

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	SMART WATCH
Test Model:	L70
Sample ID:	HC-C-202405-0298-1-2#
Environmental Conditions	
Temperature:	24.6°C
Relative Humidity:	48.6%
Test Voltage:	DC 4.4V
Test Engineer:	Jolin Lee
Note: For a more detailed features description, please refer to the report TBR-C-202405-0298-41 The report only show the worst case data.	

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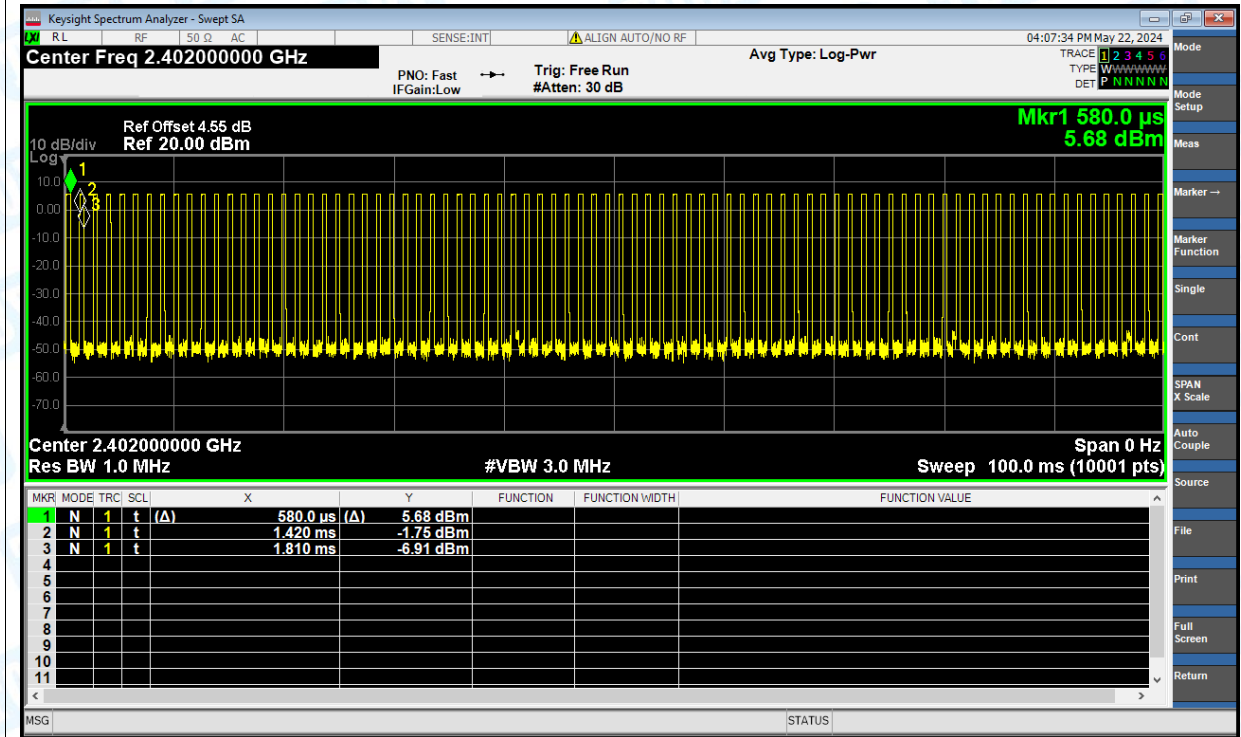
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1. Duty Cycle

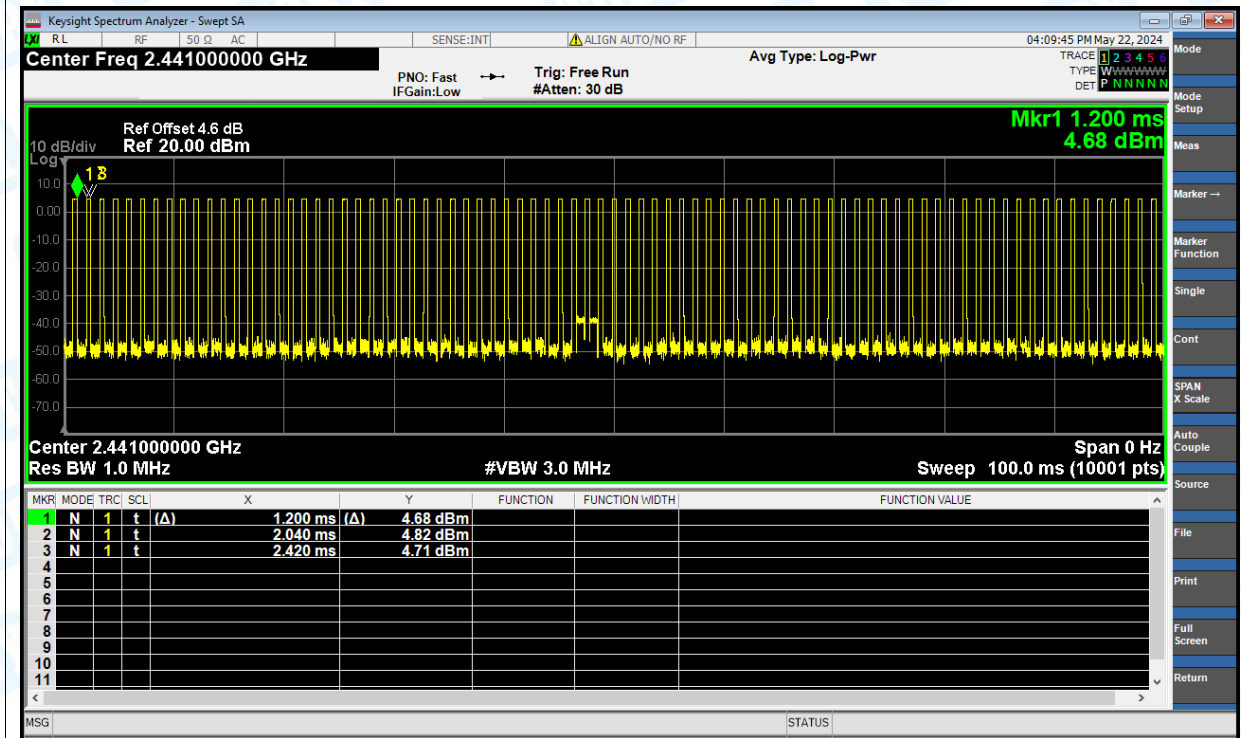
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	31.71	4.99	2.56
NVNT	1-DH1	2441	Ant1	31.15	5.07	2.63
NVNT	1-DH1	2480	Ant1	30.89	5.1	2.63
NVNT	2-DH1	2402	Ant1	31.71	4.99	2.56
NVNT	2-DH1	2441	Ant1	31.45	5.02	2.56
NVNT	2-DH1	2480	Ant1	31.71	4.99	2.56
NVNT	3-DH1	2402	Ant1	31.71	4.99	2.56
NVNT	3-DH1	2441	Ant1	31.71	4.99	2.56
NVNT	3-DH1	2480	Ant1	31.71	4.99	2.56

Test Graphs

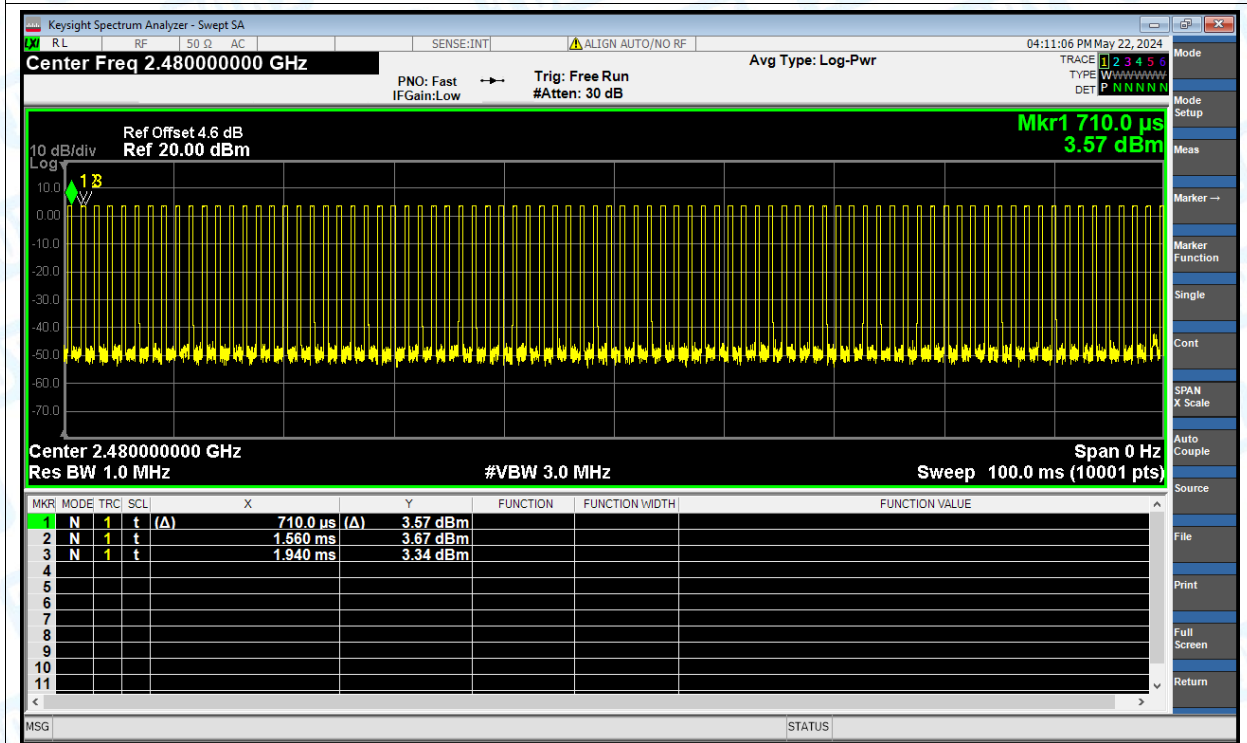
Duty Cycle NVNT 1-DH1 2402MHz Ant1



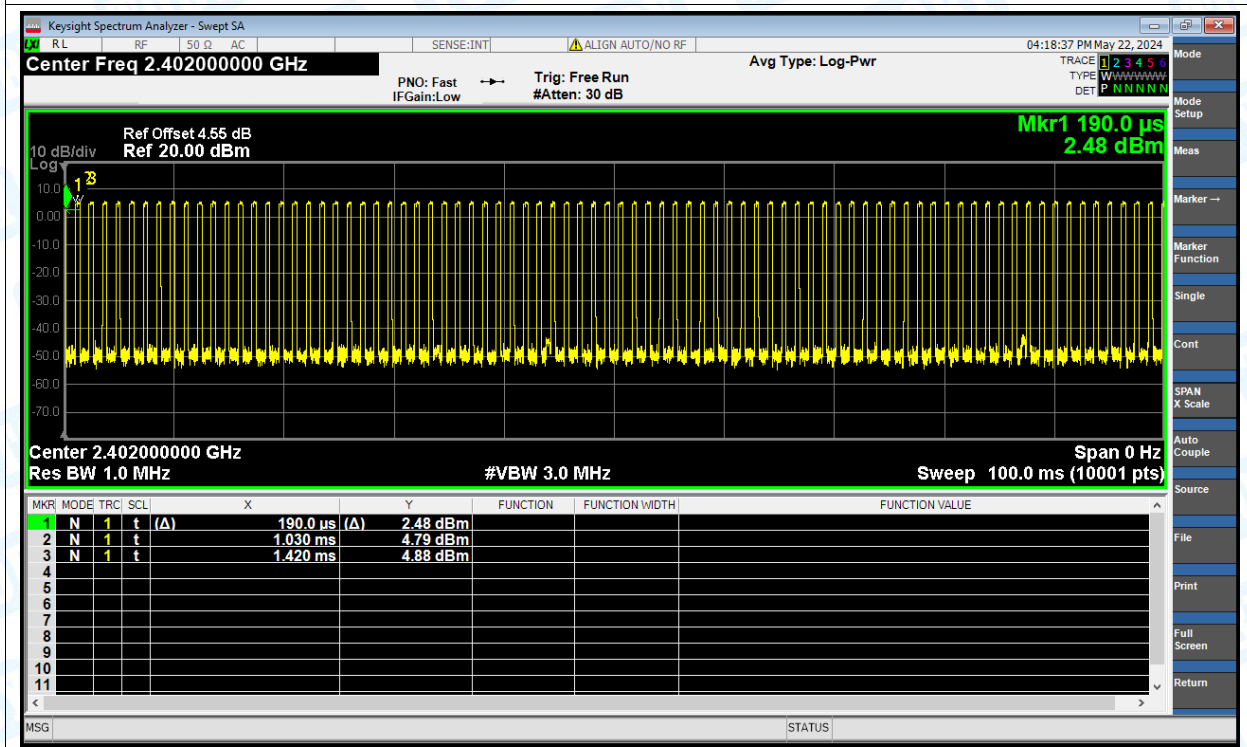
Duty Cycle NVNT 1-DH1 2441MHz Ant1



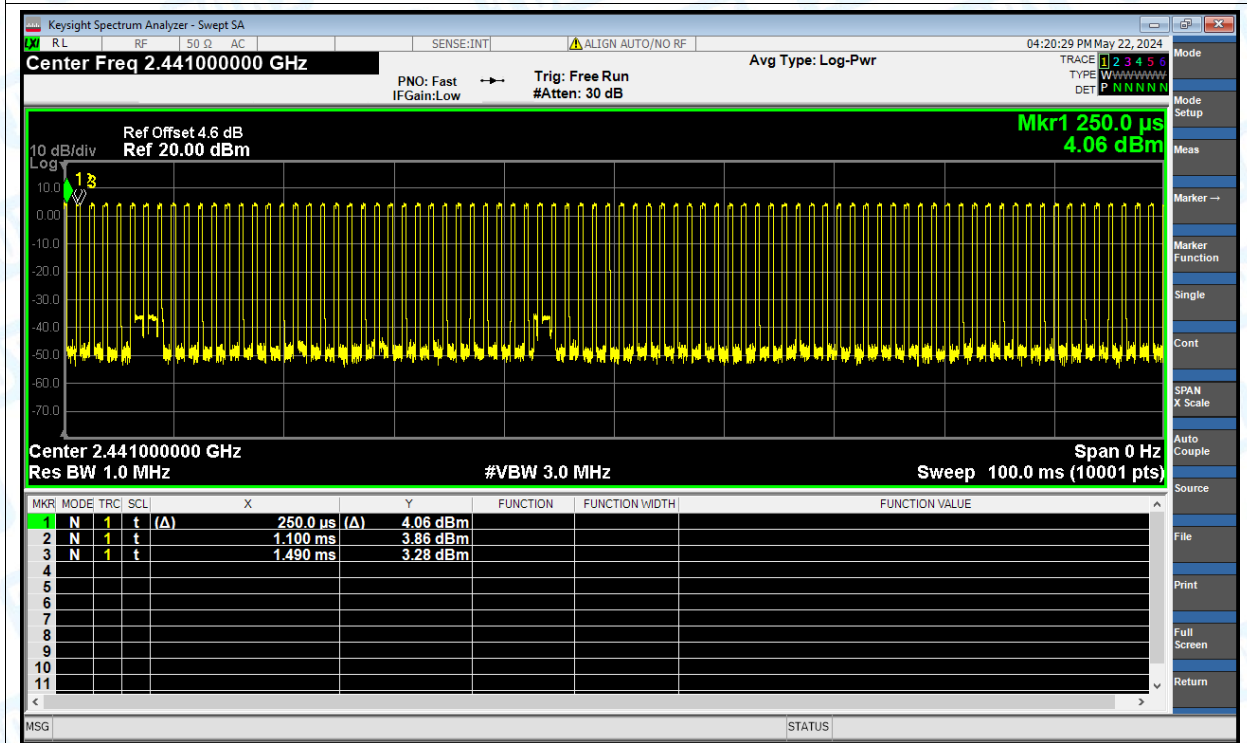
Duty Cycle NVNT 1-DH1 2480MHz Ant1



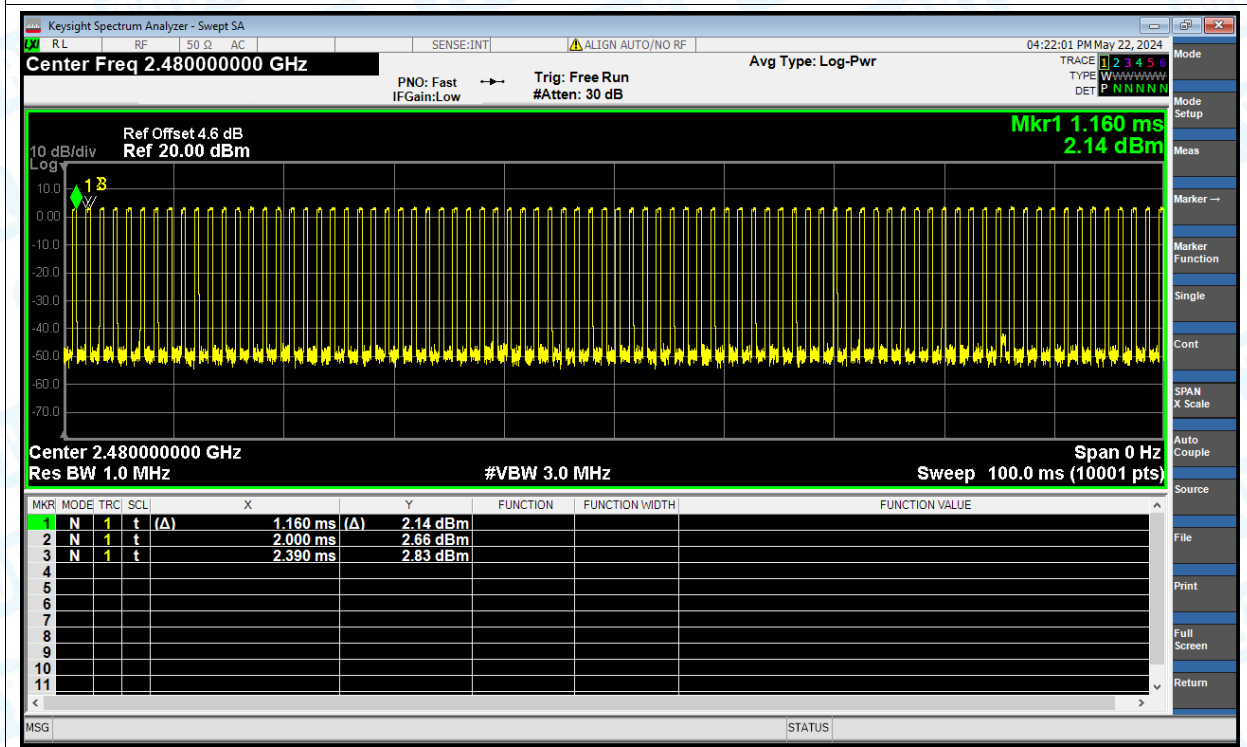
Duty Cycle NVNT 2-DH1 2402MHz Ant1



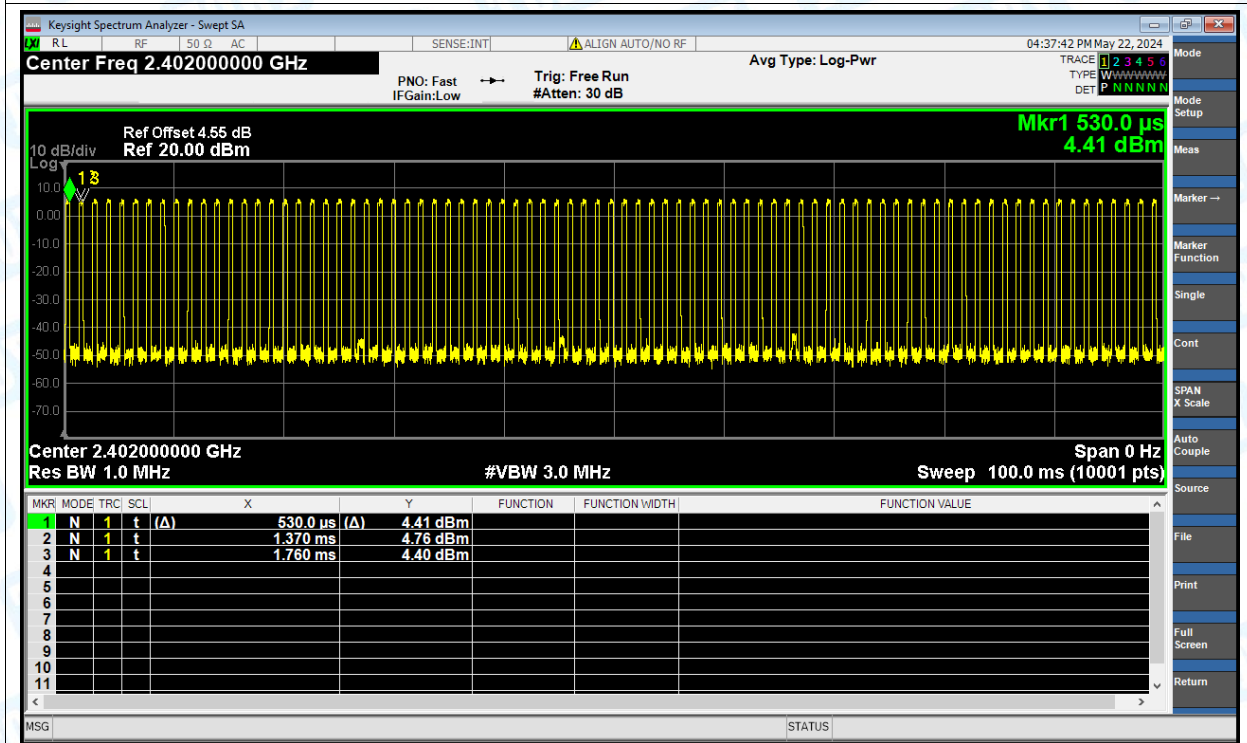
Duty Cycle NVNT 2-DH1 2441MHz Ant1



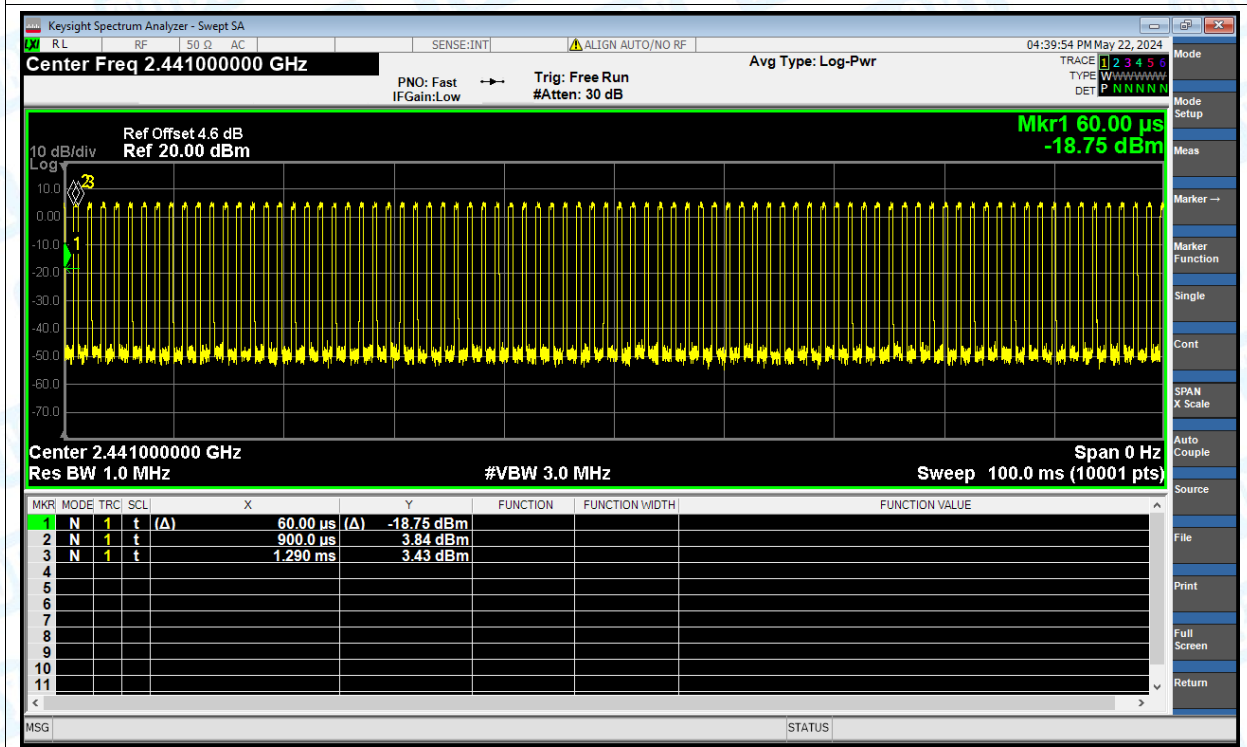
Duty Cycle NVNT 2-DH1 2480MHz Ant1

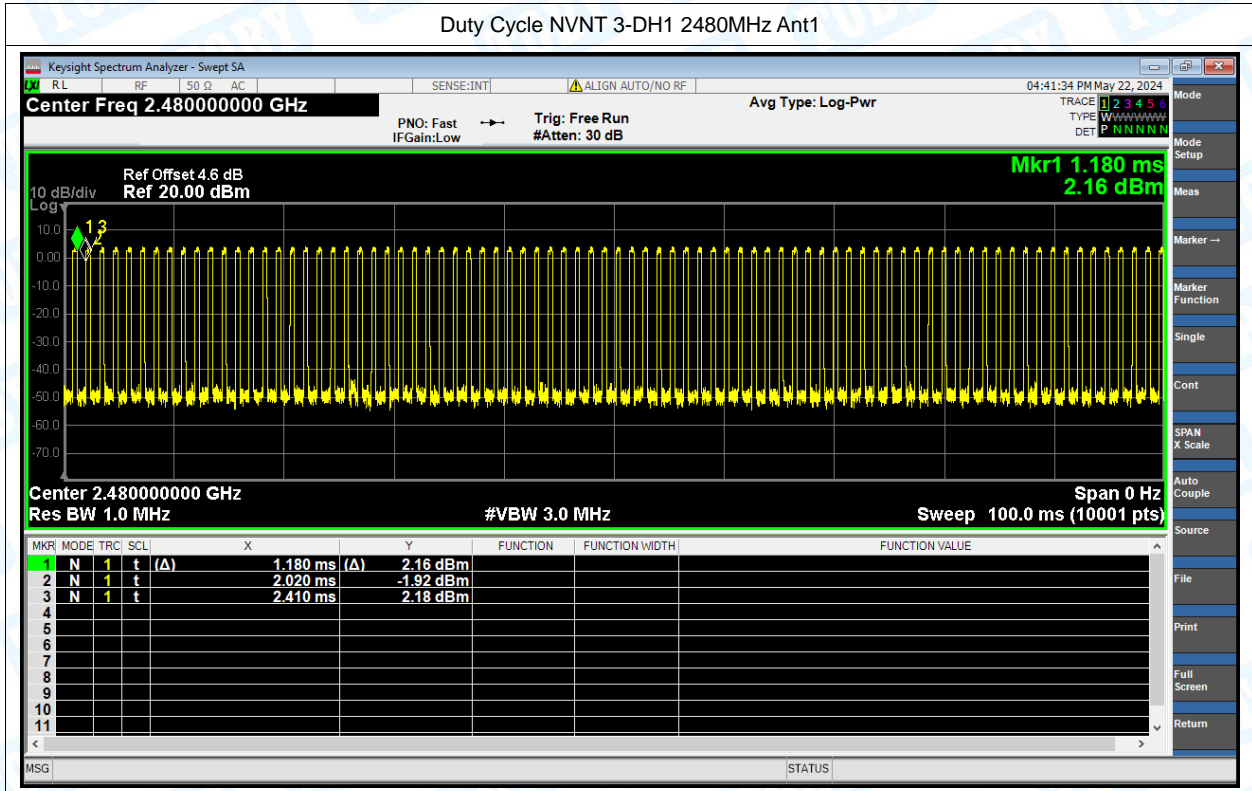


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



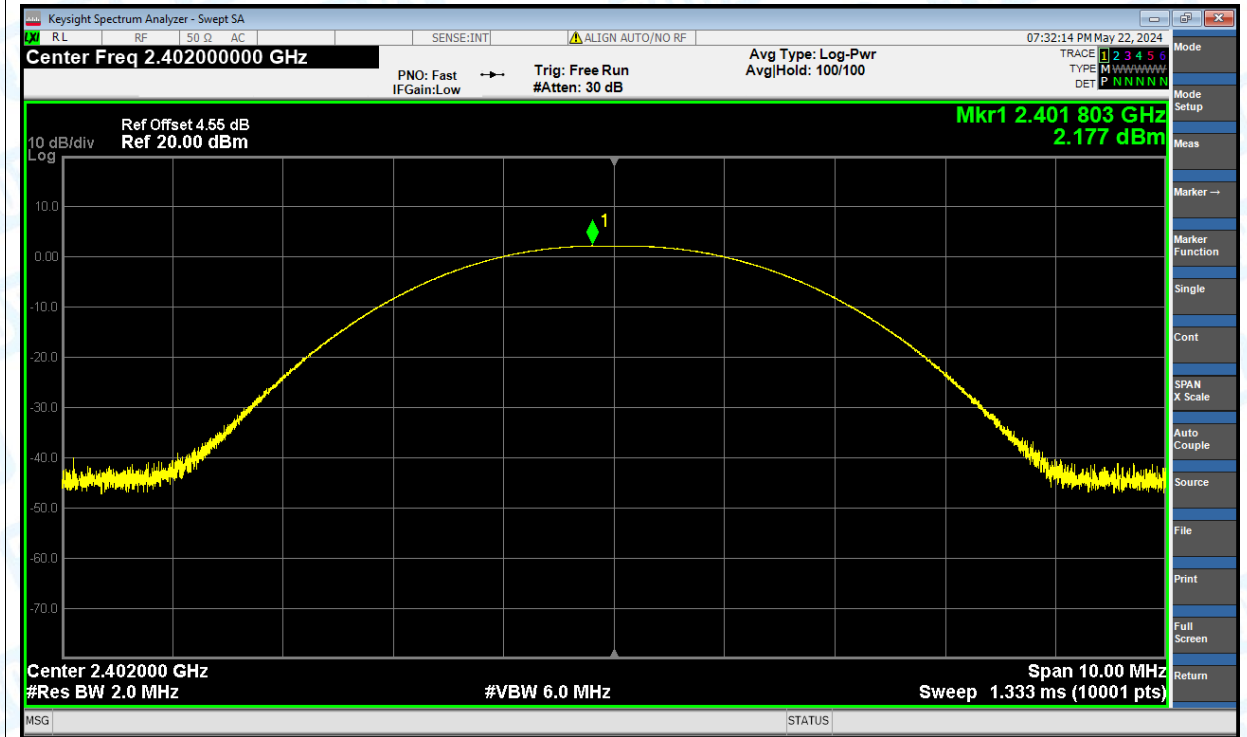


2. Maximum Conducted Output Power

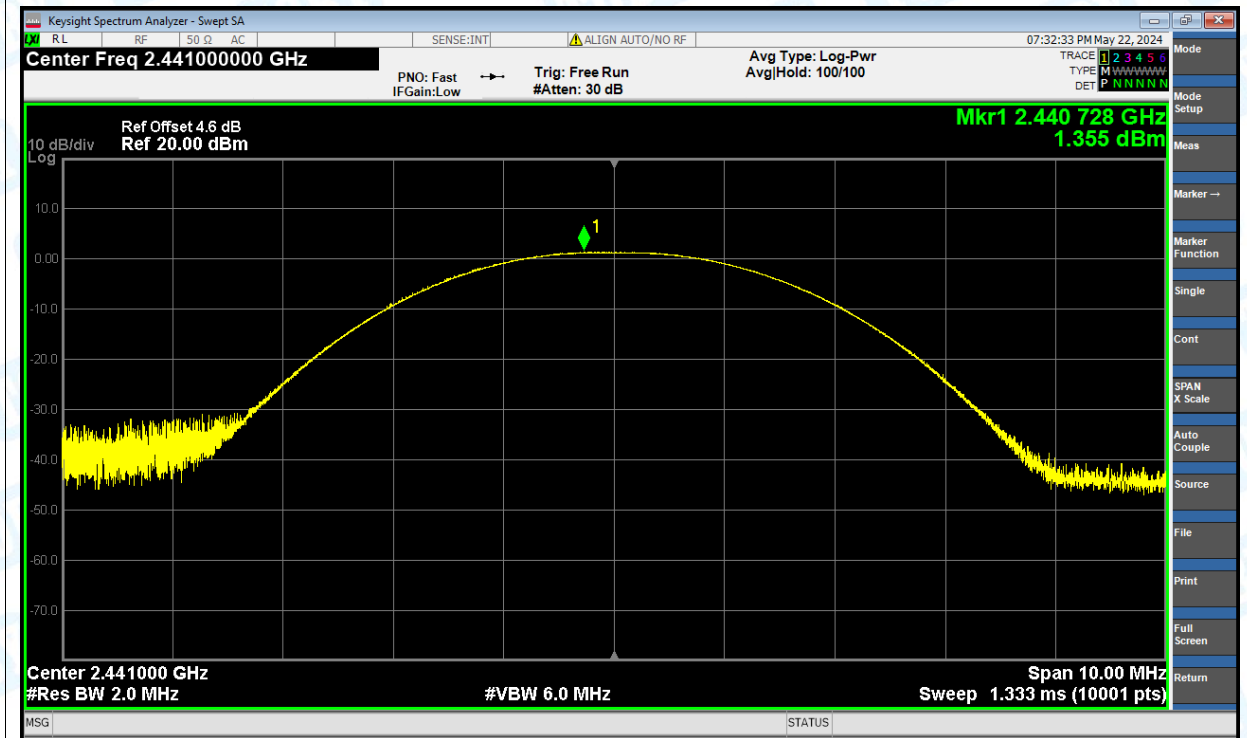
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	2.177	21	Pass
NVNT	1-DH1	2441	Ant1	1.355	21	Pass
NVNT	1-DH1	2480	Ant1	0.107	21	Pass
NVNT	1-DH3	2441	Ant1	1.241	21	Pass
NVNT	1-DH5	2441	Ant1	1.308	21	Pass
NVNT	2-DH1	2402	Ant1	2.44	21	Pass
NVNT	2-DH1	2441	Ant1	1.557	21	Pass
NVNT	2-DH1	2480	Ant1	0.444	21	Pass
NVNT	2-DH3	2441	Ant1	1.516	21	Pass
NVNT	2-DH5	2441	Ant1	1.516	21	Pass
NVNT	3-DH1	2402	Ant1	3.014	21	Pass
NVNT	3-DH1	2441	Ant1	2.116	21	Pass
NVNT	3-DH1	2480	Ant1	0.988	21	Pass
NVNT	3-DH3	2441	Ant1	2.004	21	Pass
NVNT	3-DH5	2441	Ant1	2.024	21	Pass

