

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	Wireless Headphone
Test Model:	picun F1
Sample ID:	HC-C-202405-0333-01-01
Environmental Conditions	
Temperature:	24.6°C
Relative Humidity:	51.6%
Test Voltage:	DC 3.7V
Test Engineer:	Jolin Lee
Note: For a more detailed features description, please refer to the report TBR-C-202405-0333-2 The report only show the worst case data.	

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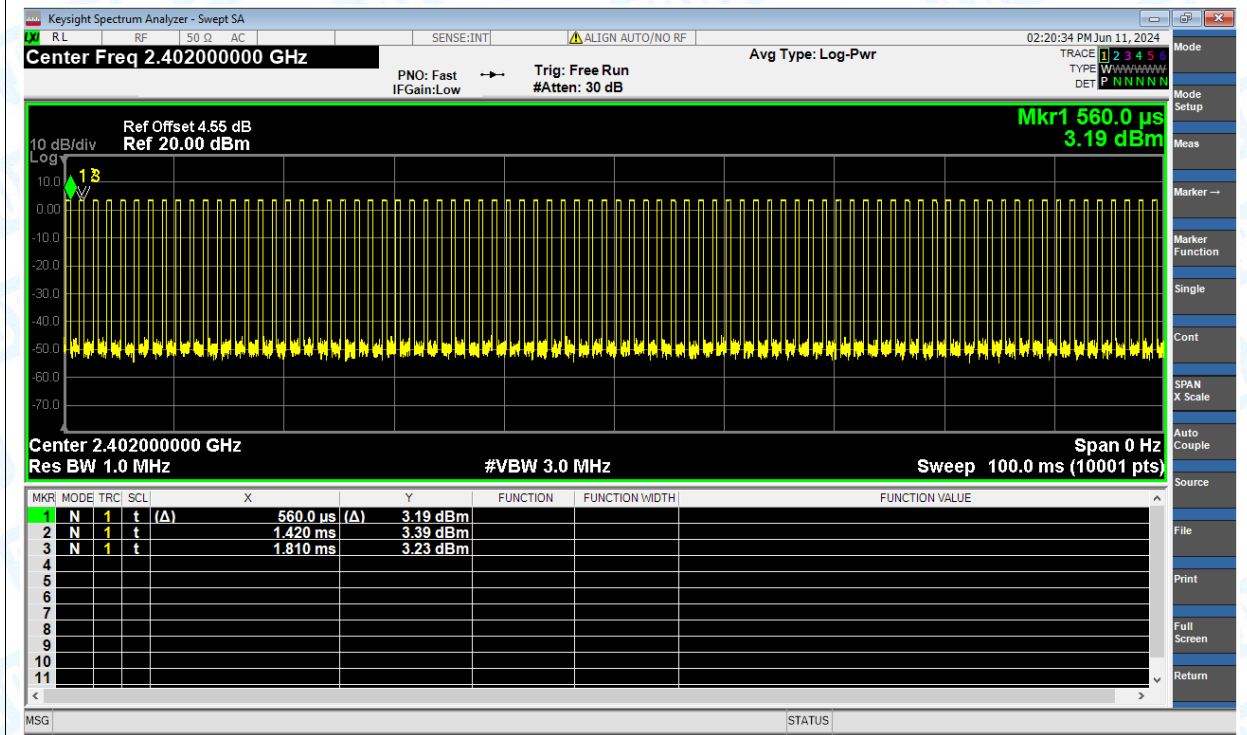
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1. Duty Cycle

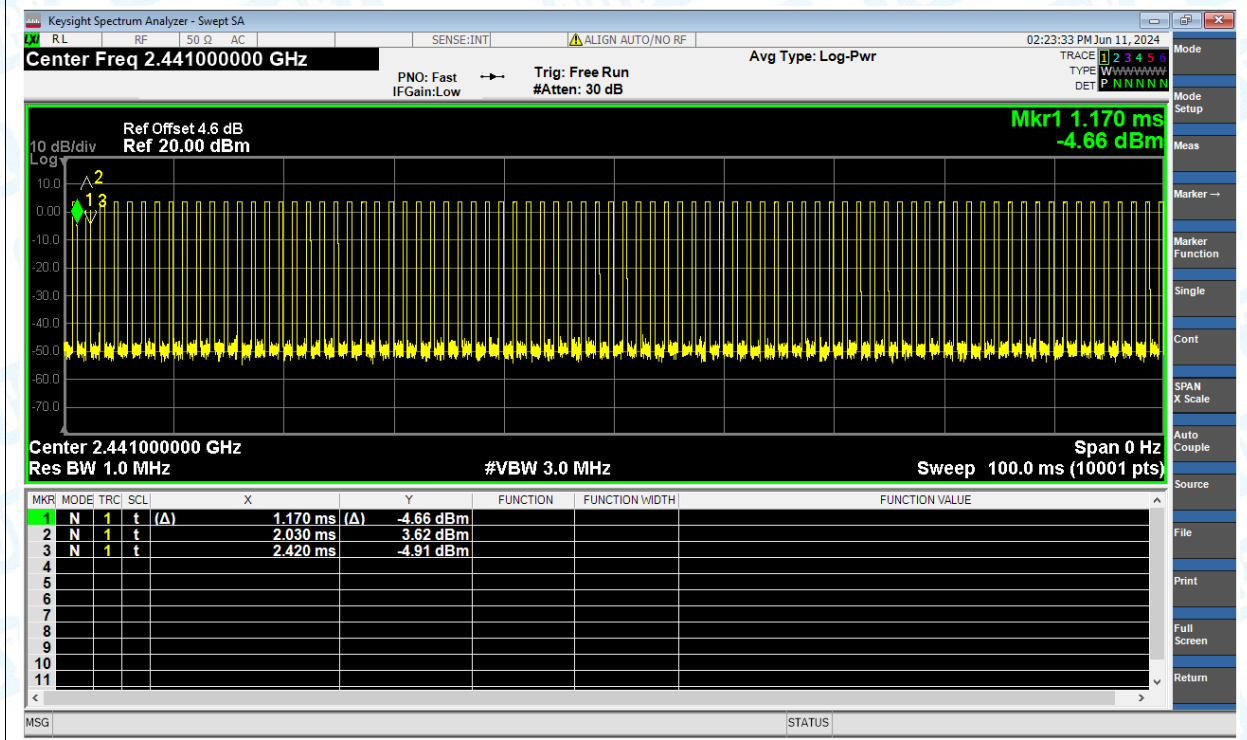
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	1-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	1-DH1	2480	Ant1	30.4	5.17	2.63
NVNT	2-DH1	2402	Ant1	32	4.95	2.5
NVNT	2-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2480	Ant1	31.2	5.06	2.56
NVNT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

Test Graphs

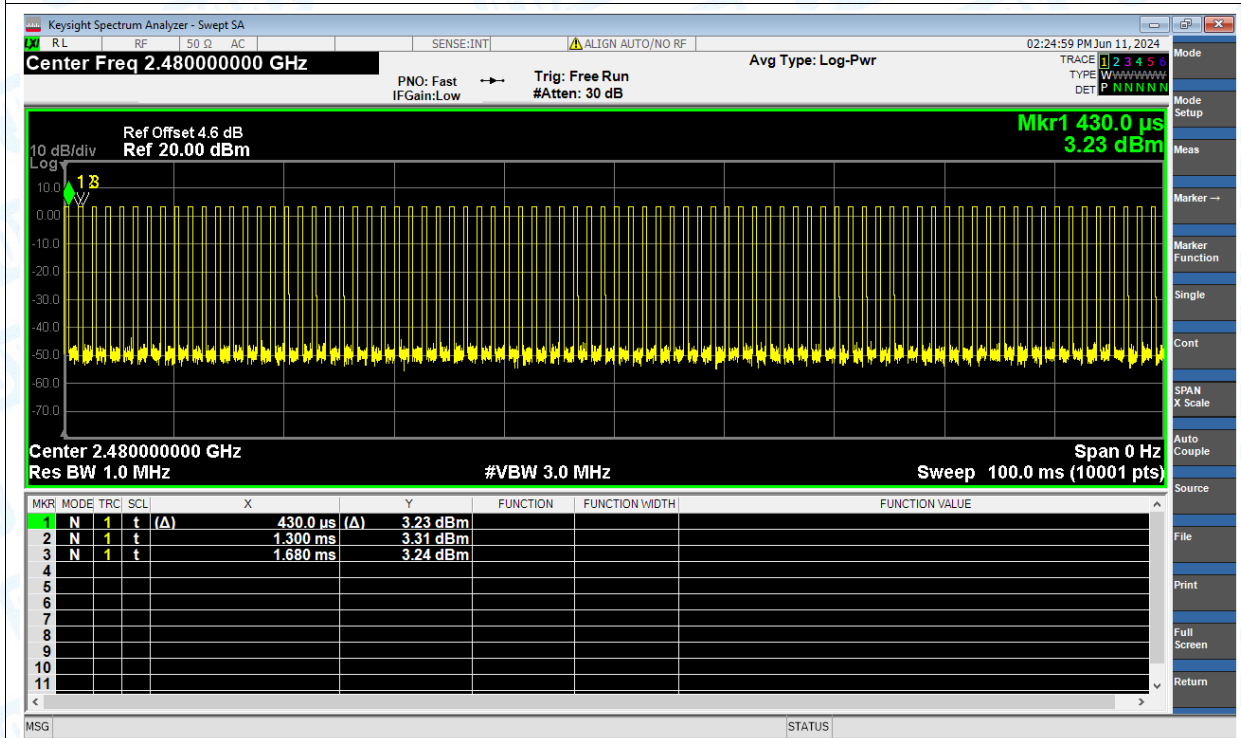
Duty Cycle NVNT 1-DH1 2402MHz Ant1



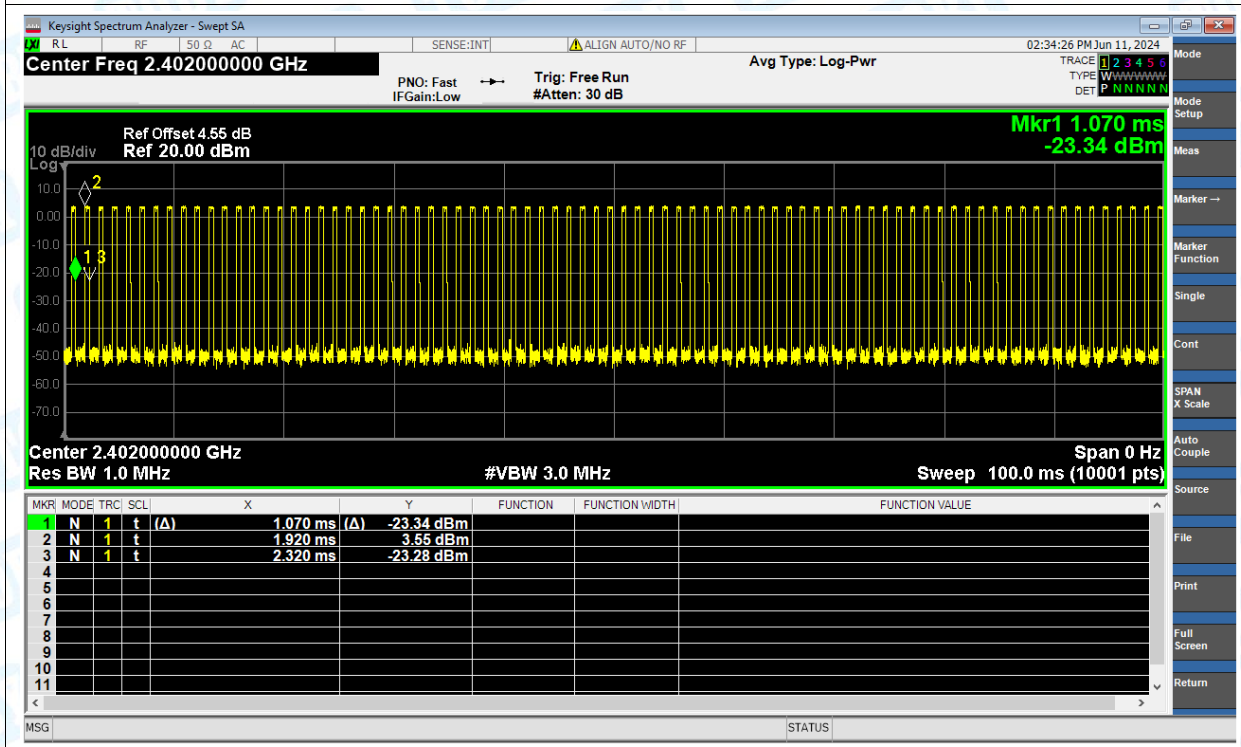
Duty Cycle NVNT 1-DH1 2441MHz Ant1



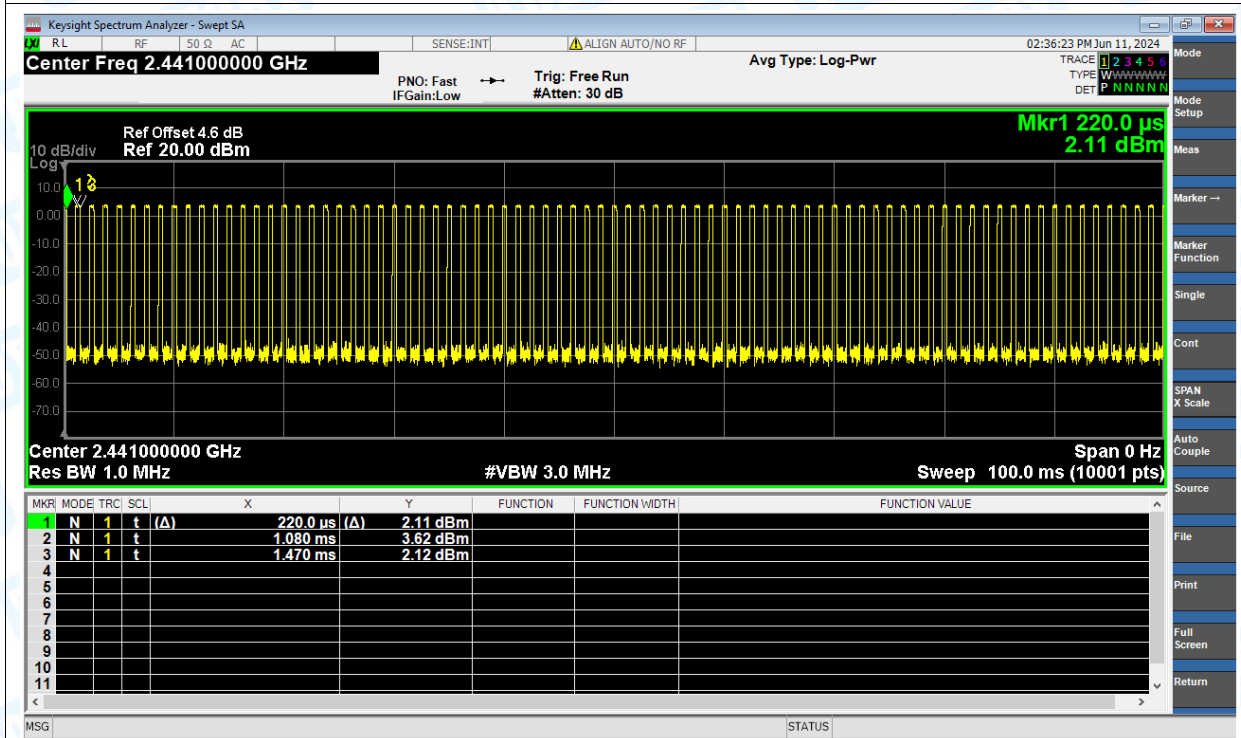
Duty Cycle NVNT 1-DH1 2480MHz Ant1



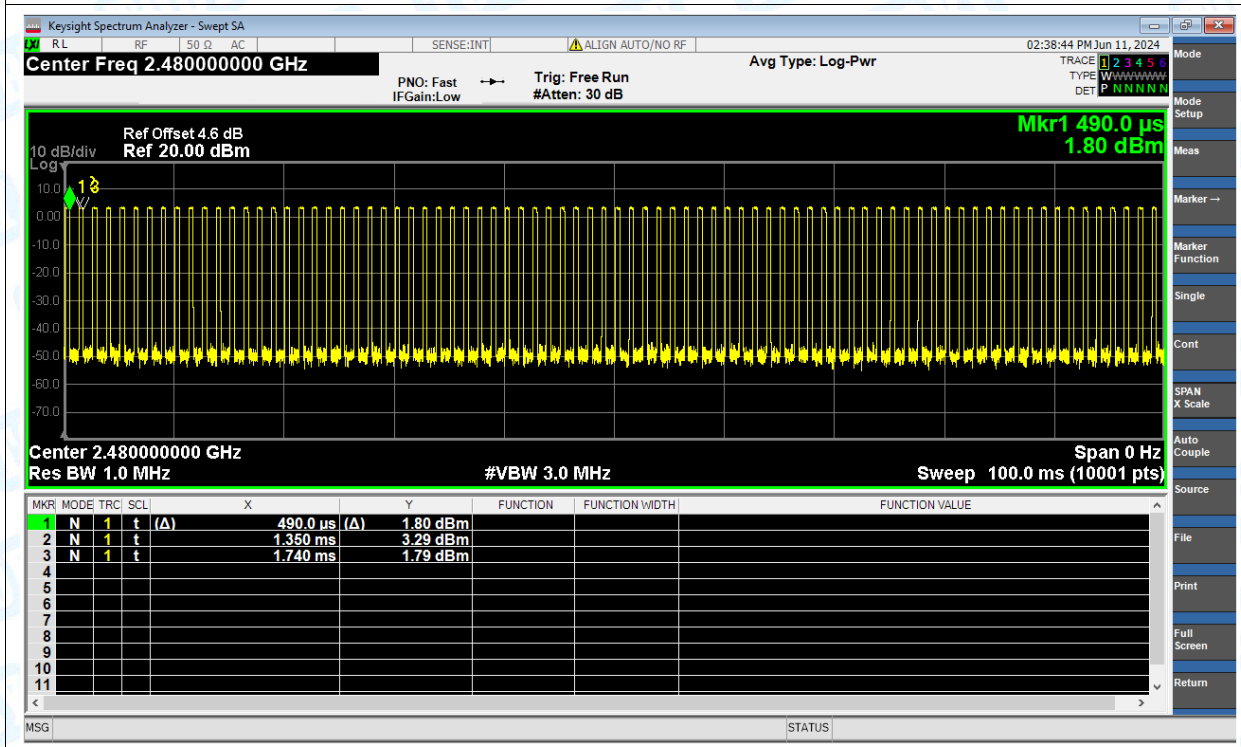
Duty Cycle NVNT 2-DH1 2402MHz Ant1



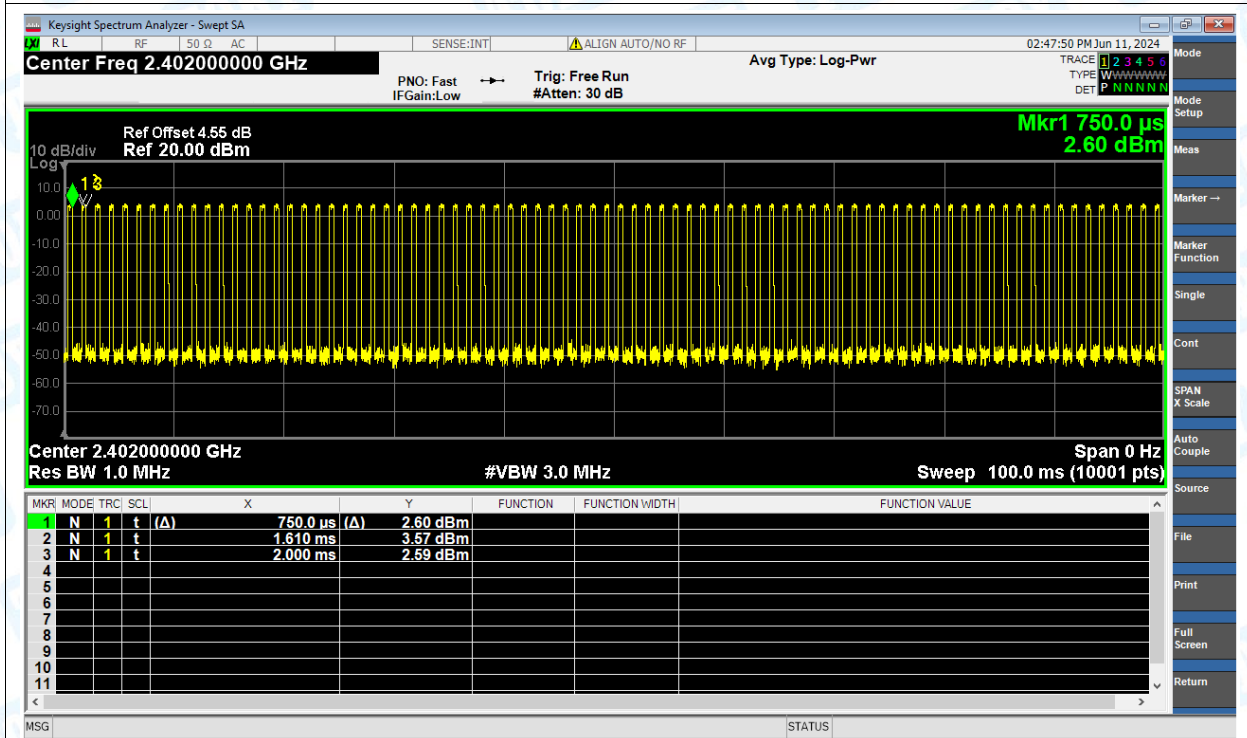
Duty Cycle NVNT 2-DH1 2441MHz Ant1



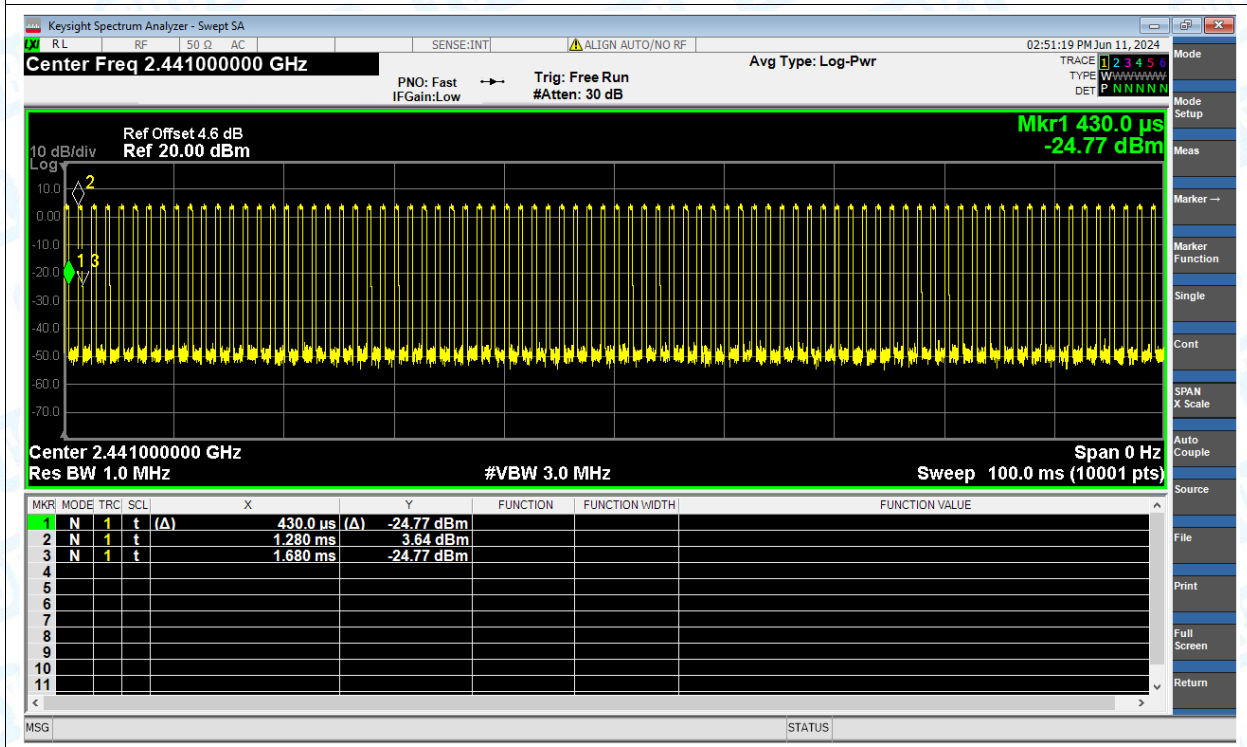
Duty Cycle NVNT 2-DH1 2480MHz Ant1

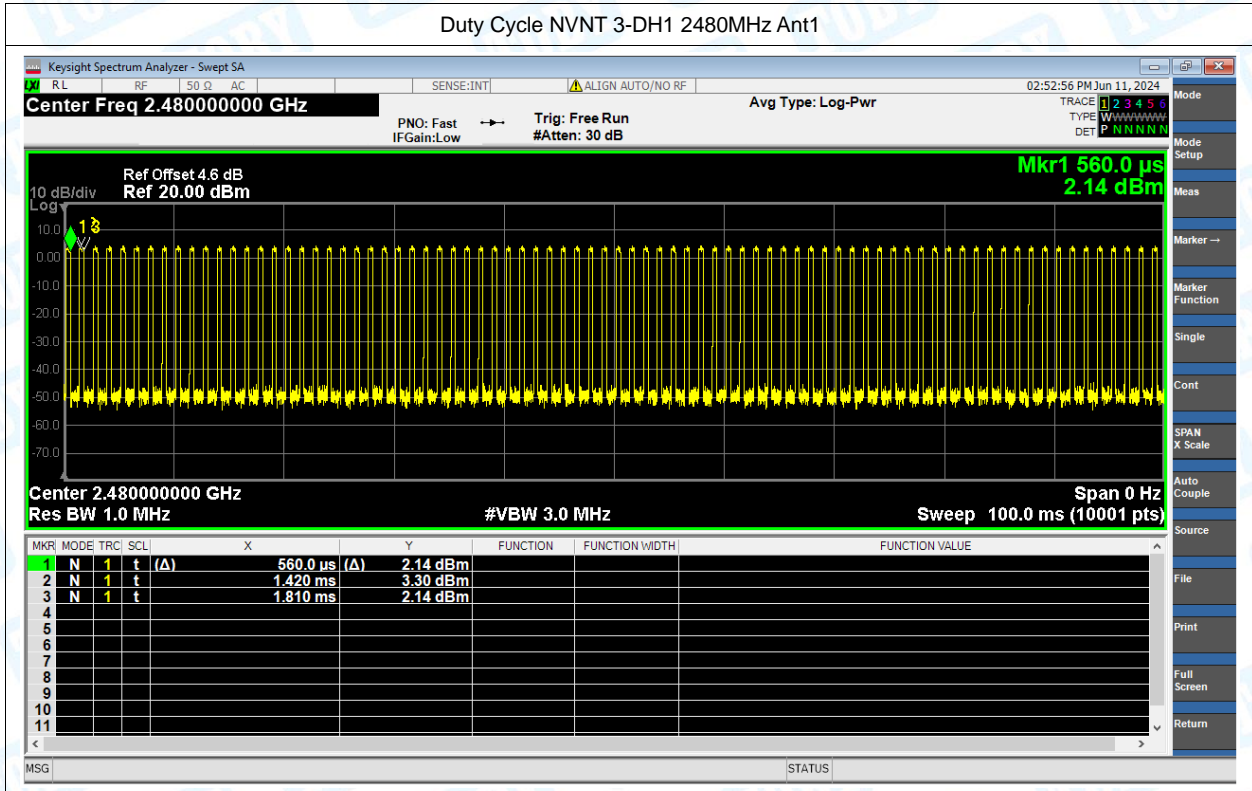


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



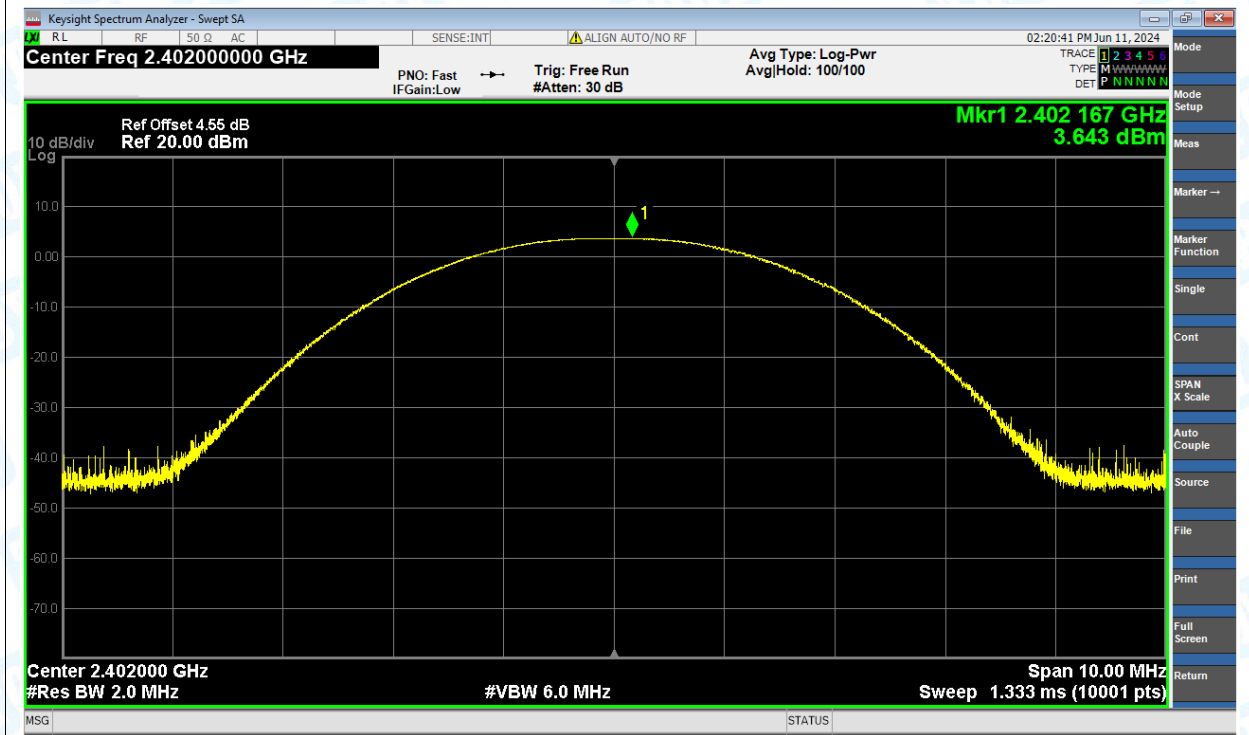


2. Maximum Conducted Output Power

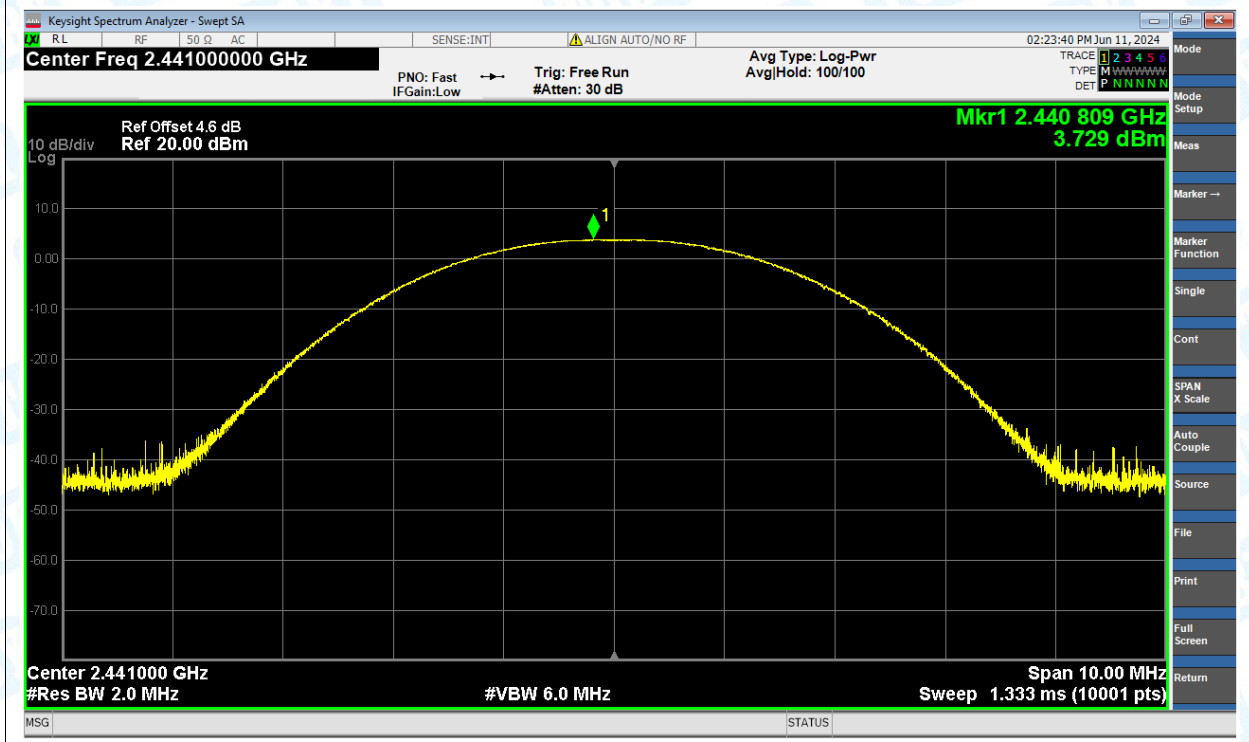
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	3.643	21	Pass
NVNT	1-DH1	2441	Ant1	3.729	21	Pass
NVNT	1-DH1	2480	Ant1	3.437	21	Pass
NVNT	1-DH3	2441	Ant1	3.716	21	Pass
NVNT	1-DH5	2441	Ant1	3.693	21	Pass
NVNT	2-DH1	2402	Ant1	4.317	21	Pass
NVNT	2-DH1	2441	Ant1	4.414	21	Pass
NVNT	2-DH1	2480	Ant1	4.111	21	Pass
NVNT	2-DH3	2441	Ant1	4.513	21	Pass
NVNT	2-DH5	2441	Ant1	4.486	21	Pass
NVNT	3-DH1	2402	Ant1	4.927	21	Pass
NVNT	3-DH1	2441	Ant1	5.027	21	Pass
NVNT	3-DH1	2480	Ant1	4.708	21	Pass
NVNT	3-DH3	2441	Ant1	4.906	21	Pass
NVNT	3-DH5	2441	Ant1	4.792	21	Pass

