

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	smart watch
Test Model:	Y11
Sample ID:	HC-C-202405-0110-01-01
Environmental Conditions	
Temperature:	46.8℃
Relative Humidity:	24.5%
Test Voltage:	DC 3.8V
Test Engineer:	Jolin Lee
Note: For a more detailed features description, please refer to the report TBR-C-202405-0110-7 The report only show the worst case data.	

Contents

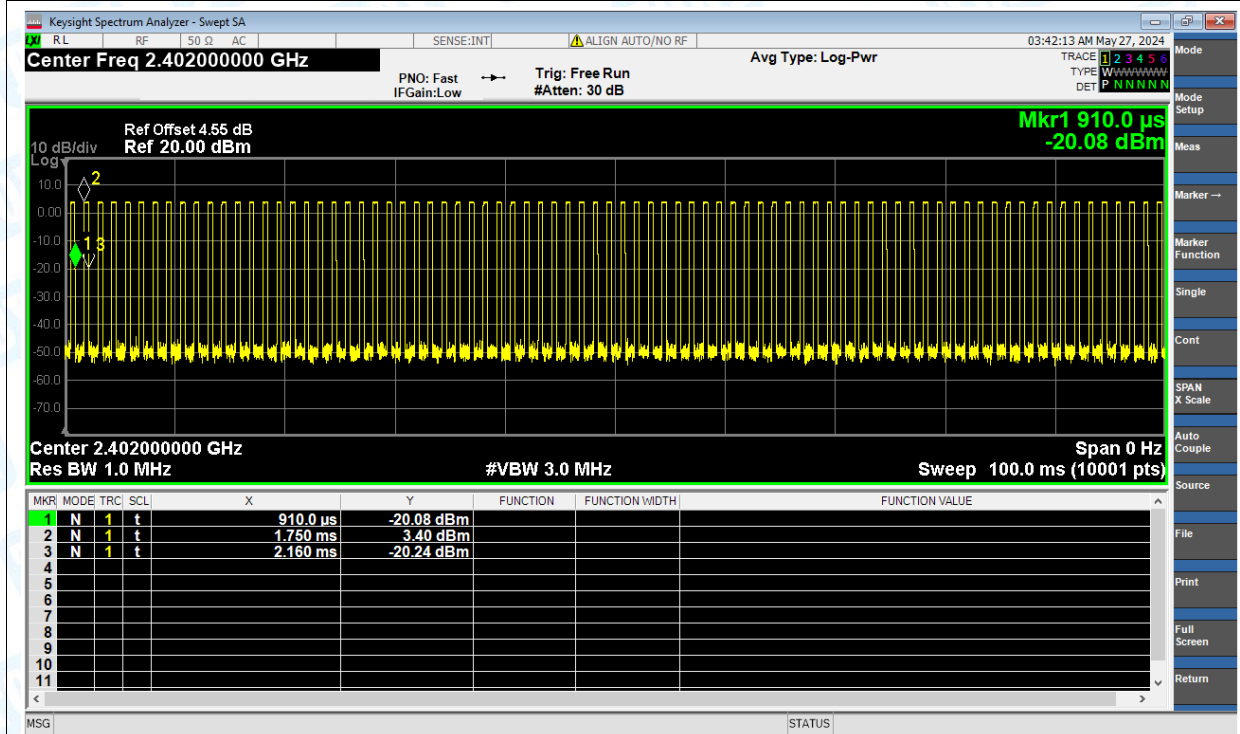
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1. Duty Cycle

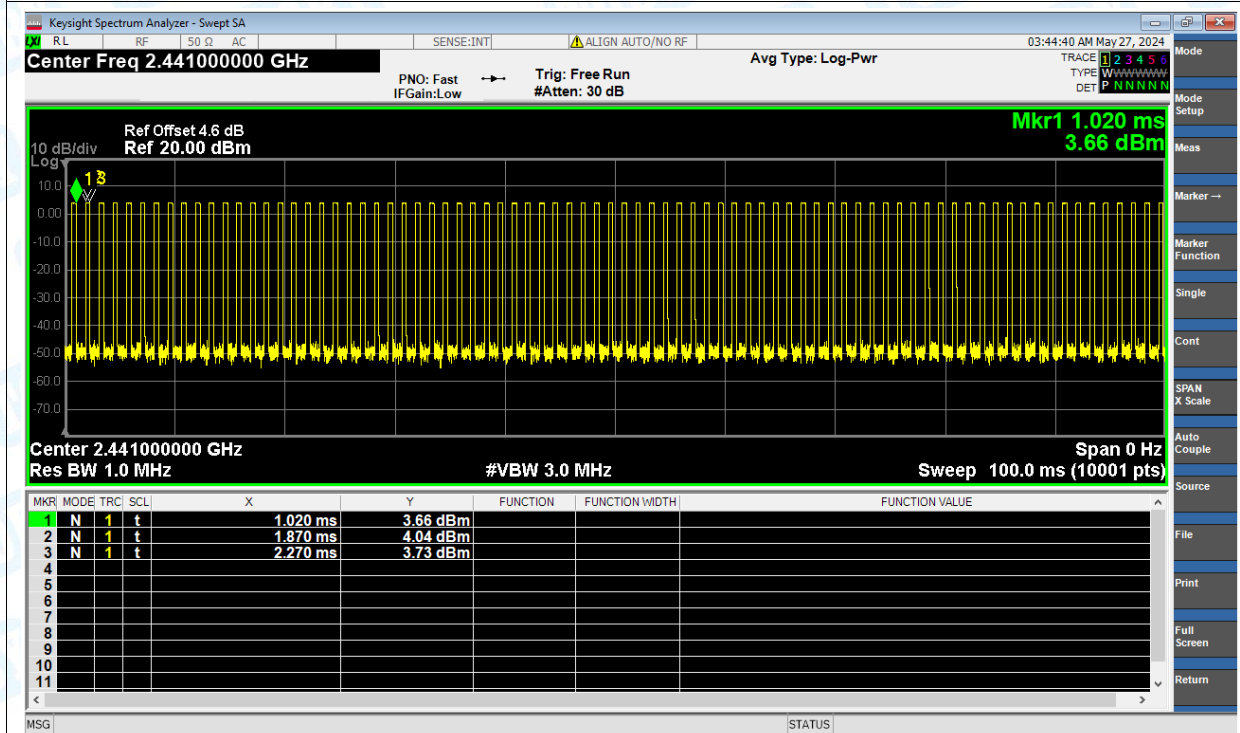
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	32.8	4.84	2.44
NVNT	1-DH1	2441	Ant1	32	4.95	2.5
NVNT	1-DH1	2480	Ant1	32.8	4.84	2.44
NVNT	2-DH1	2402	Ant1	32.8	4.84	2.44
NVNT	2-DH1	2441	Ant1	33.6	4.74	2.38
NVNT	2-DH1	2480	Ant1	33.6	4.74	2.38
NVNT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

Test Graphs

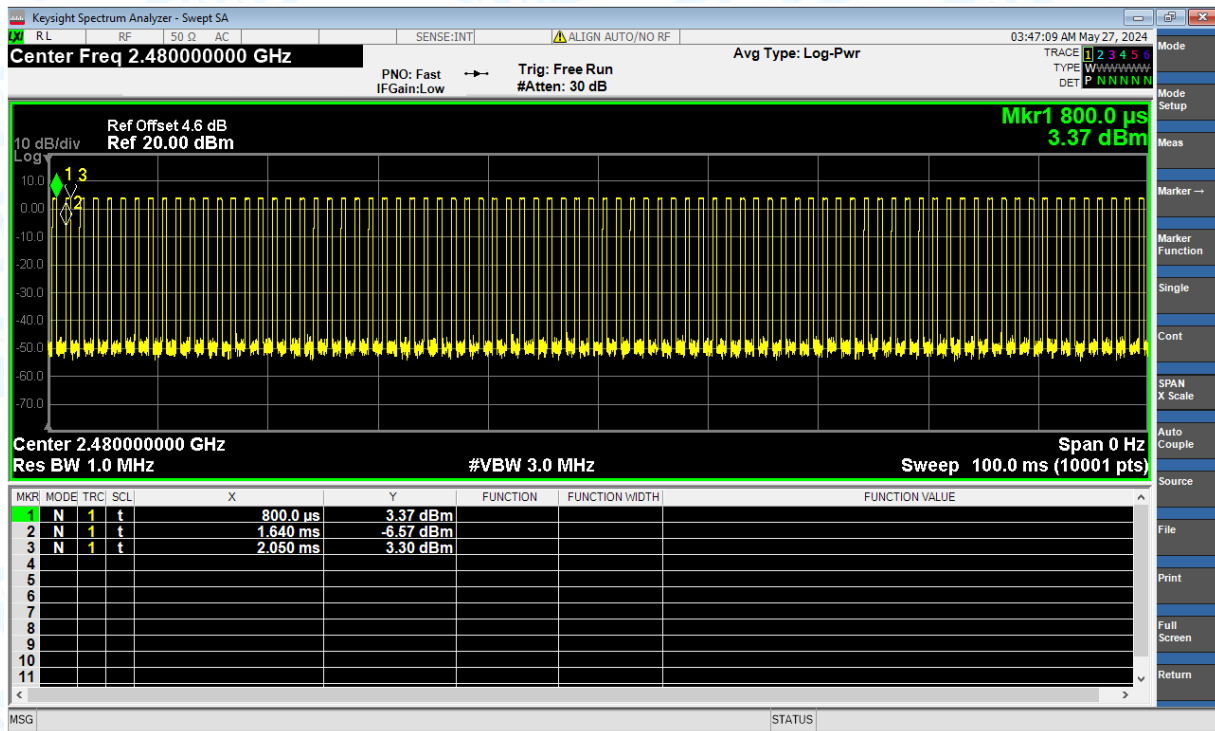
Duty Cycle NVNT 1-DH1 2402MHz Ant1



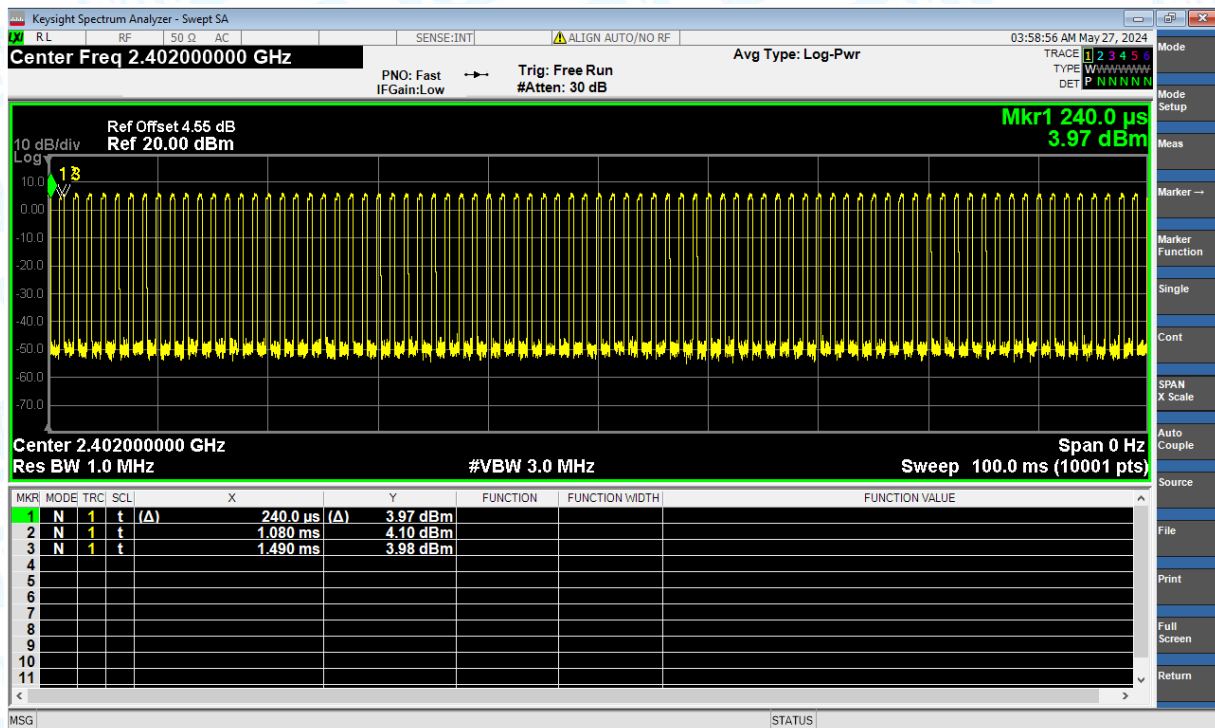
Duty Cycle NVNT 1-DH1 2441MHz Ant1



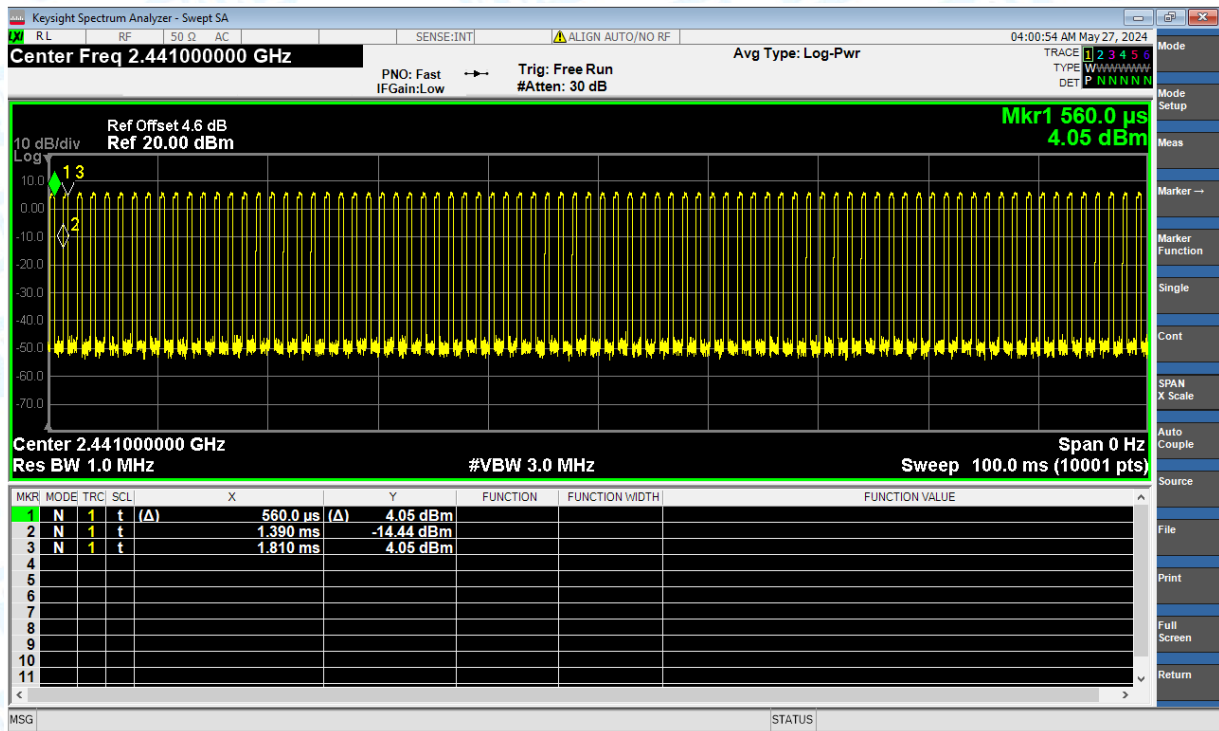
Duty Cycle NVNT 1-DH1 2480MHz Ant1



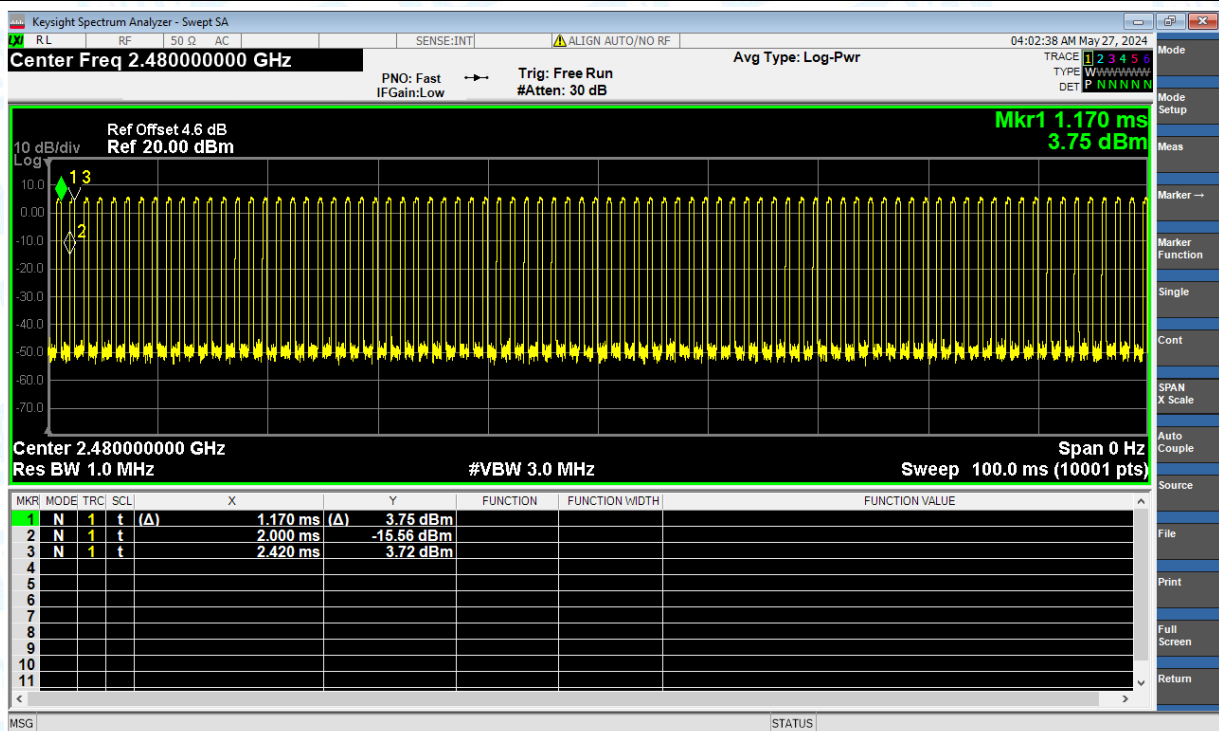
Duty Cycle NVNT 2-DH1 2402MHz Ant1



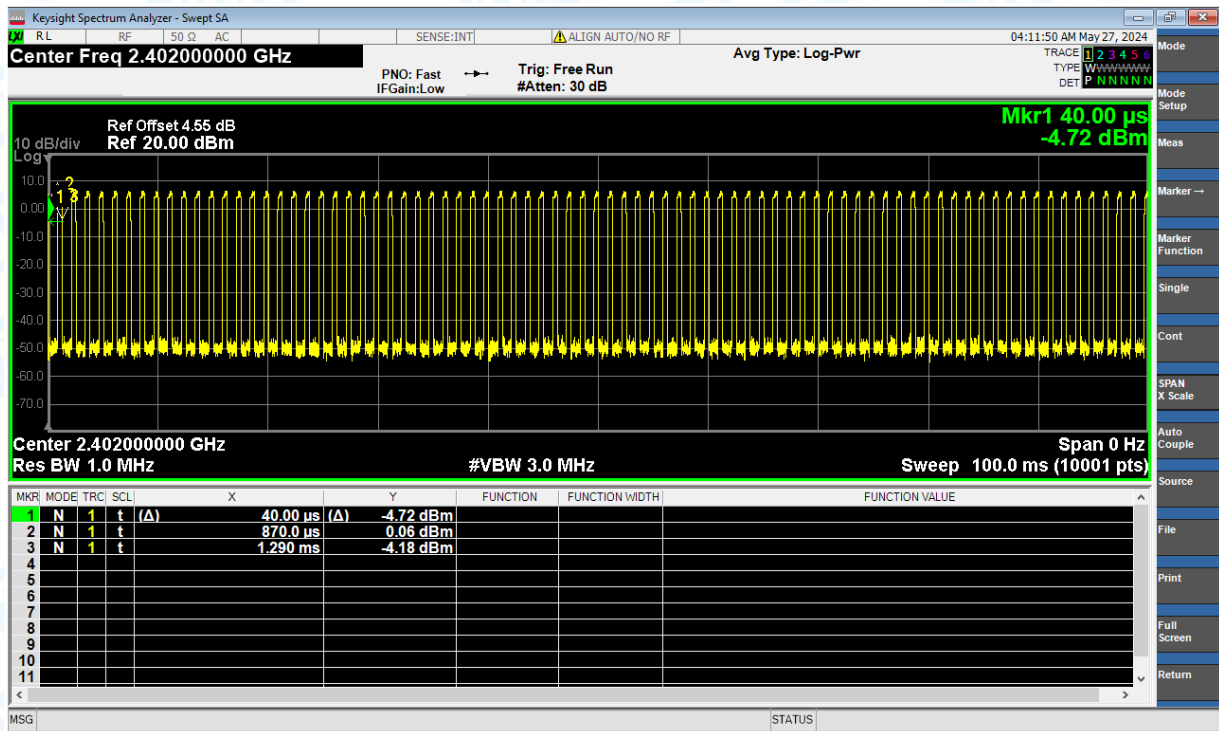
Duty Cycle NVNT 2-DH1 2441MHz Ant1



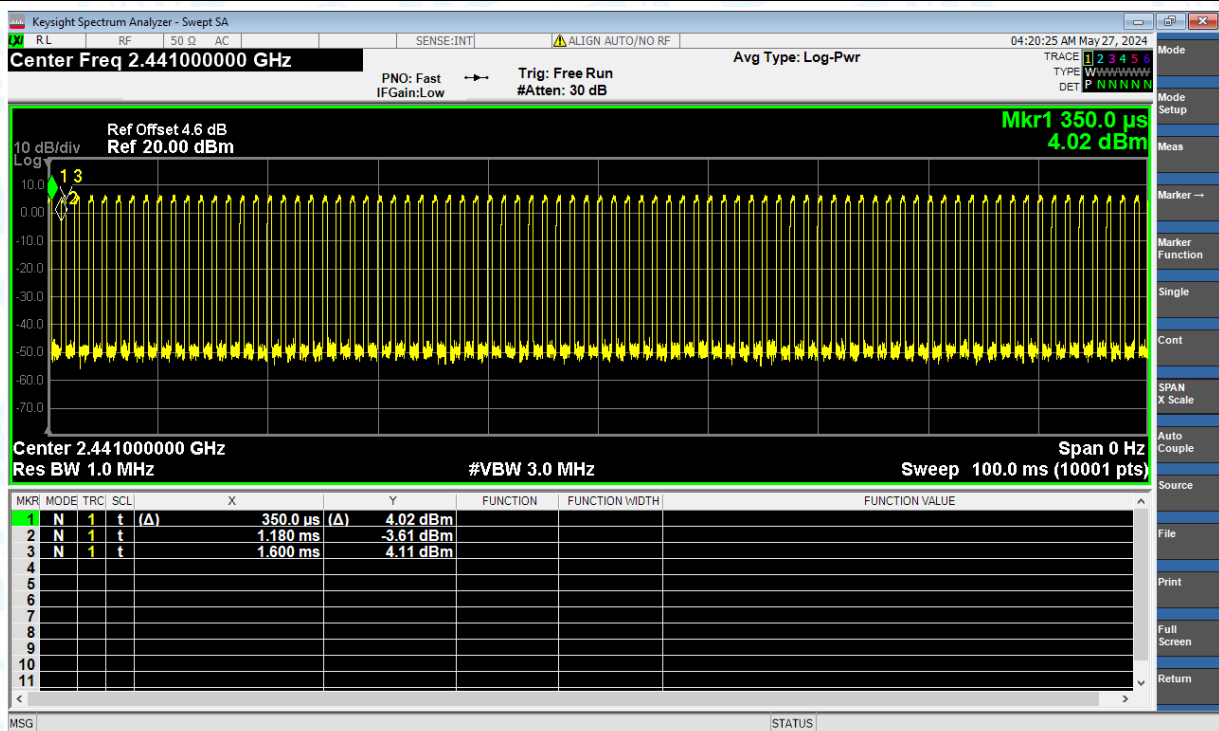
Duty Cycle NVNT 2-DH1 2480MHz Ant1

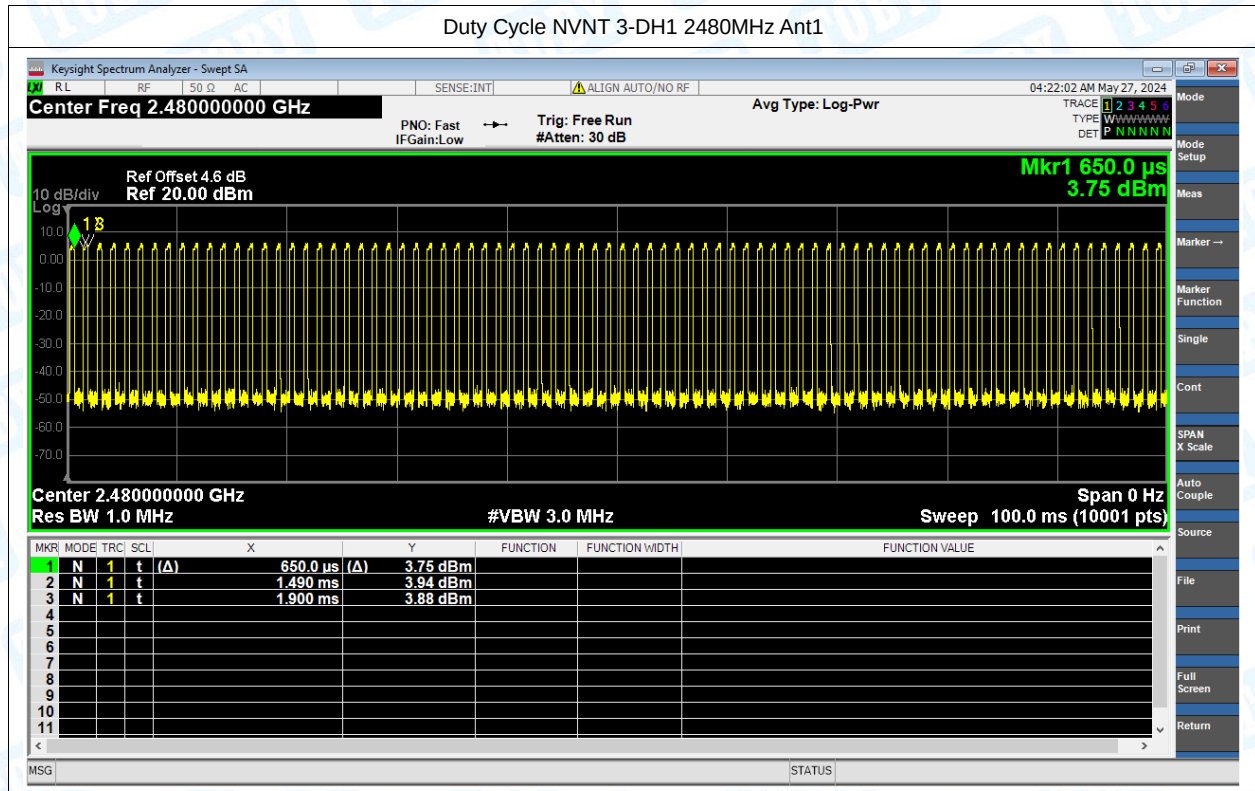


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



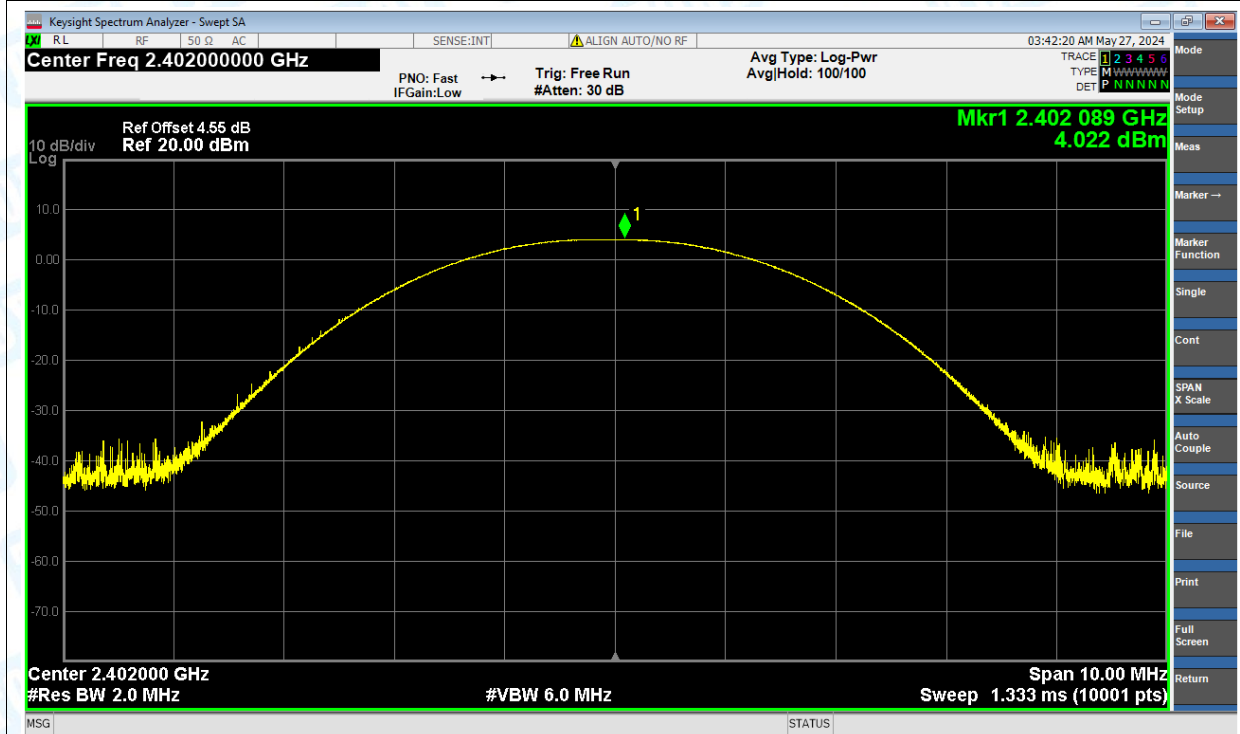


2. Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	4.022	21	Pass
NVNT	1-DH1	2441	Ant1	4.203	21	Pass
NVNT	1-DH1	2480	Ant1	3.983	21	Pass
NVNT	1-DH3	2441	Ant1	4.384	21	Pass
NVNT	1-DH5	2441	Ant1	4.371	21	Pass
NVNT	2-DH1	2402	Ant1	6.529	21	Pass
NVNT	2-DH1	2441	Ant1	6.598	21	Pass
NVNT	2-DH1	2480	Ant1	6.308	21	Pass
NVNT	2-DH3	2441	Ant1	6.687	21	Pass
NVNT	2-DH5	2441	Ant1	6.663	21	Pass
NVNT	3-DH1	2402	Ant1	6.789	21	Pass
NVNT	3-DH1	2441	Ant1	6.93	21	Pass
NVNT	3-DH1	2480	Ant1	6.629	21	Pass
NVNT	3-DH3	2441	Ant1	7.152	21	Pass
NVNT	3-DH5	2441	Ant1	6.204	21	Pass

