

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	Smart Watch
Test Model:	KT73S
Sample ID:	HC-C-202404-0016-02-01
Environmental Conditions	
Temperature:	24.2°C
Relative Humidity:	51%
Test Voltage:	DC 3.8V
Test Engineer:	Mike Yan
Note: For a more detailed features description, please refer to the report TBR-C-202404-0016-21 The report only show the worst case data.	

Contents

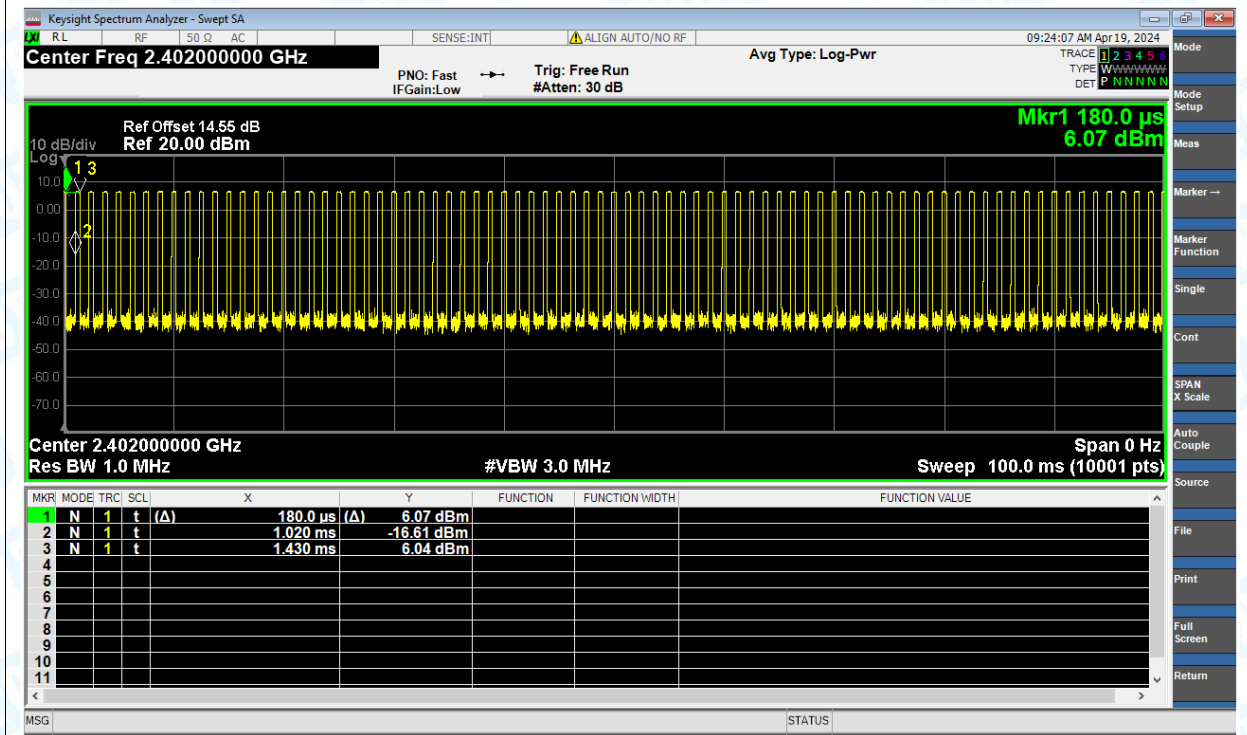
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1. Duty Cycle

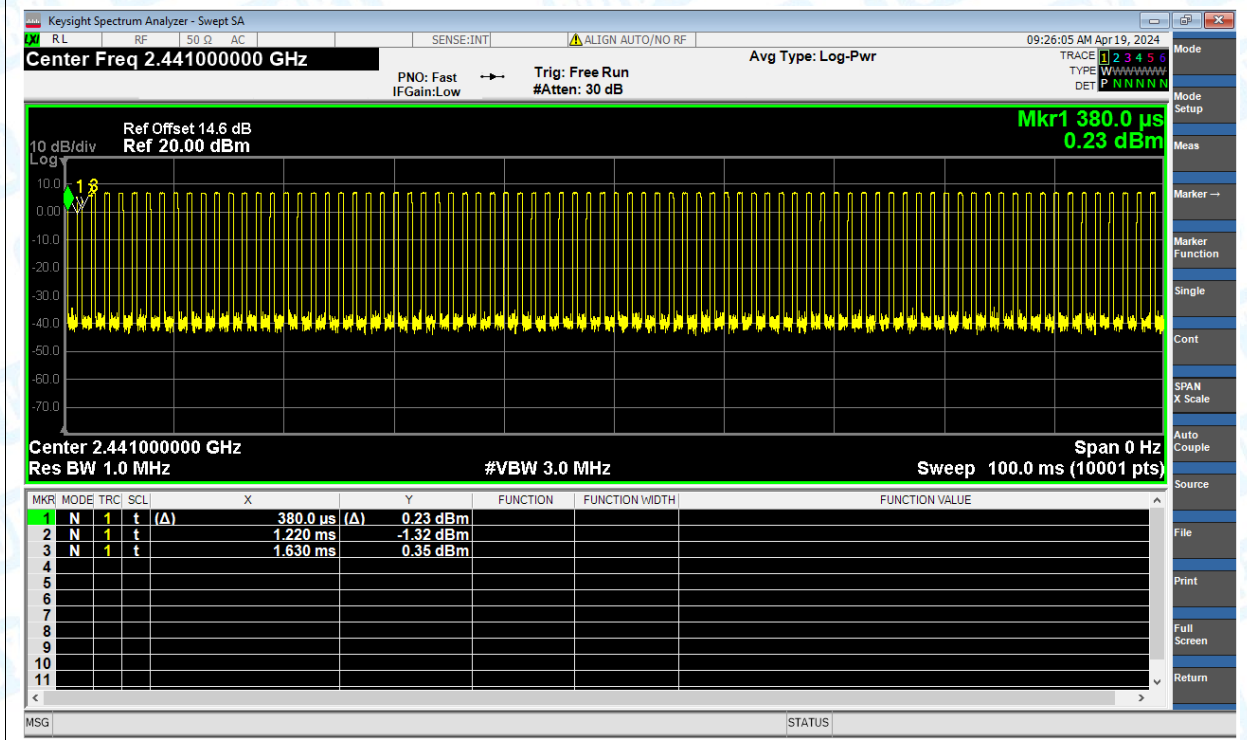
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	32.8	4.84	2.44
NVNT	1-DH1	2441	Ant1	32.8	4.84	2.44
NVNT	1-DH1	2480	Ant1	32.8	4.84	2.44
NVNT	2-DH1	2402	Ant1	33.6	4.74	2.38
NVNT	2-DH1	2441	Ant1	33.6	4.74	2.38
NVNT	2-DH1	2480	Ant1	33.6	4.74	2.38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

Test Graphs

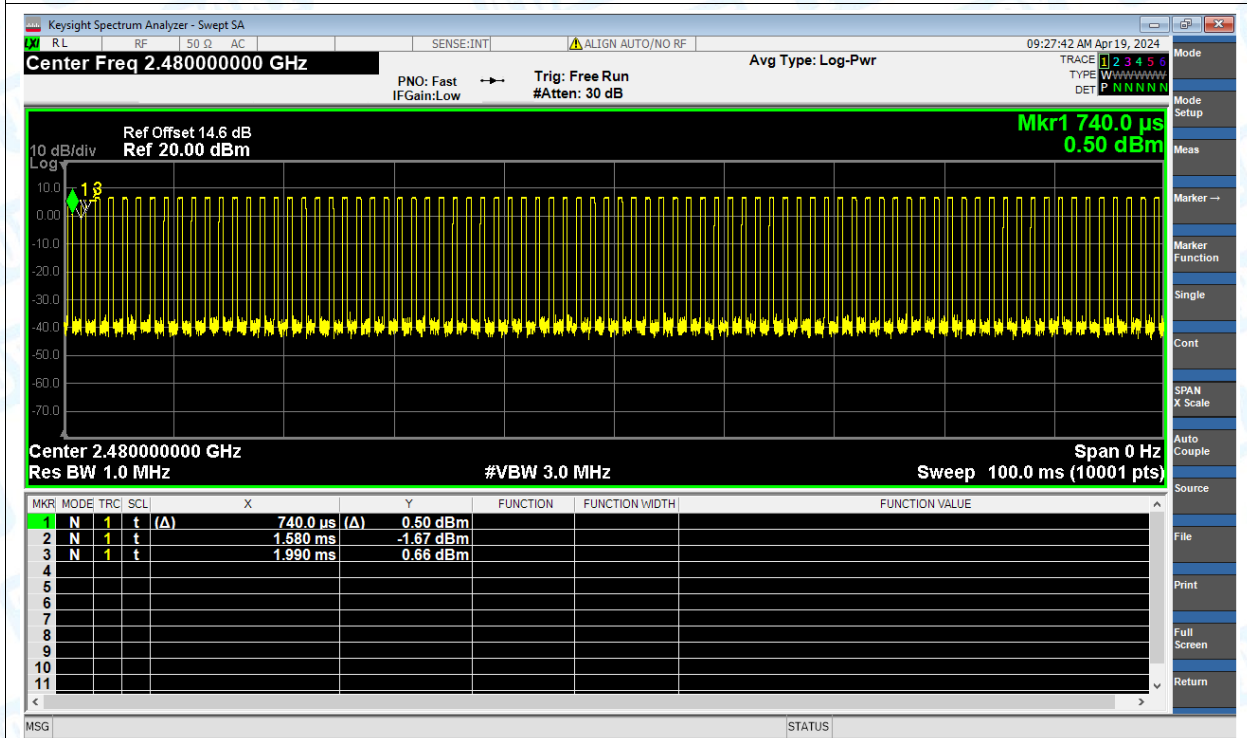
Duty Cycle NVNT 1-DH1 2402MHz Ant1



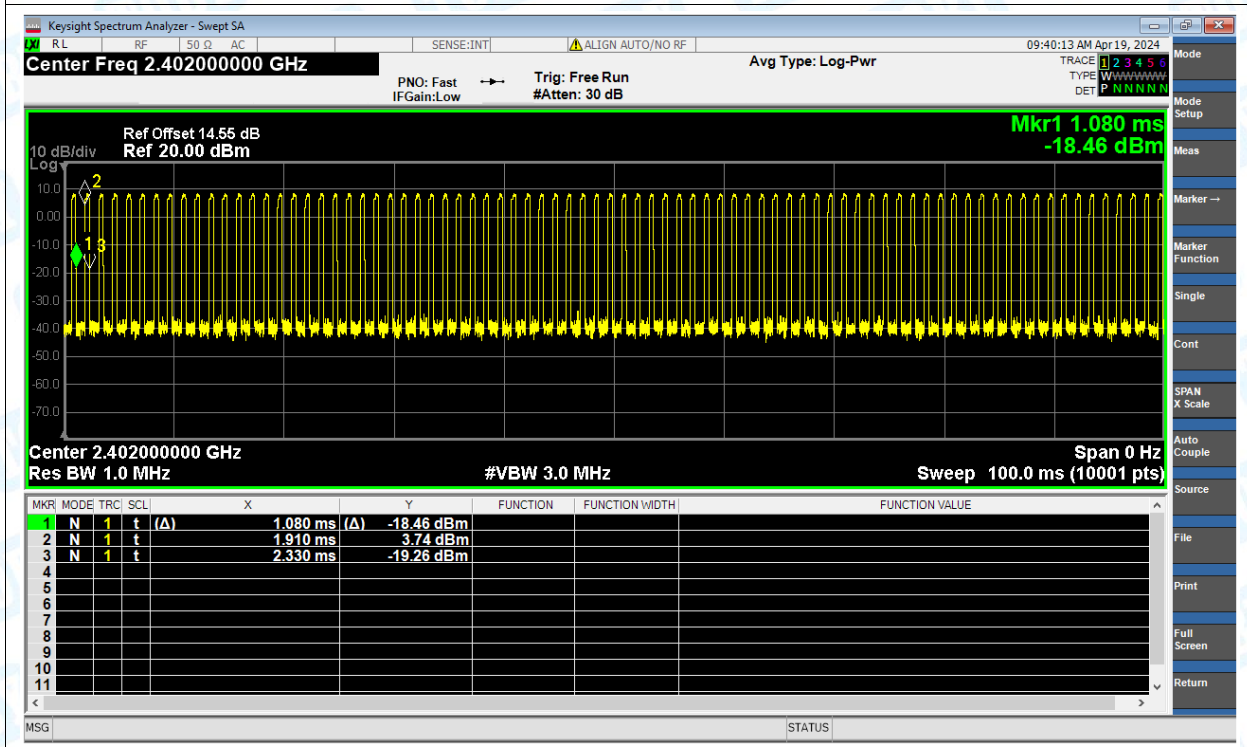
Duty Cycle NVNT 1-DH1 2441MHz Ant1



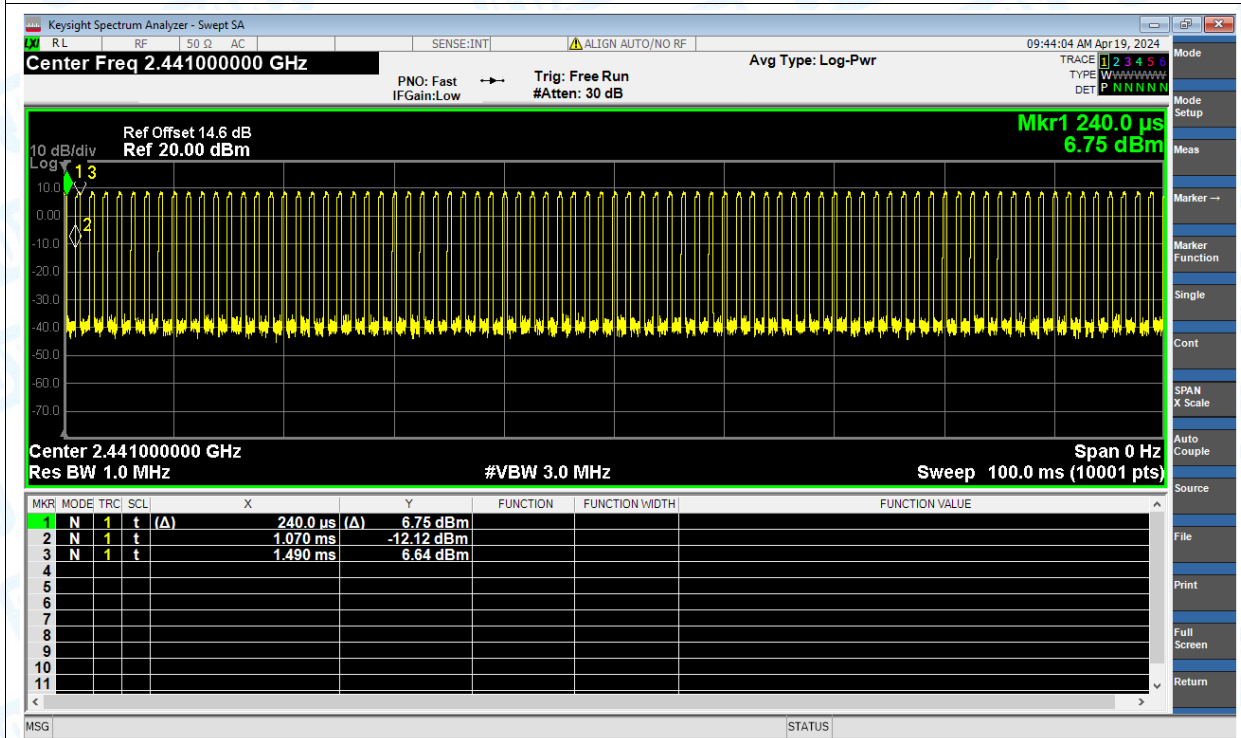
Duty Cycle NVNT 1-DH1 2480MHz Ant1



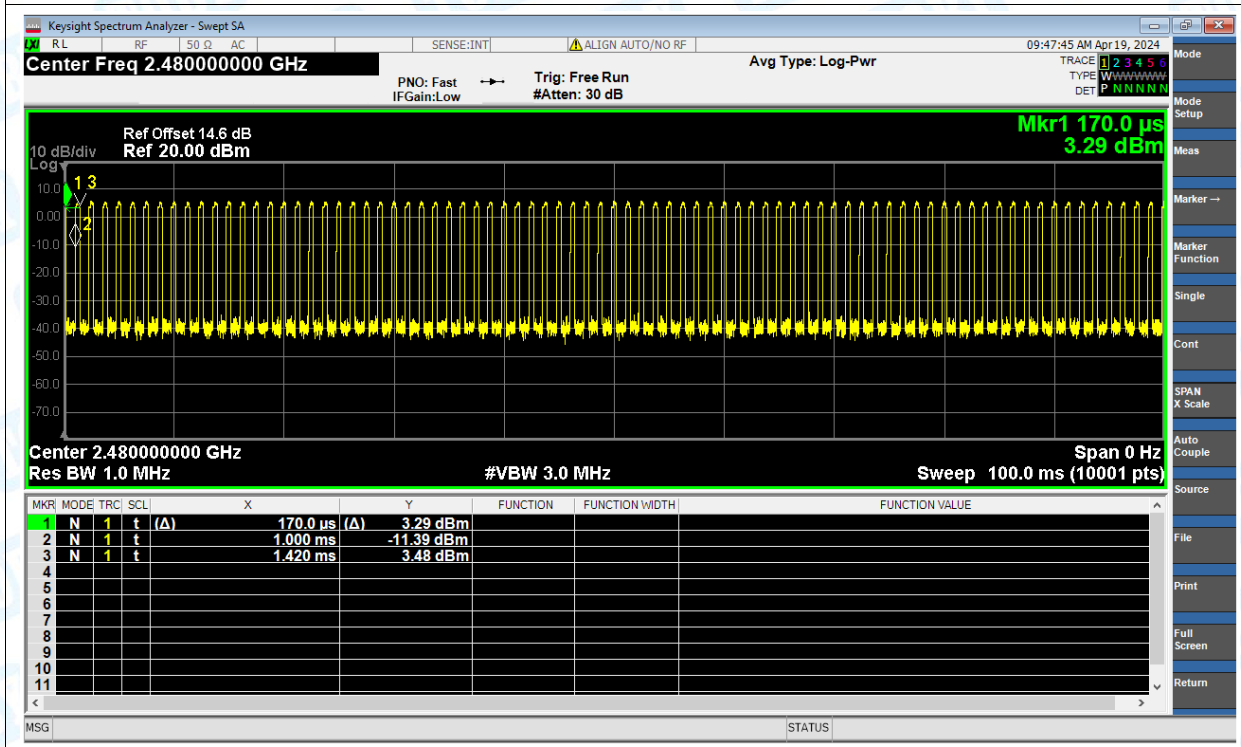
Duty Cycle NVNT 2-DH1 2402MHz Ant1



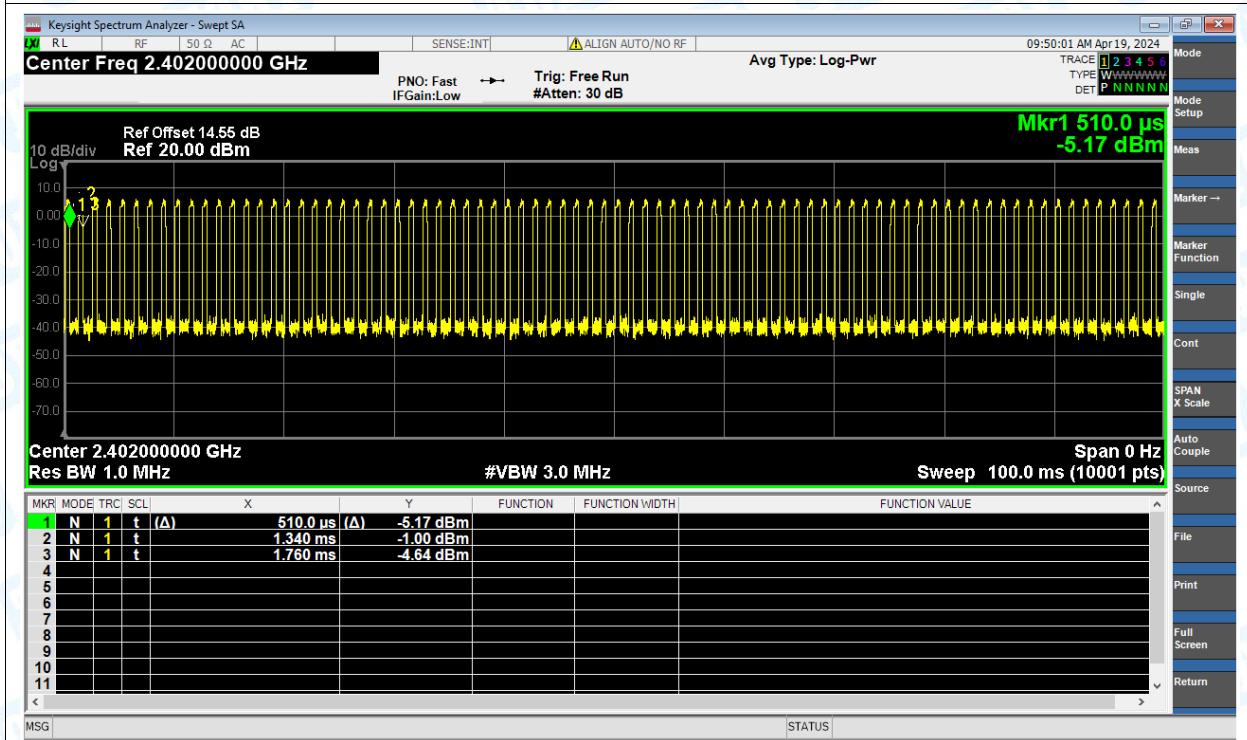
Duty Cycle NVNT 2-DH1 2441MHz Ant1



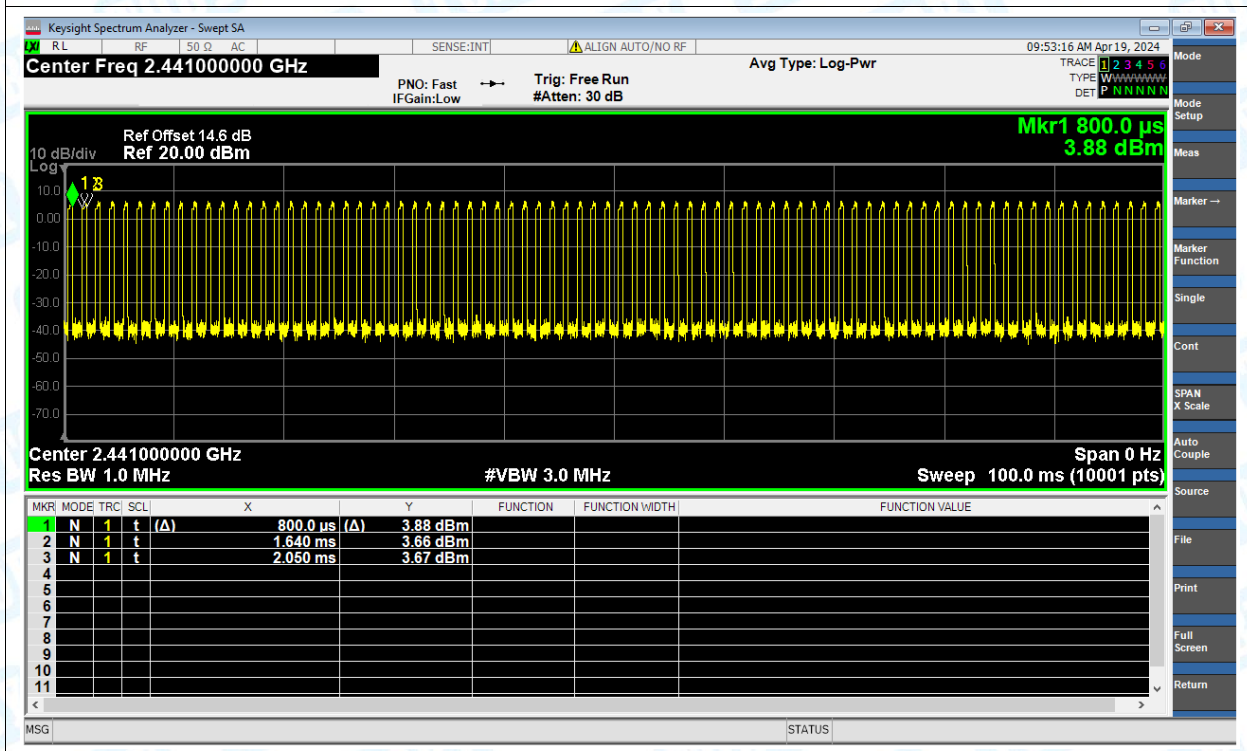
Duty Cycle NVNT 2-DH1 2480MHz Ant1

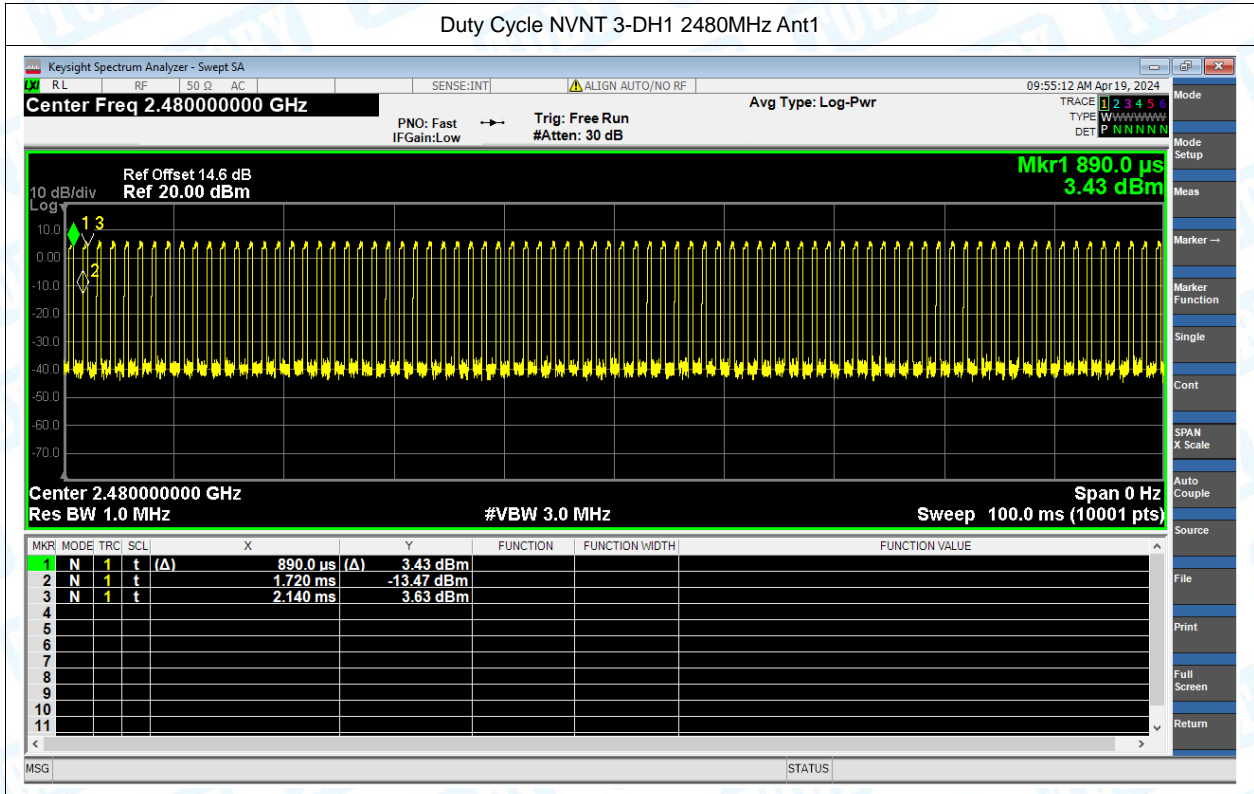


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



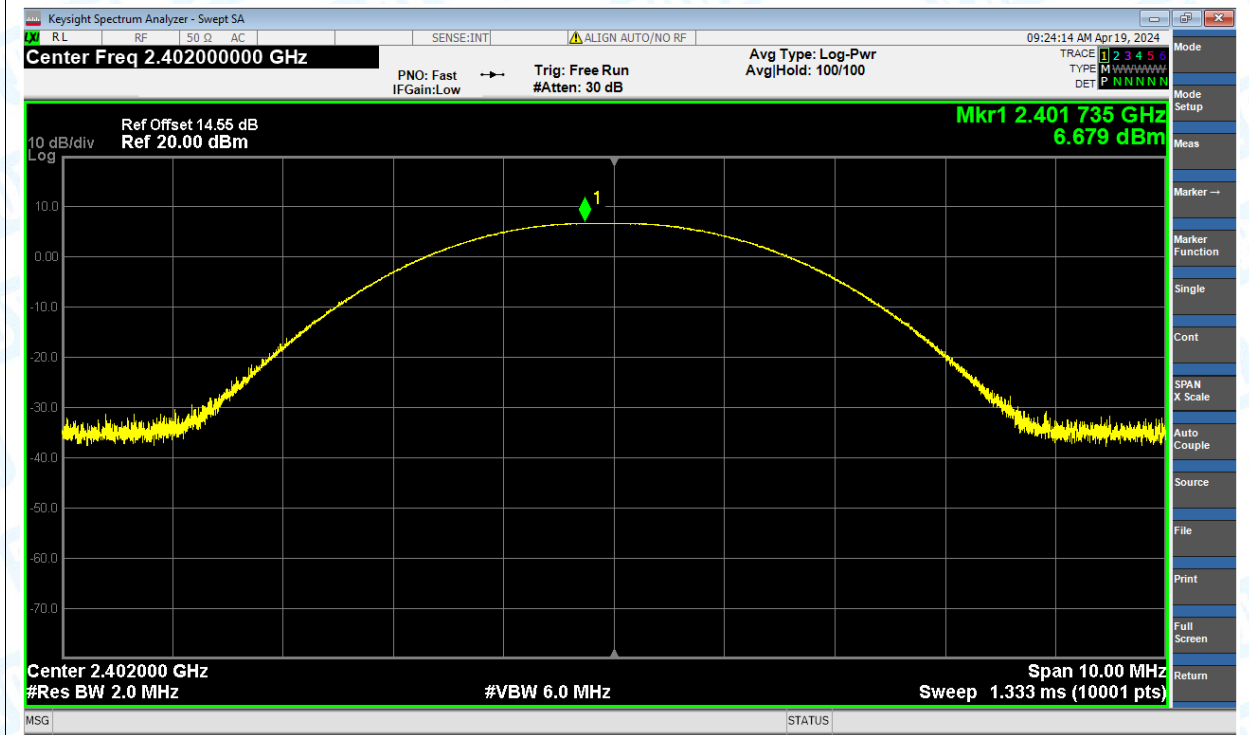


2. Maximum Conducted Output Power

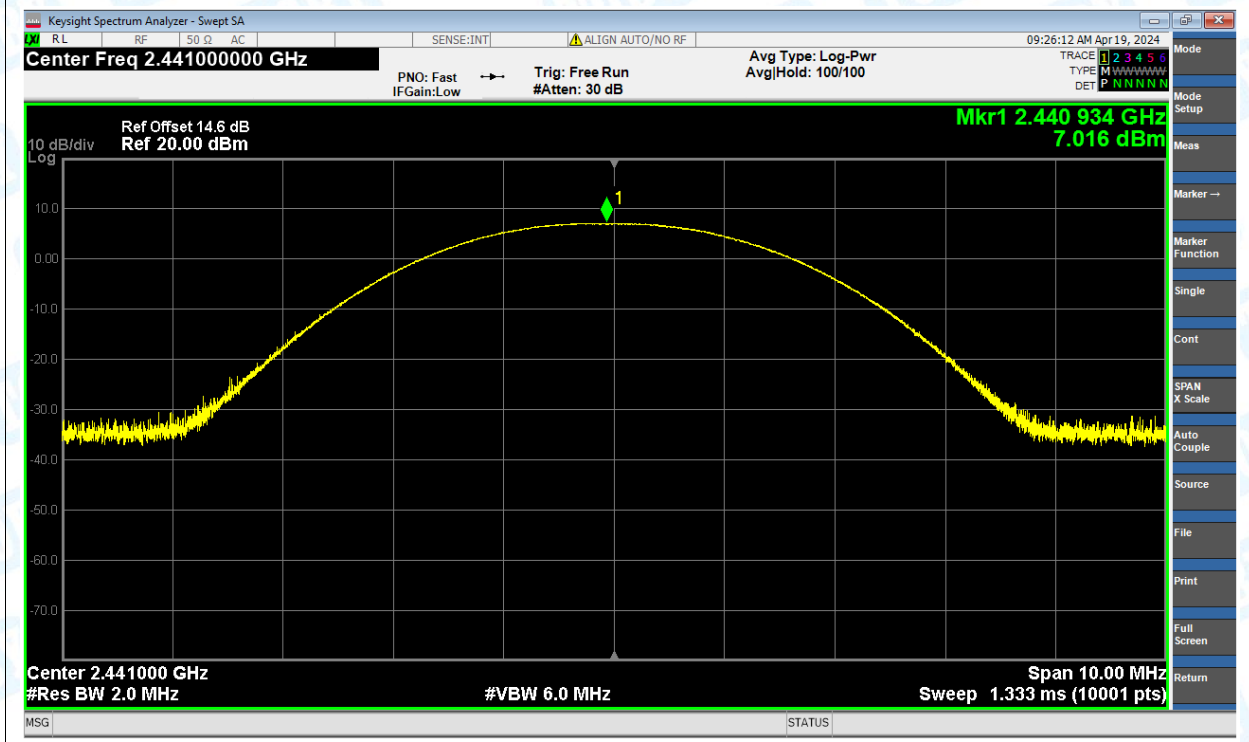
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	6.679	21	Pass
NVNT	1-DH1	2441	Ant1	7.016	21	Pass
NVNT	1-DH1	2480	Ant1	6.817	21	Pass
NVNT	1-DH3	2441	Ant1	6.889	21	Pass
NVNT	1-DH5	2441	Ant1	6.951	21	Pass
NVNT	2-DH1	2402	Ant1	5.903	21	Pass
NVNT	2-DH1	2441	Ant1	6.219	21	Pass
NVNT	2-DH1	2480	Ant1	6.061	21	Pass
NVNT	2-DH3	2441	Ant1	6.251	21	Pass
NVNT	2-DH5	2441	Ant1	6.371	21	Pass
NVNT	3-DH1	2402	Ant1	6.569	21	Pass
NVNT	3-DH1	2441	Ant1	6.91	21	Pass
NVNT	3-DH1	2480	Ant1	6.677	21	Pass
NVNT	3-DH3	2441	Ant1	6.751	21	Pass
NVNT	3-DH5	2441	Ant1	6.727	21	Pass

