

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	Wireless Headphone
Test Model:	picun UG-10A
Sample ID:	HC-C-202503-0412-01-5#
Environmental Conditions	
Temperature:	24.4℃
Relative Humidity:	50%
Test Voltage:	DC 5V
Test Engineer:	Lily Zhang
Note: For a more detailed features description, please refer to the report TBR-C-202503-0412-17 The report only show the worst case data.	

Contents

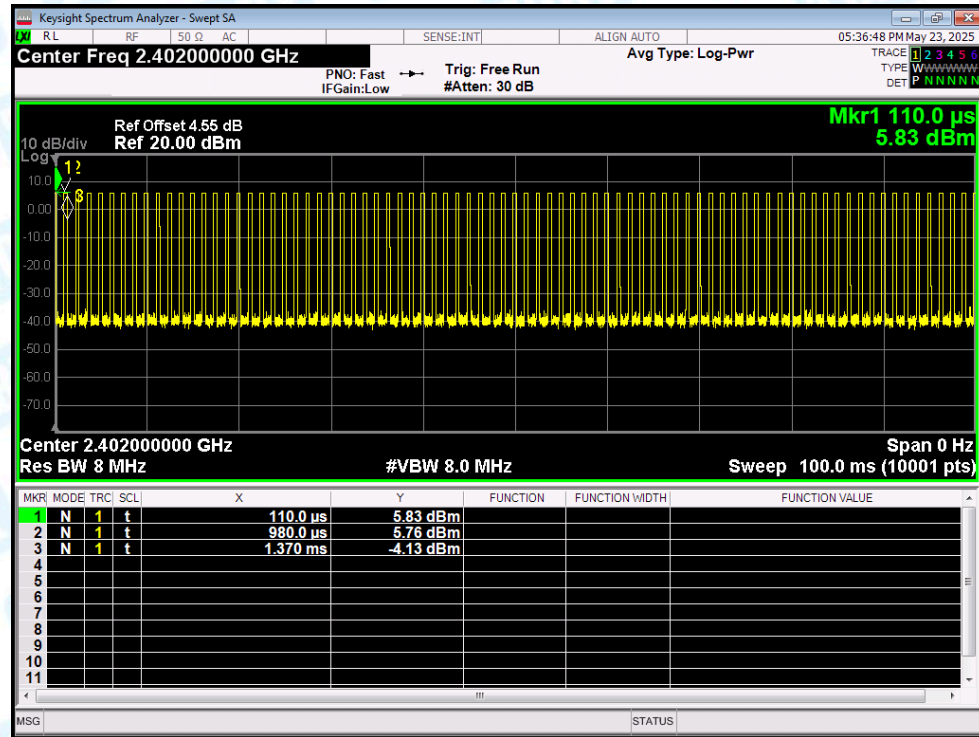
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1. Duty Cycle

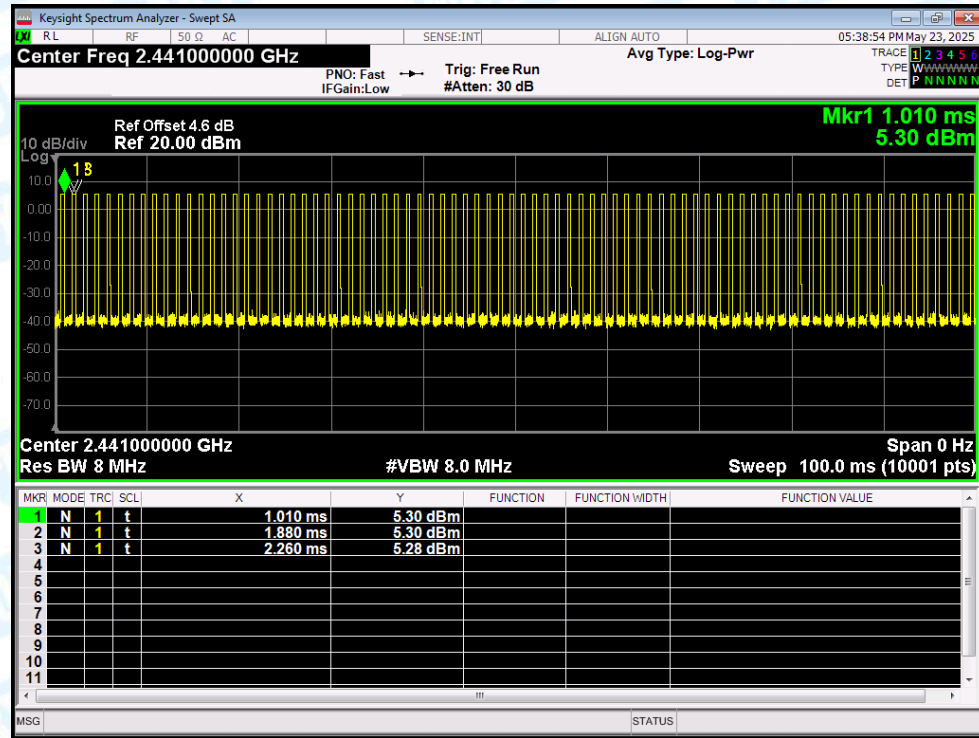
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	30.95	5.09	2.56
NVNT	1-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2480	Ant1	30.4	5.17	2.63
NVNT	2-DH1	2402	Ant1	32	4.95	2.5
NVNT	2-DH1	2441	Ant1	32	4.95	2.5
NVNT	2-DH1	2480	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2402	Ant1	31.45	5.02	2.56
NVNT	3-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2480	Ant1	31.2	5.06	2.56

Test Graphs

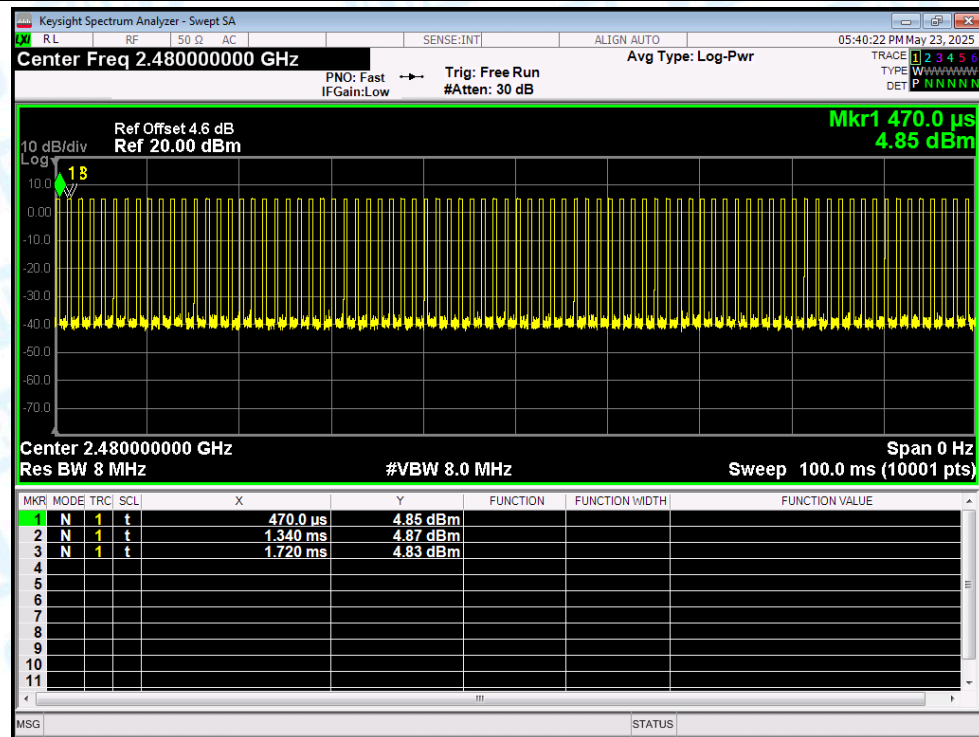
Duty Cycle NVNT 1-DH1 2402MHz Ant1



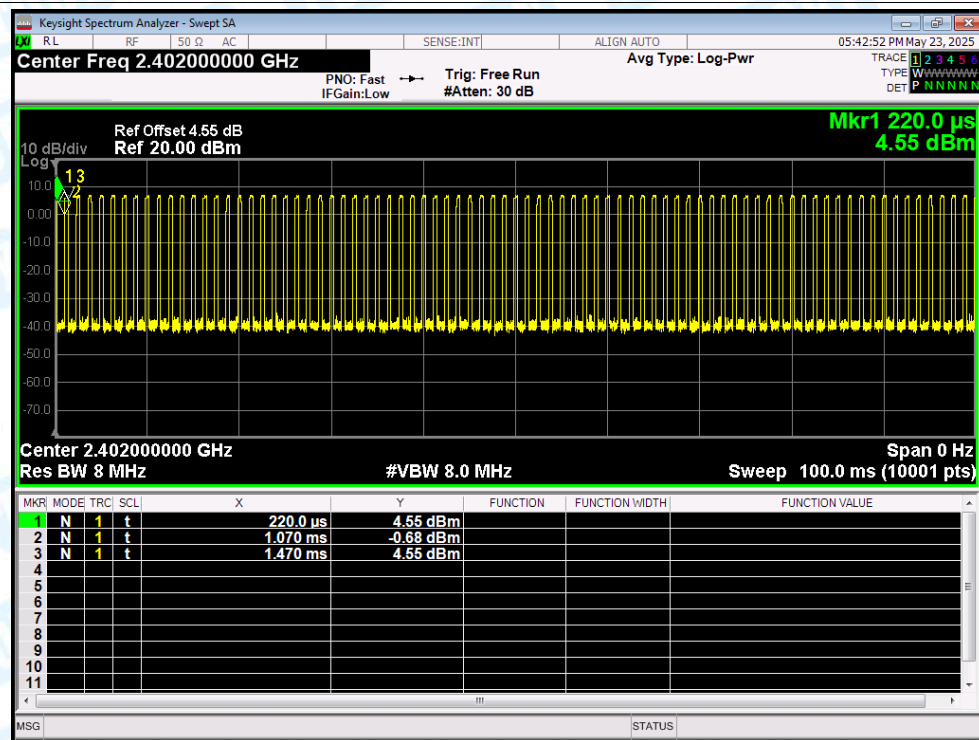
Duty Cycle NVNT 1-DH1 2441MHz Ant1



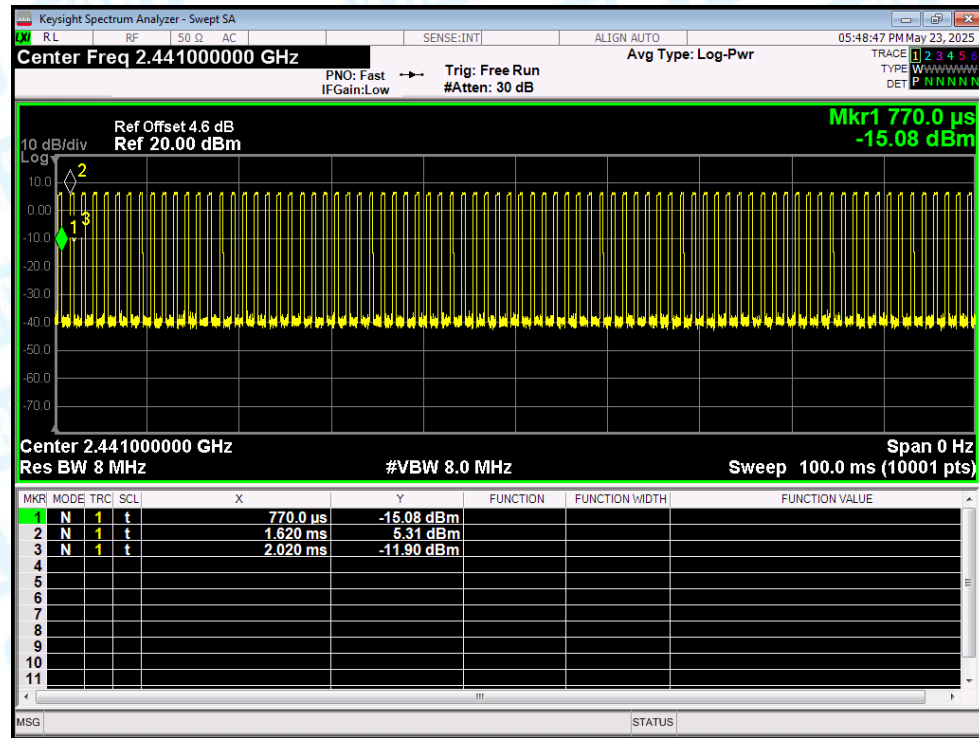
Duty Cycle NVNT 1-DH1 2480MHz Ant1



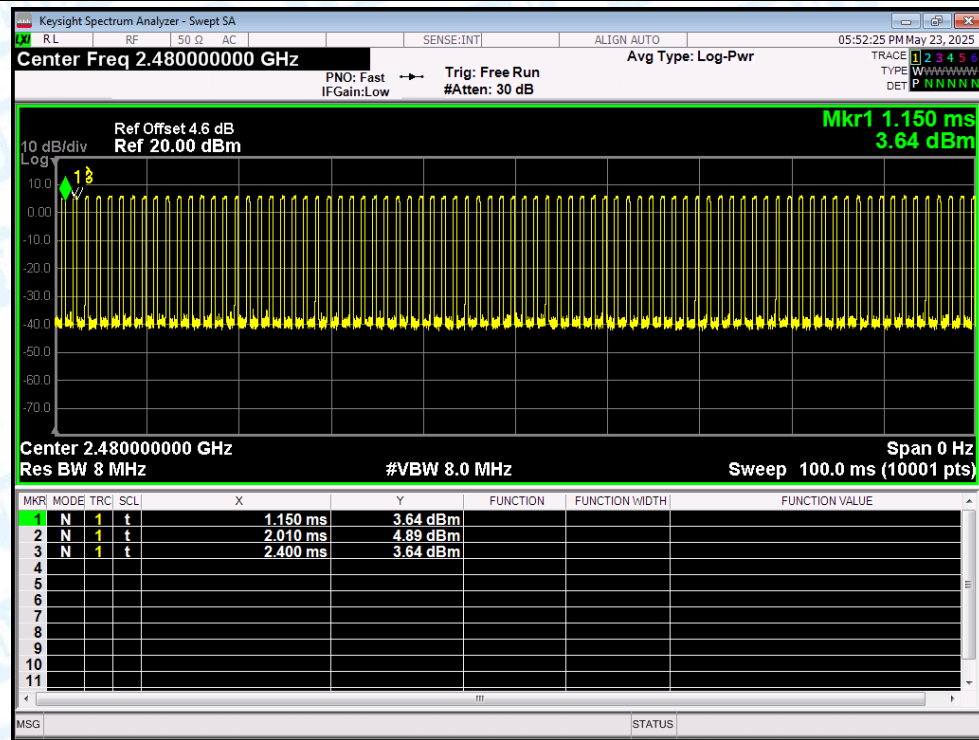
Duty Cycle NVNT 2-DH1 2402MHz Ant1



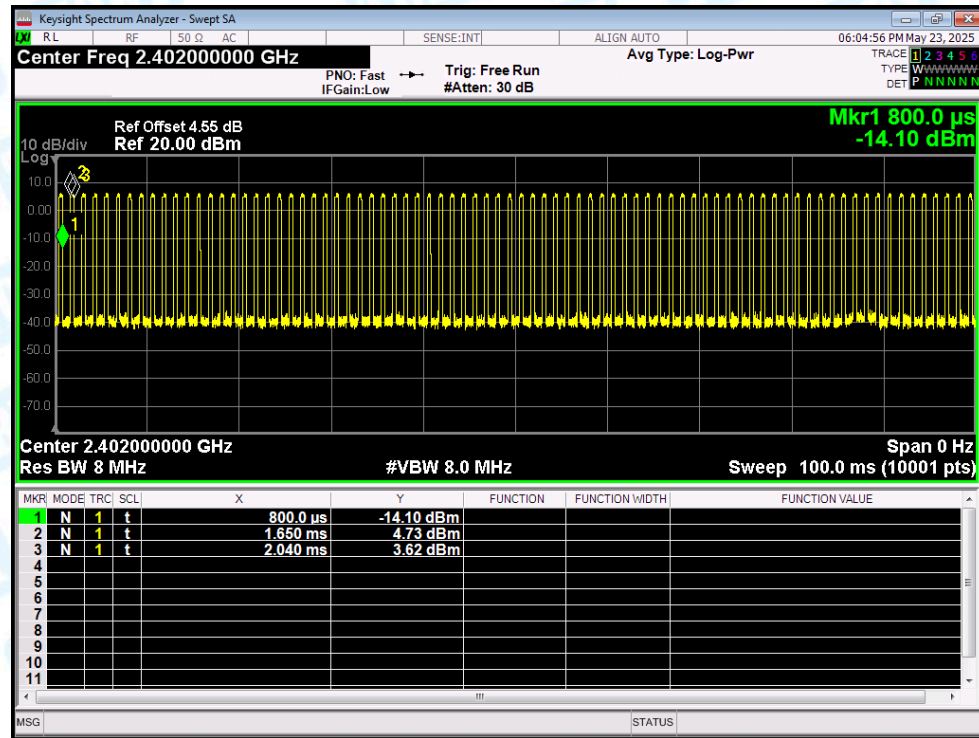
Duty Cycle NVNT 2-DH1 2441MHz Ant1



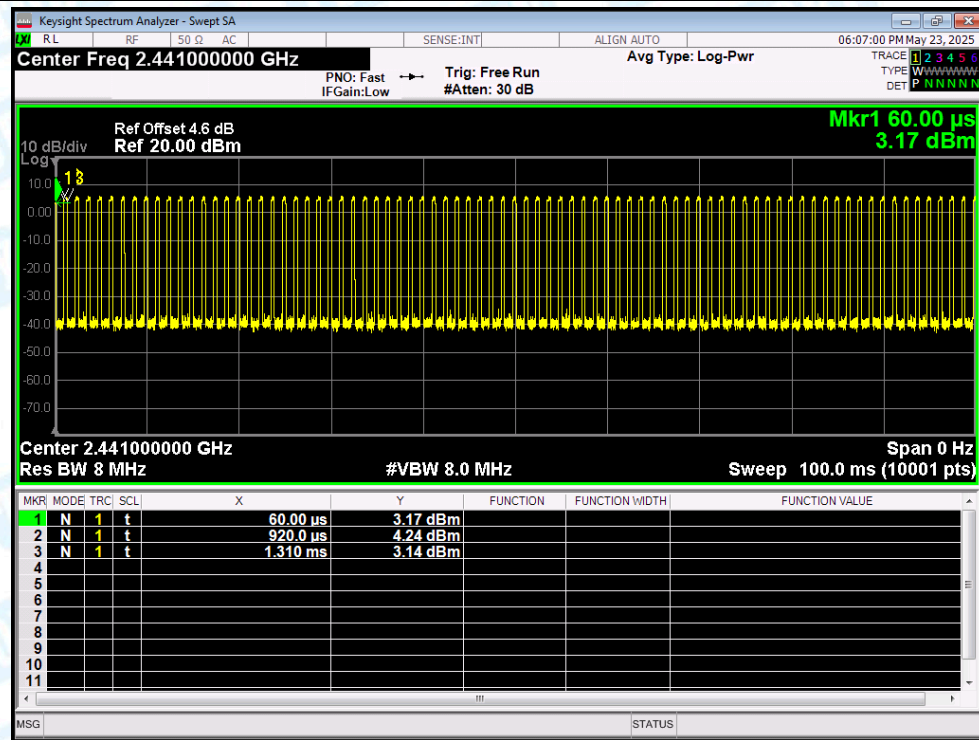
Duty Cycle NVNT 2-DH1 2480MHz Ant1

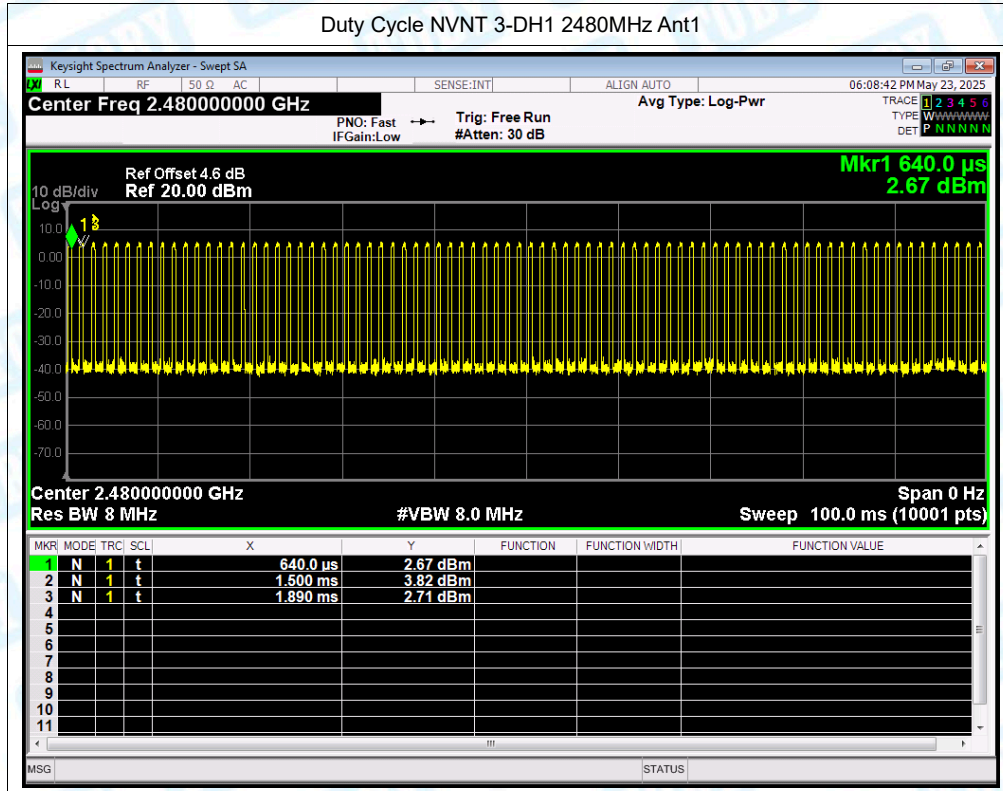


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



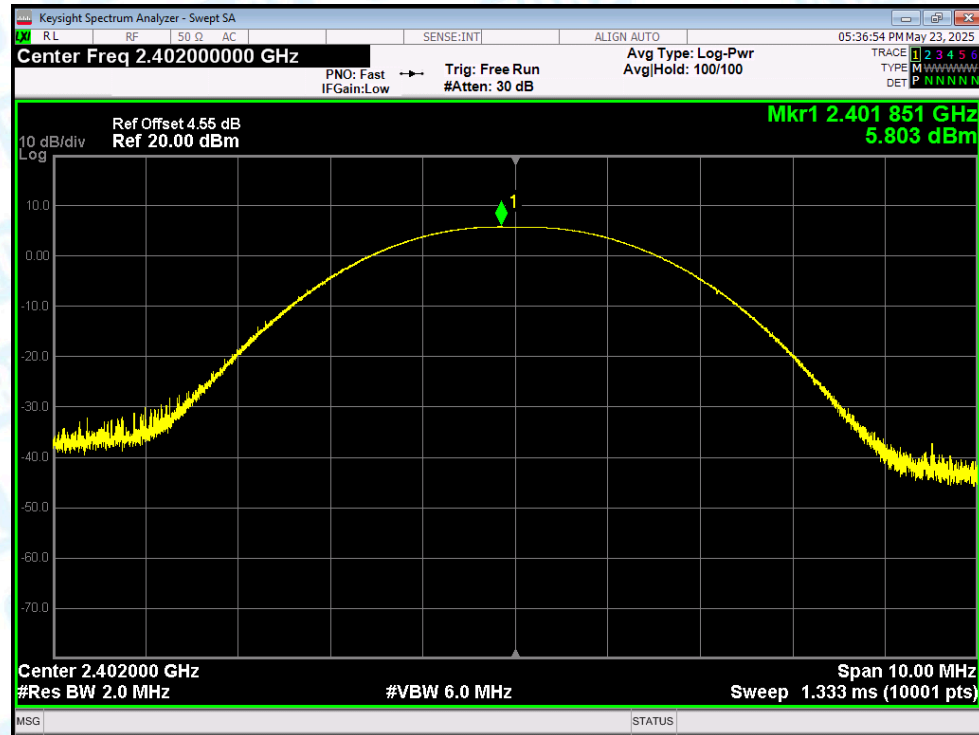


2. Maximum Conducted Output Power

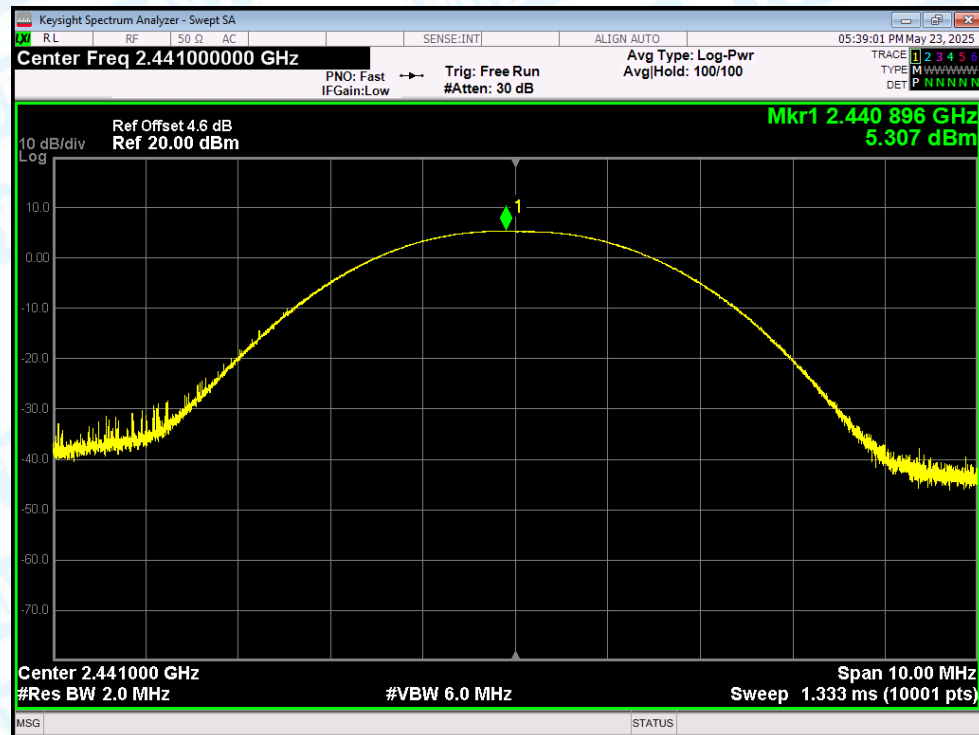
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	5.803	21	Pass
NVNT	1-DH1	2441	Ant1	5.307	21	Pass
NVNT	1-DH1	2480	Ant1	4.871	21	Pass
NVNT	1-DH3	2441	Ant1	5.276	21	Pass
NVNT	1-DH5	2441	Ant1	5.267	21	Pass
NVNT	2-DH1	2402	Ant1	6.622	21	Pass
NVNT	2-DH1	2441	Ant1	6.13	21	Pass
NVNT	2-DH1	2480	Ant1	5.693	21	Pass
NVNT	2-DH3	2441	Ant1	6.107	21	Pass
NVNT	2-DH5	2441	Ant1	6.163	21	Pass
NVNT	3-DH1	2402	Ant1	6.13	21	Pass
NVNT	3-DH1	2441	Ant1	5.646	21	Pass
NVNT	3-DH1	2480	Ant1	5.184	21	Pass
NVNT	3-DH3	2441	Ant1	5.458	21	Pass
NVNT	3-DH5	2441	Ant1	5.467	21	Pass