Test Graphs

Power NVNT 1-DH1 2402MHz Ant1



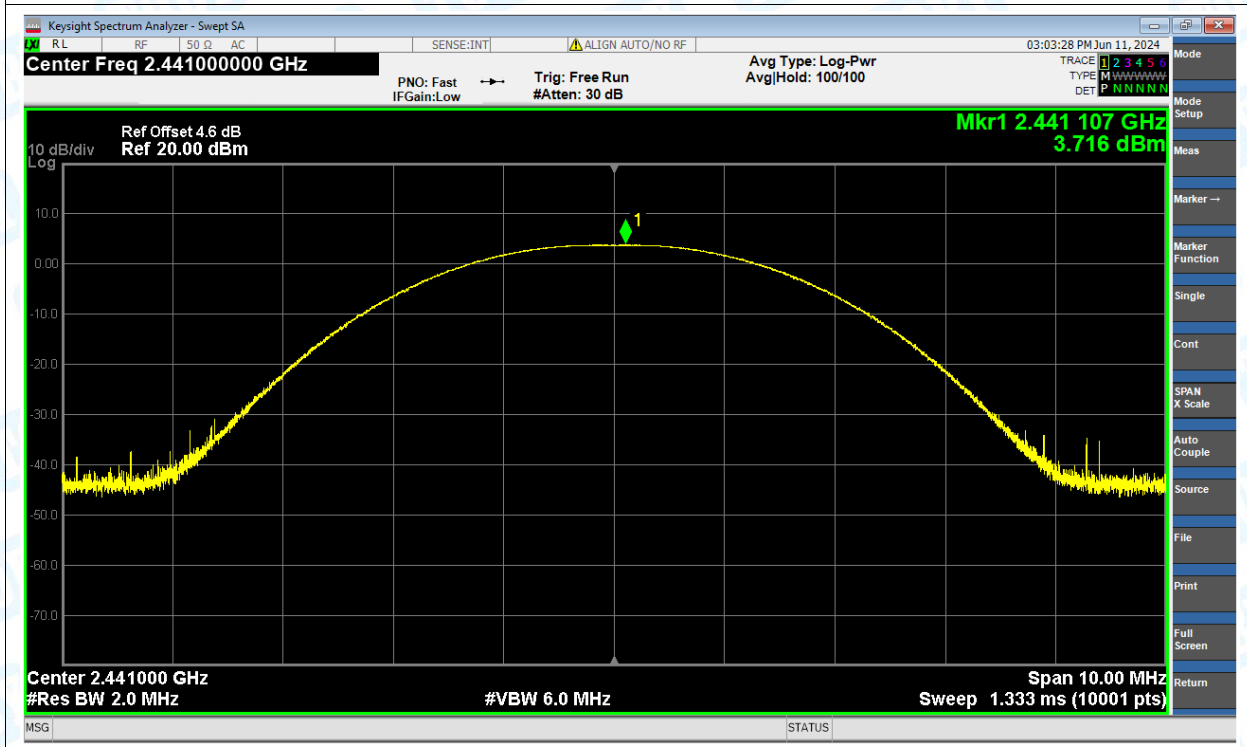
Power NVNT 1-DH1 2441MHz Ant1



Power NVNT 1-DH1 2480MHz Ant1



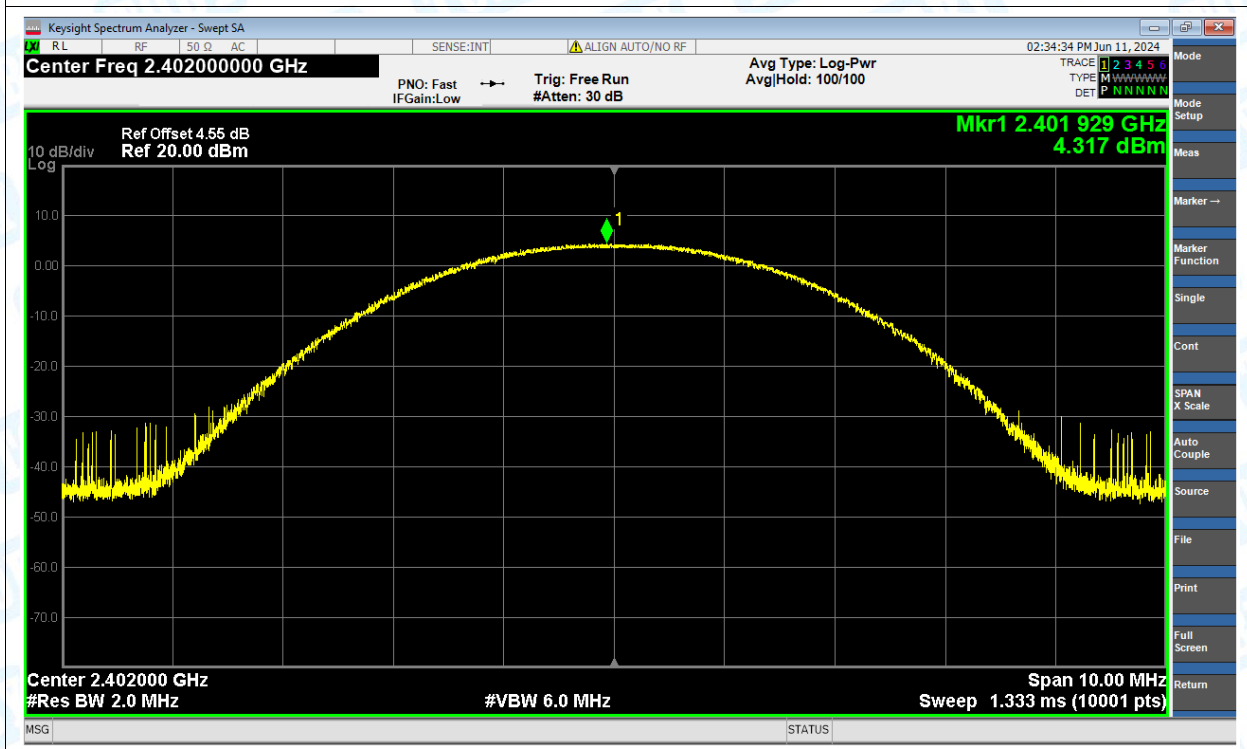
Power NVNT 1-DH3 2441MHz Ant1



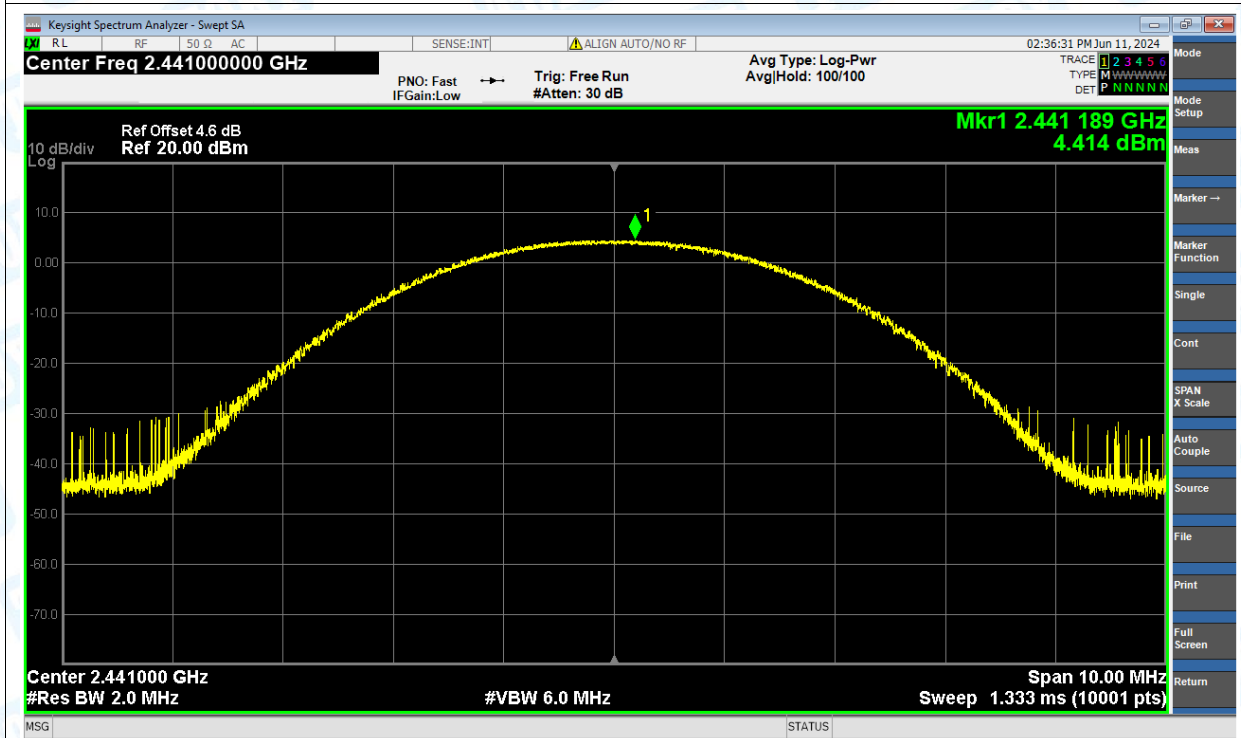
Power NVNT 1-DH5 2441MHz Ant1



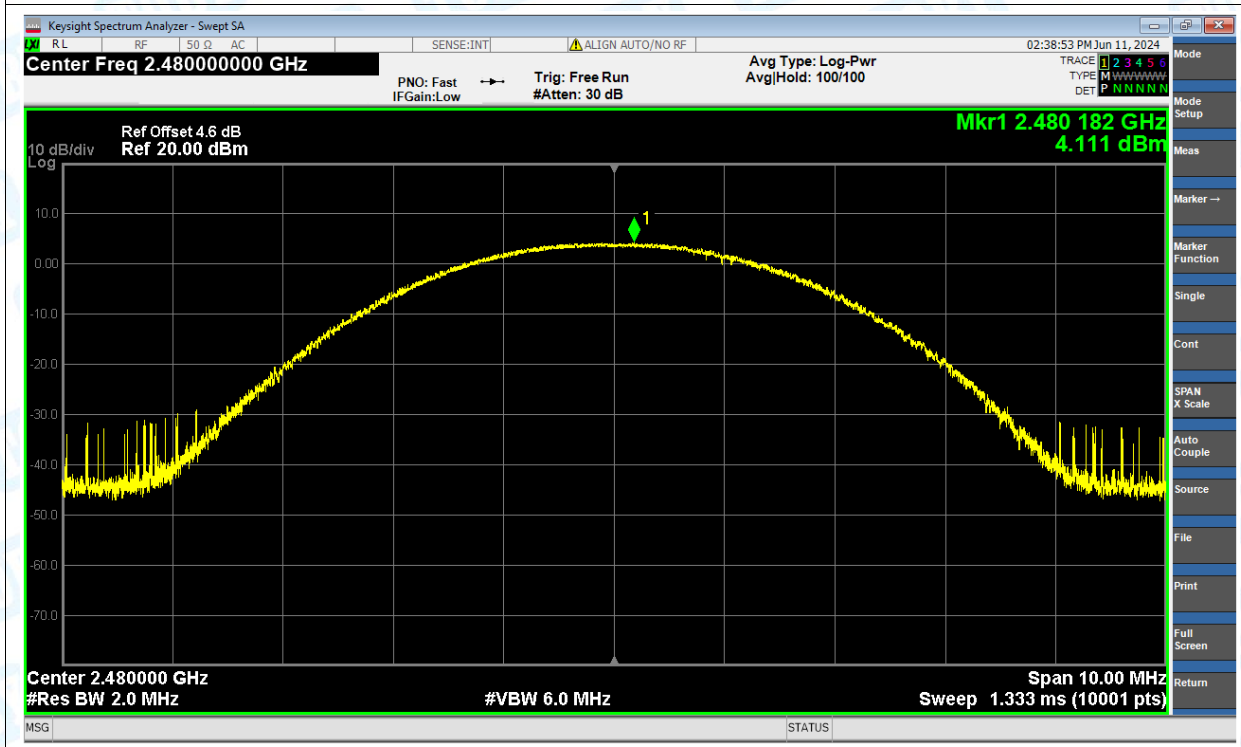
Power NVNT 2-DH1 2402MHz Ant1



Power NVNT 2-DH1 2441MHz Ant1



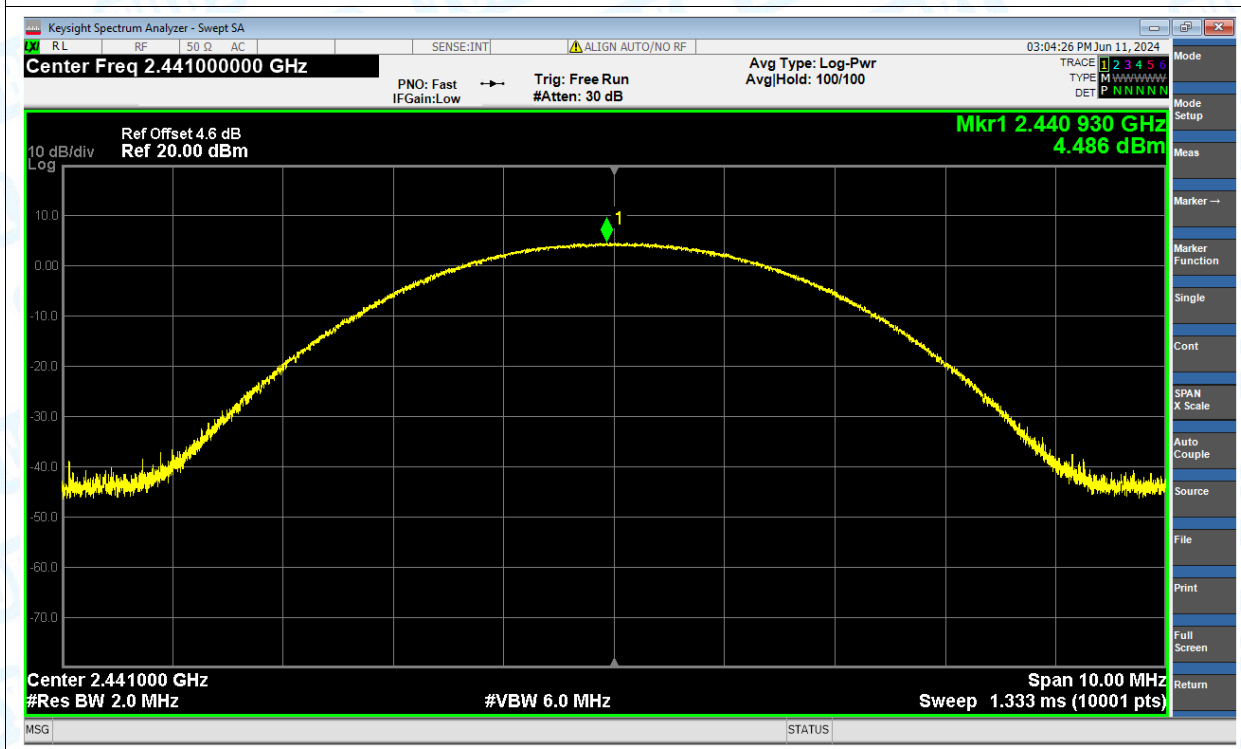
Power NVNT 2-DH1 2480MHz Ant1



Power NVNT 2-DH3 2441MHz Ant1



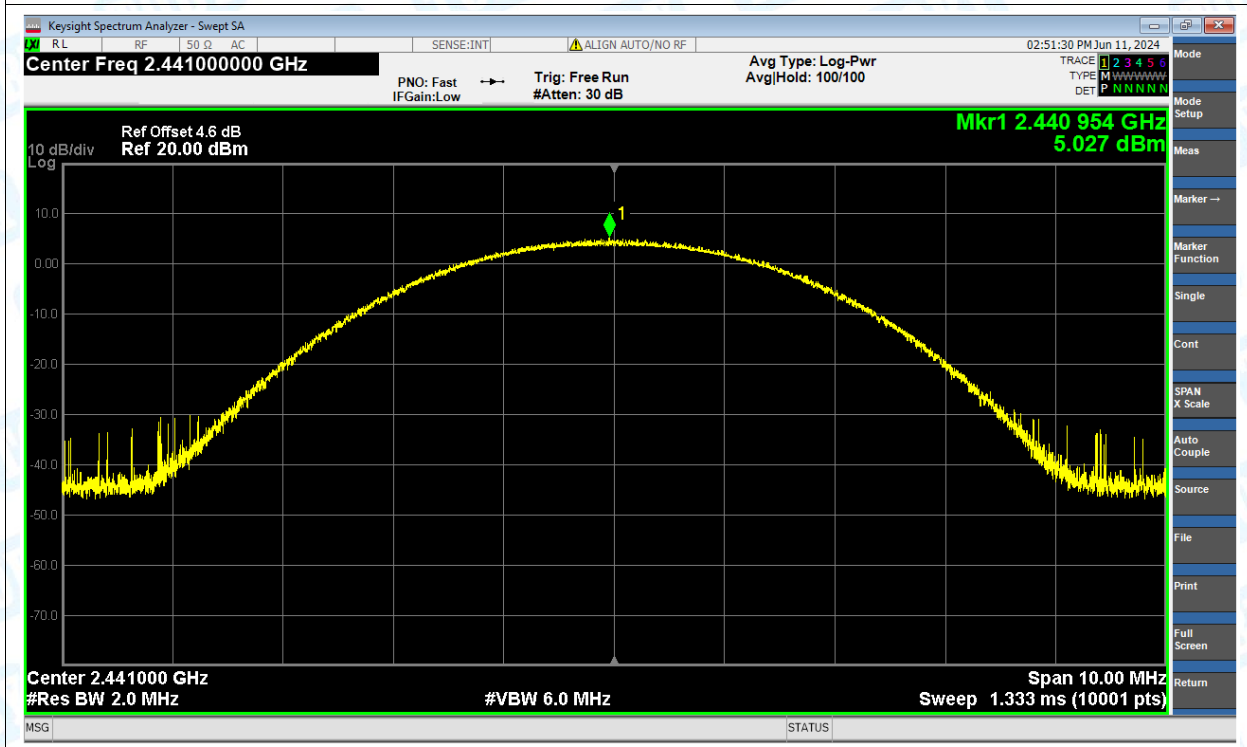
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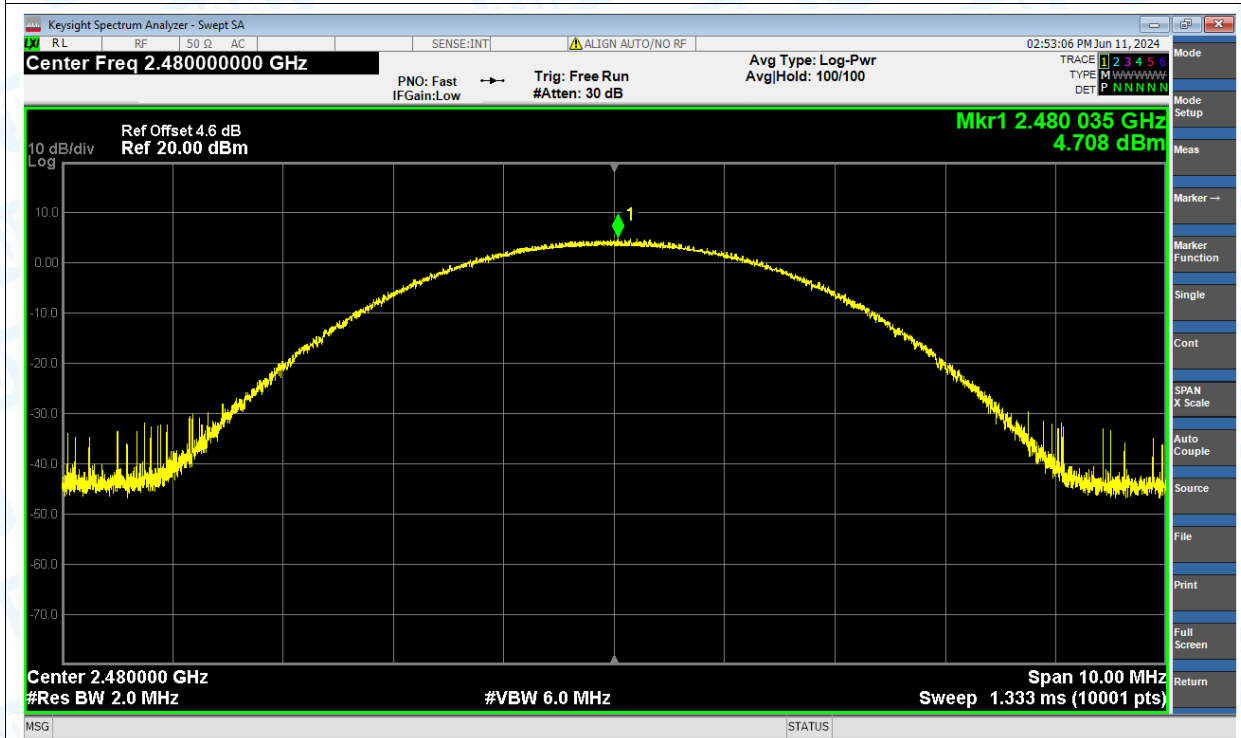
Power NVNT 3-DH1 2402MHz Ant1



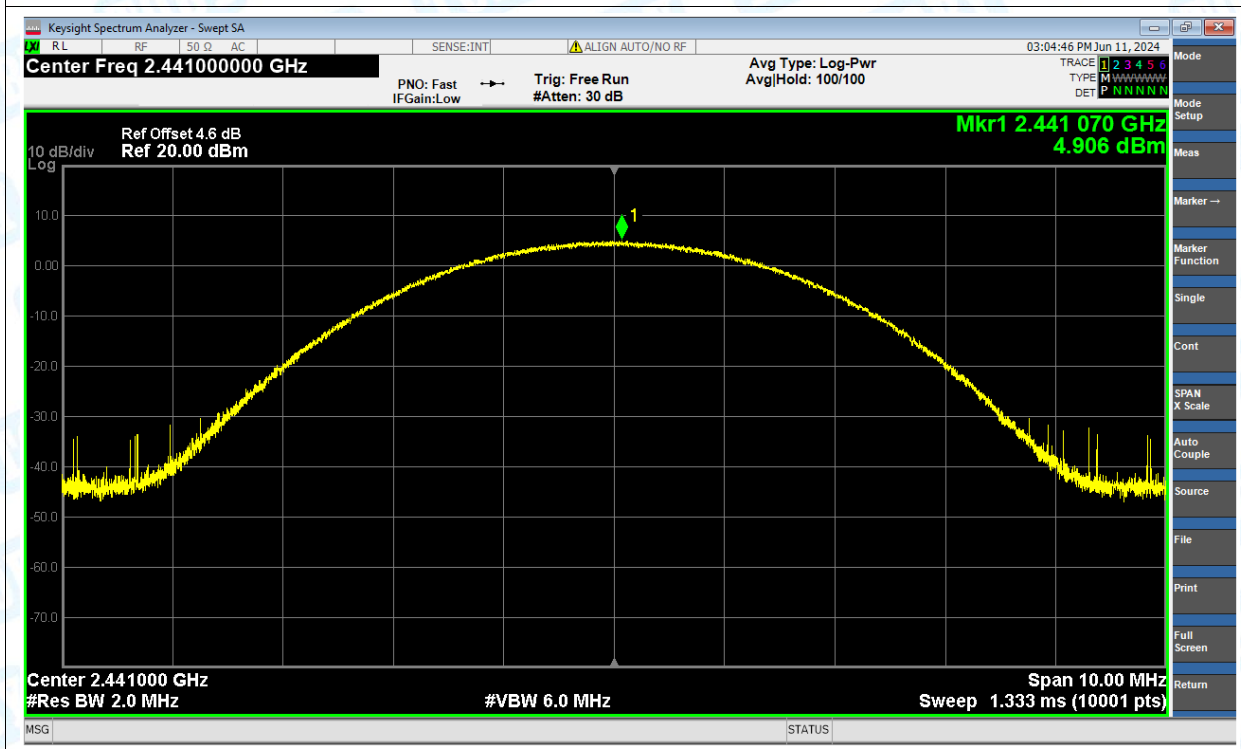
Power NVNT 3-DH1 2441MHz Ant1



Power NVNT 3-DH1 2480MHz Ant1



Power NVNT 3-DH3 2441MHz Ant1



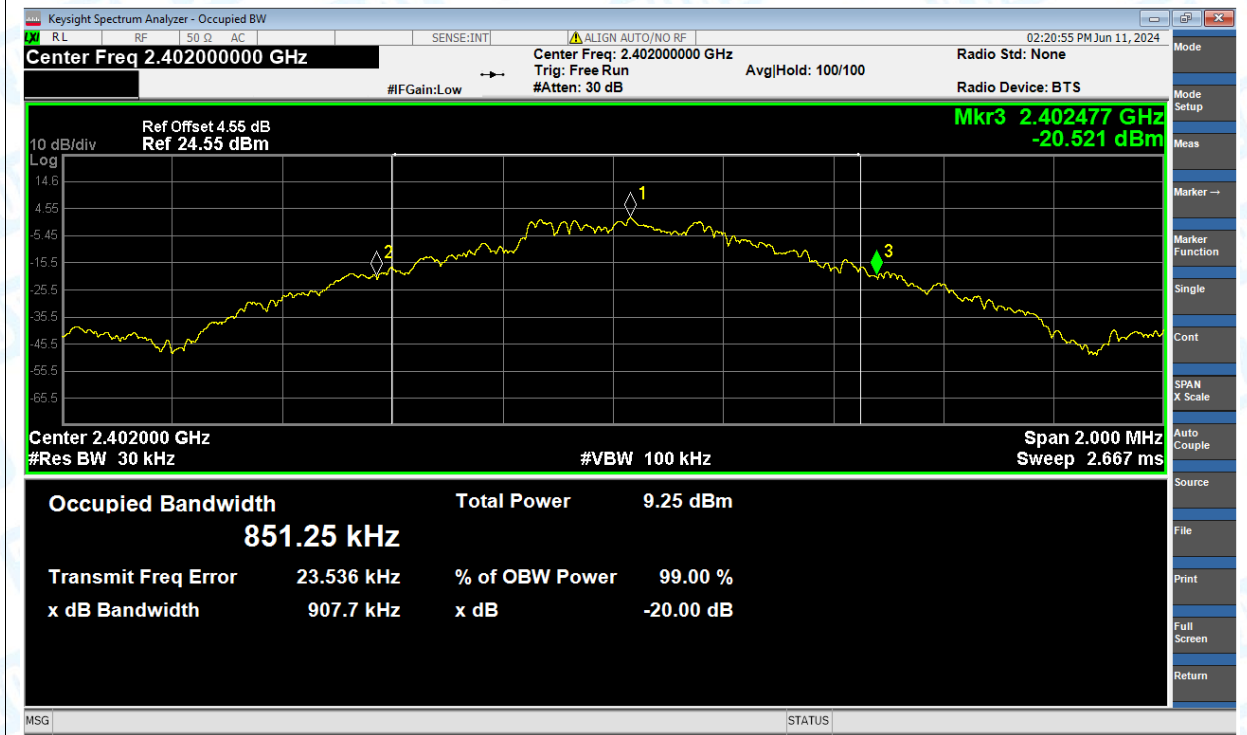


3. -20dB Bandwidth

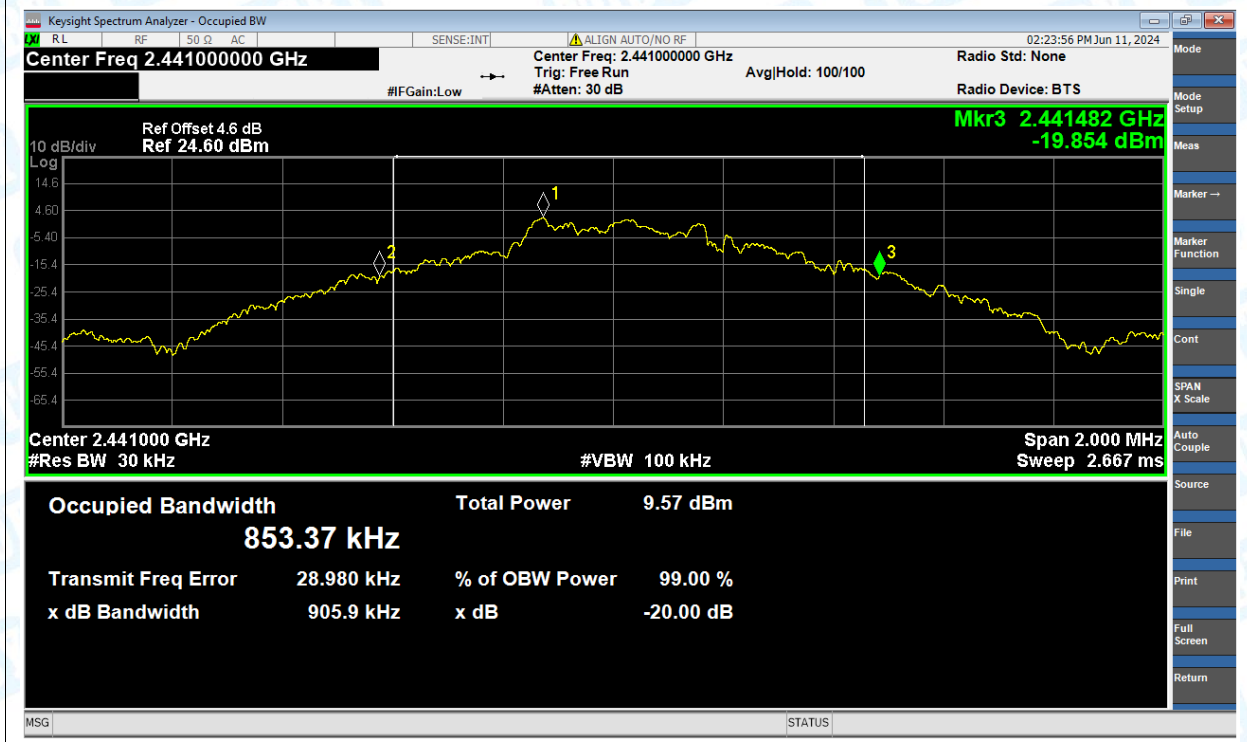
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.91	0	Pass
NVNT	1-DH1	2441	Ant1	0.91	0	Pass
NVNT	1-DH1	2480	Ant1	0.93	0	Pass
NVNT	2-DH1	2402	Ant1	1.24	0	Pass
NVNT	2-DH1	2441	Ant1	1.24	0	Pass
NVNT	2-DH1	2480	Ant1	1.24	0	Pass
NVNT	3-DH1	2402	Ant1	1.22	0	Pass
NVNT	3-DH1	2441	Ant1	1.21	0	Pass
NVNT	3-DH1	2480	Ant1	1.21	0	Pass

Test Graphs

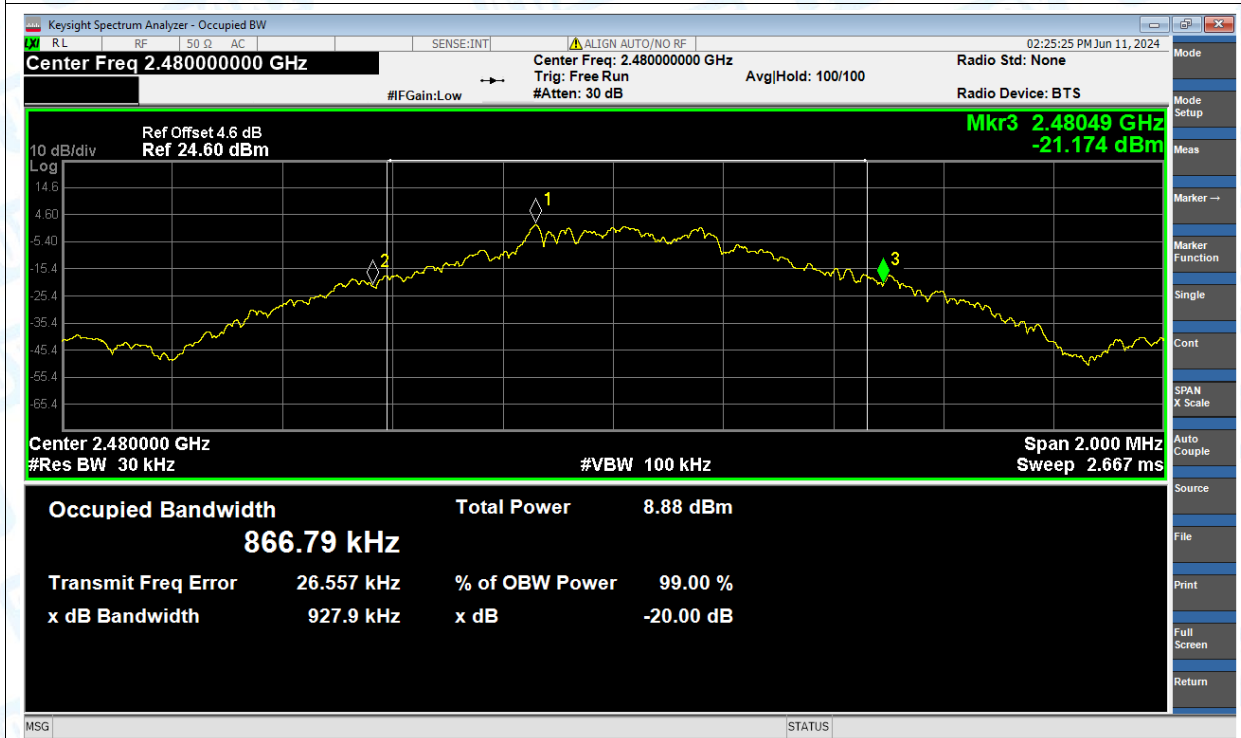
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



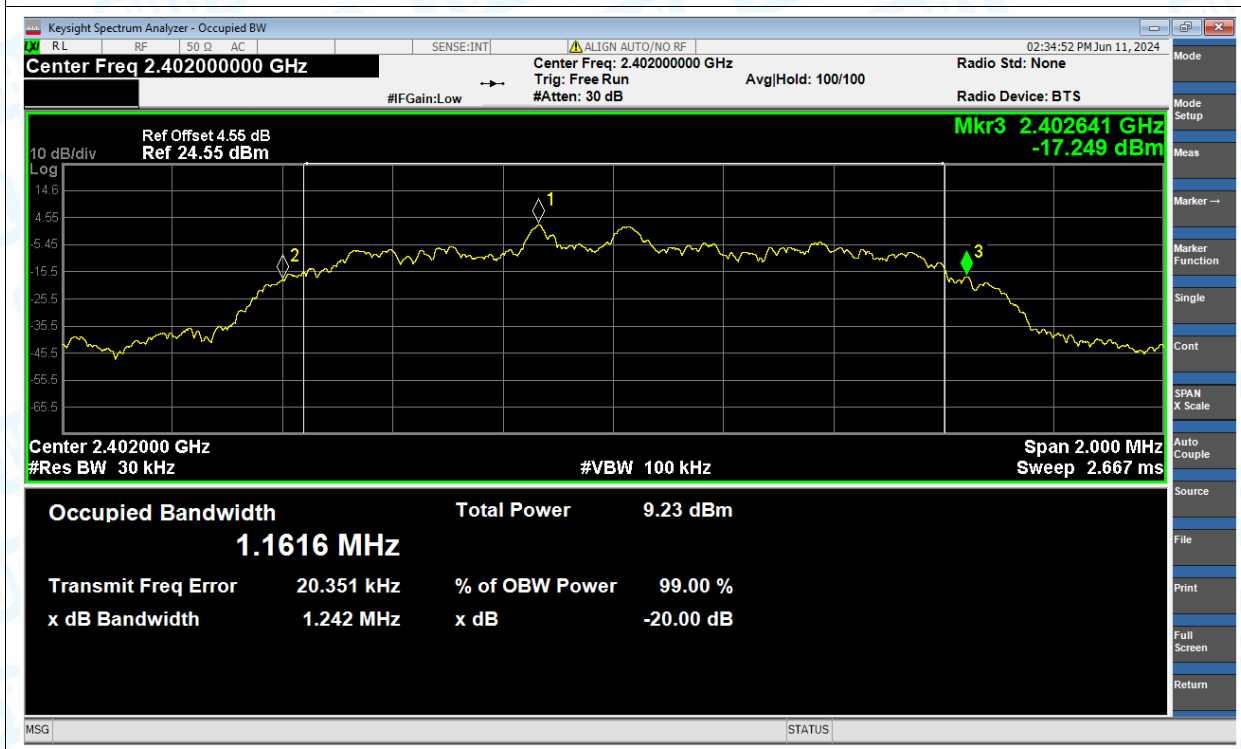
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



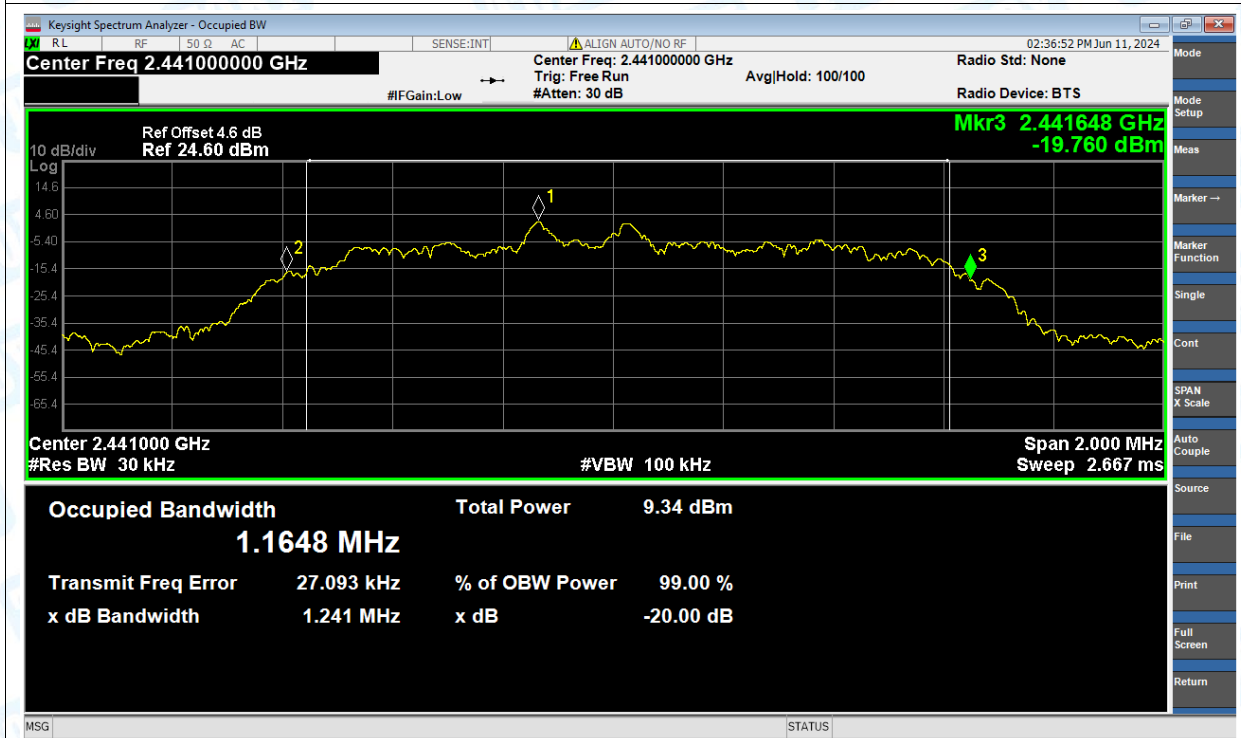
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



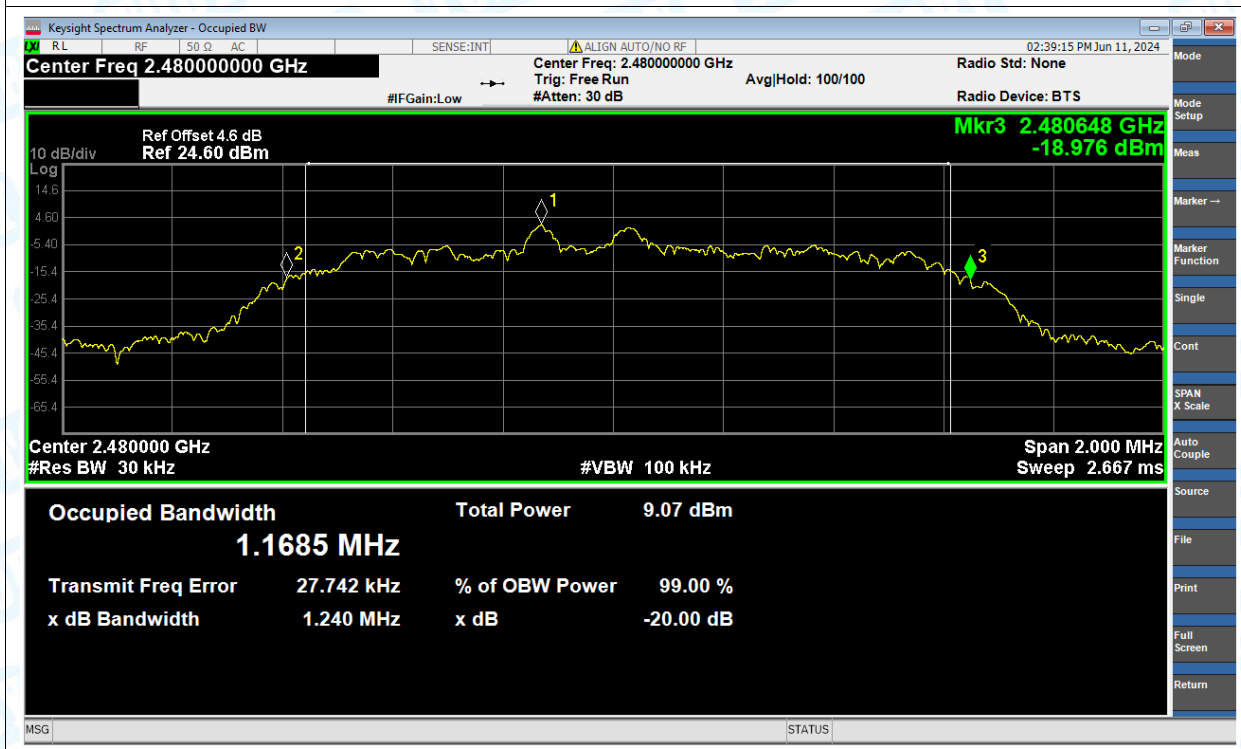
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



