

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	SMART GLASSES
Test Model:	D13
Sample ID:	HC-C-202502-0089-01-01
Environmental Conditions	
Temperature:	23.5℃
Relative Humidity:	48.6%
Test Voltage:	DC 3.8V
Test Engineer:	Rick chen
Note: For a more detailed features description, please refer to the report TBR-C-202502-0089-5 The report only show the worst case data.	

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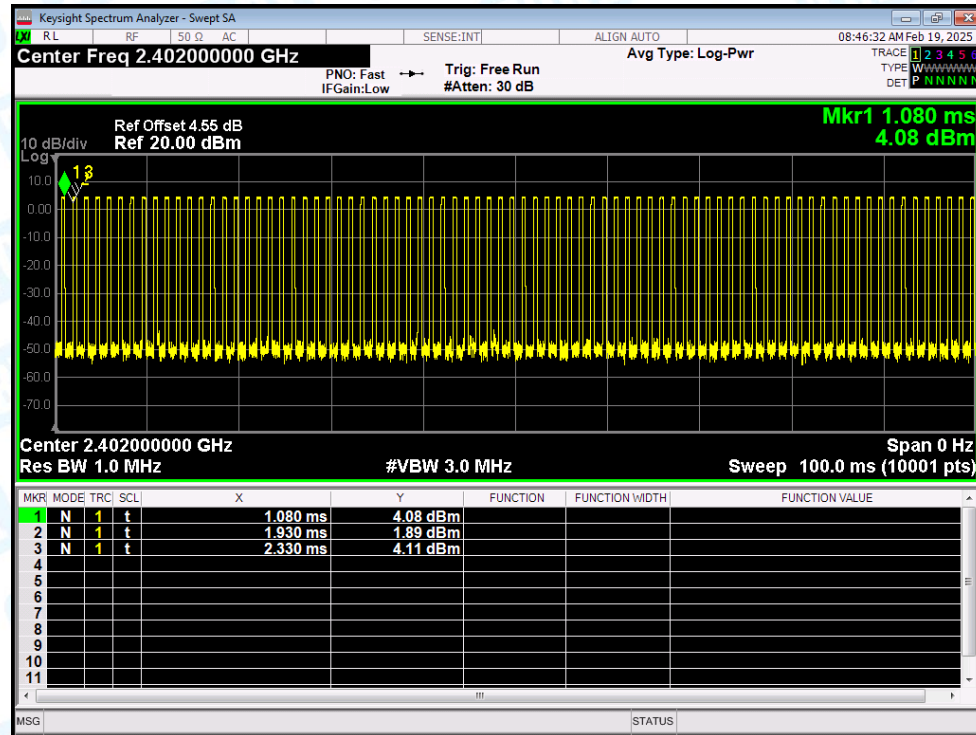
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1. Duty Cycle

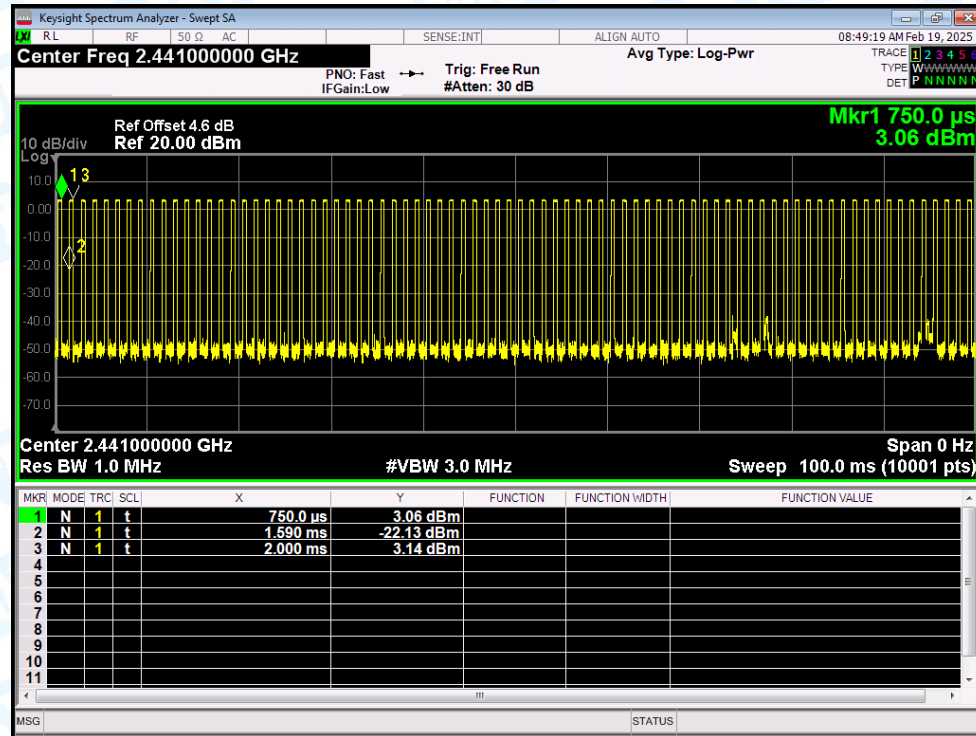
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	32	4.95	2.5
NVNT	1-DH1	2441	Ant1	32.8	4.84	2.44
NVNT	1-DH1	2480	Ant1	32.8	4.84	2.44
NVNT	2-DH1	2402	Ant1	33.6	4.74	2.38
NVNT	2-DH1	2441	Ant1	33.6	4.74	2.38
NVNT	2-DH1	2480	Ant1	33.6	4.74	2.38
NVNT	3-DH1	2402	Ant1	33.6	4.74	2.38
NVNT	3-DH1	2441	Ant1	33.6	4.74	2.38
NVNT	3-DH1	2480	Ant1	33.6	4.74	2.38

Test Graphs

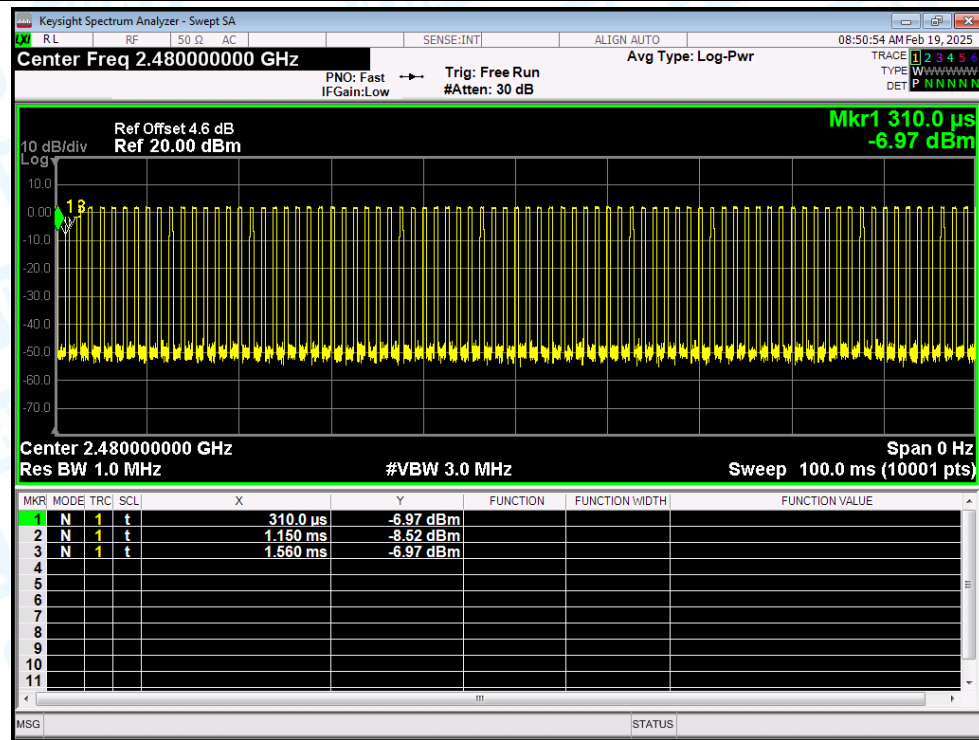
Duty Cycle NVNT 1-DH1 2402MHz Ant1



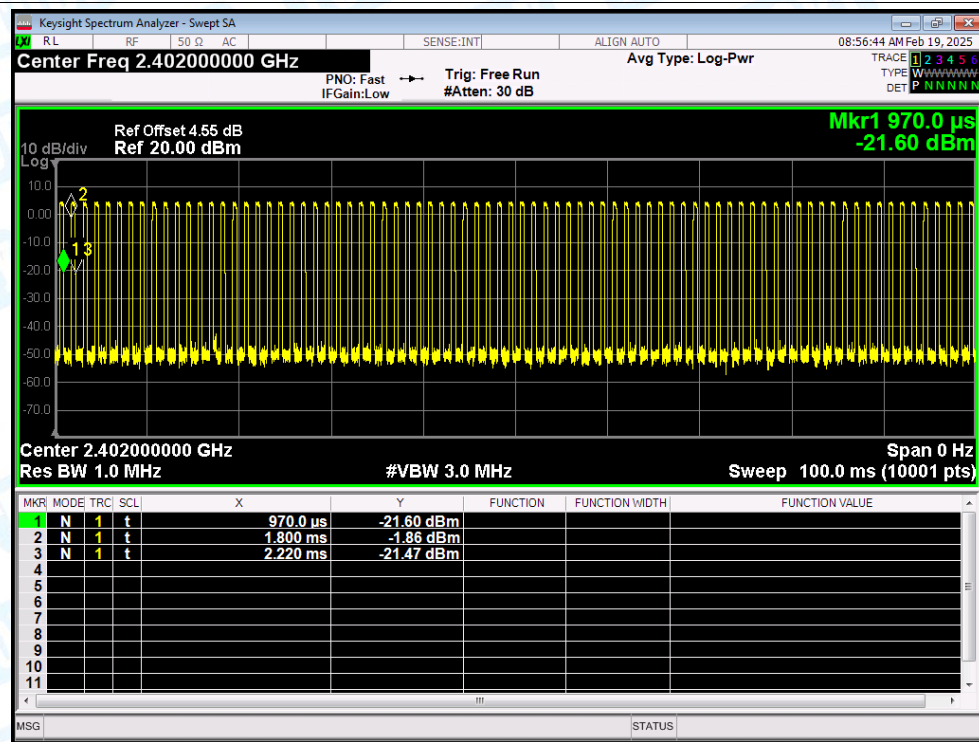
Duty Cycle NVNT 1-DH1 2441MHz Ant1



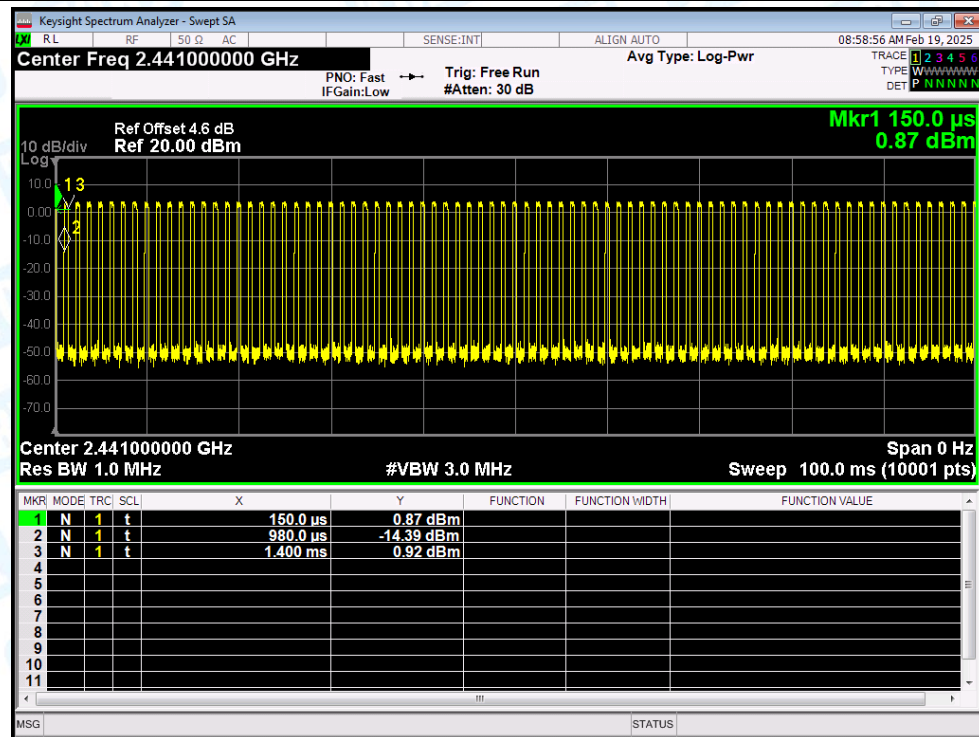
Duty Cycle NVNT 1-DH1 2480MHz Ant1



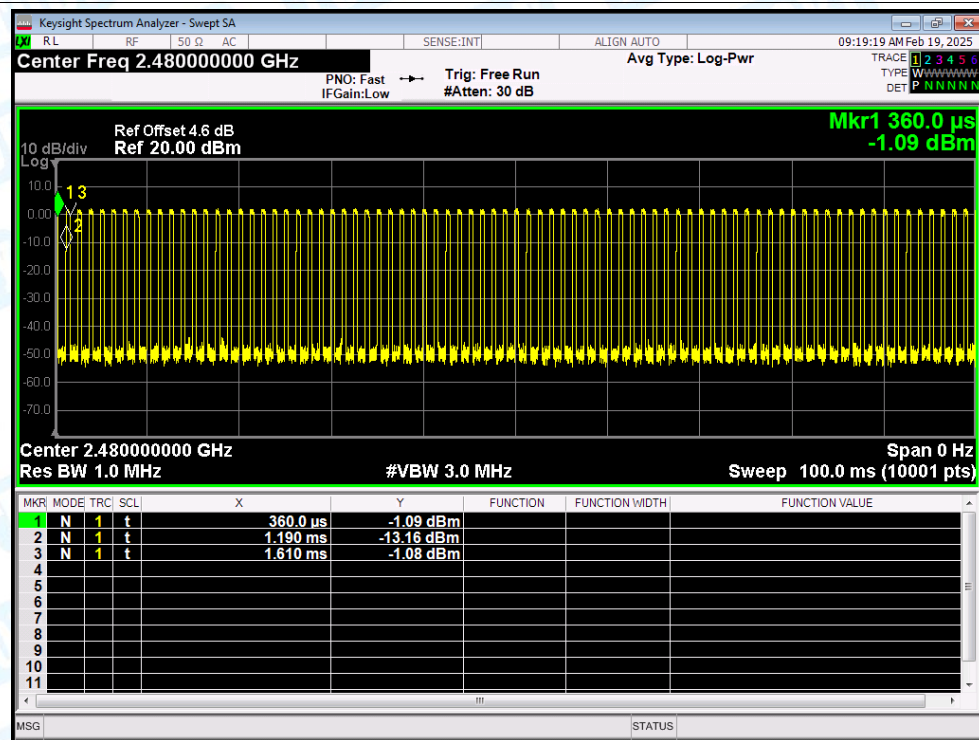
Duty Cycle NVNT 2-DH1 2402MHz Ant1



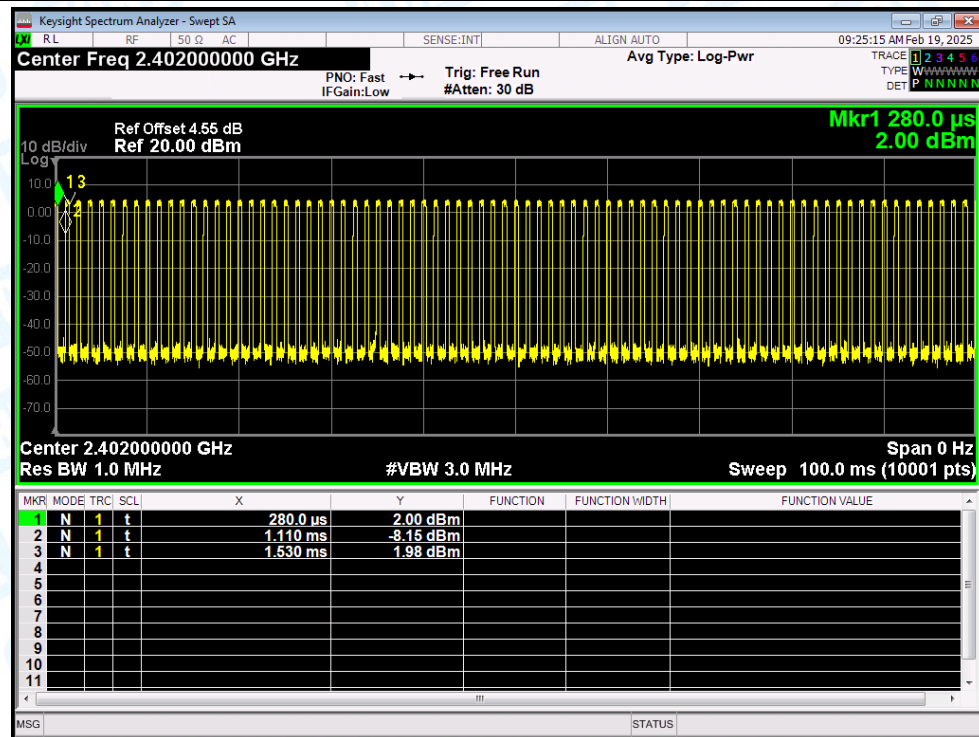
Duty Cycle NVNT 2-DH1 2441MHz Ant1



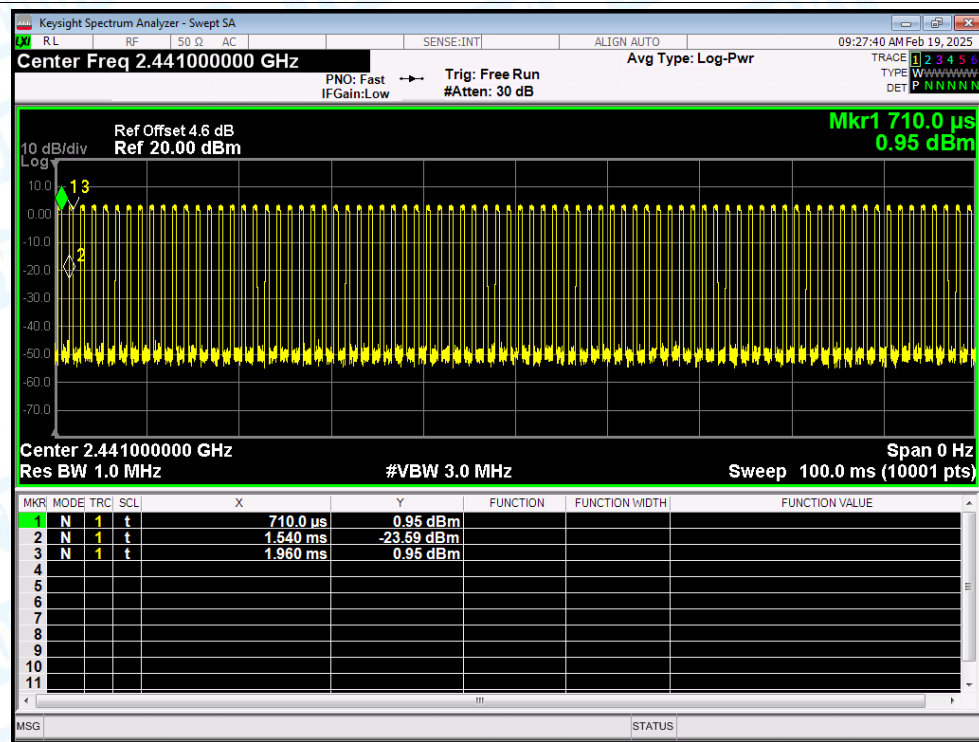
Duty Cycle NVNT 2-DH1 2480MHz Ant1

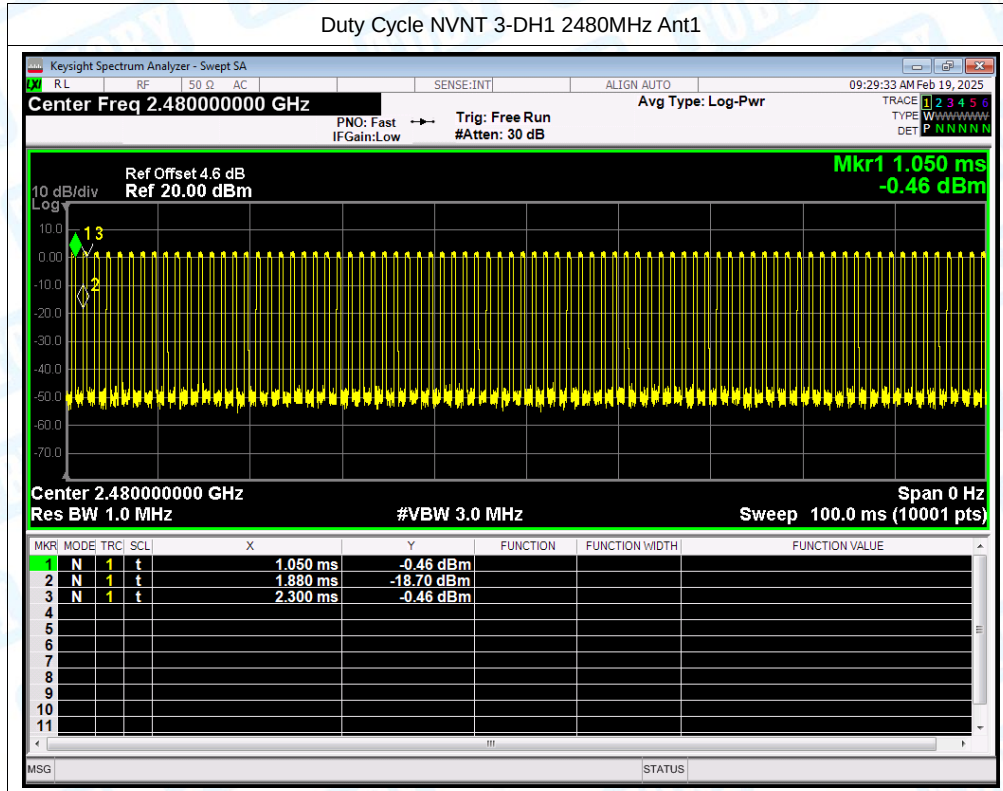


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



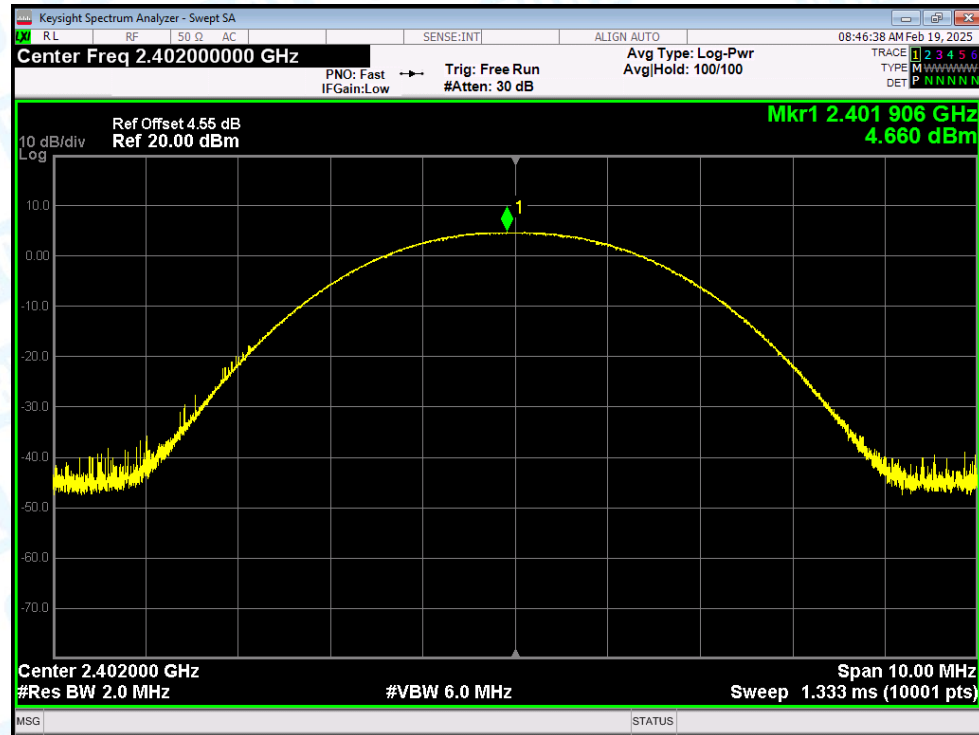


2. Maximum Conducted Output Power

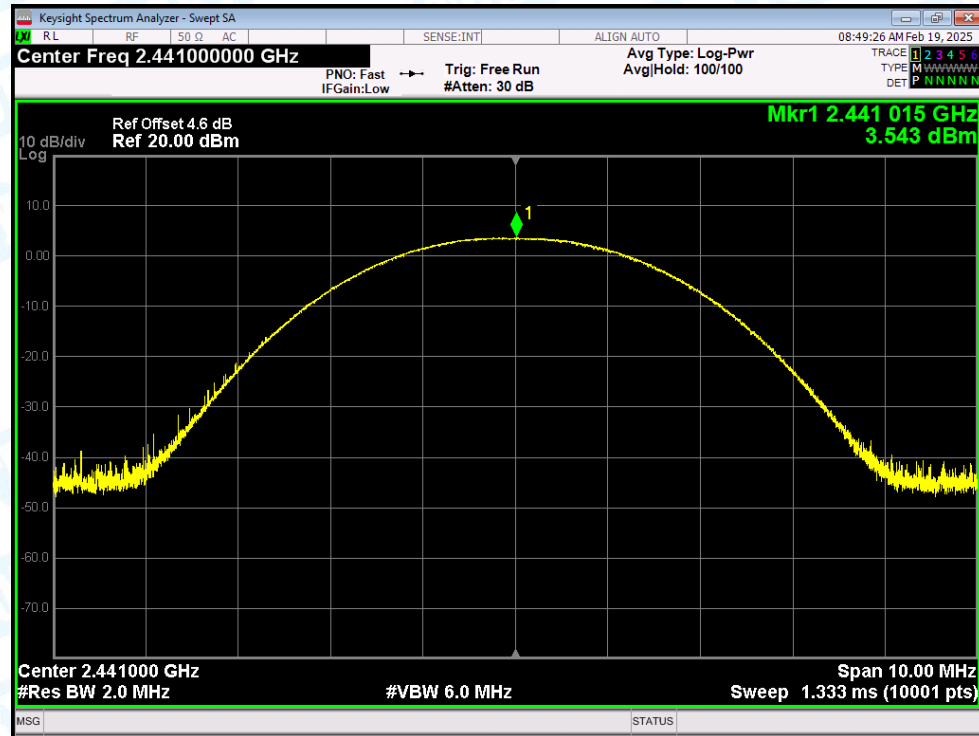
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	4.66	21	Pass
NVNT	1-DH1	2441	Ant1	3.543	21	Pass
NVNT	1-DH1	2480	Ant1	1.974	21	Pass
NVNT	2-DH1	2402	Ant1	4.974	21	Pass
NVNT	2-DH1	2441	Ant1	4.438	21	Pass
NVNT	2-DH1	2480	Ant1	2.456	21	Pass
NVNT	3-DH1	2402	Ant1	5.141	21	Pass
NVNT	3-DH1	2441	Ant1	4.192	21	Pass
NVNT	3-DH1	2480	Ant1	2.774	21	Pass