Test Graphs

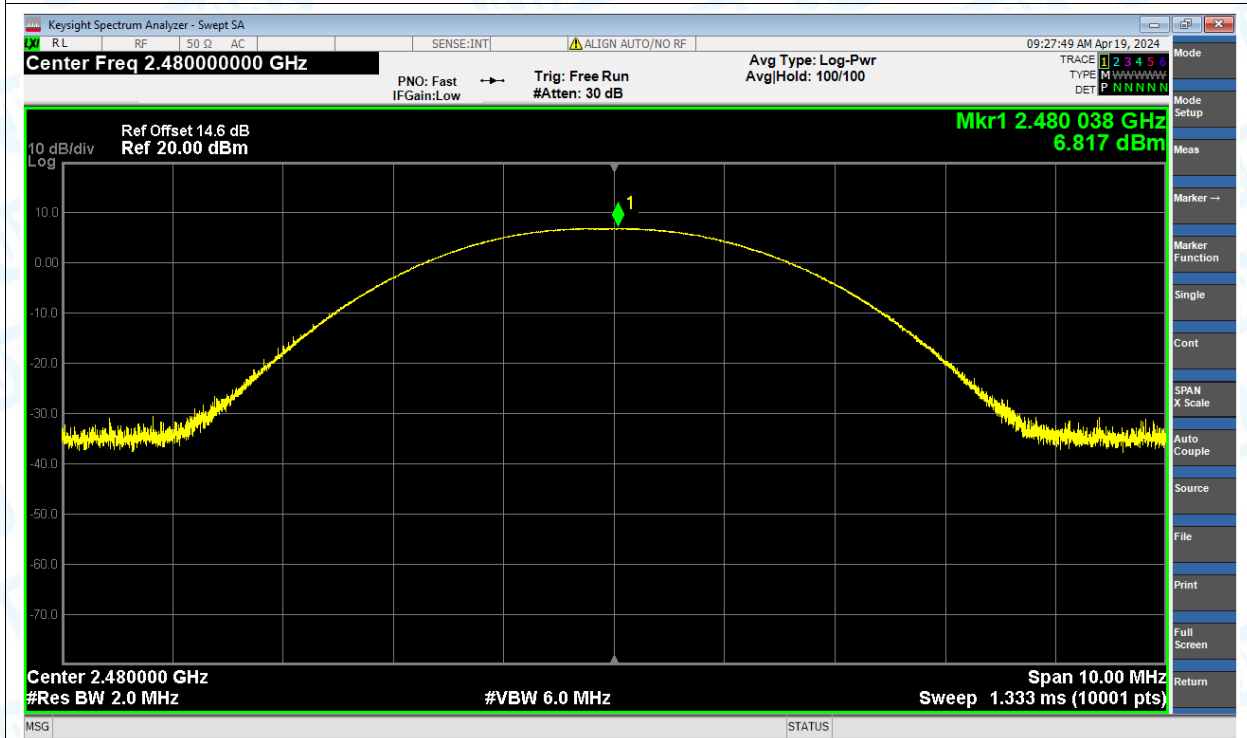
Power NVNT 1-DH1 2402MHz Ant1



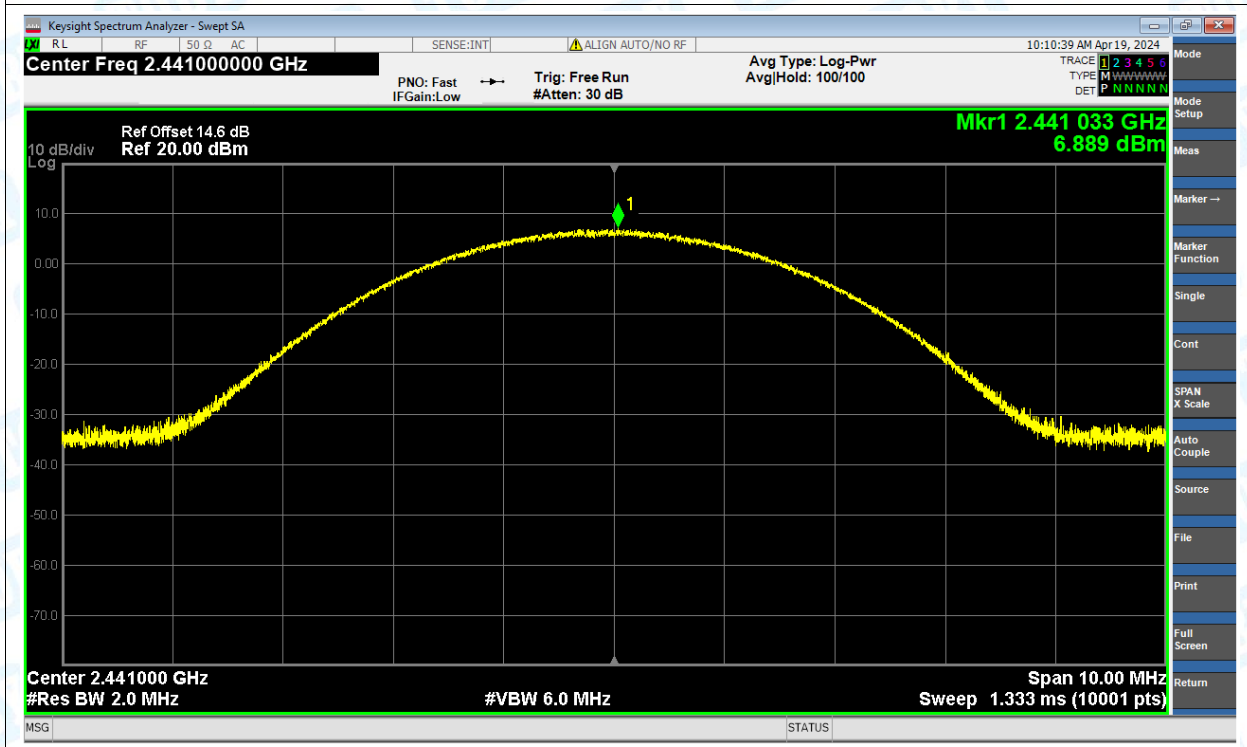
Power NVNT 1-DH1 2441MHz Ant1



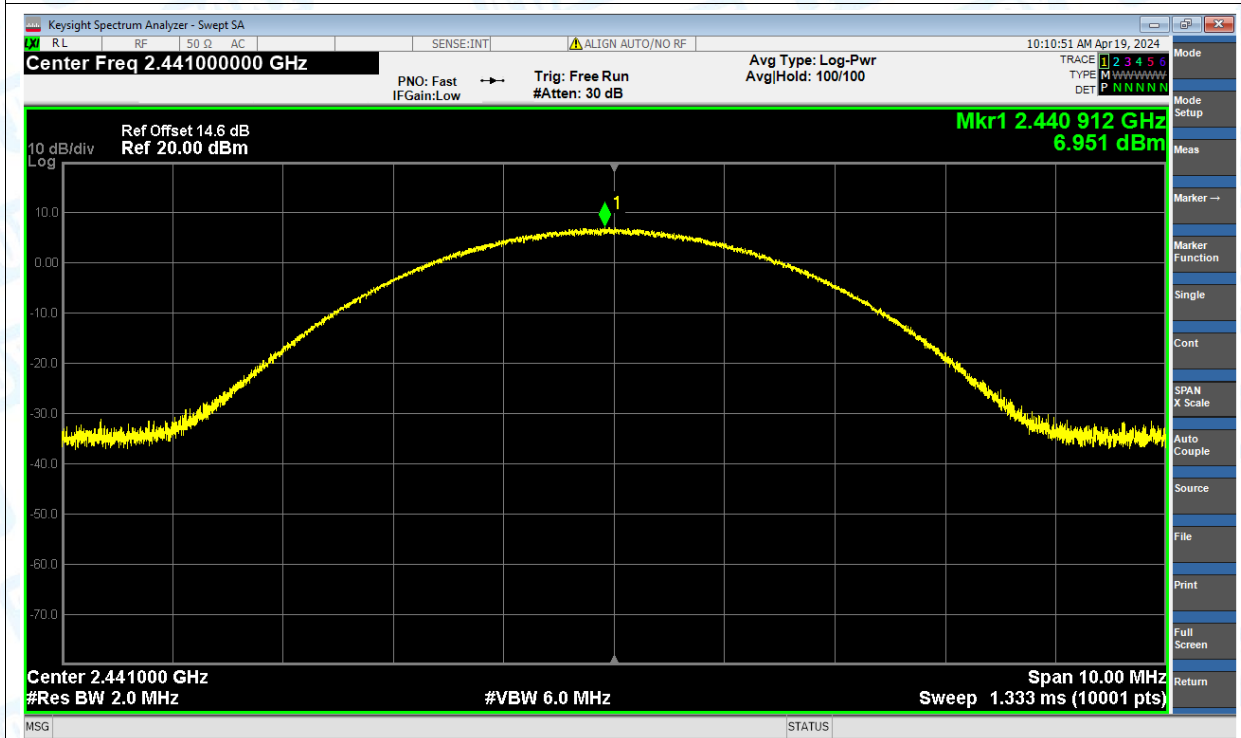
Power NVNT 1-DH1 2480MHz Ant1



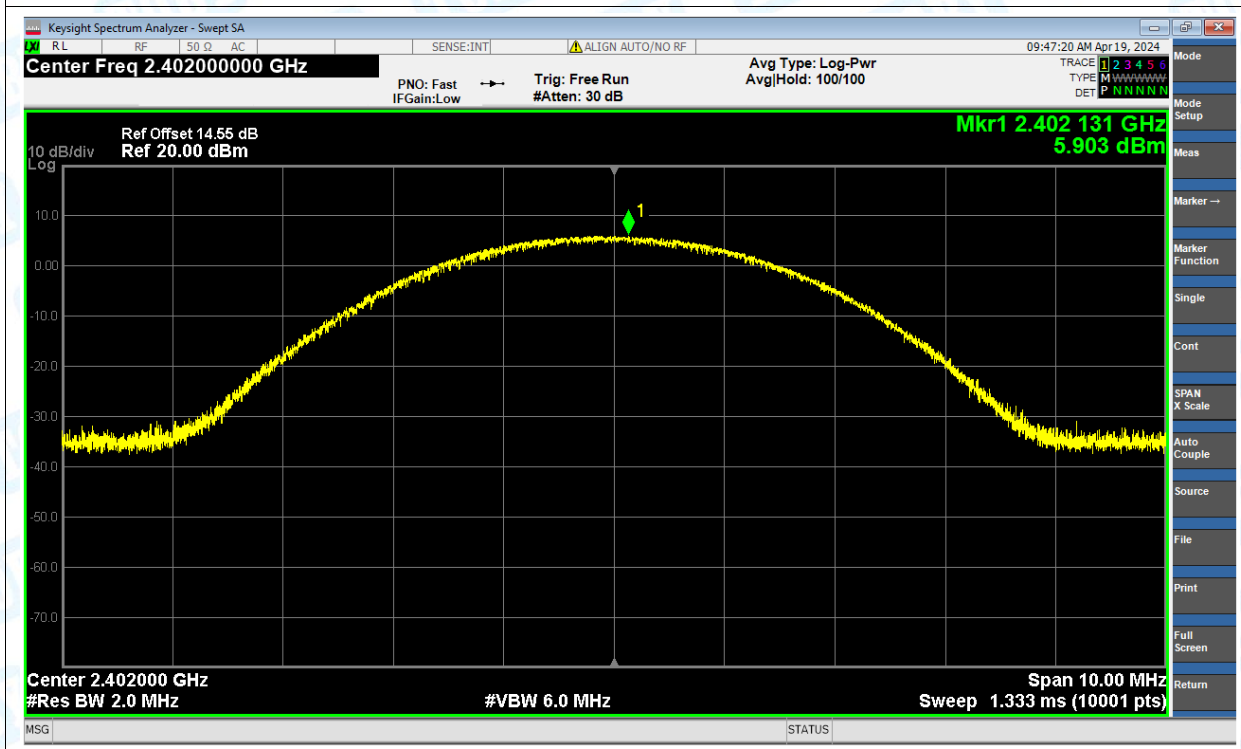
Power NVNT 1-DH3 2441MHz Ant1



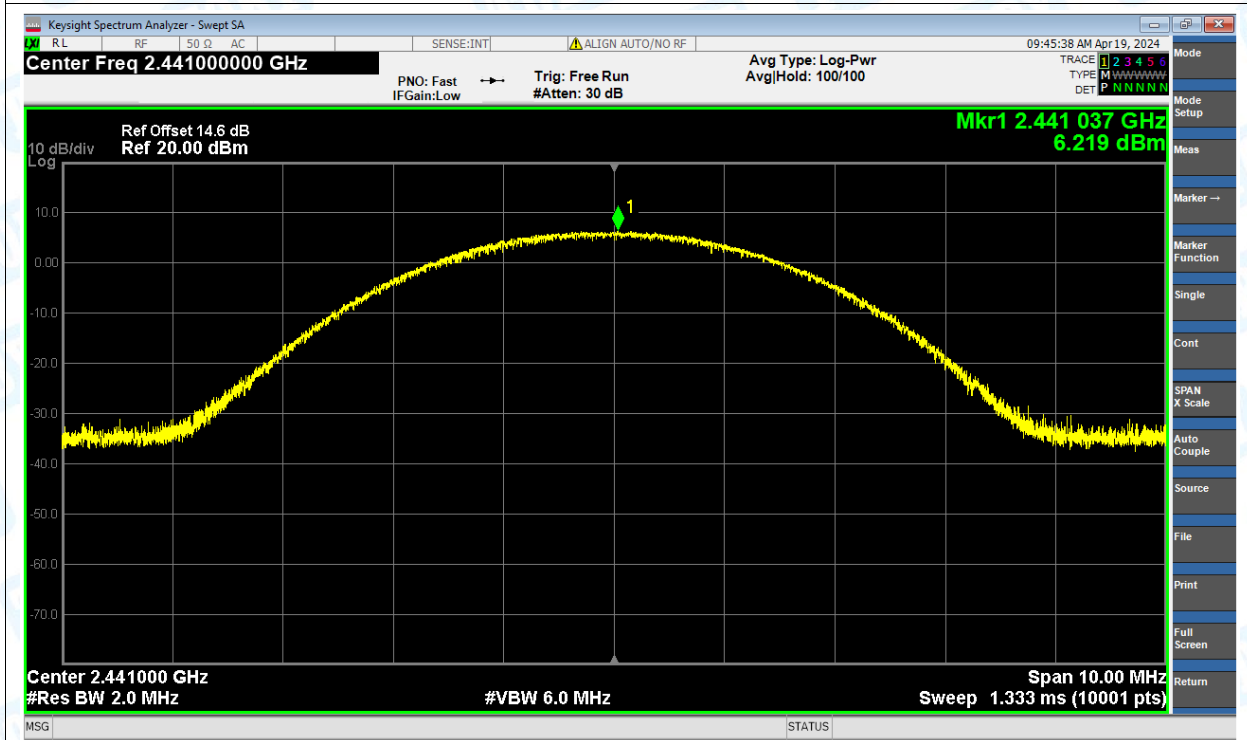
Power NVNT 1-DH5 2441MHz Ant1



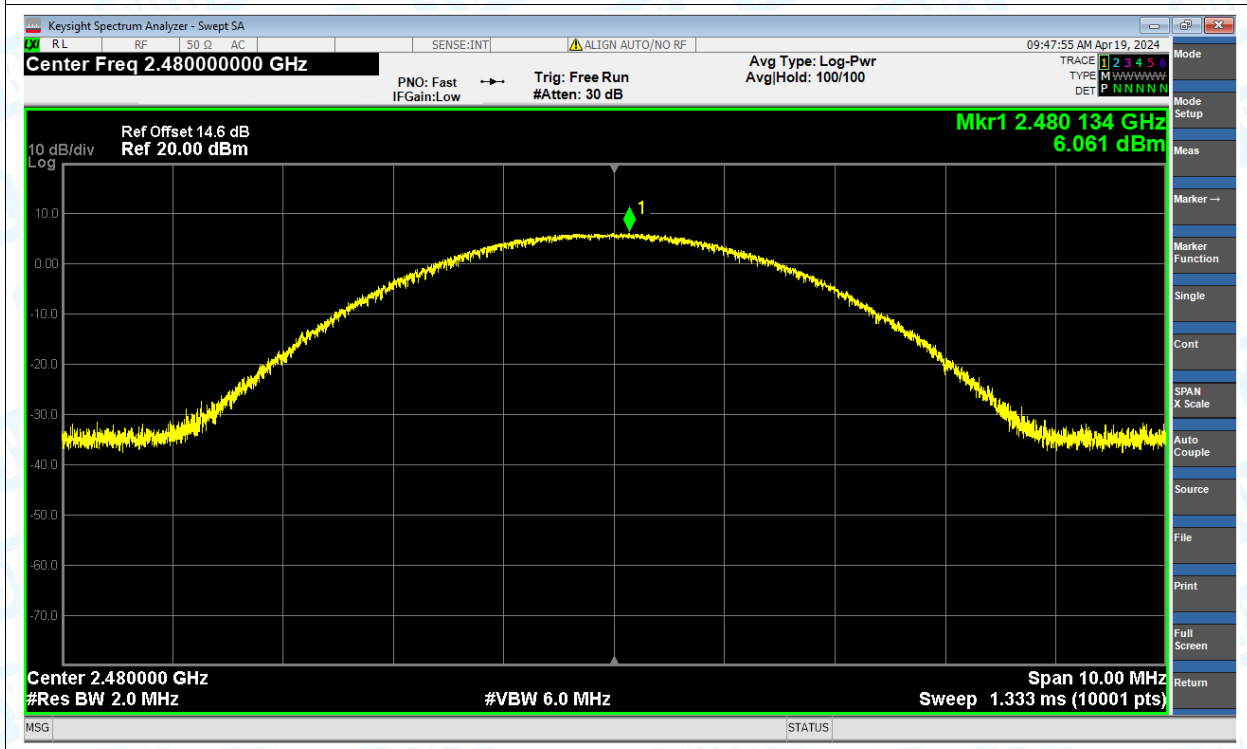
Power NVNT 2-DH1 2402MHz Ant1



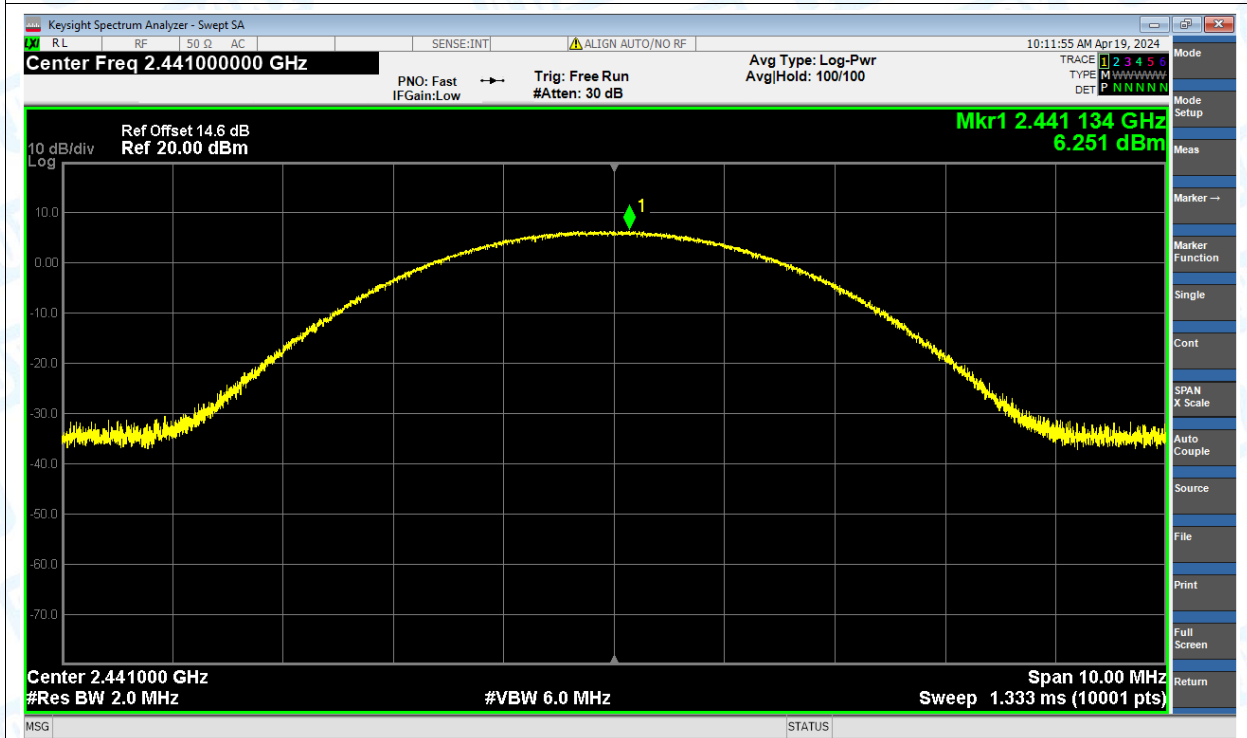
Power NVNT 2-DH1 2441MHz Ant1



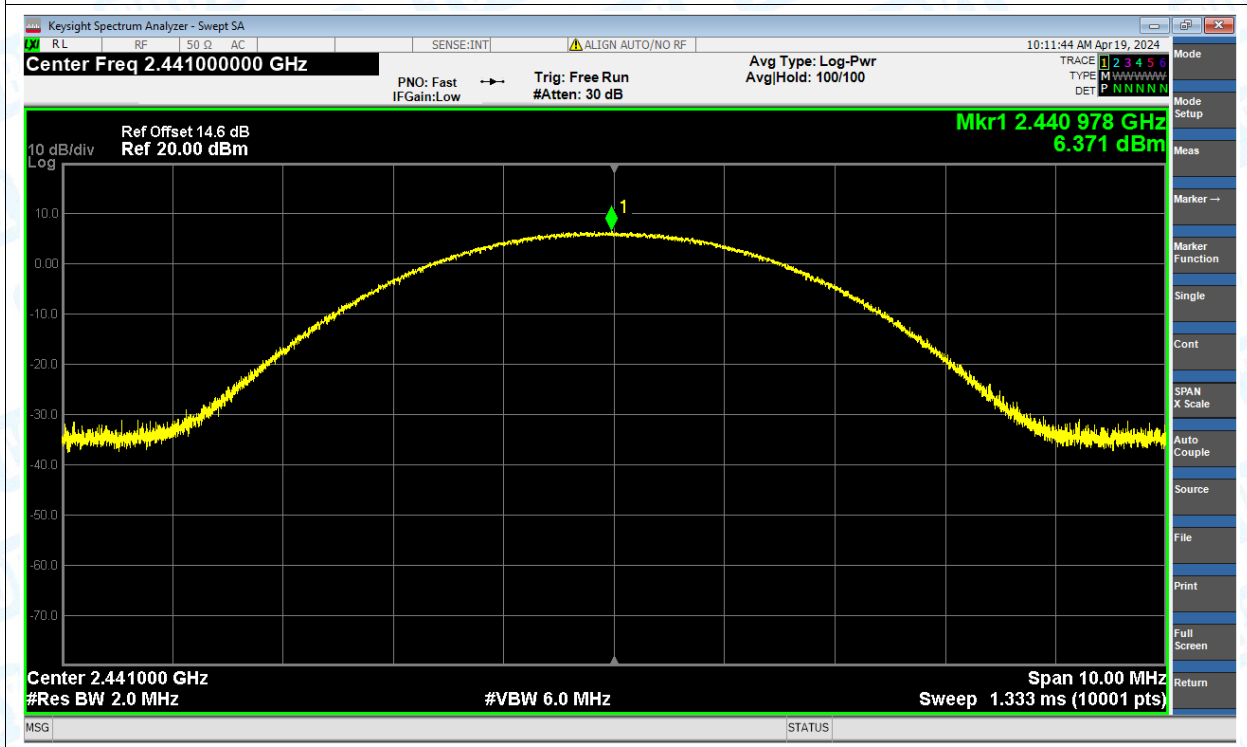
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Power NVNT 2-DH3 2441MHz Ant1



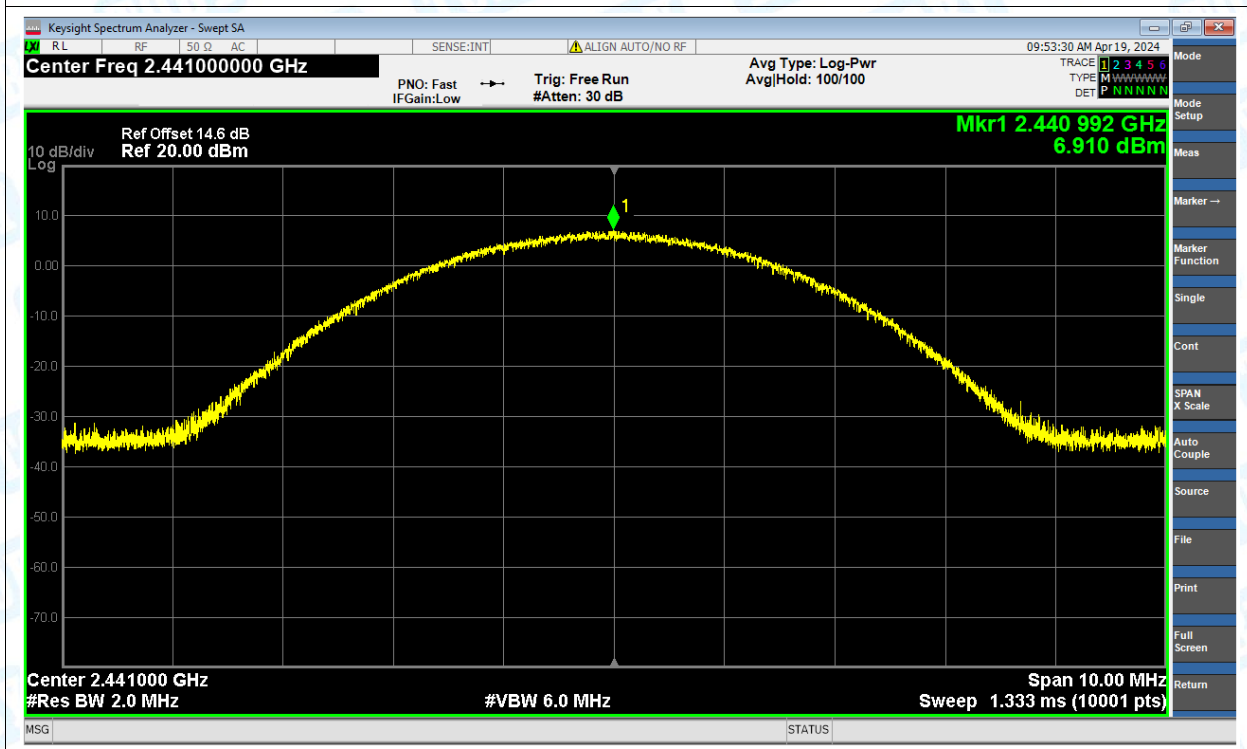
Power NVNT 2-DH5 2441MHz Ant1



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	0.86	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	1.25	0	Pass
NVNT	2-DH1	2441	Ant1	1.25	0	Pass
NVNT	2-DH1	2480	Ant1	1.22	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	1.21	0	Pass

Test Graphs

-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



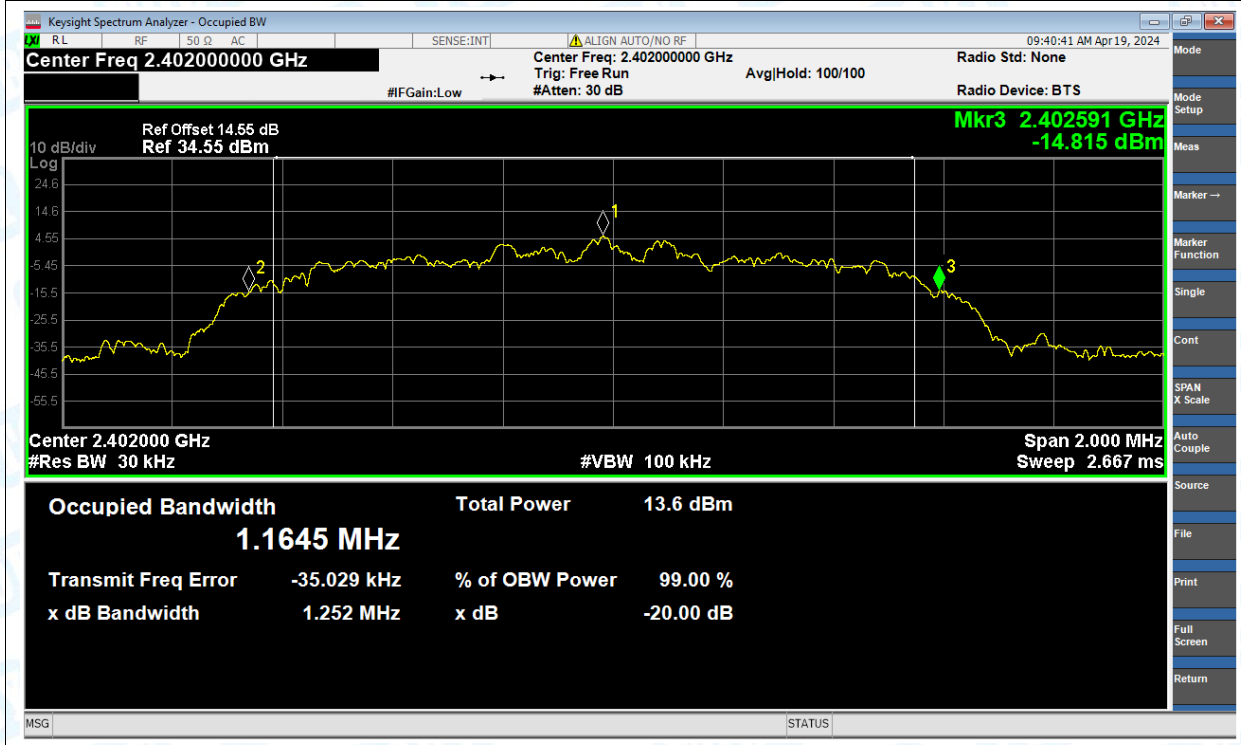
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



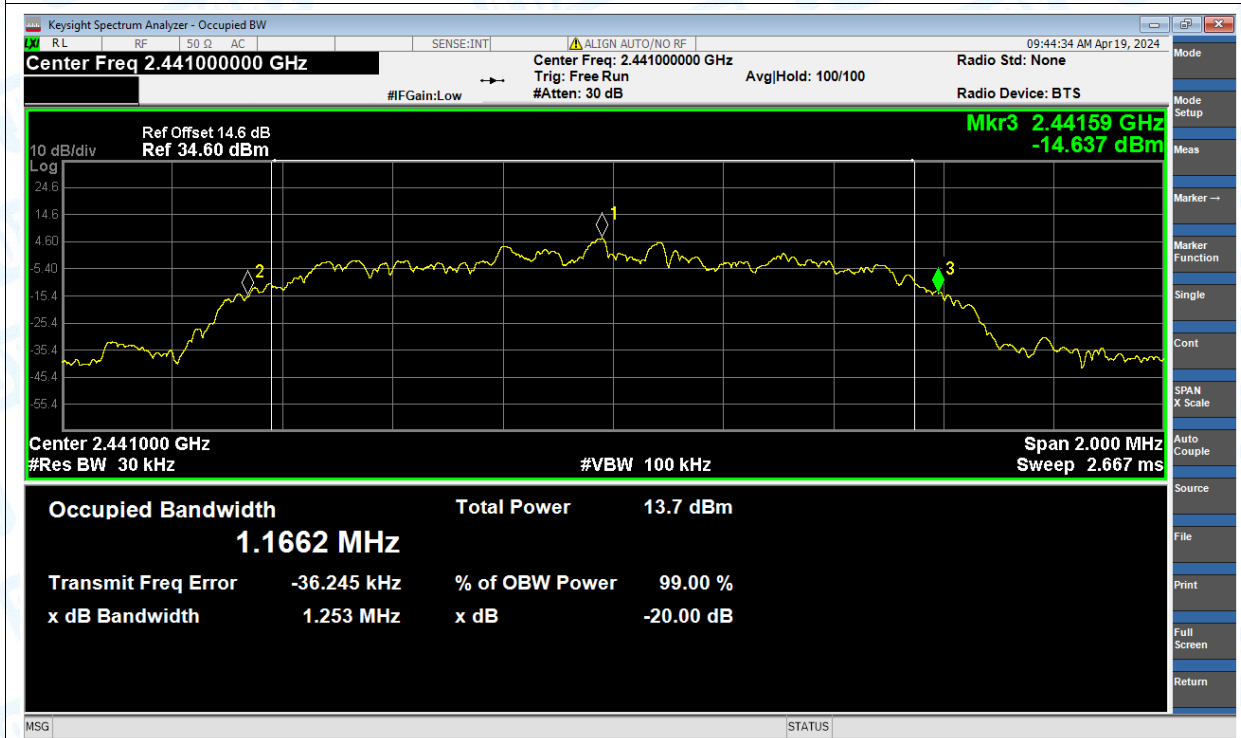
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



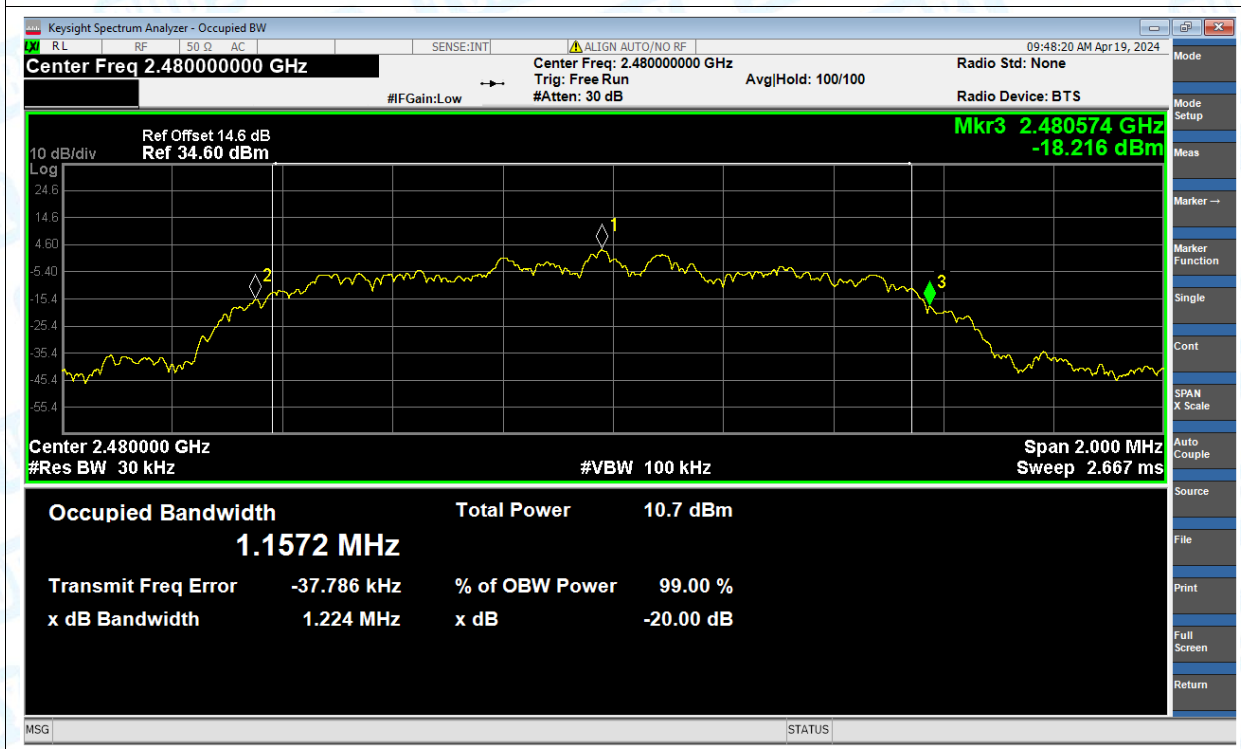
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



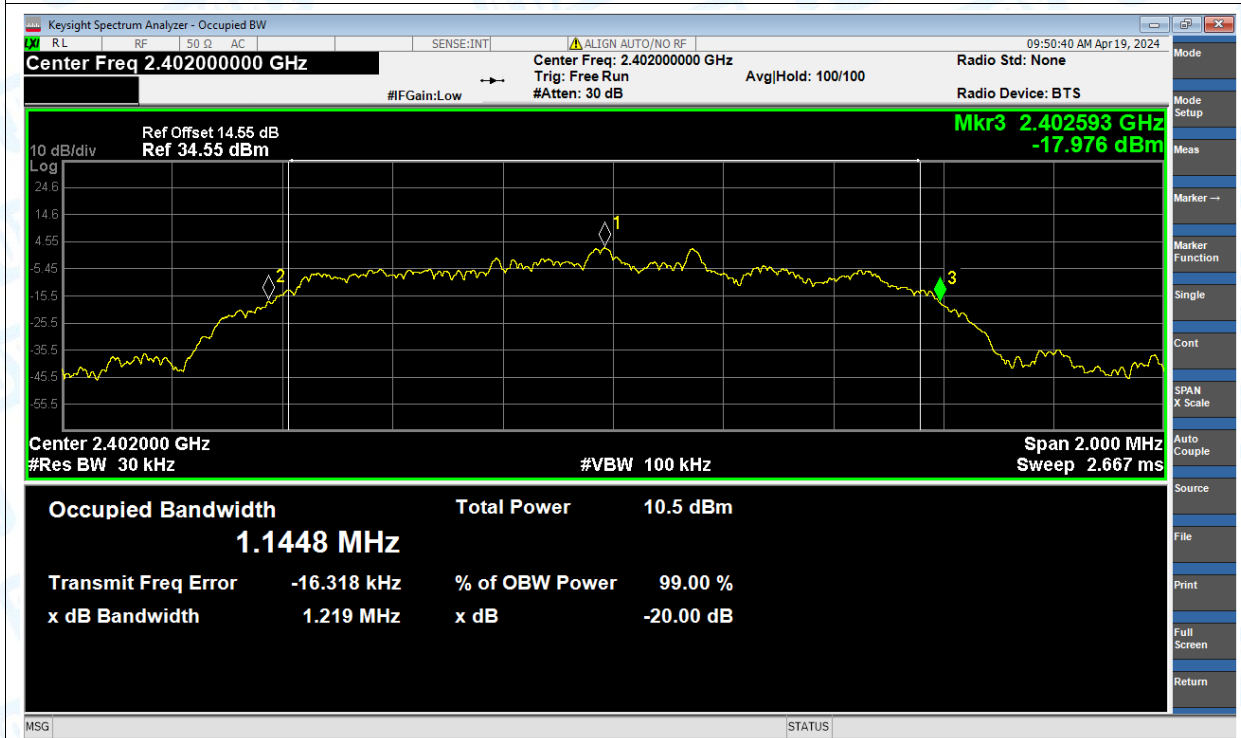
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



