

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	True wireless stereo Earphone
Test Model:	SK18
Sample ID:	HC-C-202406-0015-01-01
Environmental Conditions	
Temperature:	25.2°C
Relative Humidity:	48.6%
Test Voltage:	DC 3.7V
Test Engineer:	Jolin Lee
Note: For a more detailed features description, please refer to the report TBR-C-202406-0015-1 The report only show the worst case data.	

Contents

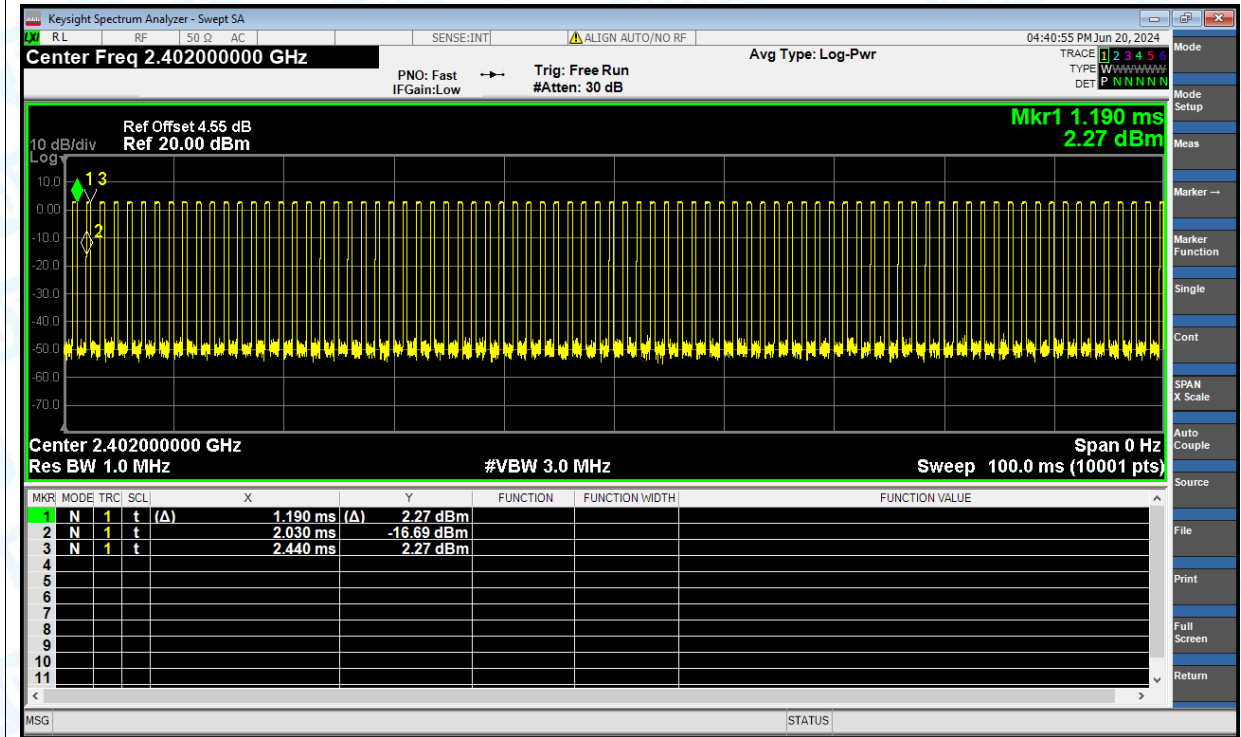
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1. Duty Cycle

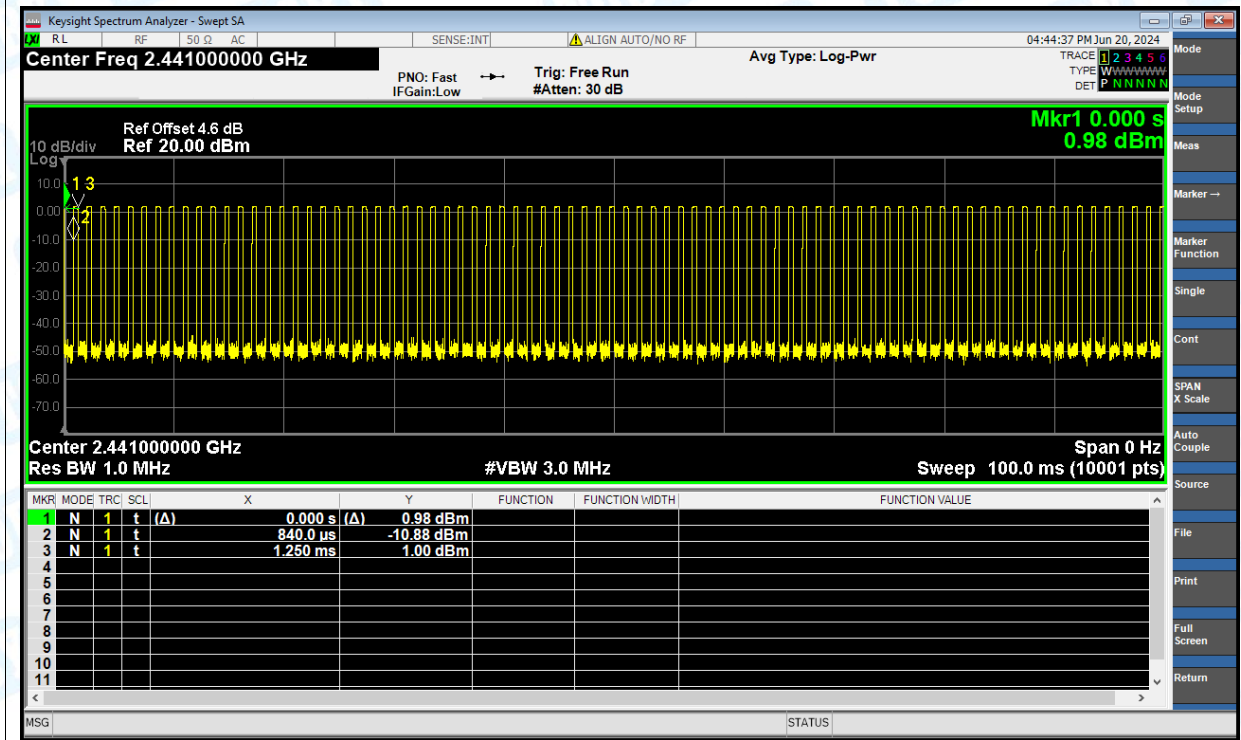
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	32.8	4.84	2.44
NVNT	1-DH1	2441	Ant1	32.8	4.84	2.44
NVNT	1-DH1	2480	Ant1	32.8	4.84	2.44
NVNT	2-DH1	2402	Ant1	33.6	4.74	2.38
NVNT	2-DH1	2441	Ant1	32.8	4.84	2.44
NVNT	2-DH1	2480	Ant1	33.6	4.74	2.38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

Test Graphs

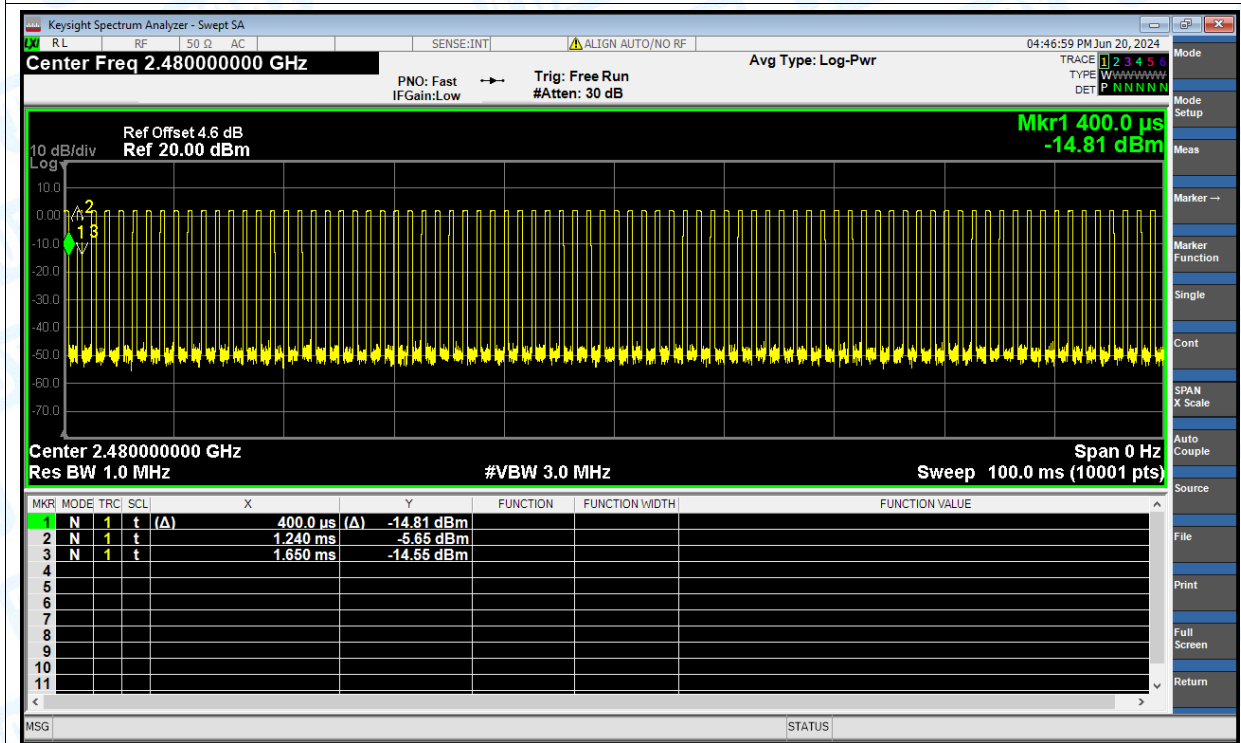
Duty Cycle NVNT 1-DH1 2402MHz Ant1



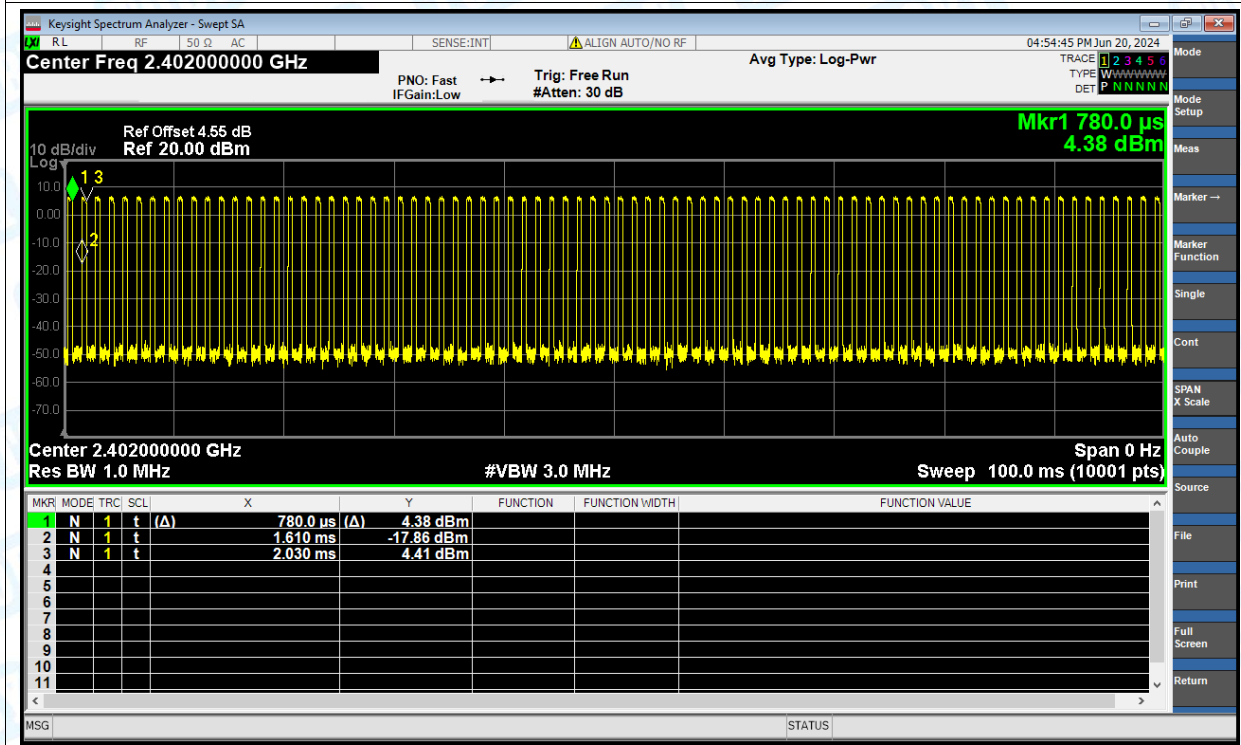
Duty Cycle NVNT 1-DH1 2441MHz Ant1



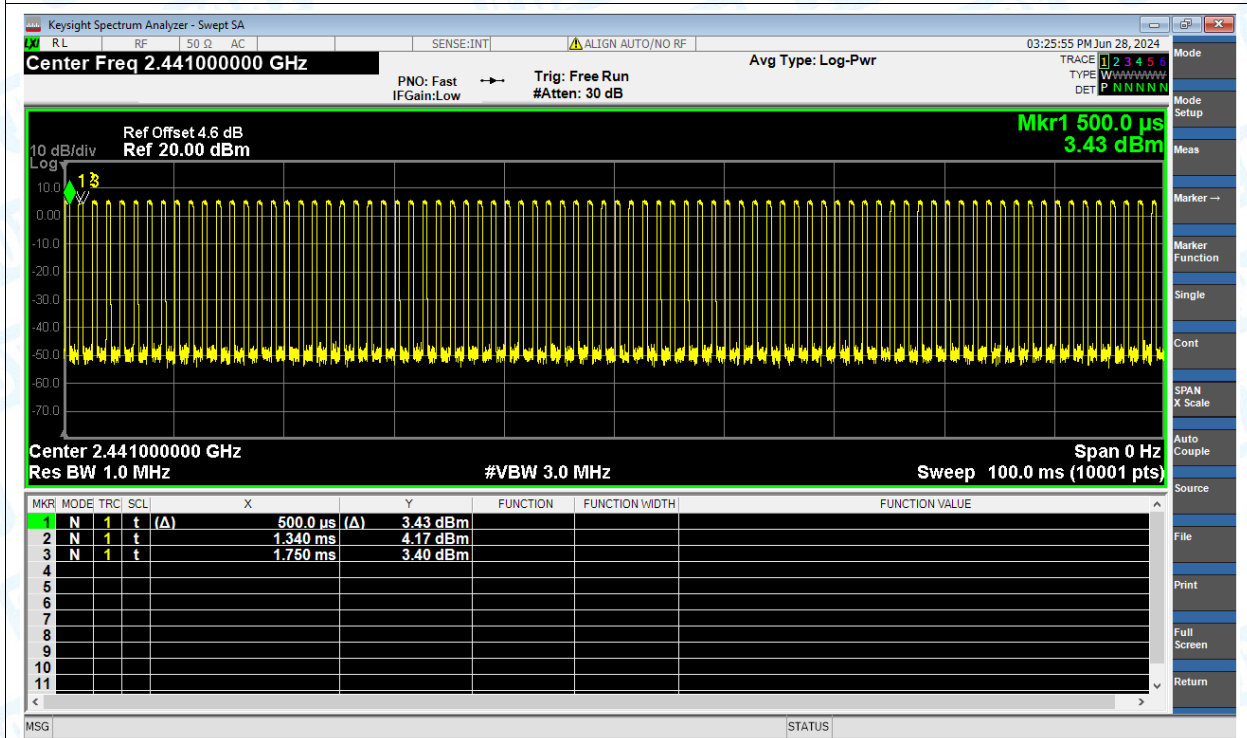
Duty Cycle NVNT 1-DH1 2480MHz Ant1



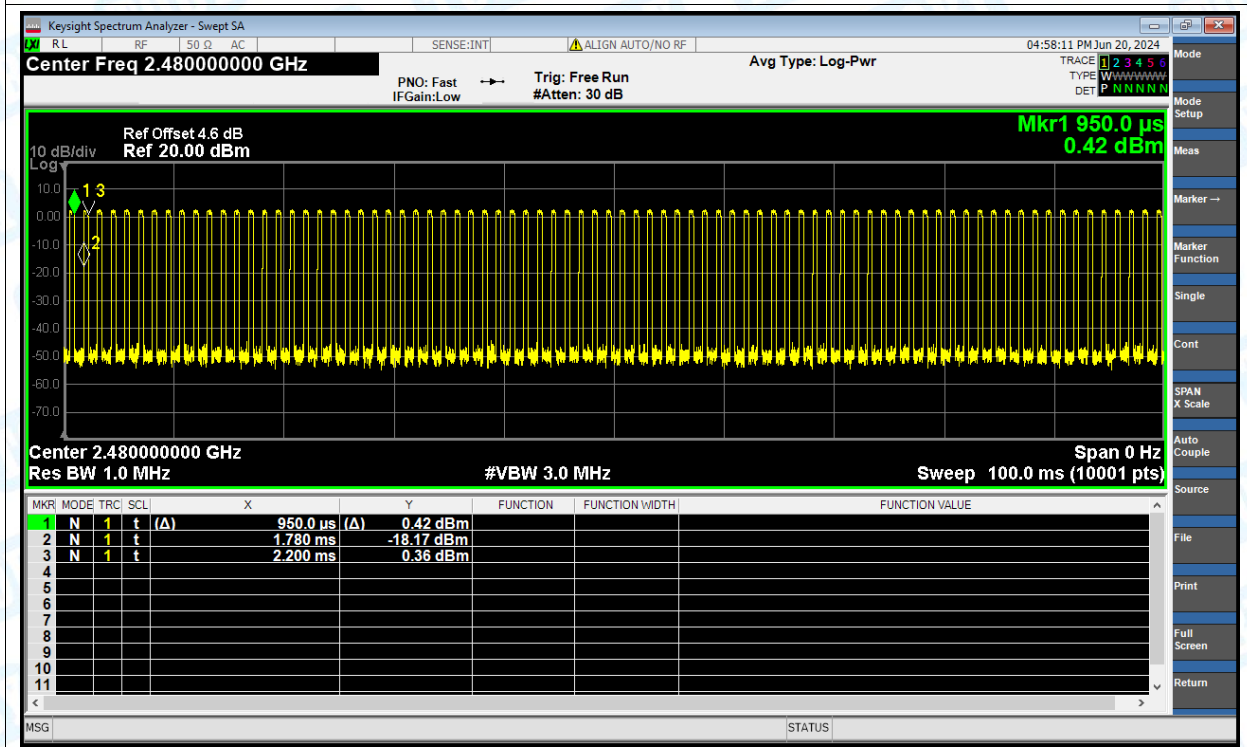
Duty Cycle NVNT 2-DH1 2402MHz Ant1



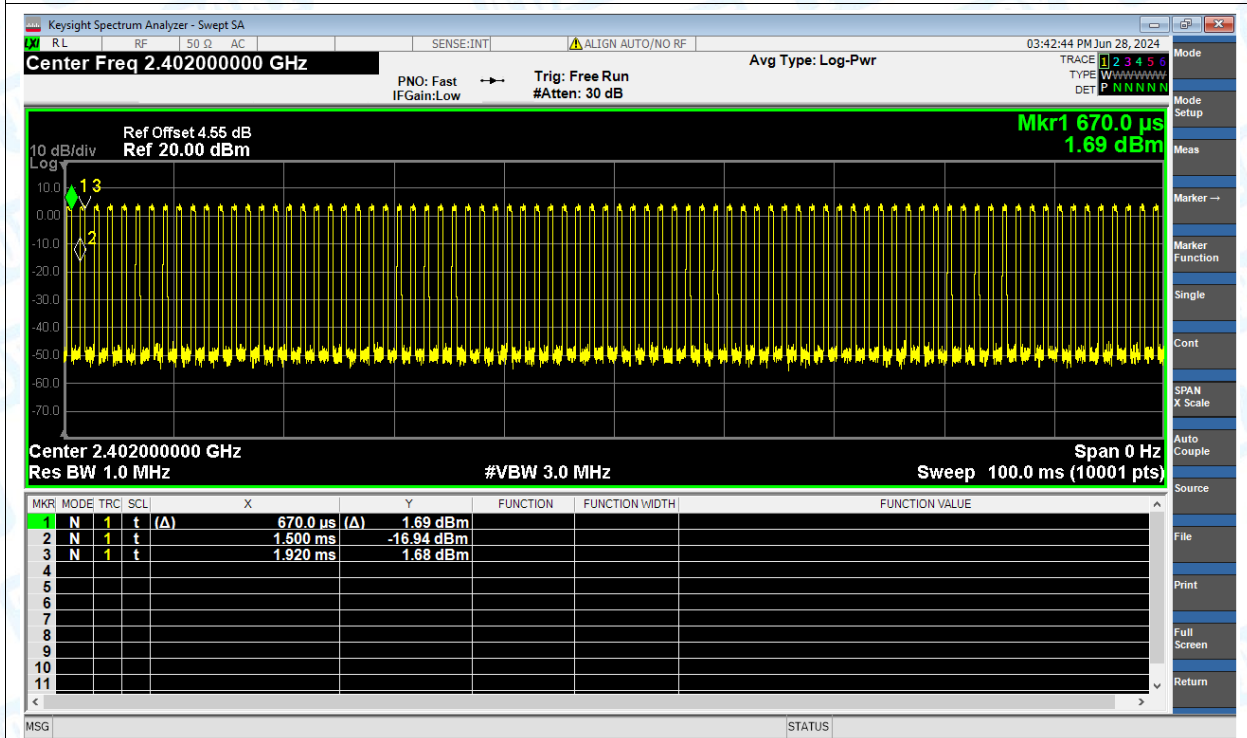
Duty Cycle NVNT 2-DH1 2441MHz Ant1



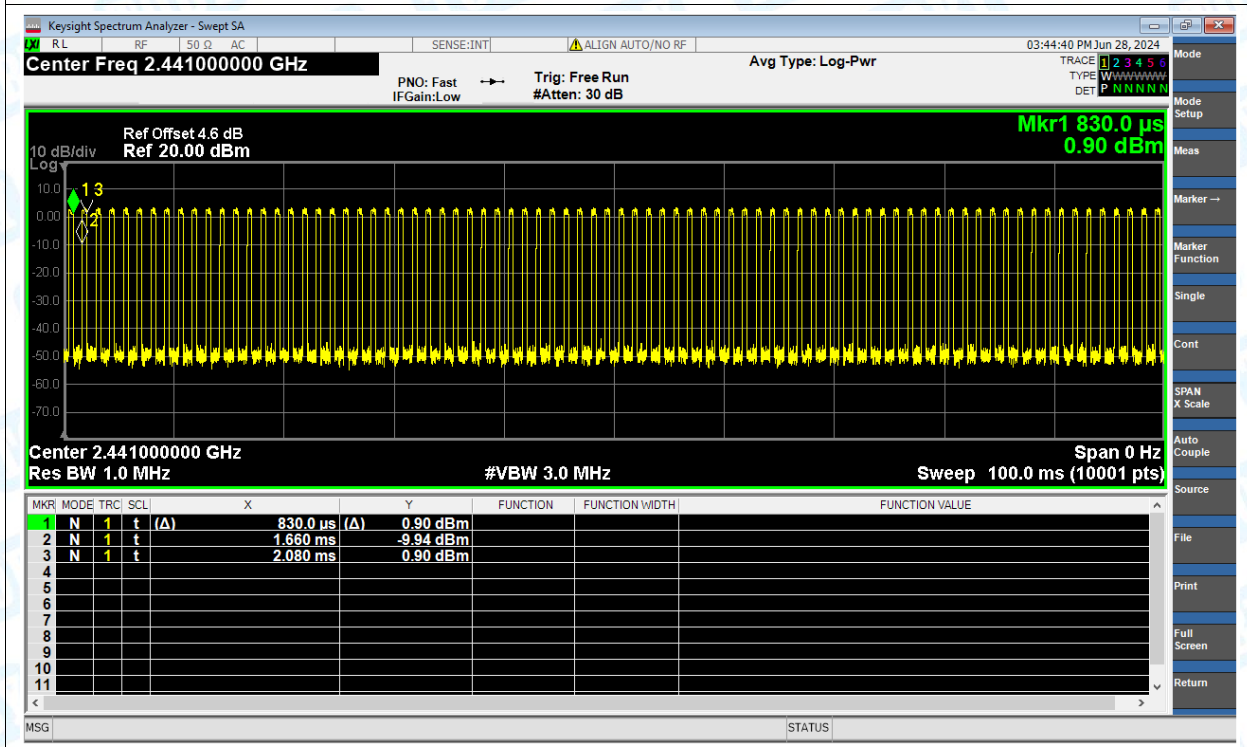
Duty Cycle NVNT 2-DH1 2480MHz Ant1

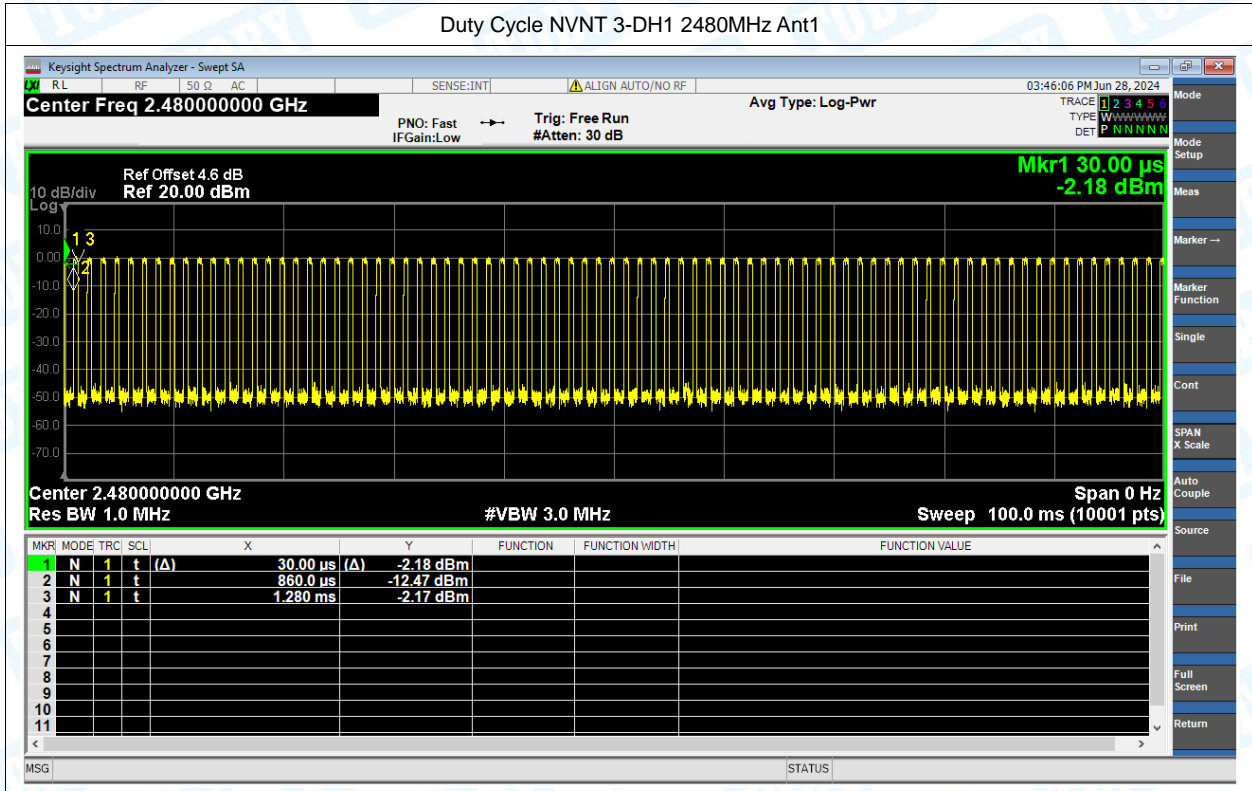


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



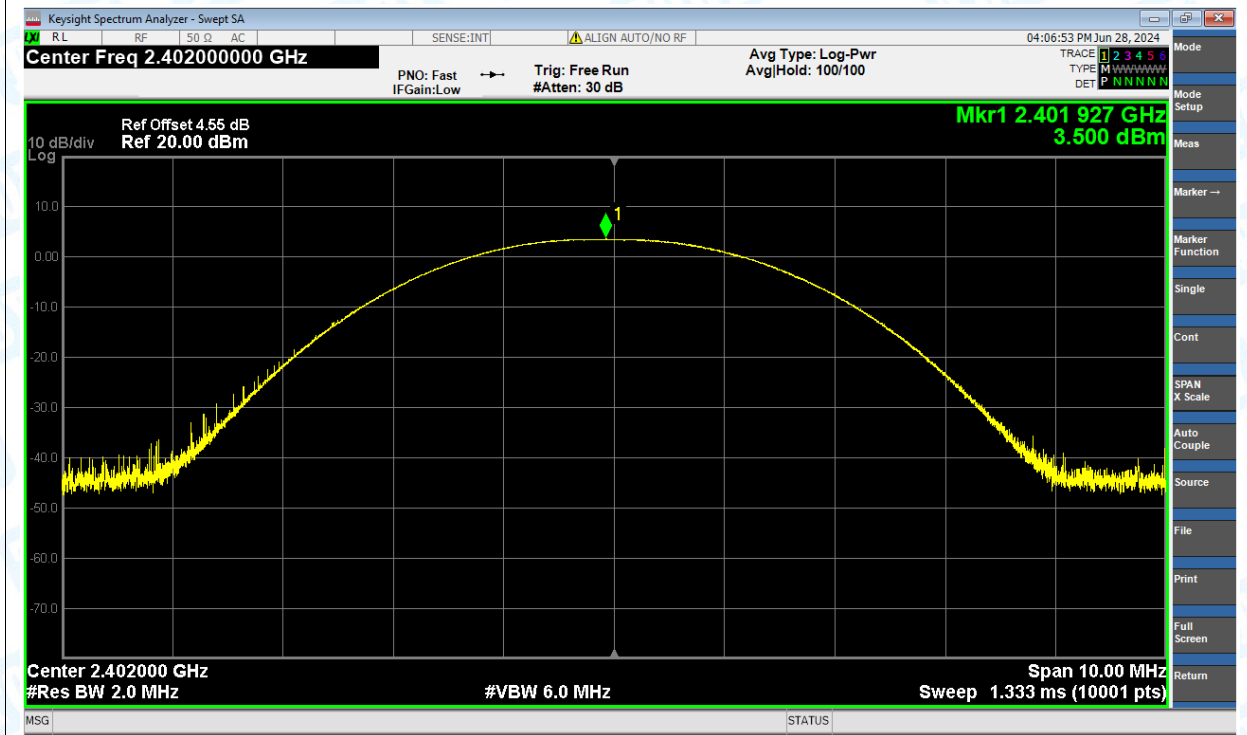


2. Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	3.5	21	Pass
NVNT	1-DH1	2441	Ant1	2.748	21	Pass
NVNT	1-DH1	2480	Ant1	-0.311	21	Pass
NVNT	2-DH1	2402	Ant1	4.266	21	Pass
NVNT	2-DH1	2441	Ant1	3.5	21	Pass
NVNT	2-DH1	2480	Ant1	0.254	21	Pass
NVNT	3-DH1	2402	Ant1	4.754	21	Pass
NVNT	3-DH1	2441	Ant1	4.011	21	Pass
NVNT	3-DH1	2480	Ant1	0.94	21	Pass

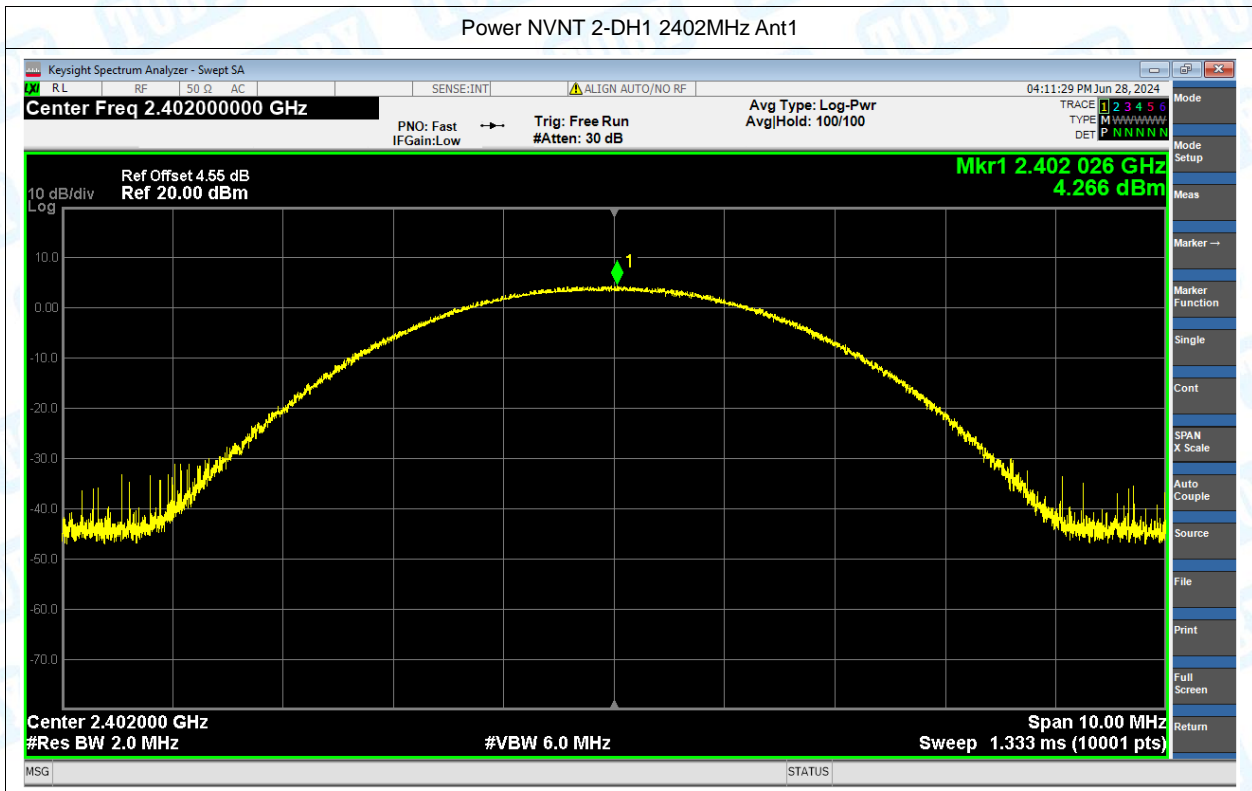
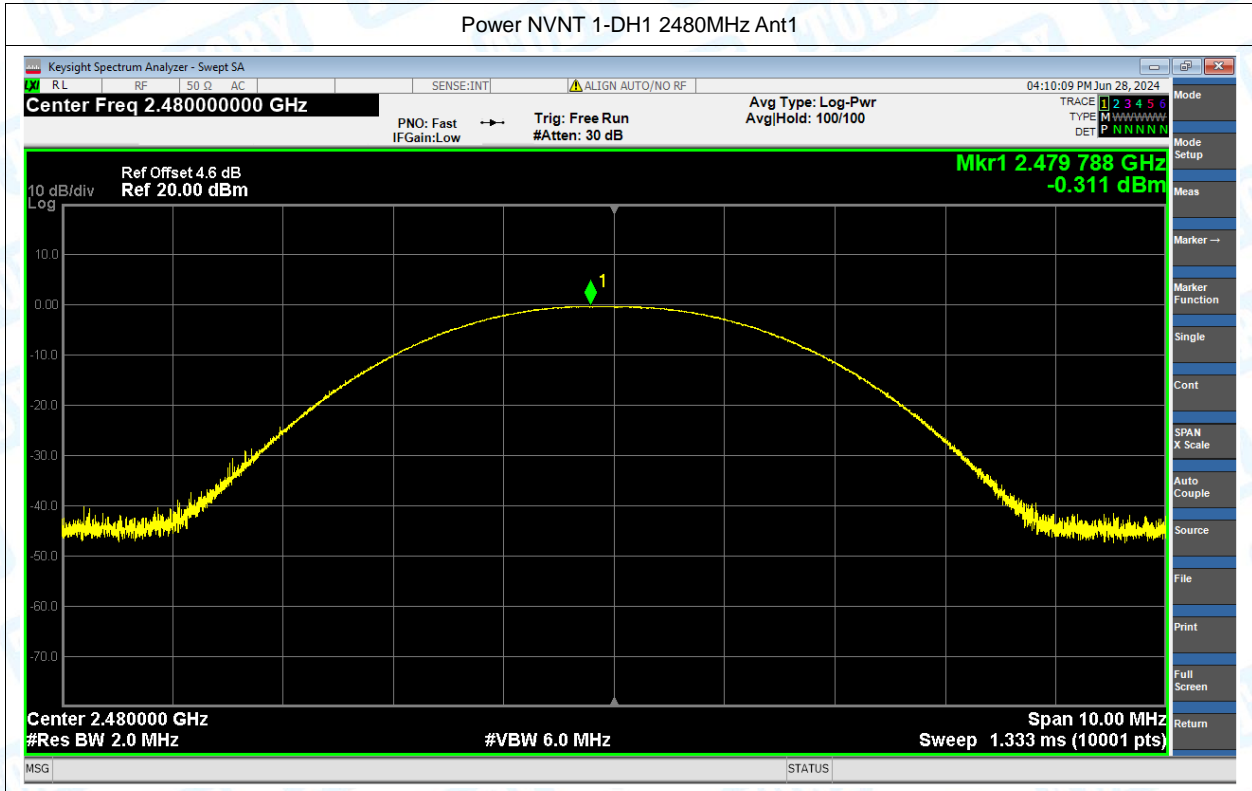
Test Graphs

