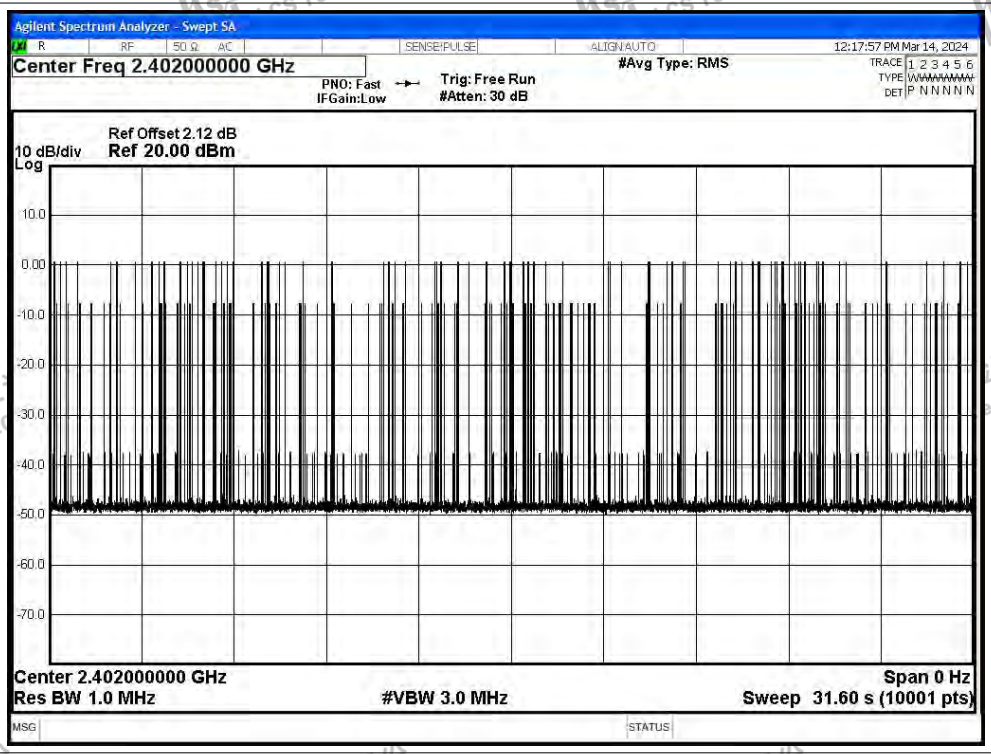
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.882	268.026	93	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.885	300.04	104	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.887	282.926	98	31600	400	Pass

Test Graphs

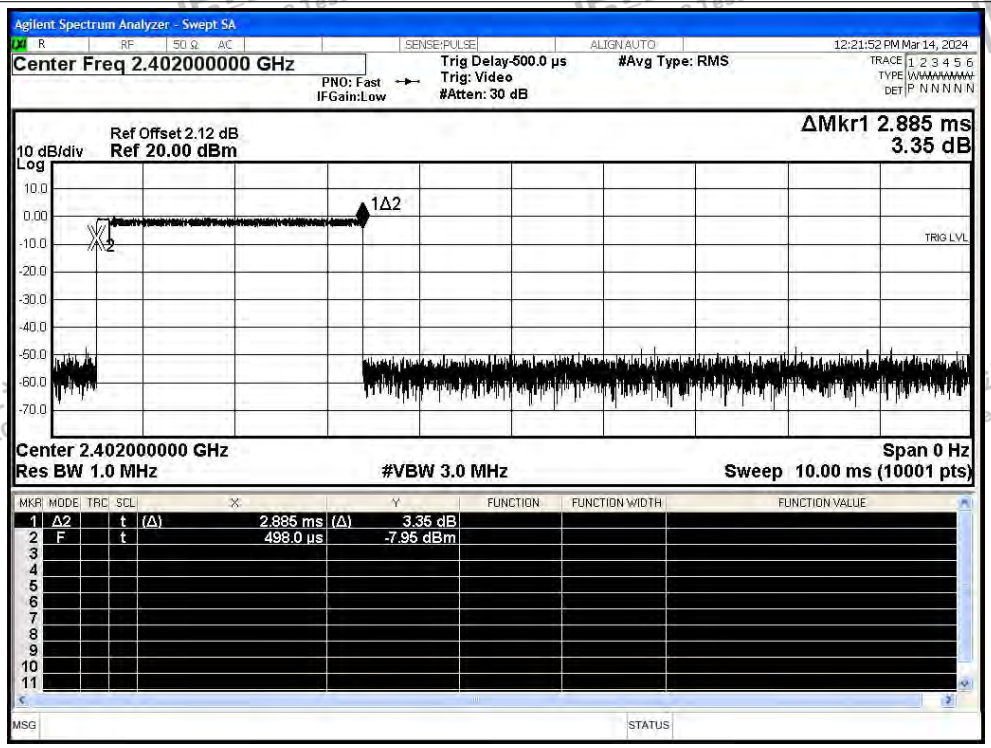
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



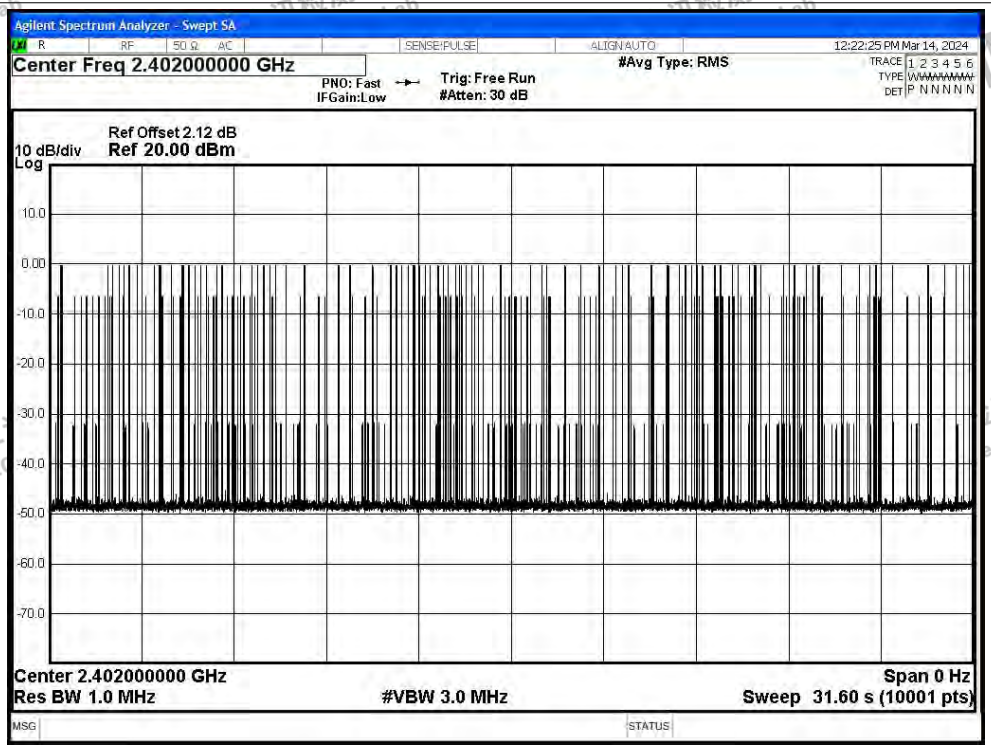
Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



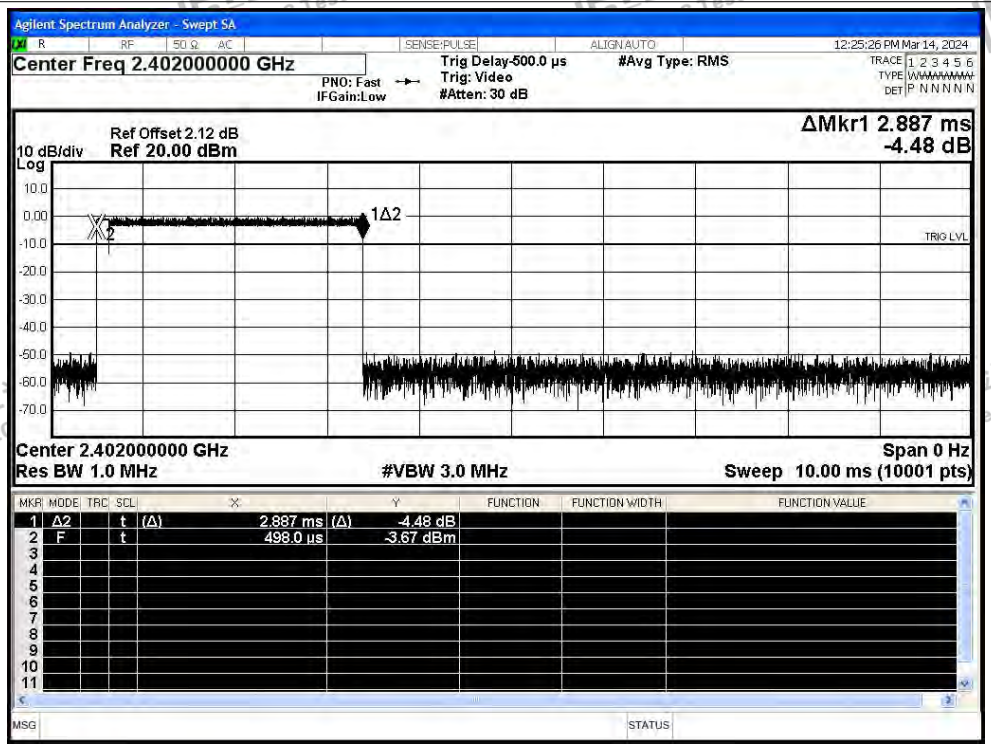
Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



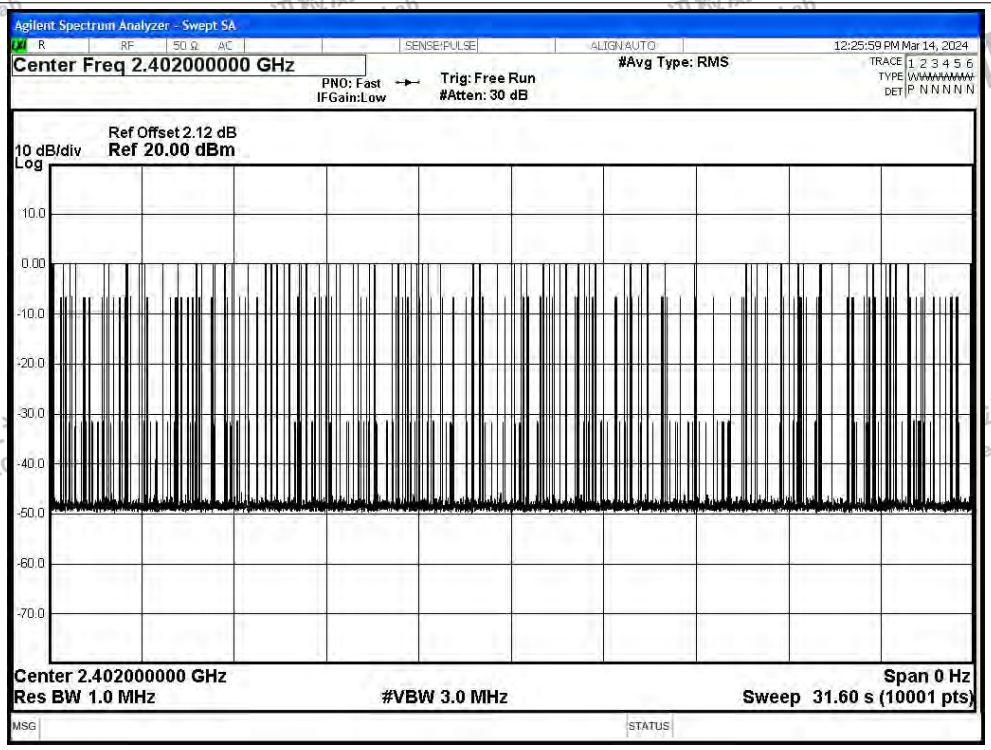
Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated

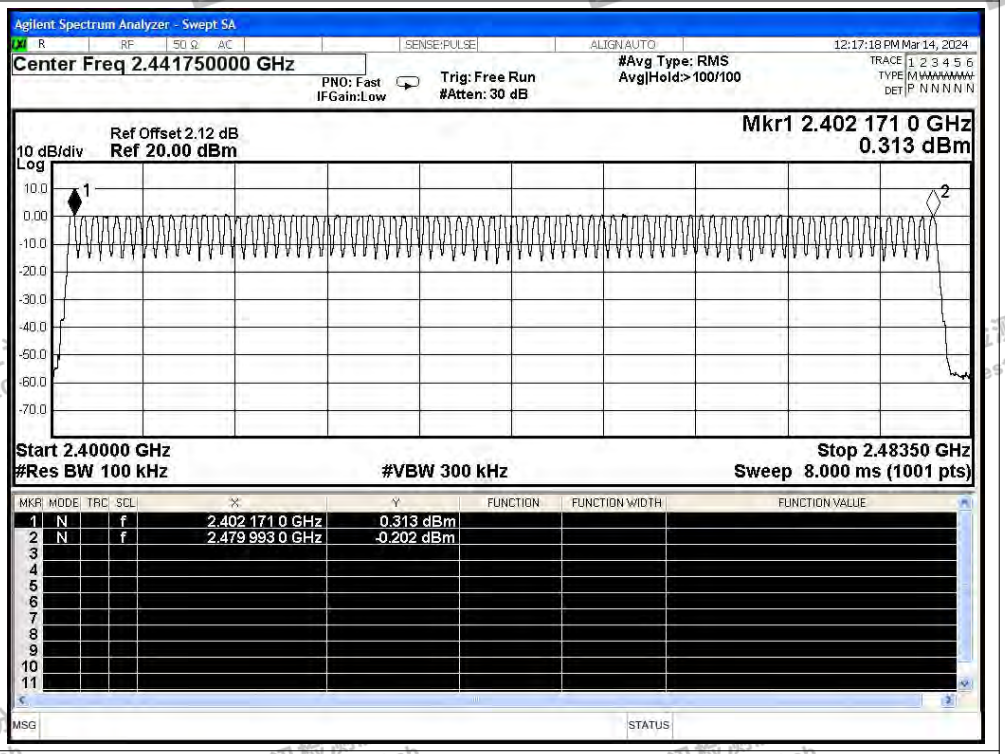


A.5 Number of Hopping Channel

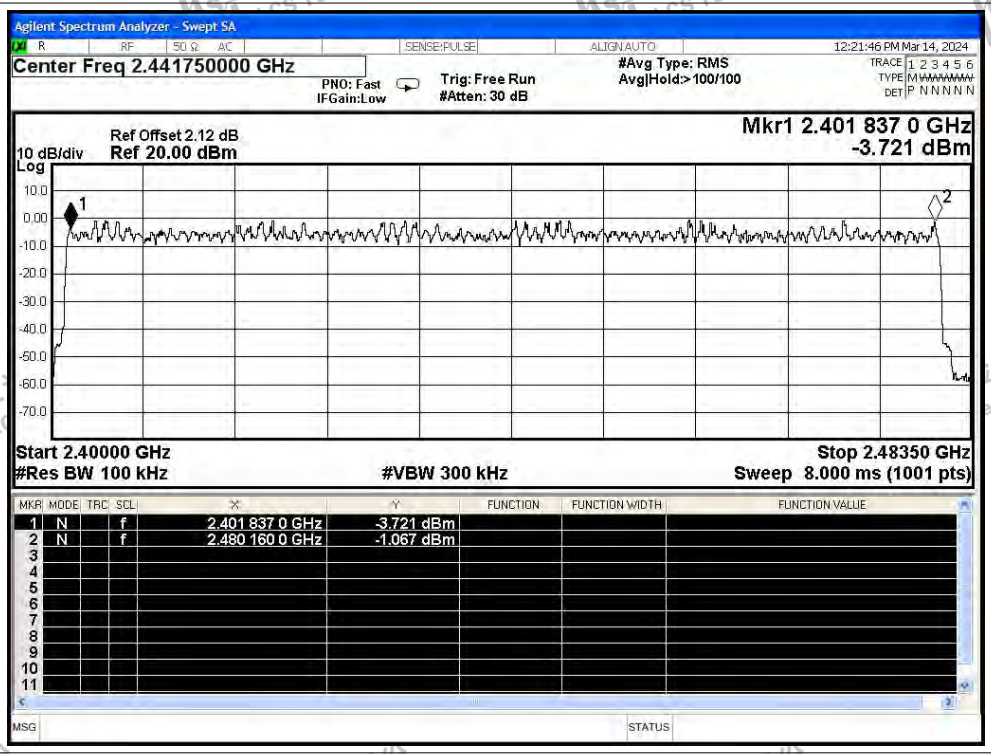
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

Test Graphs

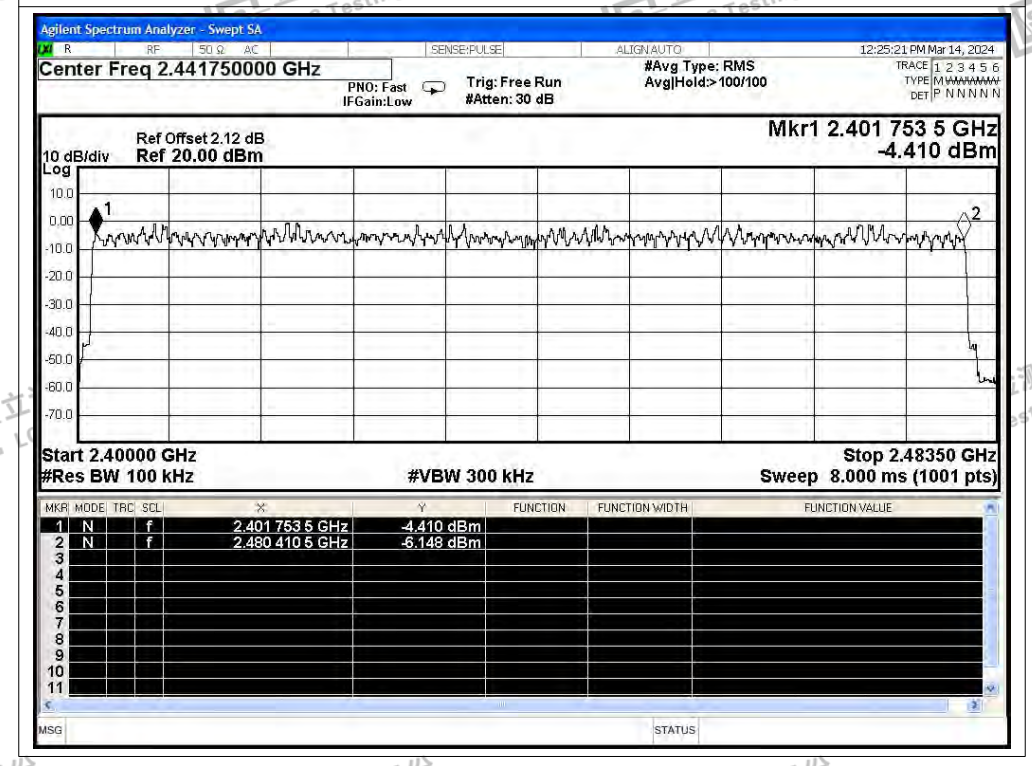
Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1



