



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: smart watch

Test Model: TB98

Environmental Conditions

Temperature:	23.8°C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jerry Chu
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	0.952	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.988	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.942	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.283	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.288	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.311	N/A	Pass

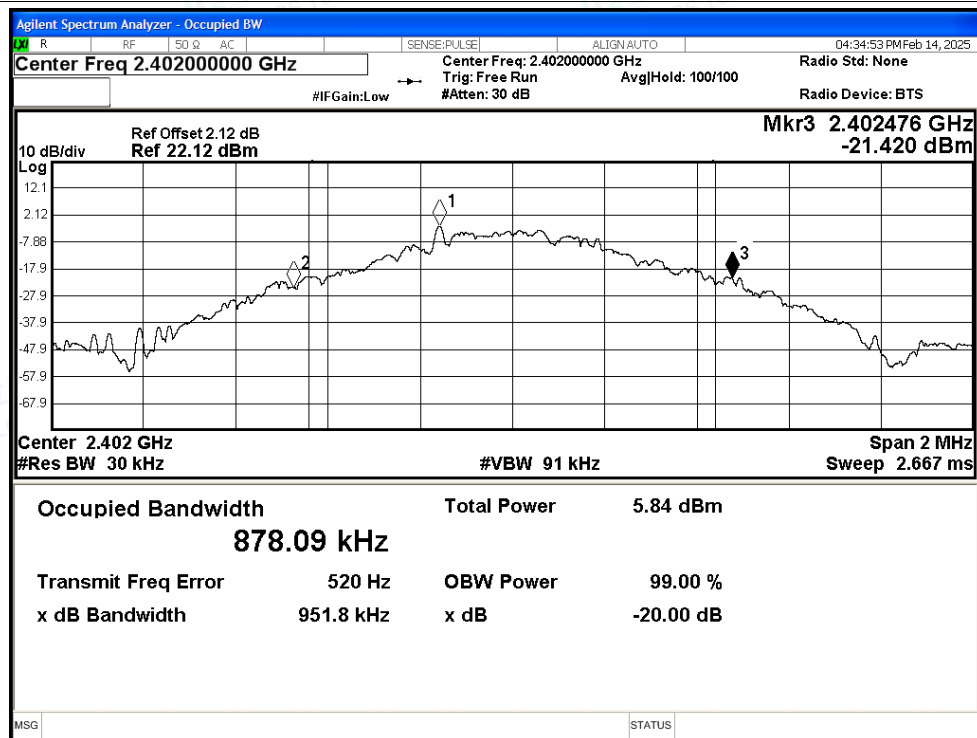


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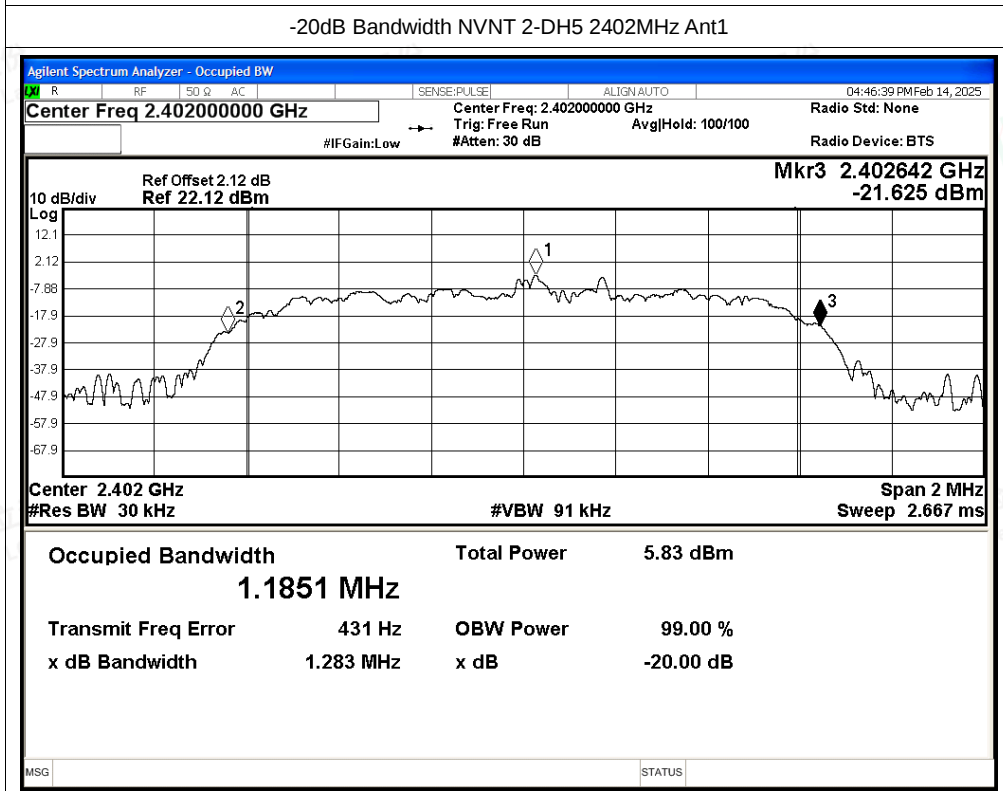
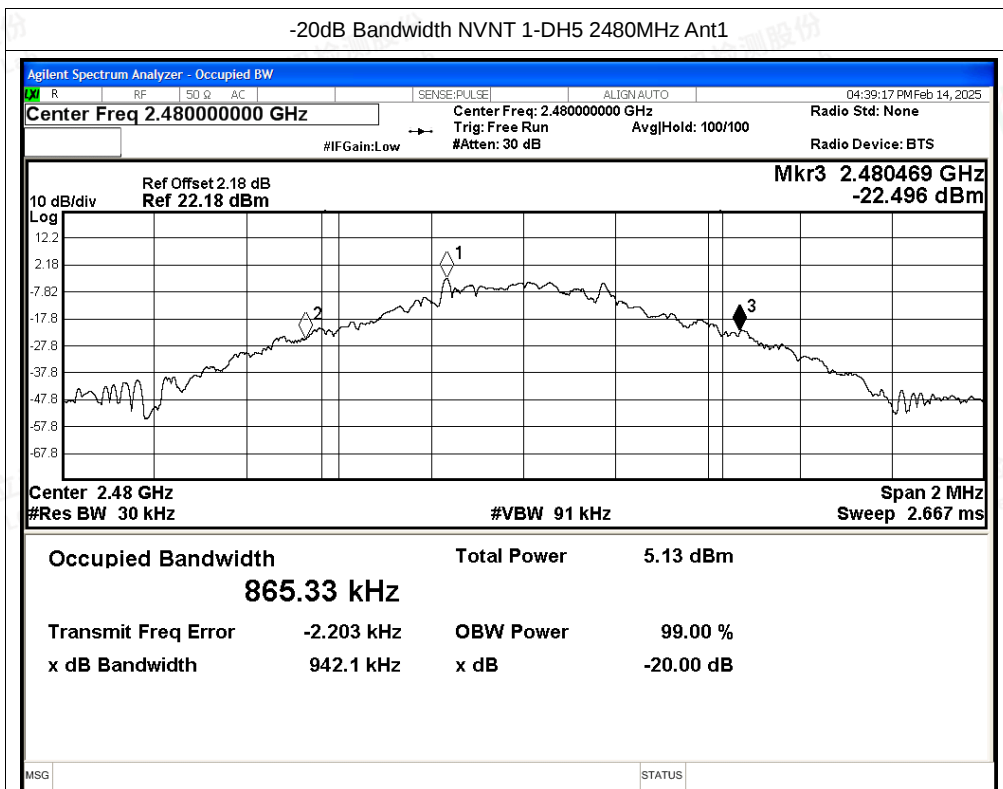
Test Graphs

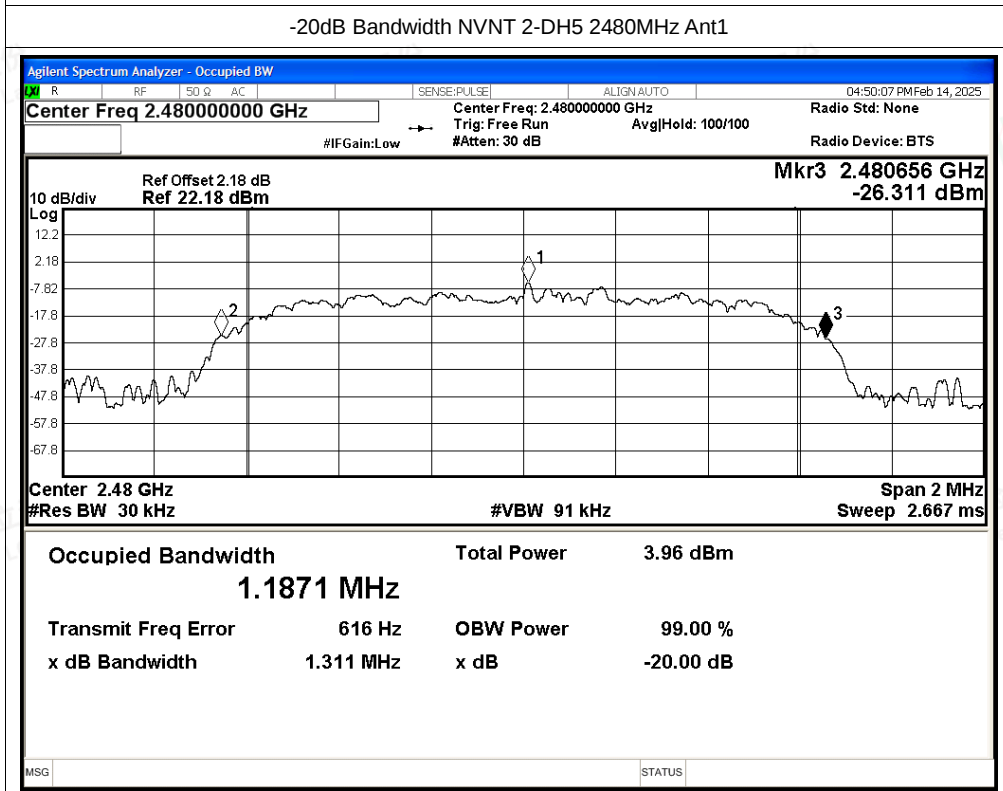
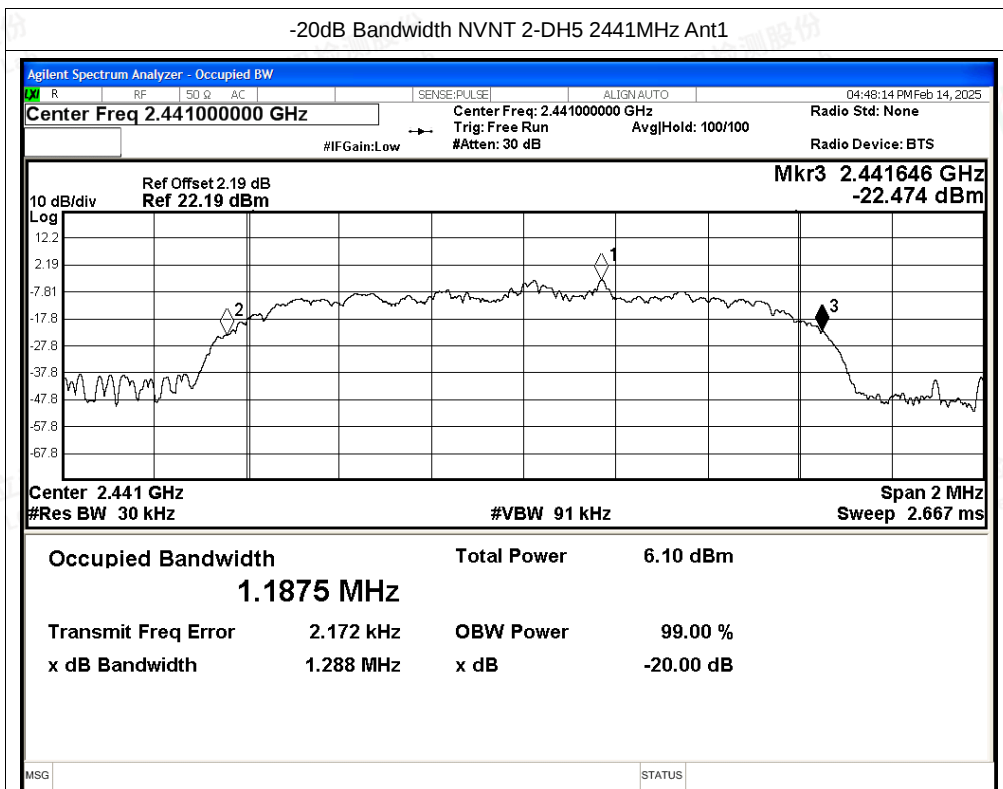
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-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	-0.39	21	Pass
NVNT	1-DH5	2441	Ant1	-0.22	21	Pass
NVNT	1-DH5	2480	Ant1	-1.43	21	Pass
NVNT	2-DH5	2402	Ant1	1.44	21	Pass
NVNT	2-DH5	2441	Ant1	0.78	21	Pass
NVNT	2-DH5	2480	Ant1	-0.02	21	Pass

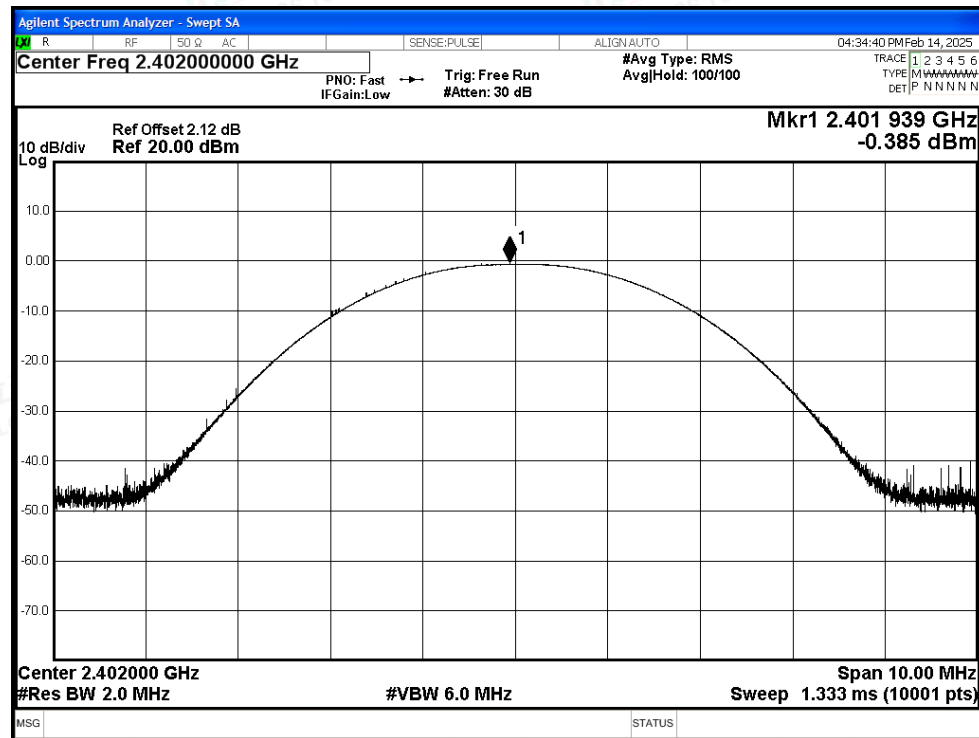


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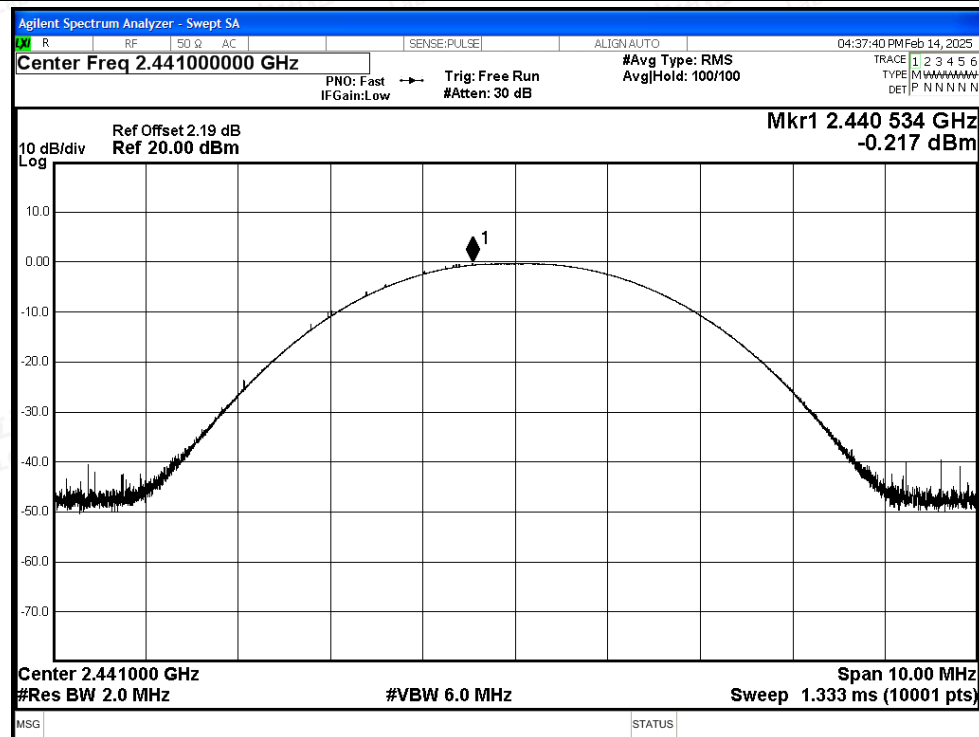


