



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: WCDMA digital mobile phone

Test Model: S23 Pro

Environmental Conditions

Temperature:	24.6°C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Luo
Supervised by:	Nick Peng



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A.1 -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.96	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.994	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.953	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.283	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.287	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.284	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.291	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.311	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.293	N/A	Pass

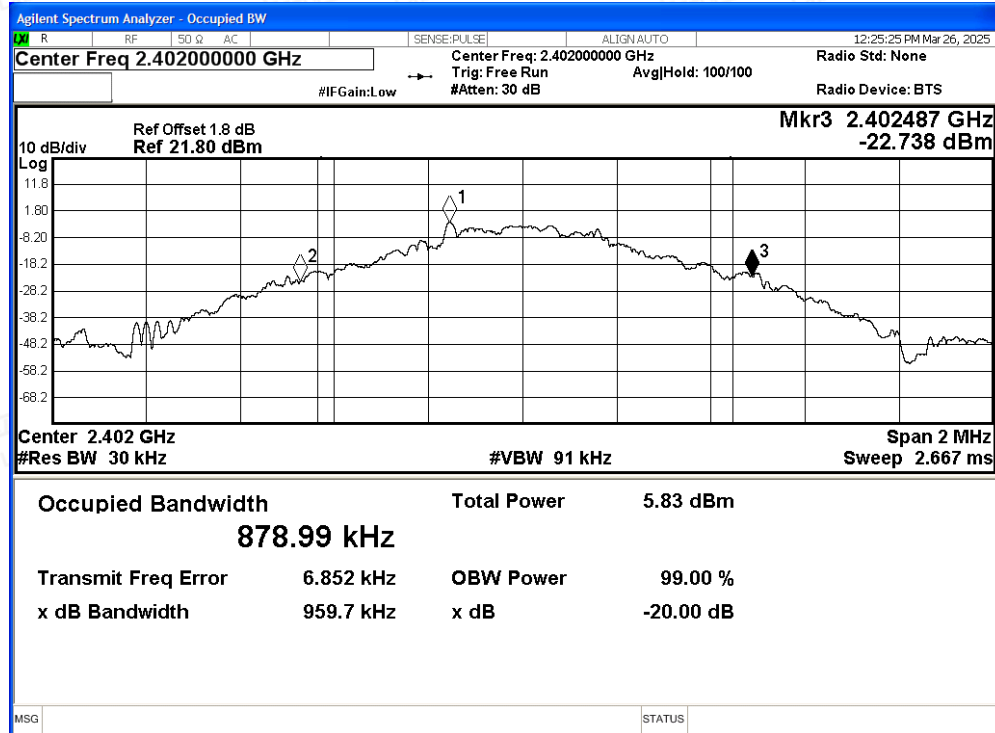


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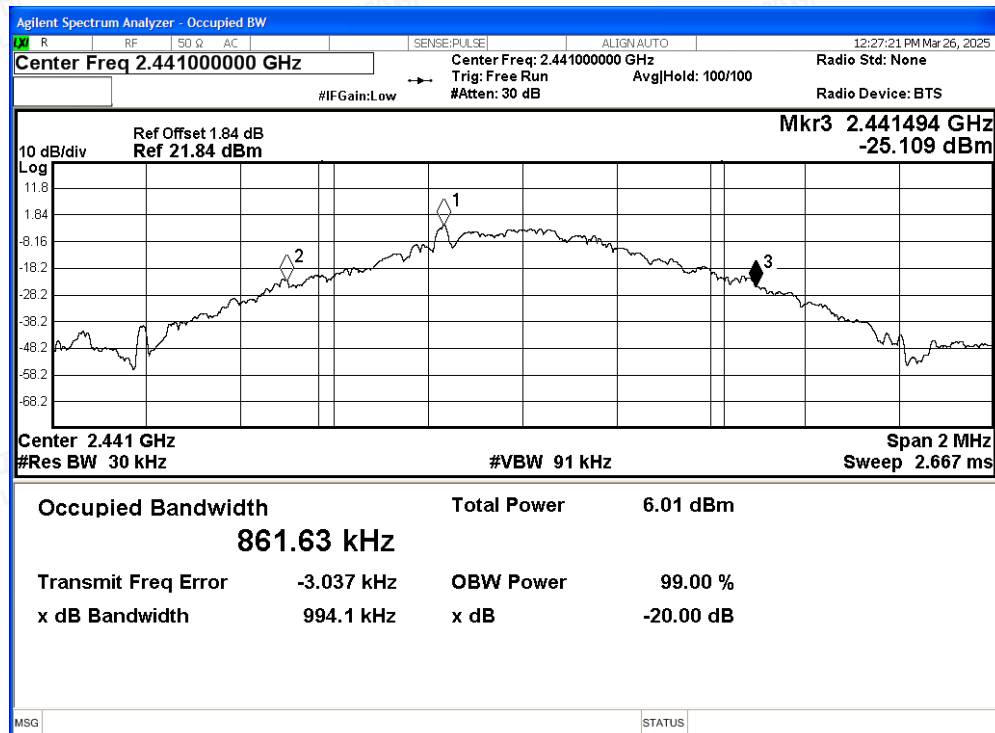


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

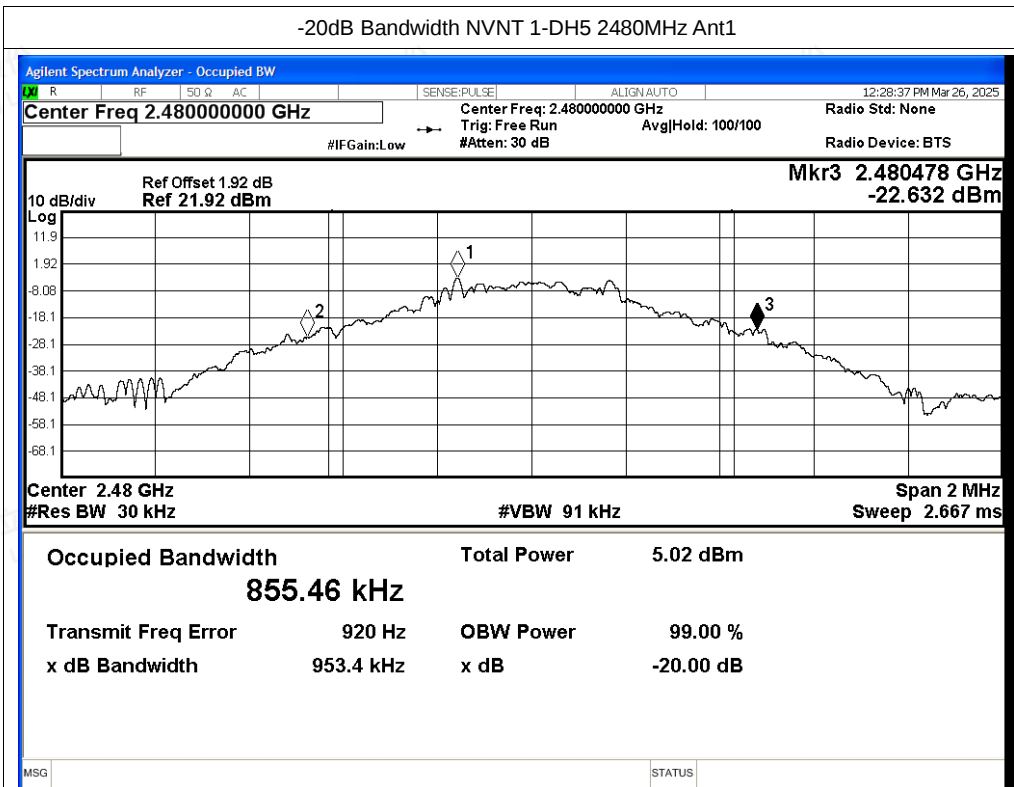


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

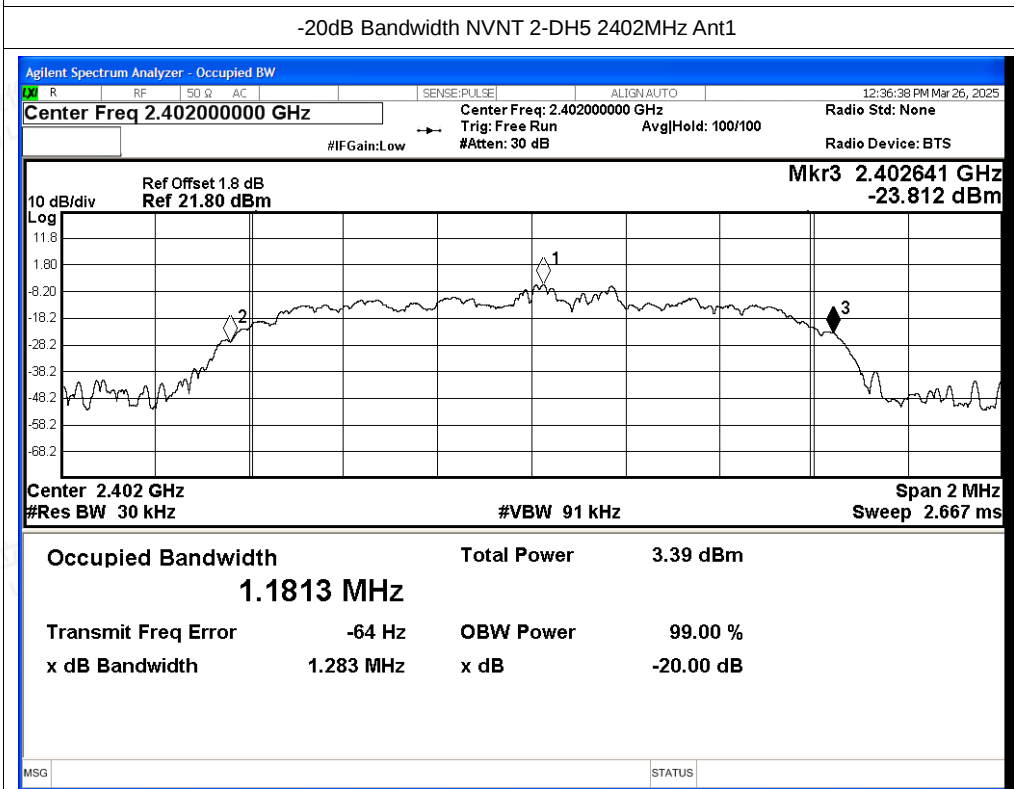




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

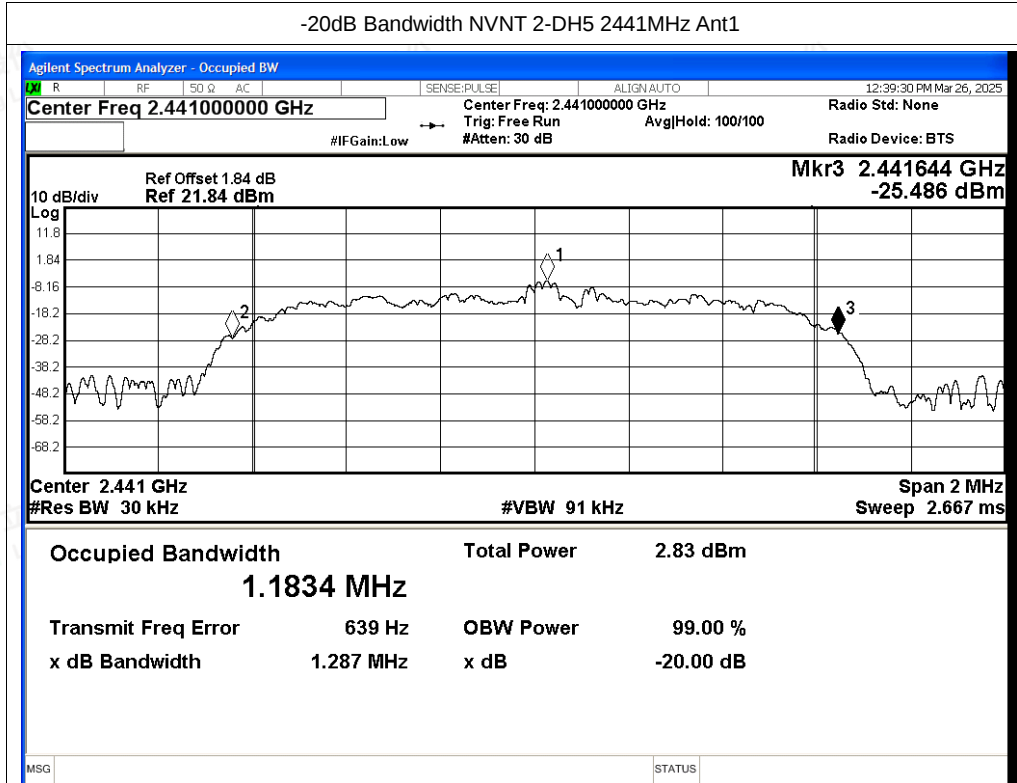


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

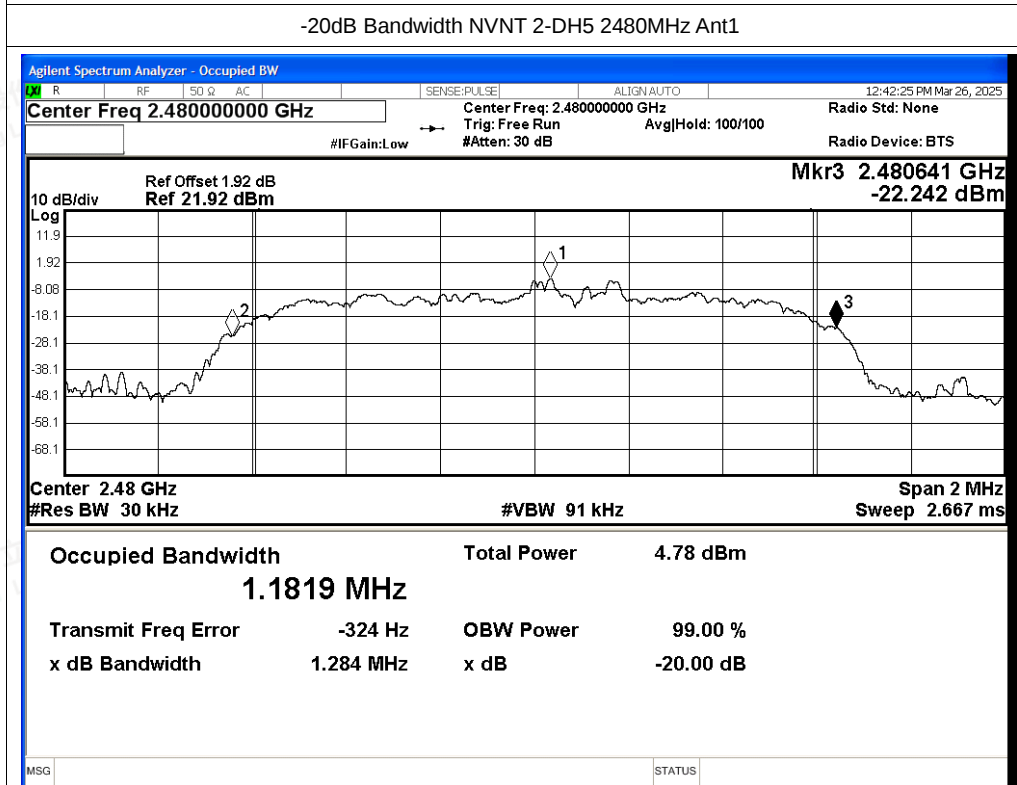




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

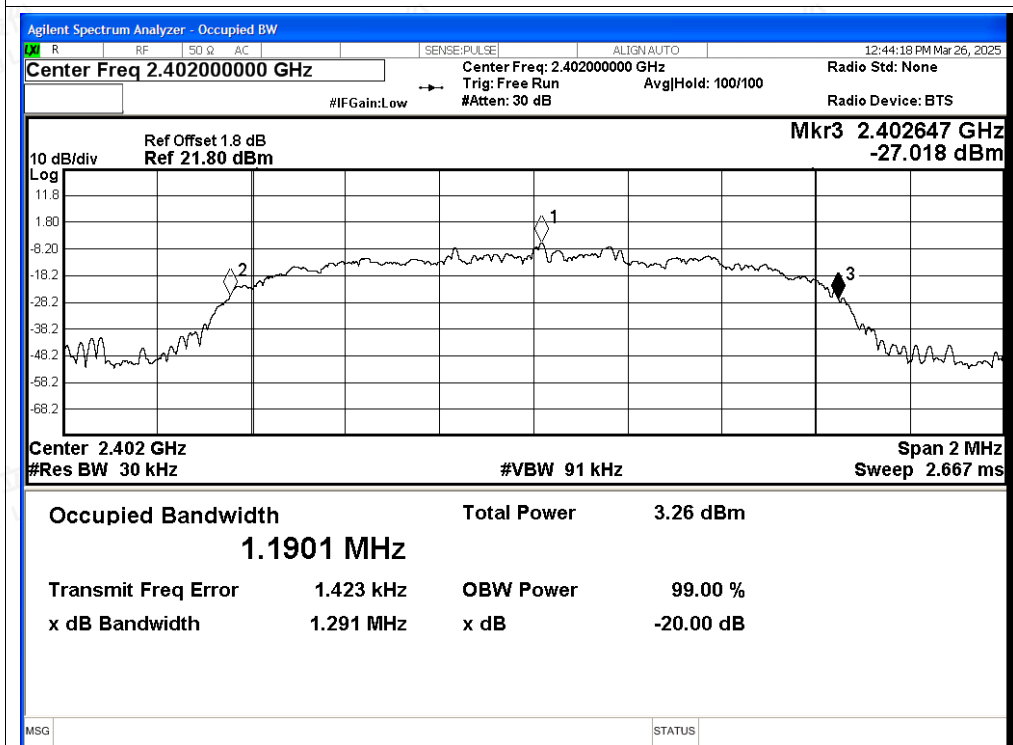


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

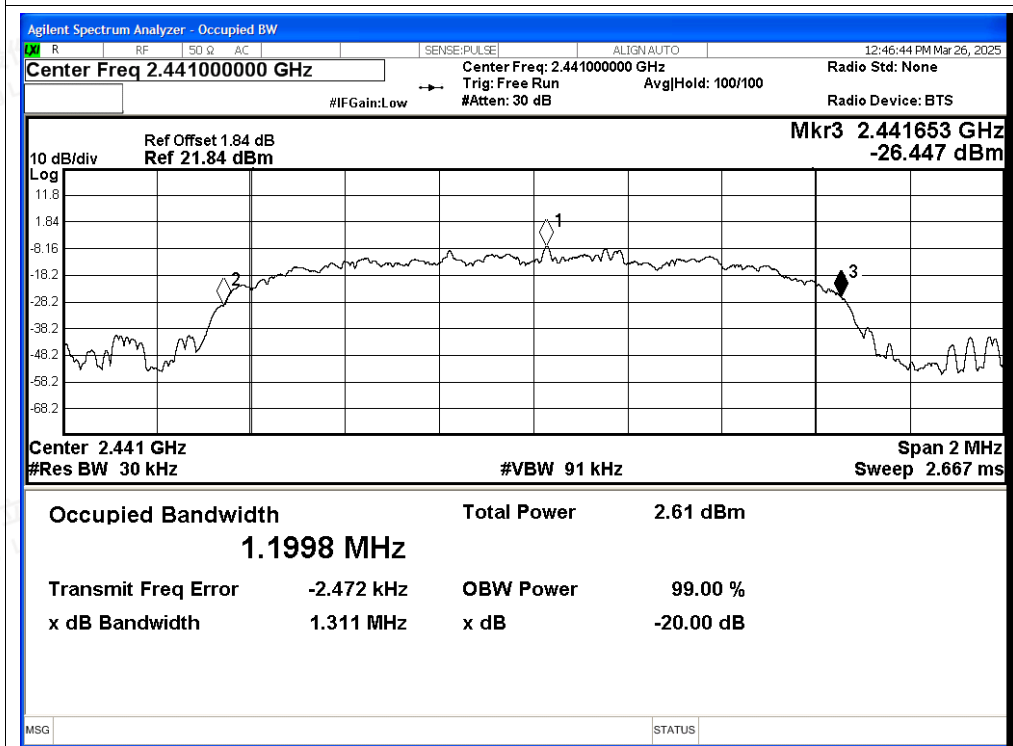


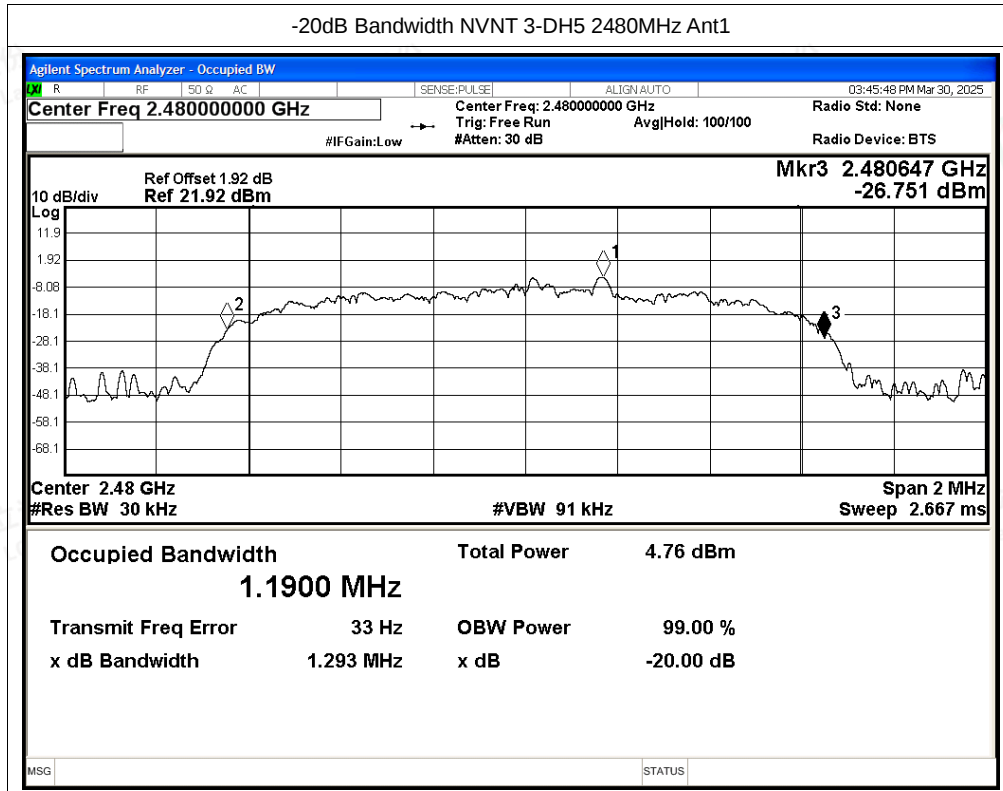


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1







A.2 Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.48	21	Pass
NVNT	1-DH5	2441	Ant1	-0.51	21	Pass
NVNT	1-DH5	2480	Ant1	-1.45	21	Pass
NVNT	2-DH5	2402	Ant1	-1.13	21	Pass
NVNT	2-DH5	2441	Ant1	-1.57	21	Pass
NVNT	2-DH5	2480	Ant1	0.37	21	Pass
NVNT	3-DH5	2402	Ant1	-0.7	21	Pass
NVNT	3-DH5	2441	Ant1	-1.18	21	Pass
NVNT	3-DH5	2480	Ant1	0.15	21	Pass

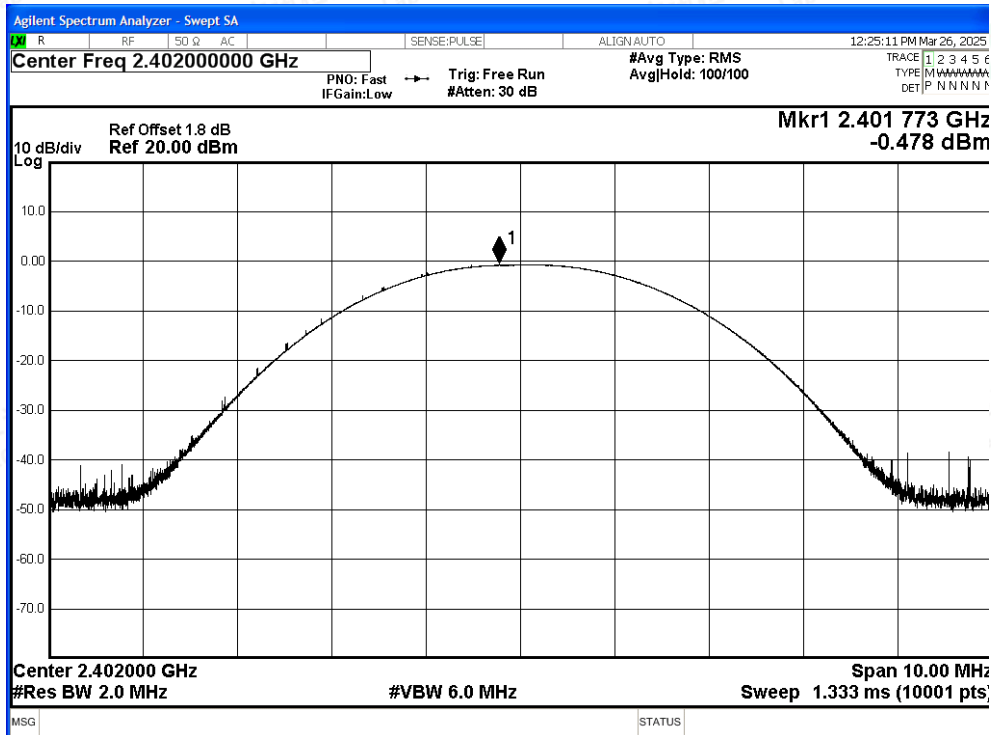


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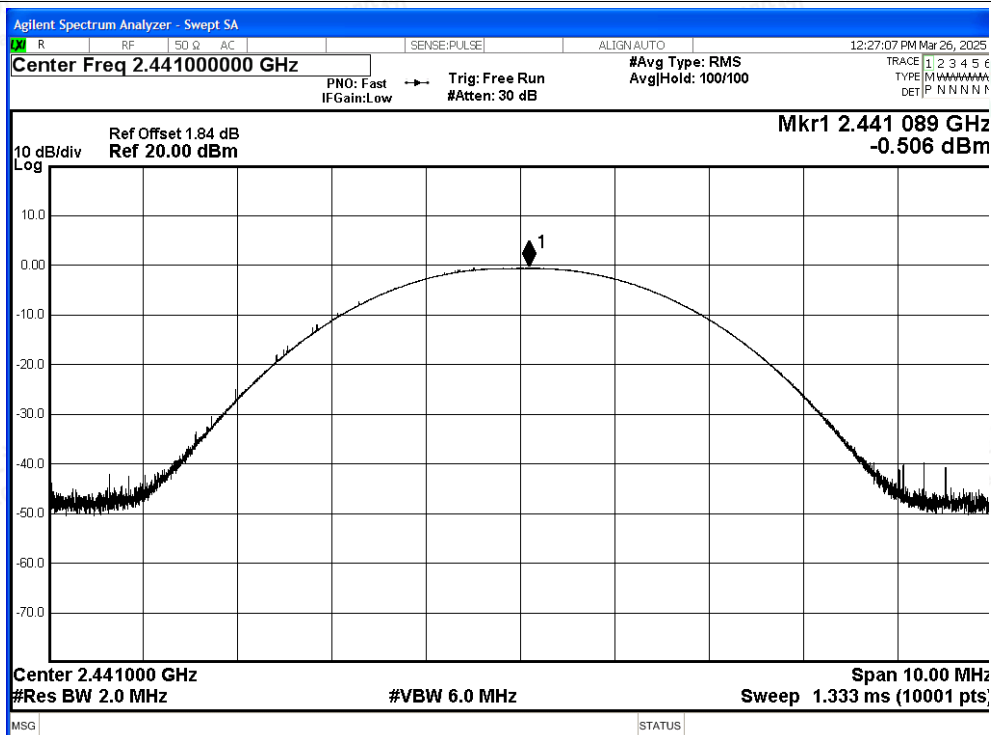


