

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	Wireless Headphone
Test Model:	iKF Rona
Sample ID:	HC-C-202412-0226-01-01
Environmental Conditions	
Temperature:	25.6℃
Relative Humidity:	52.3%
Test Voltage:	DC 3.7V
Test Engineer:	Rick Chen
Note: For a more detailed features description, please refer to the report TBR-C-202412-0226-11 The report only show the worst case data.	

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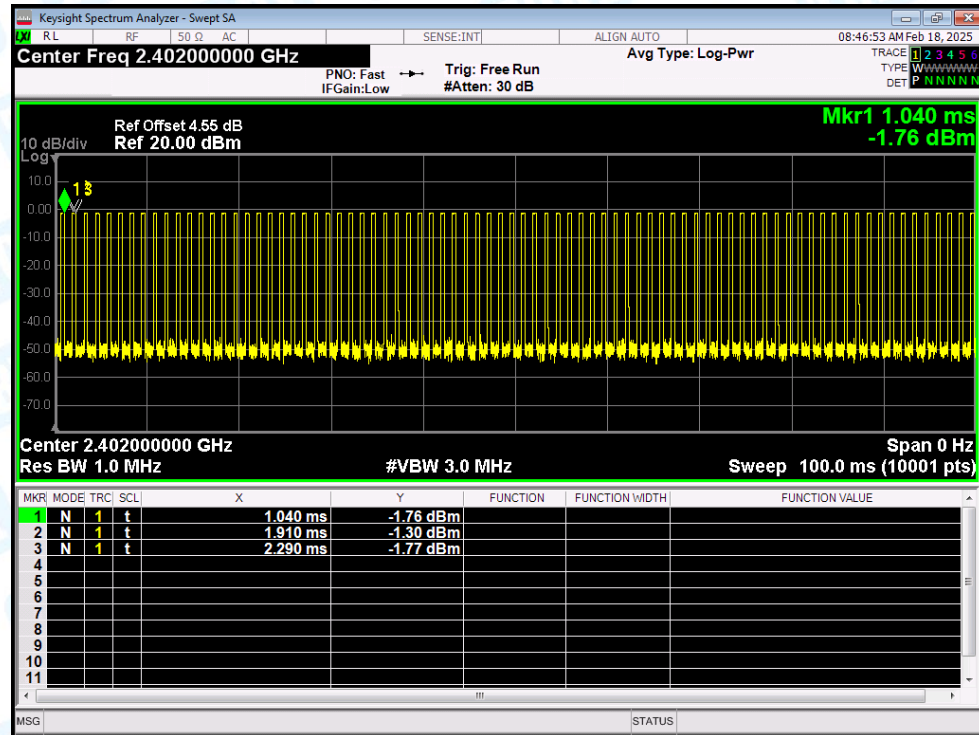
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1. Duty Cycle

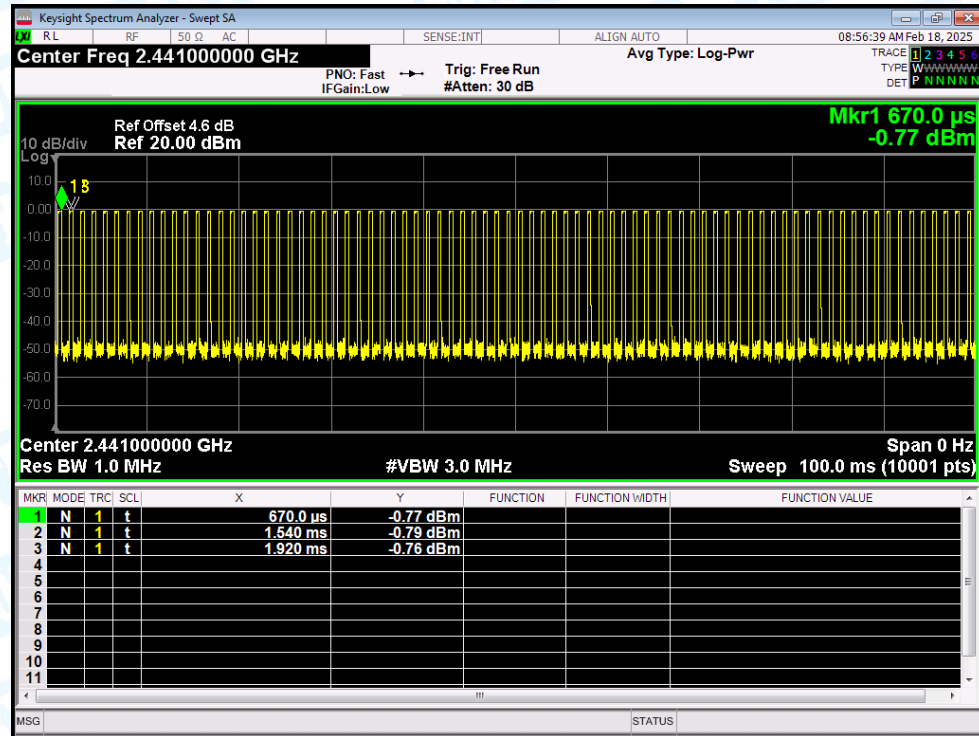
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2480	Ant1	30.4	5.17	2.63
NVNT	2-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2480	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2480	Ant1	32	4.95	2.5

Test Graphs

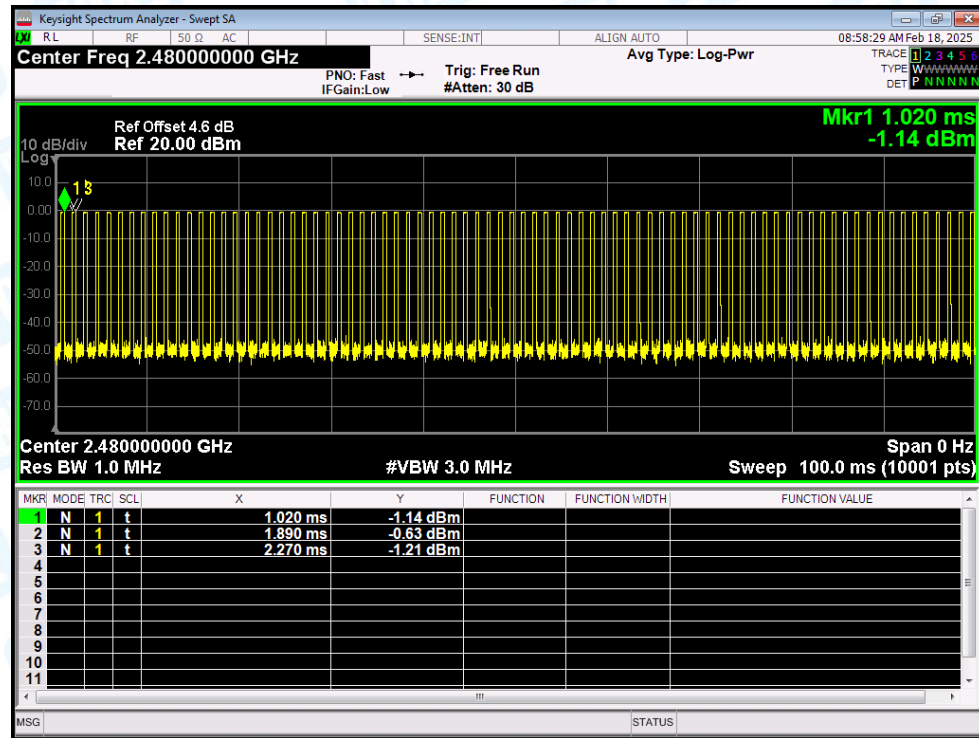
Duty Cycle NVNT 1-DH1 2402MHz Ant1



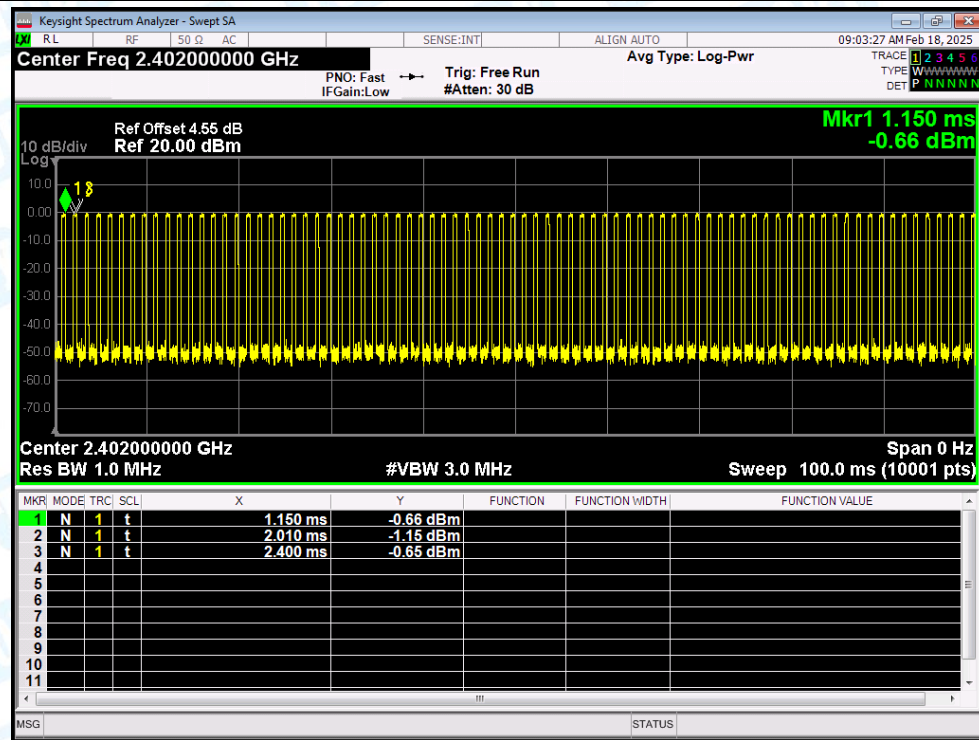
Duty Cycle NVNT 1-DH1 2441MHz Ant1



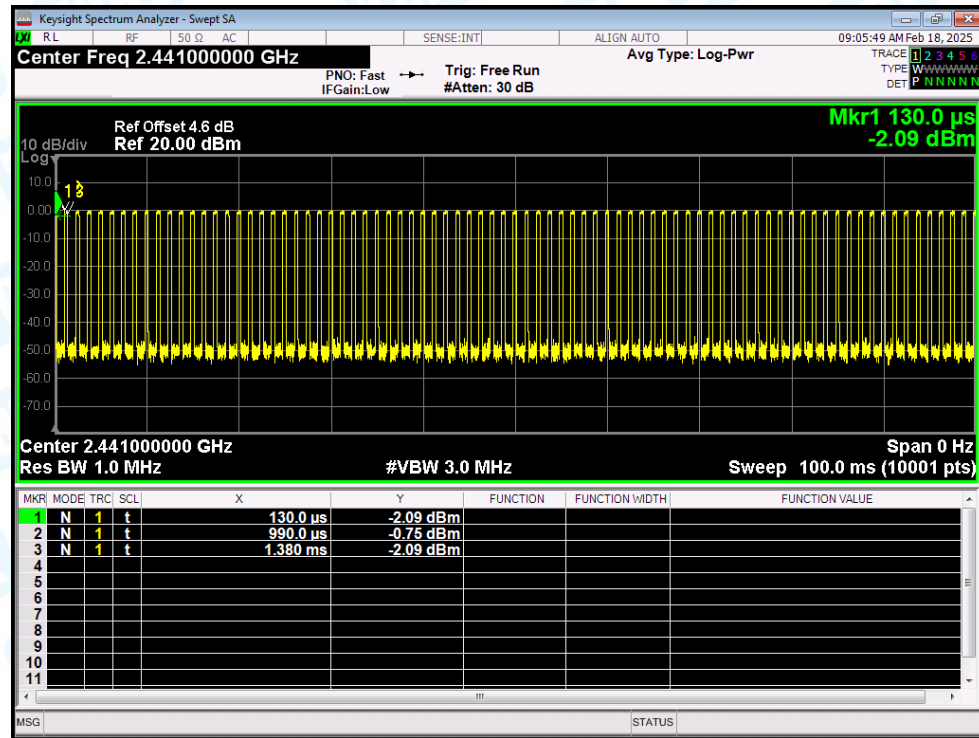
Duty Cycle NVNT 1-DH1 2480MHz Ant1



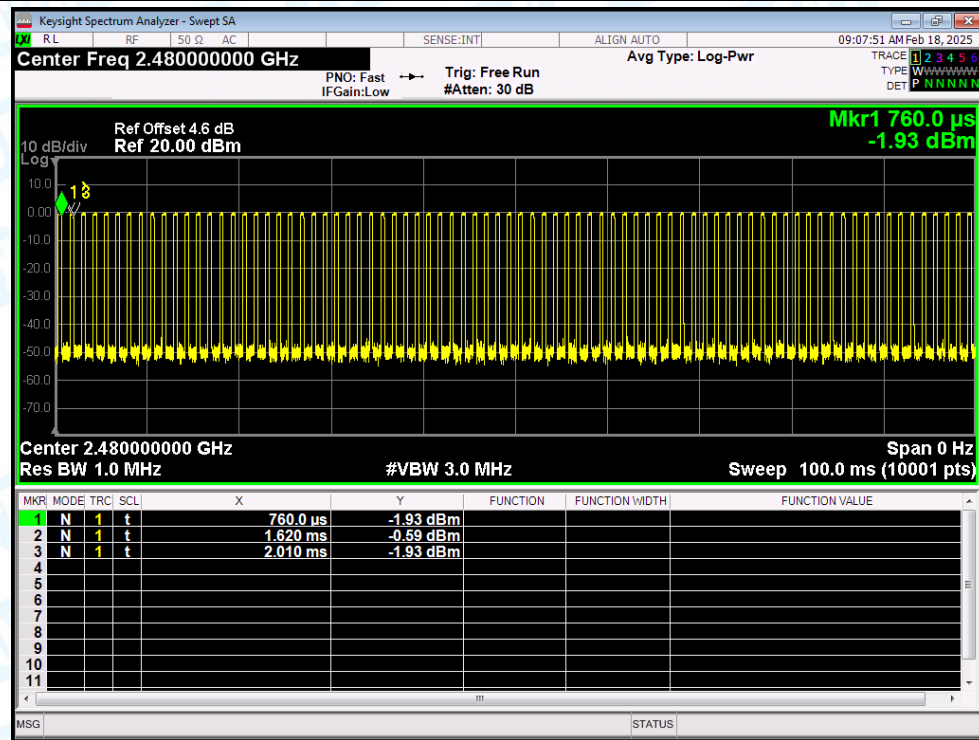
Duty Cycle NVNT 2-DH1 2402MHz Ant1



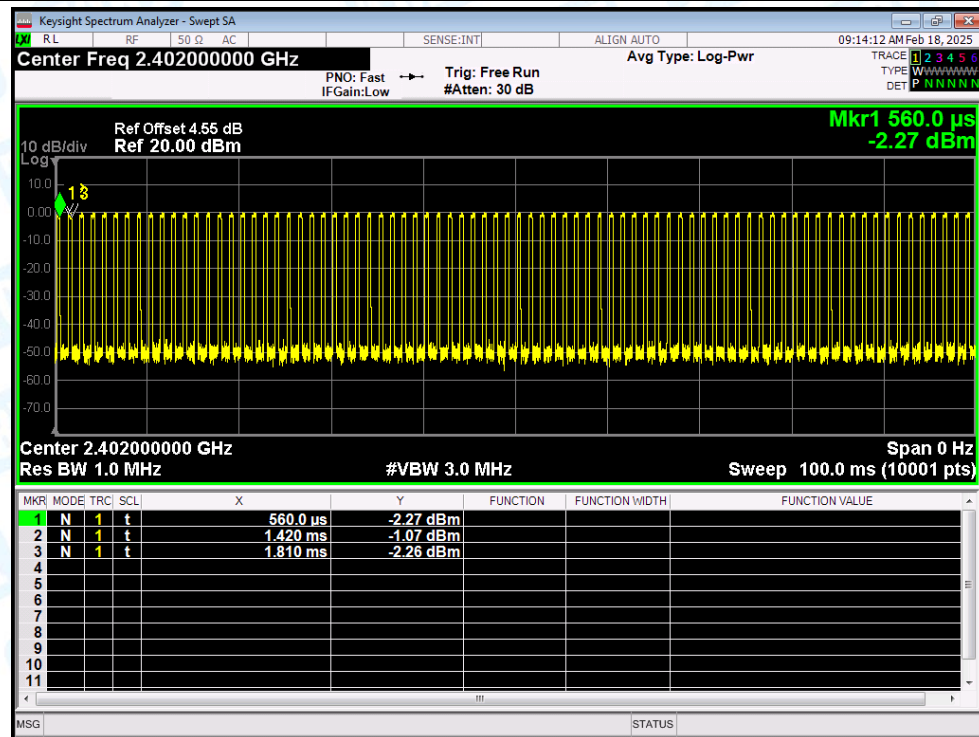
Duty Cycle NVNT 2-DH1 2441MHz Ant1



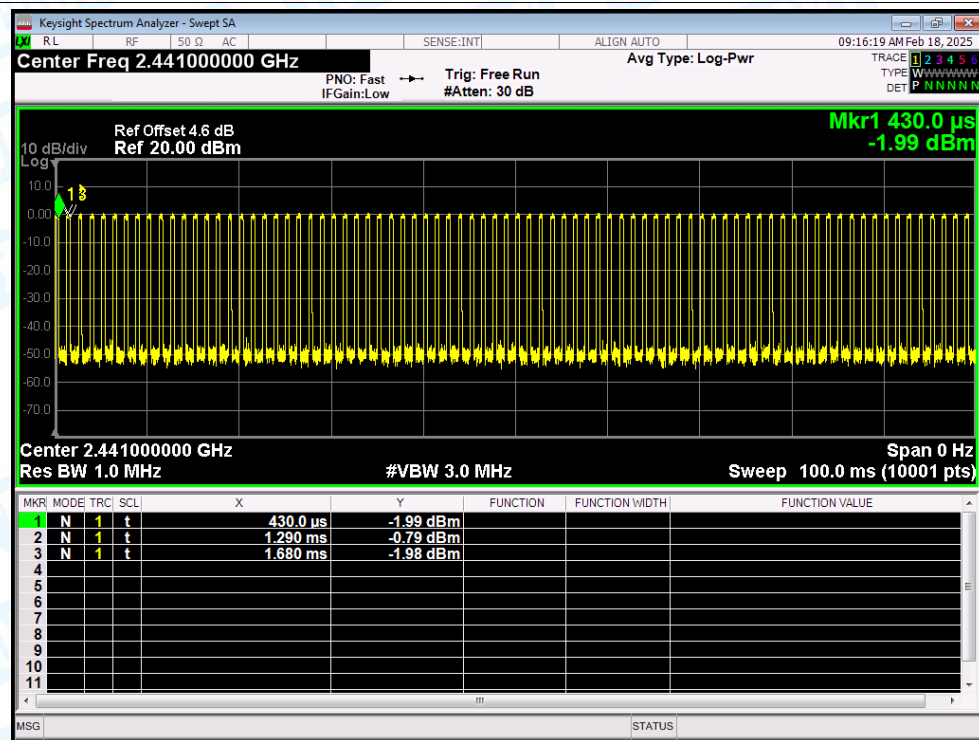
Duty Cycle NVNT 2-DH1 2480MHz Ant1

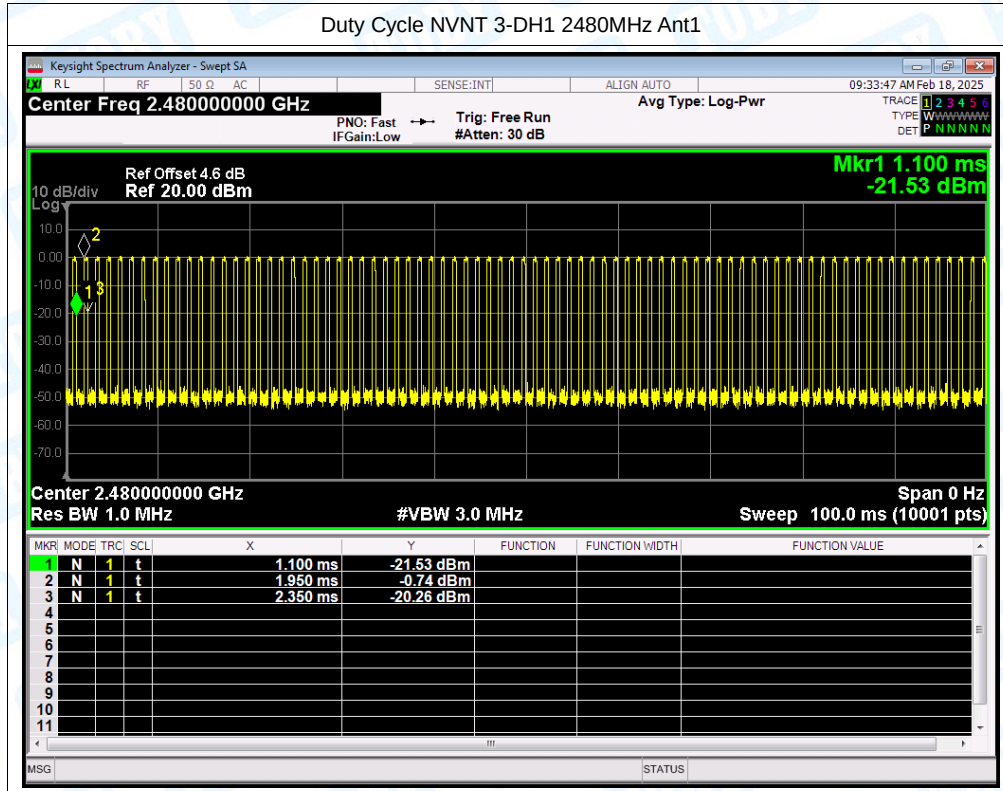


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



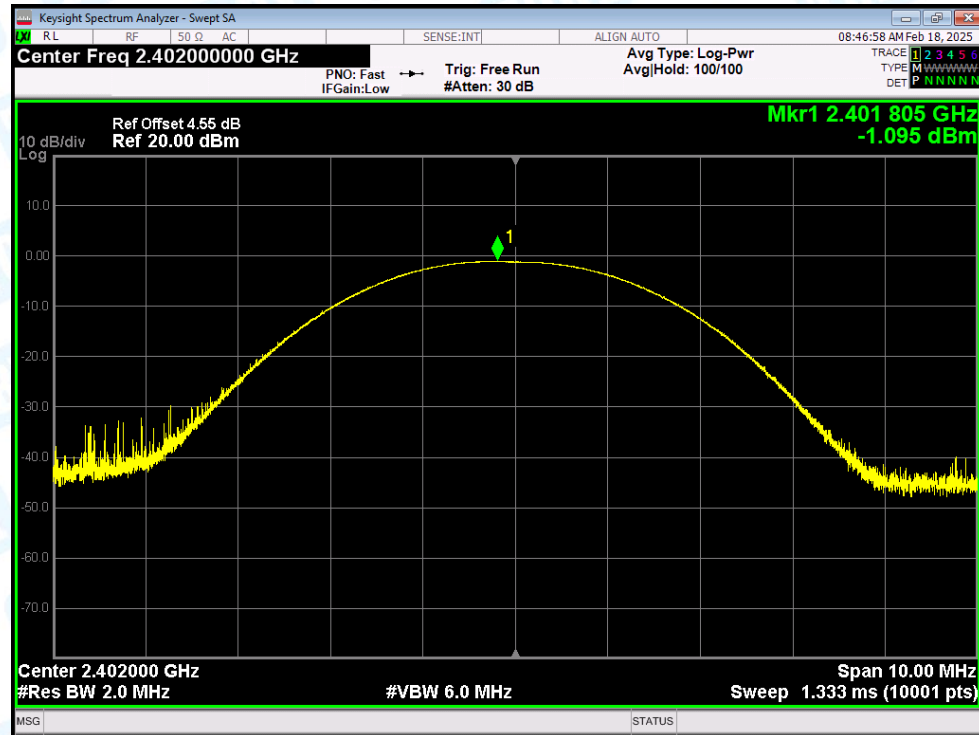


2. Maximum Conducted Output Power

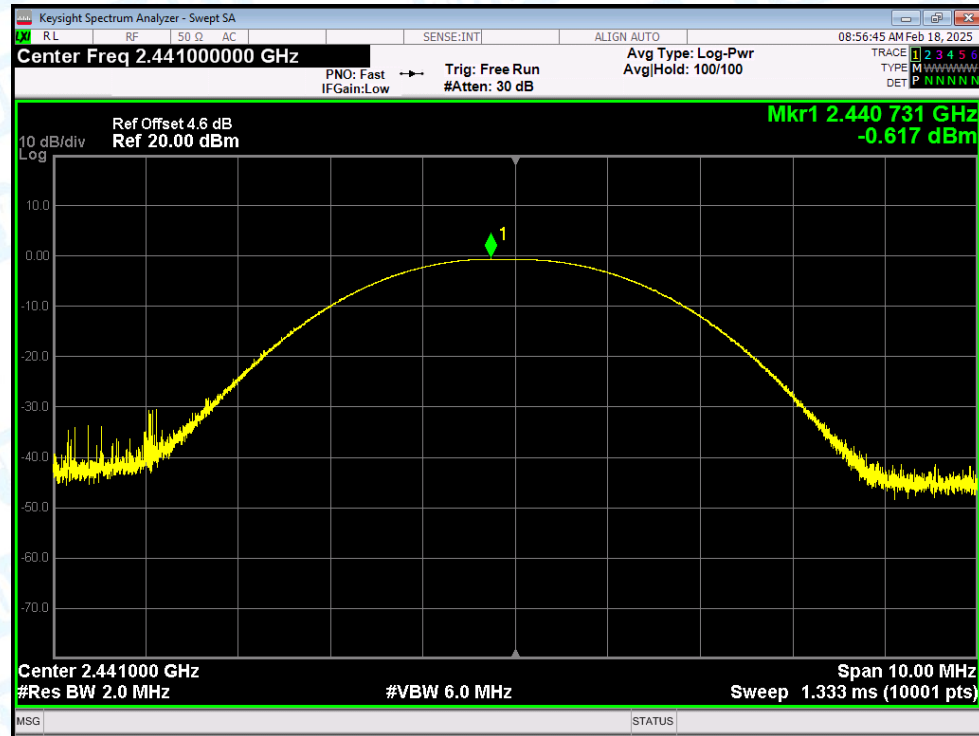
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	-1.095	21	Pass
NVNT	1-DH1	2441	Ant1	-0.617	21	Pass
NVNT	1-DH1	2480	Ant1	-0.419	21	Pass
NVNT	2-DH1	2402	Ant1	-0.018	21	Pass
NVNT	2-DH1	2441	Ant1	0.295	21	Pass
NVNT	2-DH1	2480	Ant1	0.448	21	Pass
NVNT	3-DH1	2402	Ant1	0.526	21	Pass
NVNT	3-DH1	2441	Ant1	0.832	21	Pass
NVNT	3-DH1	2480	Ant1	0.913	21	Pass