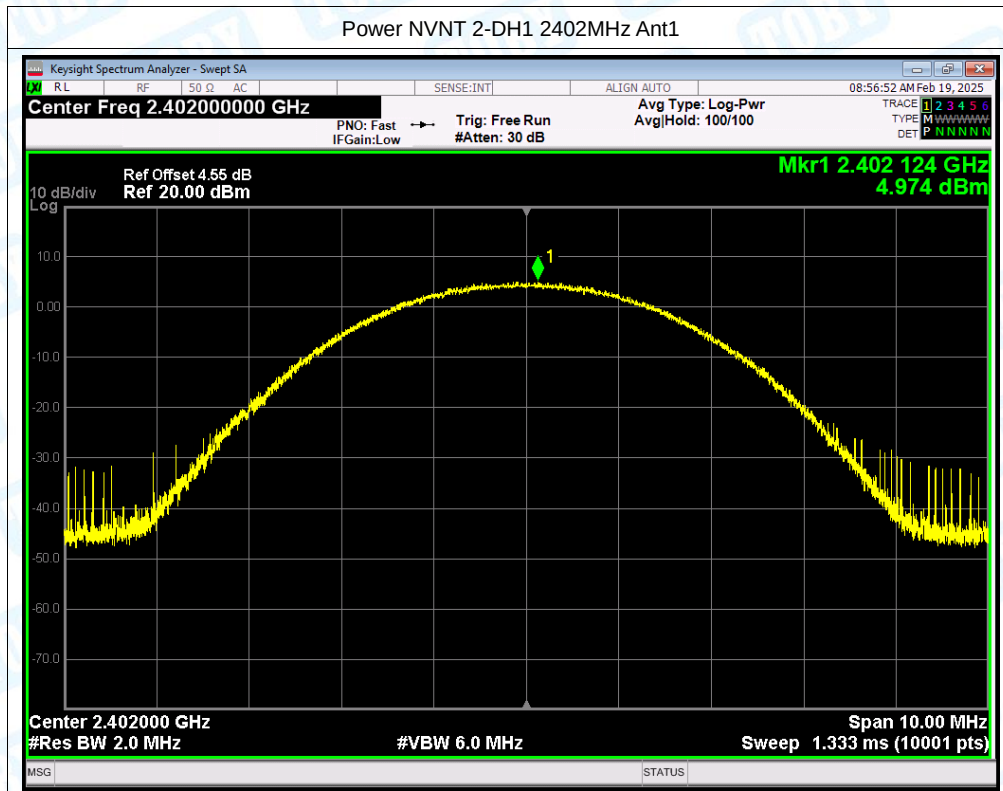
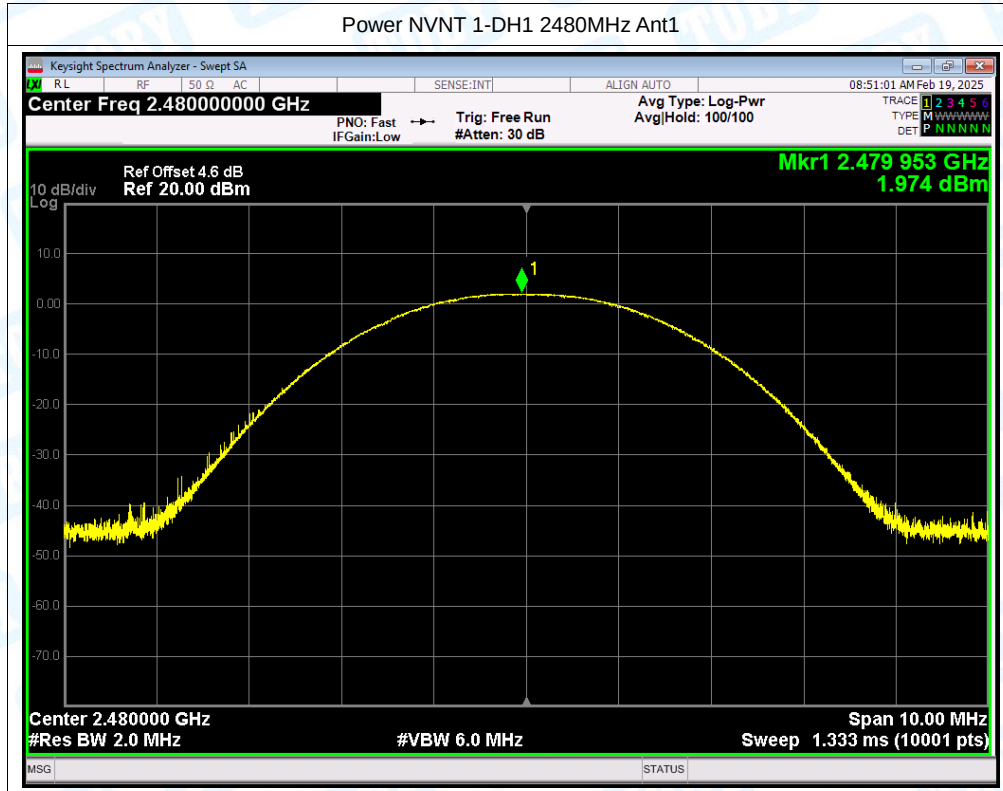
Test Graphs

Power NVNT 1-DH1 2402MHz Ant1

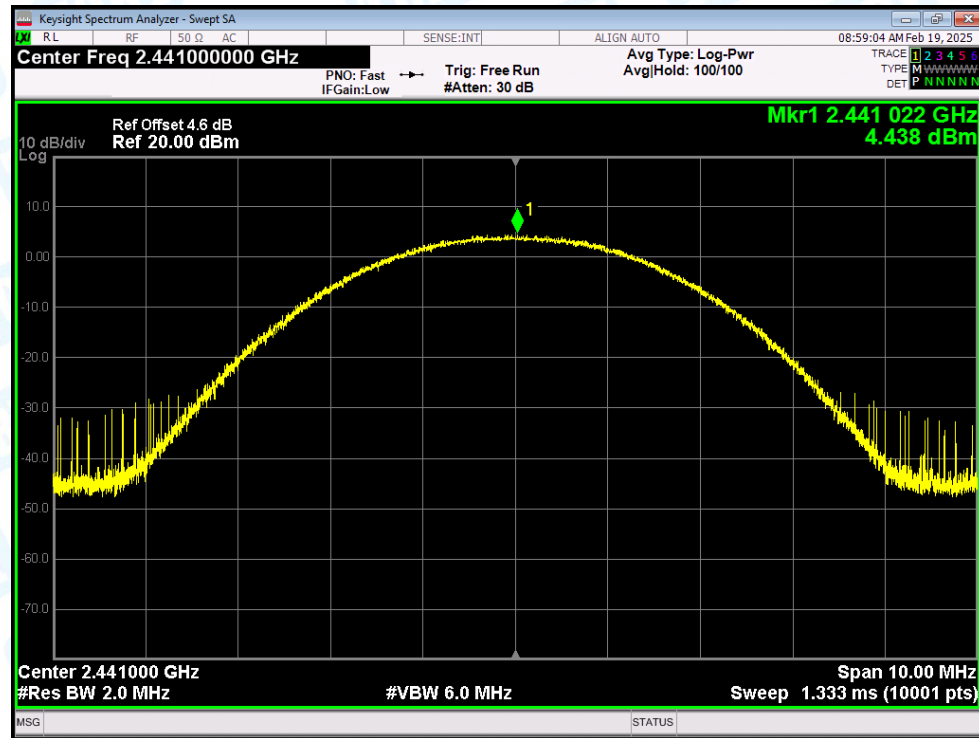


Power NVNT 1-DH1 2441MHz Ant1

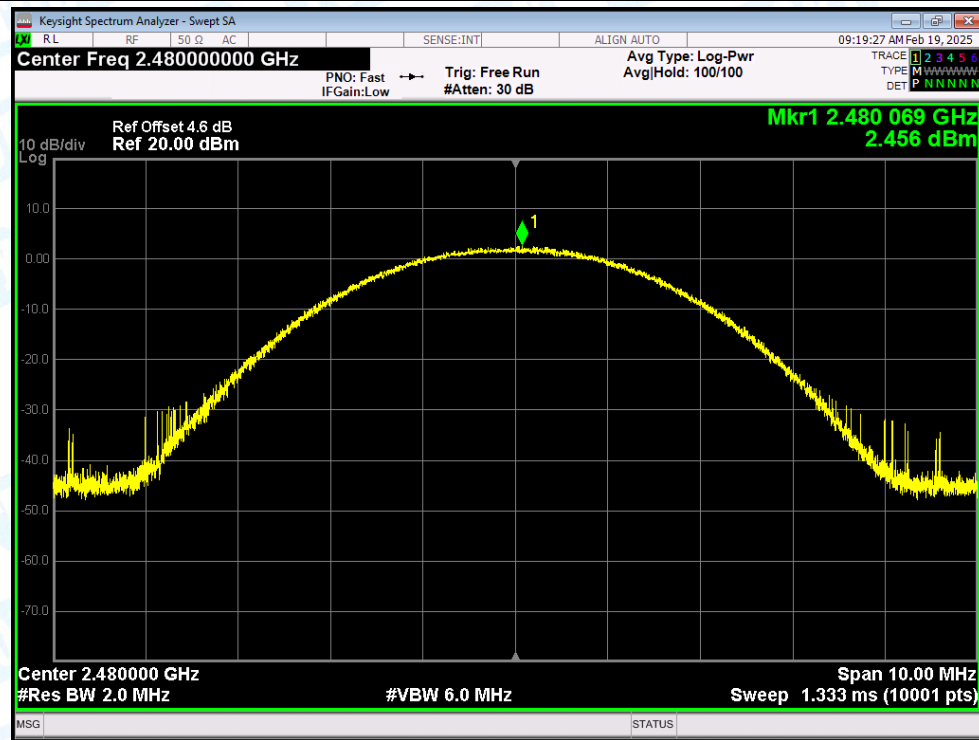




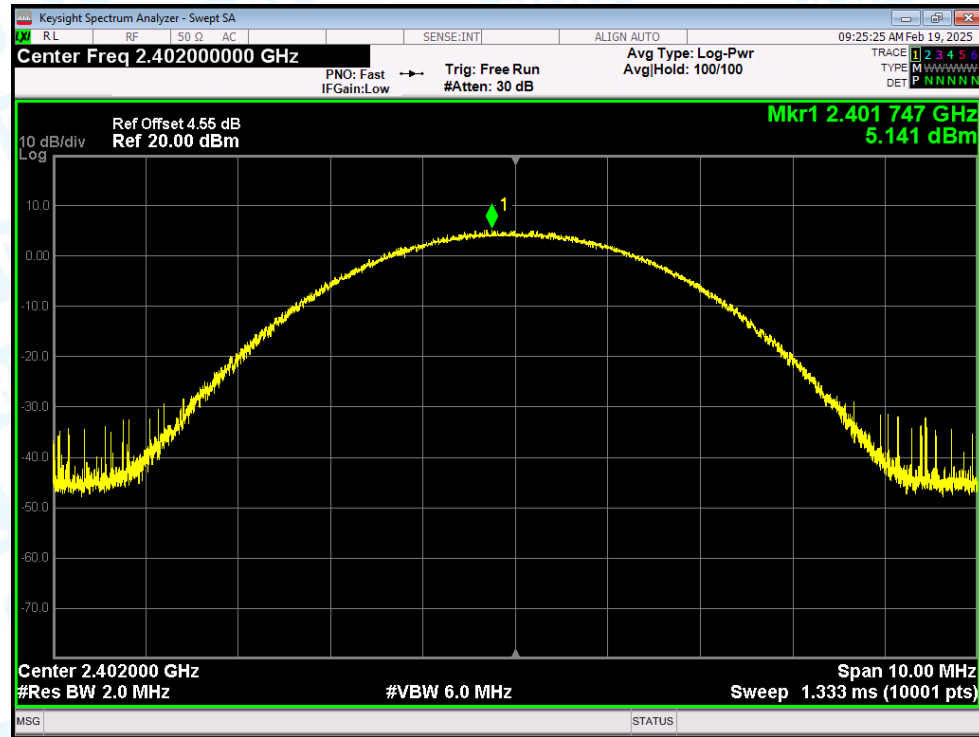
Power NVNT 2-DH1 2441MHz Ant1



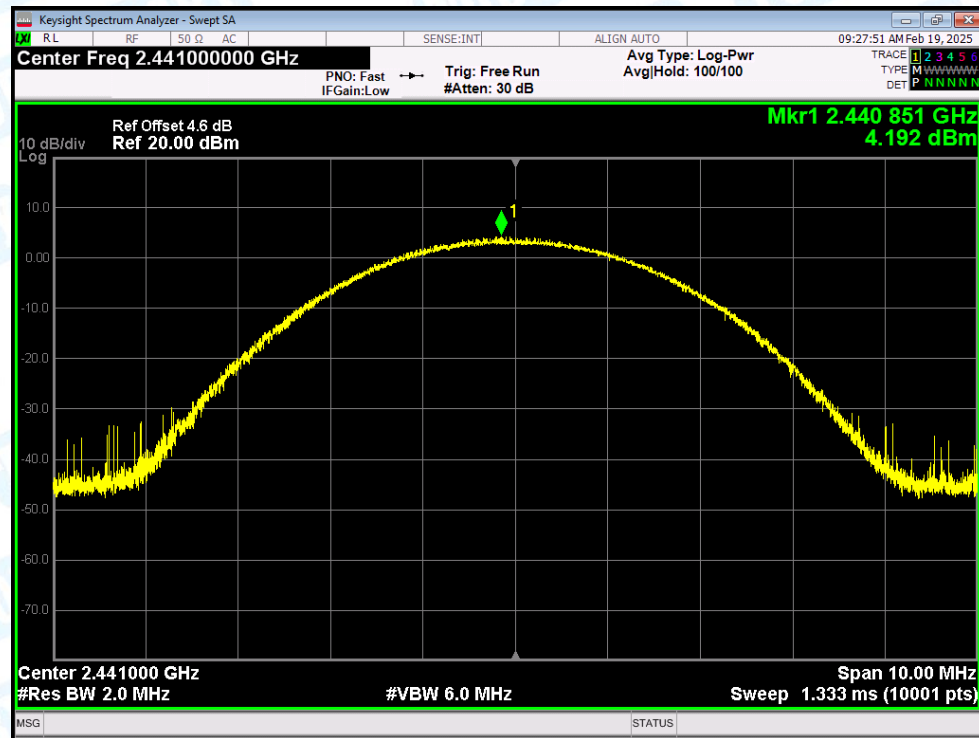
Power NVNT 2-DH1 2480MHz Ant1

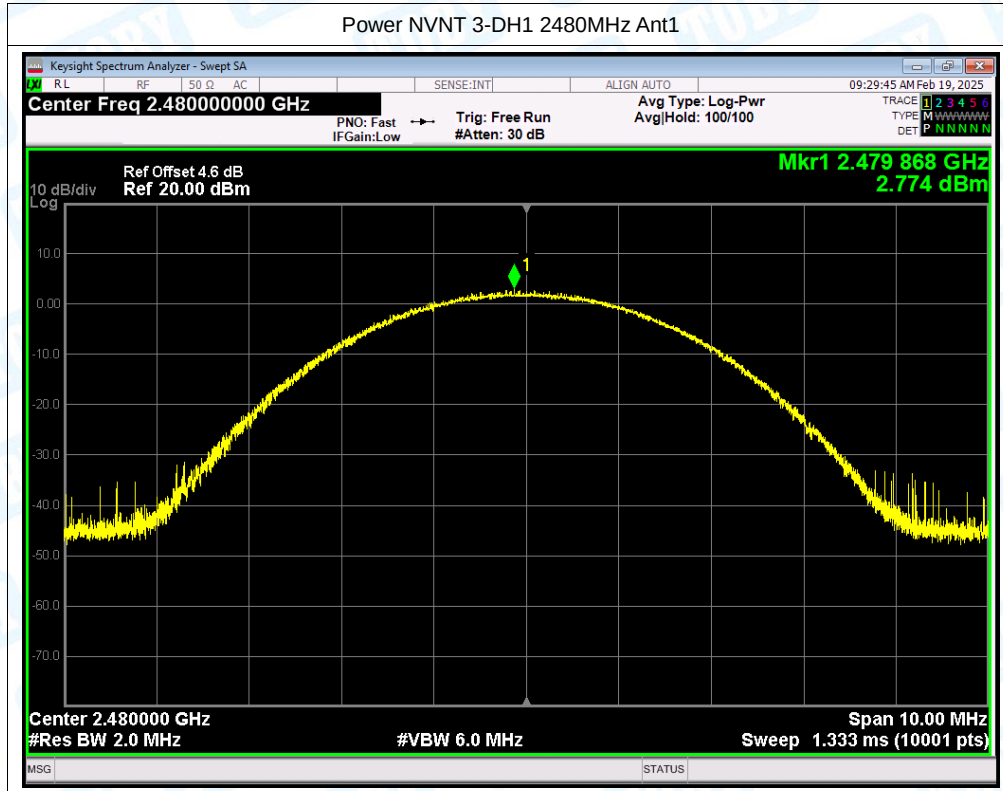


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



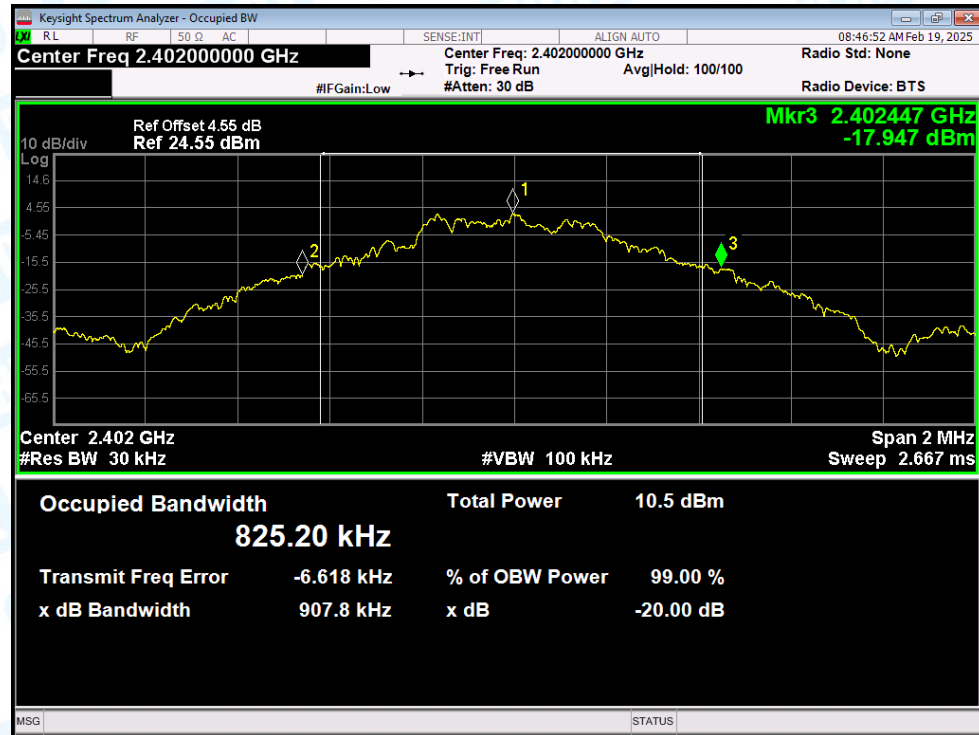


3. -20dB Bandwidth

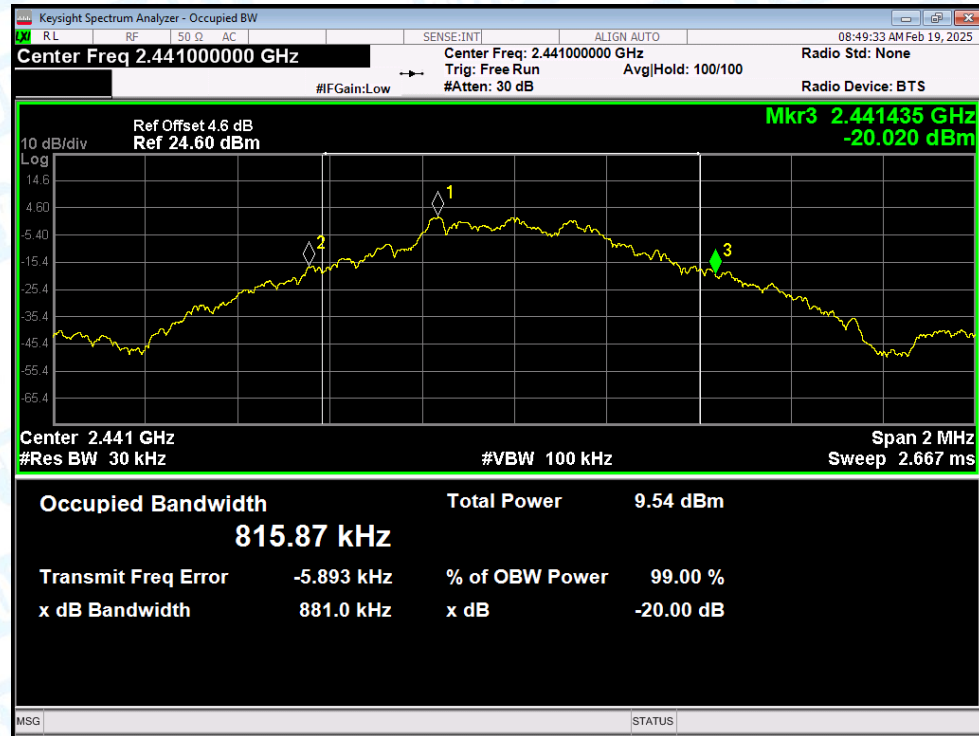
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.91	0	Pass
NVNT	1-DH1	2441	Ant1	0.88	0	Pass
NVNT	1-DH1	2480	Ant1	0.88	0	Pass
NVNT	2-DH1	2402	Ant1	1.24	0	Pass
NVNT	2-DH1	2441	Ant1	1.24	0	Pass
NVNT	2-DH1	2480	Ant1	1.25	0	Pass
NVNT	3-DH1	2402	Ant1	1.2	0	Pass
NVNT	3-DH1	2441	Ant1	1.21	0	Pass
NVNT	3-DH1	2480	Ant1	1.2	0	Pass

Test Graphs

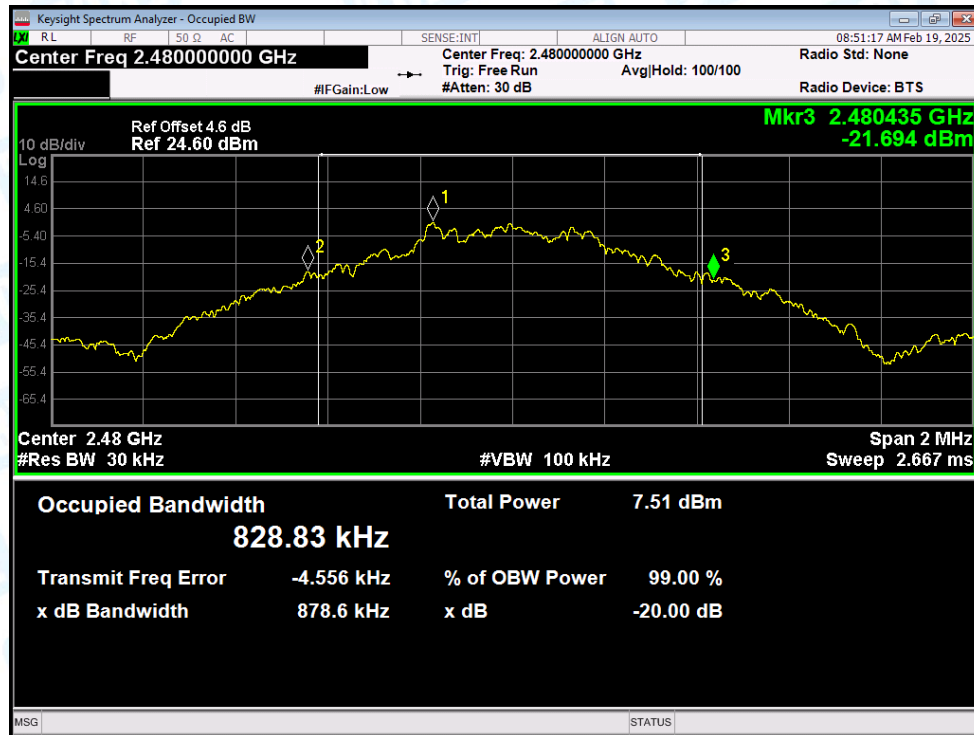
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



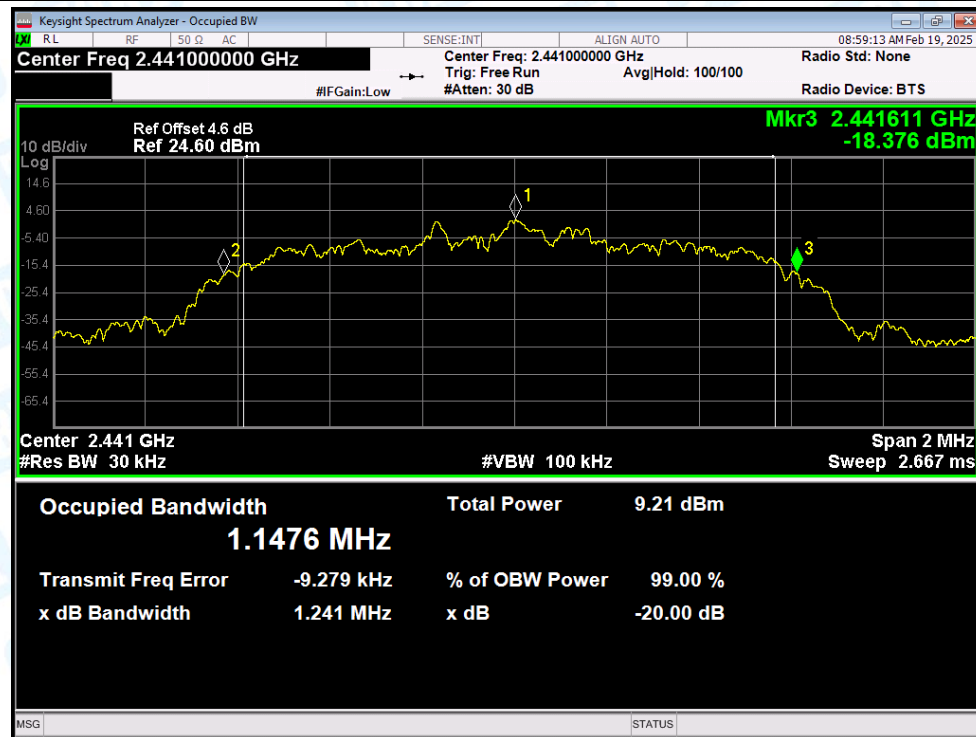
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



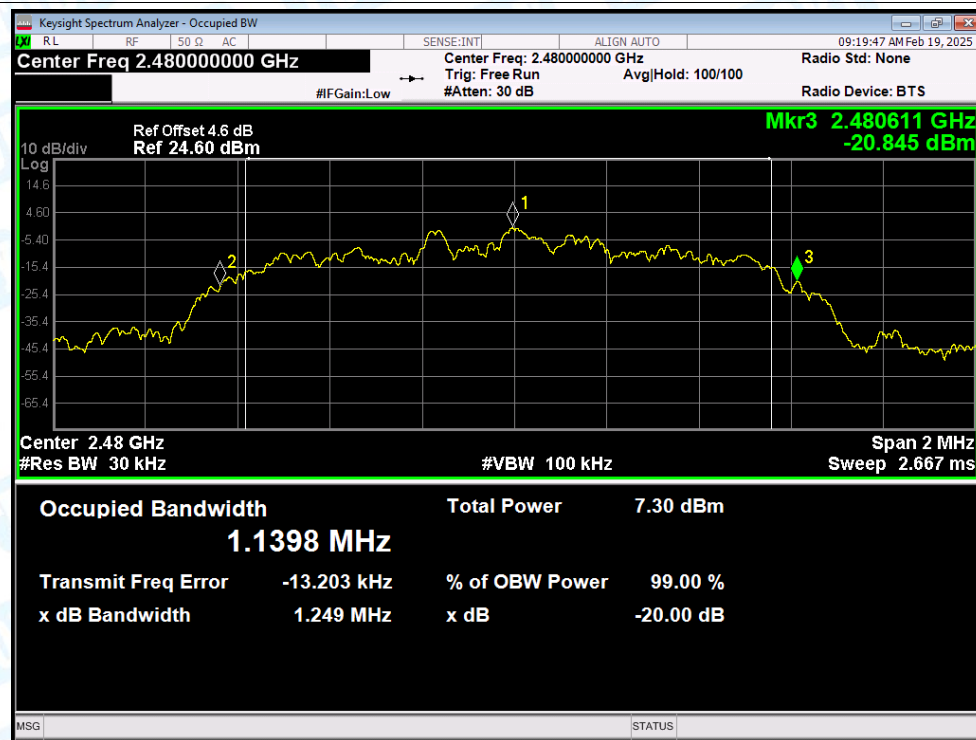
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



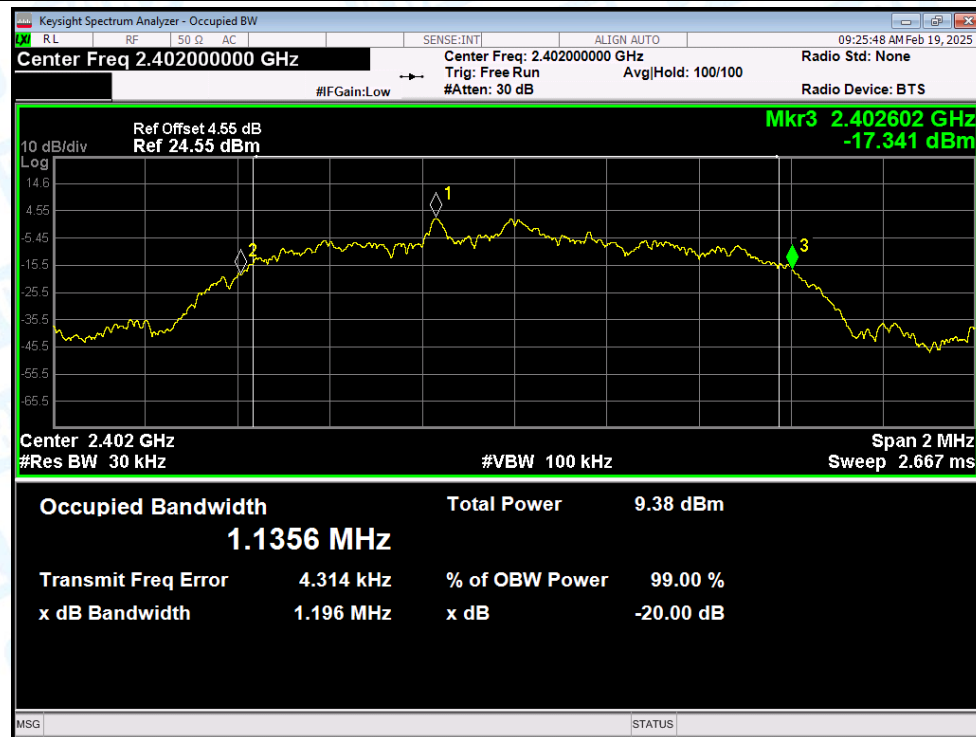
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