Power NVNT 1-DH1 2402MHz Ant1

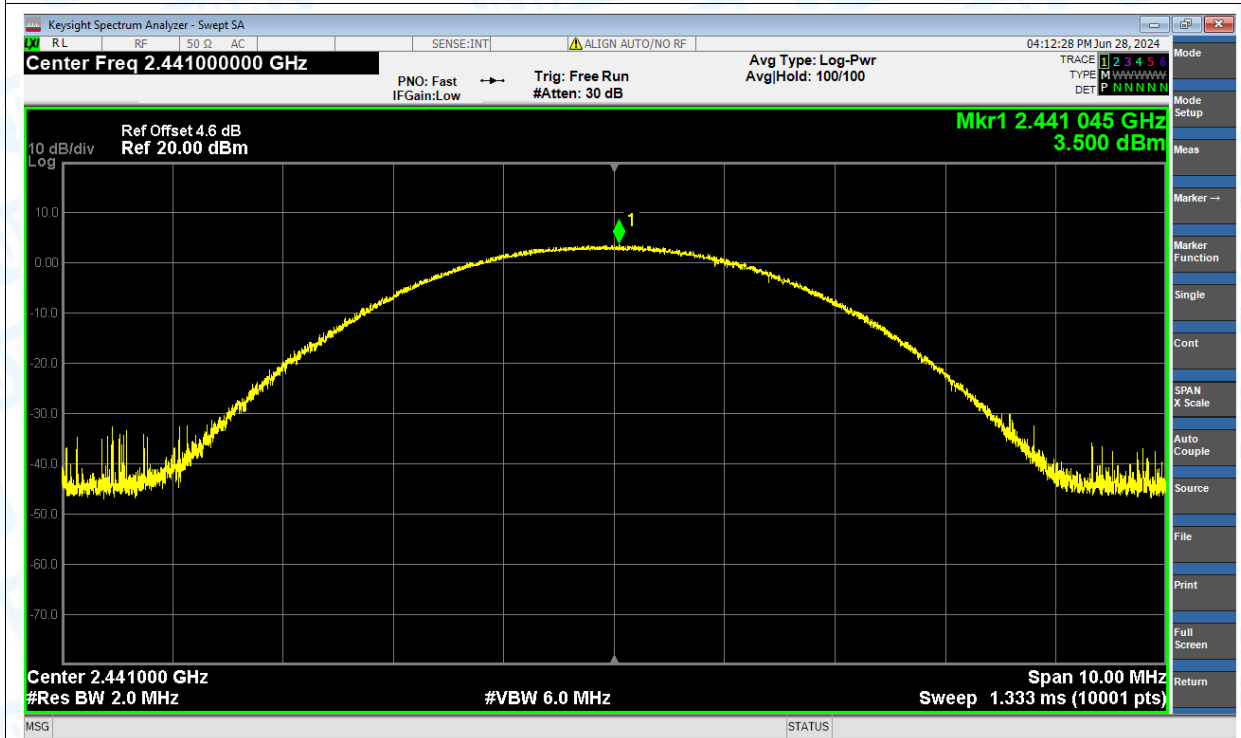


Power NVNT 1-DH1 2441MHz Ant1

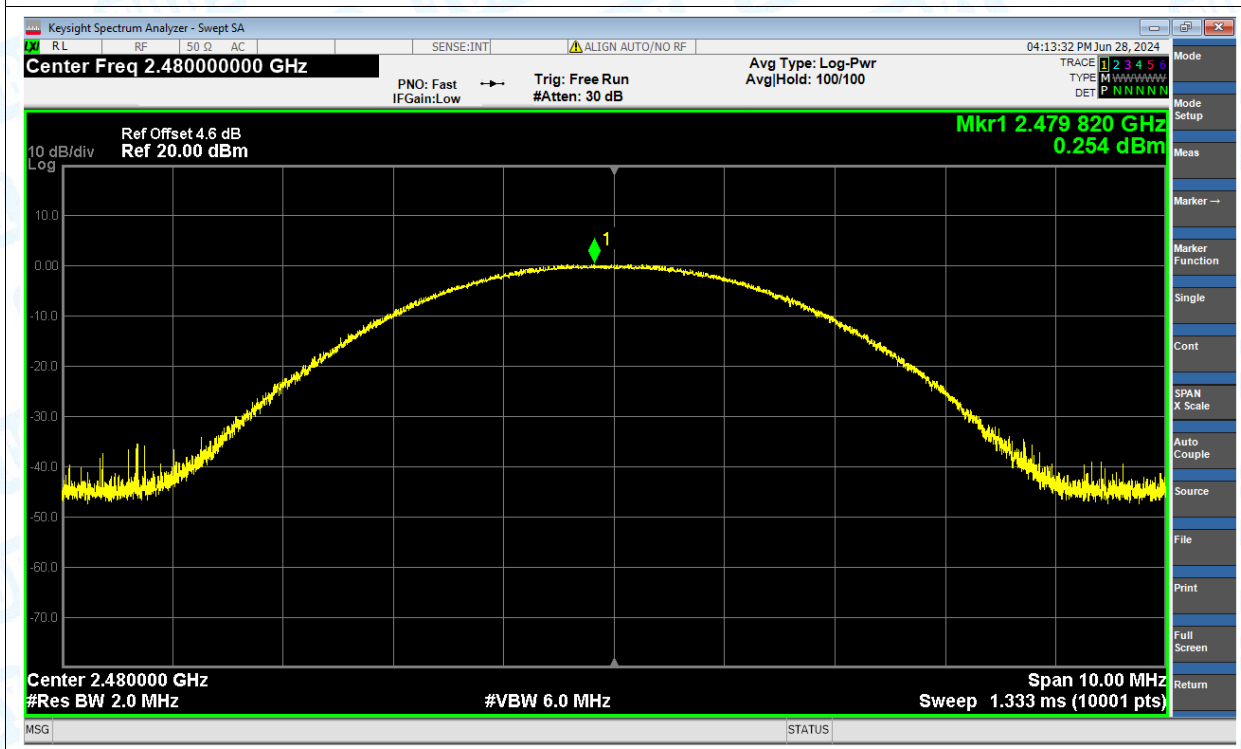




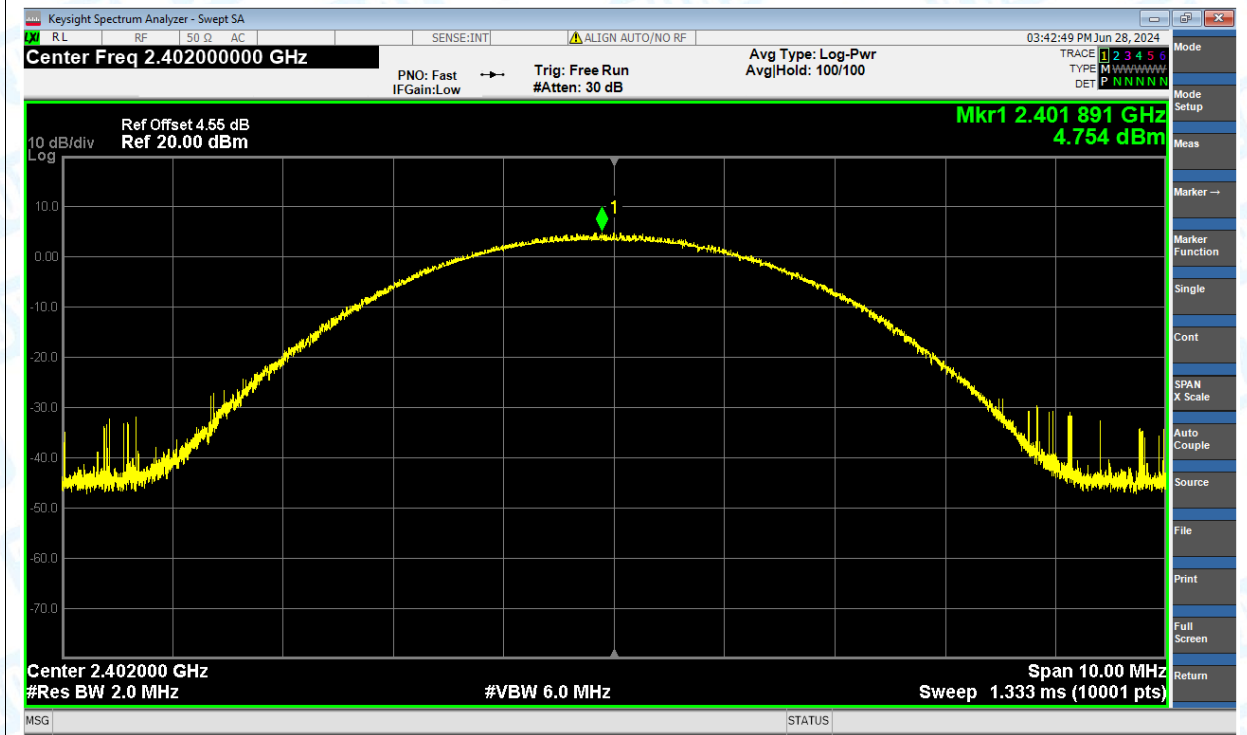
Power NVNT 2-DH1 2441MHz Ant1



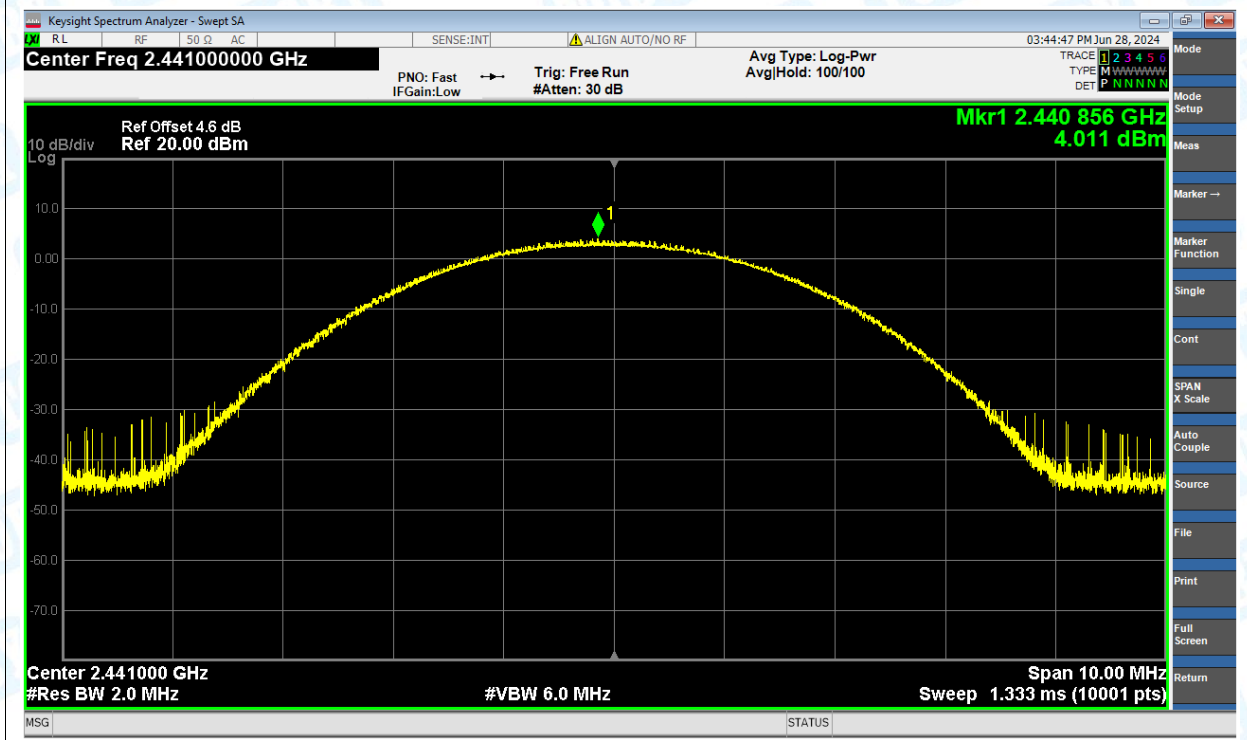
Power NVNT 2-DH1 2480MHz Ant1

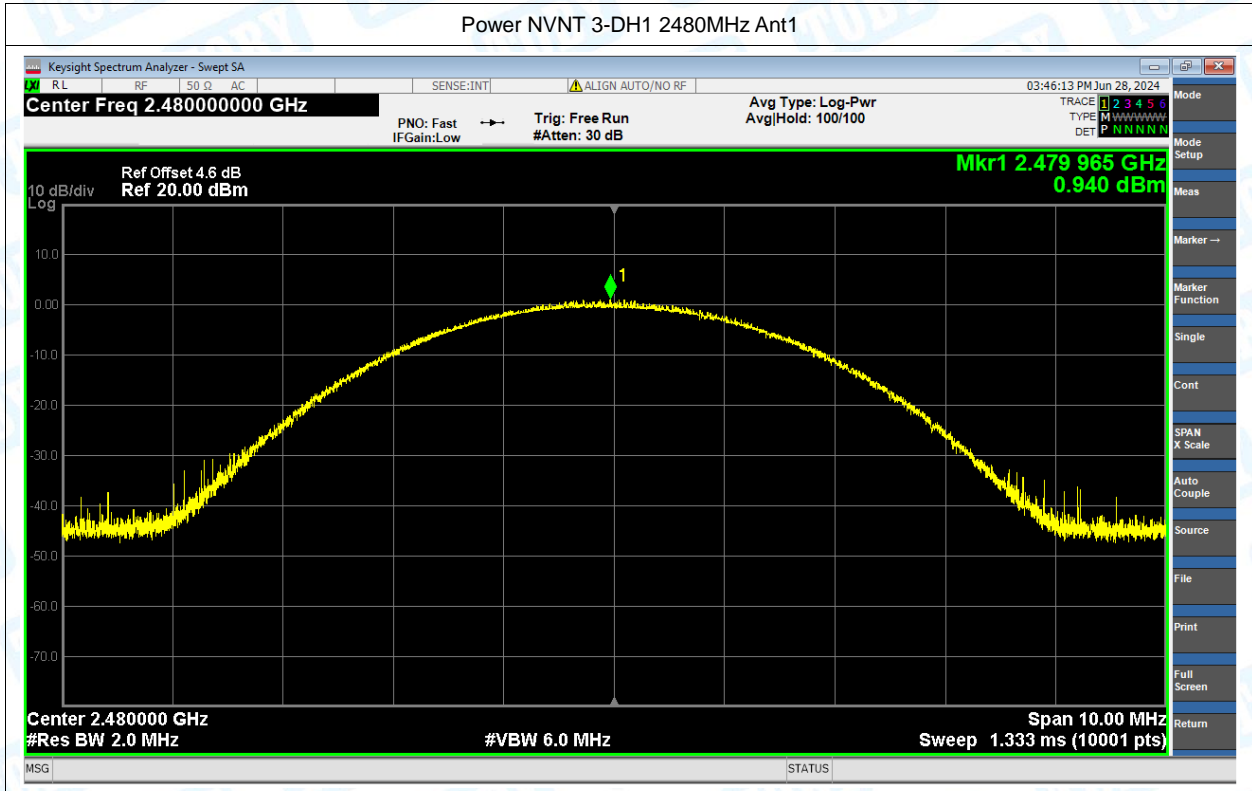


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1





3. -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.88	0	Pass
NVNT	1-DH1	2441	Ant1	0.92	0	Pass
NVNT	1-DH1	2480	Ant1	0.88	0	Pass
NVNT	2-DH1	2402	Ant1	1.21	0	Pass
NVNT	2-DH1	2441	Ant1	1.26	0	Pass
NVNT	2-DH1	2480	Ant1	1.22	0	Pass
NVNT	3-DH1	2402	Ant1	1.2	0	Pass
NVNT	3-DH1	2441	Ant1	1.2	0	Pass
NVNT	3-DH1	2480	Ant1	1.24	0	Pass

Test Graphs

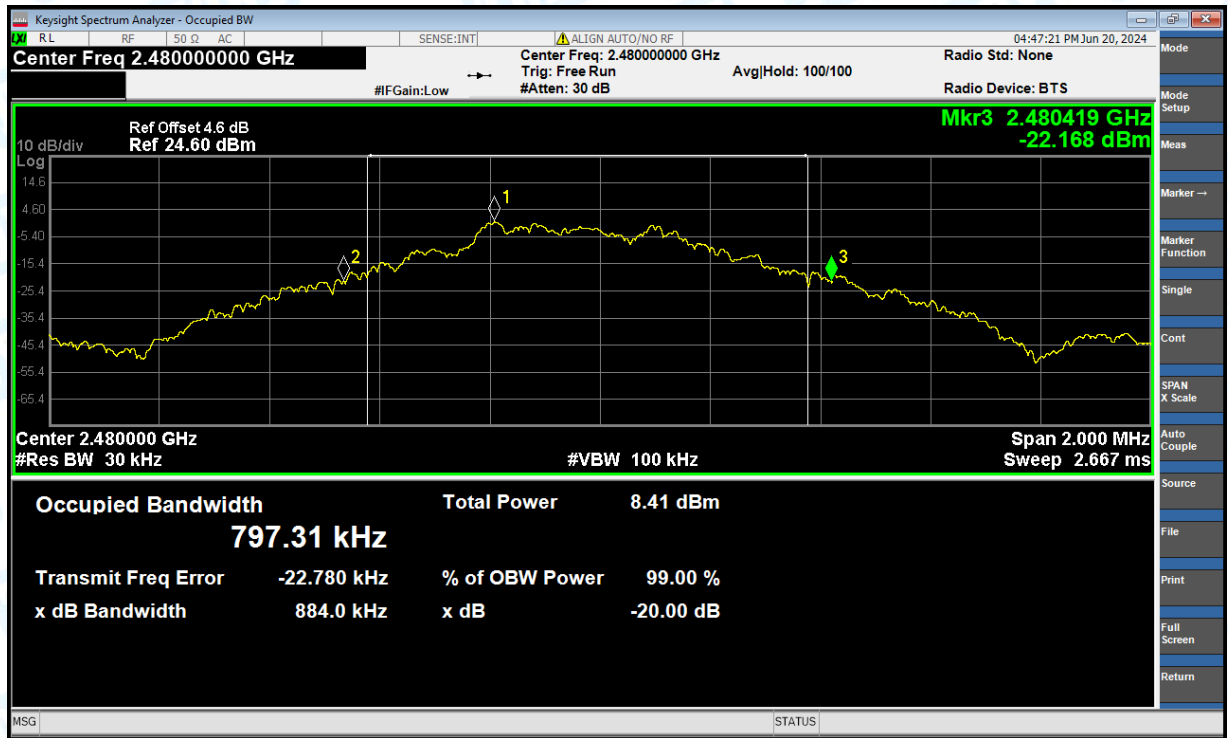
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



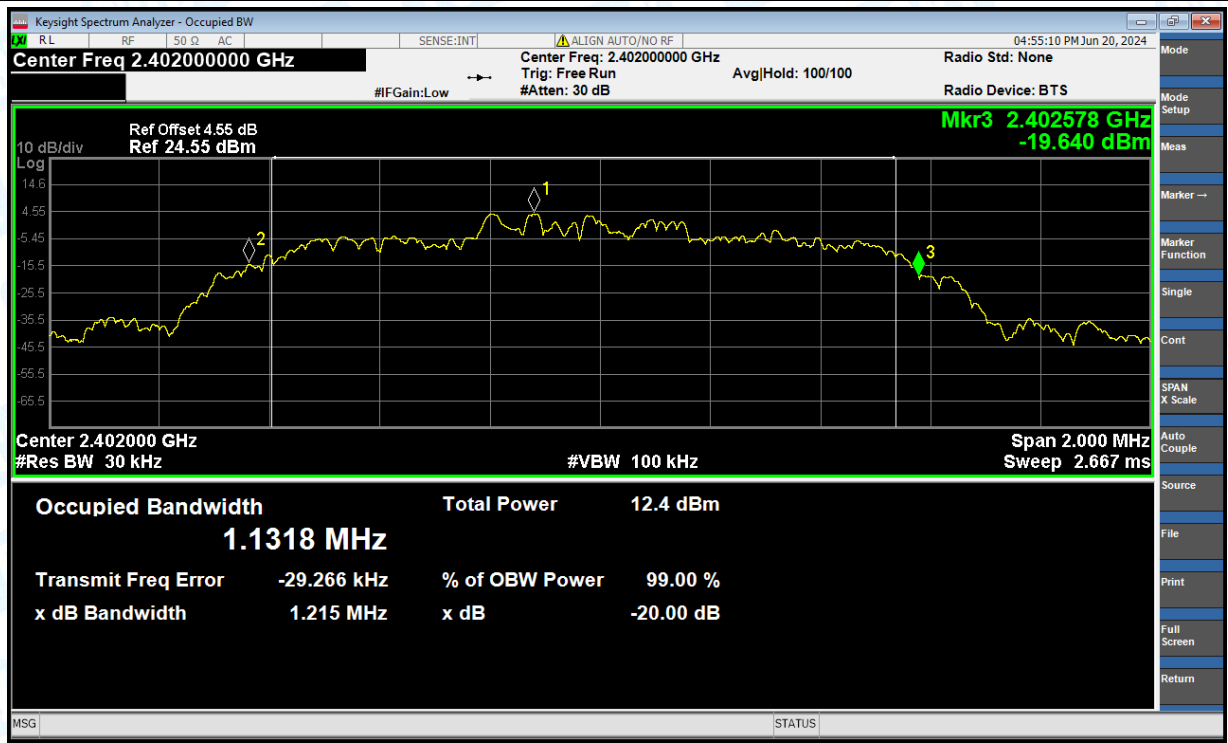
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



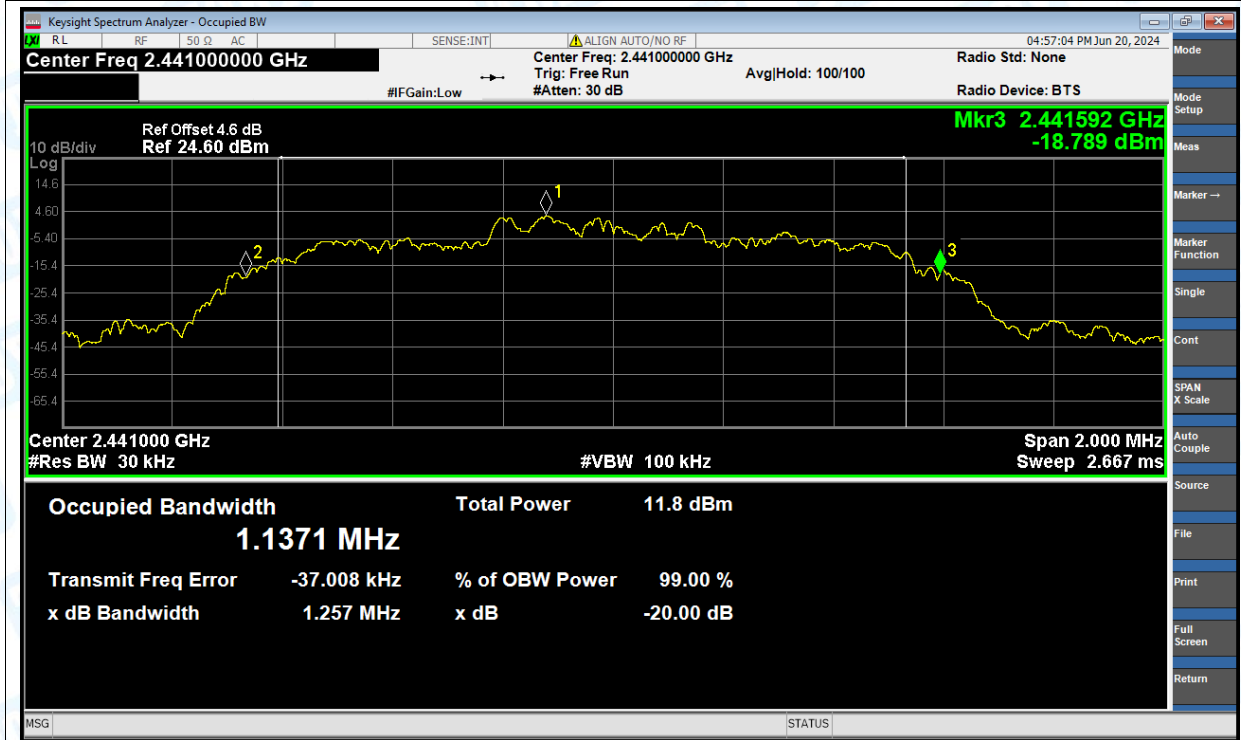
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



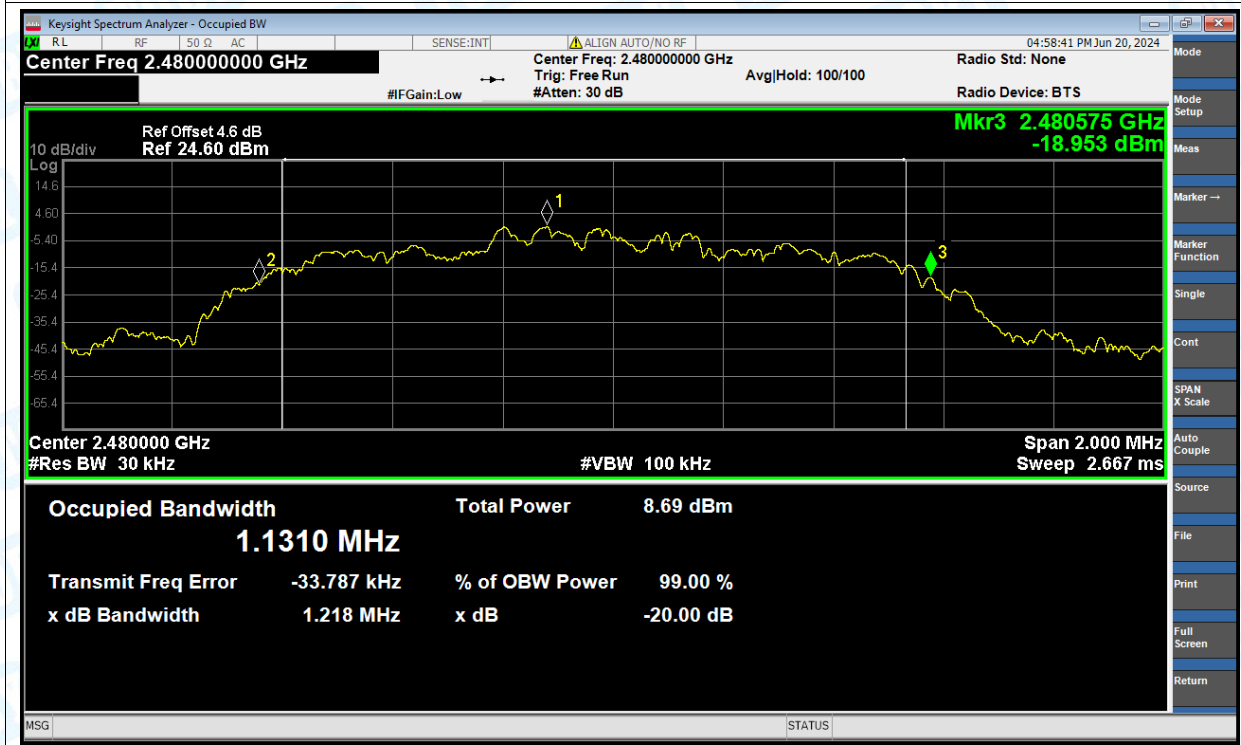
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



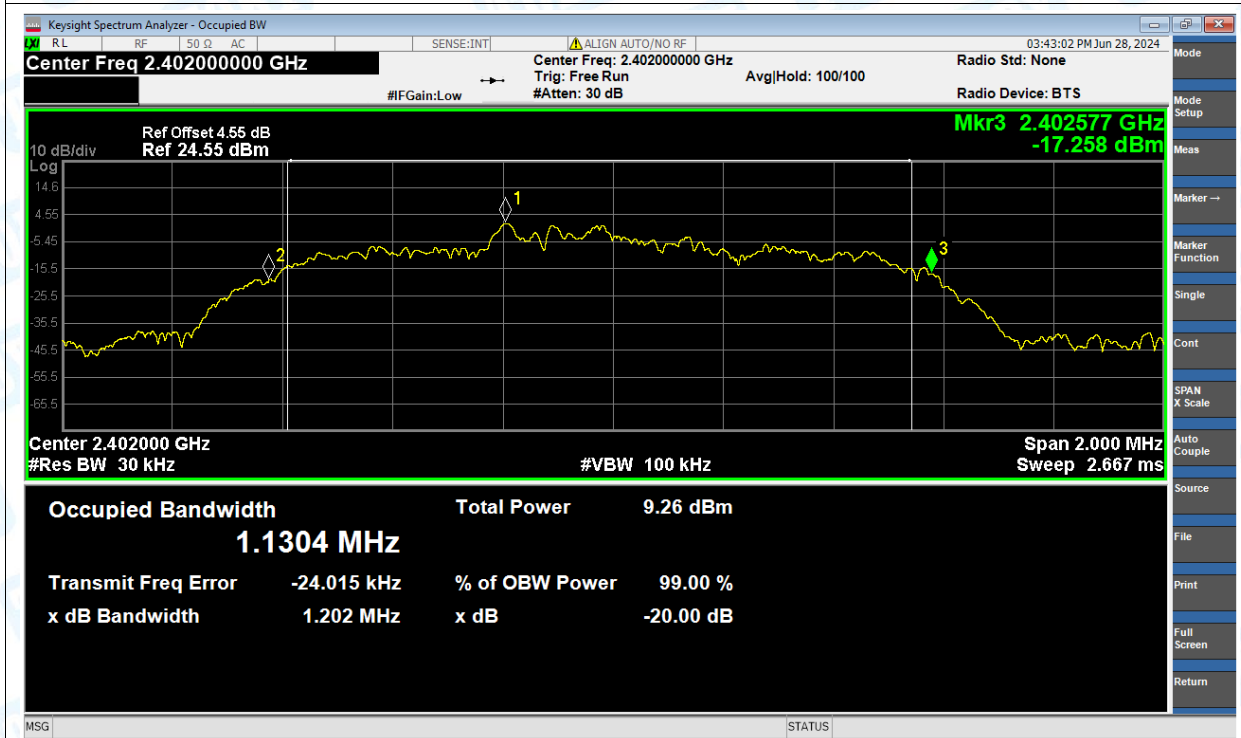
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



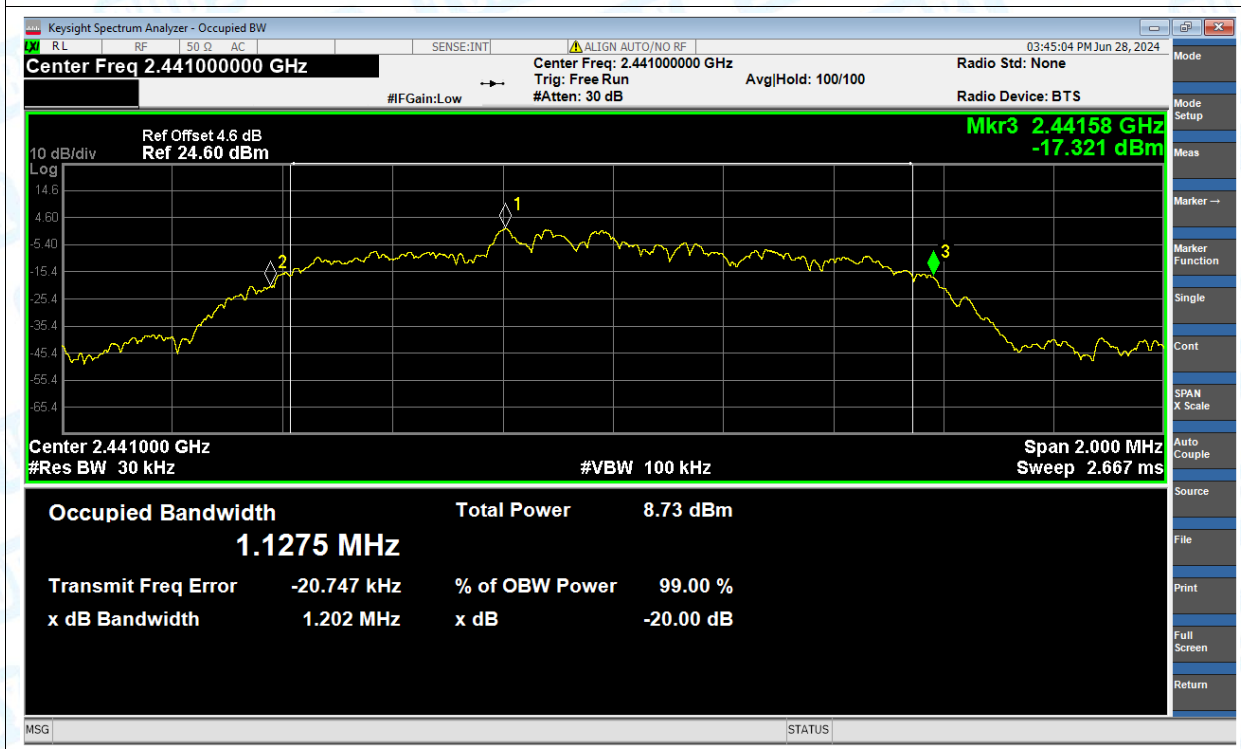
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