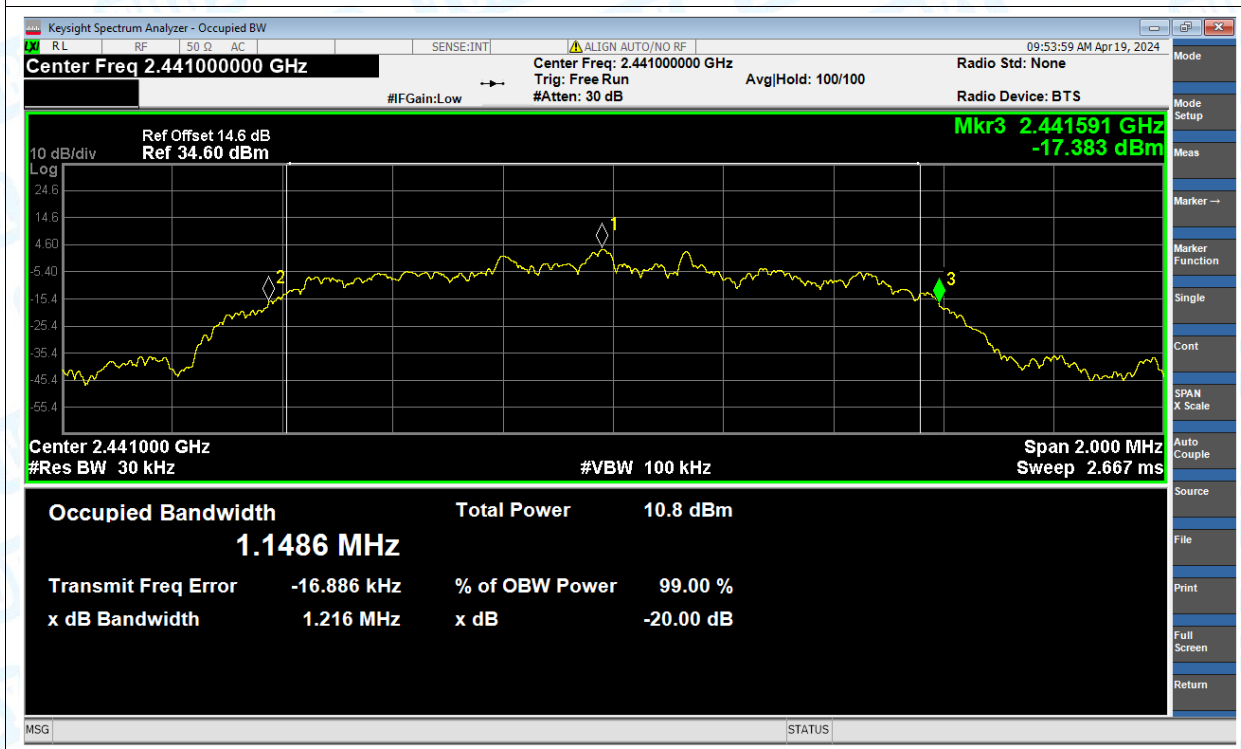
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

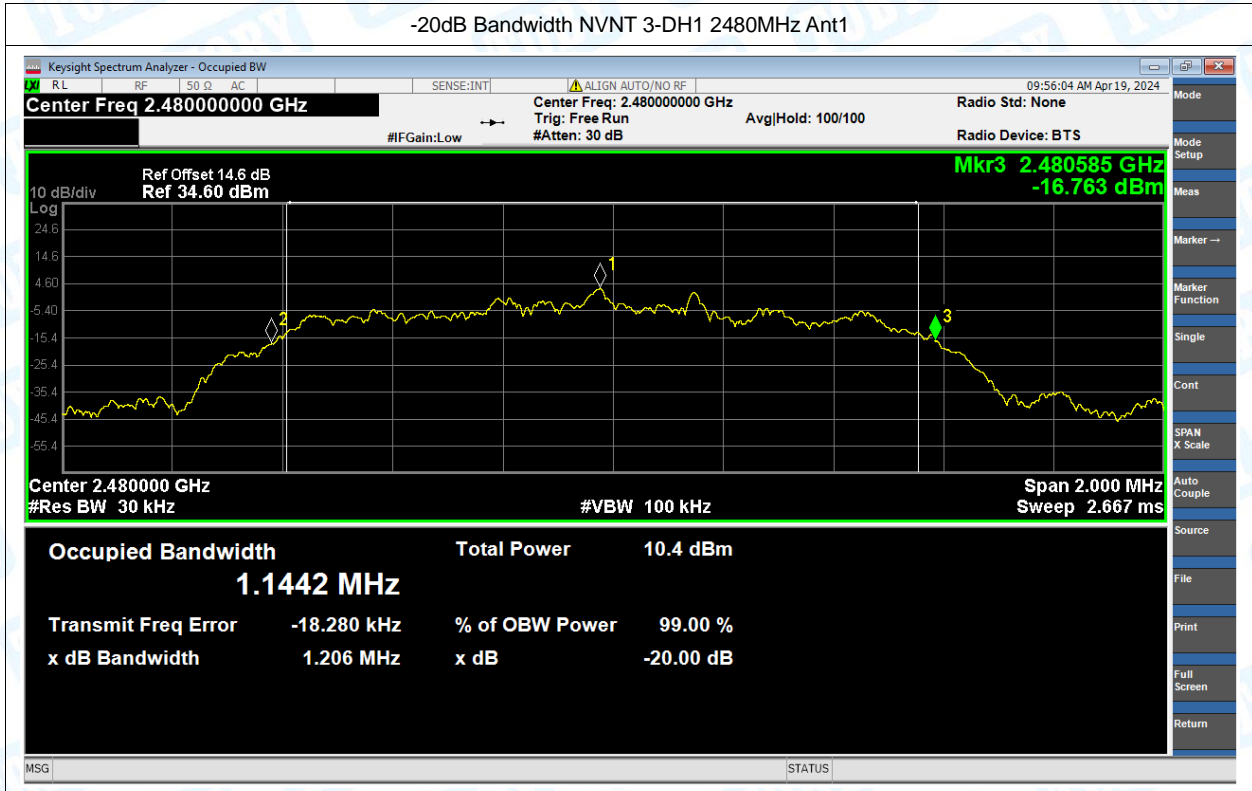


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



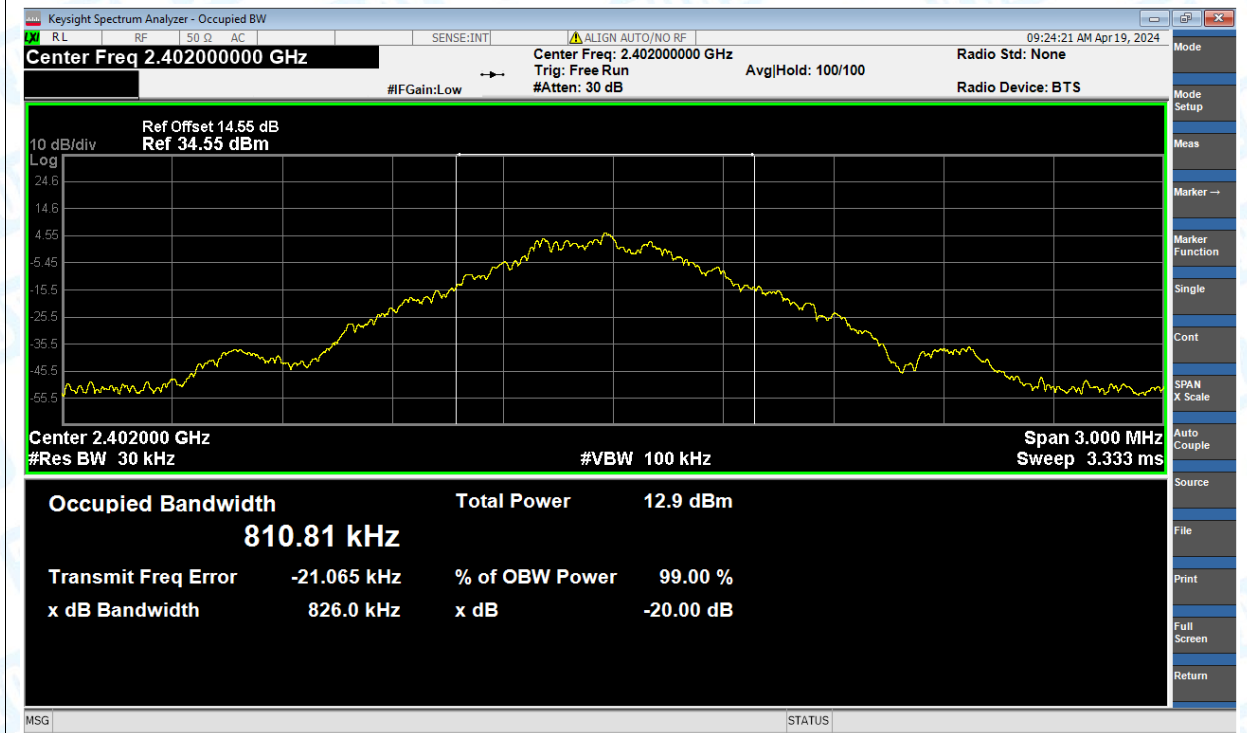


4. Occupied Channel Bandwidth

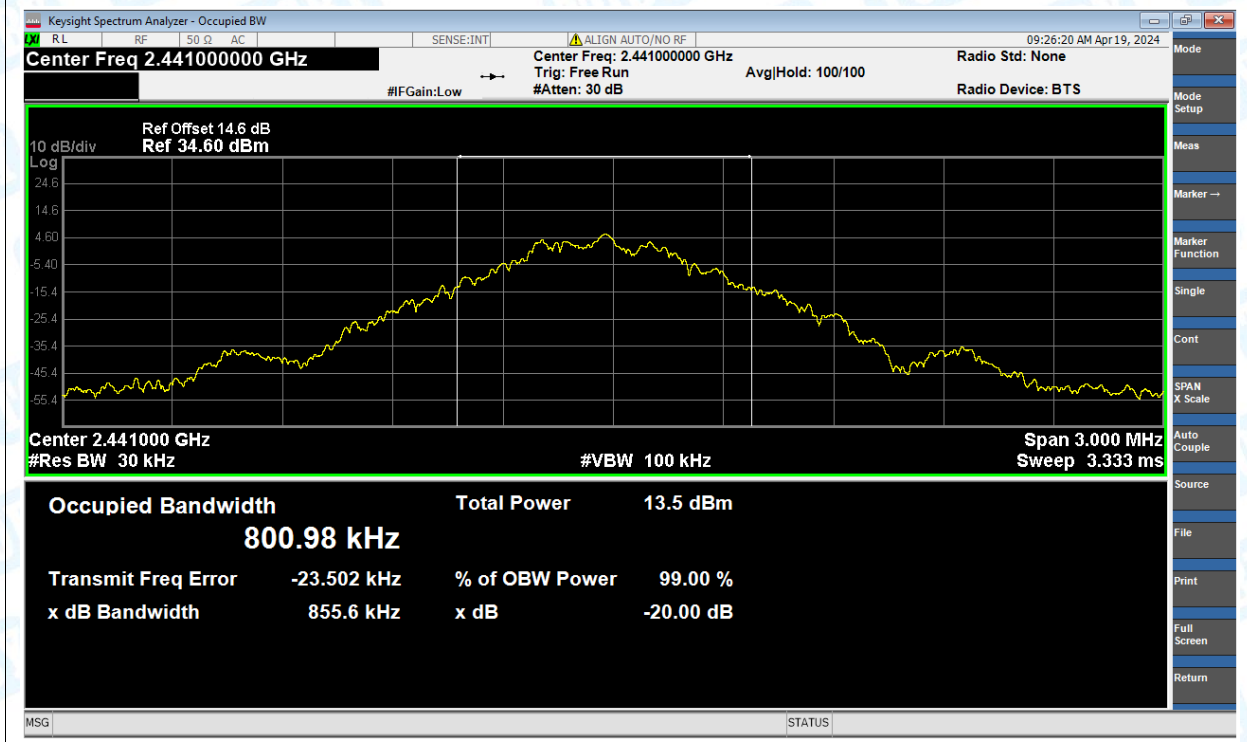
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.811
NVNT	1-DH1	2441	Ant1	0.801
NVNT	1-DH1	2480	Ant1	0.816
NVNT	2-DH1	2402	Ant1	1.157
NVNT	2-DH1	2441	Ant1	1.162
NVNT	2-DH1	2480	Ant1	1.165
NVNT	3-DH1	2402	Ant1	1.145
NVNT	3-DH1	2441	Ant1	1.148
NVNT	3-DH1	2480	Ant1	1.149

Test Graphs

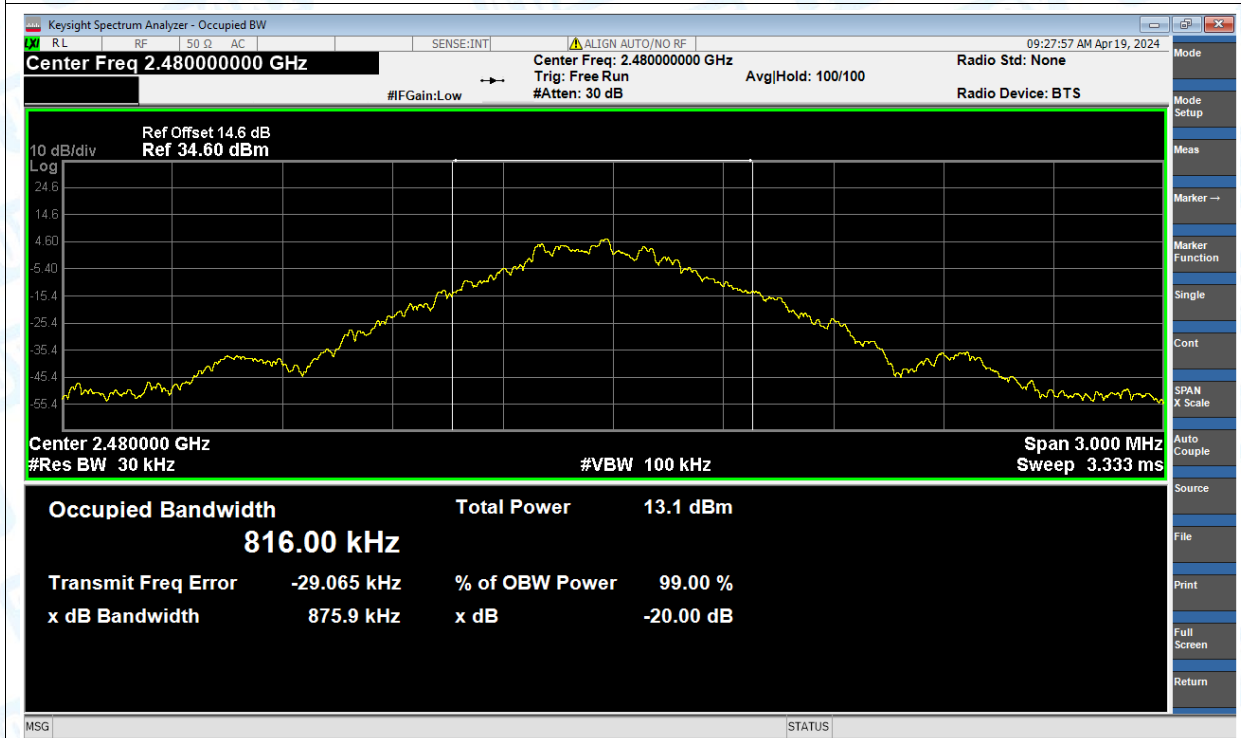
OBW NVNT 1-DH1 2402MHz Ant1



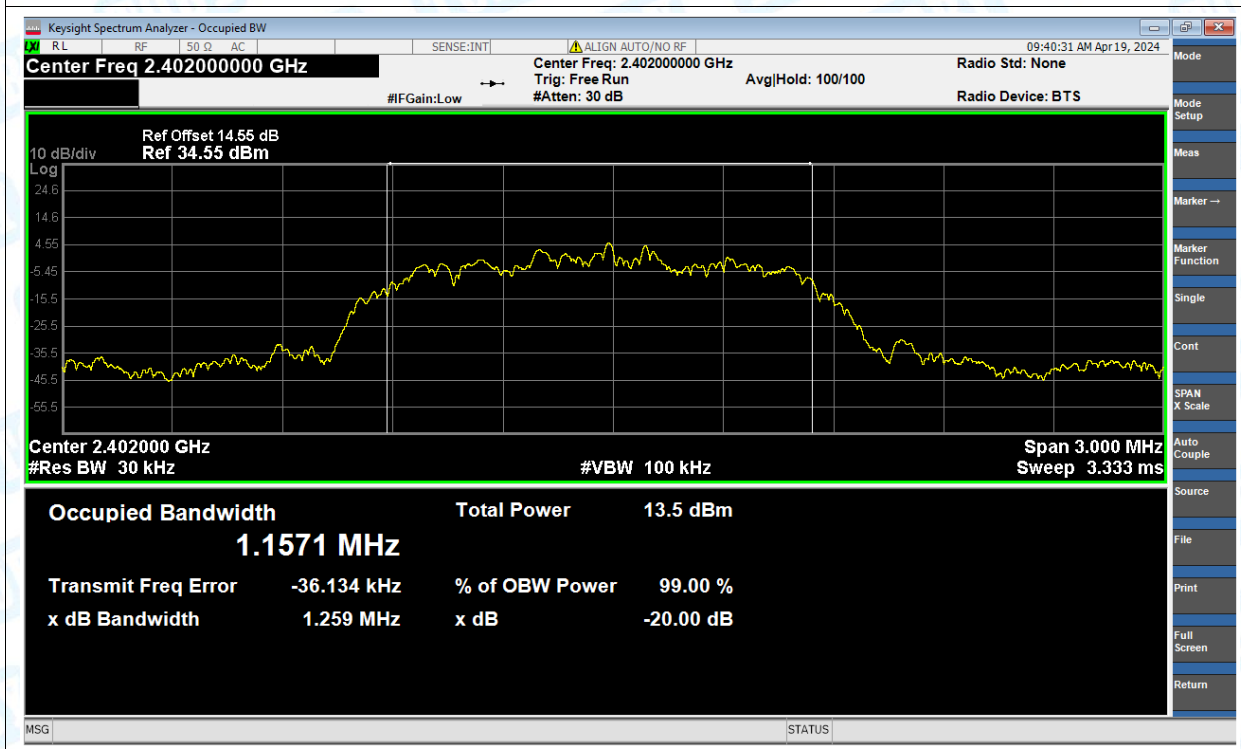
OBW NVNT 1-DH1 2441MHz Ant1



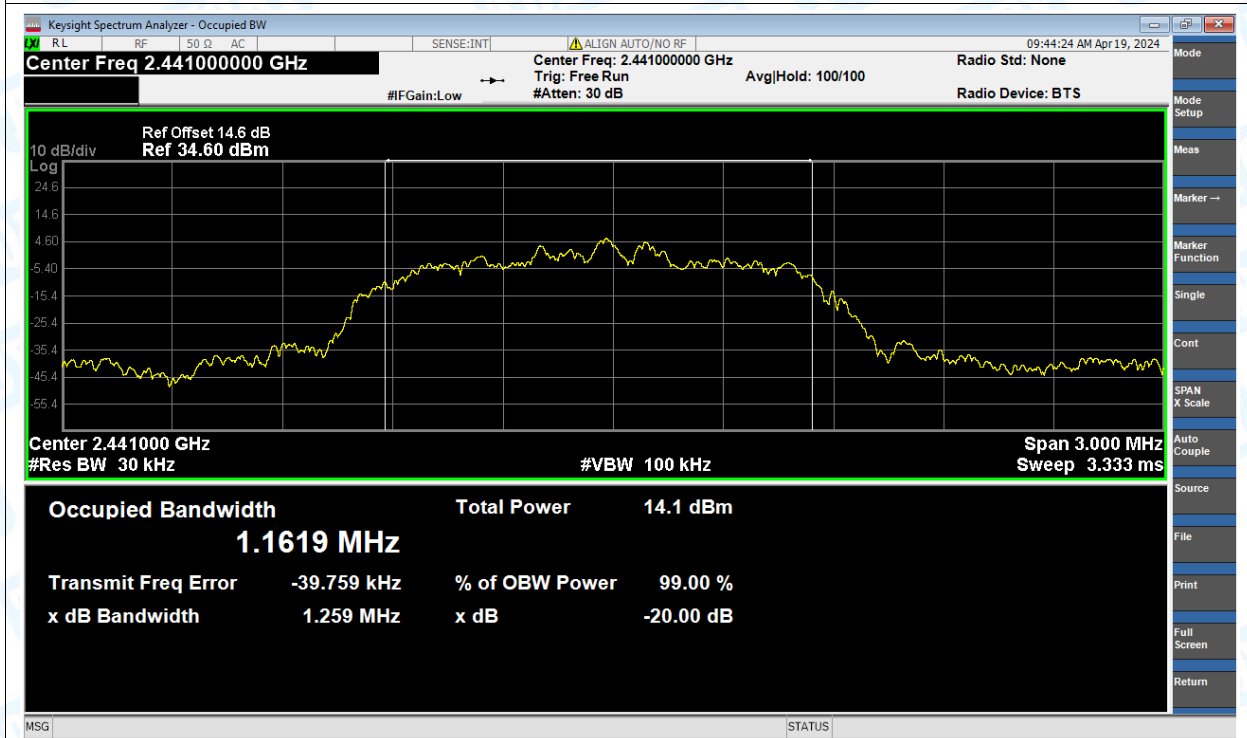
OBW NVNT 1-DH1 2480MHz Ant1



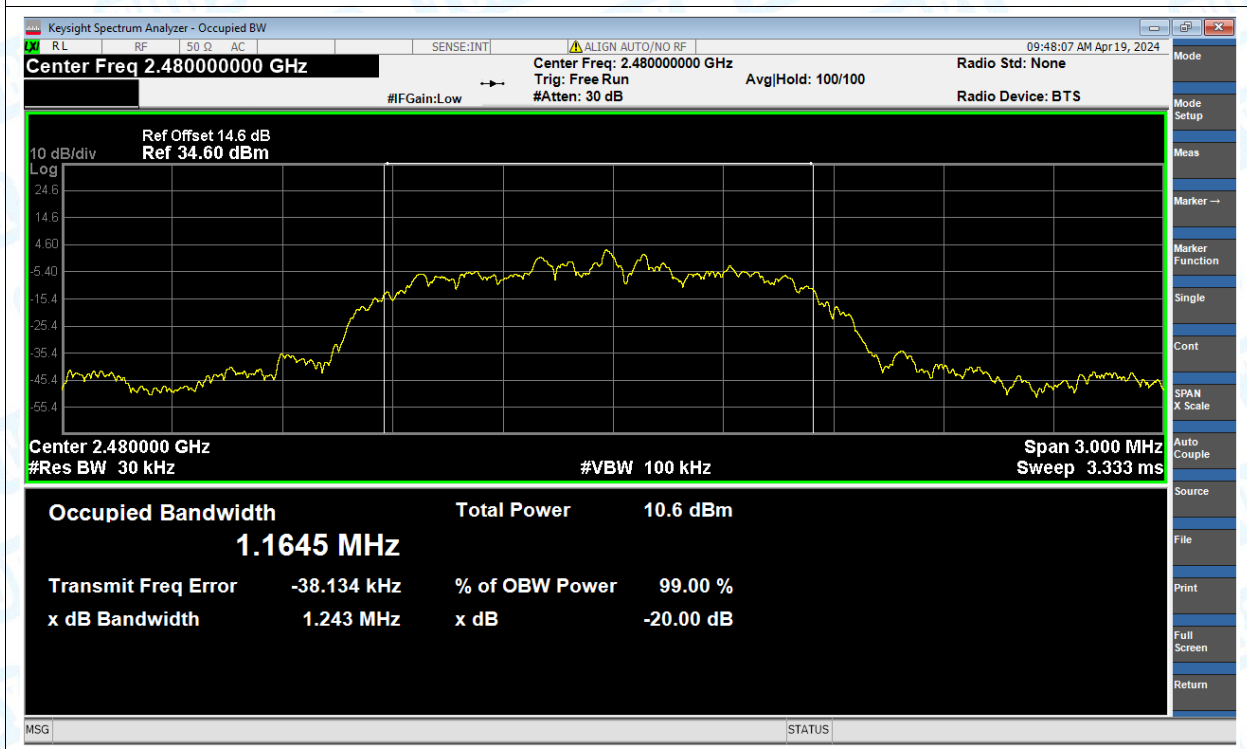
OBW NVNT 2-DH1 2402MHz Ant1



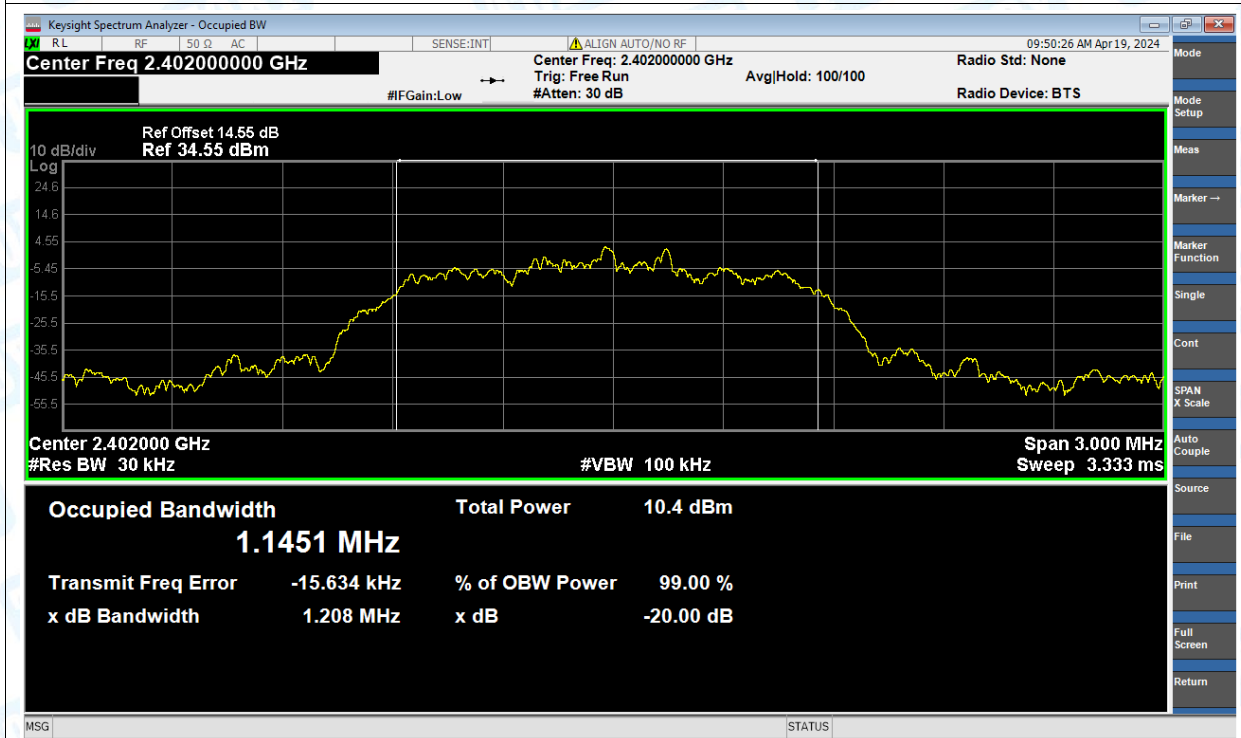
OBW NVNT 2-DH1 2441MHz Ant1



OBW NVNT 2-DH1 2480MHz Ant1

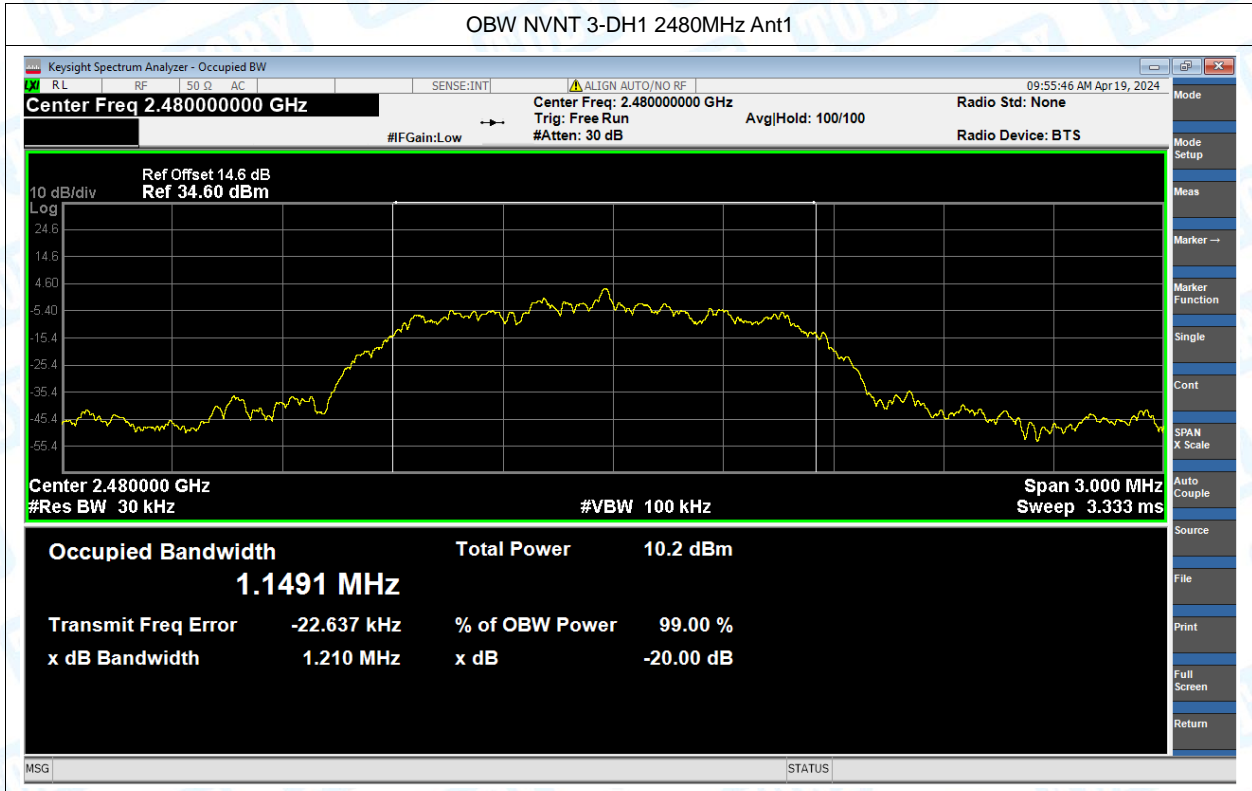


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



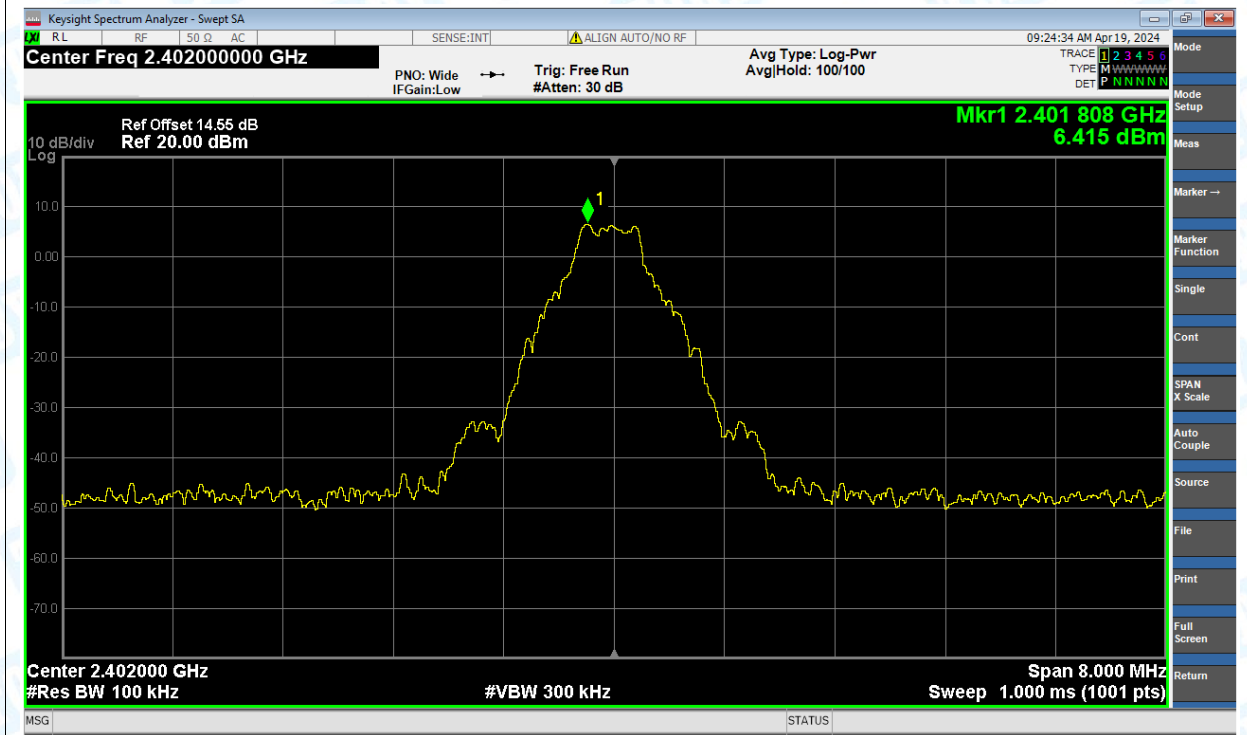


5. Band Edge

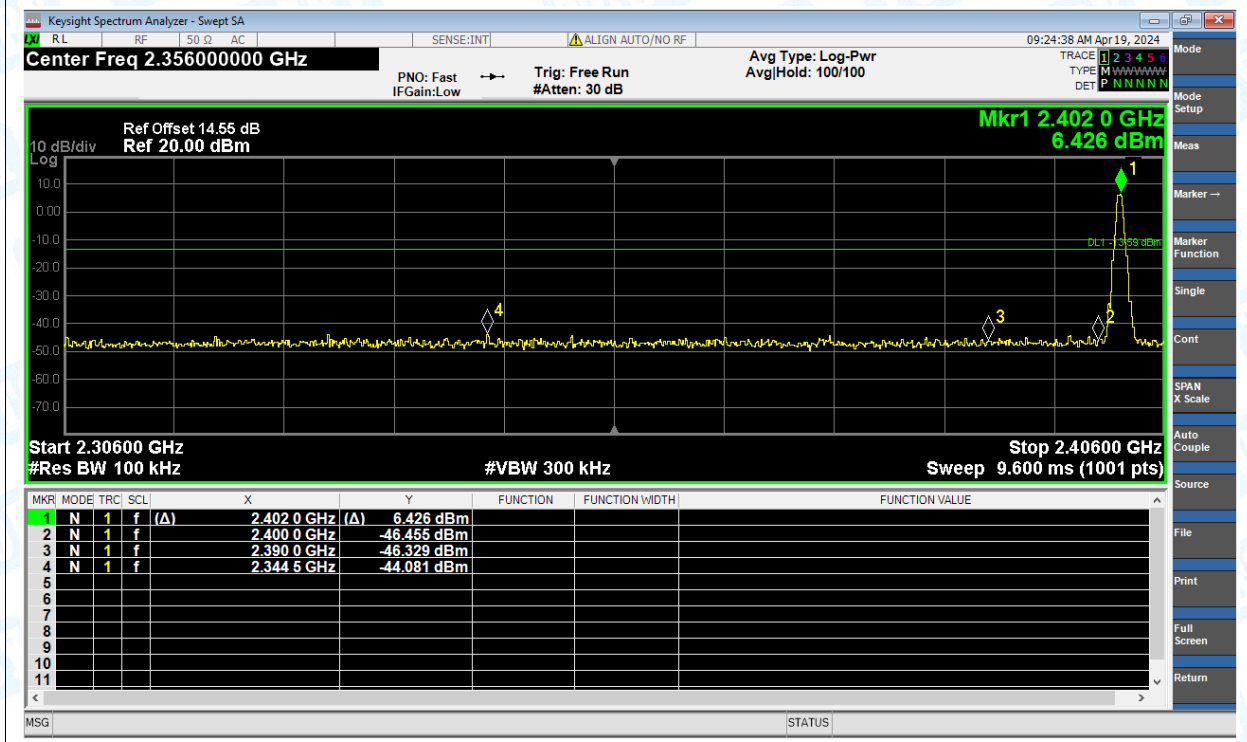
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-50.5	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-49.91	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-50.63	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-47.77	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-47.81	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-47.47	-20	Pass