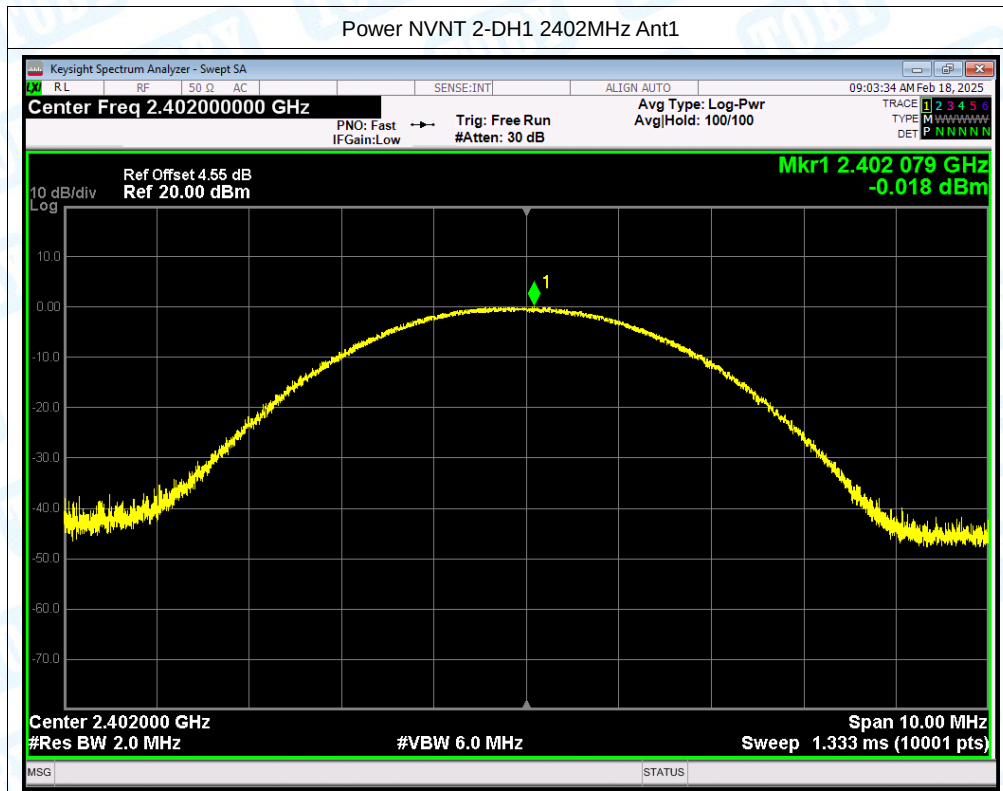
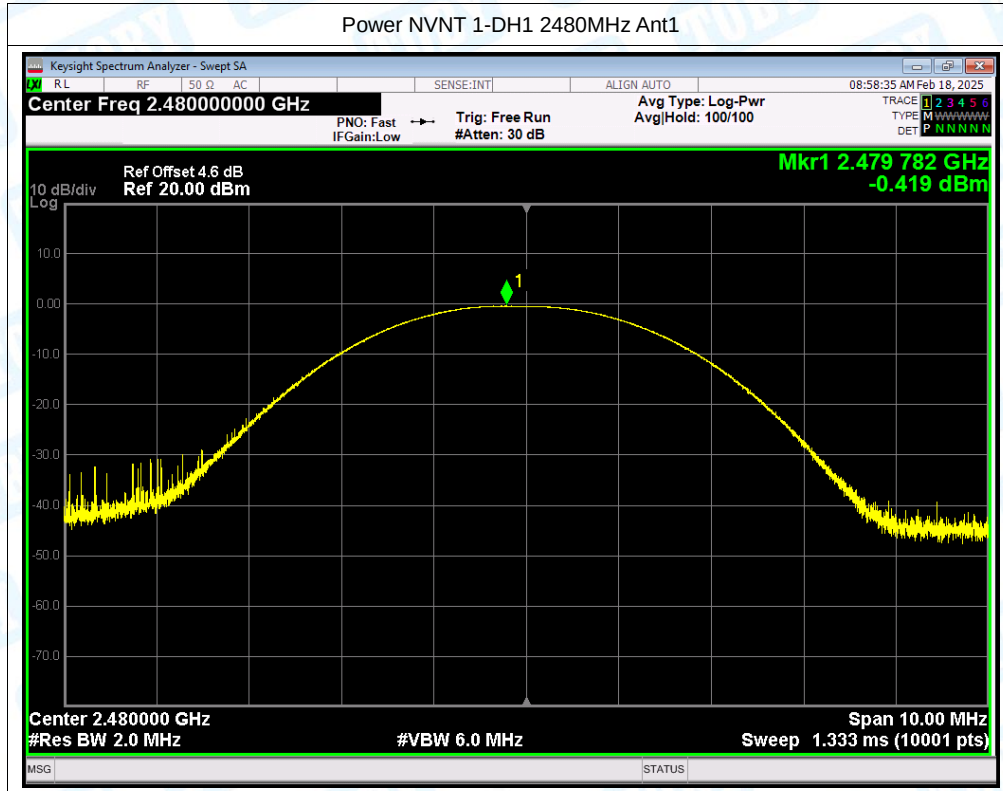
Test Graphs

Power NVNT 1-DH1 2402MHz Ant1

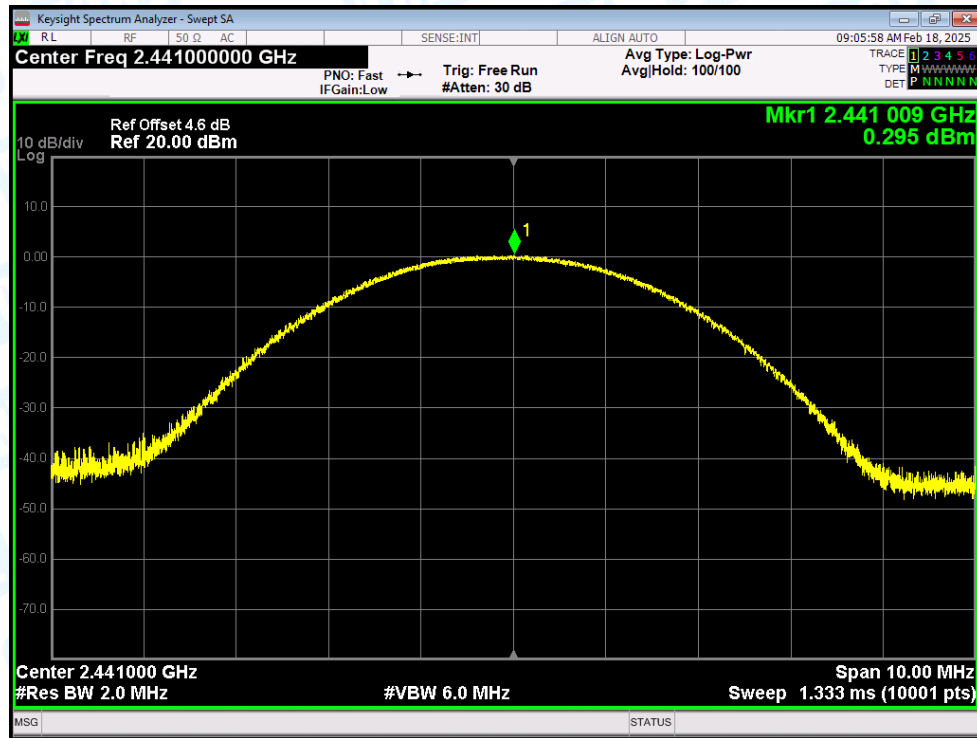


Power NVNT 1-DH1 2441MHz Ant1

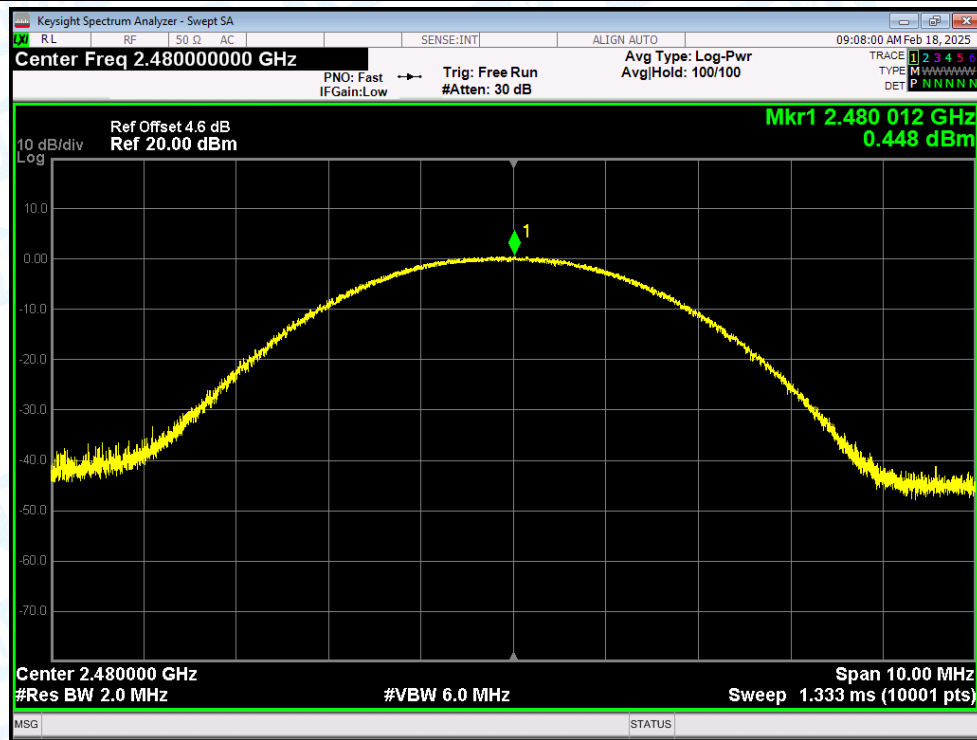




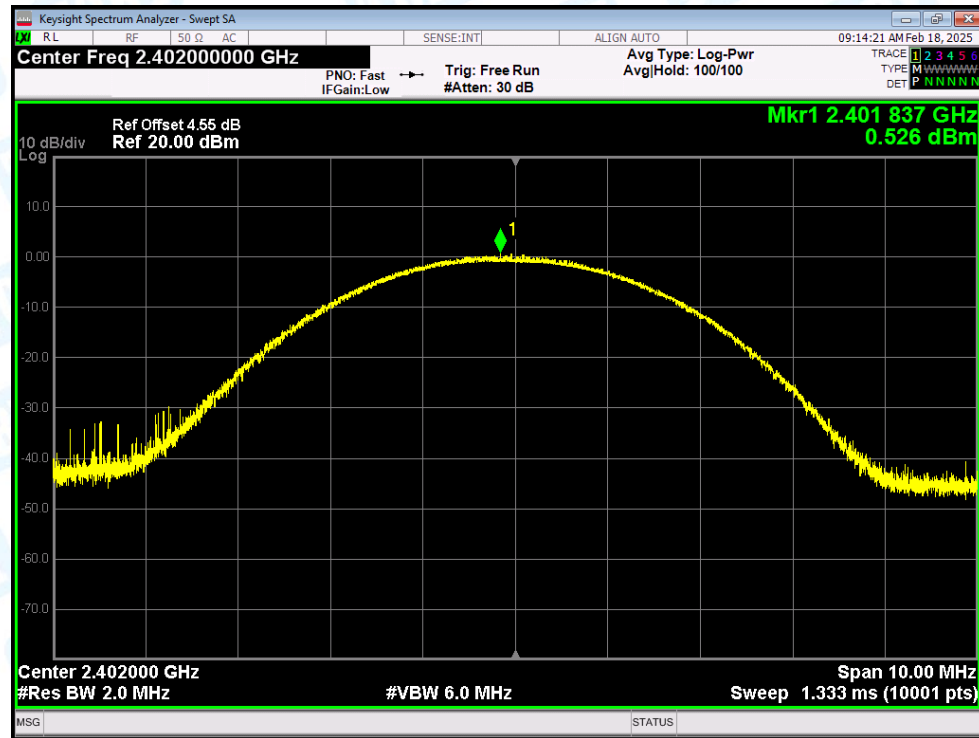
Power NVNT 2-DH1 2441MHz Ant1



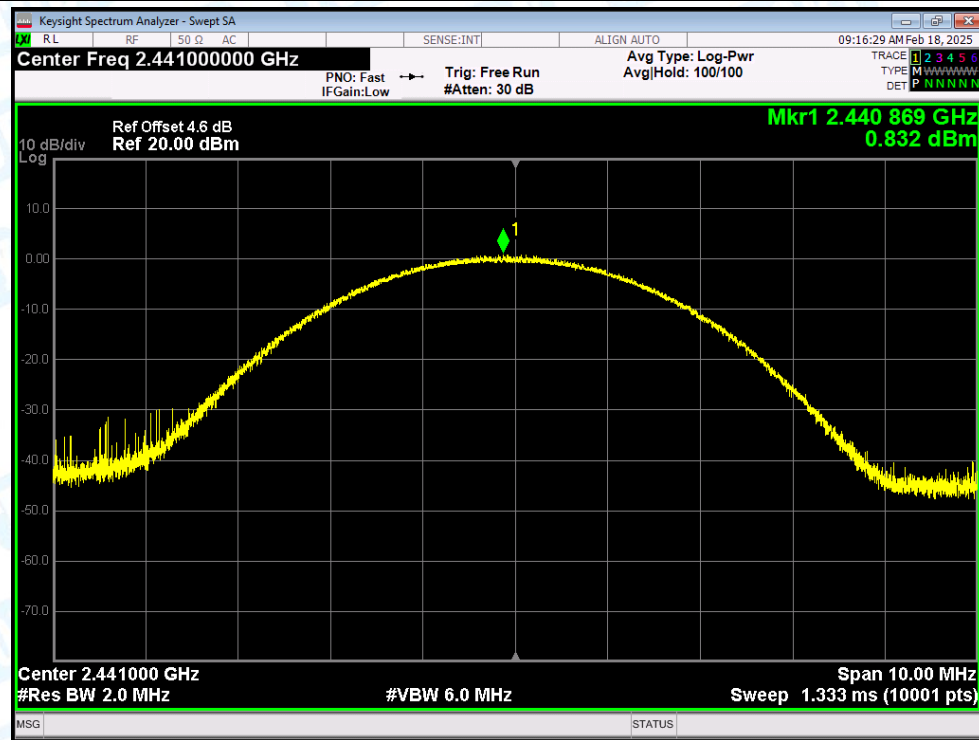
Power NVNT 2-DH1 2480MHz Ant1

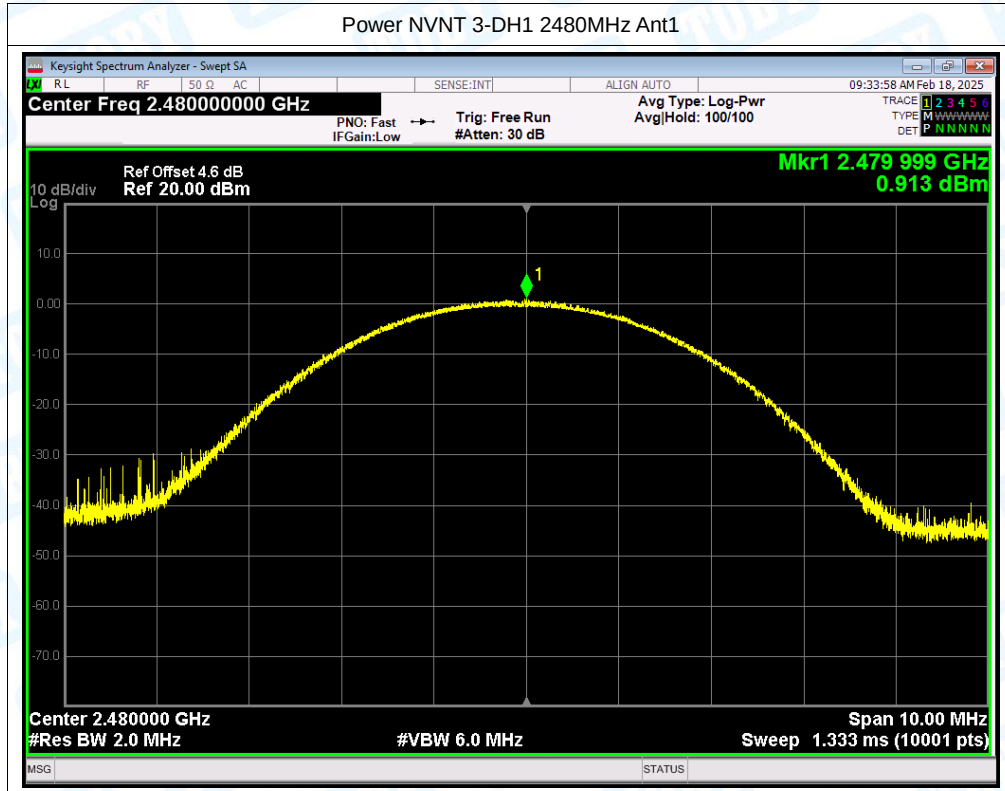


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



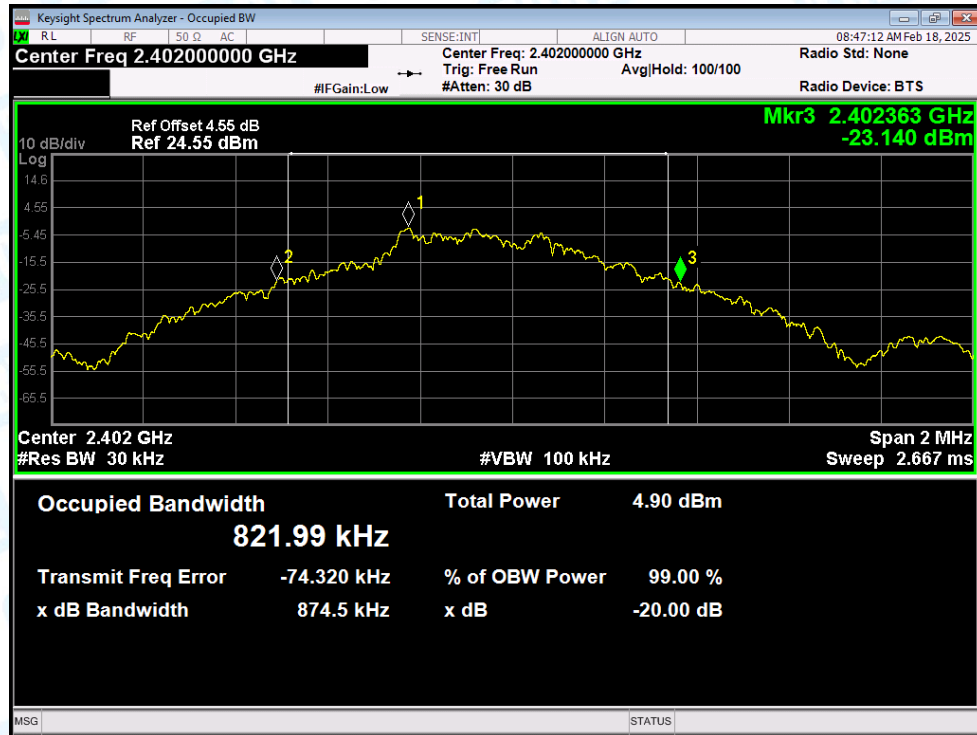


3. -20dB Bandwidth

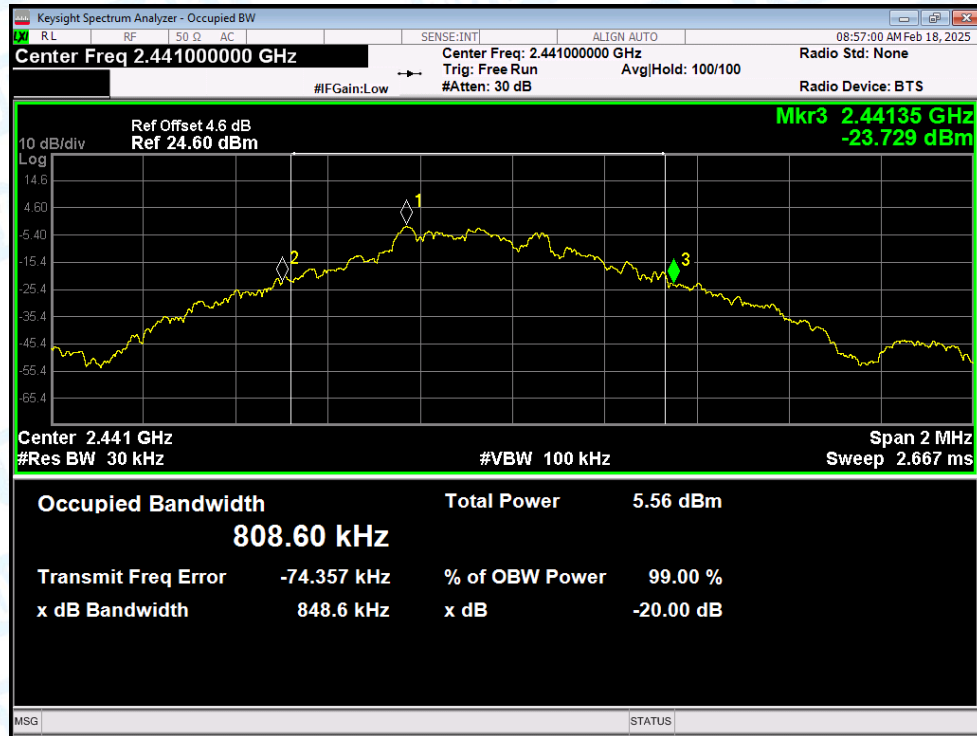
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.87	0	Pass
NVNT	1-DH1	2441	Ant1	0.85	0	Pass
NVNT	1-DH1	2480	Ant1	0.86	0	Pass
NVNT	2-DH1	2402	Ant1	1.24	0	Pass
NVNT	2-DH1	2441	Ant1	1.24	0	Pass
NVNT	2-DH1	2480	Ant1	1.23	0	Pass
NVNT	3-DH1	2402	Ant1	1.24	0	Pass
NVNT	3-DH1	2441	Ant1	1.21	0	Pass
NVNT	3-DH1	2480	Ant1	1.21	0	Pass

Test Graphs

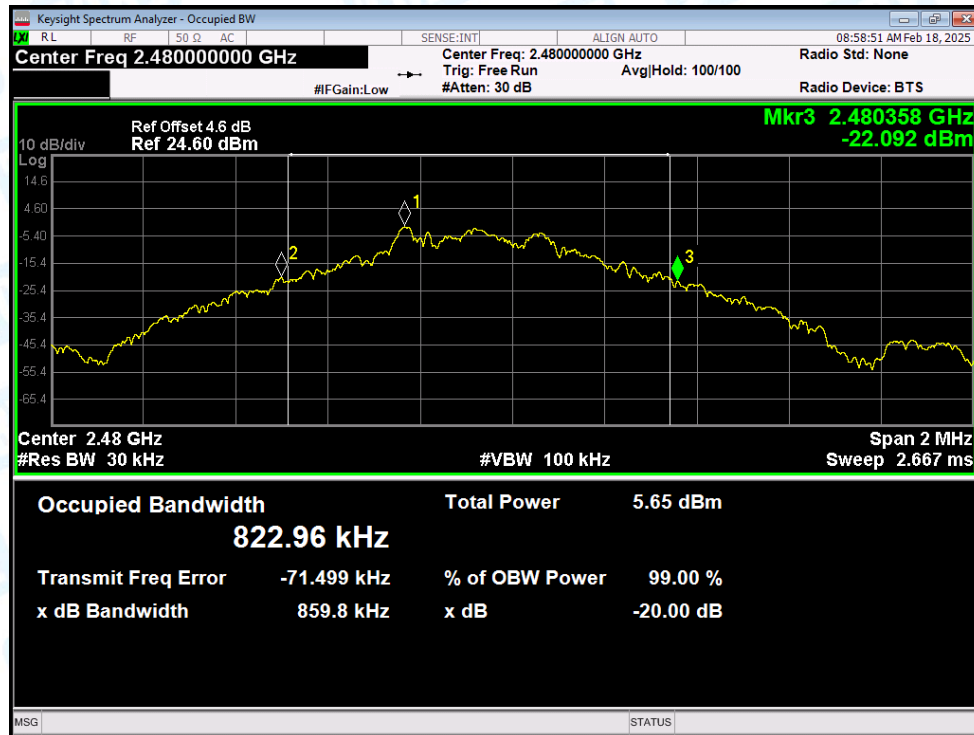
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



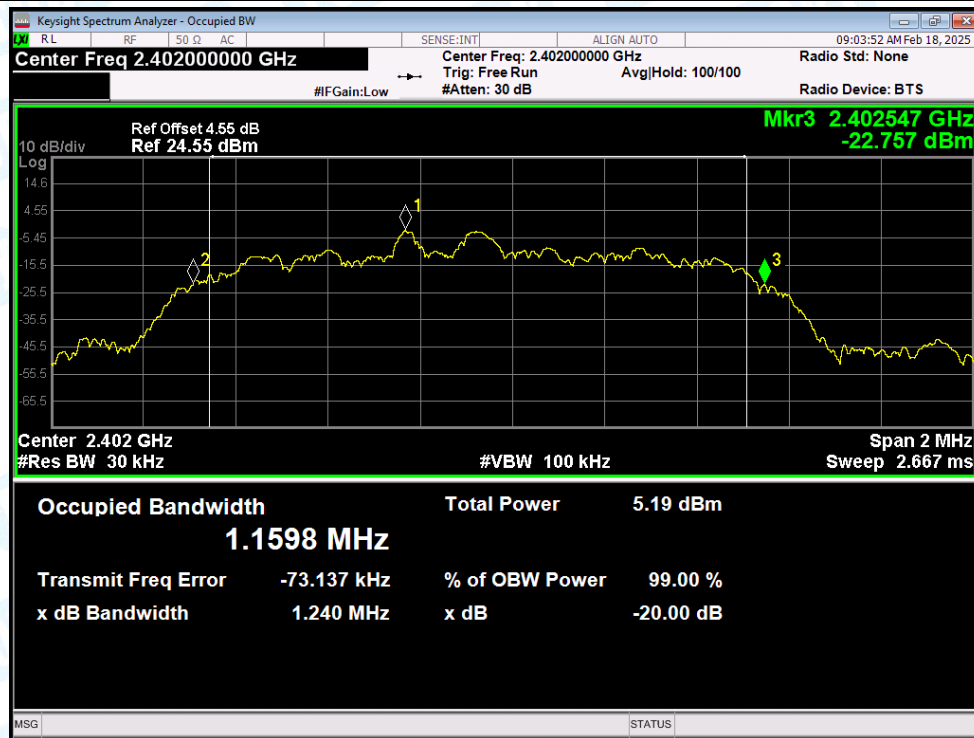
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



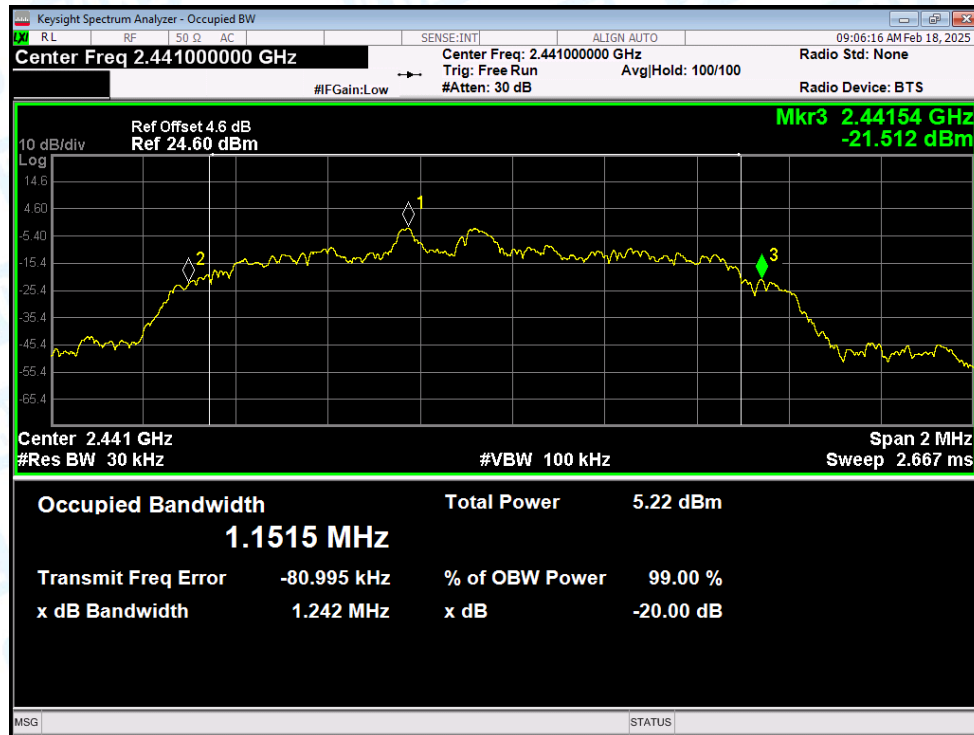
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