Test Graphs

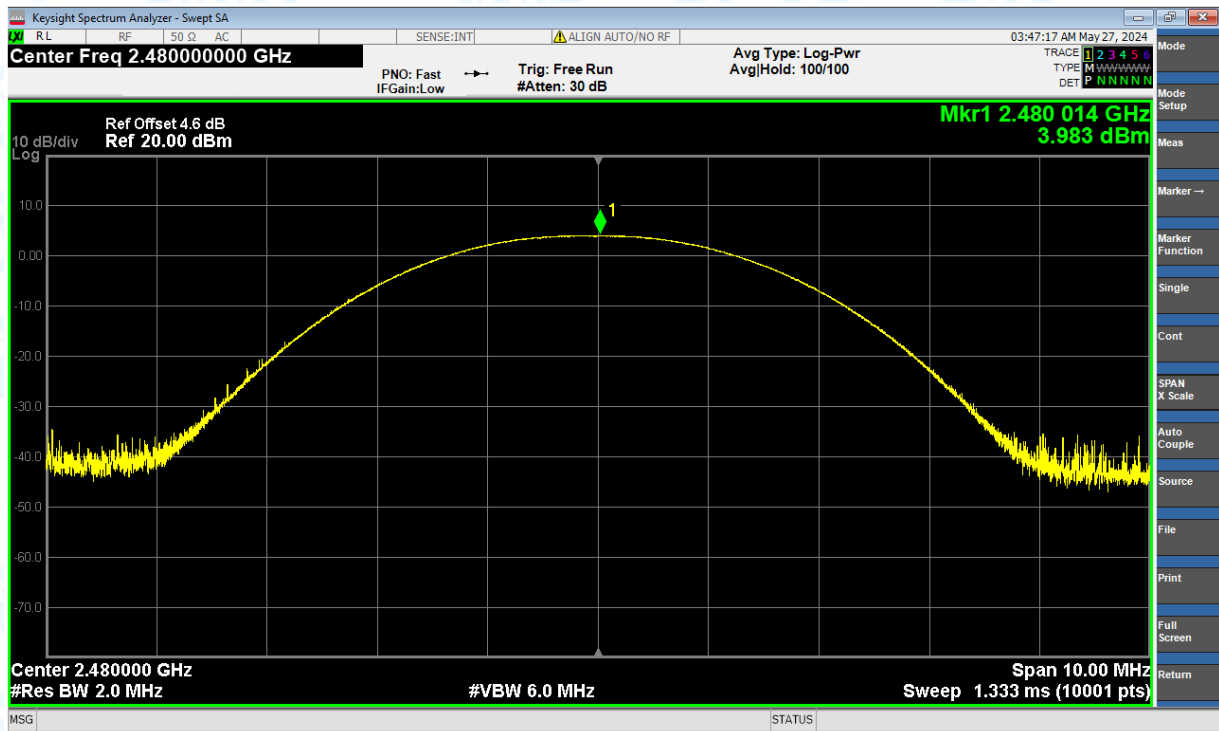
Power NVNT 1-DH1 2402MHz Ant1



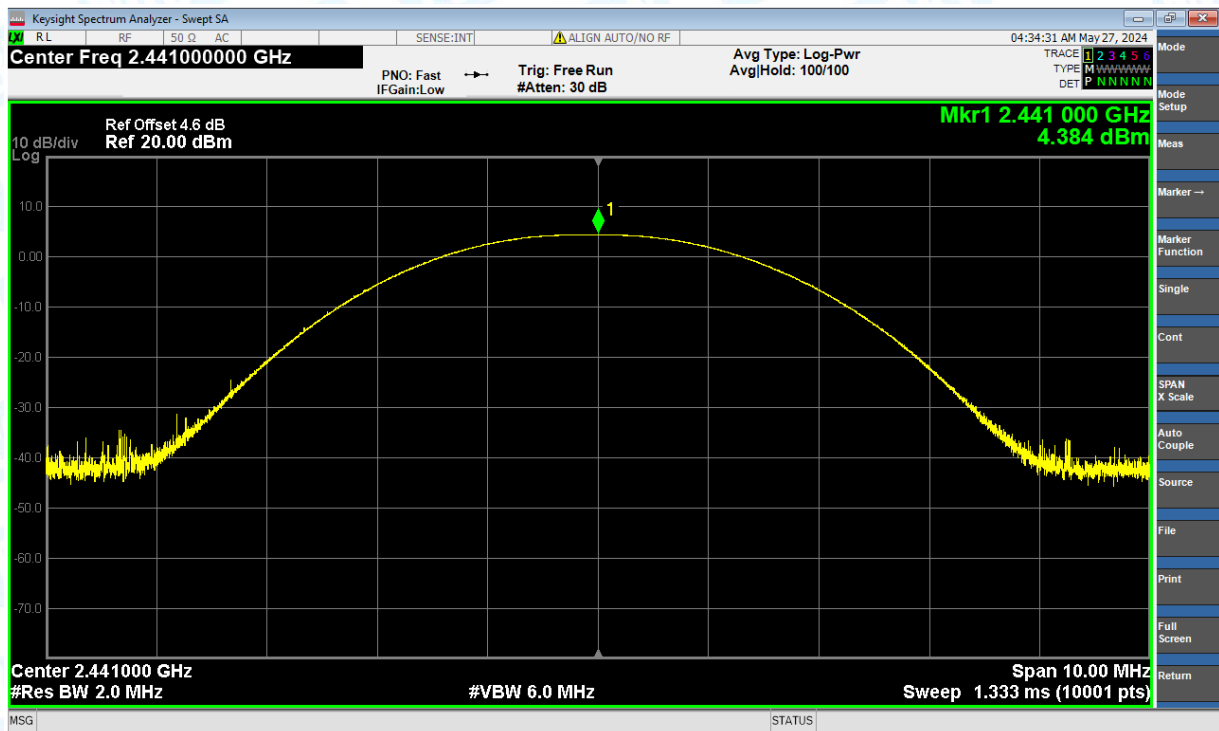
Power NVNT 1-DH1 2441MHz Ant1



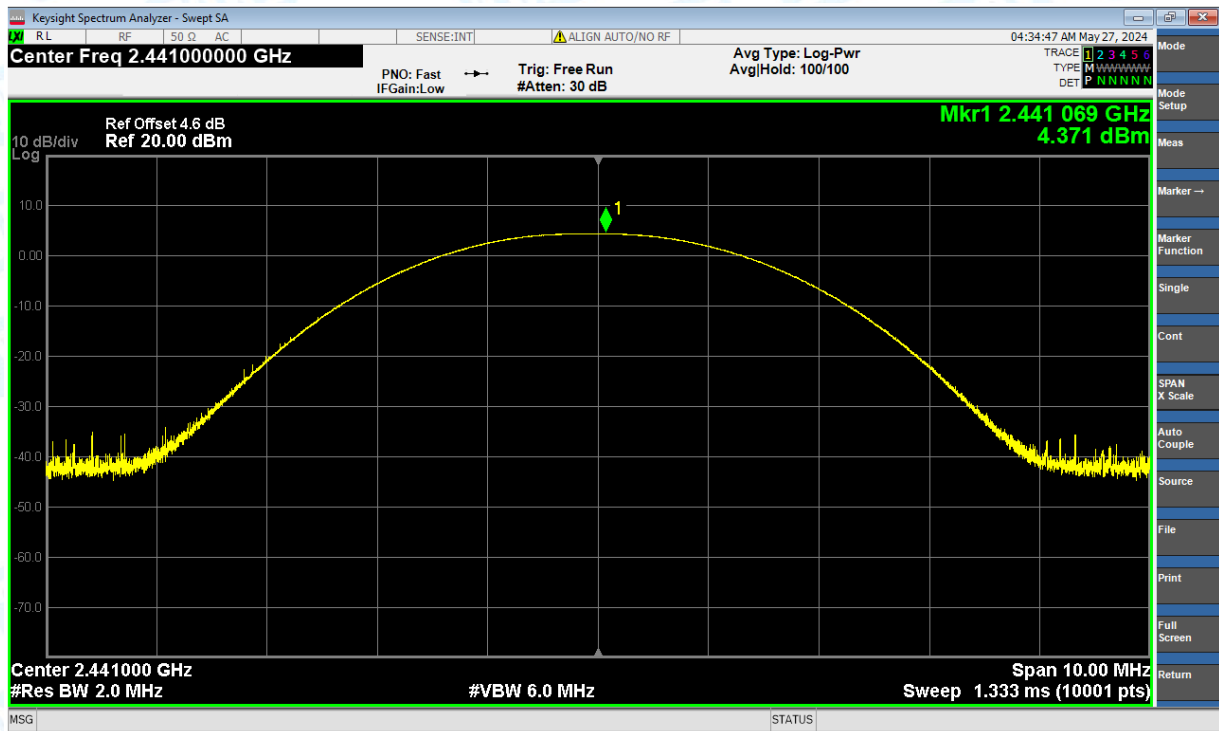
Power NVNT 1-DH1 2480MHz Ant1



Power NVNT 1-DH3 2441MHz Ant1



Power NVNT 1-DH5 2441MHz Ant1



Power NVNT 2-DH1 2402MHz Ant1



Power NVNT 2-DH1 2441MHz Ant1



Power NVNT 2-DH1 2480MHz Ant1



Power NVNT 2-DH3 2441MHz Ant1



Power NVNT 2-DH5 2441MHz Ant1



Power NVNT 3-DH1 2402MHz Ant1



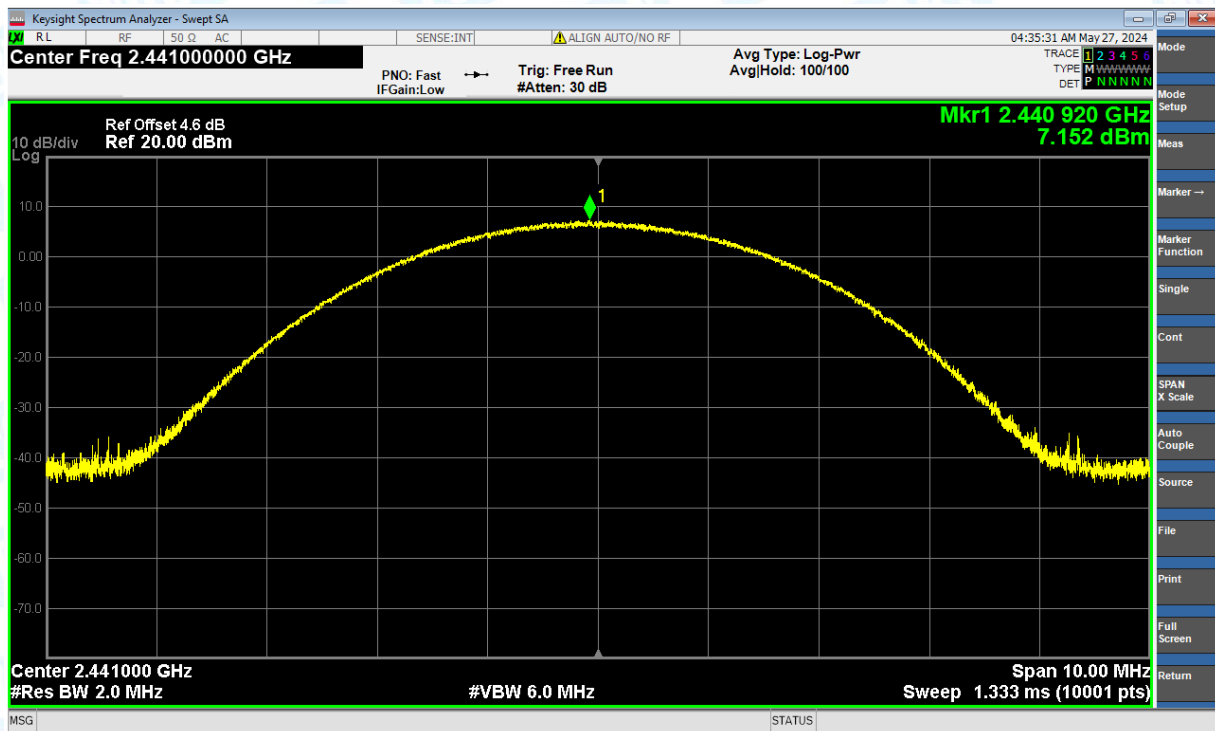
Power NVNT 3-DH1 2441MHz Ant1

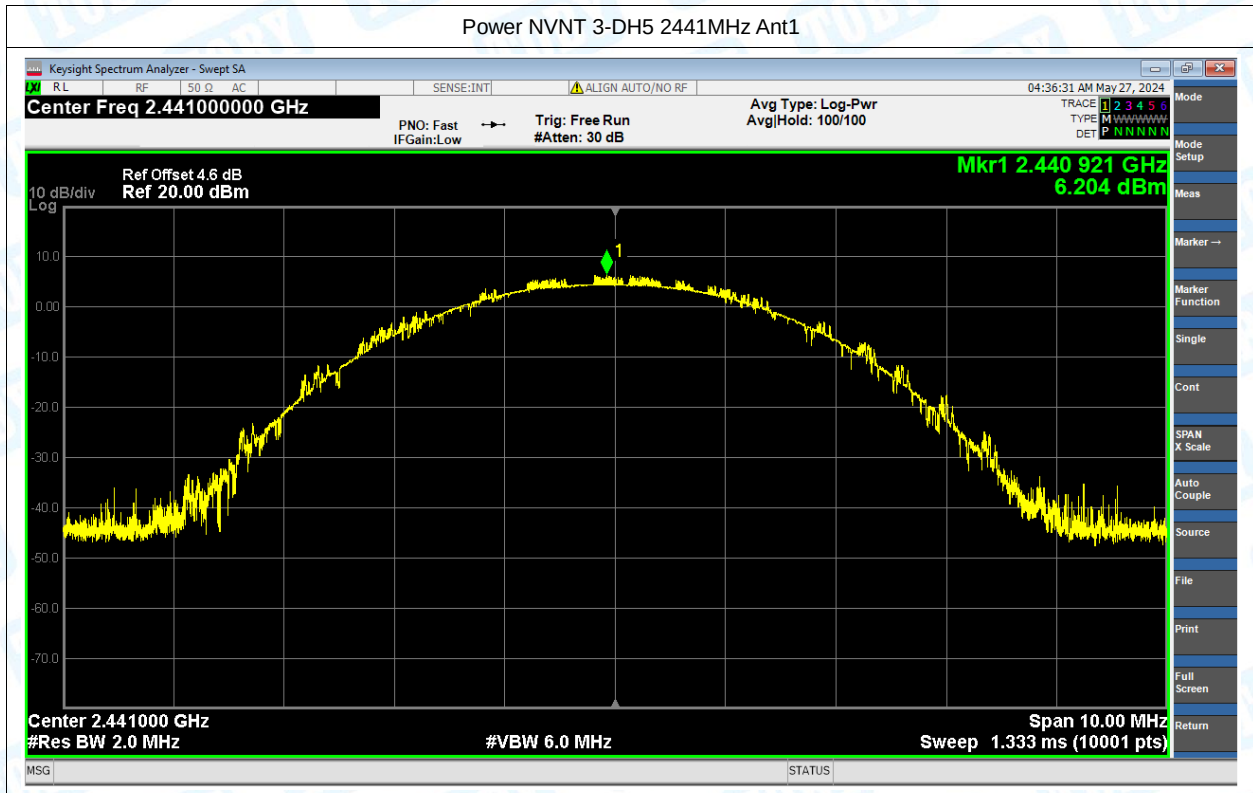


Power NVNT 3-DH1 2480MHz Ant1



Power NVNT 3-DH3 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	0.88	0	Pass
NVNT	1-DH1	2441	Ant1	0.87	0	Pass
NVNT	1-DH1	2480	Ant1	0.86	0	Pass
NVNT	2-DH1	2402	Ant1	1.26	0	Pass
NVNT	2-DH1	2441	Ant1	1.25	0	Pass
NVNT	2-DH1	2480	Ant1	1.25	0	Pass
NVNT	3-DH1	2402	Ant1	1.22	0	Pass
NVNT	3-DH1	2441	Ant1	1.22	0	Pass
NVNT	3-DH1	2480	Ant1	1.22	0	Pass

Test Graphs

-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



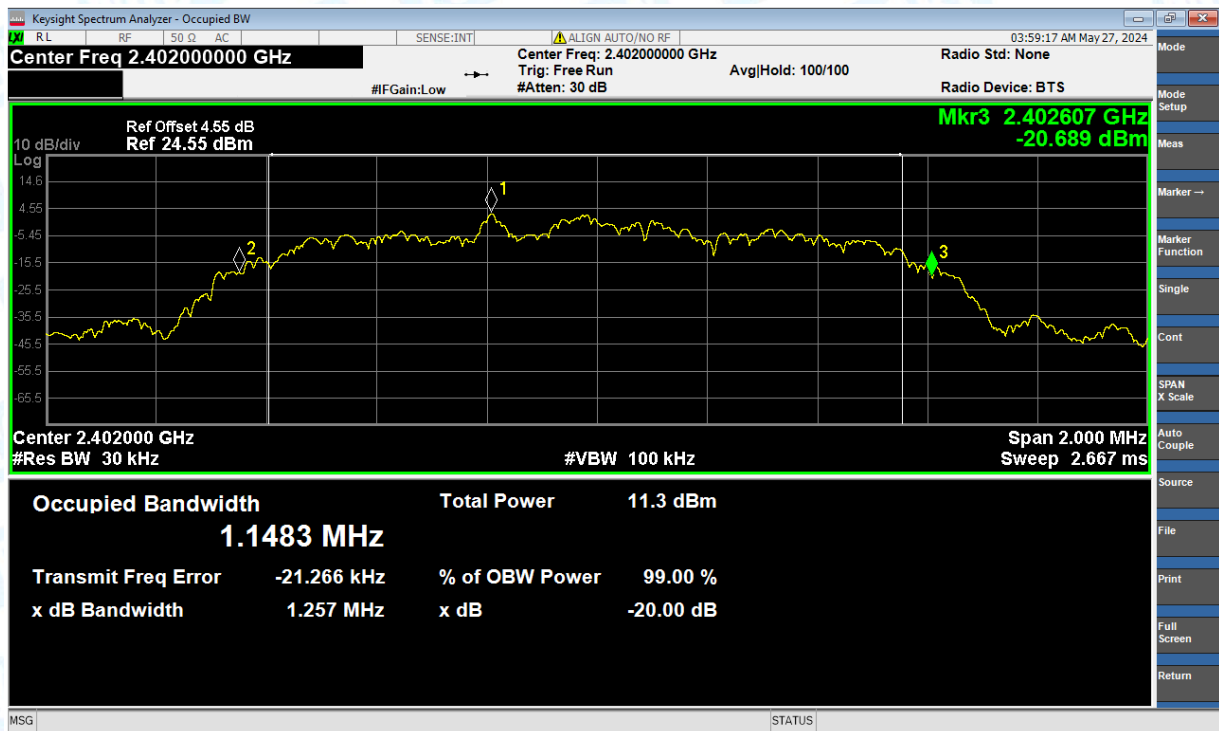
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



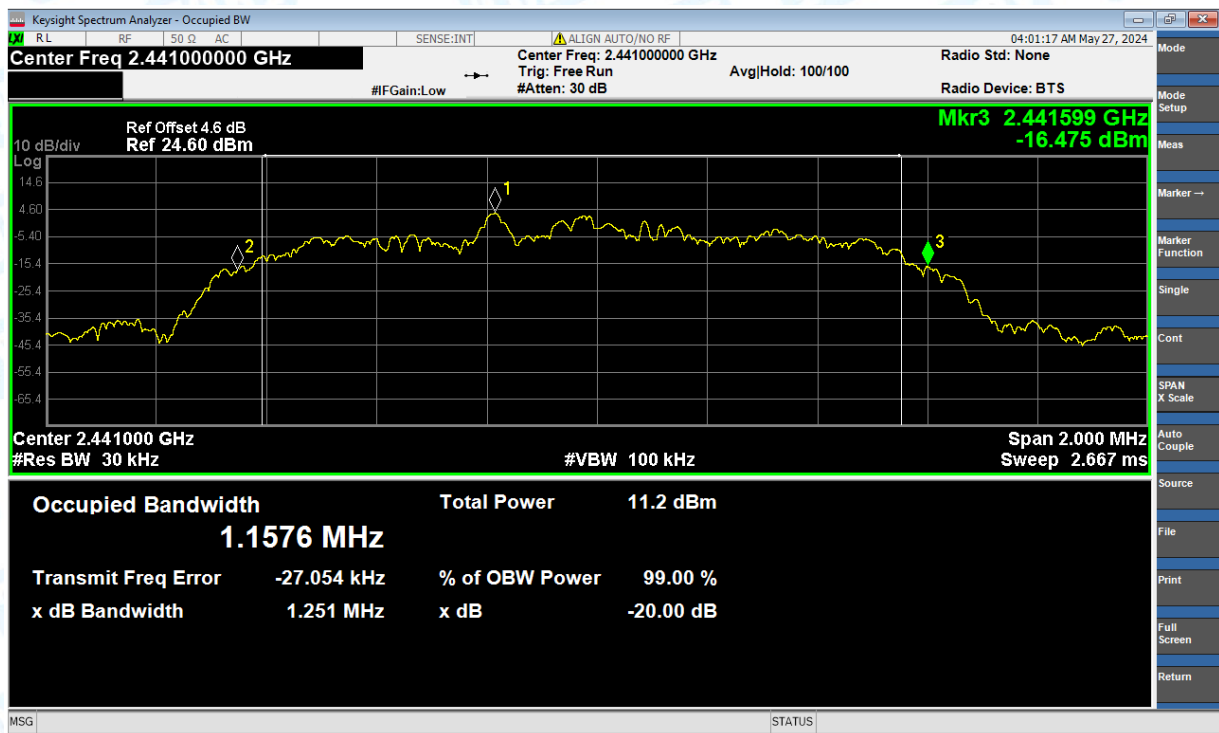
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



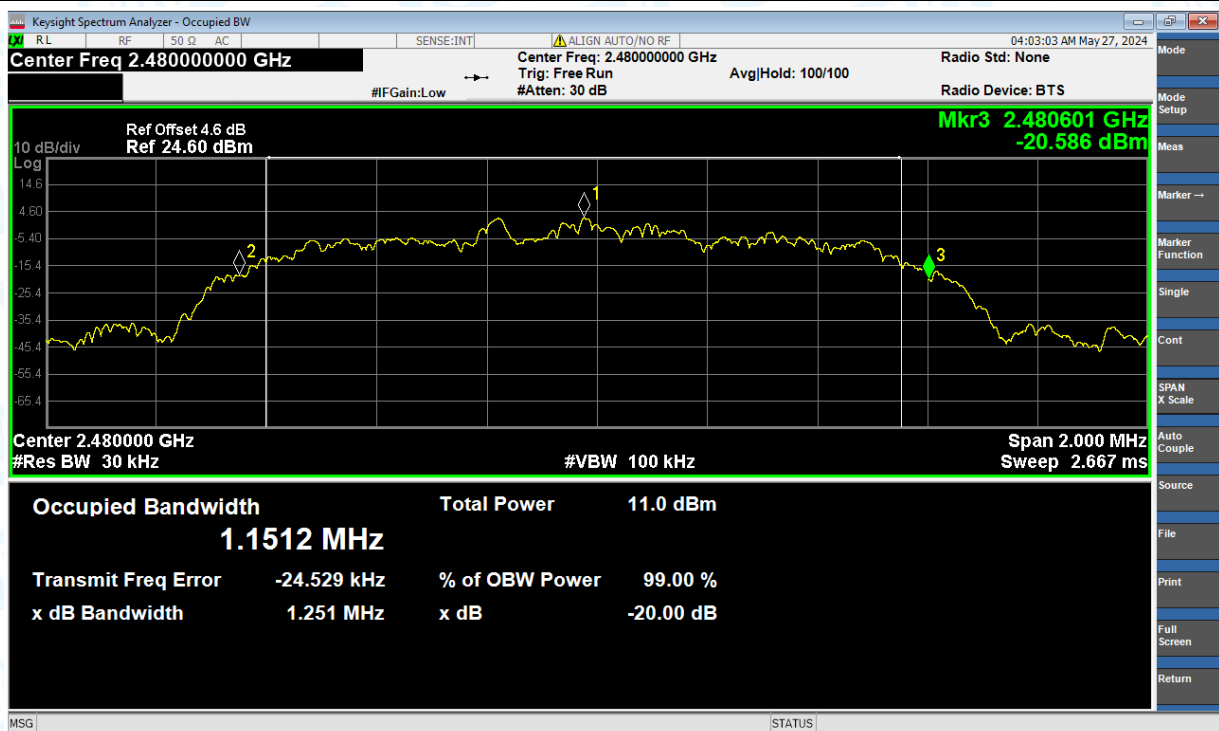
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



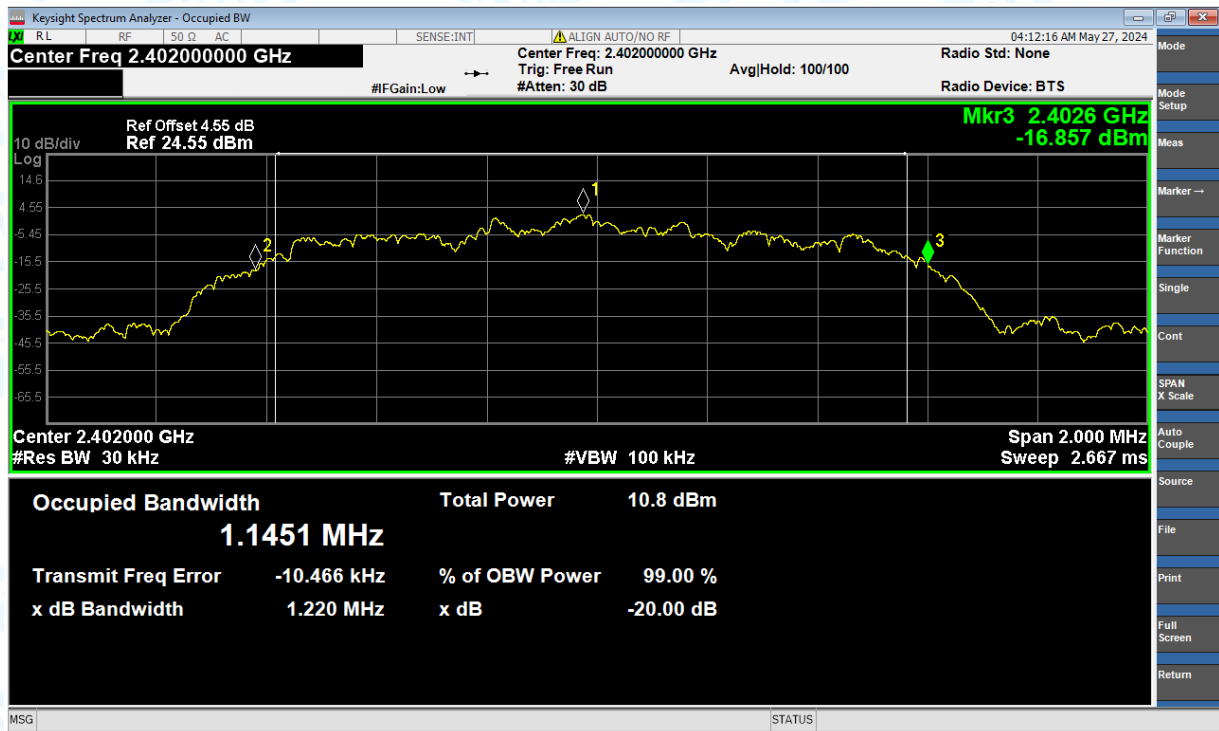
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



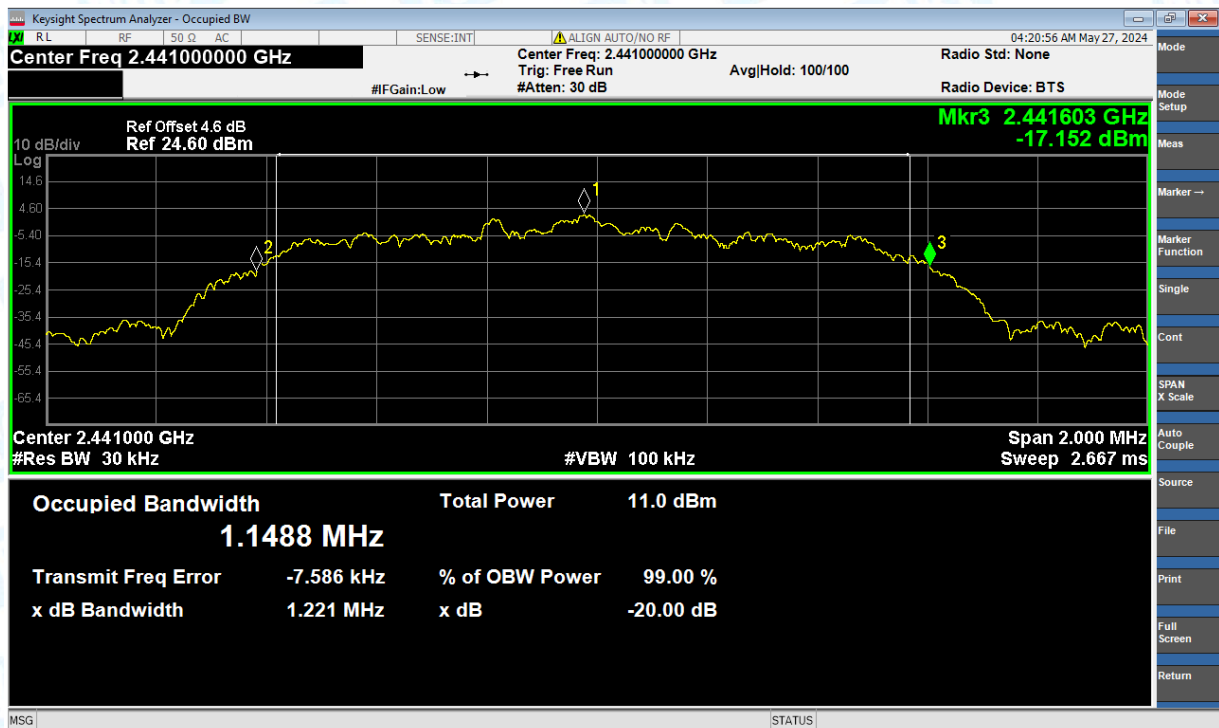
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

