

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	SMART WATCH
Test Model:	G129
Sample ID:	HC-C-202407-0182-02-01
Environmental Conditions	
Temperature:	25.6°C
Relative Humidity:	52.6%
Test Voltage:	DC 3.7V
Test Engineer:	Jolin Lee
Note: For a more detailed features description, please refer to the report TBR-C-202407-0182-43 The report only show the worst case data.	

Contents

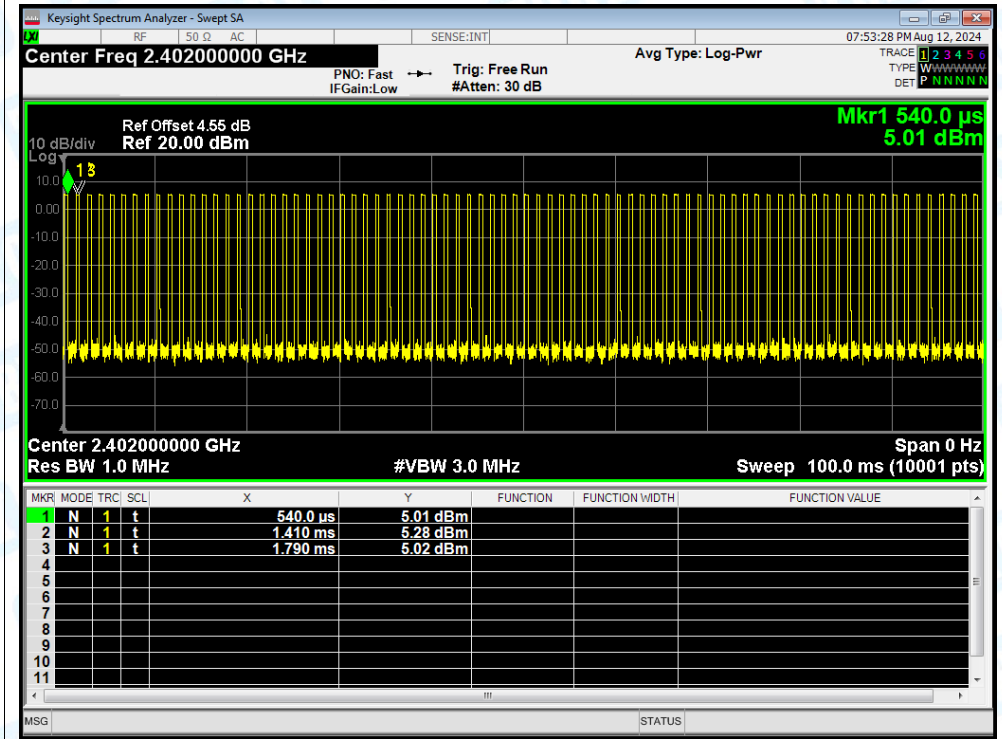
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1. Duty Cycle

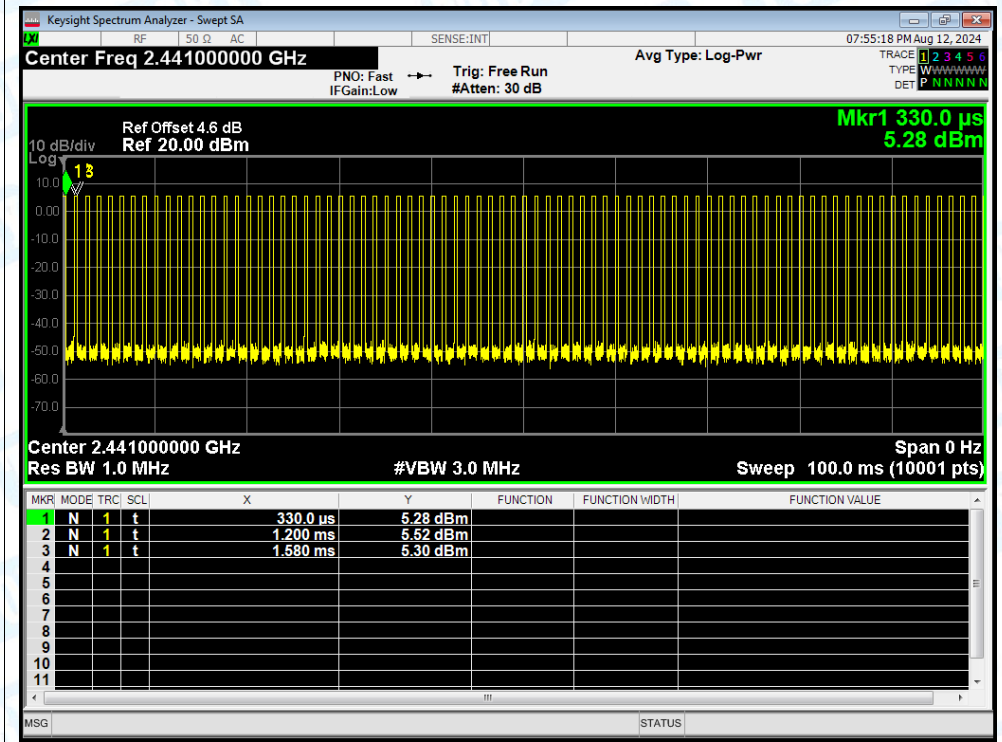
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2480	Ant1	30.4	5.17	2.63
NVNT	2-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2441	Ant1	32	4.95	2.5
NVNT	2-DH1	2480	Ant1	32	4.95	2.5
NVNT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

Test Graphs

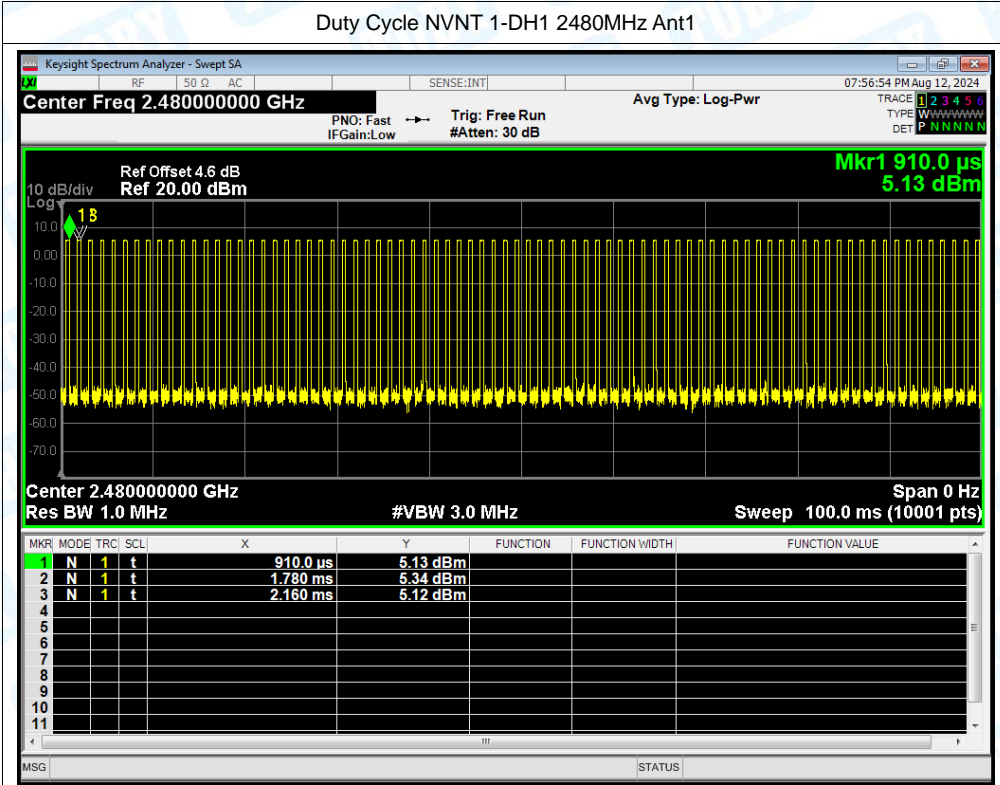
Duty Cycle NVNT 1-DH1 2402MHz Ant1



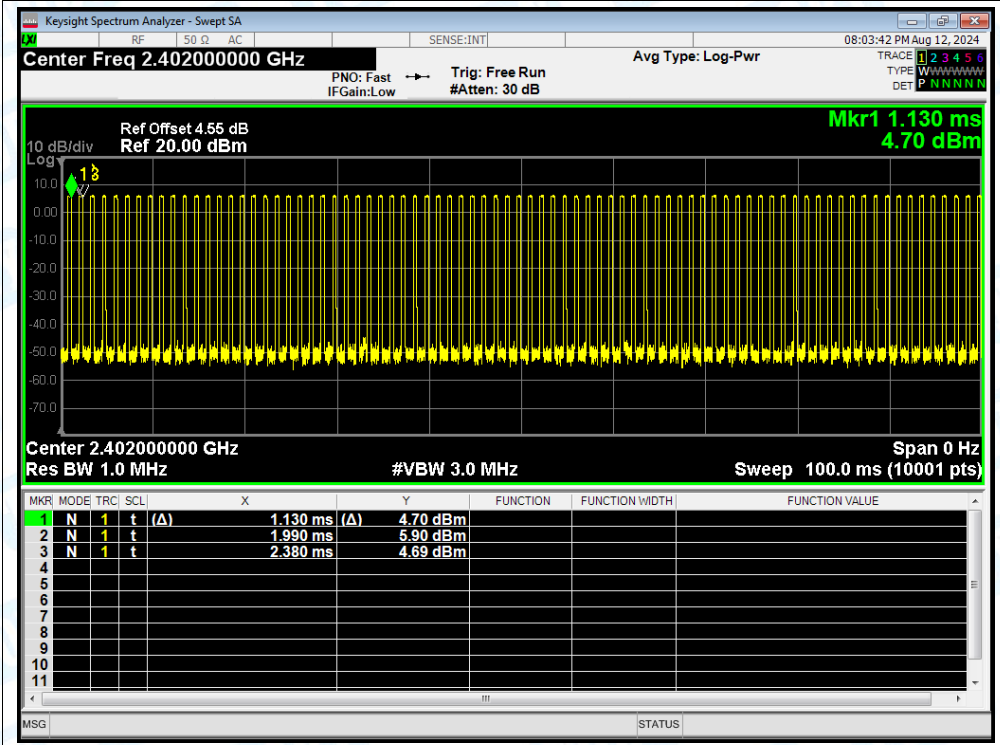
Duty Cycle NVNT 1-DH1 2441MHz Ant1



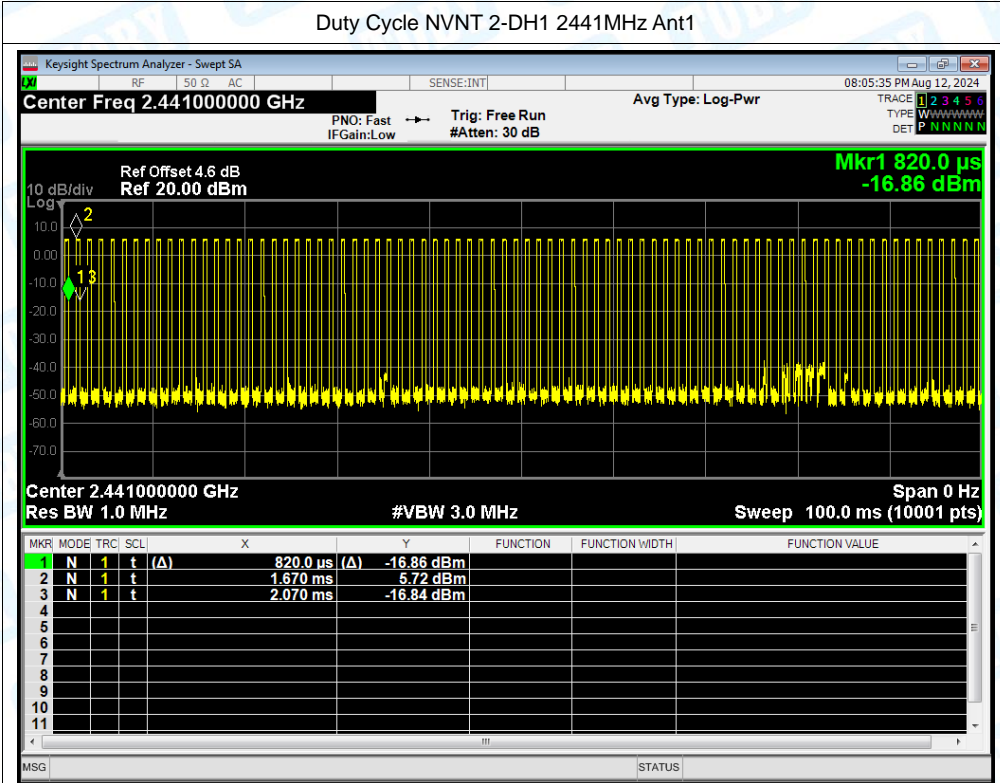
Duty Cycle NVNT 1-DH1 2480MHz Ant1



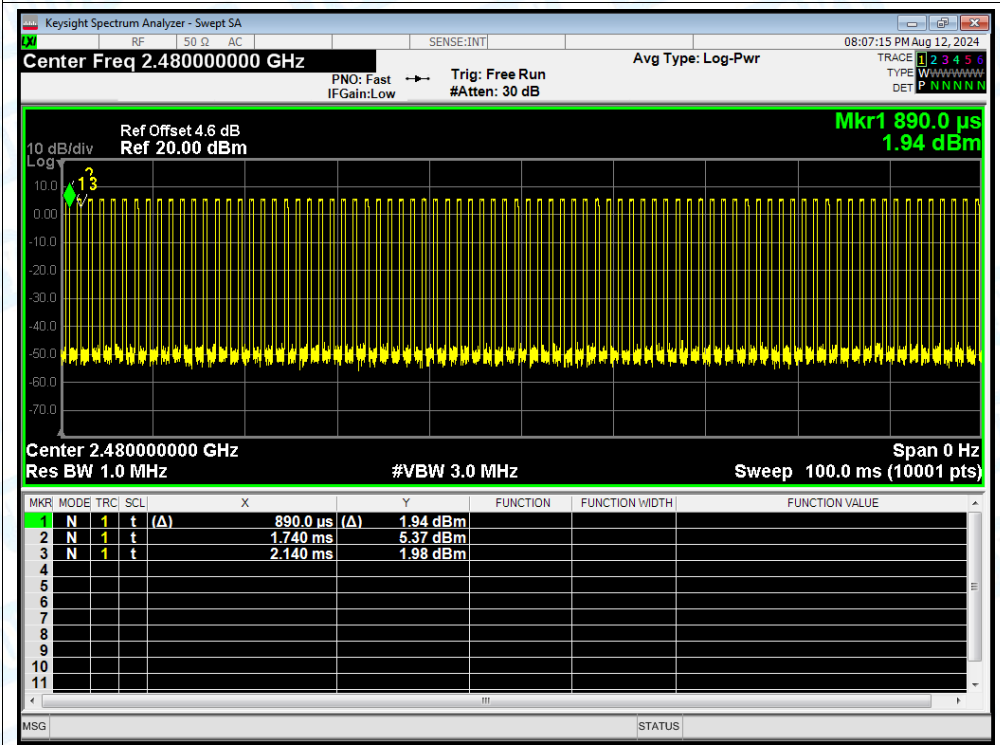
Duty Cycle NVNT 2-DH1 2402MHz Ant1



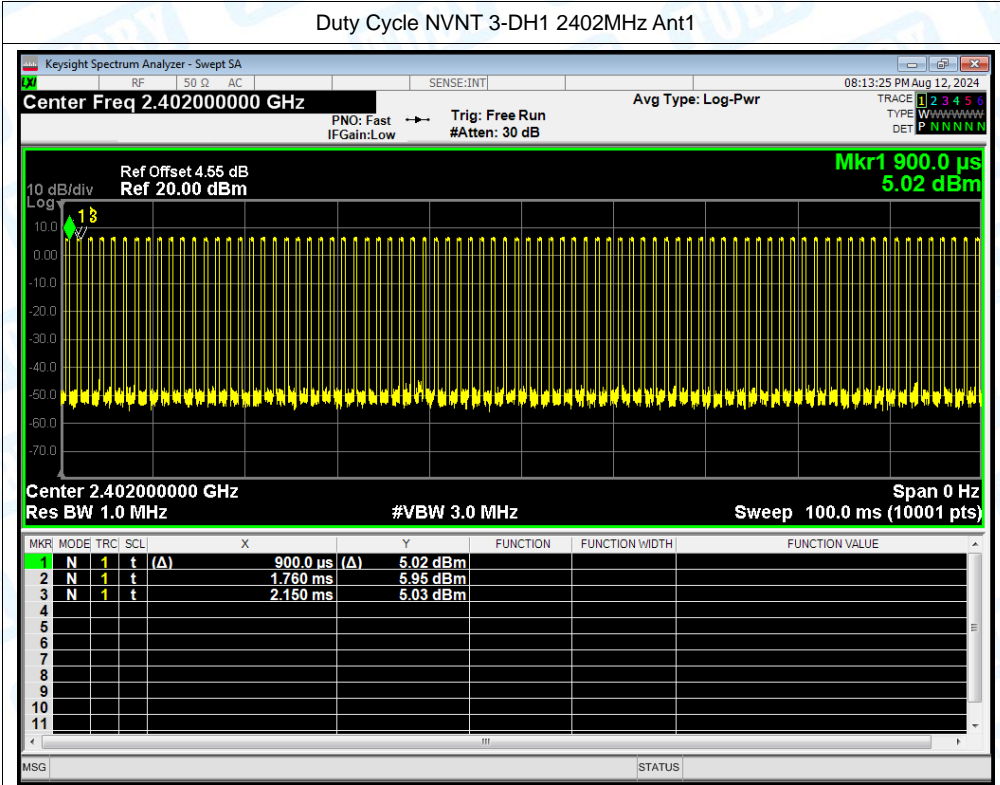
Duty Cycle NVNT 2-DH1 2441MHz Ant1



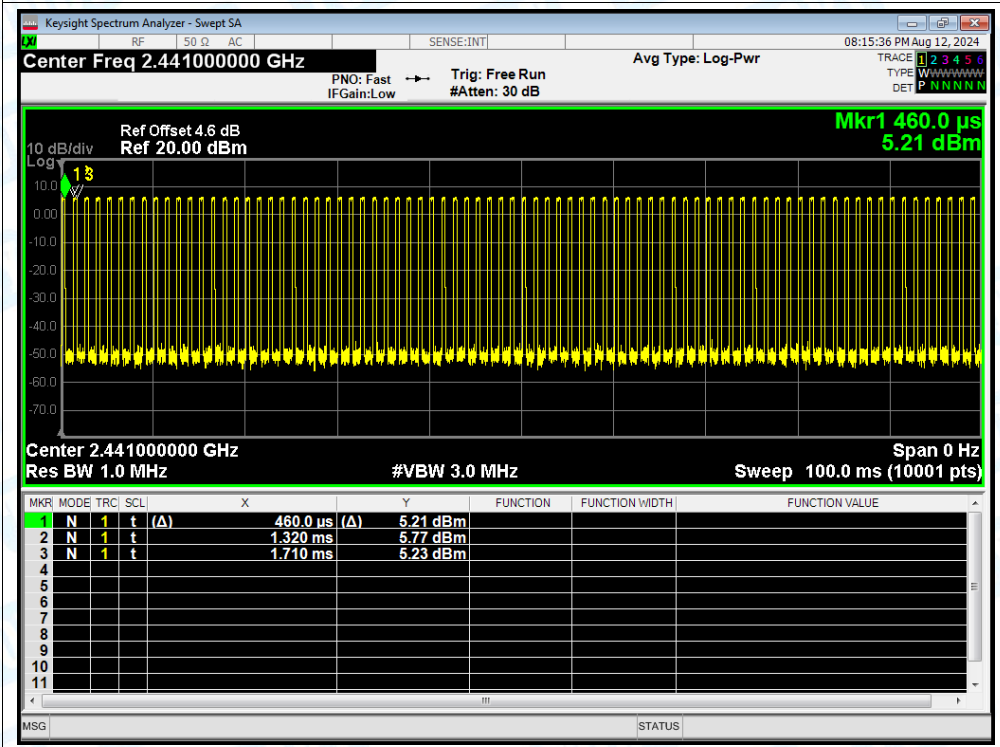
Duty Cycle NVNT 2-DH1 2480MHz Ant1

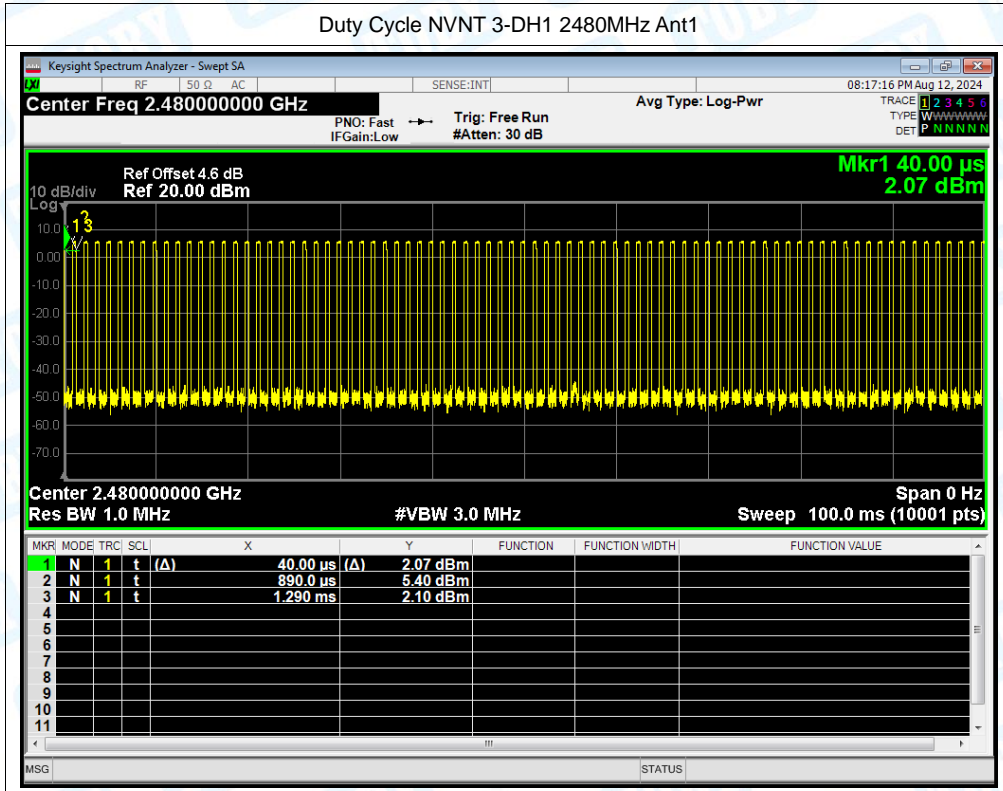


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



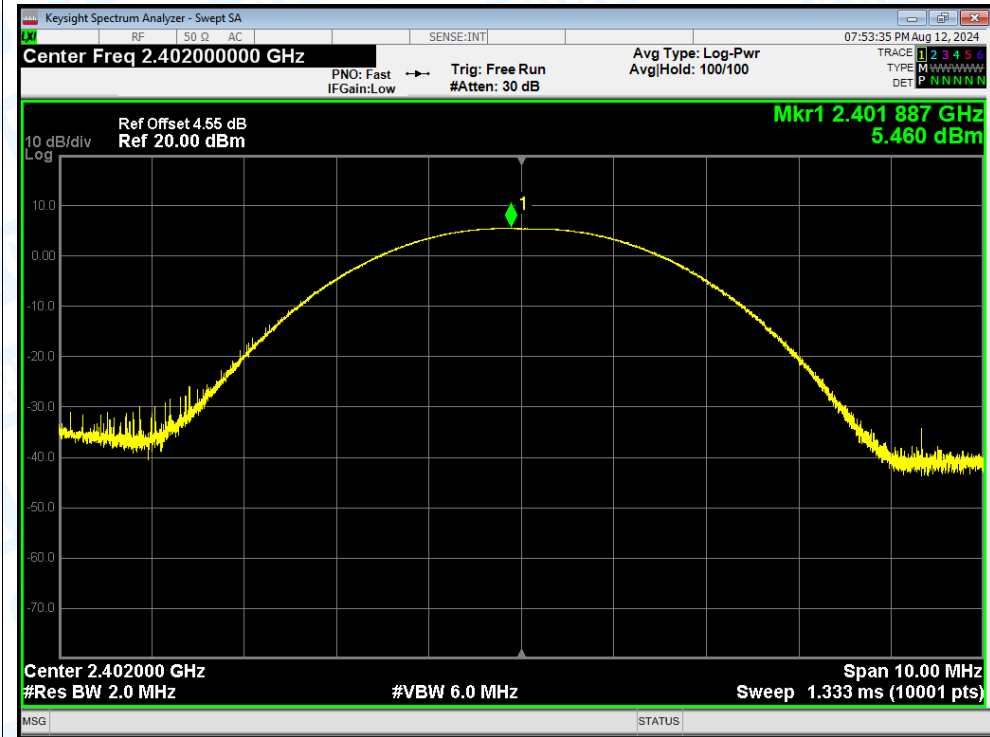


2. Maximum Conducted Output Power

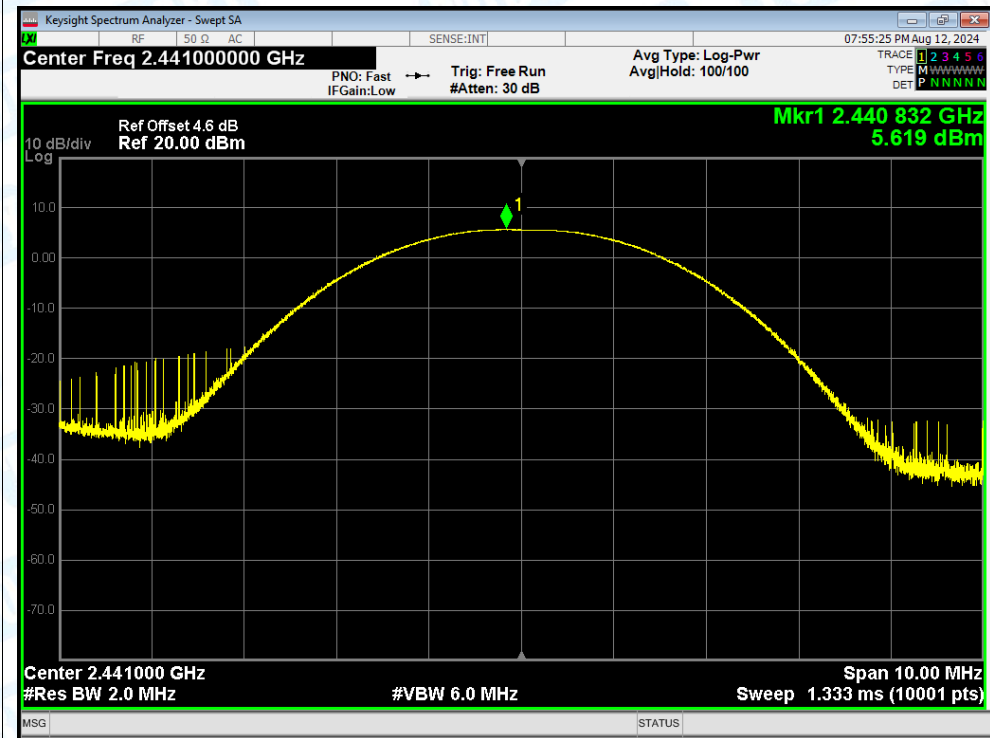
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	5.46	21	Pass
NVNT	1-DH1	2441	Ant1	5.619	21	Pass
NVNT	1-DH1	2480	Ant1	5.414	21	Pass
NVNT	1-DH3	2441	Ant1	5.888	21	Pass
NVNT	1-DH5	2441	Ant1	5.846	21	Pass
NVNT	2-DH1	2402	Ant1	6.444	21	Pass
NVNT	2-DH1	2441	Ant1	6.175	21	Pass
NVNT	2-DH1	2480	Ant1	5.83	21	Pass
NVNT	2-DH3	2441	Ant1	6.212	21	Pass
NVNT	2-DH5	2441	Ant1	6.208	21	Pass
NVNT	3-DH1	2402	Ant1	6.72	21	Pass
NVNT	3-DH1	2441	Ant1	6.412	21	Pass
NVNT	3-DH1	2480	Ant1	6.009	21	Pass
NVNT	3-DH3	2441	Ant1	6.35	21	Pass
NVNT	3-DH5	2441	Ant1	6.356	21	Pass