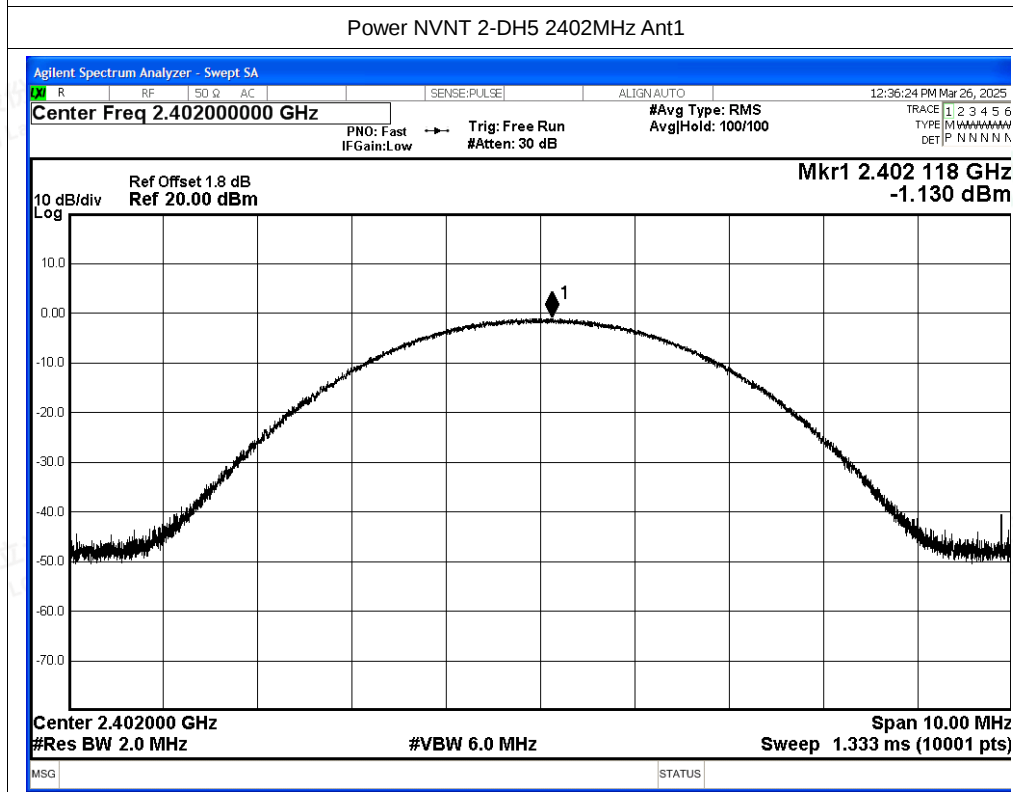
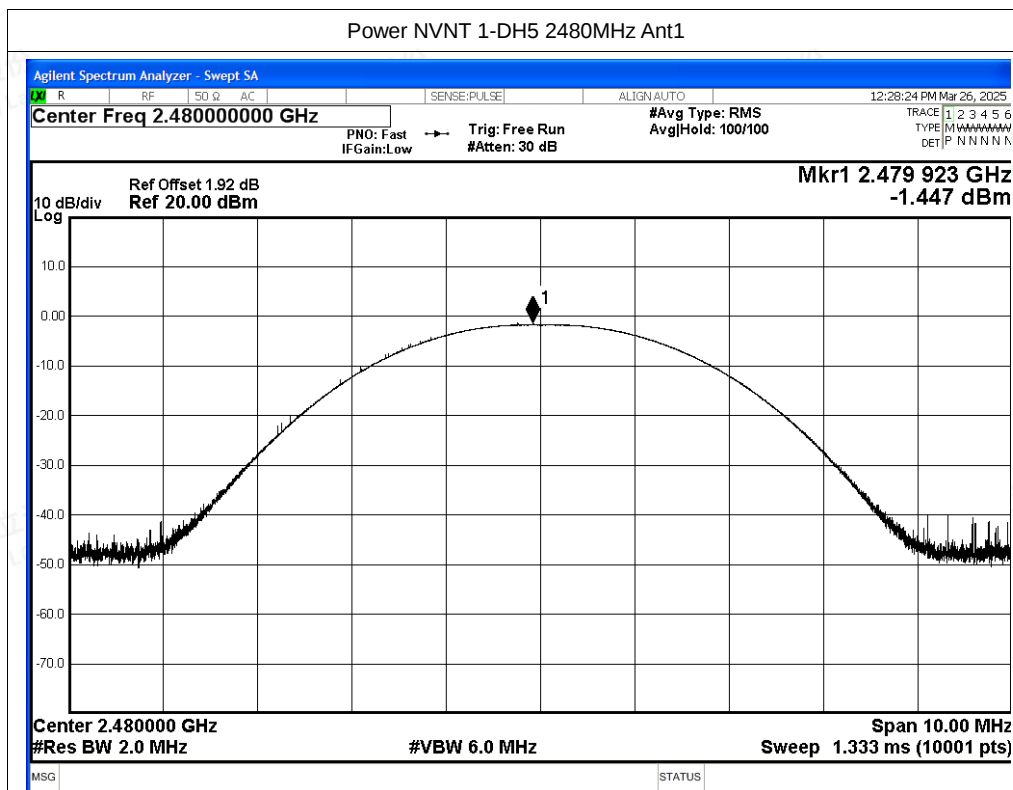
Test Graphs

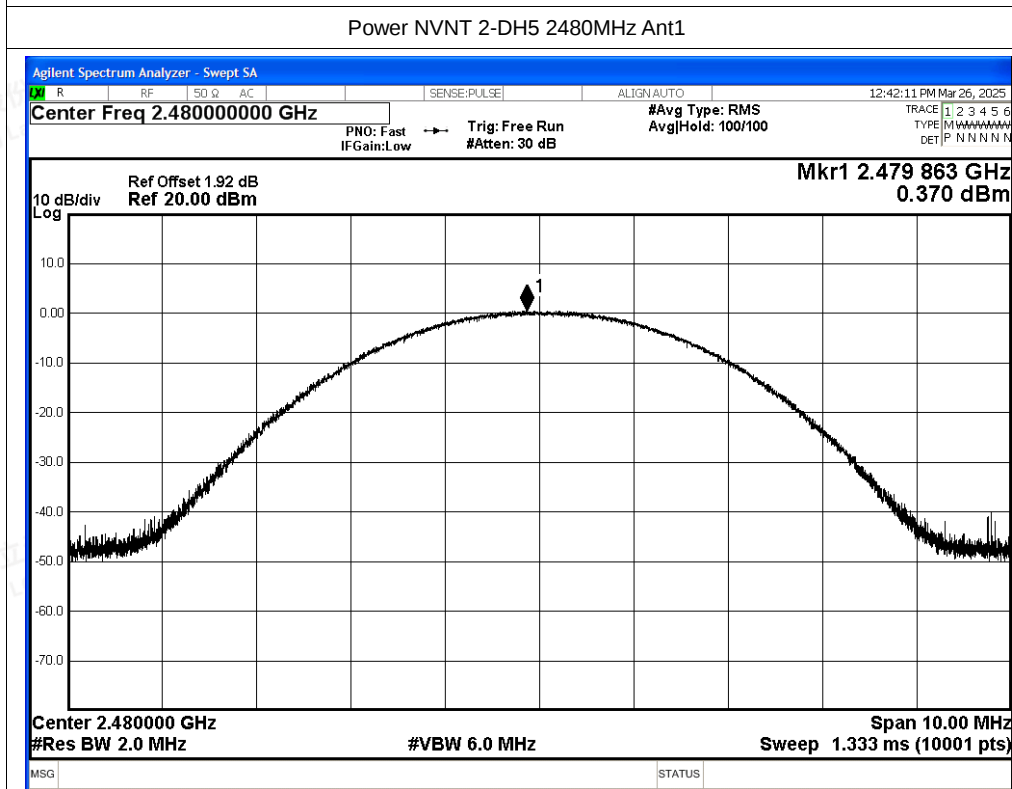
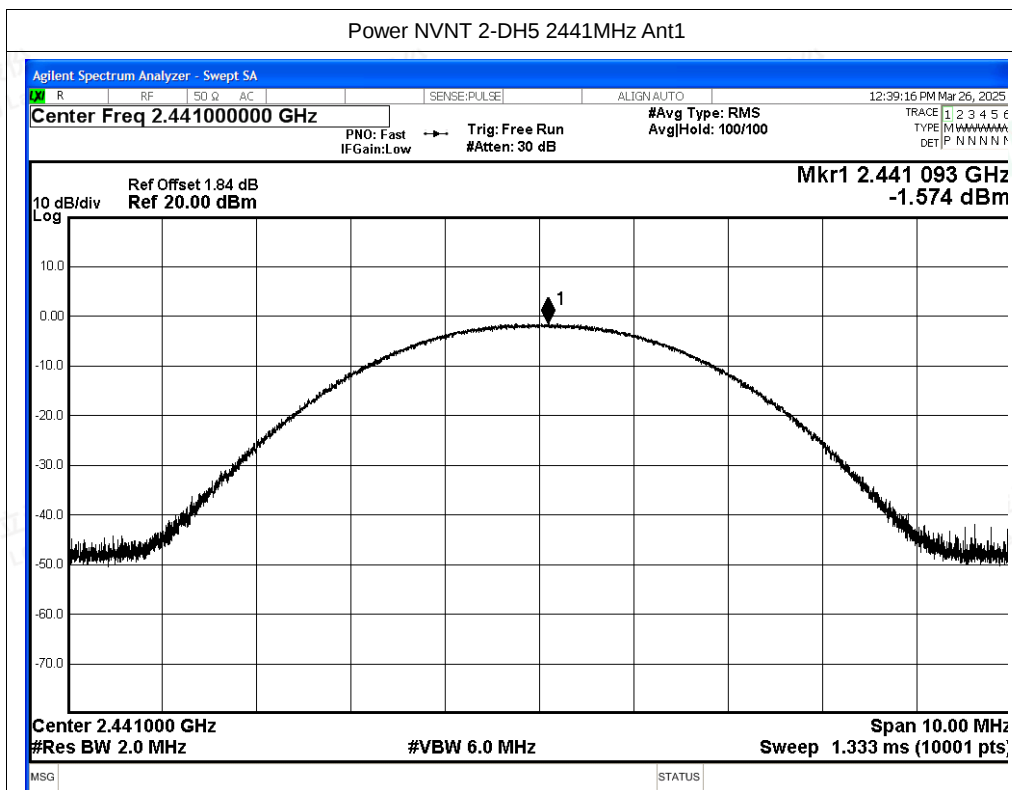
Power NVNT 1-DH5 2402MHz Ant1

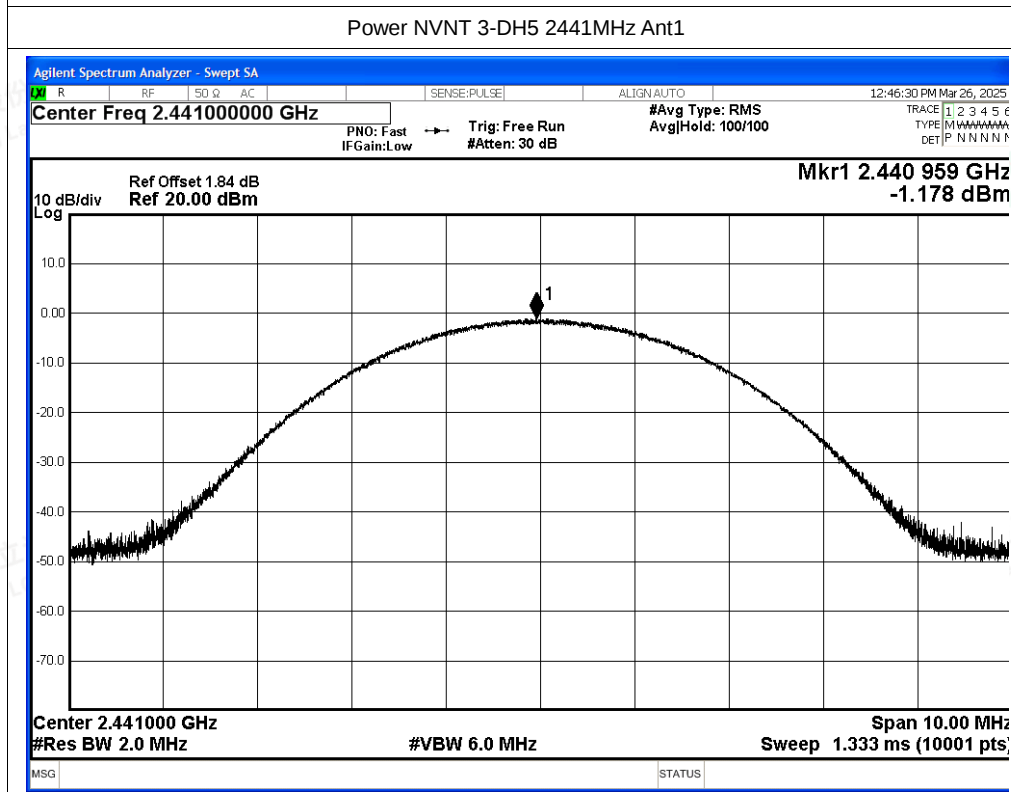
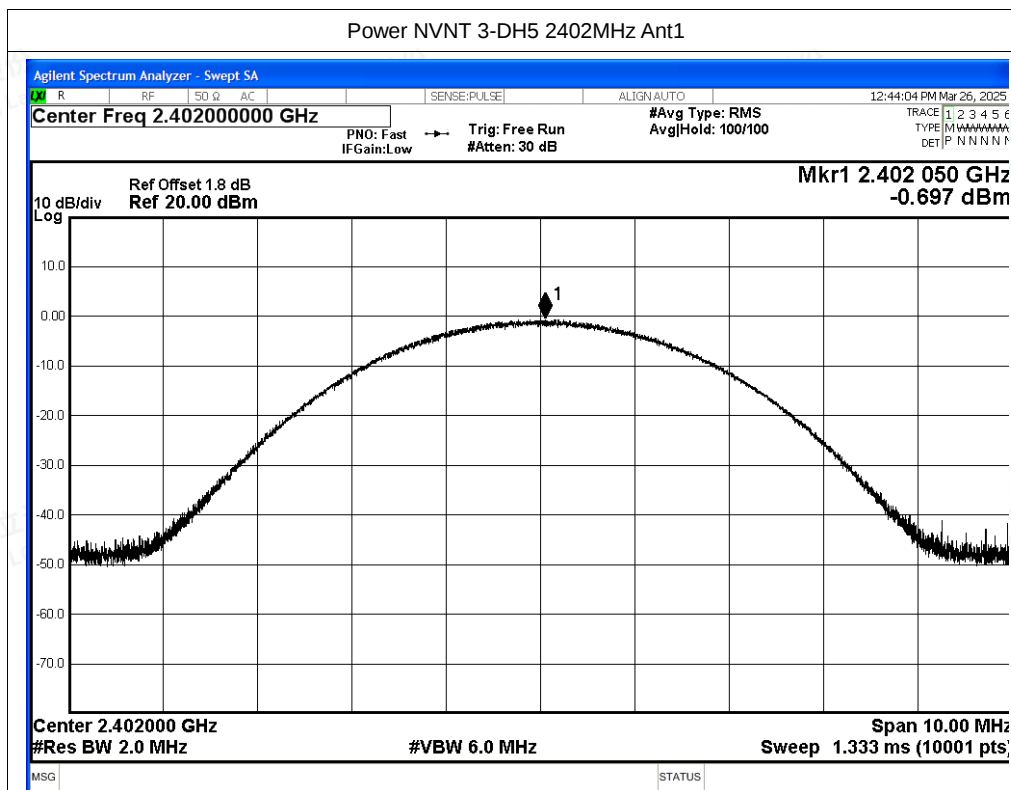


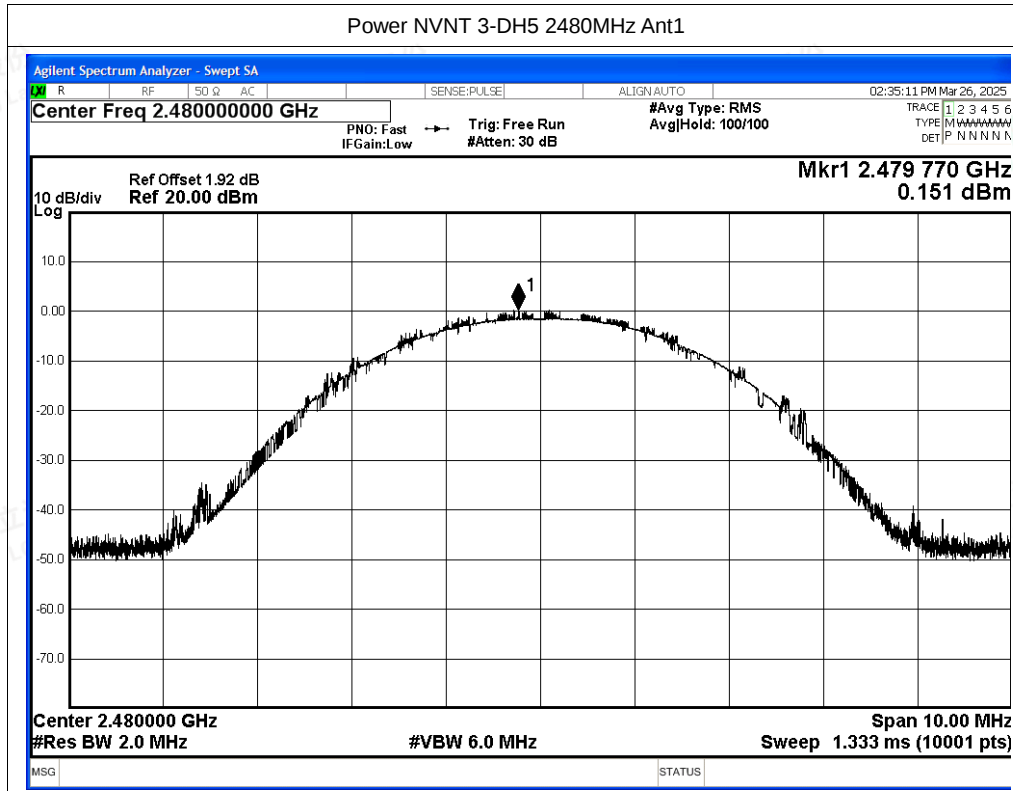
Power NVNT 1-DH5 2441MHz Ant1













A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.836	2402.836	1	0.64	Pass
NVNT	2-DH5	Ant1	2402.008	2403.01	1.002	0.855	Pass
NVNT	3-DH5	Ant1	2402.032	2403.024	0.992	0.861	Pass

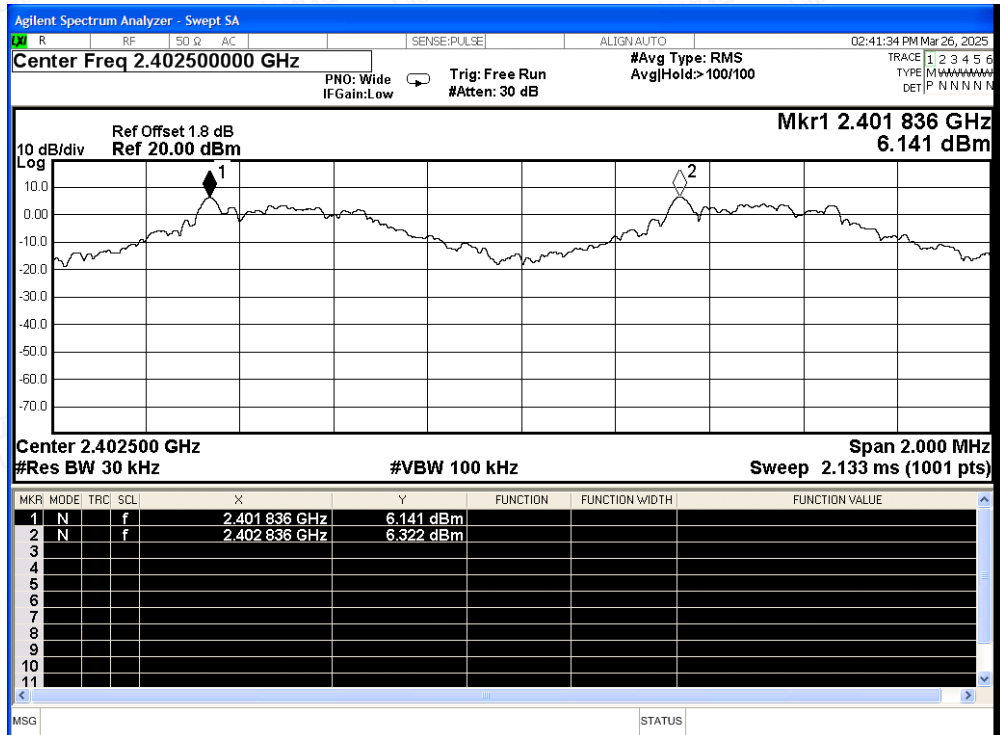


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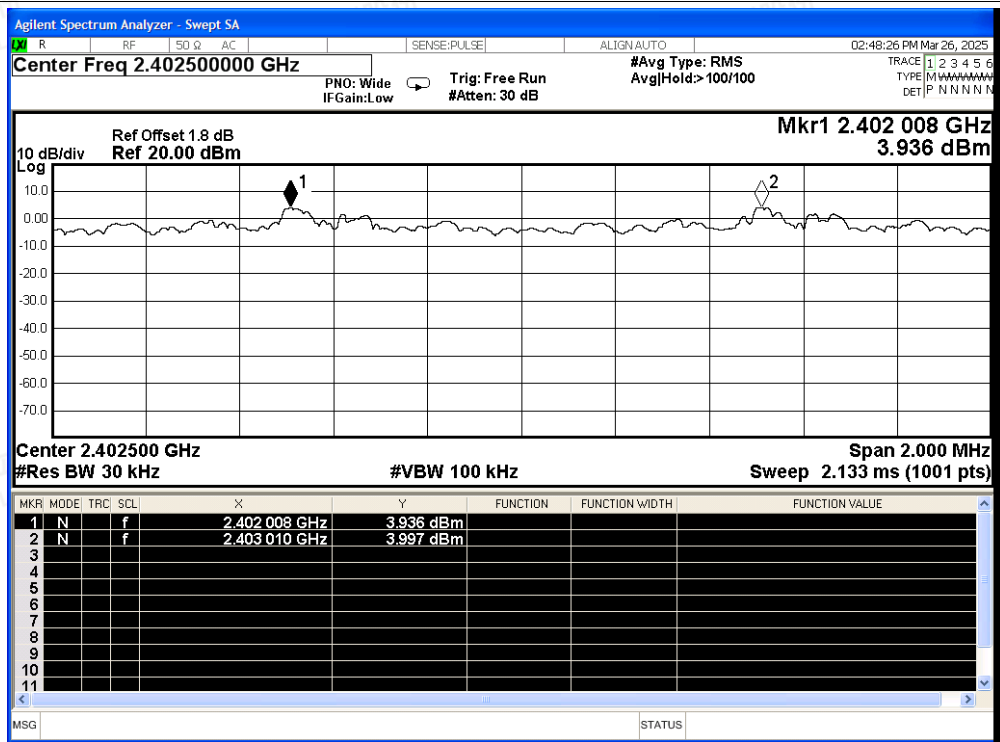


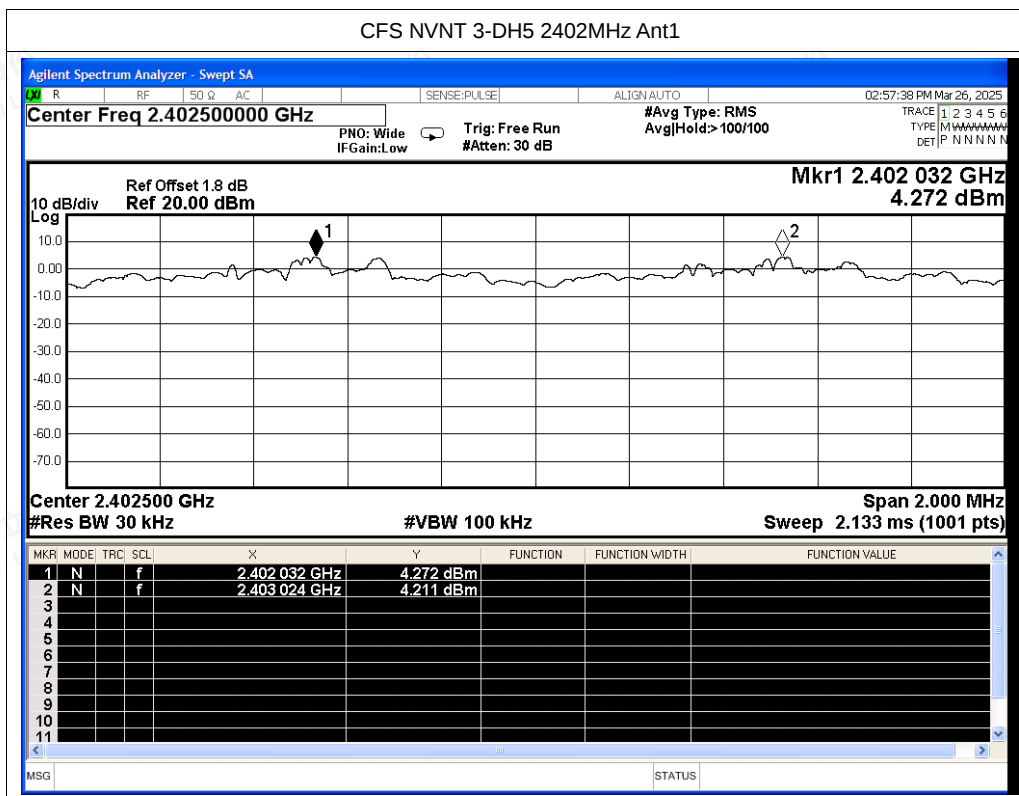
Test Graphs

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	2.909	308.354	106	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.899	307.294	106	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.898	312.984	108	31600	400	Pass

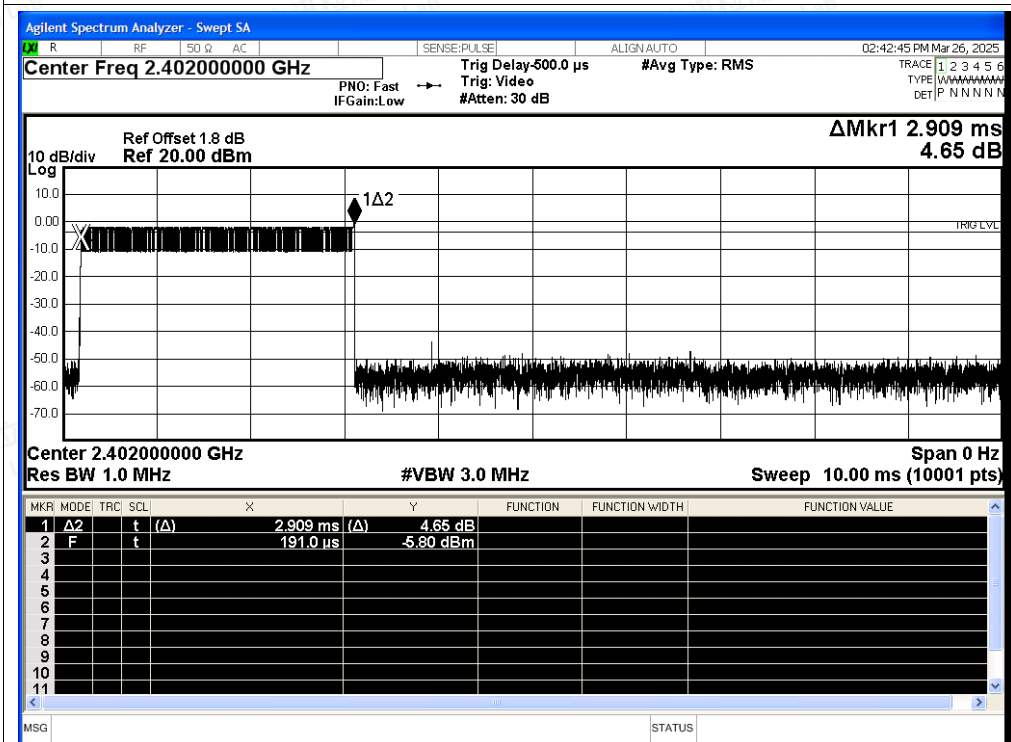


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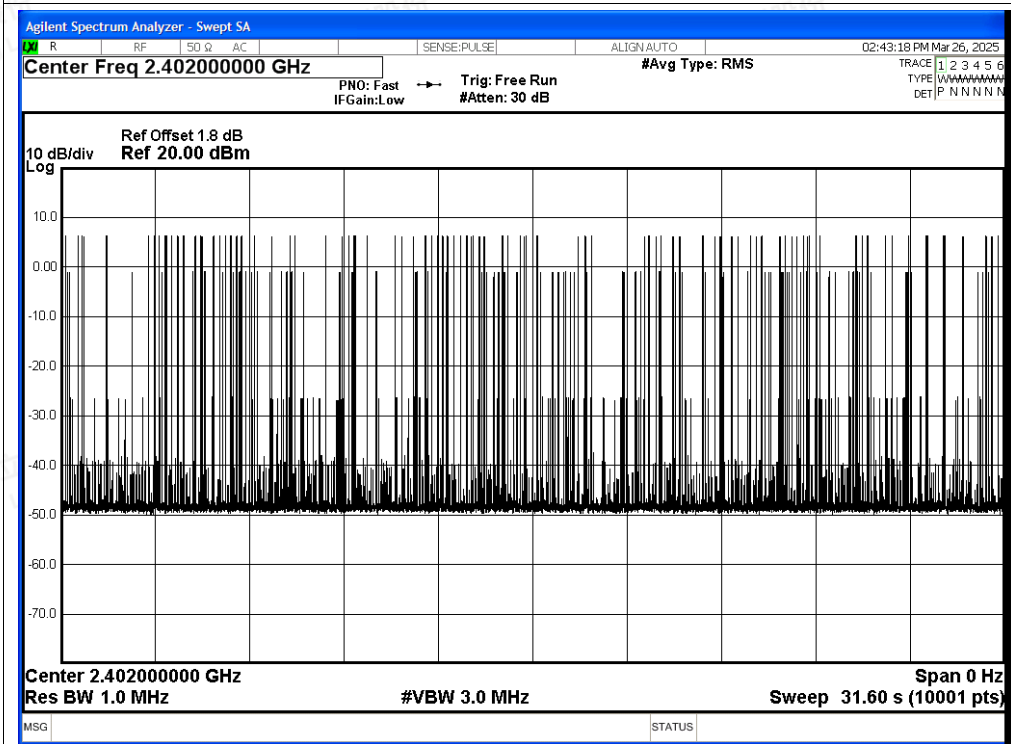