Hopping No. NVNT 3-DH5 2402MHz Ant1

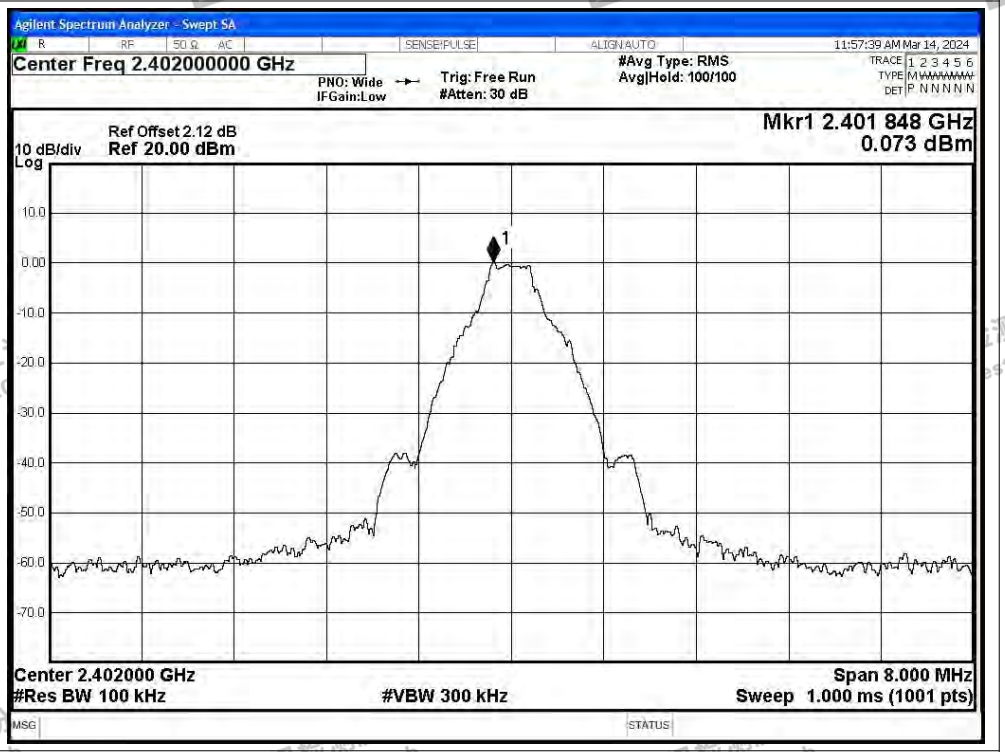


A.6 Band Edge

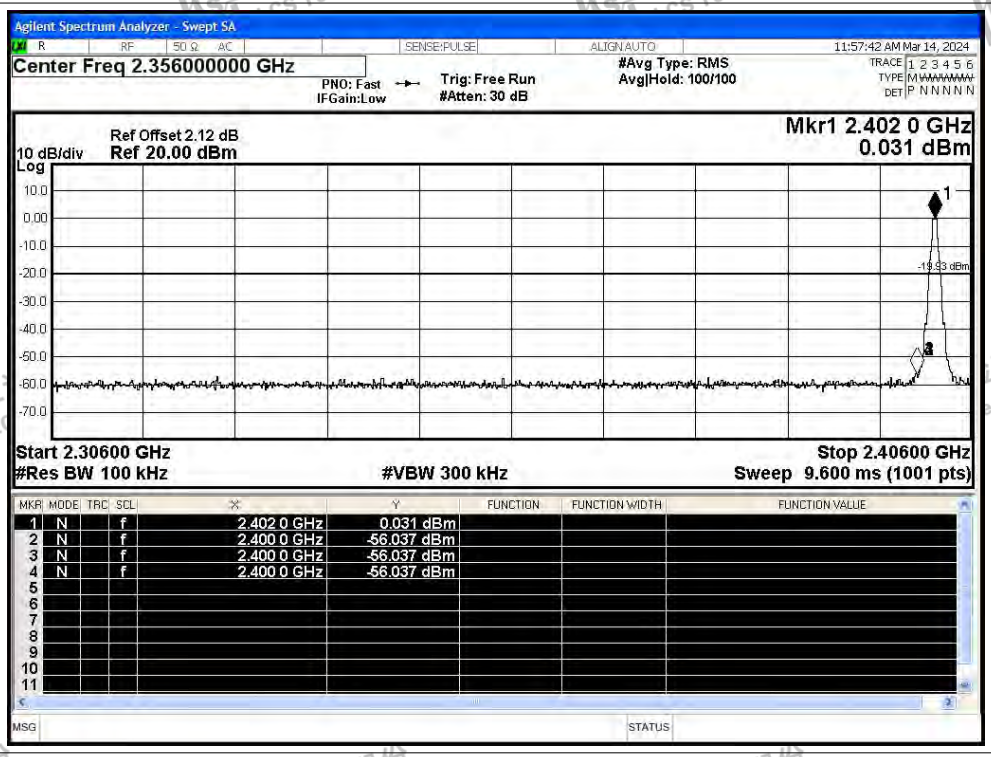
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-56.11	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-56.28	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-52.38	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-56.2	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-50.95	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-54.87	-20	Pass

Test Graphs

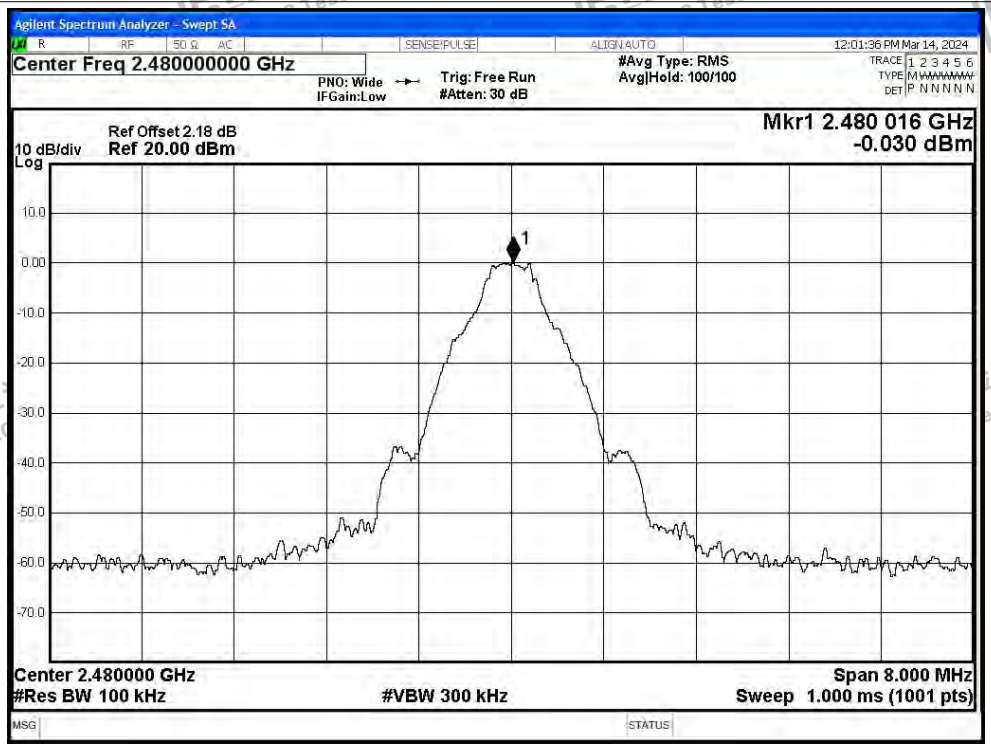
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



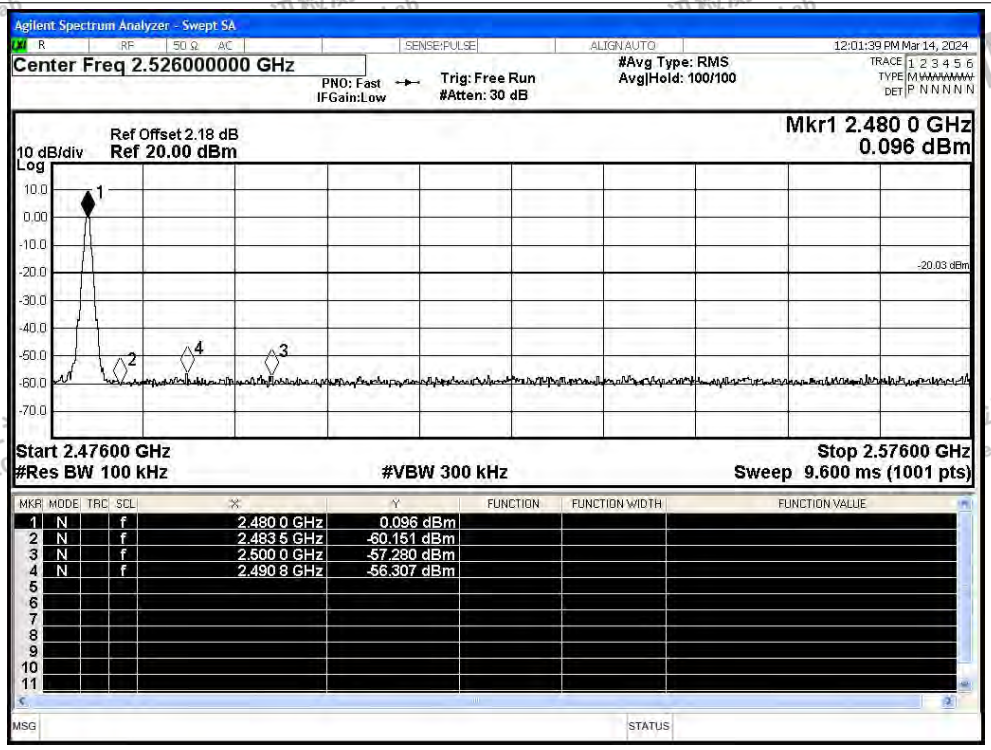
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



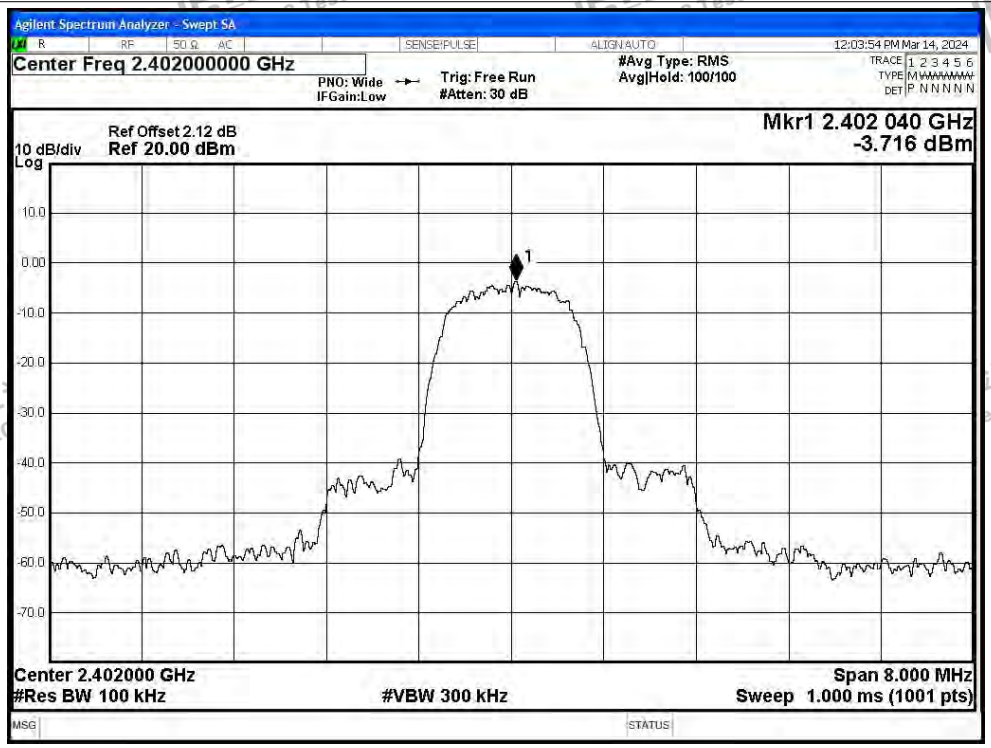
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



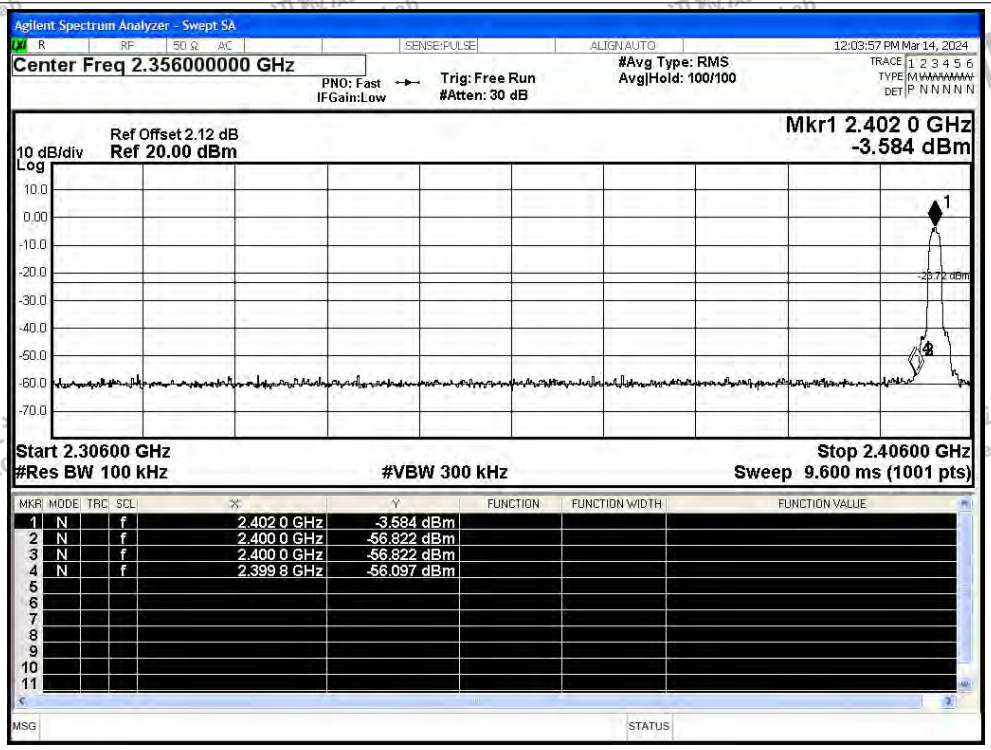
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



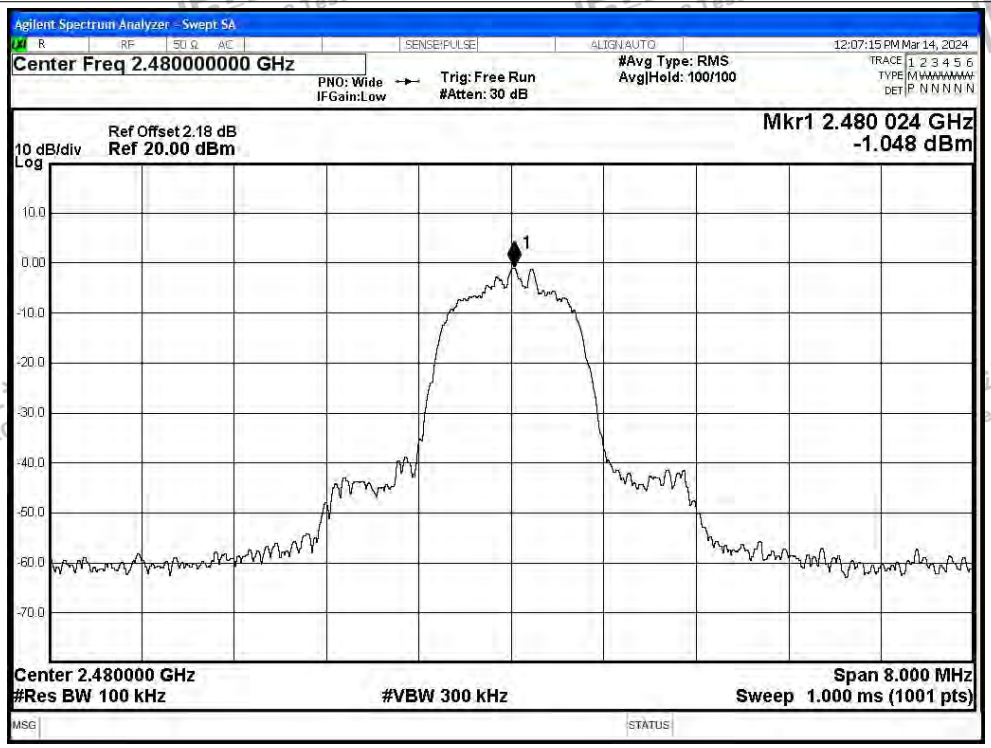
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



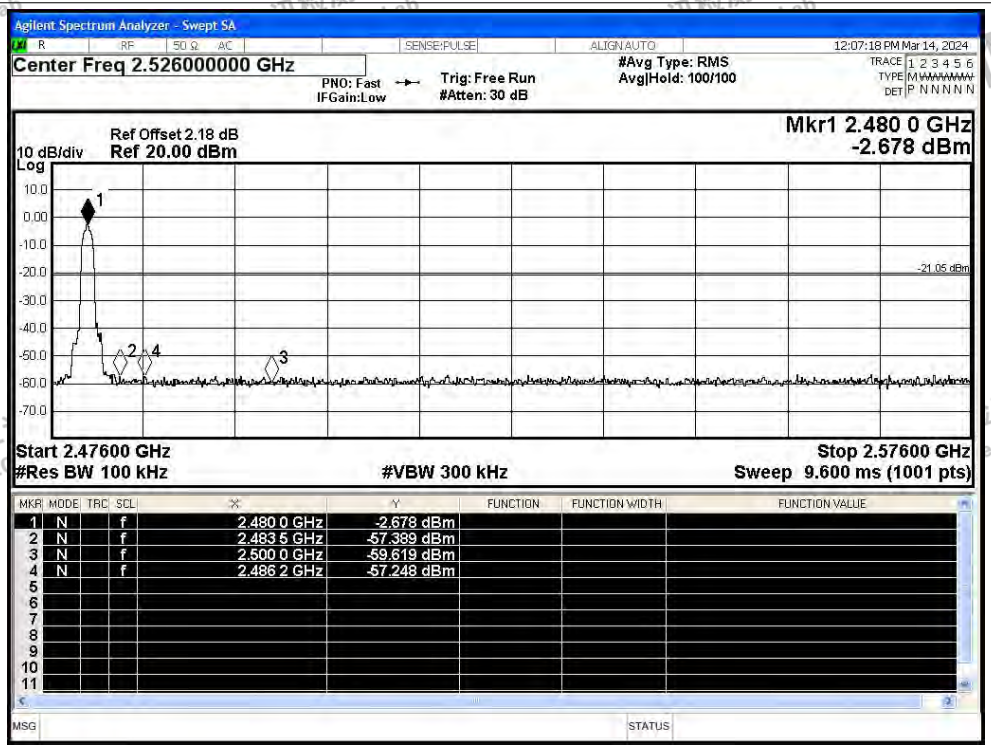
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



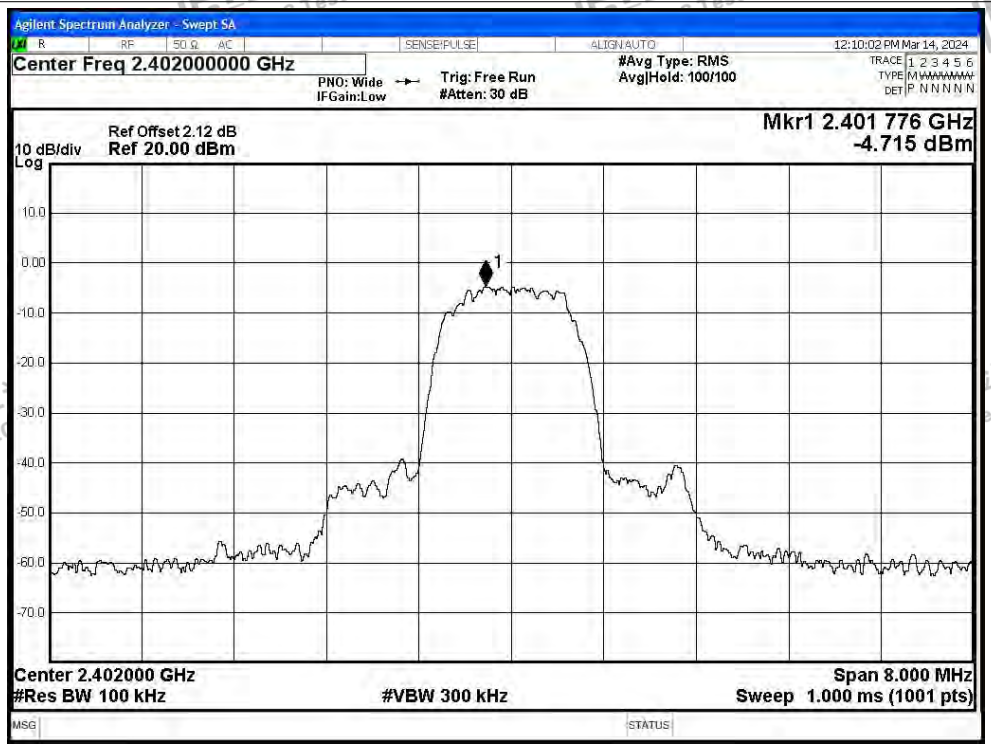
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



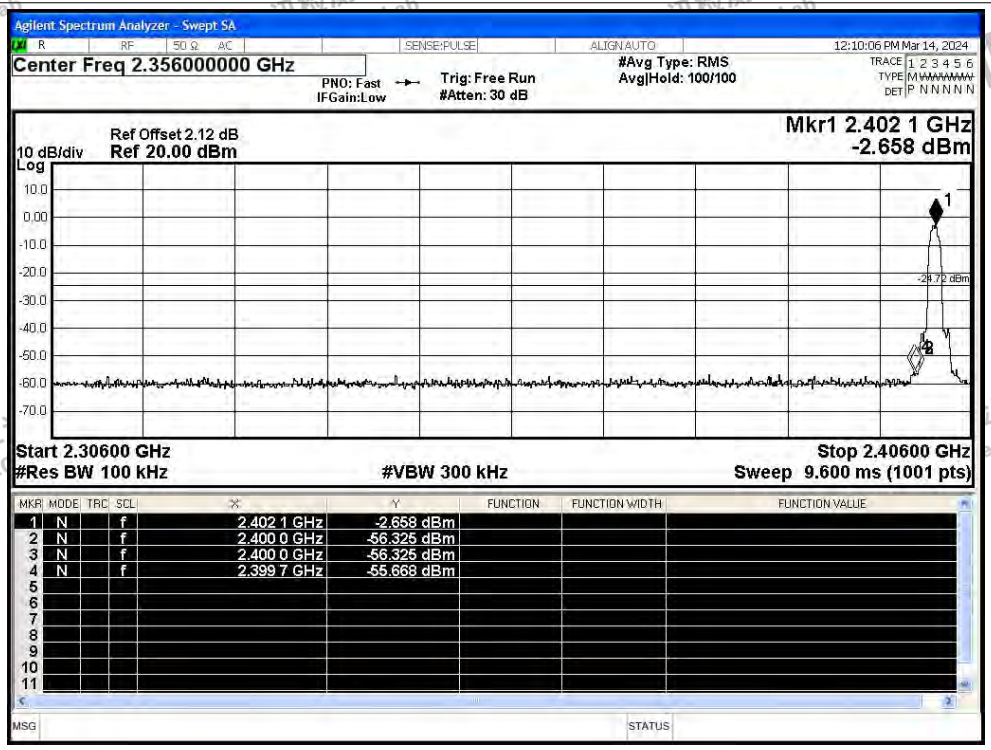
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