Test Graphs

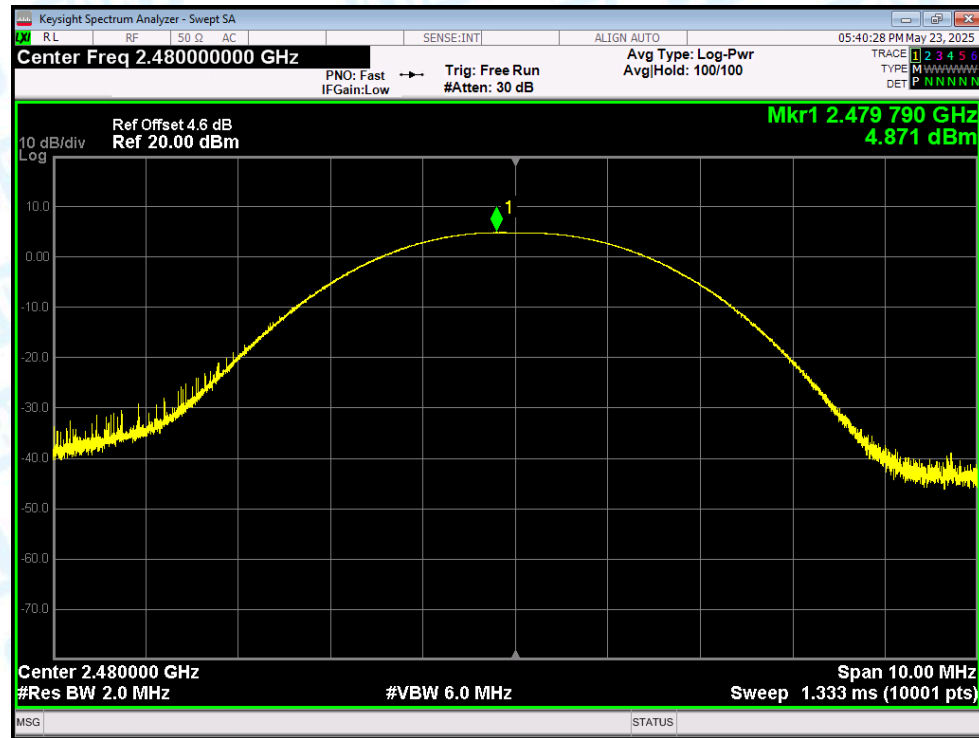
Power NVNT 1-DH1 2402MHz Ant1



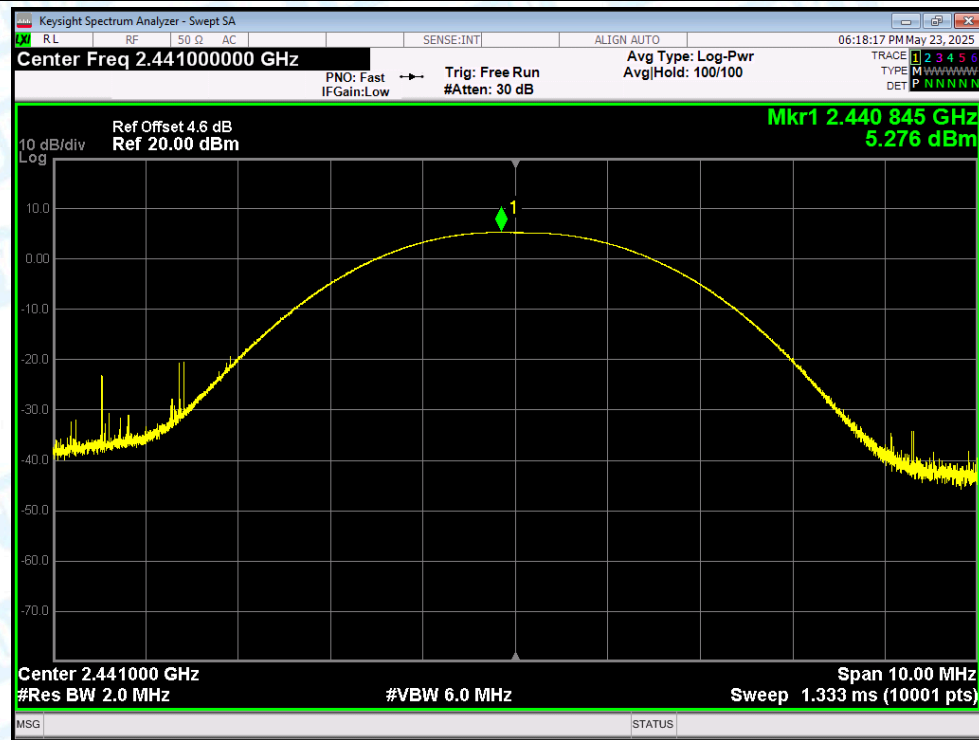
Power NVNT 1-DH1 2441MHz Ant1



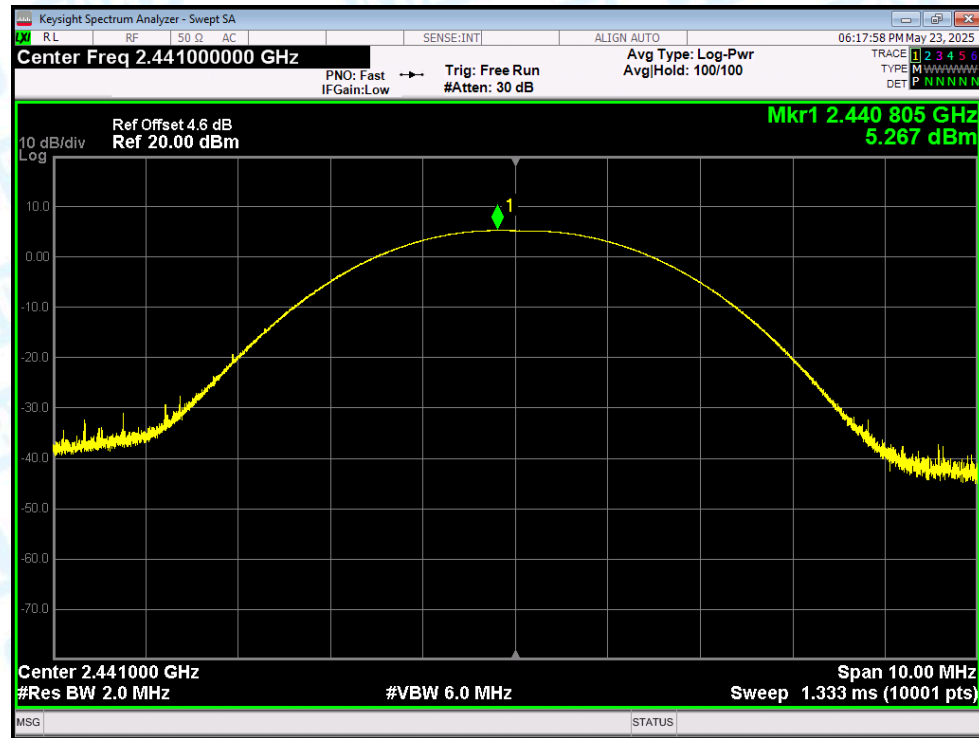
Power NVNT 1-DH1 2480MHz Ant1



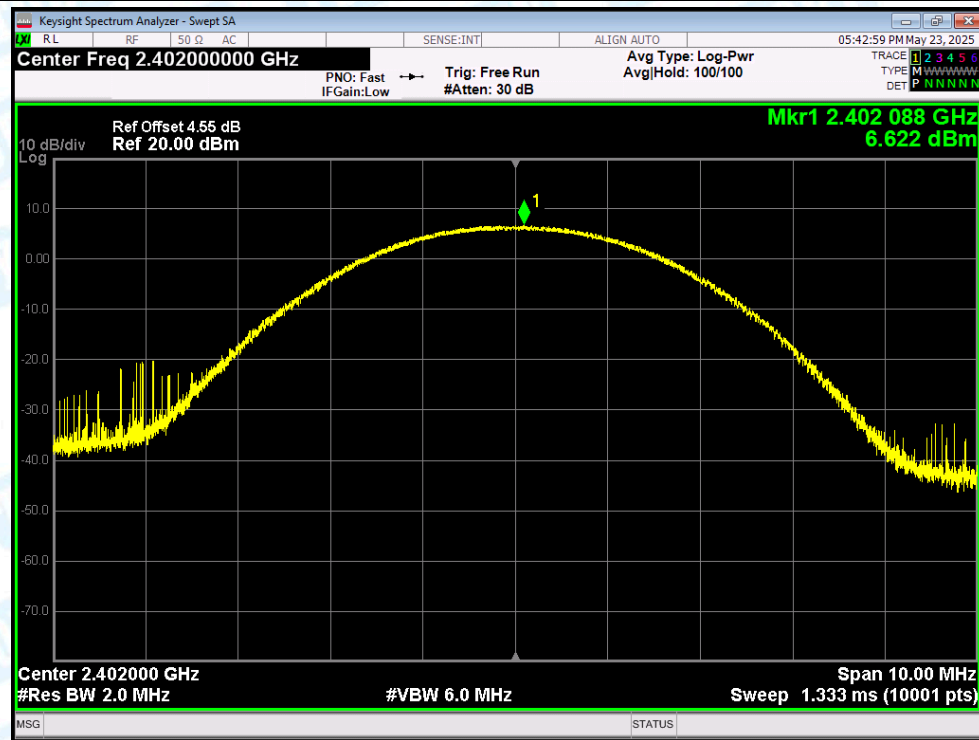
Power NVNT 1-DH3 2441MHz Ant1



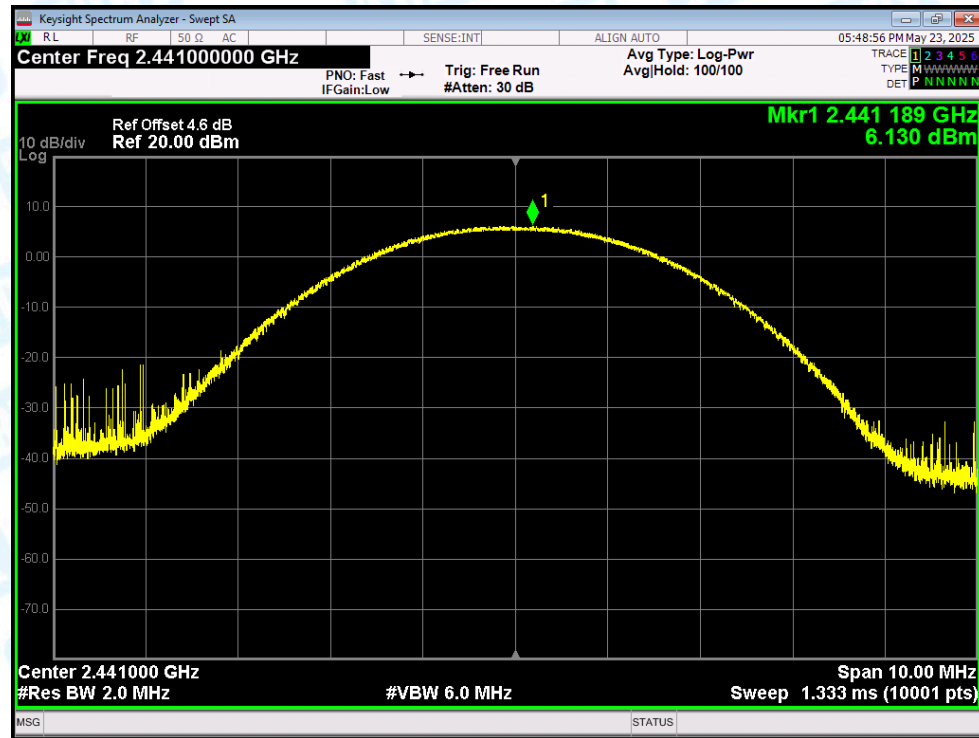
Power NVNT 1-DH5 2441MHz Ant1



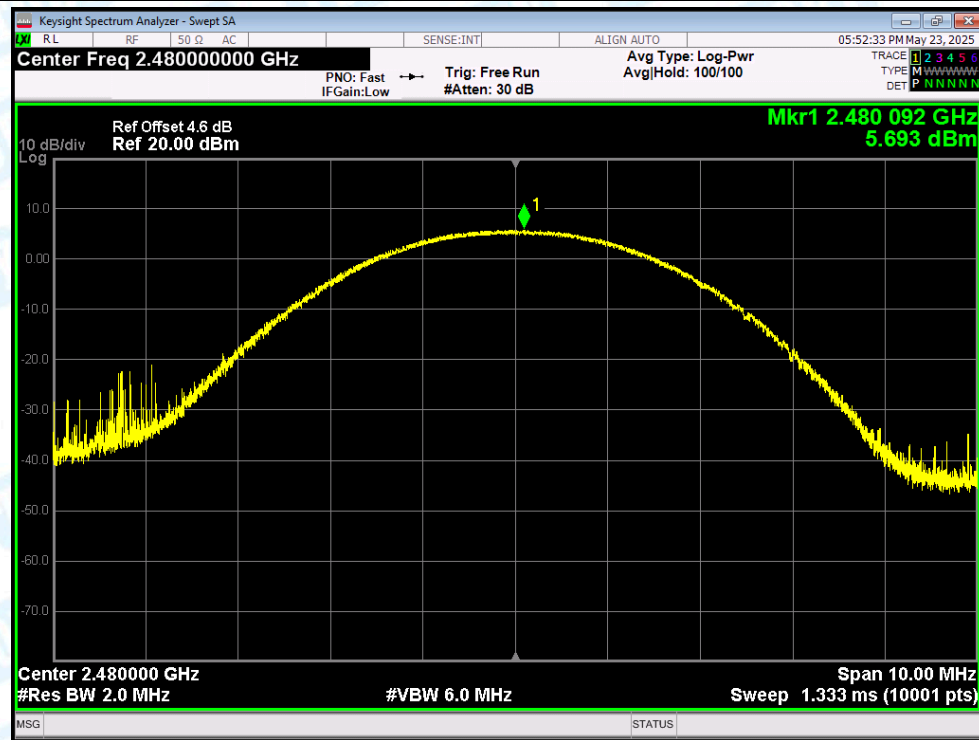
Power NVNT 2-DH1 2402MHz Ant1



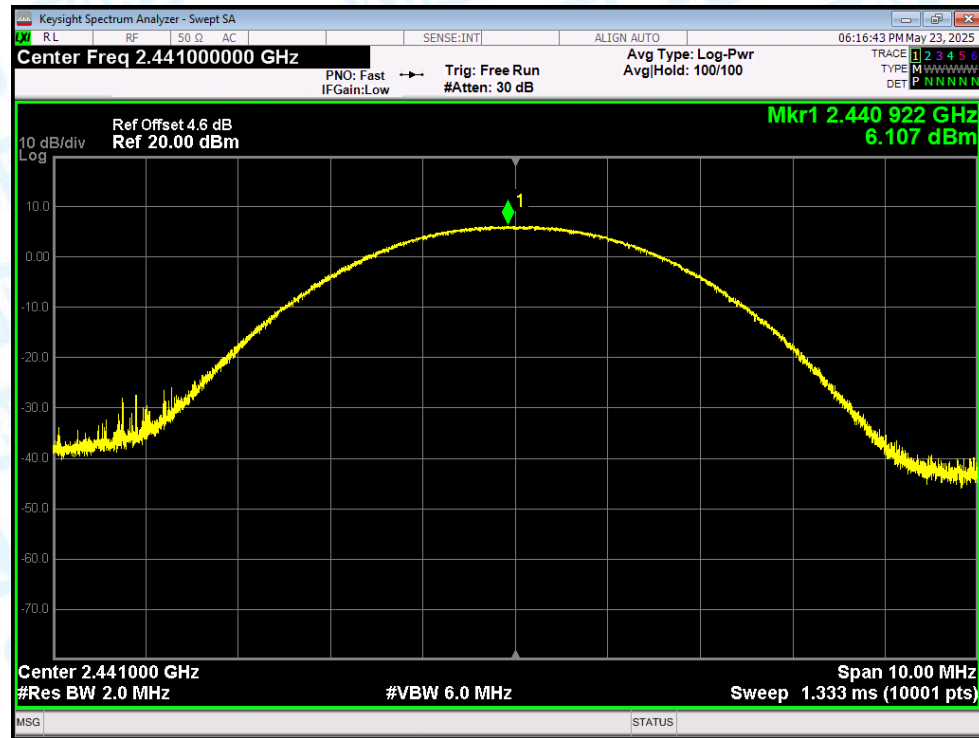
Power NVNT 2-DH1 2441MHz Ant1



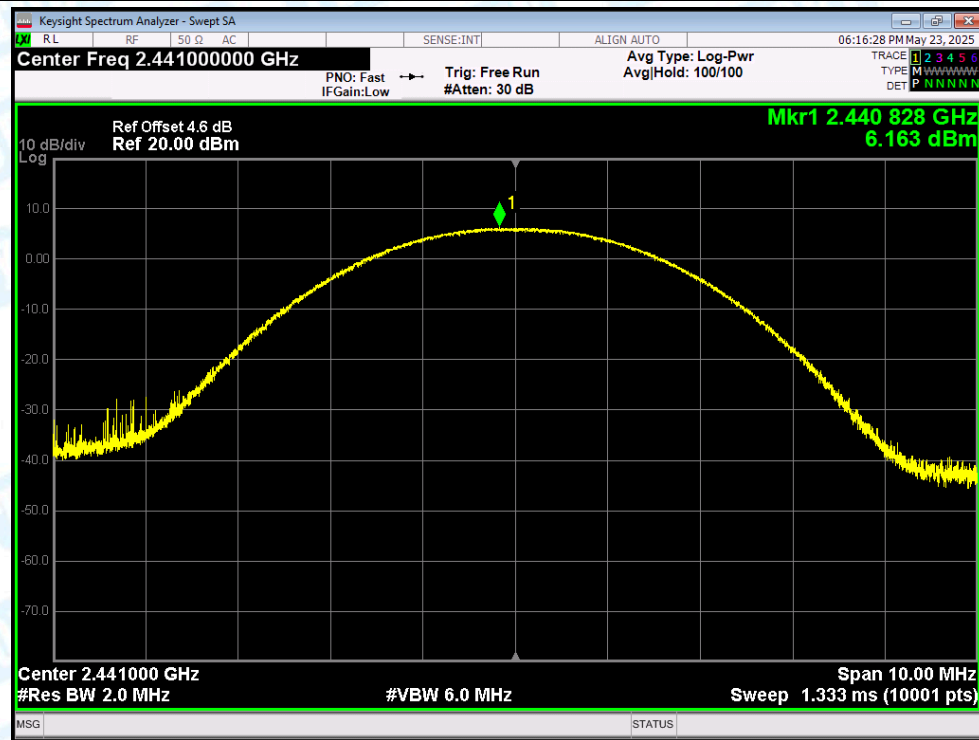
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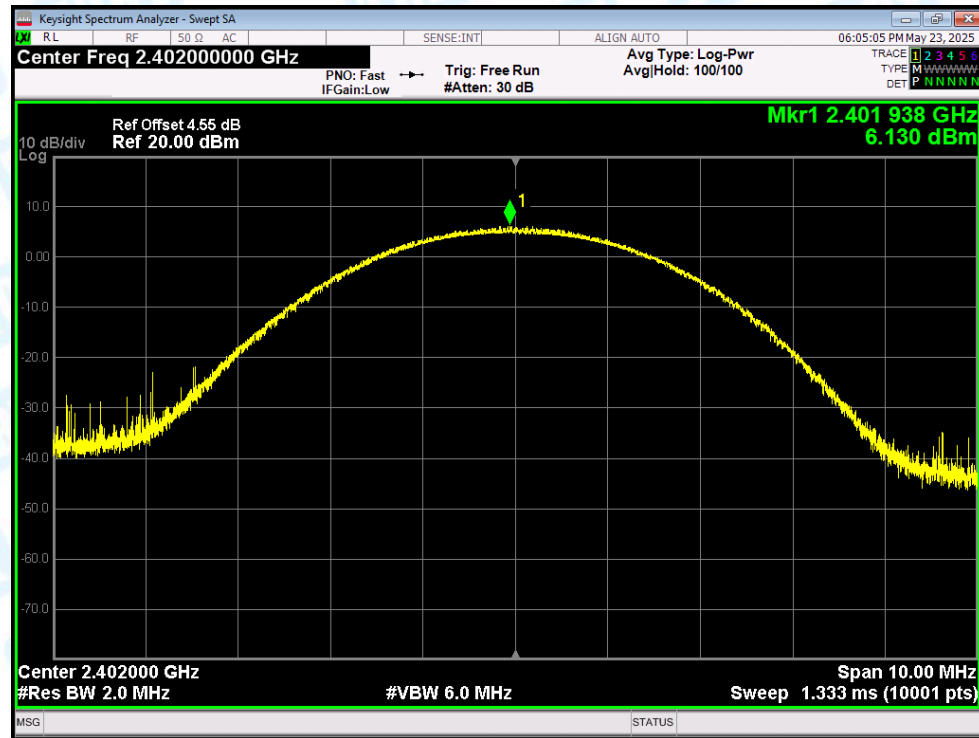
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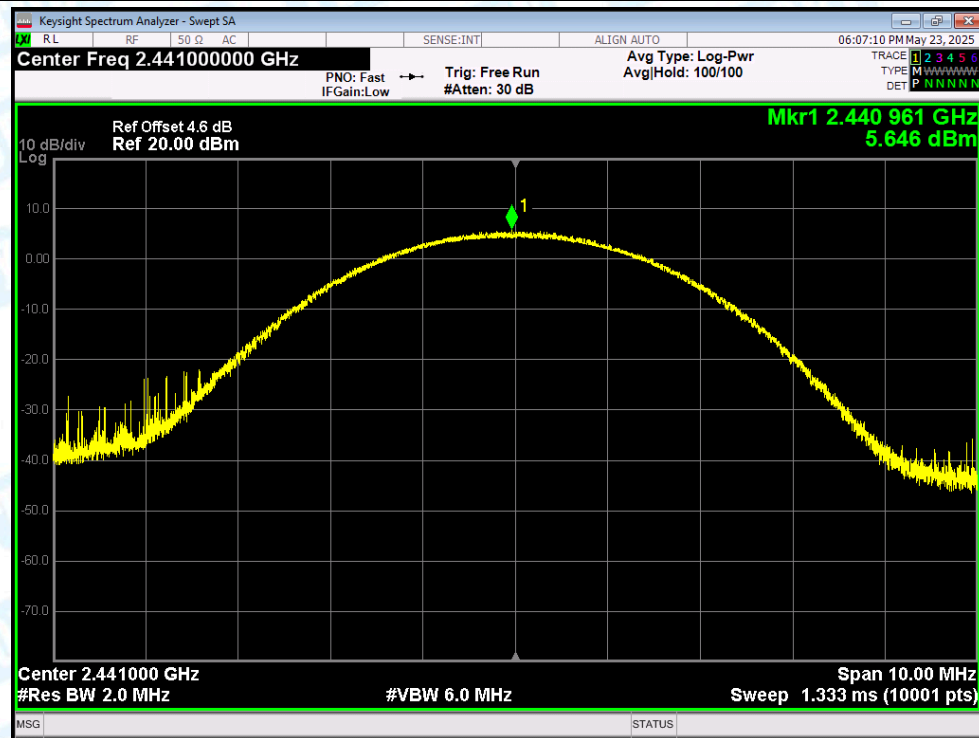
Power NVNT 2-DH5 2441MHz Ant1



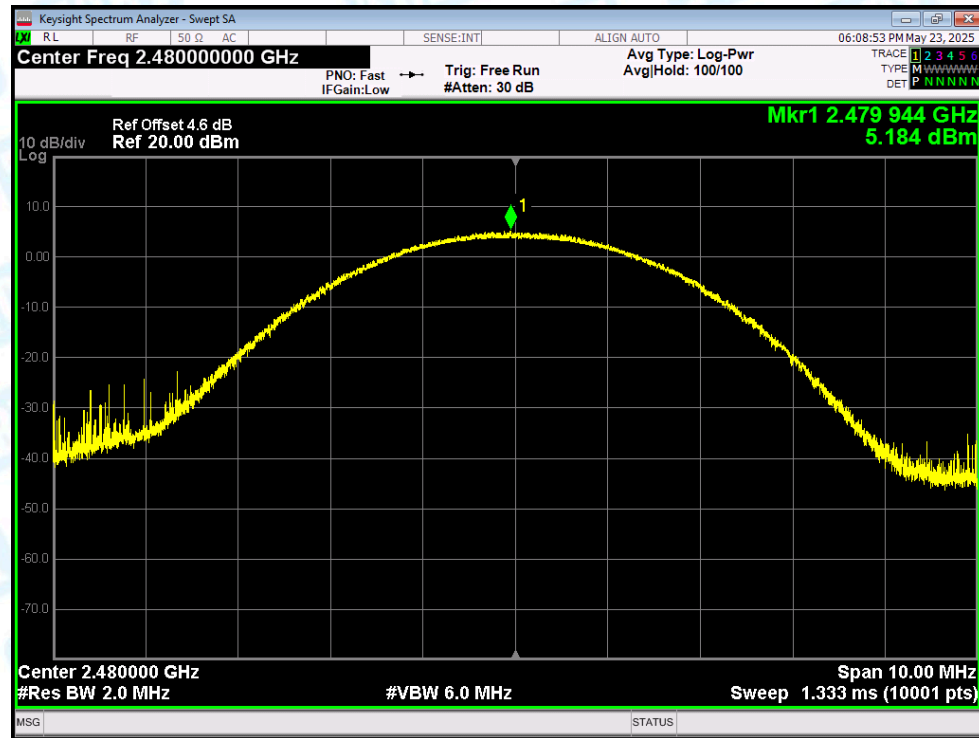
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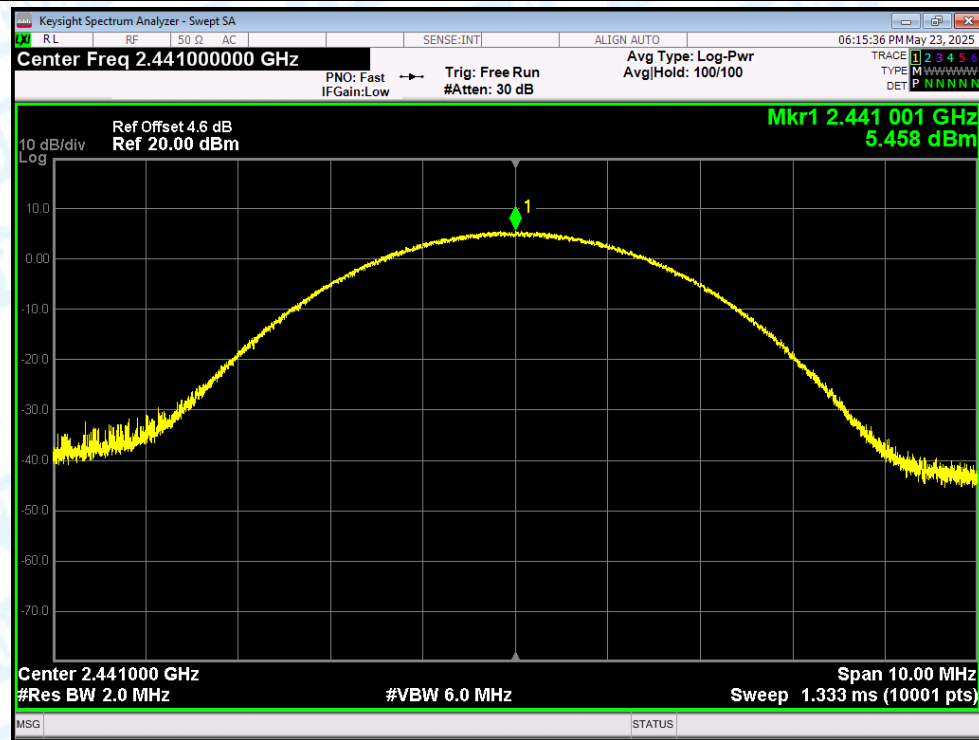
Power NVNT 3-DH1 2441MHz Ant1

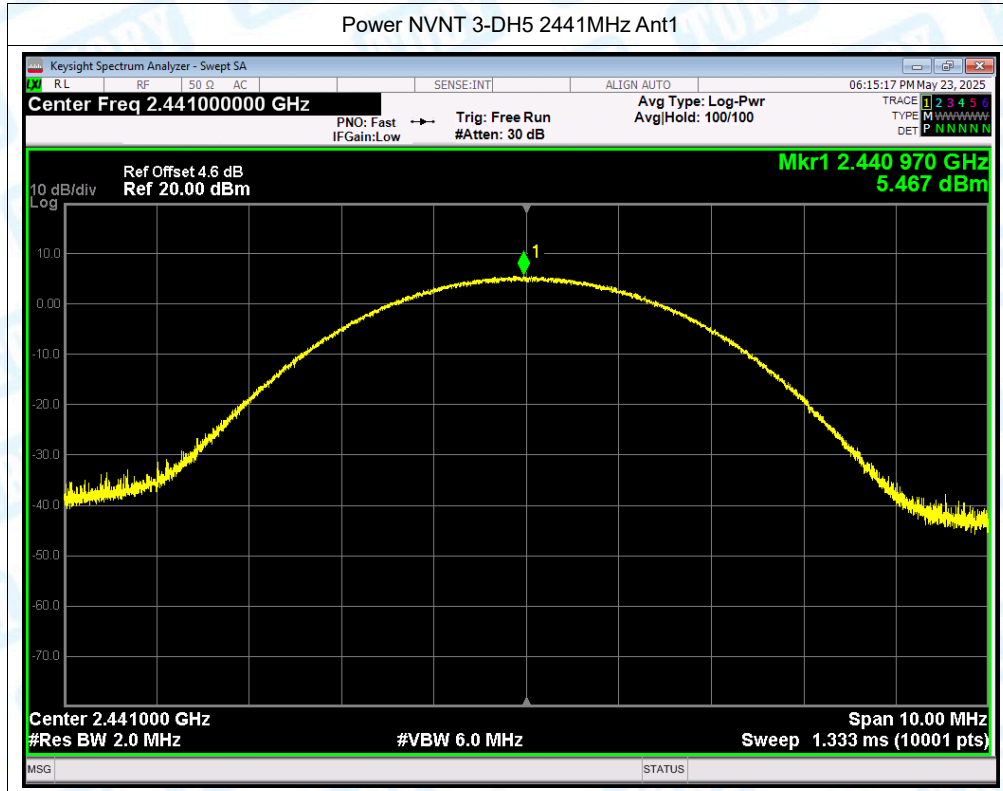


Power NVNT 3-DH1 2480MHz Ant1



Power NVNT 3-DH3 2441MHz Ant1



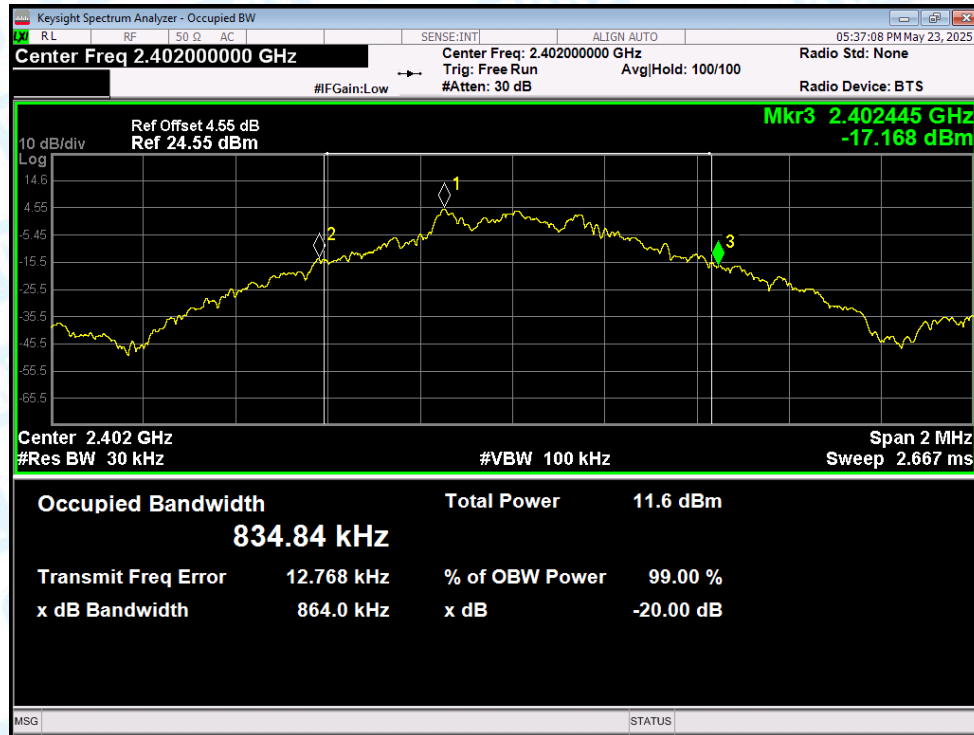


3. -20dB Bandwidth

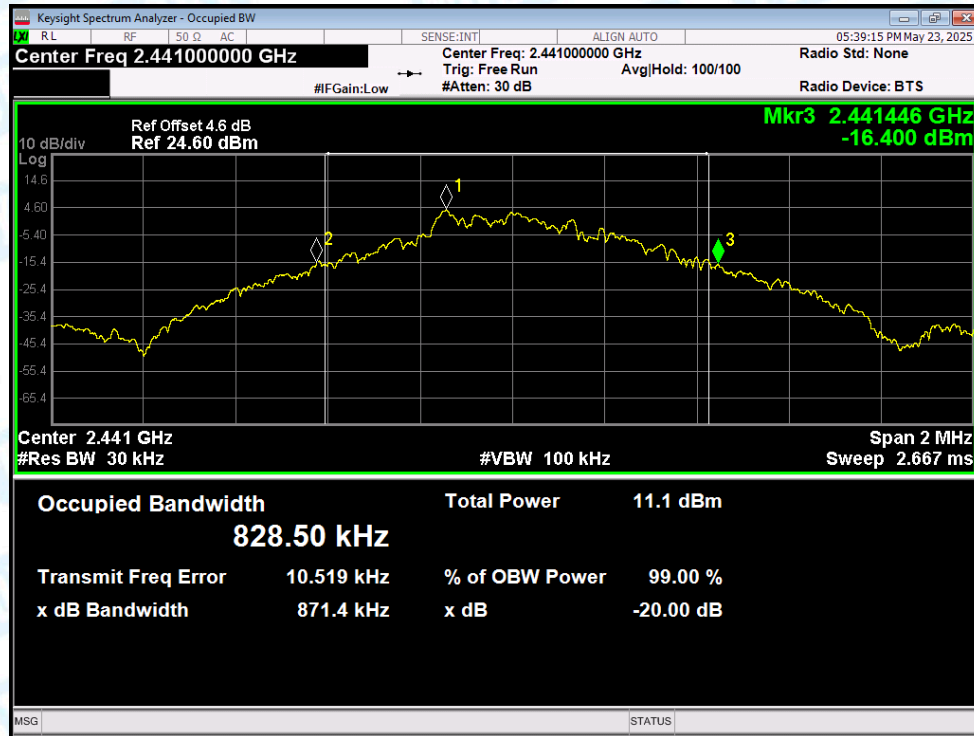
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.86	0	Pass
NVNT	1-DH1	2441	Ant1	0.87	0	Pass
NVNT	1-DH1	2480	Ant1	0.86	0	Pass
NVNT	2-DH1	2402	Ant1	1.22	0	Pass
NVNT	2-DH1	2441	Ant1	1.28	0	Pass
NVNT	2-DH1	2480	Ant1	1.24	0	Pass
NVNT	3-DH1	2402	Ant1	1.23	0	Pass
NVNT	3-DH1	2441	Ant1	1.23	0	Pass
NVNT	3-DH1	2480	Ant1	1.23	0	Pass

