

Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Professional Speaker

Test Model: PRO 5000

Environmental Conditions

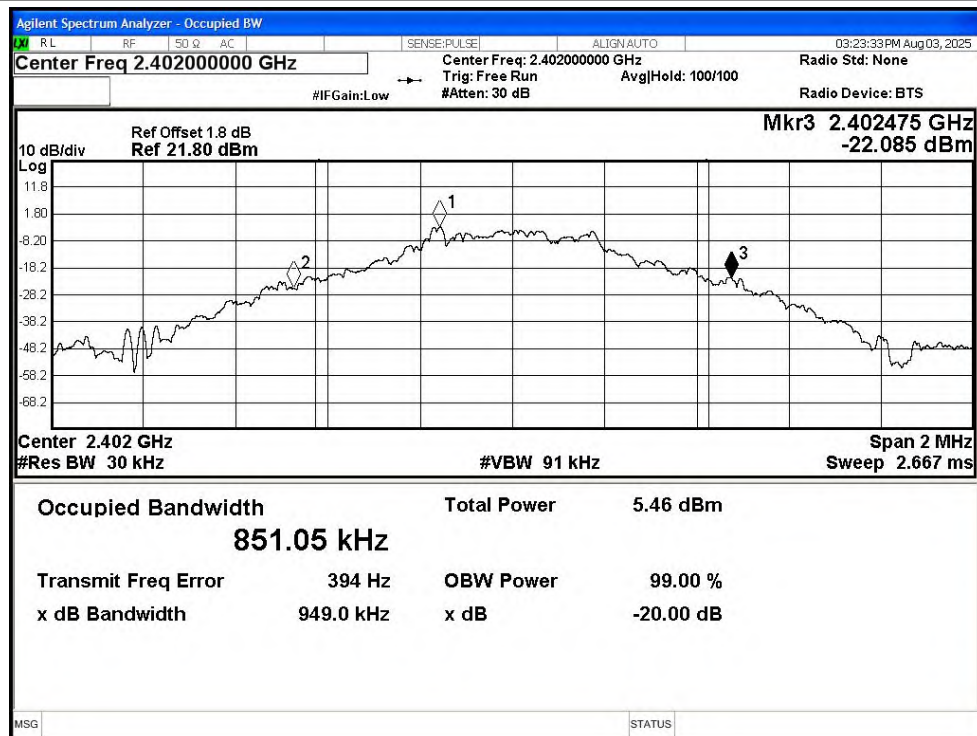
Temperature:	23.5 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Yan Chen

A.1 -20dB Bandwidth

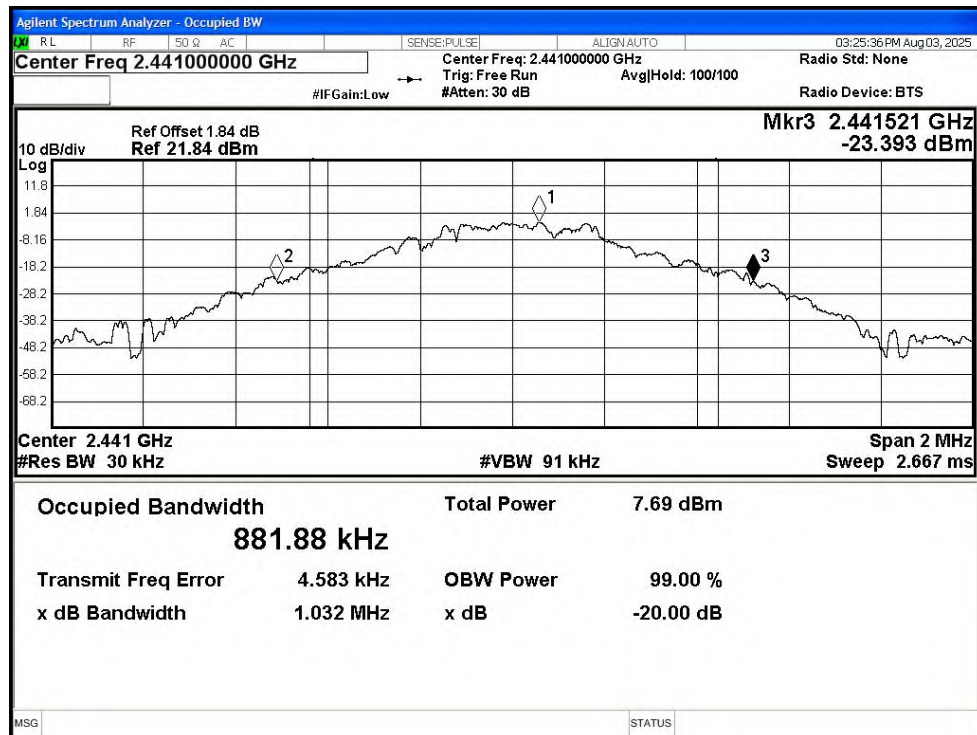
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.949	N/A	Pass
NVNT	1-DH5	2441	Ant1	1.032	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.956	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.284	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.284	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.283	N/A	Pass

Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



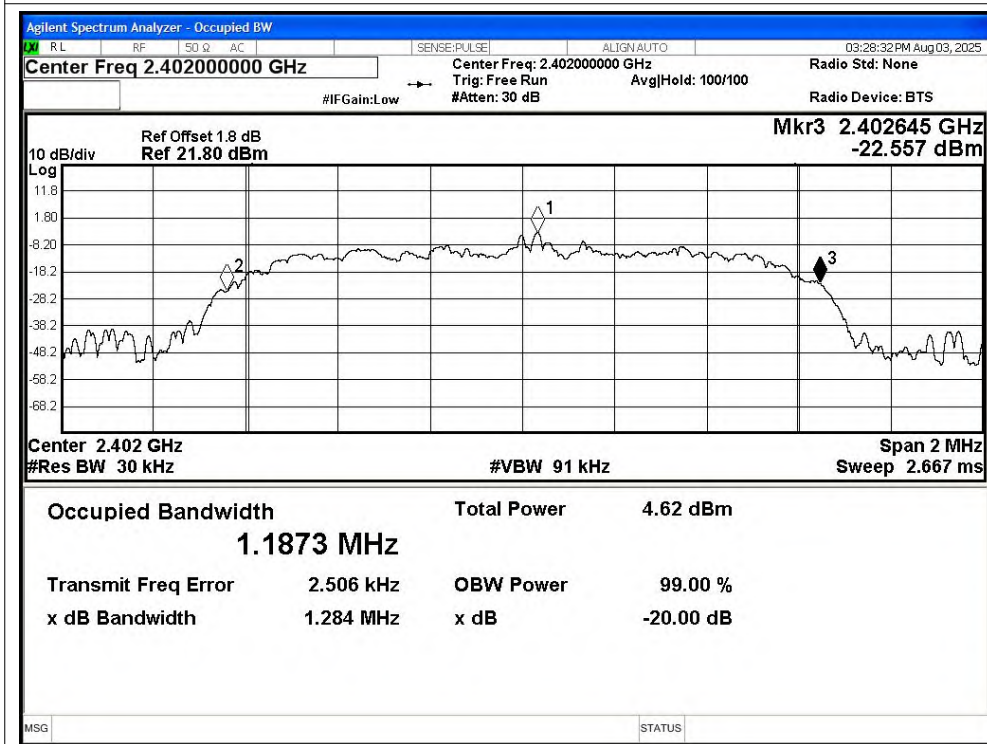
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



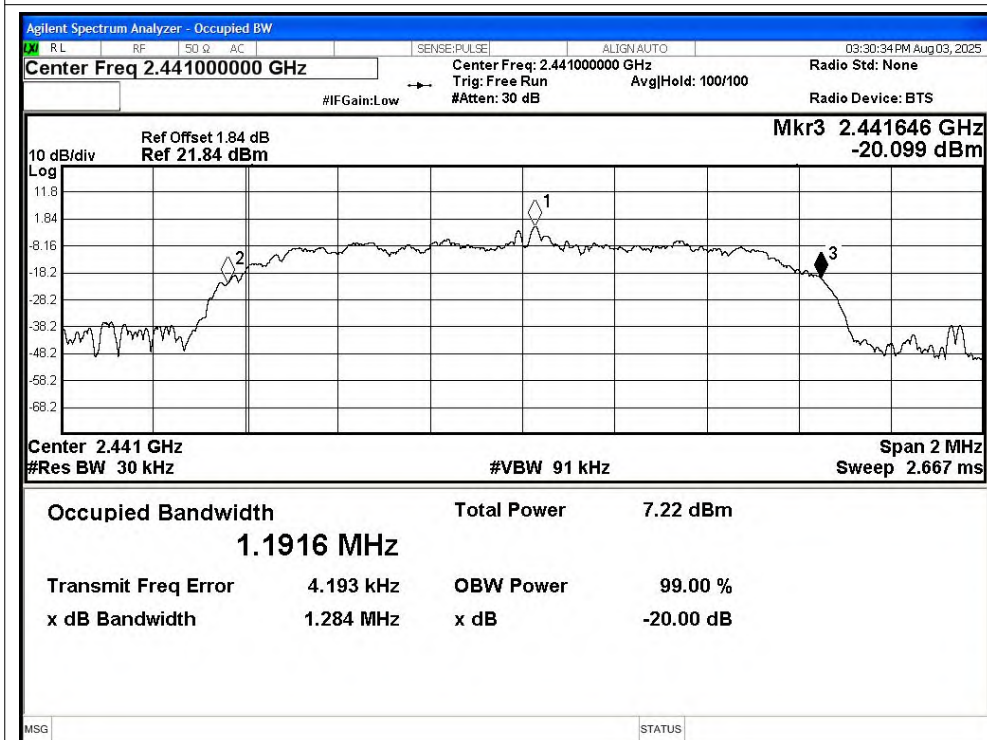
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



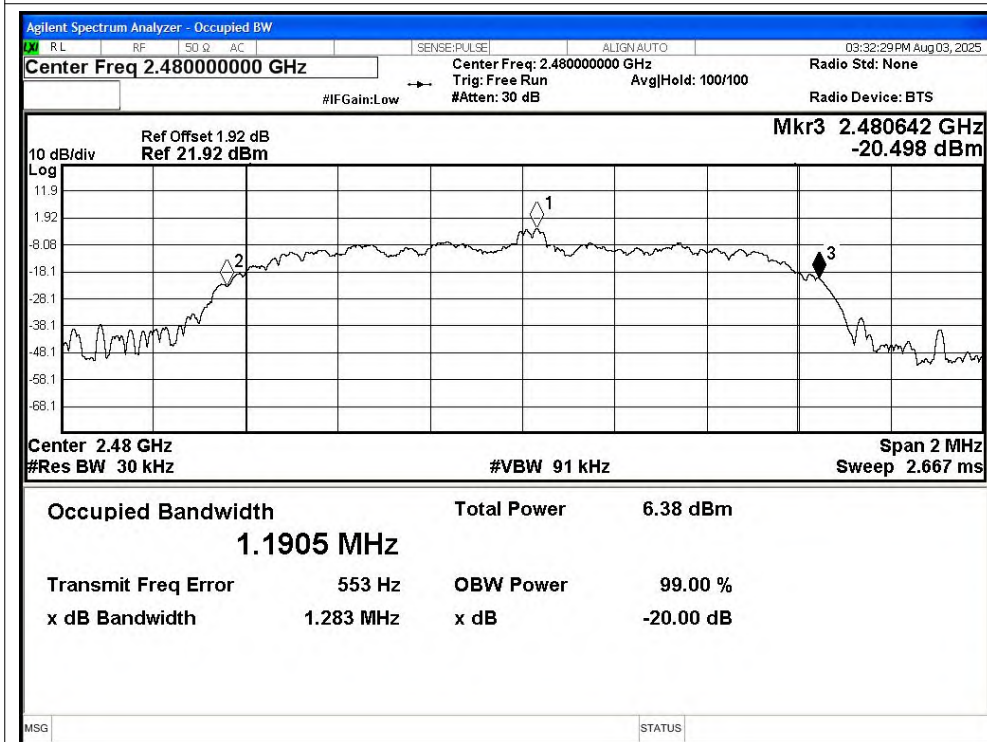
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

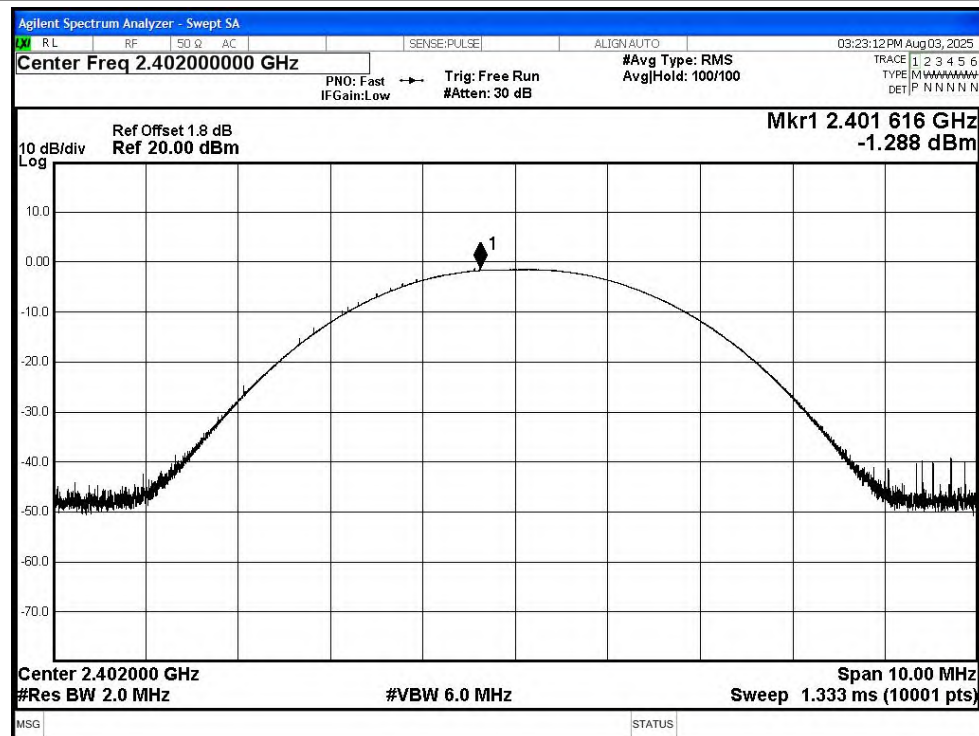


A.2 Maximum Peak Conducted Output Power

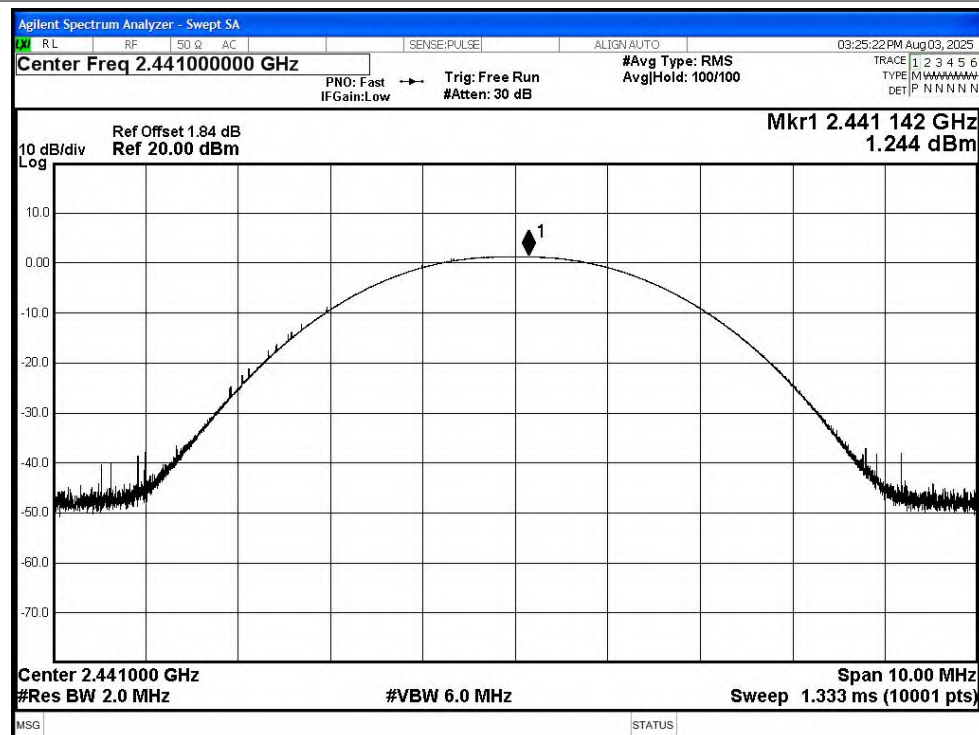
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-1.29	21	Pass
NVNT	1-DH5	2441	Ant1	1.24	21	Pass
NVNT	1-DH5	2480	Ant1	0.16	21	Pass
NVNT	2-DH5	2402	Ant1	0.6	21	Pass
NVNT	2-DH5	2441	Ant1	3.16	21	Pass
NVNT	2-DH5	2480	Ant1	1.97	21	Pass