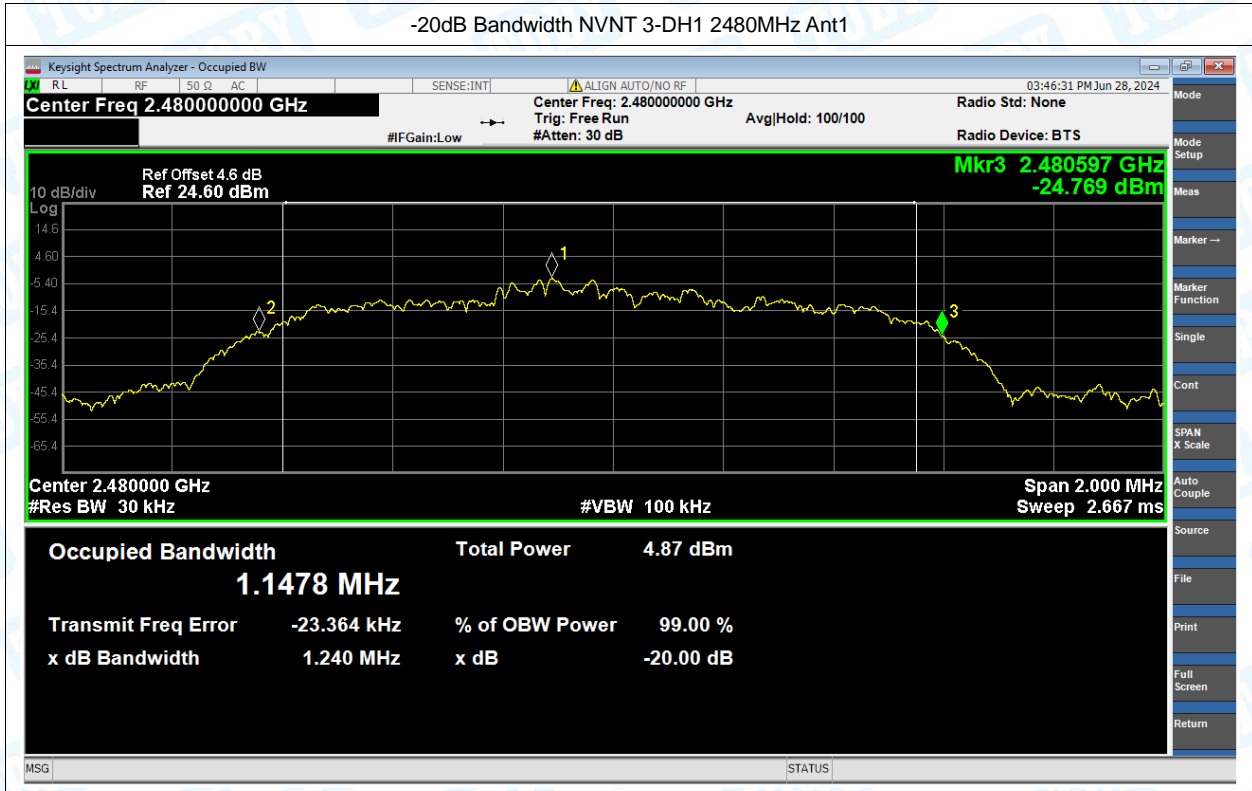


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



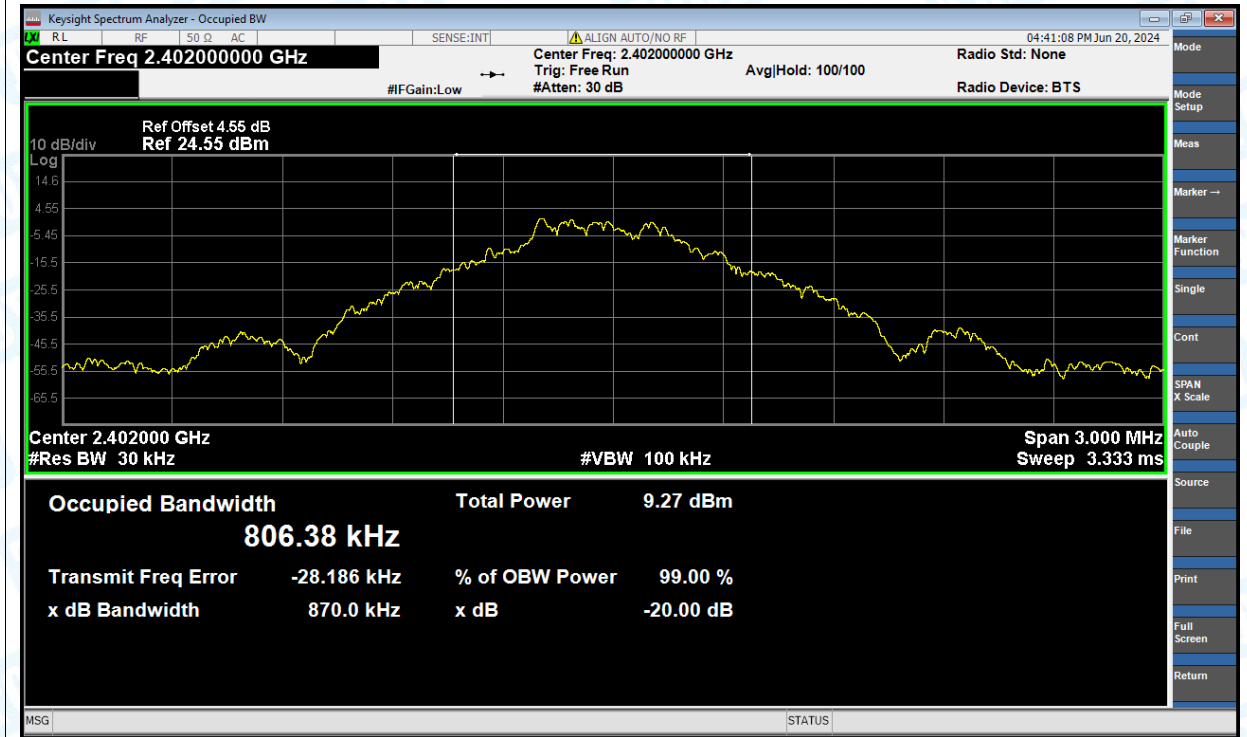


4. Occupied Channel Bandwidth

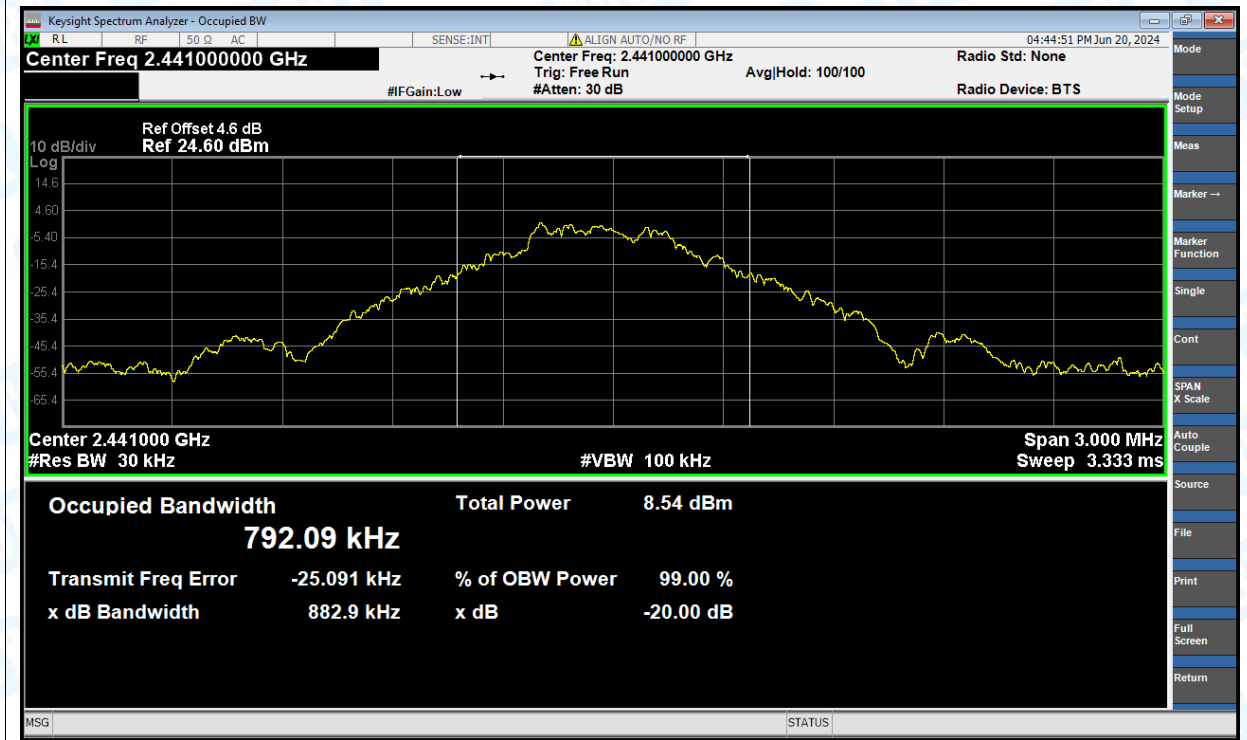
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.806
NVNT	1-DH1	2441	Ant1	0.792
NVNT	1-DH1	2480	Ant1	0.804
NVNT	2-DH1	2402	Ant1	1.14
NVNT	2-DH1	2441	Ant1	1.133
NVNT	2-DH1	2480	Ant1	1.144
NVNT	3-DH1	2402	Ant1	1.132
NVNT	3-DH1	2441	Ant1	1.135
NVNT	3-DH1	2480	Ant1	1.127

Test Graphs

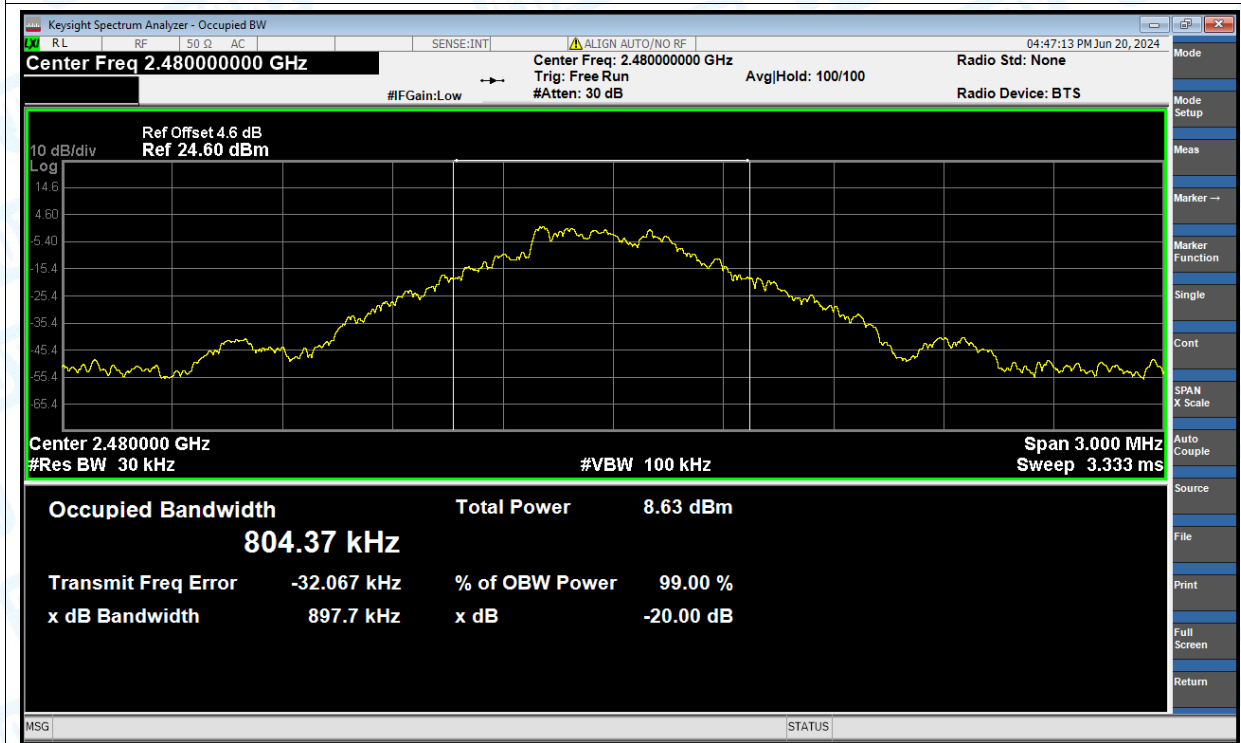
OBW NVNT 1-DH1 2402MHz Ant1



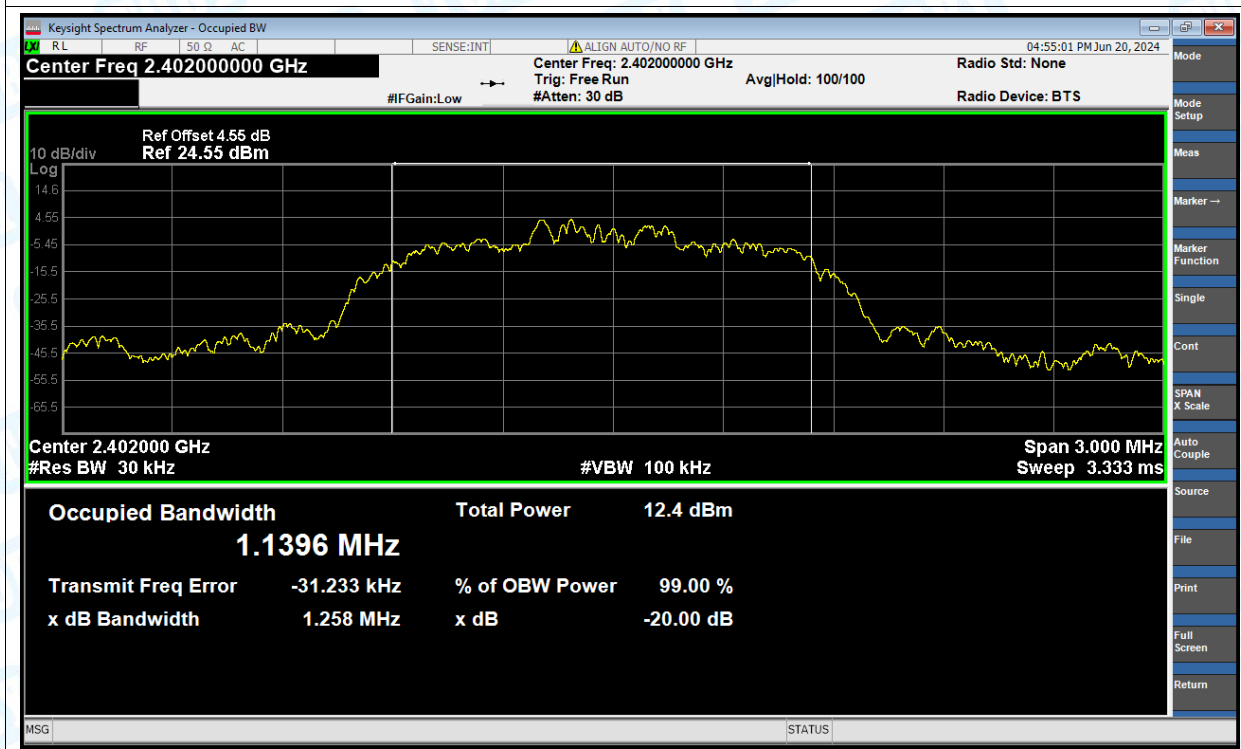
OBW NVNT 1-DH1 2441MHz Ant1



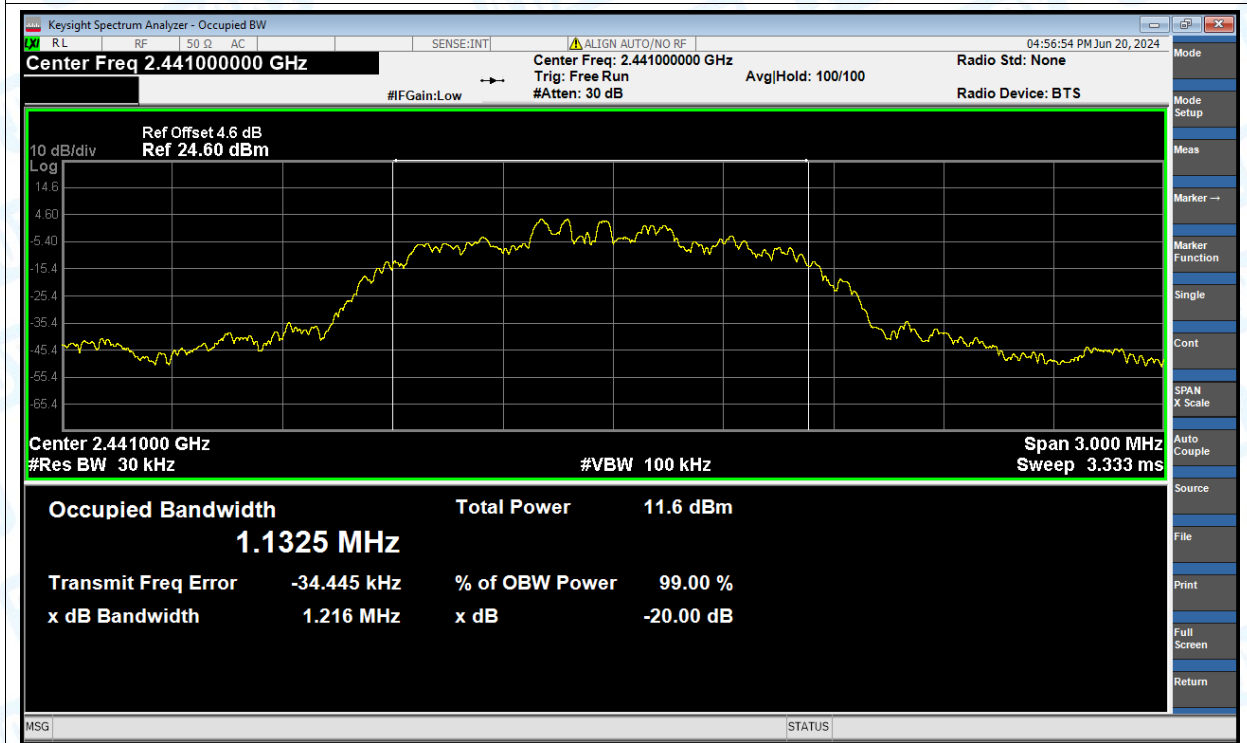
OBW NVNT 1-DH1 2480MHz Ant1



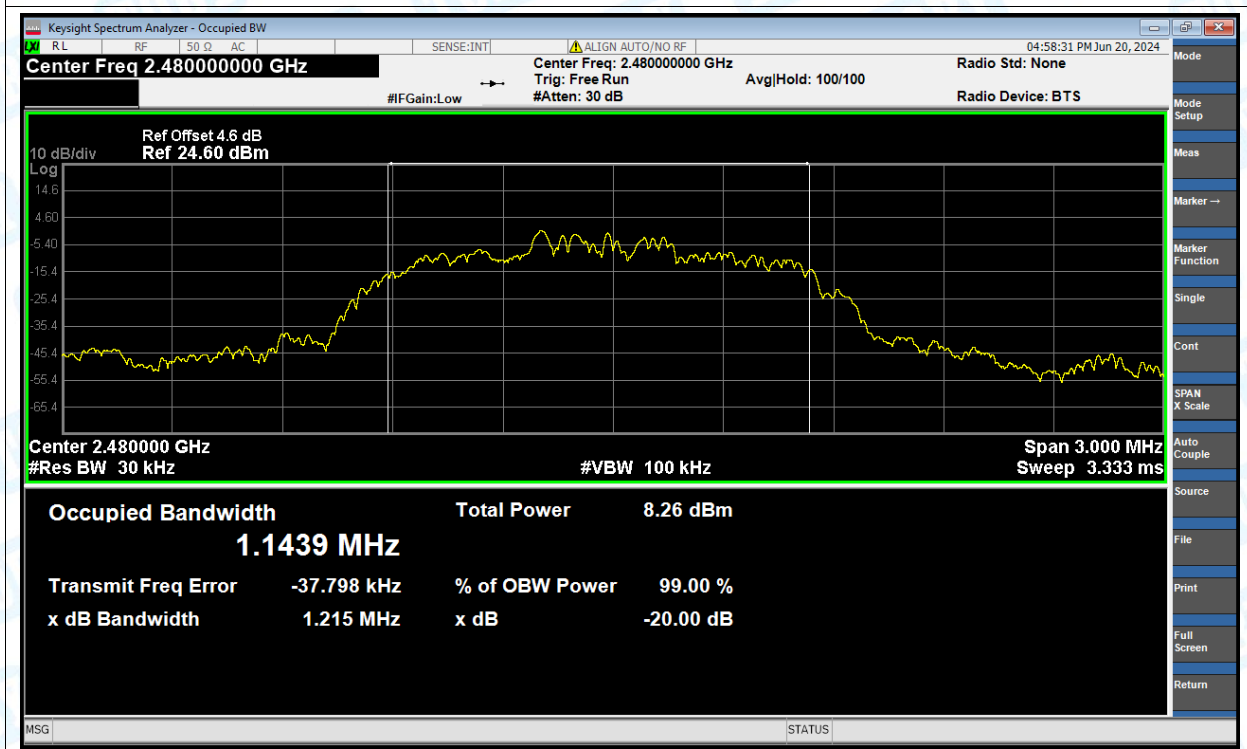
OBW NVNT 2-DH1 2402MHz Ant1



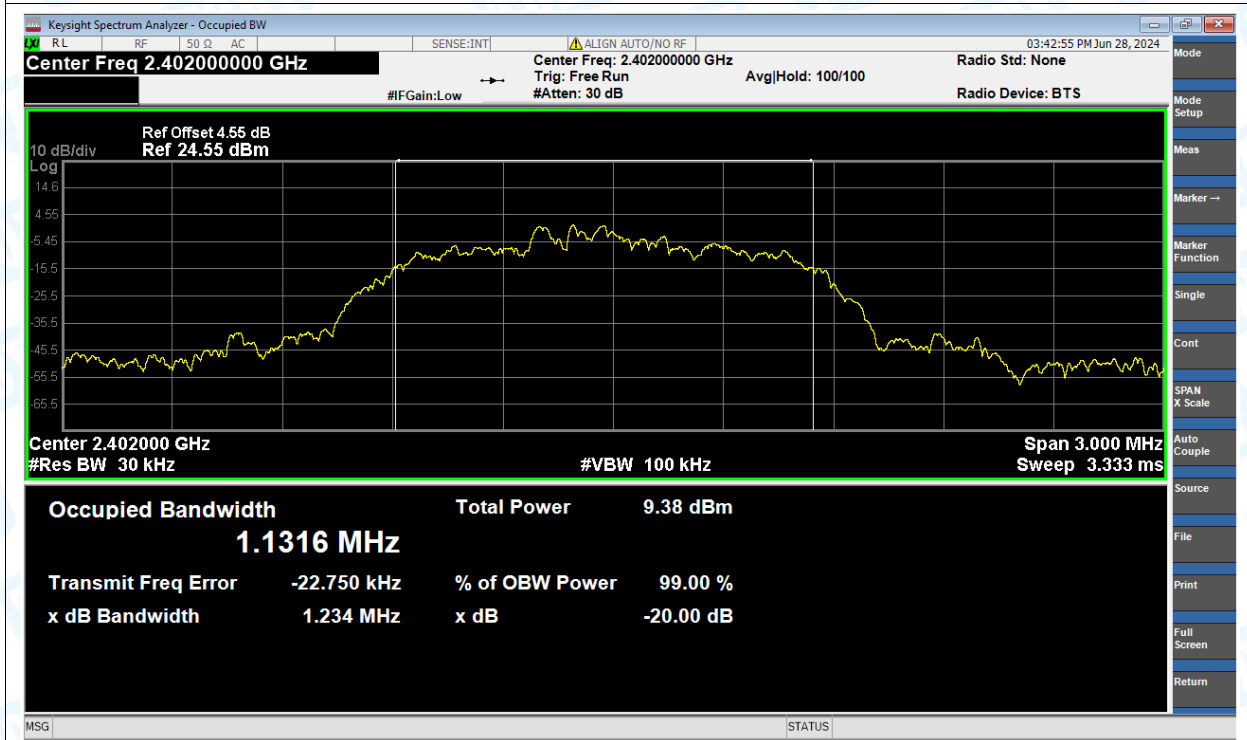
OBW NVNT 2-DH1 2441MHz Ant1



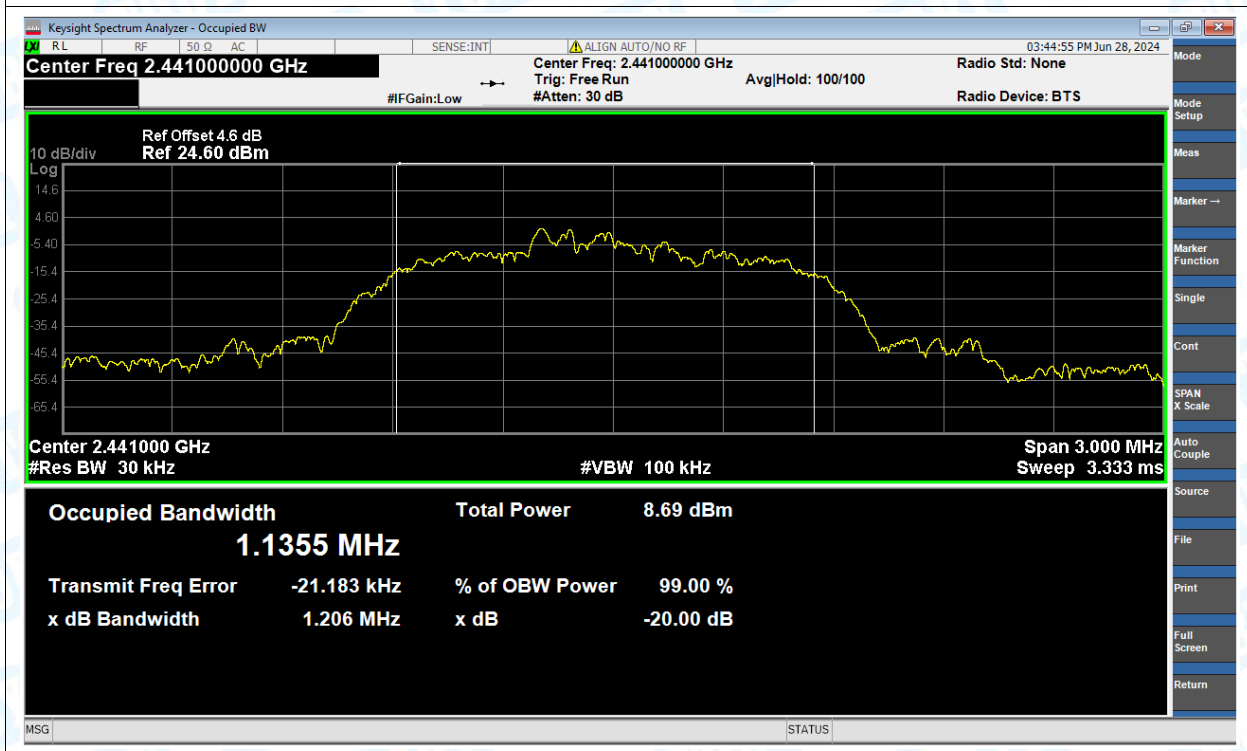
OBW NVNT 2-DH1 2480MHz Ant1



OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



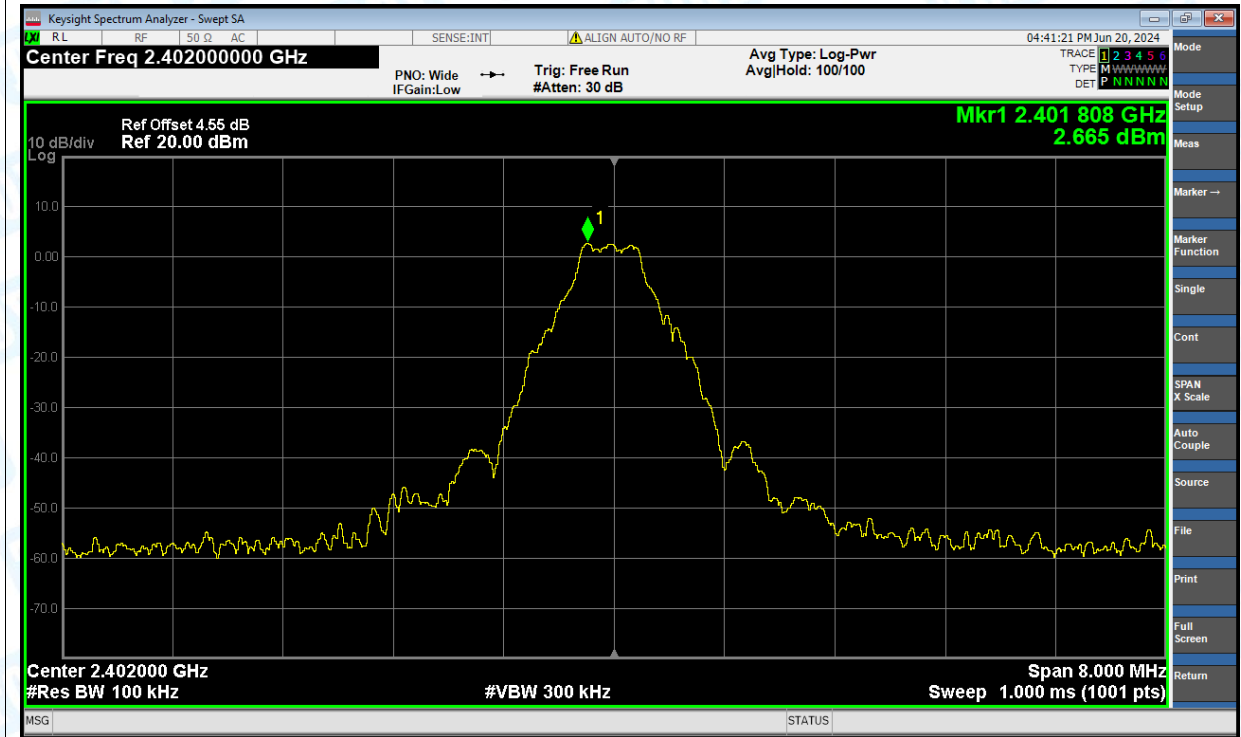


5. Band Edge

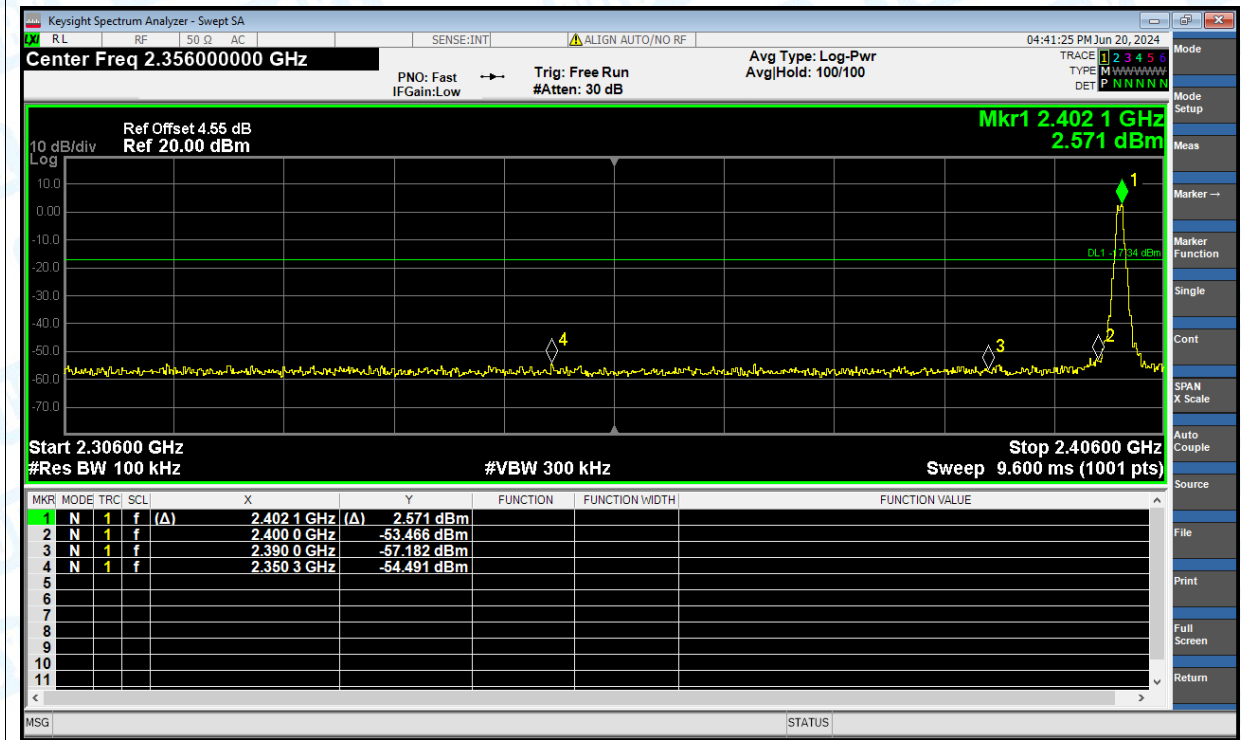
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-57.16	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-56.75	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-60.22	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-56.31	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-57.08	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-52.76	-20	Pass