Test Graphs

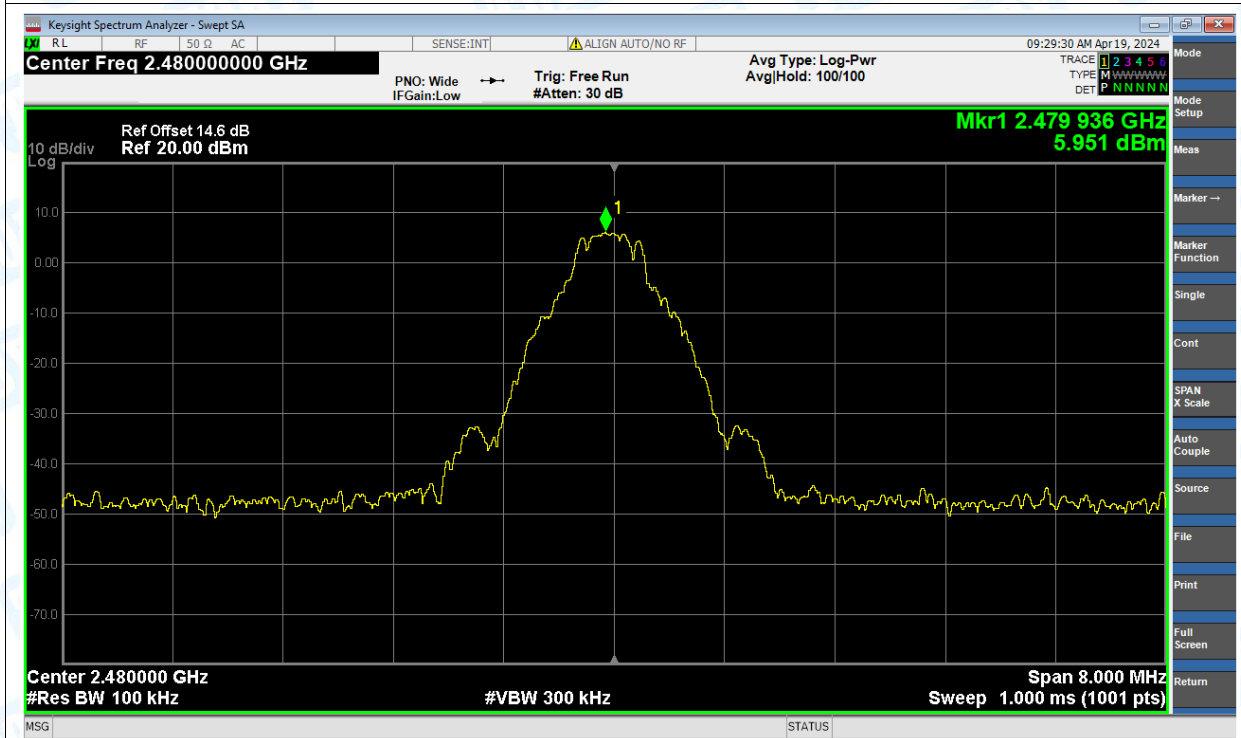
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



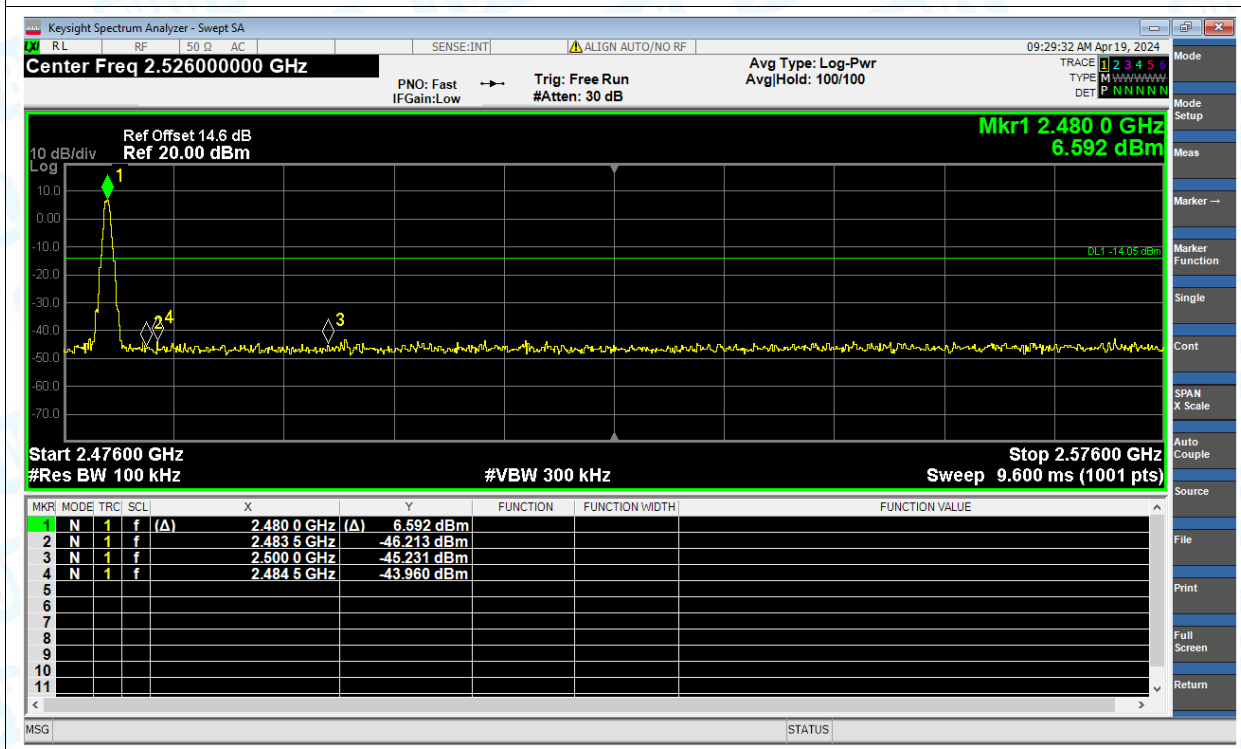
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



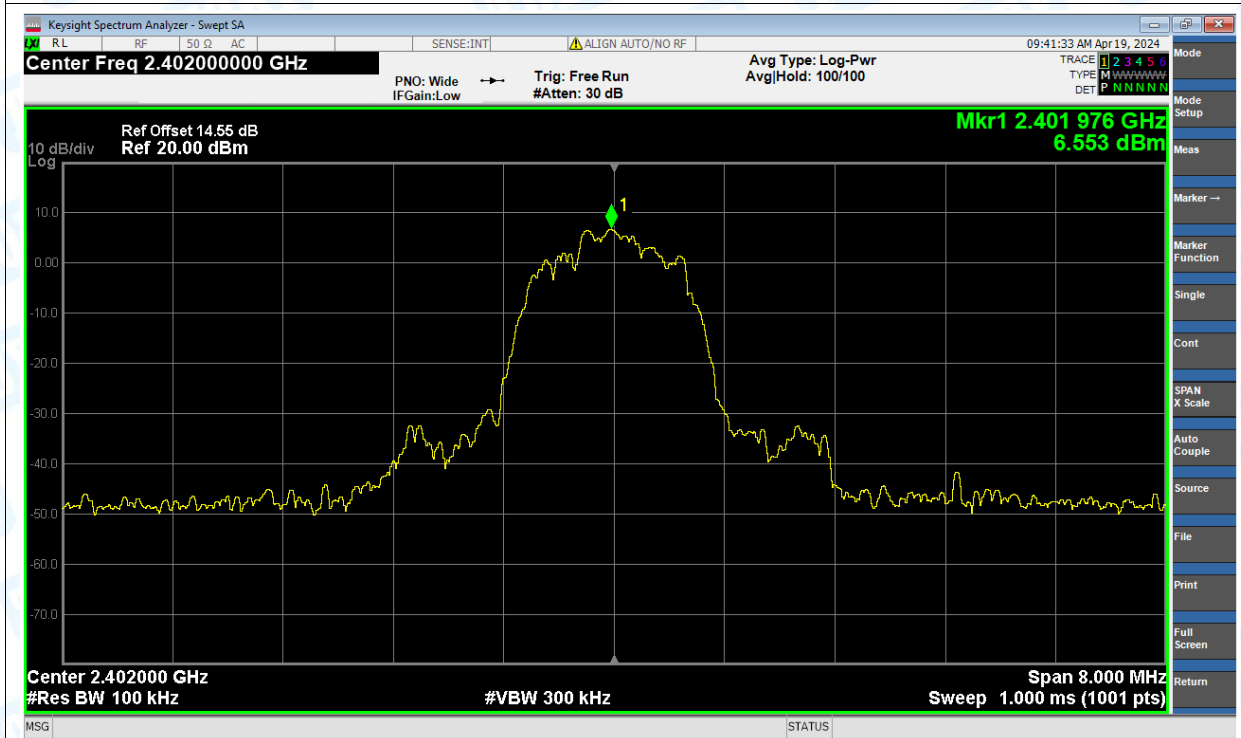
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



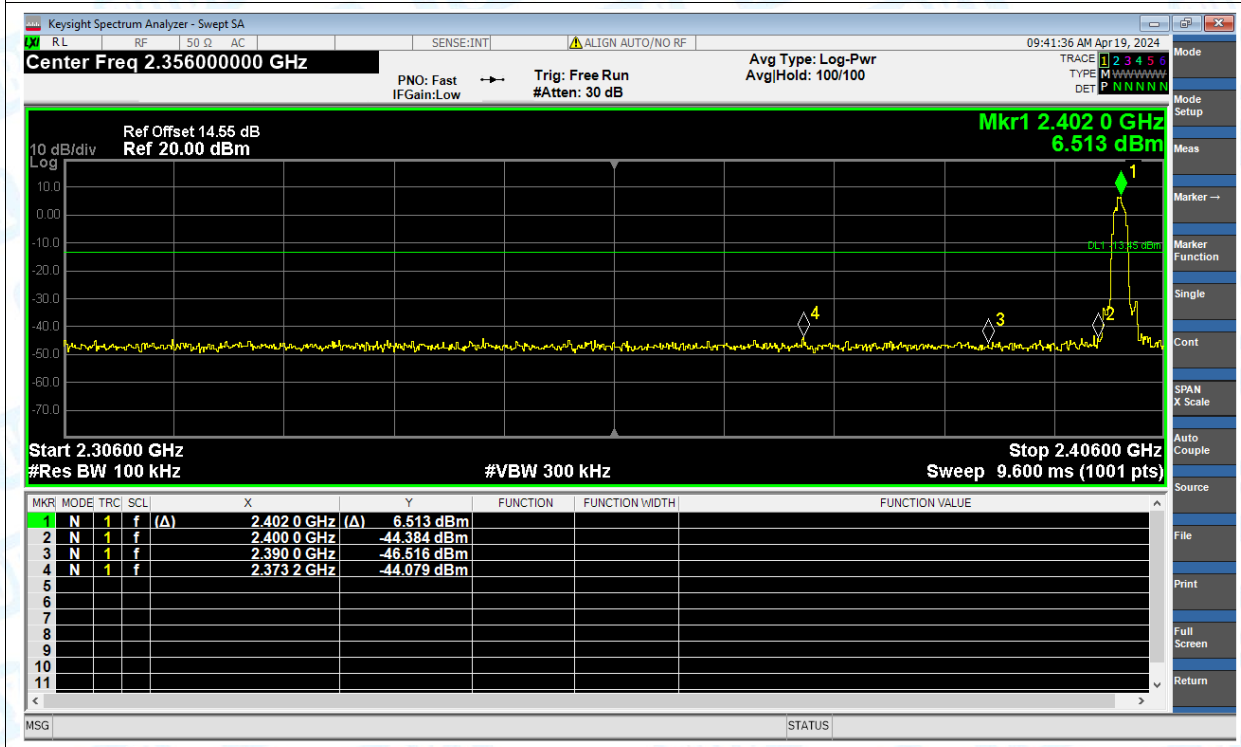
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



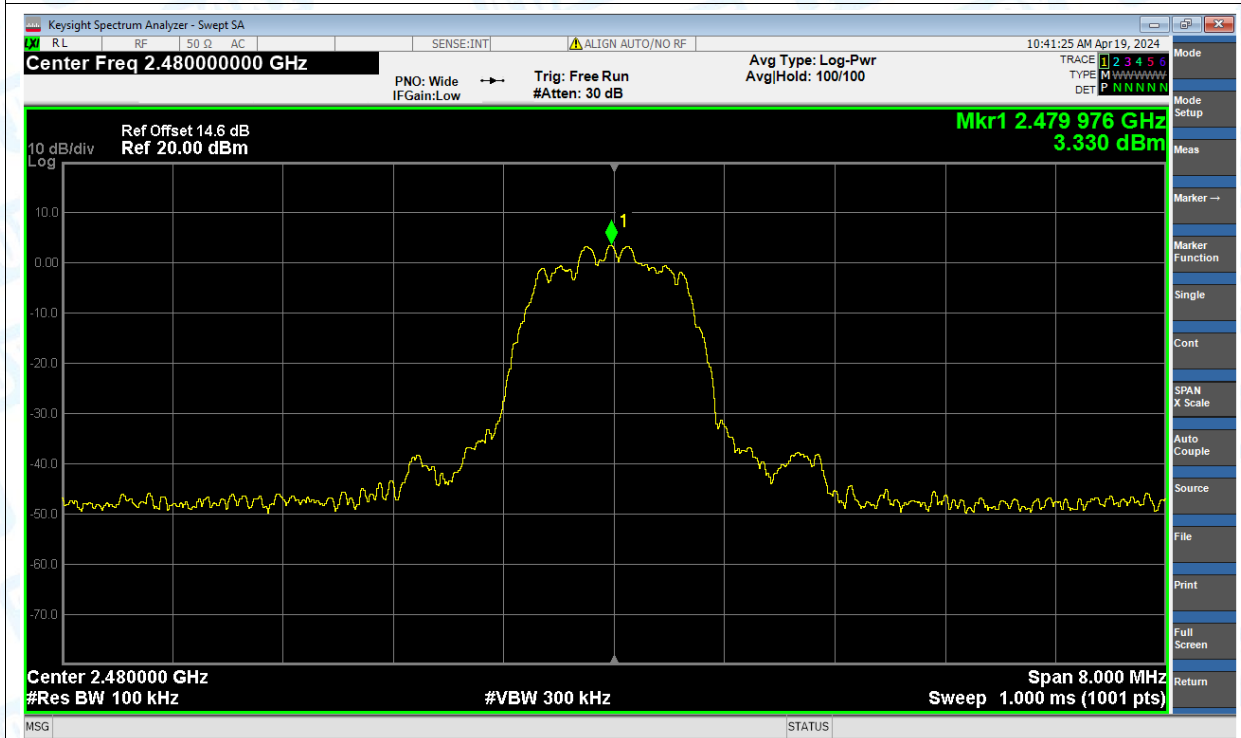
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



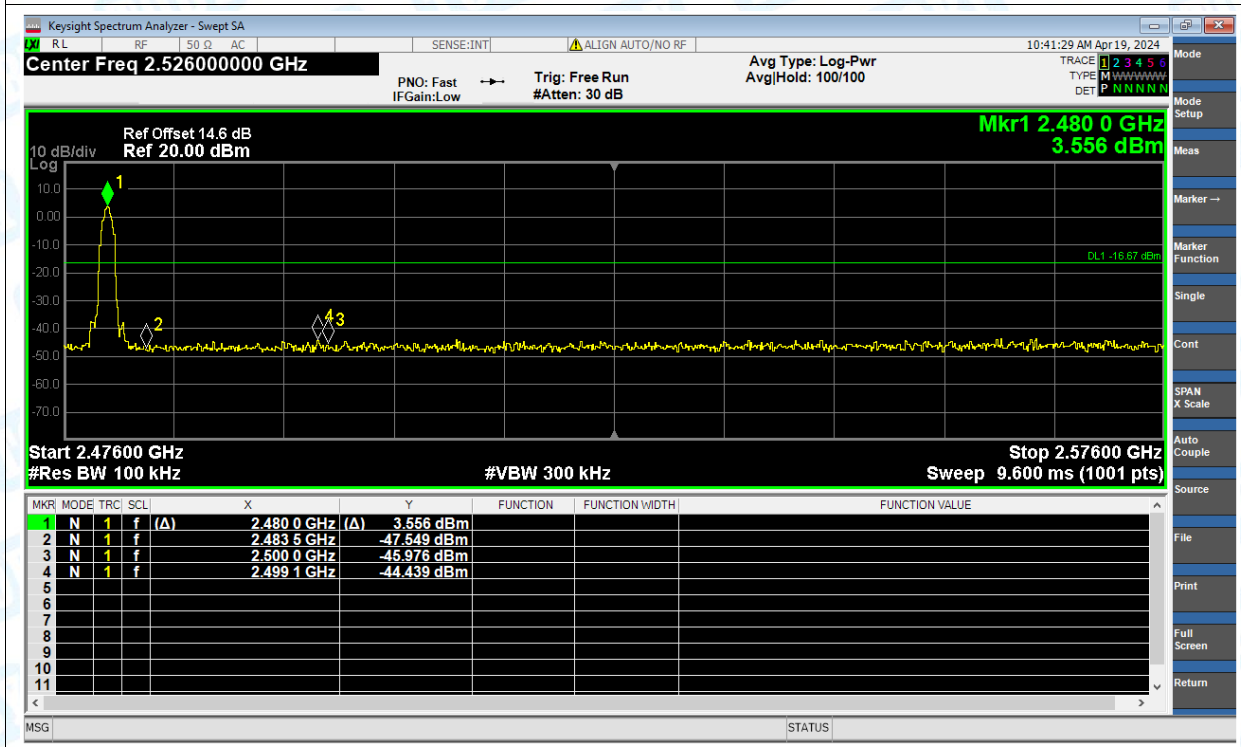
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



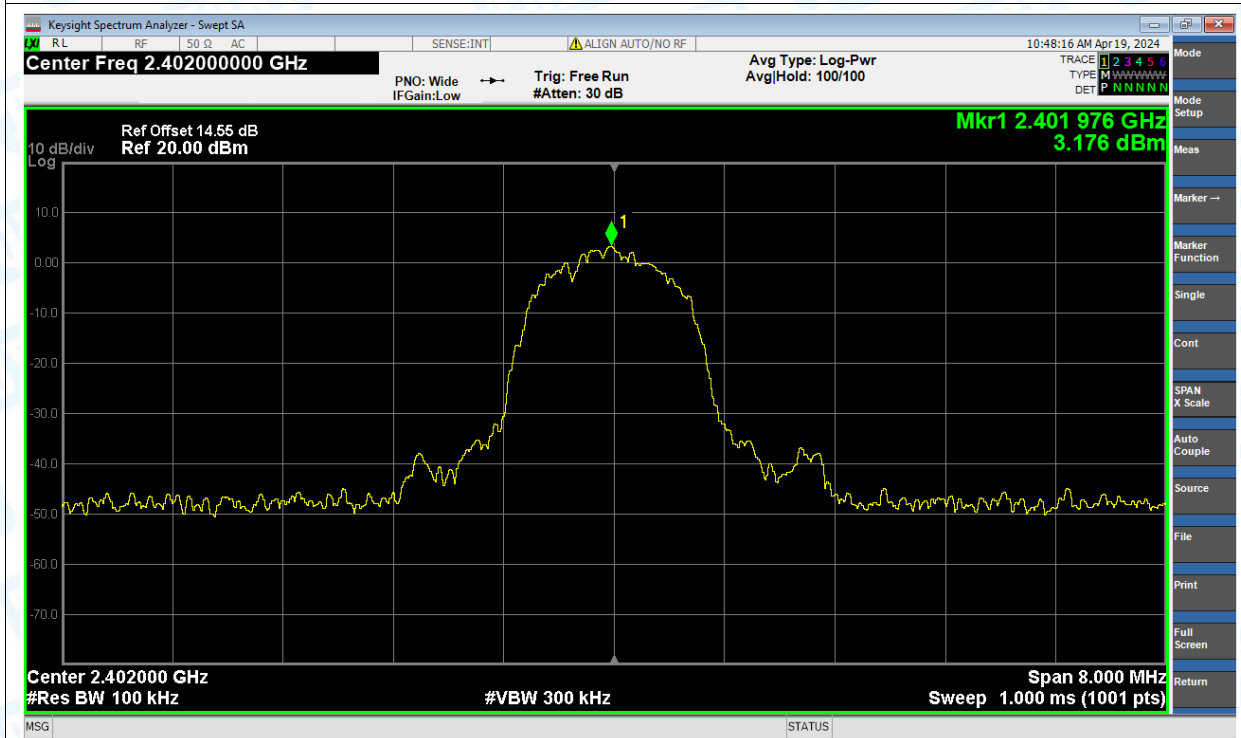
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



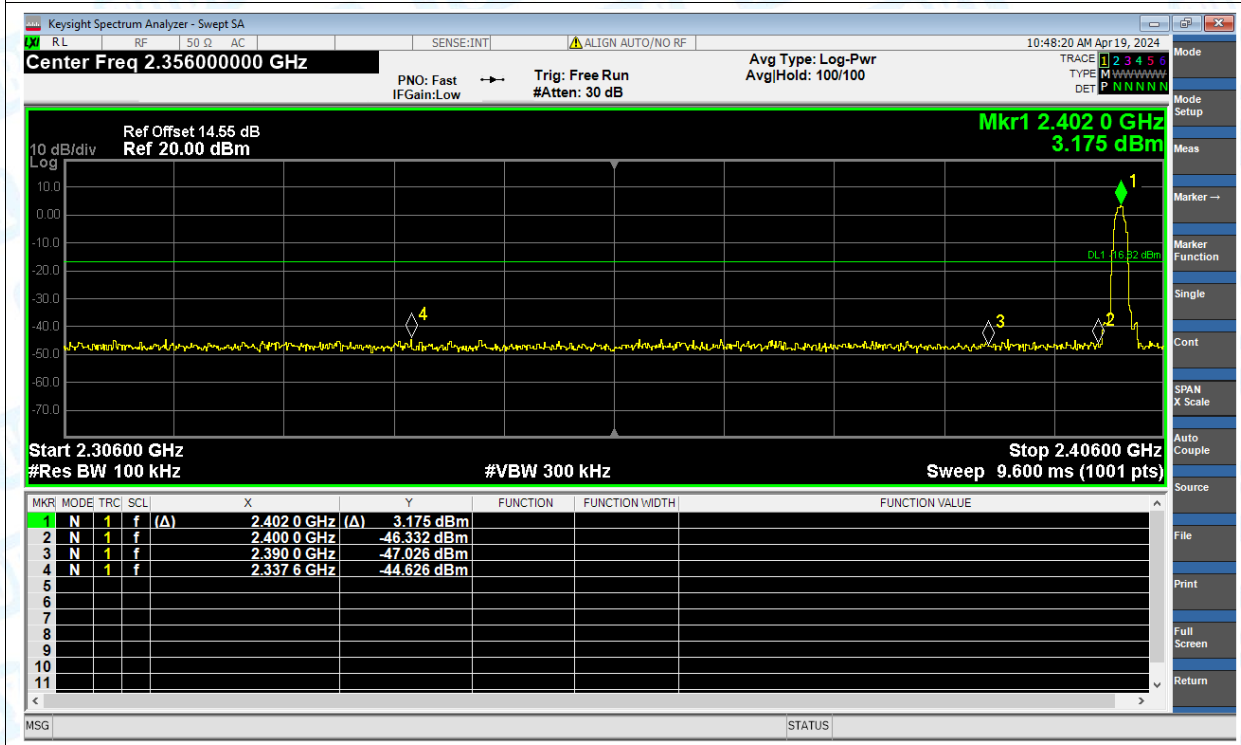
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



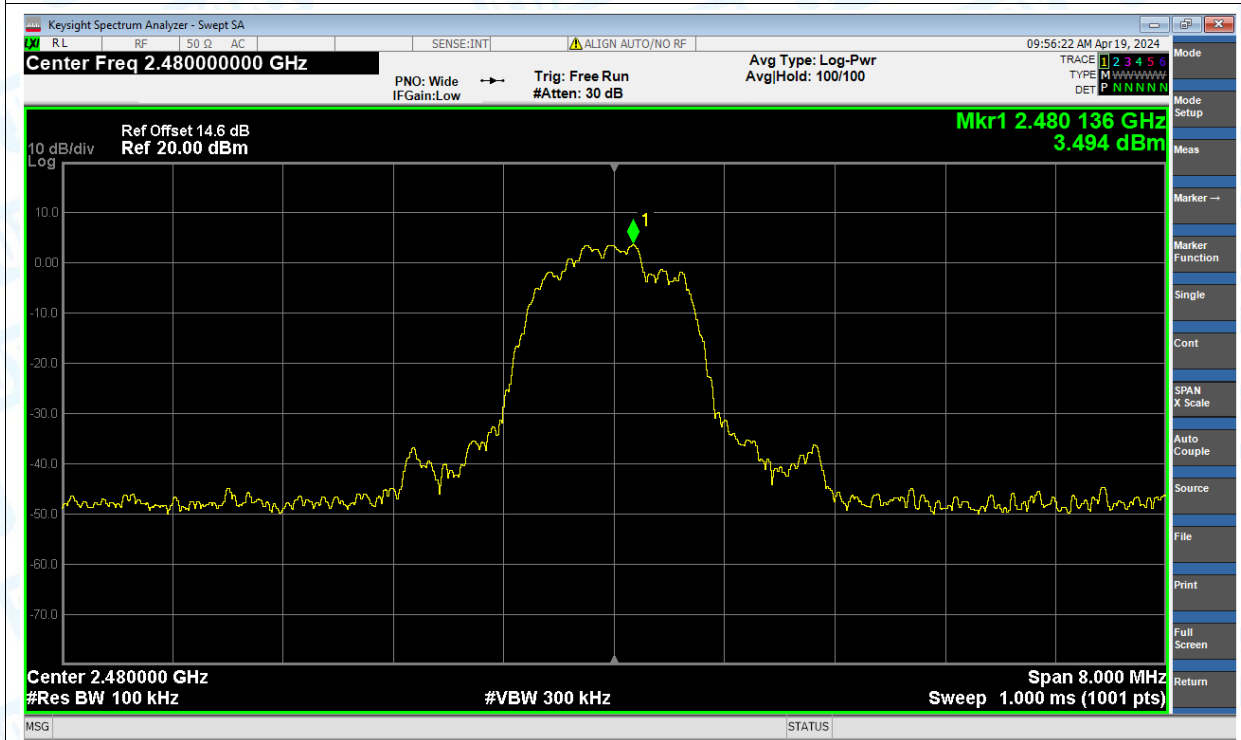
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



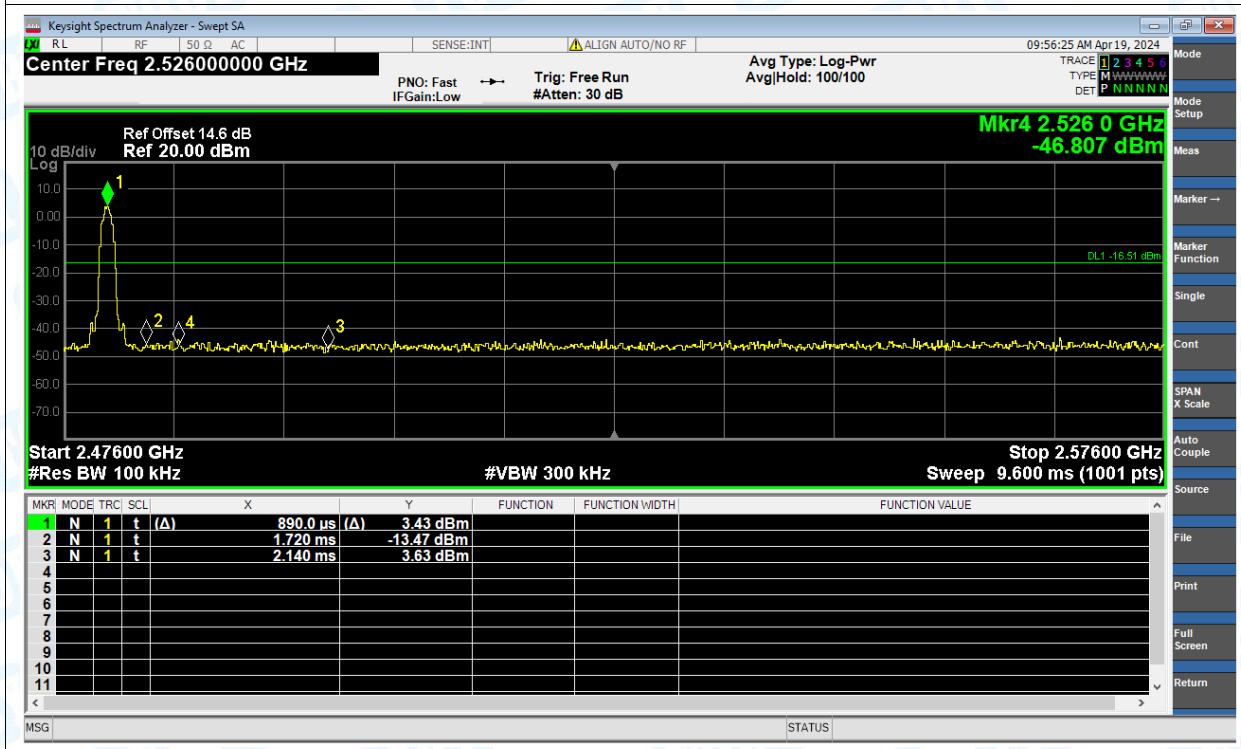
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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



6. Band Edge(Hopping)

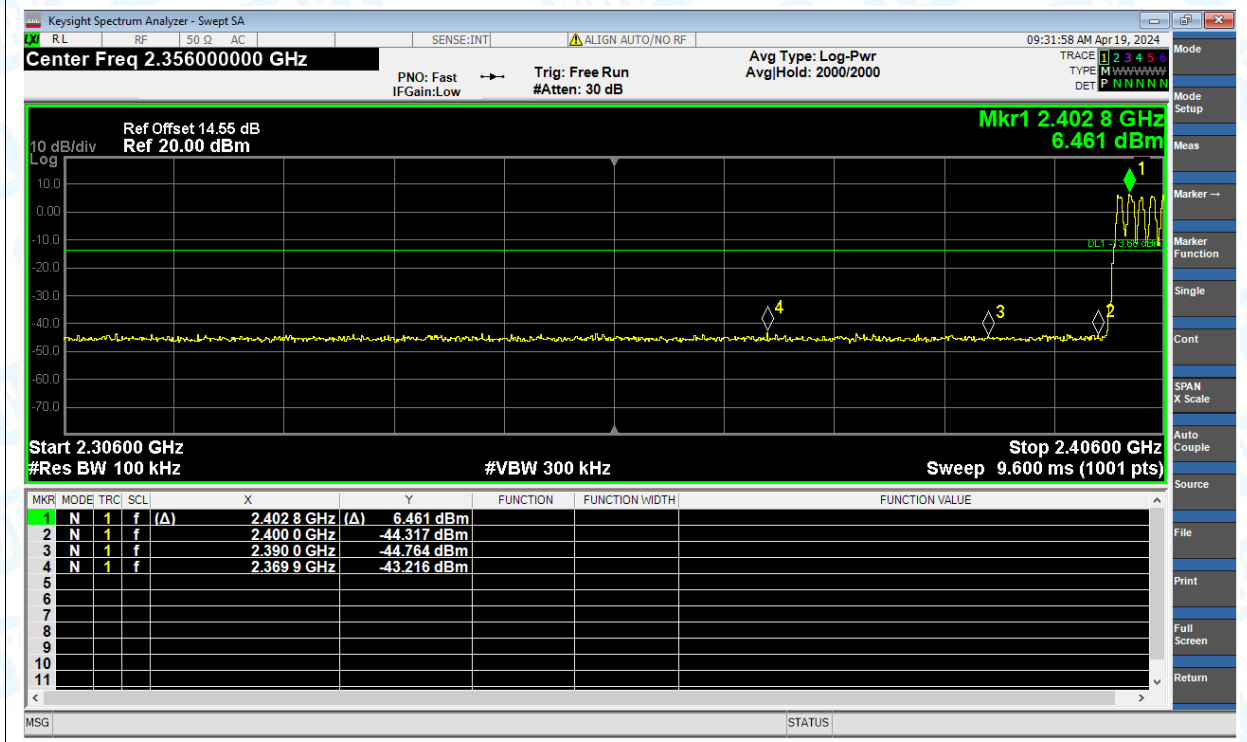
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-49.54	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-49.67	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-49.63	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-49.81	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-46.23	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-46.95	-20	Pass

Test Graphs

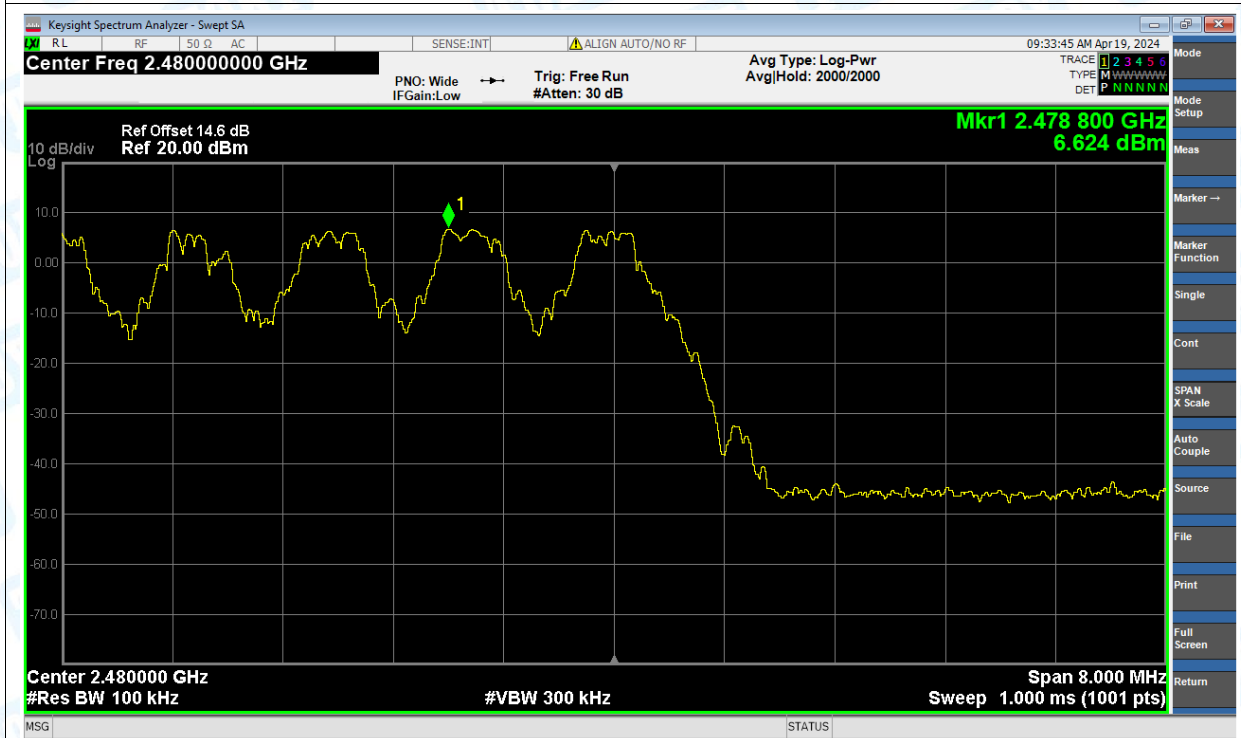
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



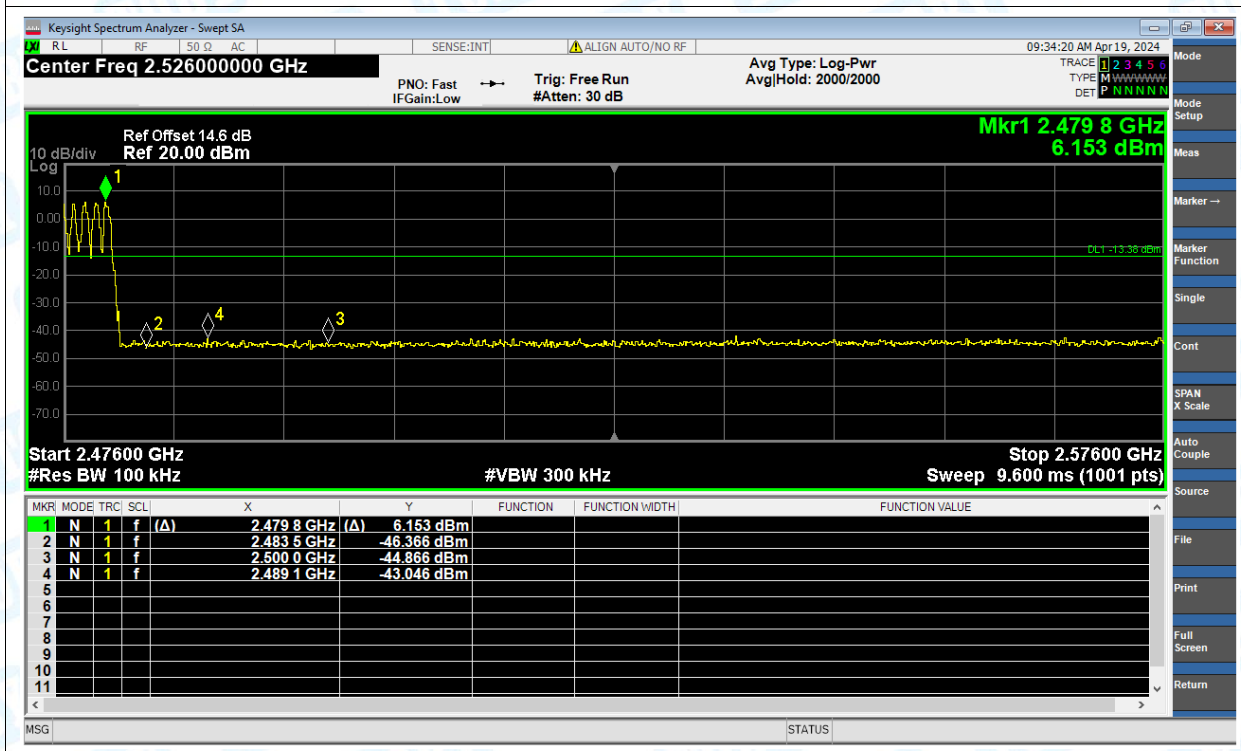
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