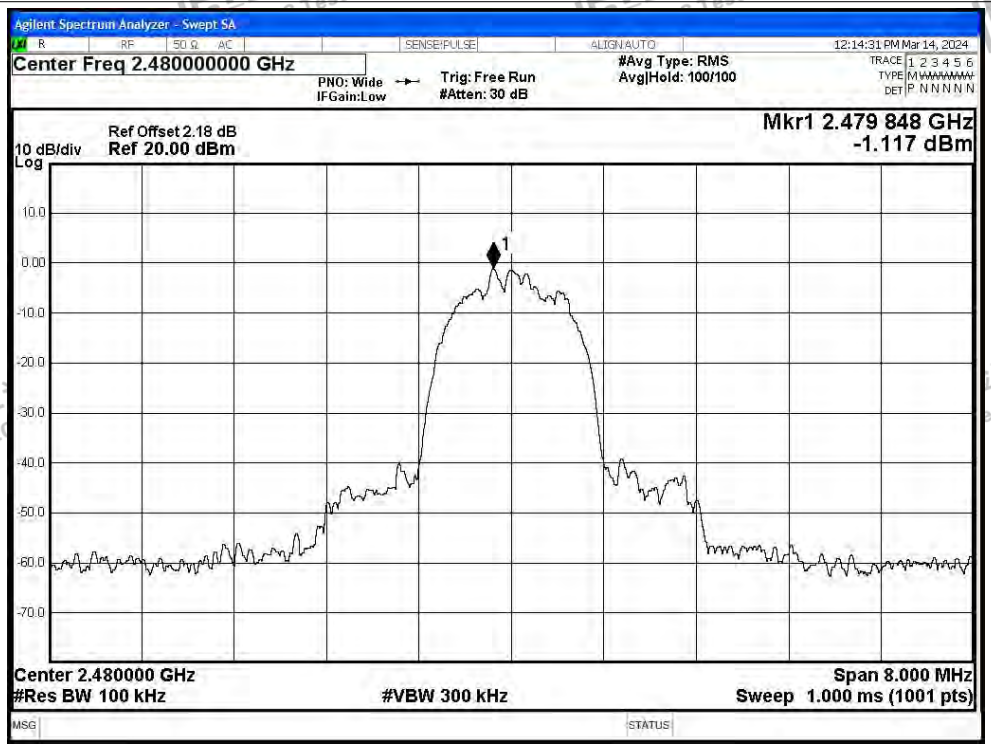
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



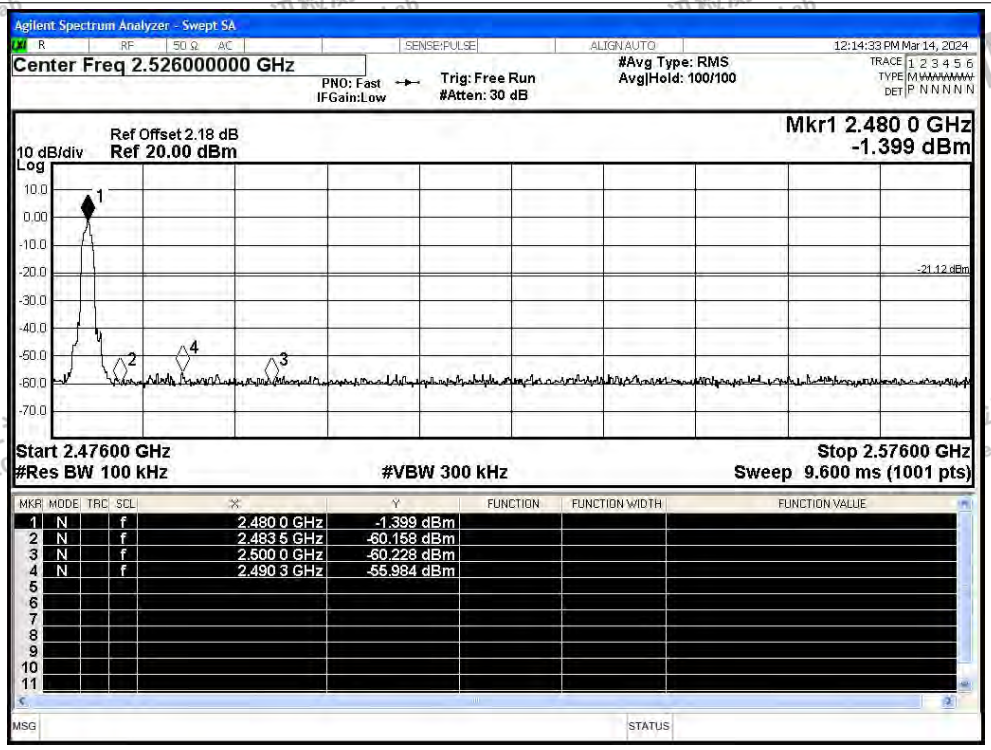
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



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



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

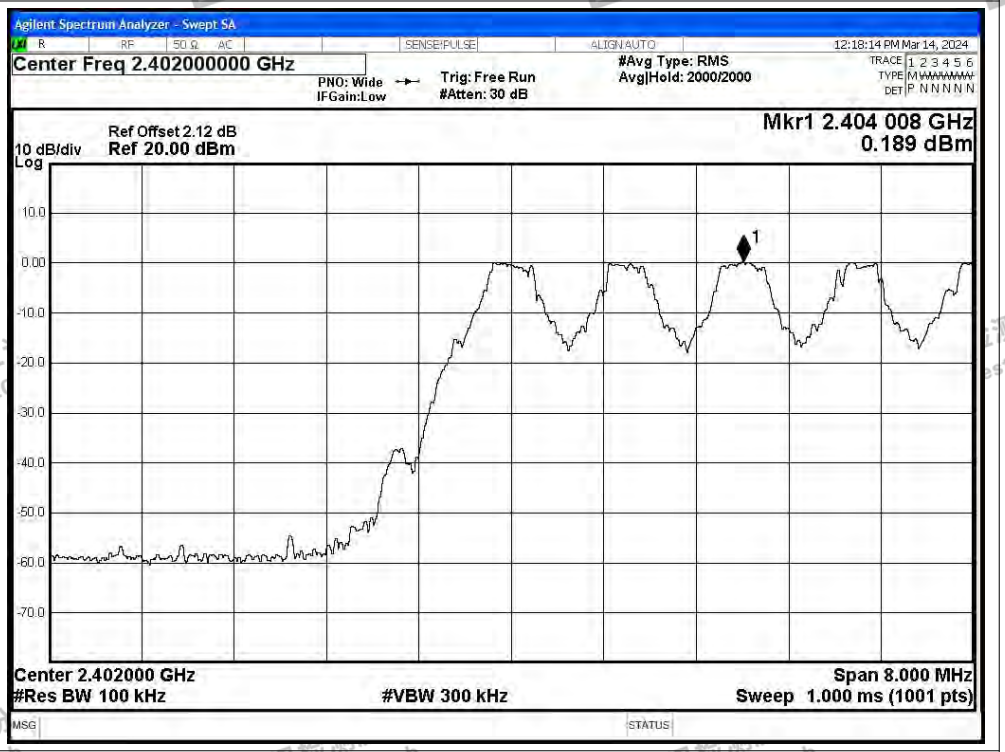


(Hopping)

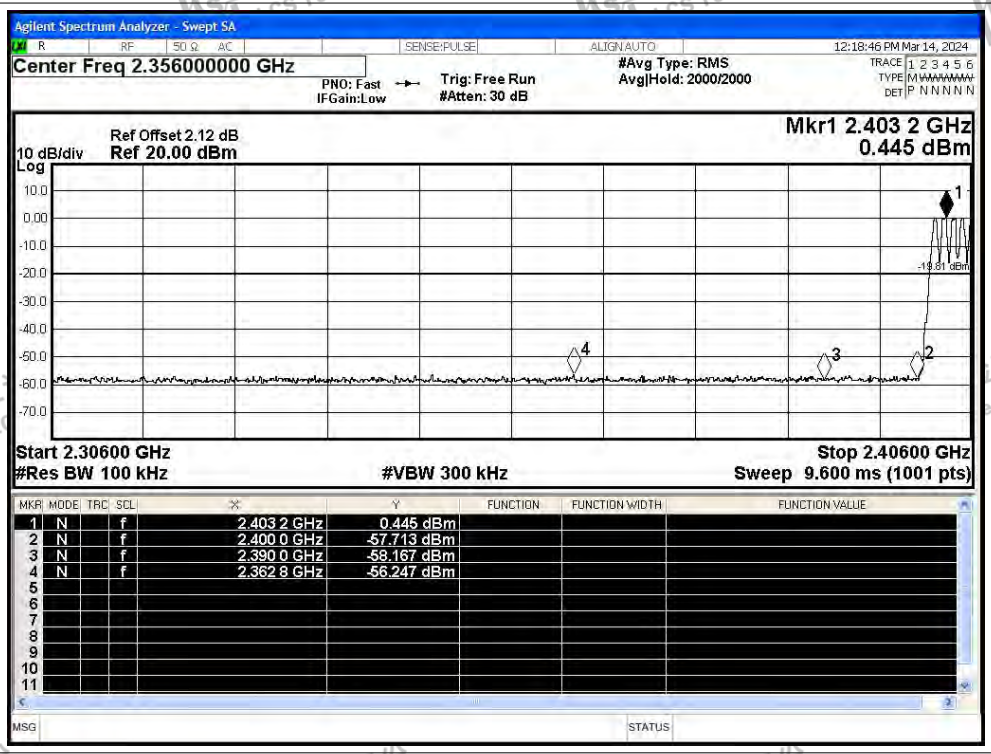
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-56.44	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-56.43	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-53.62	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-52.67	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-54.98	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-54.57	-20	Pass

Test Graphs

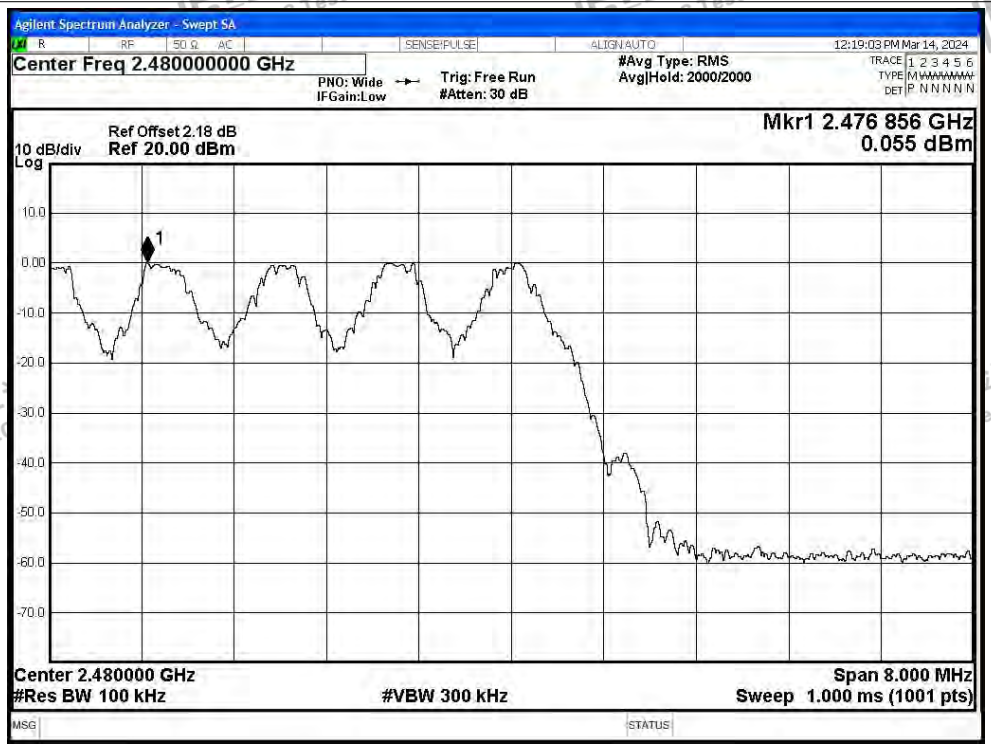
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



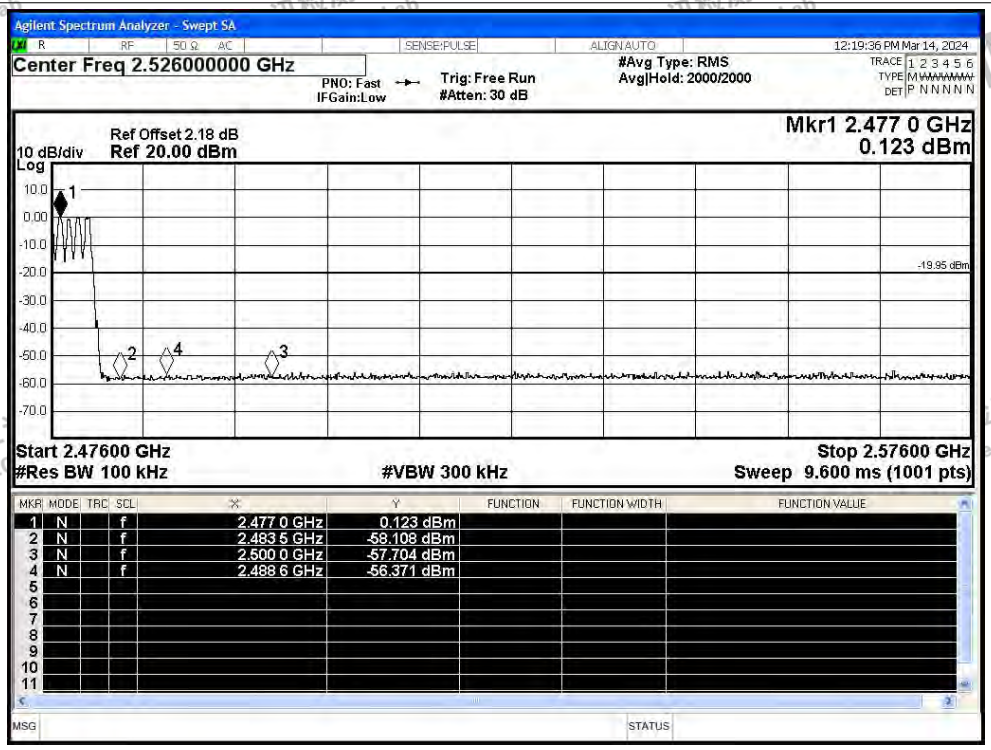
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



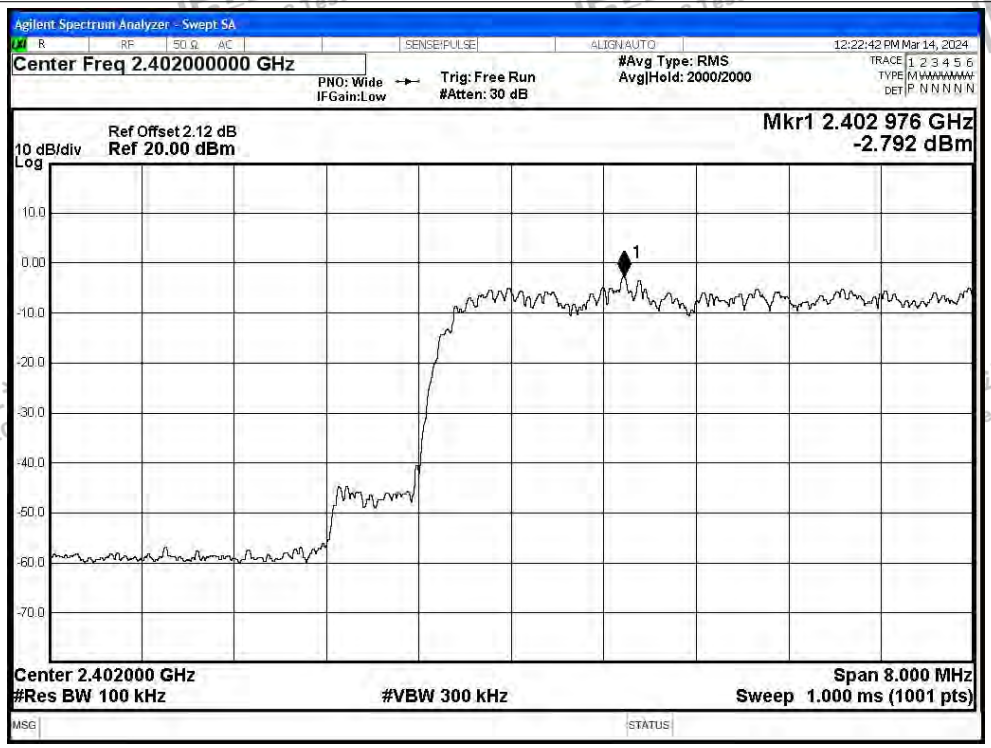
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



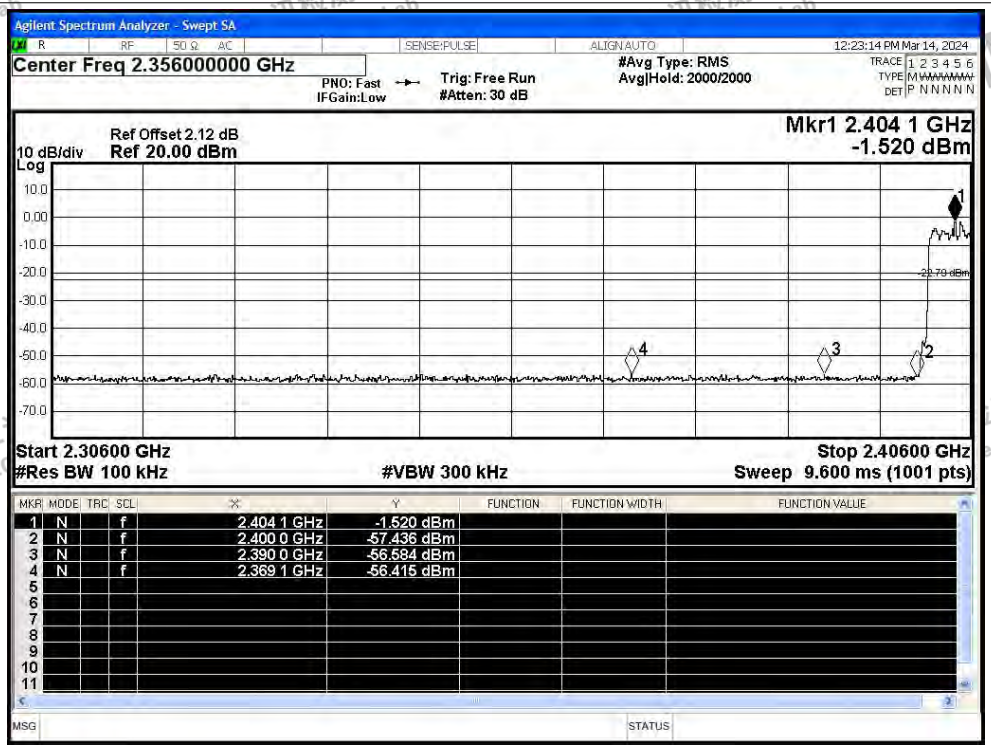
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



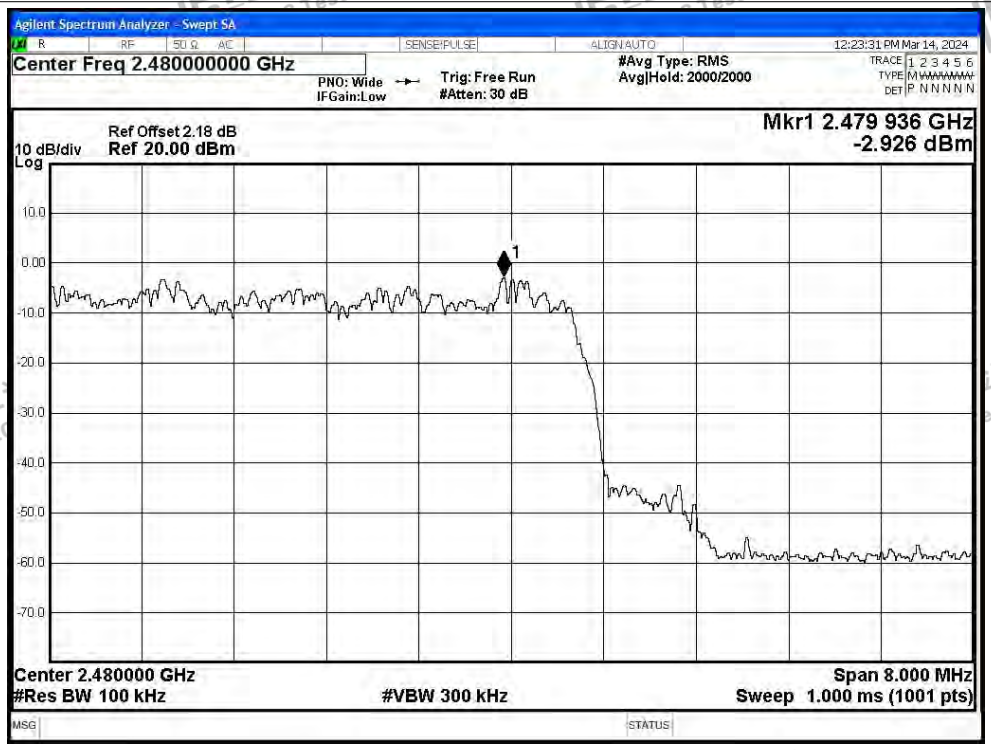
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