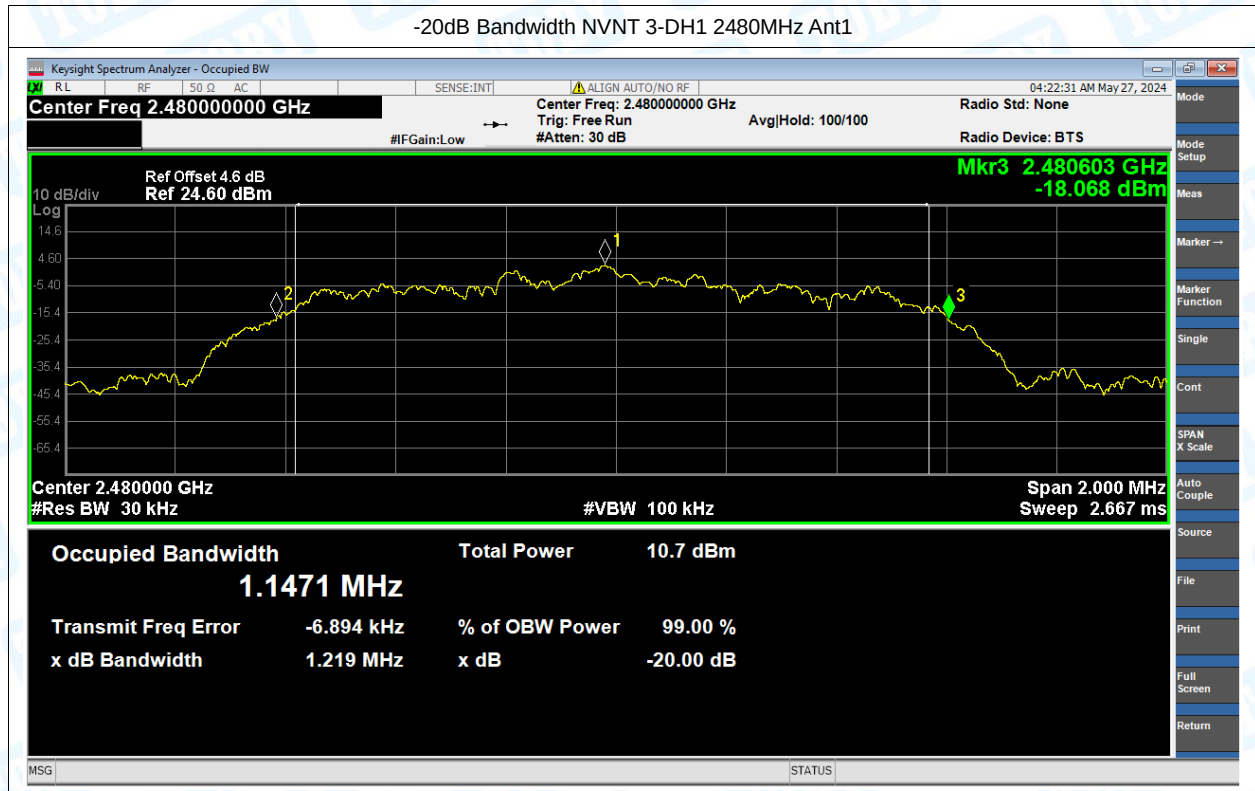


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



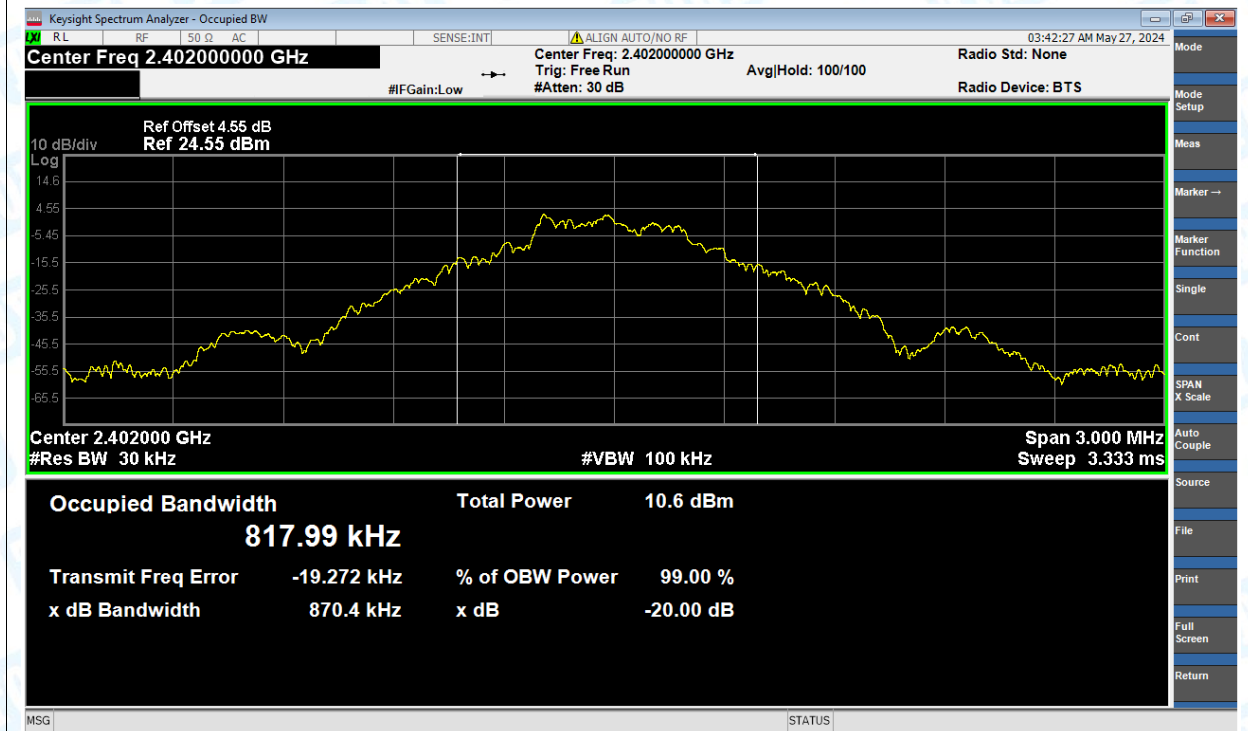


4. Occupied Channel Bandwidth

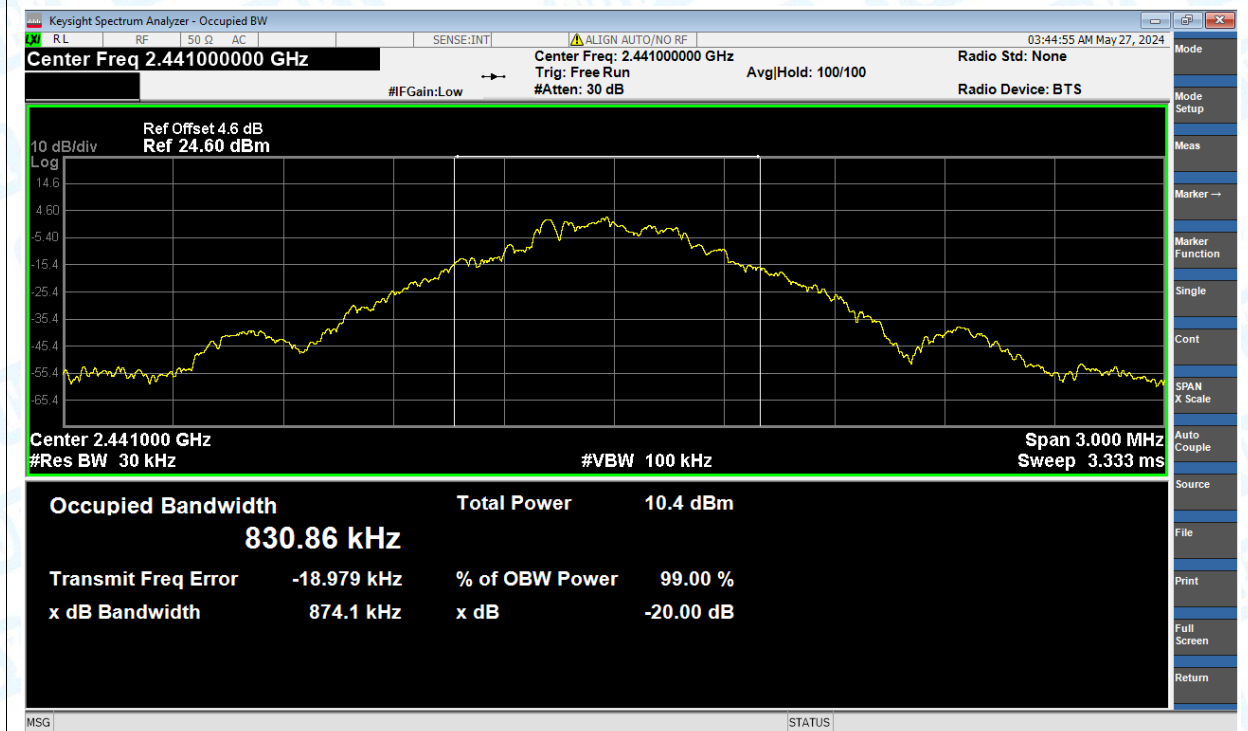
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.818
NVNT	1-DH1	2441	Ant1	0.831
NVNT	1-DH1	2480	Ant1	0.826
NVNT	2-DH1	2402	Ant1	1.164
NVNT	2-DH1	2441	Ant1	1.166
NVNT	2-DH1	2480	Ant1	1.165
NVNT	3-DH1	2402	Ant1	1.15
NVNT	3-DH1	2441	Ant1	1.138
NVNT	3-DH1	2480	Ant1	1.155

Test Graphs

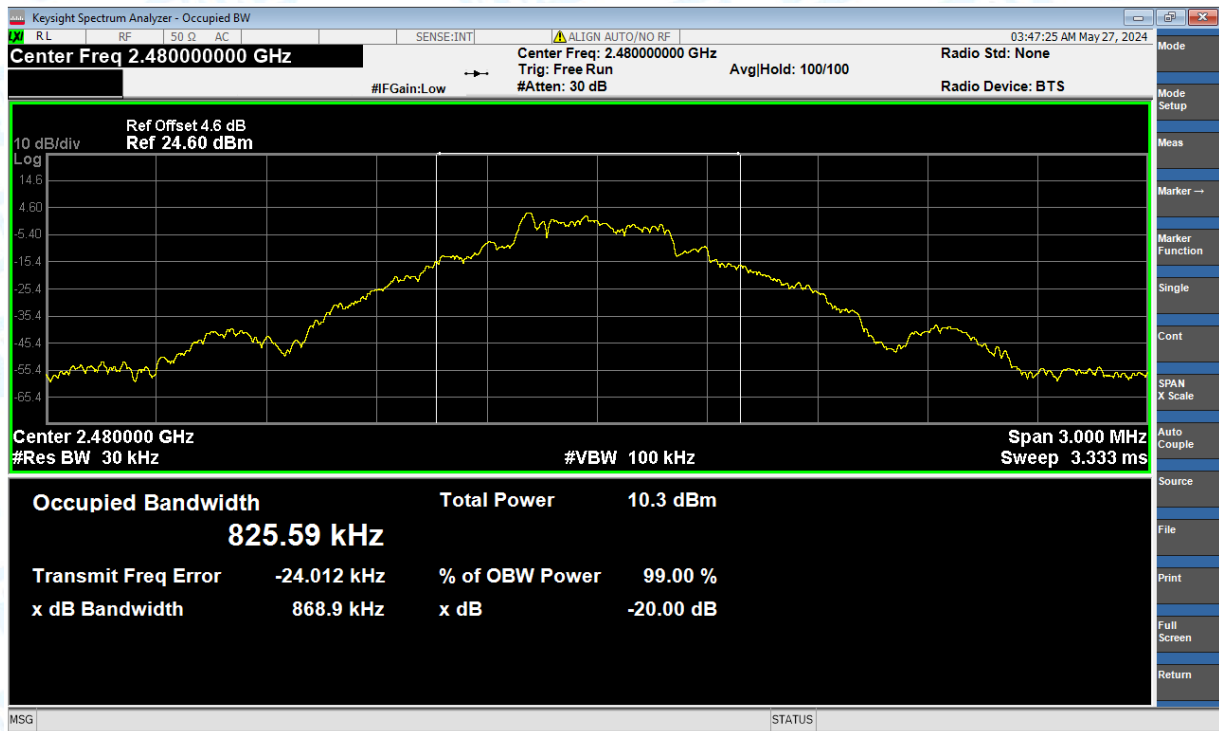
OBW NVNT 1-DH1 2402MHz Ant1



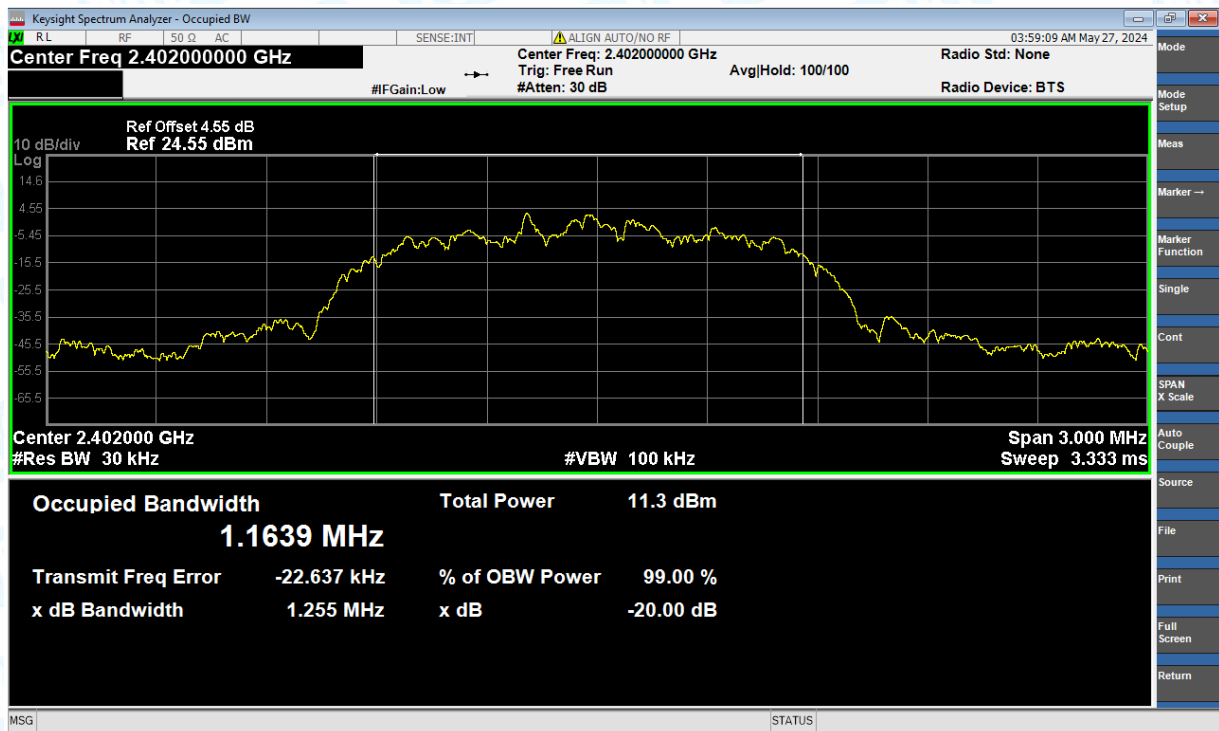
OBW NVNT 1-DH1 2441MHz Ant1



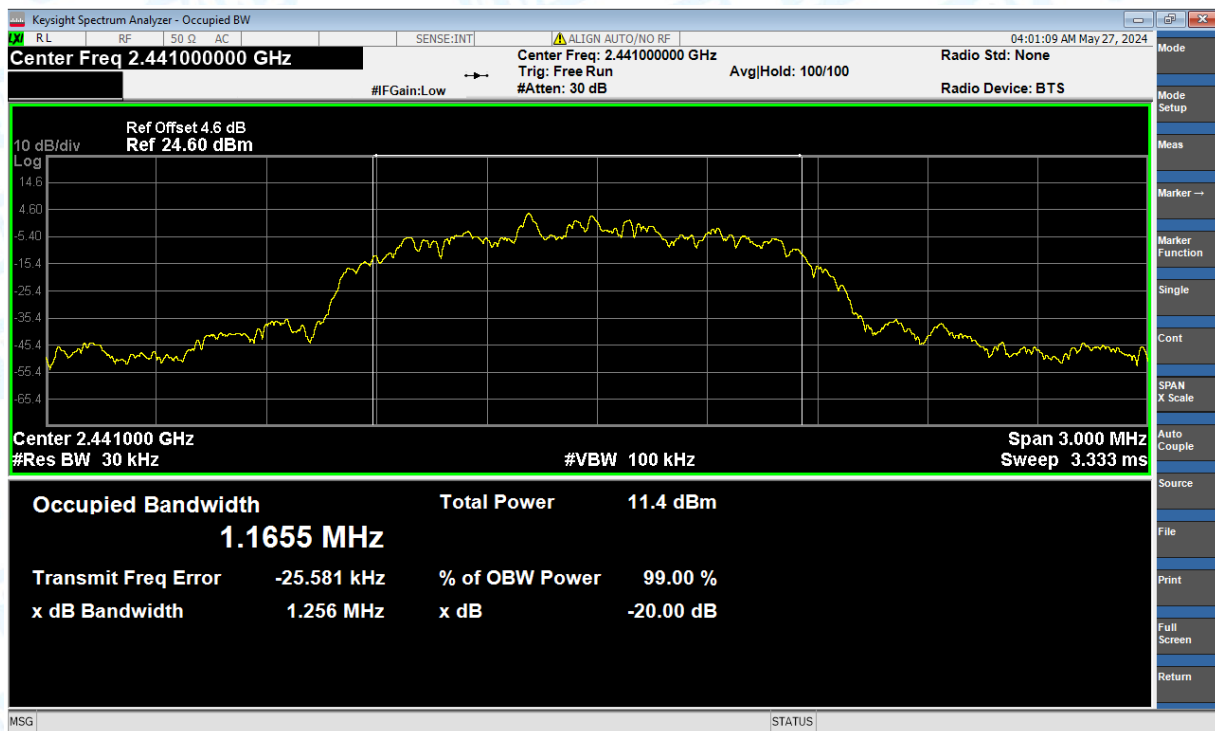
OBW NVNT 1-DH1 2480MHz Ant1



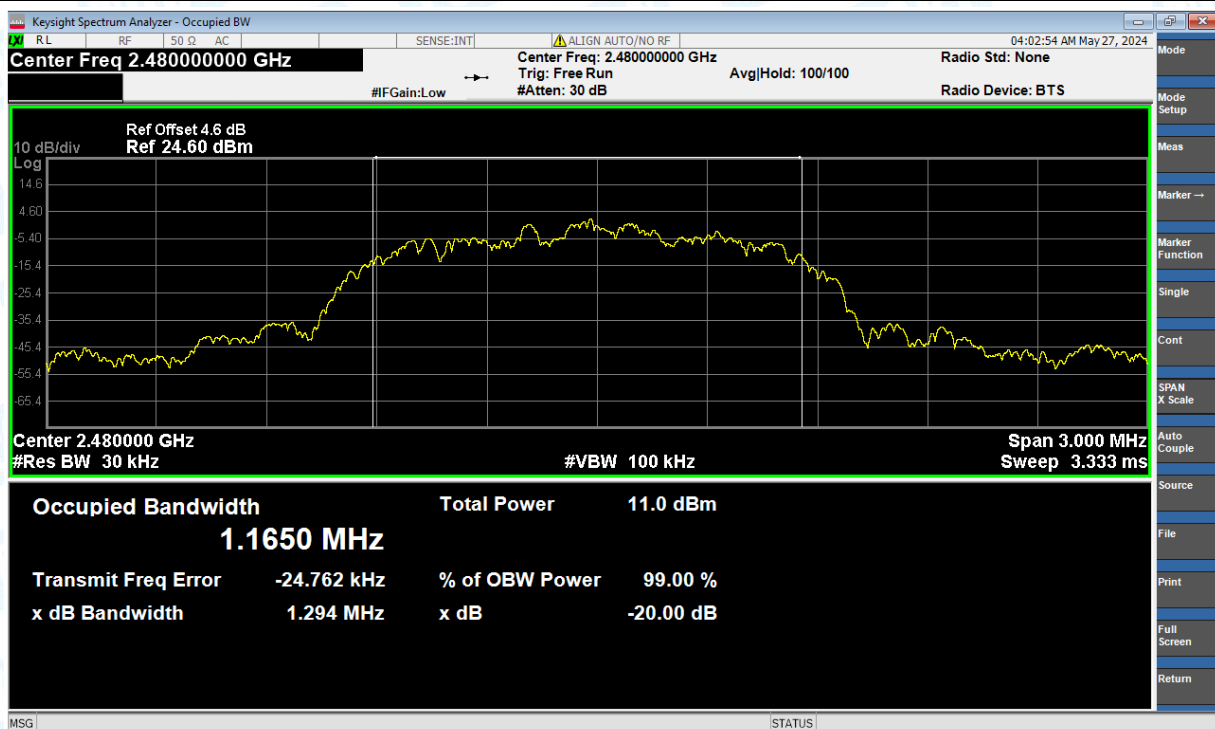
OBW NVNT 2-DH1 2402MHz Ant1



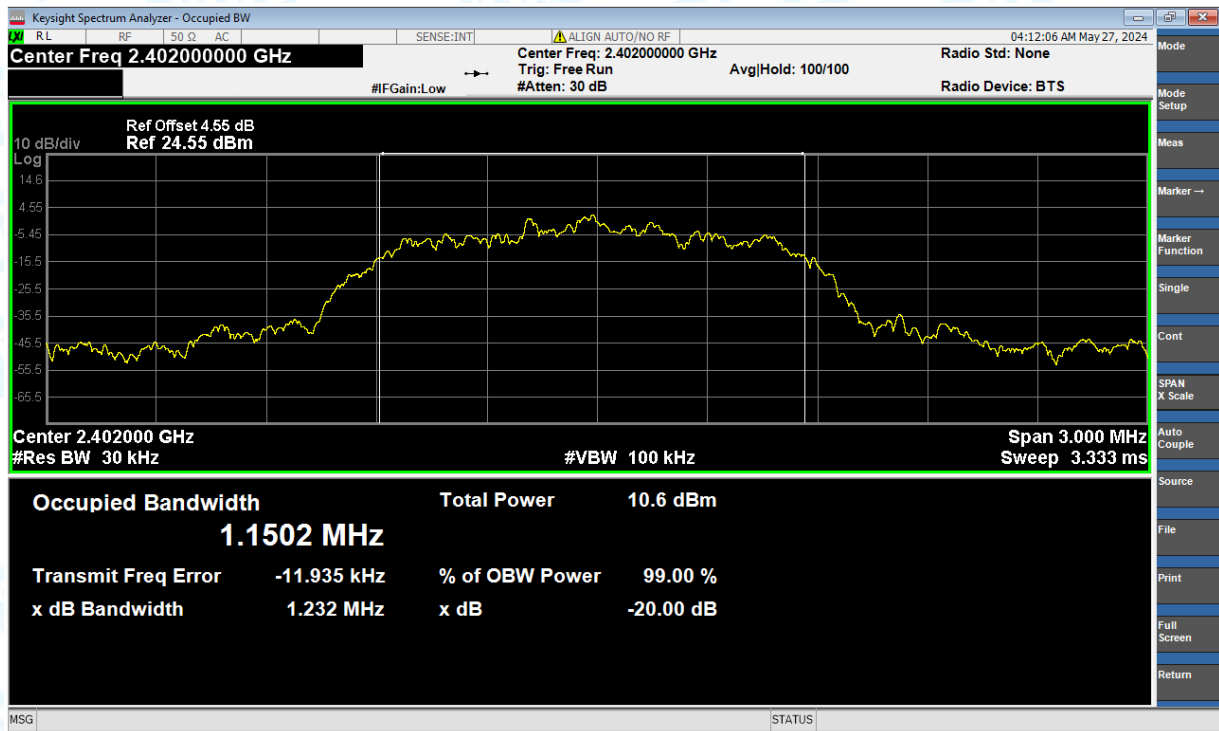
OBW NVNT 2-DH1 2441MHz Ant1



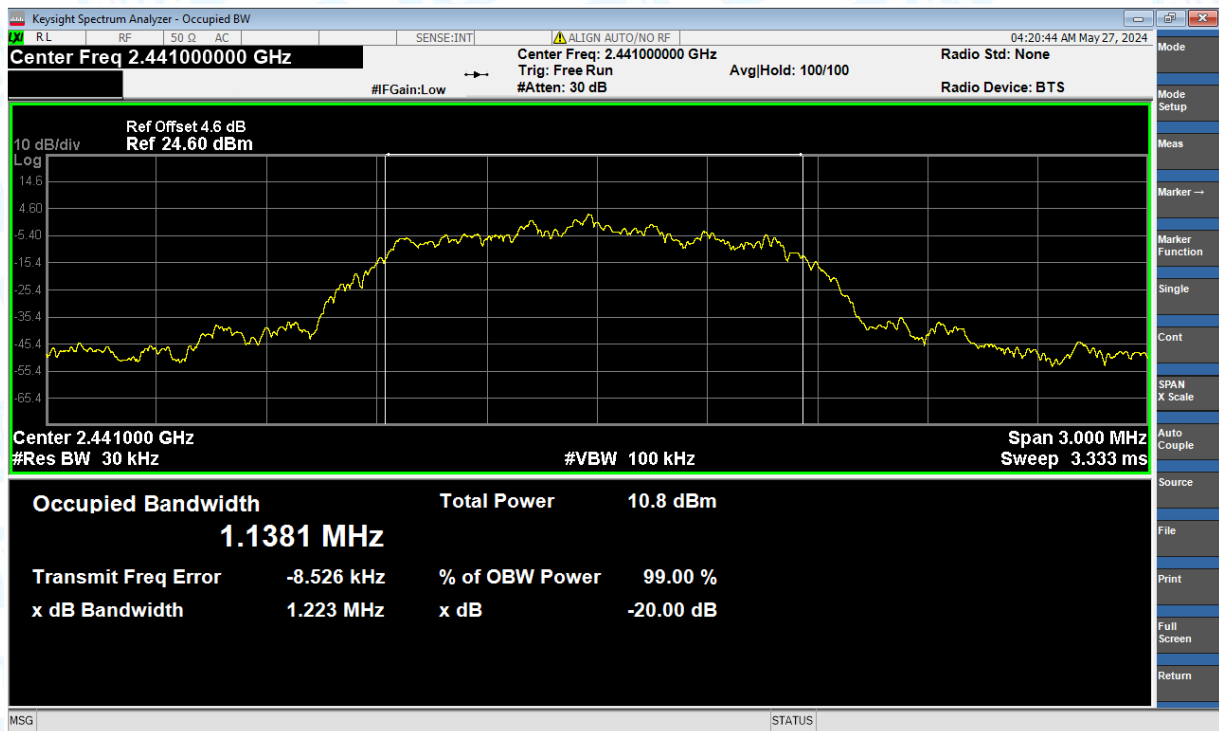
OBW NVNT 2-DH1 2480MHz Ant1

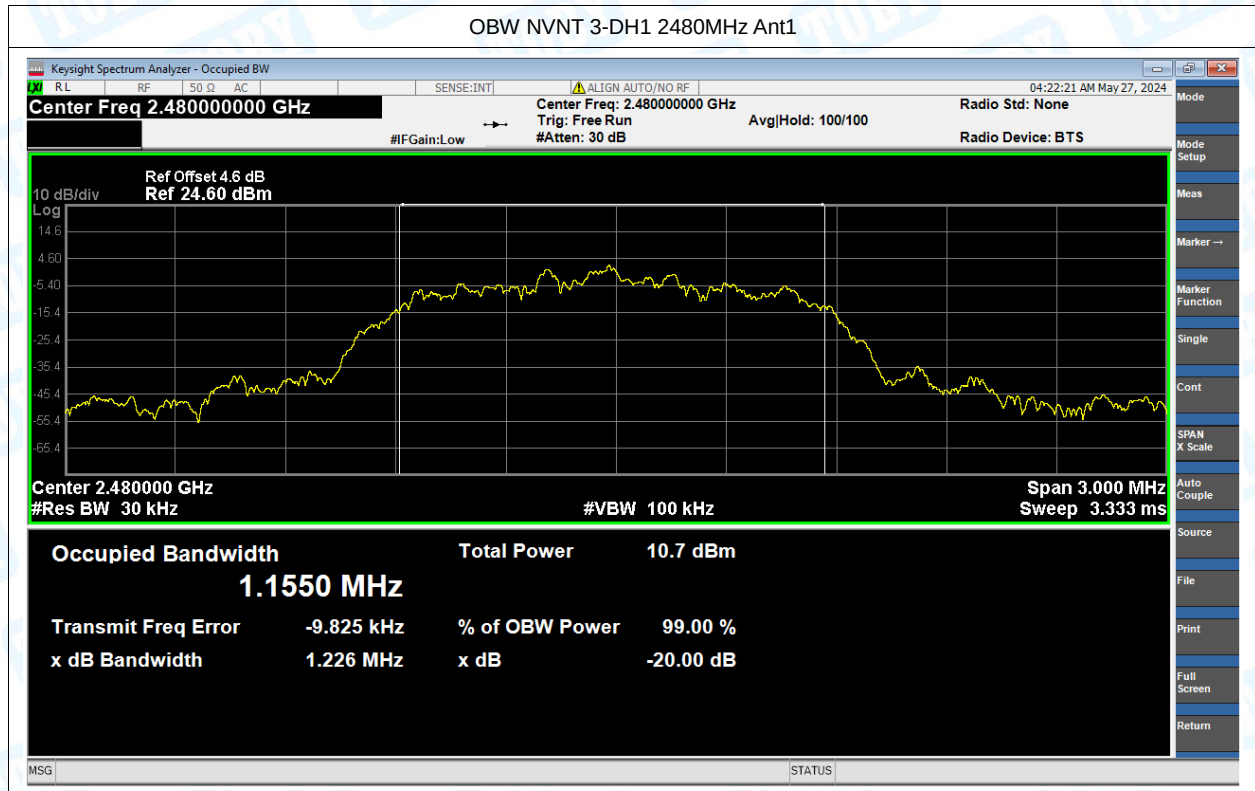


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



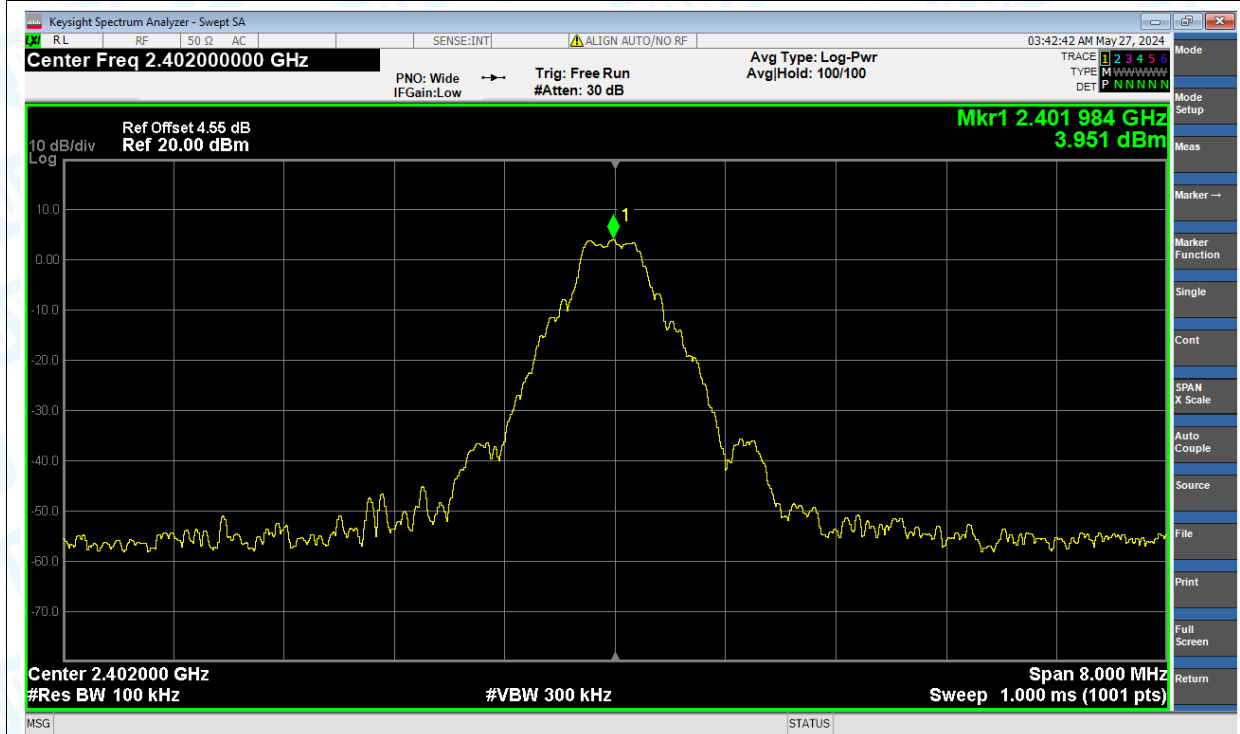


5. Band Edge

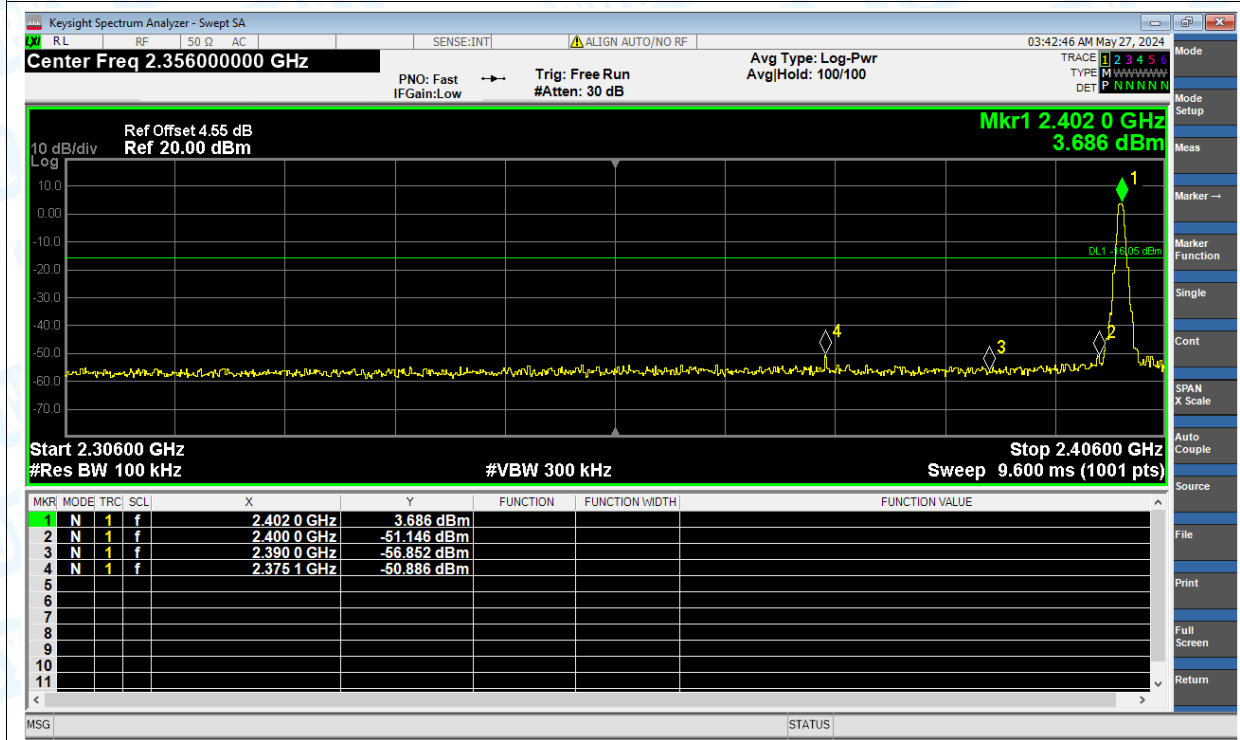
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-54.84	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-52.34	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-56.4	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-50.24	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-57.46	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-55.79	-20	Pass