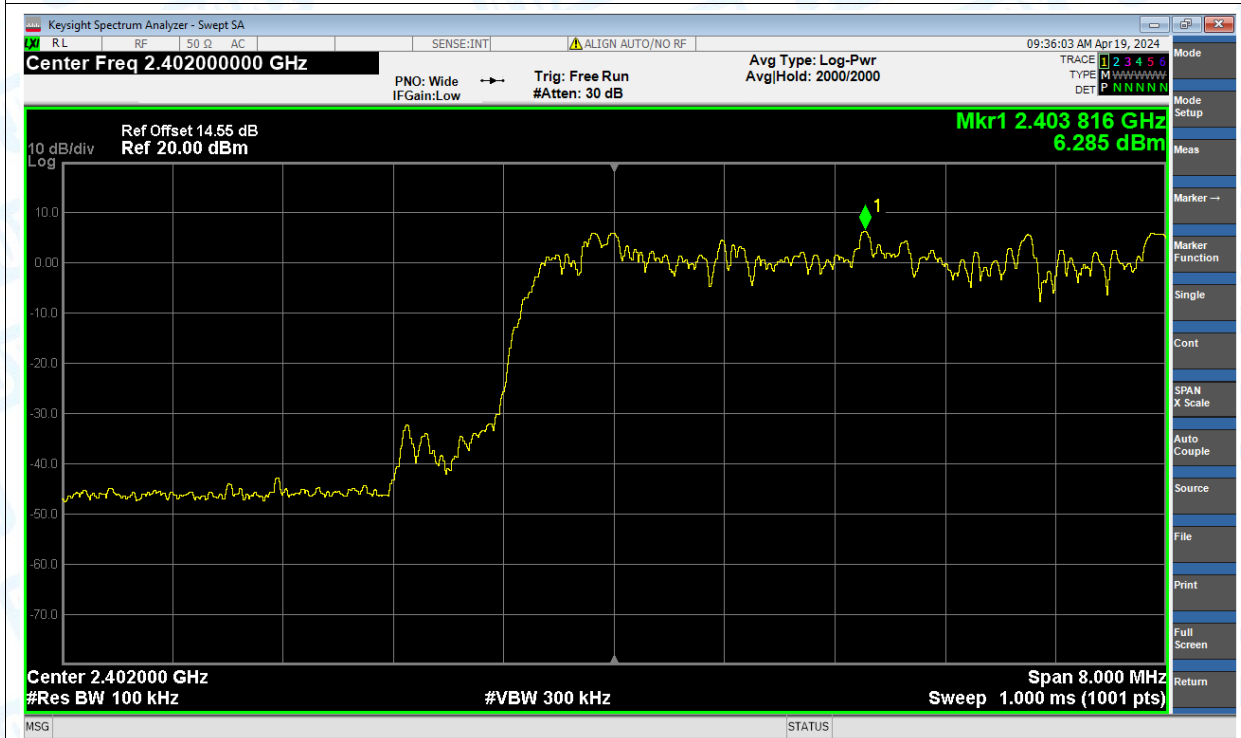
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



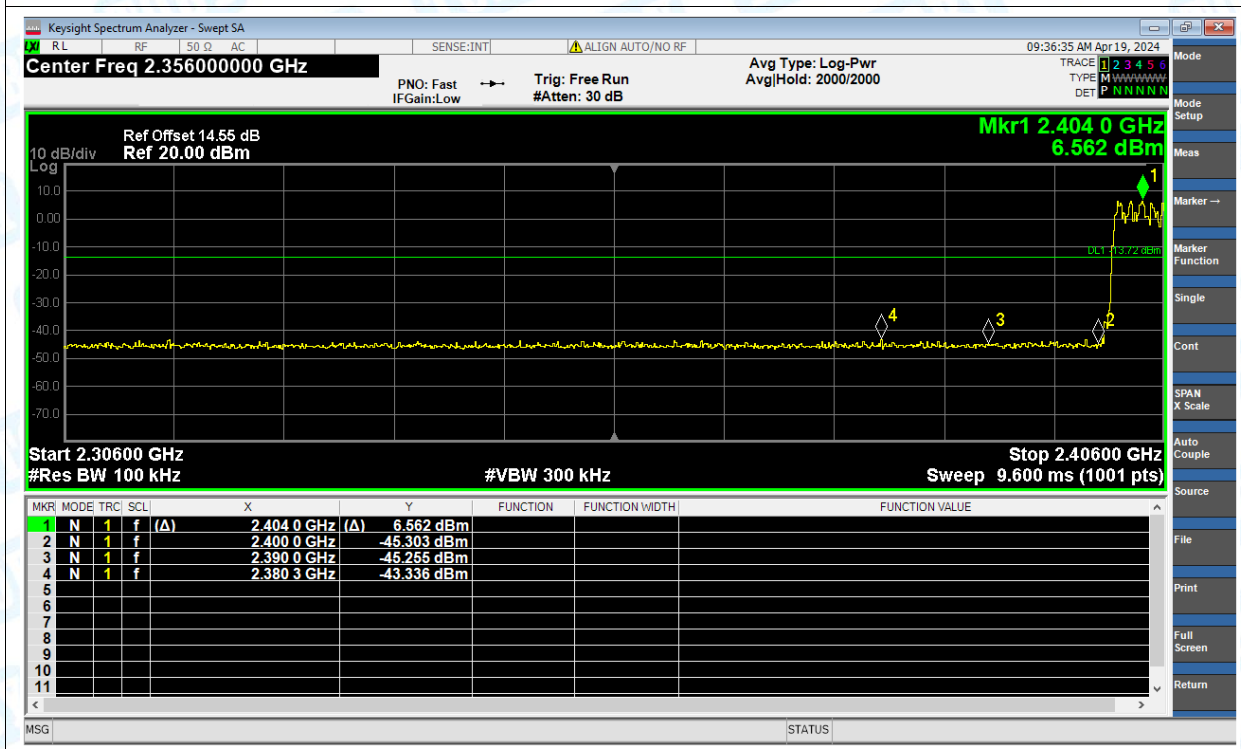
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



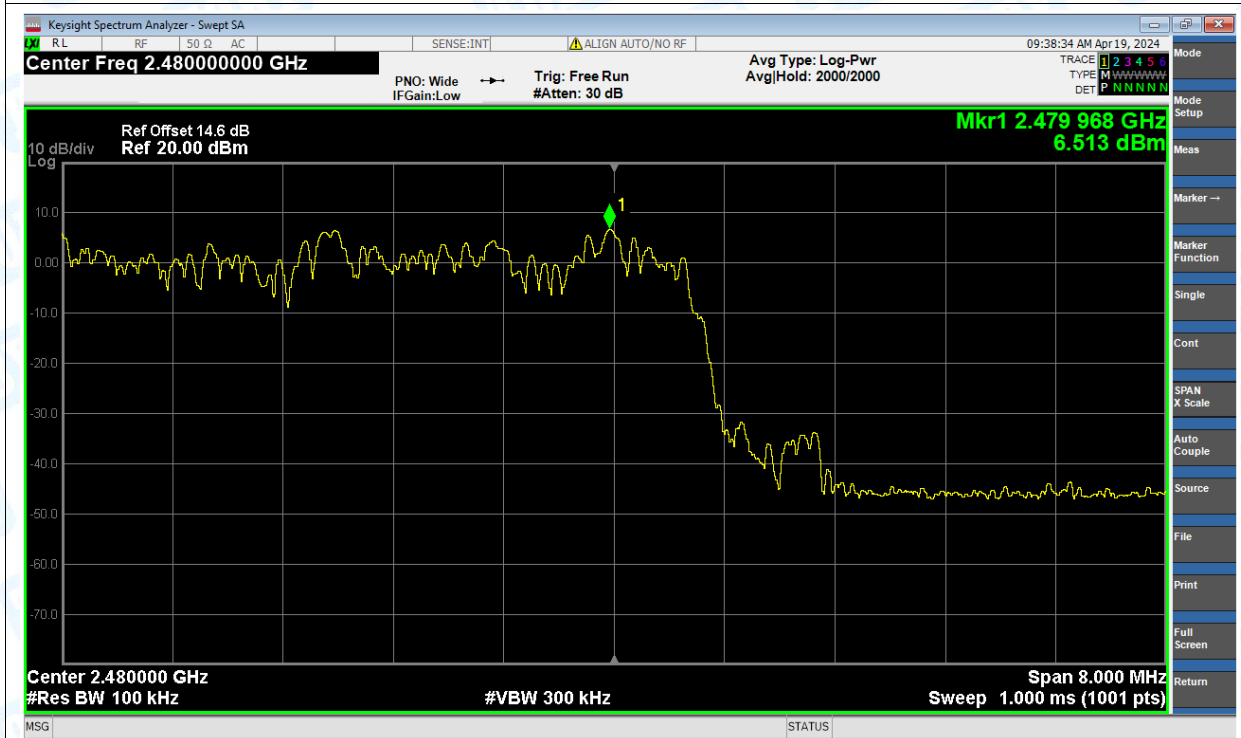
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



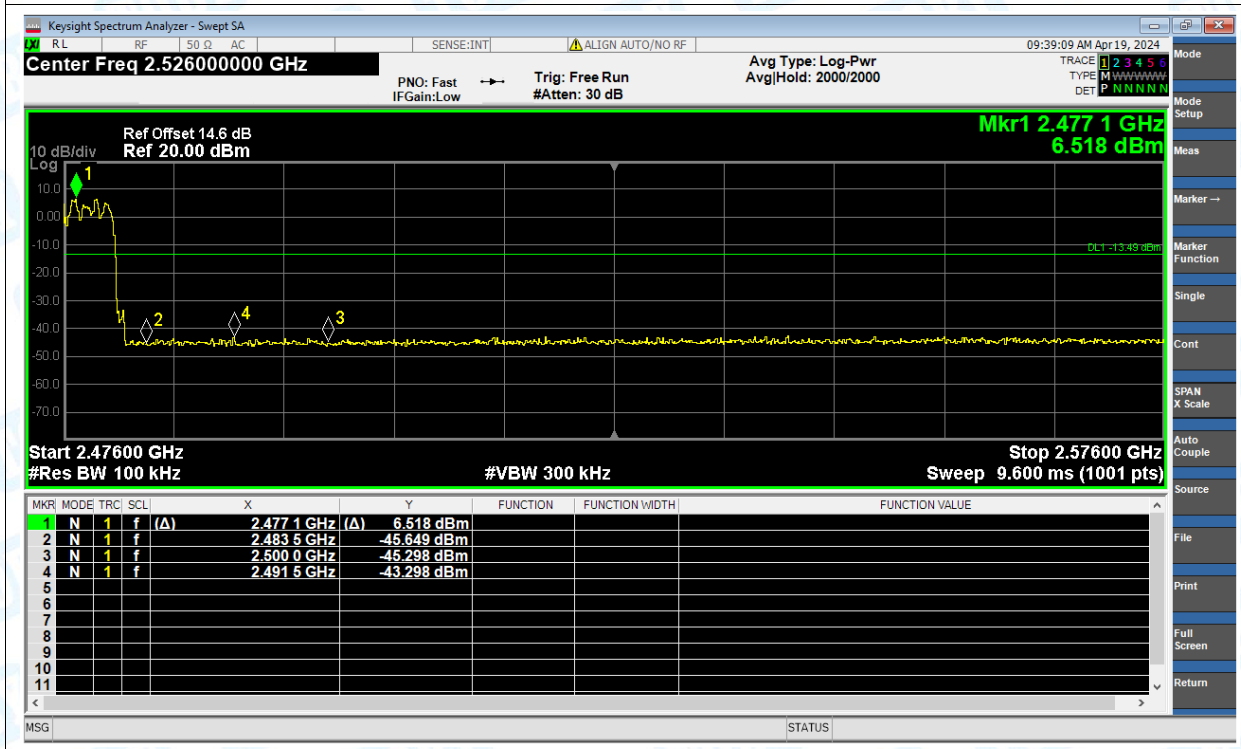
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



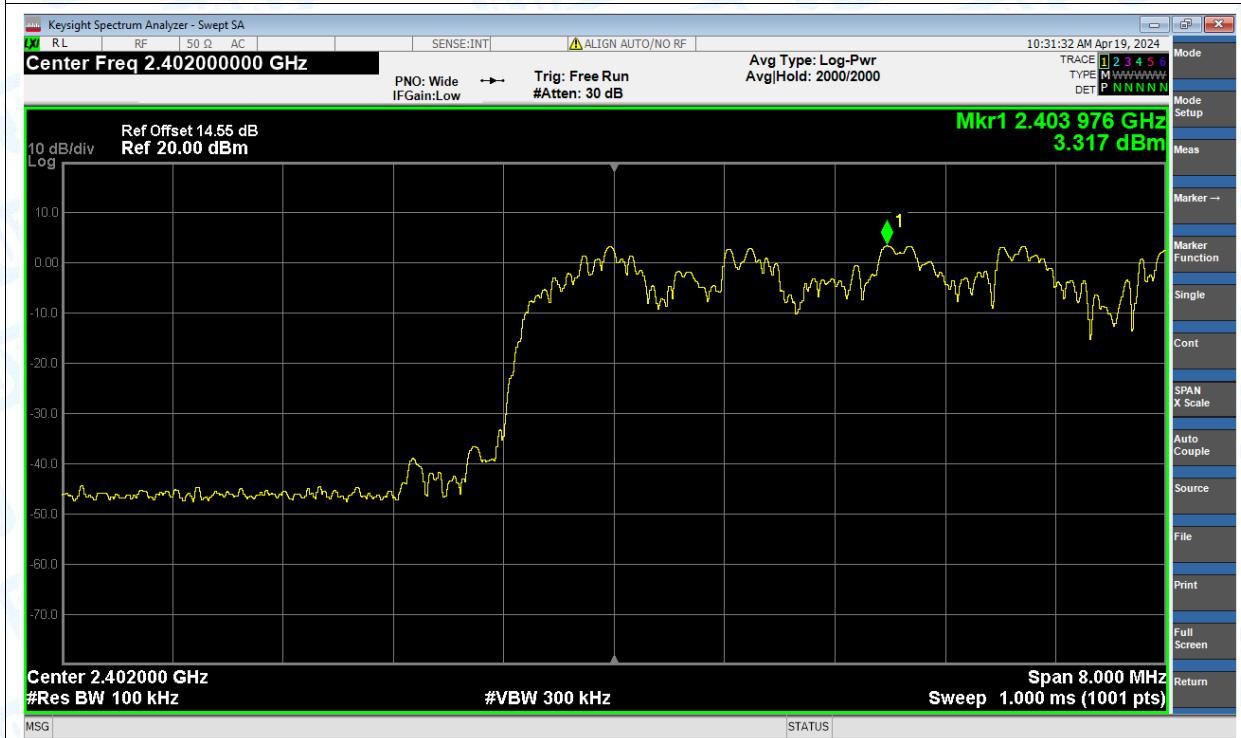
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref



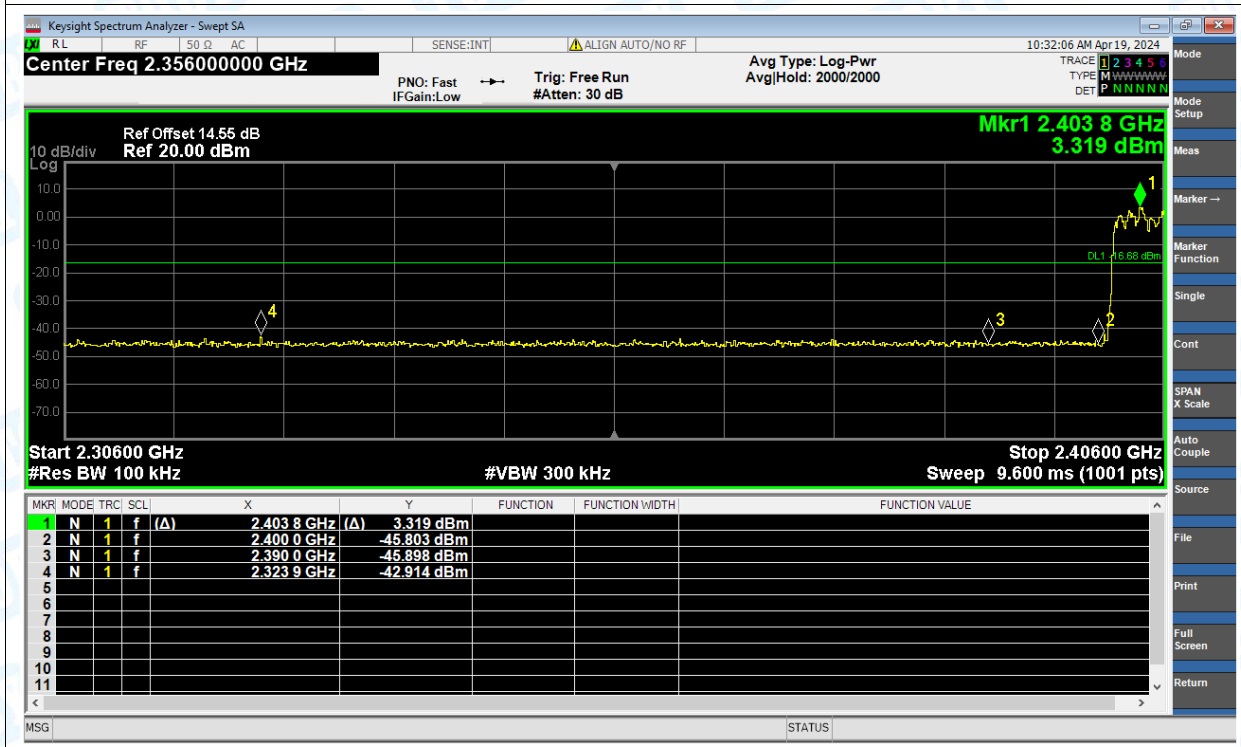
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



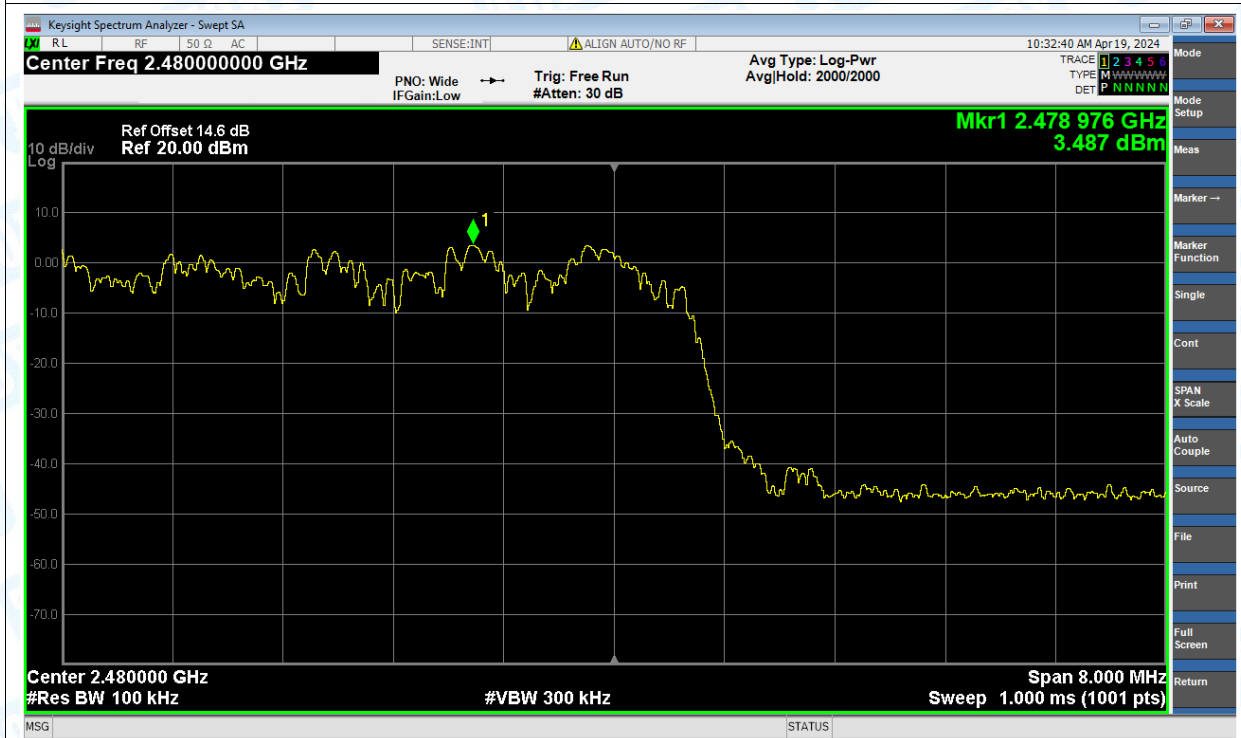
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



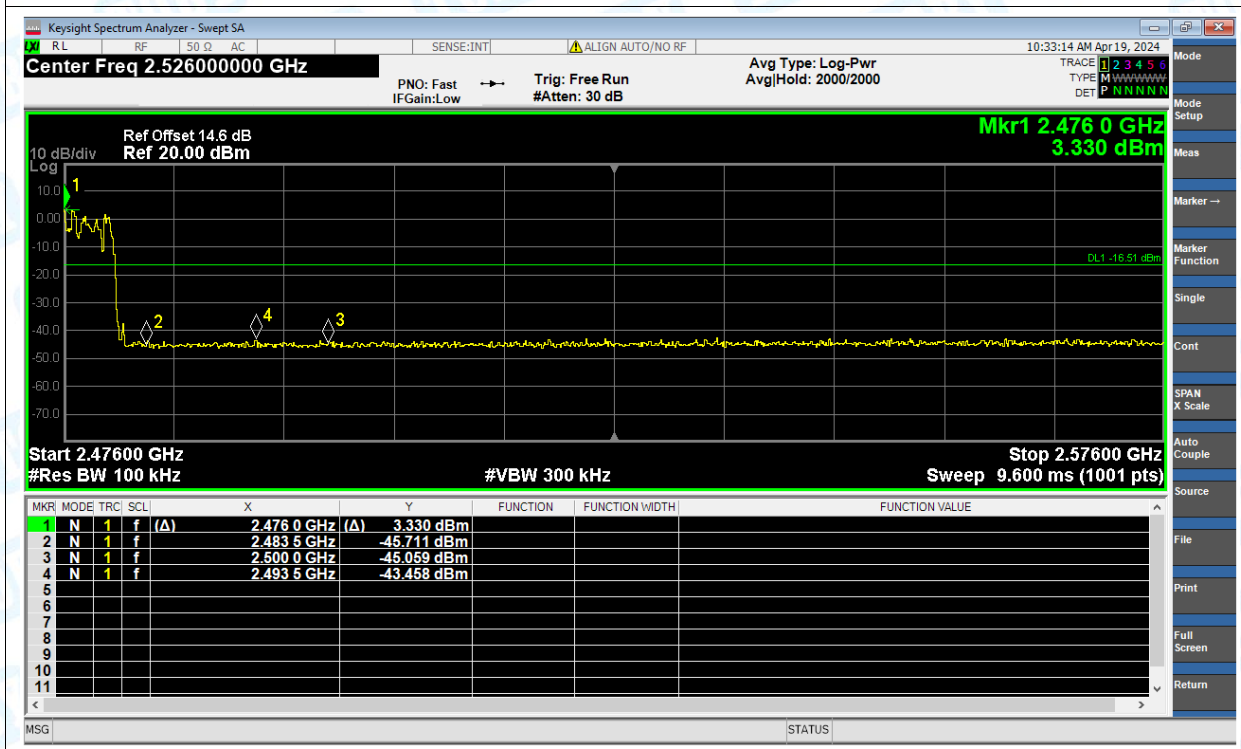
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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	-45.21	-20	Pass
NVNT	1-DH1	2441	Ant1	-42.21	-20	Pass
NVNT	1-DH1	2480	Ant1	-44.7	-20	Pass
NVNT	2-DH1	2402	Ant1	-45.16	-20	Pass
NVNT	2-DH1	2441	Ant1	-43.95	-20	Pass
NVNT	2-DH1	2480	Ant1	-42.93	-20	Pass
NVNT	3-DH1	2402	Ant1	-43.08	-20	Pass
NVNT	3-DH1	2441	Ant1	-42.57	-20	Pass
NVNT	3-DH1	2480	Ant1	-42.9	-20	Pass

Test Graphs

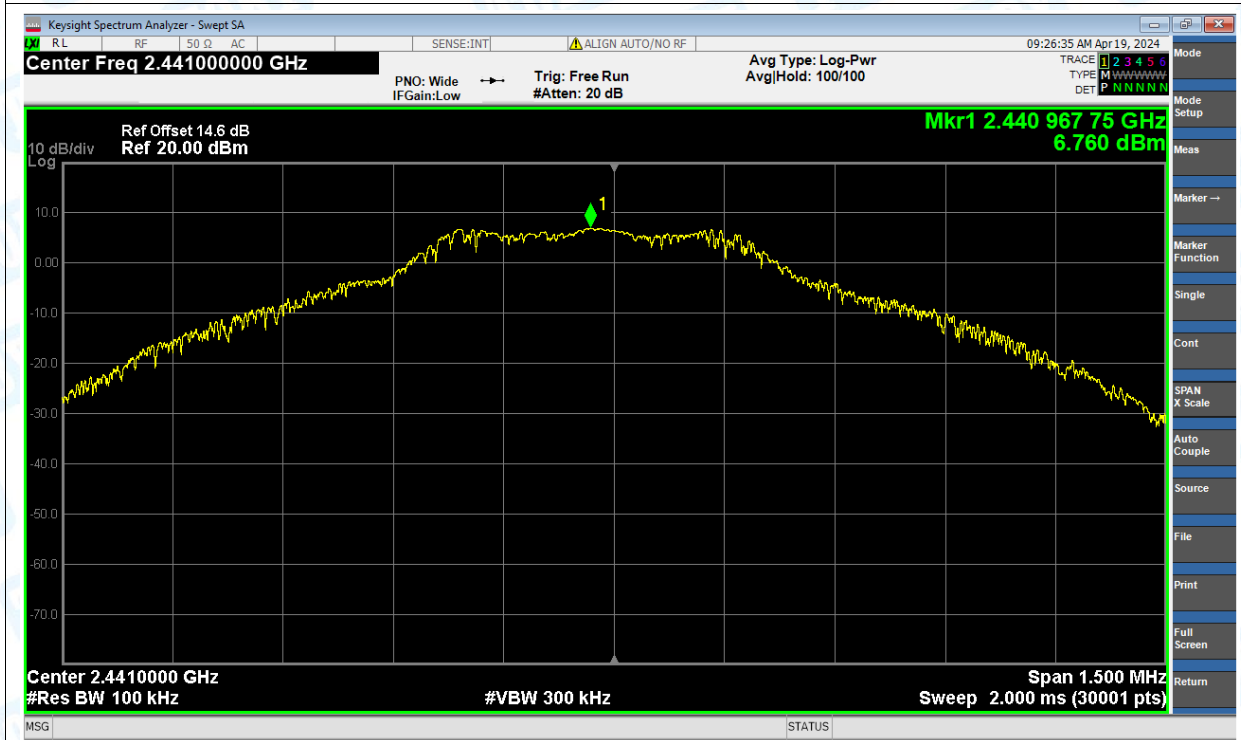
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



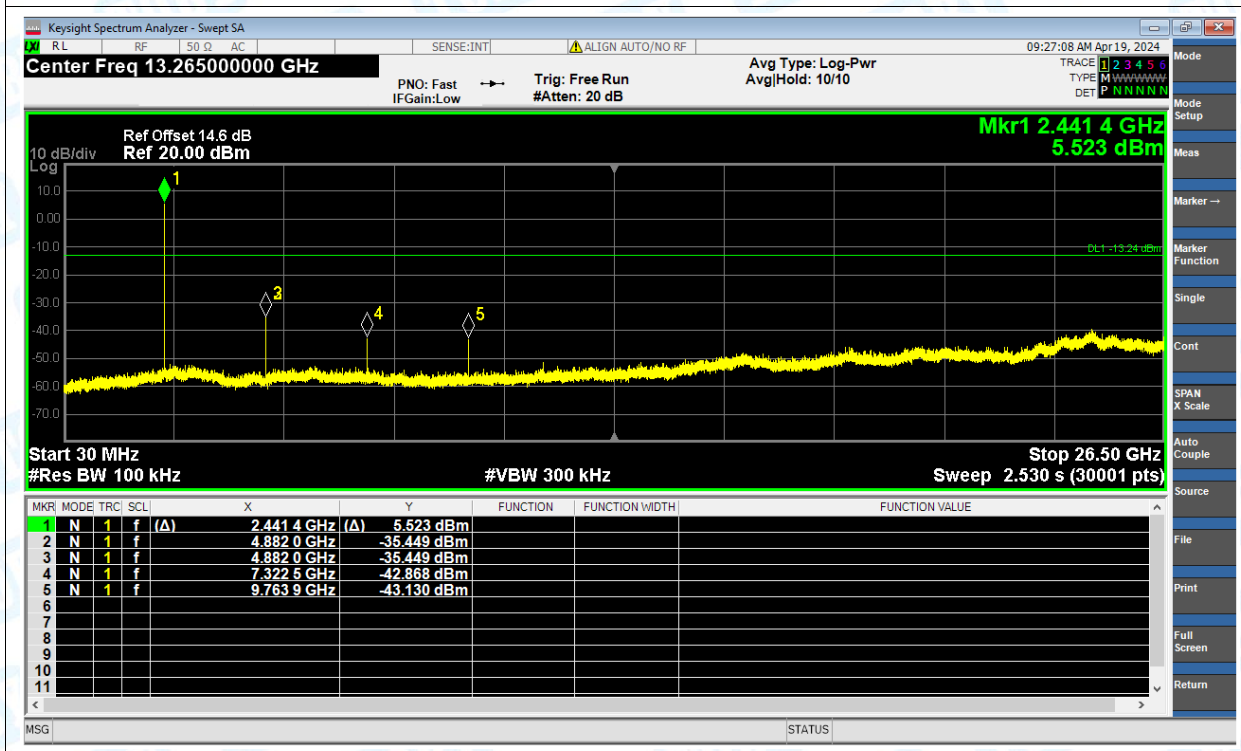
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



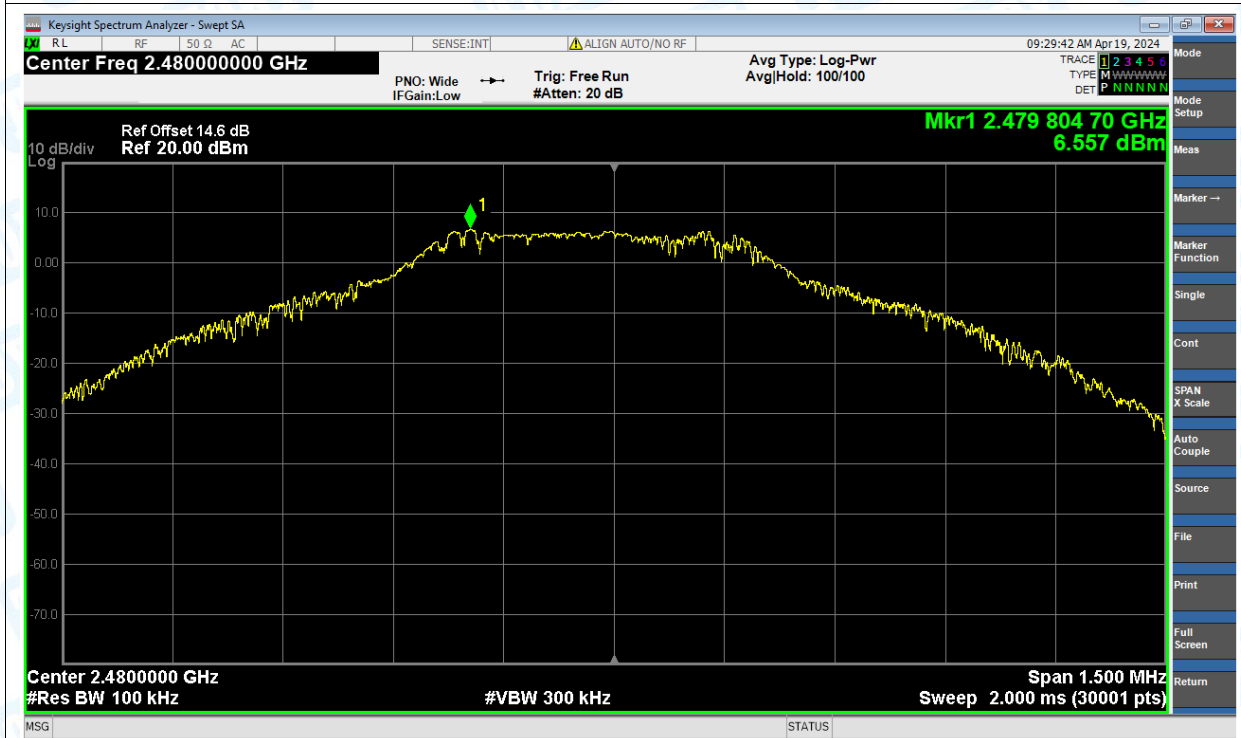
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



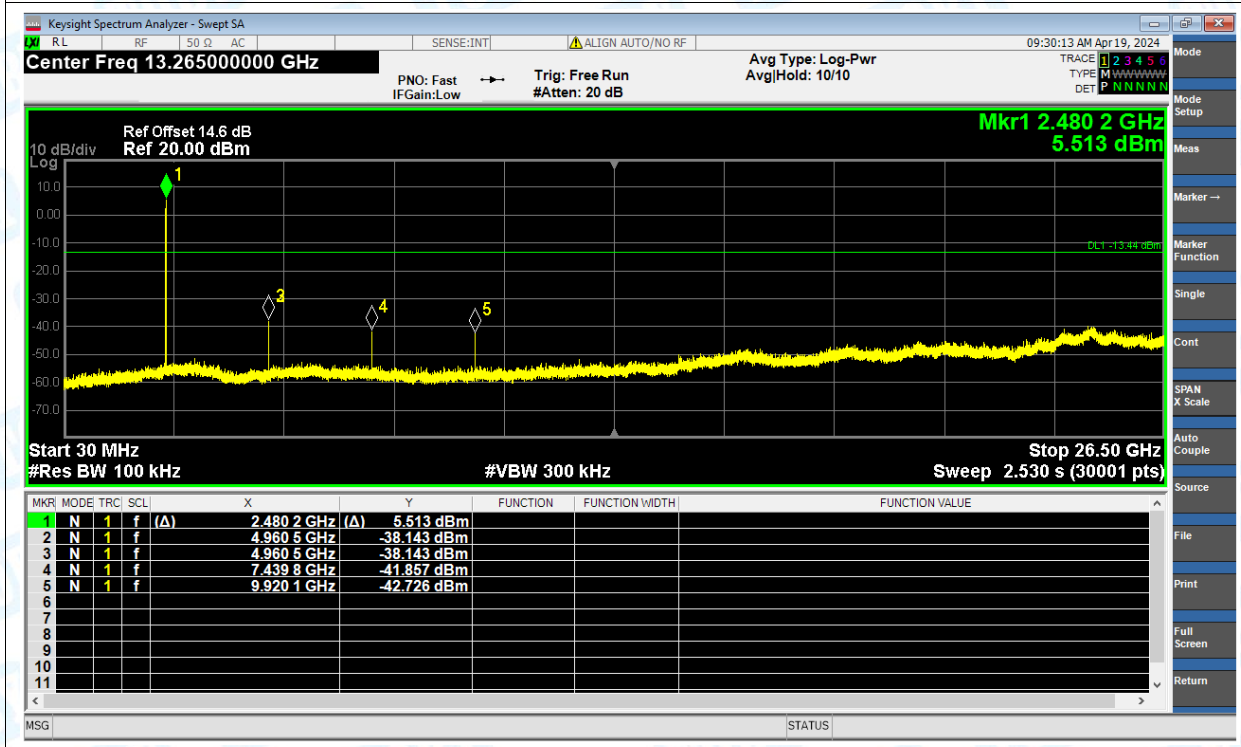
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