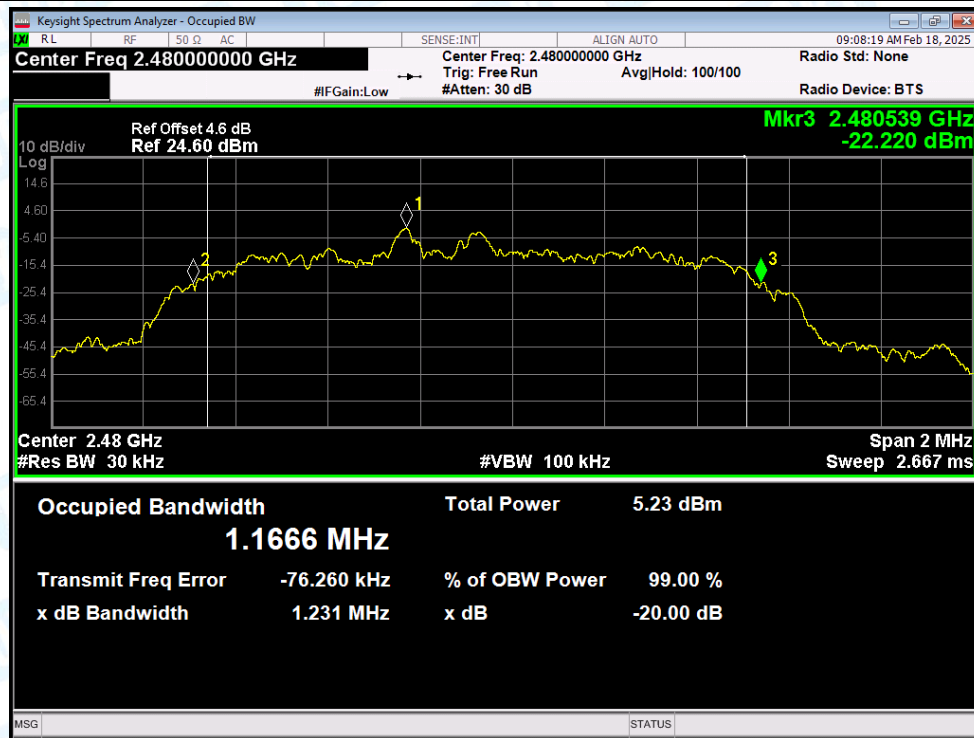
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



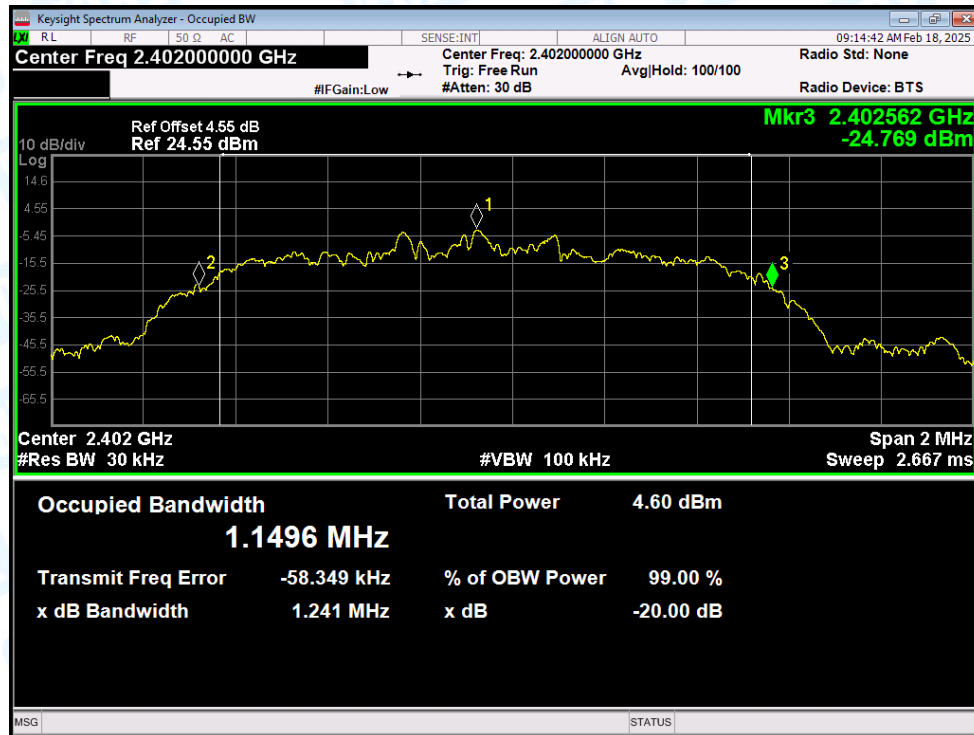
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



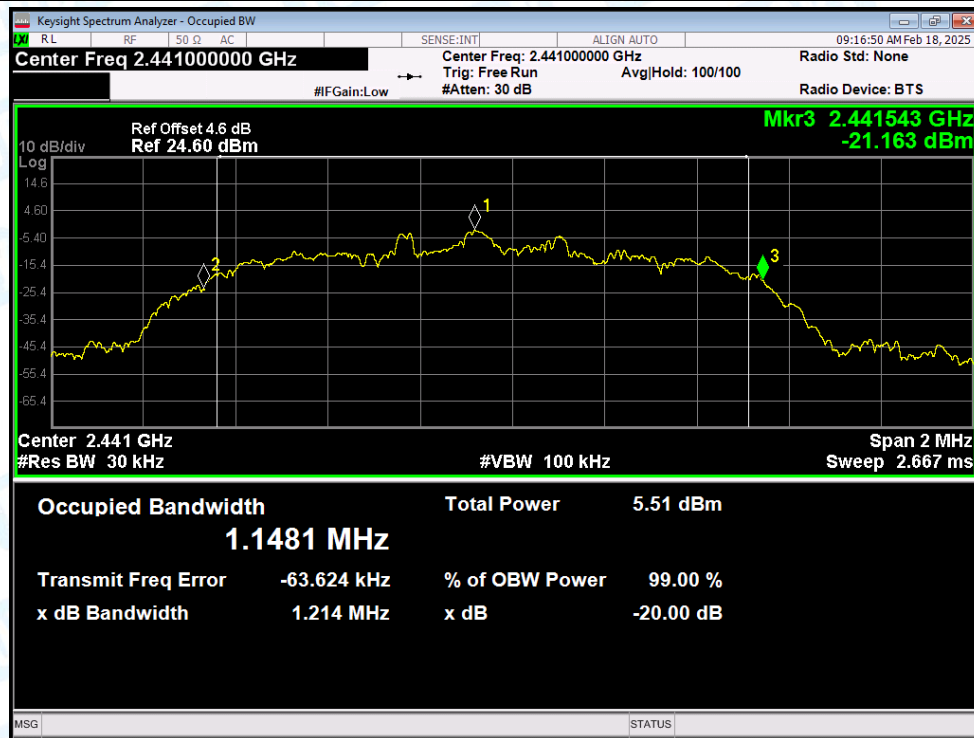
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

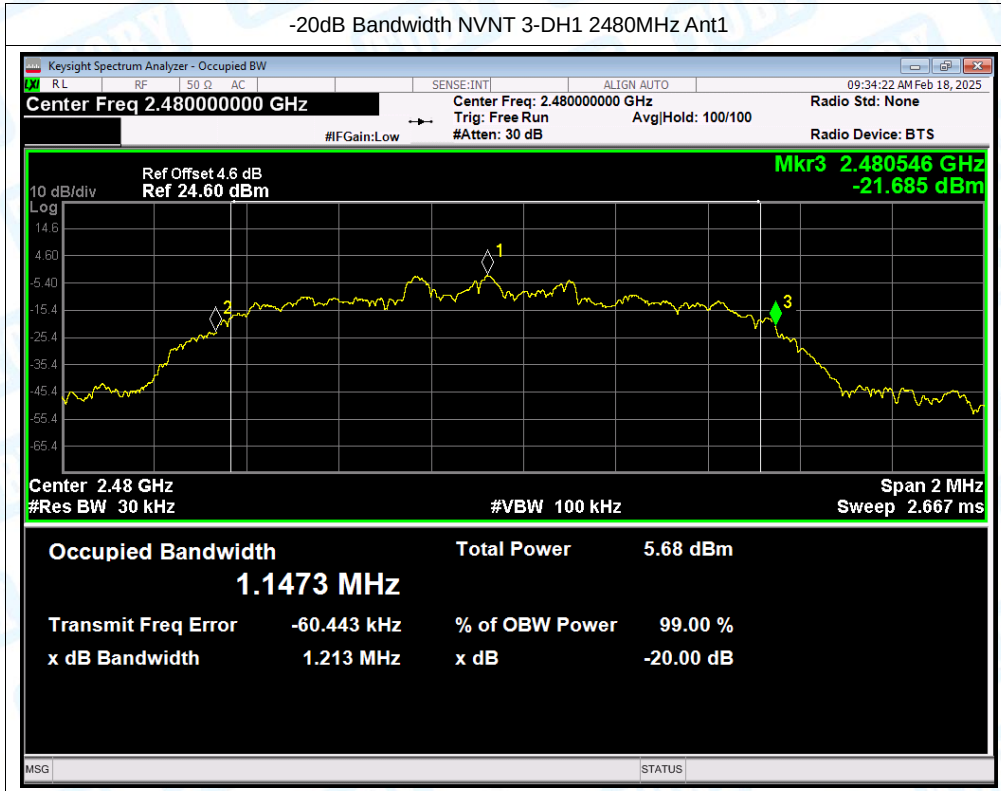


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



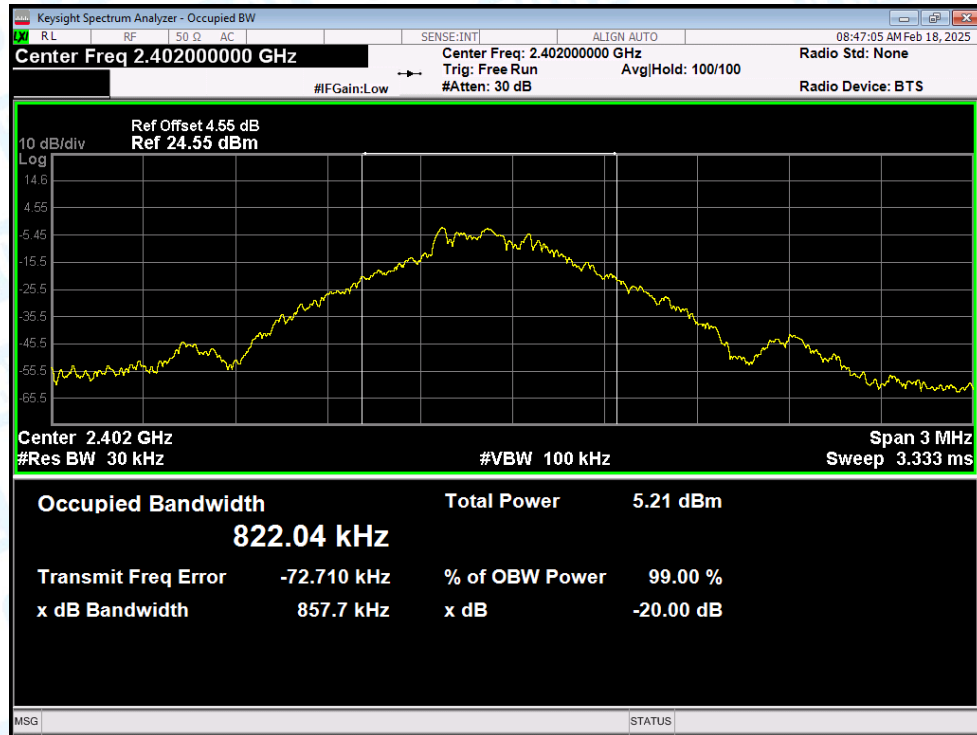


4. Occupied Channel Bandwidth

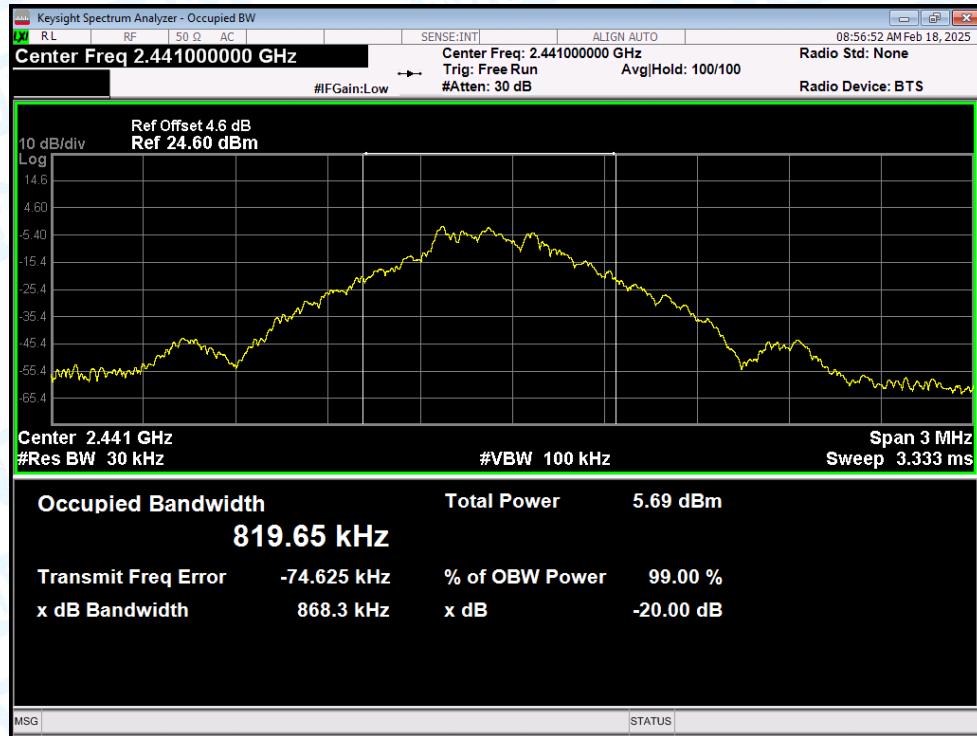
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.822
NVNT	1-DH1	2441	Ant1	0.82
NVNT	1-DH1	2480	Ant1	0.821
NVNT	2-DH1	2402	Ant1	1.152
NVNT	2-DH1	2441	Ant1	1.157
NVNT	2-DH1	2480	Ant1	1.179
NVNT	3-DH1	2402	Ant1	1.145
NVNT	3-DH1	2441	Ant1	1.15
NVNT	3-DH1	2480	Ant1	1.148