Test Graphs

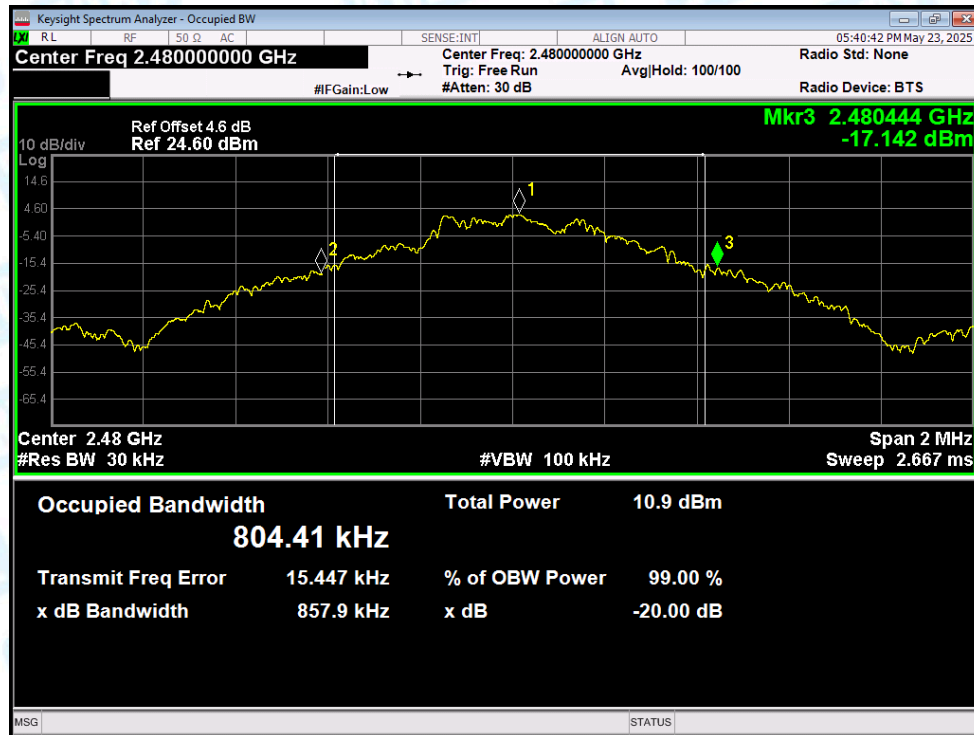
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



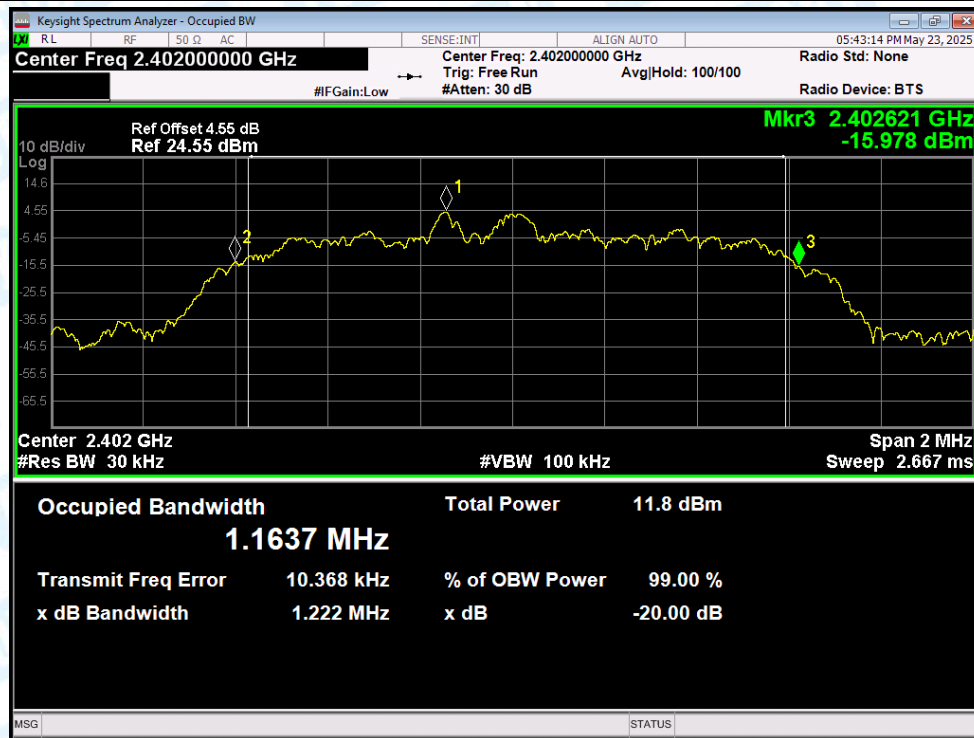
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



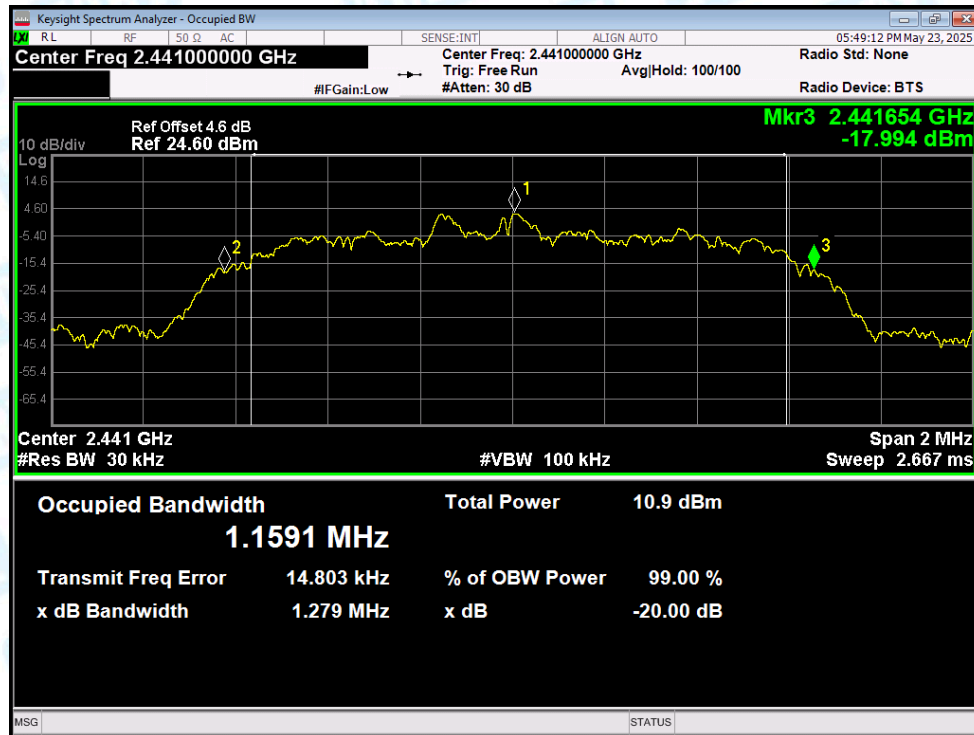
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



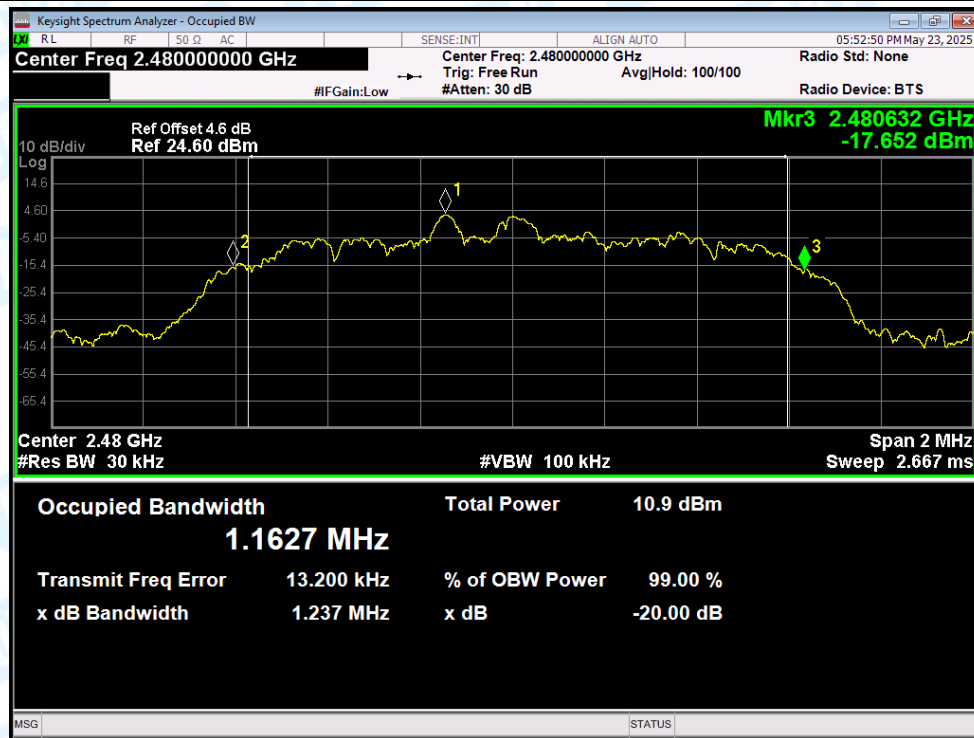
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



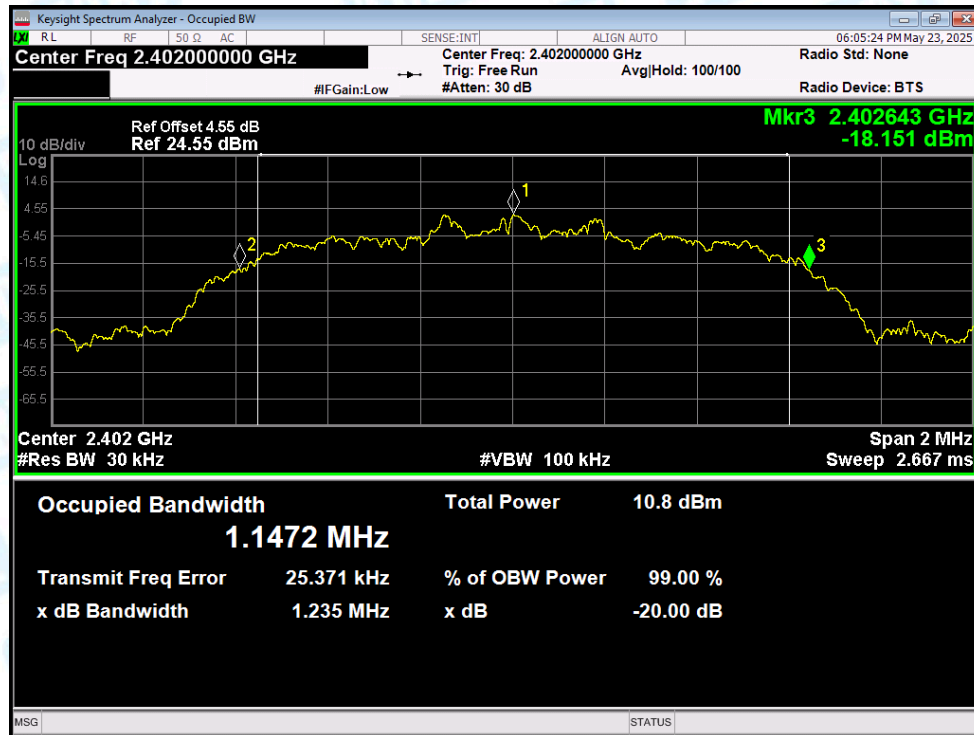
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



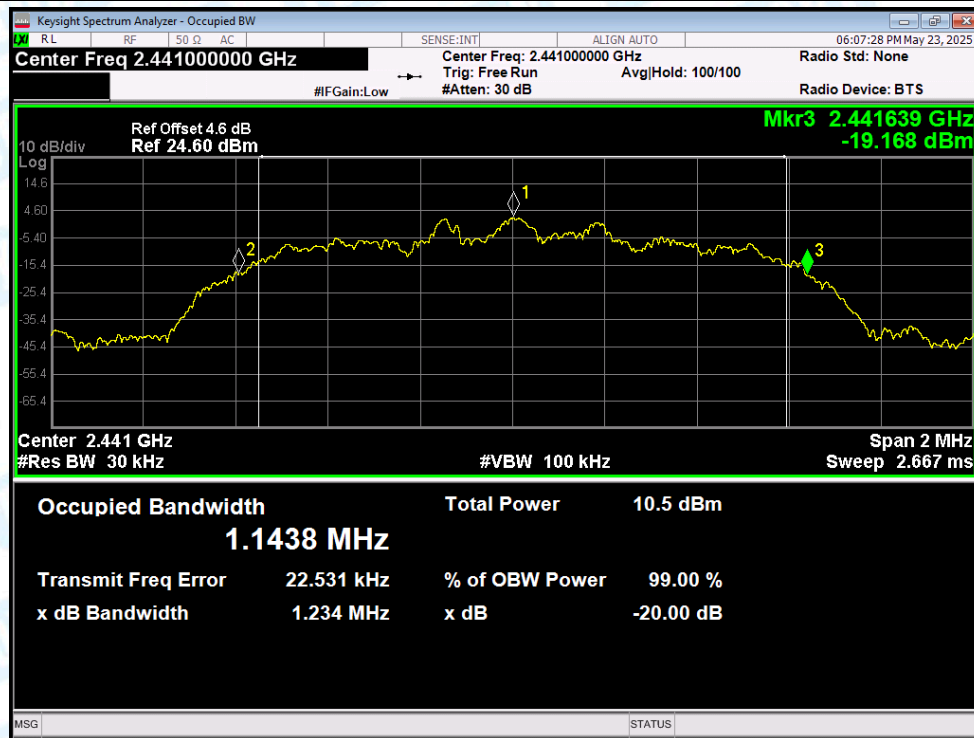
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

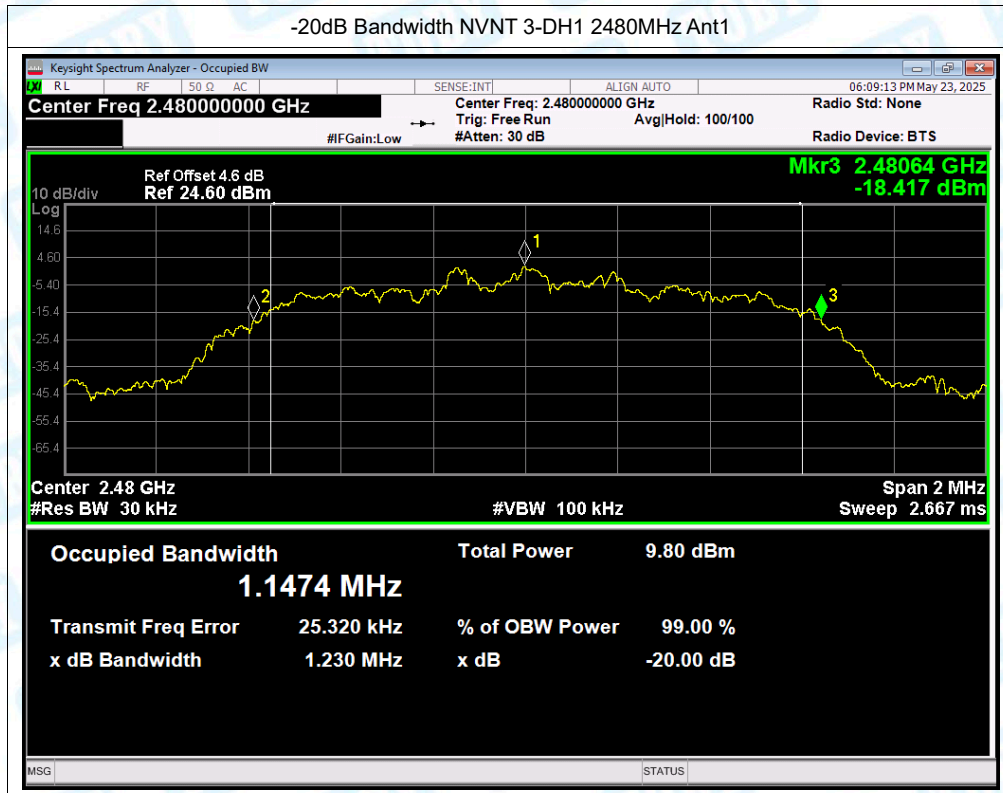


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



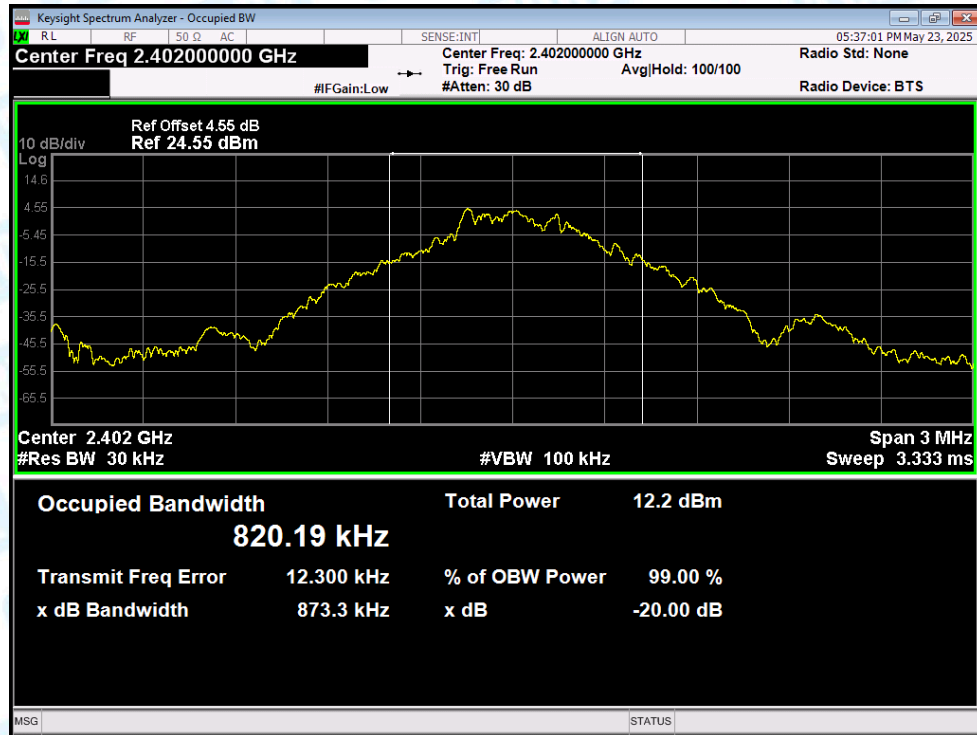


4. Occupied Channel Bandwidth

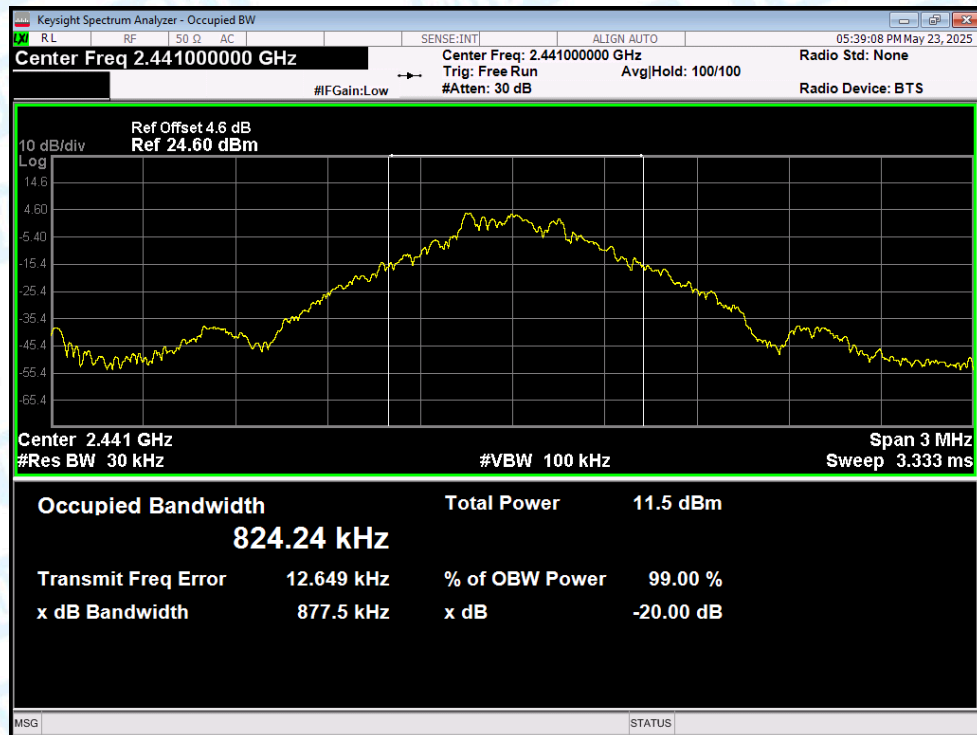
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.82
NVNT	1-DH1	2441	Ant1	0.824
NVNT	1-DH1	2480	Ant1	0.838
NVNT	2-DH1	2402	Ant1	1.153
NVNT	2-DH1	2441	Ant1	1.164
NVNT	2-DH1	2480	Ant1	1.161
NVNT	3-DH1	2402	Ant1	1.152
NVNT	3-DH1	2441	Ant1	1.149
NVNT	3-DH1	2480	Ant1	1.14

