



Appendix A

RF Test Data for BT(Conducted Measurement)

Product Name: Speaker set

Test Model: SL4000

Environmental Conditions

Temperature:	23.9° C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Jerry Chu
Supervised by:	Nick Peng



Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street,
Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity



A.1 -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.969	N/A	Pass
NVNT	1-DH5	2441	Ant1	1.006	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.967	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.279	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.304	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.286	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.287	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.291	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.291	N/A	Pass



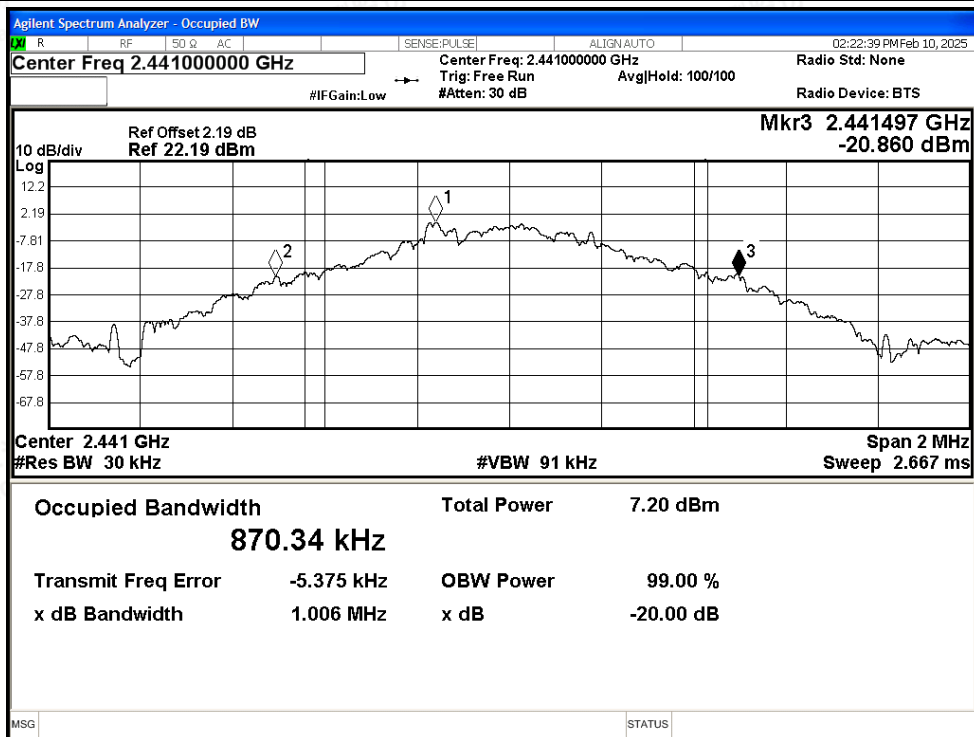


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

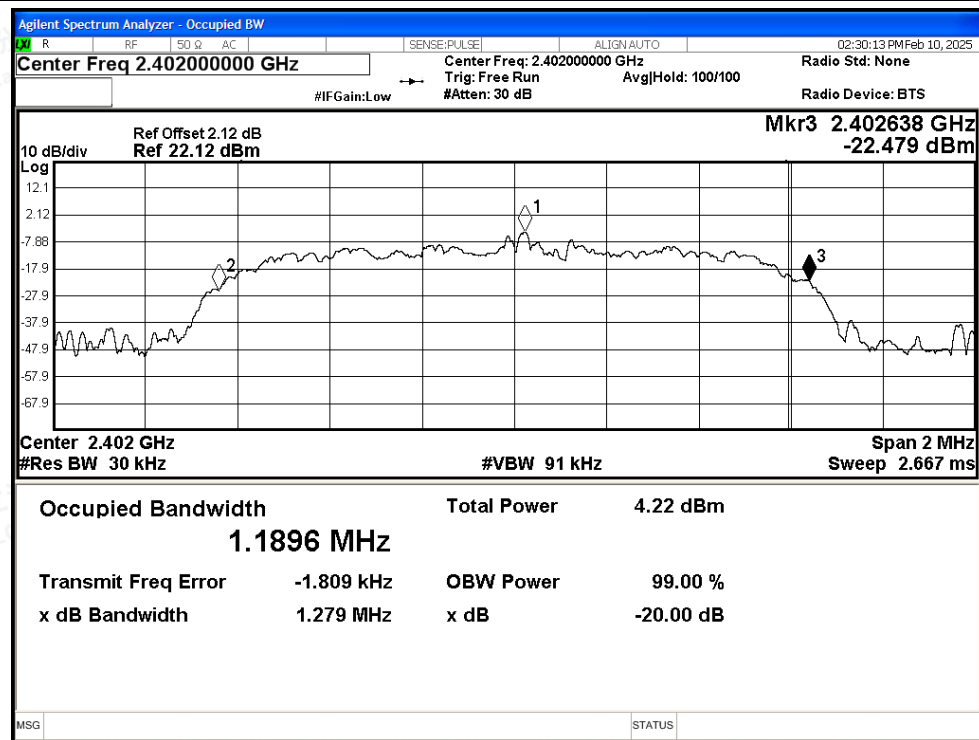
Scan code to check authenticity



-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



Shenzhen LCS Compliance Testing Laboratory Ltd.

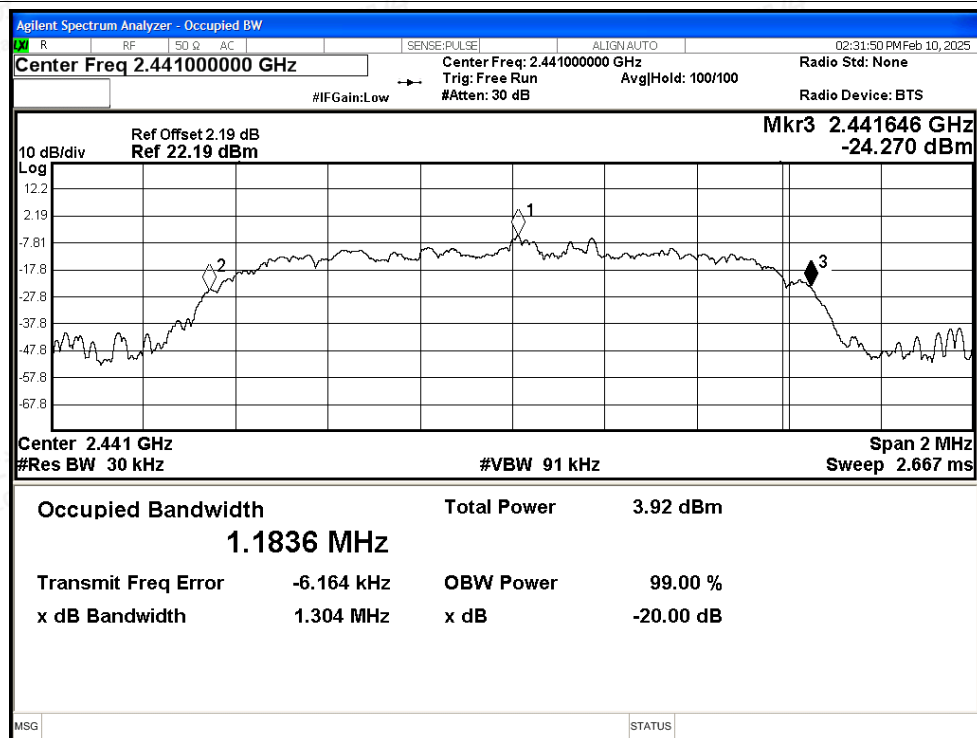
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street,
Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

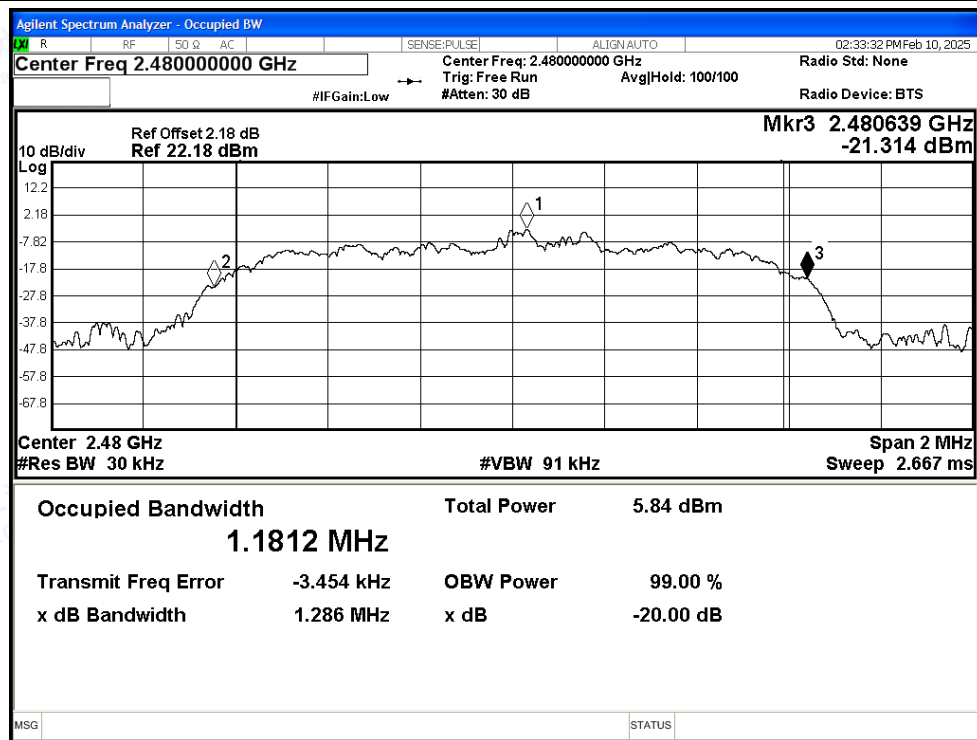
Scan code to check authenticity



-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

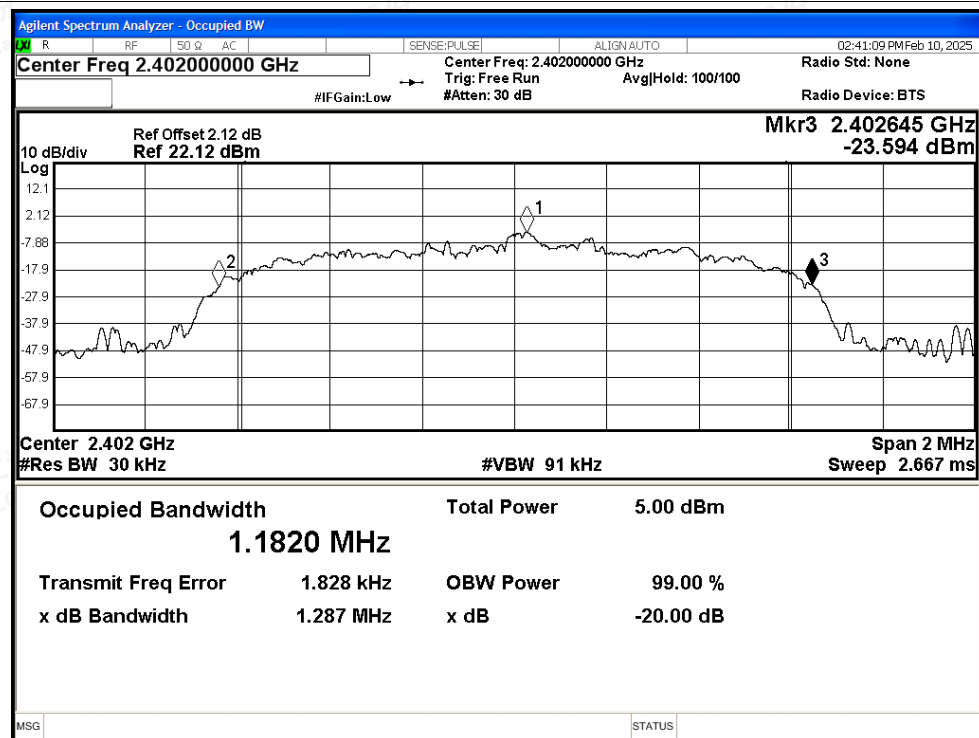


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

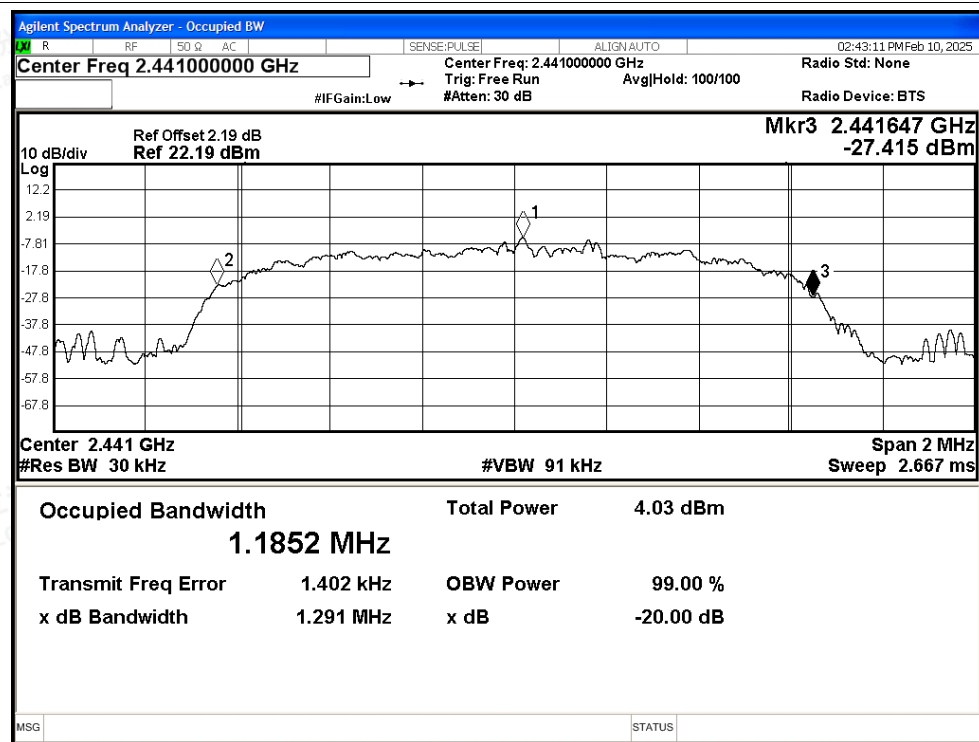




-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1

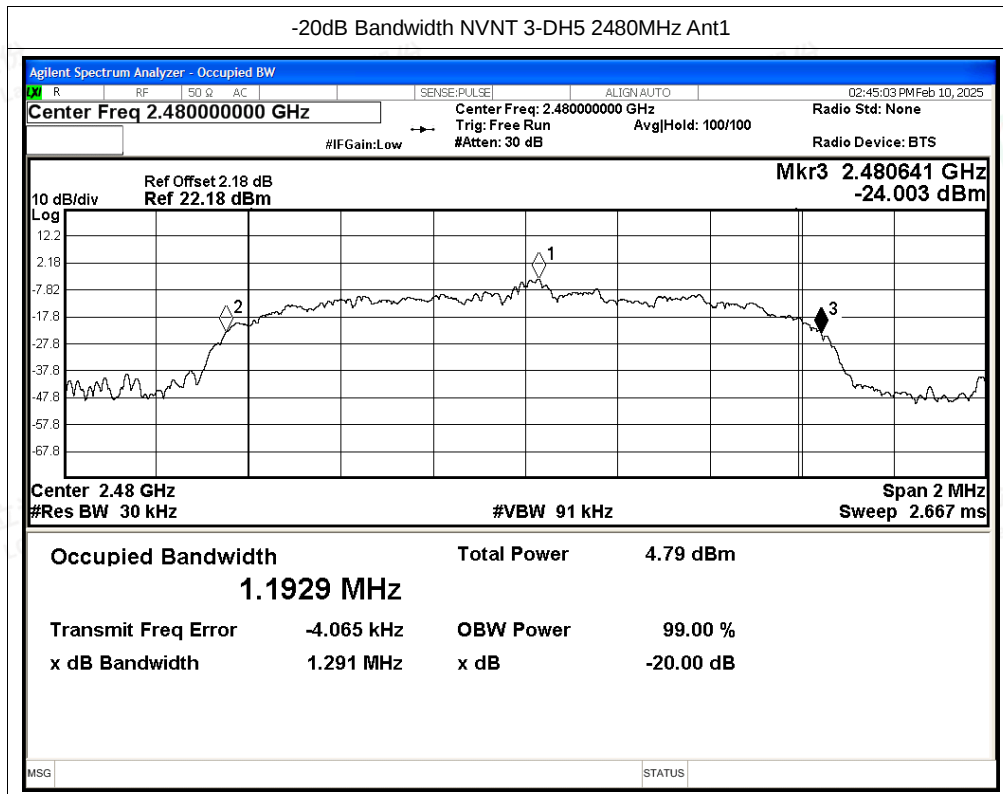


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street,
Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity





A.2 Maximum Peak Conducted Output Power

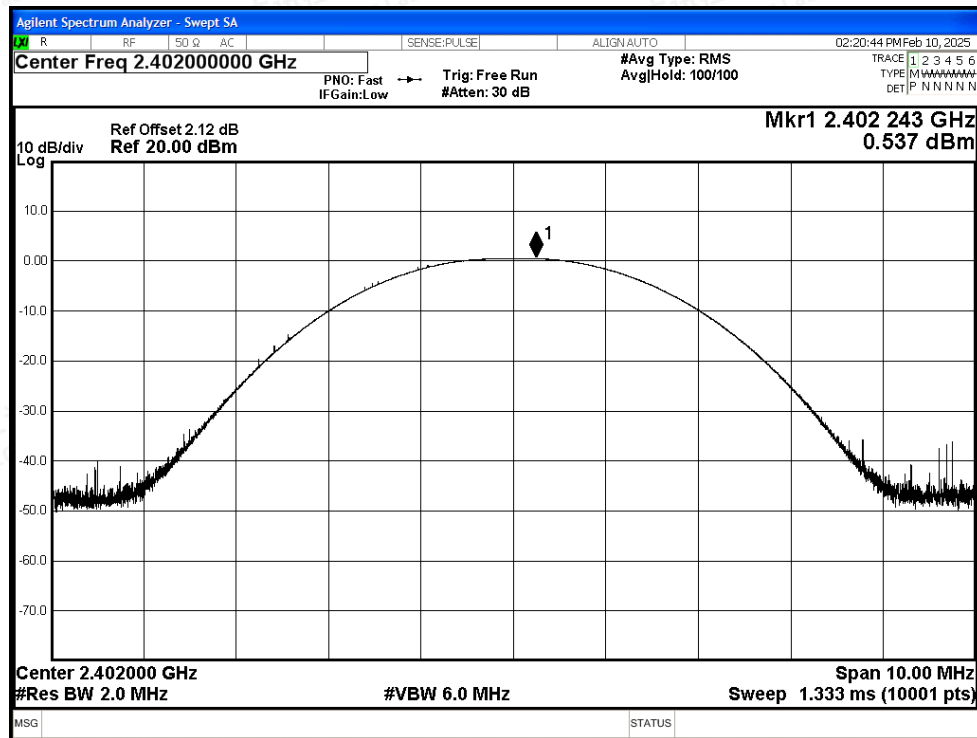
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	0.54	21	Pass
NVNT	1-DH5	2441	Ant1	0.58	21	Pass
NVNT	1-DH5	2480	Ant1	-0.44	21	Pass
NVNT	2-DH5	2402	Ant1	0.21	21	Pass
NVNT	2-DH5	2441	Ant1	-0.37	21	Pass
NVNT	2-DH5	2480	Ant1	1.33	21	Pass
NVNT	3-DH5	2402	Ant1	0.67	21	Pass
NVNT	3-DH5	2441	Ant1	0.03	21	Pass
NVNT	3-DH5	2480	Ant1	0.78	21	Pass



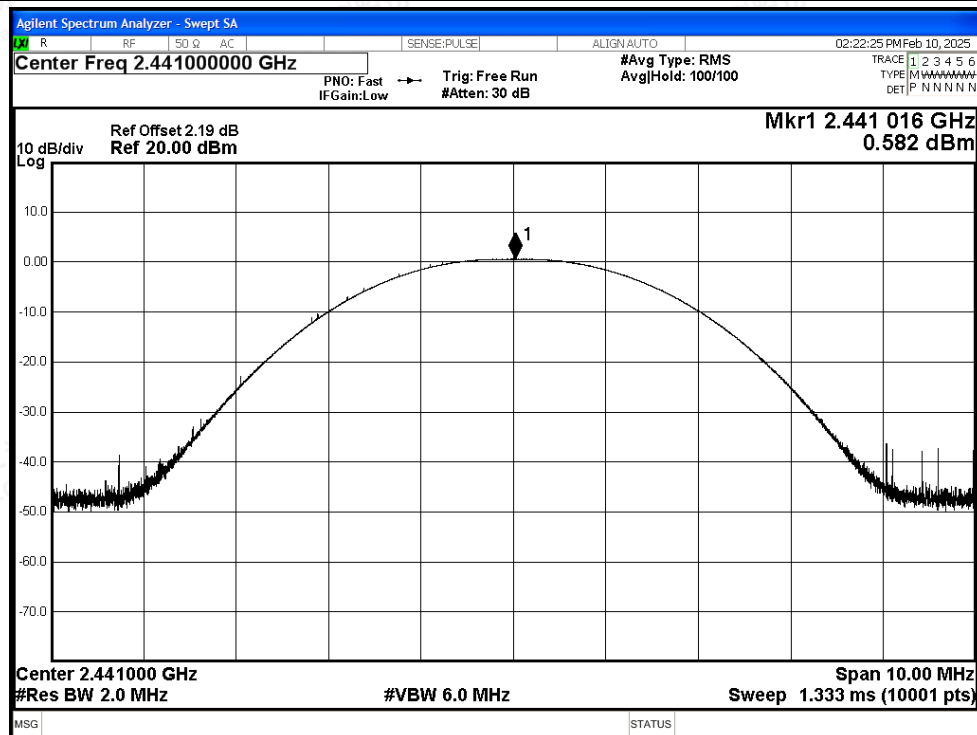


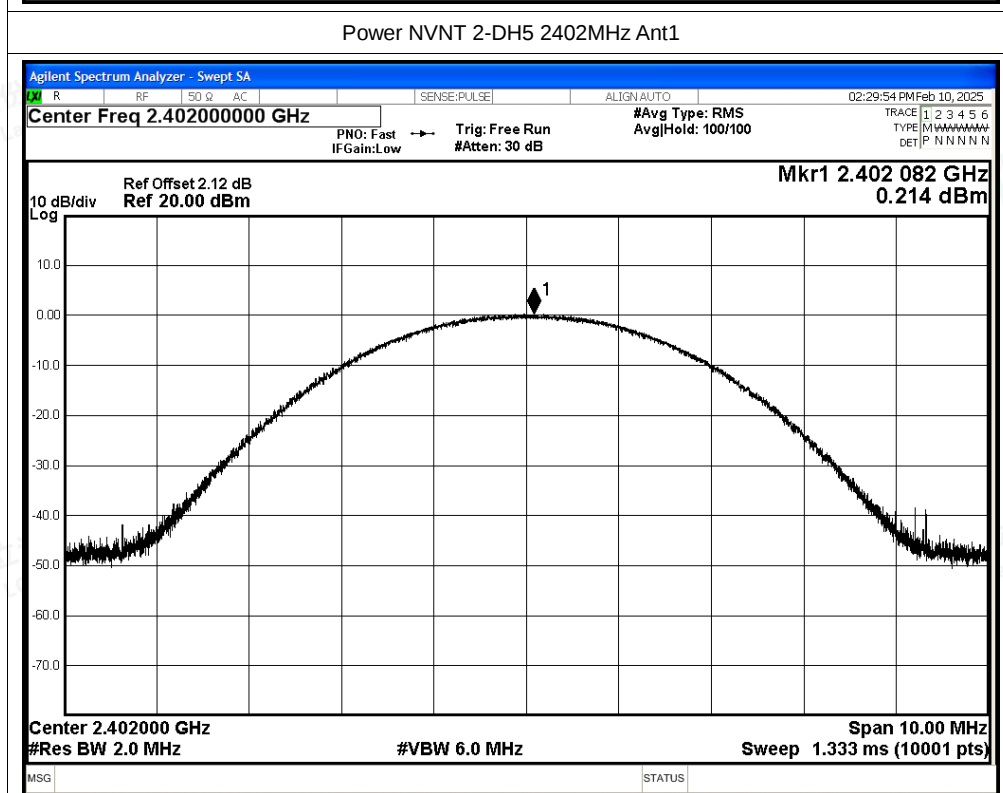
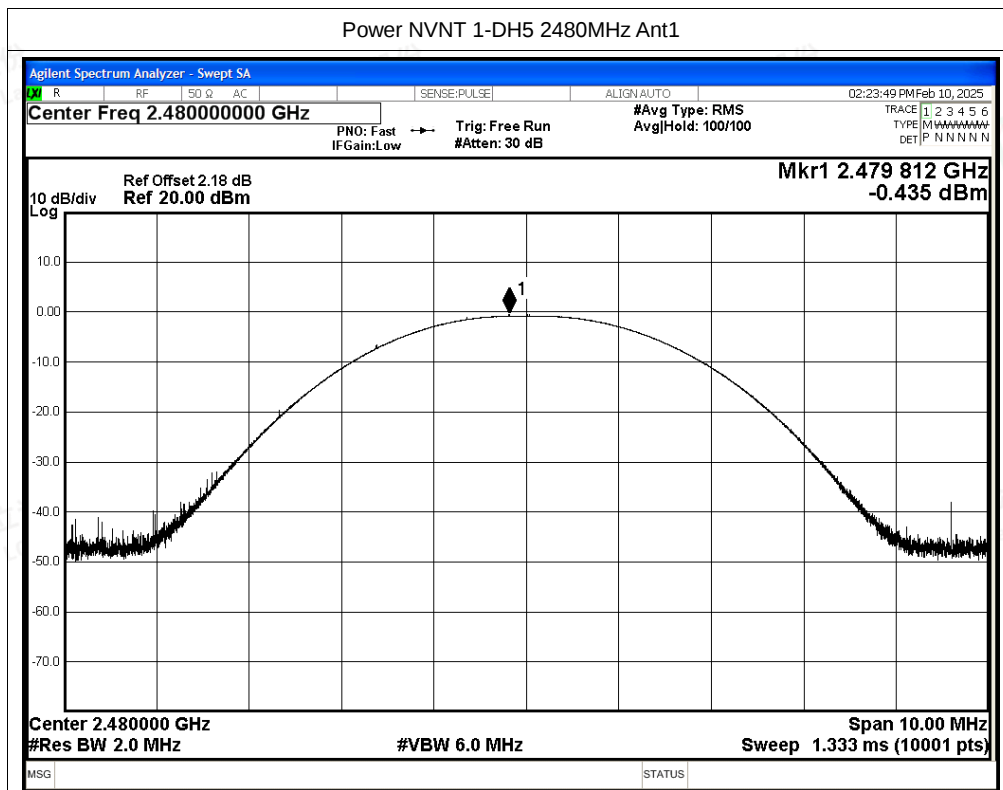
Test Graphs