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

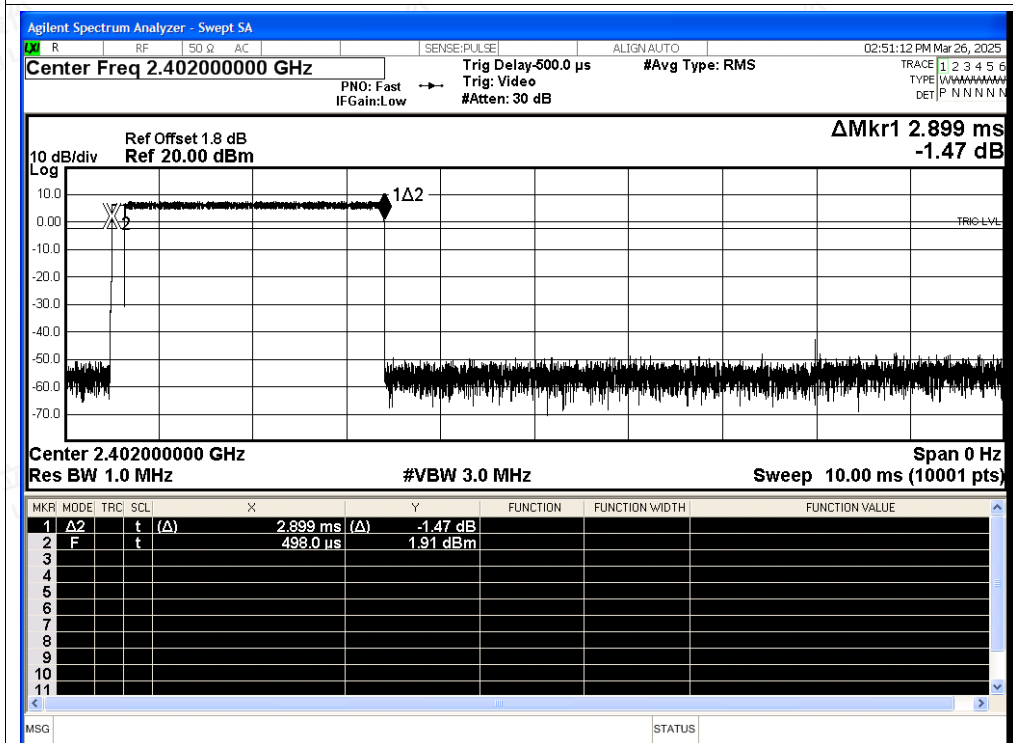


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

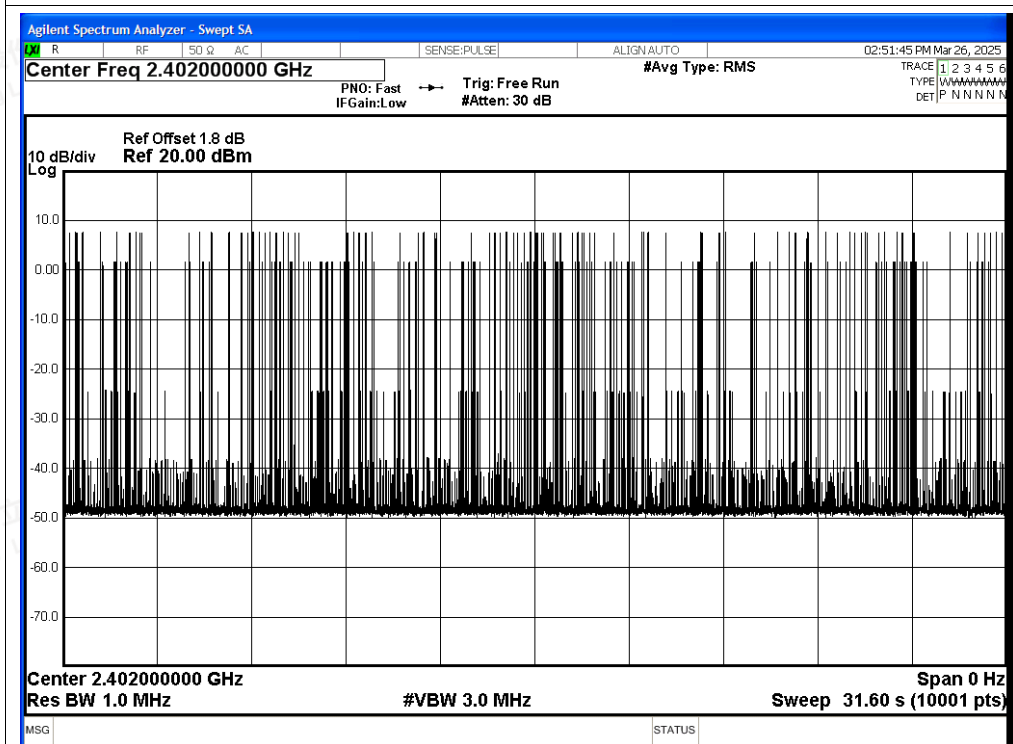


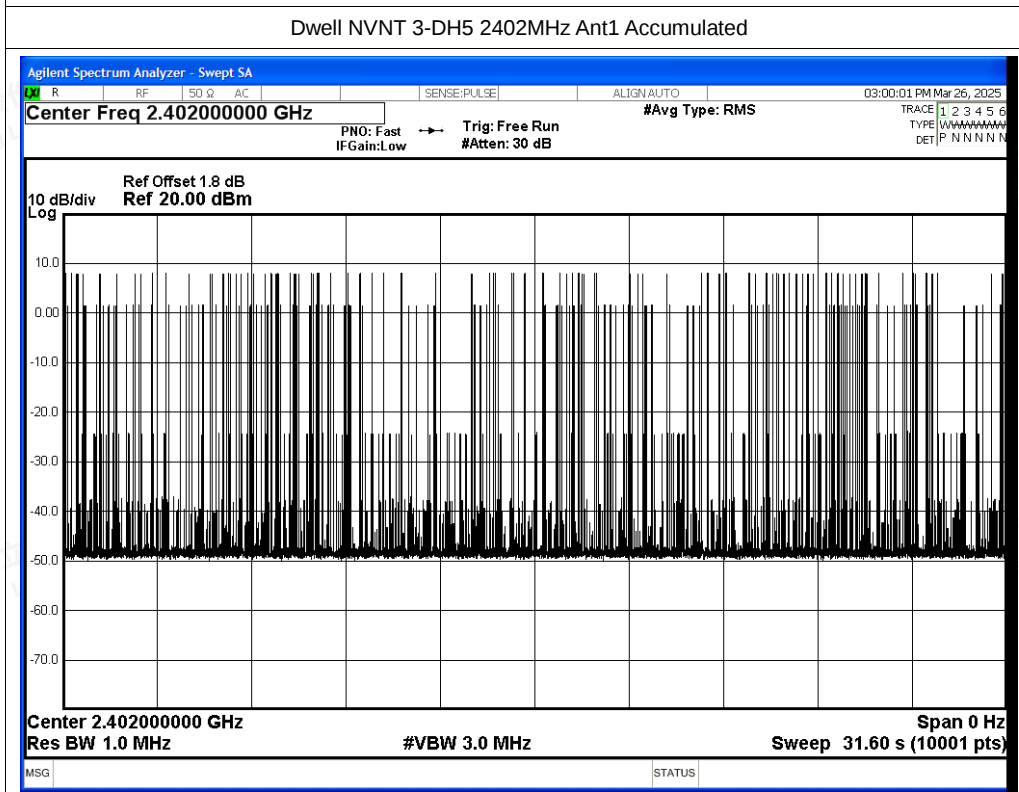
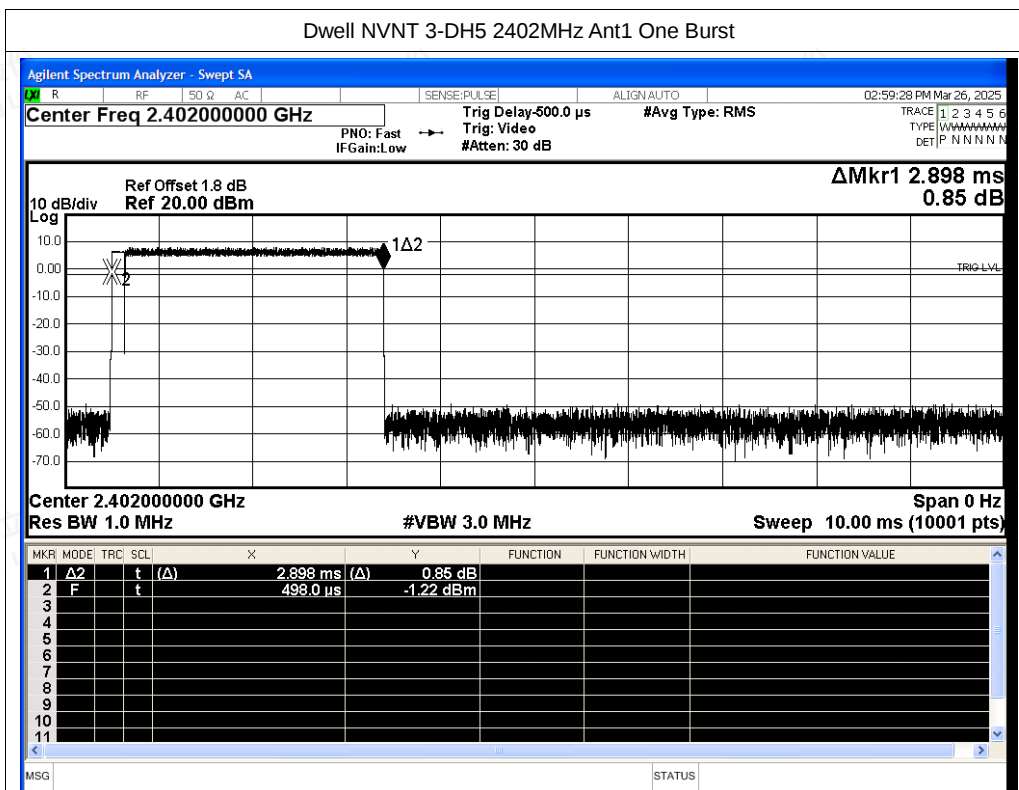


Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated







A.5 Number of Hopping Channel

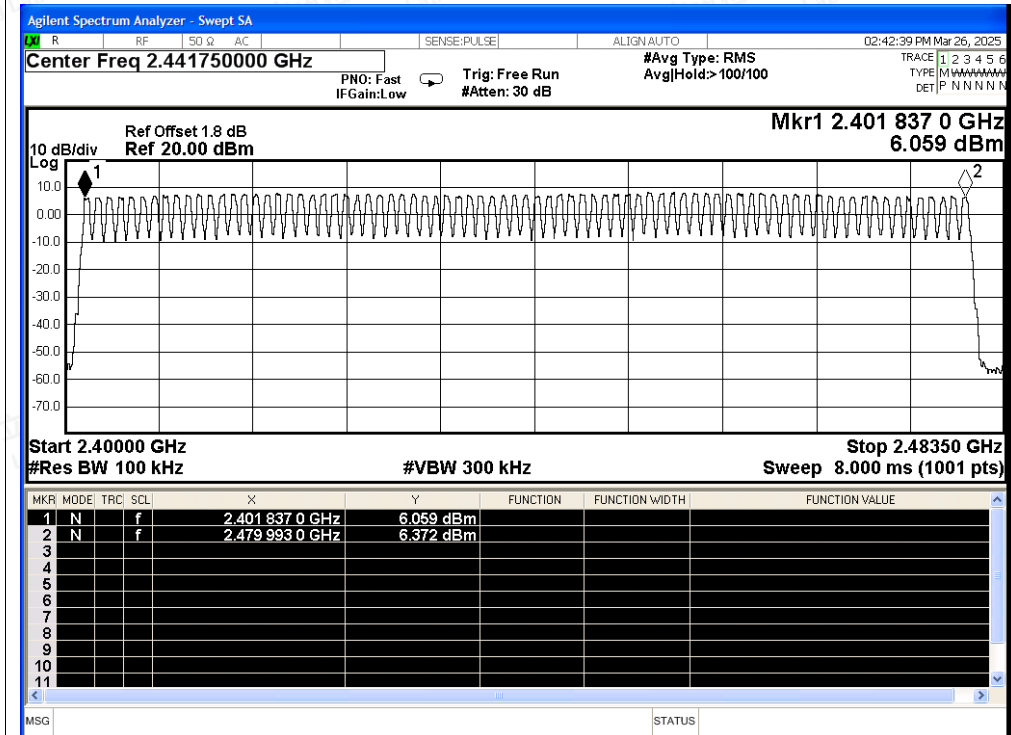
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass



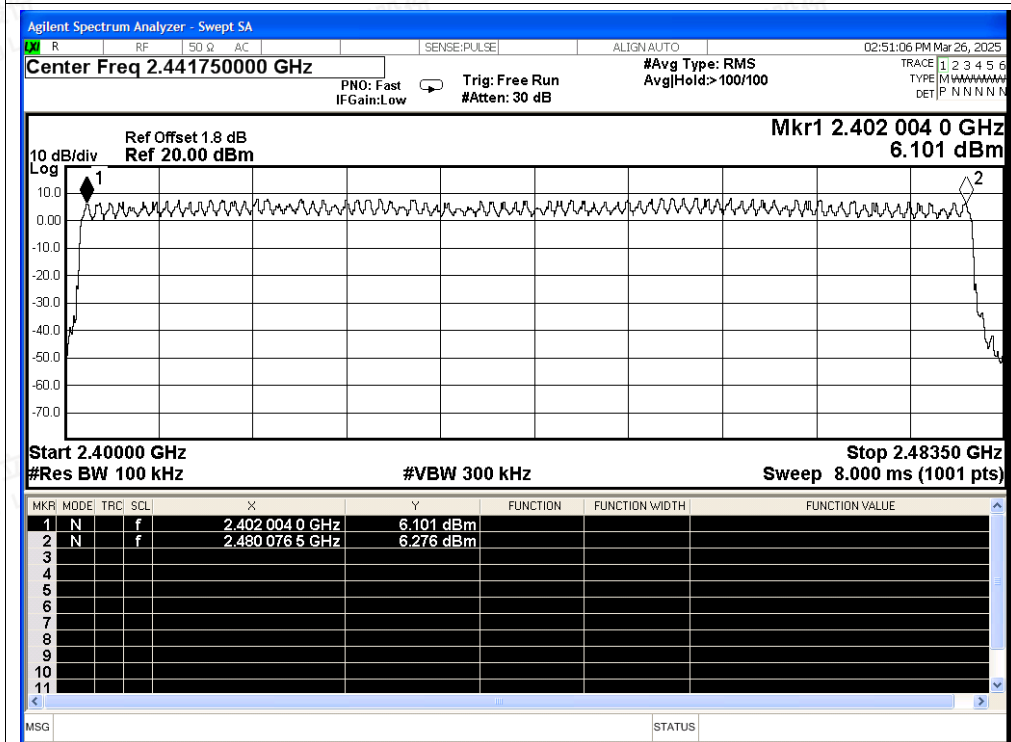


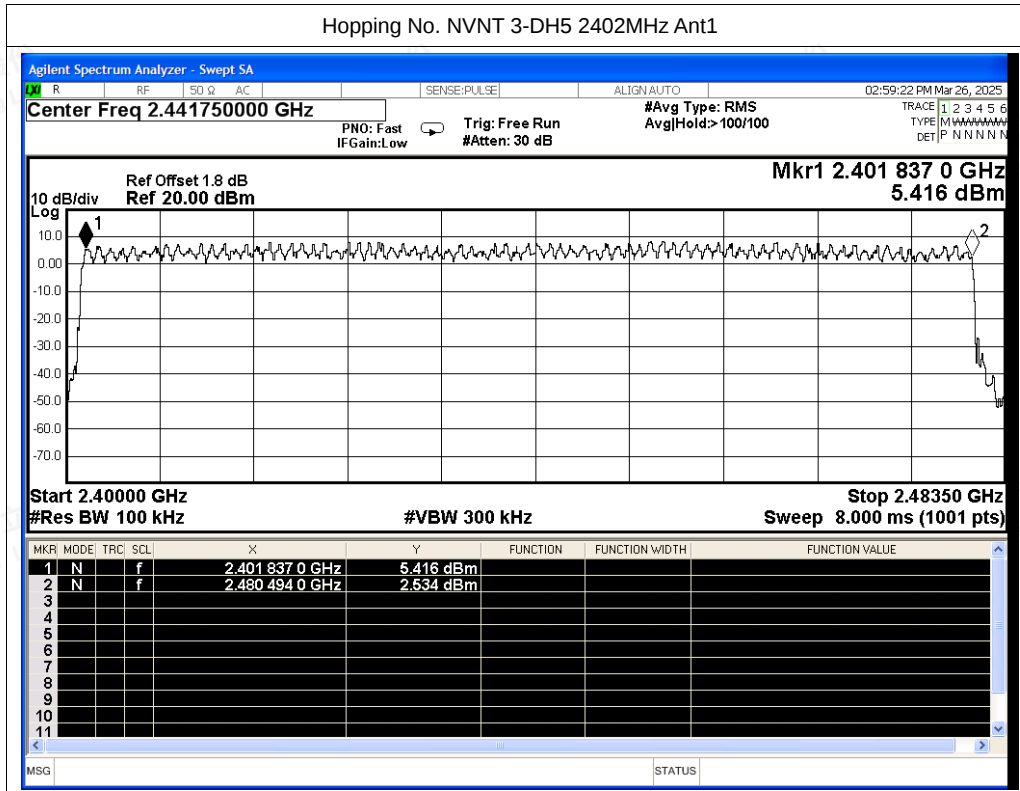
Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1







A.6 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-56.24	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-55.85	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-52.21	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-55.37	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-51.57	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-54.63	-20	Pass

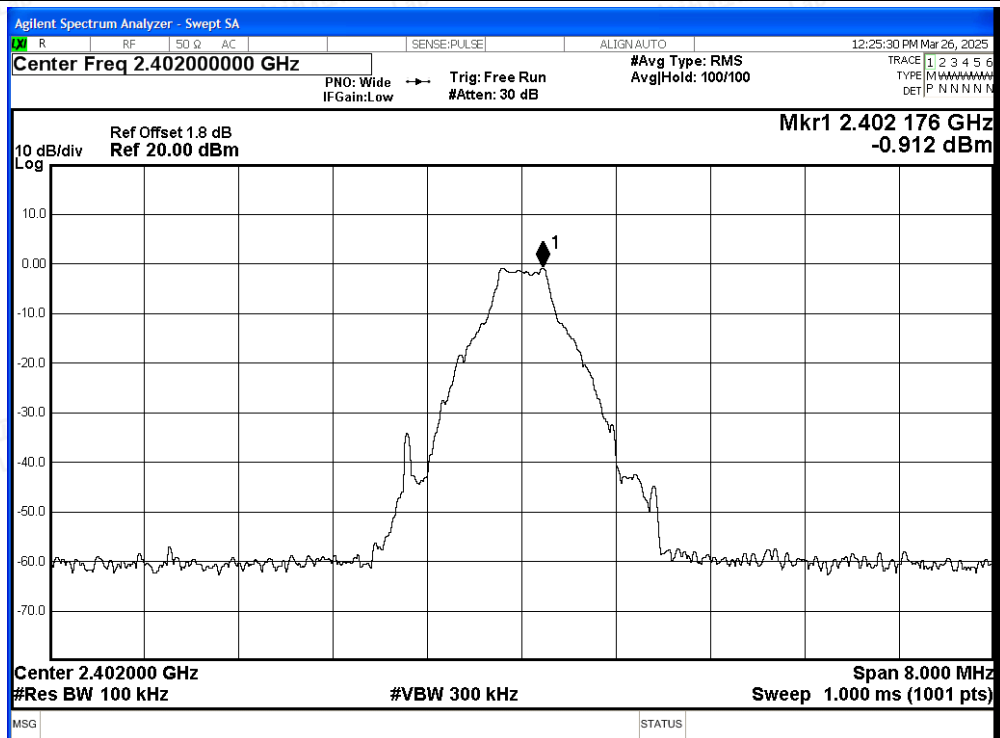


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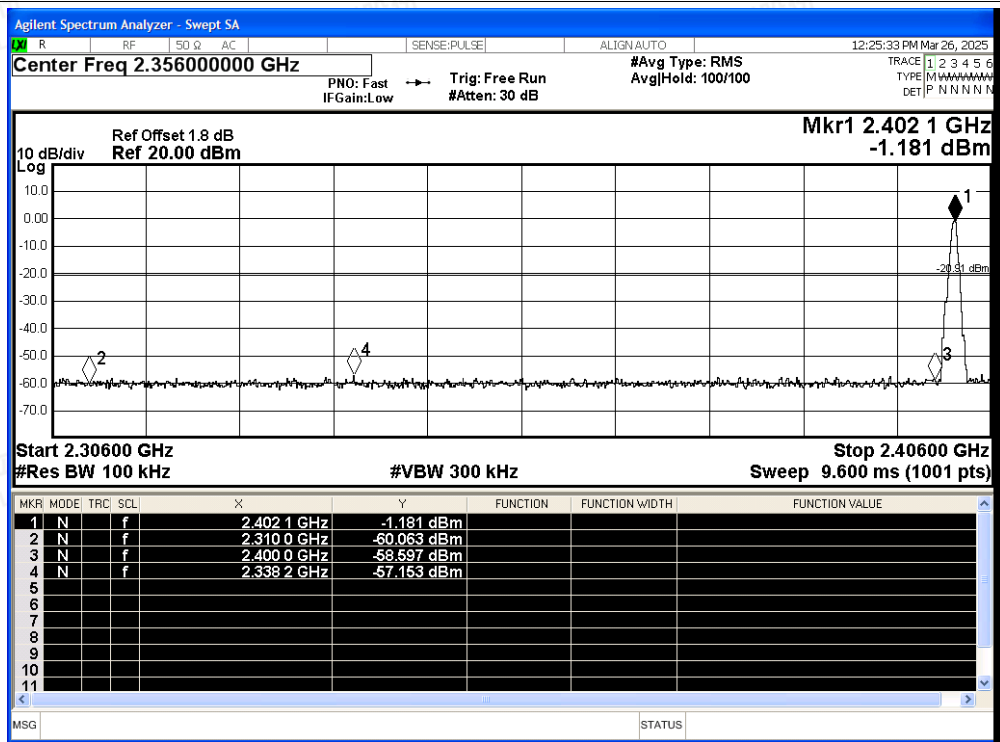


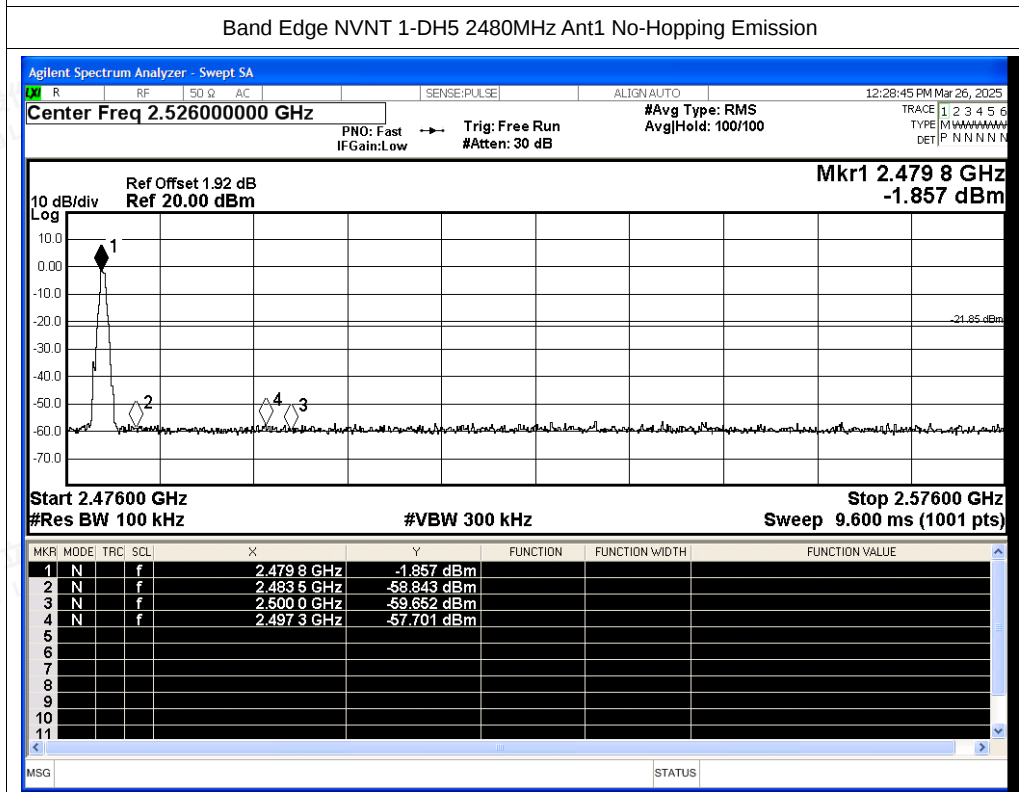
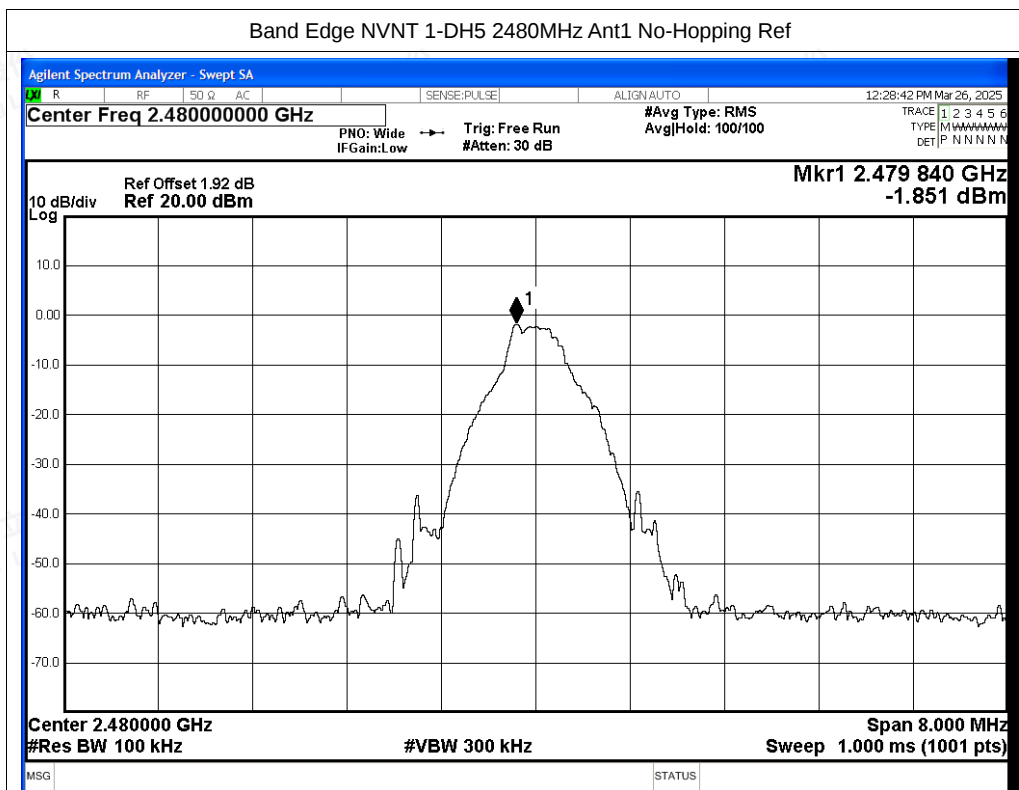
Test Graphs