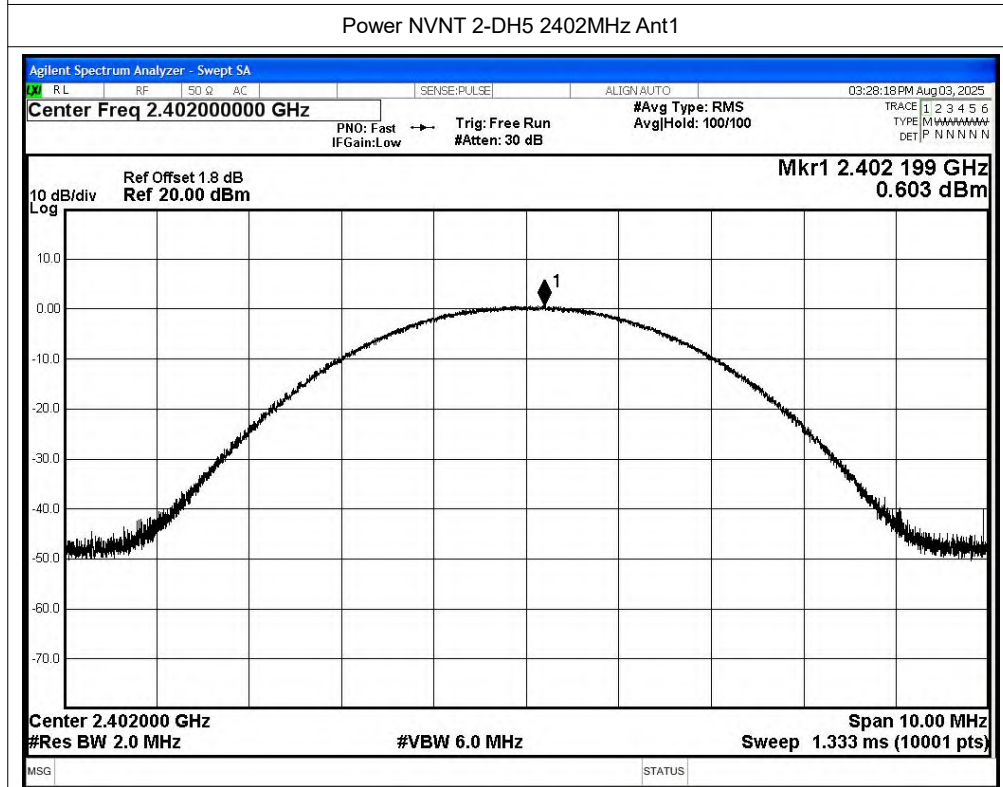
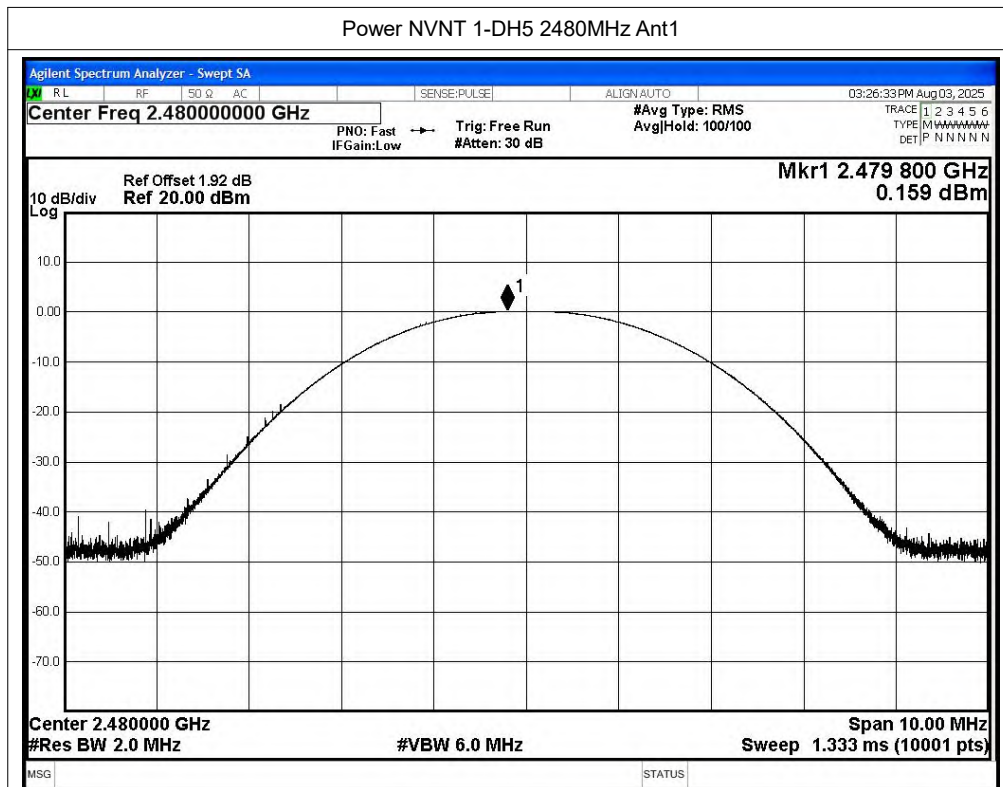
Test Graphs

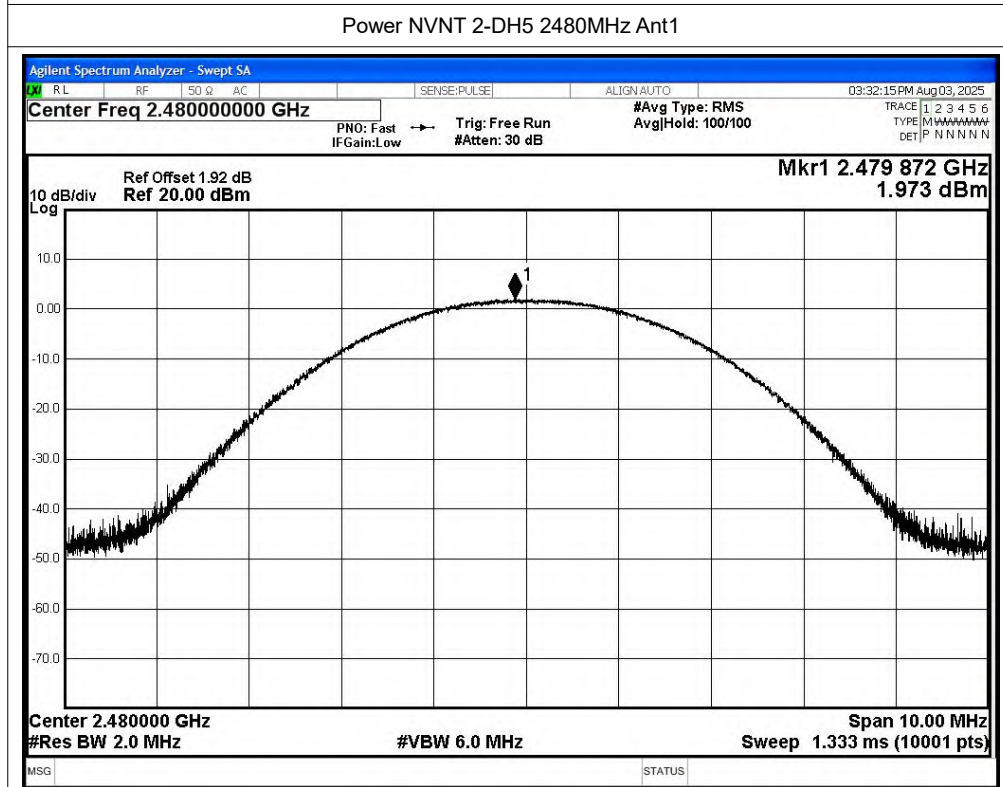
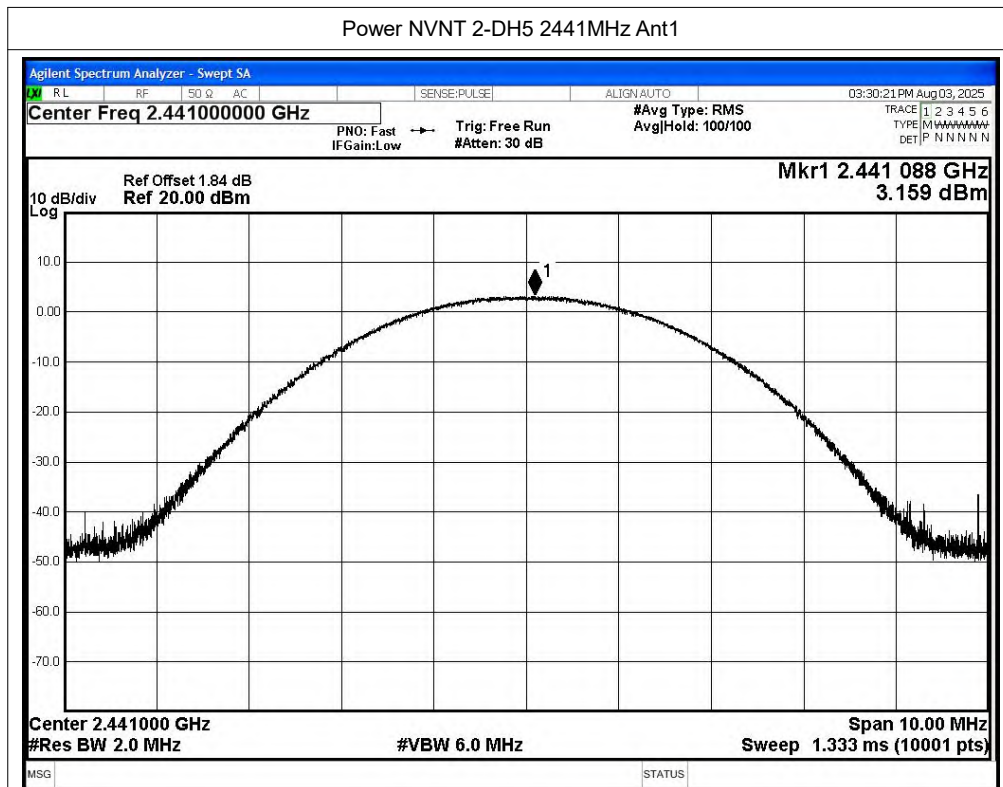
Power NVNT 1-DH5 2402MHz Ant1



Power NVNT 1-DH5 2441MHz Ant1





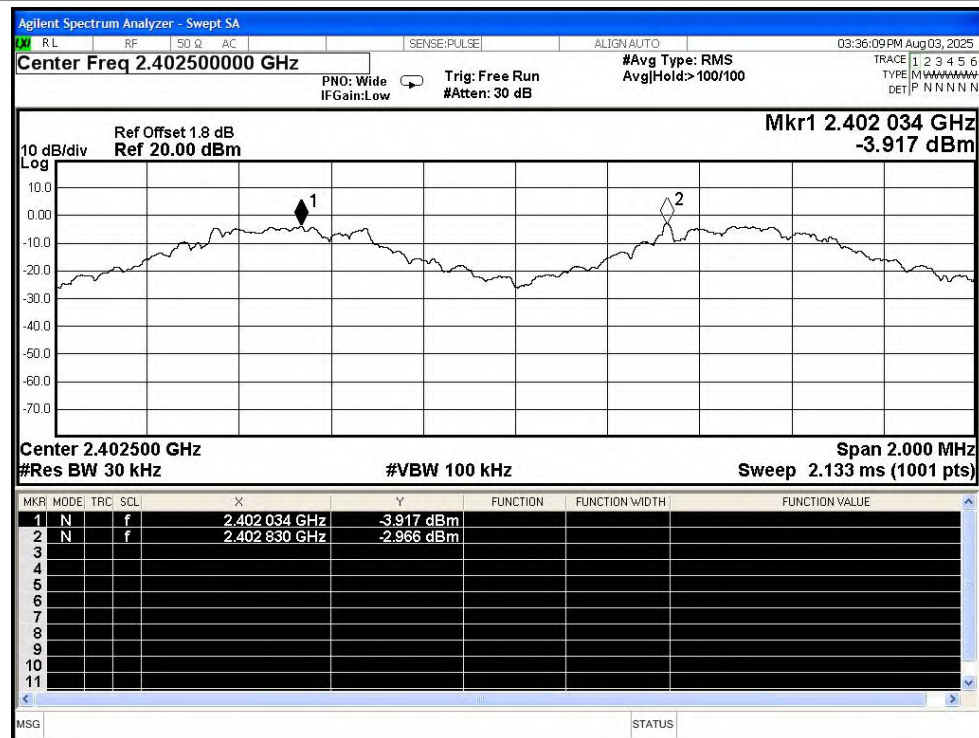


A.3 Carrier Frequencies Separation

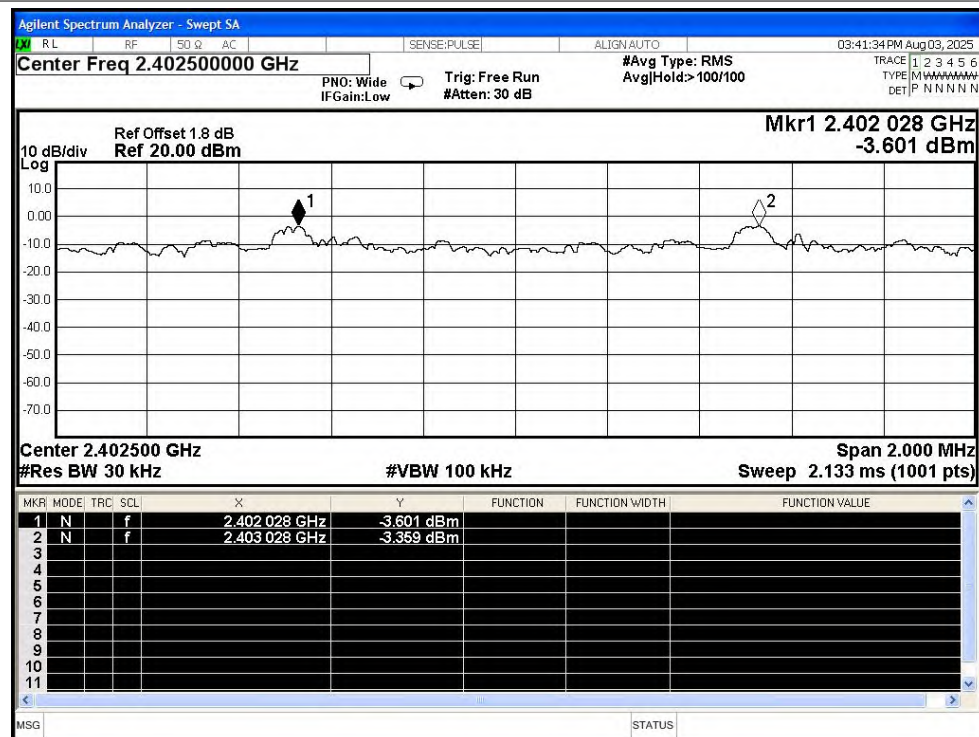
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.034	2402.83	0.796	0.688	Pass
NVNT	2-DH5	Ant1	2402.028	2403.028	1	0.856	Pass

Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1

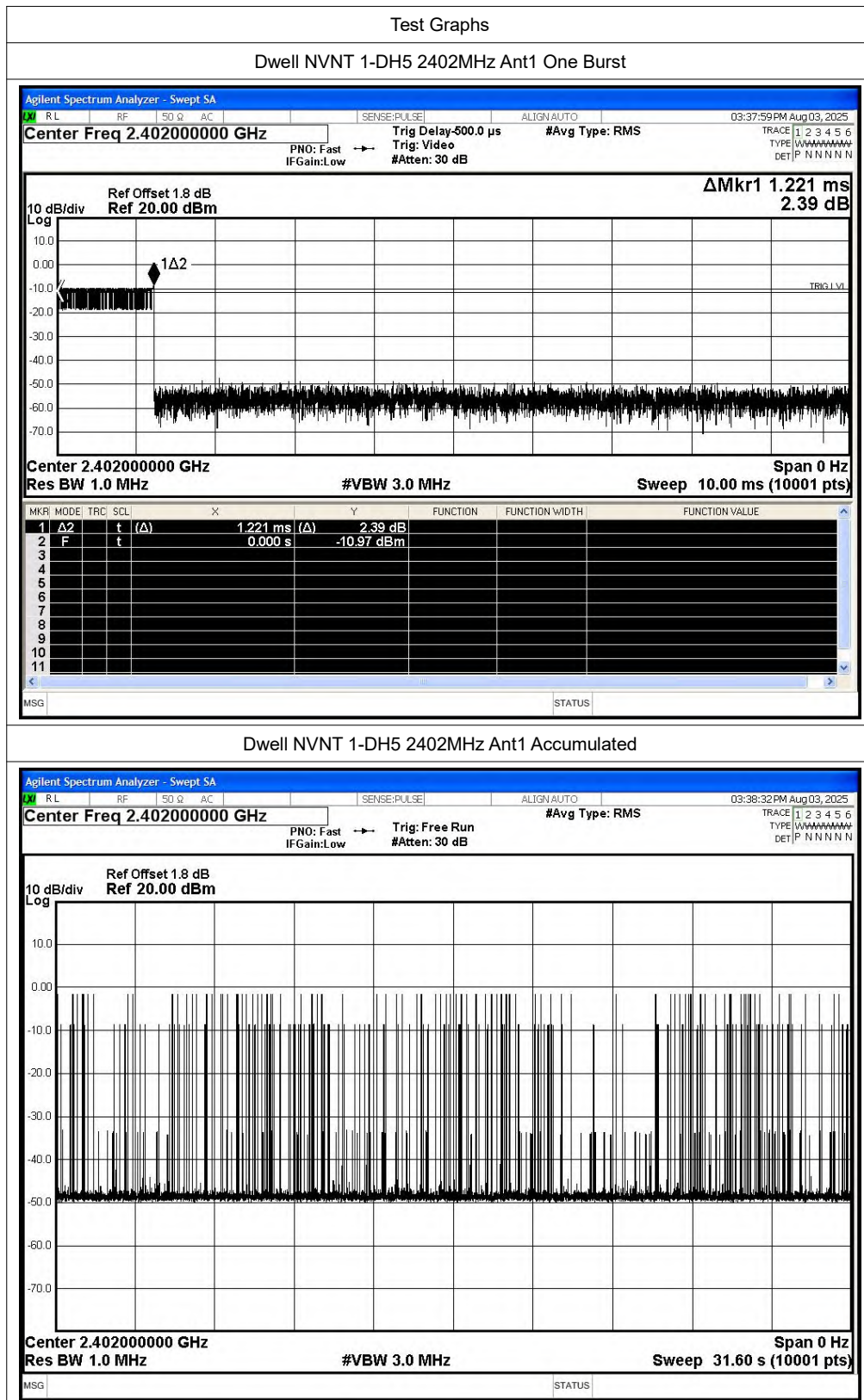


CFS NVNT 2-DH5 2402MHz Ant1

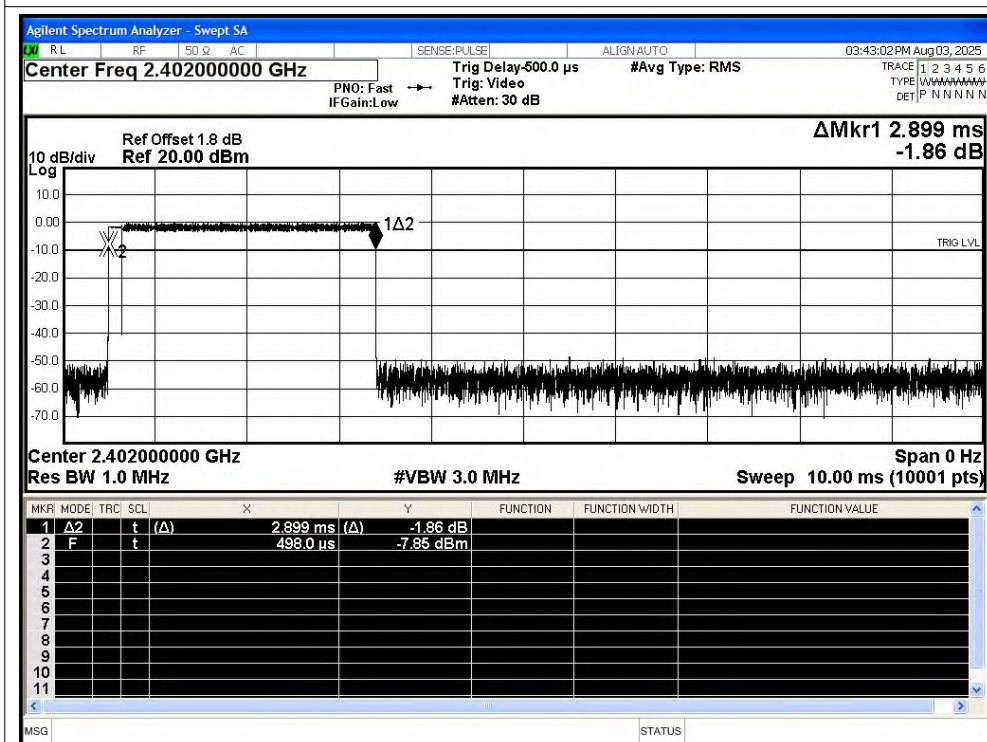


A.4 Dwell Time

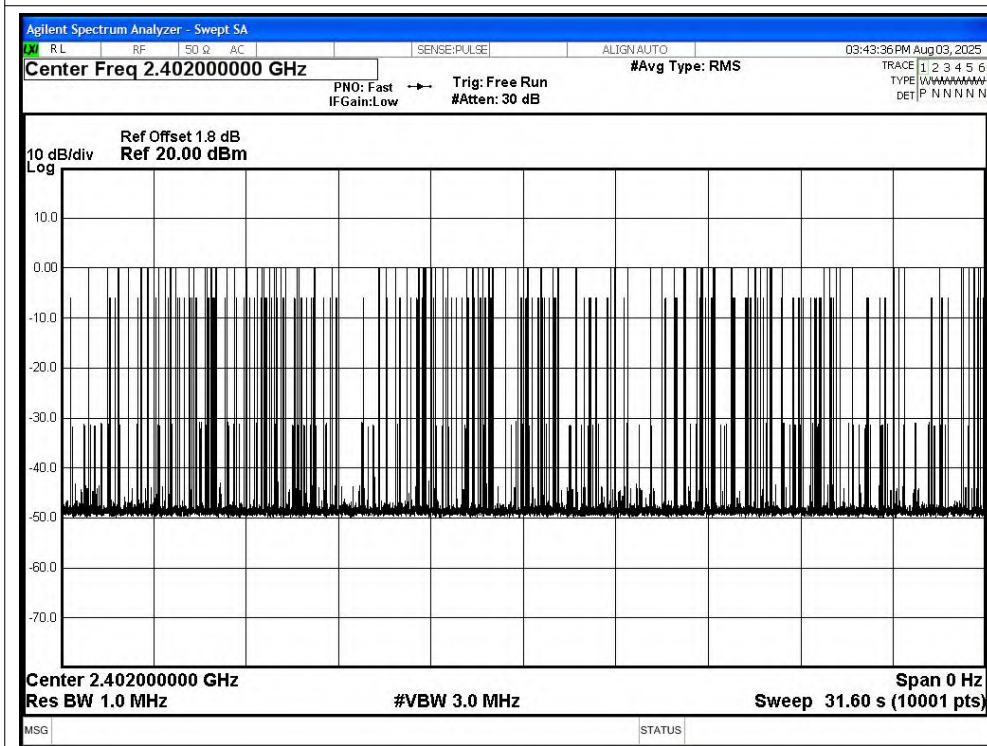
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	1.221	123.321	101	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.899	298.597	103	31600	400	Pass



Dwell NVNT 2-DH5 2402MHz Ant1 One Burst

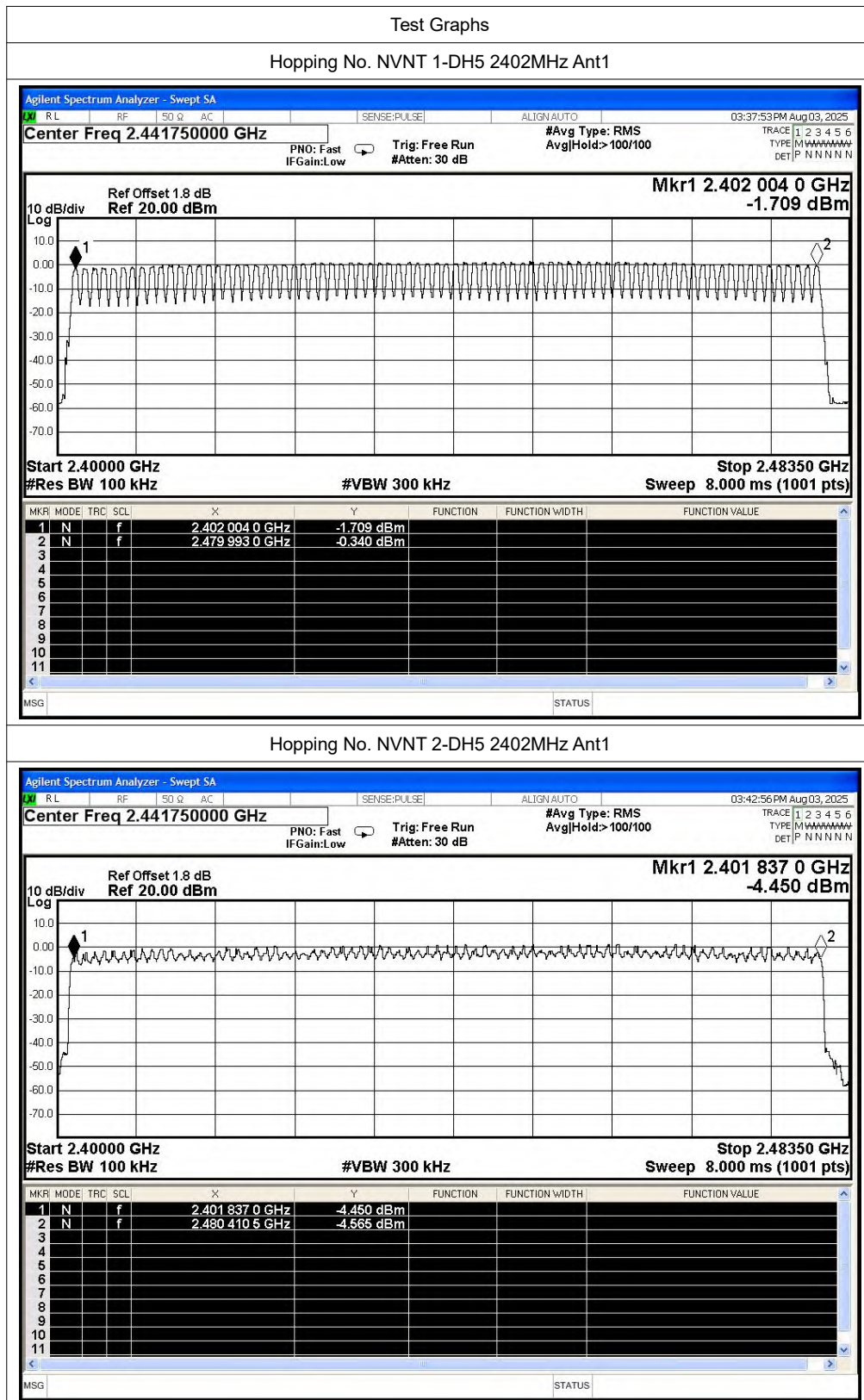


Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



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

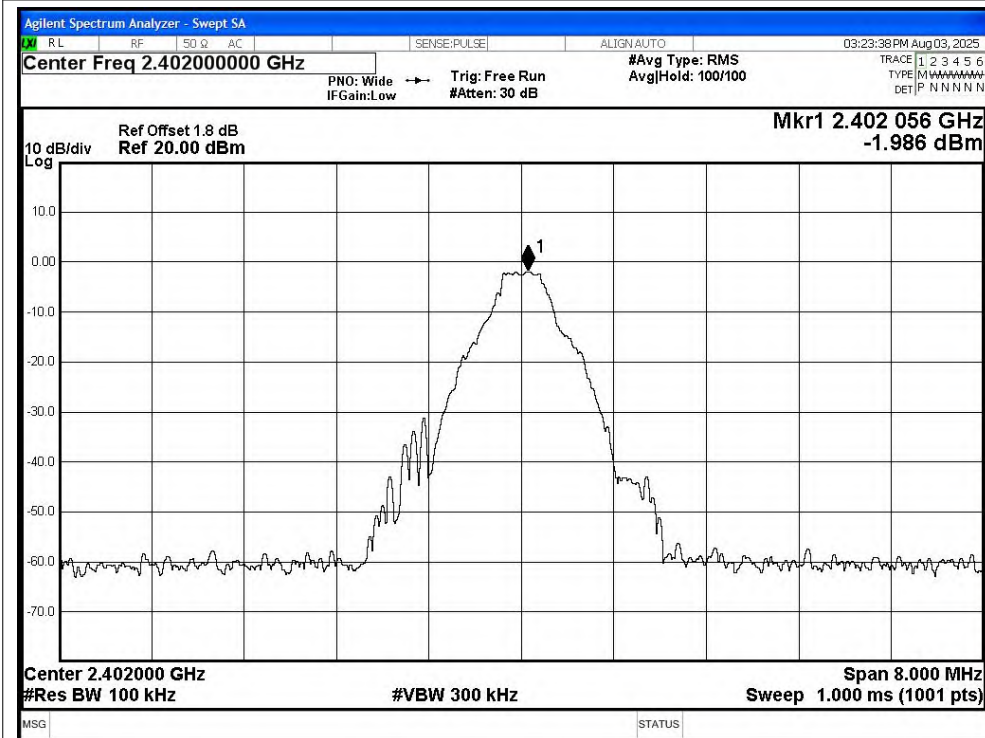


A.6 Band Edge

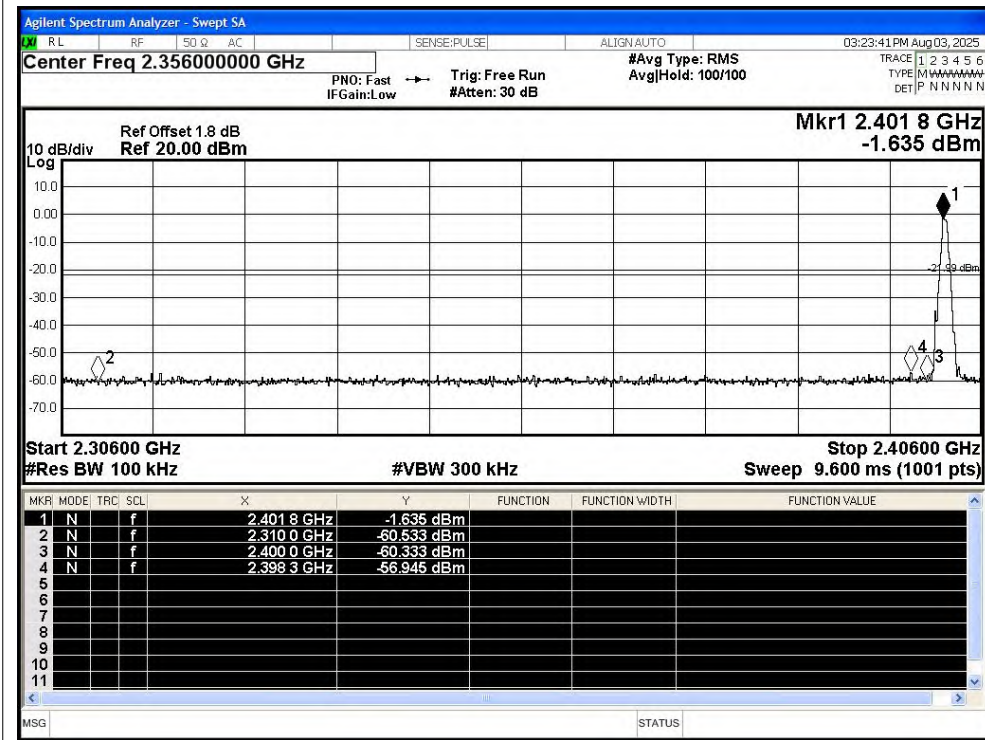
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-54.96	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-57.71	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-50.89	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-56.67	-20	Pass