Test Graphs

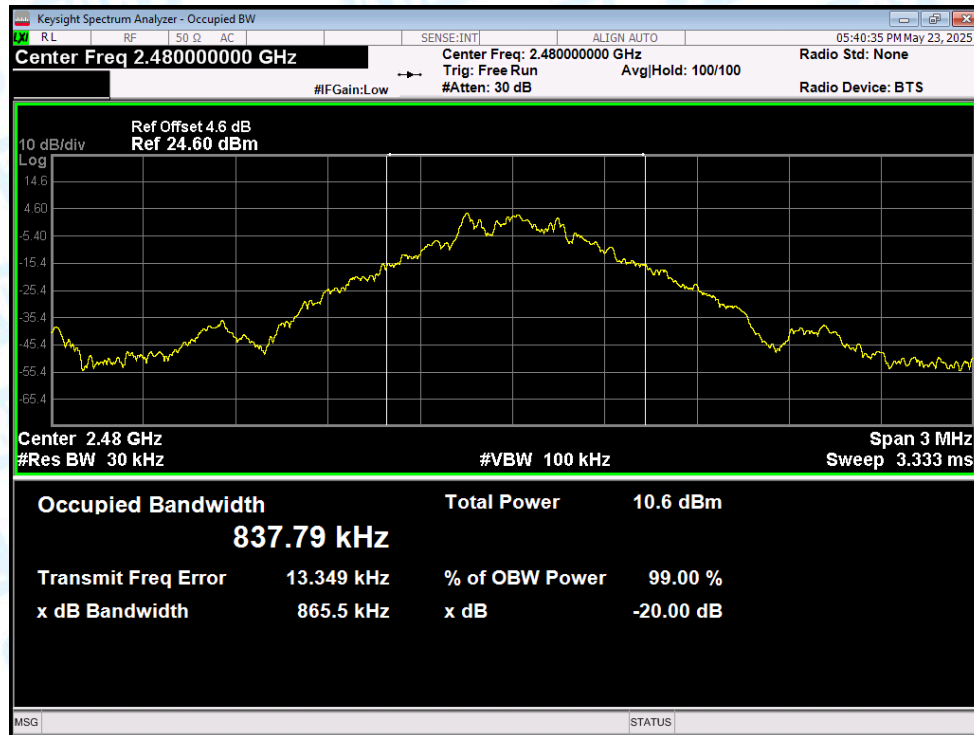
OBW NVNT 1-DH1 2402MHz Ant1



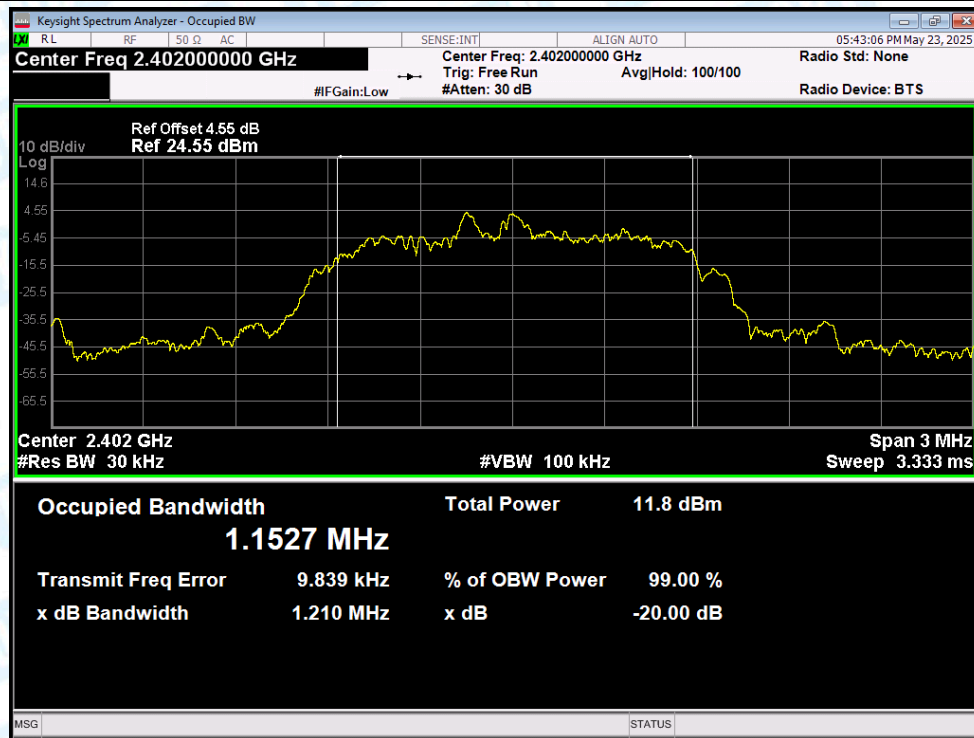
OBW NVNT 1-DH1 2441MHz Ant1



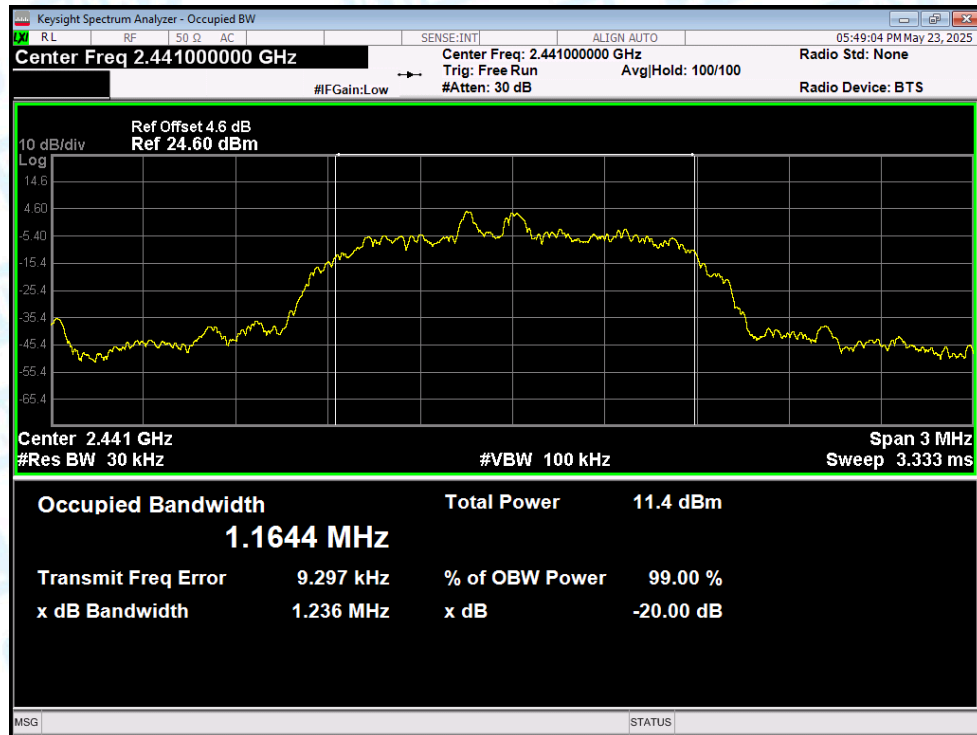
OBW NVNT 1-DH1 2480MHz Ant1



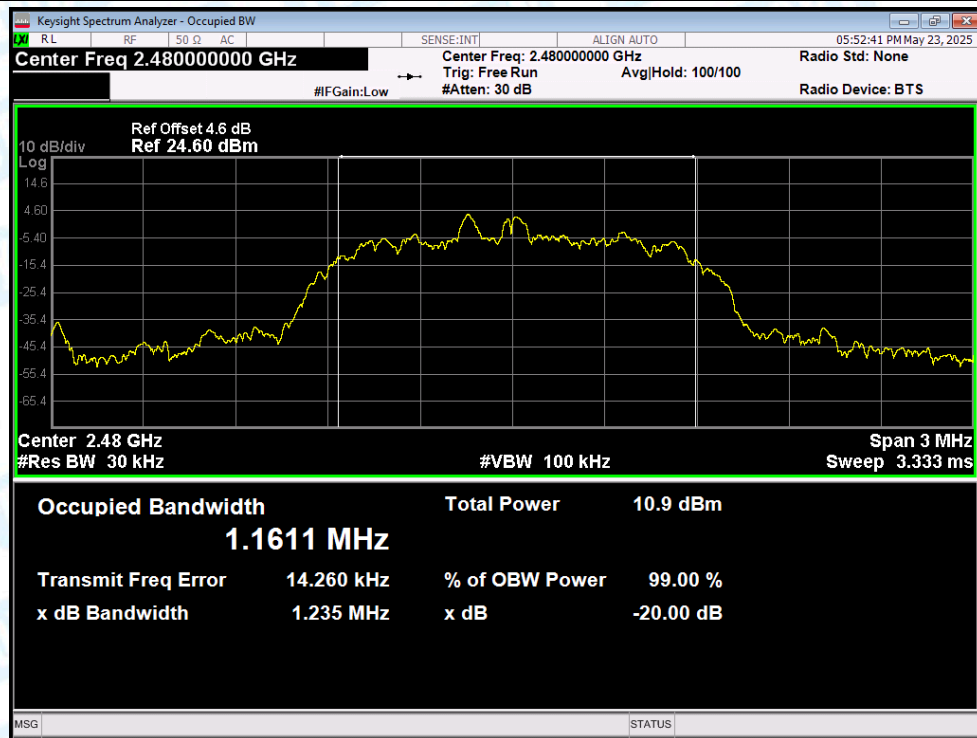
OBW NVNT 2-DH1 2402MHz Ant1



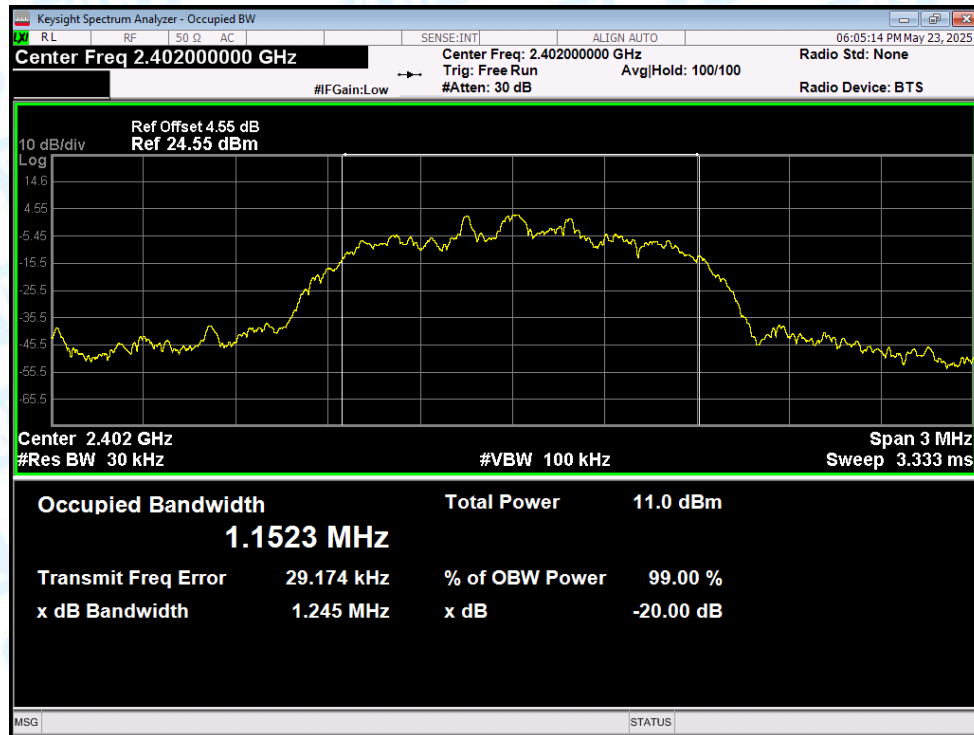
OBW NVNT 2-DH1 2441MHz Ant1



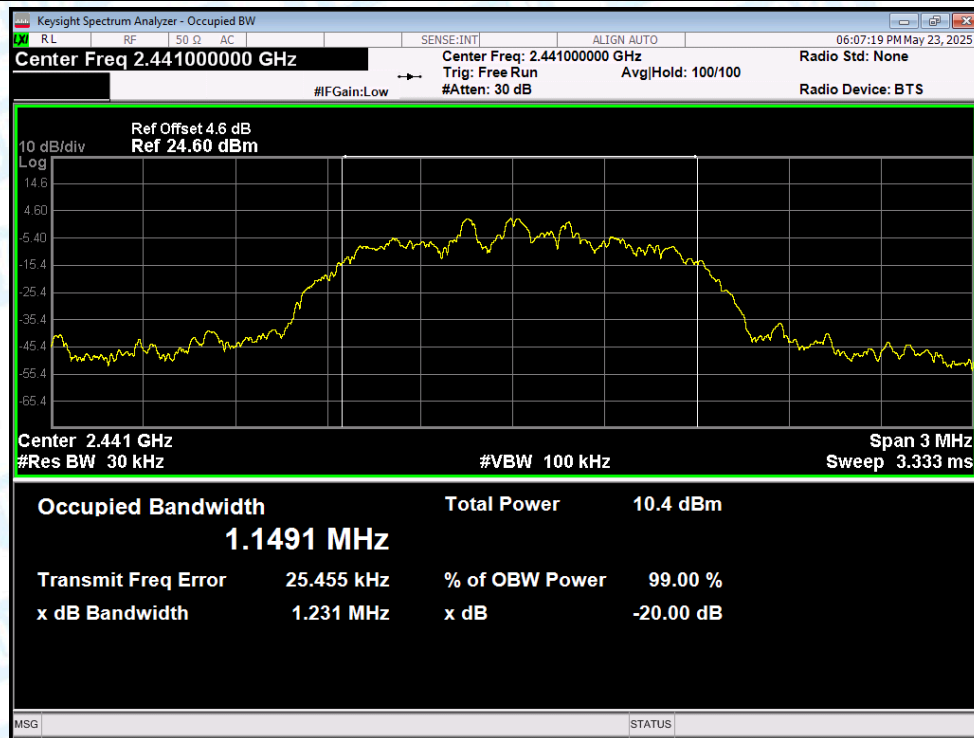
OBW NVNT 2-DH1 2480MHz Ant1

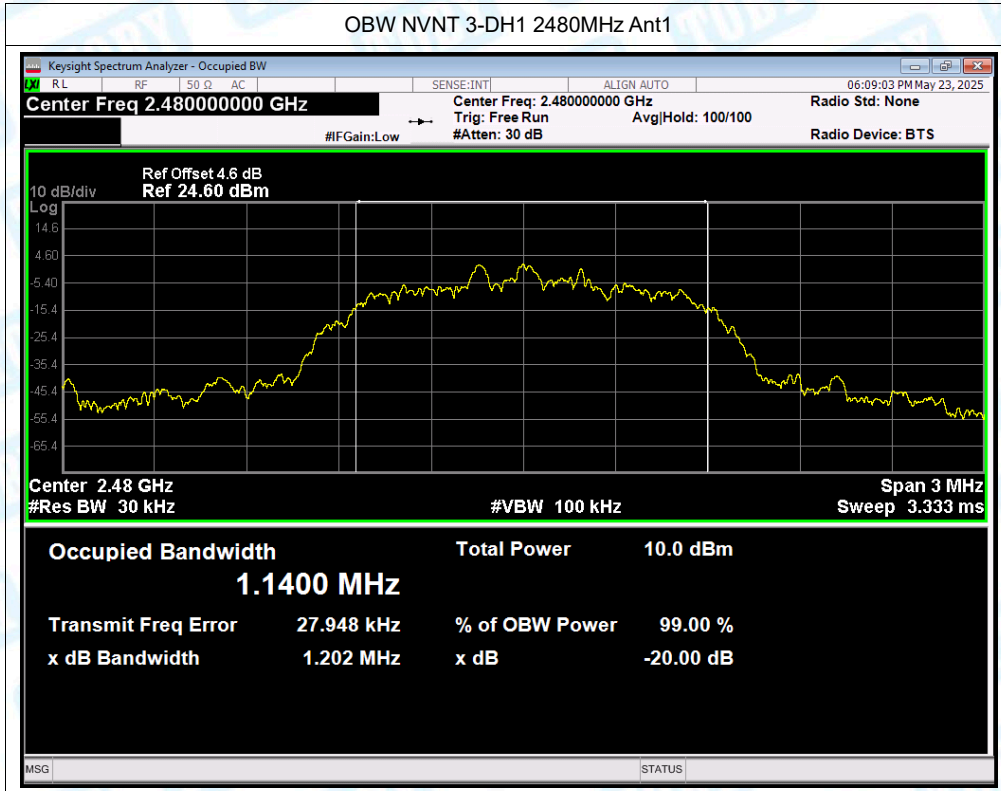


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



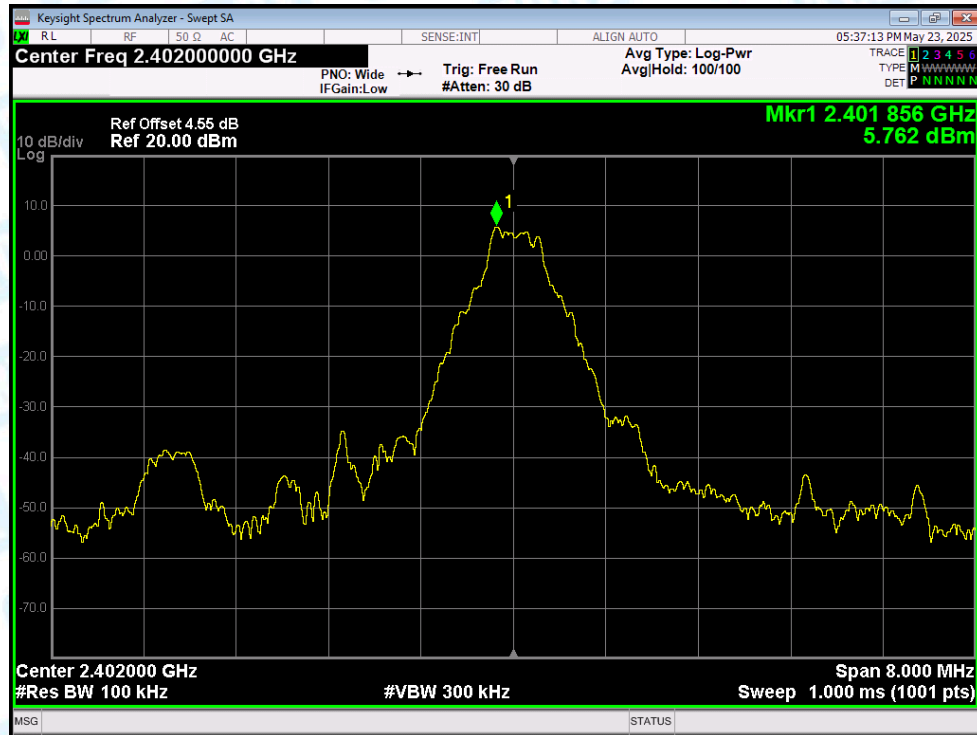


5. Band Edge

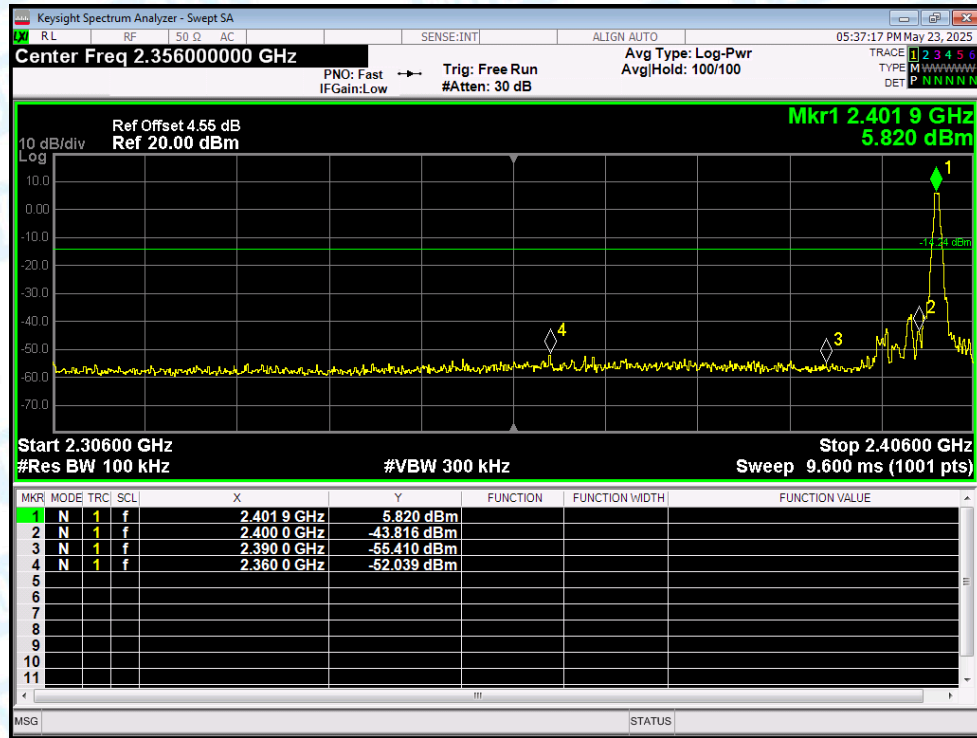
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-57.8	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-53.3	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-58.84	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-54.74	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-58.09	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-51.88	-20	Pass

Test Graphs

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



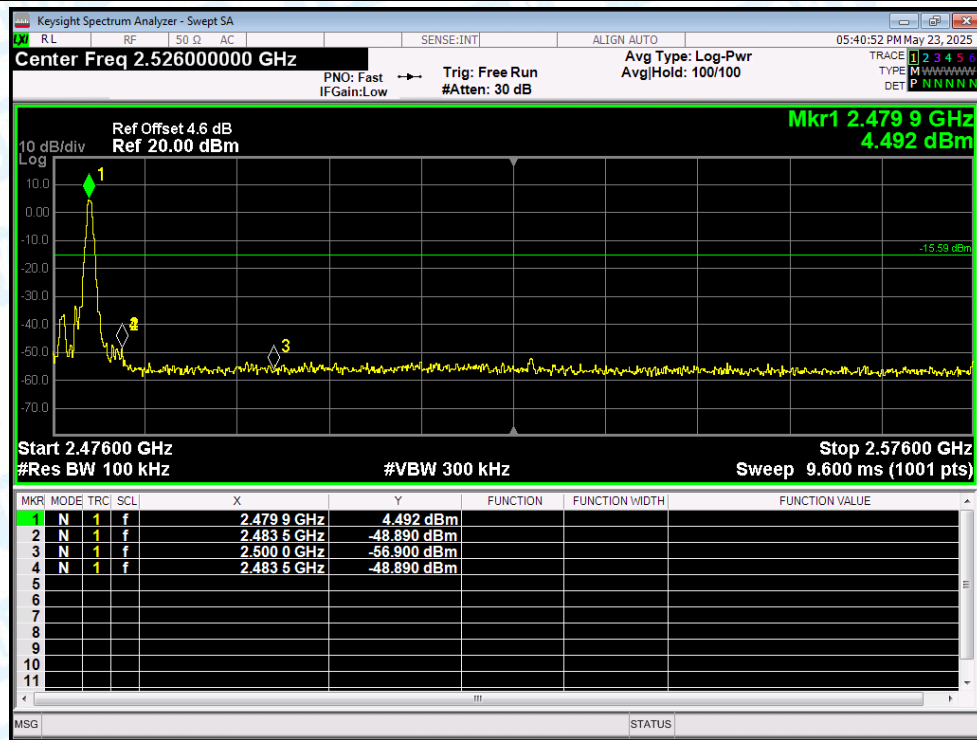
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



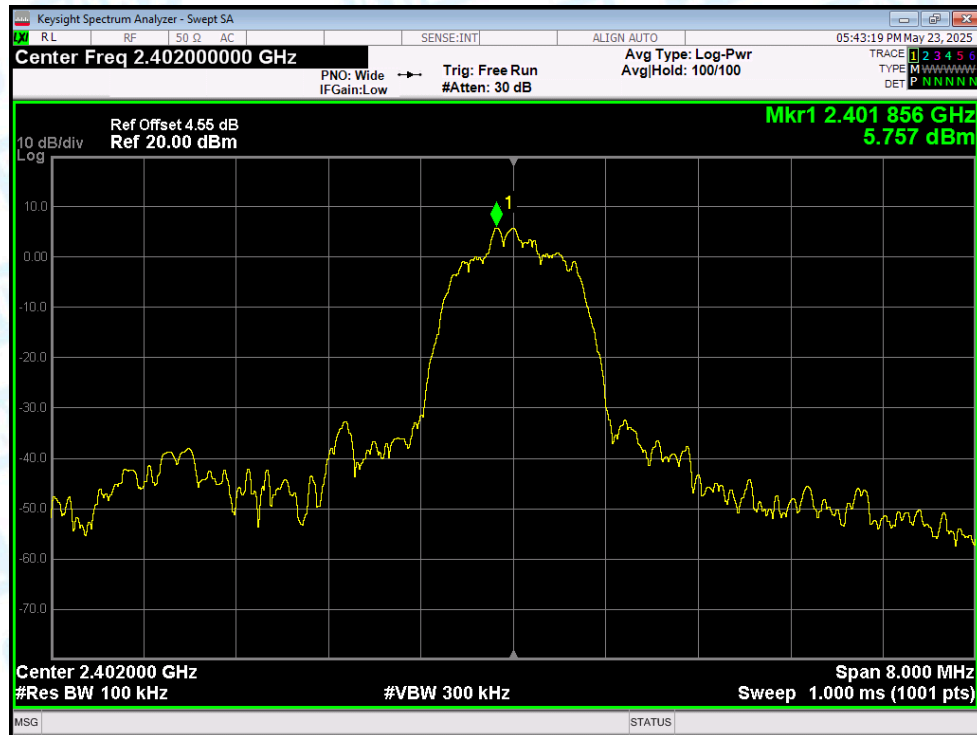
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



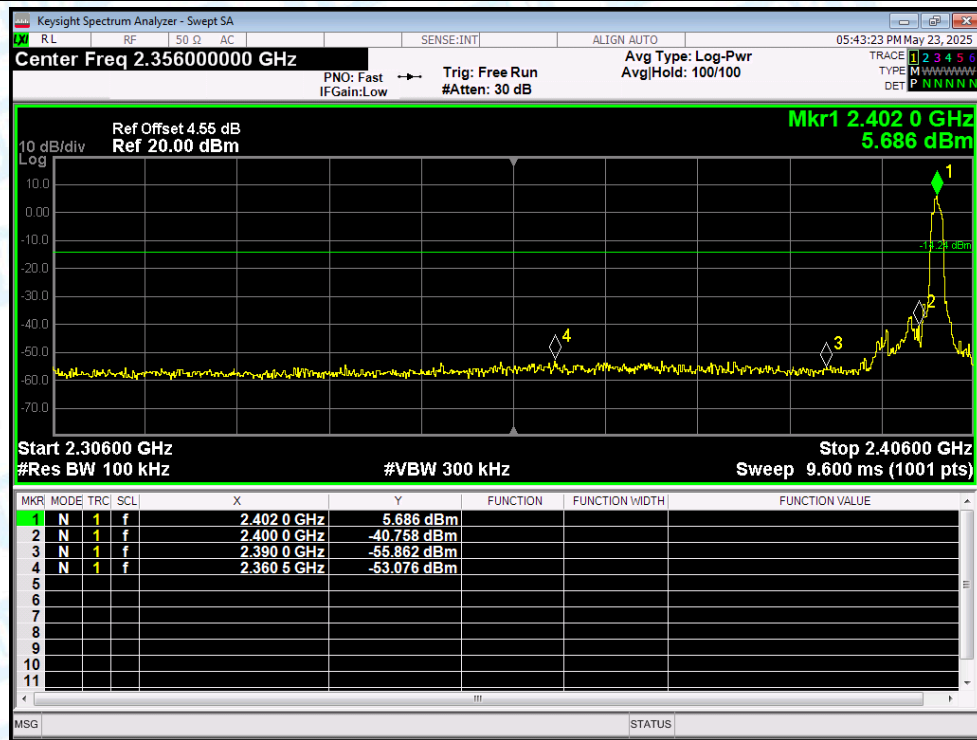
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



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



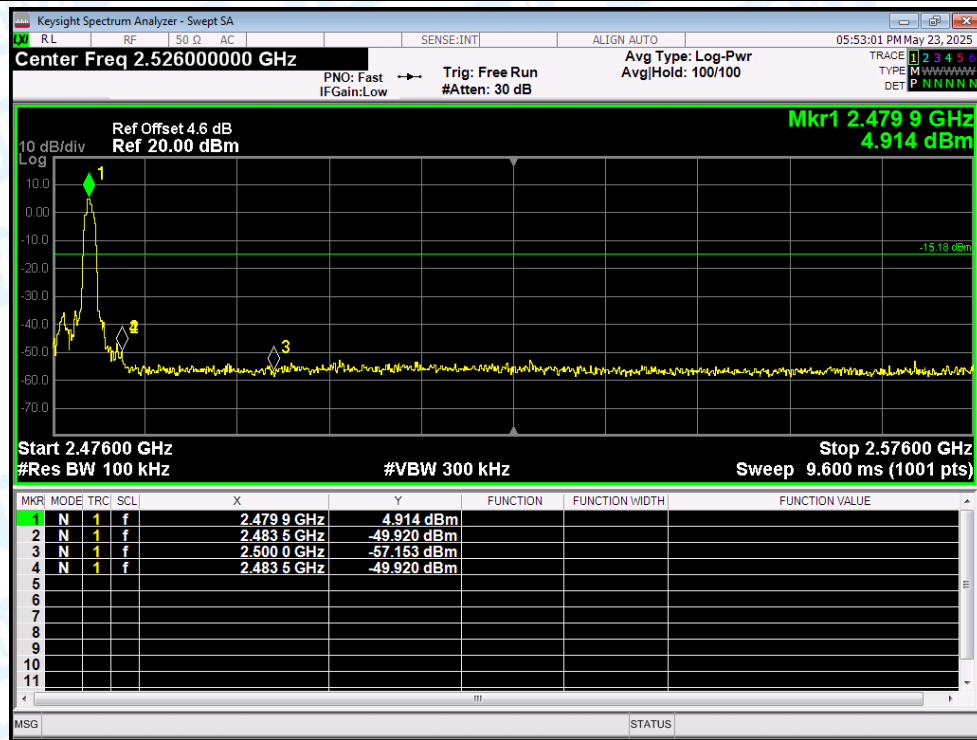
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



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



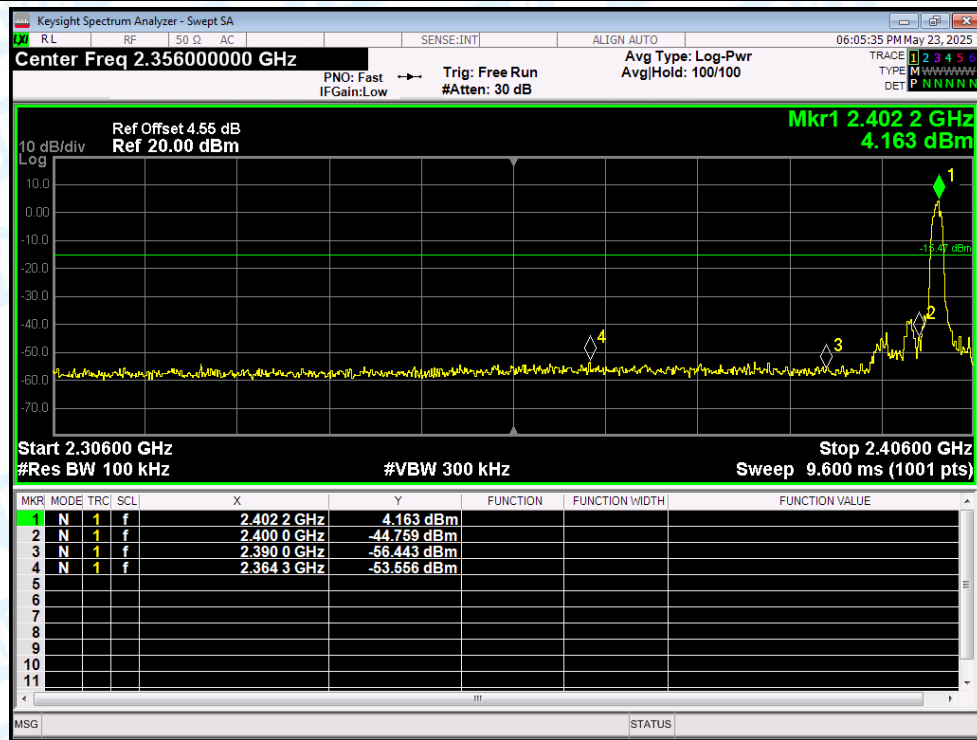
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



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



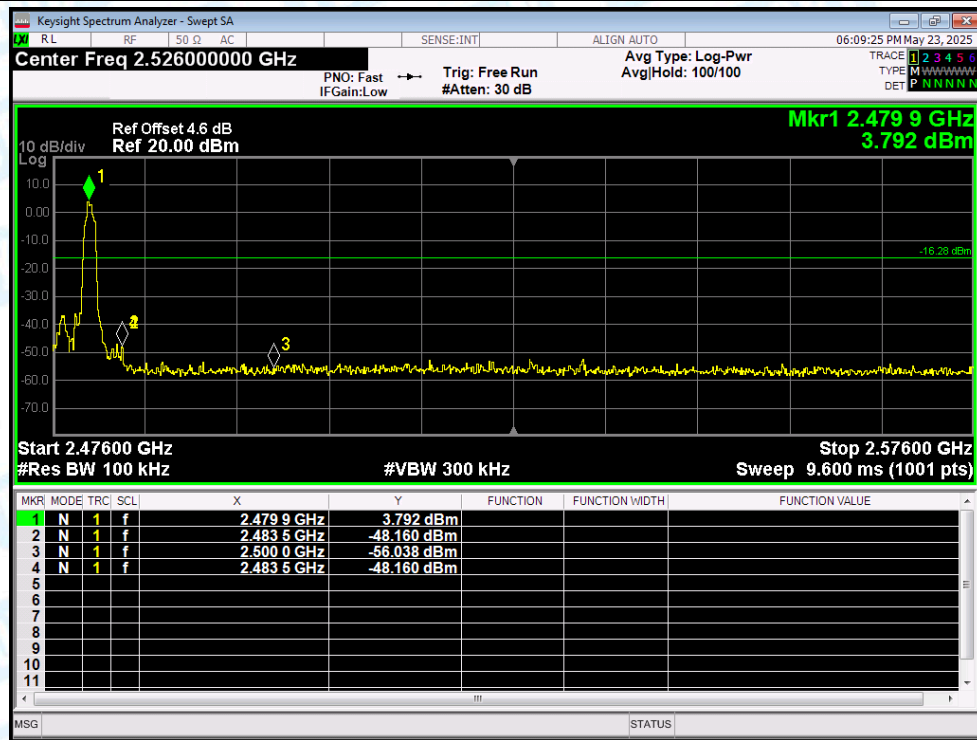
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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

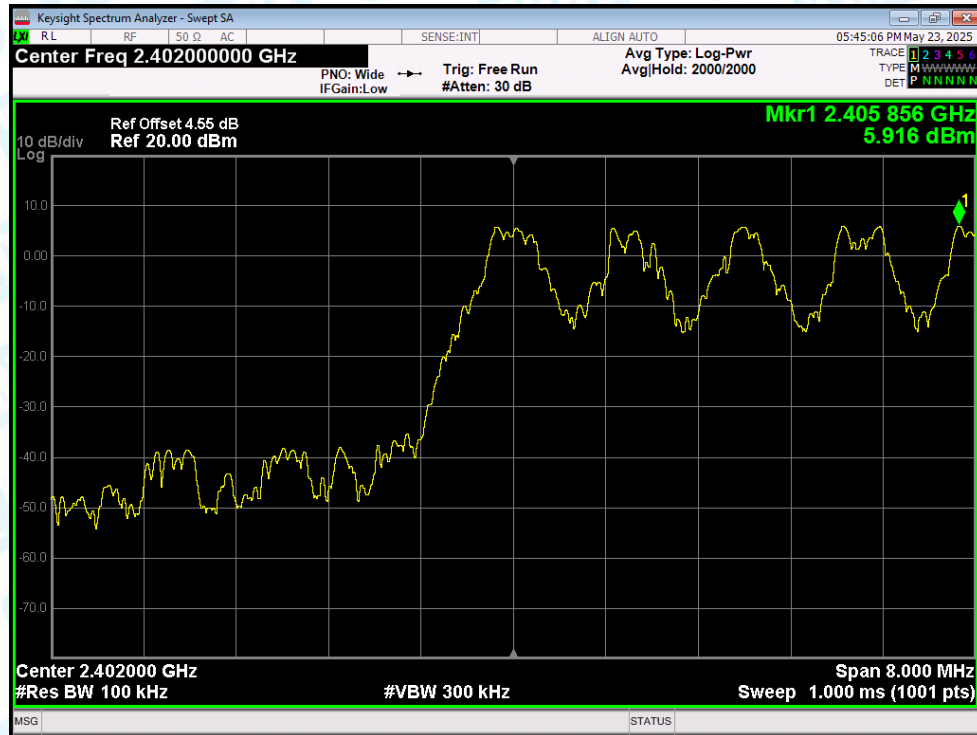


6. Band Edge(Hopping)

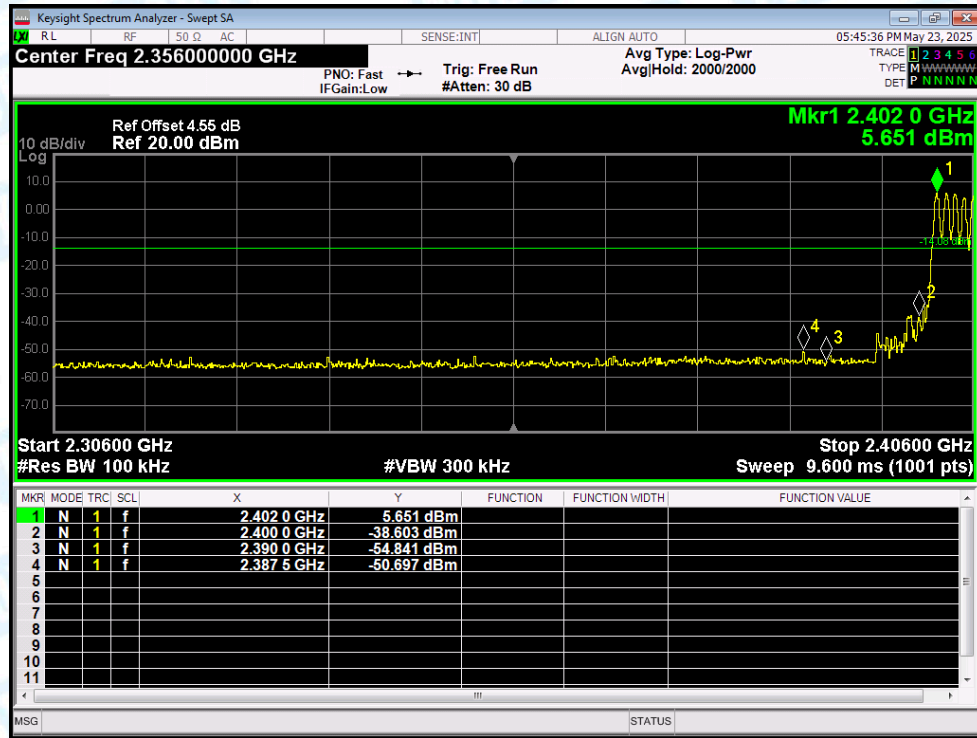
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-56.62	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-56.81	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-58.37	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-57.31	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-57.2	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-56.23	-20	Pass