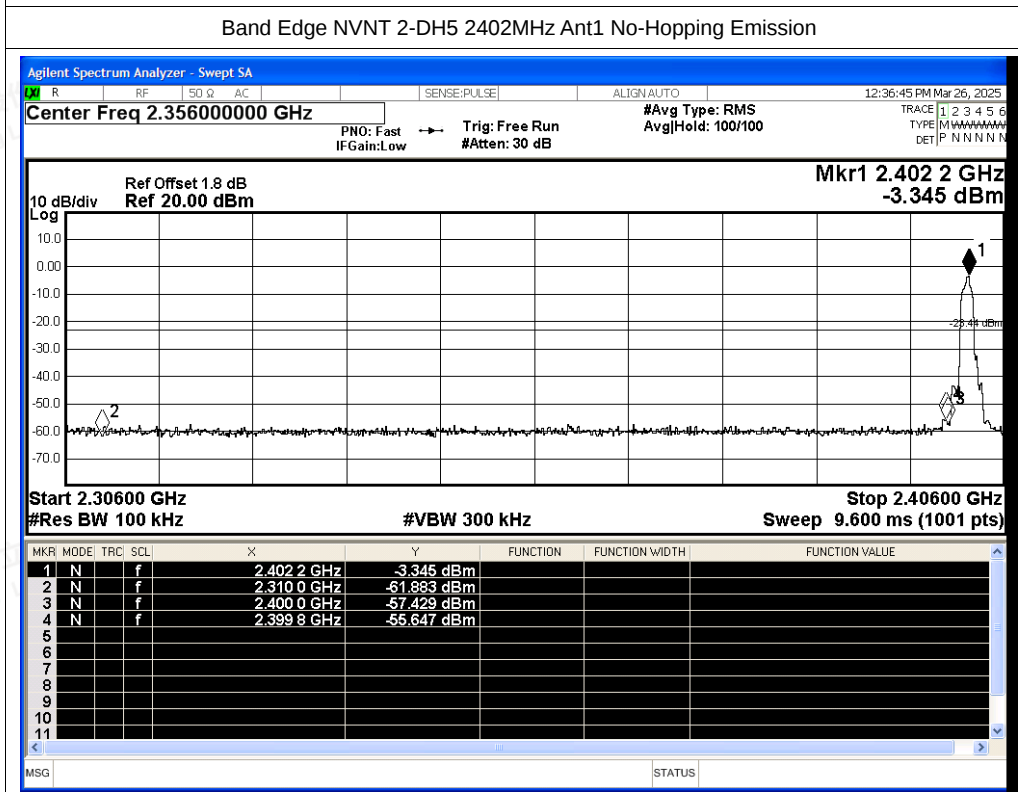
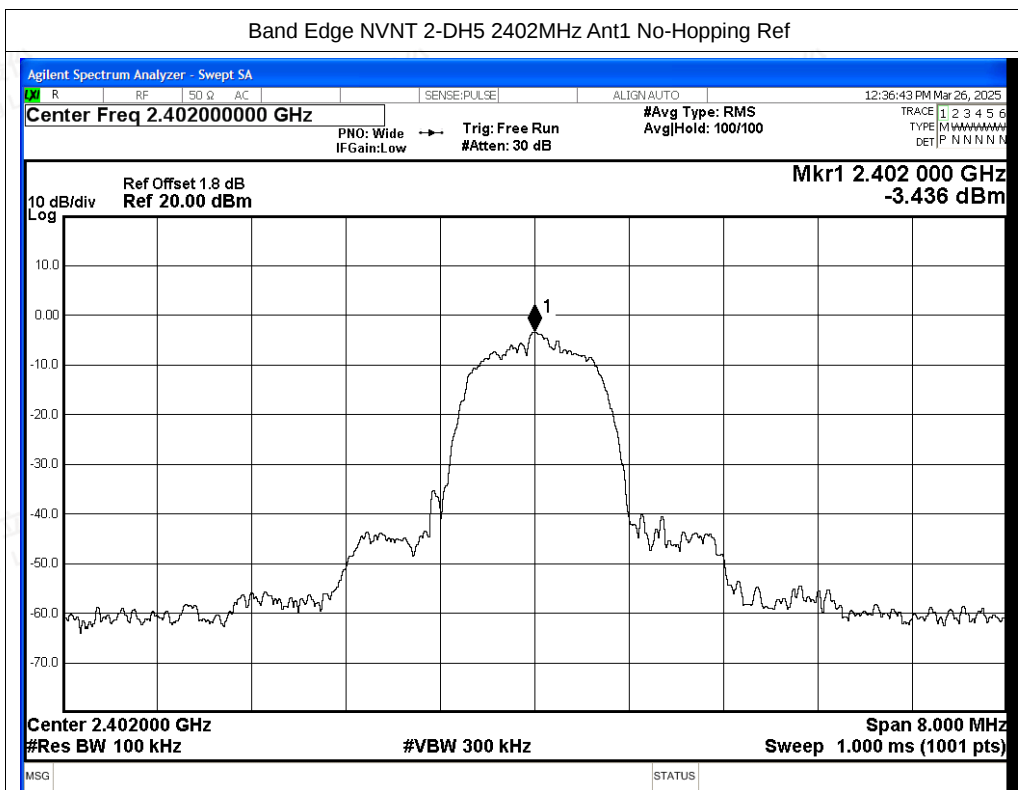
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref

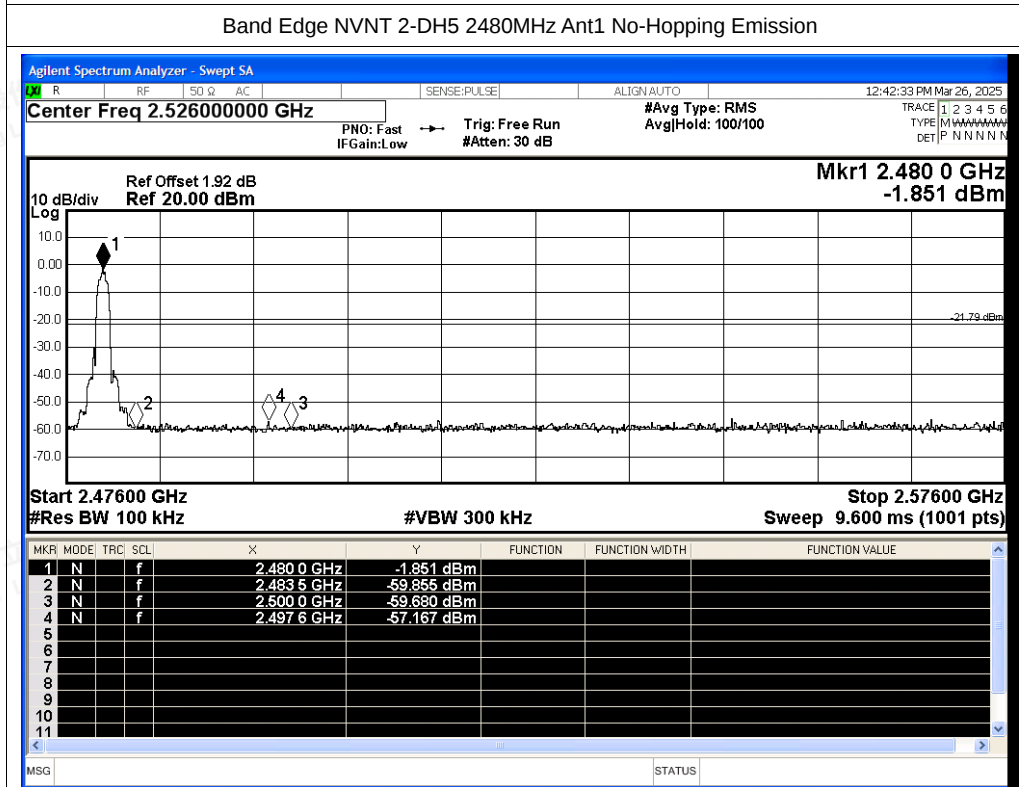
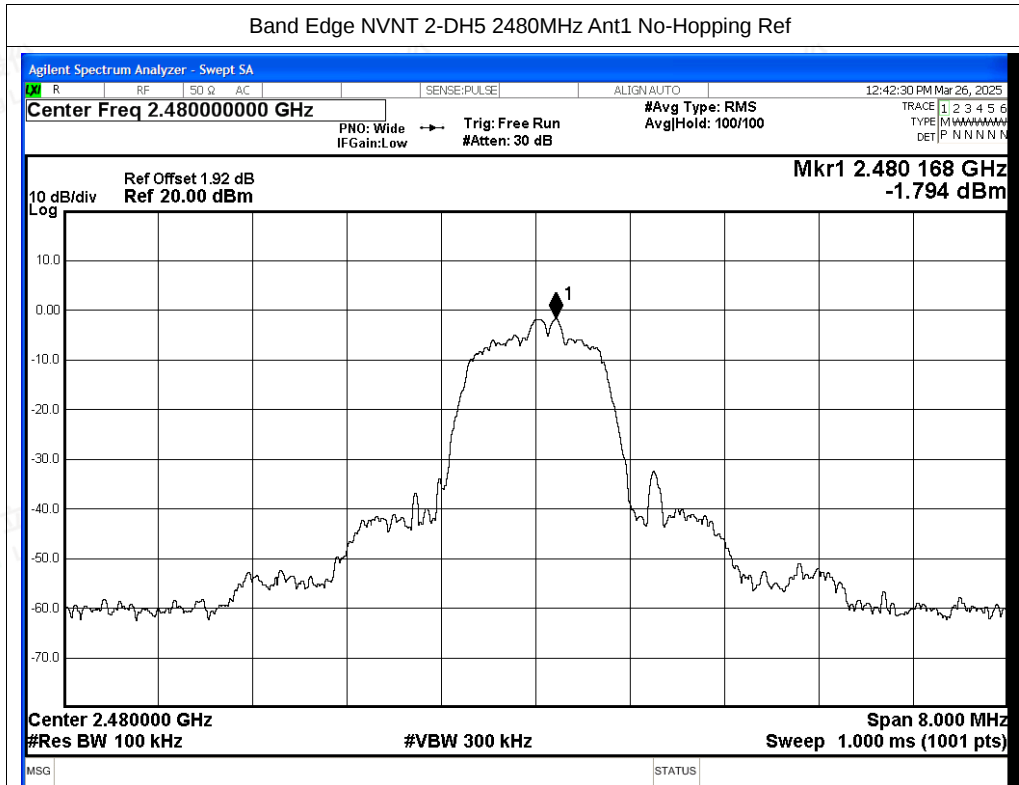


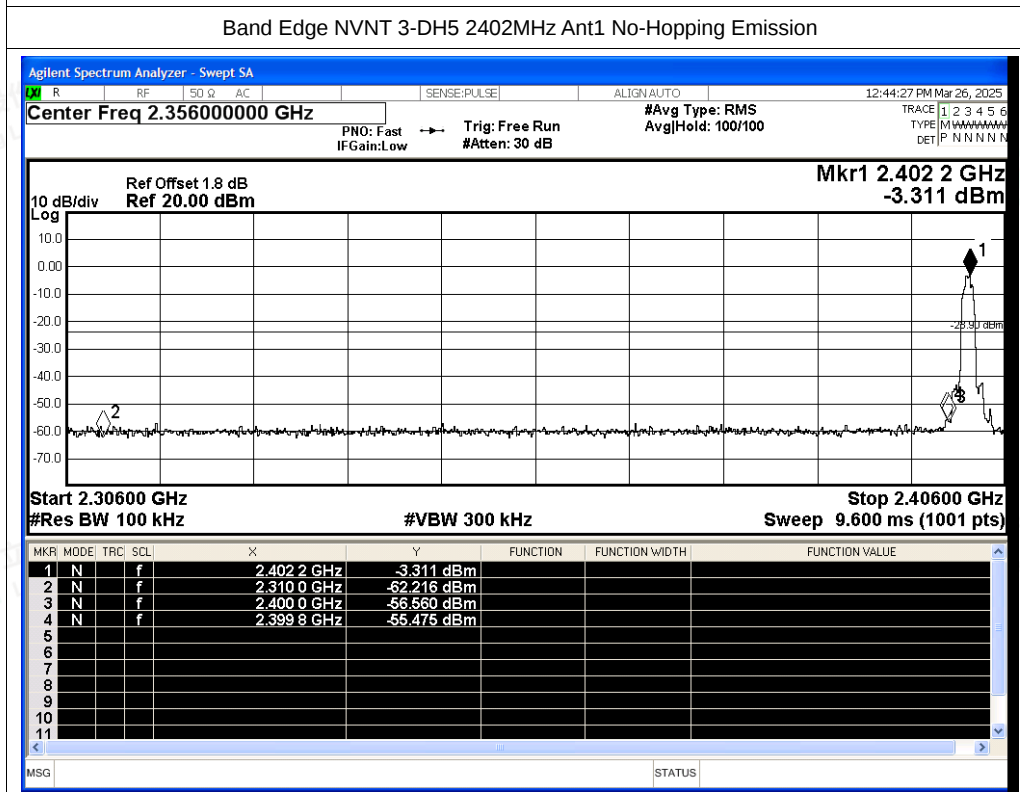
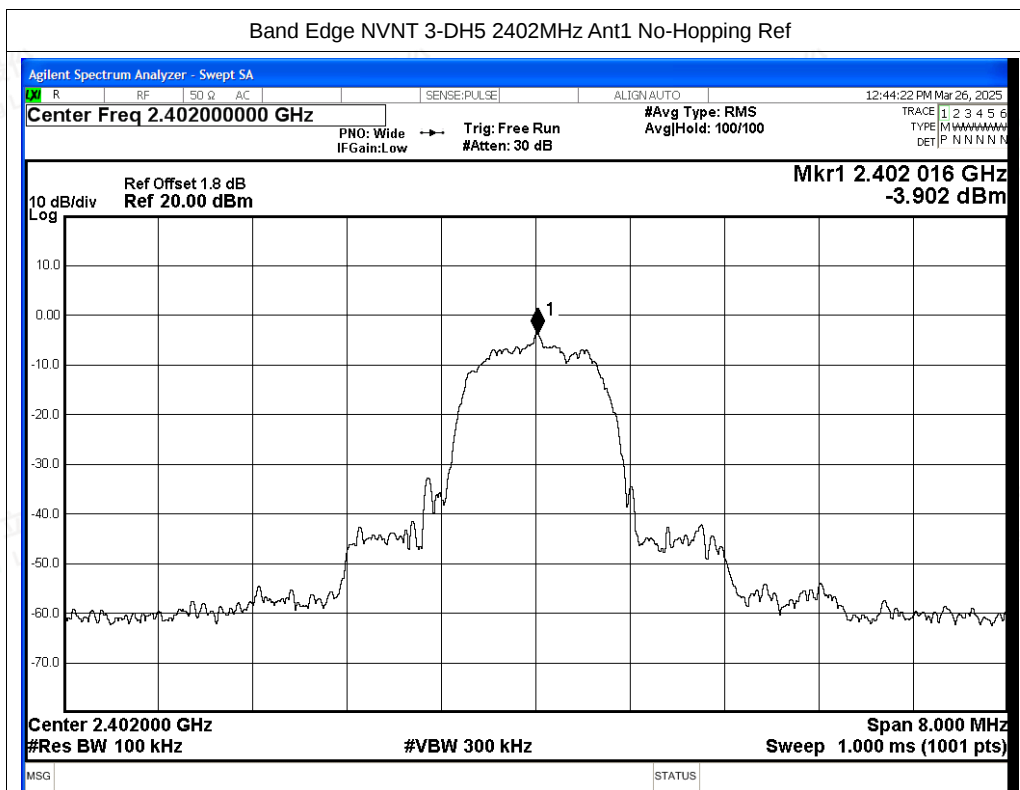
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

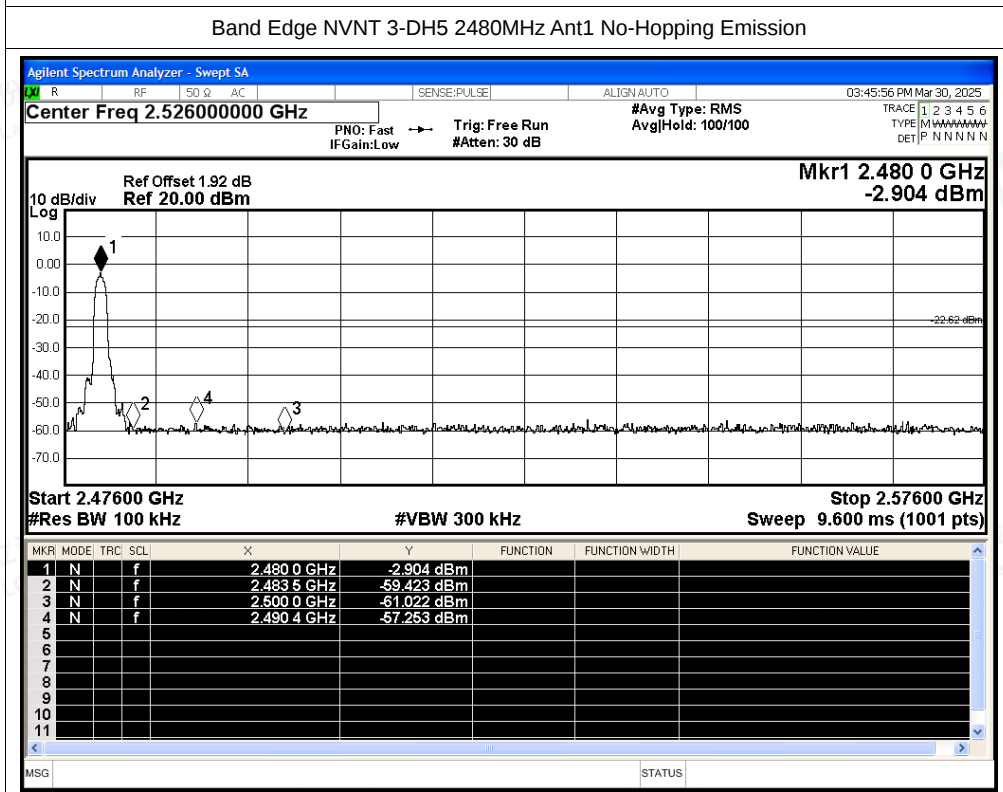
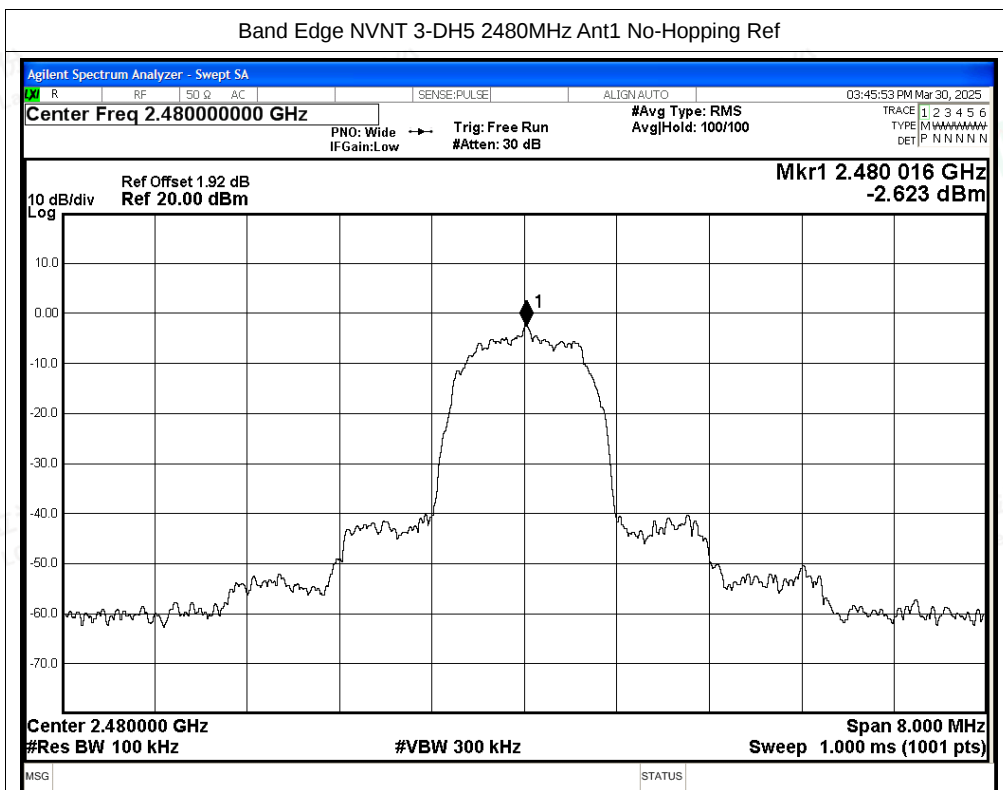














(Hopping)

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-62.53	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-62.51	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-62.7	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-57.42	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-62.72	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-54.79	-20	Pass

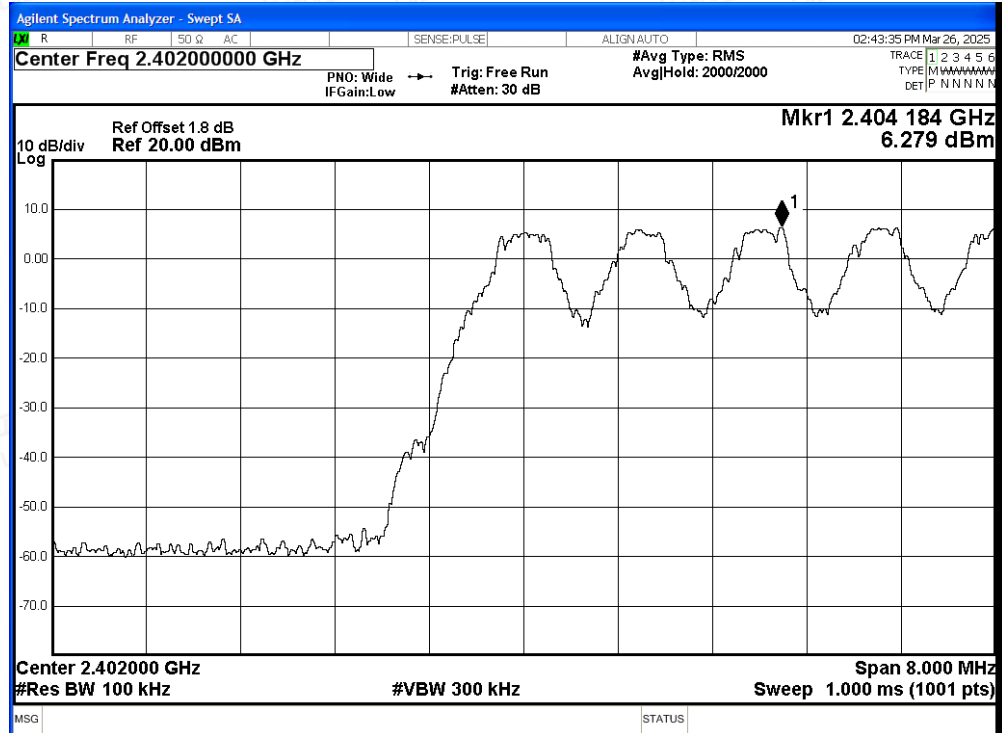


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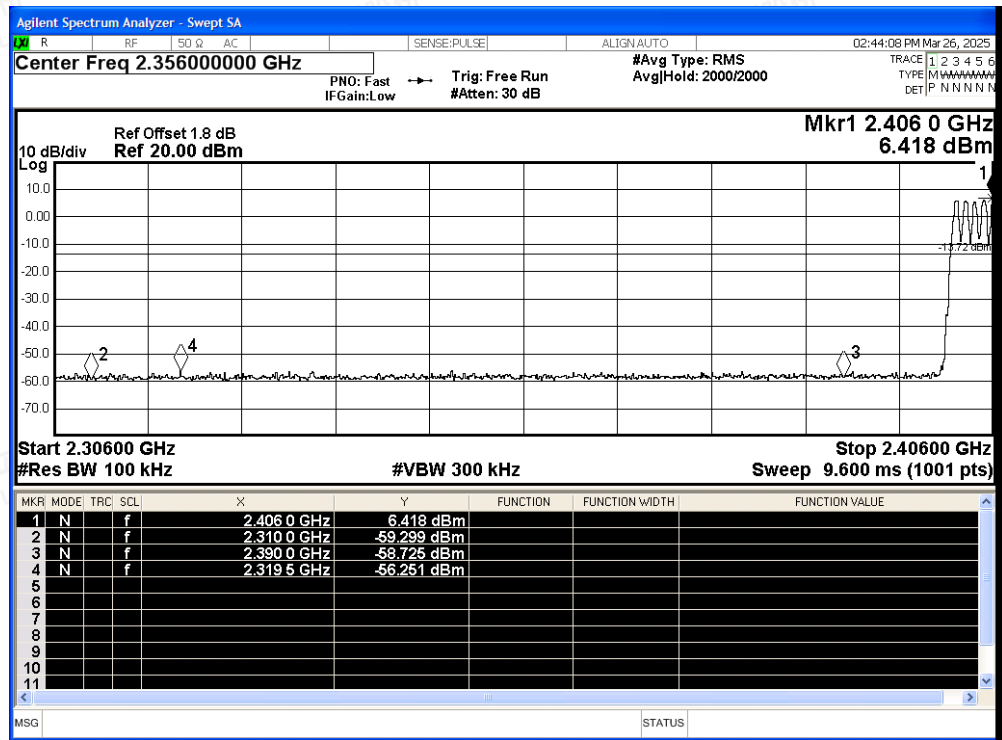


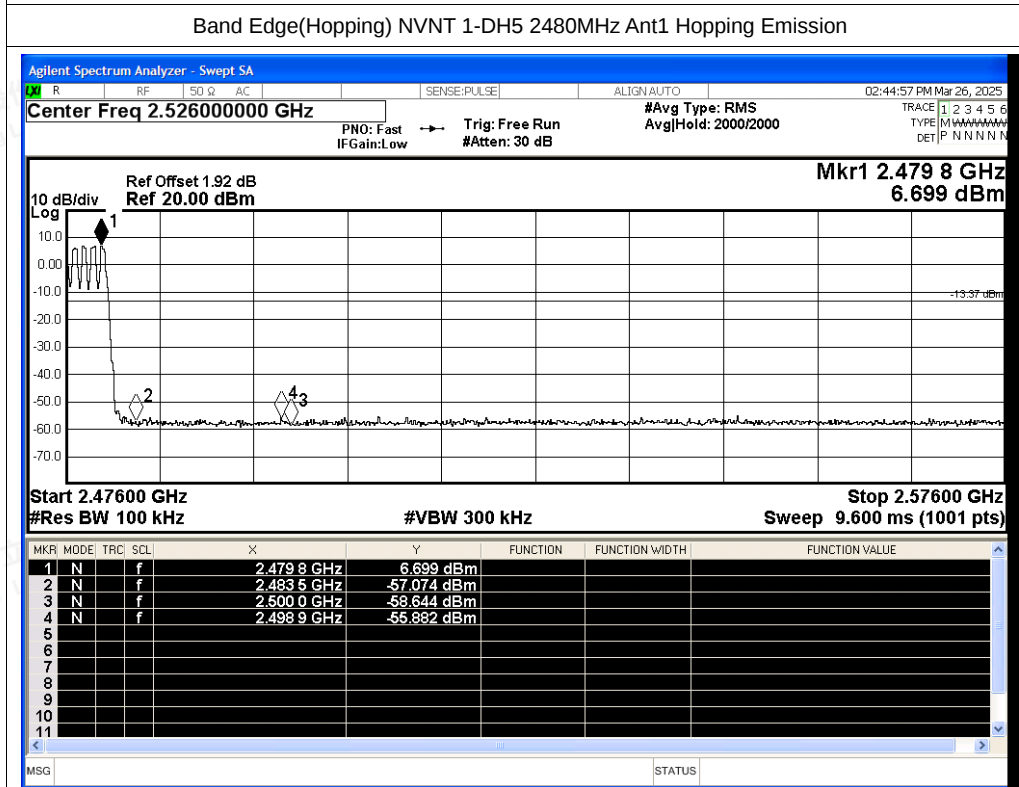
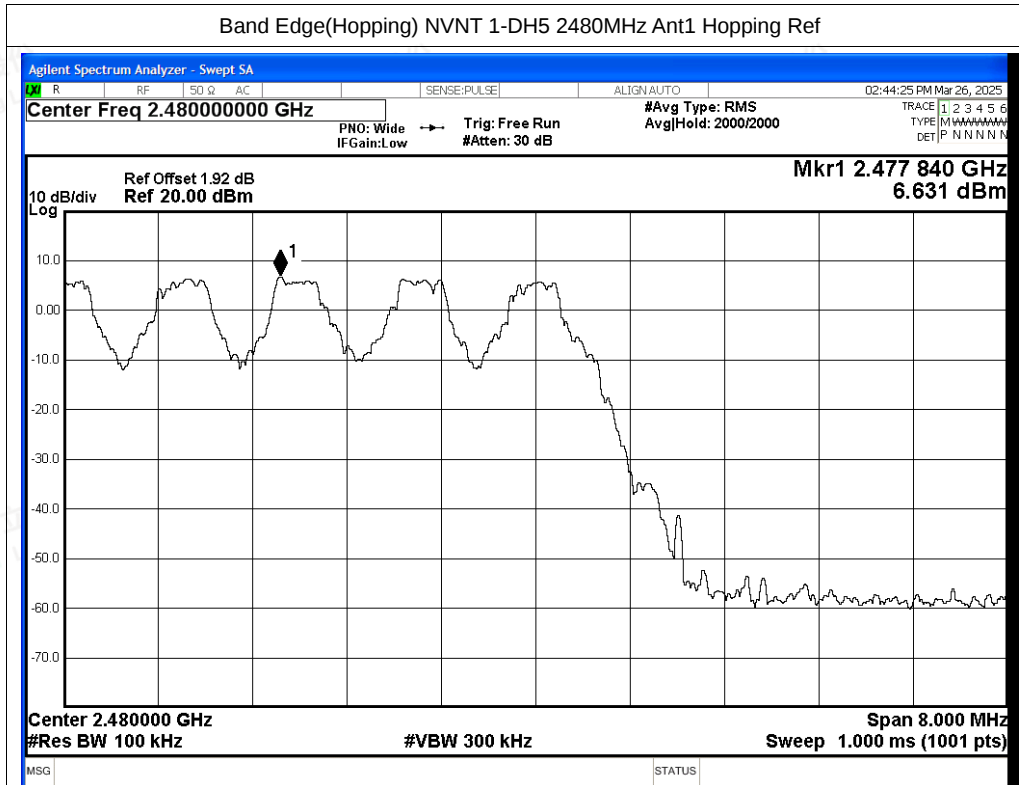
Test Graphs