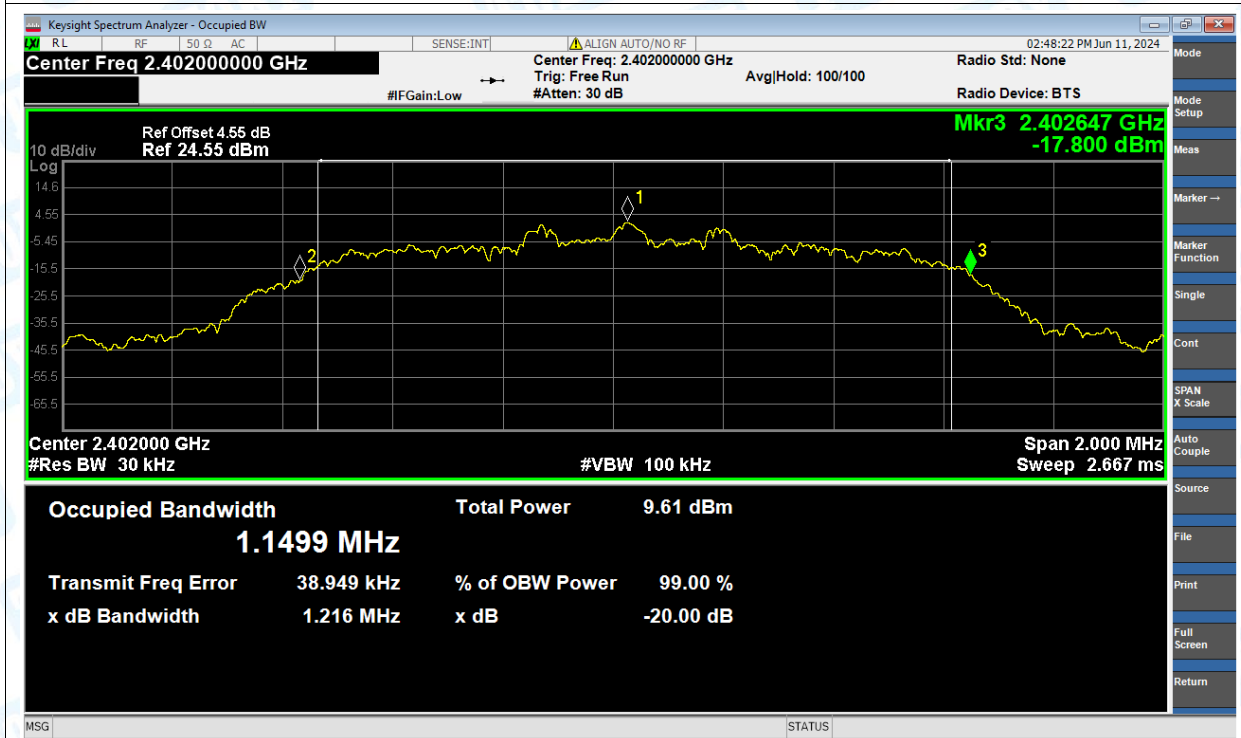
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



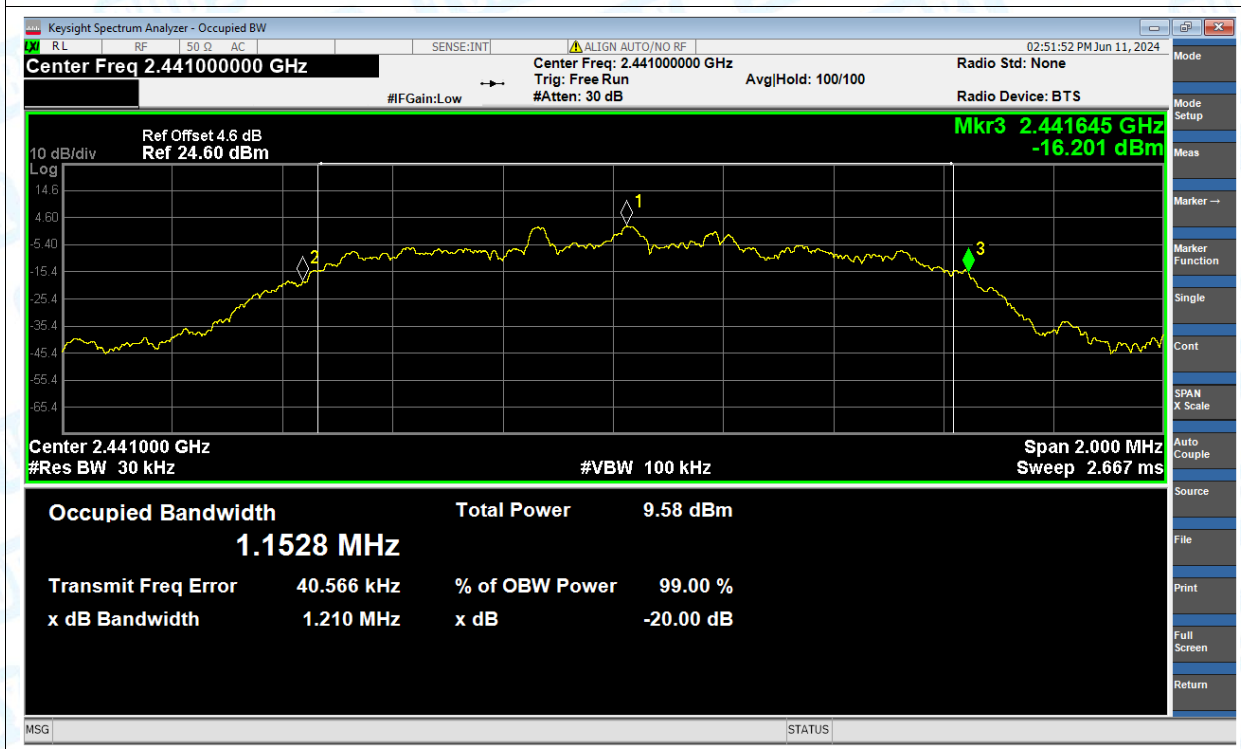
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

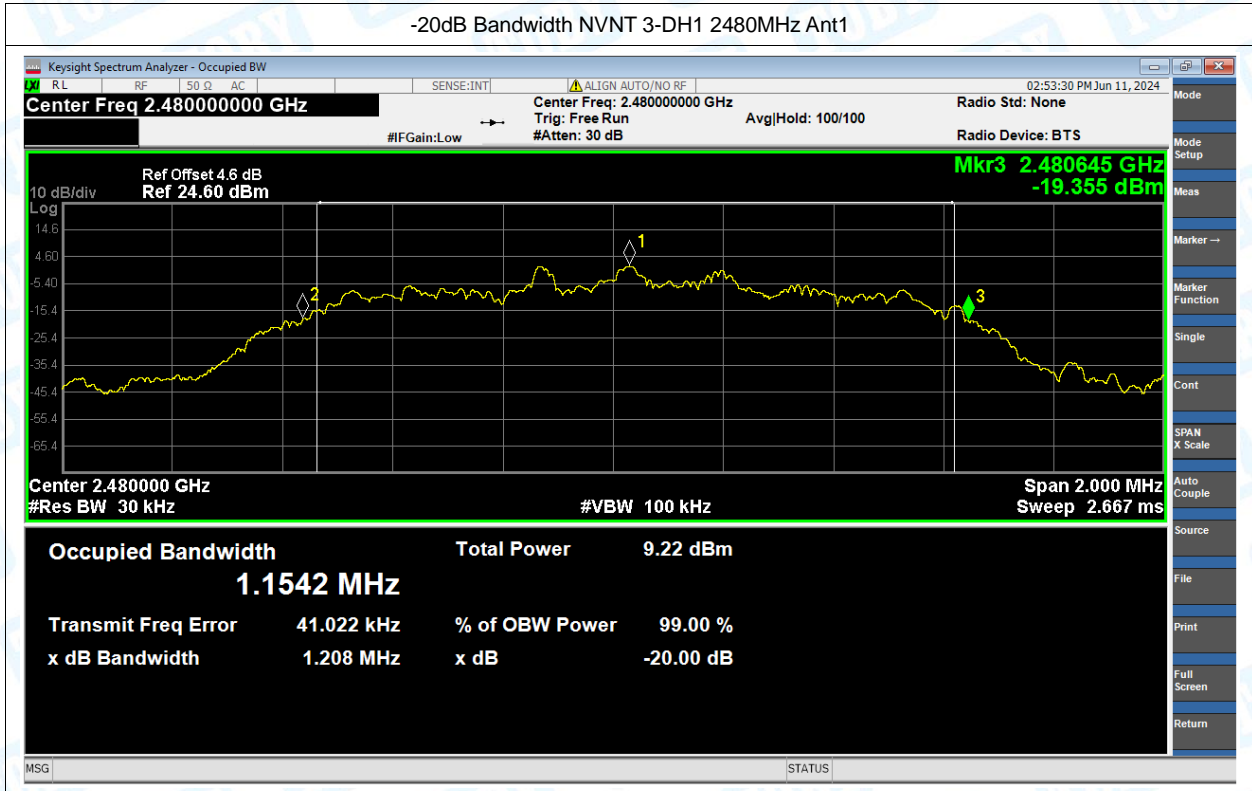


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



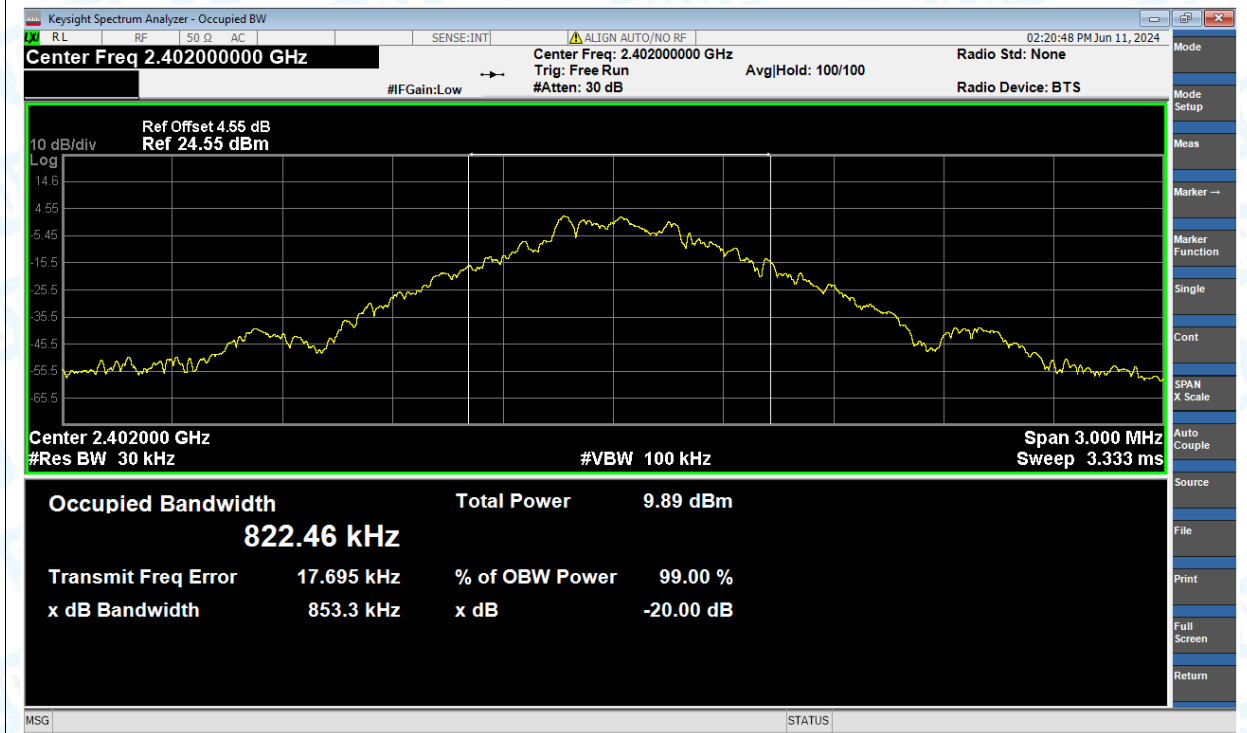


4. Occupied Channel Bandwidth

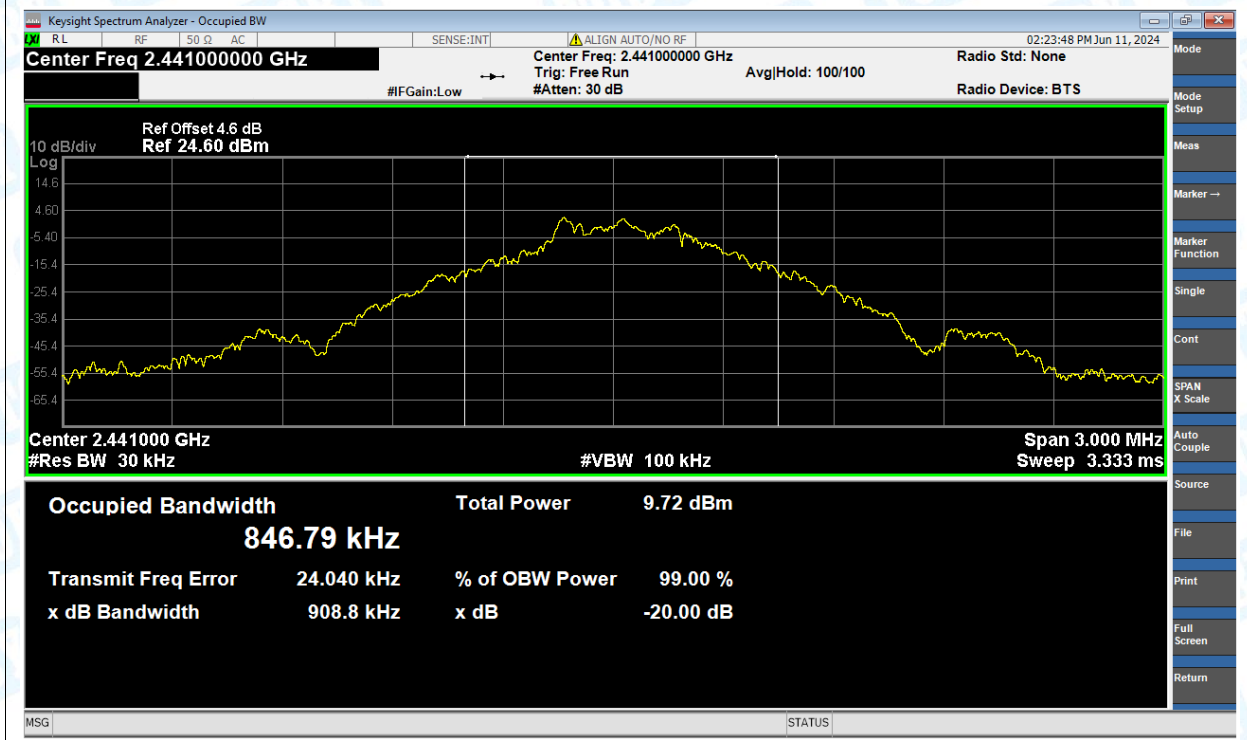
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.822
NVNT	1-DH1	2441	Ant1	0.847
NVNT	1-DH1	2480	Ant1	0.852
NVNT	2-DH1	2402	Ant1	1.165
NVNT	2-DH1	2441	Ant1	1.184
NVNT	2-DH1	2480	Ant1	1.162
NVNT	3-DH1	2402	Ant1	1.153
NVNT	3-DH1	2441	Ant1	1.15
NVNT	3-DH1	2480	Ant1	1.156

Test Graphs

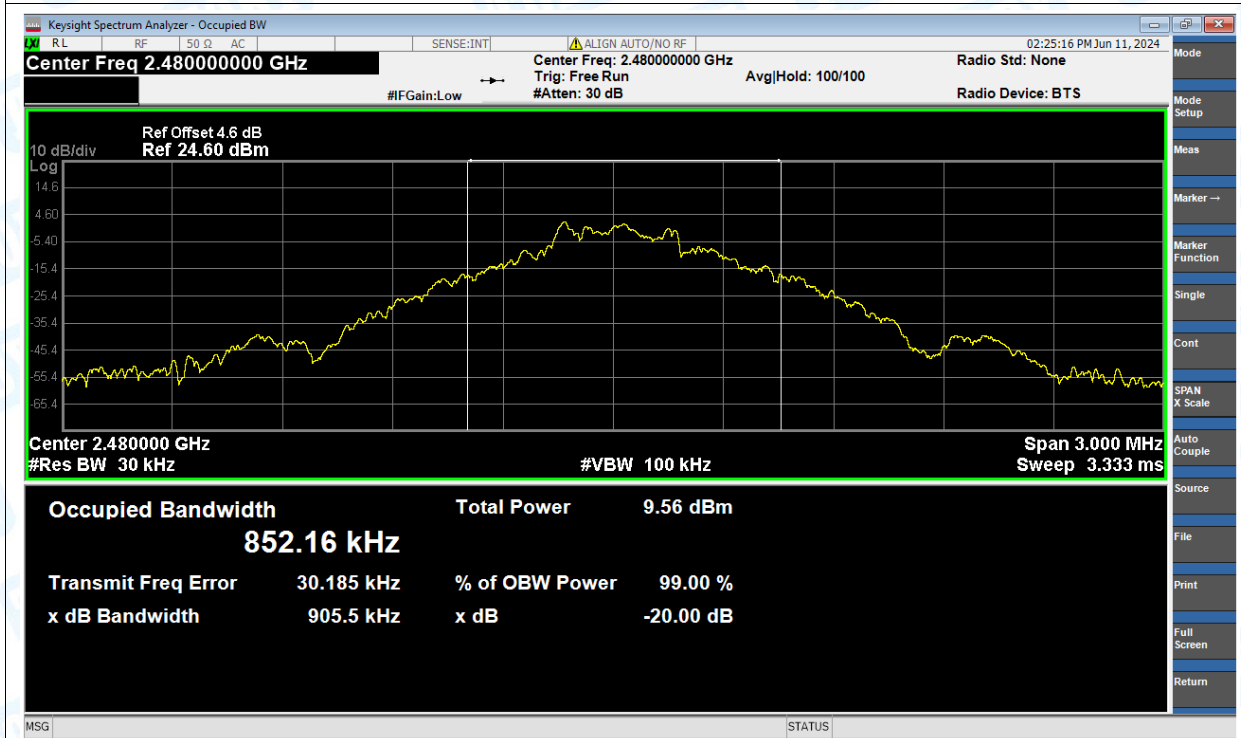
OBW NVNT 1-DH1 2402MHz Ant1



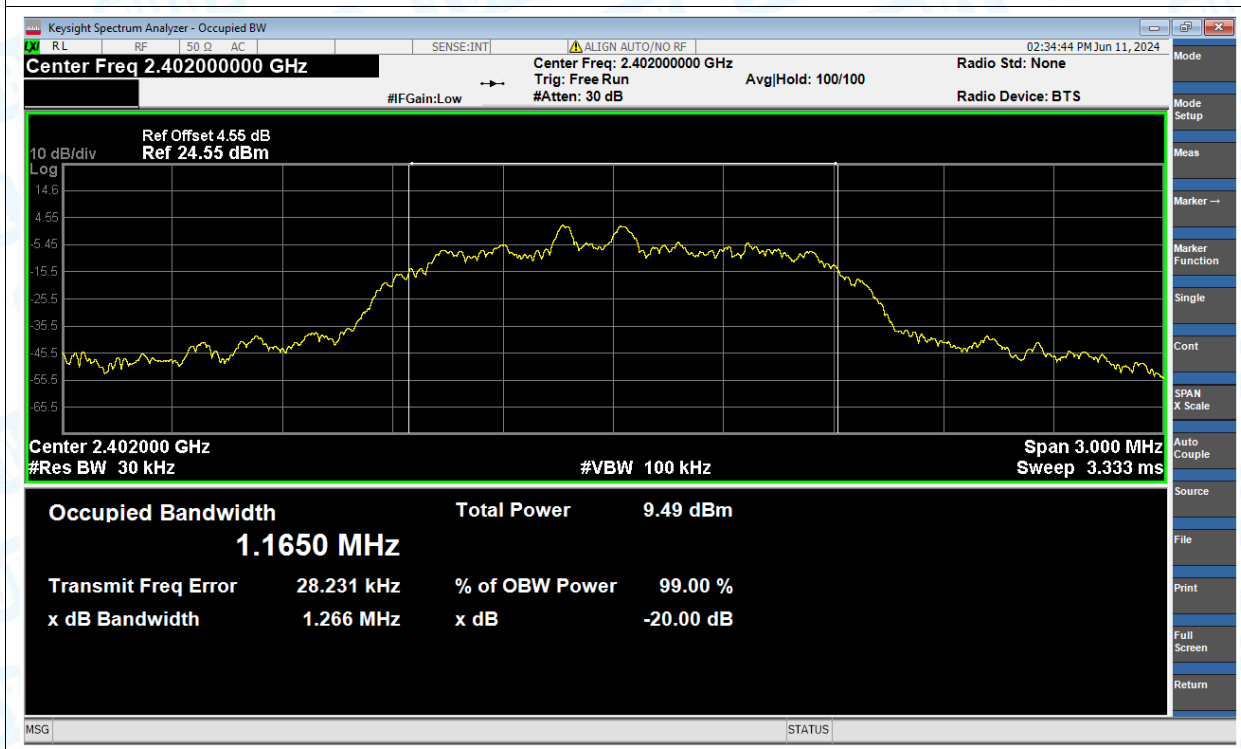
OBW NVNT 1-DH1 2441MHz Ant1



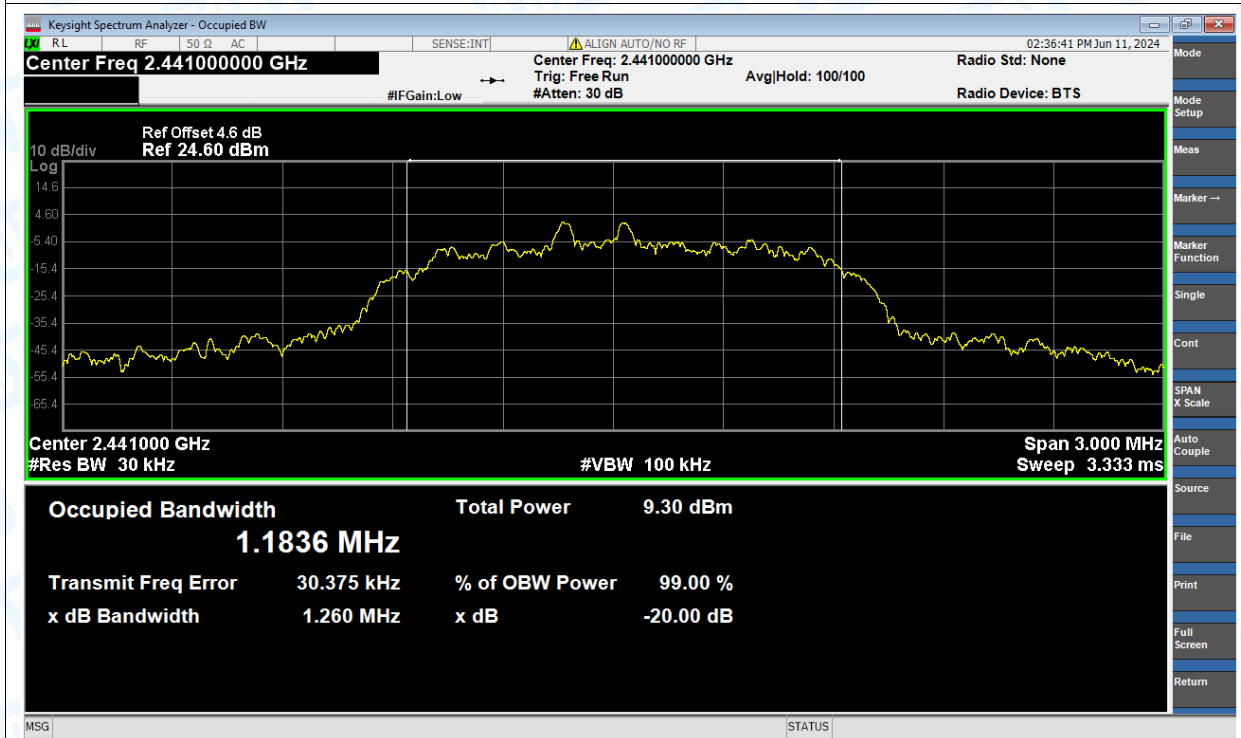
OBW NVNT 1-DH1 2480MHz Ant1



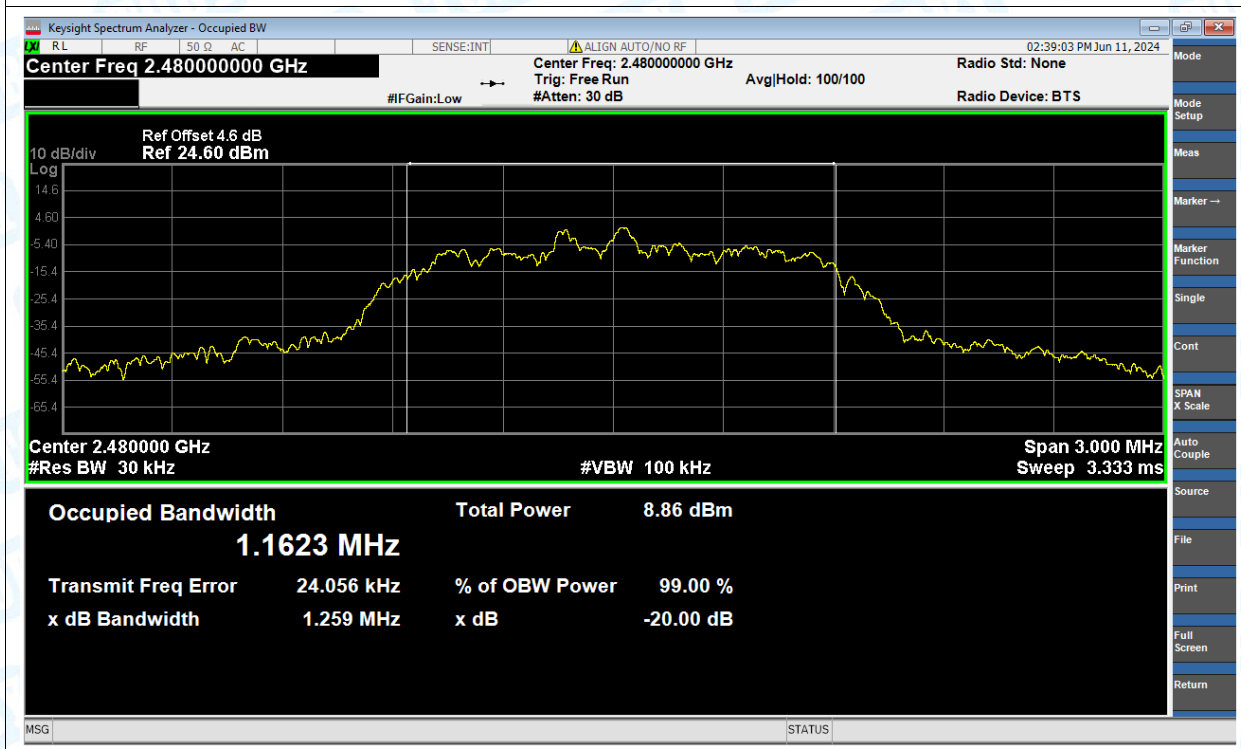
OBW NVNT 2-DH1 2402MHz Ant1



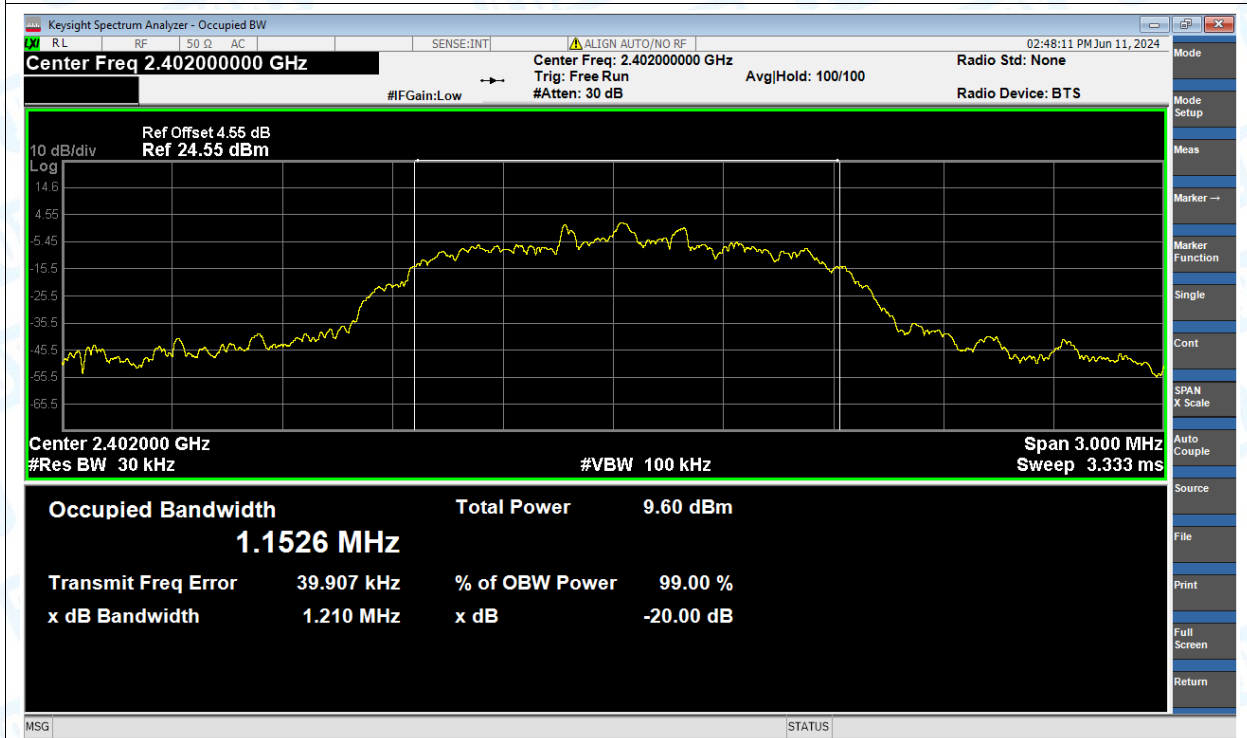
OBW NVNT 2-DH1 2441MHz Ant1



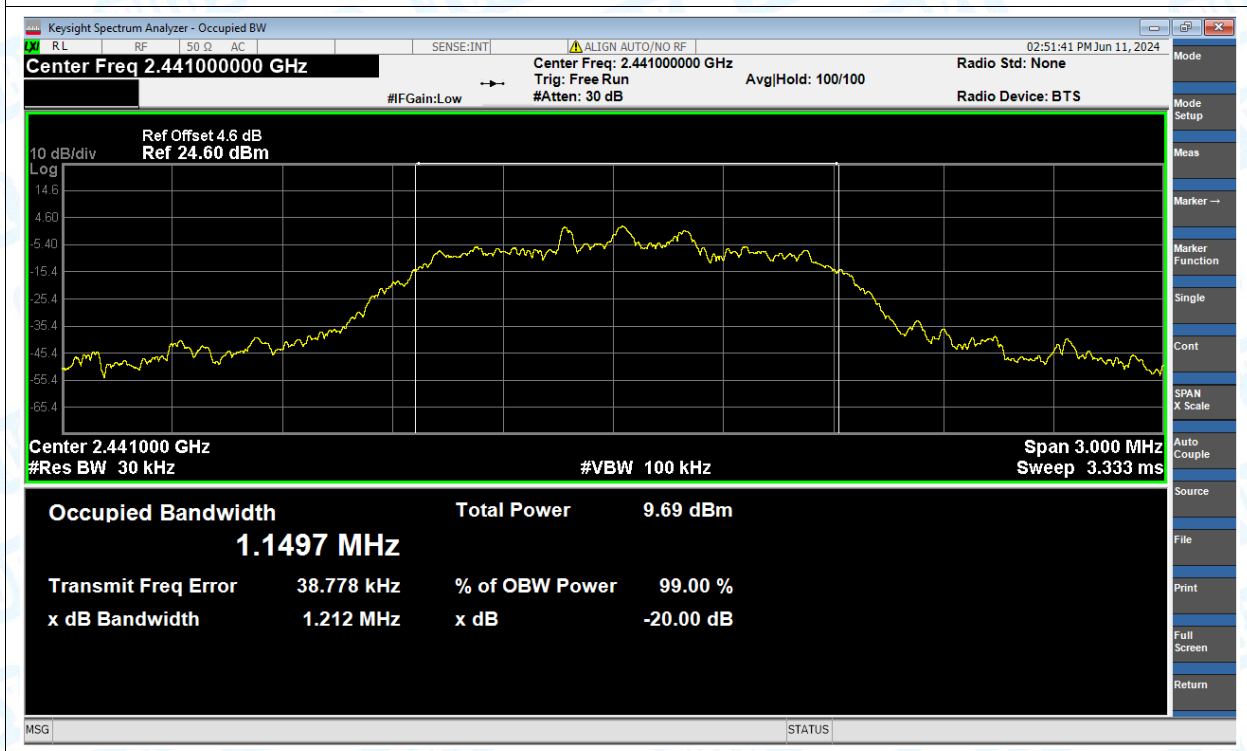
OBW NVNT 2-DH1 2480MHz Ant1

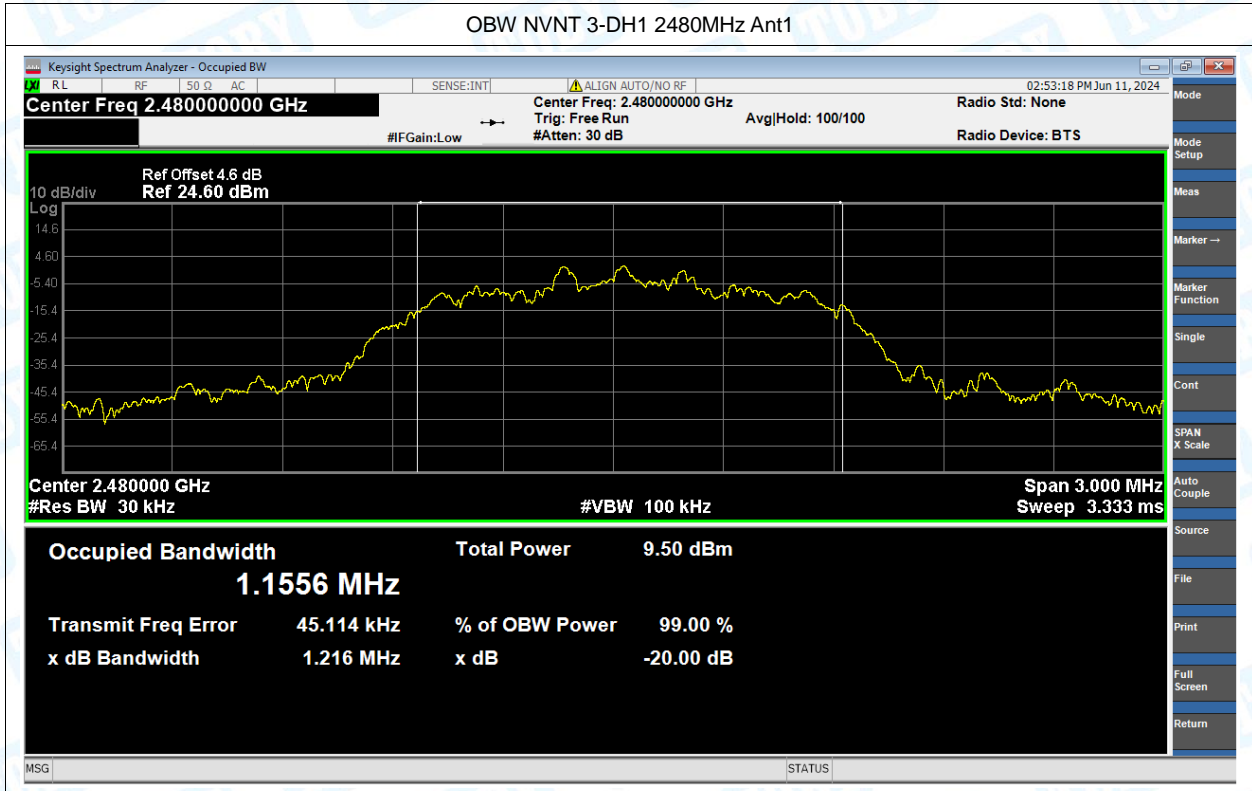


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1





5. Band Edge

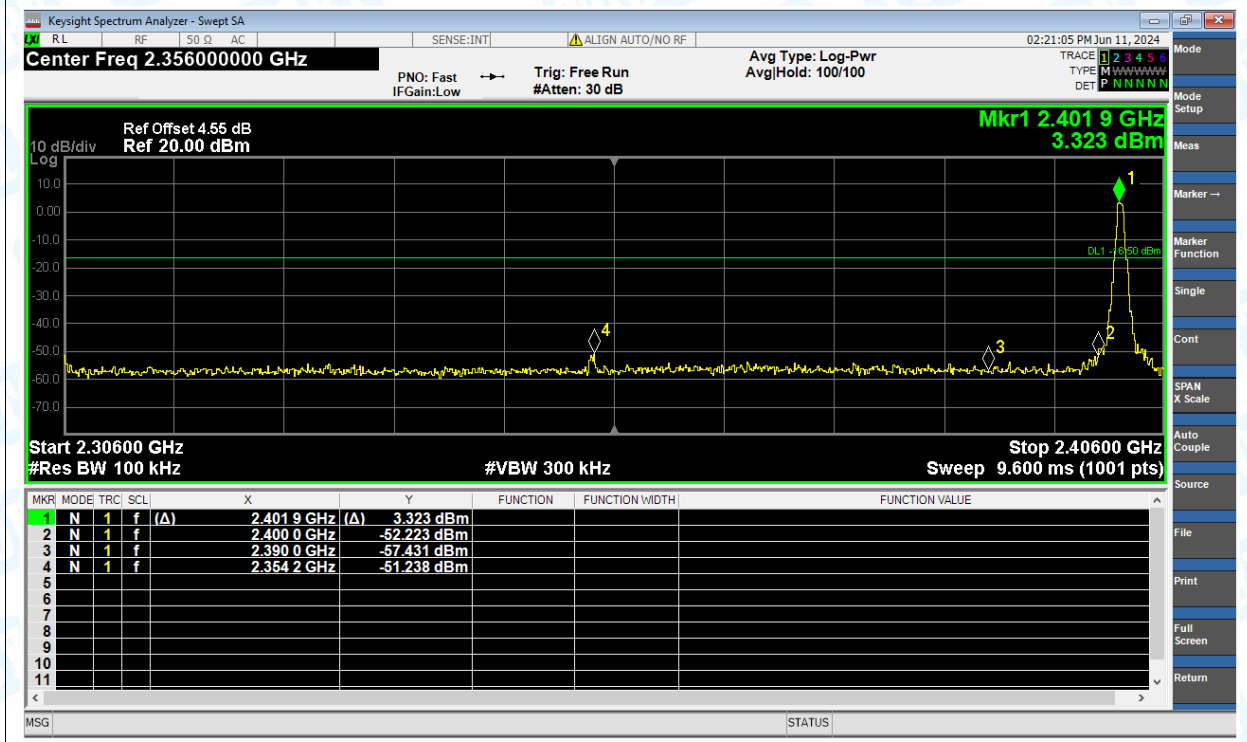
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-54.74	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-56.9	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-56.15	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-55.56	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-54.47	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-55.9	-20	Pass