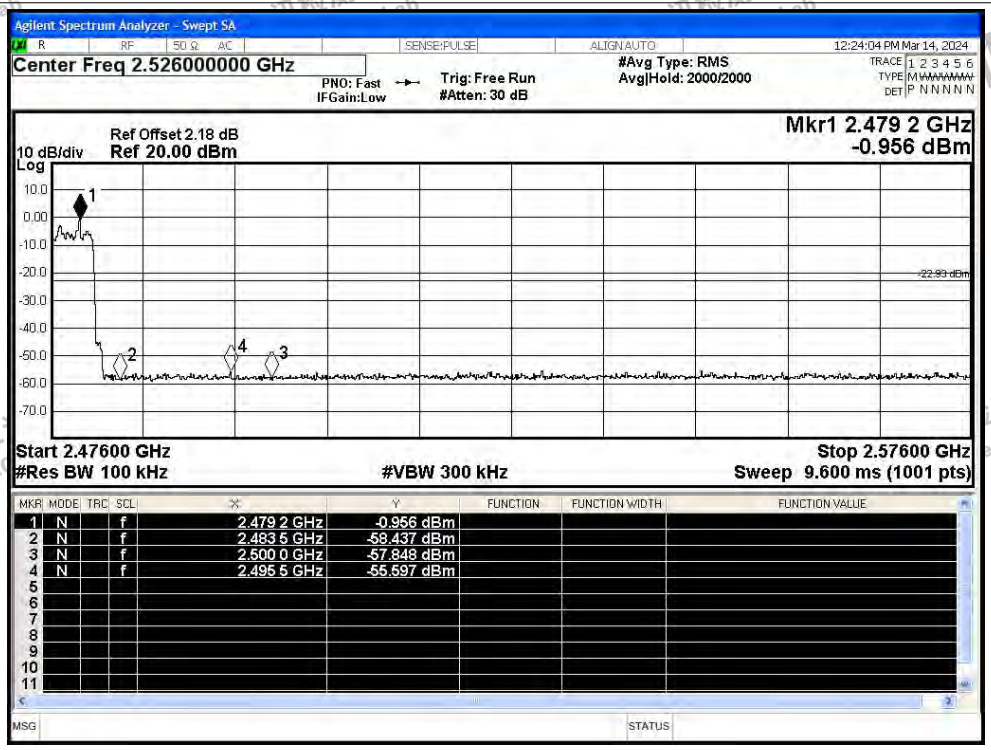
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



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

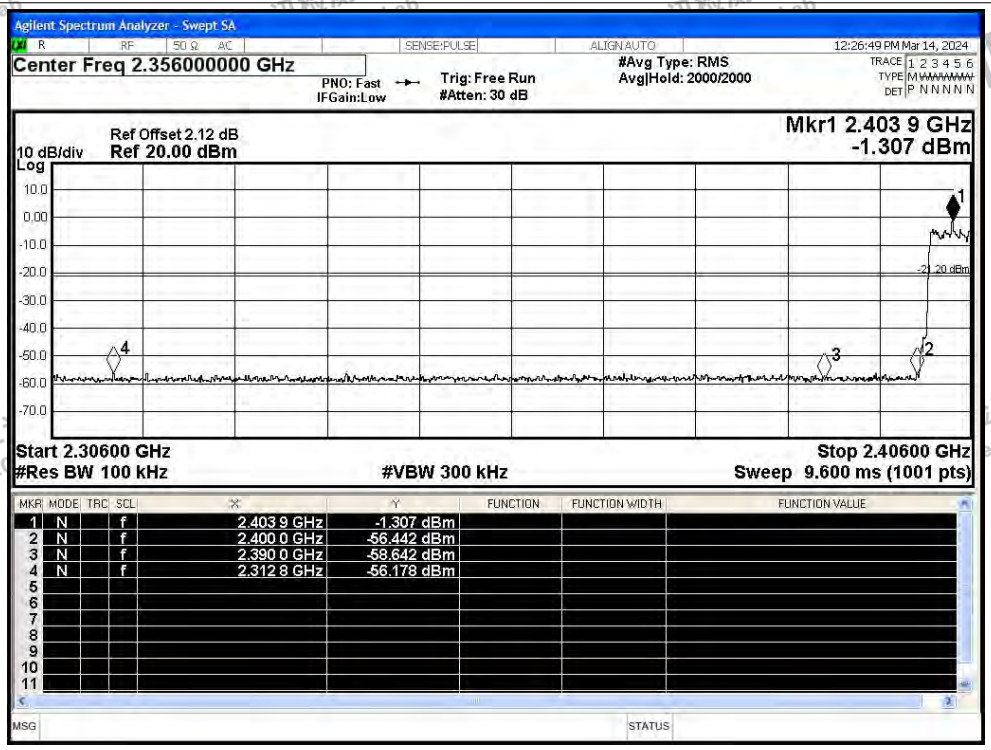


Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission

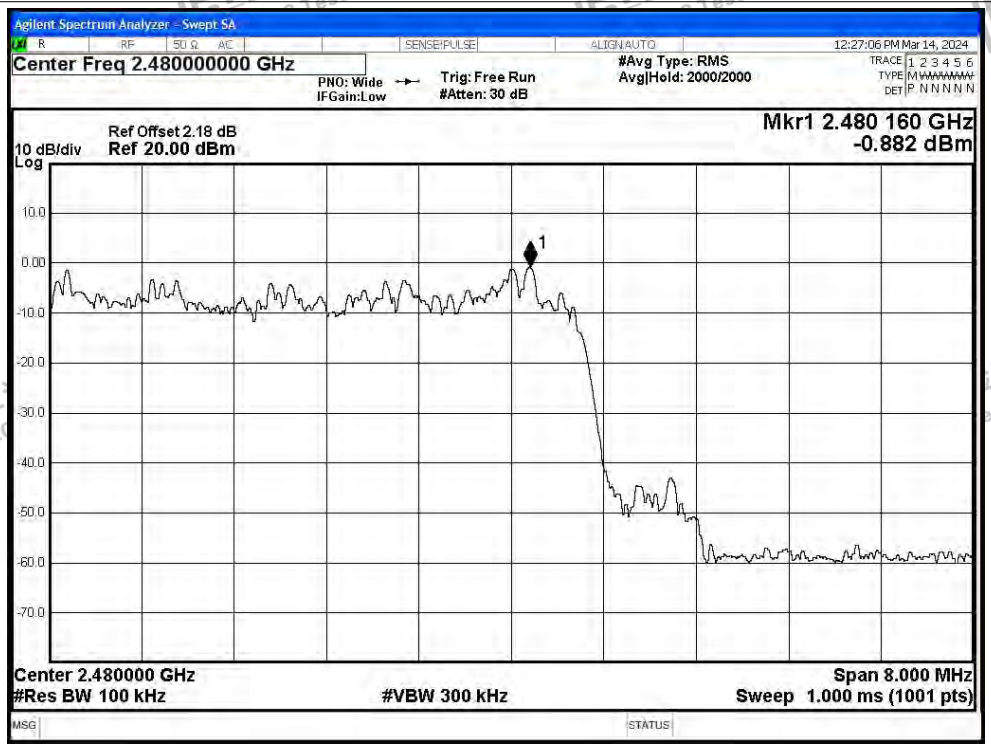


Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref

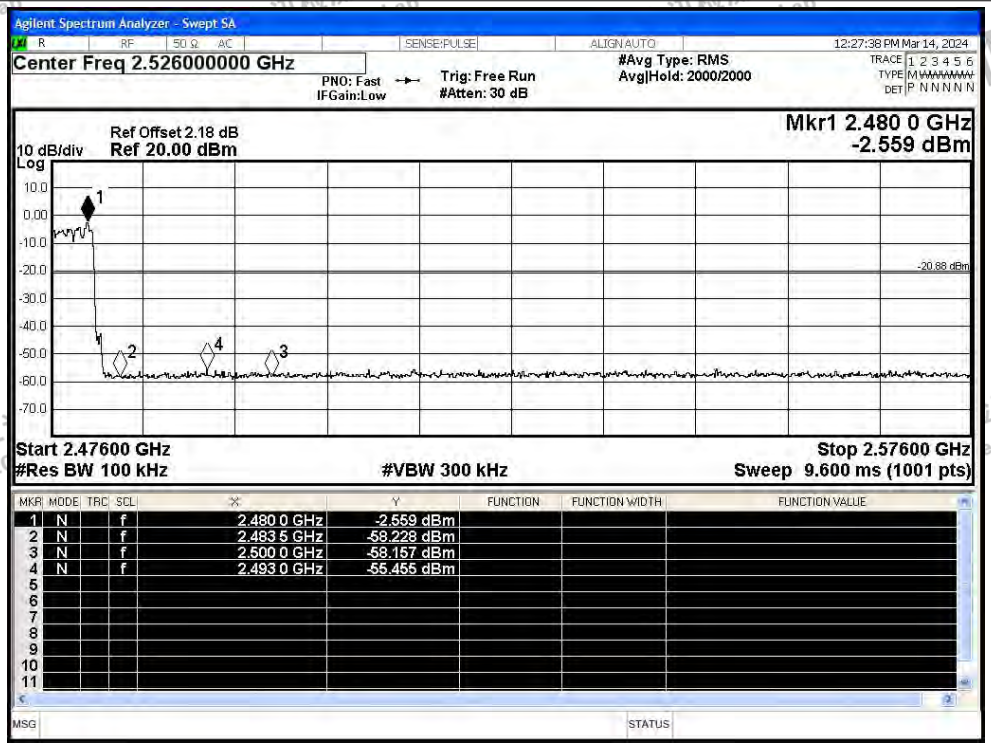
Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission



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



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

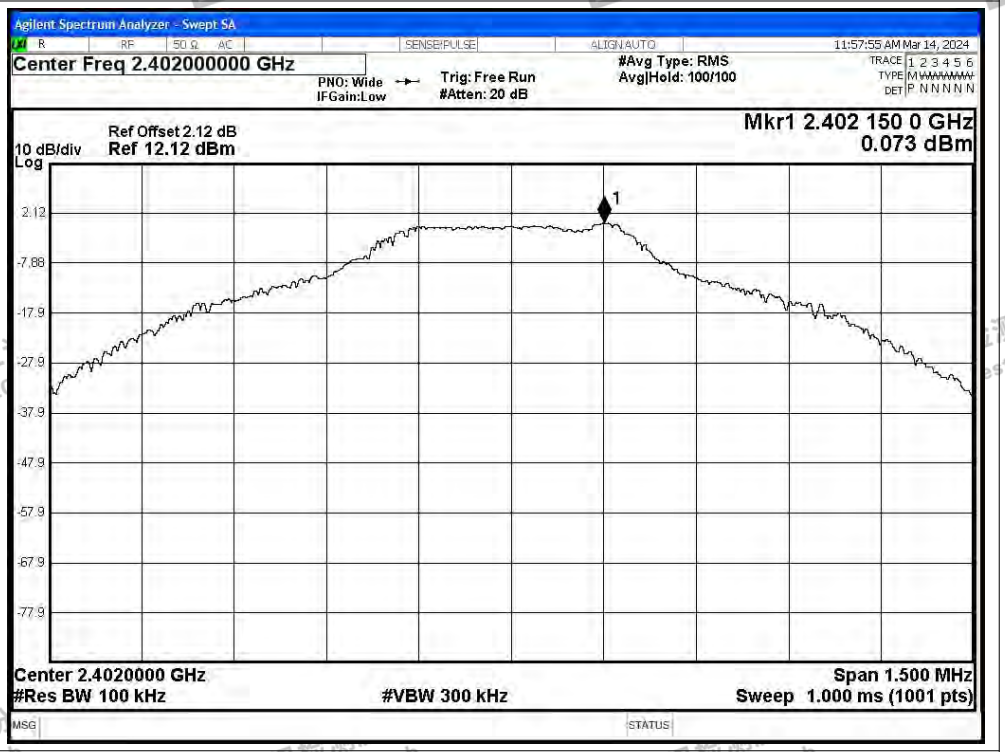


A.7 Conducted RF Spurious Emission

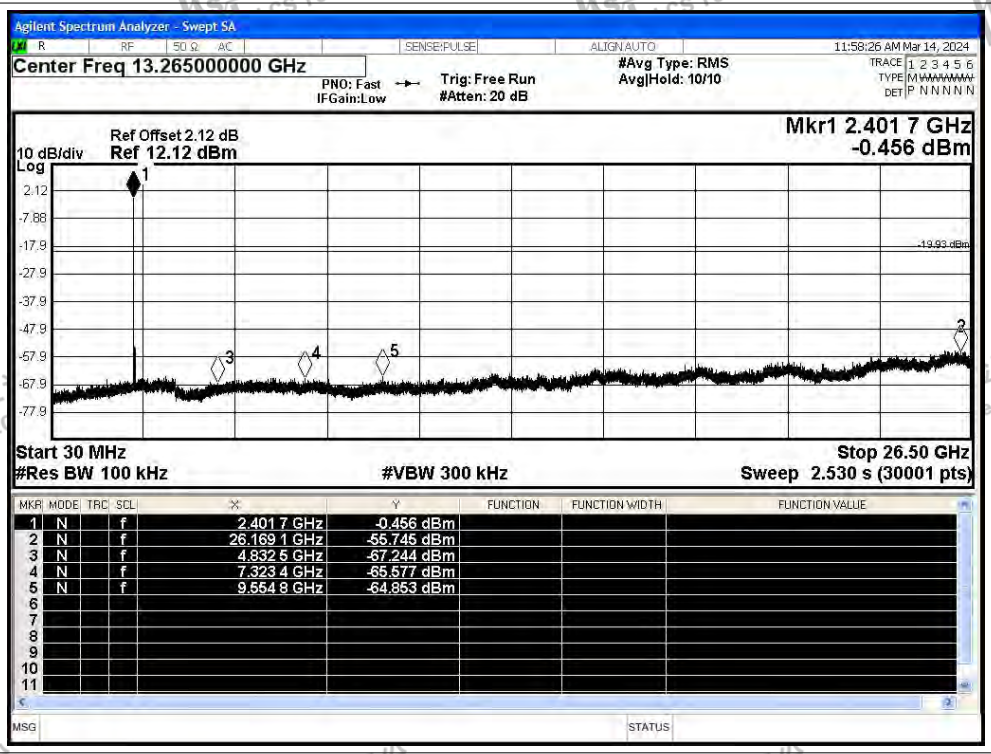
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-55.82	-20	Pass
NVNT	1-DH5	2441	Ant1	-54.94	-20	Pass
NVNT	1-DH5	2480	Ant1	-55.74	-20	Pass
NVNT	2-DH5	2402	Ant1	-54.44	-20	Pass
NVNT	2-DH5	2441	Ant1	-54.05	-20	Pass
NVNT	2-DH5	2480	Ant1	-53.71	-20	Pass
NVNT	3-DH5	2402	Ant1	-54.55	-20	Pass
NVNT	3-DH5	2441	Ant1	-53.08	-20	Pass
NVNT	3-DH5	2480	Ant1	-53.52	-20	Pass

Test Graphs

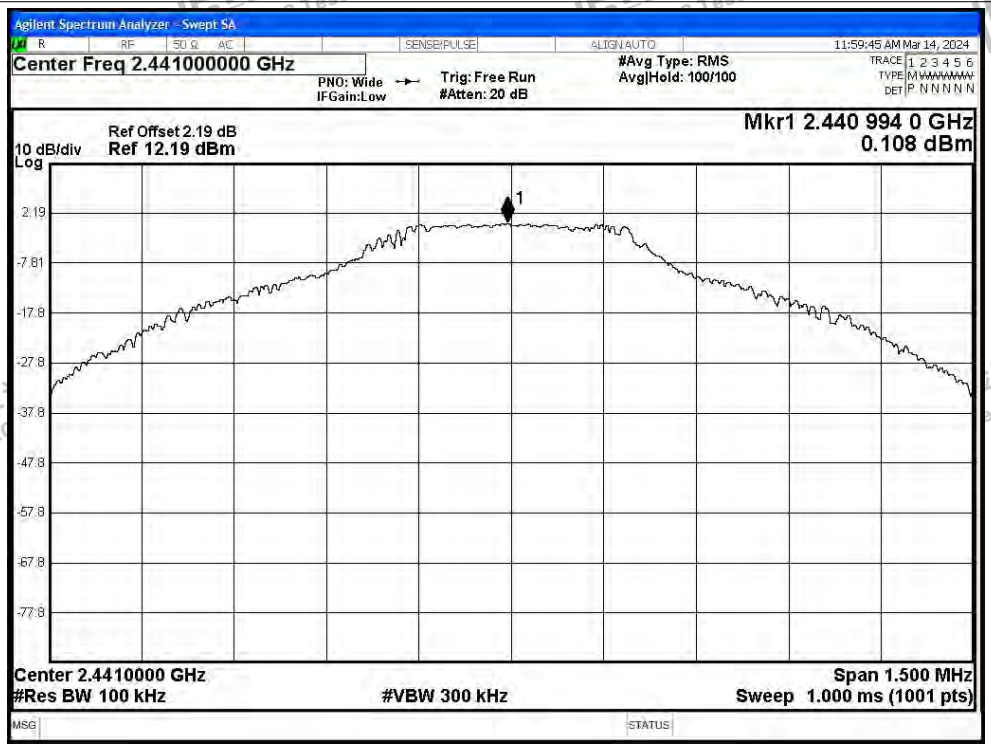
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



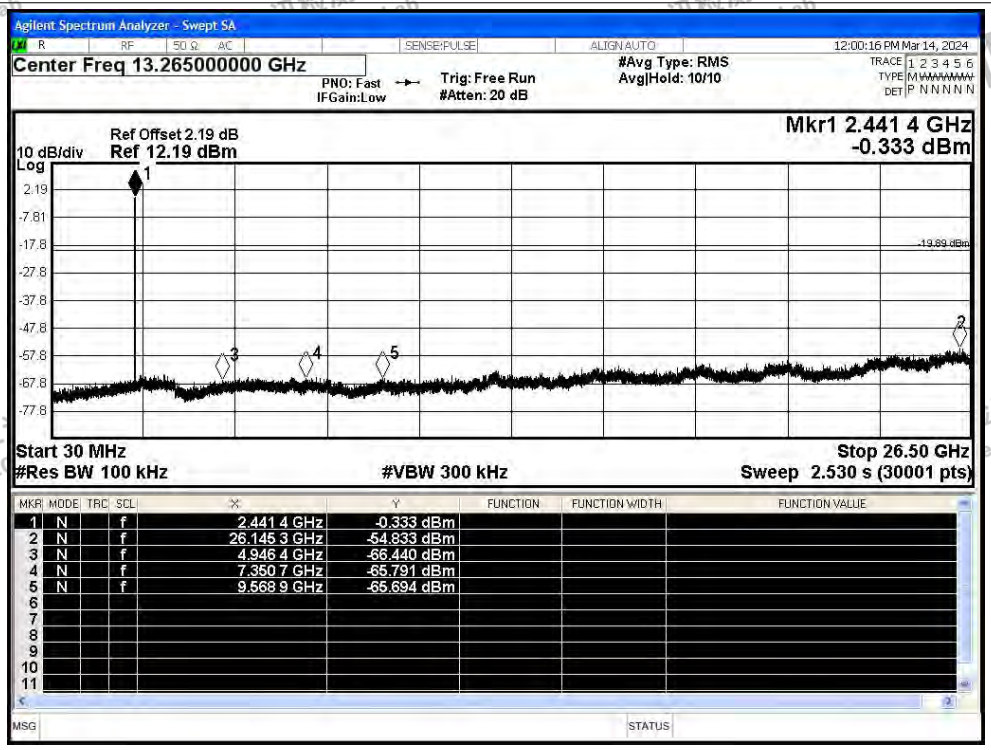
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



