



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Touch Panel

Test Model: TOUCHPAD.One

Environmental Conditions

Temperature:	23.1°C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Can Kun
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	Ant	1.024	N/A	Pass
NVNT	1-DH5	2441	Ant	0.942	N/A	Pass
NVNT	1-DH5	2480	Ant	0.944	N/A	Pass
NVNT	2-DH5	2402	Ant	1.33	N/A	Pass
NVNT	2-DH5	2441	Ant	1.29	N/A	Pass
NVNT	2-DH5	2480	Ant	1.281	N/A	Pass
NVNT	3-DH5	2402	Ant	1.298	N/A	Pass
NVNT	3-DH5	2441	Ant	1.3	N/A	Pass
NVNT	3-DH5	2480	Ant	1.313	N/A	Pass



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

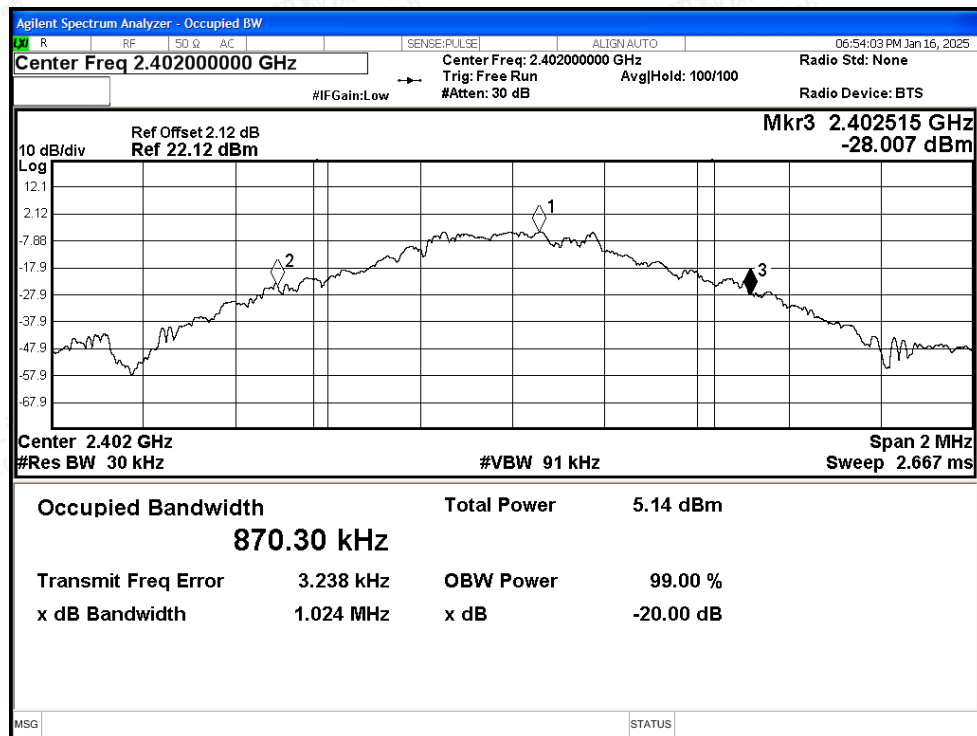
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

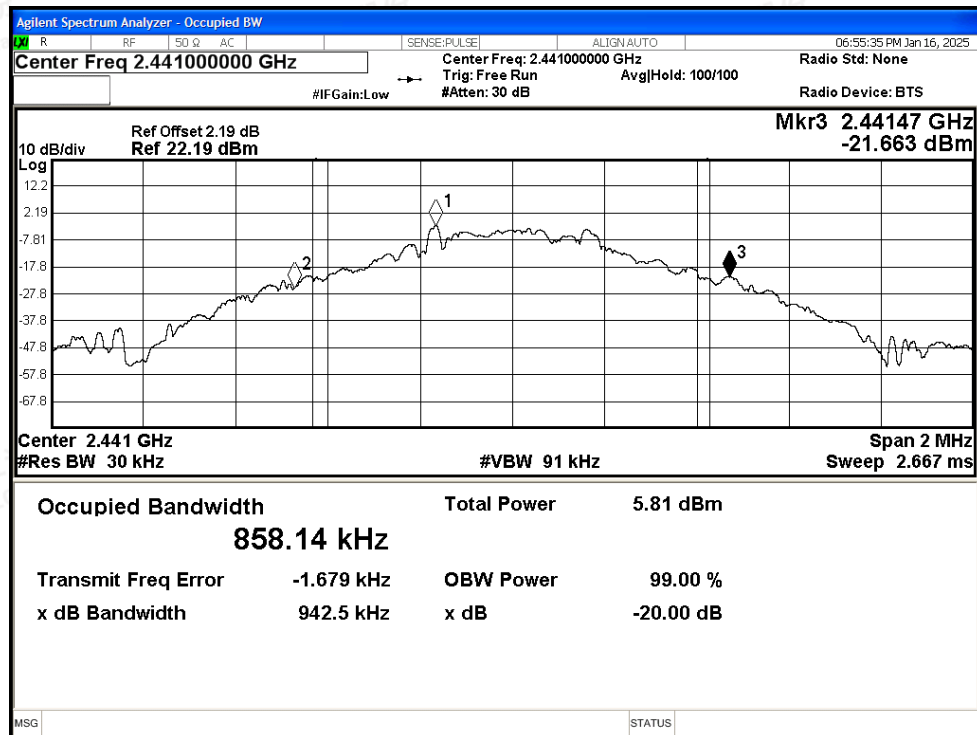


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant



Shenzhen LCS Compliance Testing Laboratory Ltd.

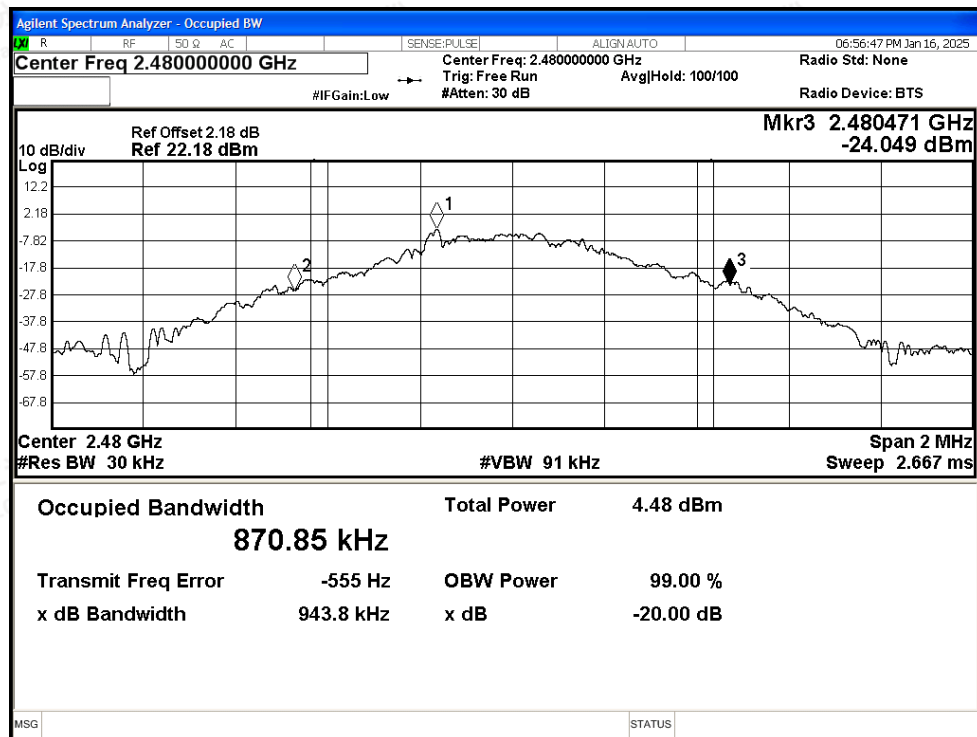
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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 Ant

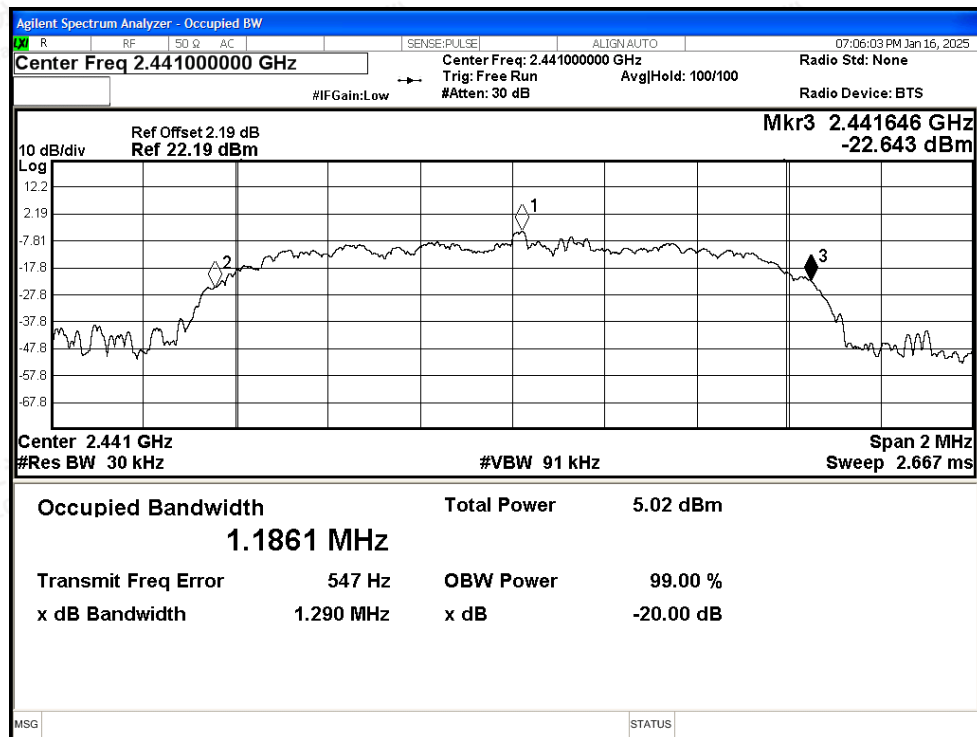


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant

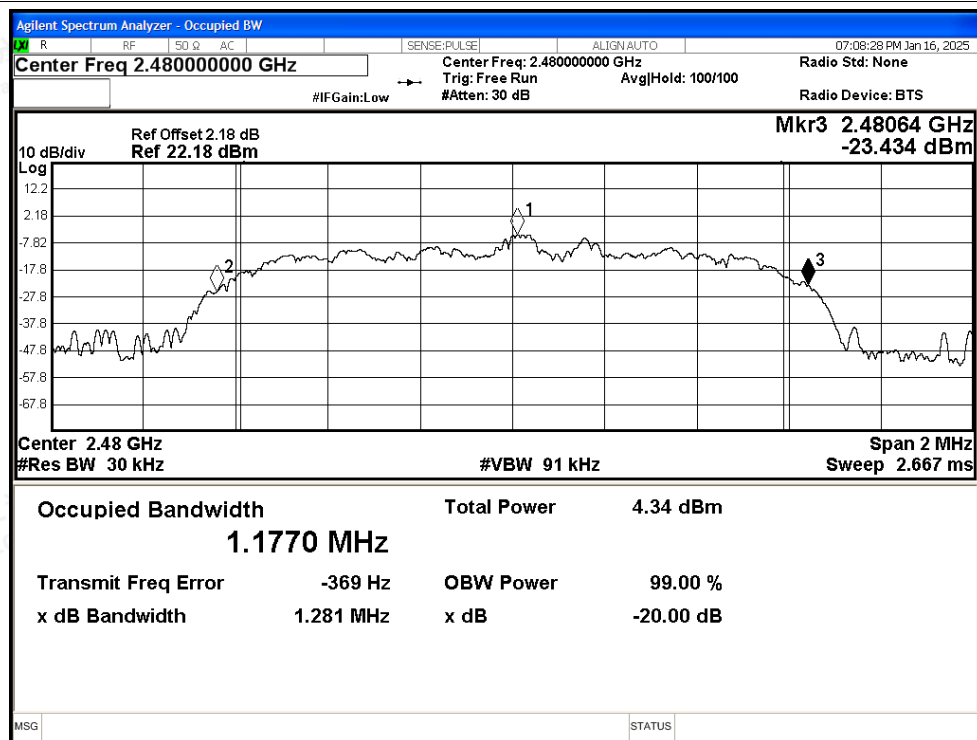




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant

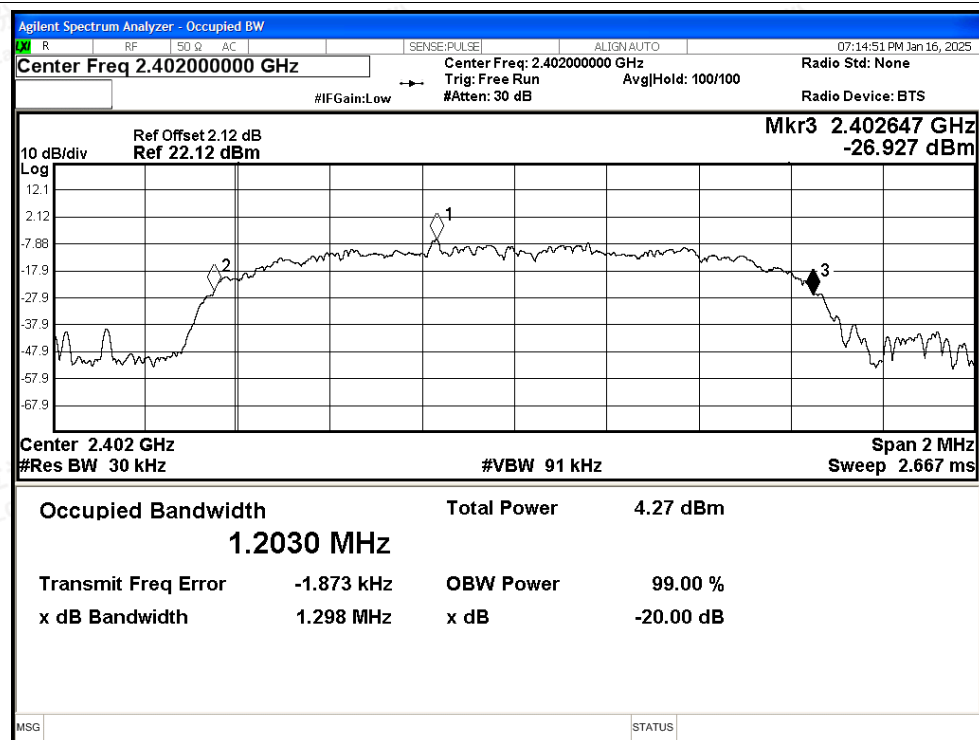


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant

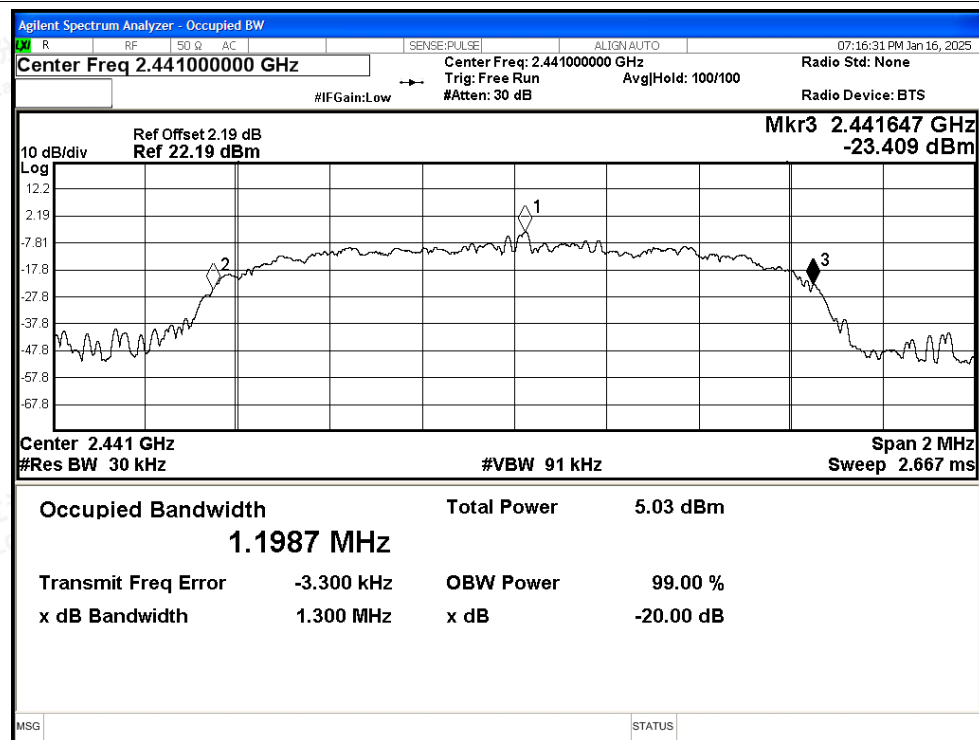


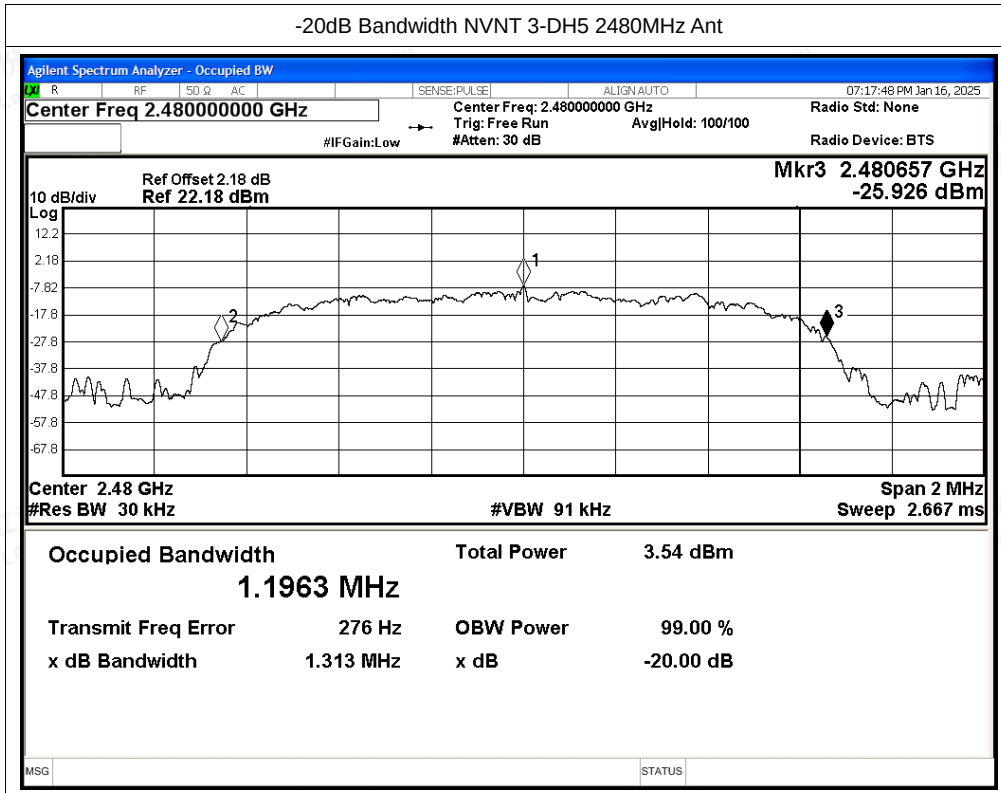


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant







A.2 Maximum Peak Conducted Output Power

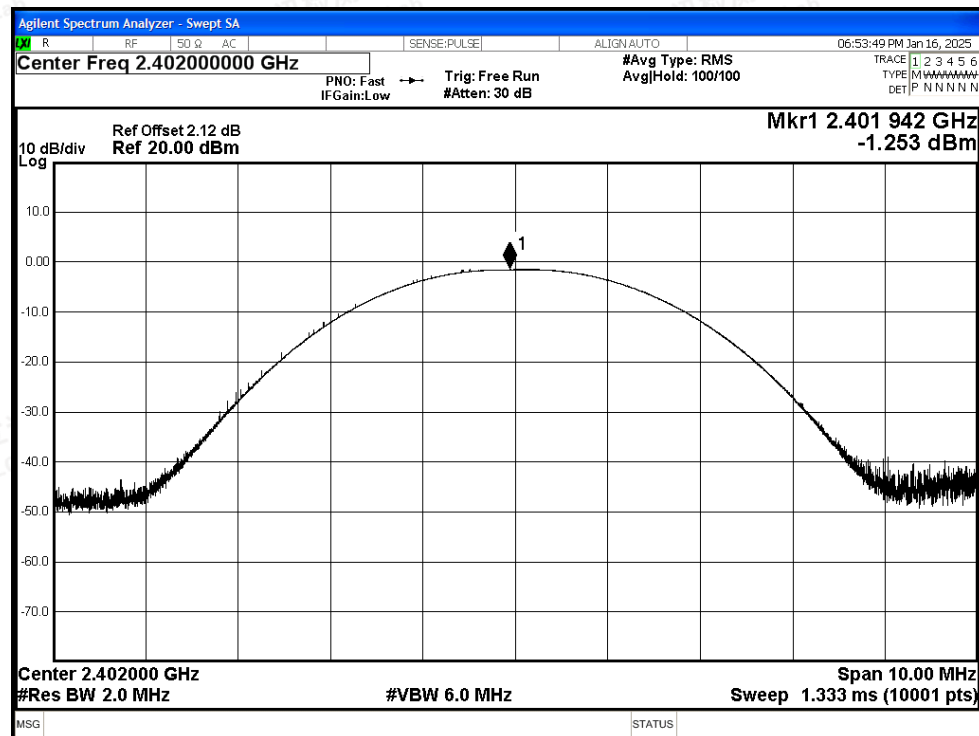
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant	-1.25	21	Pass
NVNT	1-DH5	2441	Ant	-0.74	21	Pass
NVNT	1-DH5	2480	Ant	-2.17	21	Pass
NVNT	2-DH5	2402	Ant	0.55	21	Pass
NVNT	2-DH5	2441	Ant	0.8	21	Pass
NVNT	2-DH5	2480	Ant	-0.26	21	Pass
NVNT	3-DH5	2402	Ant	0.88	21	Pass
NVNT	3-DH5	2441	Ant	1.11	21	Pass
NVNT	3-DH5	2480	Ant	0.01	21	Pass



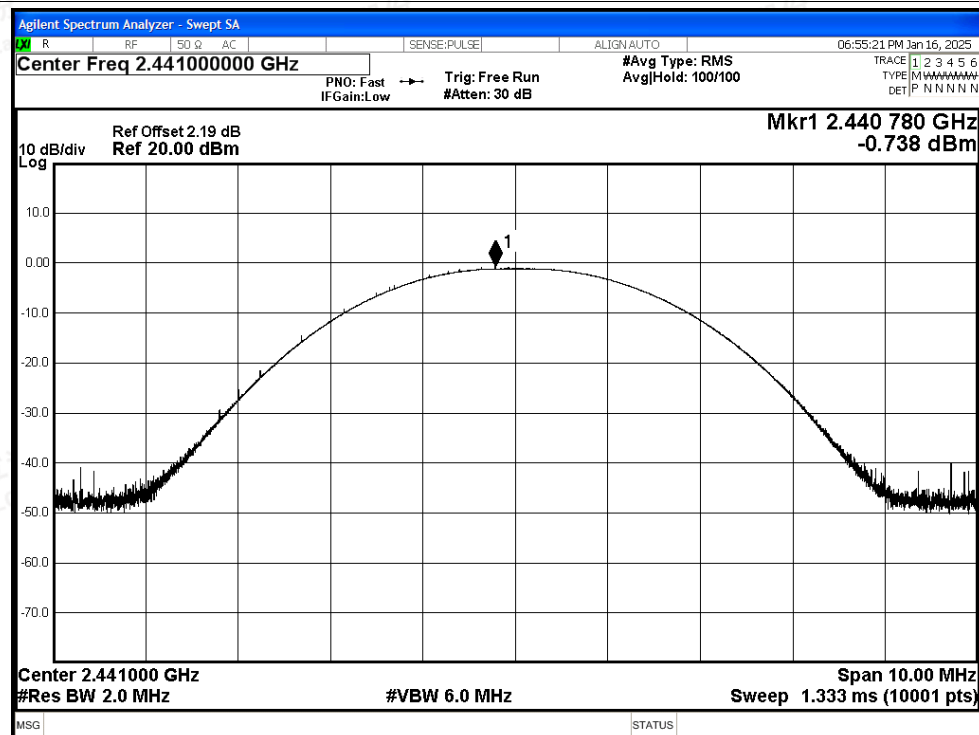


Test Graphs

Power NVNT 1-DH5 2402MHz Ant



Power NVNT 1-DH5 2441MHz Ant



Shenzhen LCS Compliance Testing Laboratory Ltd.