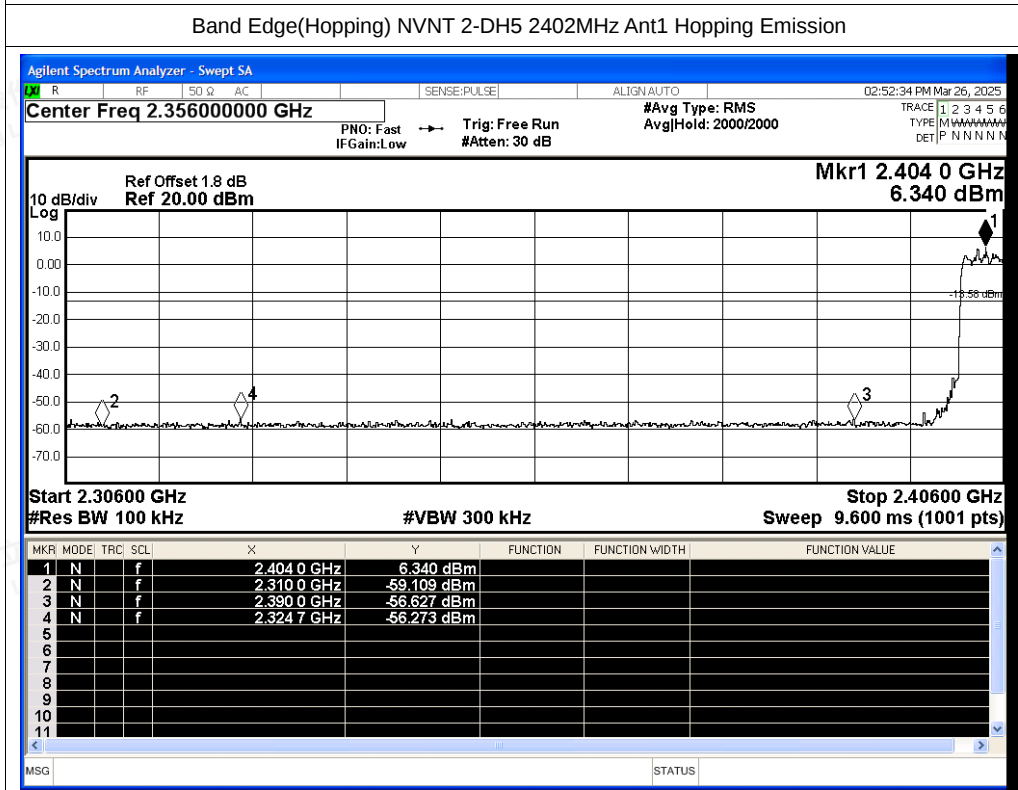
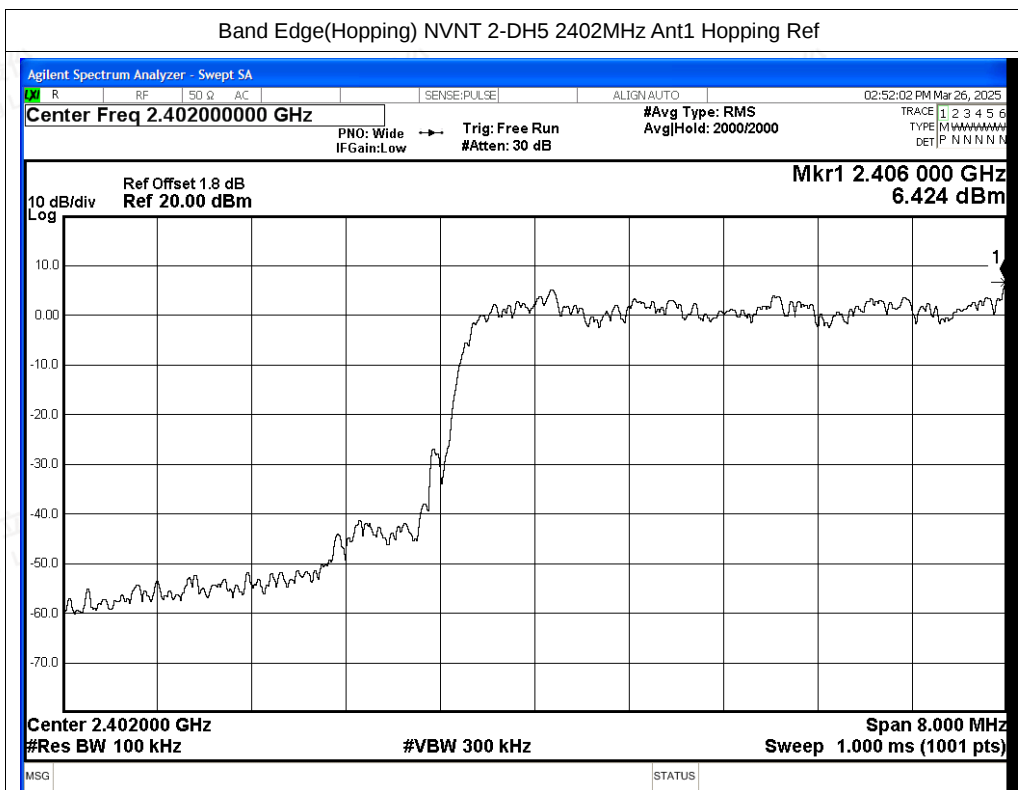
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref

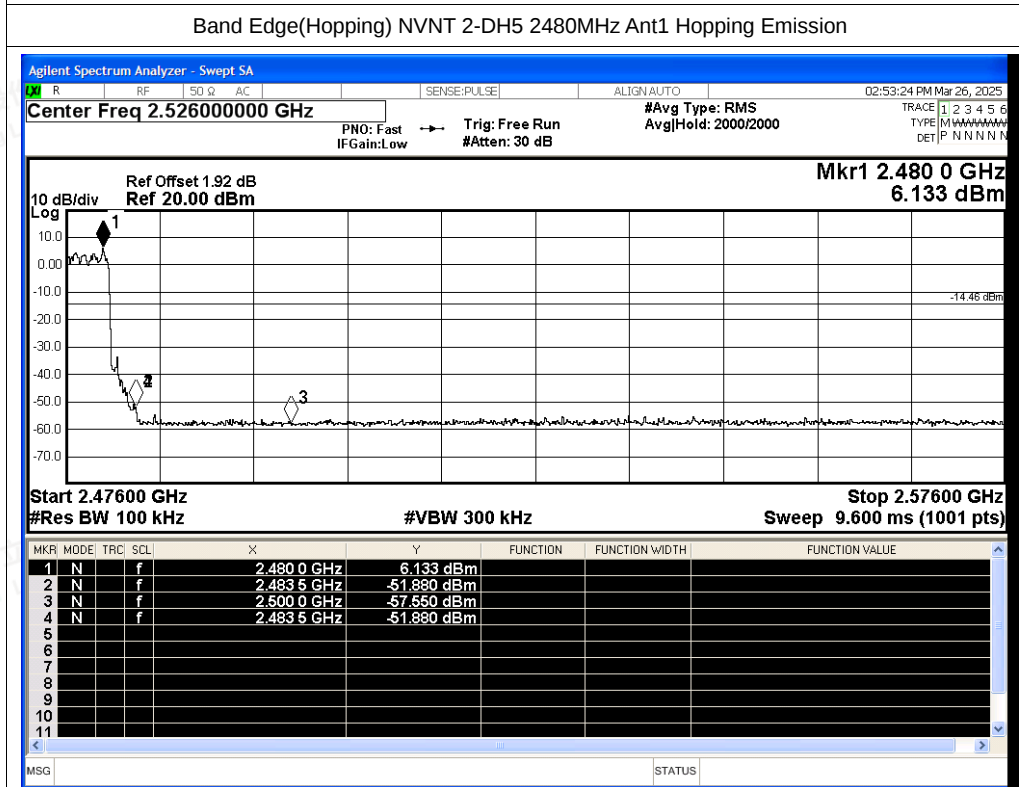
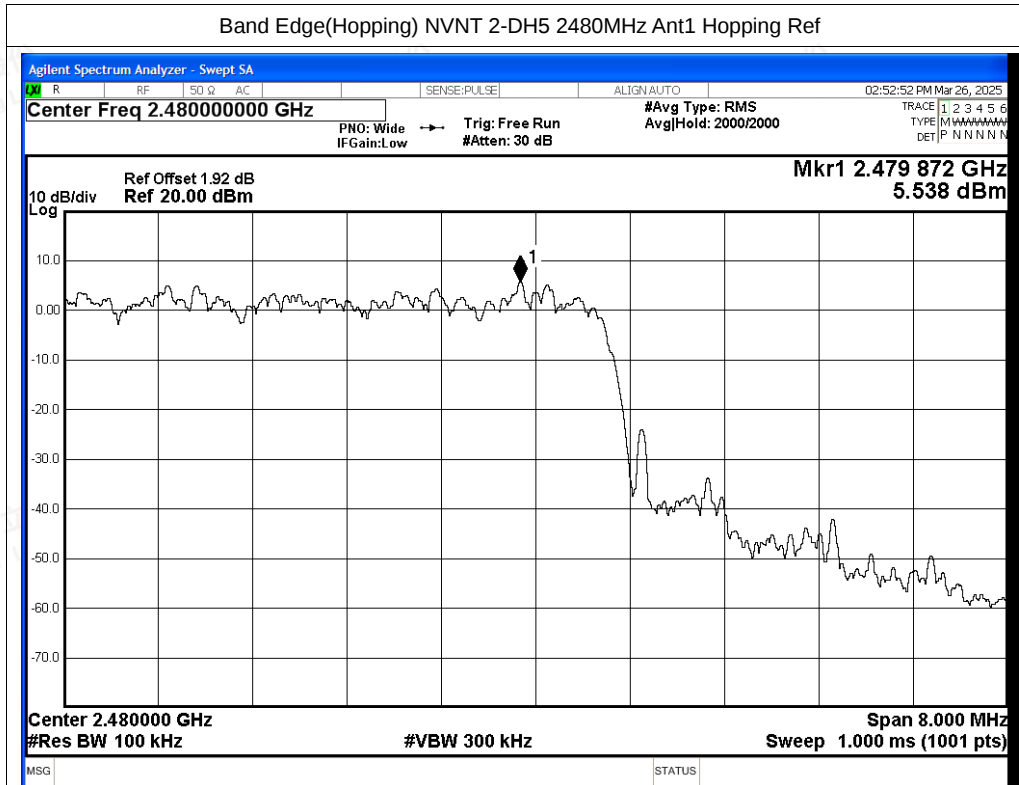


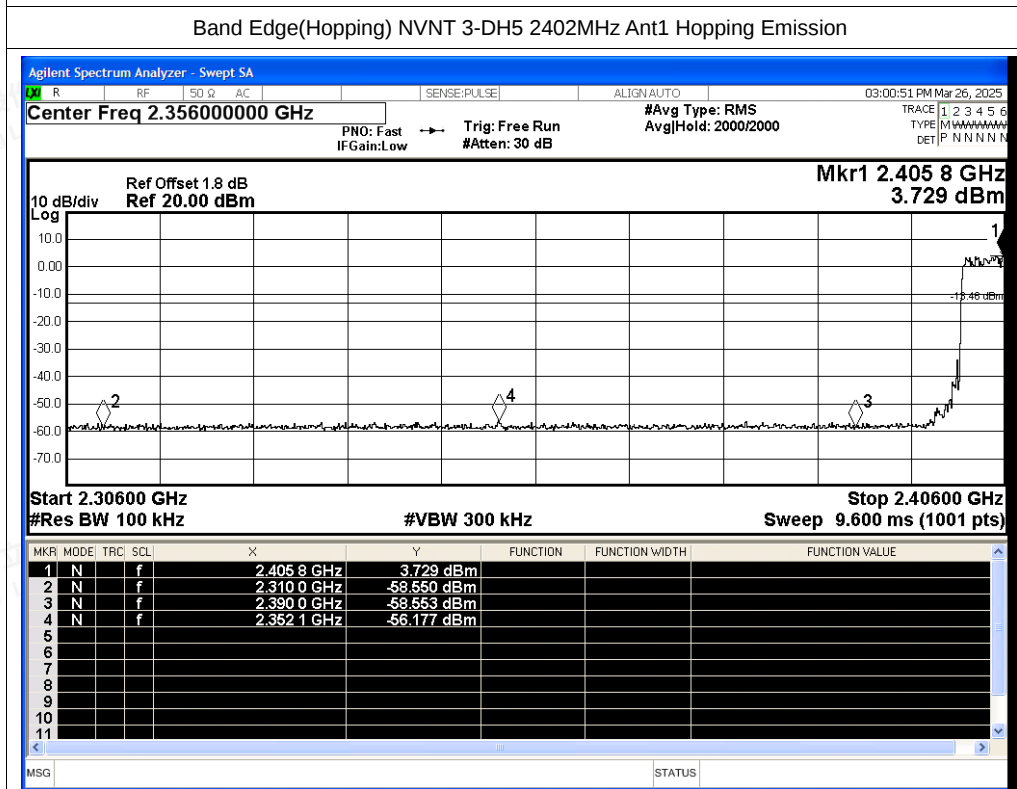
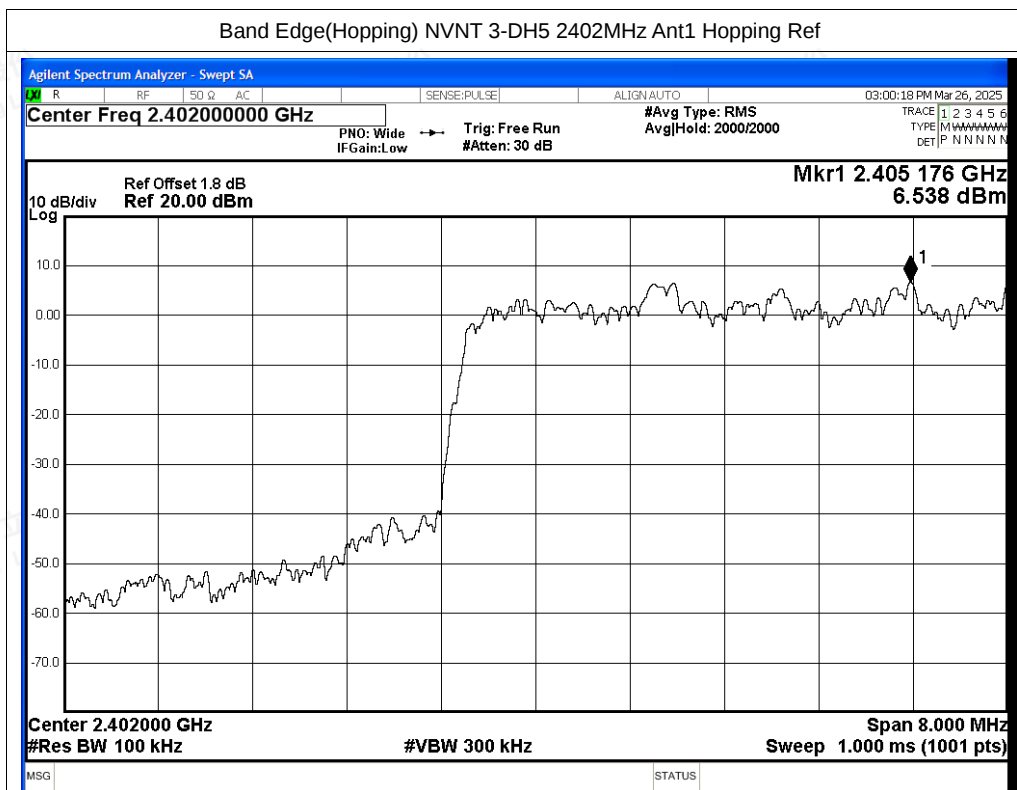
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission









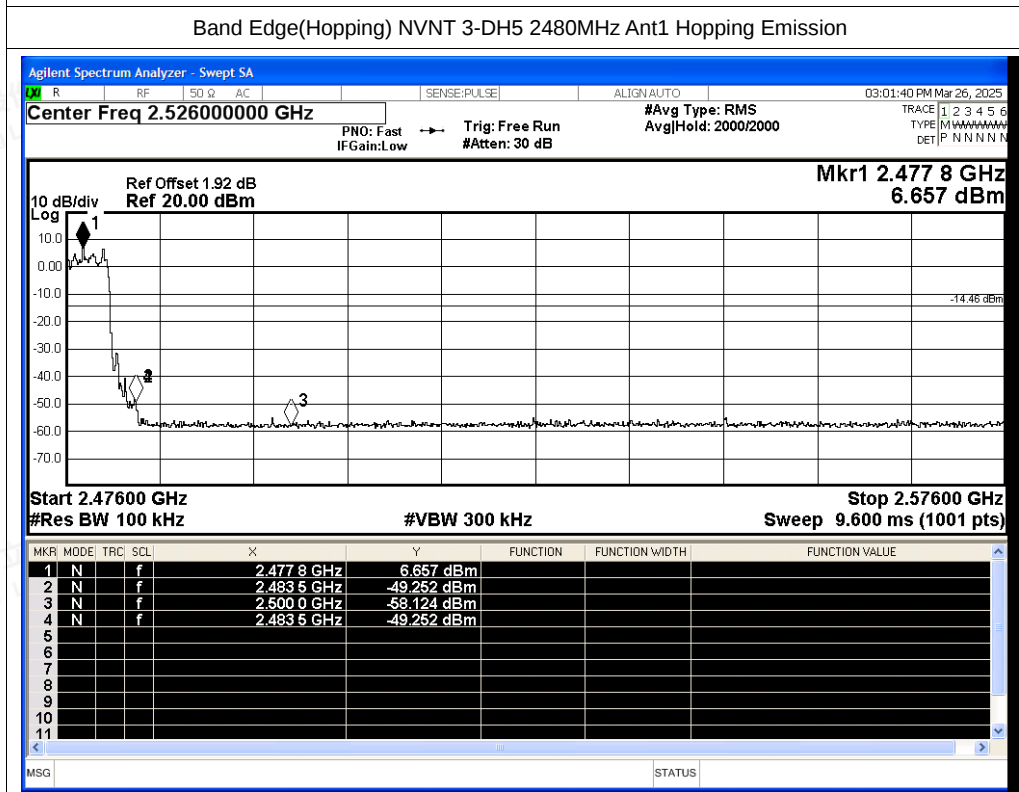
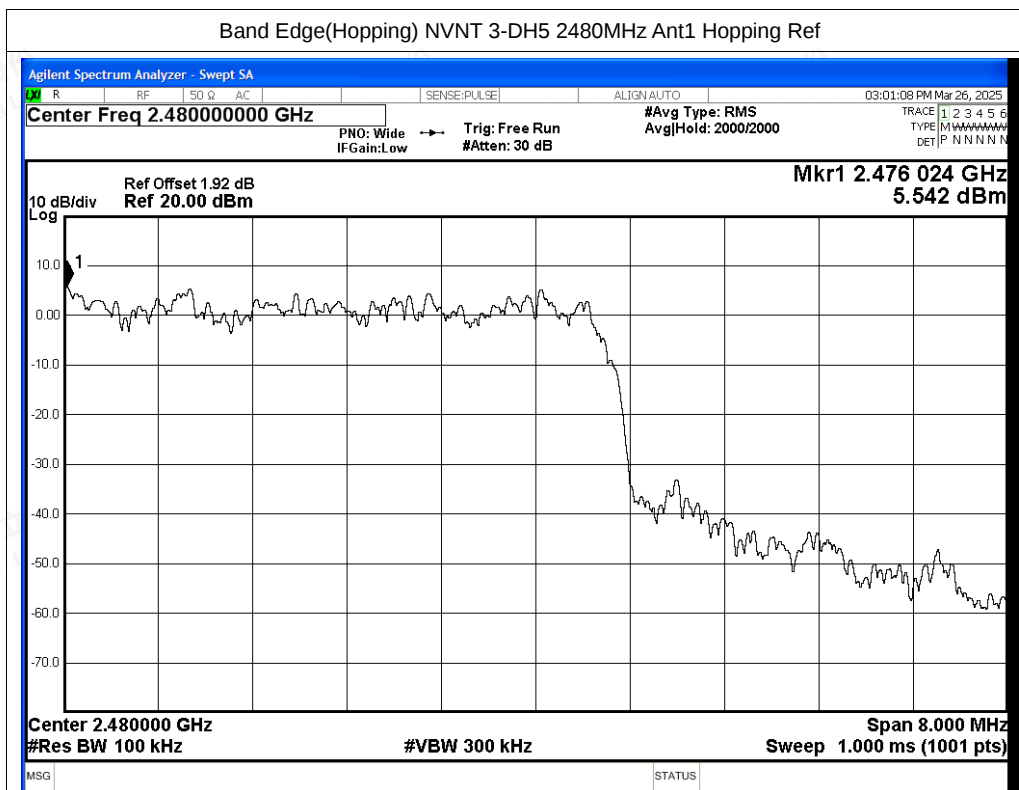


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A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-54.5	-20	Pass
NVNT	1-DH5	2441	Ant1	-54.75	-20	Pass
NVNT	1-DH5	2480	Ant1	-52.73	-20	Pass
NVNT	2-DH5	2402	Ant1	-51.84	-20	Pass
NVNT	2-DH5	2441	Ant1	-44.87	-20	Pass
NVNT	2-DH5	2480	Ant1	-51.38	-20	Pass
NVNT	3-DH5	2402	Ant1	-51.73	-20	Pass
NVNT	3-DH5	2441	Ant1	-51.34	-20	Pass
NVNT	3-DH5	2480	Ant1	-53.59	-20	Pass



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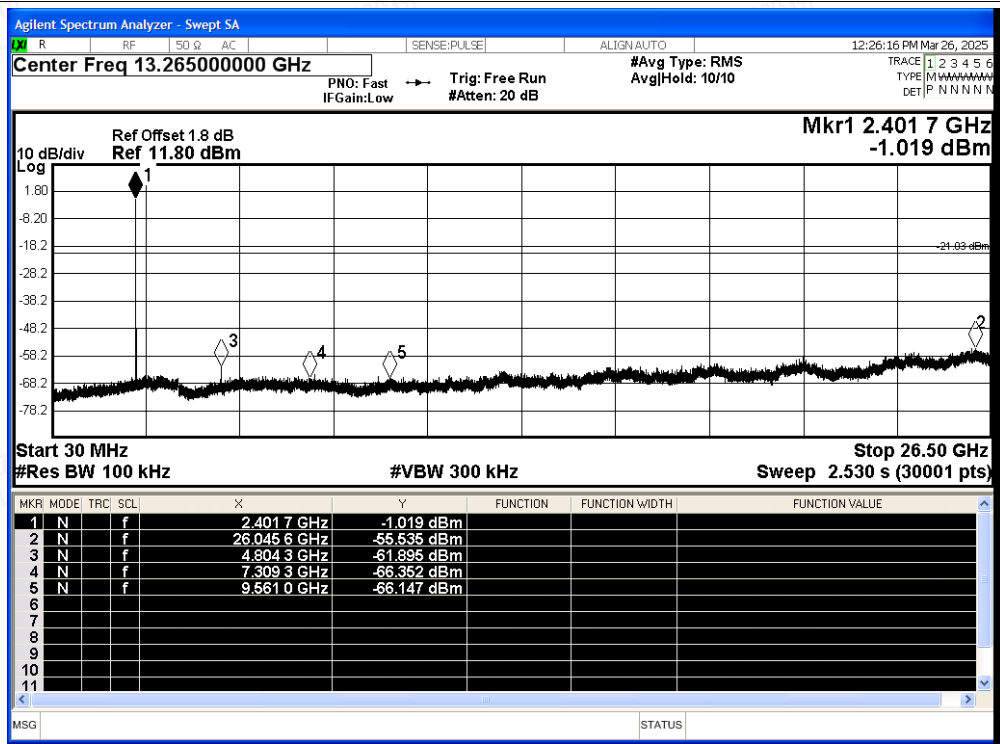


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



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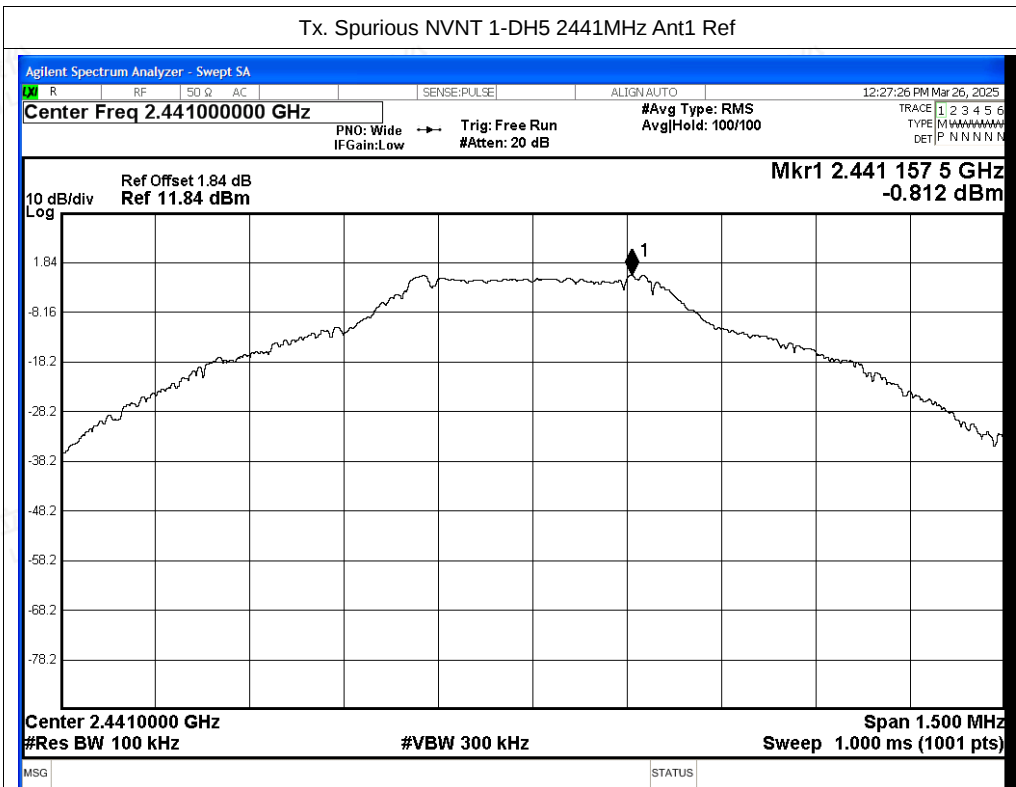
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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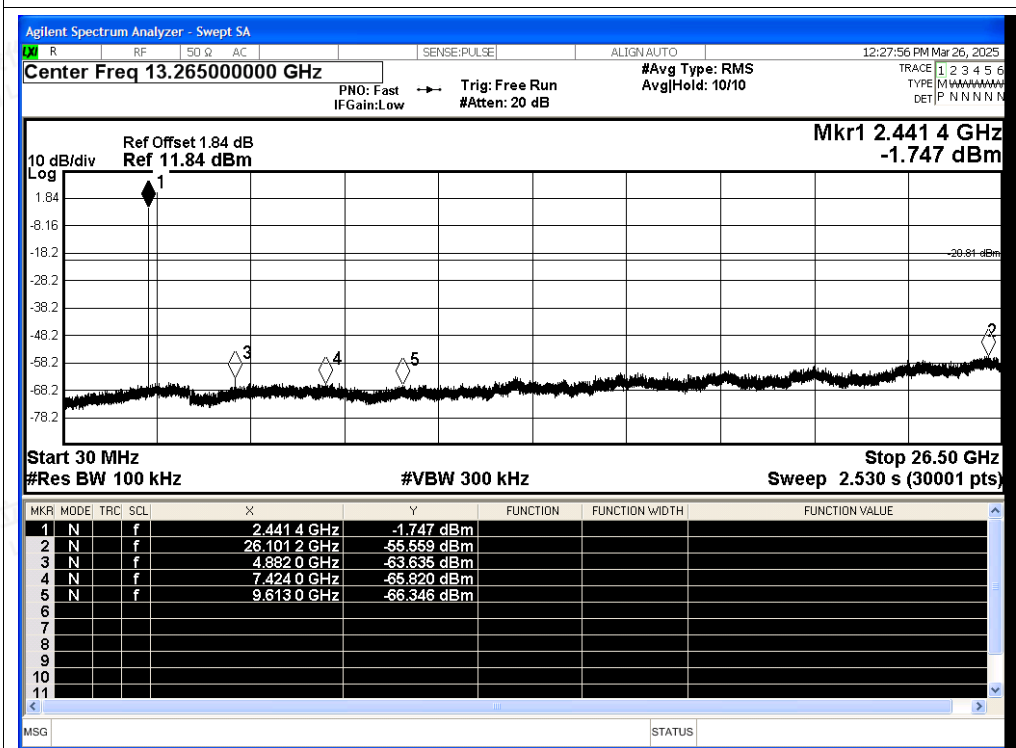
Scan code to check authenticity



Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

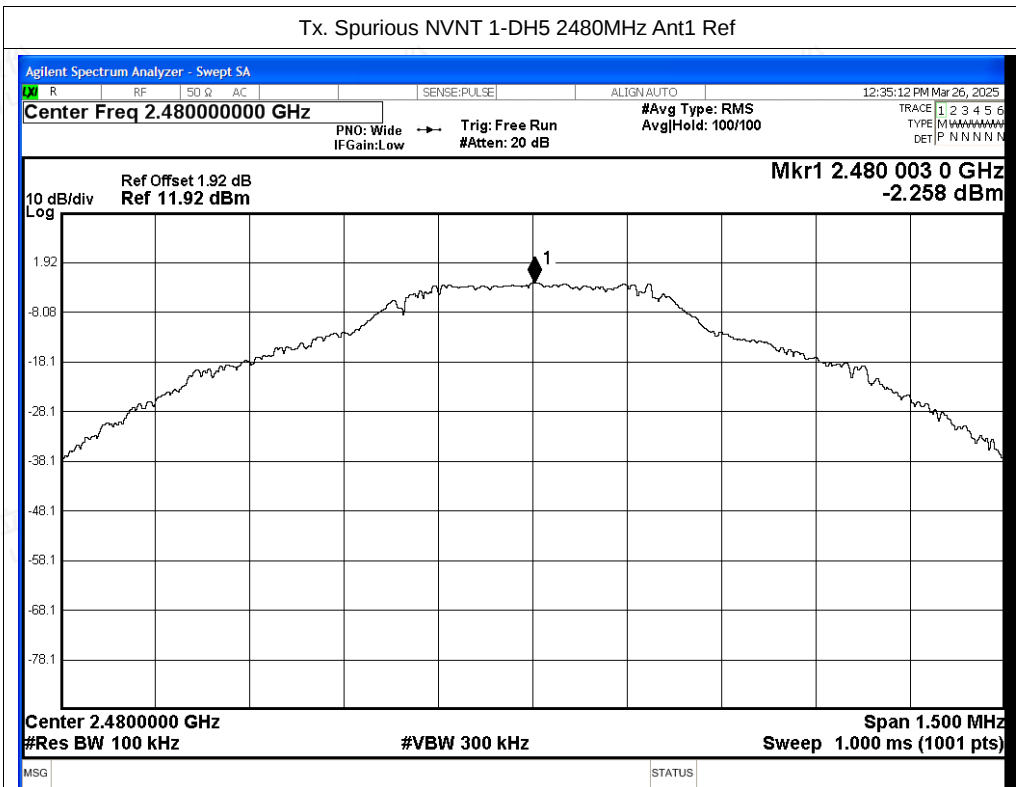


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

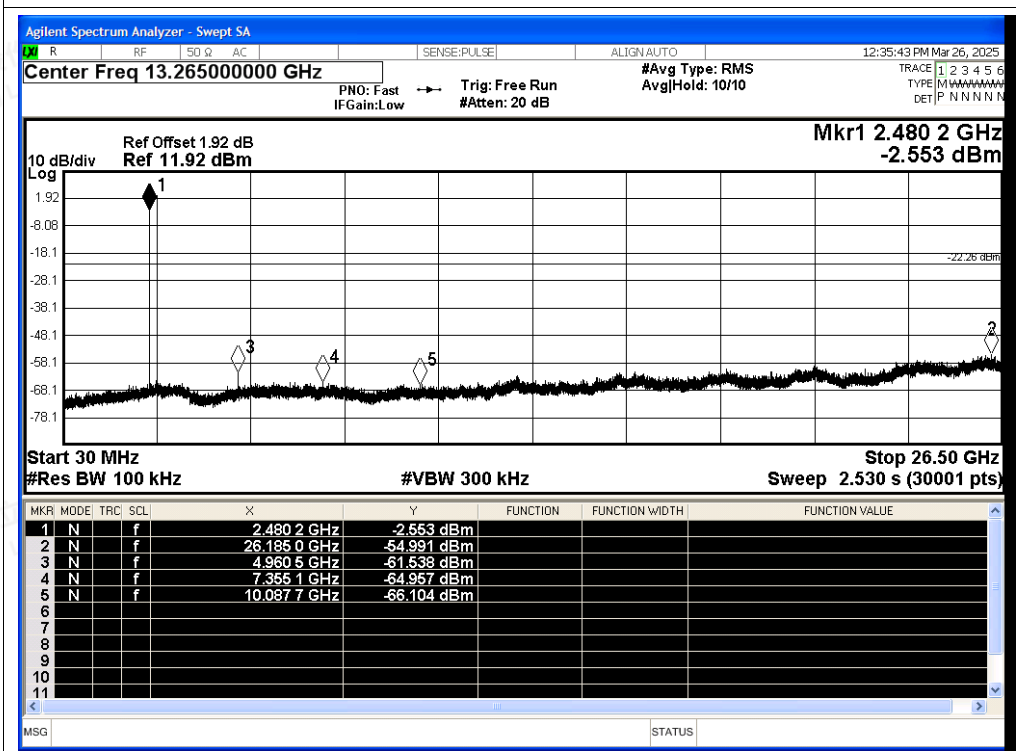




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

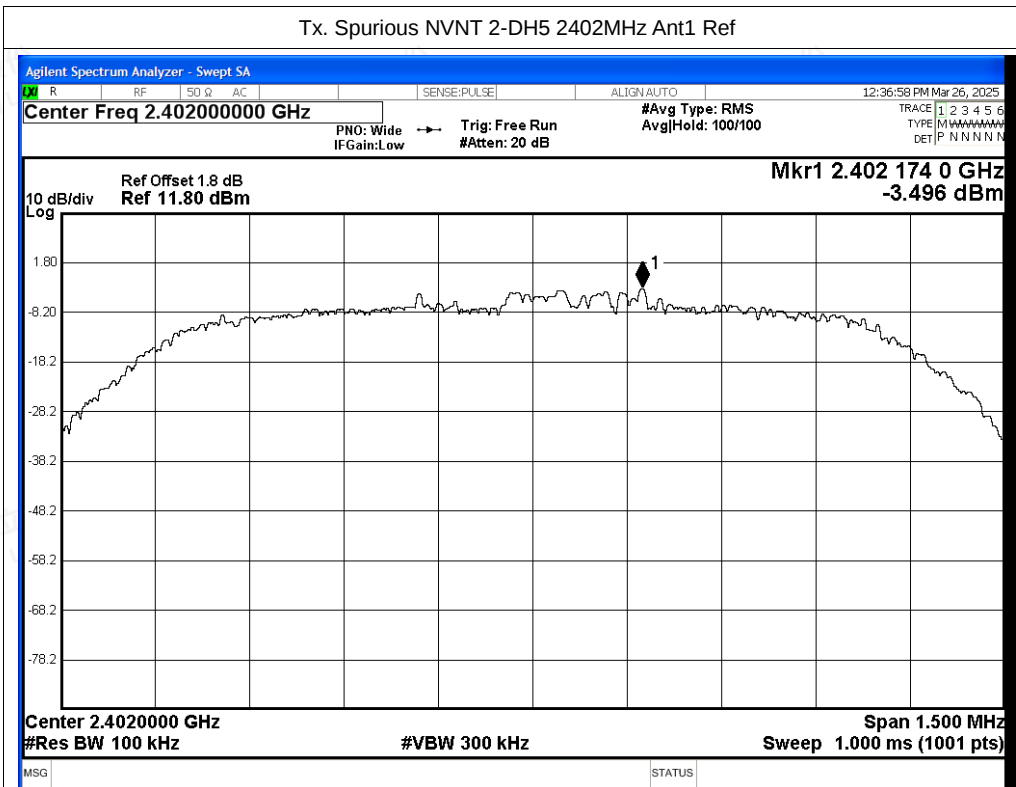


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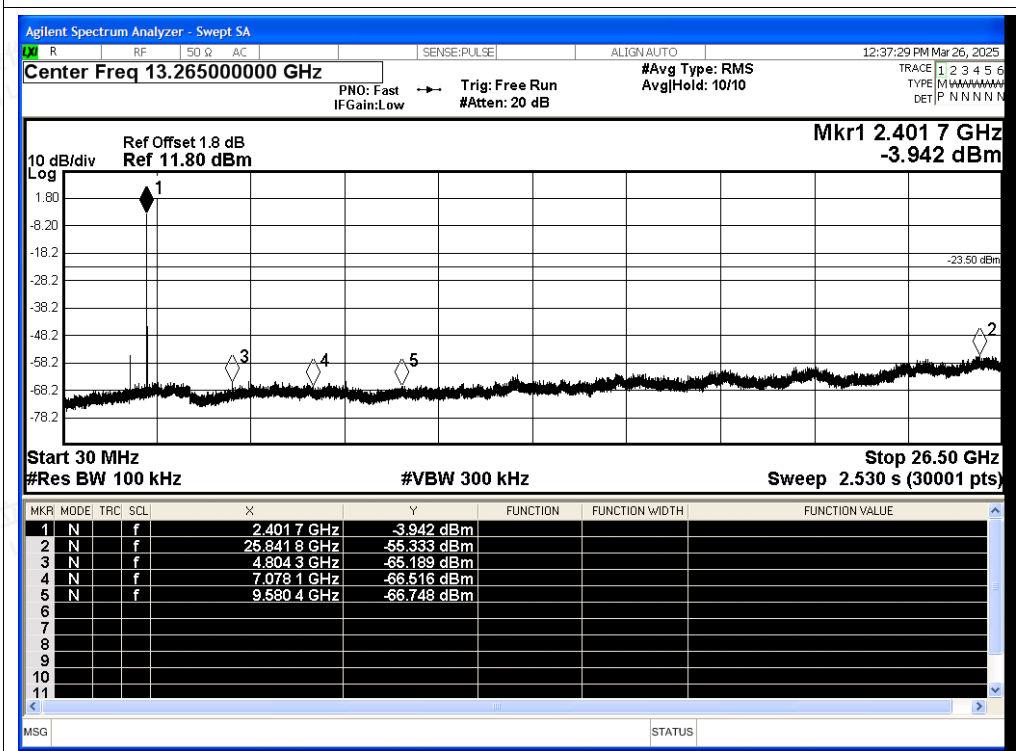




Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



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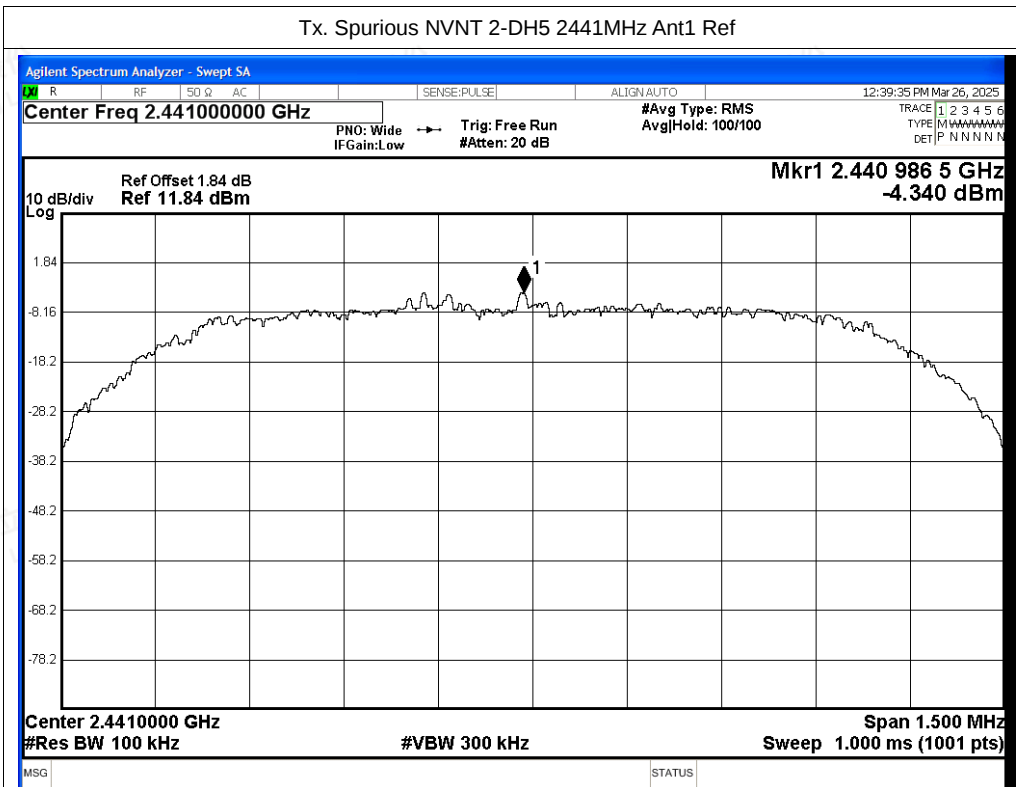
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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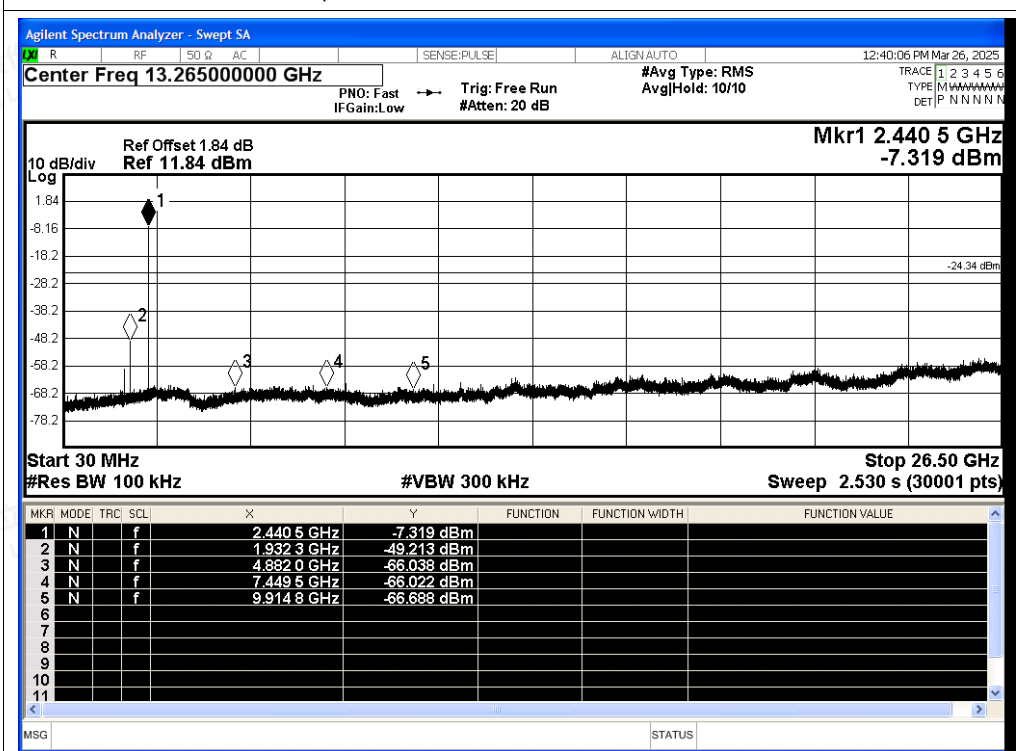
Scan code to check authenticity



Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

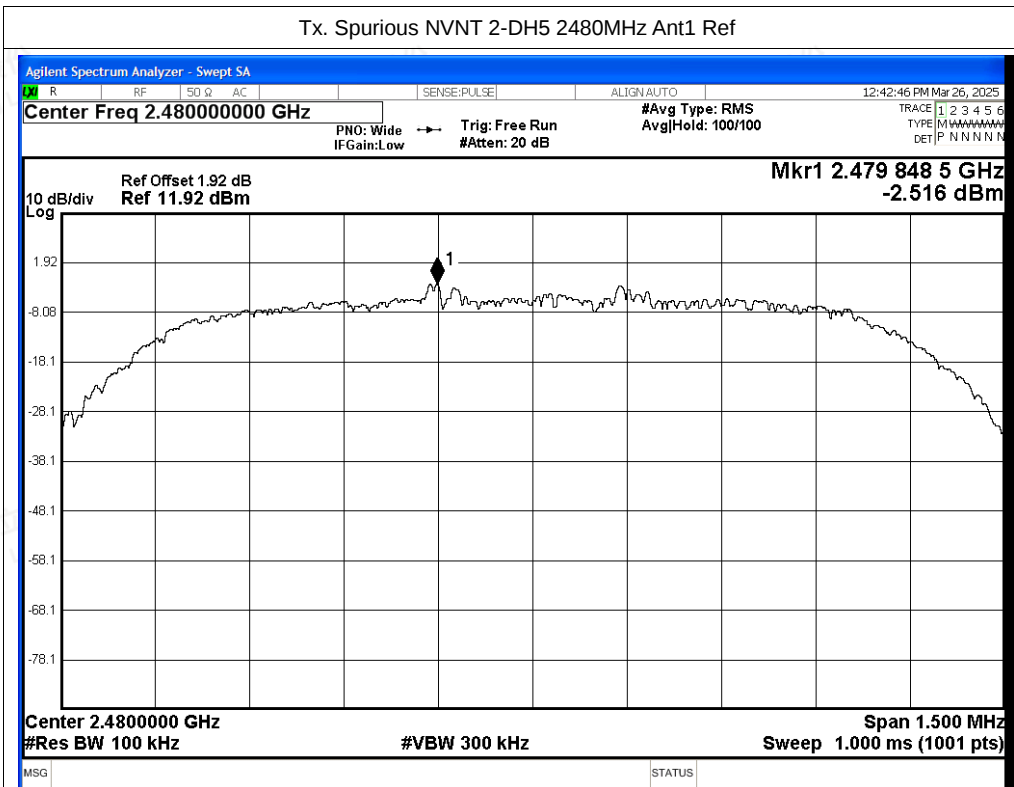
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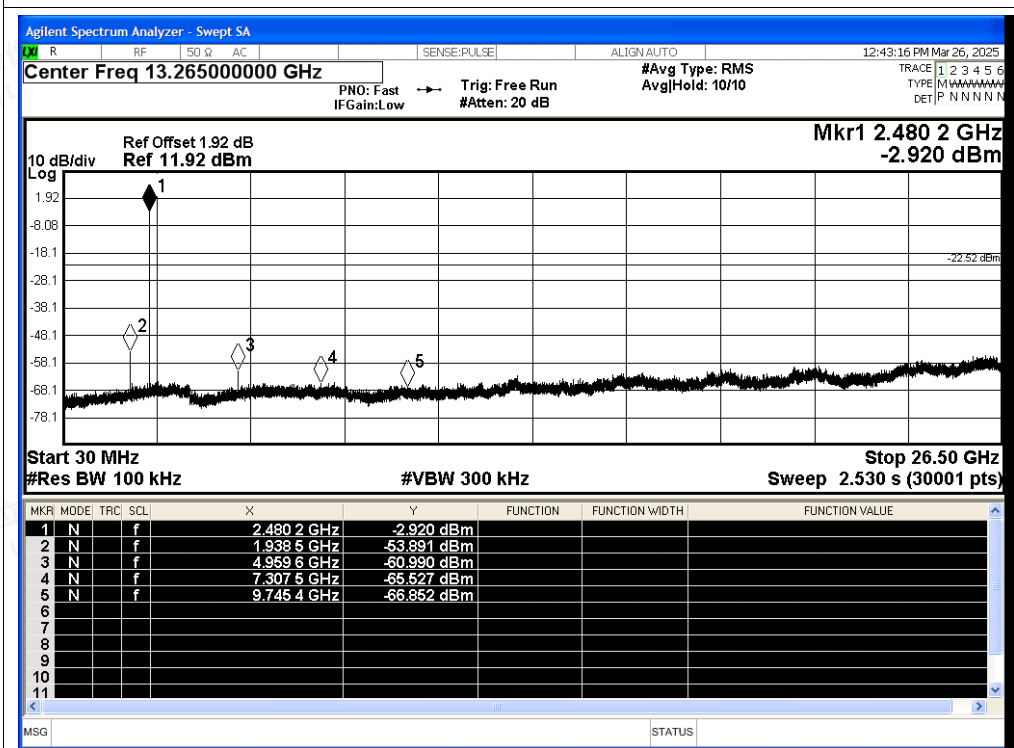
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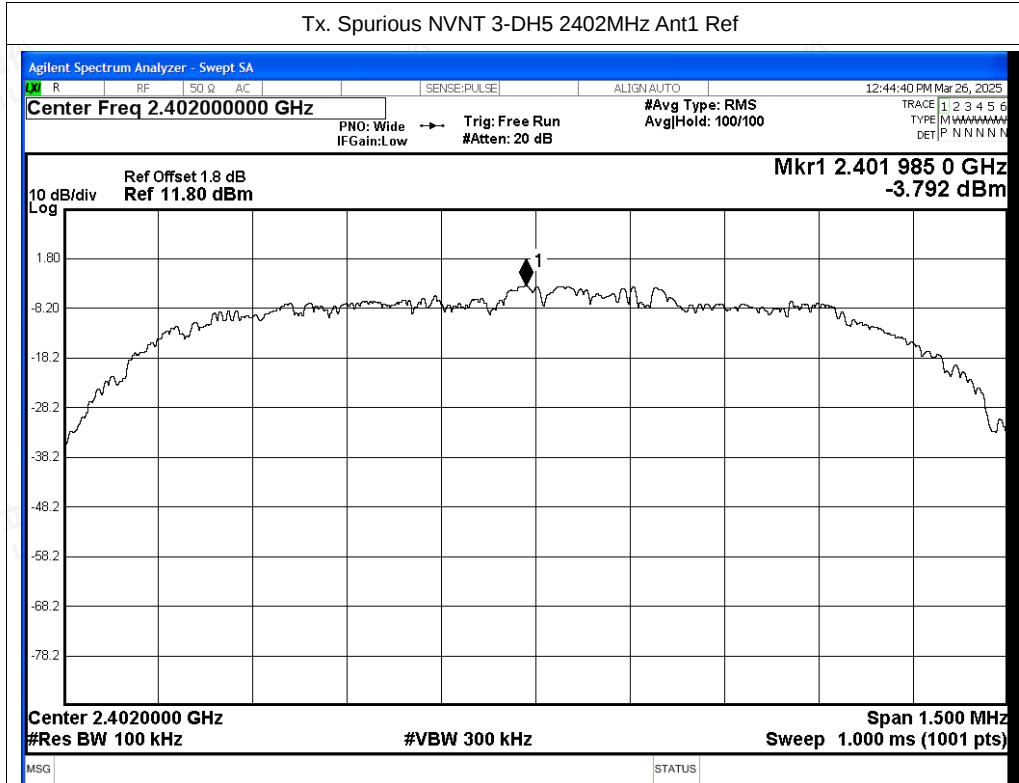


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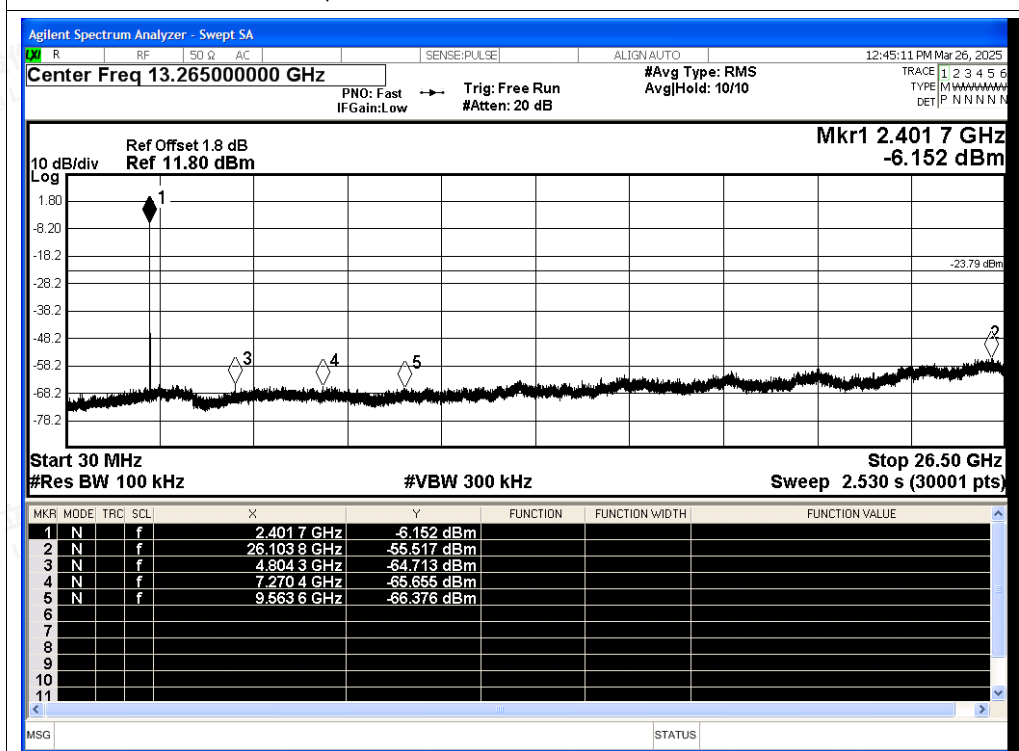




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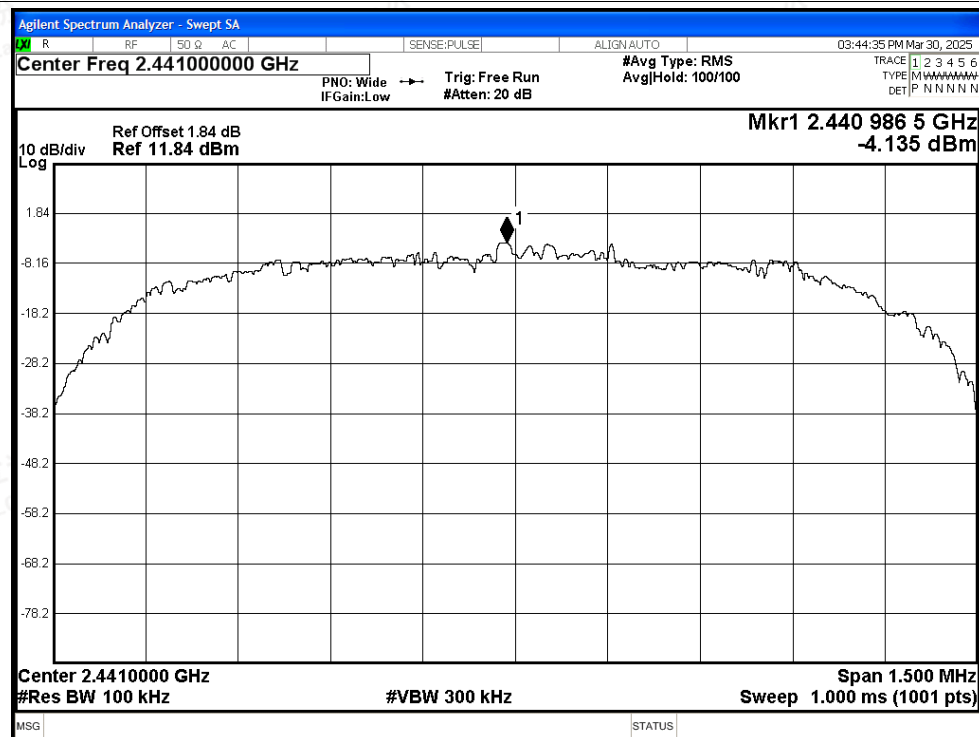