Test Graphs

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



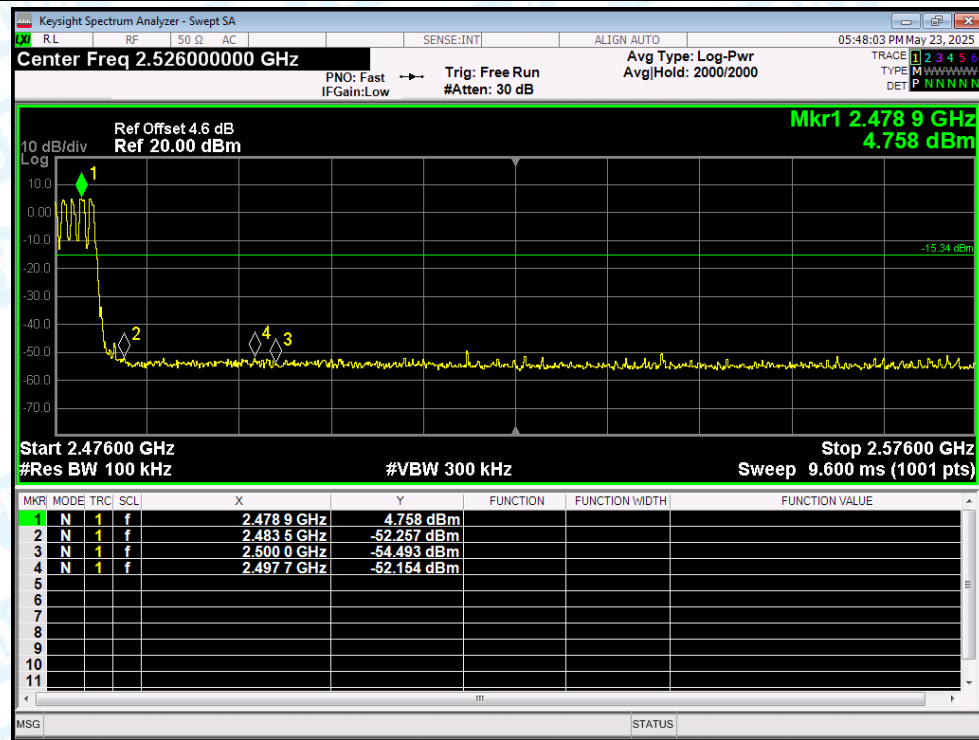
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



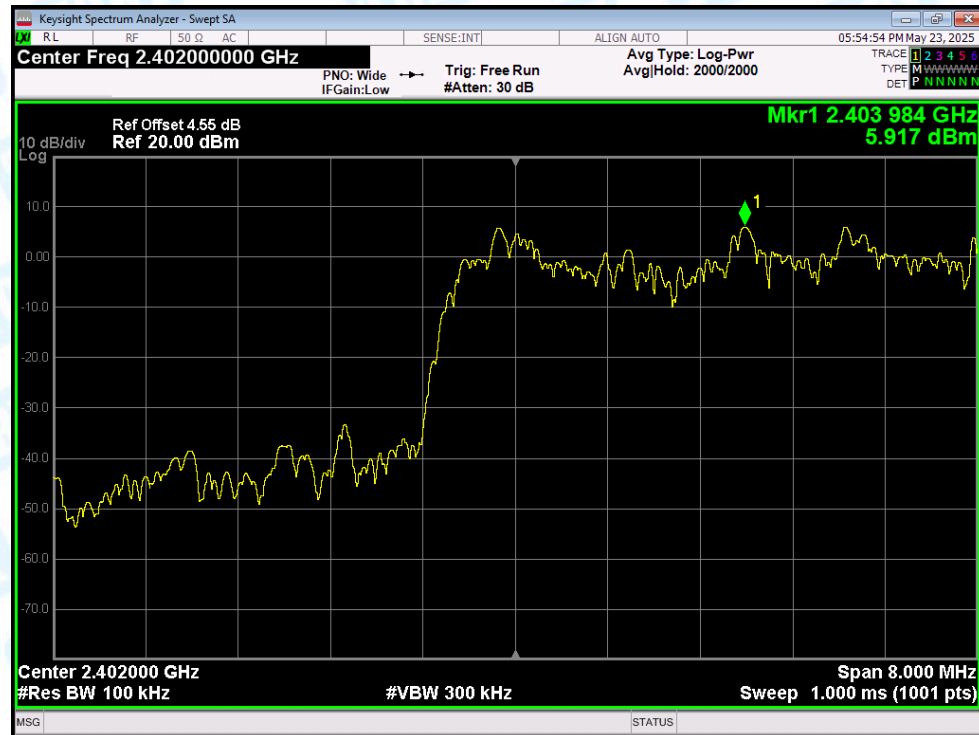
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



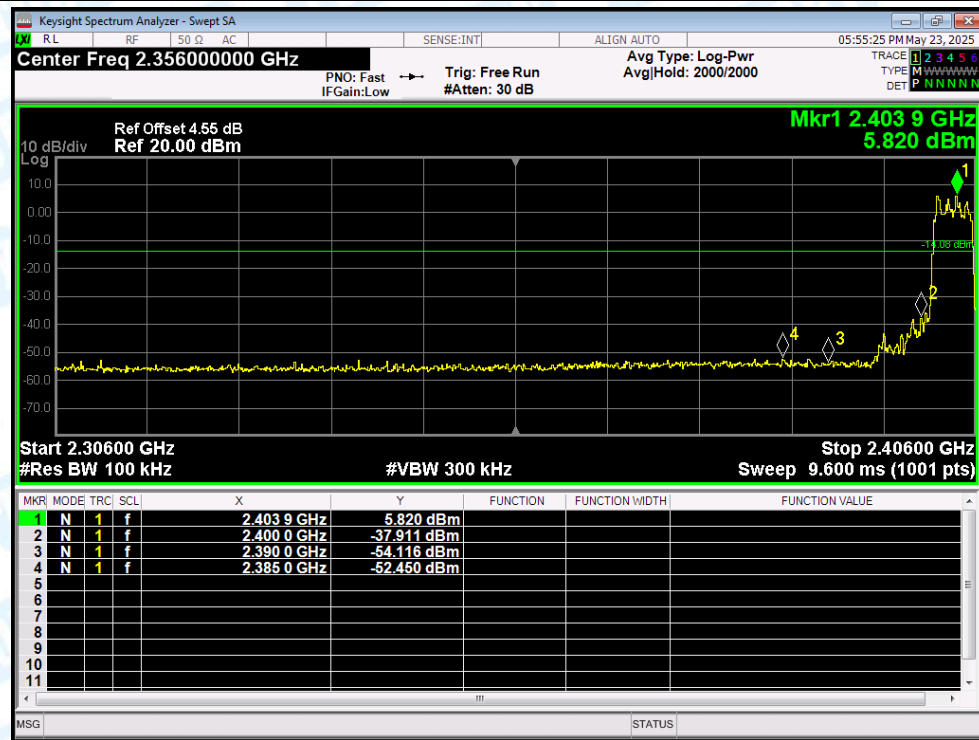
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



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



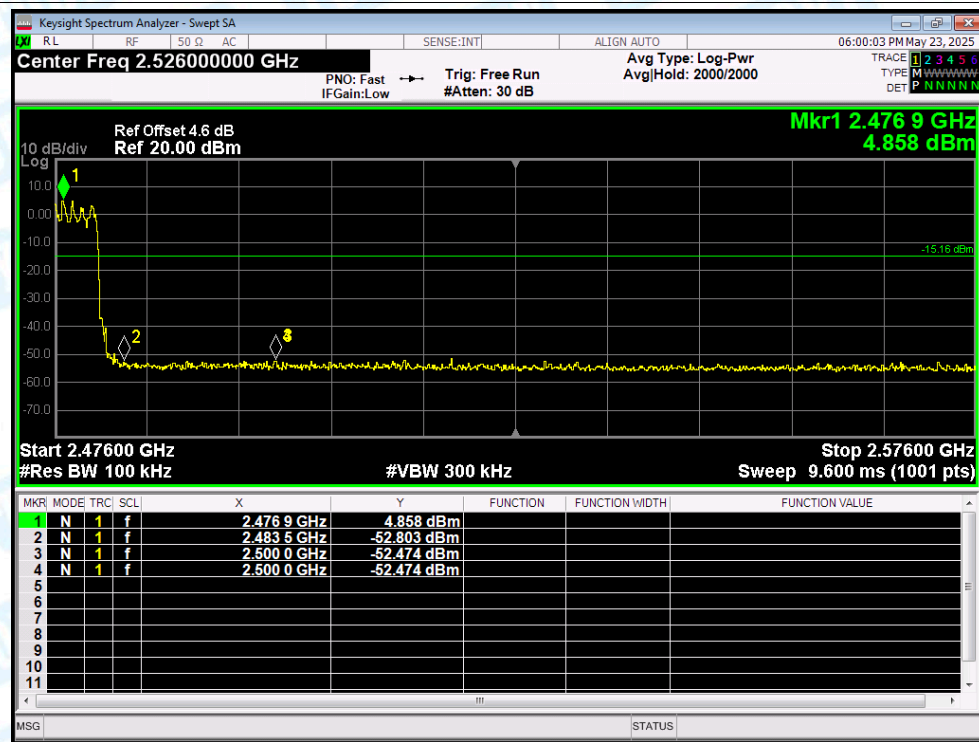
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission

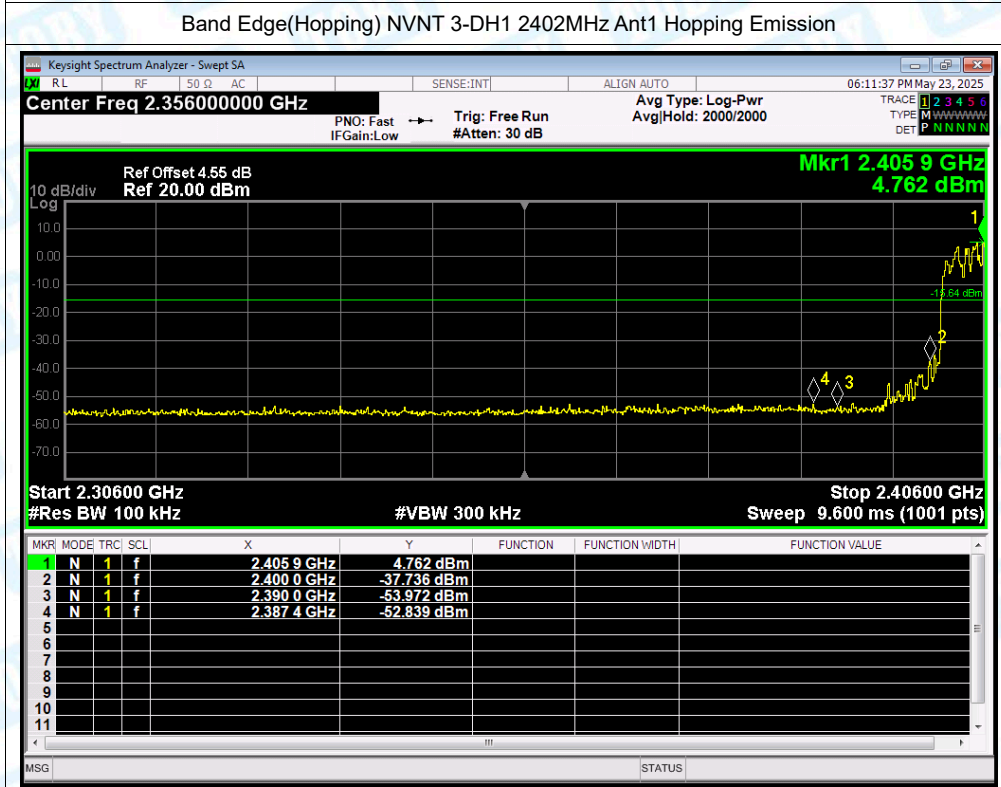
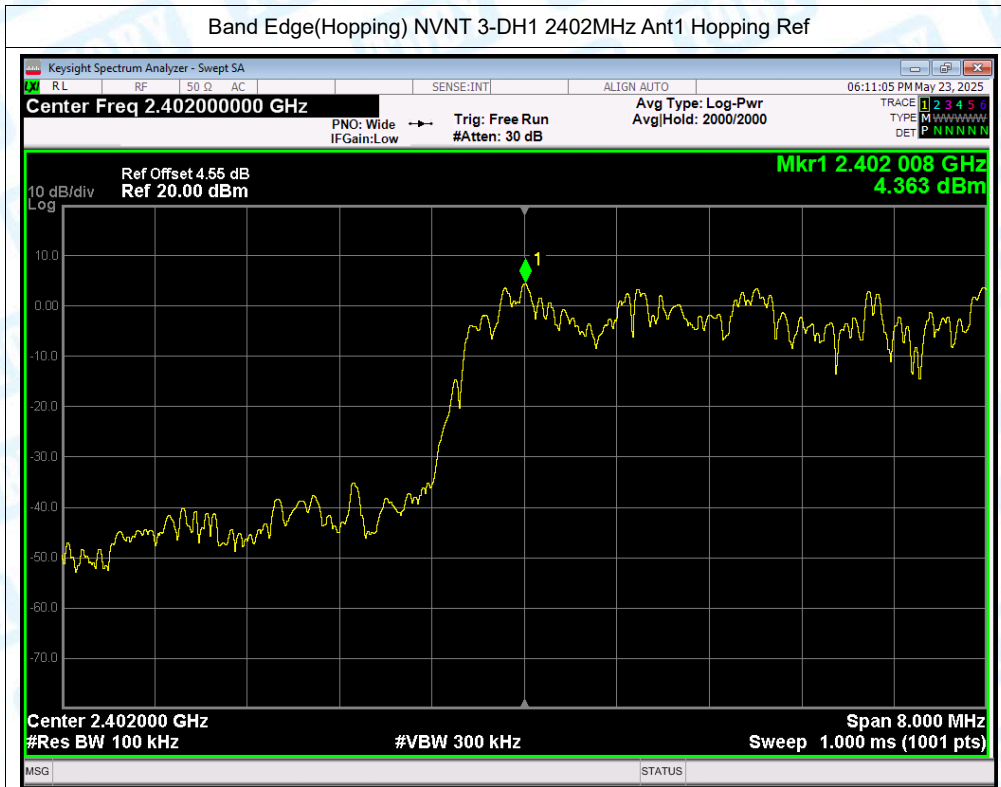


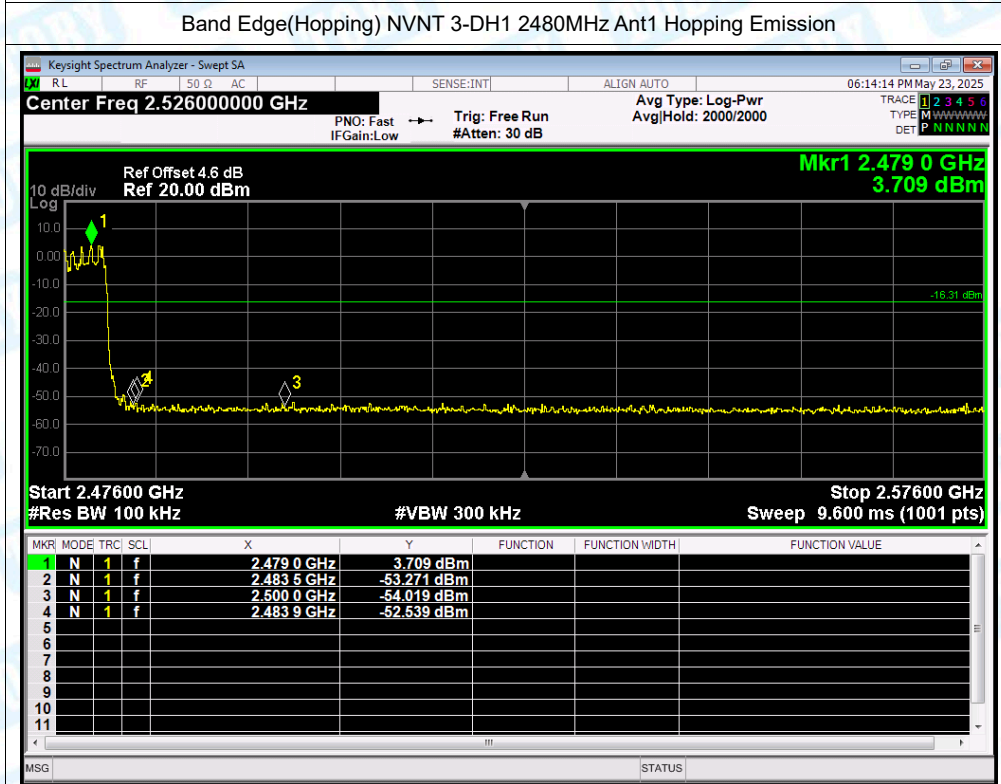
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref



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





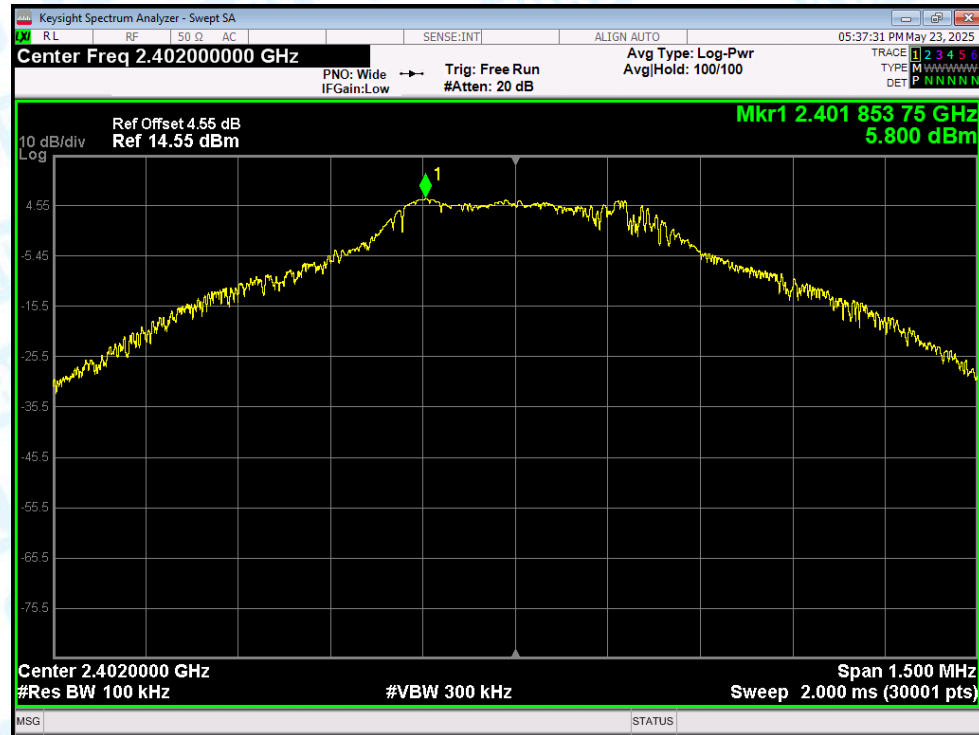


7. Conducted RF Spurious Emission

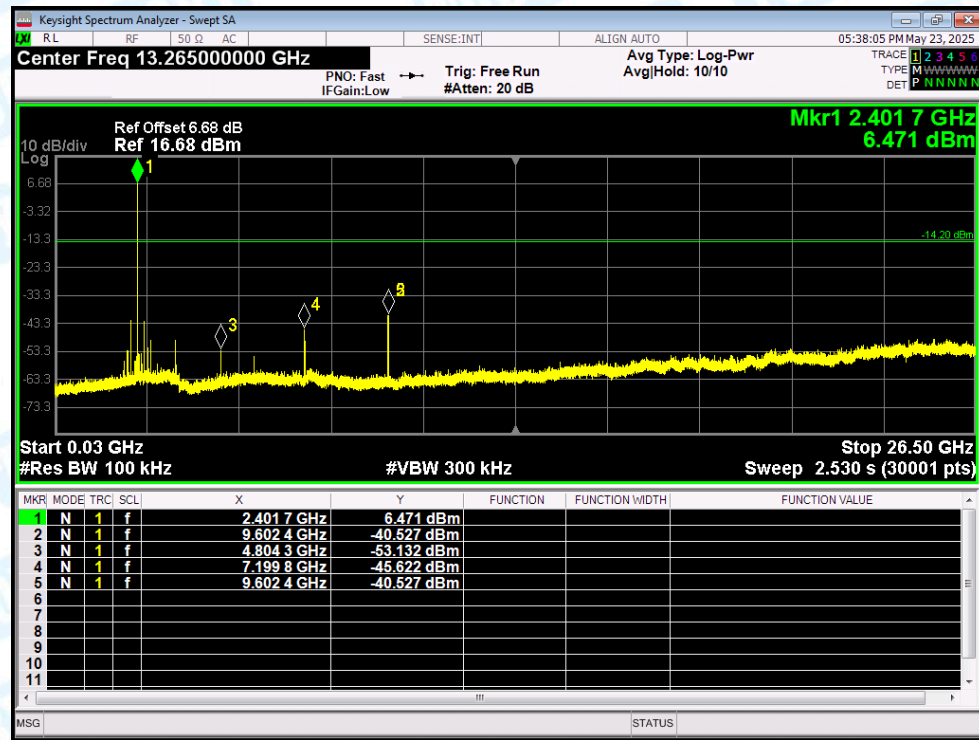
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-46.33	-20	Pass
NVNT	1-DH1	2441	Ant1	-45.81	-20	Pass
NVNT	1-DH1	2480	Ant1	-44.06	-20	Pass
NVNT	2-DH1	2402	Ant1	-46.42	-20	Pass
NVNT	2-DH1	2441	Ant1	-45.66	-20	Pass
NVNT	2-DH1	2480	Ant1	-44.06	-20	Pass
NVNT	3-DH1	2402	Ant1	-45.05	-20	Pass
NVNT	3-DH1	2441	Ant1	-45.63	-20	Pass
NVNT	3-DH1	2480	Ant1	-45.33	-20	Pass

Test Graphs

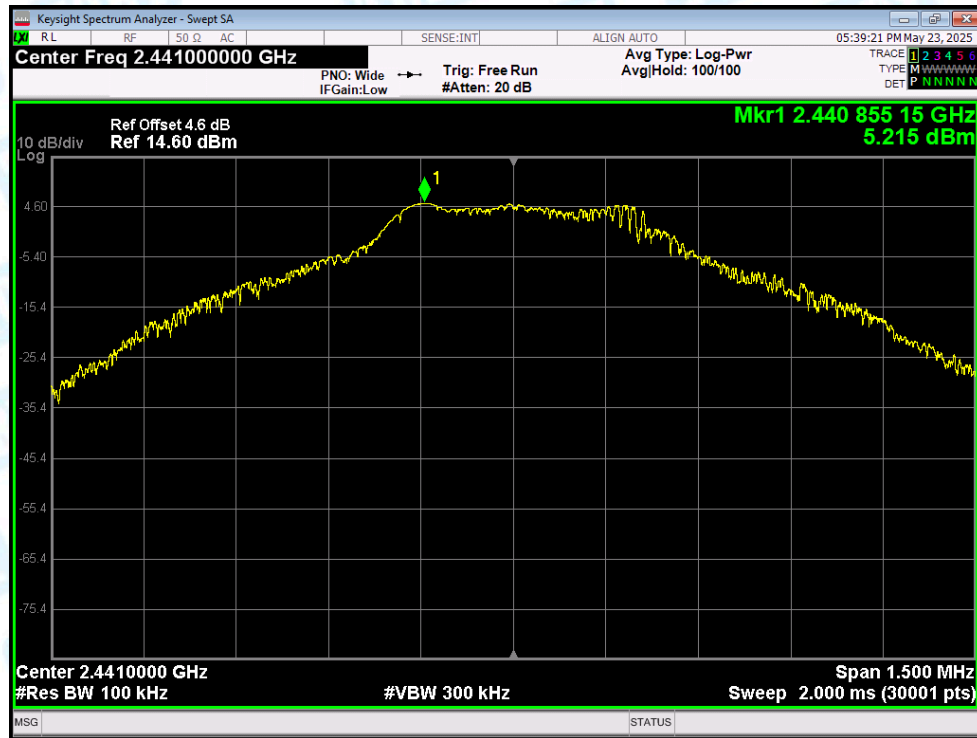
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



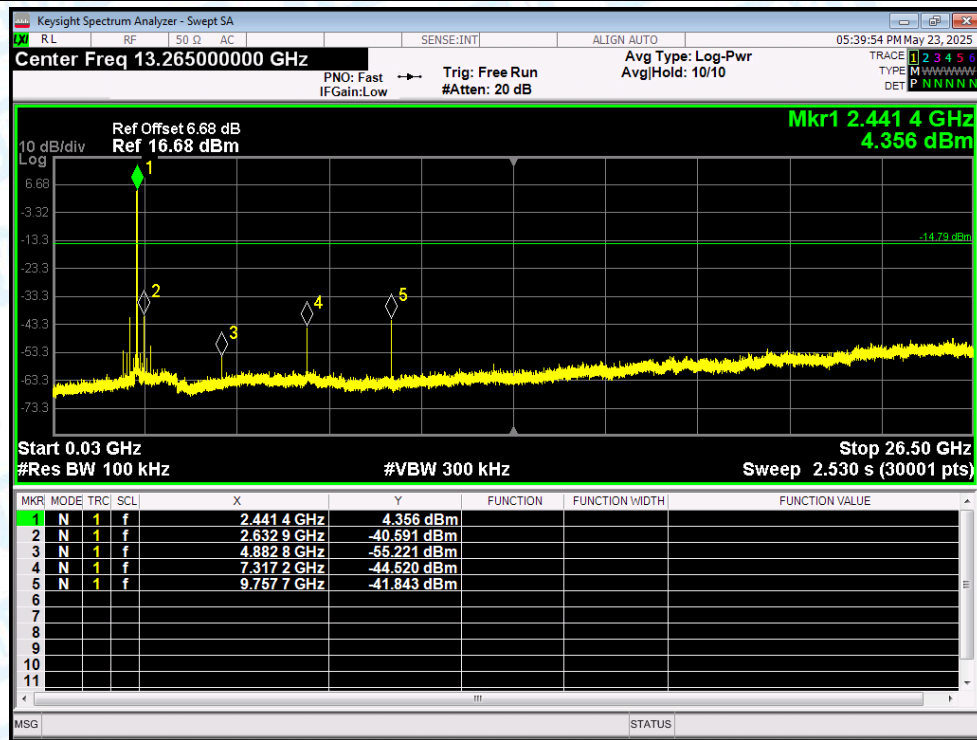
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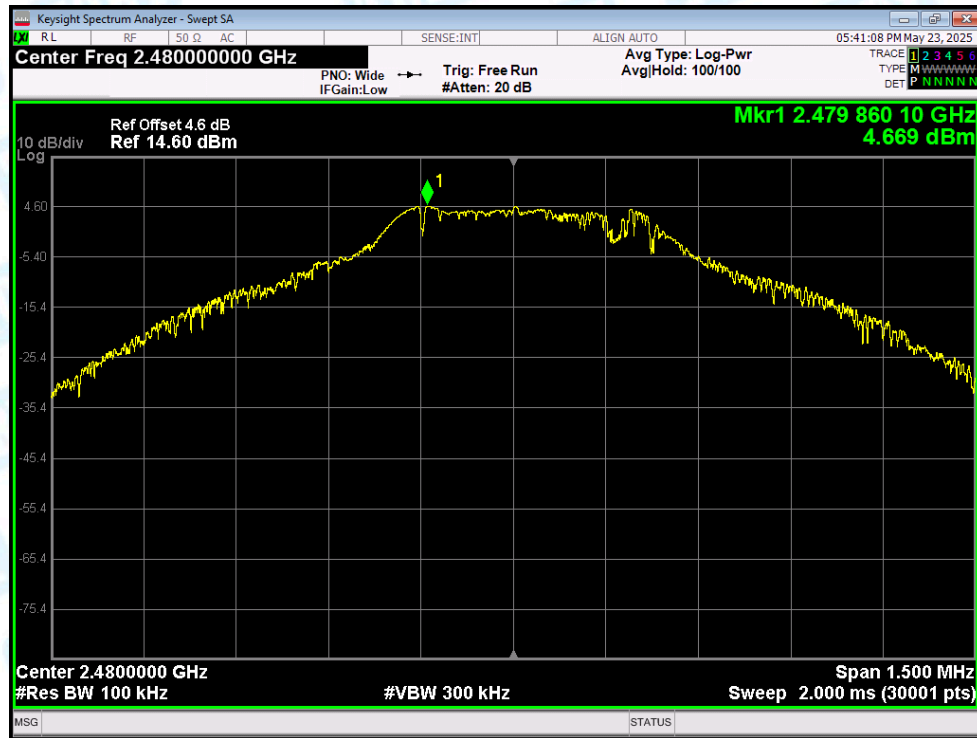
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