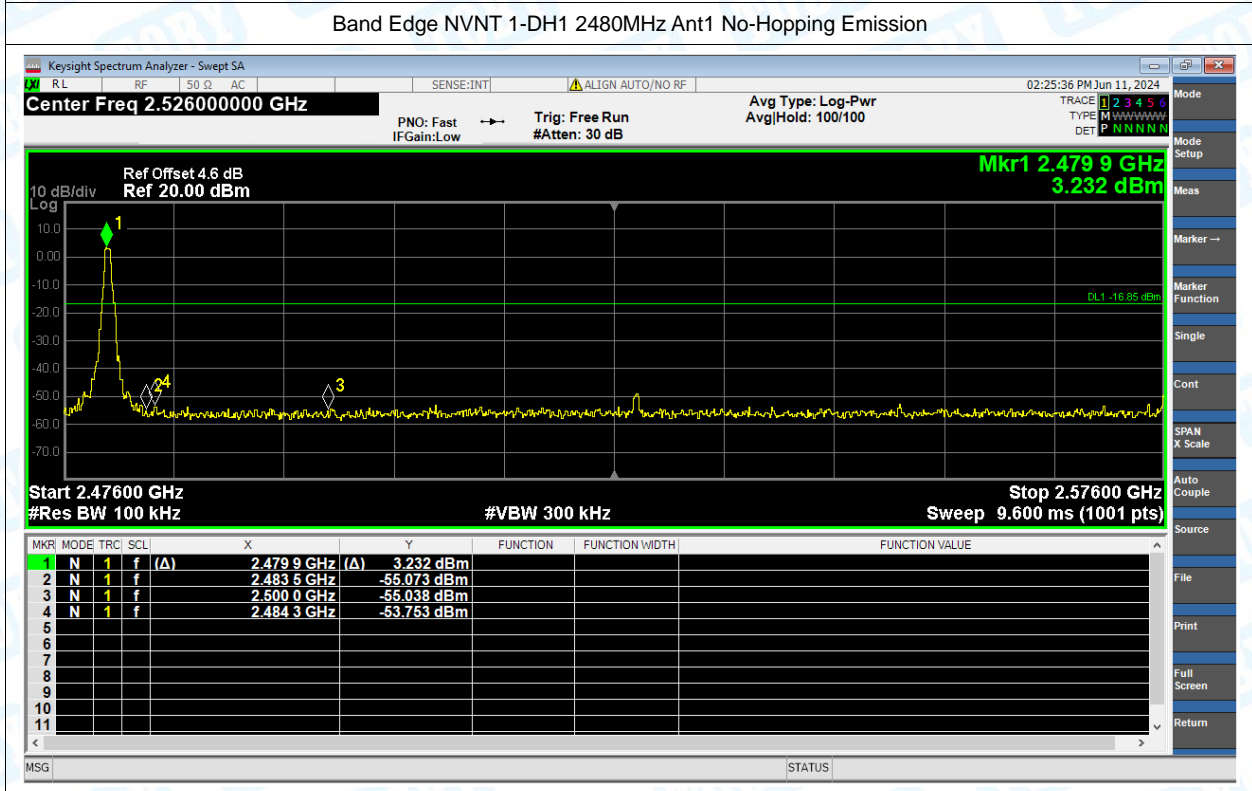
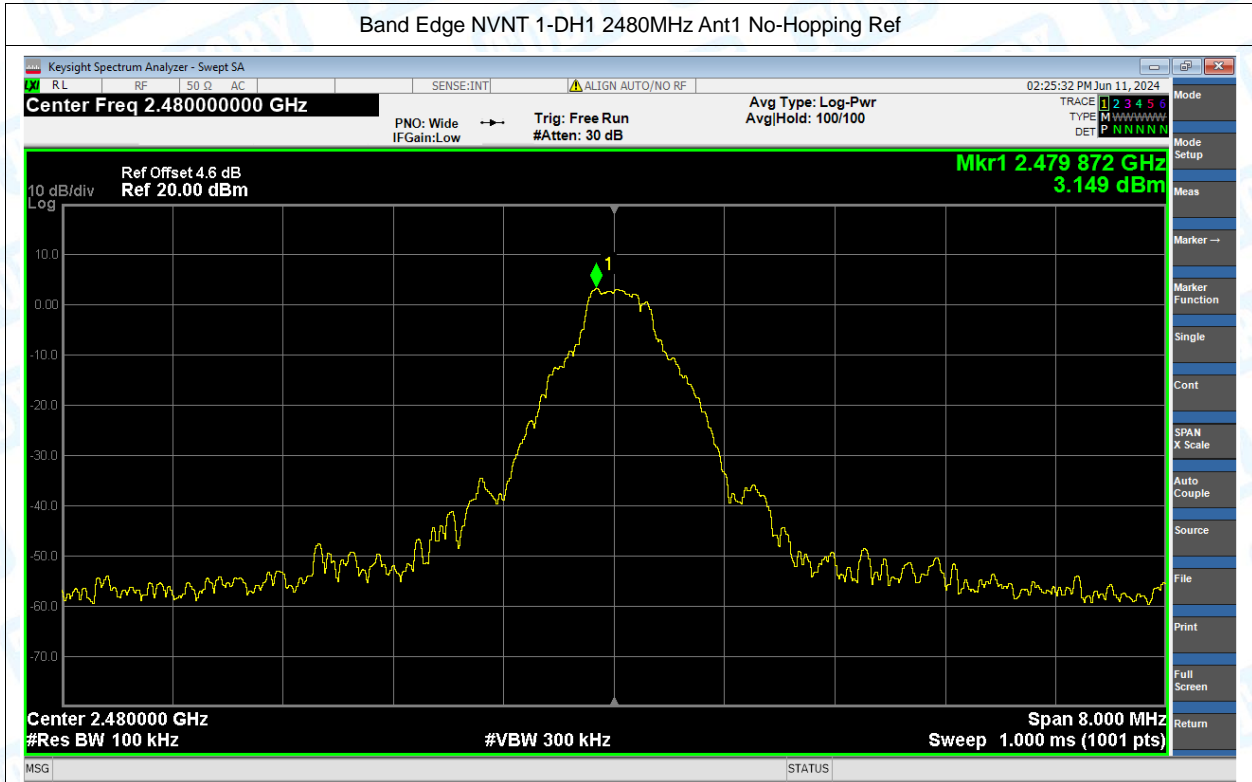
Test Graphs

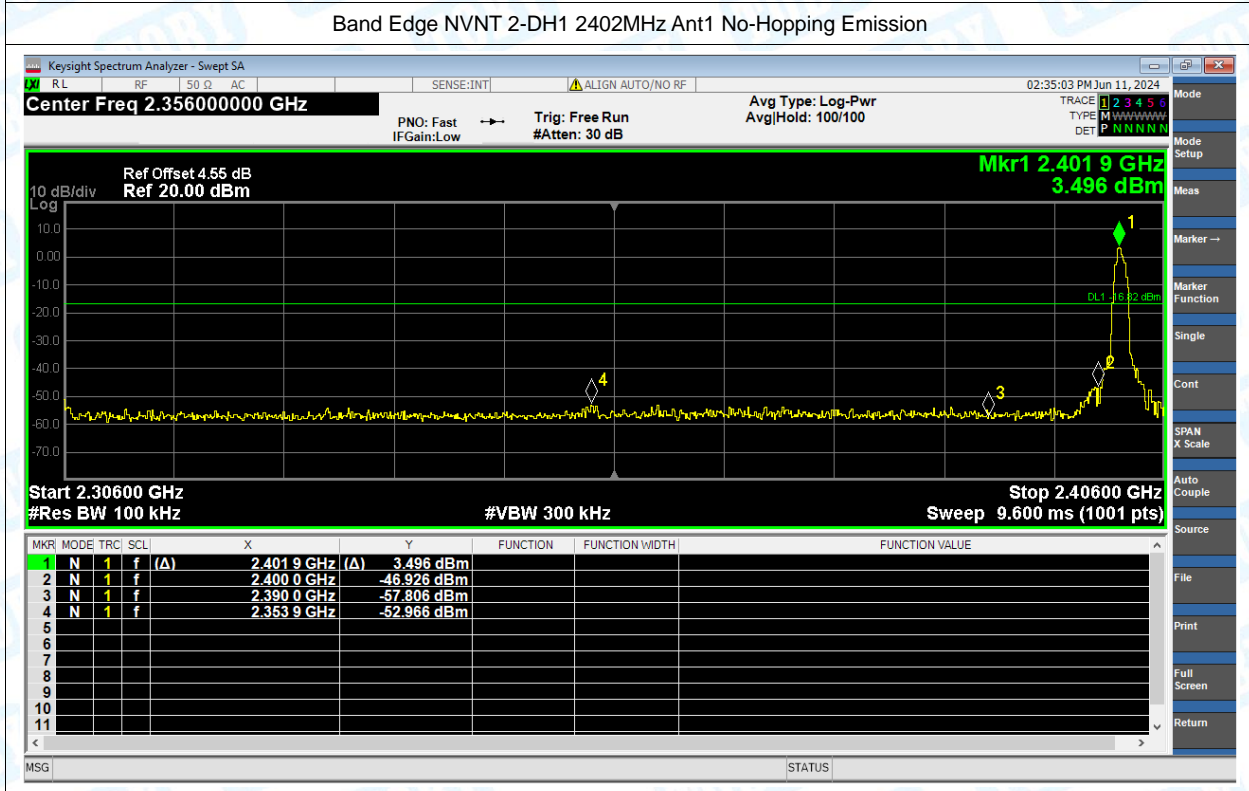
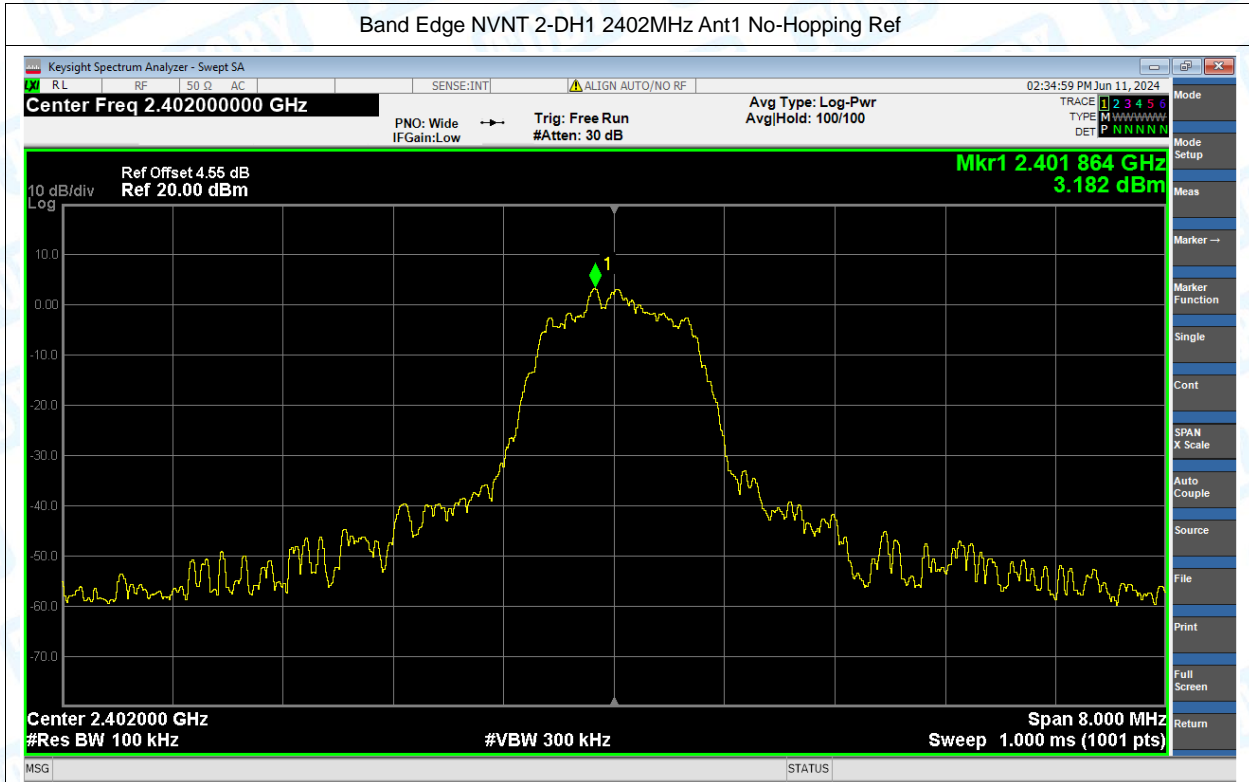
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref

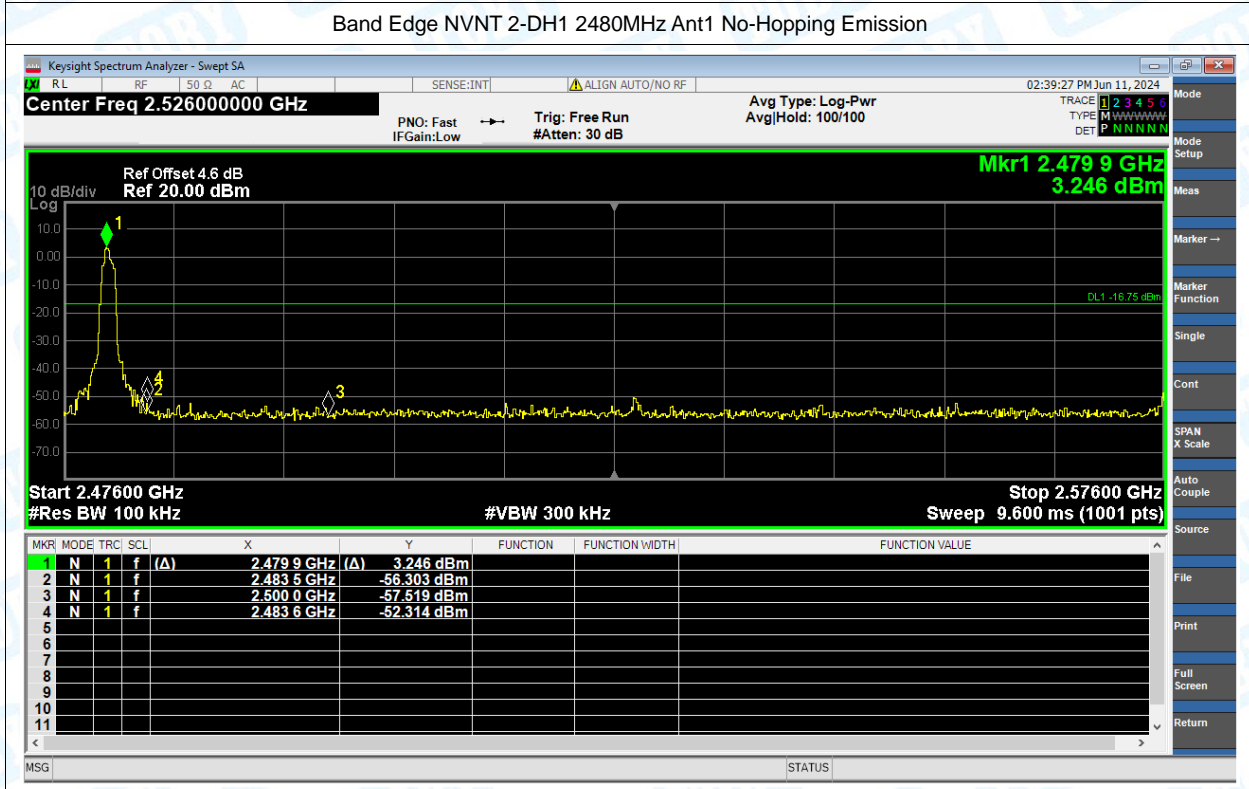
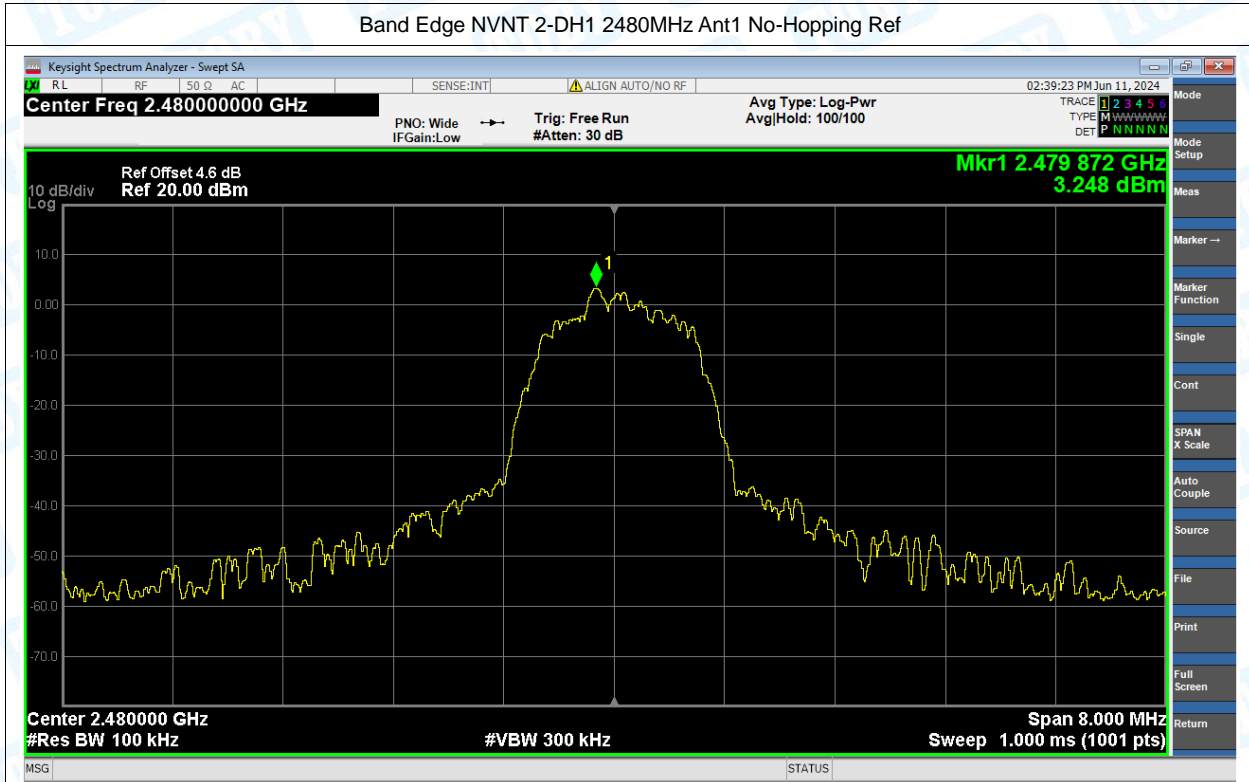


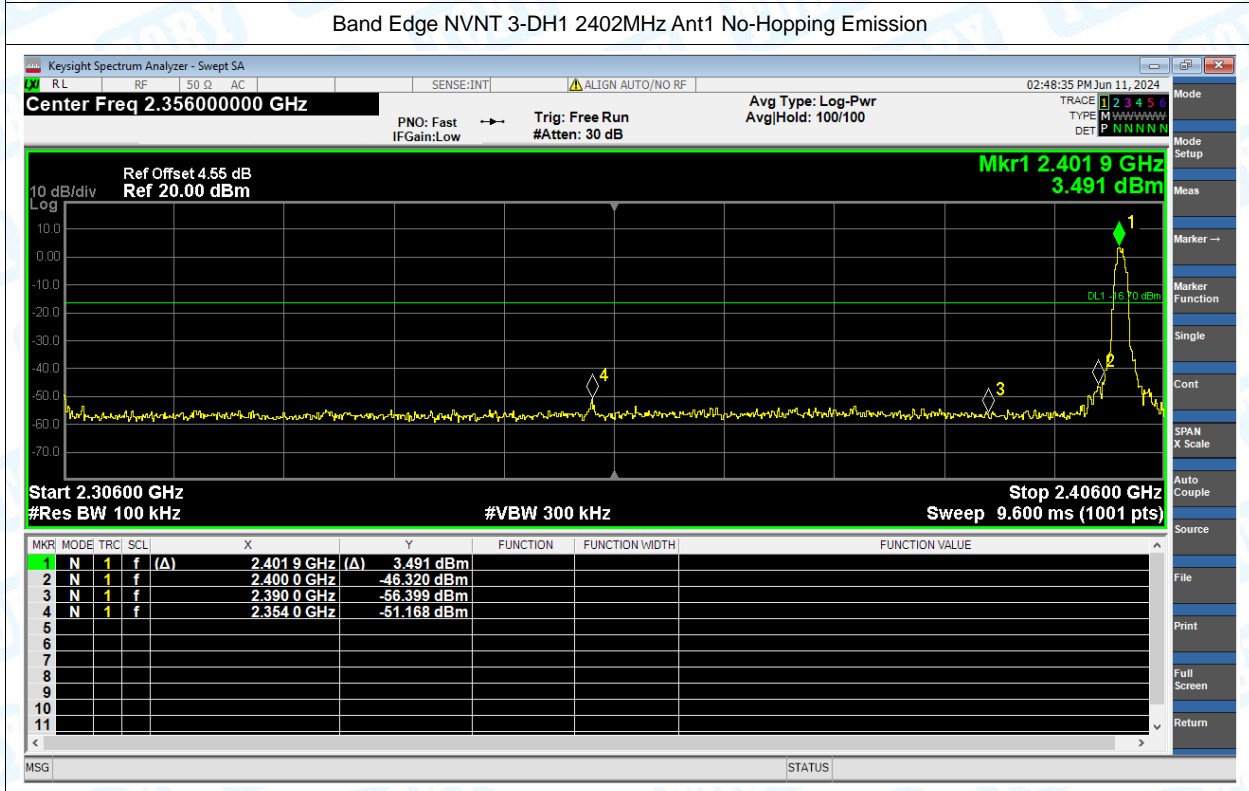
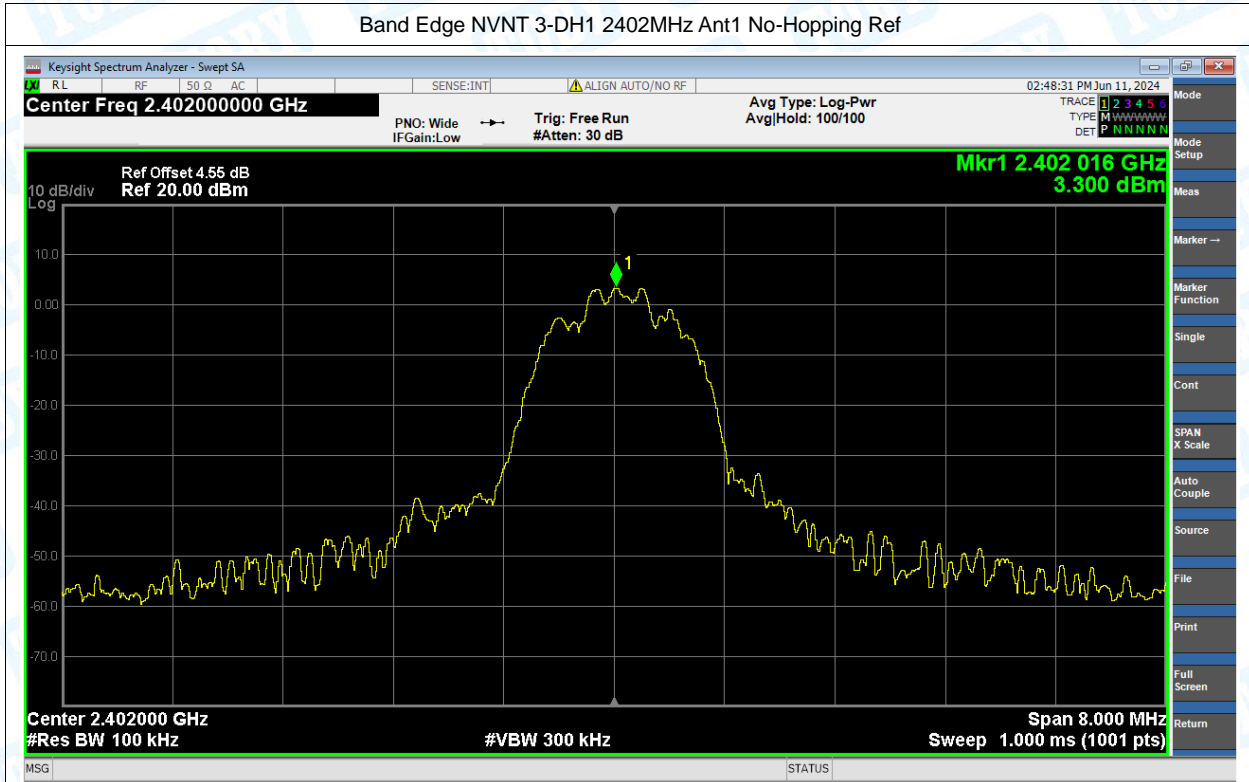
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission

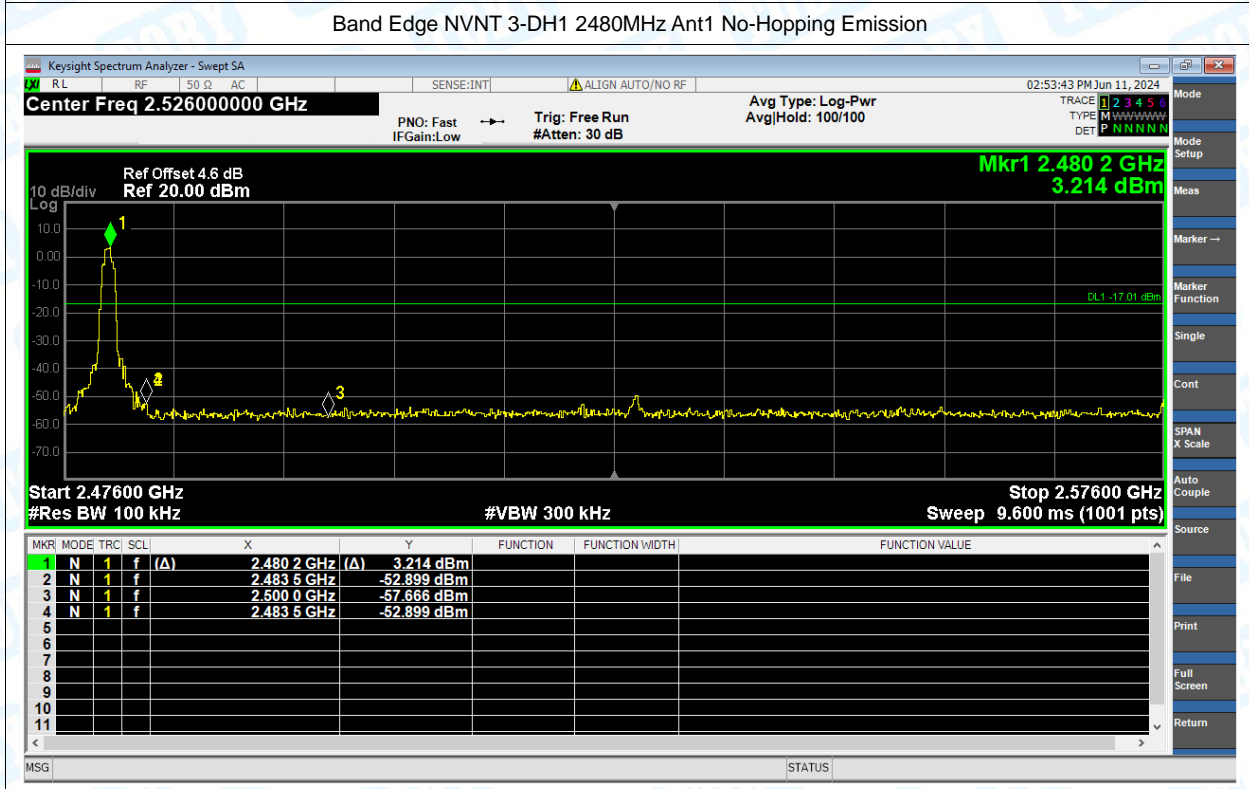
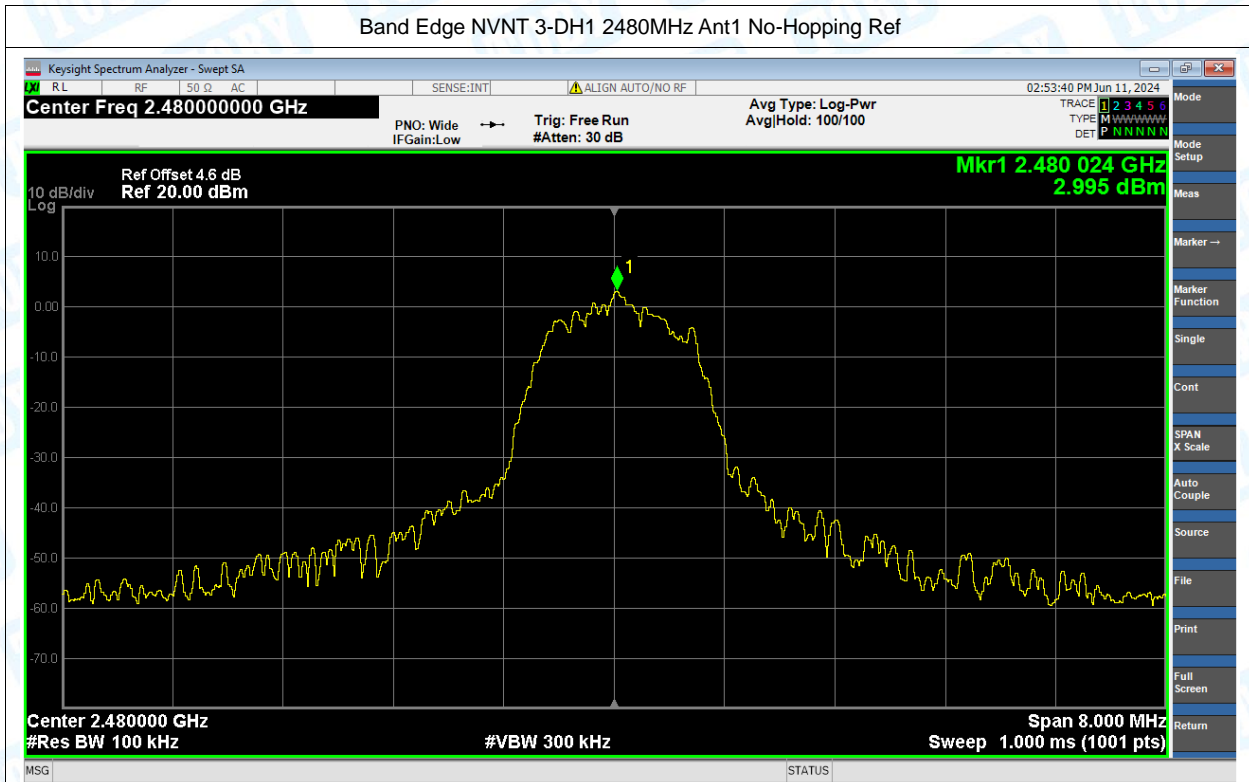










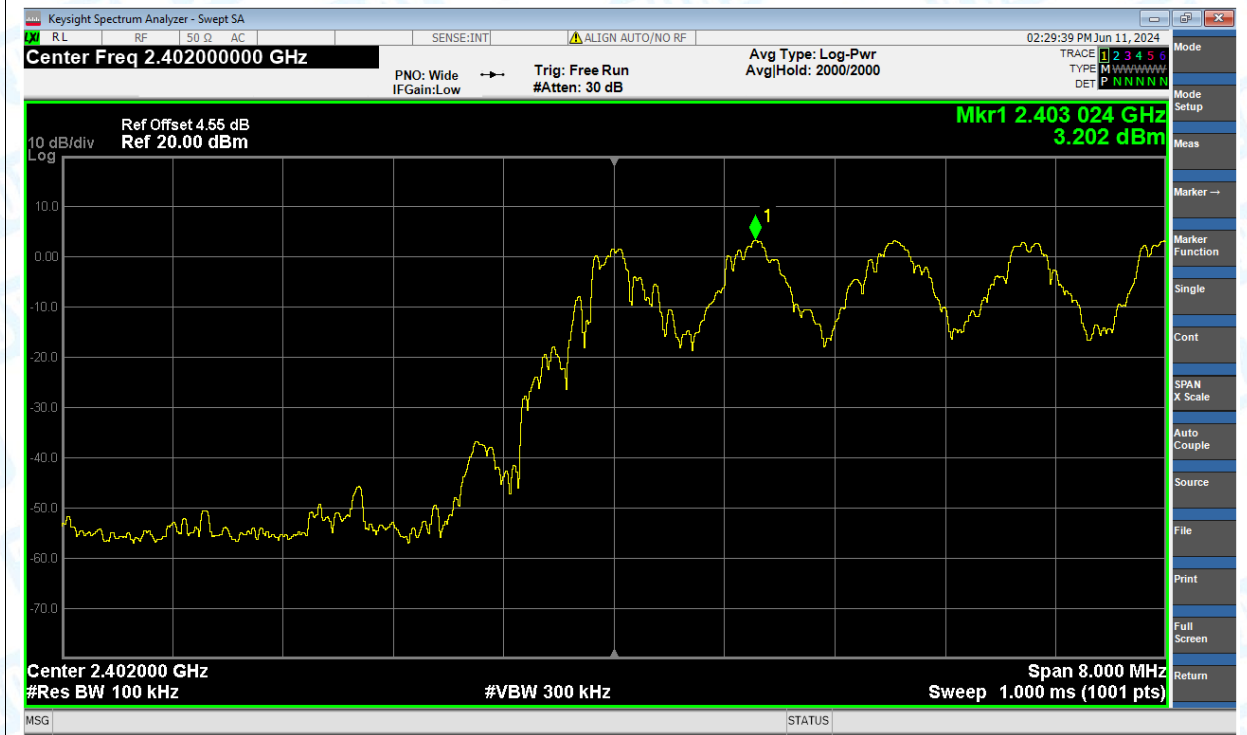


6. Band Edge(Hopping)

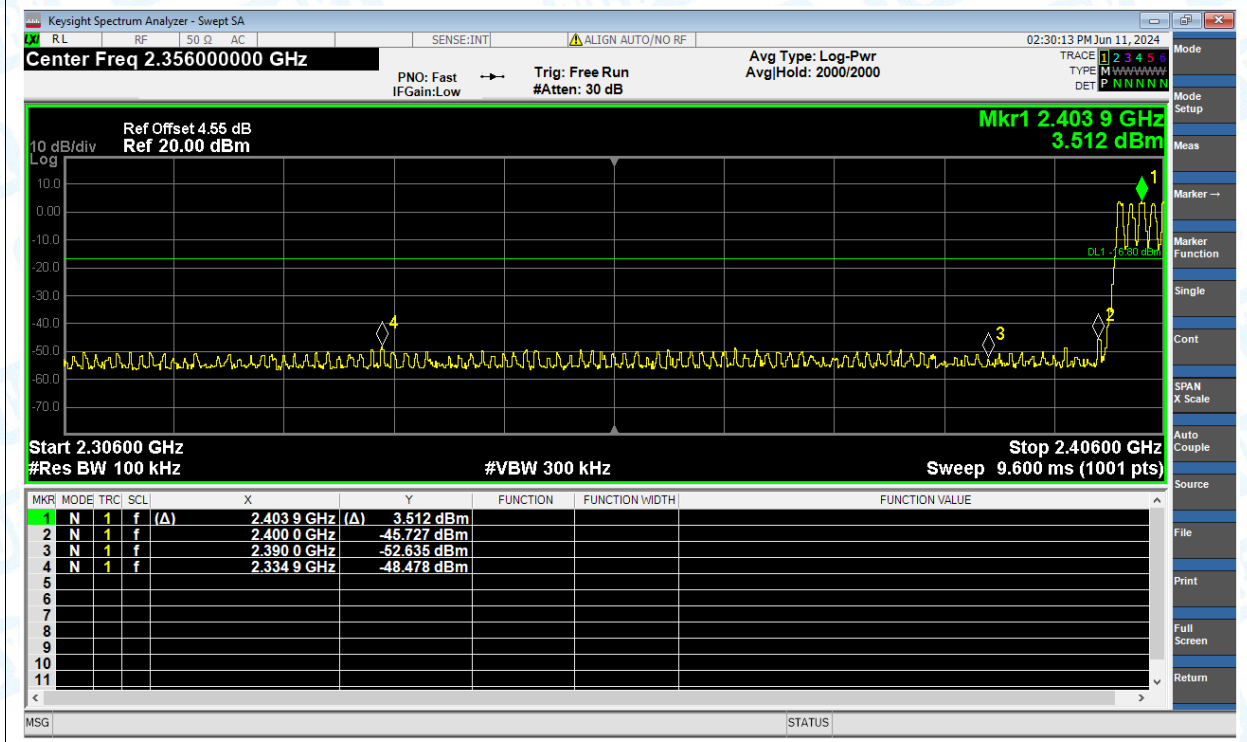
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-51.68	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-50.45	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-51.22	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-51.52	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-51.15	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-51.95	-20	Pass

Test Graphs

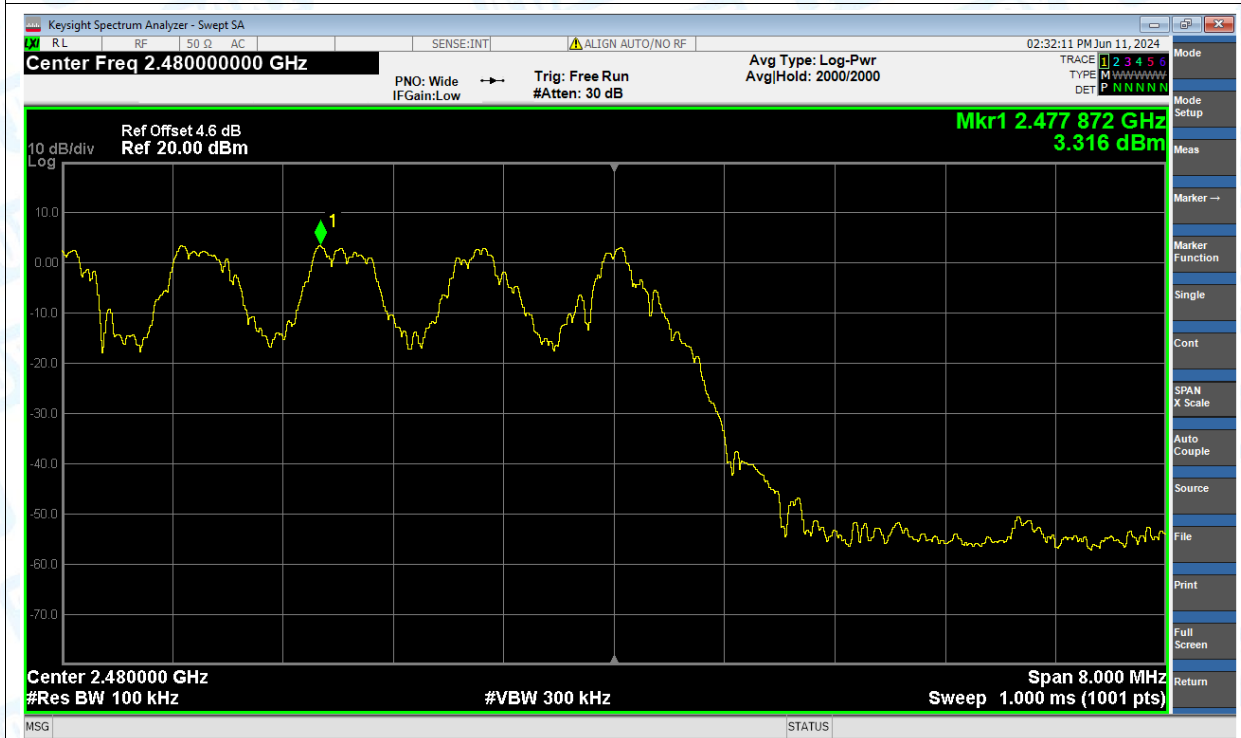
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