Test Graphs

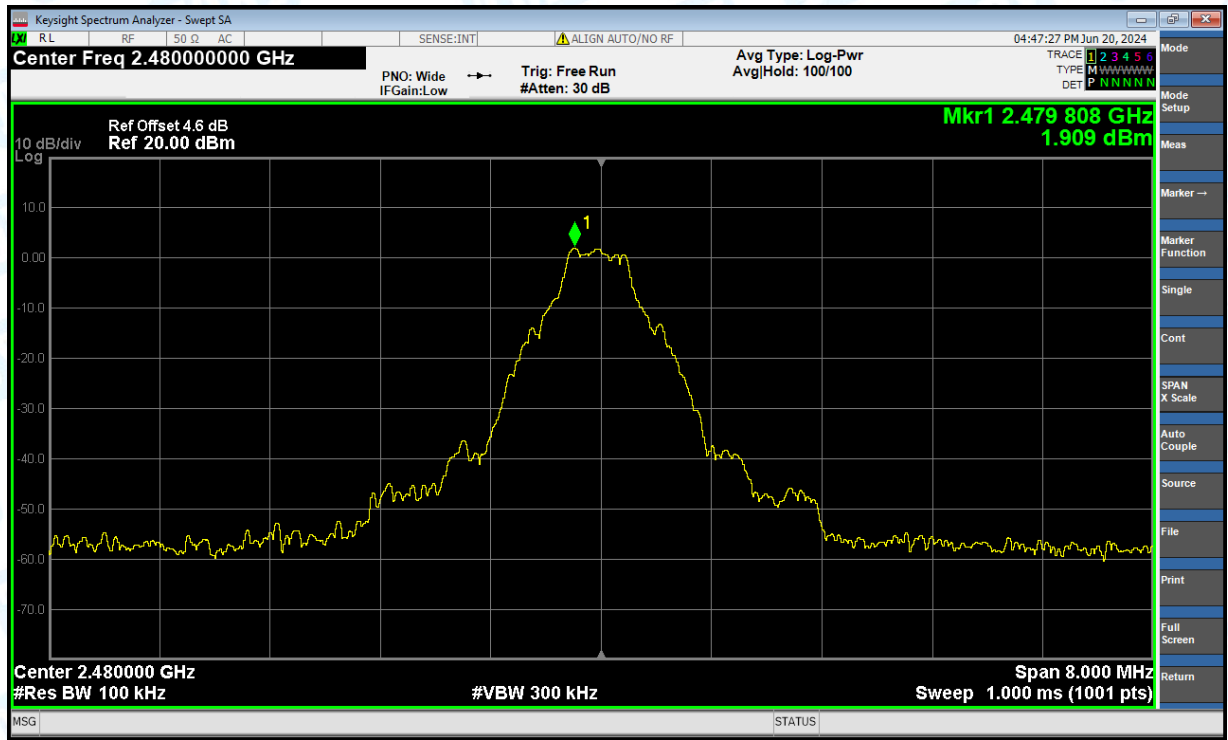
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



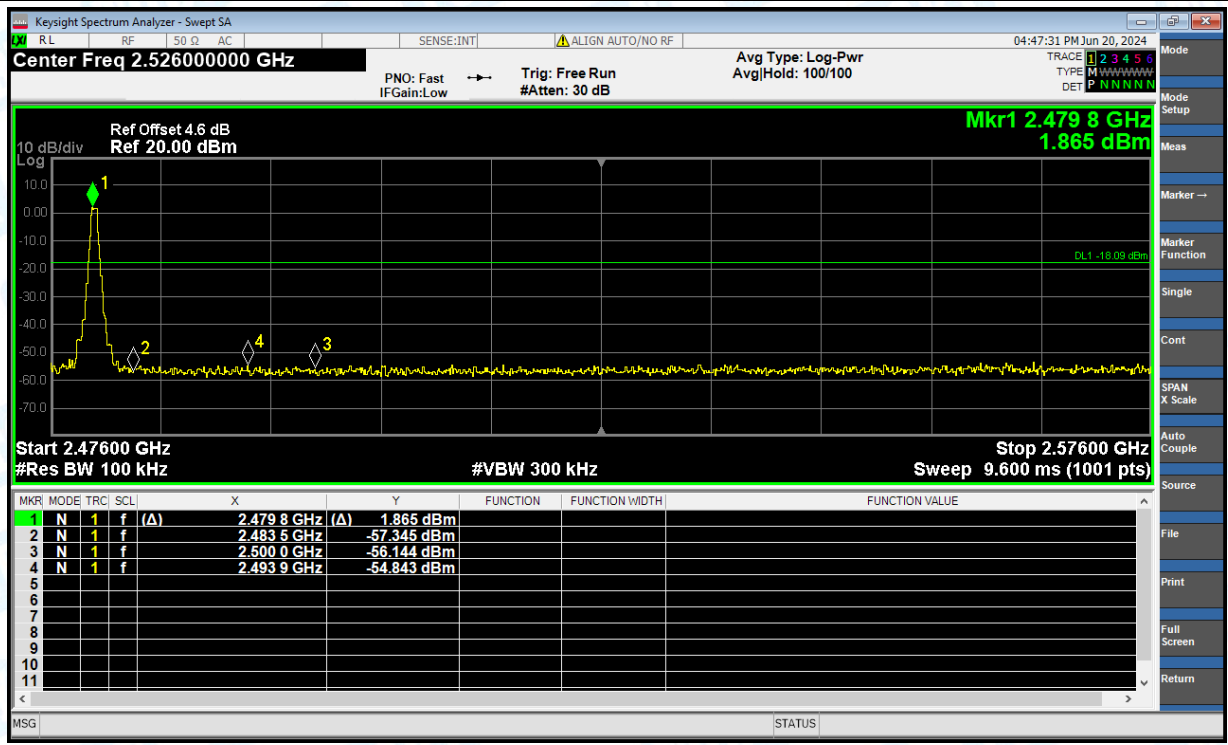
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



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



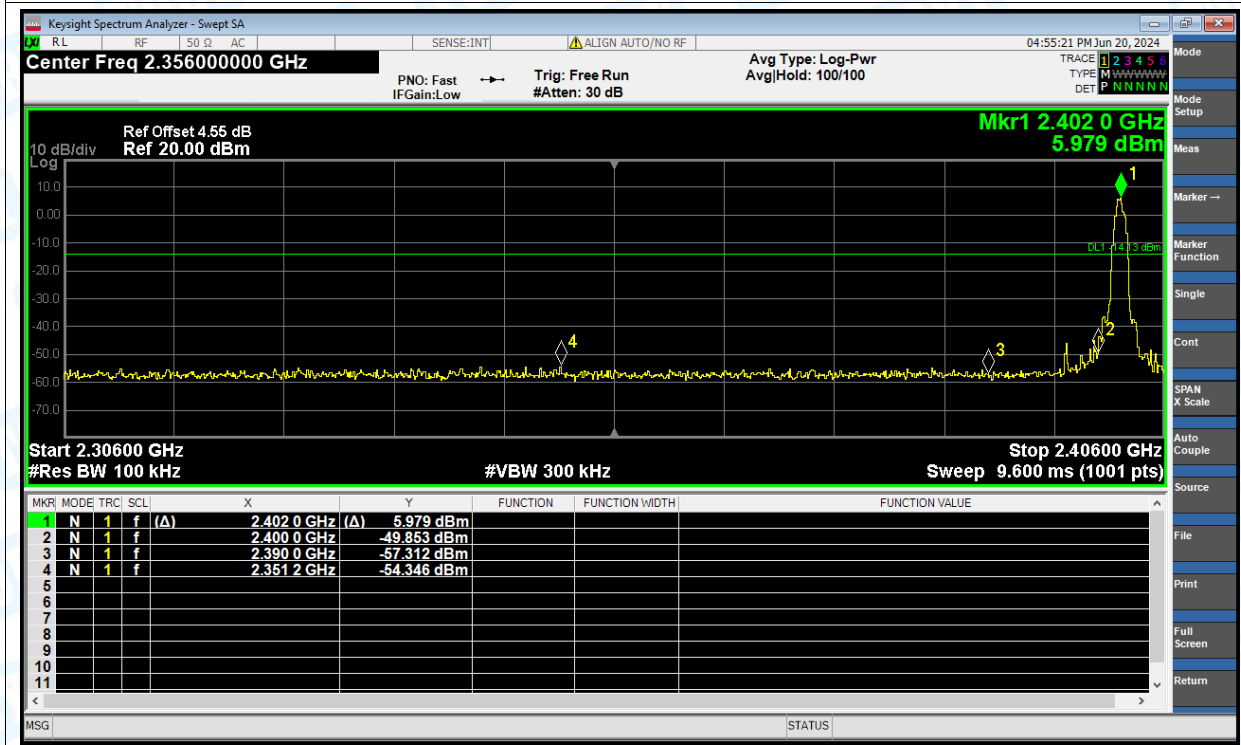
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



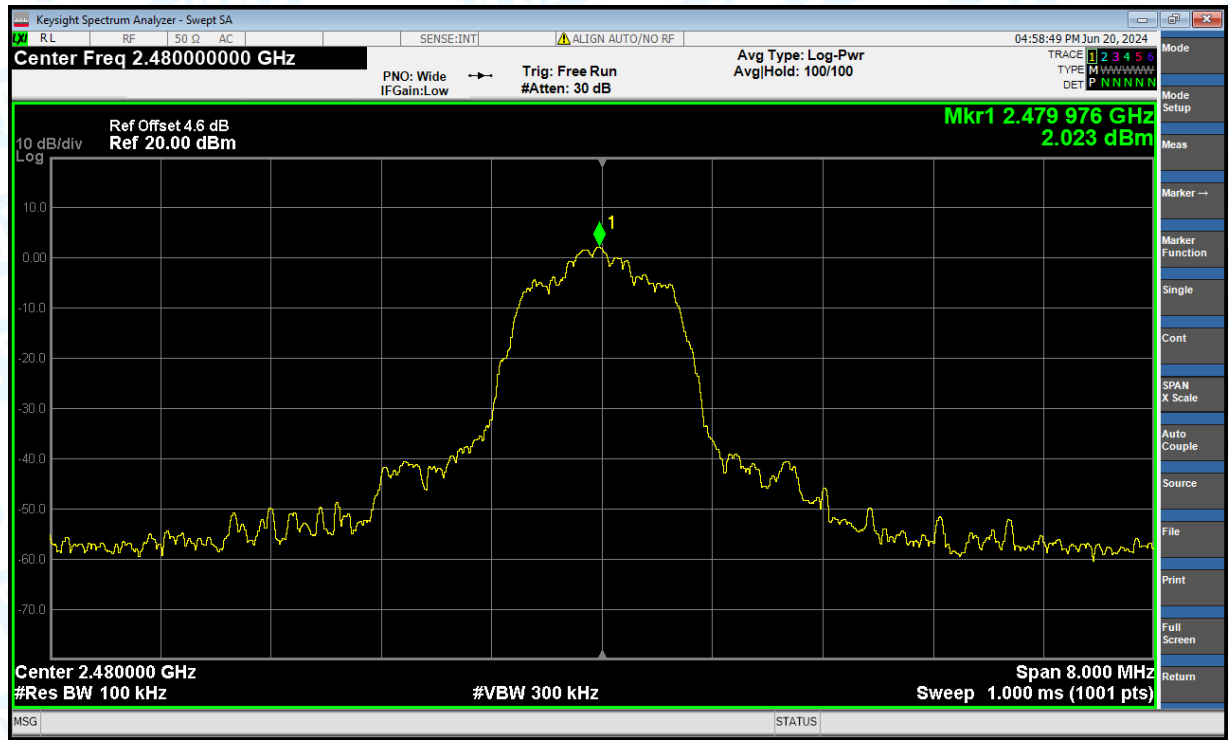
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



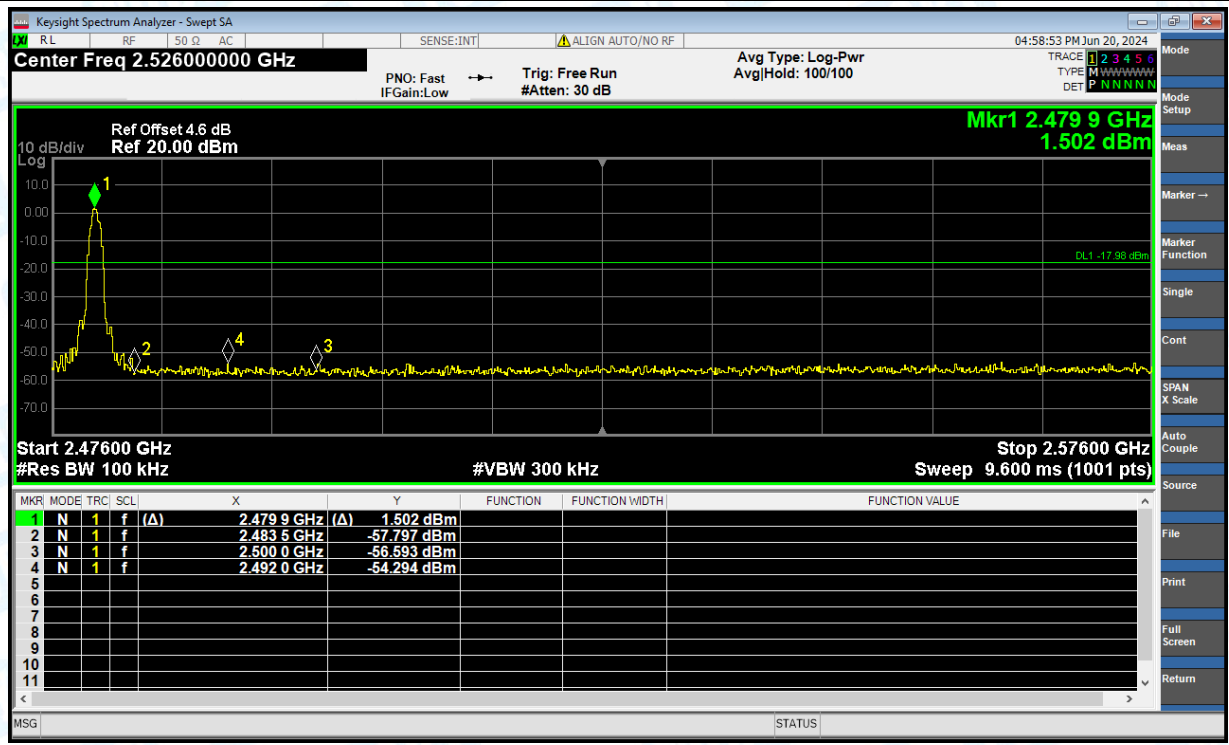
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission

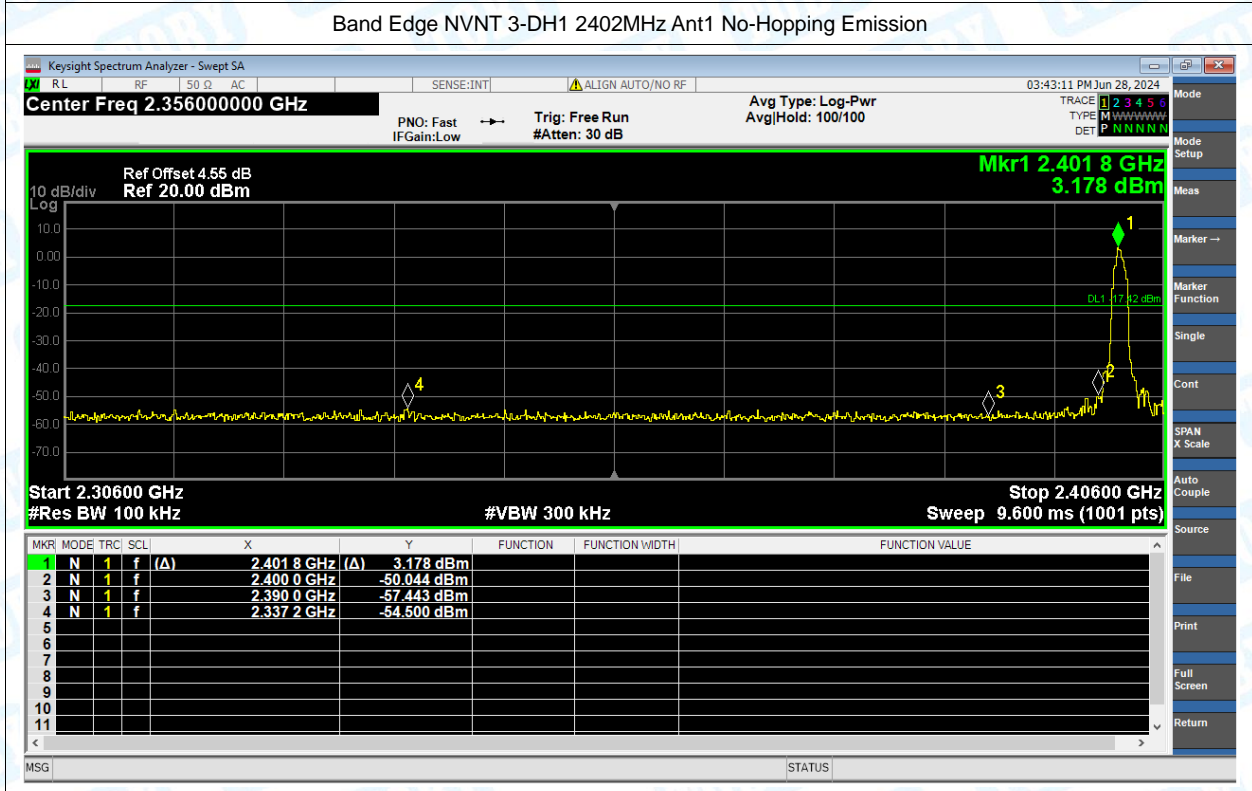
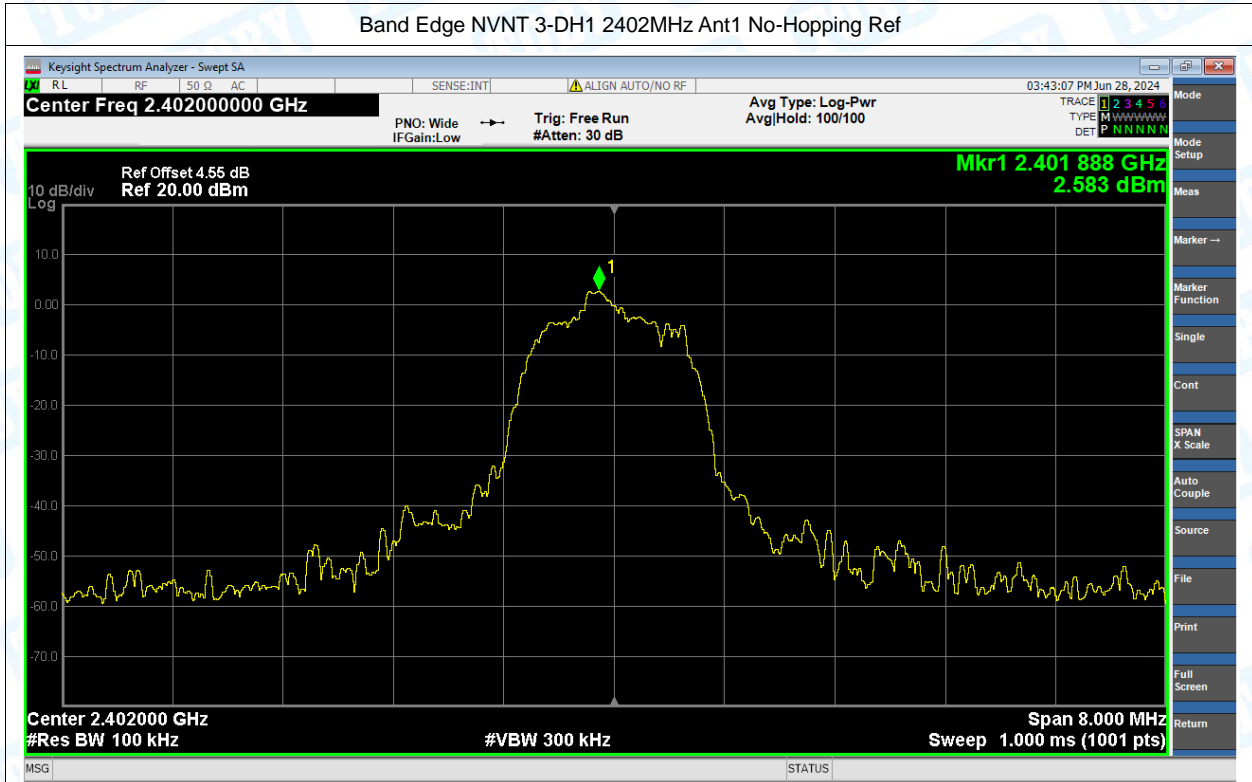


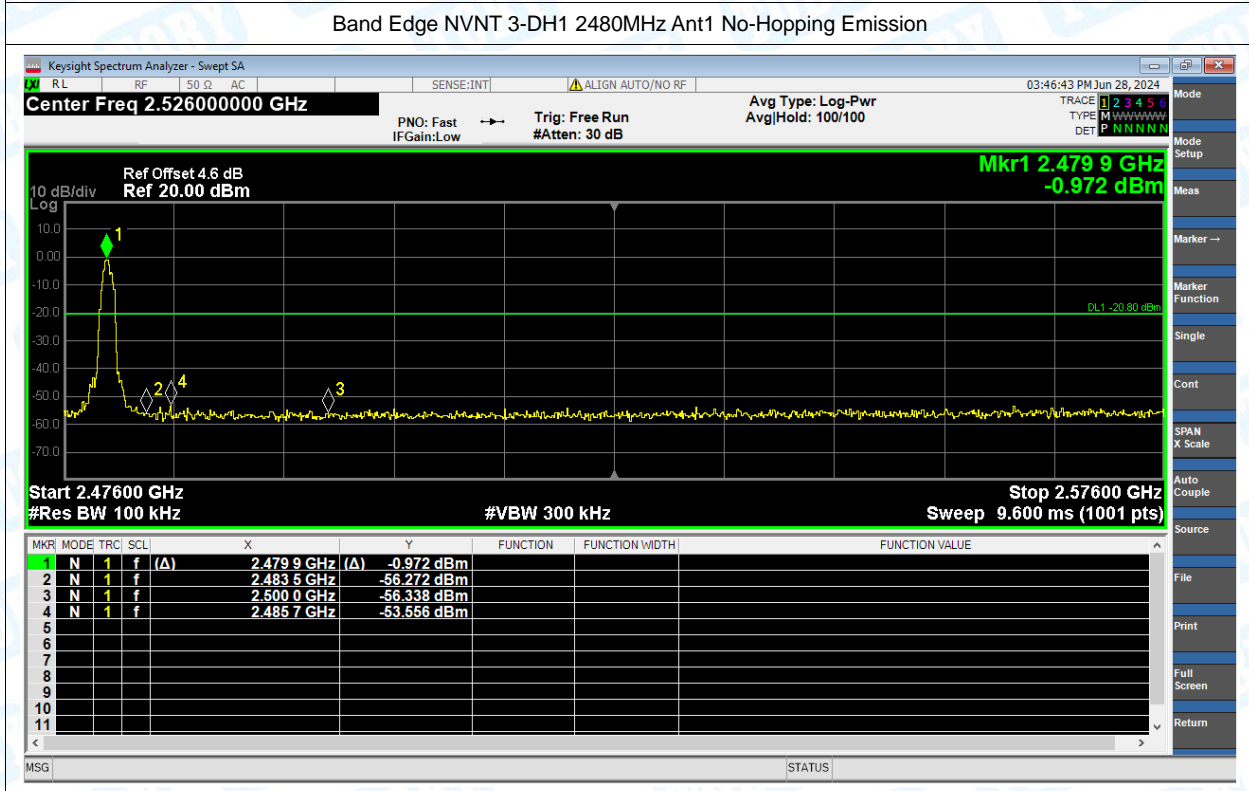
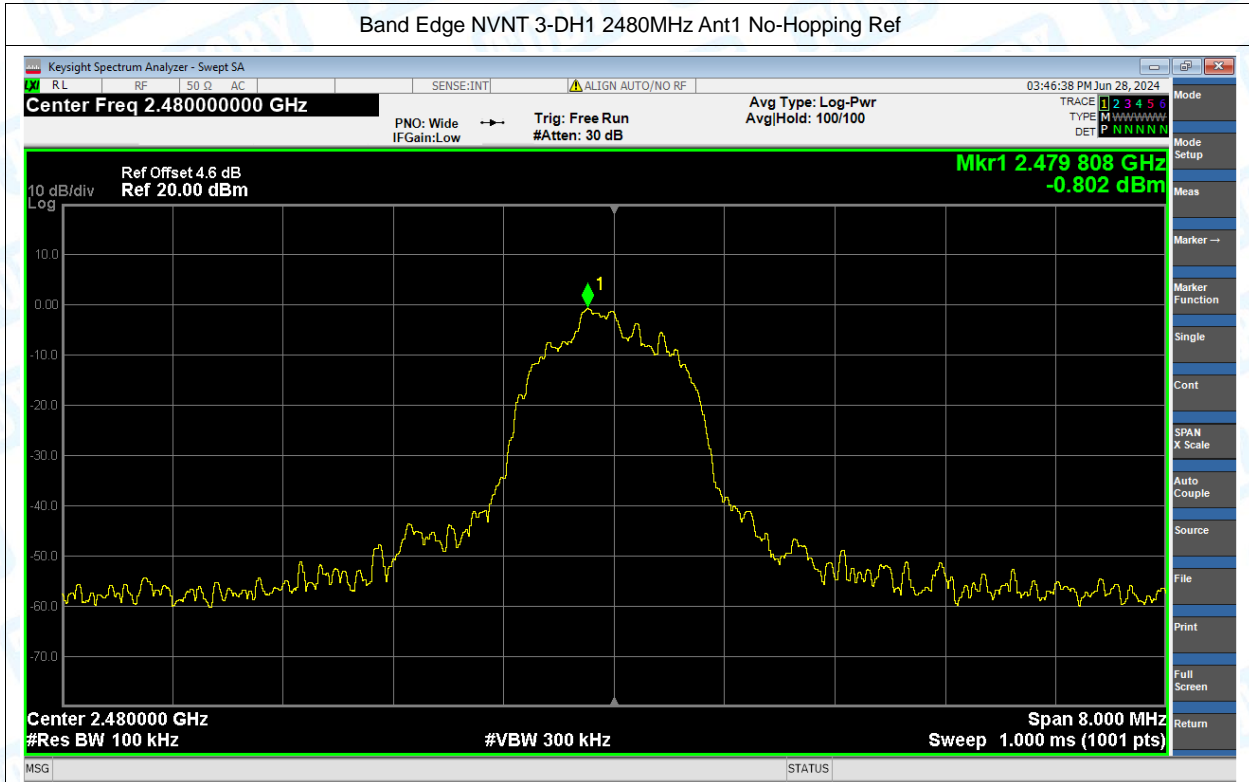
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



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







6. Band Edge(Hopping)

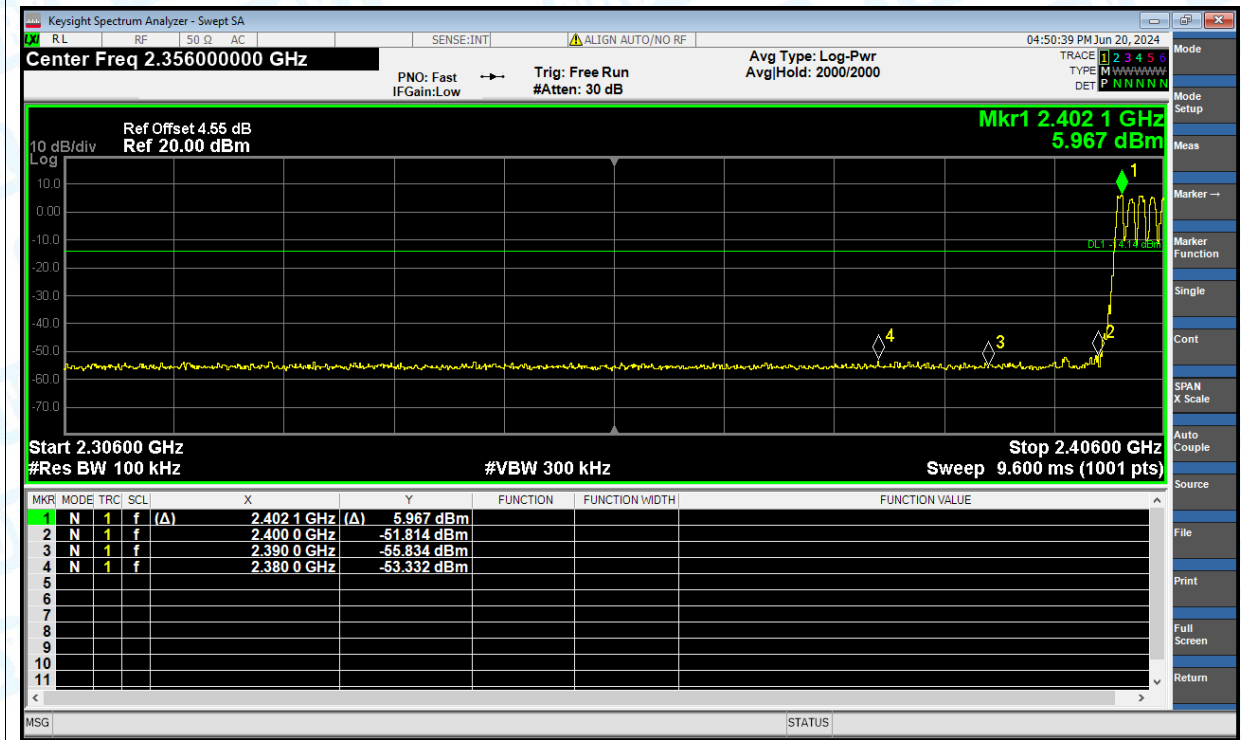
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-59.19	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-55.76	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-59.67	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-56.04	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-56.35	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-52.92	-20	Pass

Test Graphs

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



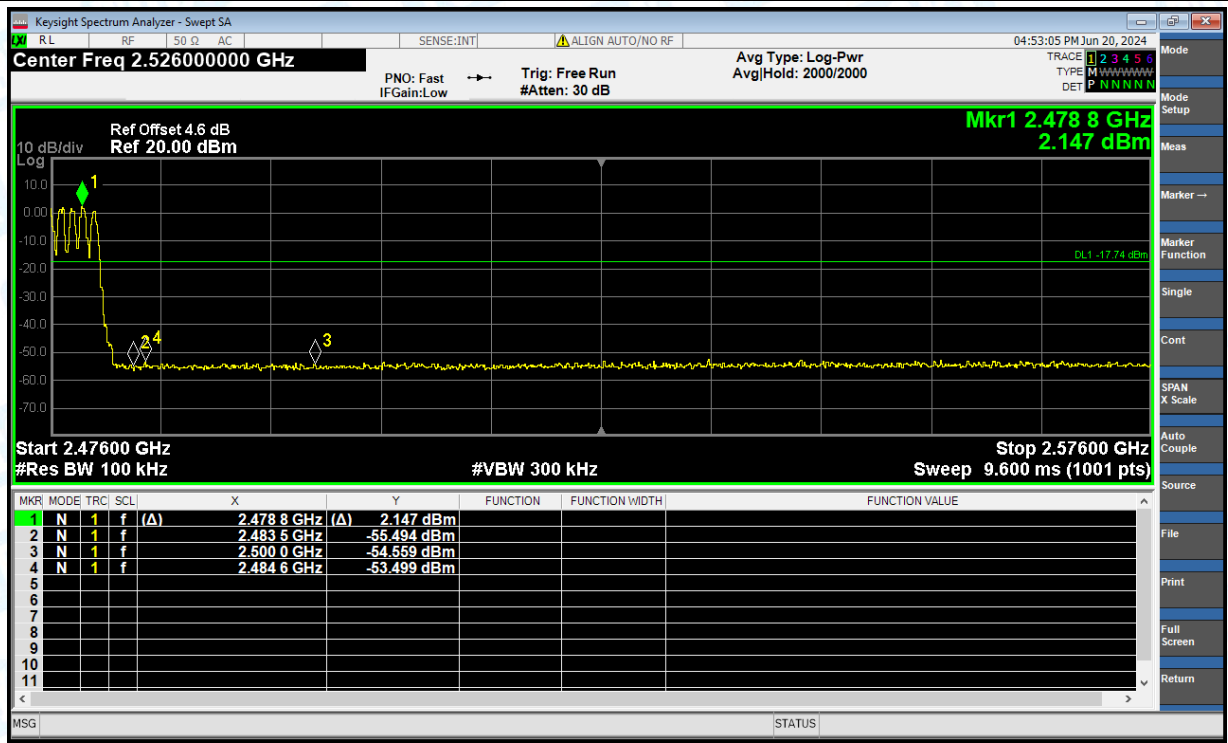
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



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



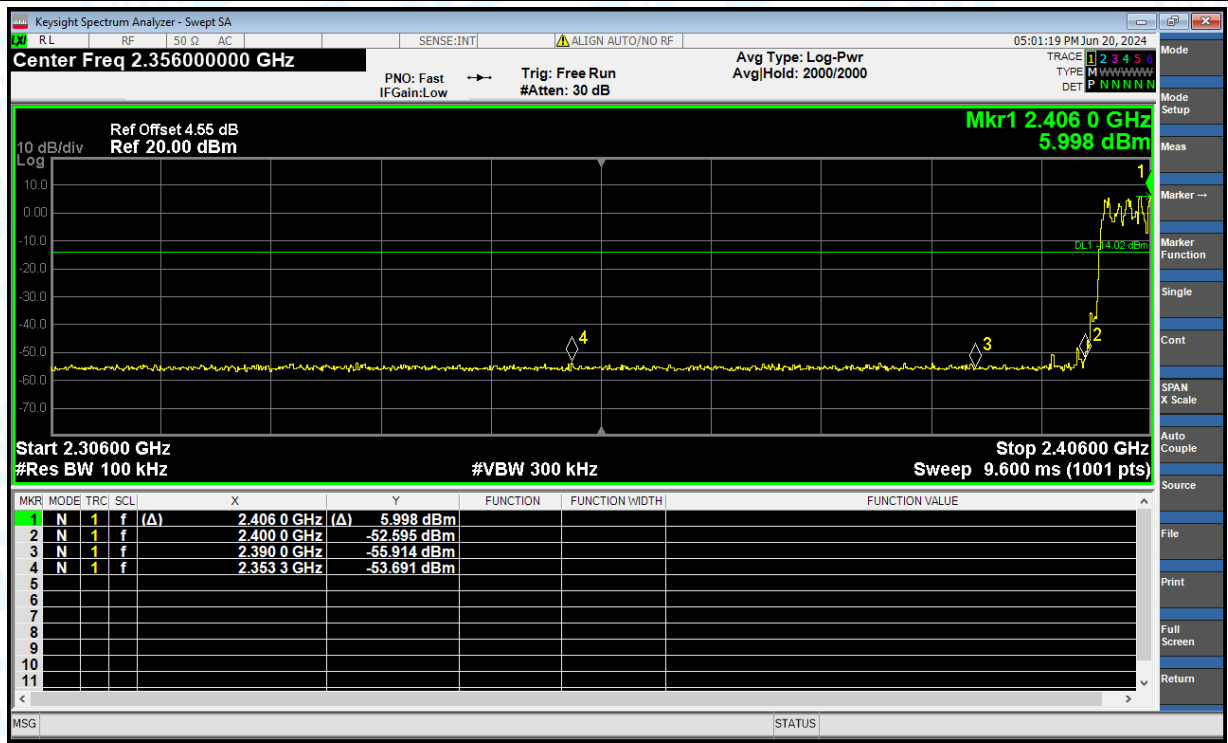
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