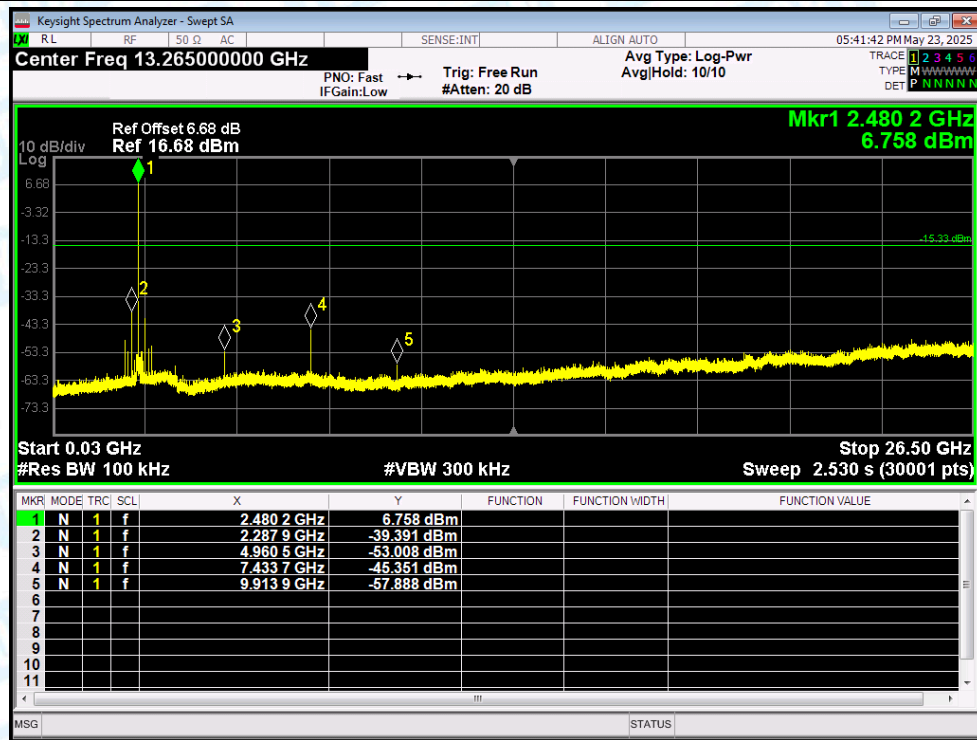
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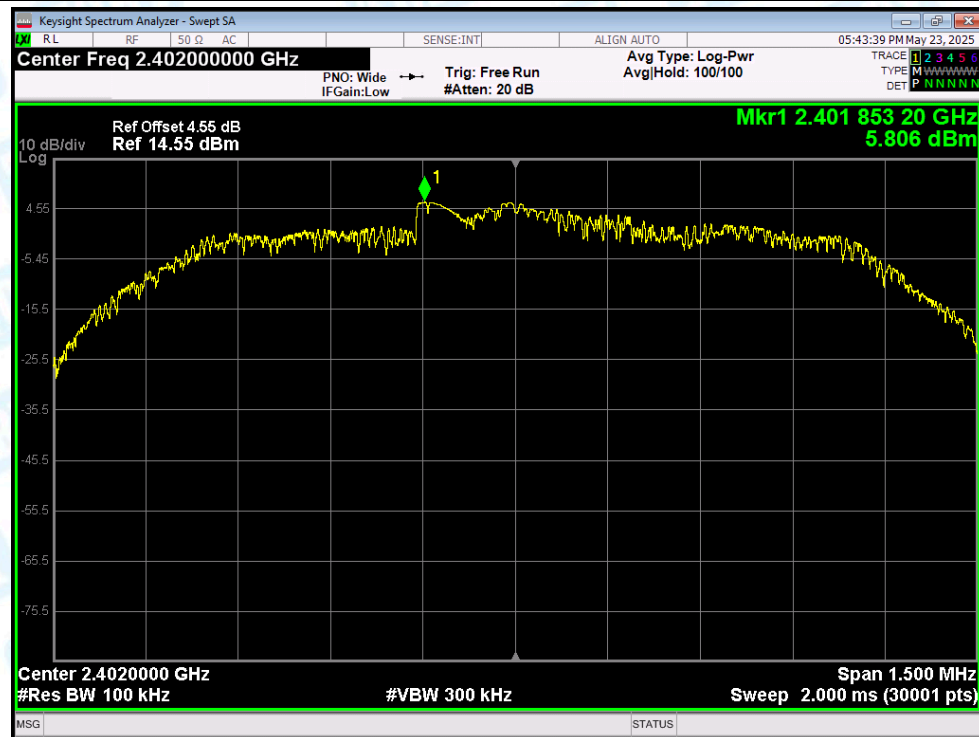
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



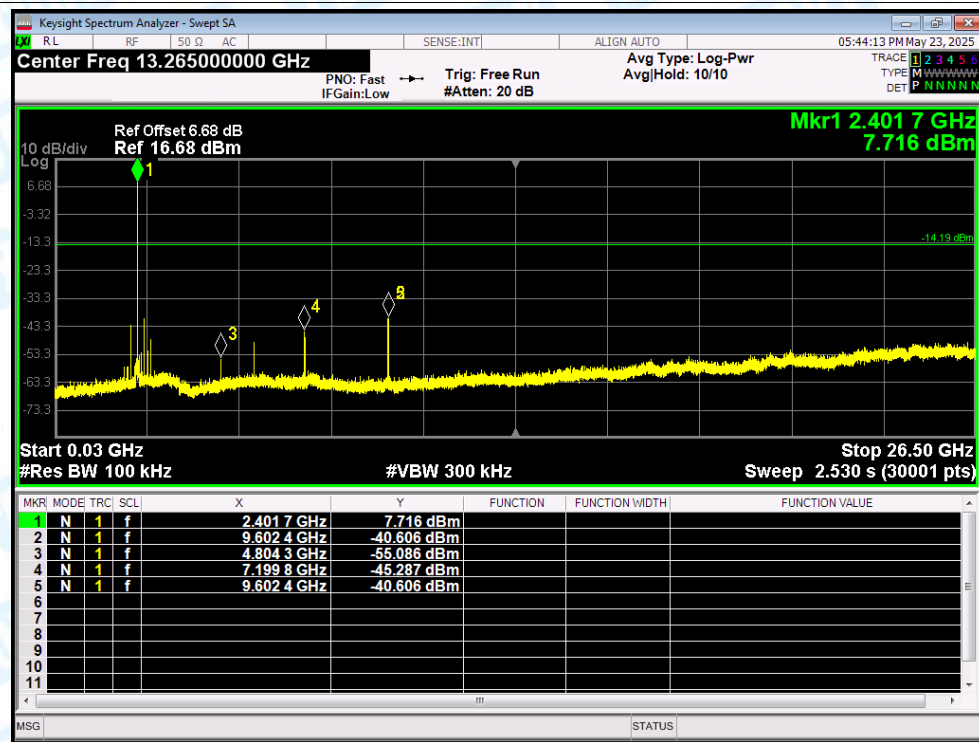
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



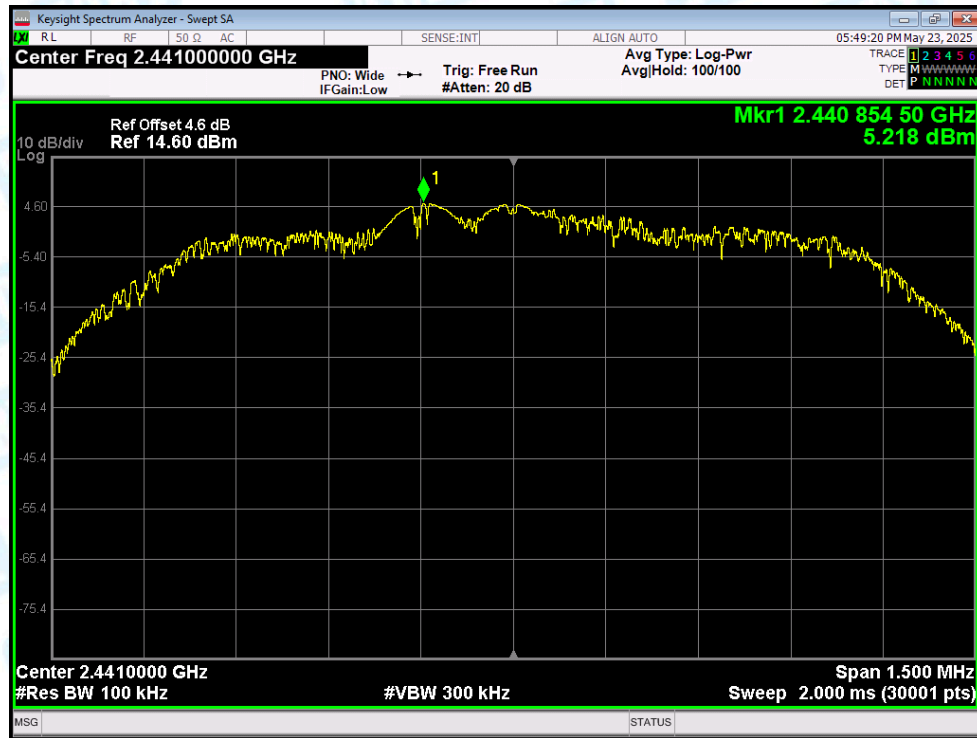
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



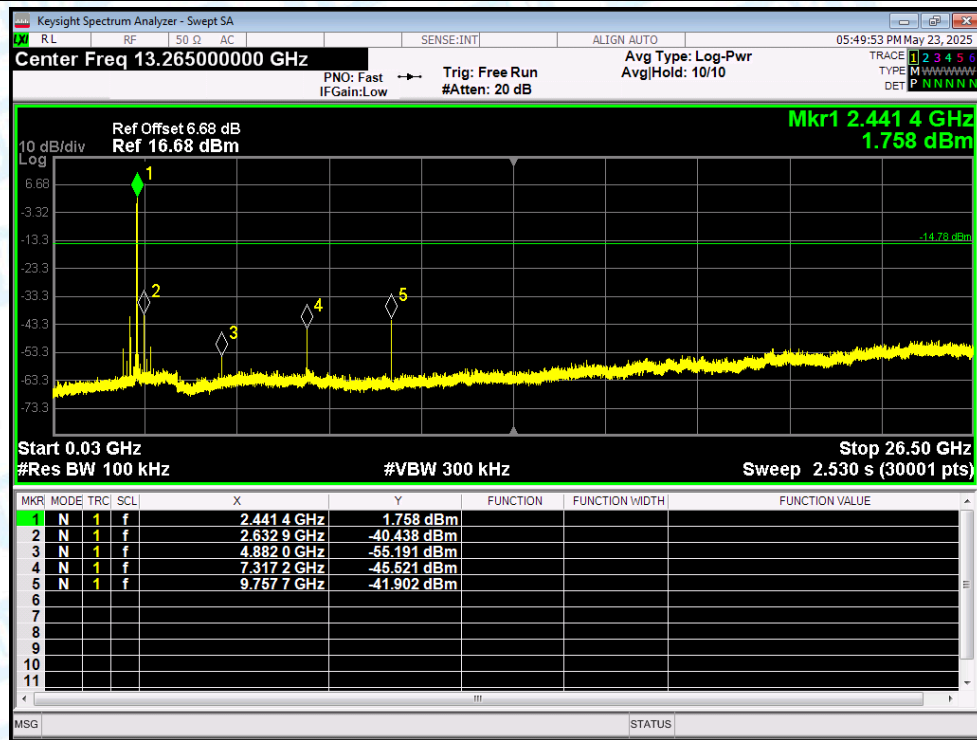
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



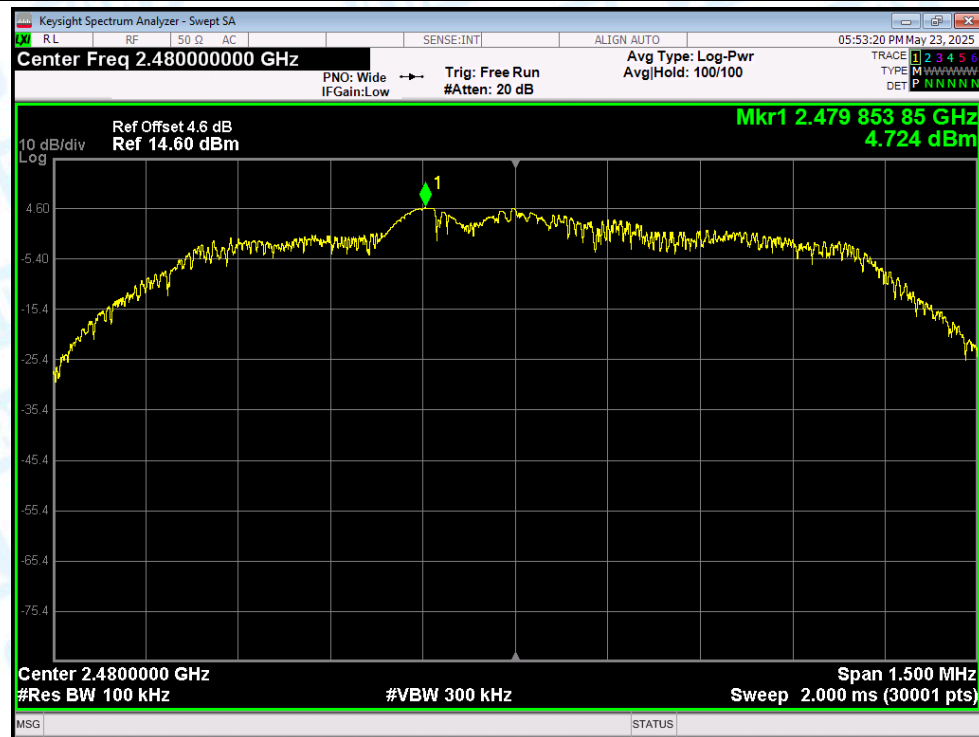
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



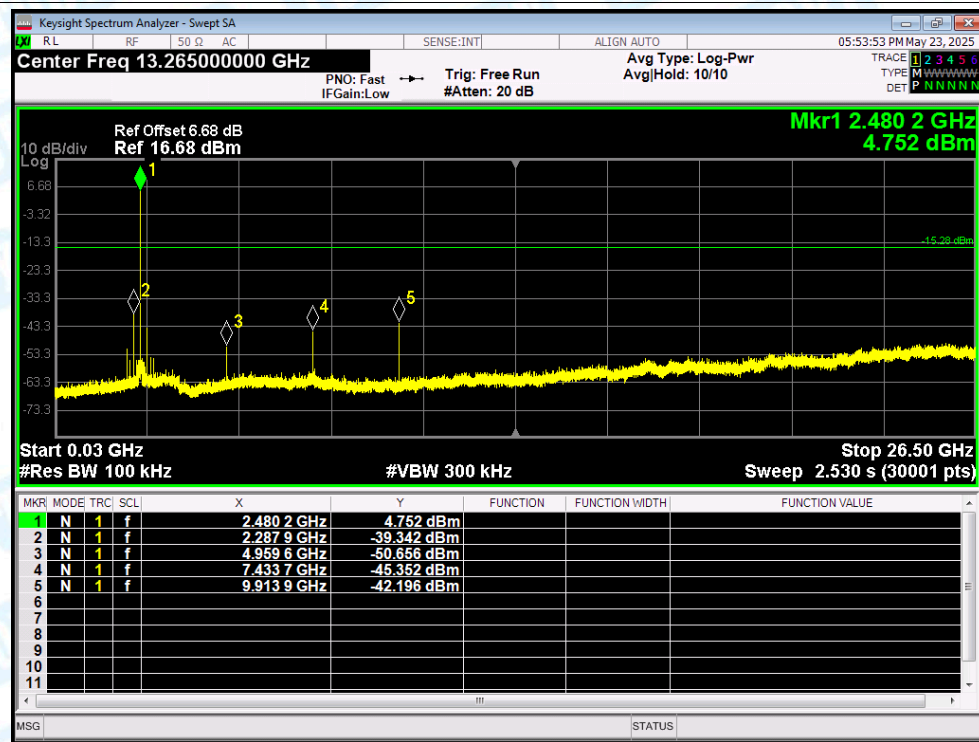
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



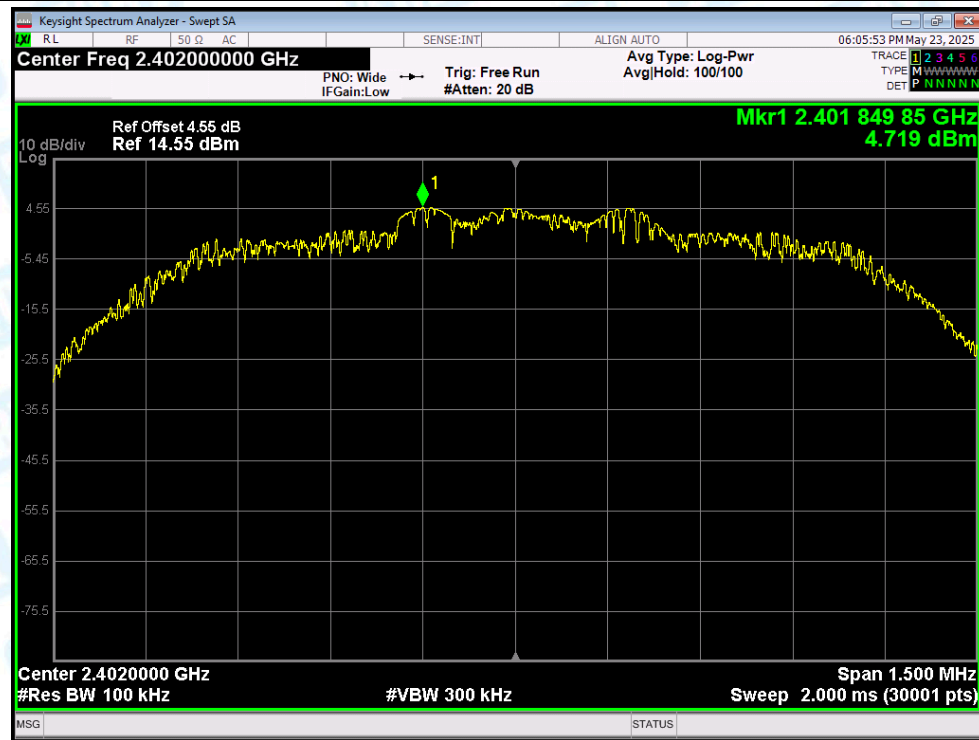
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



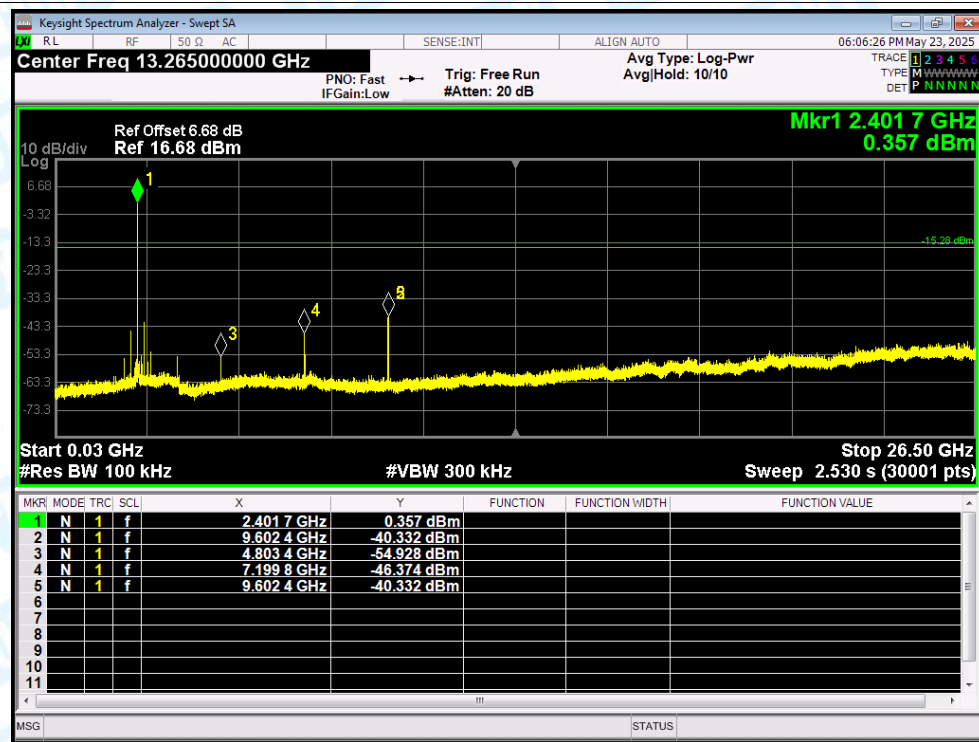
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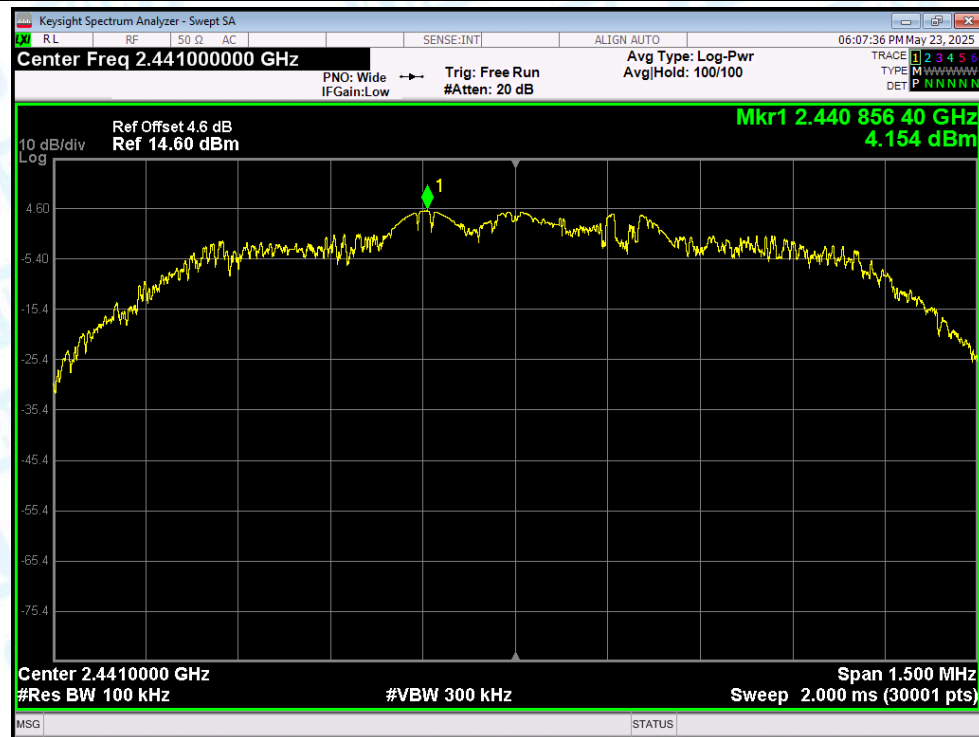
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



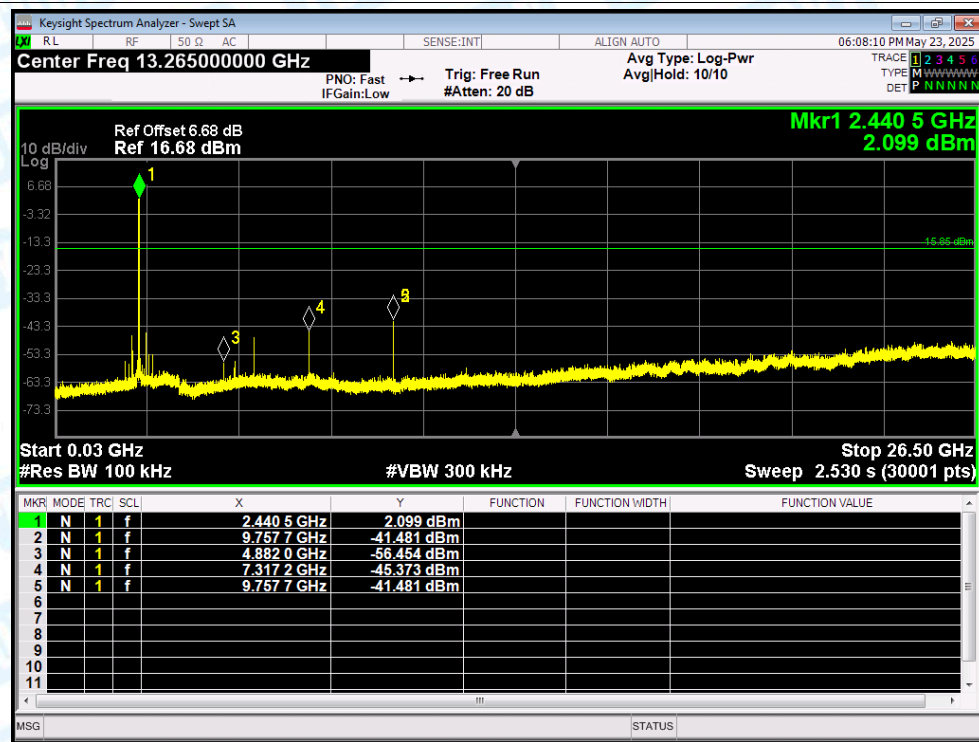
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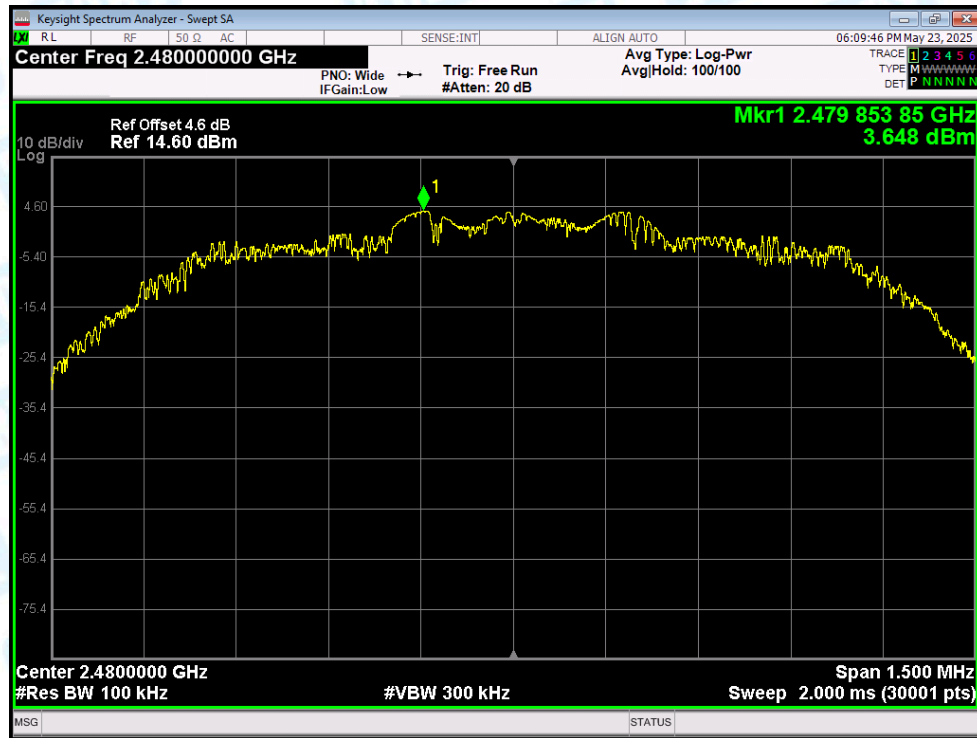
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



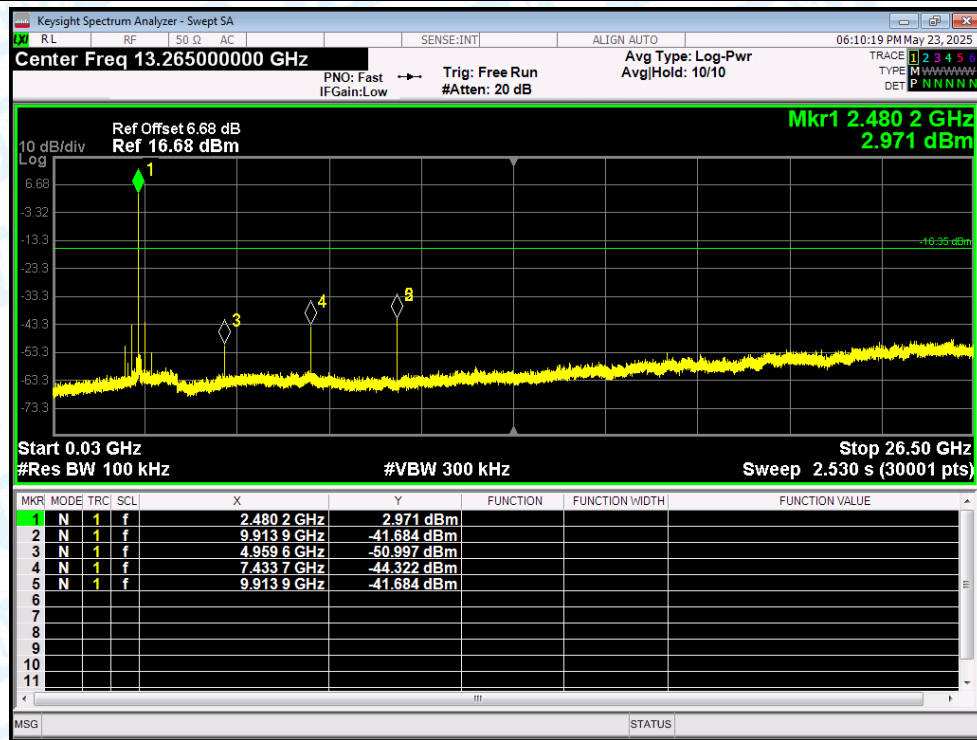
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