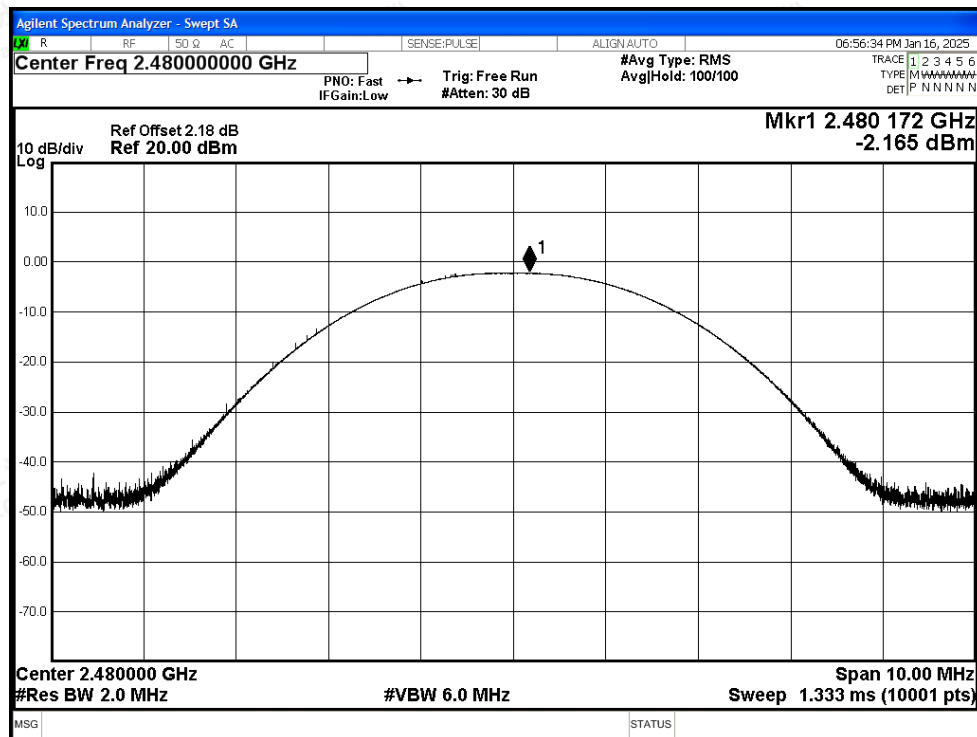
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

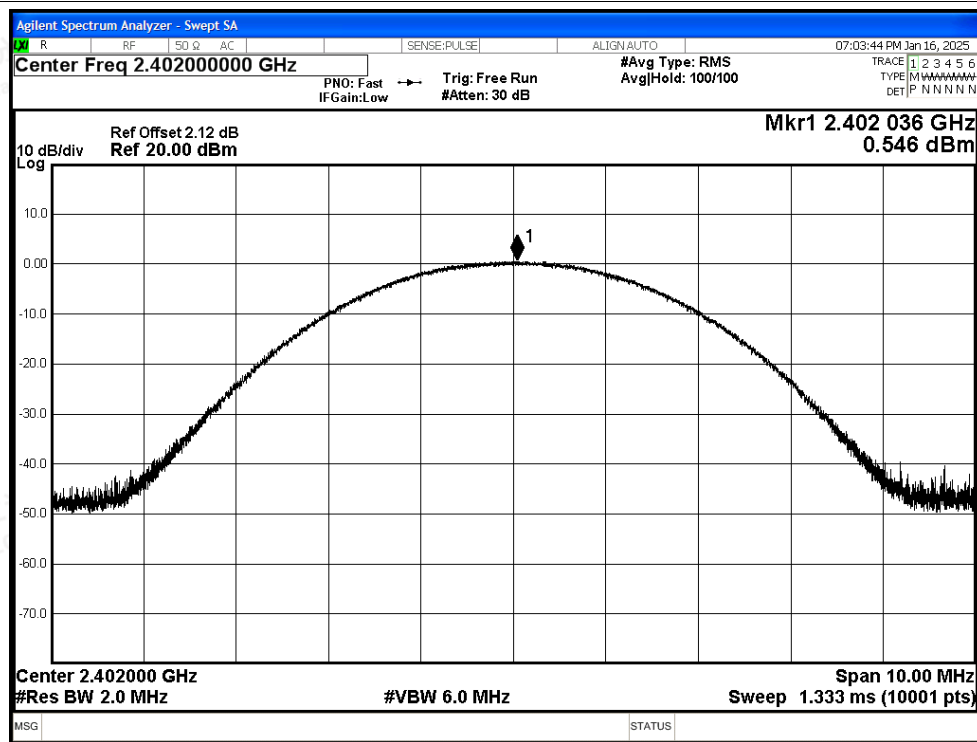
Scan code to check authenticity

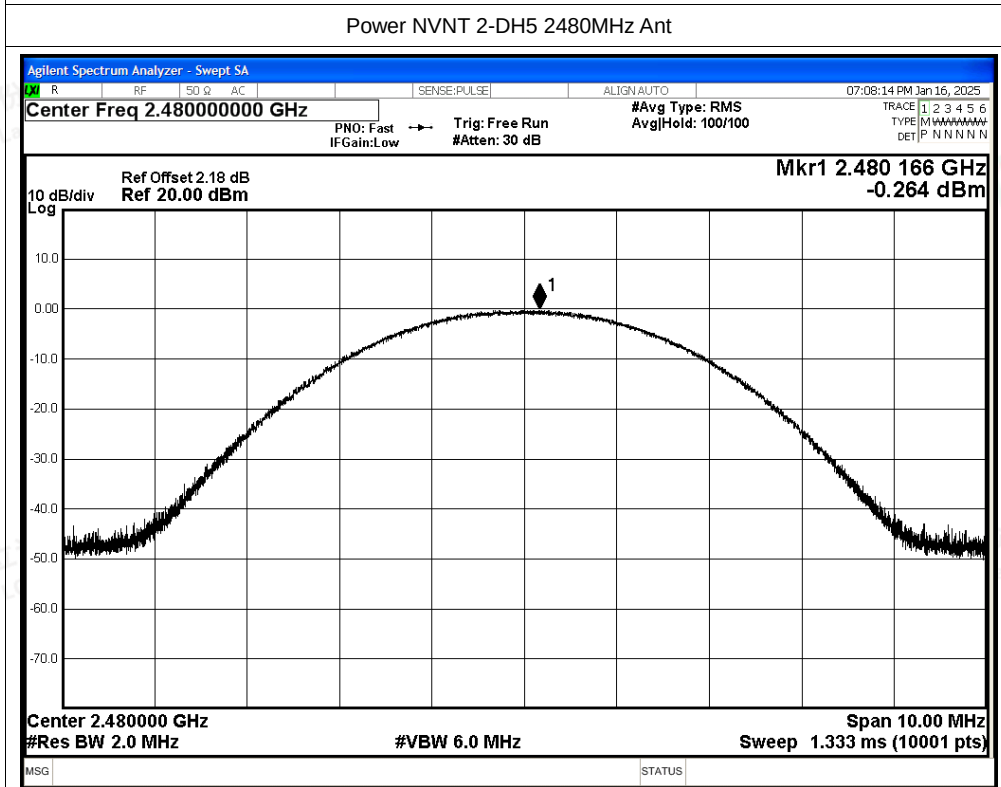
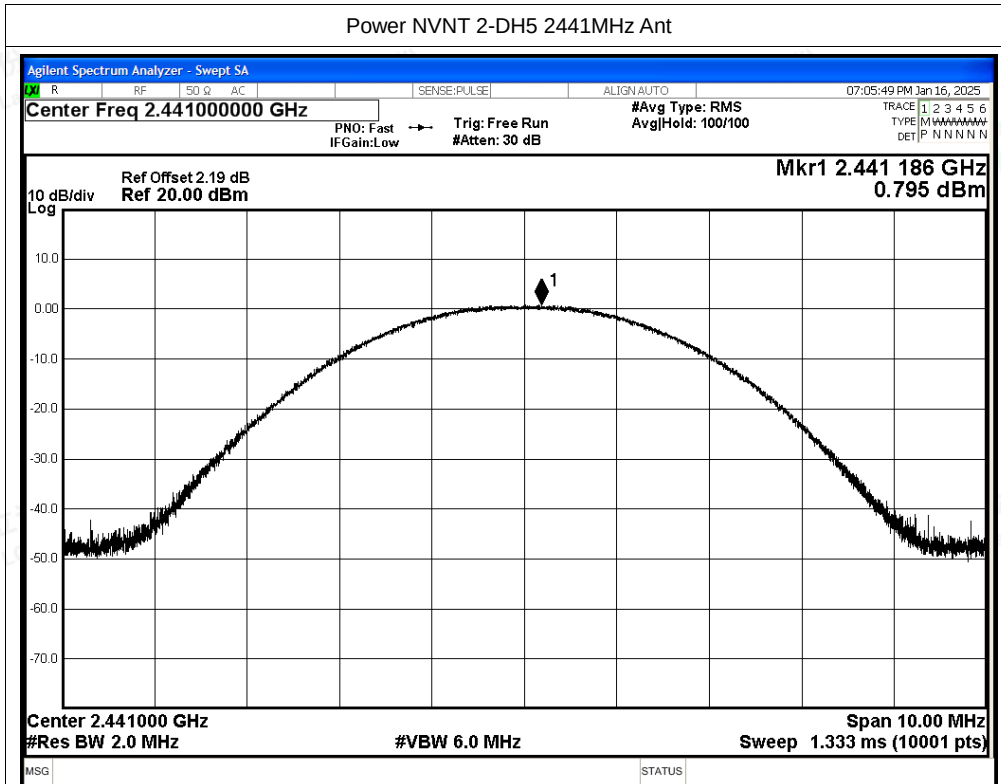


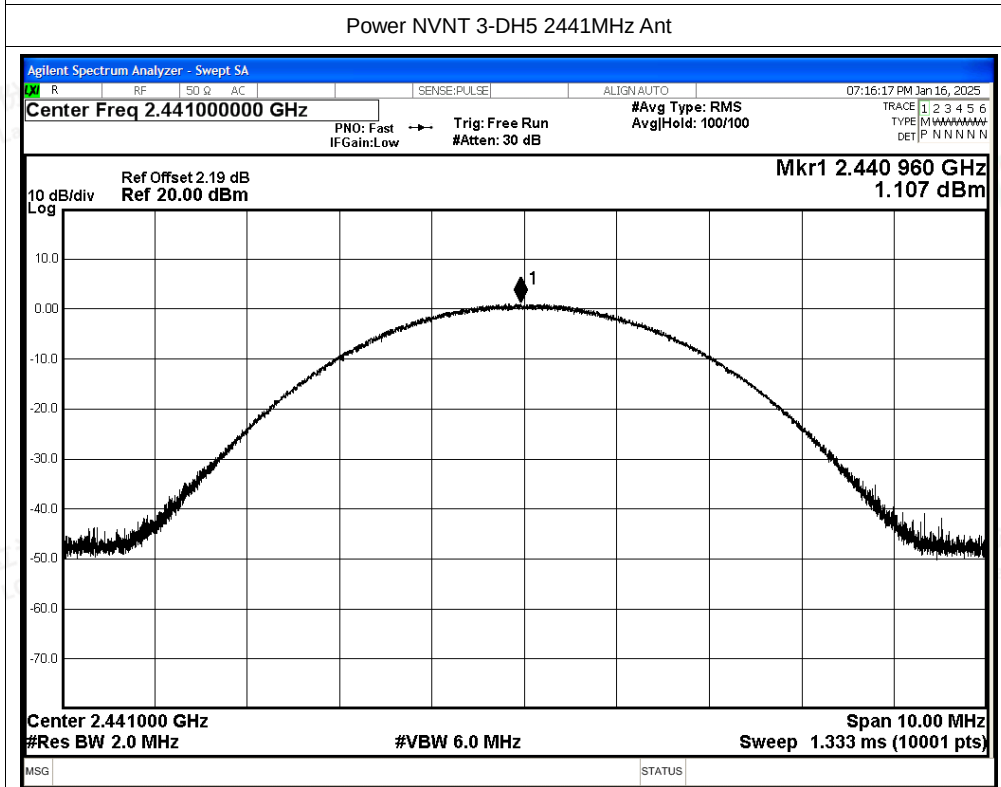
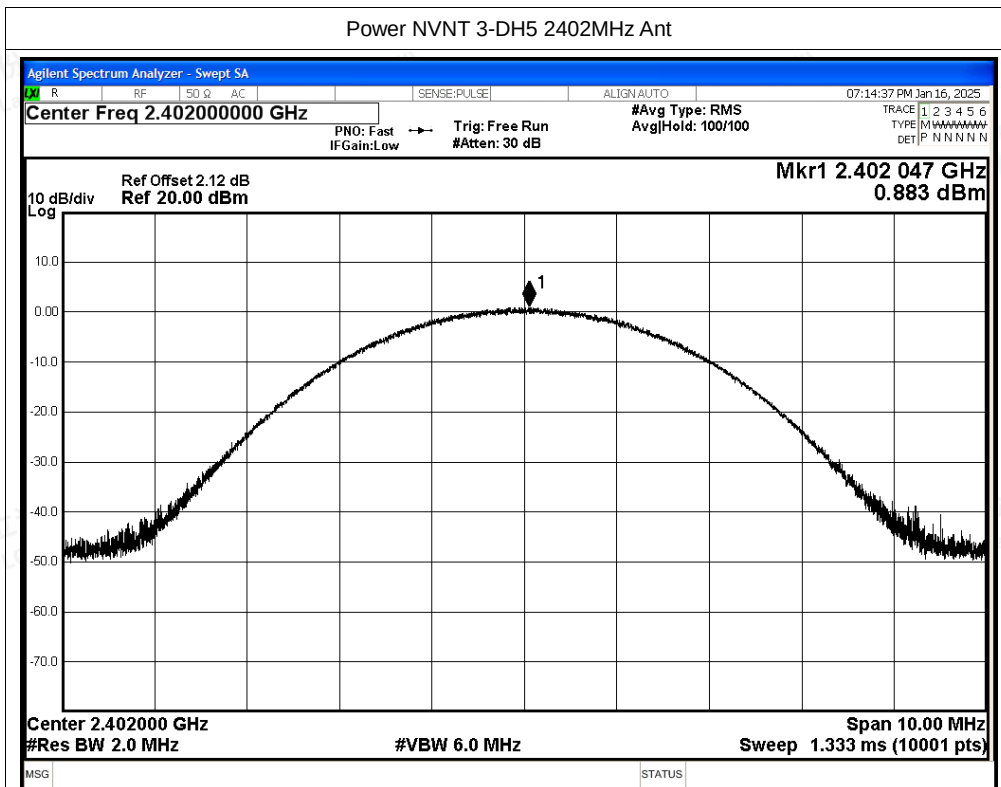
Power NVNT 1-DH5 2480MHz Ant

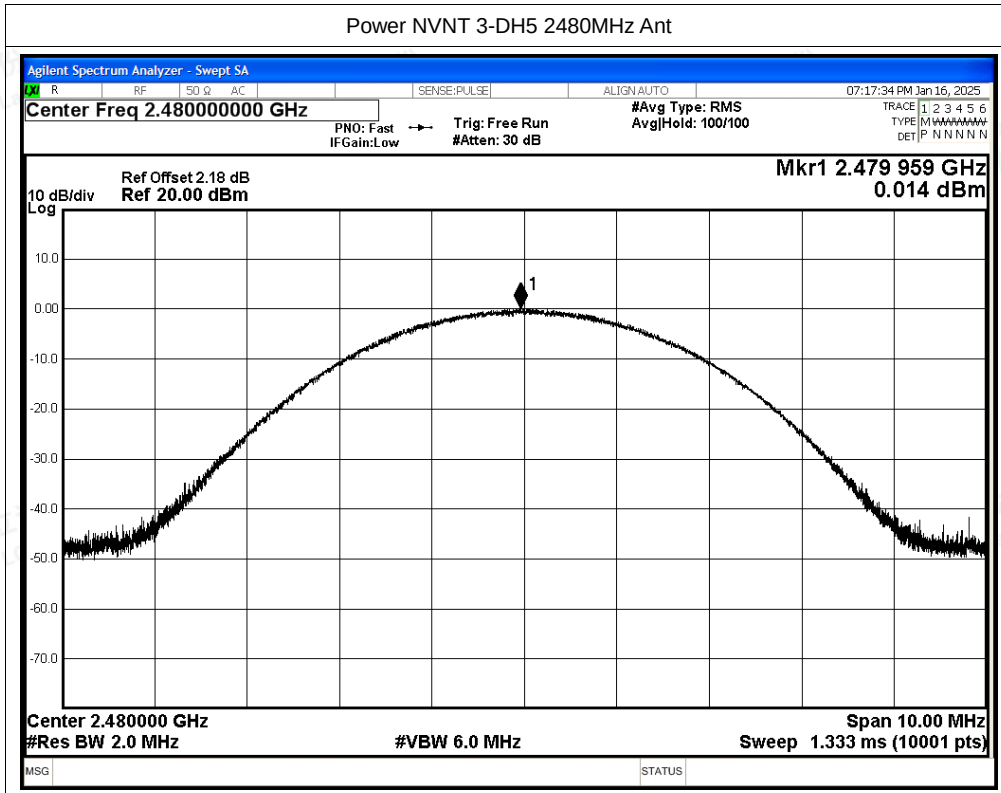


Power NVNT 2-DH5 2402MHz Ant











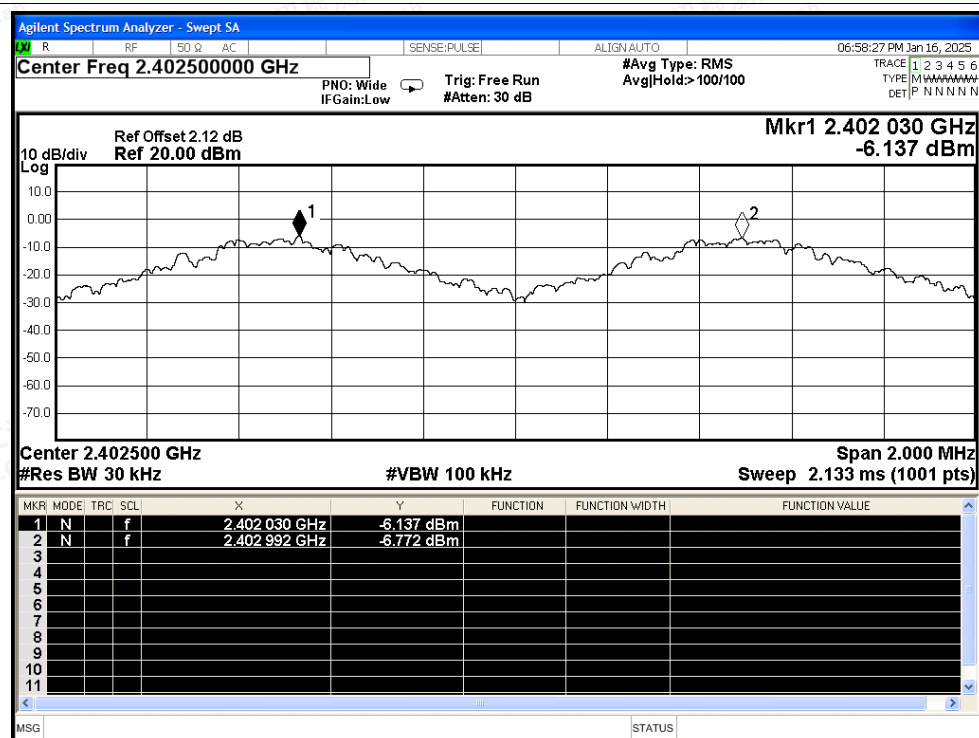
A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant	2402.03	2402.992	0.962	0.683	Pass
NVNT	2-DH5	Ant	2402.03	2403.022	0.992	0.887	Pass
NVNT	3-DH5	Ant	2402.128	2403.01	0.882	0.875	Pass

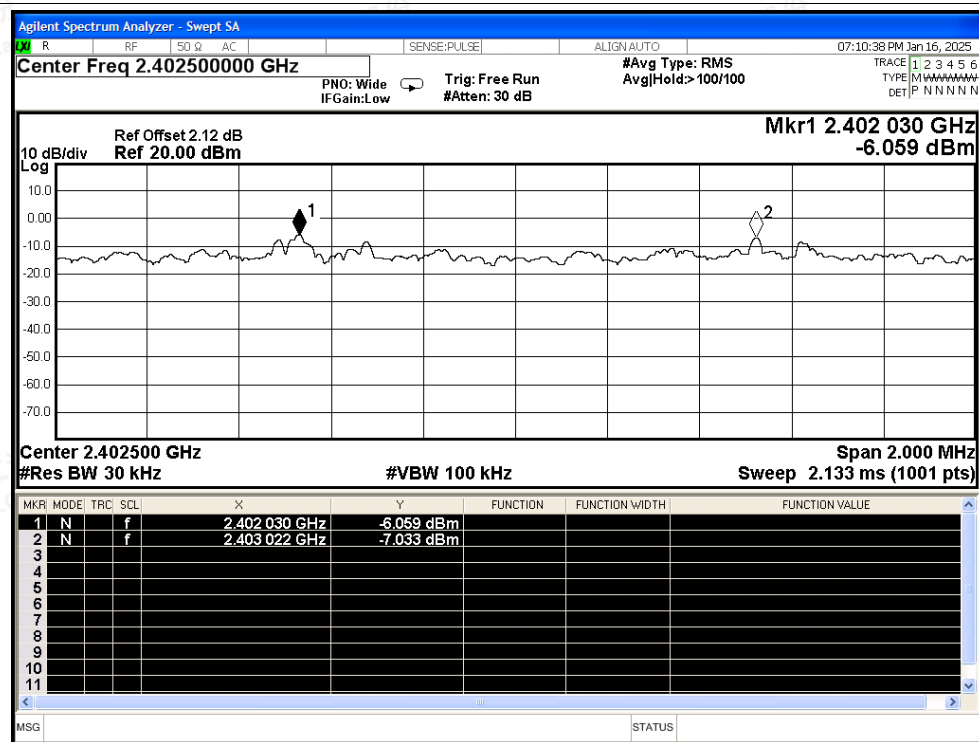


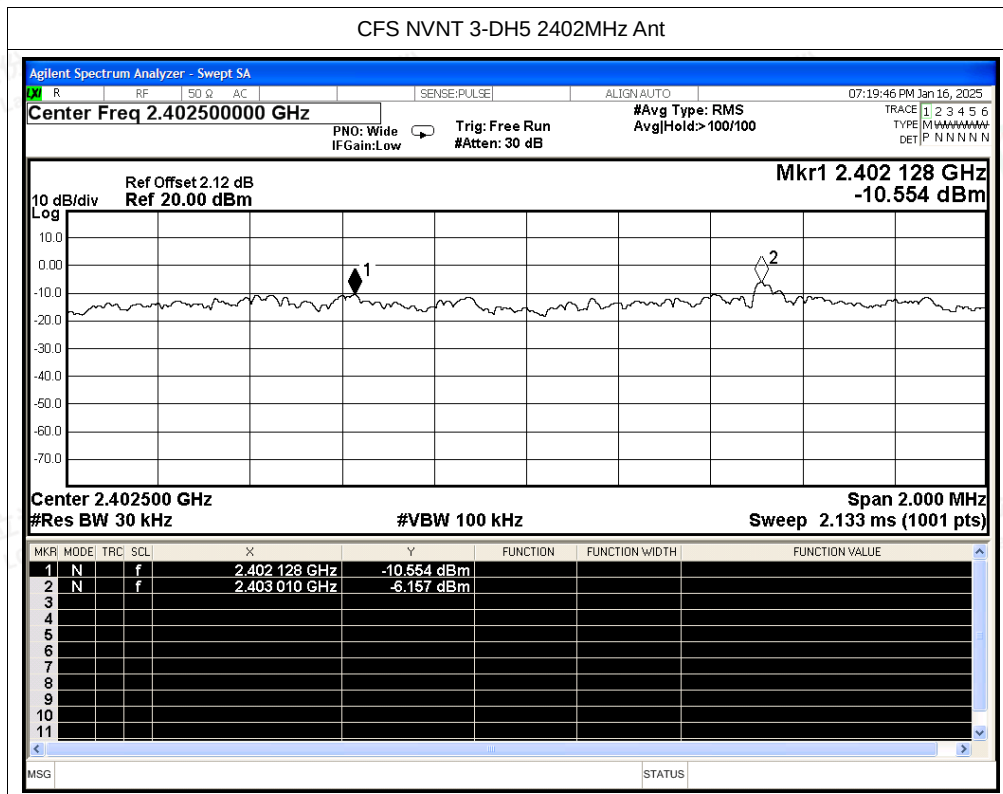
Test Graphs

CFS NVNT 1-DH5 2402MHz Ant



CFS NVNT 2-DH5 2402MHz Ant





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.4 Dwell Time

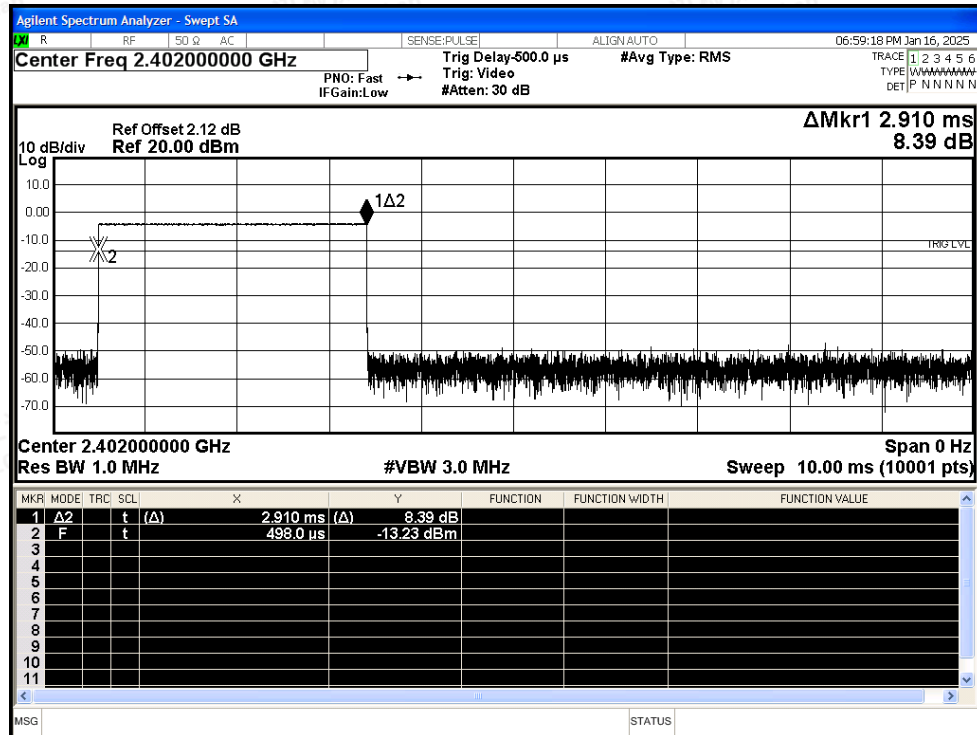
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant	2.91	302.64	104	31600	400	Pass
NVNT	2-DH5	2402	Ant	2.898	269.514	93	31600	400	Pass
NVNT	3-DH5	2402	Ant	2.897	301.288	104	31600	400	Pass