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



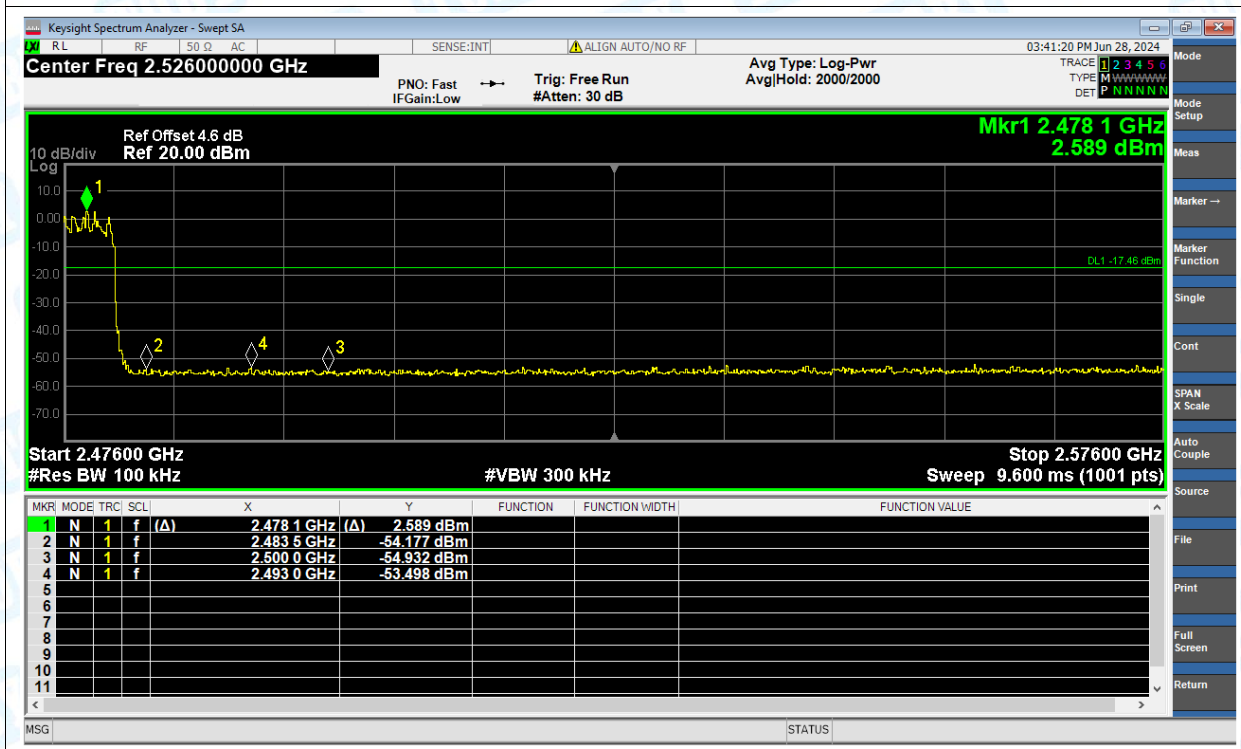
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



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



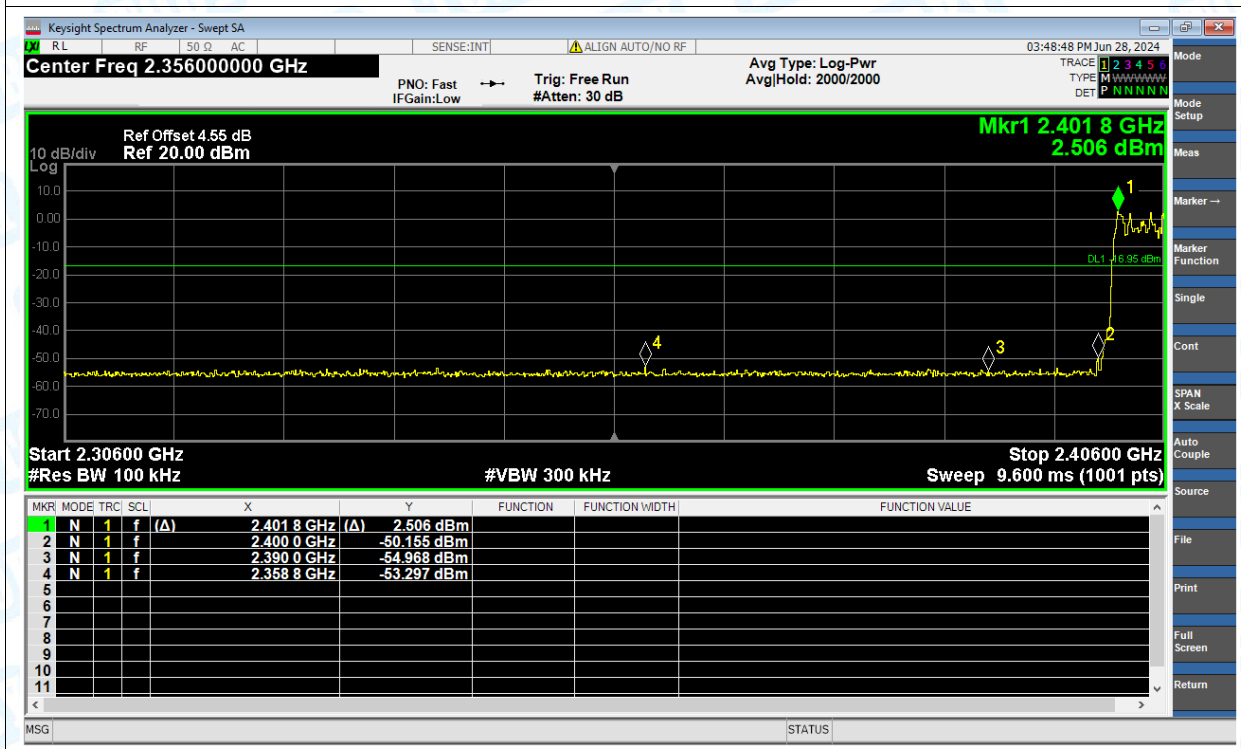
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



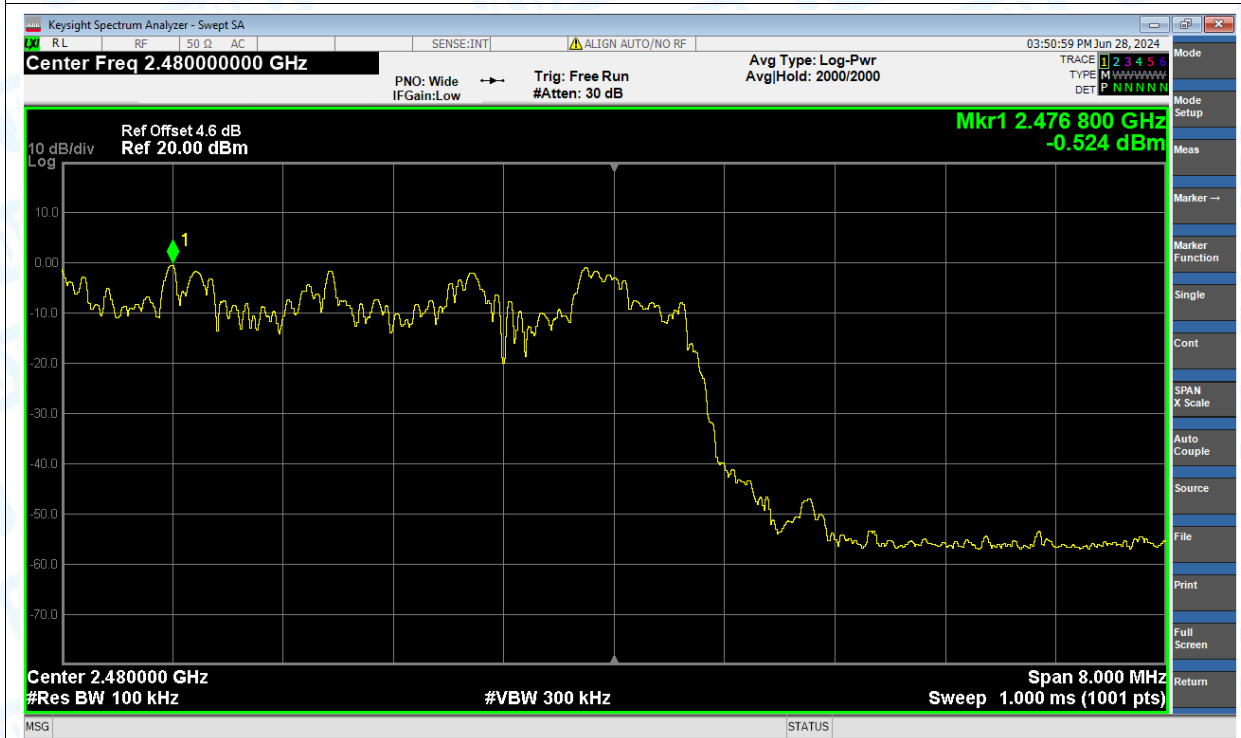
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



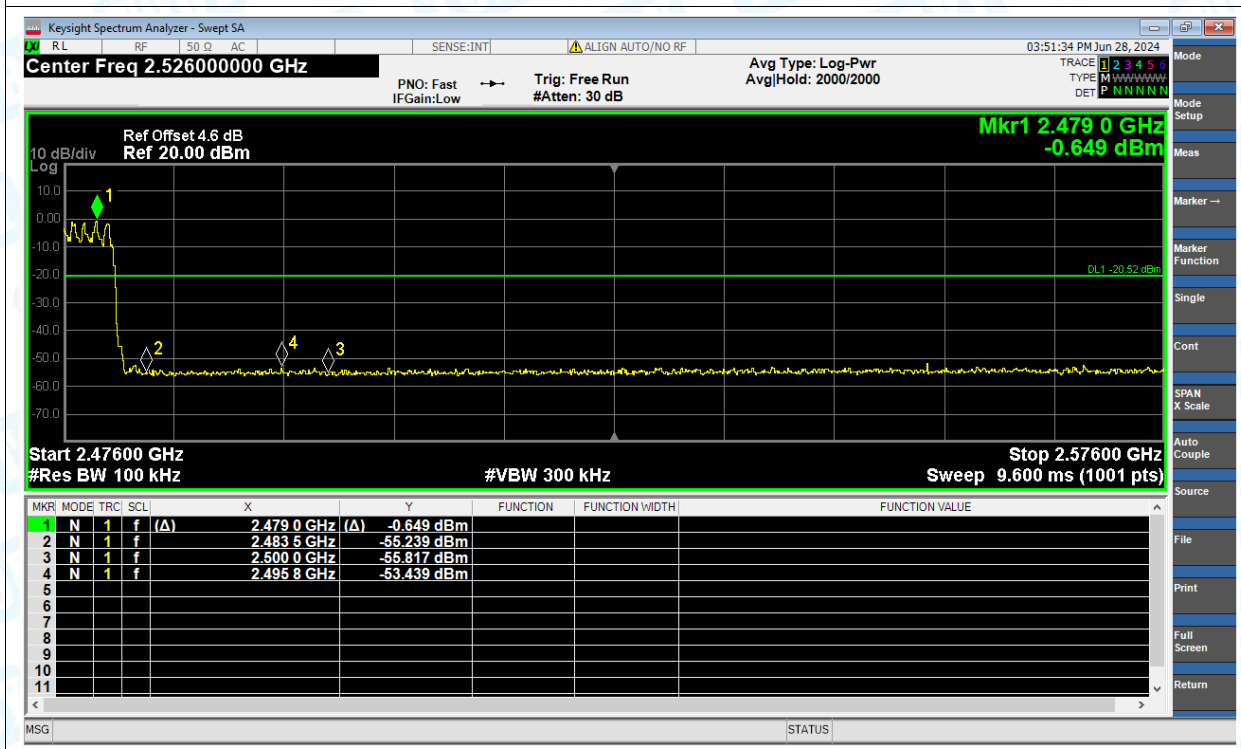
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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

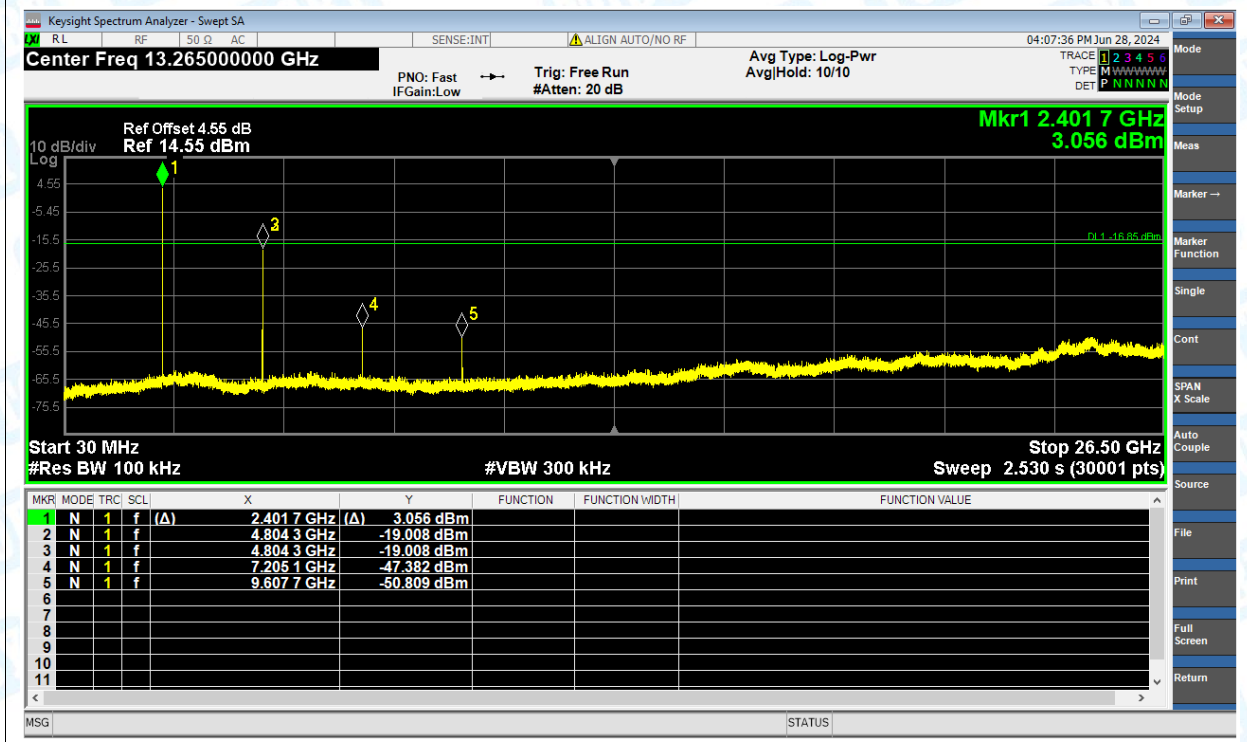
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-22.16	-20	Pass
NVNT	1-DH1	2441	Ant1	-22.43	-20	Pass
NVNT	1-DH1	2480	Ant1	-21.63	-20	Pass
NVNT	2-DH1	2402	Ant1	-29.88	-20	Pass
NVNT	2-DH1	2441	Ant1	-48.58	-20	Pass
NVNT	2-DH1	2480	Ant1	-21.77	-20	Pass
NVNT	3-DH1	2402	Ant1	-28.18	-20	Pass
NVNT	3-DH1	2441	Ant1	-24.2	-20	Pass
NVNT	3-DH1	2480	Ant1	-24.14	-20	Pass

Test Graphs

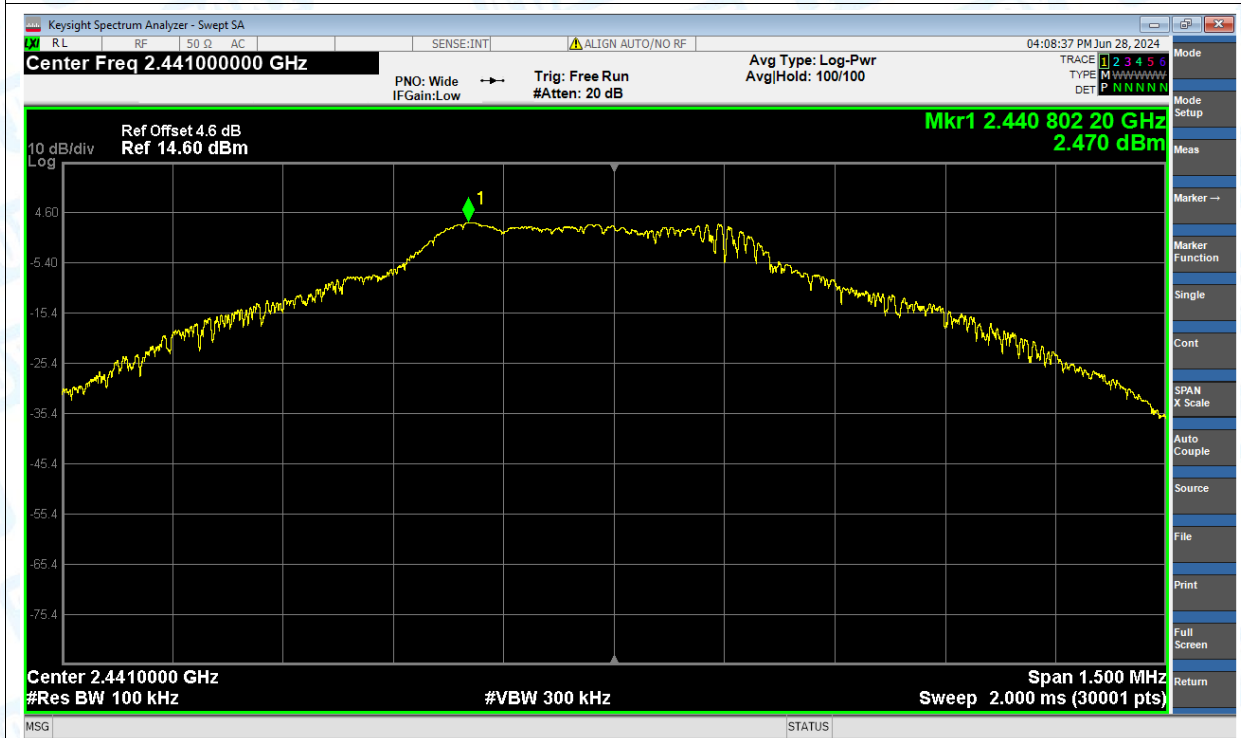
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



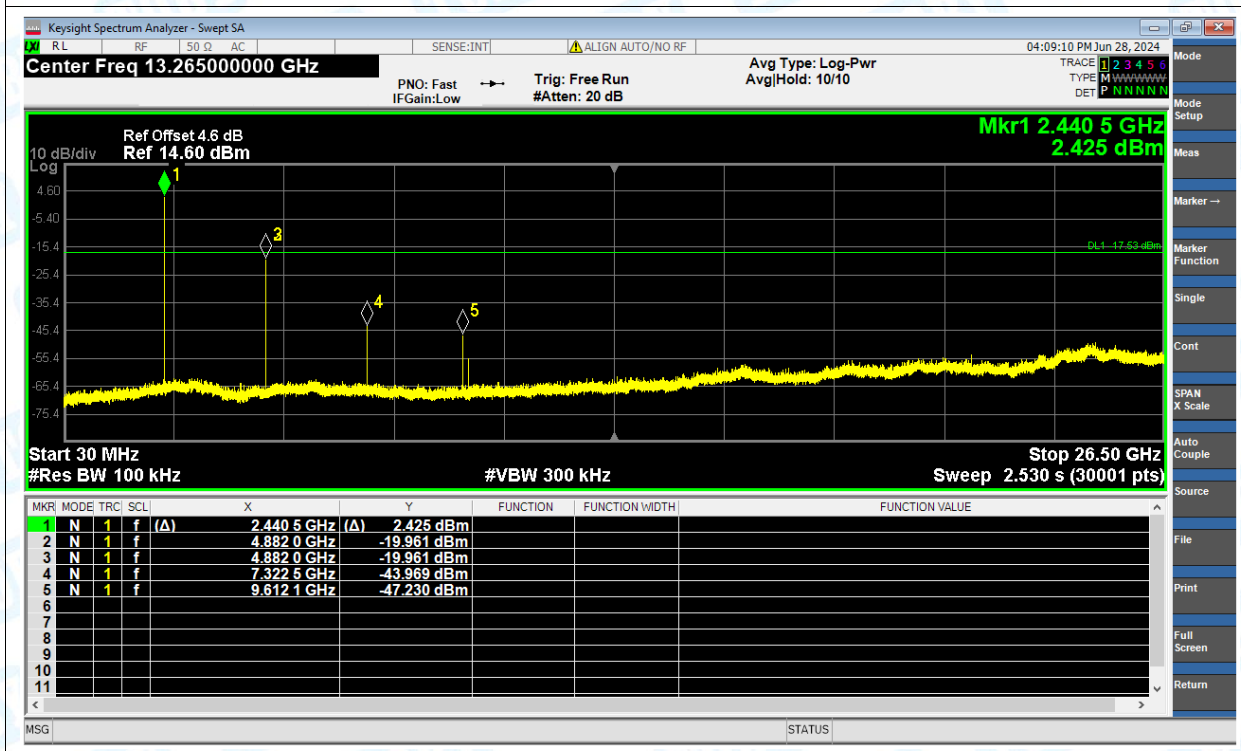
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



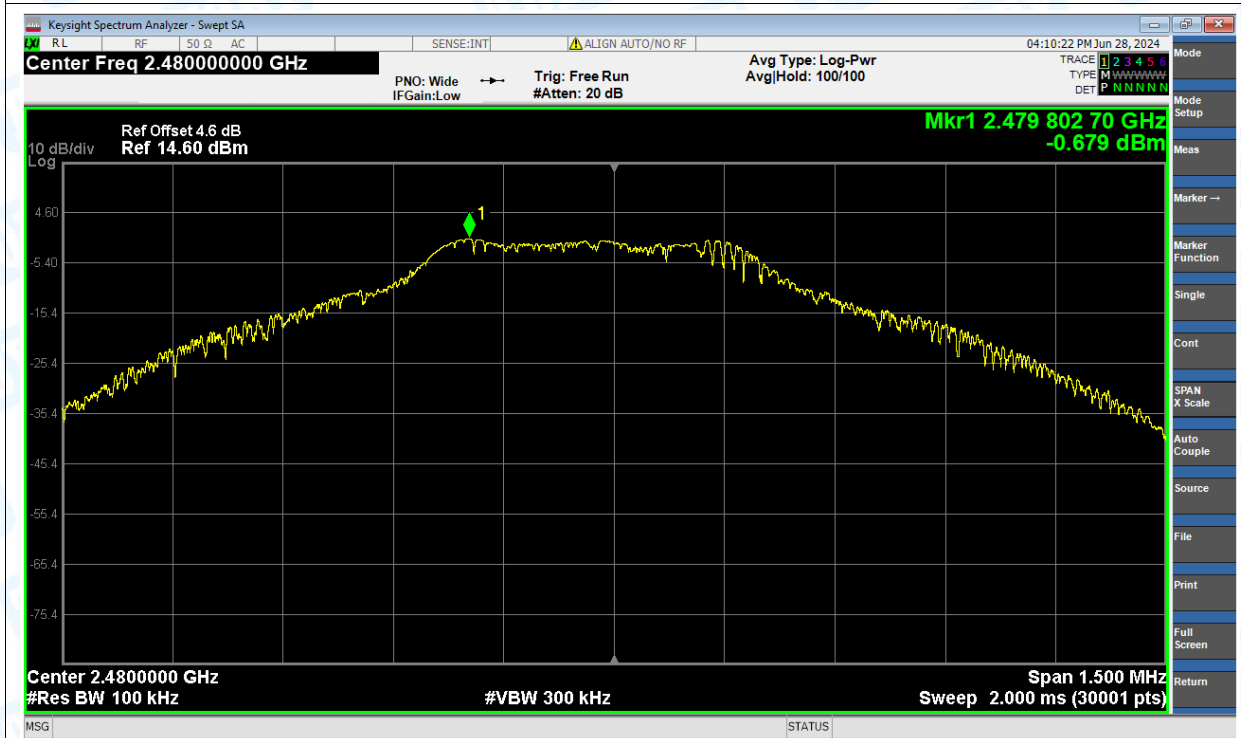
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



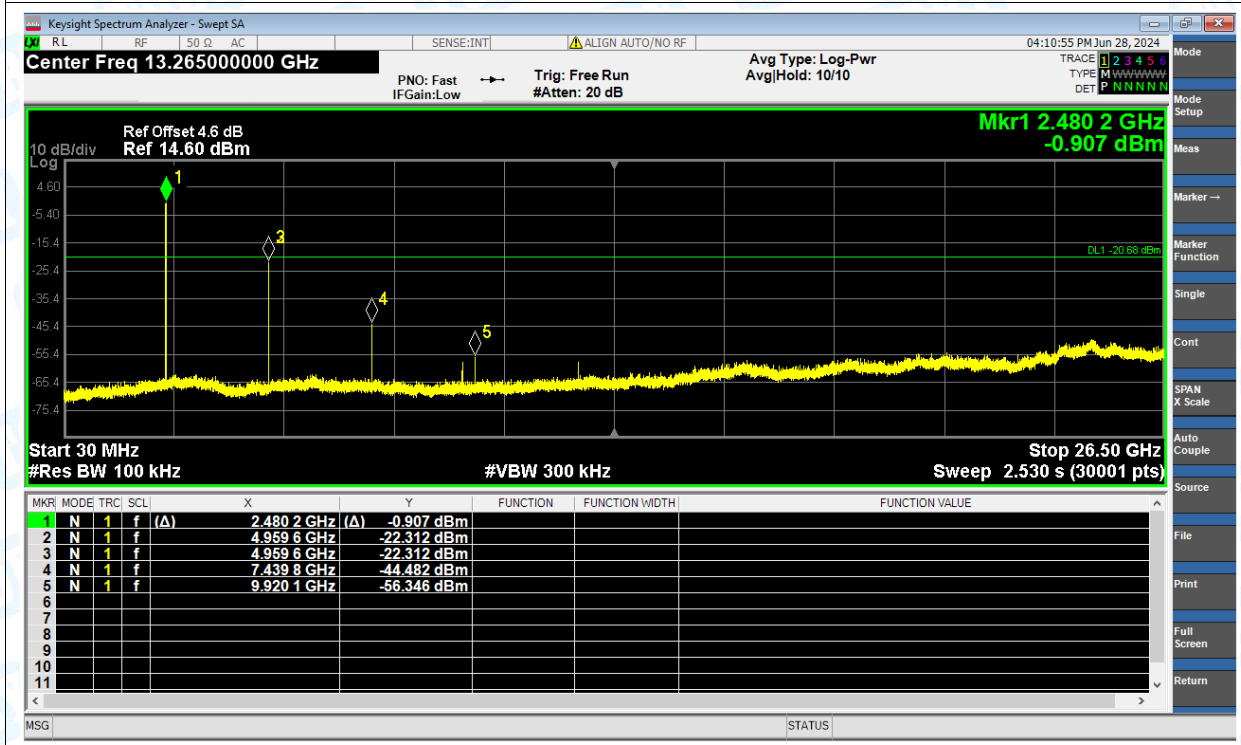
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



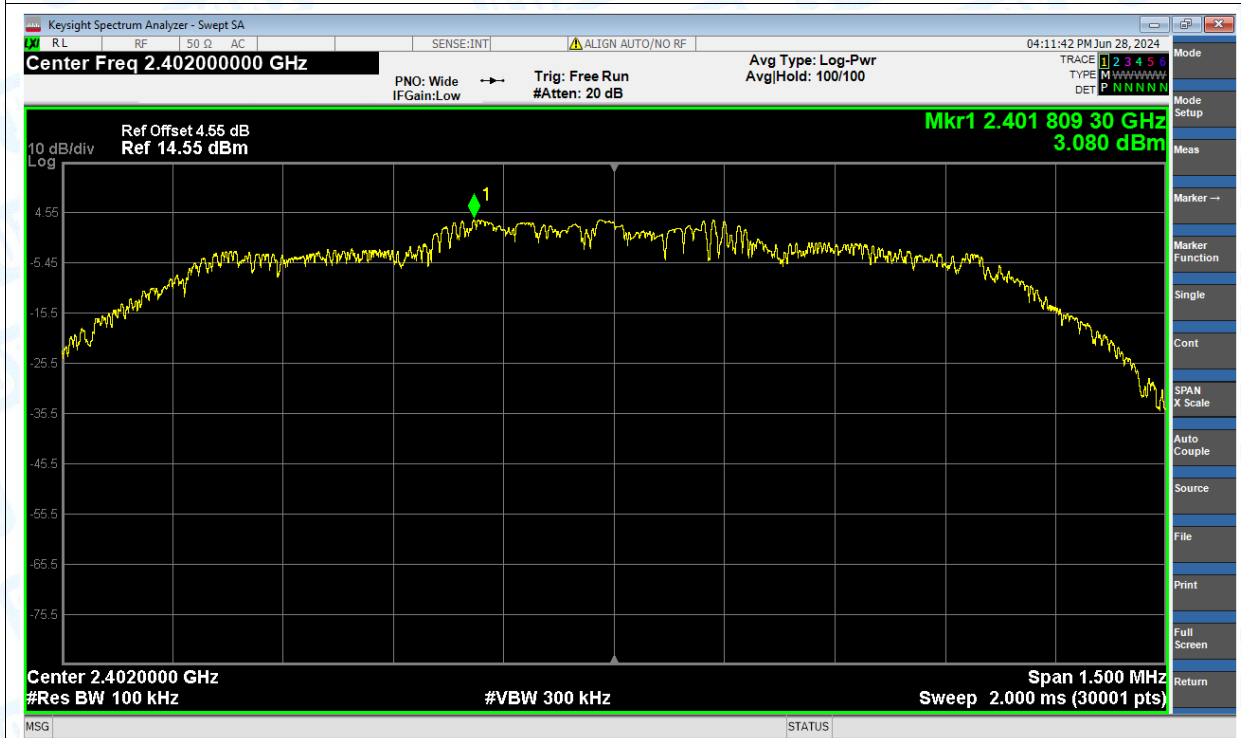
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



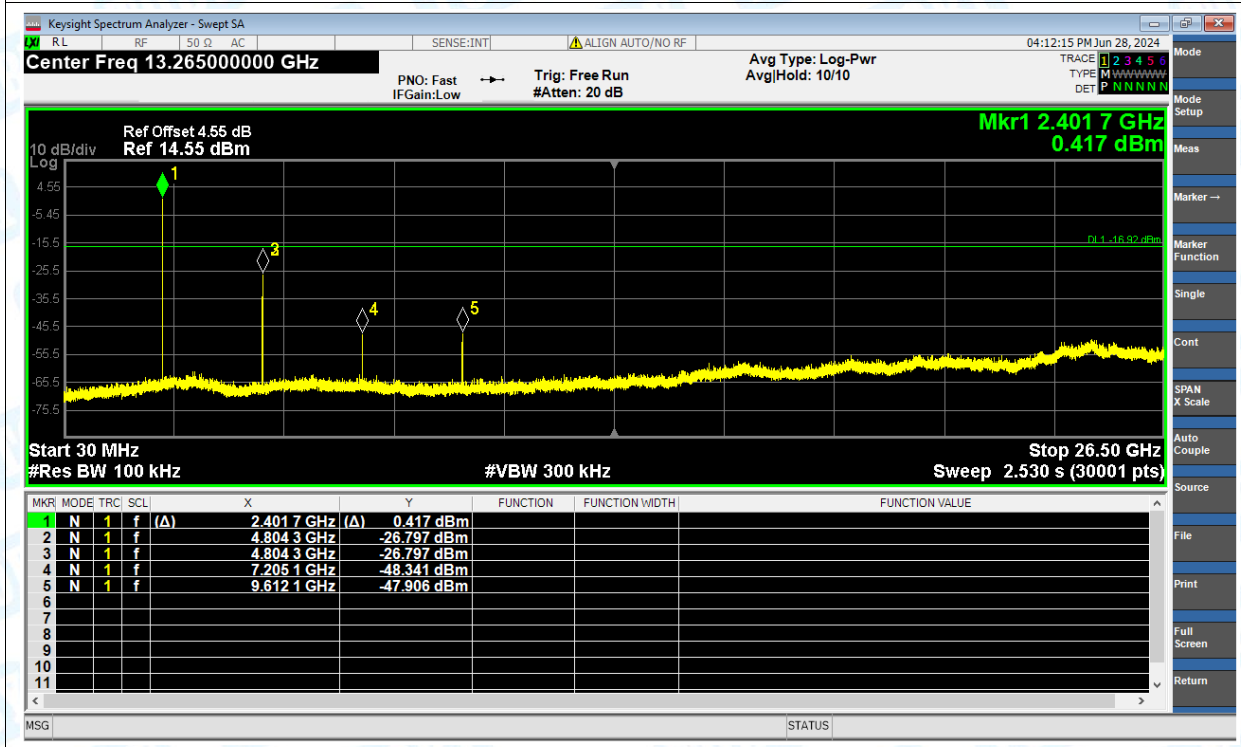
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