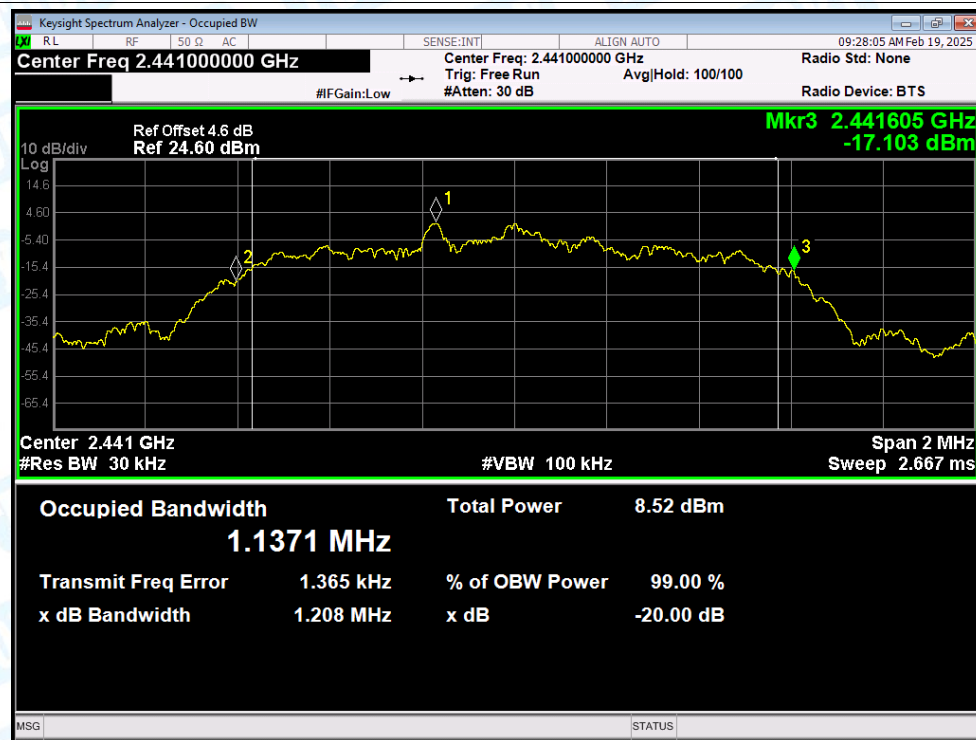
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

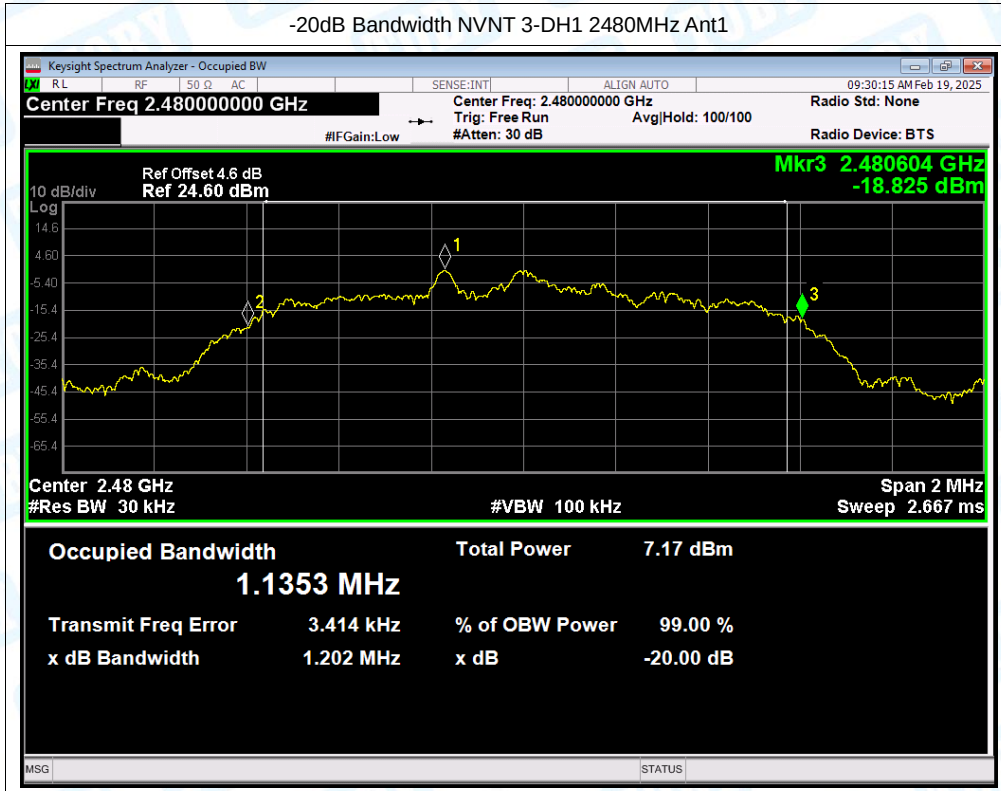


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



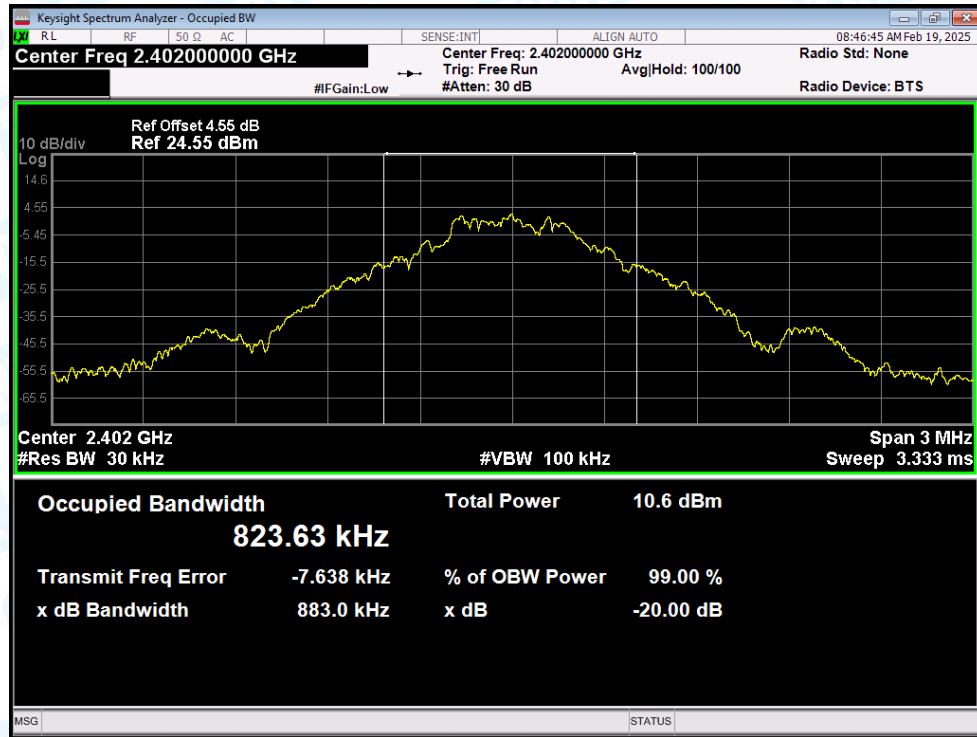


4. Occupied Channel Bandwidth

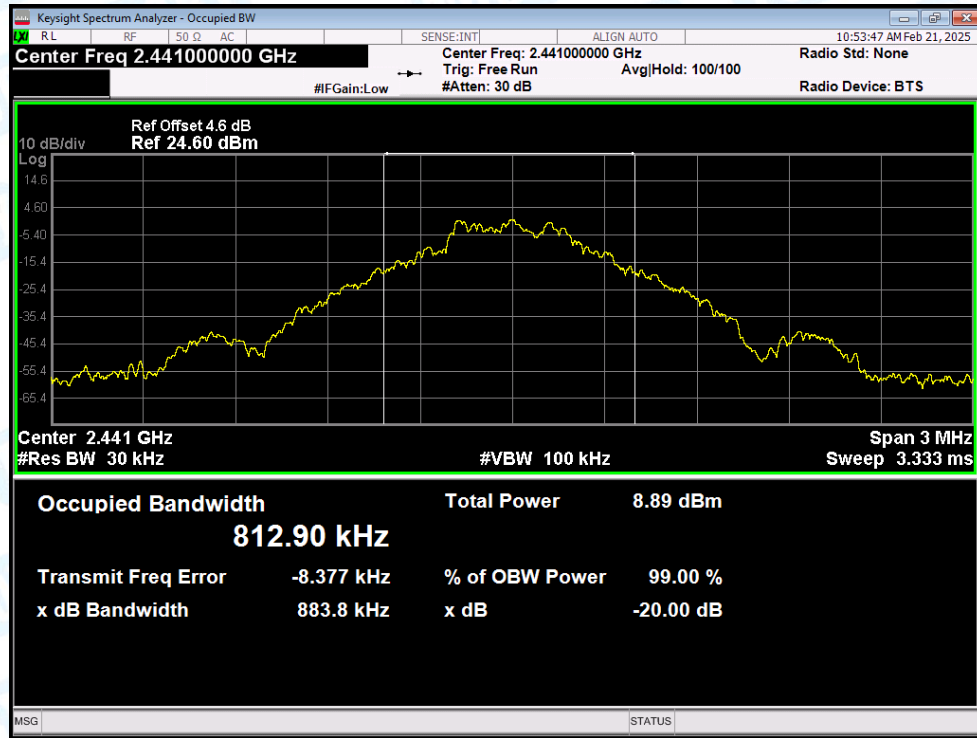
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.824
NVNT	1-DH1	2441	Ant1	0.813
NVNT	1-DH1	2480	Ant1	0.825
NVNT	2-DH1	2402	Ant1	1.151
NVNT	2-DH1	2441	Ant1	1.143
NVNT	2-DH1	2480	Ant1	1.148
NVNT	3-DH1	2402	Ant1	1.142
NVNT	3-DH1	2441	Ant1	1.139
NVNT	3-DH1	2480	Ant1	1.149

Test Graphs

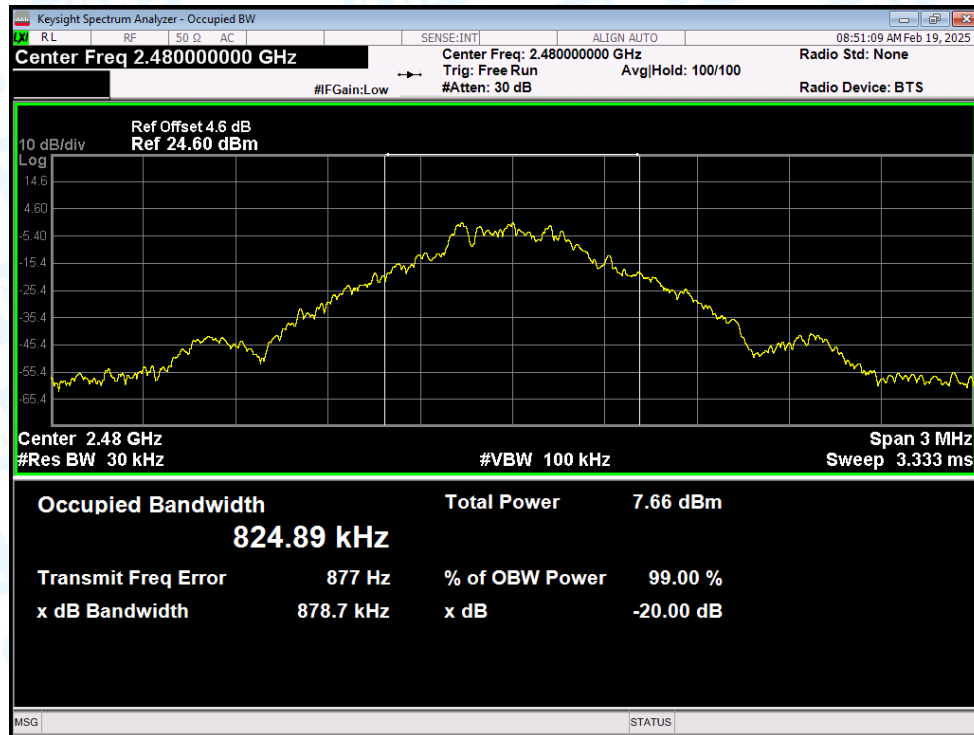
OBW NVNT 1-DH1 2402MHz Ant1



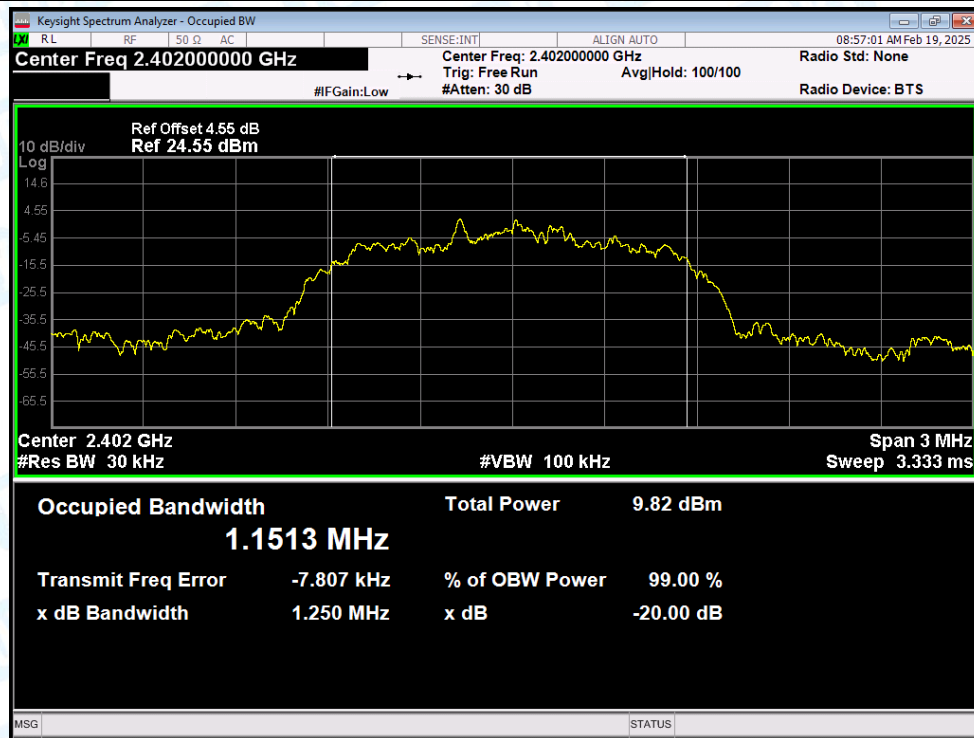
OBW NVNT 1-DH1 2441MHz Ant1



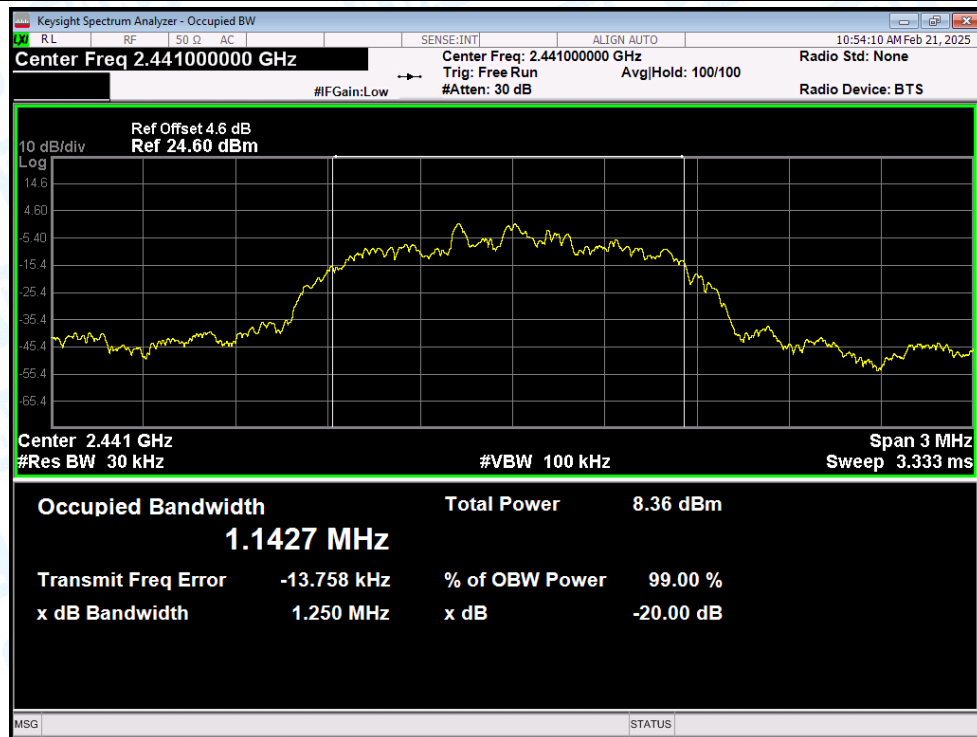
OBW NVNT 1-DH1 2480MHz Ant1



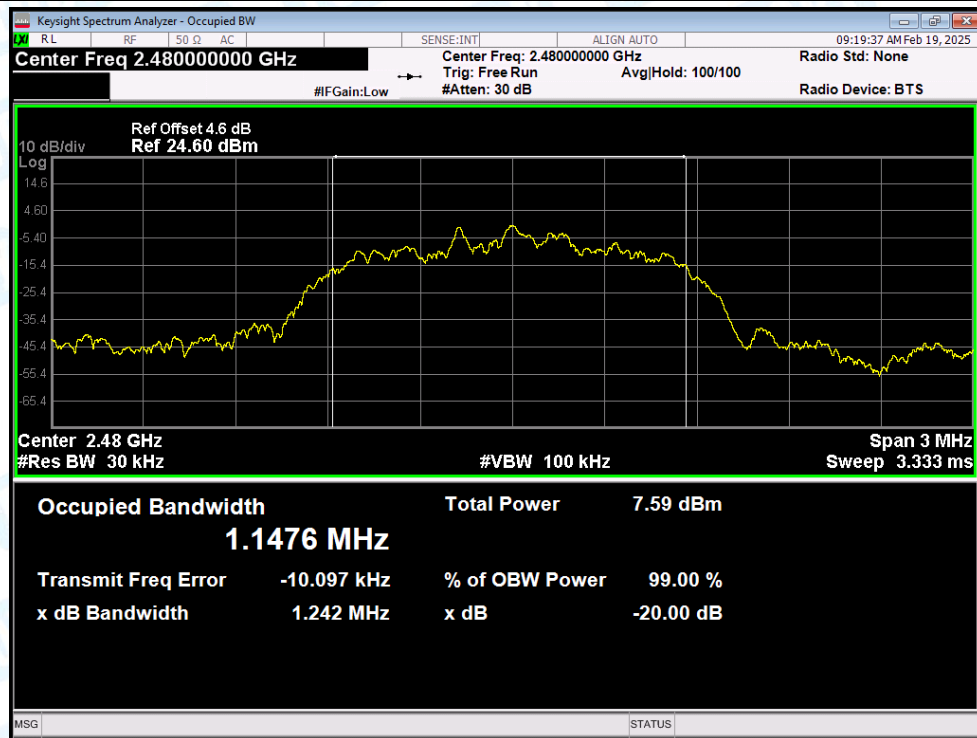
OBW NVNT 2-DH1 2402MHz Ant1



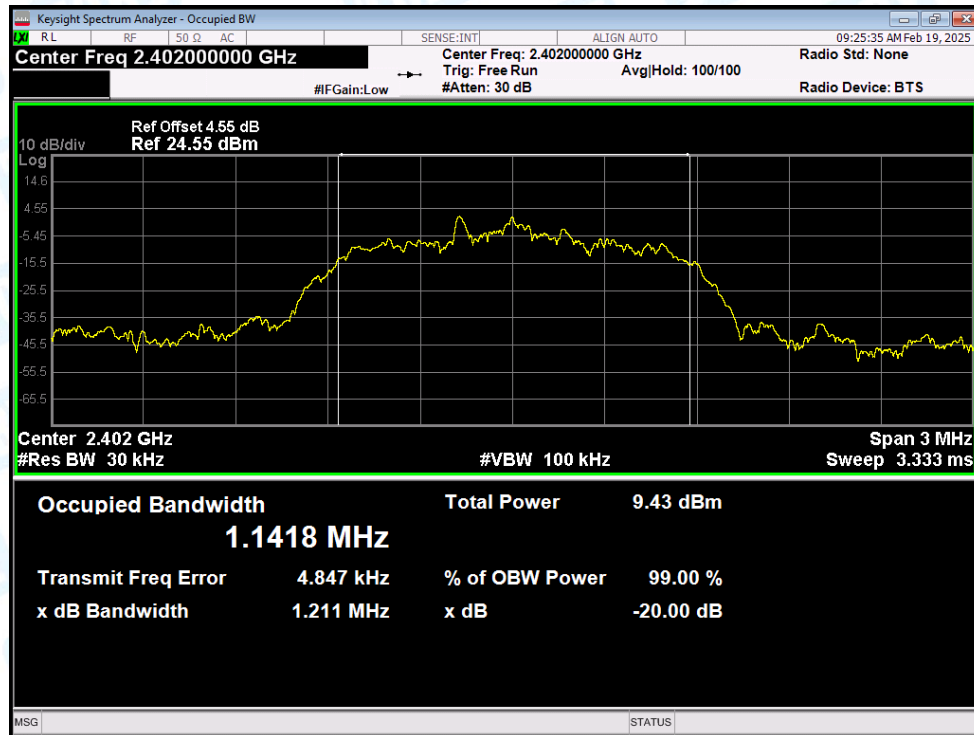
OBW NVNT 2-DH1 2441MHz Ant1



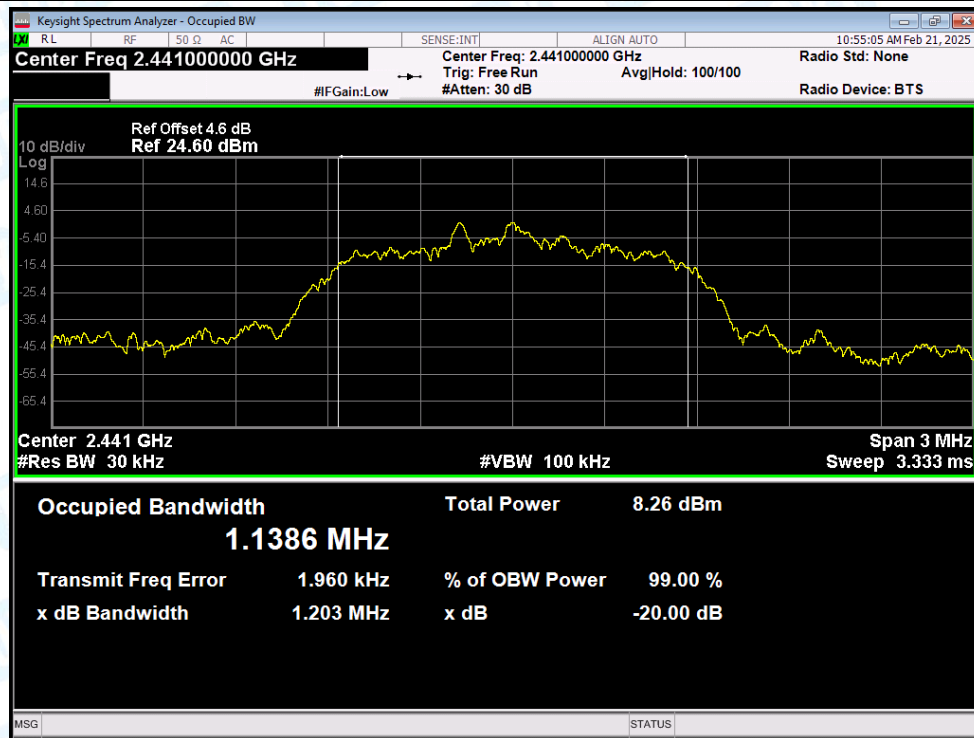
OBW NVNT 2-DH1 2480MHz Ant1

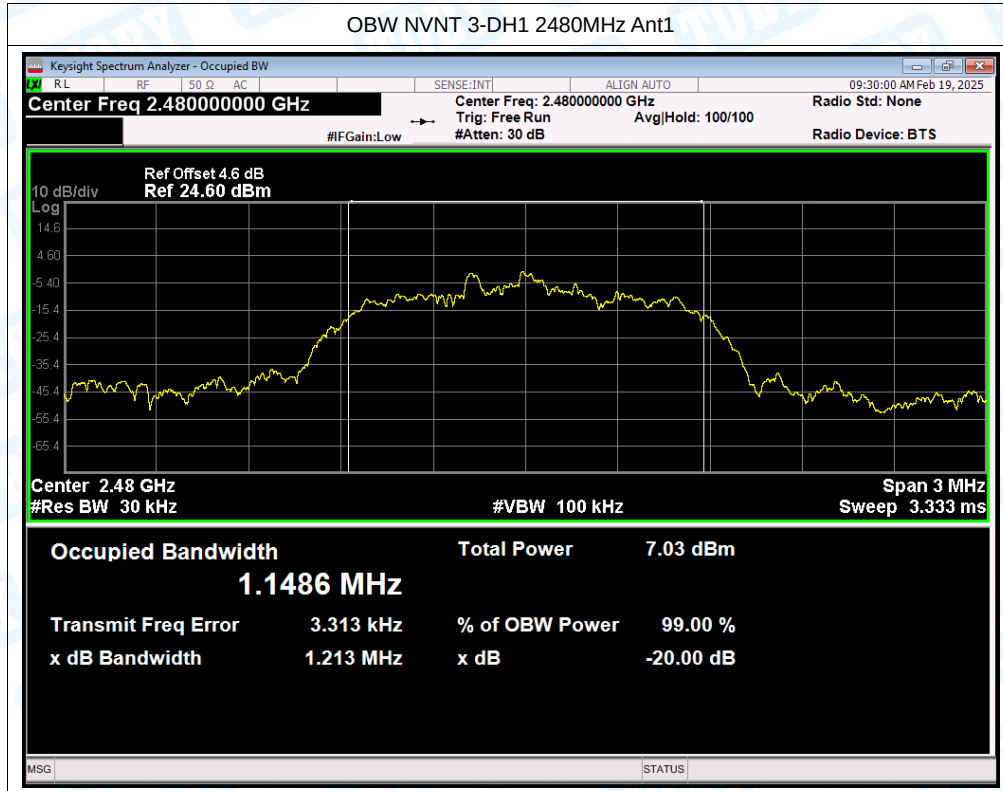


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



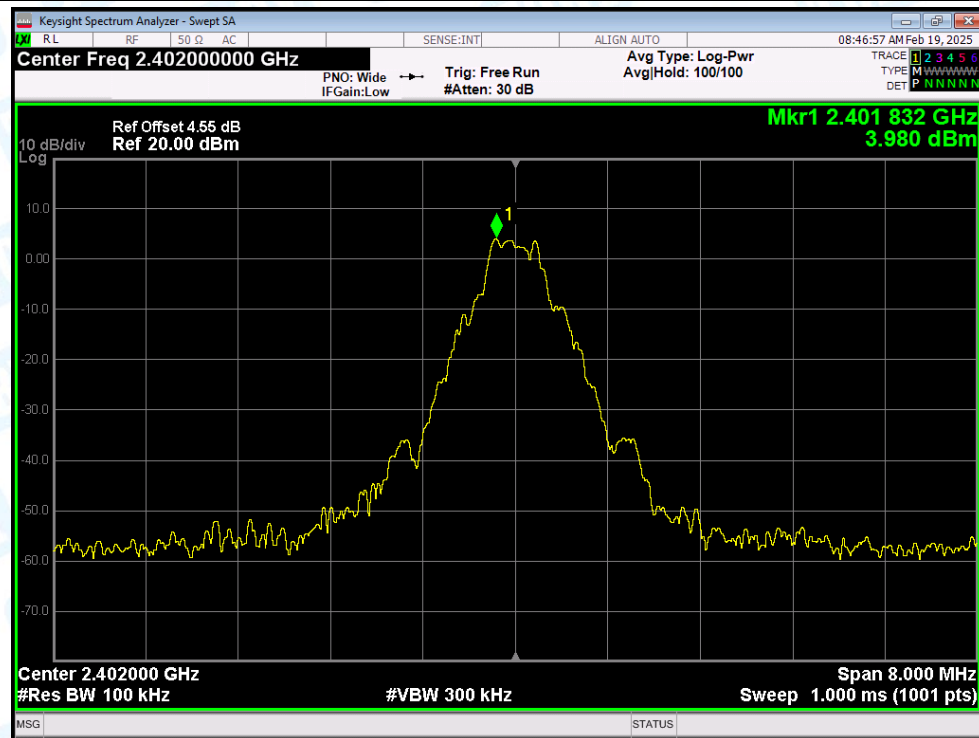


5. Band Edge

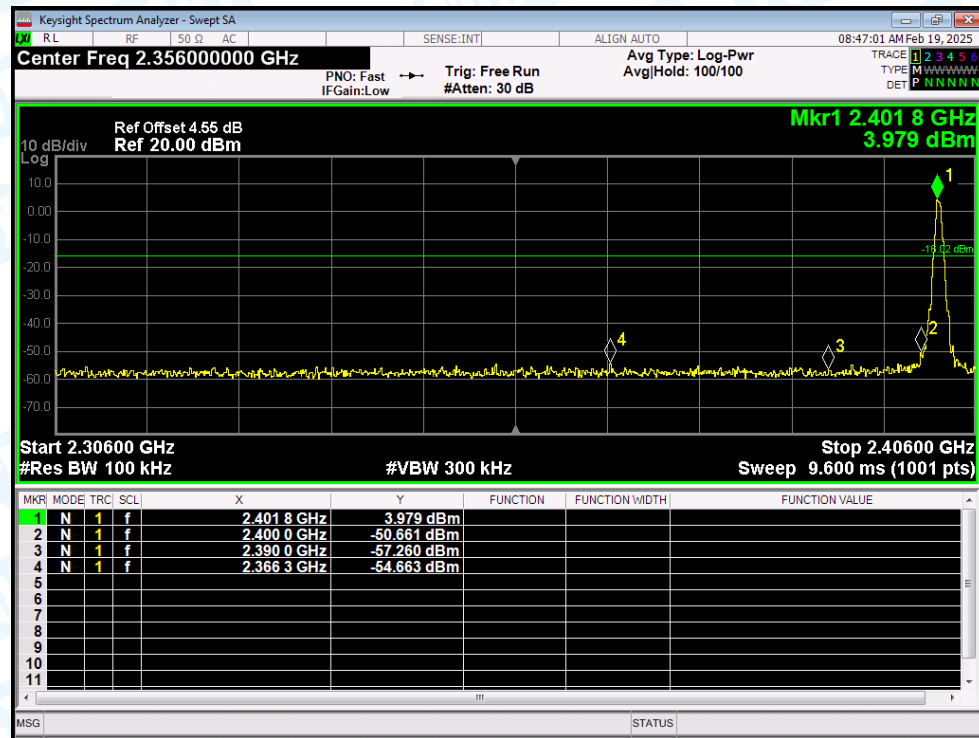
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-58.64	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-55.72	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-58.23	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-55.7	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-58.17	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-54.98	-20	Pass