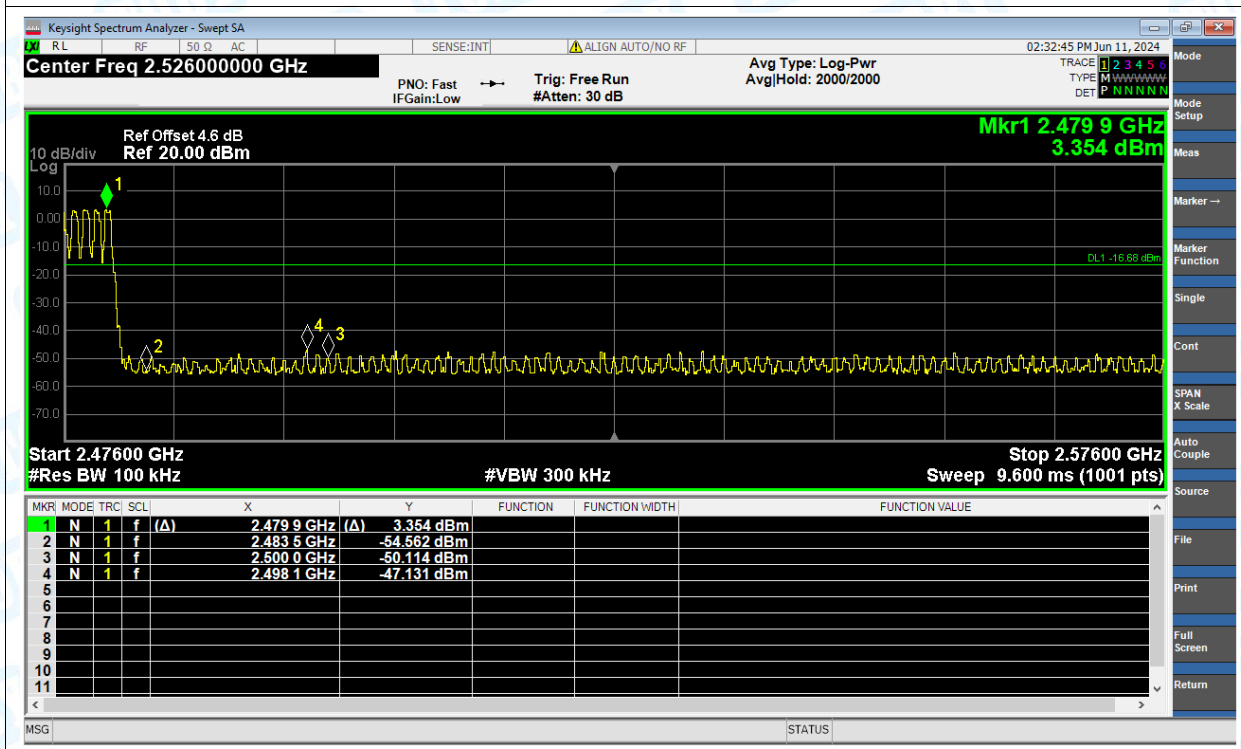
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



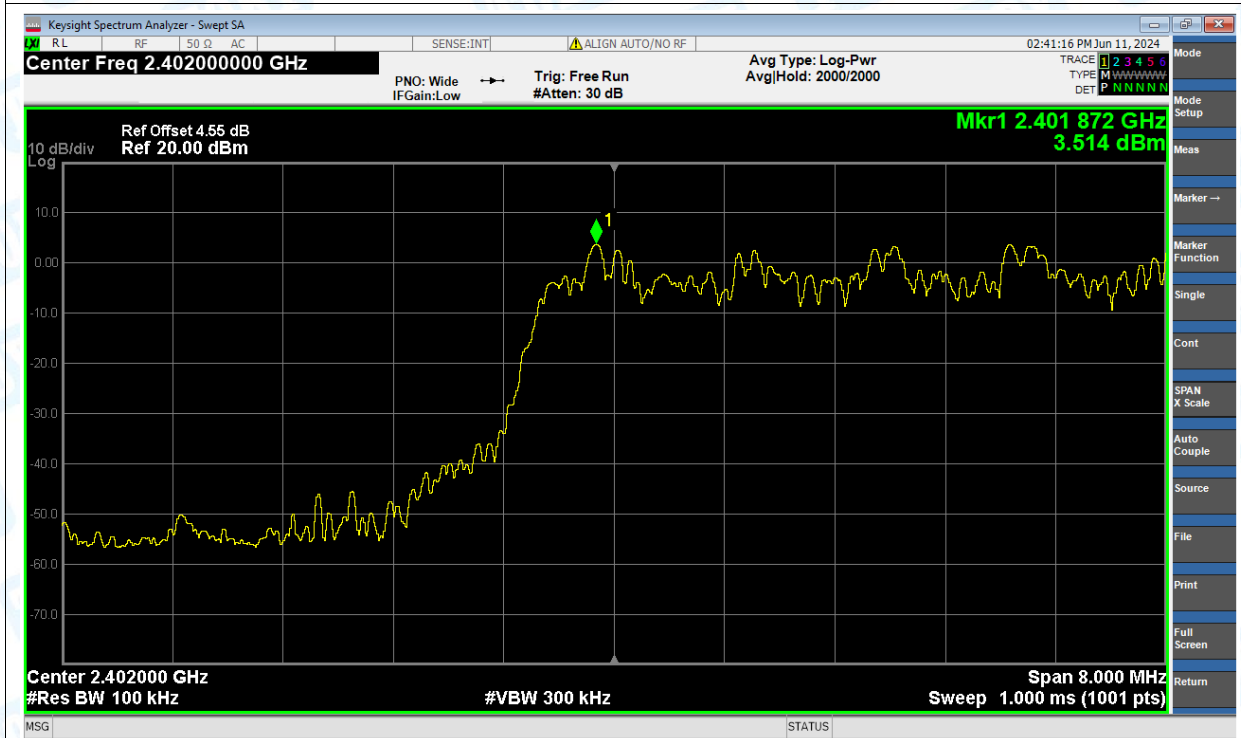
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



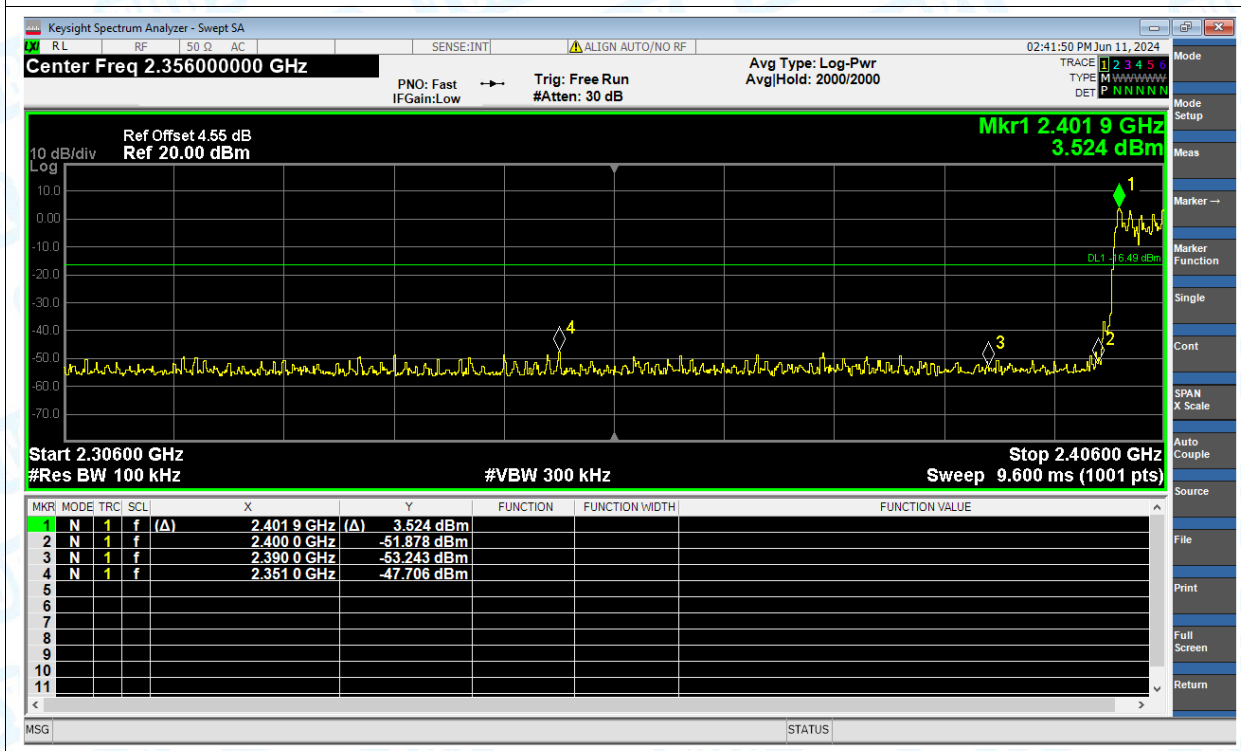
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



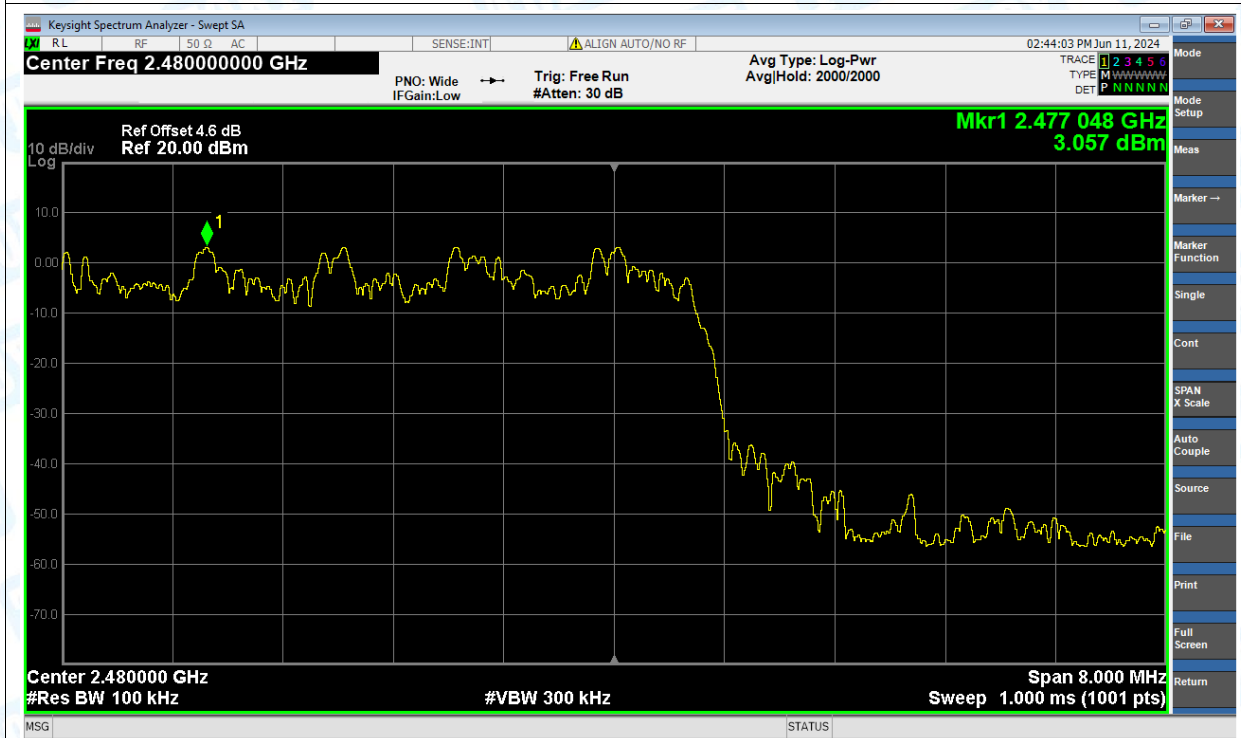
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



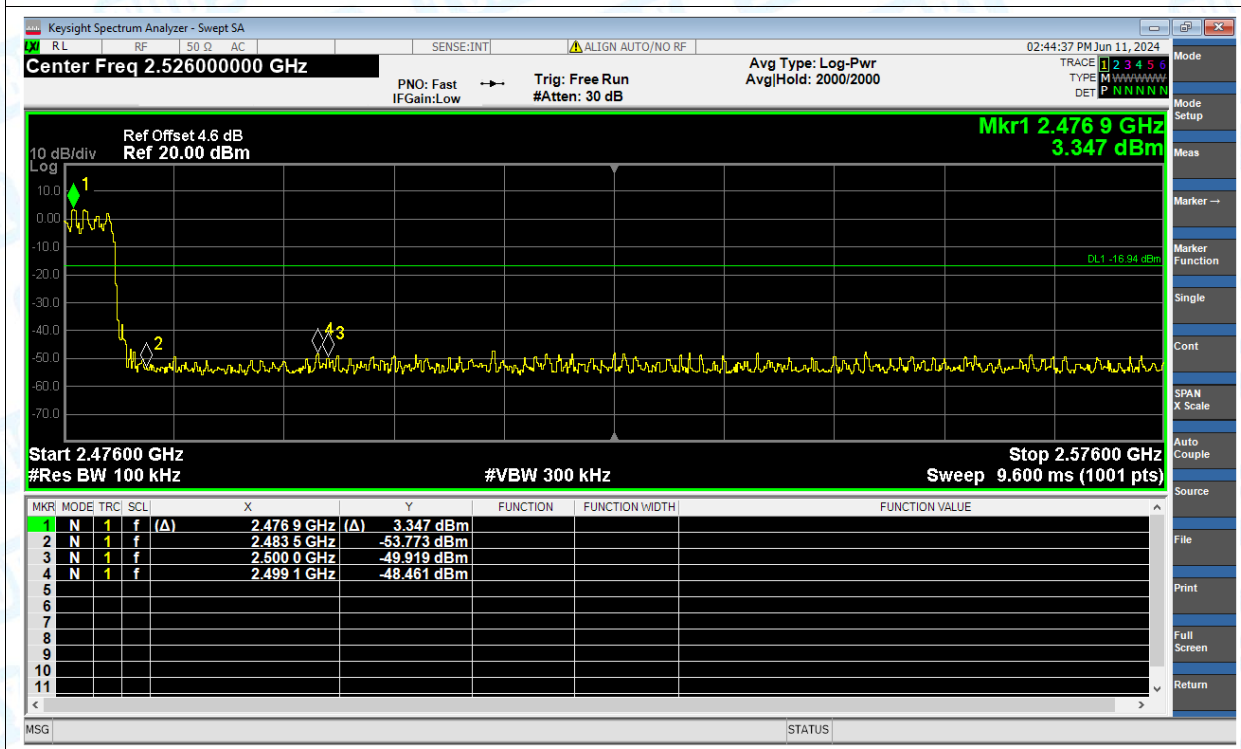
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



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



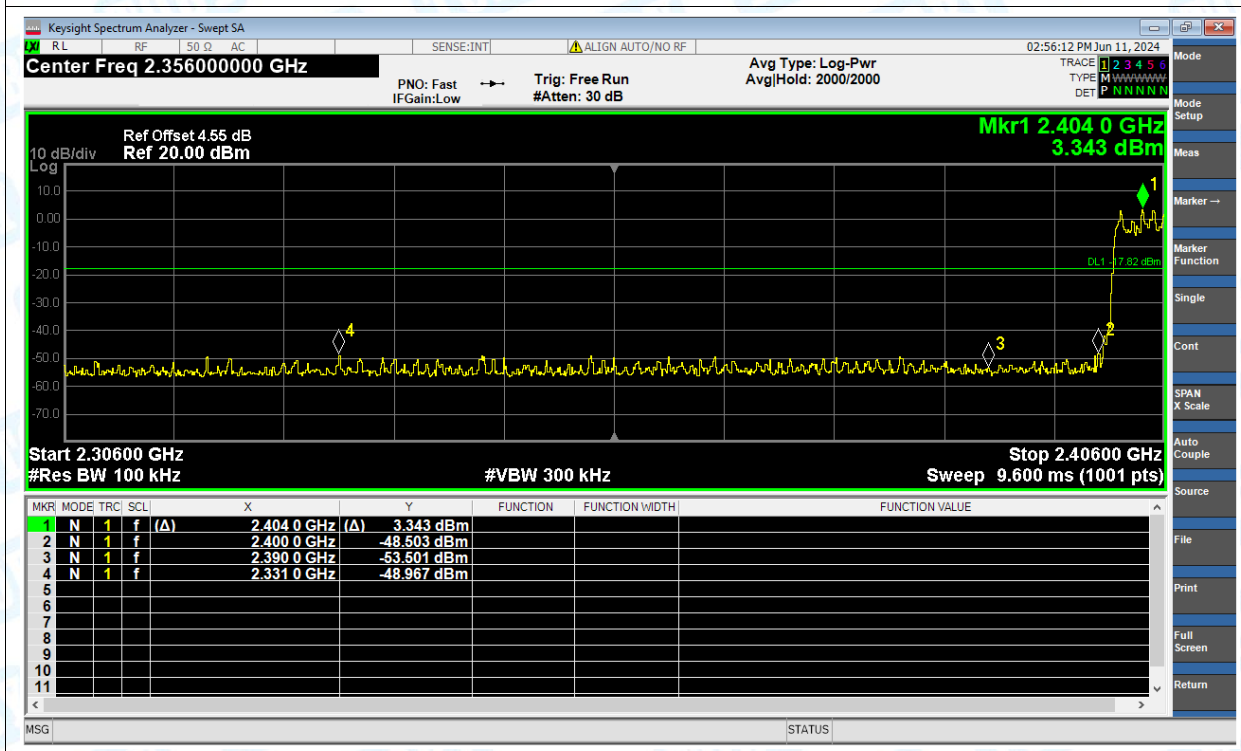
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



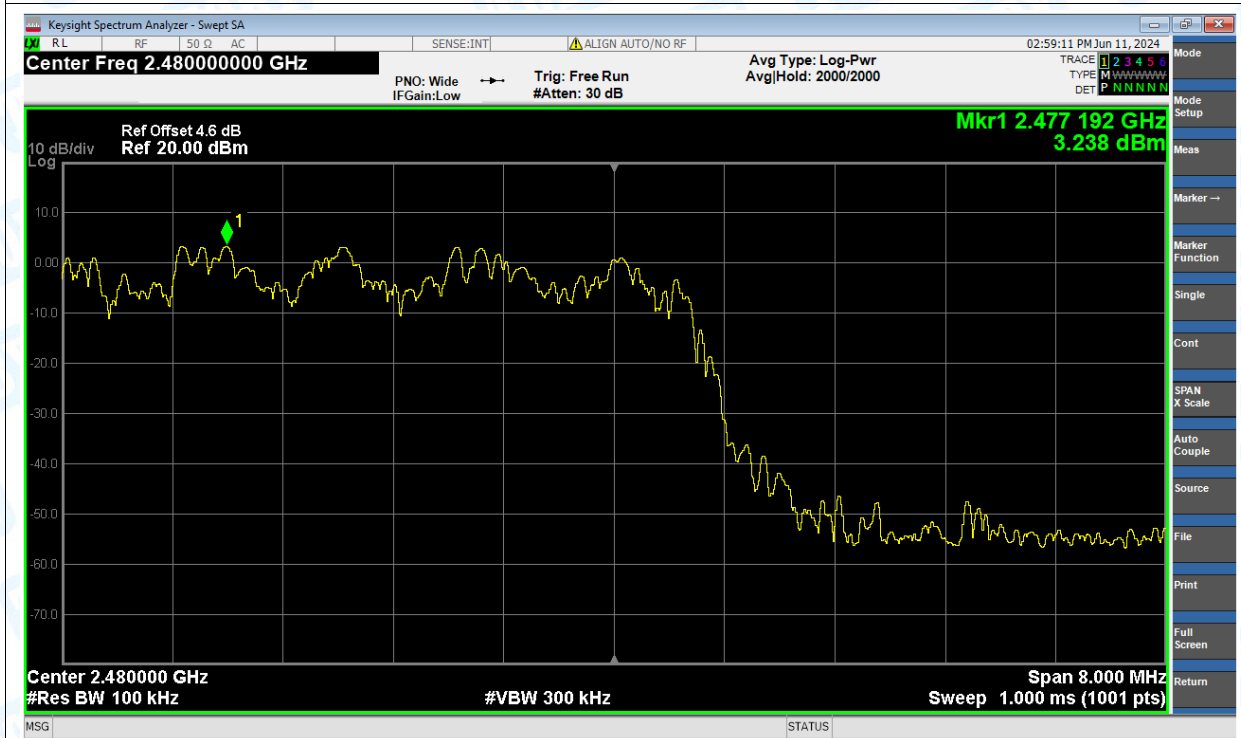
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



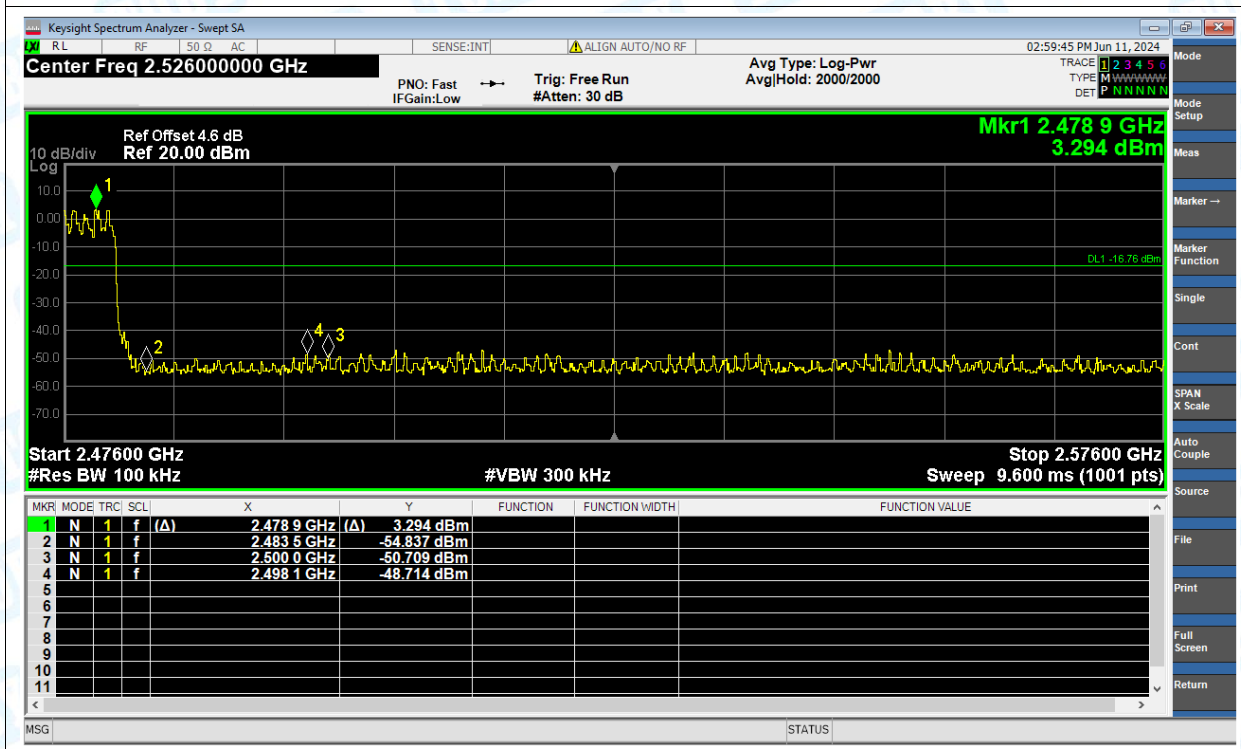
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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



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

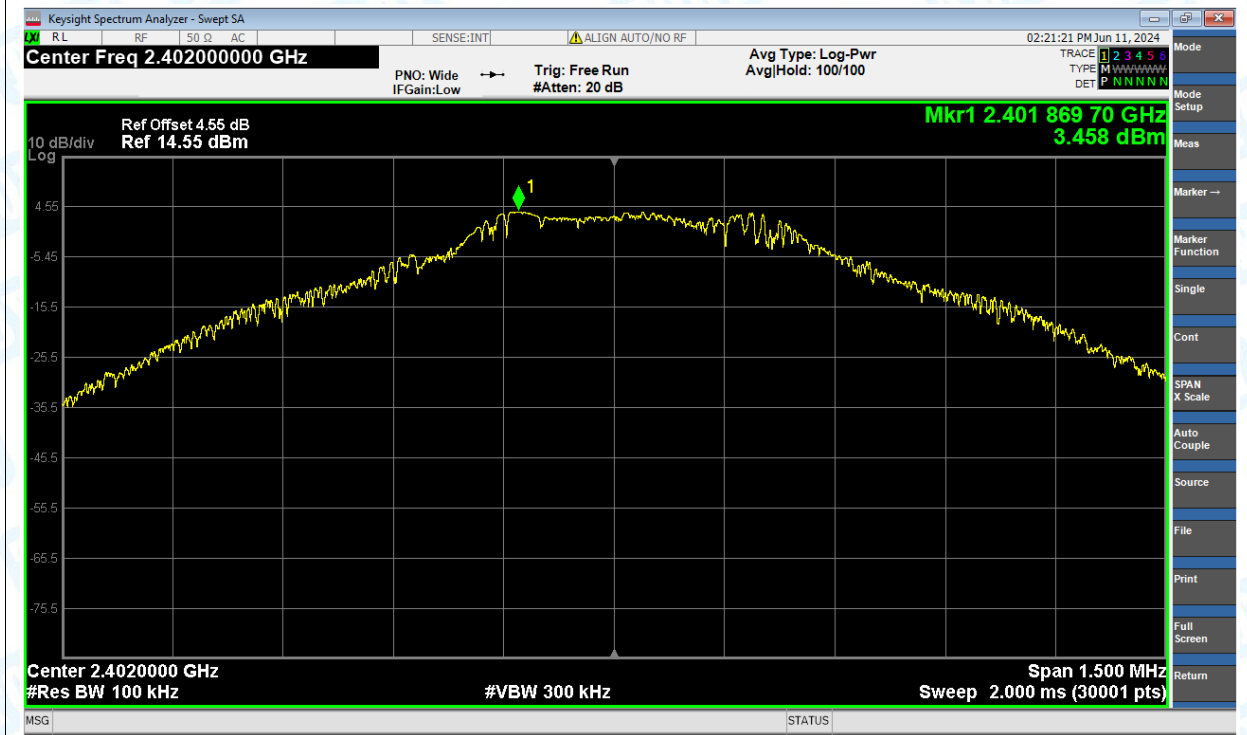


7. Conducted RF Spurious Emission

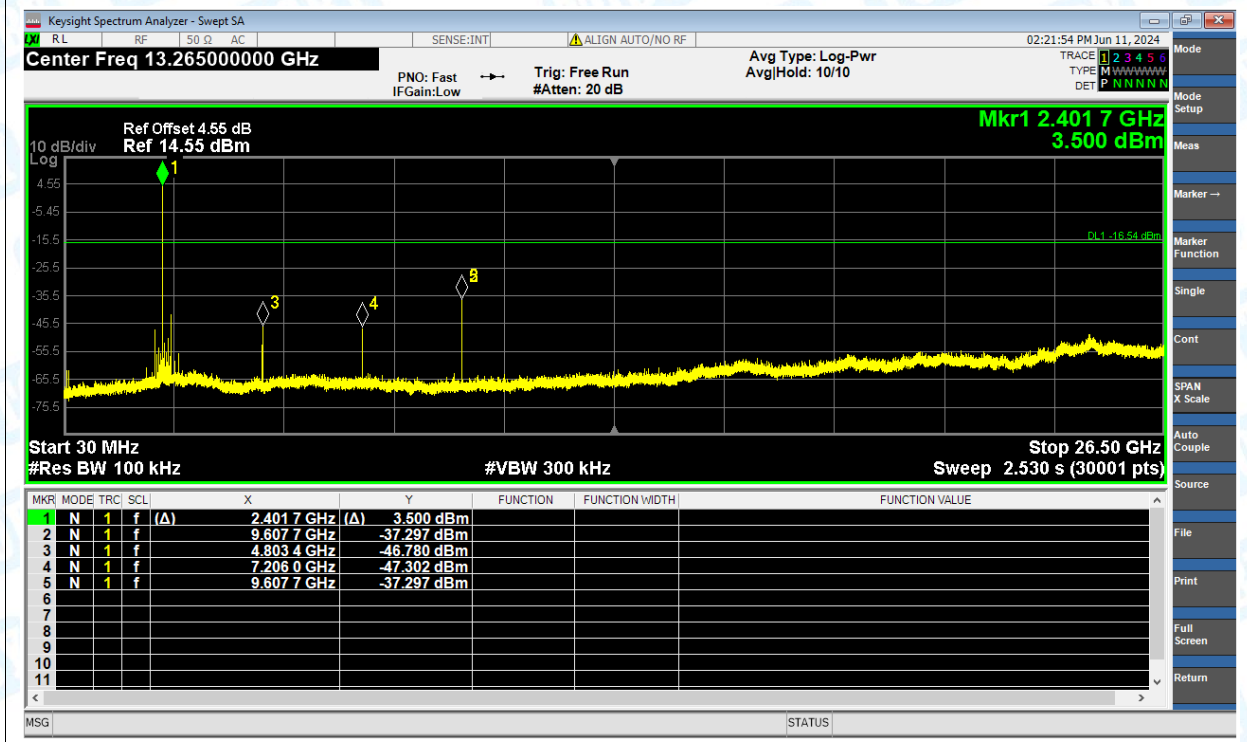
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-40.76	-20	Pass
NVNT	1-DH1	2441	Ant1	-41.68	-20	Pass
NVNT	1-DH1	2480	Ant1	-42.53	-20	Pass
NVNT	2-DH1	2402	Ant1	-41.07	-20	Pass
NVNT	2-DH1	2441	Ant1	-41.55	-20	Pass
NVNT	2-DH1	2480	Ant1	-42	-20	Pass
NVNT	3-DH1	2402	Ant1	-40.97	-20	Pass
NVNT	3-DH1	2441	Ant1	-41.66	-20	Pass
NVNT	3-DH1	2480	Ant1	-42.74	-20	Pass

Test Graphs

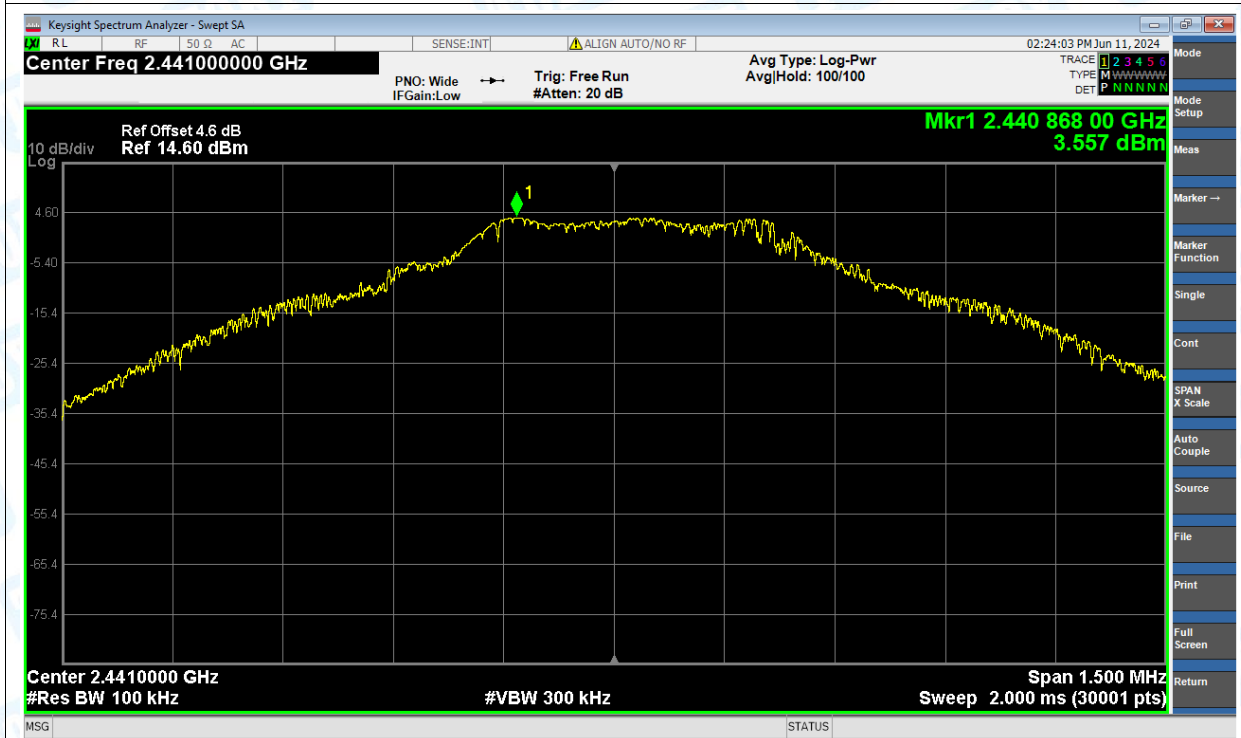
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



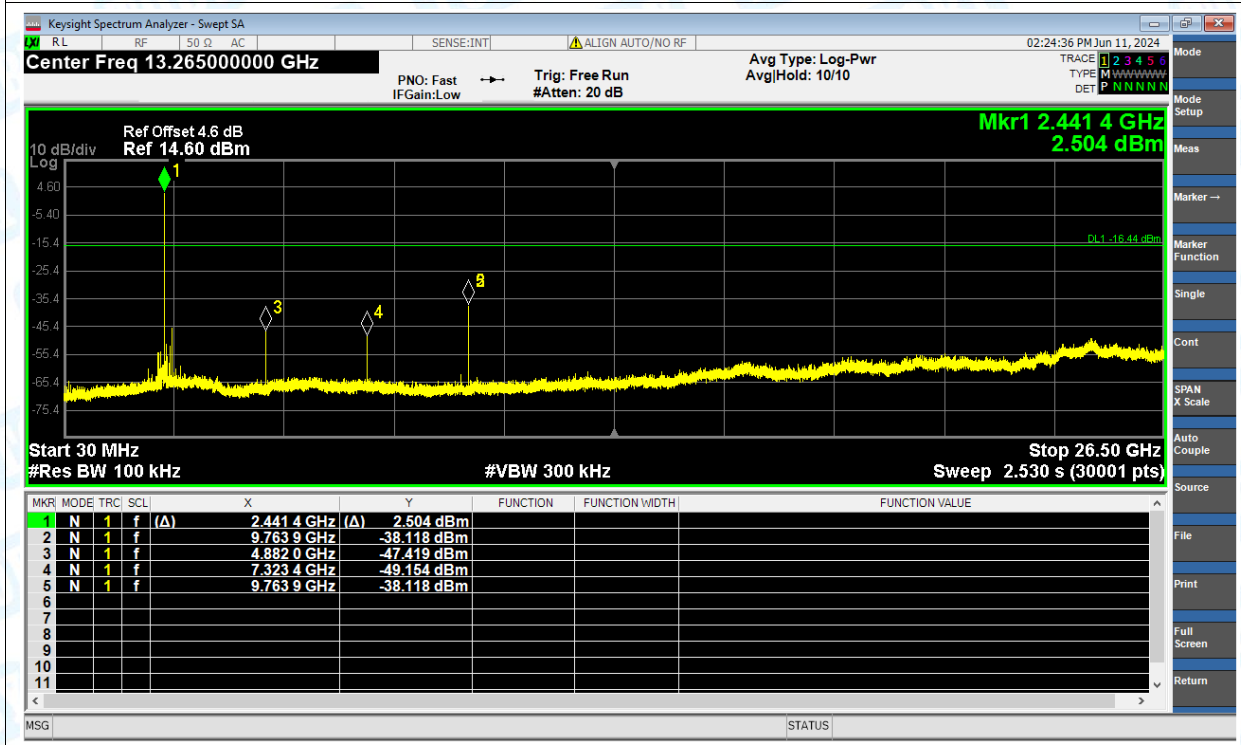
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



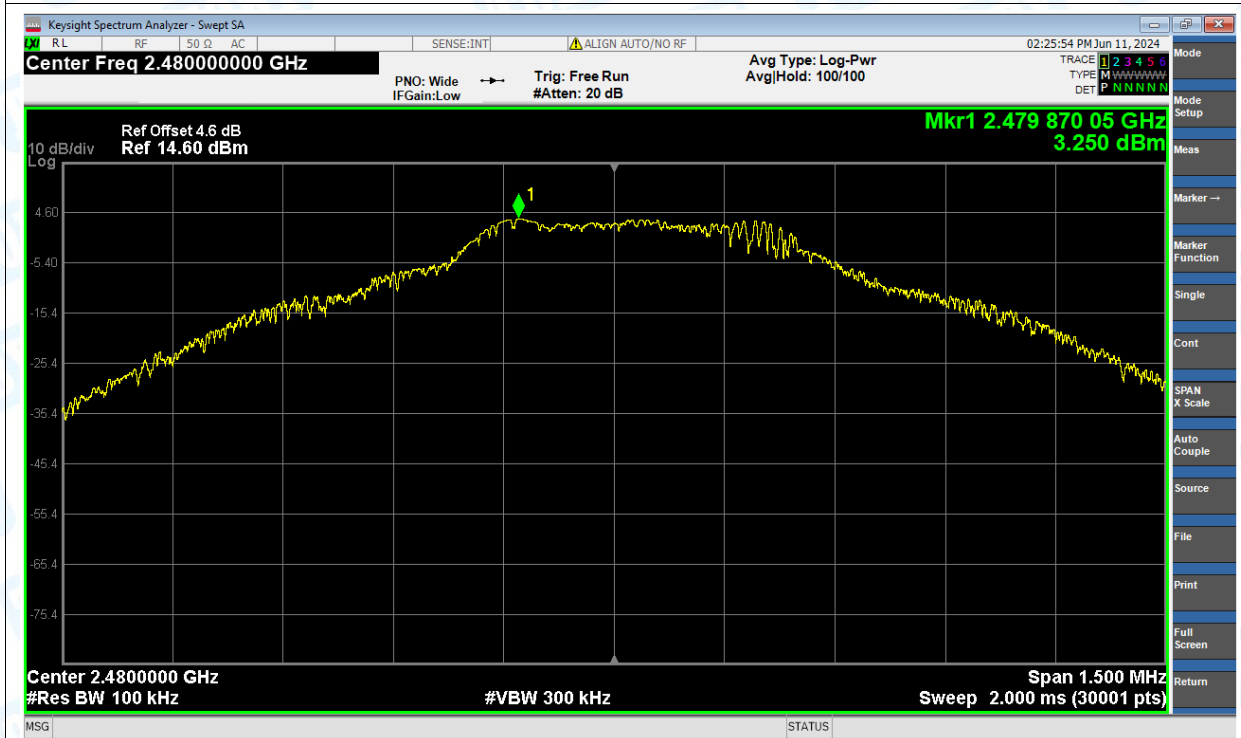
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