Test Graphs

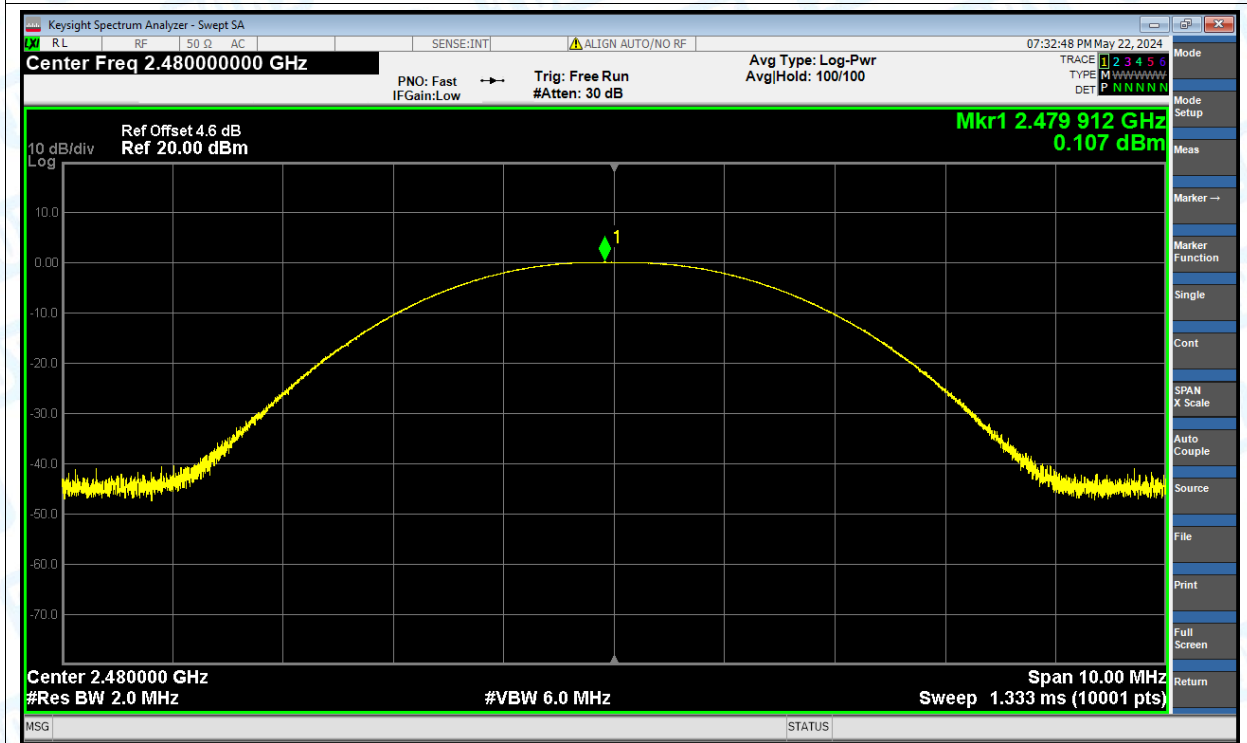
Power NVNT 1-DH1 2402MHz Ant1



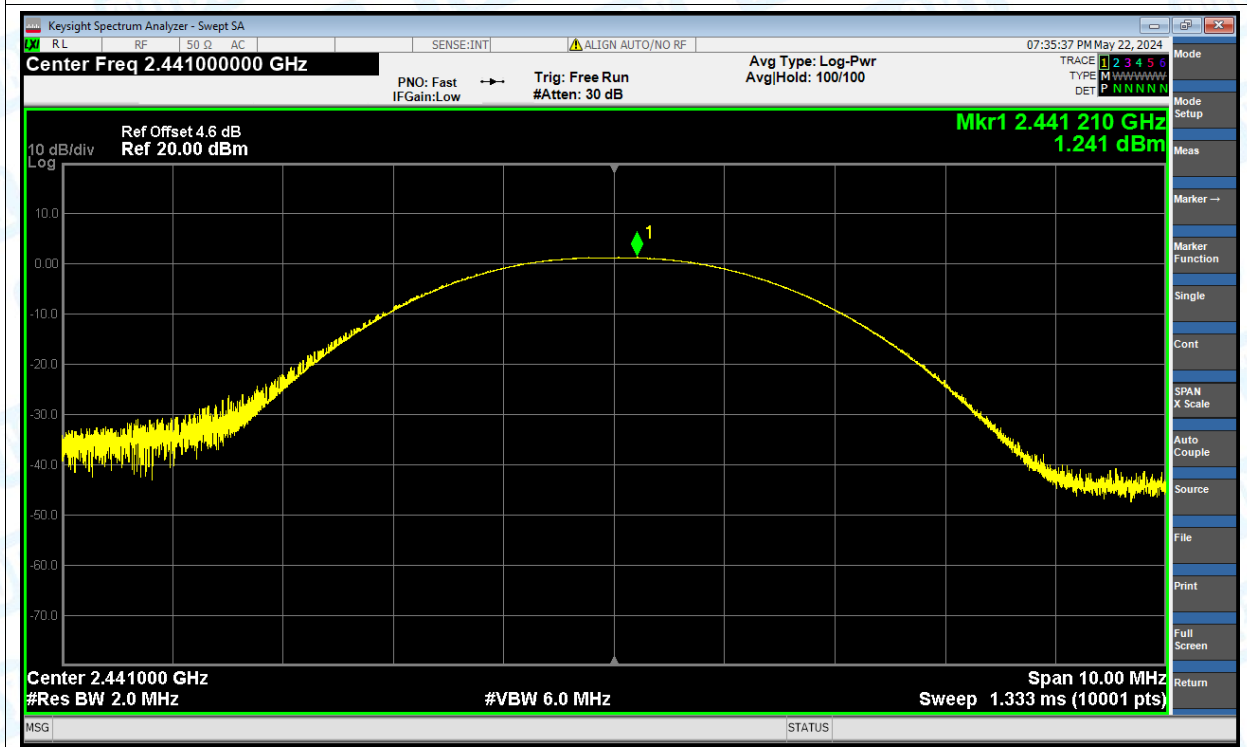
Power NVNT 1-DH1 2441MHz Ant1



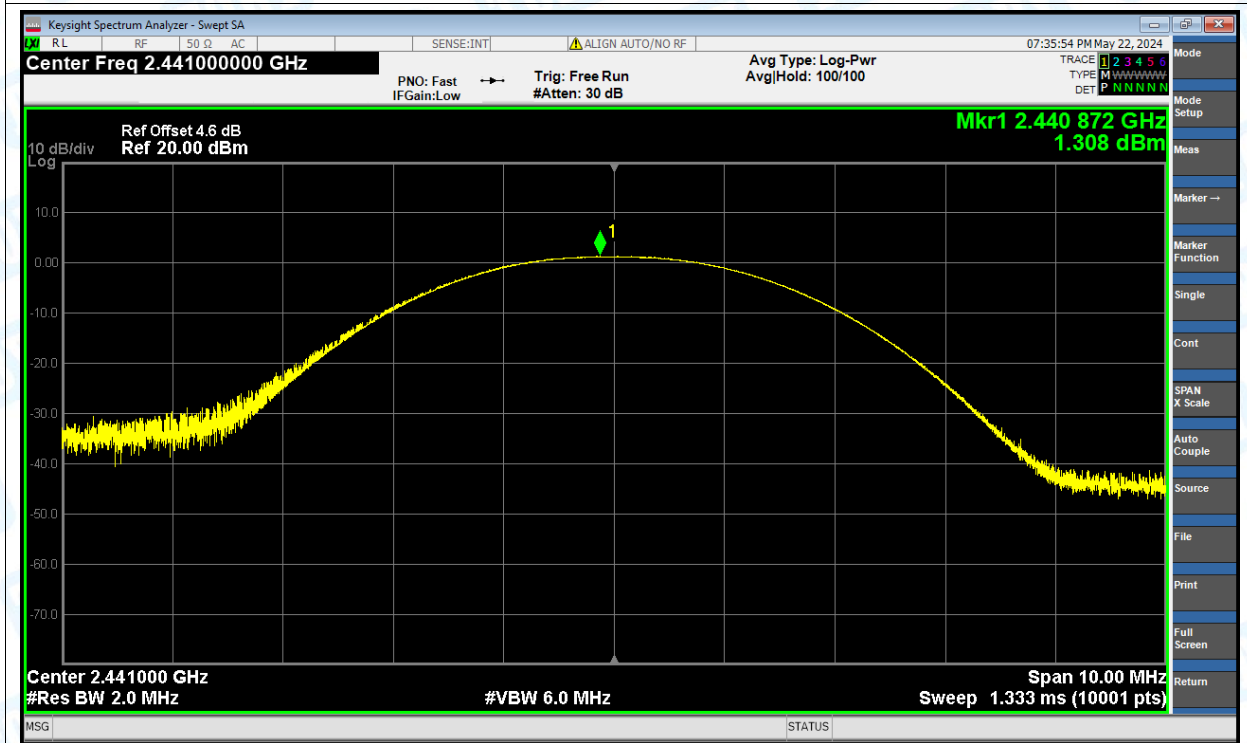
Power NVNT 1-DH1 2480MHz Ant1



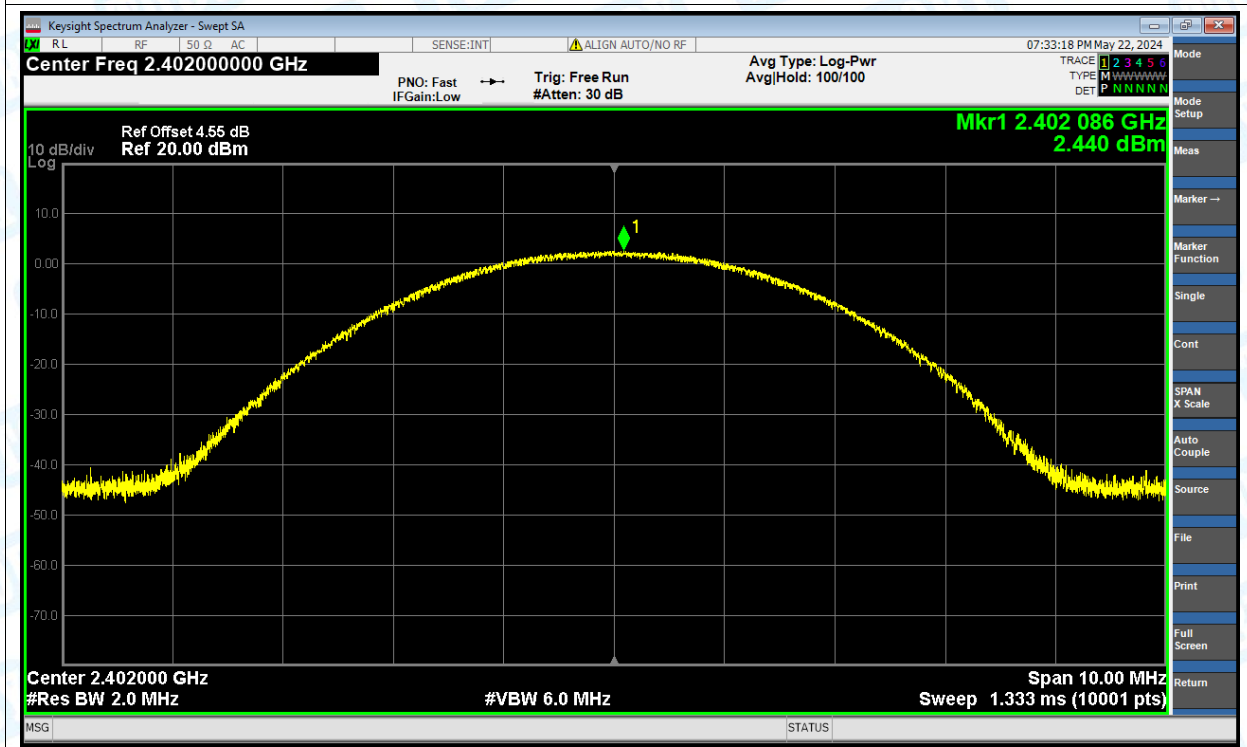
Power NVNT 1-DH3 2441MHz Ant1



Power NVNT 1-DH5 2441MHz Ant1



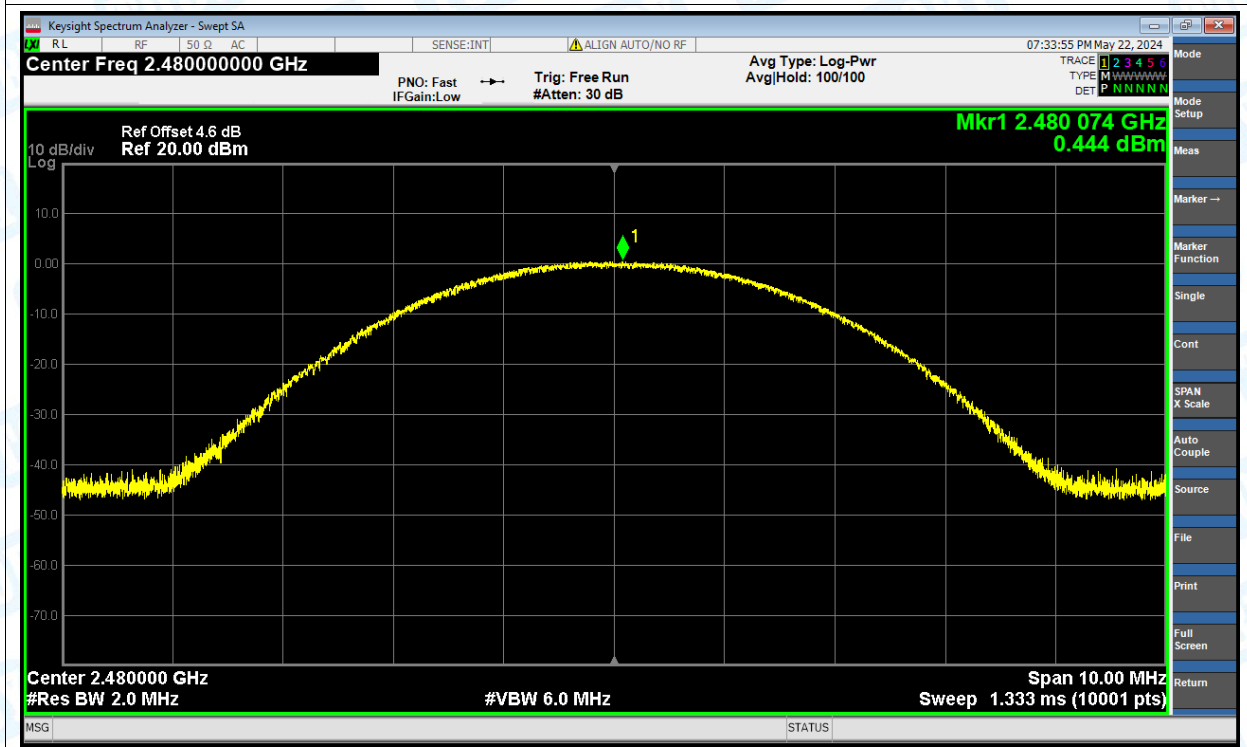
Power NVNT 2-DH1 2402MHz Ant1



Power NVNT 2-DH1 2441MHz Ant1



Power NVNT 2-DH1 2480MHz Ant1



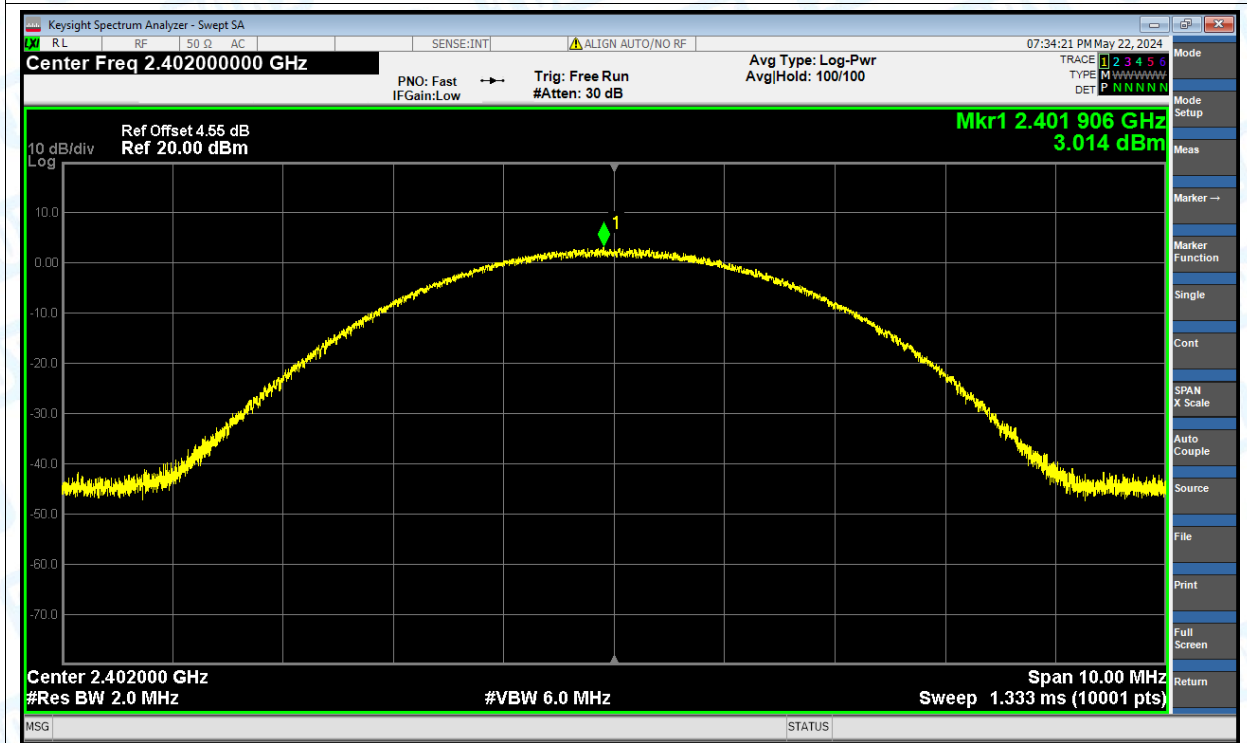
Power NVNT 2-DH3 2441MHz Ant1



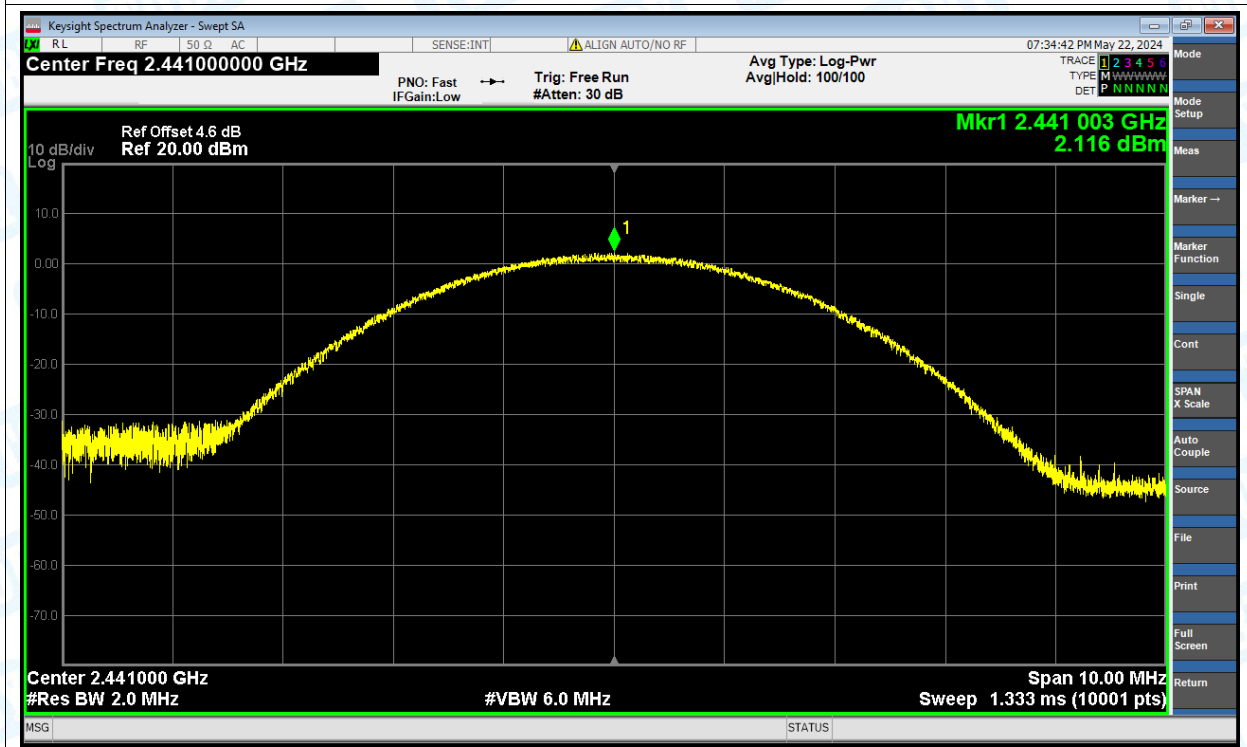
Power NVNT 2-DH5 2441MHz Ant1



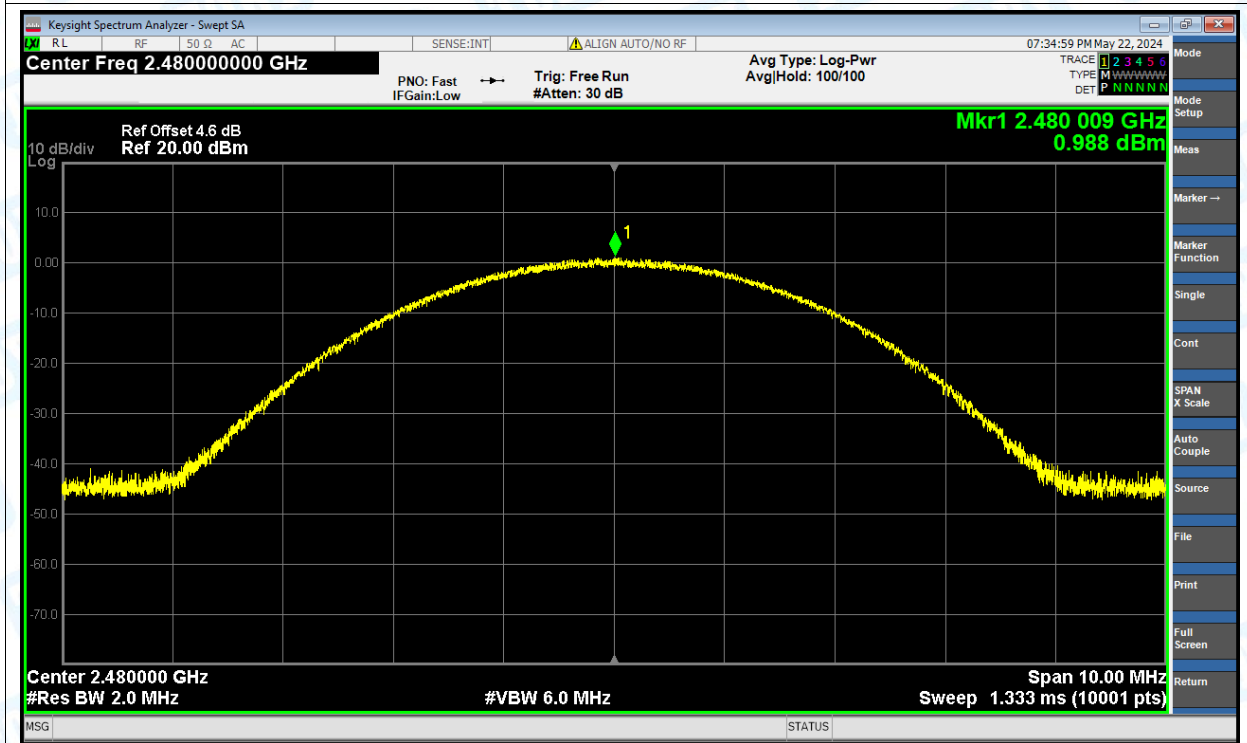
Power NVNT 3-DH1 2402MHz Ant1



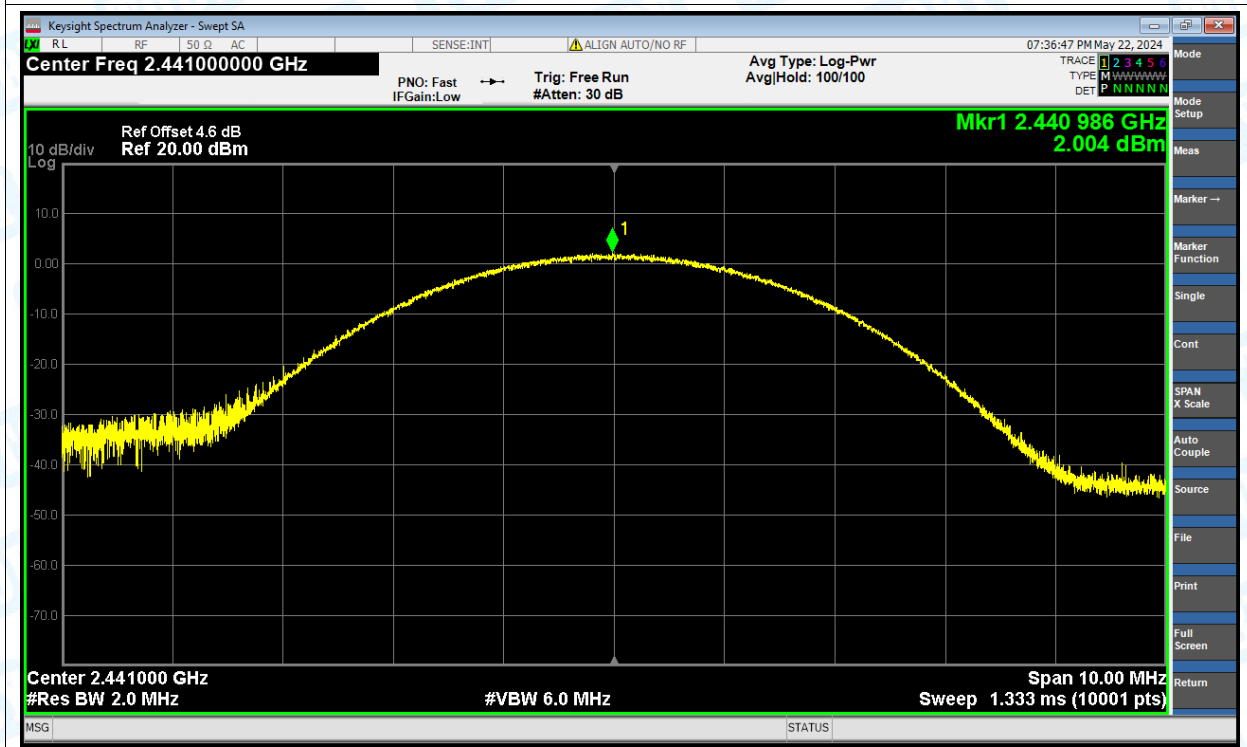
Power NVNT 3-DH1 2441MHz Ant1



Power NVNT 3-DH1 2480MHz Ant1



Power NVNT 3-DH3 2441MHz Ant1



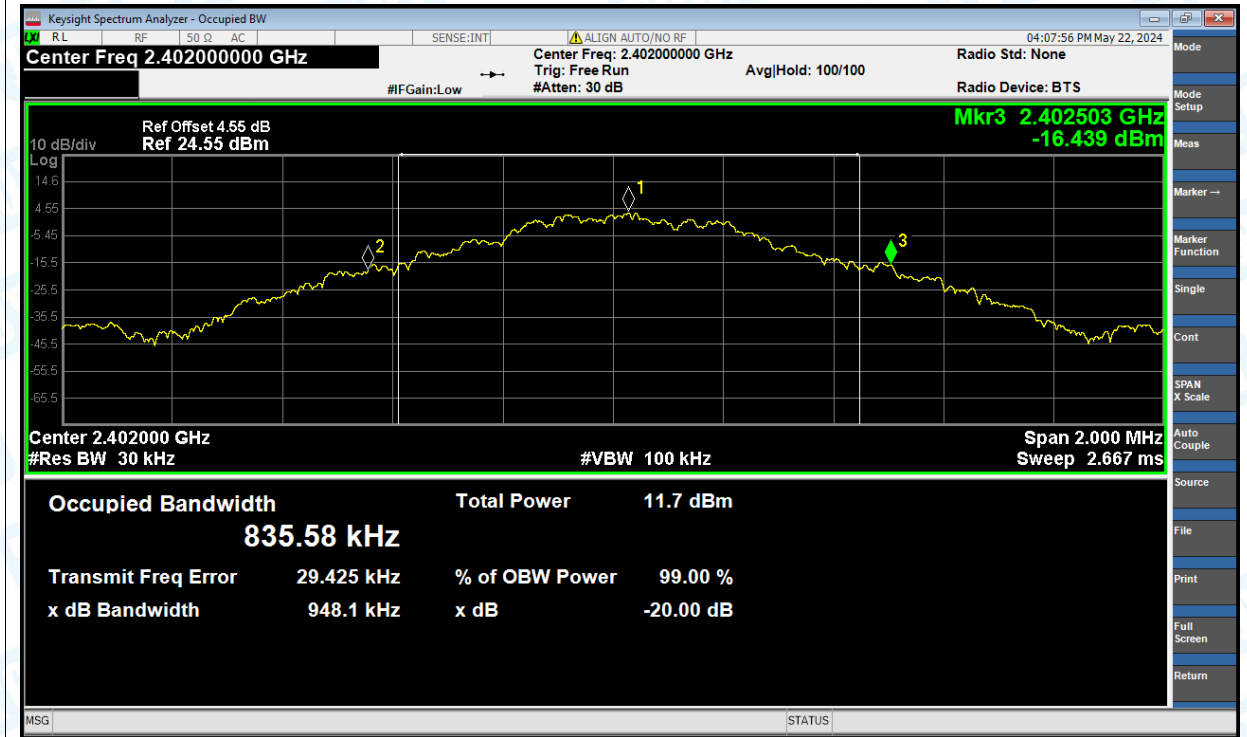


3. -20dB Bandwidth

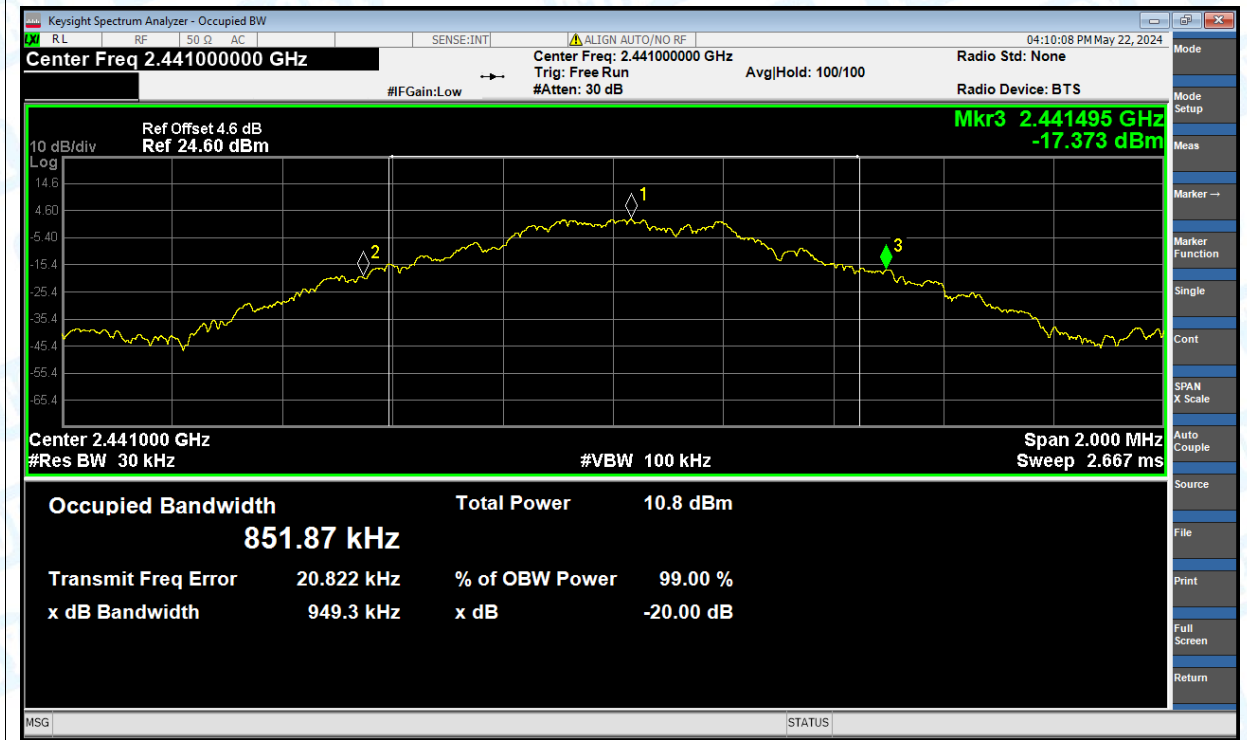
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.95	0	Pass
NVNT	1-DH1	2441	Ant1	0.95	0	Pass
NVNT	1-DH1	2480	Ant1	0.94	0	Pass
NVNT	2-DH1	2402	Ant1	1.28	0	Pass
NVNT	2-DH1	2441	Ant1	1.3	0	Pass
NVNT	2-DH1	2480	Ant1	1.24	0	Pass
NVNT	3-DH1	2402	Ant1	1.21	0	Pass
NVNT	3-DH1	2441	Ant1	1.2	0	Pass
NVNT	3-DH1	2480	Ant1	1.22	0	Pass

Test Graphs

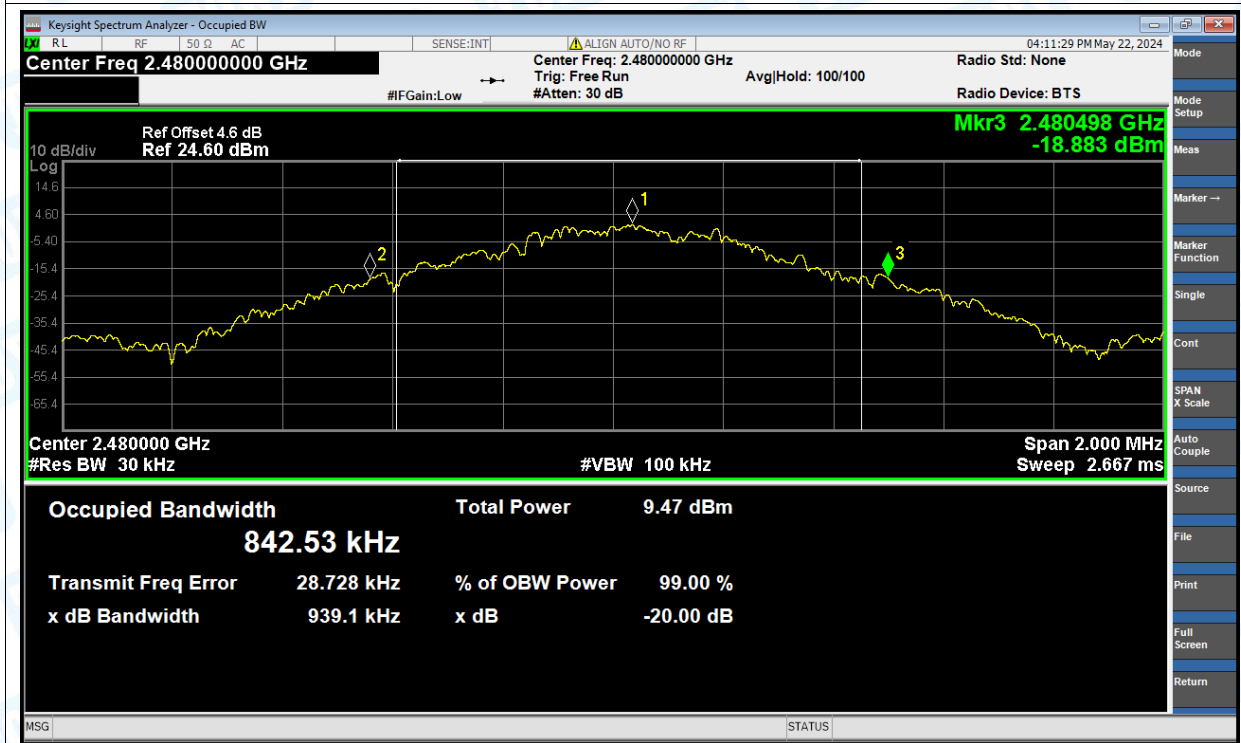
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