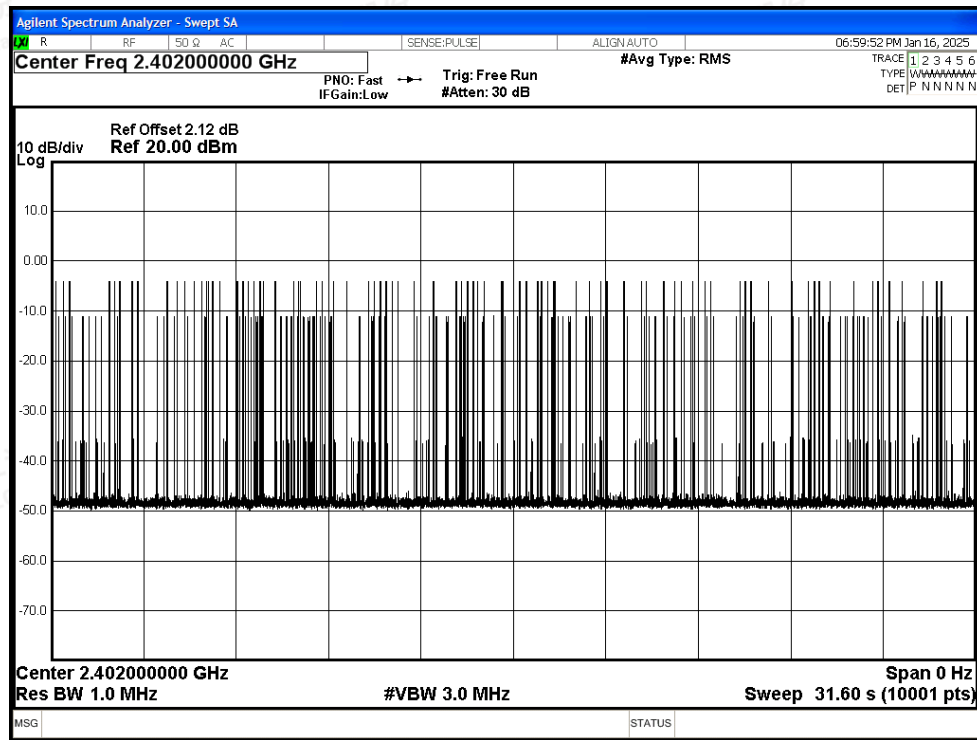


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant One Burst

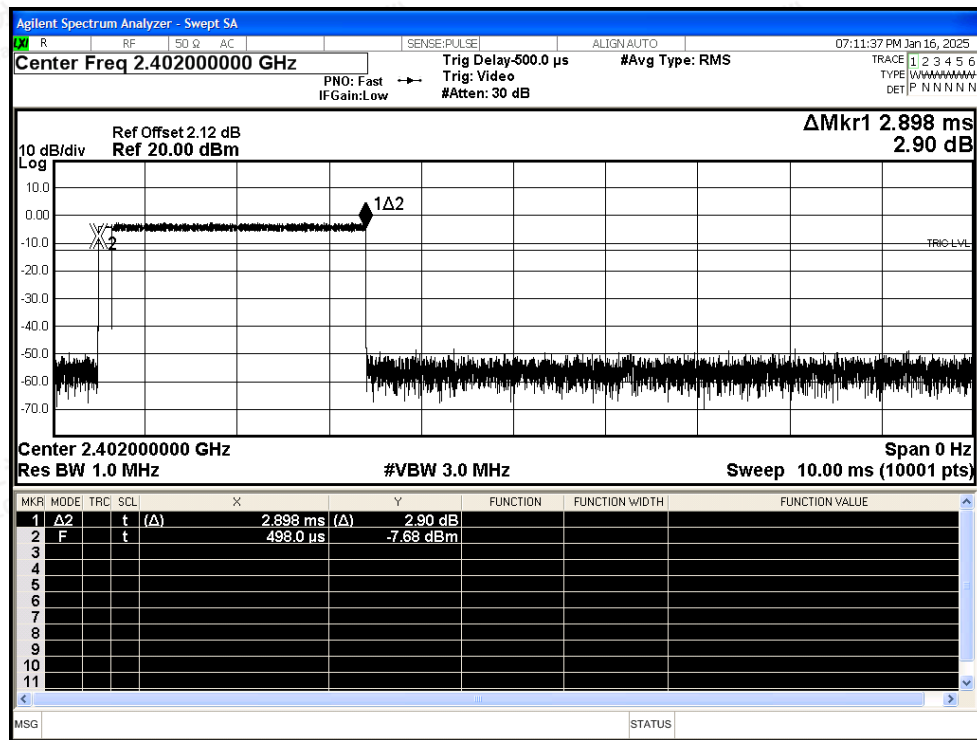


Dwell NVNT 1-DH5 2402MHz Ant Accumulated

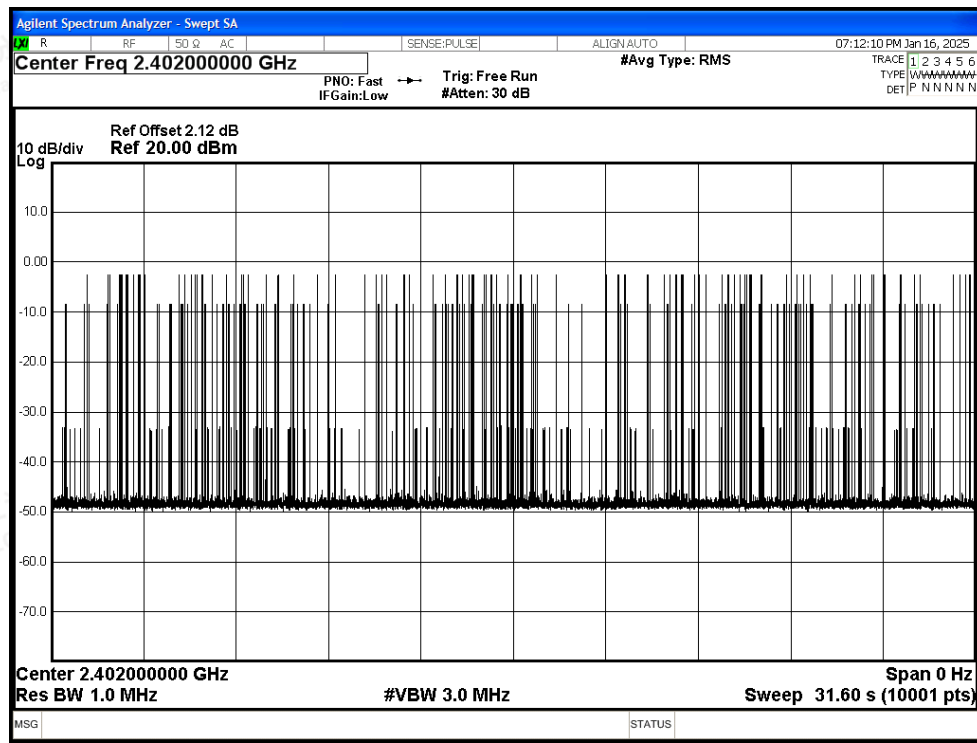




Dwell NVNT 2-DH5 2402MHz Ant One Burst

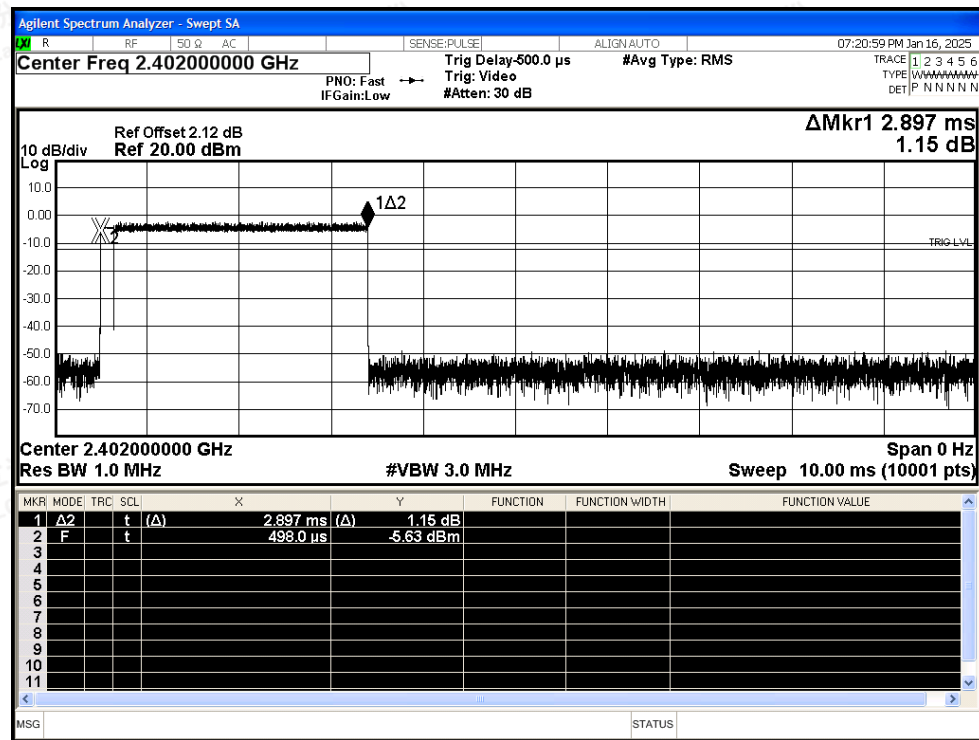


Dwell NVNT 2-DH5 2402MHz Ant Accumulated

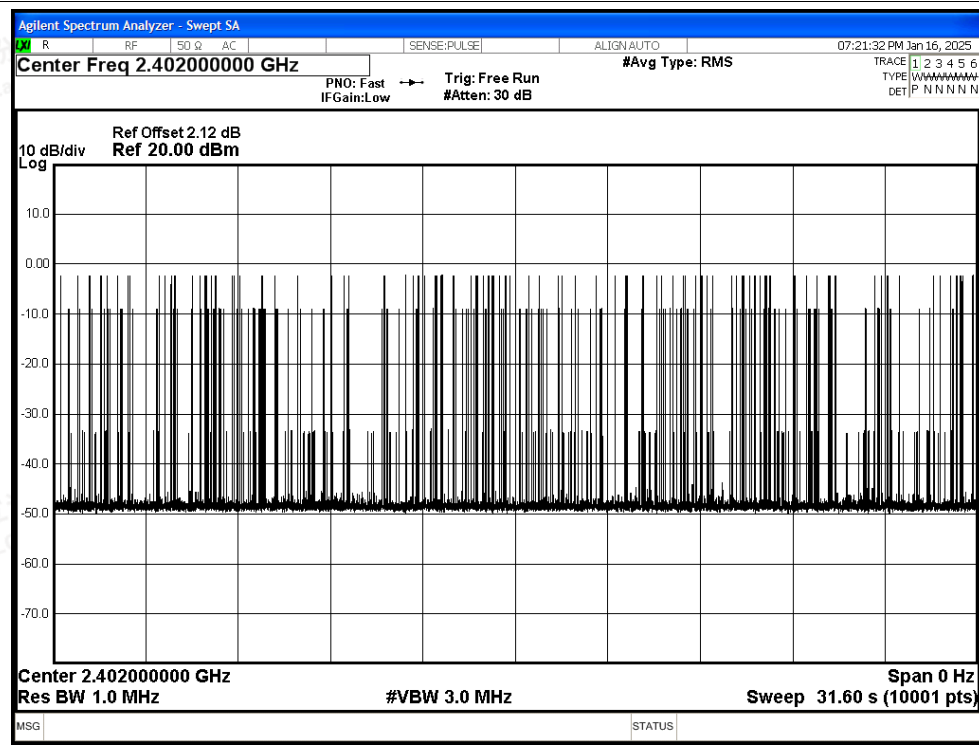




Dwell NVNT 3-DH5 2402MHz Ant One Burst



Dwell NVNT 3-DH5 2402MHz Ant Accumulated





A.5 Number of Hopping Channel

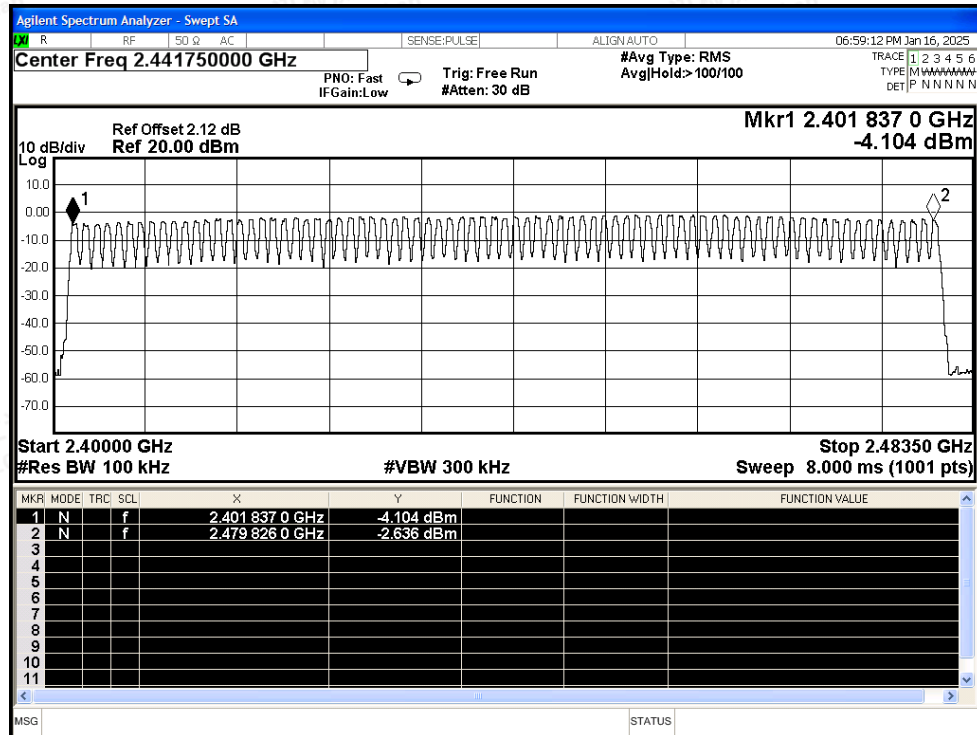
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant	79	15	Pass
NVNT	2-DH5	Ant	79	15	Pass
NVNT	3-DH5	Ant	79	15	Pass



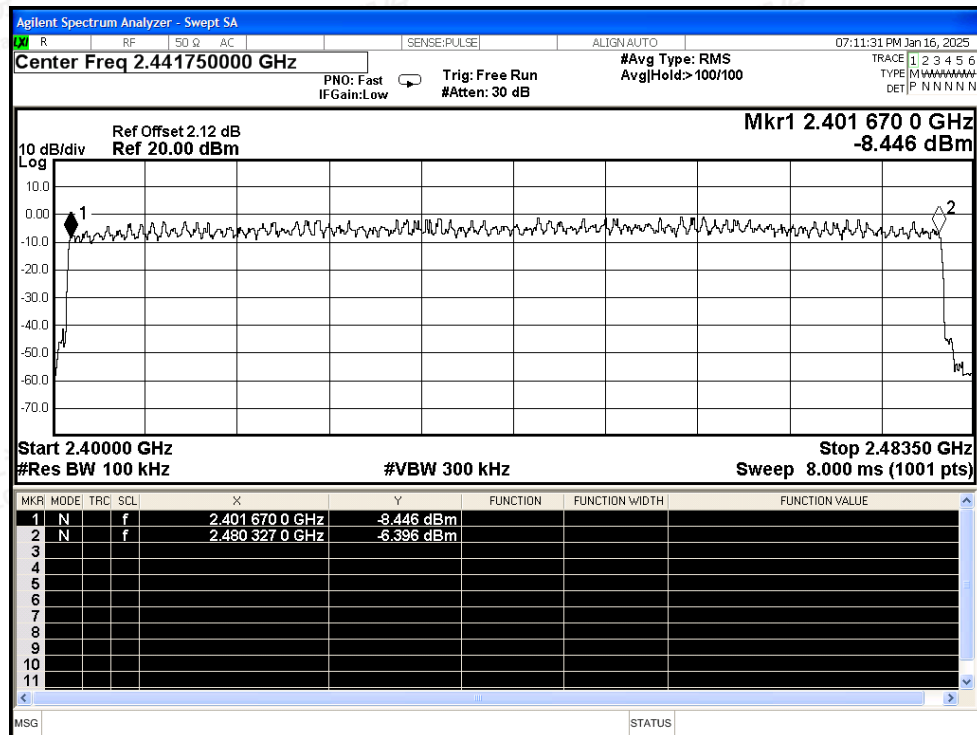


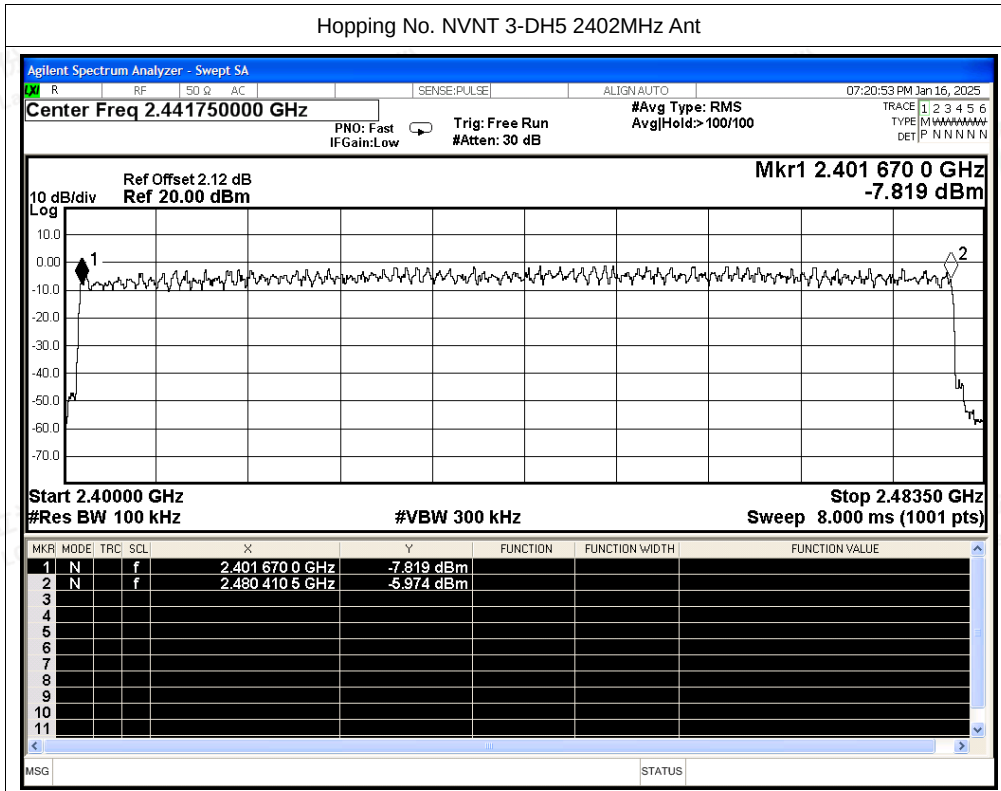
Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant



Hopping No. NVNT 2-DH5 2402MHz Ant







A.6 Band Edge

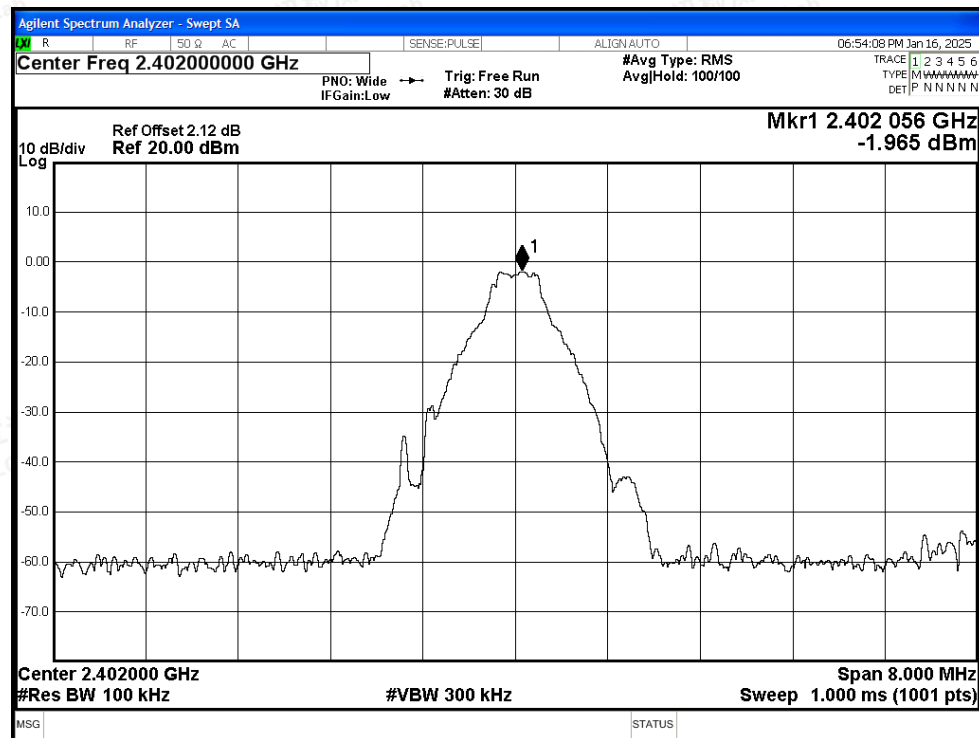
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant	No-Hopping	-55.39	-20	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	-54.46	-20	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	-51.92	-20	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	-54.02	-20	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	-49.22	-20	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	-54.05	-20	Pass



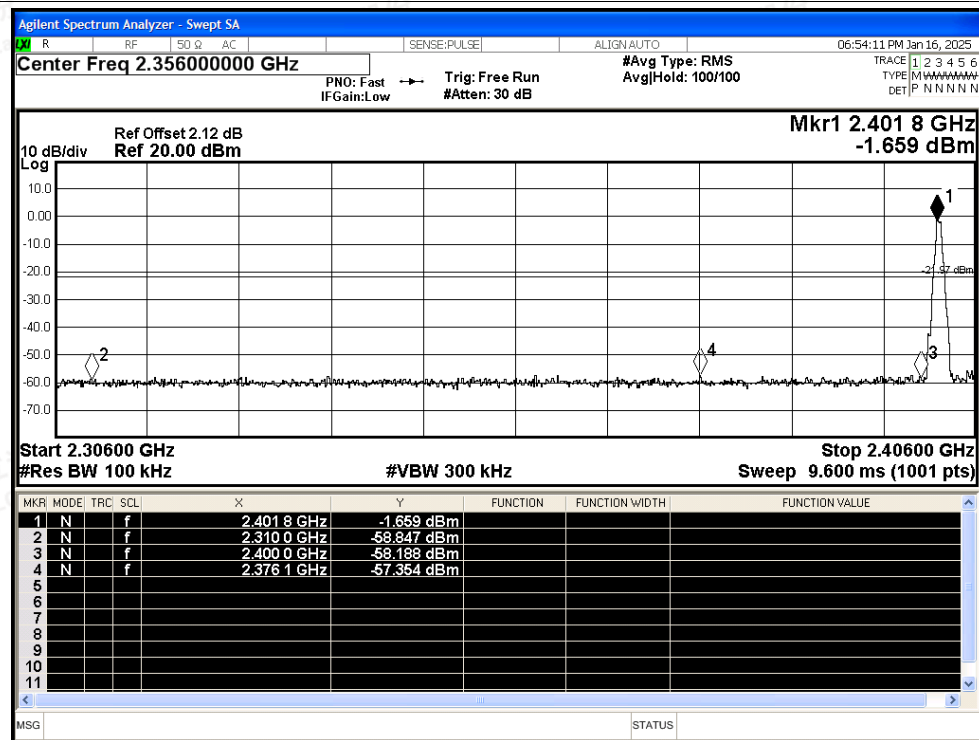


Test Graphs

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



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

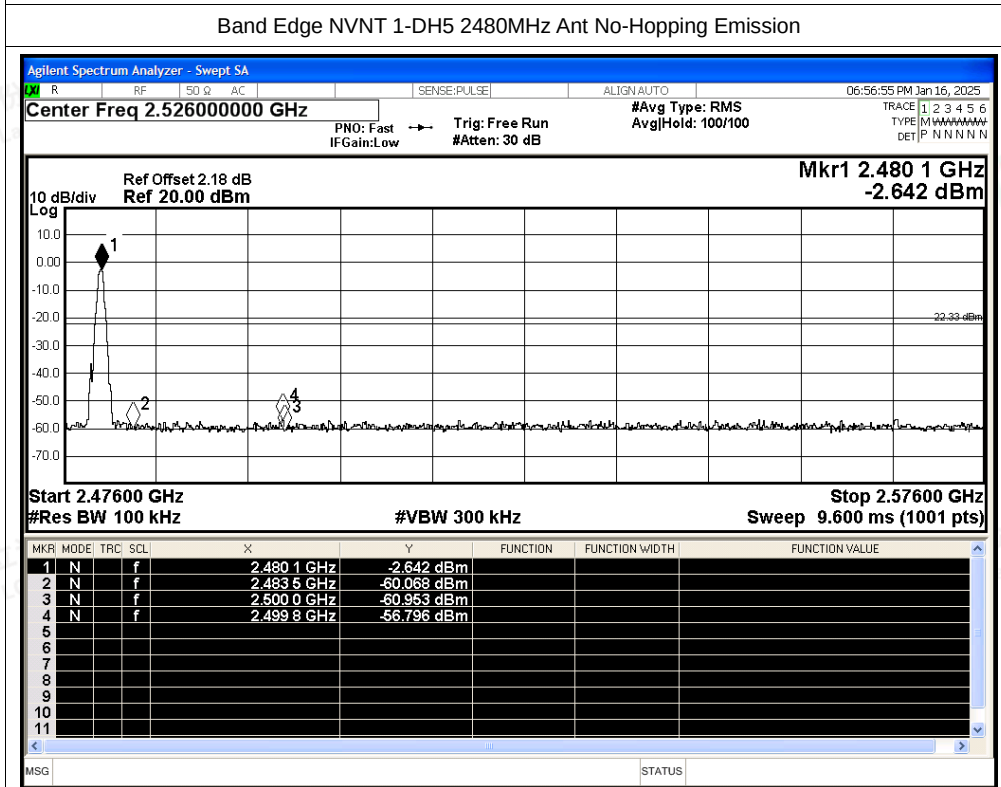
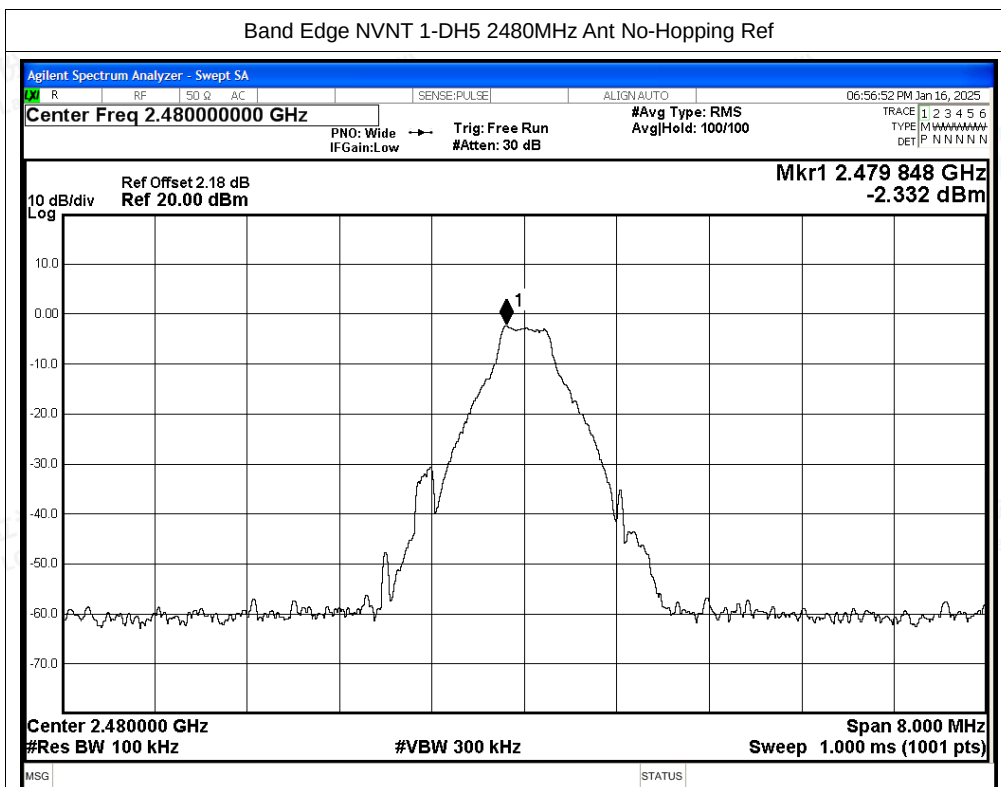


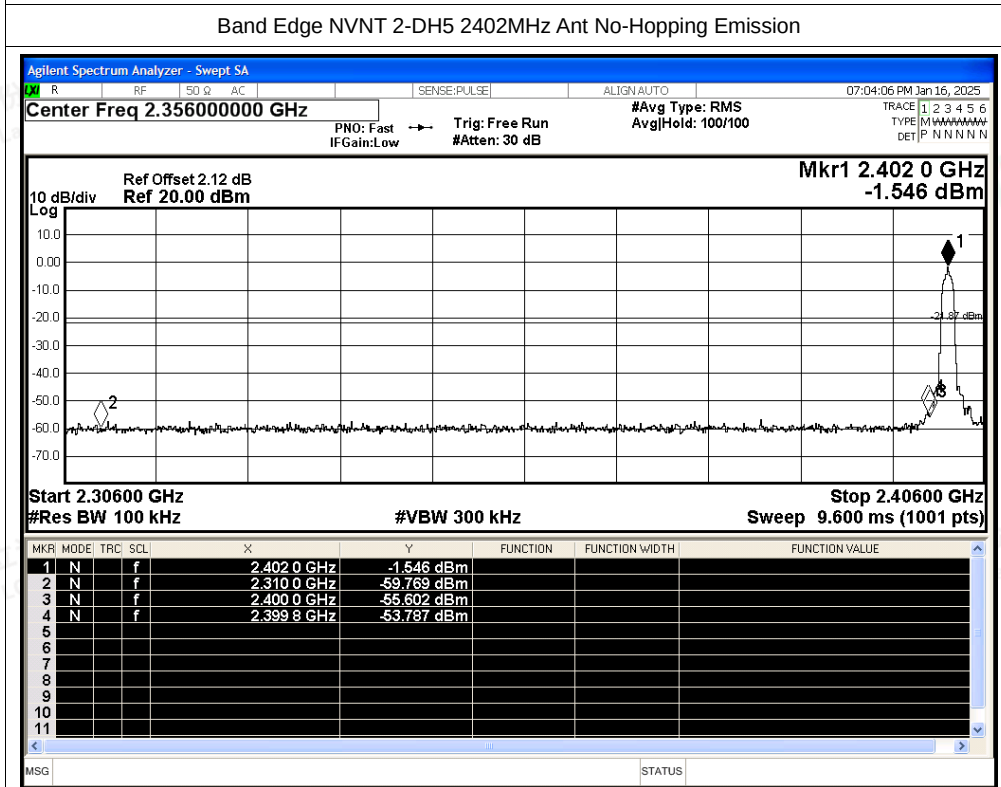
Shenzhen LCS Compliance Testing Laboratory Ltd.