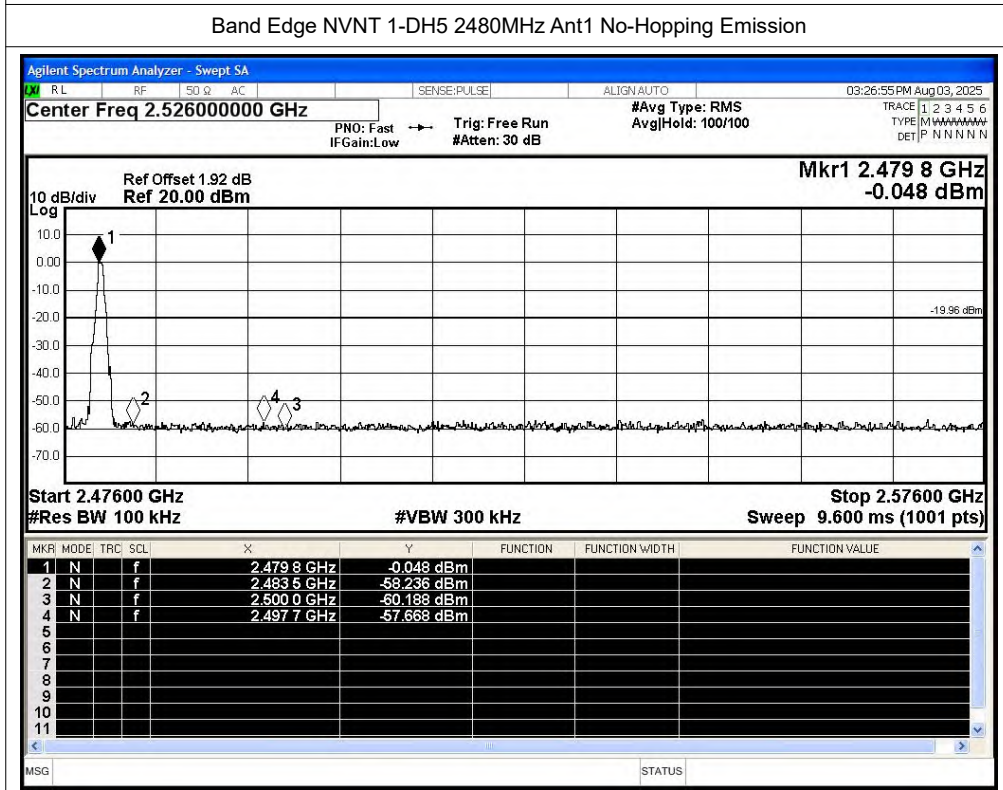
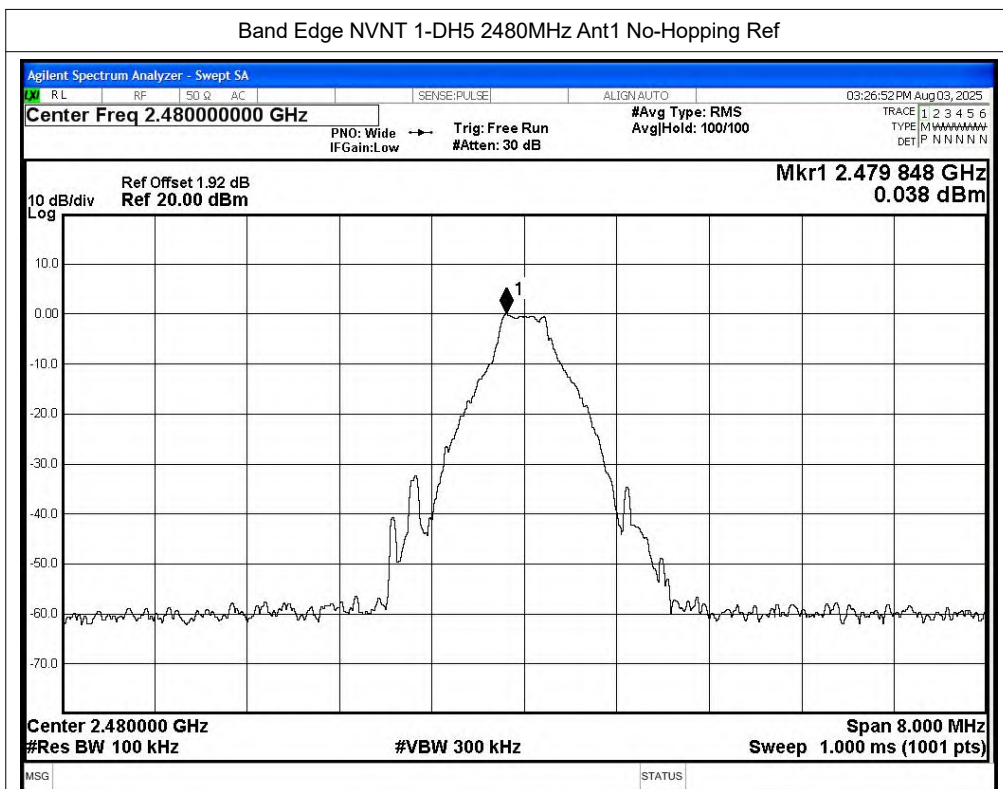
Test Graphs

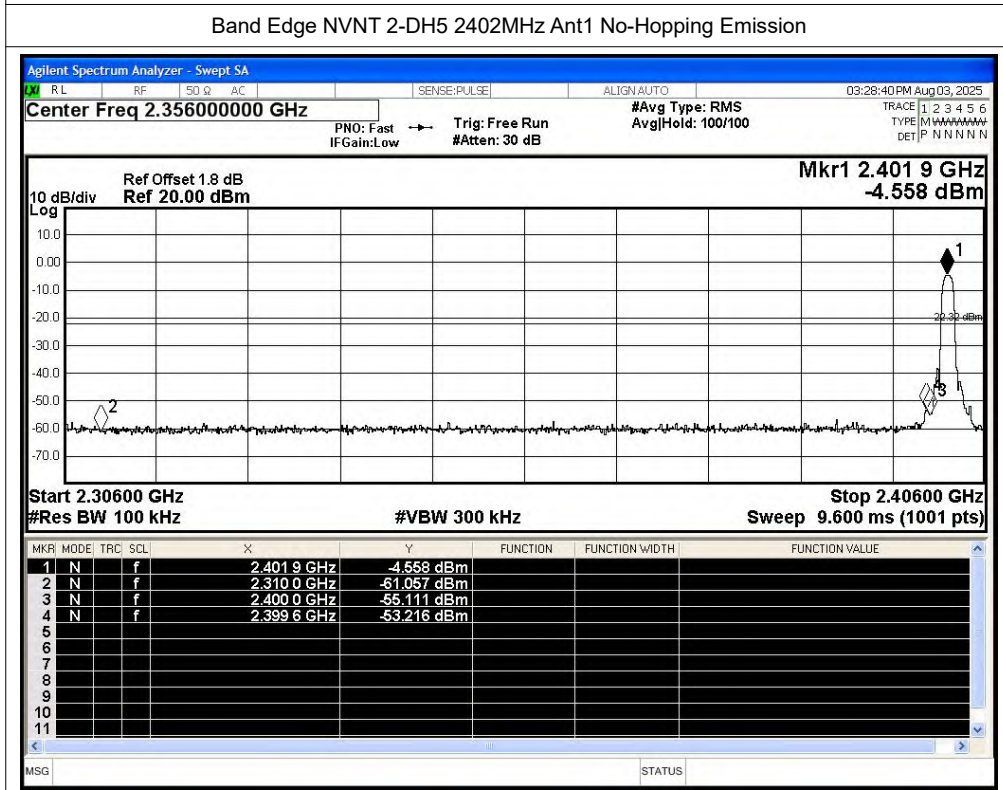
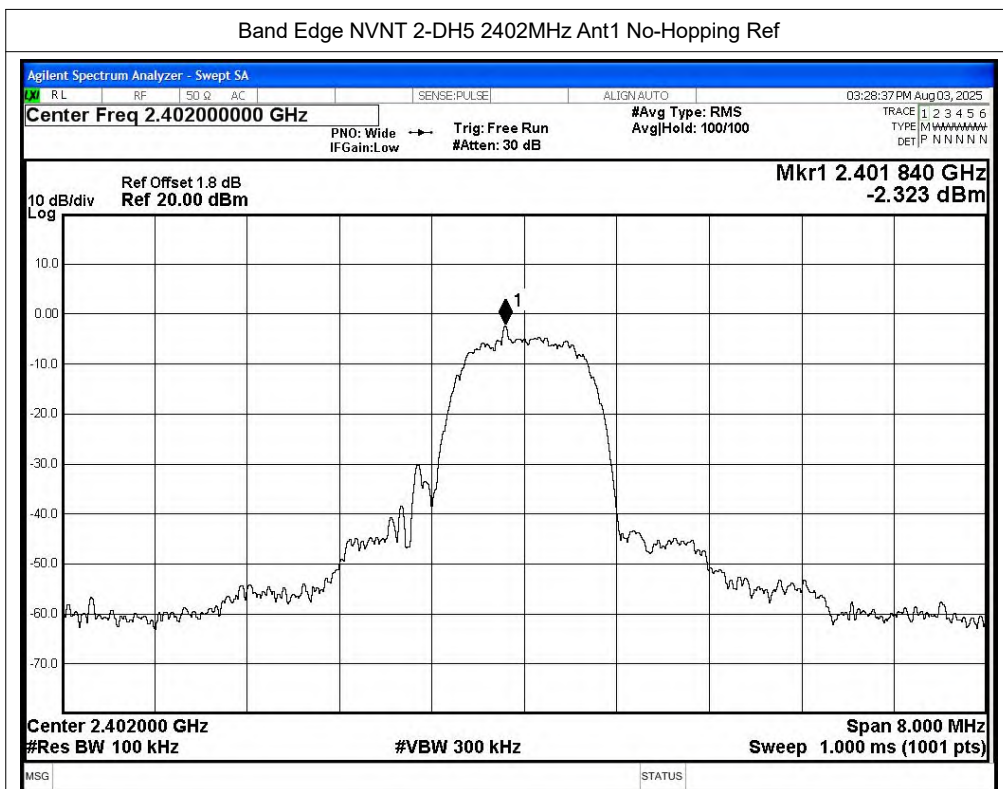
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref

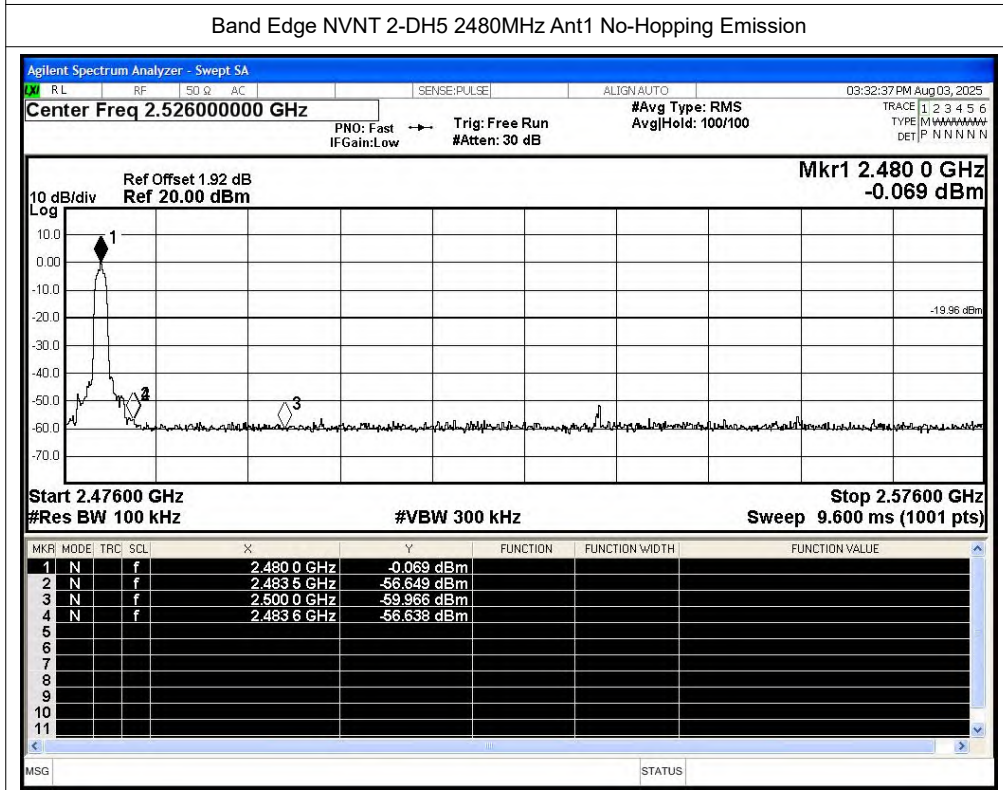
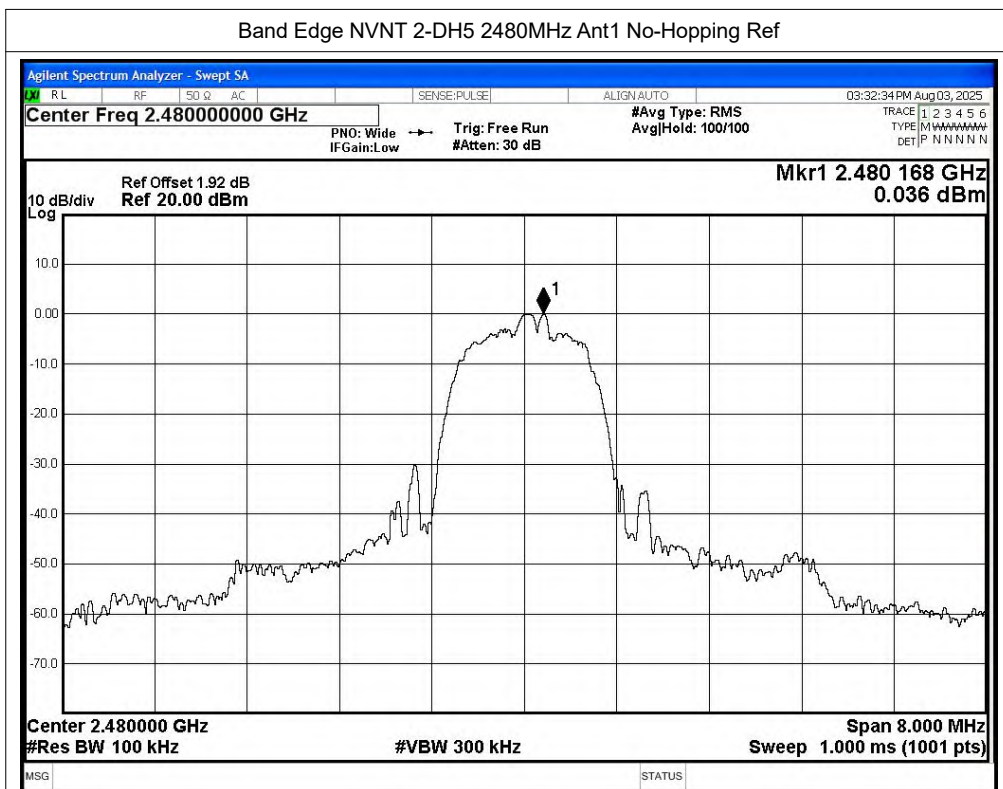