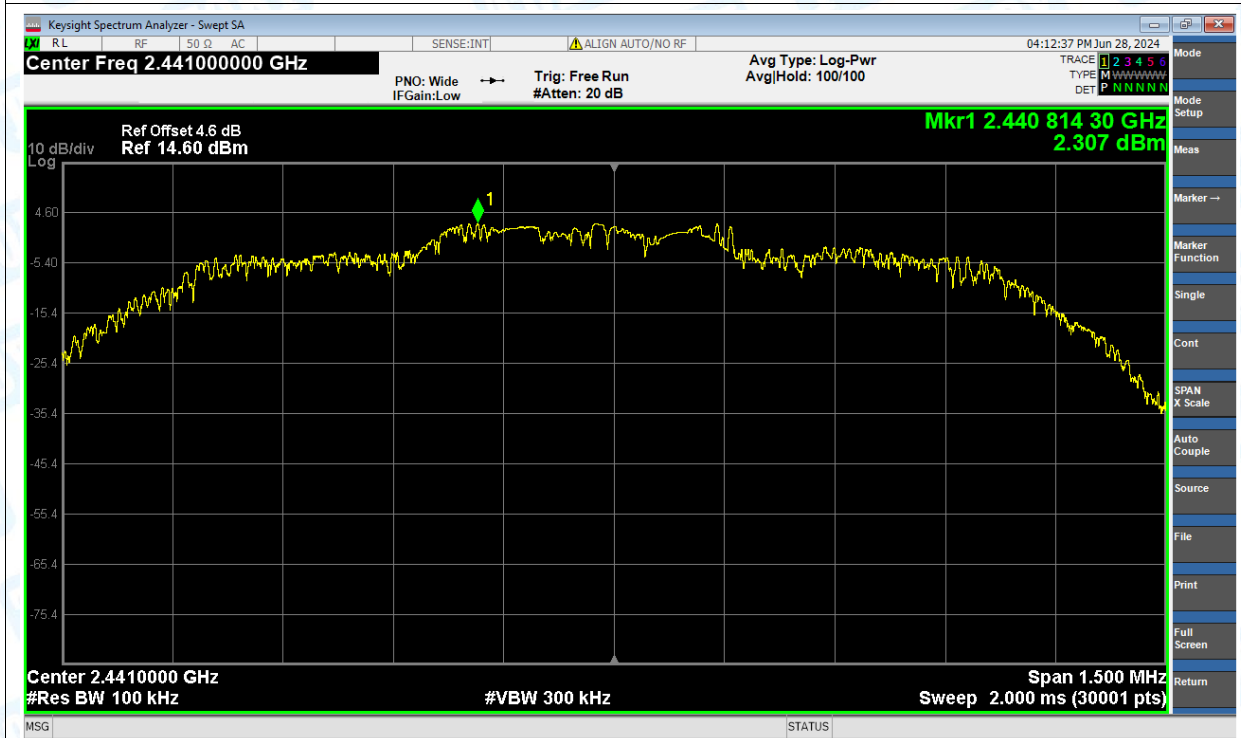
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



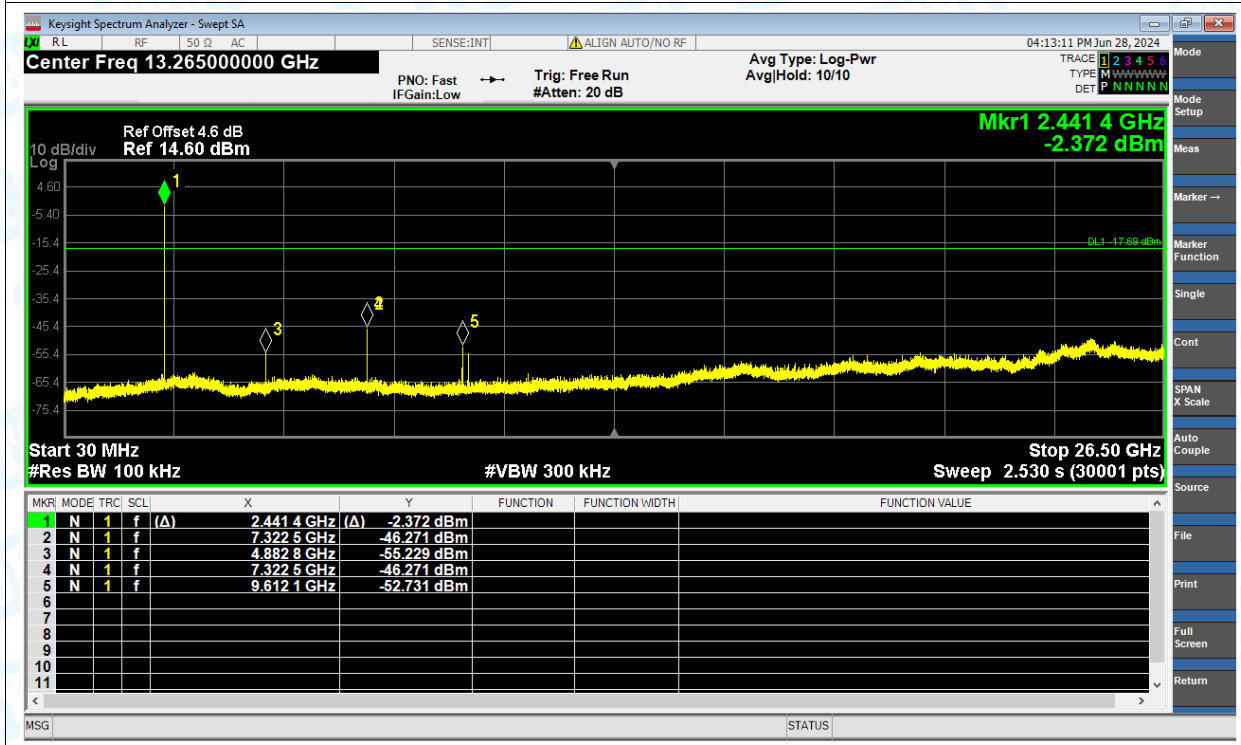
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



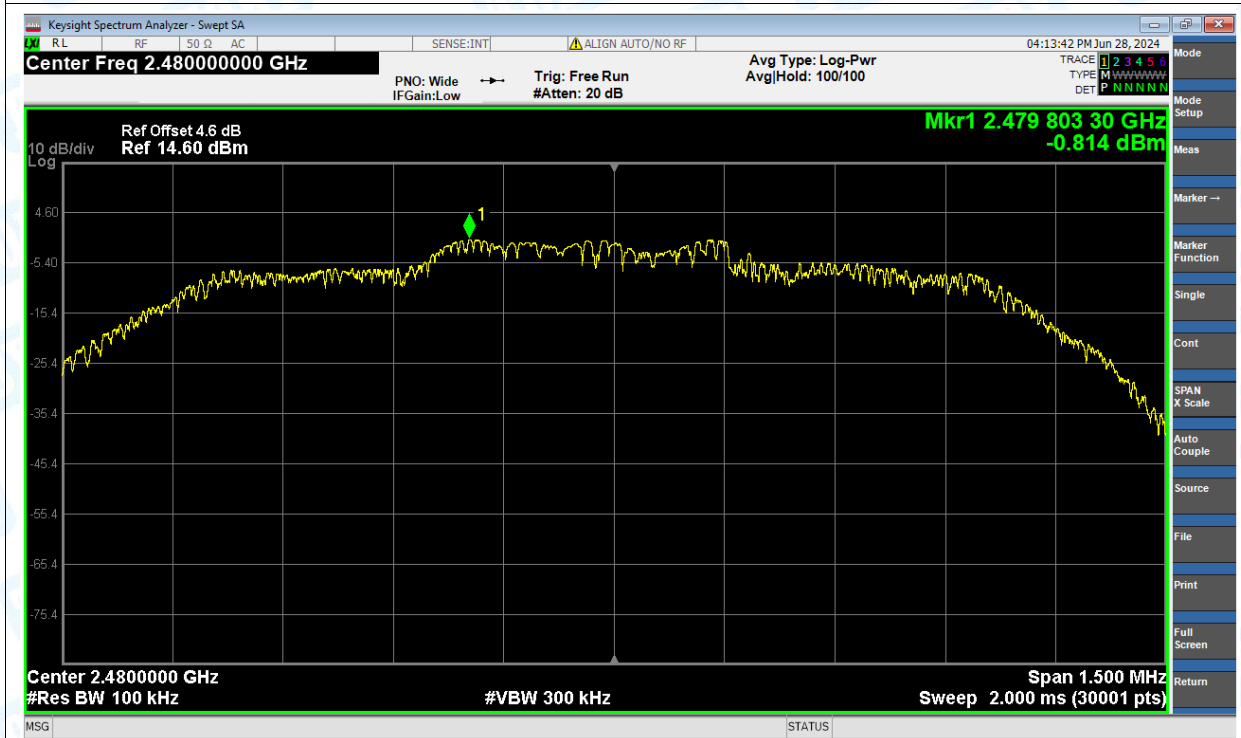
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



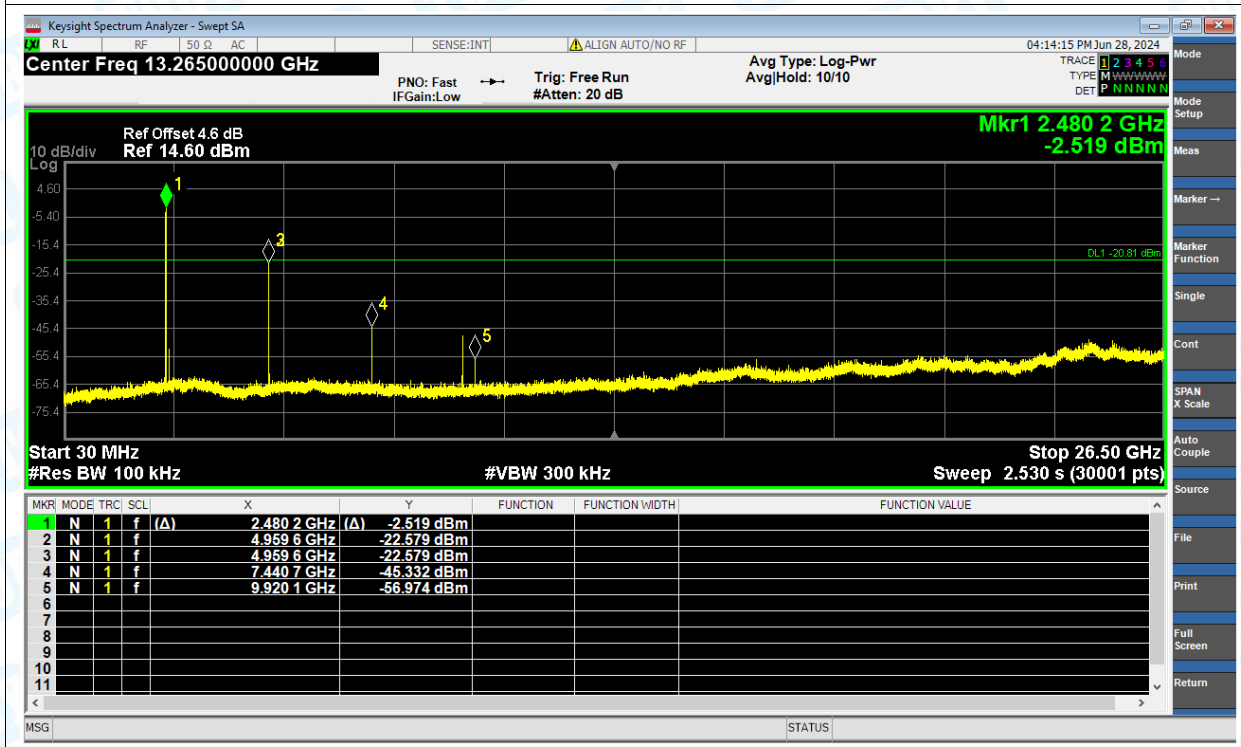
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



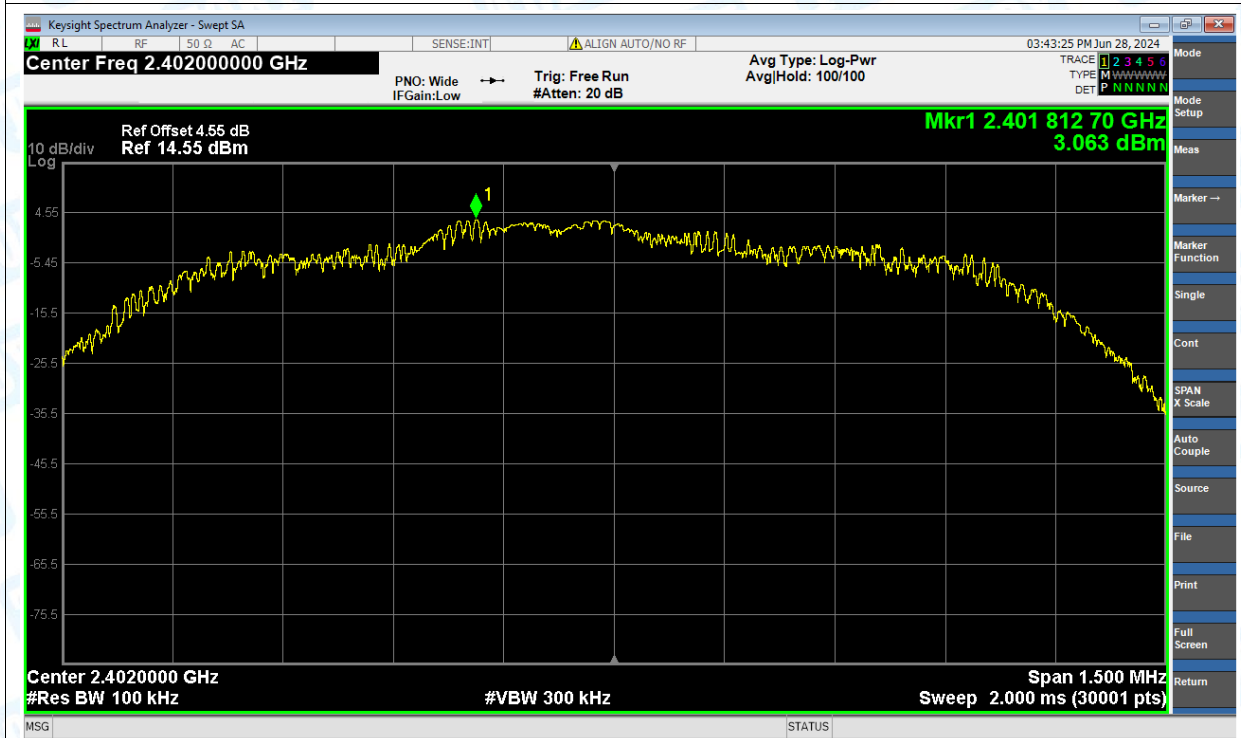
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



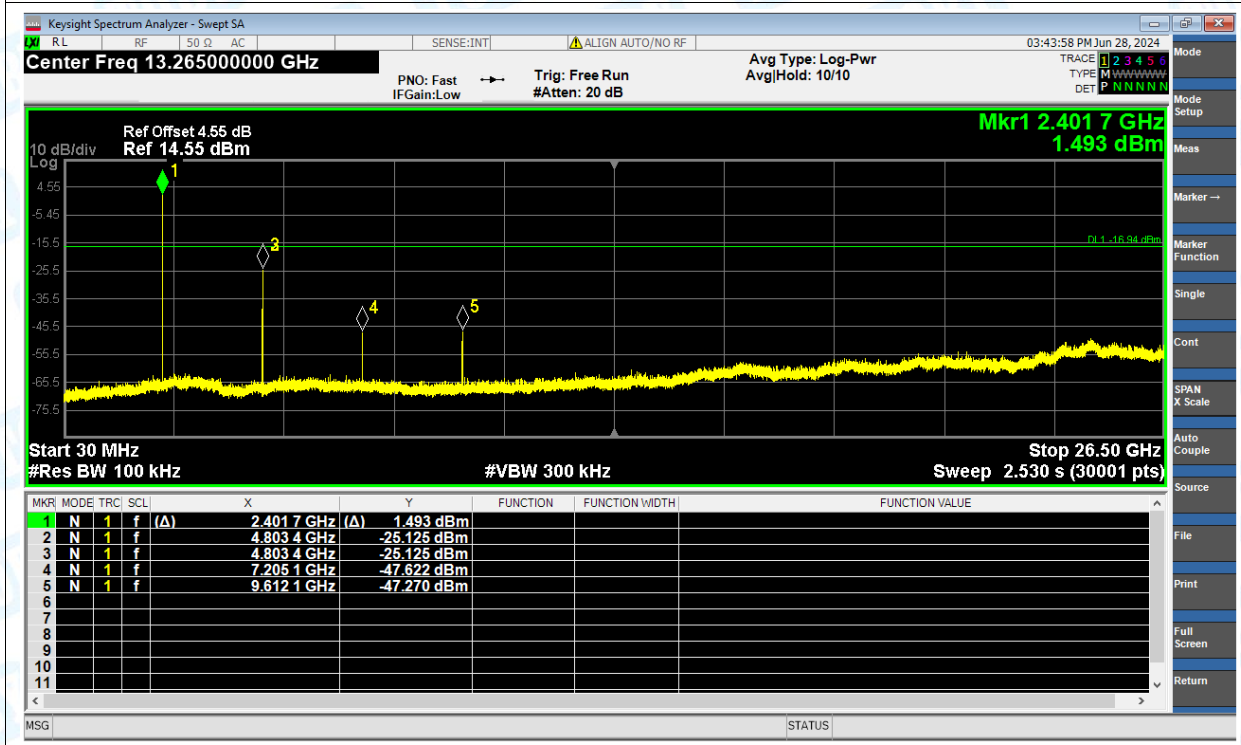
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



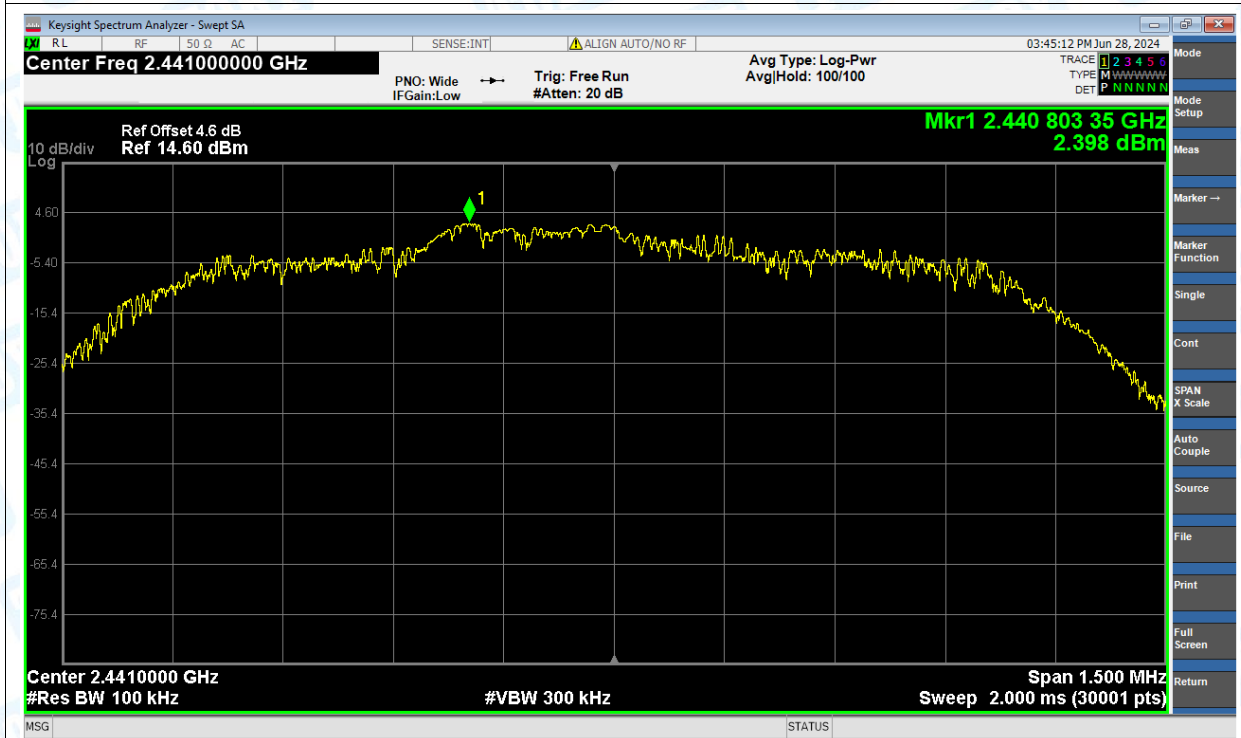
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



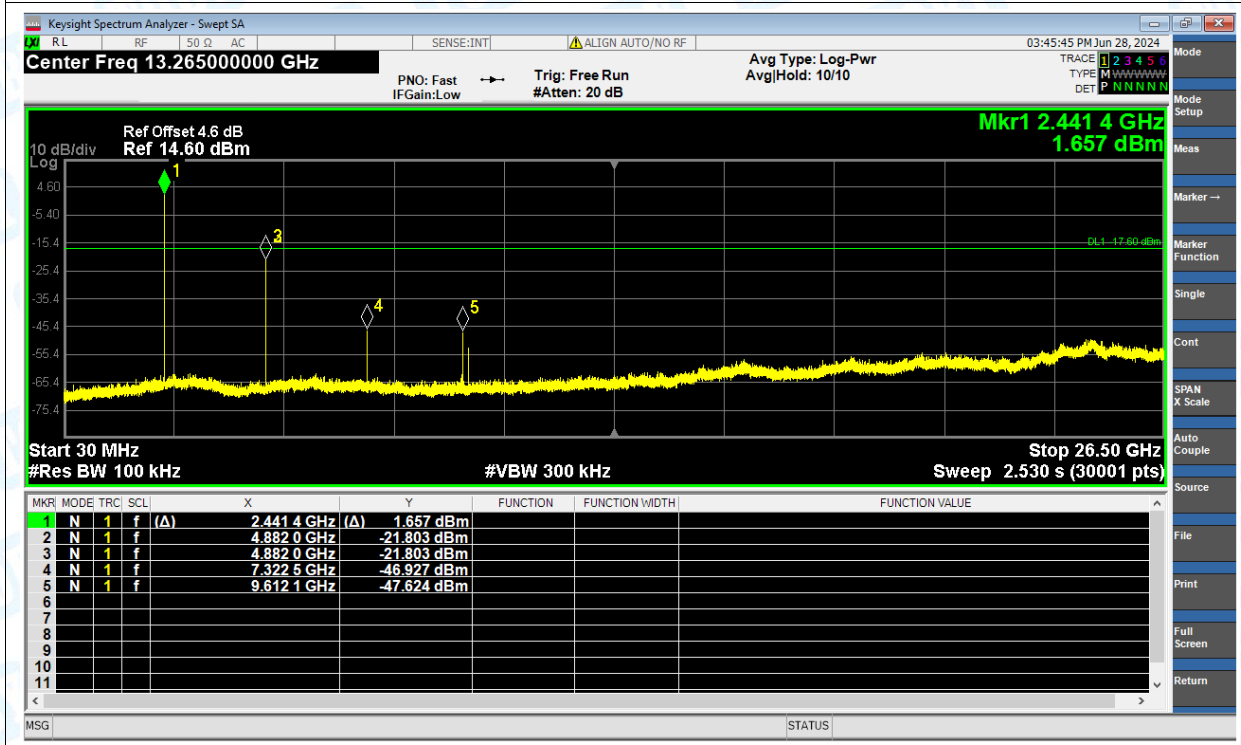
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



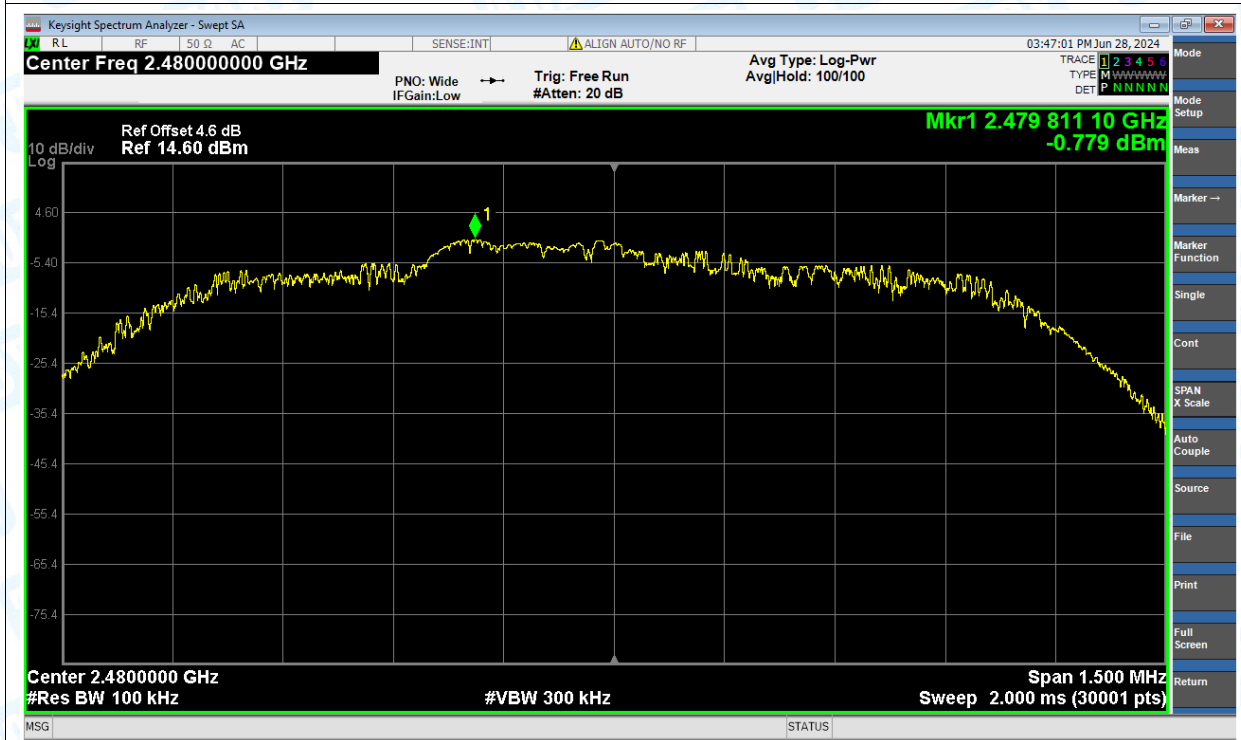
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



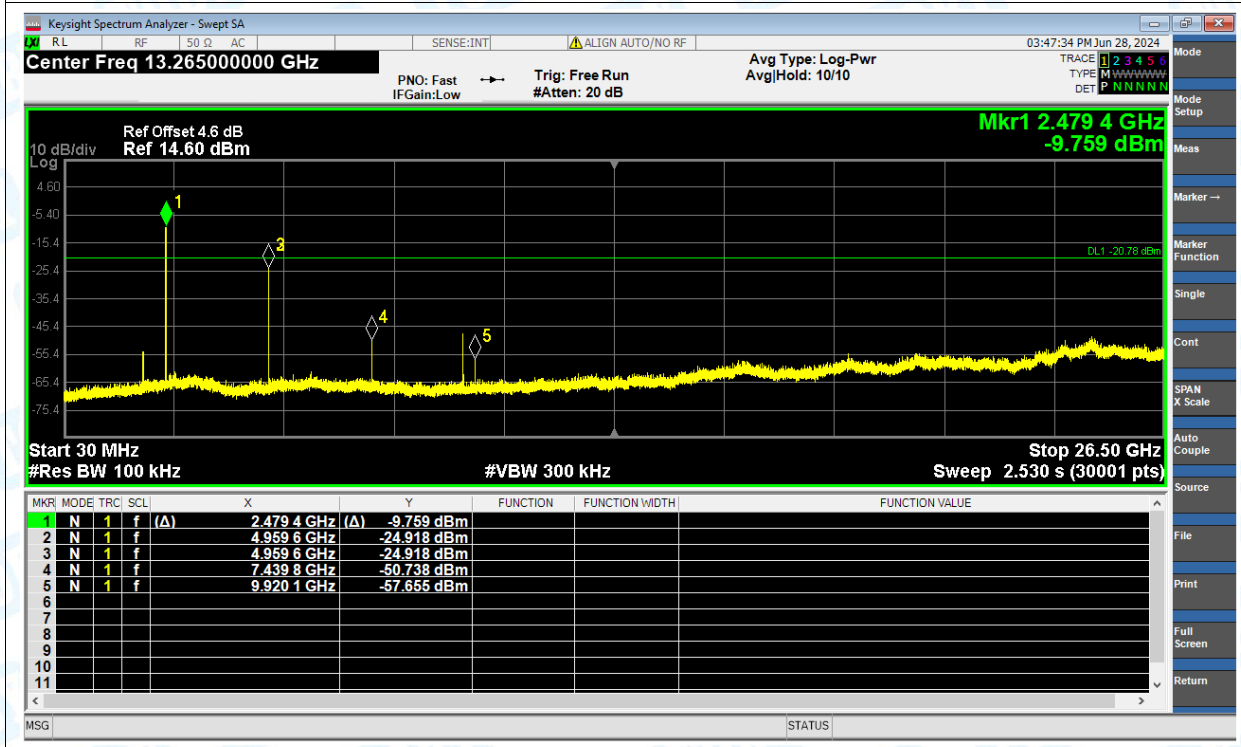
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

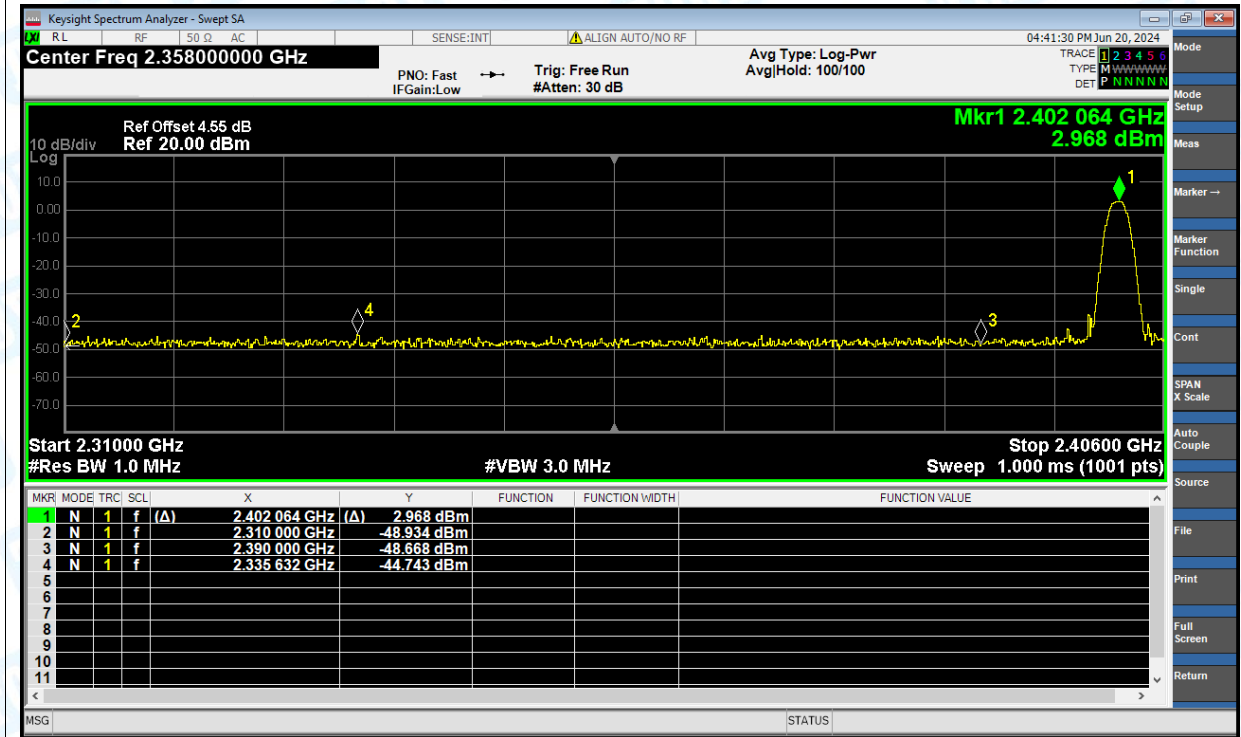


8. Restrict Band

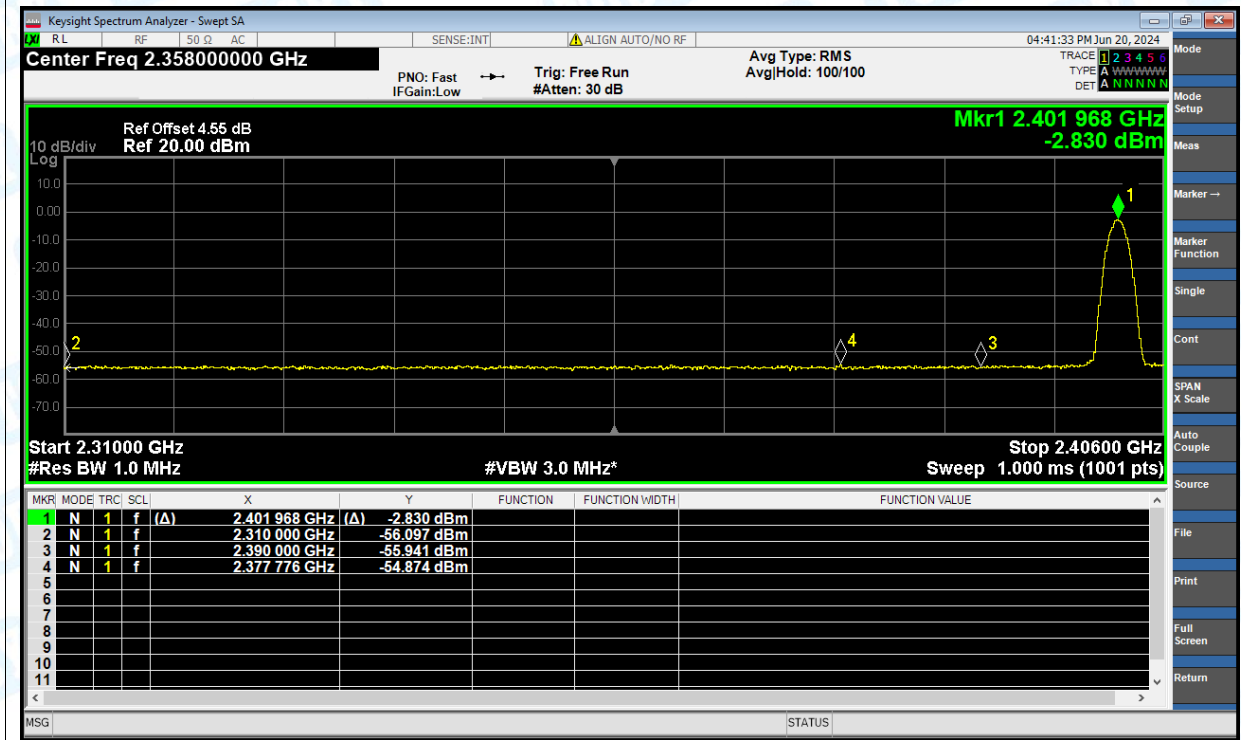
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-48.93	2	-	48.33	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-56.1	2	4.84	46	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2335.632	-44.74	2	-	52.52	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2377.776	-54.87	2	4.84	47.23	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-48.67	2	-	48.59	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-55.94	2	4.84	46.16	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-47.39	2	-	49.87	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-55.26	2	4.84	46.84	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2487.736	-44.33	2	-	52.93	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2499.328	-54.5	2	4.84	47.6	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-46.44	2	-	50.82	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-55.76	2	4.84	46.34	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-48.07	2	-	49.19	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.12	2	4.74	45.88	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2376.048	-43.74	2	-	53.52	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2323.728	-54.89	2	4.74	47.11	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-46.87	2	-	50.39	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-55.8	2	4.74	46.2	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-40.68	2	-	56.58	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-55.15	2	4.74	46.85	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.944	-40.47	2	-	56.79	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2484.04	-54.39	2	4.74	47.61	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-47.2	2	-	50.06	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-55.91	2	4.74	46.09	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-48.81	2	-	48.45	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-55.63	2	4.74	46.37	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2349.936	-43.59	2	-	53.67	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2371.056	-54.87	2	4.74	47.13	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-48.96	2	-	48.3	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-56.1	2	4.74	45.9	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-47.69	2	-	49.57	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-54.58	2	4.74	47.42	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.824	-41.97	2	-	55.29	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.56	-54.28	2	4.74	47.72	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-45.76	2	-	51.5	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-55.52	2	4.74	46.48	Average	54	Pass