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

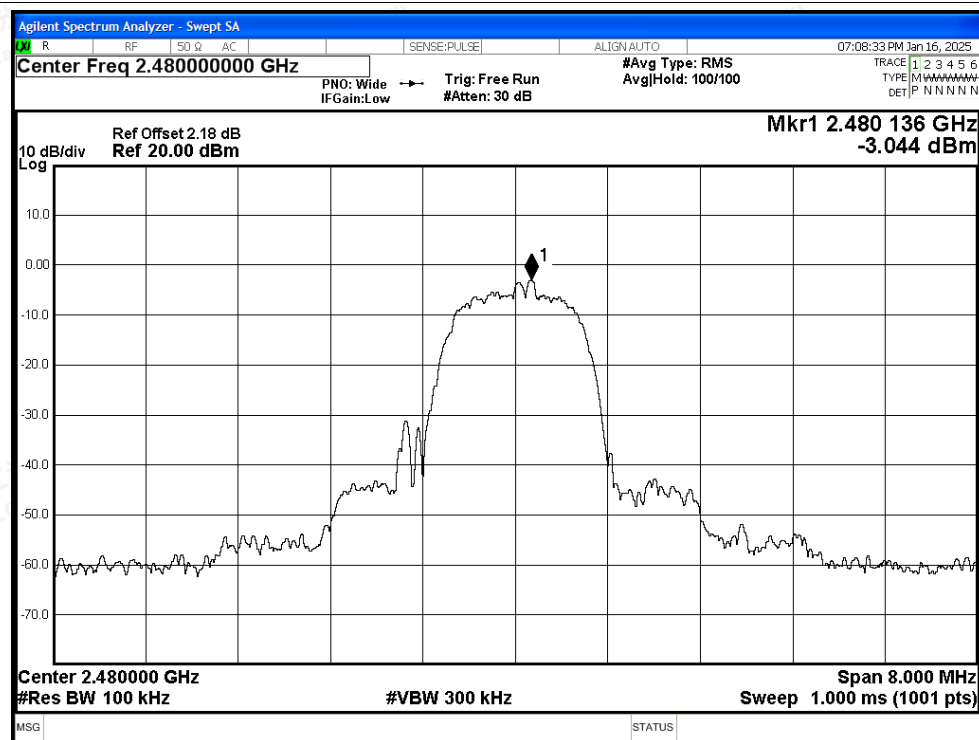




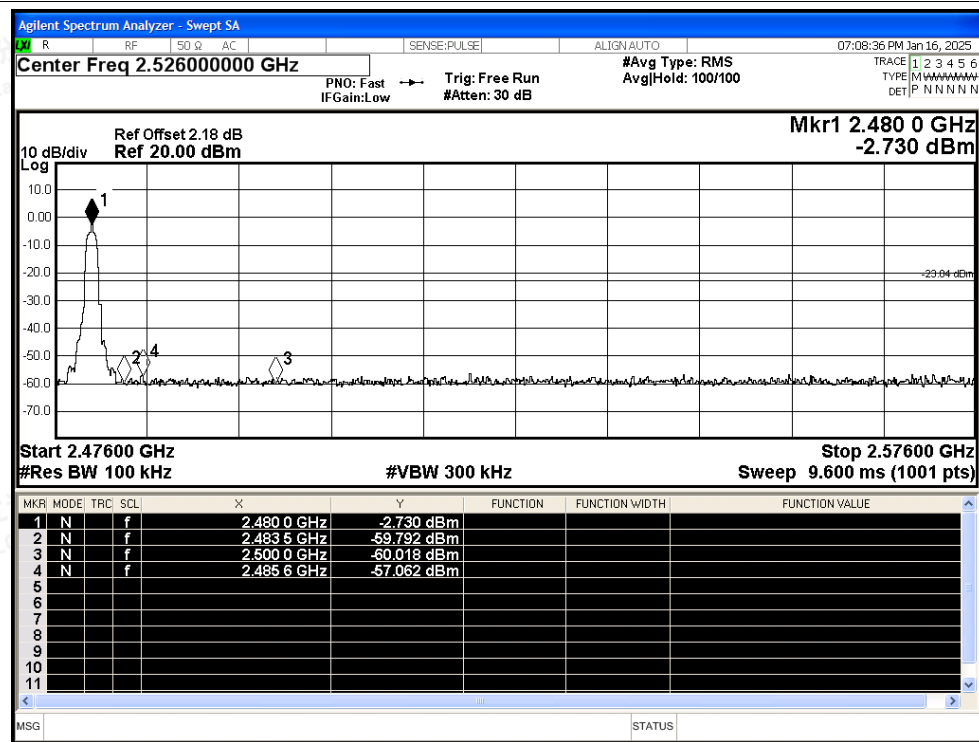
Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen,
518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity



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

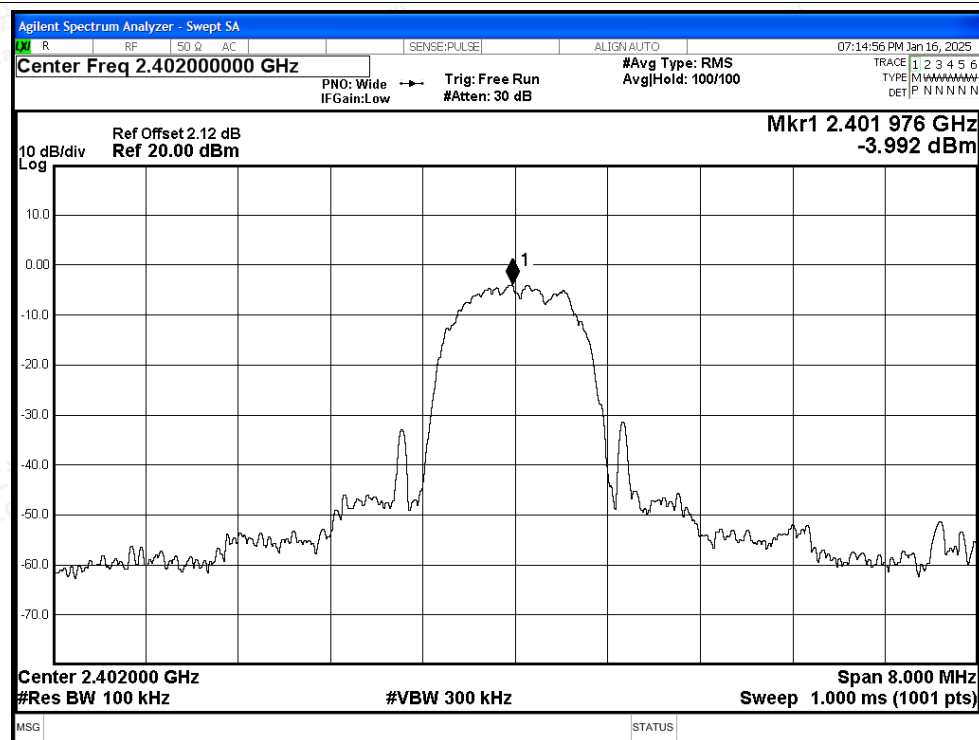


Band Edge NVNT 2-DH5 2480MHz Ant No-Hopping Emission

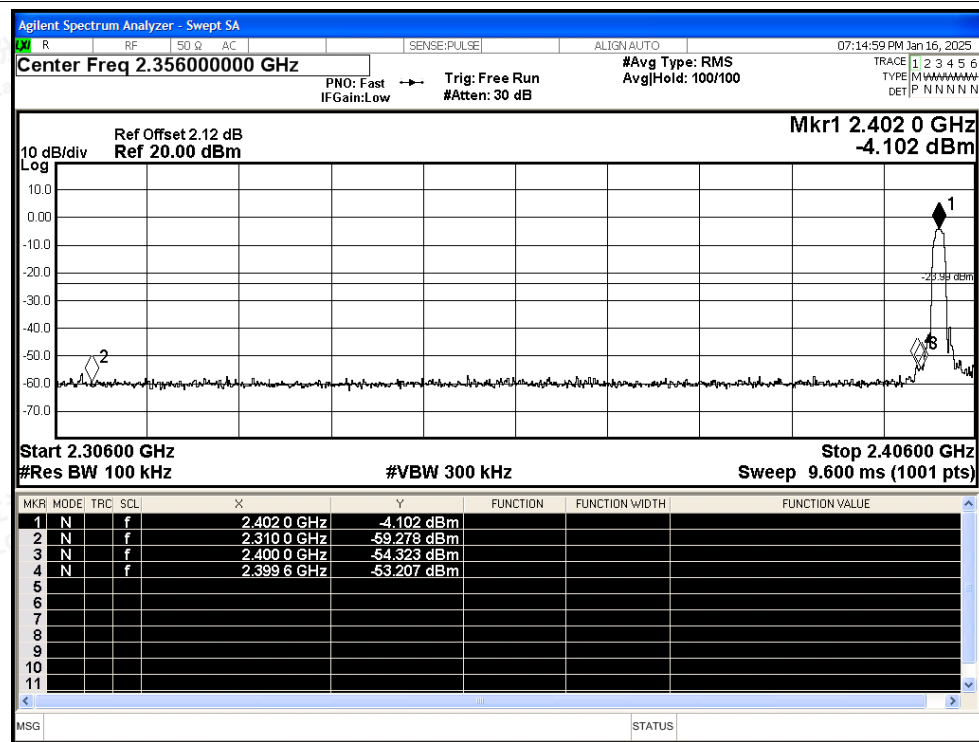


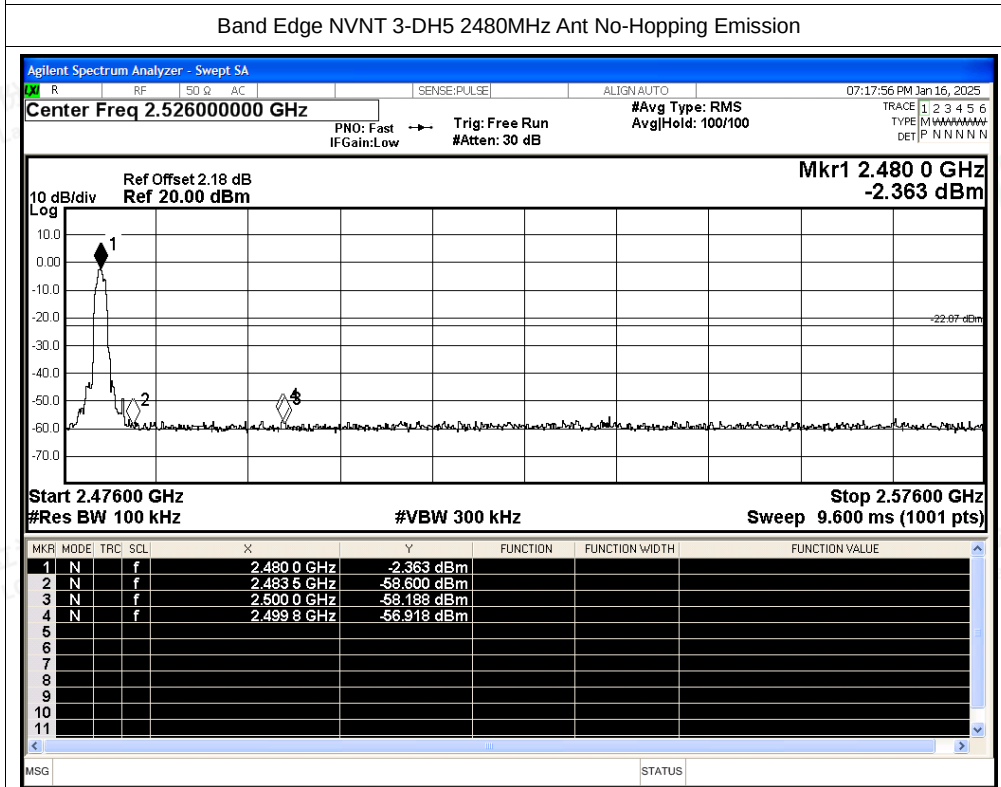
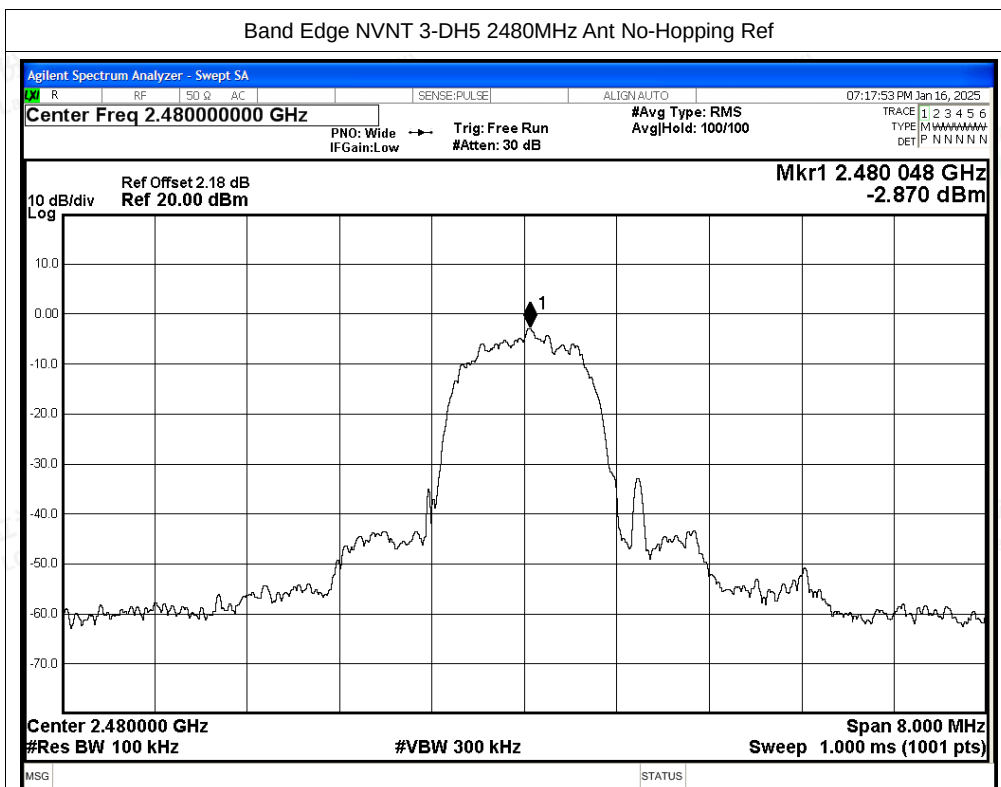


Band Edge NVNT 3-DH5 2402MHz Ant No-Hopping Ref



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







(Hopping)

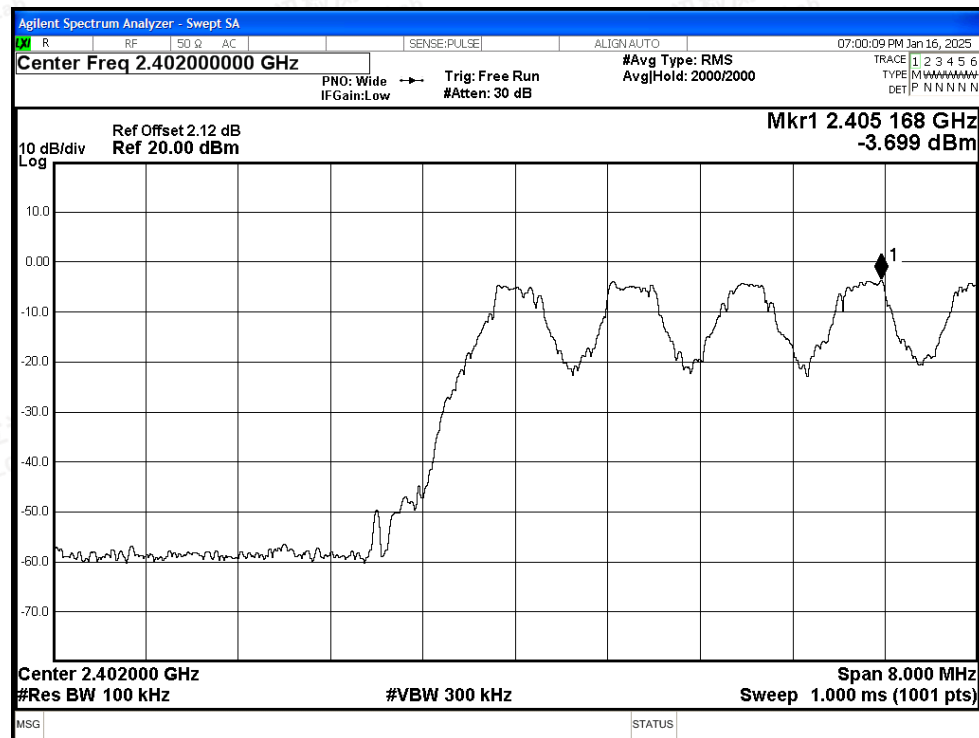
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant	Hopping	-51.88	-20	Pass
NVNT	1-DH5	2480	Ant	Hopping	-52.89	-20	Pass
NVNT	2-DH5	2402	Ant	Hopping	-50.9	-20	Pass
NVNT	2-DH5	2480	Ant	Hopping	-52.15	-20	Pass
NVNT	3-DH5	2402	Ant	Hopping	-51.24	-20	Pass
NVNT	3-DH5	2480	Ant	Hopping	-52.95	-20	Pass



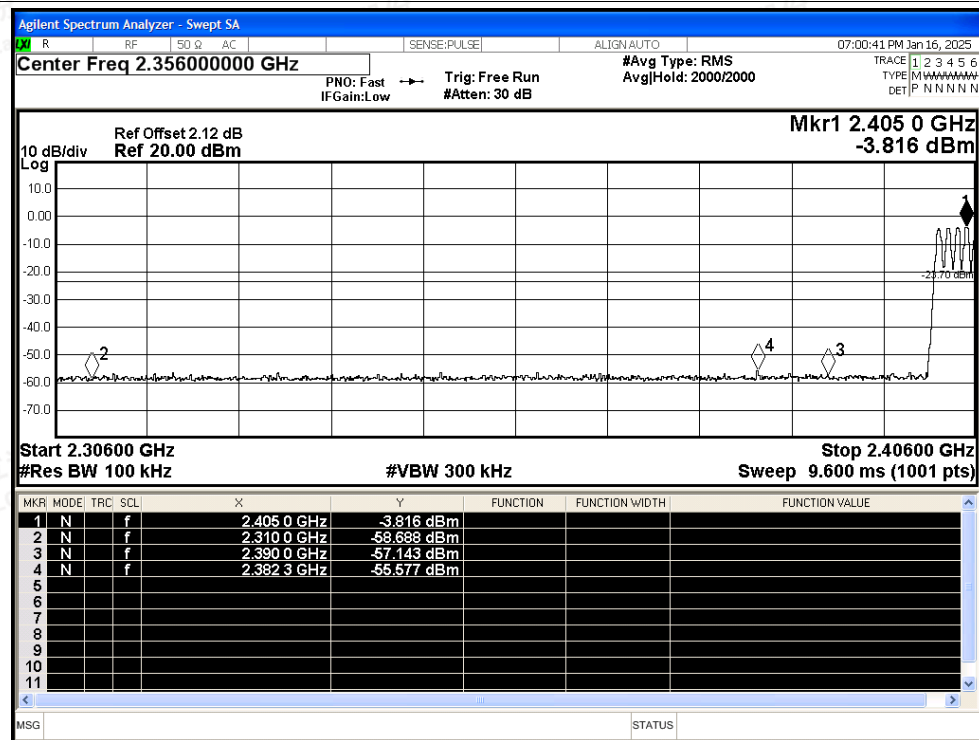


Test Graphs

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



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

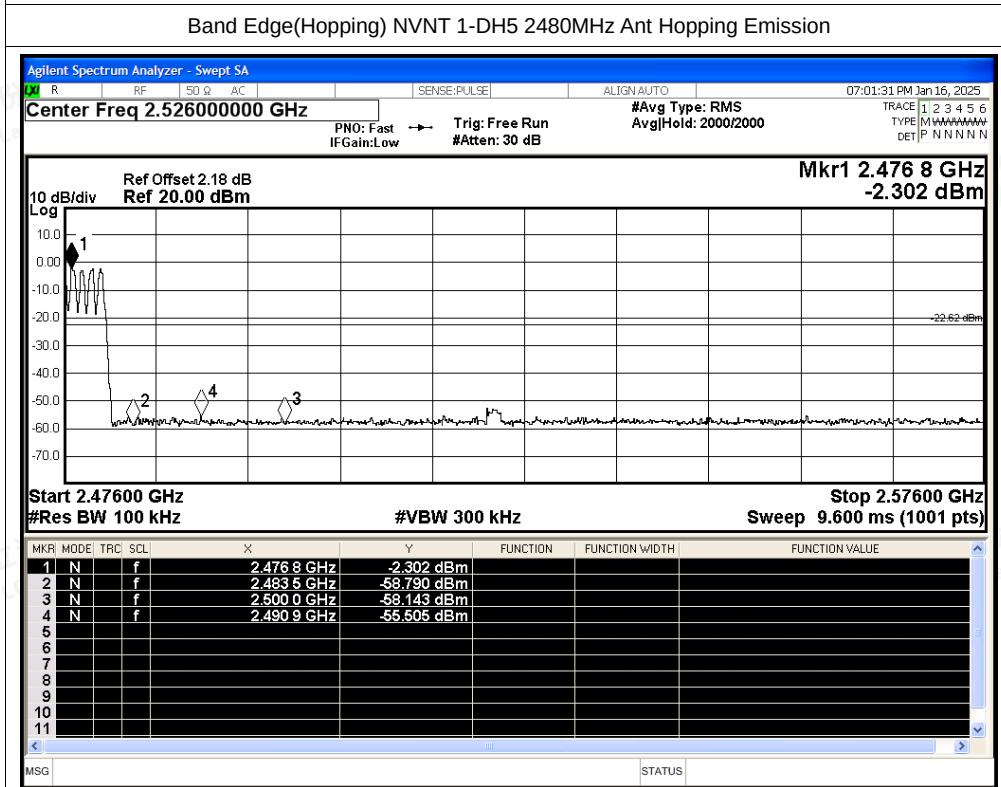
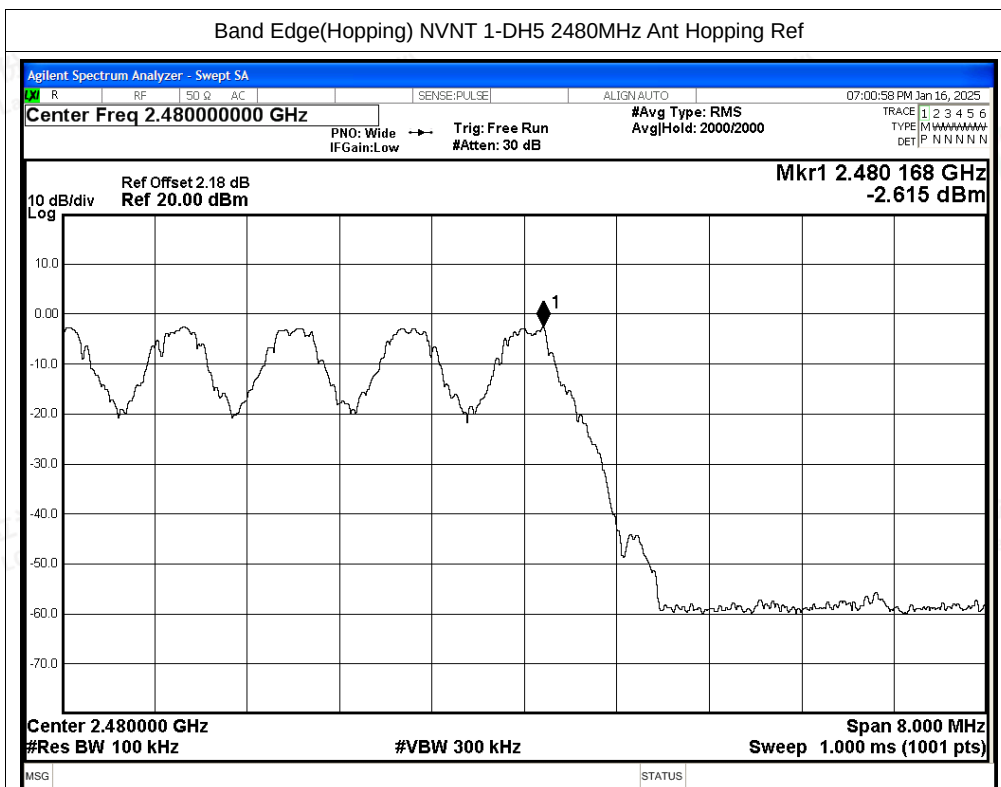