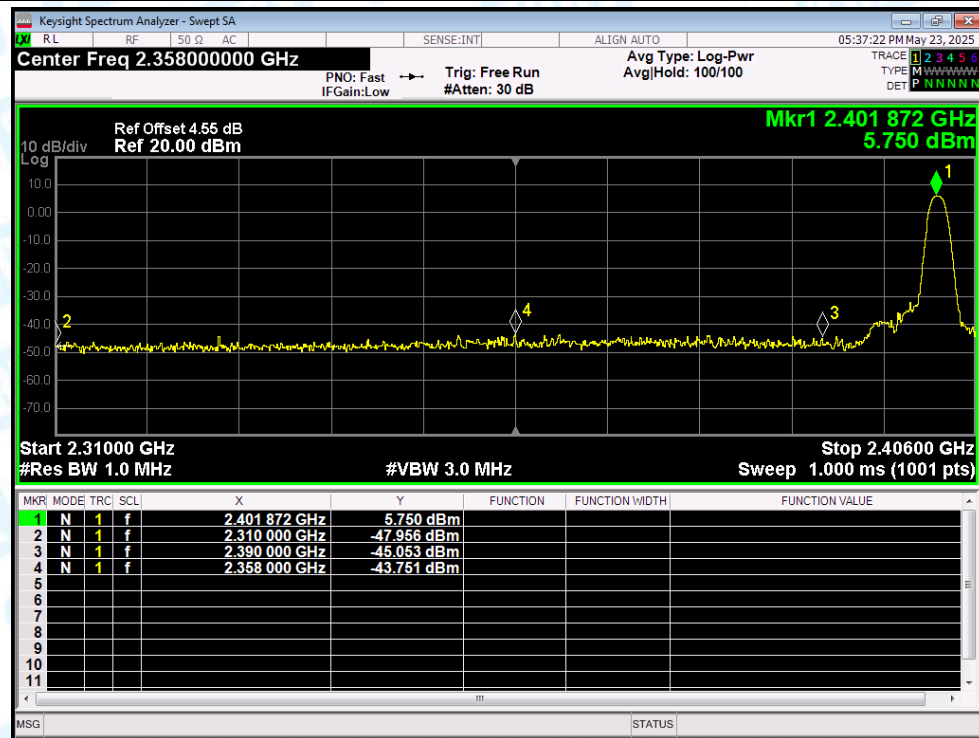


8. Restrict Band

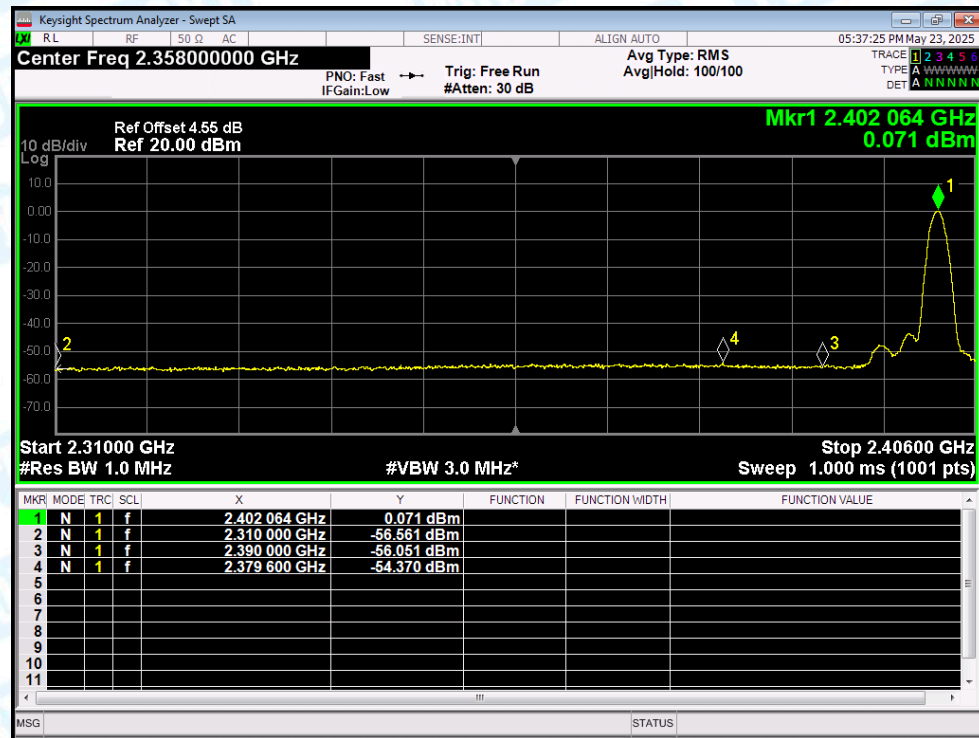
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-47.96	2	-	49.3	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-56.56	2	5.09	45.79	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2358	-43.75	2	-	53.51	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2379.6	-54.37	2	5.09	47.98	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-45.05	2	-	52.21	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-56.05	2	5.09	46.3	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-44.18	2	-	53.08	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-52.63	2	5.17	49.8	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.704	-42.83	2	-	54.43	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.512	-52.63	2	5.17	49.8	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-46.64	2	-	50.62	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-54.57	2	5.17	47.86	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-47	2	-	50.26	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.48	2	4.95	45.73	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2374.32	-42.94	2	-	54.32	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2363.856	-54.22	2	4.95	47.99	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-47.86	2	-	49.4	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-54.94	2	4.95	47.27	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-43.92	2	-	53.34	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-52.95	2	5.06	49.37	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2484.256	-38.47	2	-	58.79	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.536	-52.77	2	5.06	49.55	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-45.48	2	-	51.78	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-54.65	2	5.06	47.67	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-49.06	2	-	48.2	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-56.1	2	5.02	46.18	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2349.744	-44.05	2	-	53.21	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2369.616	-54.37	2	5.02	47.91	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-46.58	2	-	50.68	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-55.58	2	5.02	46.7	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-43.9	2	-	53.36	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-52.79	2	5.06	49.53	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2484.568	-40.5	2	-	56.76	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.584	-52.21	2	5.06	50.11	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-47.89	2	-	49.37	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-55.03	2	5.06	47.29	Average	54	Pass

Test Graphs

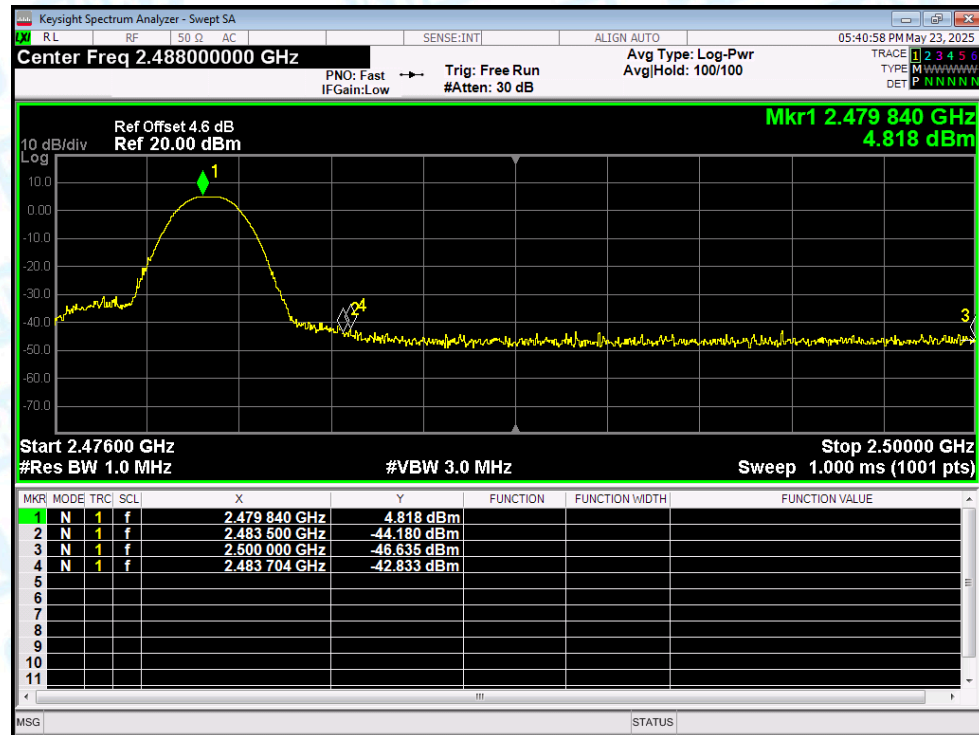
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



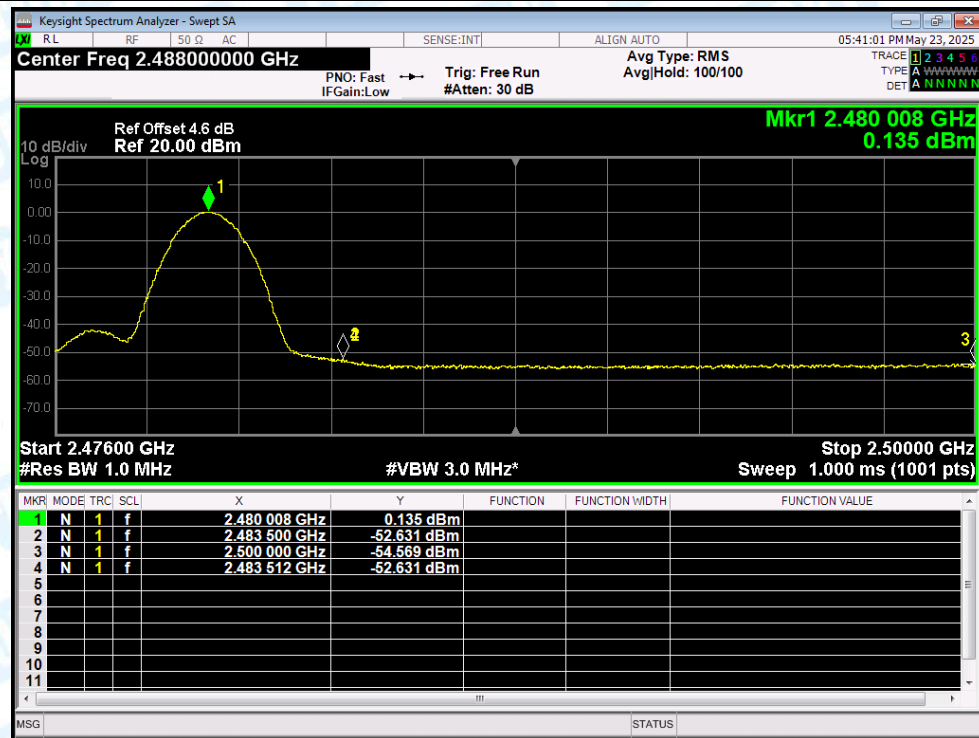
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



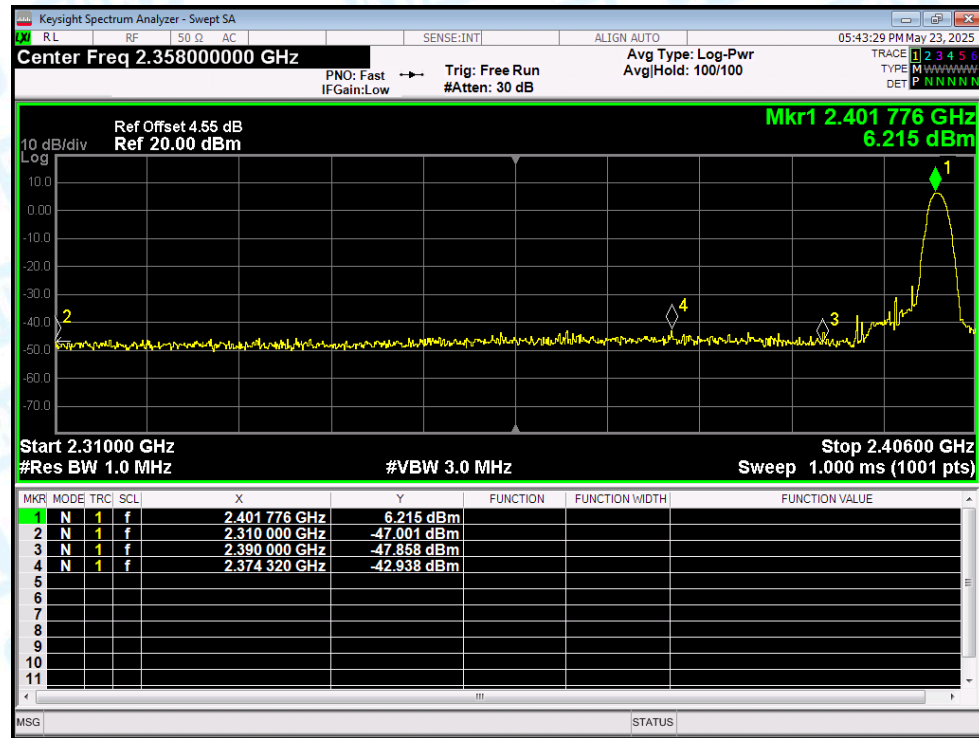
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



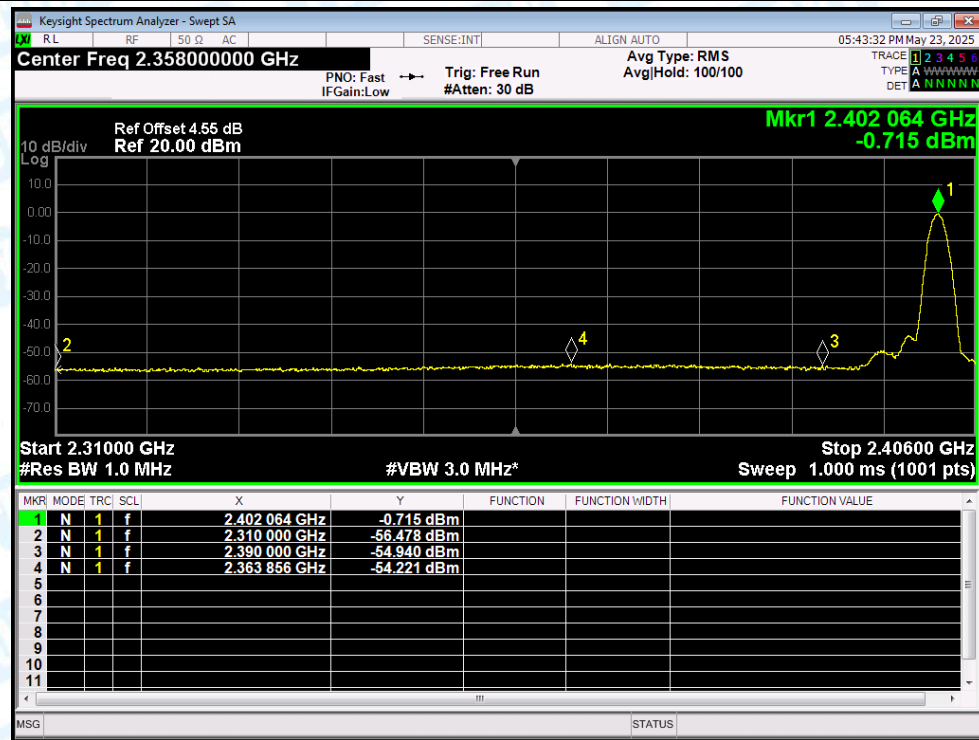
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



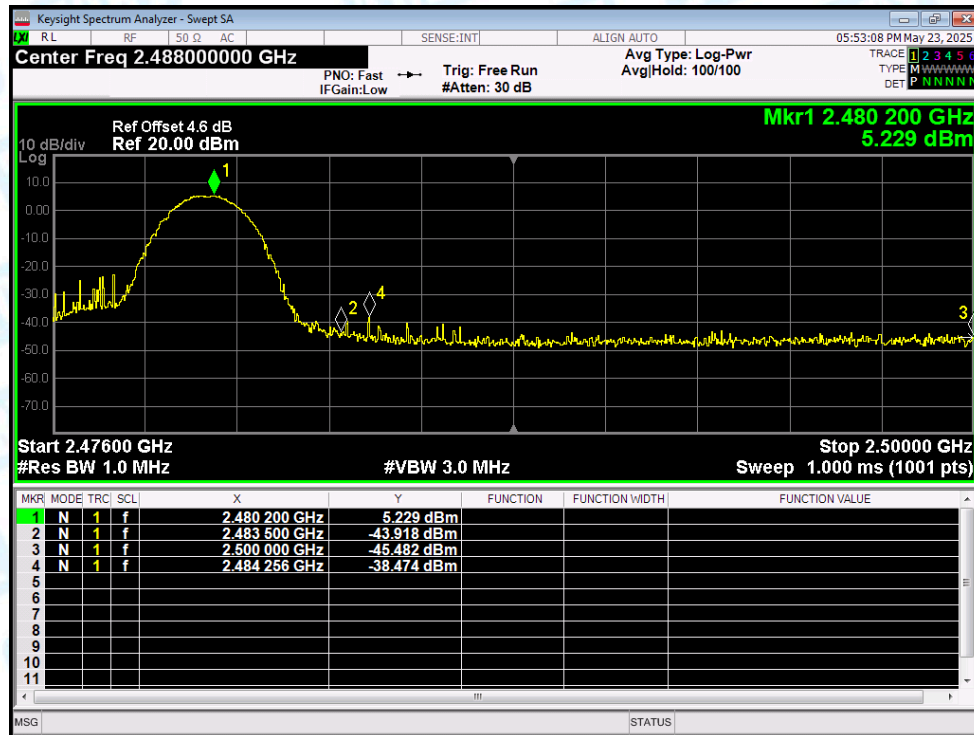
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



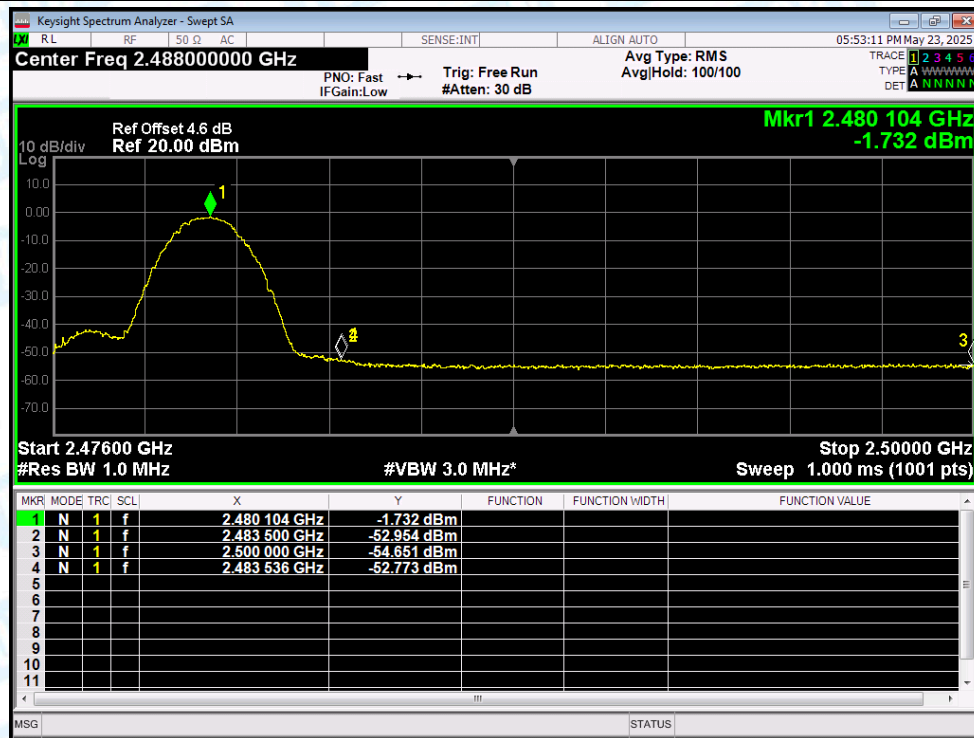
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



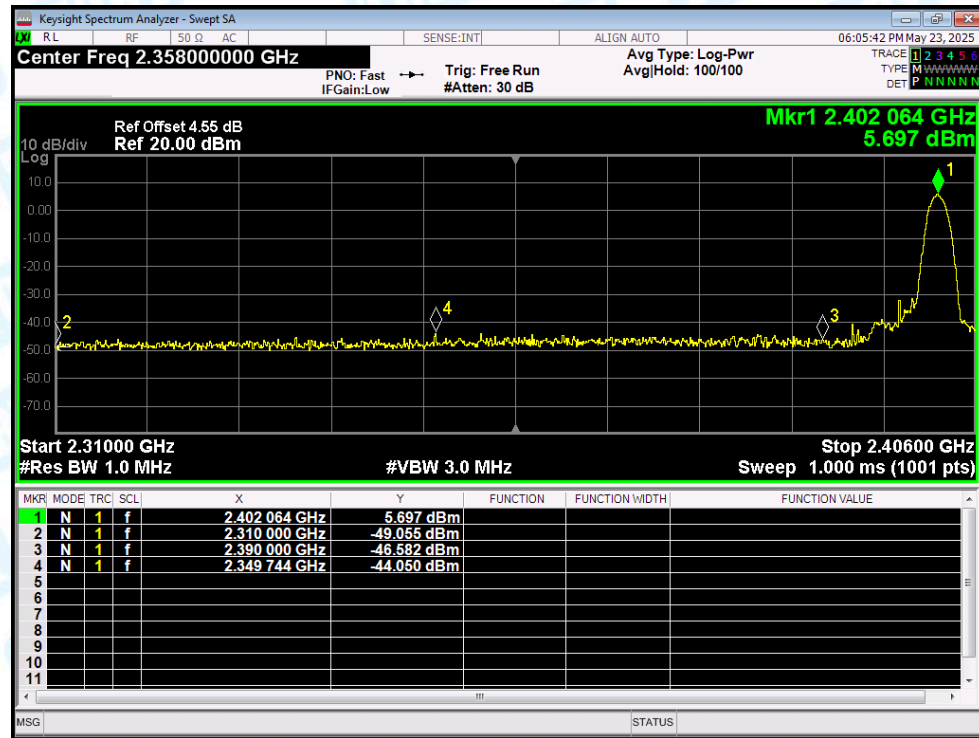
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



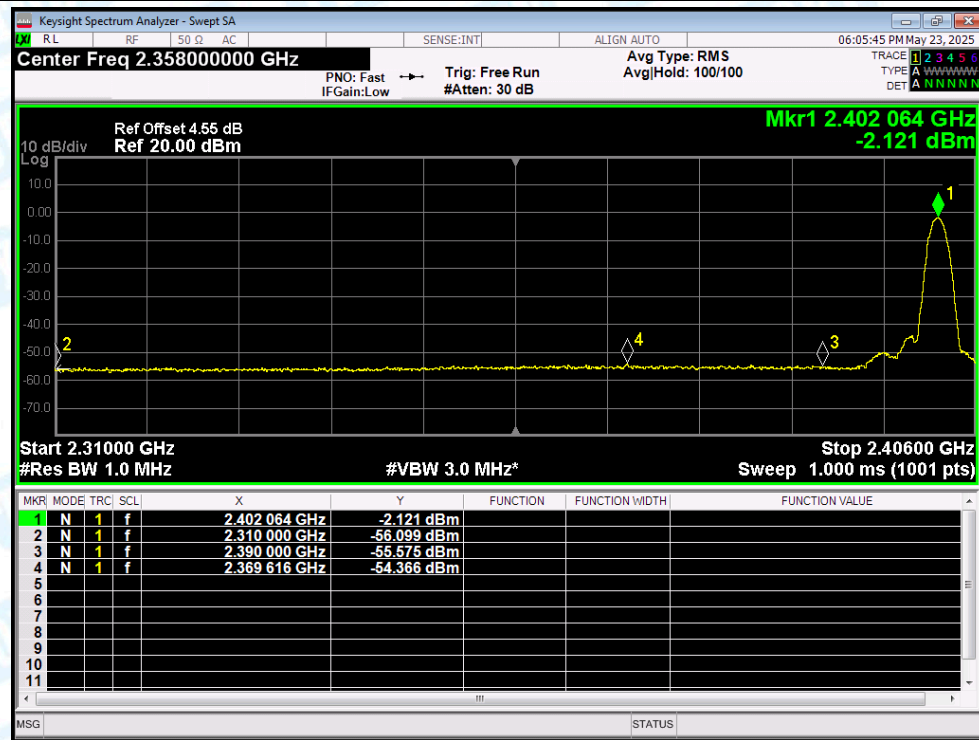
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



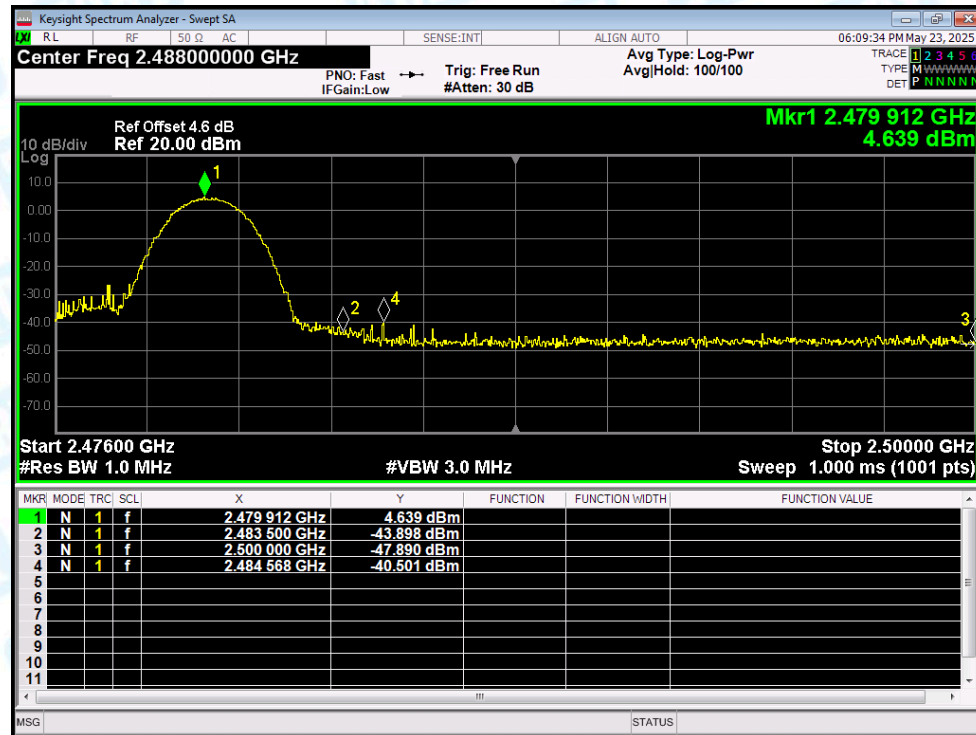
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



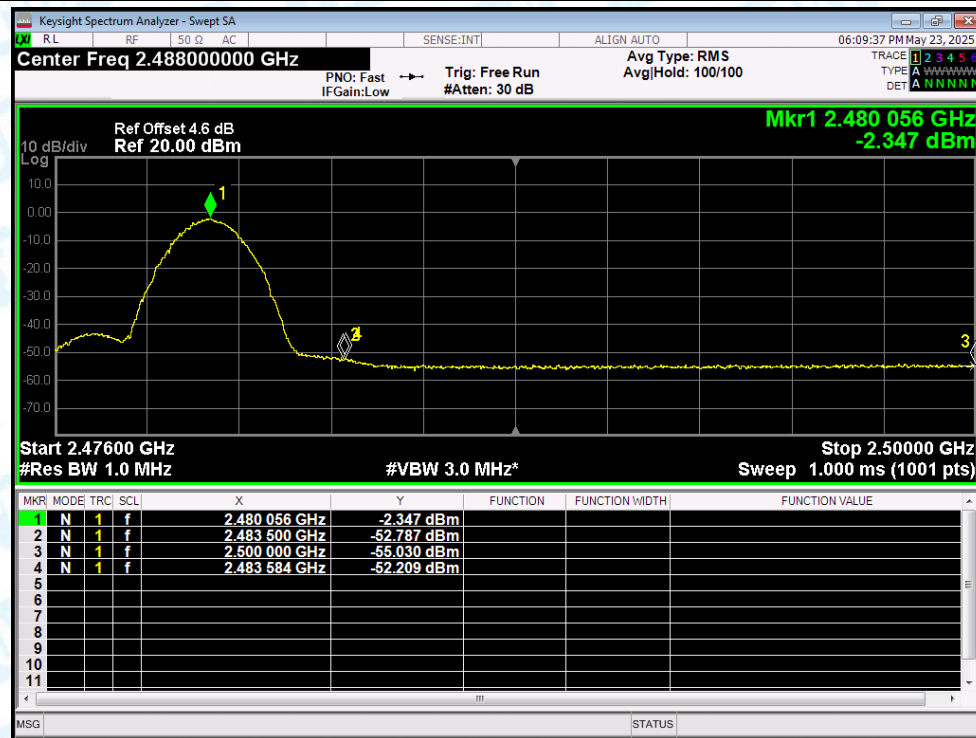
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

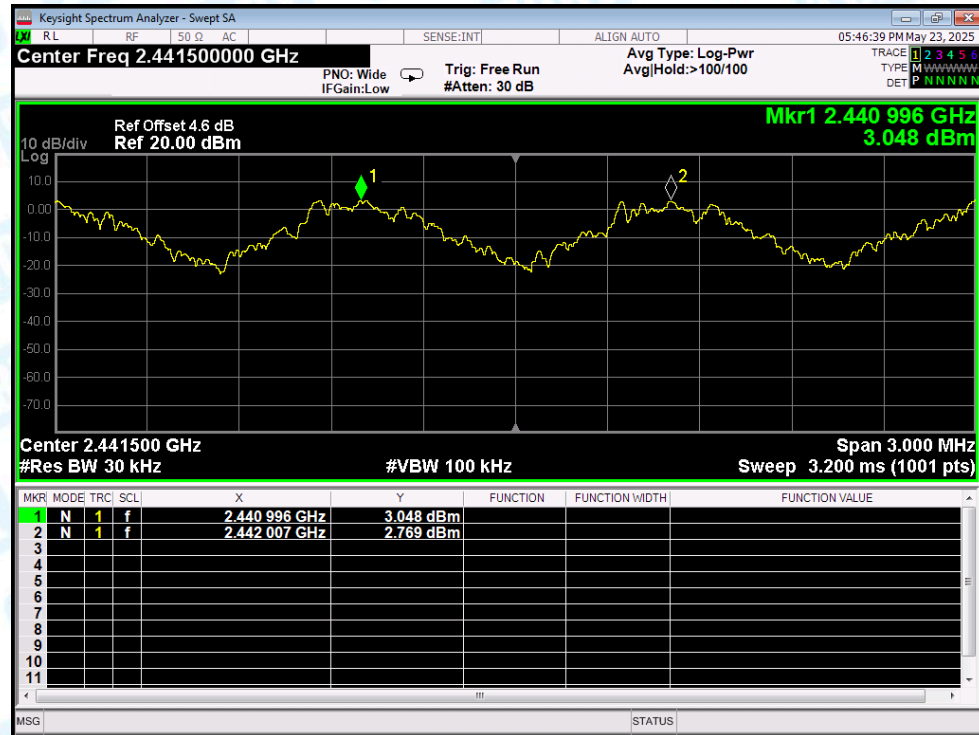


9. Carrier Frequencies Separation

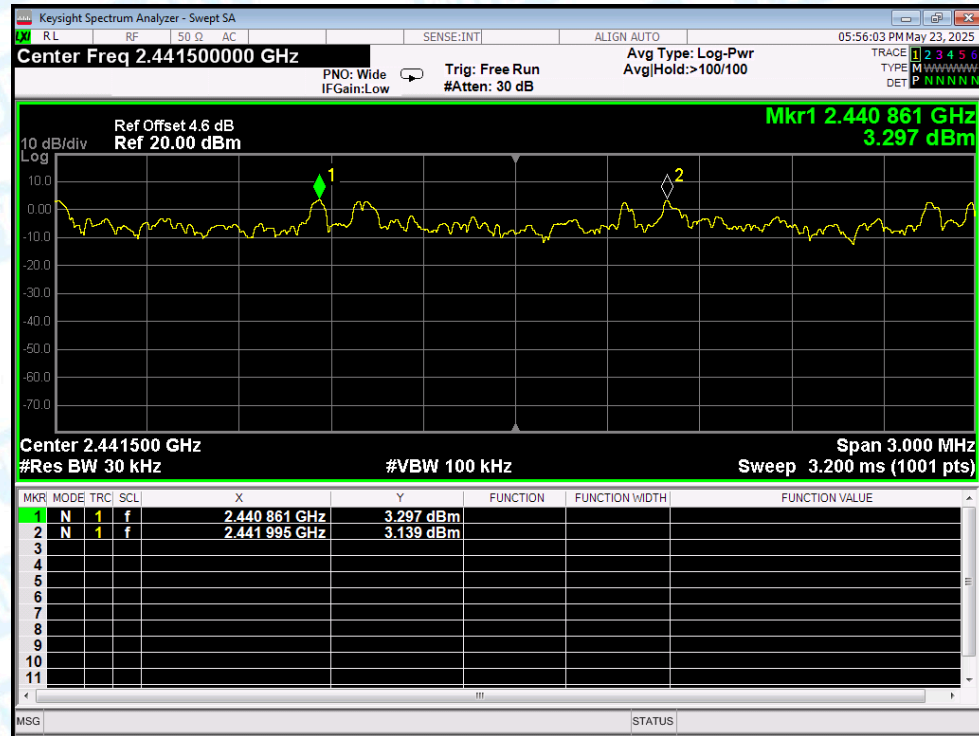
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.996	2442.007	1.011	0.58	Pass
NVNT	2-DH1	Ant1	2440.861	2441.995	1.134	0.853	Pass
NVNT	3-DH1	Ant1	2441.014	2442.007	0.993	0.82	Pass