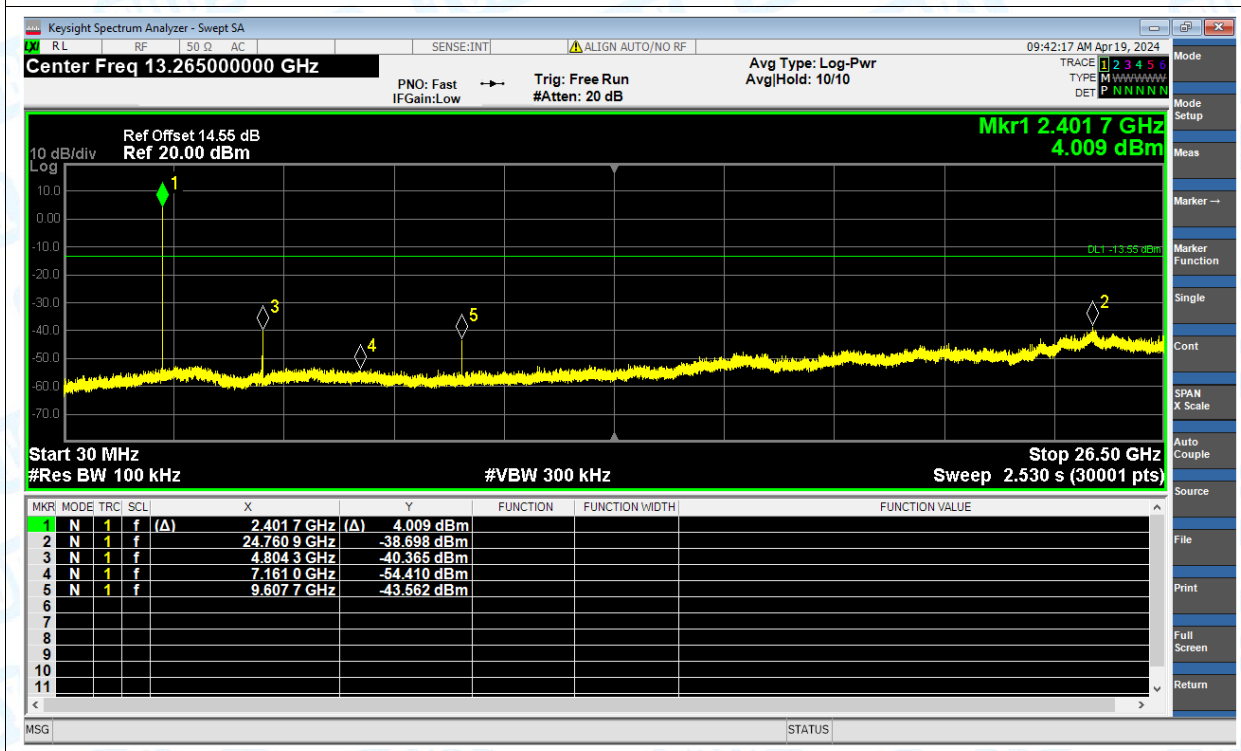
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



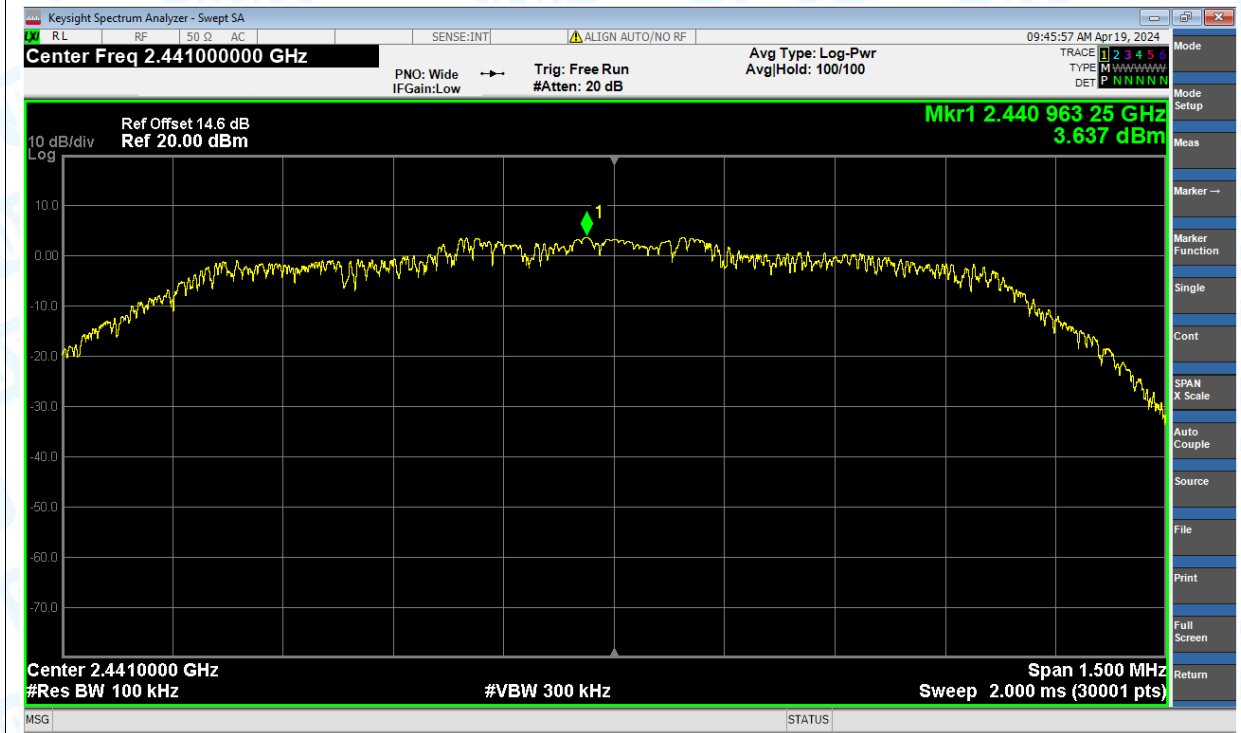
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



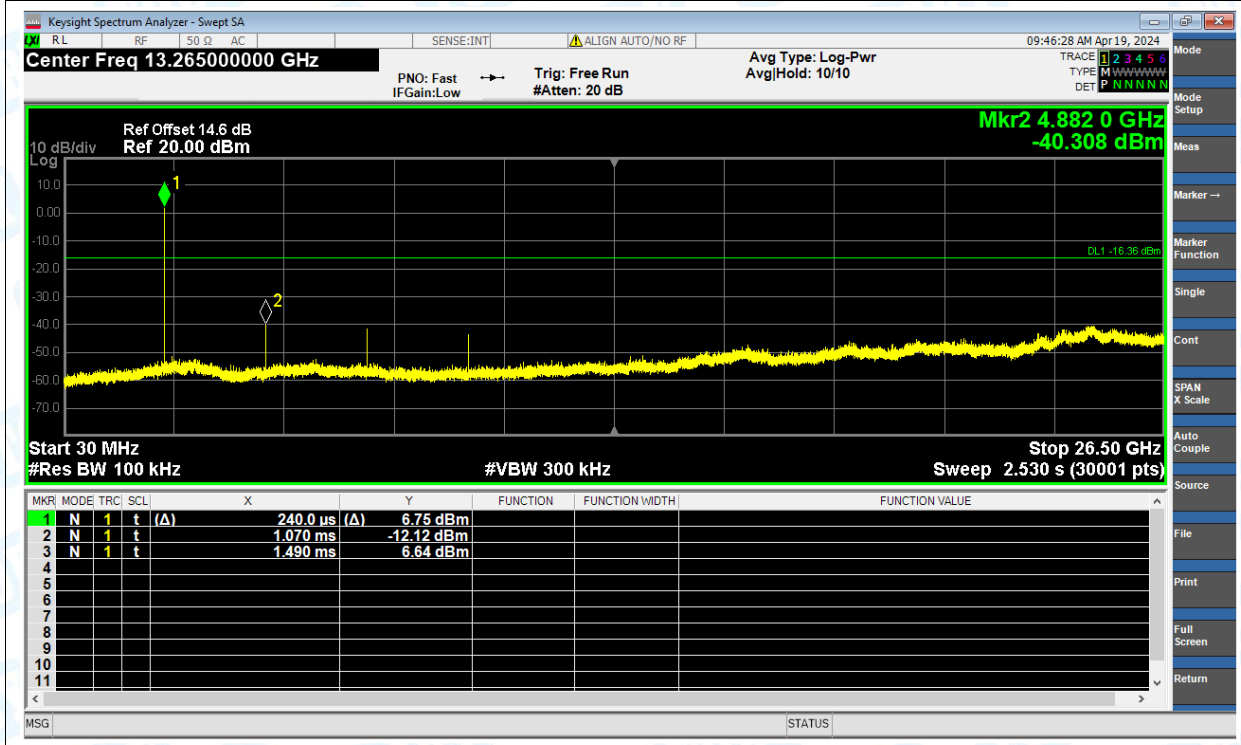
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



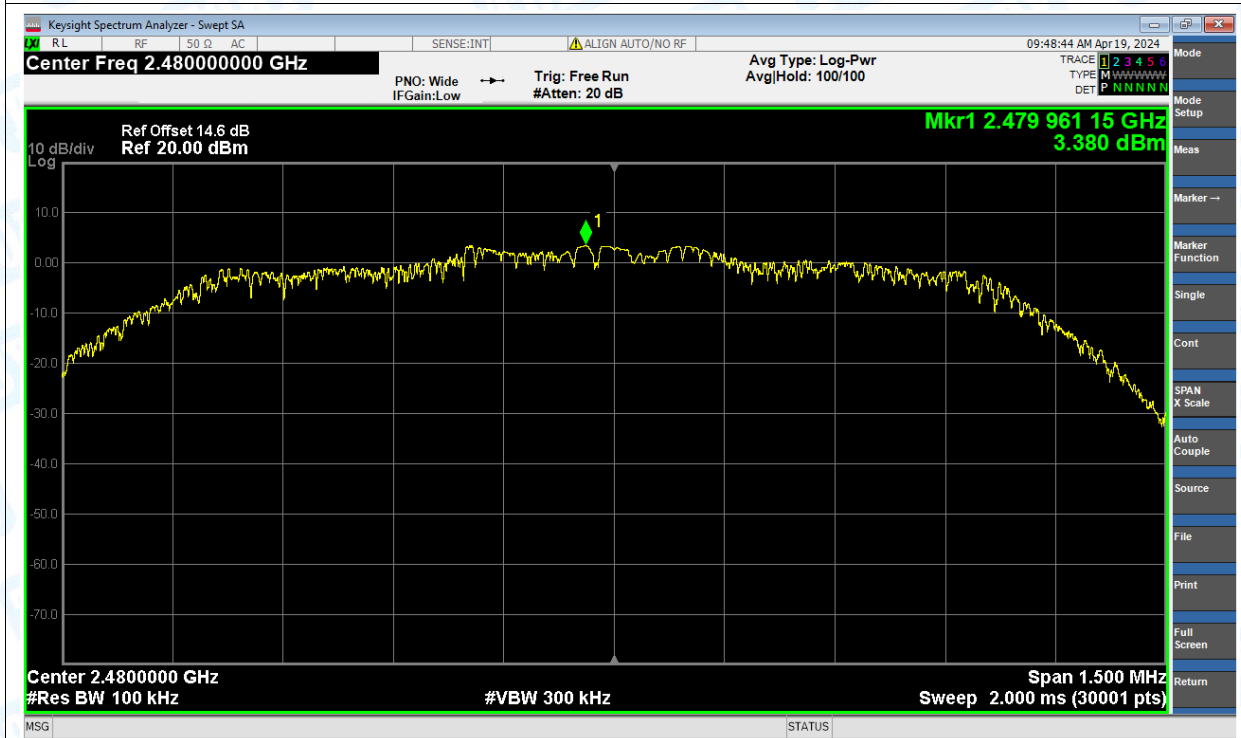
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



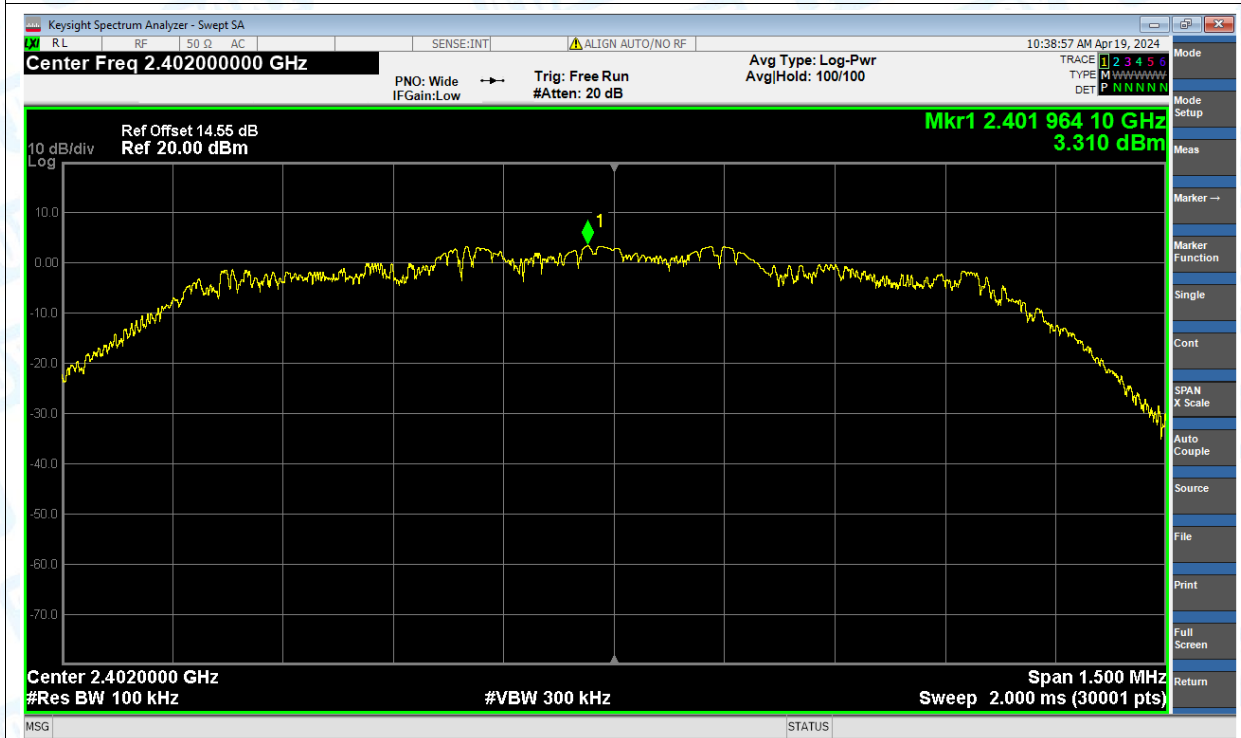
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



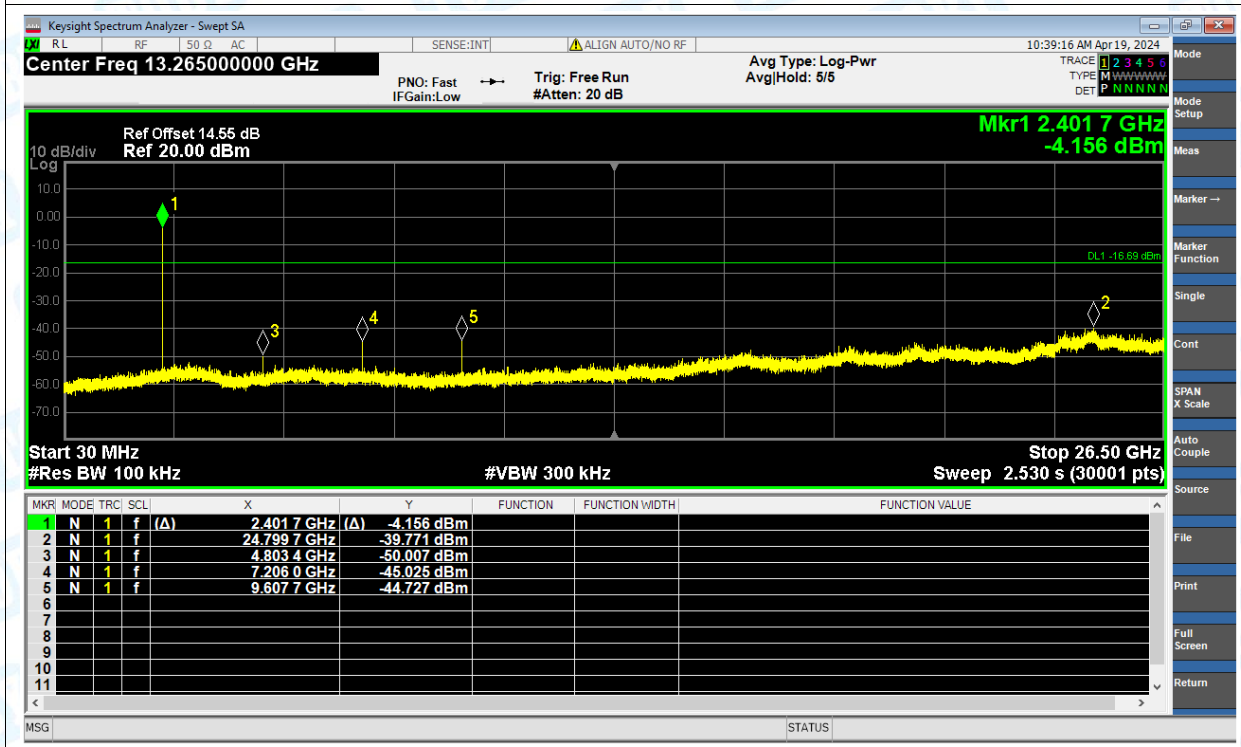
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



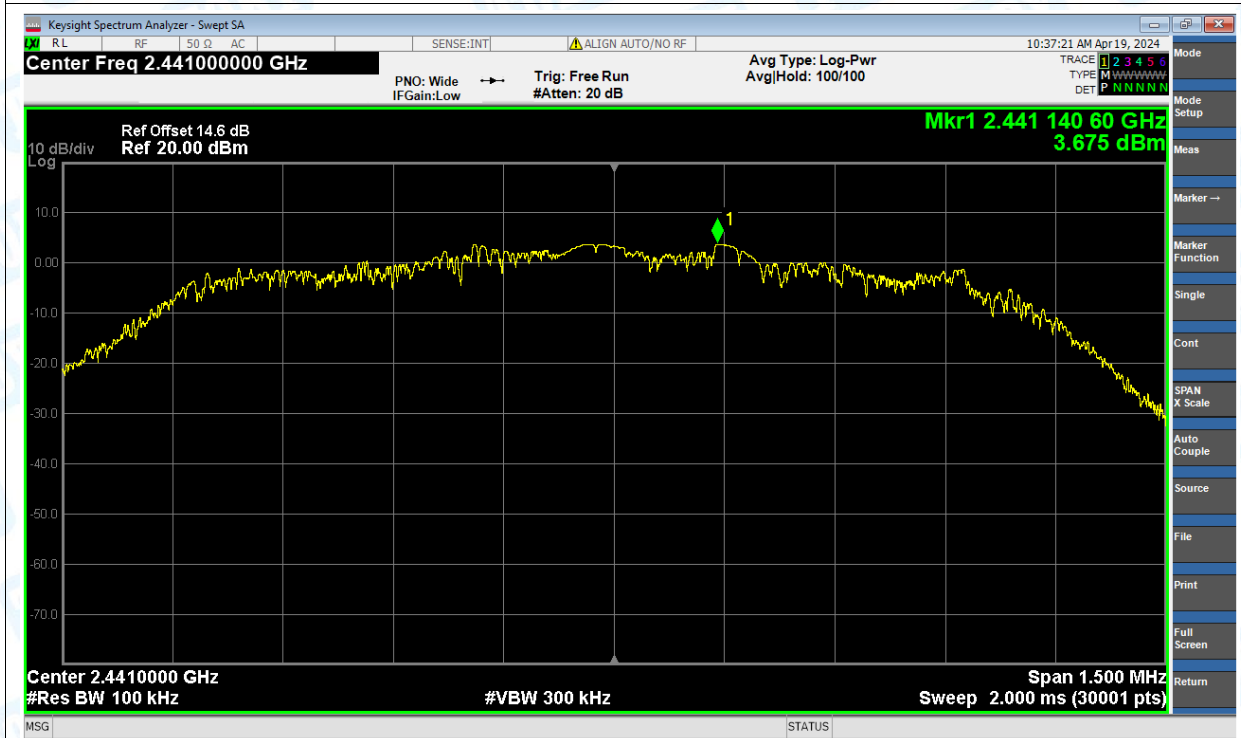
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



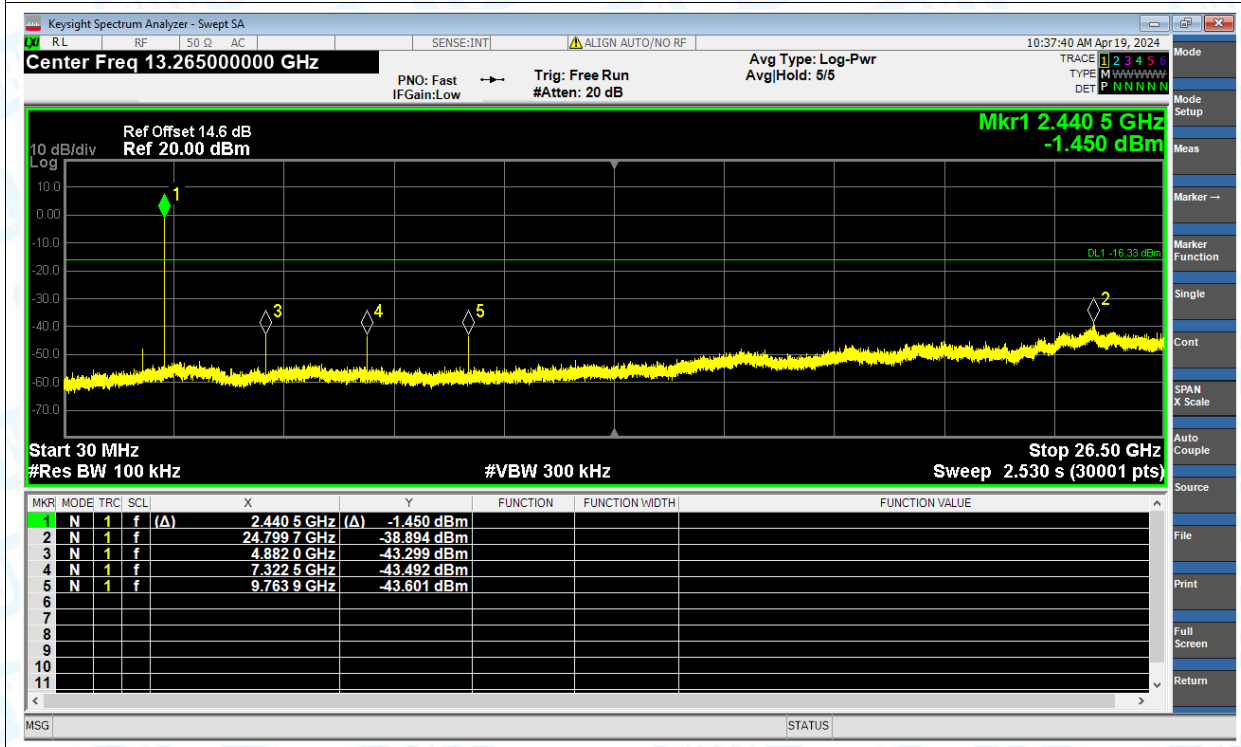
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



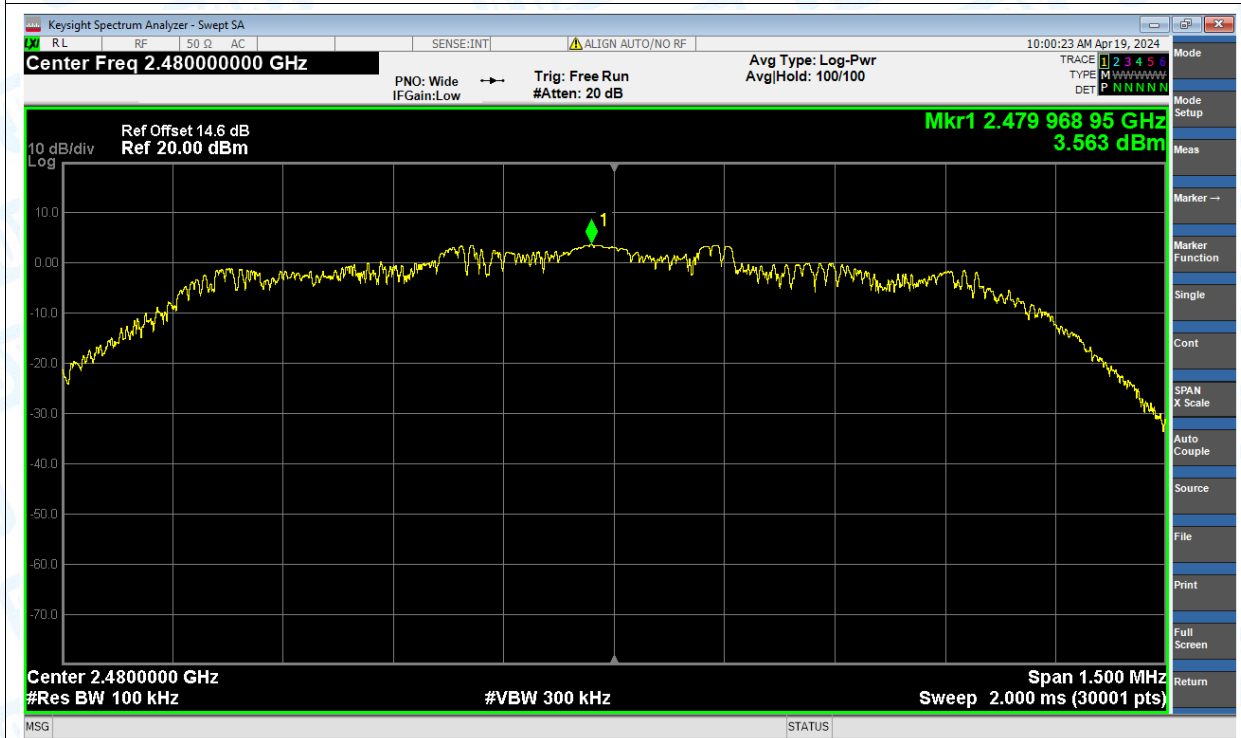
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



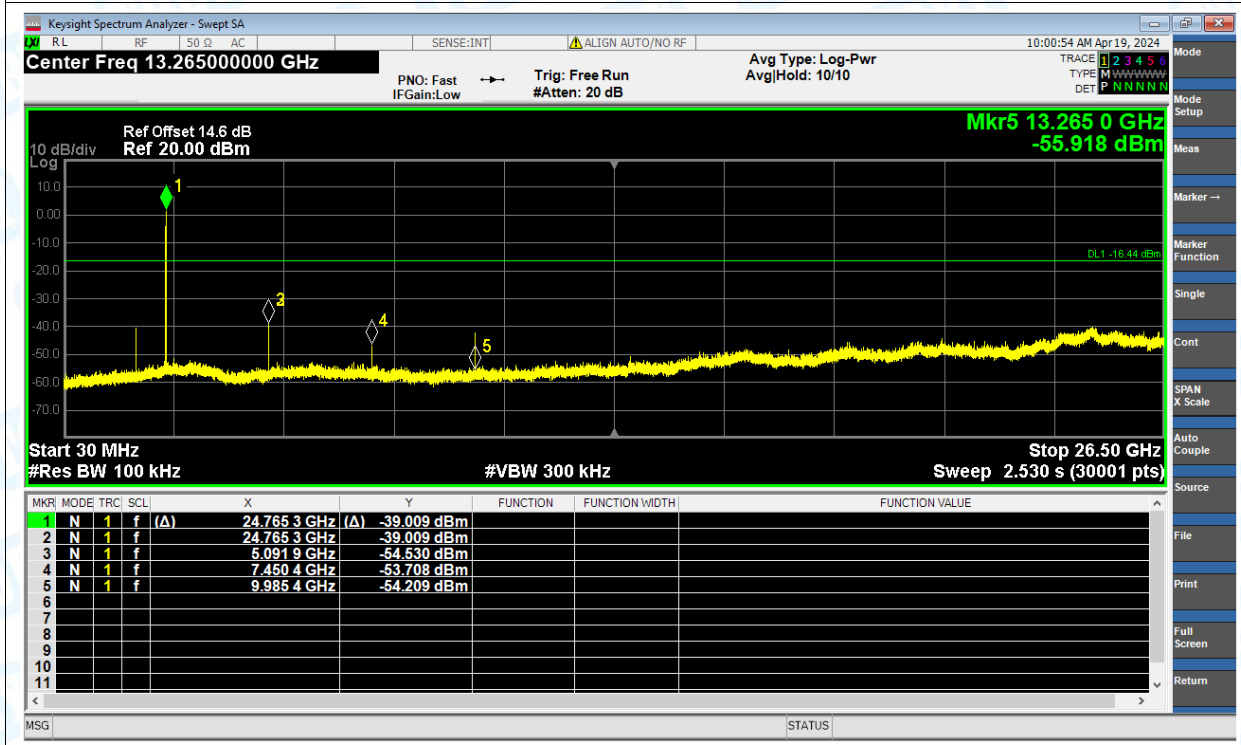
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

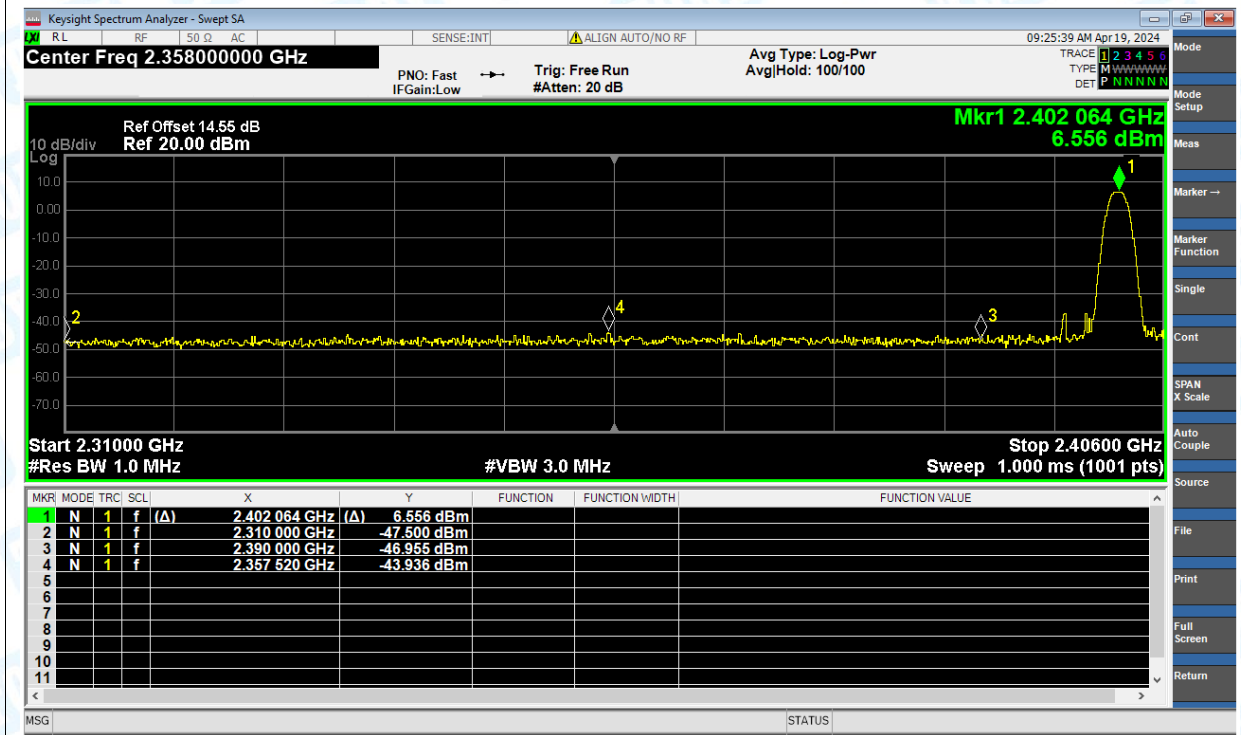


8. Restrict Band

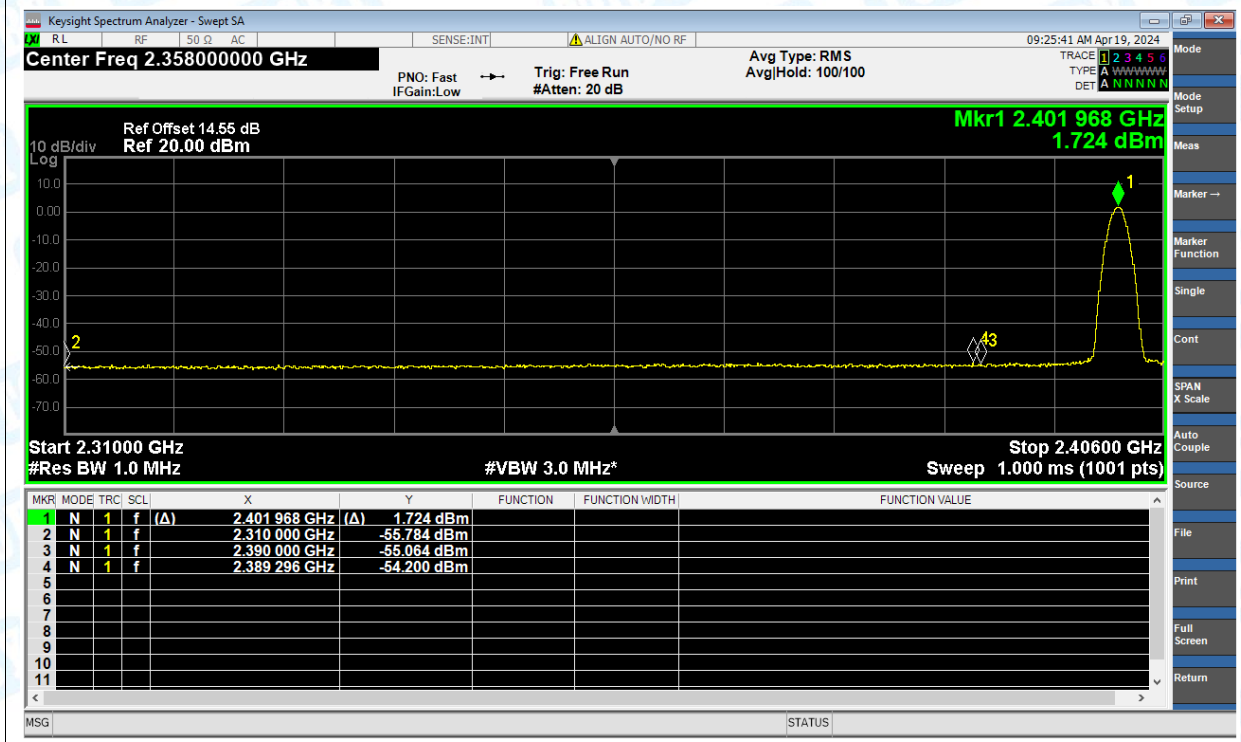
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-47.5	2	-	49.76	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-55.78	2	4.84	46.32	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2357.52	-43.94	2	-	53.32	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2389.296	-54.2	2	4.84	47.9	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-46.96	2	-	50.3	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-55.06	2	4.84	47.04	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-45.35	2	-	51.91	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-54.7	2	4.84	47.4	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2484.928	-38.22	2	-	59.04	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2484.808	-53.17	2	4.84	48.93	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-46.03	2	-	51.23	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-54.6	2	4.84	47.5	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-46.24	2	-	51.02	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-55.51	2	4.74	46.49	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2362.512	-43.52	2	-	53.74	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2389.2	-54.31	2	4.74	47.69	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-47.57	2	-	49.69	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-54.97	2	4.74	47.03	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-45.76	2	-	51.5	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-54.65	2	4.74	47.35	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.968	-41.16	2	-	56.1	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.944	-53.43	2	4.74	48.57	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-46.2	2	-	51.06	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-55.03	2	4.74	46.97	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-48.05	2	-	49.21	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-55.11	2	4.74	46.89	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2378.16	-44.14	2	-	53.12	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2373.936	-54.27	2	4.74	47.73	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-46.84	2	-	50.42	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-54.48	2	4.74	47.52	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-46.66	2	-	50.6	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-54.15	2	4.74	47.85	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2484.52	-40.04	2	-	57.22	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2484.16	-53.12	2	4.74	48.88	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-45.36	2	-	51.9	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-54.79	2	4.74	47.21	Average	54	Pass