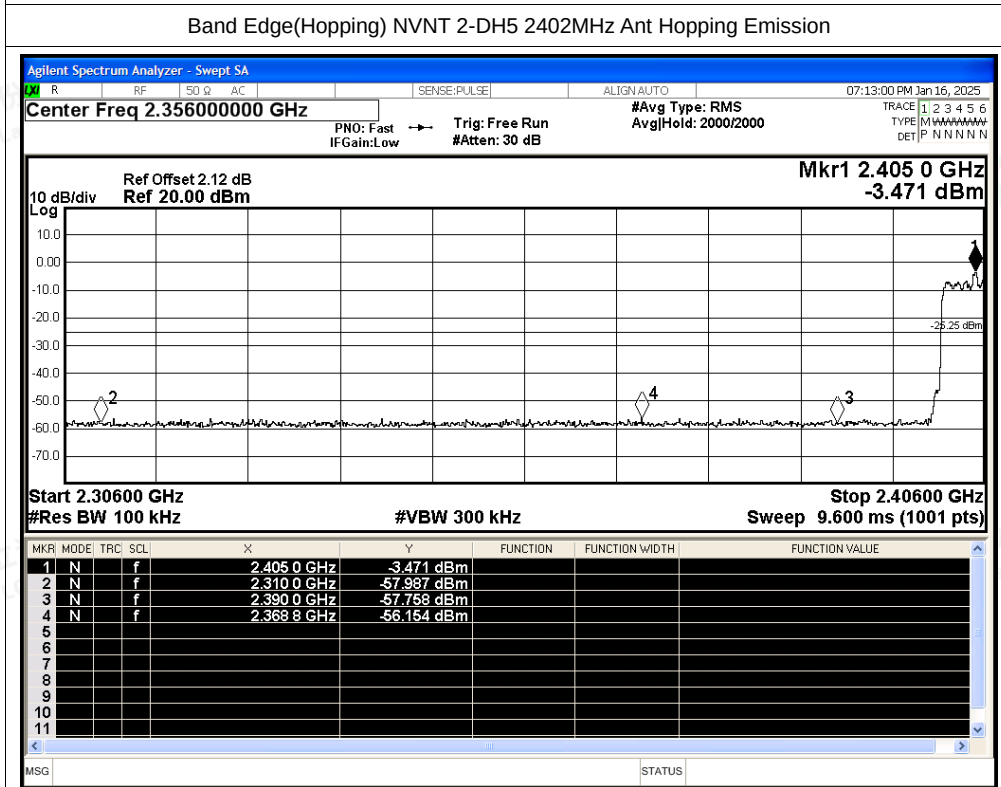
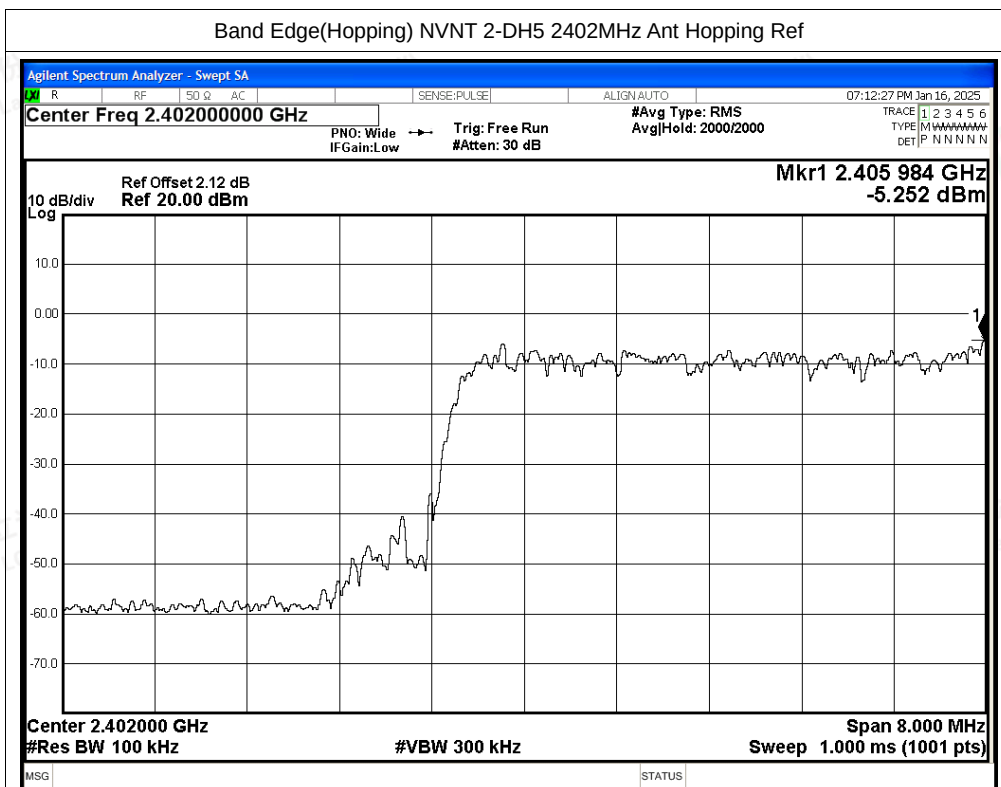
Shenzhen LCS Compliance Testing Laboratory Ltd.

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

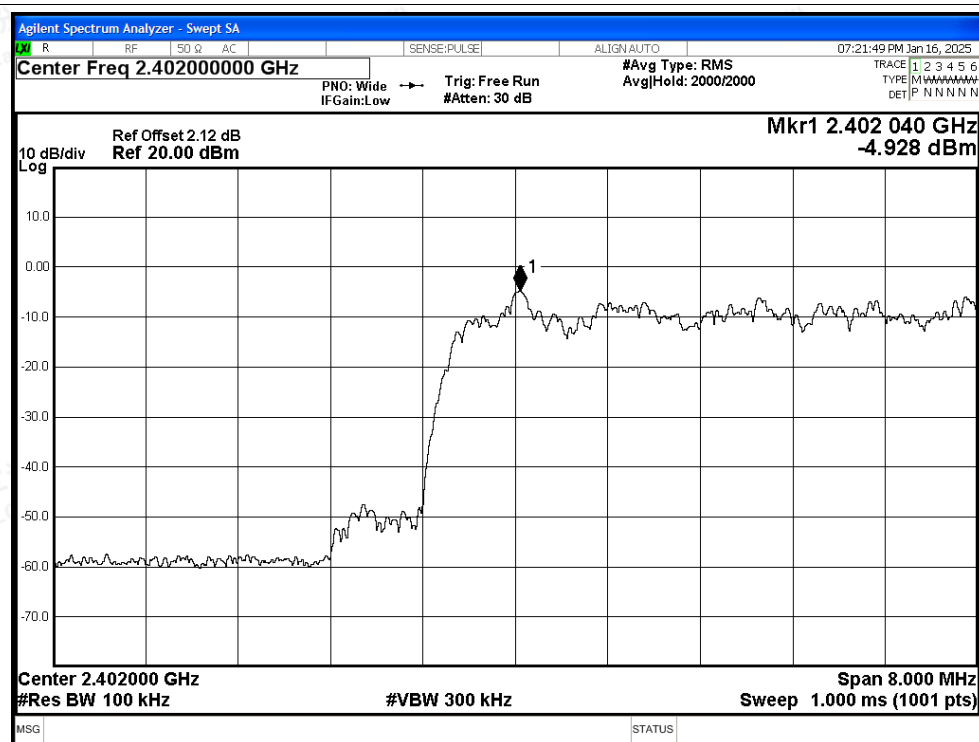
Scan code to check authenticity



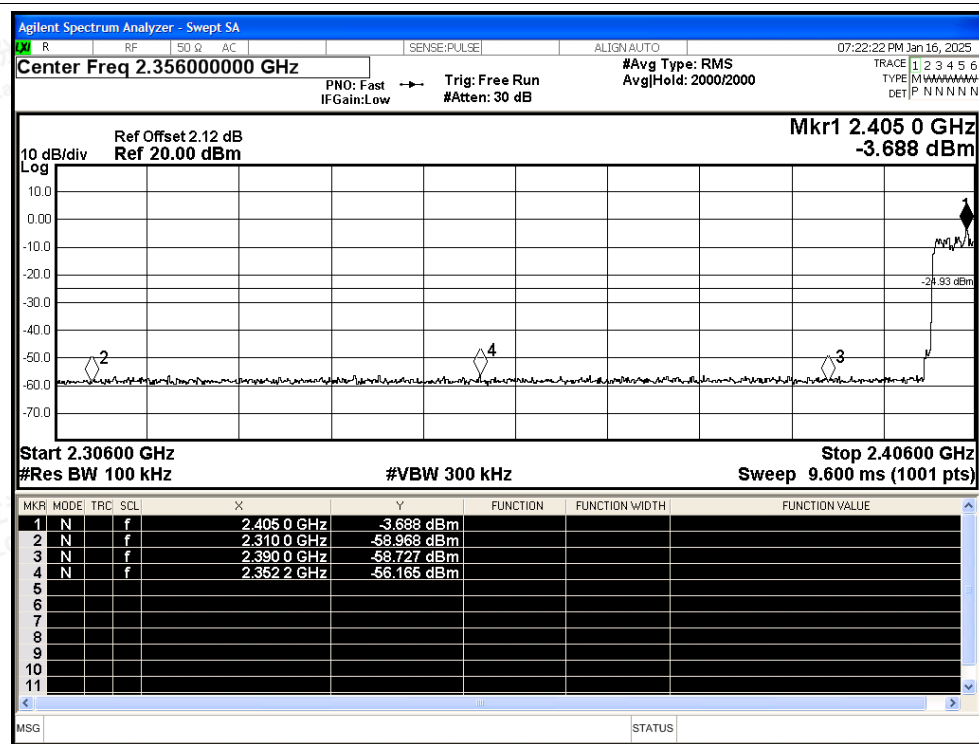




Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant Hopping Ref



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



Shenzhen LCS Compliance Testing Laboratory Ltd.

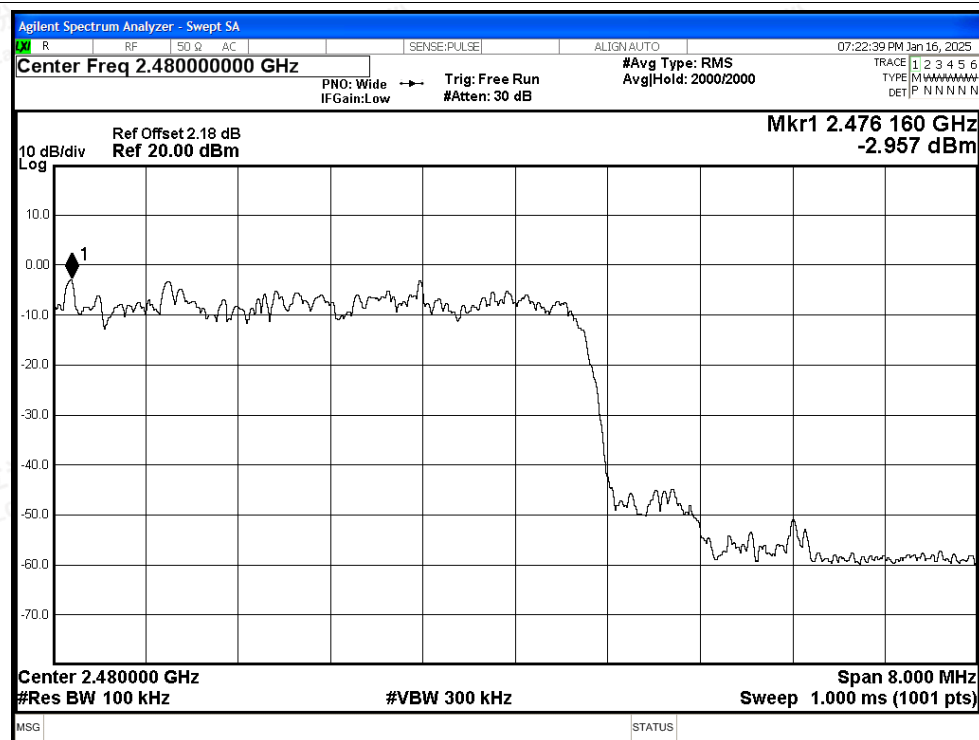
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

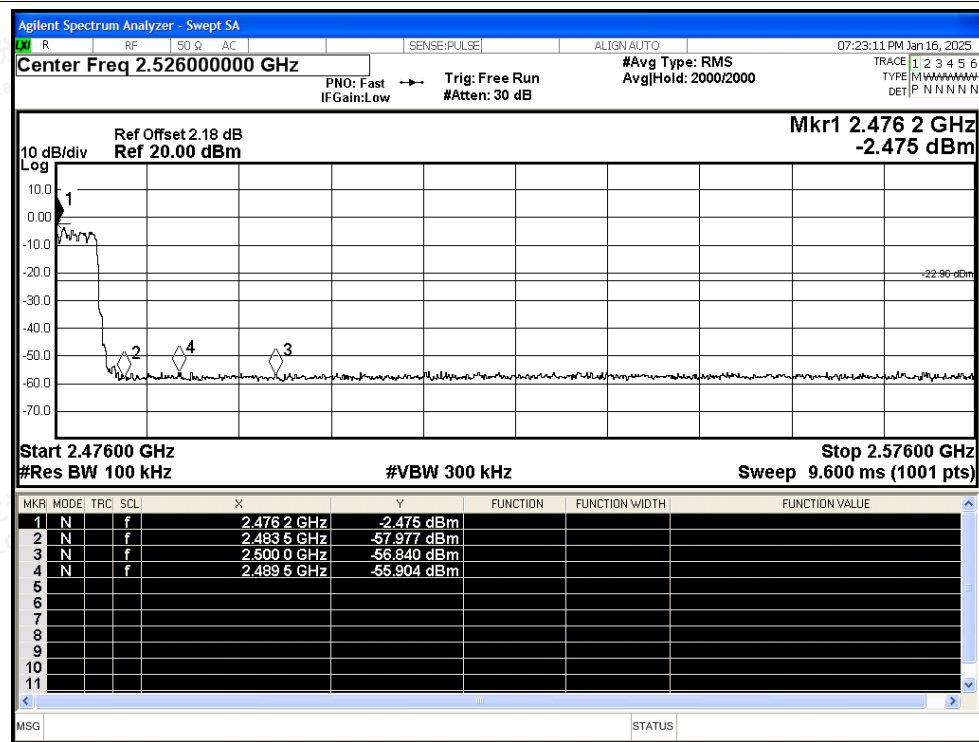
Scan code to check authenticity



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



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





A.7 Conducted RF Spurious Emission

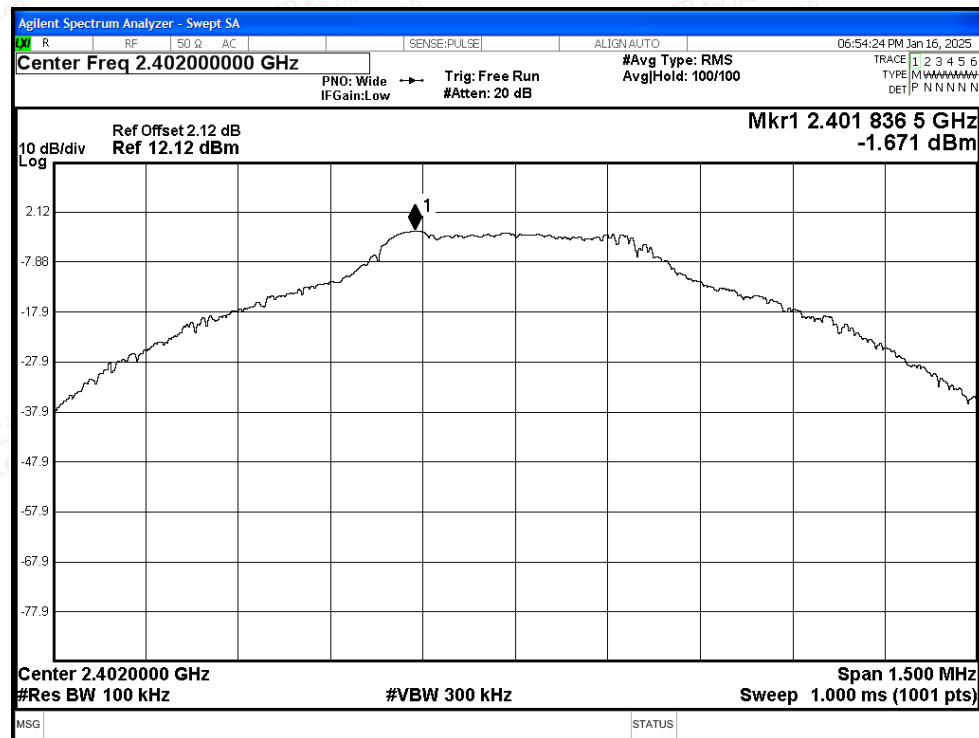
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant	-53.47	-20	Pass
NVNT	1-DH5	2441	Ant	-54.1	-20	Pass
NVNT	1-DH5	2480	Ant	-53.4	-20	Pass
NVNT	2-DH5	2402	Ant	-53.91	-20	Pass
NVNT	2-DH5	2441	Ant	-54.01	-20	Pass
NVNT	2-DH5	2480	Ant	-52.71	-20	Pass
NVNT	3-DH5	2402	Ant	-52.08	-20	Pass
NVNT	3-DH5	2441	Ant	-44.62	-20	Pass
NVNT	3-DH5	2480	Ant	-51.36	-20	Pass