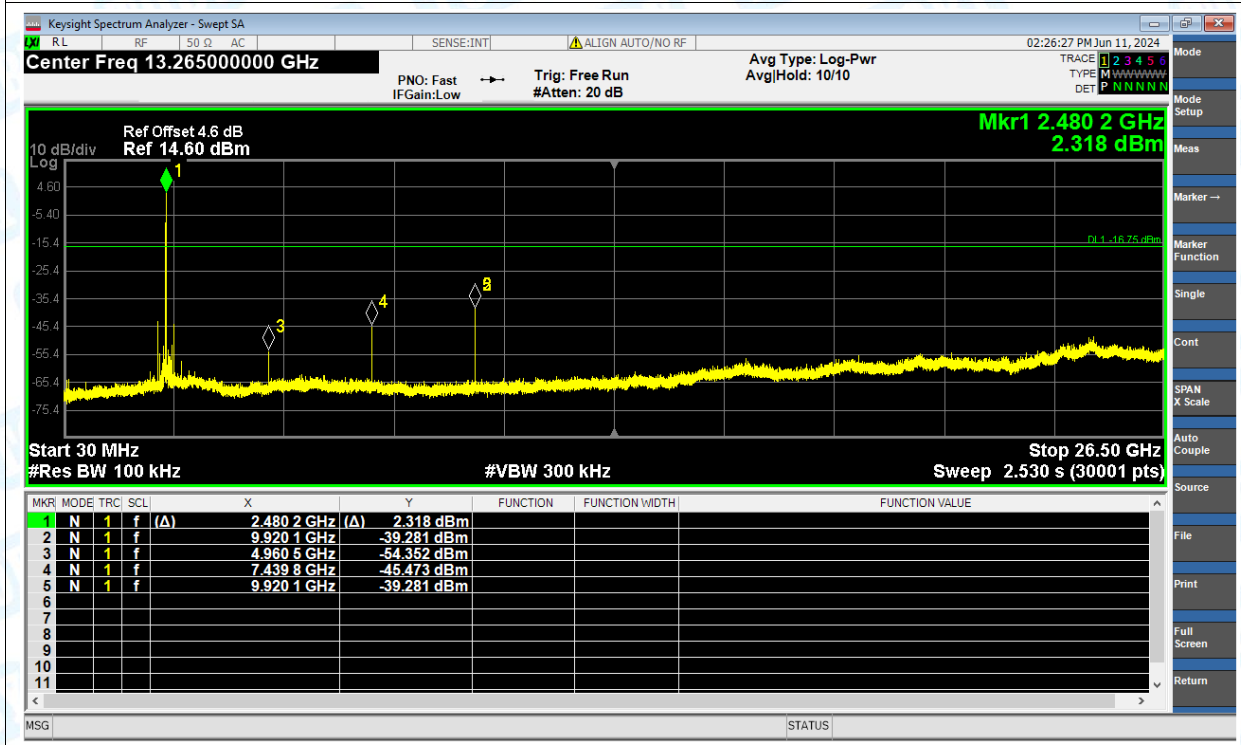
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



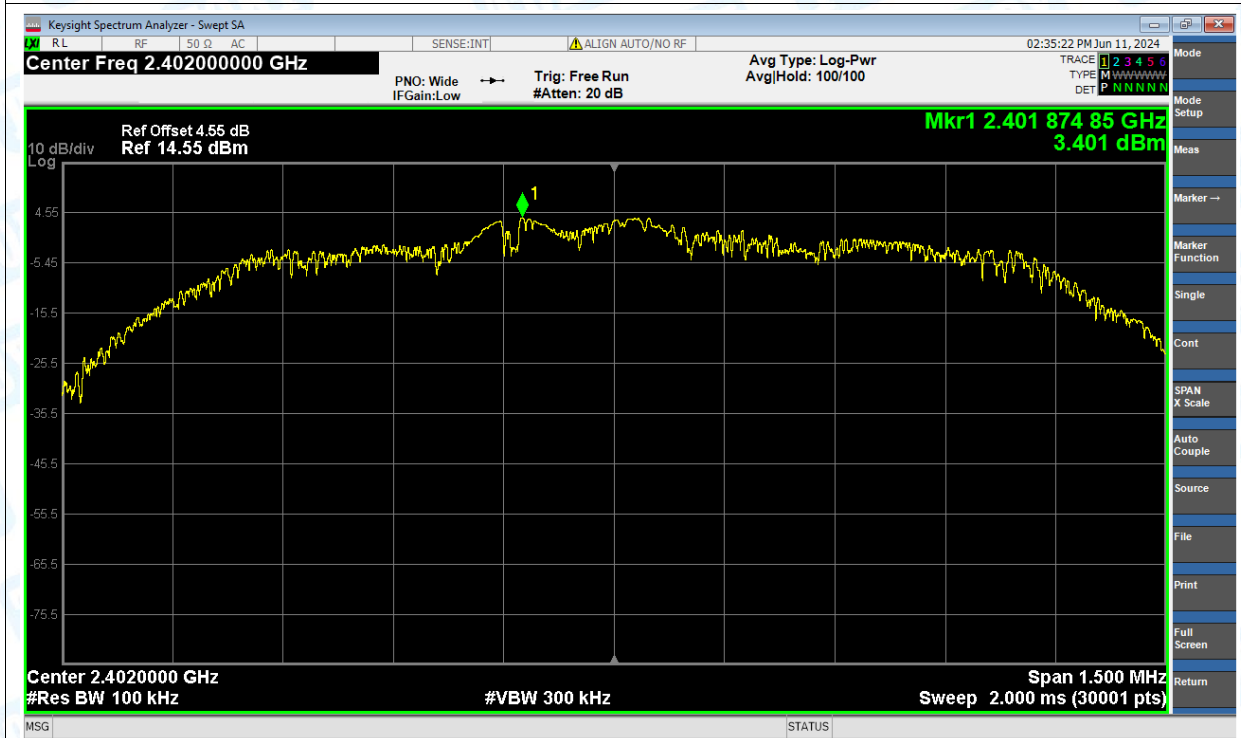
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



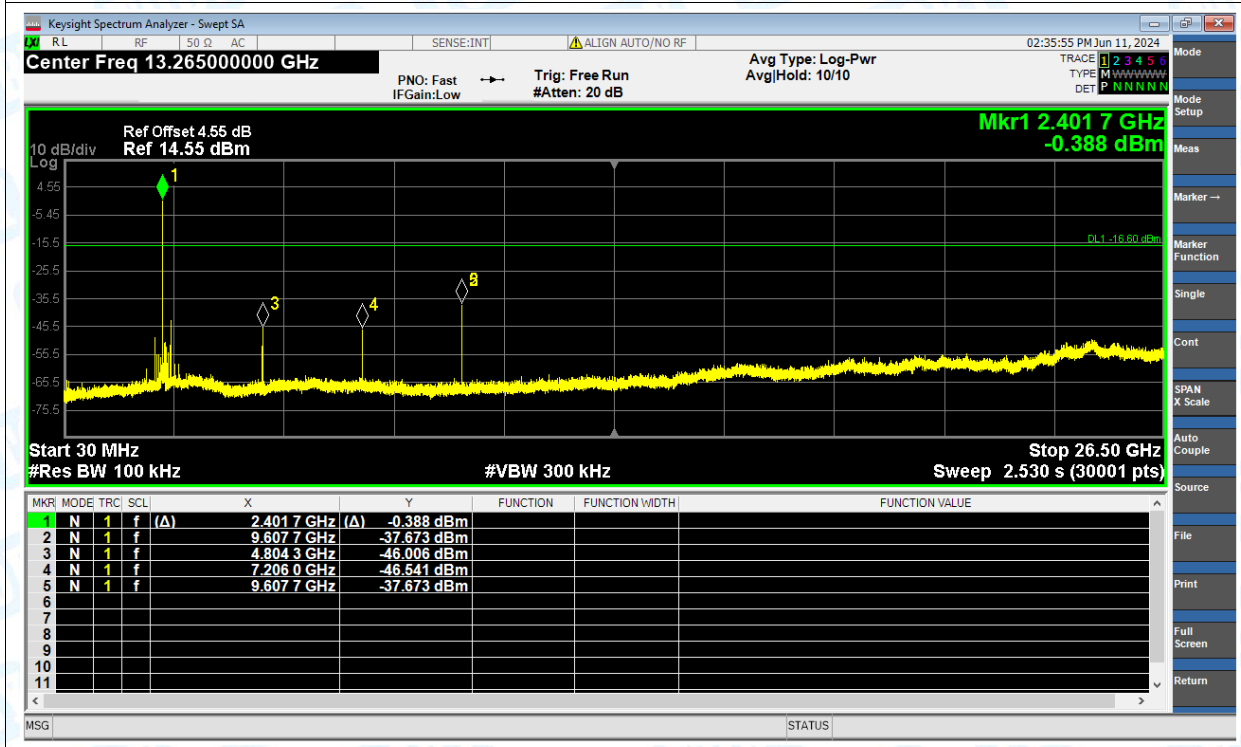
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



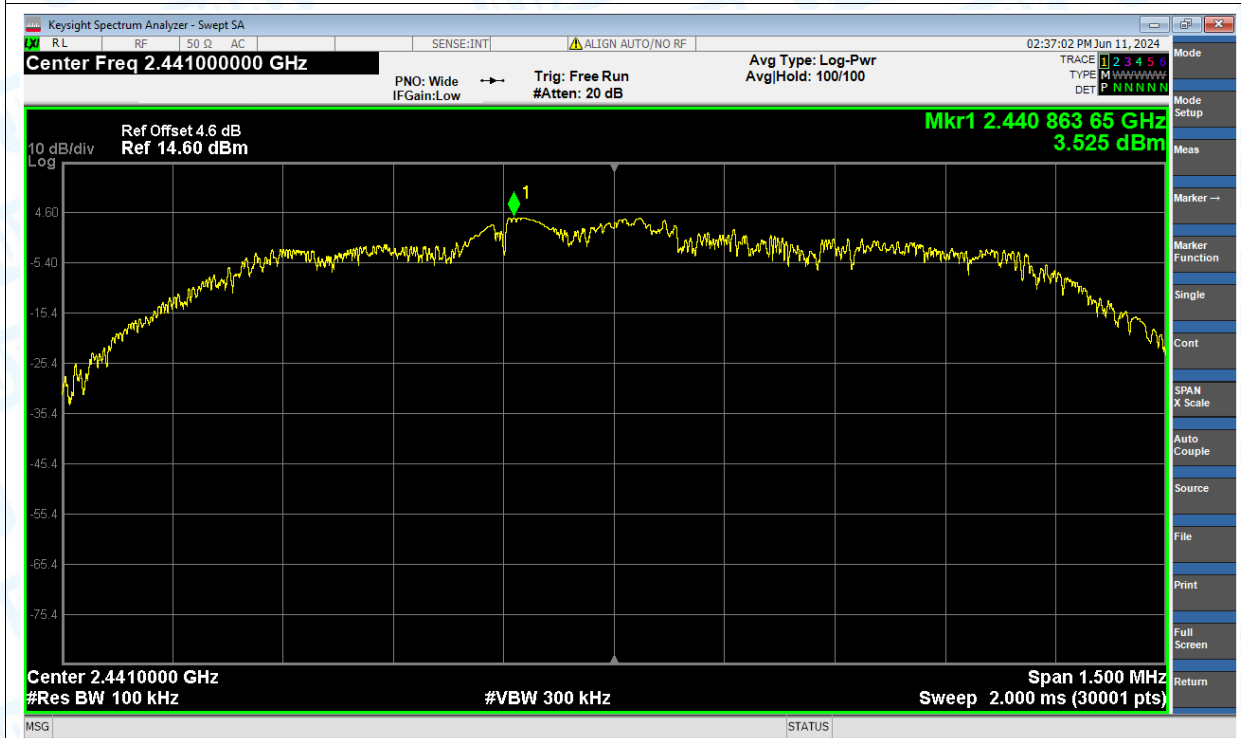
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



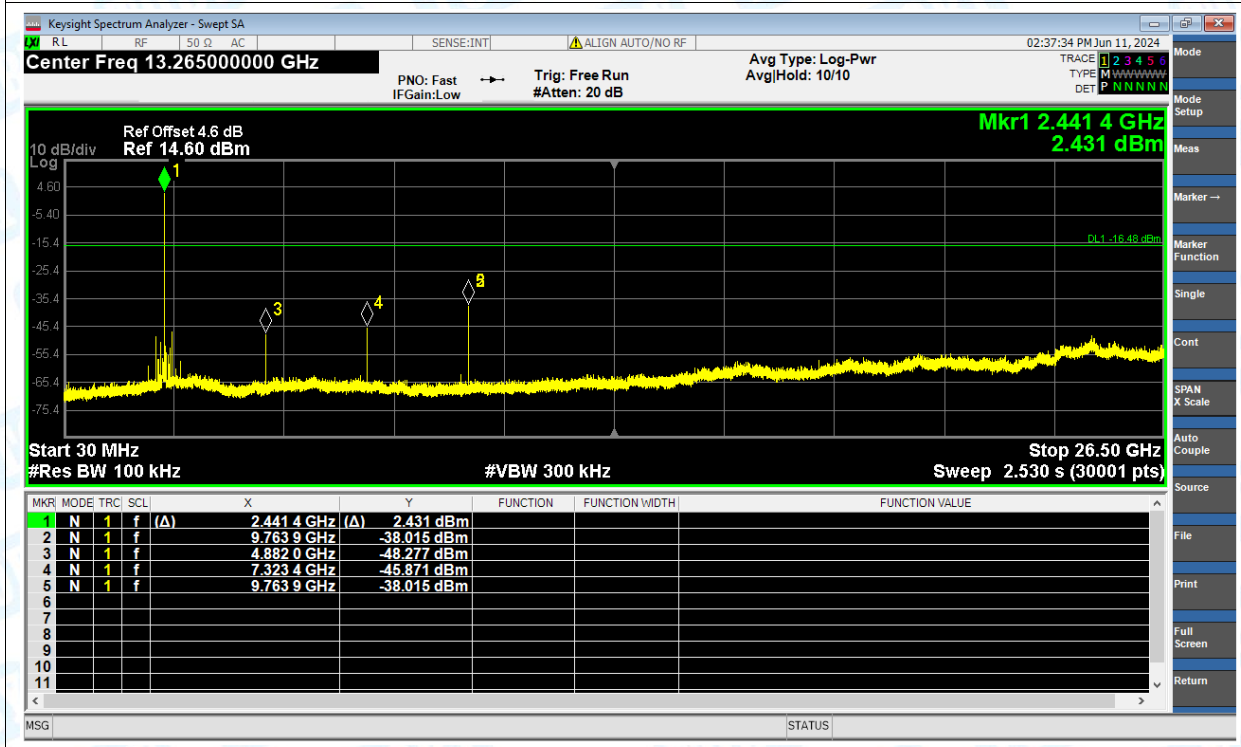
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



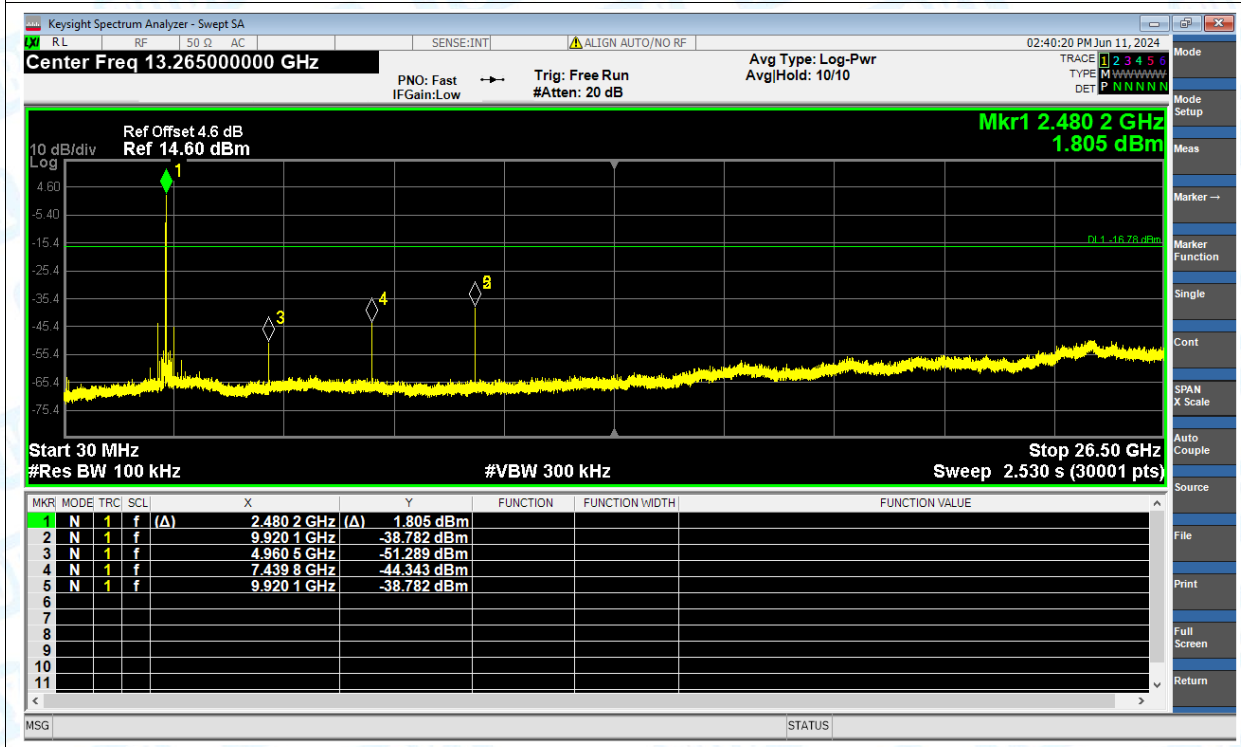
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



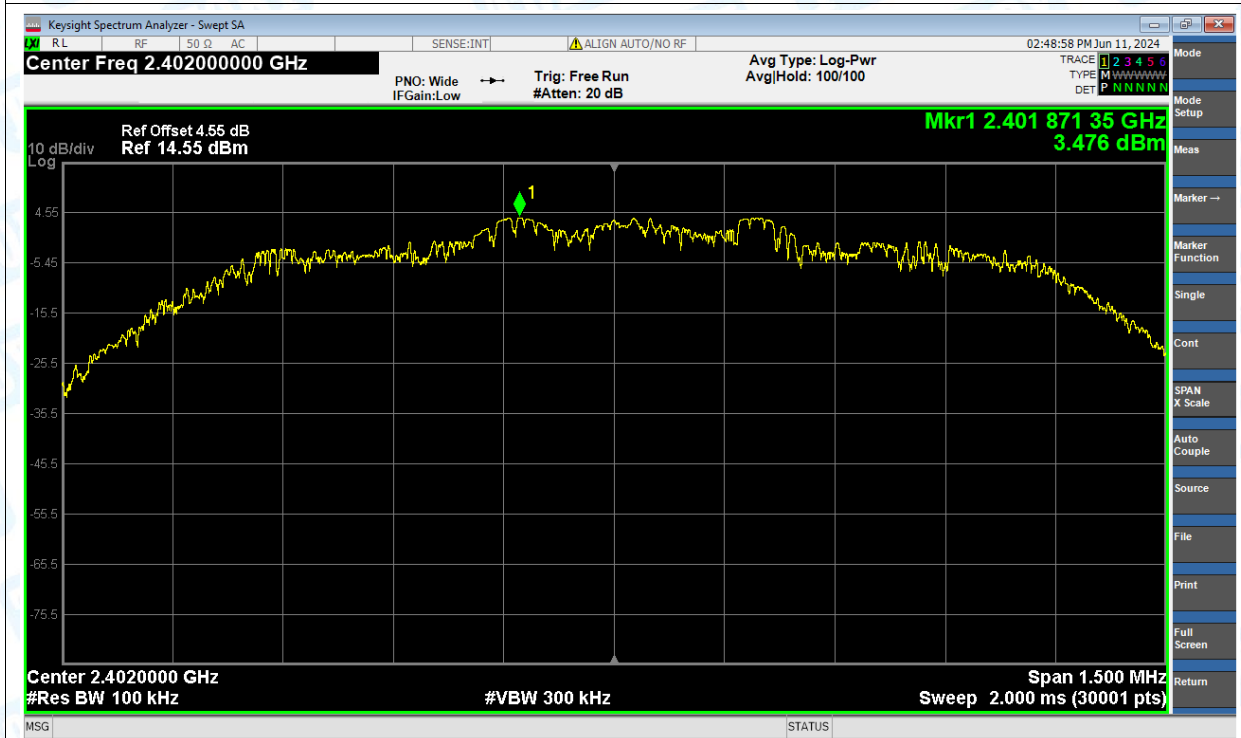
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



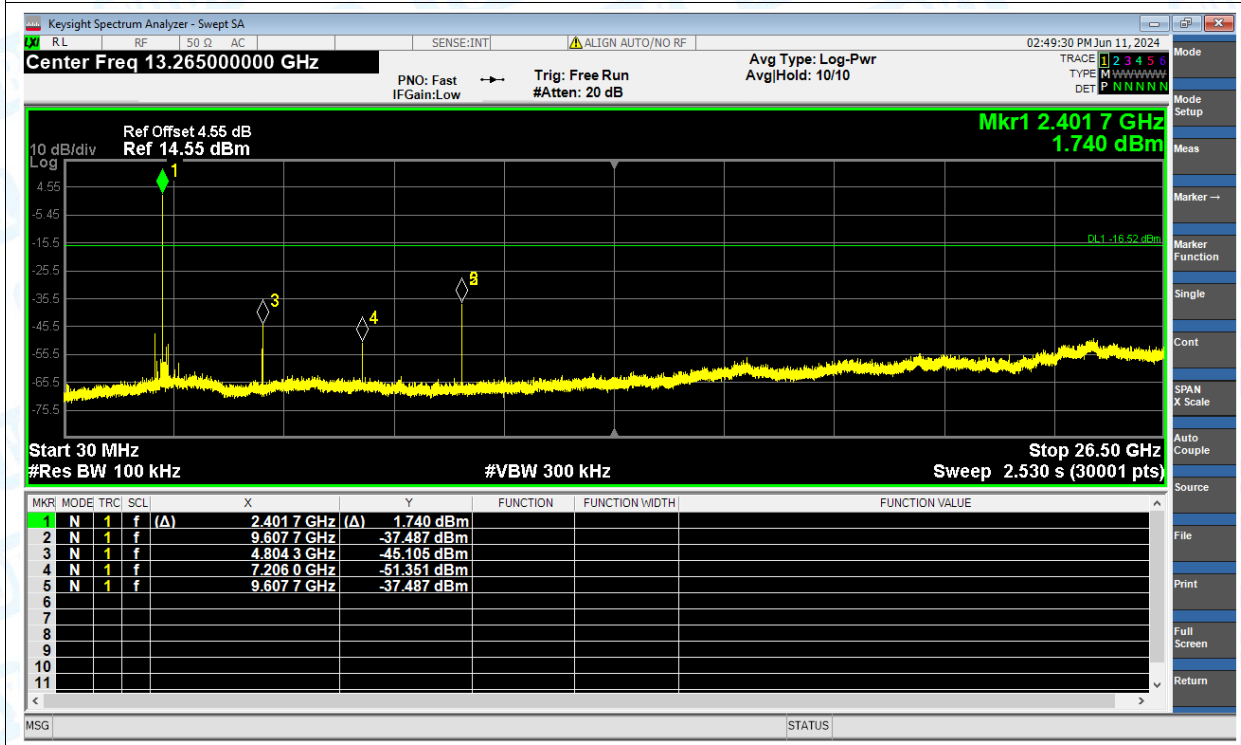
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



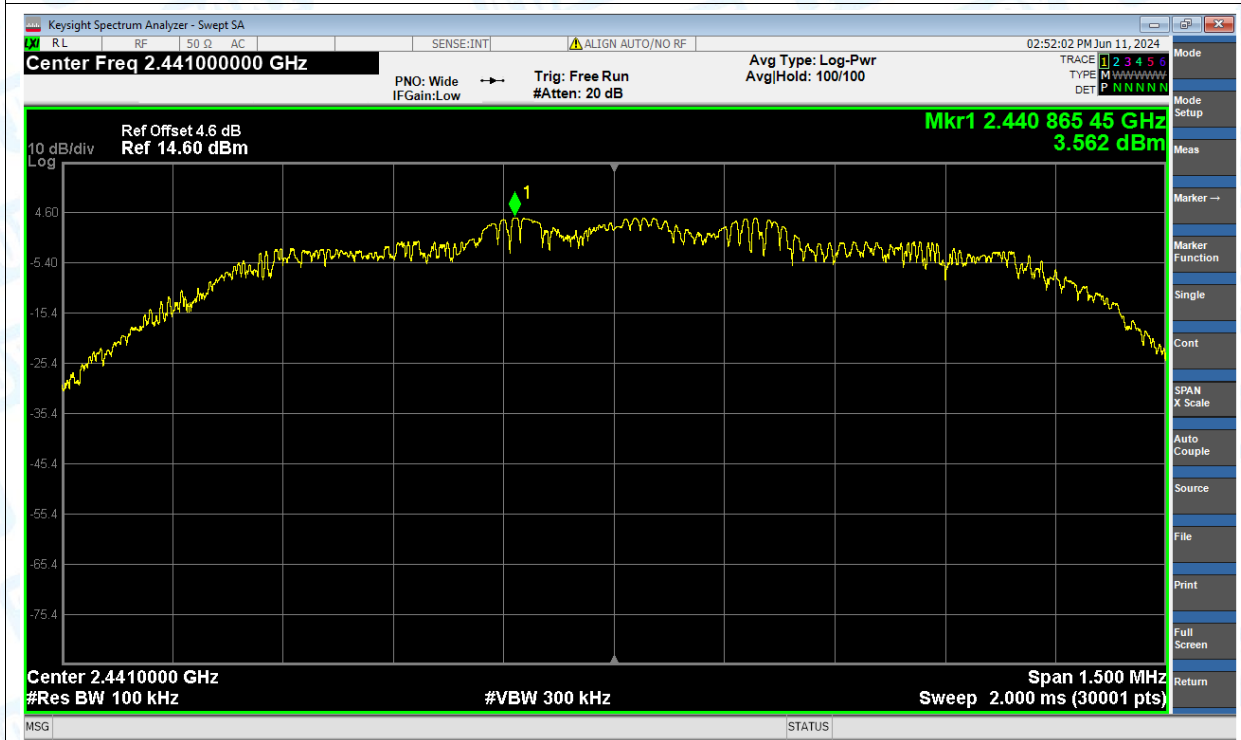
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



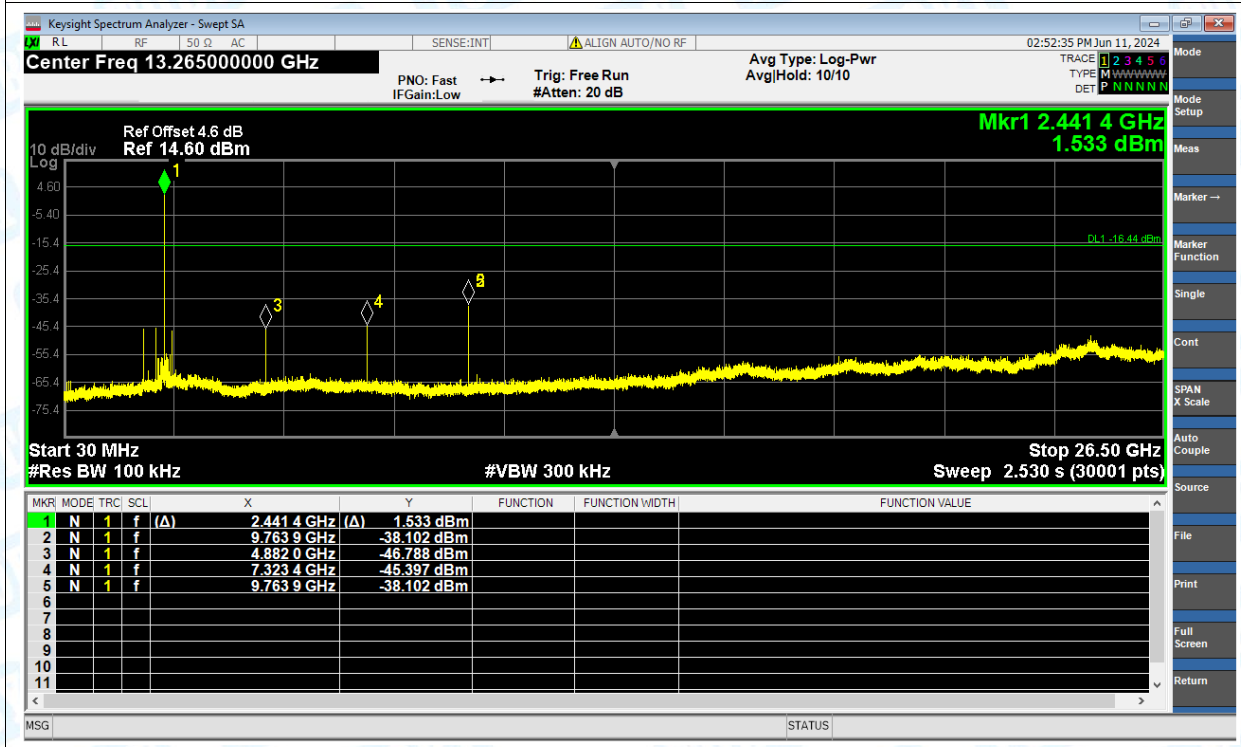
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



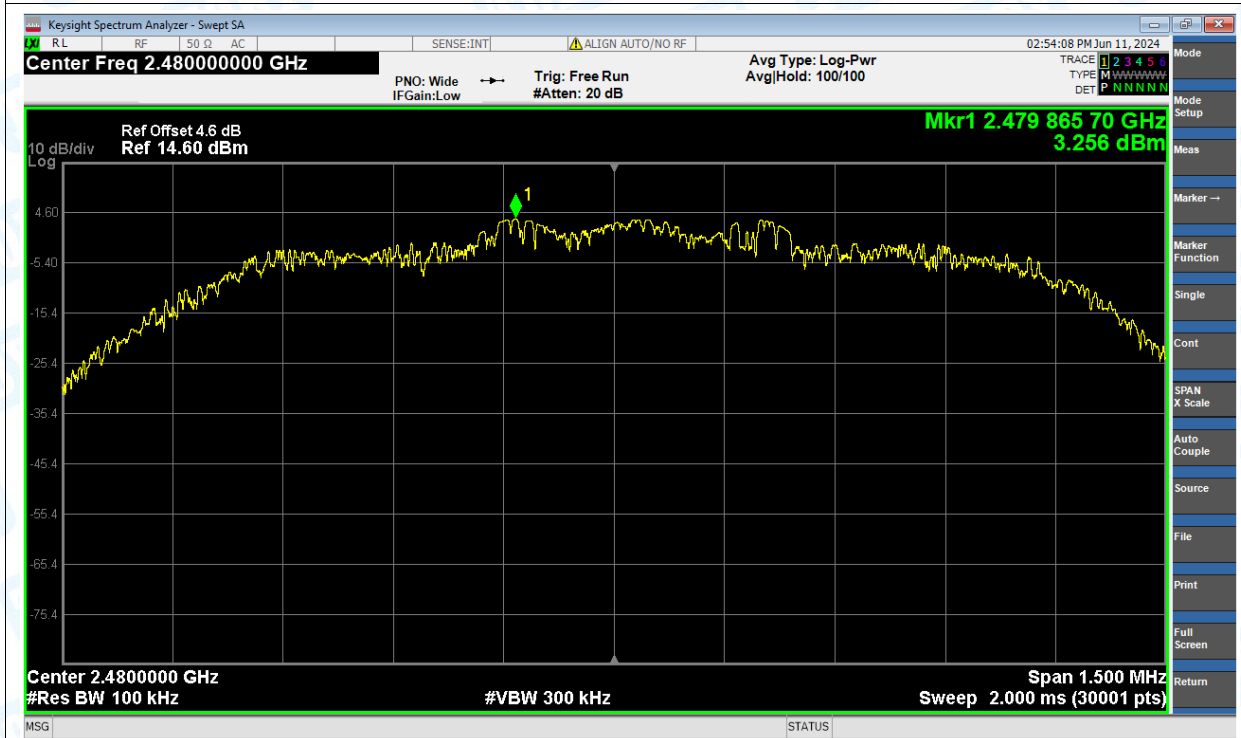
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



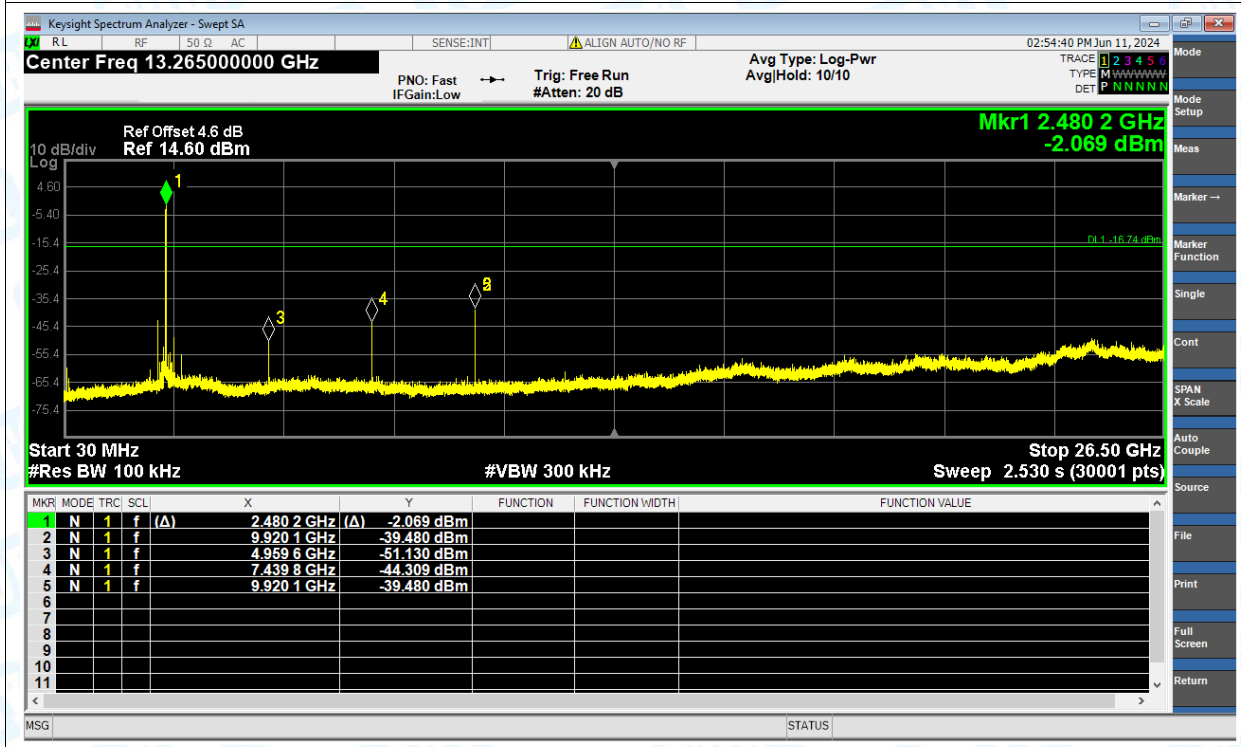
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