Test Graphs

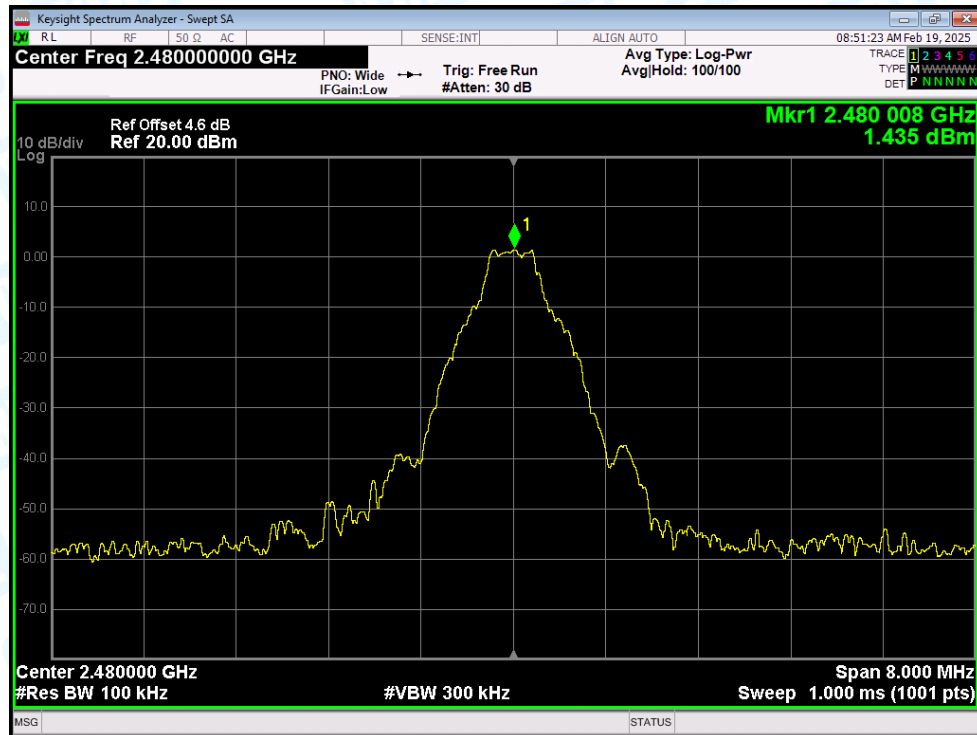
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



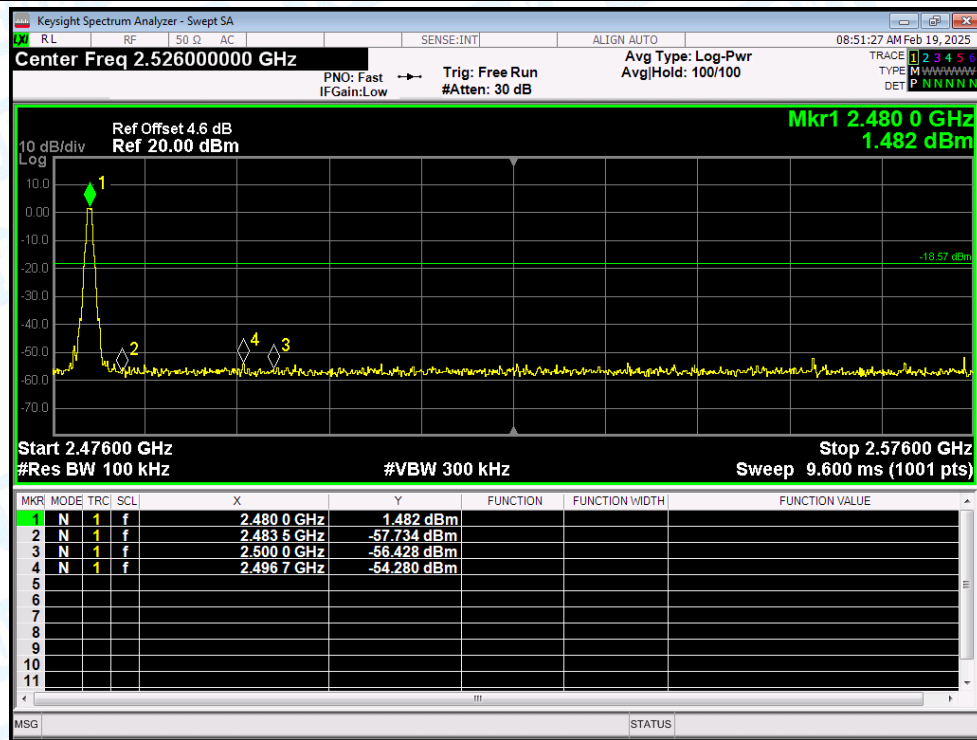
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission

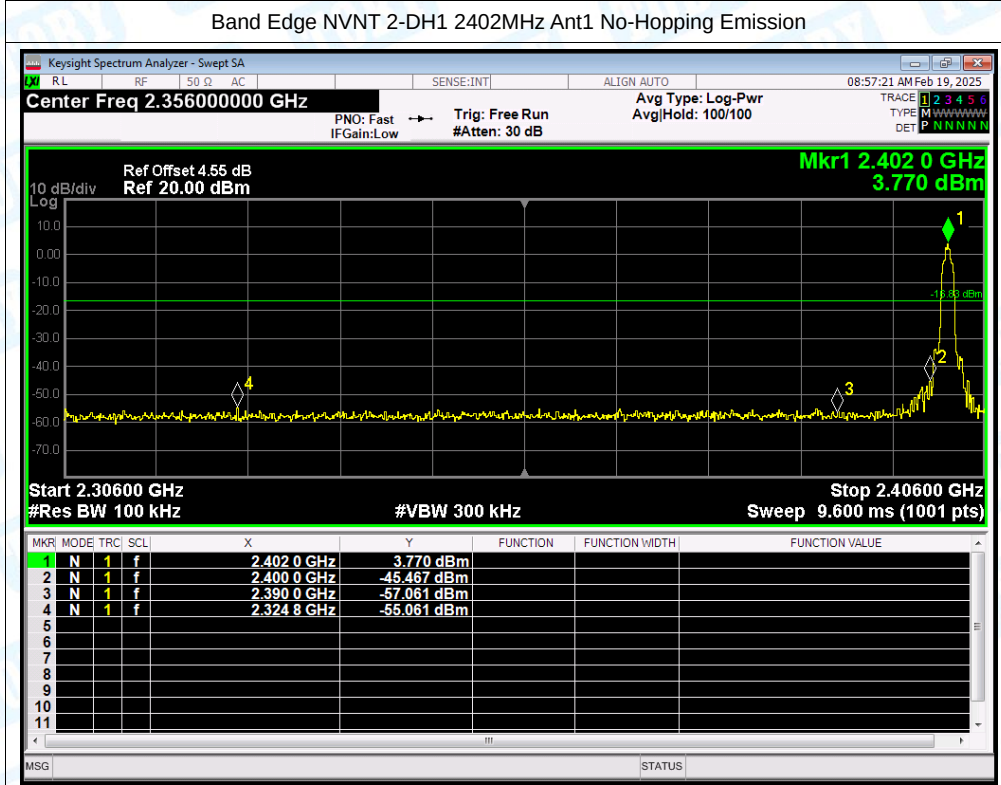
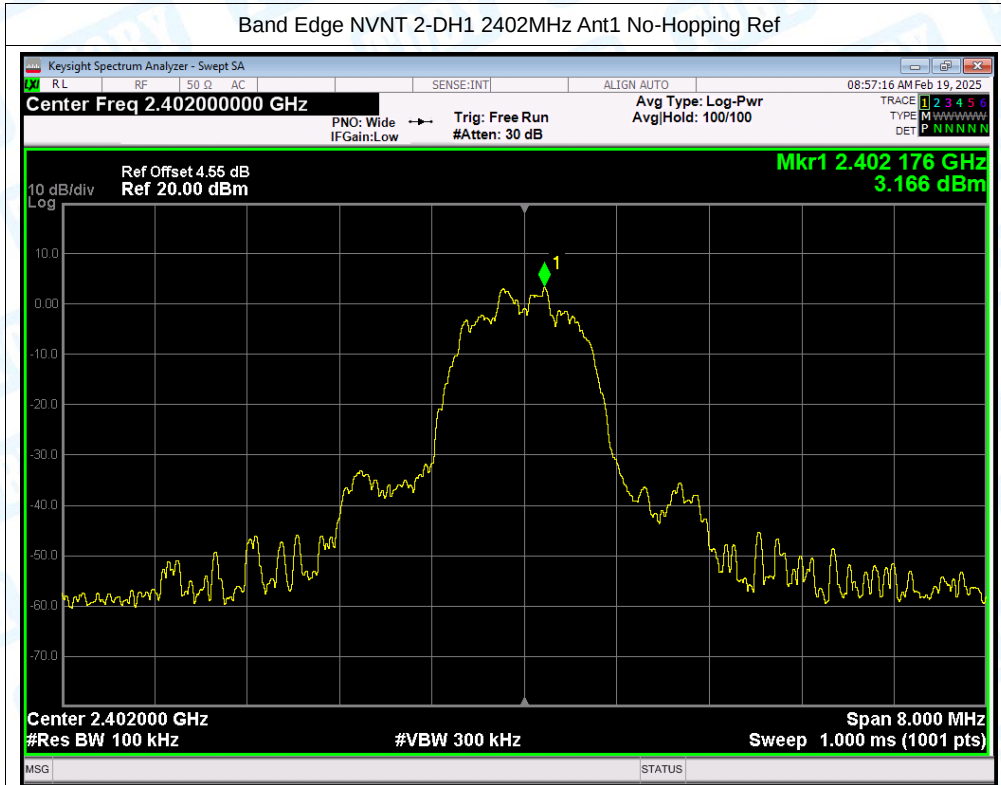


Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref

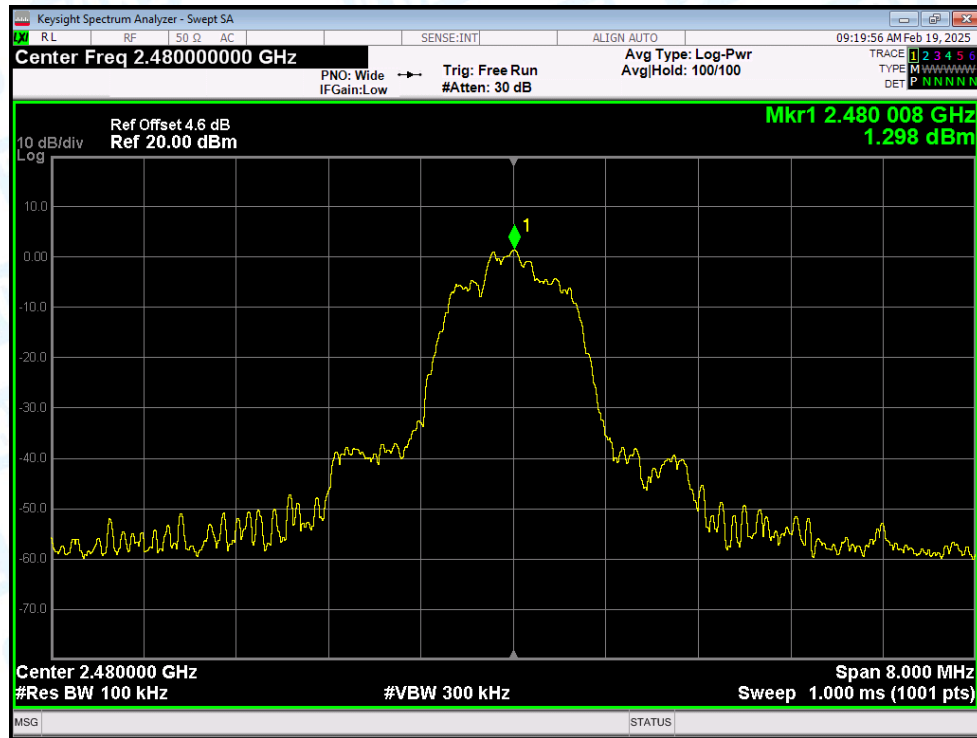


Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission

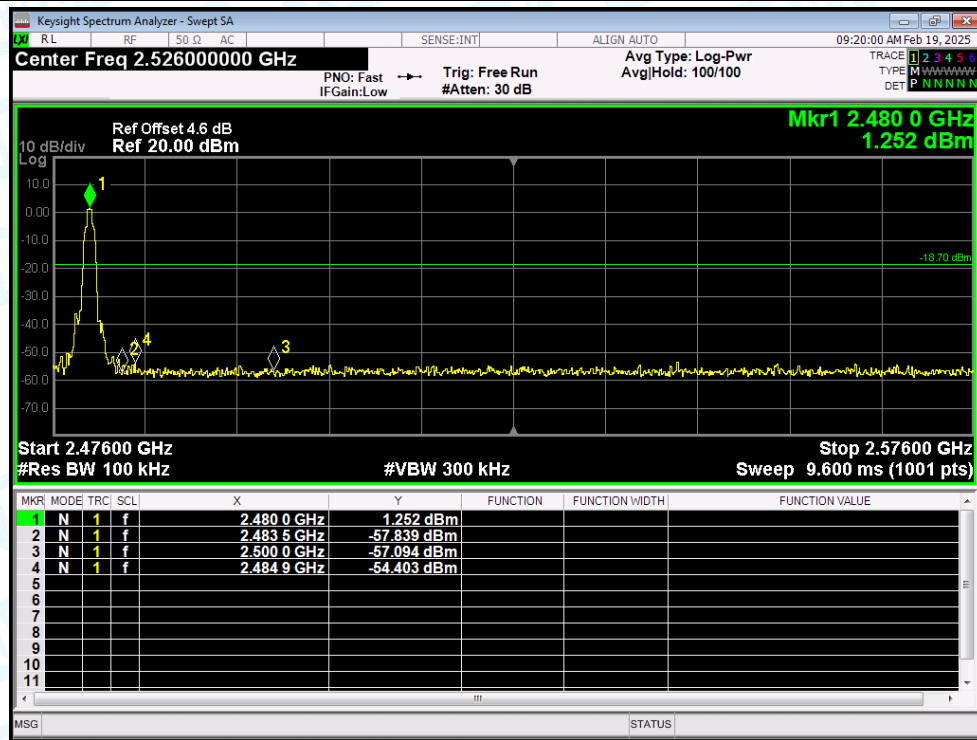




Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



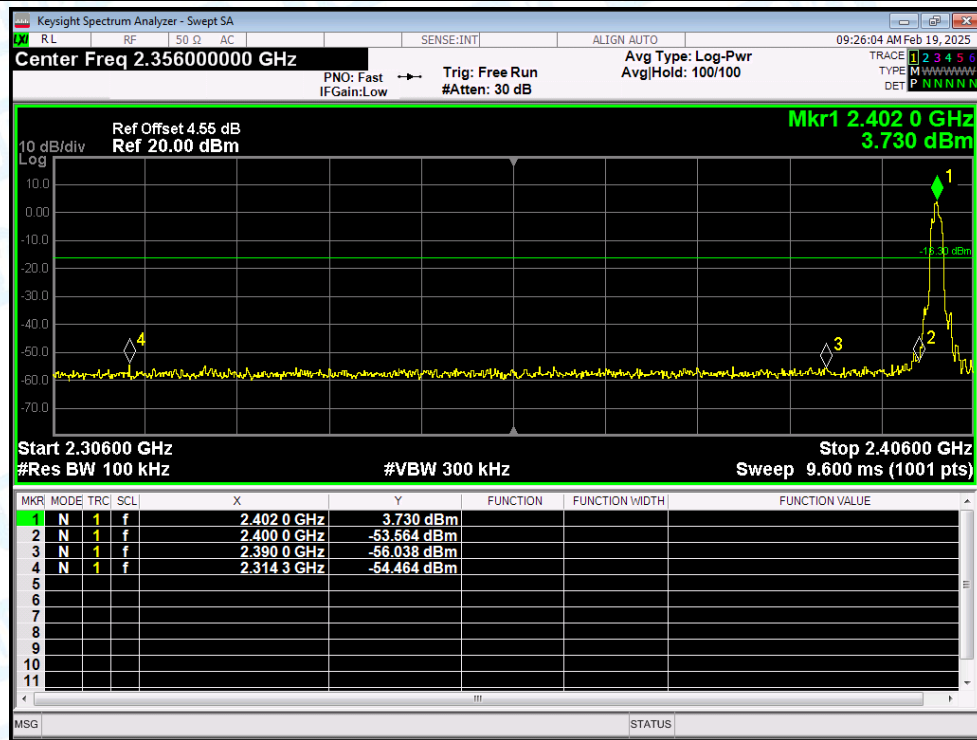
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



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



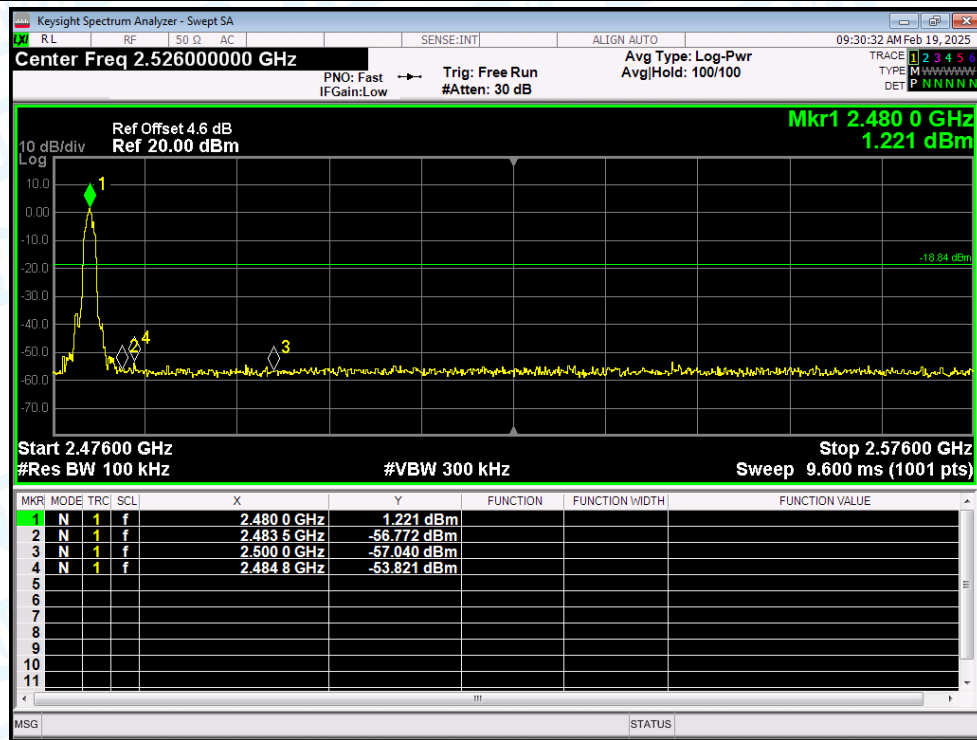
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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

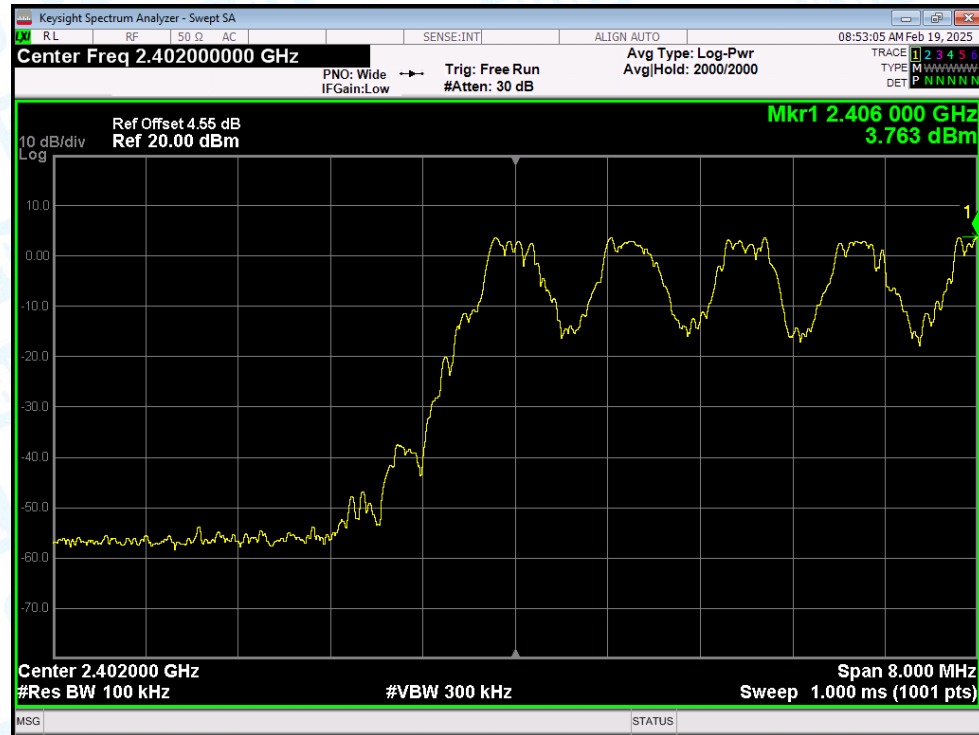


6. Band Edge(Hopping)

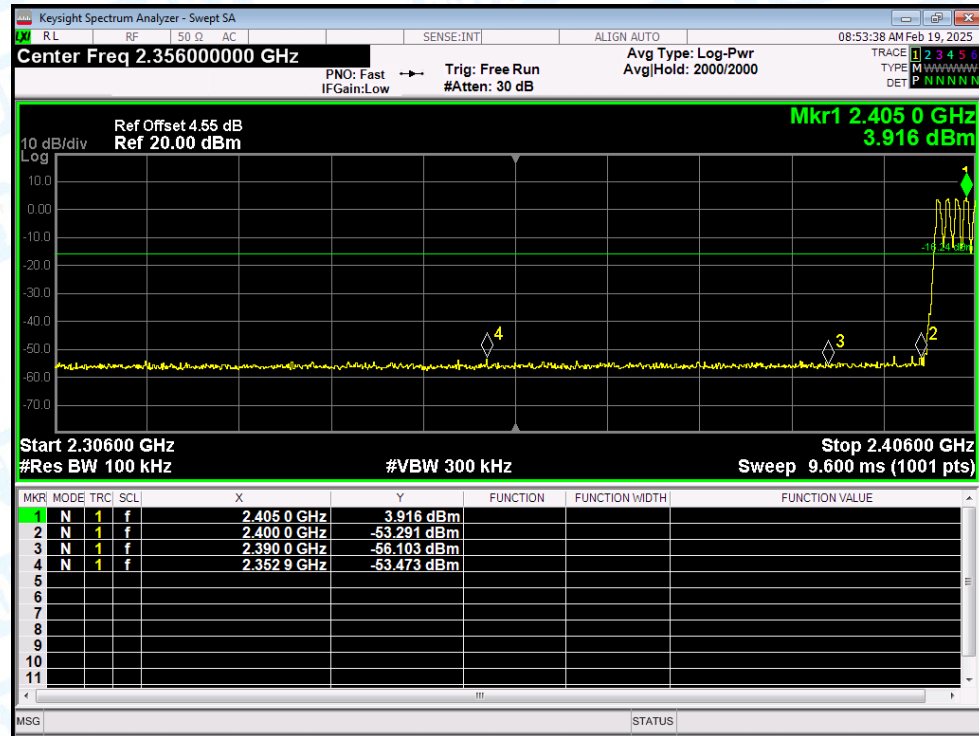
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-57.23	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-55.24	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-57.84	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-54.88	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-57.73	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-54.88	-20	Pass

Test Graphs

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



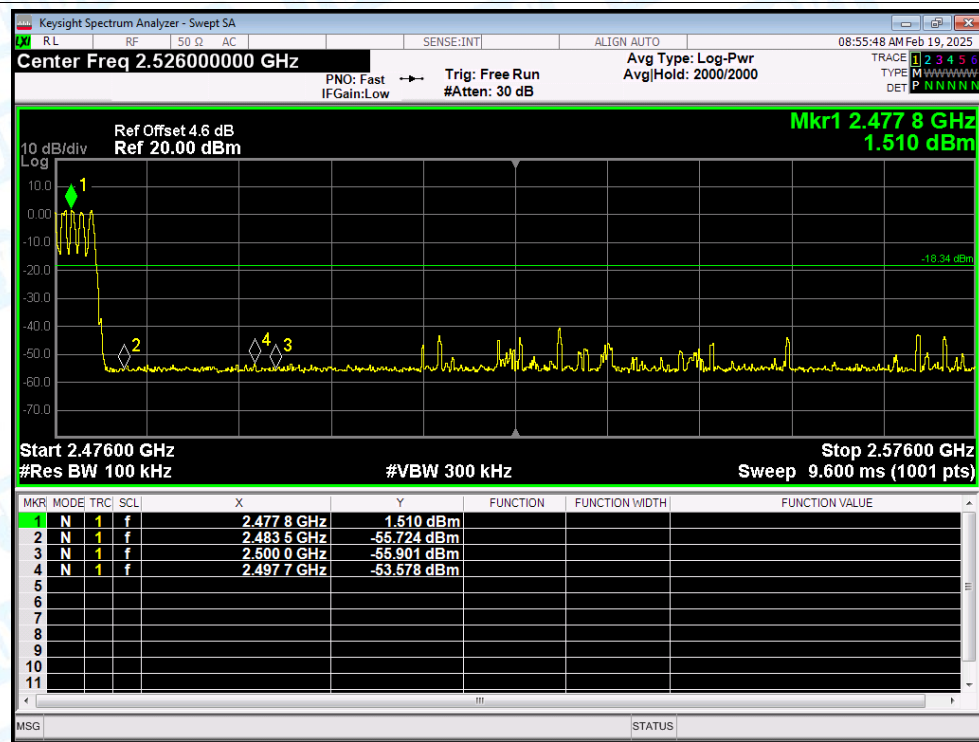
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission

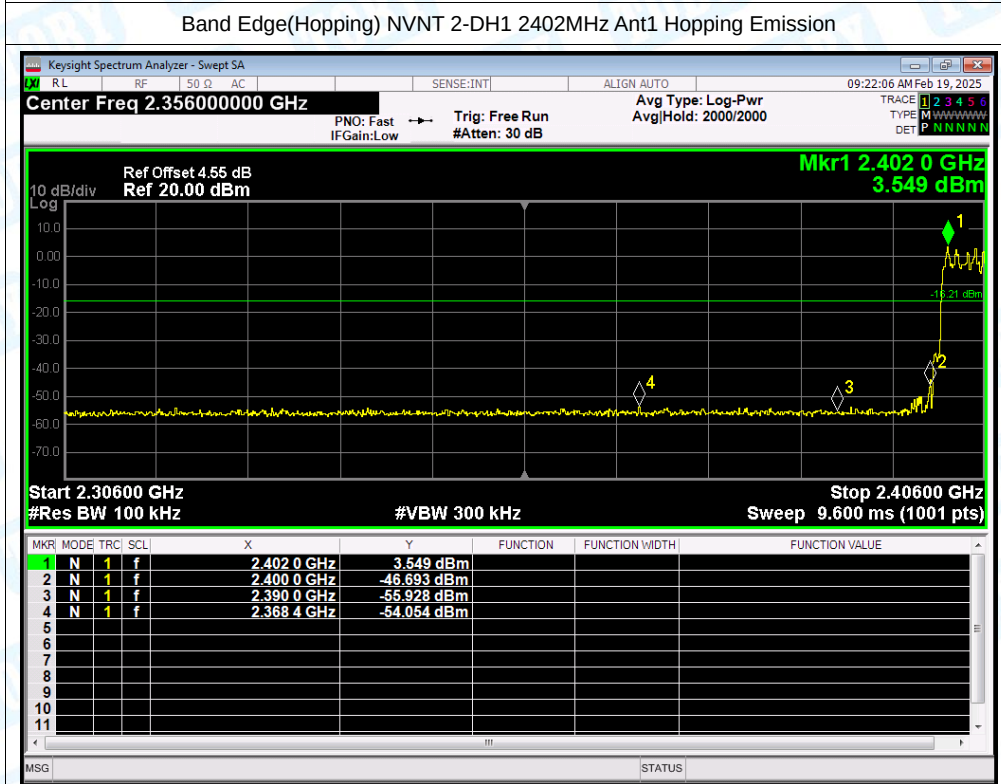
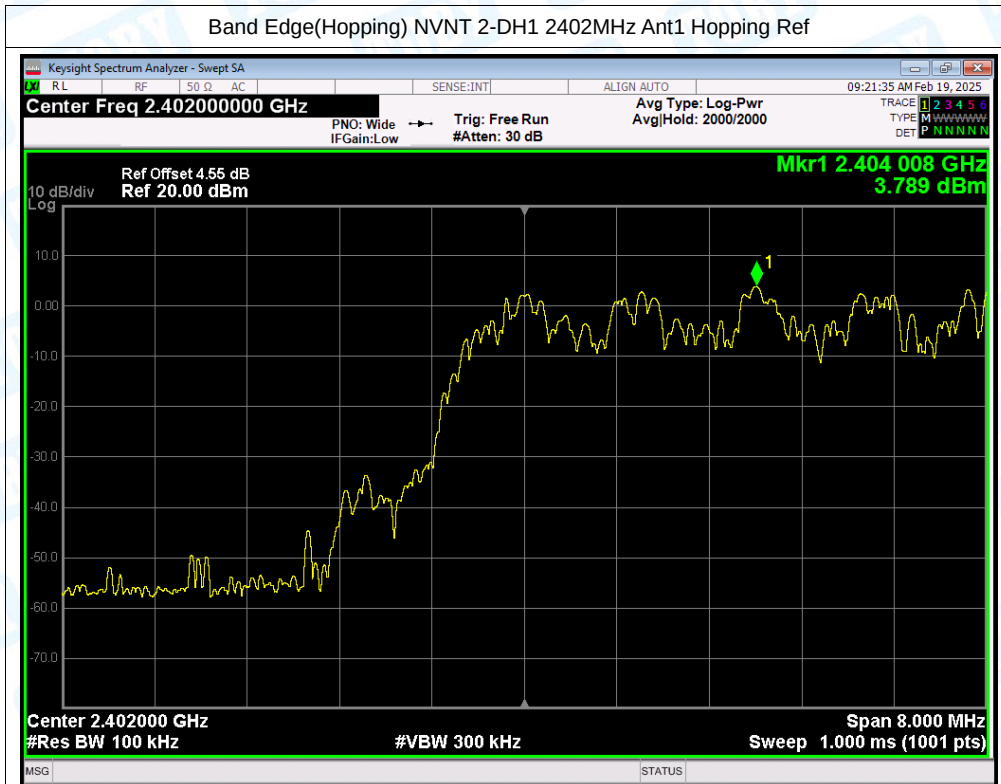