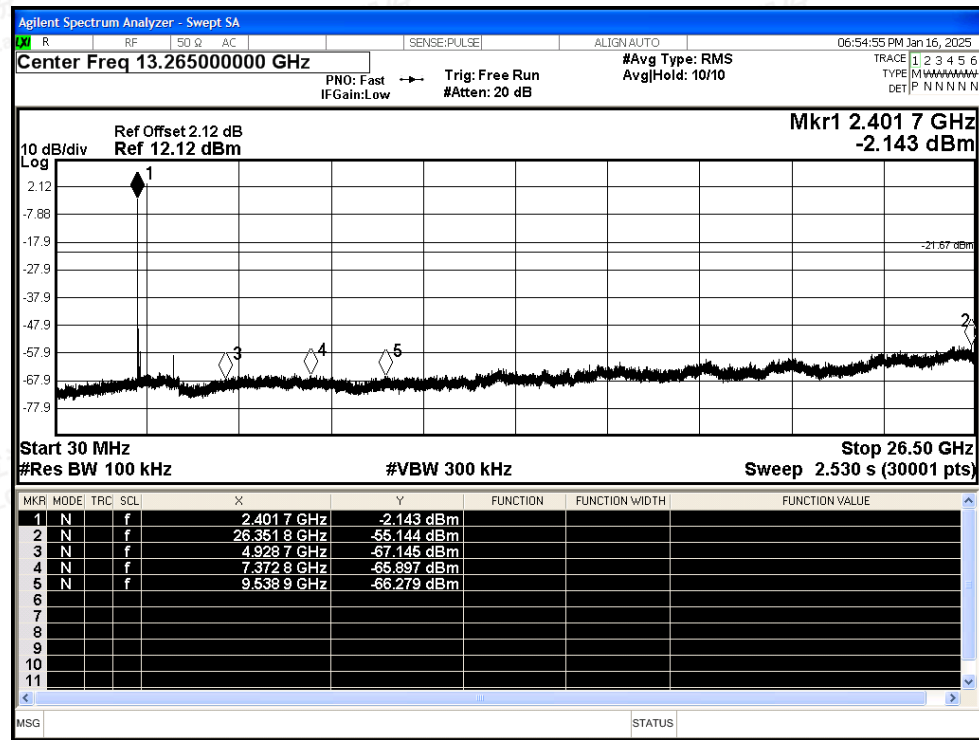


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant Ref

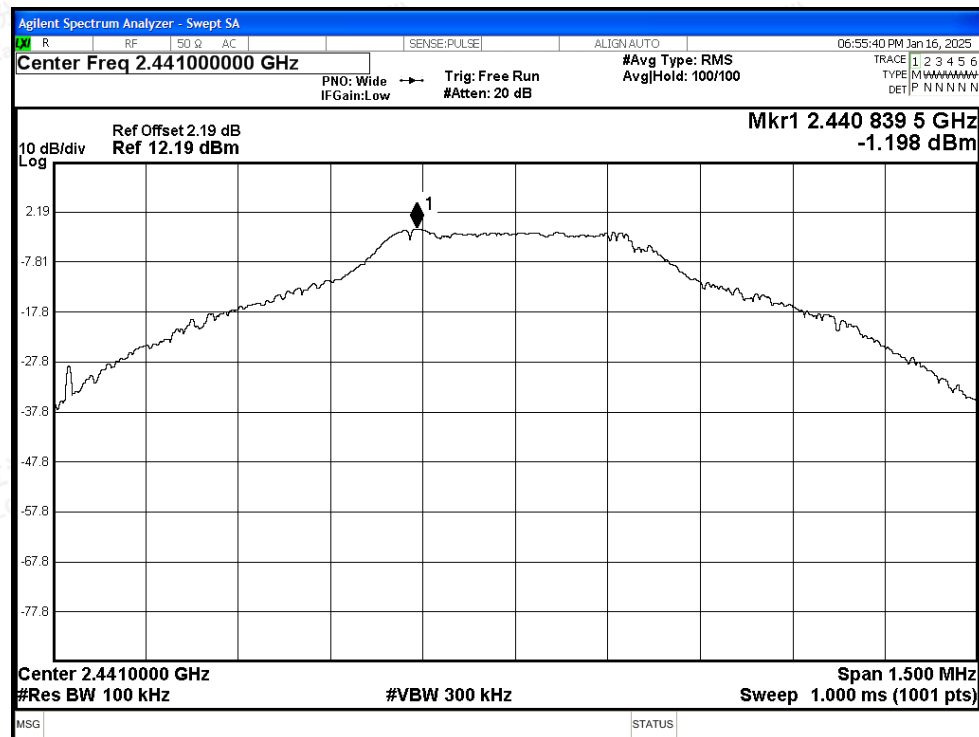


Tx. Spurious NVNT 1-DH5 2402MHz Ant Emission

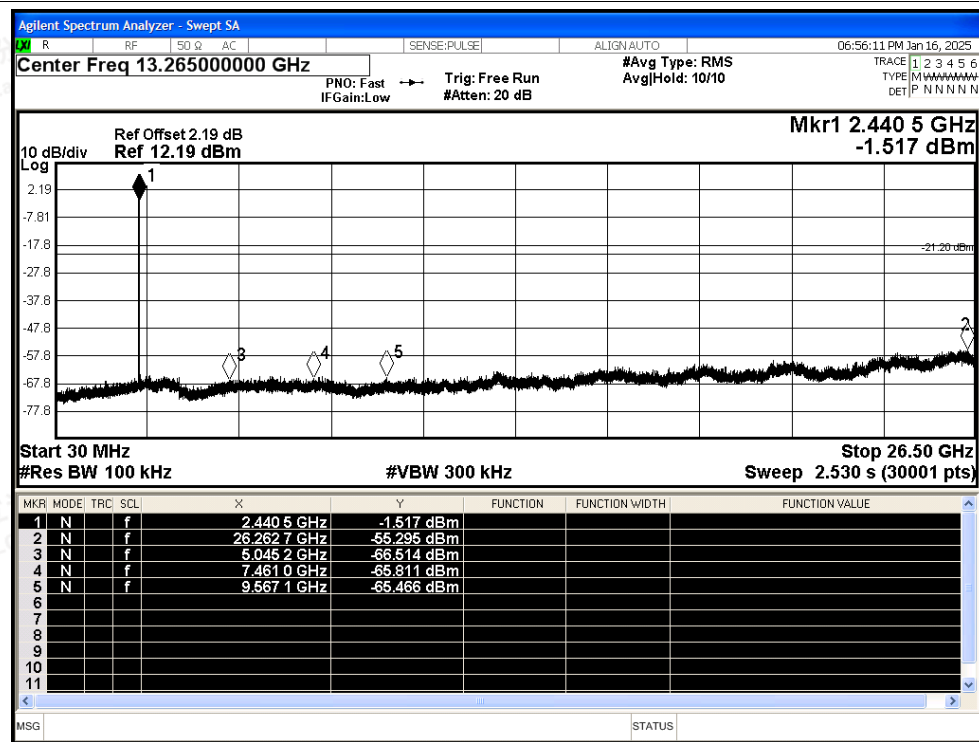




Tx. Spurious NVNT 1-DH5 2441MHz Ant Ref

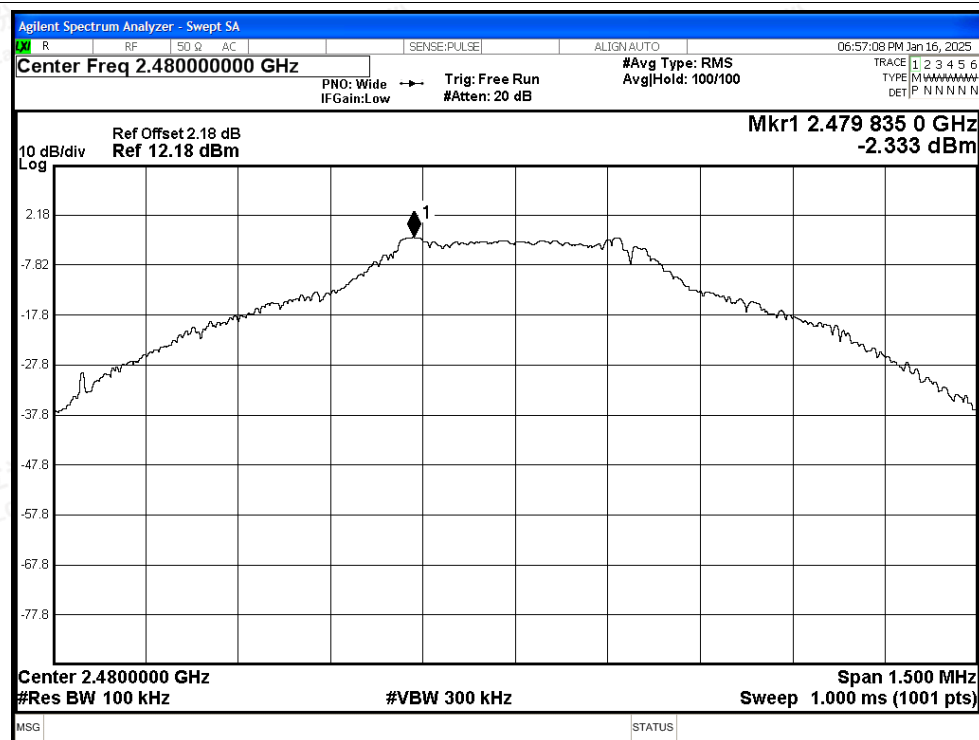


Tx. Spurious NVNT 1-DH5 2441MHz Ant Emission

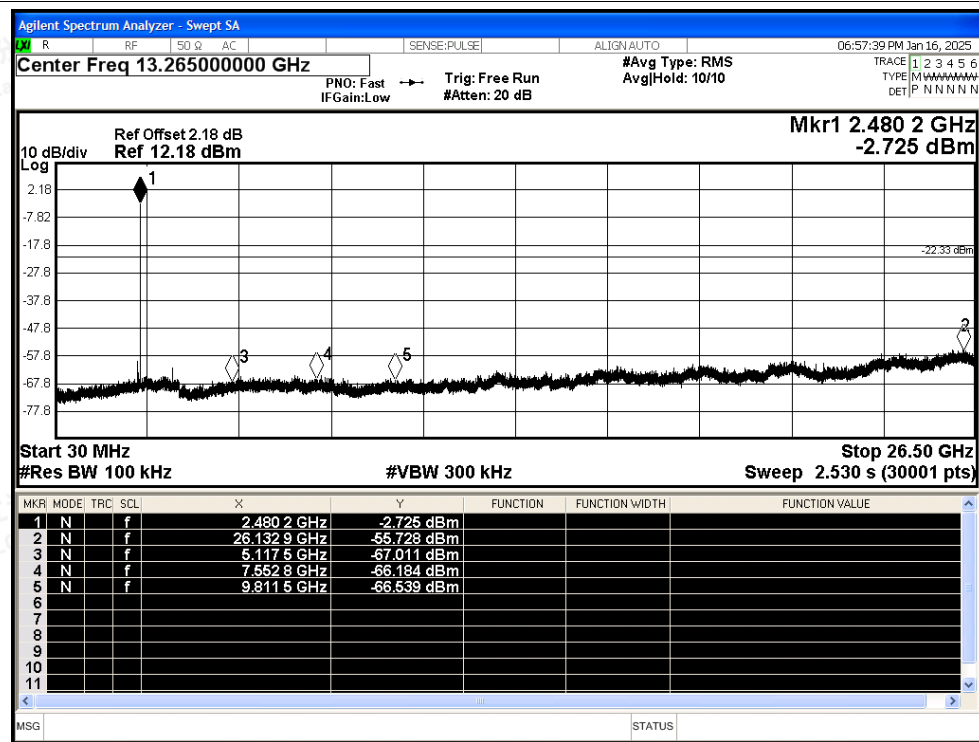




Tx. Spurious NVNT 1-DH5 2480MHz Ant Ref

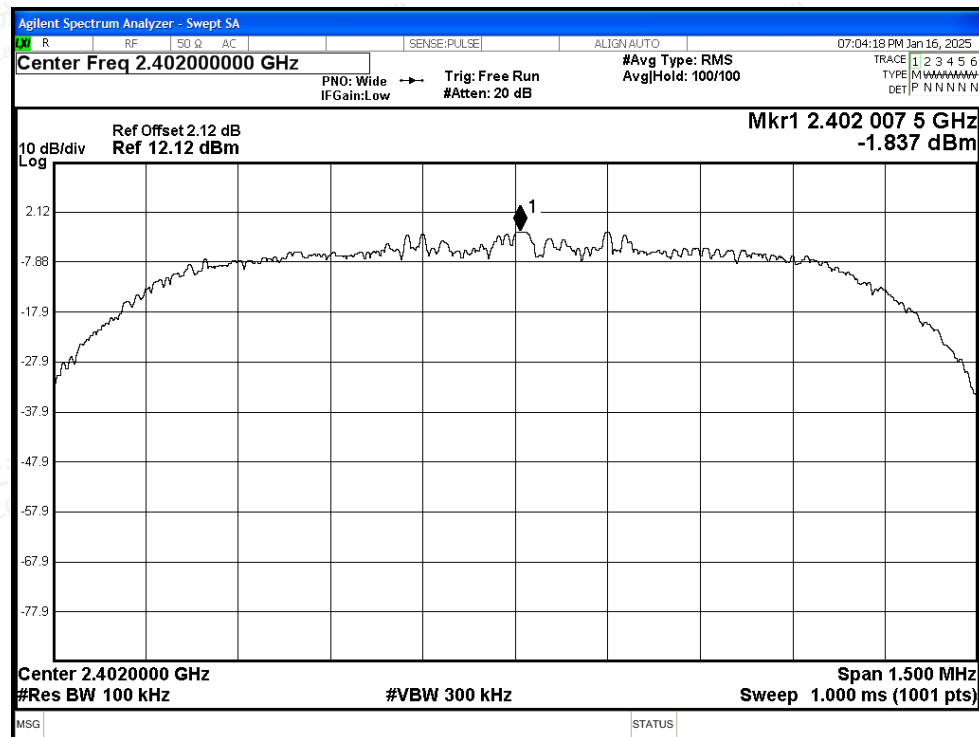


Tx. Spurious NVNT 1-DH5 2480MHz Ant Emission

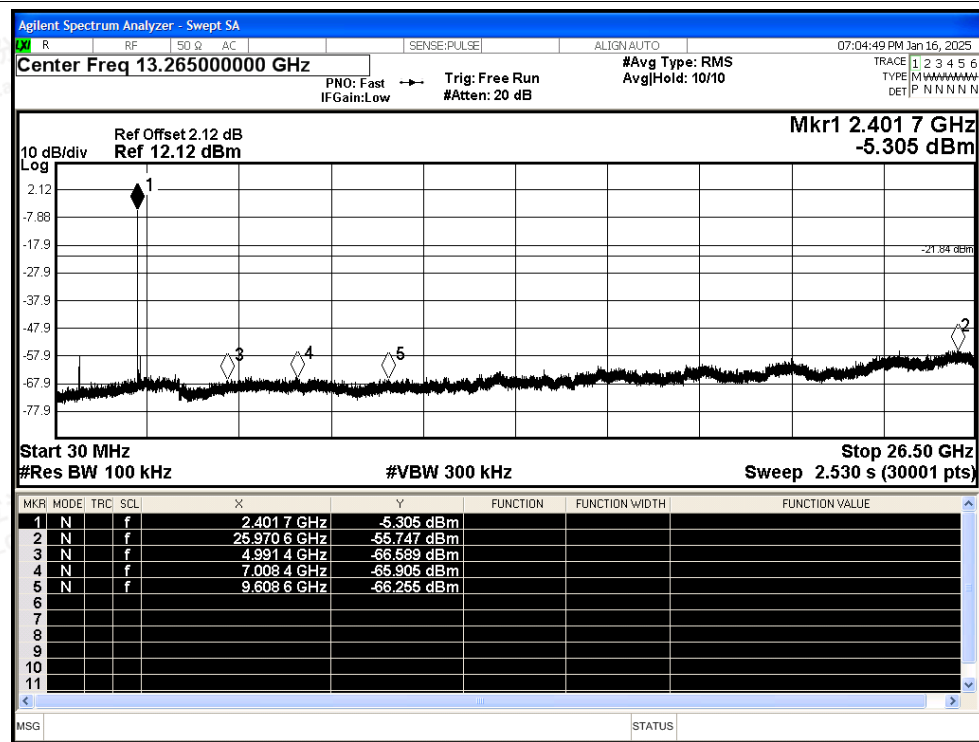




Tx. Spurious NVNT 2-DH5 2402MHz Ant Ref

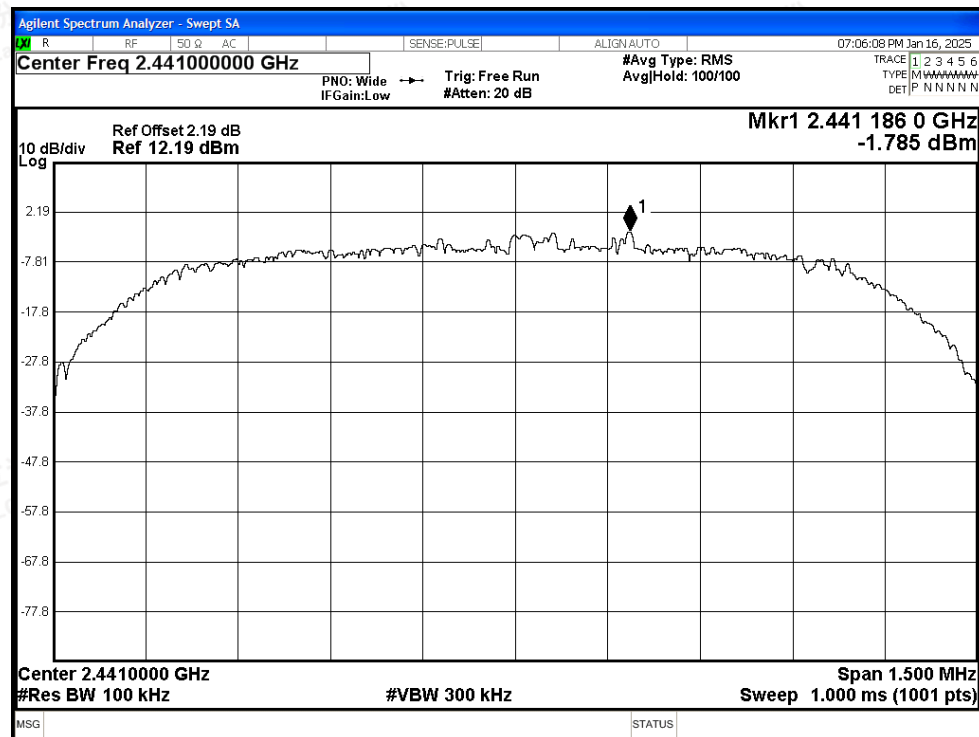


Tx. Spurious NVNT 2-DH5 2402MHz Ant Emission

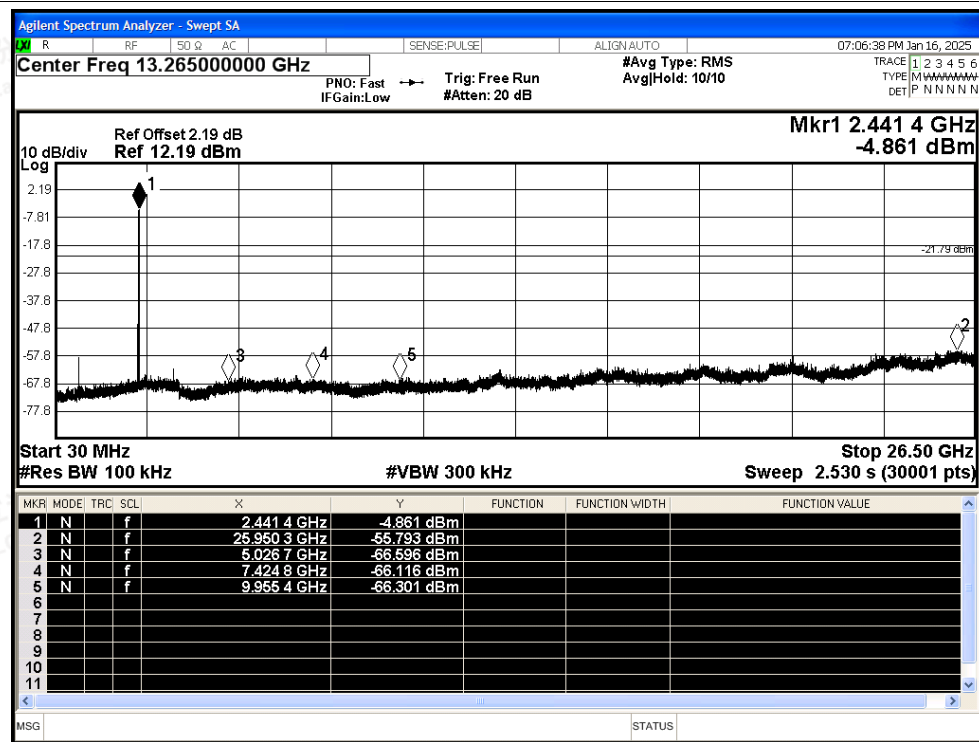




Tx. Spurious NVNT 2-DH5 2441MHz Ant Ref

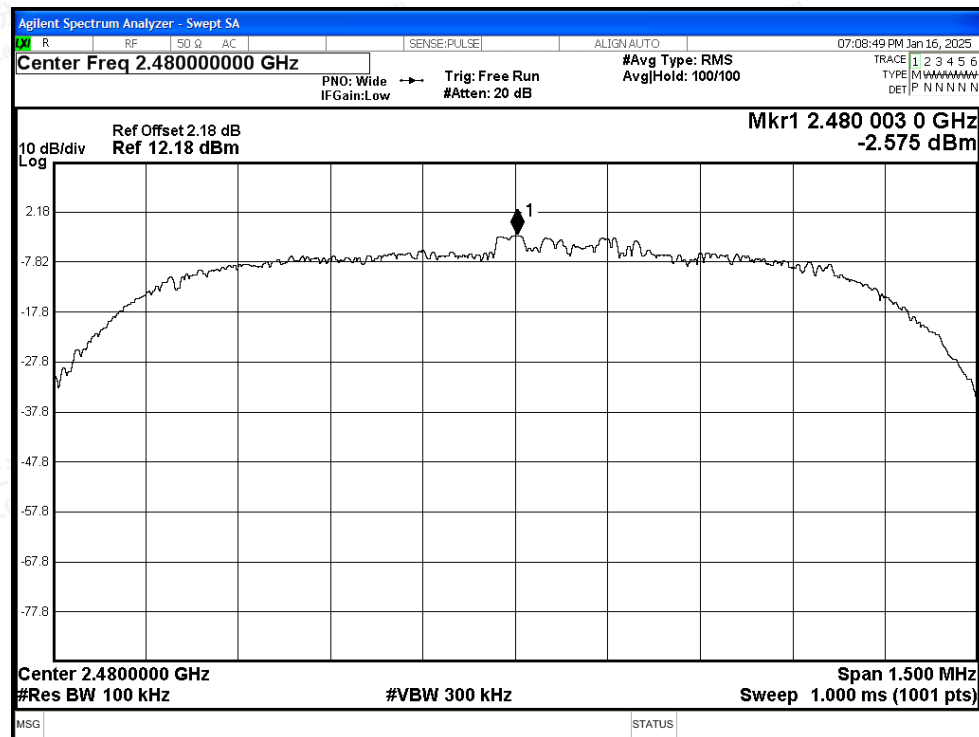


Tx. Spurious NVNT 2-DH5 2441MHz Ant Emission

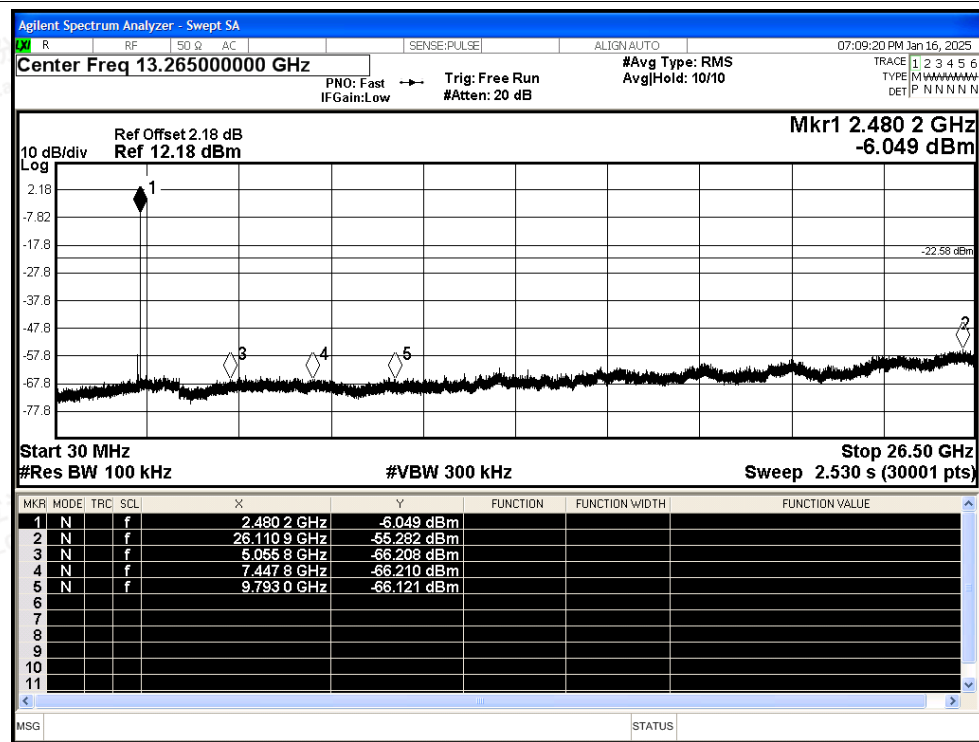




Tx. Spurious NVNT 2-DH5 2480MHz Ant Ref

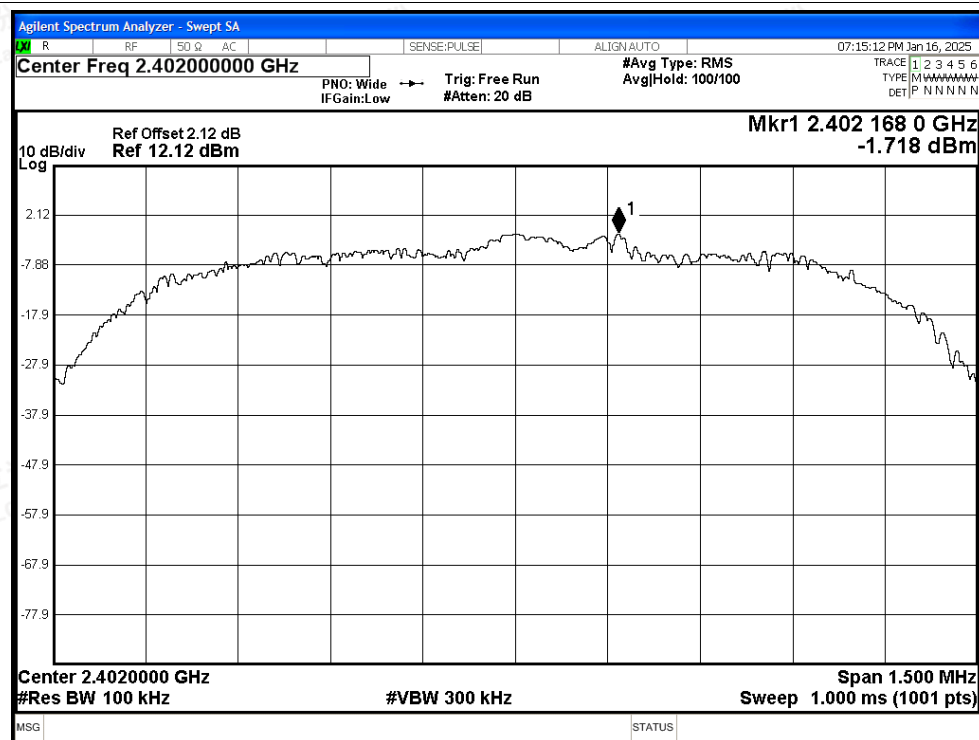


Tx. Spurious NVNT 2-DH5 2480MHz Ant Emission

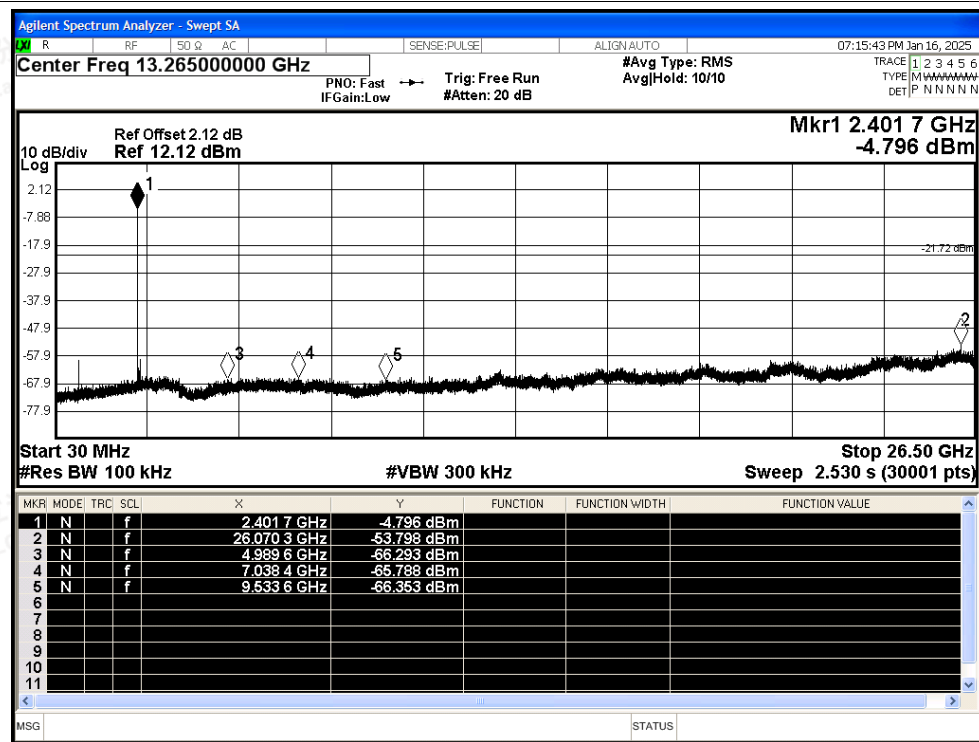




Tx. Spurious NVNT 3-DH5 2402MHz Ant Ref

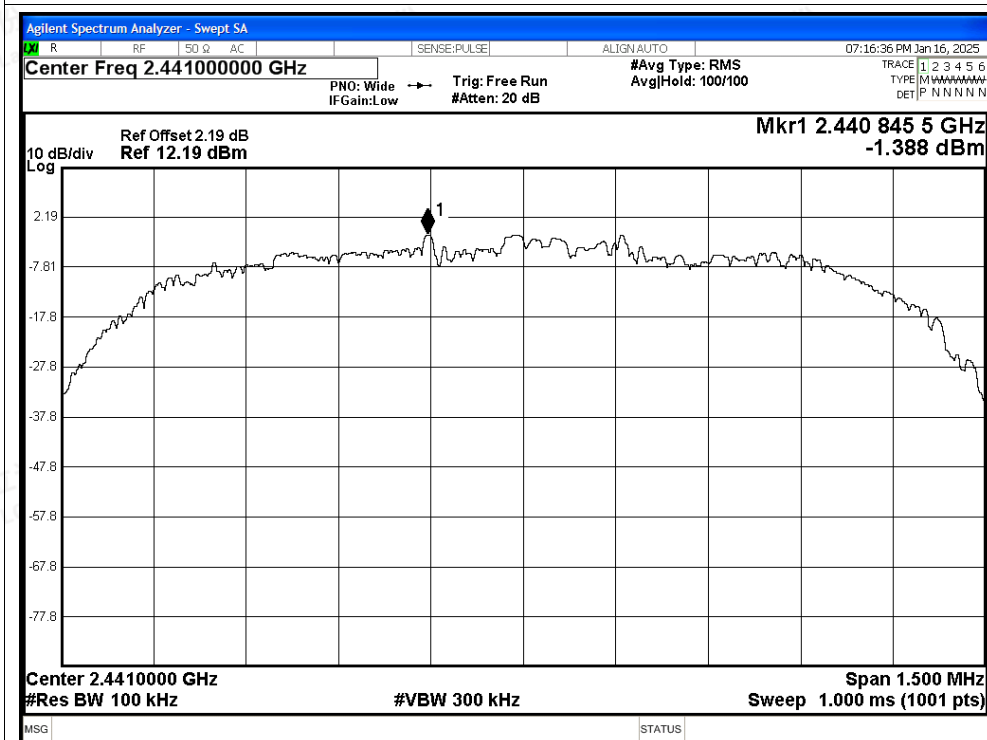


Tx. Spurious NVNT 3-DH5 2402MHz Ant Emission

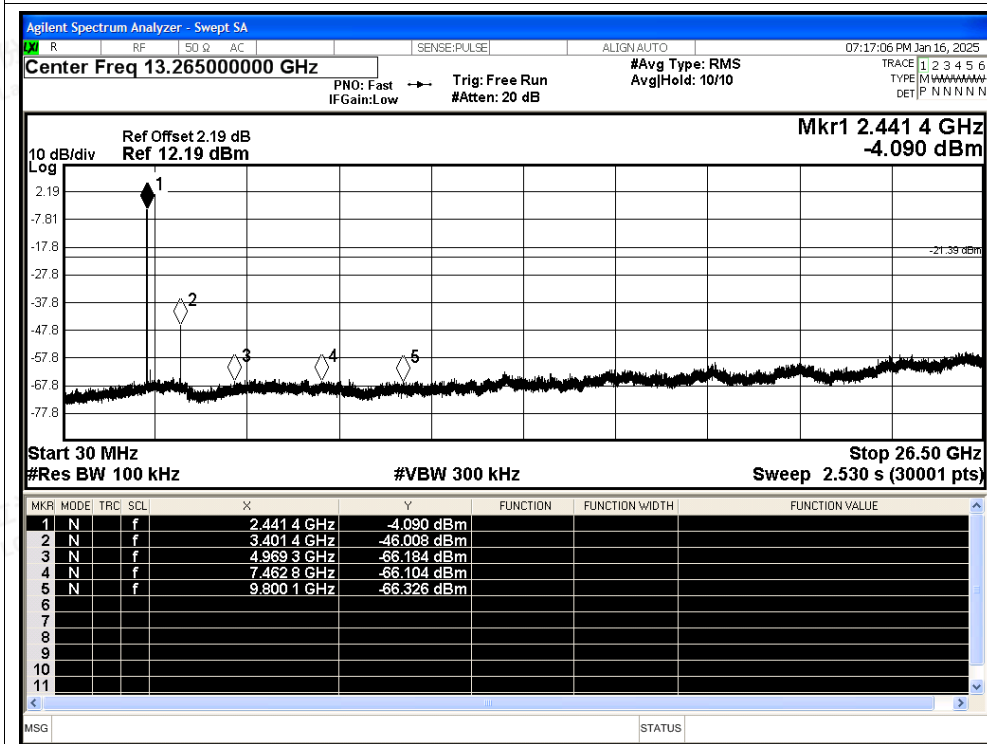




Tx. Spurious NVNT 3-DH5 2441MHz Ant Ref

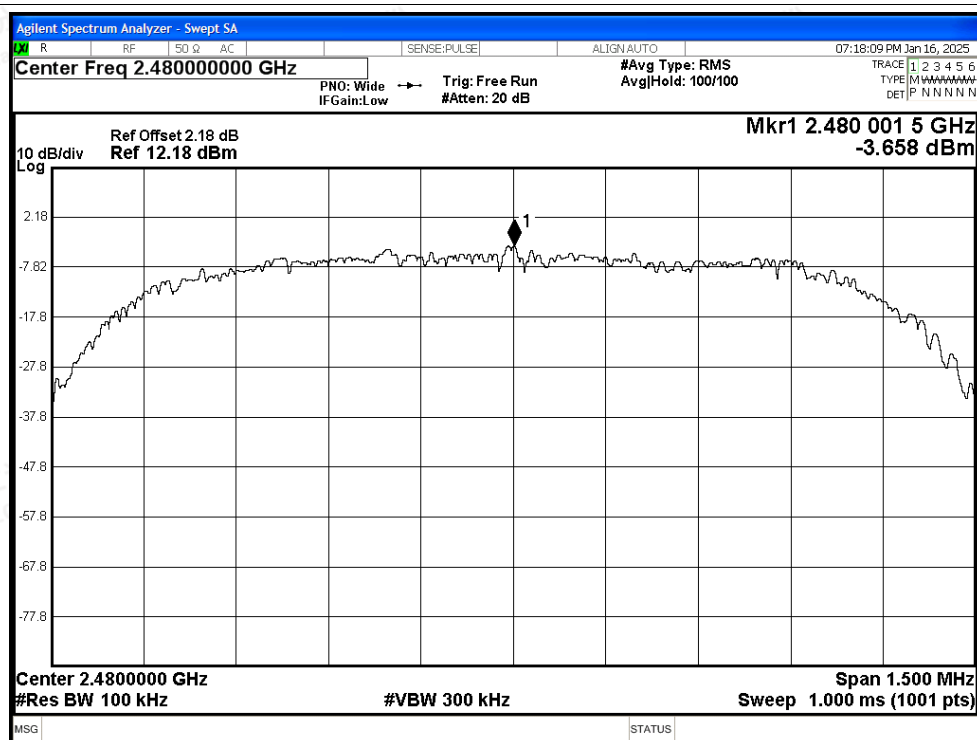


Tx. Spurious NVNT 3-DH5 2441MHz Ant Emission

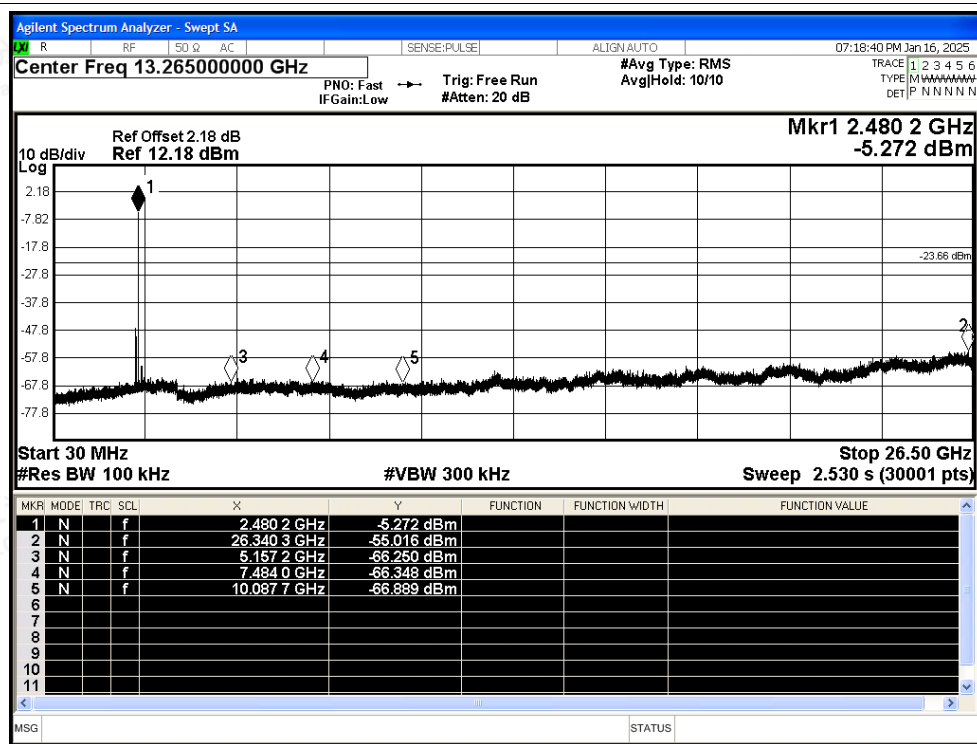




Tx. Spurious NVNT 3-DH5 2480MHz Ant Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant Emission