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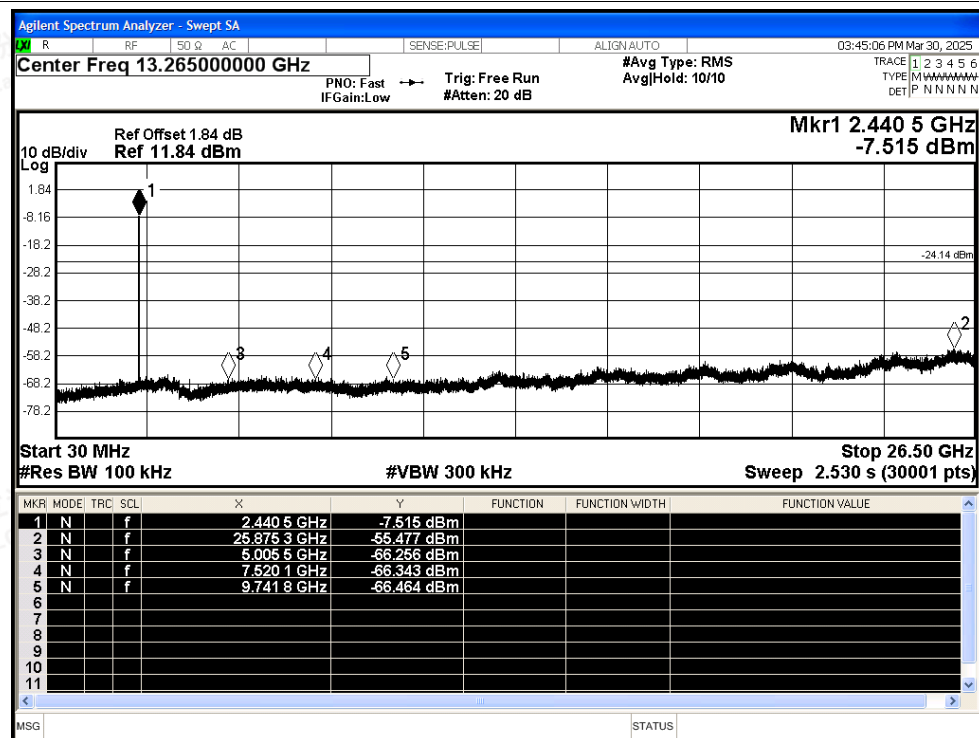




Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref

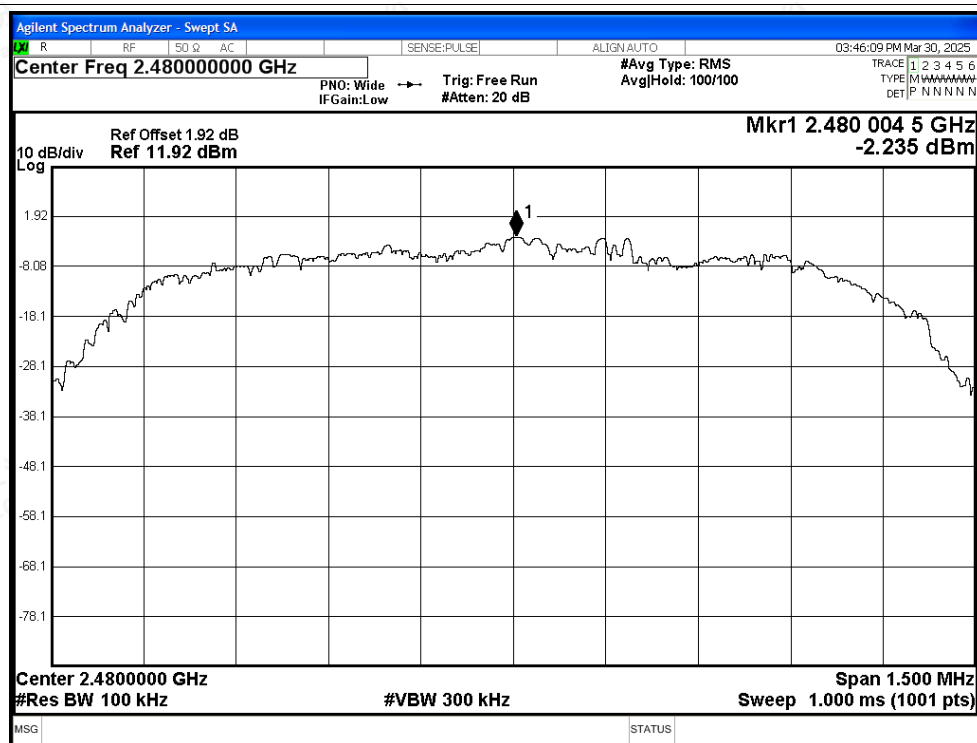


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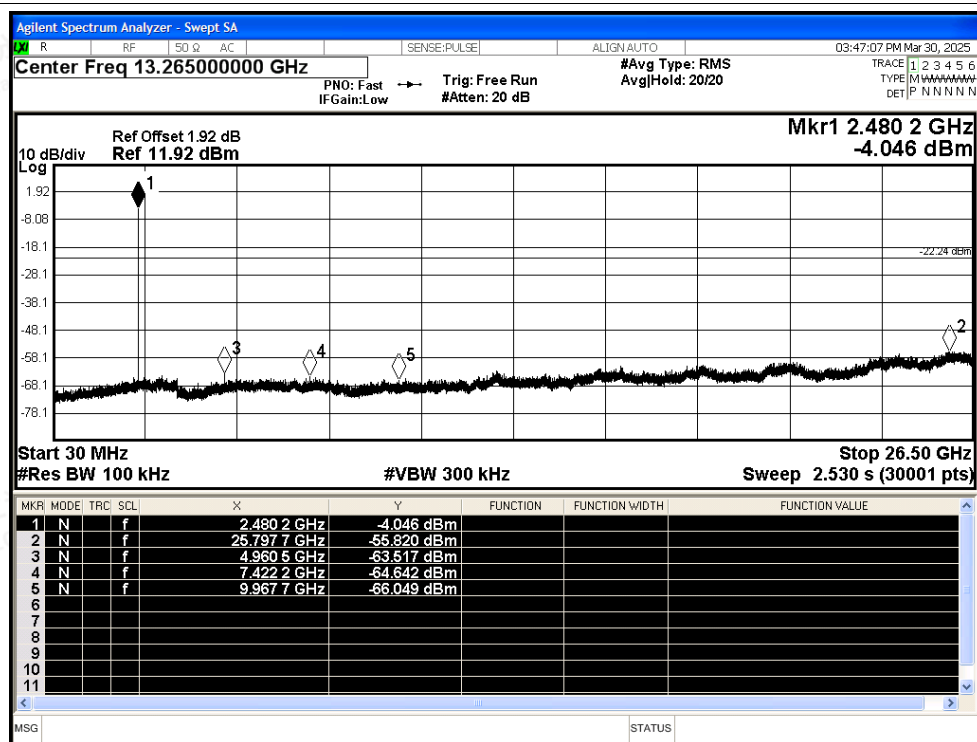




Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



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	77.63	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.63	1.1	0.34
NVNT	2-DH5	2402	Ant1	76.43	1.17	0.36
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	77.28	1.12	0.35
NVNT	3-DH5	2441	Ant1	77.28	1.12	0.35
NVNT	3-DH5	2480	Ant1	77.28	1.12	0.35

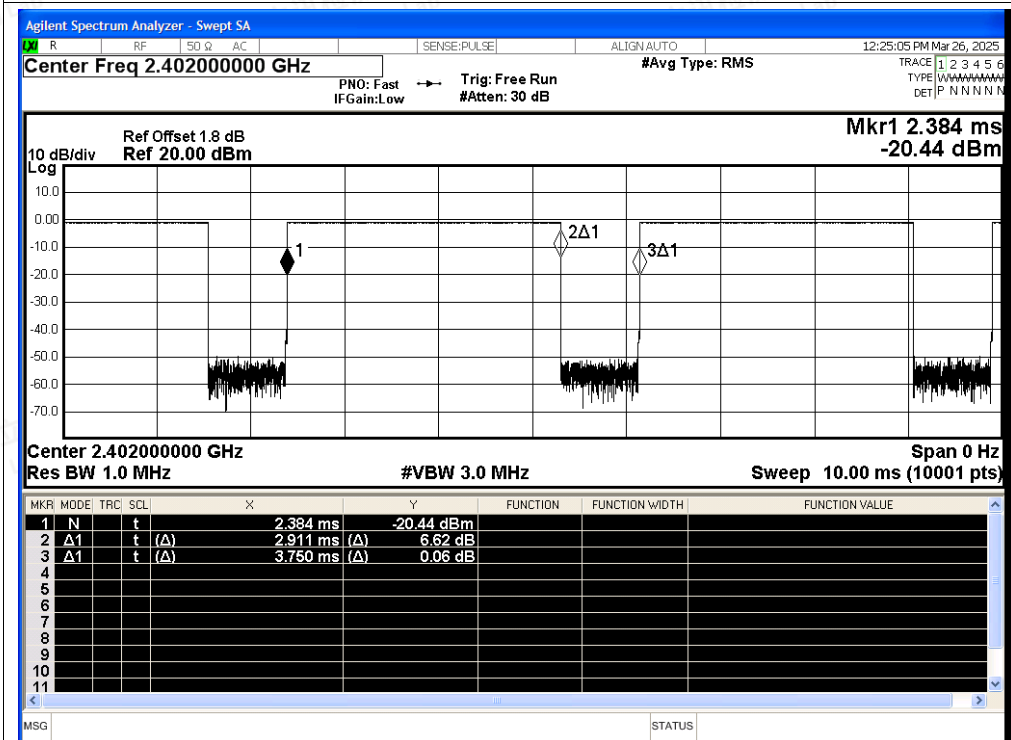


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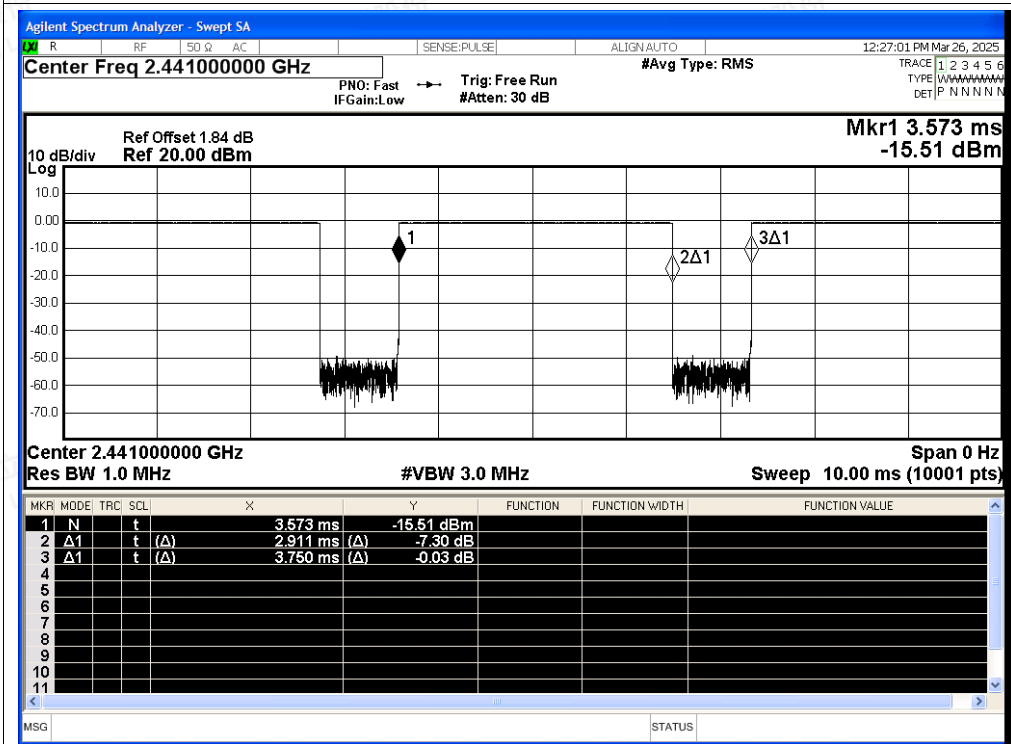


Test Graphs

Duty Cycle NVNT 1-DH5 2402MHz Ant1

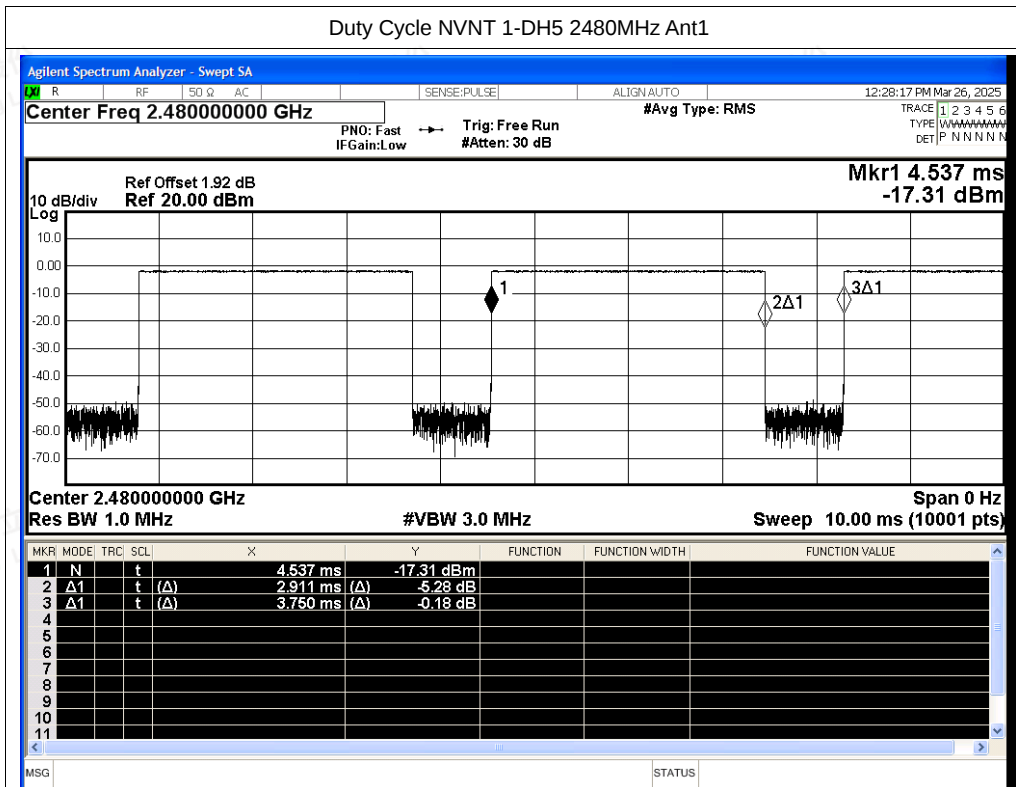


Duty Cycle NVNT 1-DH5 2441MHz Ant1

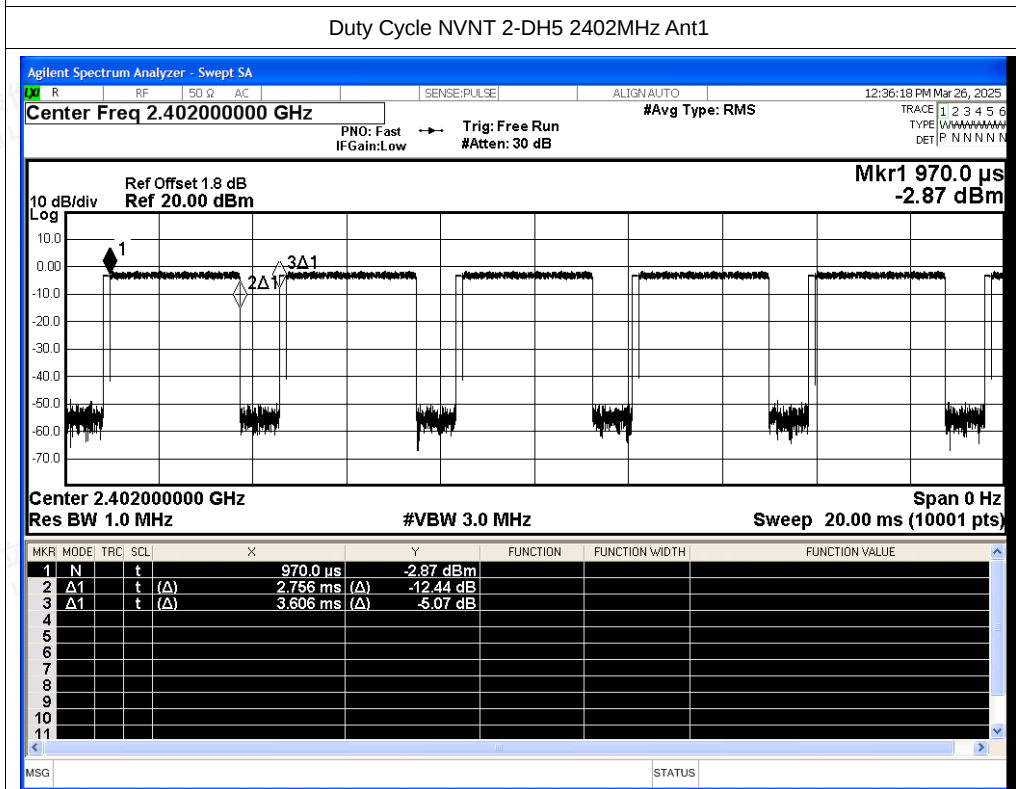




Duty Cycle NVNT 1-DH5 2480MHz Ant1

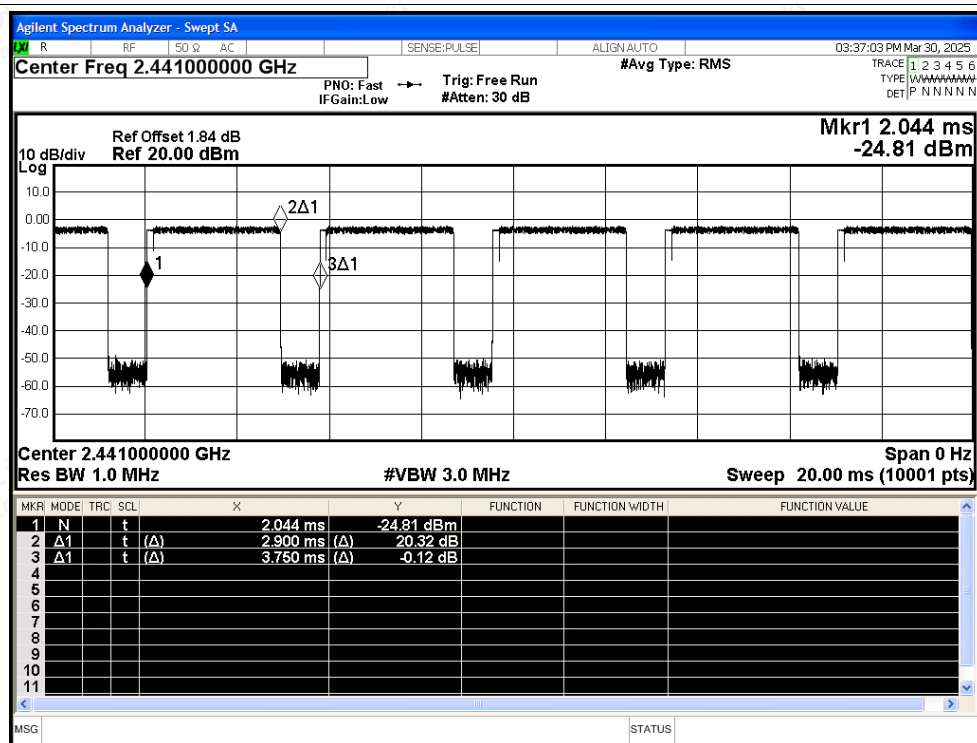


Duty Cycle NVNT 2-DH5 2402MHz Ant1

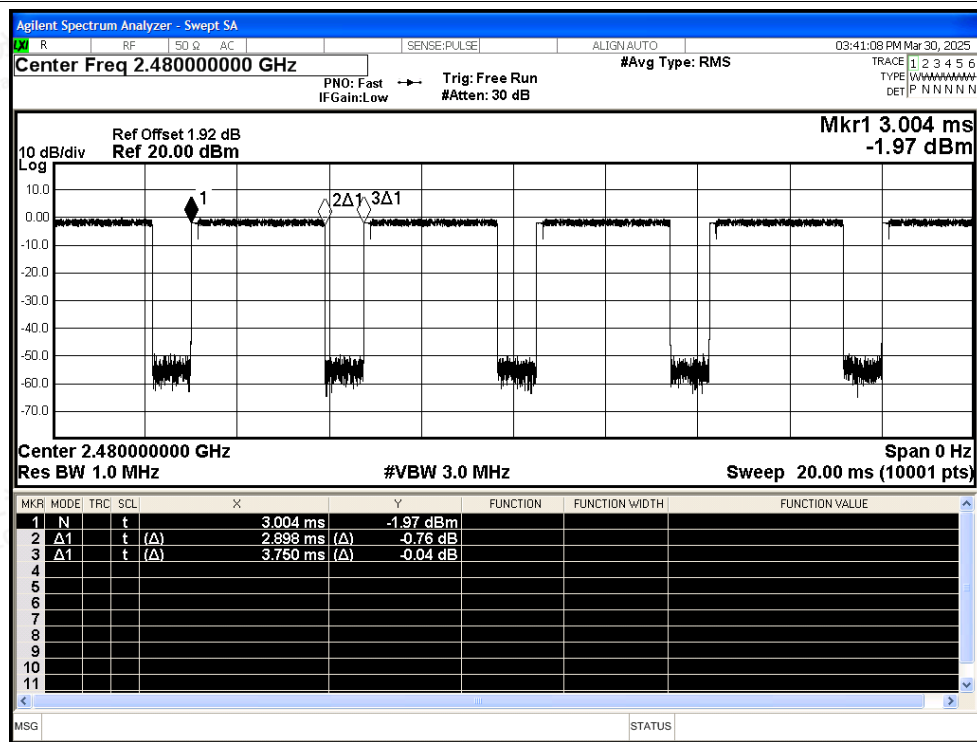




Duty Cycle NVNT 2-DH5 2441MHz Ant1

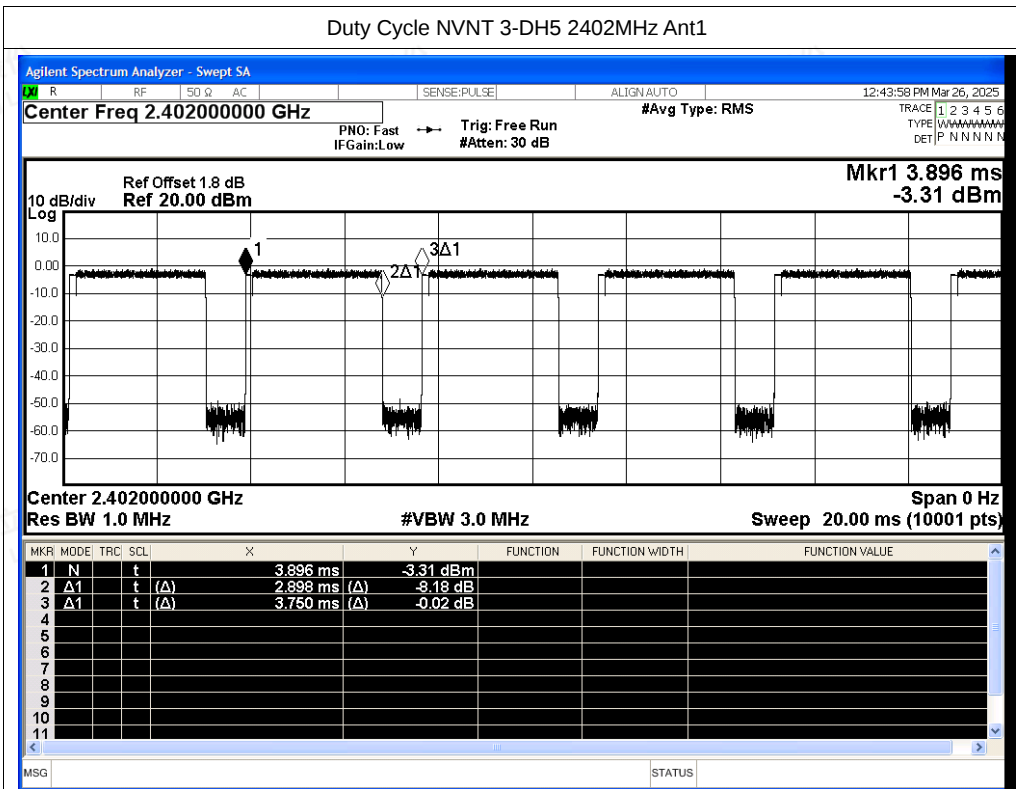


Duty Cycle NVNT 2-DH5 2480MHz Ant1

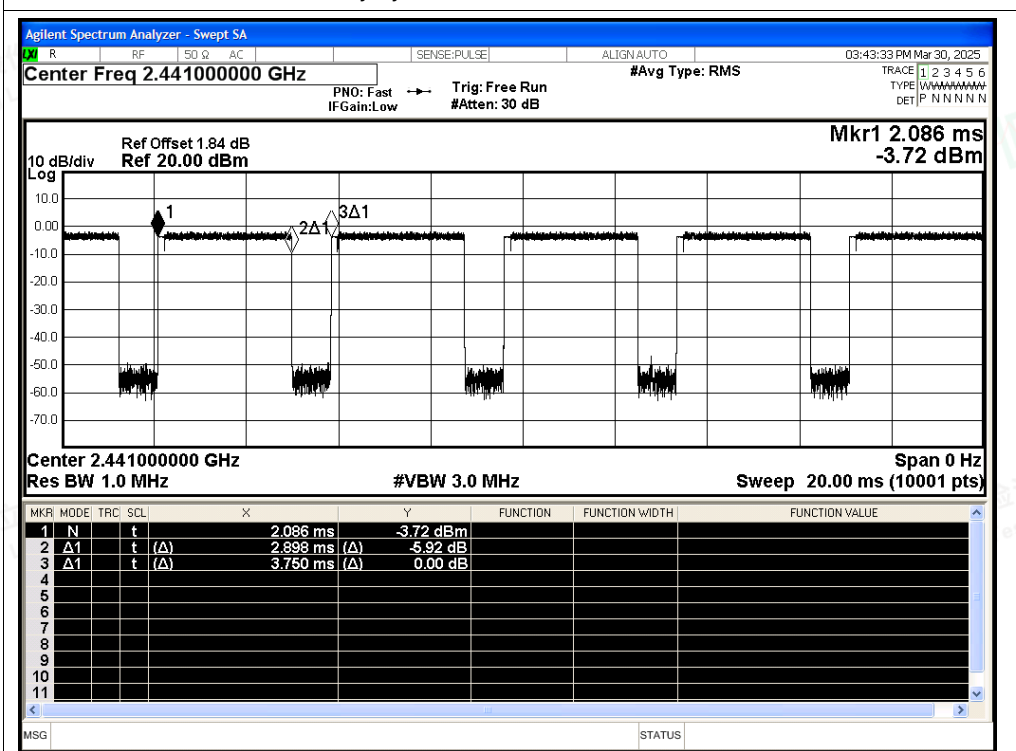


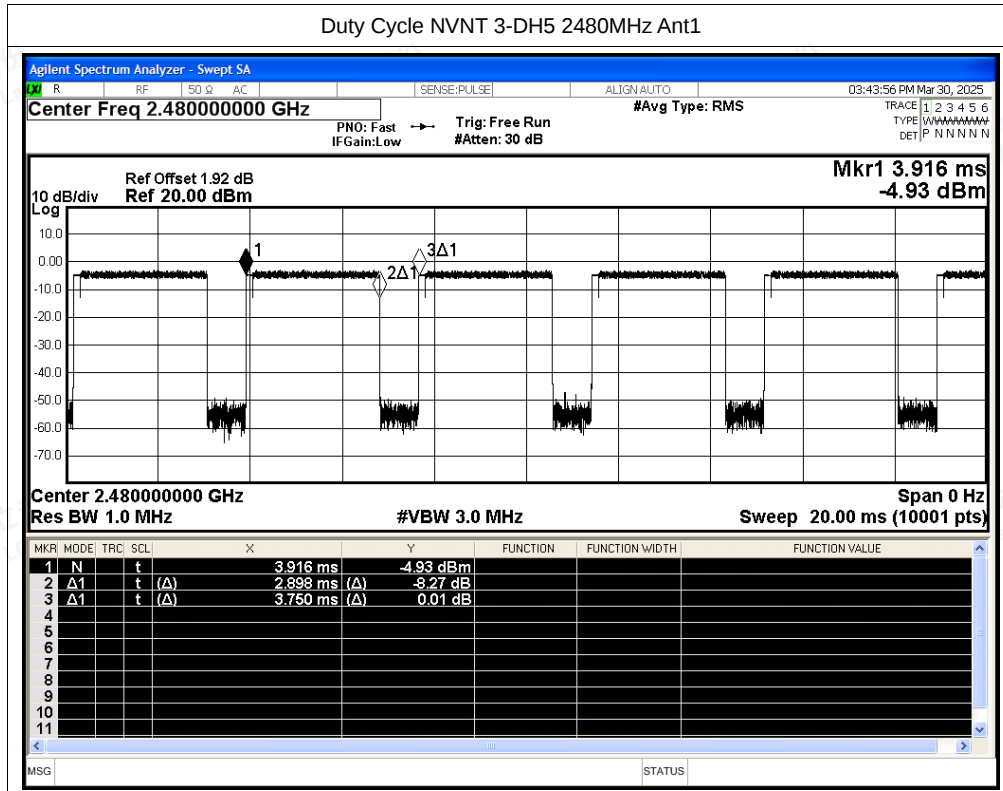


Duty Cycle NVNT 3-DH5 2402MHz Ant1



Duty Cycle NVNT 3-DH5 2441MHz Ant1







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	-51.44	2	-	45.82	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.6	2	1.1	39.76	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2389.872	-47.75	2	-	49.51	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2387.76	-57.97	2	1.1	40.39	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-51.65	2	-	45.61	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-59.08	2	1.1	39.28	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-49.14	2	-	48.12	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-58.03	2	1.1	40.33	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2484.304	-45.16	2	-	52.1	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2499.664	-57.15	2	1.1	41.21	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-48.65	2	-	48.61	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-58.44	2	1.1	39.92	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-49.44	2	-	47.82	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-59.08	2	1.17	39.35	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2360.496	-47.29	2	-	49.97	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2383.152	-57.86	2	1.17	40.57	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-51.34	2	-	45.92	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-59.02	2	1.17	39.41	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-49.02	2	-	48.24	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-57.73	2	1.12	40.65	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2487.76	-46.87	2	-	50.39	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.8	-57.29	2	1.12	41.09	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-48.55	2	-	48.71	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-58.03	2	1.12	40.35	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-49.75	2	-	47.51	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-59.08	2	1.12	39.3	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2386.512	-47.87	2	-	49.39	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2386.992	-57.85	2	1.12	40.53	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-51.74	2	-	45.52	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-58.27	2	1.12	40.11	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-51.04	2	-	46.22	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-57.69	2	1.12	40.69	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2487.376	-47.01	2	-	50.25	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2485.576	-57.12	2	1.12	41.26	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-50.11	2	-	47.15	Peak	74	Pass