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



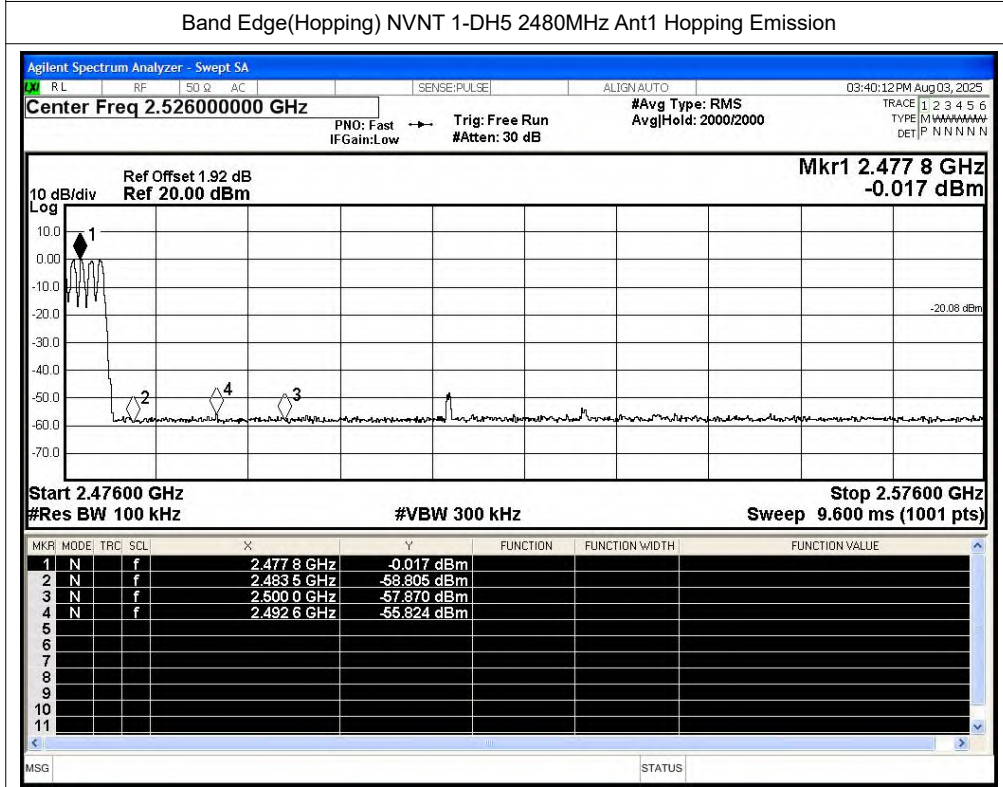
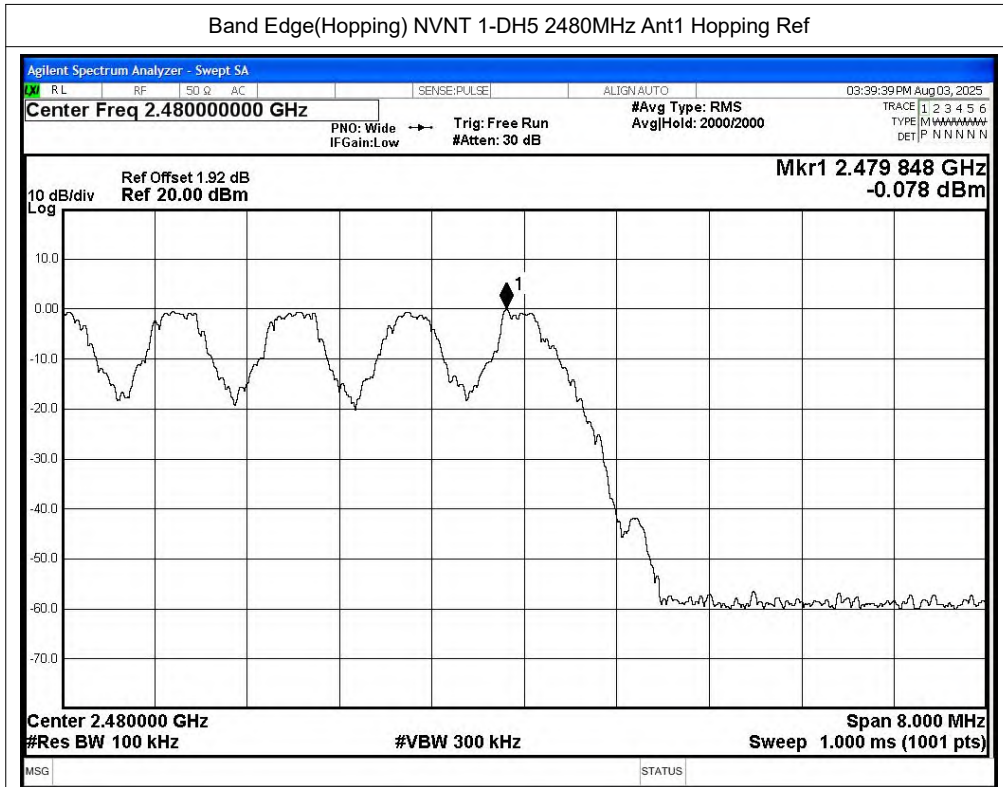


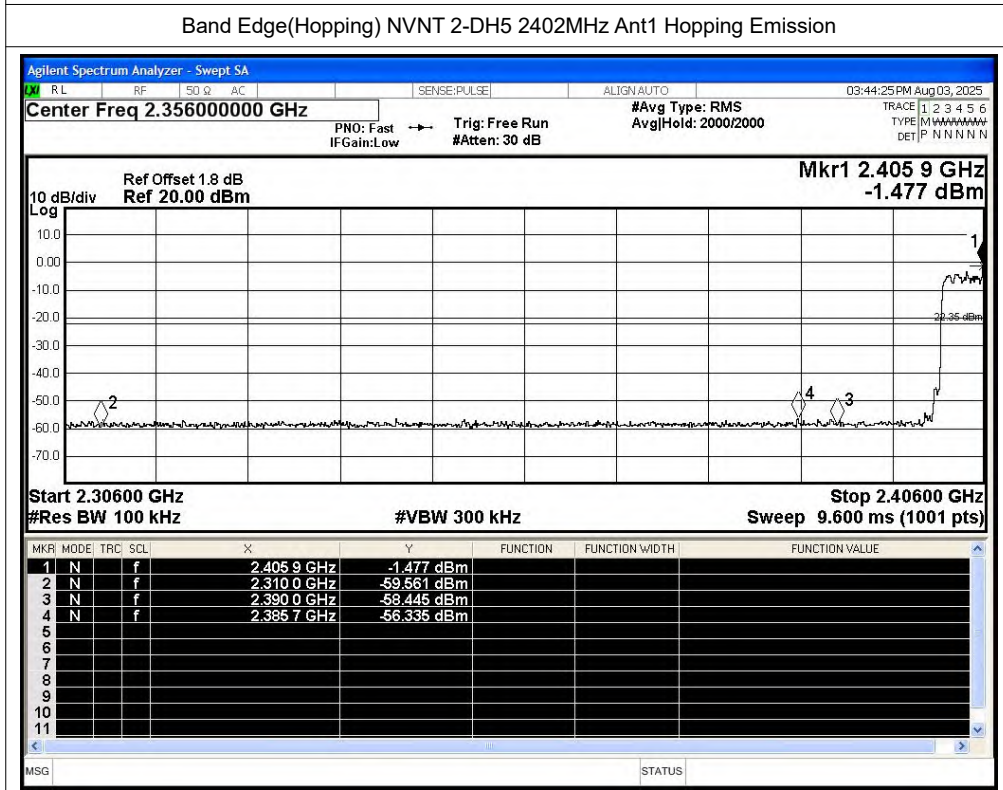
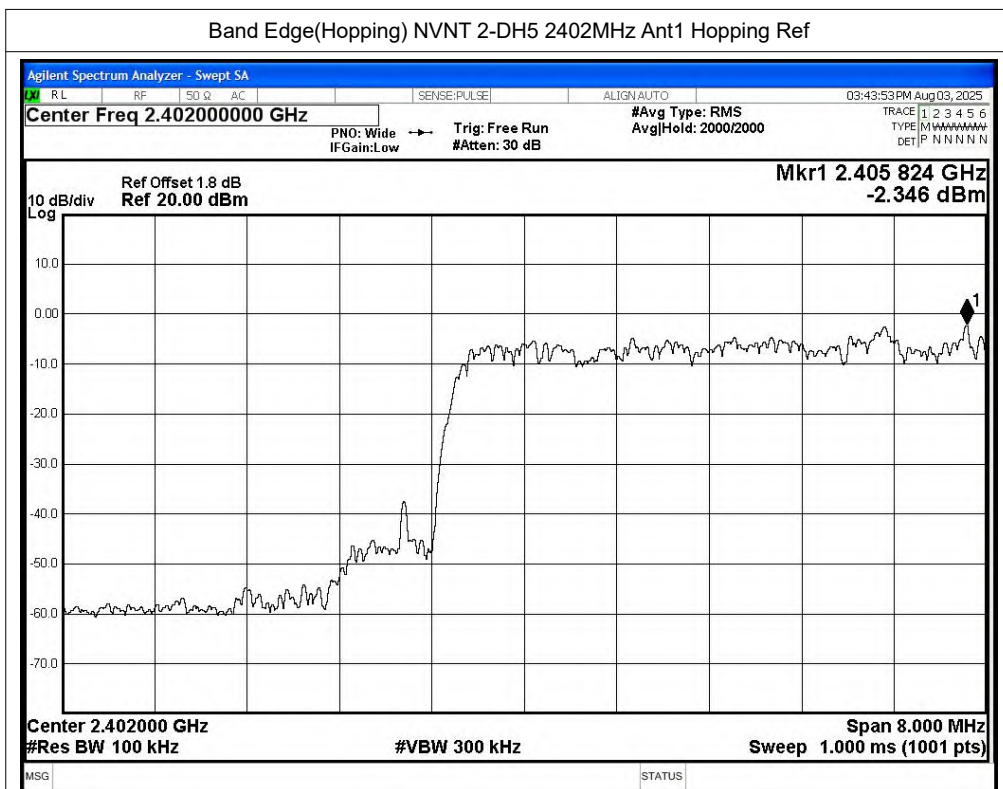


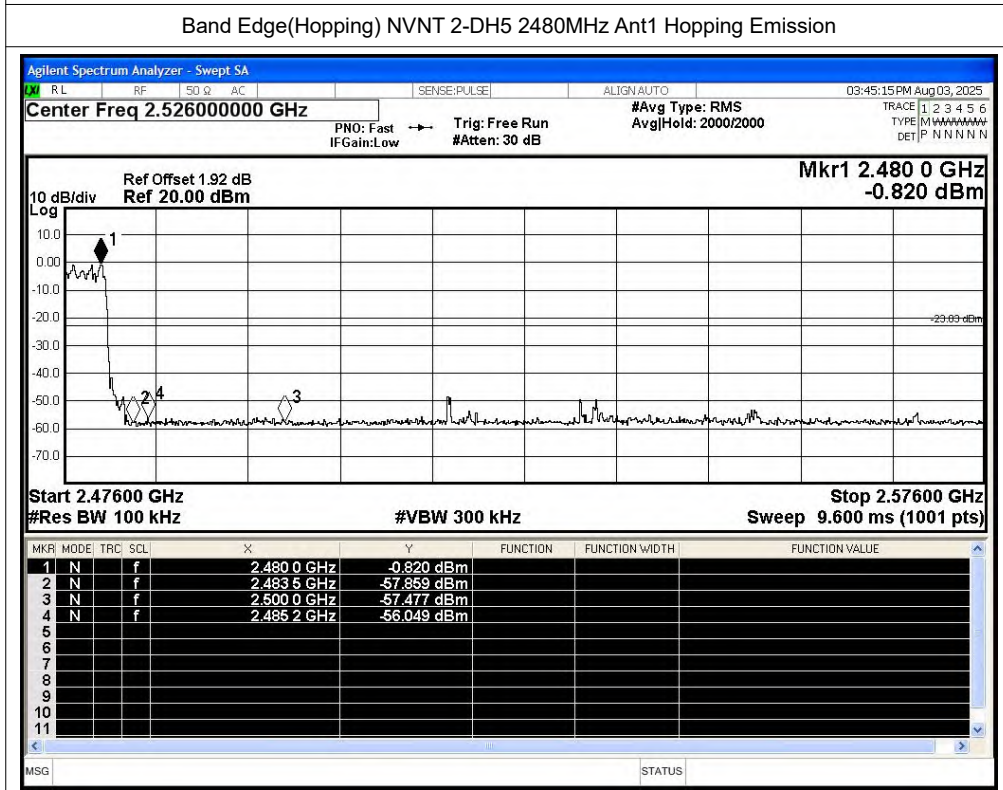
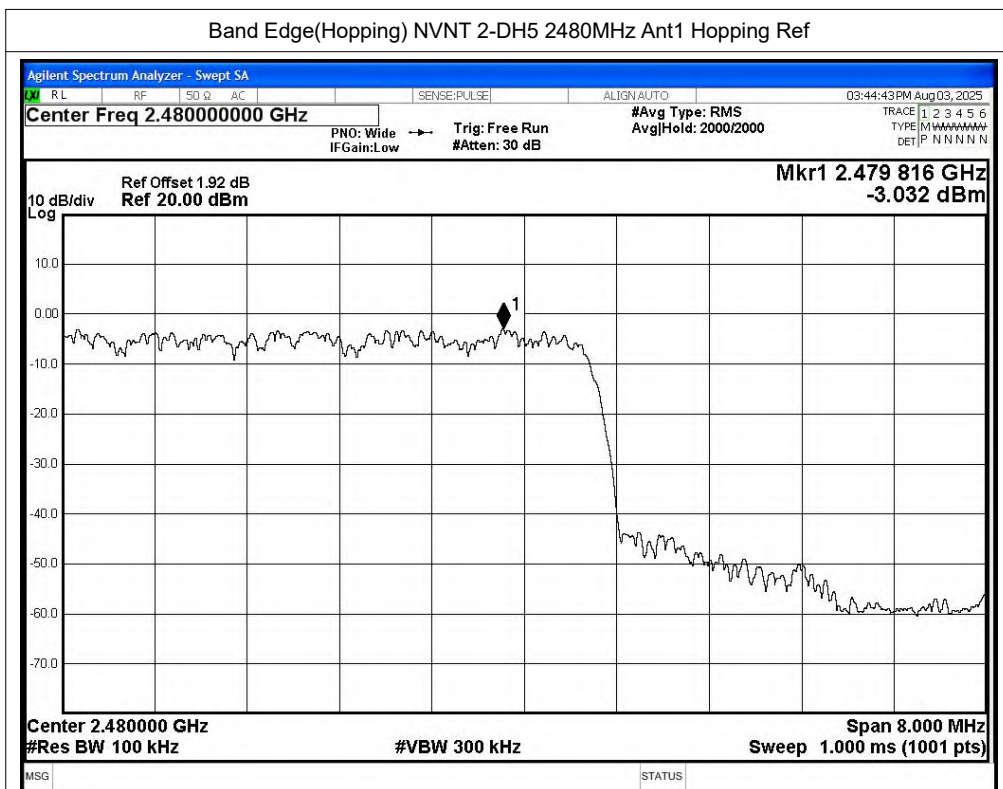