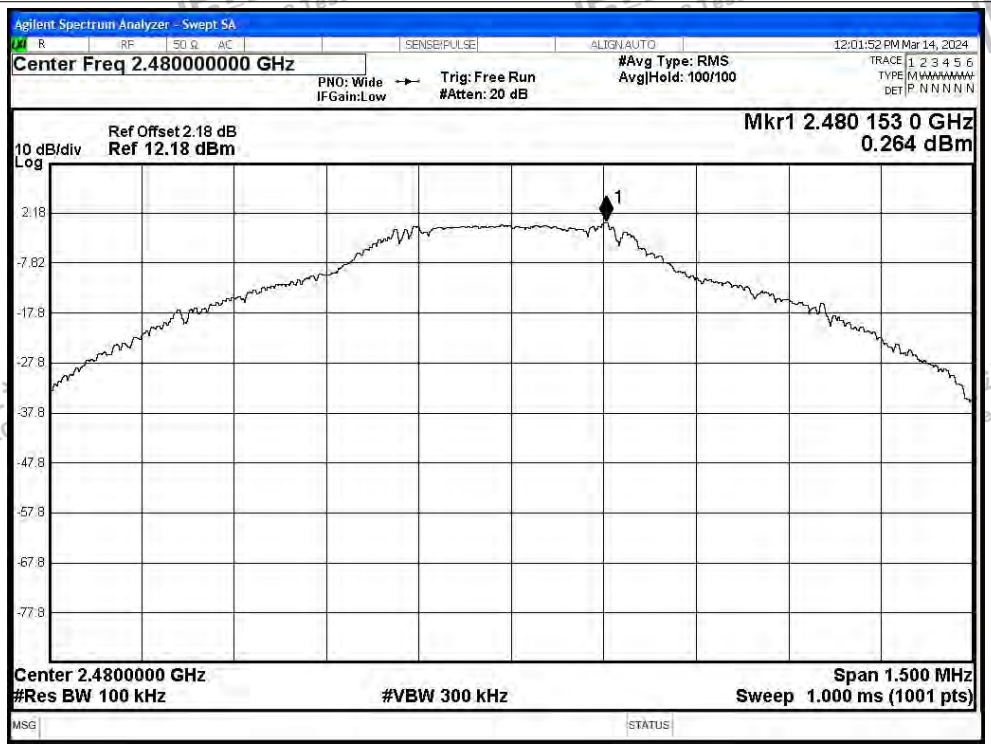
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



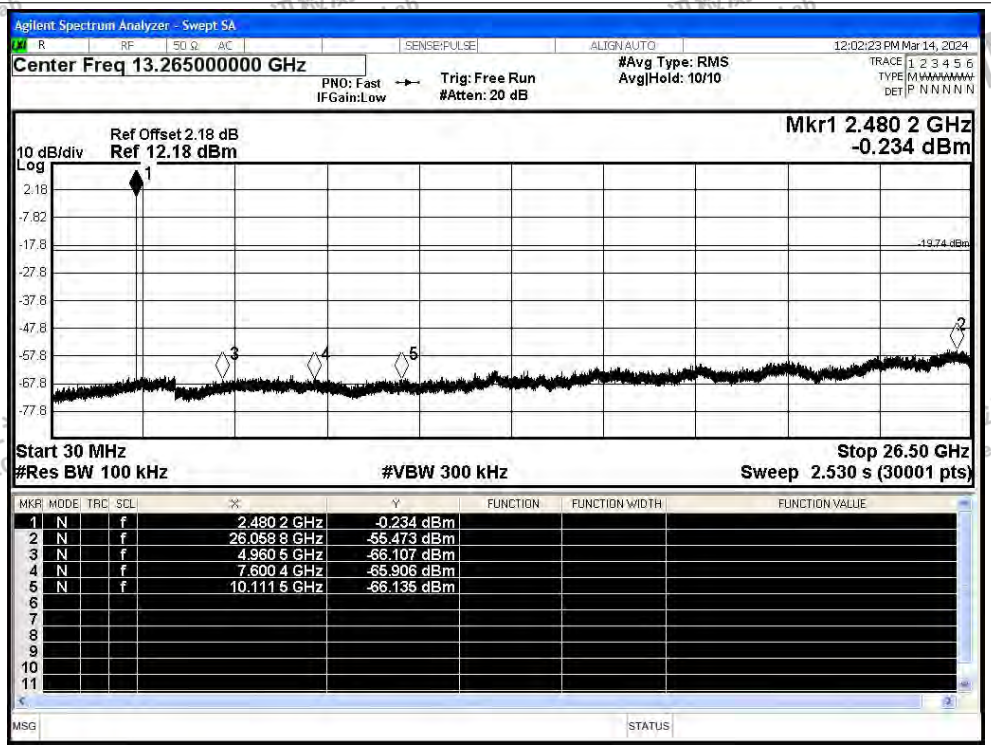
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



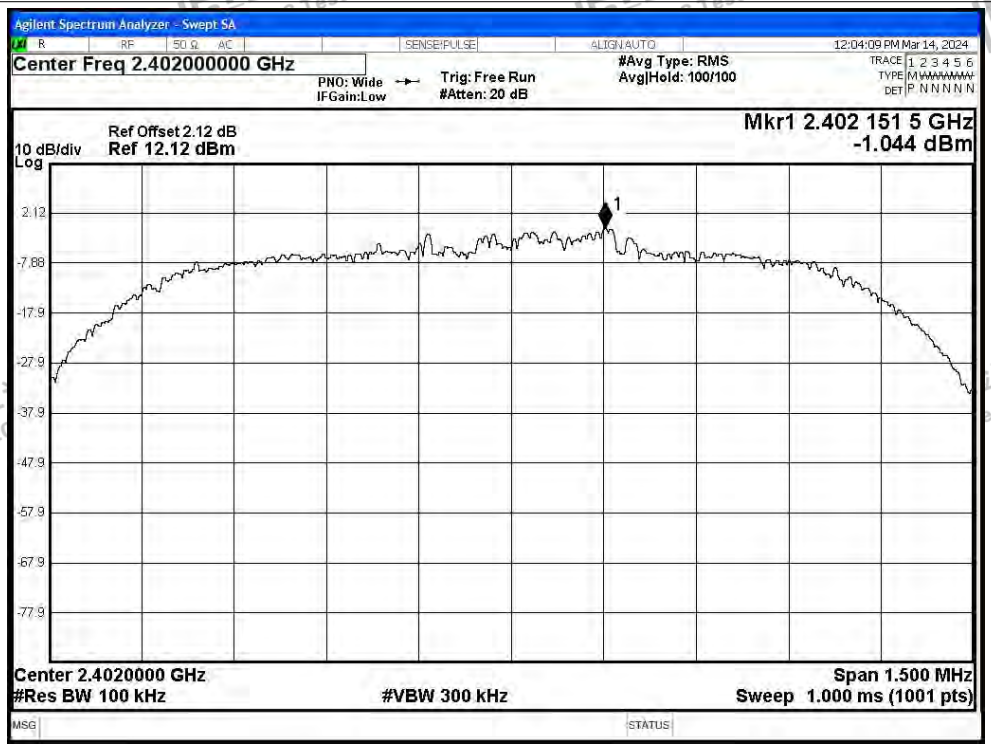
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



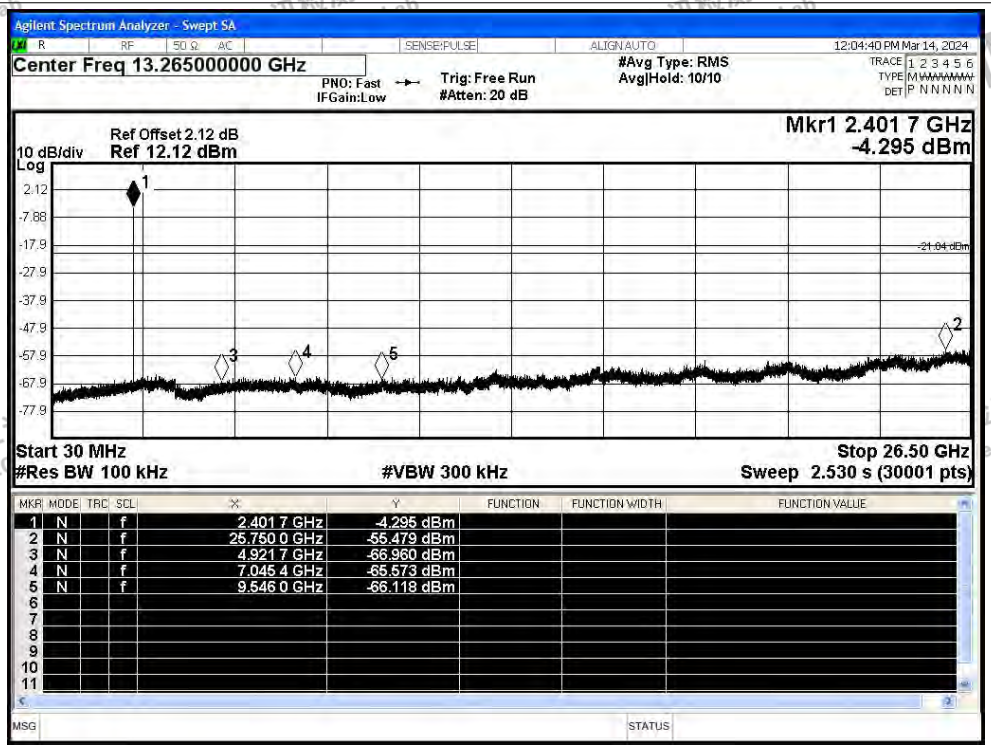
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



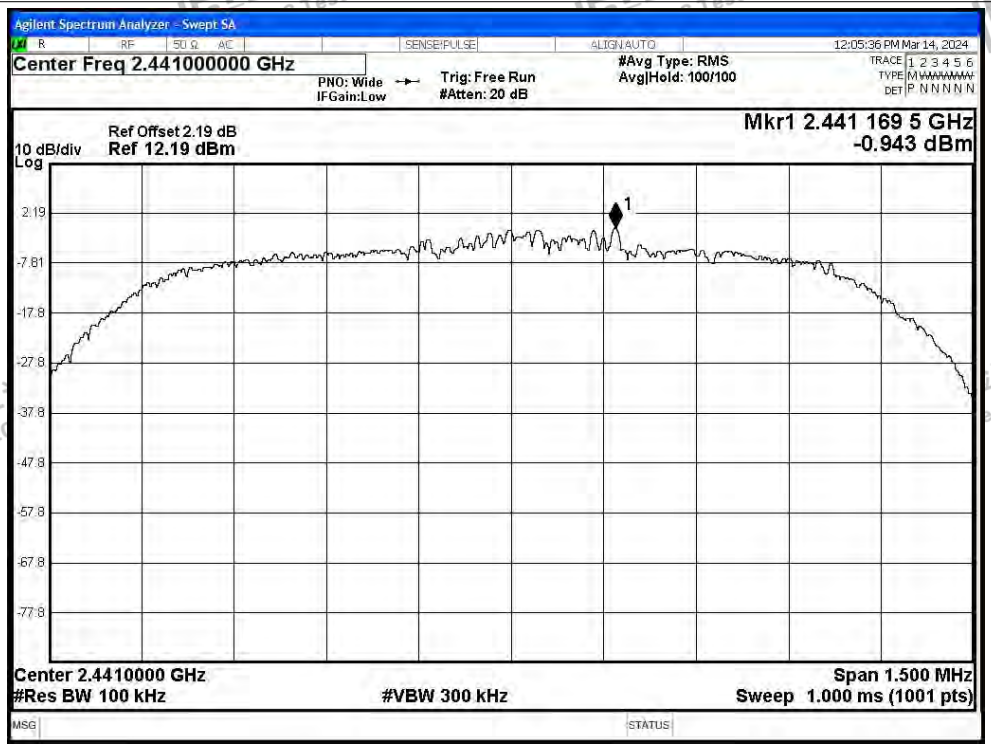
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



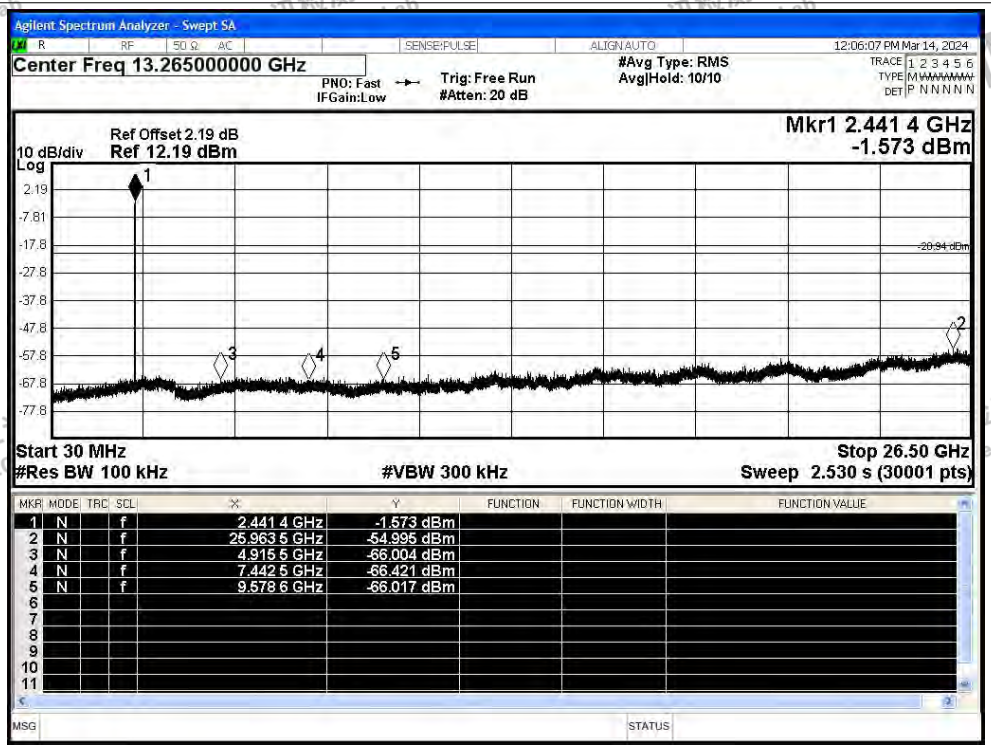
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



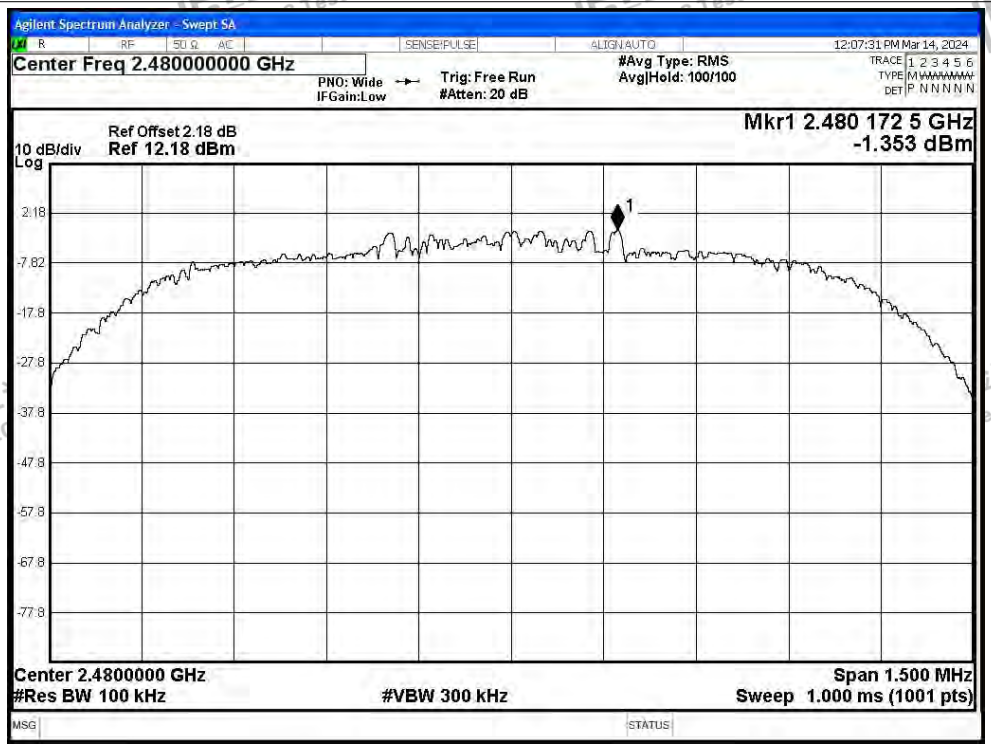
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



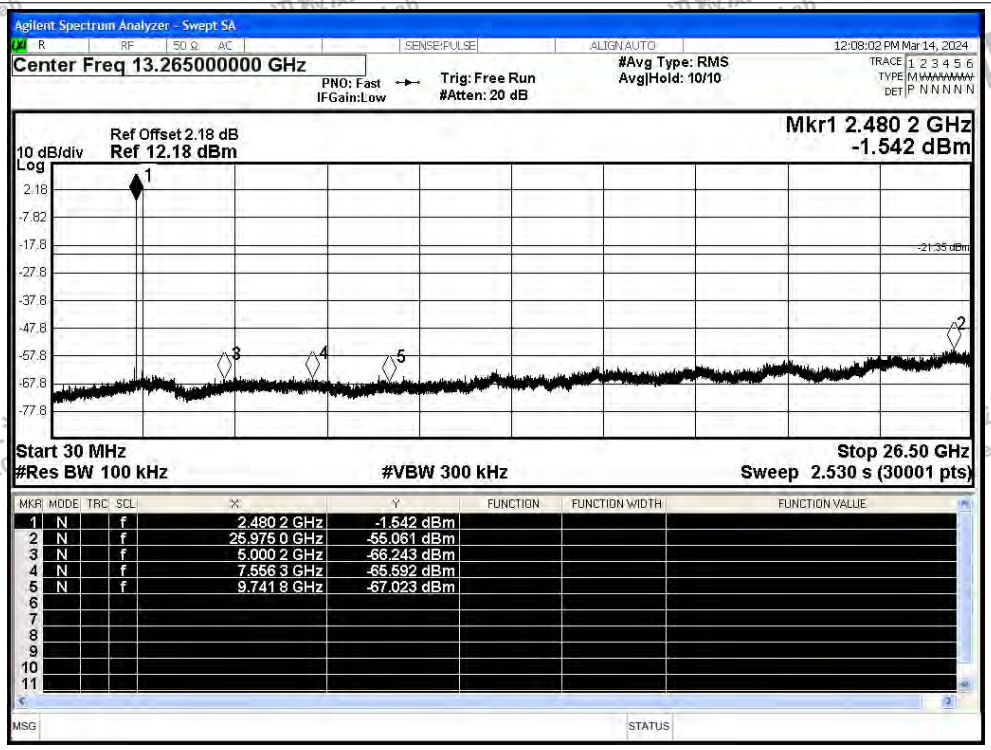
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



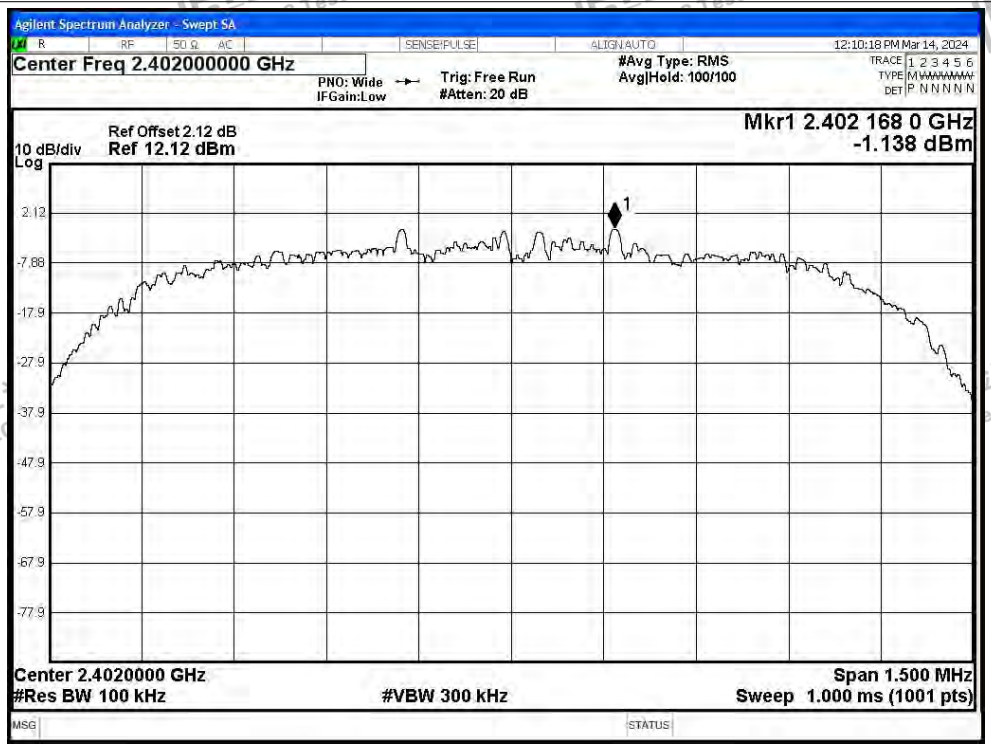
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