A.8 Duty Cycle

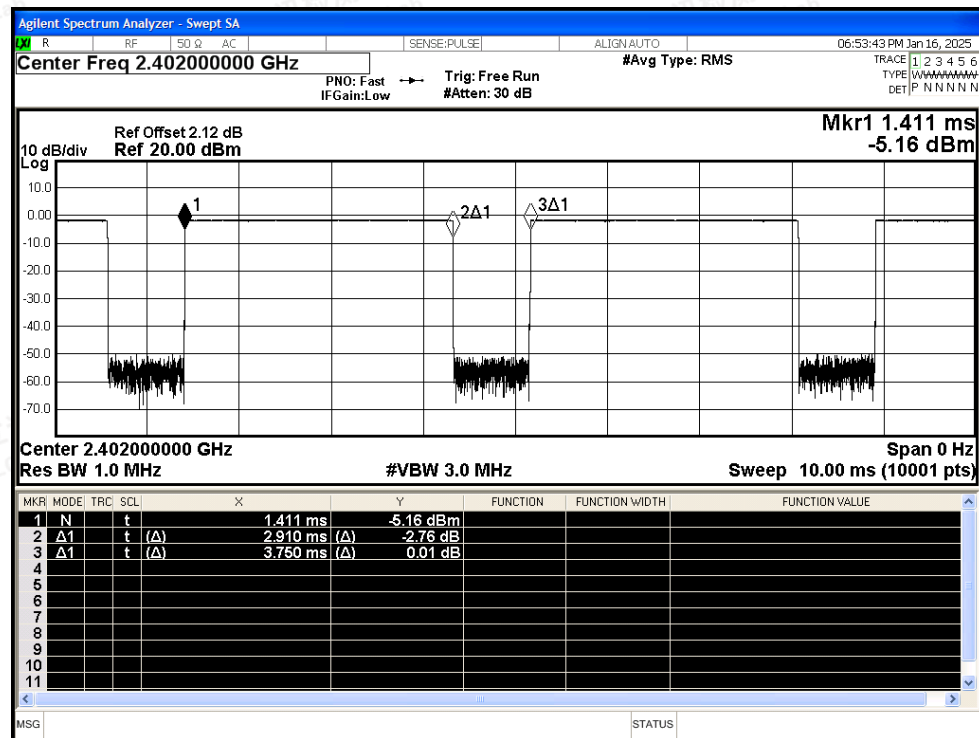
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant	77.6	1.1	0.34
NVNT	1-DH5	2441	Ant	77.63	1.1	0.34
NVNT	1-DH5	2480	Ant	77.63	1.1	0.34
NVNT	2-DH5	2402	Ant	77.33	1.12	0.34
NVNT	2-DH5	2441	Ant	77.28	1.12	0.35
NVNT	2-DH5	2480	Ant	77.33	1.12	0.34
NVNT	3-DH5	2402	Ant	77.33	1.12	0.34
NVNT	3-DH5	2441	Ant	77.28	1.12	0.35
NVNT	3-DH5	2480	Ant	77.28	1.12	0.35



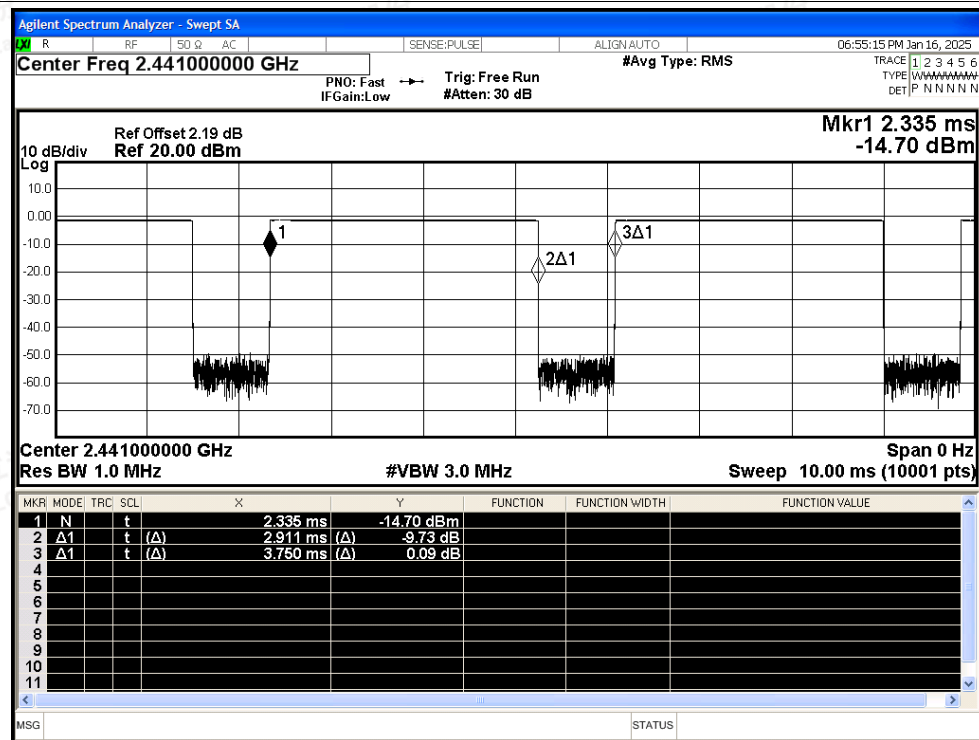


Test Graphs

Duty Cycle NVNT 1-DH5 2402MHz Ant



Duty Cycle NVNT 1-DH5 2441MHz Ant



Shenzhen LCS Compliance Testing Laboratory Ltd.

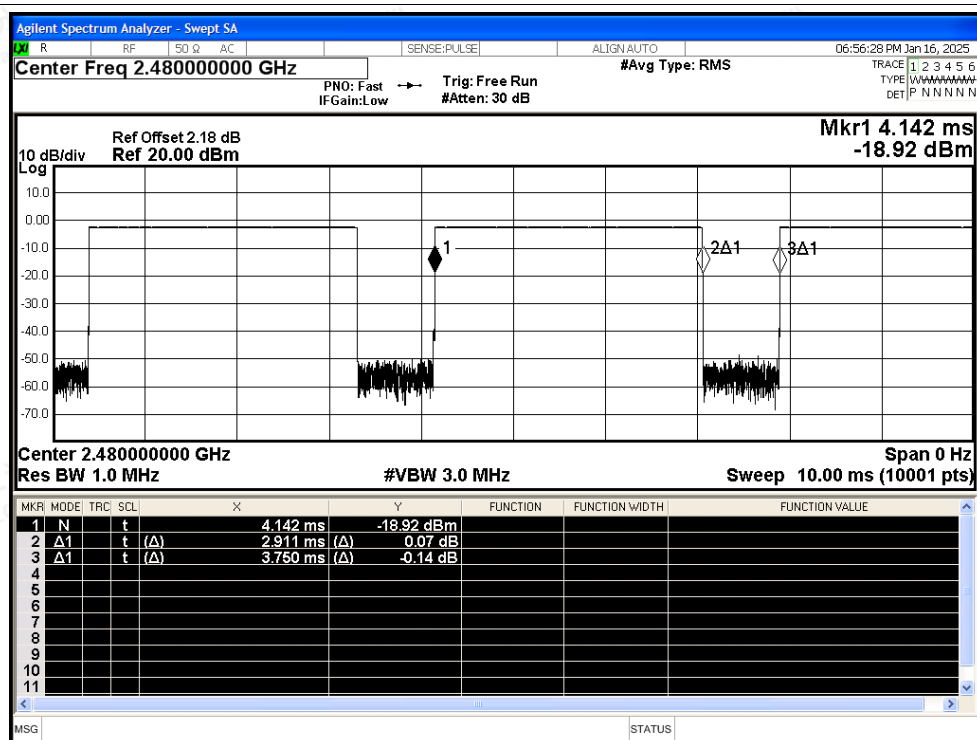
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

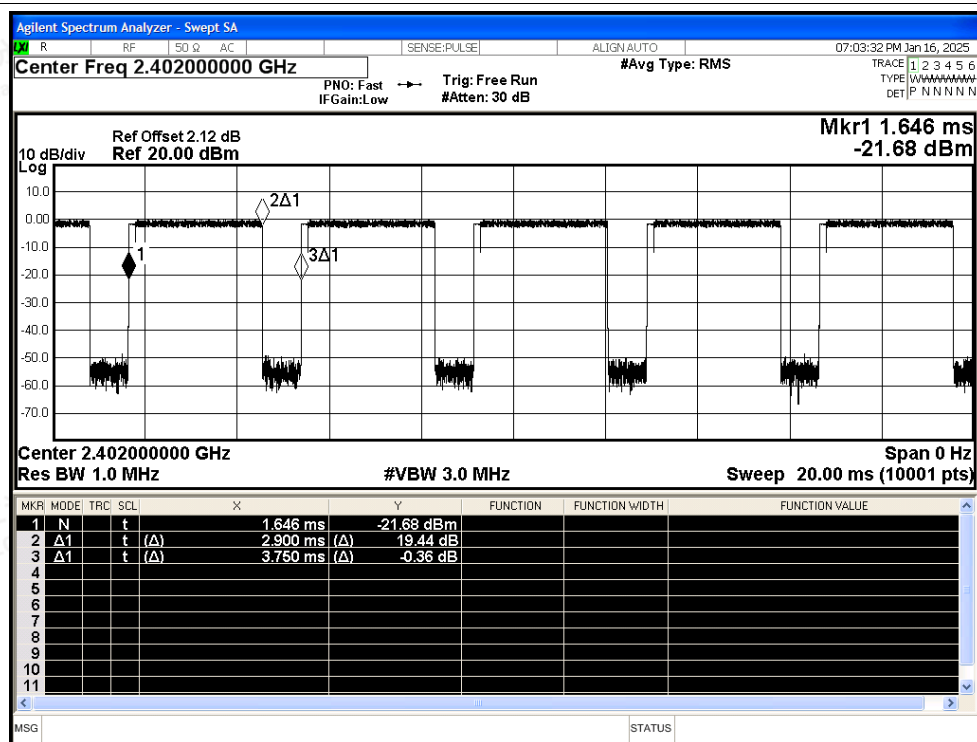
Scan code to check authenticity



Duty Cycle NVNT 1-DH5 2480MHz Ant

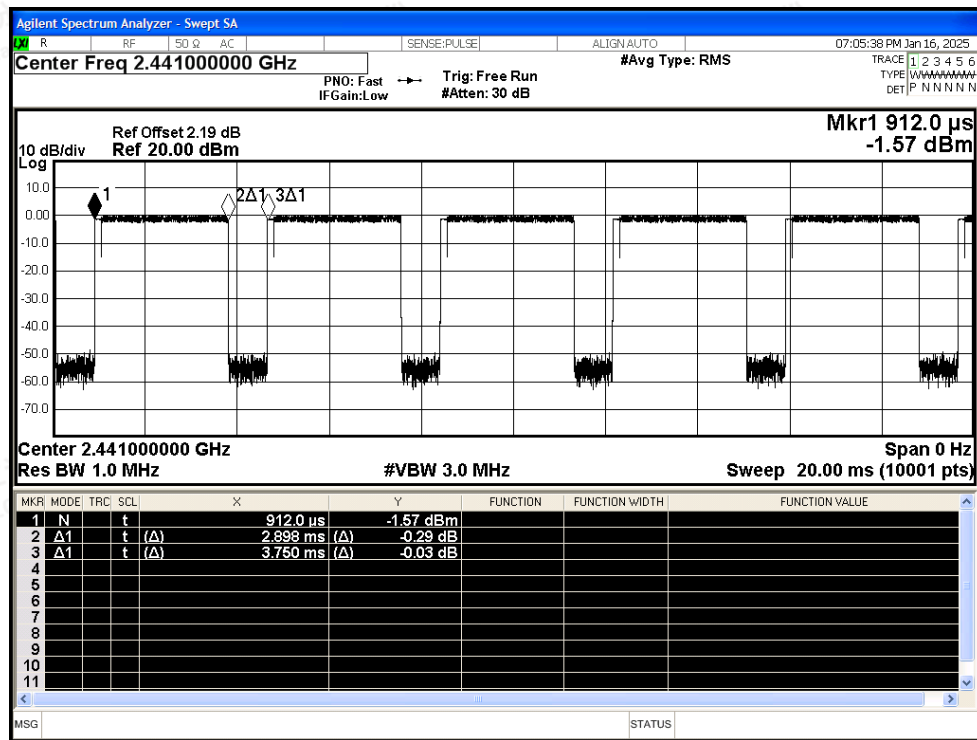


Duty Cycle NVNT 2-DH5 2402MHz Ant

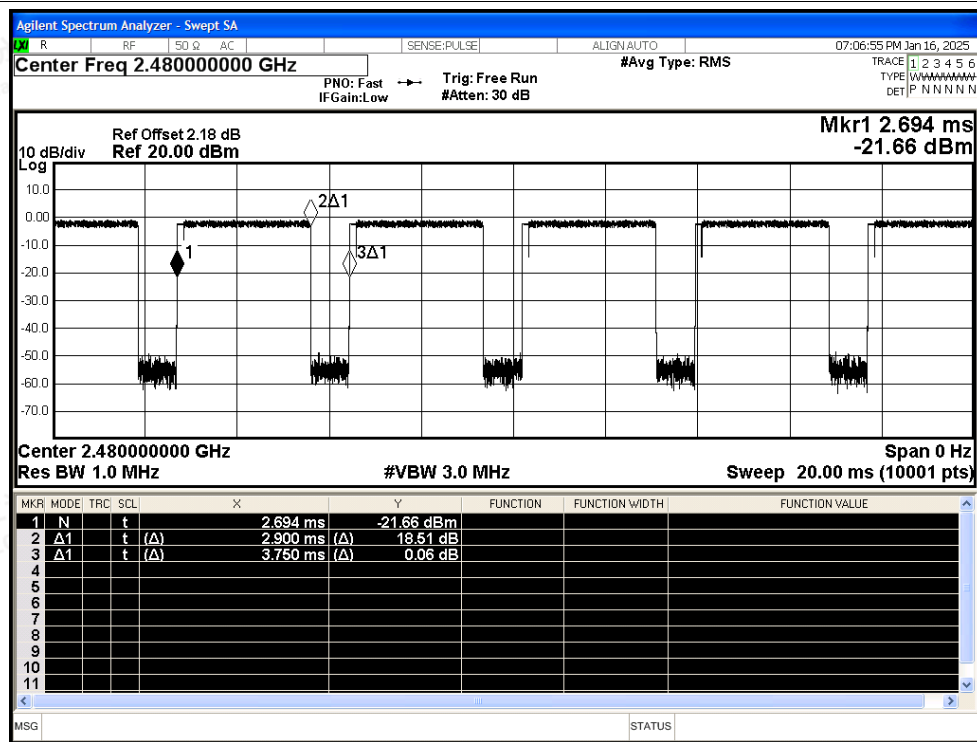




Duty Cycle NVNT 2-DH5 2441MHz Ant

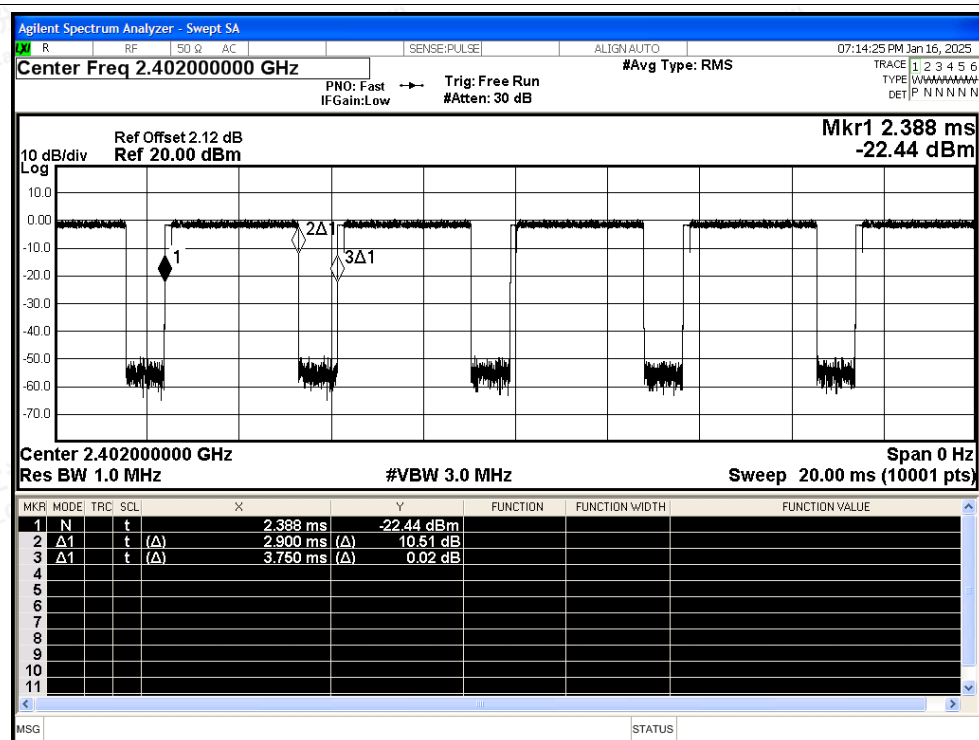


Duty Cycle NVNT 2-DH5 2480MHz Ant

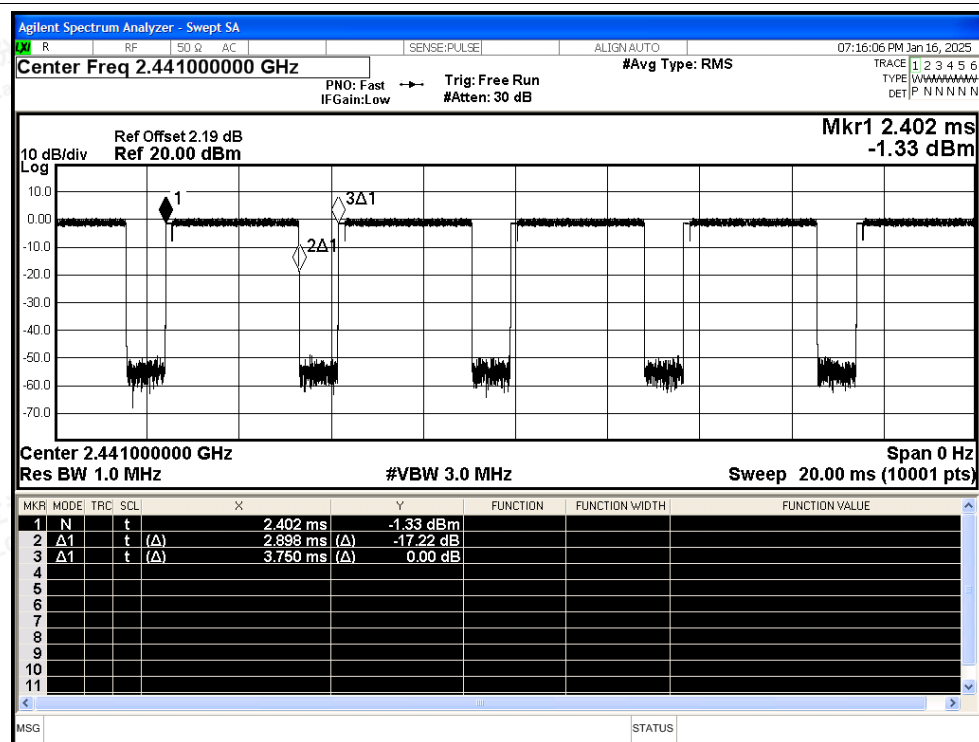


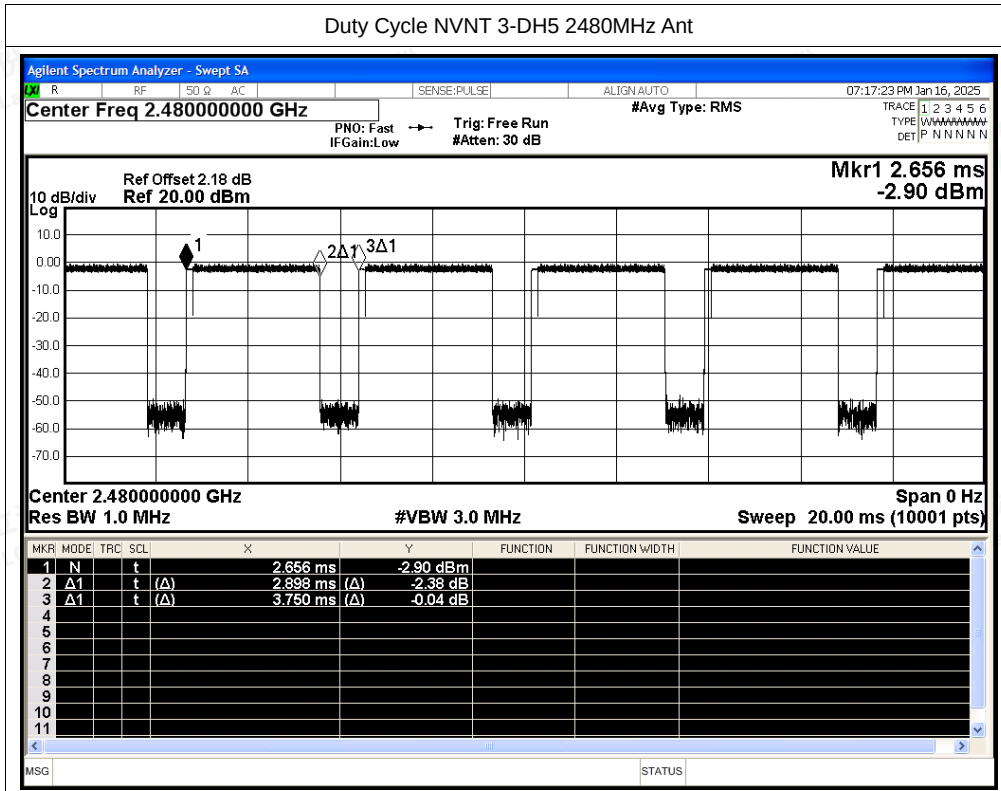


Duty Cycle NVNT 3-DH5 2402MHz Ant



Duty Cycle NVNT 3-DH5 2441MHz Ant







A.9 Restrict Band

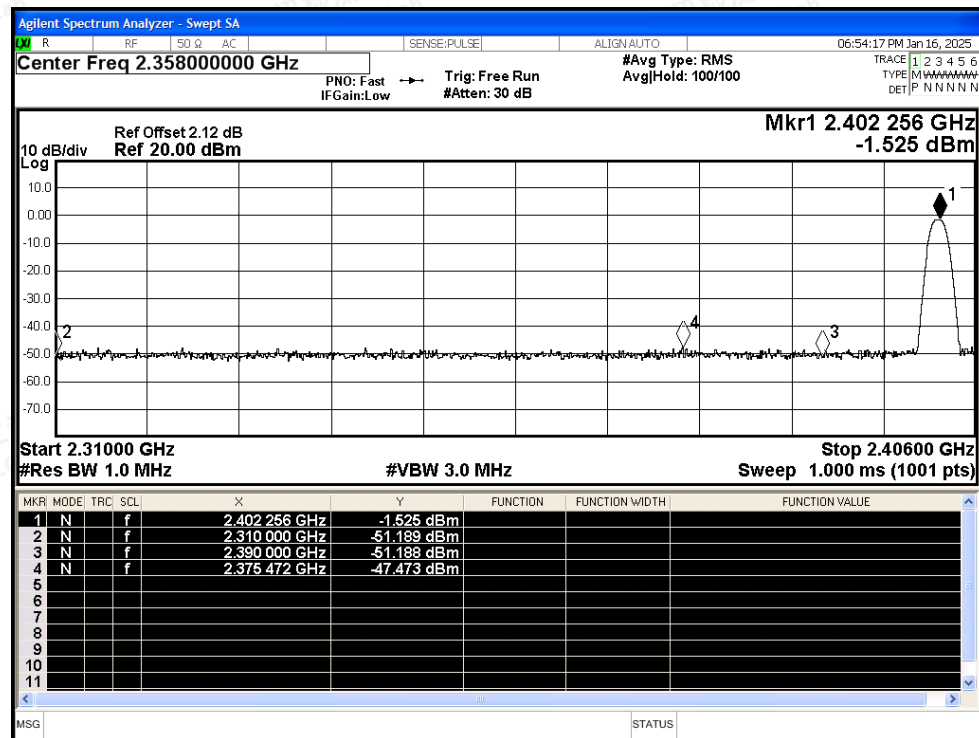
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant	No-Hopping	2310	-51.19	2	-	46.07	Peak	74	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2310	-58.77	2	1.1	39.59	Average	54	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2375.472	-47.47	2	-	49.79	Peak	74	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2366.352	-57.72	2	1.1	40.64	Average	54	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2390	-51.19	2	-	46.07	Peak	74	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2390	-58.21	2	1.1	40.15	Average	54	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2483.5	-49.35	2	-	47.91	Peak	74	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2483.5	-57.28	2	1.1	41.08	Average	54	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2488.576	-46.87	2	-	50.39	Peak	74	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2483.824	-57.15	2	1.1	41.21	Average	54	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2500	-49.36	2	-	47.9	Peak	74	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2500	-57.74	2	1.1	40.62	Average	54	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2310	-51.14	2	-	46.12	Peak	74	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2310	-58.93	2	1.12	39.45	Average	54	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2365.872	-47.76	2	-	49.5	Peak	74	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2382.192	-57.6	2	1.12	40.78	Average	54	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2390	-51.61	2	-	45.65	Peak	74	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2390	-58.38	2	1.12	40	Average	54	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2483.5	-49.45	2	-	47.81	Peak	74	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2483.5	-57.95	2	1.12	40.43	Average	54	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2483.56	-46.86	2	-	50.4	Peak	74	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2483.608	-57.01	2	1.12	41.37	Average	54	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2500	-49.69	2	-	47.57	Peak	74	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2500	-58.27	2	1.12	40.11	Average	54	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2310	-51.14	2	-	46.12	Peak	74	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2310	-58.99	2	1.12	39.39	Average	54	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2364.144	-47.46	2	-	49.8	Peak	74	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2383.632	-57.66	2	1.12	40.72	Average	54	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2390	-51.17	2	-	46.09	Peak	74	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2390	-58.39	2	1.12	39.99	Average	54	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2483.5	-49.55	2	-	47.71	Peak	74	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2483.5	-57.55	2	1.12	40.83	Average	54	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2490.136	-46.38	2	-	50.88	Peak	74	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2483.848	-57.1	2	1.12	41.28	Average	54	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2500	-50.15	2	-	47.11	Peak	74	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2500	-58.42	2	1.12	39.96	Average	54	Pass



