

Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Professional Speaker

Test Model: PA-15250

Environmental Conditions

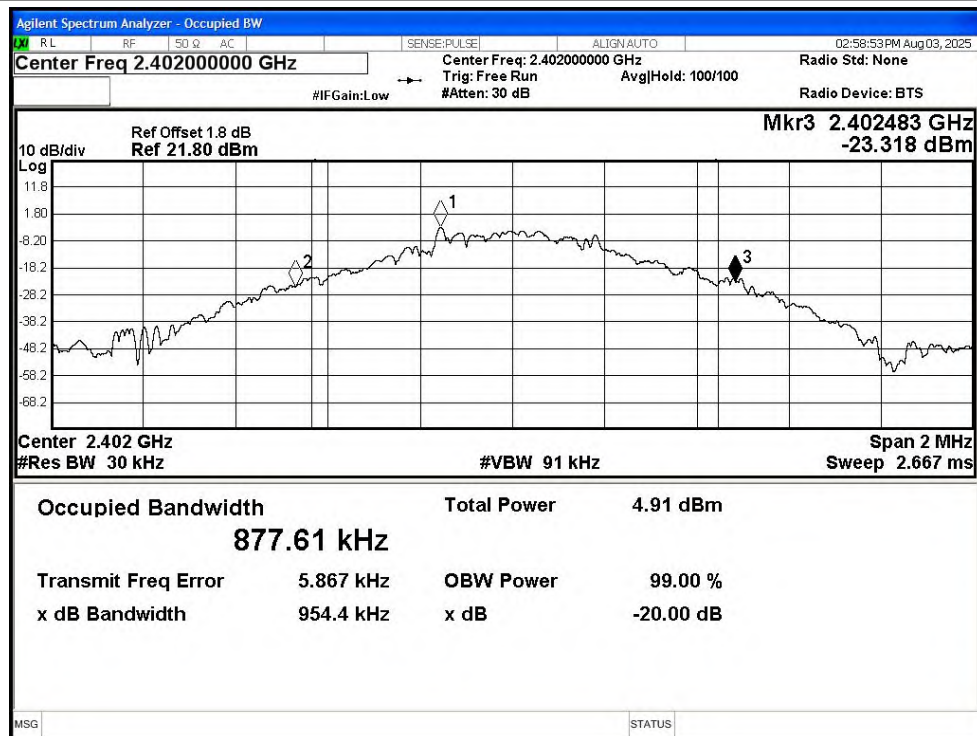
Temperature:	23.5 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Yan Chen

A.1 -20dB Bandwidth

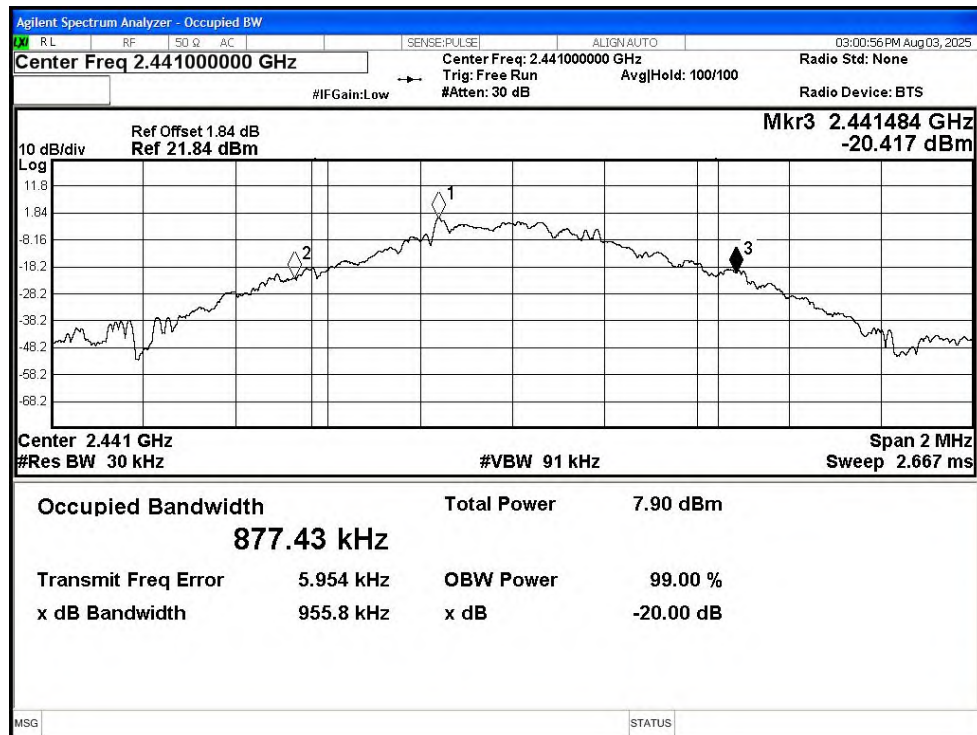
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.954	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.956	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.961	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.31	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.288	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.316	N/A	Pass

Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



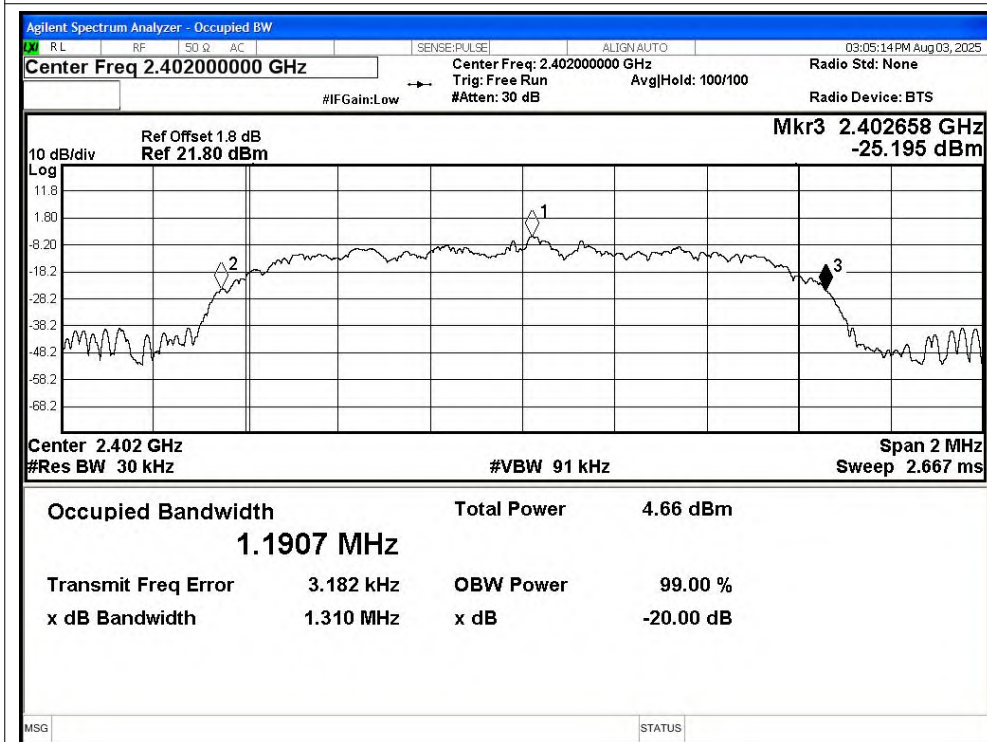
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



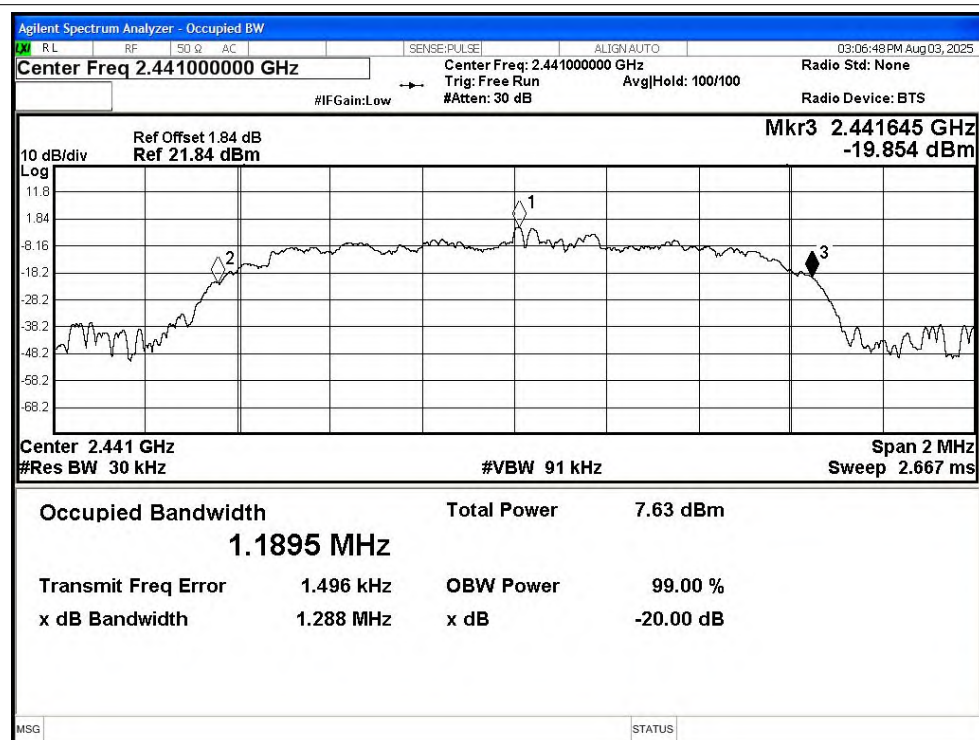
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



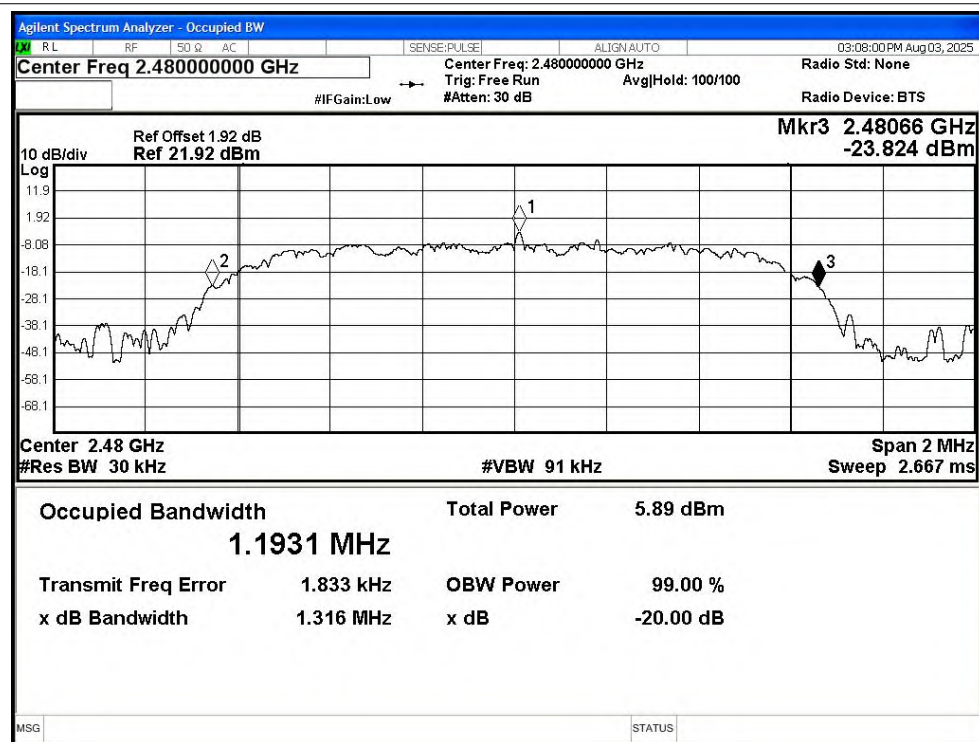
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

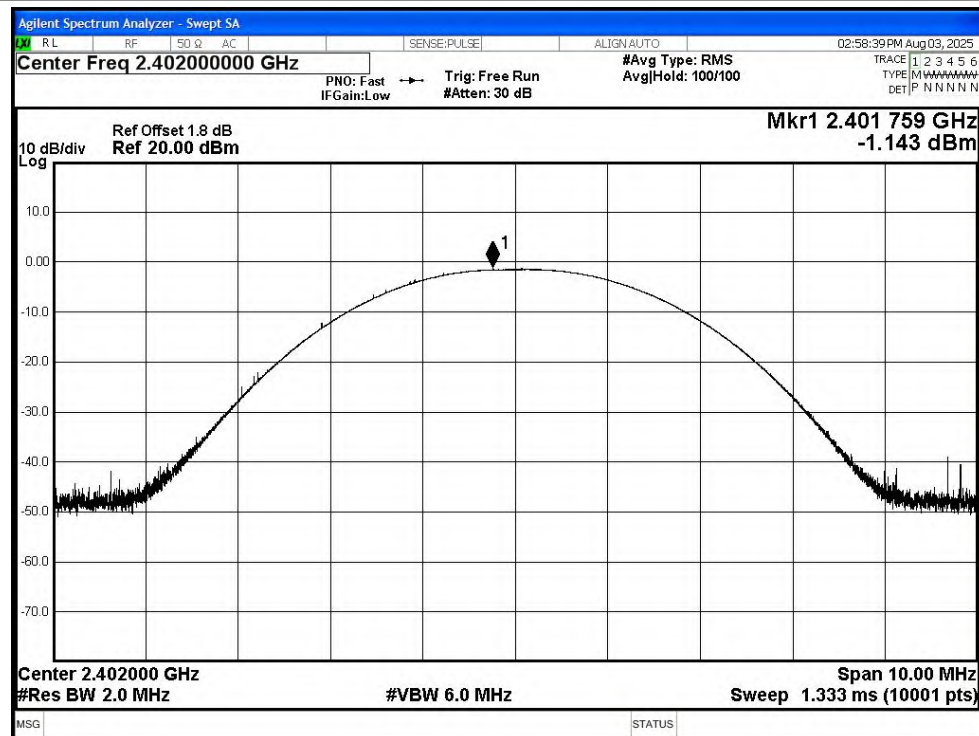


A.2 Maximum Peak Conducted Output Power

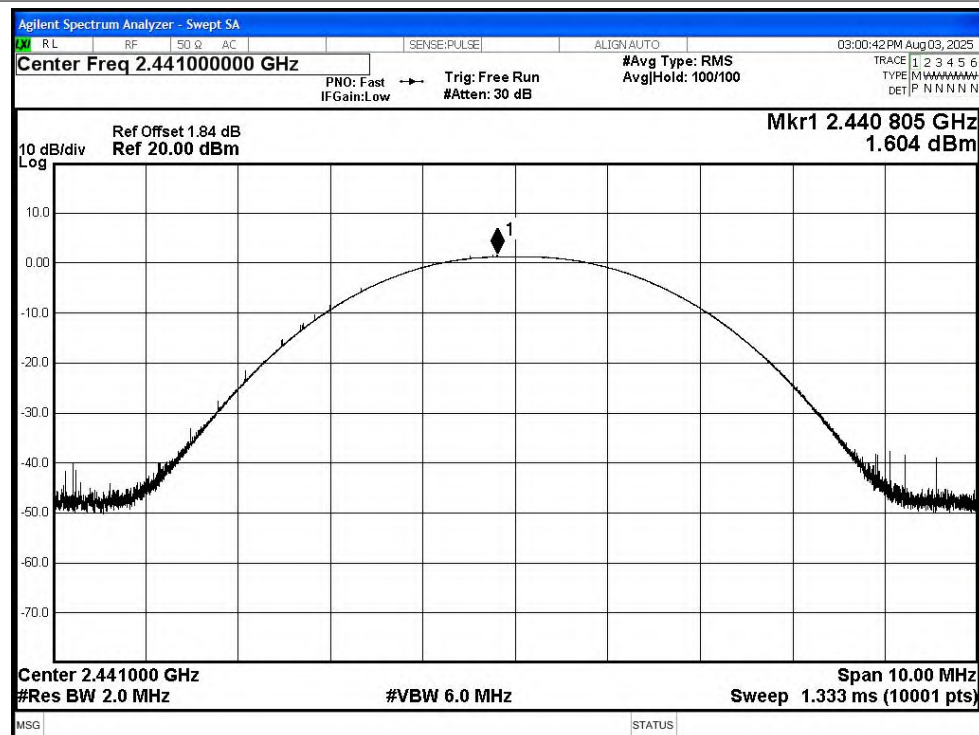
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-1.14	21	Pass
NVNT	1-DH5	2441	Ant1	1.6	21	Pass
NVNT	1-DH5	2480	Ant1	0.17	21	Pass
NVNT	2-DH5	2402	Ant1	0.63	21	Pass
NVNT	2-DH5	2441	Ant1	3.23	21	Pass
NVNT	2-DH5	2480	Ant1	1.99	21	Pass