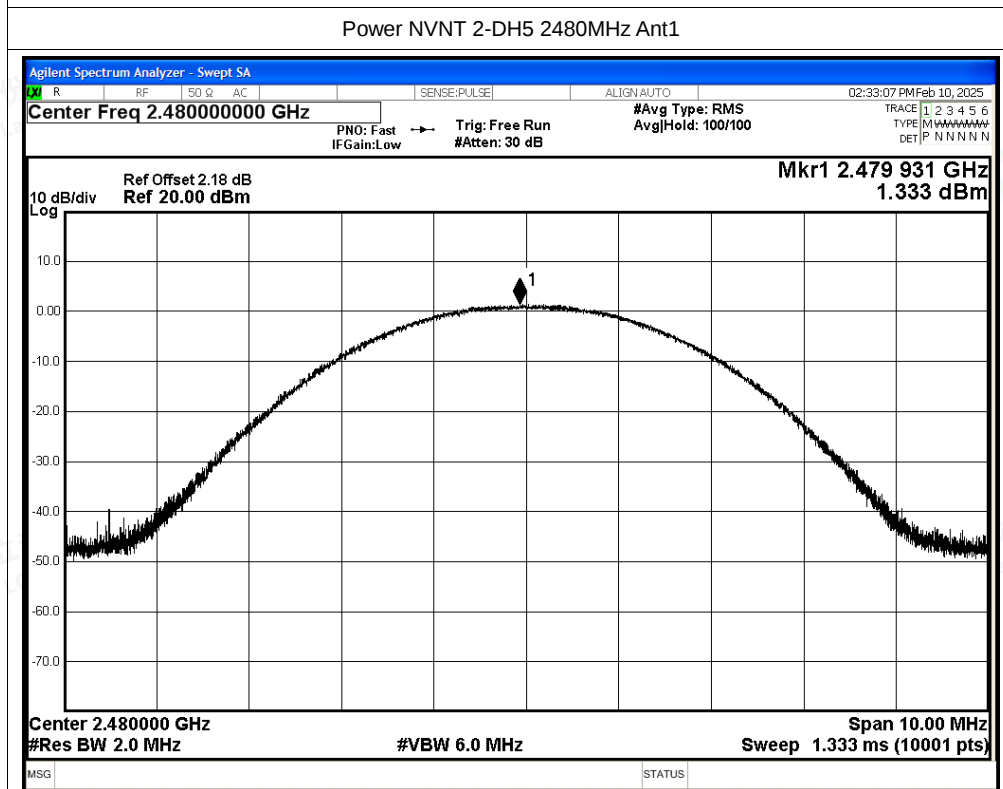
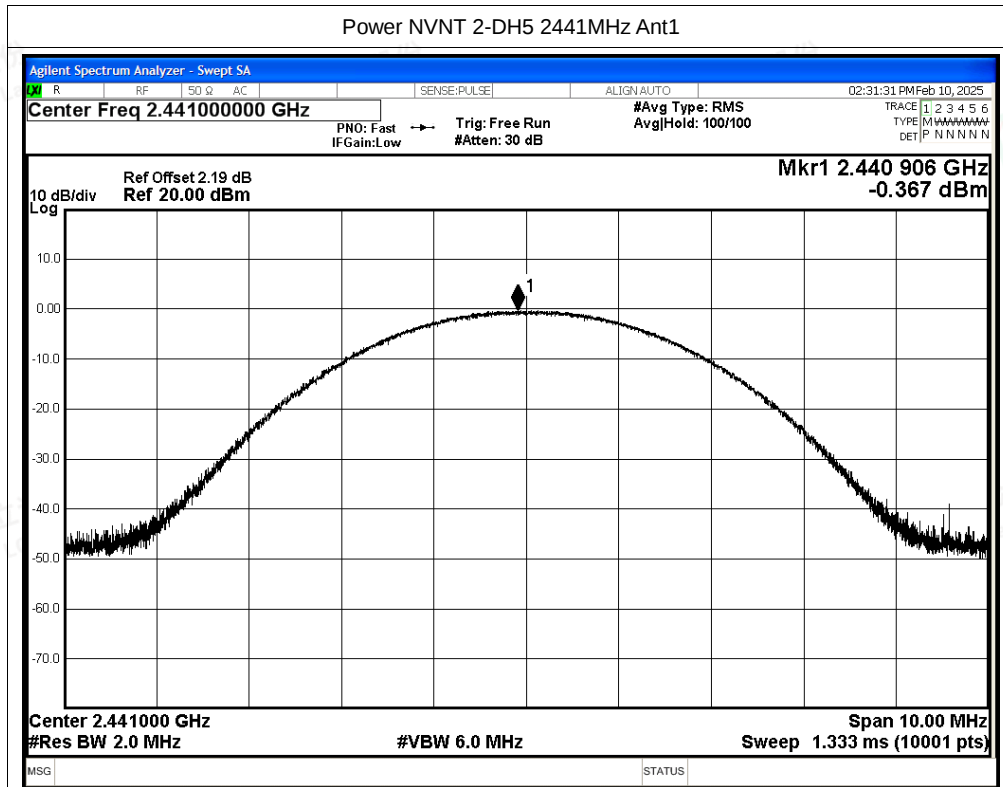
Power NVNT 1-DH5 2402MHz Ant1



Power NVNT 1-DH5 2441MHz Ant1

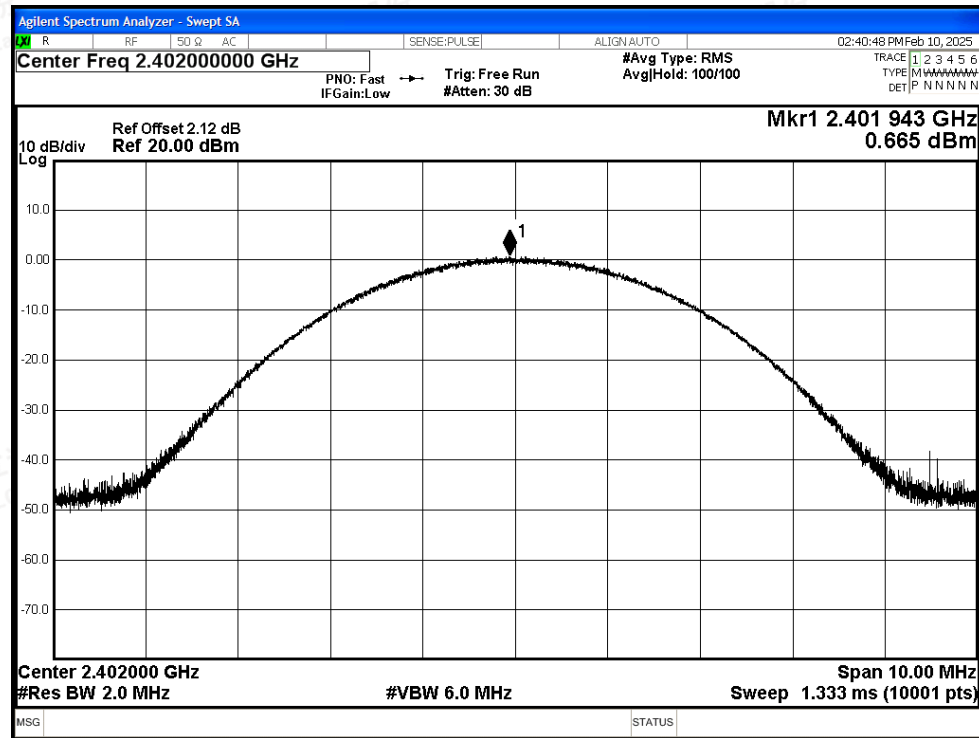




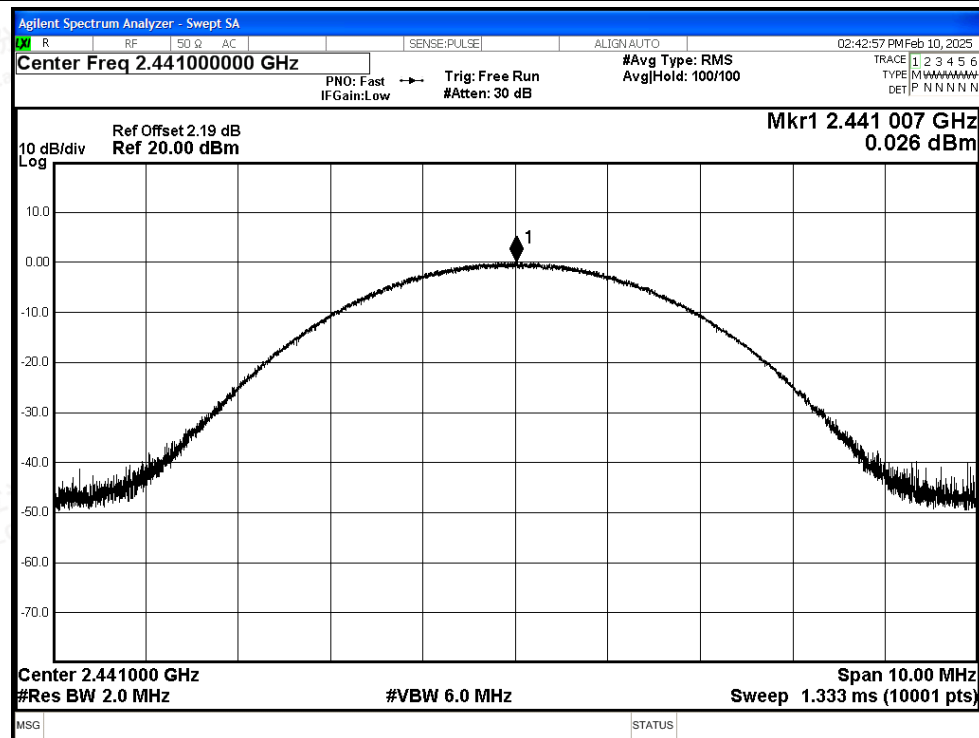




Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1

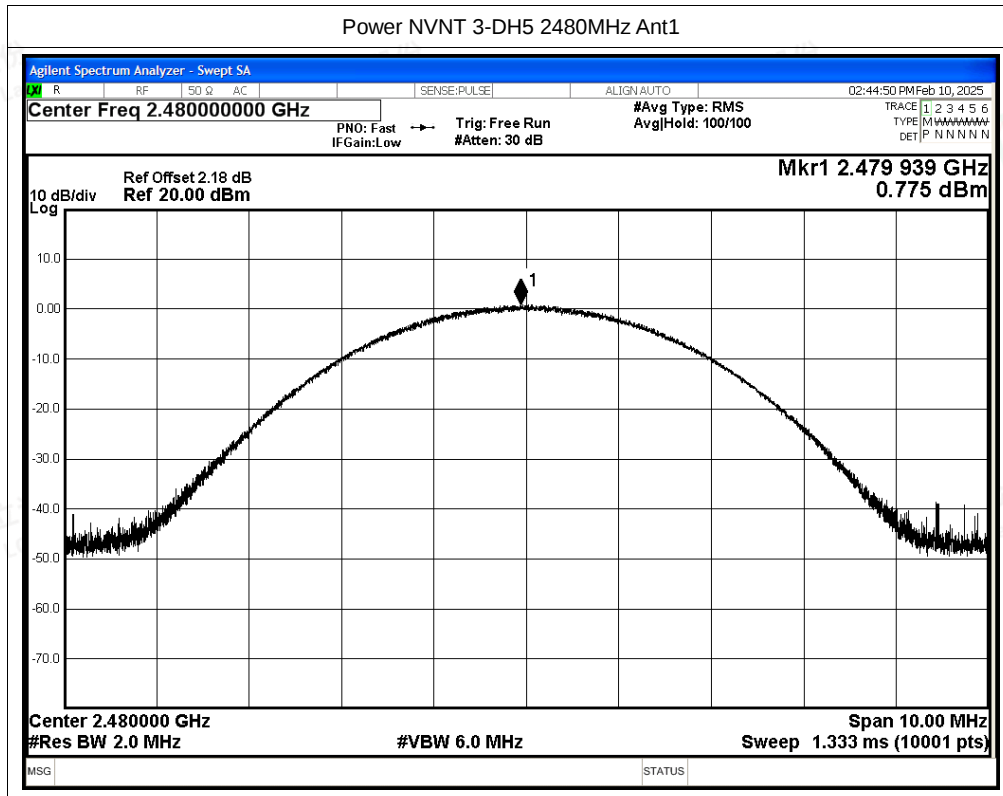


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street,
Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

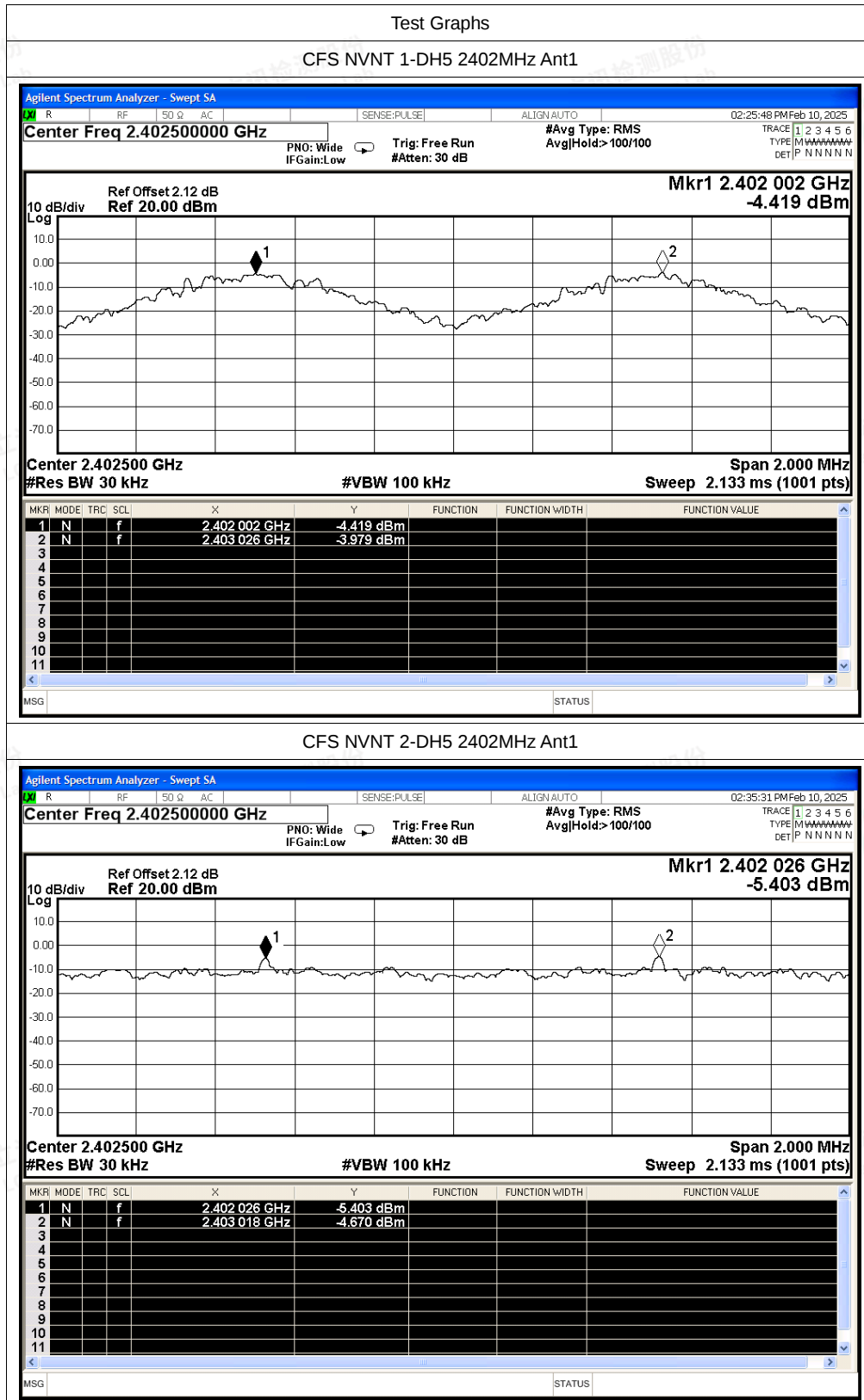
Scan code to check authenticity

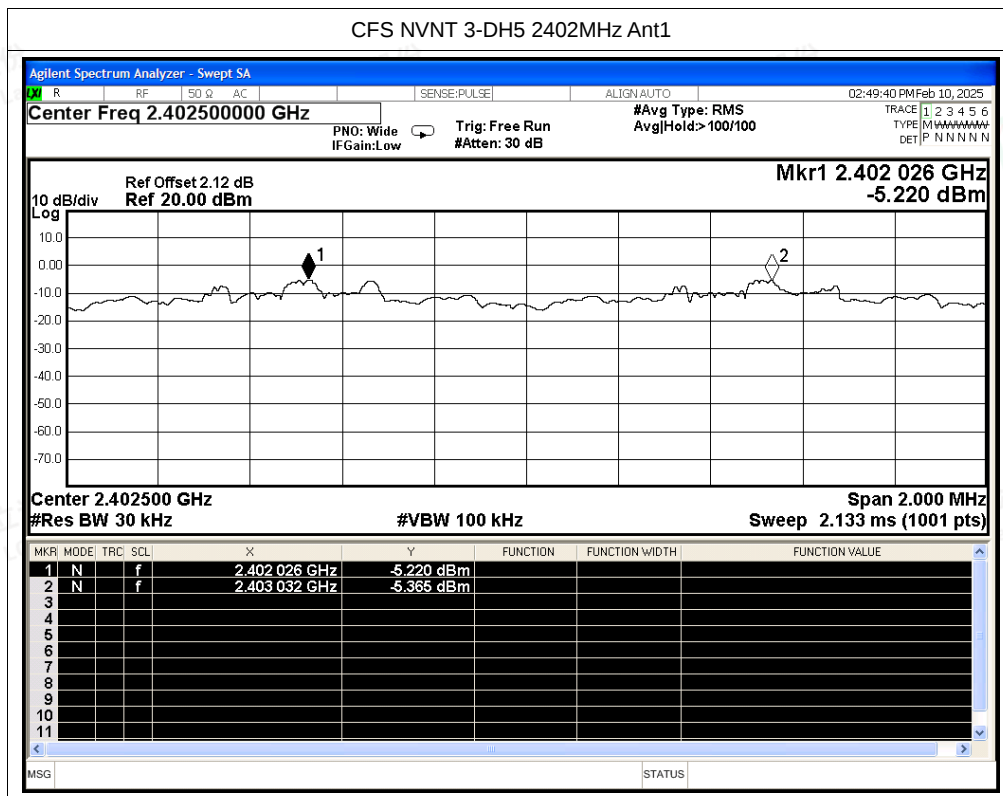


A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.002	2403.026	1.024	0.671	Pass
NVNT	2-DH5	Ant1	2402.026	2403.018	0.992	0.869	Pass
NVNT	3-DH5	Ant1	2402.026	2403.032	1.006	0.861	Pass









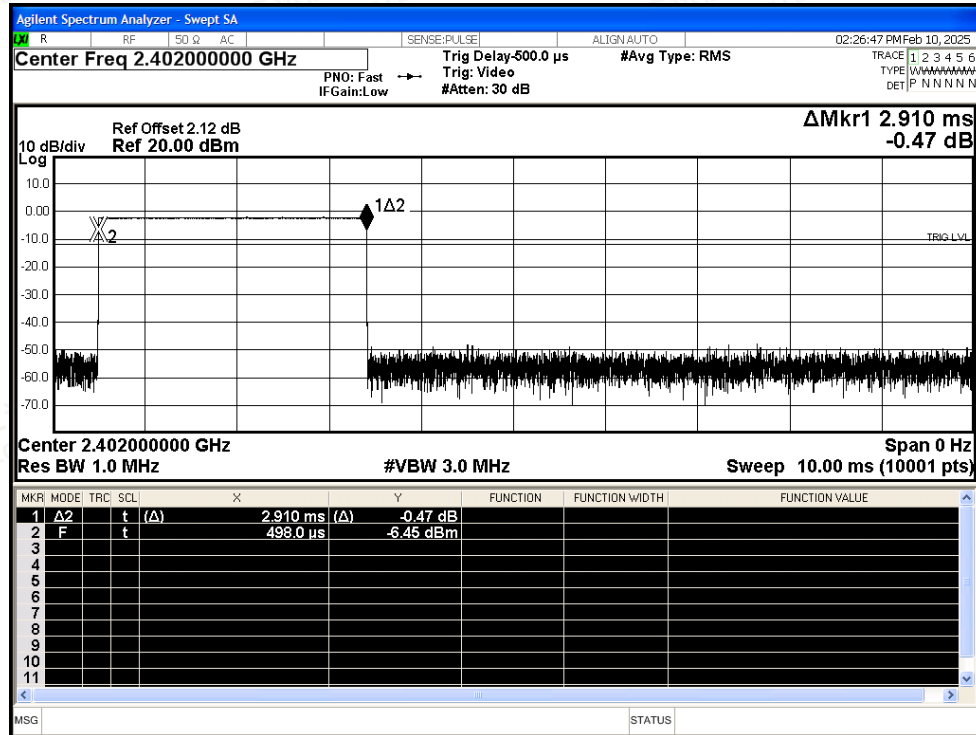
A.4 Dwell Time

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	2.91	311.37	107	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	307.188	106	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.897	289.7	100	31600	400	Pass

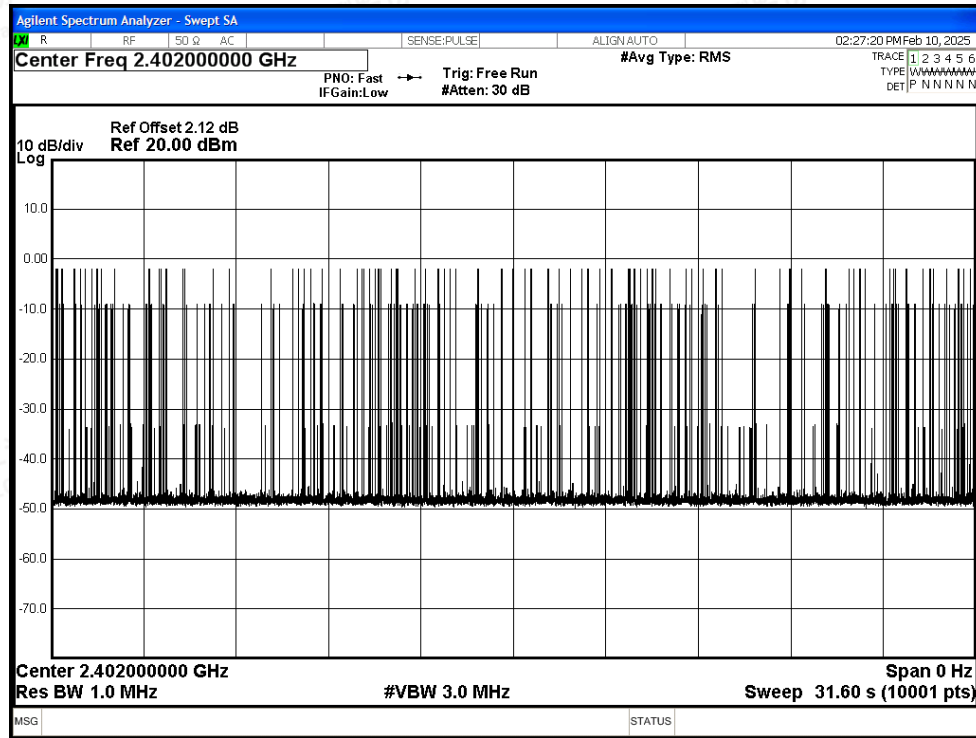


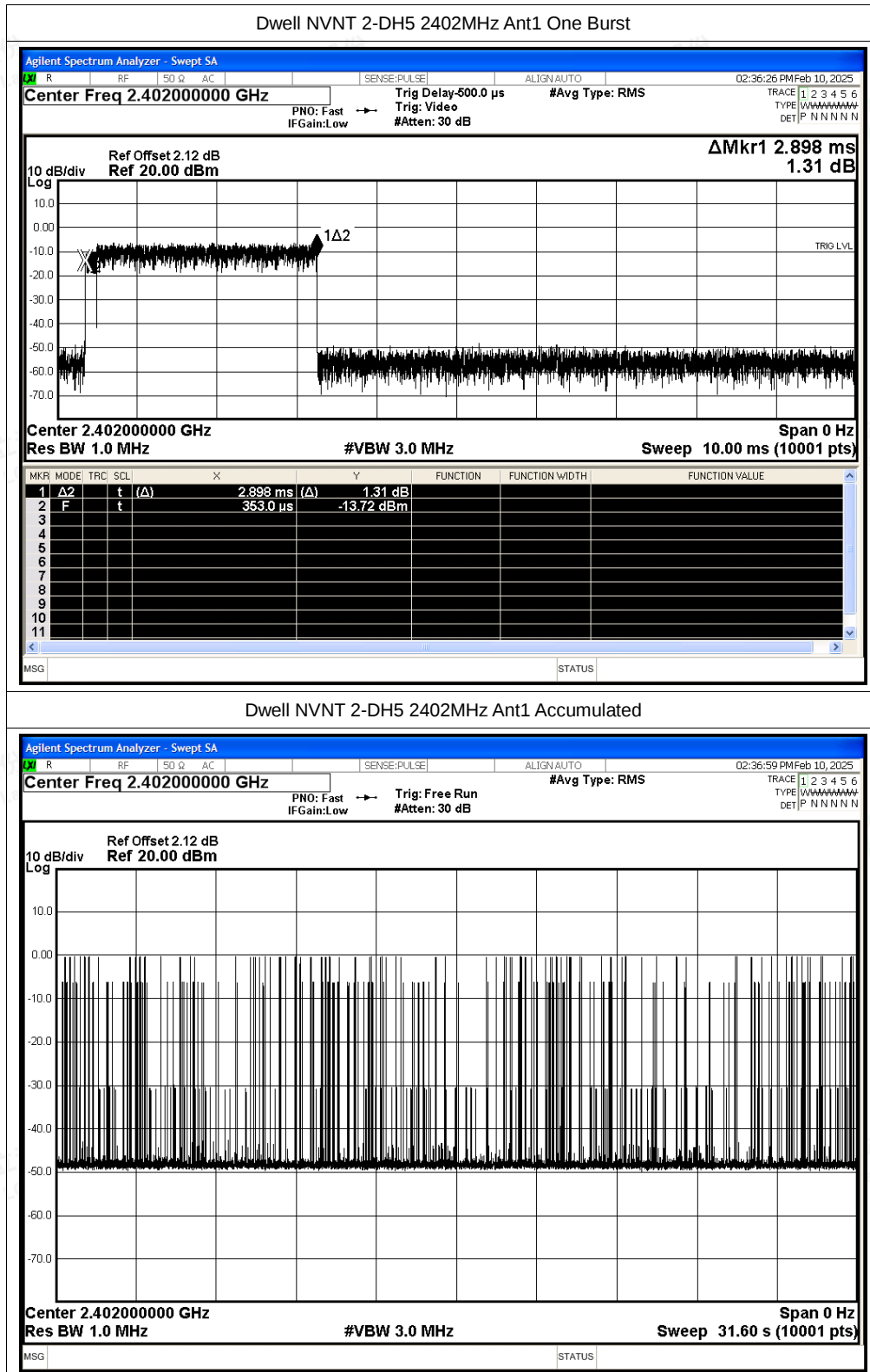
Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