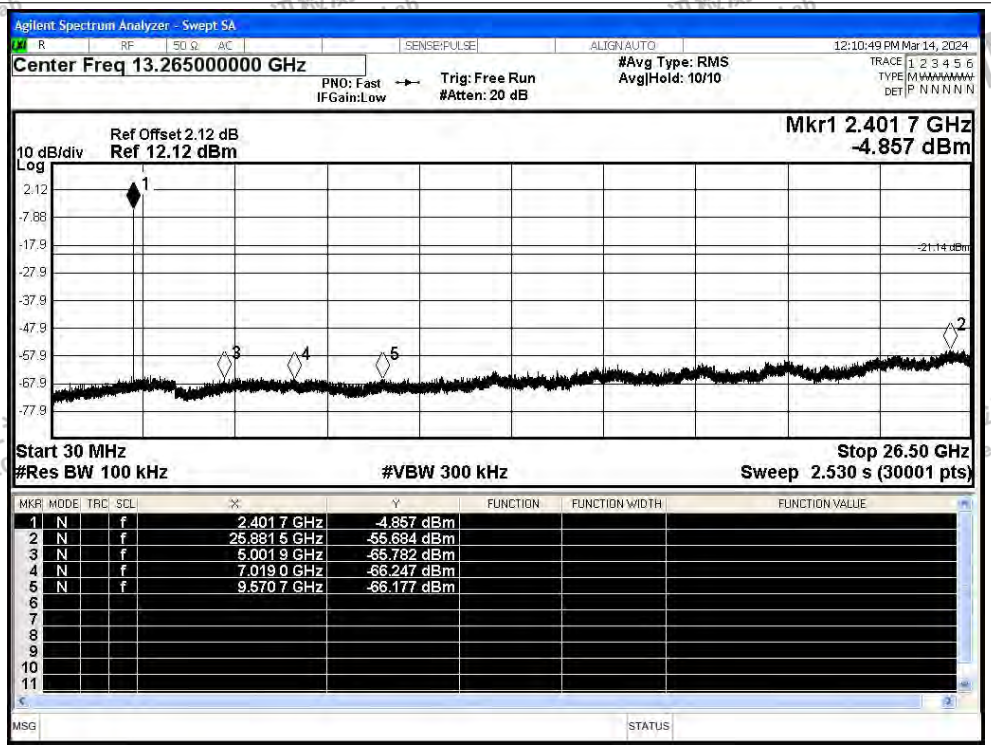
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



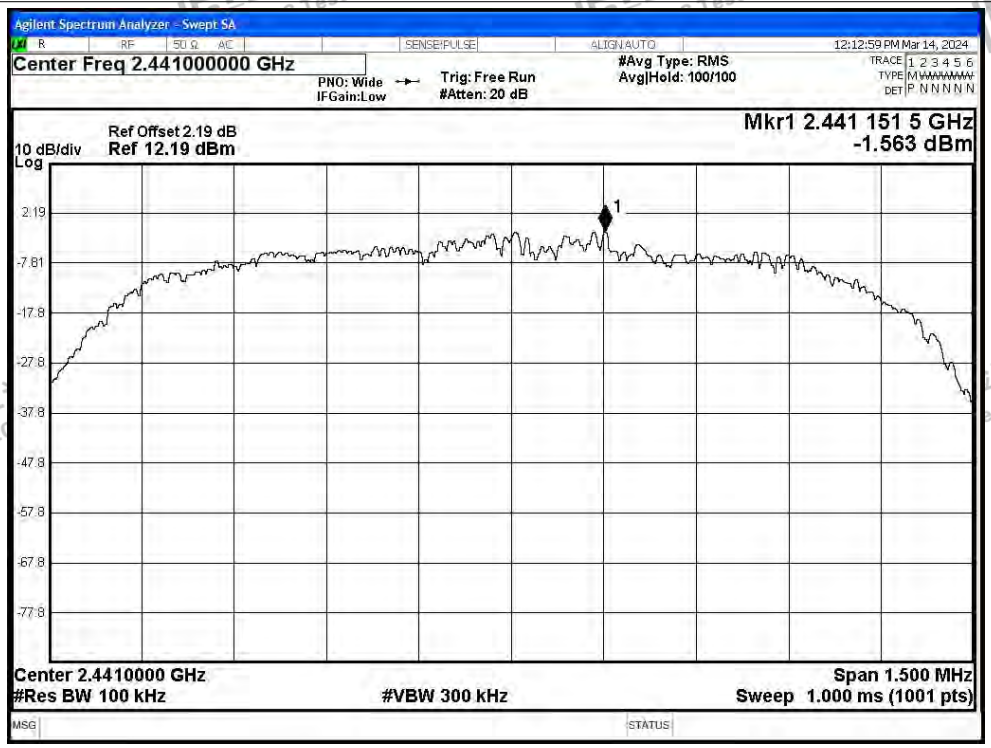
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



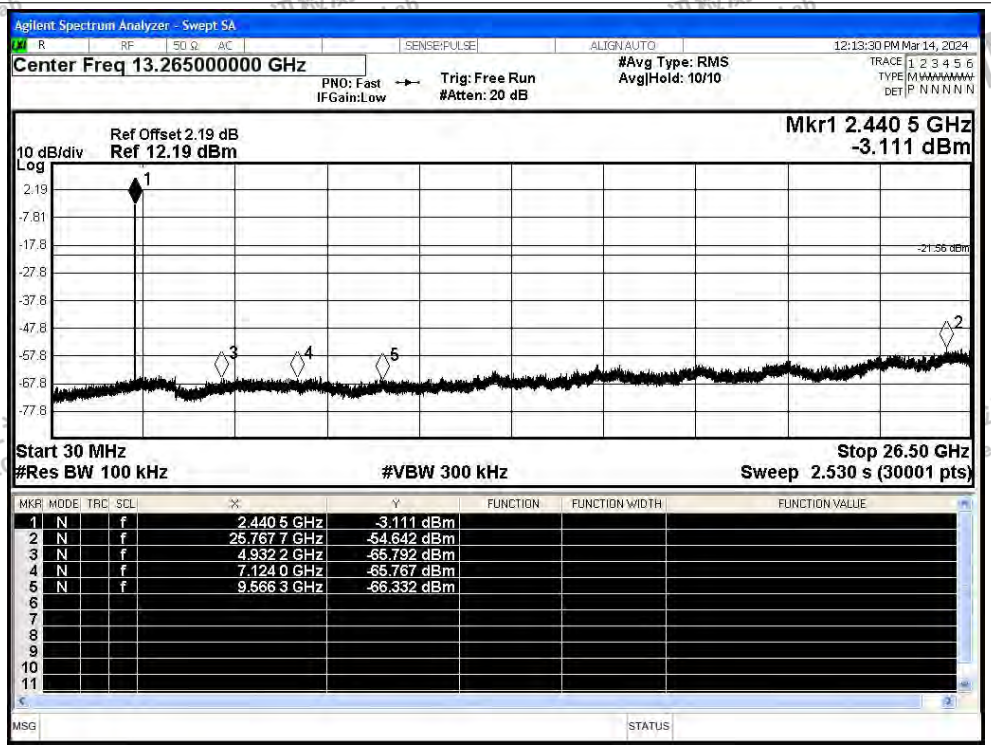
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission



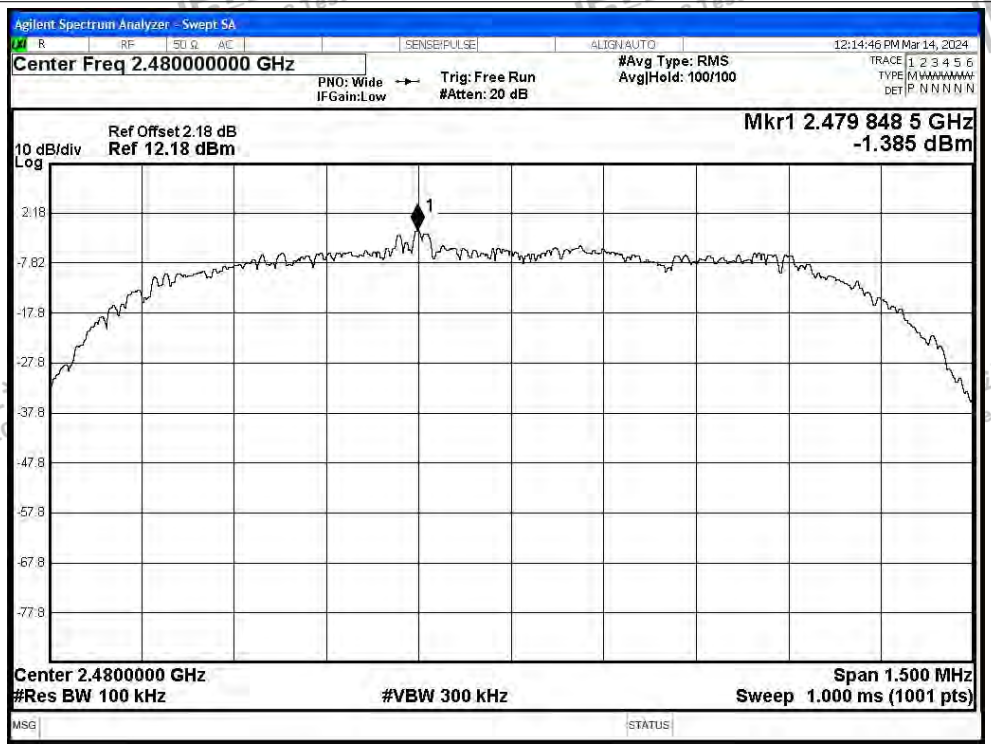
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



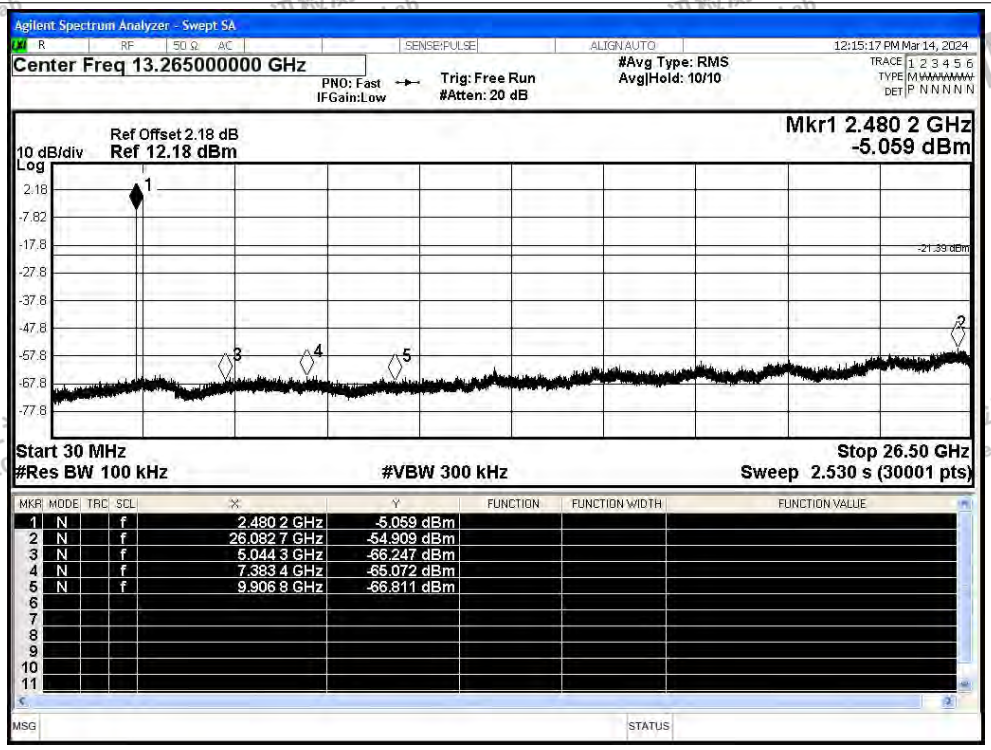
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission

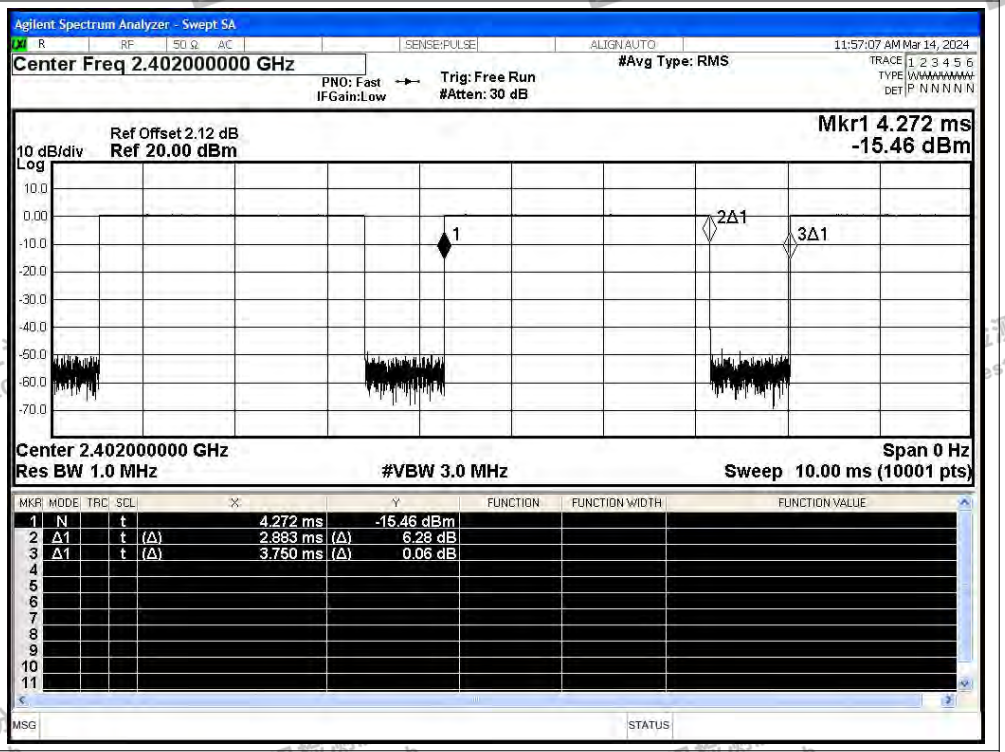


A.8 Duty Cycle

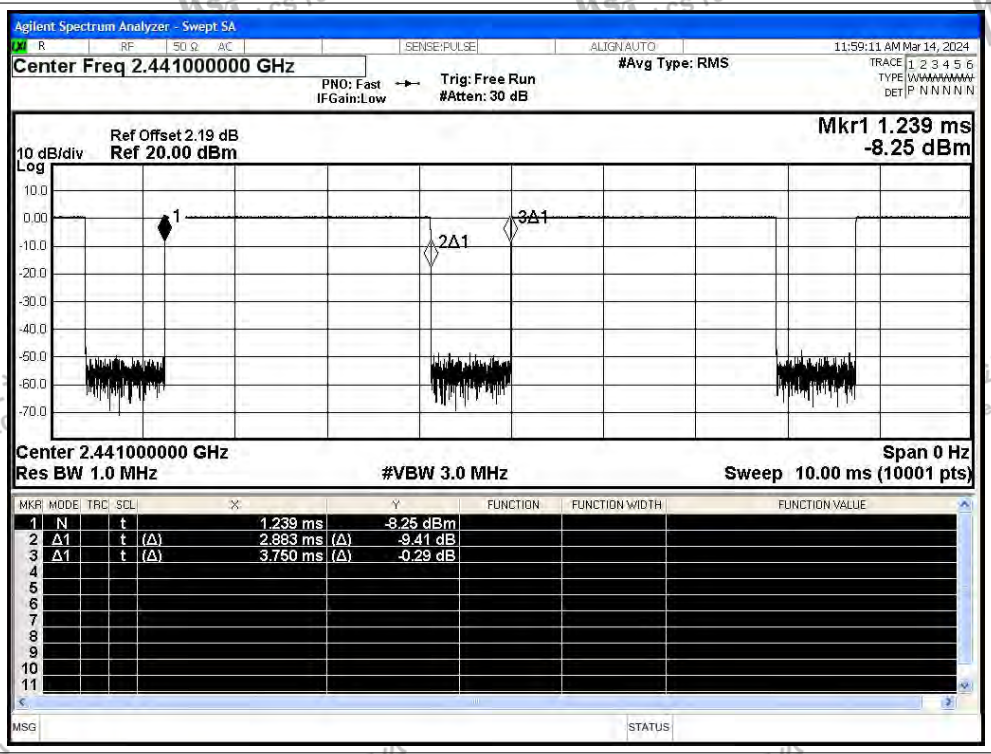
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	76.88	1.14	0.35
NVNT	1-DH5	2441	Ant1	76.88	1.14	0.35
NVNT	1-DH5	2480	Ant1	76.88	1.14	0.35
NVNT	2-DH5	2402	Ant1	76.96	1.14	0.35
NVNT	2-DH5	2441	Ant1	76.96	1.14	0.35
NVNT	2-DH5	2480	Ant1	76.96	1.14	0.35
NVNT	3-DH5	2402	Ant1	77.01	1.13	0.35
NVNT	3-DH5	2441	Ant1	77.01	1.13	0.35
NVNT	3-DH5	2480	Ant1	77.01	1.13	0.35