Test Graphs

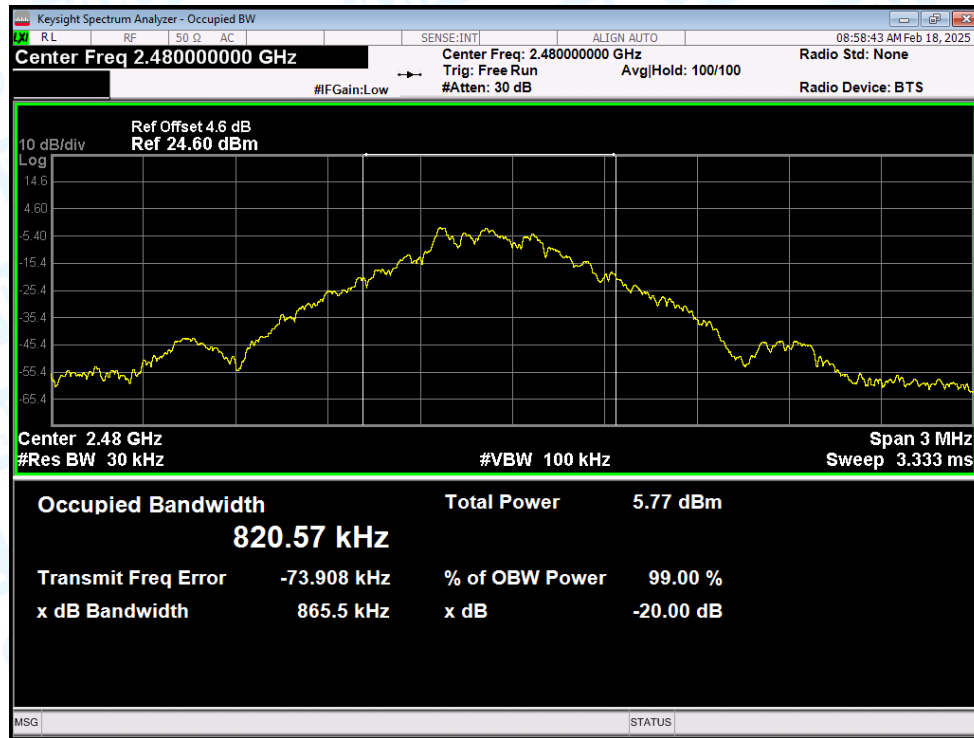
OBW NVNT 1-DH1 2402MHz Ant1



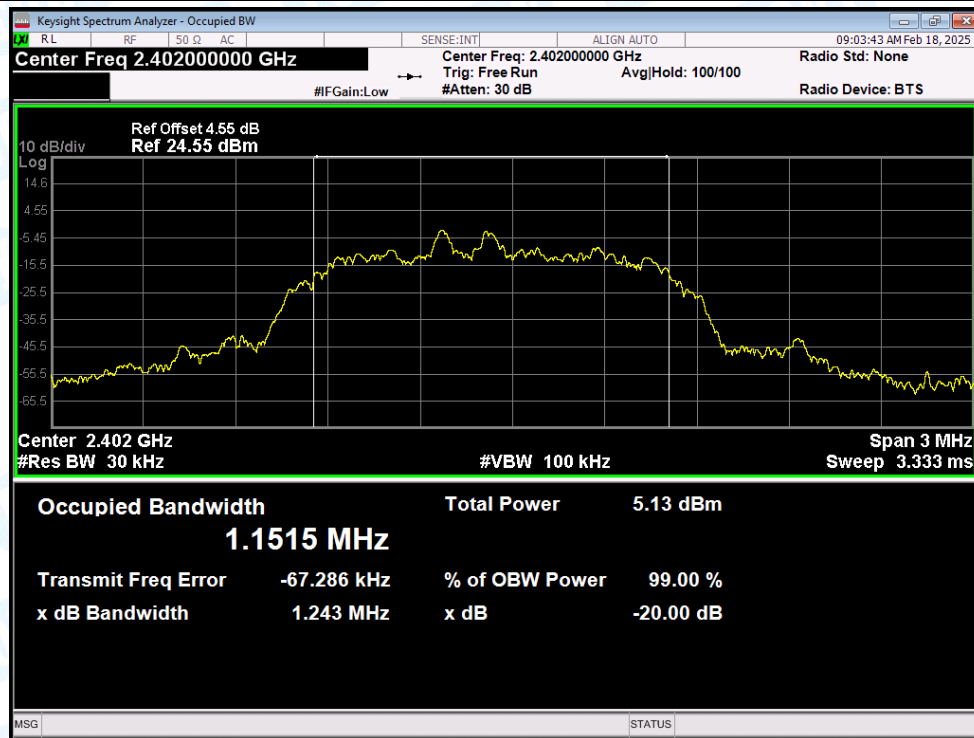
OBW NVNT 1-DH1 2441MHz Ant1



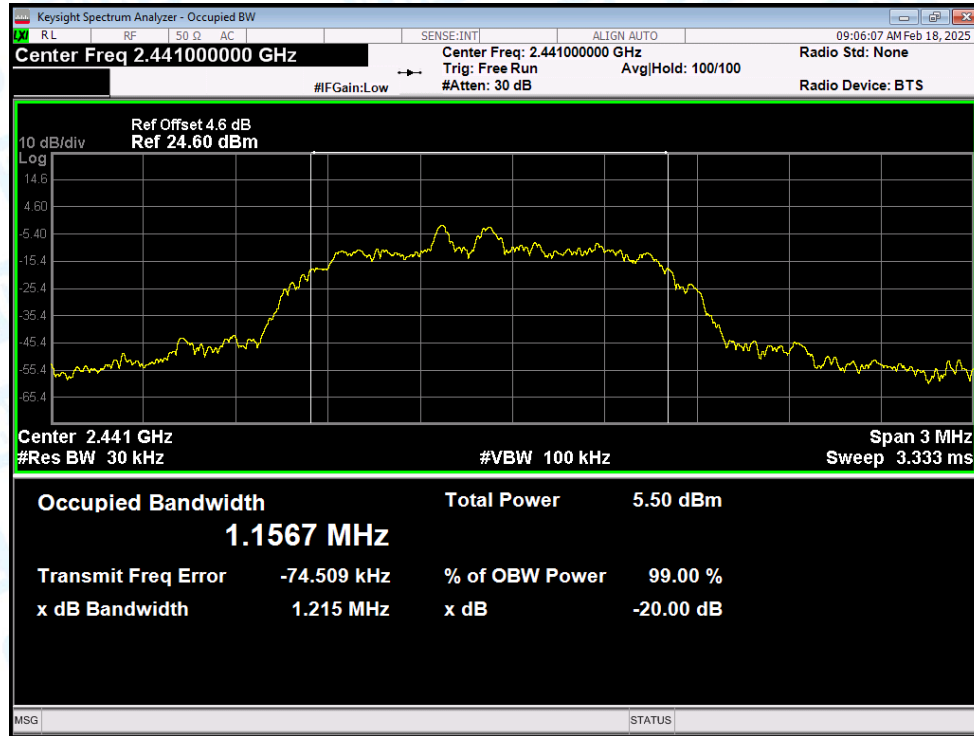
OBW NVNT 1-DH1 2480MHz Ant1



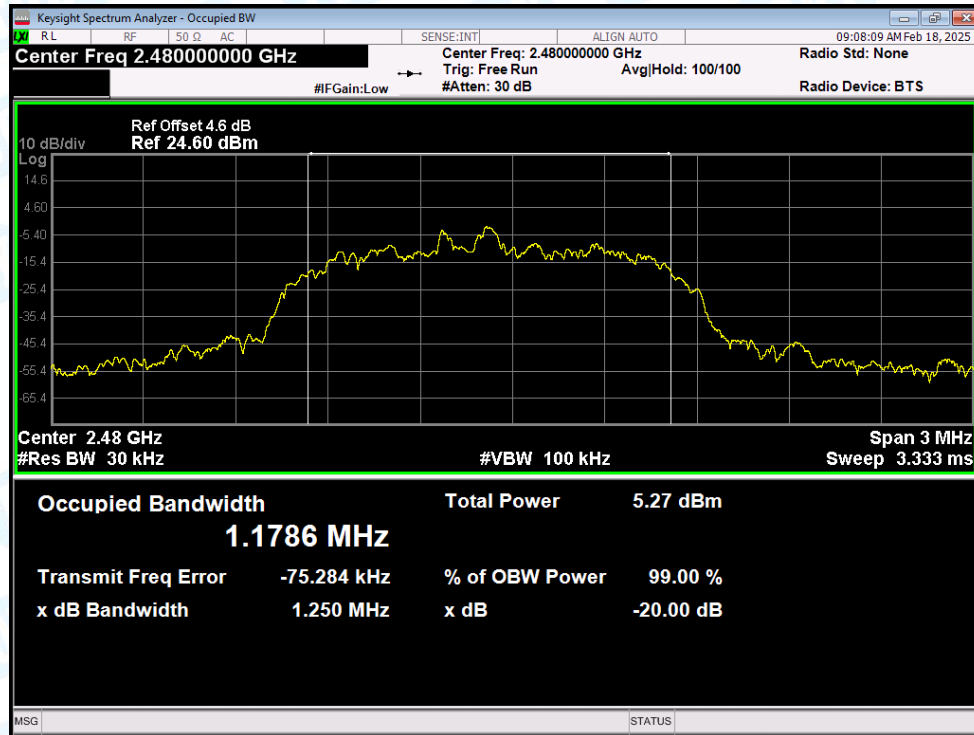
OBW NVNT 2-DH1 2402MHz Ant1



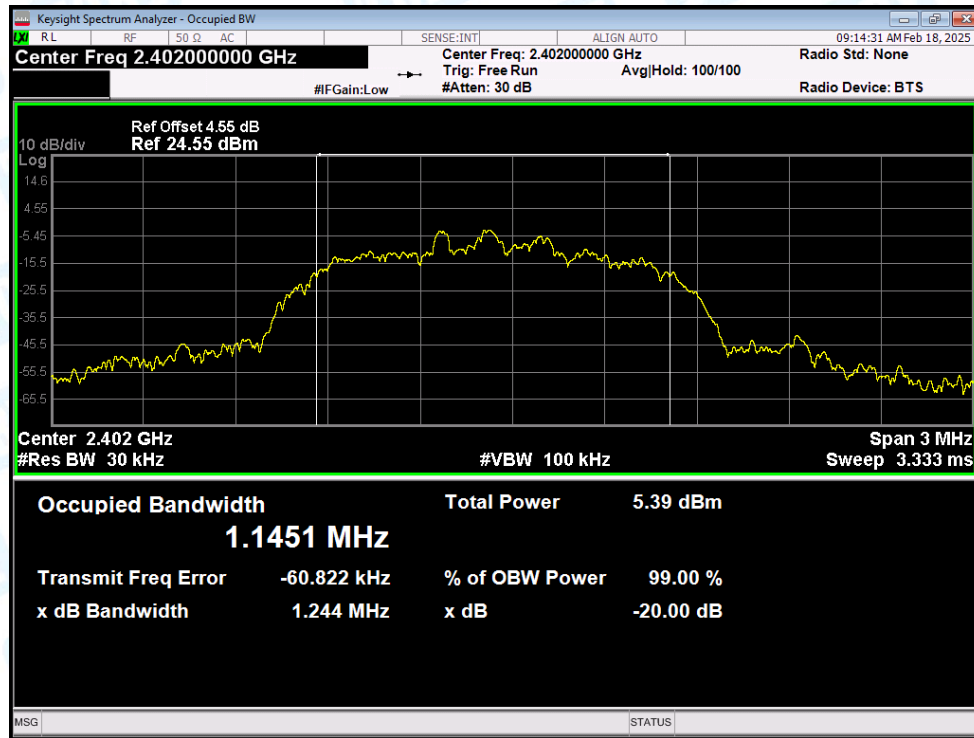
OBW NVNT 2-DH1 2441MHz Ant1



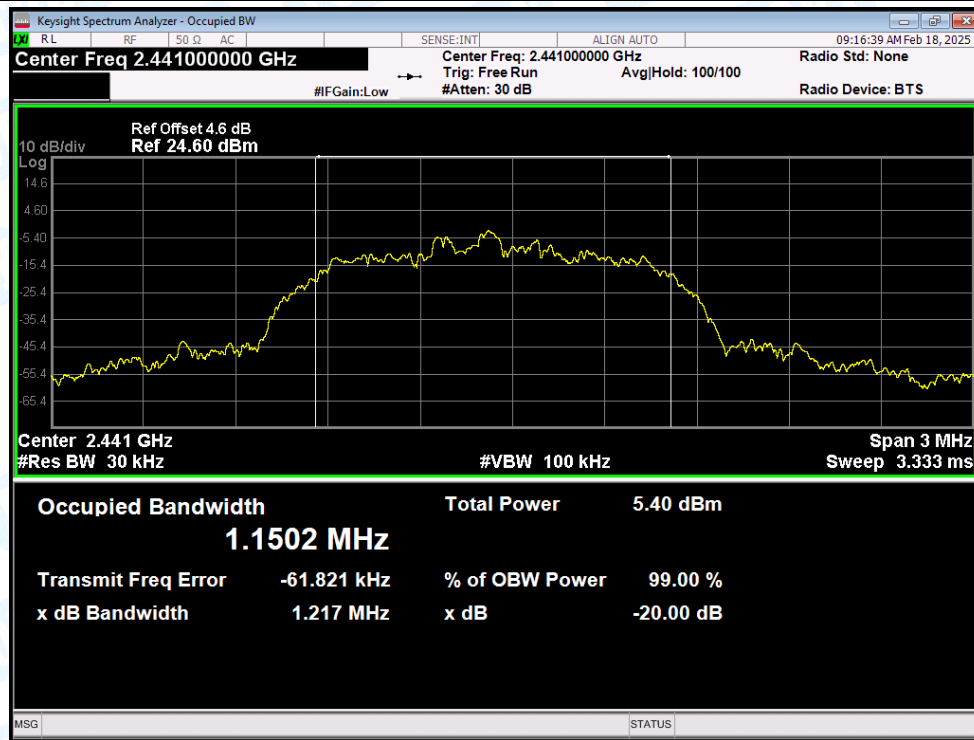
OBW NVNT 2-DH1 2480MHz Ant1

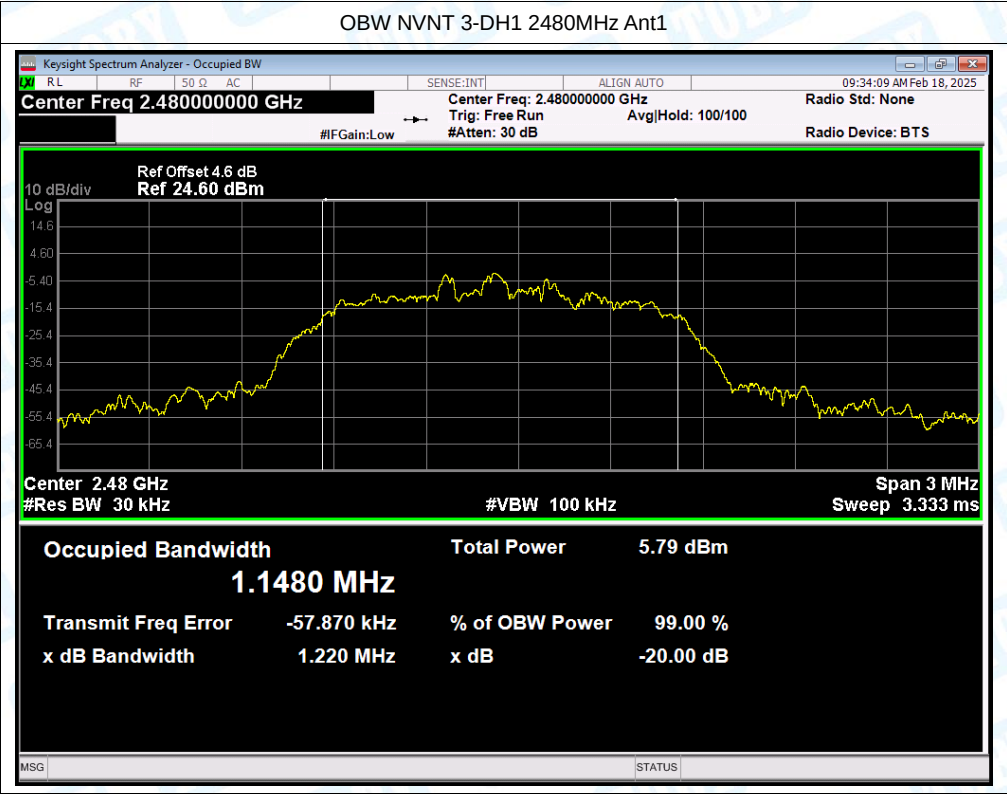


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



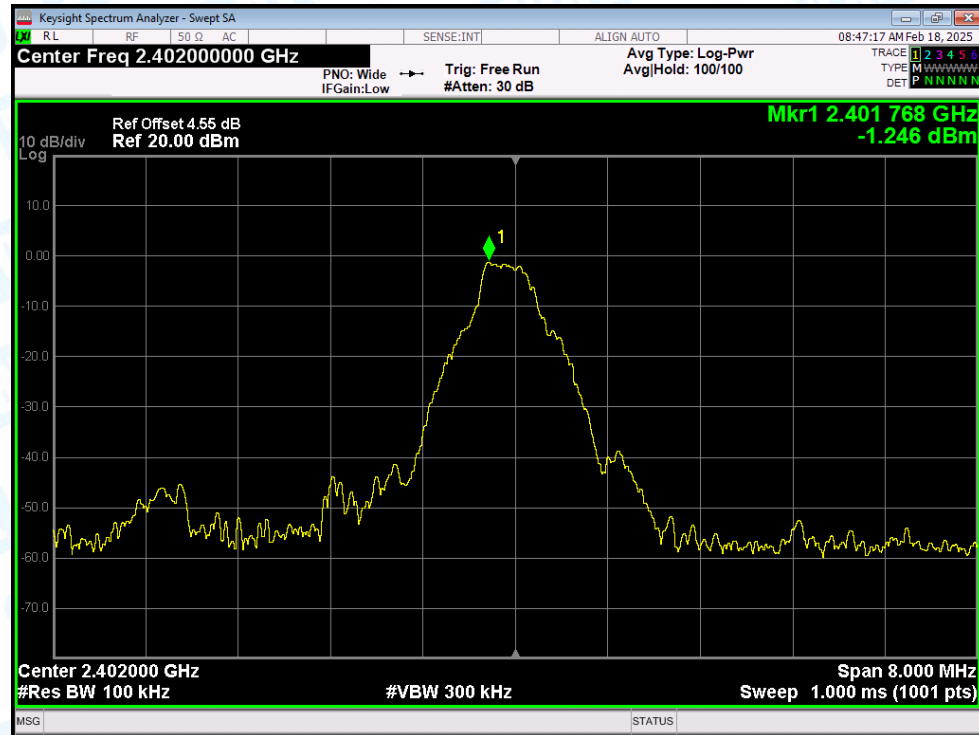


5. Band Edge

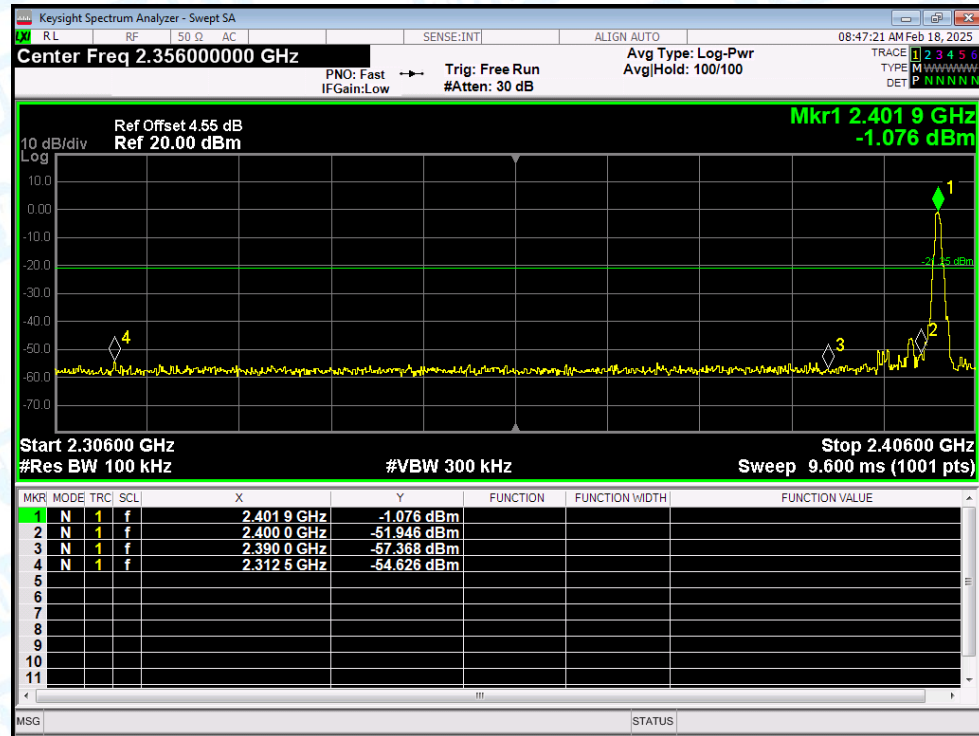
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-53.38	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-54.53	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-53.71	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-53.74	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-53.59	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-53.56	-20	Pass

Test Graphs

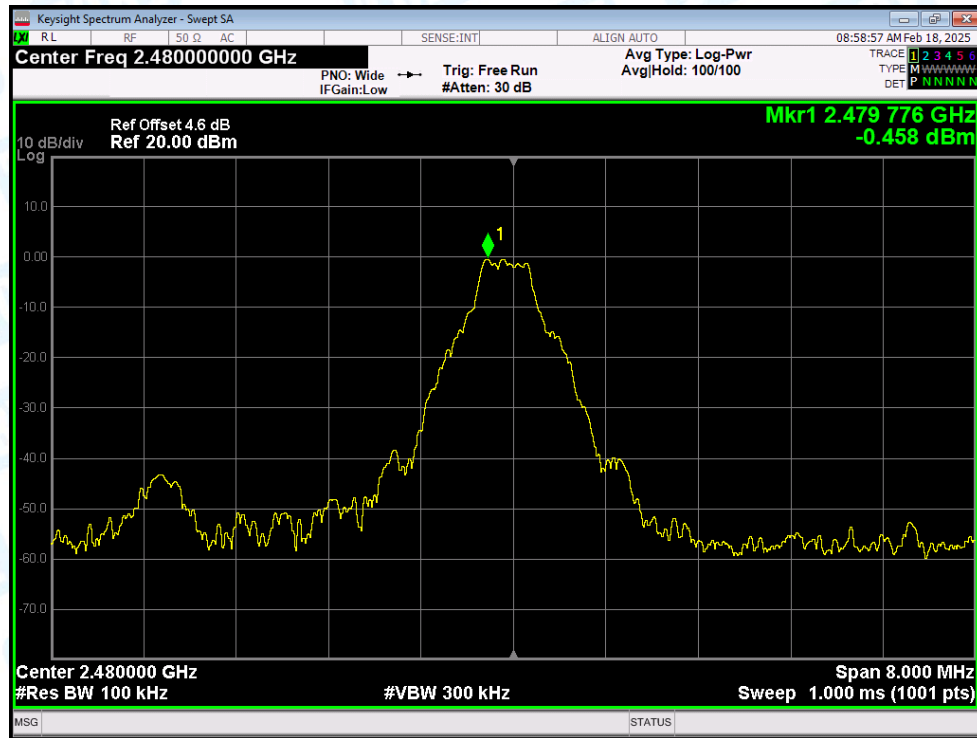
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



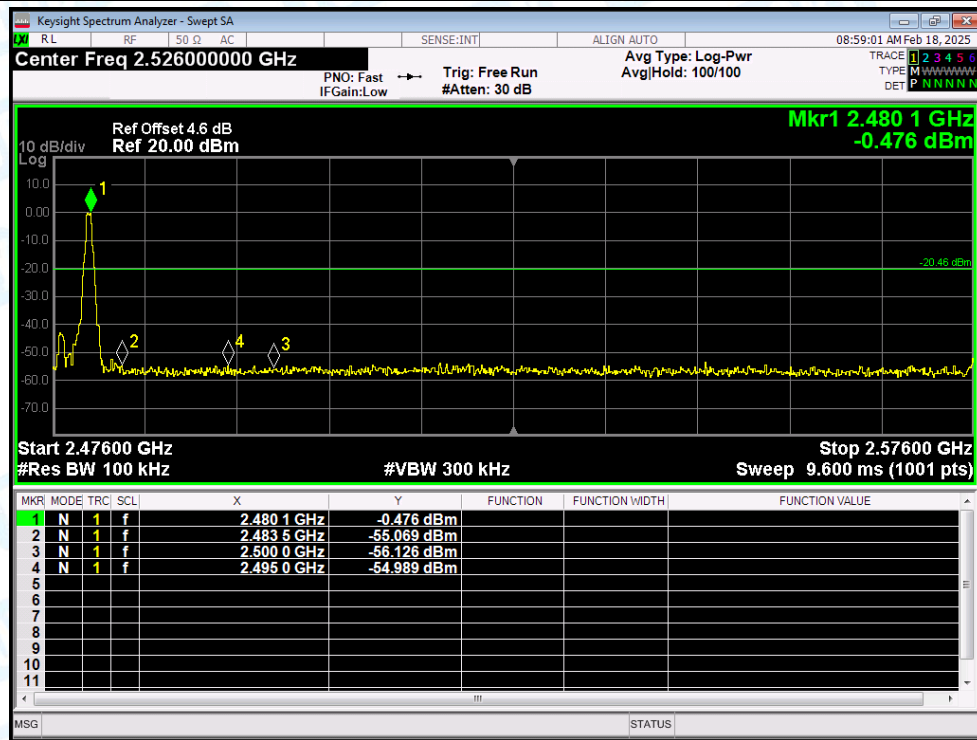
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



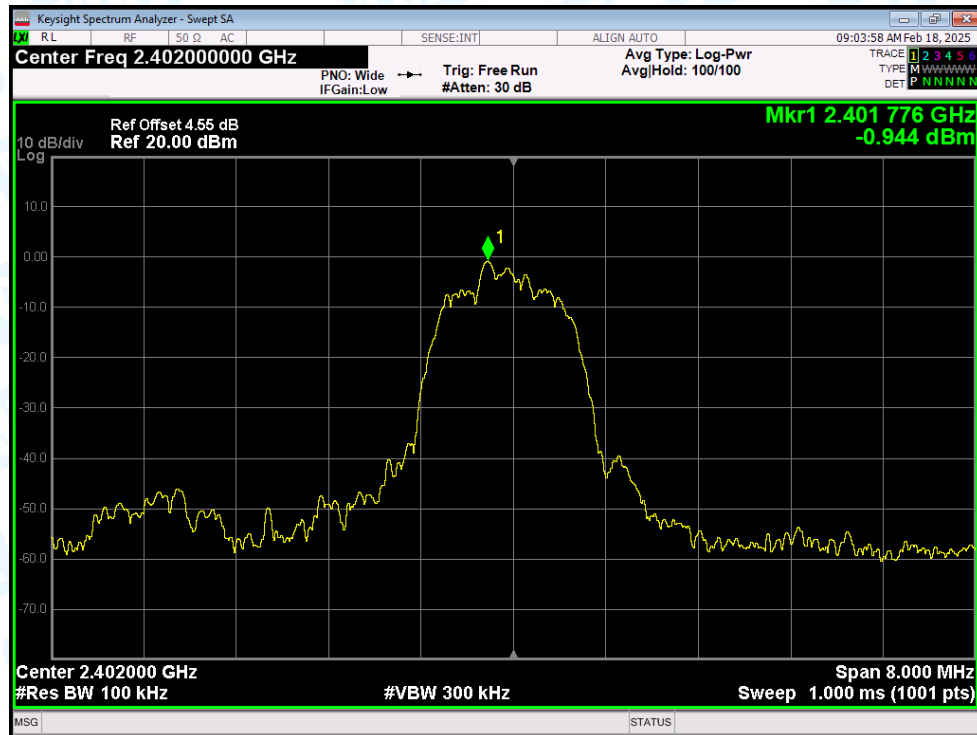
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



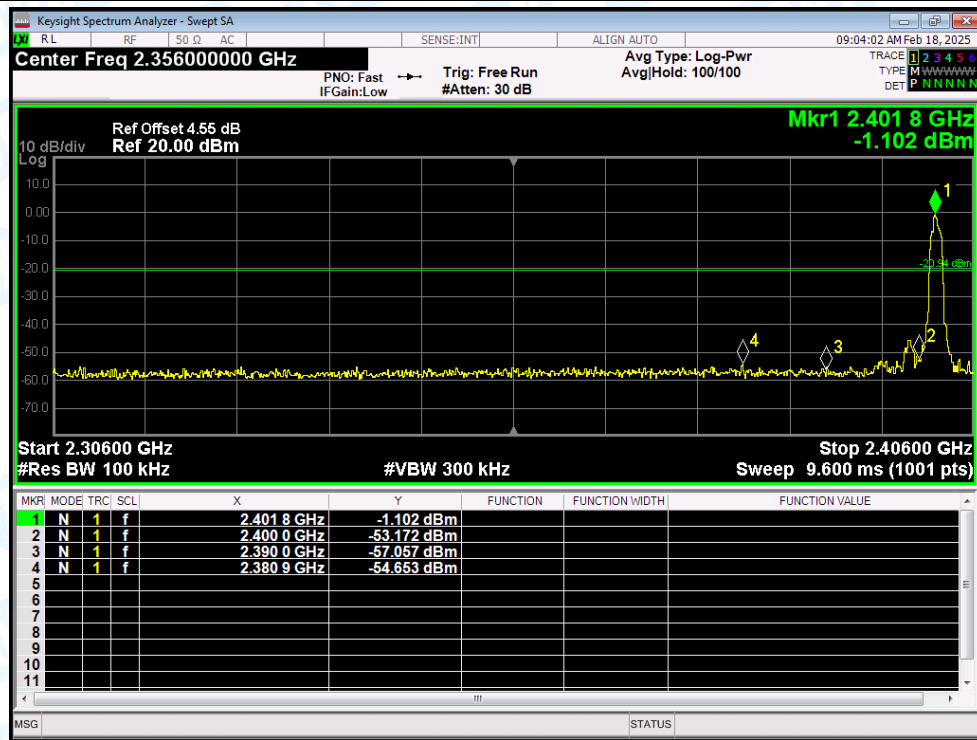
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



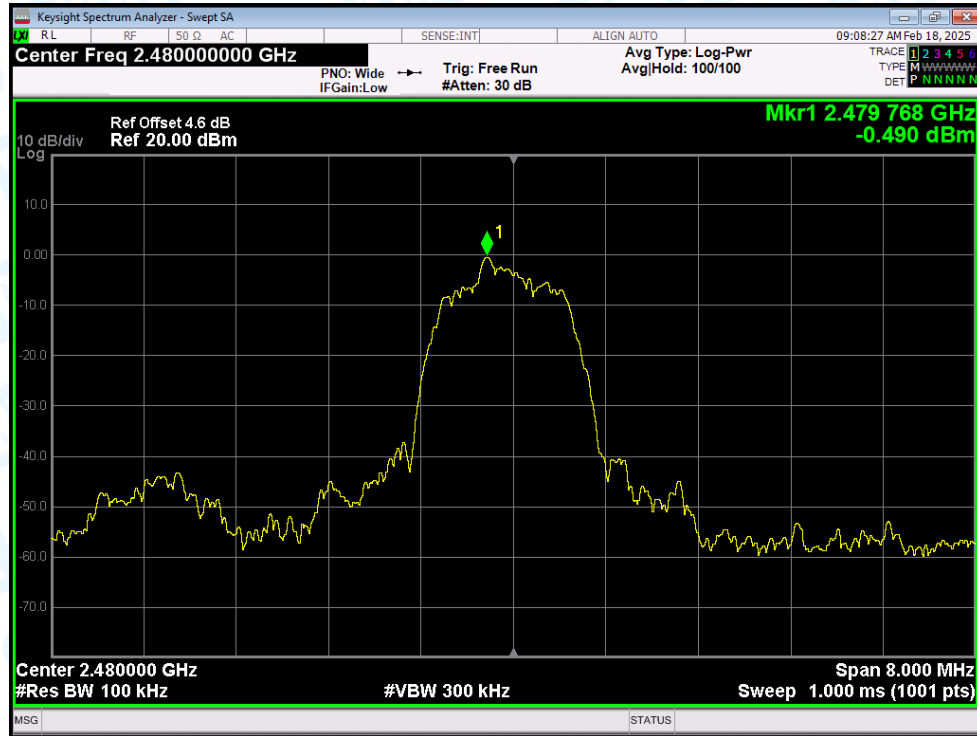
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



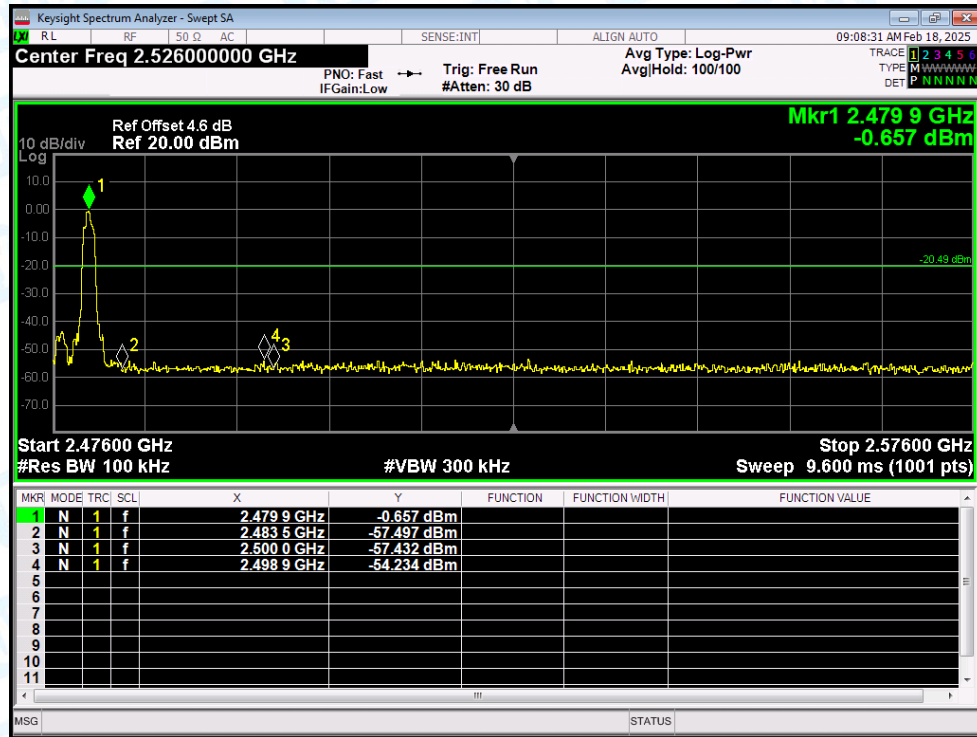
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



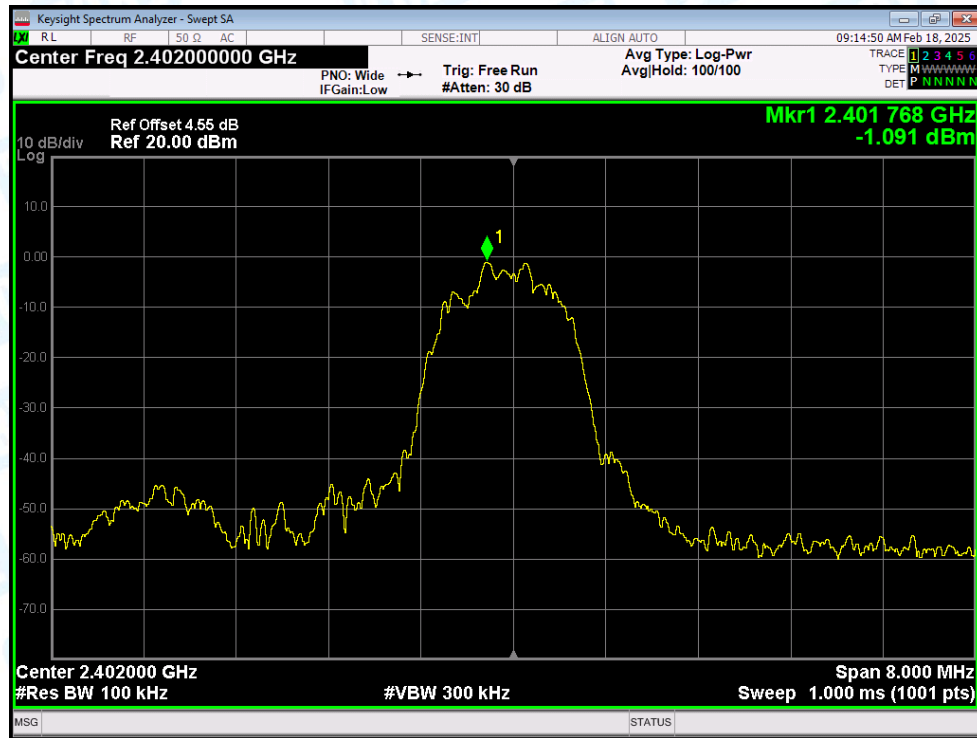
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



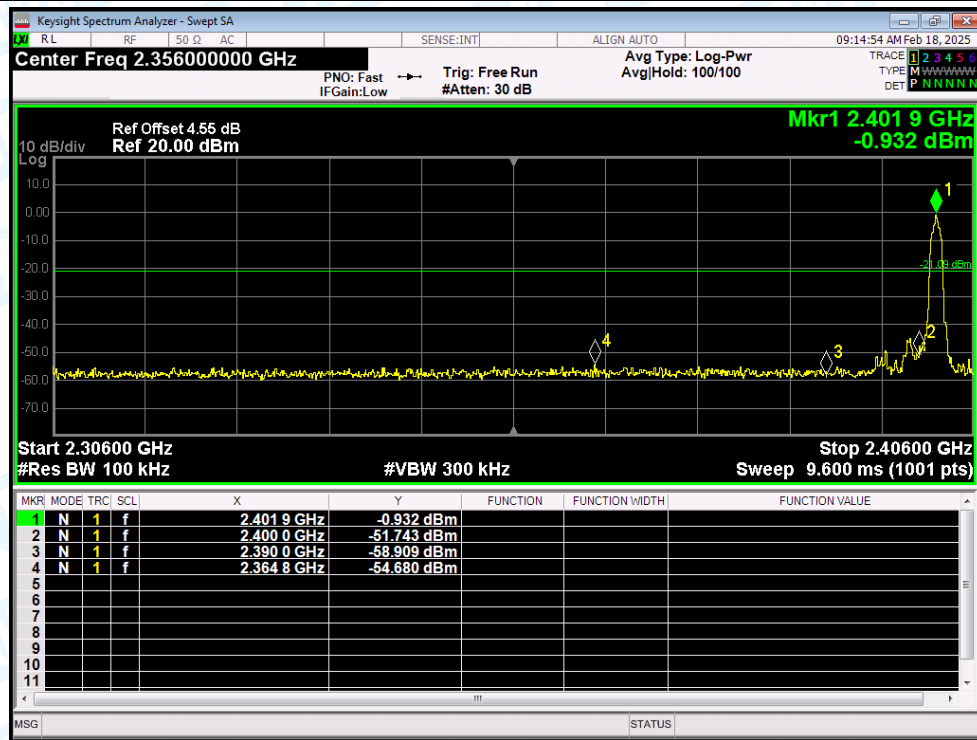
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



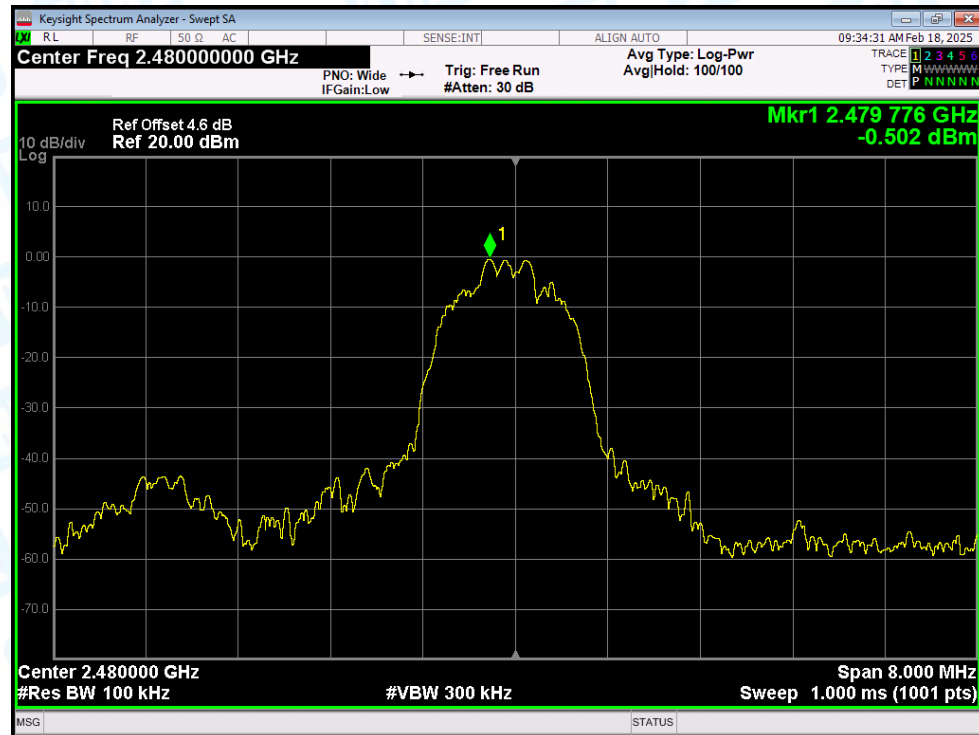
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