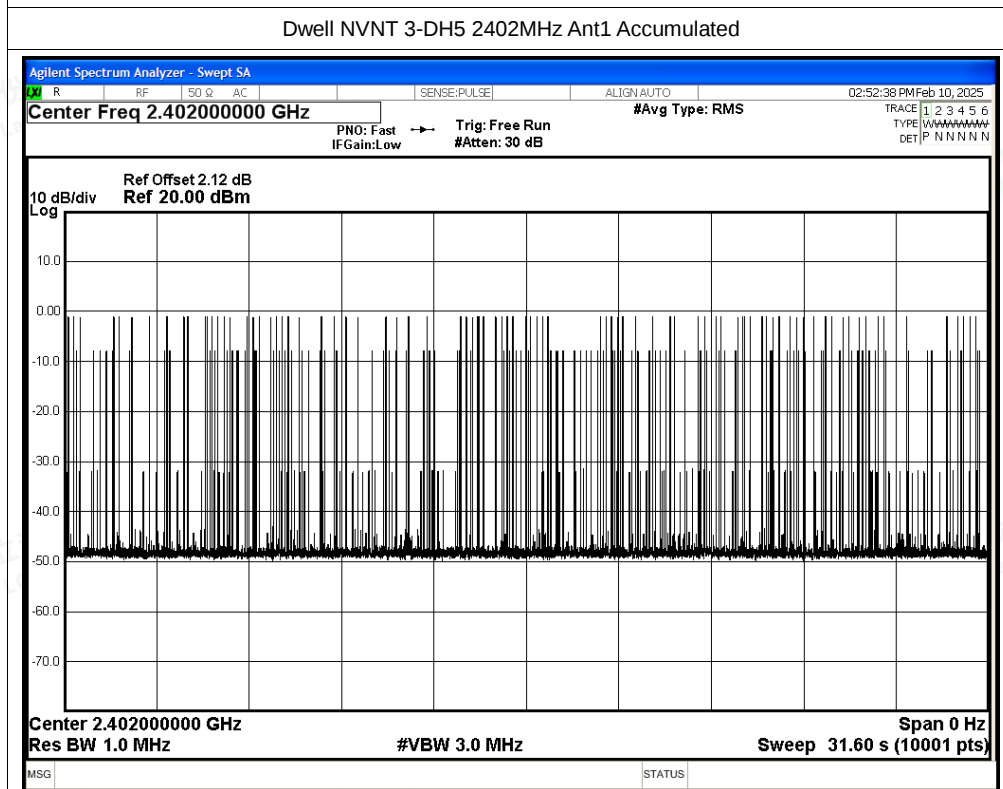
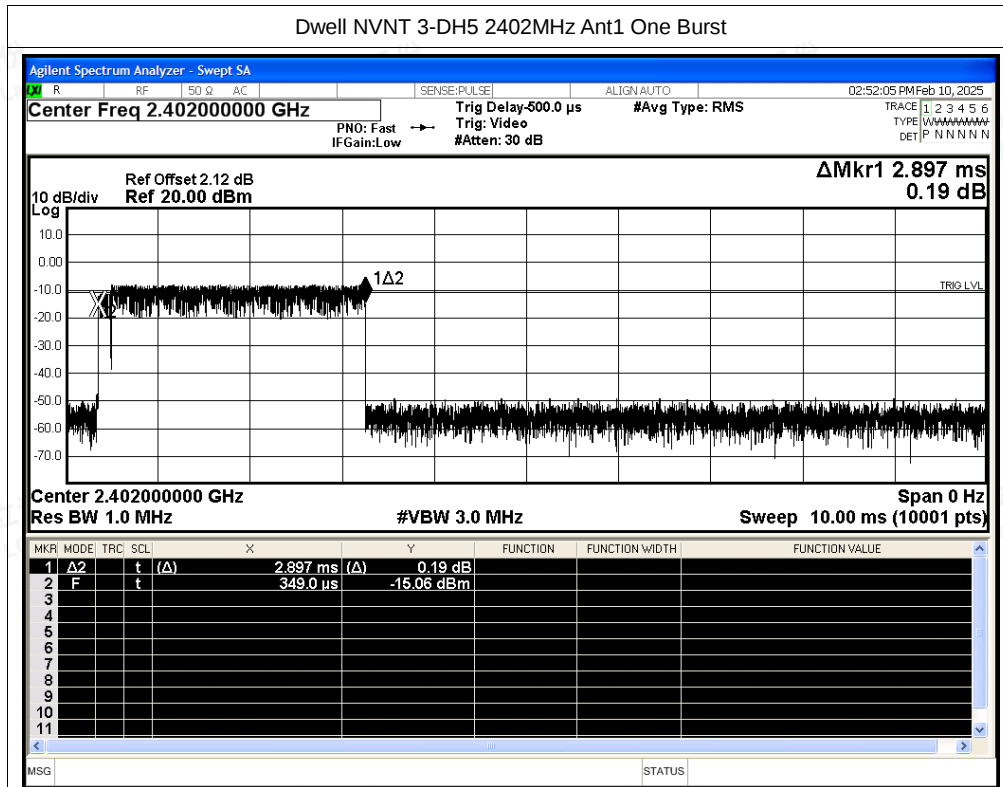


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street,
Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

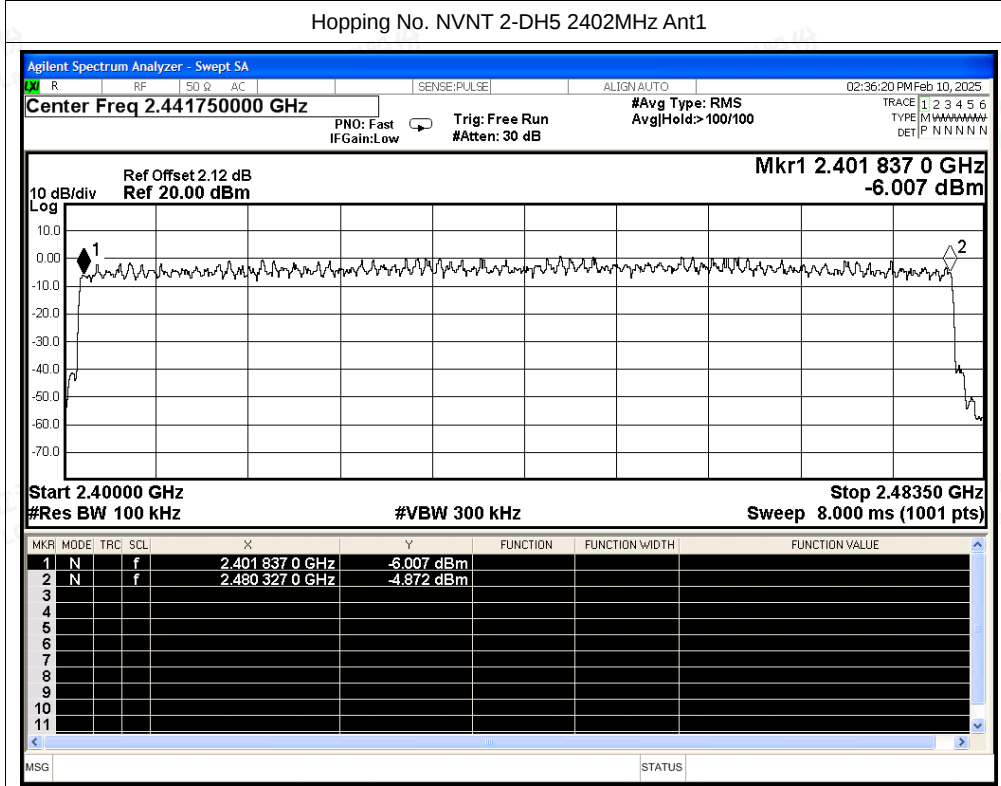
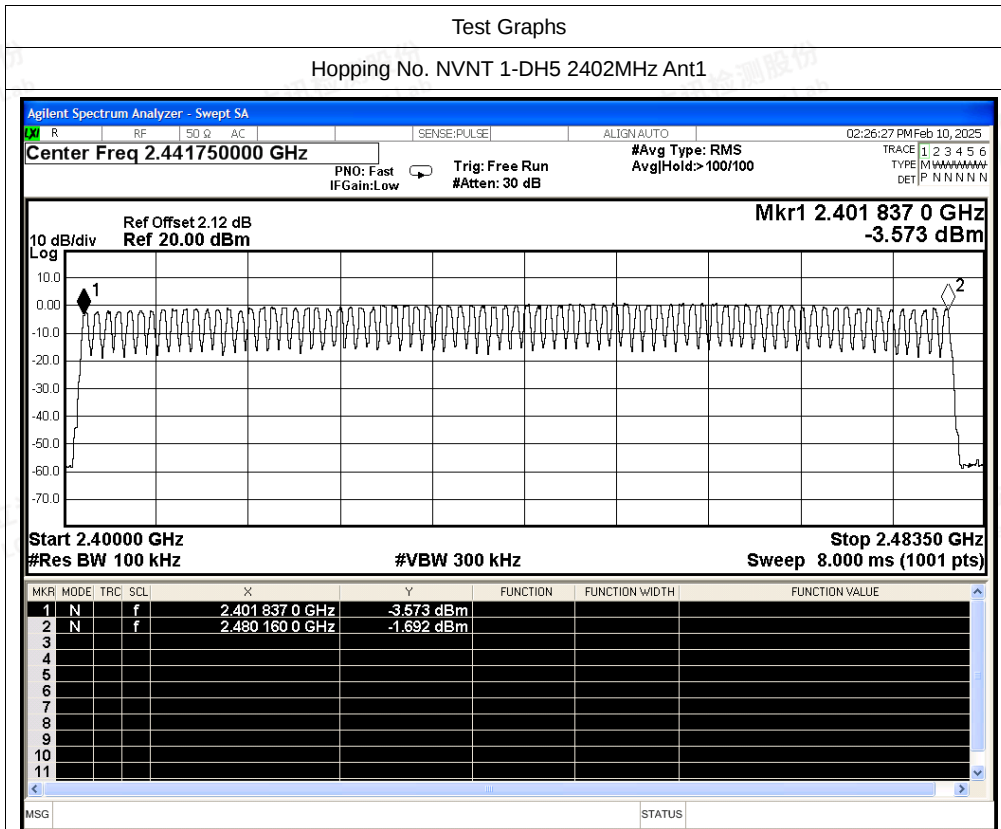


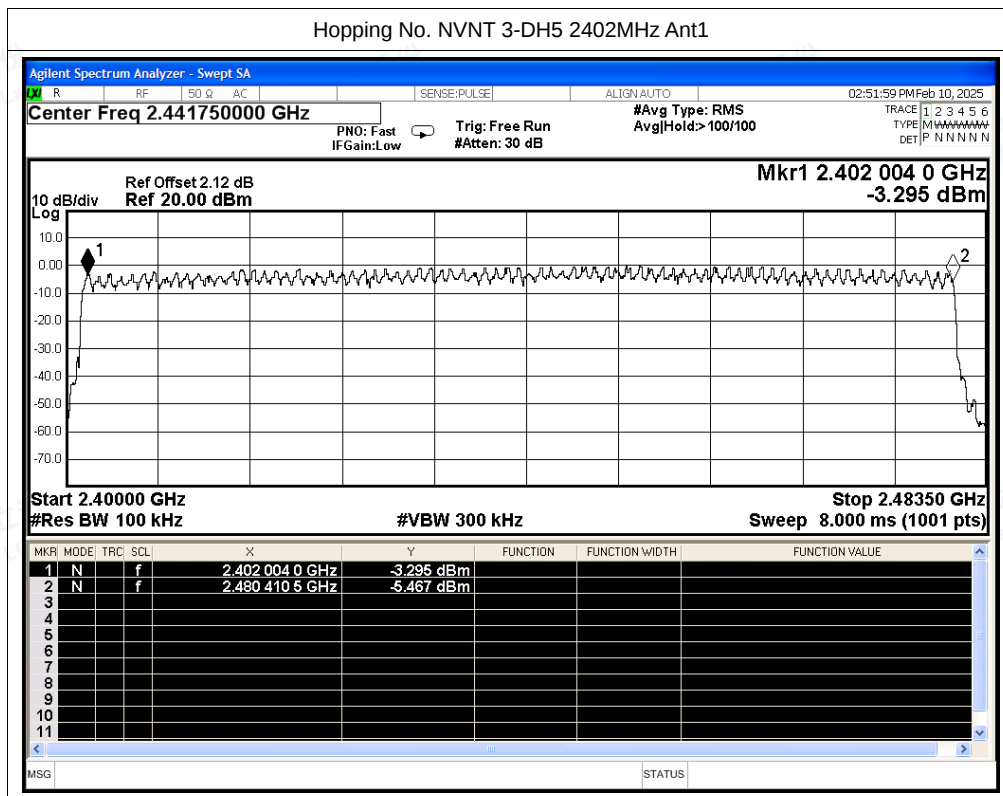


A.5 Number of Hopping Channel

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







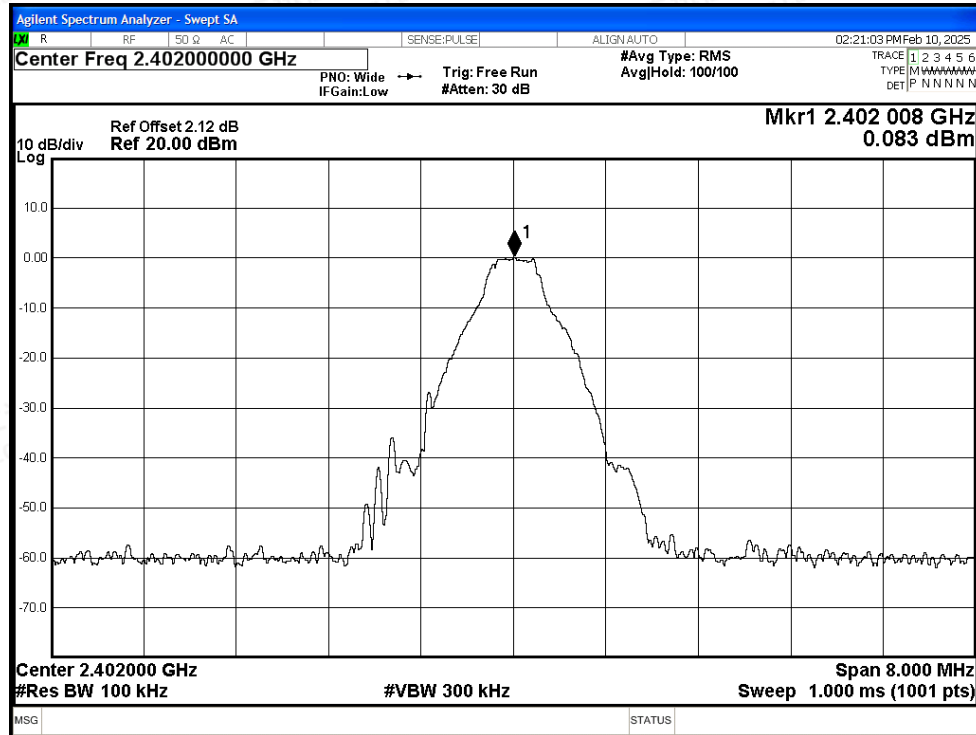
A.6 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-55.79	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-54.87	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-49.64	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-54.18	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-48.63	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-53.61	-20	Pass

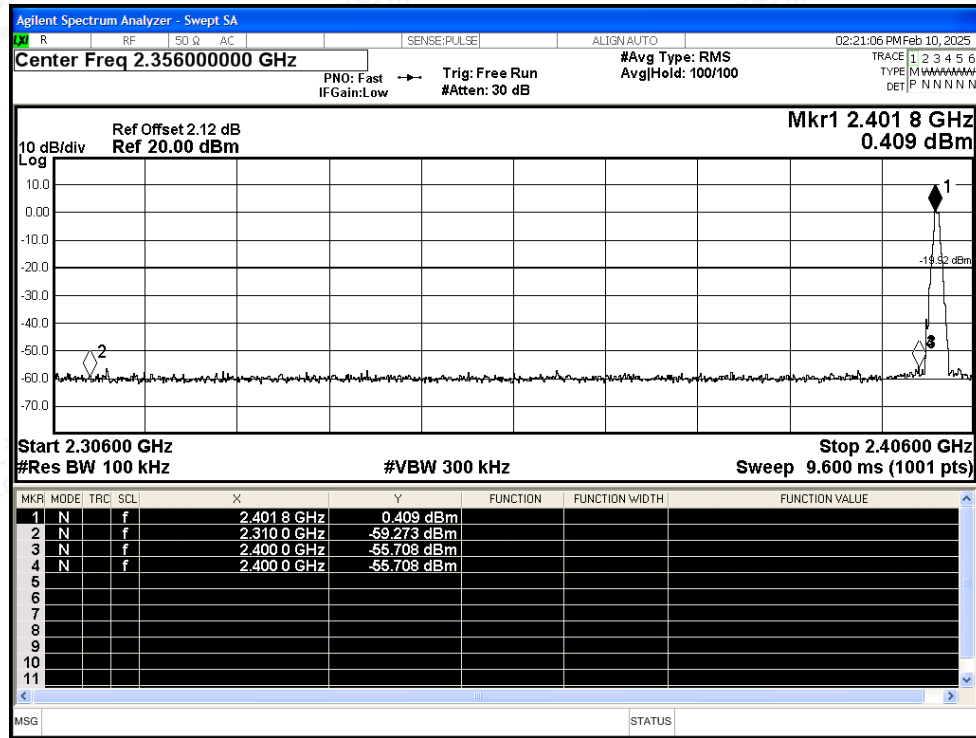


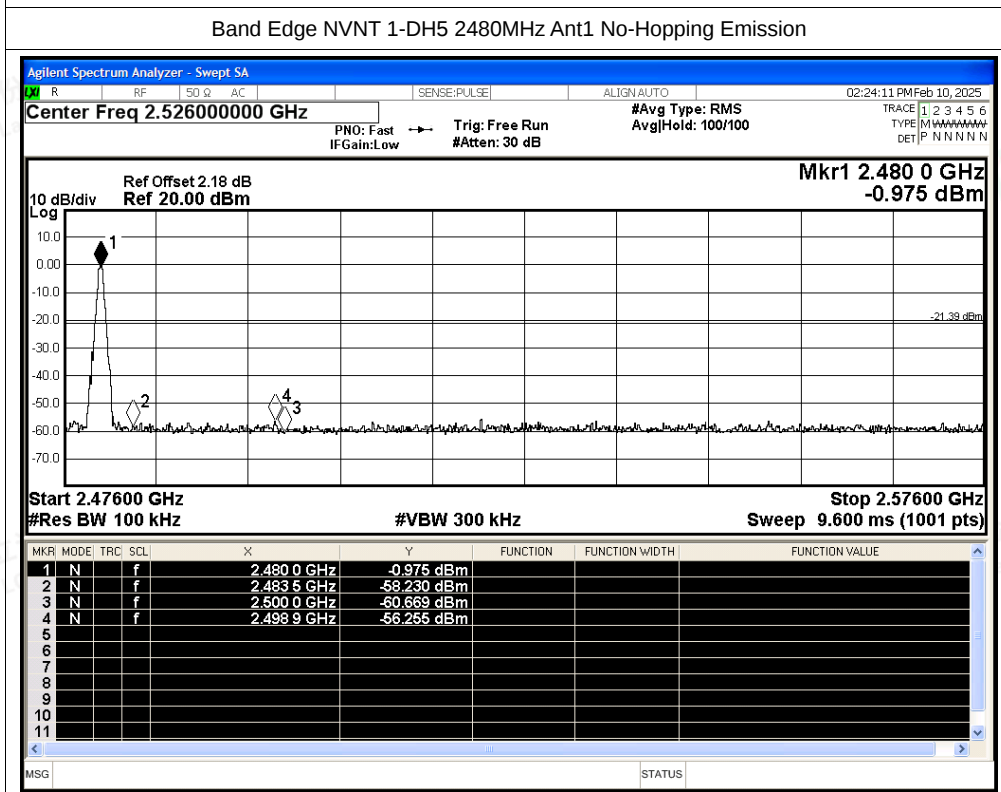
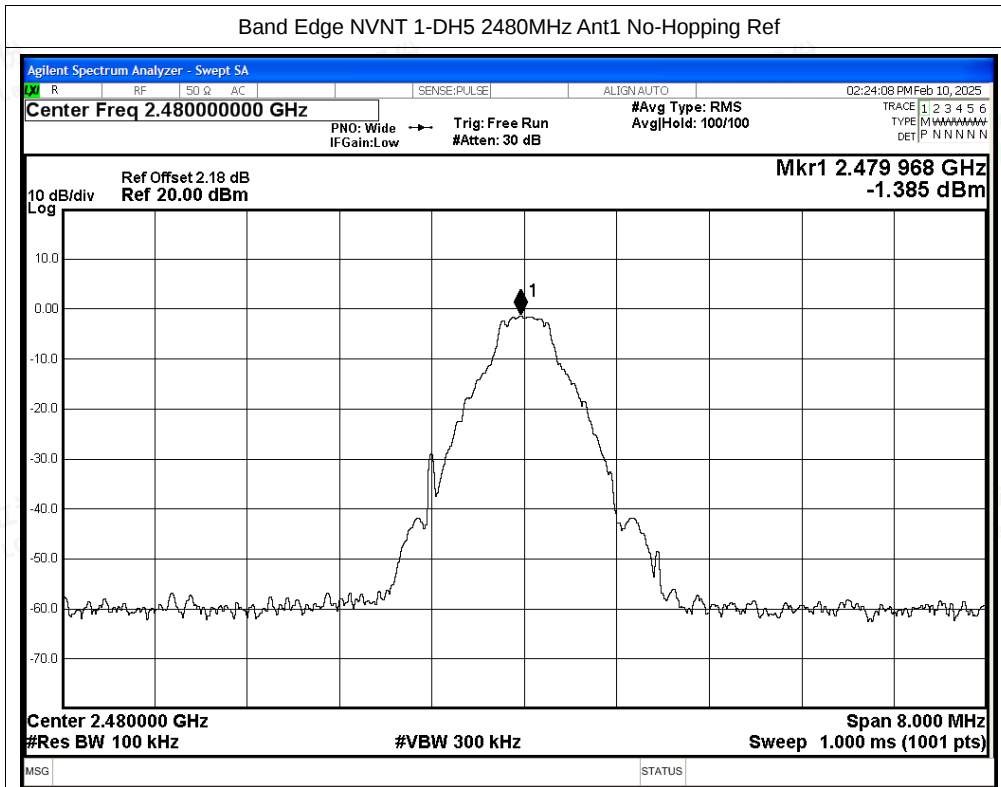
Test Graphs

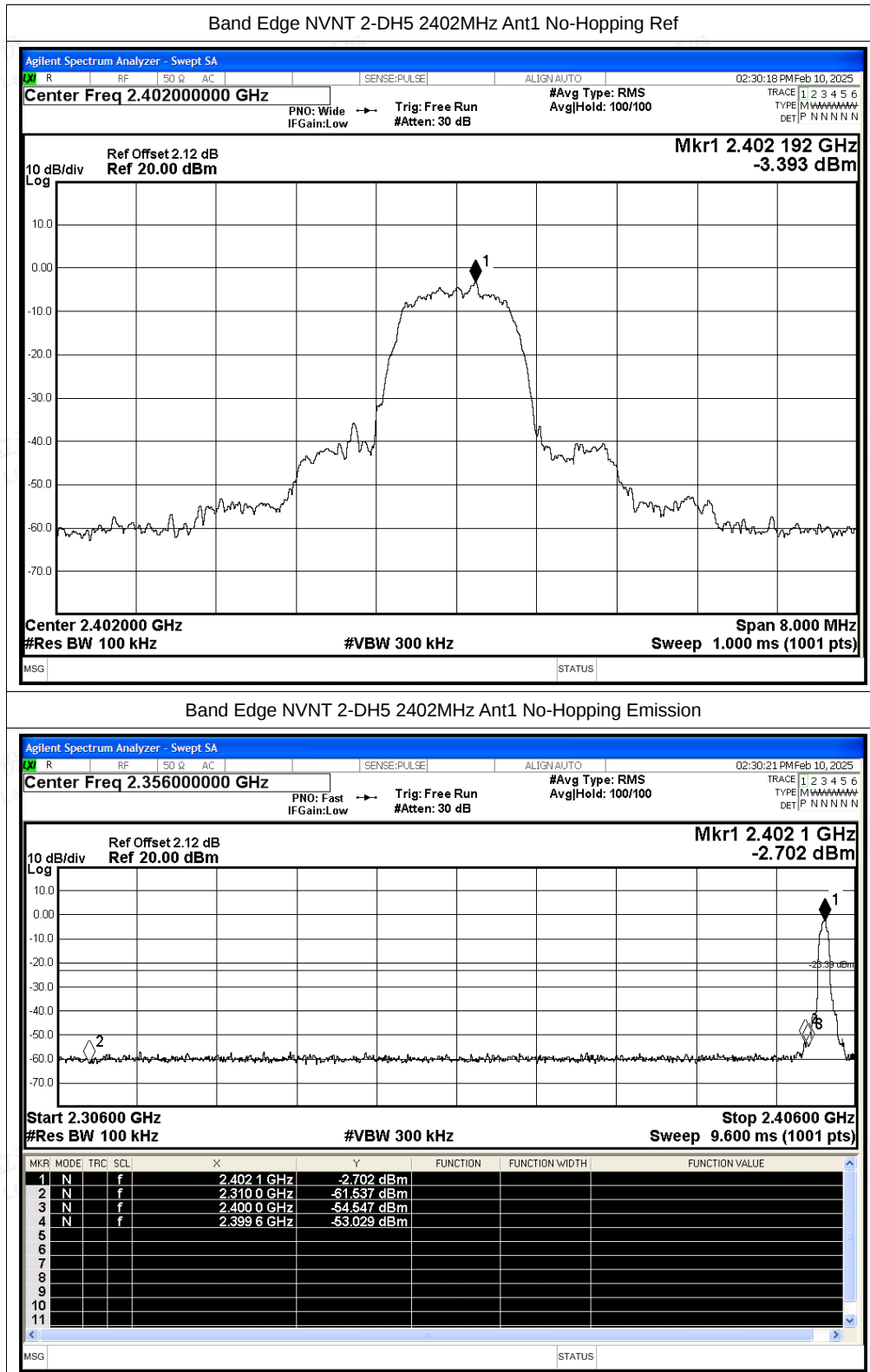
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