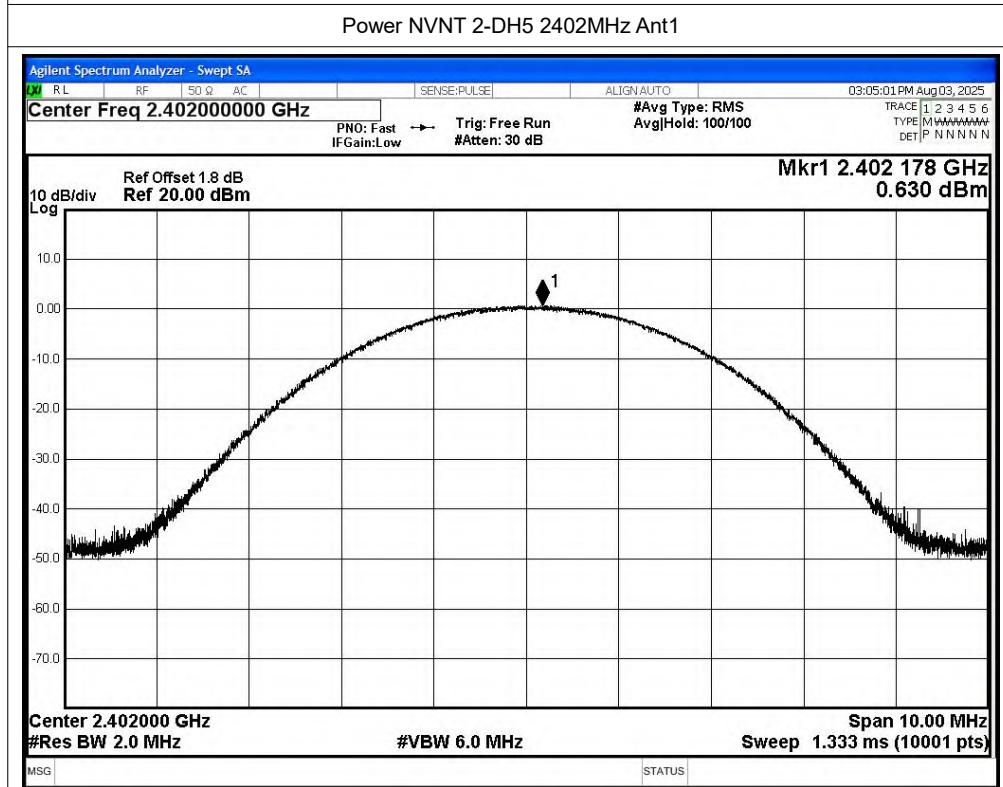
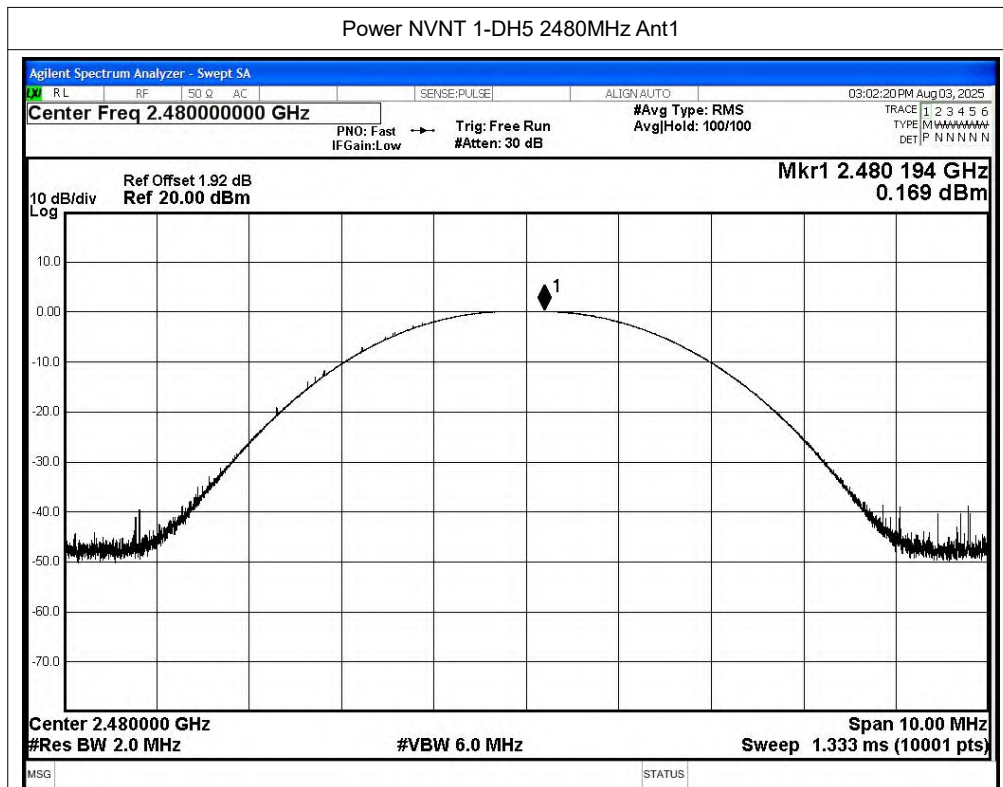
Test Graphs