(Hopping)

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-54.6	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-55.75	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-53.99	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-53.02	-20	Pass





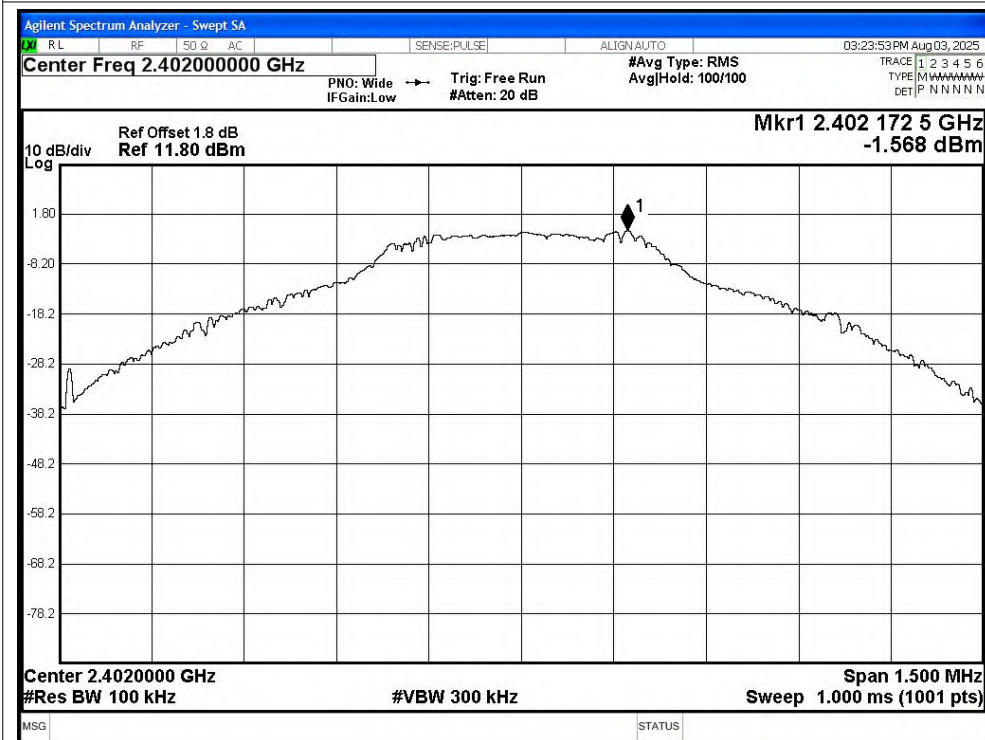


A.7 Conducted RF Spurious Emission

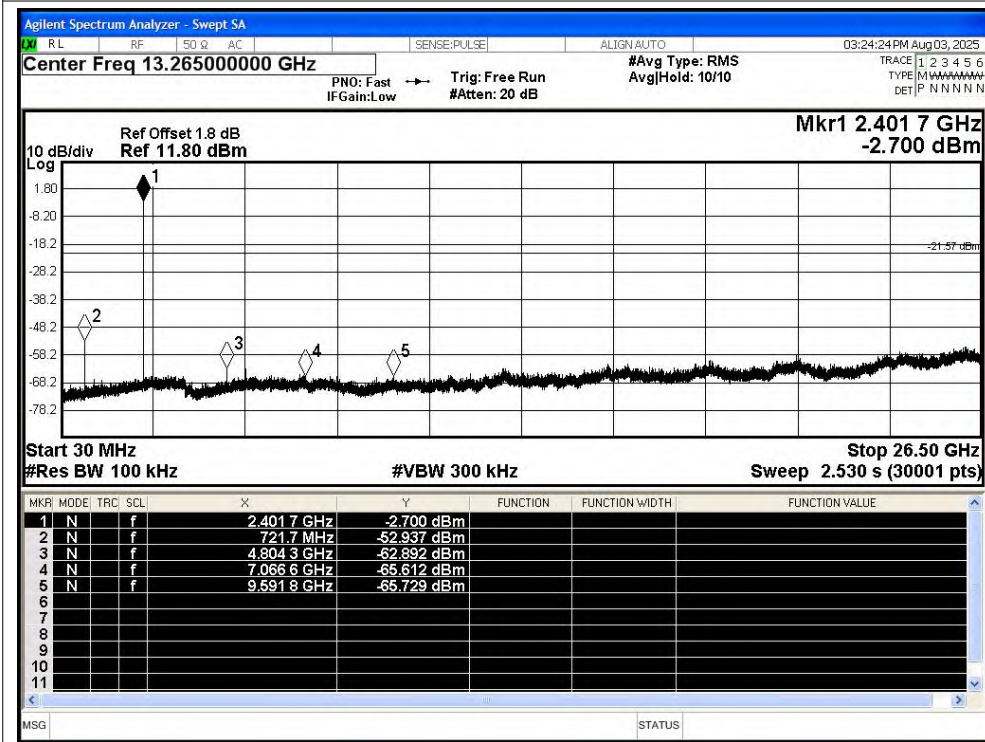
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-51.37	-20	Pass
NVNT	1-DH5	2441	Ant1	-56.57	-20	Pass
NVNT	1-DH5	2480	Ant1	-43.28	-20	Pass
NVNT	2-DH5	2402	Ant1	-53.77	-20	Pass
NVNT	2-DH5	2441	Ant1	-43.31	-20	Pass
NVNT	2-DH5	2480	Ant1	-54.93	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



Guangzhou LCS Compliance Testing Laboratory Ltd.

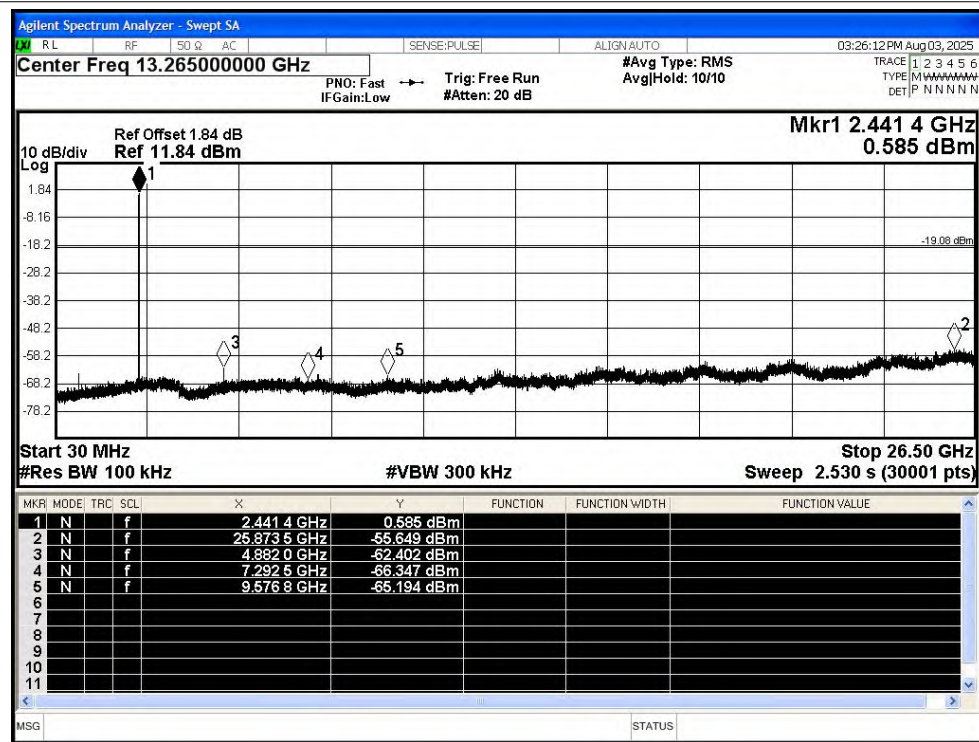
Add: No.44-1, Qianfeng North Road, Shiqi, Panyu District, Guangzhou, Guangdong, China

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

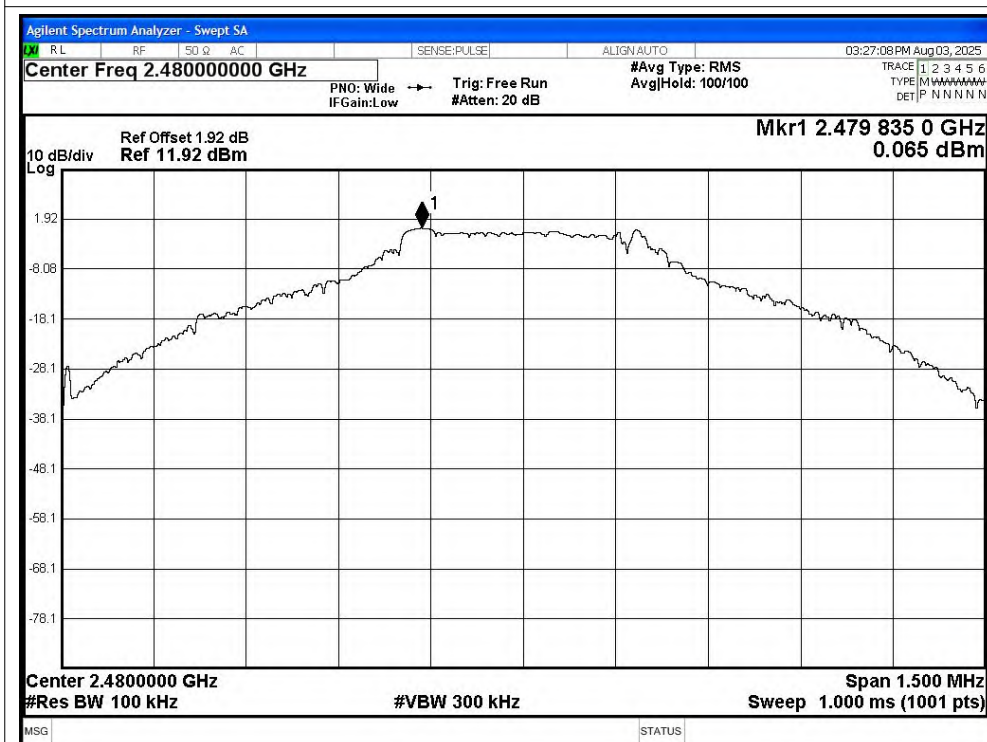
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



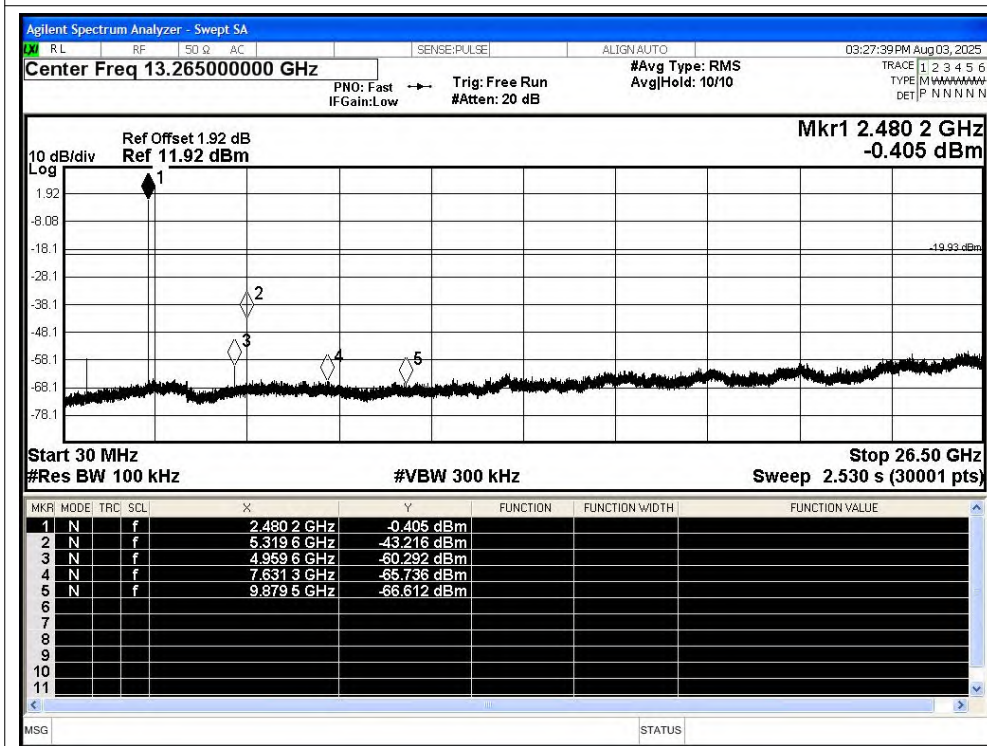
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



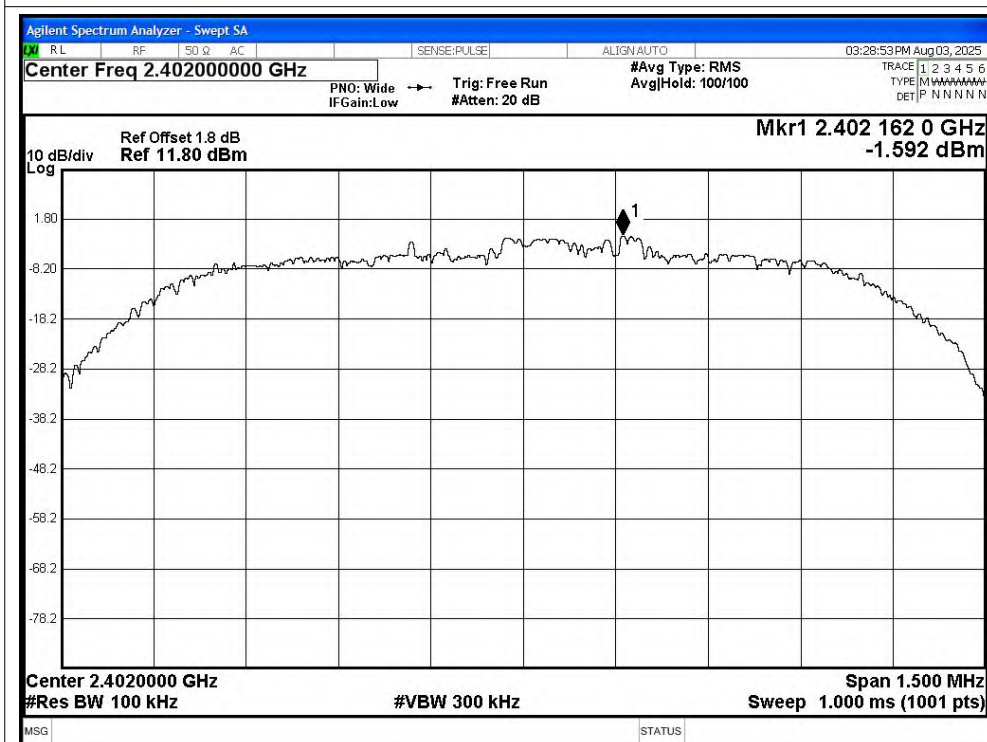
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