Test Graphs

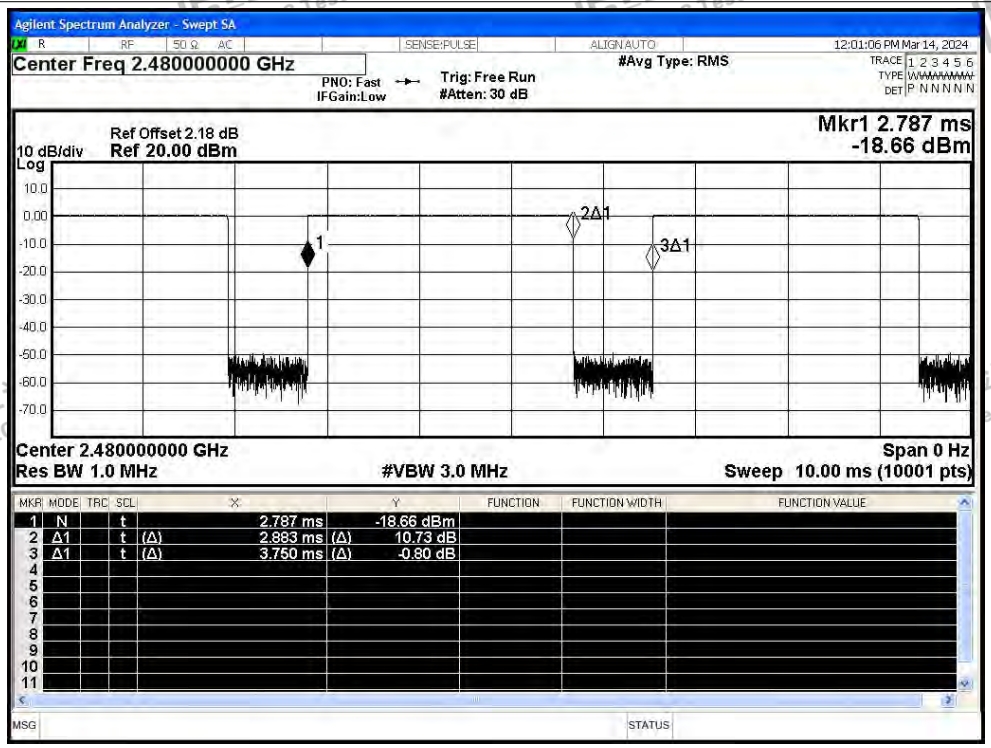
Duty Cycle NVNT 1-DH5 2402MHz Ant1



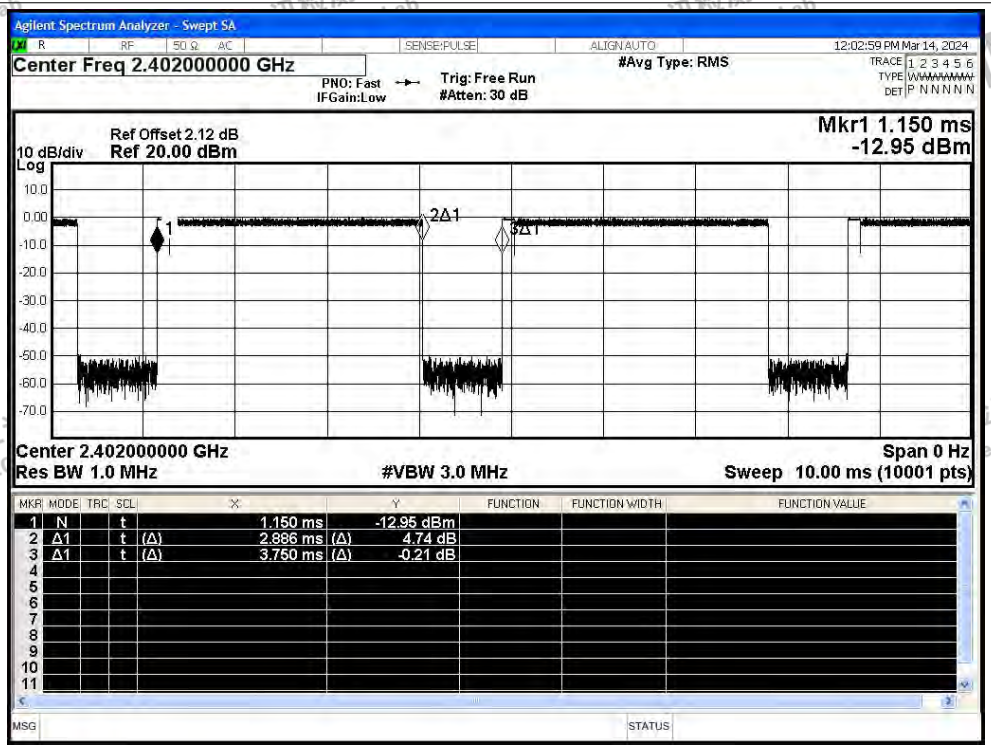
Duty Cycle NVNT 1-DH5 2441MHz Ant1



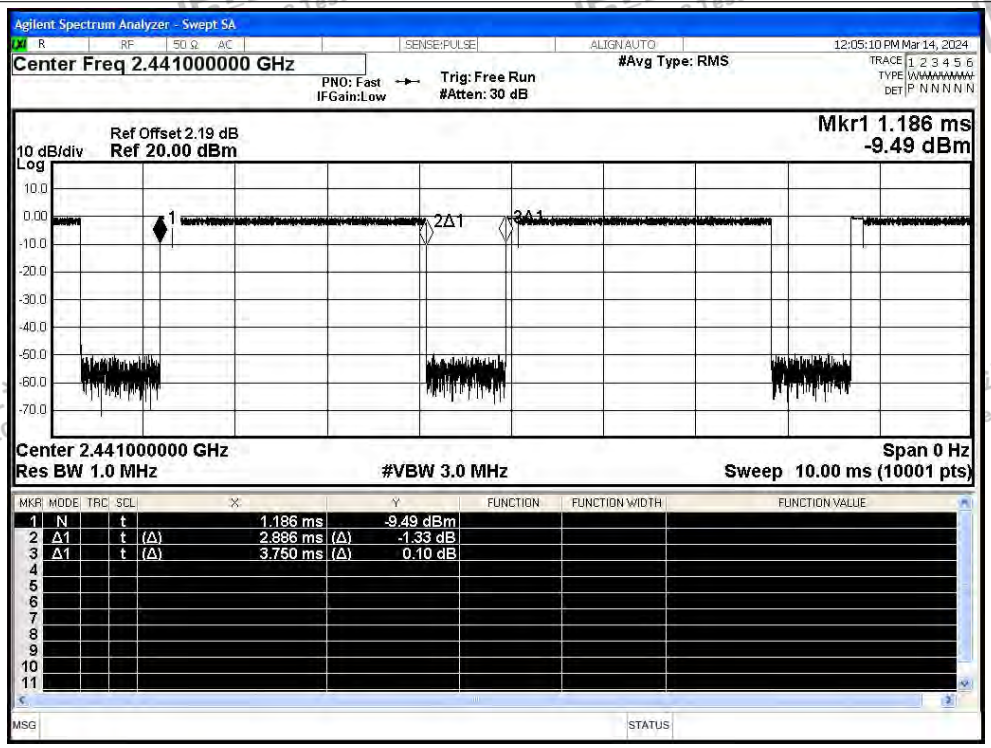
Duty Cycle NVNT 1-DH5 2480MHz Ant1



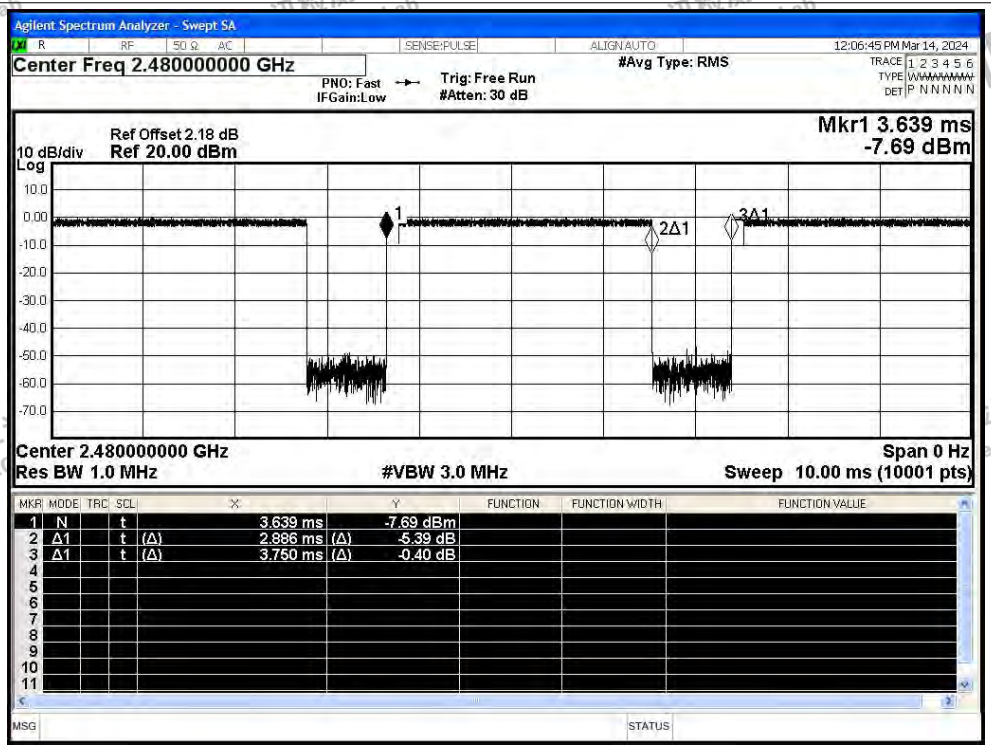
Duty Cycle NVNT 2-DH5 2402MHz Ant1



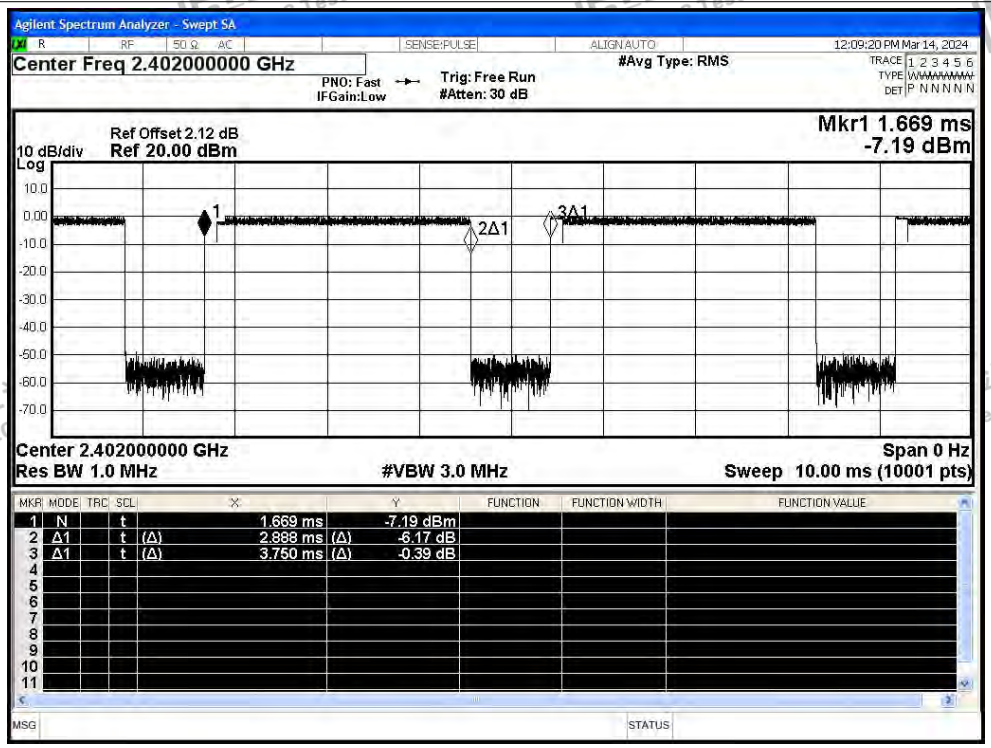
Duty Cycle NVNT 2-DH5 2441MHz Ant1



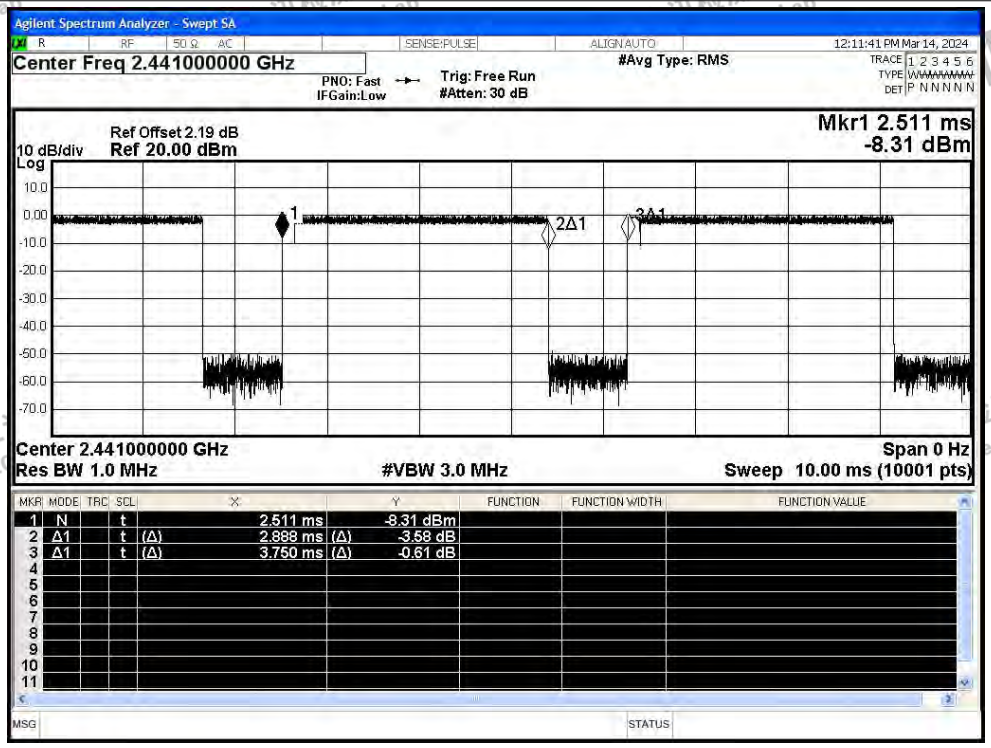
Duty Cycle NVNT 2-DH5 2480MHz Ant1



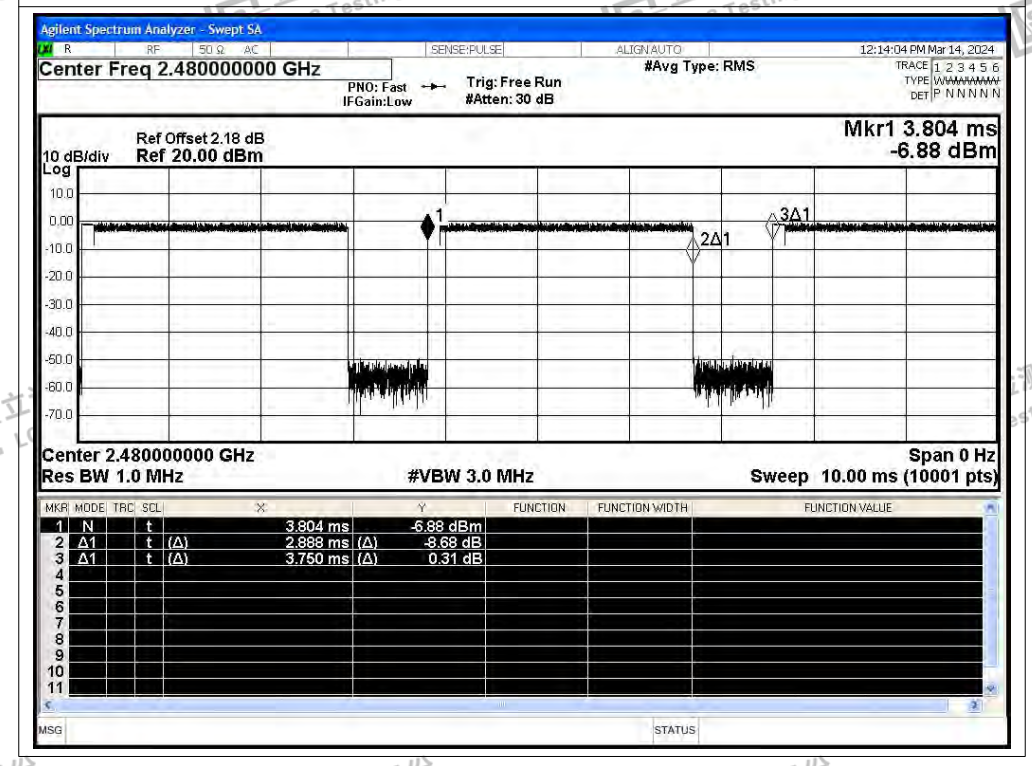
Duty Cycle NVNT 3-DH5 2402MHz Ant1



Duty Cycle NVNT 3-DH5 2441MHz Ant1



Duty Cycle NVNT 3-DH5 2480MHz Ant1



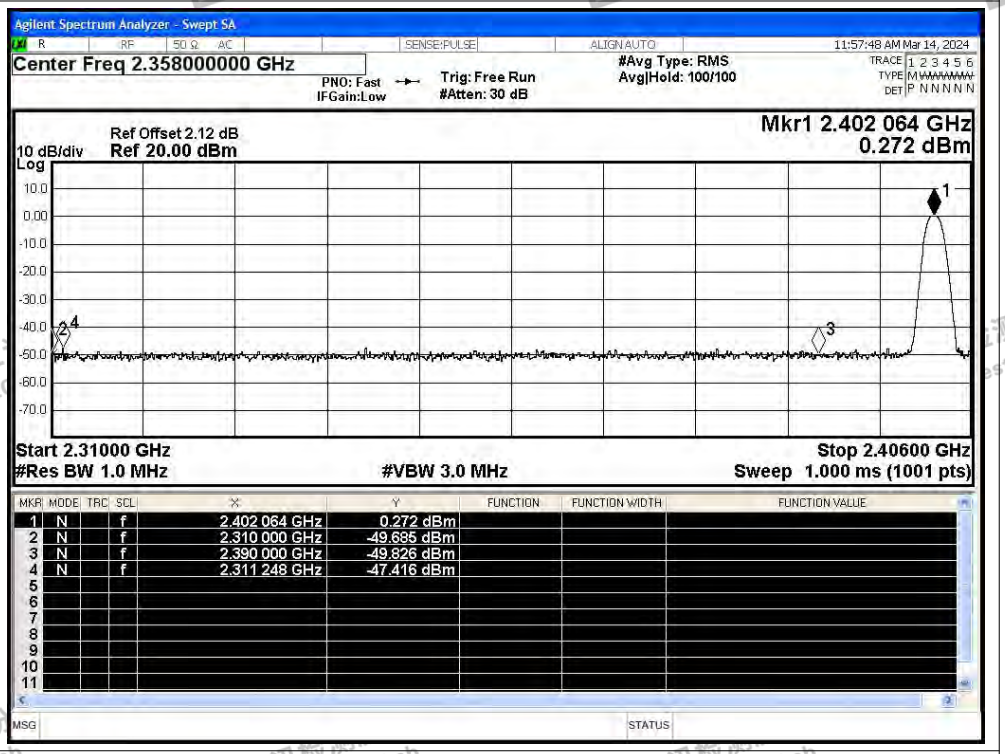
A.9 Restrict Band

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	-49.69	3.58	-	49.15	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.89	3.58	1.14	39.95	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2311.248	-47.42	3.58	-	51.42	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2387.184	-57.46	3.58	1.14	41.38	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-49.83	3.58	-	49.01	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-58.26	3.58	1.14	40.58	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-50.71	3.58	-	48.13	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-58.16	3.58	1.14	40.68	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2488.12	-47.18	3.58	-	51.66	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2490.592	-57.05	3.58	1.14	41.79	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-49.61	3.58	-	49.23	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-57.8	3.58	1.14	41.04	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-50.34	3.58	-	48.50	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-59.35	3.58	1.14	39.49	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2388.912	-46.31	3.58	-	52.53	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2379.312	-57.78	3.58	1.14	41.06	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-50.83	3.58	-	48.01	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-58.43	3.58	1.14	40.41	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-50.07	3.58	-	48.77	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-57.82	3.58	1.14	41.02	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2499.688	-46.73	3.58	-	52.11	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2492.104	-57.05	3.58	1.14	41.79	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-49.55	3.58	-	49.29	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-58.04	3.58	1.14	40.80	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-50.38	3.58	-	48.46	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-59.13	3.58	1.13	39.71	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2325.84	-47.84	3.58	-	51.00	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2386.608	-57.68	3.58	1.13	41.16	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-51.05	3.58	-	47.79	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-58.15	3.58	1.13	40.69	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-50.63	3.58	-	48.21	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-58.03	3.58	1.13	40.81	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2499.76	-47.15	3.58	-	51.69	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.704	-56.87	3.58	1.13	41.97	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-50.25	3.58	-	48.59	Peak	74	Pass

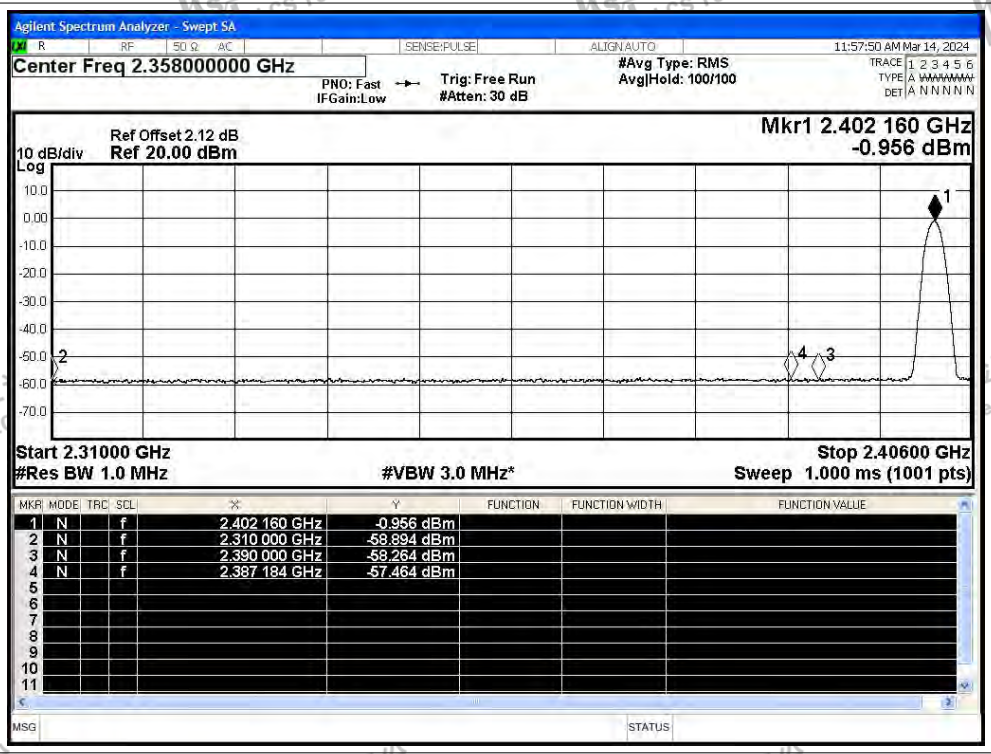
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-57.87	3.58	1.13	40.97	Average	54	Pass

Test Graphs

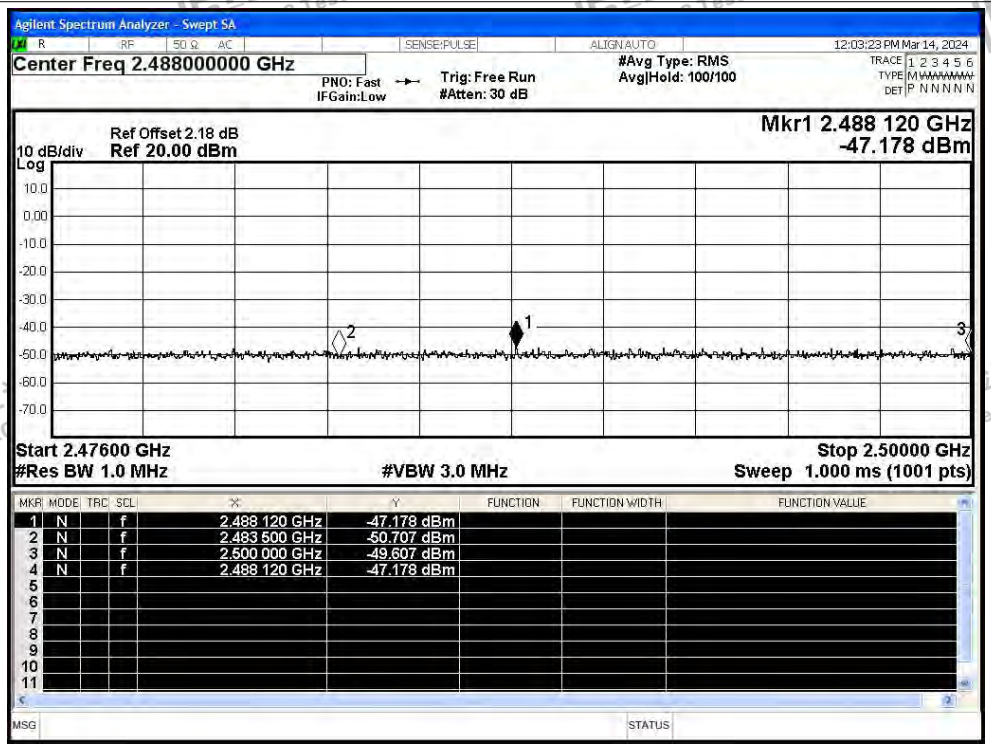
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