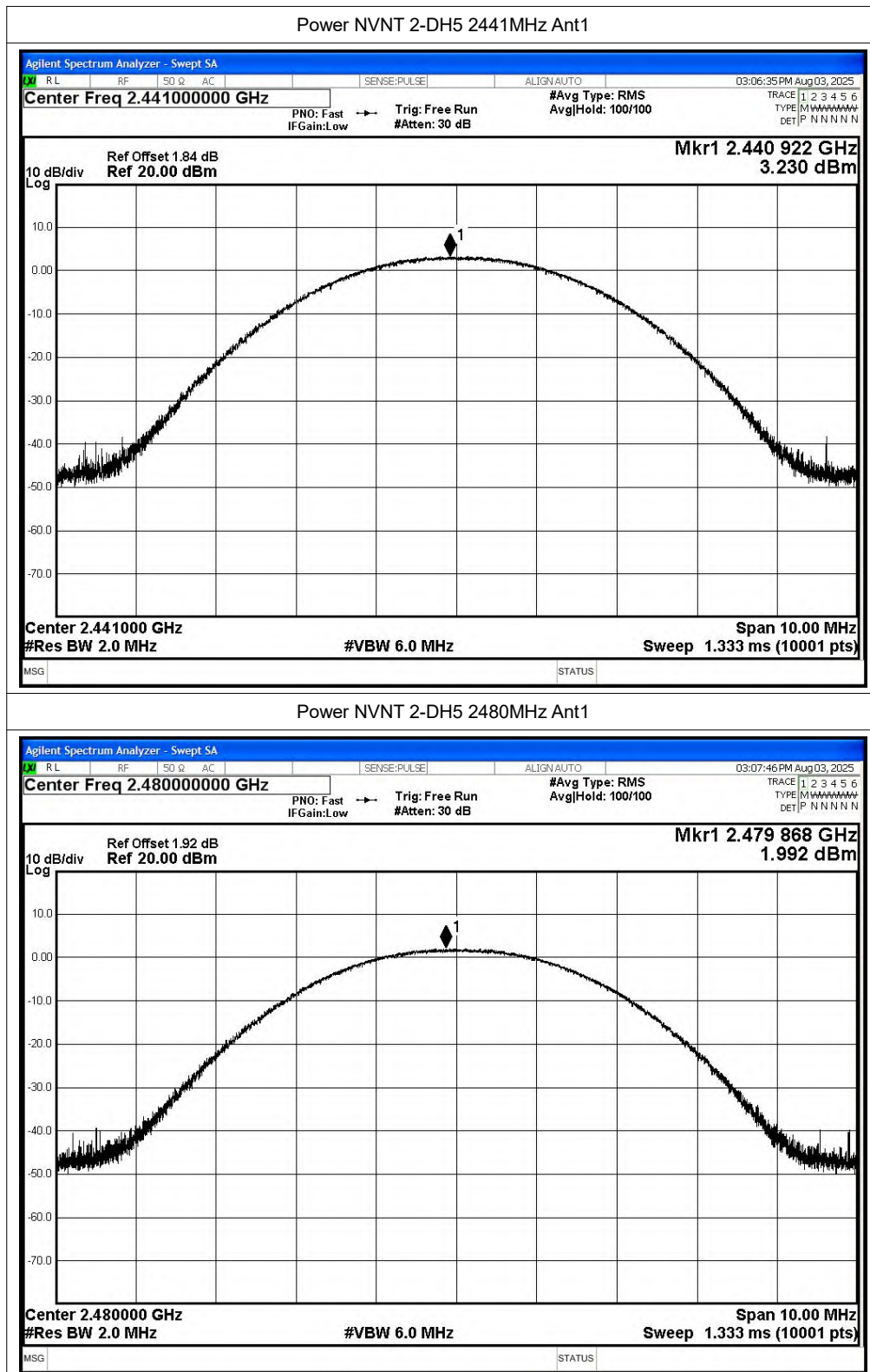
Power NVNT 1-DH5 2402MHz Ant1



Power NVNT 1-DH5 2441MHz Ant1

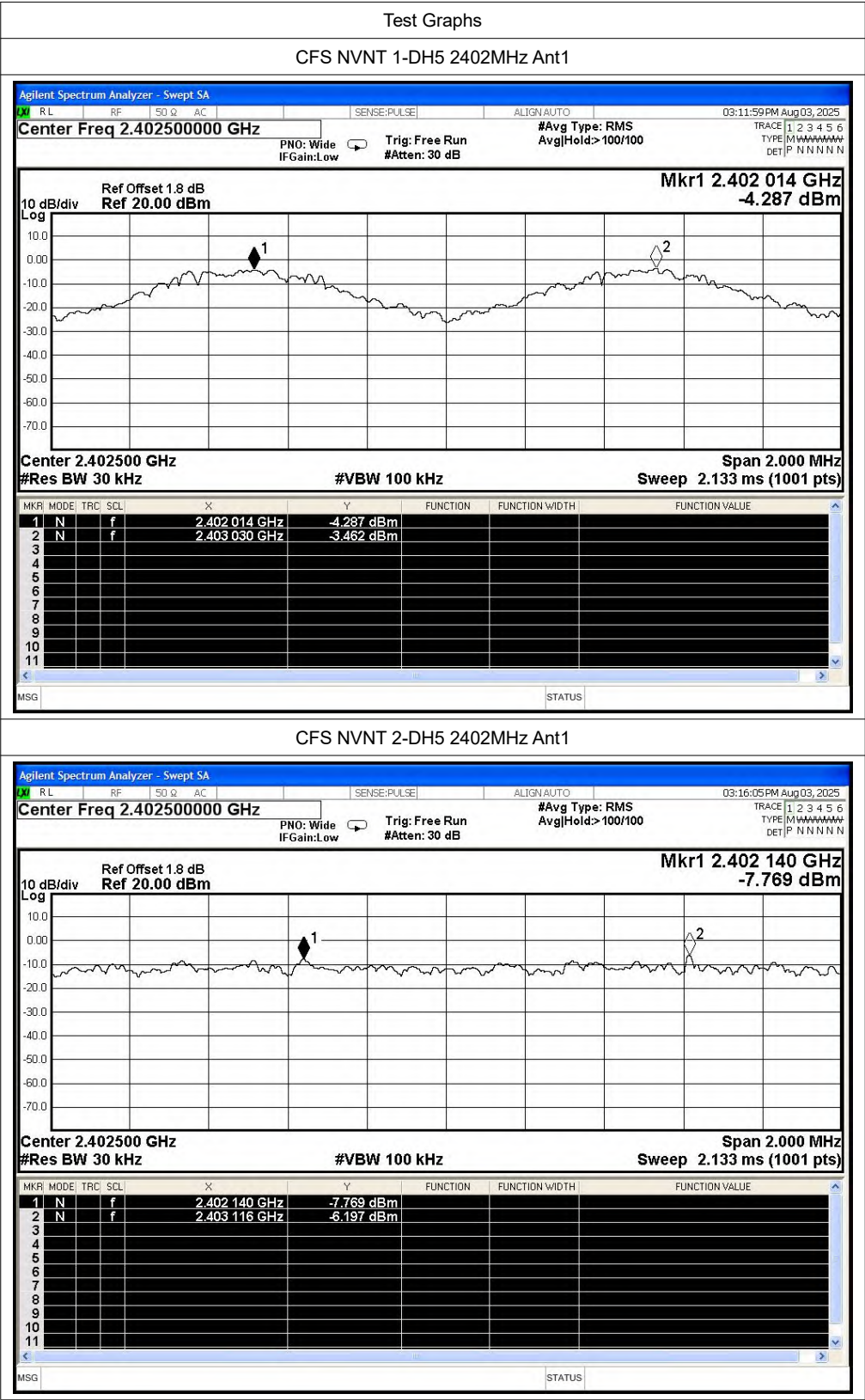






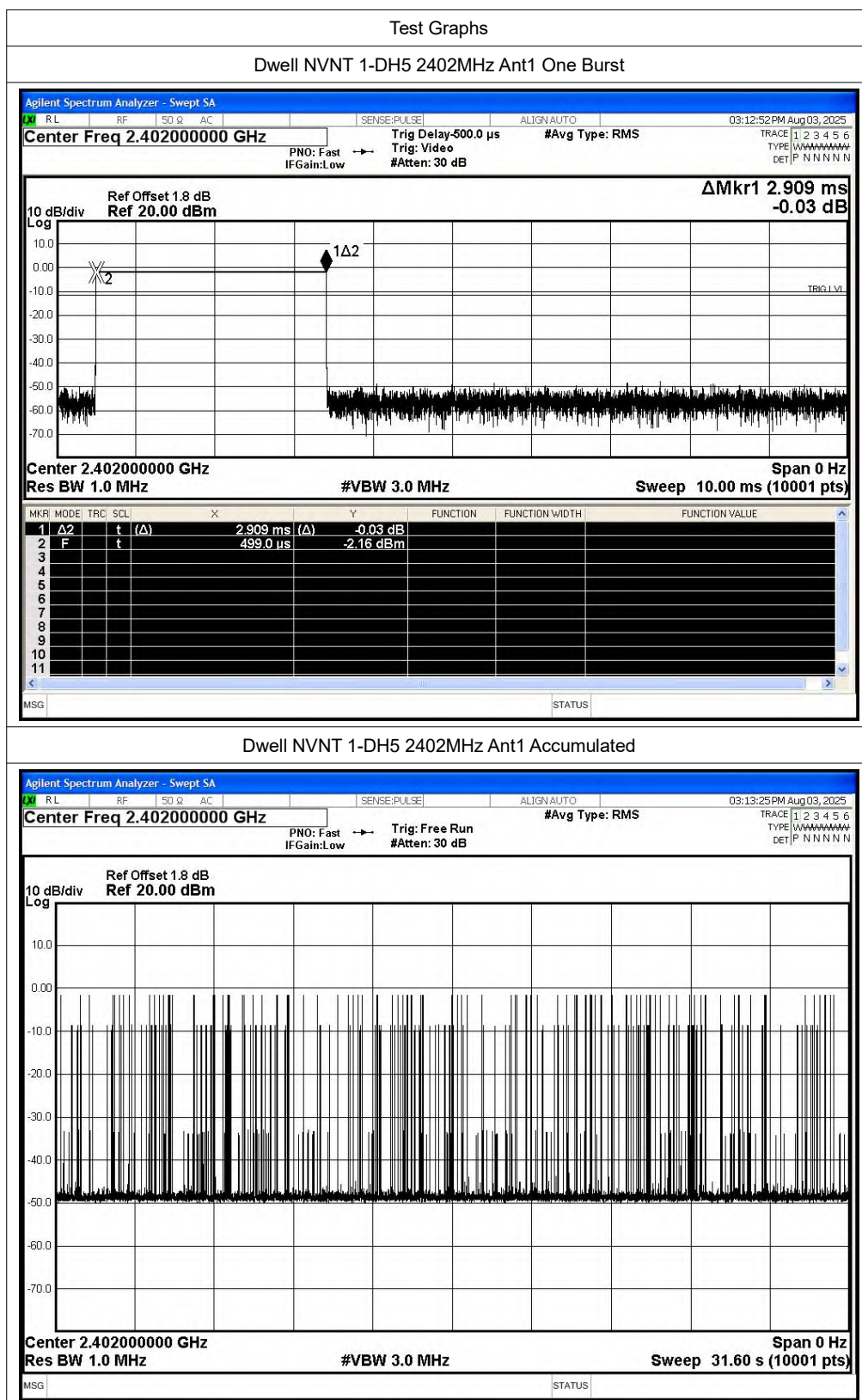
A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.014	2403.03	1.016	0.641	Pass
NVNT	2-DH5	Ant1	2402.14	2403.116	0.976	0.877	Pass

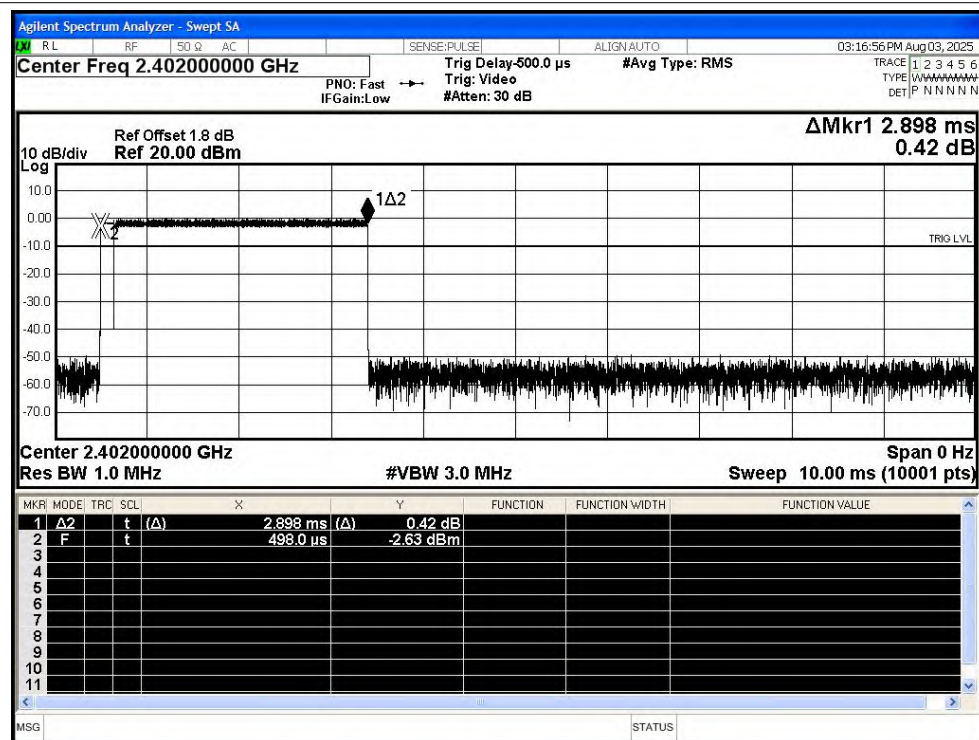


A.4 Dwell Time

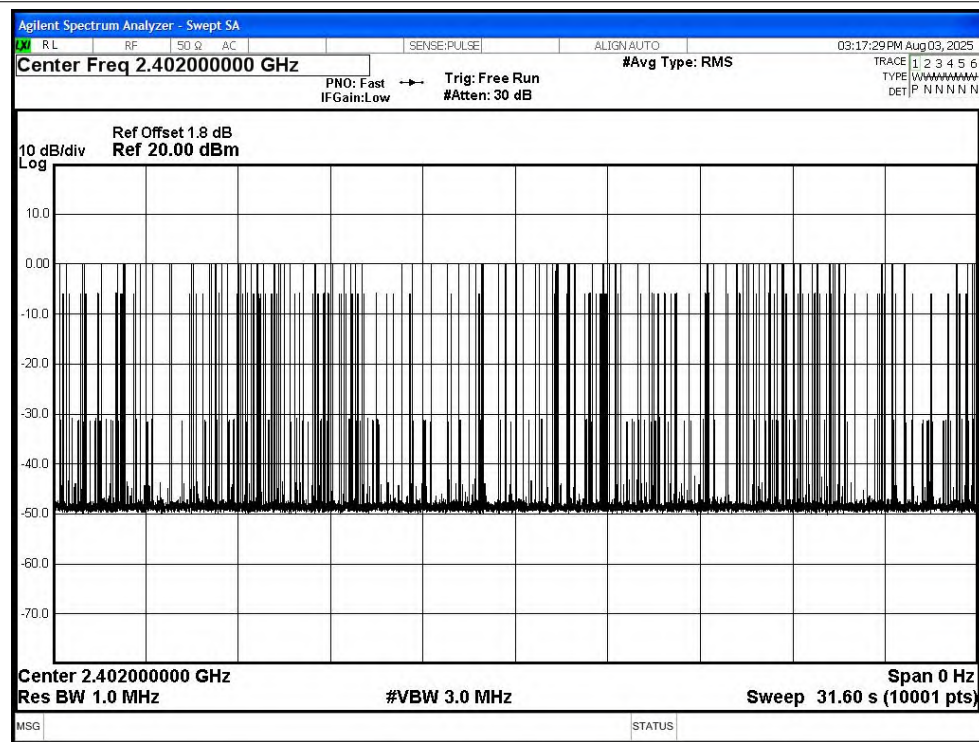
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.909	285.082	98	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	312.984	108	31600	400	Pass



Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

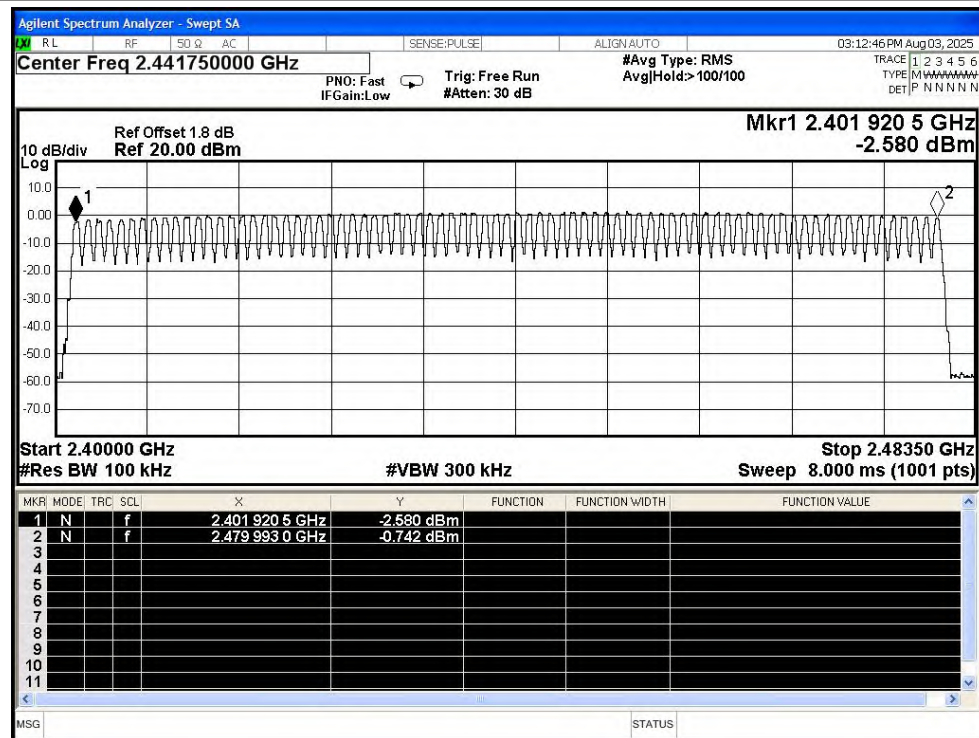


A.5 Number of Hopping Channel

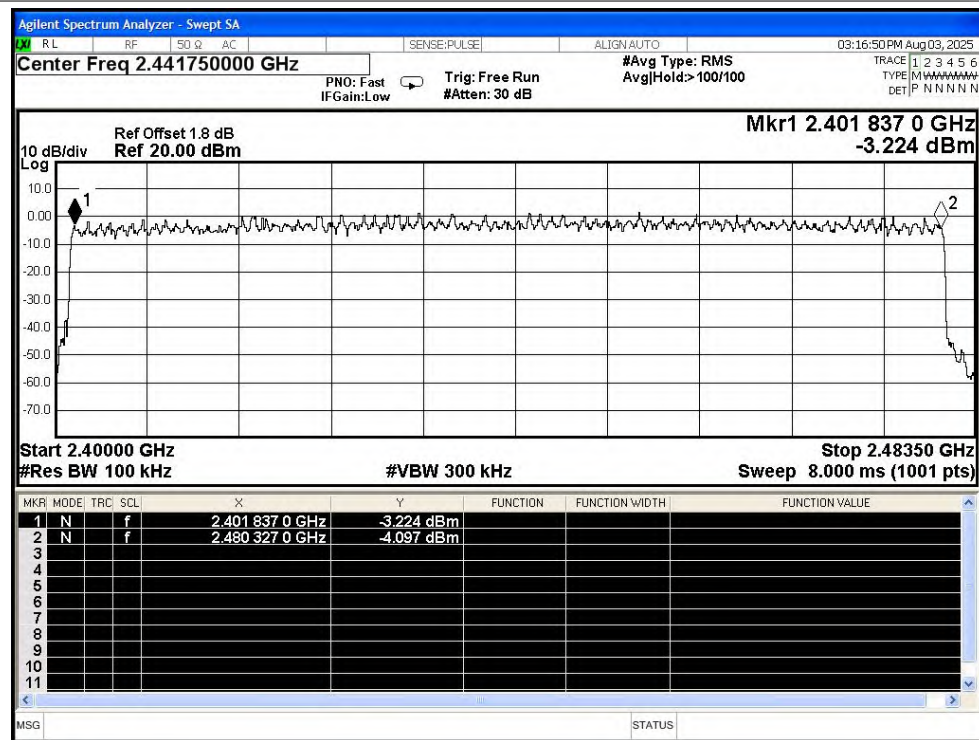
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass

Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1



Guangzhou LCS Compliance Testing Laboratory Ltd.