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





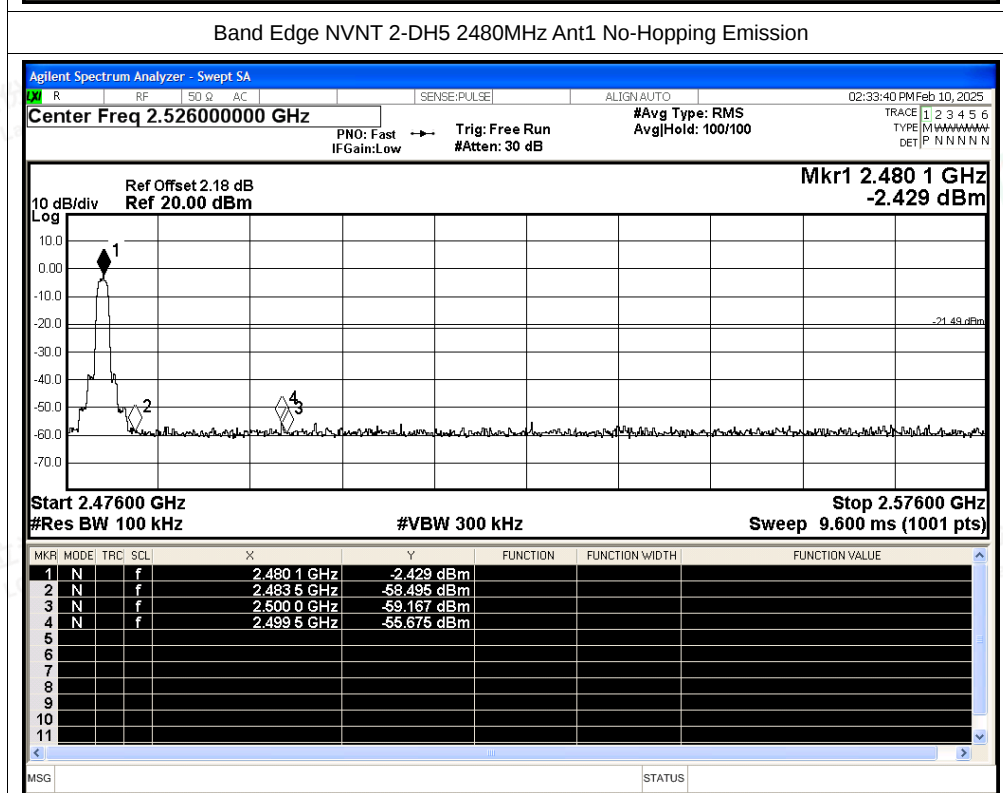
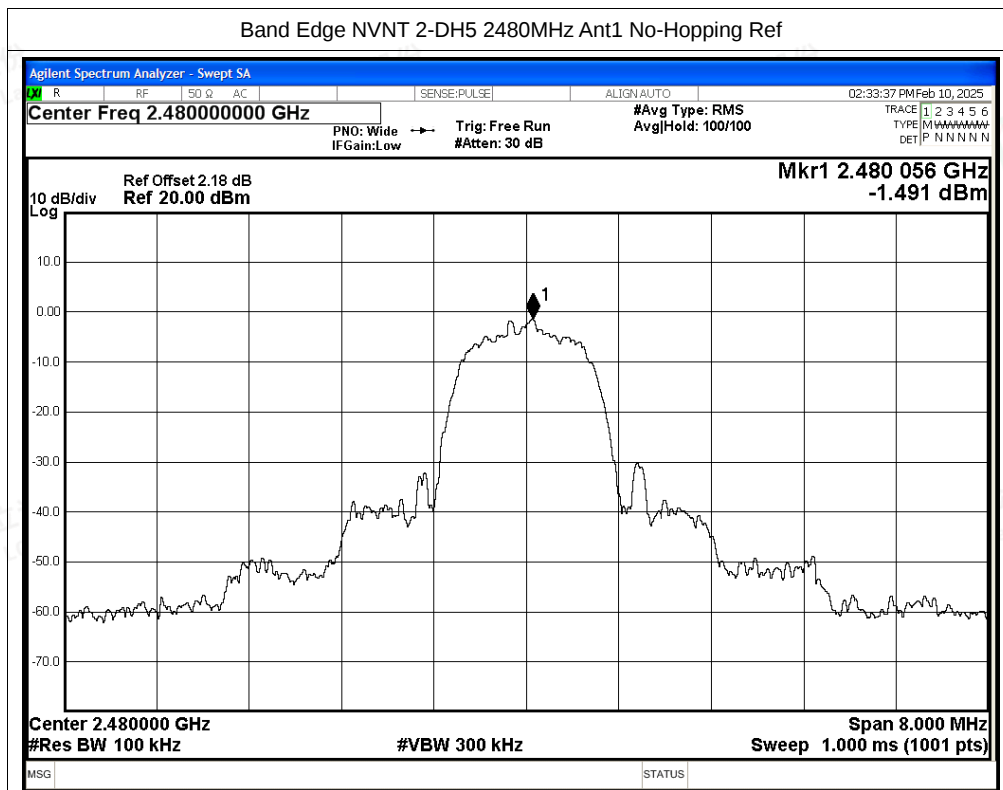


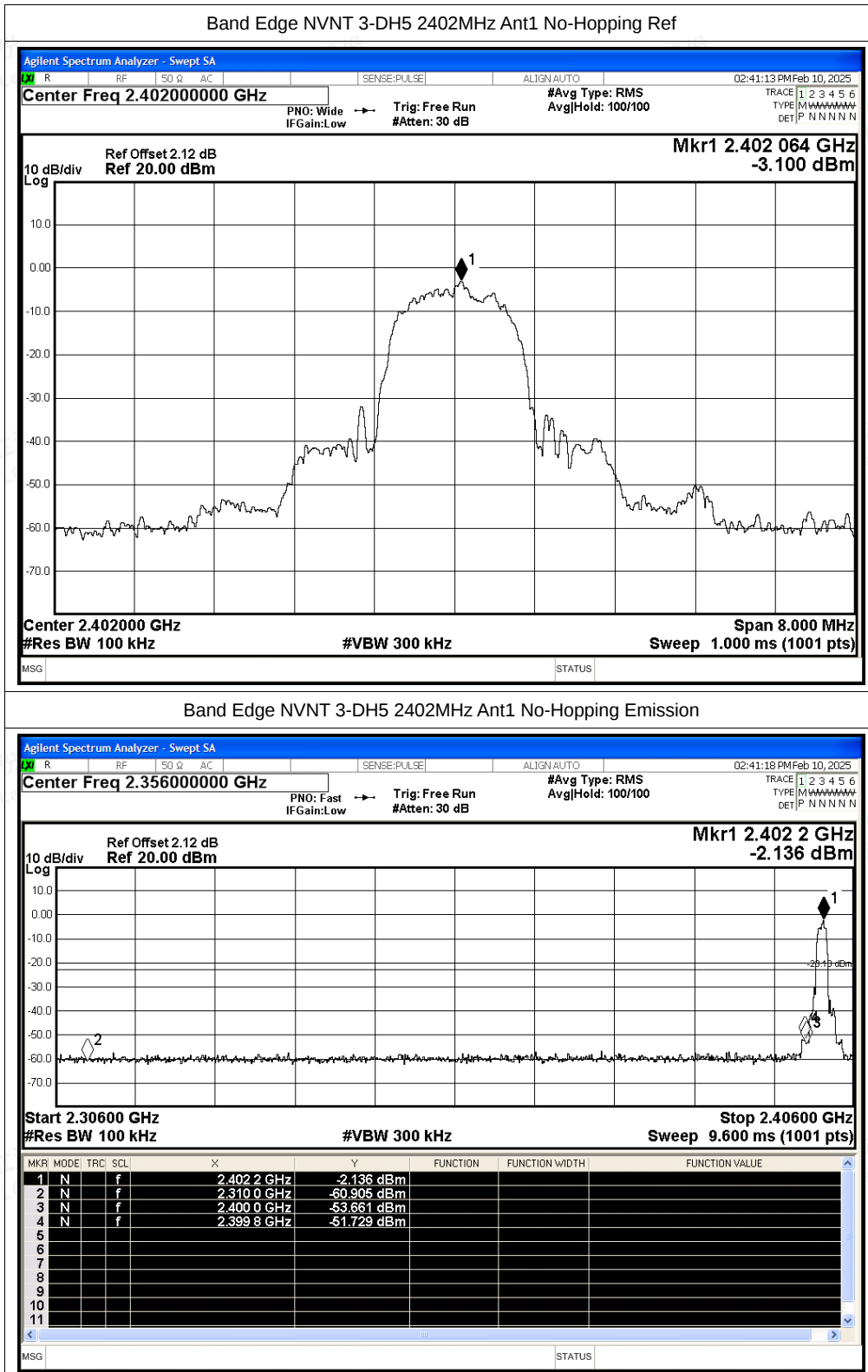
Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



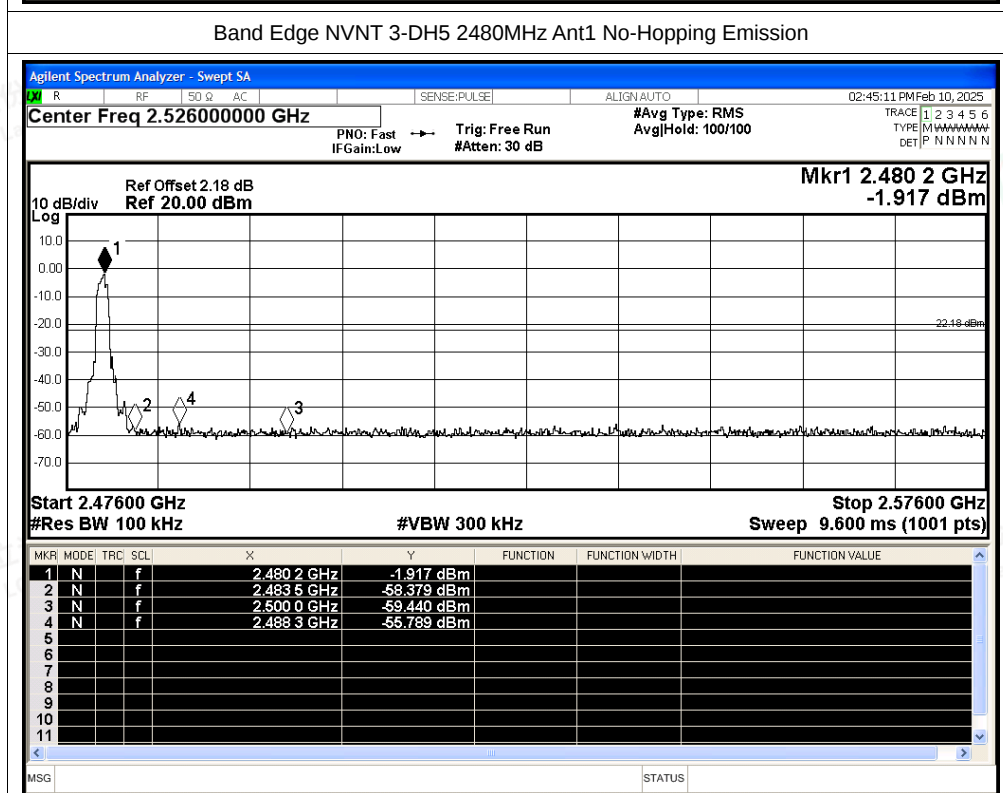
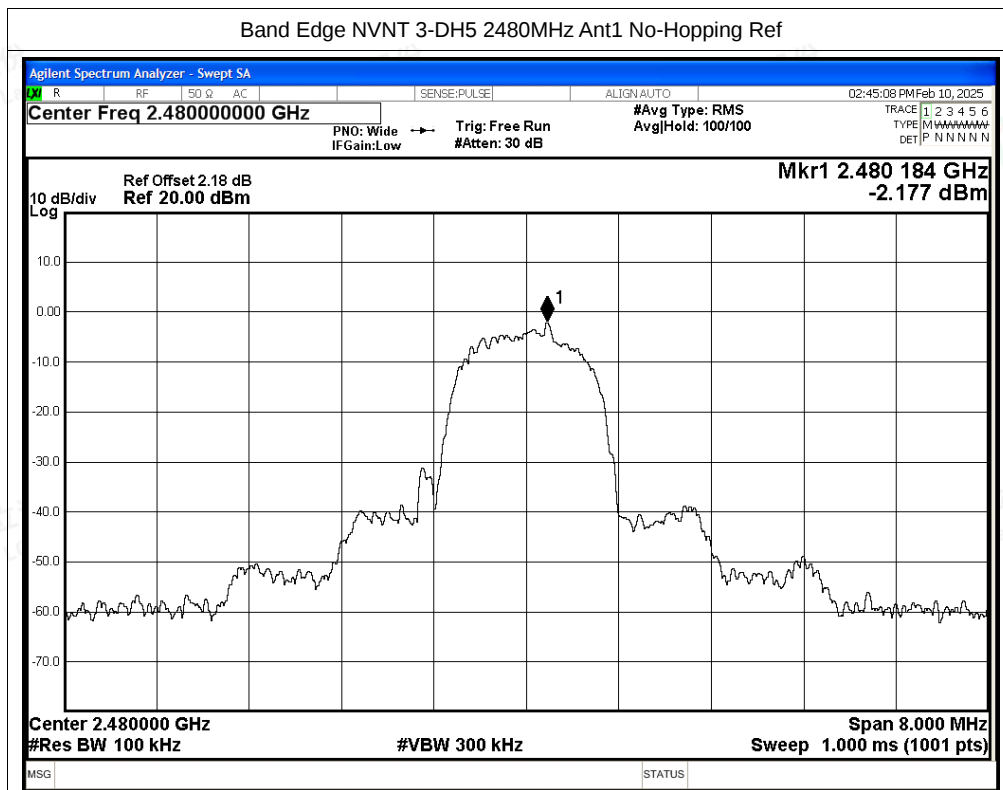


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street,
Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

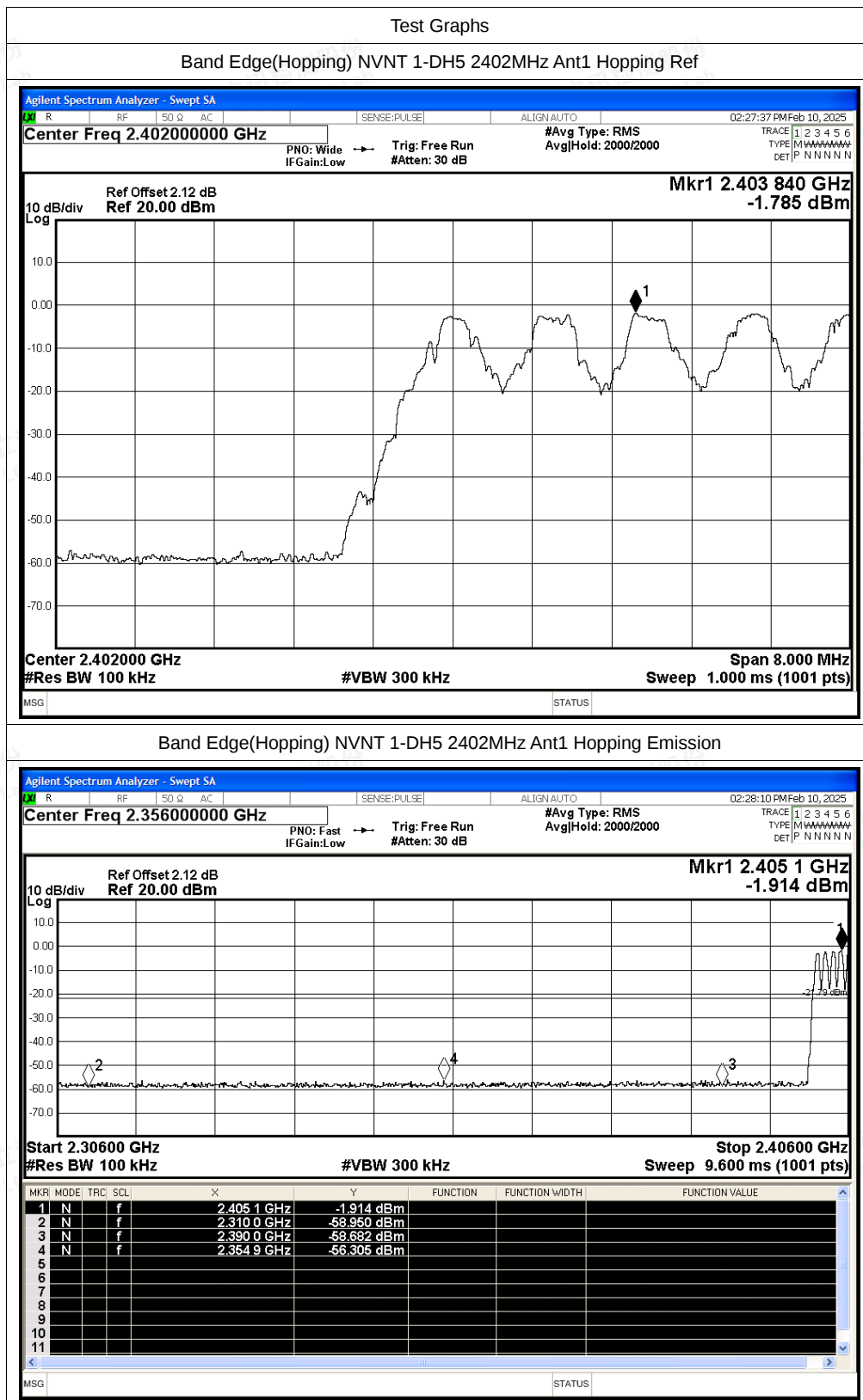
Scan code to check authenticity

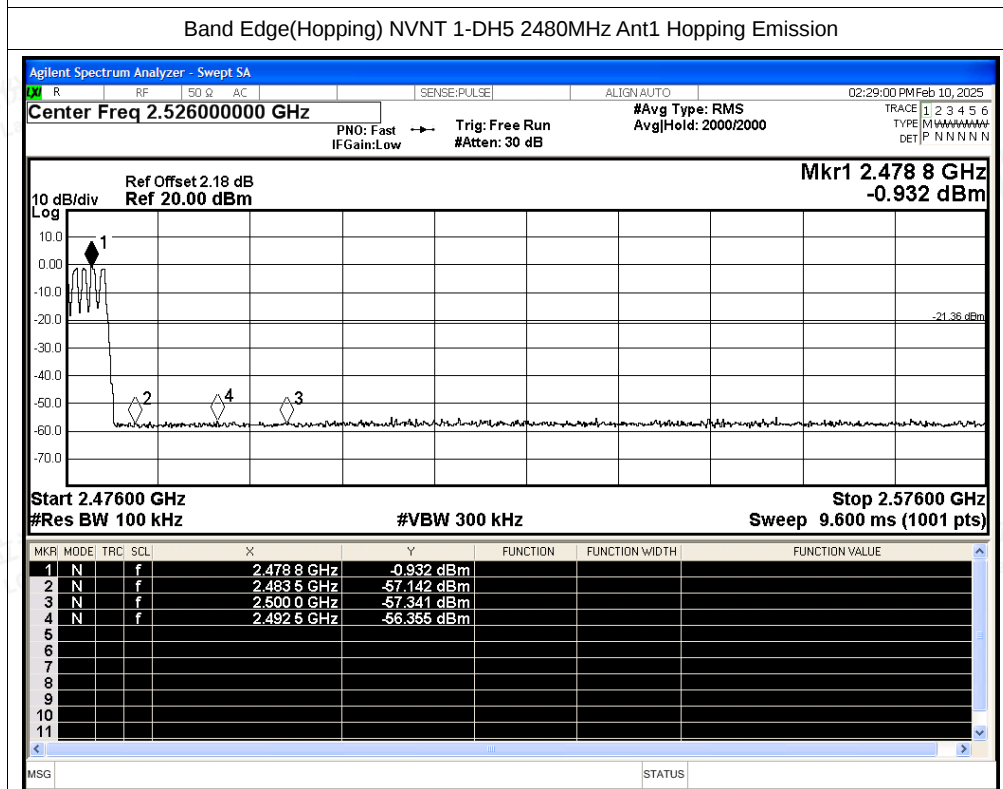
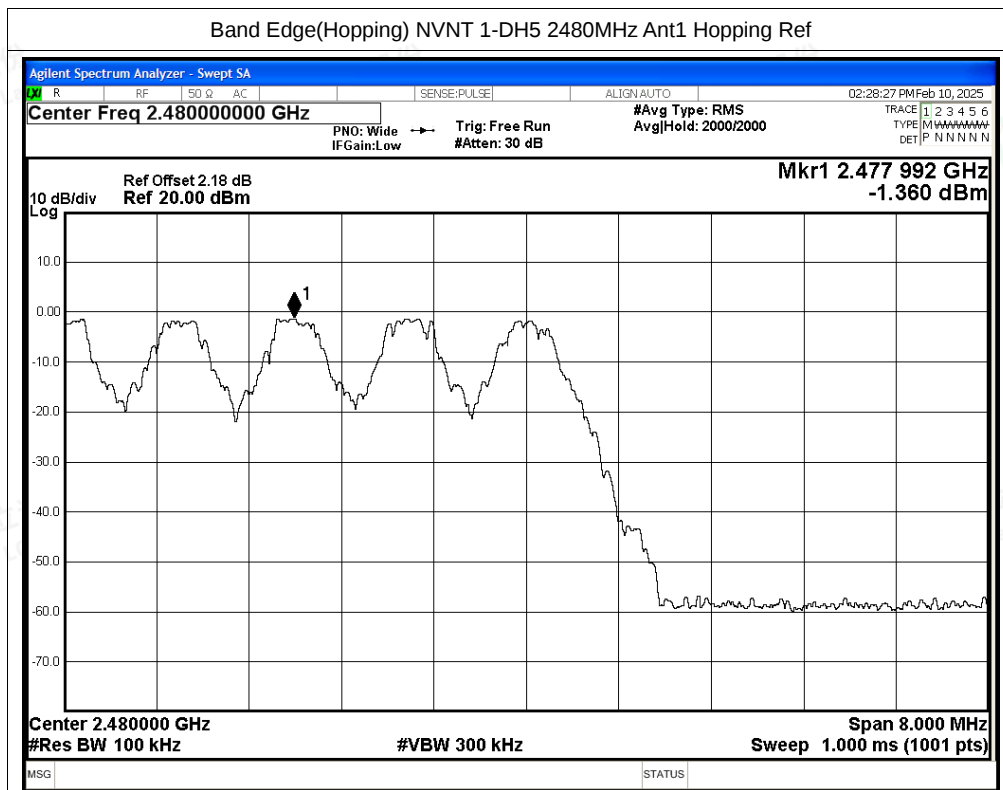


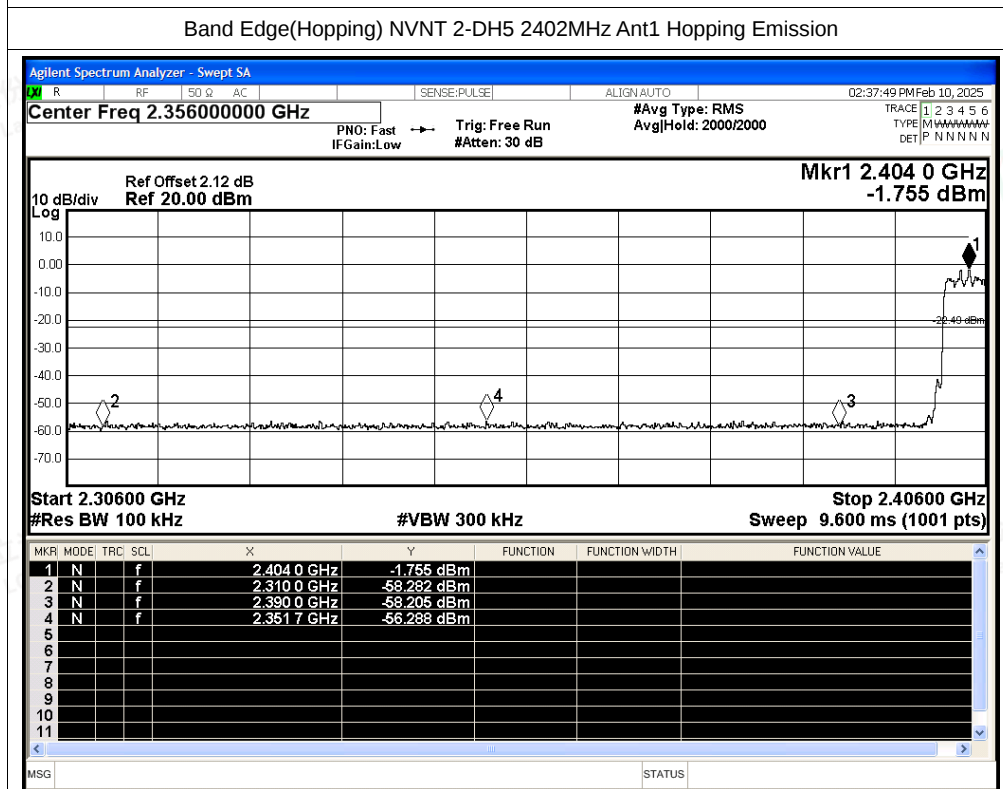
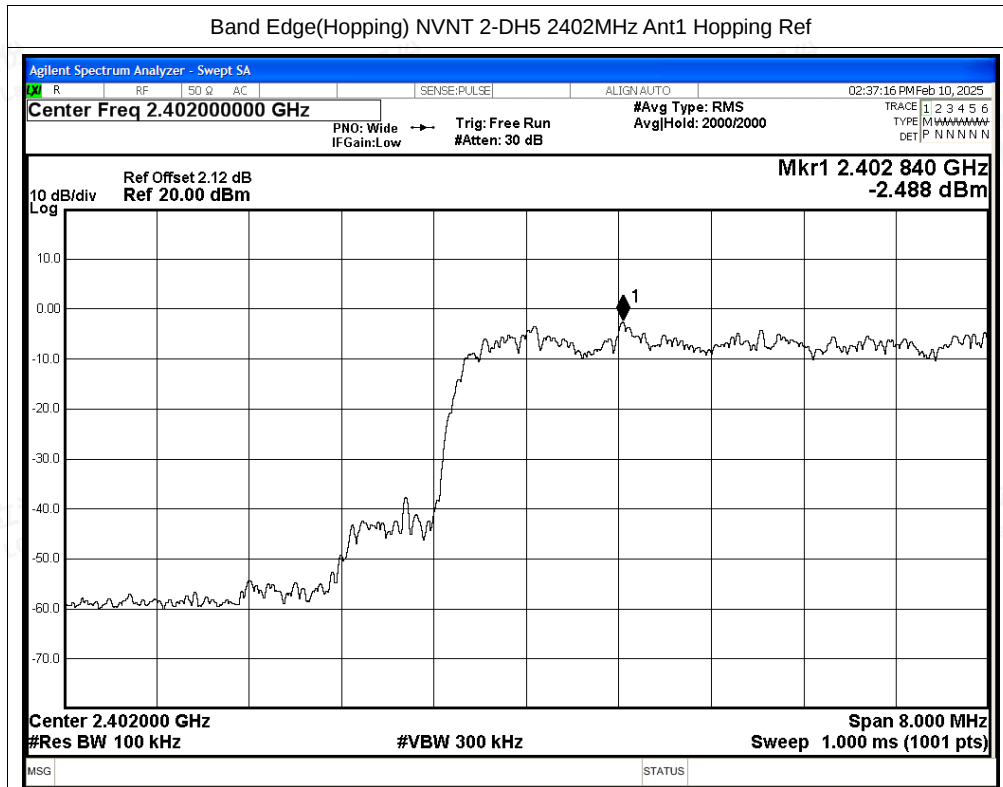
(Hopping)