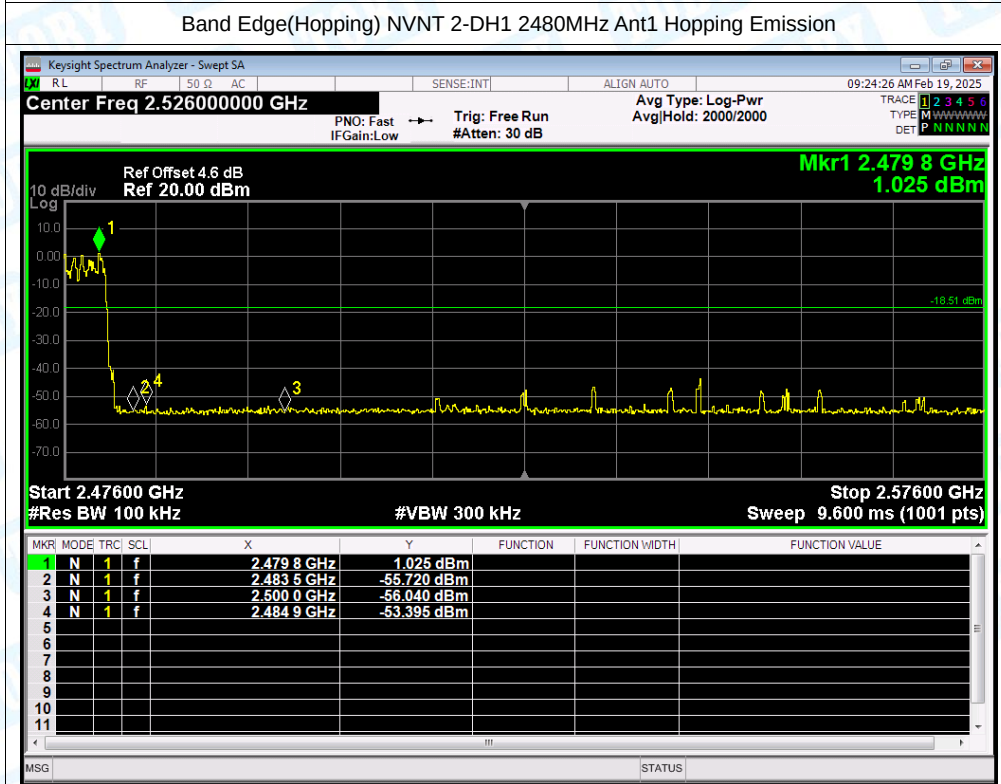
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref

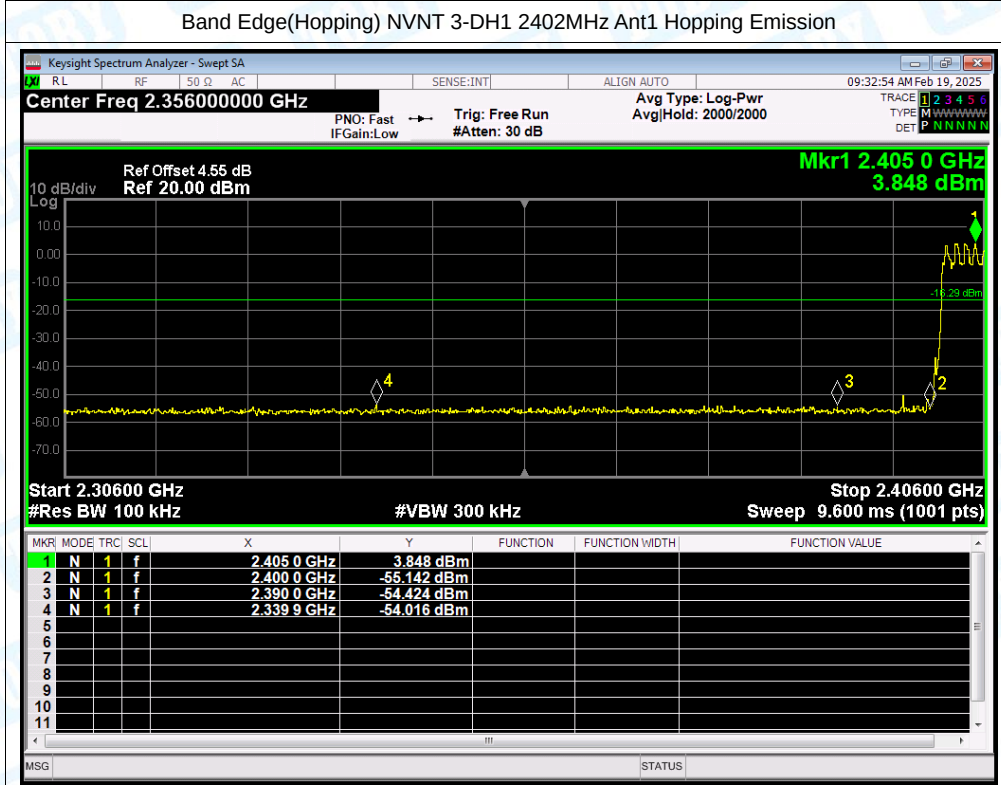
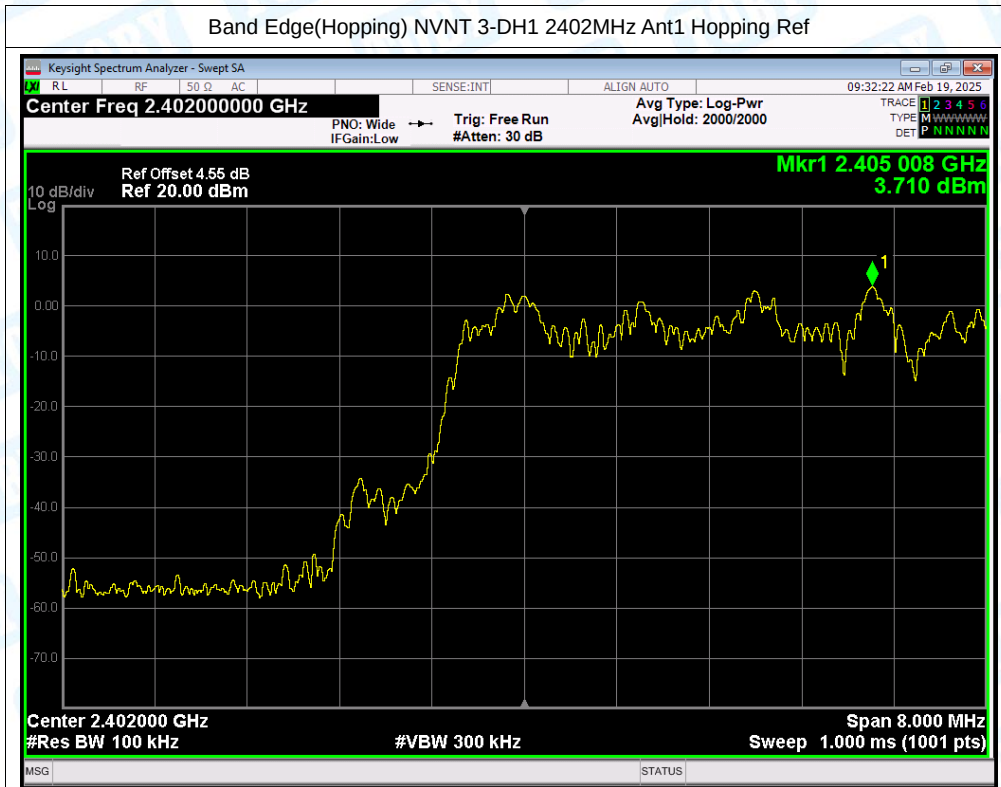


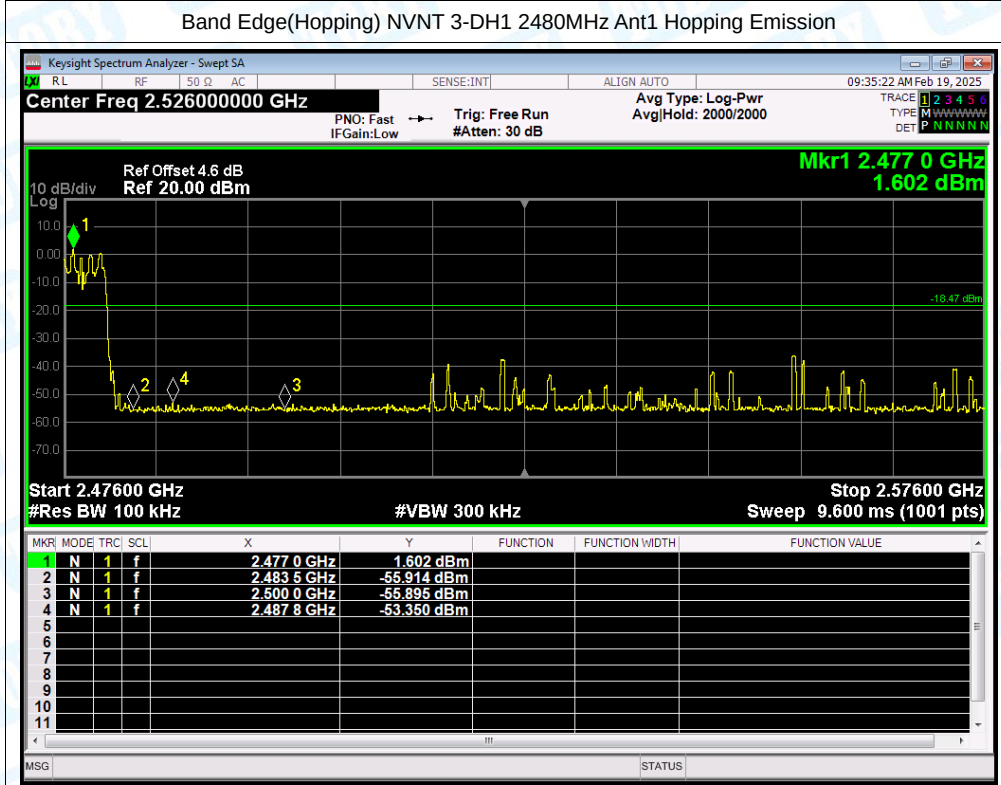
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission









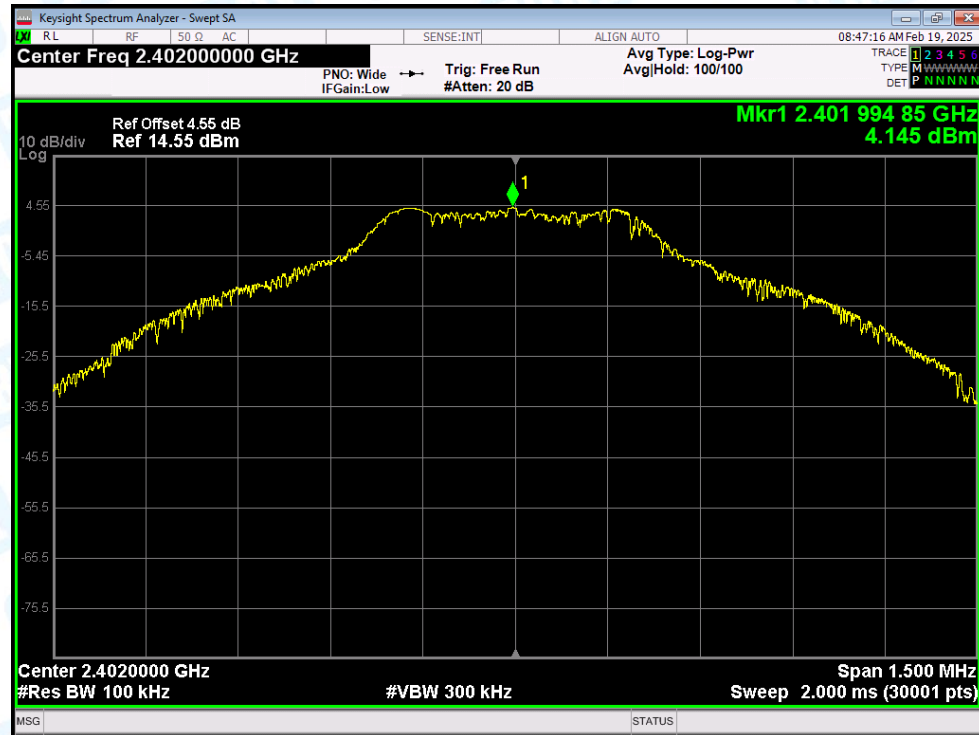


7. Conducted RF Spurious Emission

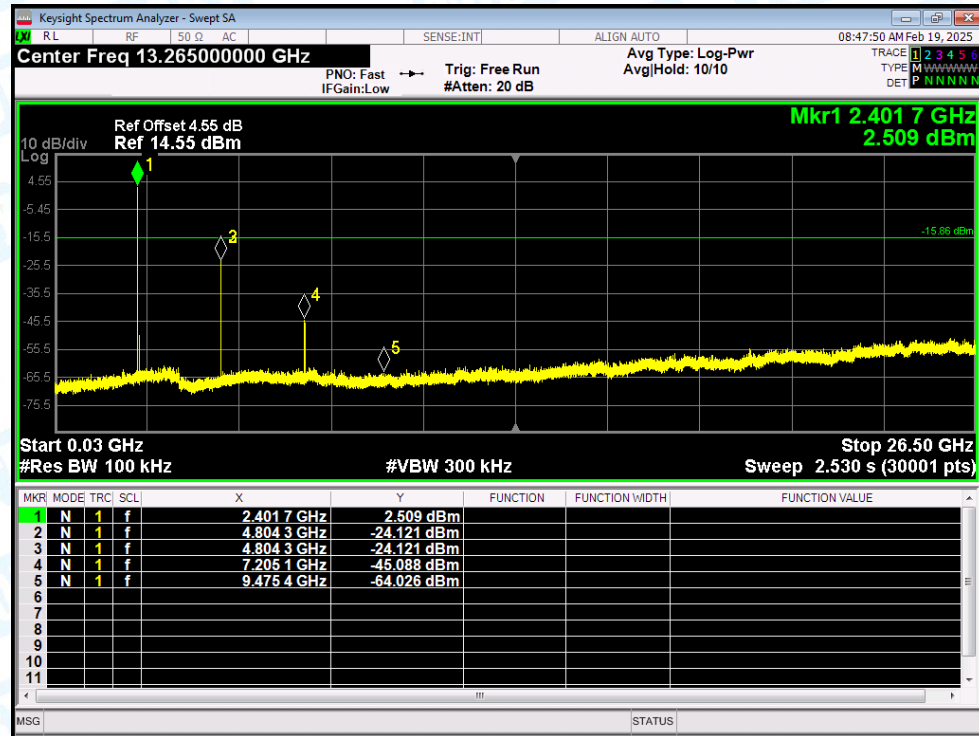
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-28.27	-20	Pass
NVNT	1-DH1	2441	Ant1	-23.94	-20	Pass
NVNT	1-DH1	2480	Ant1	-22.29	-20	Pass
NVNT	2-DH1	2402	Ant1	-30.97	-20	Pass
NVNT	2-DH1	2441	Ant1	-26.3	-20	Pass
NVNT	2-DH1	2480	Ant1	-21.94	-20	Pass
NVNT	3-DH1	2402	Ant1	-29.45	-20	Pass
NVNT	3-DH1	2441	Ant1	-26.05	-20	Pass
NVNT	3-DH1	2480	Ant1	-21.53	-20	Pass

Test Graphs

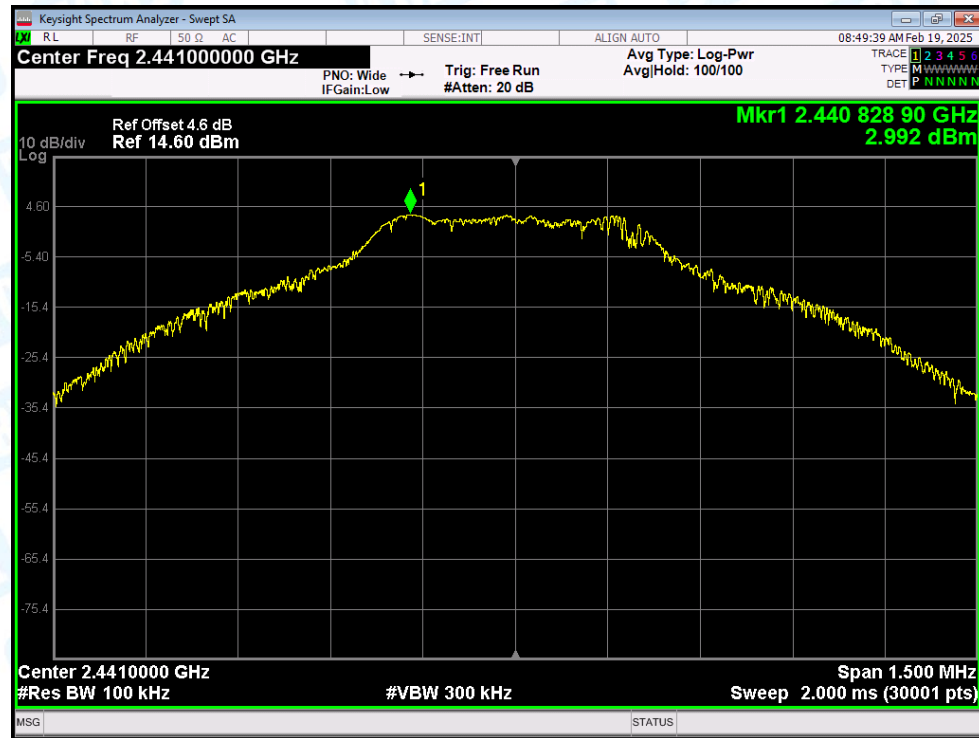
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



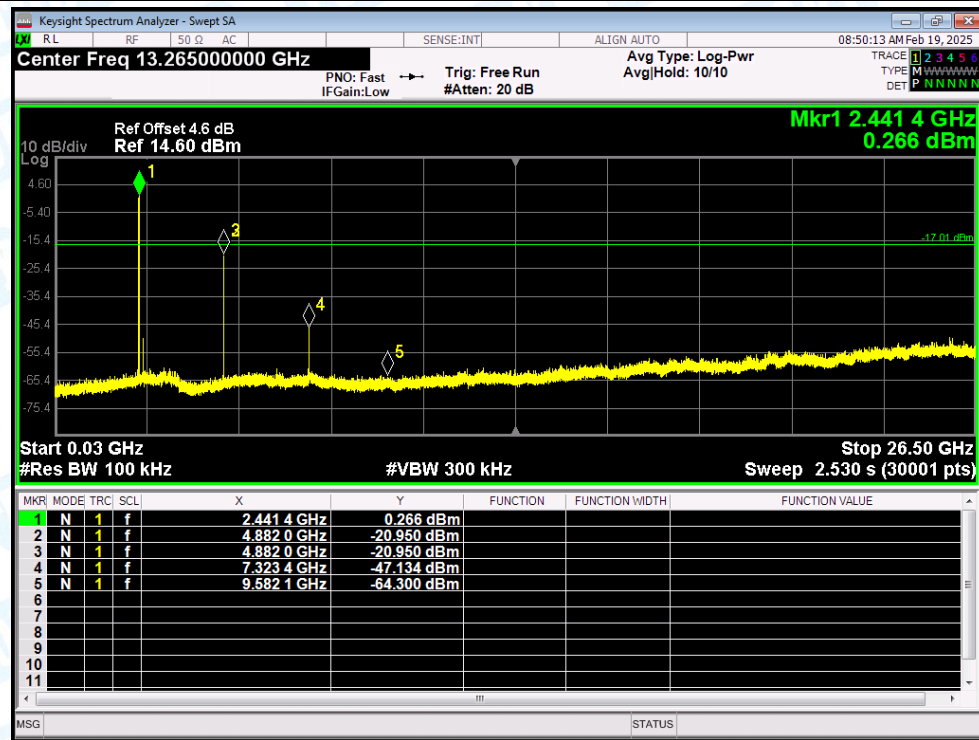
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



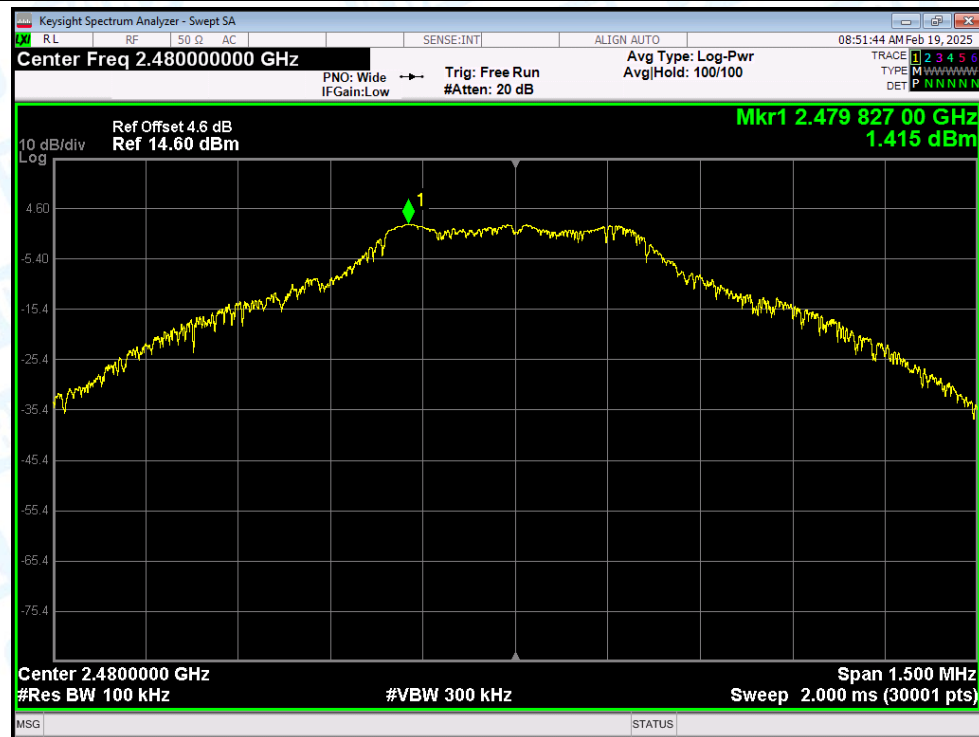
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



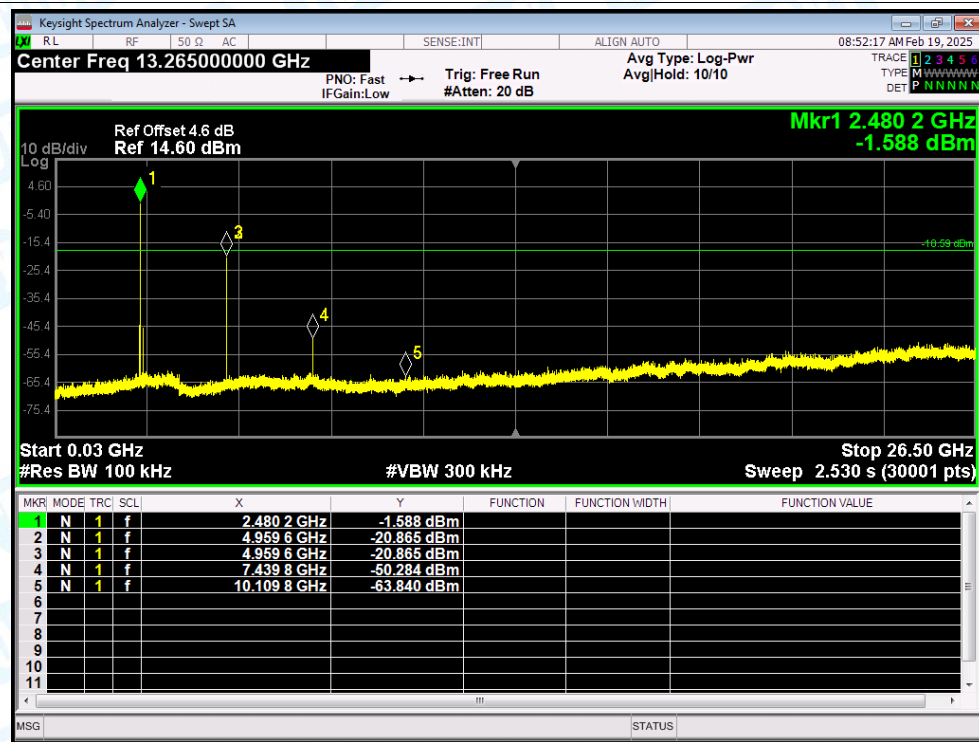
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



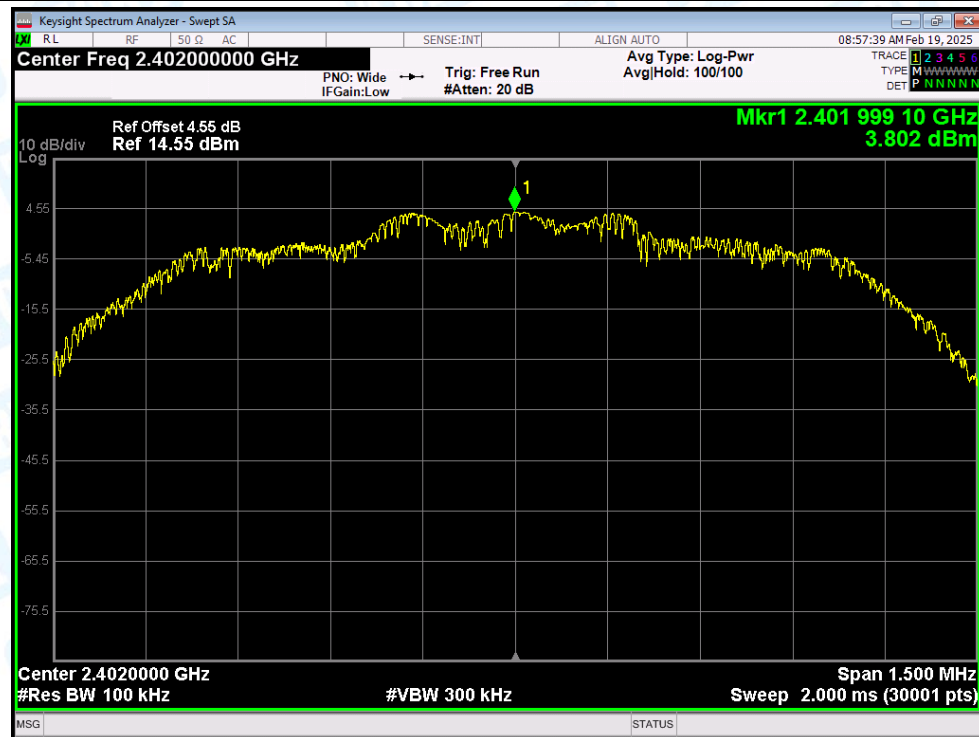
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