Add: No.44-1, Qianfeng North Road, Shiqi, Panyu District, Guangzhou, Guangdong, China

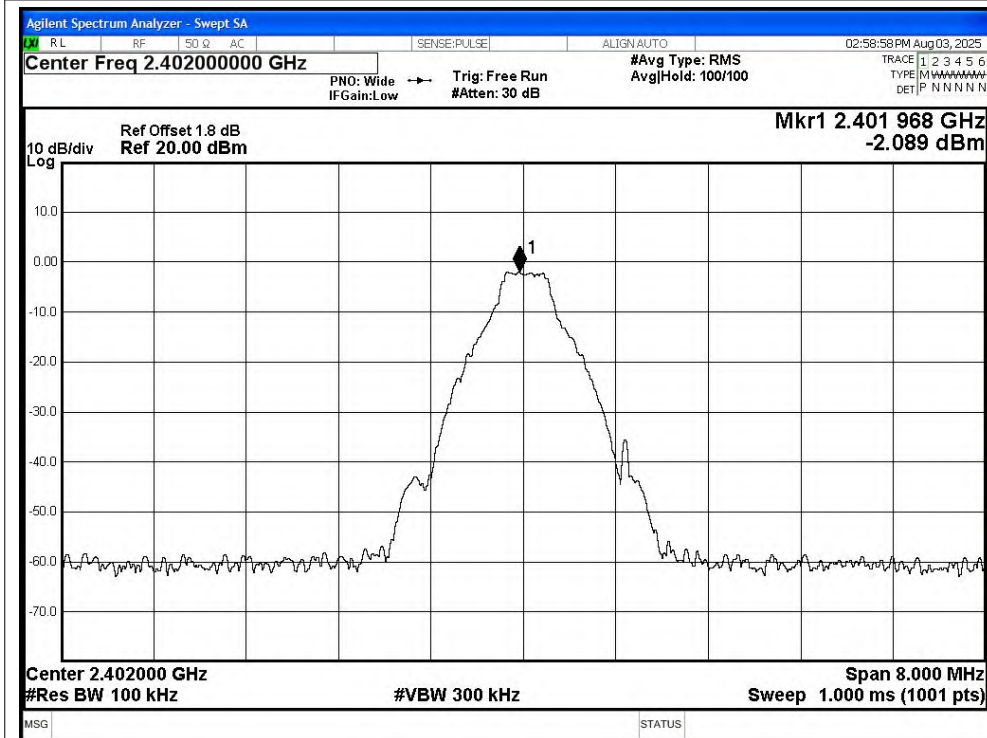
Tel: +(86) 020-39166689 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

A.6 Band Edge

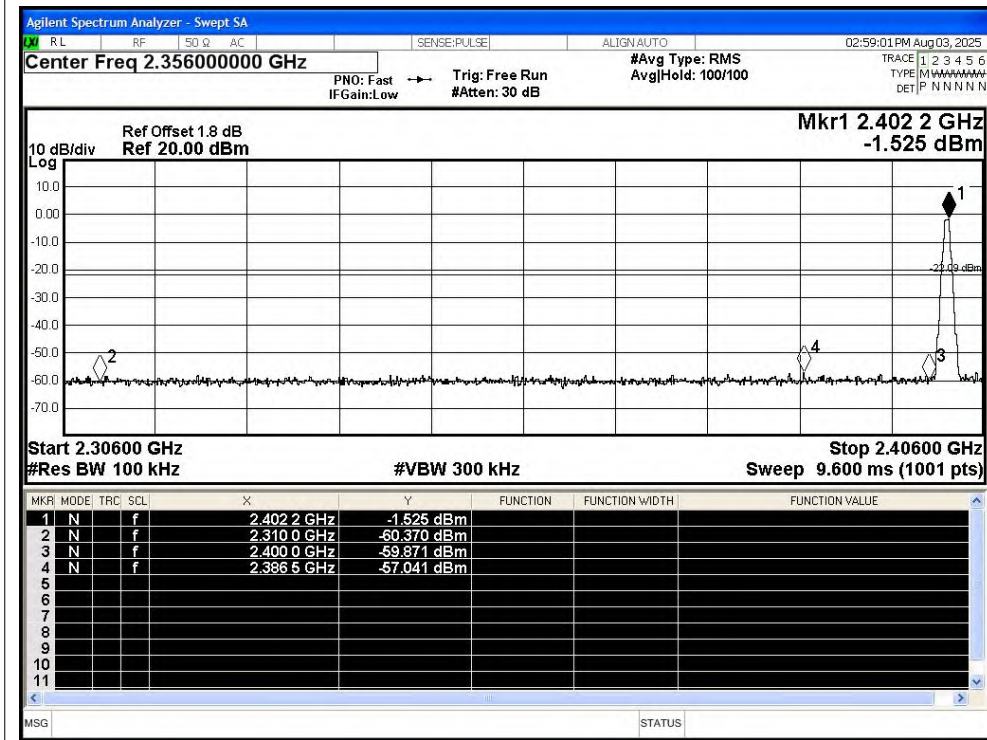
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-54.95	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-56.65	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-50.86	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-56.75	-20	Pass

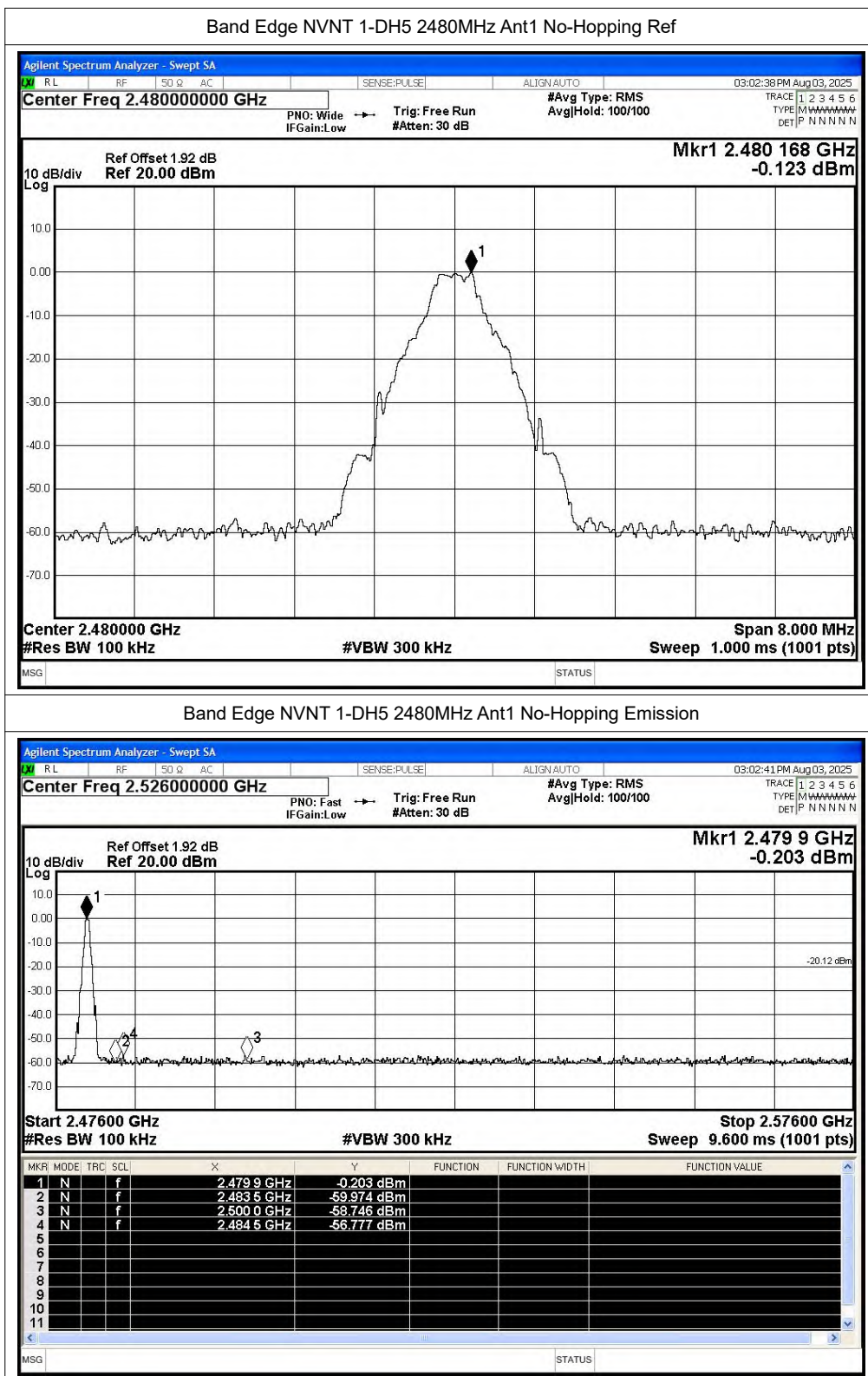
Test Graphs

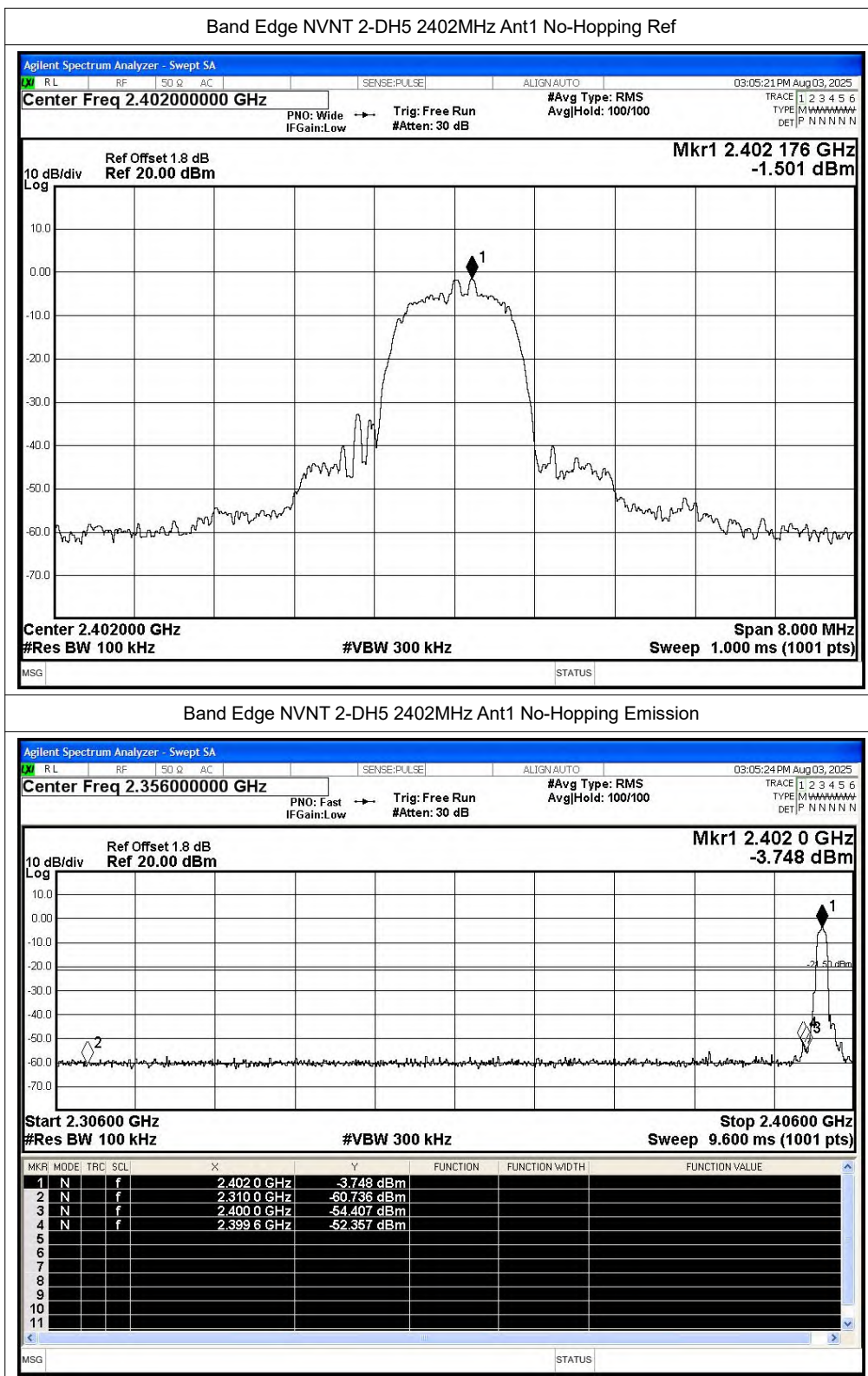
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref

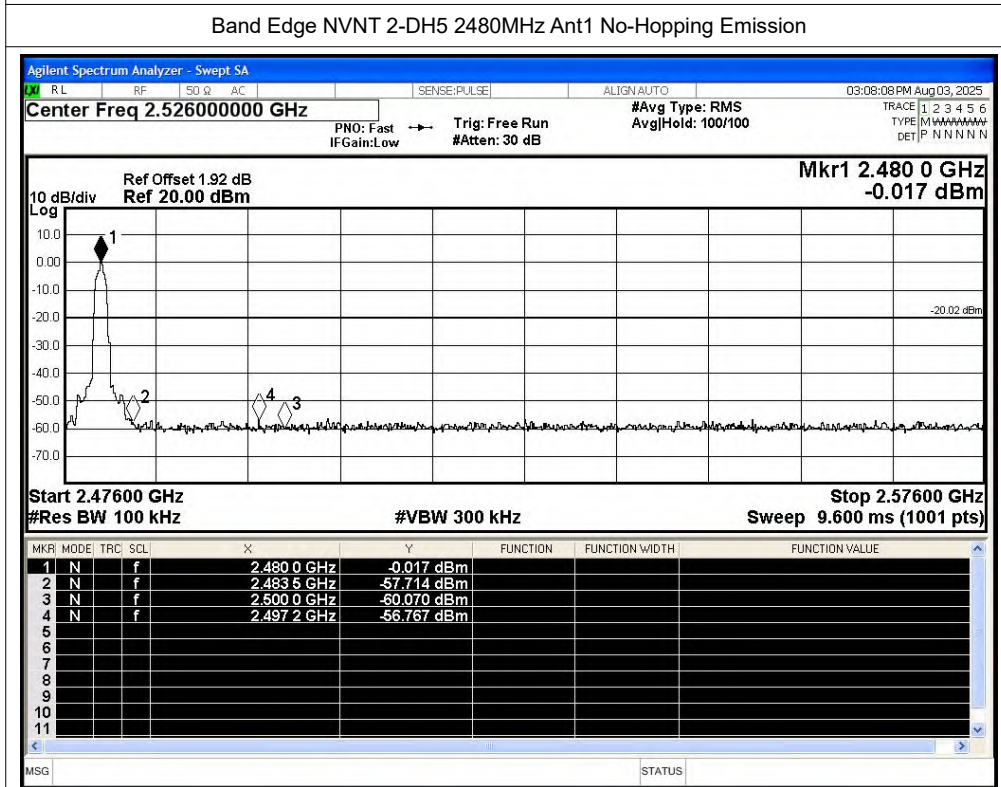
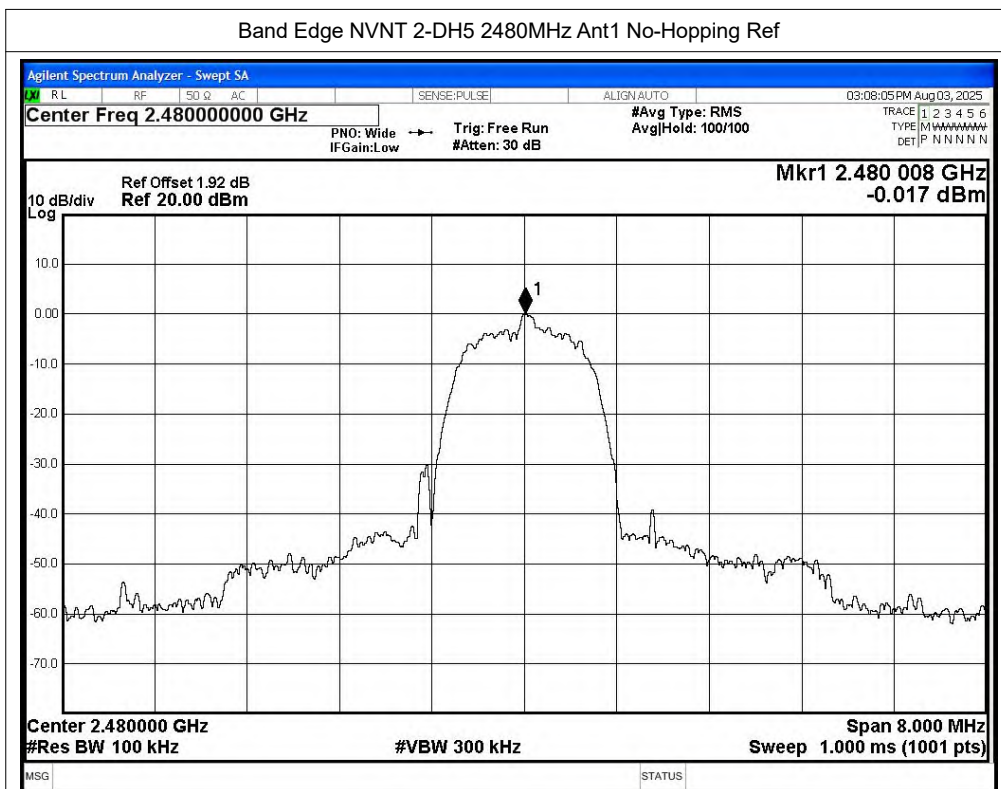