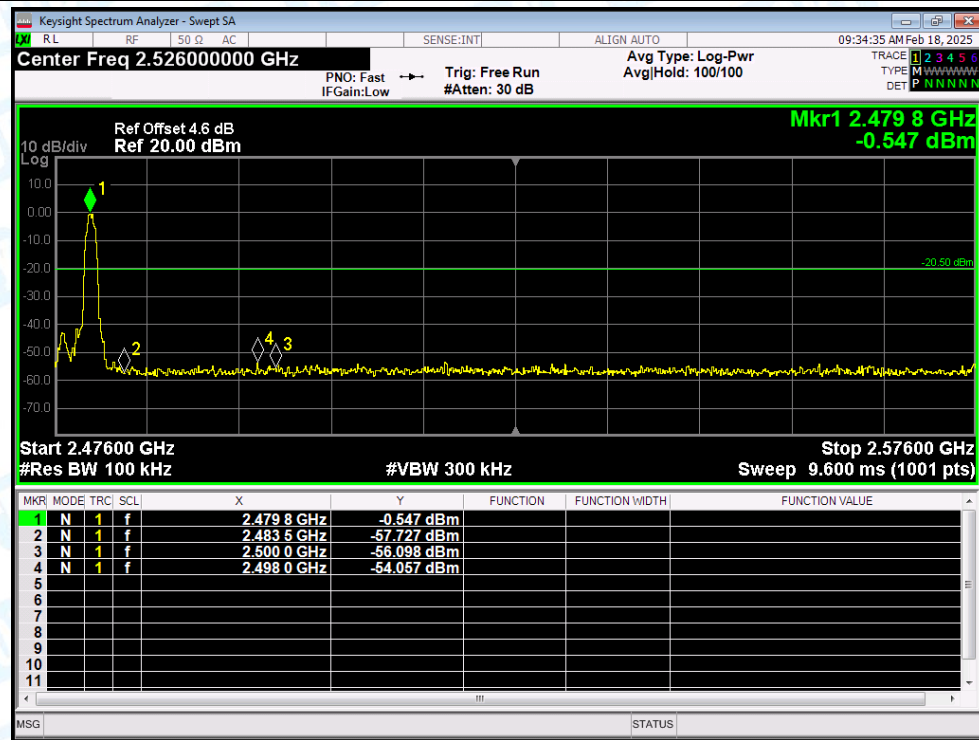
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Emission



6. Band Edge(Hopping)

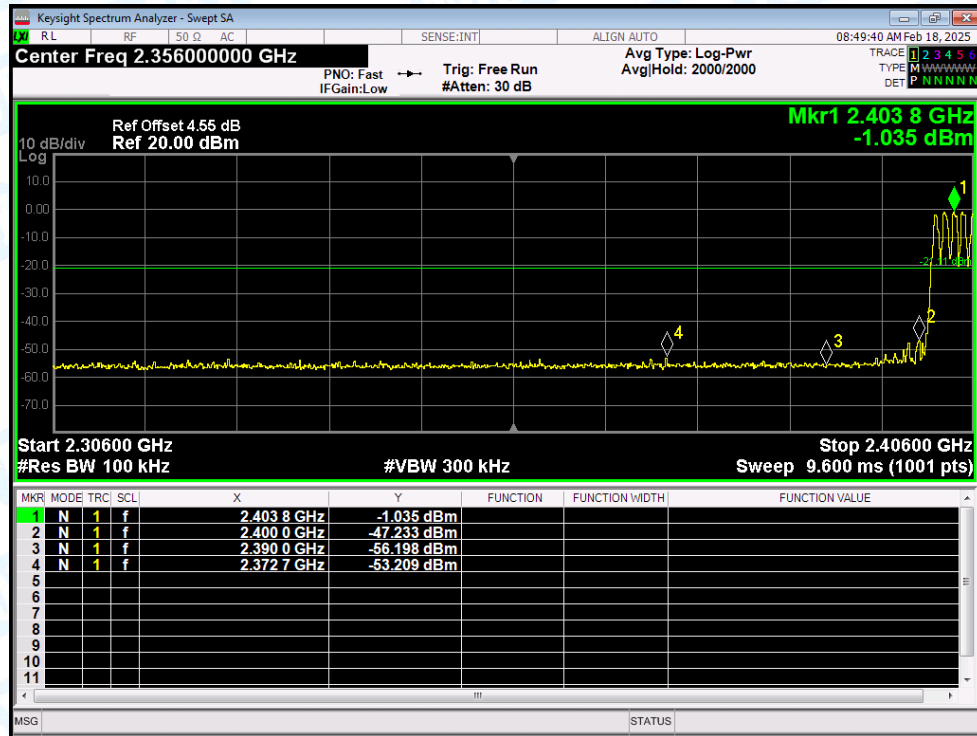
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-52.1	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-51.36	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-52.8	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-50.45	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-53.07	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-51.76	-20	Pass

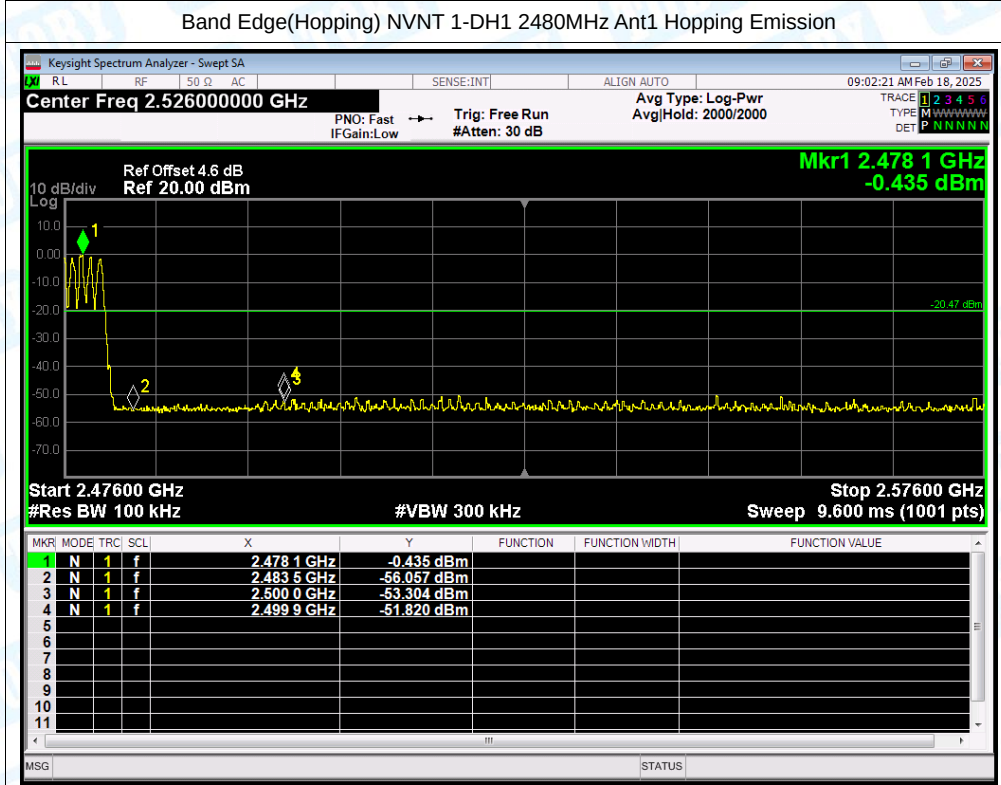
Test Graphs

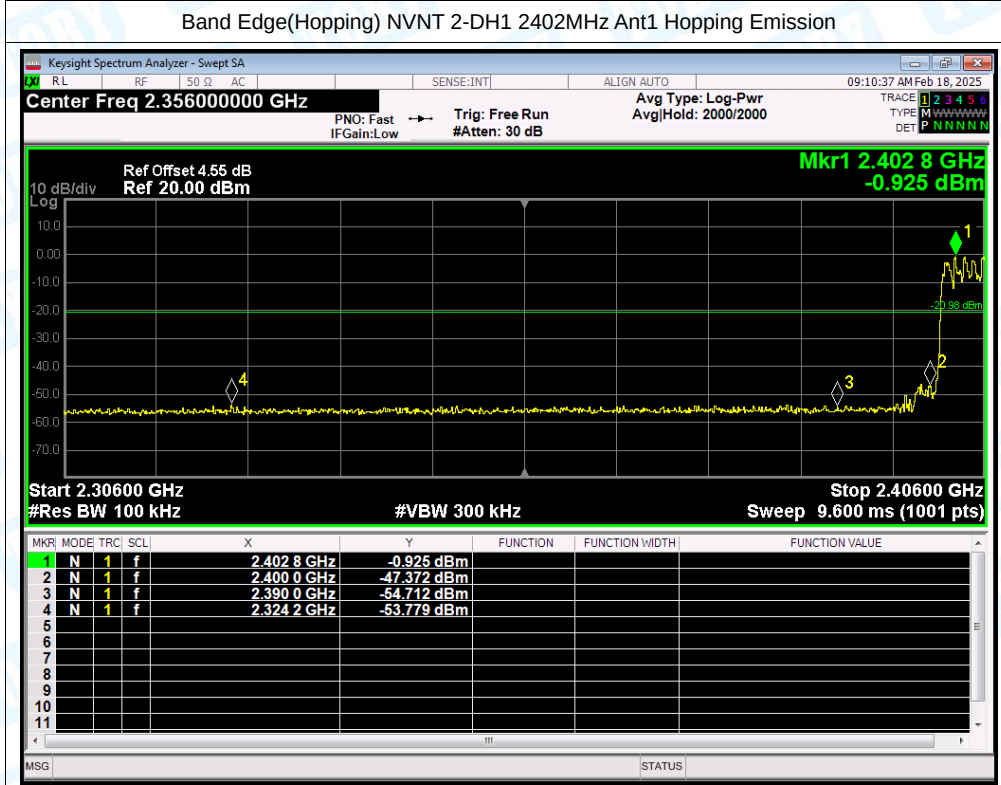
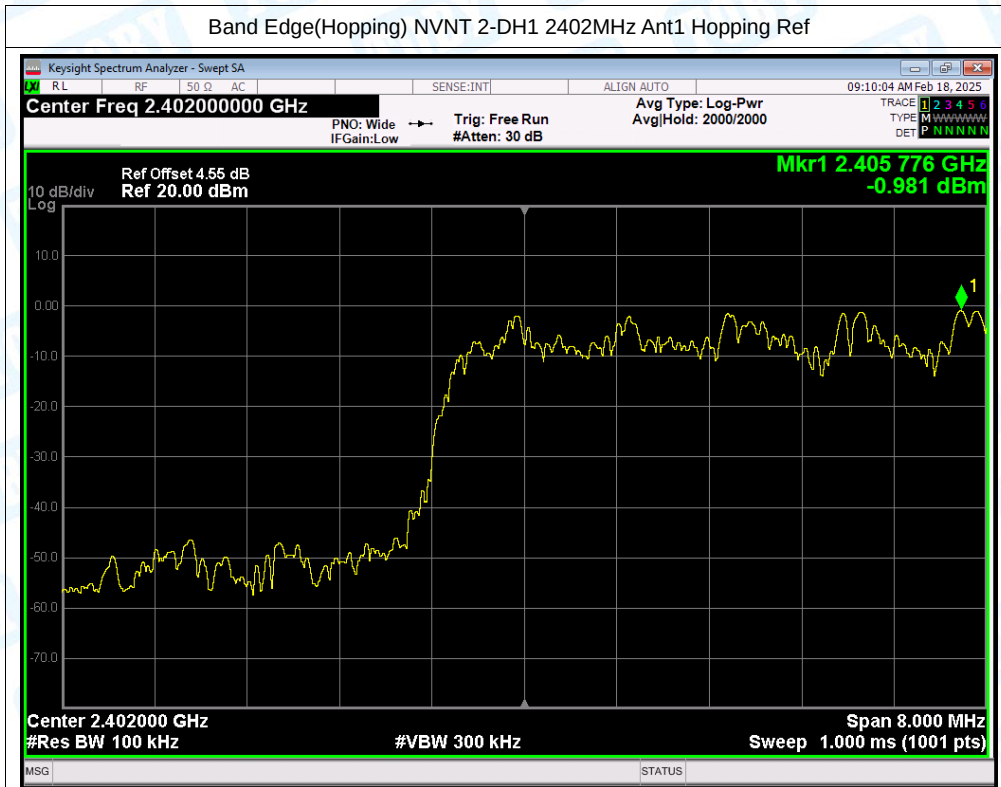
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref

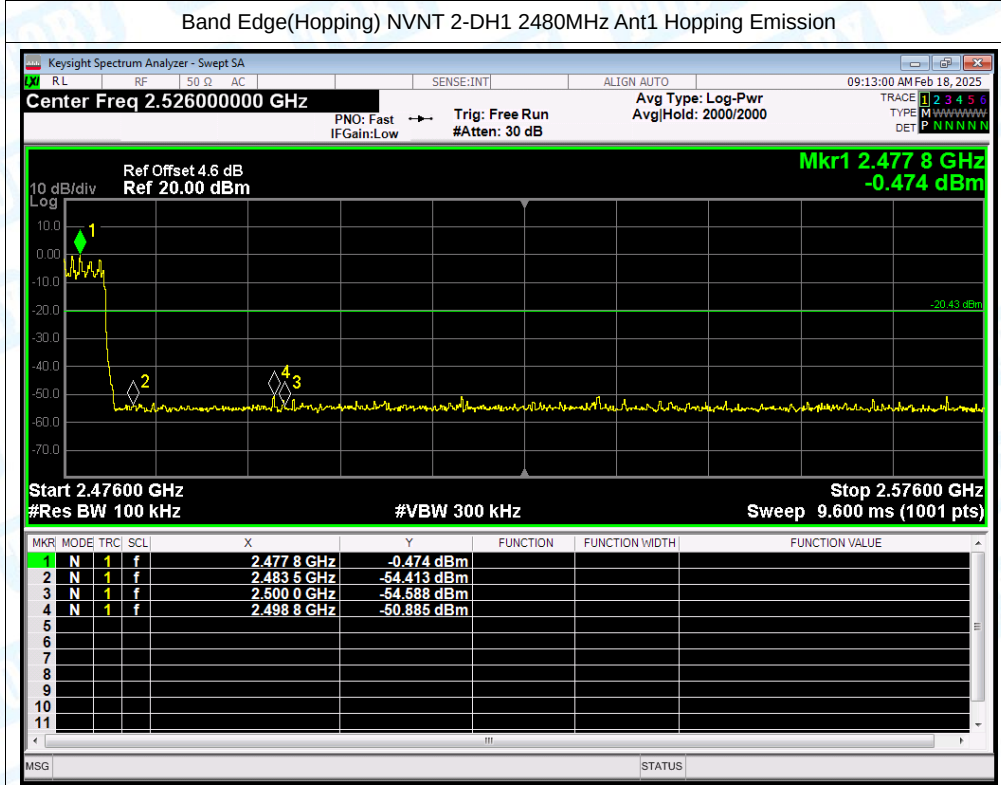


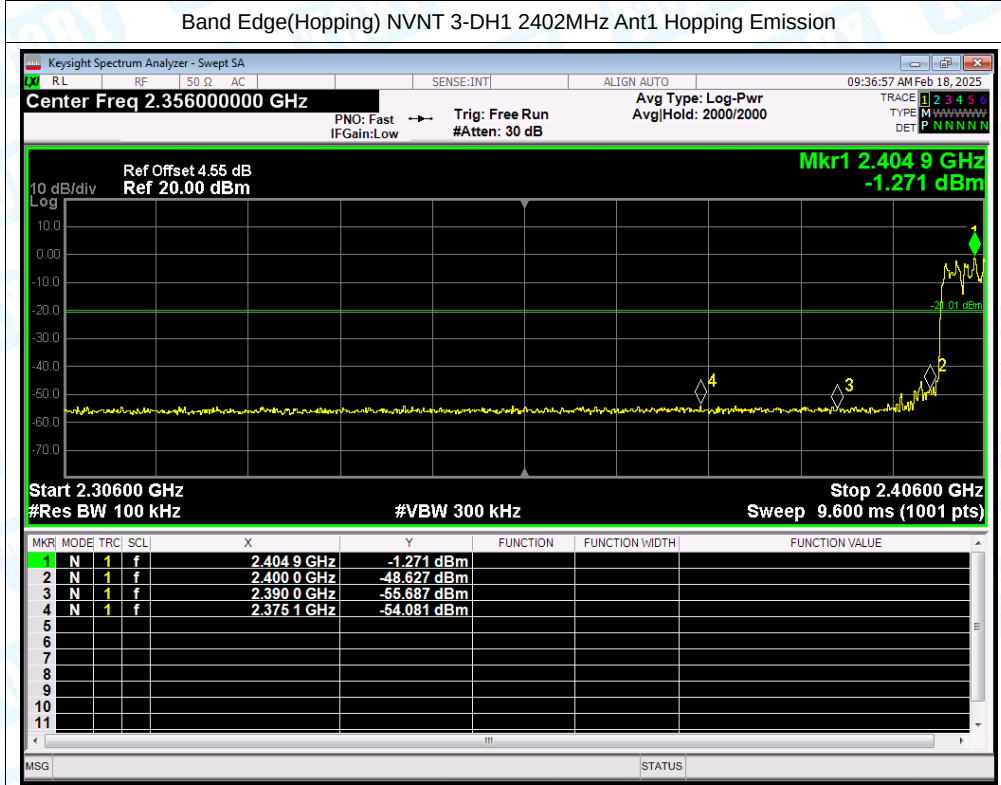
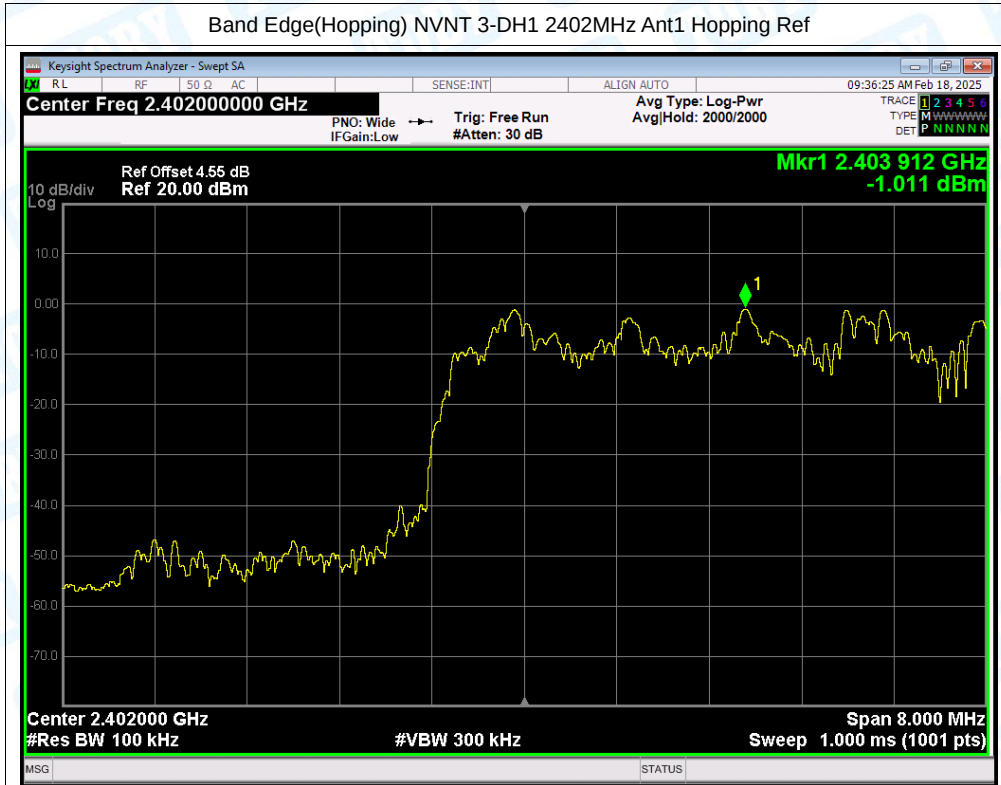
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission

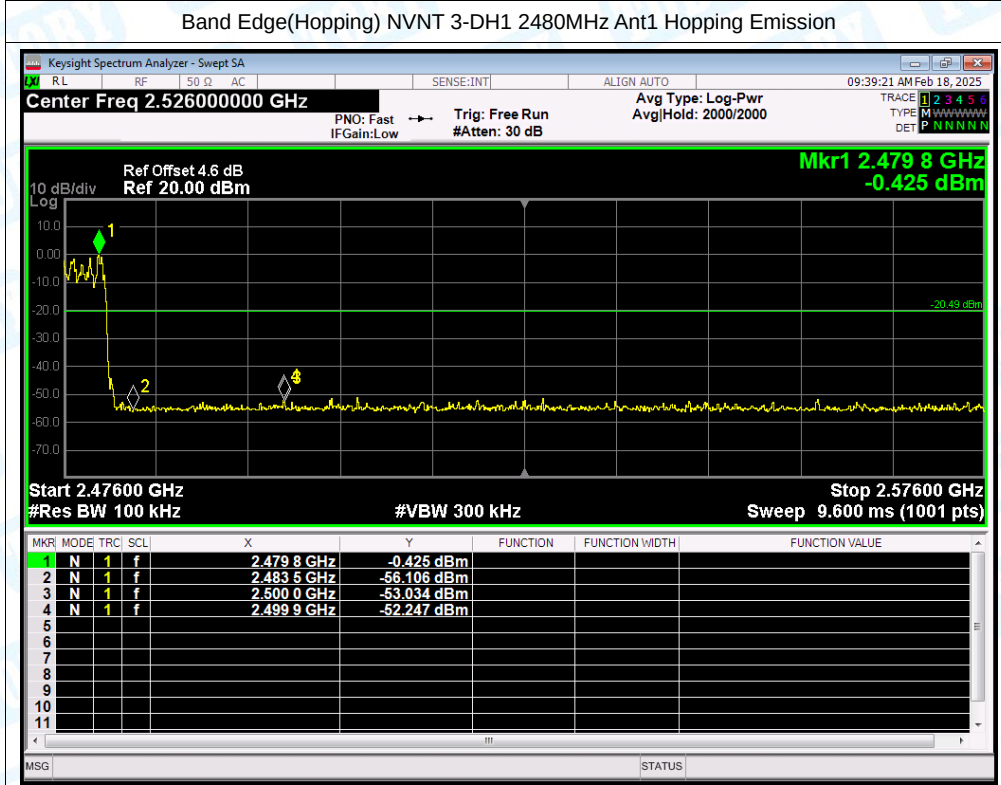










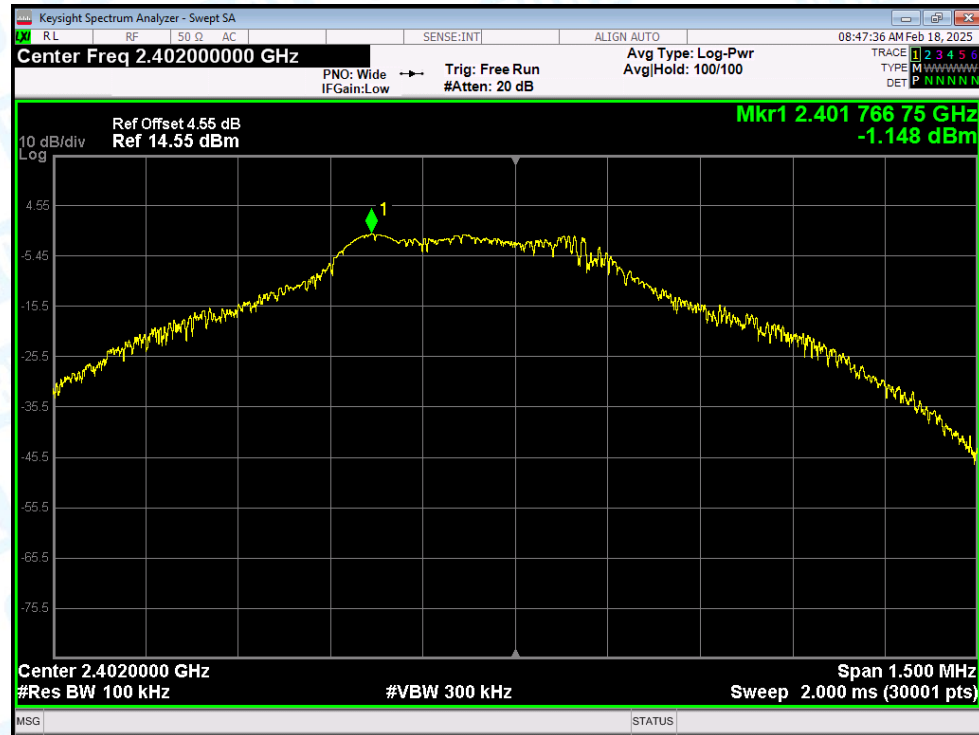


7. Conducted RF Spurious Emission

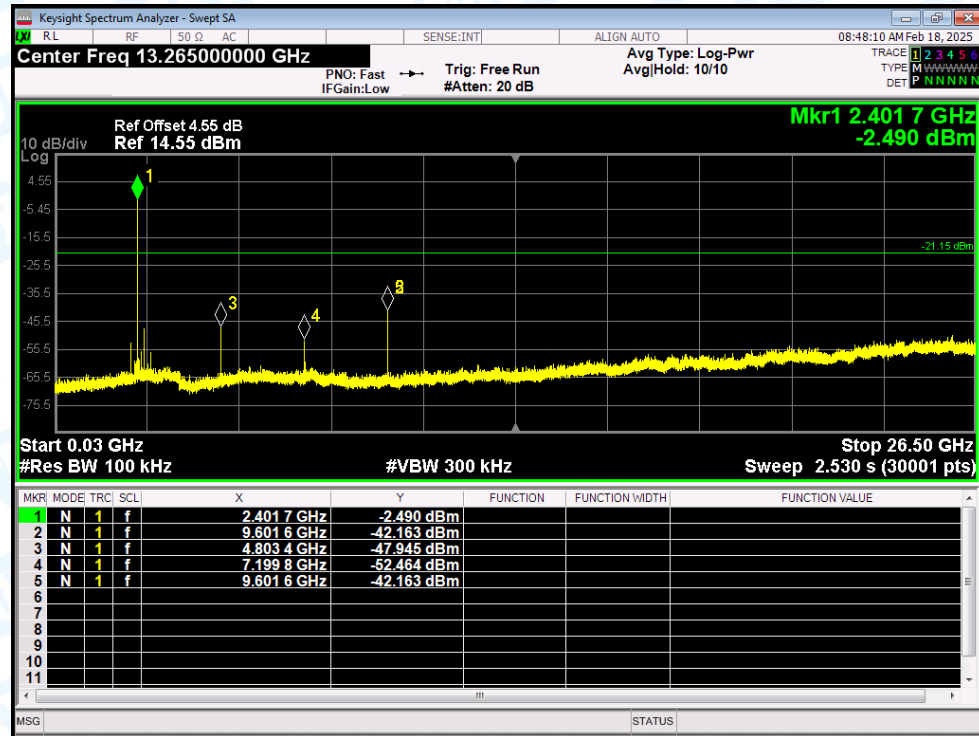
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-41.01	-20	Pass
NVNT	1-DH1	2441	Ant1	-39.96	-20	Pass
NVNT	1-DH1	2480	Ant1	-43.17	-20	Pass
NVNT	2-DH1	2402	Ant1	-40.59	-20	Pass
NVNT	2-DH1	2441	Ant1	-39.87	-20	Pass
NVNT	2-DH1	2480	Ant1	-43.31	-20	Pass
NVNT	3-DH1	2402	Ant1	-40.67	-20	Pass
NVNT	3-DH1	2441	Ant1	-39.46	-20	Pass
NVNT	3-DH1	2480	Ant1	-43.74	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