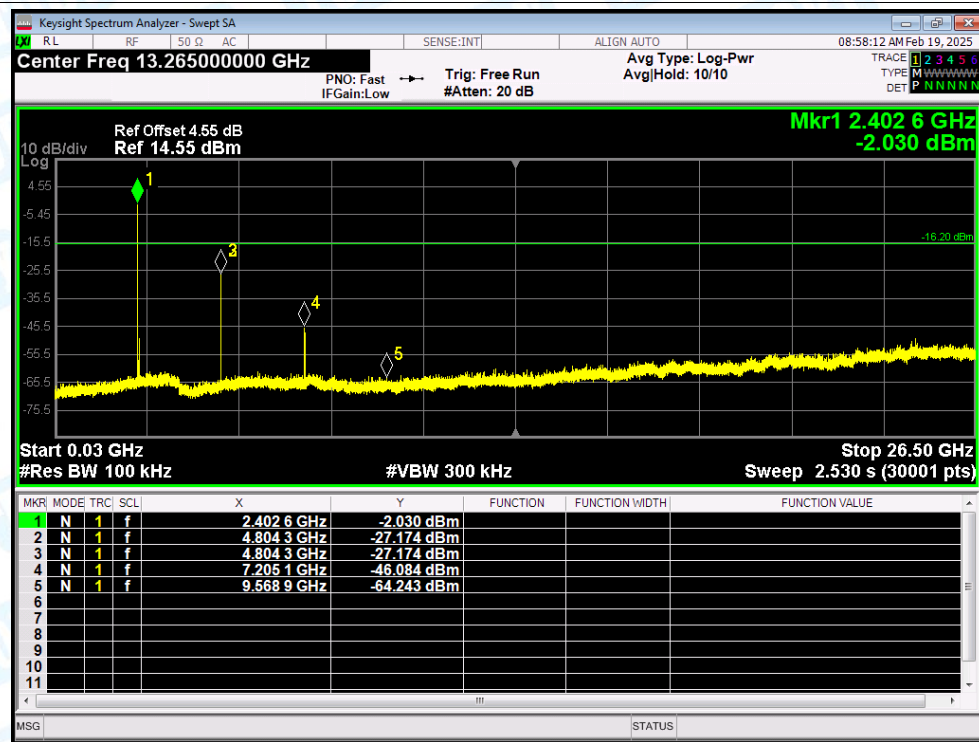
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



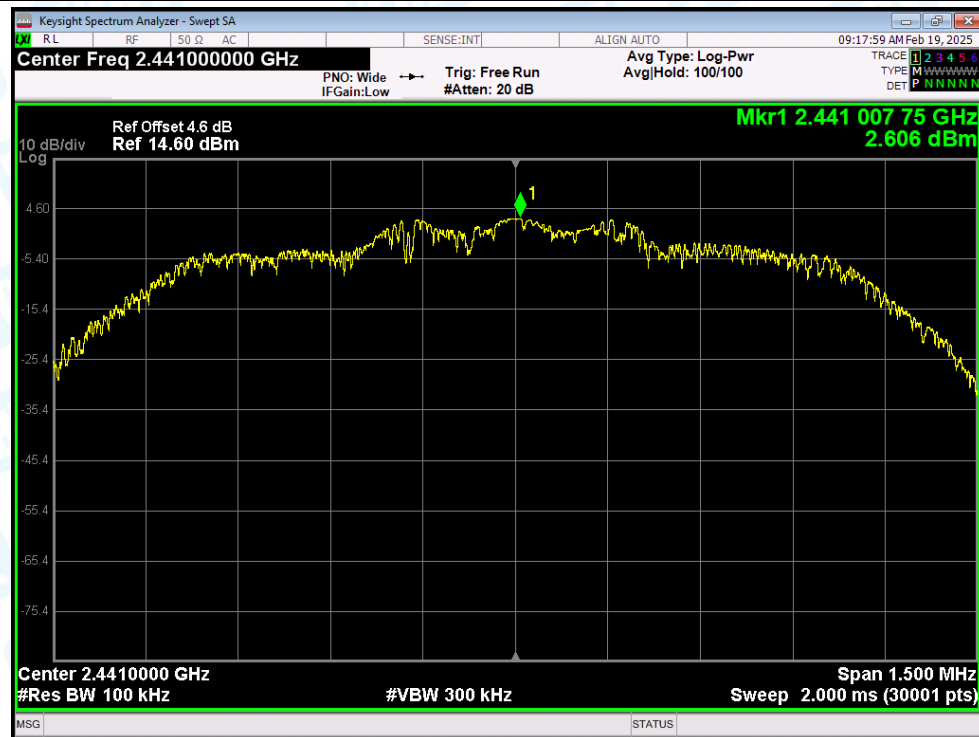
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



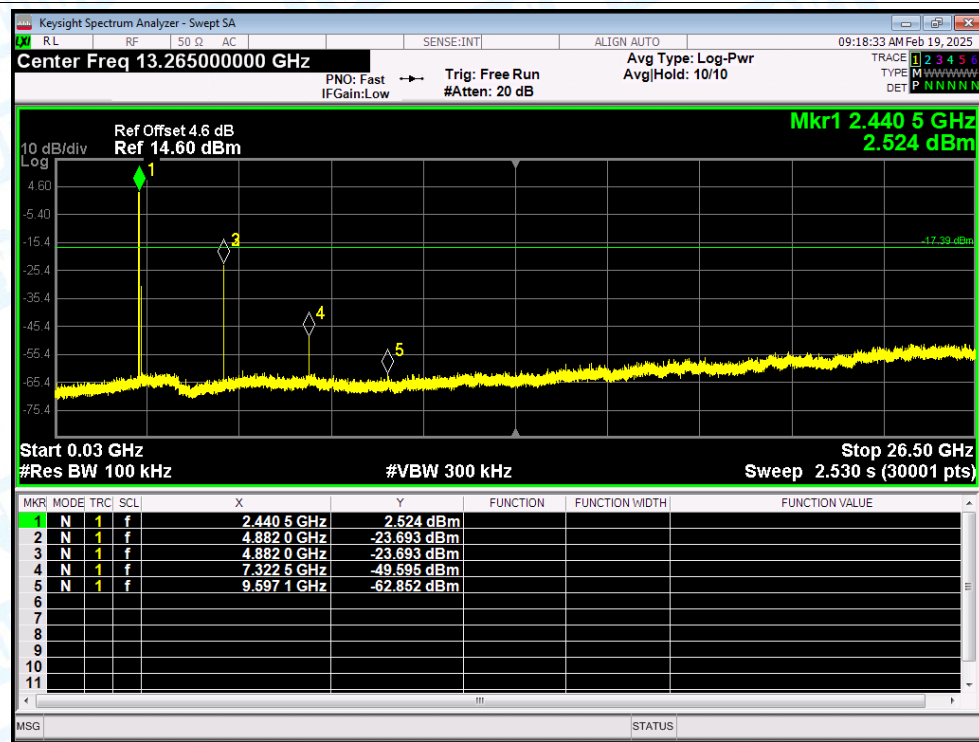
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



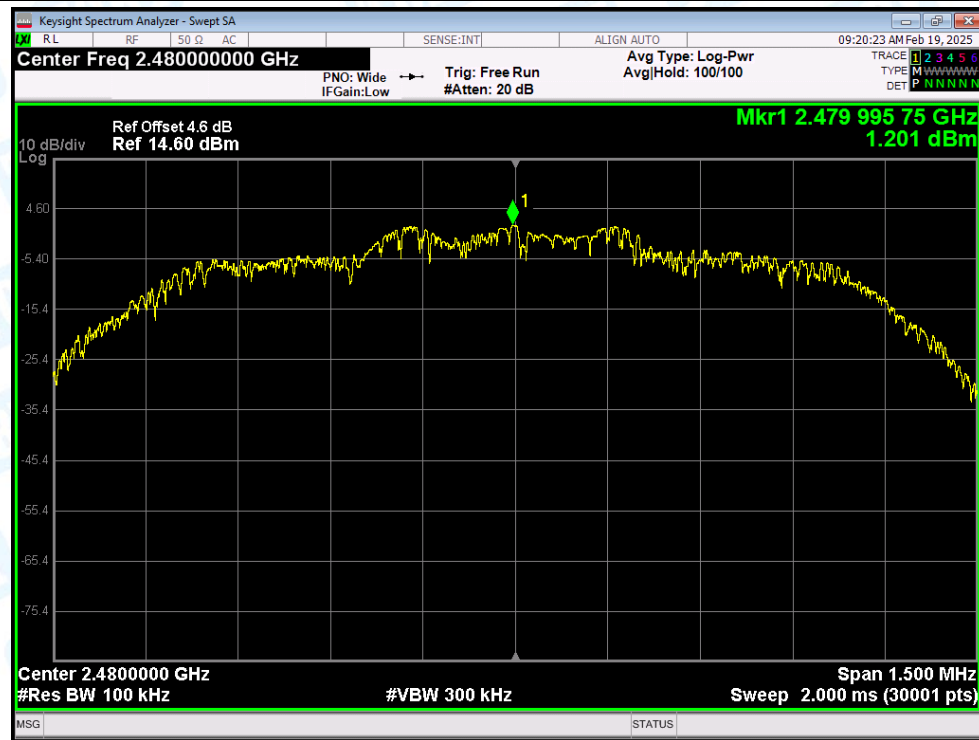
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



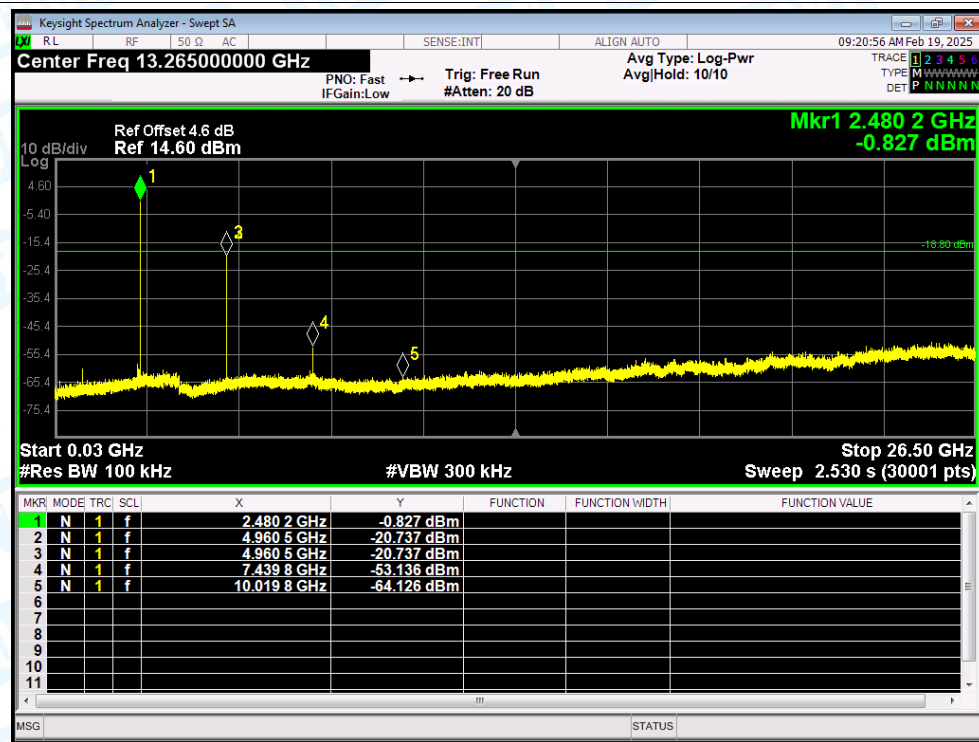
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



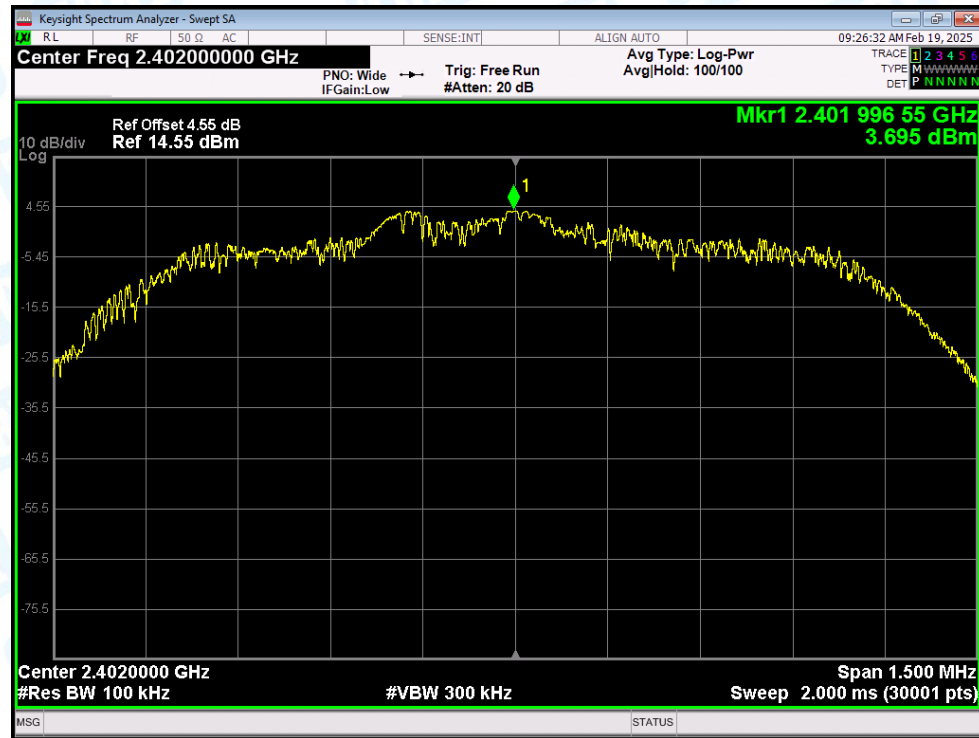
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



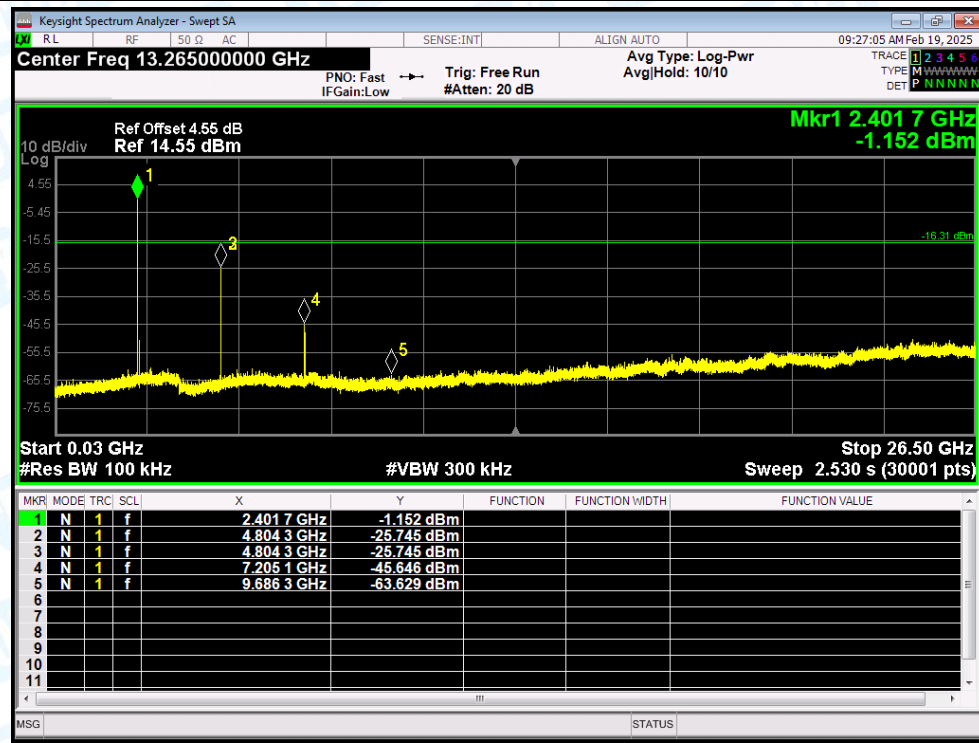
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



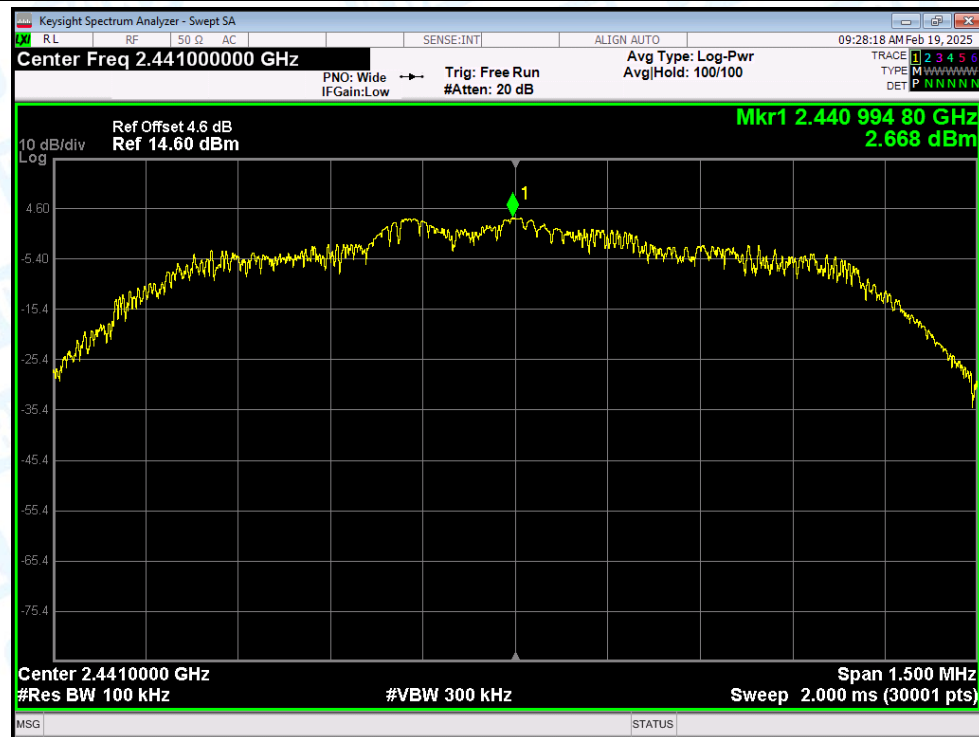
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



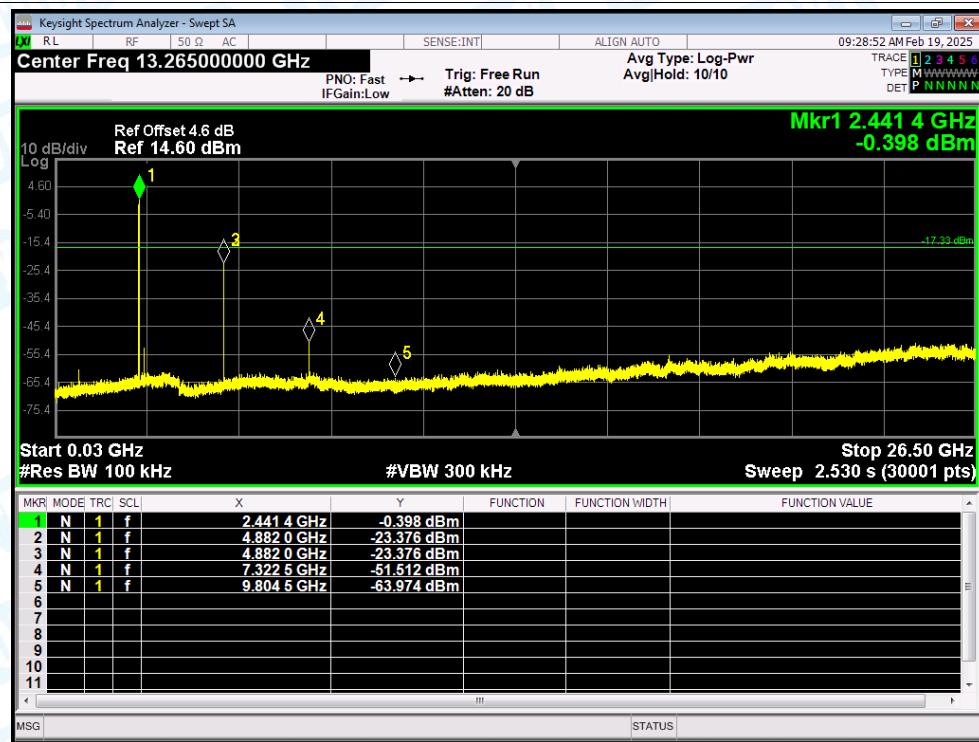
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



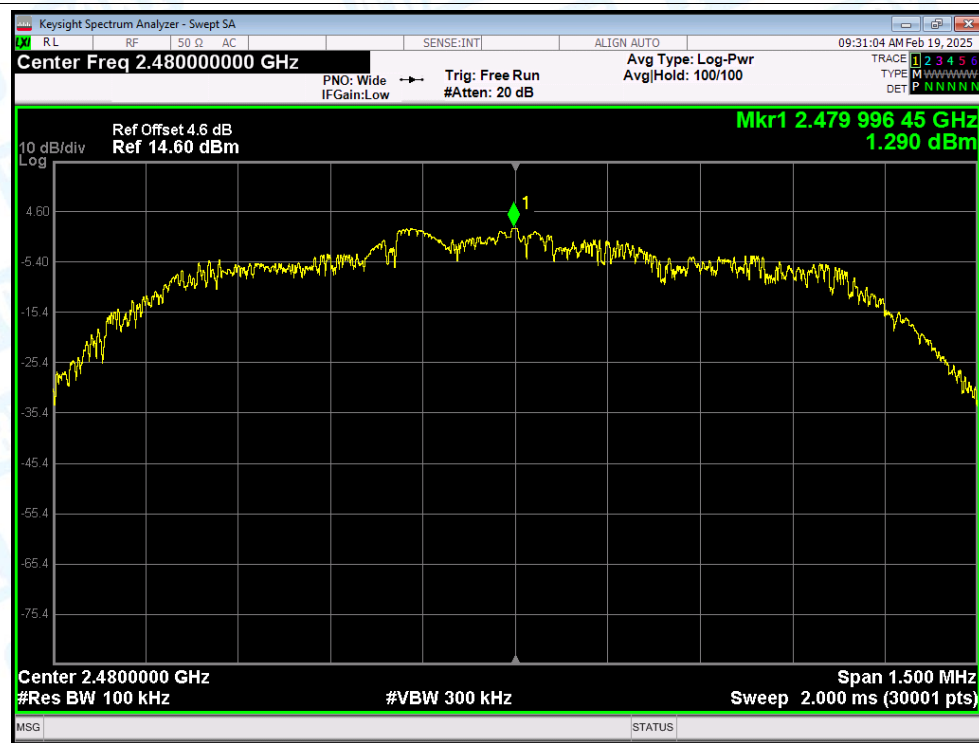
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



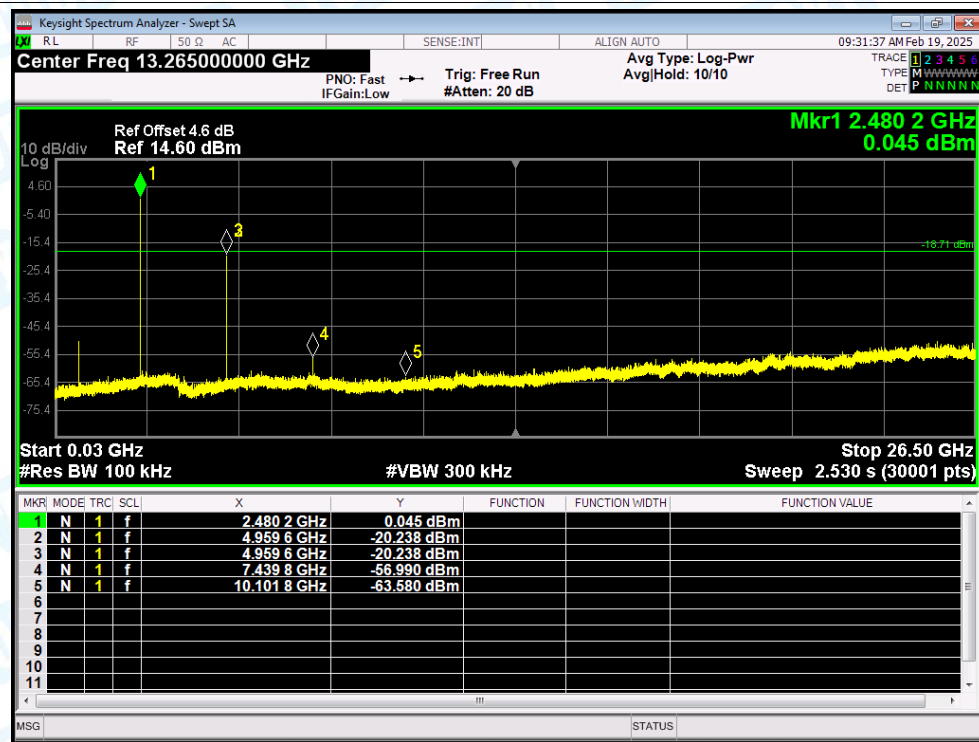
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

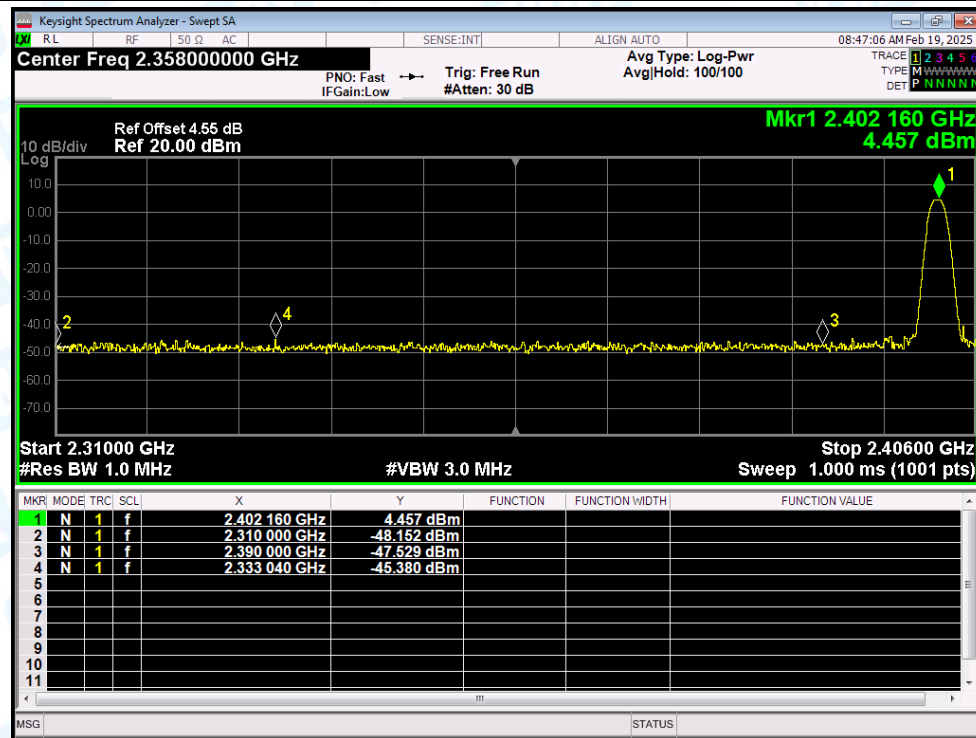


8. Restrict Band

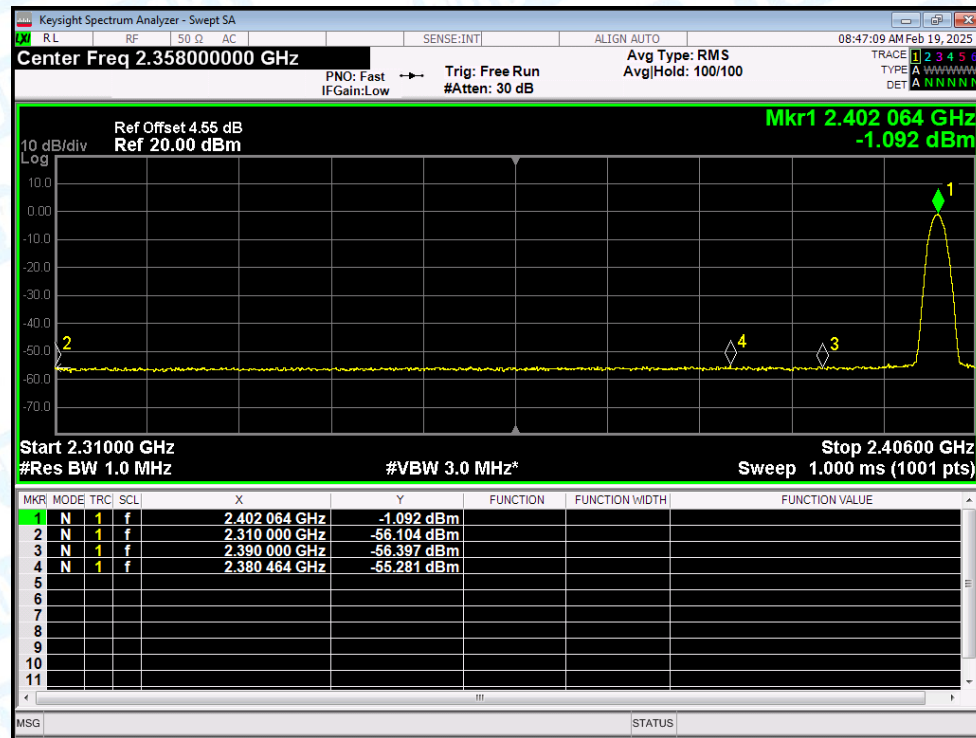
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-48.15	2.7	-	49.81	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-56.1	2.7	4.95	46.81	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2333.04	-45.38	2.7	-	52.58	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2380.464	-55.28	2.7	4.95	47.63	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-47.53	2.7	-	50.43	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-56.4	2.7	4.95	46.51	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-47.49	2.7	-	50.47	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-55.44	2.7	4.84	47.36	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2485.384	-43.93	2.7	-	54.03	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.968	-54.74	2.7	4.84	48.06	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-45.93	2.7	-	52.03	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-55.18	2.7	4.84	47.62	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-47.45	2.7	-	50.51	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.84	2.7	4.74	45.86	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2313.84	-45.61	2.7	-	52.35	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2362.608	-55.49	2.7	4.74	47.21	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-47.37	2.7	-	50.59	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-55.91	2.7	4.74	46.79	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-38.06	2.7	-	59.9	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-54.96	2.7	4.74	47.74	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.512	-38.06	2.7	-	59.9	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2499.16	-54.53	2.7	4.74	48.17	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-44.72	2.7	-	53.24	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-55.74	2.7	4.74	46.96	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-48.72	2.7	-	49.24	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-56.47	2.7	4.74	46.23	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2314.608	-45.52	2.7	-	52.44	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2360.88	-55.37	2.7	4.74	47.33	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-47.99	2.7	-	49.97	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-56.39	2.7	4.74	46.31	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-48.11	2.7	-	49.85	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-55.41	2.7	4.74	47.29	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.56	-40.77	2.7	-	57.19	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2484.64	-54.83	2.7	4.74	47.87	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-47.38	2.7	-	50.58	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-55.6	2.7	4.74	47.1	Average	54	Pass