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



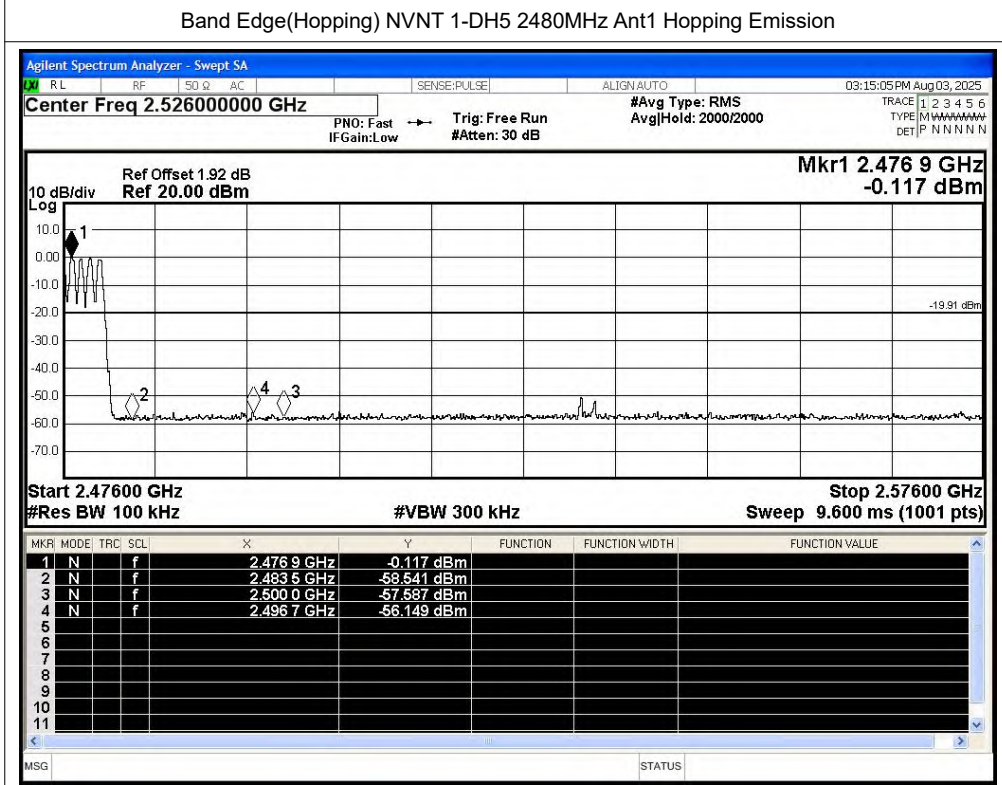
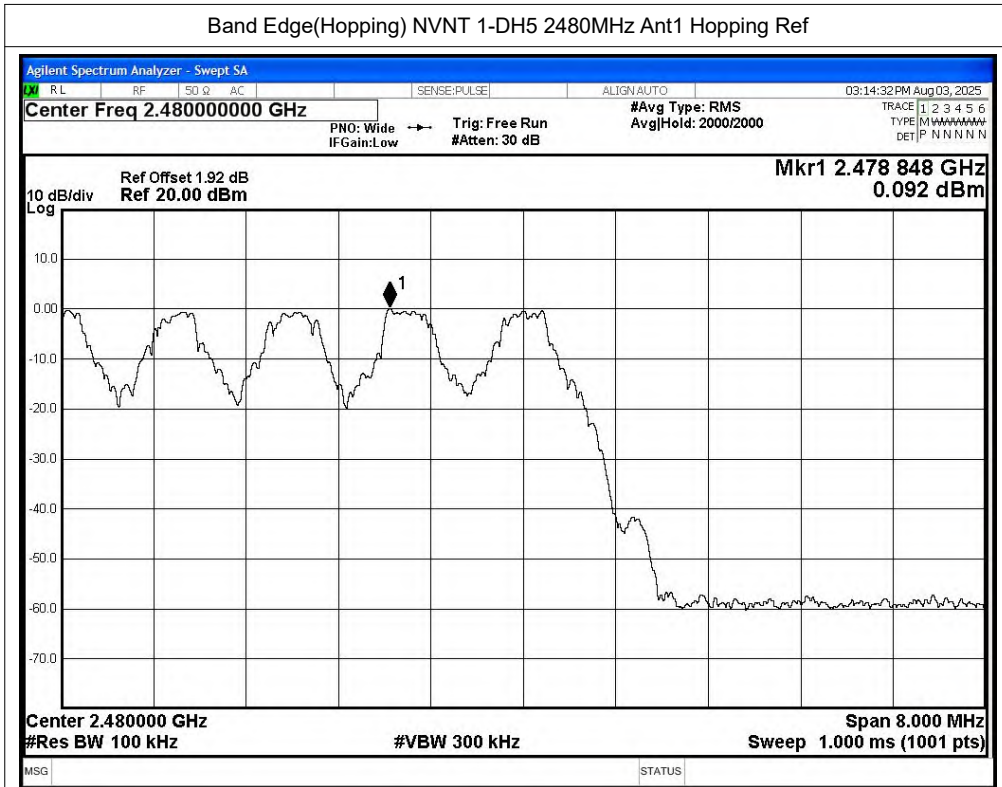


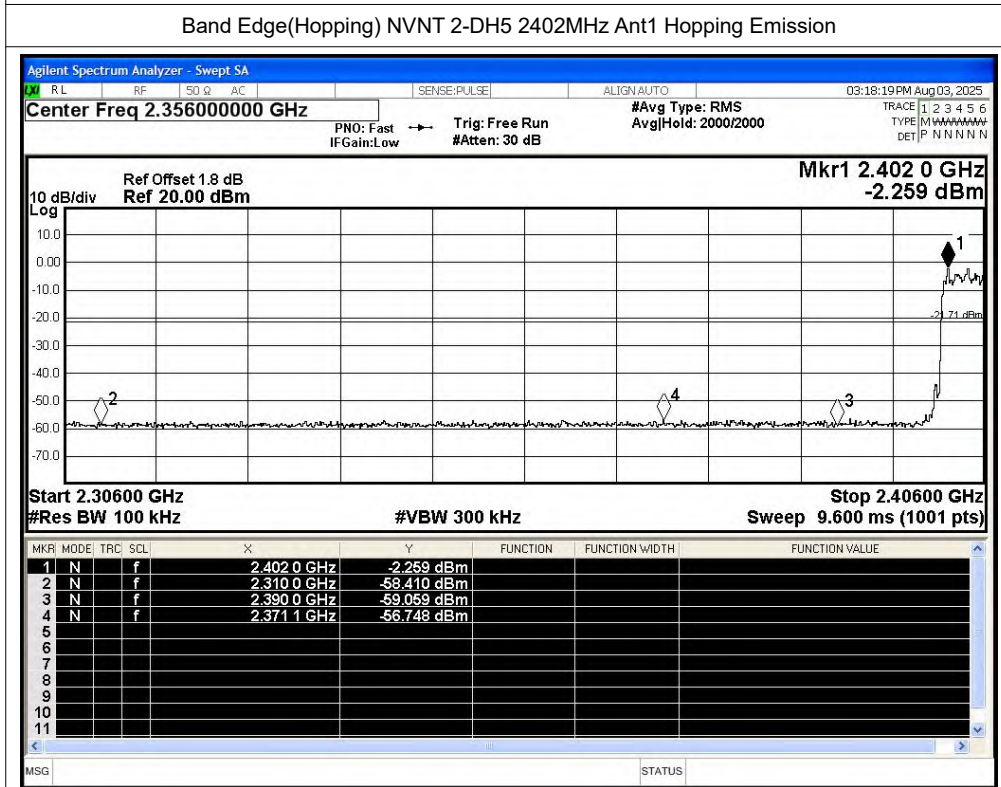
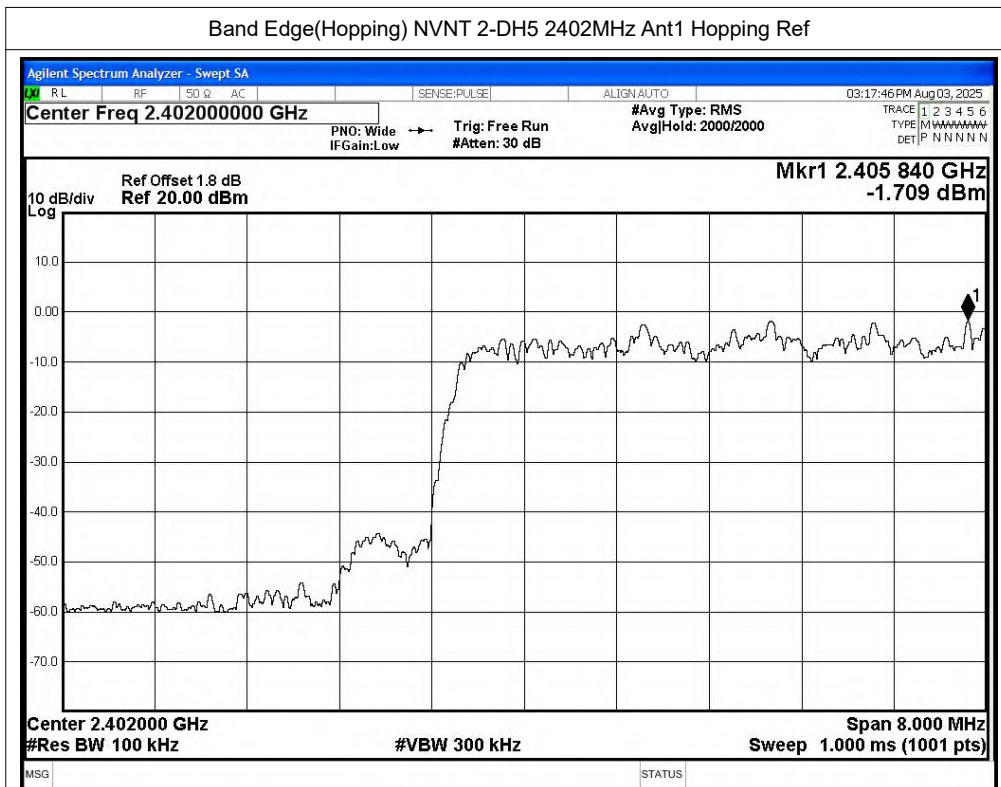


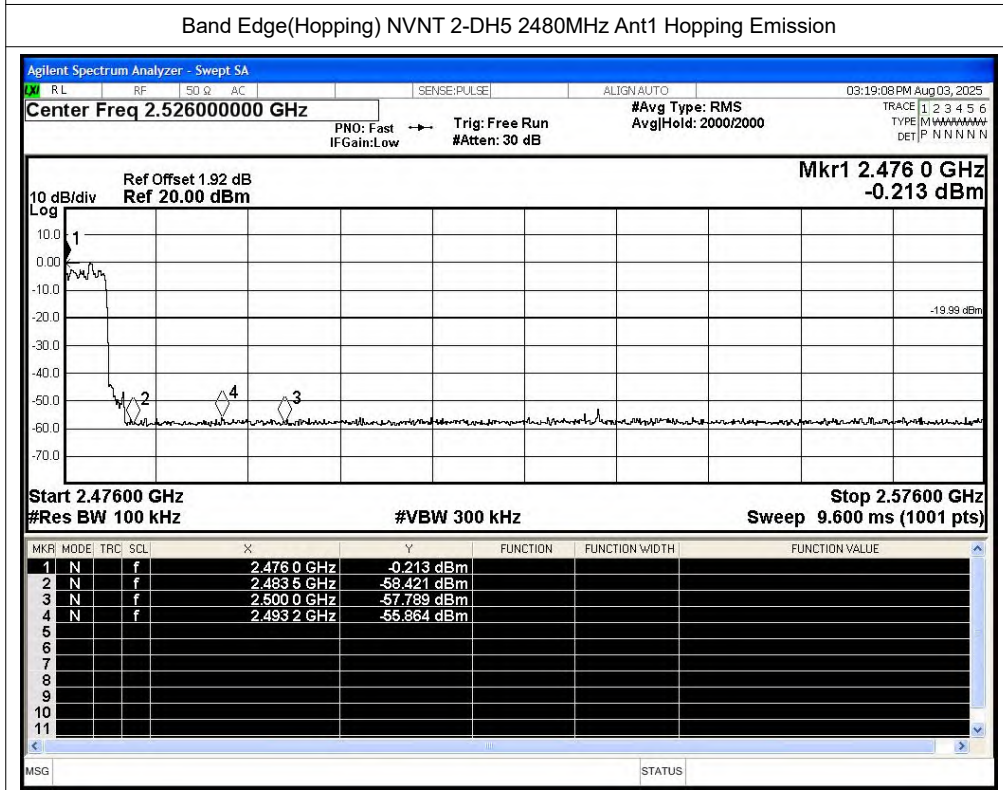
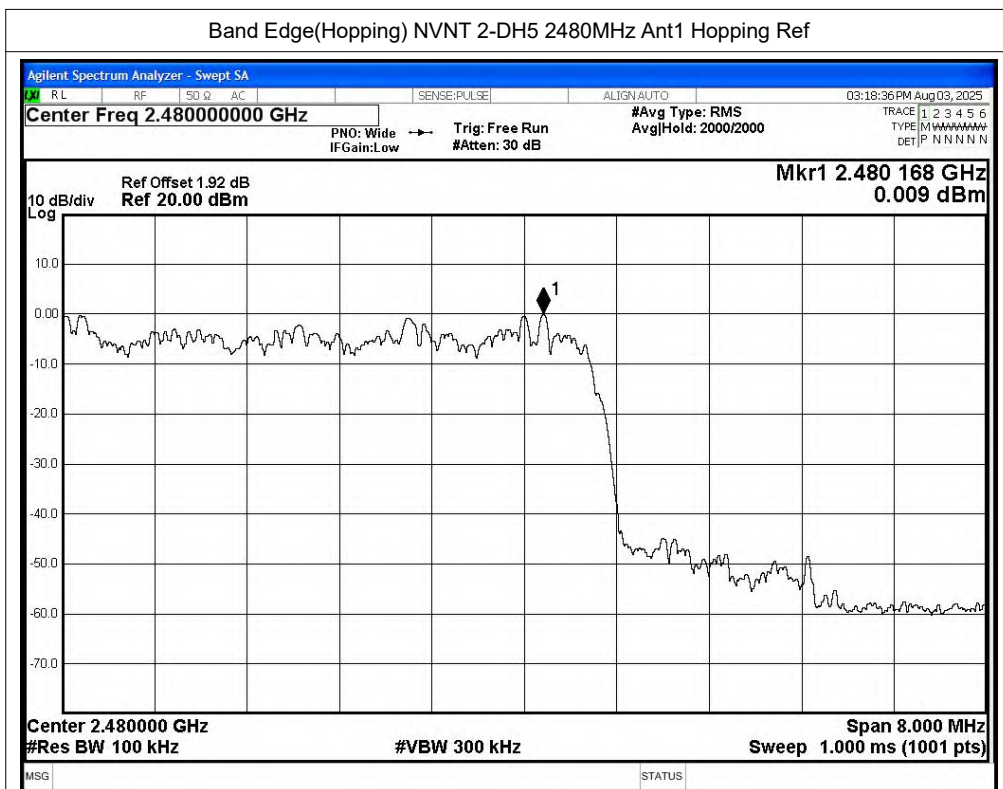