Test Graphs

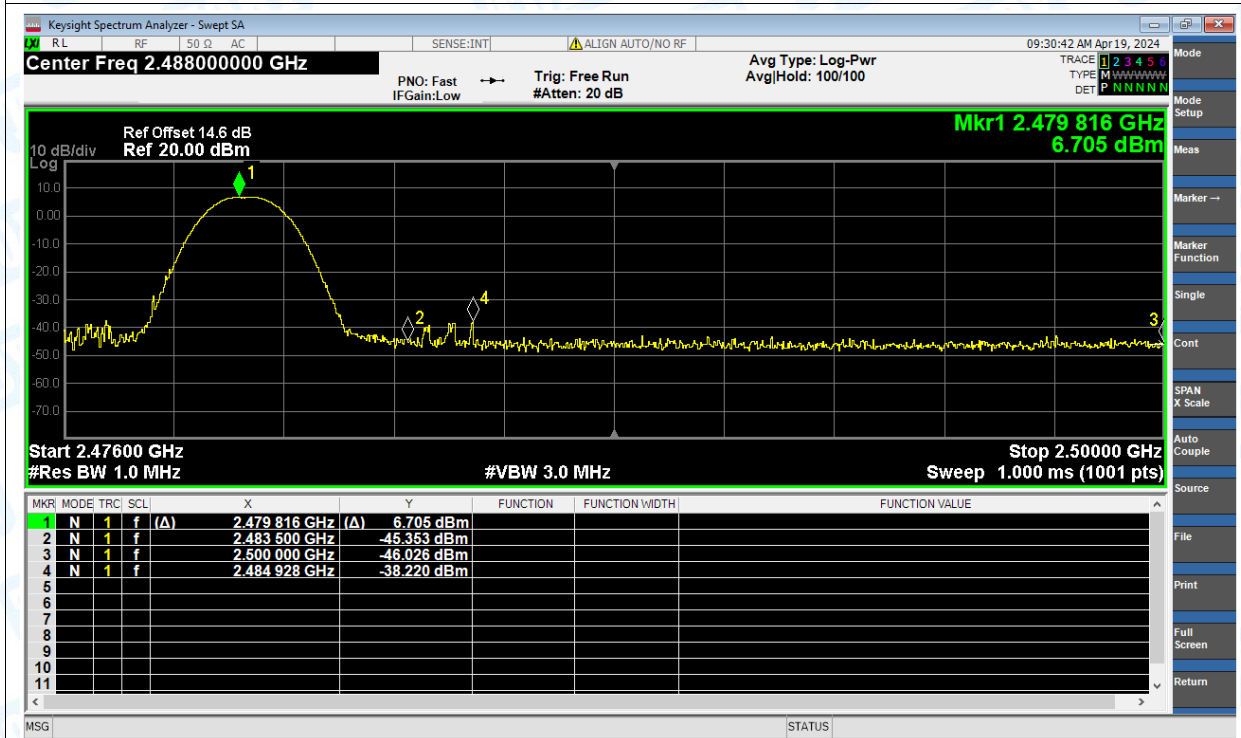
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



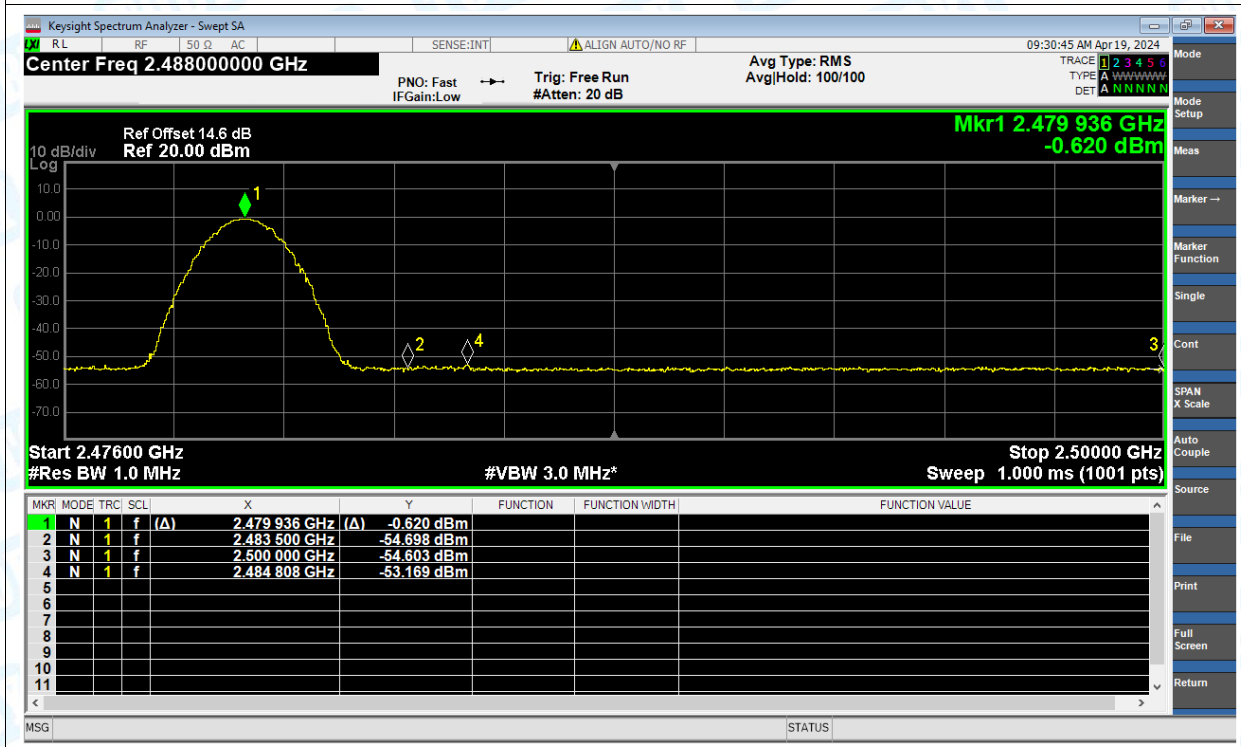
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



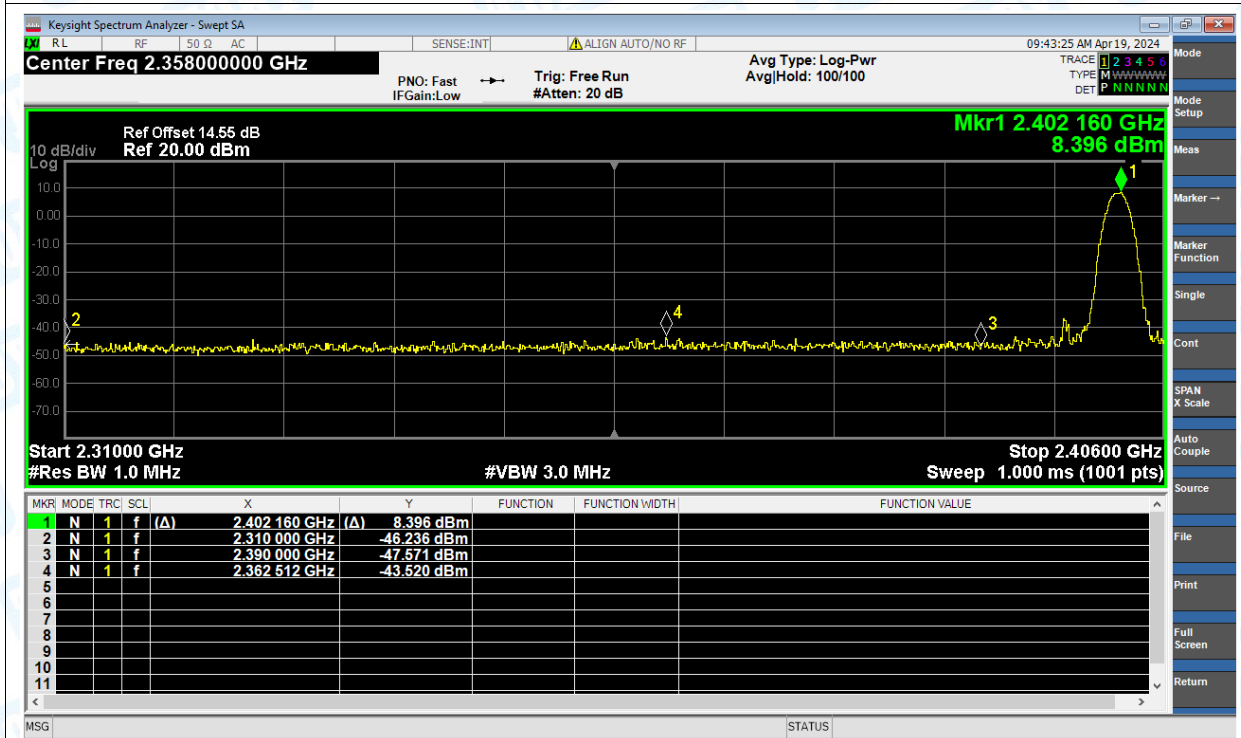
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



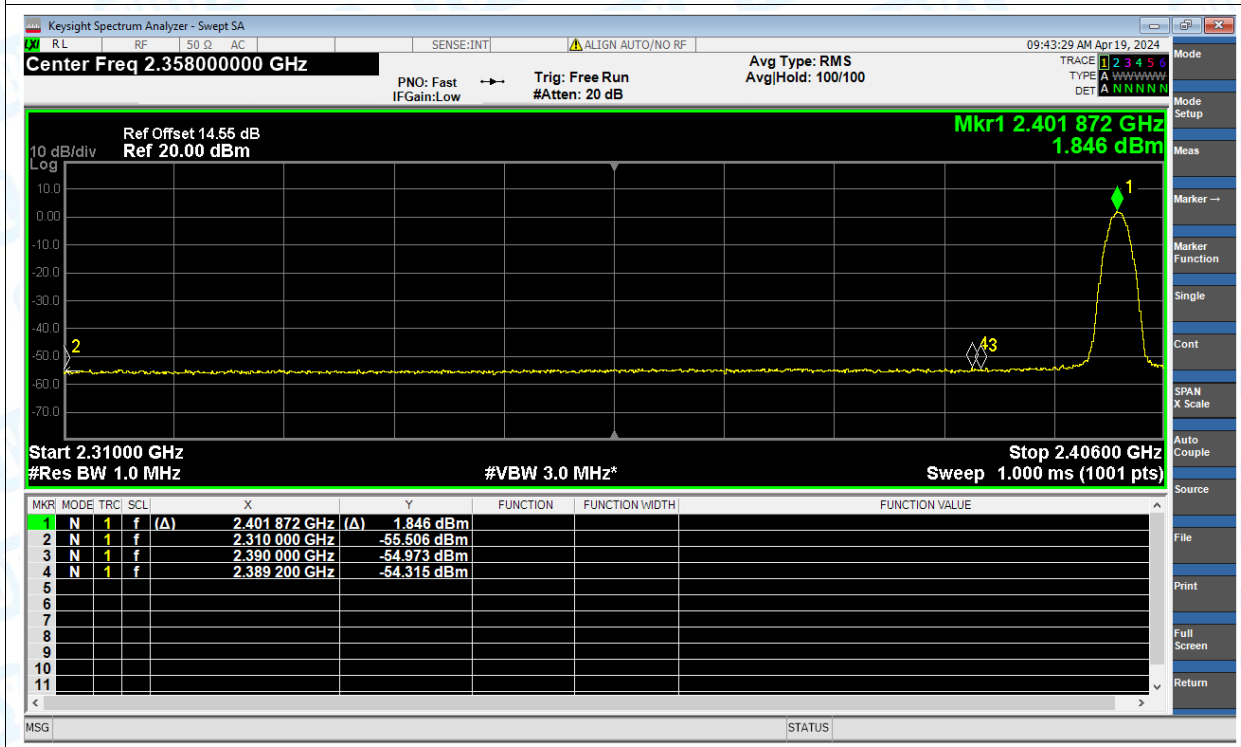
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



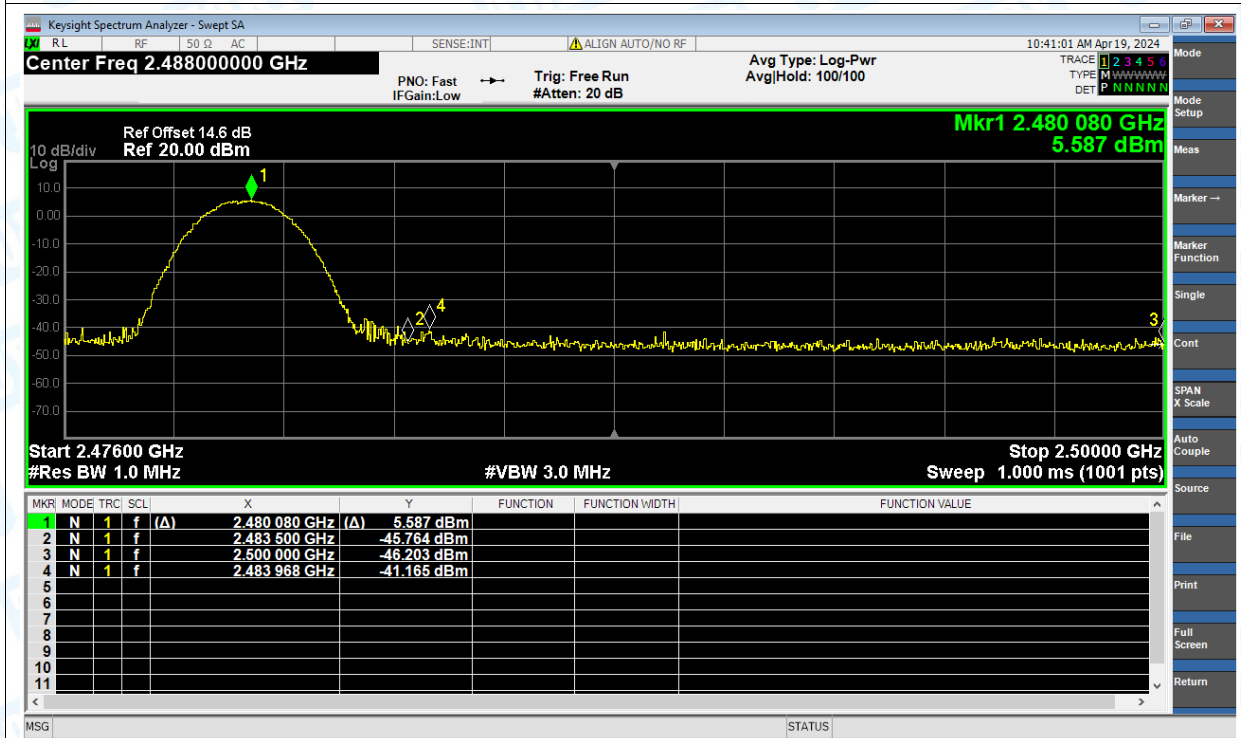
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



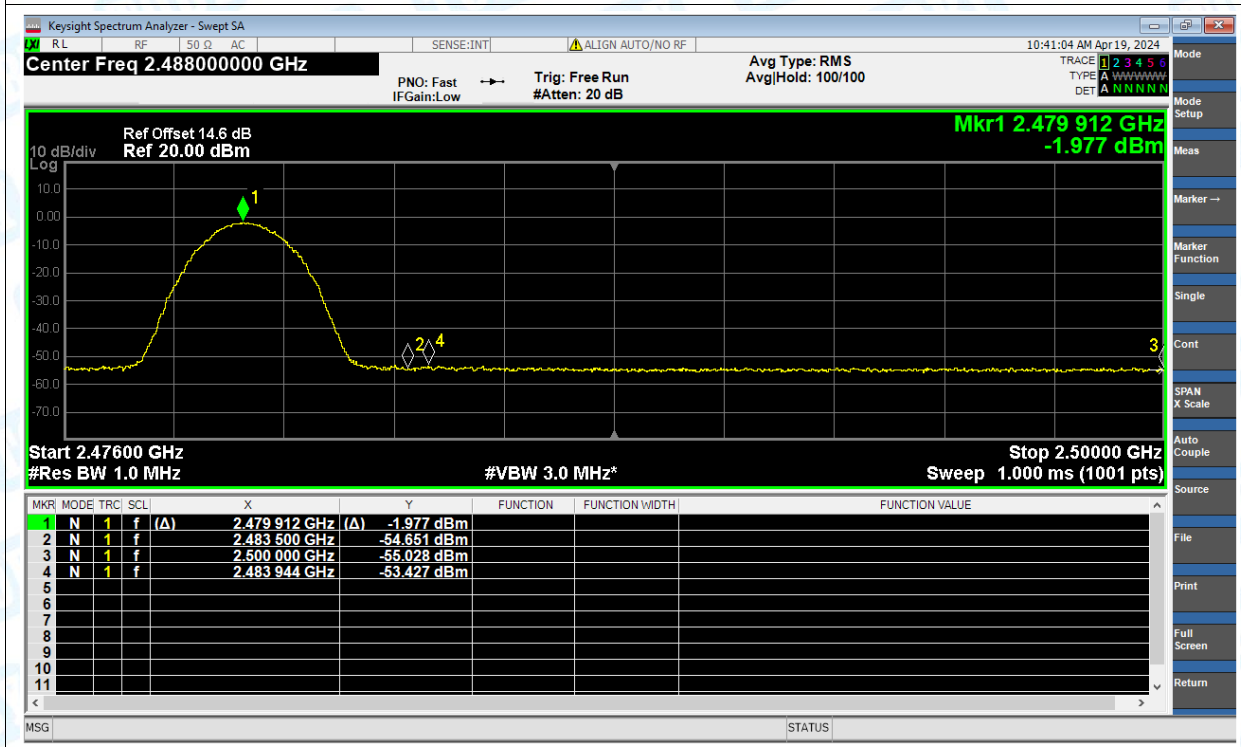
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



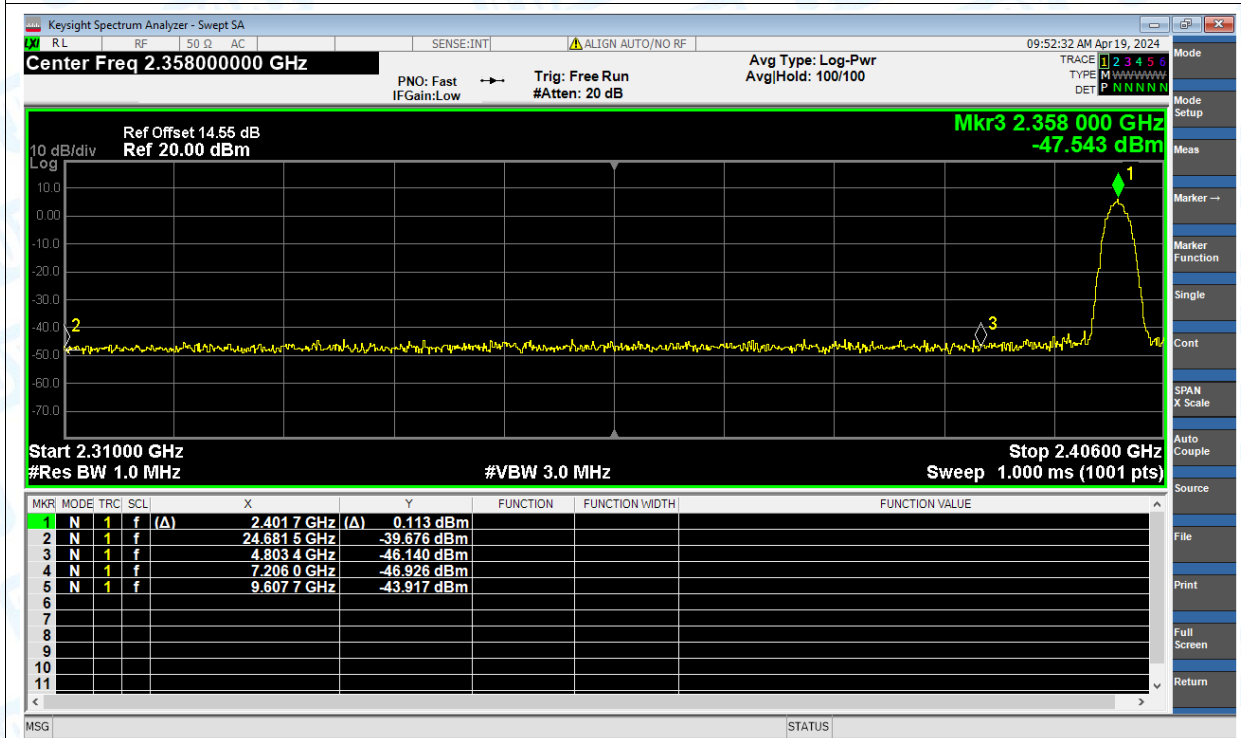
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



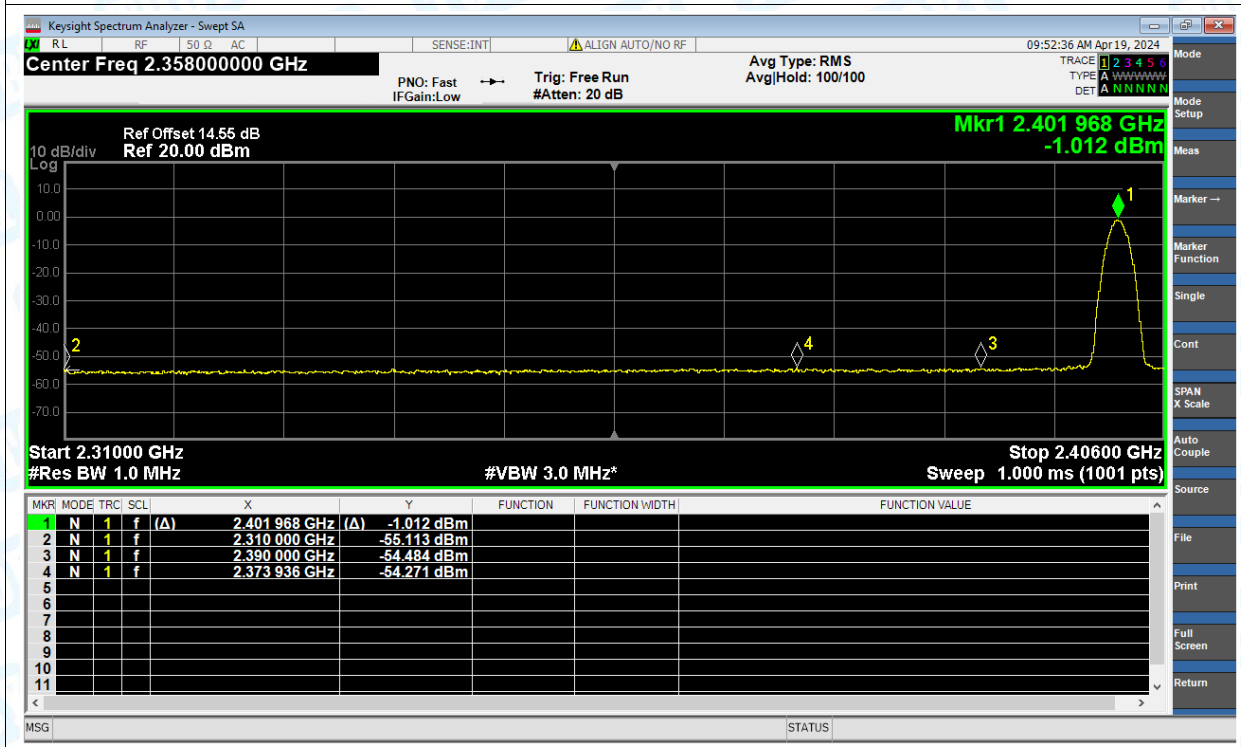
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



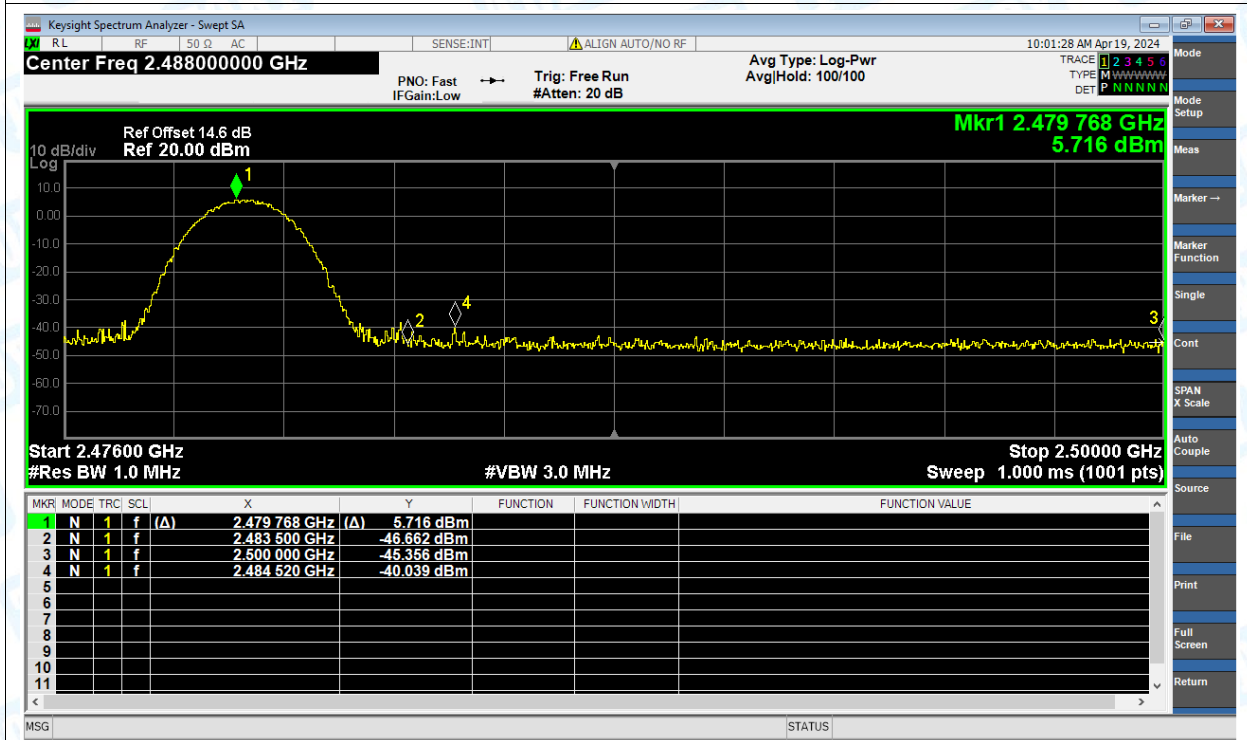
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



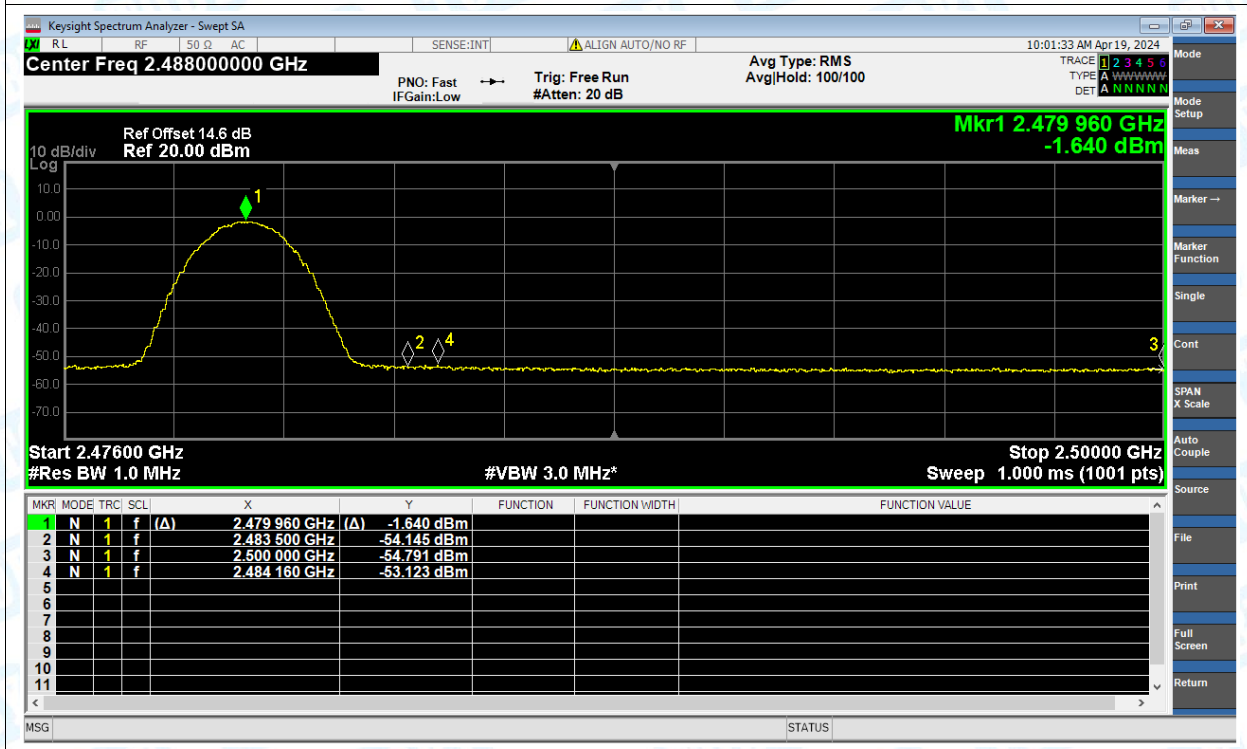
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

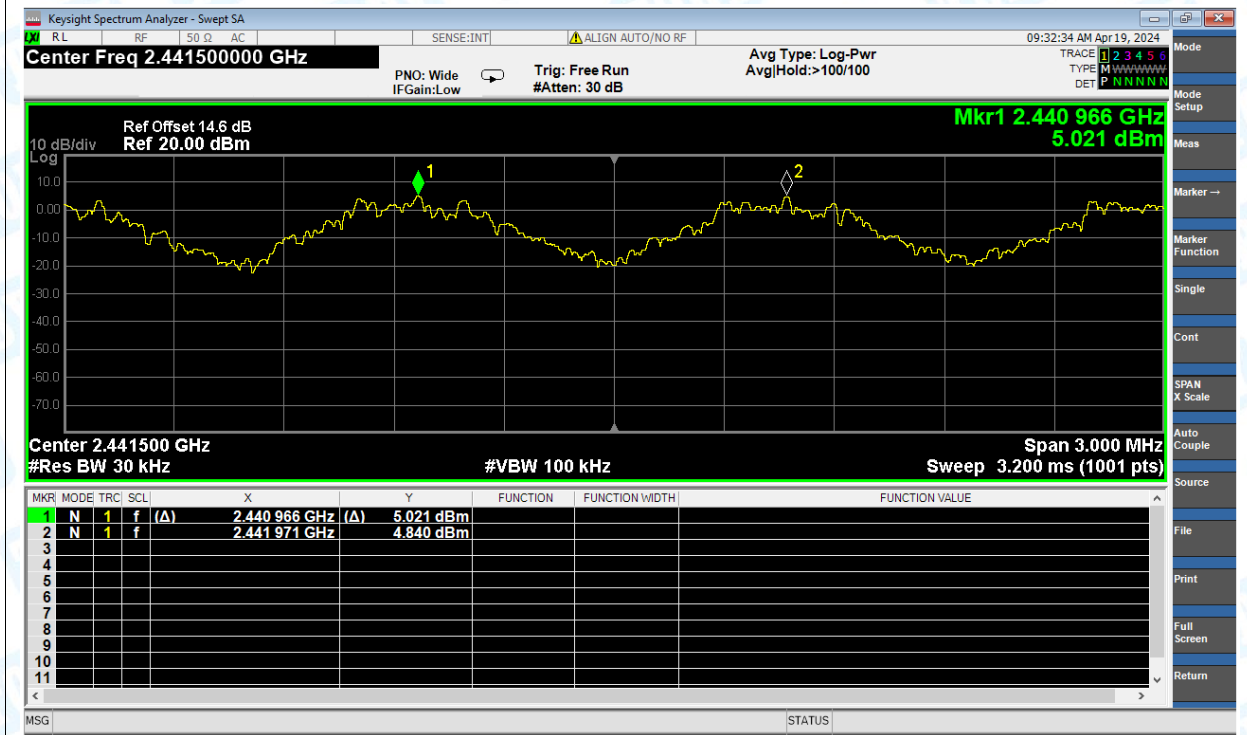


9. Carrier Frequencies Separation

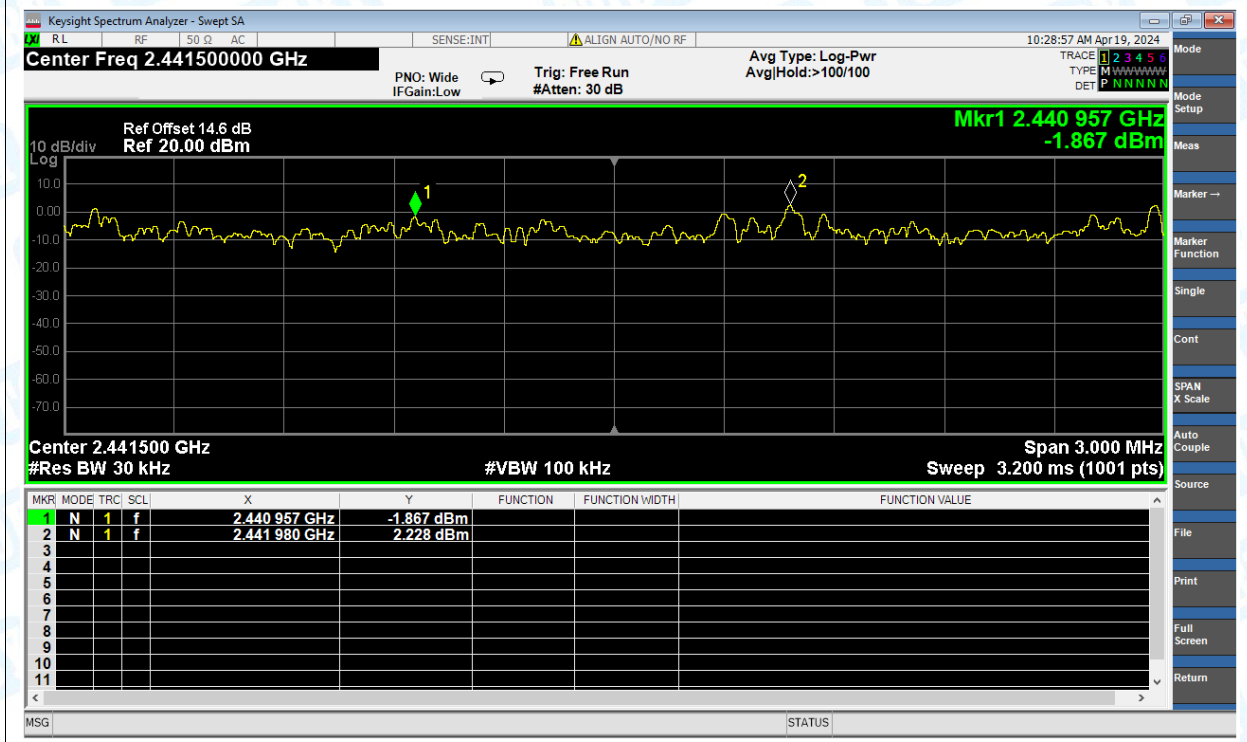
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.966	2441.971	1.005	0.58	Pass
NVNT	2-DH1	Ant1	2440.957	2441.98	1.023	0.833	Pass
NVNT	3-DH1	Ant1	2440.975	2441.983	1.008	0.813	Pass

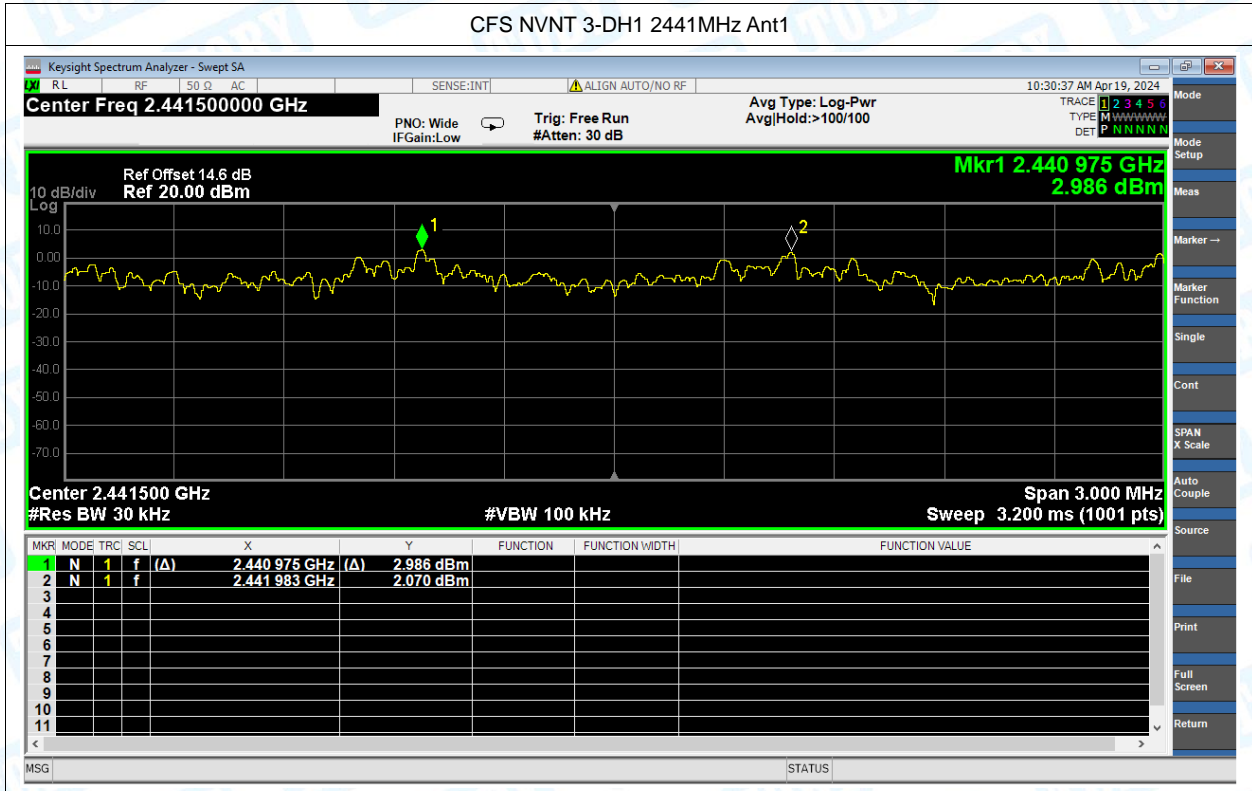
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