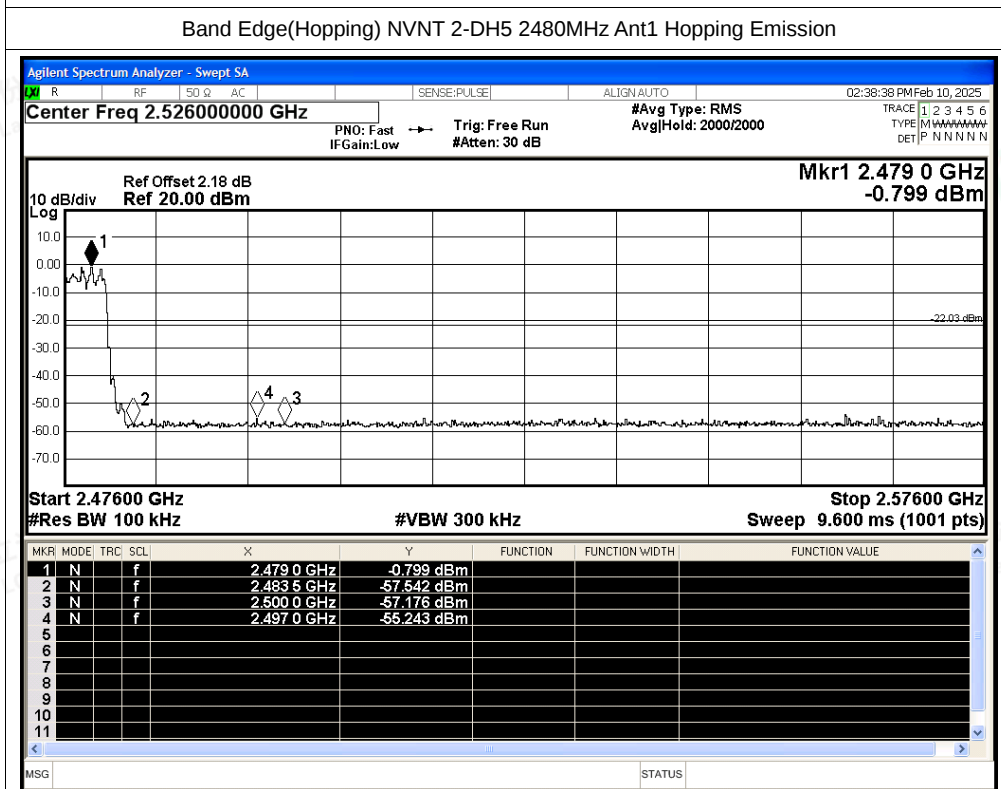
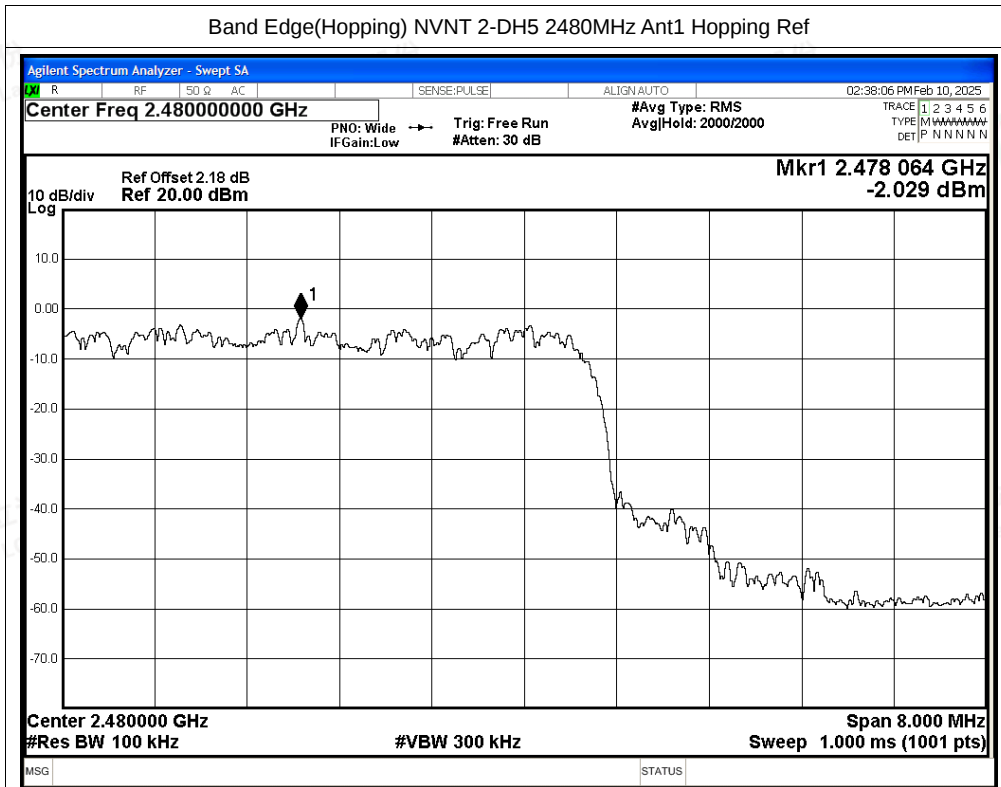
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-54.52	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-55	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-53.8	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-53.21	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-52.98	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-53.3	-20	Pass

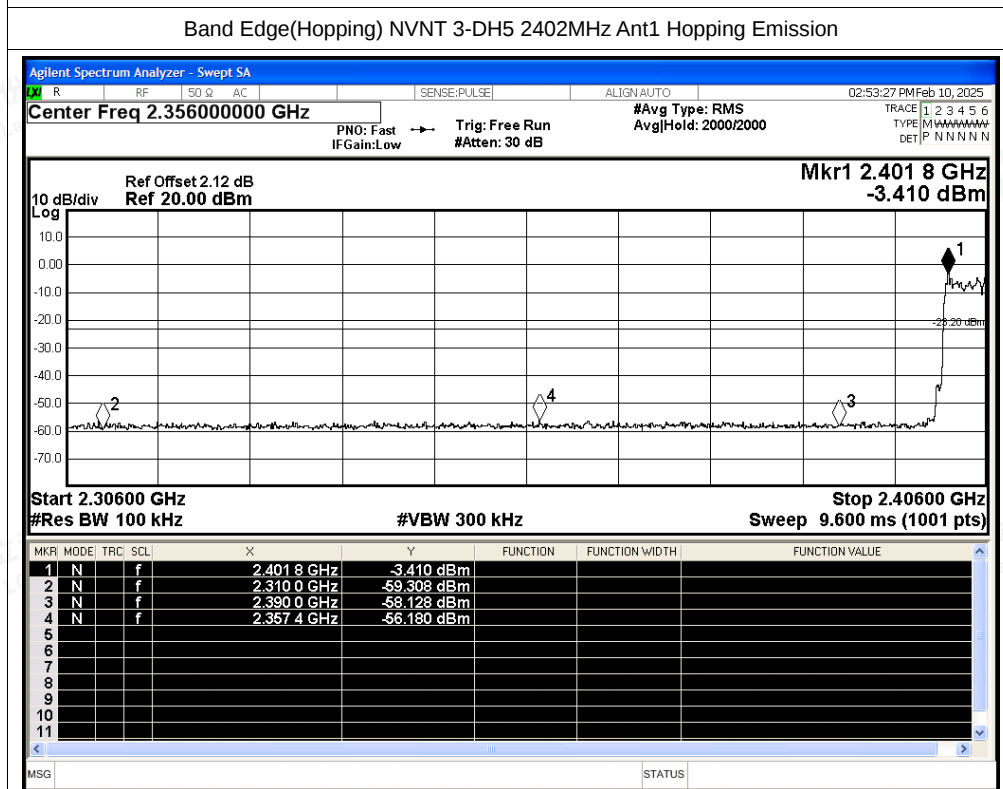
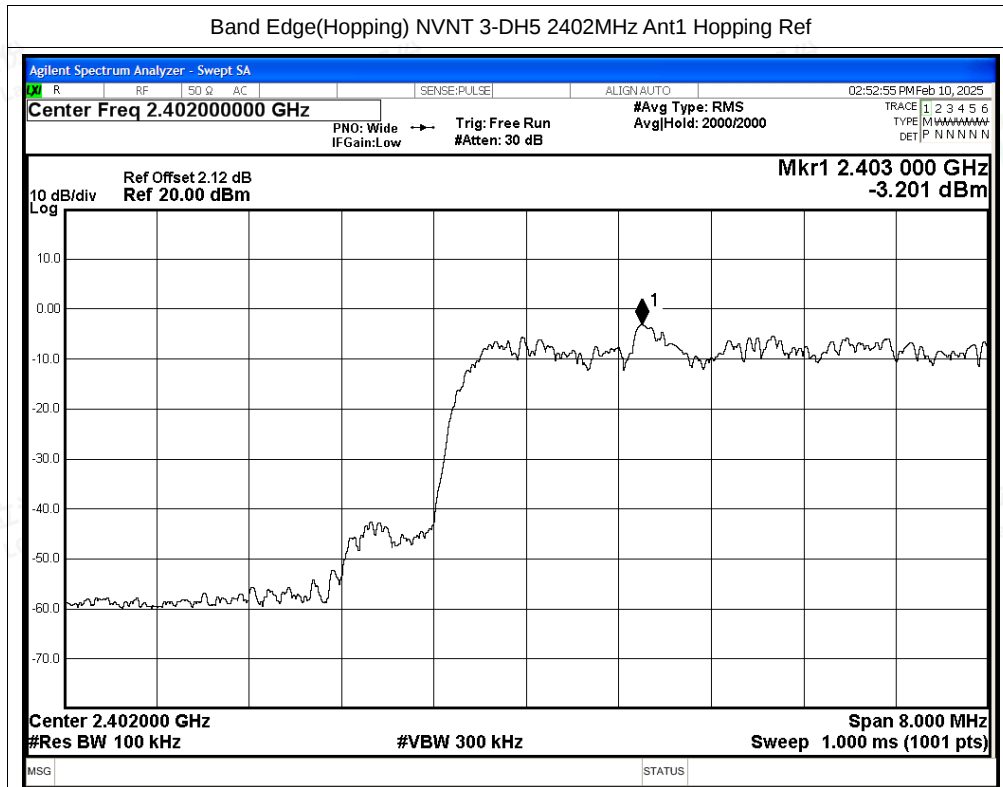


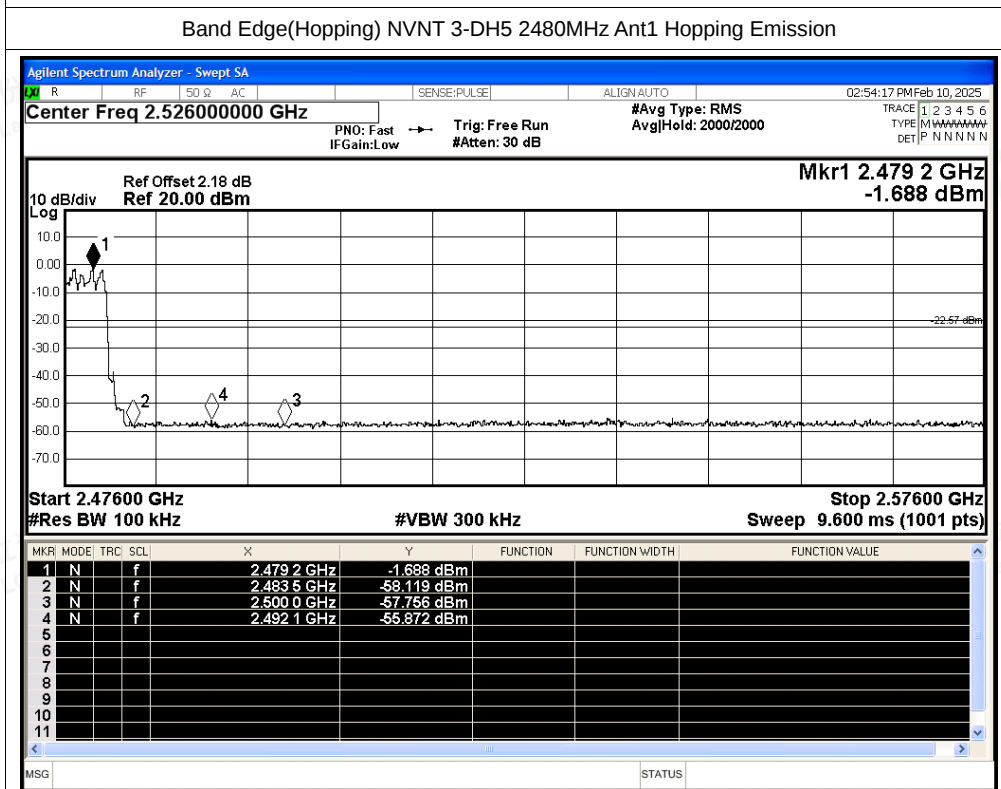
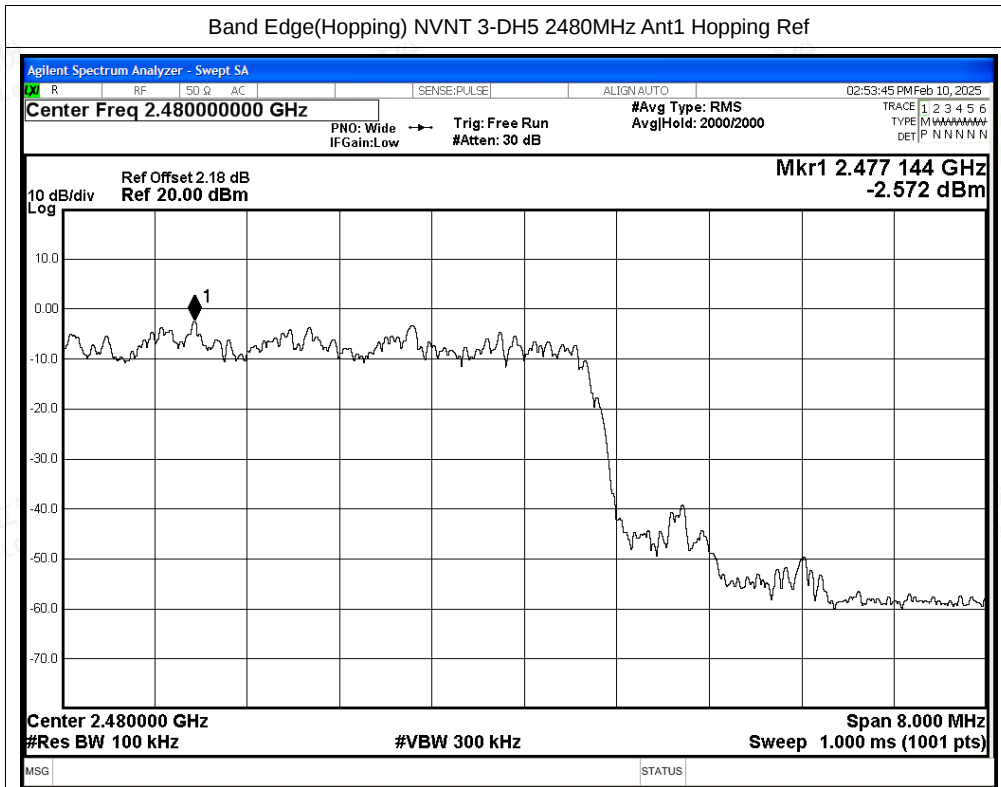








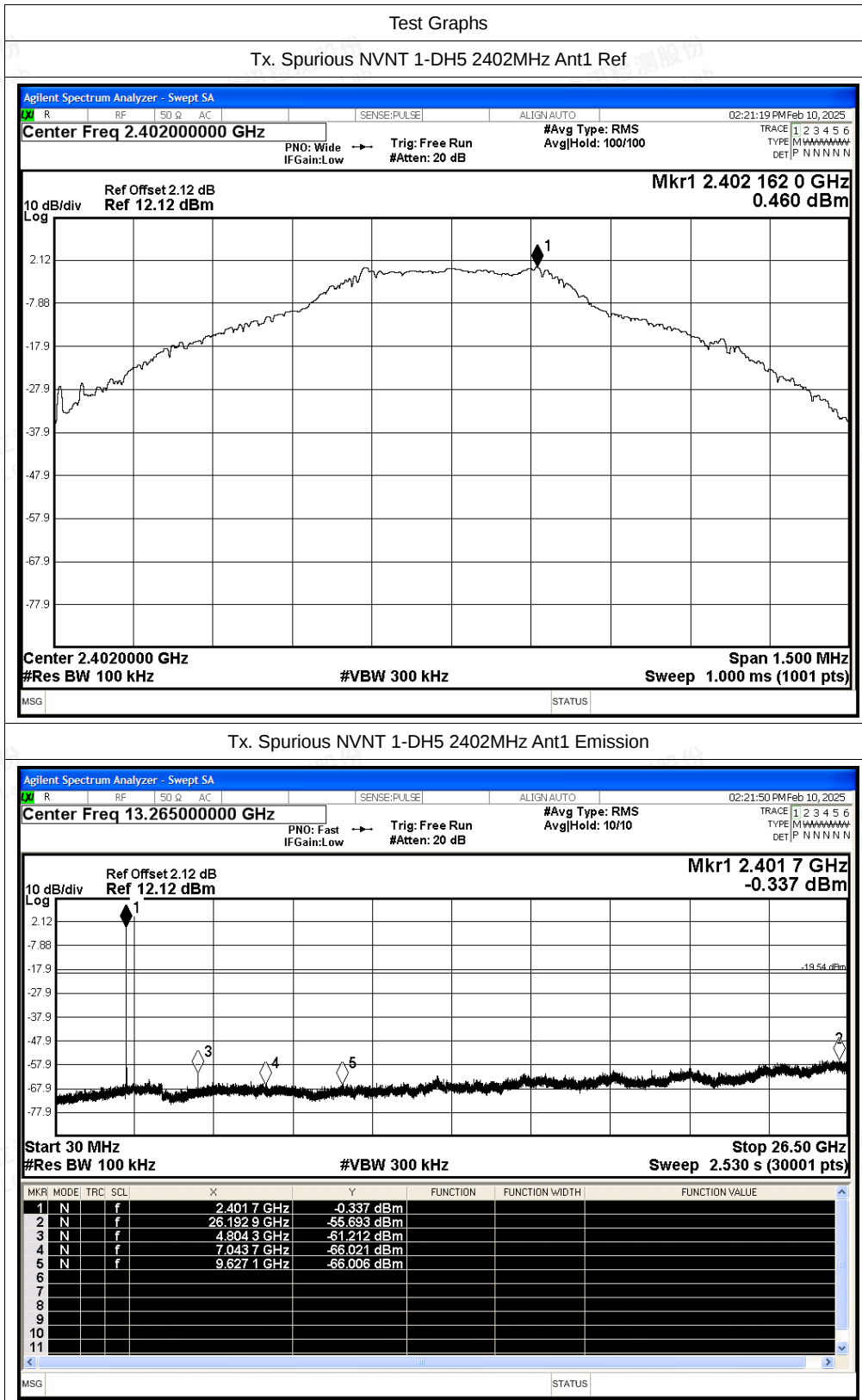




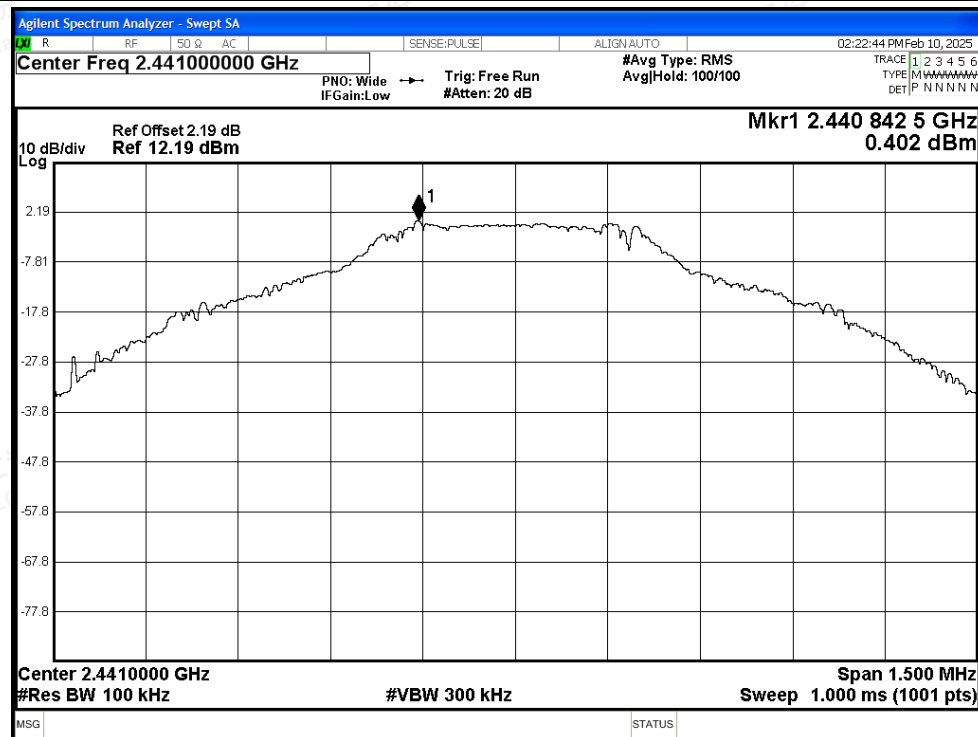
A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-56.15	-20	Pass
NVNT	1-DH5	2441	Ant1	-55.29	-20	Pass
NVNT	1-DH5	2480	Ant1	-54.28	-20	Pass
NVNT	2-DH5	2402	Ant1	-52.46	-20	Pass
NVNT	2-DH5	2441	Ant1	-52.72	-20	Pass
NVNT	2-DH5	2480	Ant1	-54.18	-20	Pass
NVNT	3-DH5	2402	Ant1	-53.83	-20	Pass
NVNT	3-DH5	2441	Ant1	-53.35	-20	Pass
NVNT	3-DH5	2480	Ant1	-53.25	-20	Pass

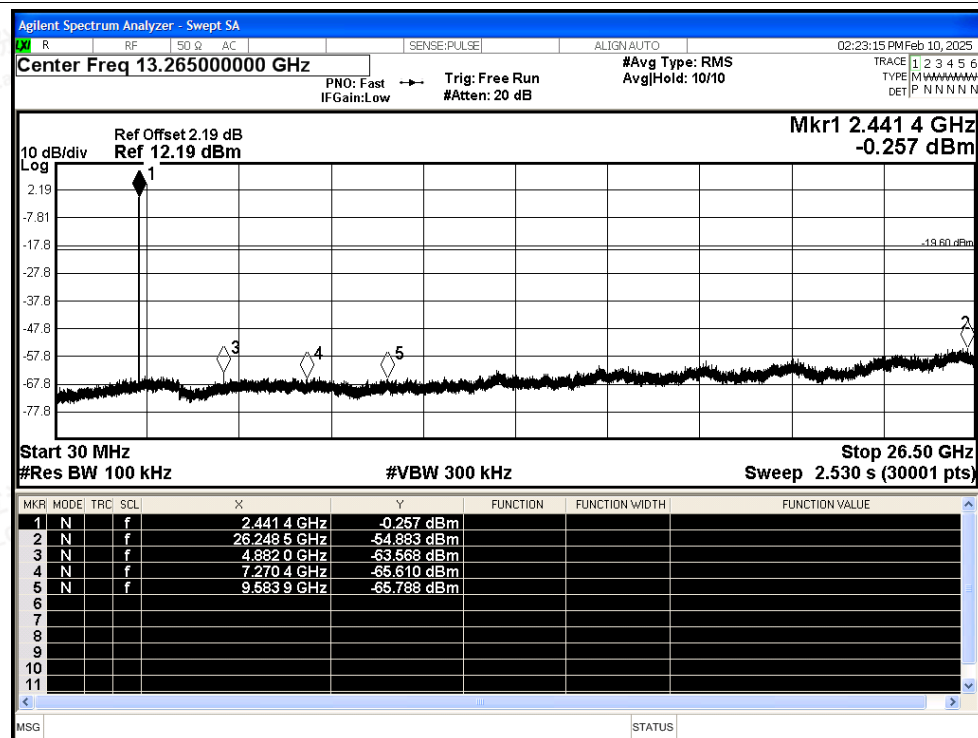




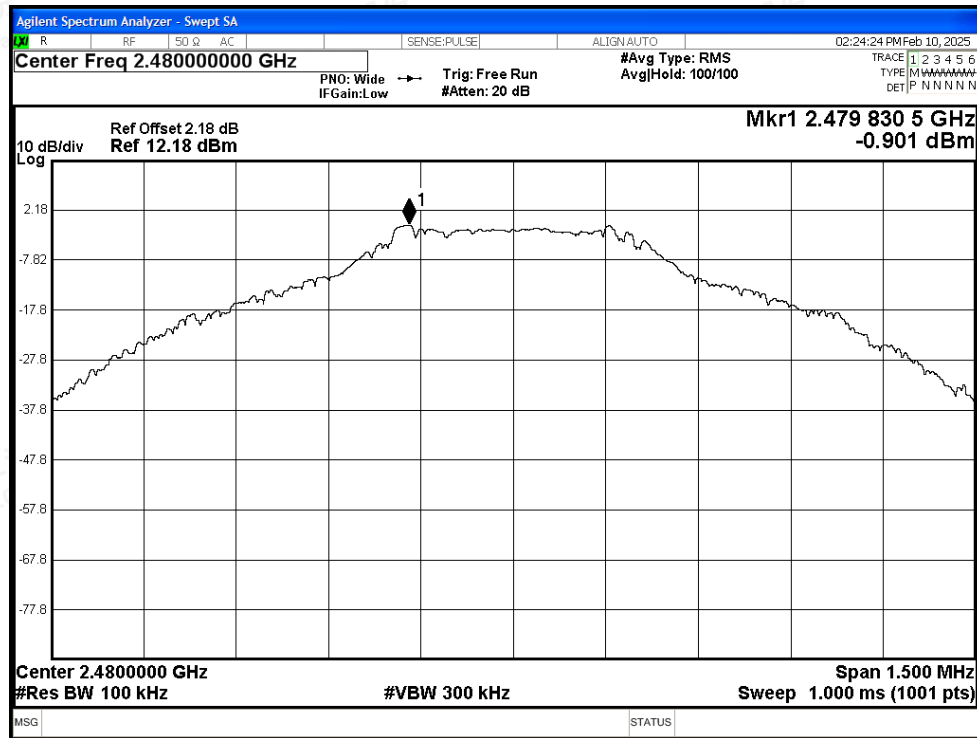
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