Test Graphs

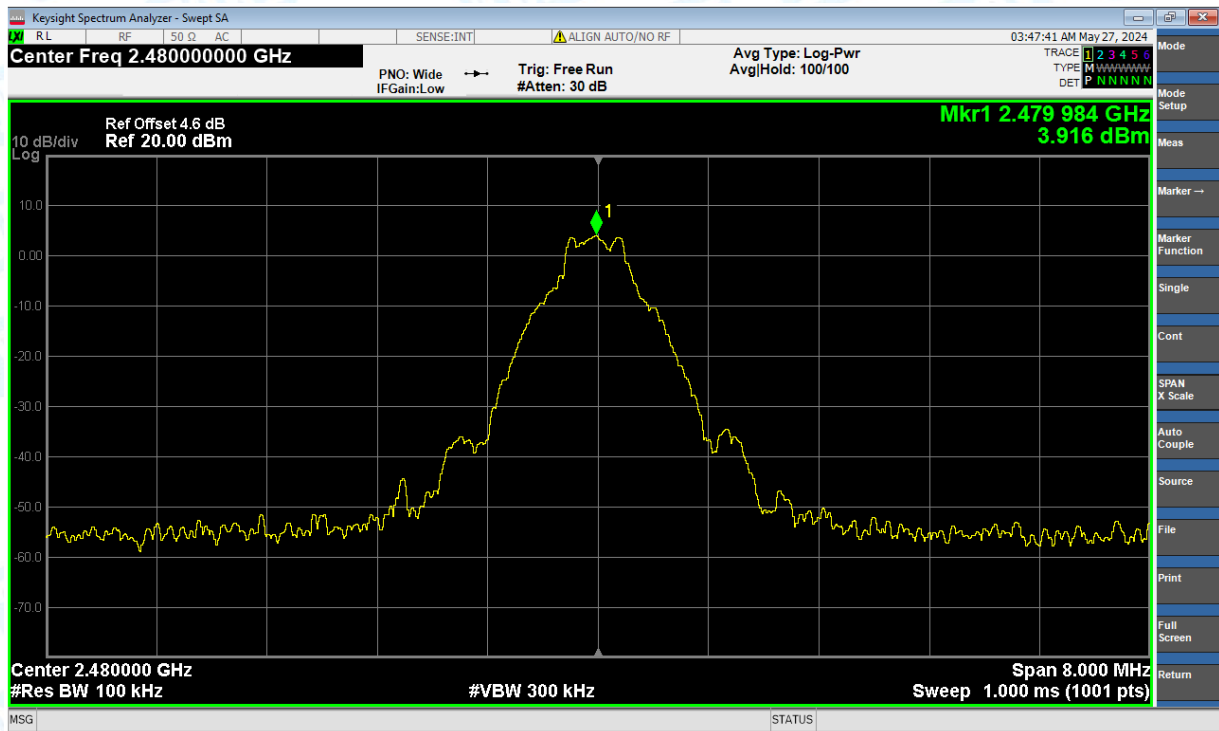
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



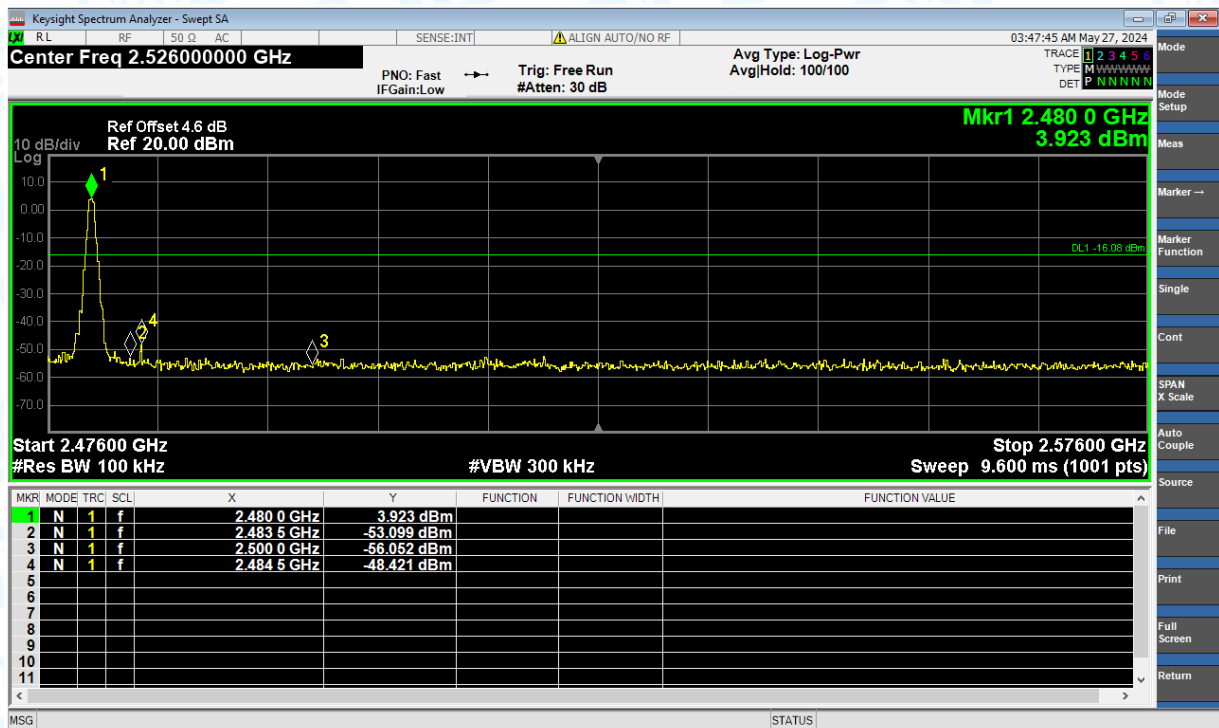
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



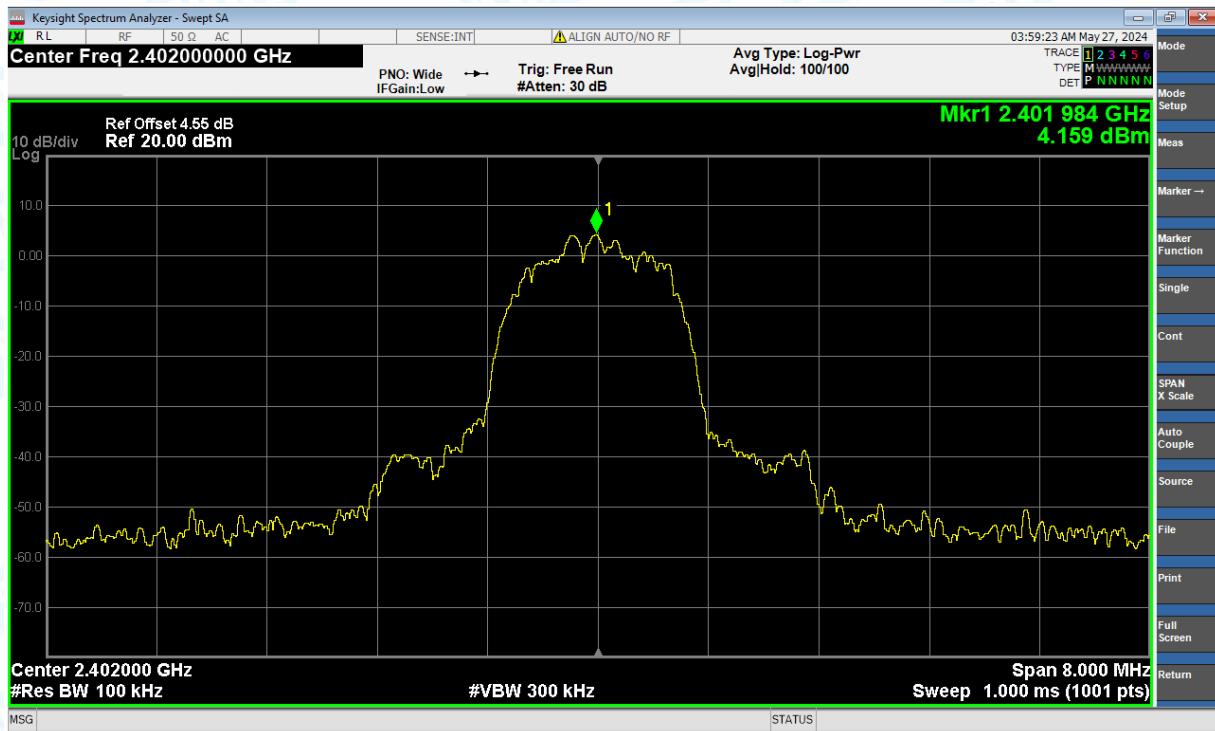
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



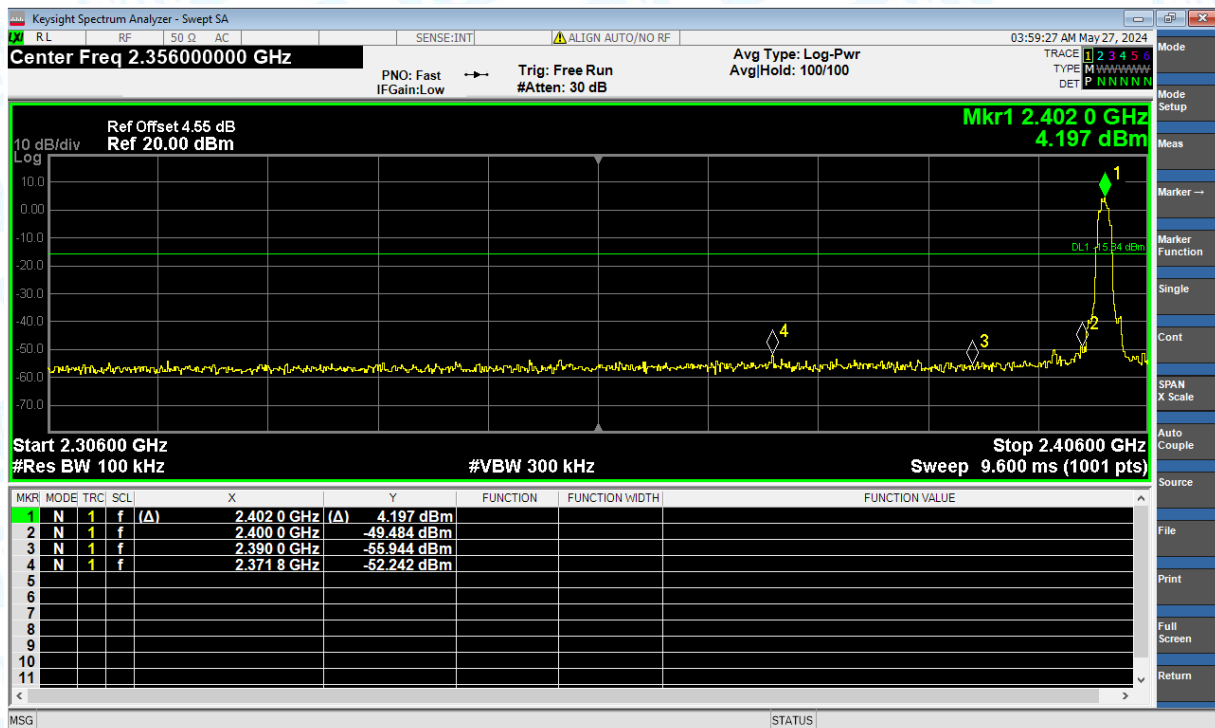
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



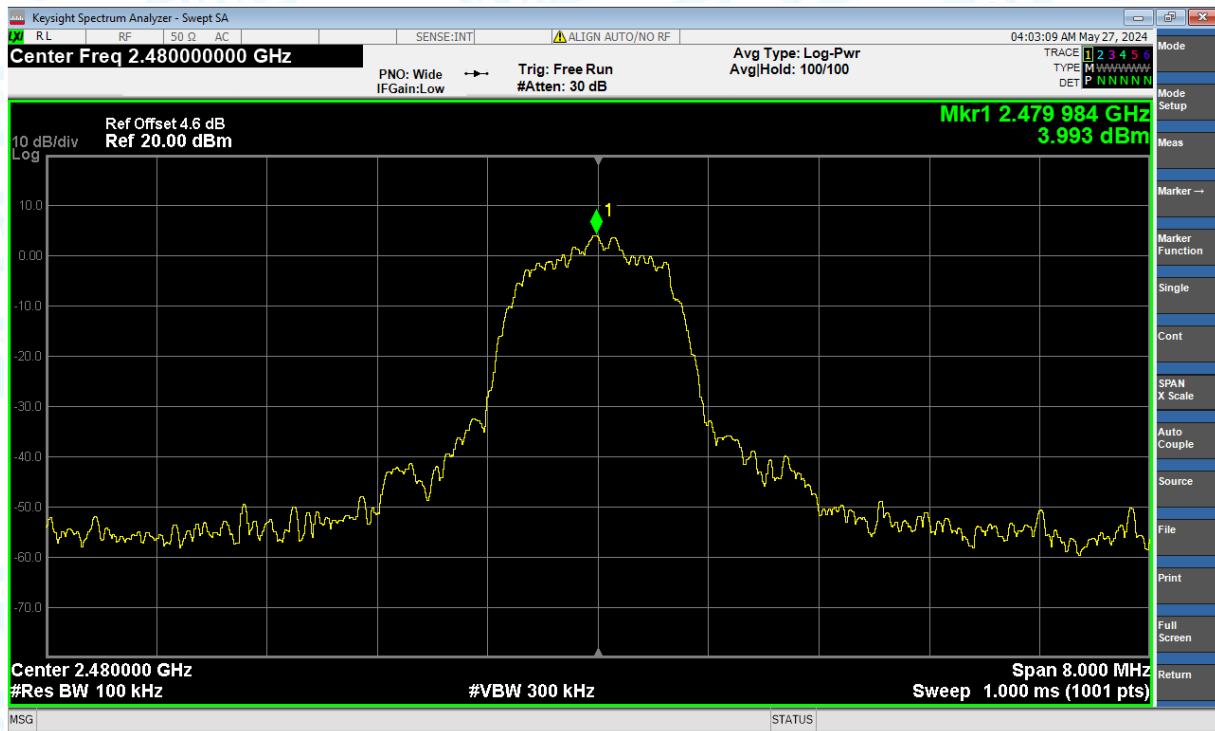
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



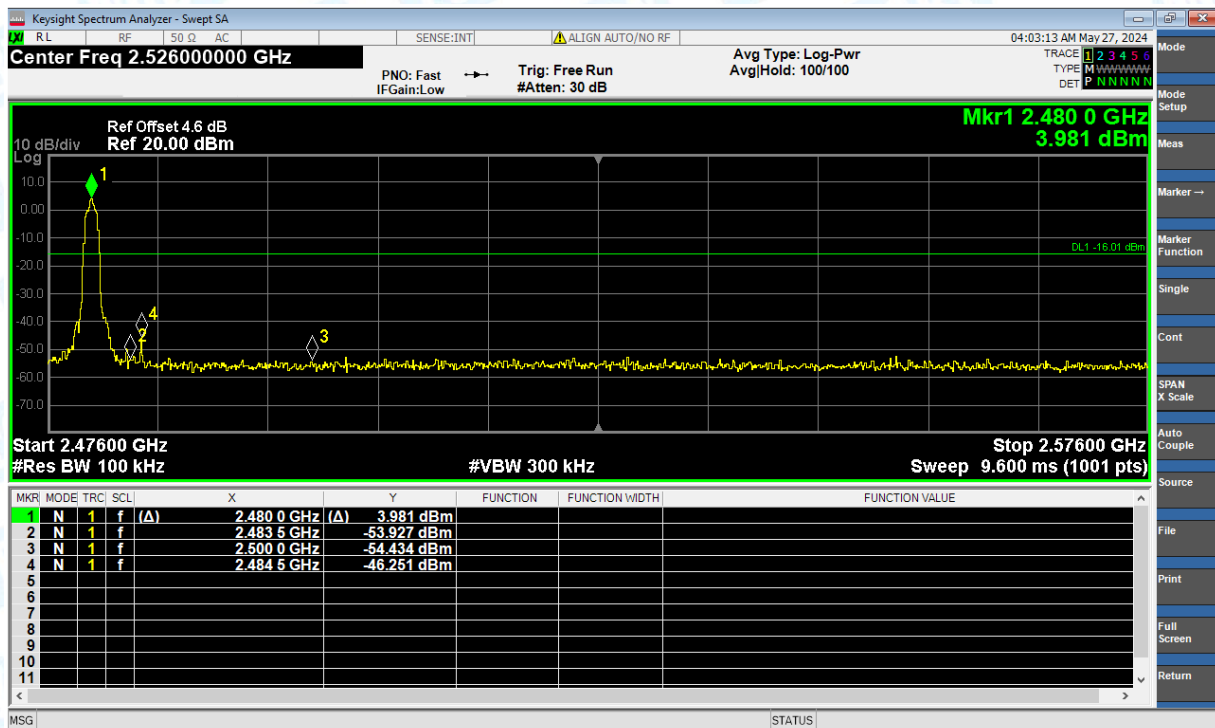
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



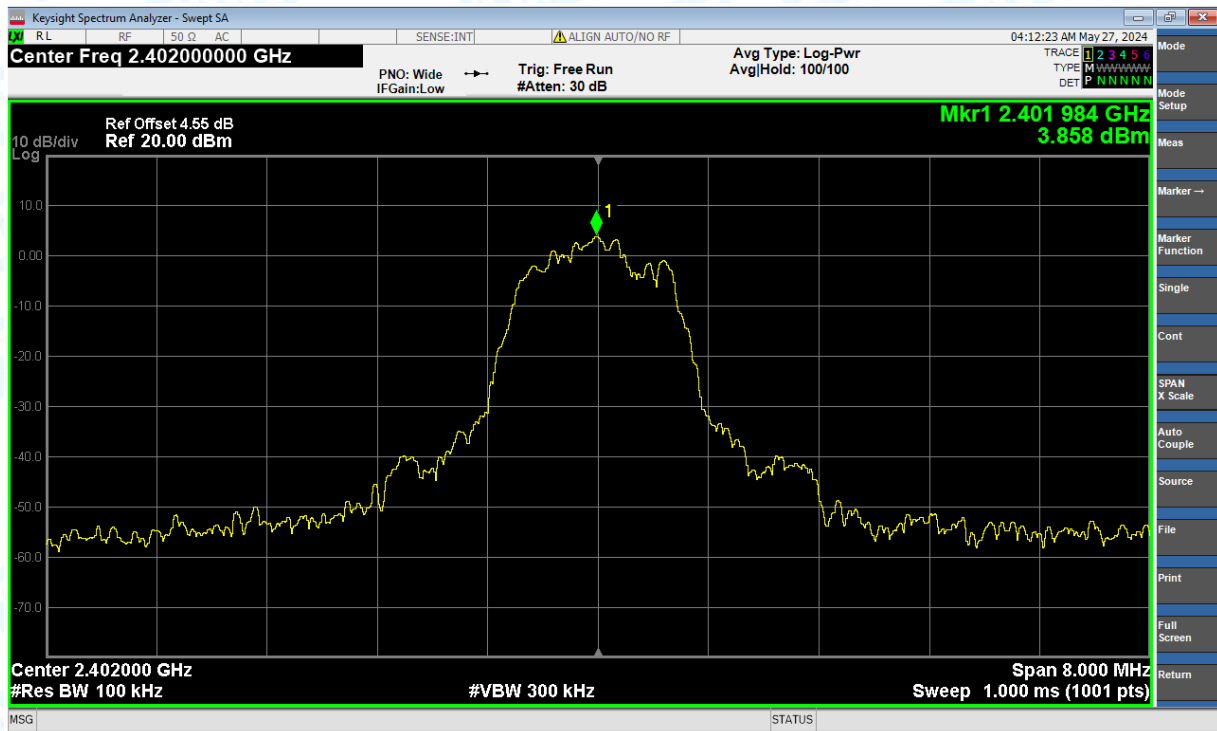
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



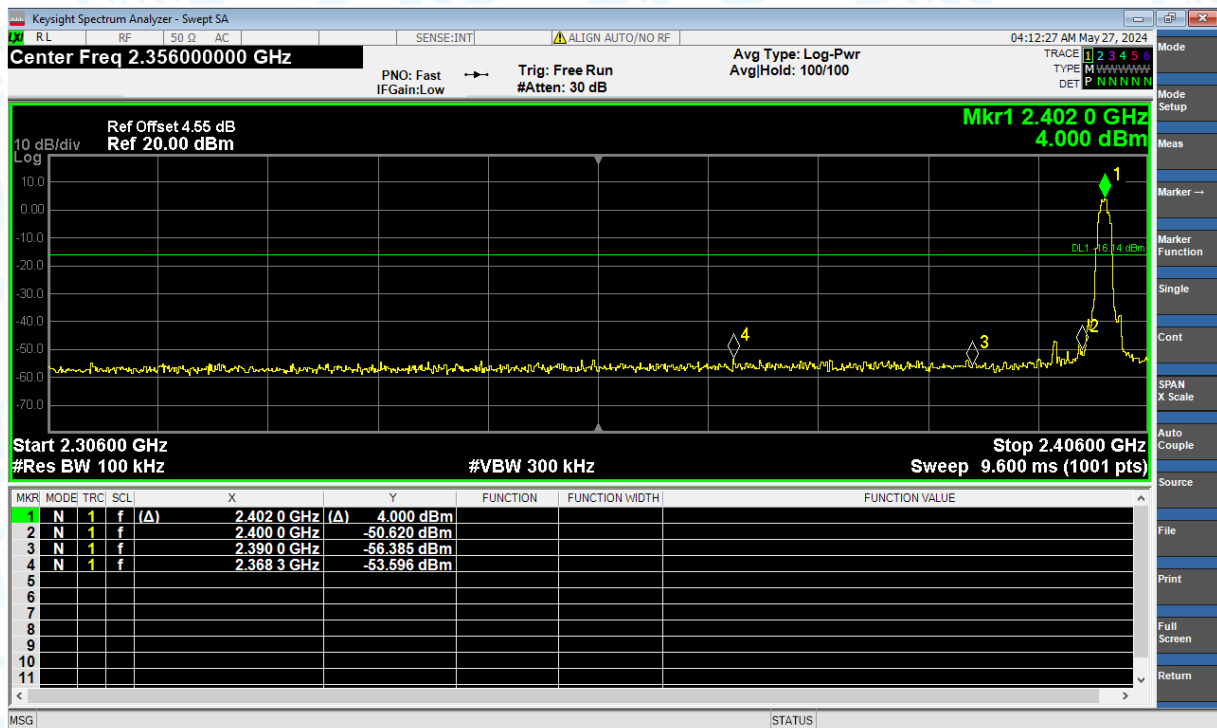
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



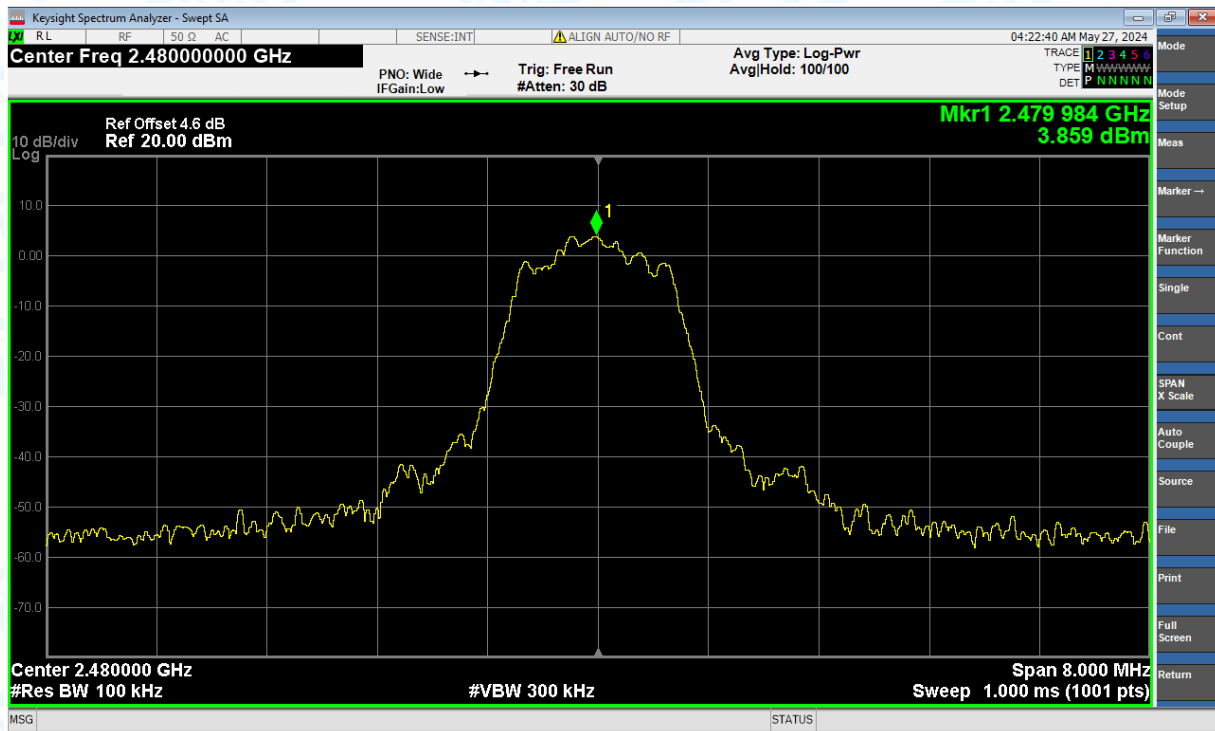
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



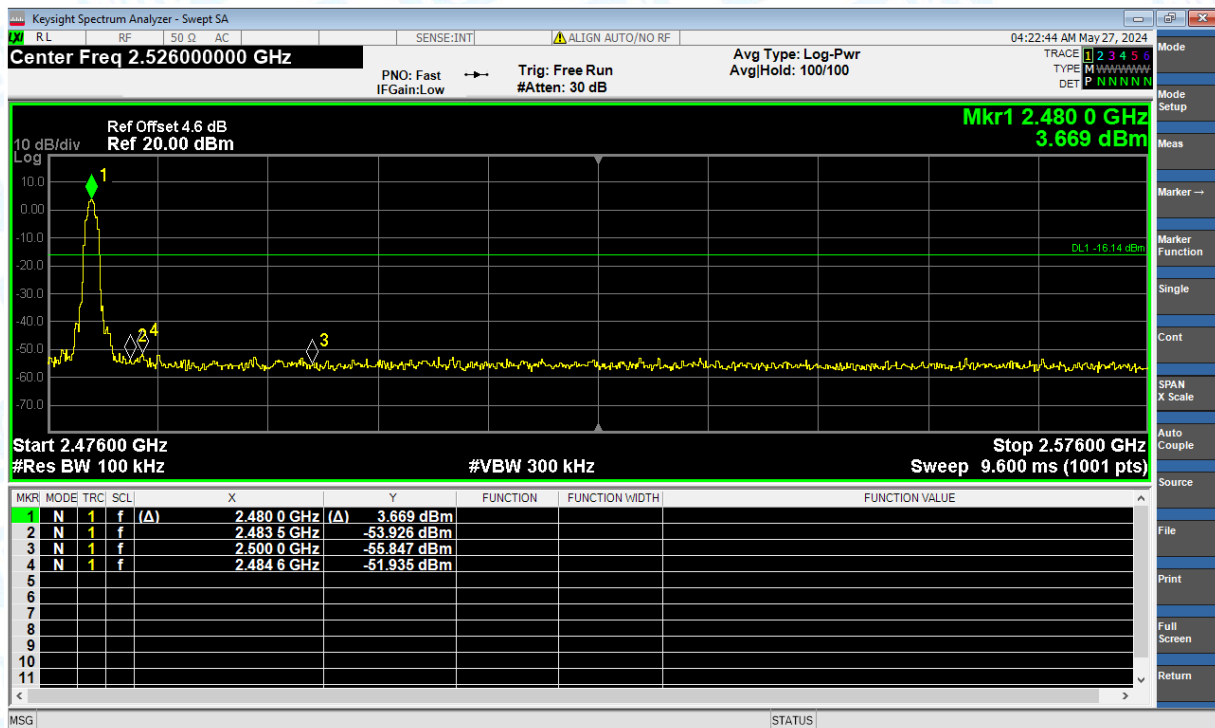
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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

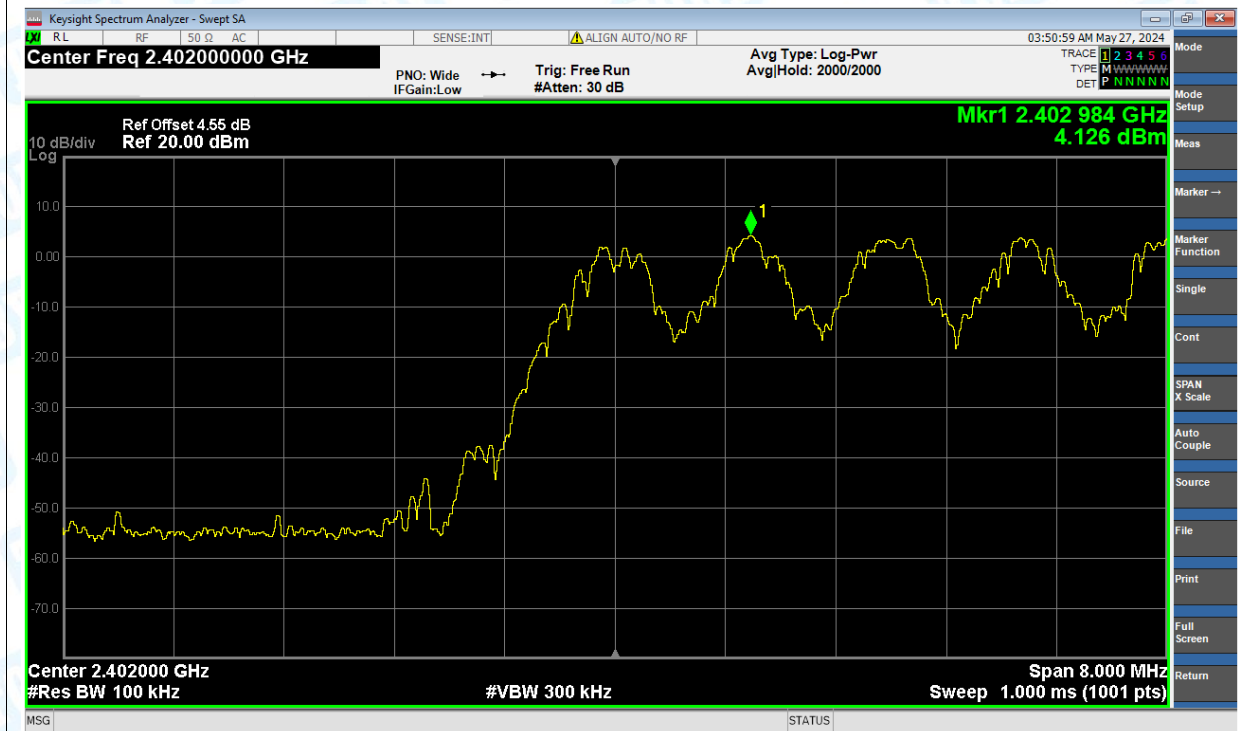


6. Band Edge(Hopping)

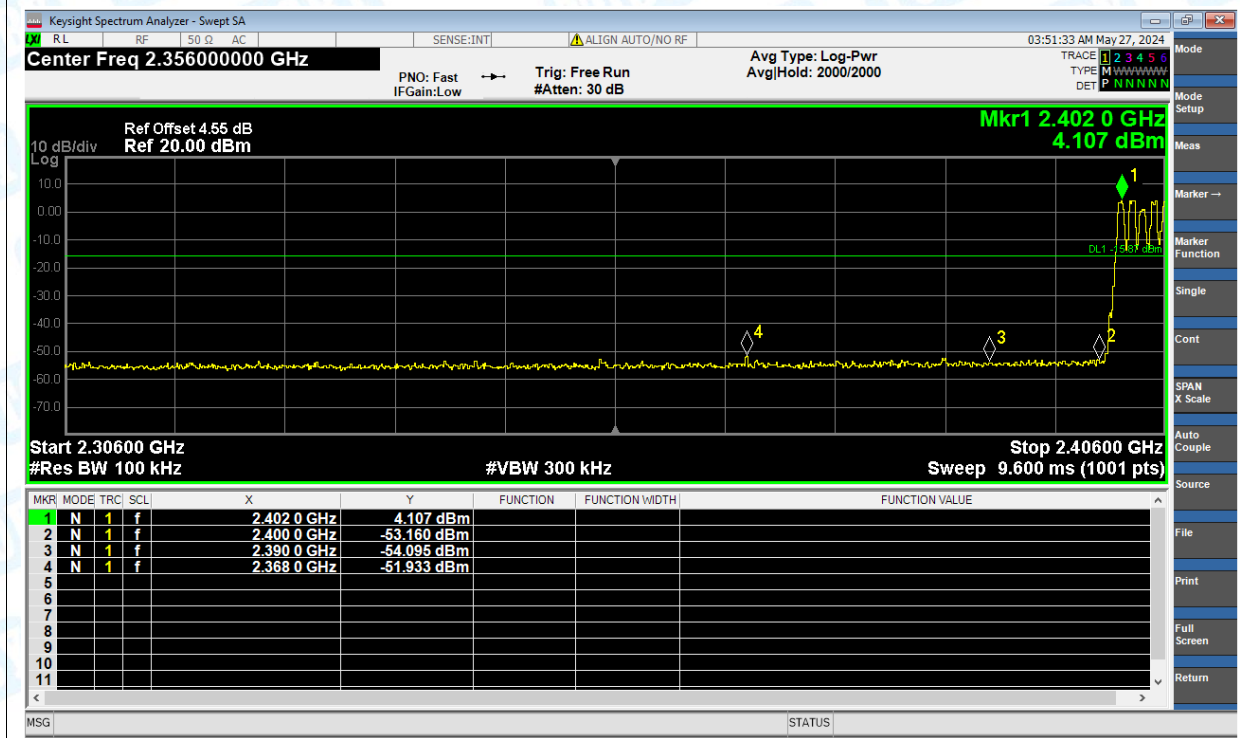
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-56.06	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-54.11	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-56.69	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-56.06	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-56.89	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-56.3	-20	Pass