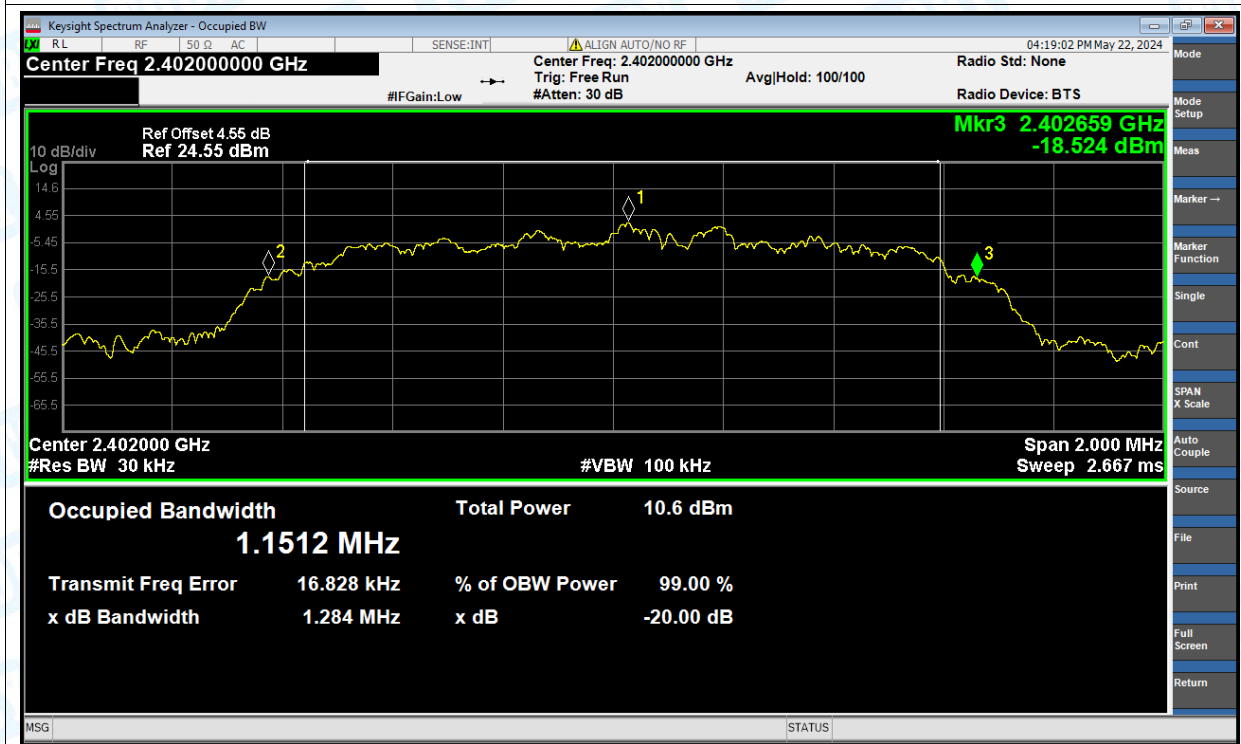
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



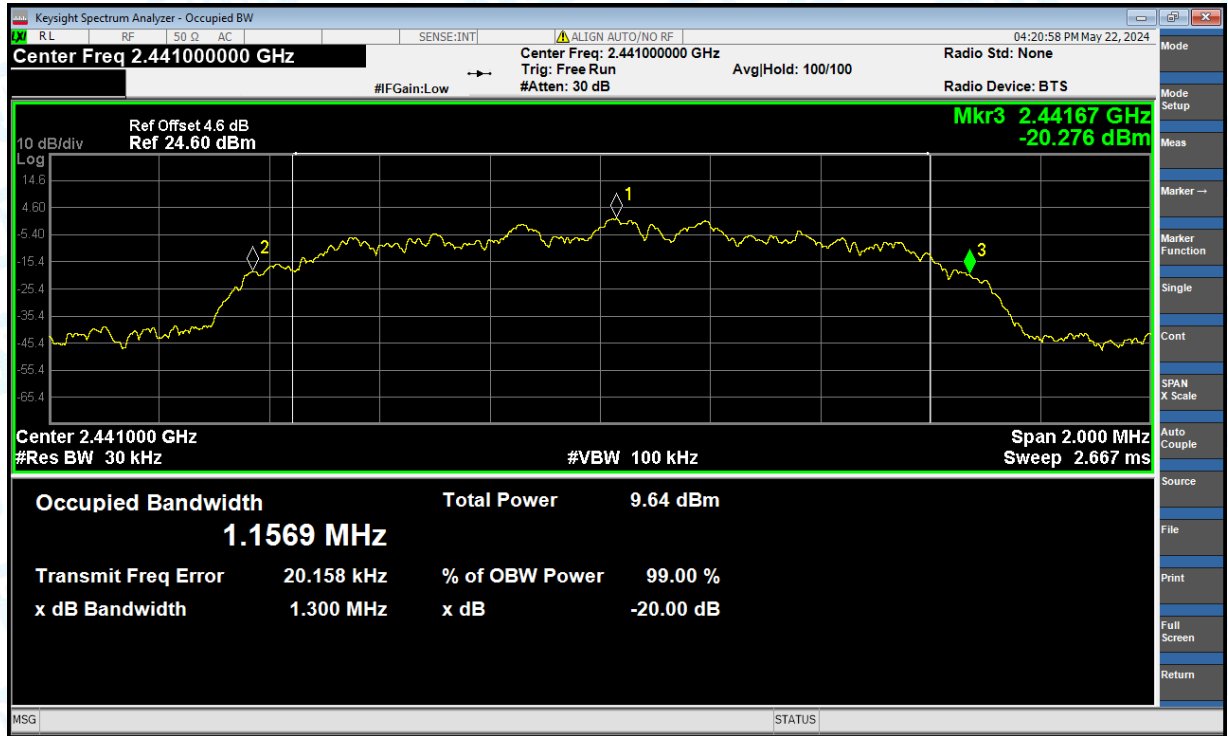
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



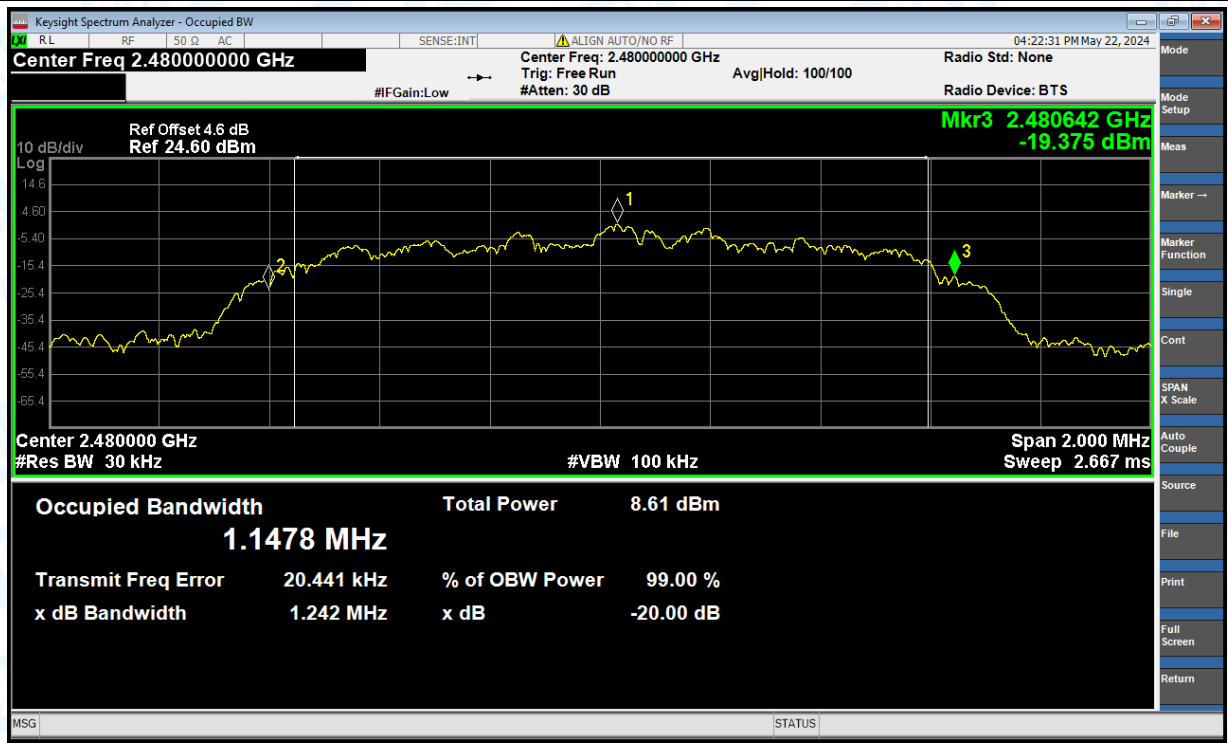
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



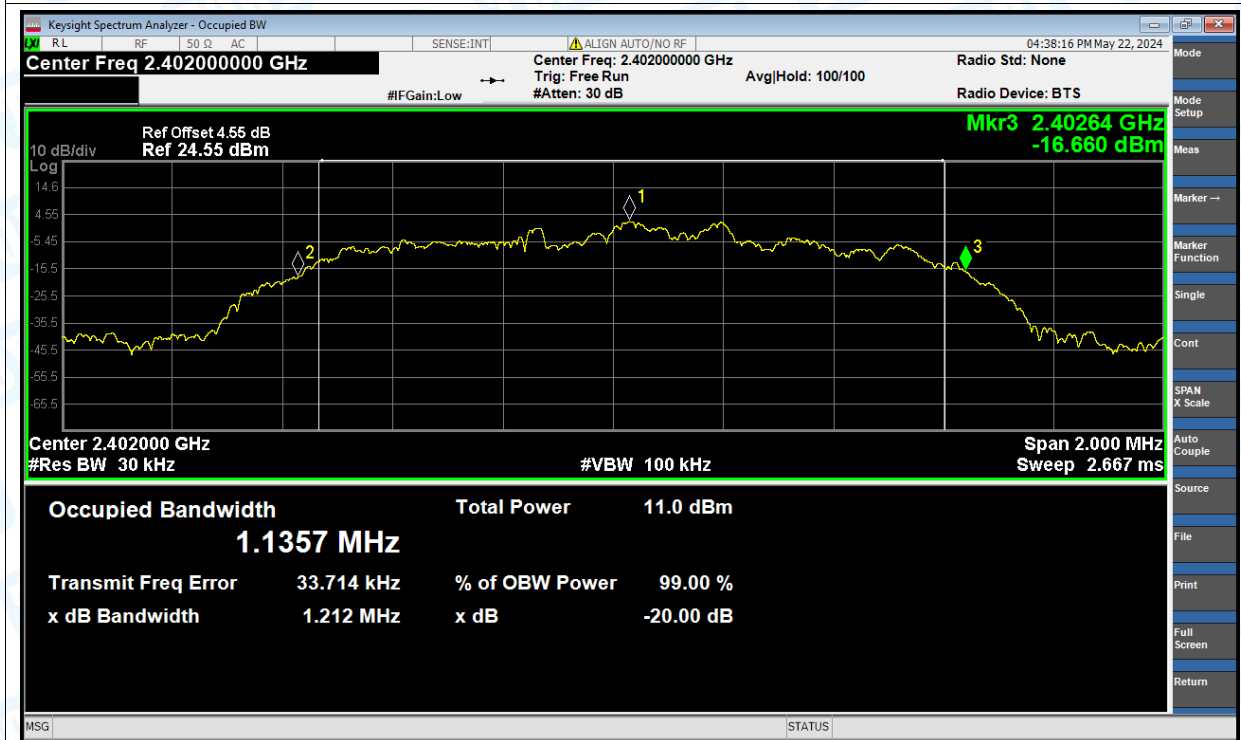
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



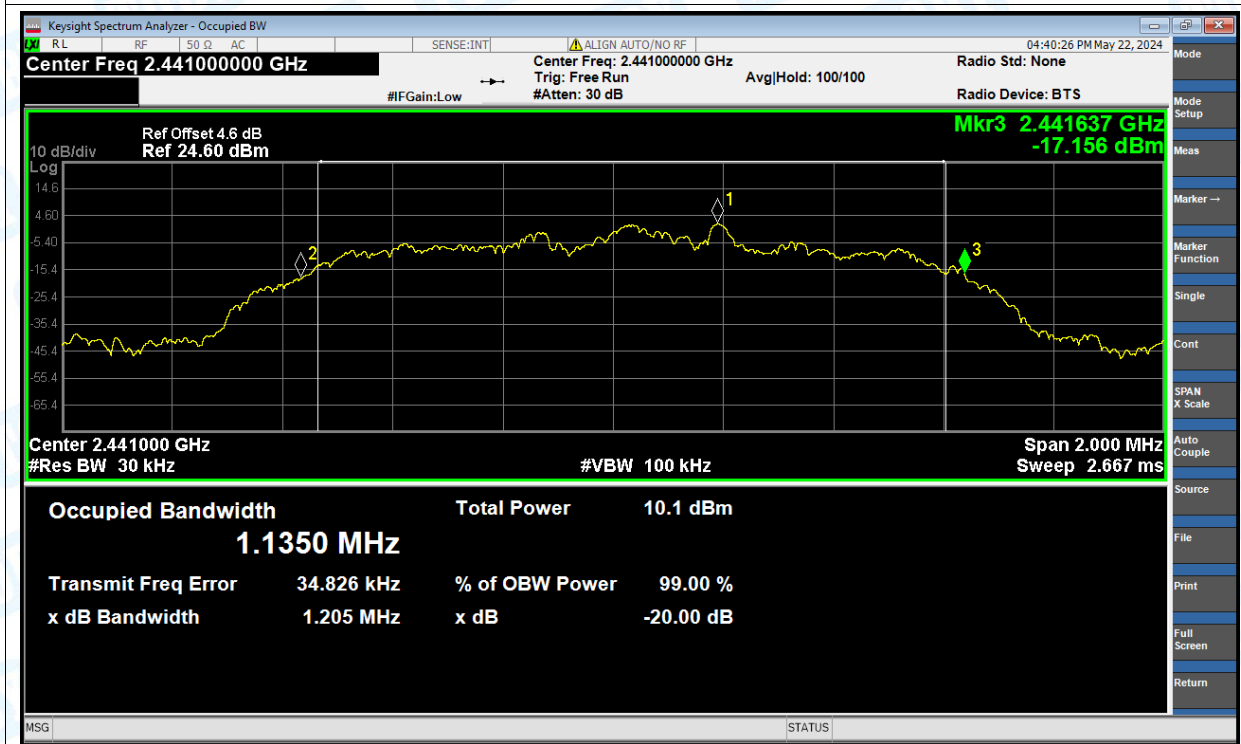
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

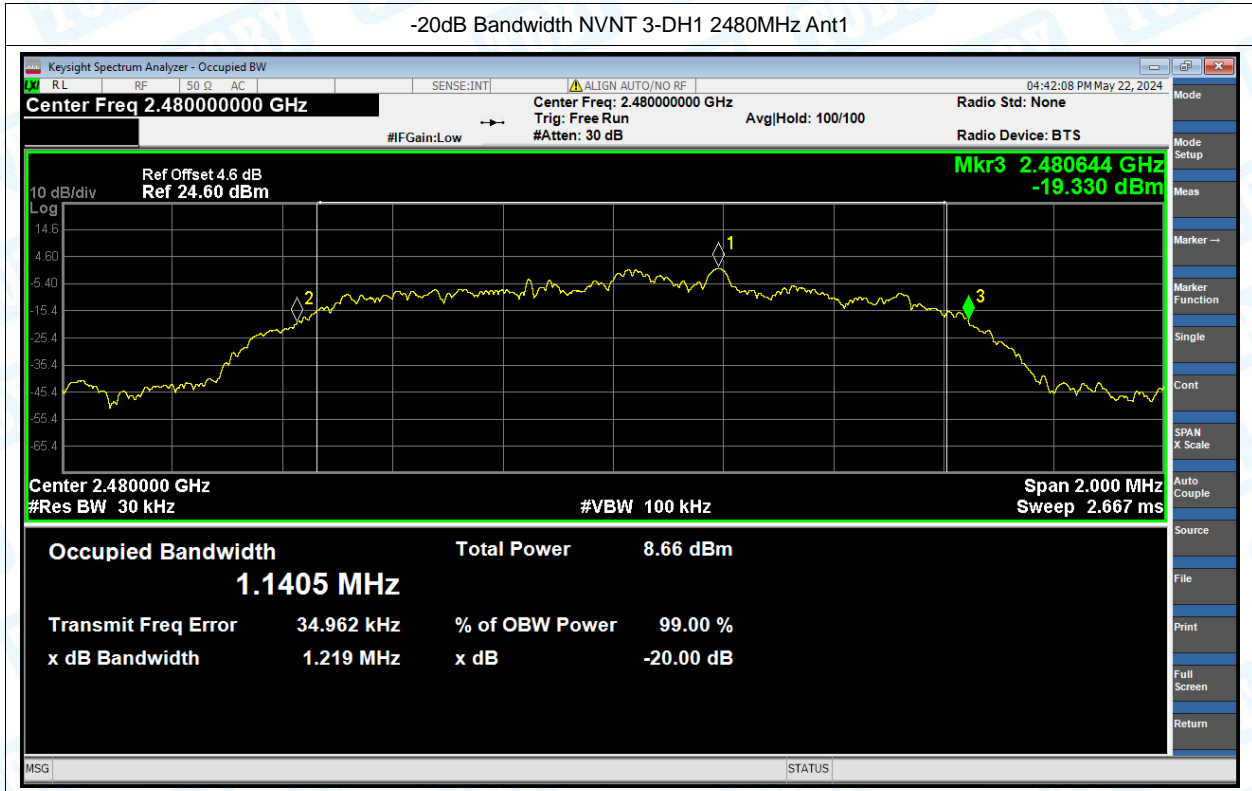


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



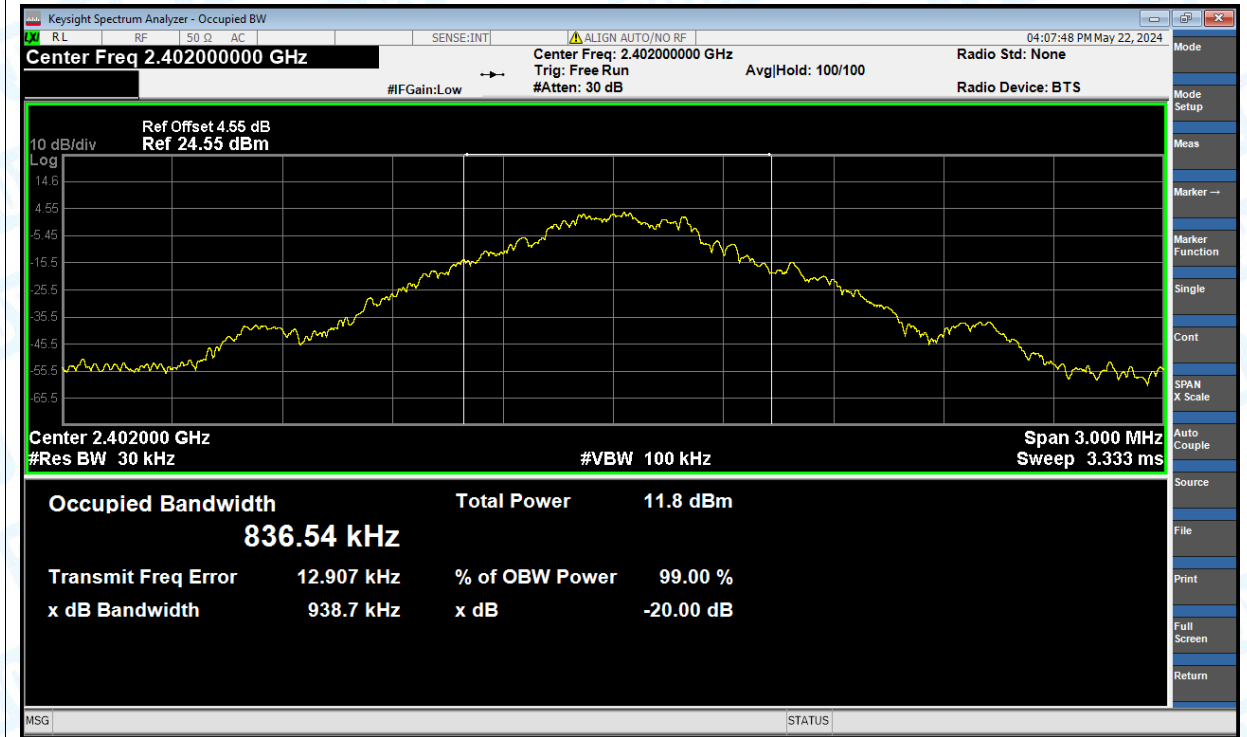


4. Occupied Channel Bandwidth

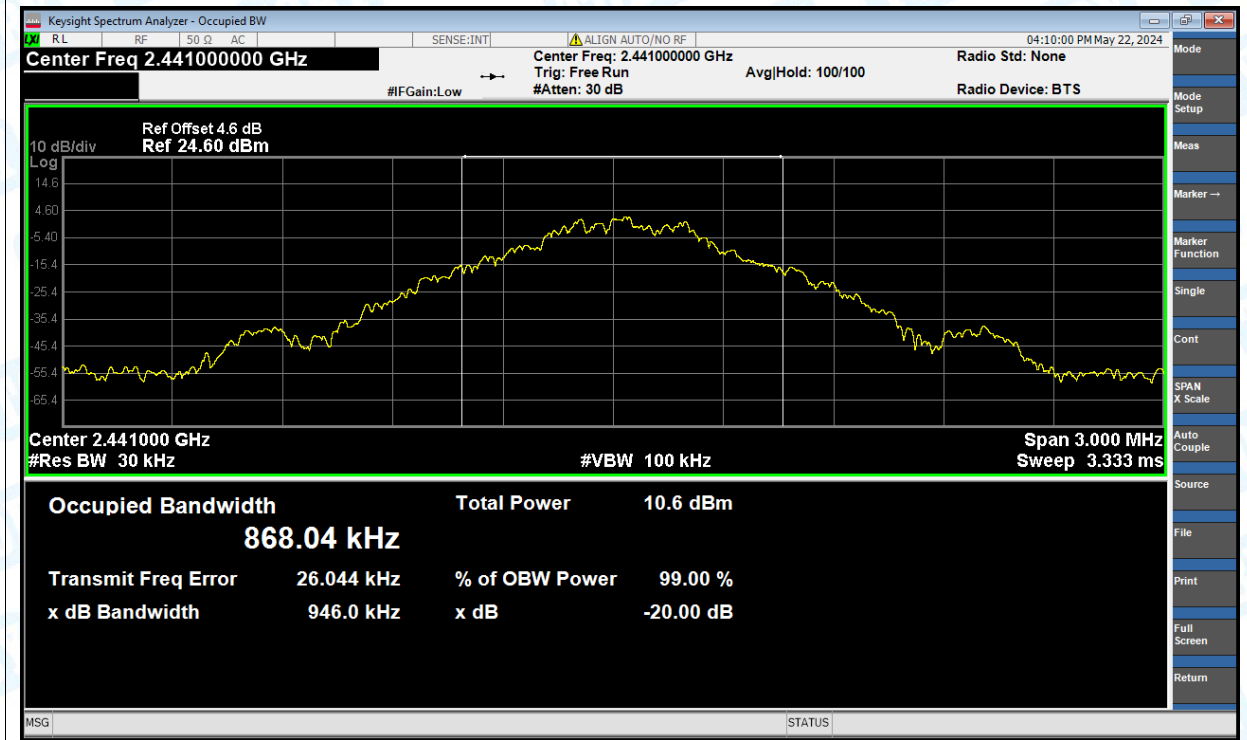
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.837
NVNT	1-DH1	2441	Ant1	0.868
NVNT	1-DH1	2480	Ant1	0.869
NVNT	2-DH1	2402	Ant1	1.158
NVNT	2-DH1	2441	Ant1	1.163
NVNT	2-DH1	2480	Ant1	1.161
NVNT	3-DH1	2402	Ant1	1.144
NVNT	3-DH1	2441	Ant1	1.149
NVNT	3-DH1	2480	Ant1	1.141