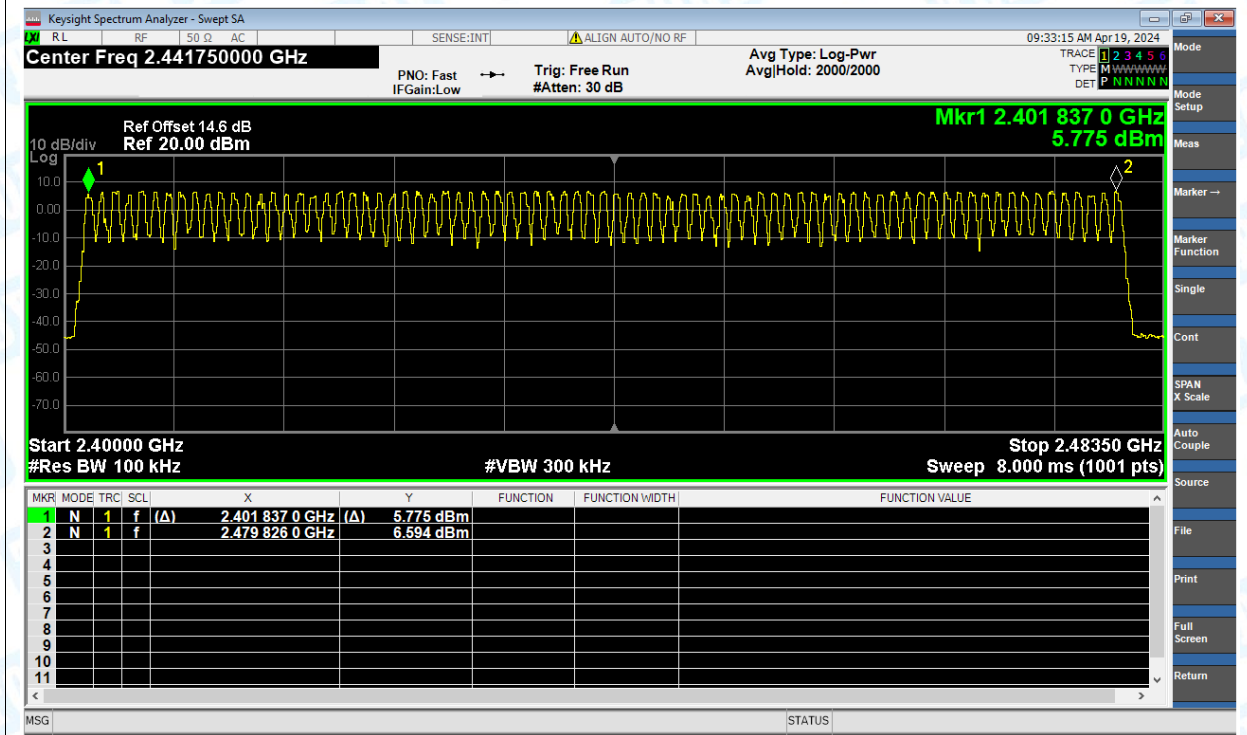


10. Number of Hopping Channel

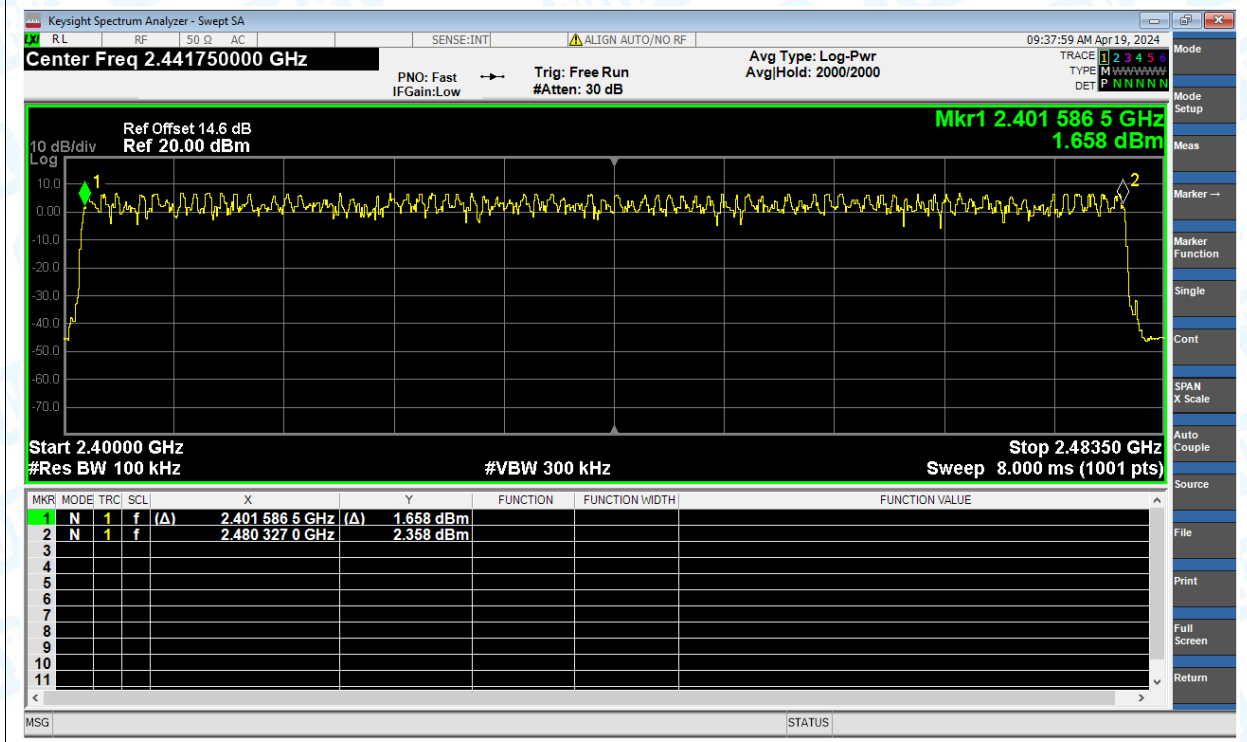
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

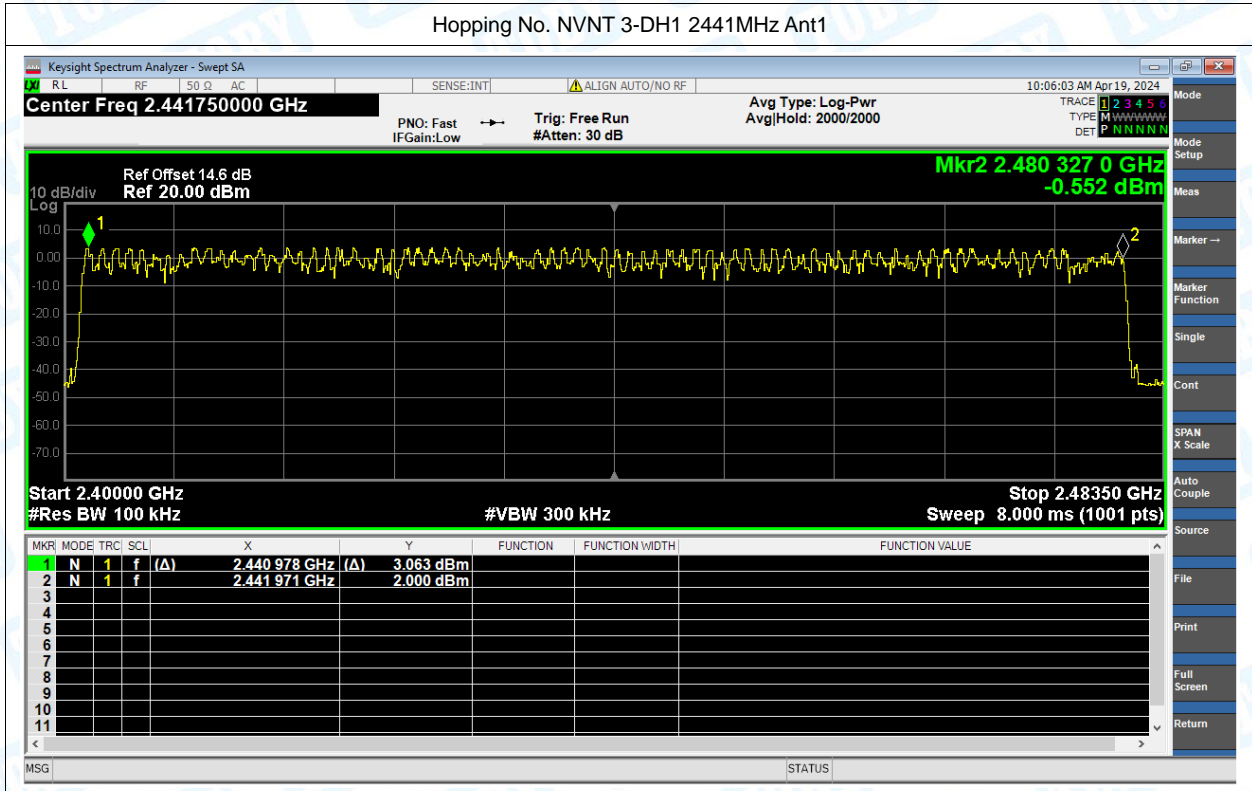
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



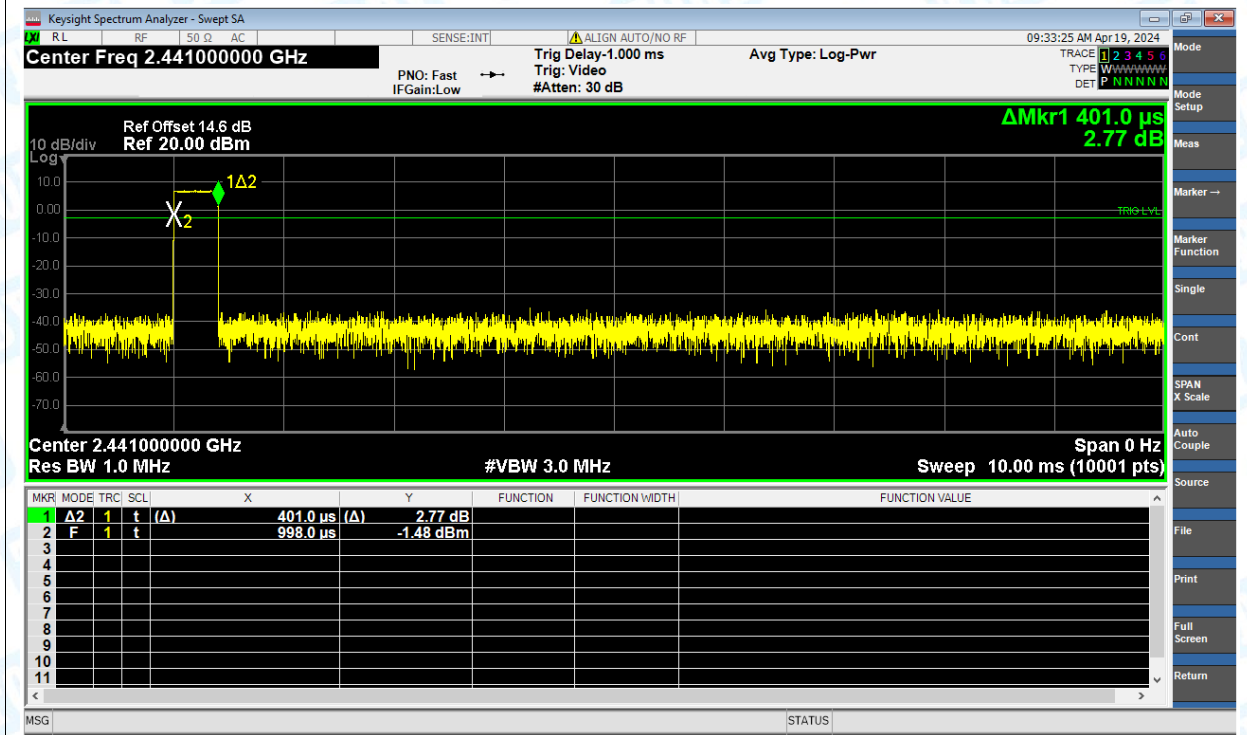


11. Dwell Time

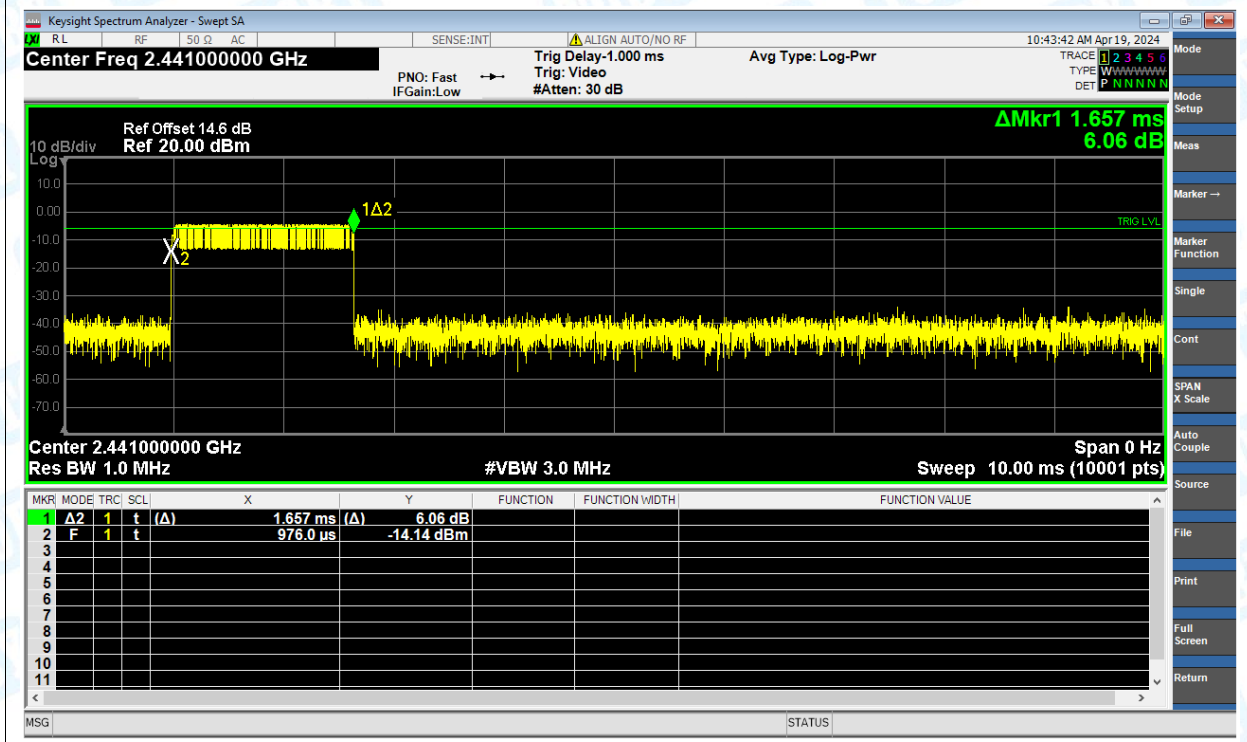
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.401	128.32	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.657	265.12	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.904	309.76	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.407	130.24	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.66	265.6	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.908	310.187	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	2.913	310.72	31600	400	Pass

Test Graphs

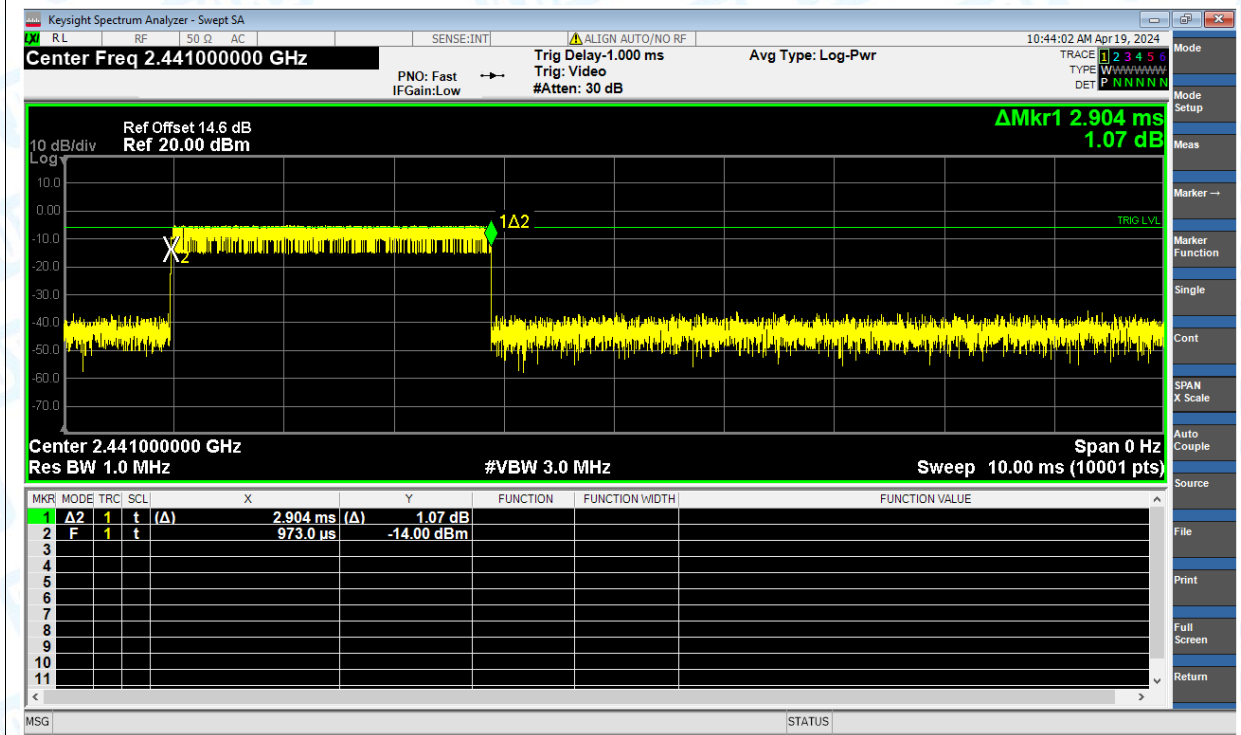
Dwell NVNT 1-DH1 2441MHz Ant1



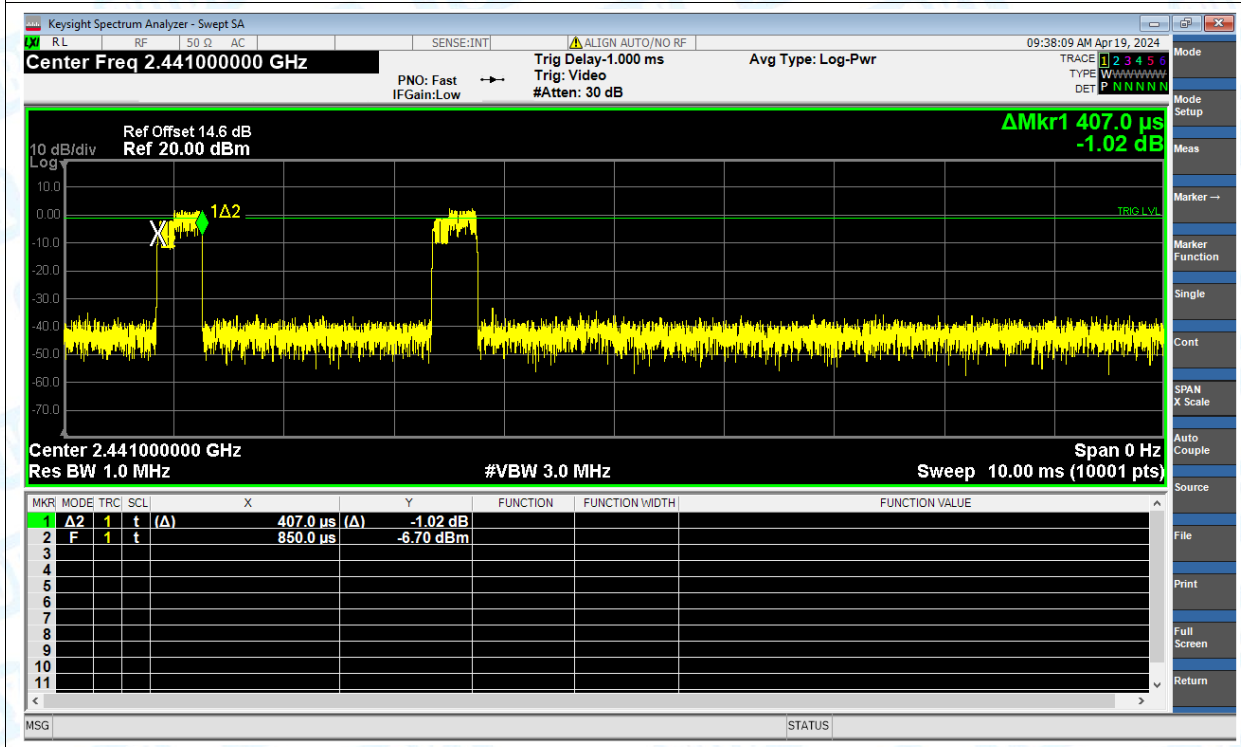
Dwell NVNT 1-DH3 2441MHz Ant1



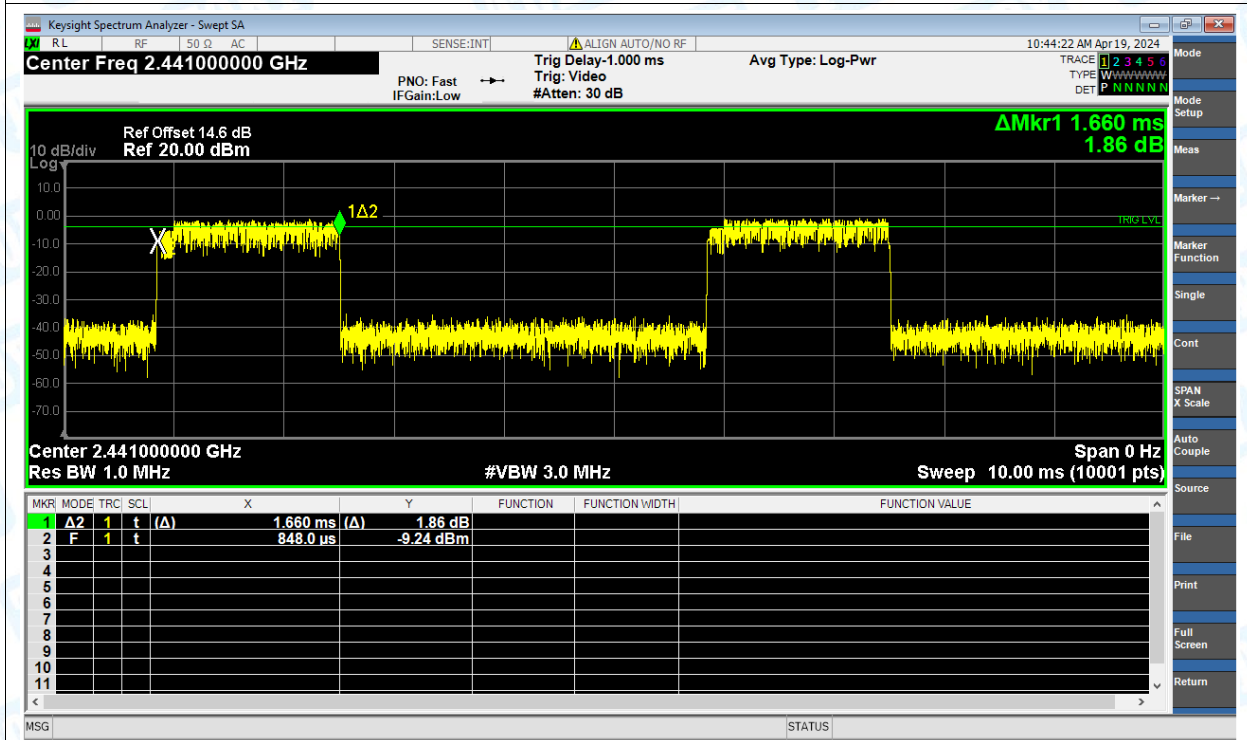
Dwell NVNT 1-DH5 2441MHz Ant1



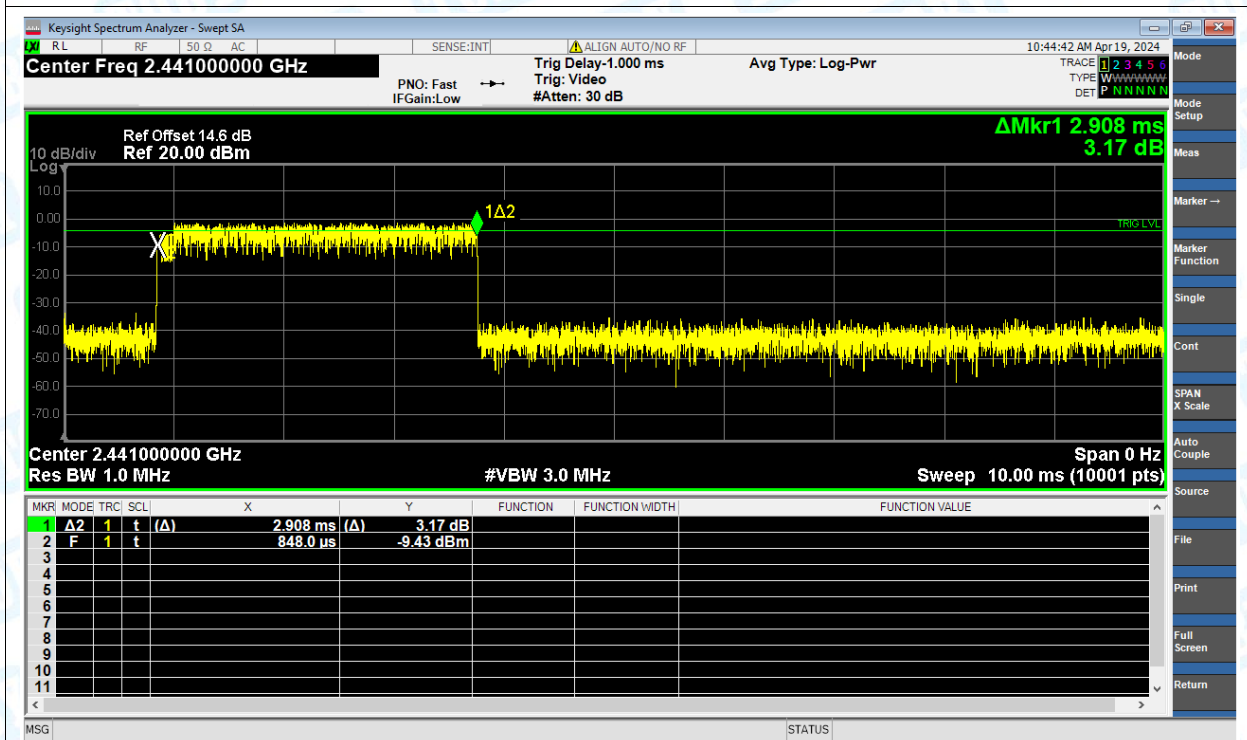
Dwell NVNT 2-DH1 2441MHz Ant1



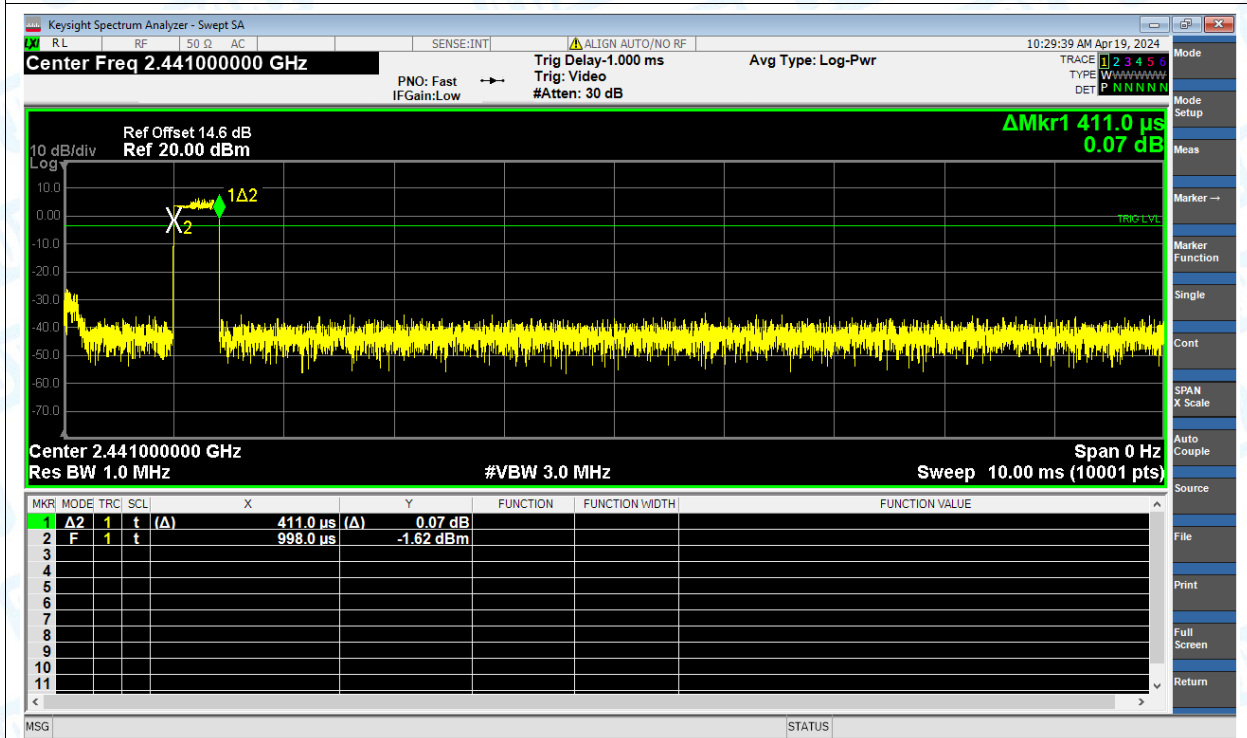
Dwell NVNT 2-DH3 2441MHz Ant1



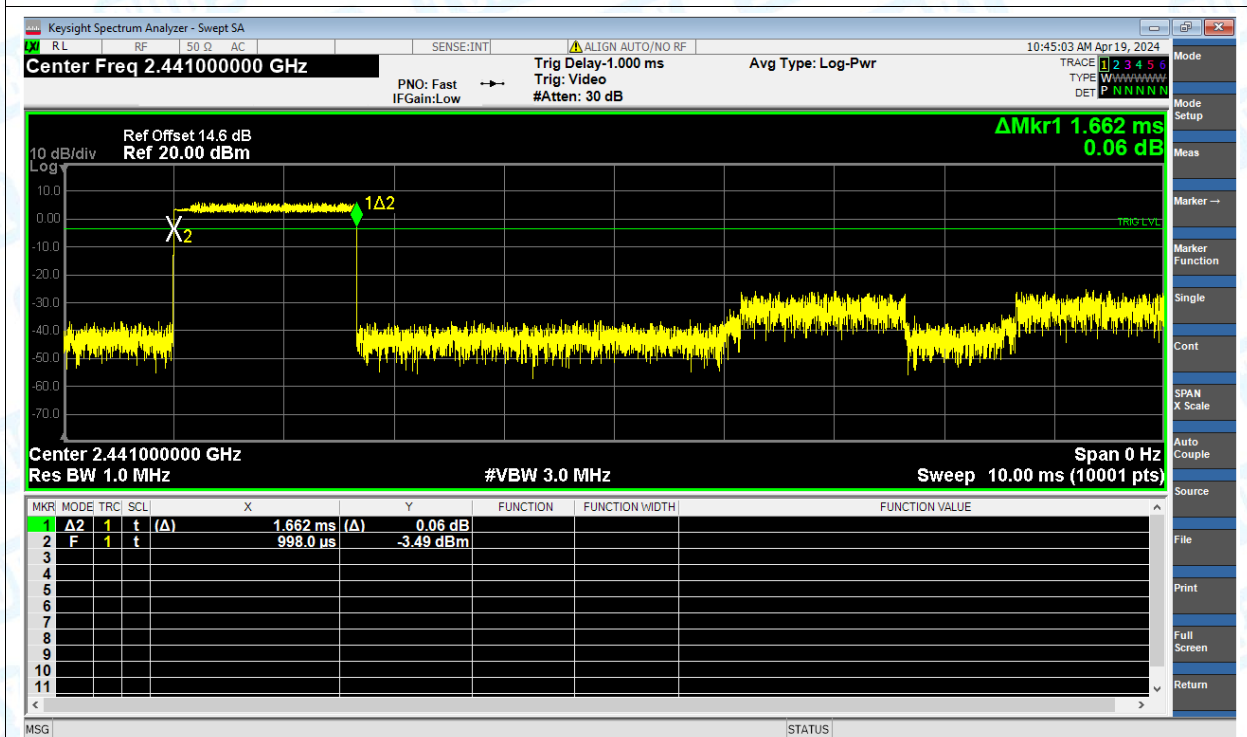
Dwell NVNT 2-DH5 2441MHz Ant1

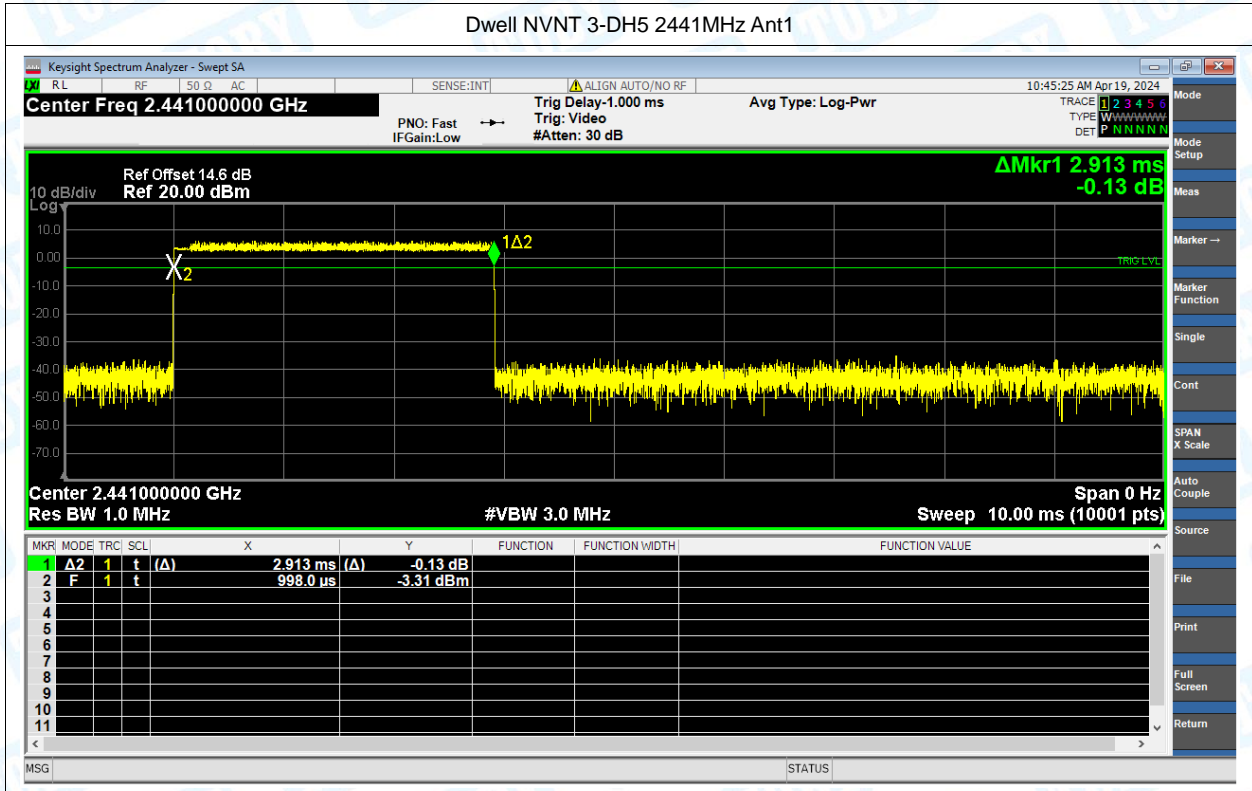


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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