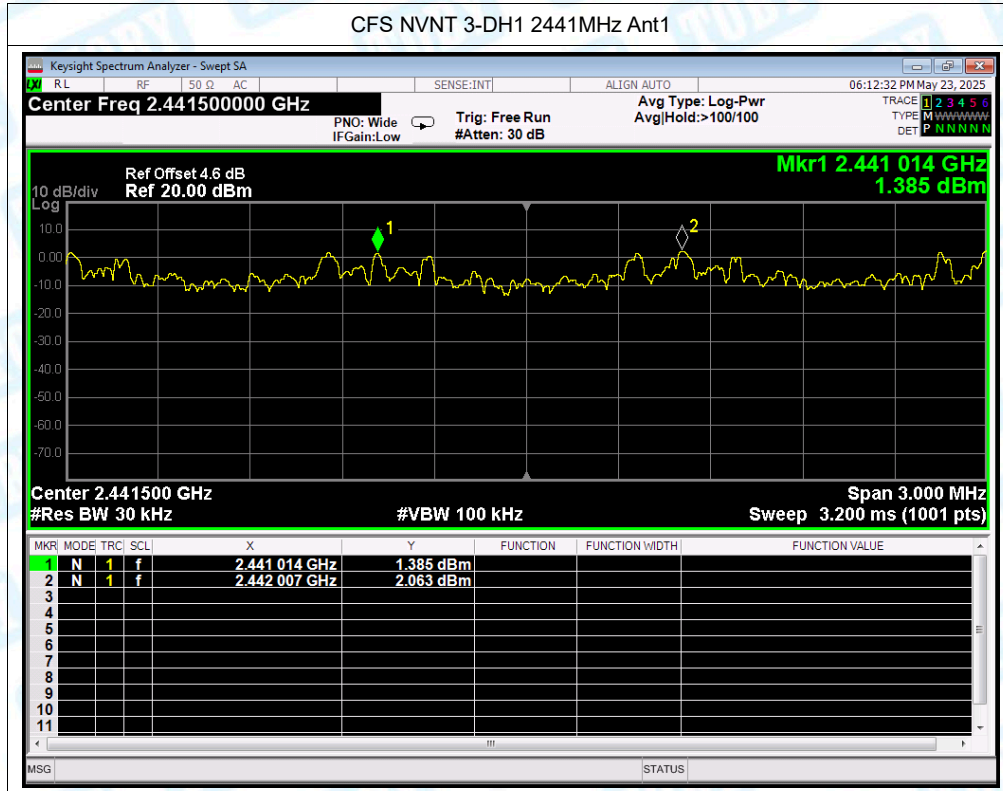
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



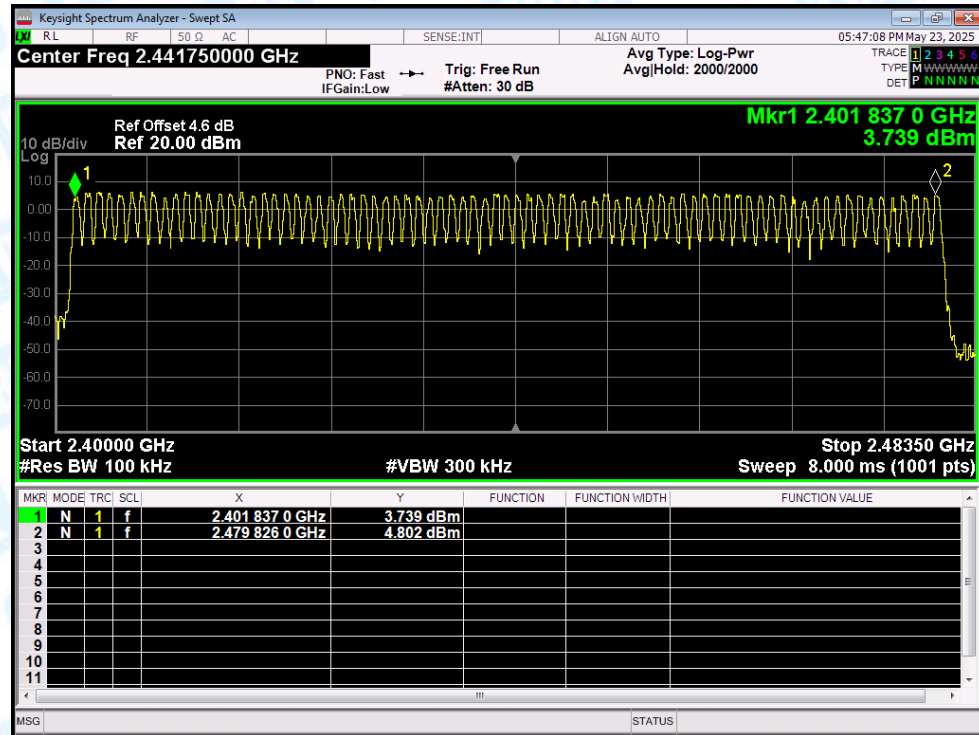


10. Number of Hopping Channel

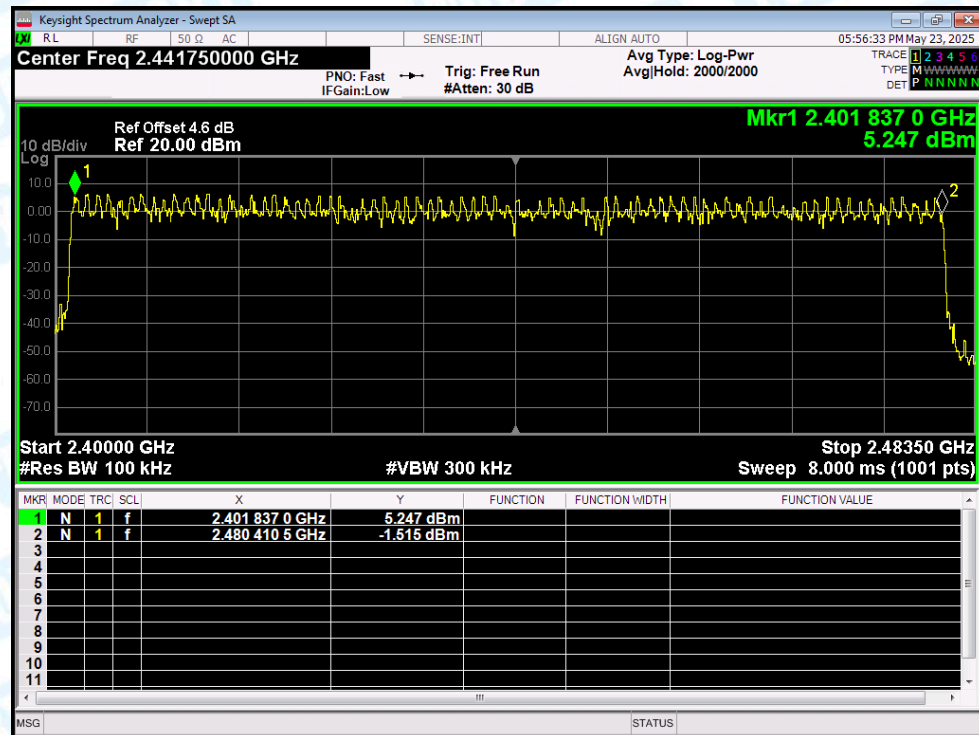
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

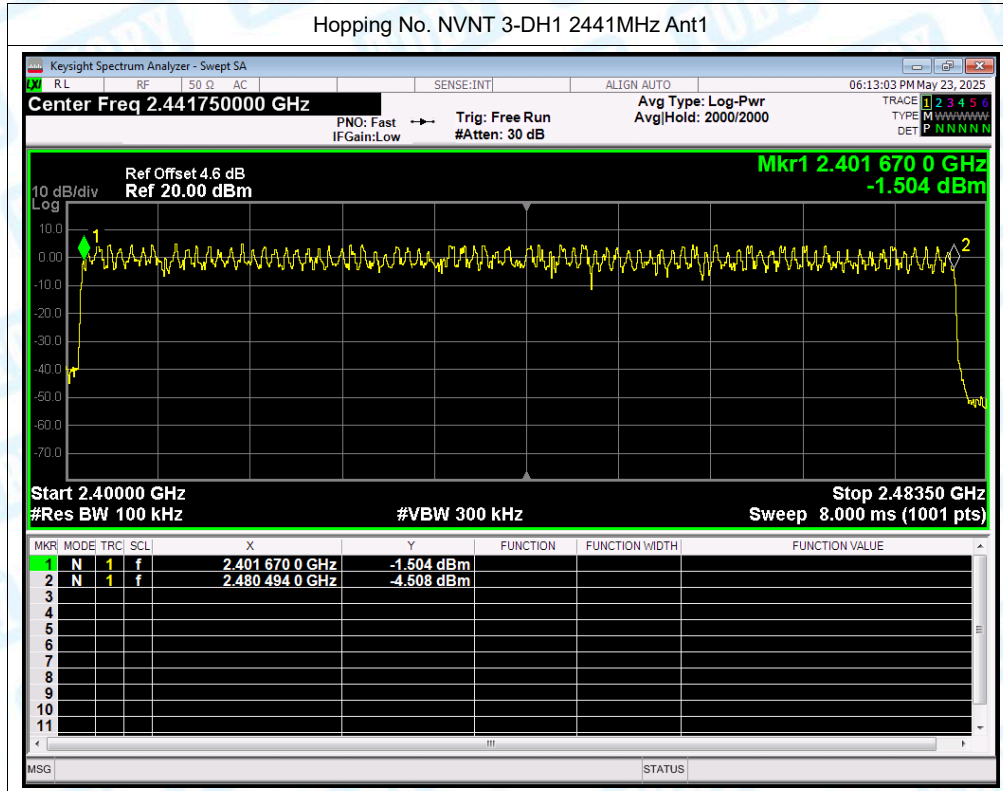
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



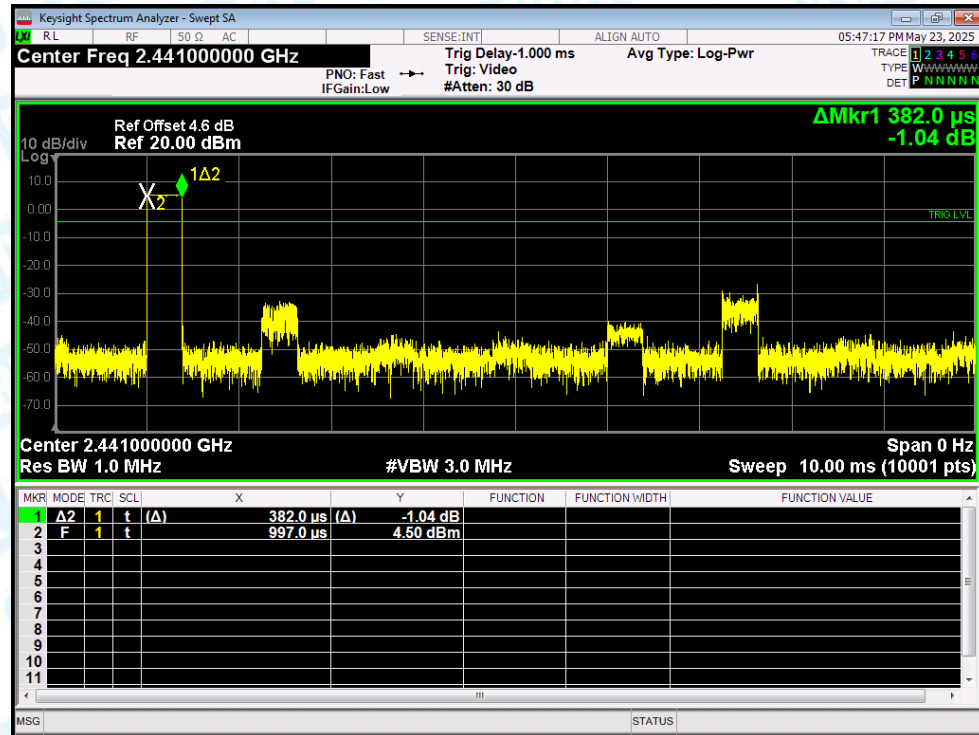


11. Dwell Time

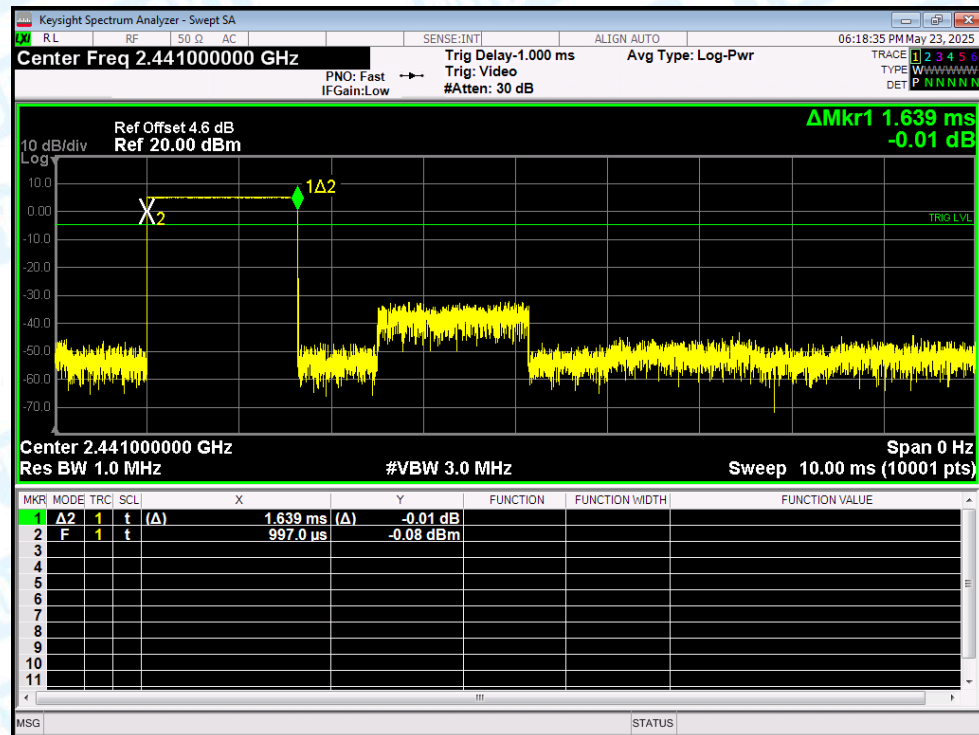
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.382	122.24	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.639	262.24	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.886	307.84	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.392	125.44	31600	400	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	0.392	125.44	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.642	262.72	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.893	308.587	31600	400	Pass

Test Graphs

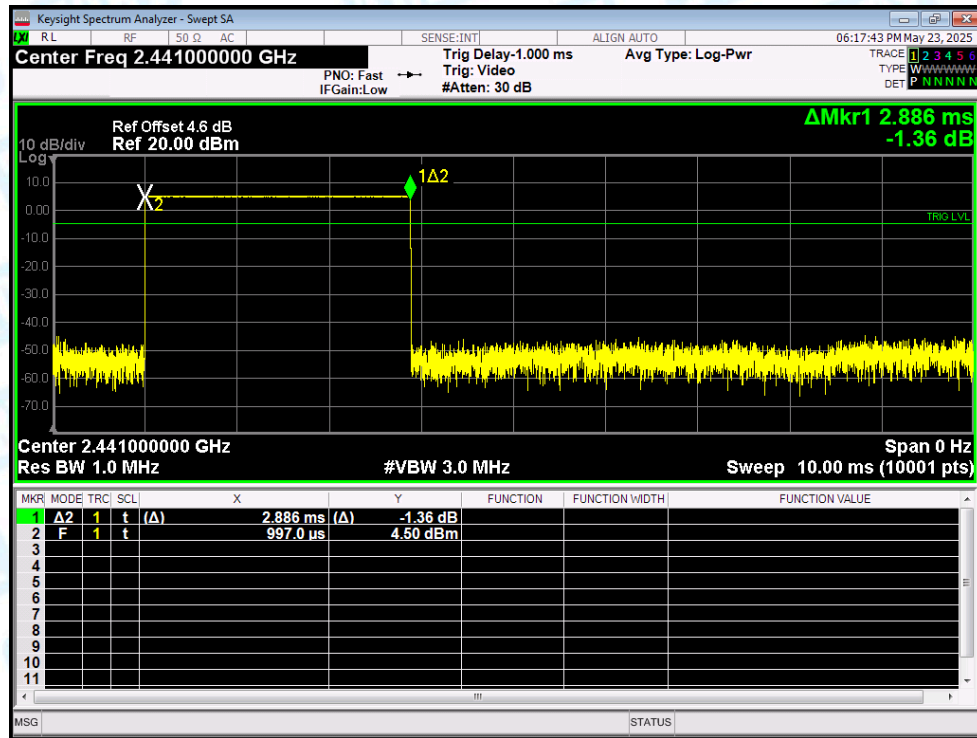
Dwell NVNT 1-DH1 2441MHz Ant1



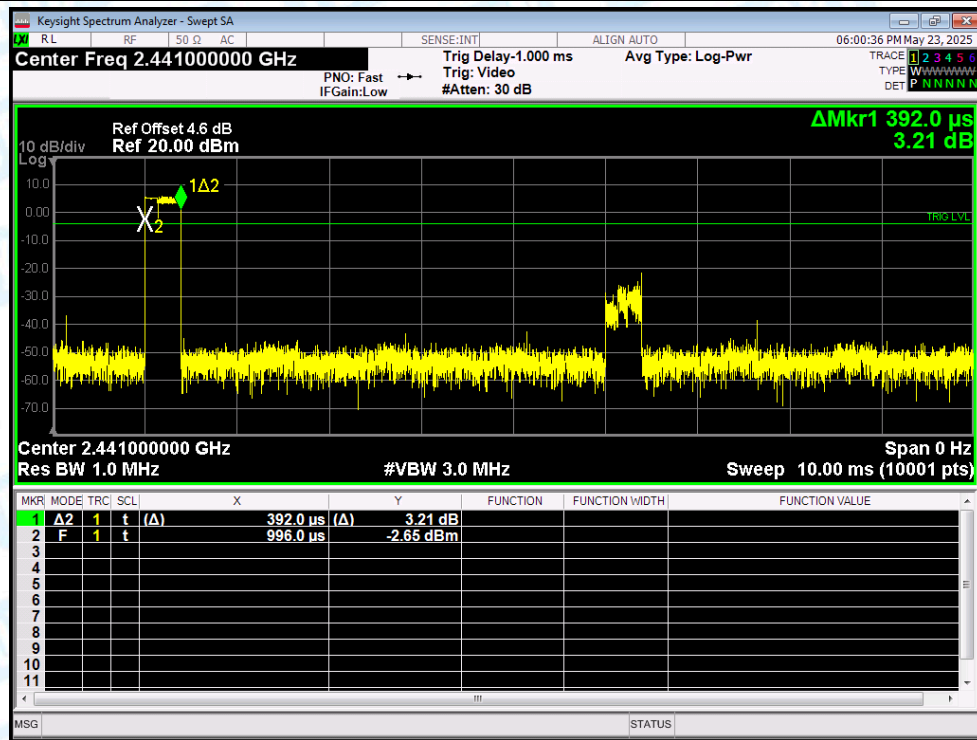
Dwell NVNT 1-DH3 2441MHz Ant1



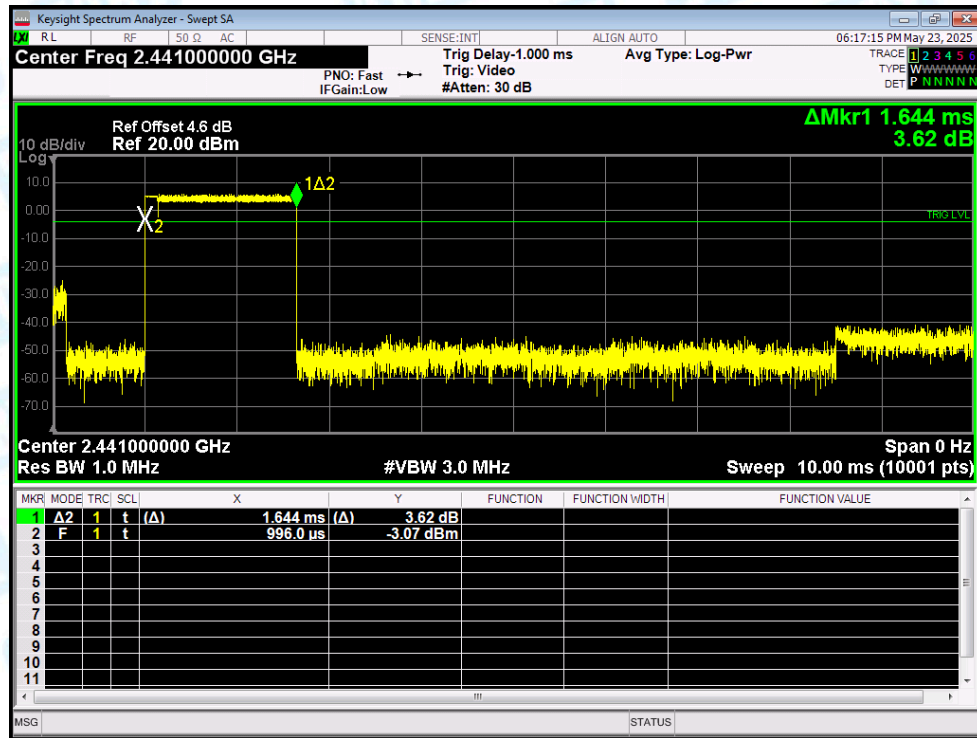
Dwell NVNT 1-DH5 2441MHz Ant1



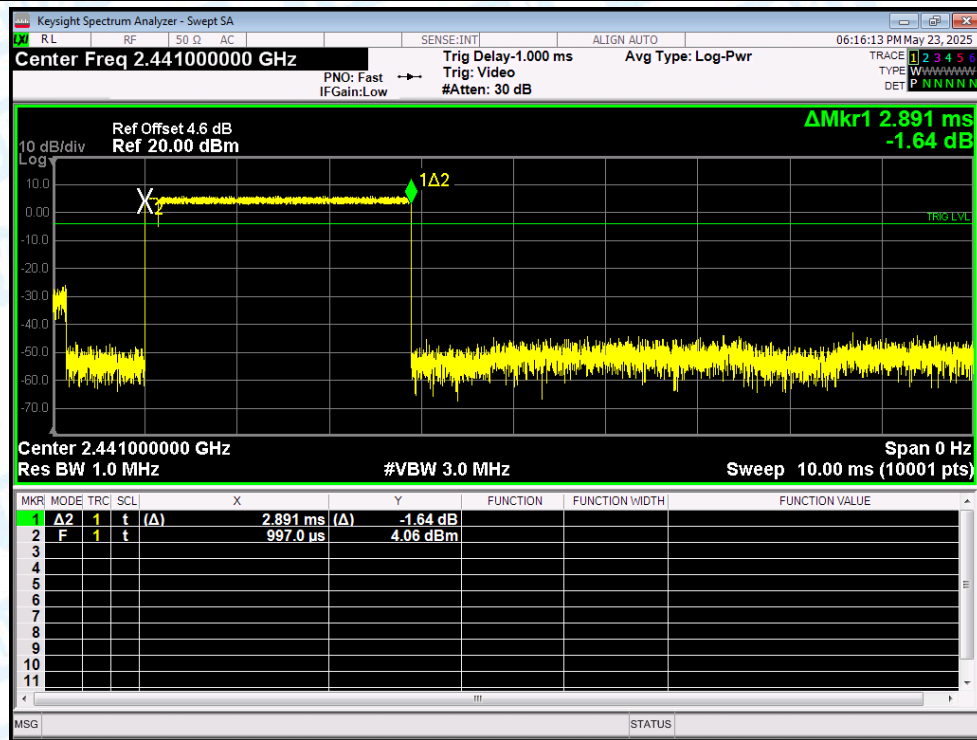
Dwell NVNT 2-DH1 2441MHz Ant1



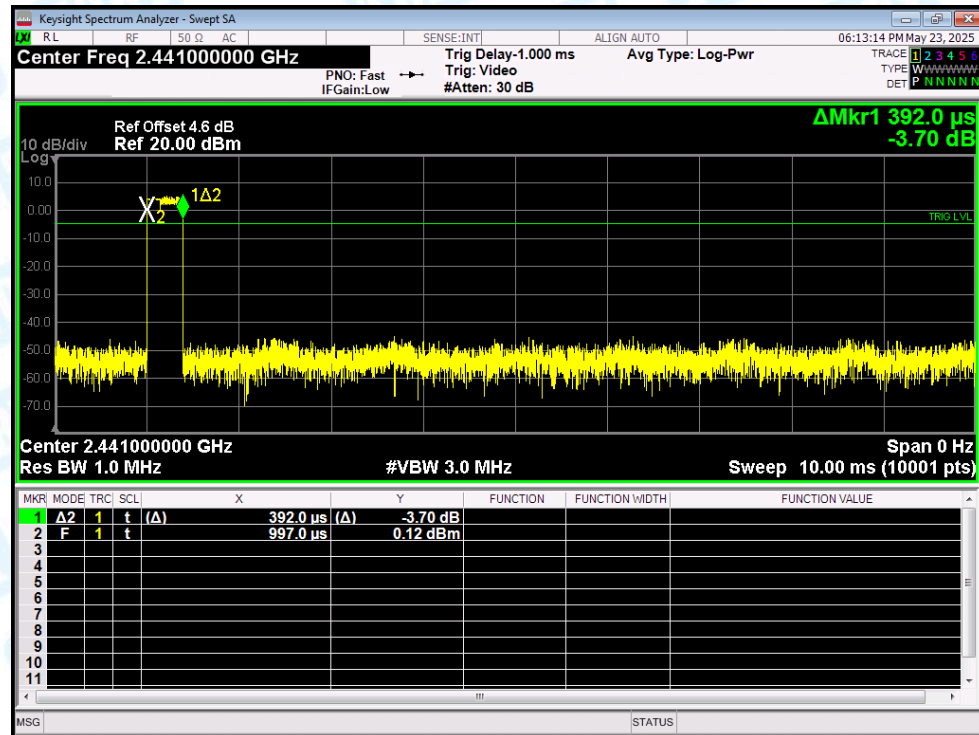
Dwell NVNT 2-DH3 2441MHz Ant1



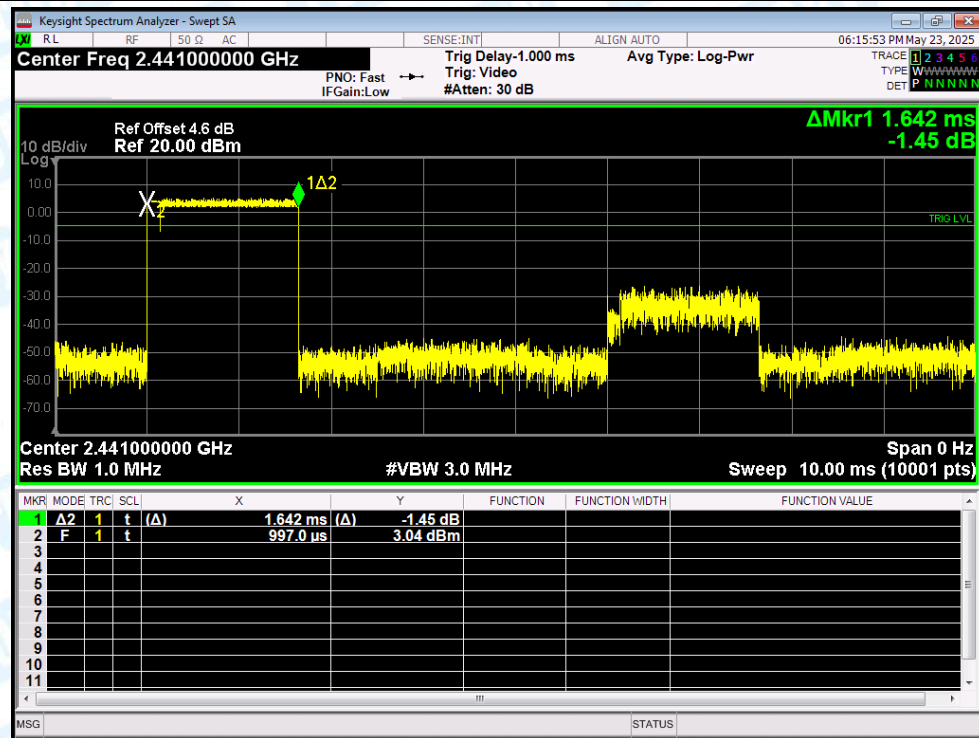
Dwell NVNT 2-DH5 2441MHz Ant1

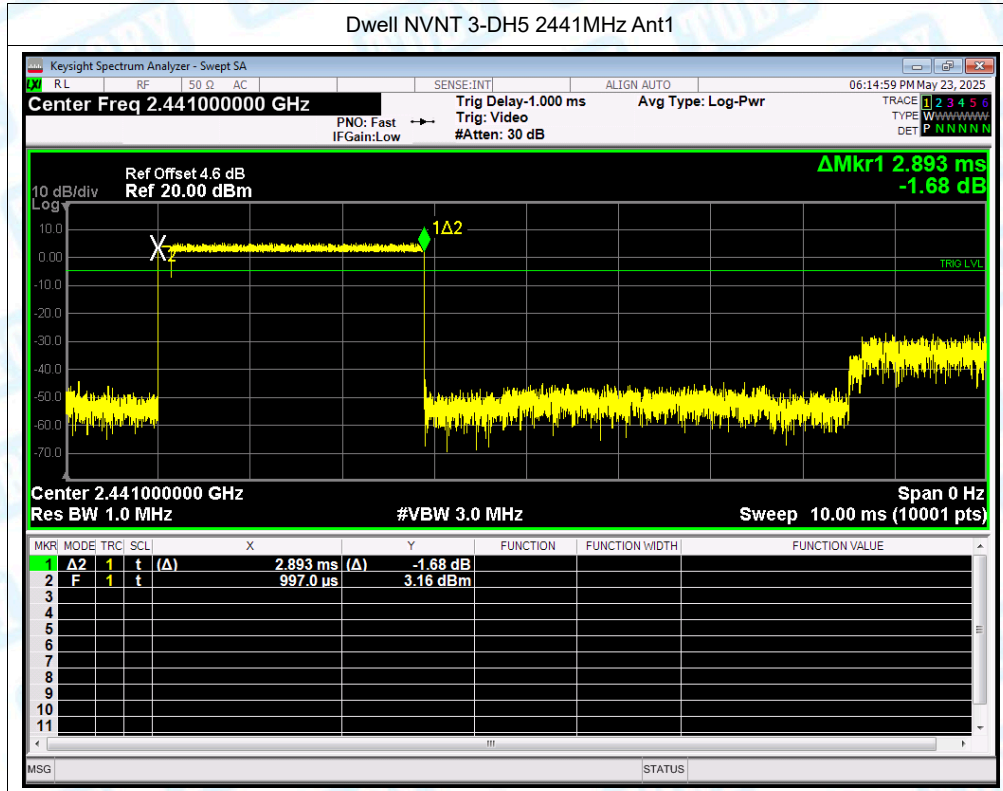


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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