Test Graphs

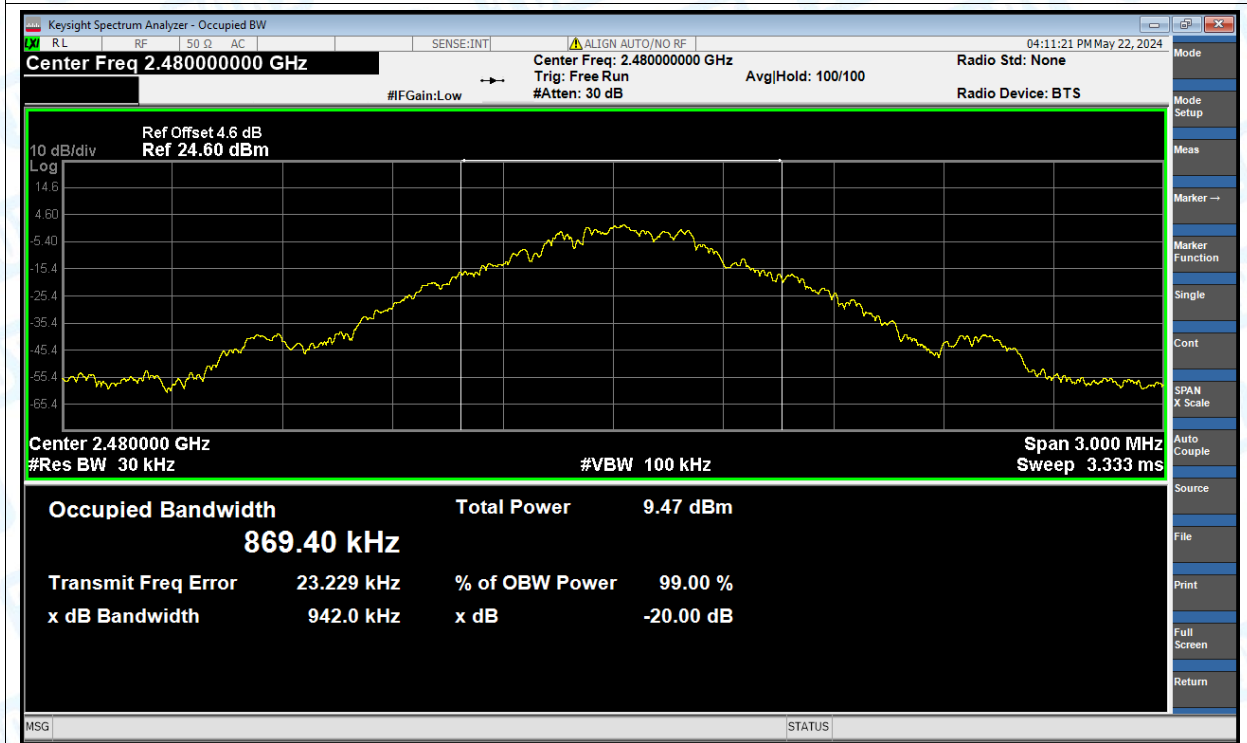
OBW NVNT 1-DH1 2402MHz Ant1



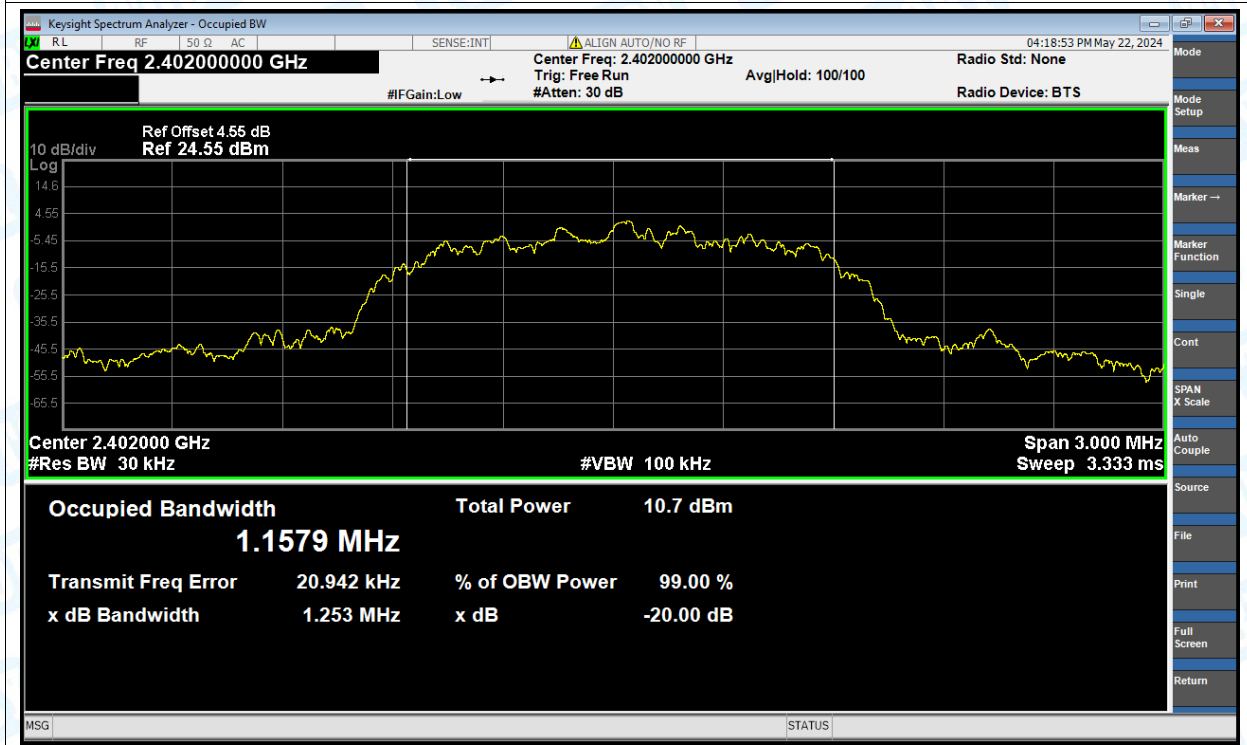
OBW NVNT 1-DH1 2441MHz Ant1



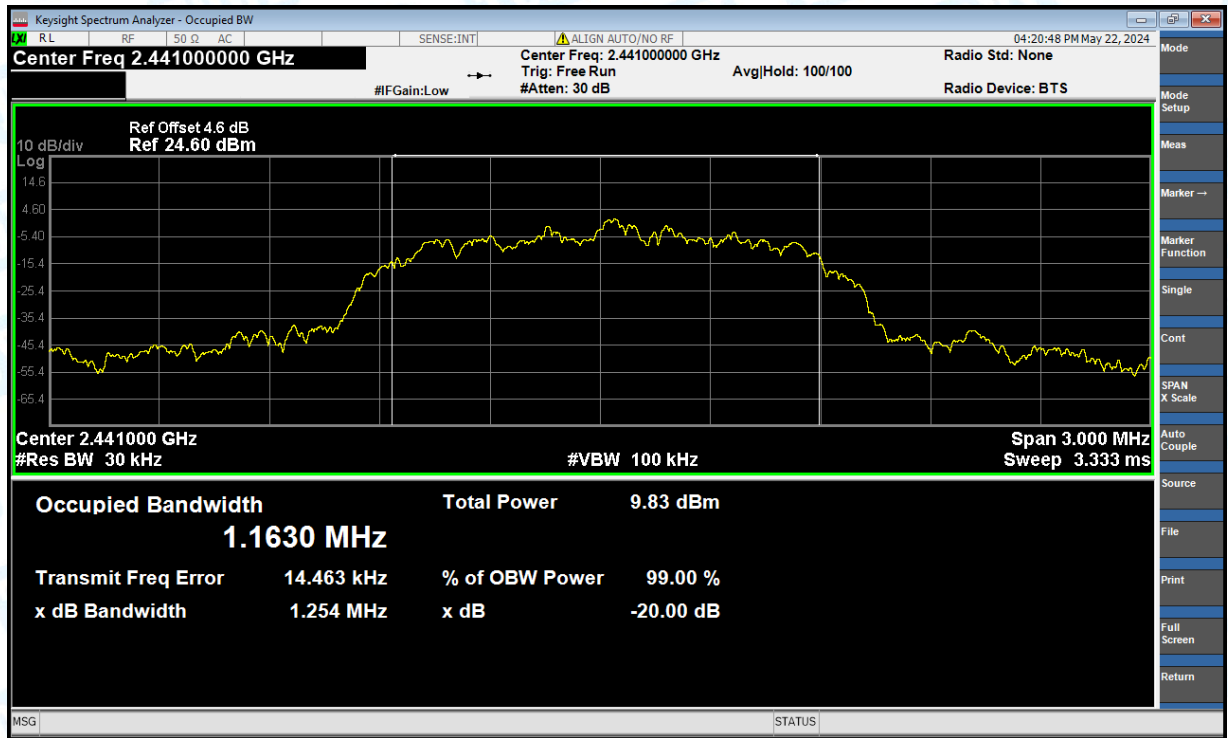
OBW NVNT 1-DH1 2480MHz Ant1



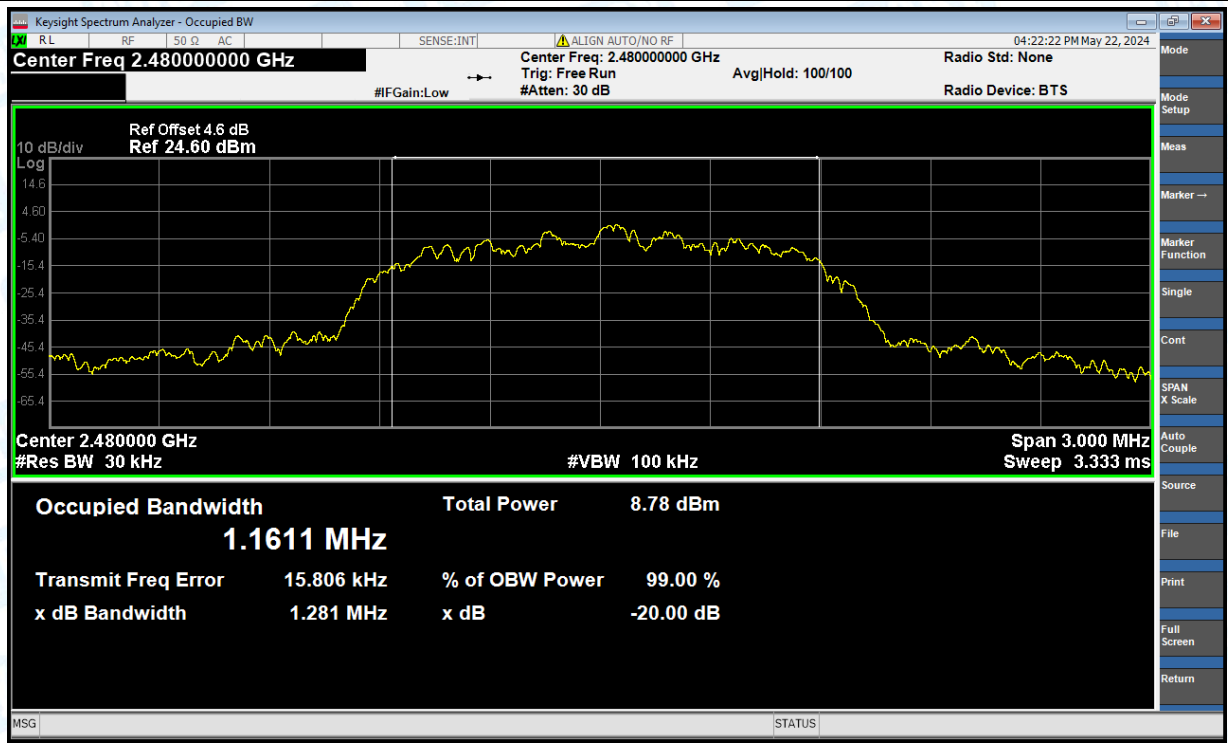
OBW NVNT 2-DH1 2402MHz Ant1



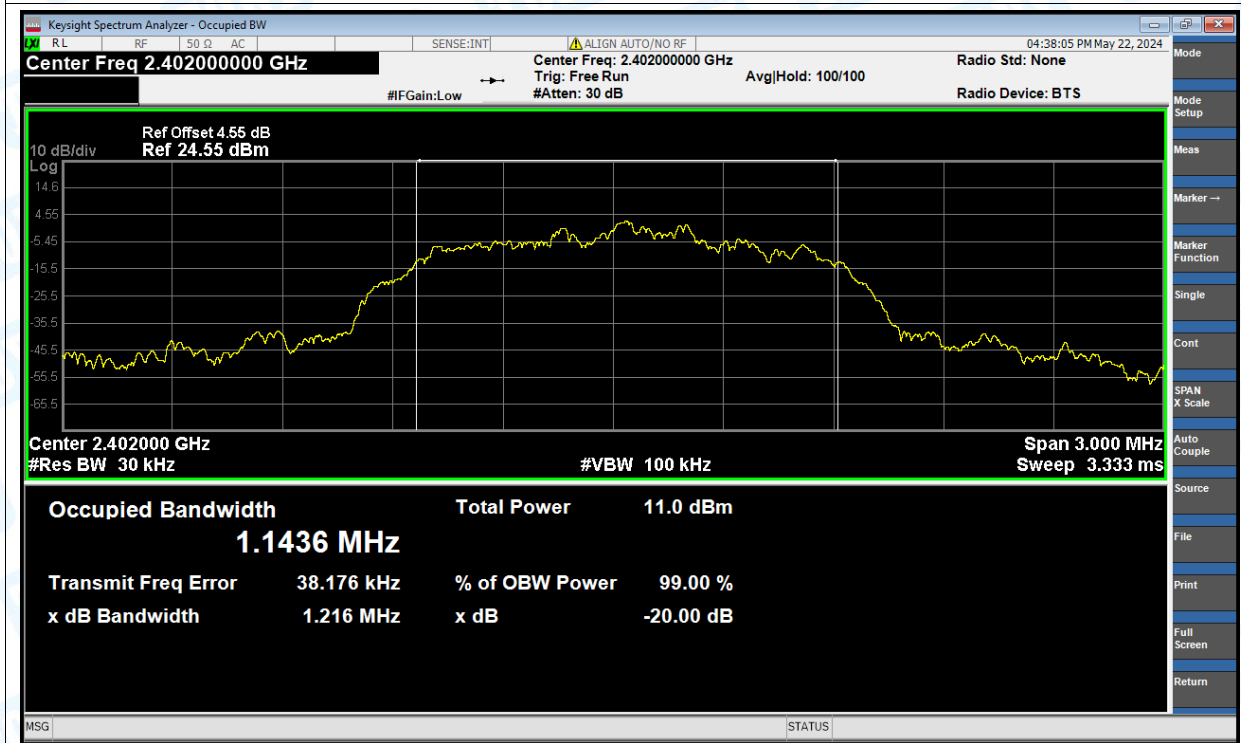
OBW NVNT 2-DH1 2441MHz Ant1



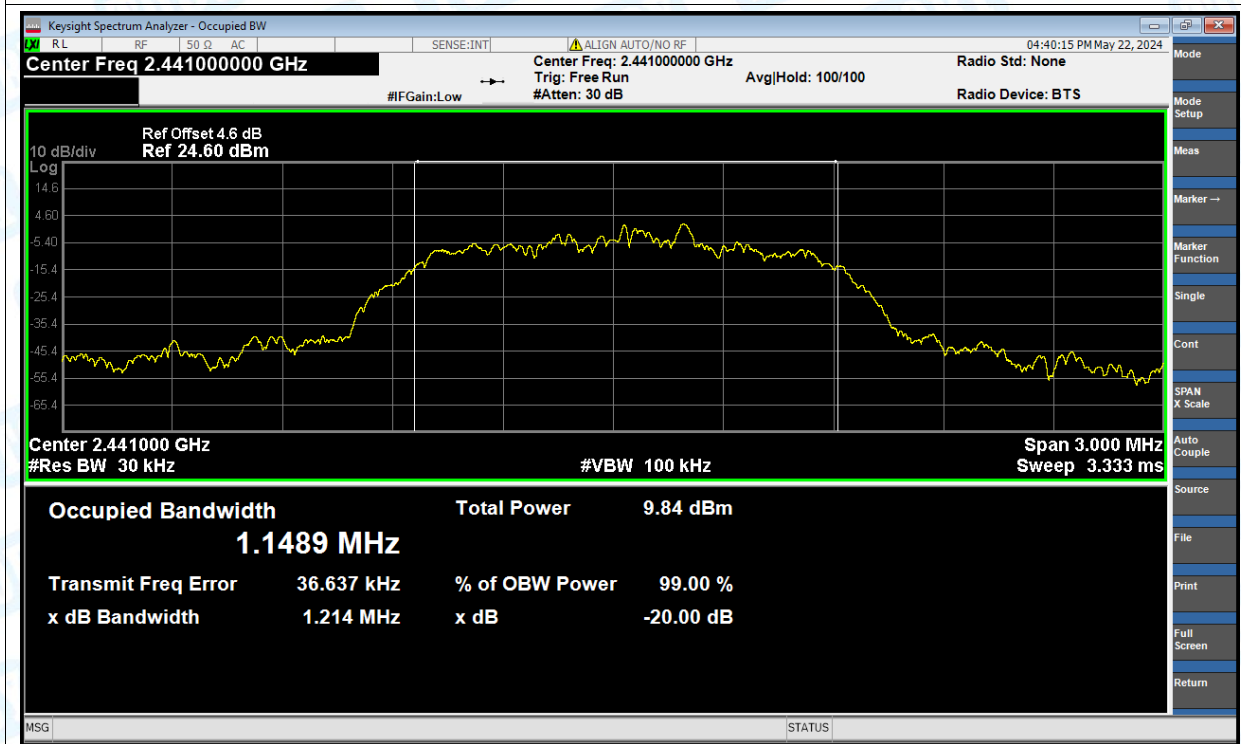
OBW NVNT 2-DH1 2480MHz Ant1

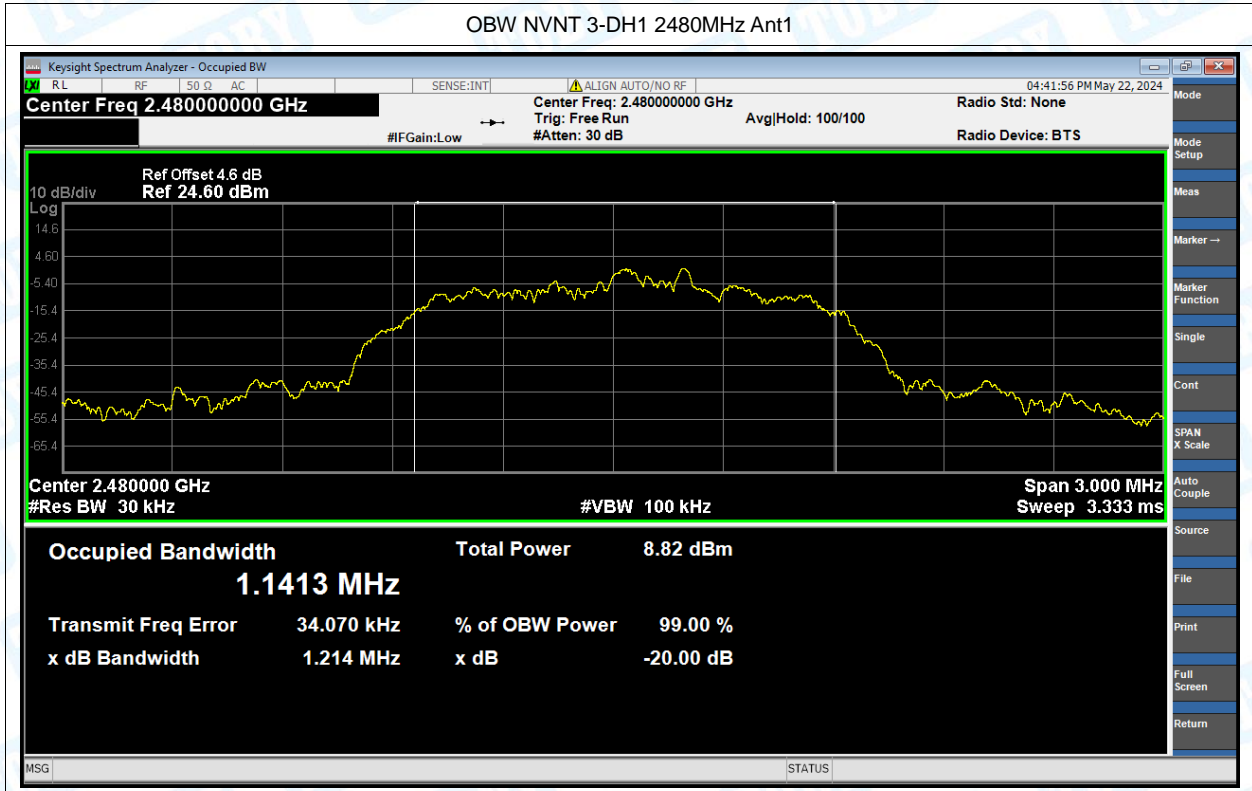


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



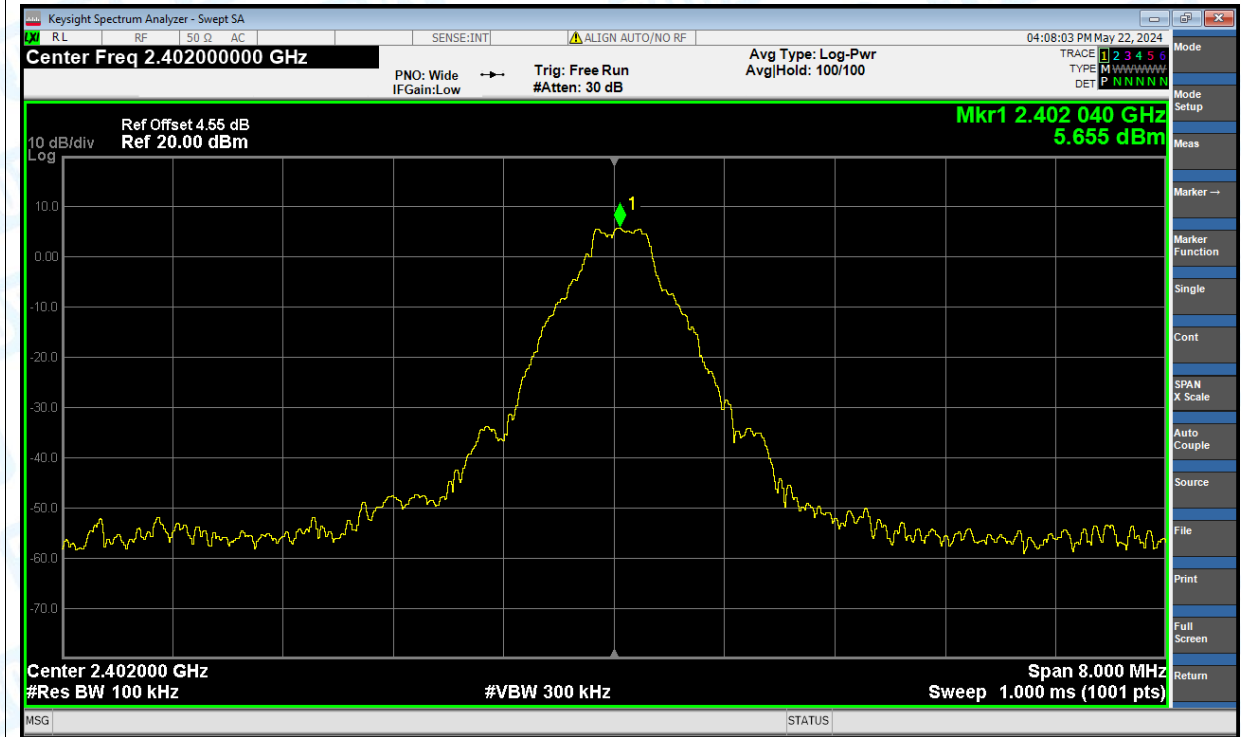


5. Band Edge

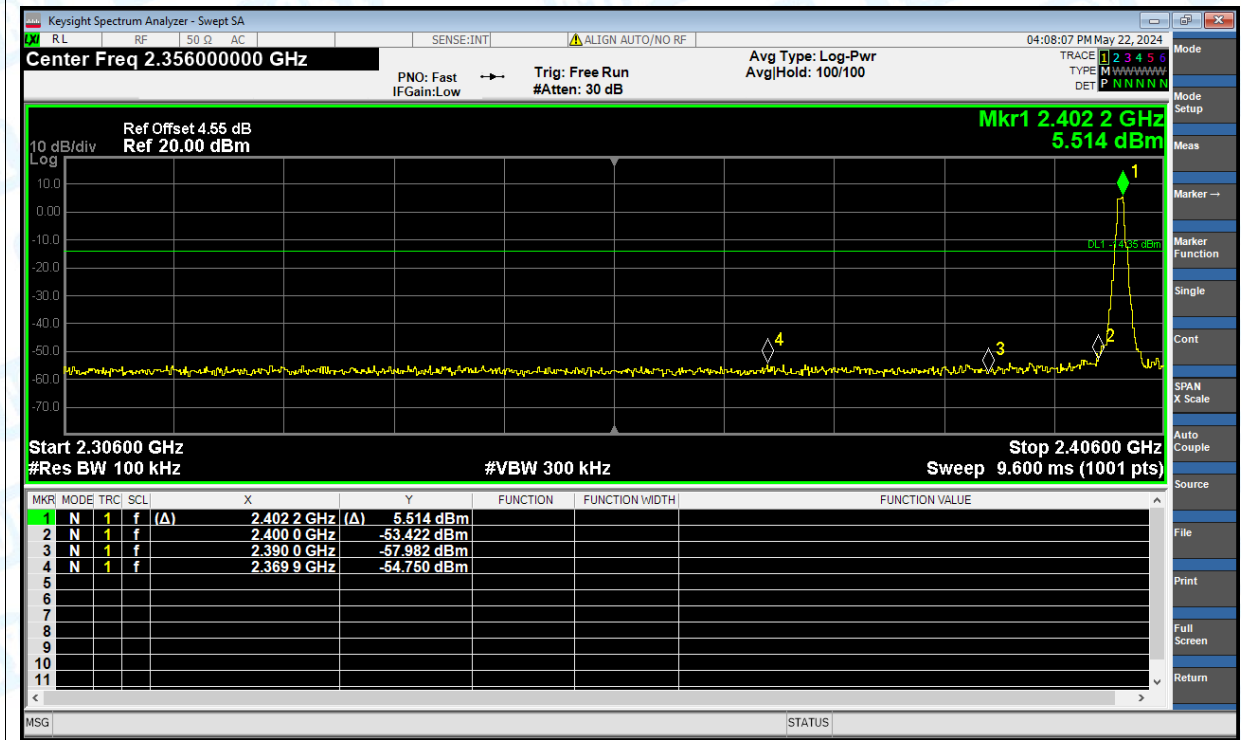
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-60.41	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-56.74	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-58.25	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-56.45	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-58.81	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-56.29	-20	Pass

Test Graphs

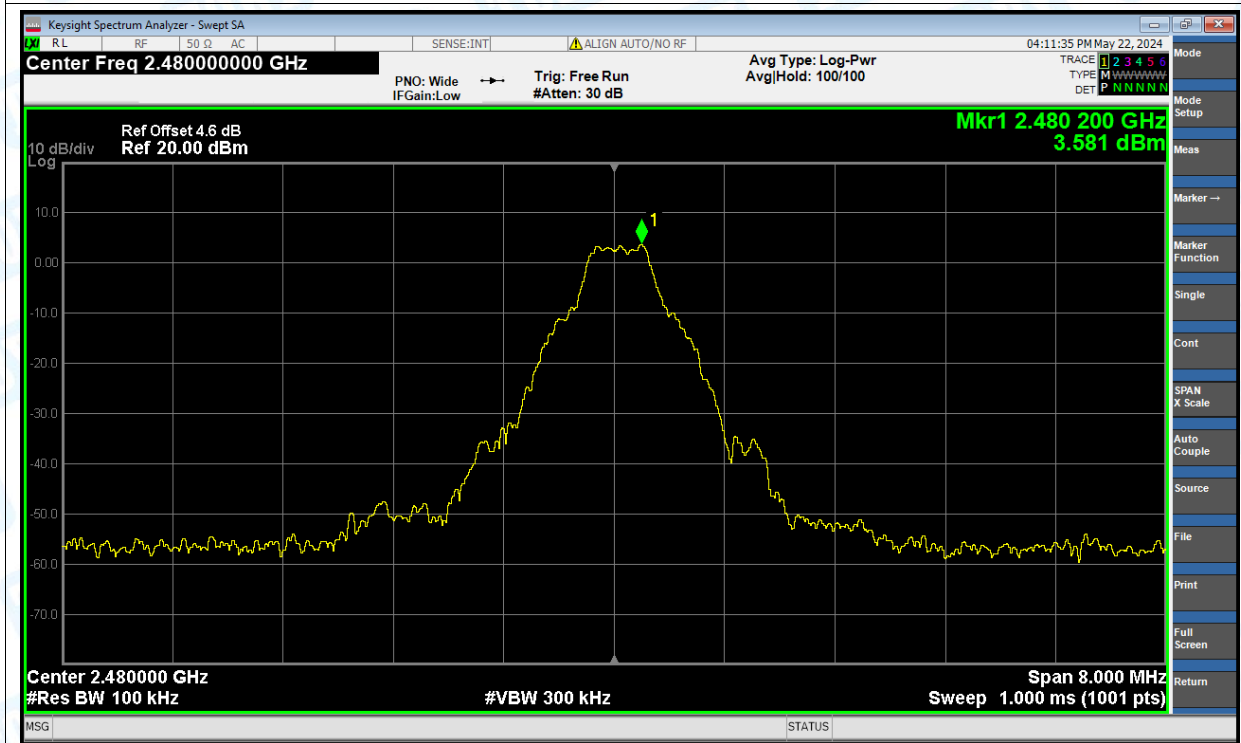
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



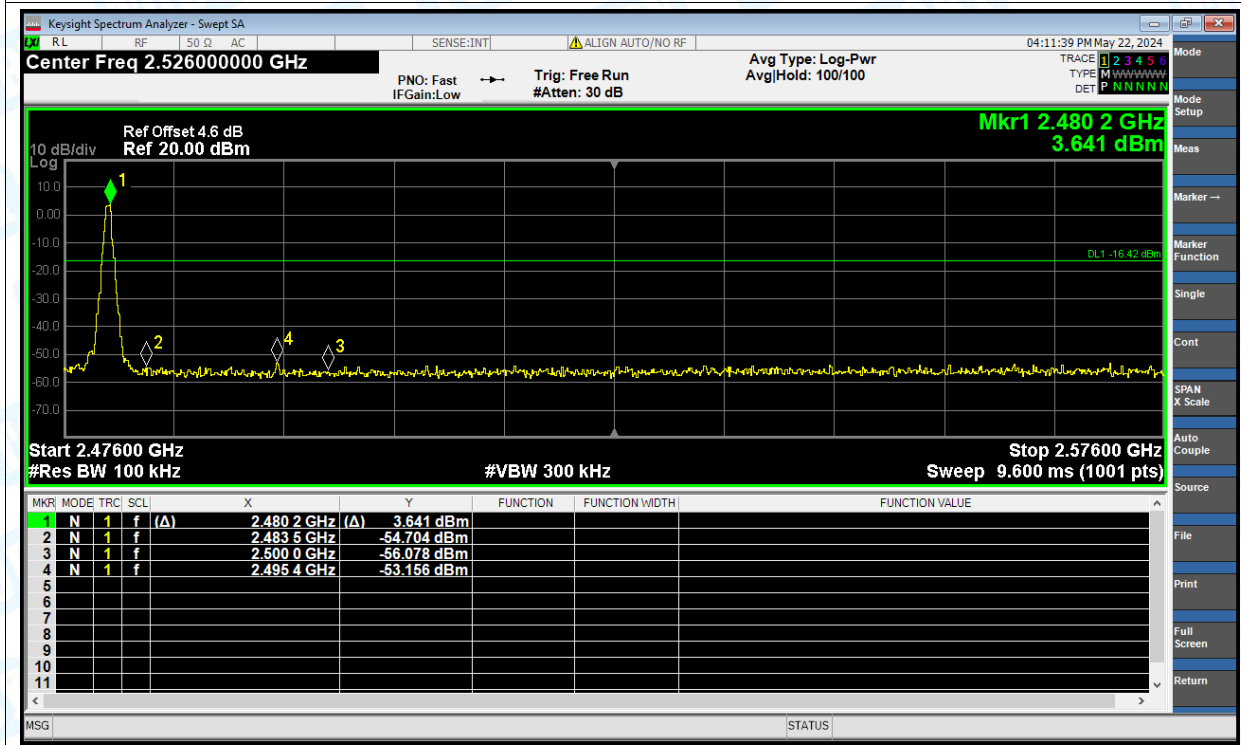
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



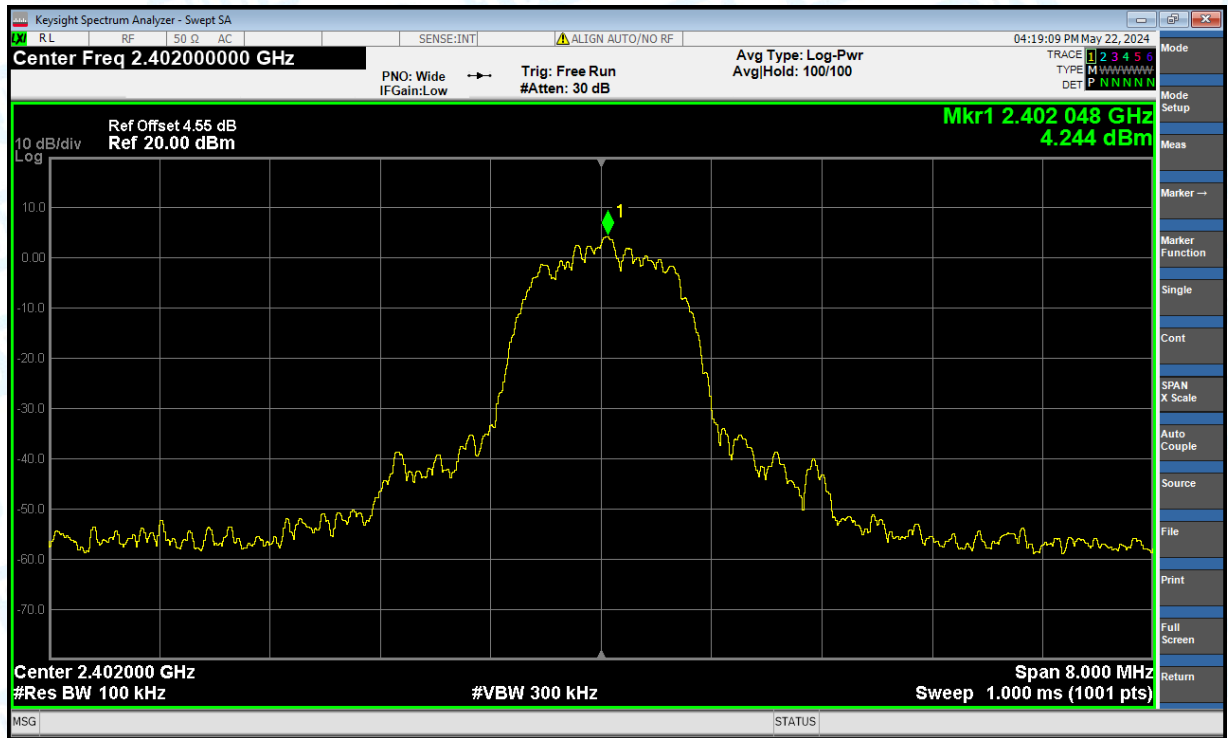
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



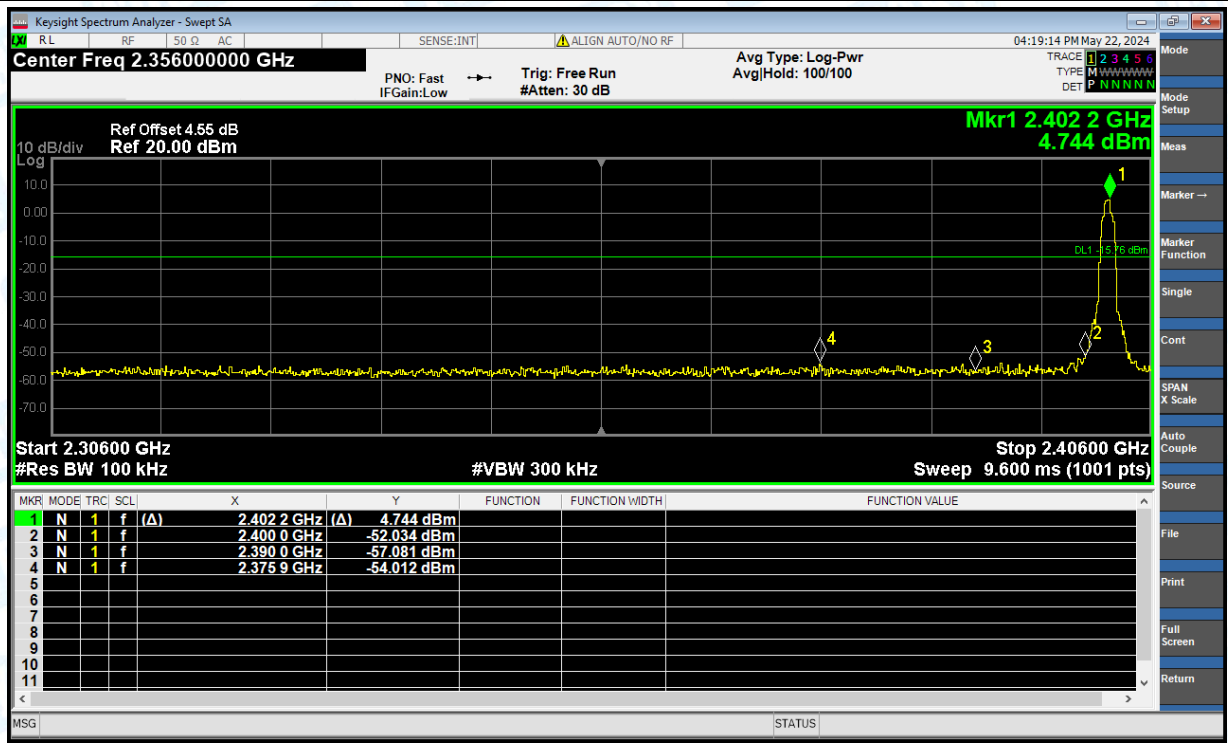
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



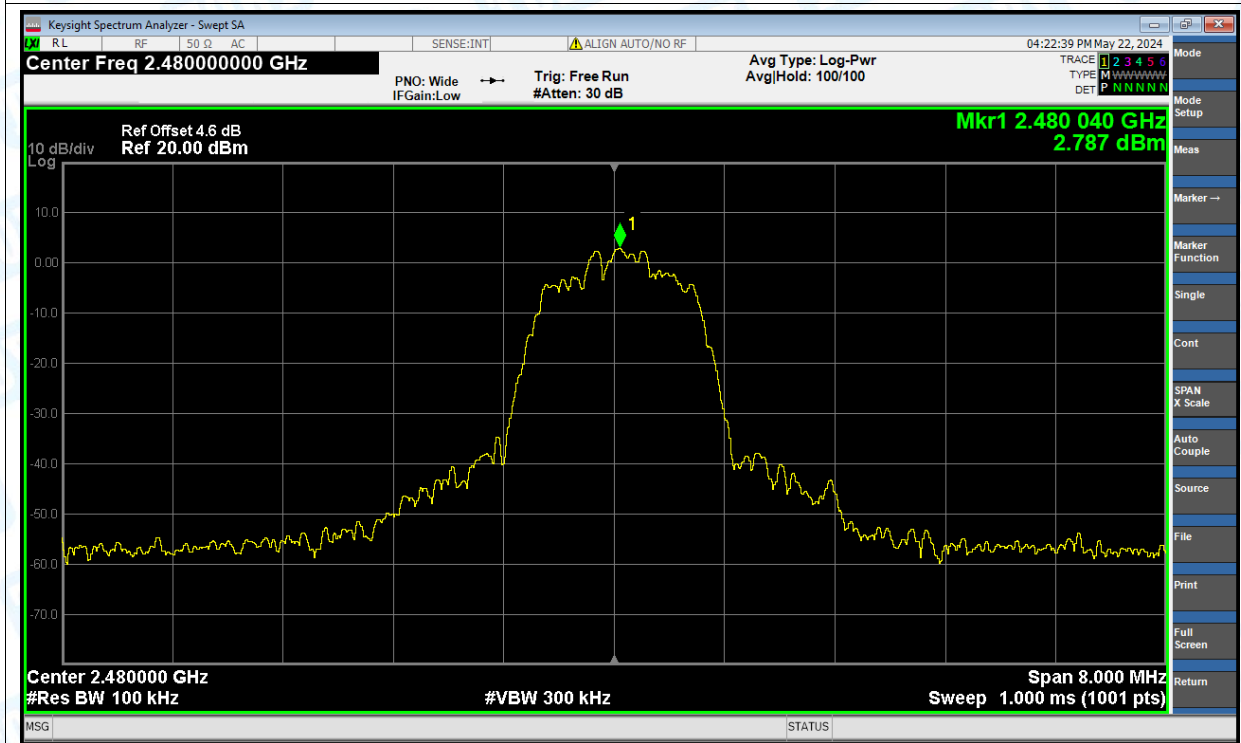
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



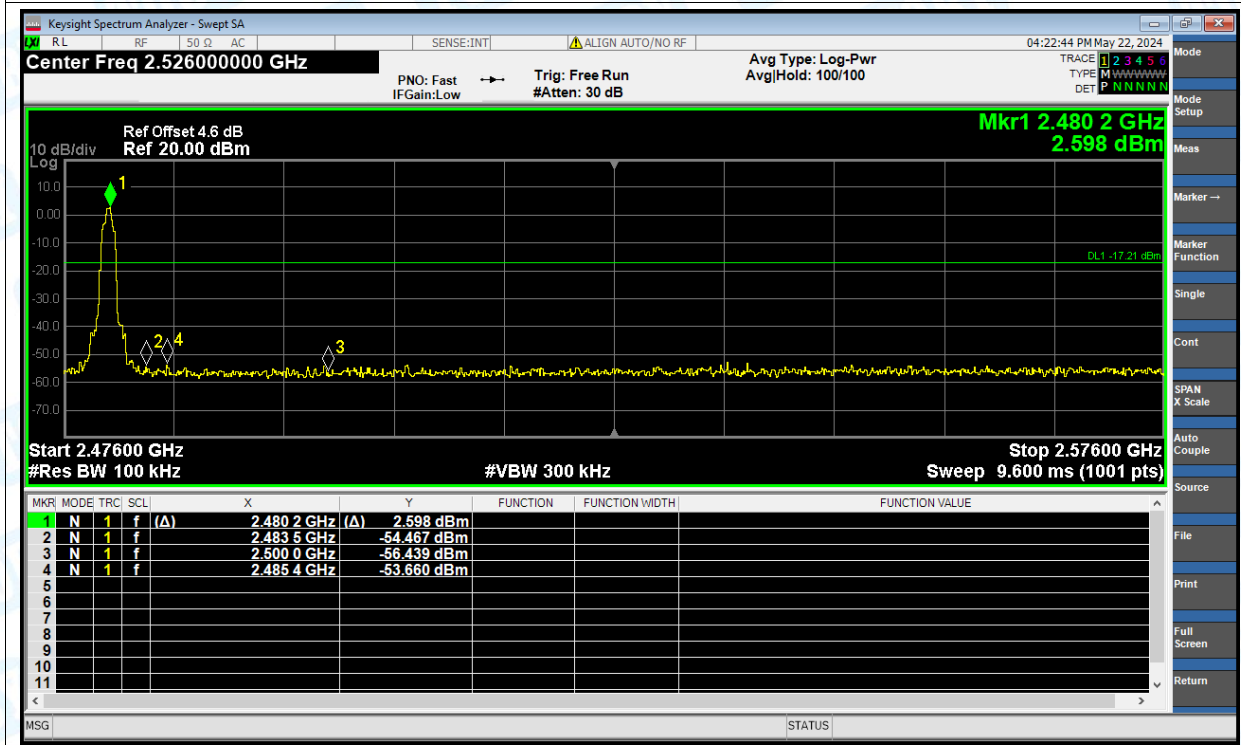
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



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



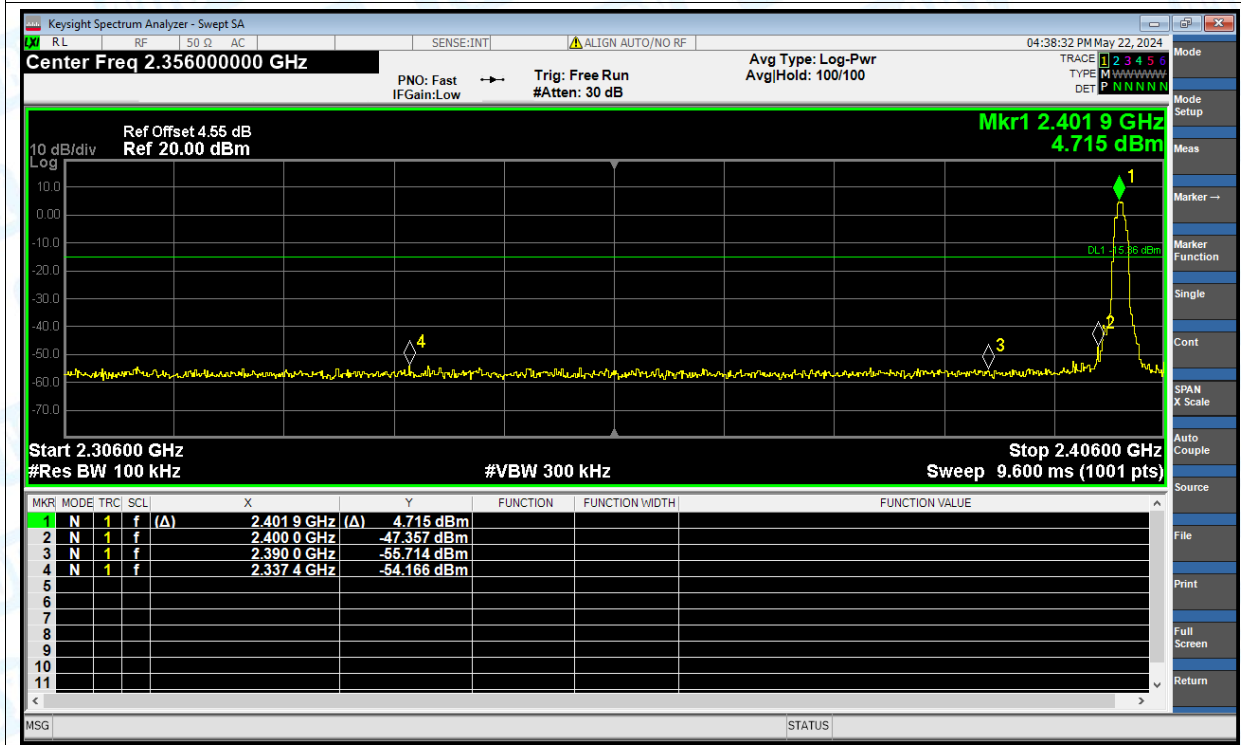
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