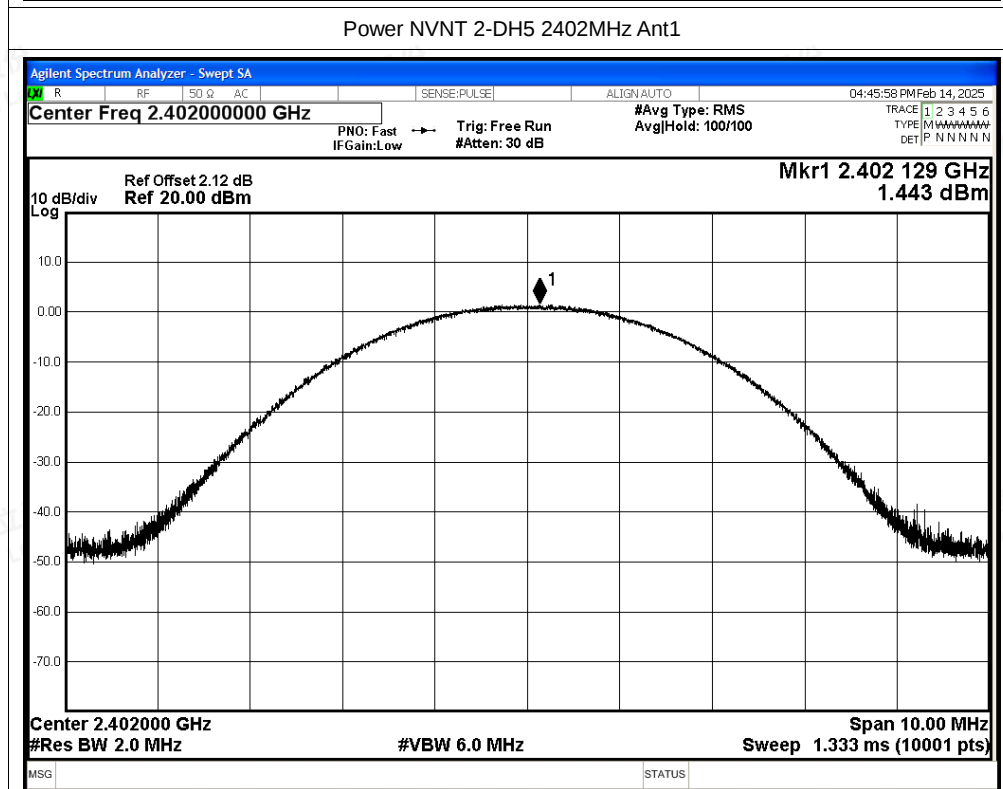
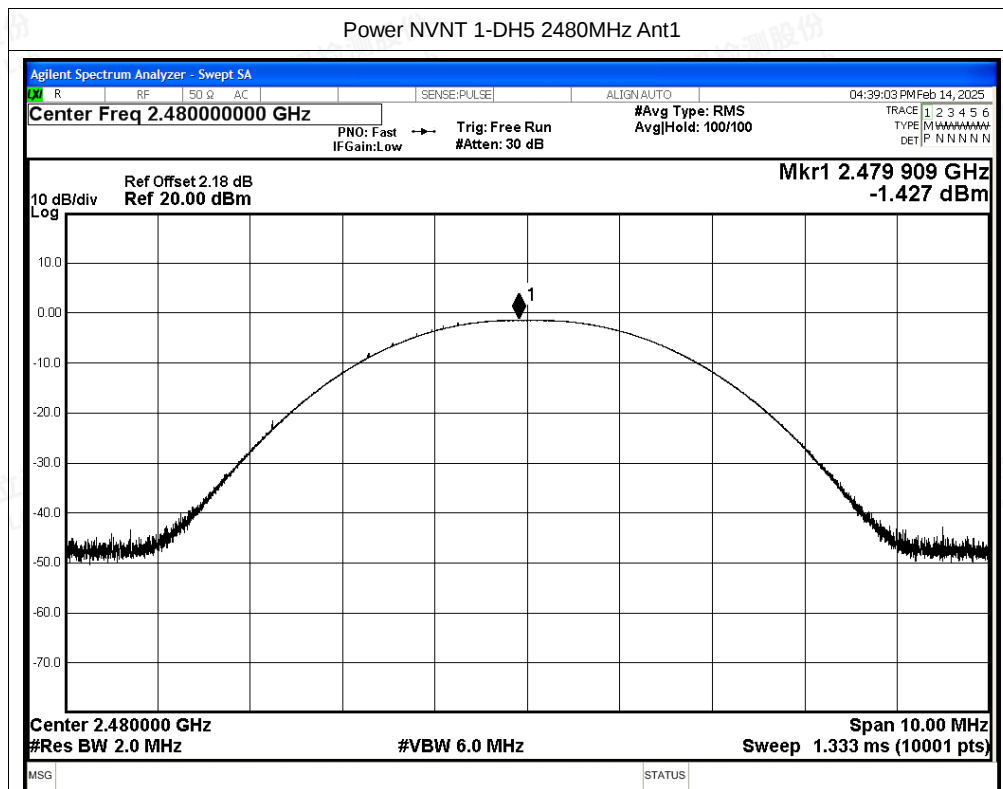
Test Graphs

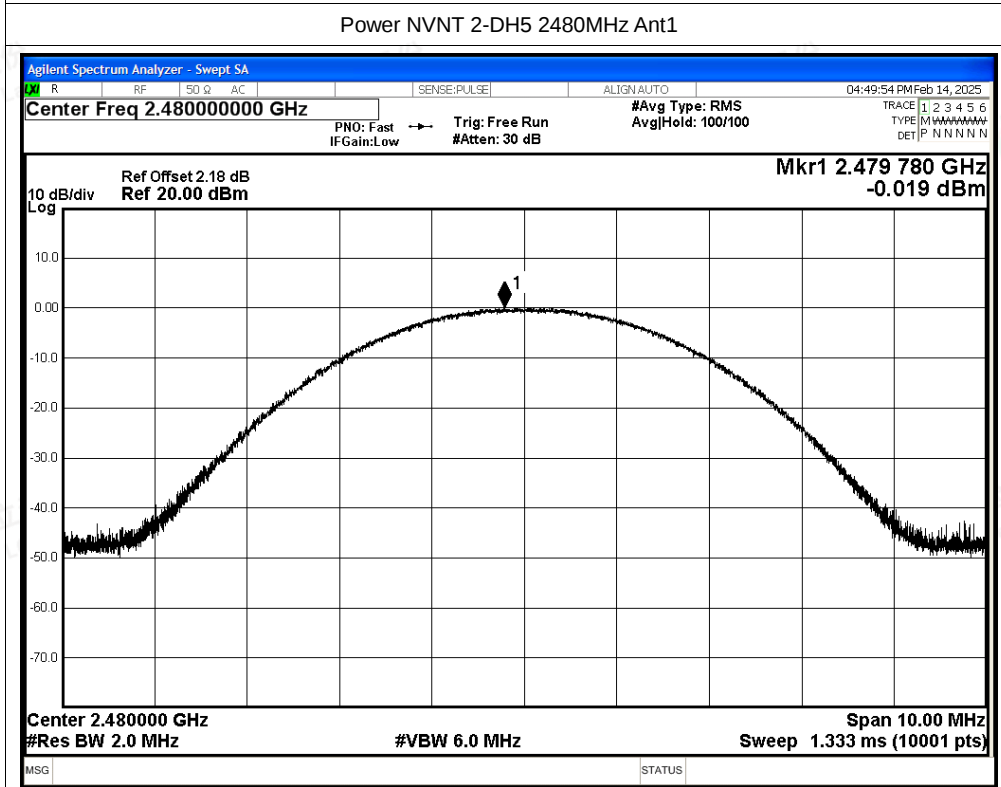
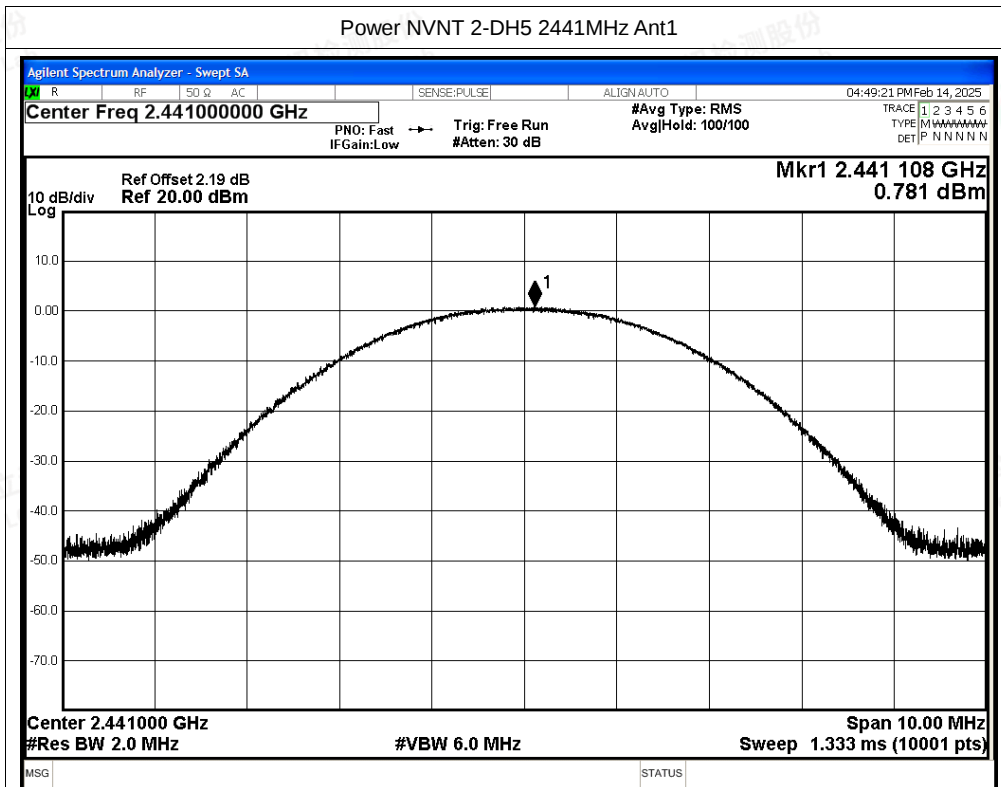
Power NVNT 1-DH5 2402MHz Ant1



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	2401.828	2403.024	1.196	0.659	Pass
NVNT	2-DH5	Ant1	2402.012	2403.112	1.1	0.874	Pass

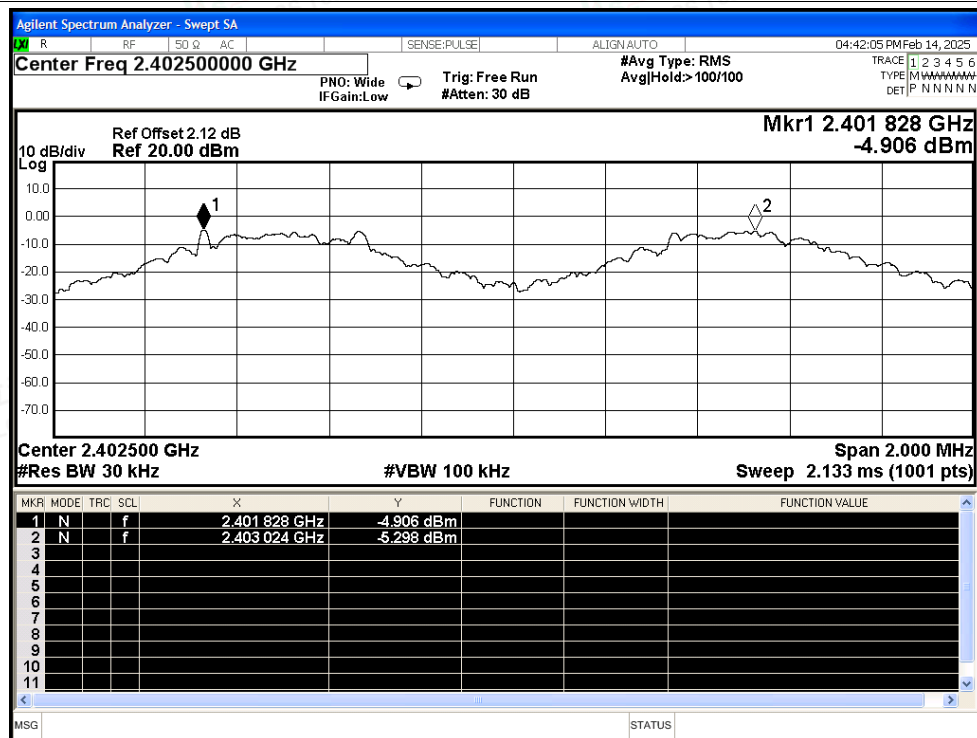


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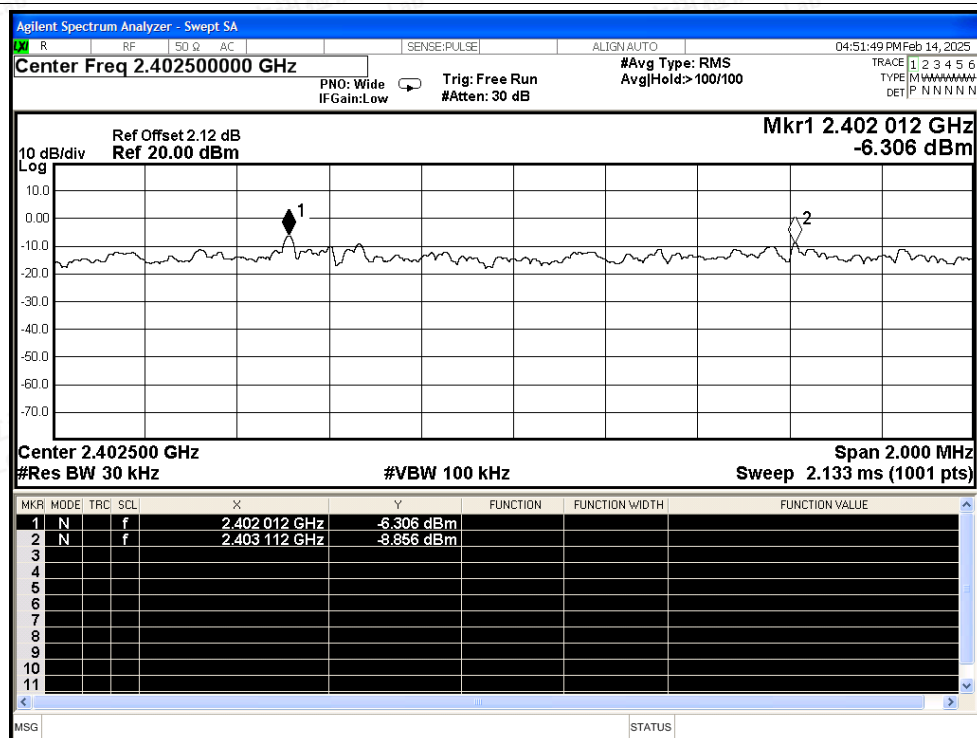


Test Graphs

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	285.082	98	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	330.372	114	31600	400	Pass