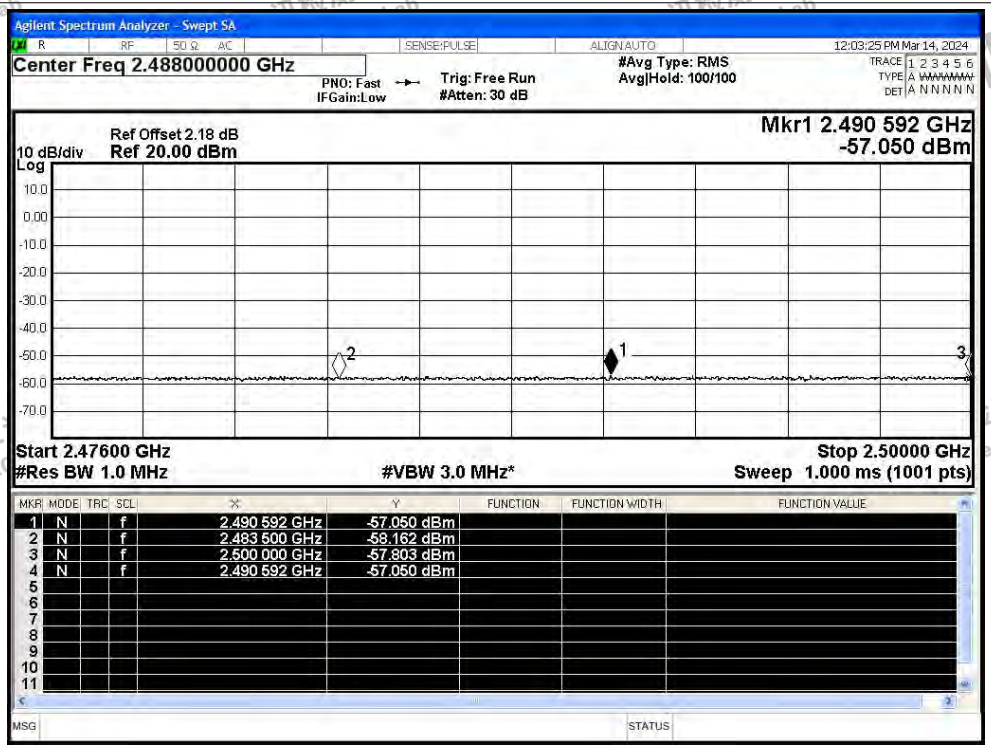
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



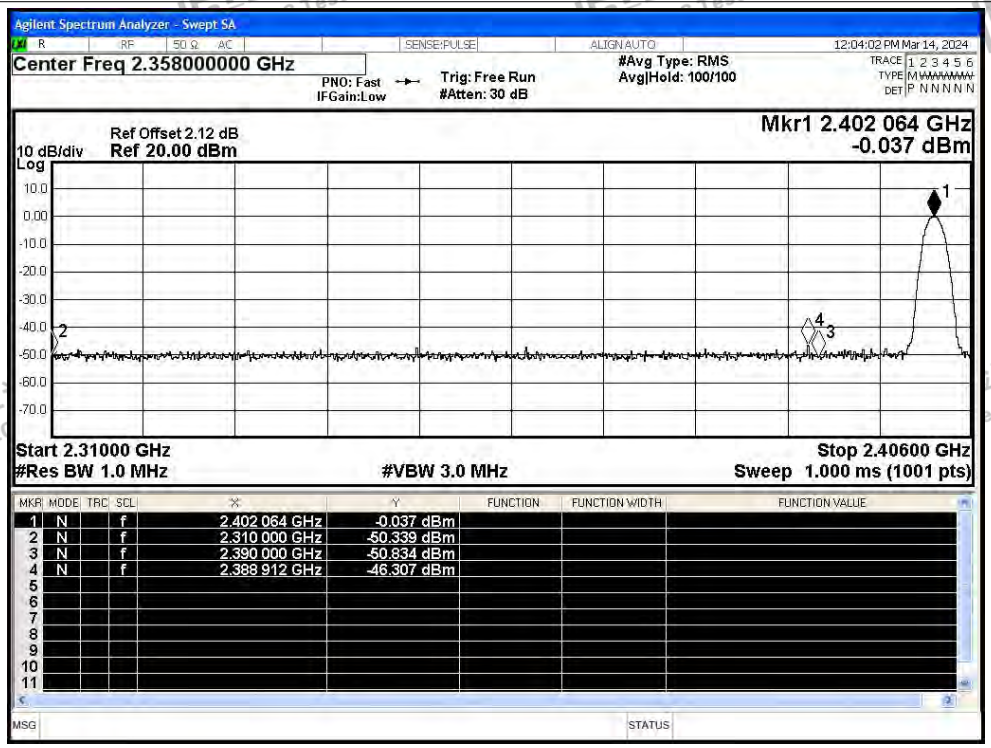
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



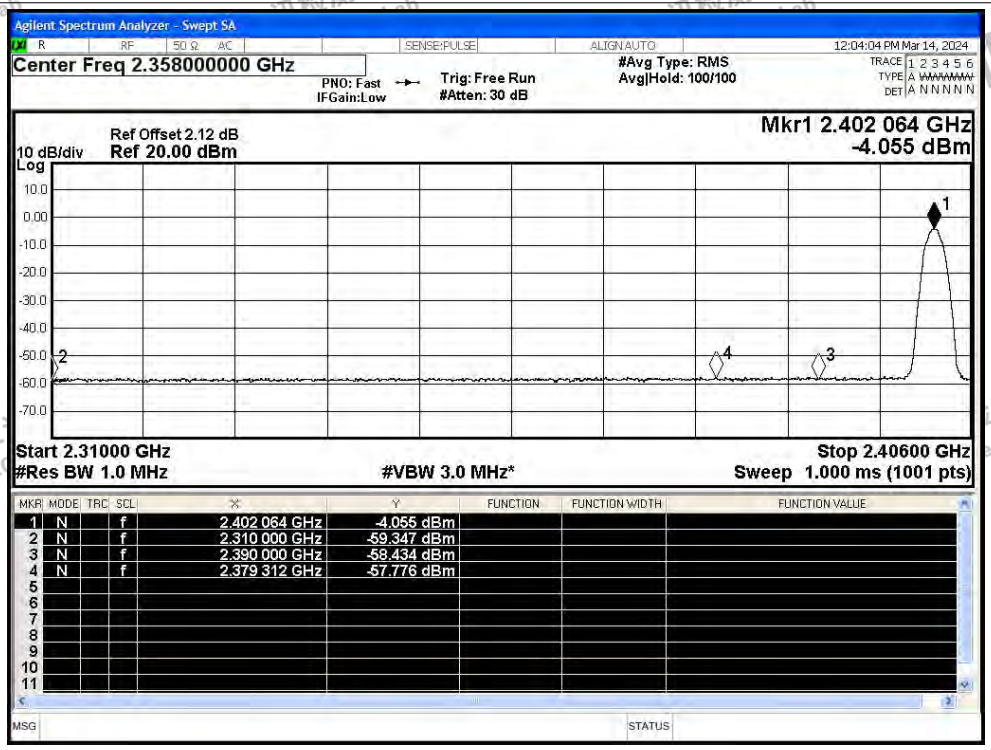
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



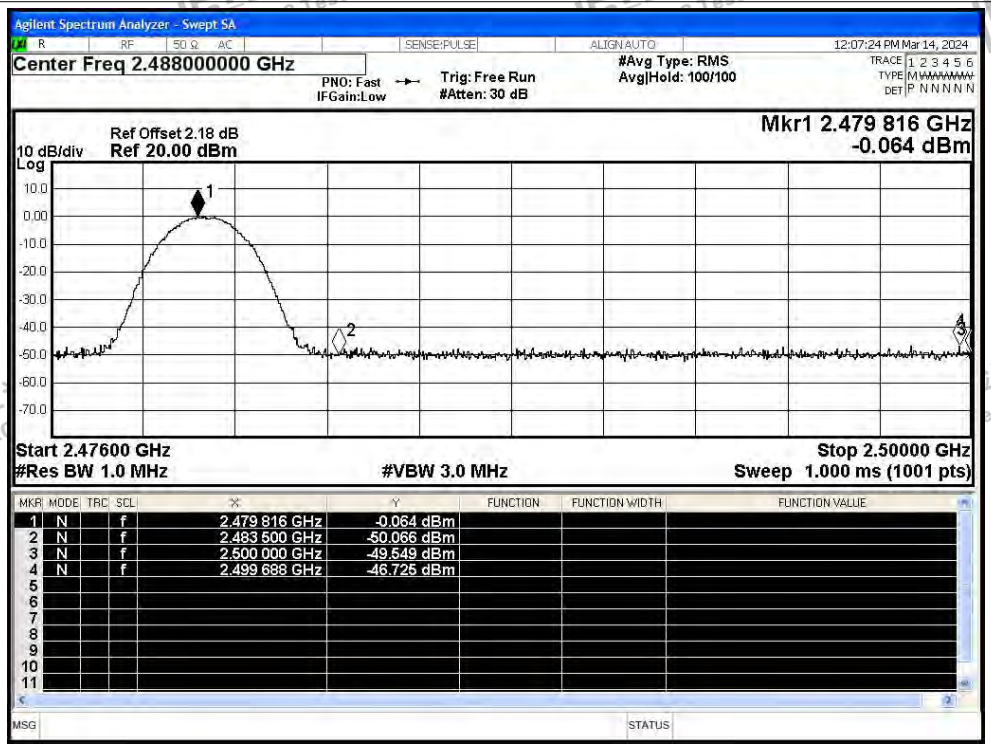
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



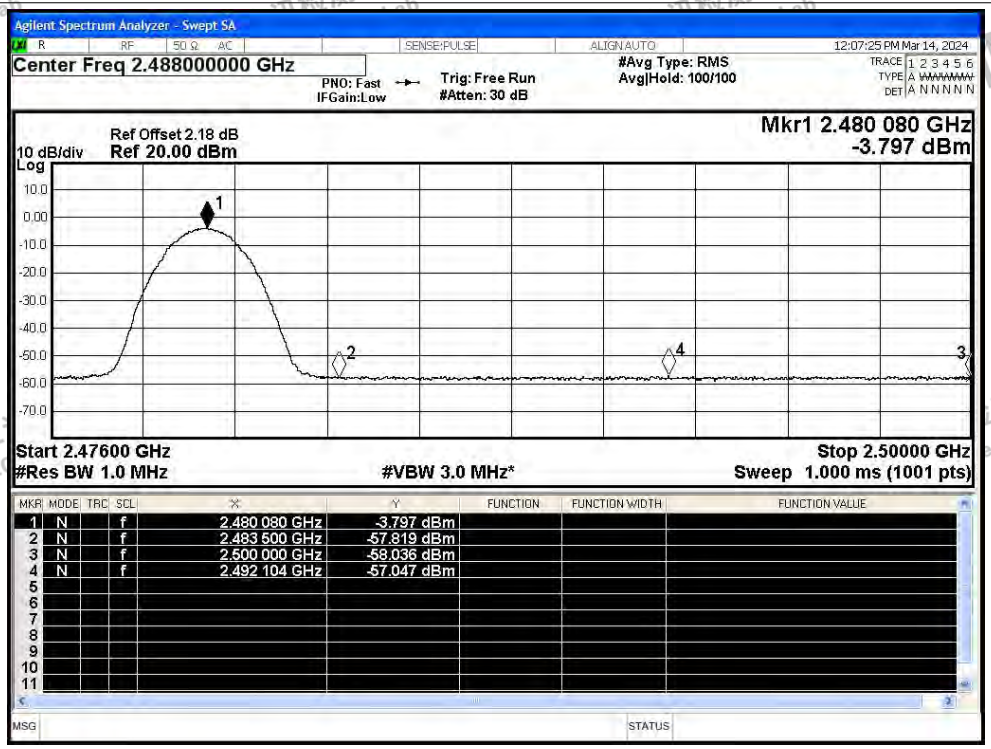
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average



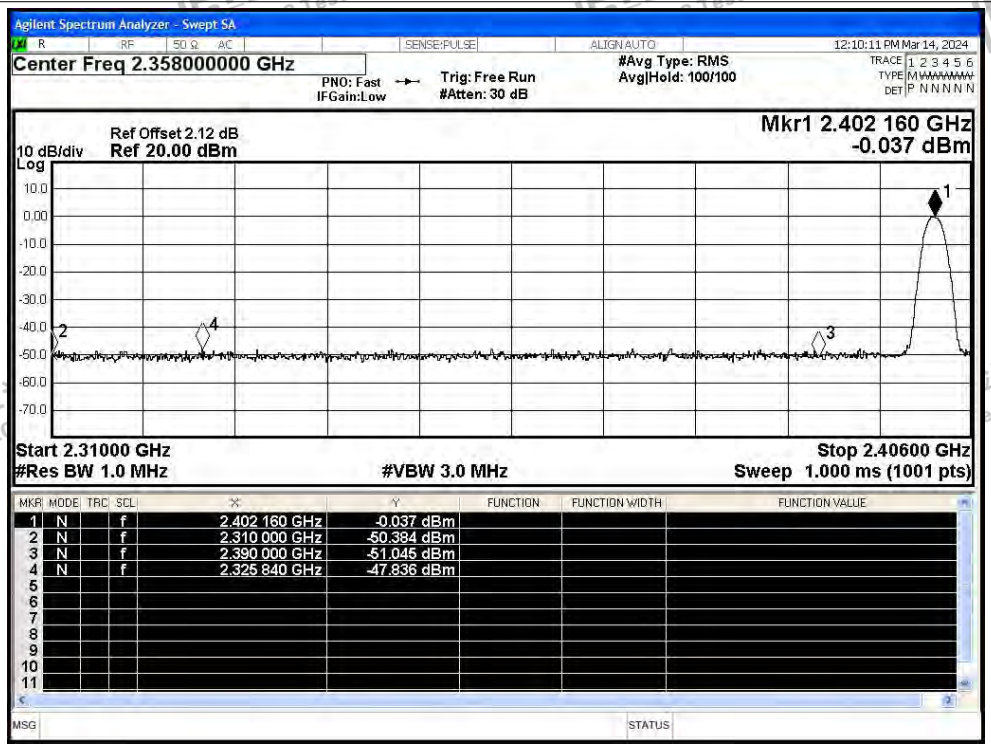
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak



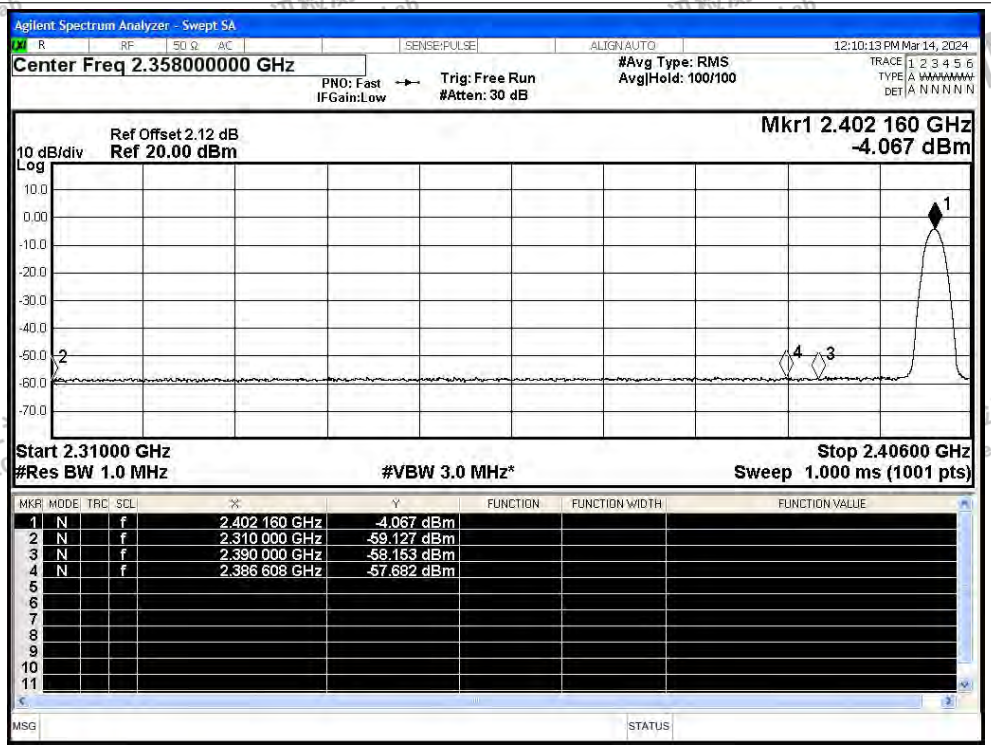
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Average



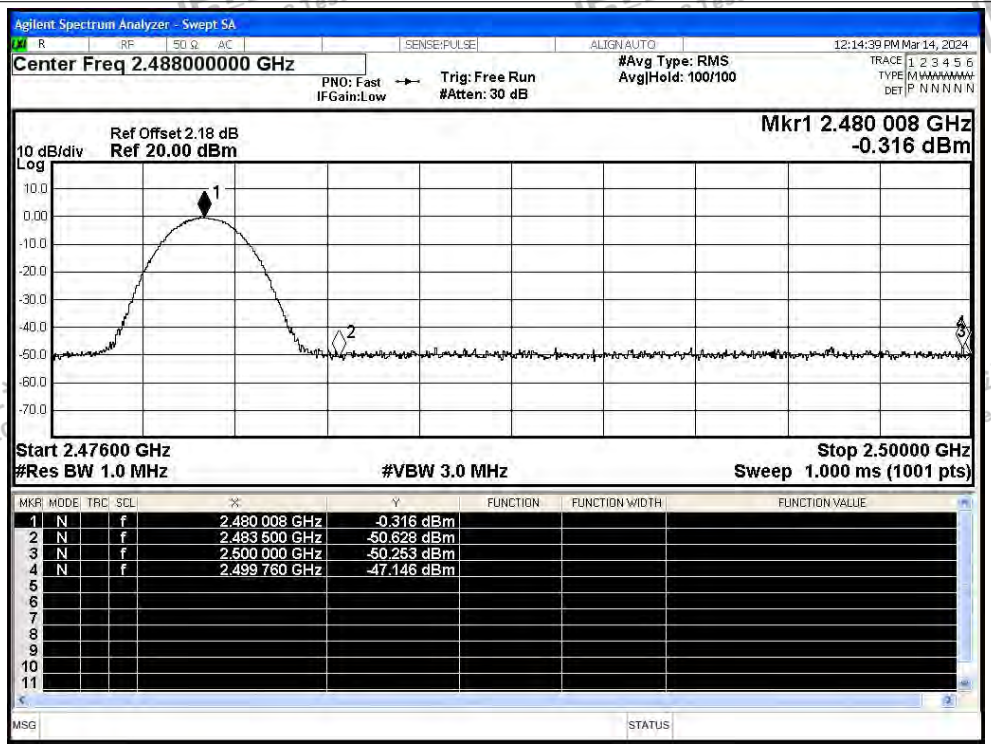
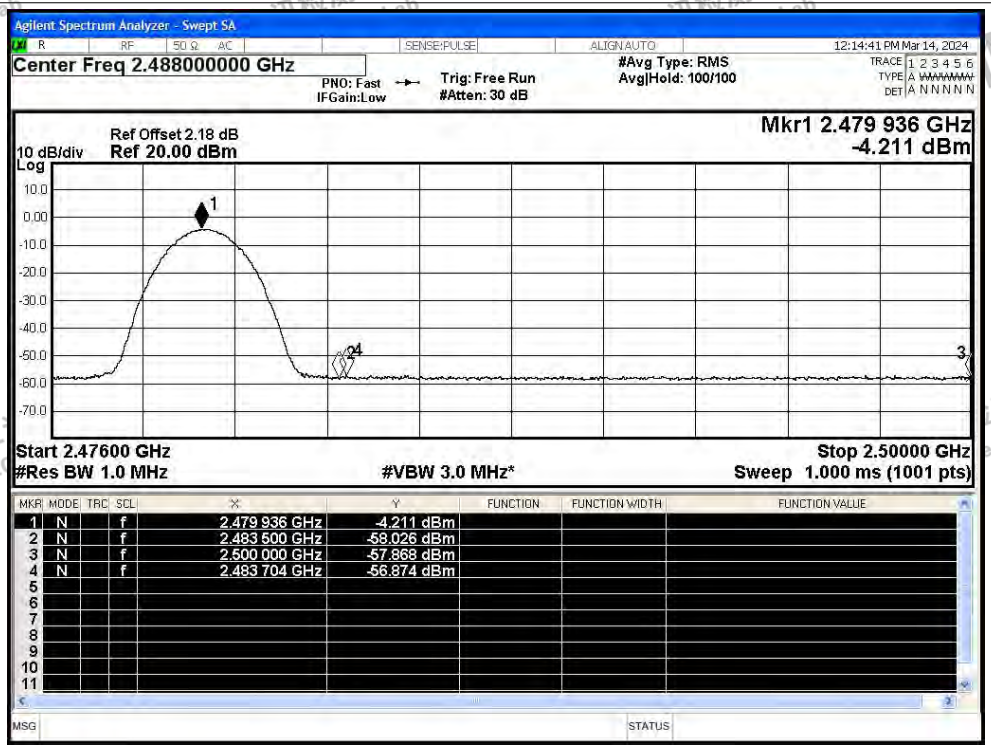
Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak



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