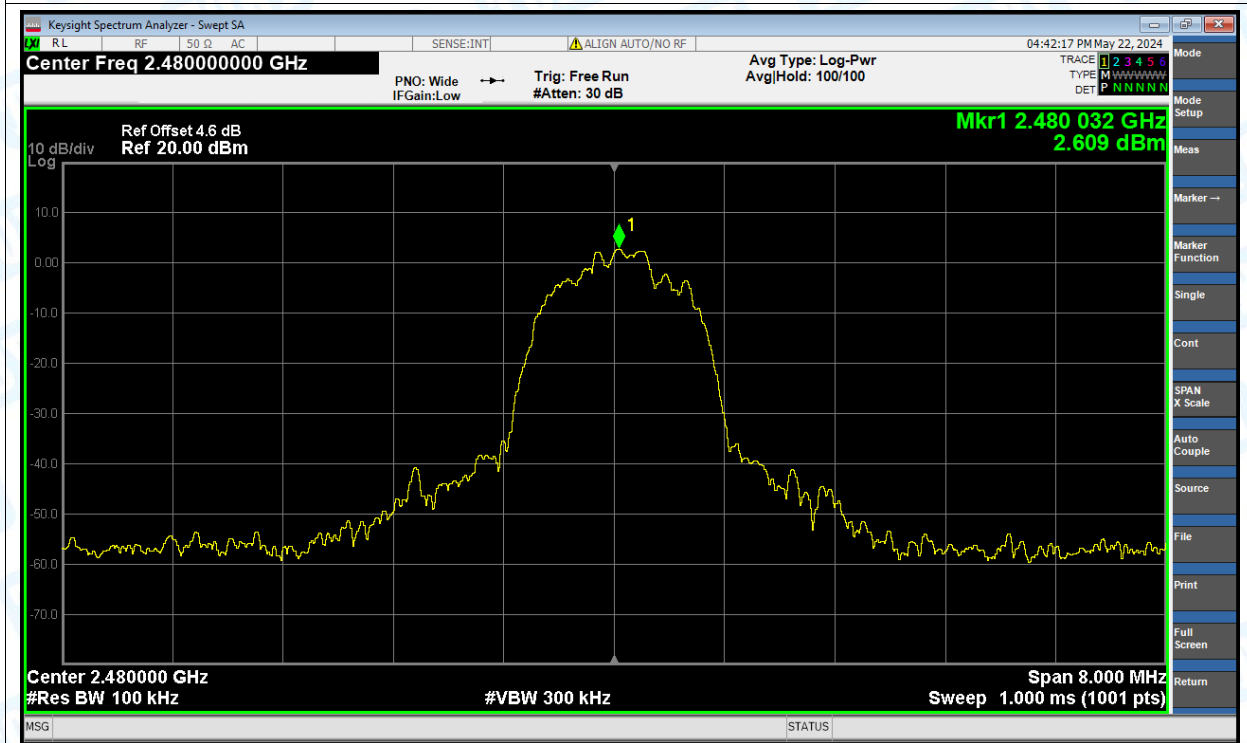
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



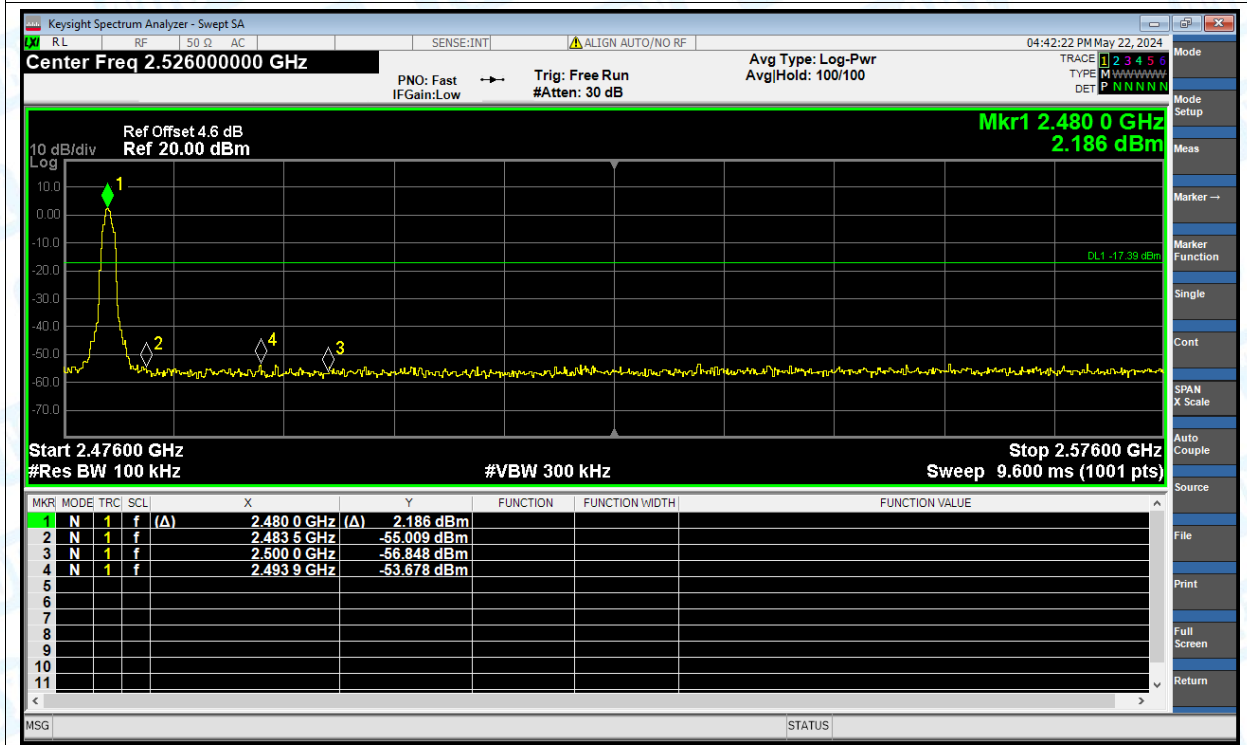
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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



6. Band Edge(Hopping)

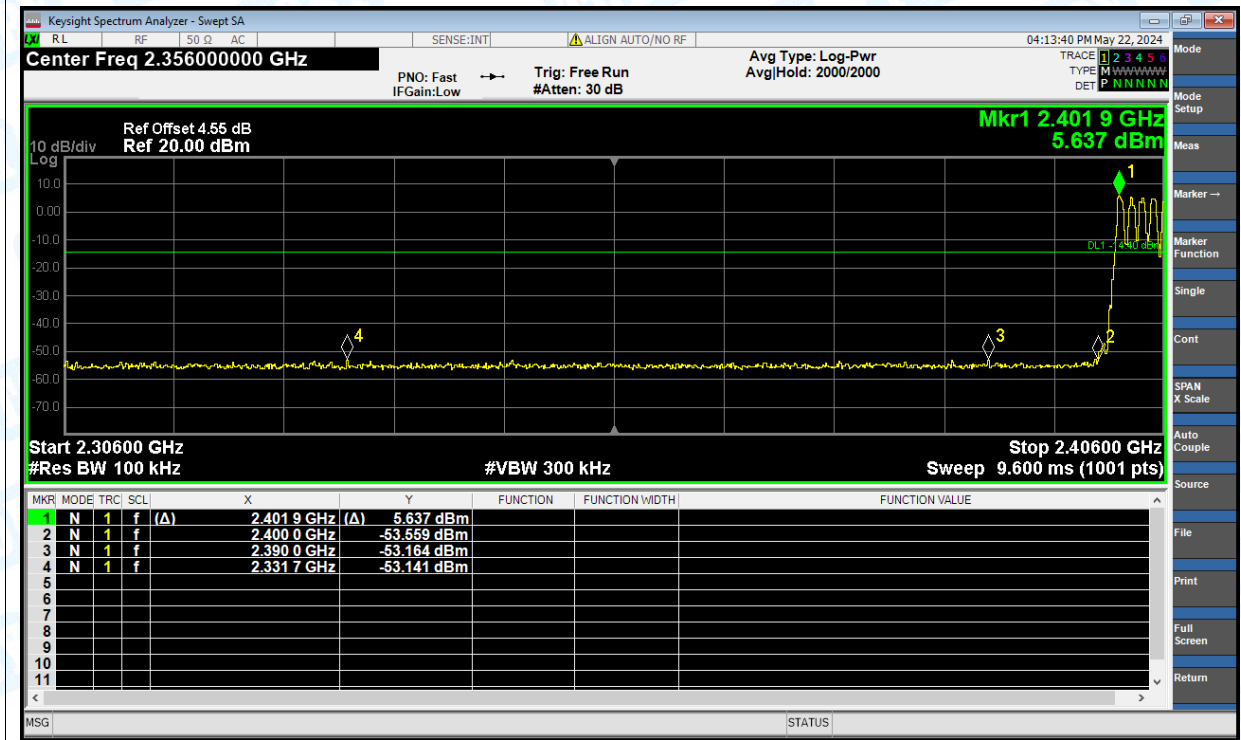
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-58.74	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-56.17	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-57.57	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-56.02	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-57.87	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-55.62	-20	Pass

Test Graphs

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



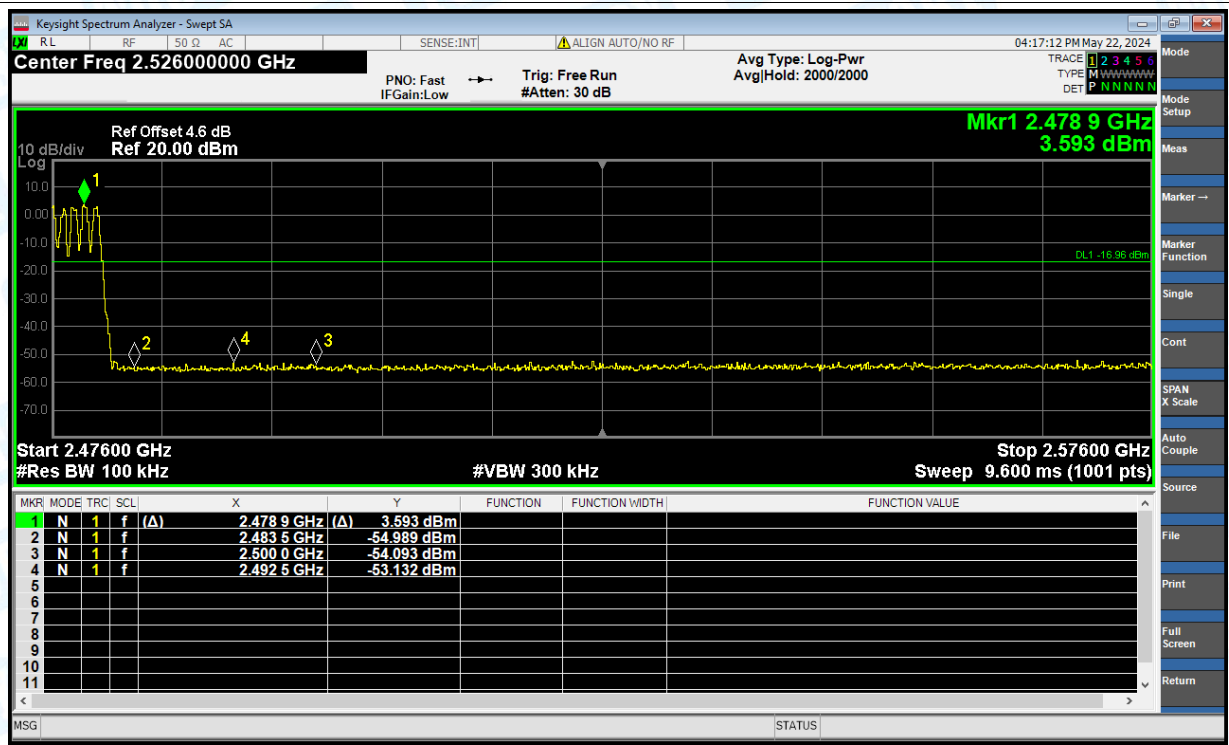
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



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



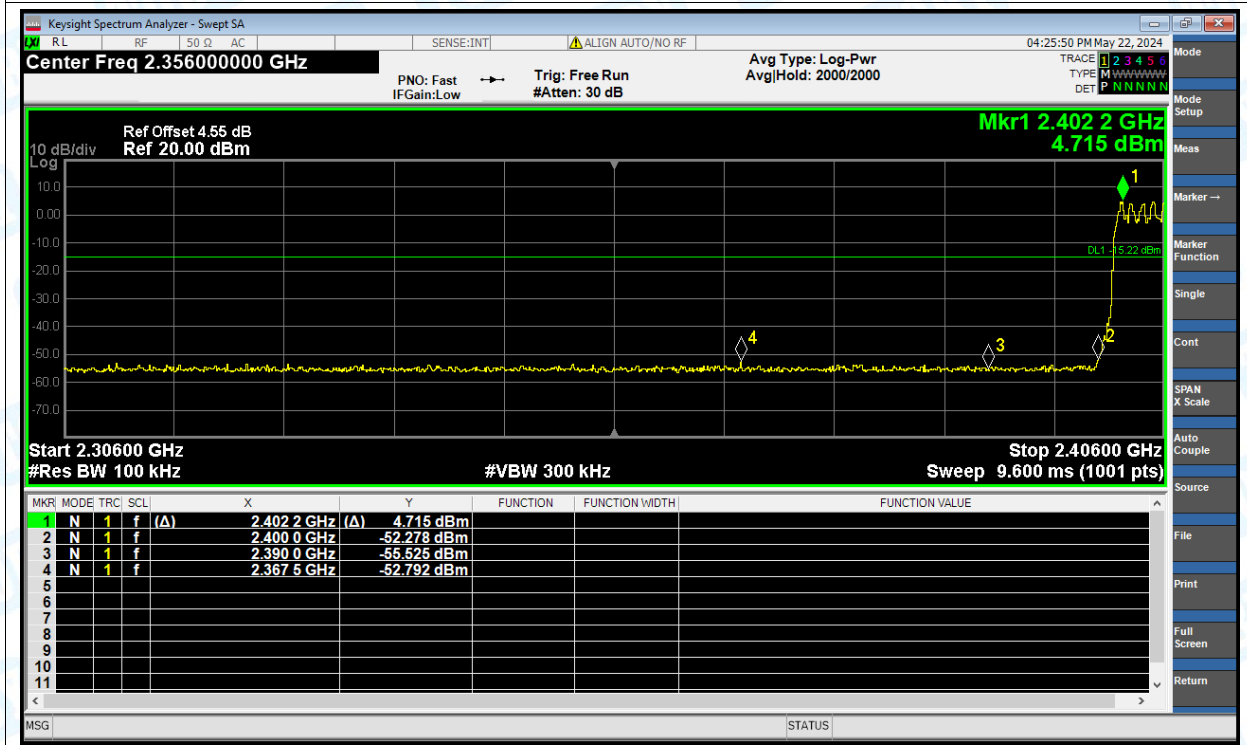
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



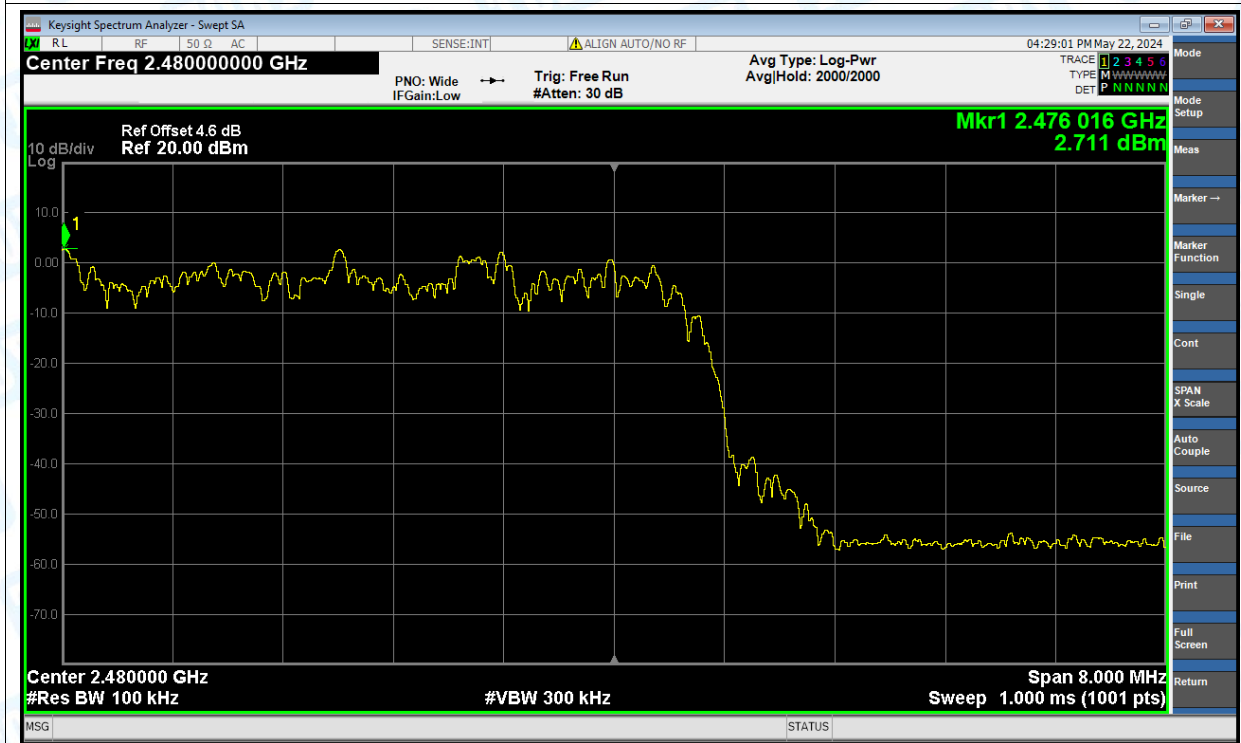
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



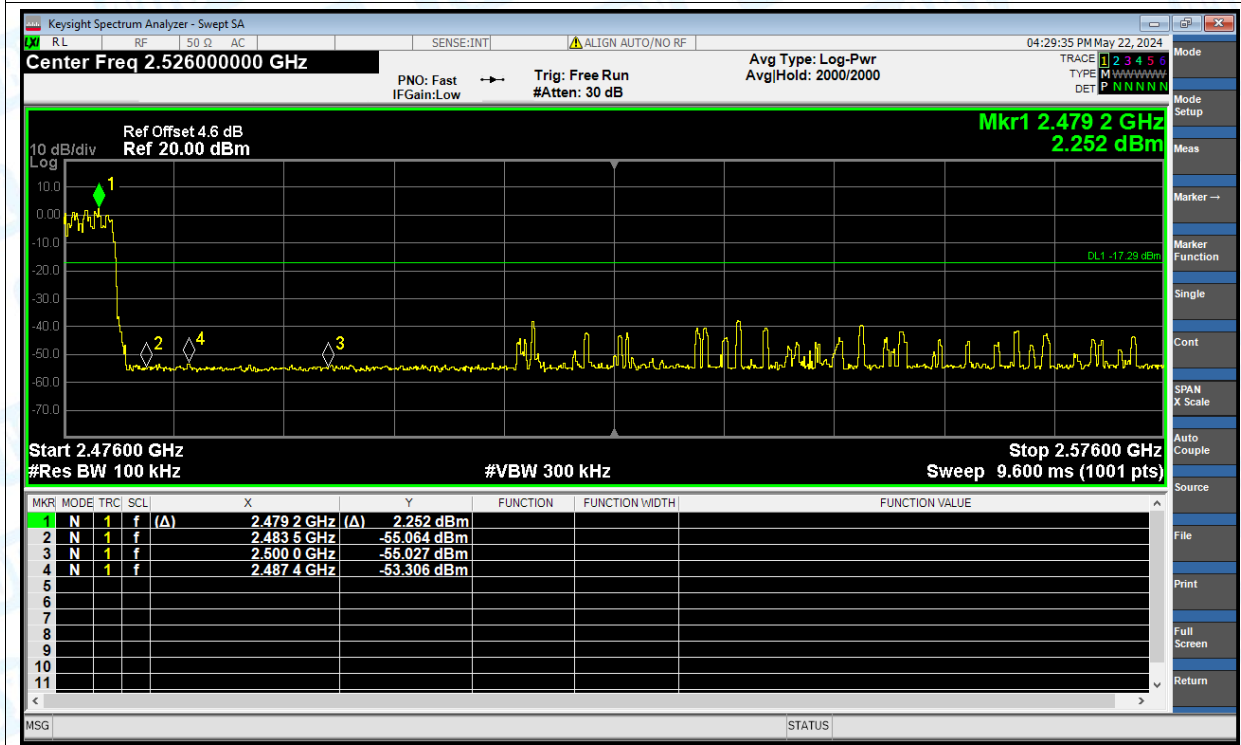
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



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



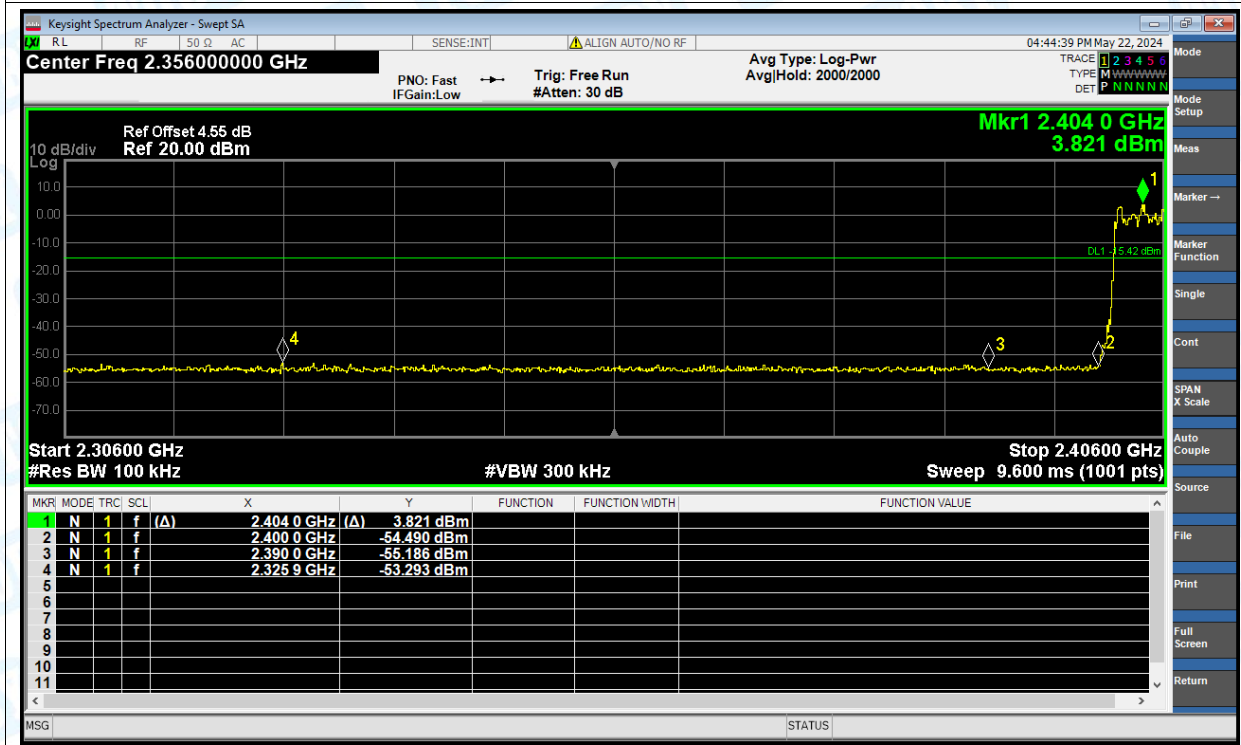
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



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



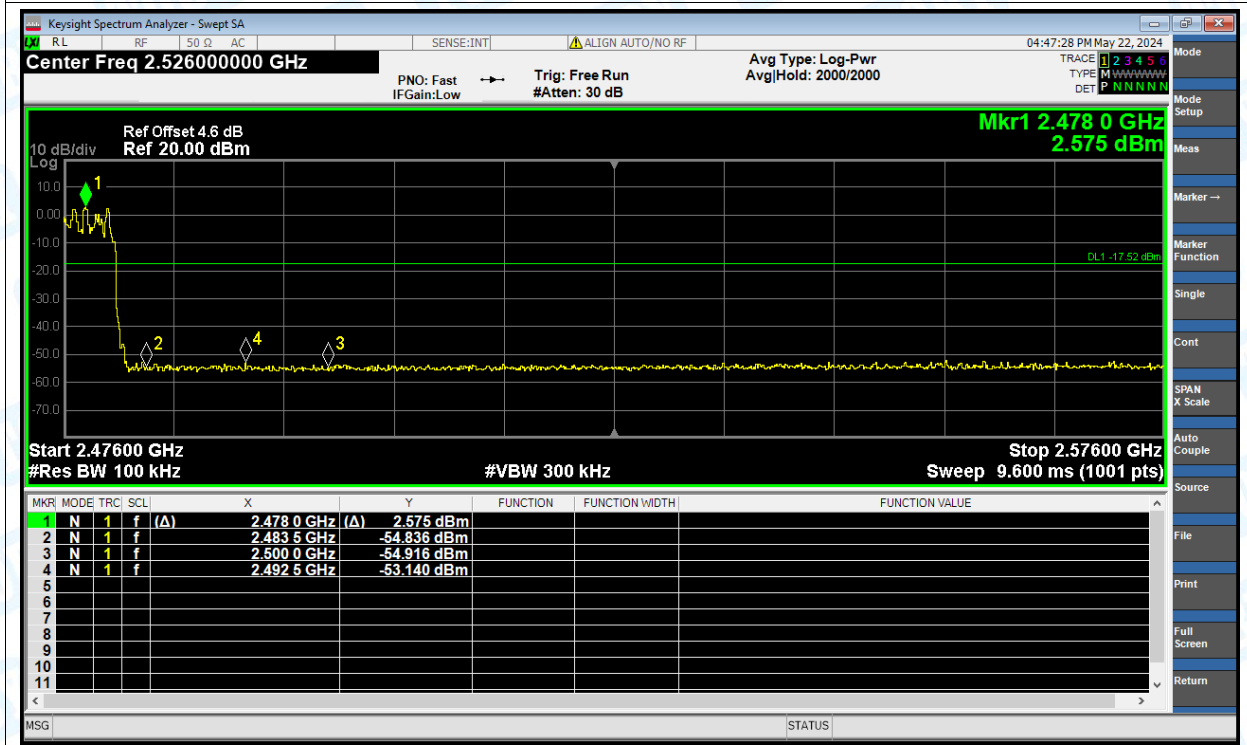
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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



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

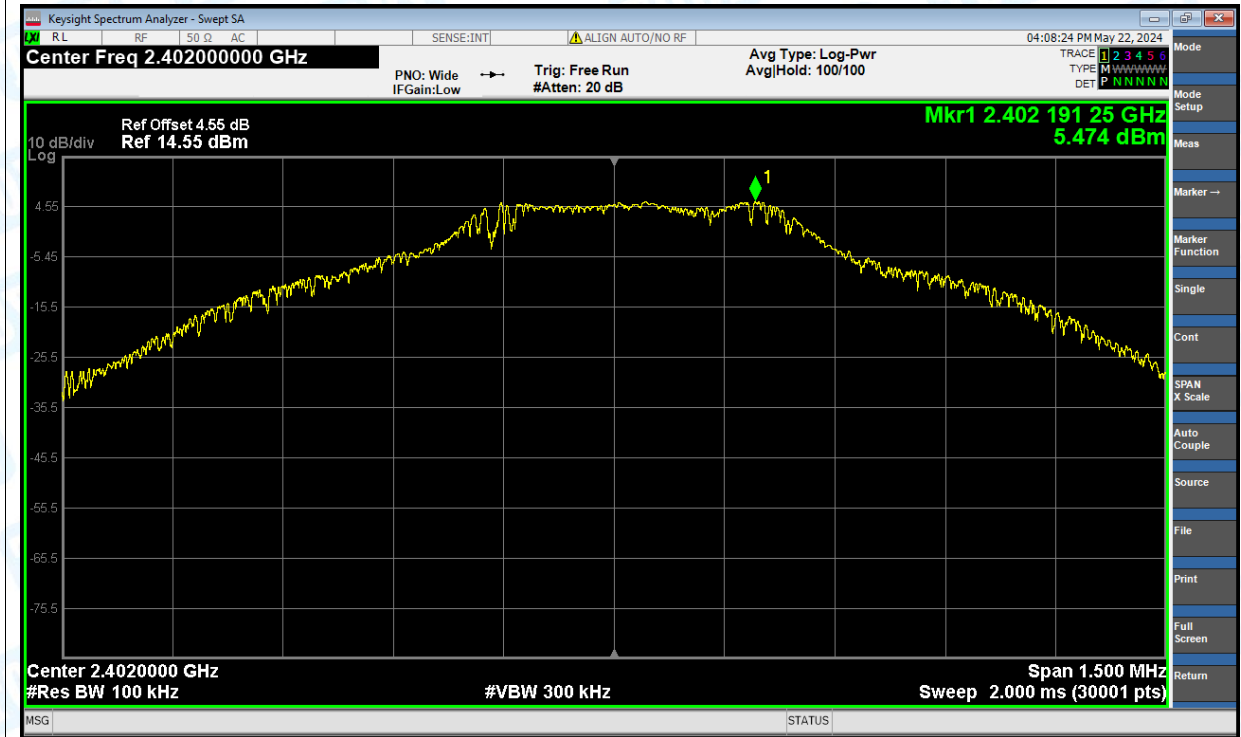


7. Conducted RF Spurious Emission

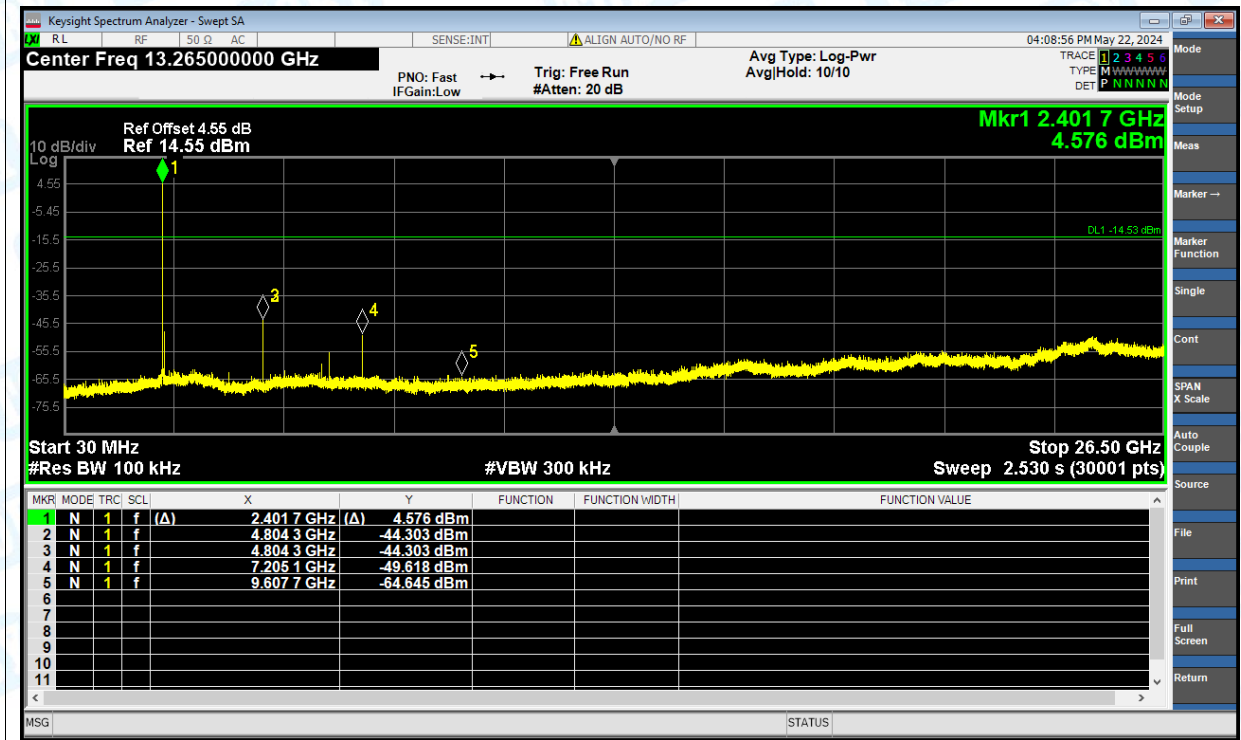
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-49.77	-20	Pass
NVNT	1-DH1	2441	Ant1	-47.35	-20	Pass
NVNT	1-DH1	2480	Ant1	-47.91	-20	Pass
NVNT	2-DH1	2402	Ant1	-54.27	-20	Pass
NVNT	2-DH1	2441	Ant1	-49.43	-20	Pass
NVNT	2-DH1	2480	Ant1	-49.29	-20	Pass
NVNT	3-DH1	2402	Ant1	-52.62	-20	Pass
NVNT	3-DH1	2441	Ant1	-51.65	-20	Pass
NVNT	3-DH1	2480	Ant1	-50.45	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



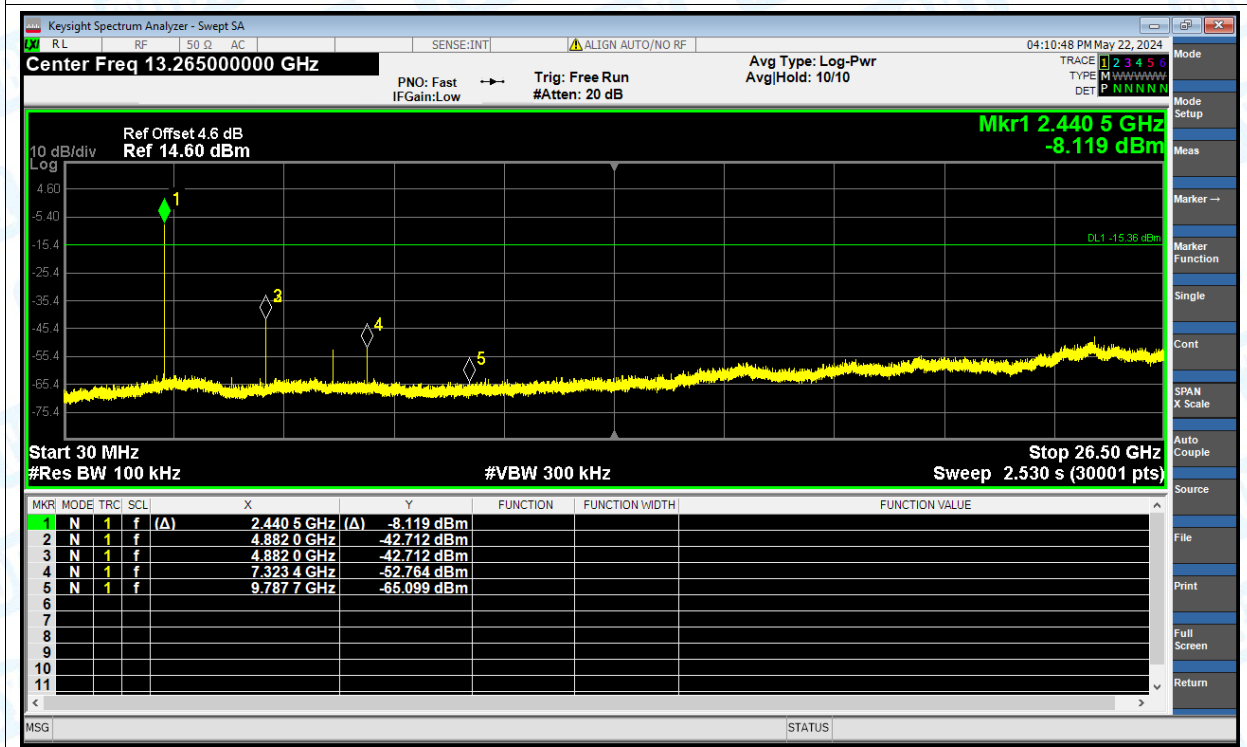
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