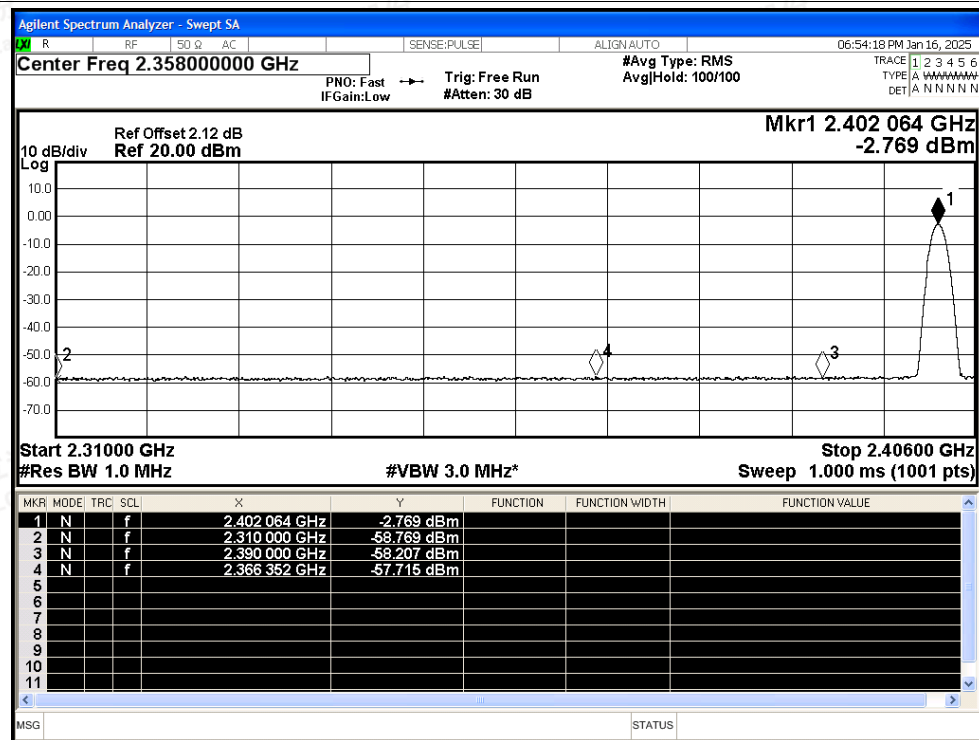


Test Graphs

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

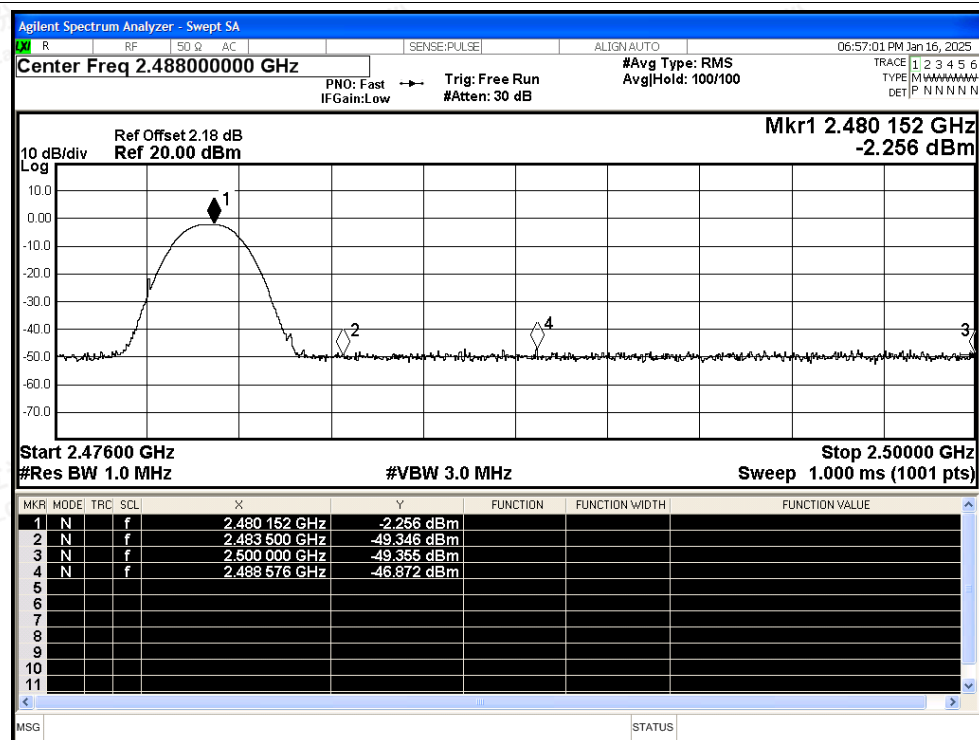


Restrict Band NVNT 1-DH5 2402MHz Ant No-Hopping Average

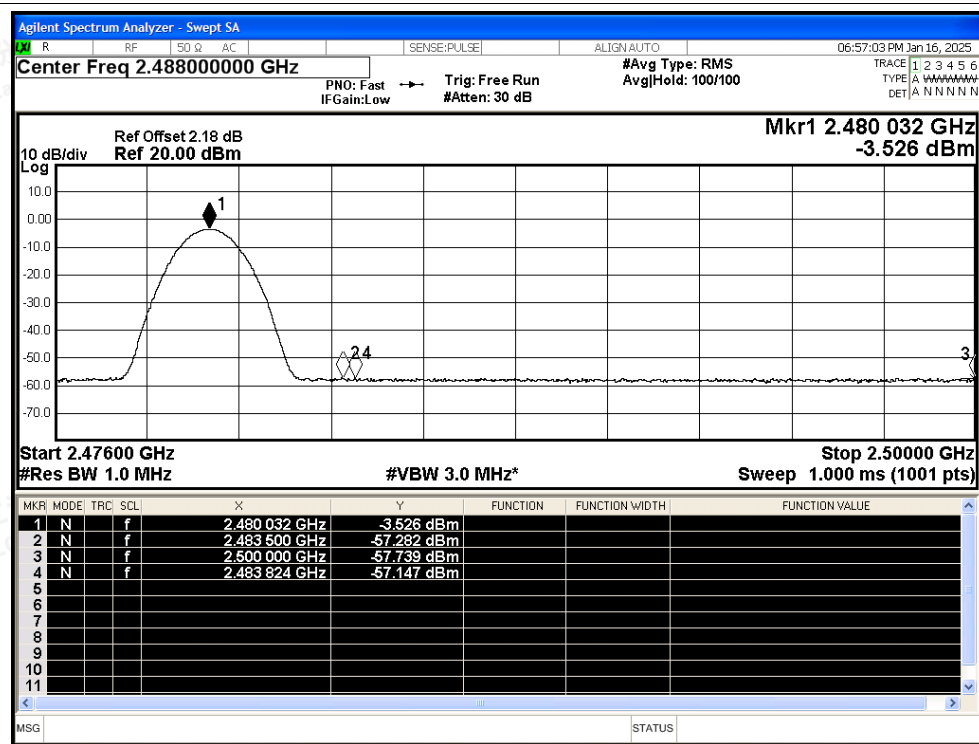




Restrict Band NVNT 1-DH5 2480MHz Ant No-Hopping Peak

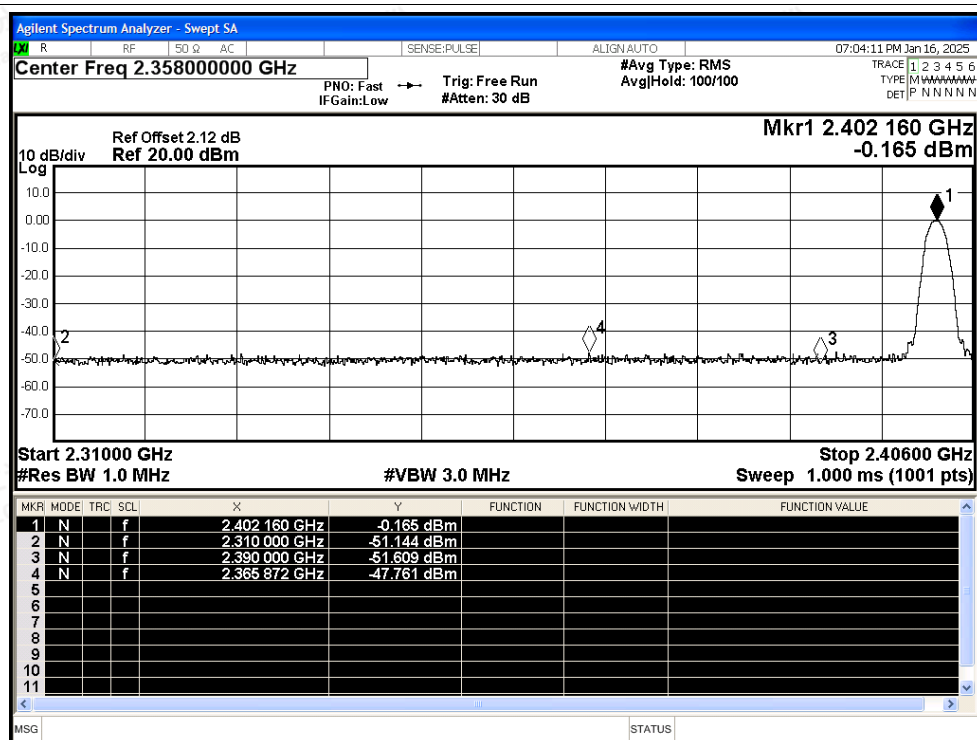


Restrict Band NVNT 1-DH5 2480MHz Ant No-Hopping Average

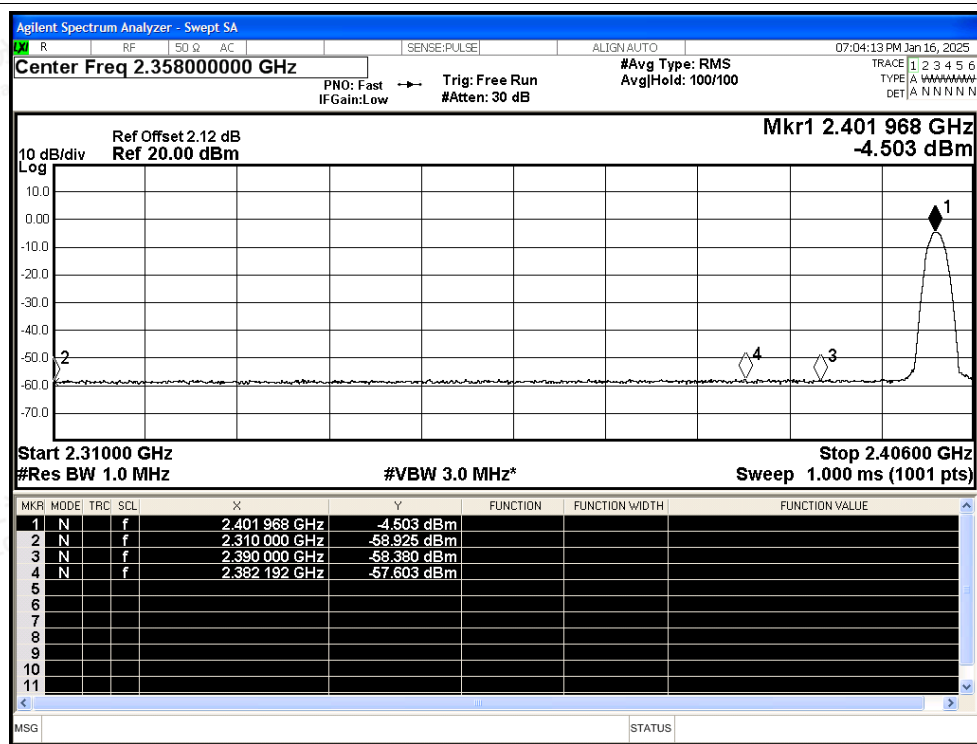




Restrict Band NVNT 2-DH5 2402MHz Ant No-Hopping Peak

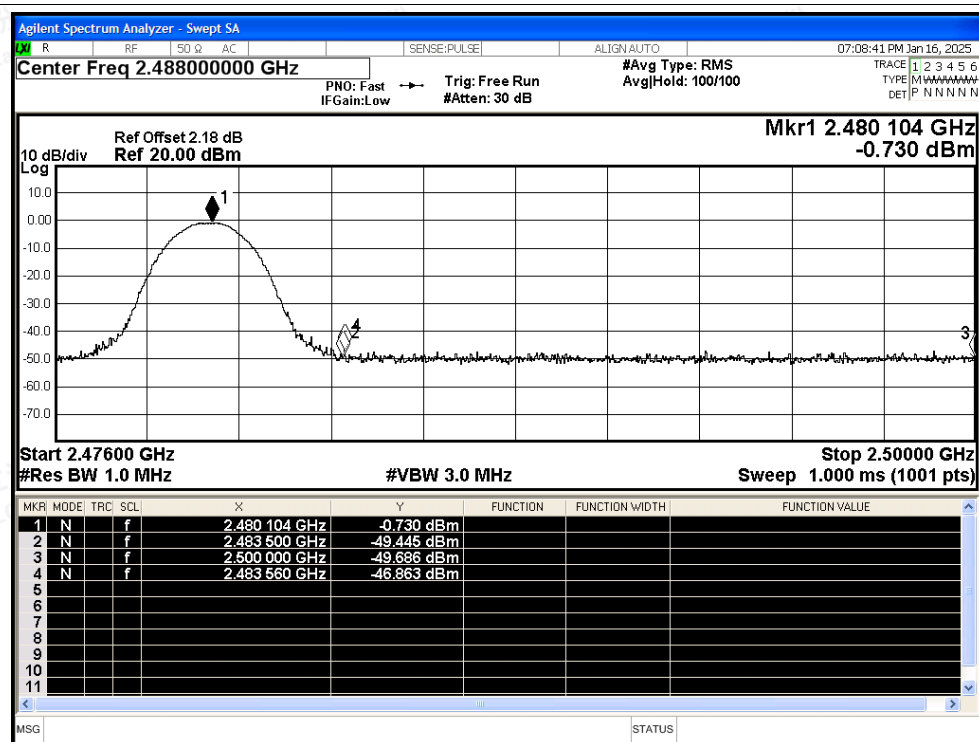


Restrict Band NVNT 2-DH5 2402MHz Ant No-Hopping Average

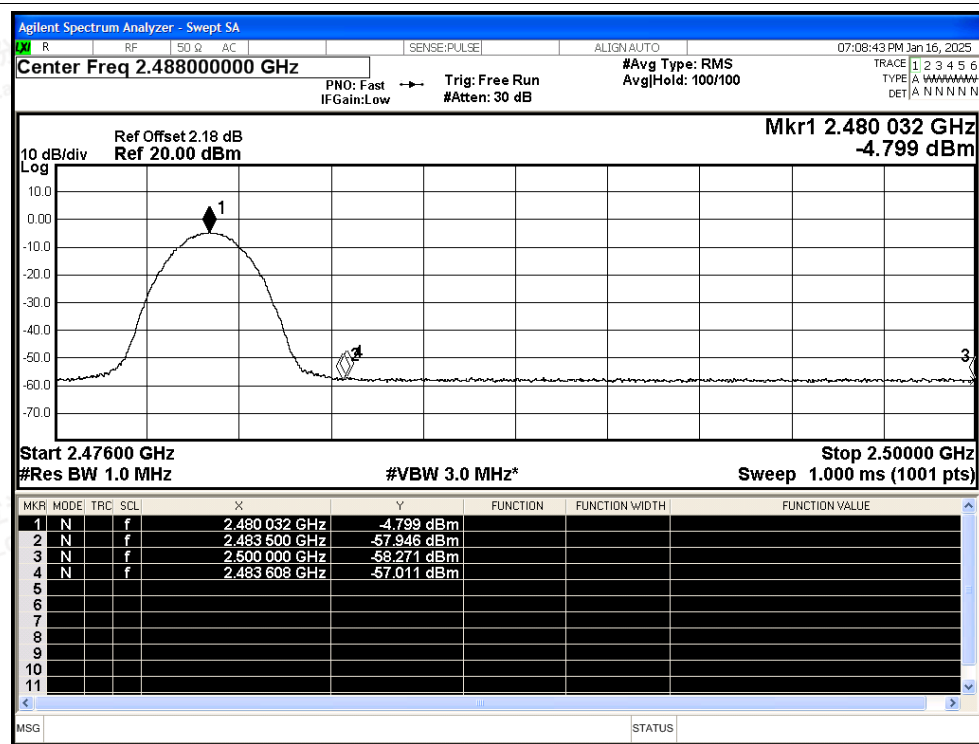




Restrict Band NVNT 2-DH5 2480MHz Ant No-Hopping Peak

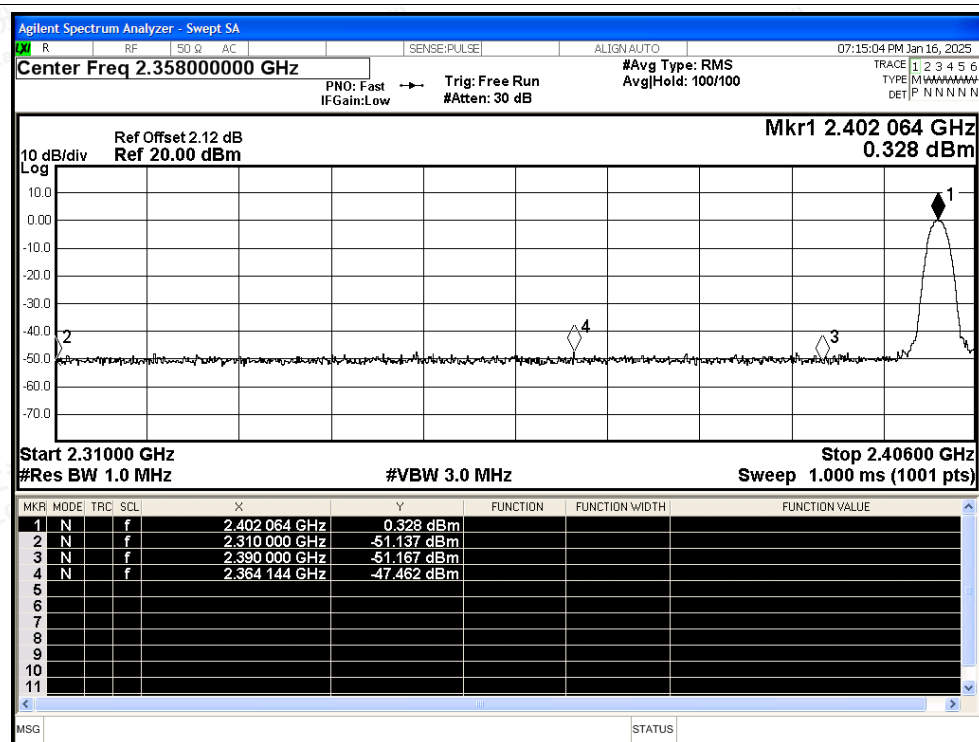


Restrict Band NVNT 2-DH5 2480MHz Ant No-Hopping Average

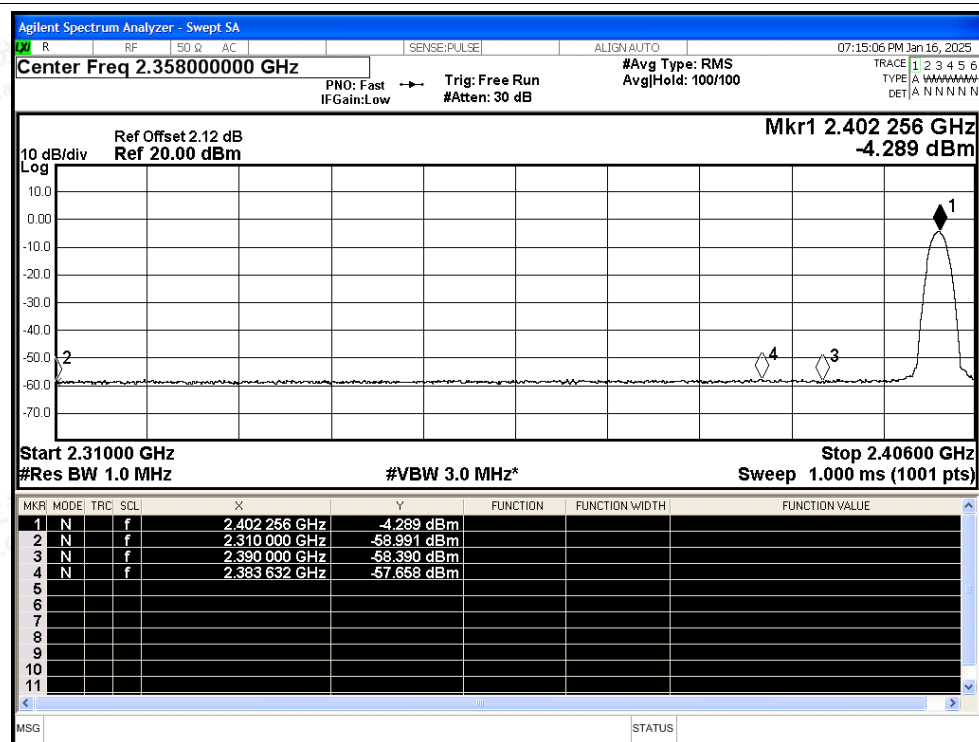




Restrict Band NVNT 3-DH5 2402MHz Ant No-Hopping Peak

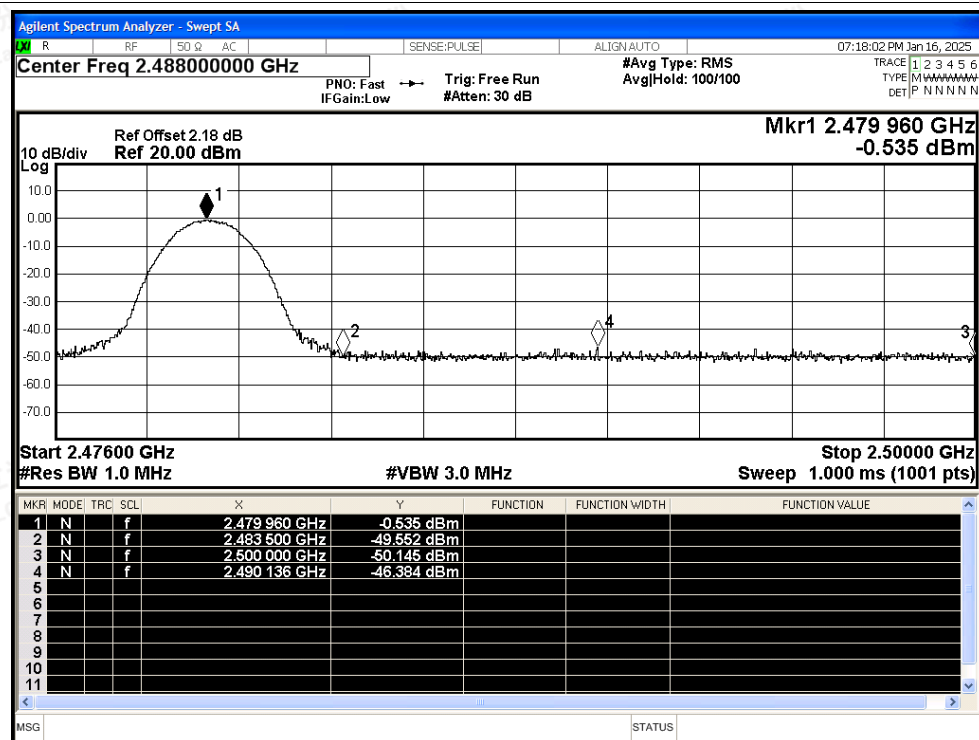


Restrict Band NVNT 3-DH5 2402MHz Ant No-Hopping Average





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



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