Test Graphs

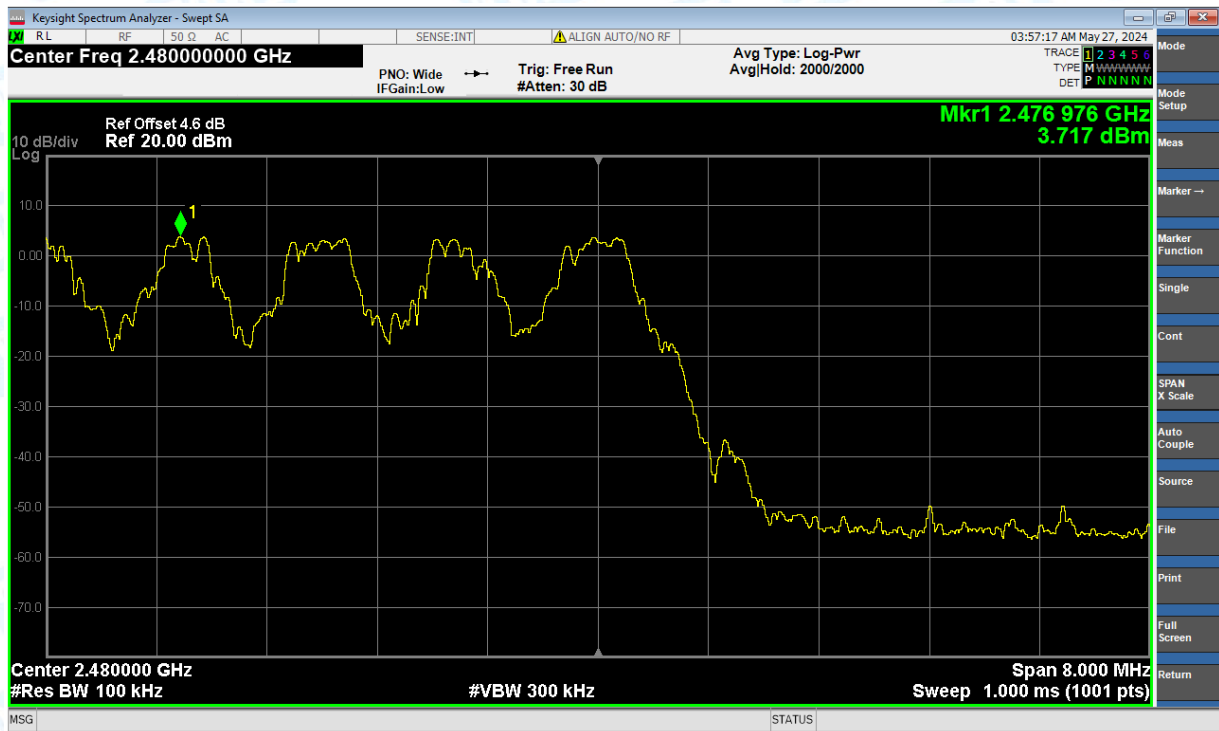
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



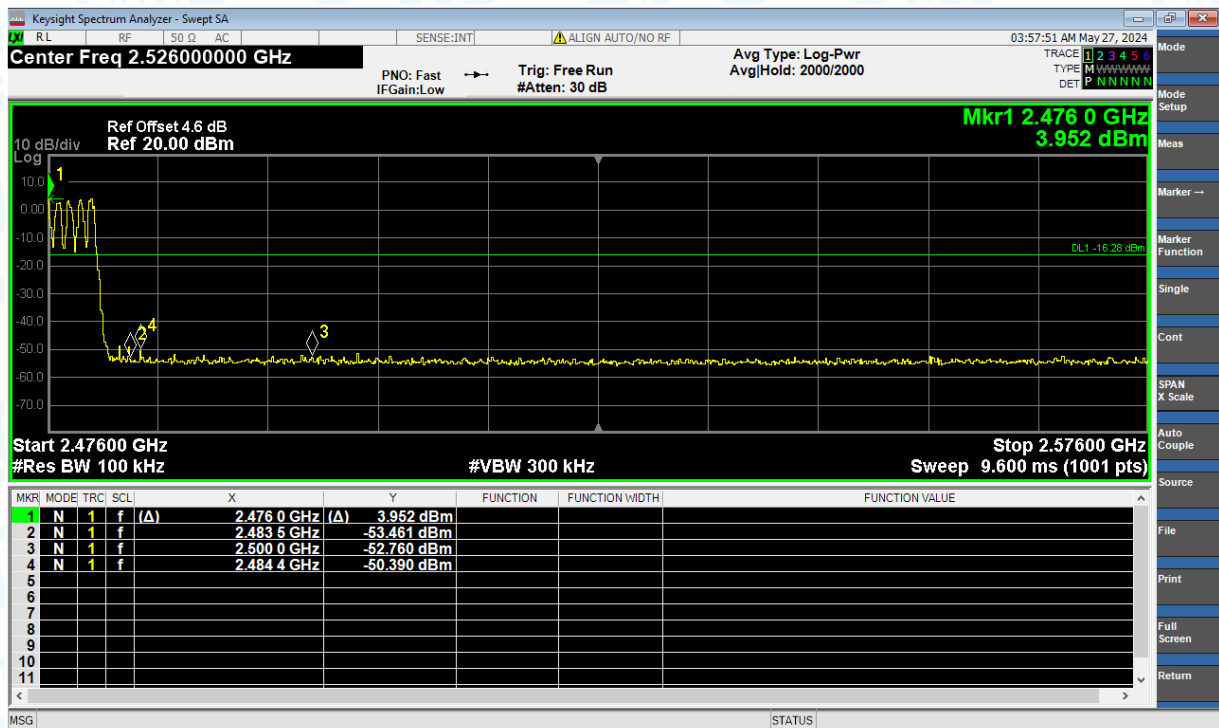
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



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



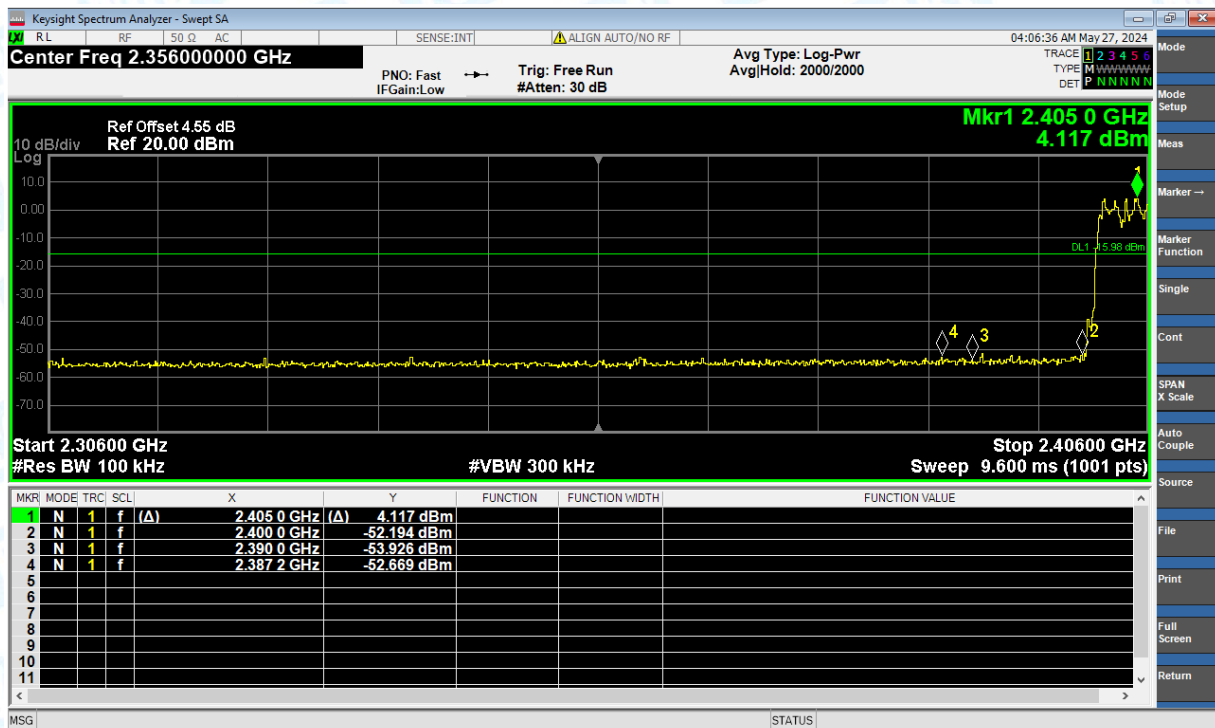
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



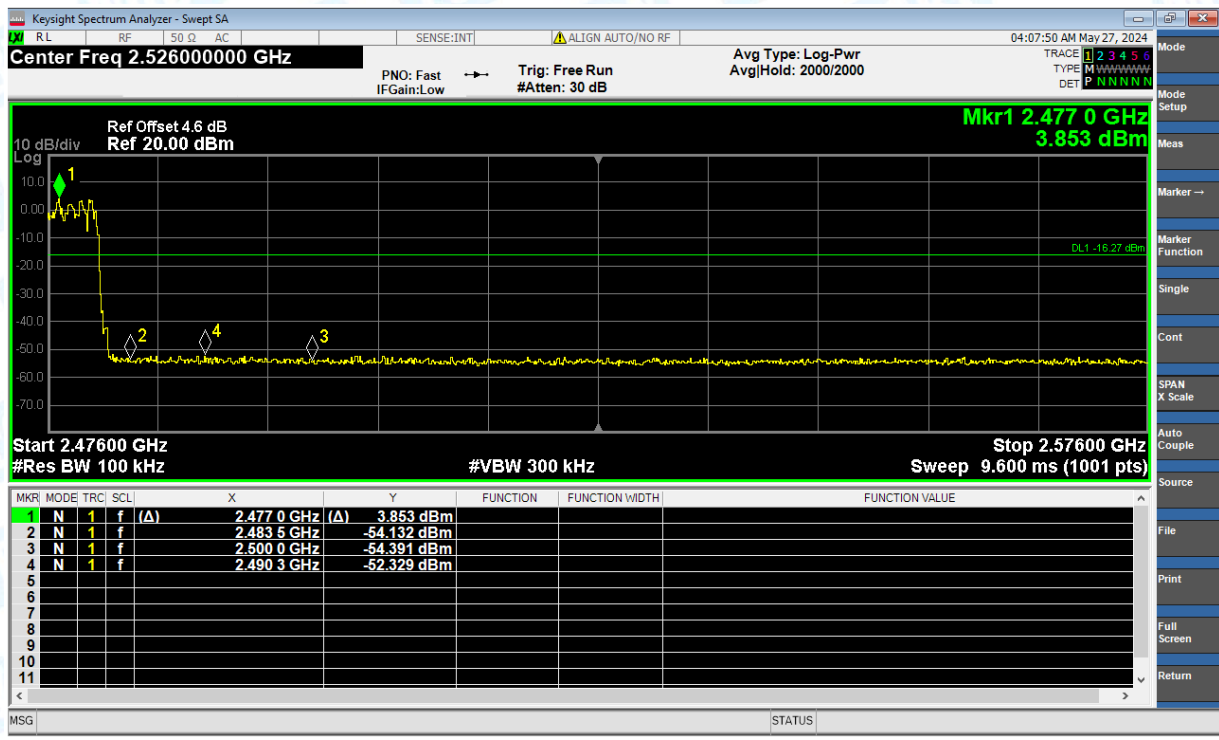
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref



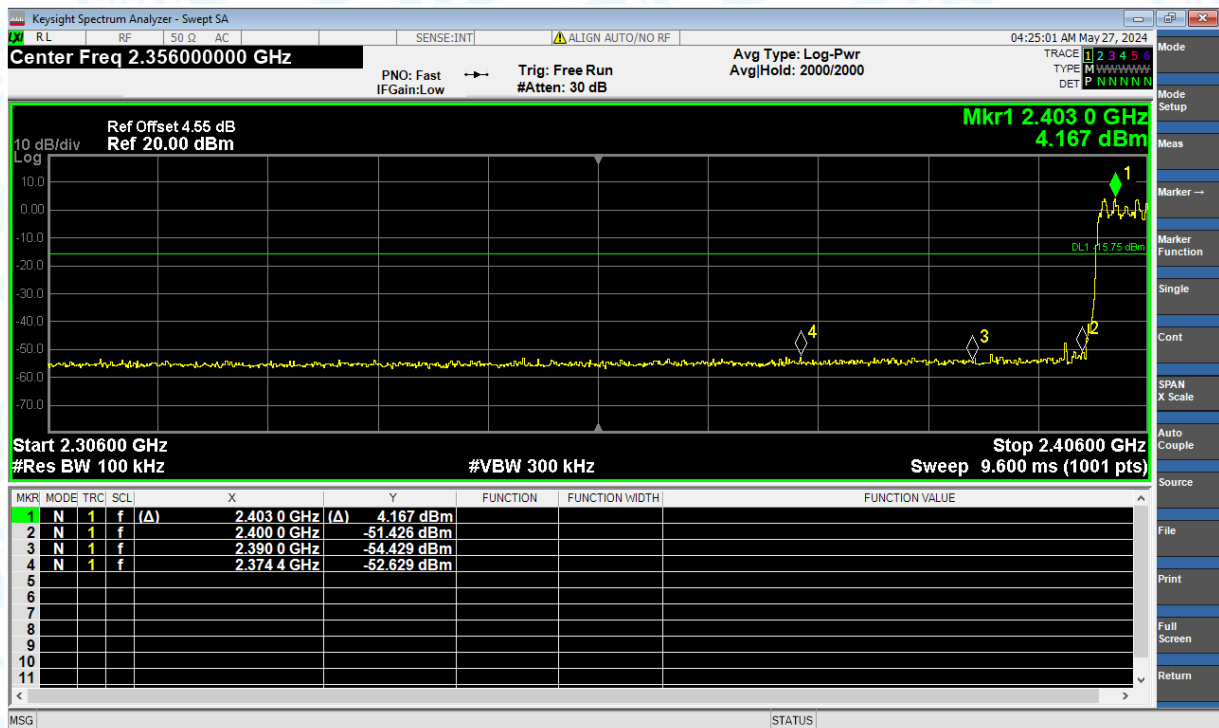
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



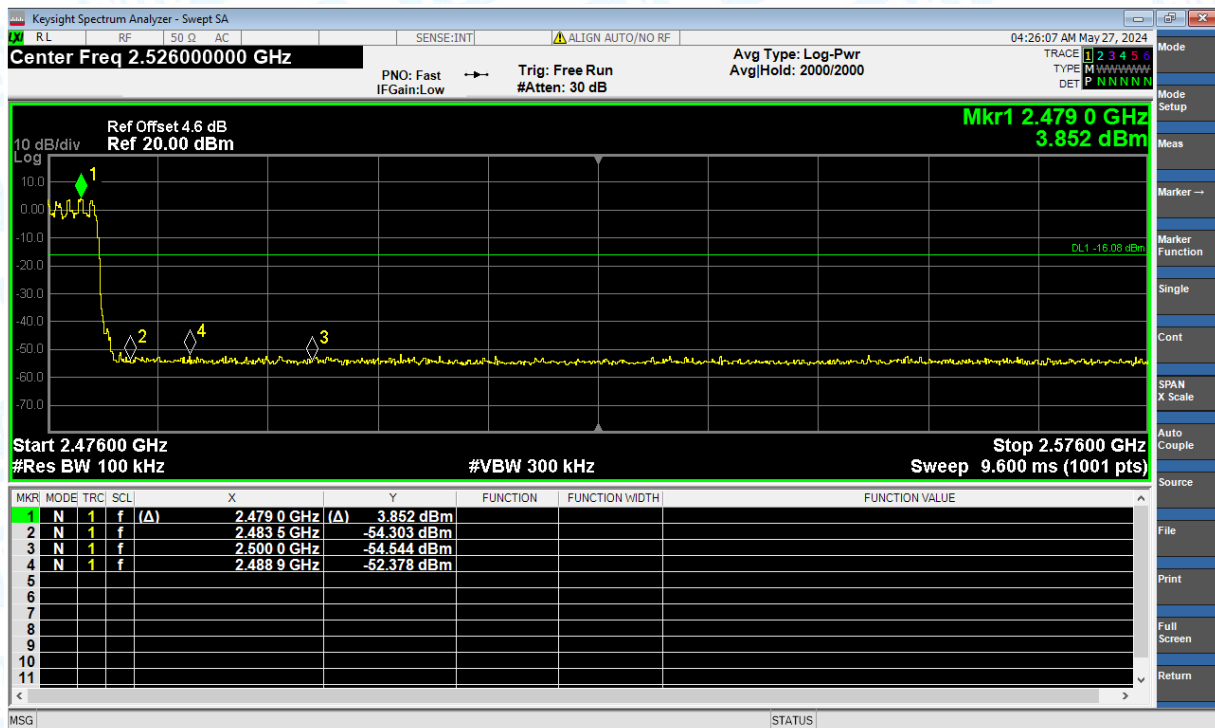
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Emission

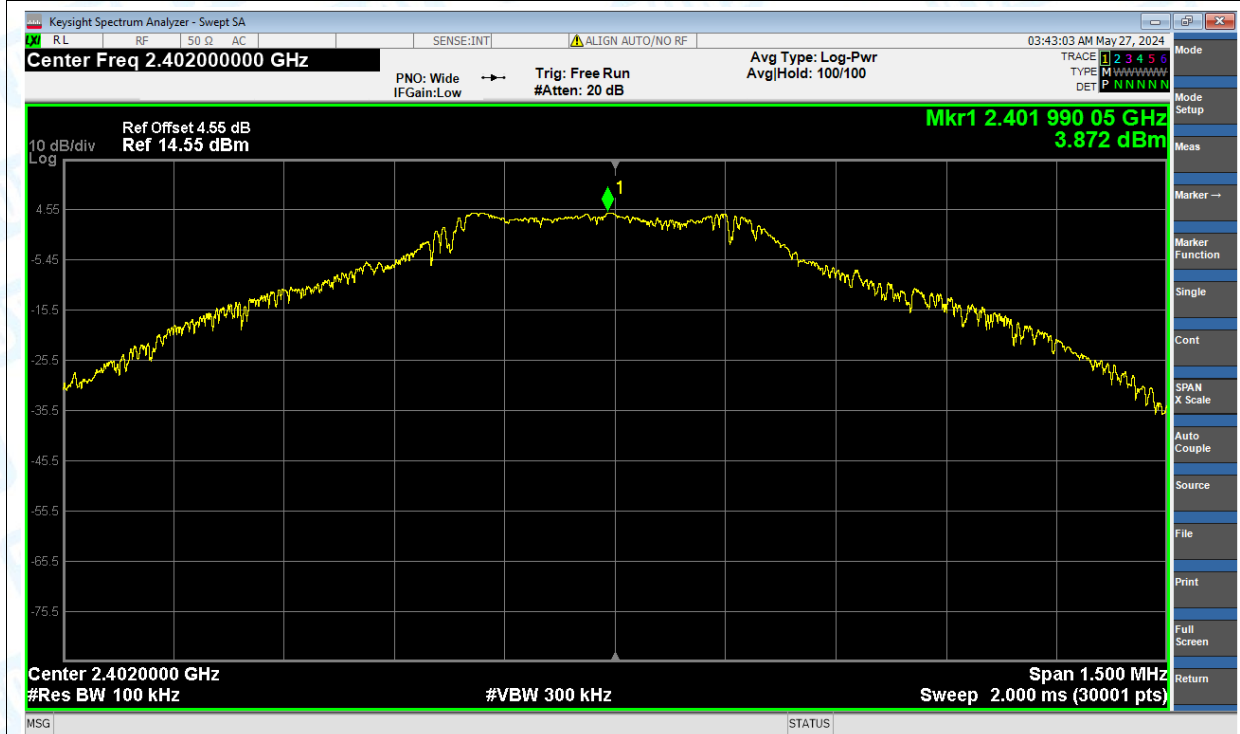


7. Conducted RF Spurious Emission

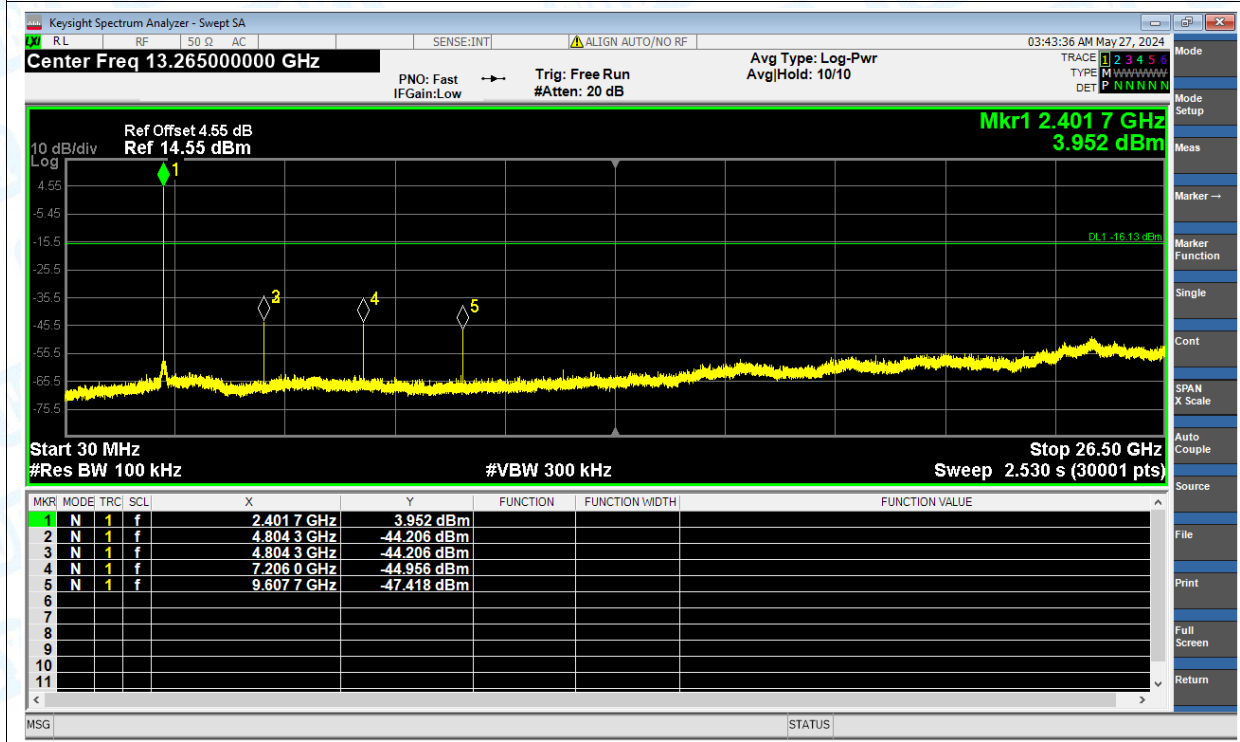
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-48.08	-20	Pass
NVNT	1-DH1	2441	Ant1	-44.57	-20	Pass
NVNT	1-DH1	2480	Ant1	-43.87	-20	Pass
NVNT	2-DH1	2402	Ant1	-49.66	-20	Pass
NVNT	2-DH1	2441	Ant1	-45.07	-20	Pass
NVNT	2-DH1	2480	Ant1	-46.63	-20	Pass
NVNT	3-DH1	2402	Ant1	-45.52	-20	Pass
NVNT	3-DH1	2441	Ant1	-48.89	-20	Pass
NVNT	3-DH1	2480	Ant1	-43.16	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



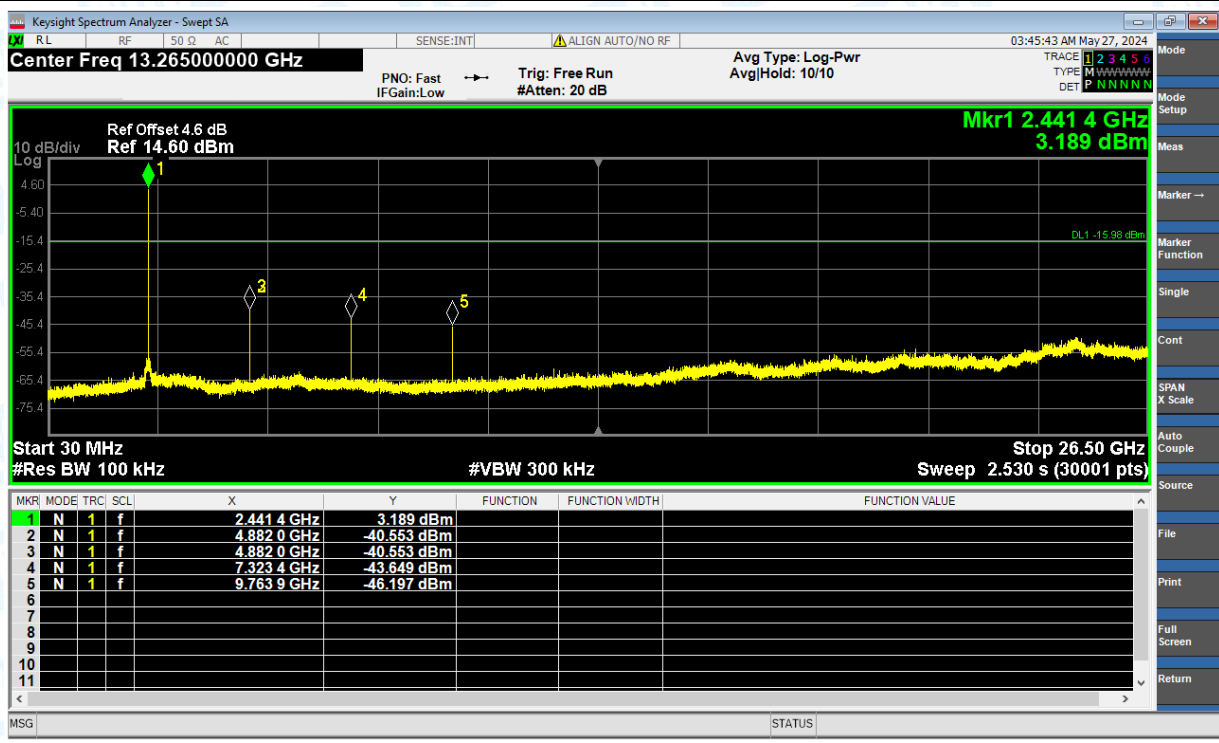
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



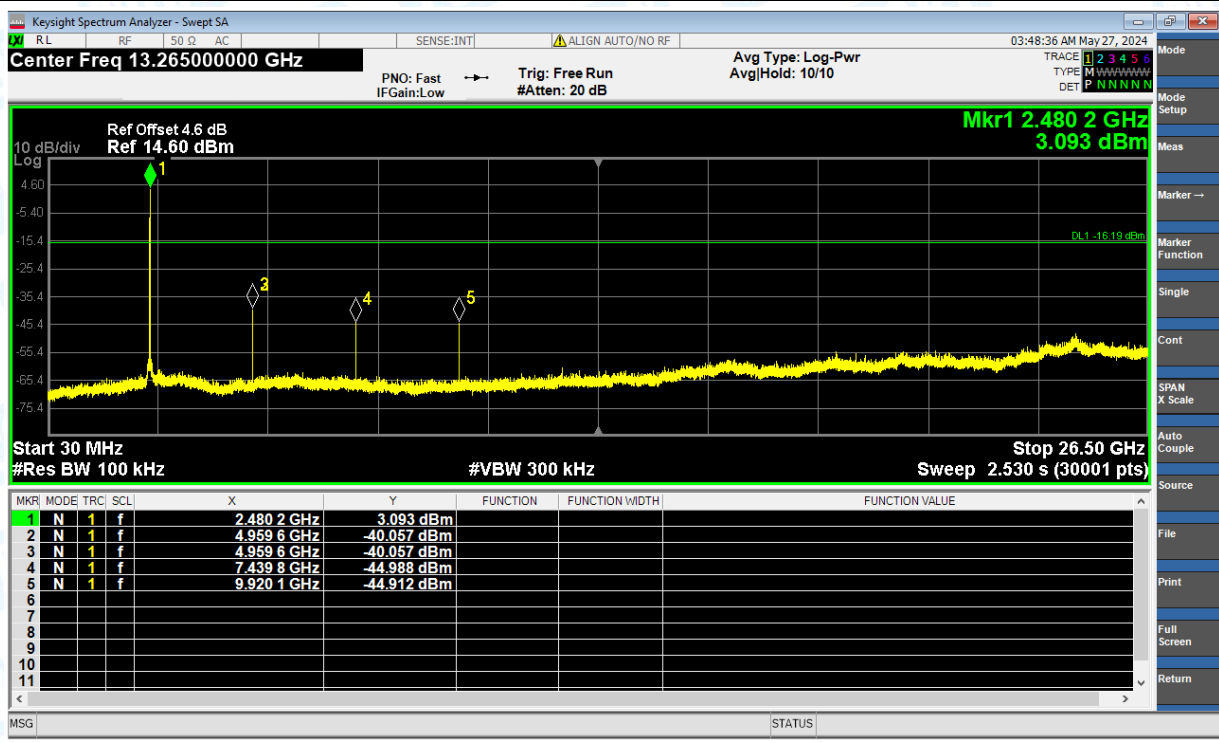
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



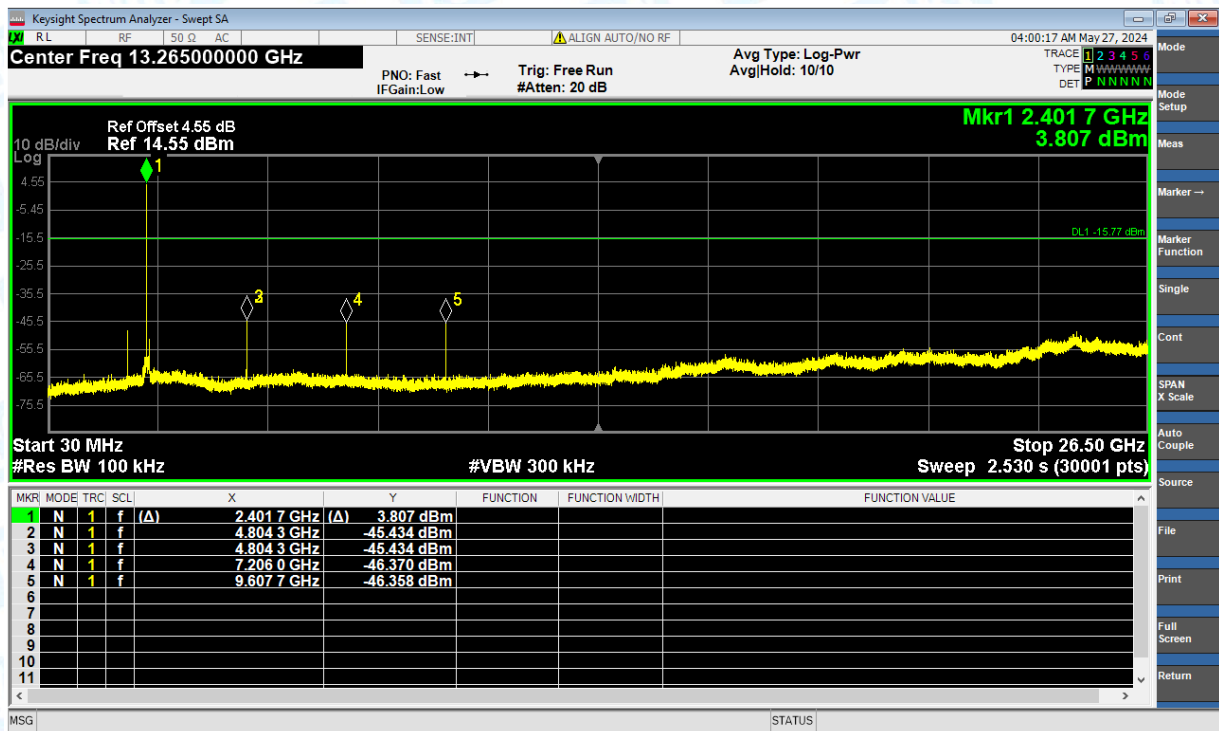
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