(Hopping)

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-54.75	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-56.24	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-55.04	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-55.87	-20	Pass





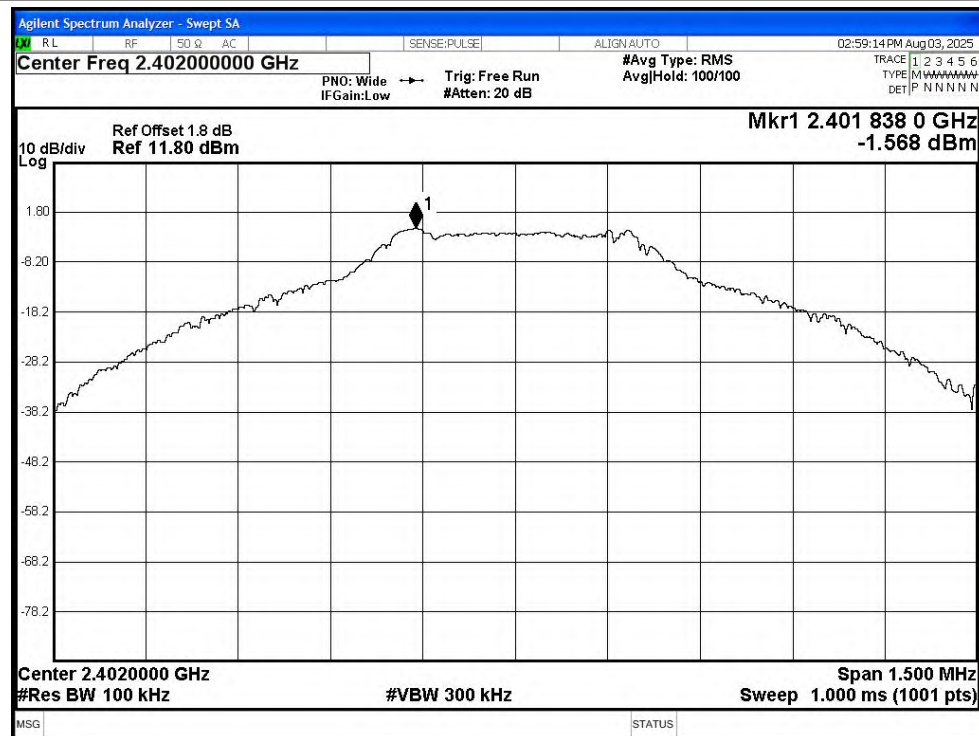


A.7 Conducted RF Spurious Emission

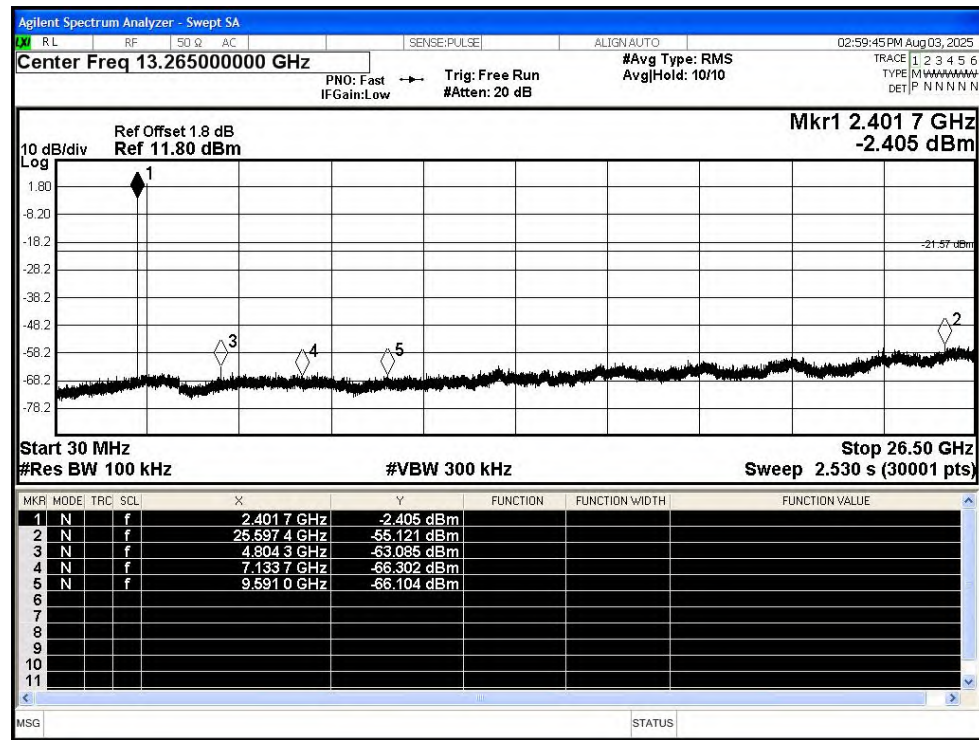
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-53.55	-20	Pass
NVNT	1-DH5	2441	Ant1	-56.07	-20	Pass
NVNT	1-DH5	2480	Ant1	-55.67	-20	Pass
NVNT	2-DH5	2402	Ant1	-42.95	-20	Pass
NVNT	2-DH5	2441	Ant1	-43.06	-20	Pass
NVNT	2-DH5	2480	Ant1	-54.9	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



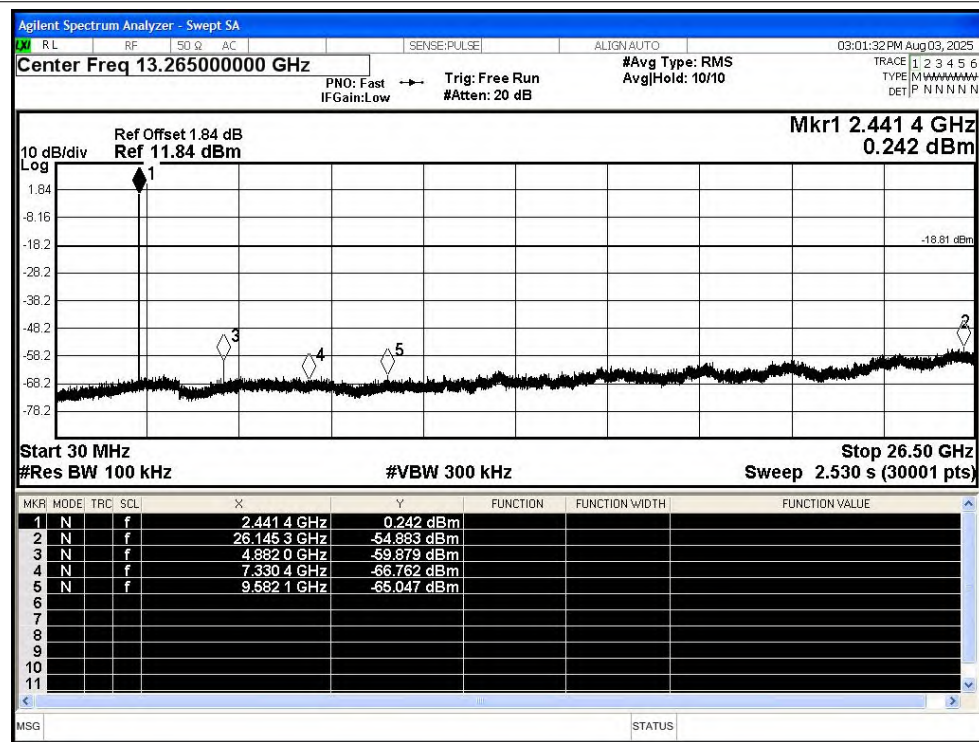
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



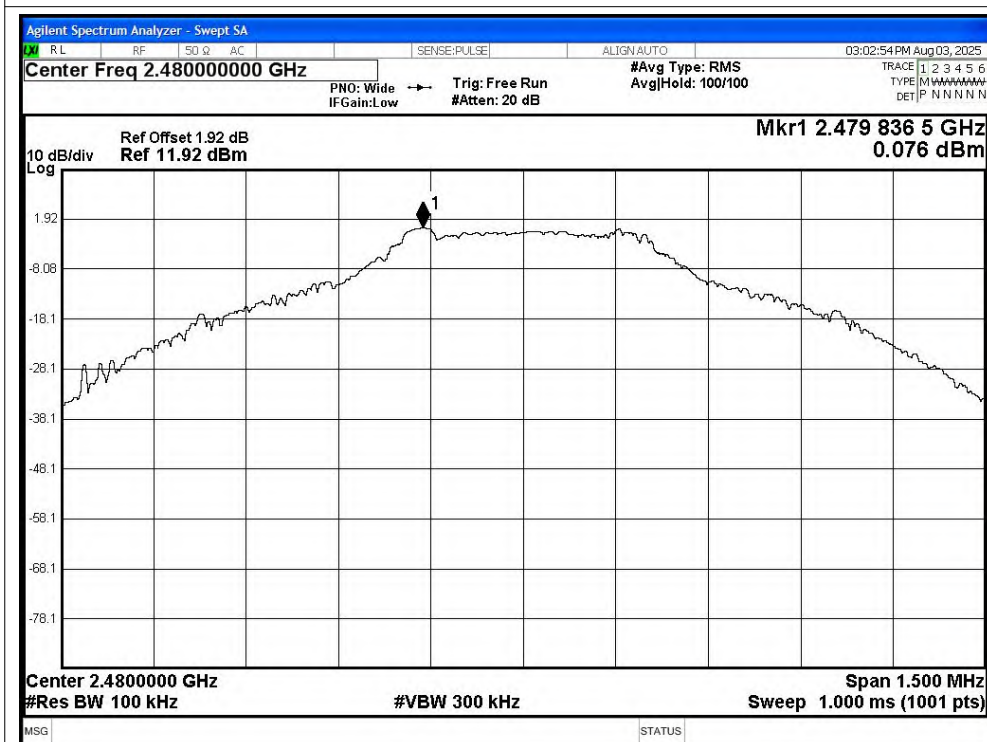
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



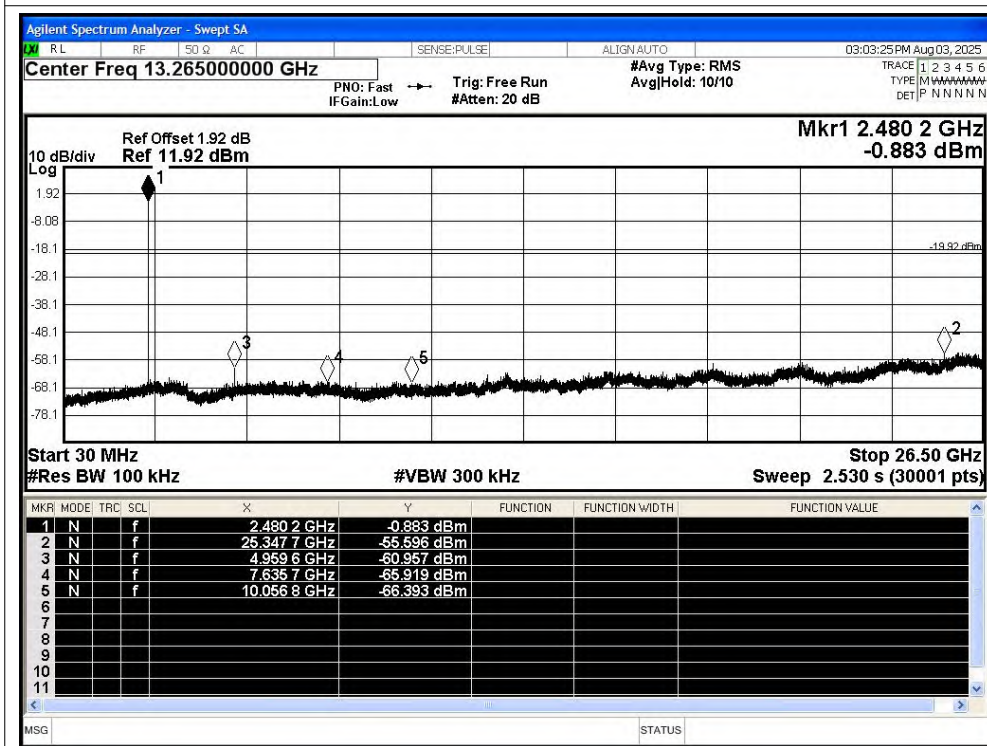
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



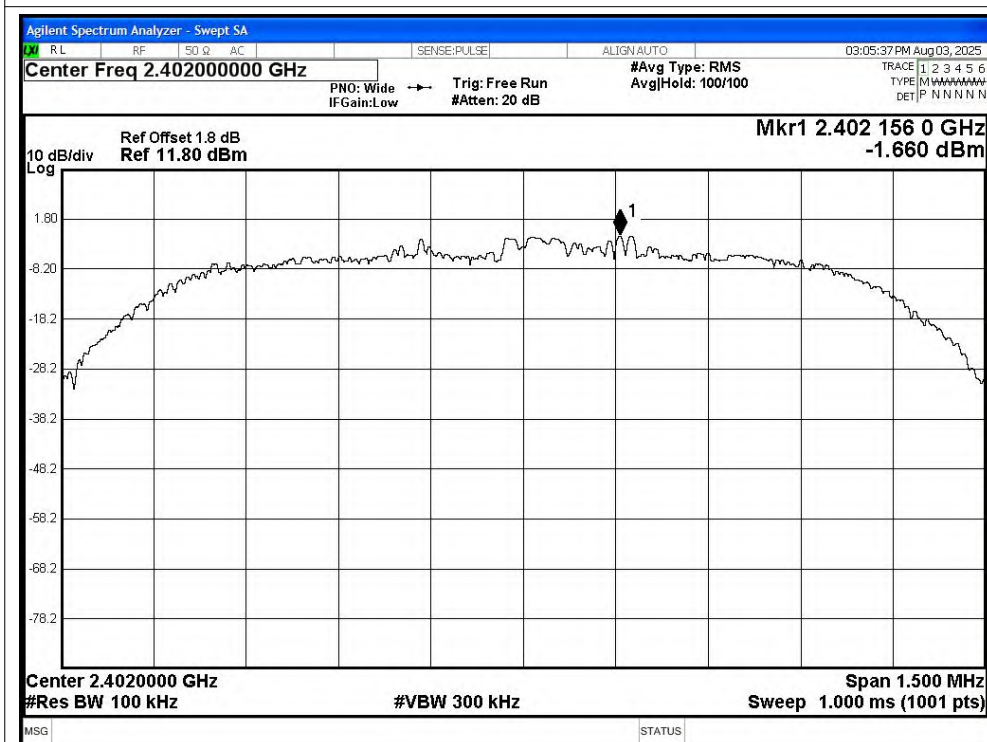
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