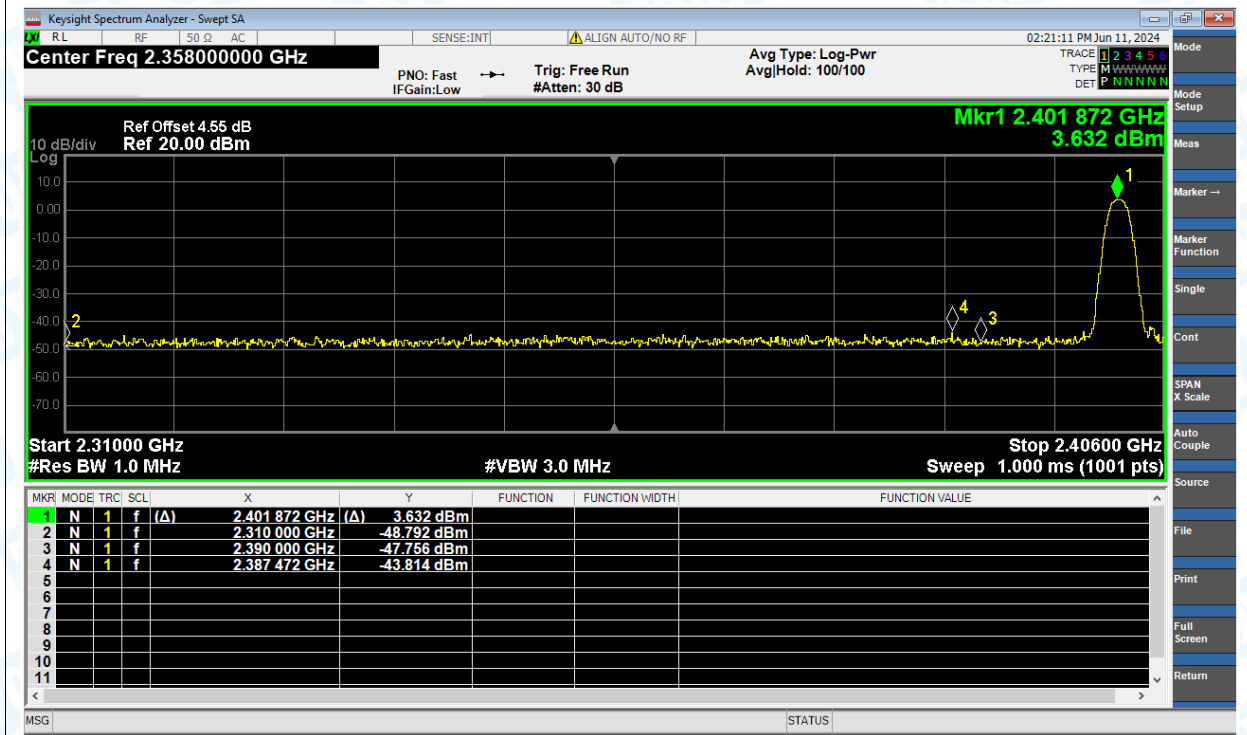


8. Restrict Band

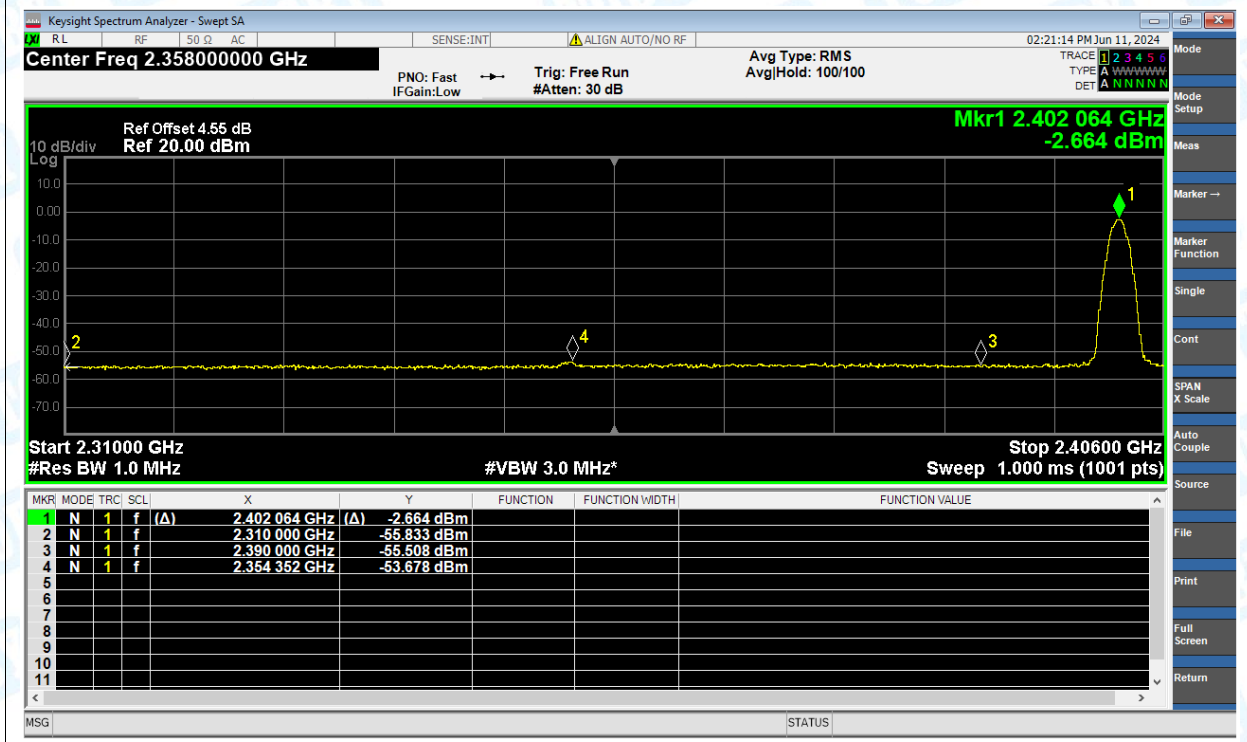
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-48.79	2	-	48.47	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-55.83	2	5.06	46.49	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2387.472	-43.81	2	-	53.45	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2354.352	-53.68	2	5.06	48.64	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-47.76	2	-	49.5	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-55.51	2	5.06	46.81	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-46.25	2	-	51.01	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-54.74	2	5.17	47.69	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2486.296	-41.33	2	-	55.93	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.704	-54.15	2	5.17	48.28	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-44.75	2	-	52.51	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-54.61	2	5.17	47.82	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-46.57	2	-	50.69	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.19	2	4.95	46.02	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310.672	-43.51	2	-	53.75	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2353.776	-54.04	2	4.95	48.17	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-48.04	2	-	49.22	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-55.21	2	4.95	47	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-46.37	2	-	50.89	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-54.58	2	5.06	47.74	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.992	-37.38	2	-	59.88	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.752	-53.67	2	5.06	48.65	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-46.12	2	-	51.14	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-55.29	2	5.06	47.03	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-47.3	2	-	49.96	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-56.03	2	5.06	46.29	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2323.824	-43.83	2	-	53.43	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2354.16	-54.4	2	5.06	47.92	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-49.11	2	-	48.15	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-55.62	2	5.06	46.7	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-46.33	2	-	50.93	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-54.22	2	5.06	48.1	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2486.536	-38.58	2	-	58.68	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.536	-53.02	2	5.06	49.3	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-45.85	2	-	51.41	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-54.77	2	5.06	47.55	Average	54	Pass

Test Graphs

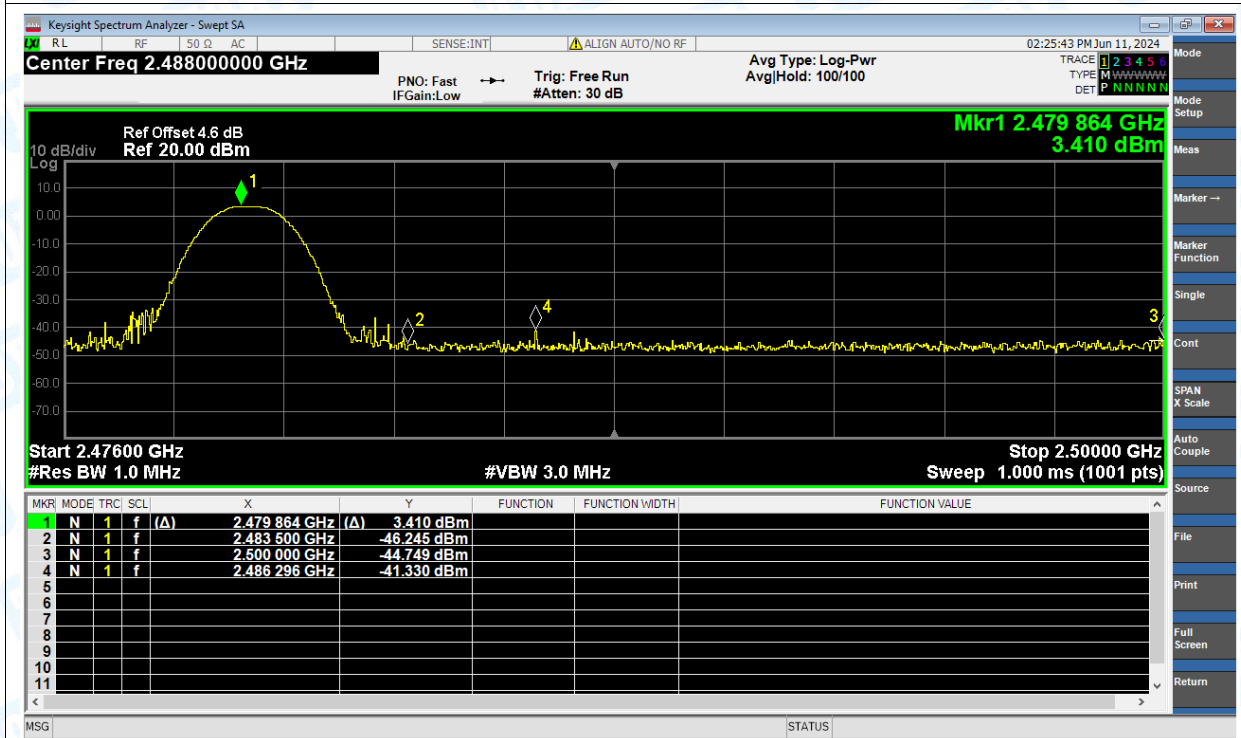
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



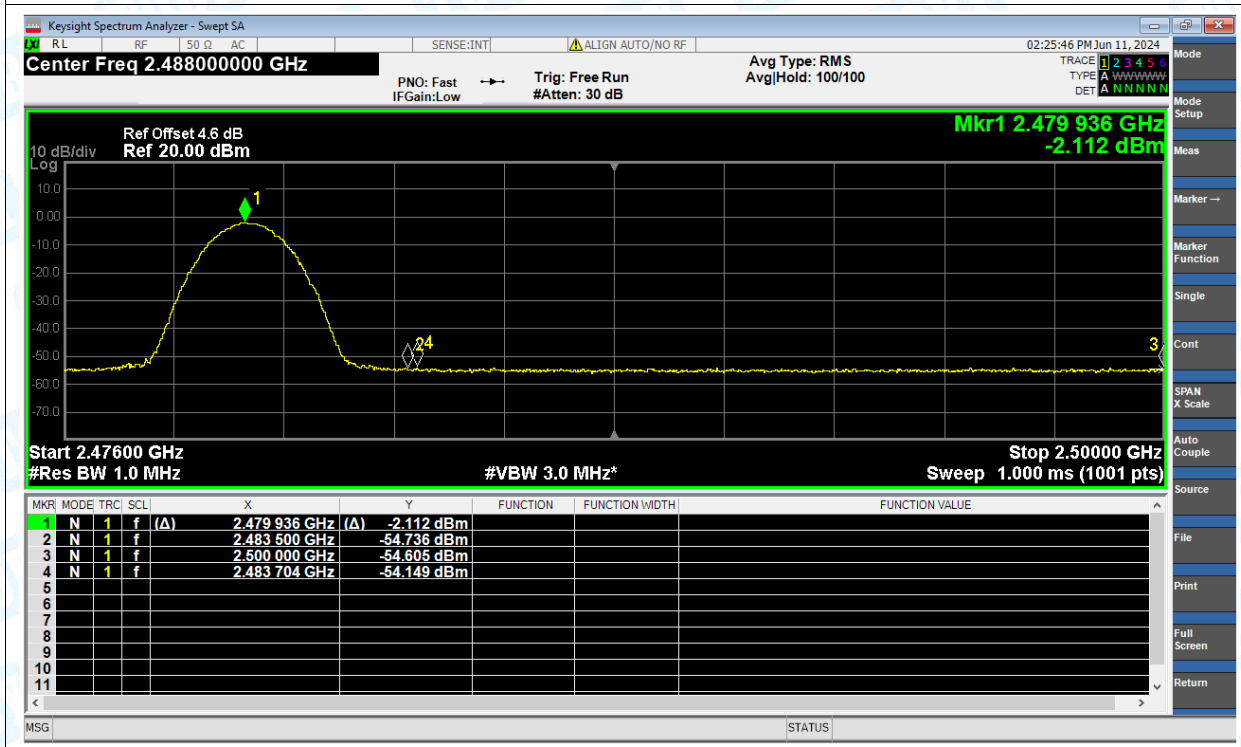
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average

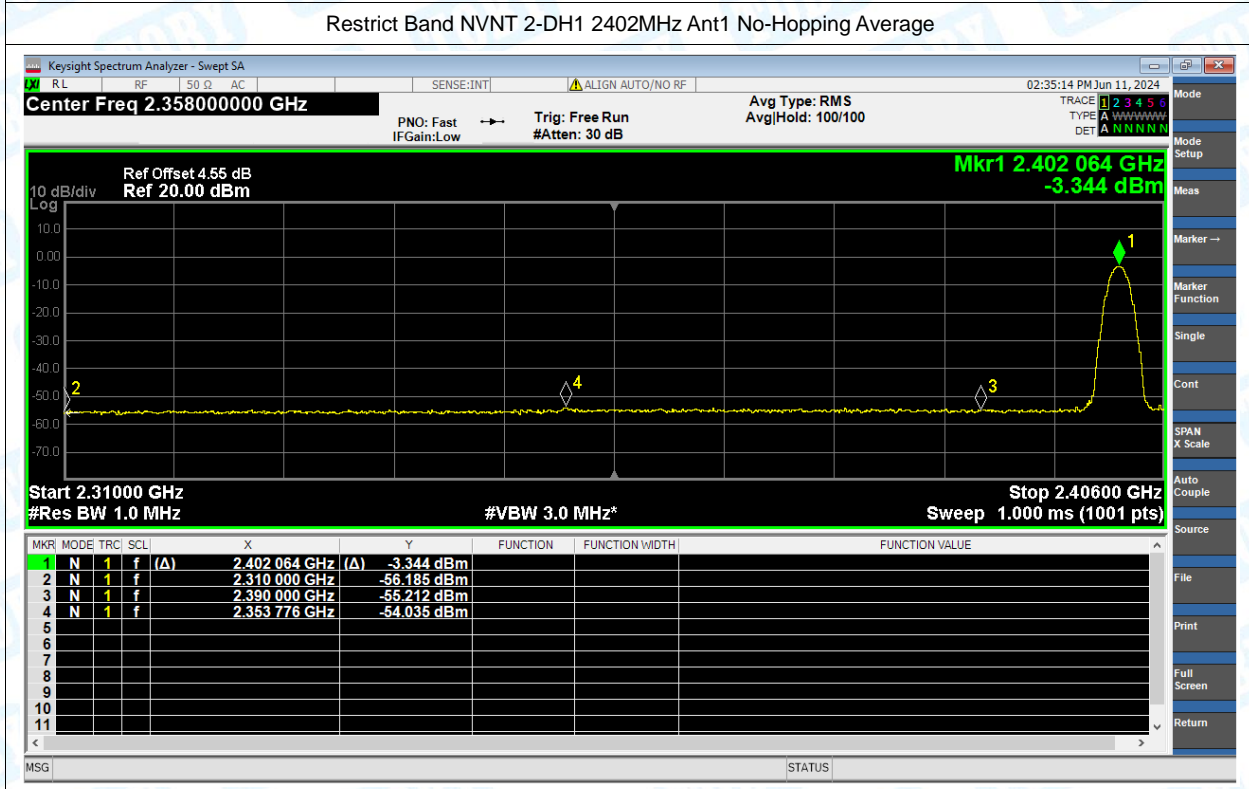
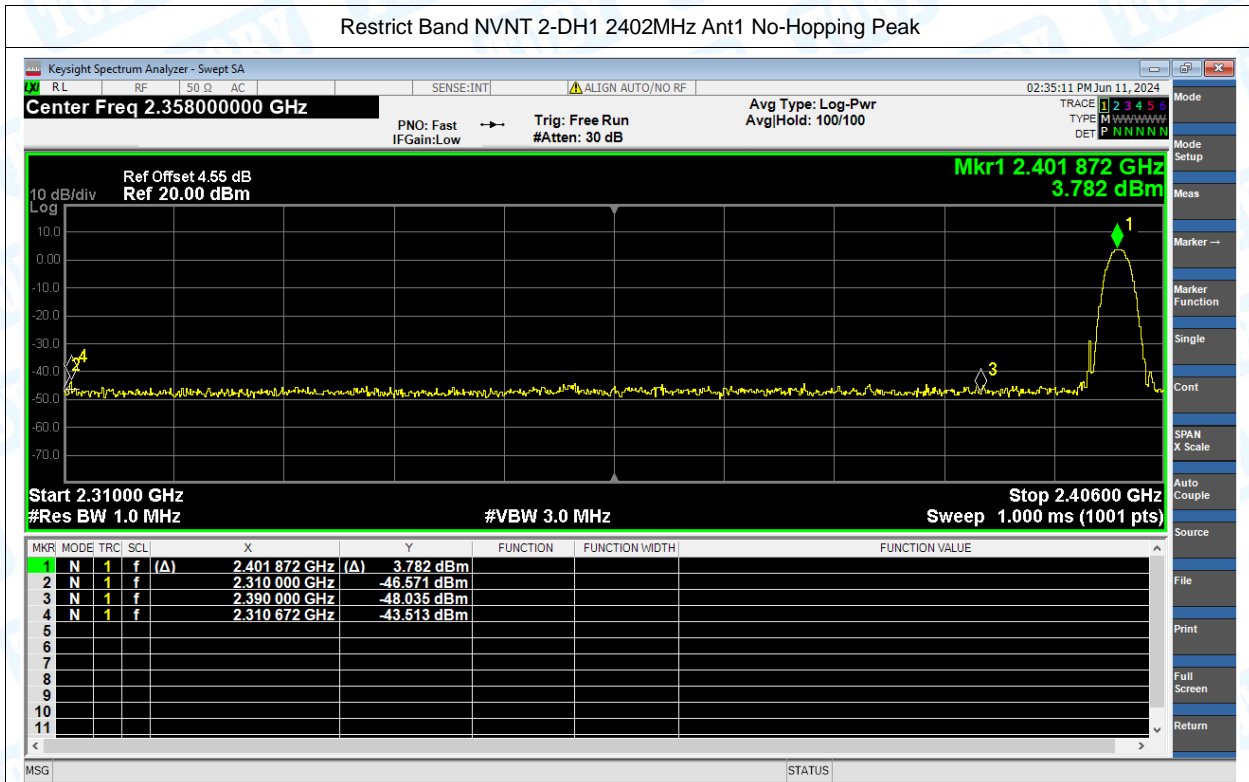


Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



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

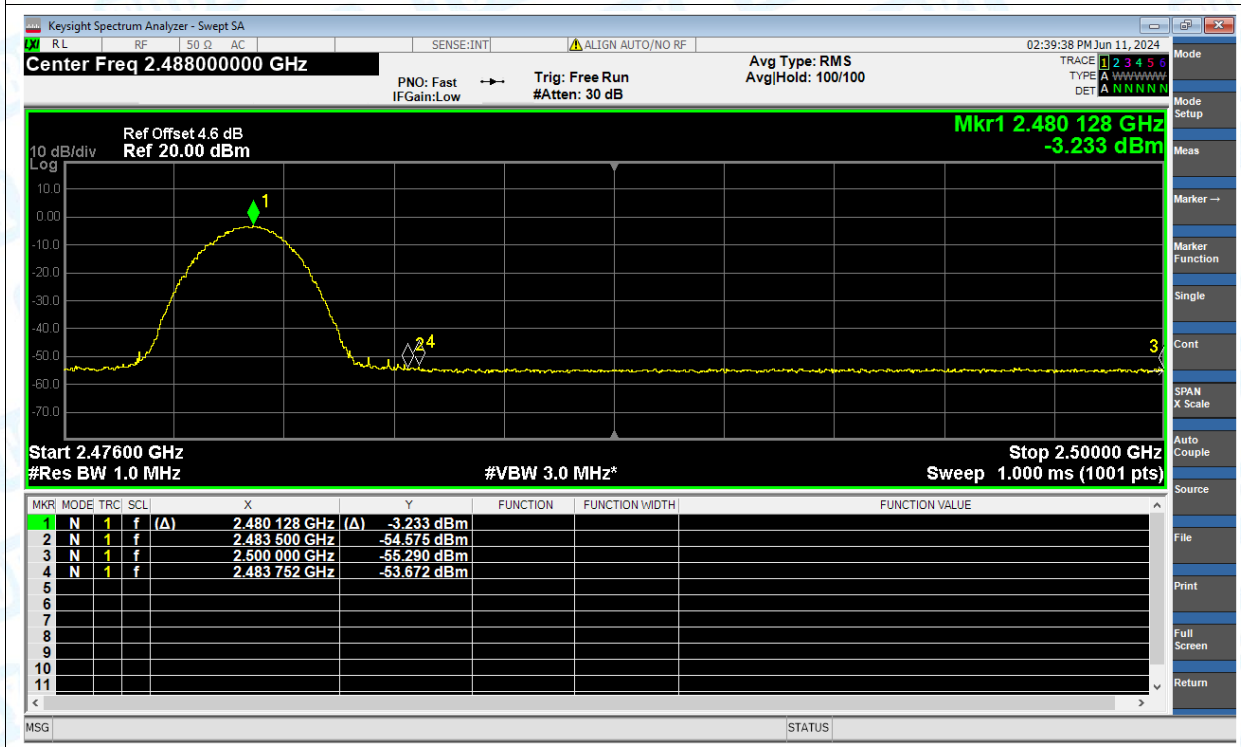




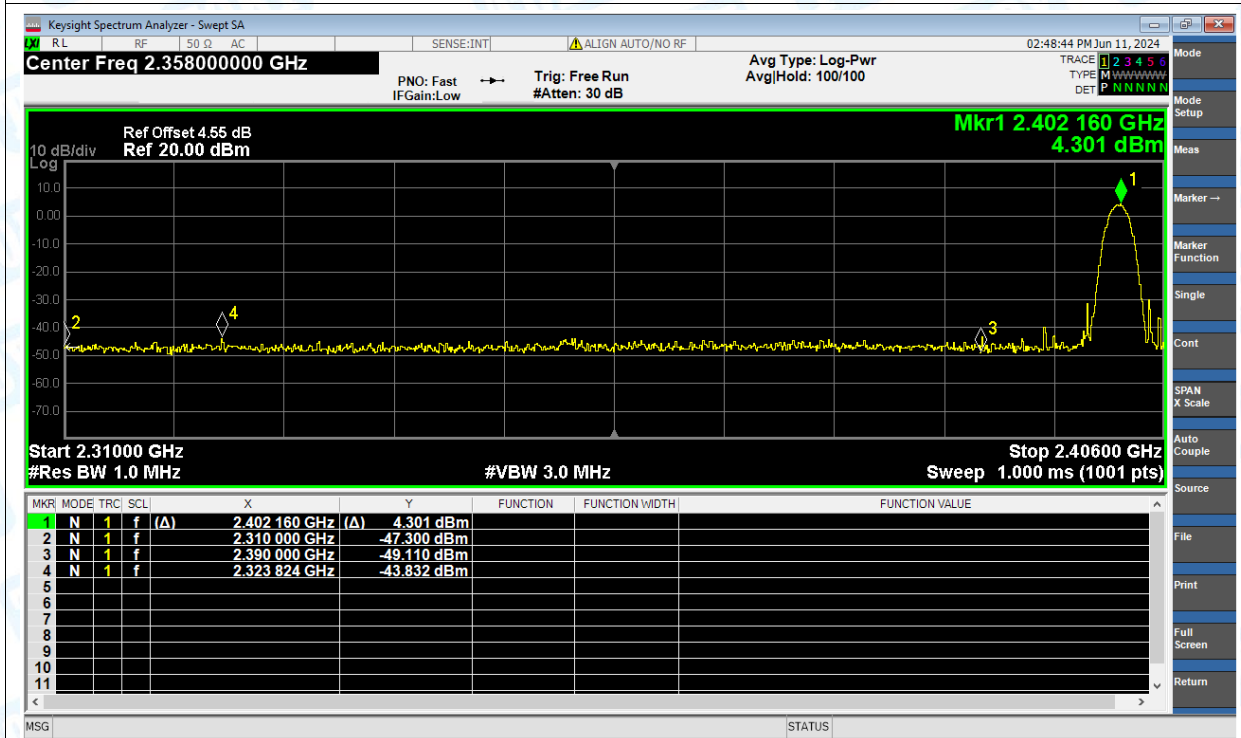
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



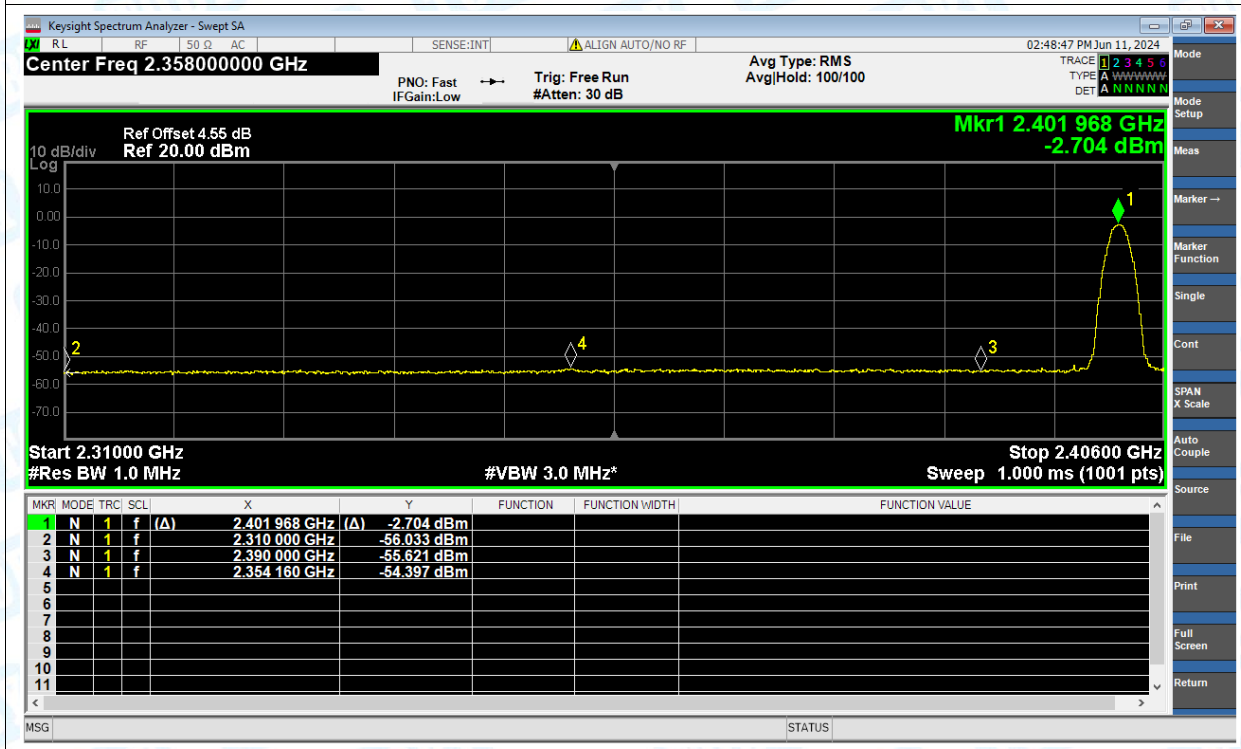
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



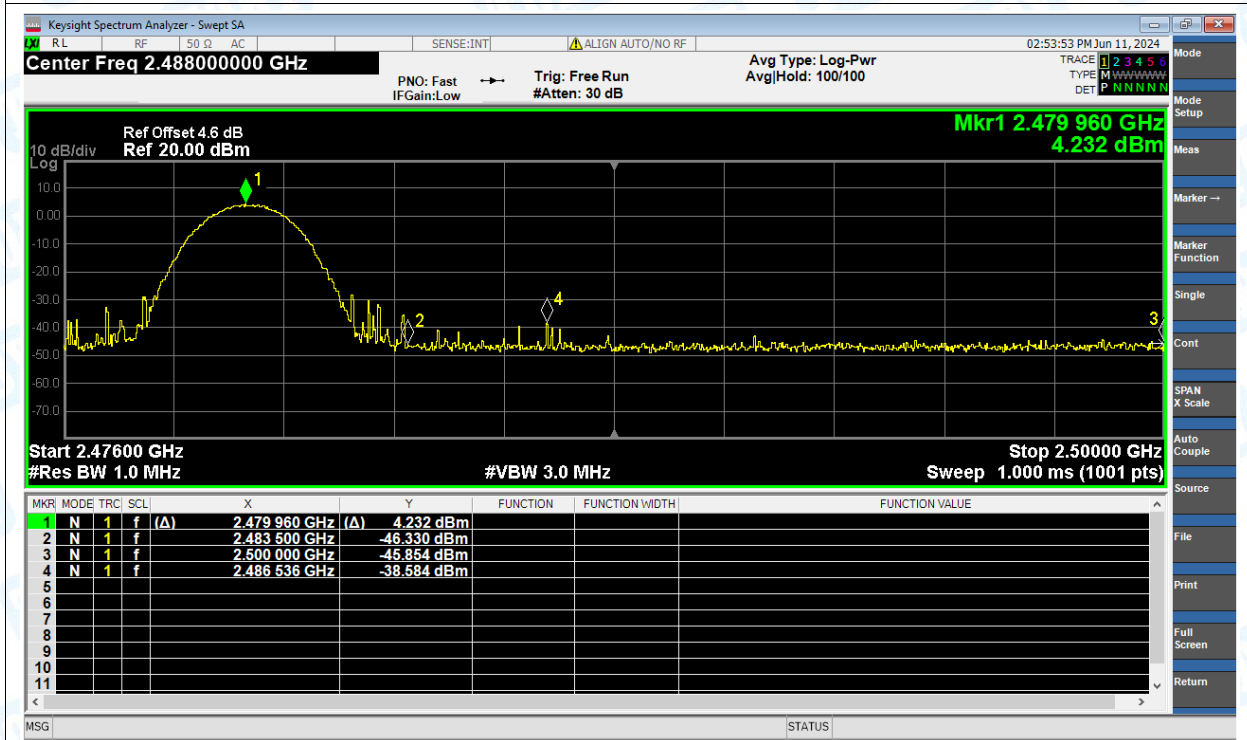
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



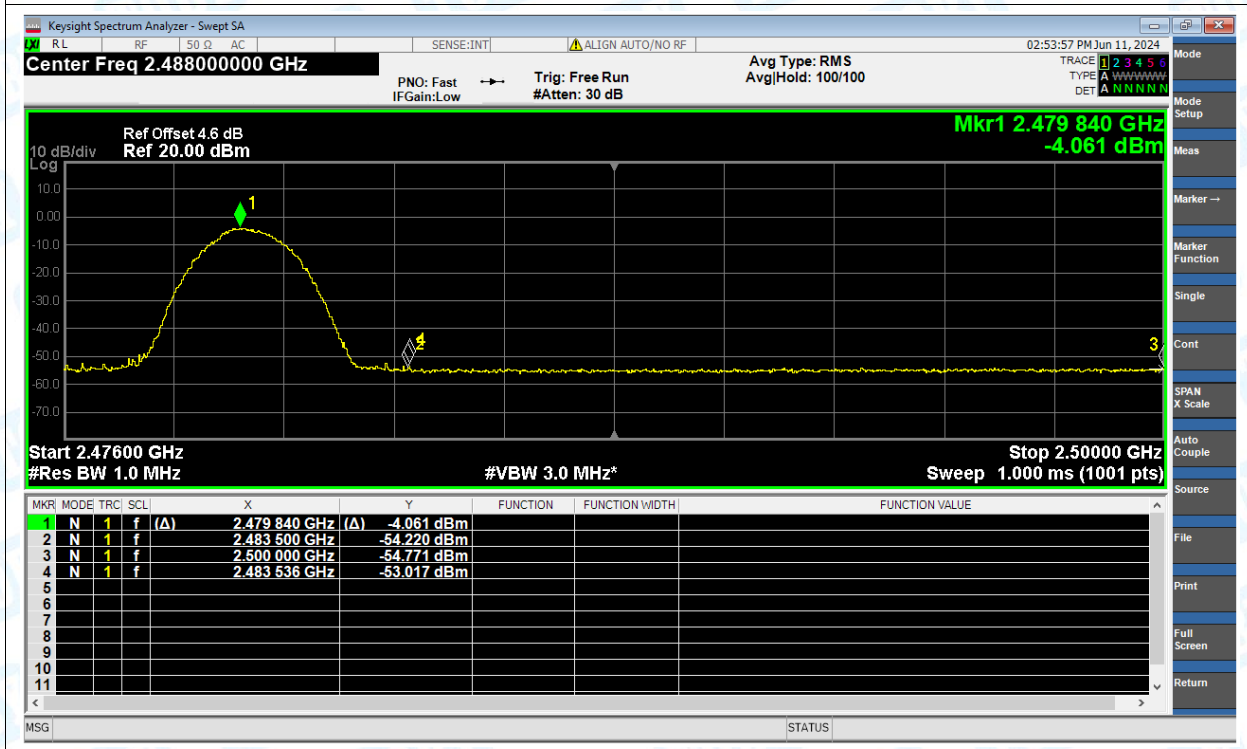
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

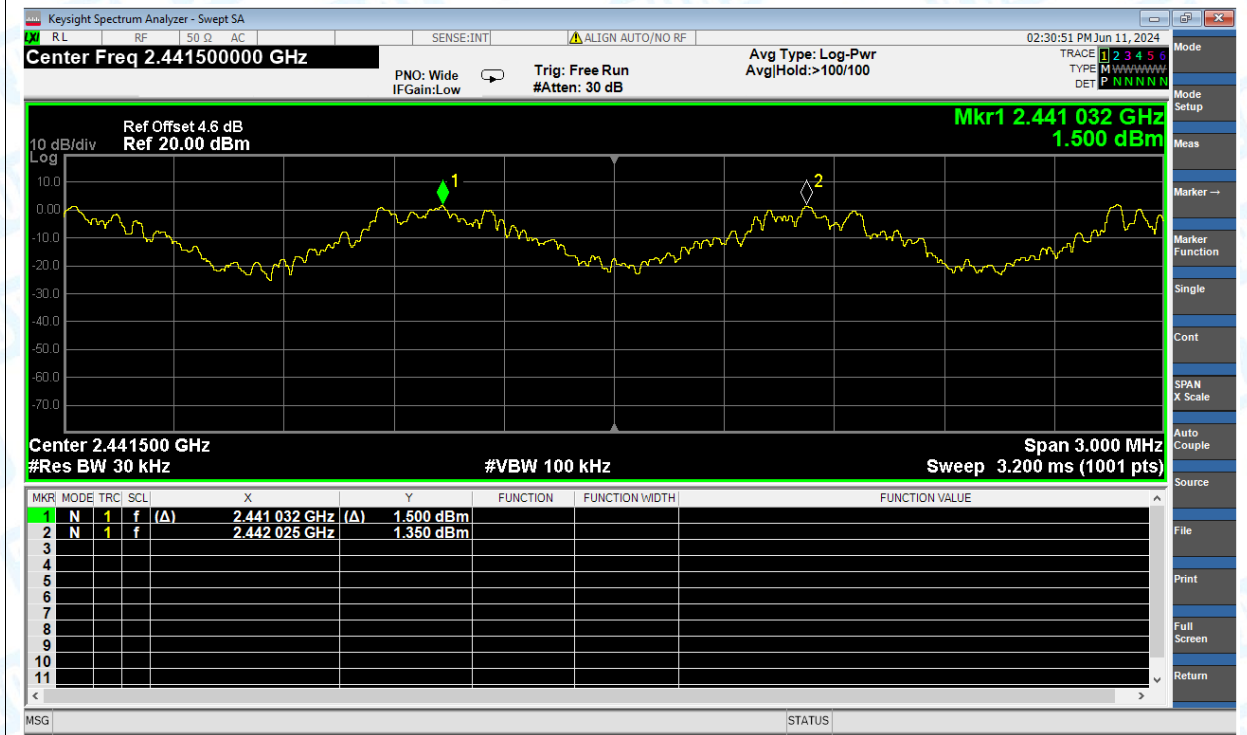


9. Carrier Frequencies Separation

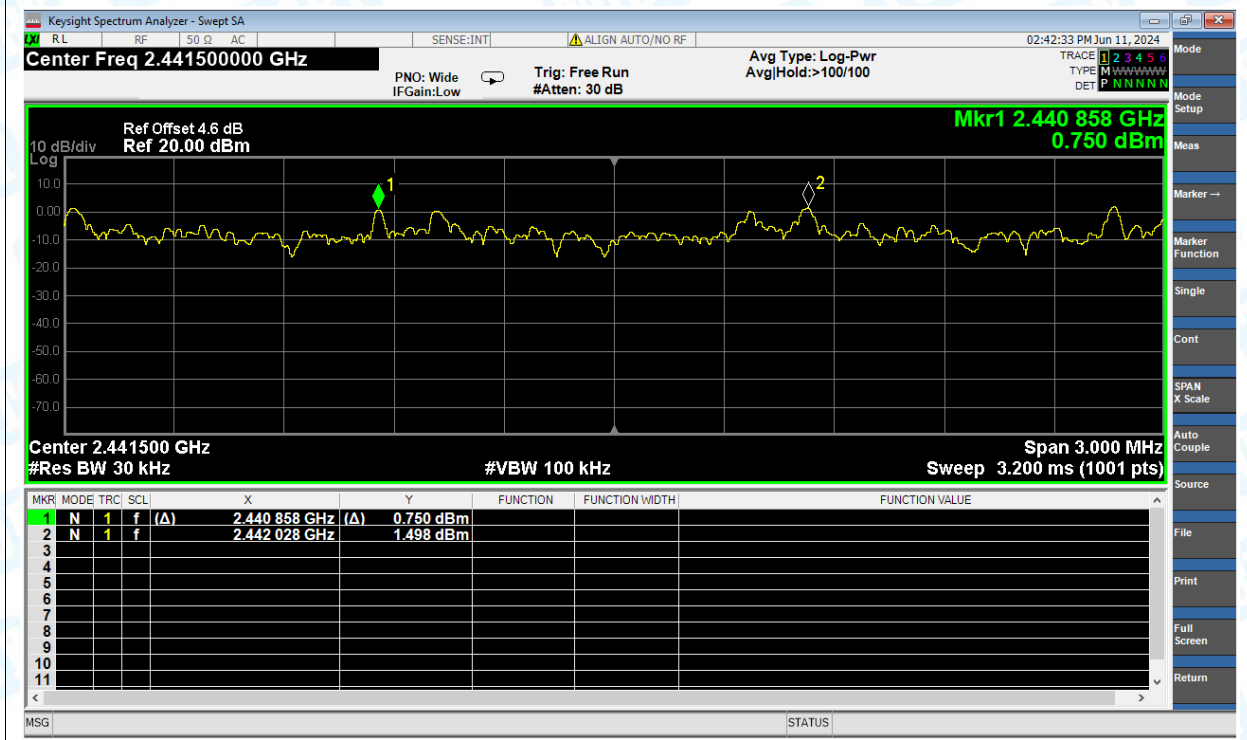
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2441.032	2442.025	0.993	0.607	Pass
NVNT	2-DH1	Ant1	2440.858	2442.028	1.17	0.827	Pass
NVNT	3-DH1	Ant1	2440.864	2442.025	1.161	0.807	Pass