Test Graphs

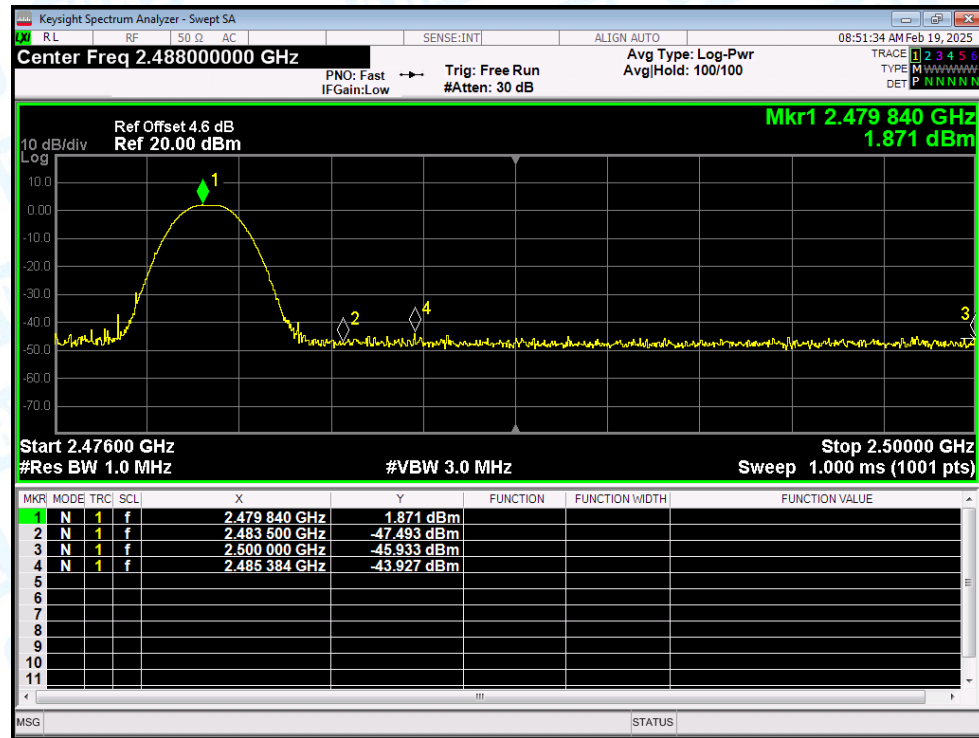
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



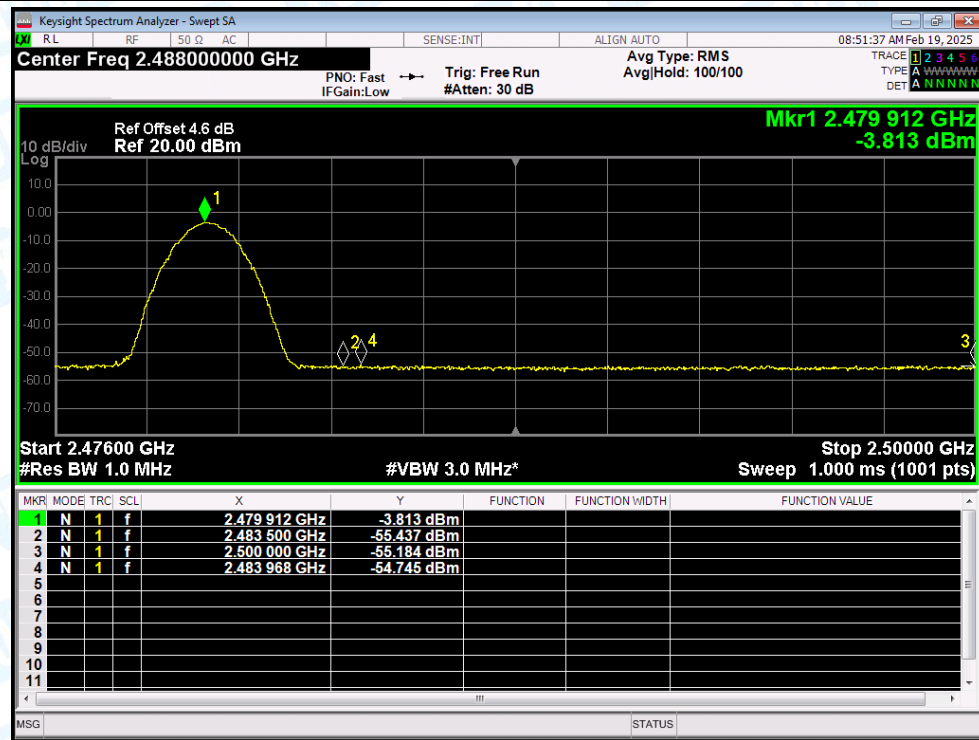
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



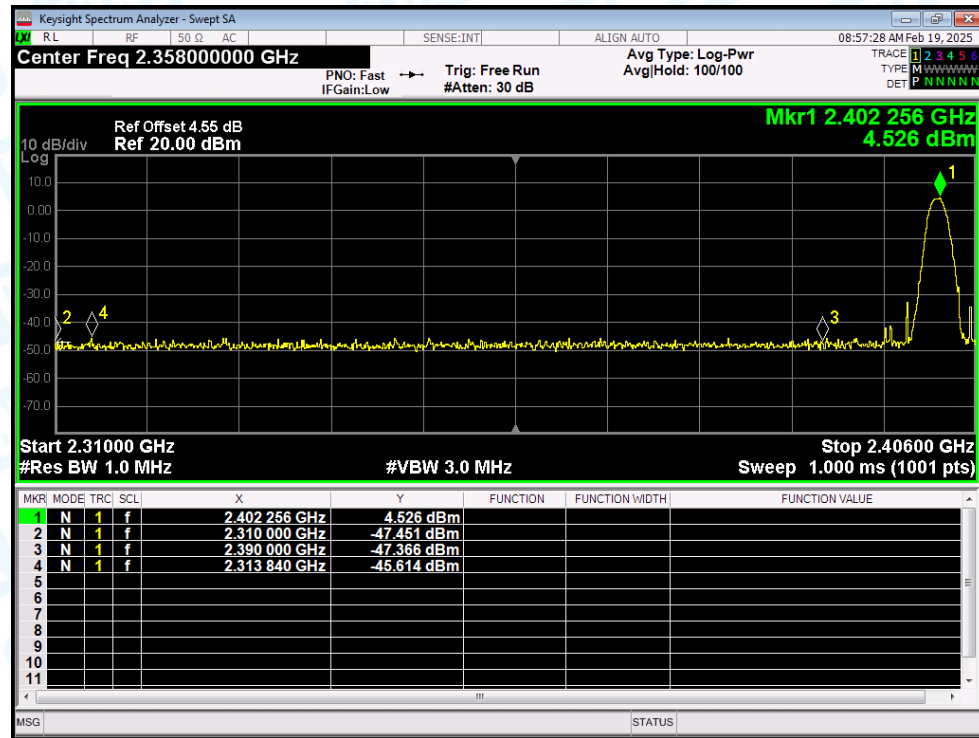
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



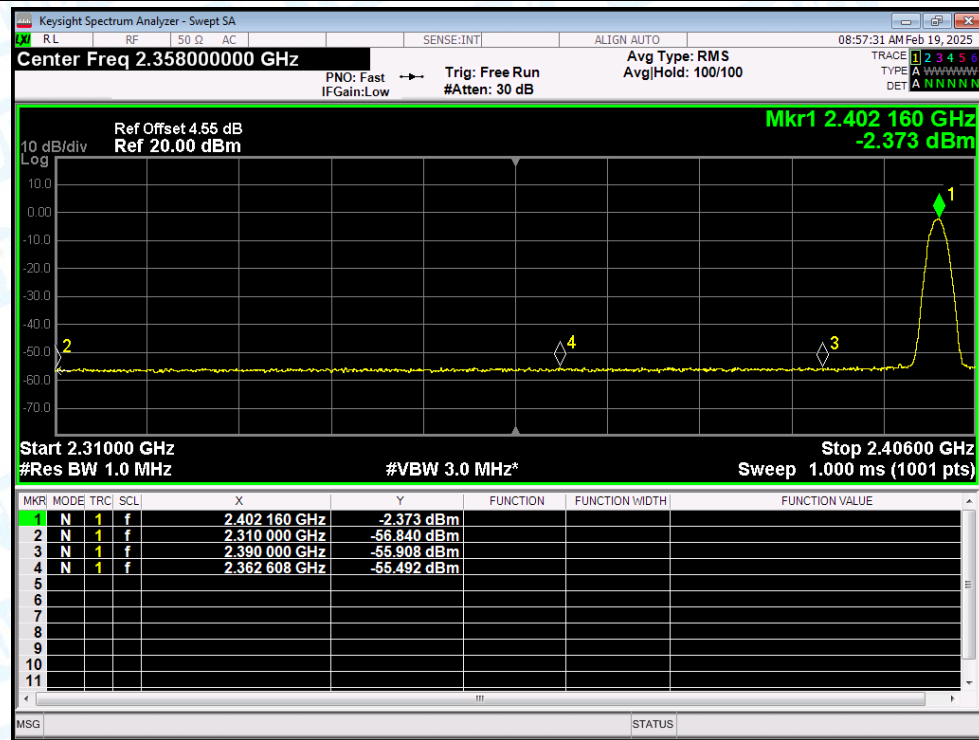
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



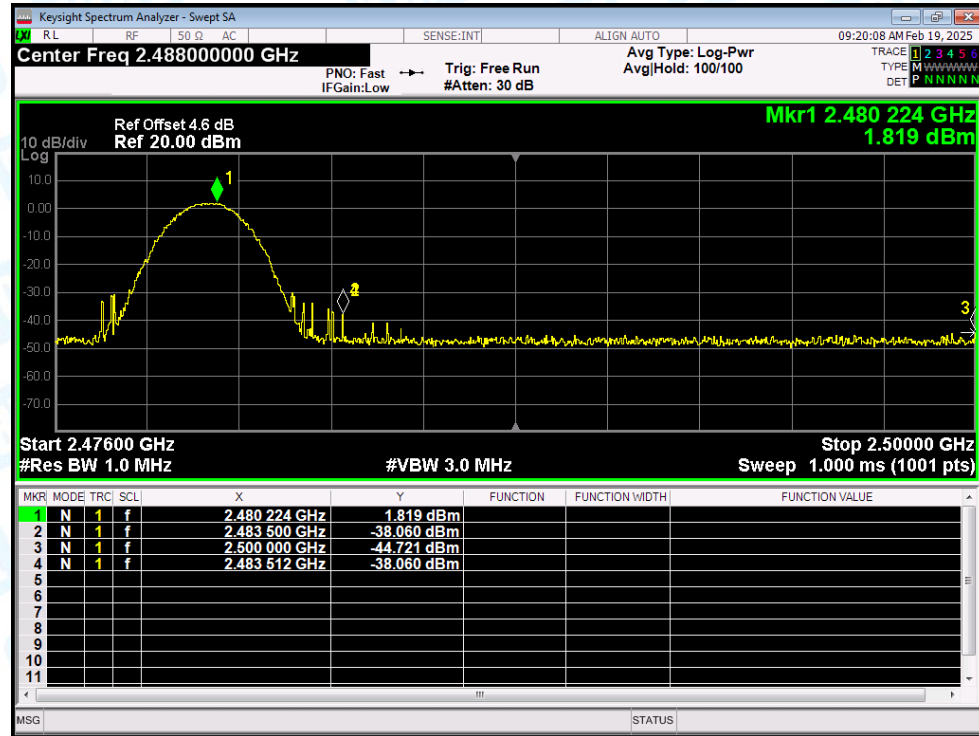
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



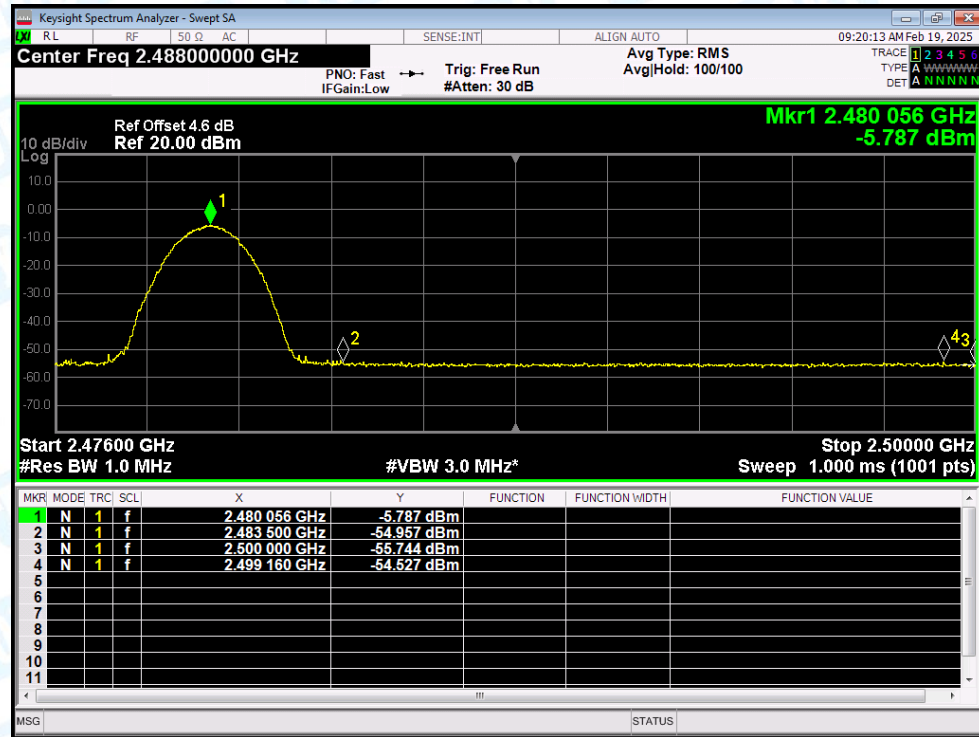
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



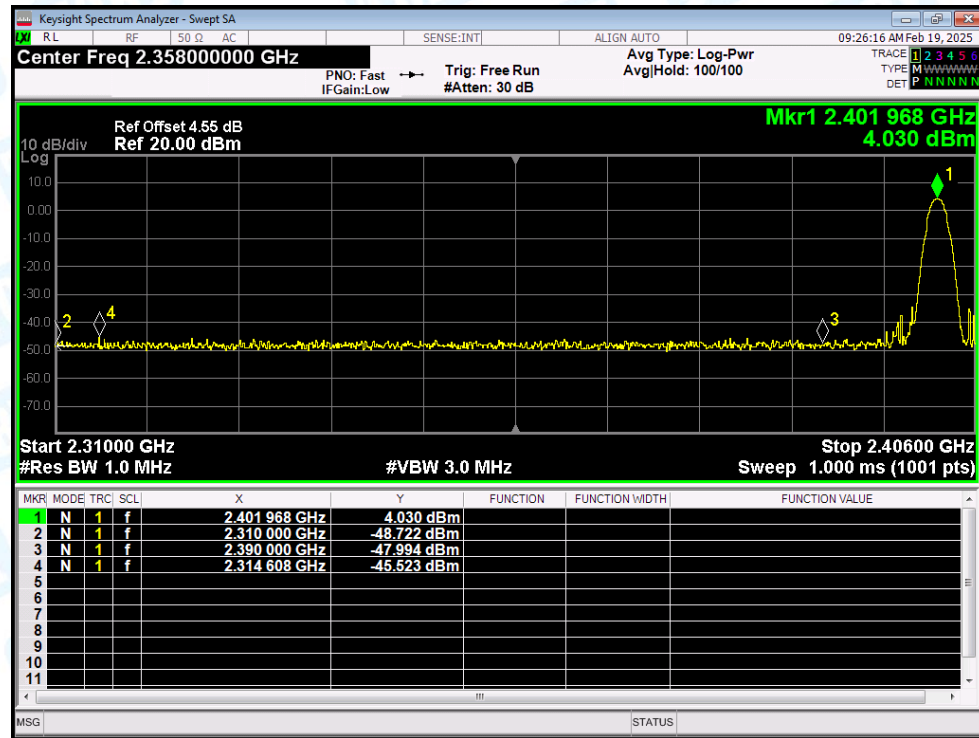
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



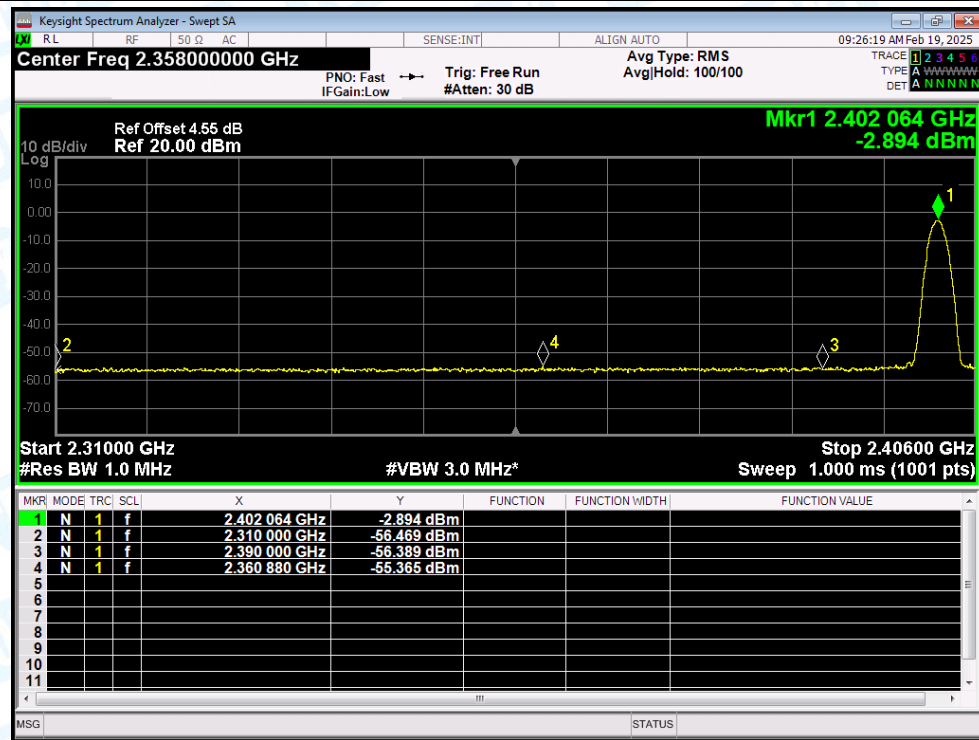
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



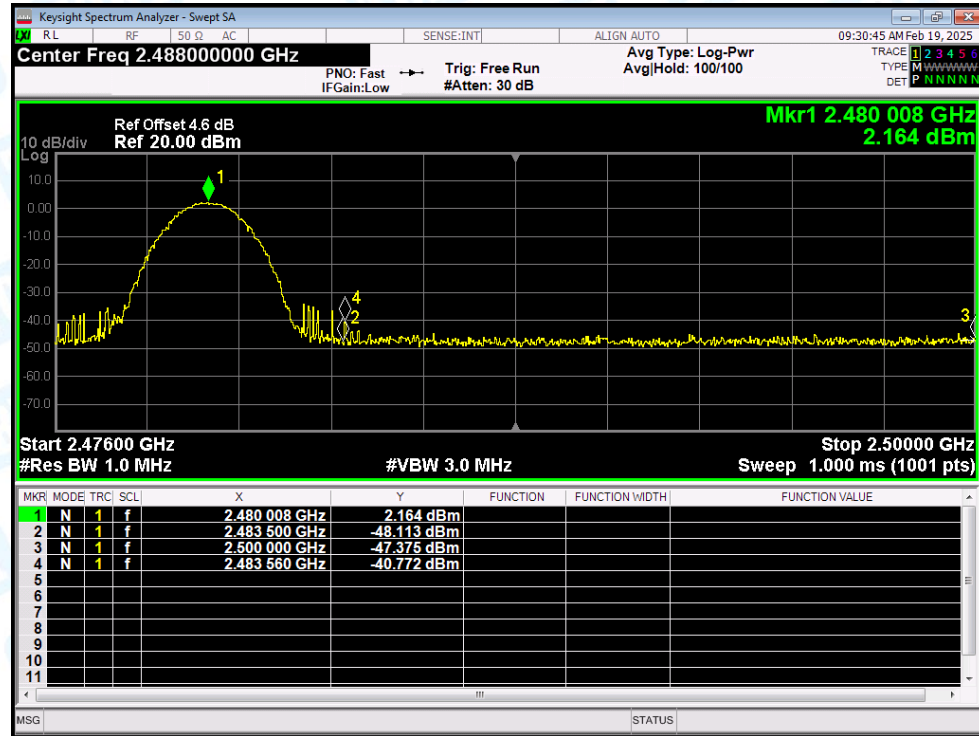
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



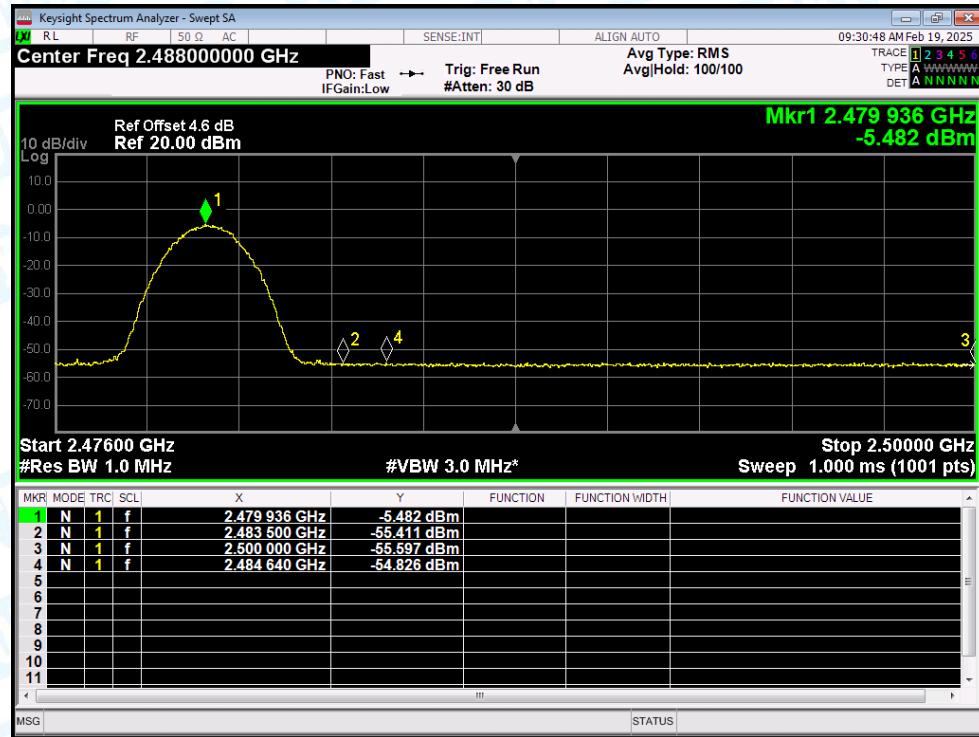
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

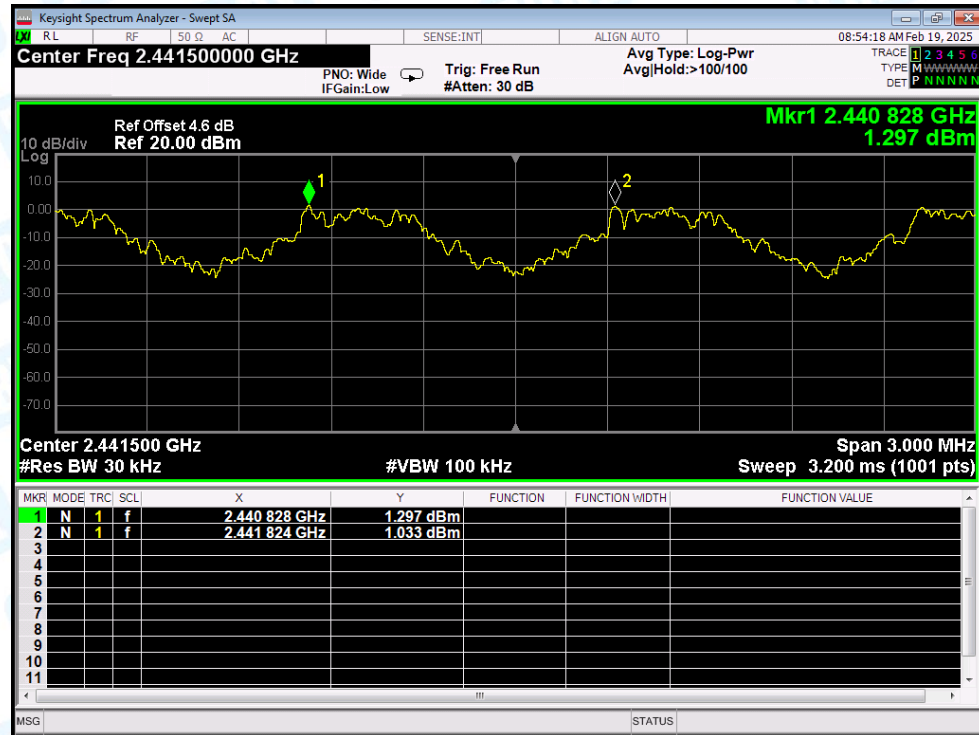


9. Carrier Frequencies Separation

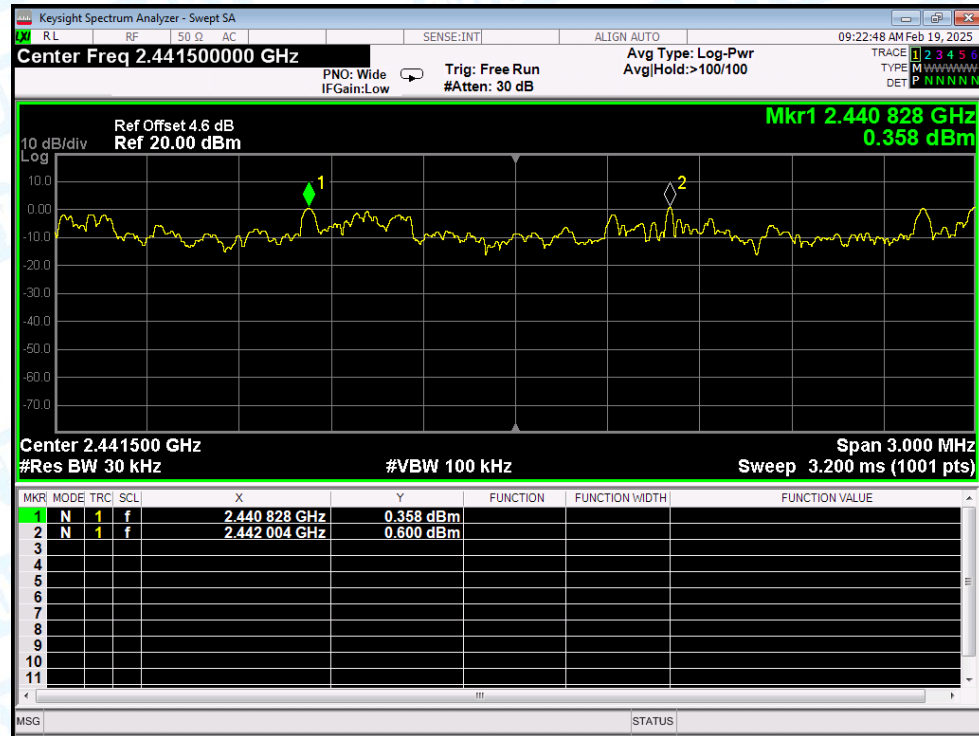
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.828	2441.824	0.996	0.587	Pass
NVNT	2-DH1	Ant1	2440.828	2442.004	1.176	0.827	Pass
NVNT	3-DH1	Ant1	2440.828	2442.004	1.176	0.807	Pass

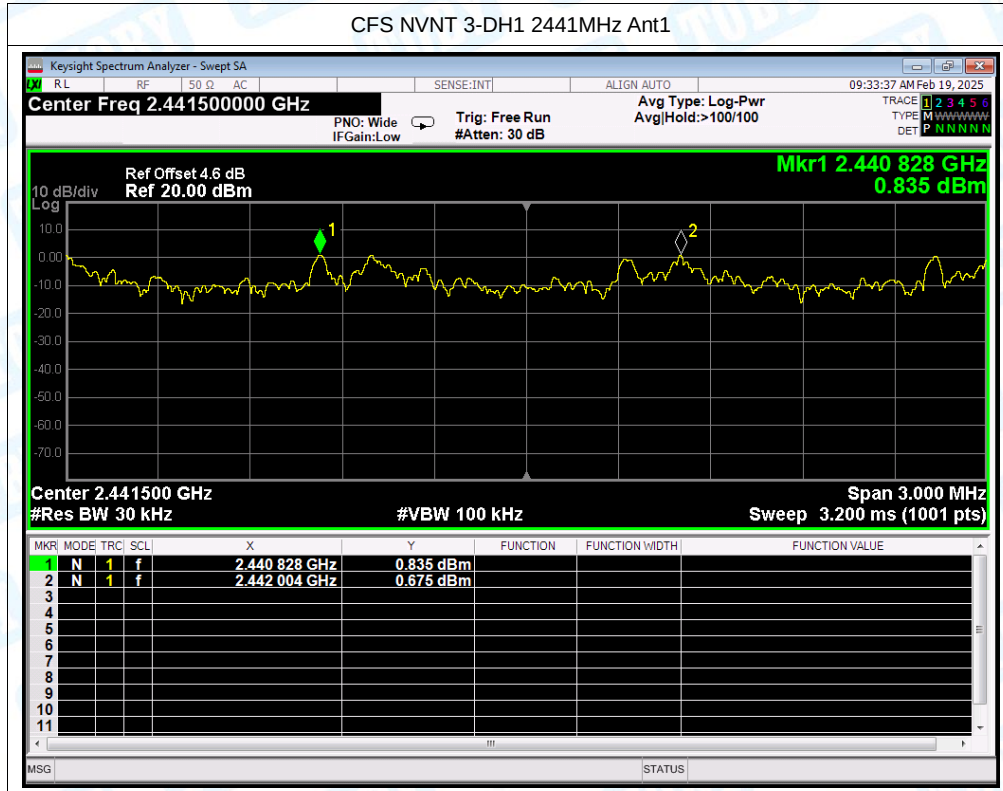
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