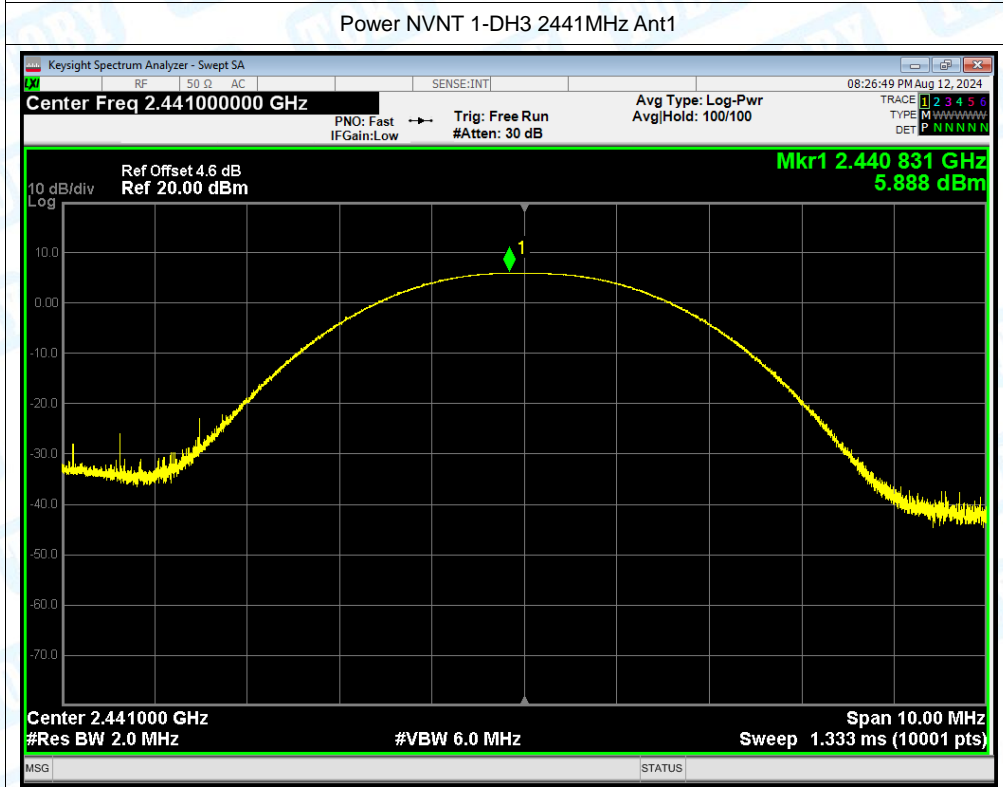
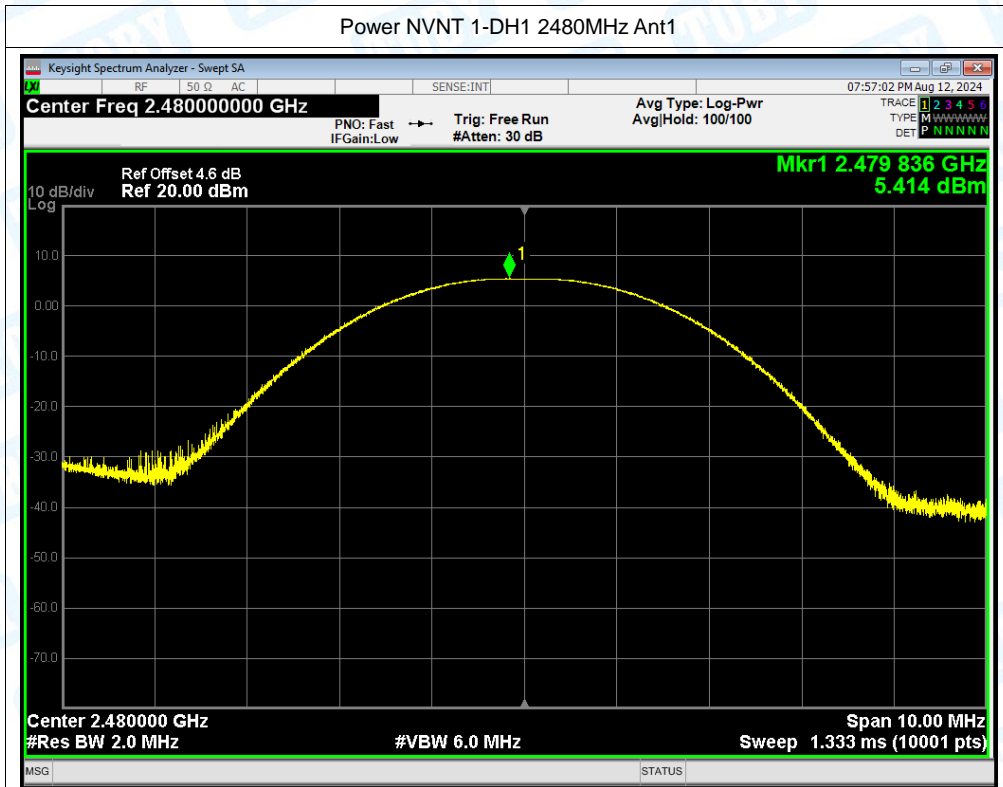
Test Graphs

Power NVNT 1-DH1 2402MHz Ant1

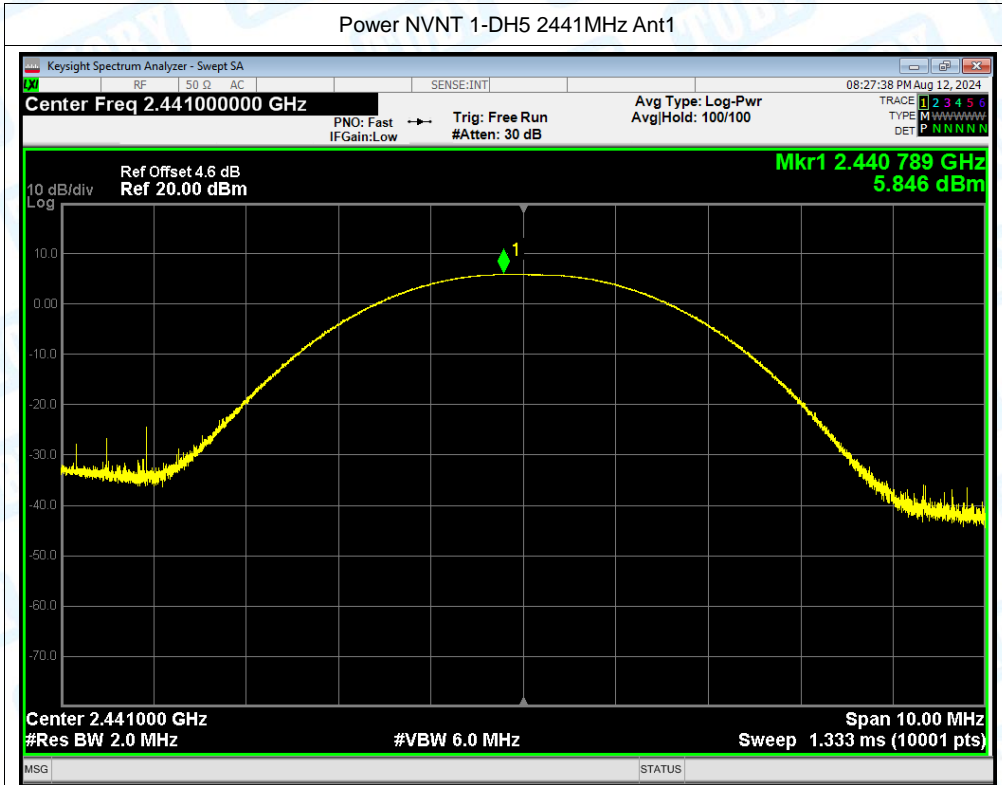


Power NVNT 1-DH1 2441MHz Ant1

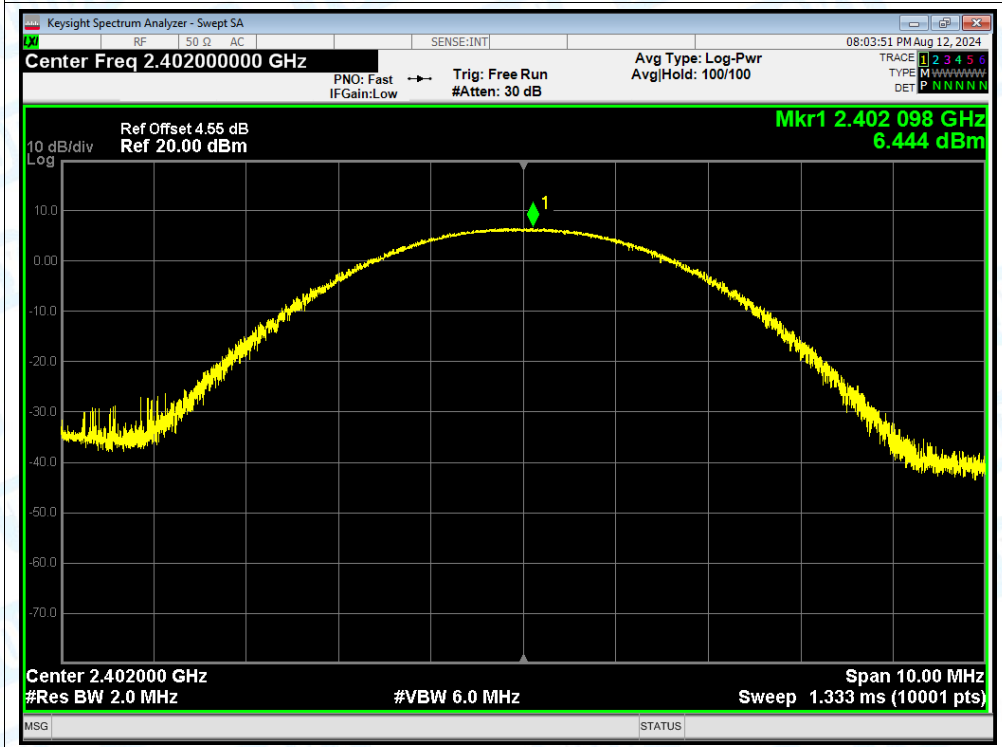


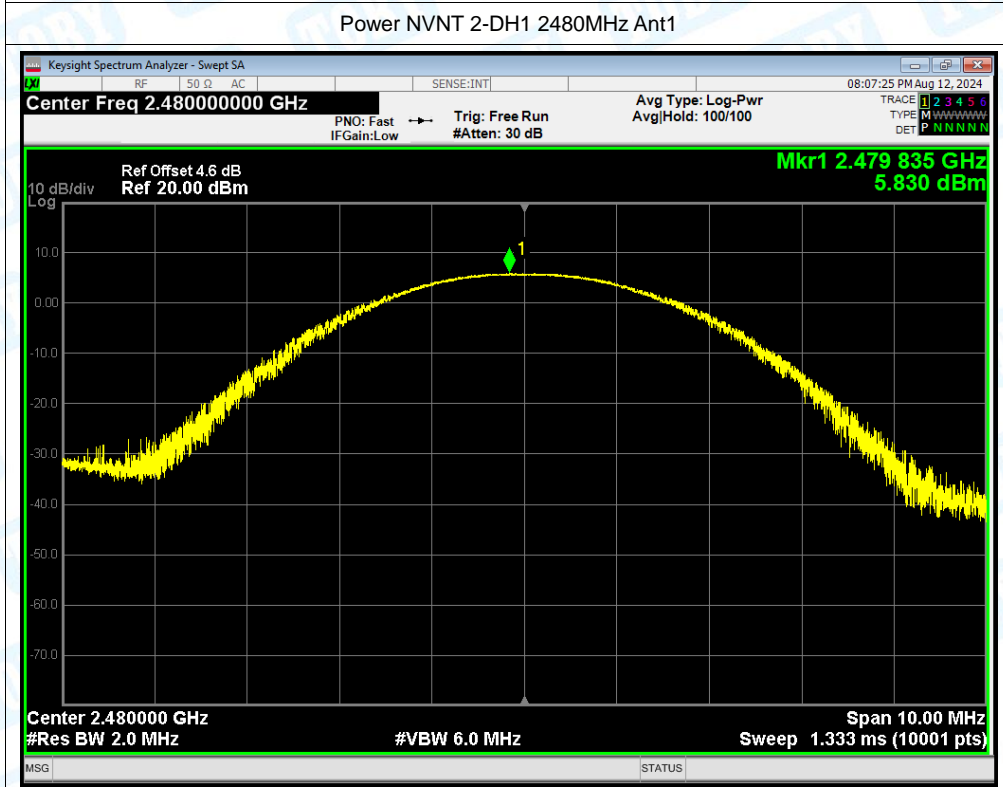
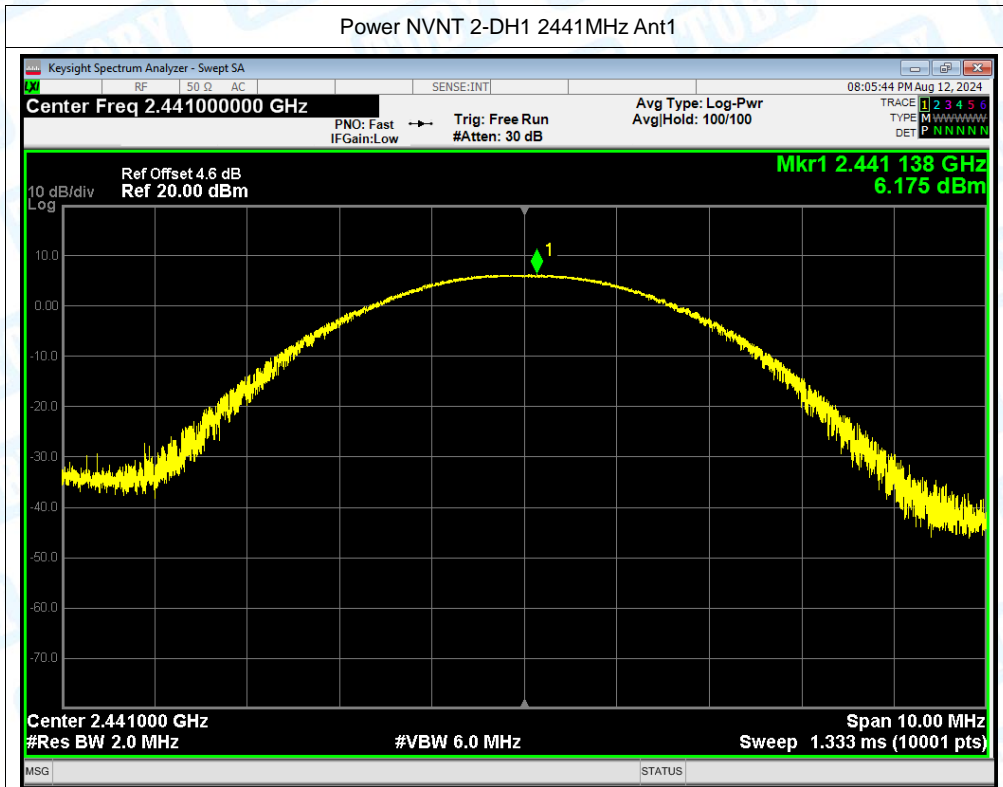


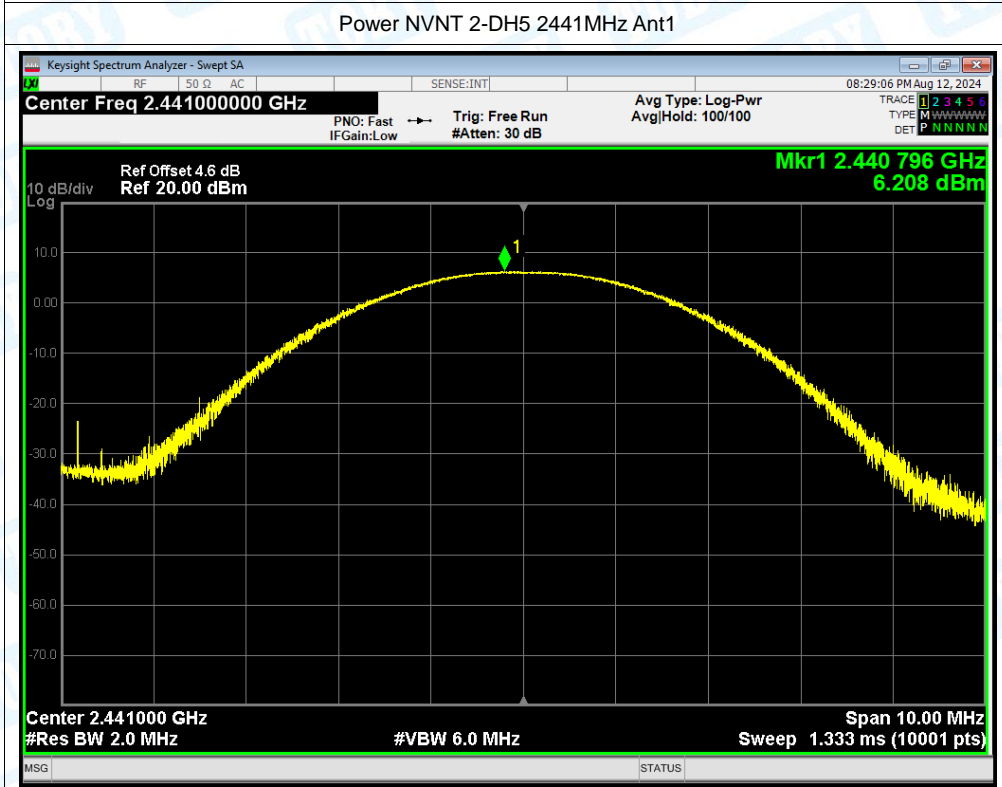
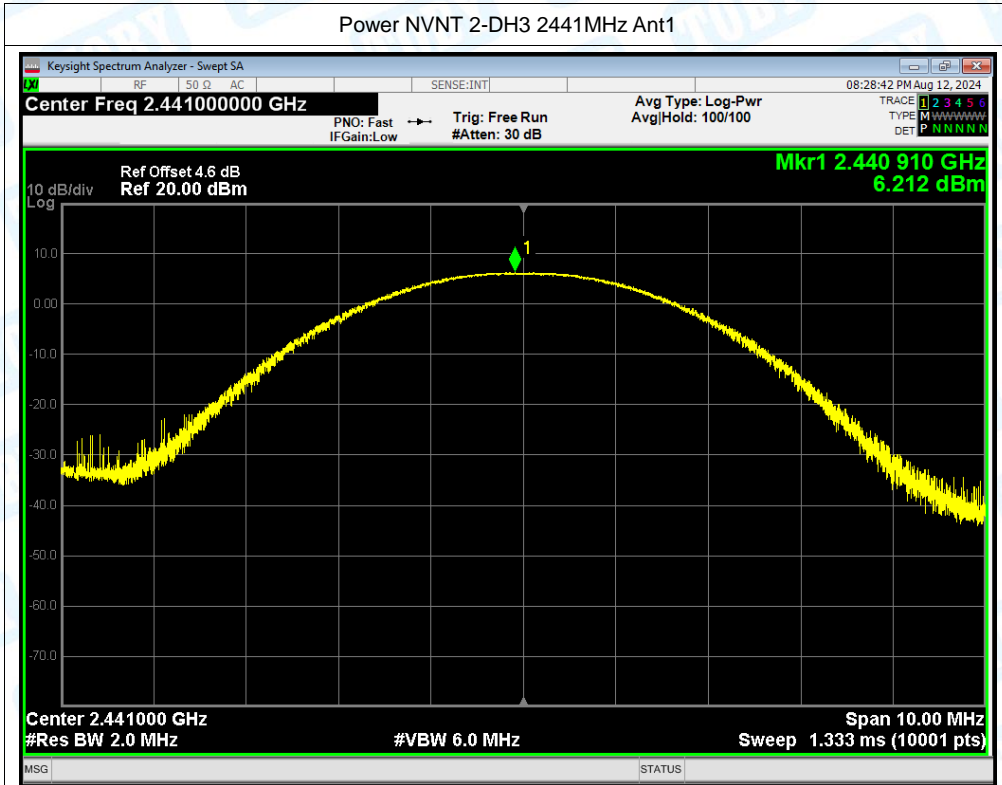
Power NVNT 1-DH5 2441MHz Ant1

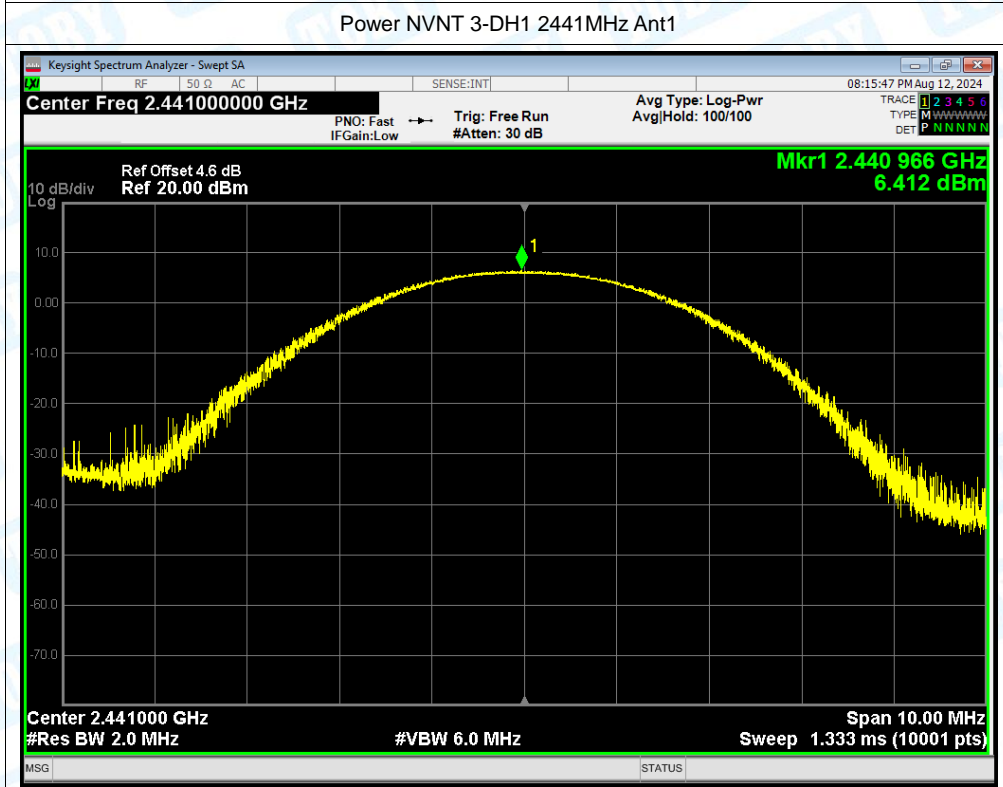
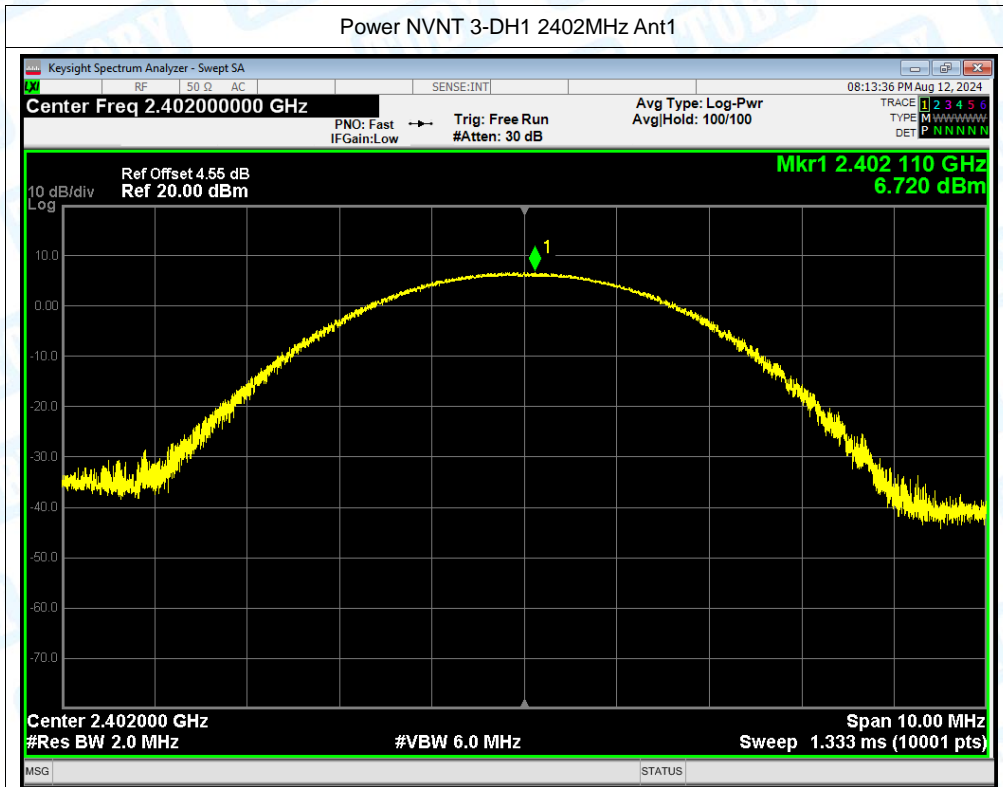


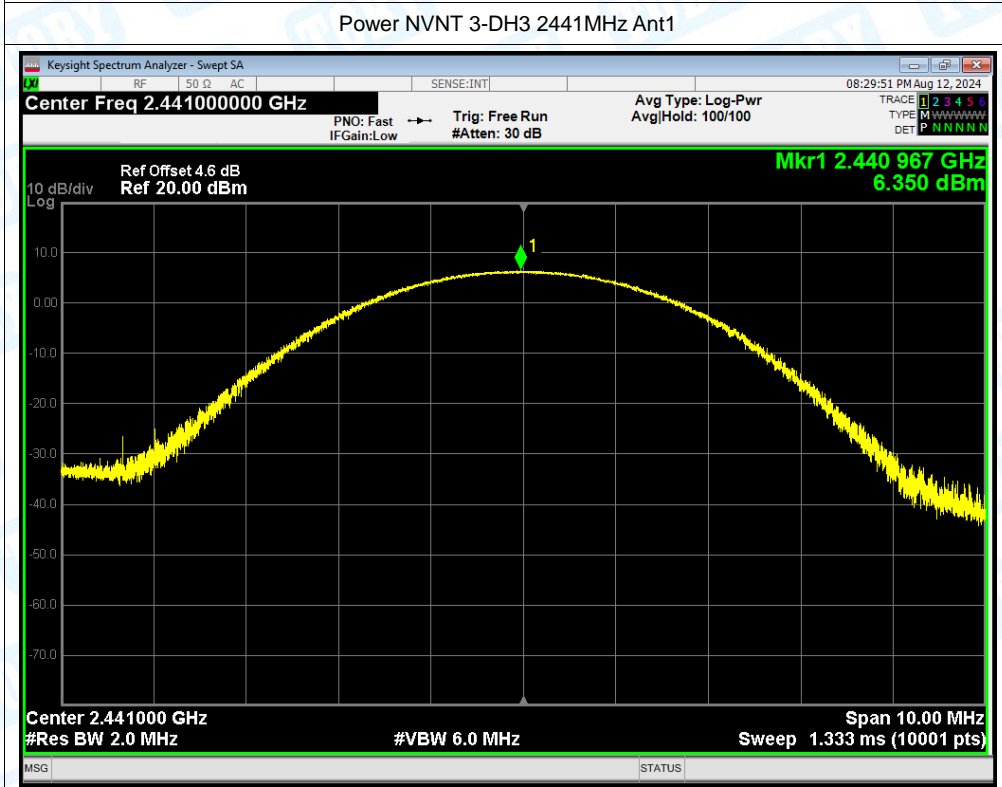
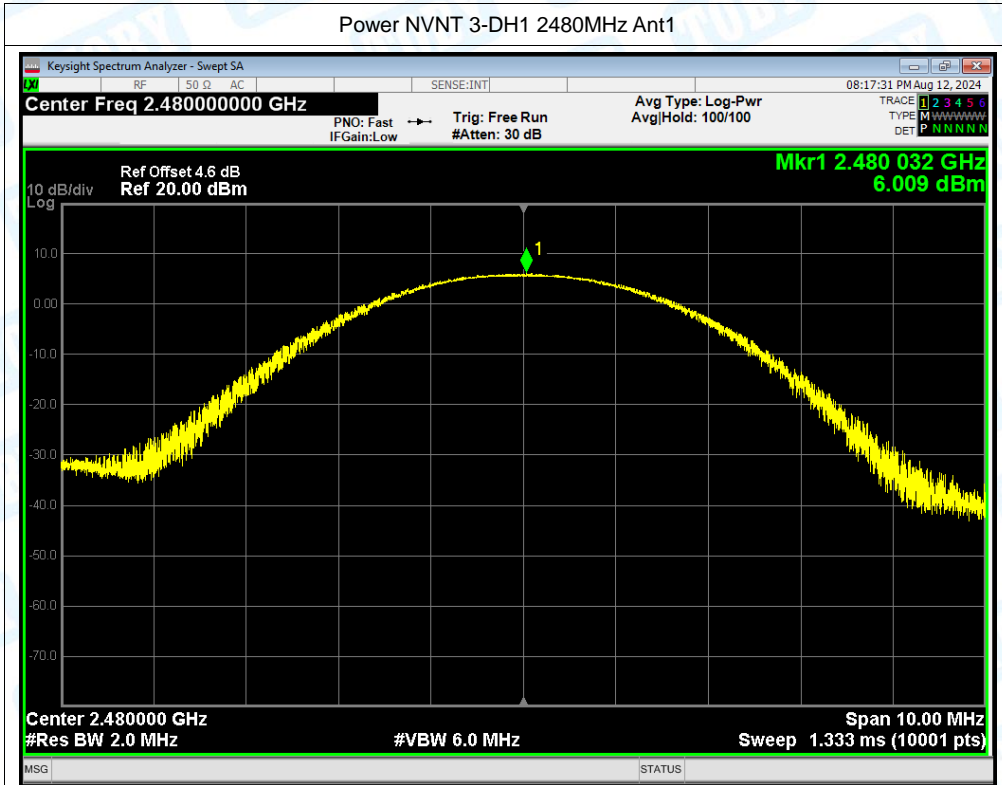
Power NVNT 2-DH1 2402MHz Ant1