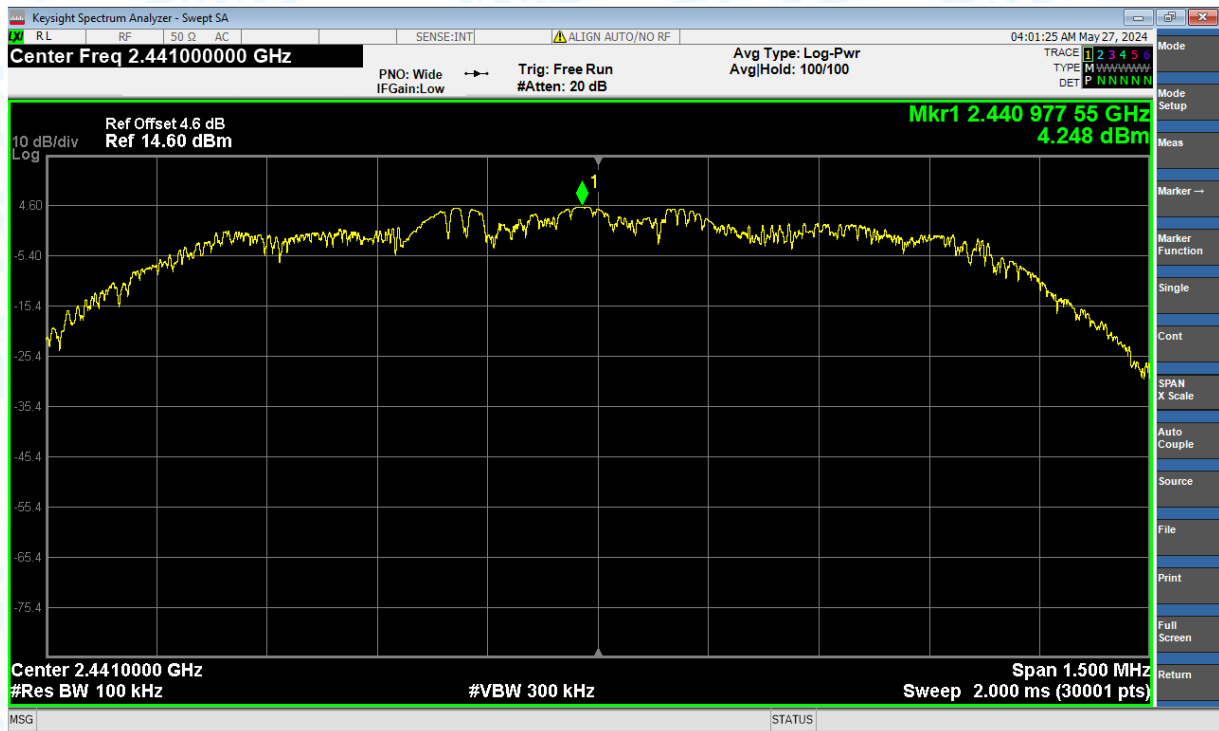
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



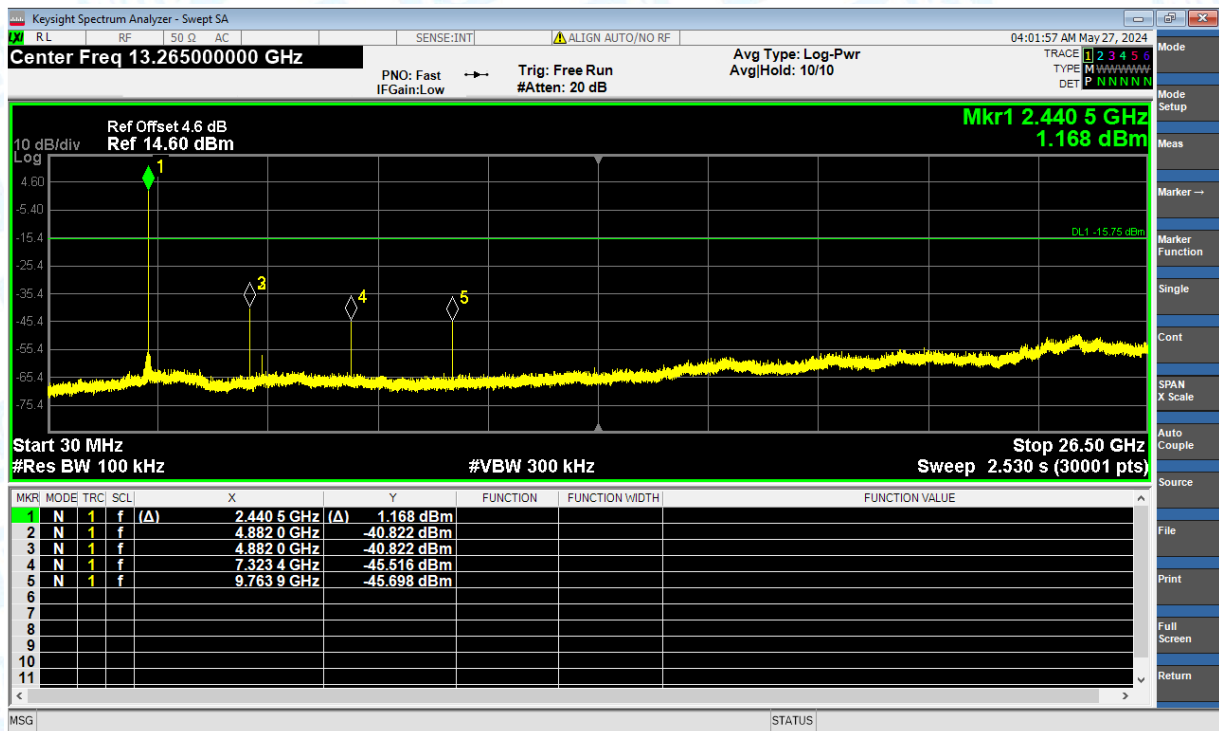
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



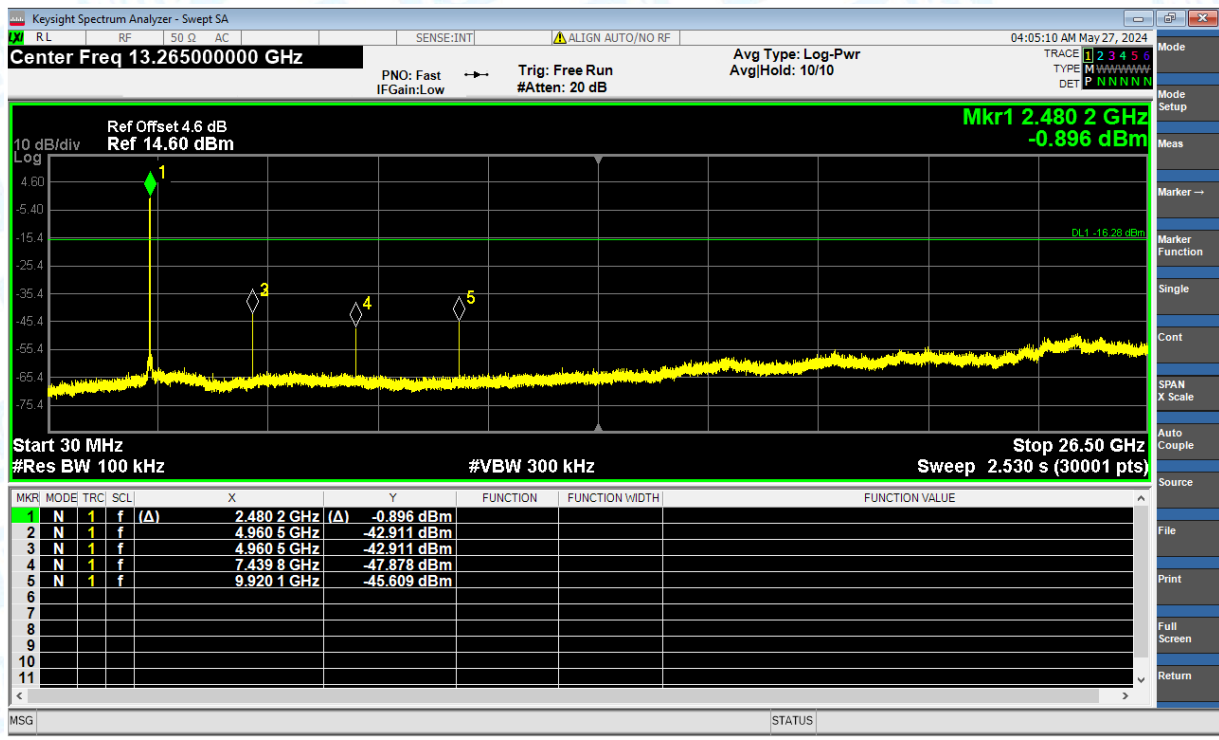
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



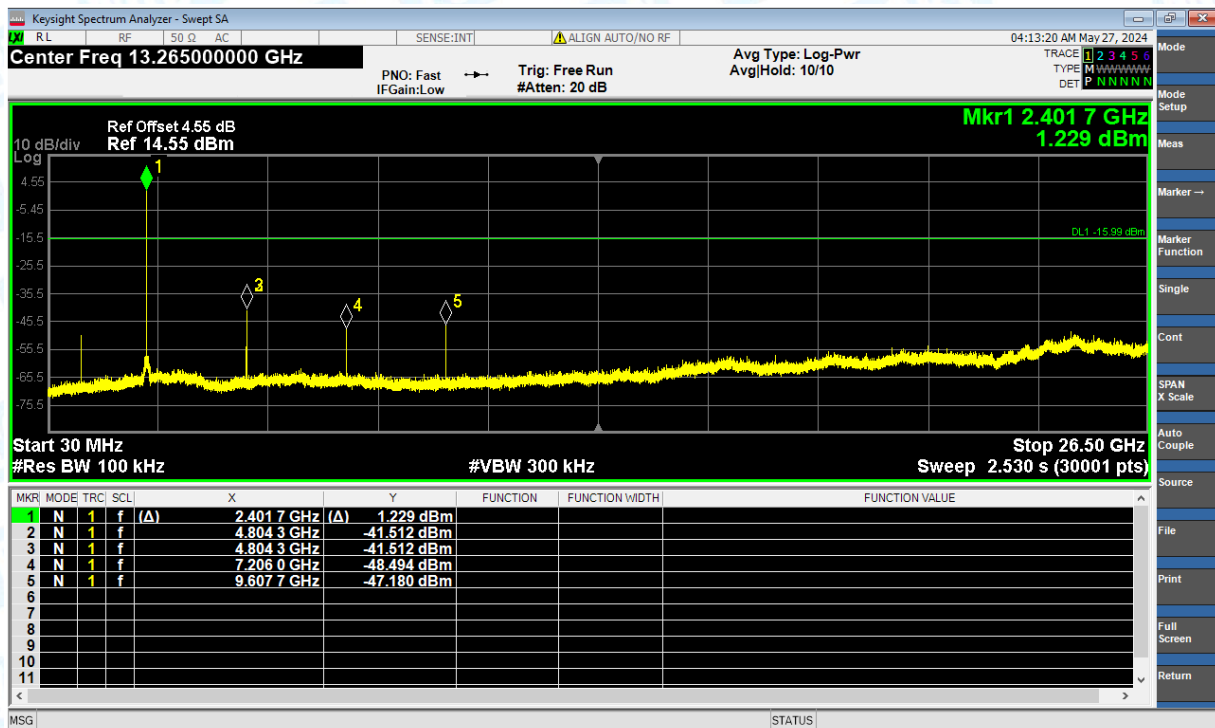
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



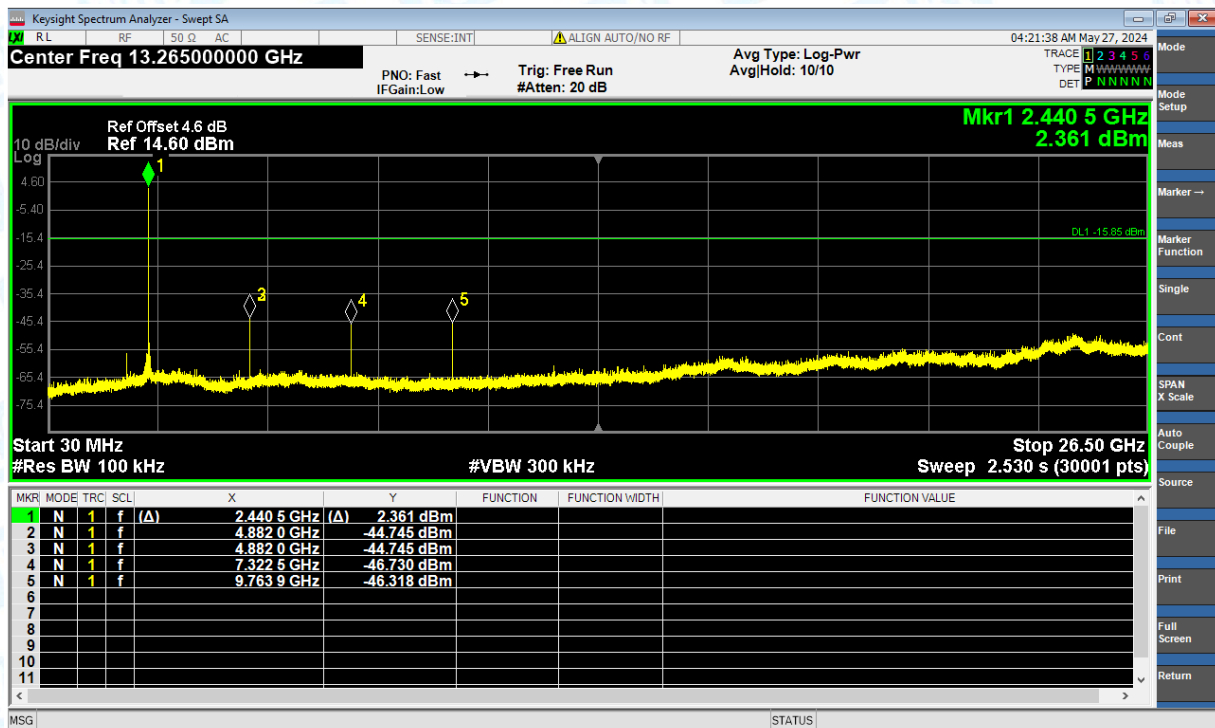
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



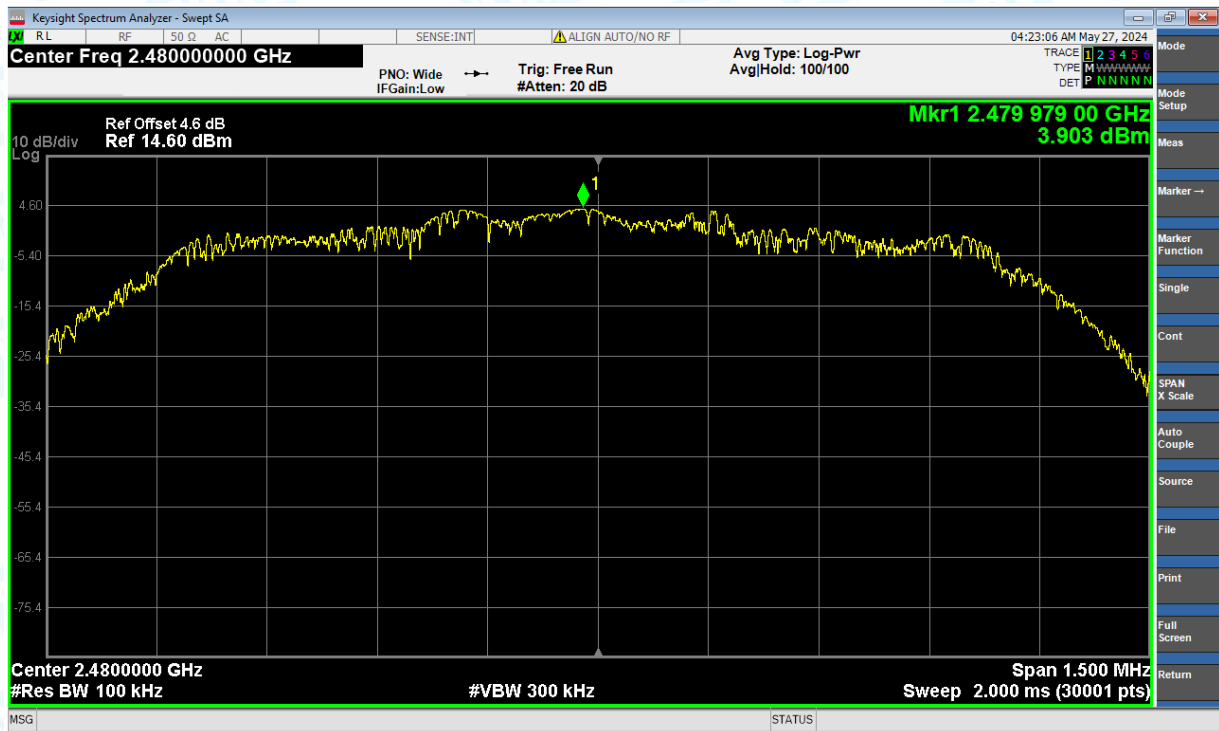
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



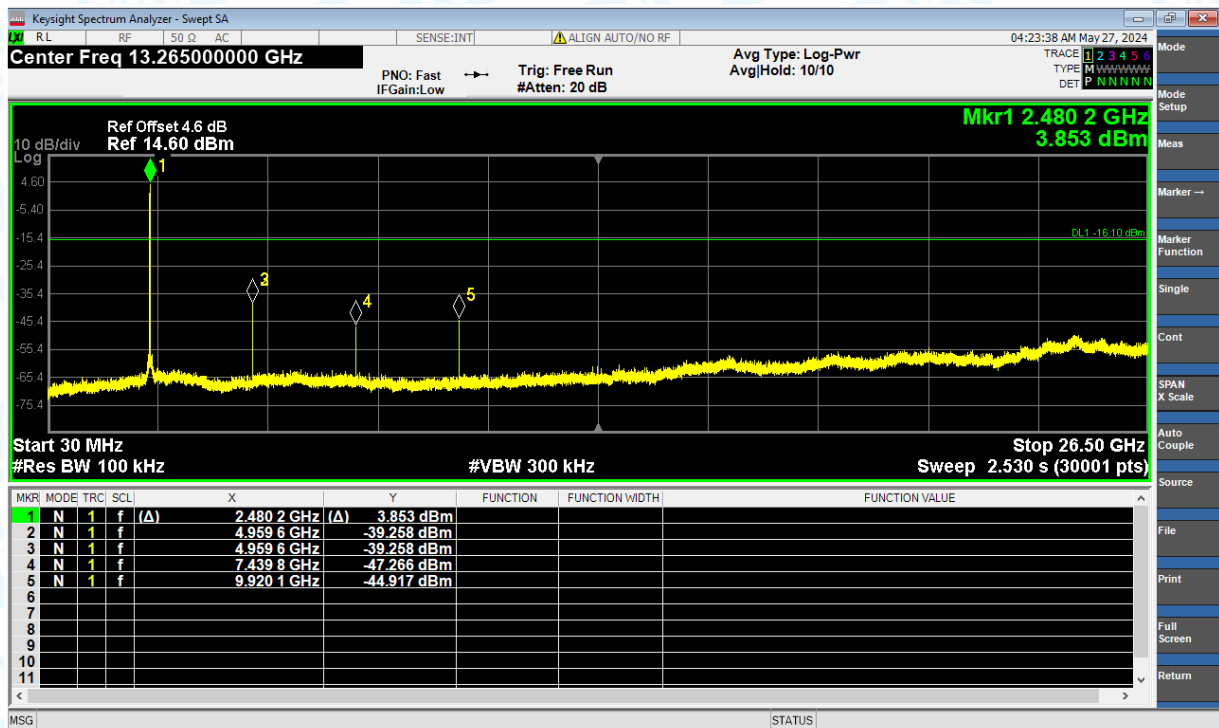
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

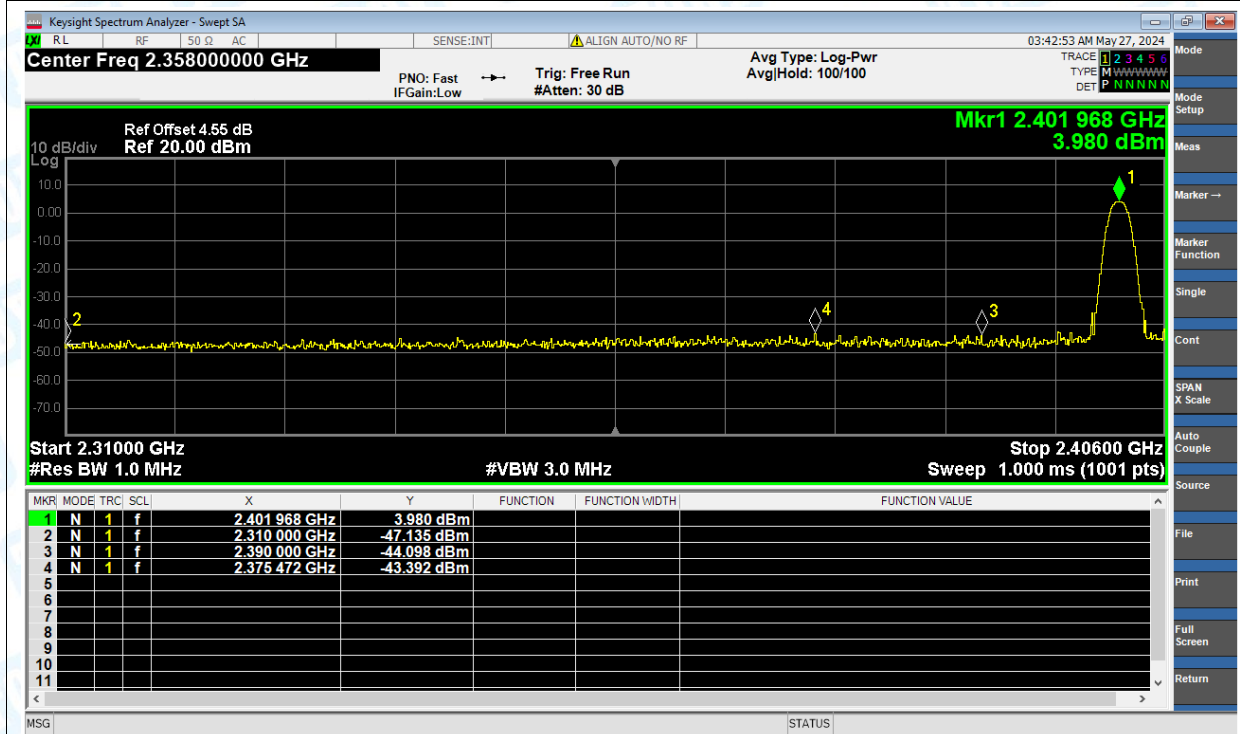


8. Restrict Band

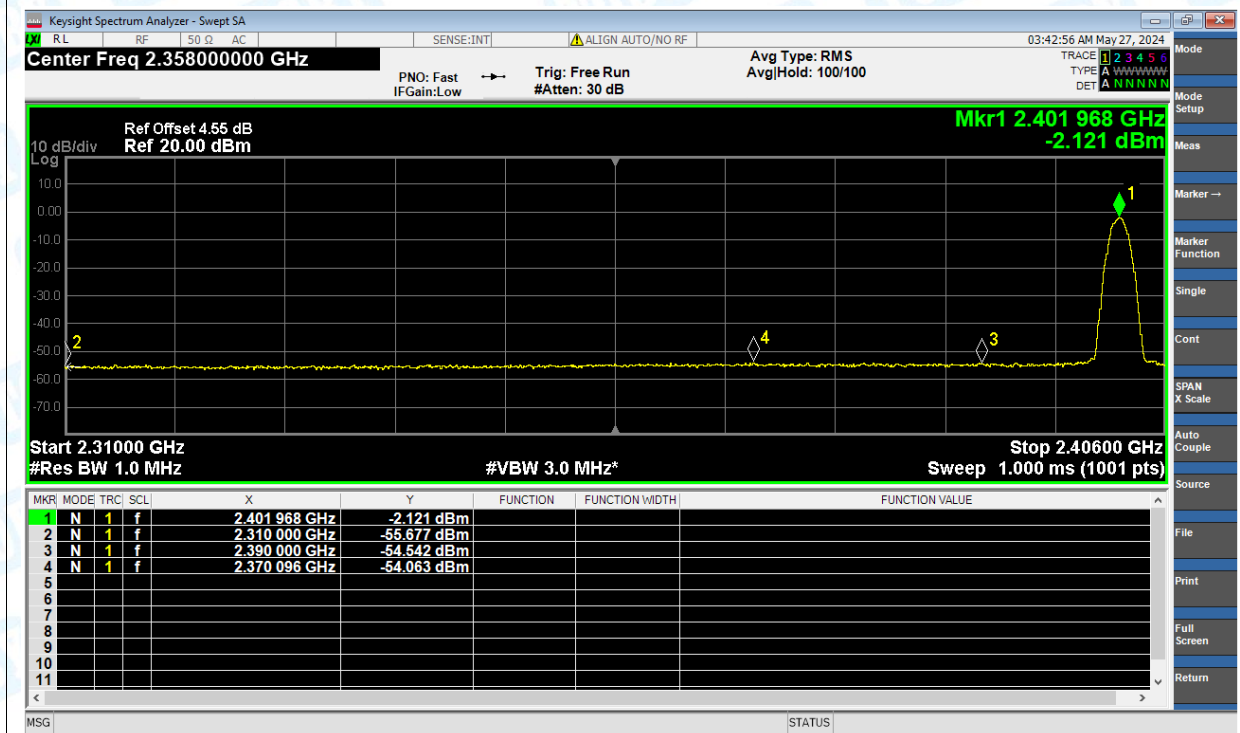
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-47.14	2	-	50.12	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-55.68	2	4.84	46.42	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2375.472	-43.39	2	-	53.87	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2370.096	-54.06	2	4.84	48.04	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-44.1	2	-	53.16	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-54.54	2	4.84	47.56	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-44.16	2	-	53.1	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-54.27	2	4.84	47.83	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2484.616	-39.44	2	-	57.82	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2484.784	-52.74	2	4.84	49.36	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-45.26	2	-	52	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-54.87	2	4.84	47.23	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-47.54	2	-	49.72	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.02	2	4.84	46.08	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2388.432	-43.16	2	-	54.1	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2388.912	-54.33	2	4.84	47.77	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-47.33	2	-	49.93	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-55.36	2	4.84	46.74	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-44.06	2	-	53.2	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-53.28	2	4.74	48.72	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2484.784	-38.94	2	-	58.32	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.656	-52.77	2	4.74	49.23	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-46.56	2	-	50.7	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-54.33	2	4.74	47.67	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-48.14	2	-	49.12	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-55.63	2	4.74	46.37	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2373.264	-42.64	2	-	54.62	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2374.32	-54.28	2	4.74	47.72	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-44.75	2	-	52.51	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-55.31	2	4.74	46.69	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-45.94	2	-	51.32	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-54.2	2	4.84	47.9	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2484.808	-39.24	2	-	58.02	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2484.664	-52.89	2	4.84	49.21	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-46.24	2	-	51.02	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-54.93	2	4.84	47.17	Average	54	Pass

Test Graphs

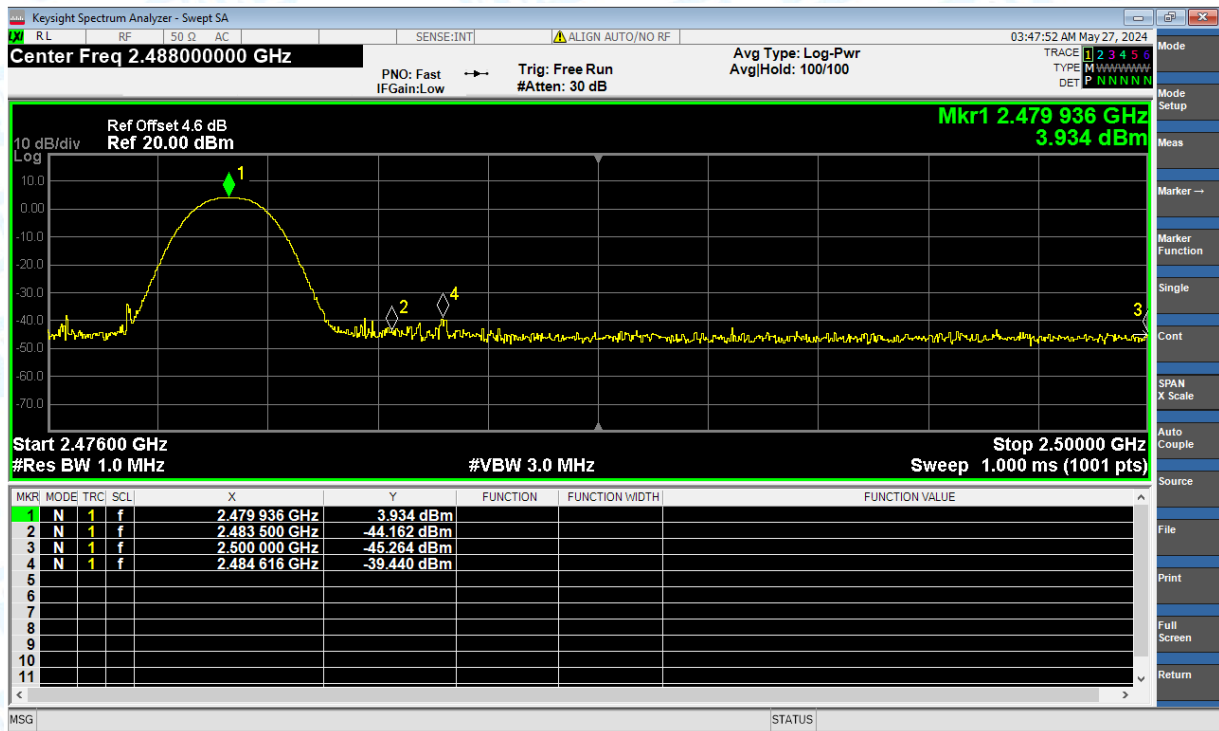
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



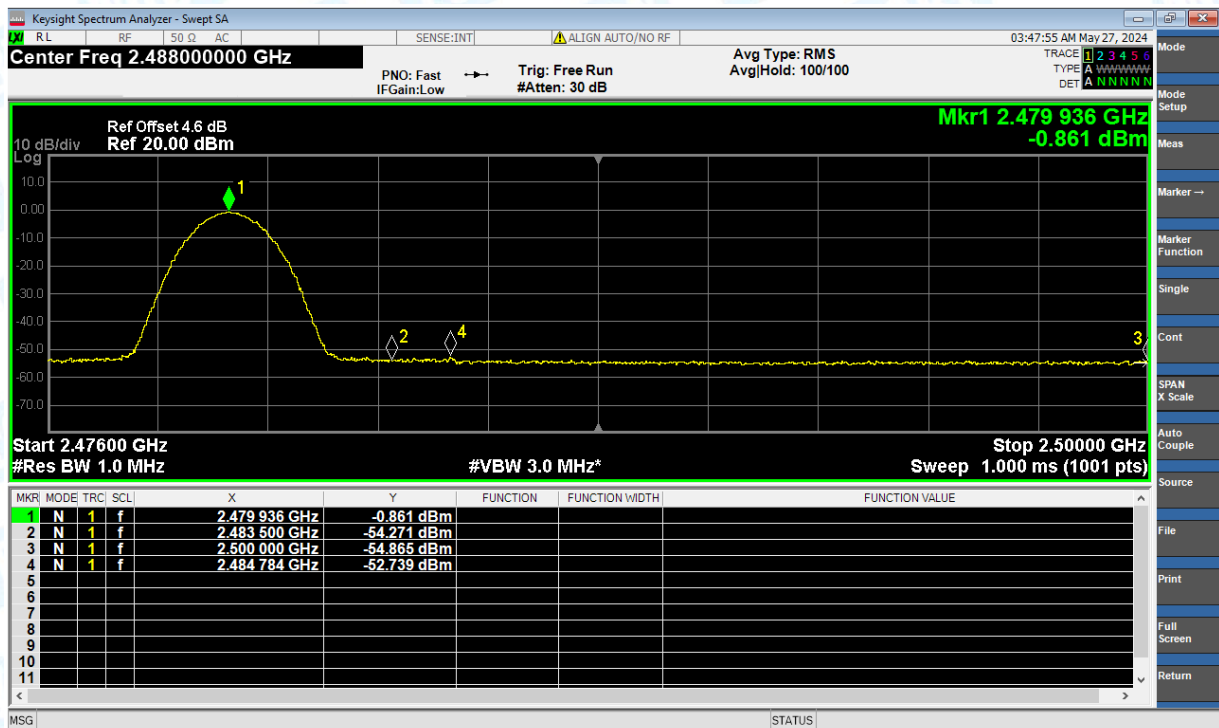
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



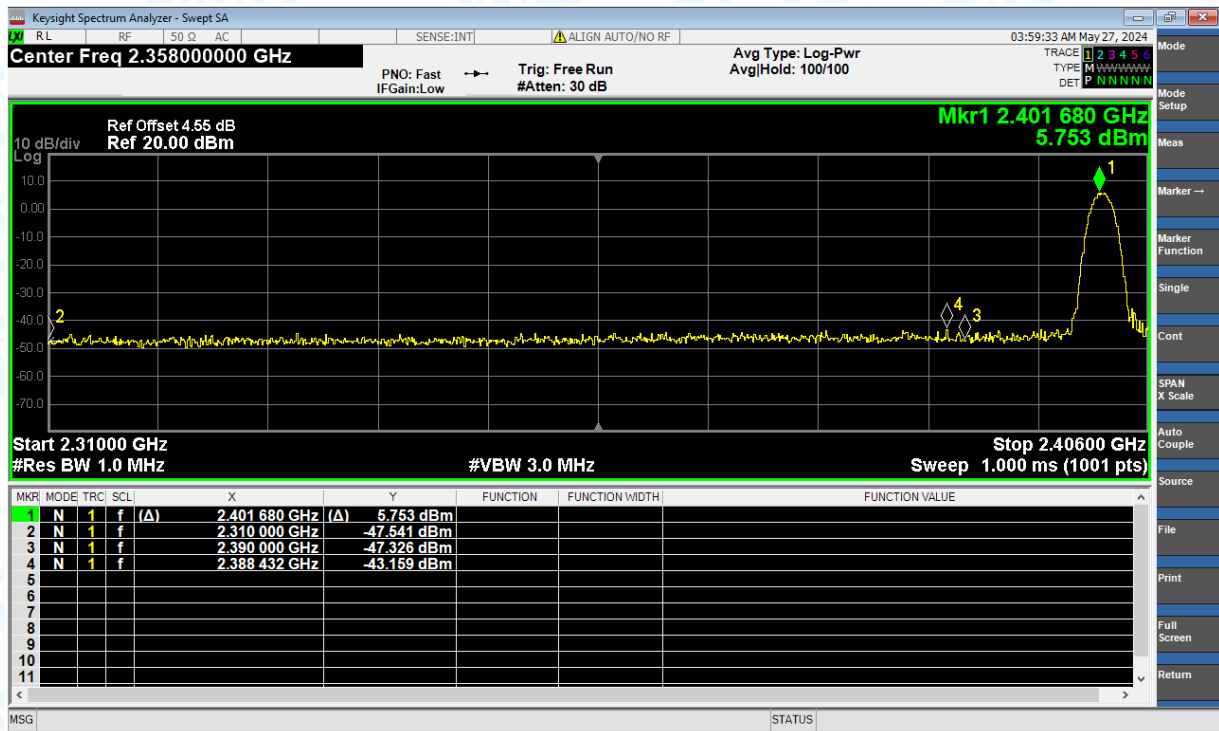
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