Test Graphs

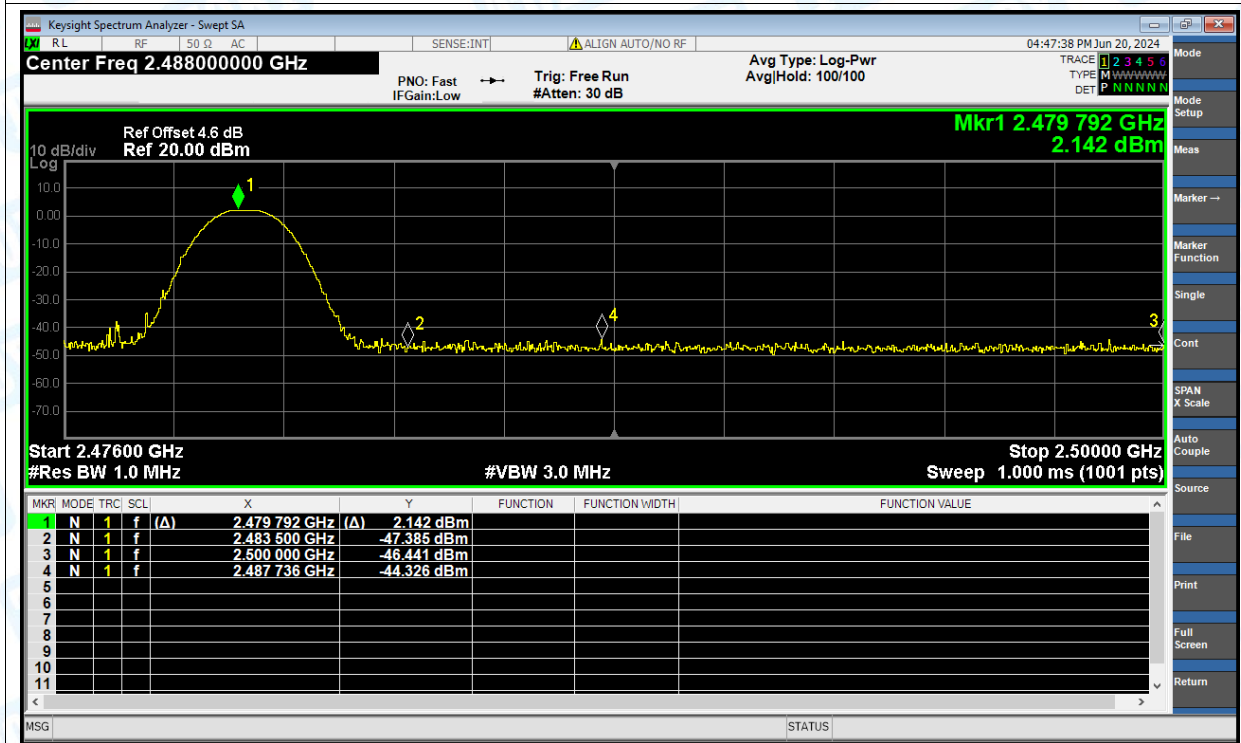
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



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



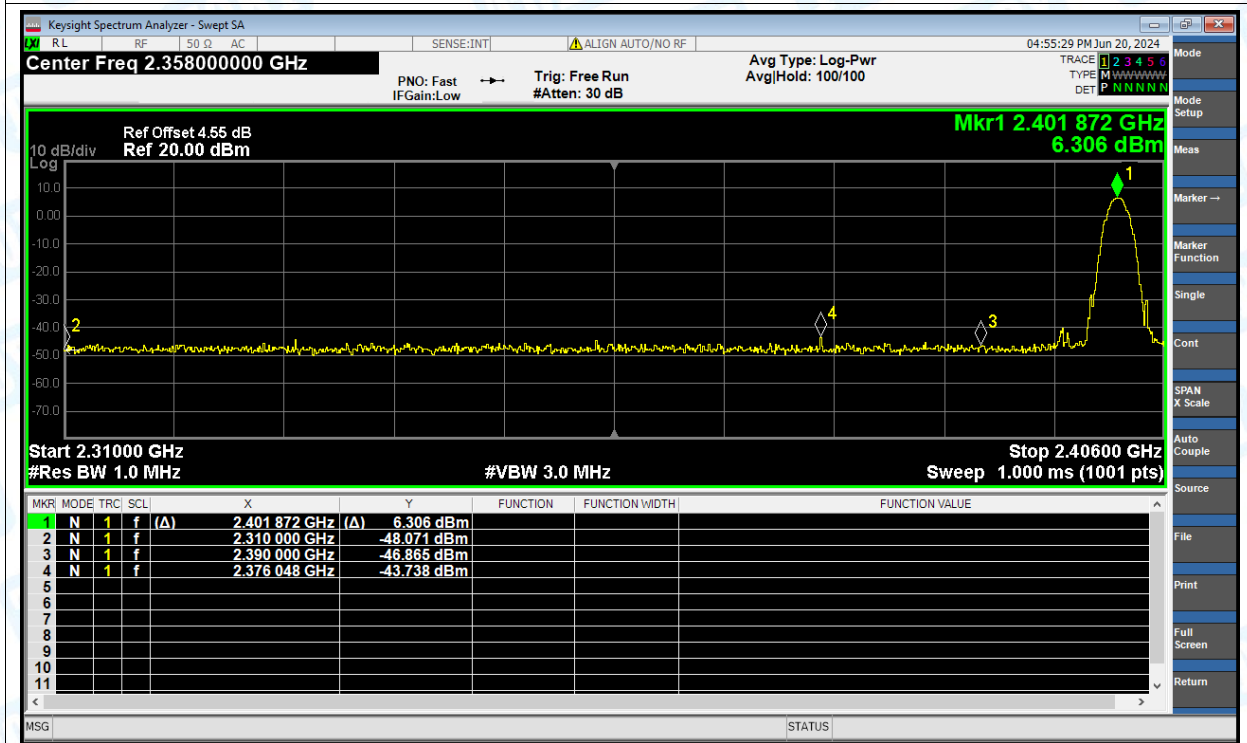
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



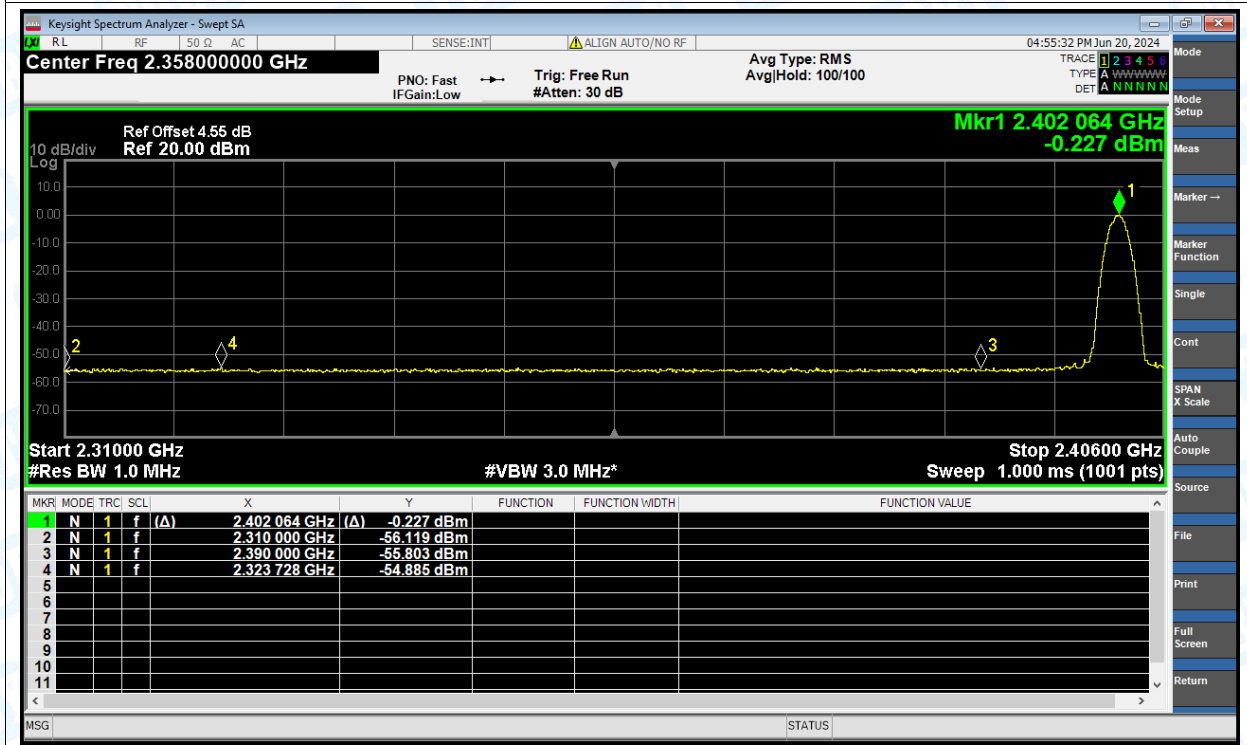
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



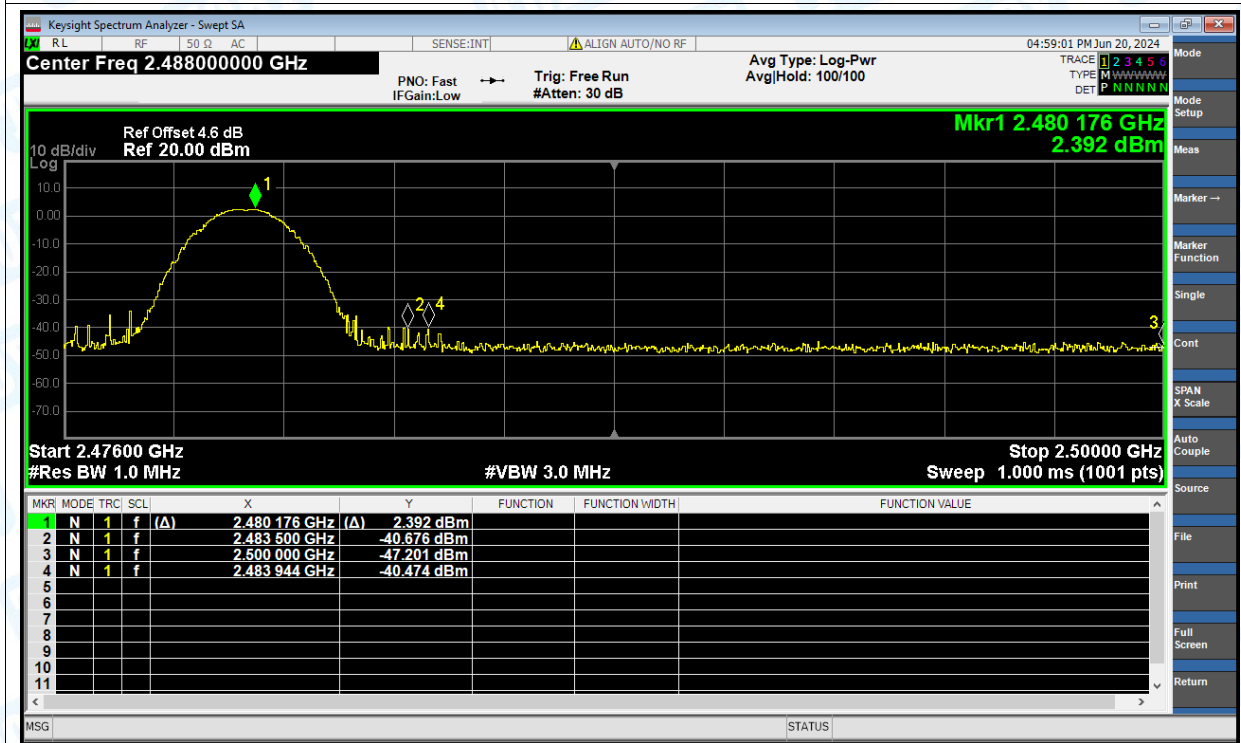
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



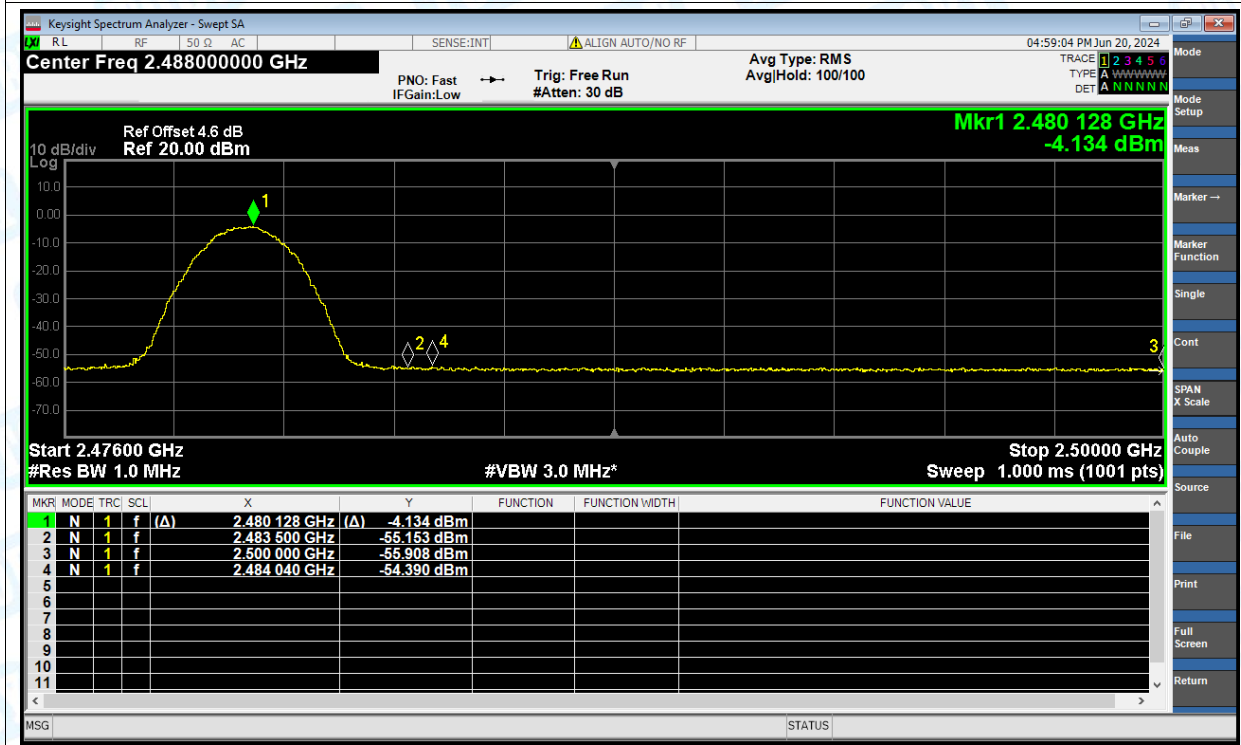
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



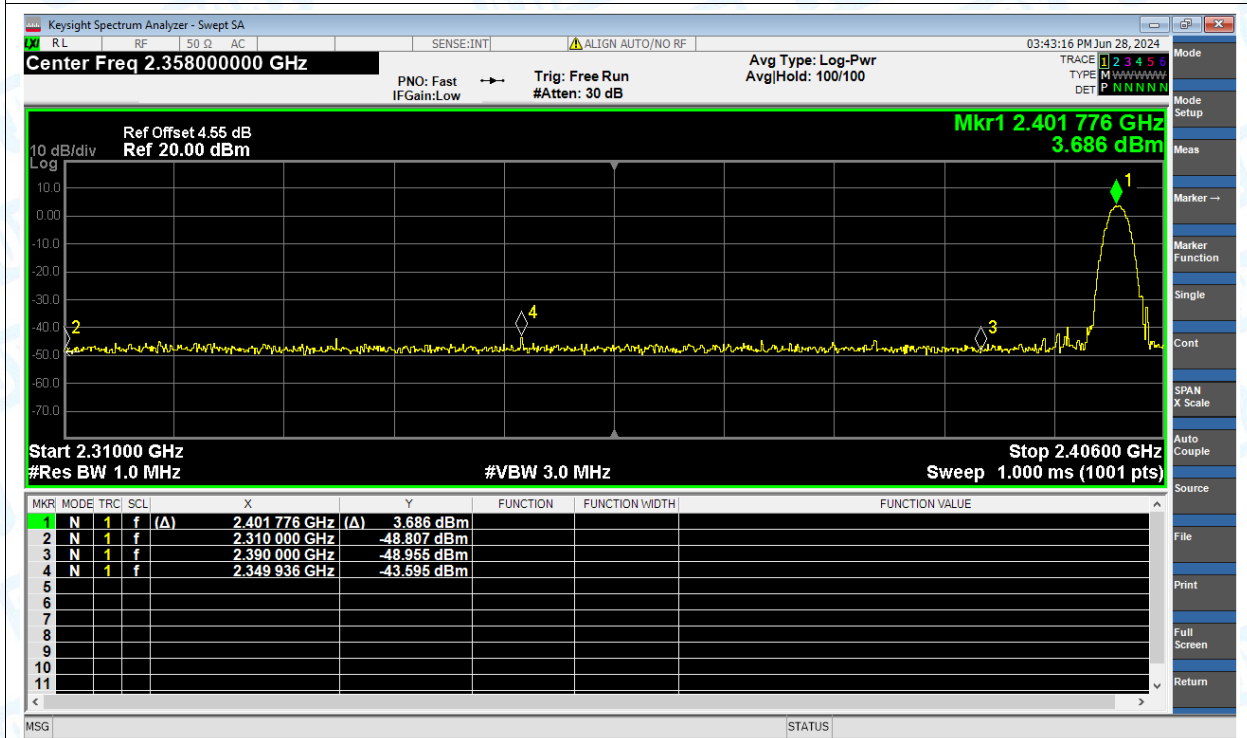
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



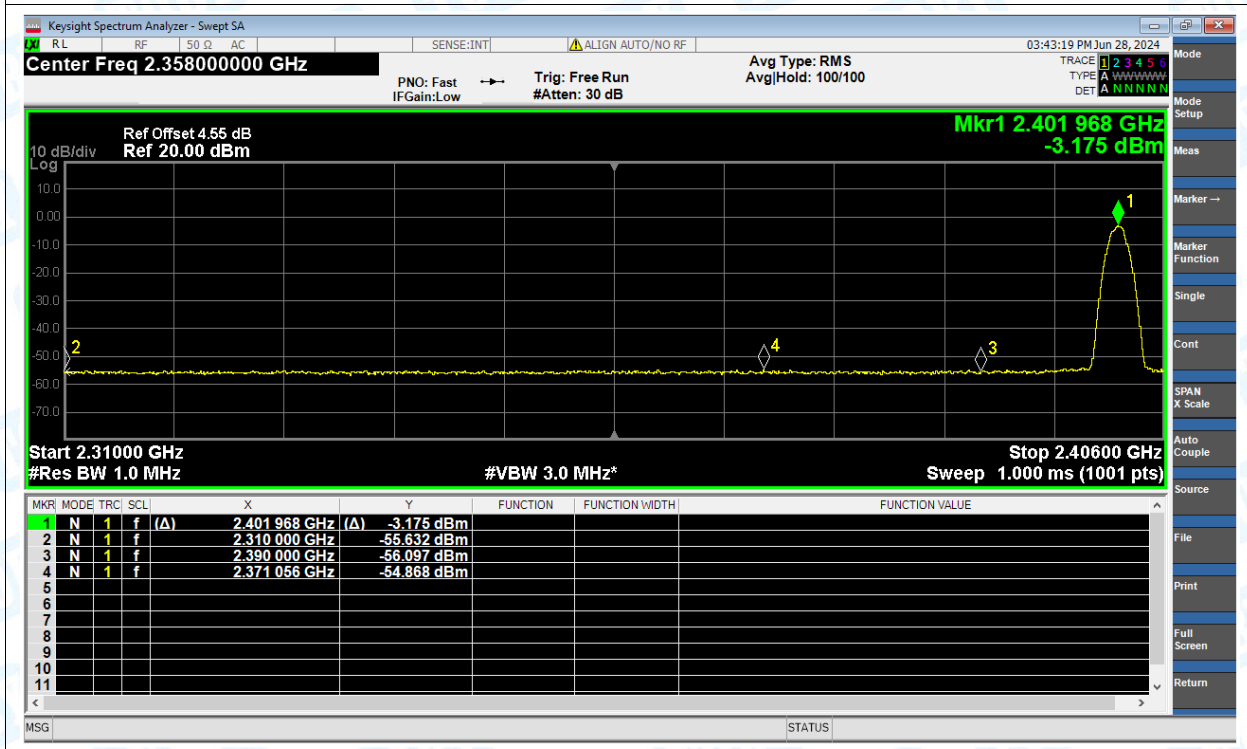
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



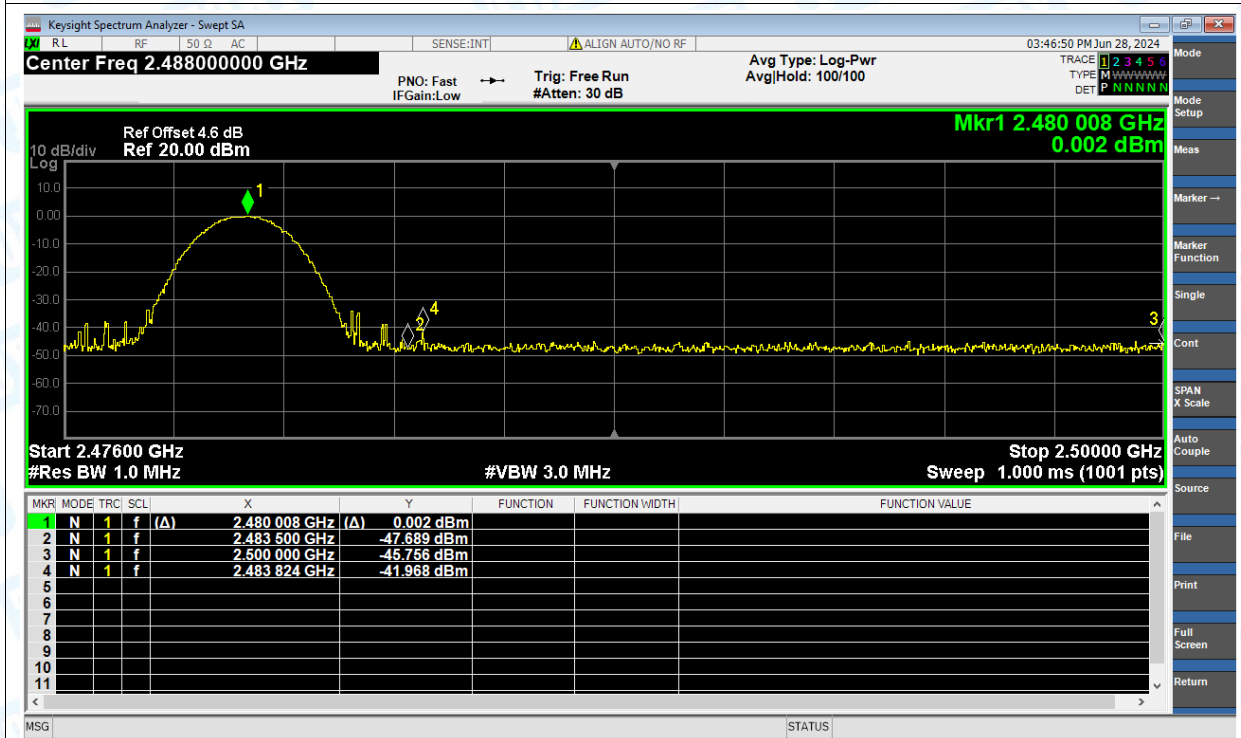
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



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

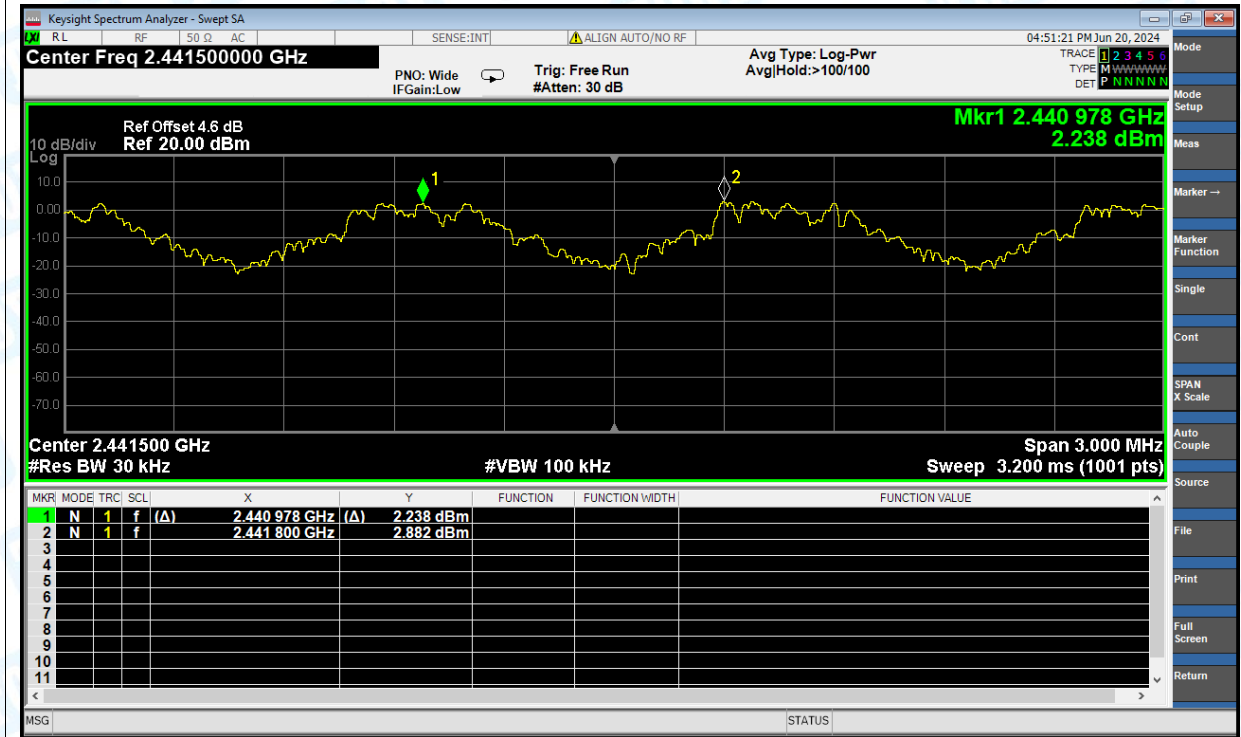


9. Carrier Frequencies Separation

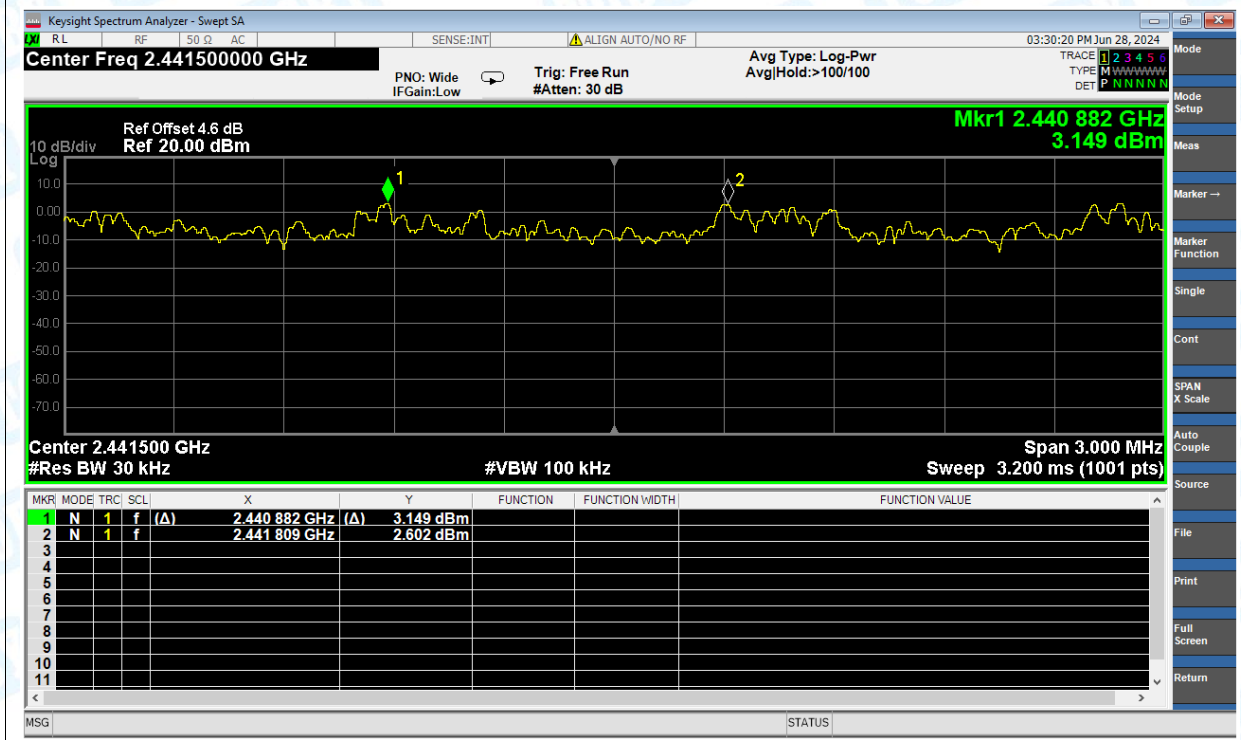
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.978	2441.8	0.822	0.613	Pass
NVNT	2-DH1	Ant1	2440.882	2441.809	0.927	0.025	Pass
NVNT	3-DH1	Ant1	2440.888	2441.962	1.074	0.8	Pass

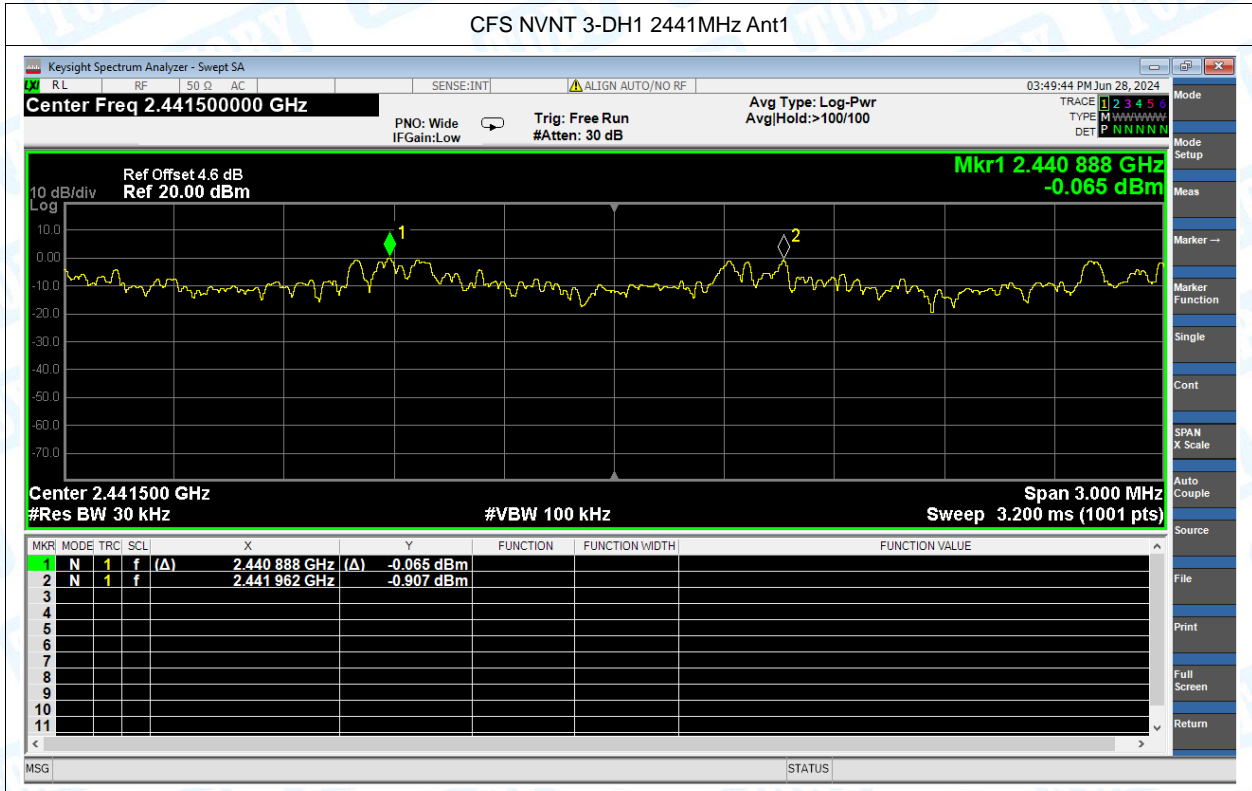
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