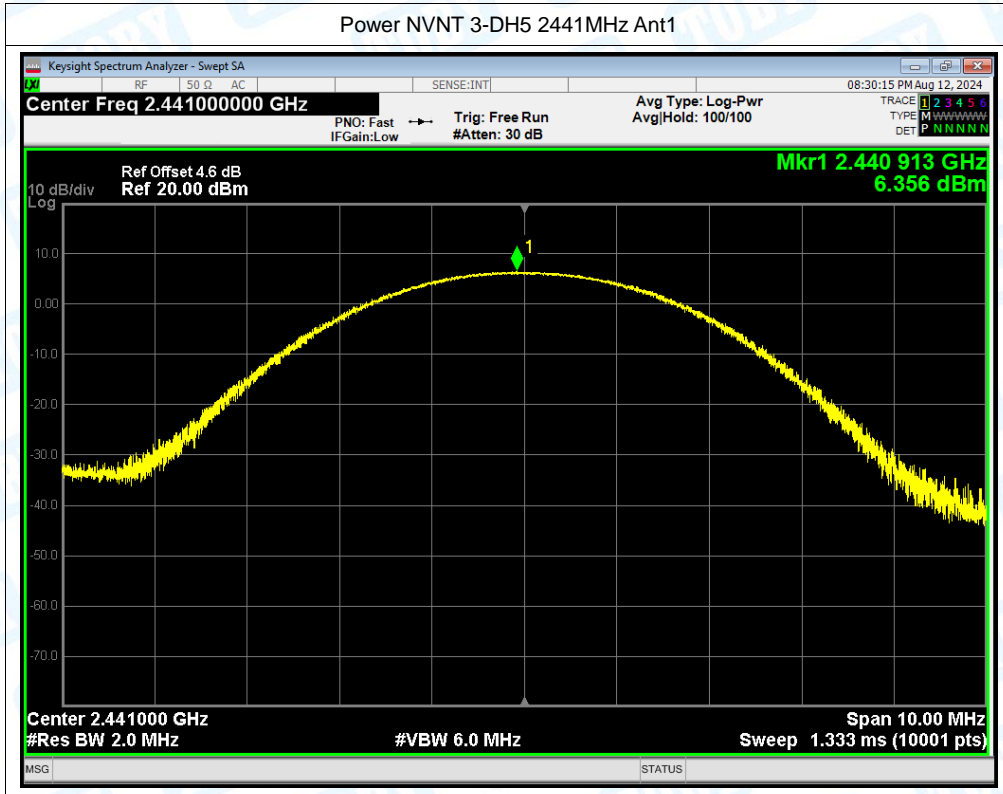










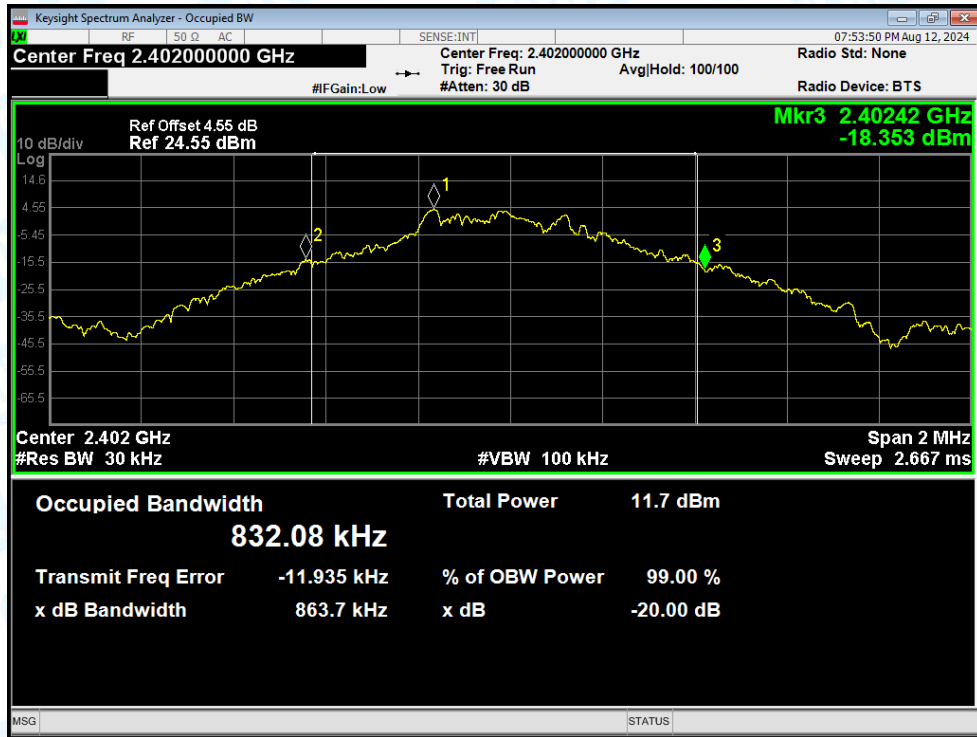


3. -20dB Bandwidth

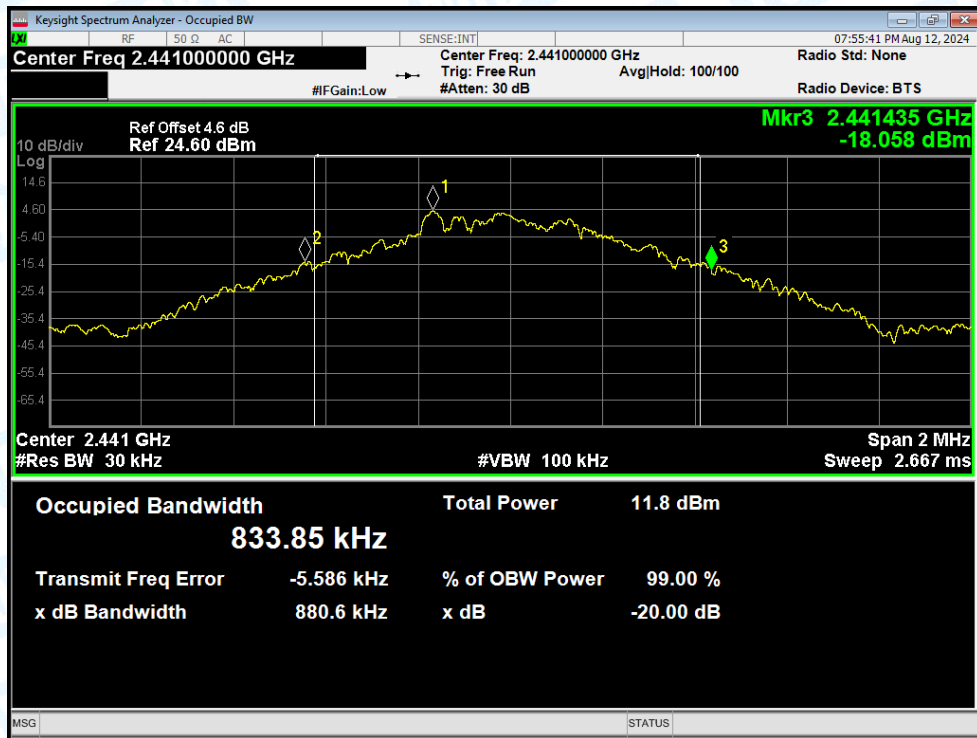
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.86	0	Pass
NVNT	1-DH1	2441	Ant1	0.88	0	Pass
NVNT	1-DH1	2480	Ant1	0.89	0	Pass
NVNT	2-DH1	2402	Ant1	1.22	0	Pass
NVNT	2-DH1	2441	Ant1	1.25	0	Pass
NVNT	2-DH1	2480	Ant1	1.25	0	Pass
NVNT	3-DH1	2402	Ant1	1.21	0	Pass
NVNT	3-DH1	2441	Ant1	1.25	0	Pass
NVNT	3-DH1	2480	Ant1	1.23	0	Pass

Test Graphs

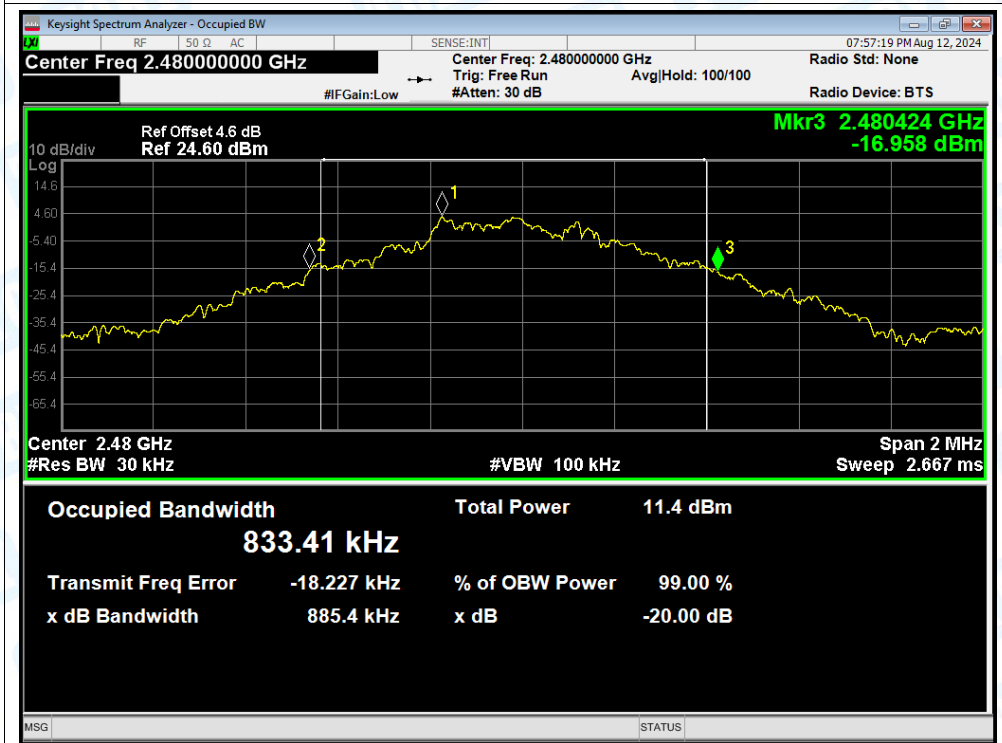
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



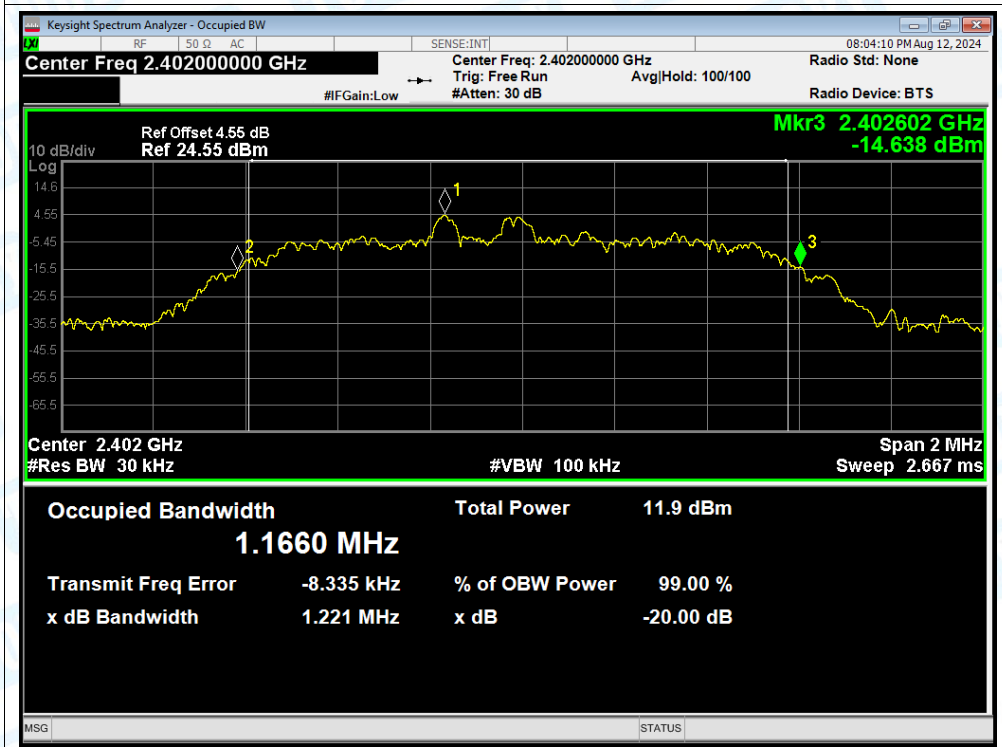
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



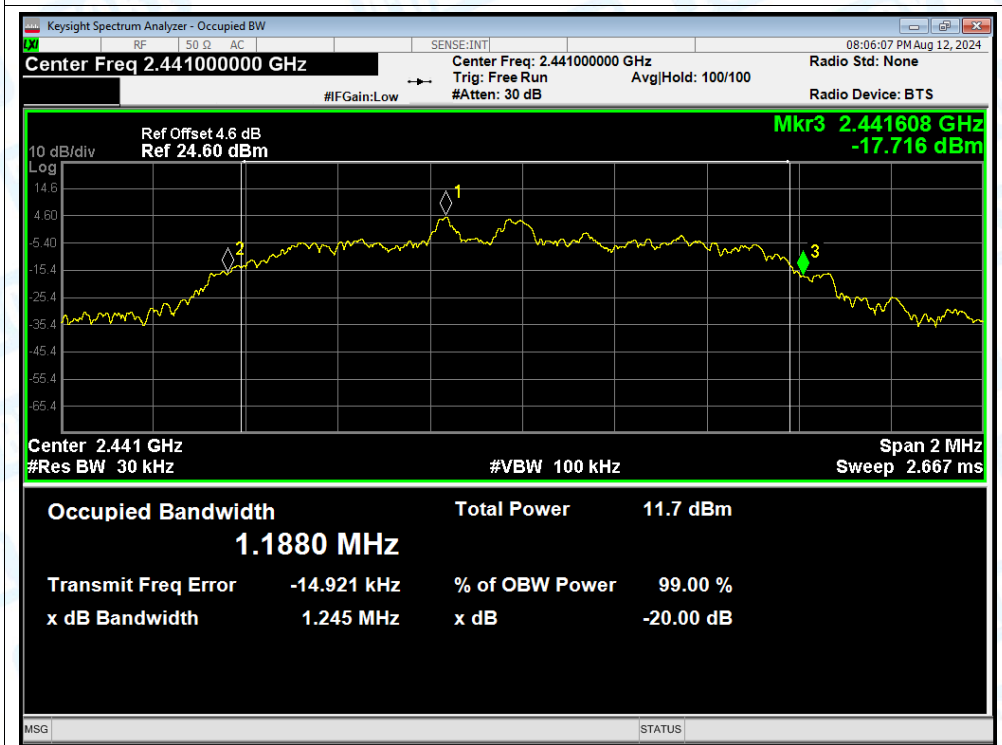
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



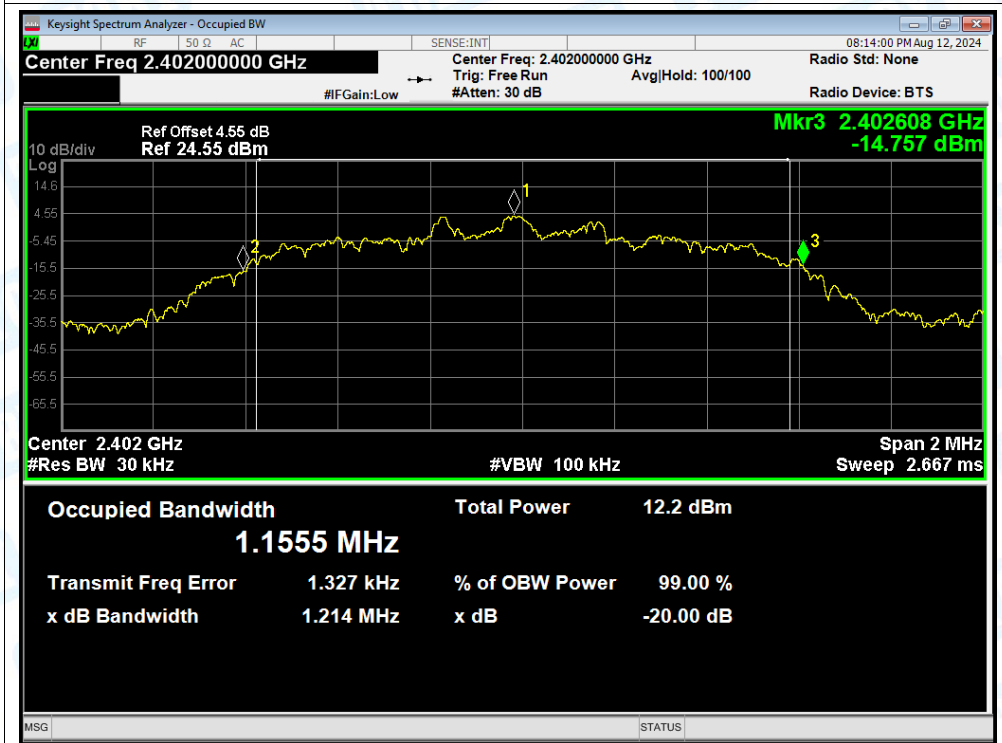
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



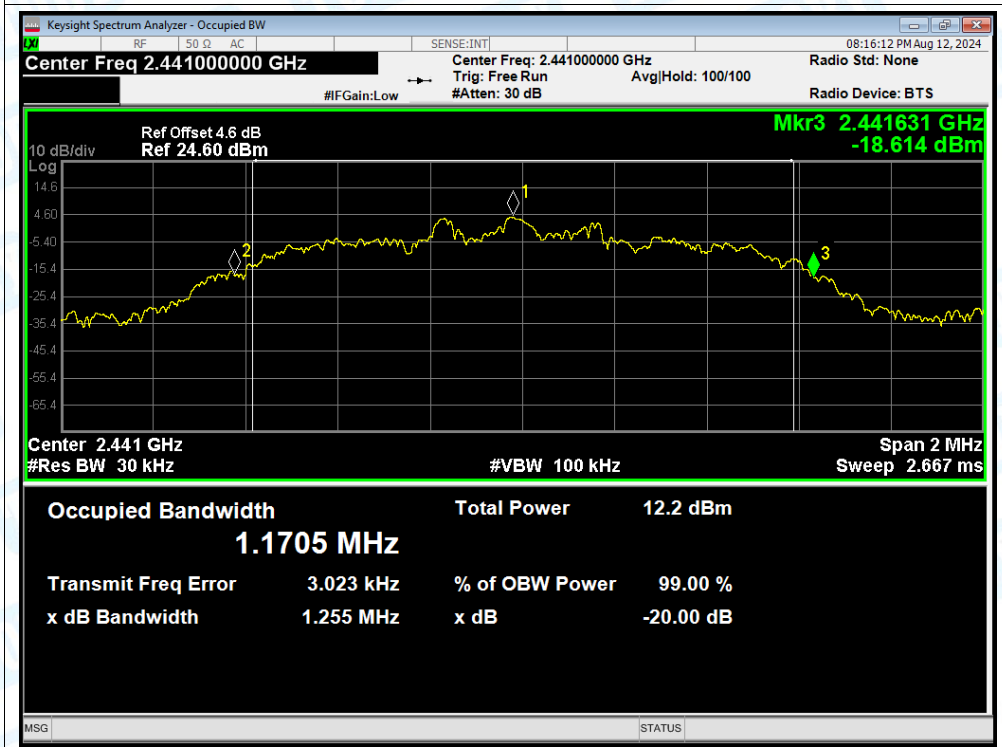
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

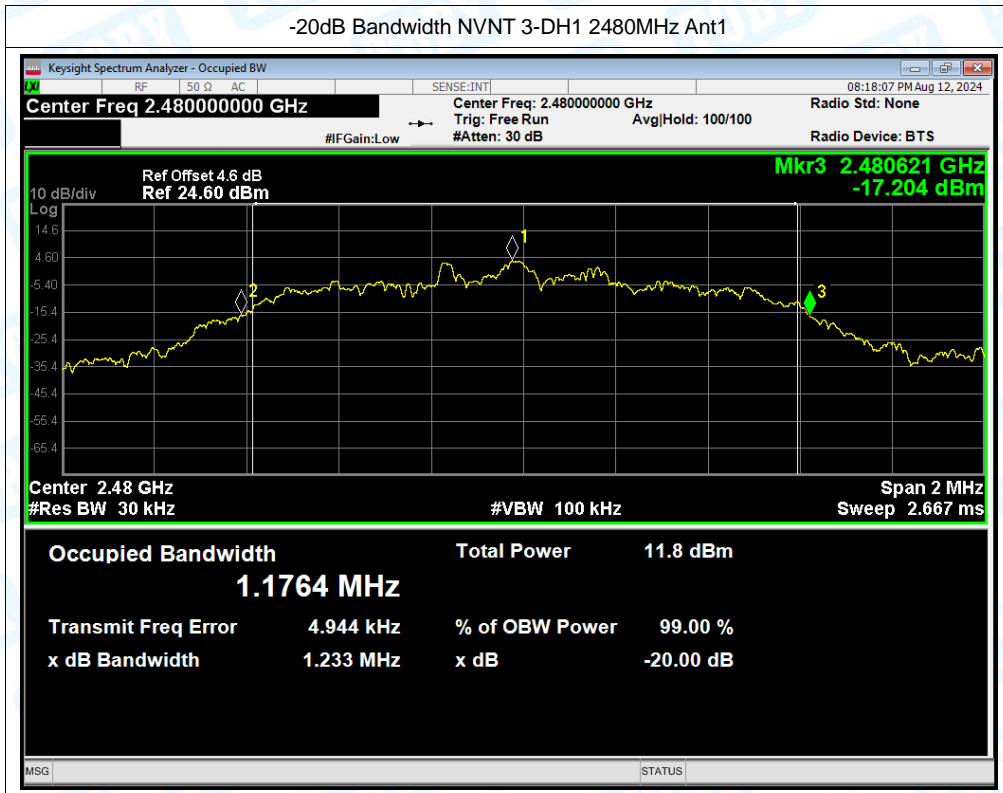


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



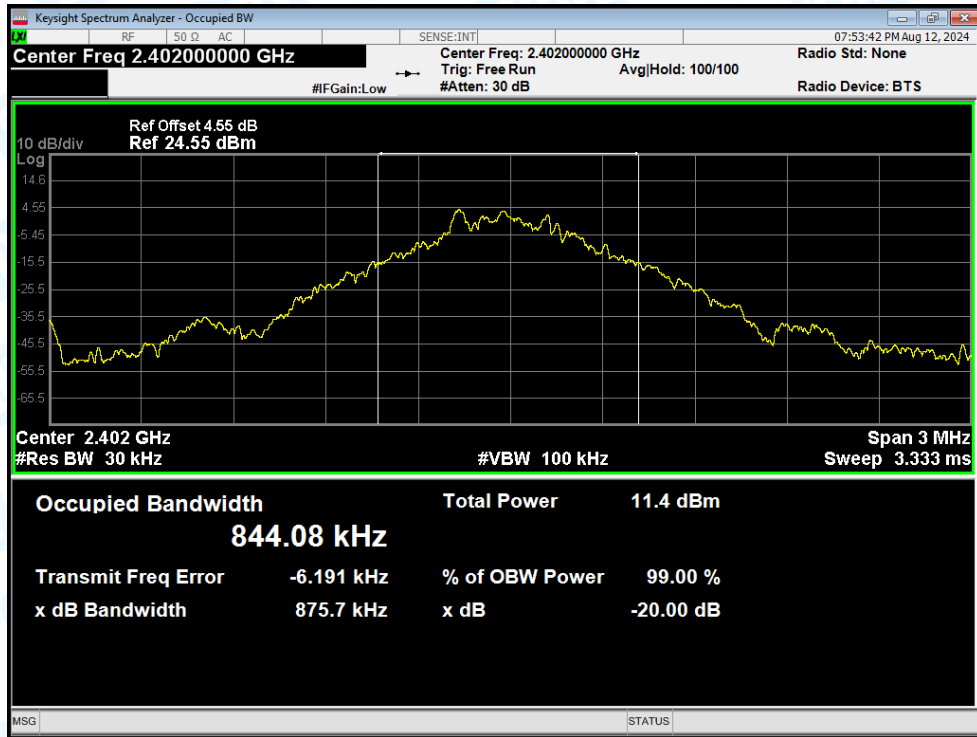


4. Occupied Channel Bandwidth

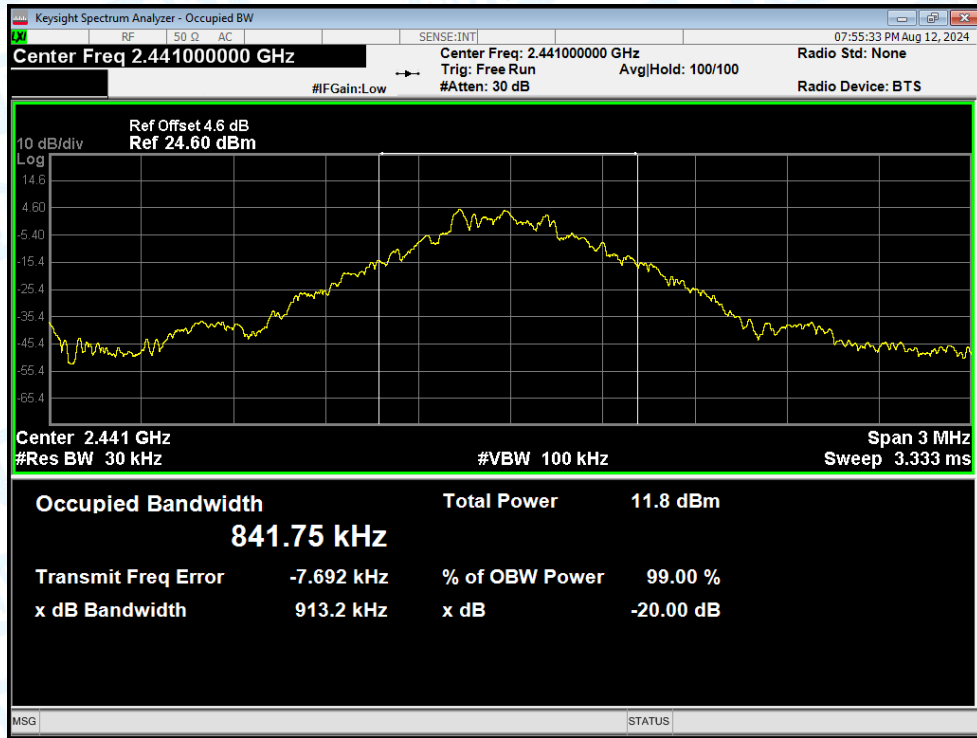
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.844
NVNT	1-DH1	2441	Ant1	0.842
NVNT	1-DH1	2480	Ant1	0.83
NVNT	2-DH1	2402	Ant1	1.186
NVNT	2-DH1	2441	Ant1	1.205
NVNT	2-DH1	2480	Ant1	1.23
NVNT	3-DH1	2402	Ant1	1.162
NVNT	3-DH1	2441	Ant1	1.186
NVNT	3-DH1	2480	Ant1	1.196

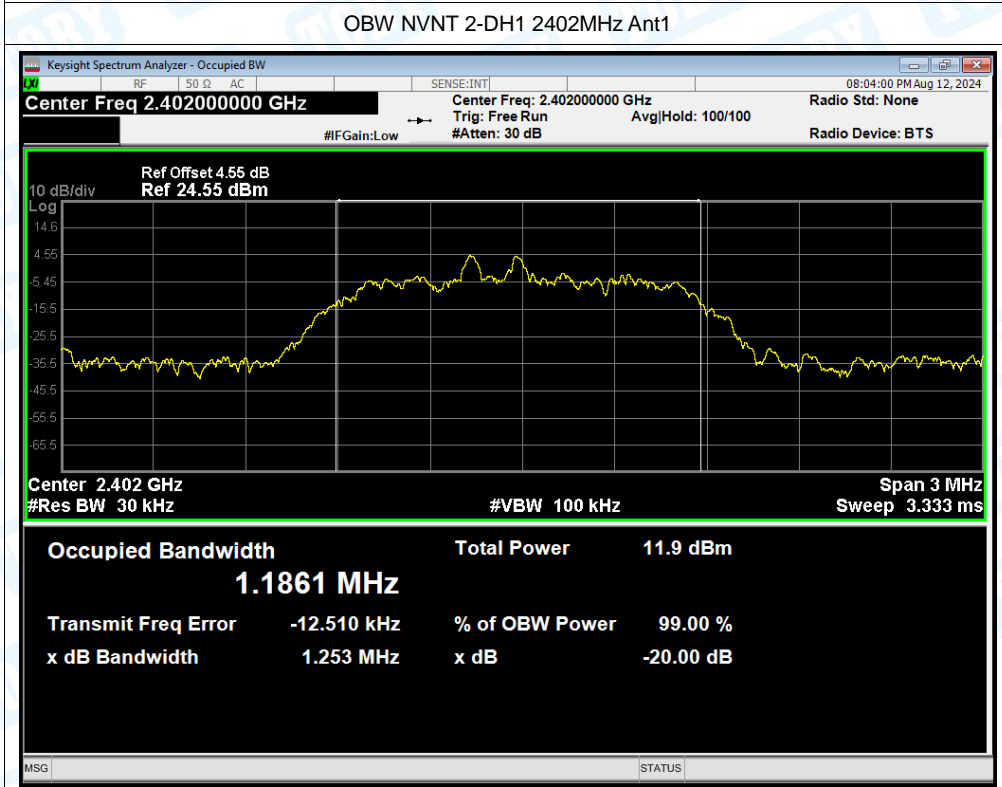
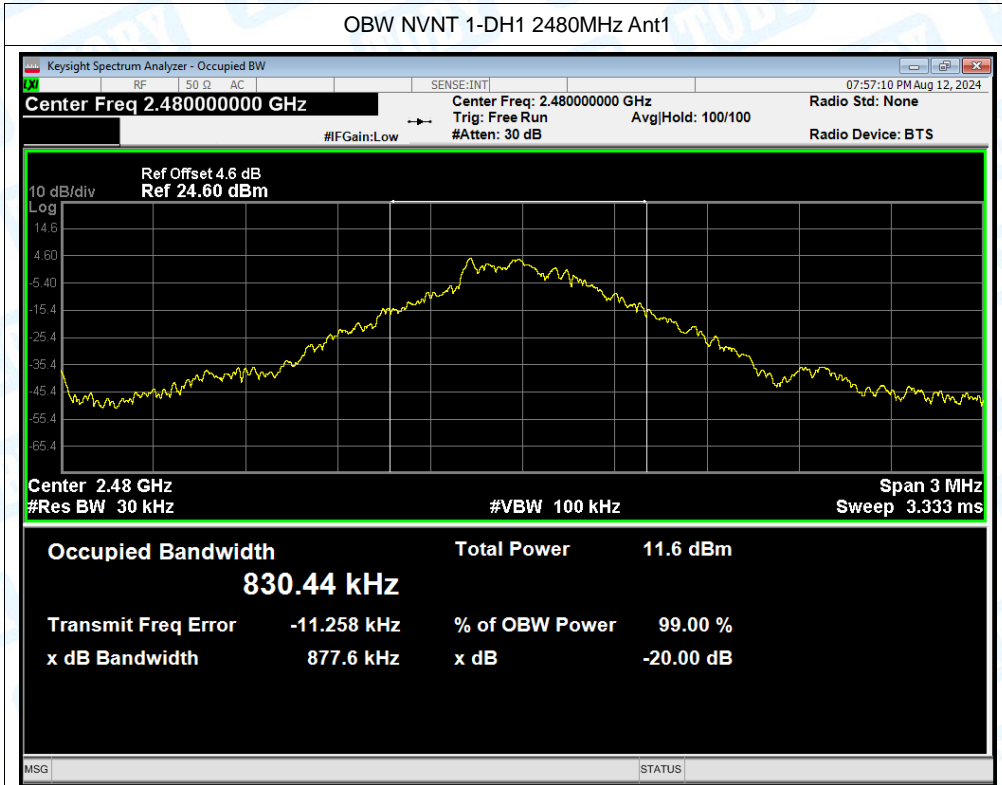
Test Graphs