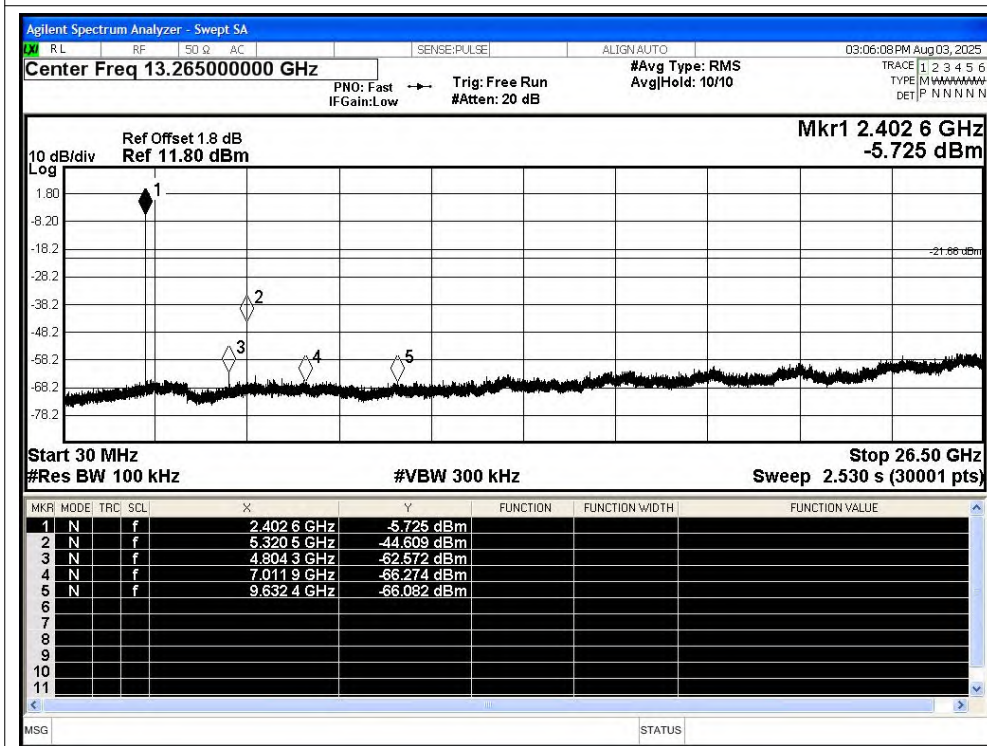
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



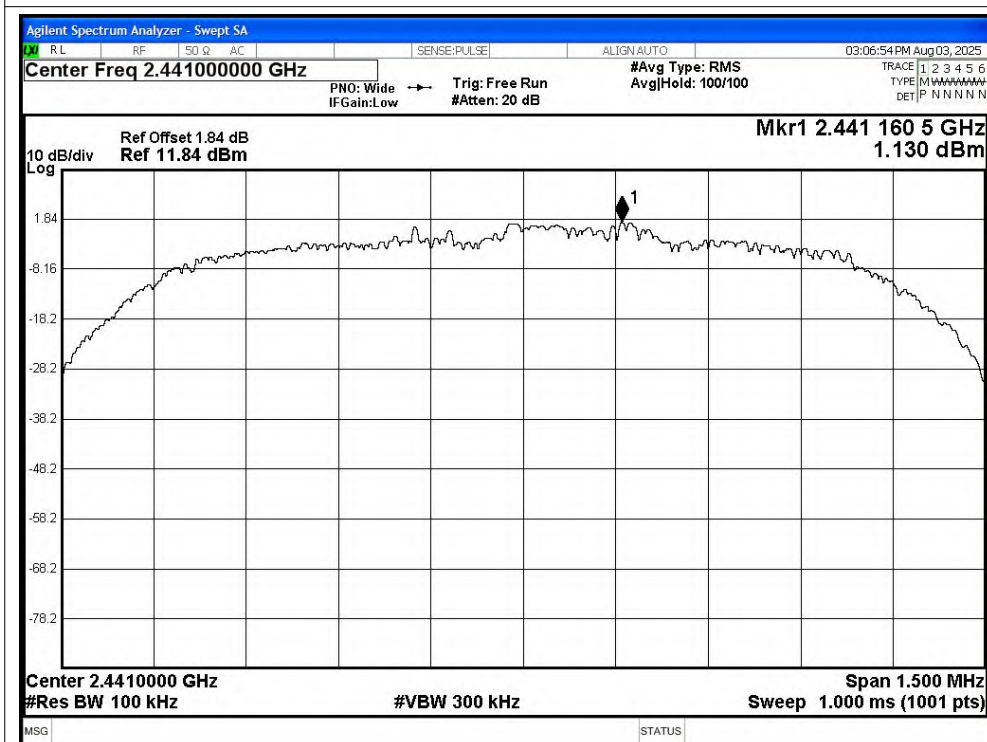
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



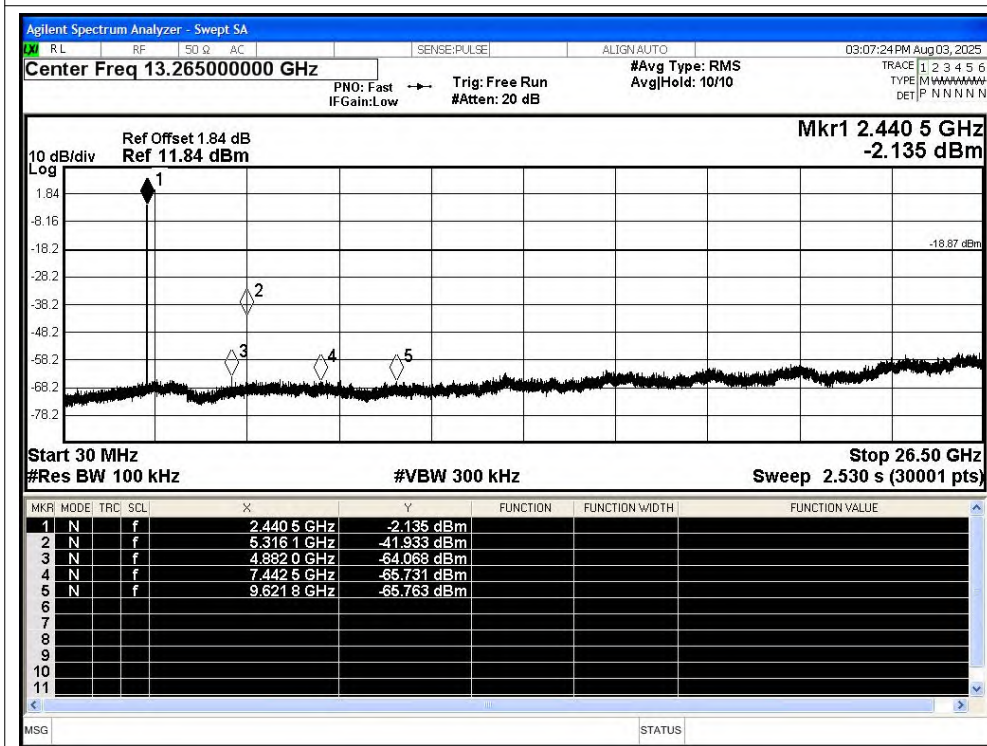
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission

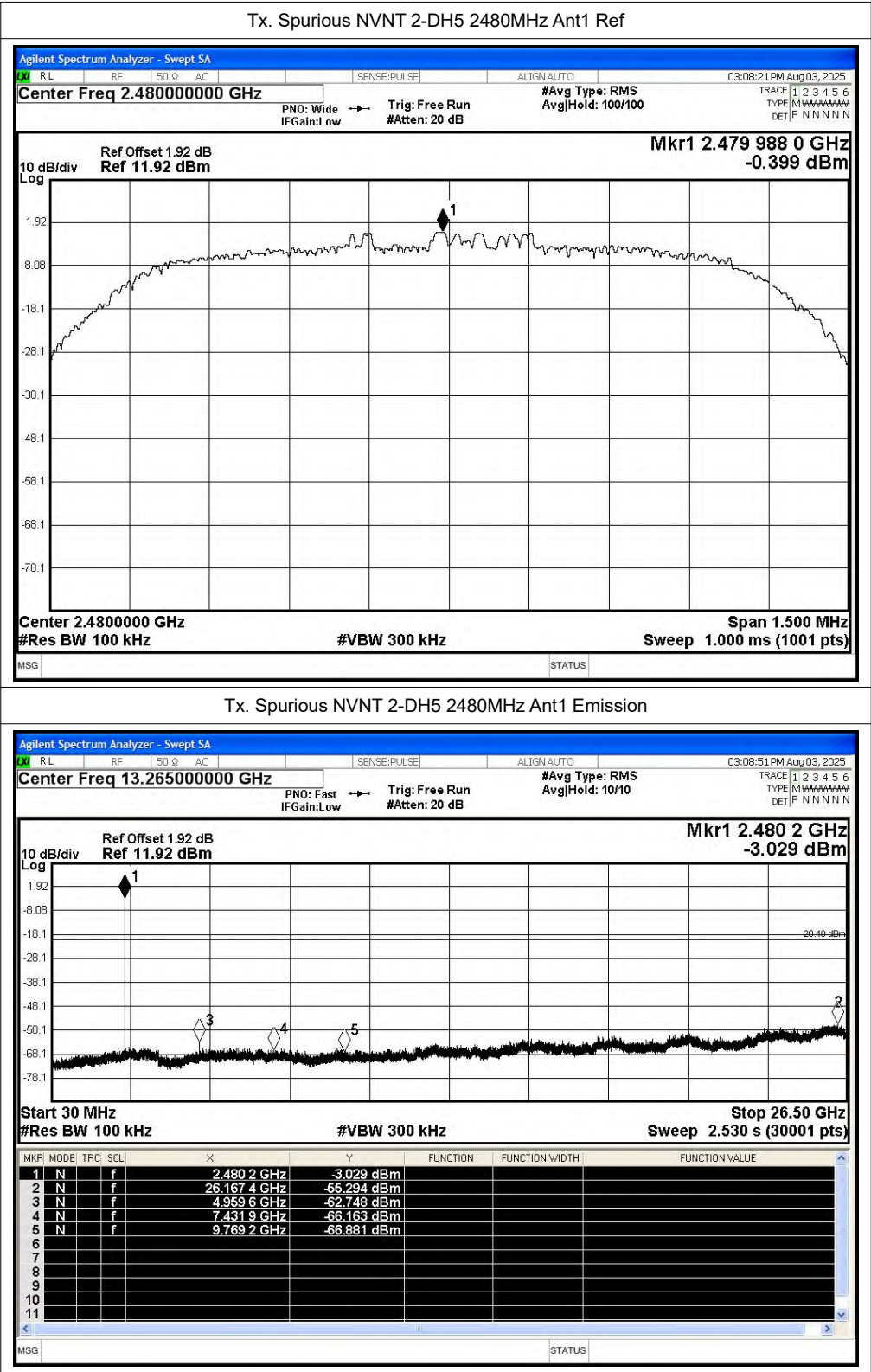


Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



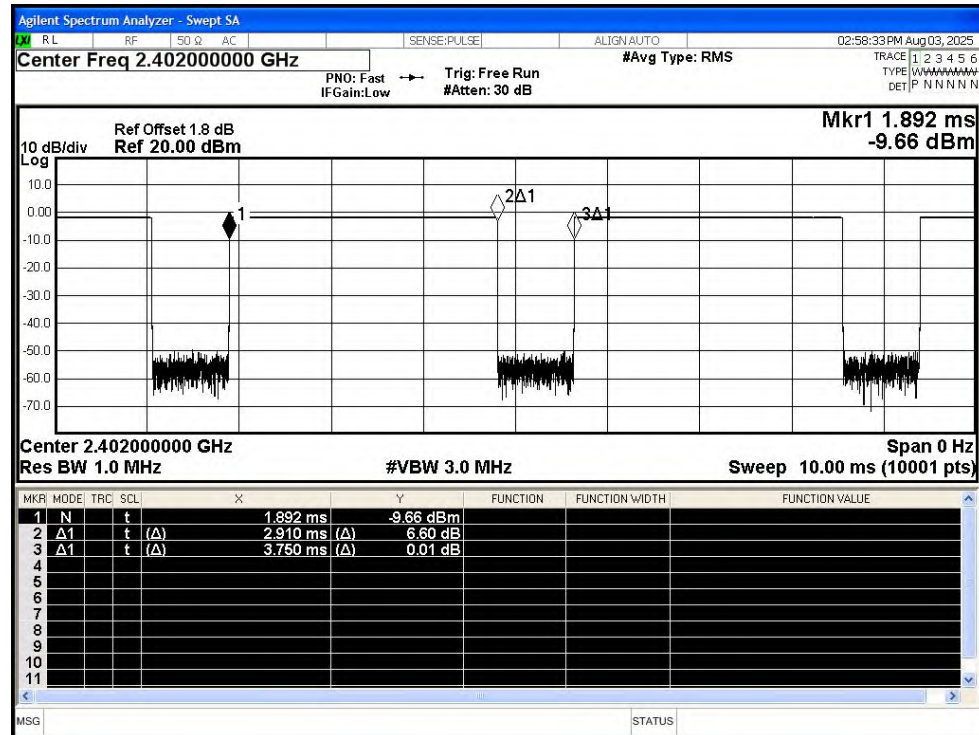


A.8 Duty Cycle

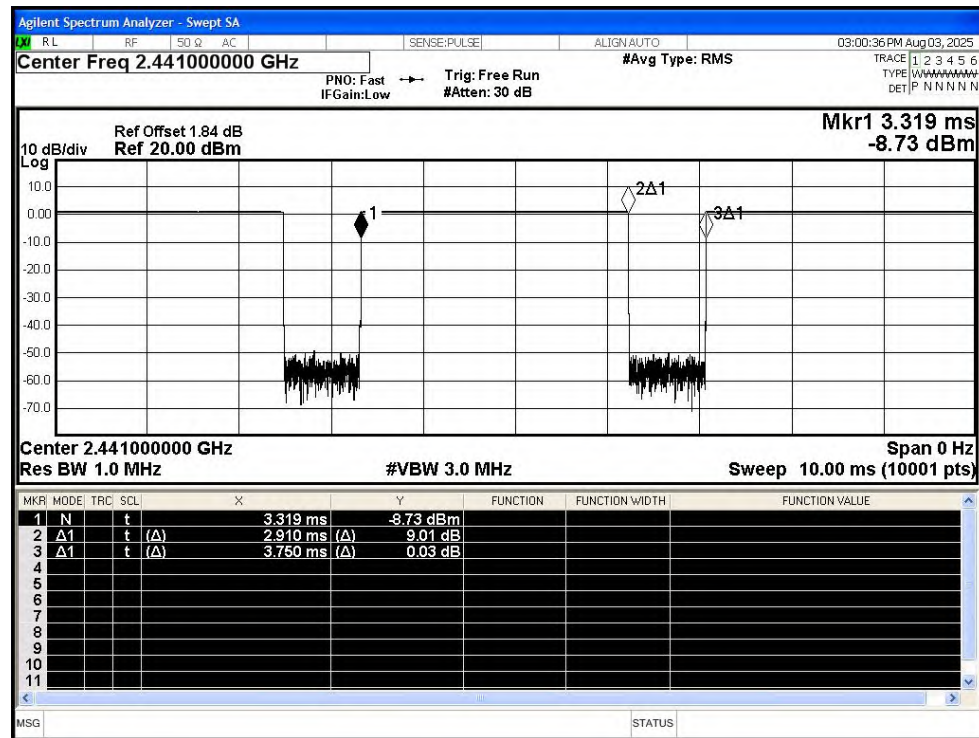
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.6	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.33	1.12	0.34
NVNT	2-DH5	2441	Ant1	76.43	1.17	0.36
NVNT	2-DH5	2480	Ant1	77.28	1.12	0.35