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NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-57.71	2	1.12	40.67	Average	54	Pass
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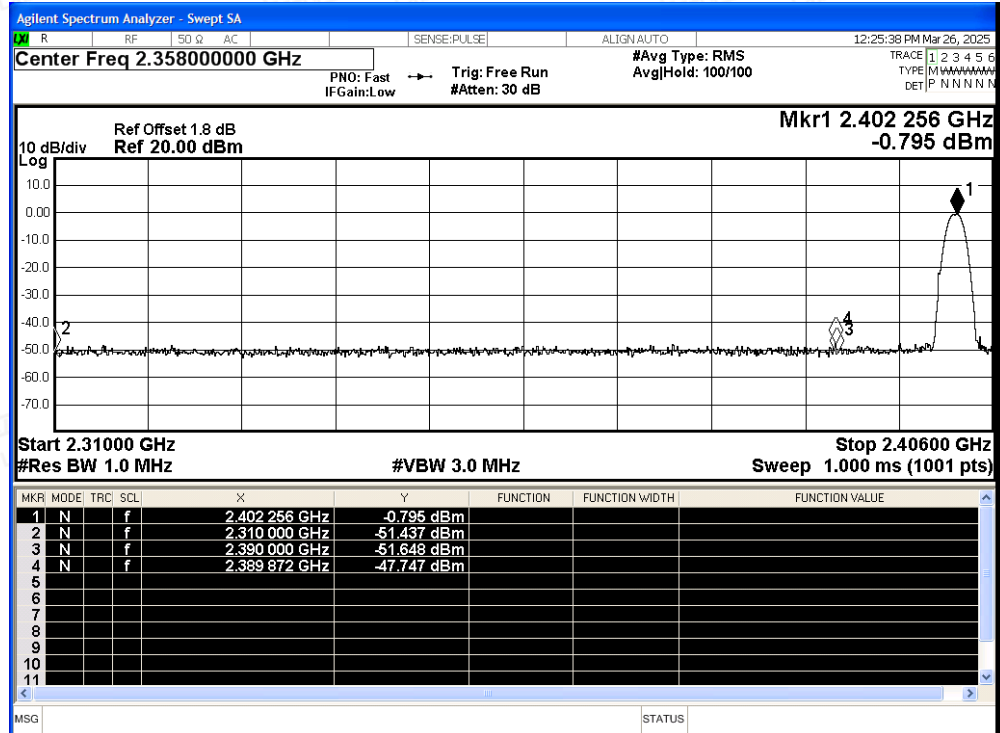


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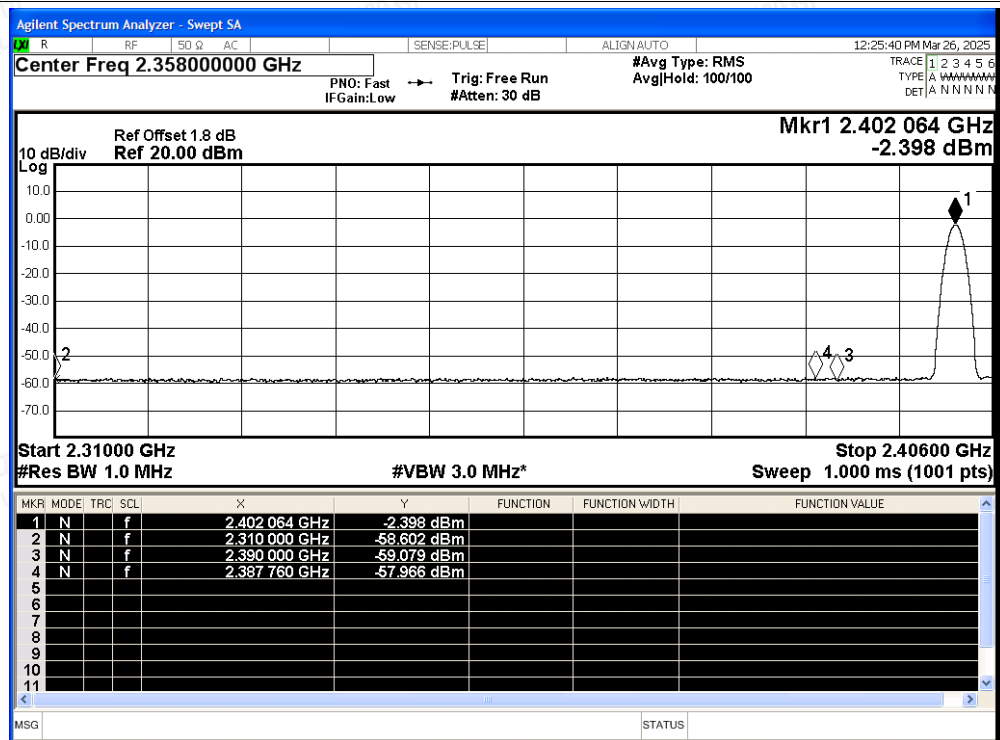


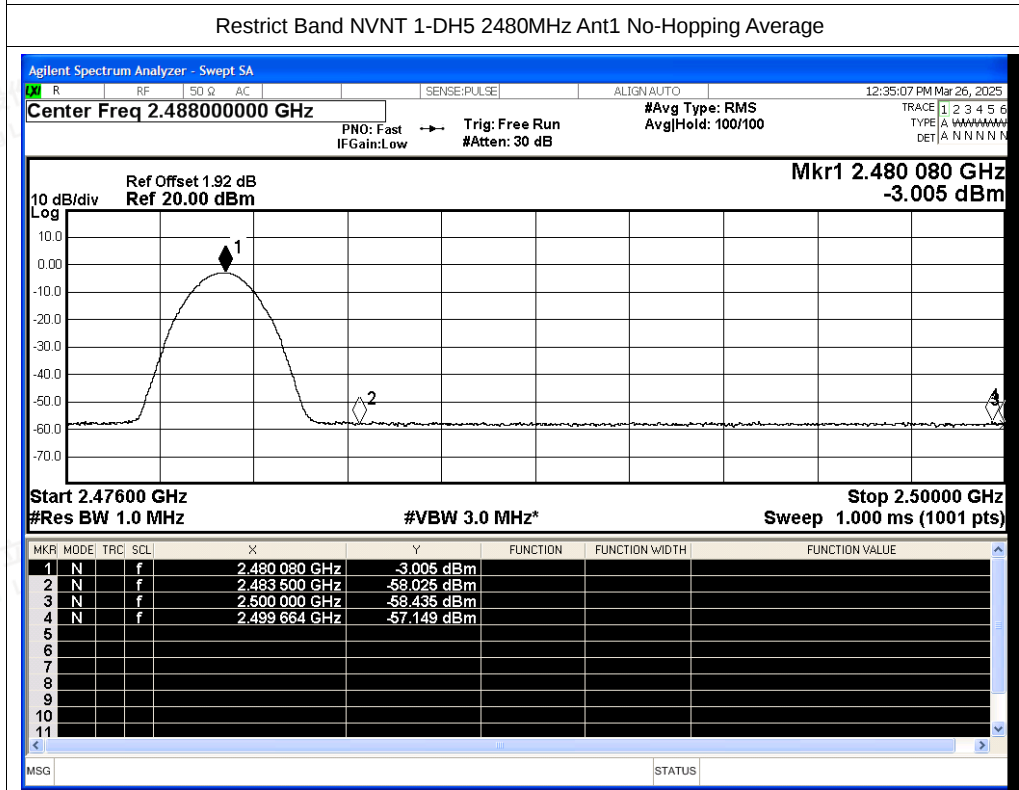
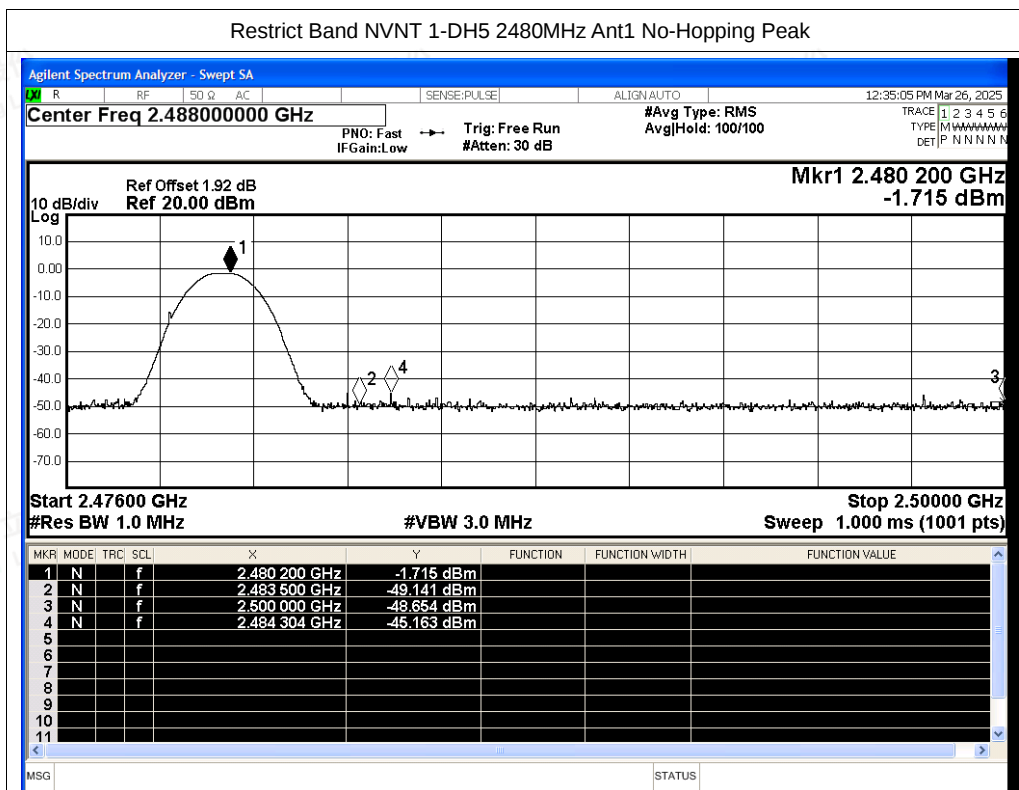
Test Graphs

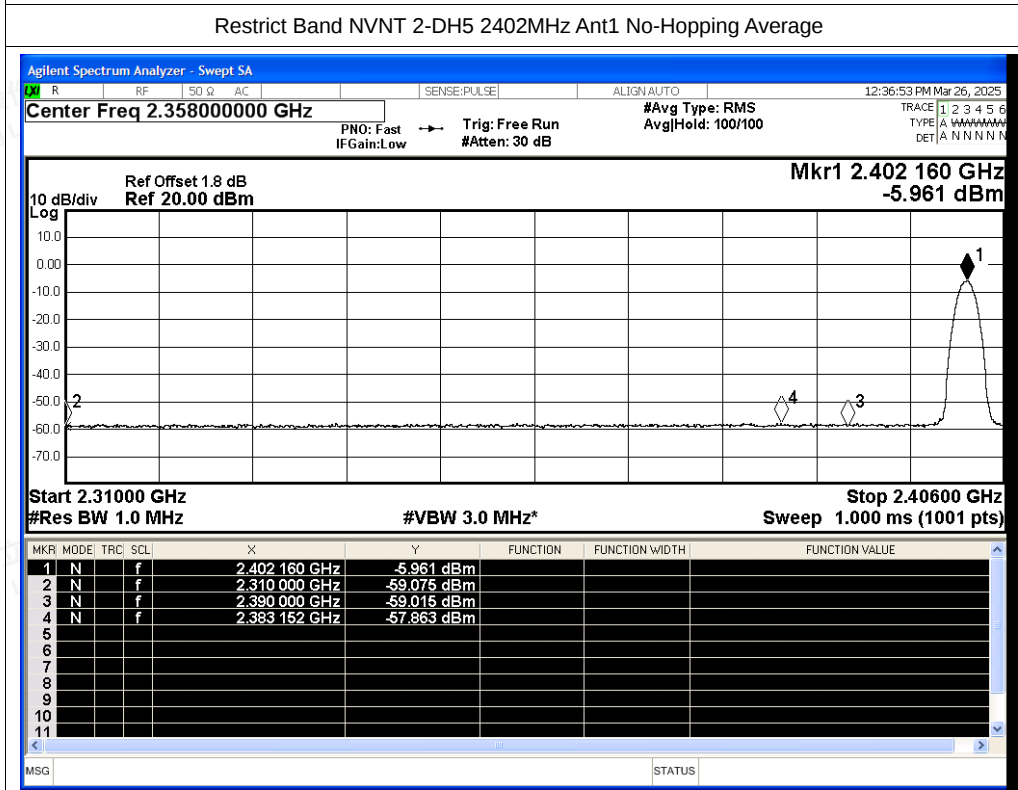
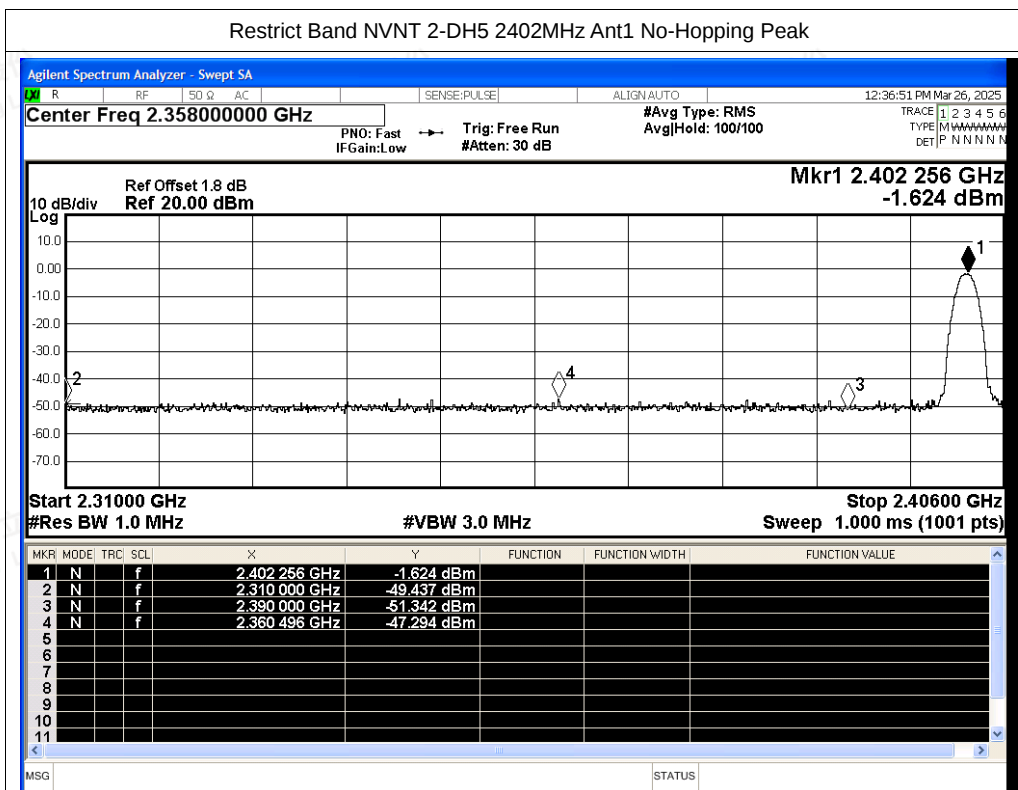
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



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

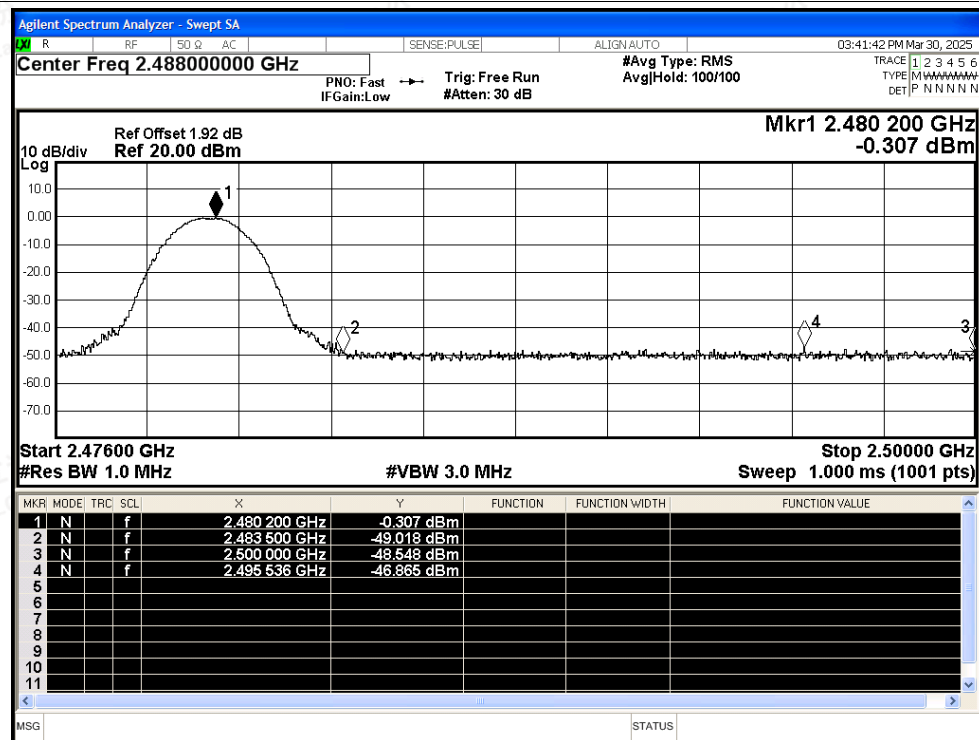




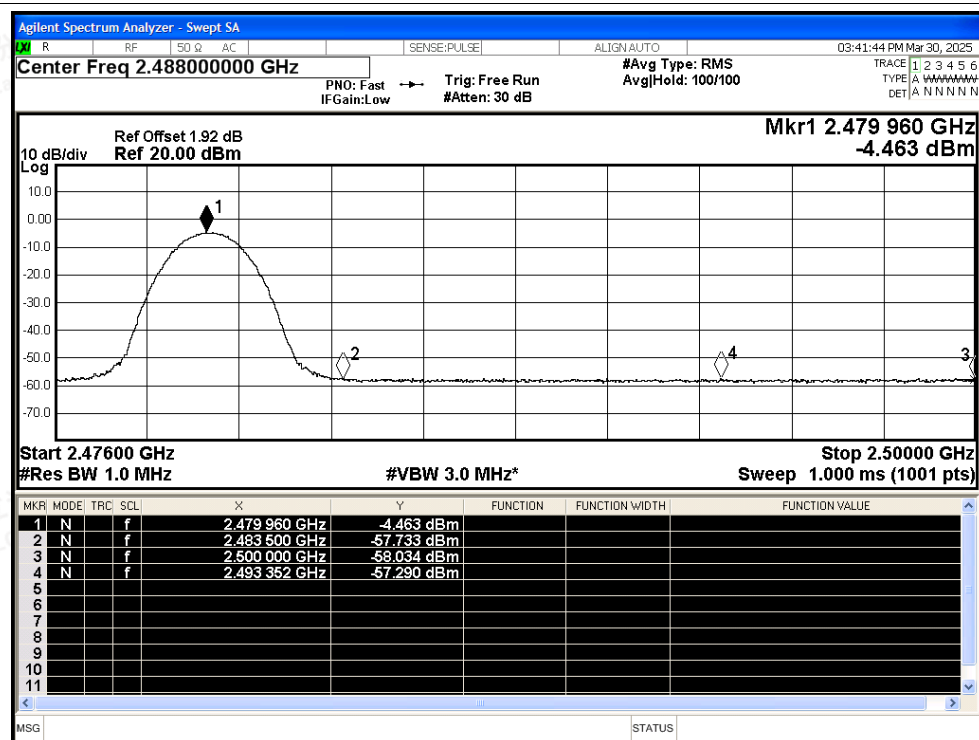


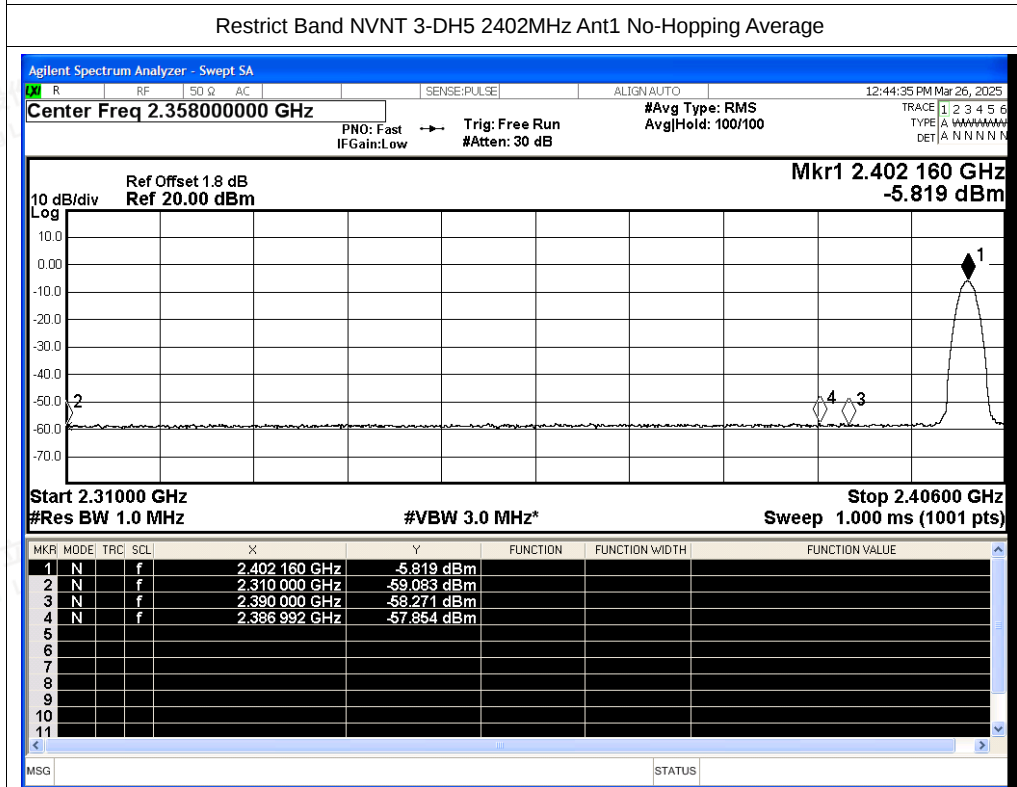
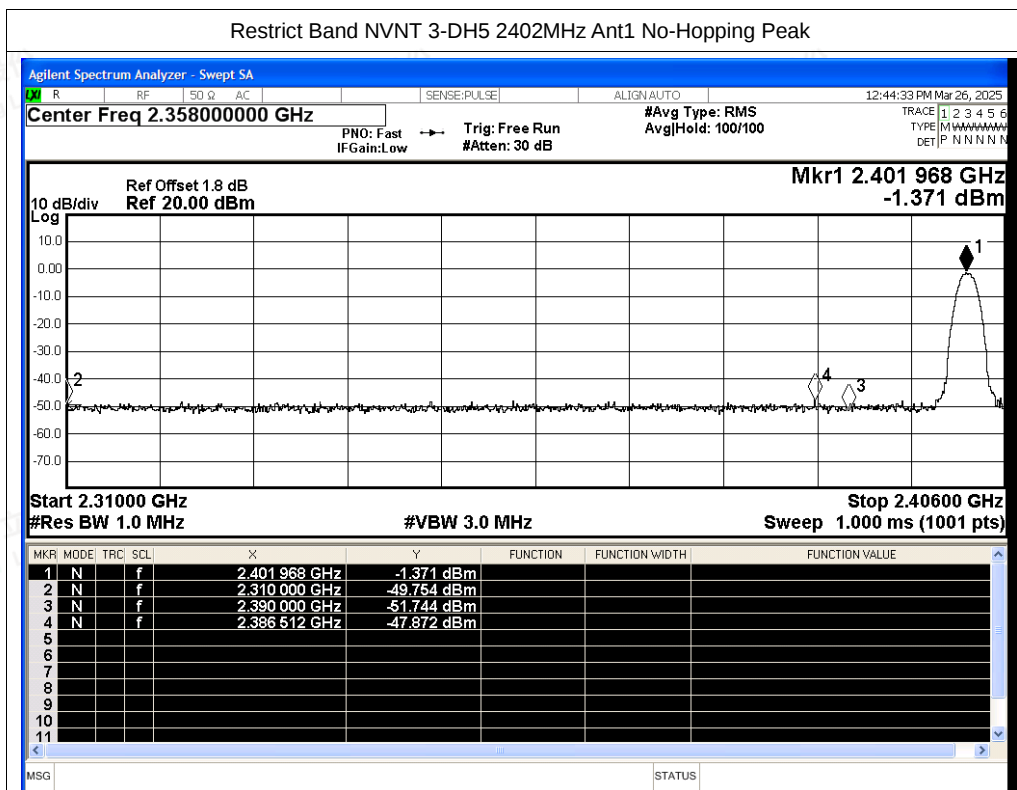


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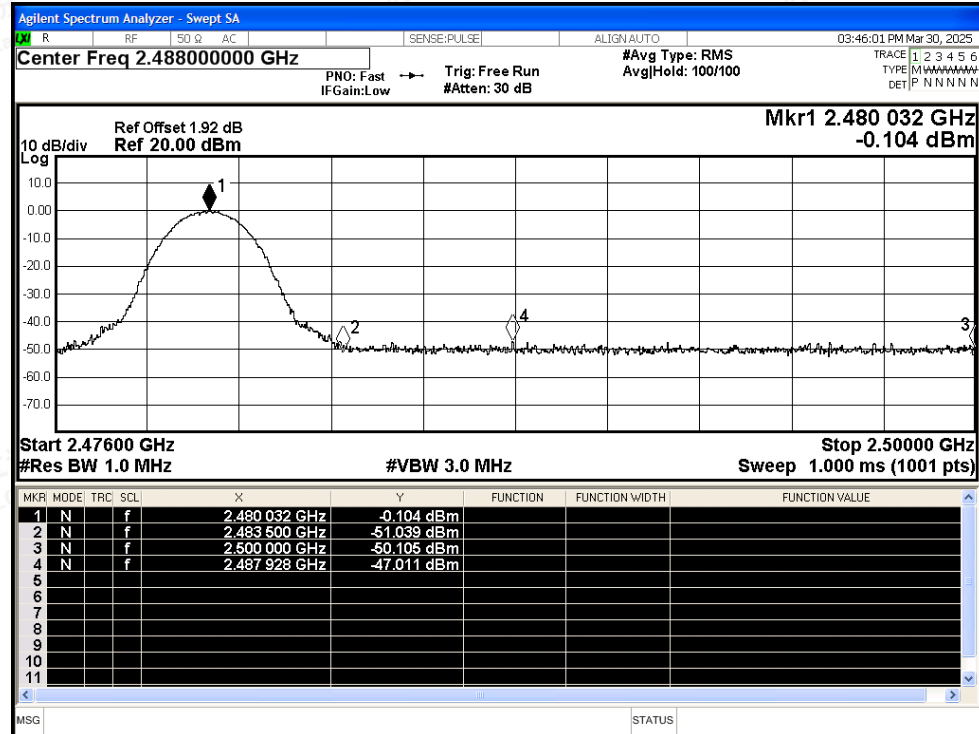
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Average







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



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