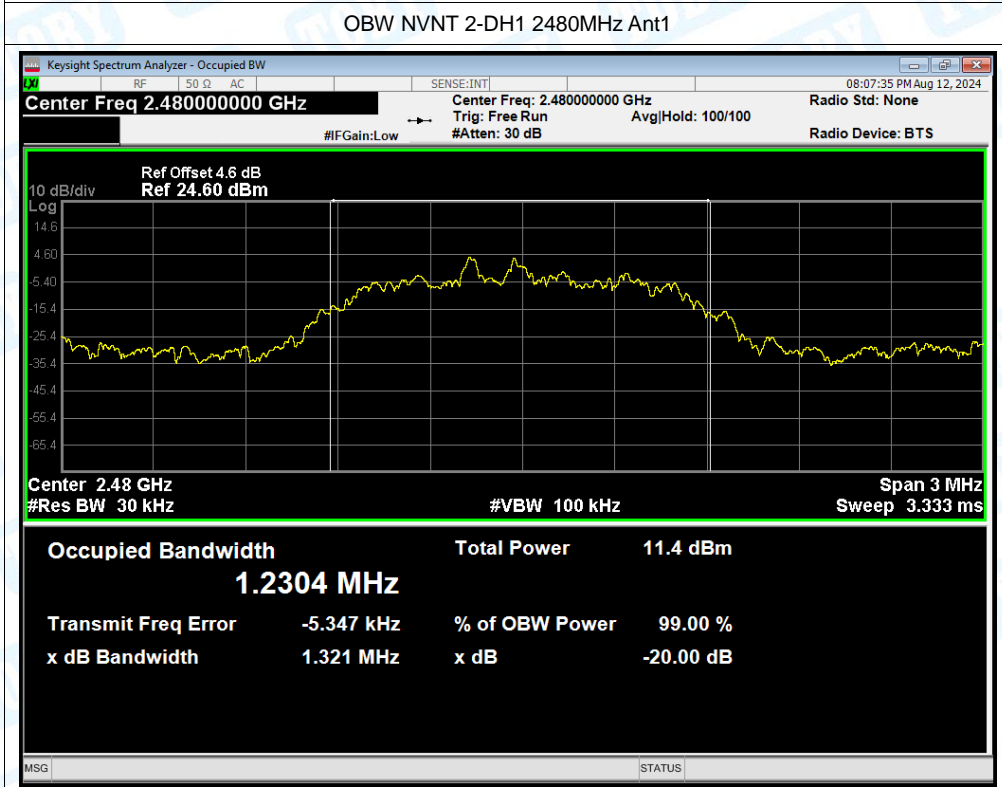
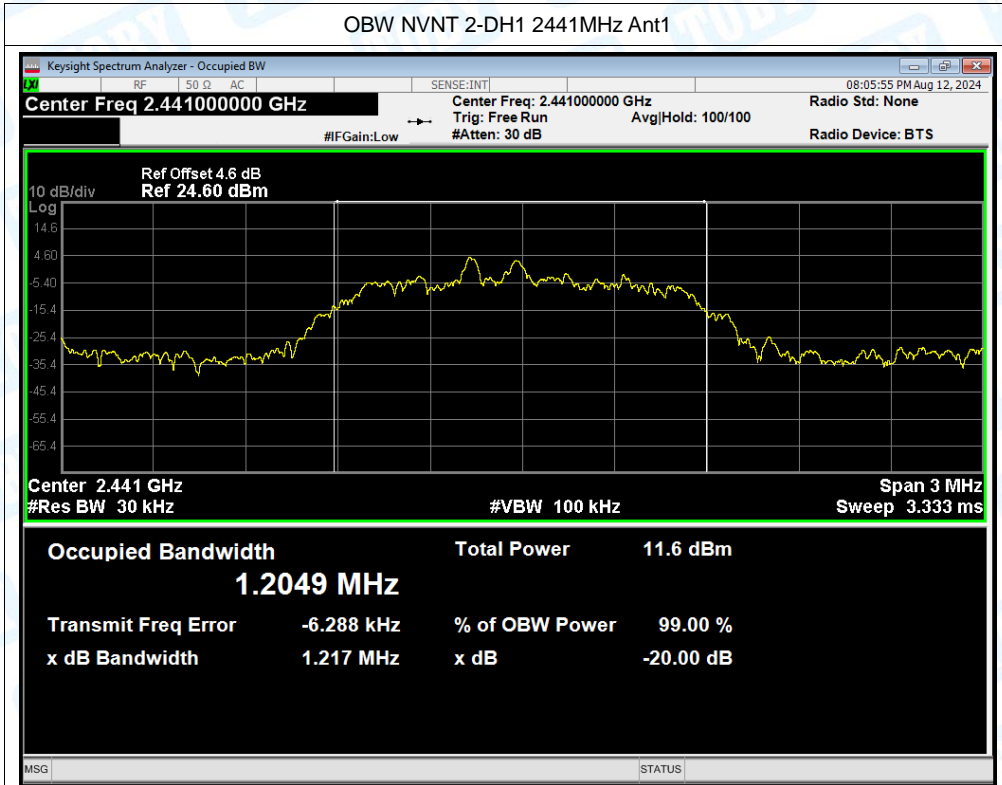
OBW NVNT 1-DH1 2402MHz Ant1

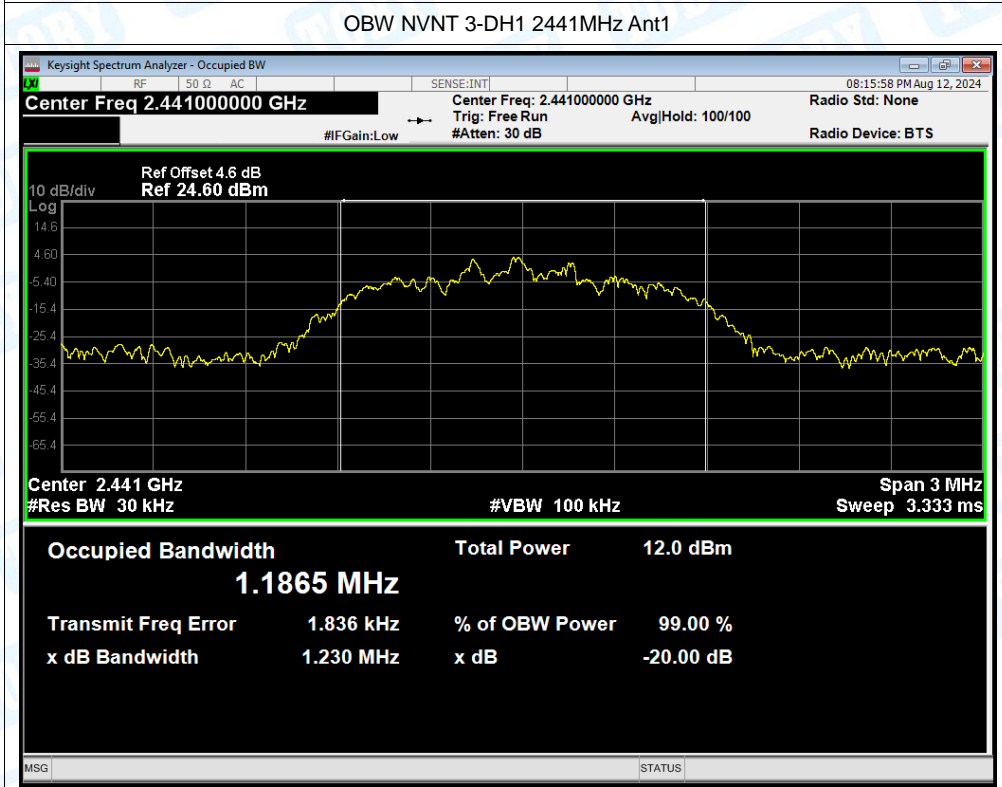
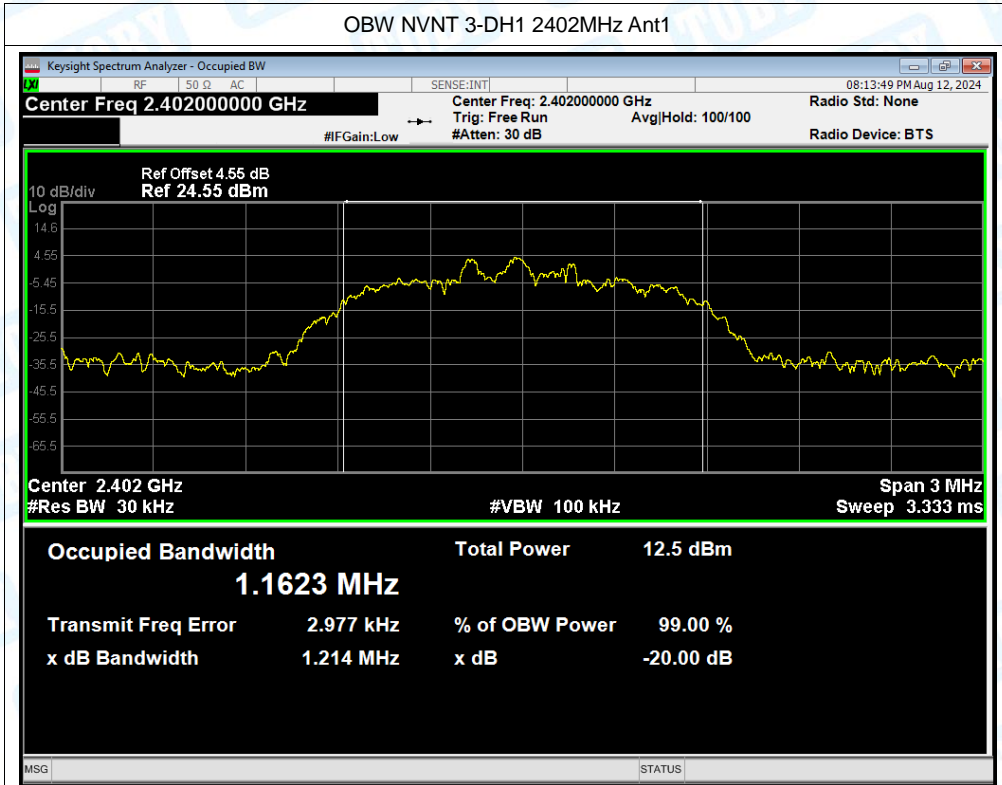


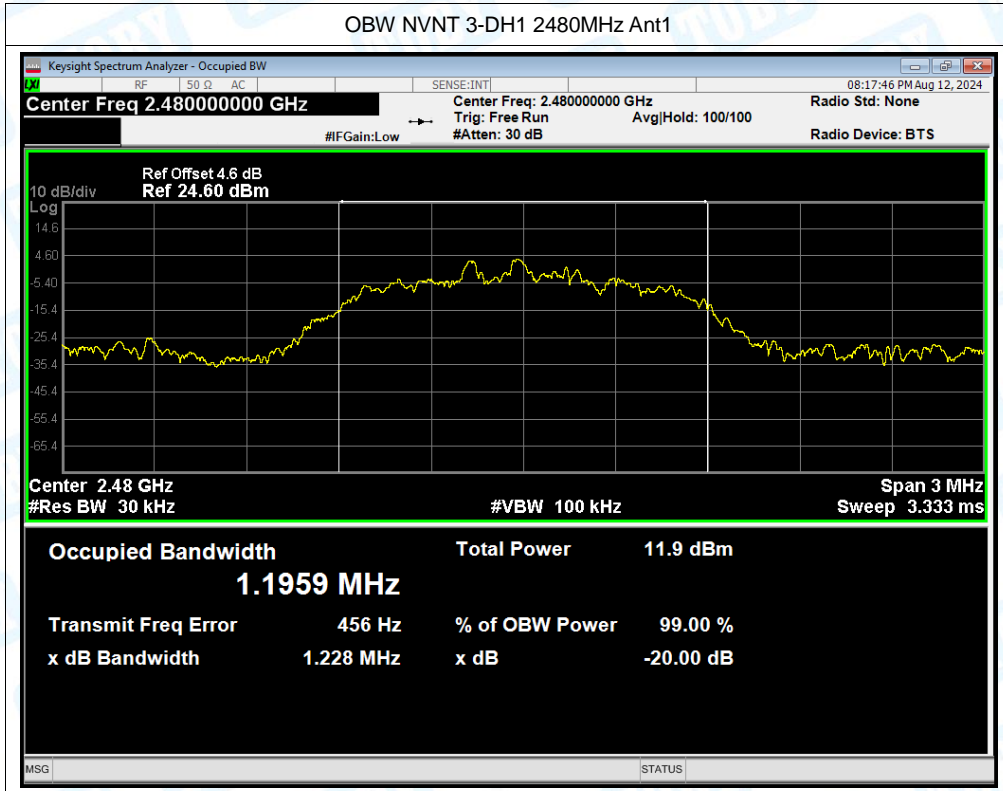
OBW NVNT 1-DH1 2441MHz Ant1









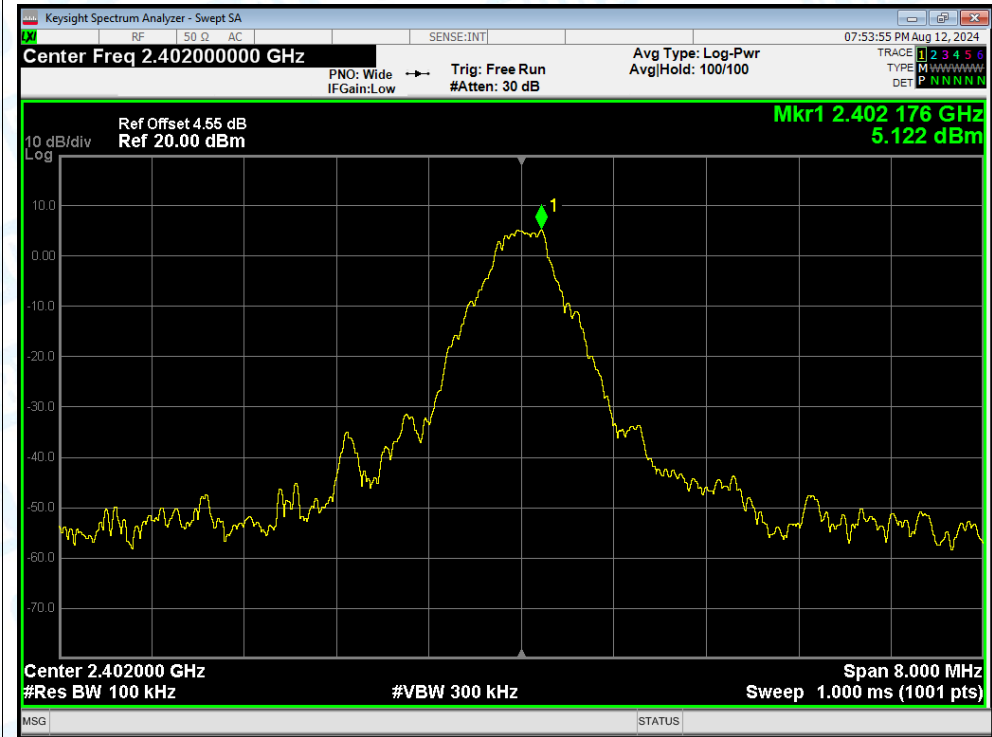


5. Band Edge

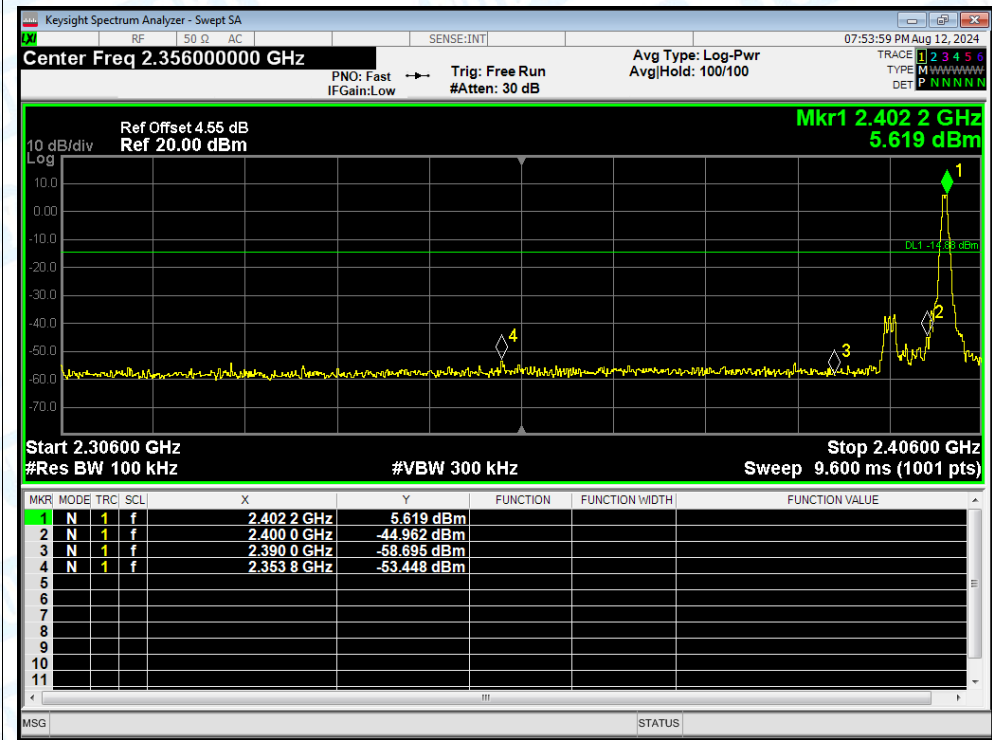
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-58.57	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-49.8	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-58.77	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-50.41	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-60.38	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-51.75	-20	Pass

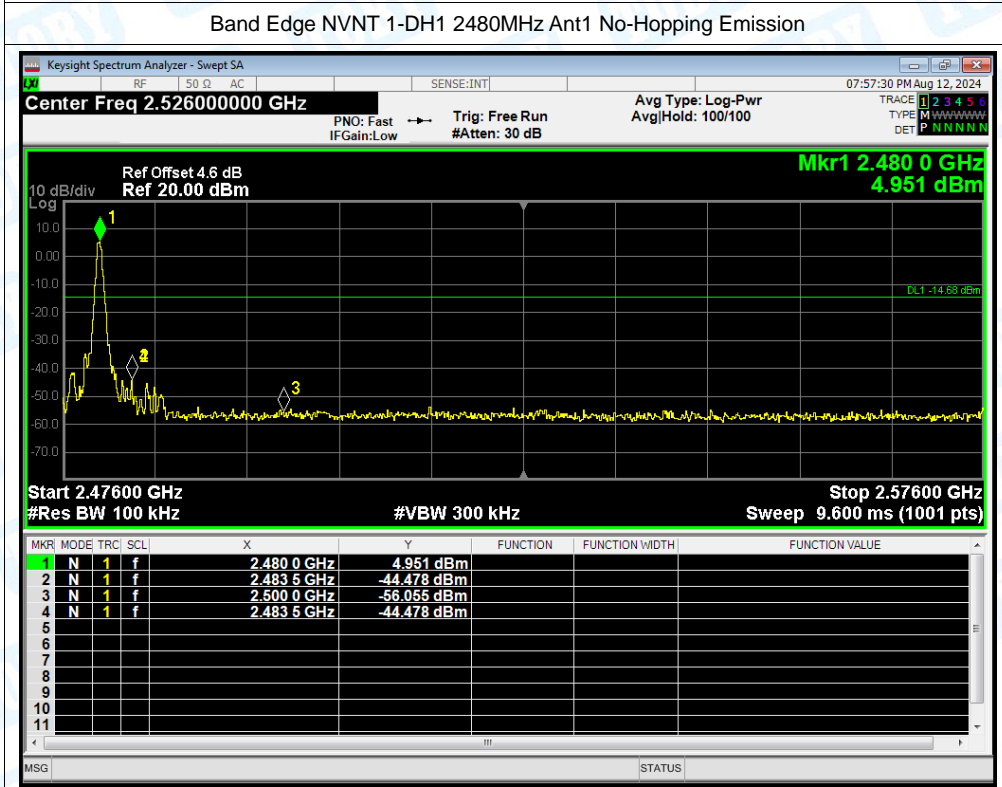
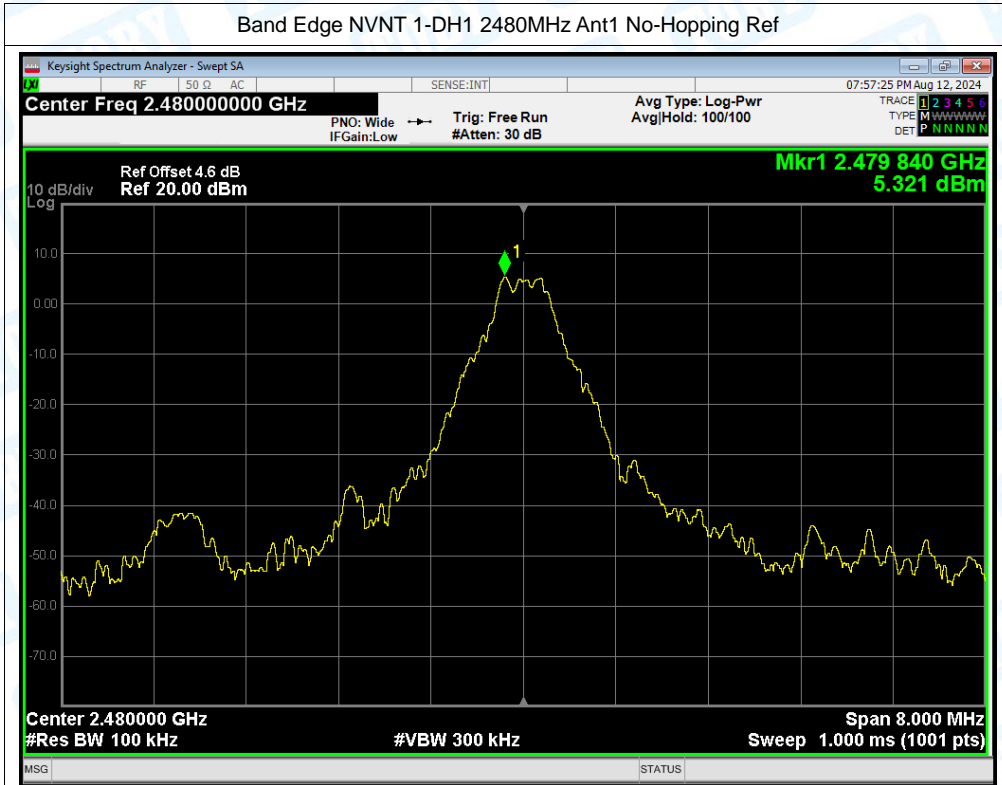
Test Graphs

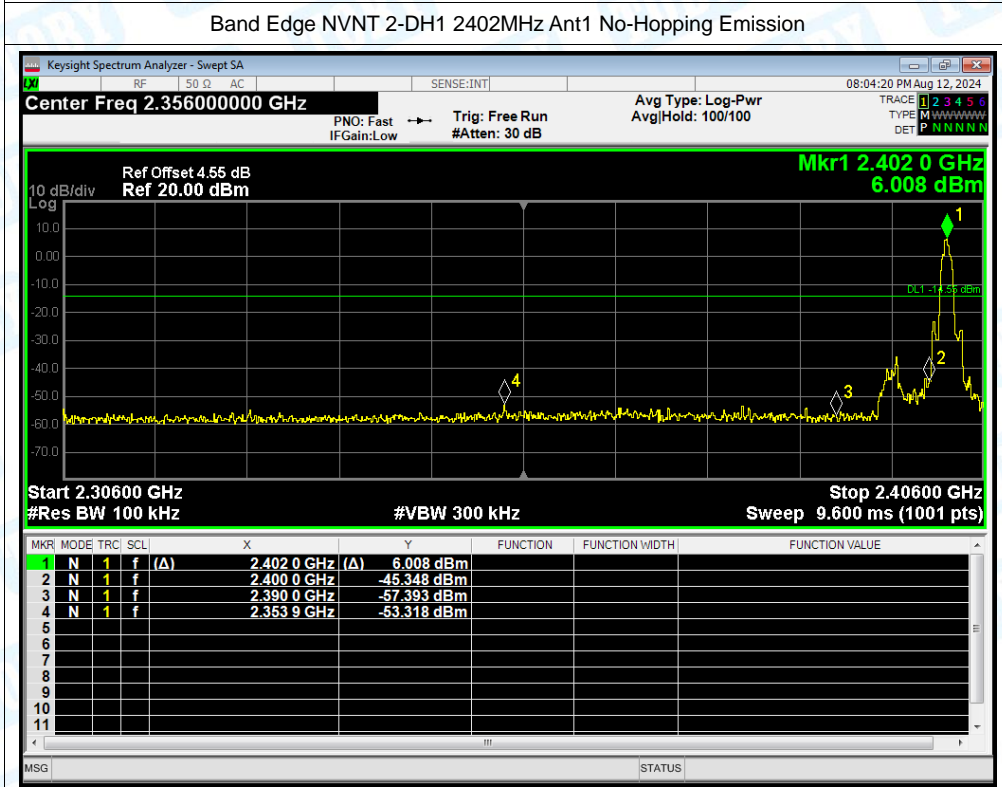
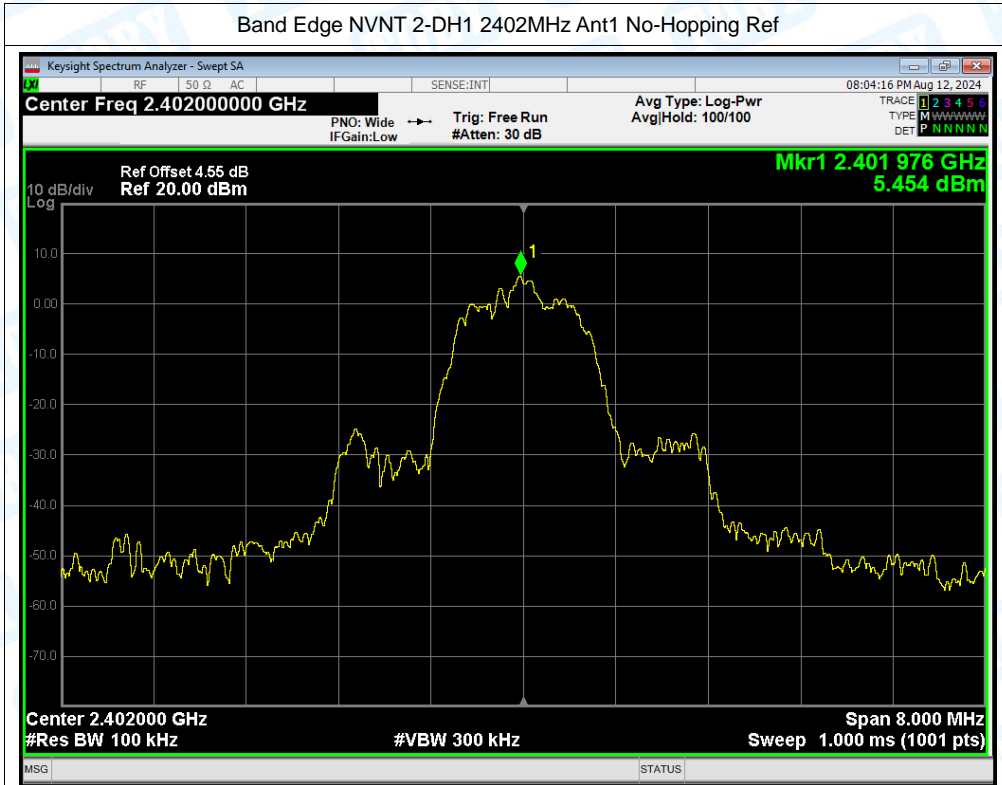
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref

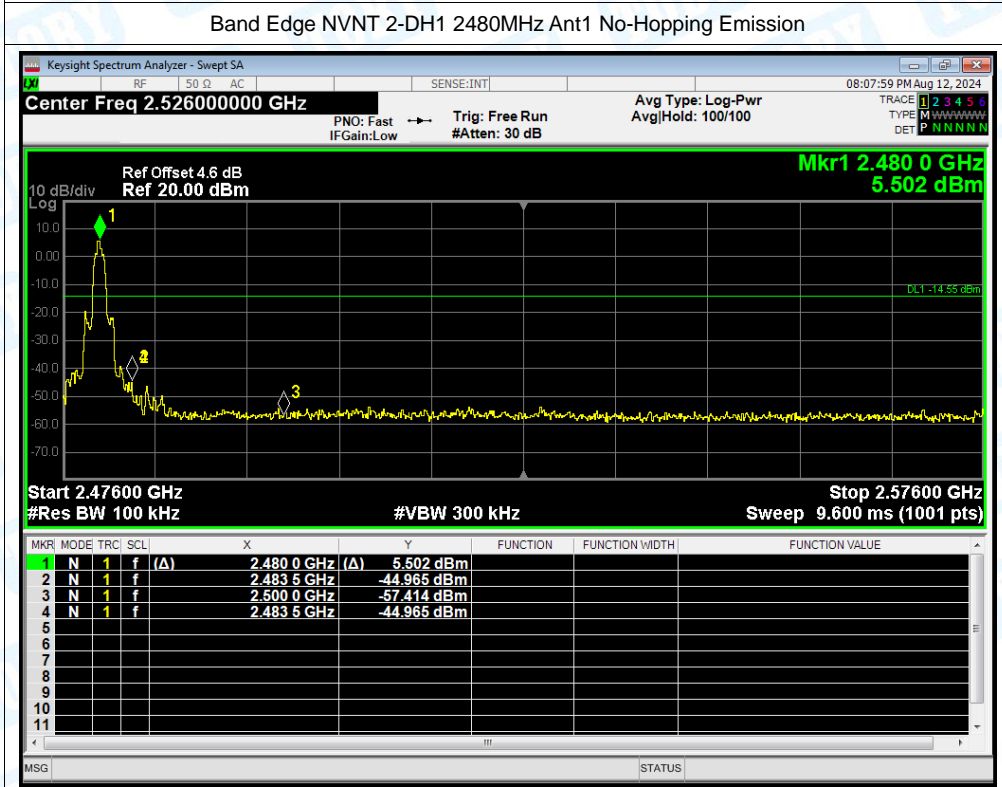


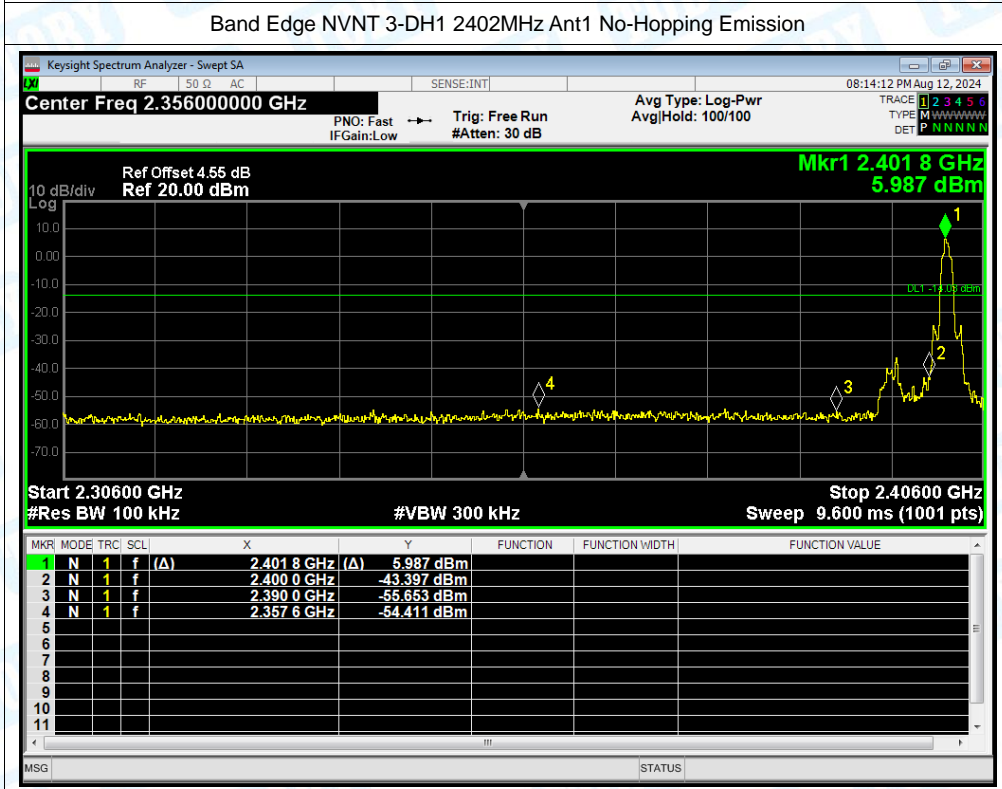
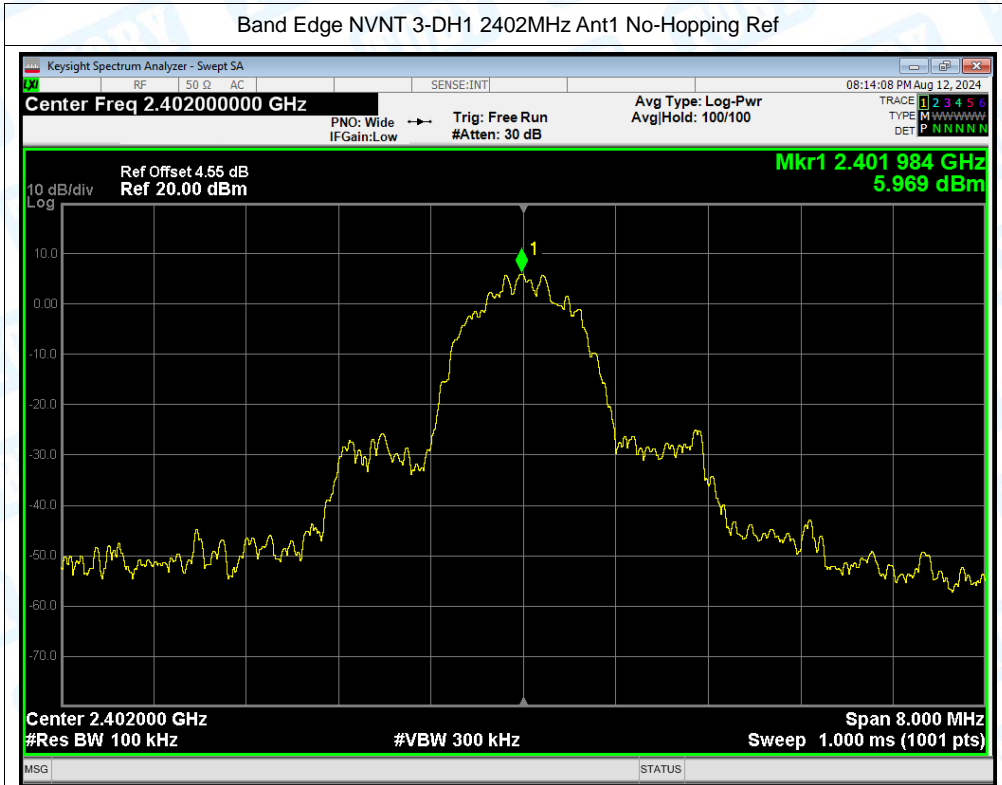
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission

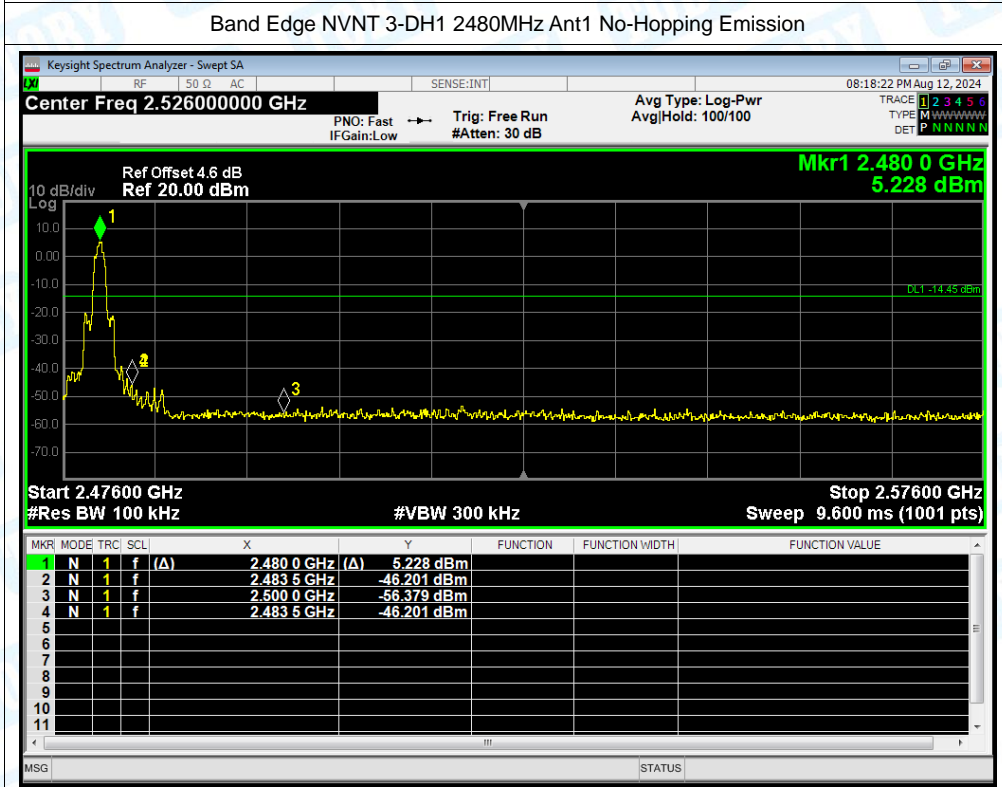
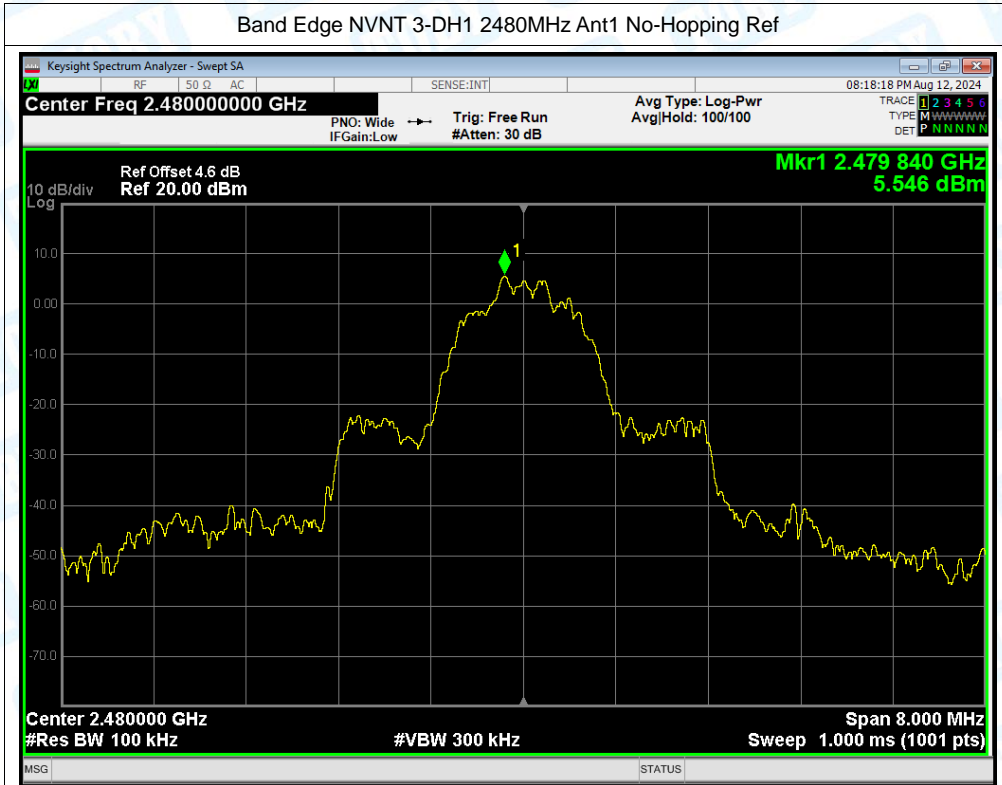










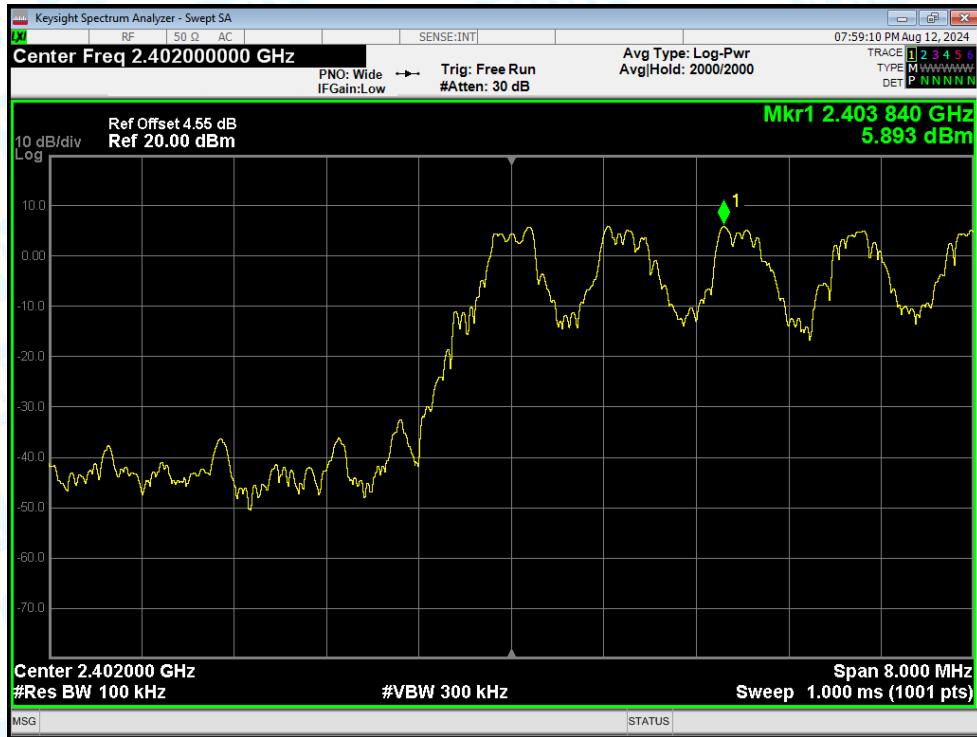


6. Band Edge(Hopping)

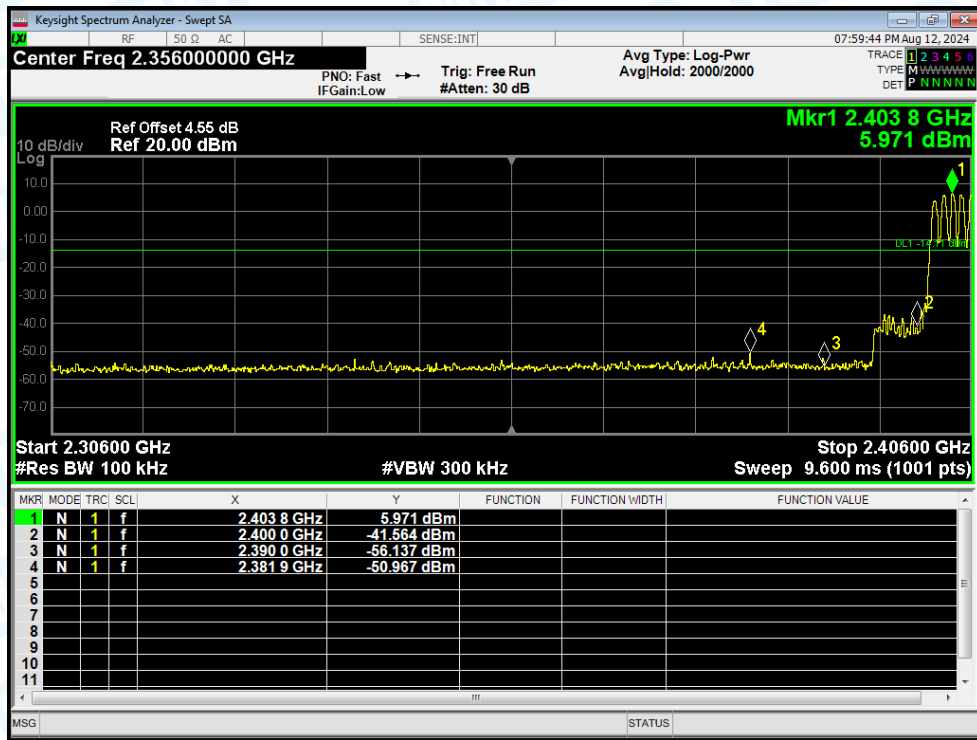
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-56.86	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-50.38	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-59.37	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-51.22	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-58.28	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-50.5	-20	Pass

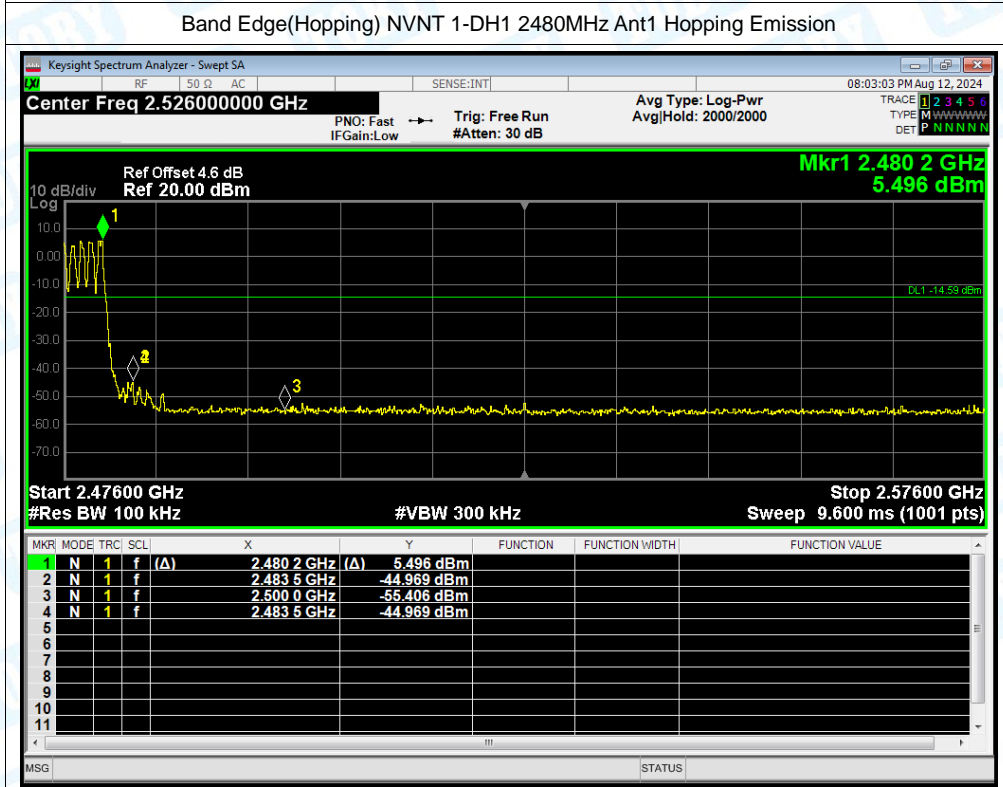
Test Graphs

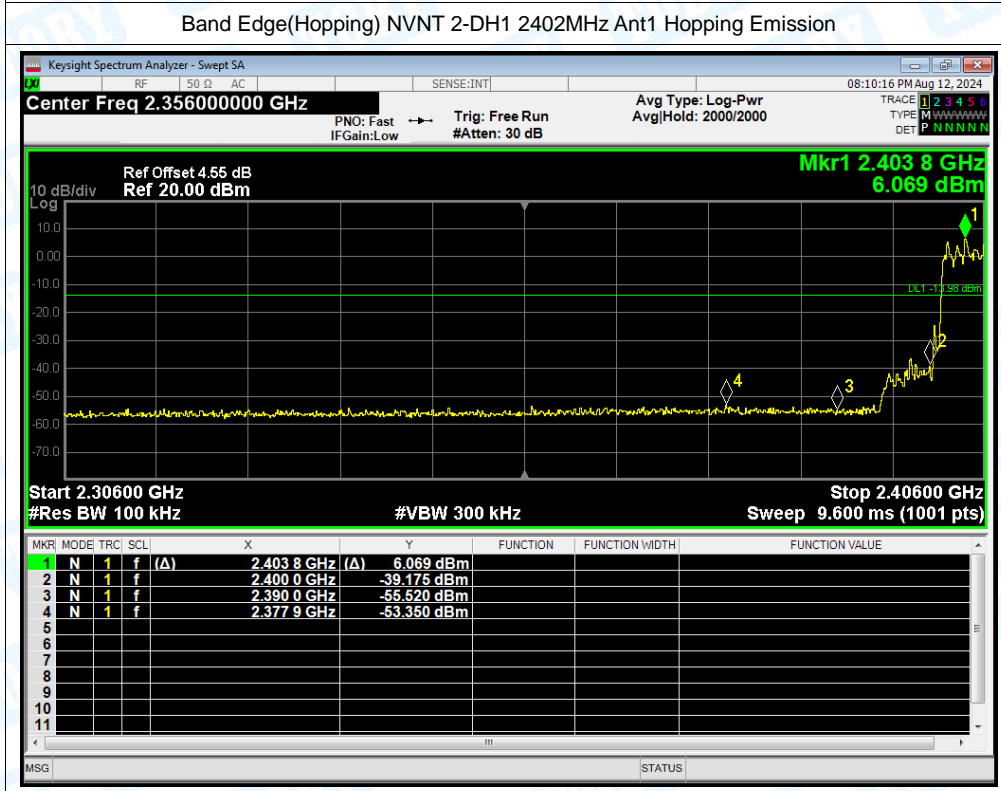
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref

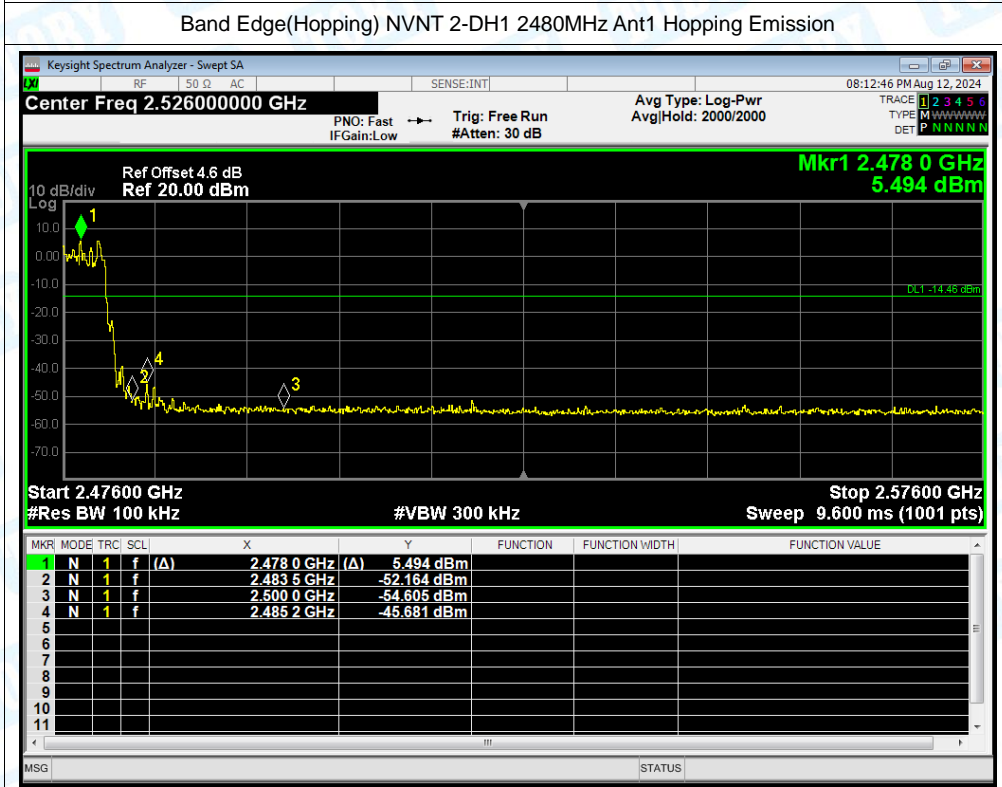
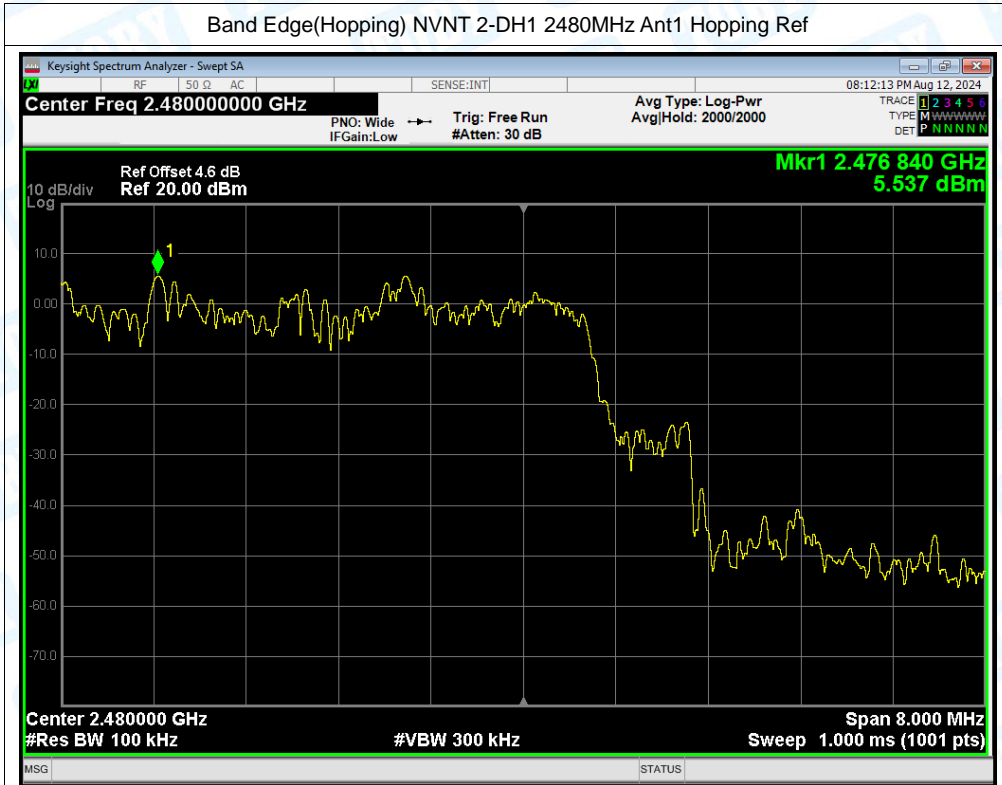


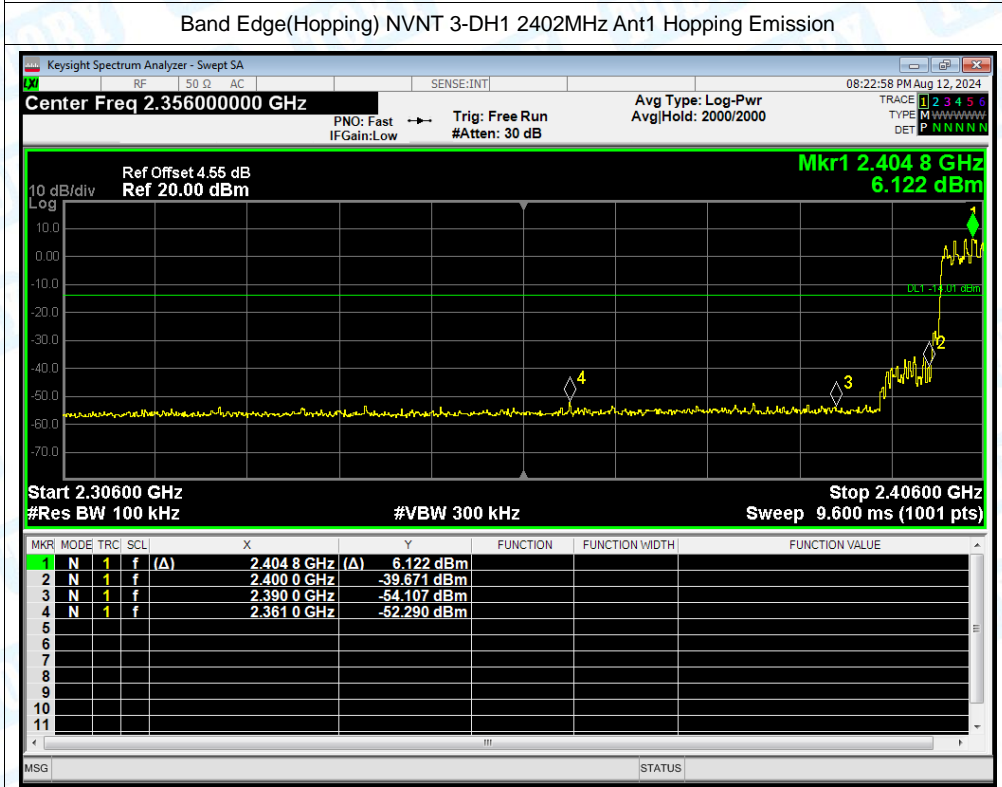
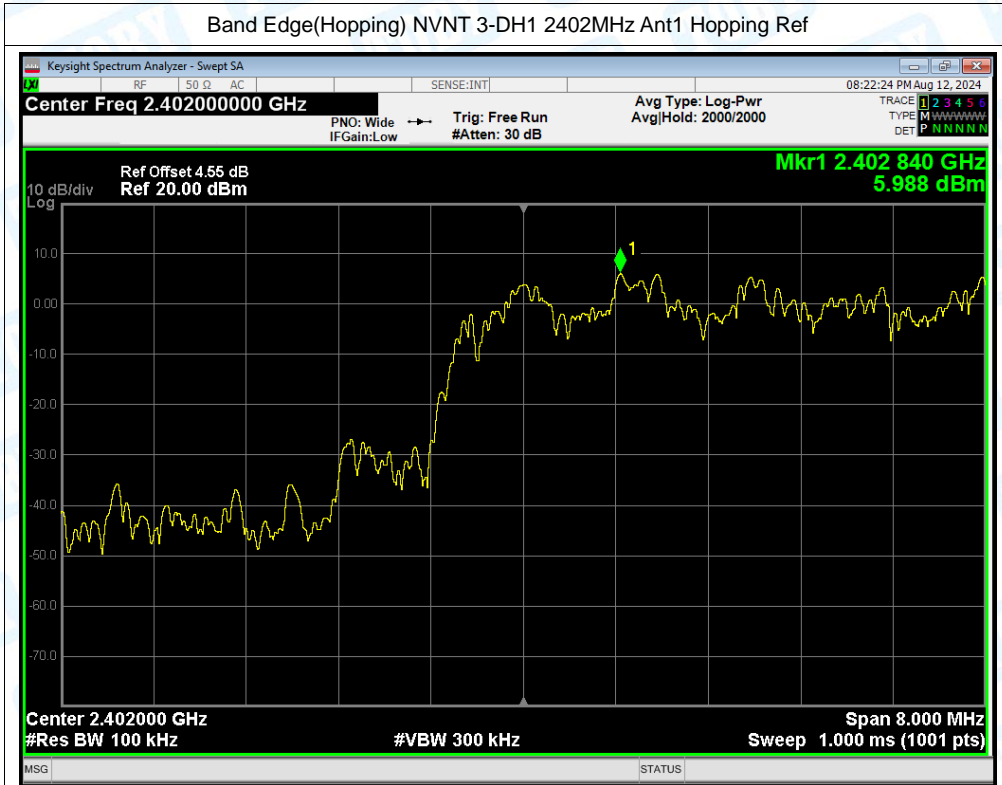
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission

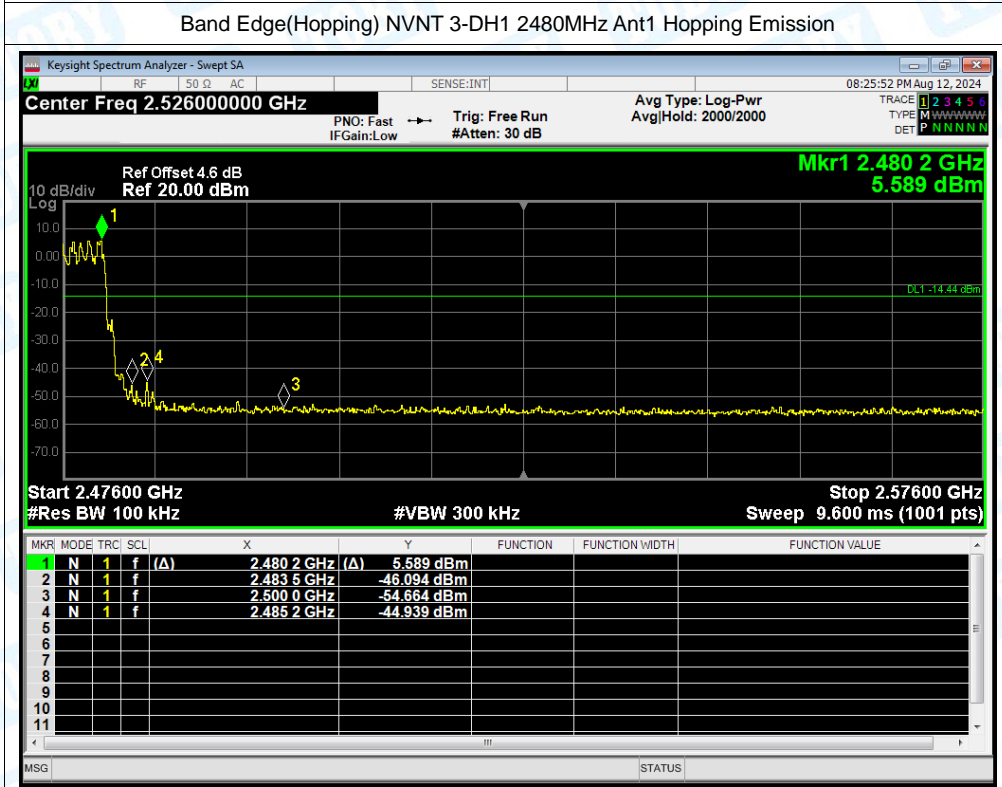










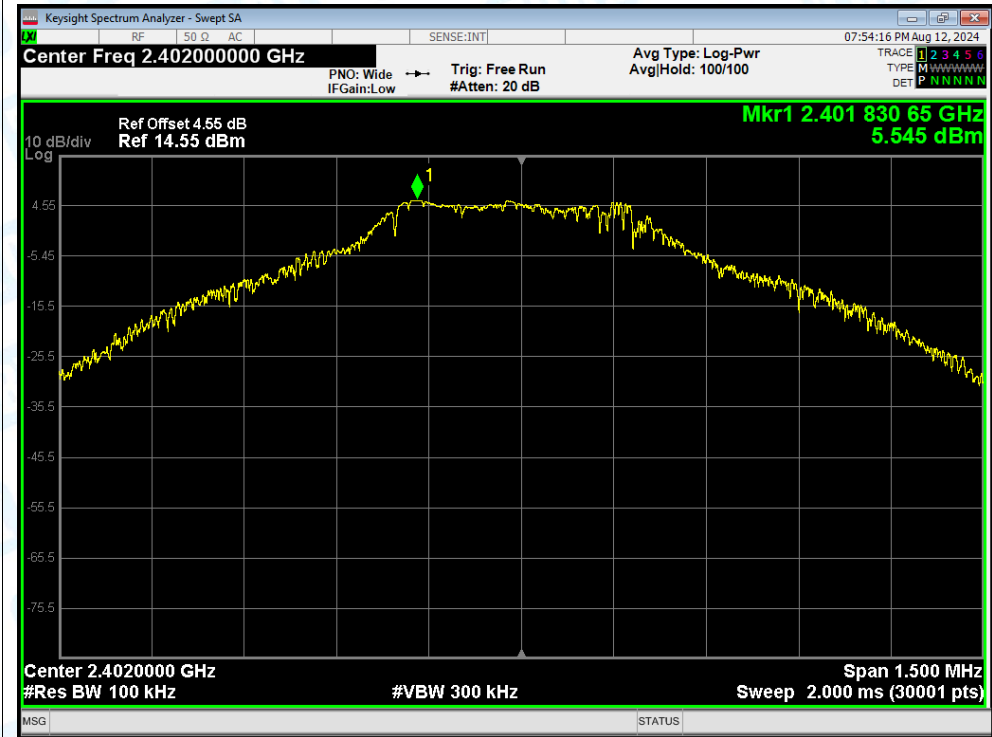


7. Conducted RF Spurious Emission

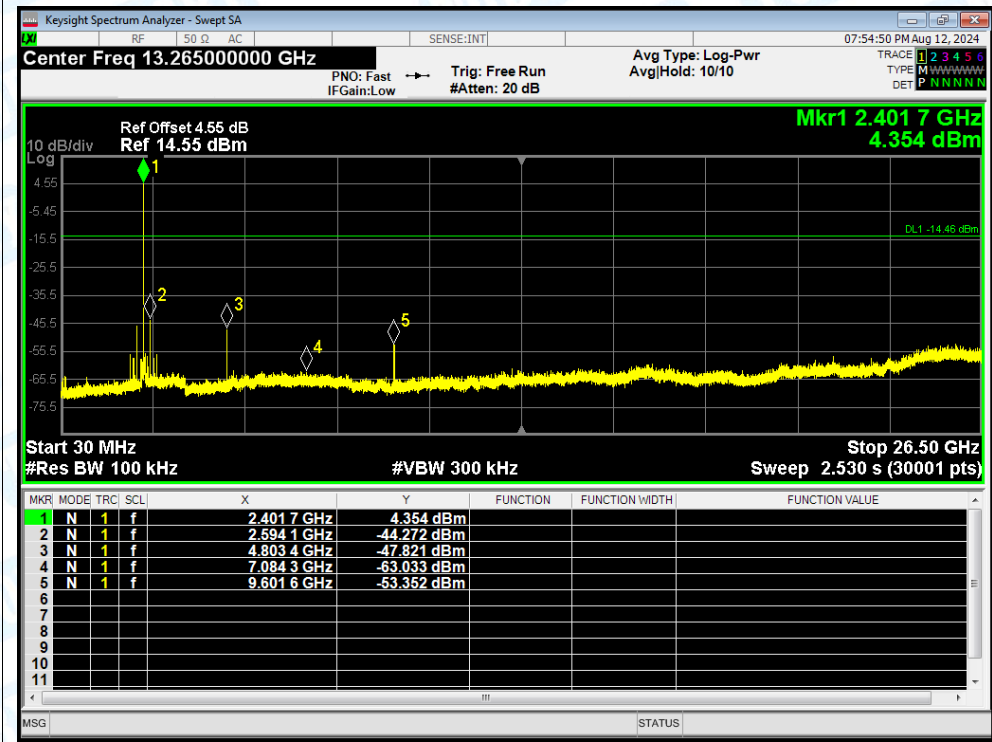
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-49.82	-20	Pass
NVNT	1-DH1	2441	Ant1	-49.95	-20	Pass
NVNT	1-DH1	2480	Ant1	-49.4	-20	Pass
NVNT	2-DH1	2402	Ant1	-51.52	-20	Pass
NVNT	2-DH1	2441	Ant1	-53.3	-20	Pass
NVNT	2-DH1	2480	Ant1	-52.76	-20	Pass
NVNT	3-DH1	2402	Ant1	-51.99	-20	Pass
NVNT	3-DH1	2441	Ant1	-49.96	-20	Pass
NVNT	3-DH1	2480	Ant1	-49.54	-20	Pass

Test Graphs

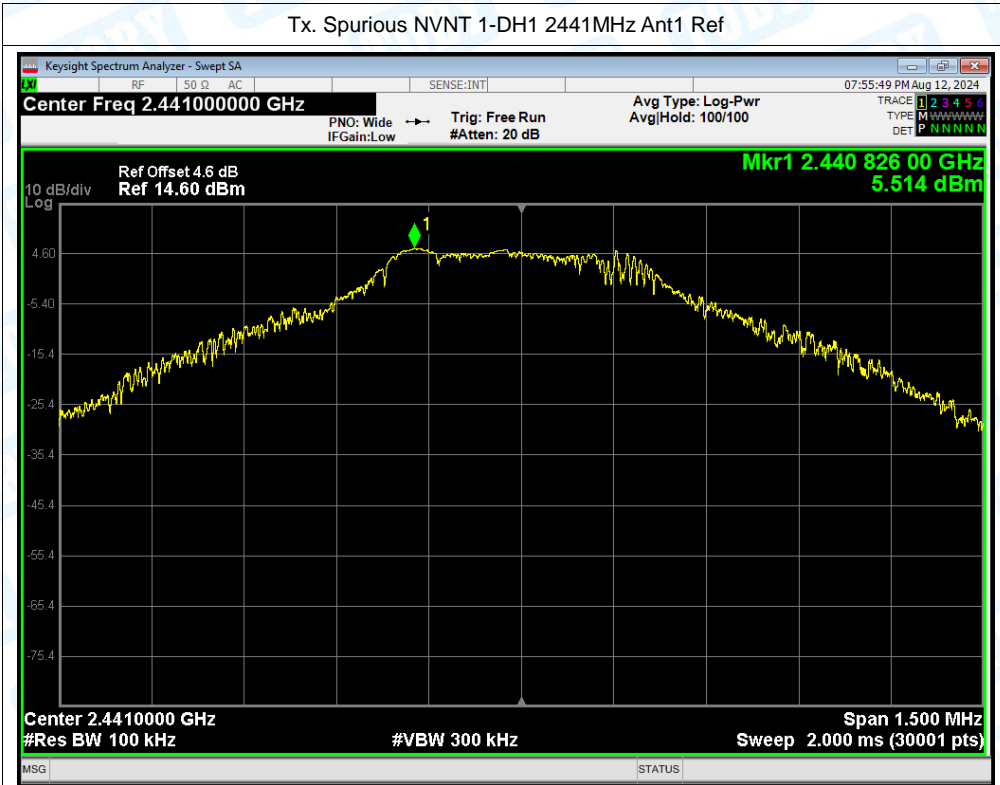
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



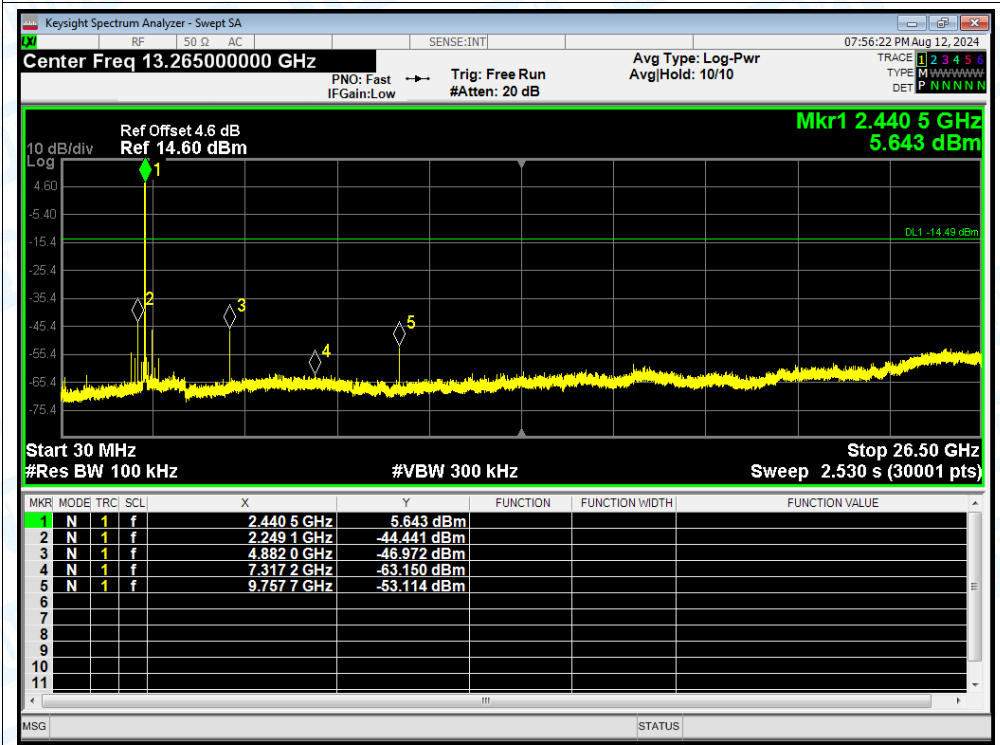
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



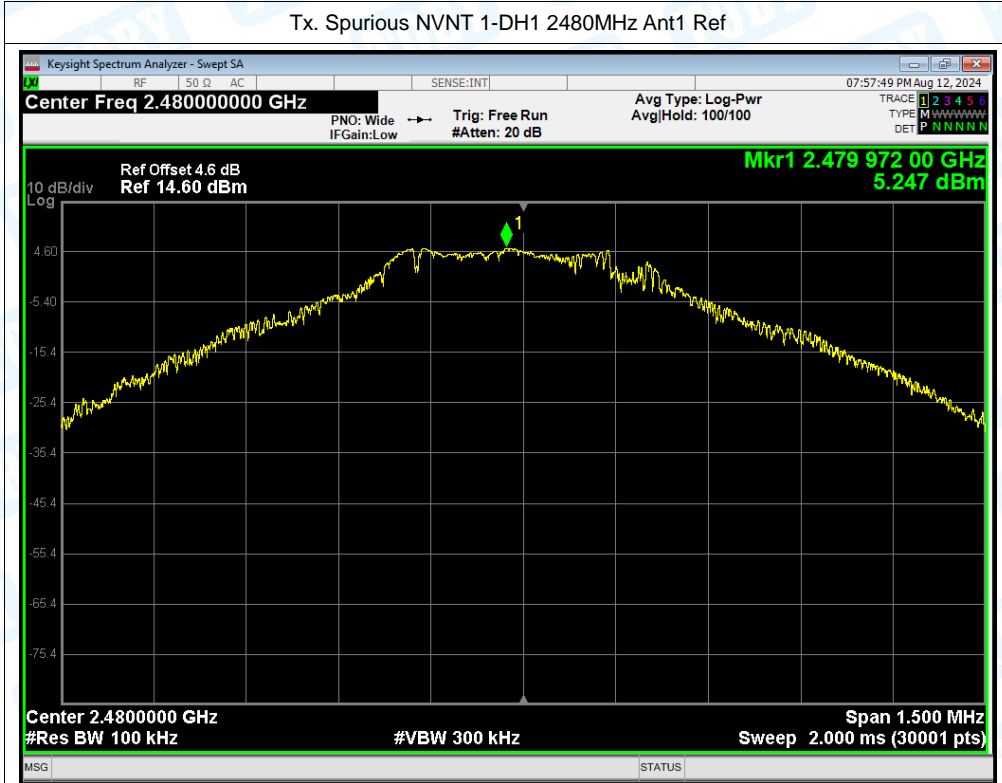
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



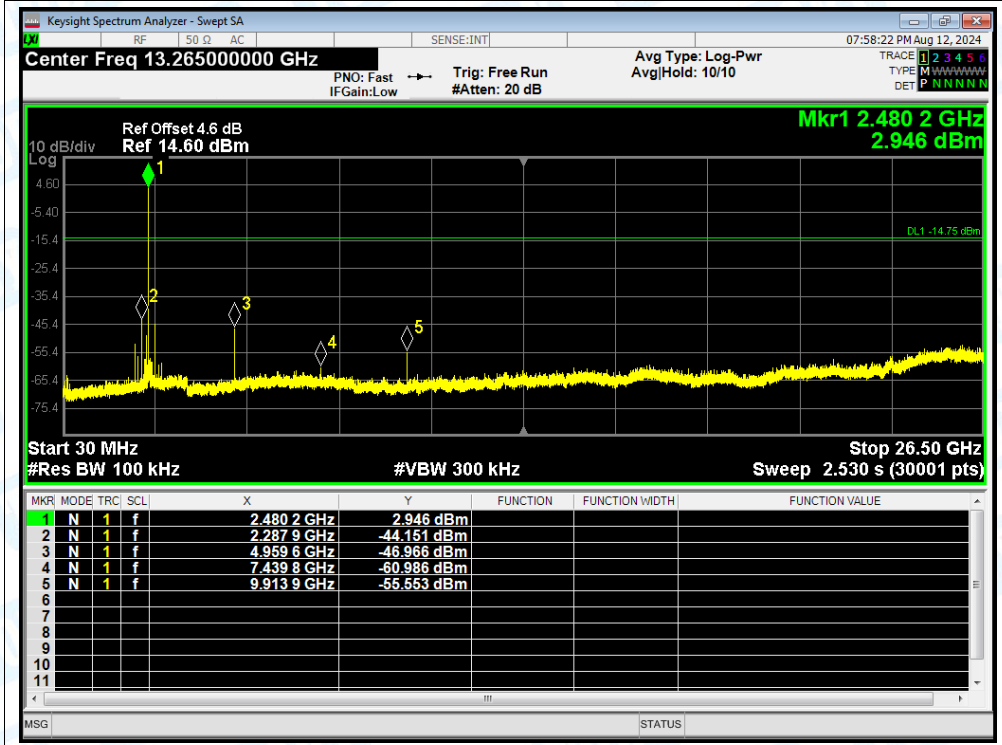
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



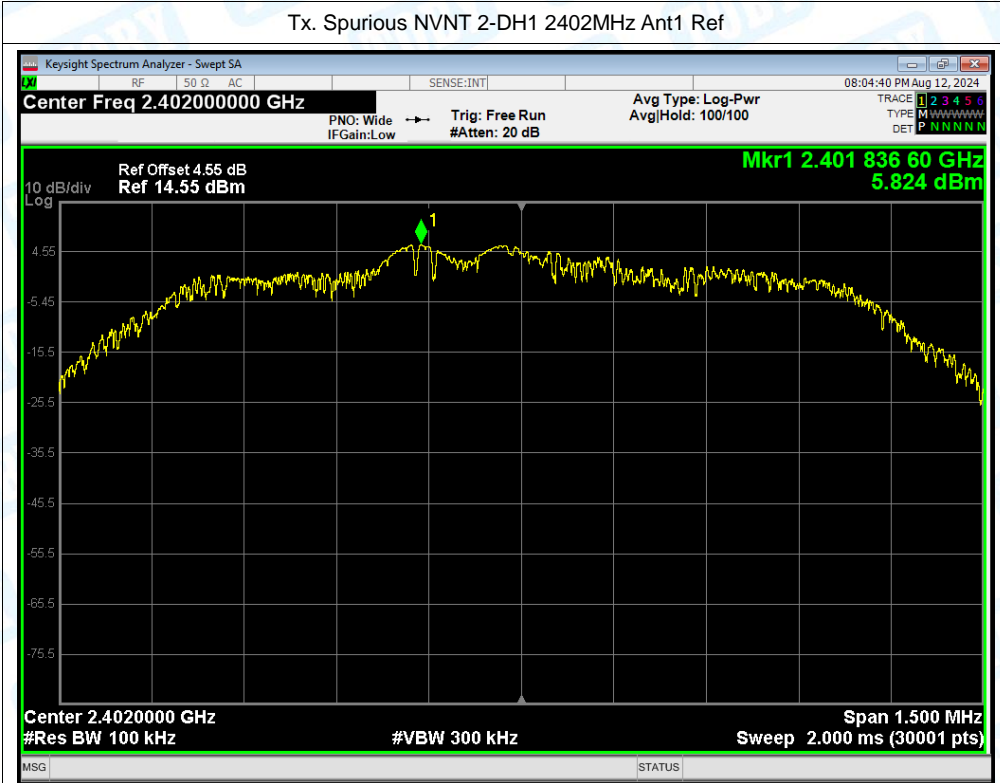
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



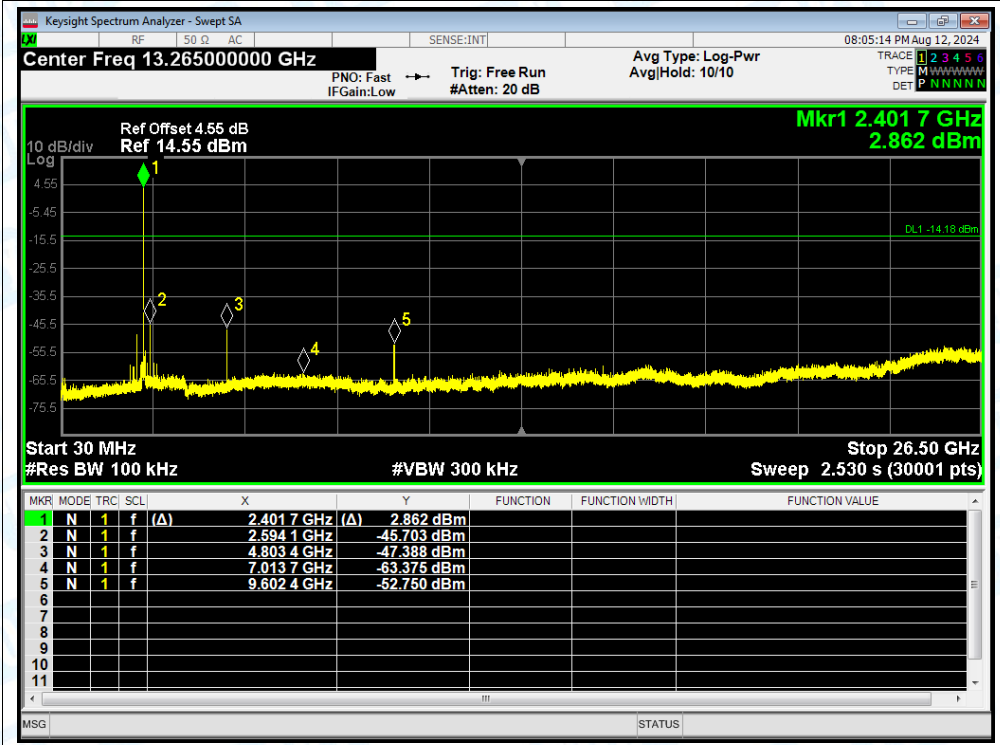
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



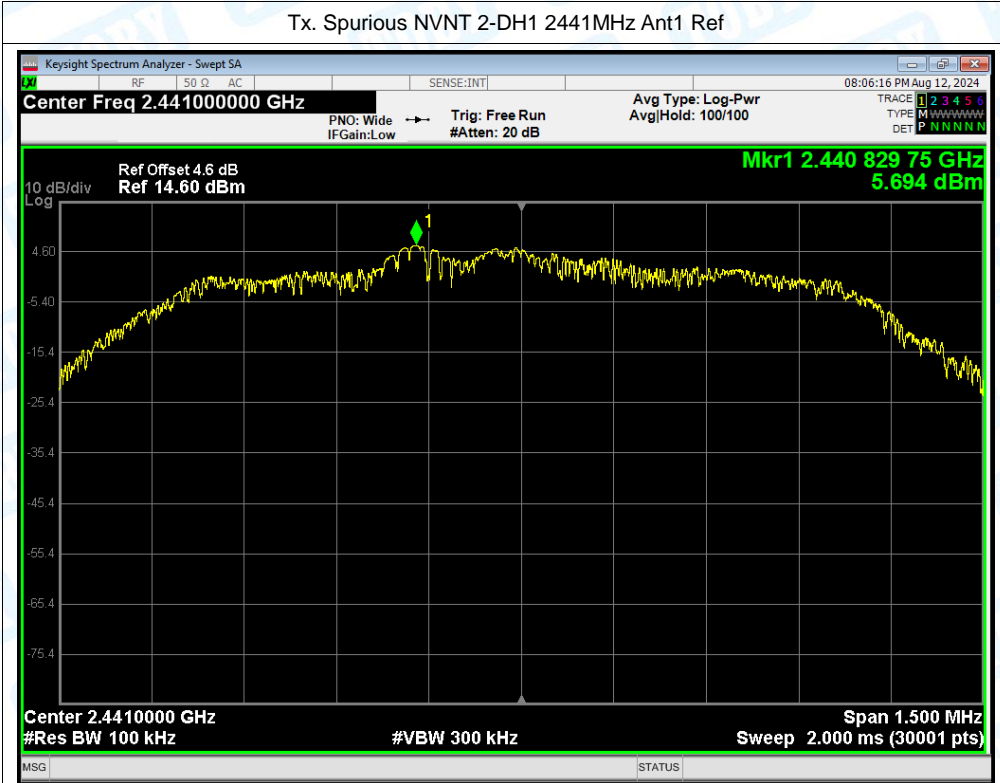
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



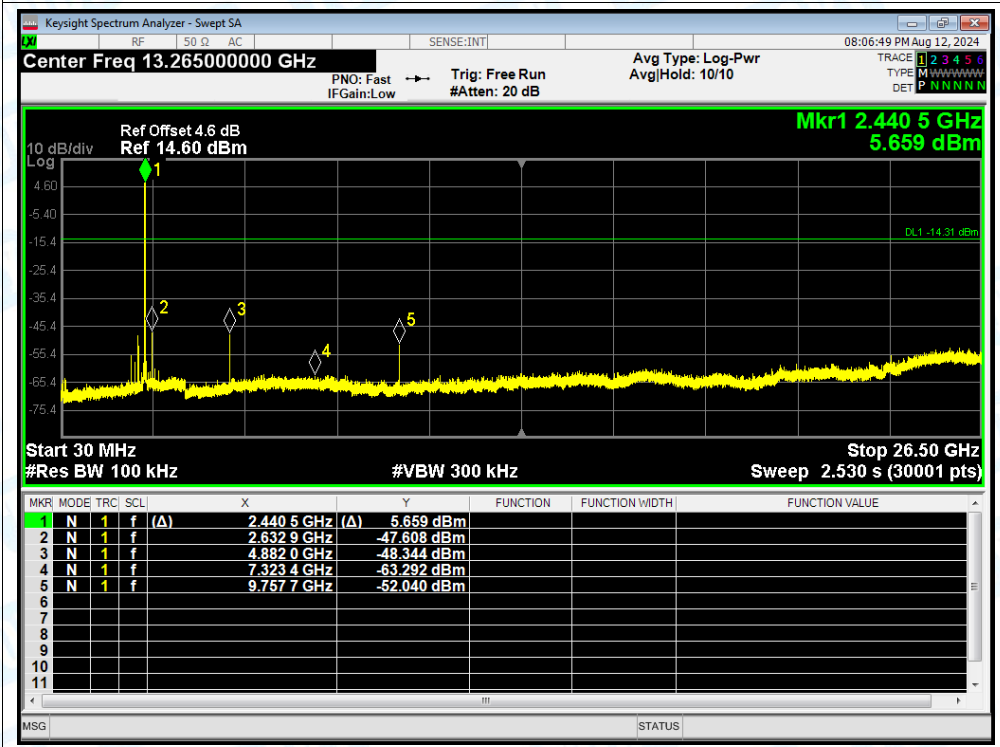
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



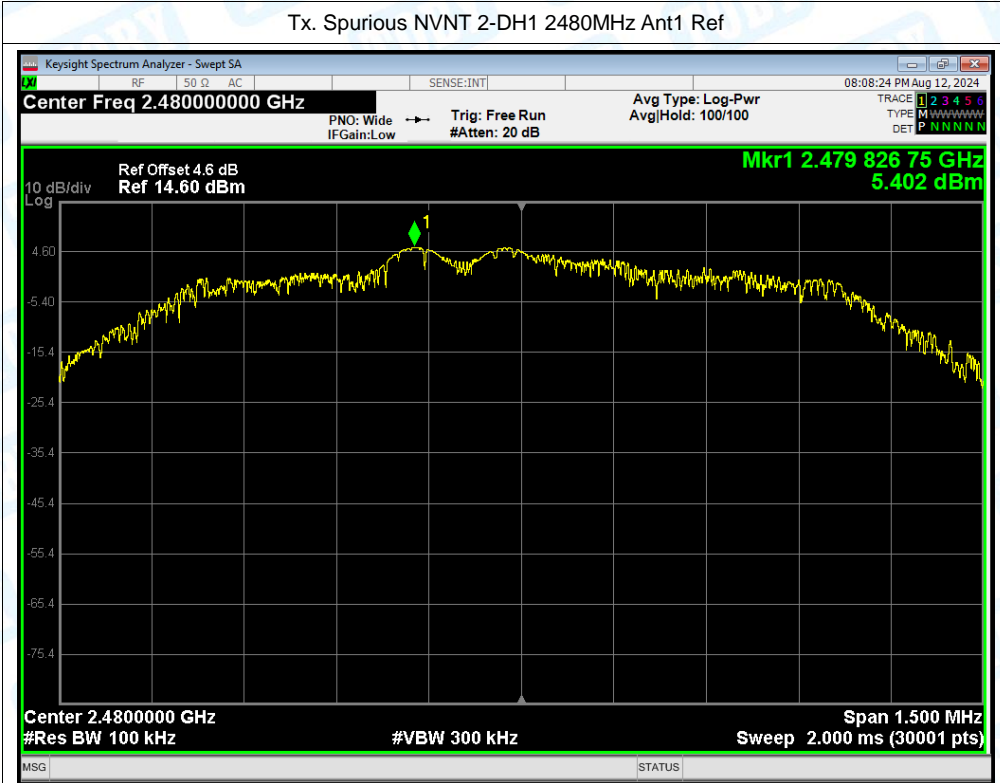
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



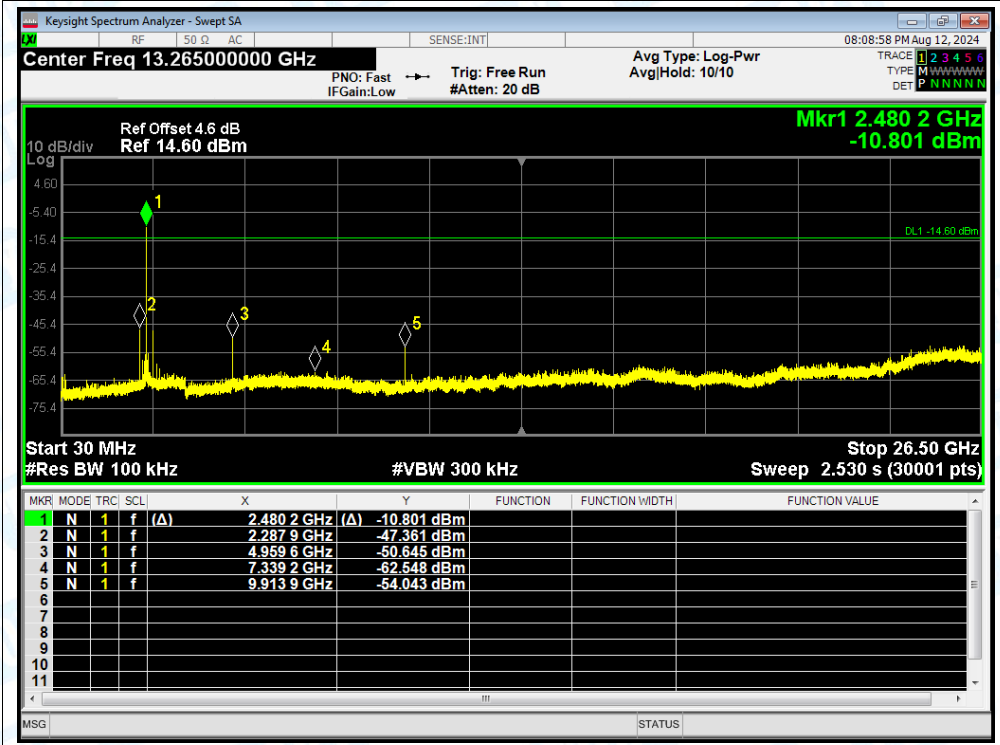
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



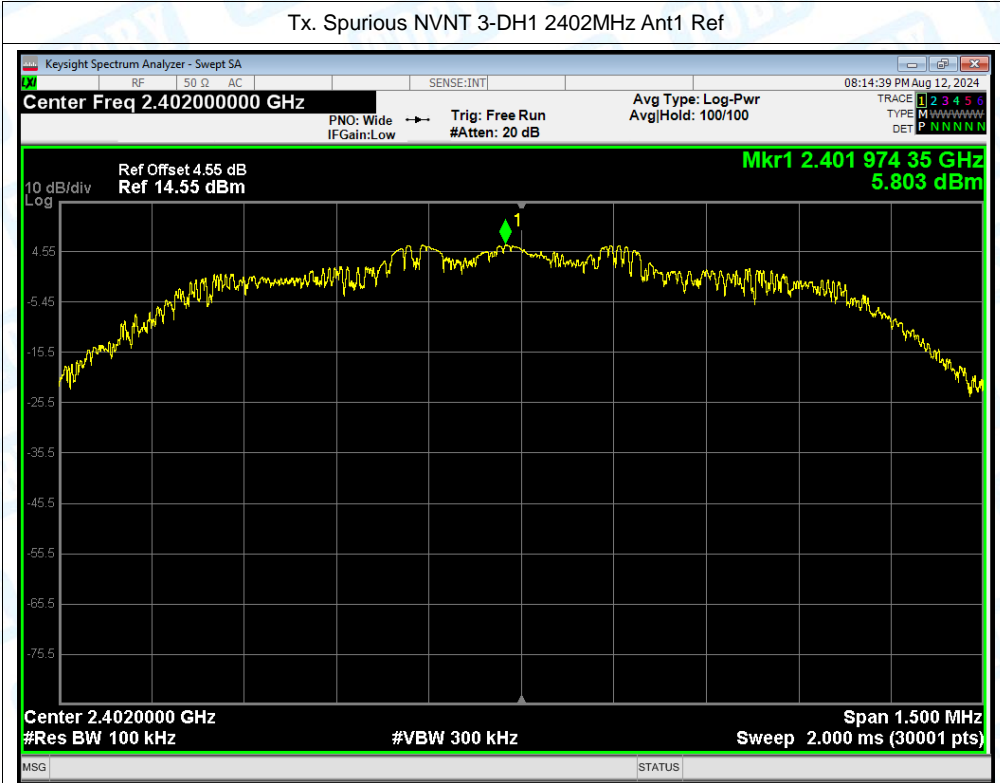
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