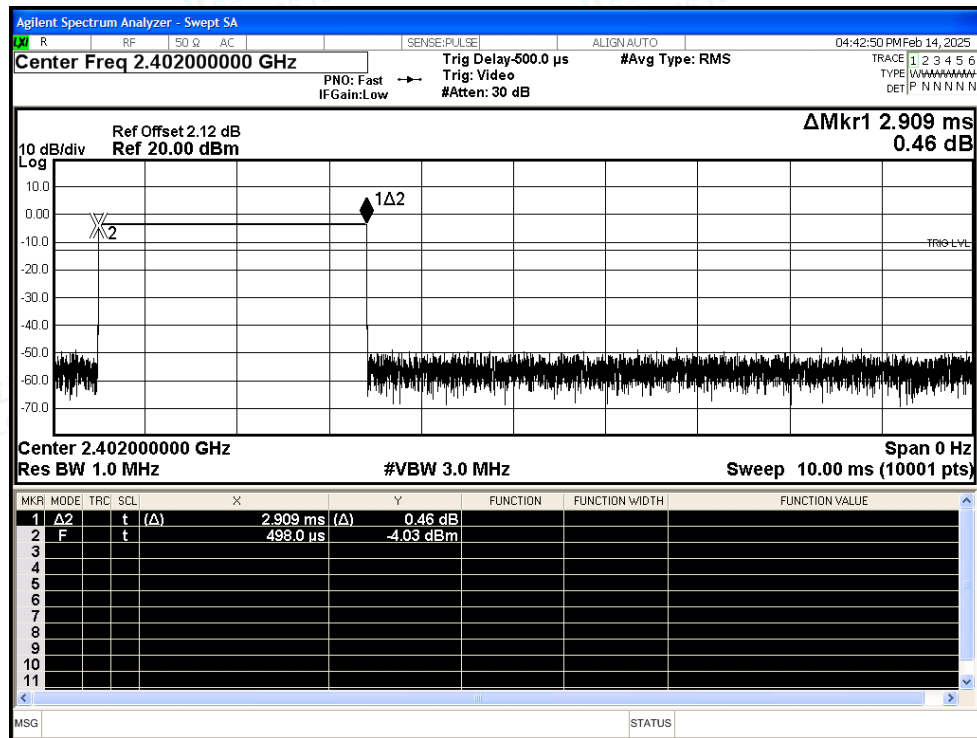


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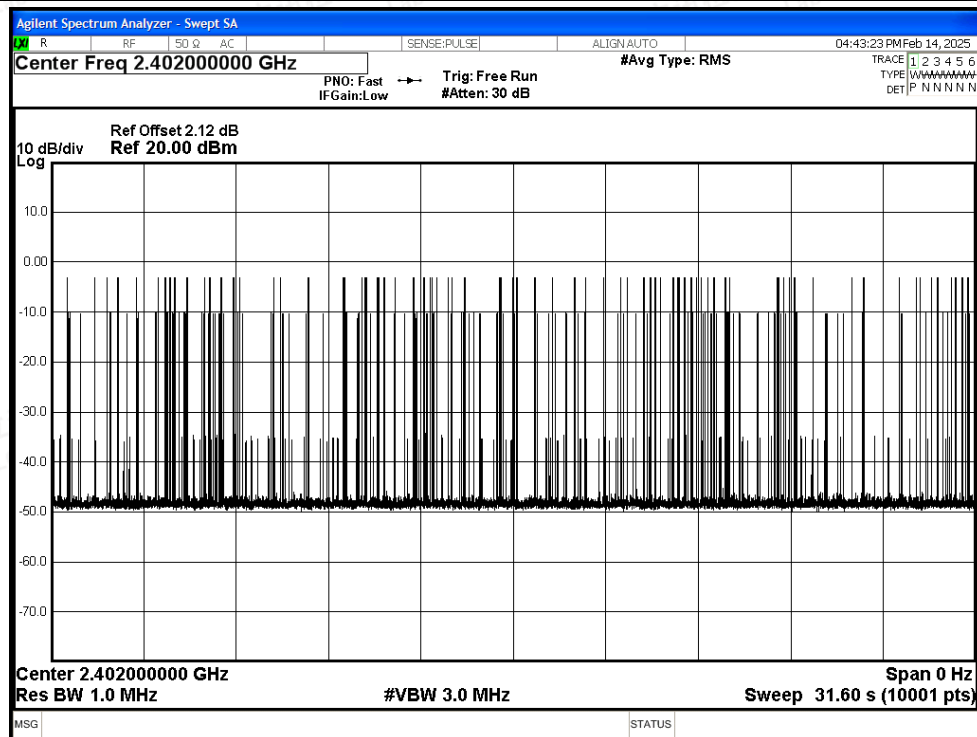


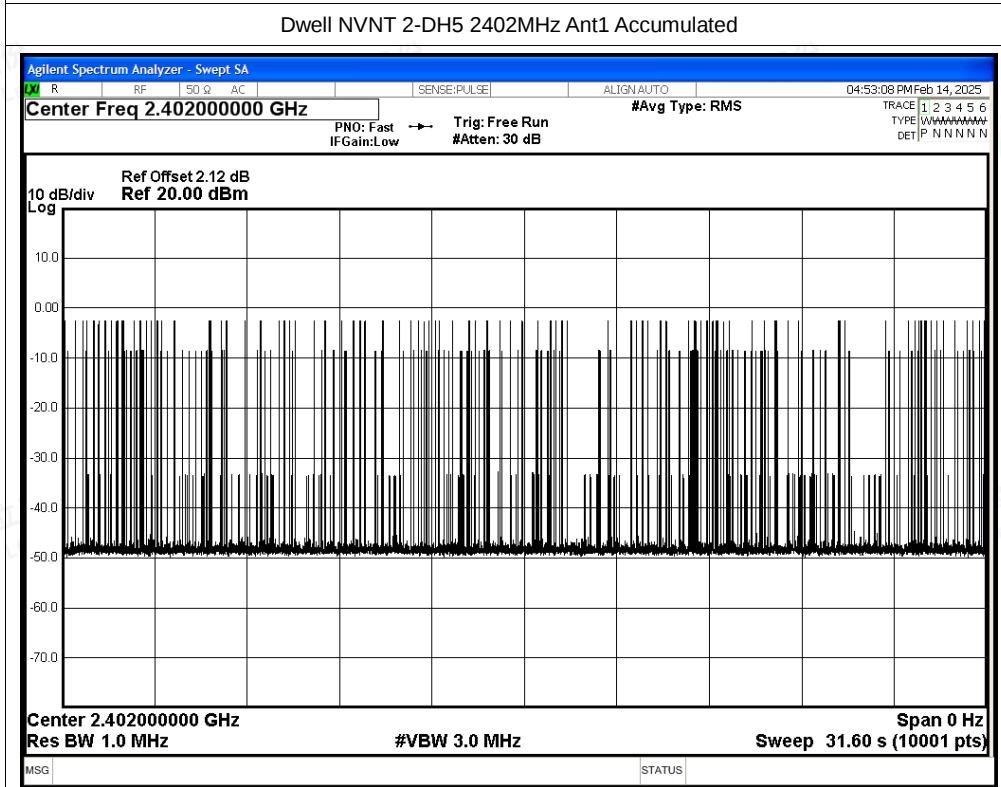
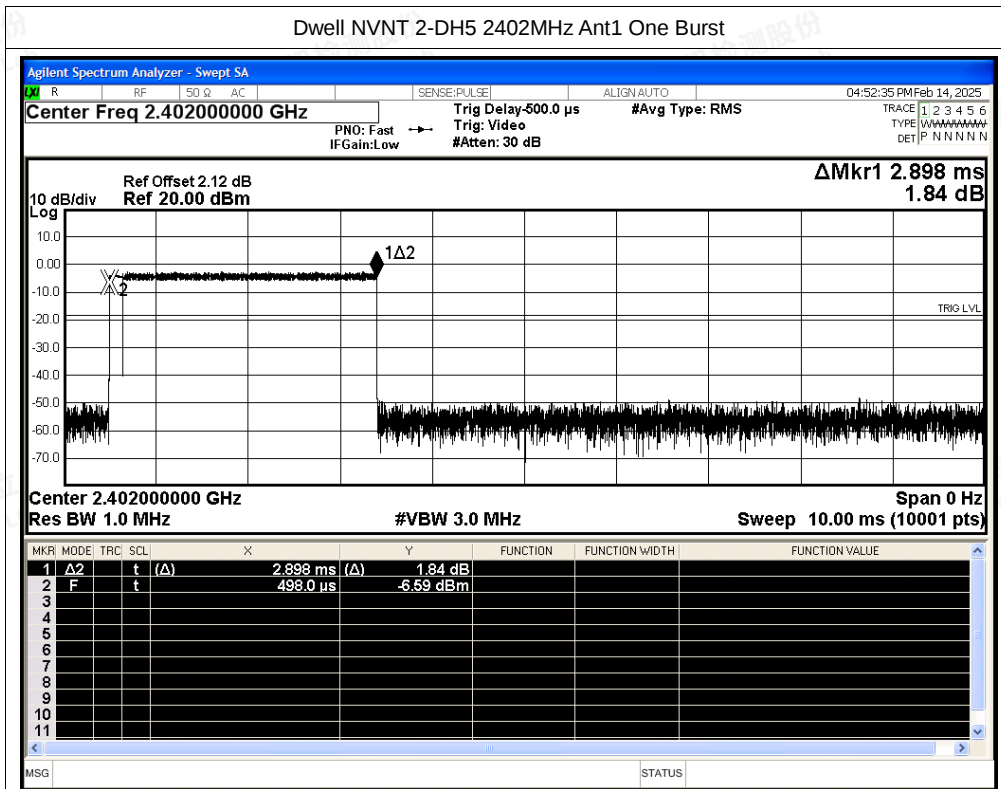
Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



Dwell NVNT 1-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

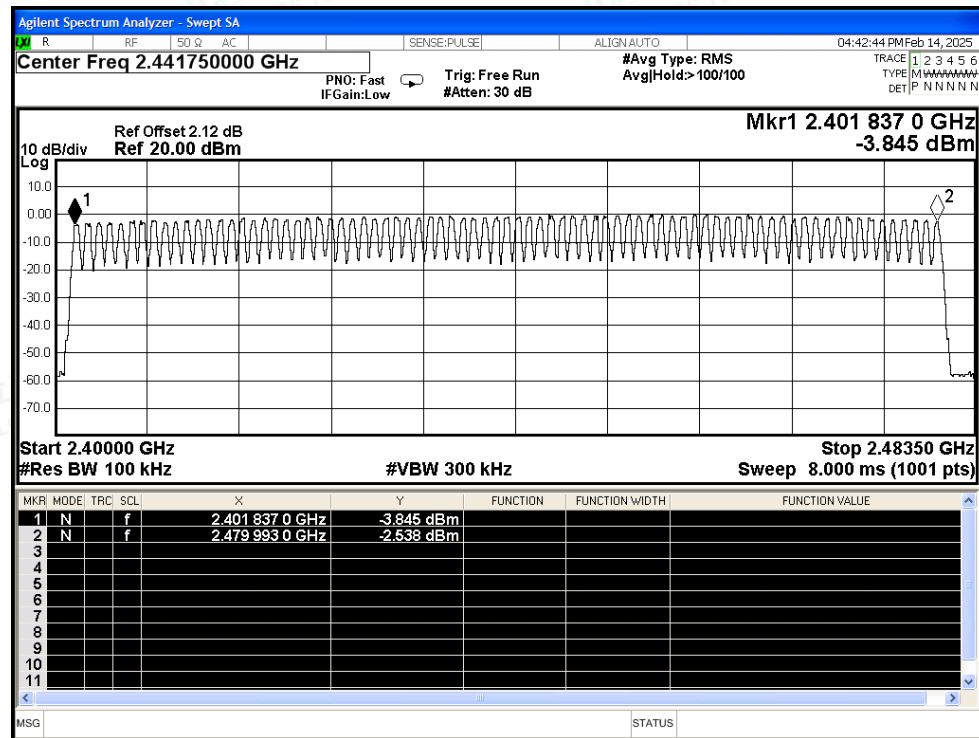


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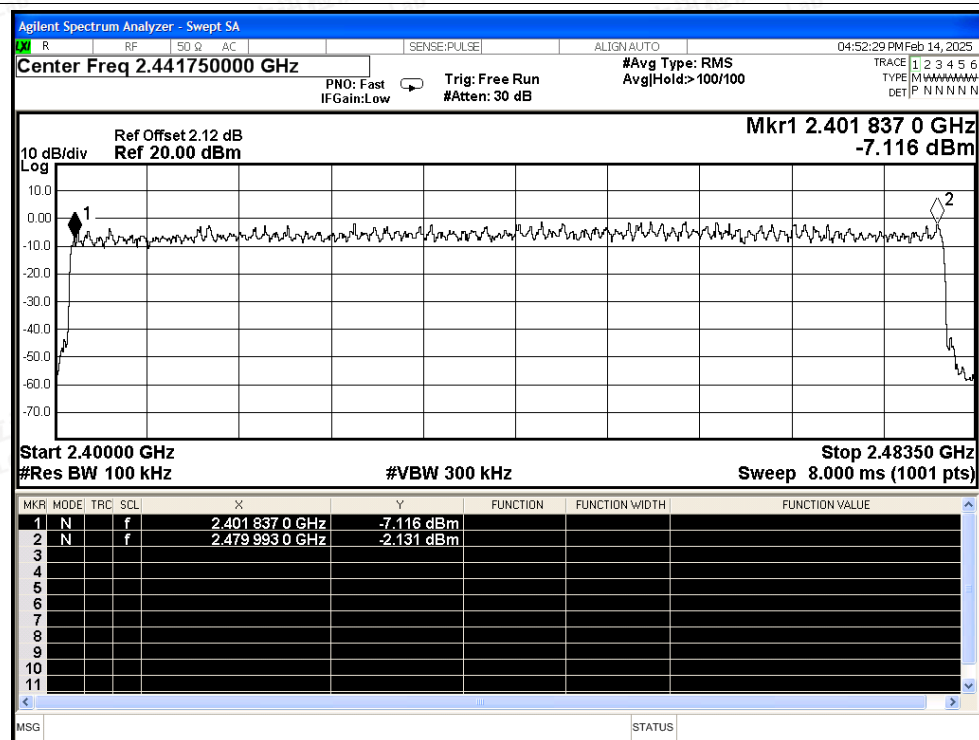


Test Graphs

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	-55.72	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-55.64	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-51.98	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-55.2	-20	Pass

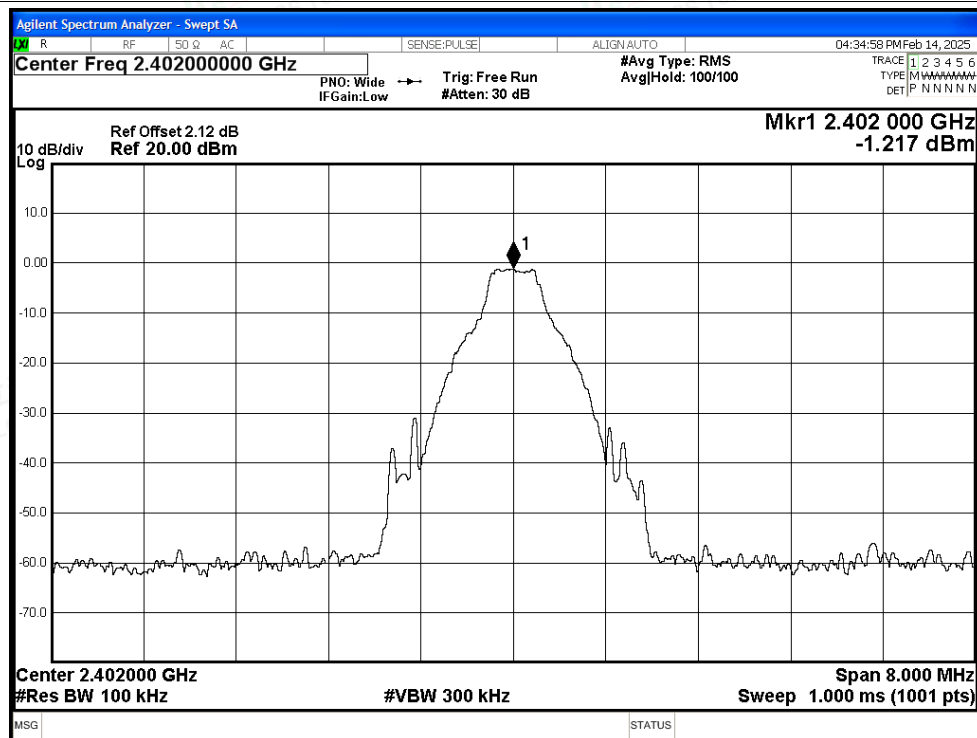


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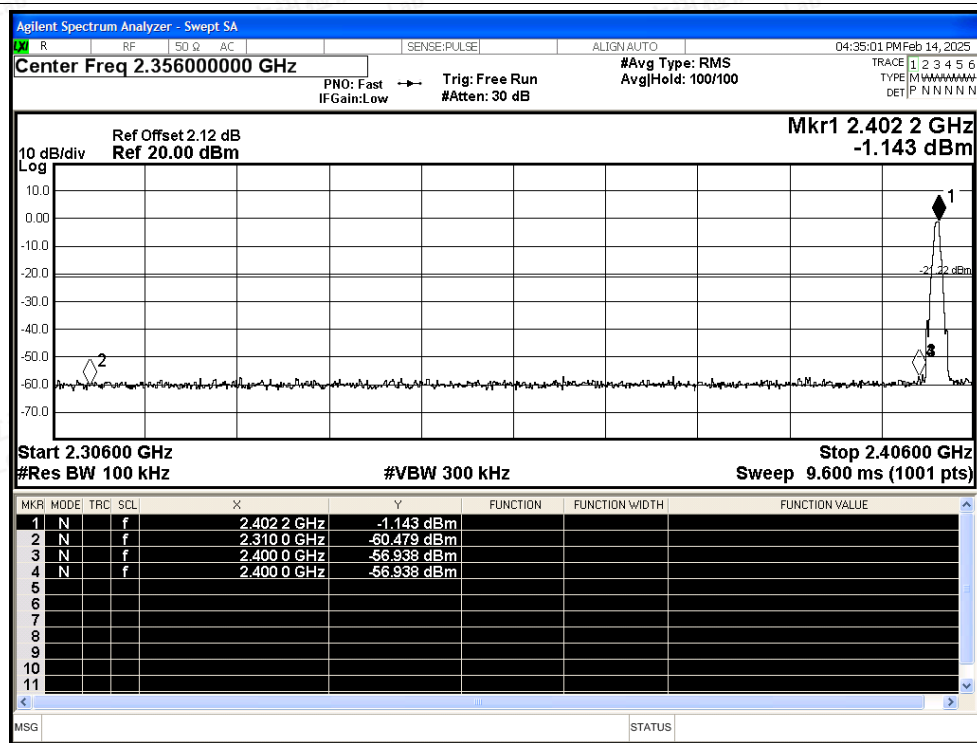