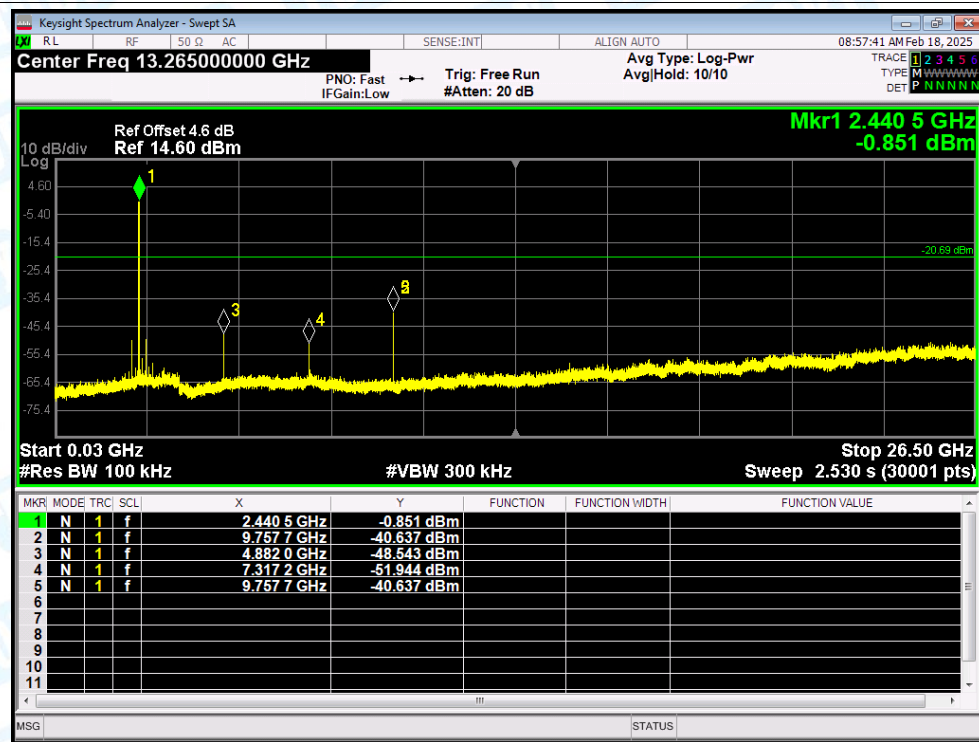
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



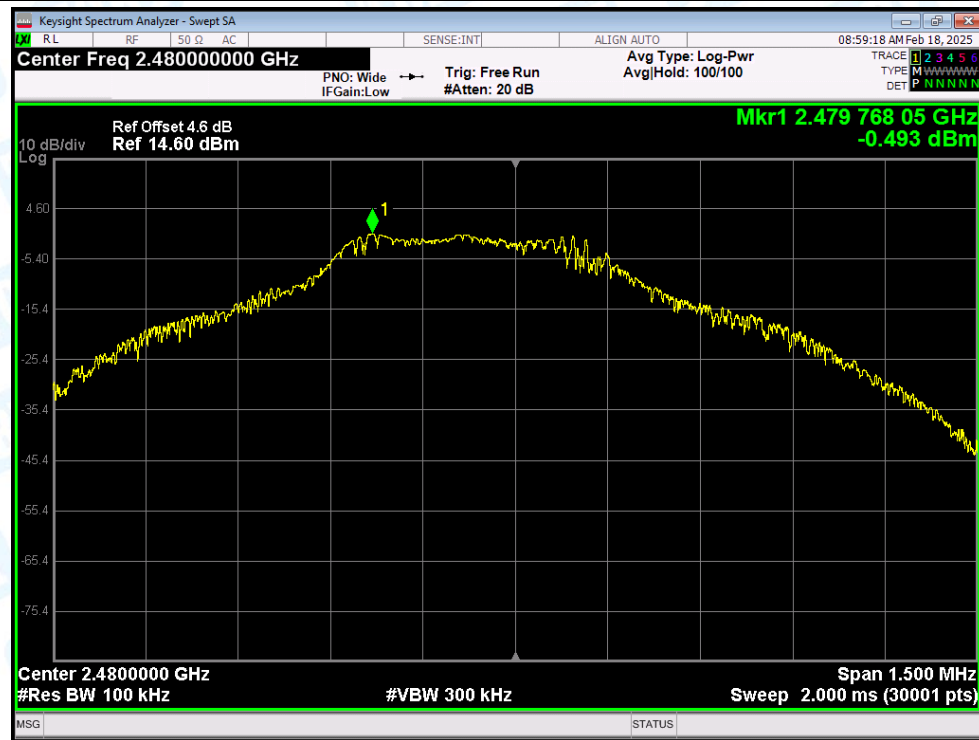
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



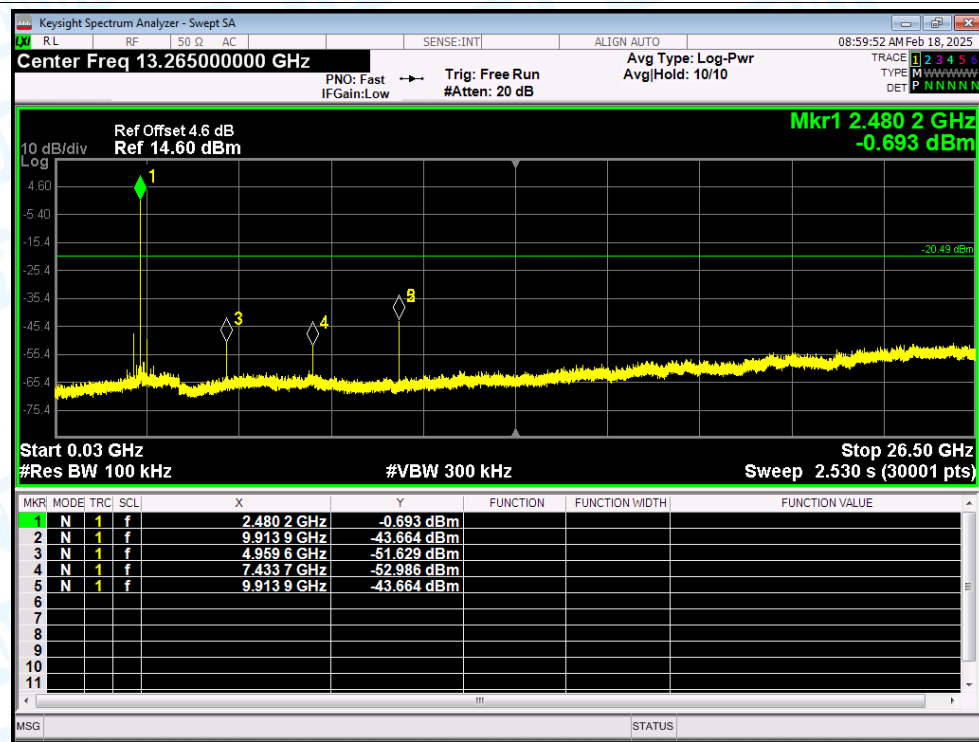
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



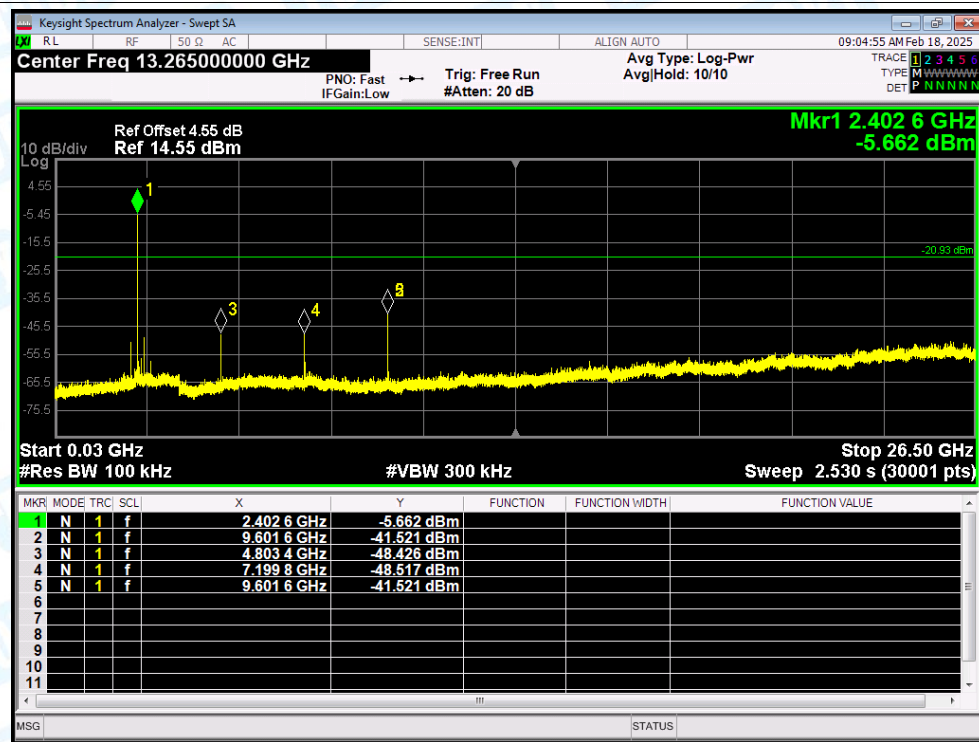
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



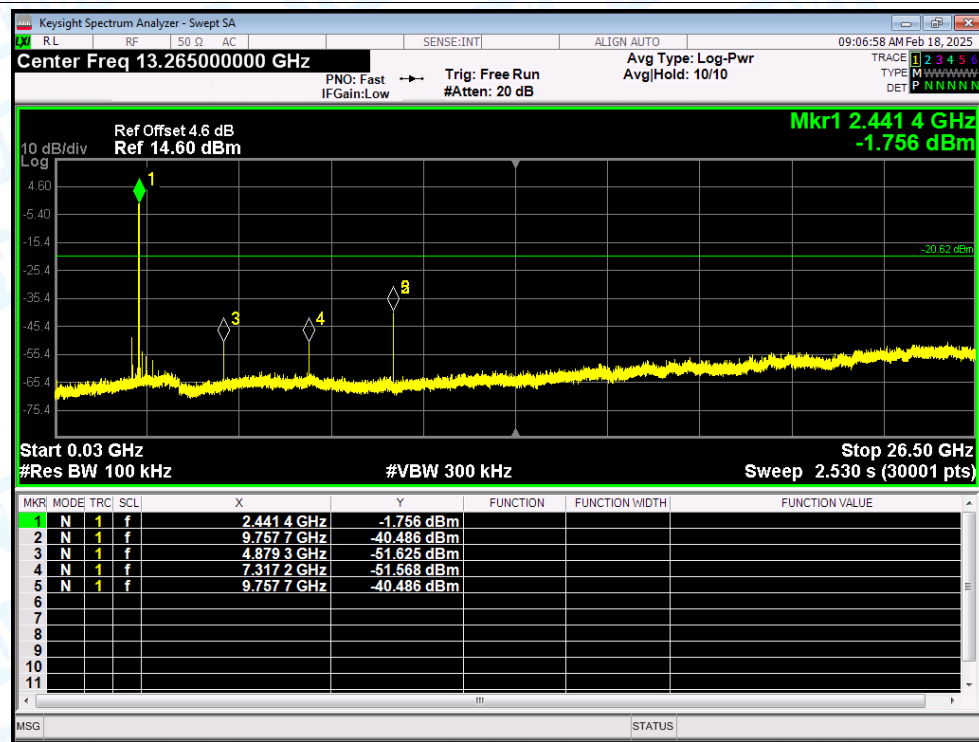
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



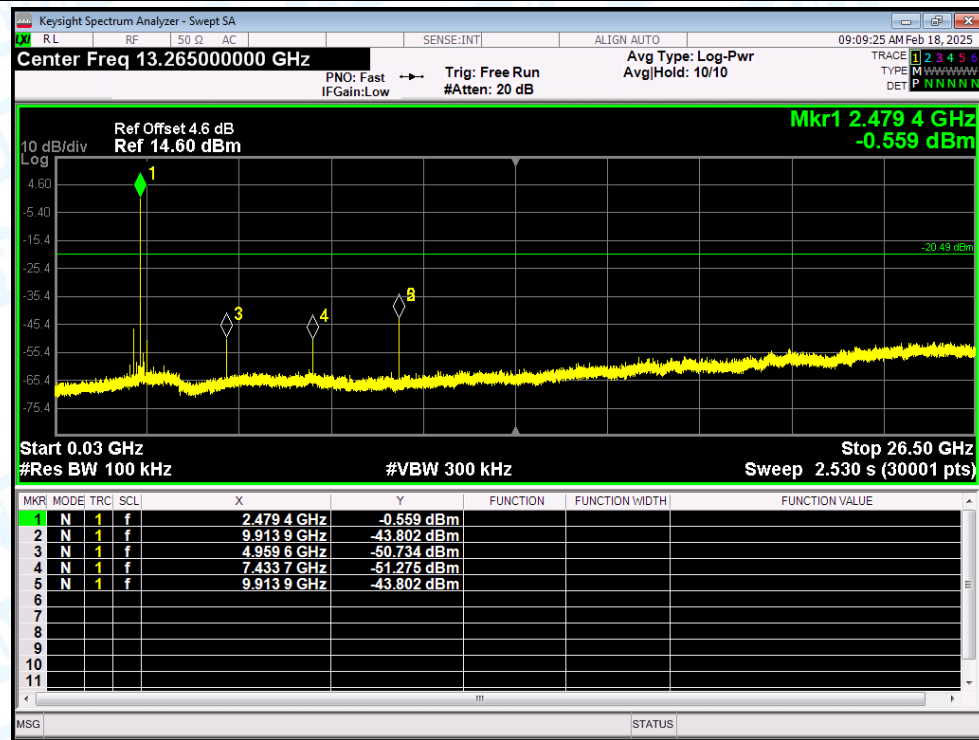
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



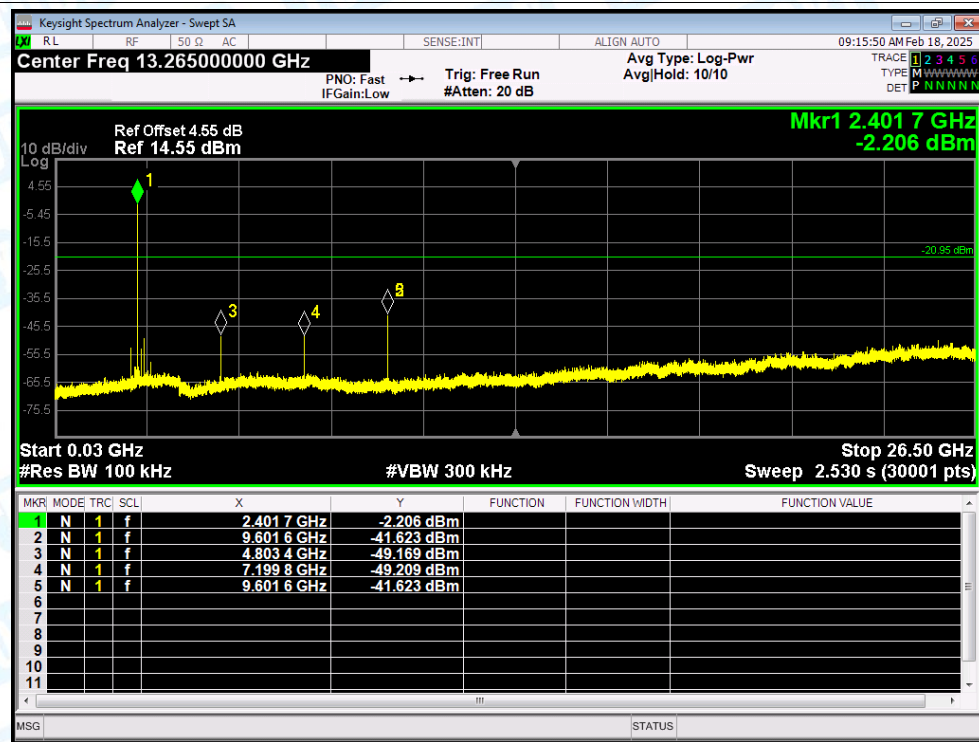
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



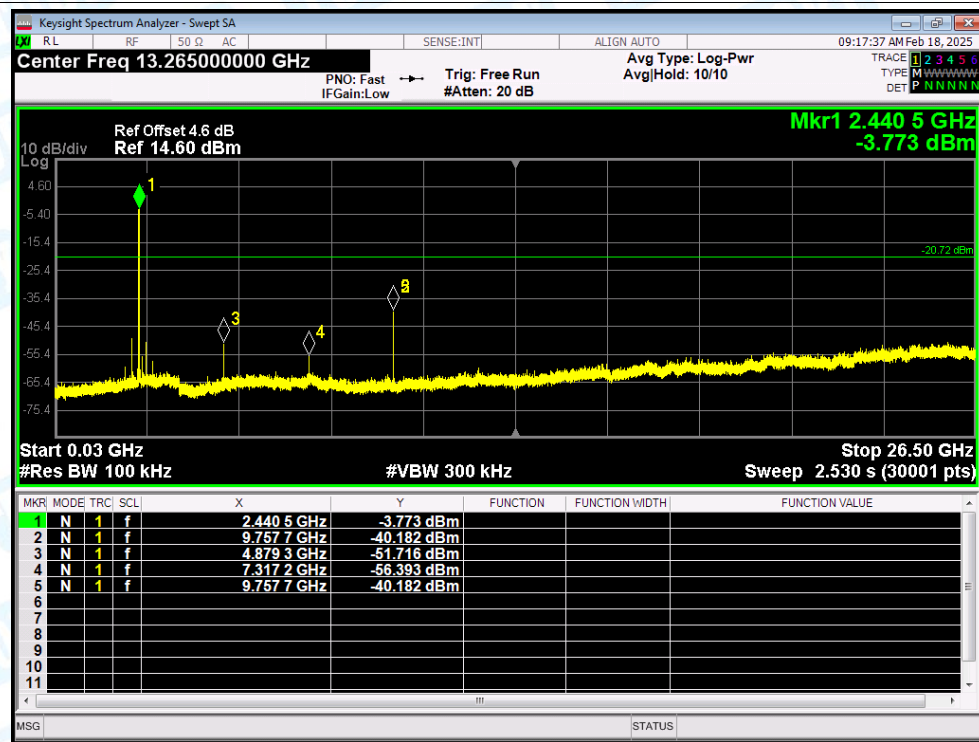
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



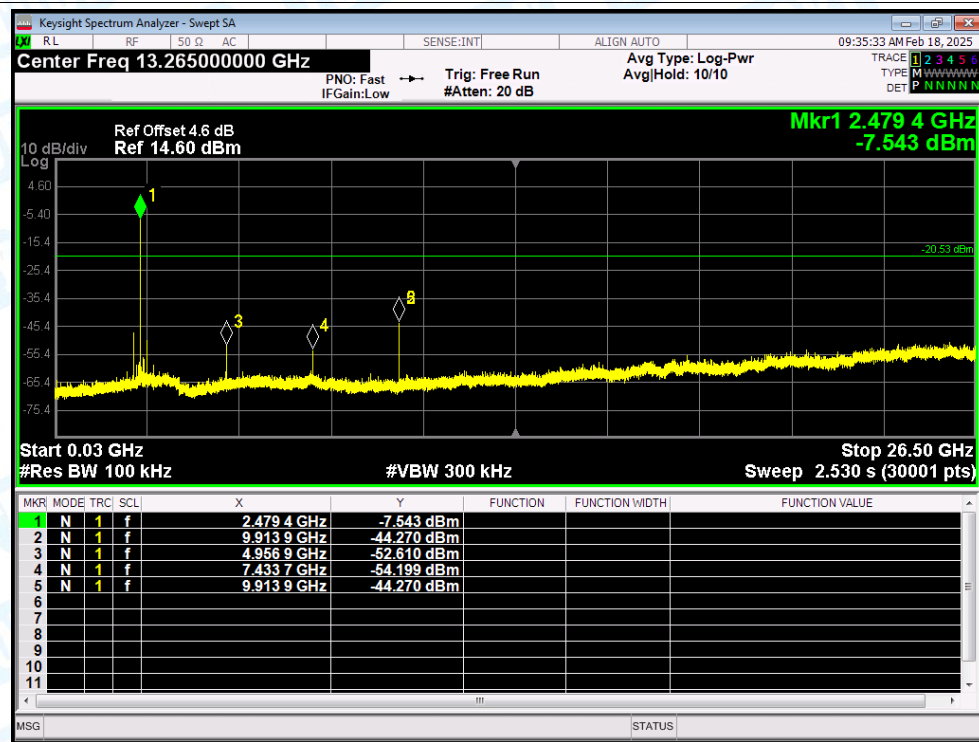
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

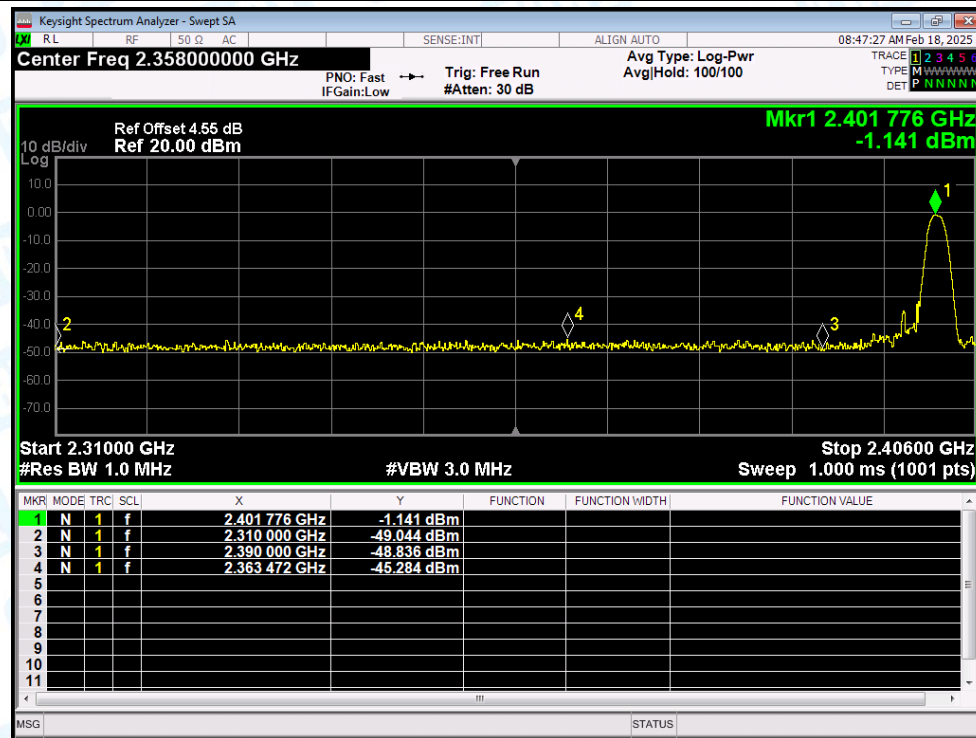


8. Restrict Band

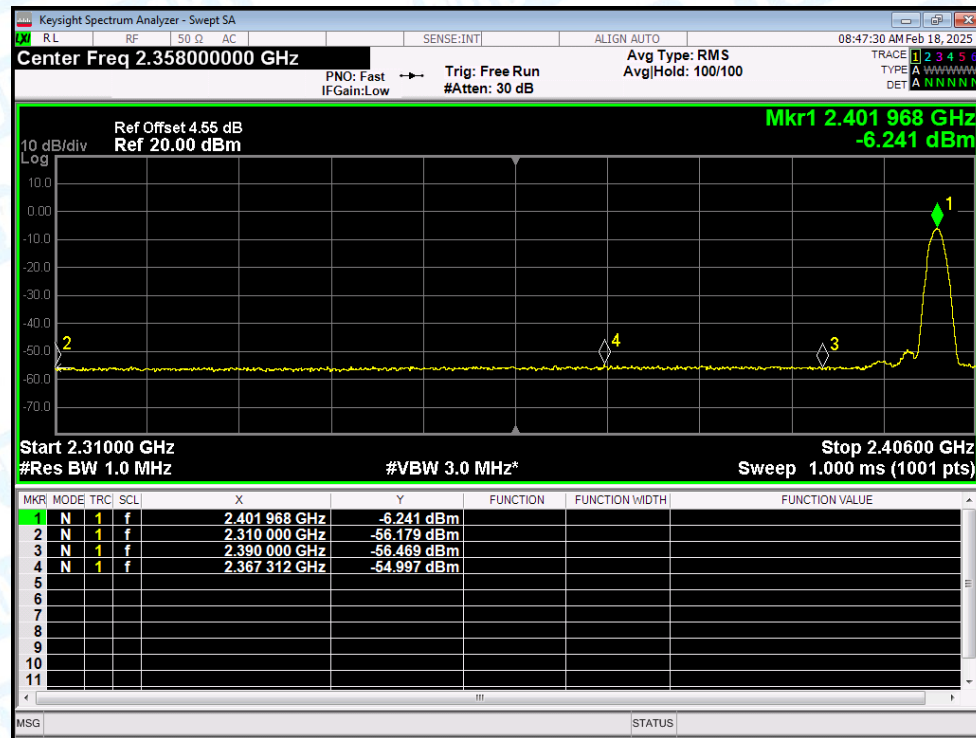
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-49.04	2	-	48.22	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-56.18	2	5.17	46.25	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2363.472	-45.28	2	-	51.98	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2367.312	-55	2	5.17	47.43	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-48.84	2	-	48.42	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-56.47	2	5.17	45.96	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-46.86	2	-	50.4	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-55.27	2	5.17	47.16	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2484.28	-44.81	2	-	52.45	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2484.112	-54.63	2	5.17	47.8	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-46.38	2	-	50.88	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-55.31	2	5.17	47.12	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-49.09	2	-	48.17	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.08	2	5.06	46.24	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2384.592	-44.68	2	-	52.58	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2379.984	-55.11	2	5.06	47.21	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-48.15	2	-	49.11	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-56.31	2	5.06	46.01	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-44.45	2	-	52.81	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-55.09	2	5.06	47.23	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.512	-44.45	2	-	52.81	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2498.464	-54.66	2	5.06	47.66	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-47.55	2	-	49.71	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-55.71	2	5.06	46.61	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-48.98	2	-	48.28	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-56.33	2	5.06	45.99	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2349.84	-44.69	2	-	52.57	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2374.224	-55.17	2	5.06	47.15	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-47.84	2	-	49.42	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-55.99	2	5.06	46.33	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-46	2	-	51.26	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-55.59	2	4.95	46.62	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.56	-43.24	2	-	54.02	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2489.656	-54.49	2	4.95	47.72	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-46.4	2	-	50.86	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-55.55	2	4.95	46.66	Average	54	Pass

Test Graphs

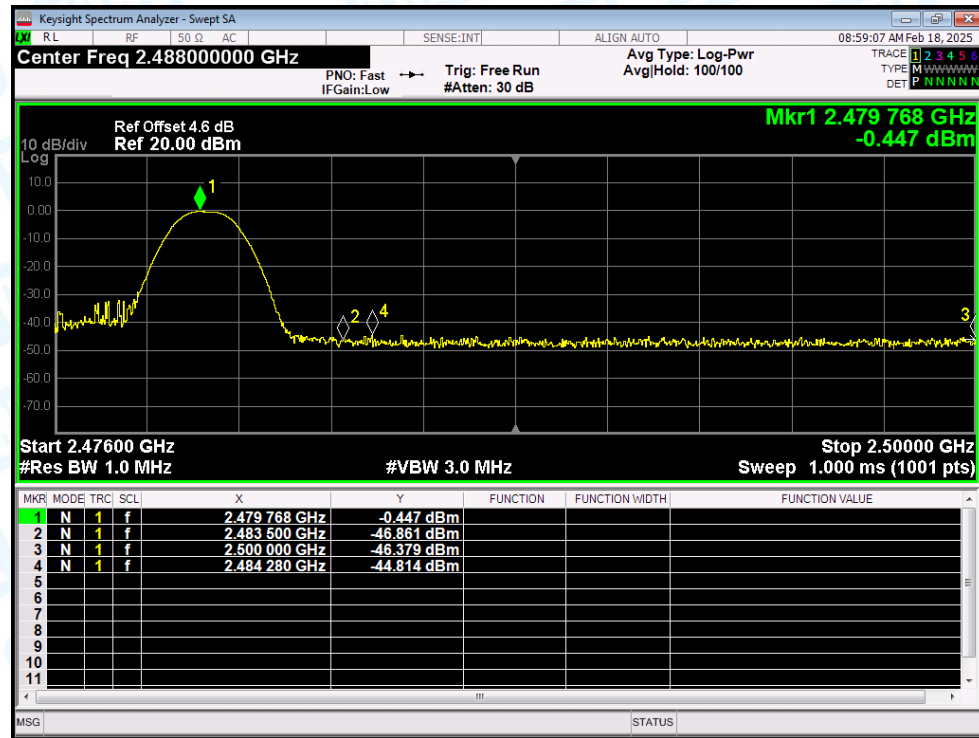
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