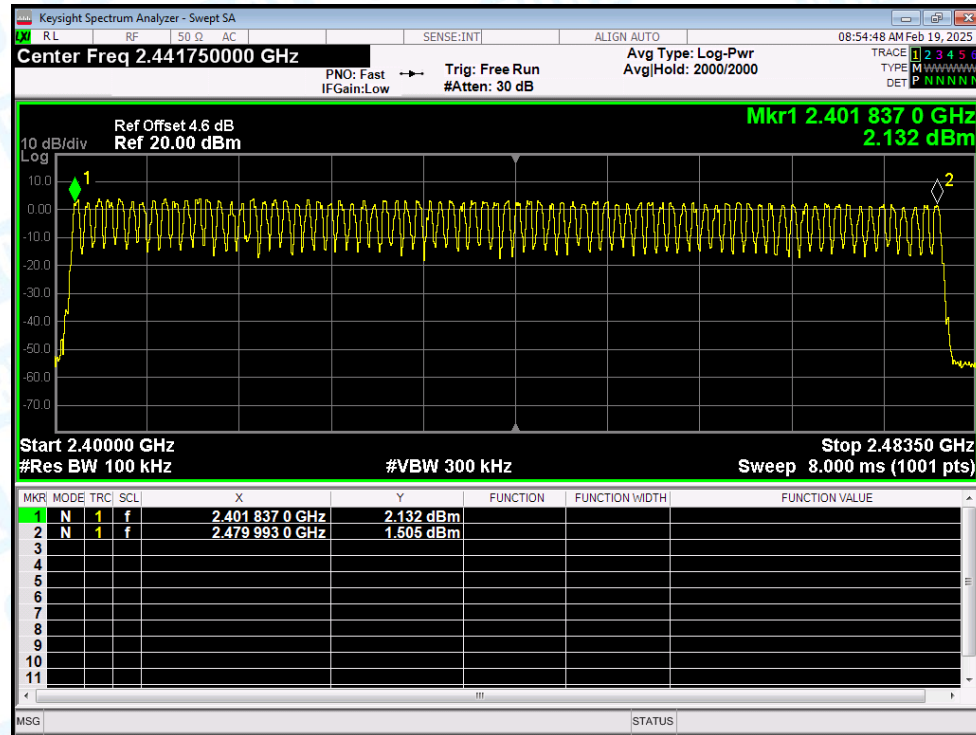


10. Number of Hopping Channel

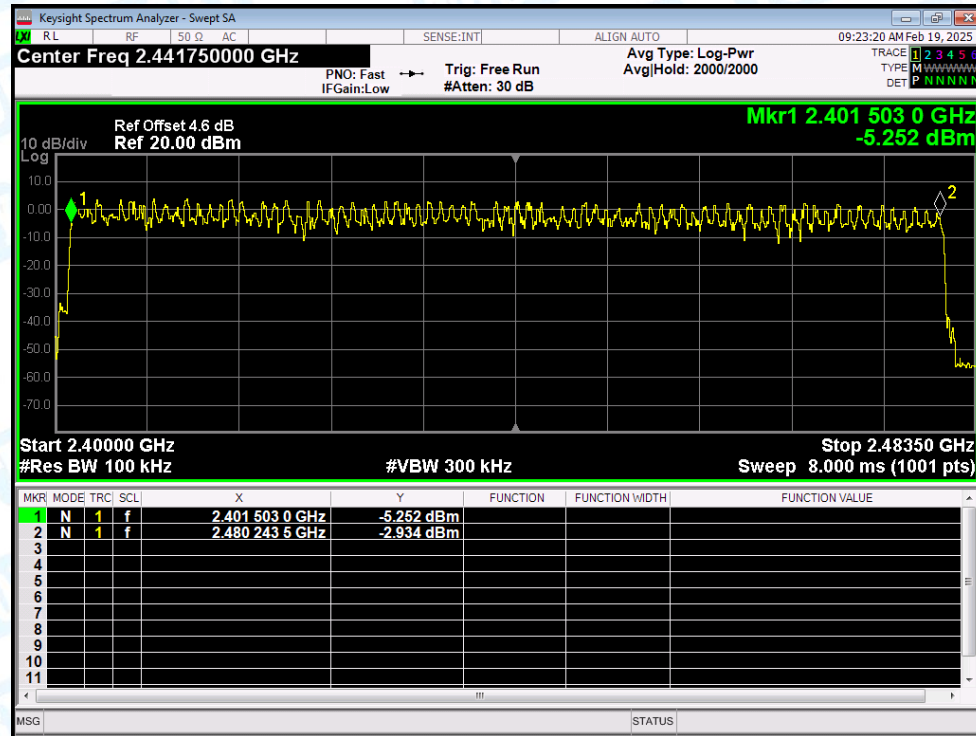
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

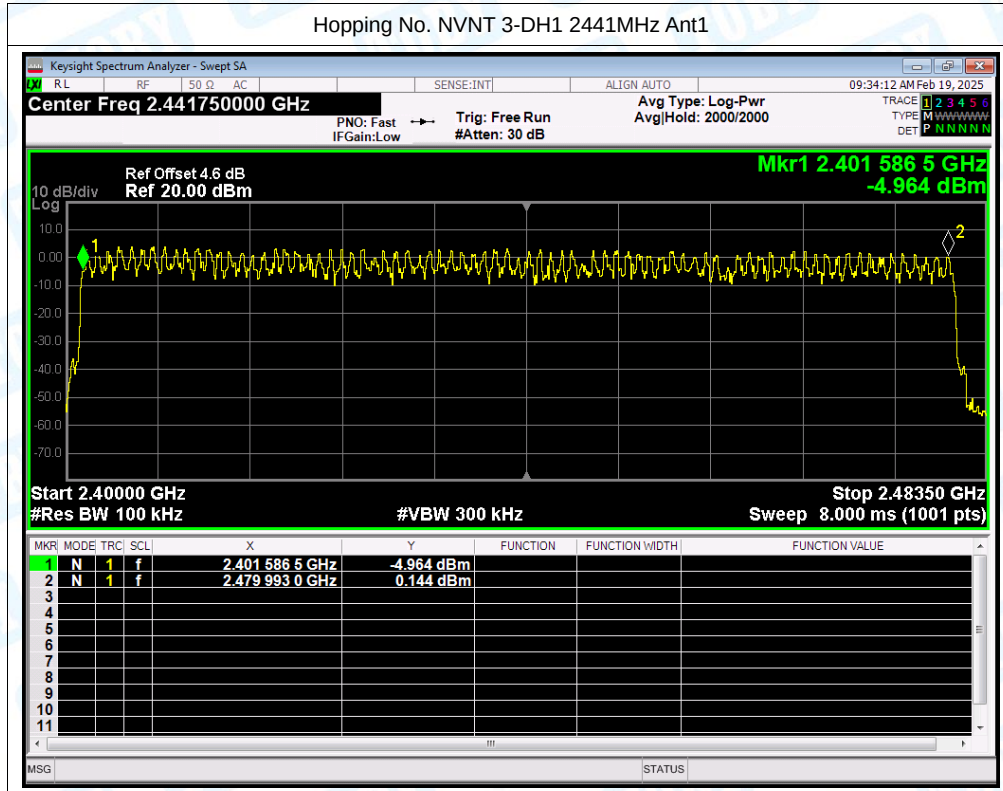
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



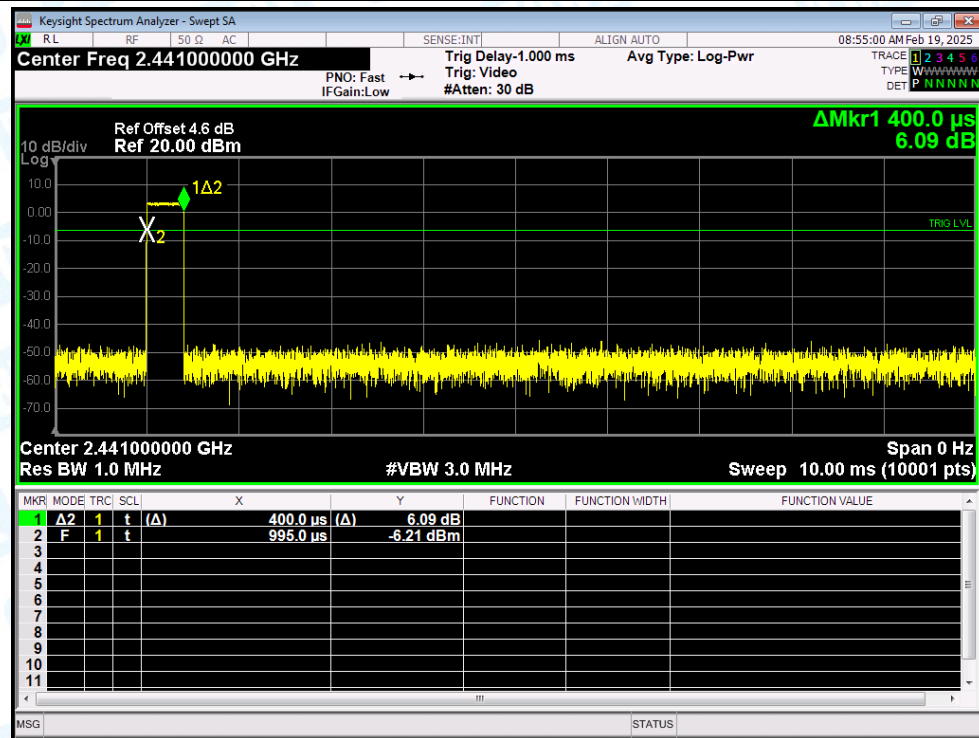


11. Dwell Time

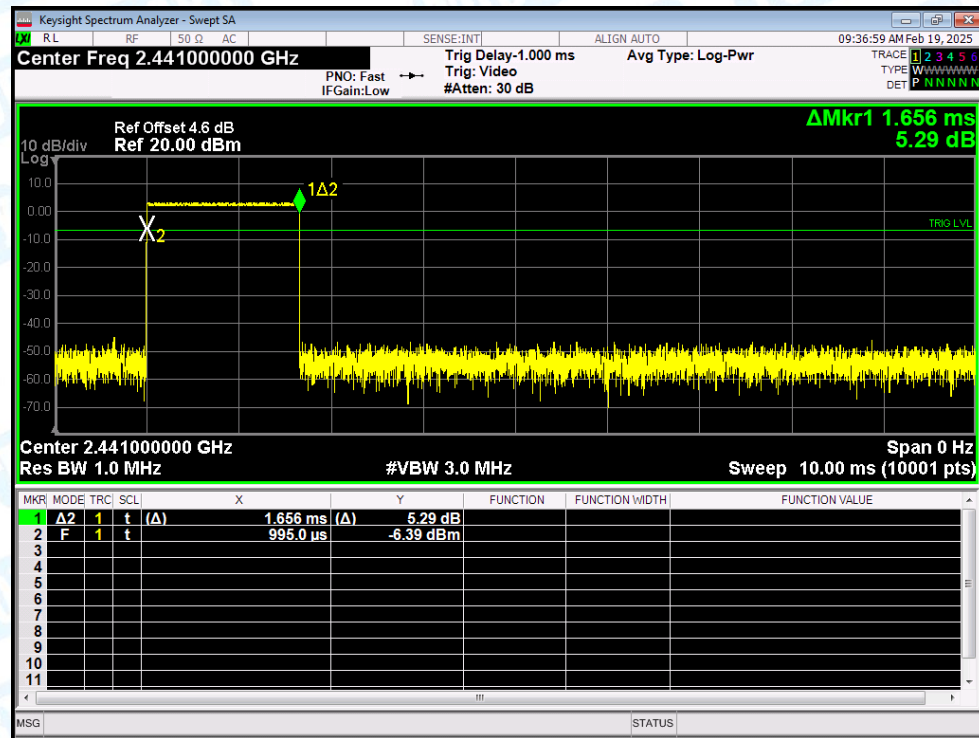
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.4	128	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.656	264.96	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.904	309.76	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.409	130.88	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.661	265.76	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.909	310.293	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.412	131.84	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.661	265.76	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.912	310.613	31600	400	Pass

Test Graphs

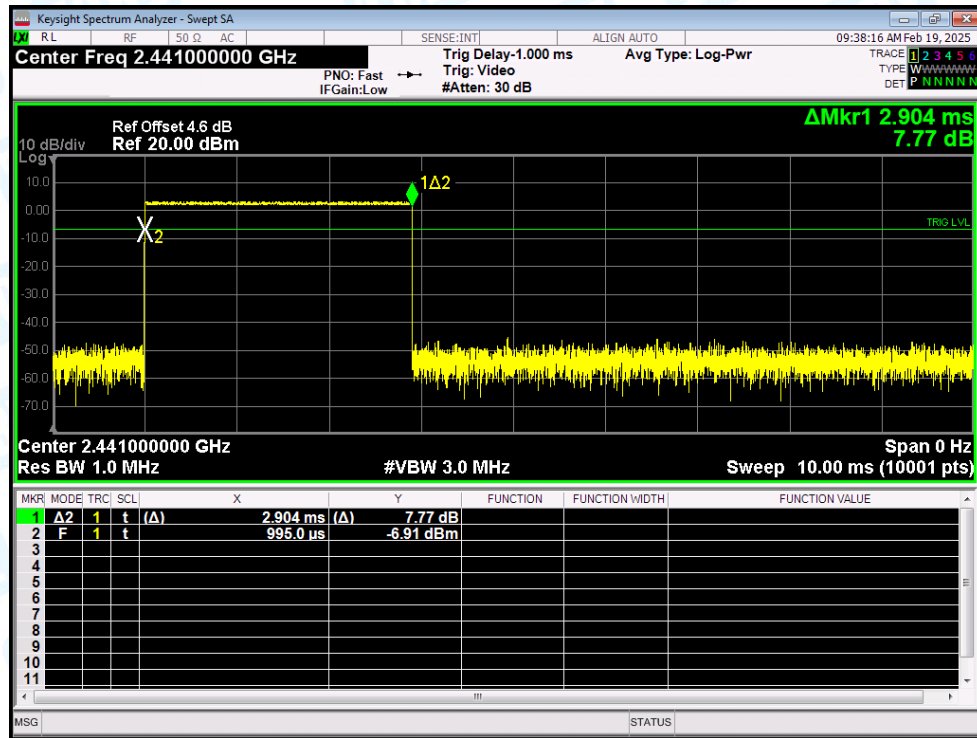
Dwell NVNT 1-DH1 2441MHz Ant1



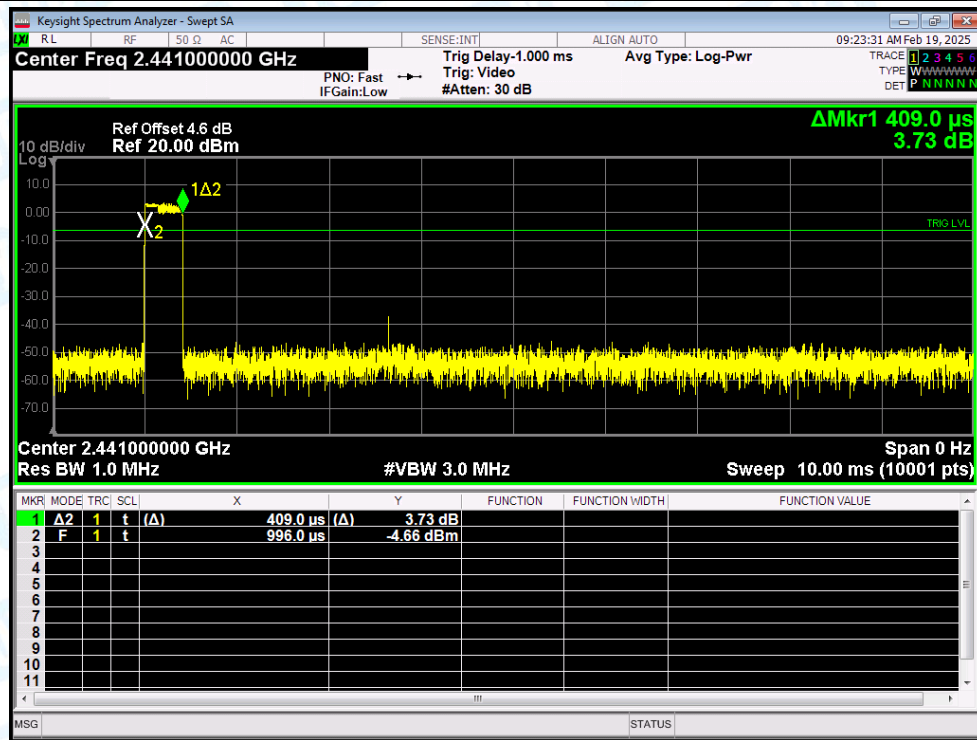
Dwell NVNT 1-DH3 2441MHz Ant1



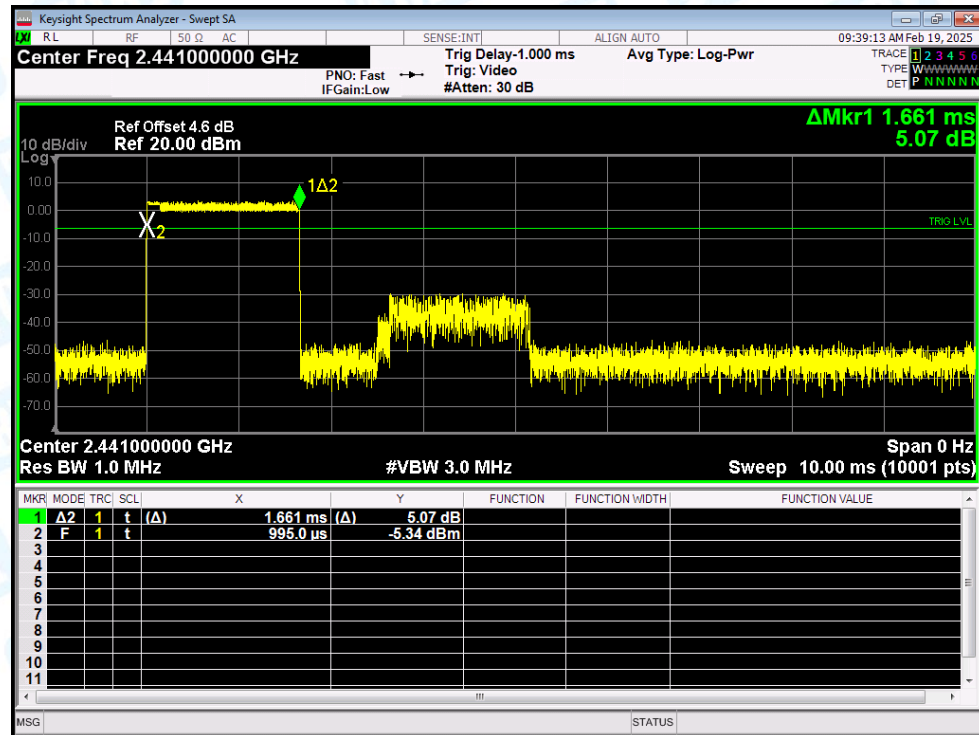
Dwell NVNT 1-DH5 2441MHz Ant1



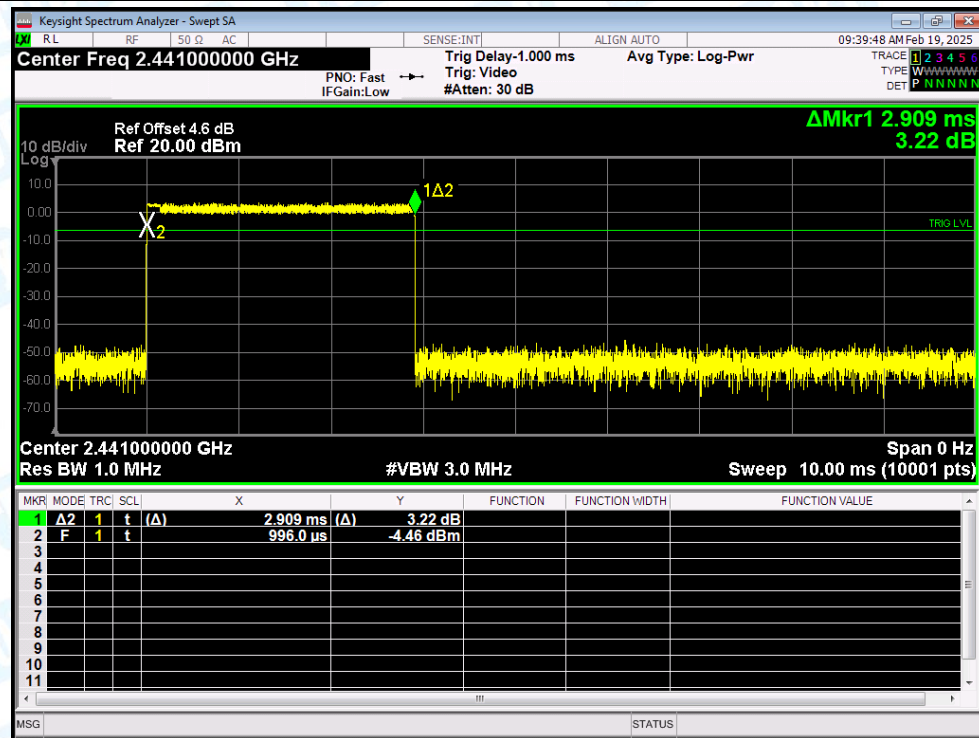
Dwell NVNT 2-DH1 2441MHz Ant1



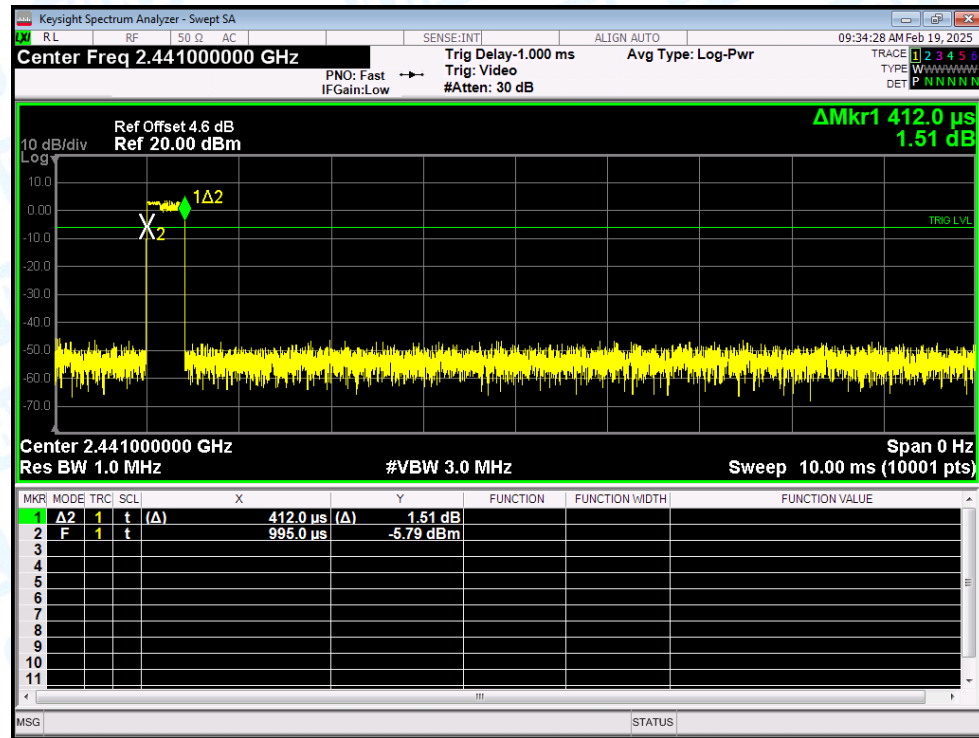
Dwell NVNT 2-DH3 2441MHz Ant1



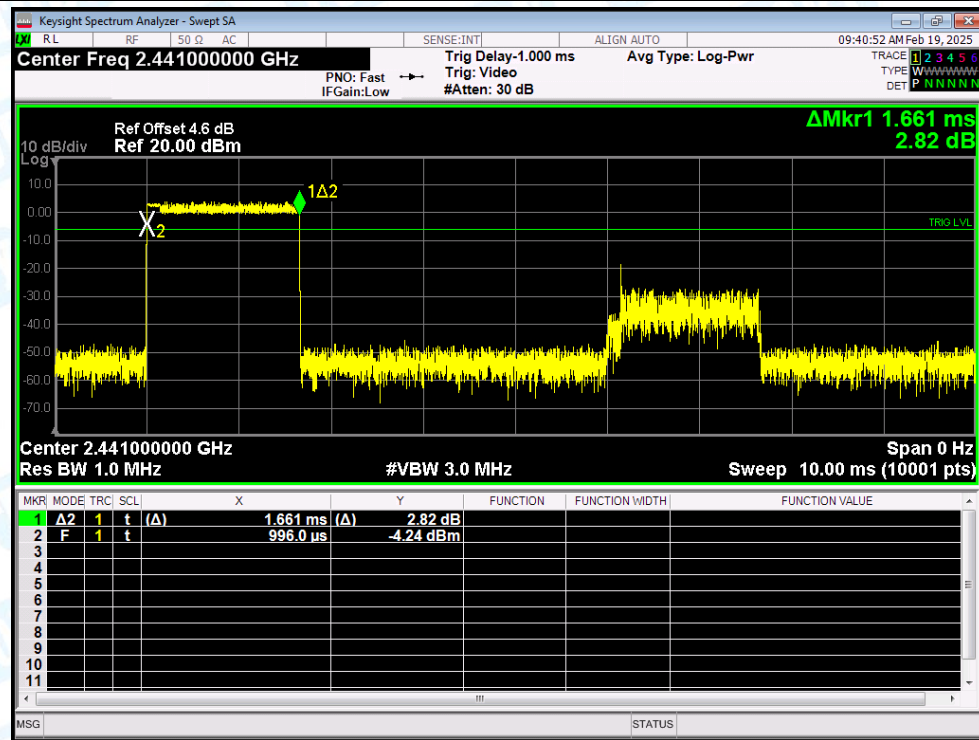
Dwell NVNT 2-DH5 2441MHz Ant1

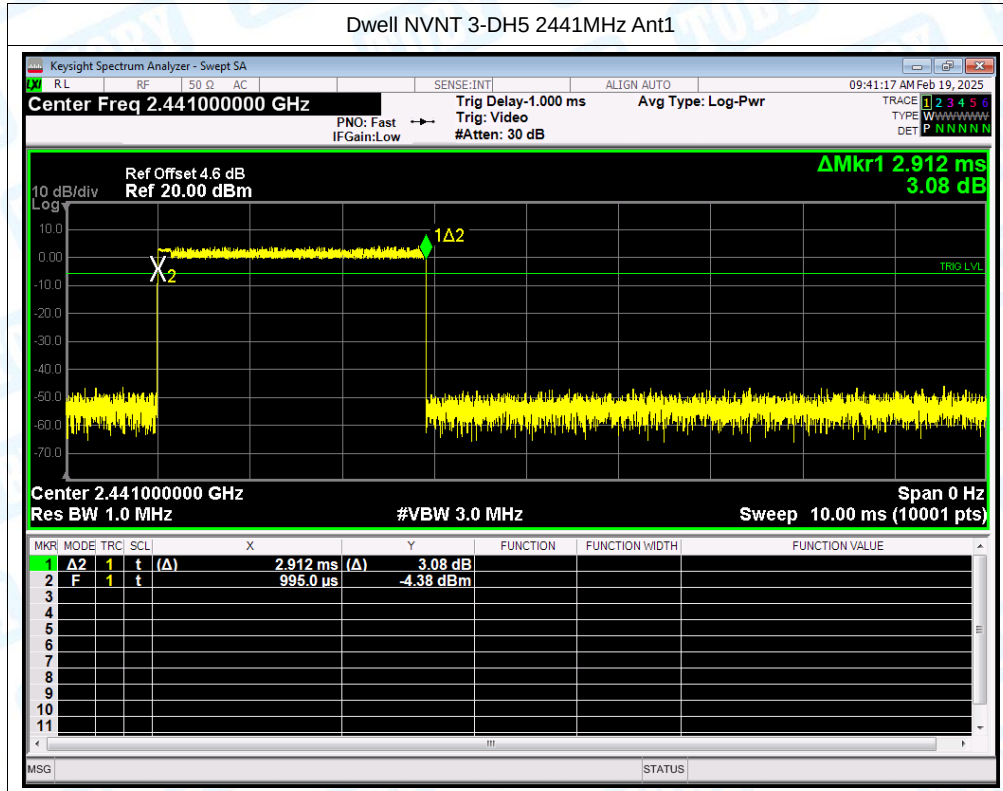


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





--- END OF REPORT ---