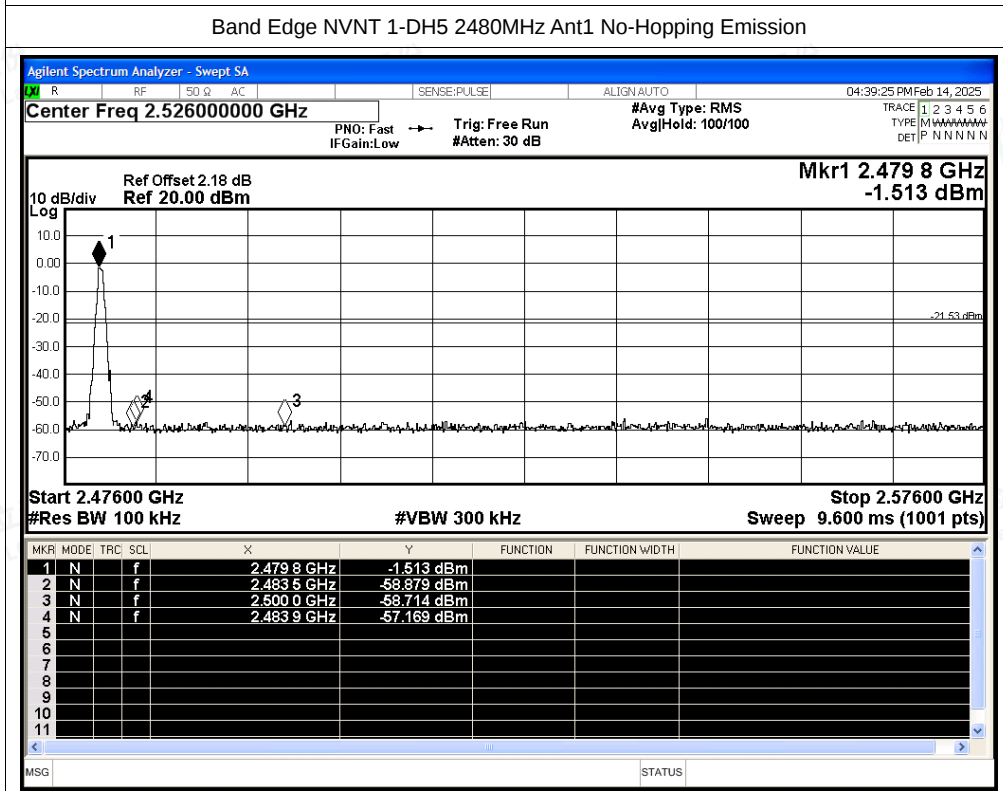
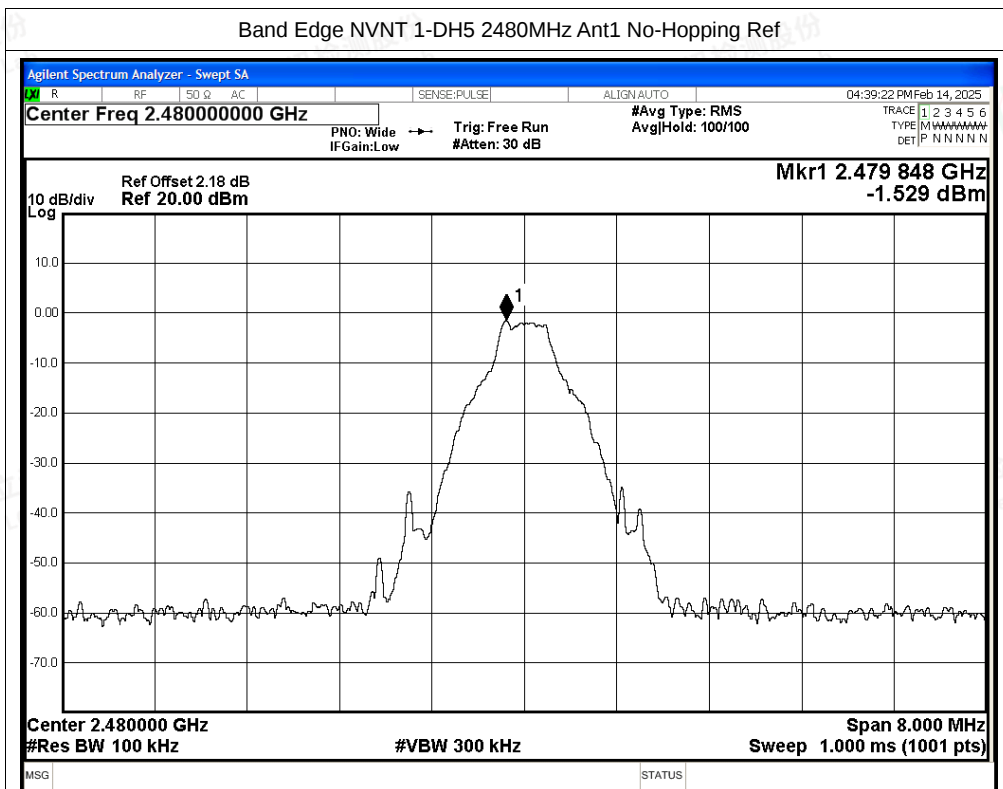
Test Graphs

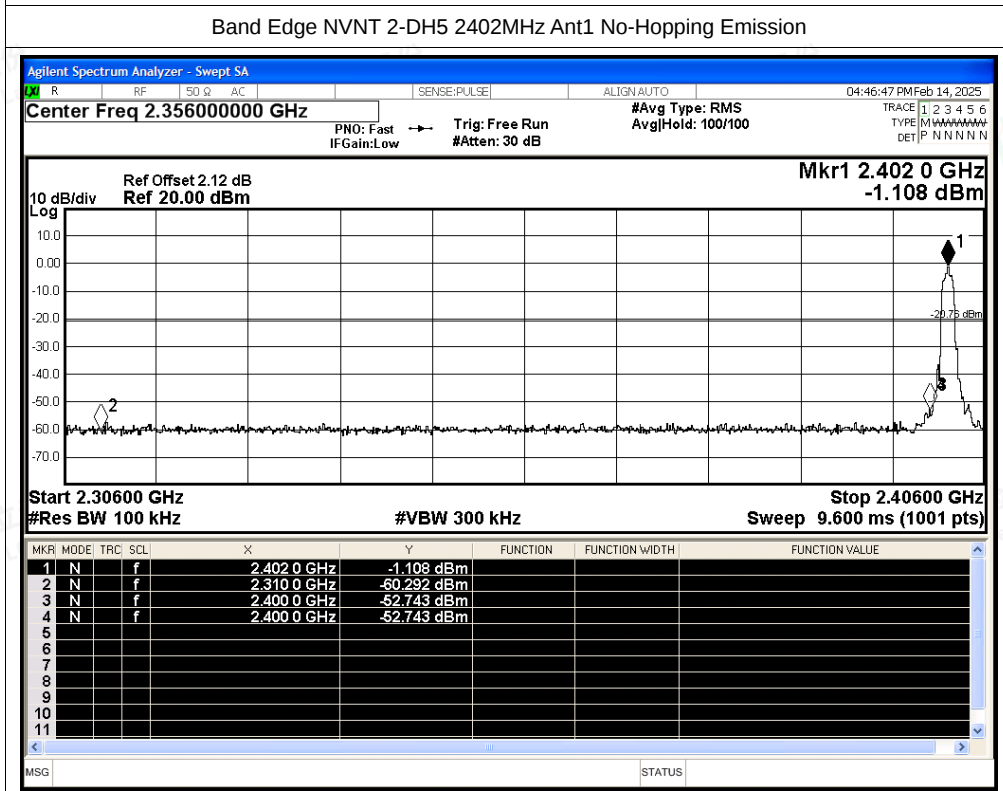
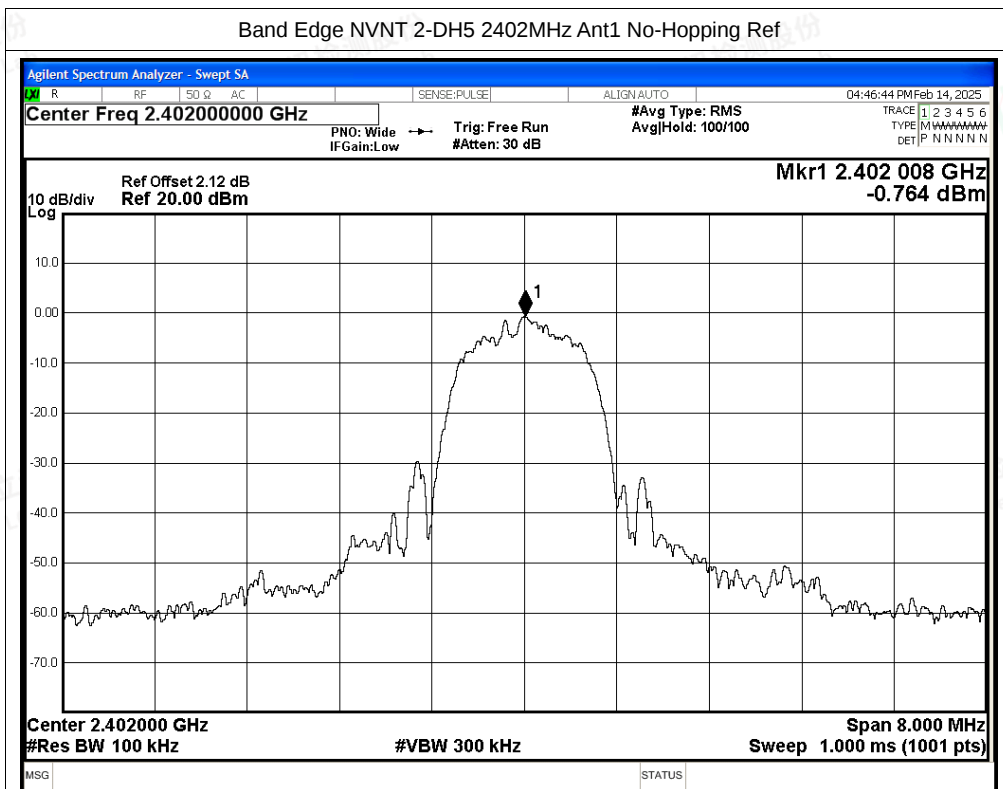
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref

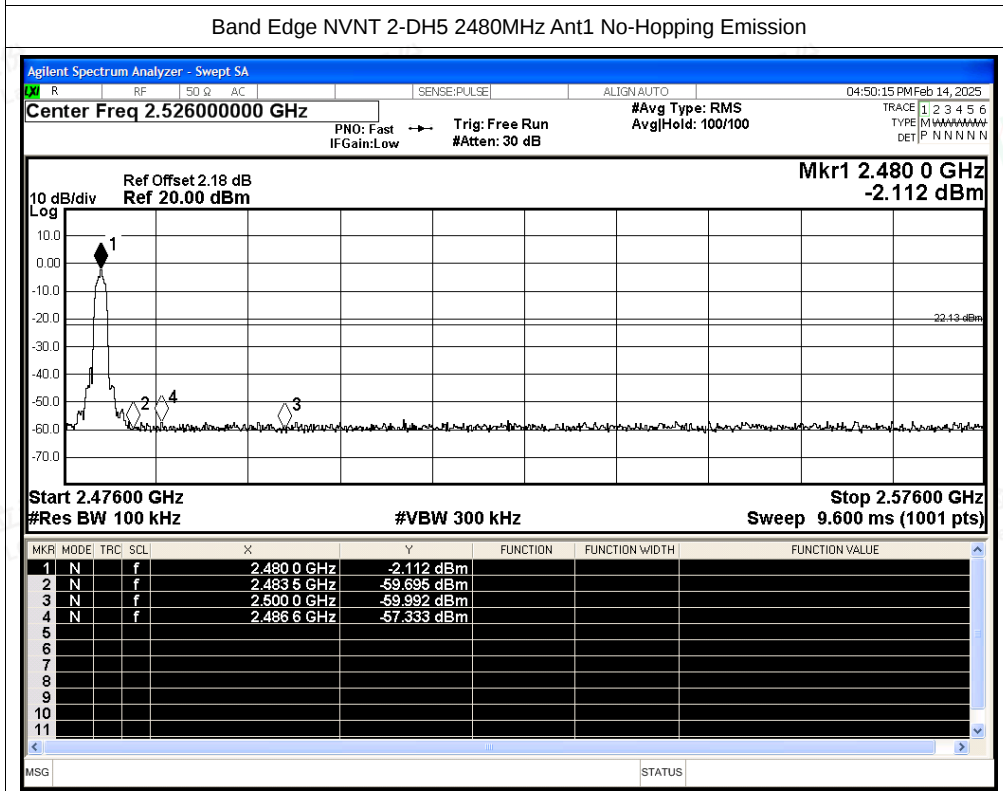
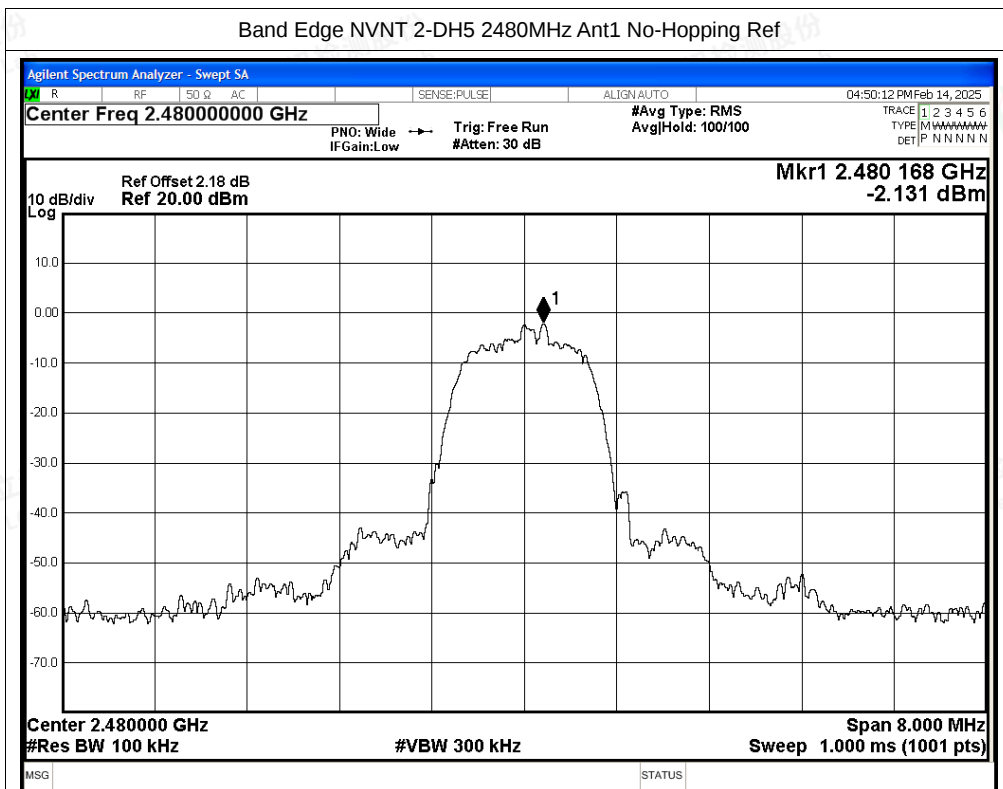


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission











(Hopping)

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-53.51	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-54.43	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-51.7	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-53.34	-20	Pass