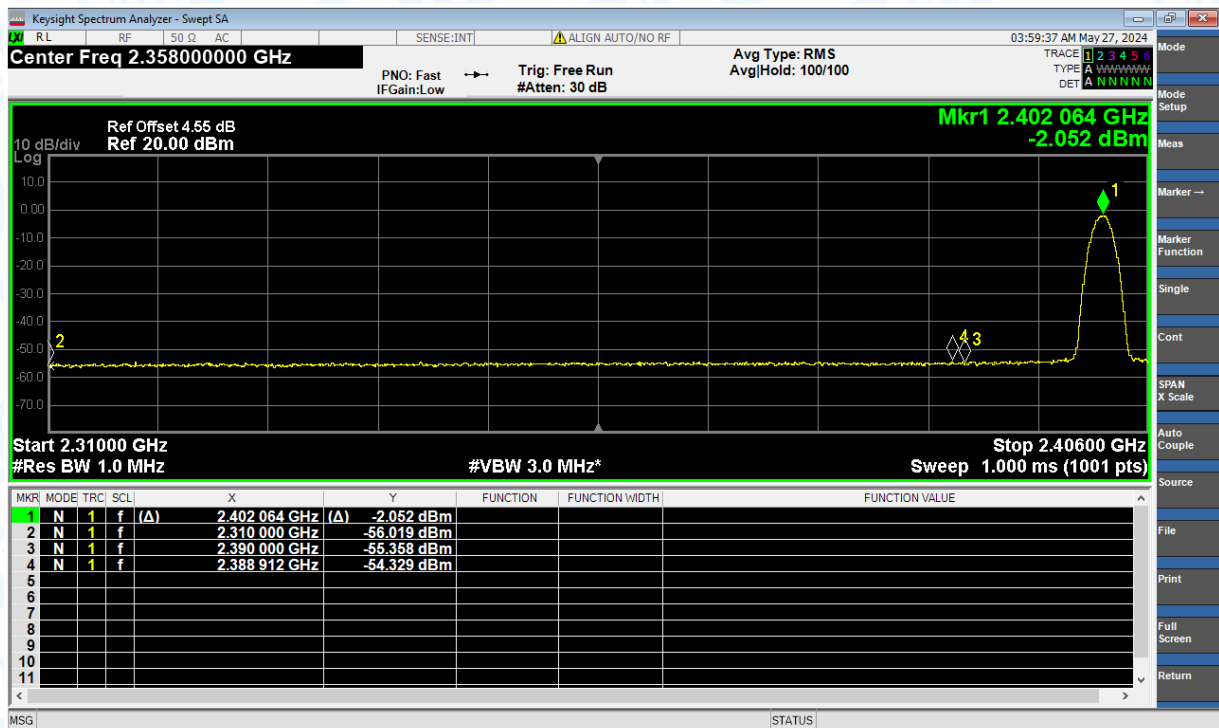
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



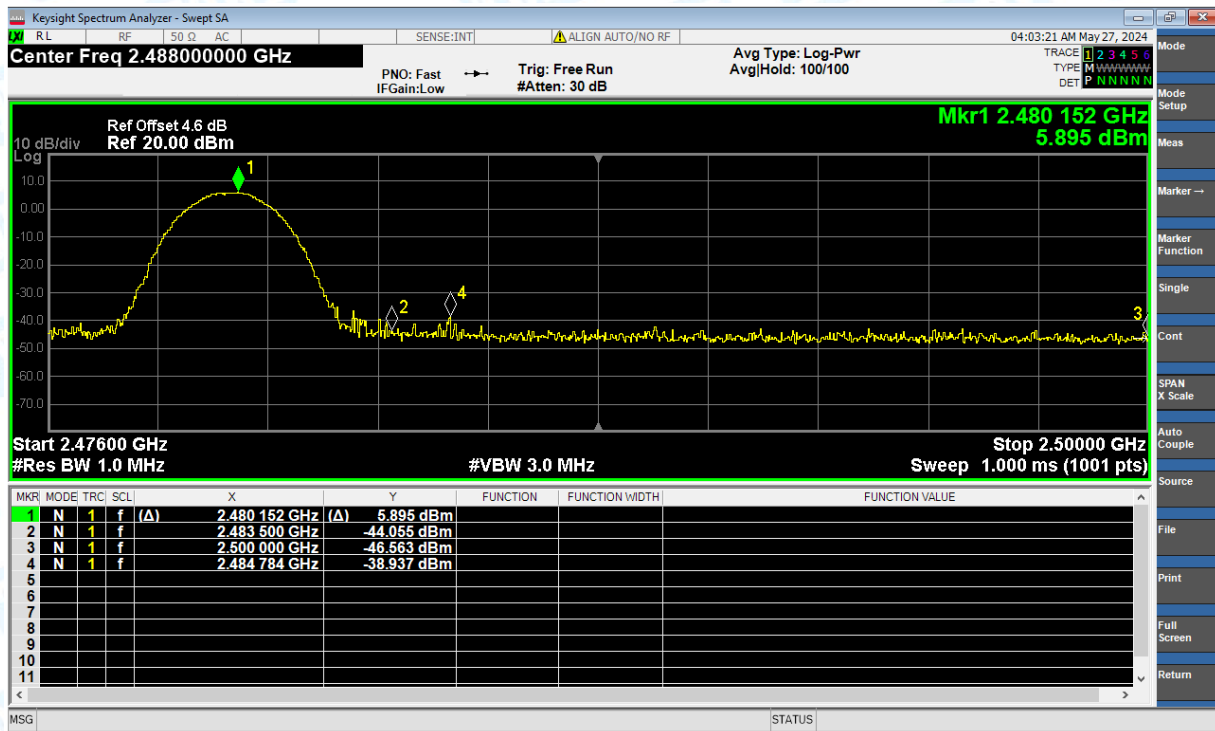
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



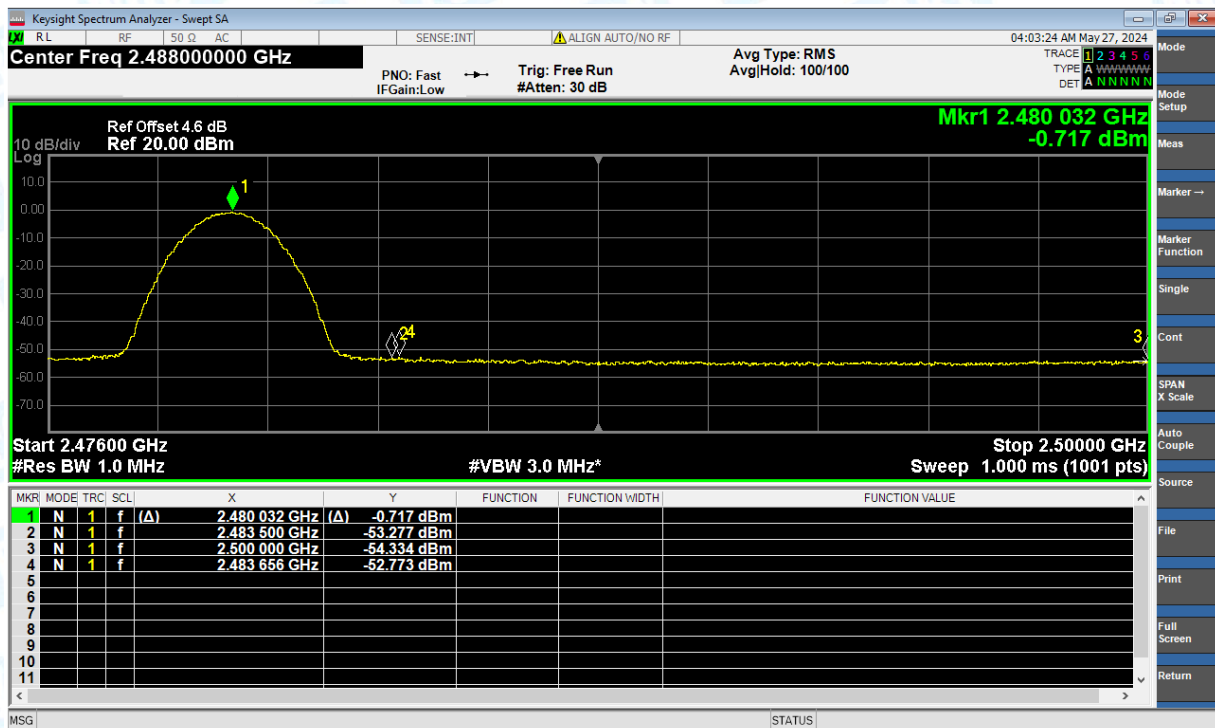
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



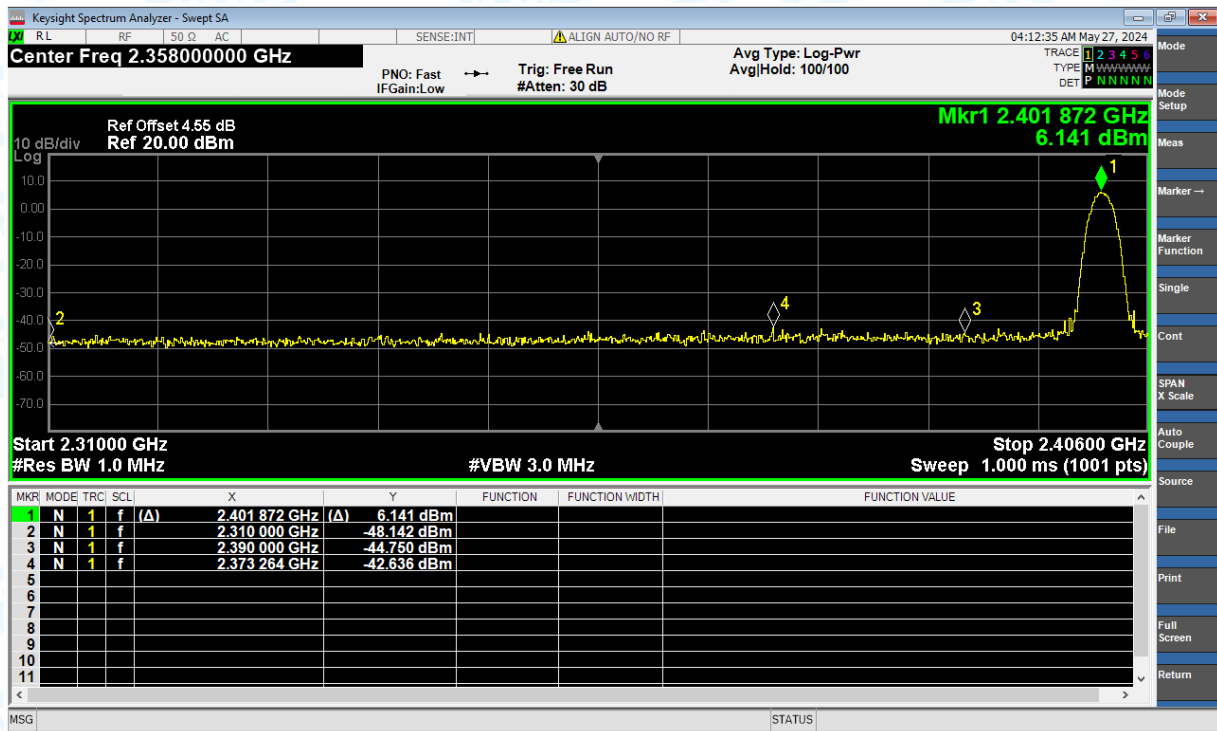
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



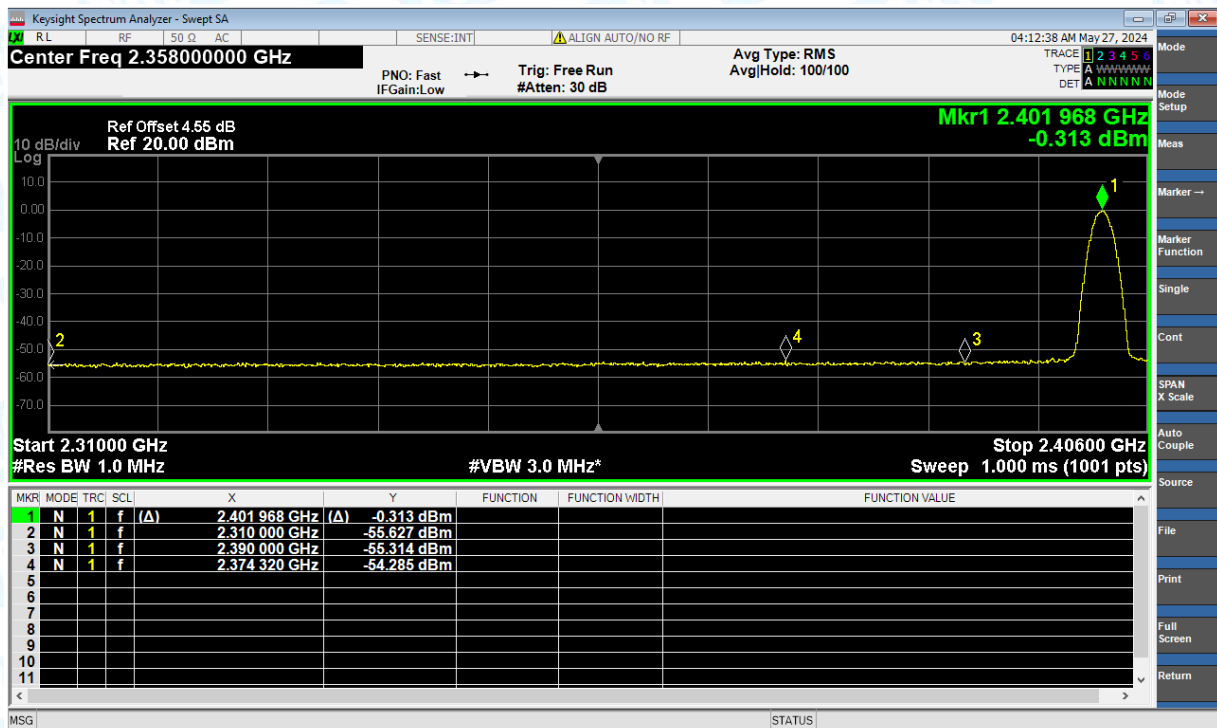
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



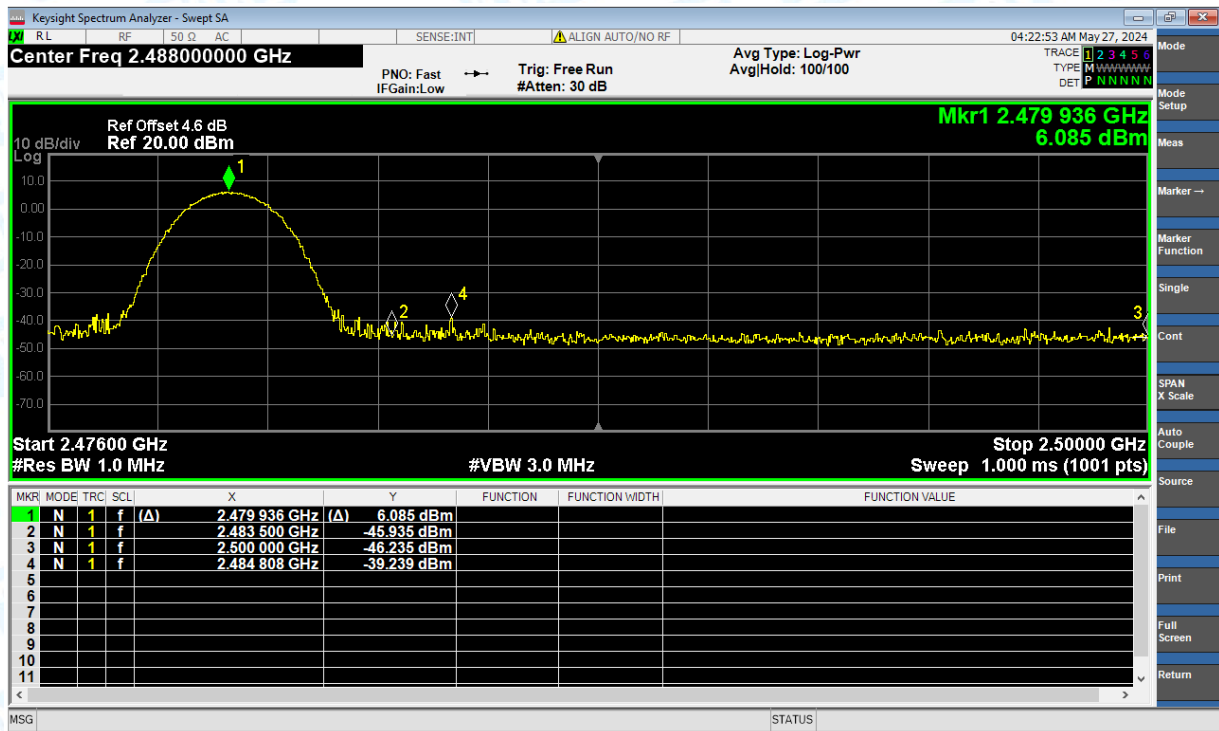
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



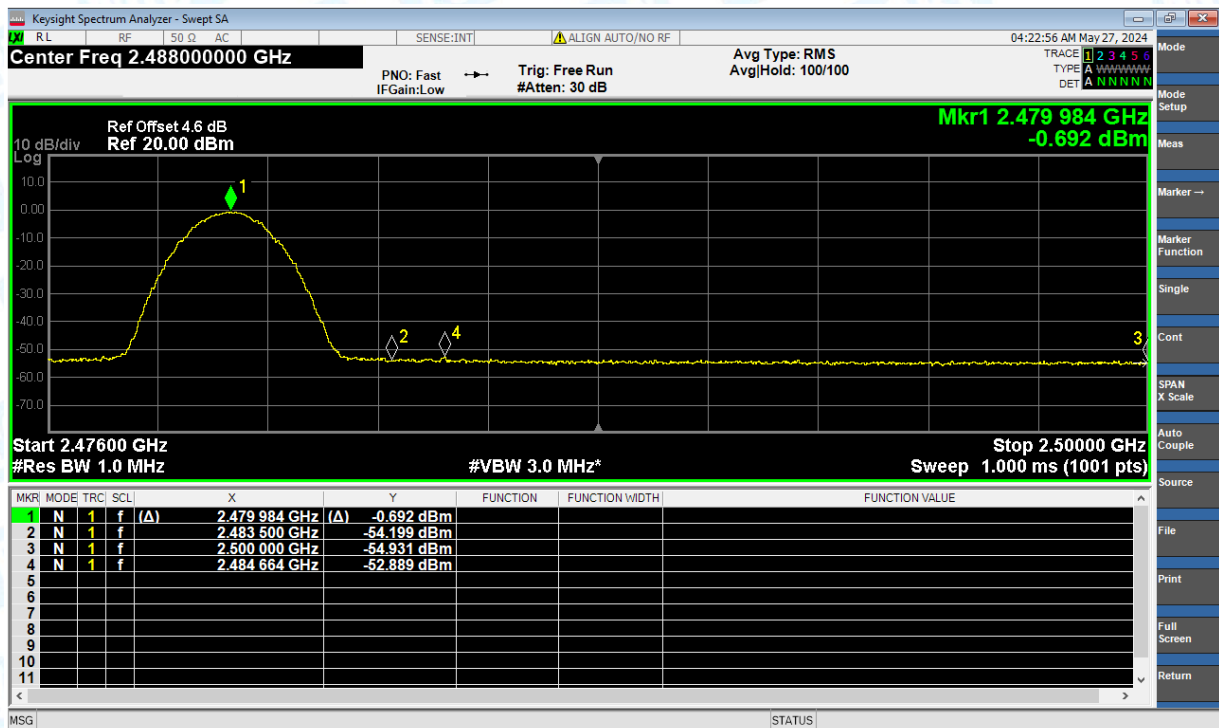
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

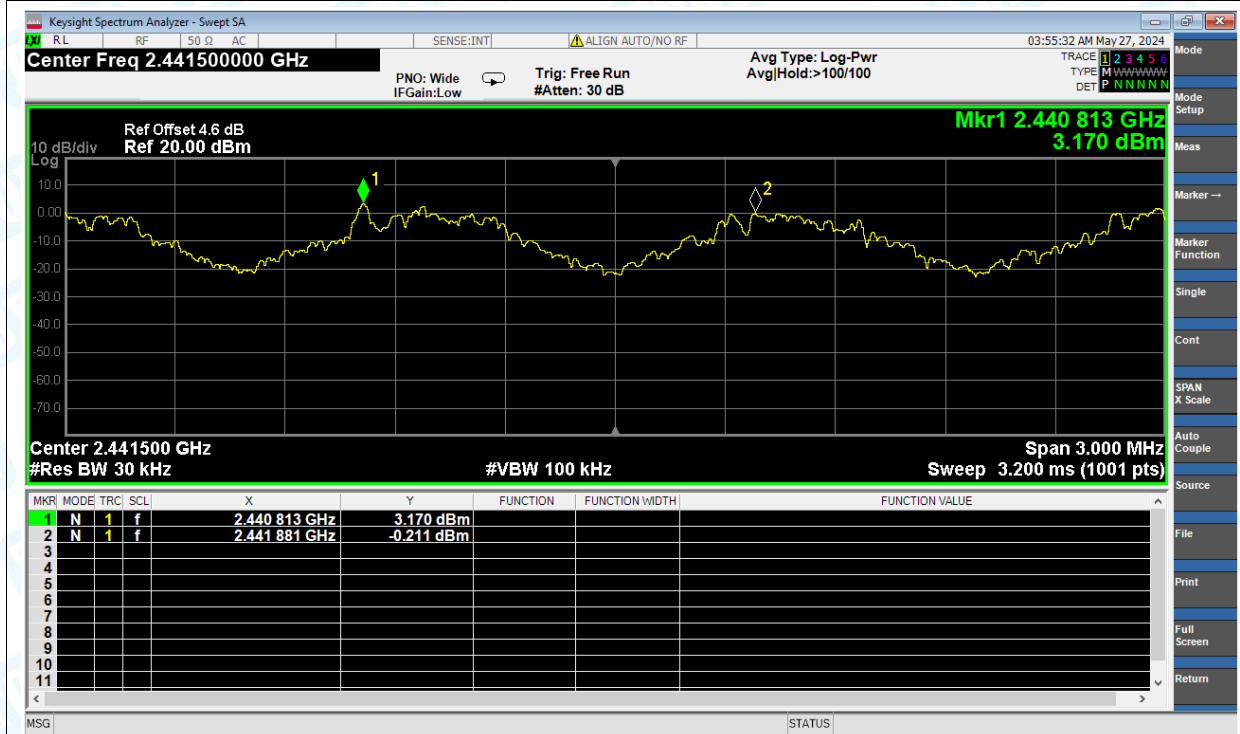


9. Carrier Frequencies Separation

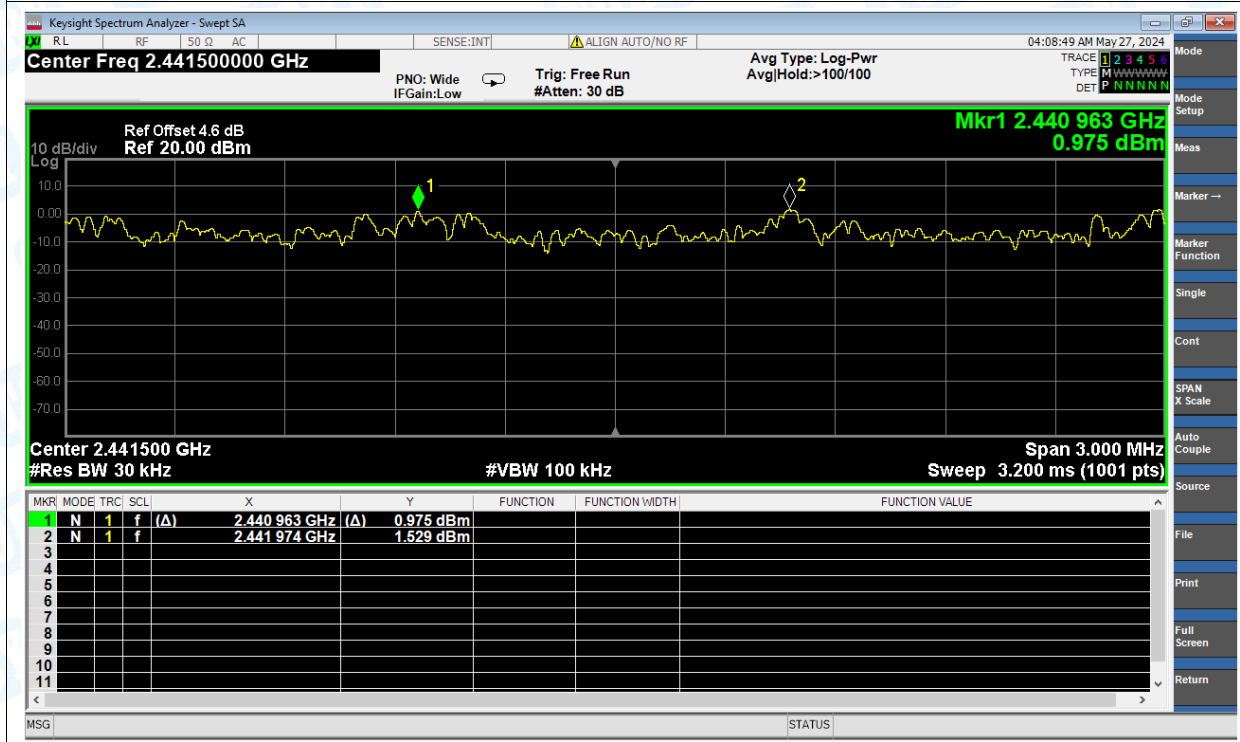
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.813	2441.881	1.068	0.025	Pass
NVNT	2-DH1	Ant1	2440.963	2441.974	1.011	0.833	Pass
NVNT	3-DH1	Ant1	2440.81	2441.986	1.176	0.813	Pass

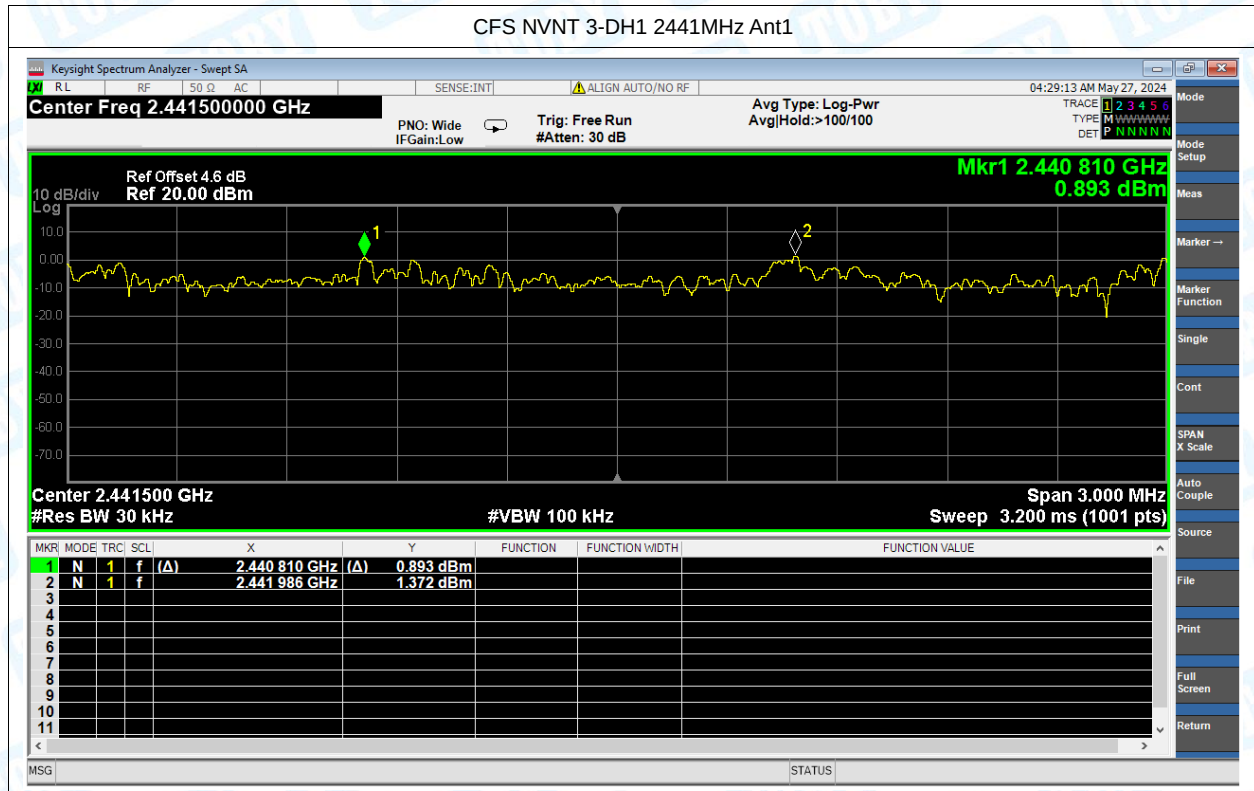
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