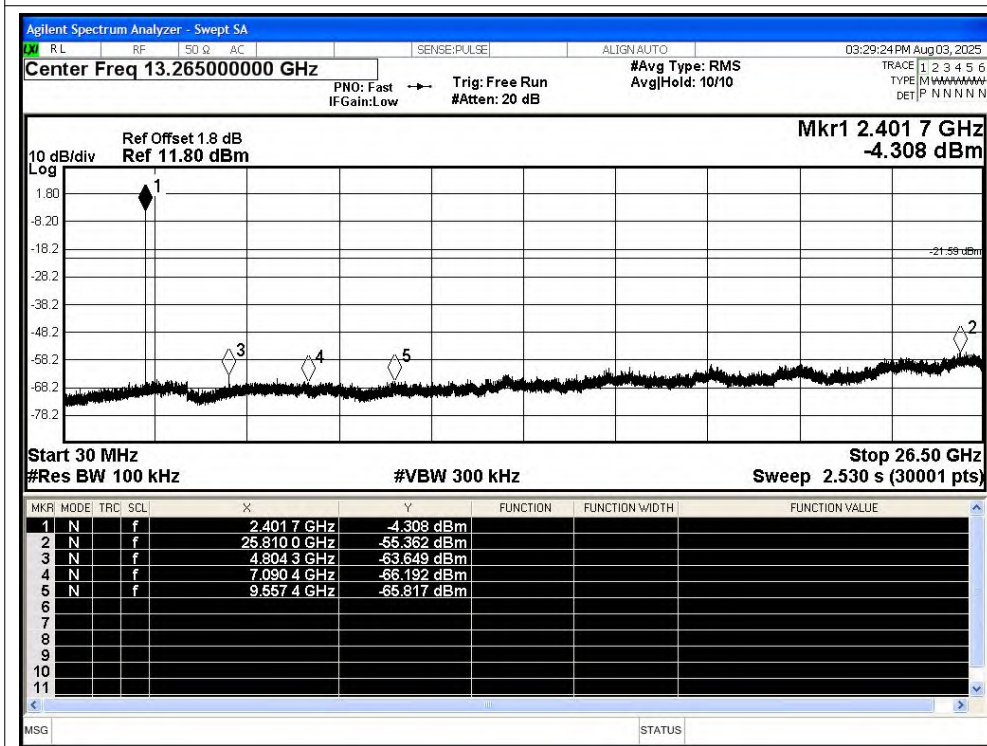
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



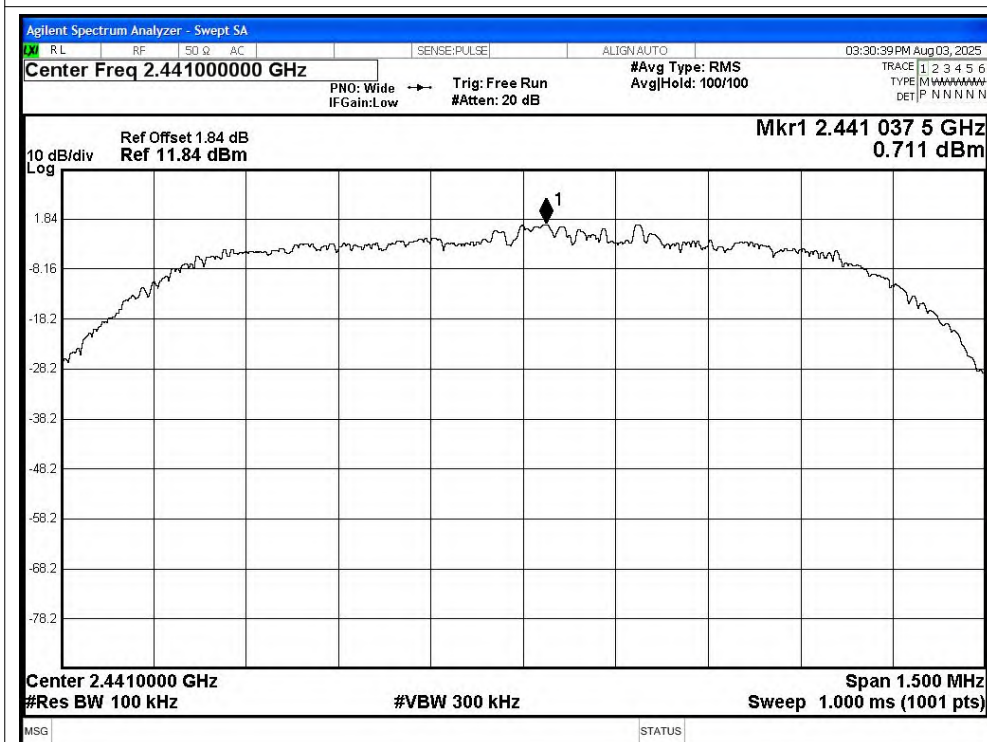
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



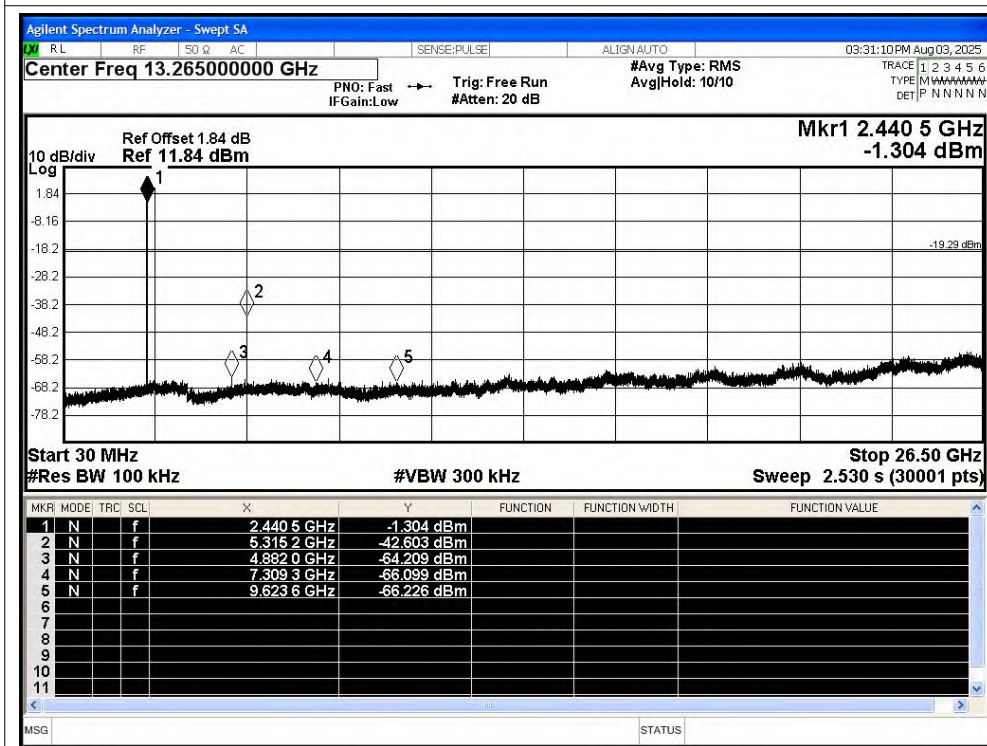
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



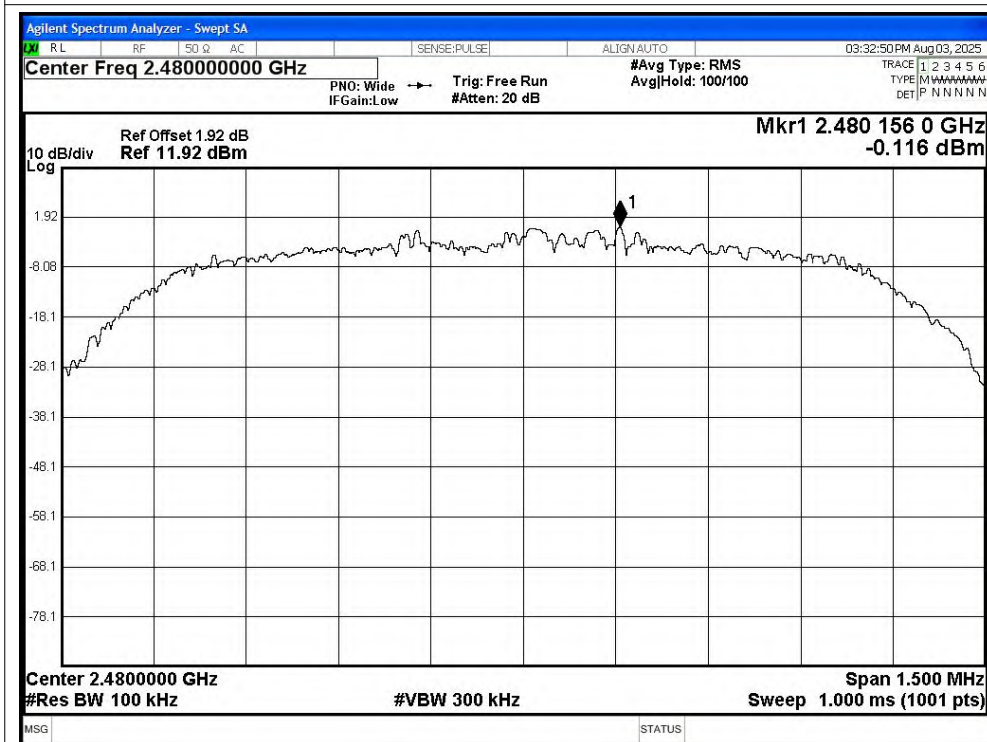
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



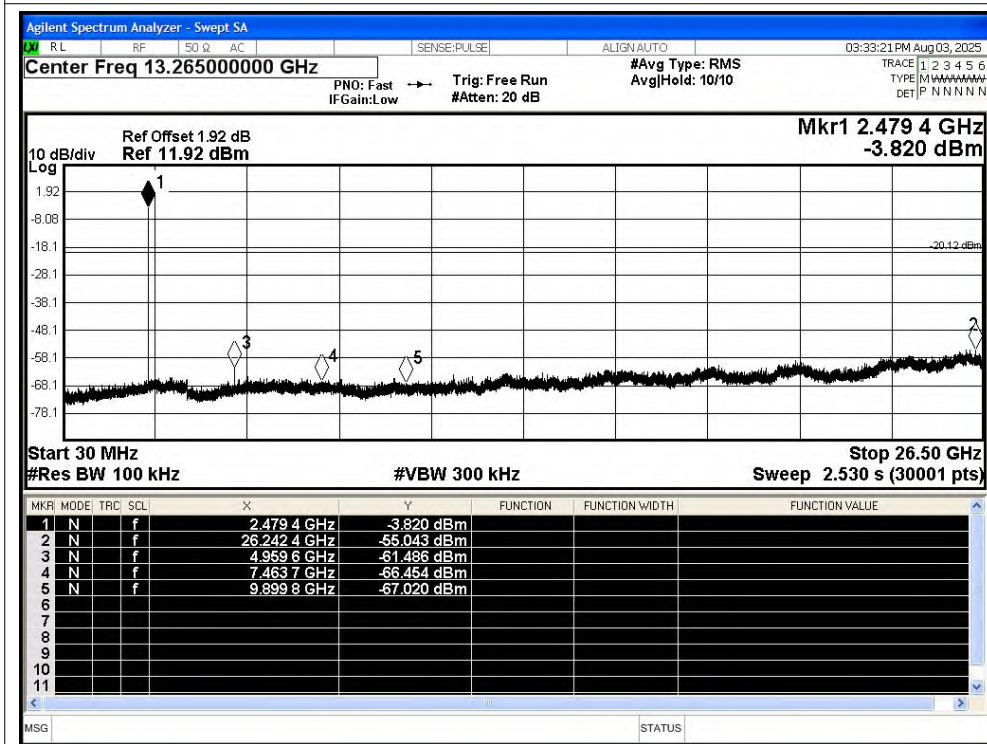
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission

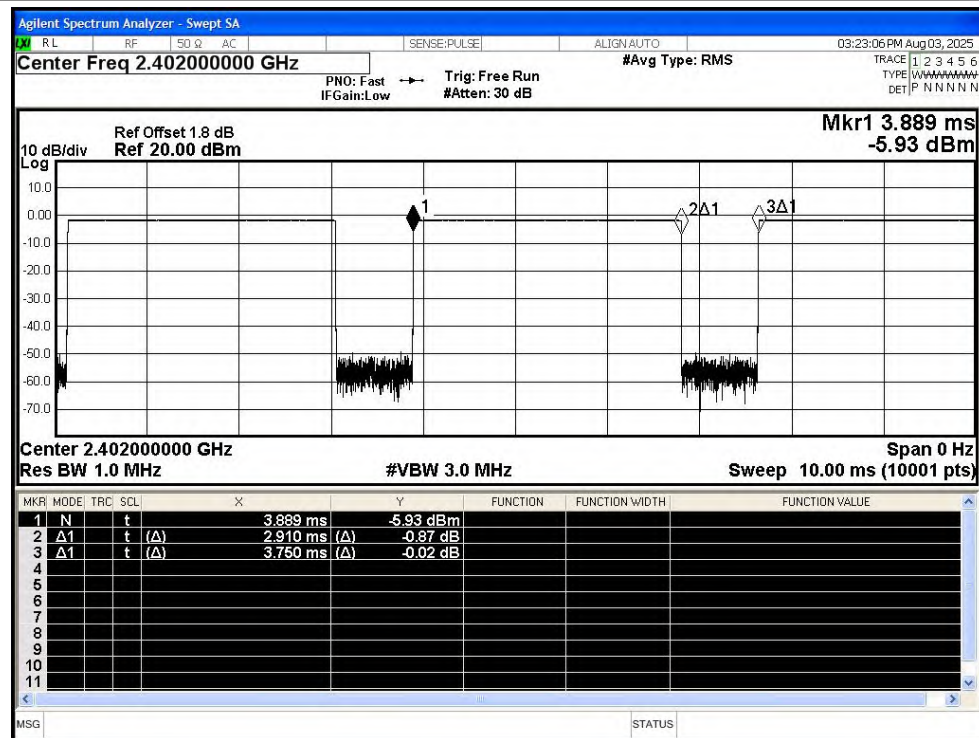


A.8 Duty Cycle

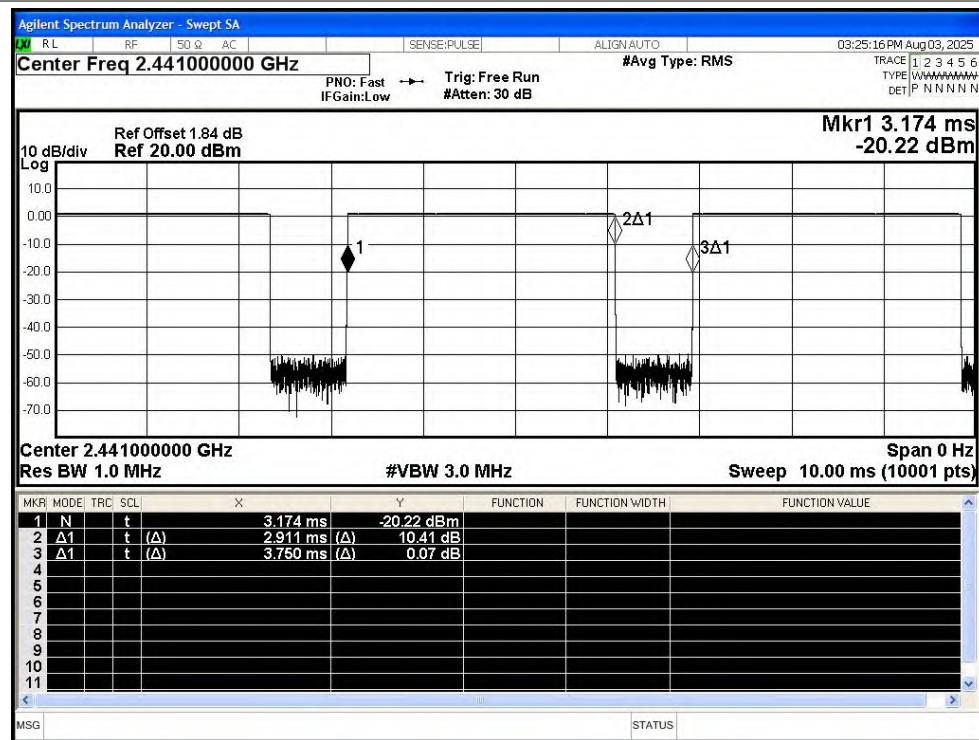
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.63	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.6	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.33	1.12	0.34
NVNT	2-DH5	2441	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2480	Ant1	76.43	1.17	0.36