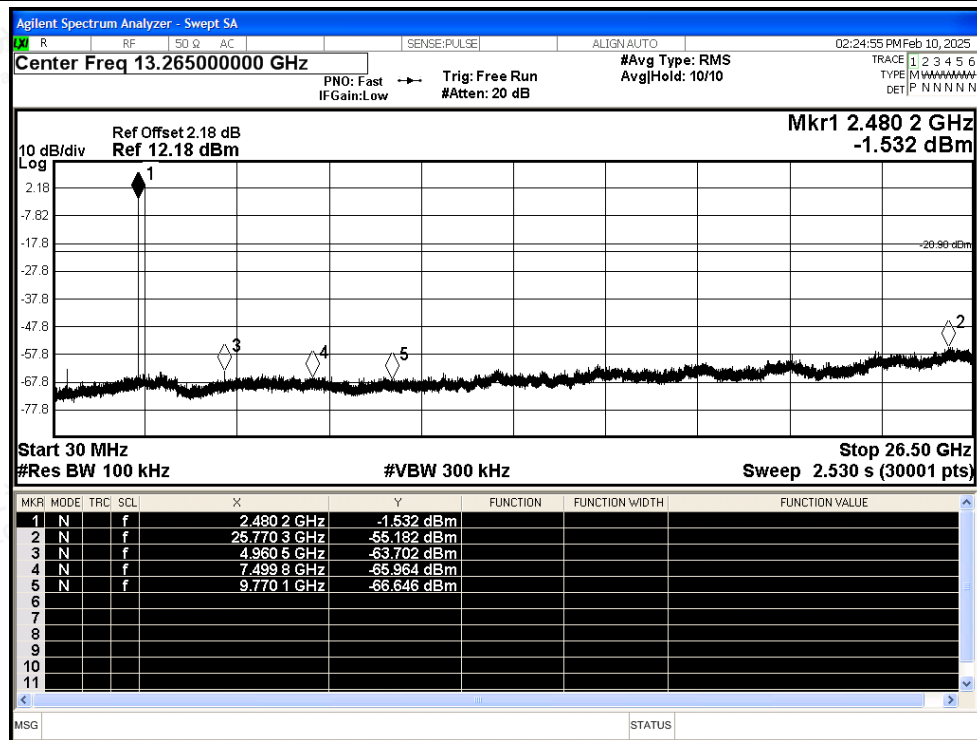
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



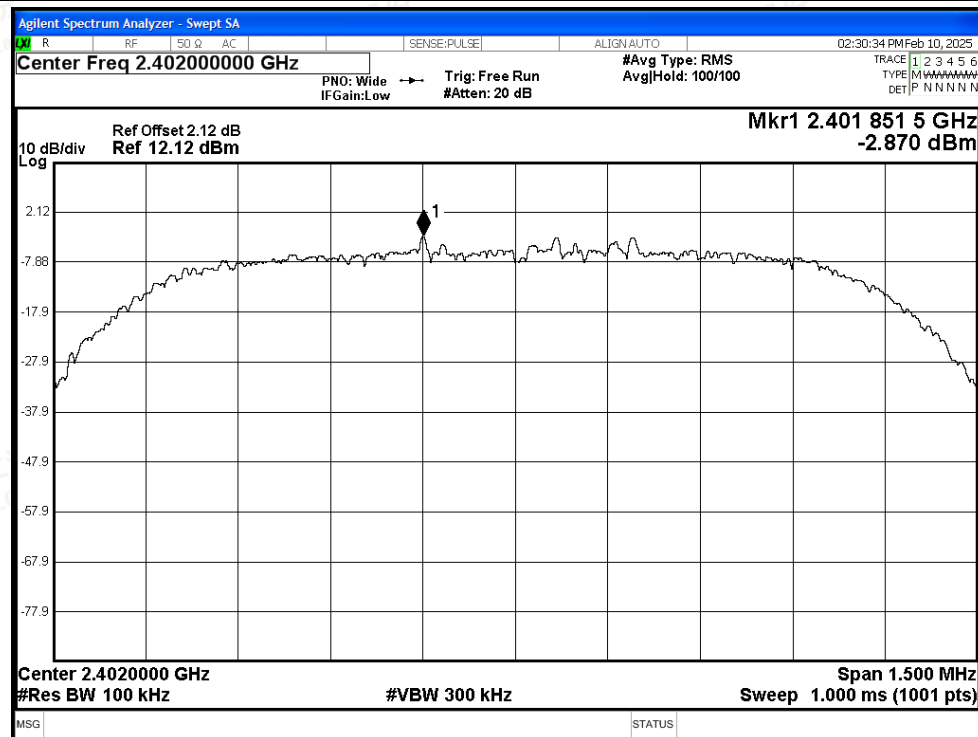
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



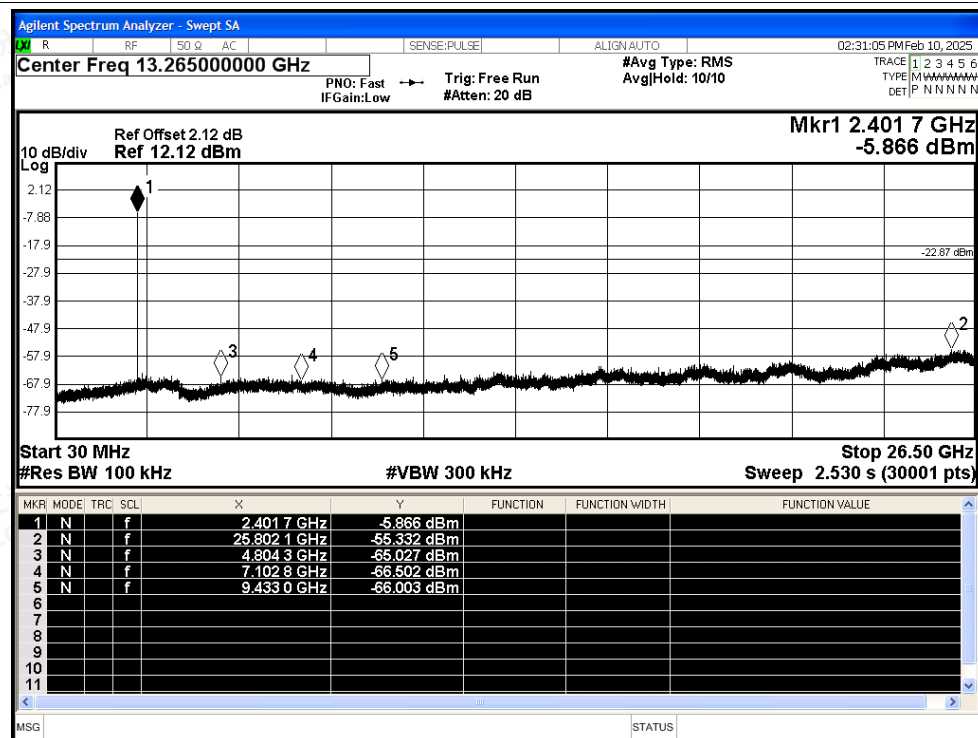
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref

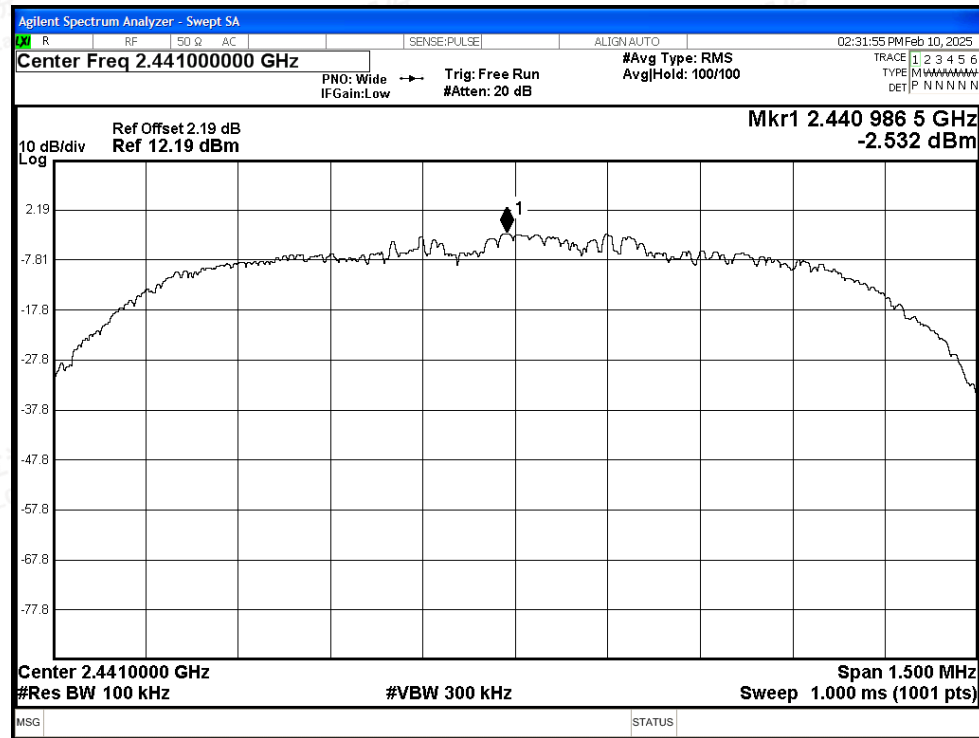


Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission

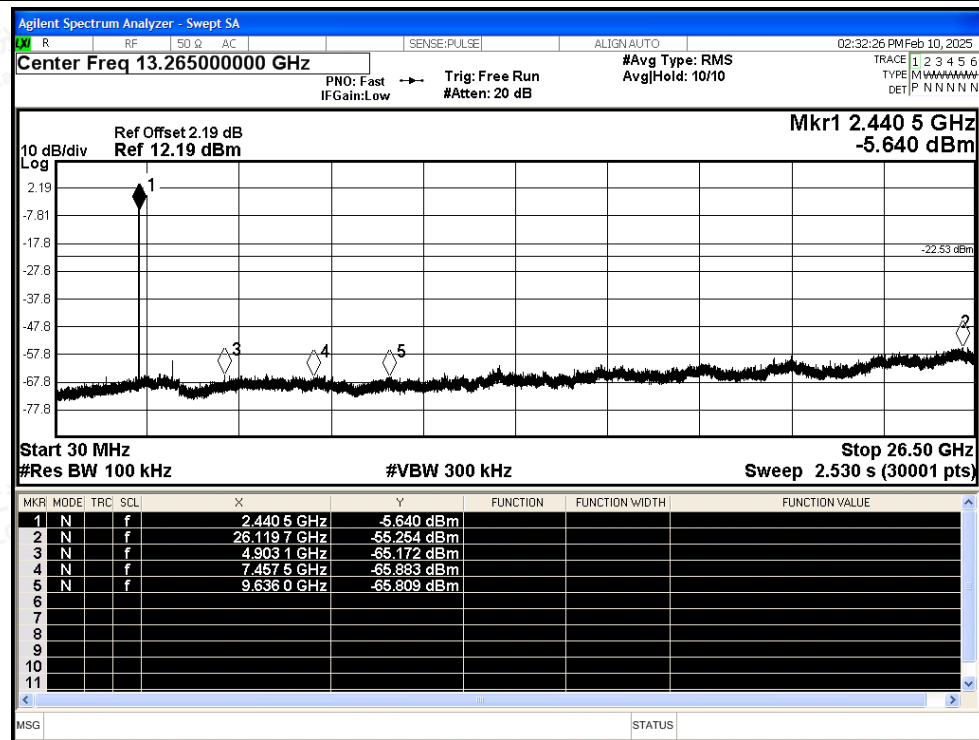




Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



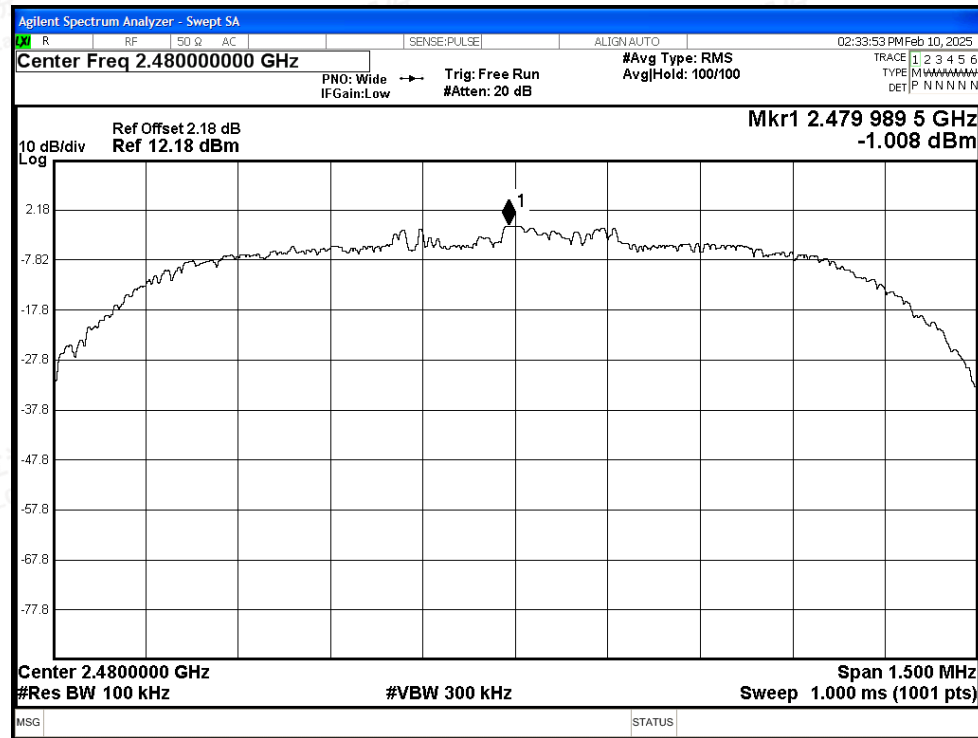
Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

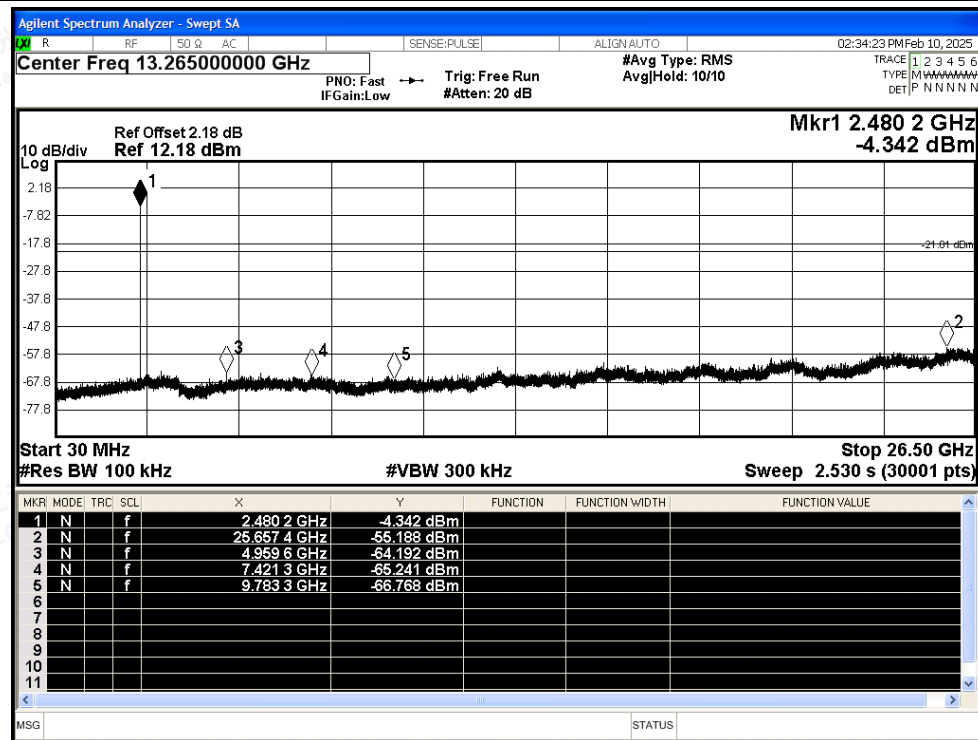
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

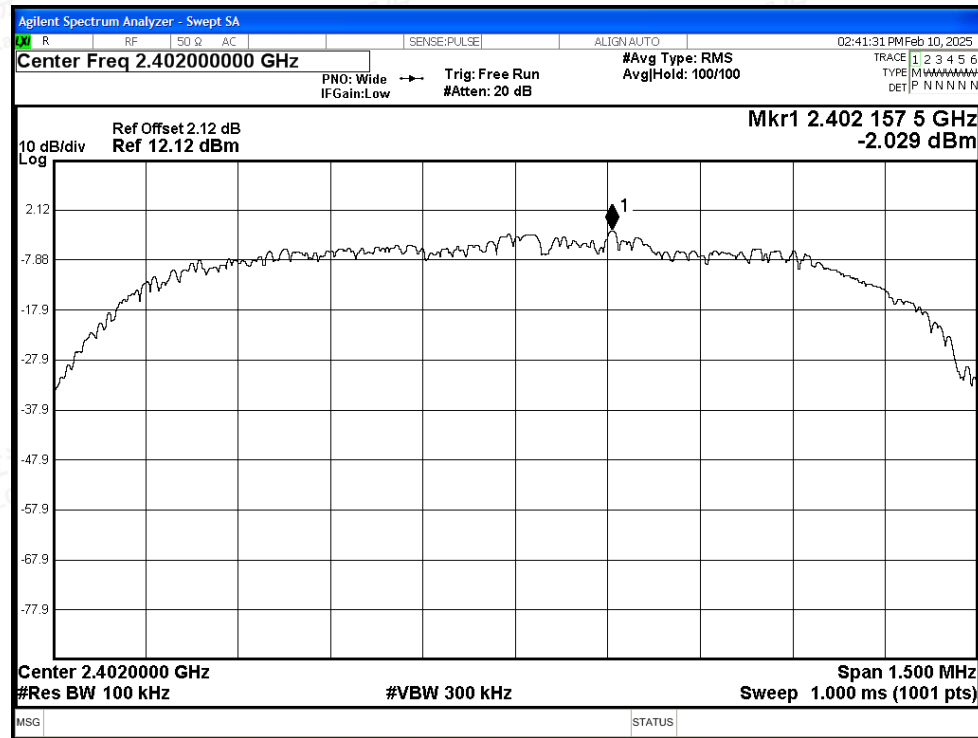
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



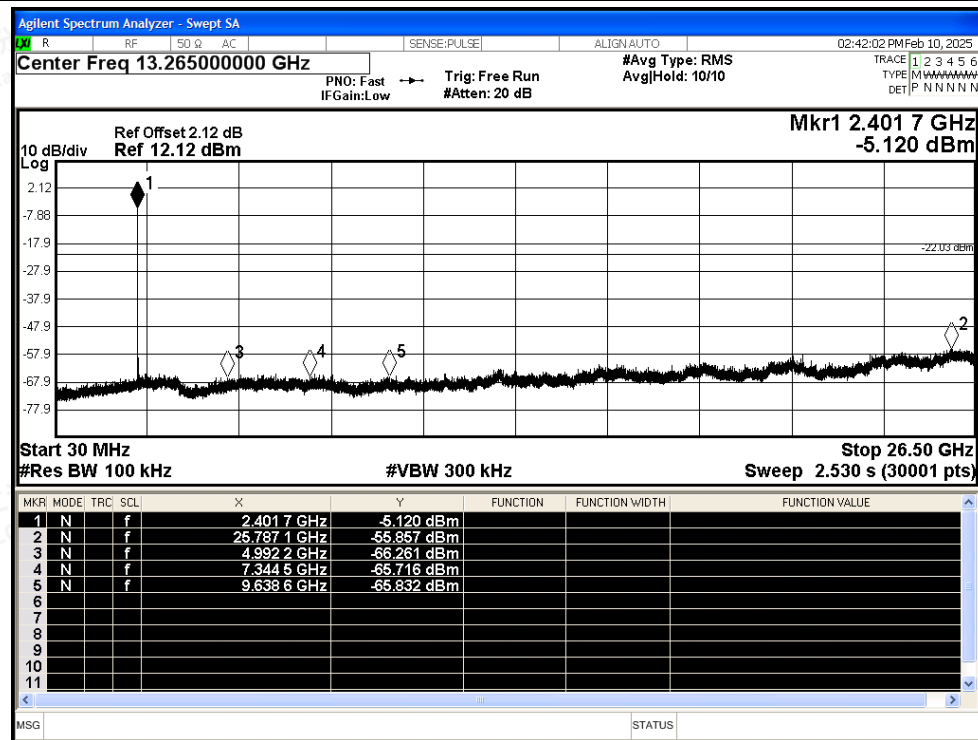
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



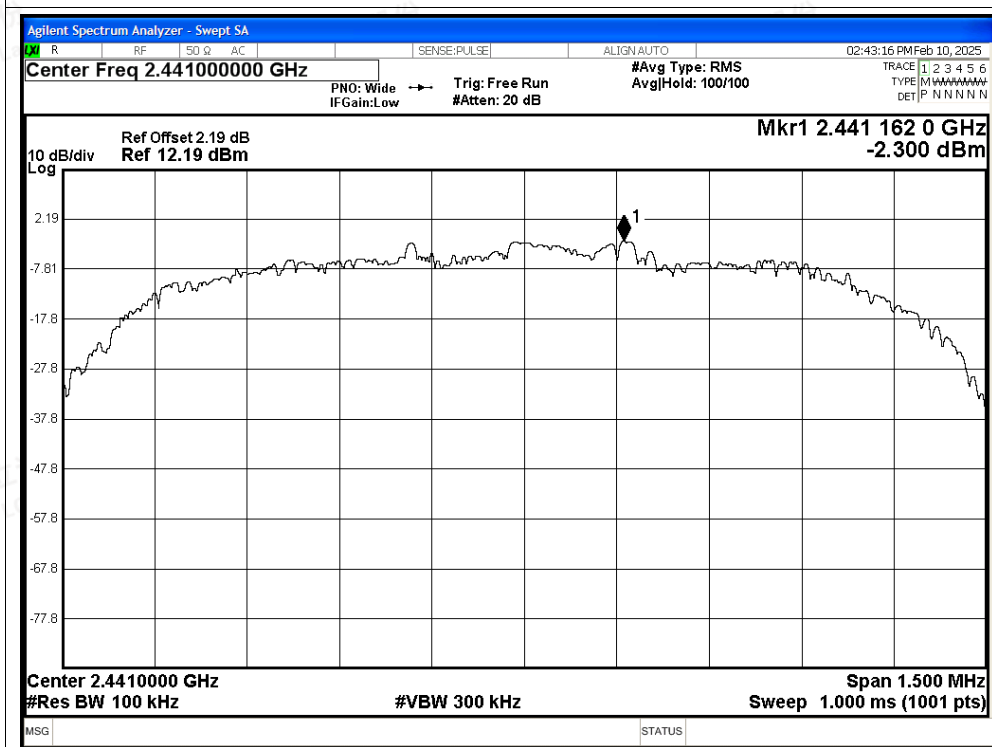
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



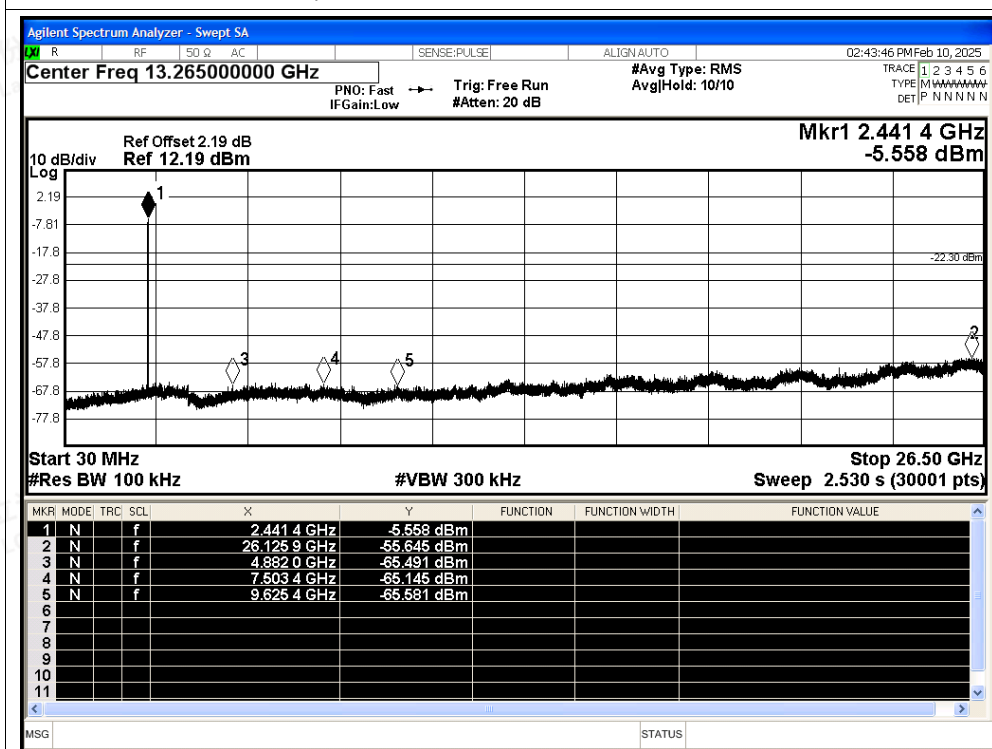
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref

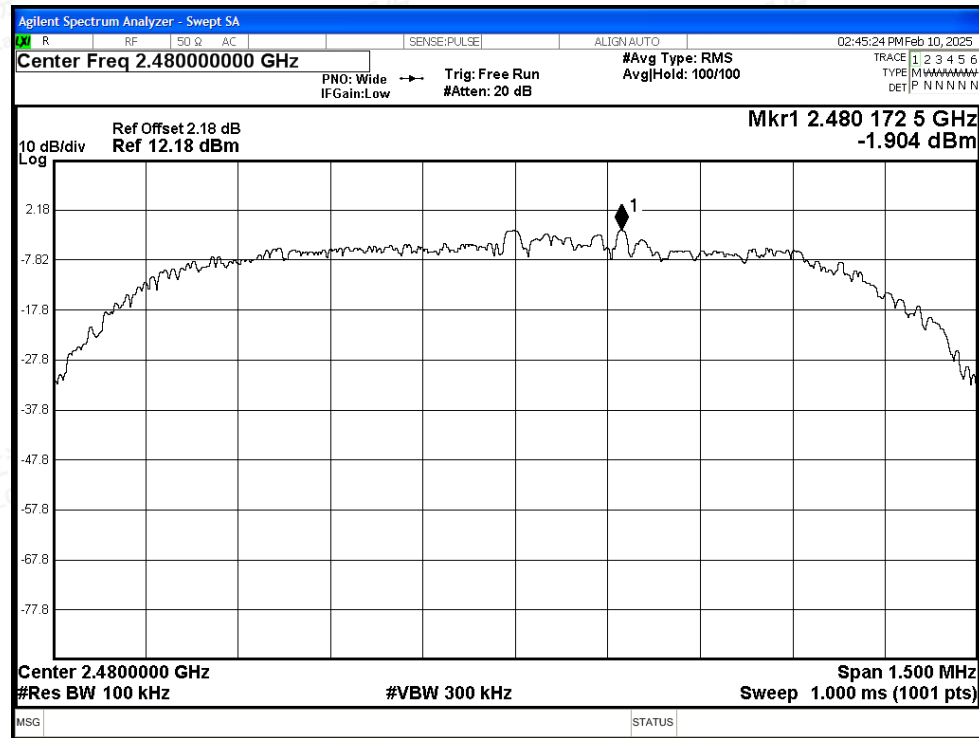


Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission

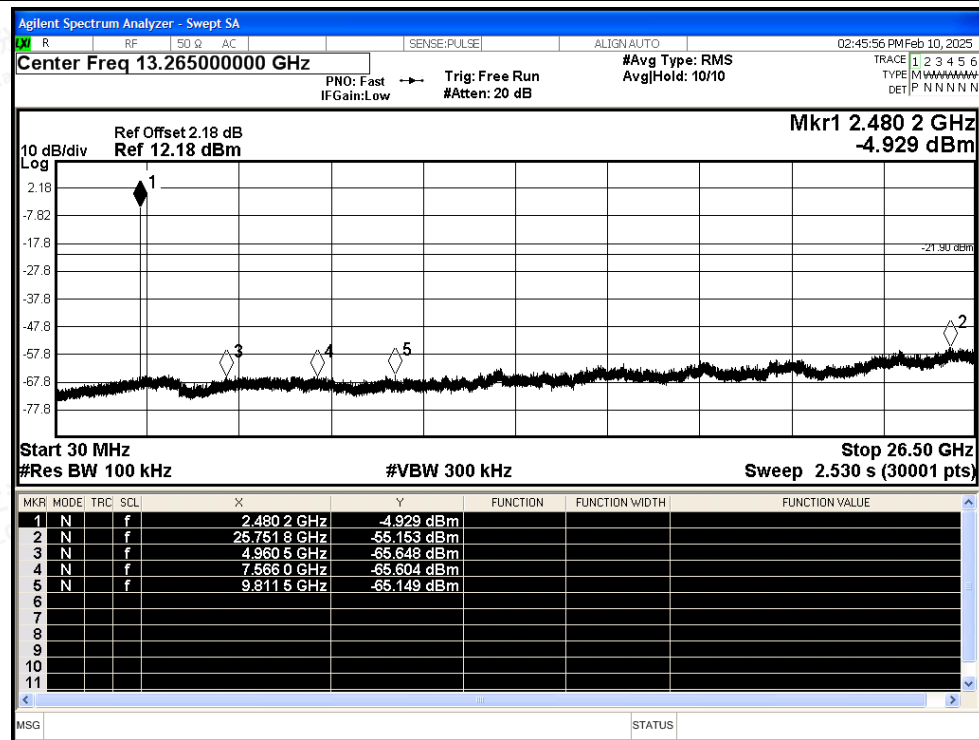




Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



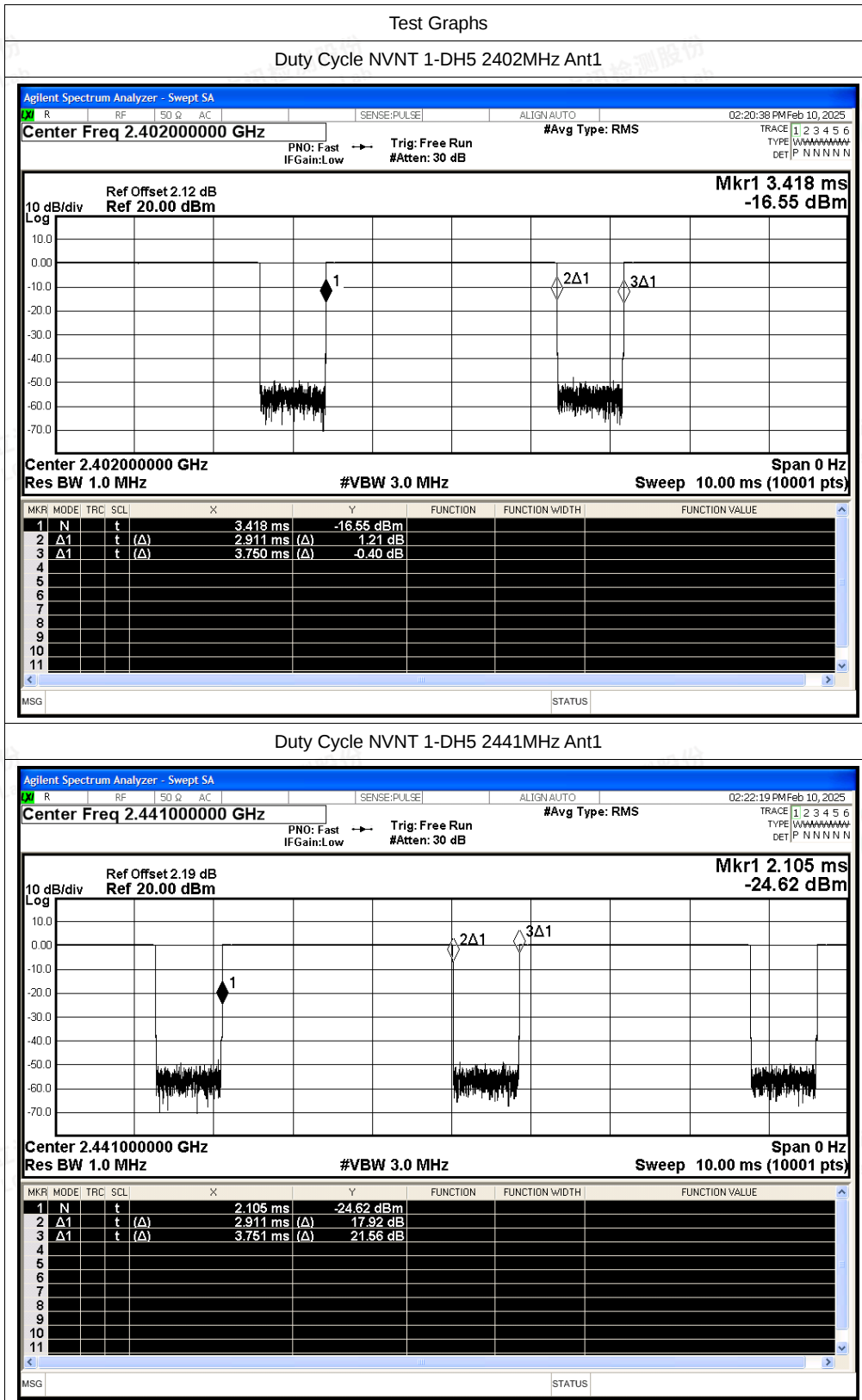
Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission



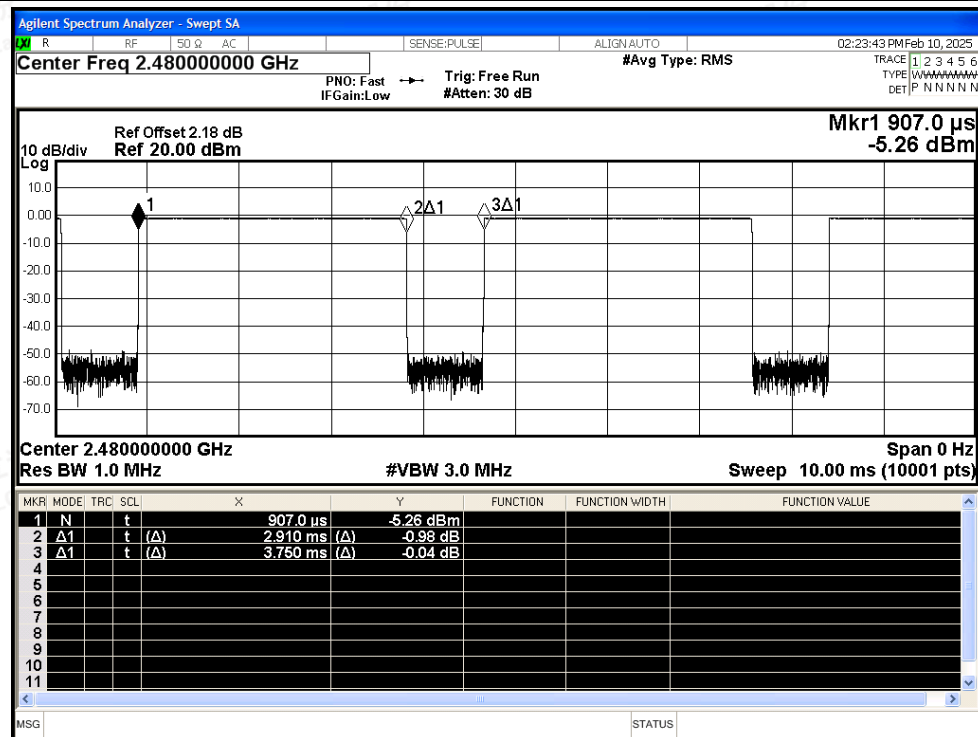
A.8 Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.63	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.61	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	77.33	1.12	0.34
NVNT	2-DH5	2480	Ant1	77.28	1.12	0.35
NVNT	3-DH5	2402	Ant1	77.33	1.12	0.34
NVNT	3-DH5	2441	Ant1	77.28	1.12	0.35
NVNT	3-DH5	2480	Ant1	77.28	1.12	0.35