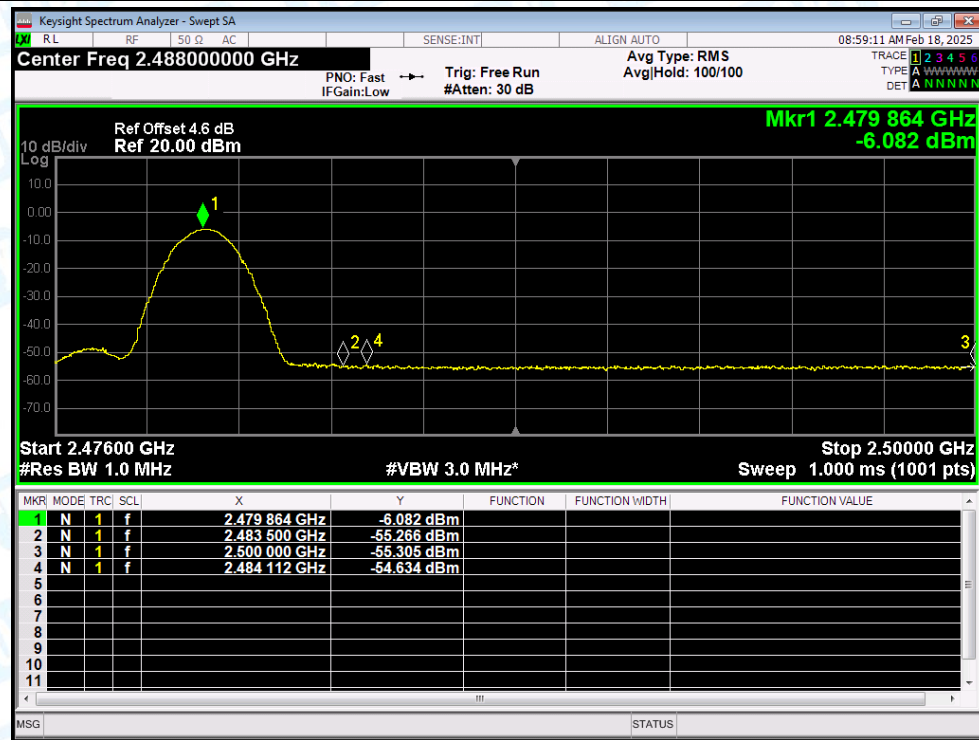
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



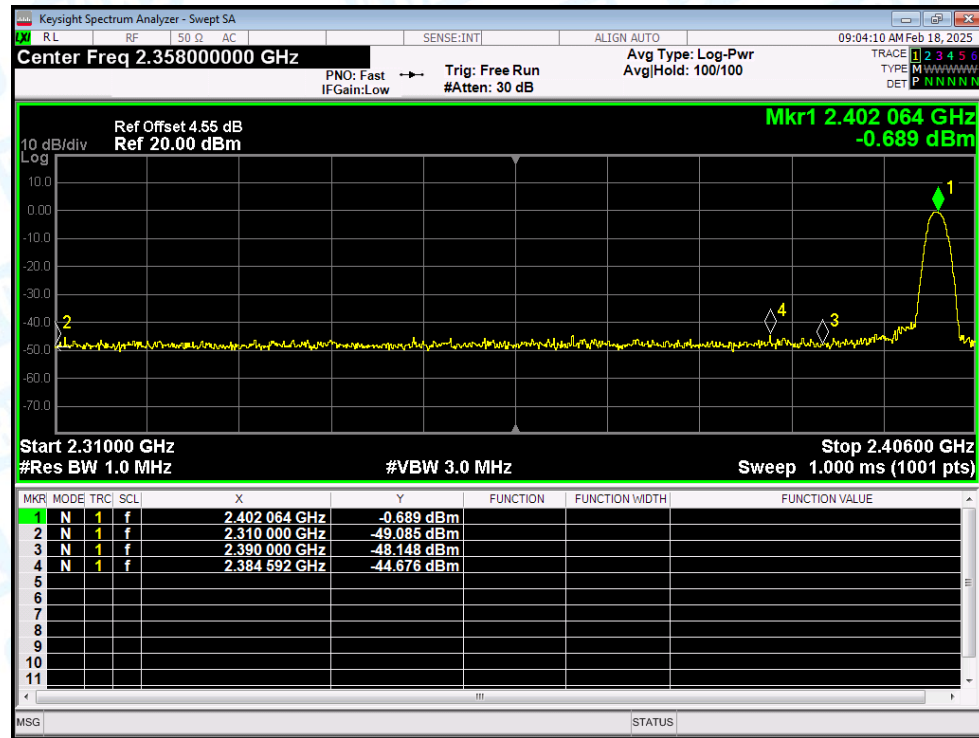
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



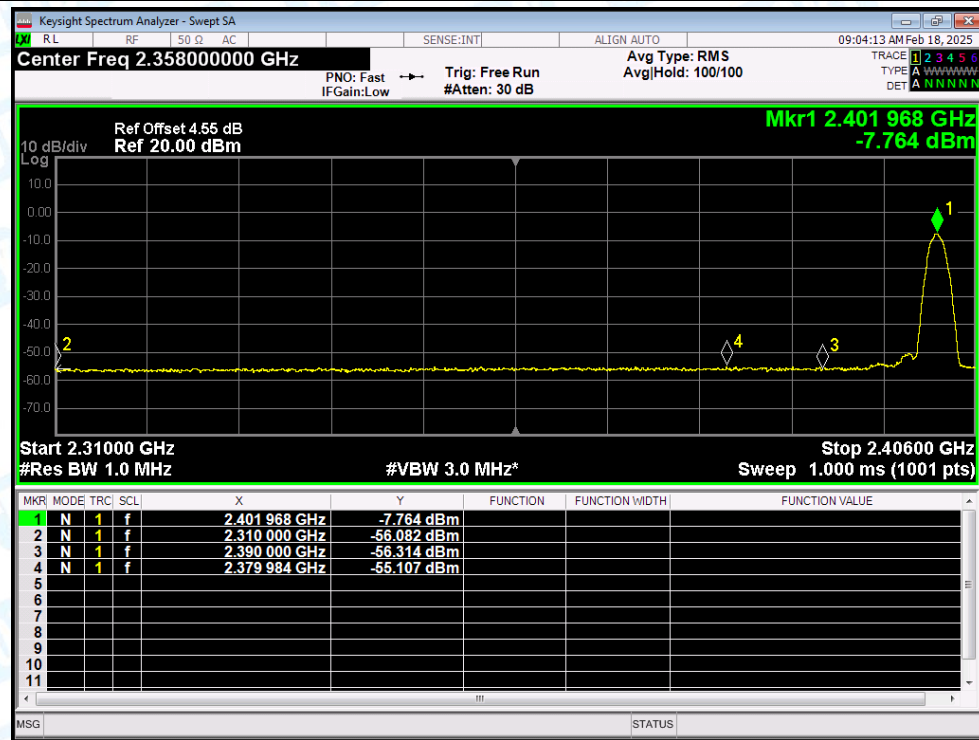
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



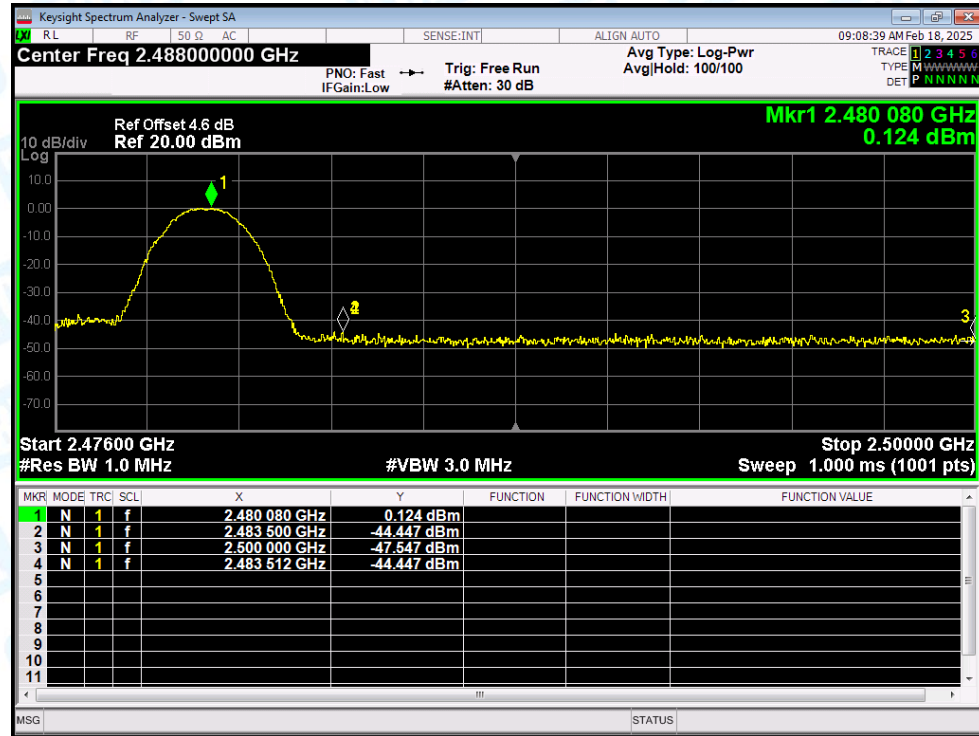
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



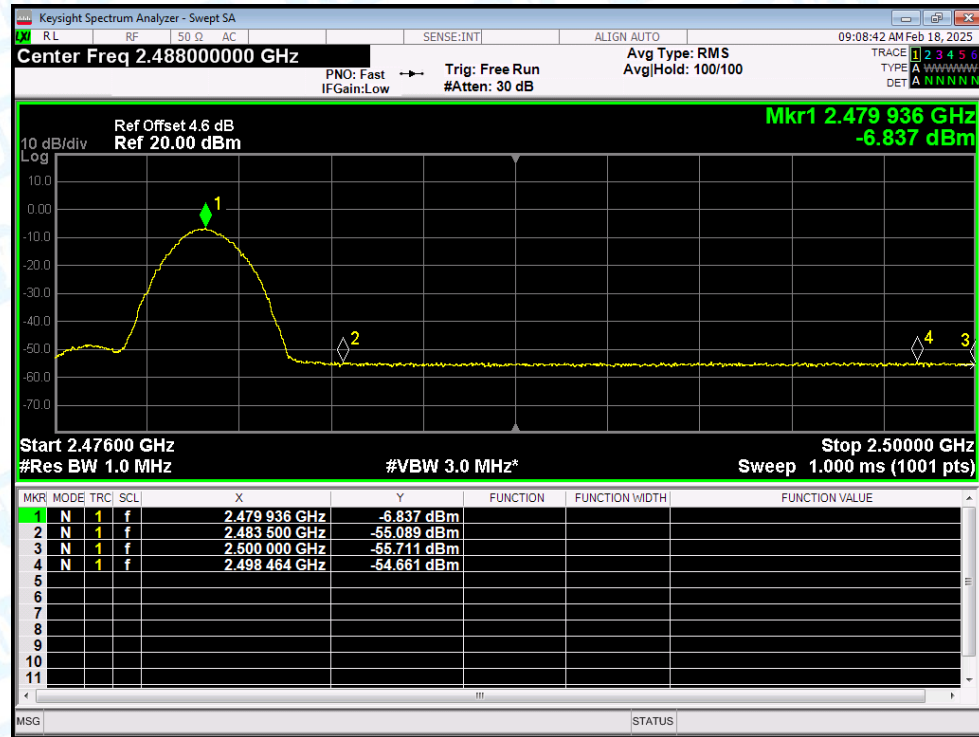
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



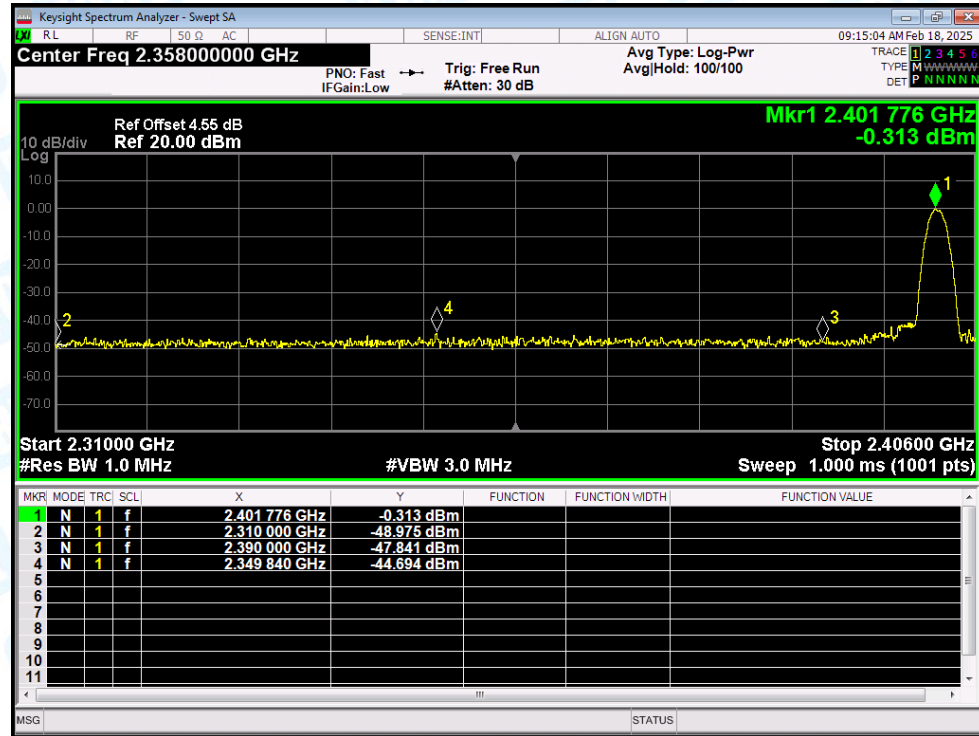
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



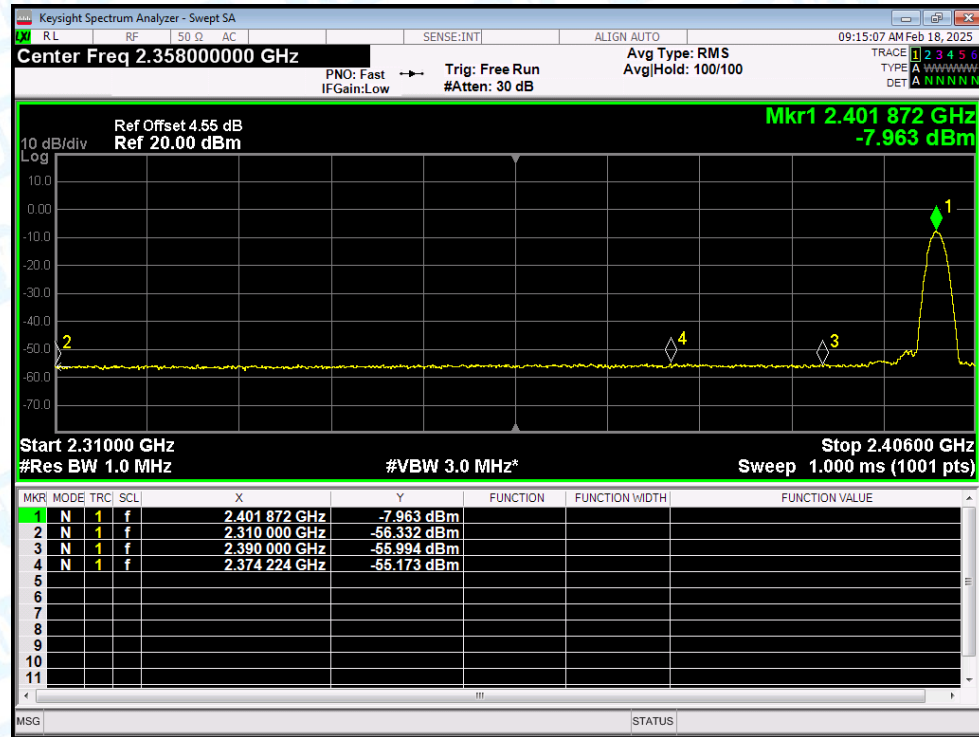
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



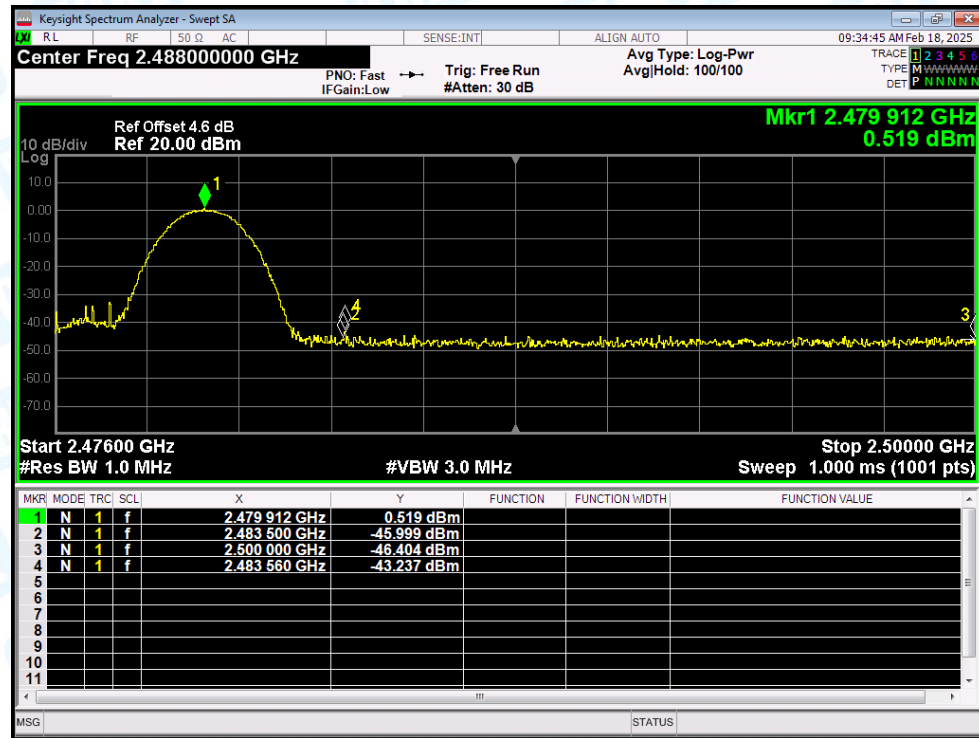
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



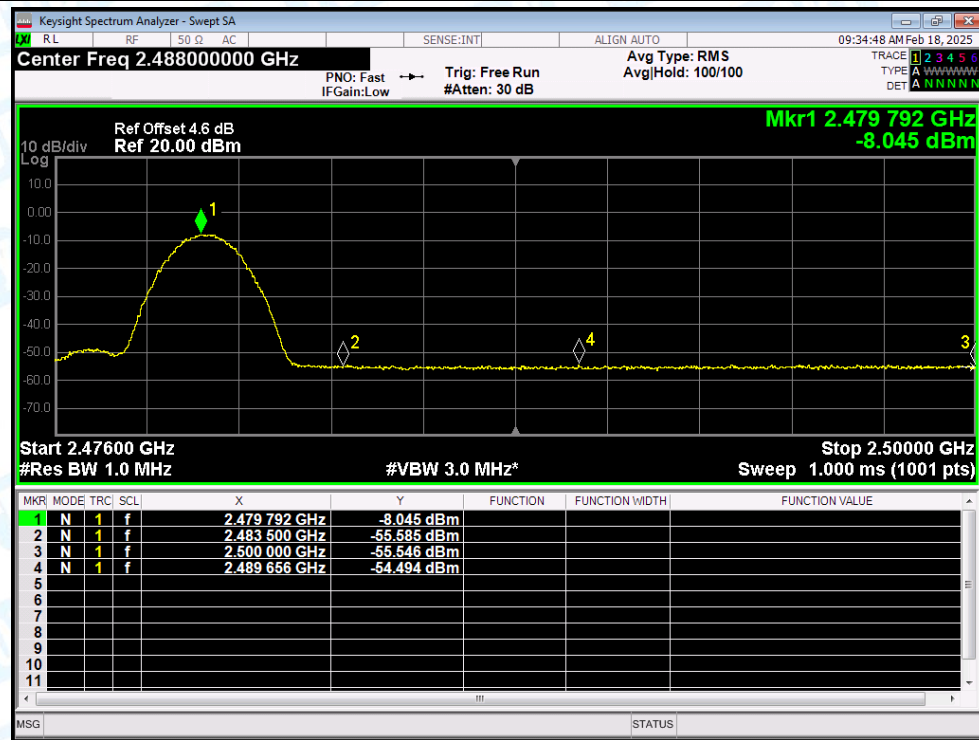
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



Restrict Band NVNT 3-DH1 2480MHz Ant1 No-Hopping Peak



Restrict Band NVNT 3-DH1 2480MHz Ant1 No-Hopping Average

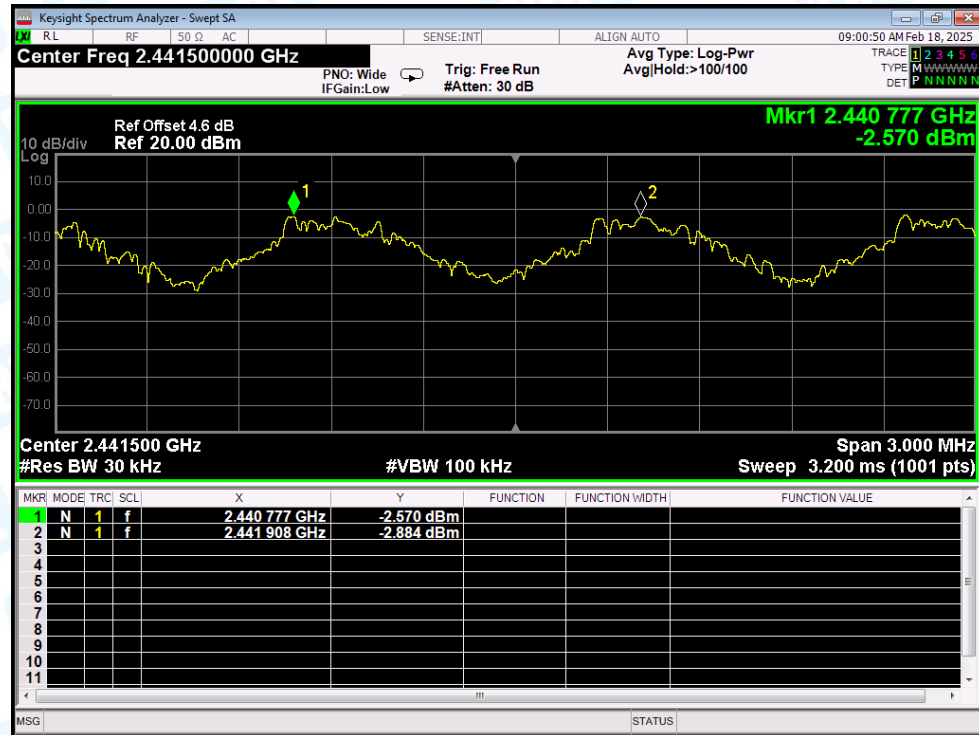


9. Carrier Frequencies Separation

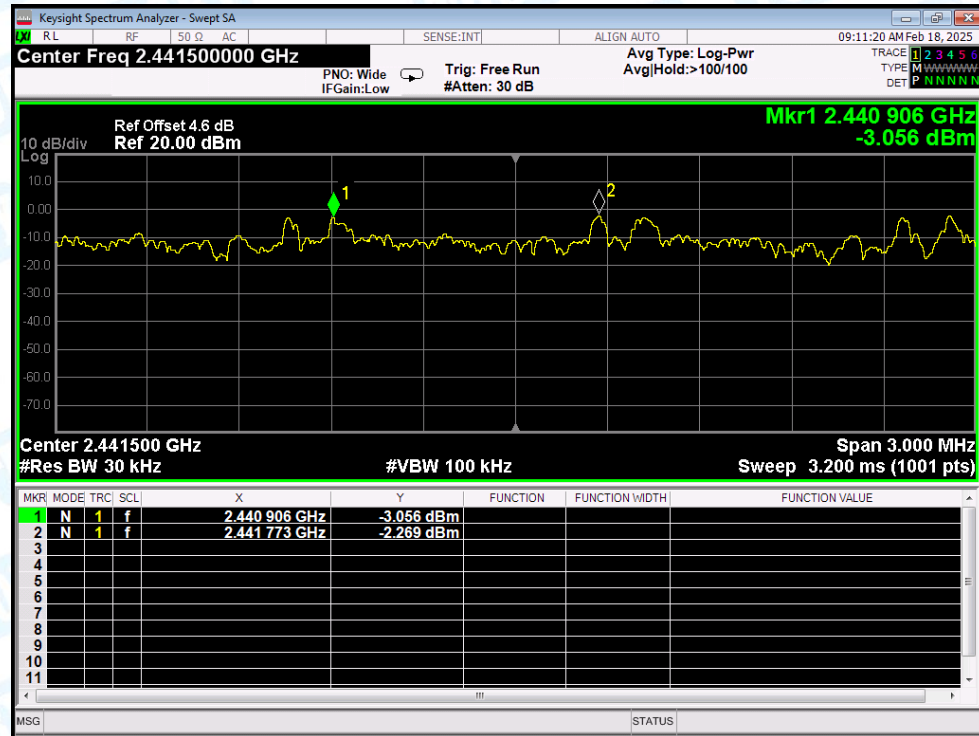
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.777	2441.908	1.131	0.567	Pass
NVNT	2-DH1	Ant1	2440.906	2441.773	0.867	0.827	Pass
NVNT	3-DH1	Ant1	2440.78	2441.761	0.981	0.807	Pass

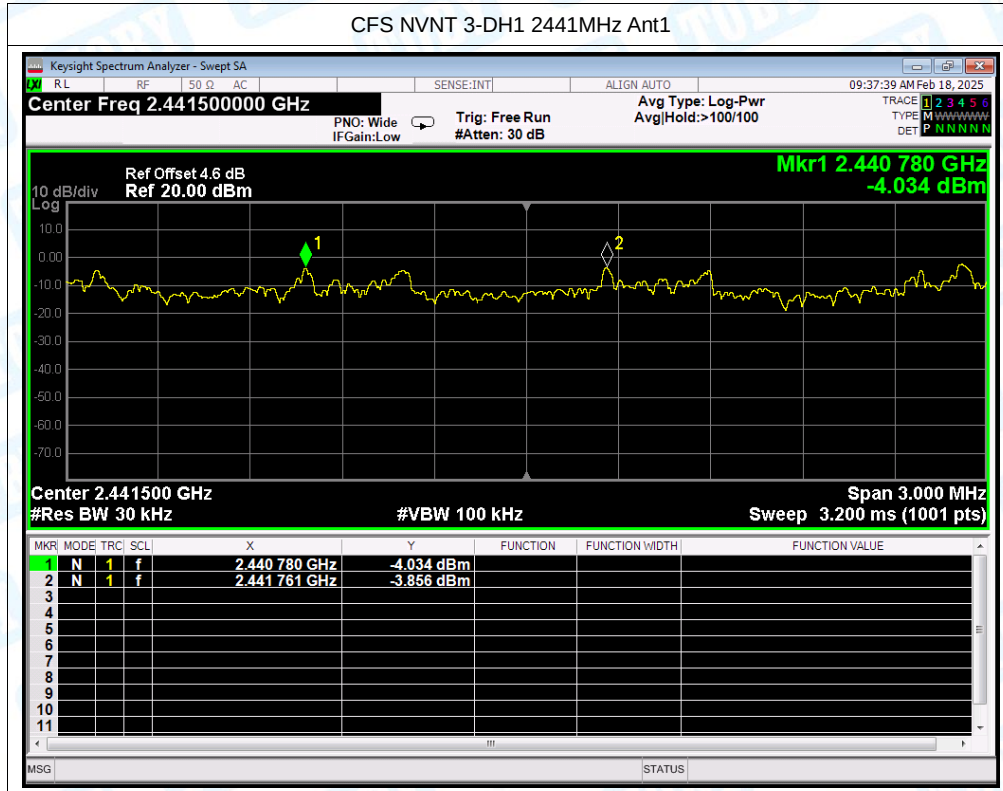
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