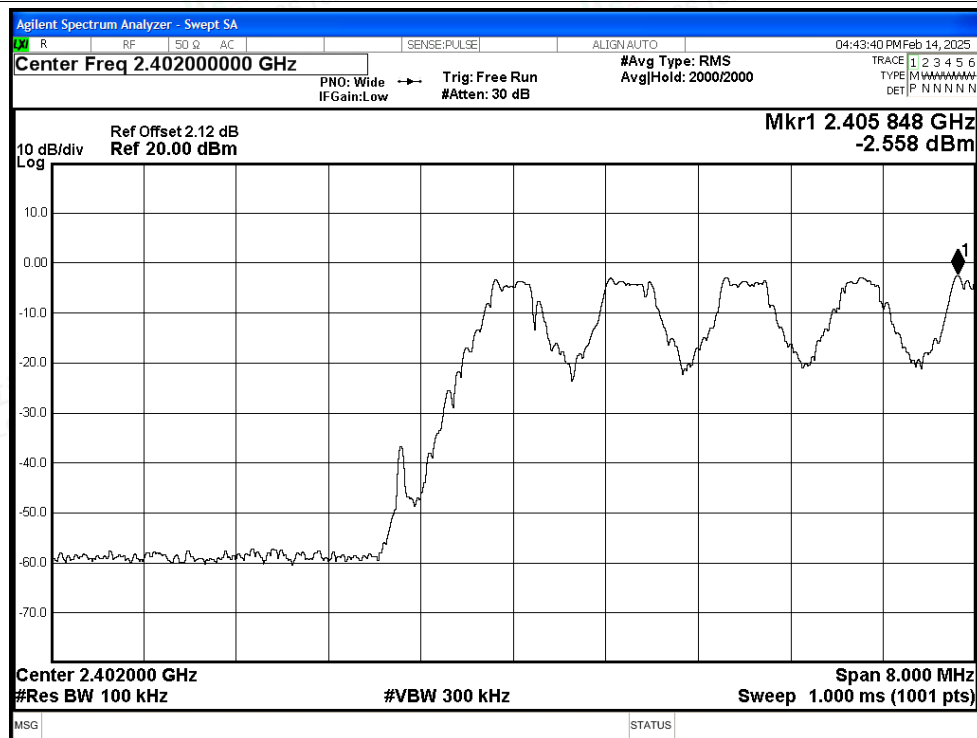


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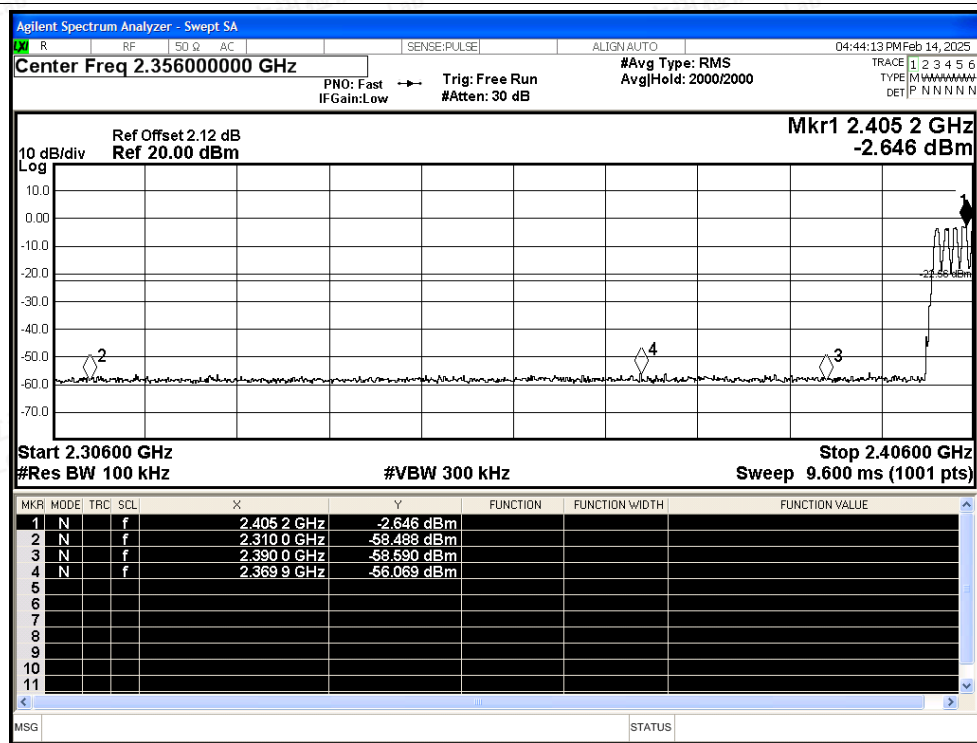


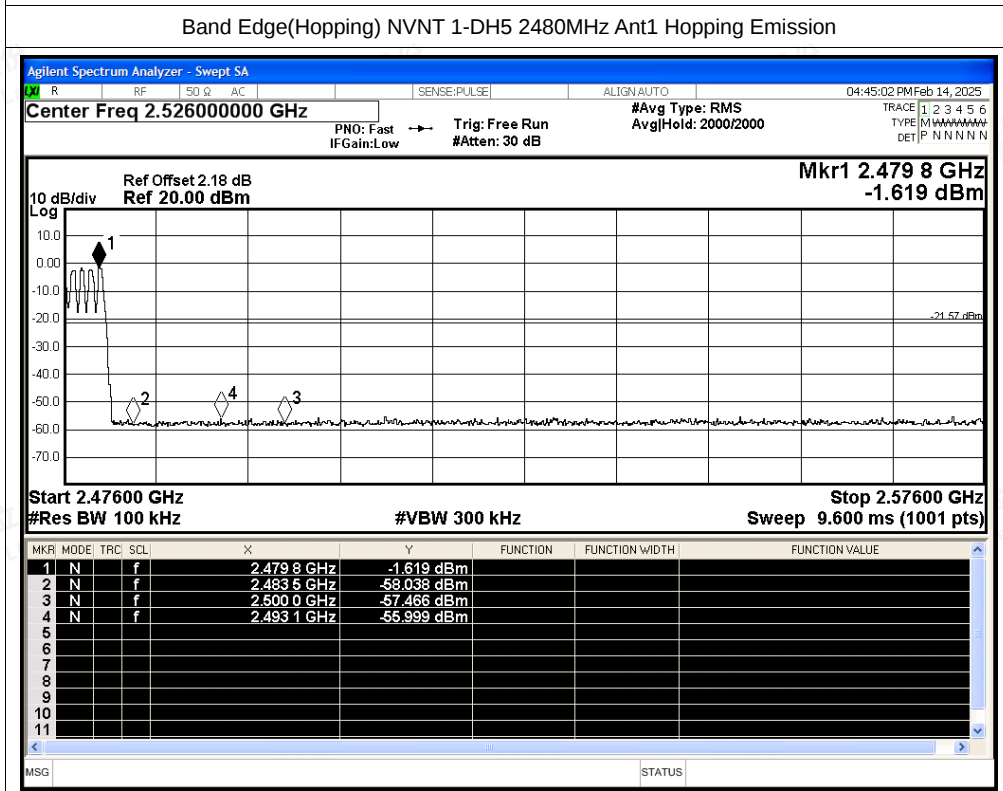
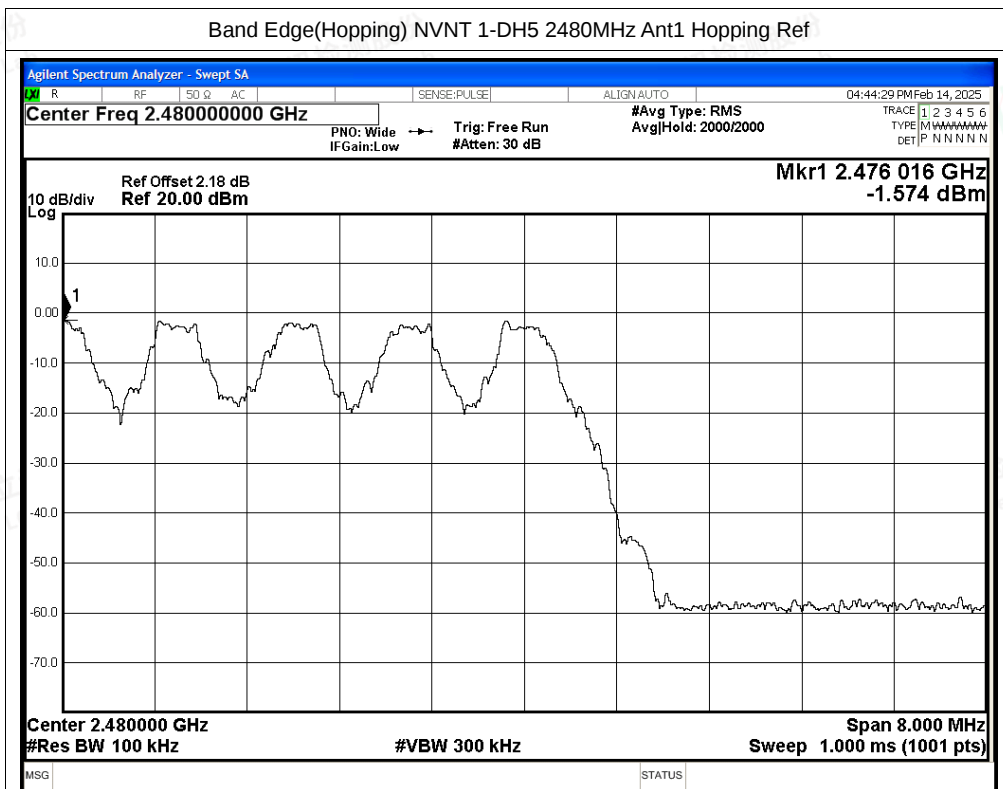
Test Graphs

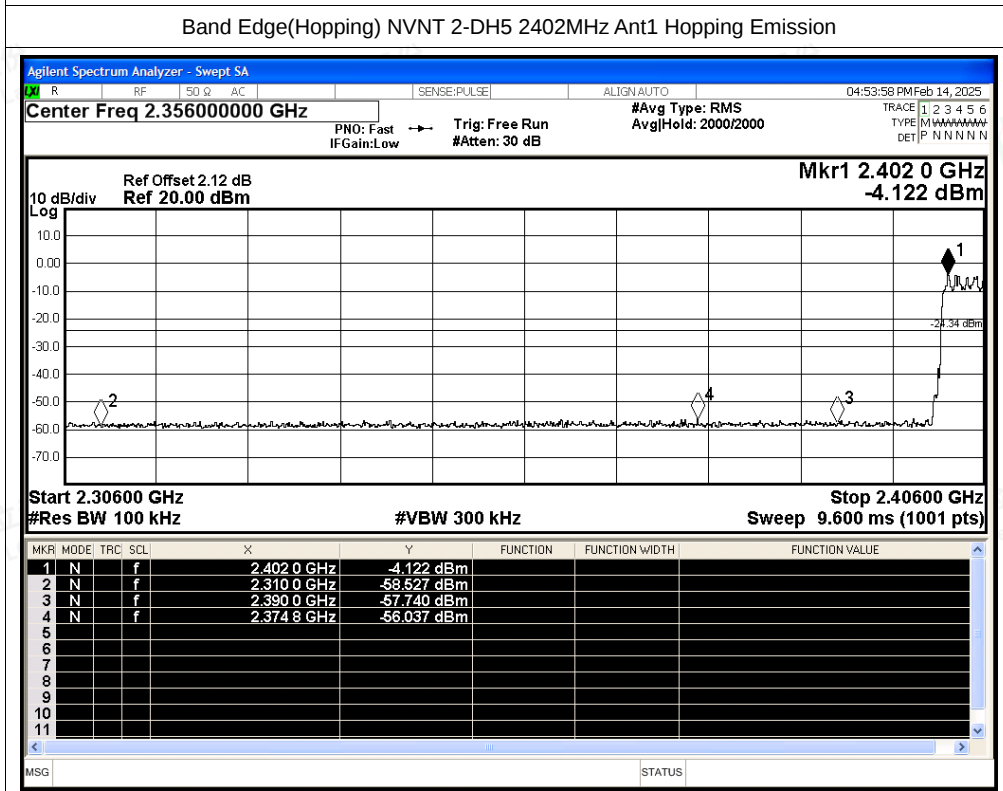
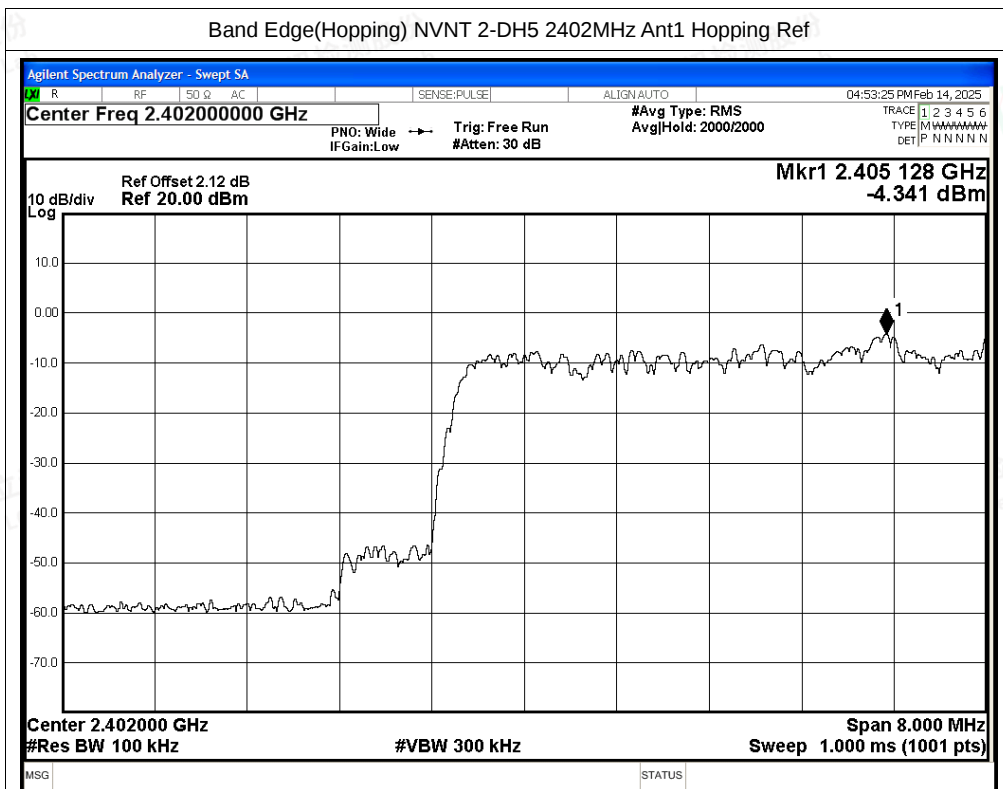
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref