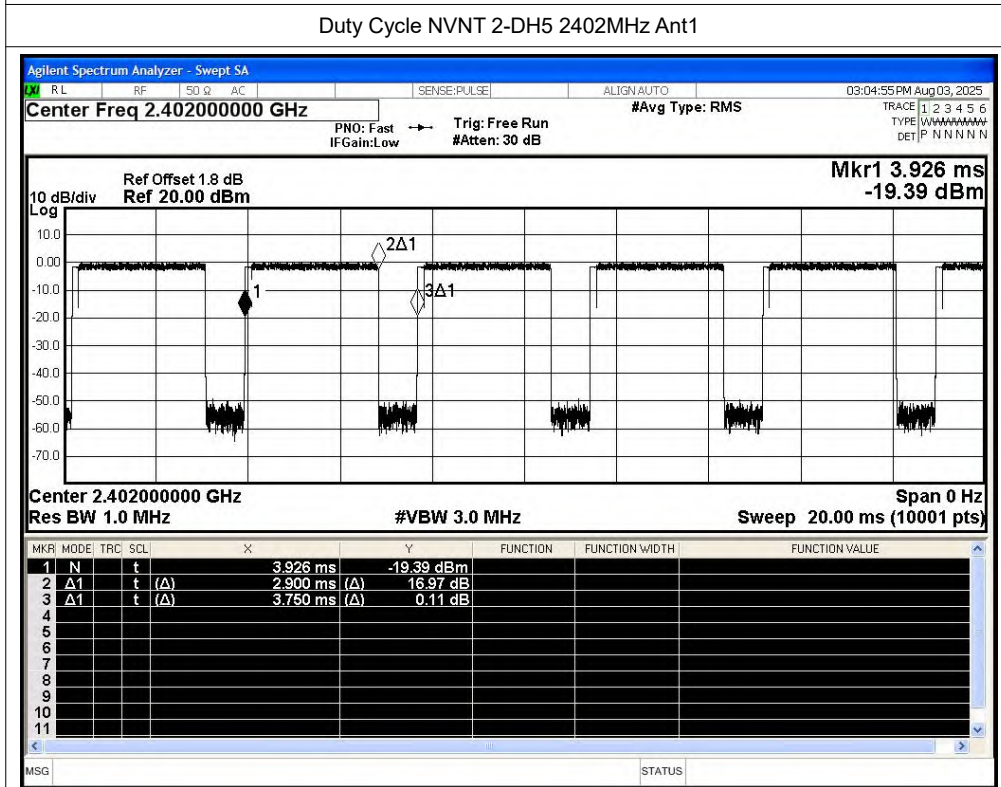
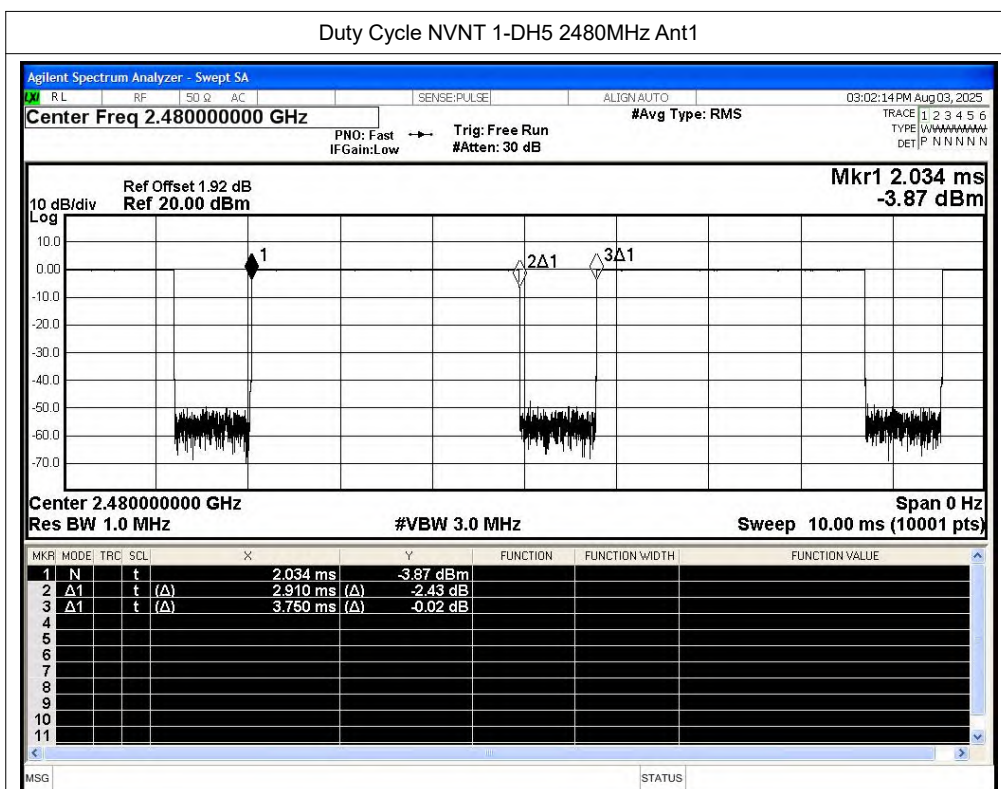
Test Graphs

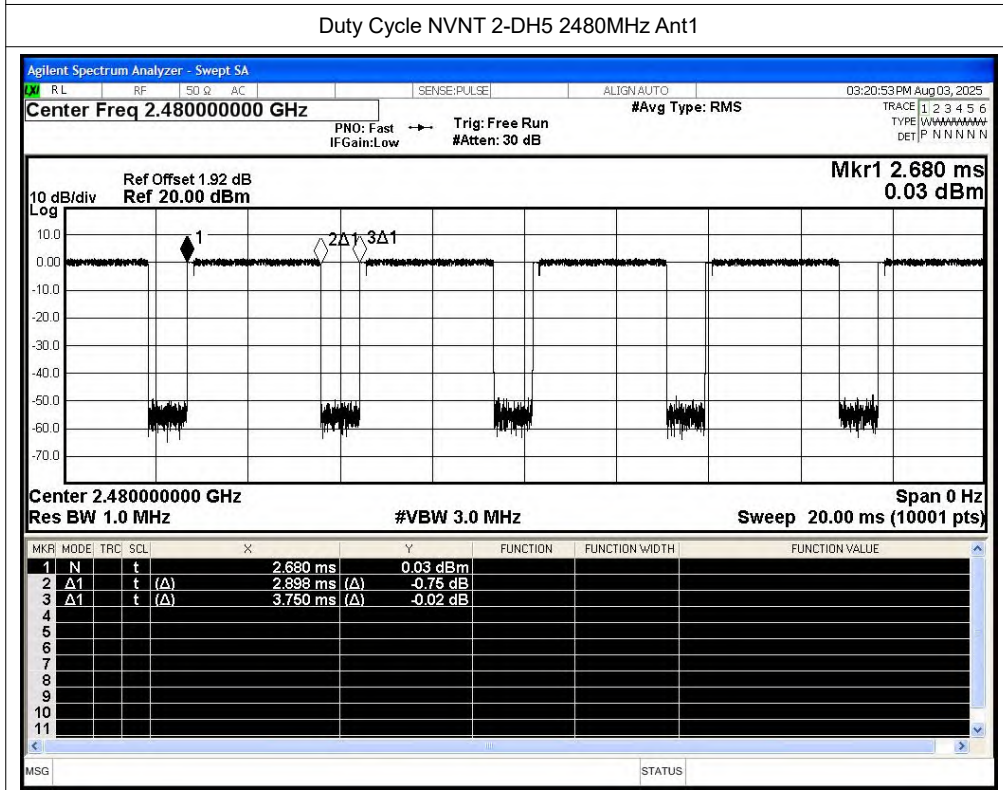
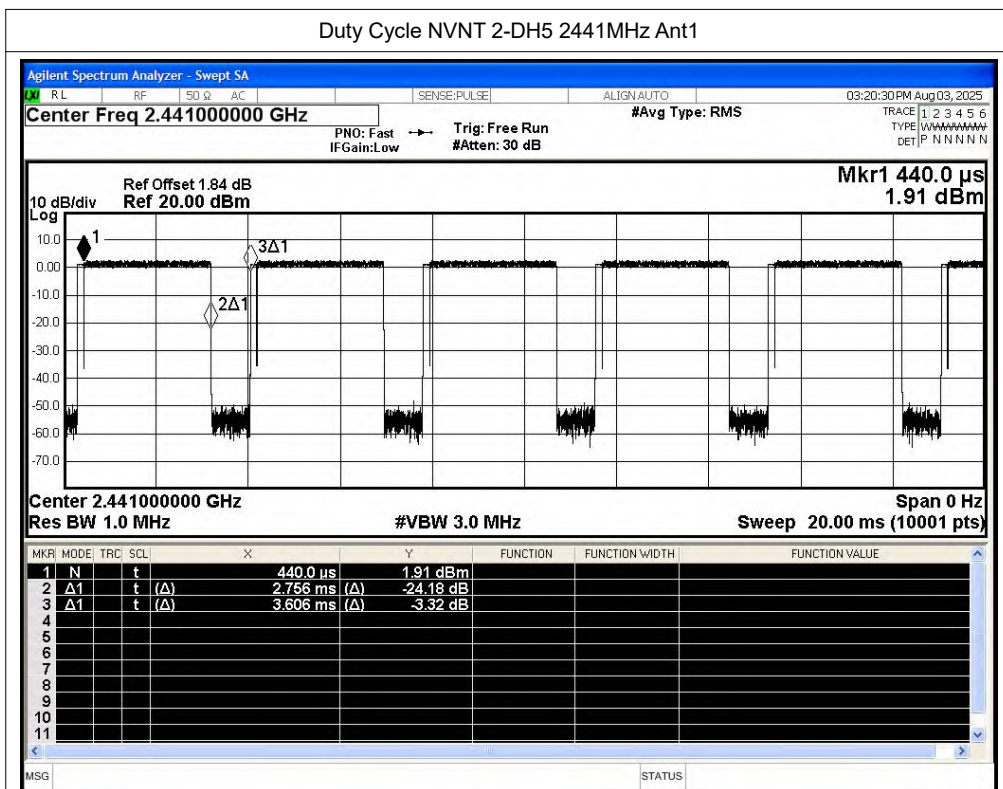
Duty Cycle NVNT 1-DH5 2402MHz Ant1



Duty Cycle NVNT 1-DH5 2441MHz Ant1





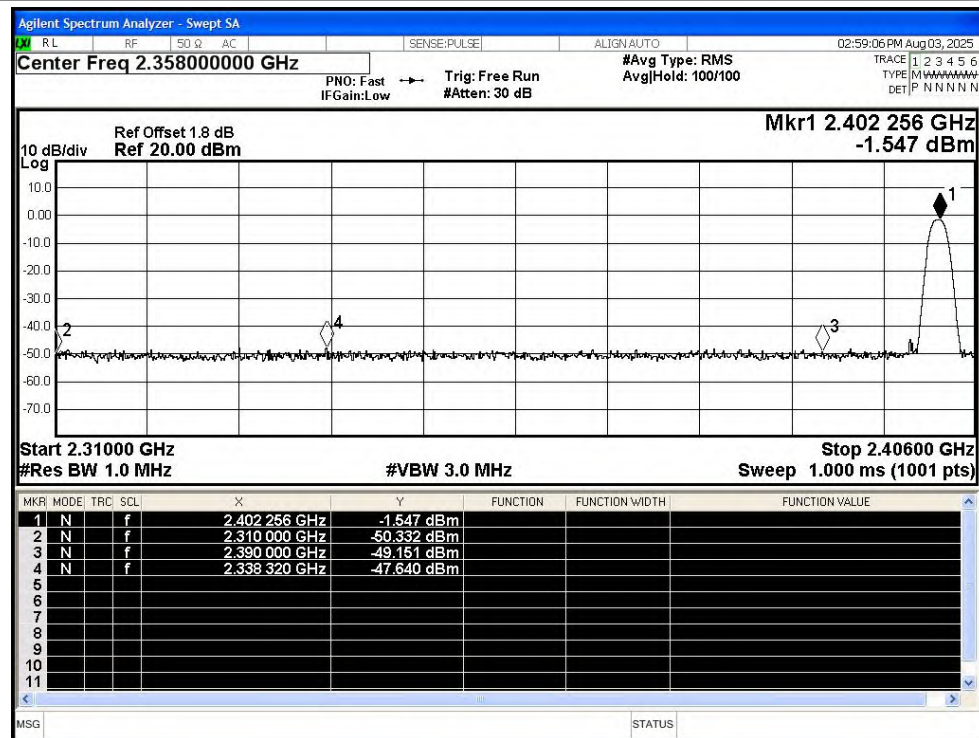


A.9 Restrict Band

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	-50.33	2	-	46.93	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-59.12	2	1.1	39.24	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2338.32	-47.64	2	-	49.62	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2387.76	-57.88	2	1.1	40.48	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-49.15	2	-	48.11	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-59.1	2	1.1	39.26	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-49.97	2	-	47.29	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-58.01	2	1.1	40.35	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2487.928	-46.06	2	-	51.2	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2487.712	-57.24	2	1.1	41.12	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-49.38	2	-	47.88	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-58.01	2	1.1	40.35	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-51.28	2	-	45.98	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-58.84	2	1.12	39.54	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2383.728	-48.08	2	-	49.18	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2373.36	-57.89	2	1.12	40.49	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-51.17	2	-	46.09	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-58.91	2	1.12	39.47	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-44.96	2	-	52.3	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-57.23	2	0.12	40.15	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2484.16	-44.6	2	-	52.66	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.824	-56.53	2	0.12	40.85	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-50.86	2	-	46.4	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-58.6	2	0.12	38.78	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