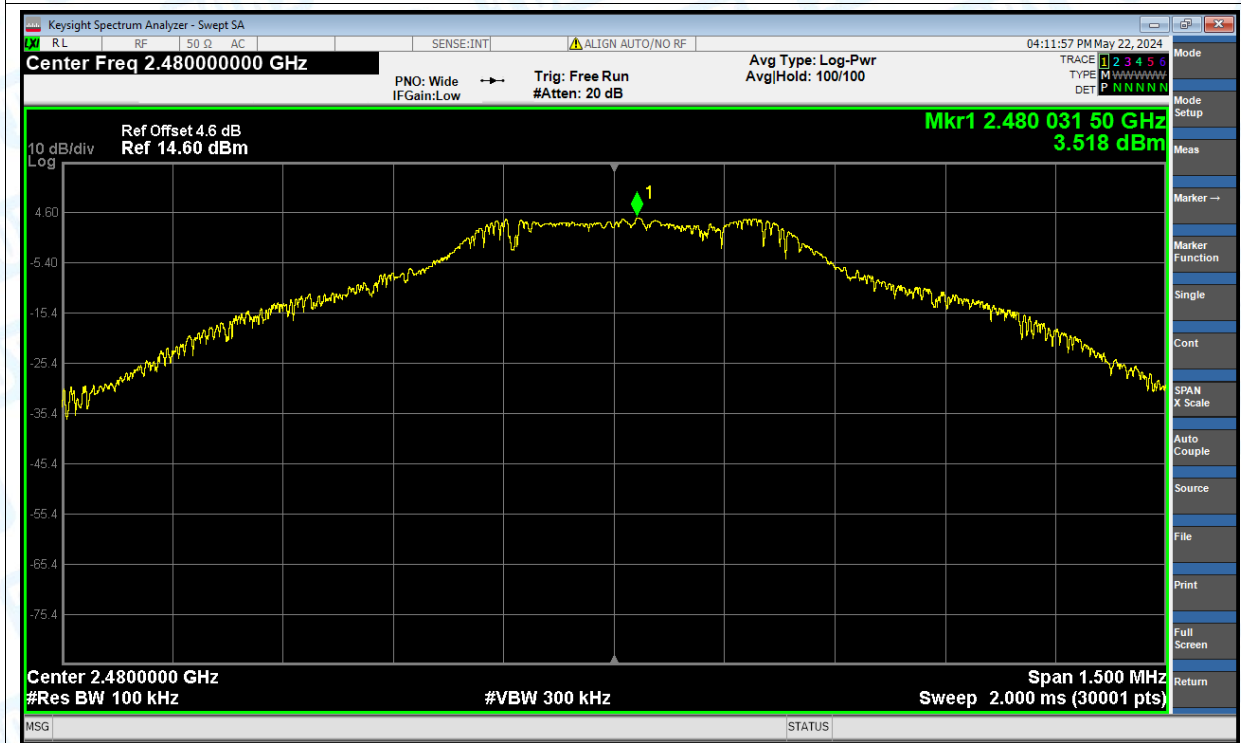
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



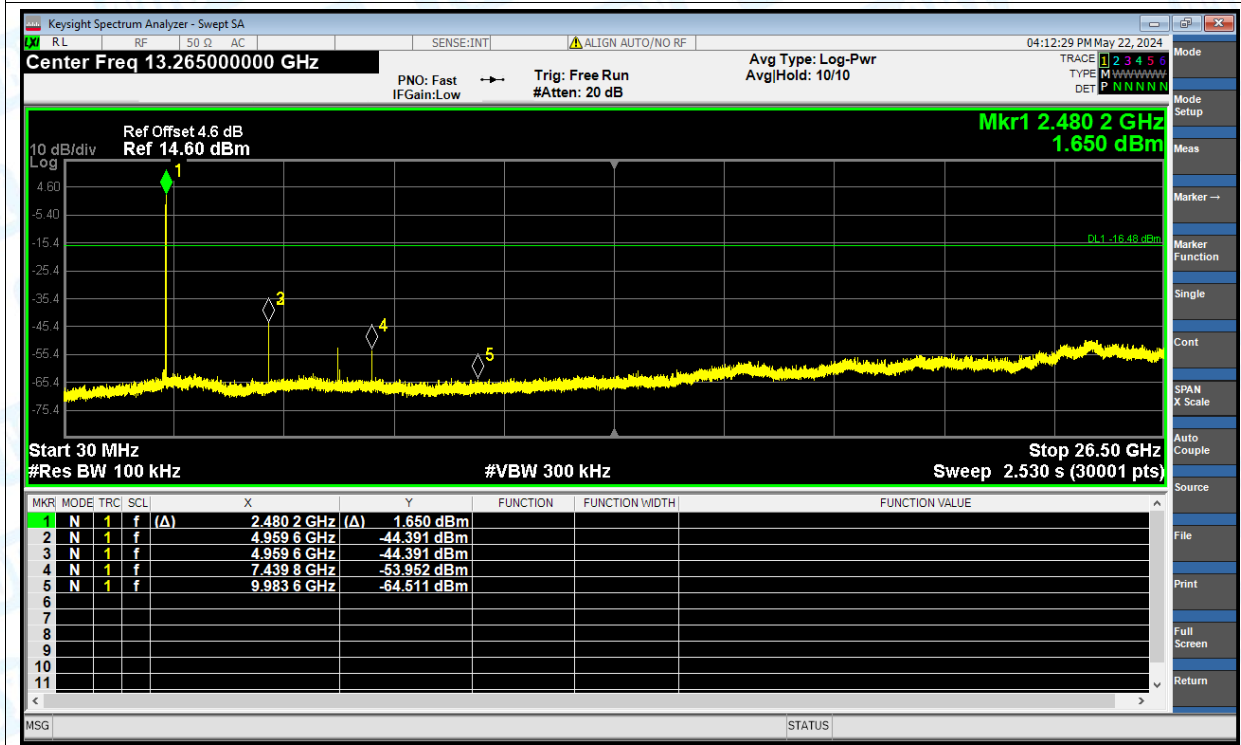
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



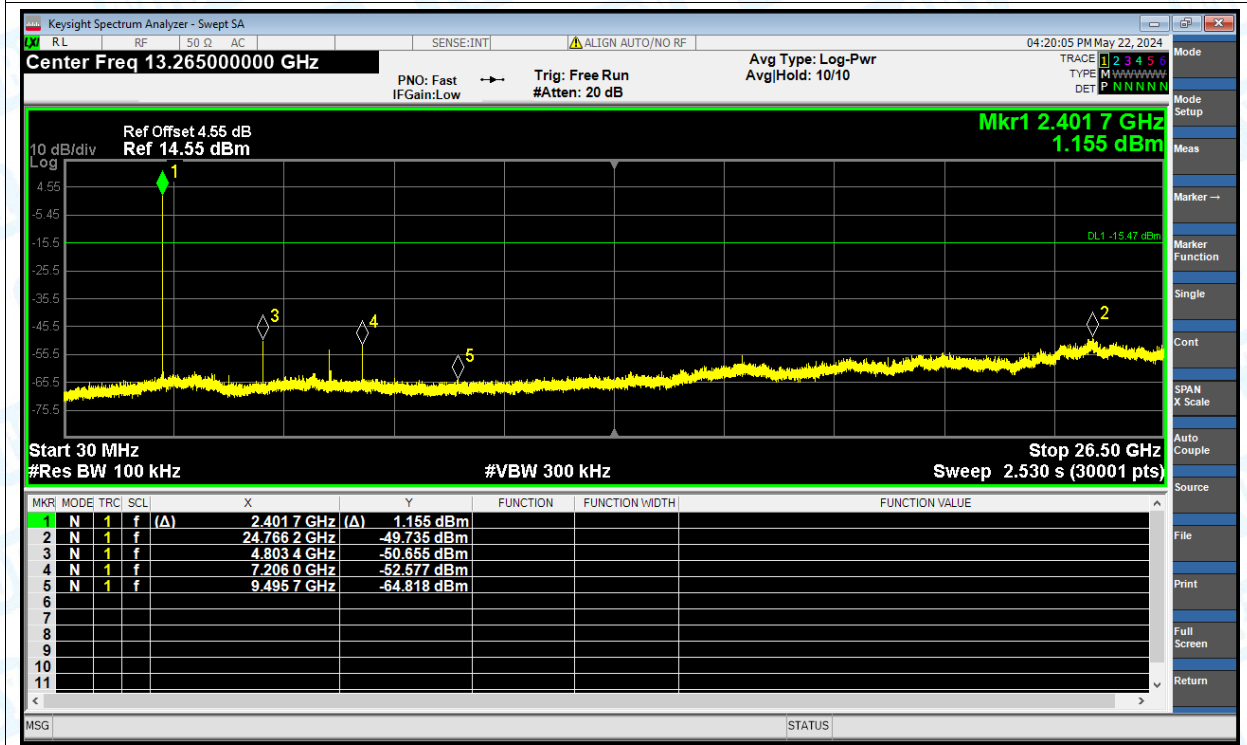
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



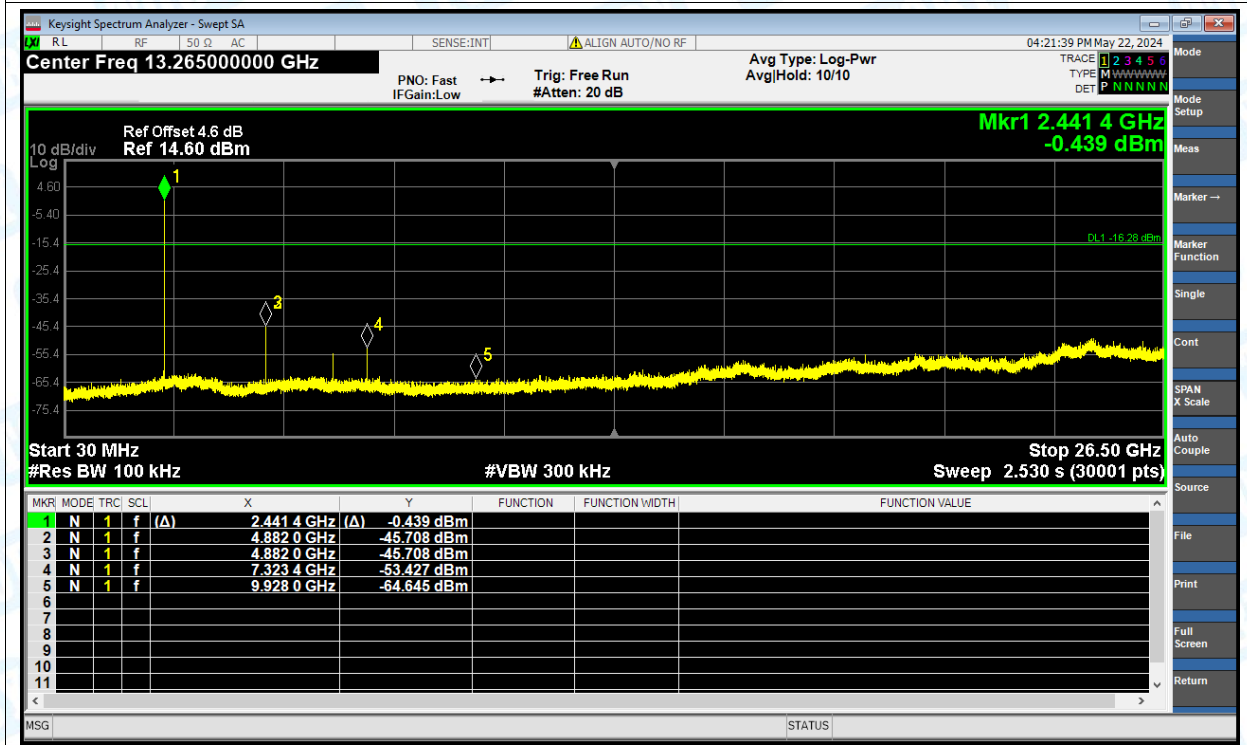
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



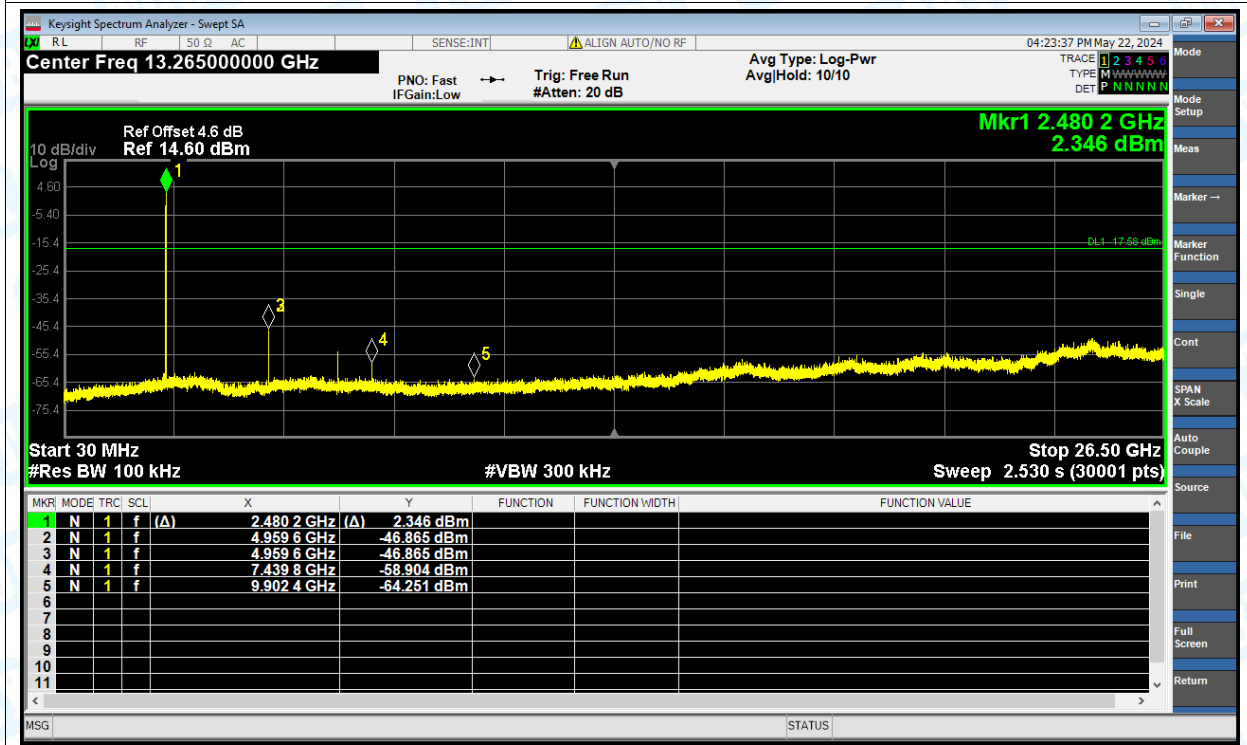
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



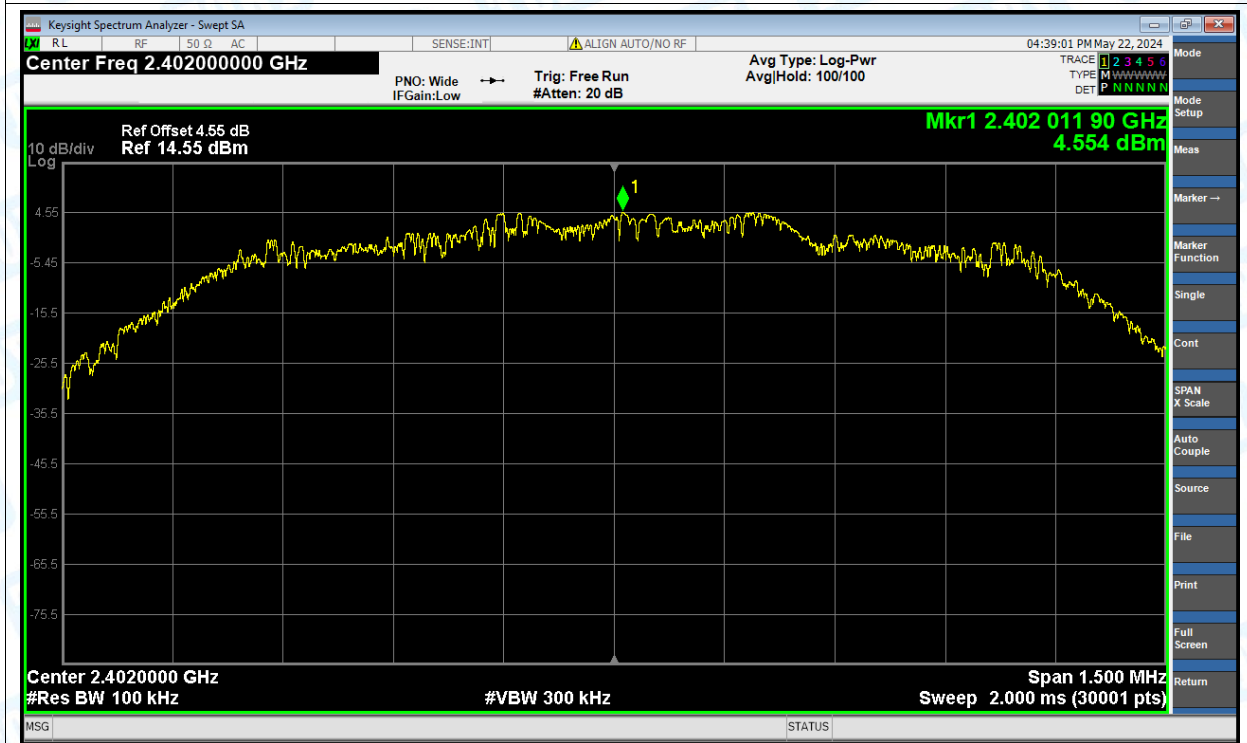
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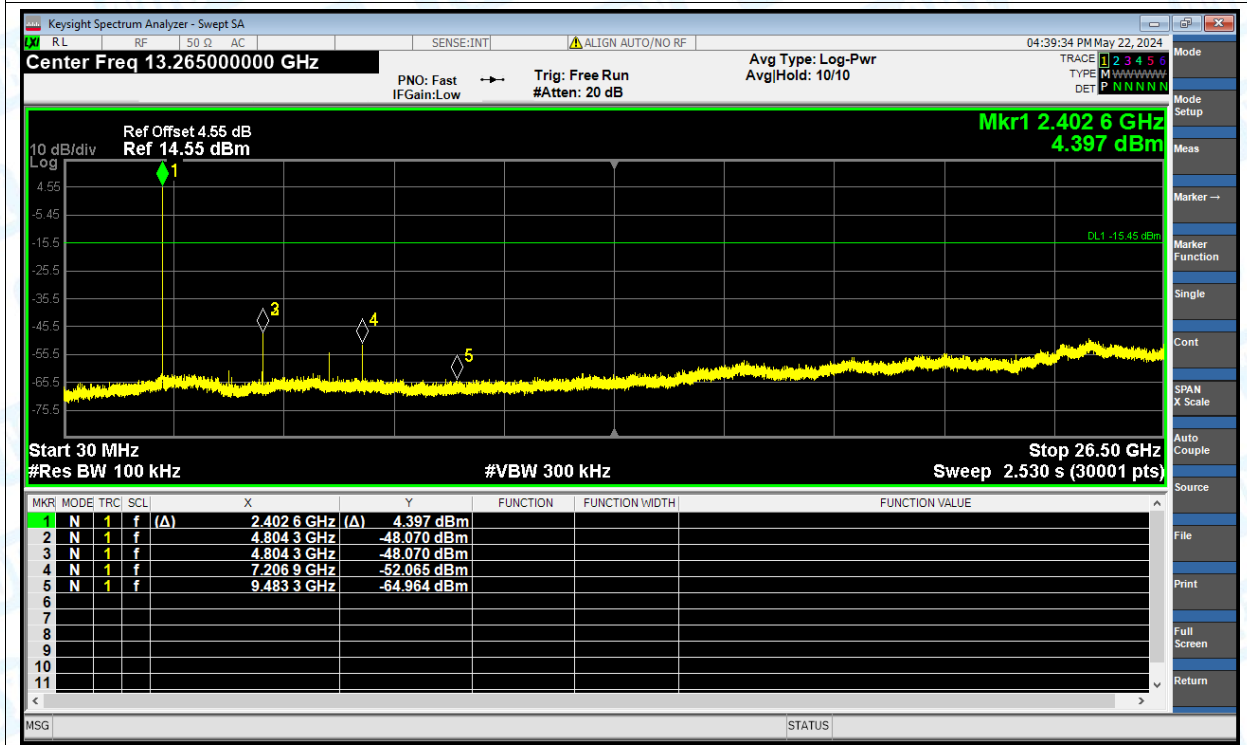
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



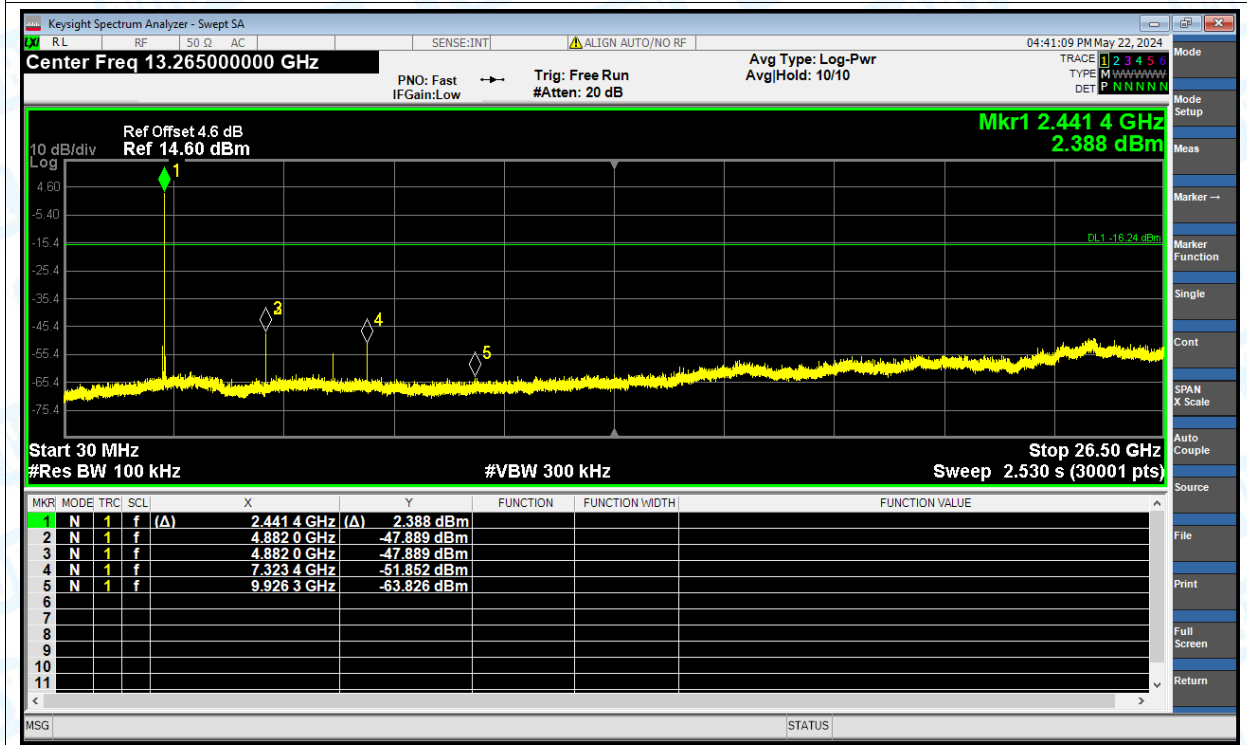
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



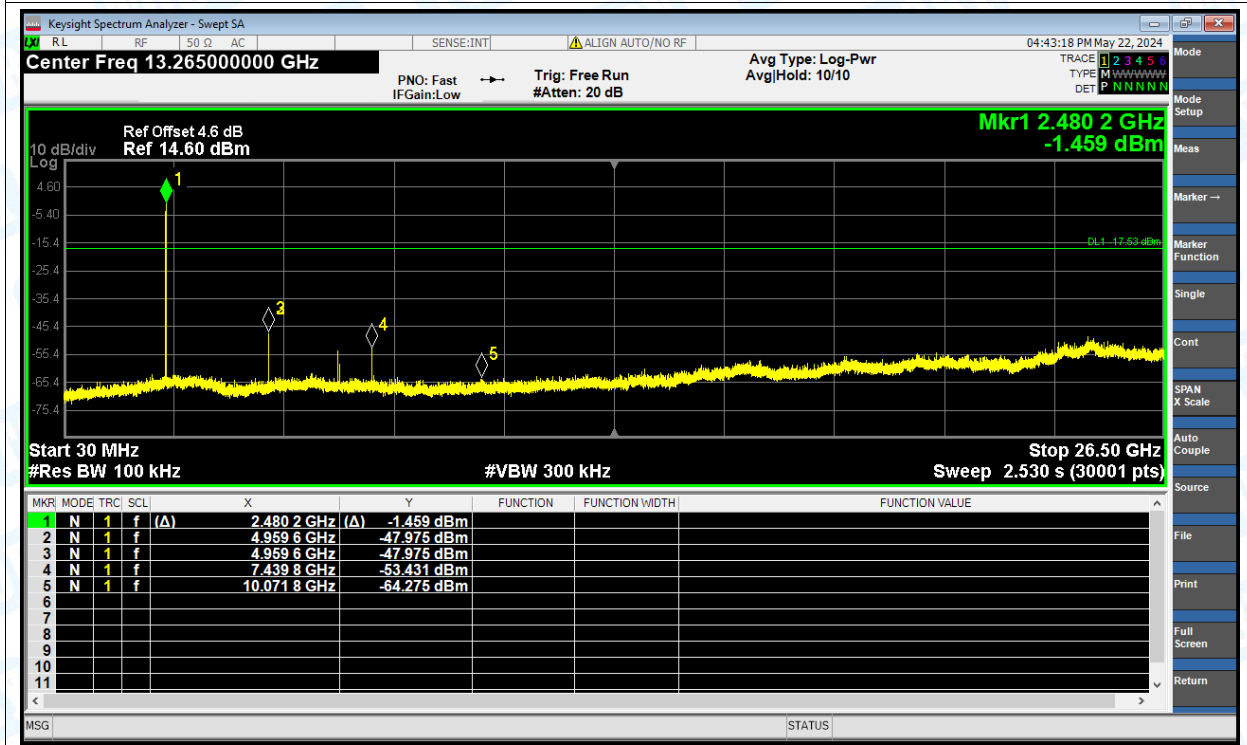
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

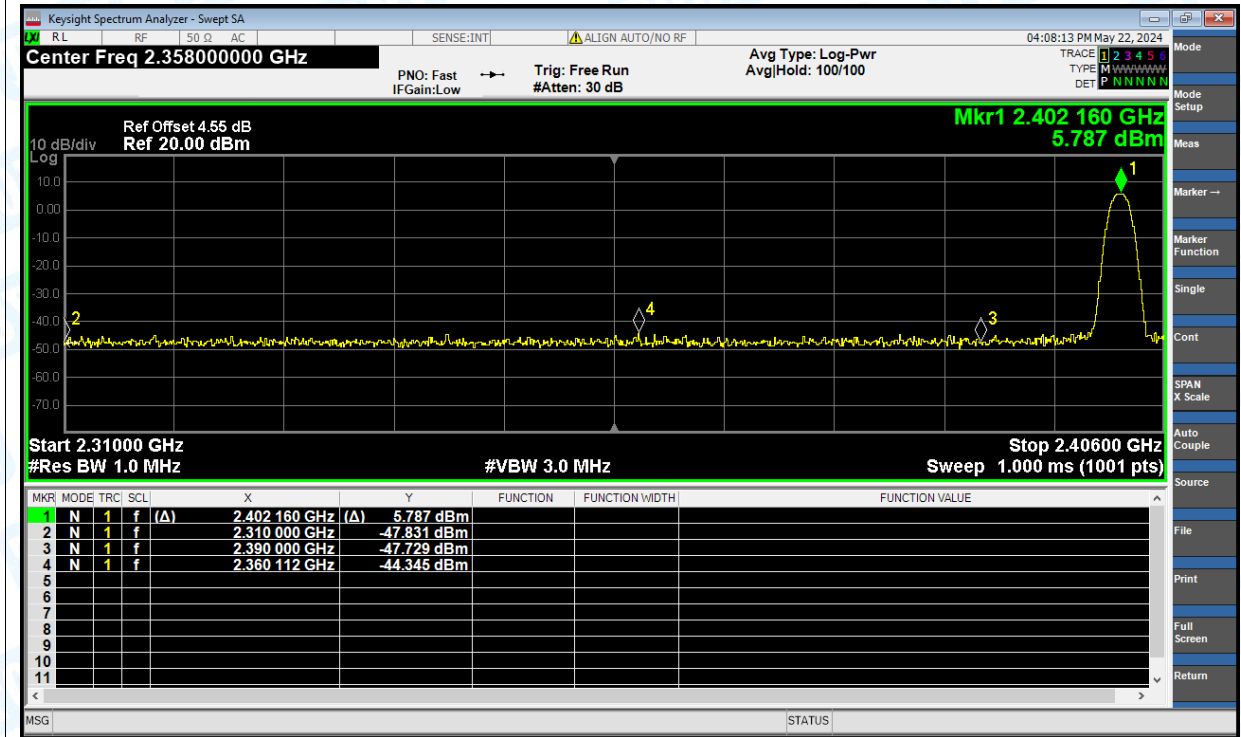


8. Restrict Band

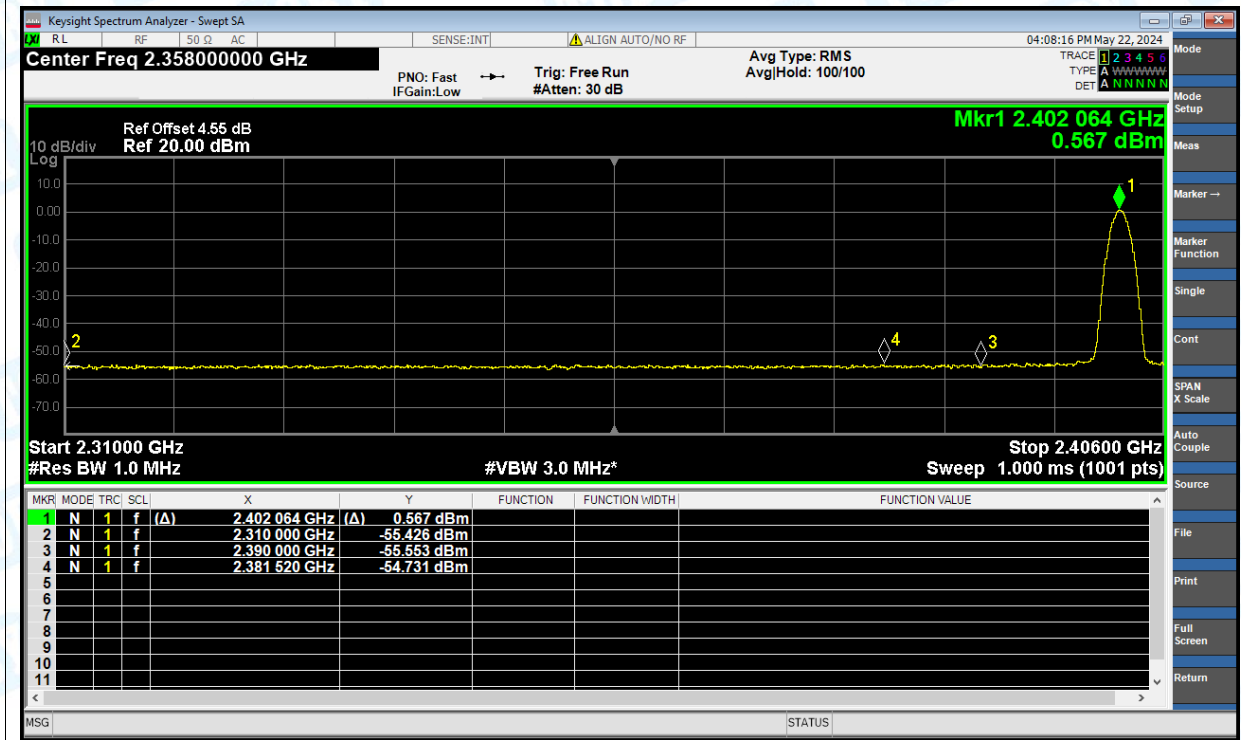
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-47.83	2	-	49.43	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-55.43	2	4.99	46.82	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2360.112	-44.34	2	-	52.92	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2381.52	-54.73	2	4.99	47.52	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-47.73	2	-	49.53	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-55.55	2	4.99	46.7	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-44.44	2	-	52.82	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-54.49	2	5.1	47.87	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2484.952	-44.14	2	-	53.12	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.704	-54.11	2	5.1	48.25	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-47.89	2	-	49.37	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-55.6	2	5.1	46.76	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-47.56	2	-	49.7	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-55.49	2	4.99	46.76	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2356.08	-44.65	2	-	52.61	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2358.096	-54.69	2	4.99	47.56	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-46.66	2	-	50.6	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-55.38	2	4.99	46.87	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-46.83	2	-	50.43	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-54.33	2	4.99	47.92	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2489.176	-44.48	2	-	52.78	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.536	-54.19	2	4.99	48.06	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-47.26	2	-	50	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-56.02	2	4.99	46.23	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-47.25	2	-	50.01	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-55.35	2	4.99	46.9	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2362.032	-44.21	2	-	53.05	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2375.76	-54.58	2	4.99	47.67	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-46.92	2	-	50.34	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-55.22	2	4.99	47.03	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-47.03	2	-	50.23	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-55.21	2	4.99	47.04	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2491.936	-44.64	2	-	52.62	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.584	-54.39	2	4.99	47.86	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-46.34	2	-	50.92	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-54.77	2	4.99	47.48	Average	54	Pass

Test Graphs

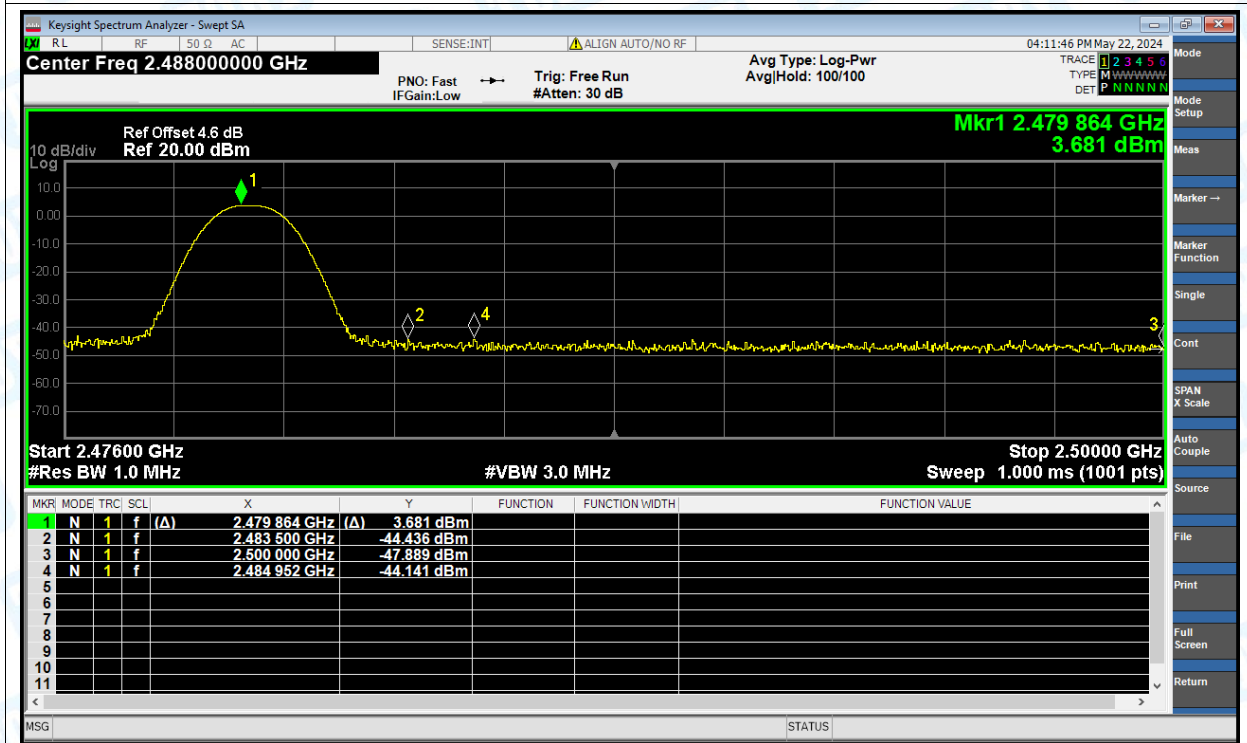
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