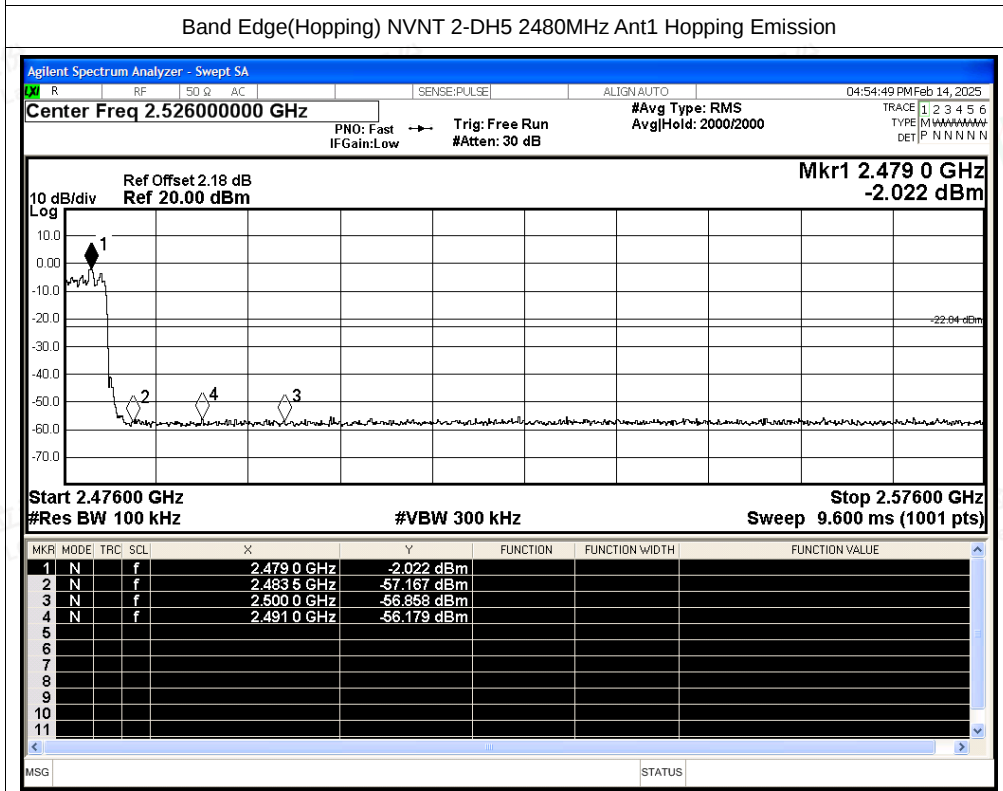
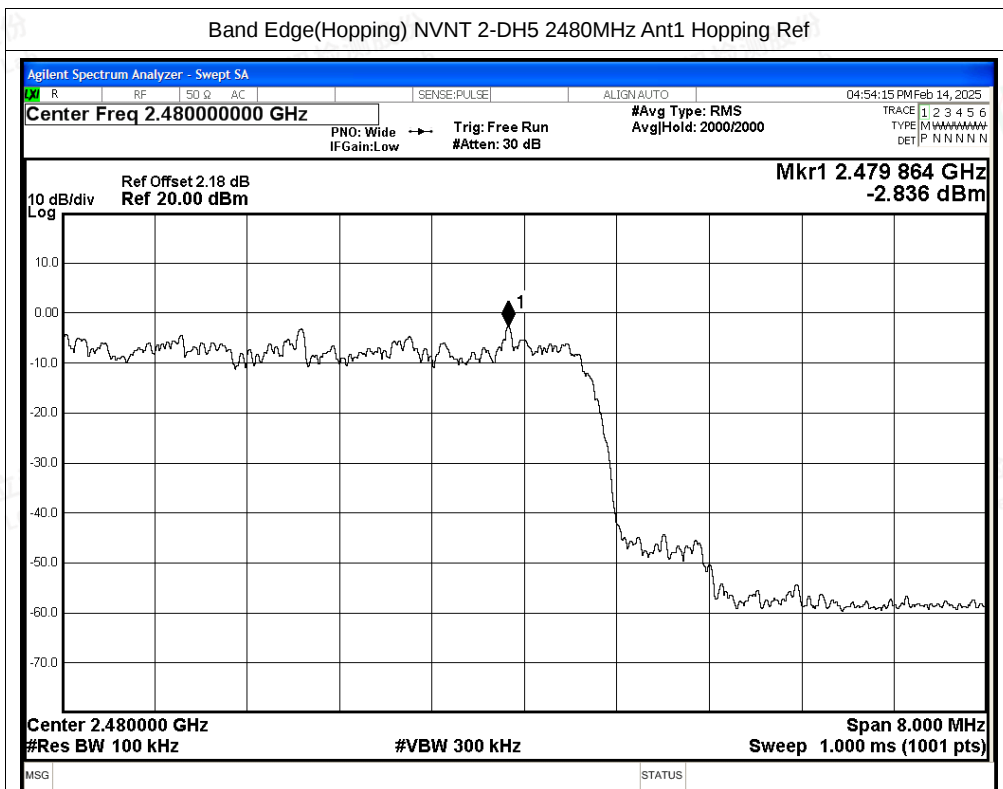


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission











A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-54.32	-20	Pass
NVNT	1-DH5	2441	Ant1	-54.5	-20	Pass
NVNT	1-DH5	2480	Ant1	-54.17	-20	Pass
NVNT	2-DH5	2402	Ant1	-53.91	-20	Pass
NVNT	2-DH5	2441	Ant1	-54.22	-20	Pass
NVNT	2-DH5	2480	Ant1	-52.29	-20	Pass

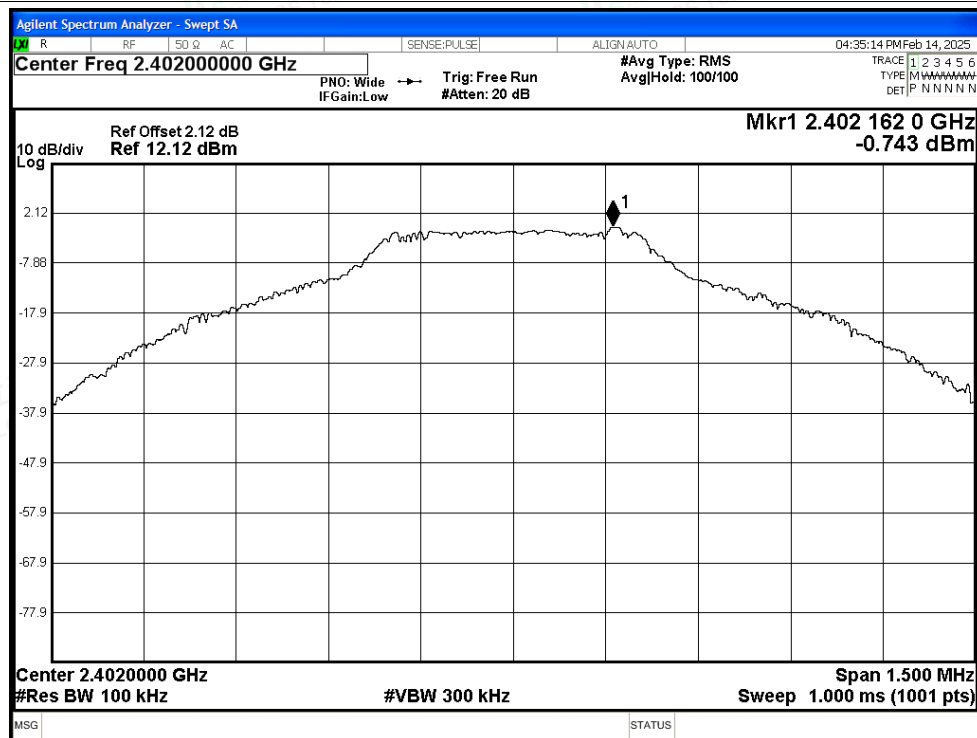


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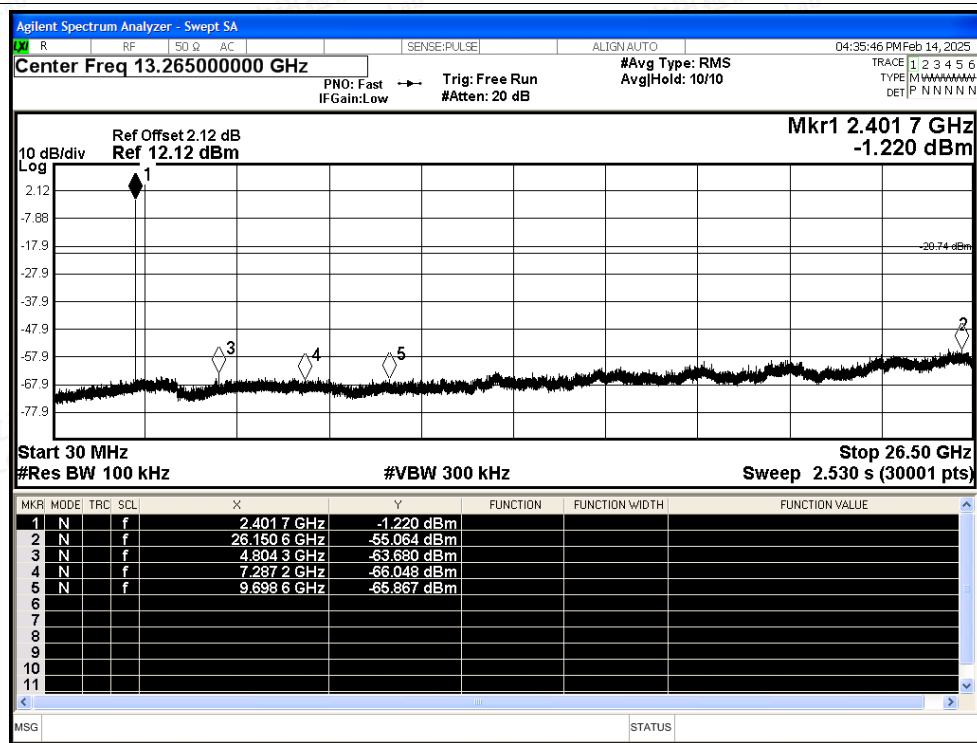