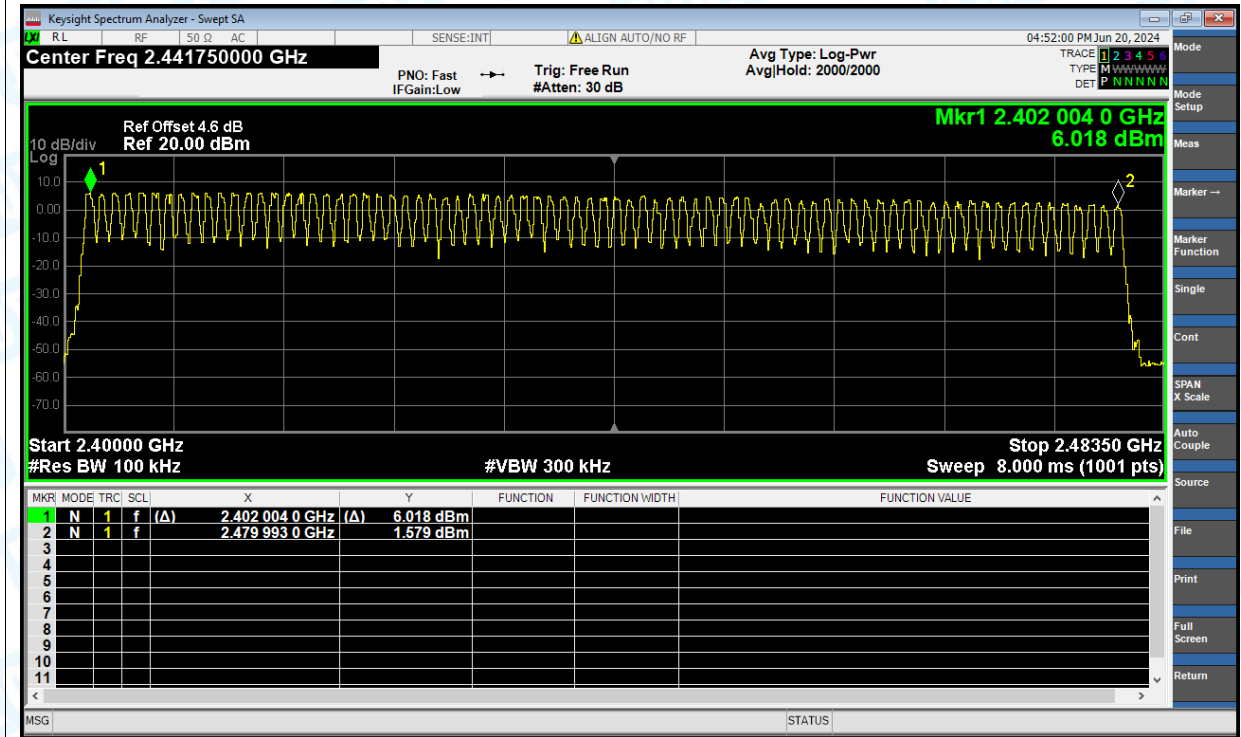


10. Number of Hopping Channel

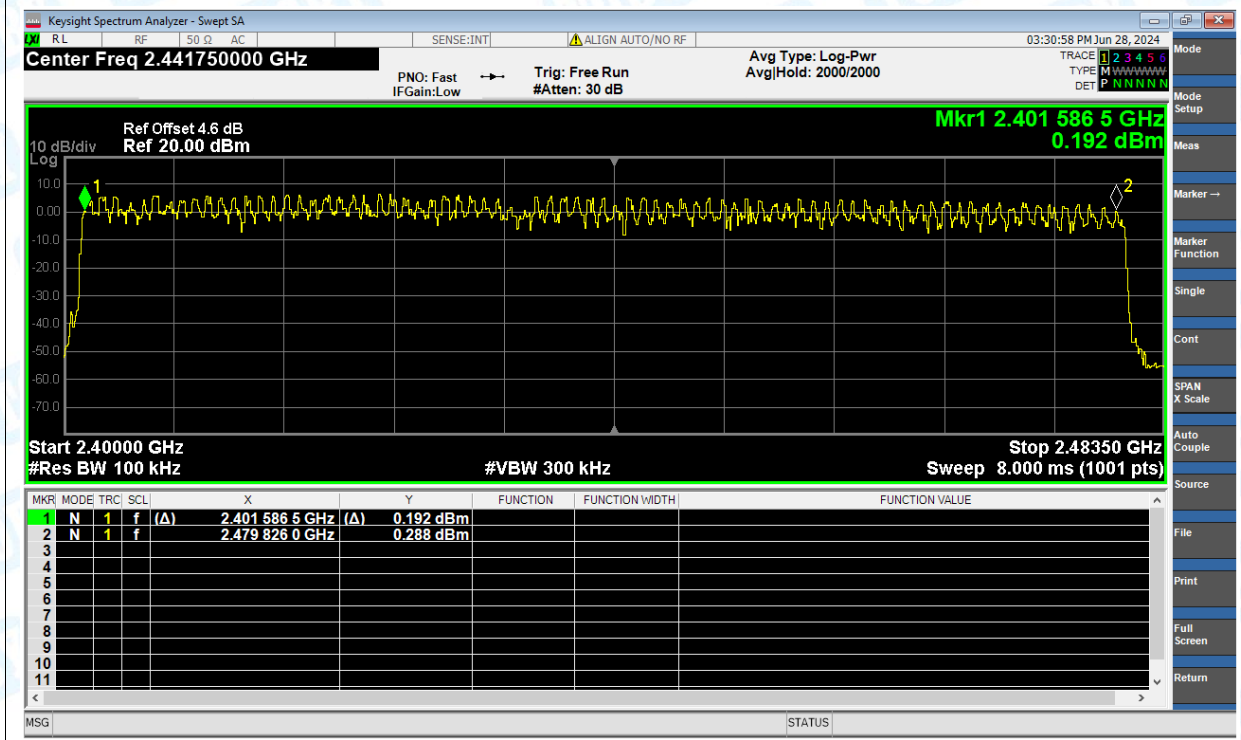
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

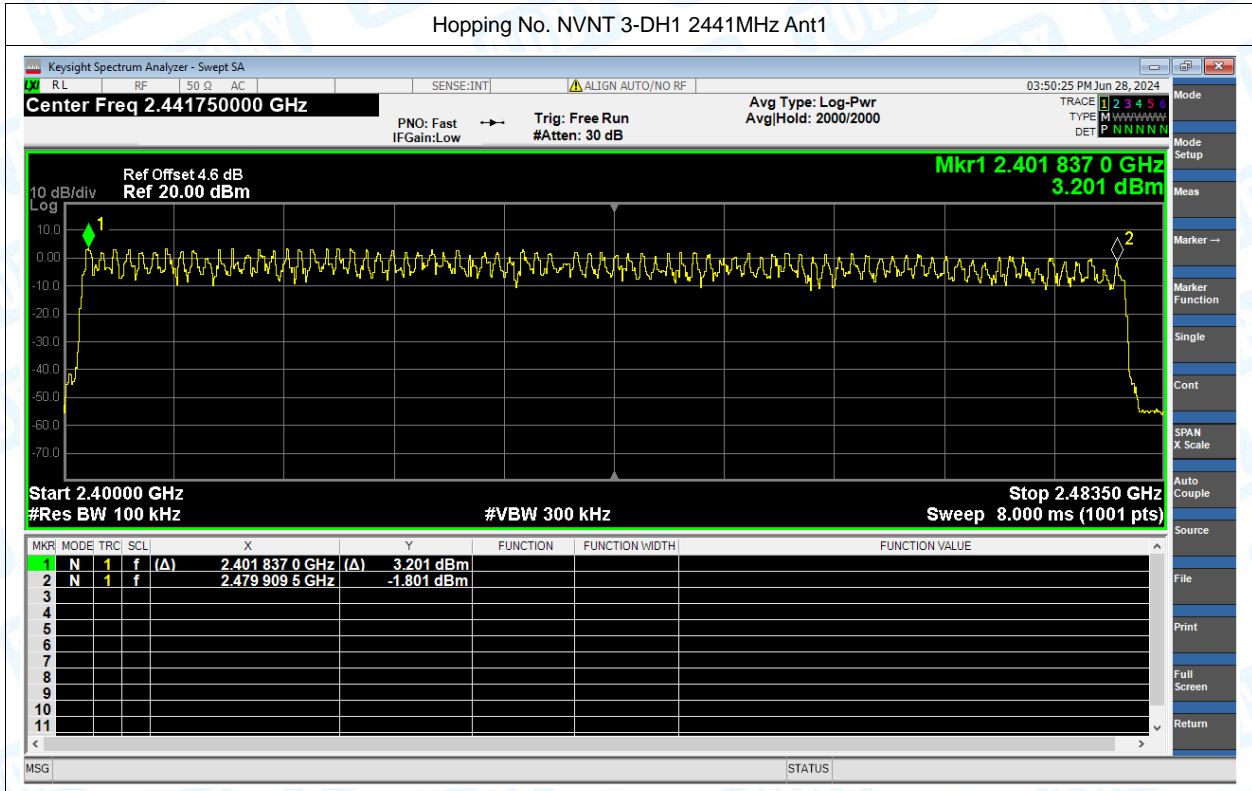
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



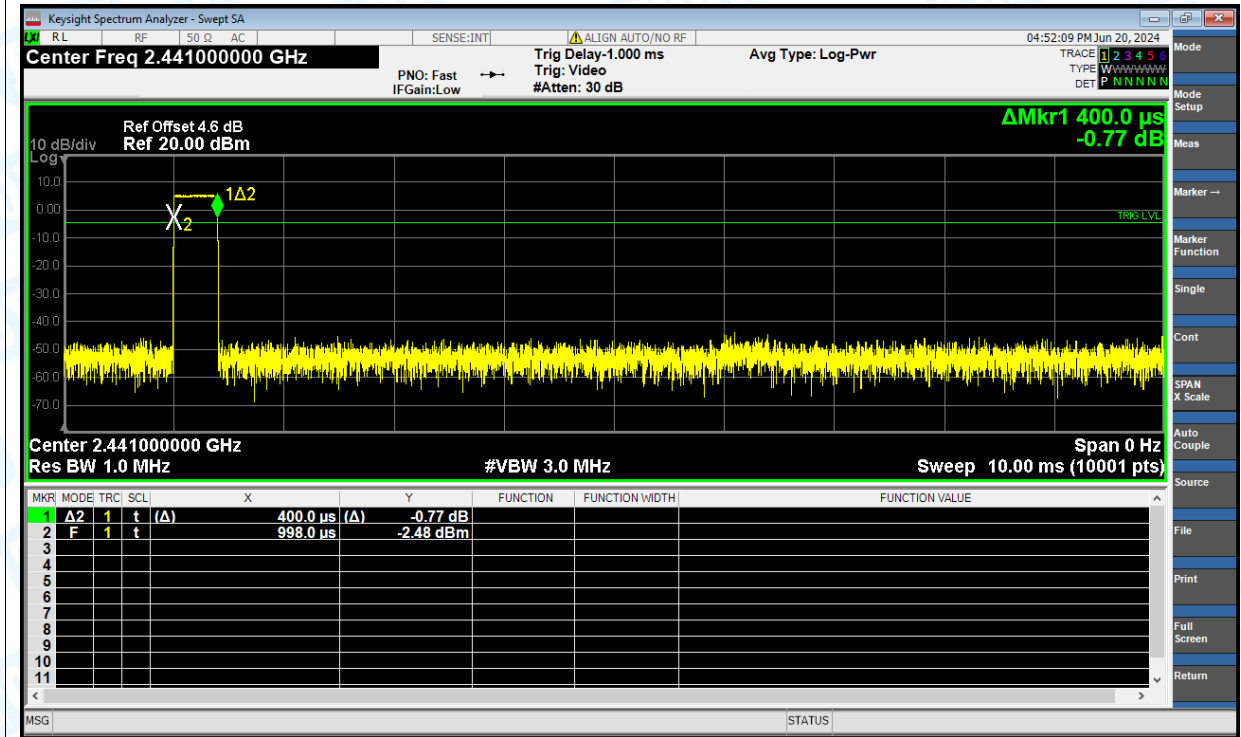


11. Dwell Time

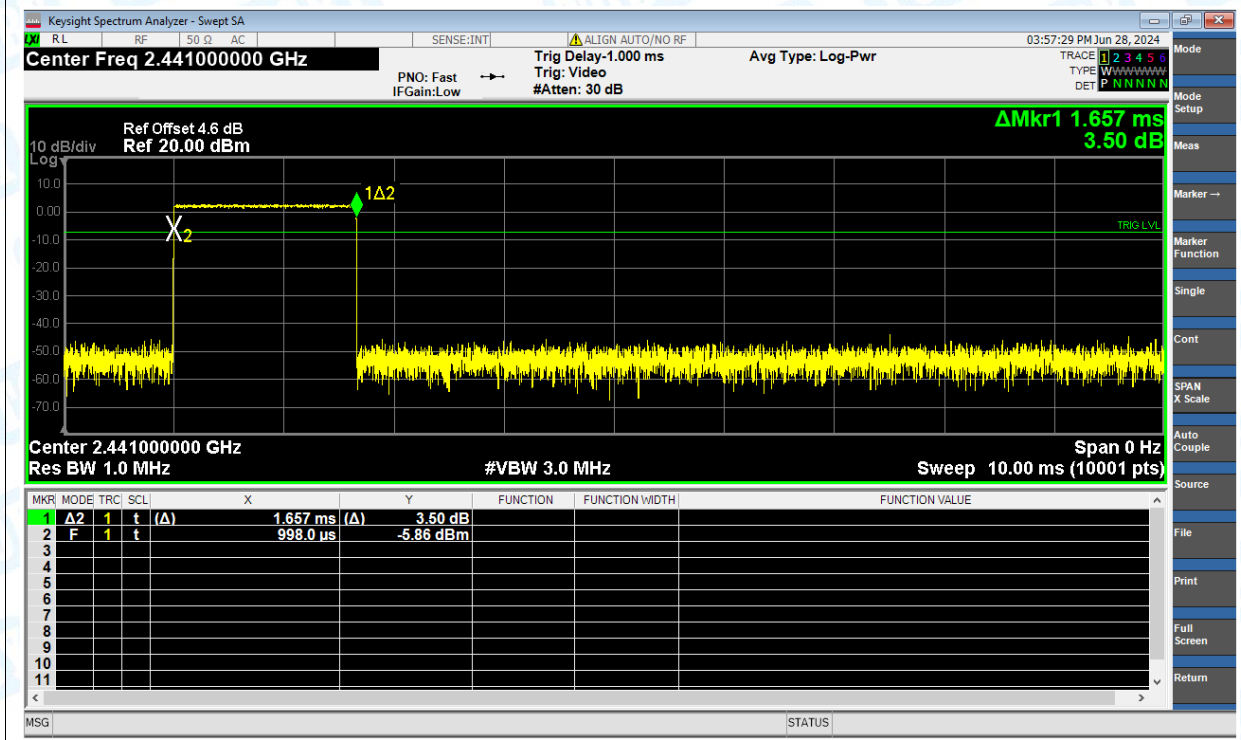
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.4	128	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.657	265.12	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.905	309.867	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.409	130.88	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.663	266.08	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.911	310.507	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.413	132.16	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.663	266.08	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.913	310.72	31600	400	Pass

Test Graphs

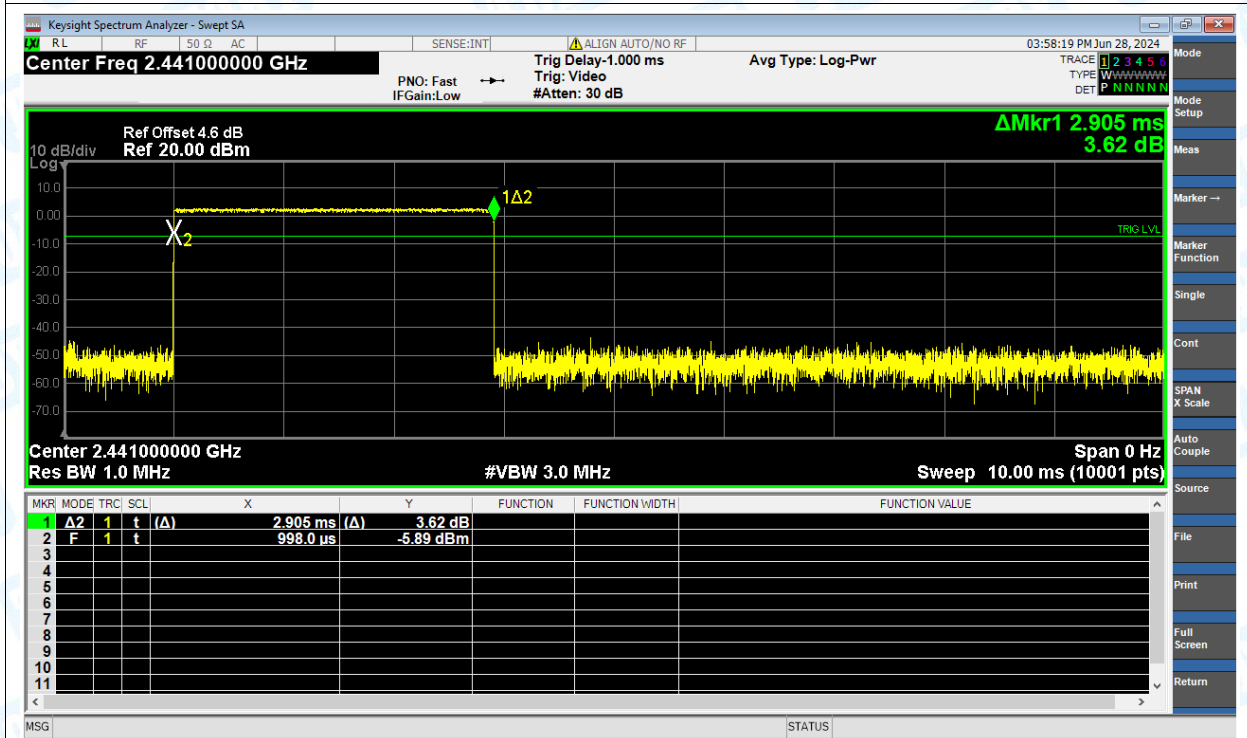
Dwell NVNT 1-DH1 2441MHz Ant1



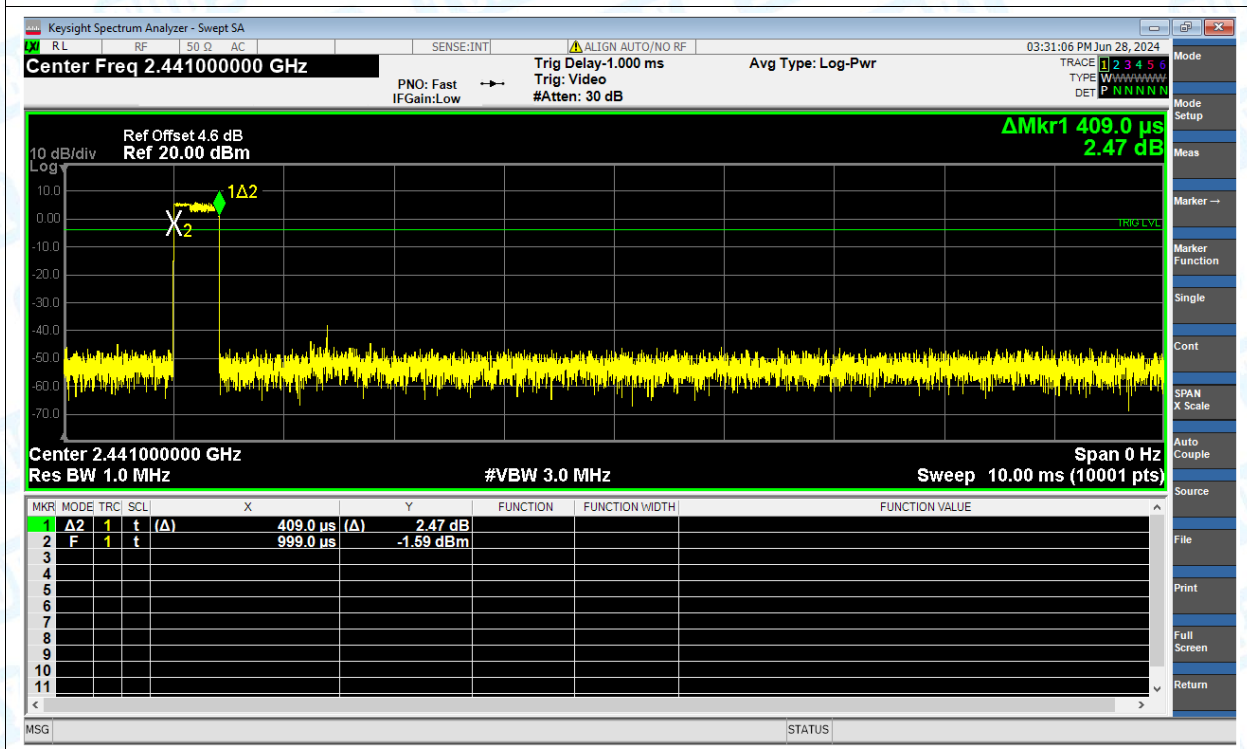
Dwell NVNT 1-DH3 2441MHz Ant1



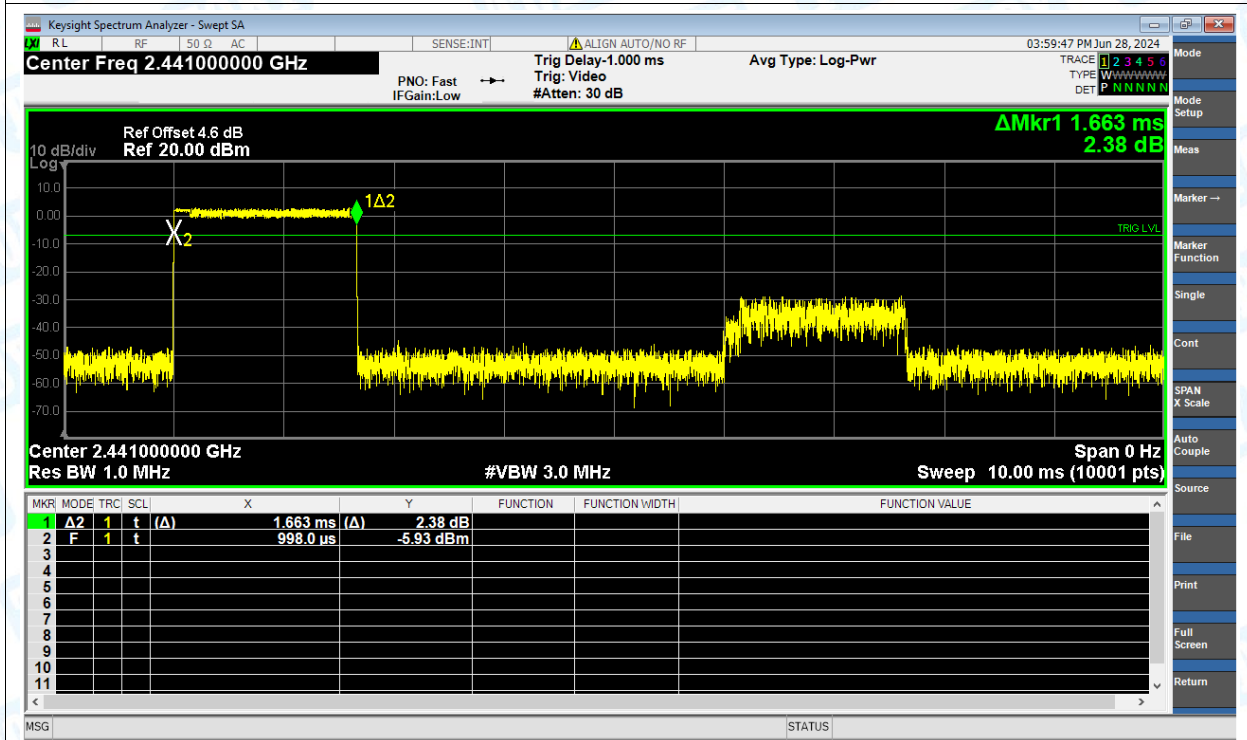
Dwell NVNT 1-DH5 2441MHz Ant1



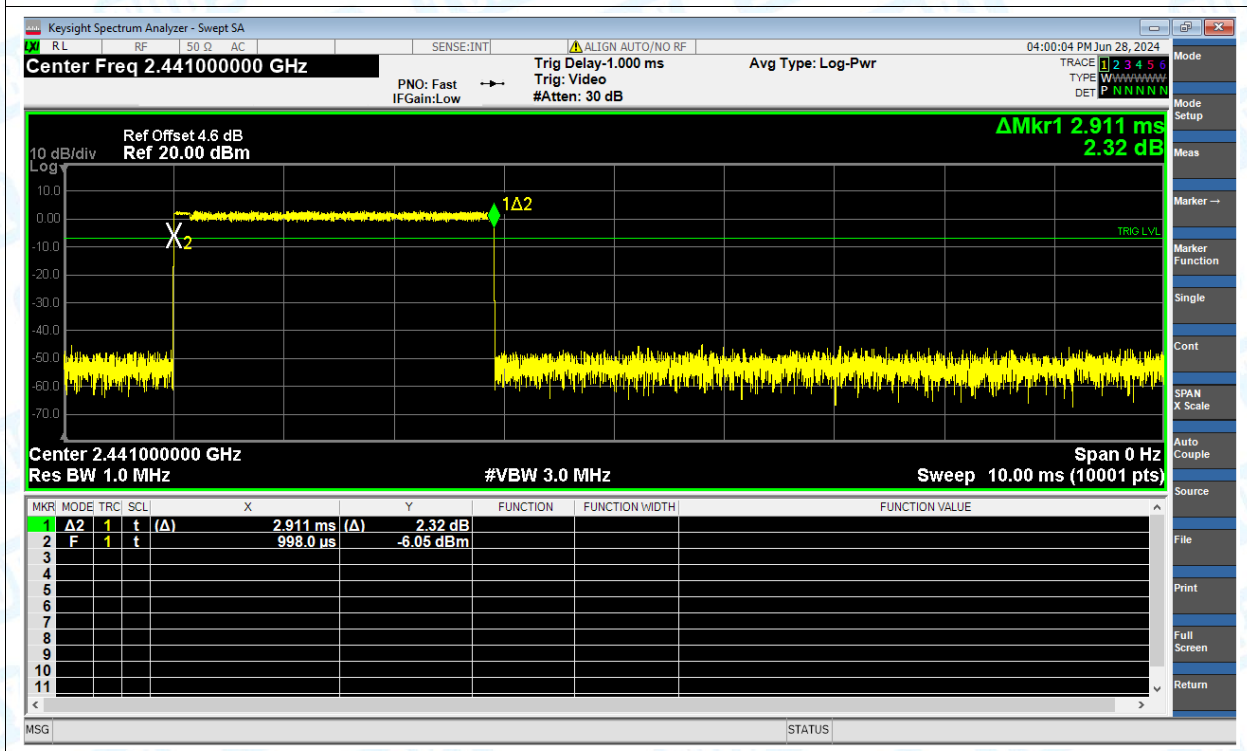
Dwell NVNT 2-DH1 2441MHz Ant1



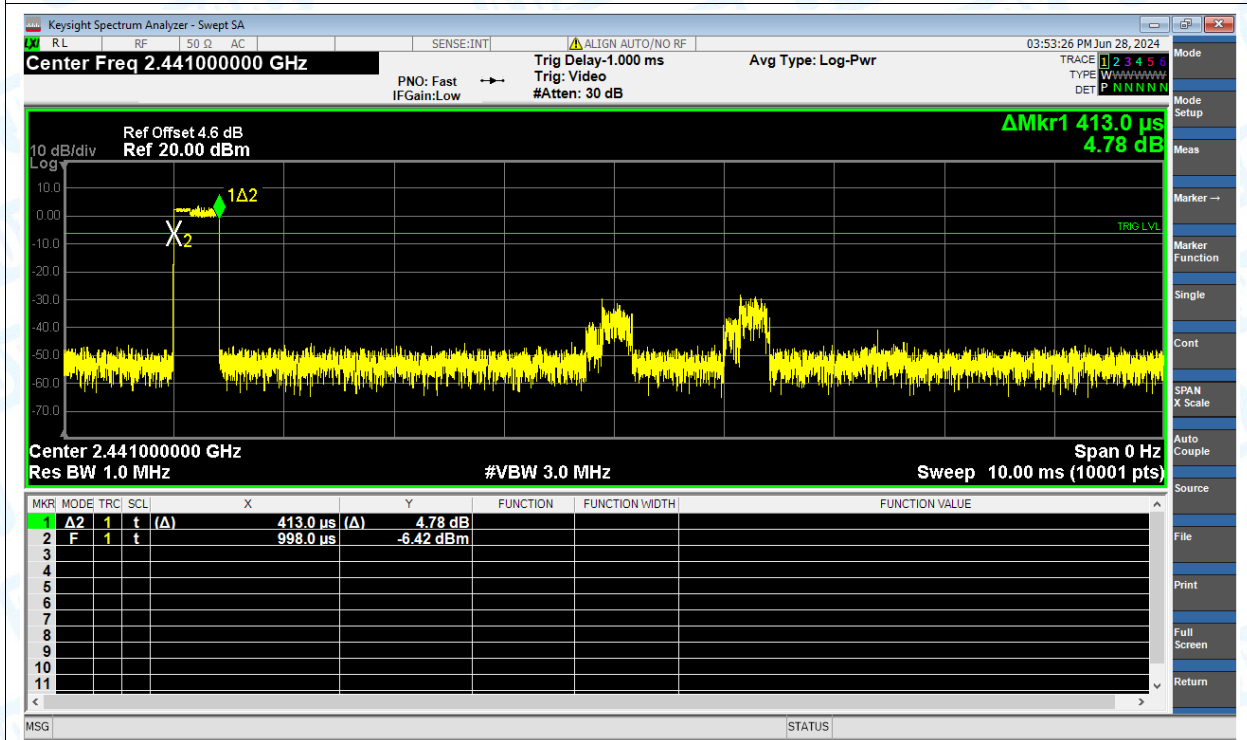
Dwell NVNT 2-DH3 2441MHz Ant1



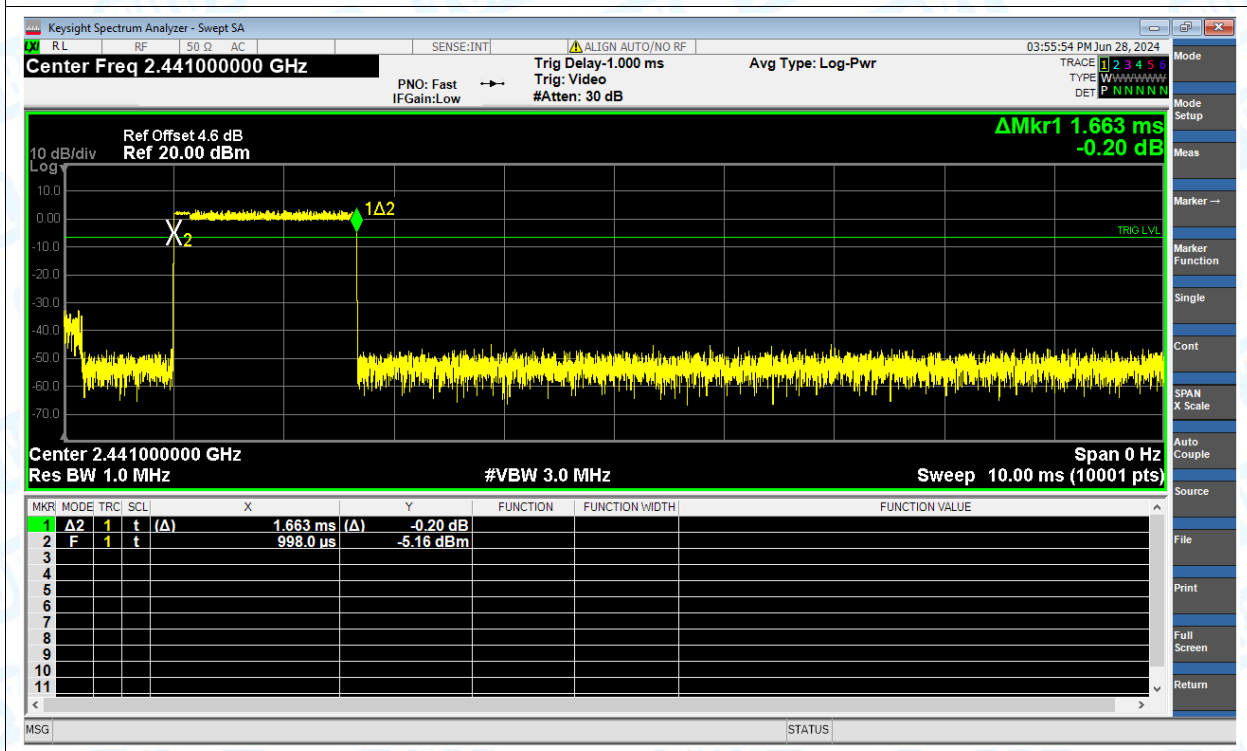
Dwell NVNT 2-DH5 2441MHz Ant1

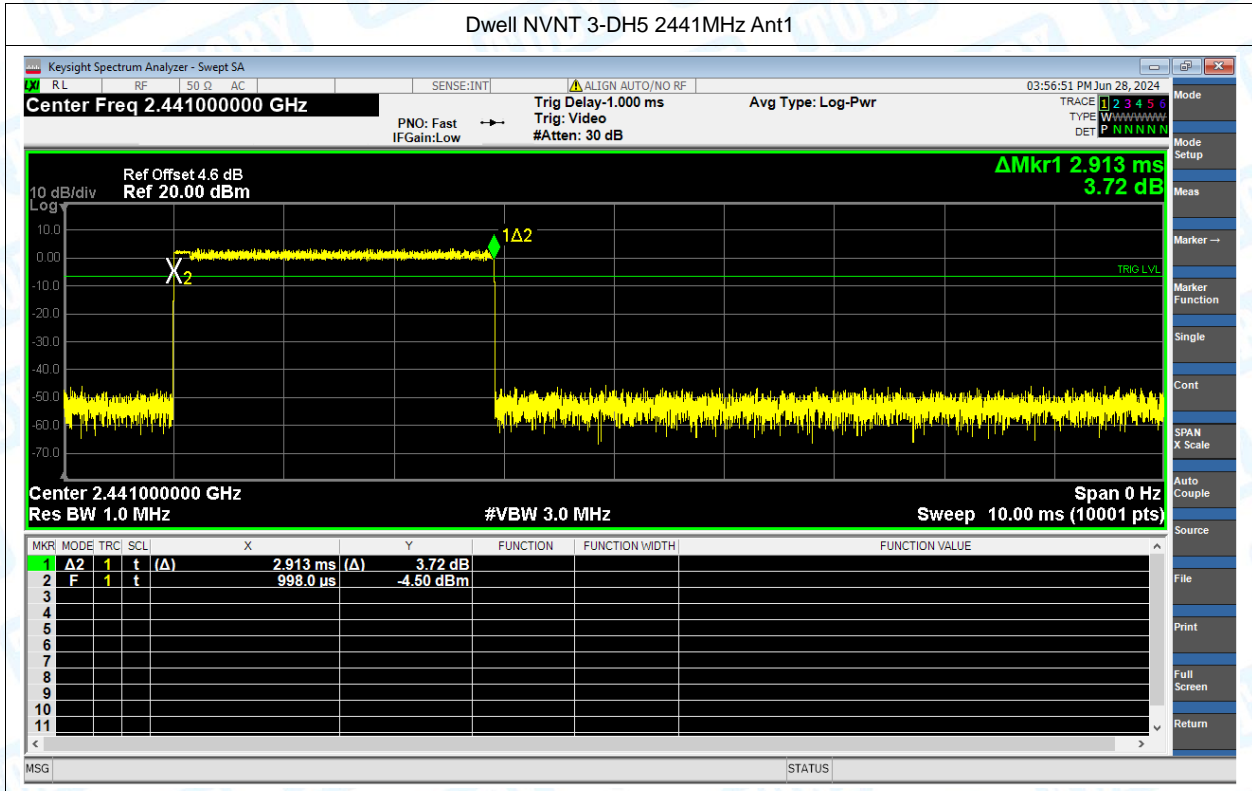


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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