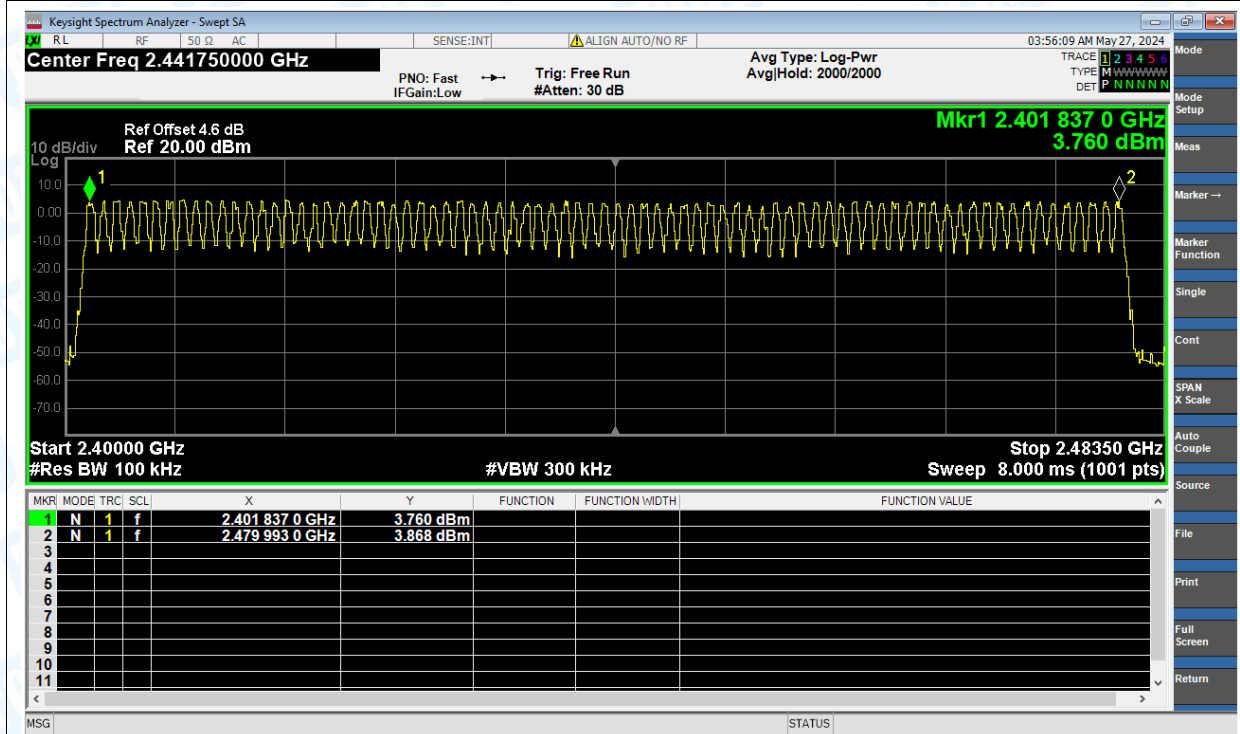


10. Number of Hopping Channel

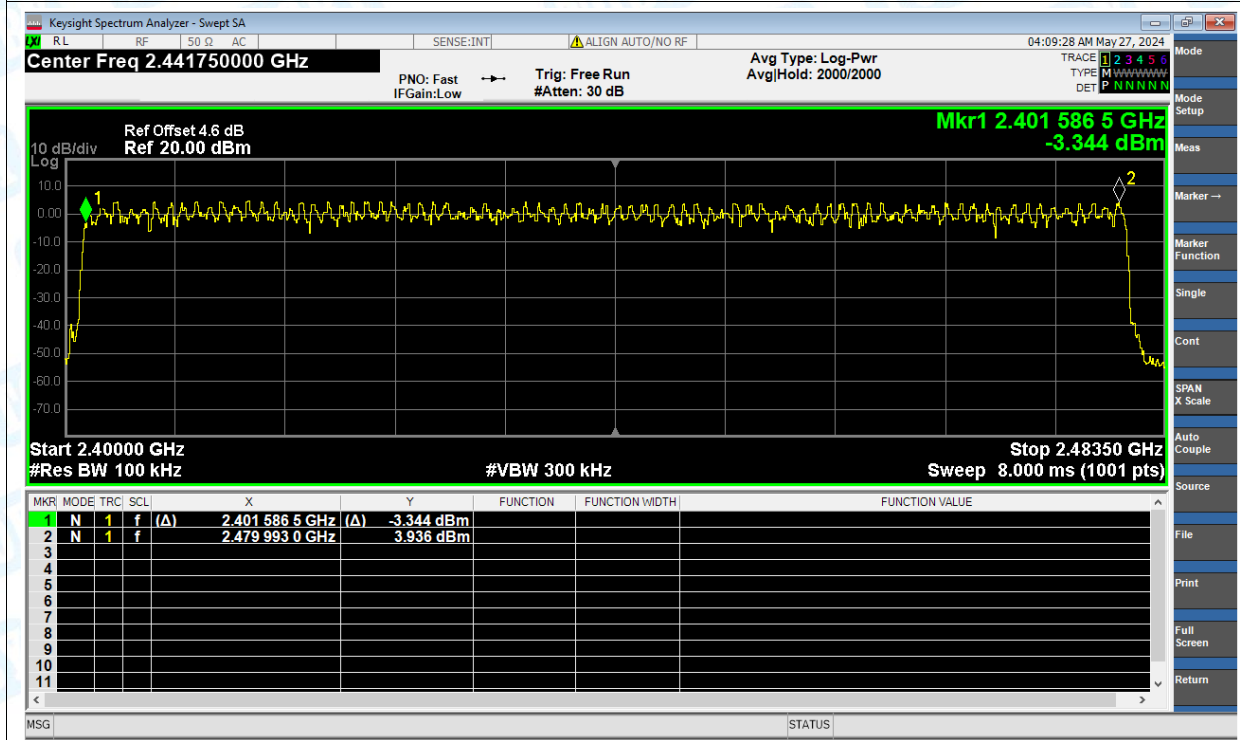
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

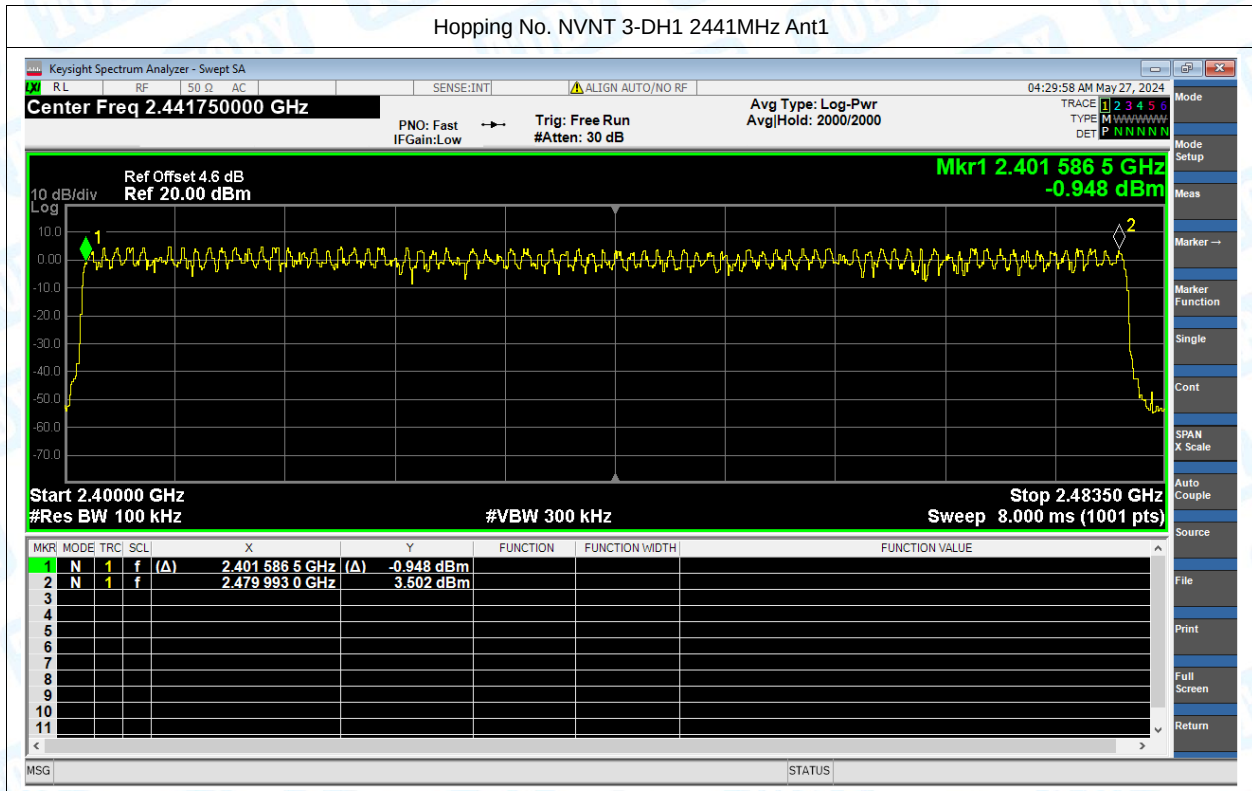
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



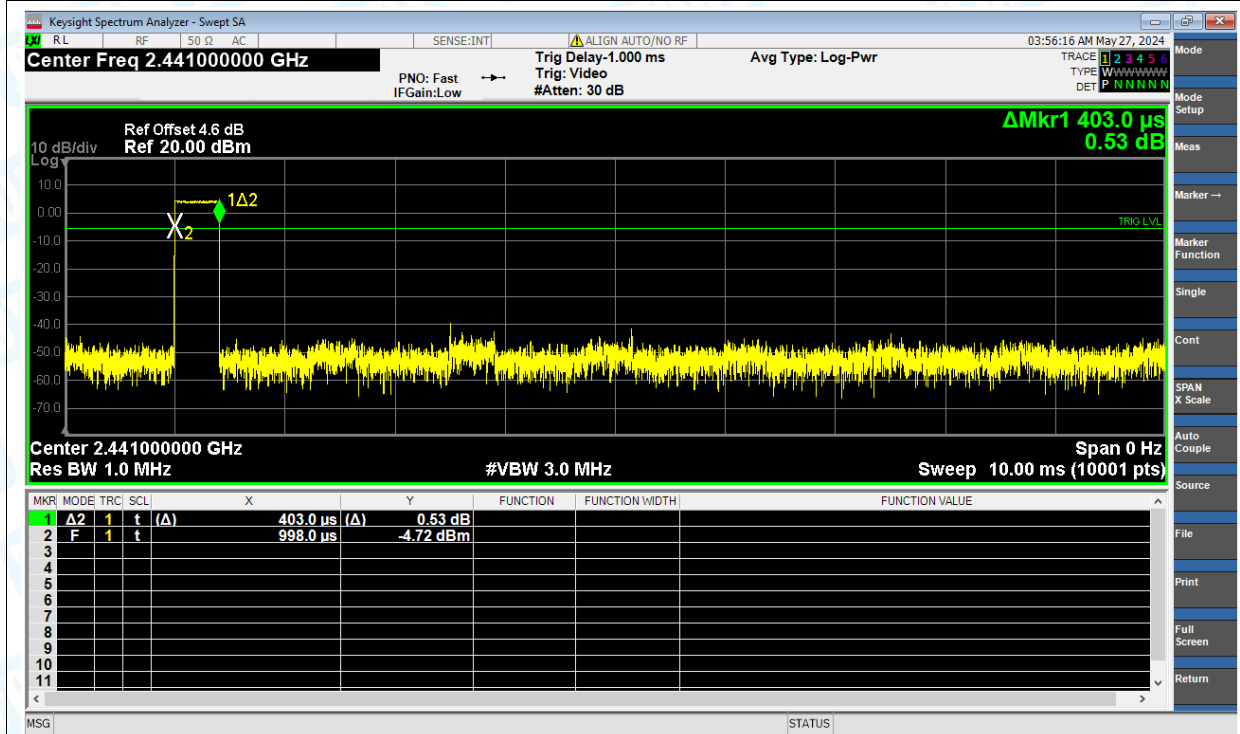


11. Dwell Time

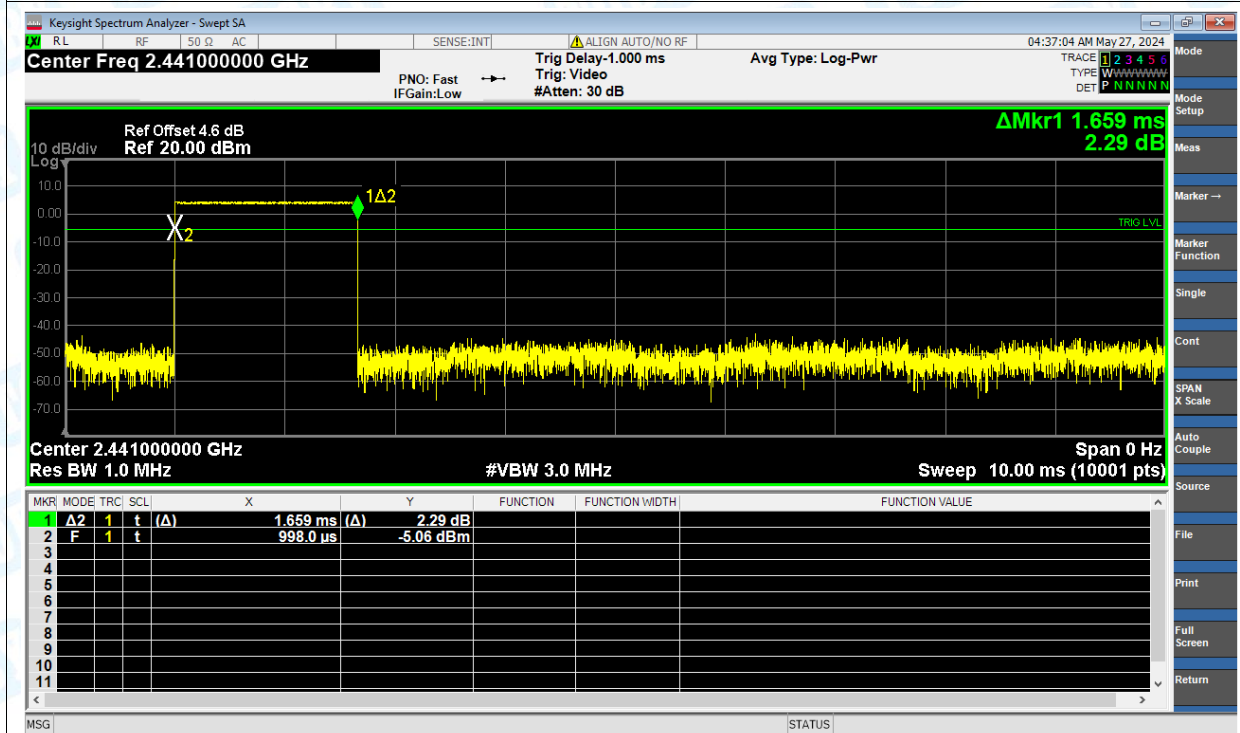
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.403	128.96	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.659	265.44	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.907	310.08	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.411	131.52	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.663	266.08	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.911	310.507	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.411	131.52	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.662	265.92	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.911	310.507	31600	400	Pass

Test Graphs

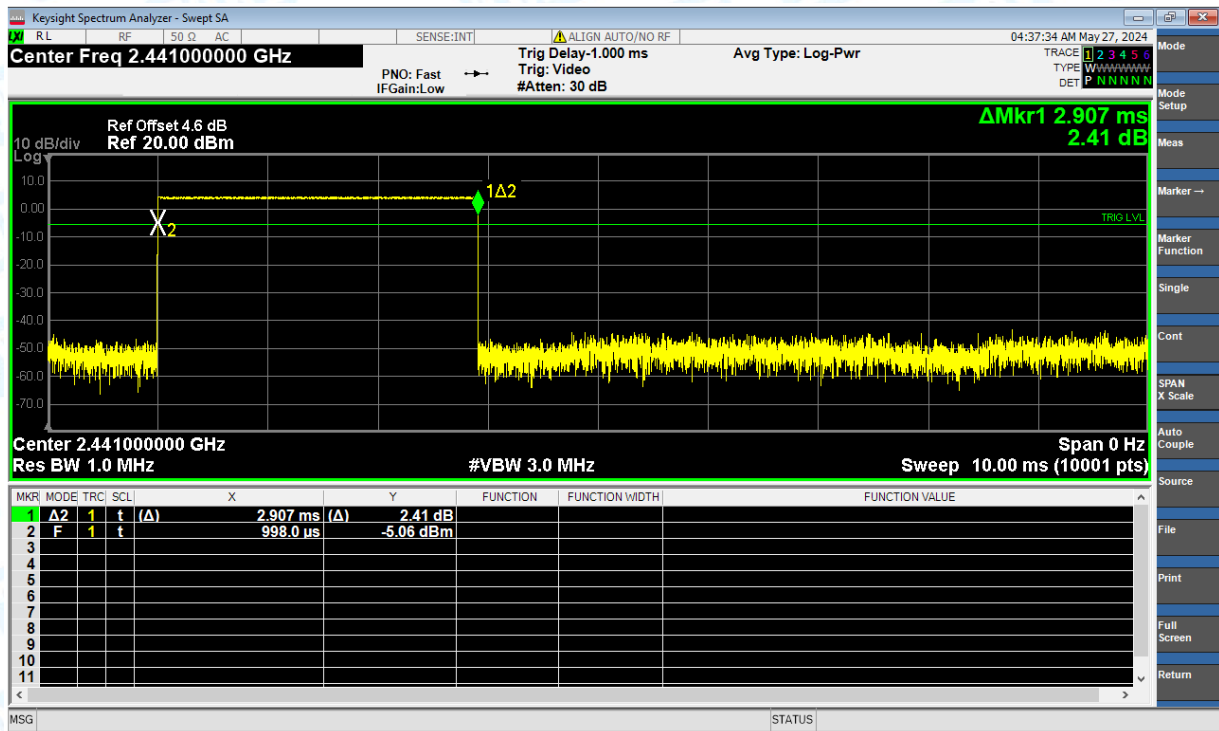
Dwell NVNT 1-DH1 2441MHz Ant1



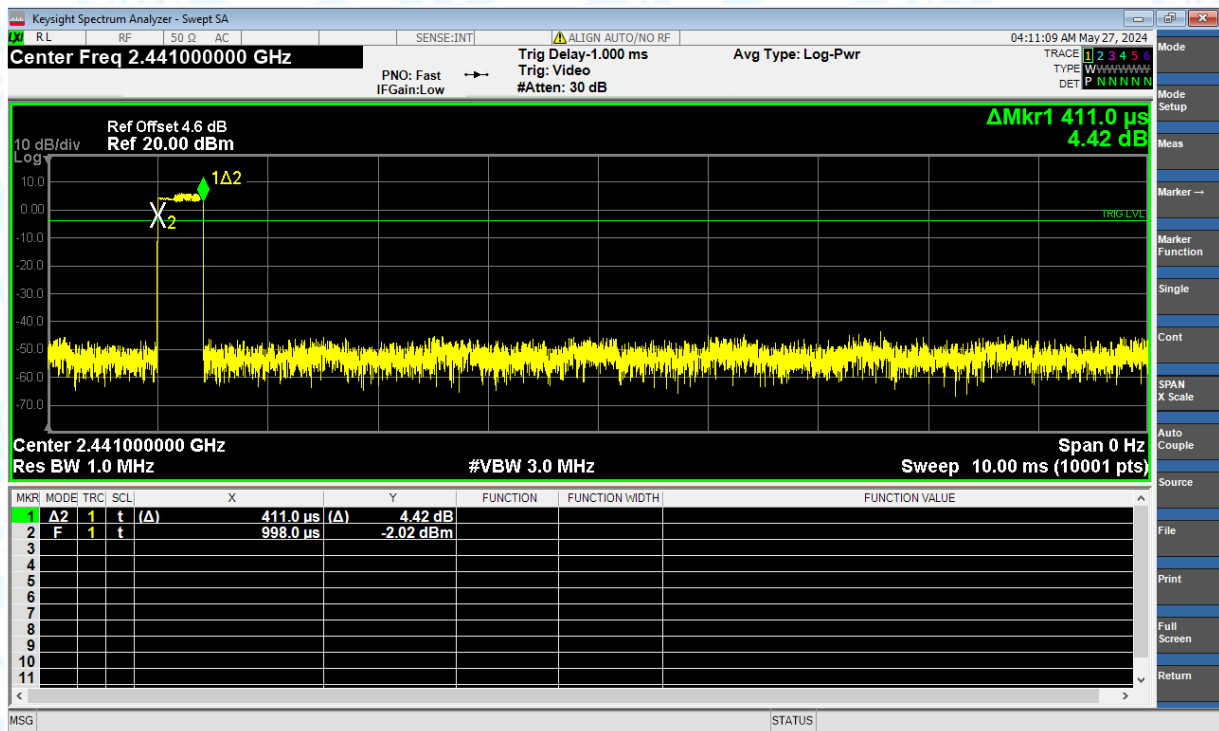
Dwell NVNT 1-DH3 2441MHz Ant1



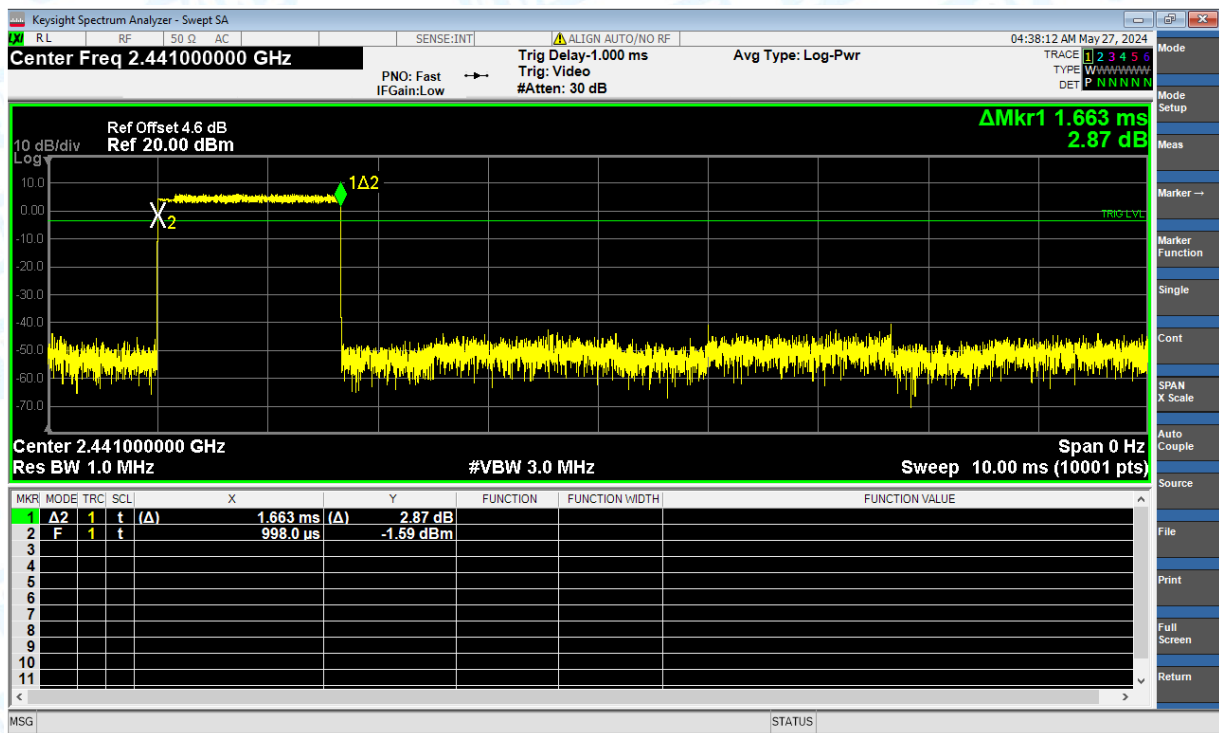
Dwell NVNT 1-DH5 2441MHz Ant1



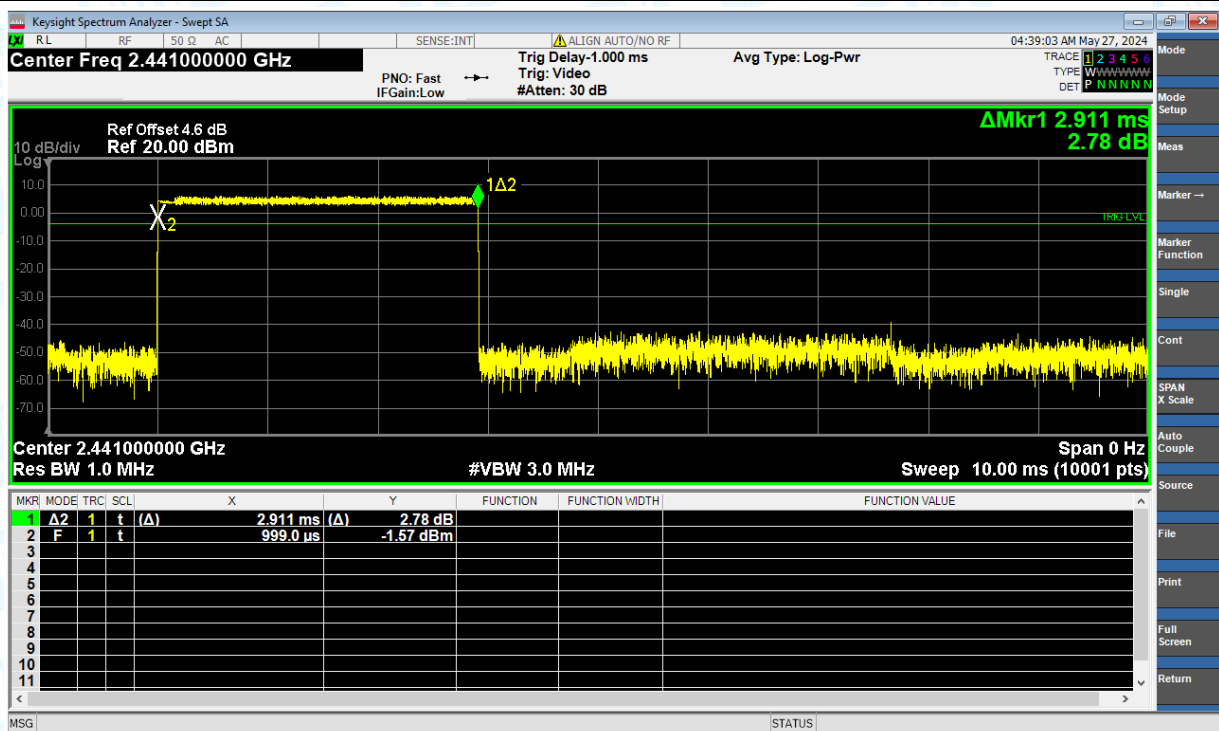
Dwell NVNT 2-DH1 2441MHz Ant1



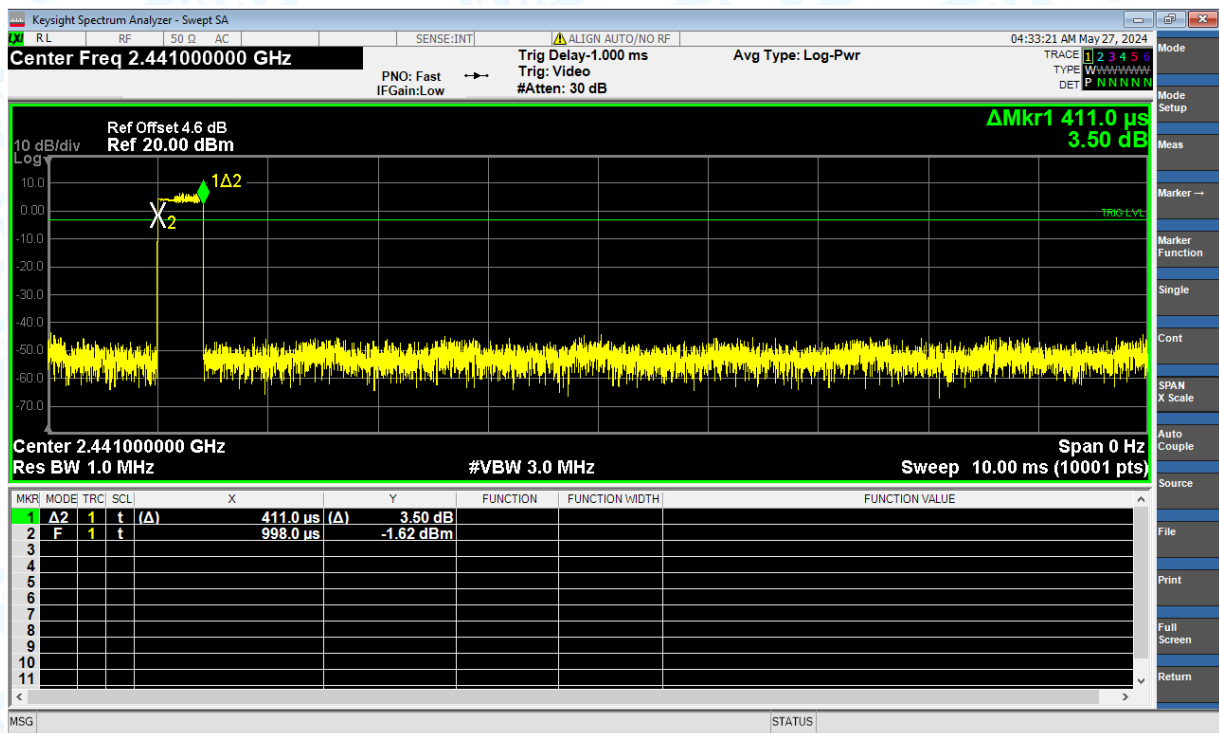
Dwell NVNT 2-DH3 2441MHz Ant1



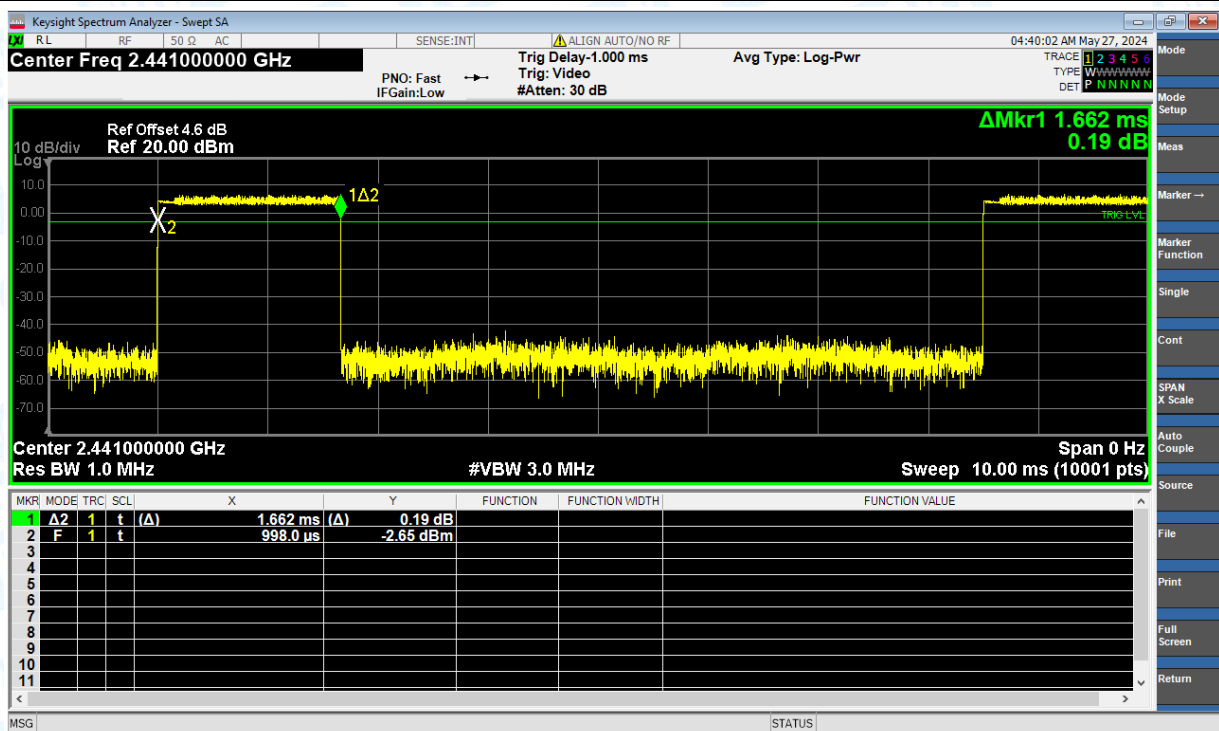
Dwell NVNT 2-DH5 2441MHz Ant1

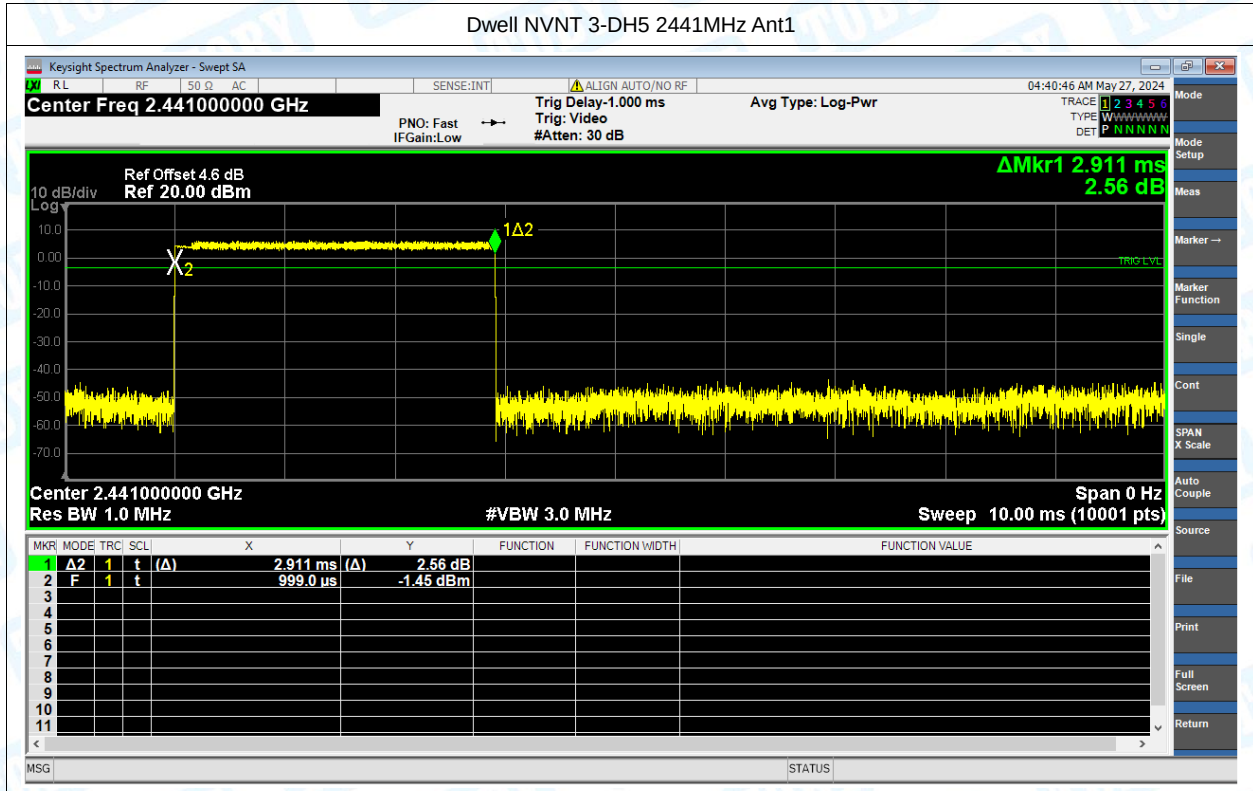


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





-----END OF THE REPORT-----