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

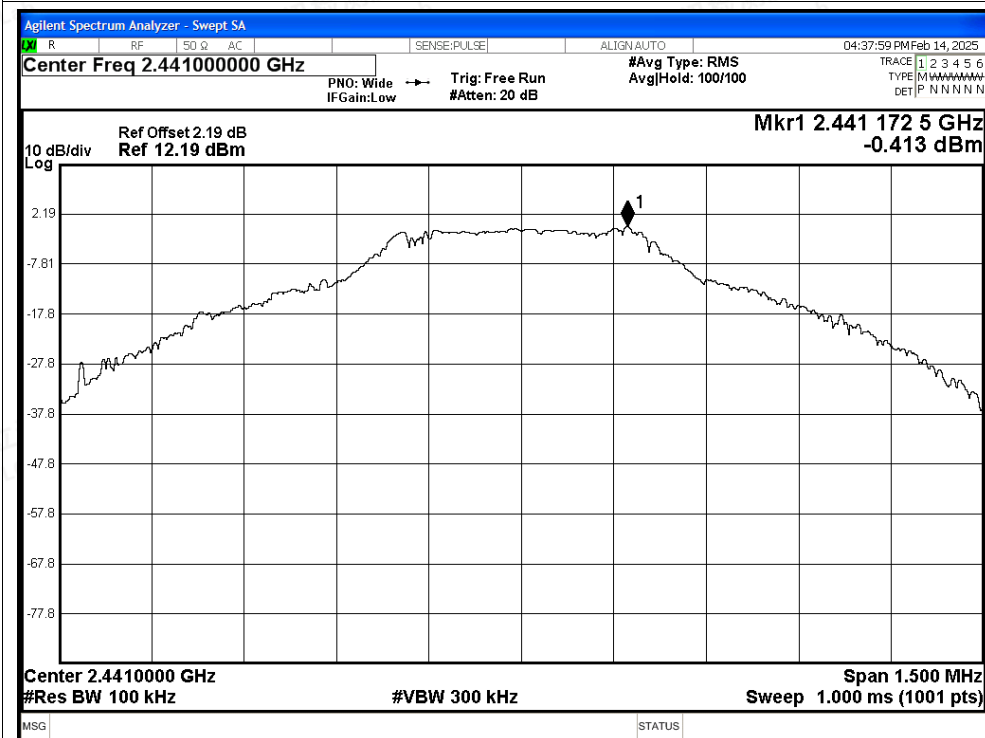


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

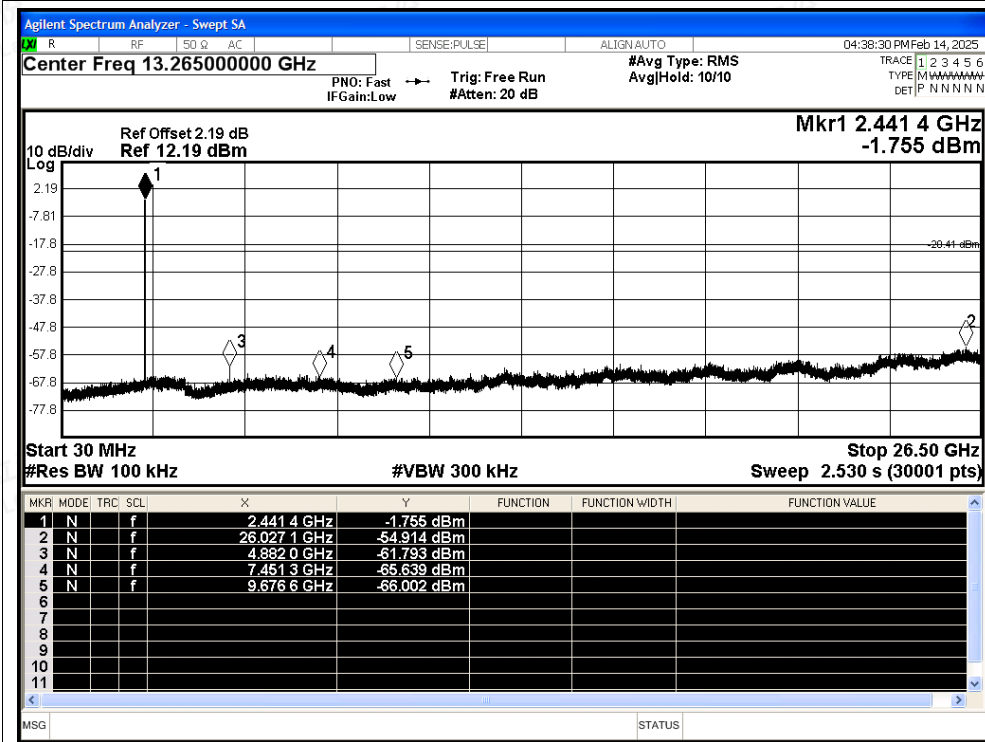




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

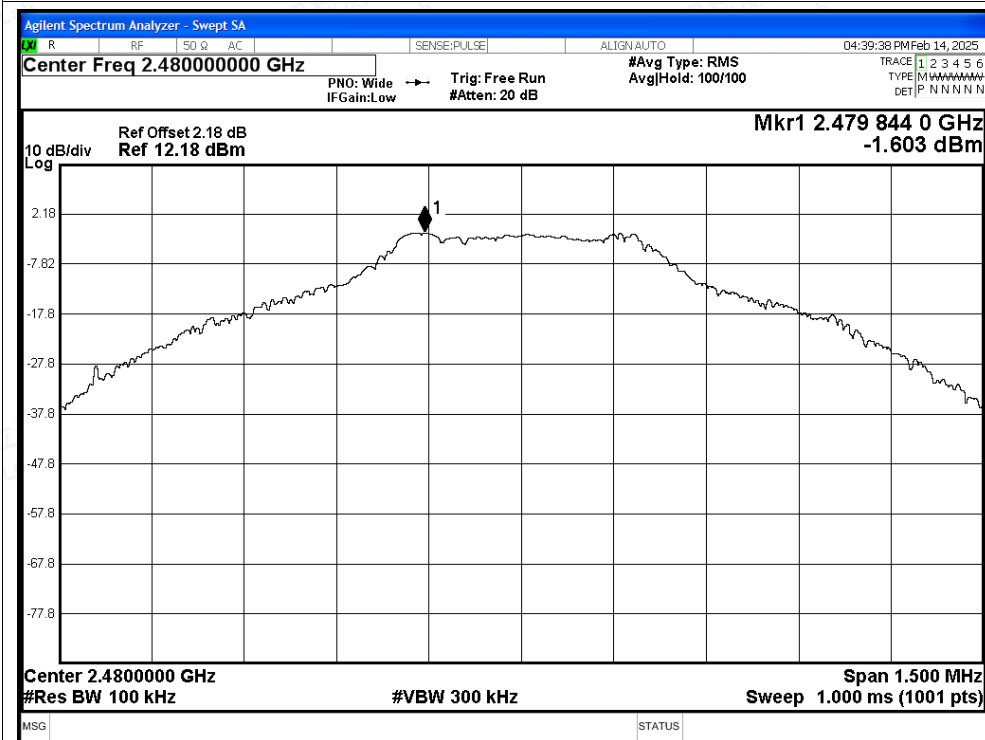


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

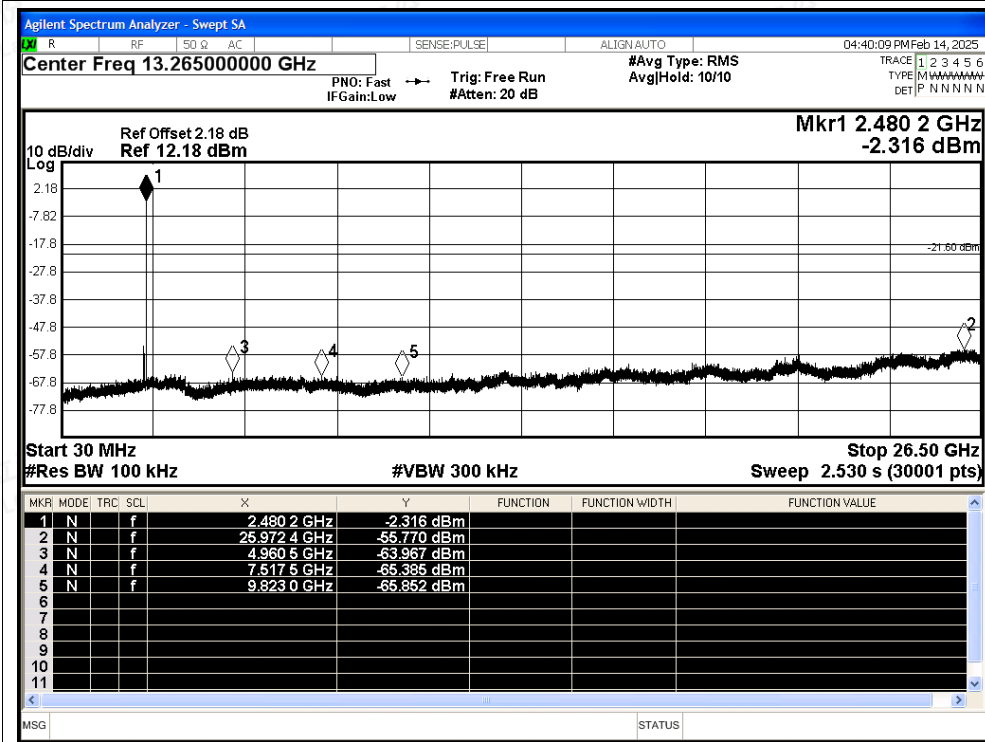




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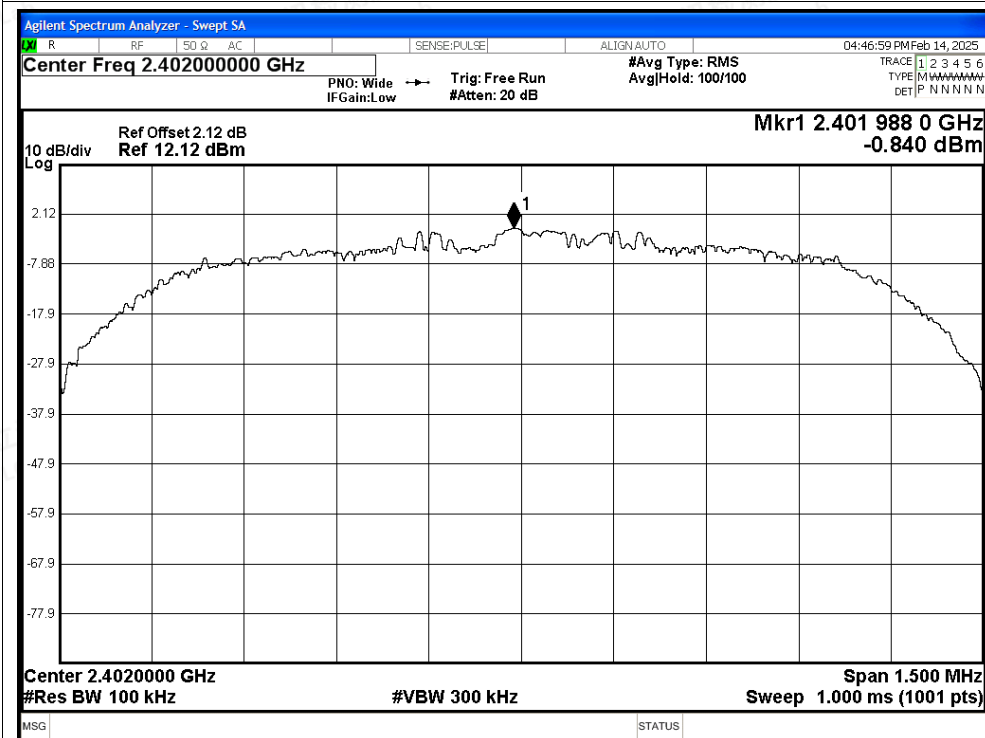


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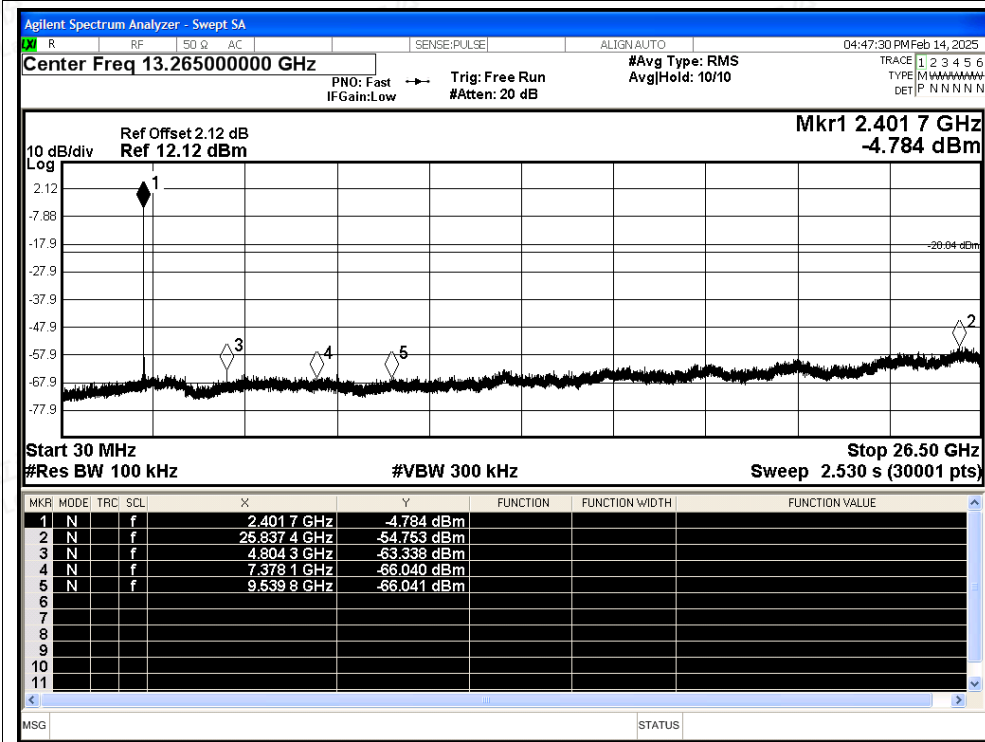




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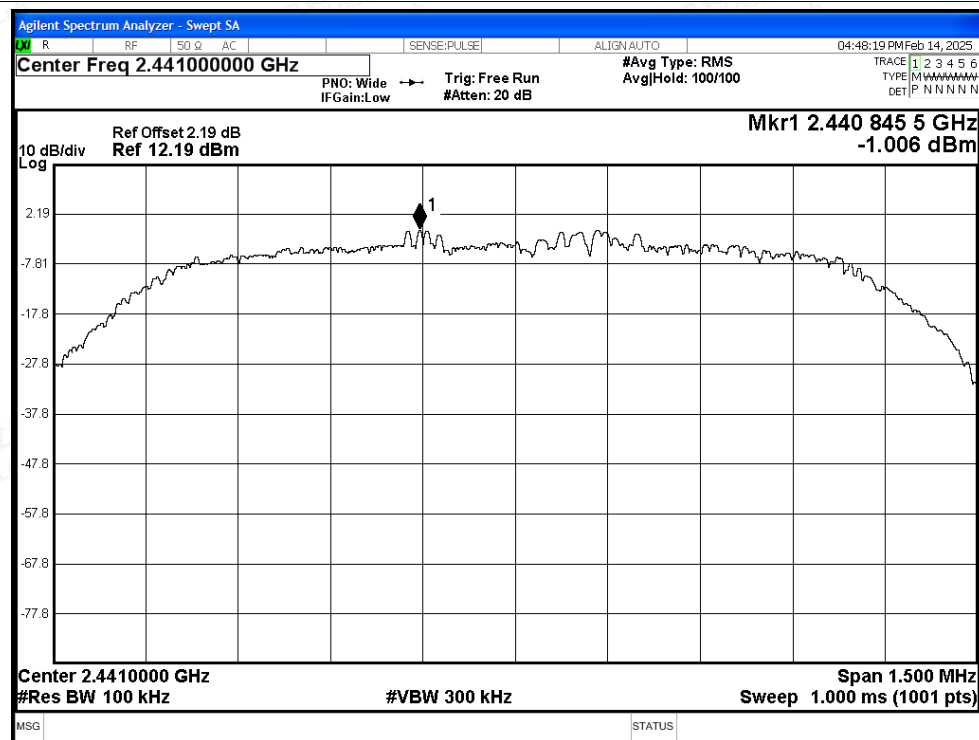


Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission

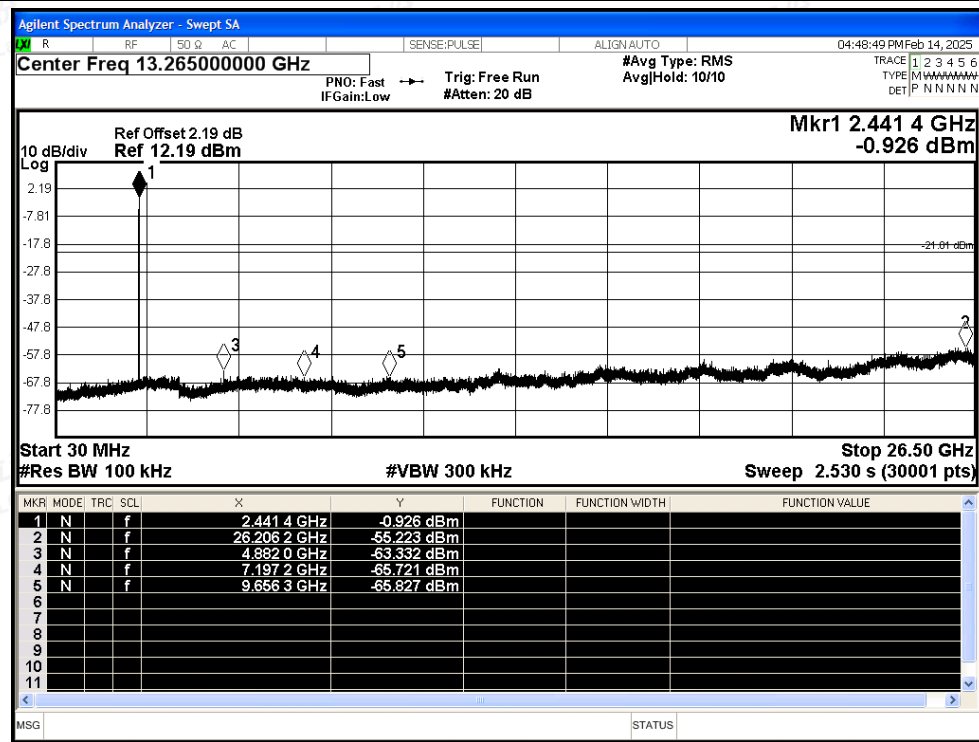




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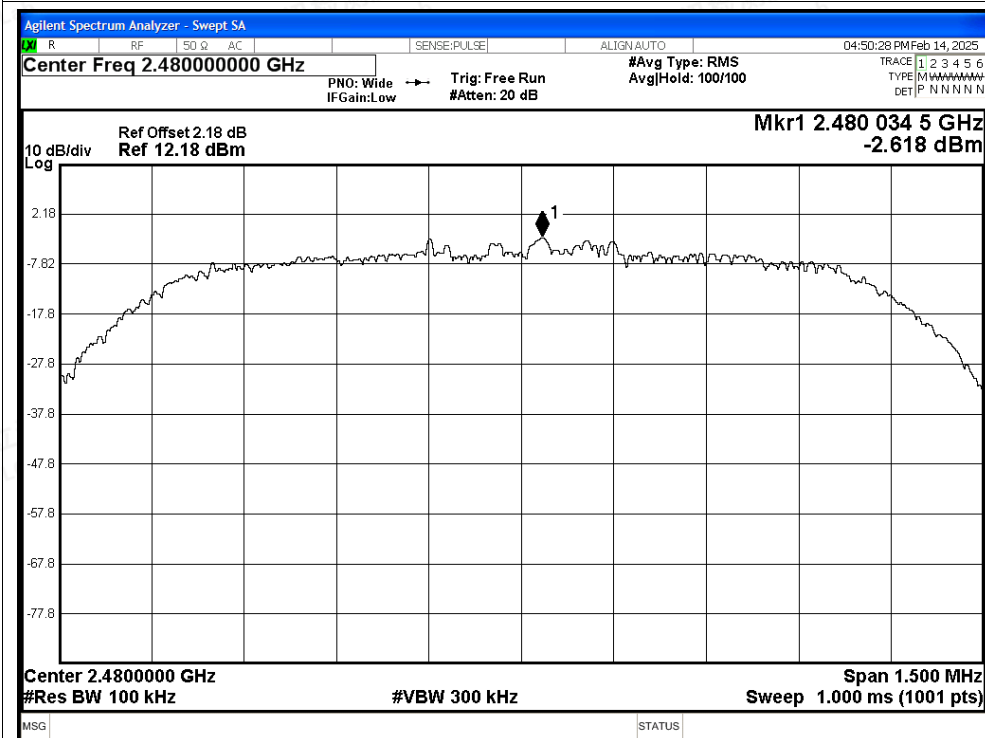


Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission

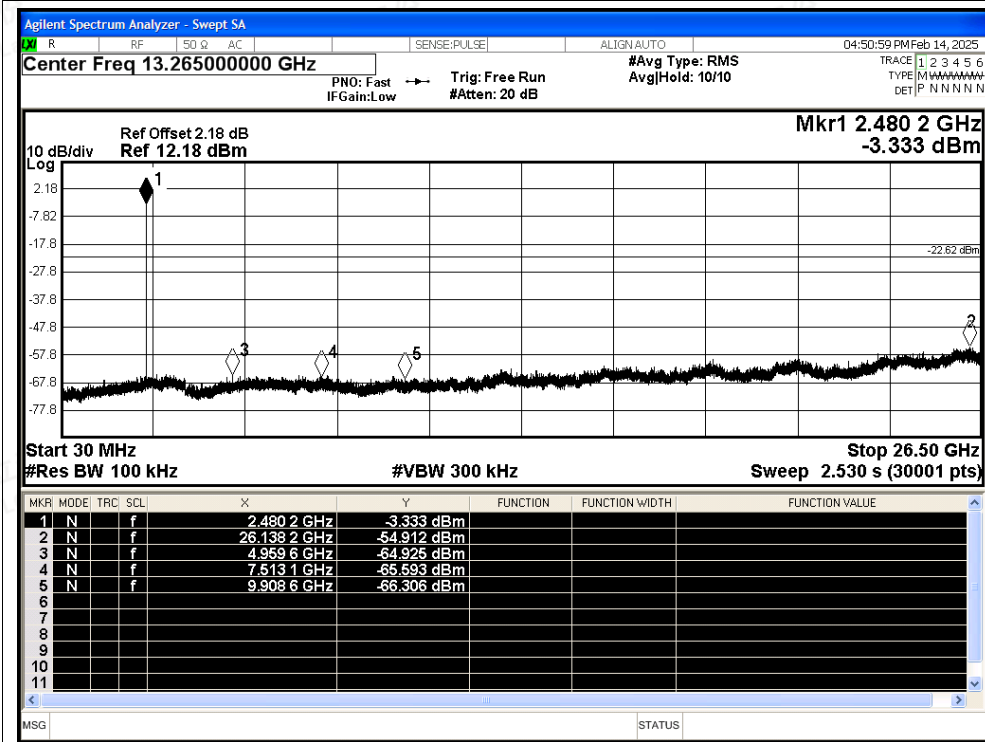




Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



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	77.28	1.12	0.35
NVNT	2-DH5	2441	Ant1	77.33	1.12	0.34
NVNT	2-DH5	2480	Ant1	77.28	1.12	0.35