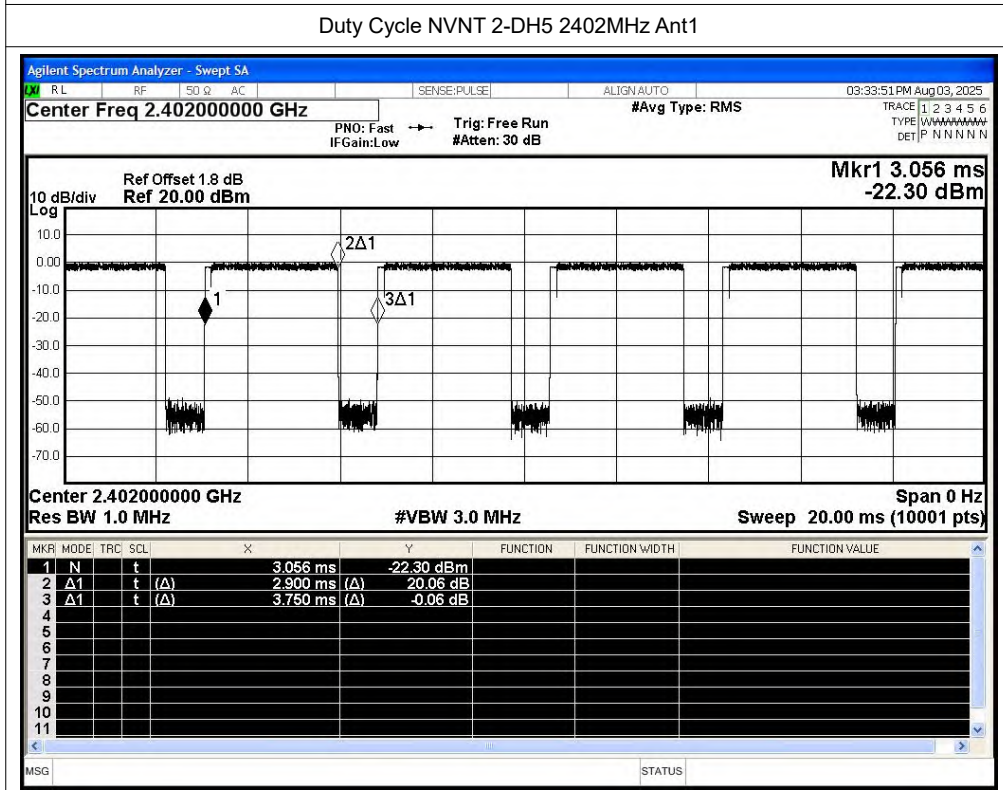
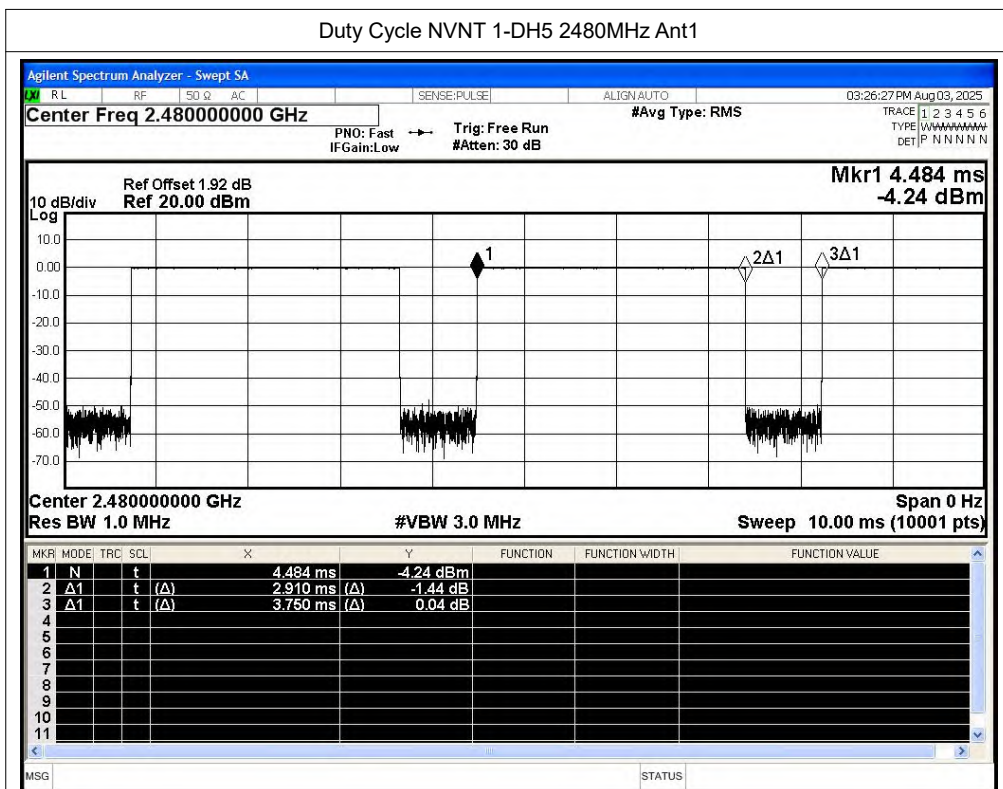
Test Graphs

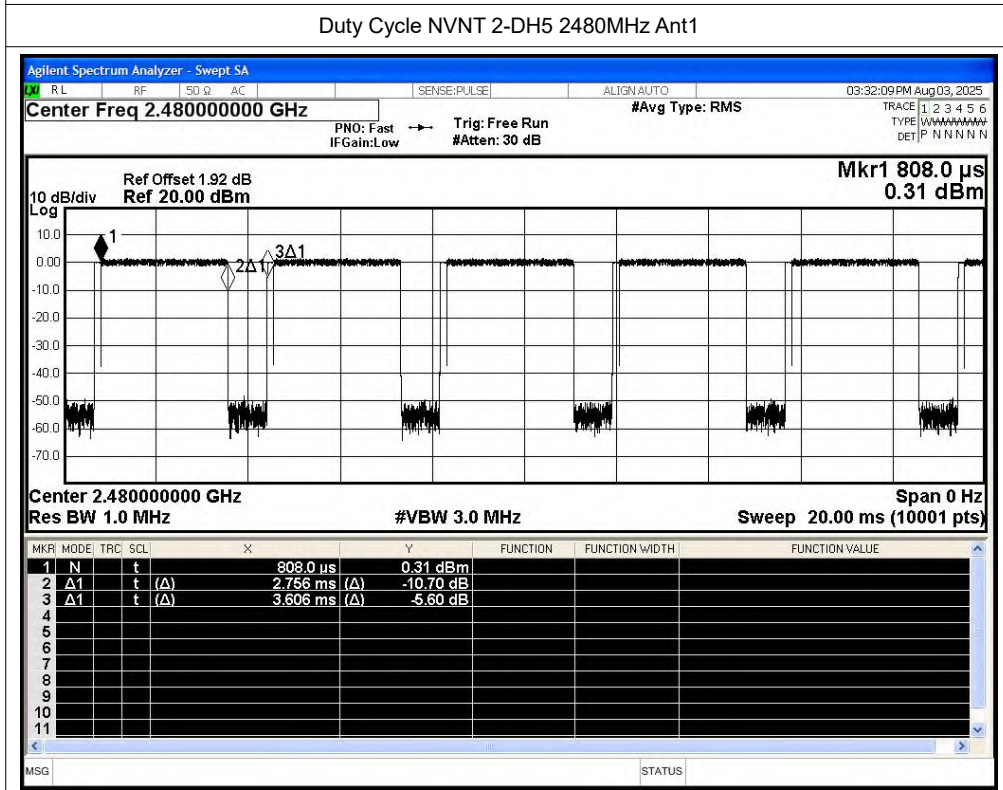
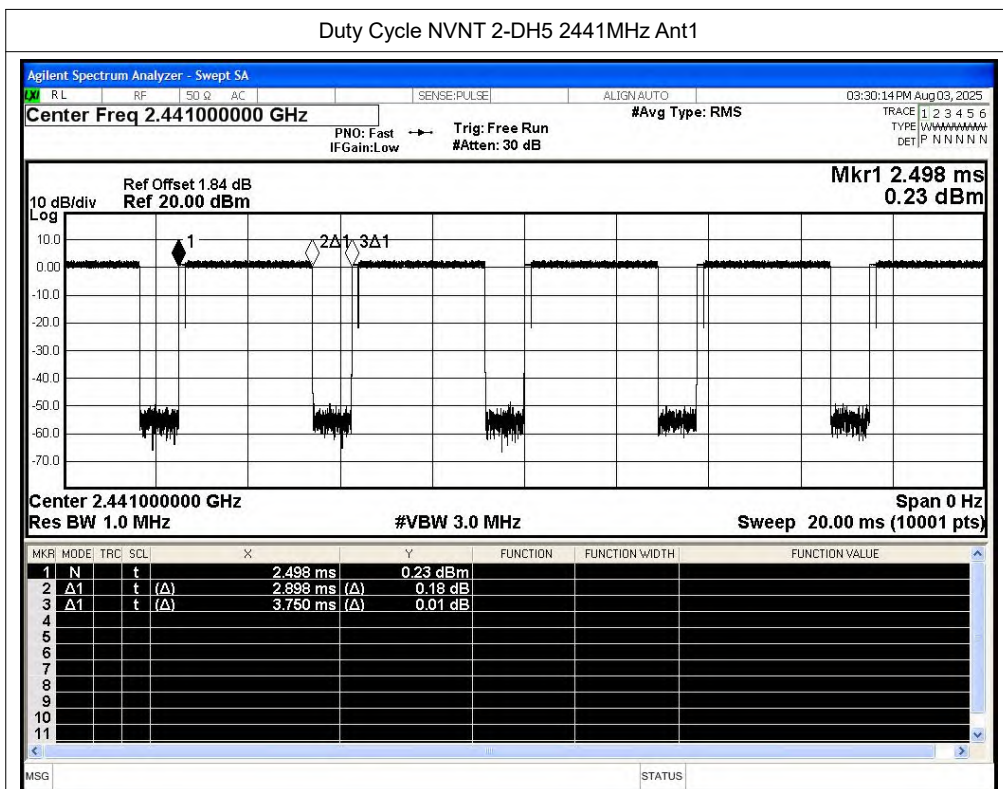
Duty Cycle NVNT 1-DH5 2402MHz Ant1



Duty Cycle NVNT 1-DH5 2441MHz Ant1





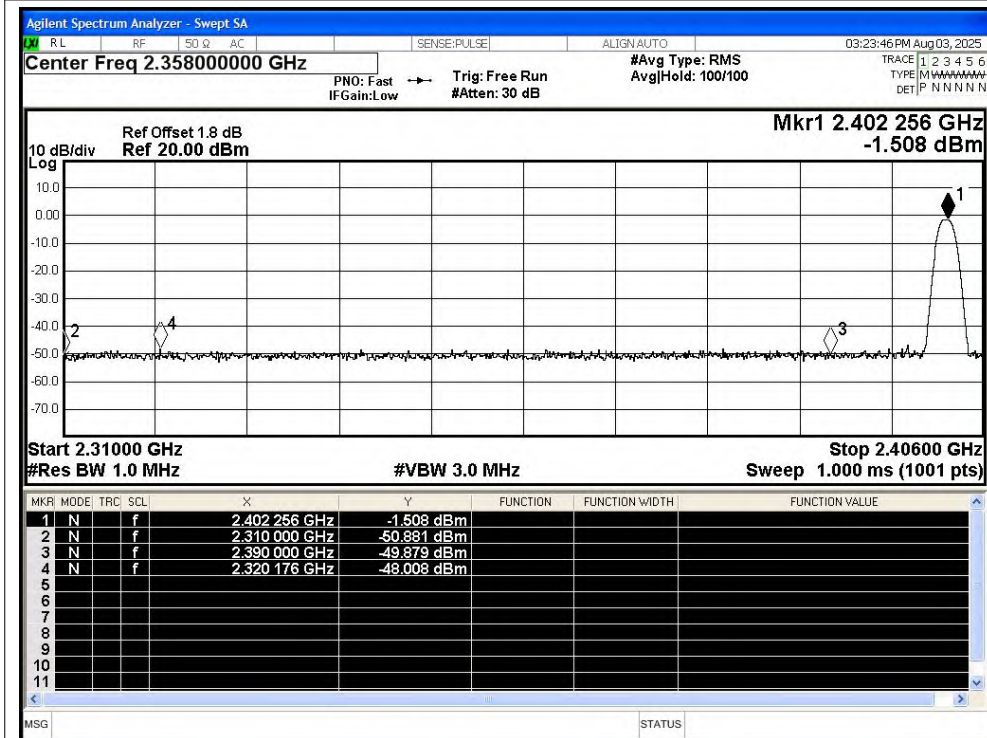


A.9 Restrict Band

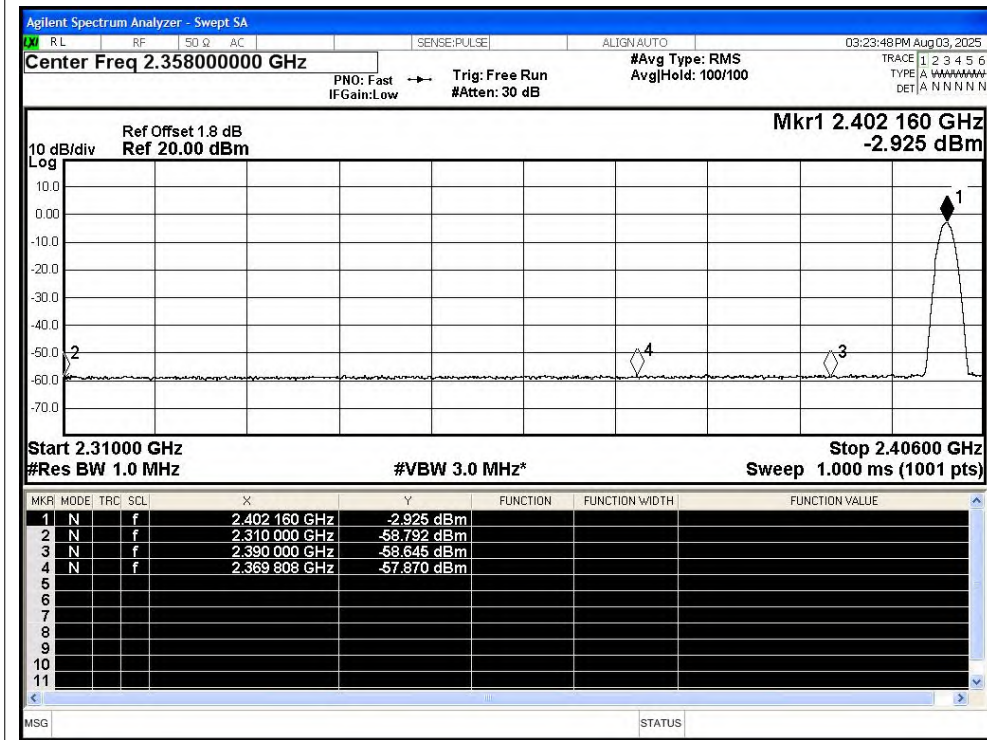
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-50.88	2	-	46.38	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.79	2	1.1	39.57	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2320.176	-48.01	2	-	49.25	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2369.808	-57.87	2	1.1	40.49	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-49.88	2	-	47.38	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-58.65	2	1.1	39.71	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-51.09	2	-	46.17	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-58.42	2	1.1	39.94	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2486.776	-44.34	2	-	52.92	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2499.688	-57.24	2	1.1	41.12	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-50.34	2	-	46.92	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-58.52	2	1.1	39.84	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-51.77	2	-	45.49	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-59.3	2	1.17	39.13	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2334.48	-48	2	-	49.26	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2387.28	-57.96	2	1.17	40.47	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-50.53	2	-	46.73	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-58.68	2	1.17	39.75	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-44.84	2	-	52.42	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-56.42	2	1.17	42.01	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2484.208	-44.22	2	-	53.04	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.584	-56.42	2	1.17	42.01	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-51.16	2	-	46.1	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-58.4	2	1.17	40.03	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



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