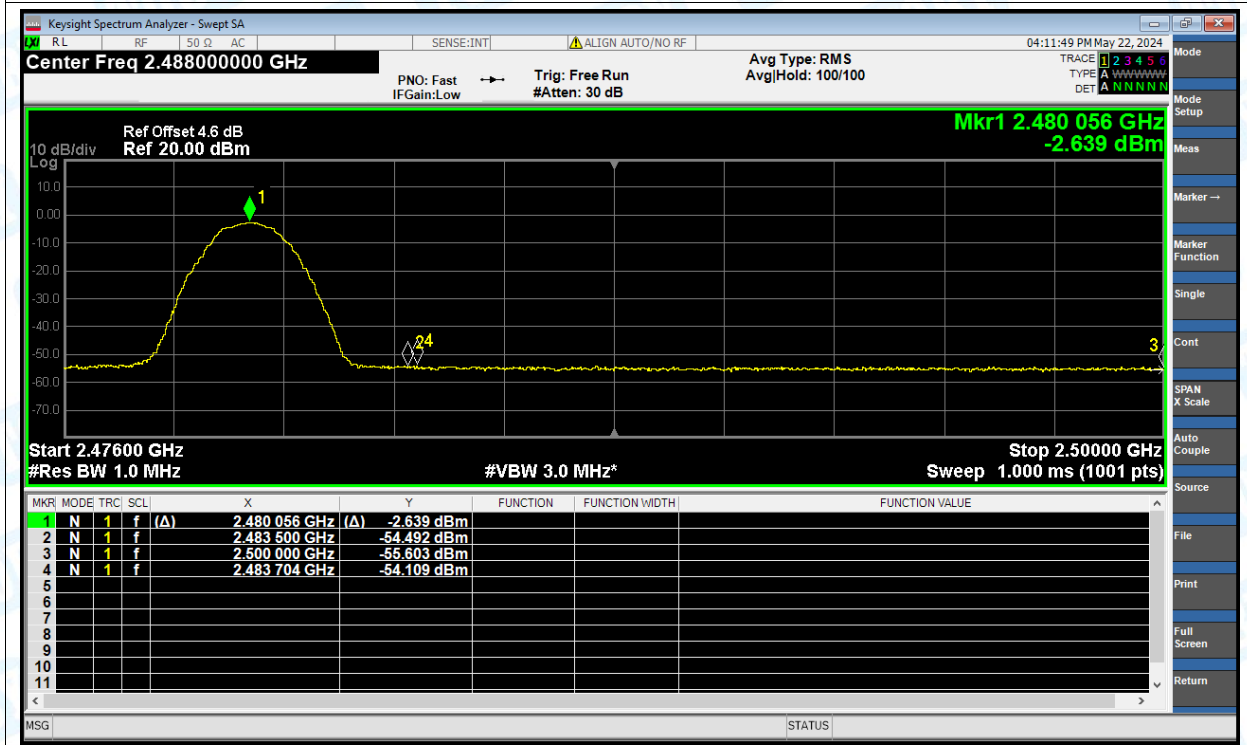
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



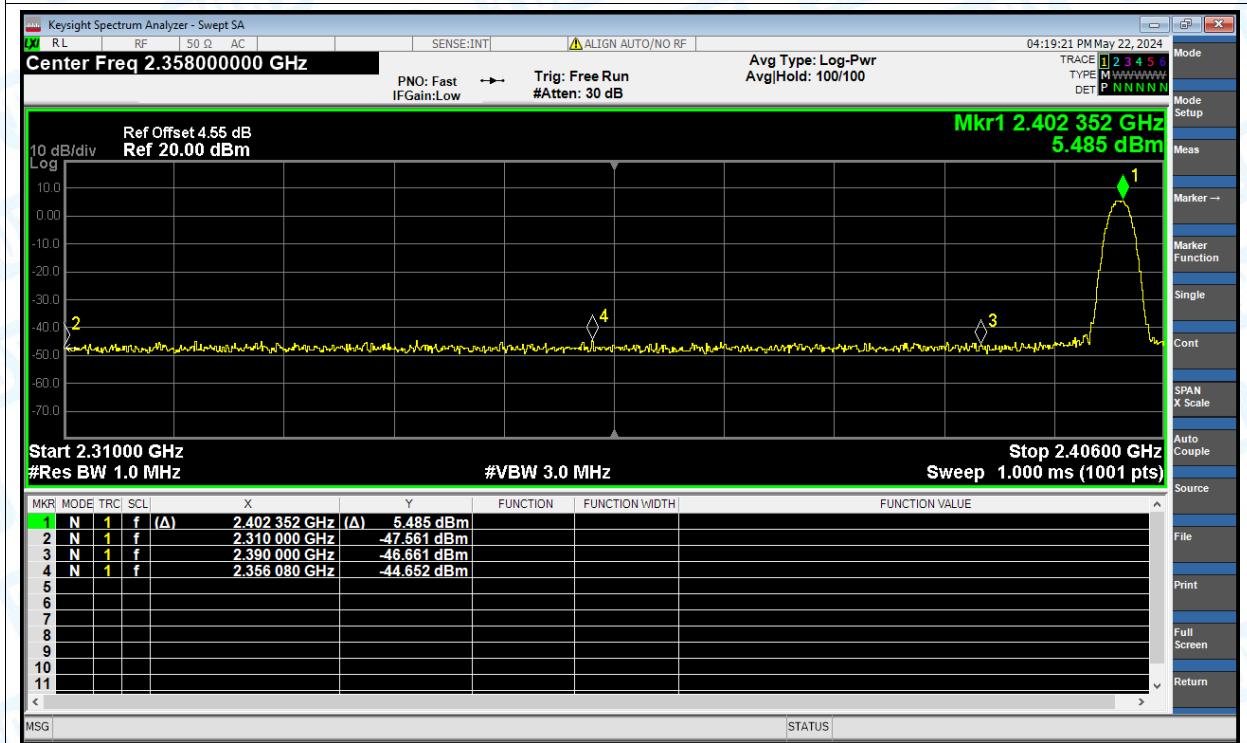
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



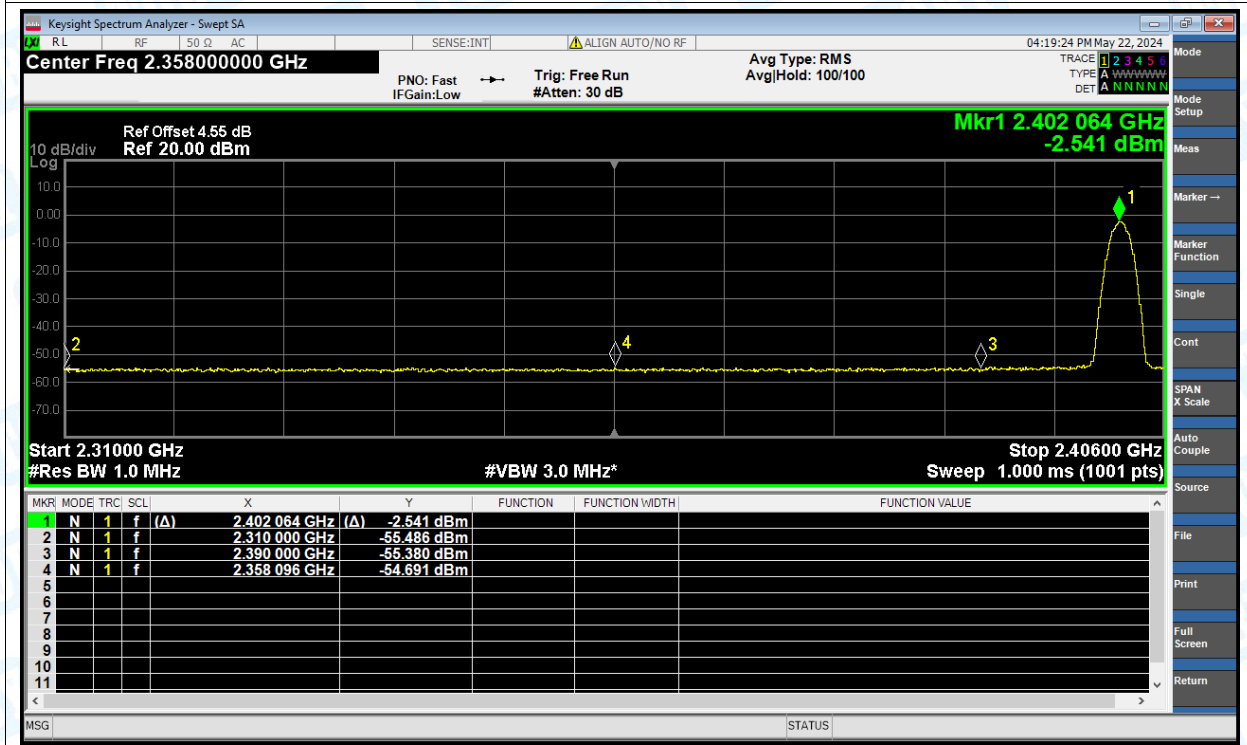
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



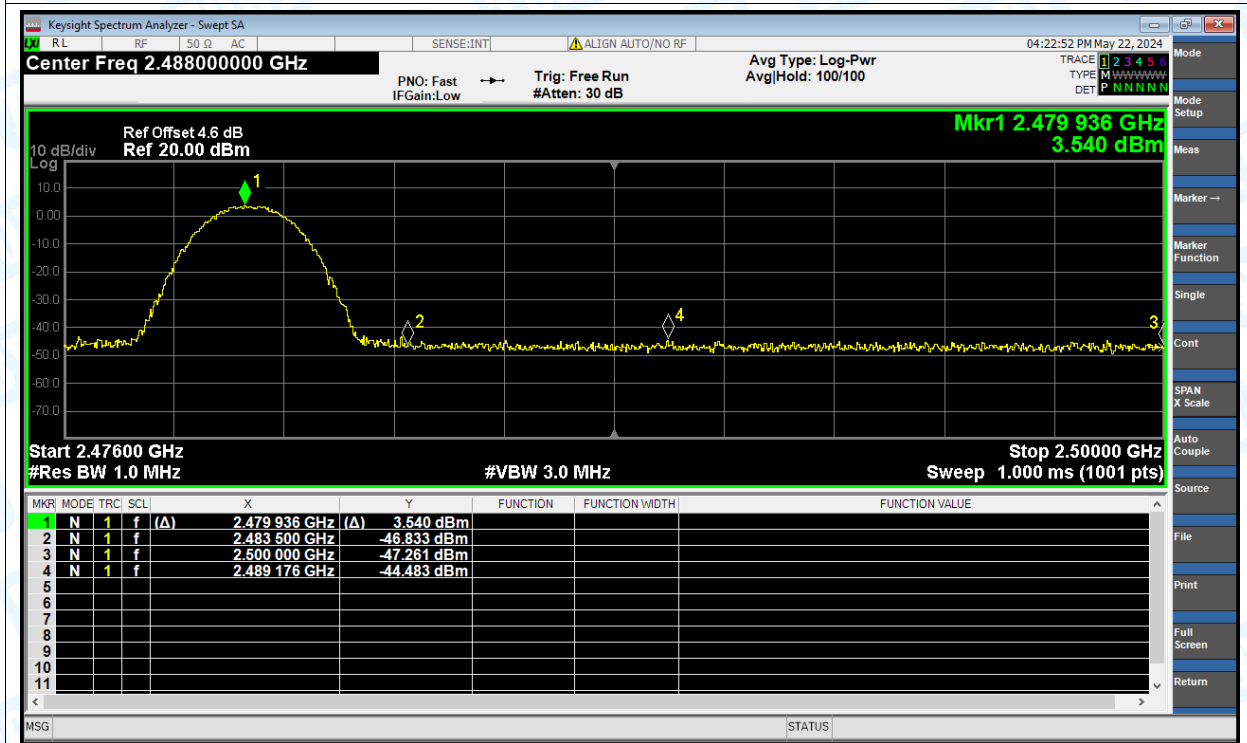
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



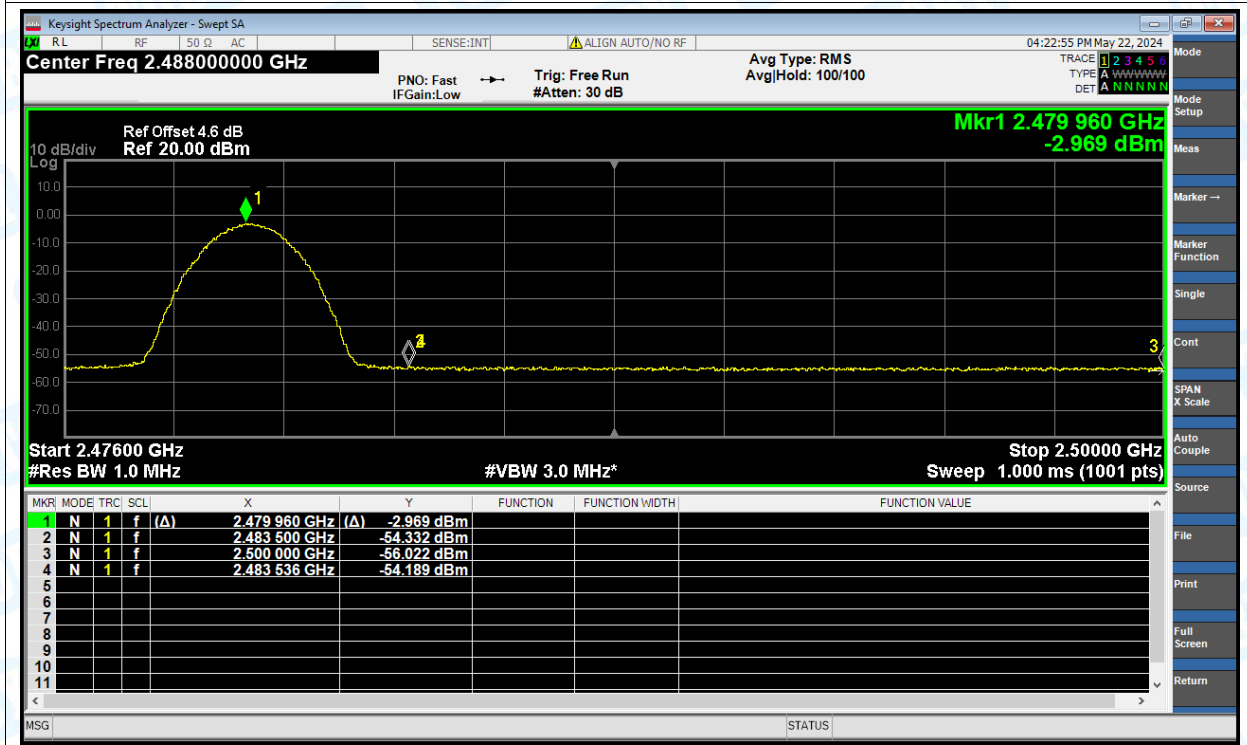
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



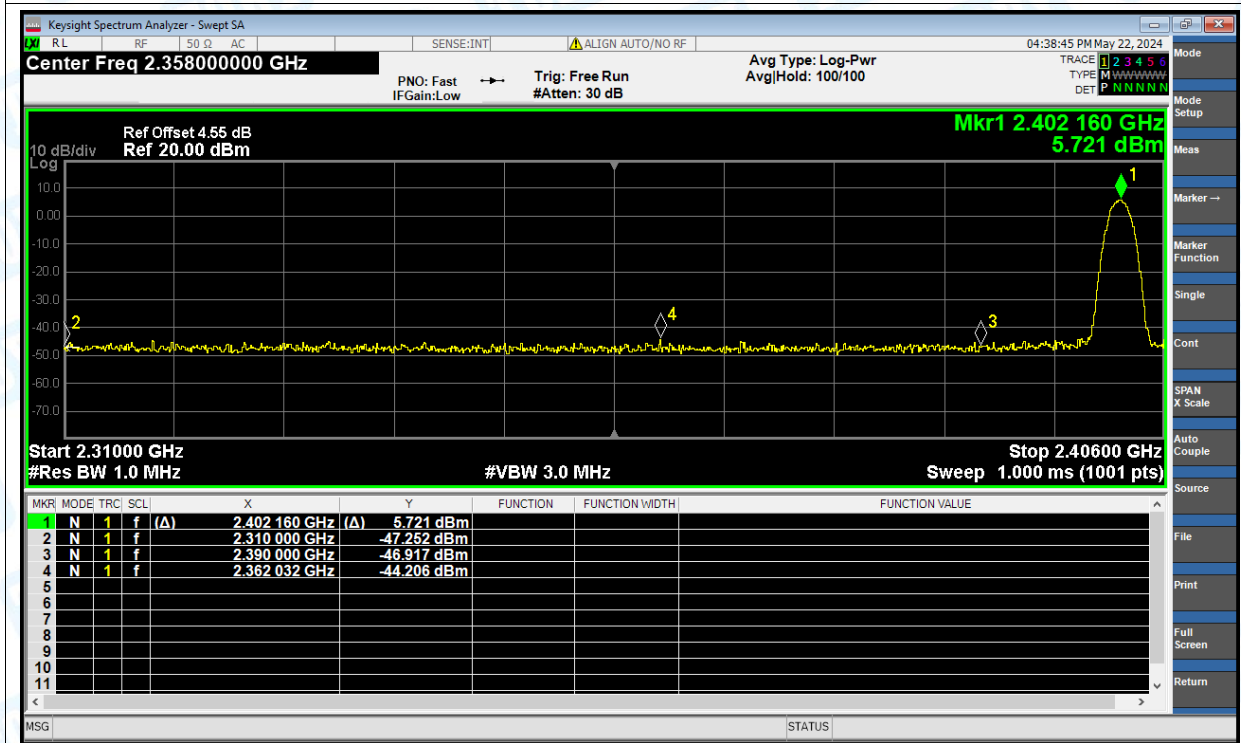
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



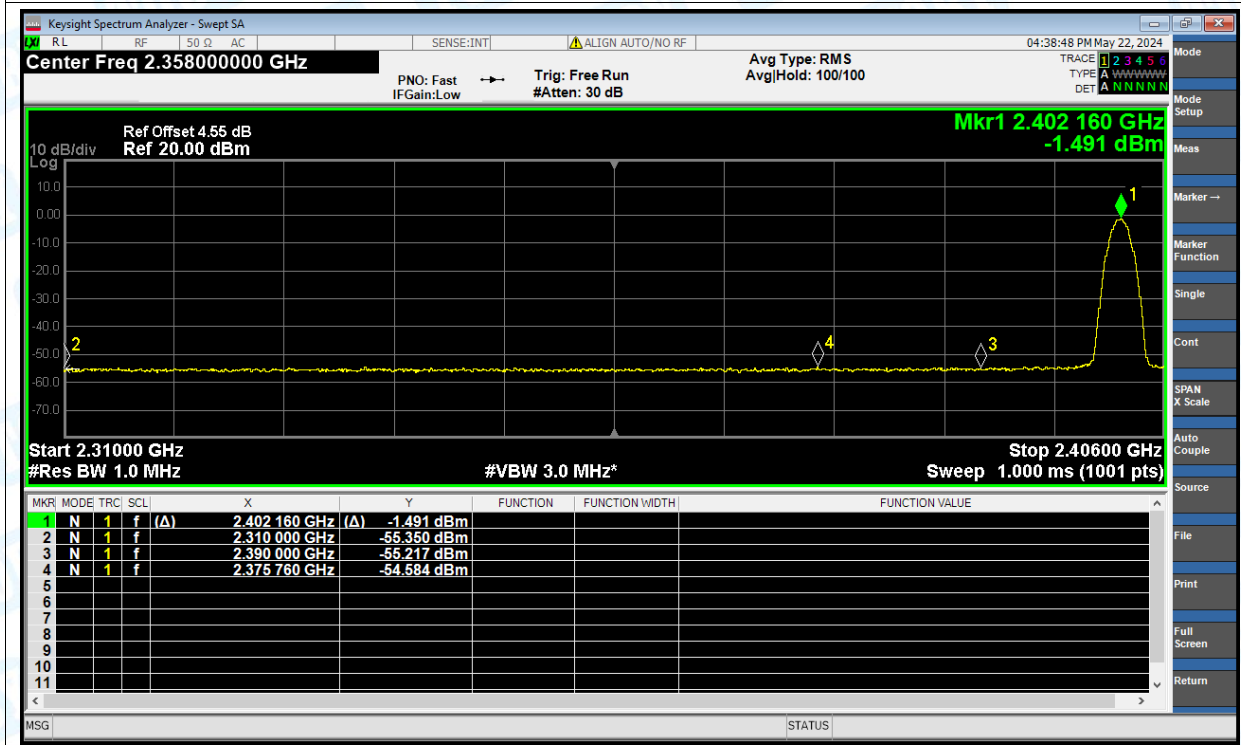
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



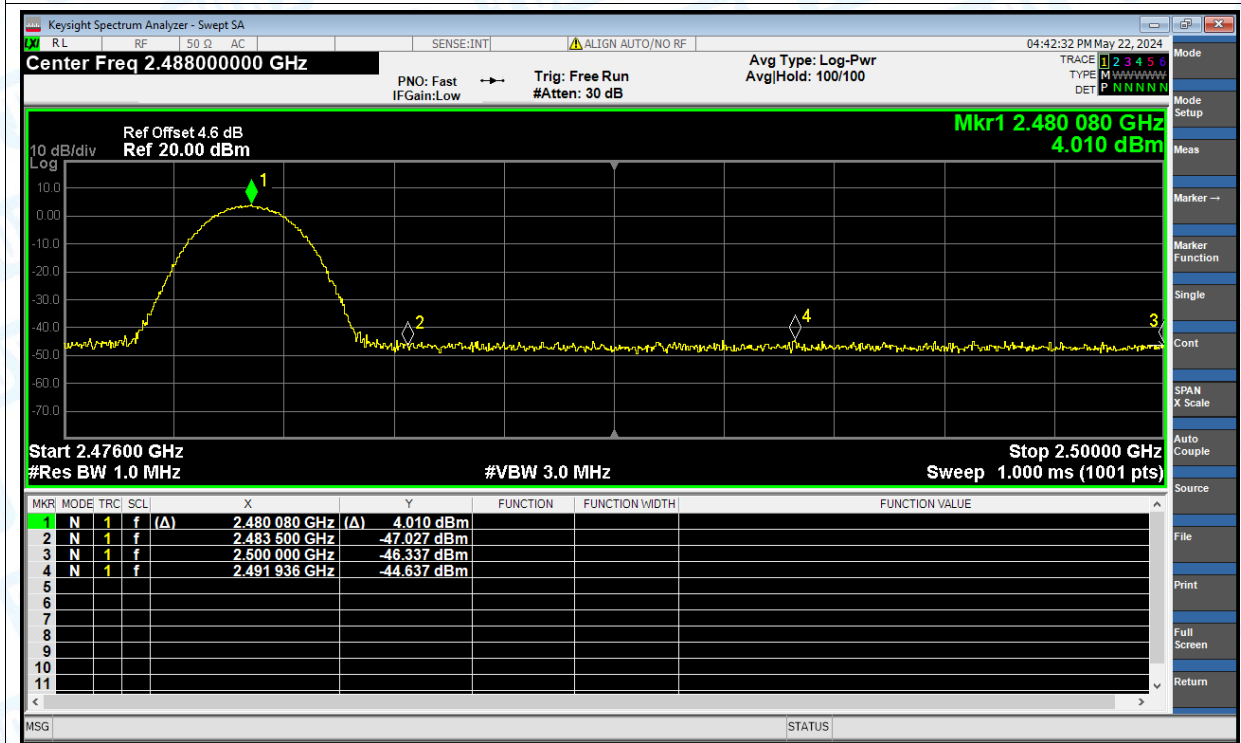
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



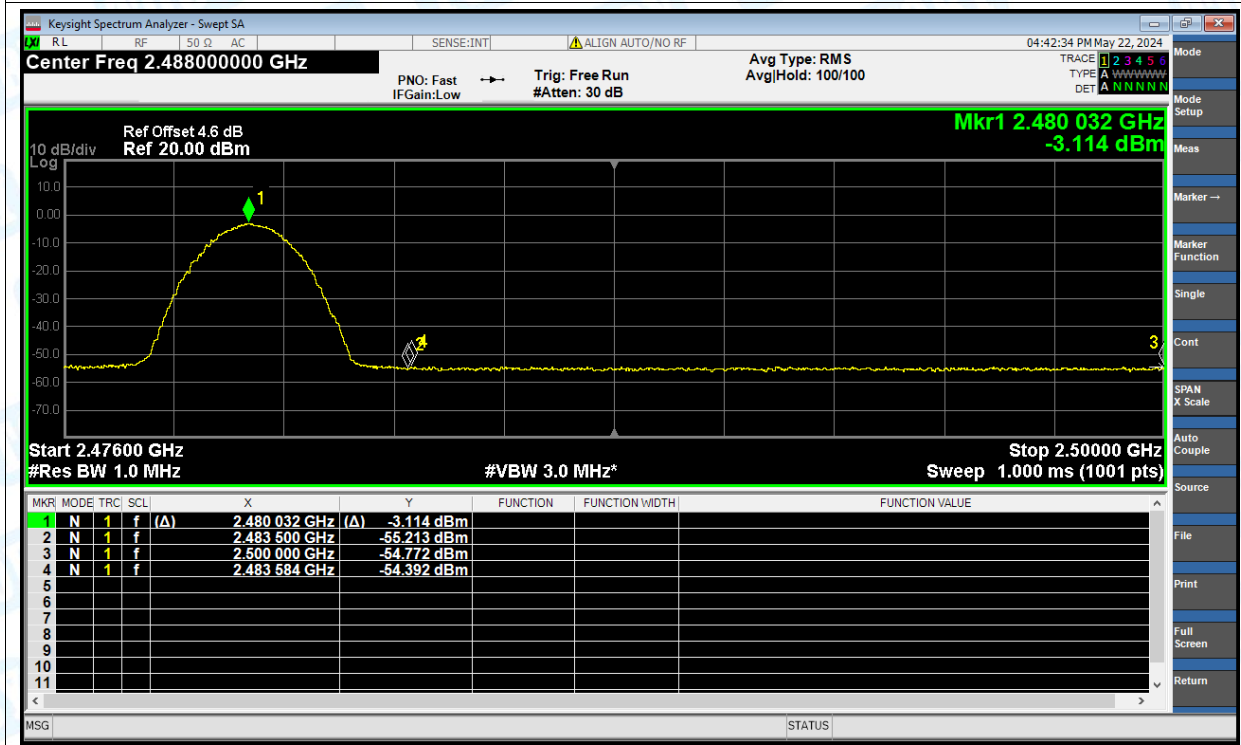
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

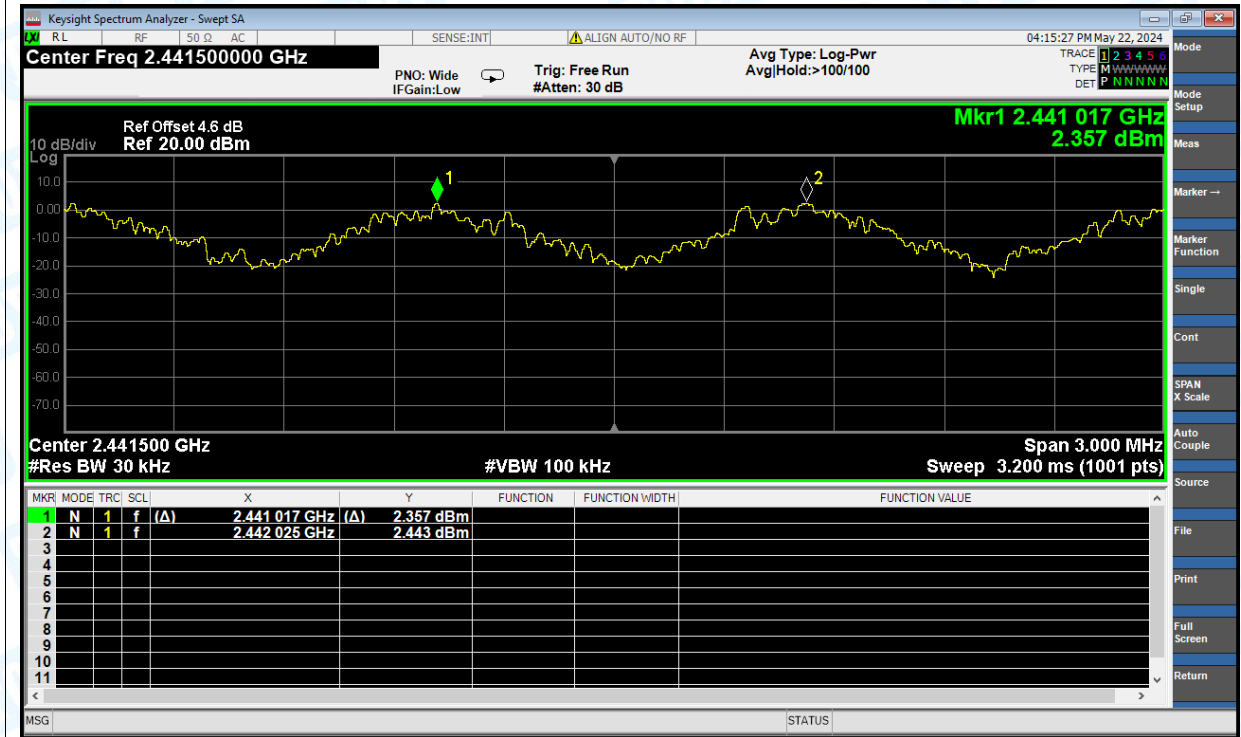


9. Carrier Frequencies Separation

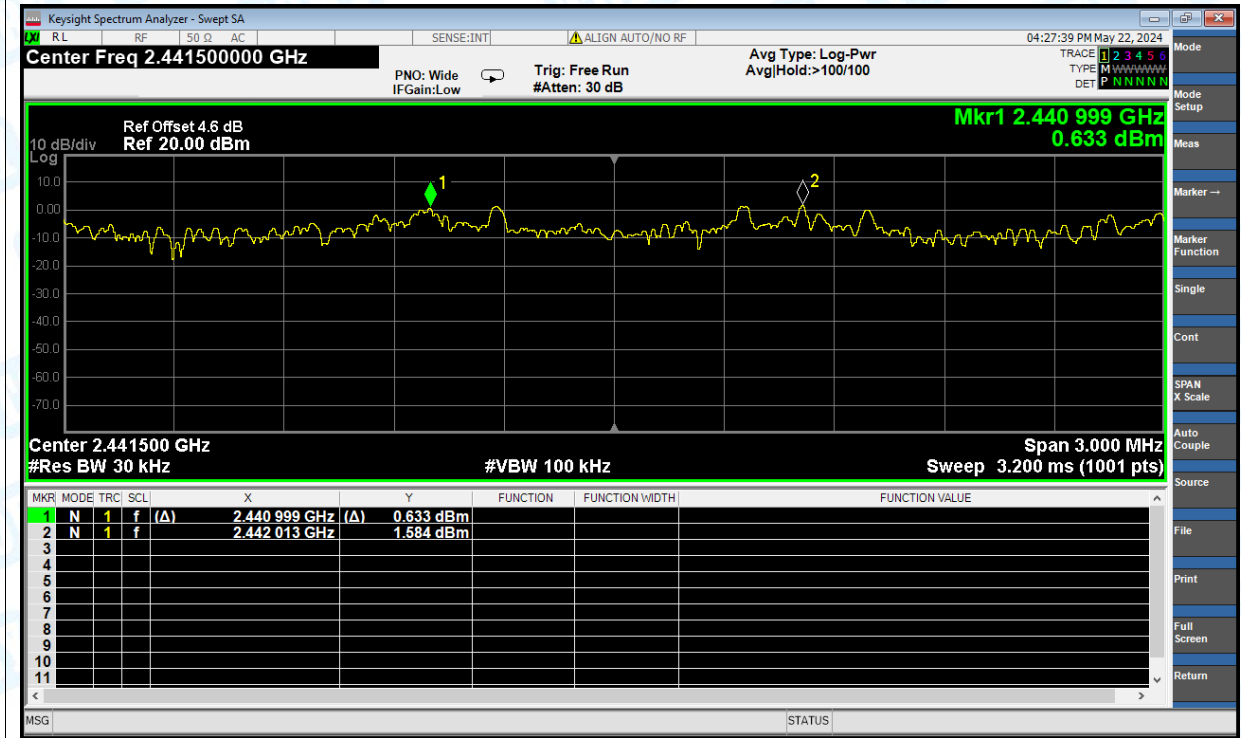
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2441.017	2442.025	1.008	0.633	Pass
NVNT	2-DH1	Ant1	2440.999	2442.013	1.014	0.867	Pass
NVNT	3-DH1	Ant1	2440.978	2442.025	1.047	0.8	Pass

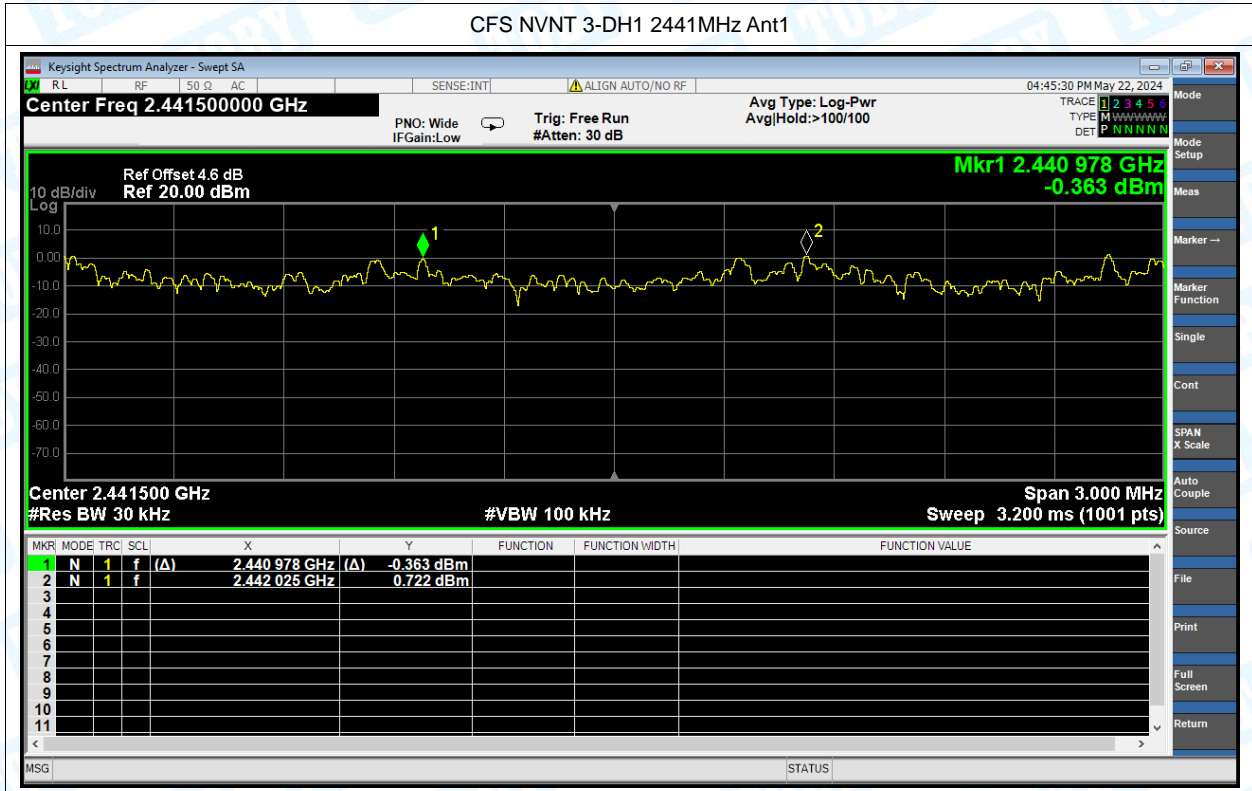
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