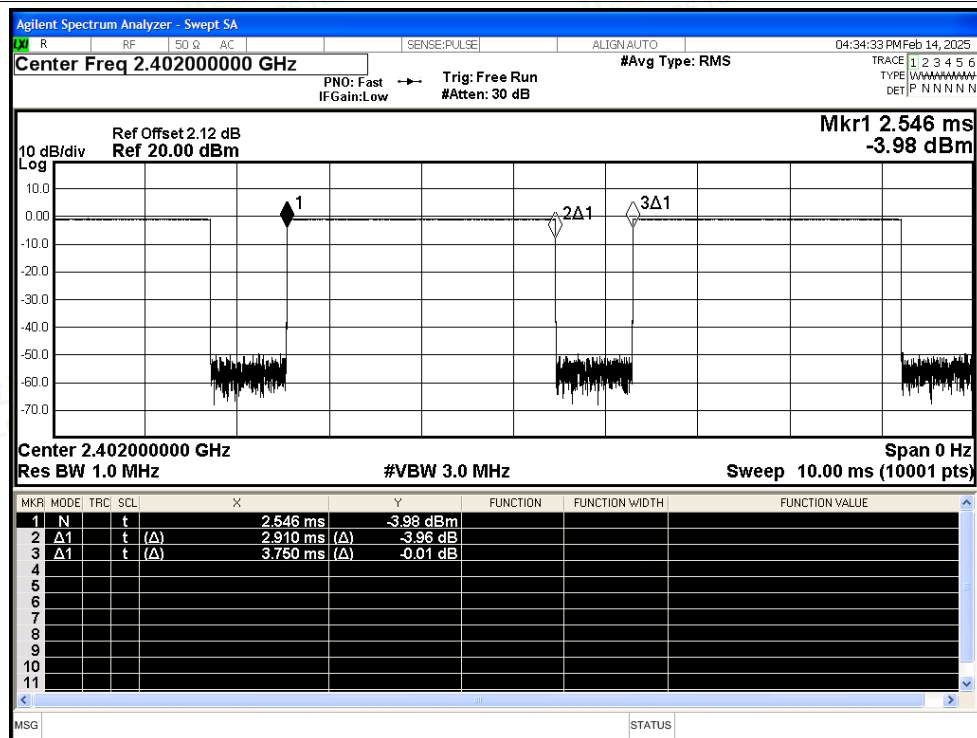


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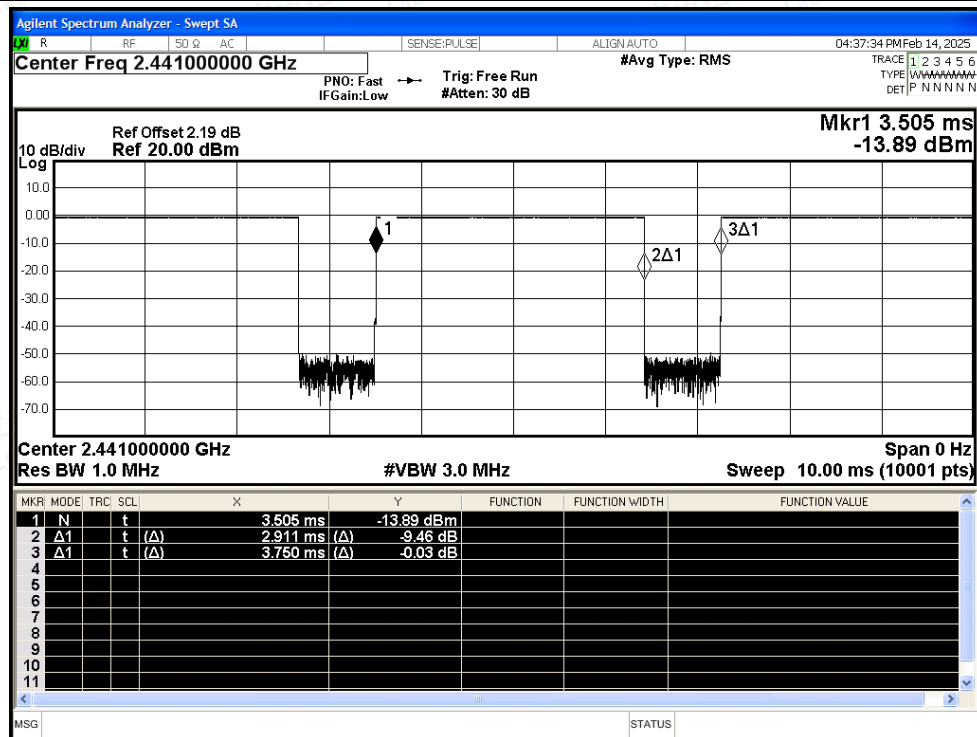


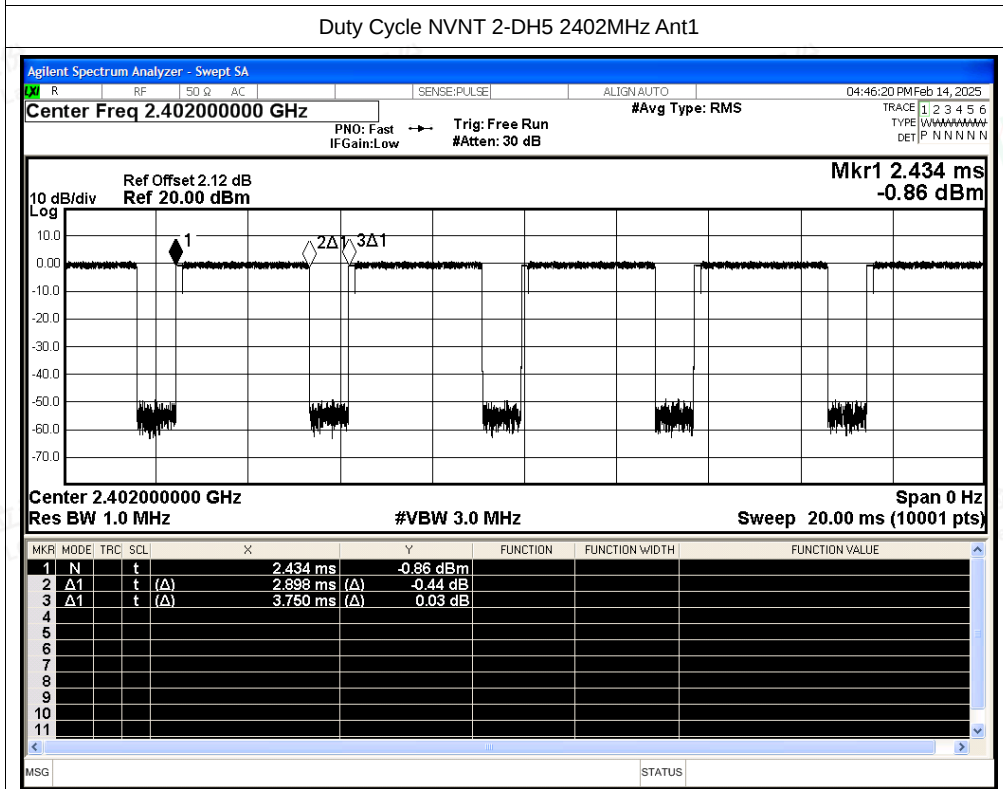
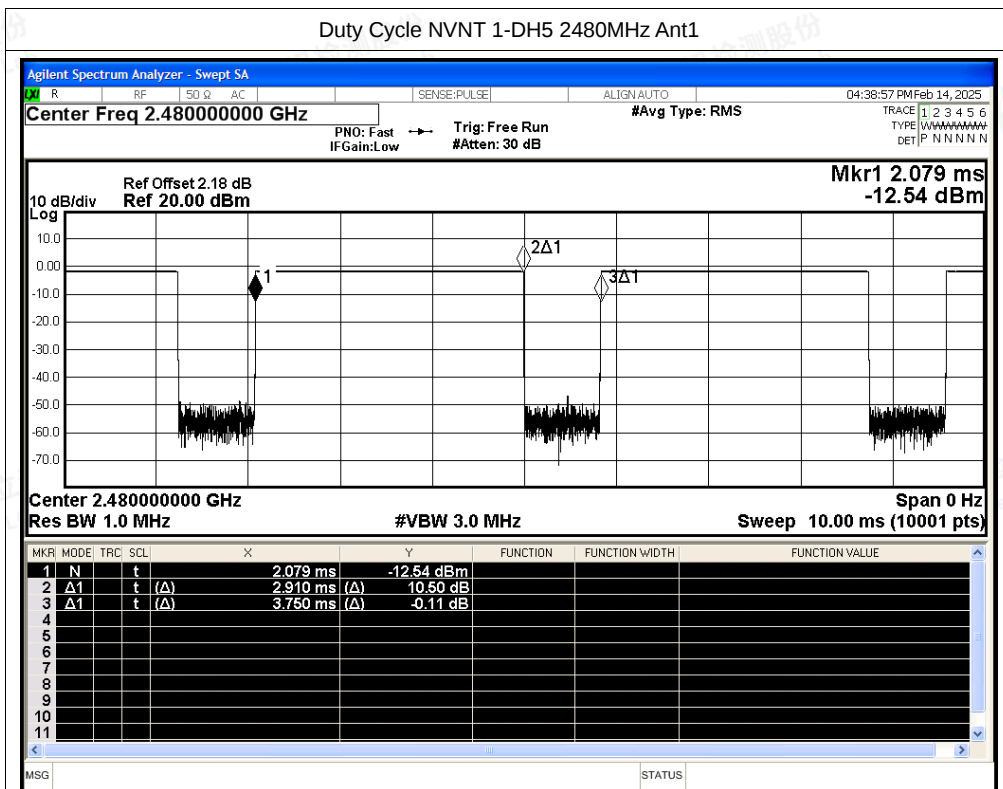
Test Graphs

Duty Cycle NVNT 1-DH5 2402MHz Ant1



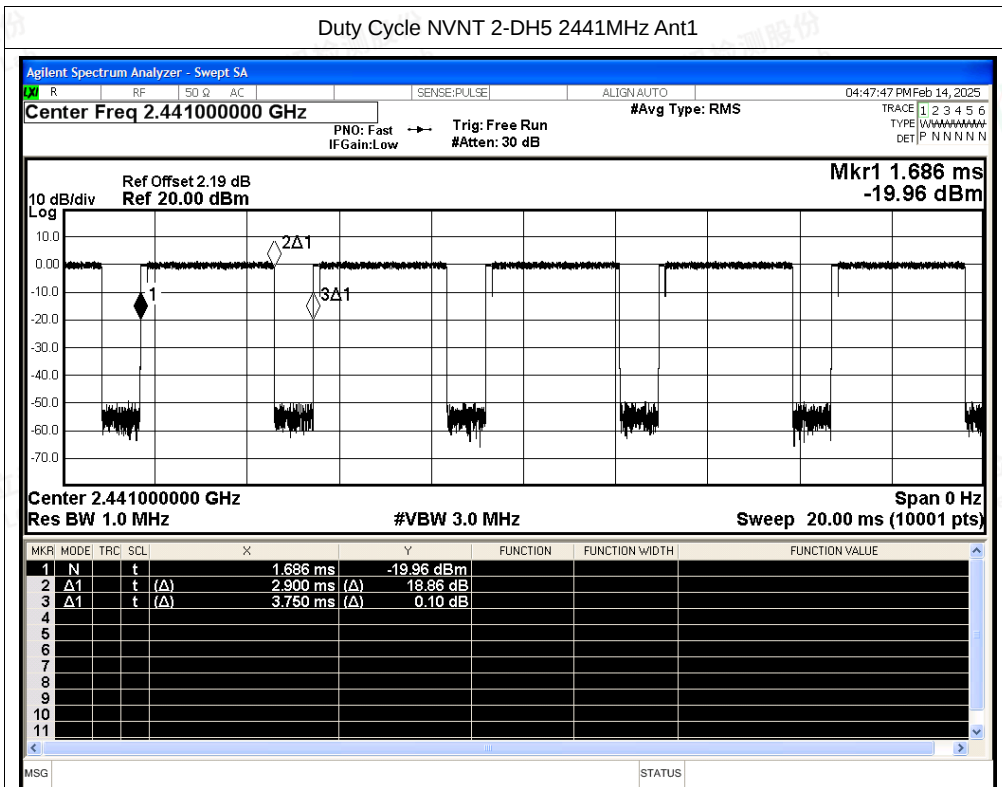
Duty Cycle NVNT 1-DH5 2441MHz Ant1



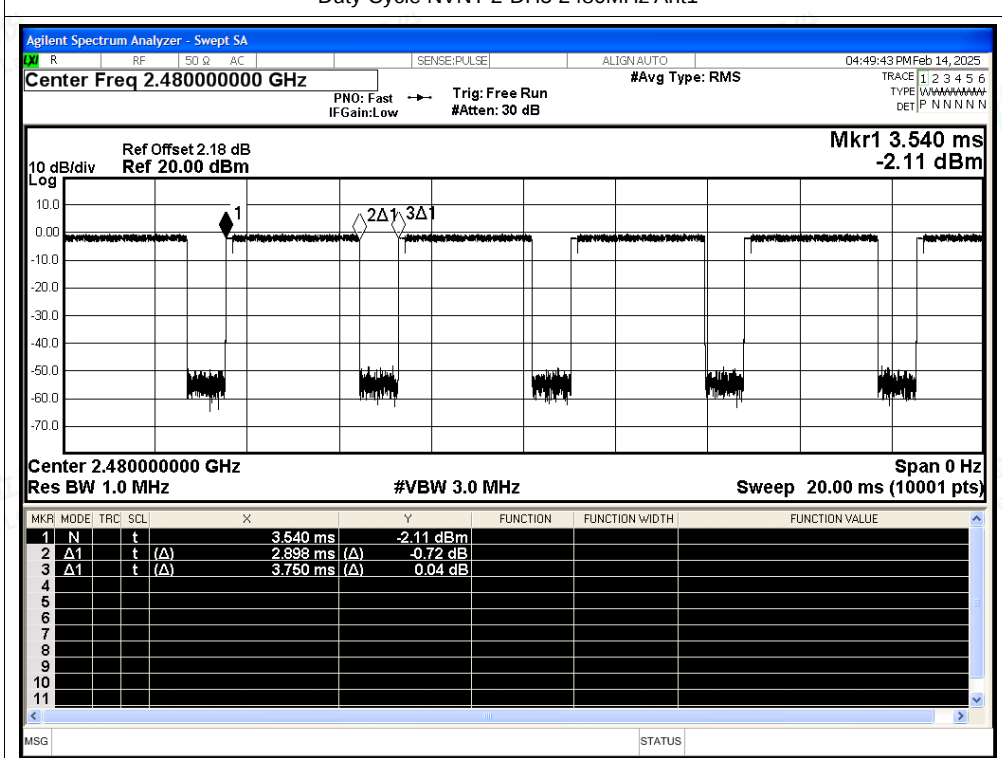




Duty Cycle NVNT 2-DH5 2441MHz Ant1



Duty Cycle NVNT 2-DH5 2480MHz 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	-51.57	2.09	-	45.78	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-59.09	2.09	1.1	39.36	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2319.024	-47.2	2.09	-	50.15	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2376.24	-57.6	2.09	1.1	40.85	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-51.18	2.09	-	46.17	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-58.61	2.09	1.1	39.84	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-49.36	2.09	-	47.99	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-58	2.09	1.1	40.45	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2494.096	-46.4	2.09	-	50.95	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2496.52	-57.15	2.09	1.1	41.30	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-50.27	2.09	-	47.08	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-57.52	2.09	1.1	40.93	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-50.63	2.09	-	46.72	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-58.55	2.09	1.12	39.92	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2330.736	-46.99	2.09	-	50.36	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2378.544	-57.63	2.09	1.12	40.84	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-49.5	2.09	-	47.85	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-58.12	2.09	1.12	40.35	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-50.19	2.09	-	47.16	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-57.44	2.09	1.12	41.03	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2494.48	-47.13	2.09	-	50.22	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.824	-56.86	2.09	1.12	41.61	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-49.66	2.09	-	47.69	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-57.91	2.09	1.12	40.56	Average	54	Pass

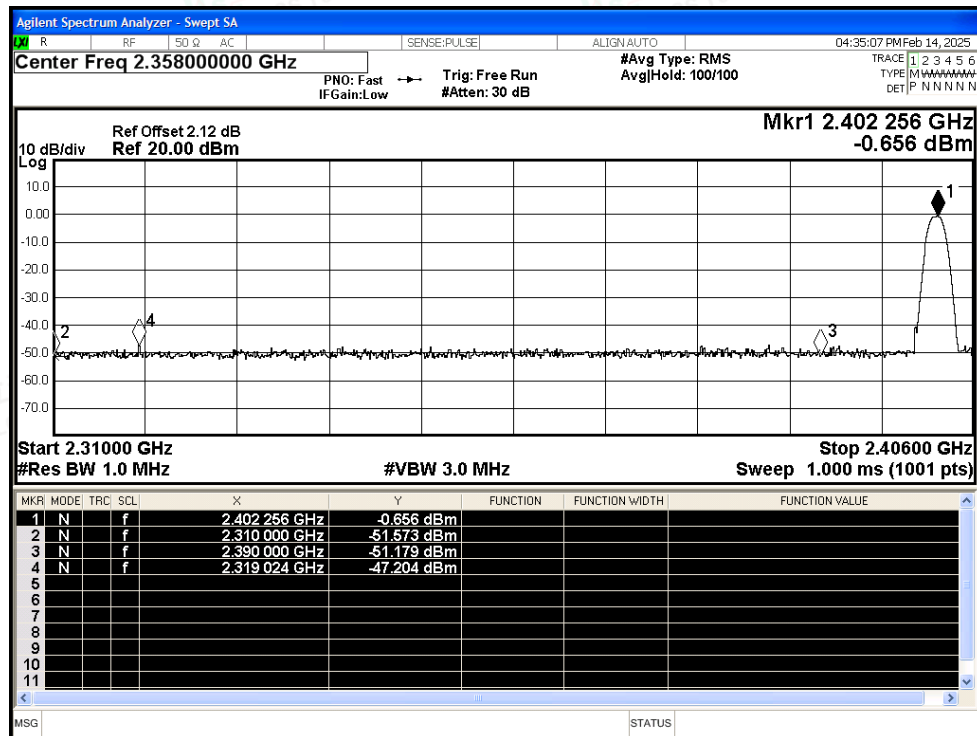


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Scan code to check authenticity



Test Graphs

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



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