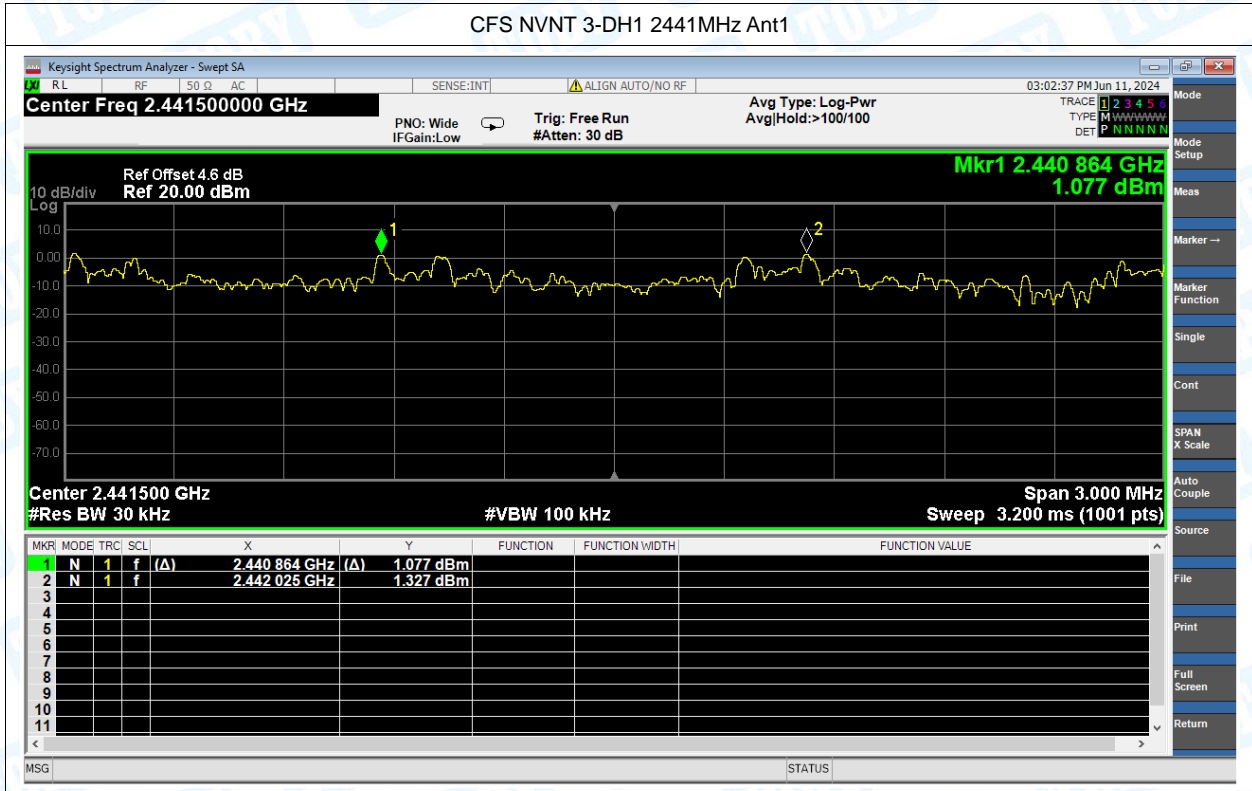
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



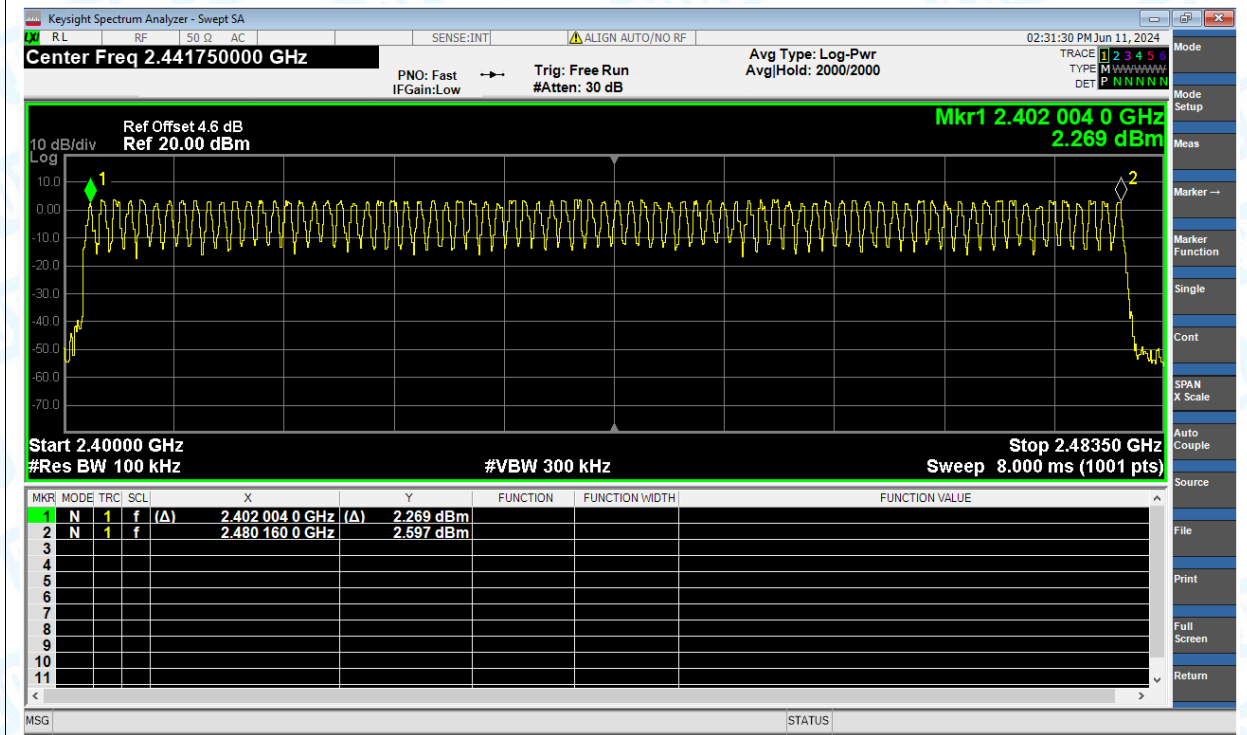


10. Number of Hopping Channel

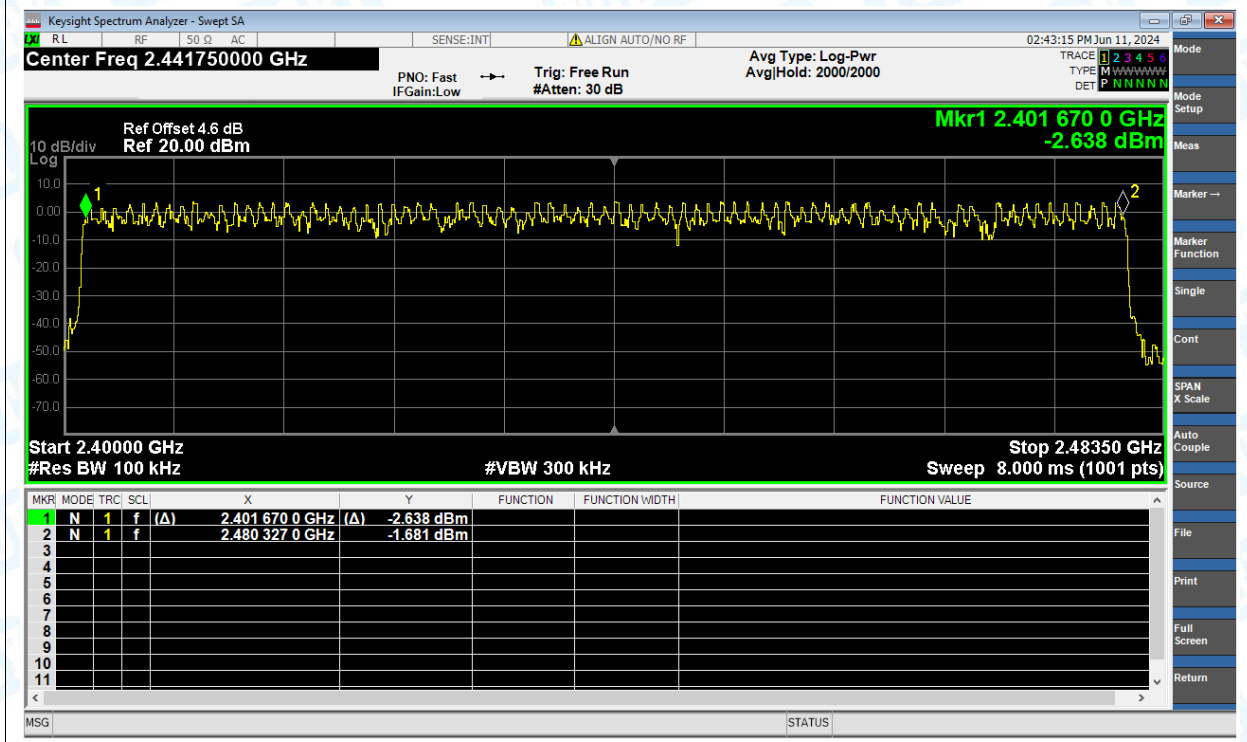
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

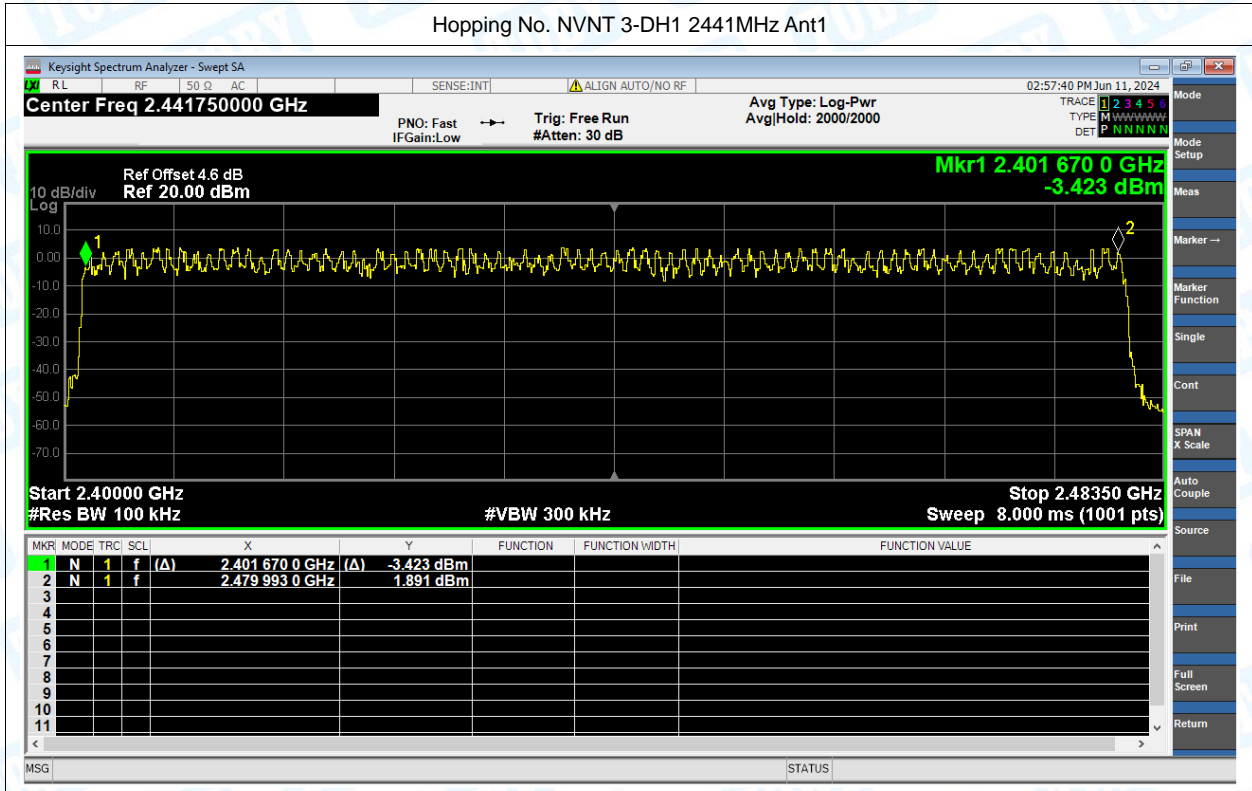
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



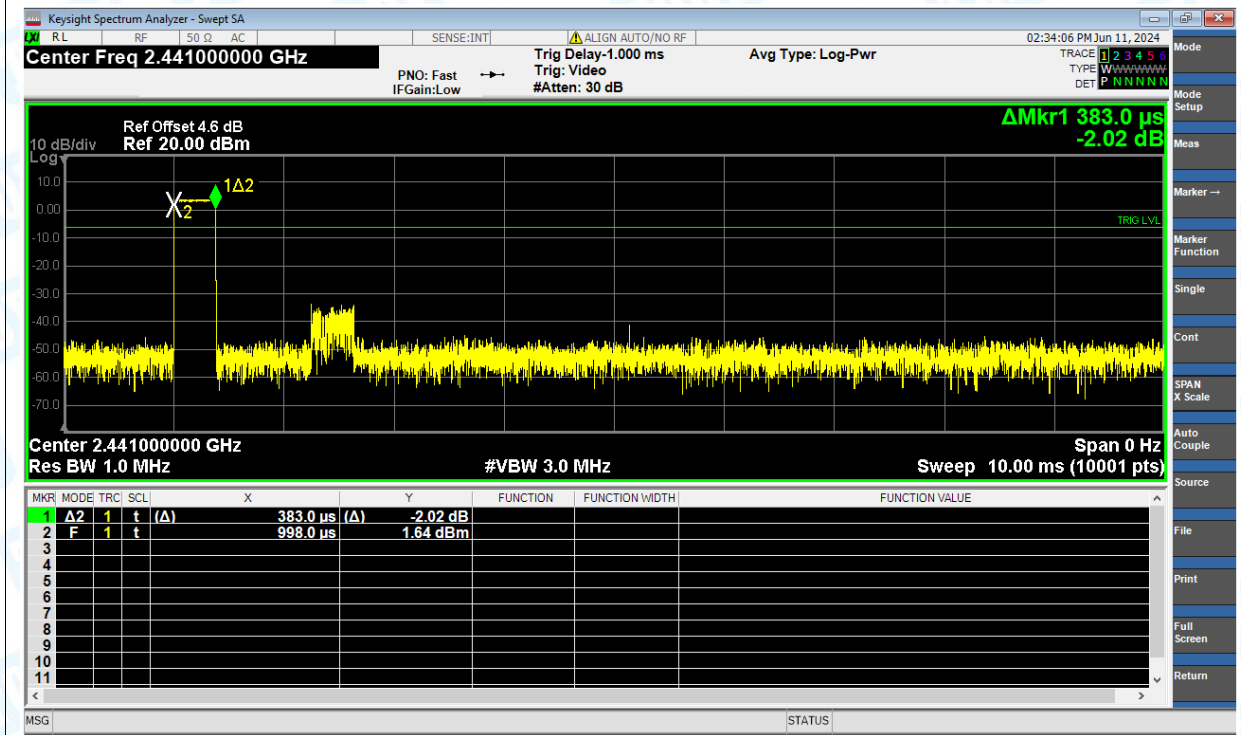


11. Dwell Time

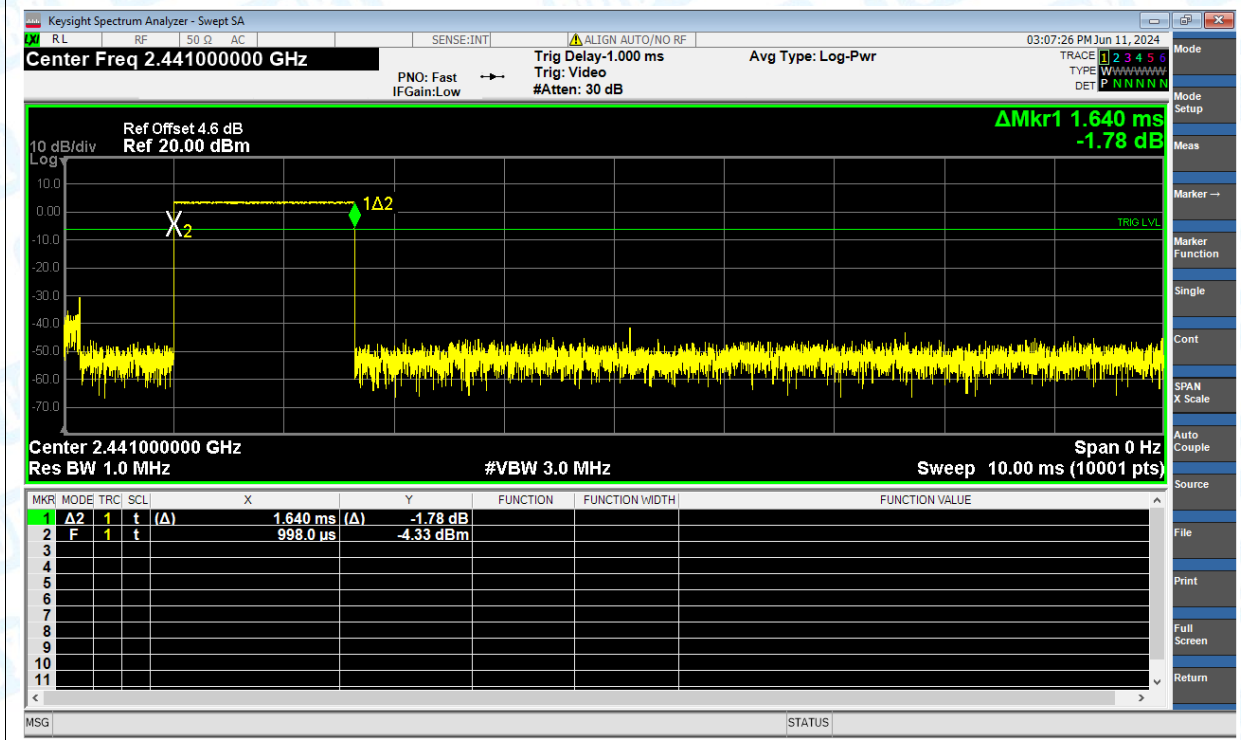
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.383	122.56	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.64	262.4	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.887	307.947	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.392	125.44	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.644	263.04	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.892	308.48	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.392	125.44	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.643	262.88	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.893	308.587	31600	400	Pass

Test Graphs

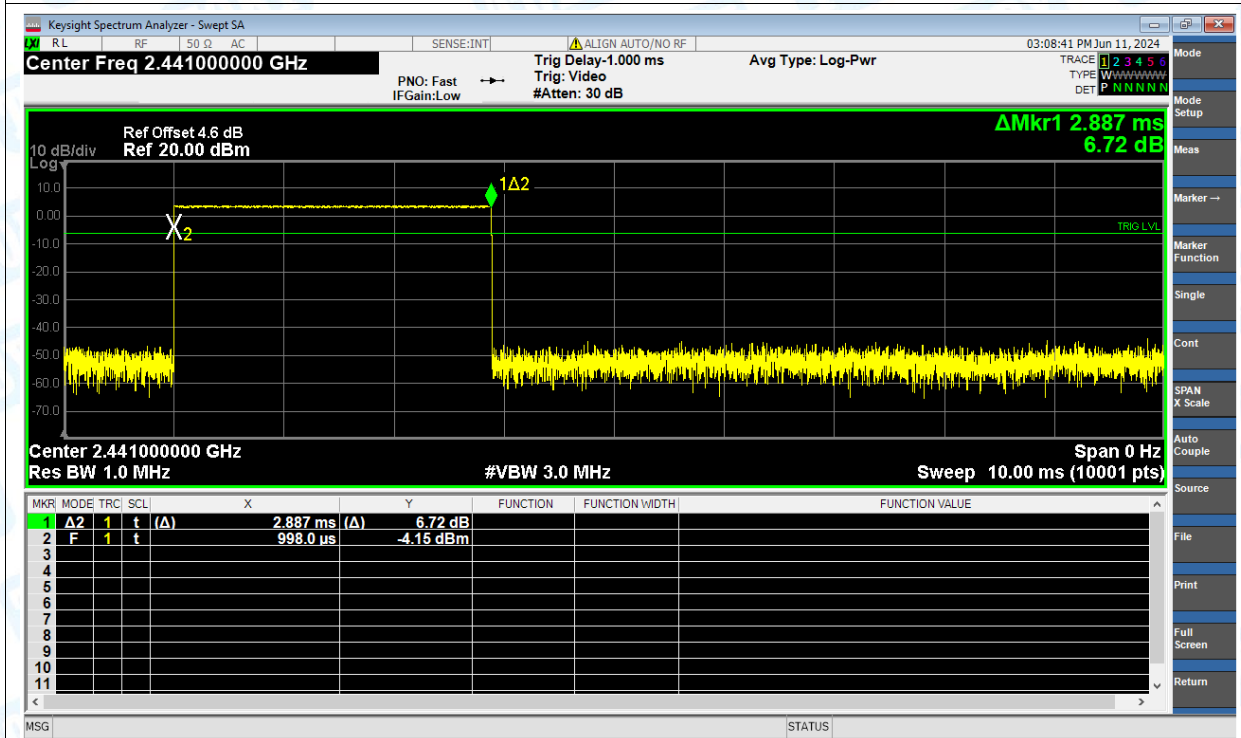
Dwell NVNT 1-DH1 2441MHz Ant1



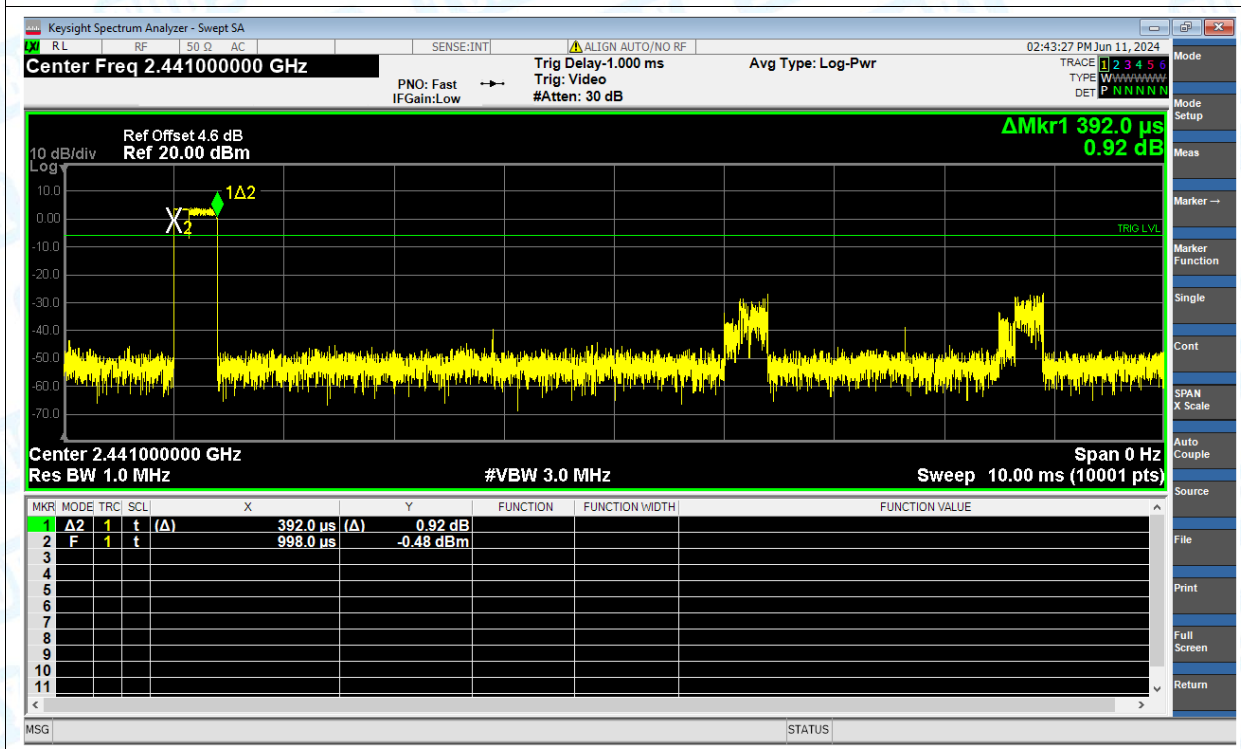
Dwell NVNT 1-DH3 2441MHz Ant1



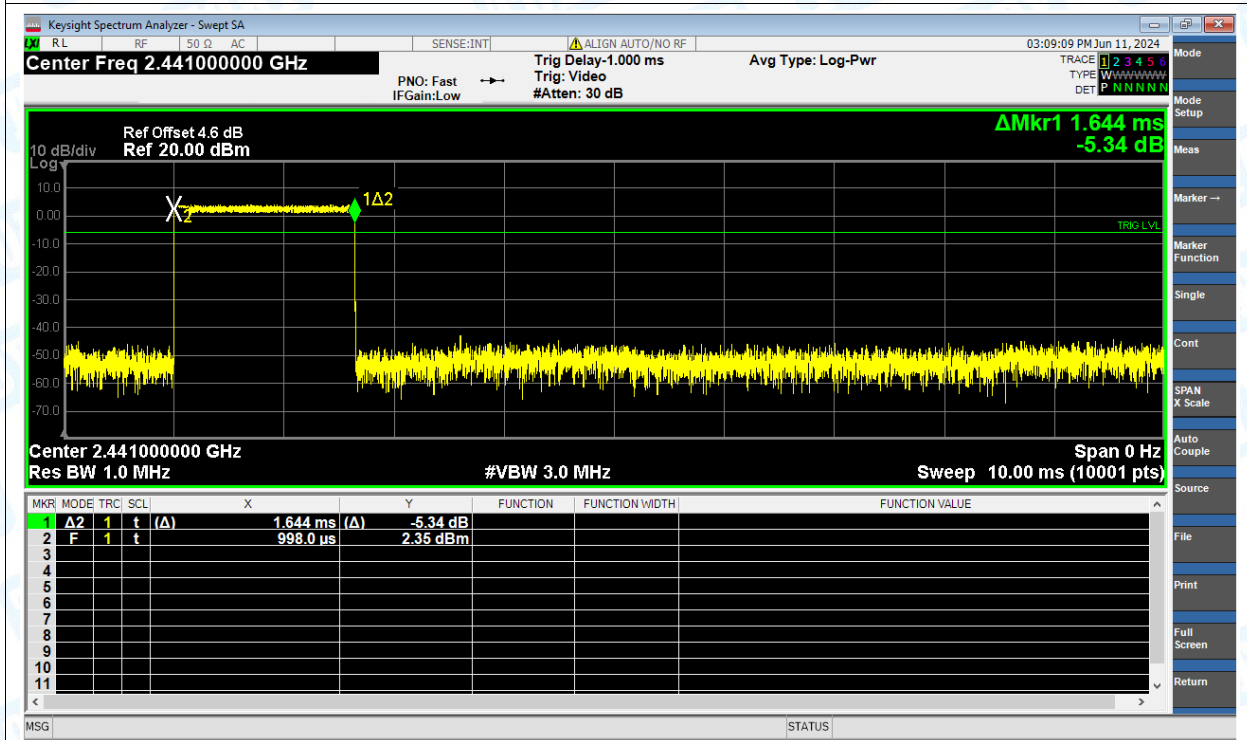
Dwell NVNT 1-DH5 2441MHz Ant1



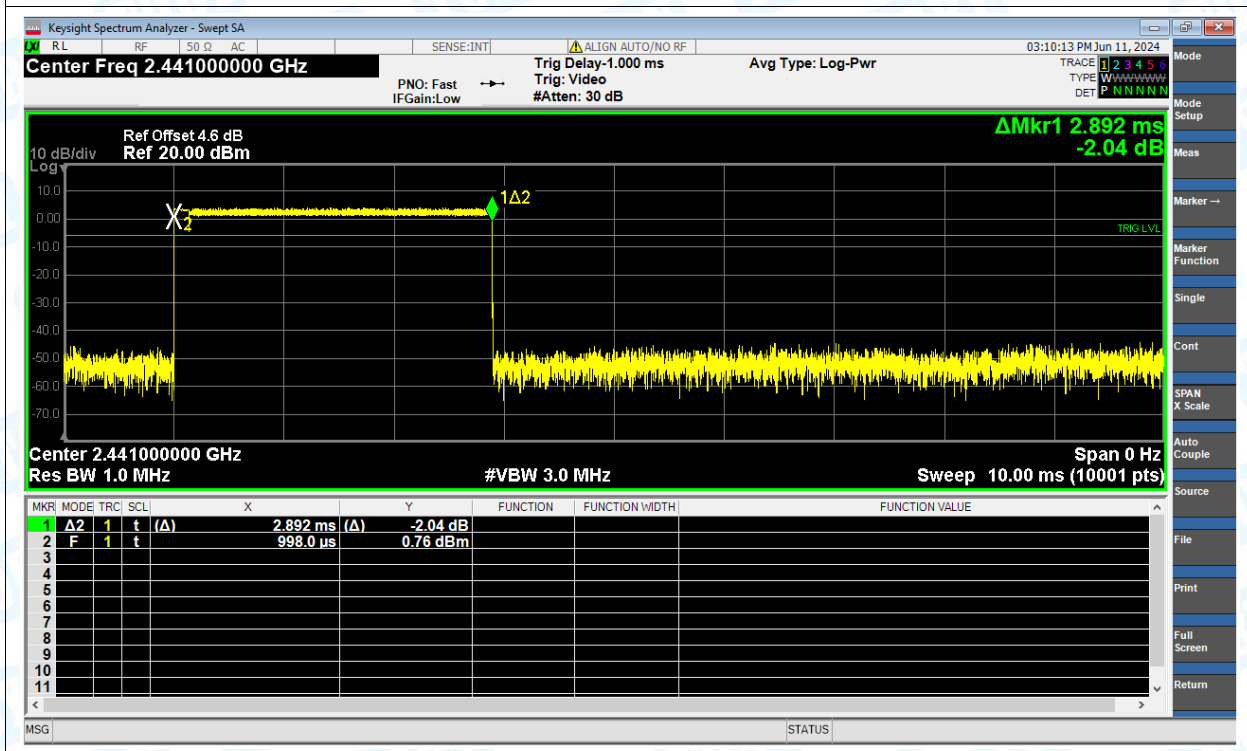
Dwell NVNT 2-DH1 2441MHz Ant1



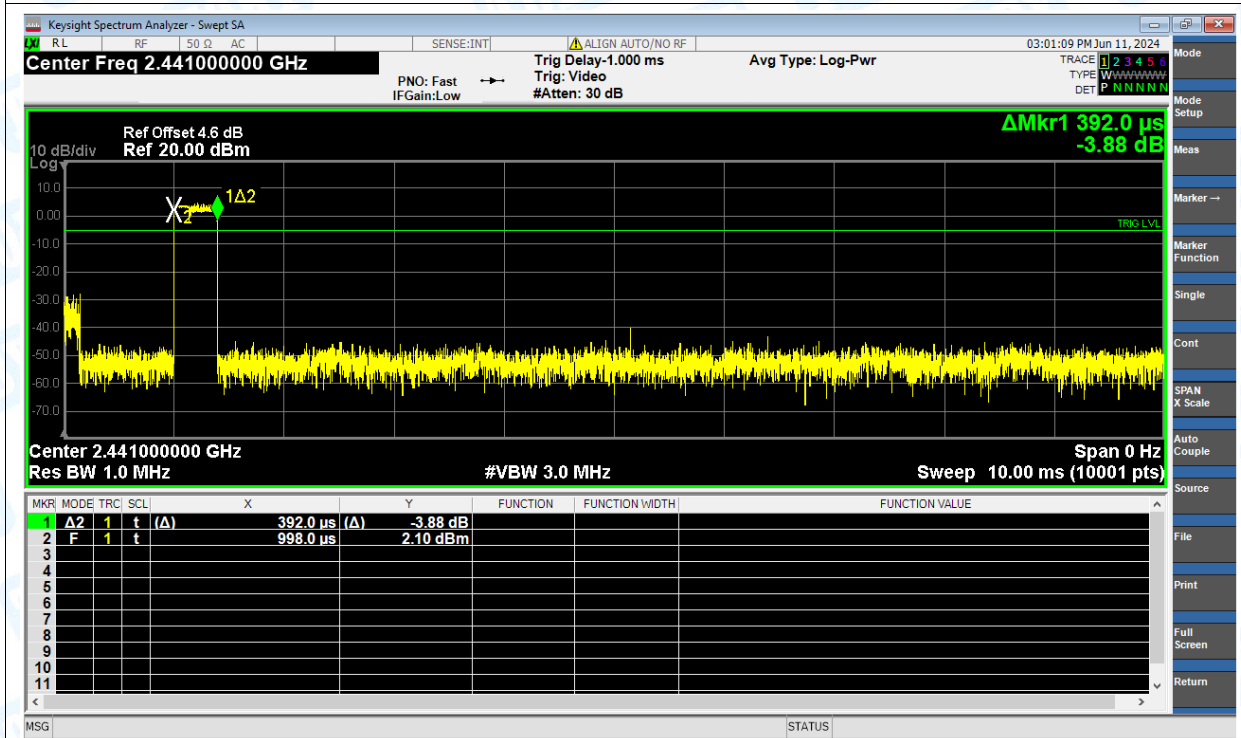
Dwell NVNT 2-DH3 2441MHz Ant1



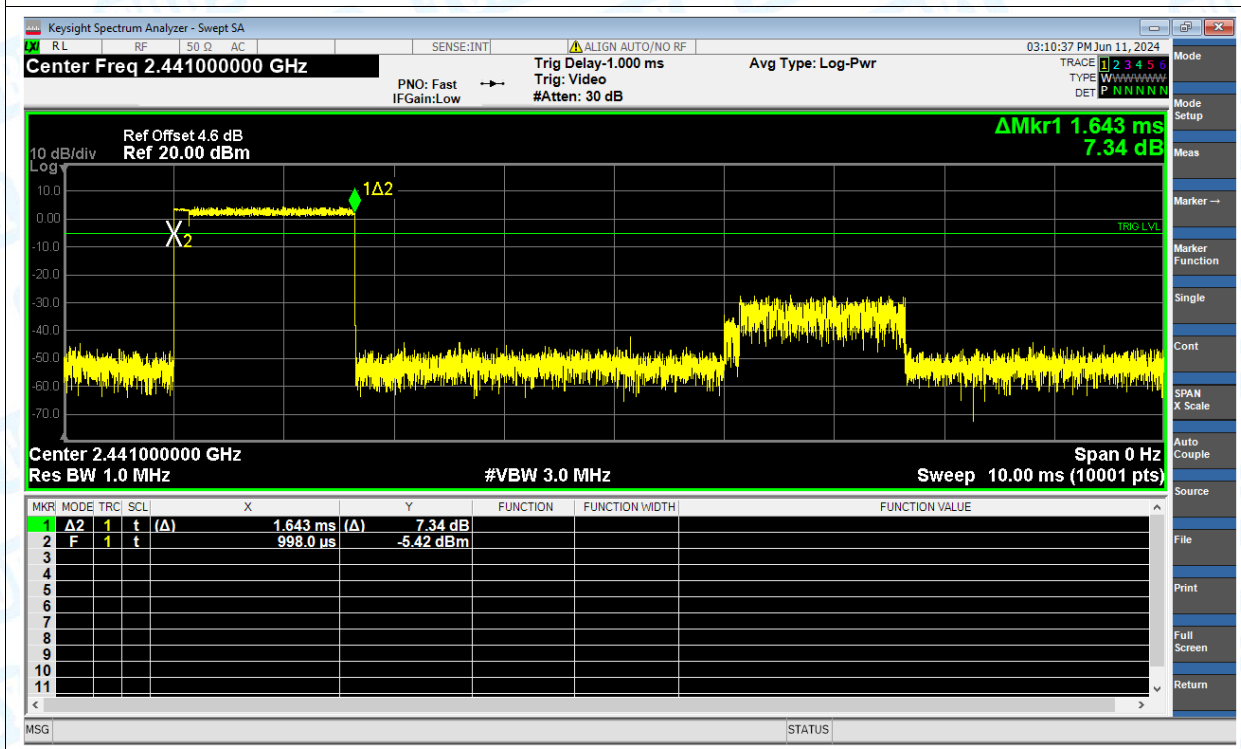
Dwell NVNT 2-DH5 2441MHz Ant1

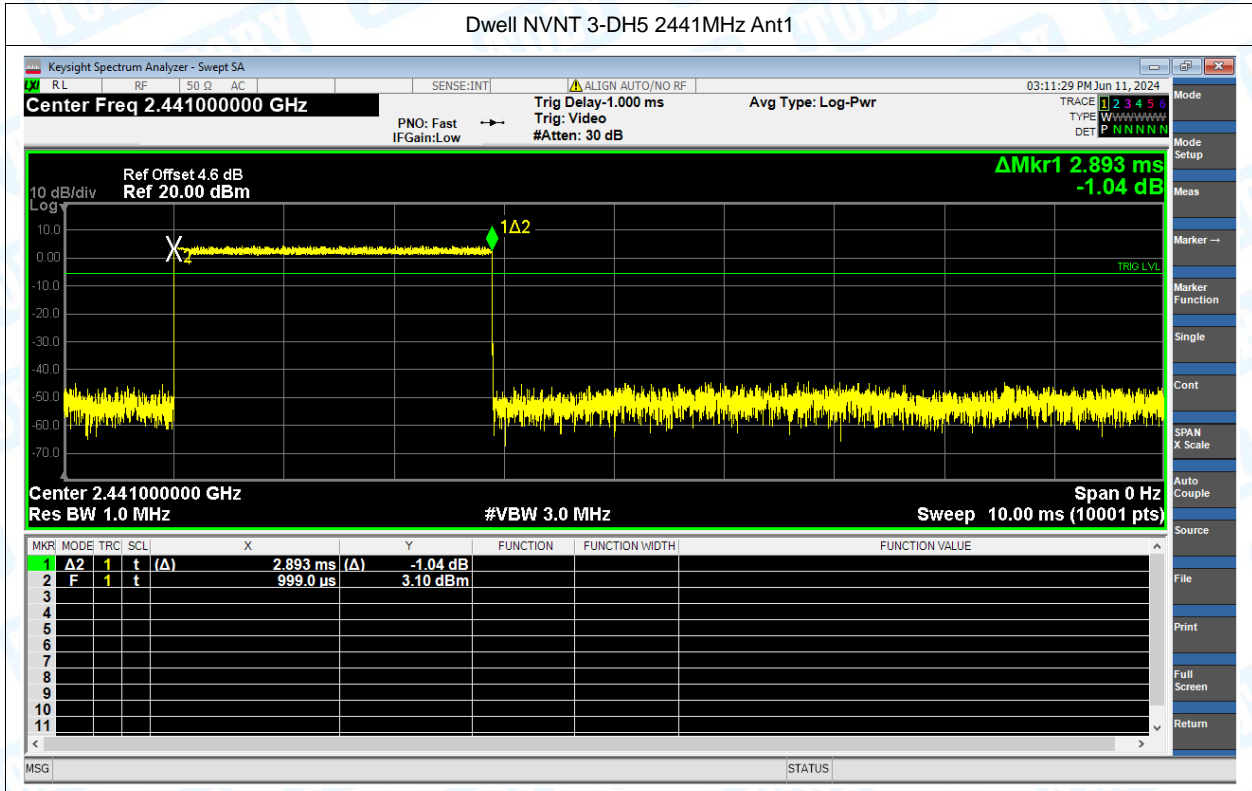


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





-----End of report-----