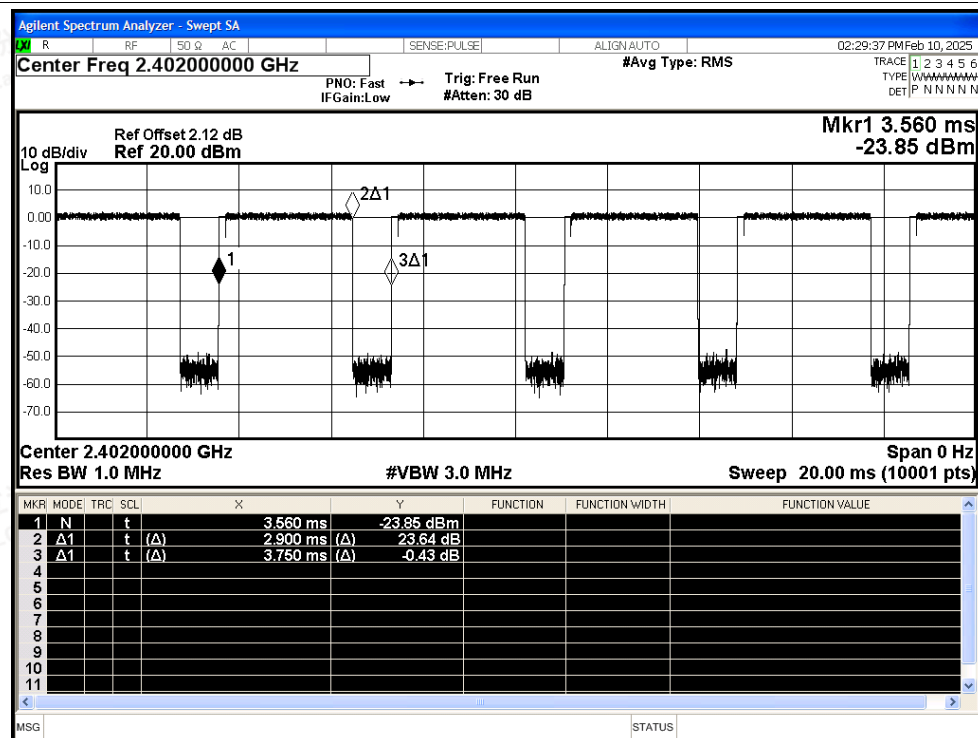




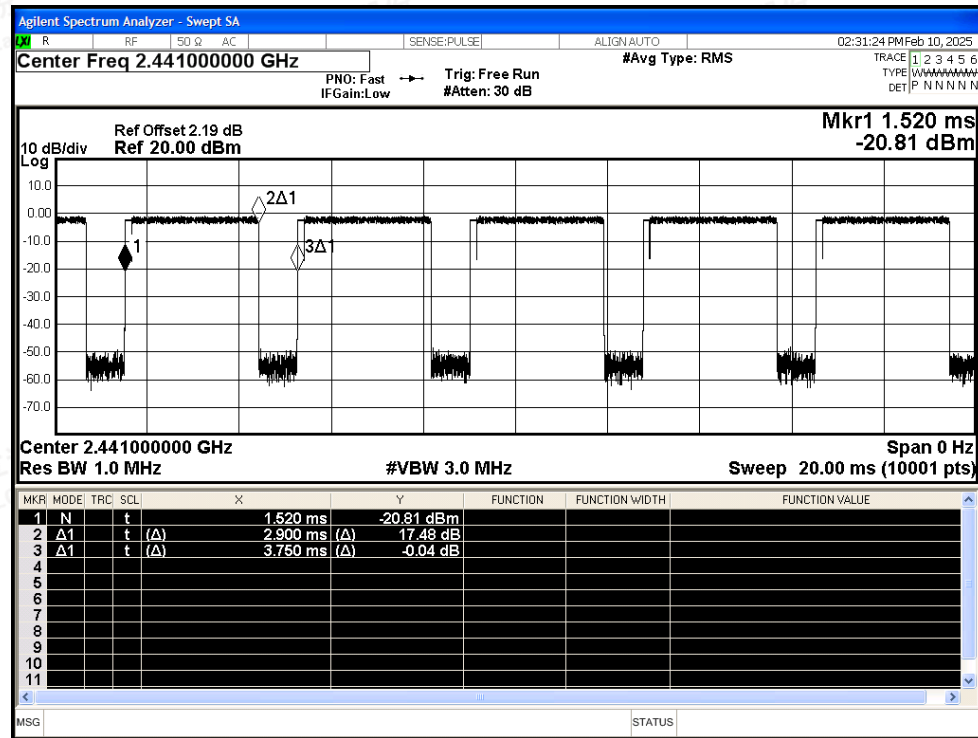
Duty Cycle NVNT 1-DH5 2480MHz Ant1



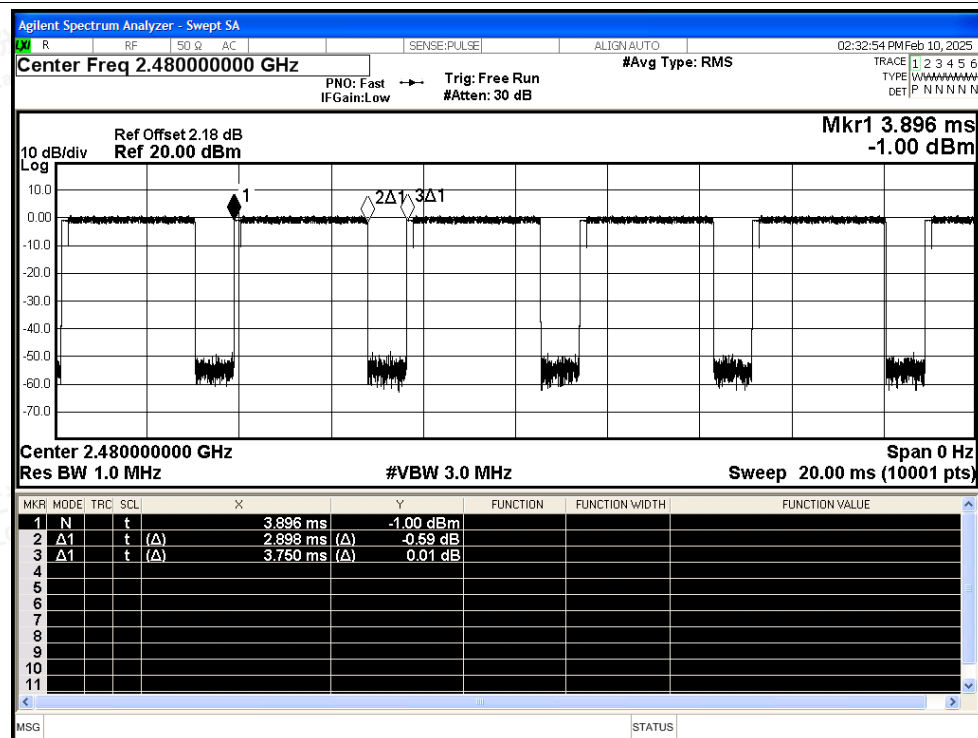
Duty Cycle NVNT 2-DH5 2402MHz Ant1



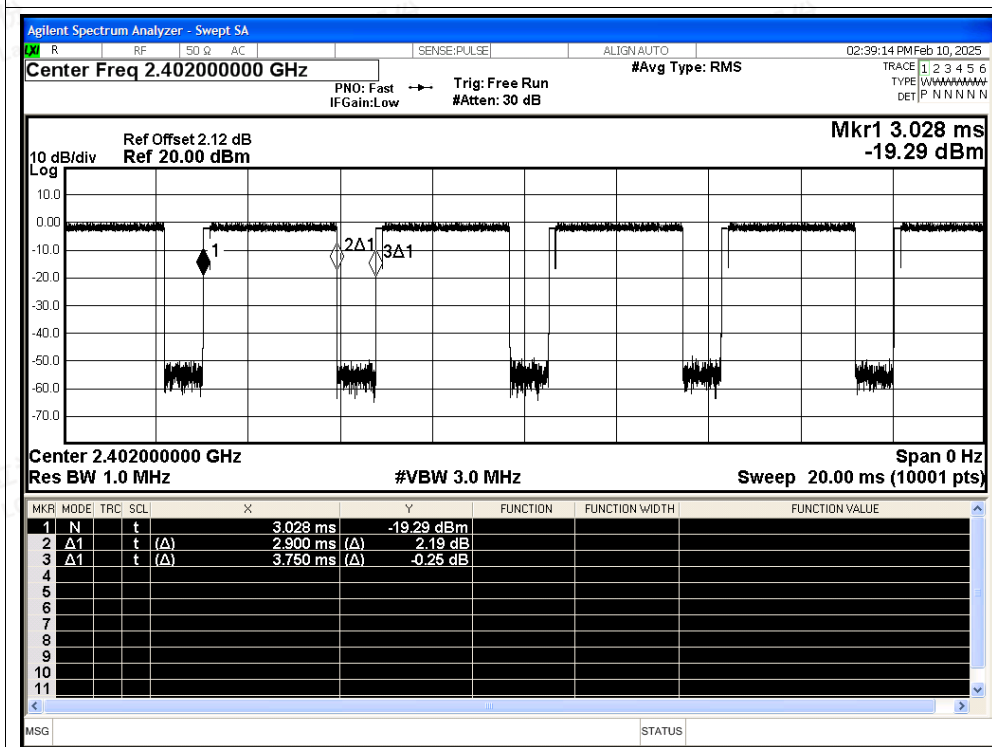
Duty Cycle NVNT 2-DH5 2441MHz Ant1



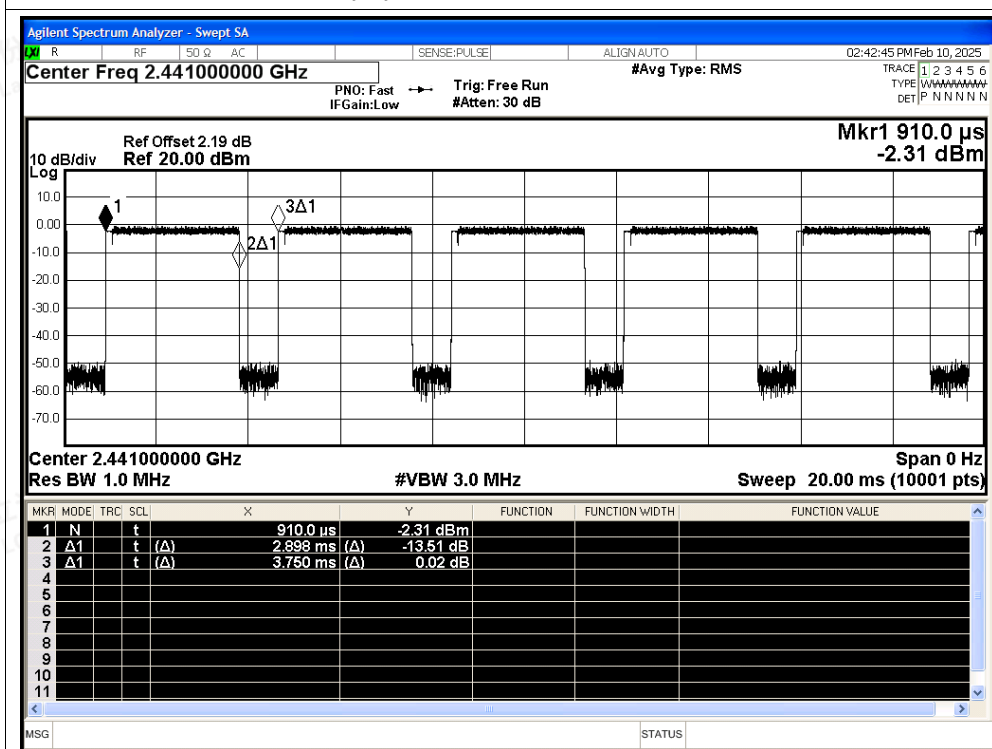
Duty Cycle NVNT 2-DH5 2480MHz Ant1

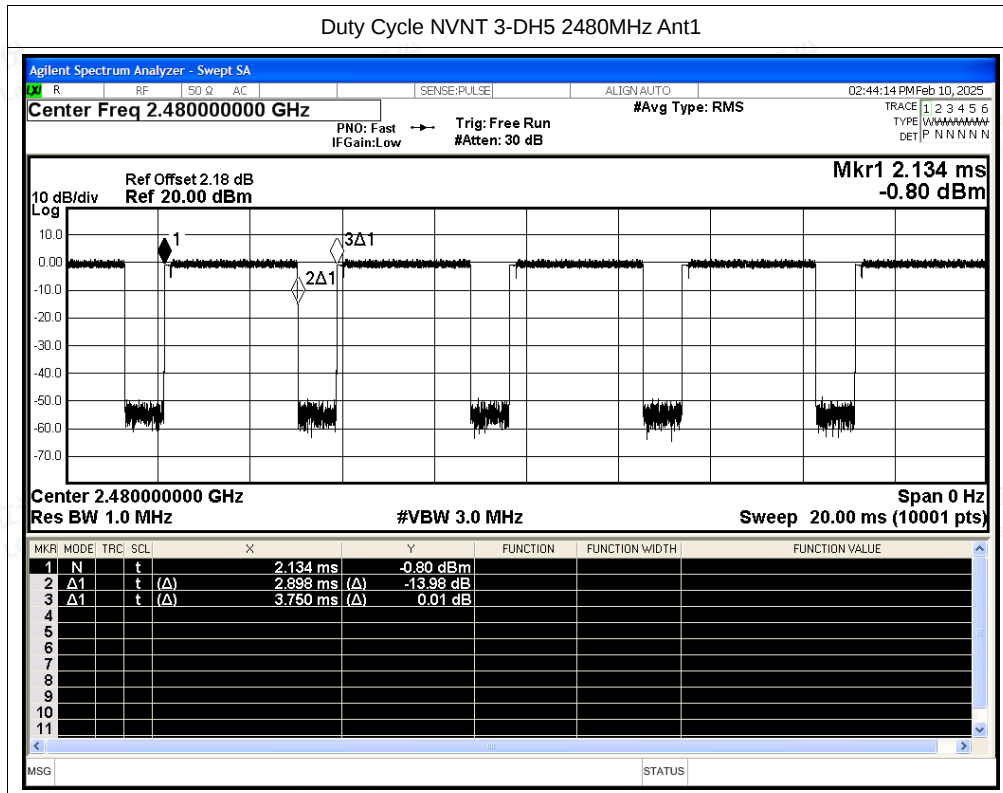


Duty Cycle NVNT 3-DH5 2402MHz Ant1



Duty Cycle NVNT 3-DH5 2441MHz Ant1



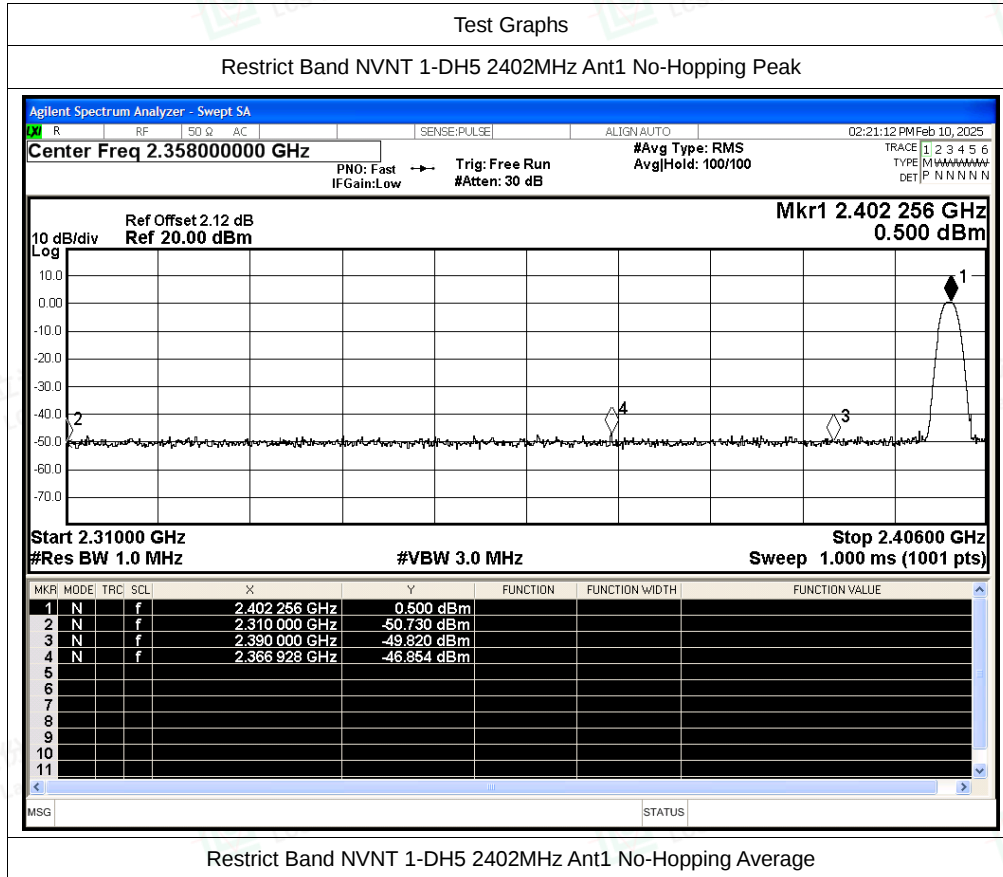


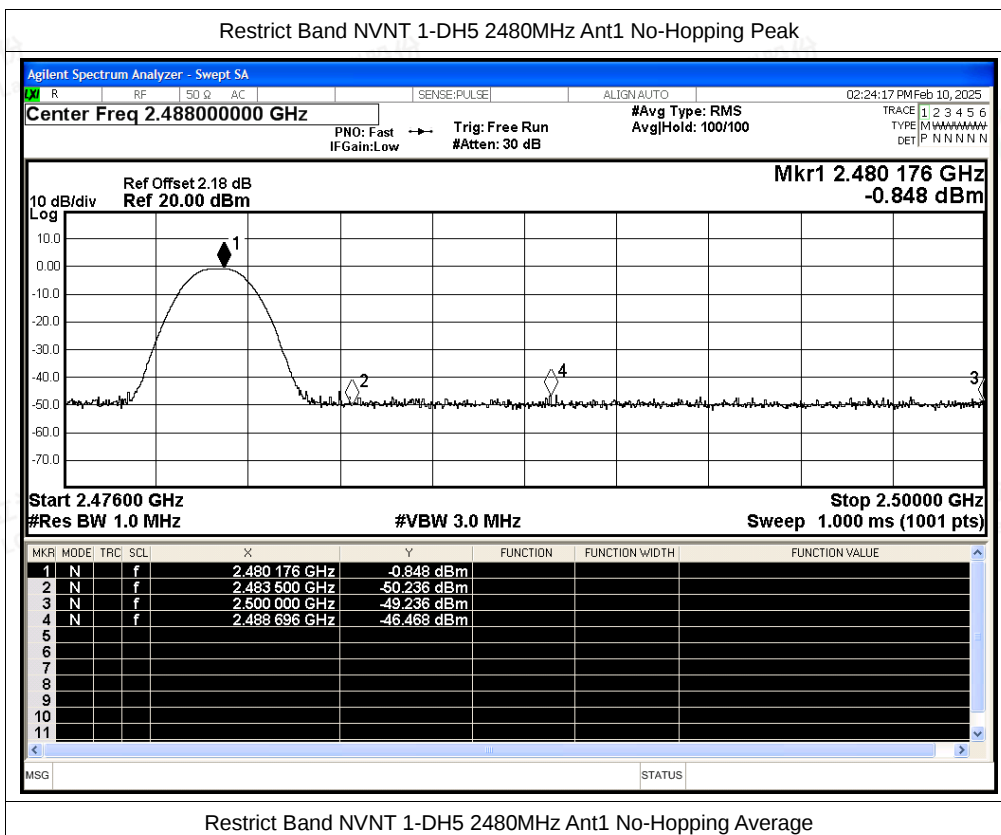
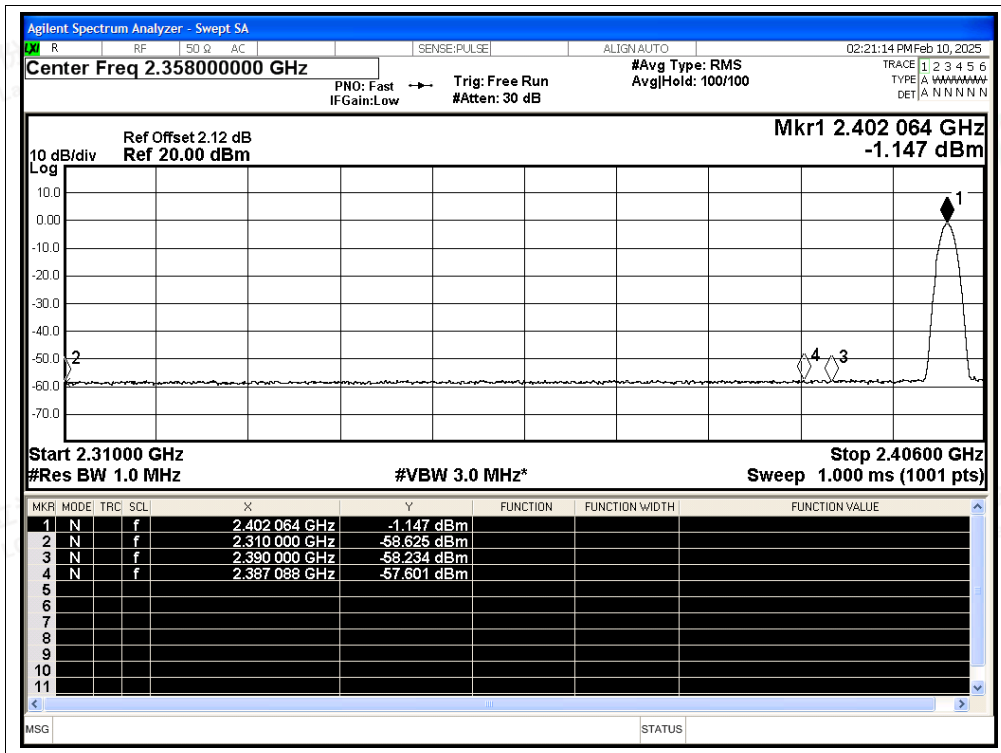
A.9 Restrict Band

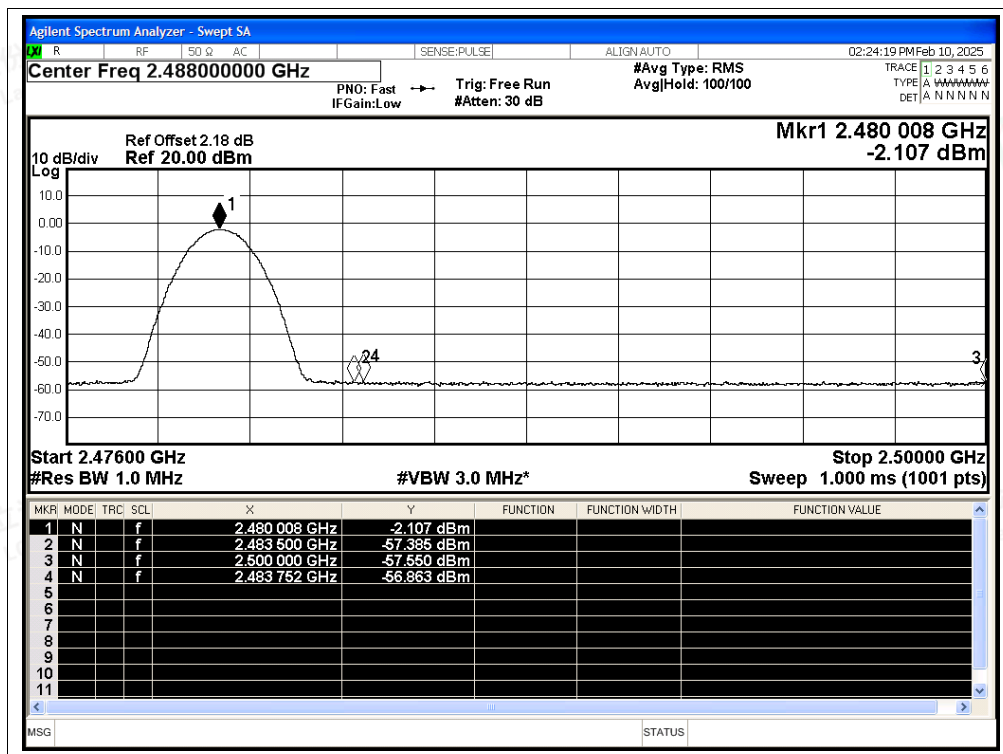
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-50.73	2	-	46.53	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.63	2	1.1	39.73	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2366.928	-46.85	2	-	50.41	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2387.088	-57.6	2	1.1	40.76	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-49.82	2	-	47.44	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-58.23	2	1.1	40.13	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-50.24	2	-	47.02	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-57.39	2	1.1	40.97	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2488.696	-46.47	2	-	50.79	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.752	-56.86	2	1.1	41.5	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-49.24	2	-	48.02	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-57.55	2	1.1	40.81	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-50.56	2	-	46.7	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-58.43	2	1.12	39.95	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2385.84	-47.65	2	-	49.61	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2387.856	-57.58	2	1.12	40.8	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-50.85	2	-	46.41	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-58.21	2	1.12	40.17	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-47.82	2	-	49.44	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-57.21	2	1.12	41.17	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2487.016	-43.98	2	-	53.28	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.536	-56.8	2	1.12	41.58	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-50.4	2	-	46.86	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-57.55	2	1.12	40.83	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-49.73	2	-	47.53	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-58.83	2	1.12	39.55	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2342.448	-47.52	2	-	49.74	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2316.432	-57.29	2	1.12	41.09	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-49.68	2	-	47.58	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-58.46	2	1.12	39.92	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-49.65	2	-	47.61	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-57.51	2	1.12	40.87	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2484.664	-44.74	2	-	52.52	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2484.064	-57.05	2	1.12	41.33	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-49.82	2	-	47.44	Peak	74	Pass

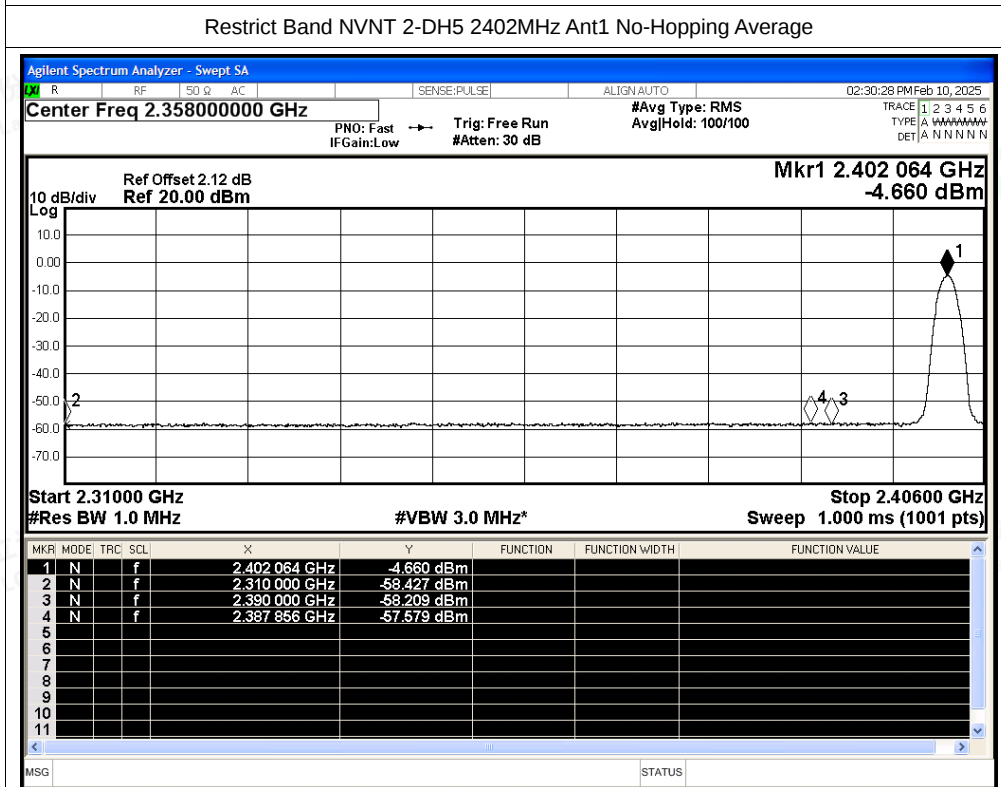
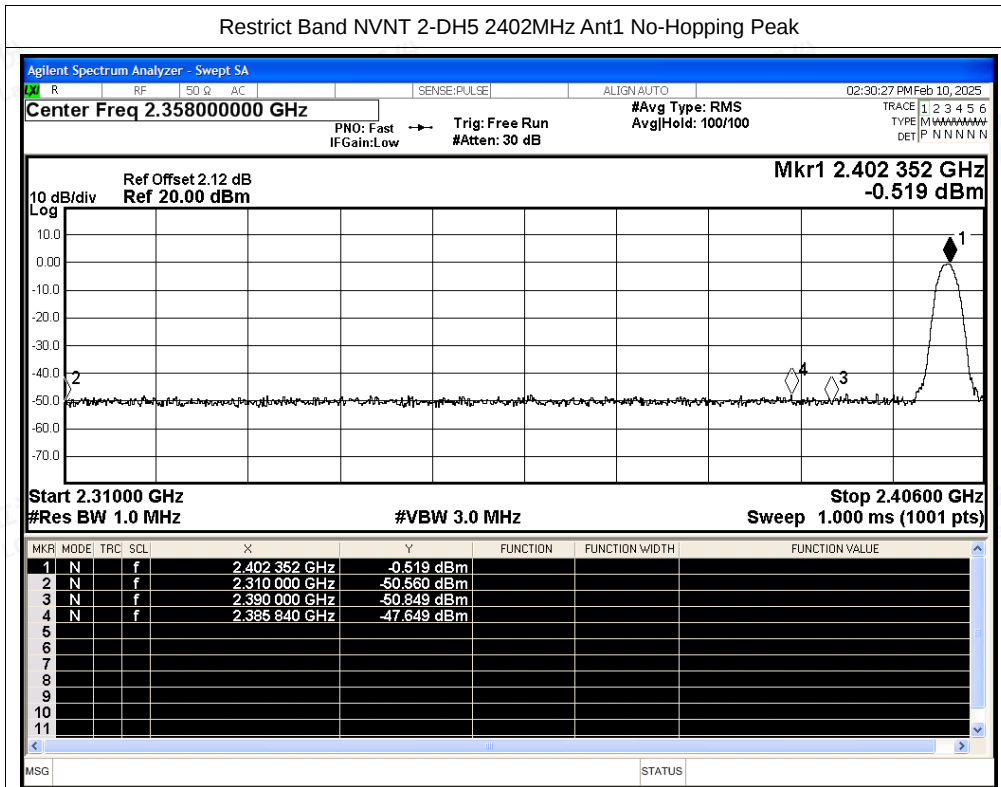


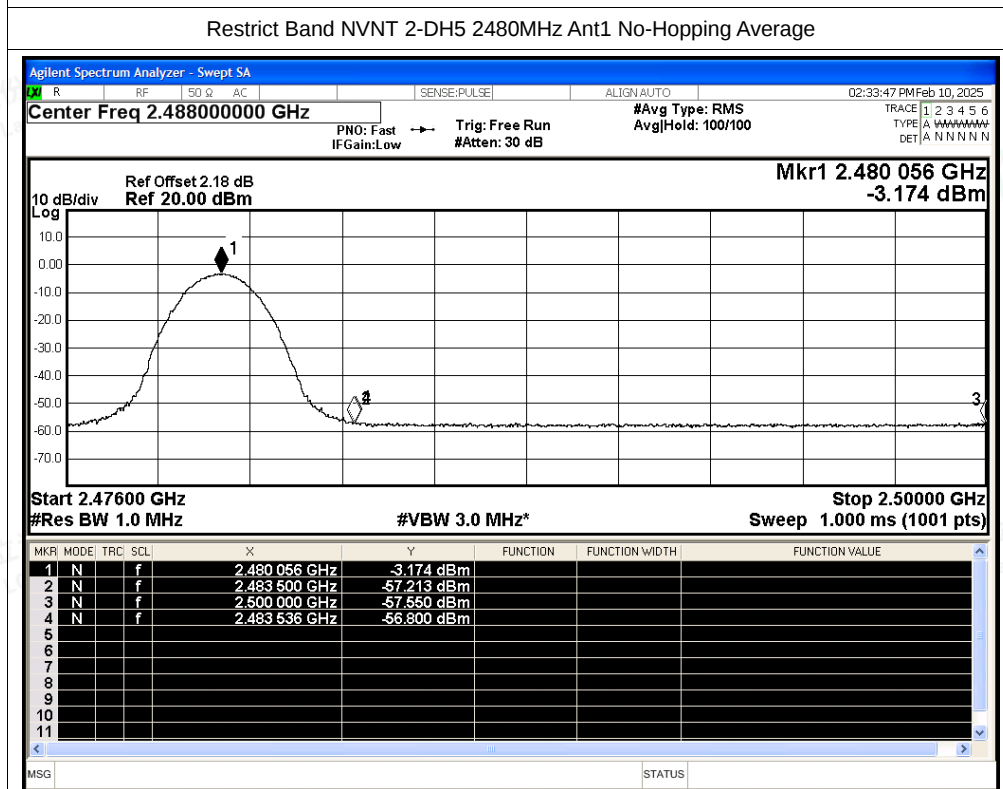
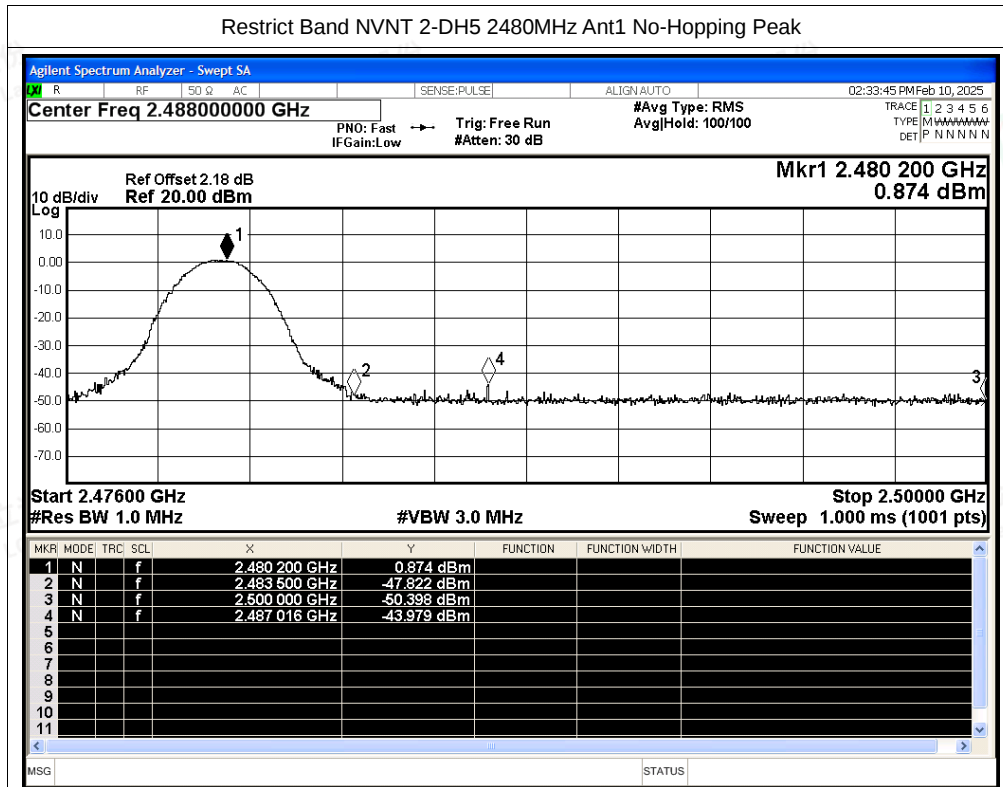
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-57.87	2	1.12	40.51	Average	54	Pass
------	-------	------	------	------------	------	--------	---	------	-------	---------	----	------

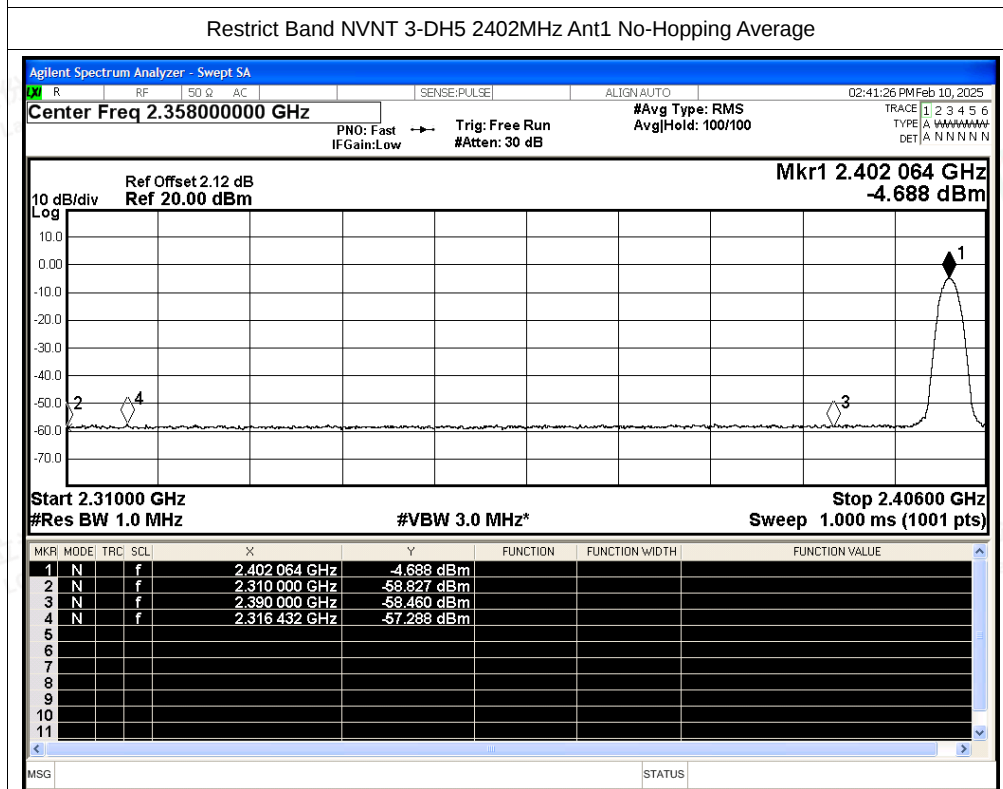
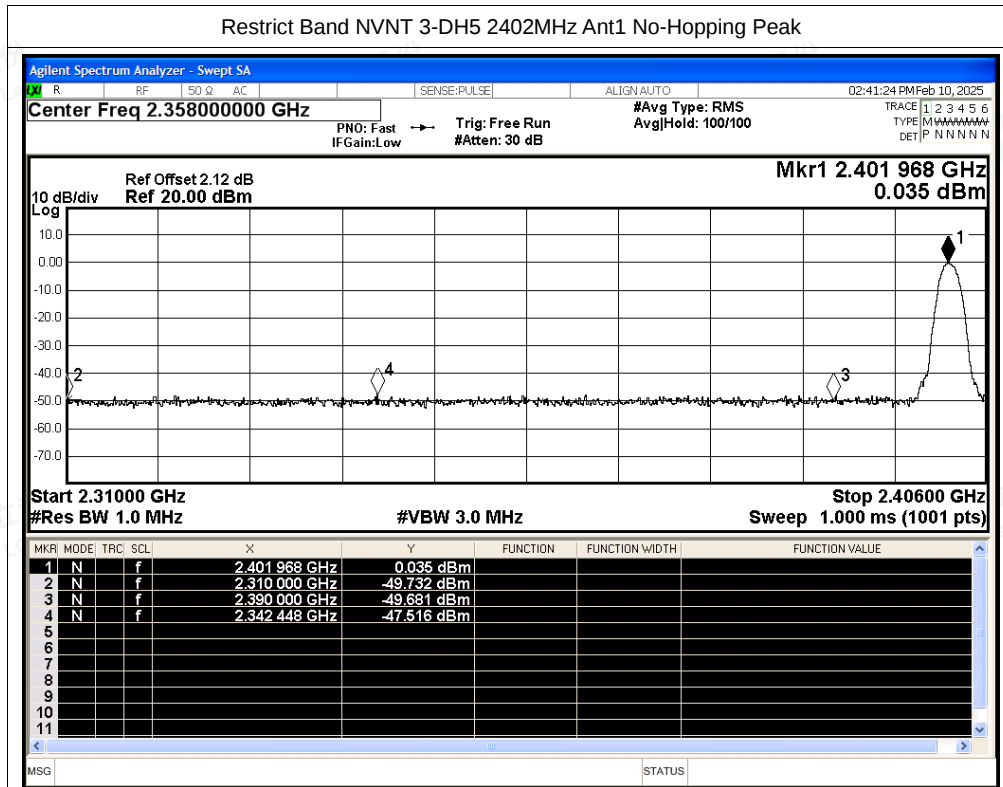




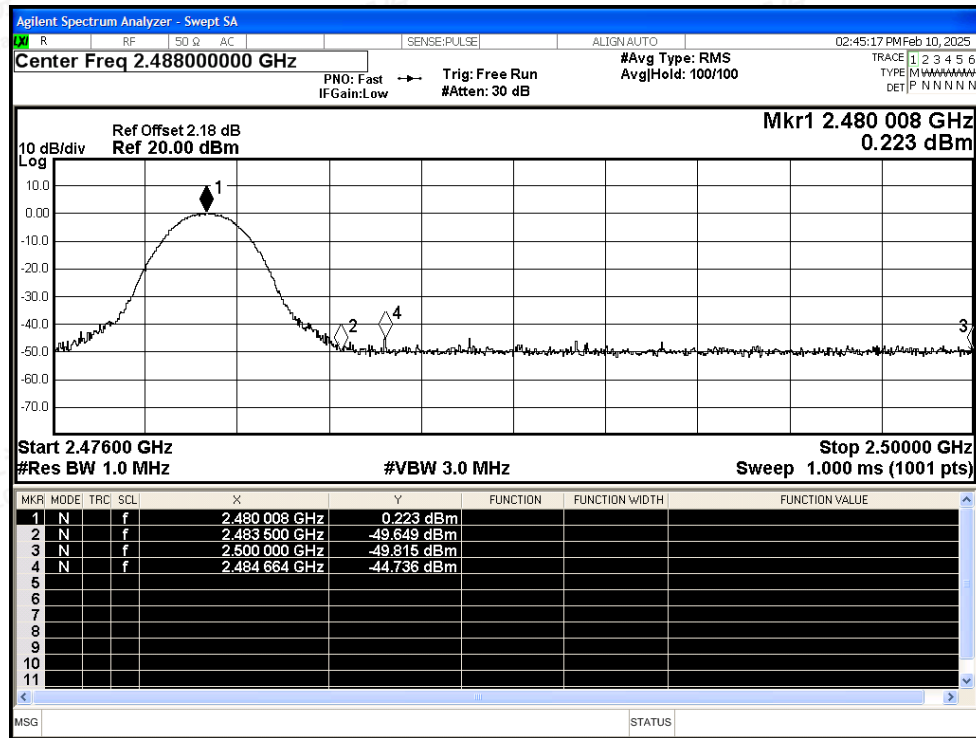








Restrict Band NVNT 3-DH5 2480MHz Ant1 No-Hopping Peak



Restrict Band NVNT 3-DH5 2480MHz Ant1 No-Hopping Average