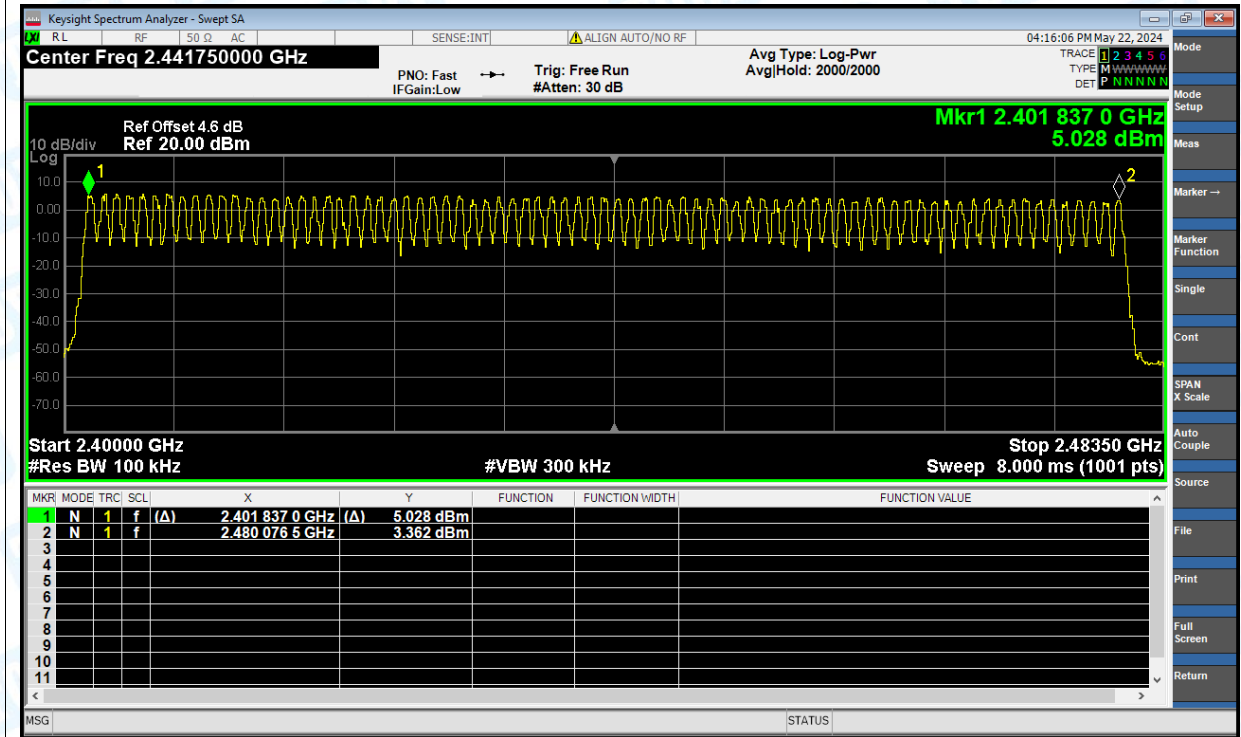


10. Number of Hopping Channel

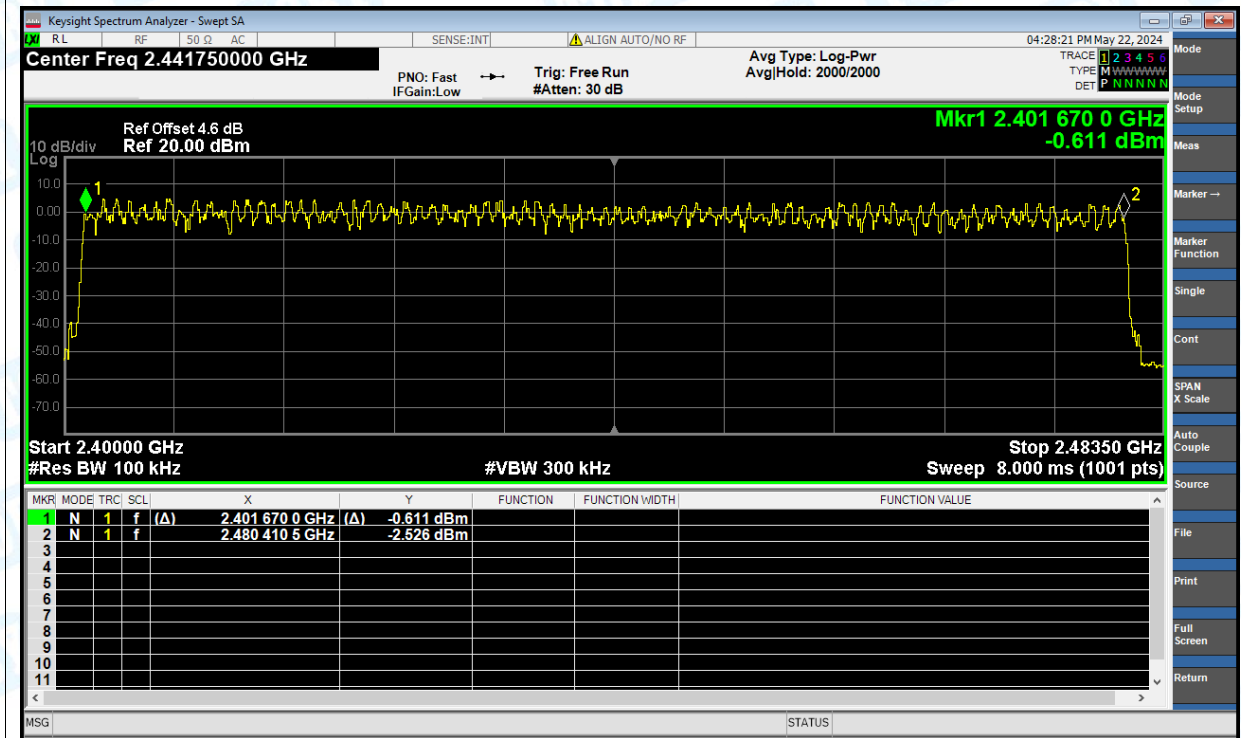
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

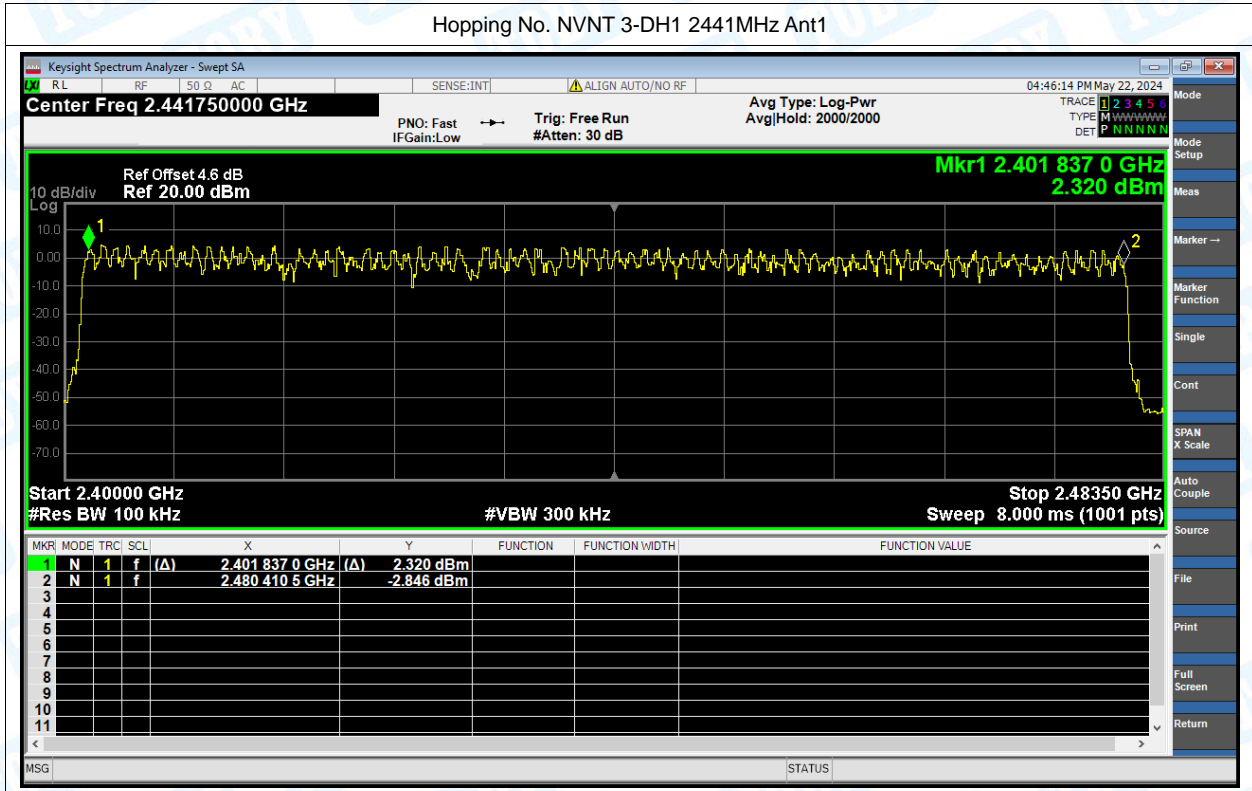
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



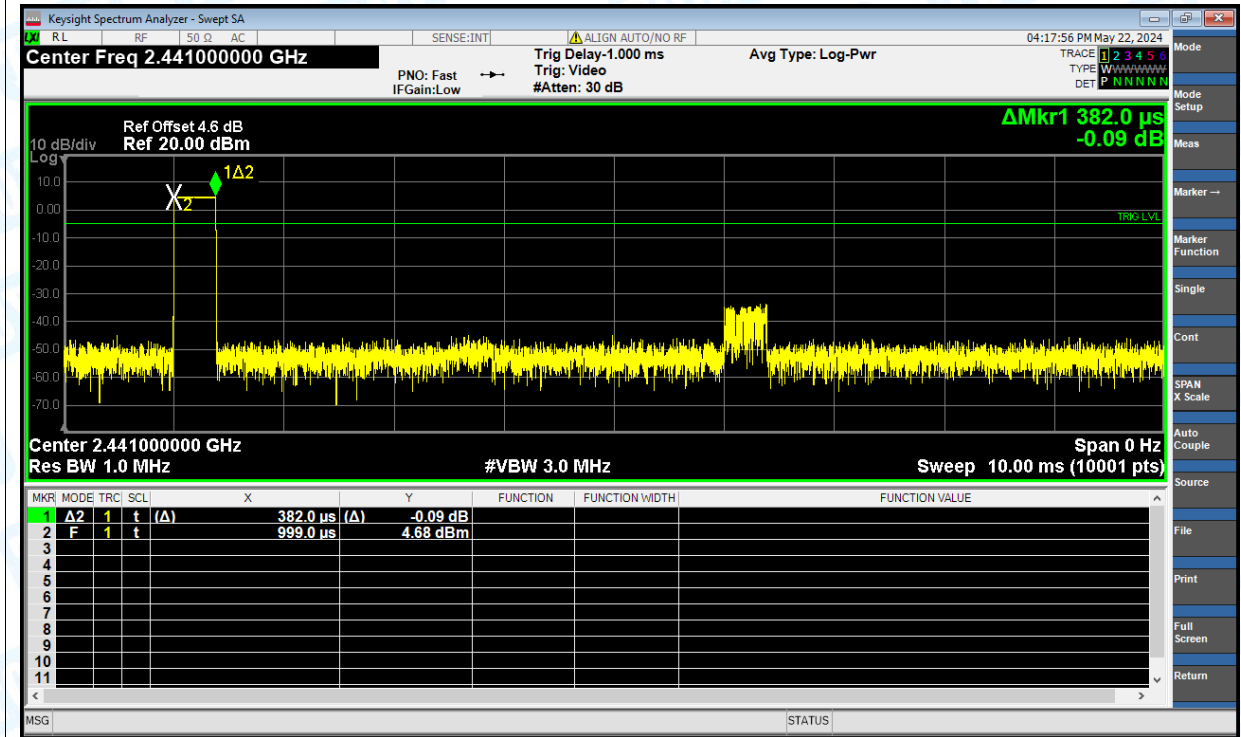


11. Dwell Time

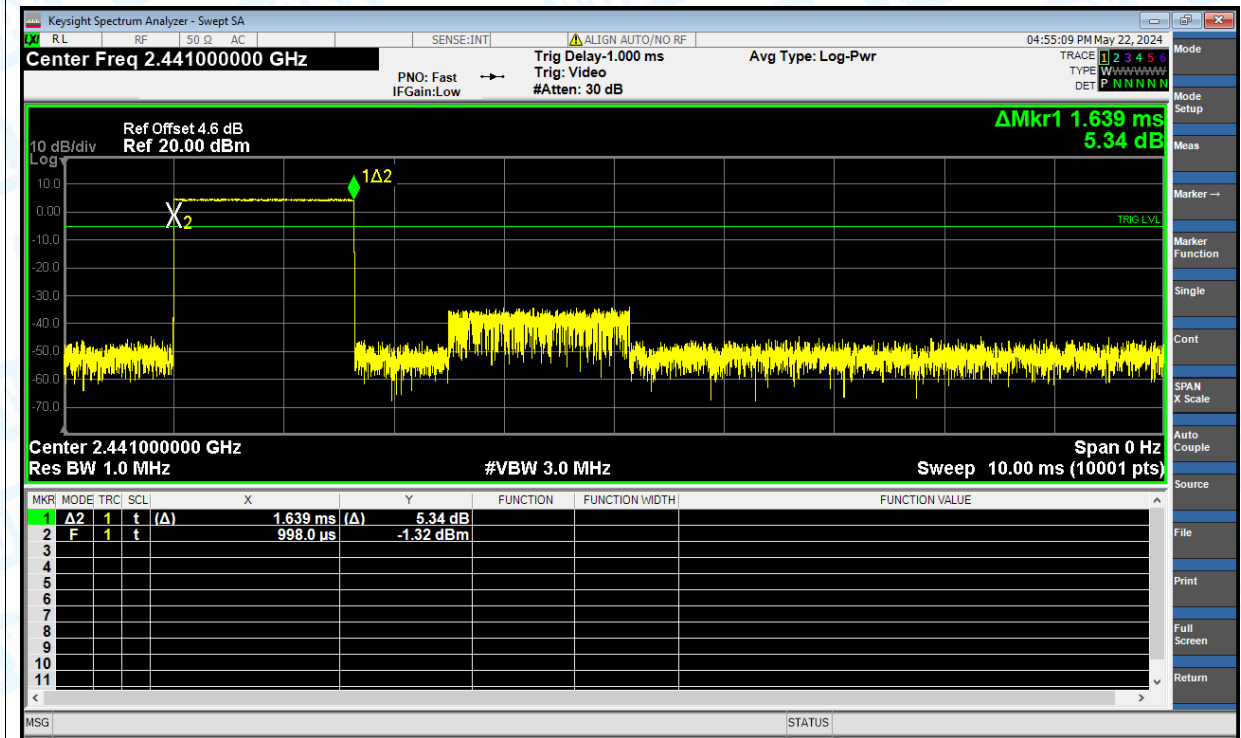
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.382	122.24	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.639	262.24	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.887	307.947	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.392	125.44	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.644	263.04	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.891	308.373	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.391	125.12	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

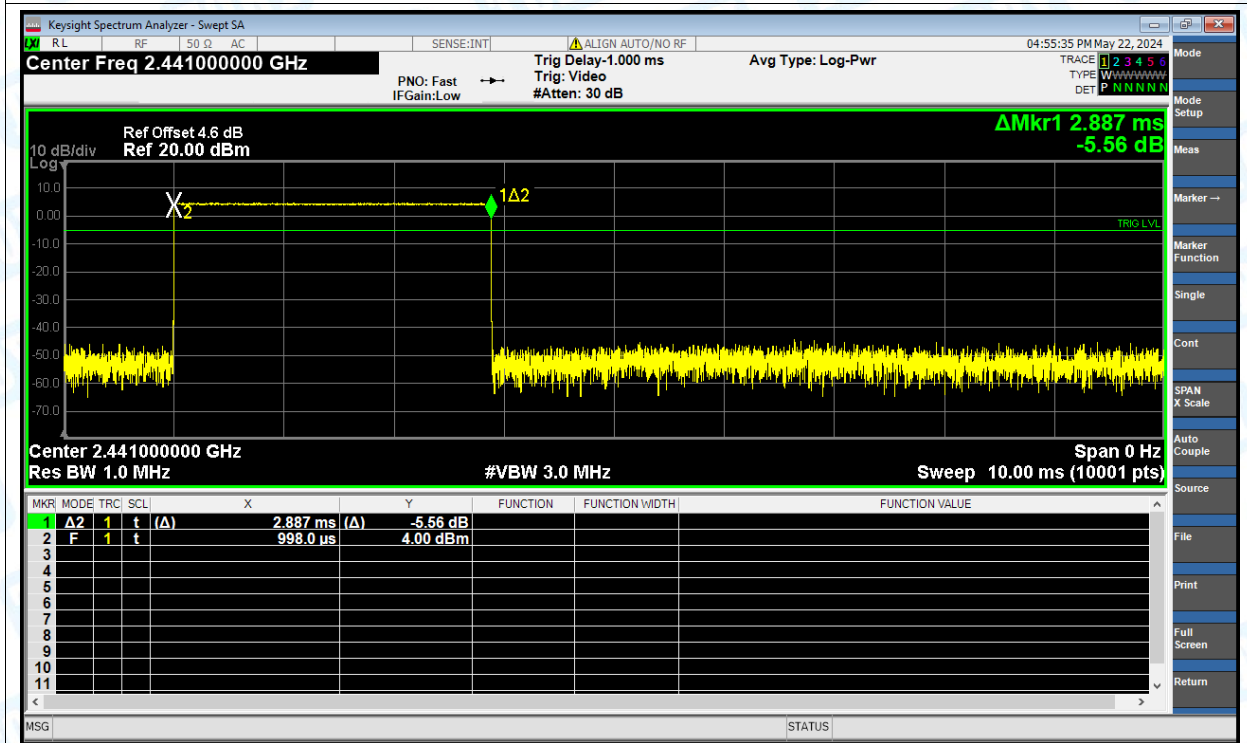
Dwell NVNT 1-DH1 2441MHz Ant1



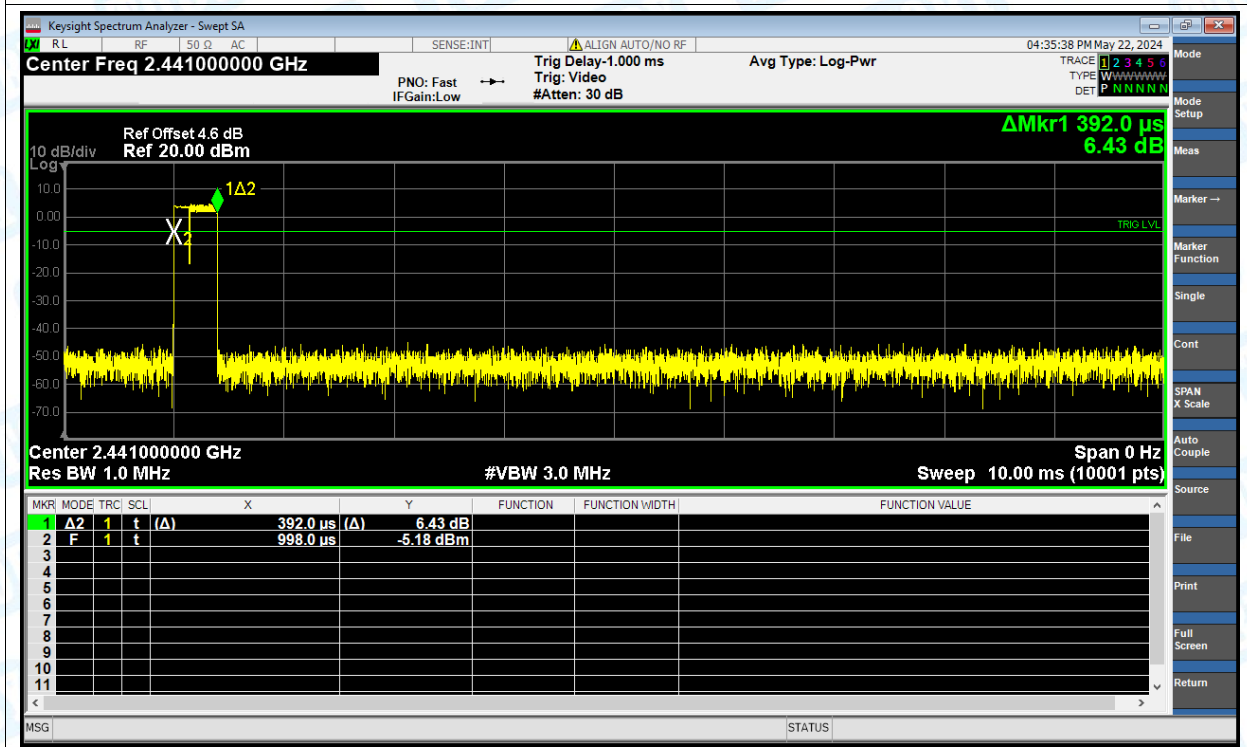
Dwell NVNT 1-DH3 2441MHz Ant1



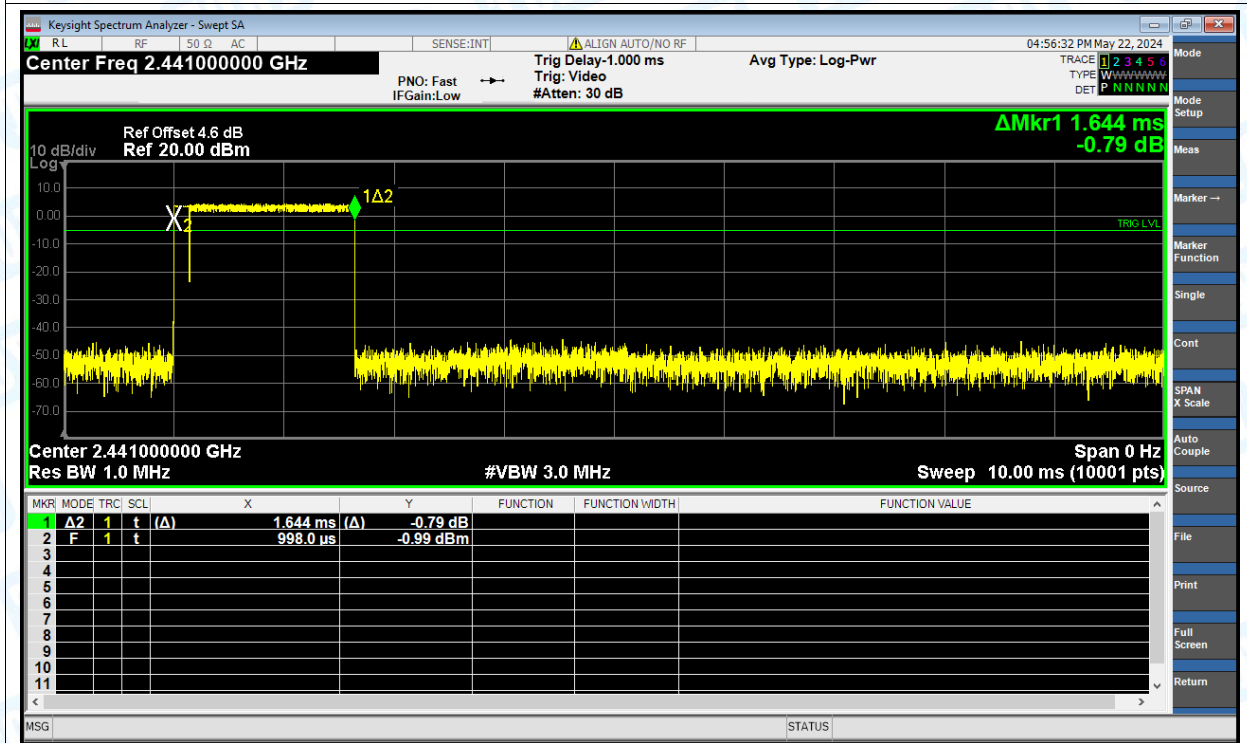
Dwell NVNT 1-DH5 2441MHz Ant1



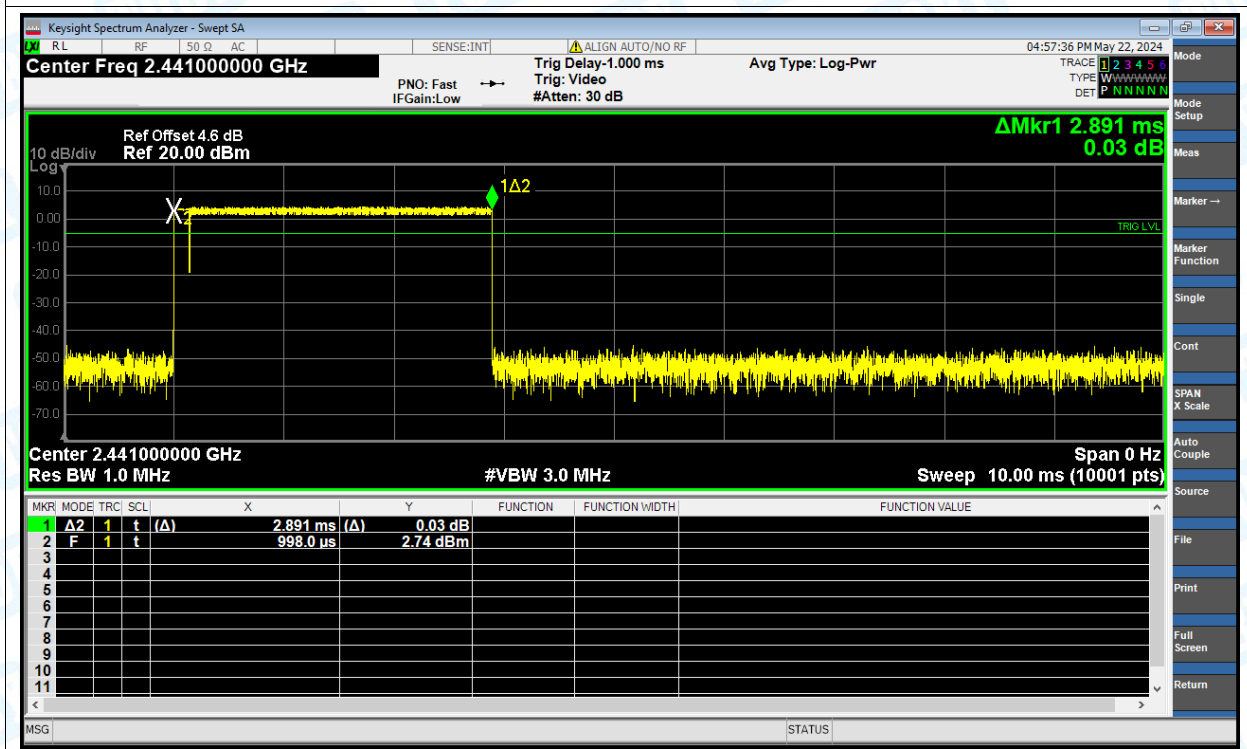
Dwell NVNT 2-DH1 2441MHz Ant1



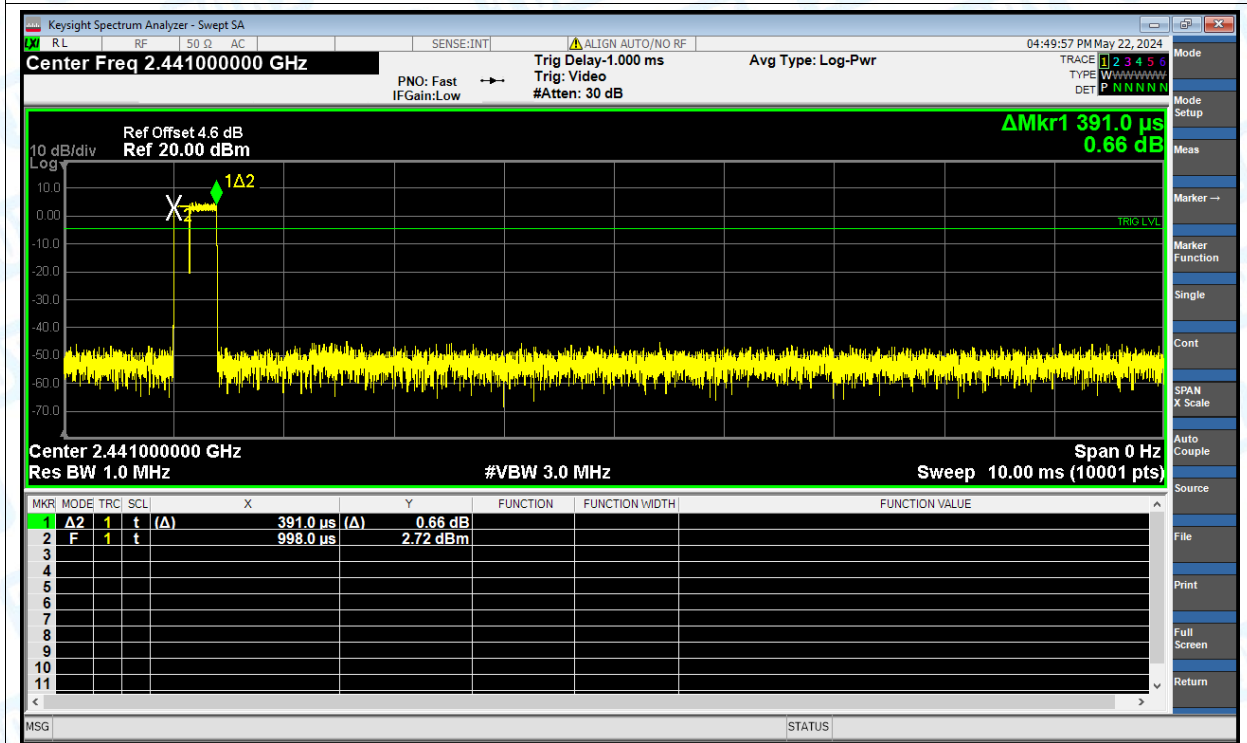
Dwell NVNT 2-DH3 2441MHz Ant1



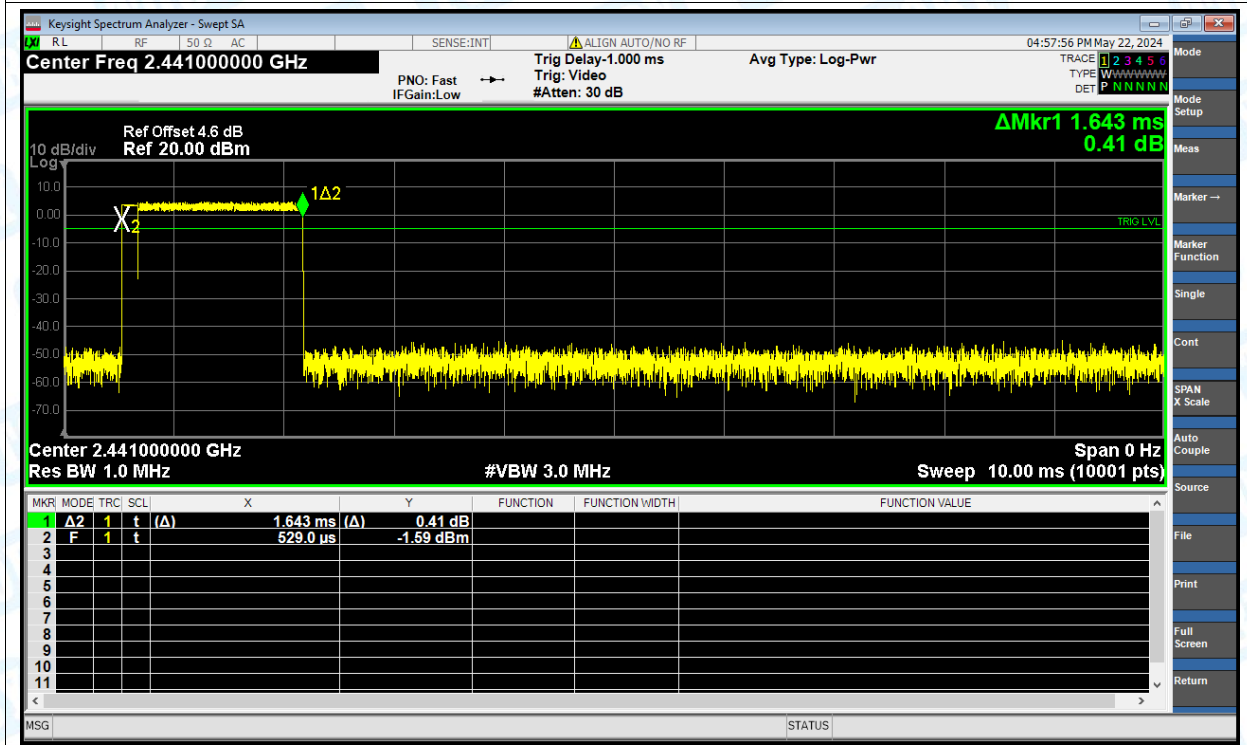
Dwell NVNT 2-DH5 2441MHz Ant1

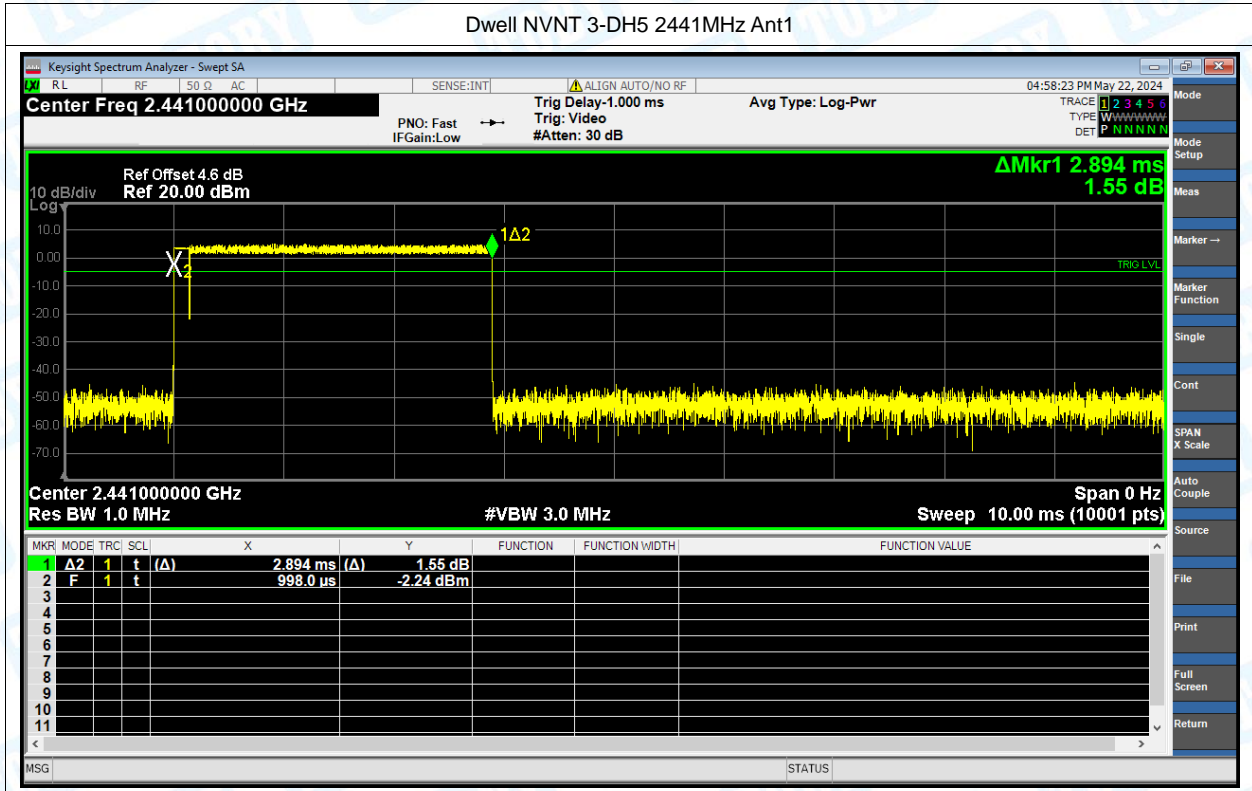


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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