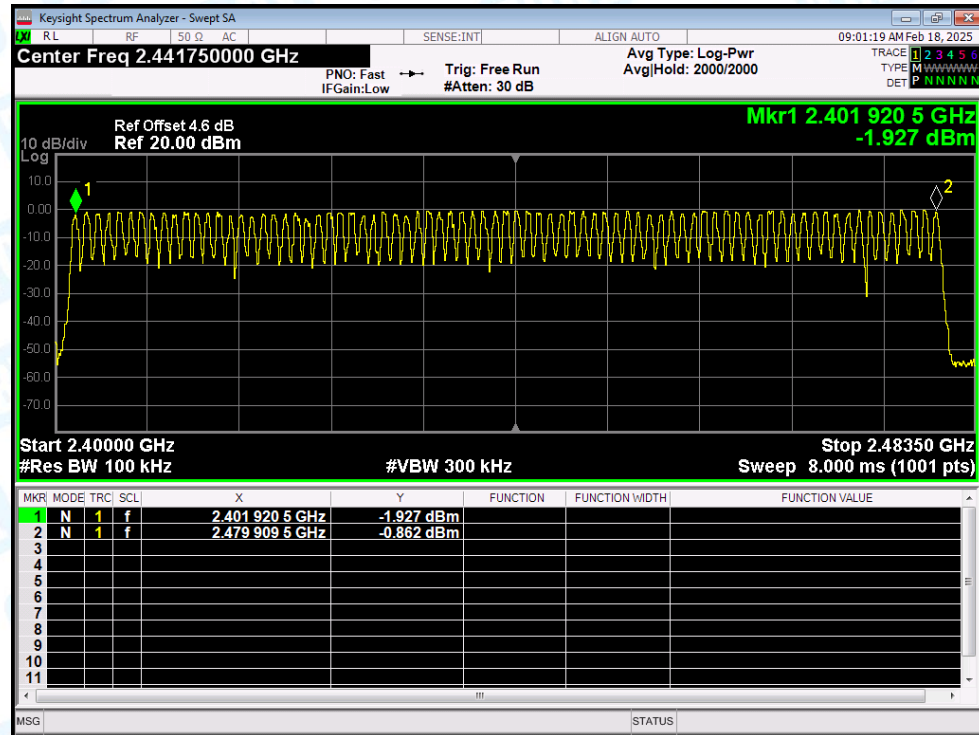


10. Number of Hopping Channel

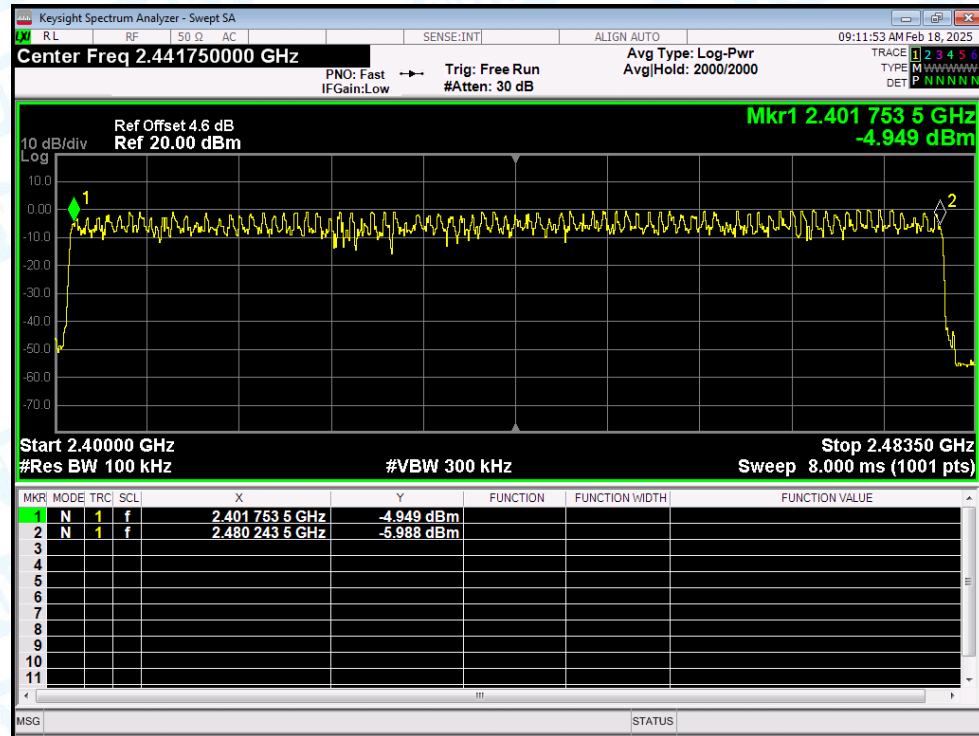
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

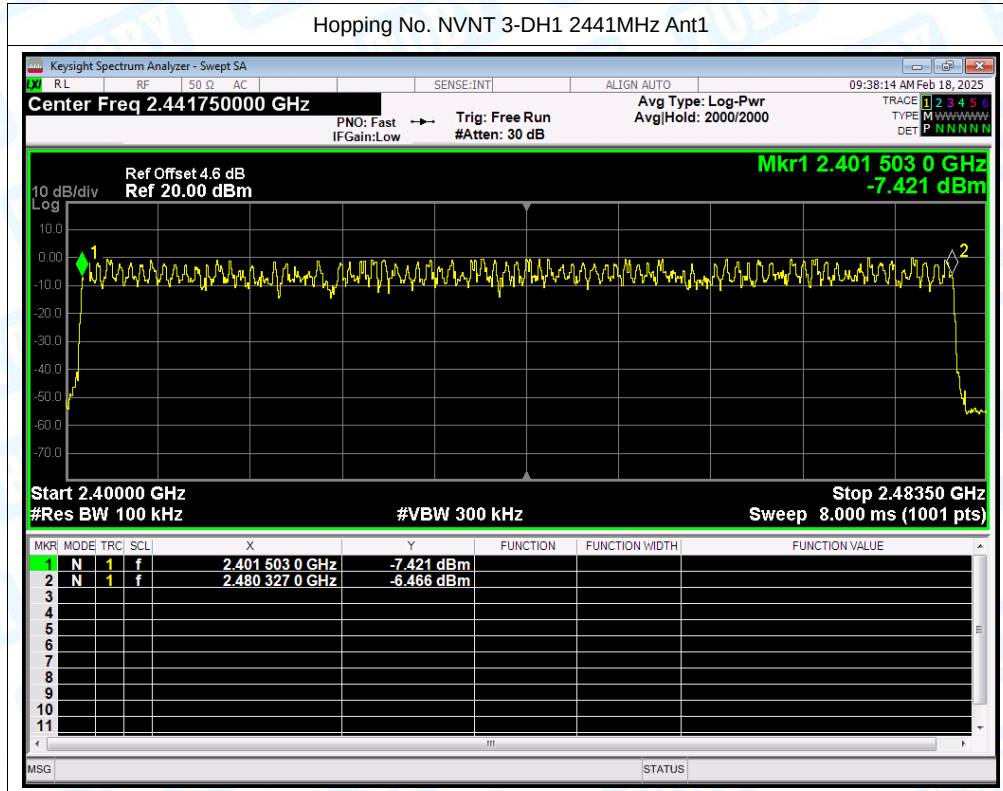
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



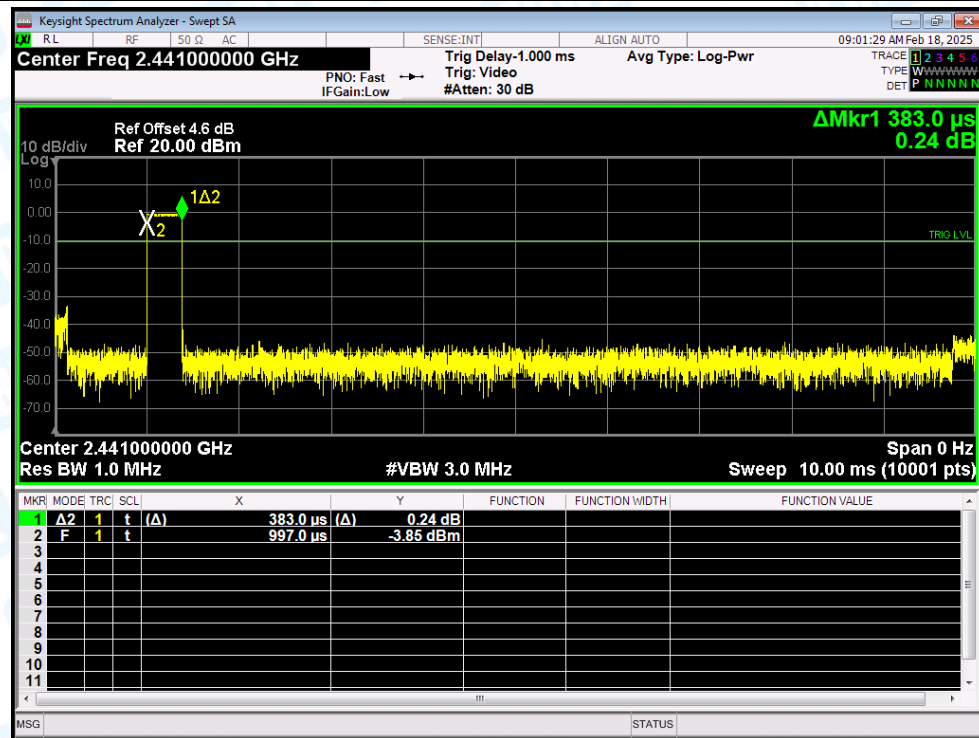


11. Dwell Time

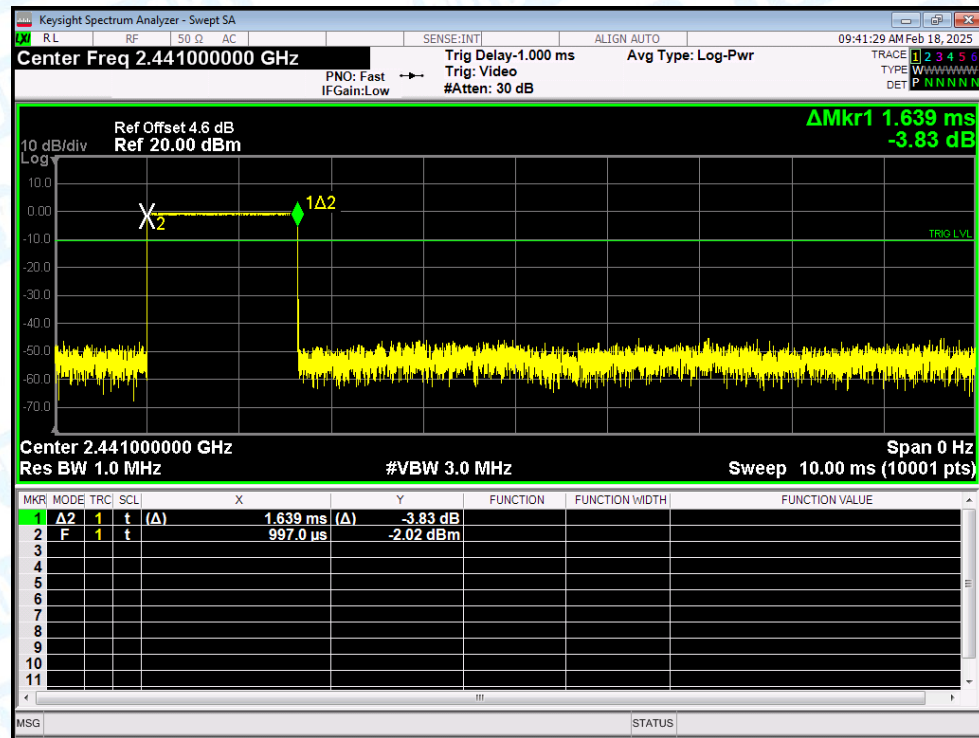
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.383	122.56	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.639	262.24	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.887	307.947	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.392	125.44	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.644	263.04	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.892	308.48	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.392	125.44	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.643	262.88	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.894	308.693	31600	400	Pass

Test Graphs

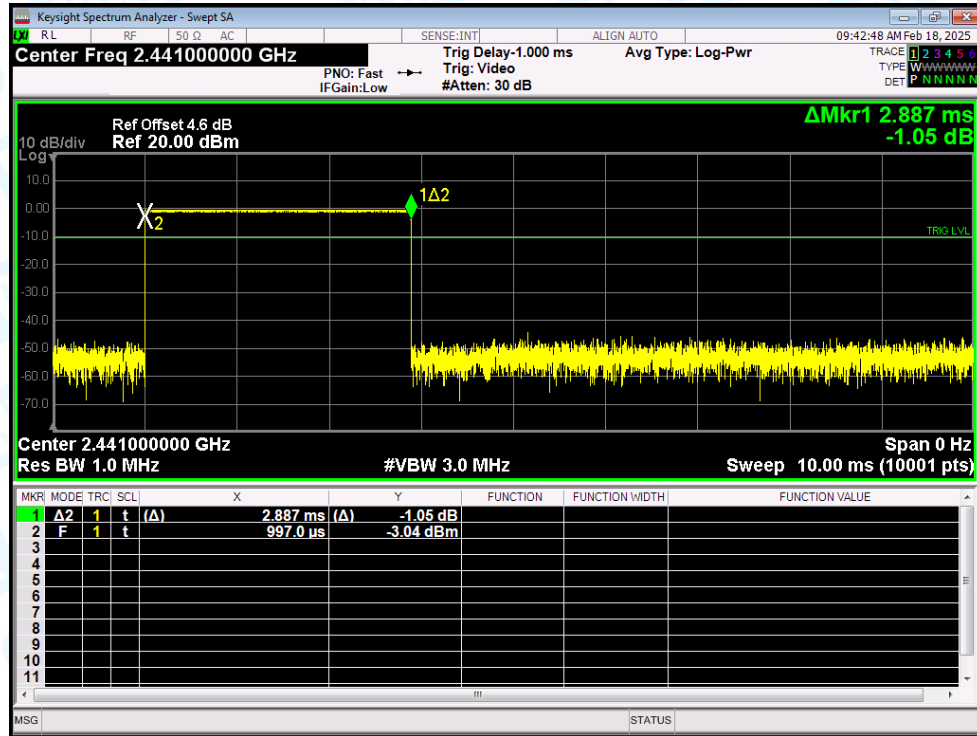
Dwell NVNT 1-DH1 2441MHz Ant1



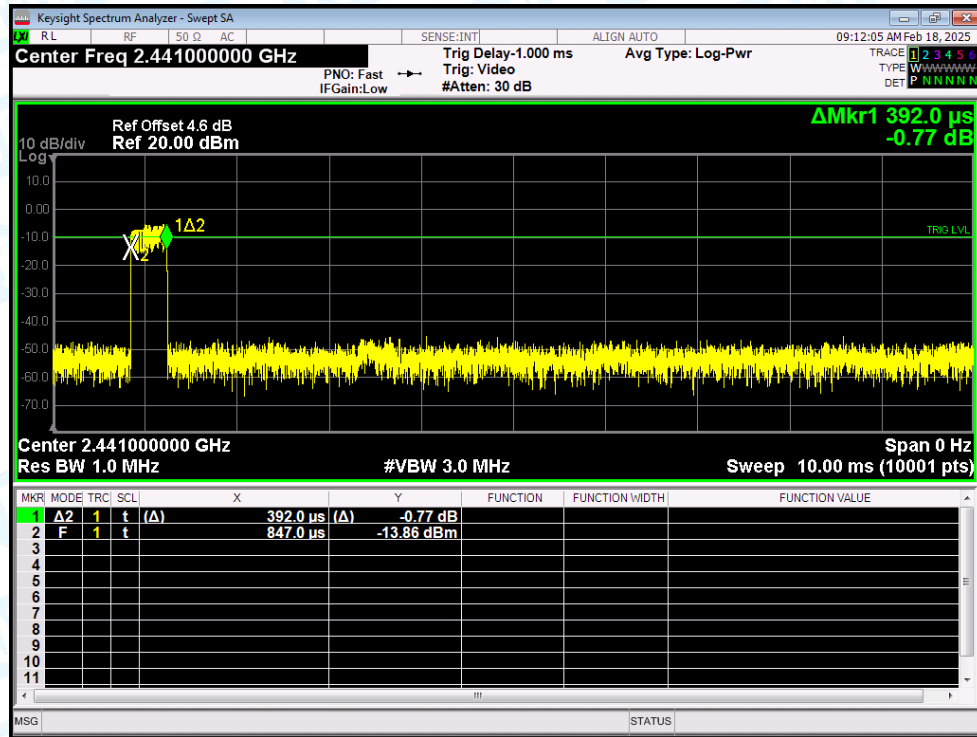
Dwell NVNT 1-DH3 2441MHz Ant1



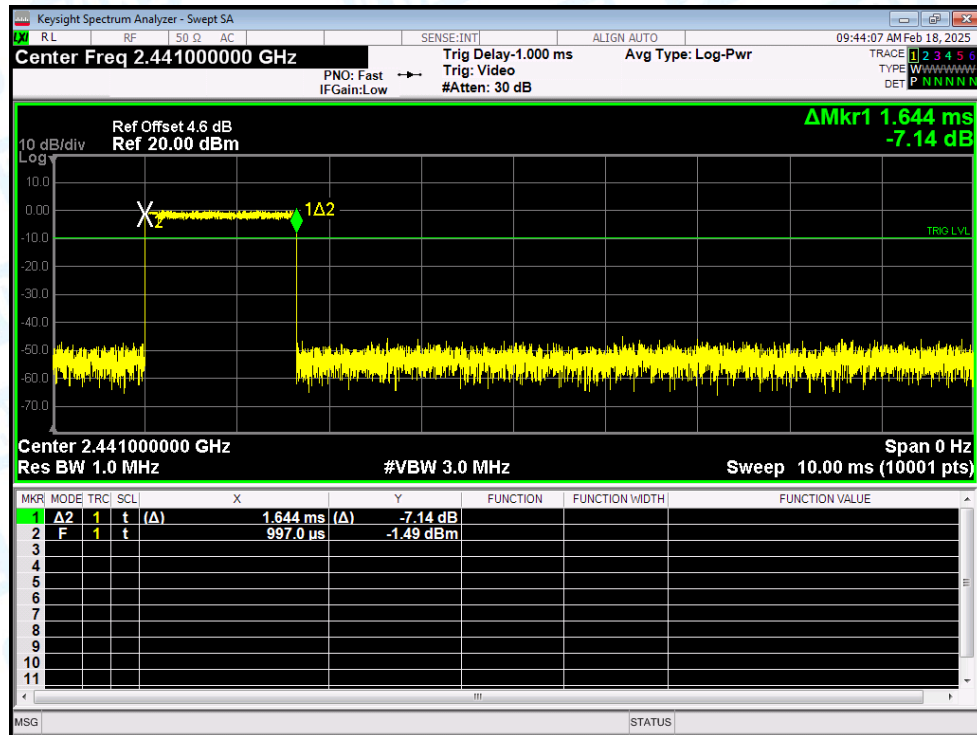
Dwell NVNT 1-DH5 2441MHz Ant1



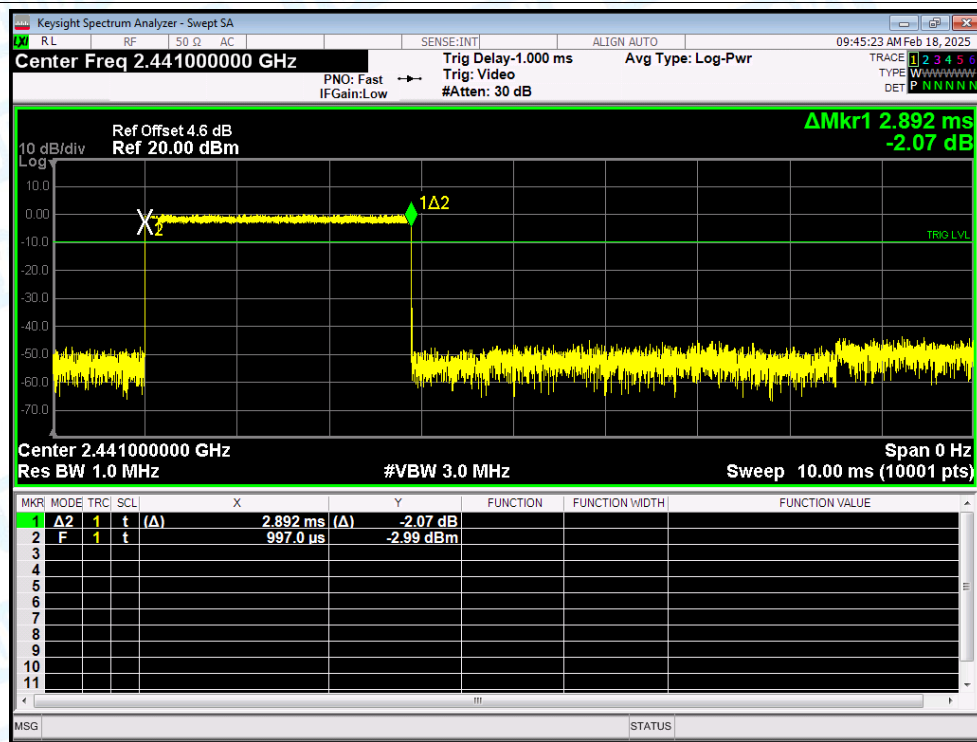
Dwell NVNT 2-DH1 2441MHz Ant1



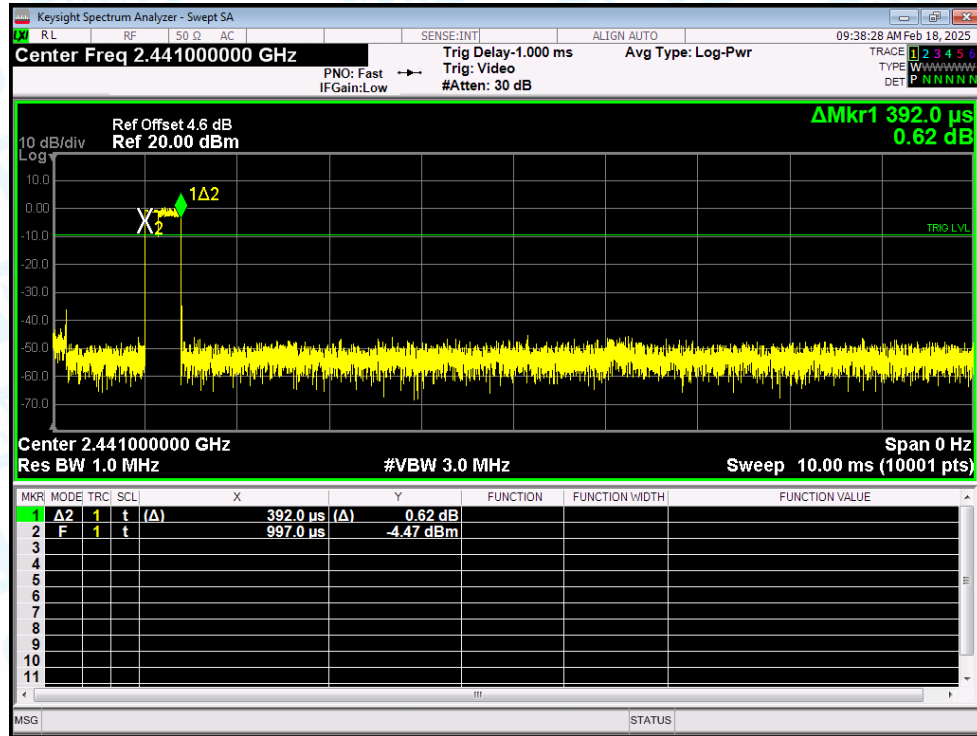
Dwell NVNT 2-DH3 2441MHz Ant1



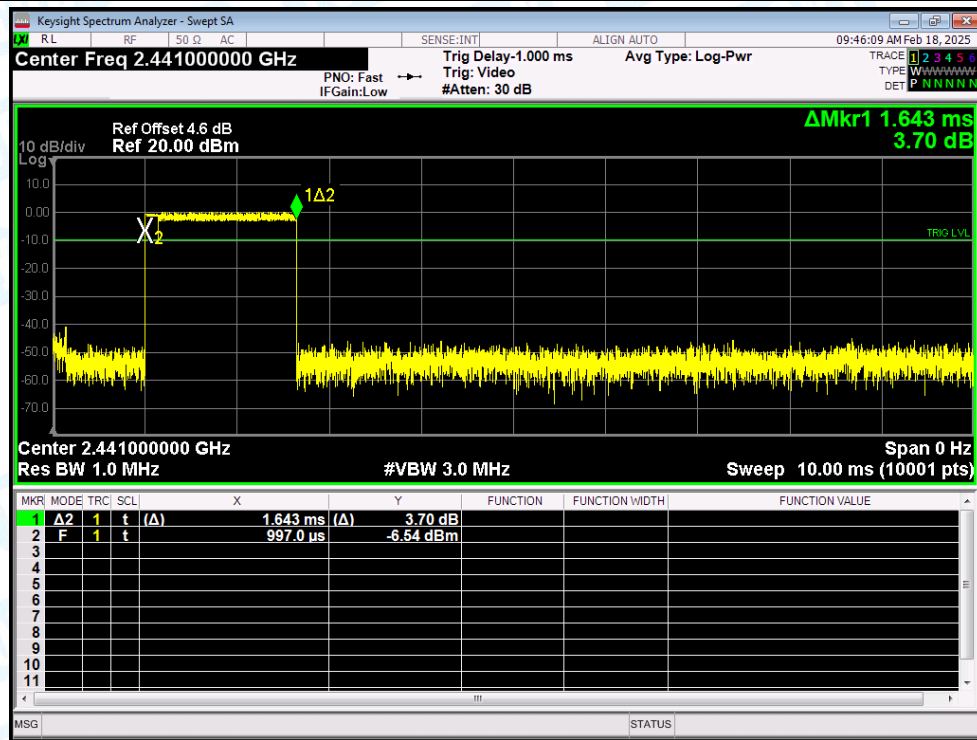
Dwell NVNT 2-DH5 2441MHz Ant1

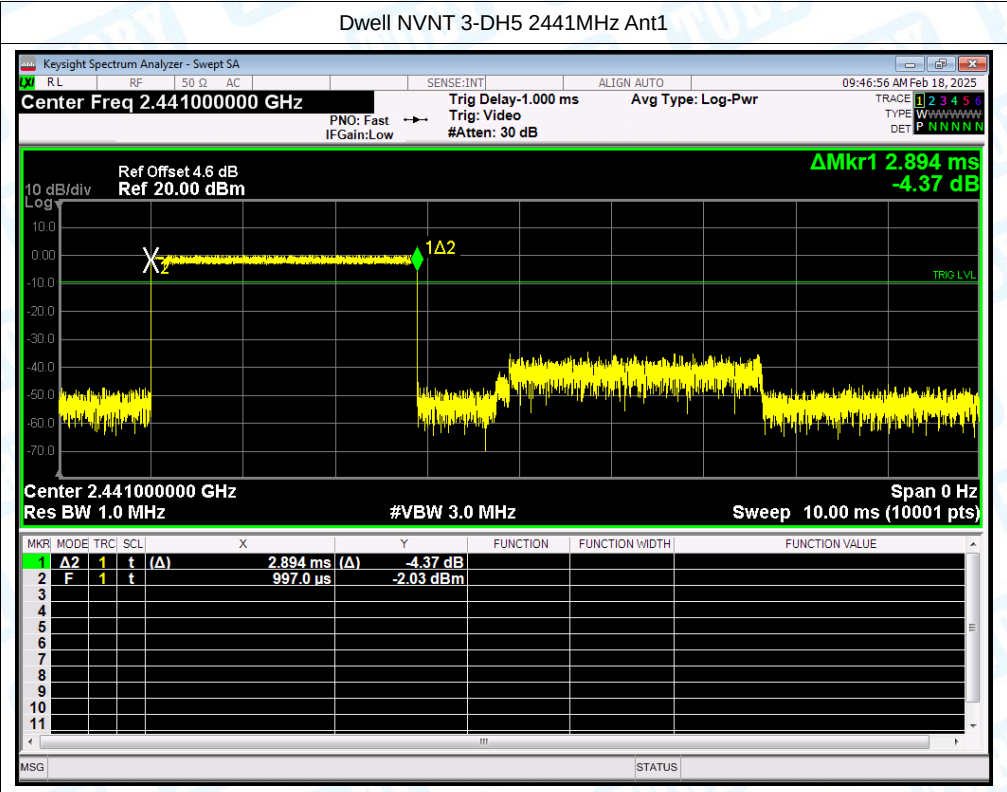


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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