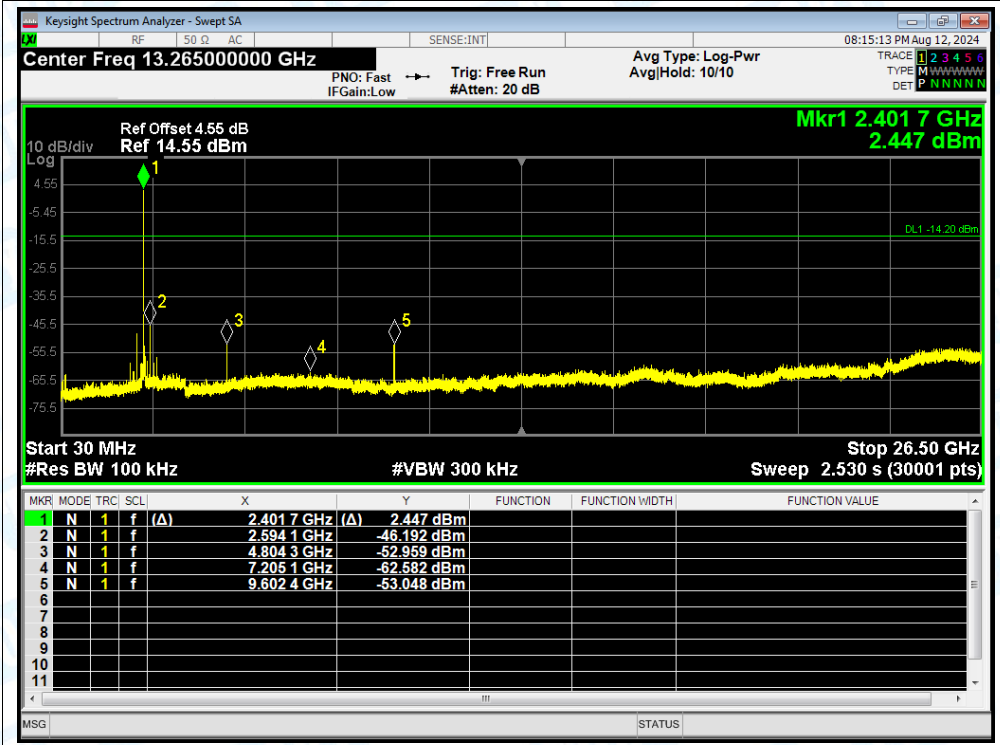
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



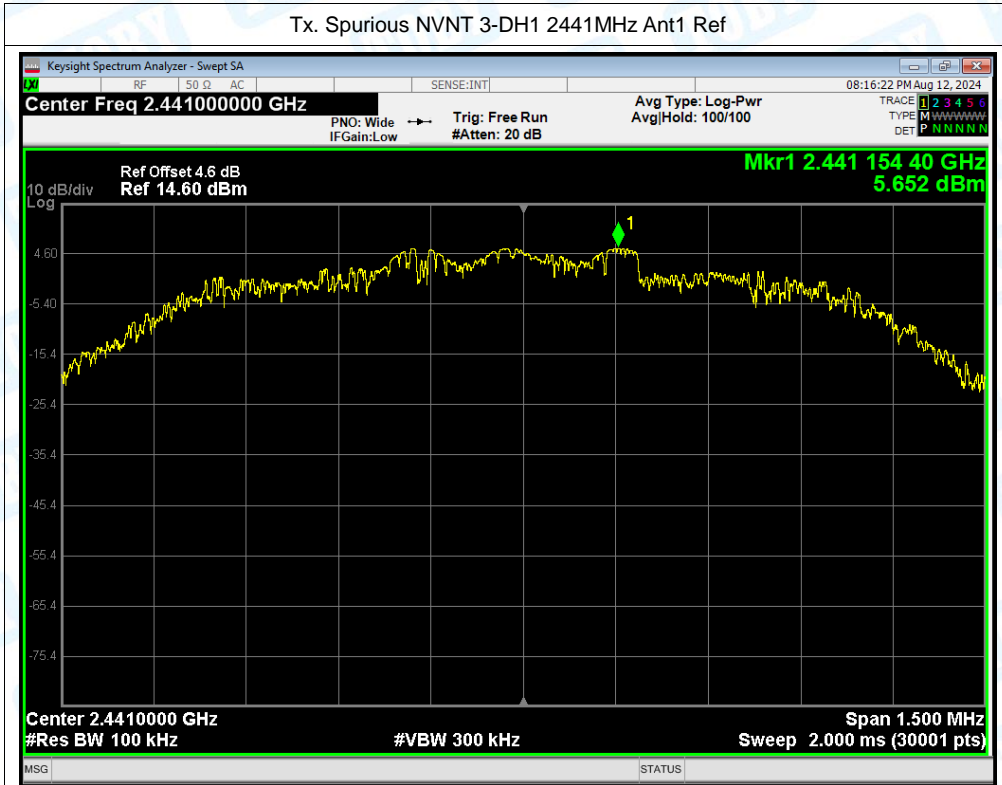
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



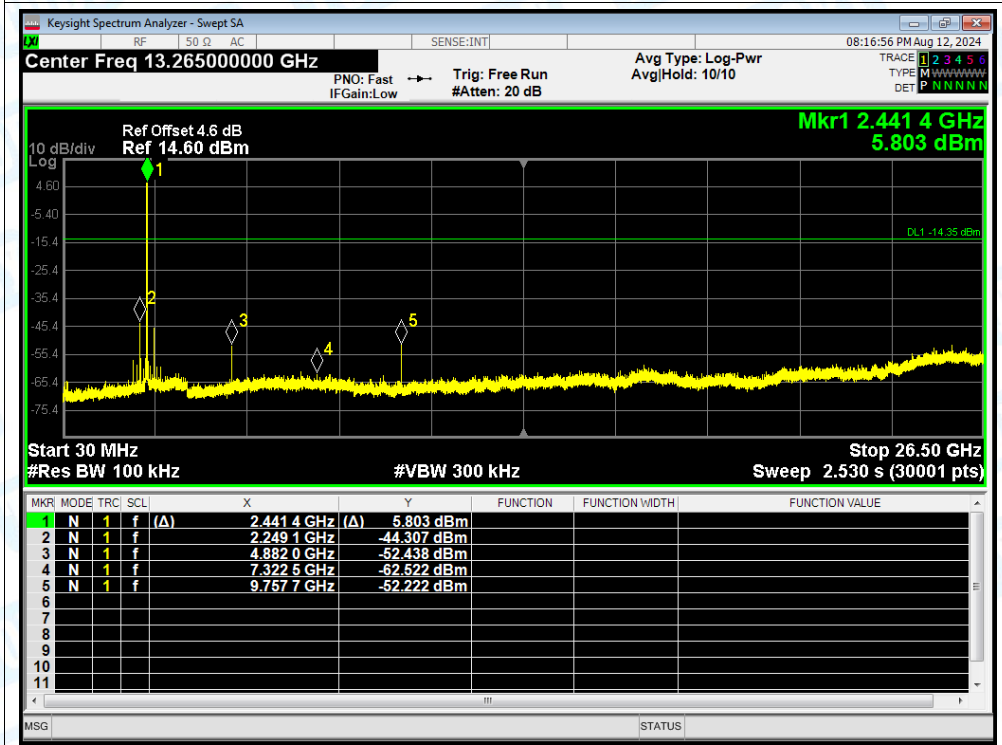
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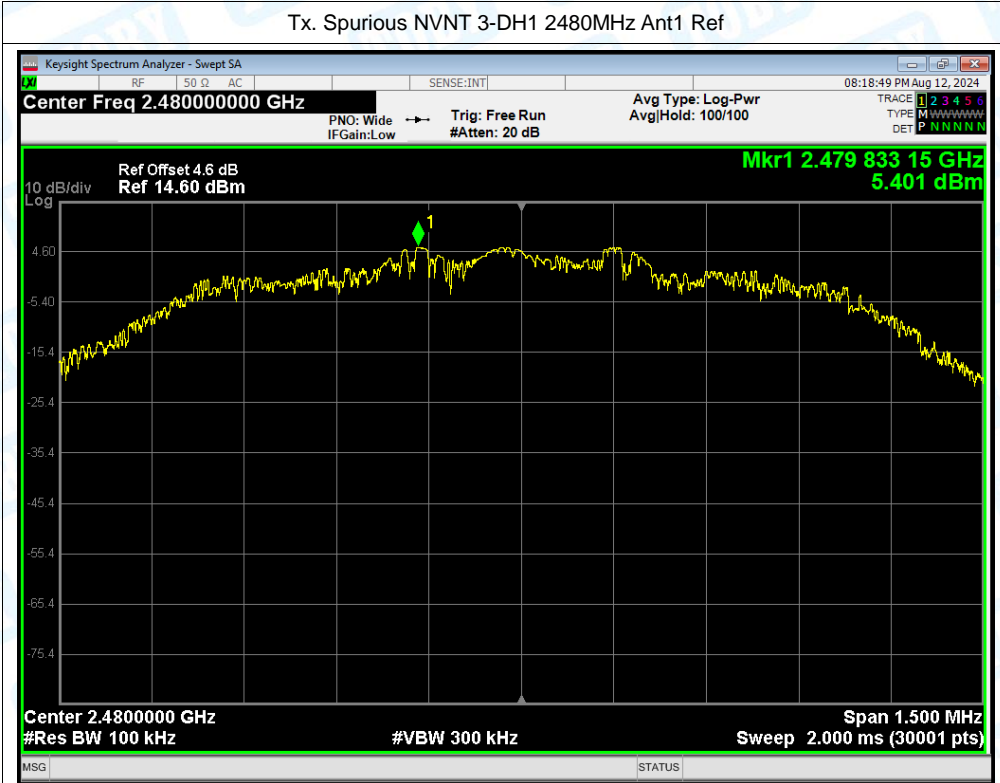
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



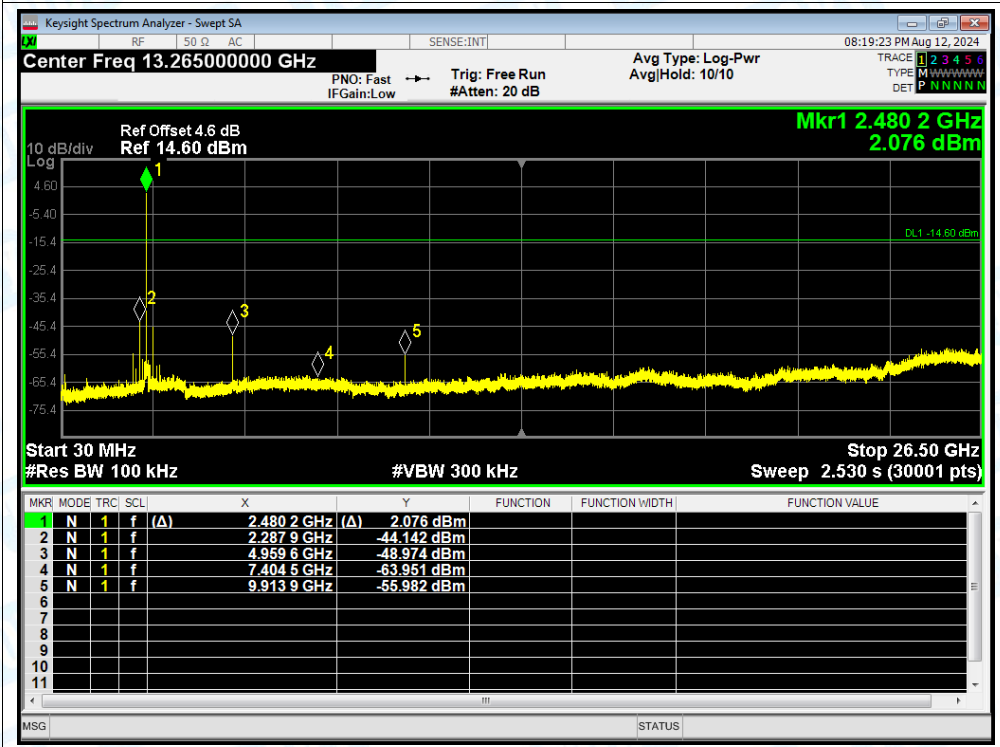
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

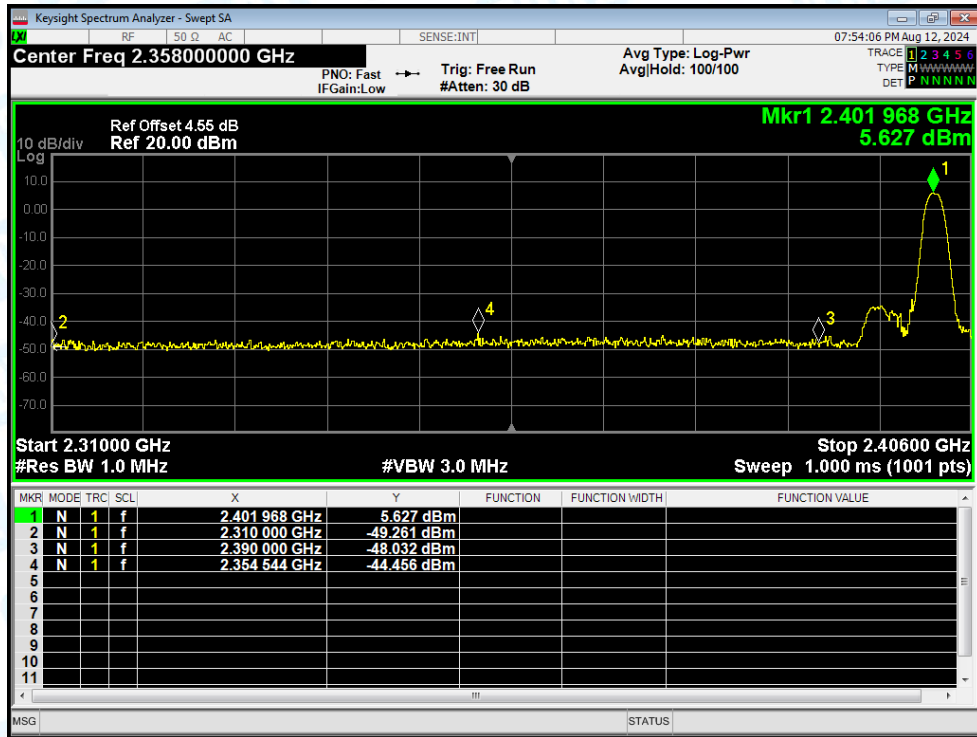


8. Restrict Band

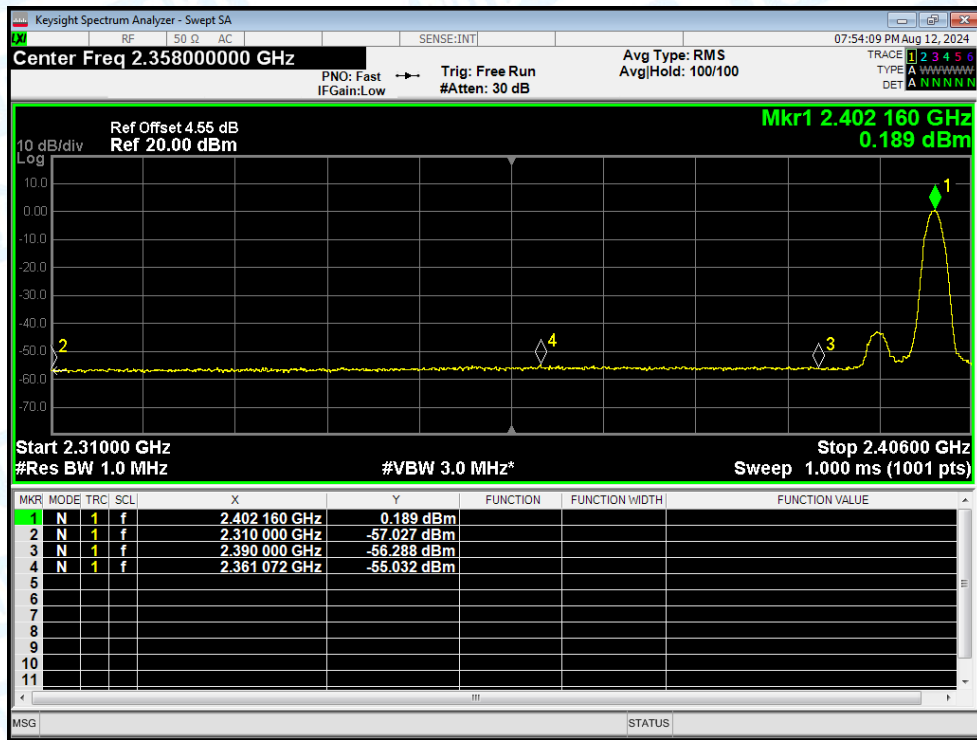
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-49.26	2	-	48	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-57.03	2	5.17	45.4	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2354.544	-44.46	2	-	52.8	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2361.072	-55.03	2	5.17	47.4	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-48.03	2	-	49.23	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-56.29	2	5.17	46.14	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-39.74	2	-	57.52	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-51.79	2	5.17	50.64	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.512	-39.75	2	-	57.51	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.584	-50.5	2	5.17	51.93	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-48.74	2	-	48.52	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-55.74	2	5.17	46.69	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-48.15	2	-	49.11	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-57.11	2	5.06	45.21	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2358.288	-44.53	2	-	52.73	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2370.864	-55.03	2	5.06	47.29	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-48.3	2	-	48.96	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-56.04	2	5.06	46.28	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-35.05	2	-	62.21	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-51.29	2	4.95	50.92	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.512	-35.05	2	-	62.21	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.56	-51.02	2	4.95	51.19	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-46.97	2	-	50.29	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-55.21	2	4.95	47	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-47.53	2	-	49.73	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-57.08	2	5.06	45.24	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2362.416	-42.89	2	-	54.37	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2364.528	-54.91	2	5.06	47.41	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-48.16	2	-	49.1	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-55.99	2	5.06	46.33	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-38.41	2	-	58.85	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-51.45	2	4.95	50.76	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.632	-36.65	2	-	60.61	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.632	-50.69	2	4.95	51.52	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-46.25	2	-	51.01	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-55.49	2	4.95	46.72	Average	54	Pass

Test Graphs

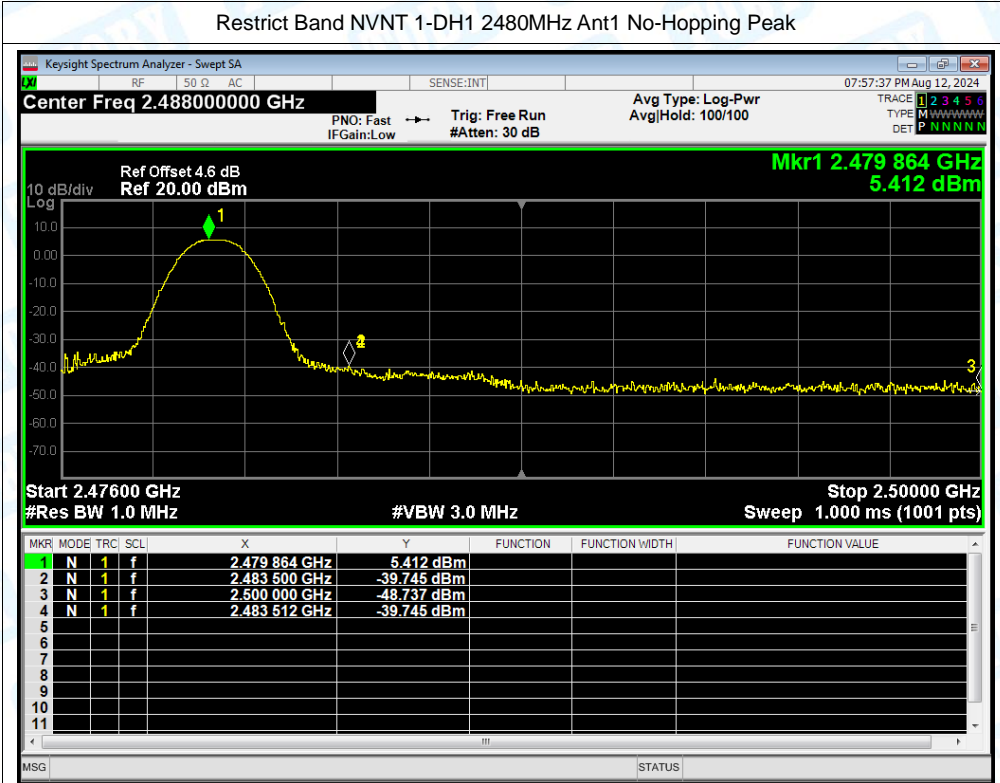
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



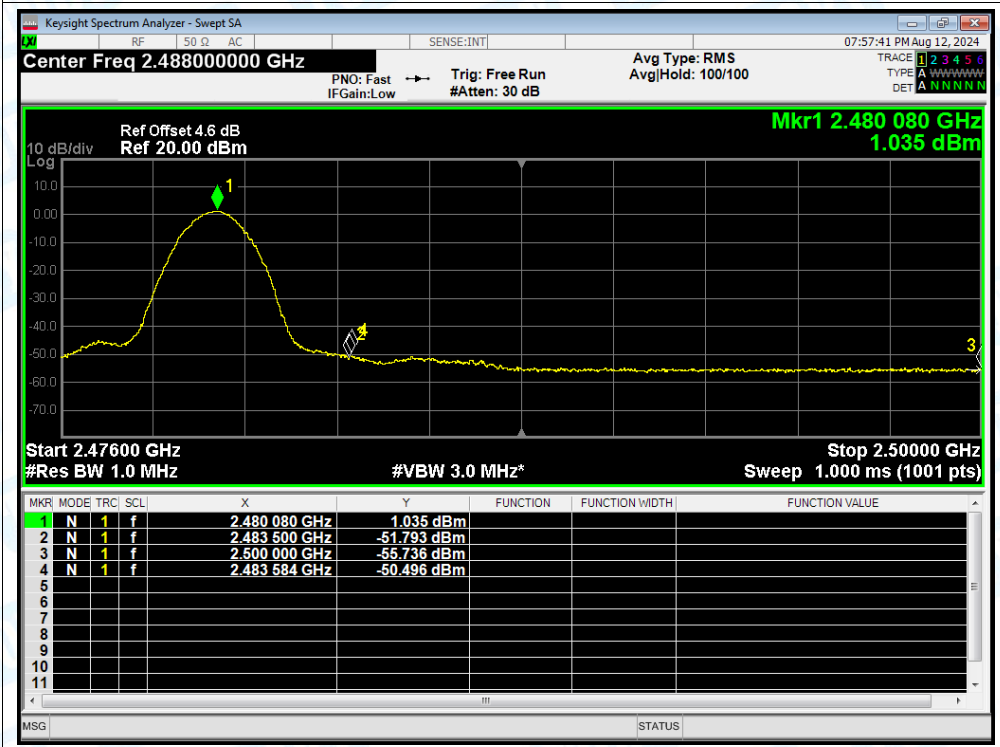
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average

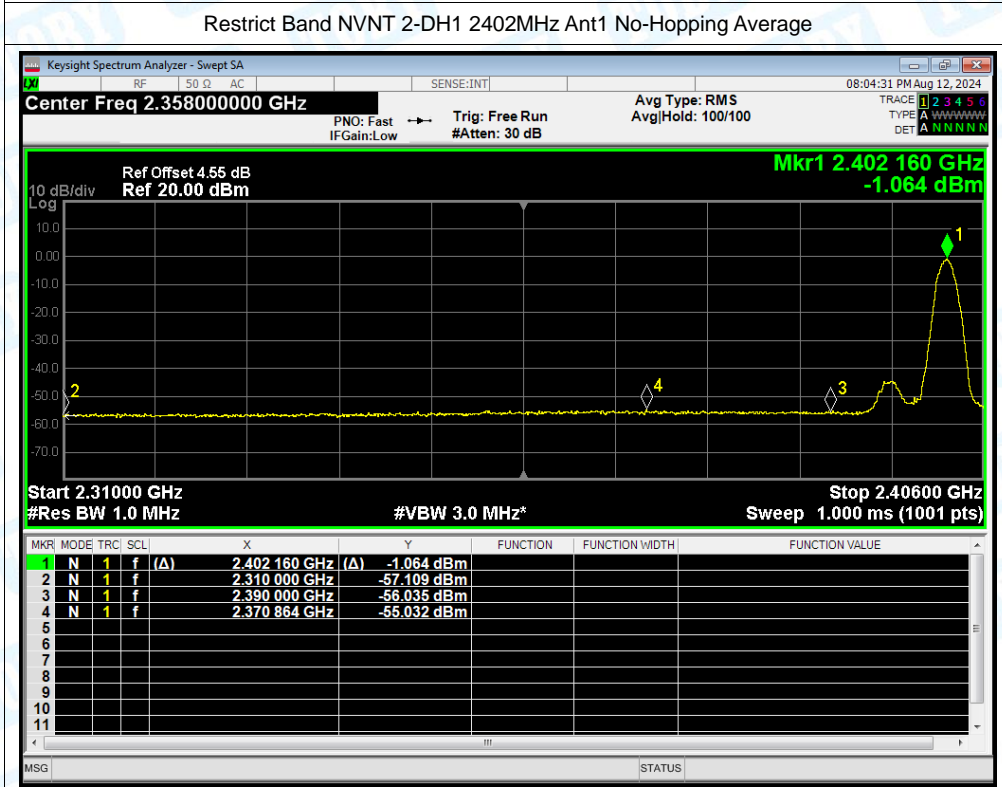
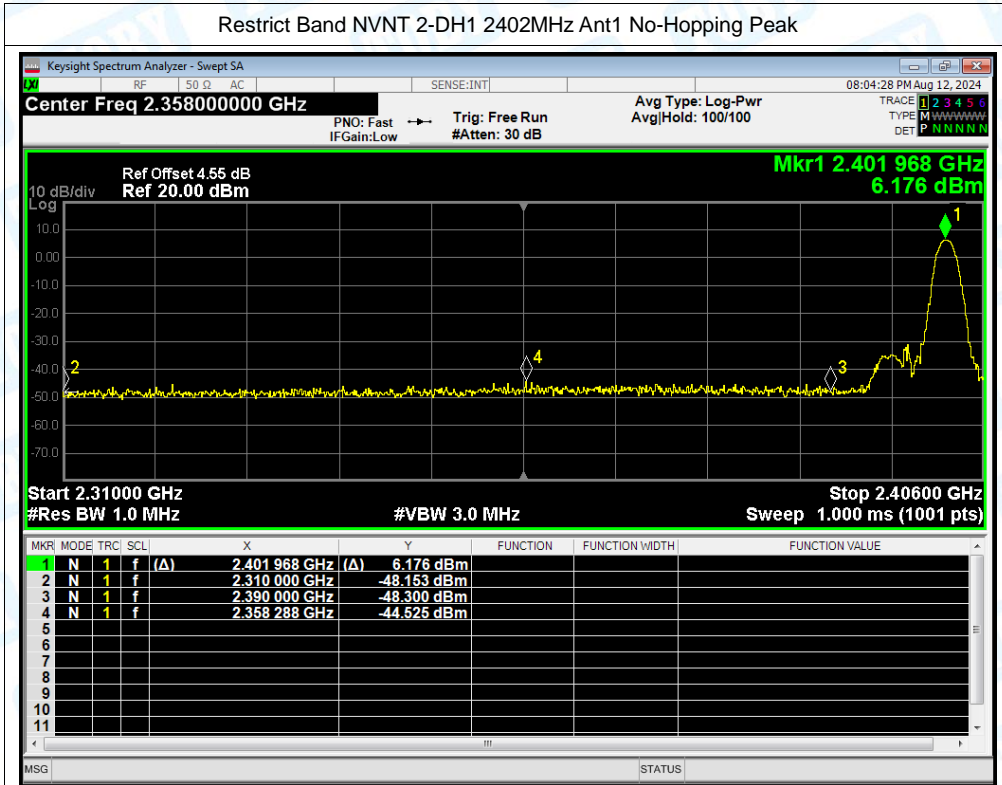


Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak

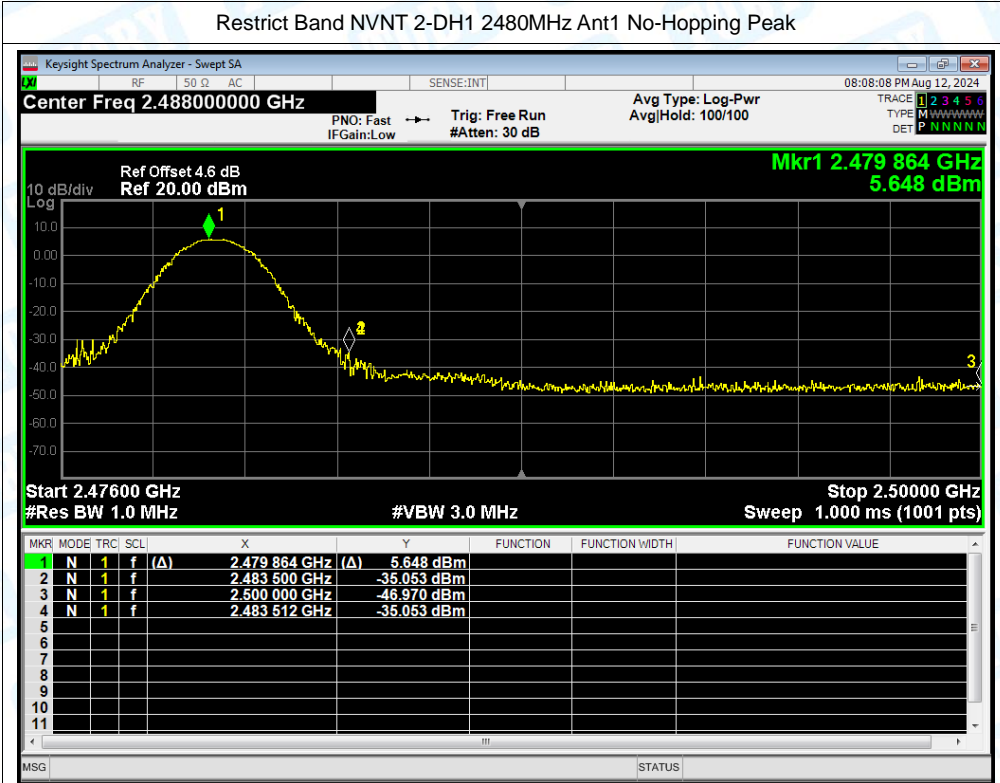


Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average

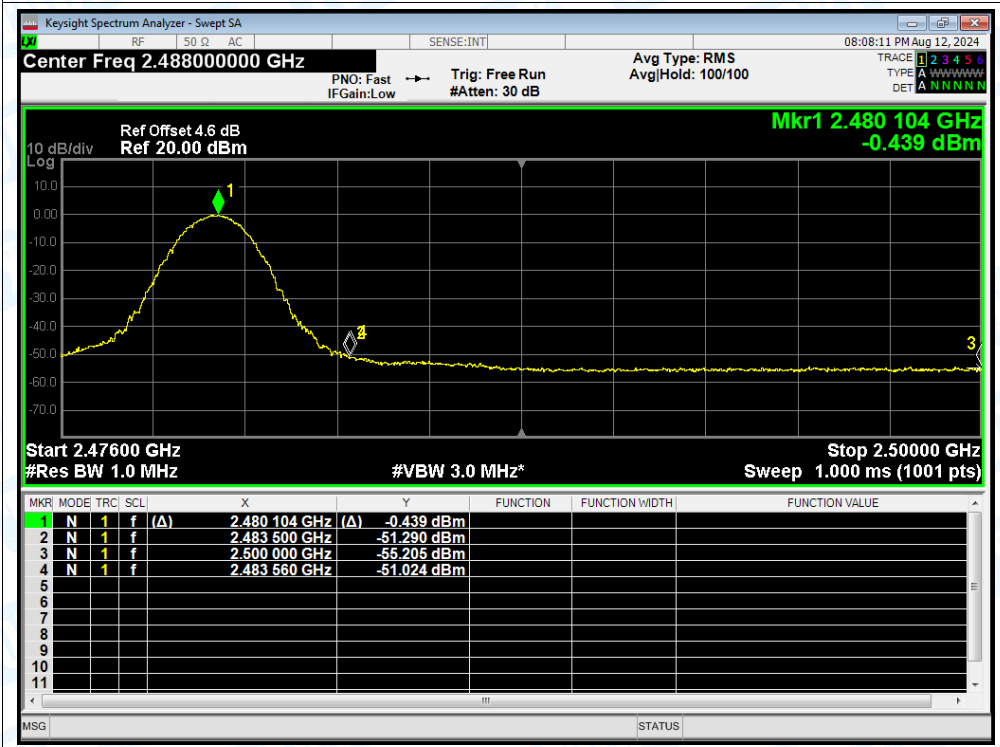


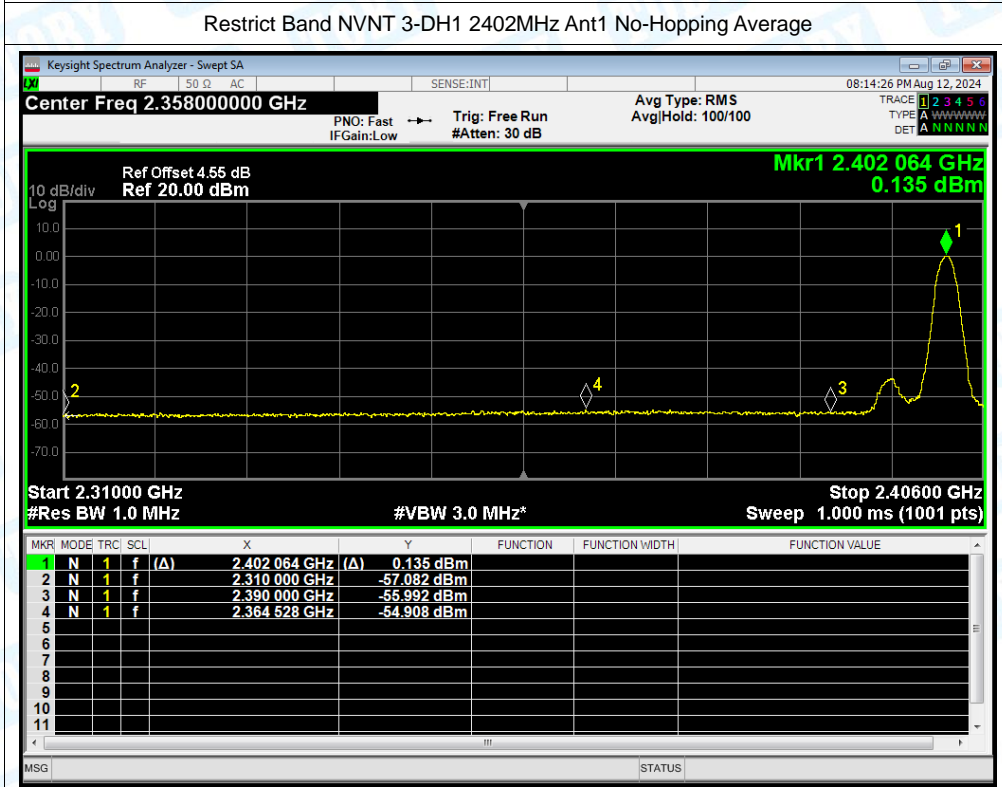
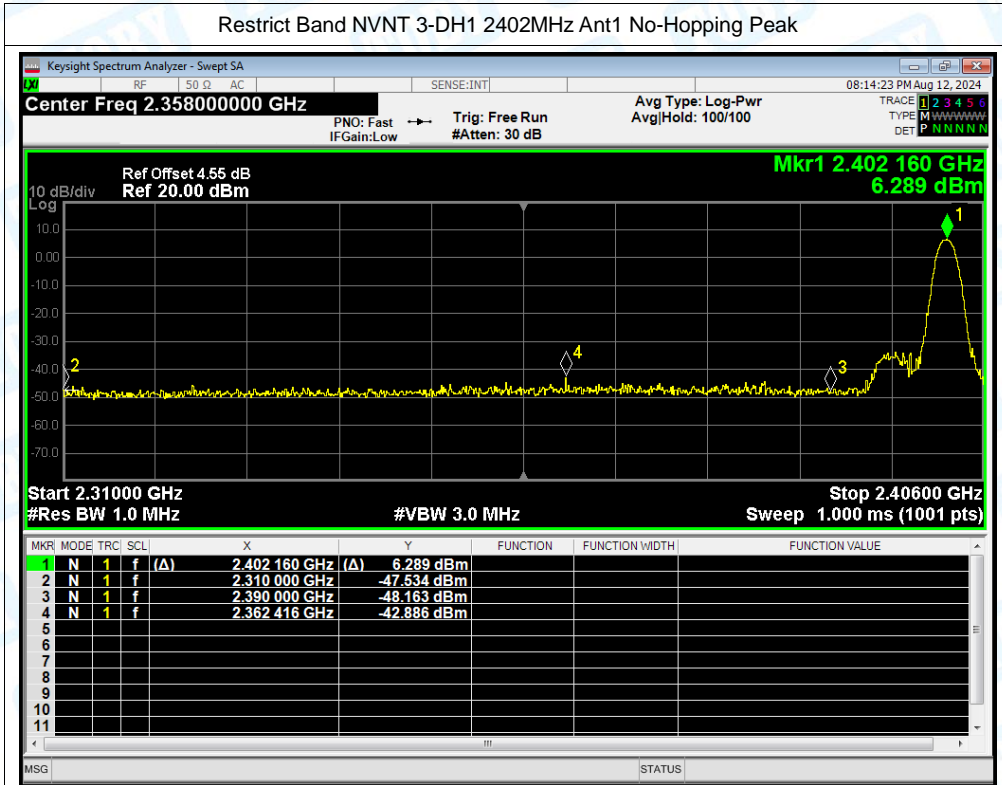


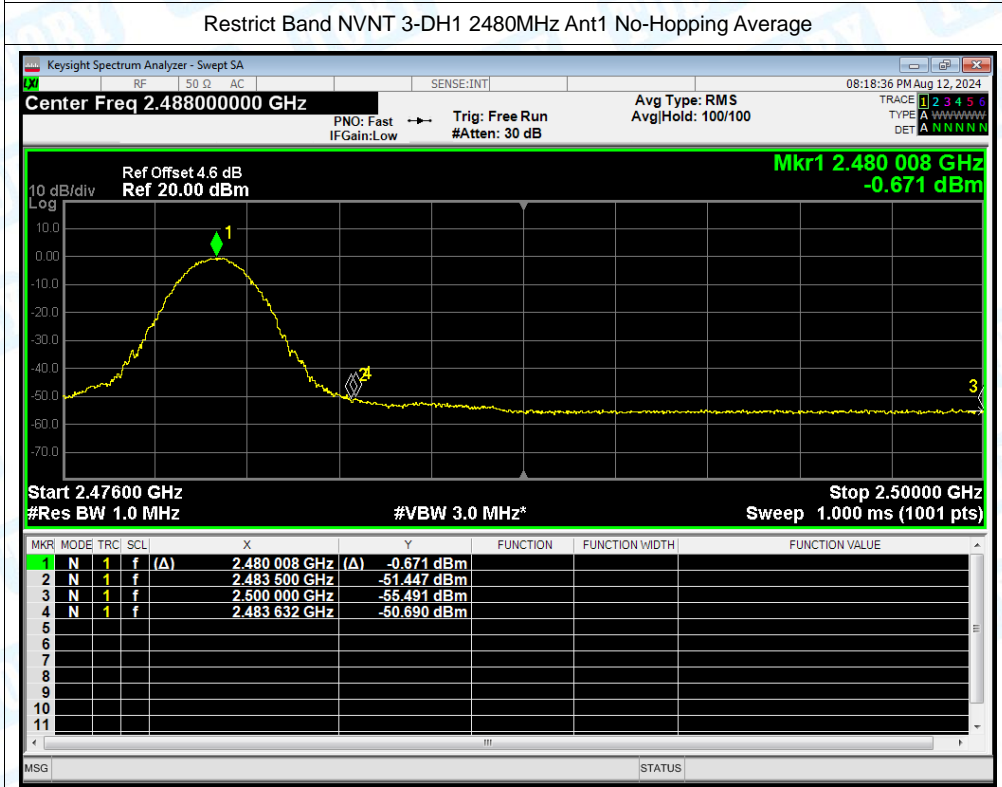
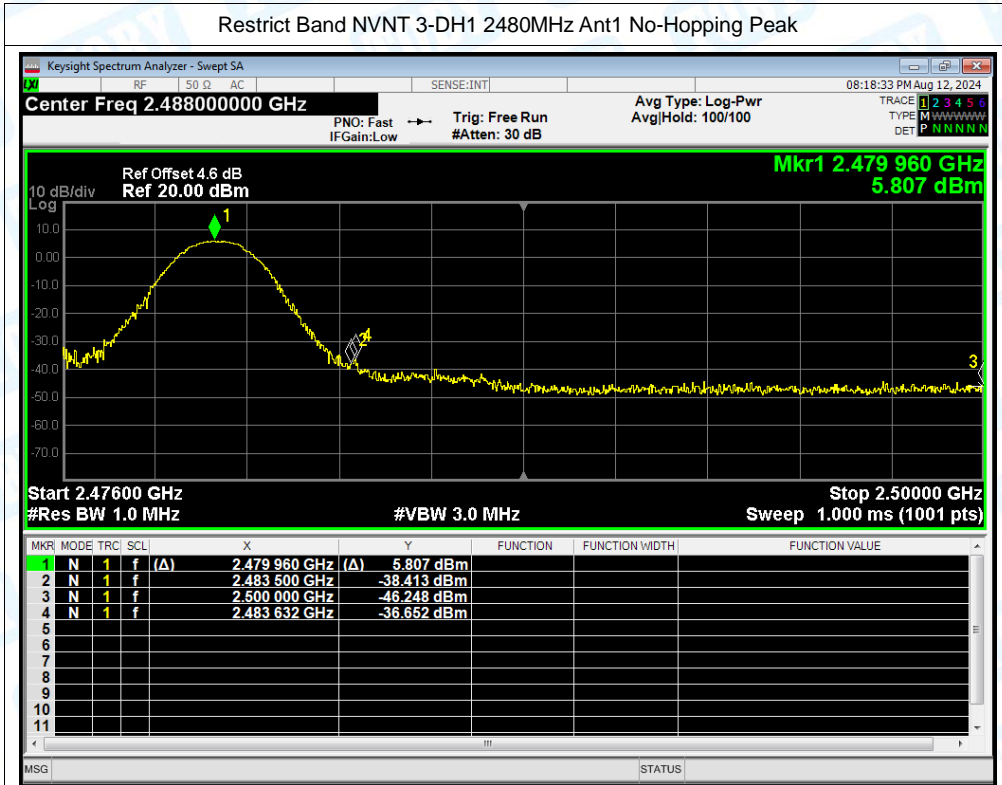
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



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





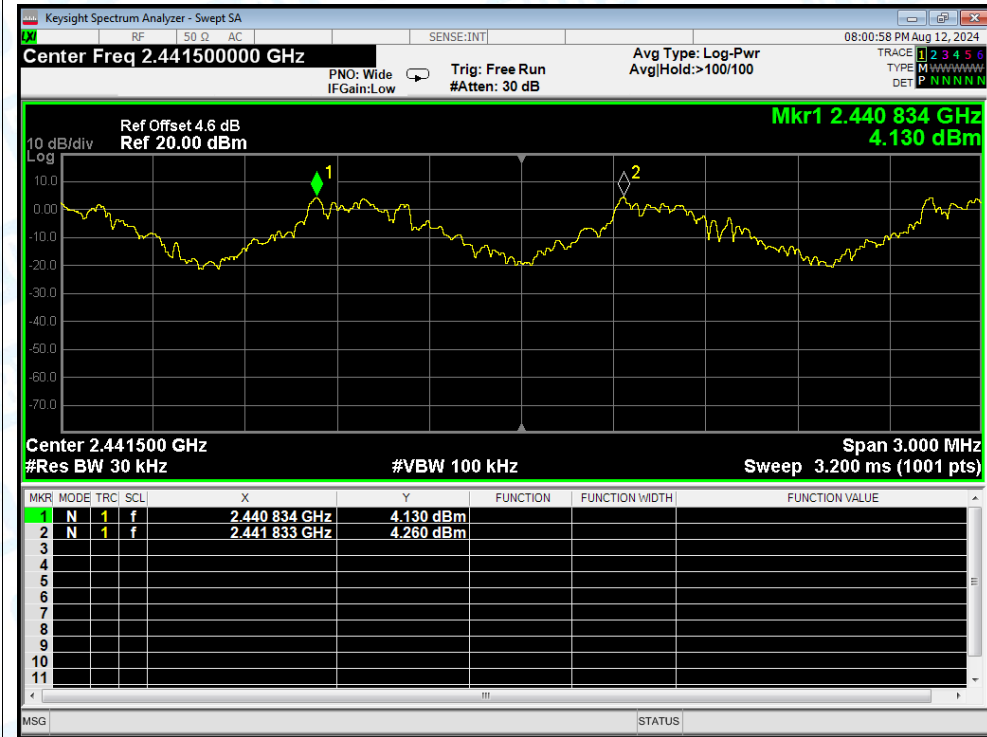


9. Carrier Frequencies Separation

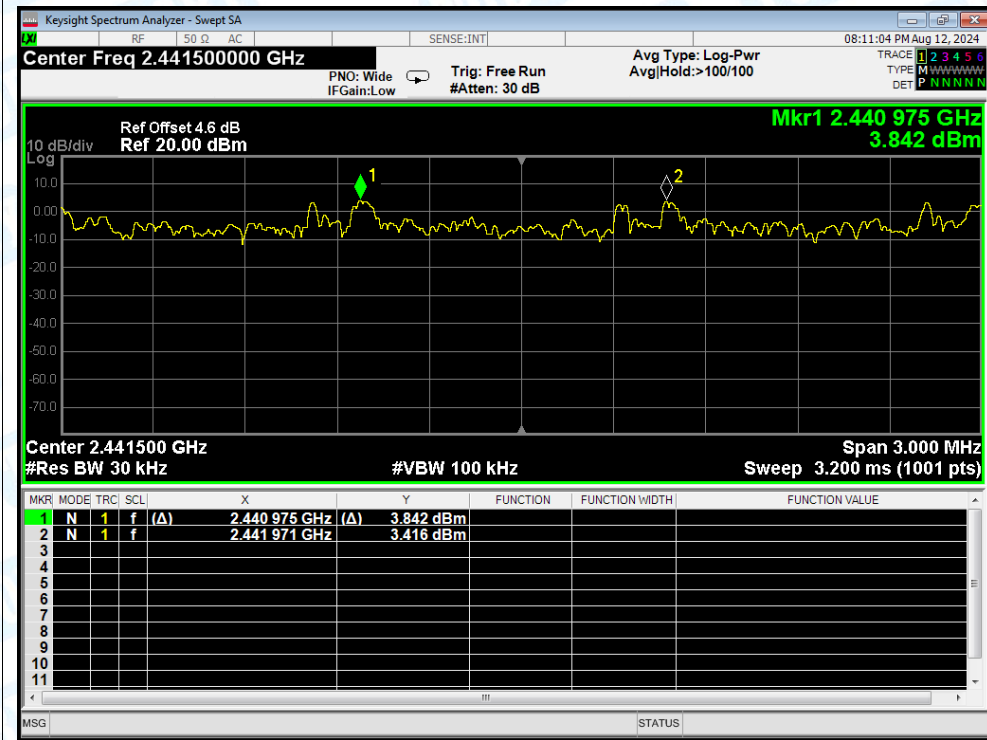
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.834	2441.833	0.999	0.587	Pass
NVNT	2-DH1	Ant1	2440.975	2441.971	0.996	0.833	Pass
NVNT	3-DH1	Ant1	2440.978	2441.995	1.017	0.833	Pass

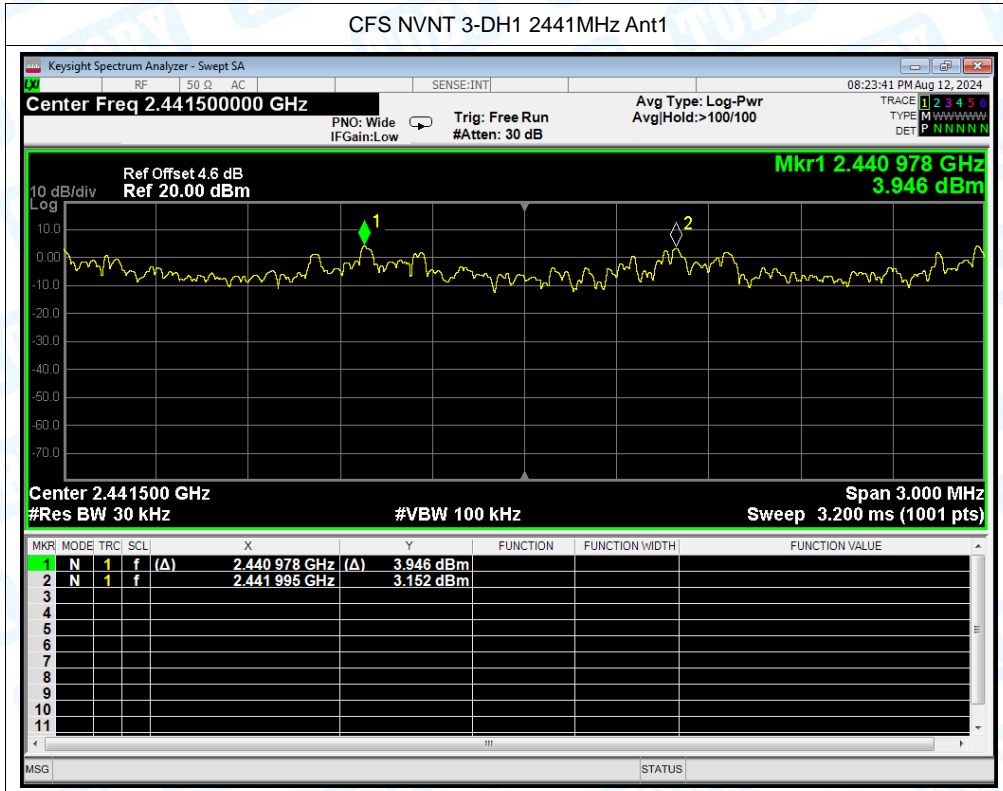
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



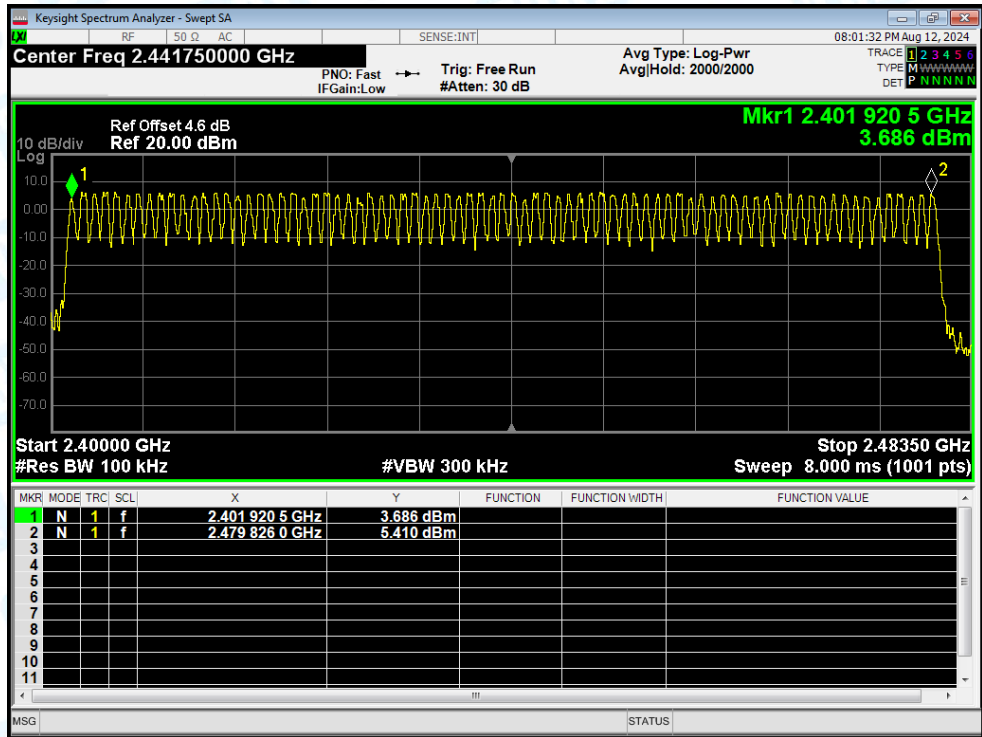


10. Number of Hopping Channel

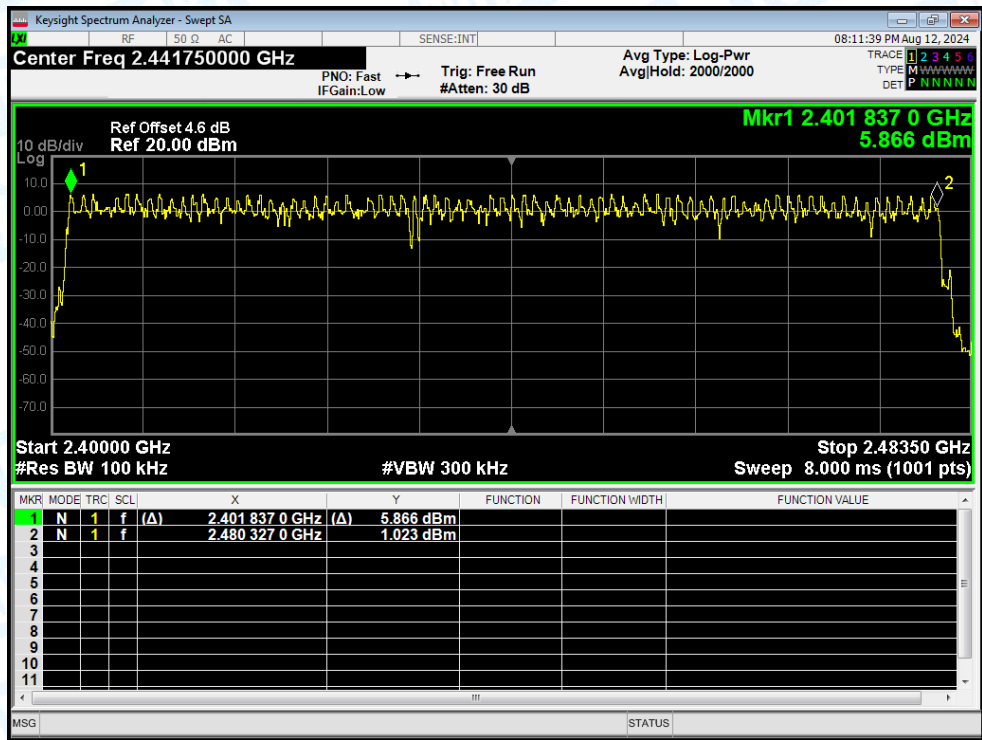
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

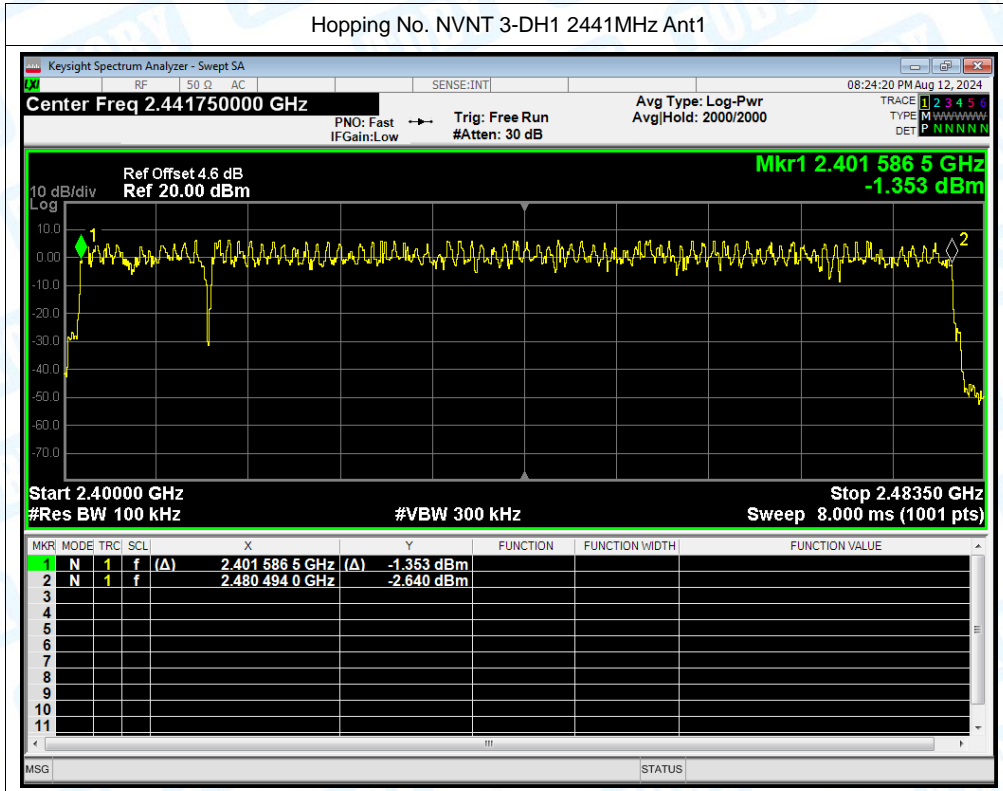
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



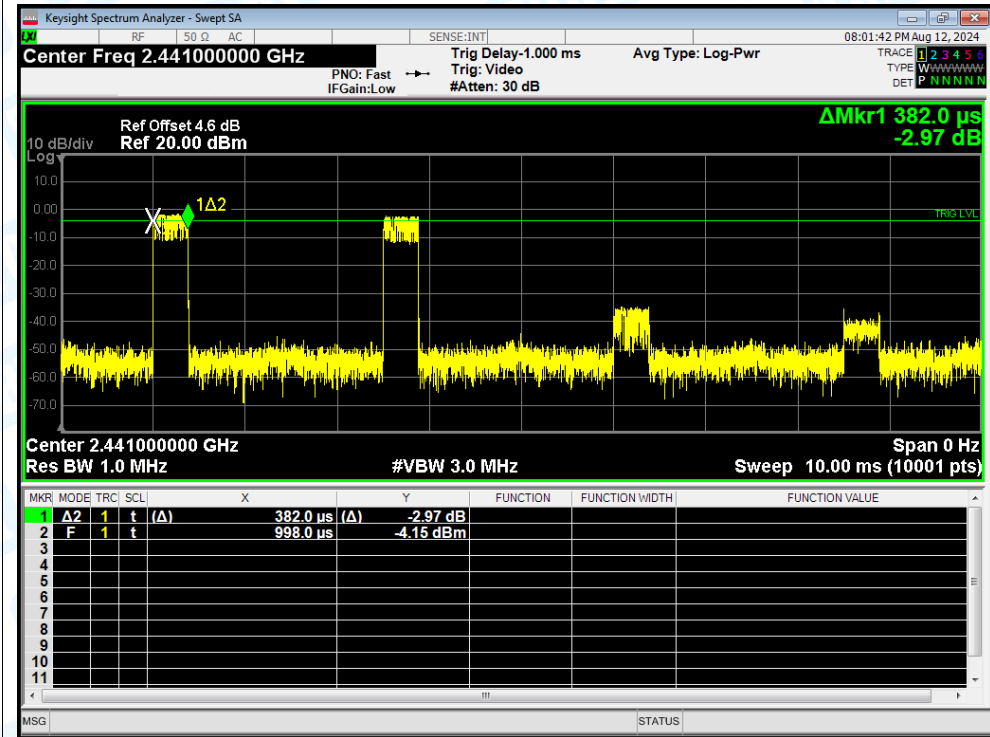


11. Dwell Time

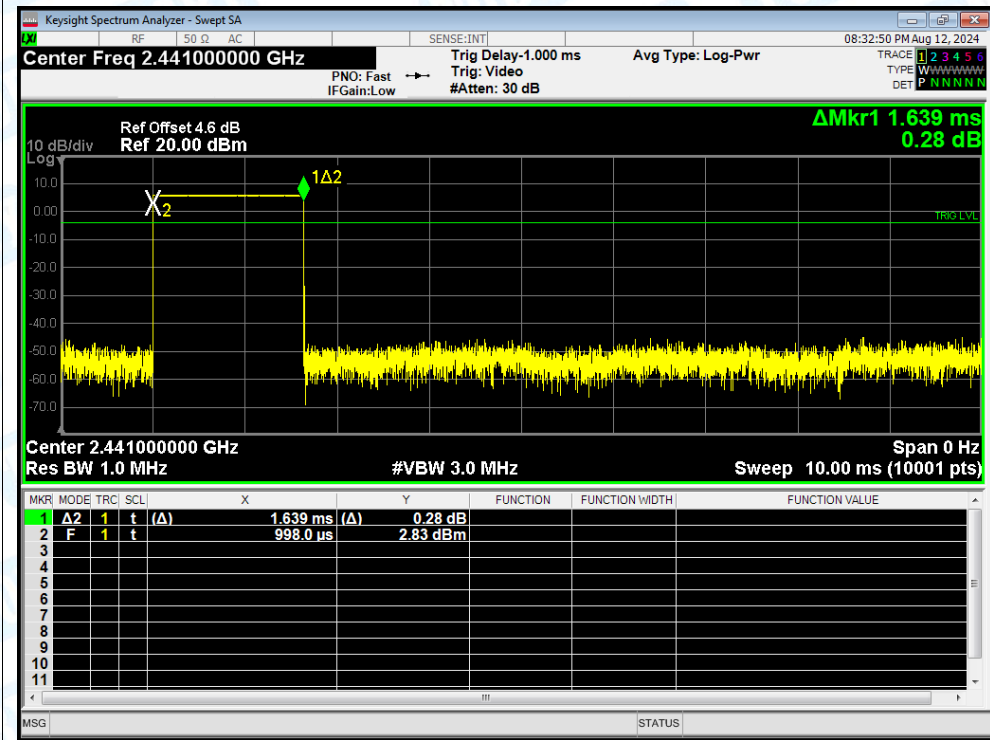
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.382	122.24	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.639	262.24	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.888	308.053	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.392	125.44	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.643	262.88	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.885	307.733	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.391	125.12	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.643	262.88	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.892	308.48	31600	400	Pass

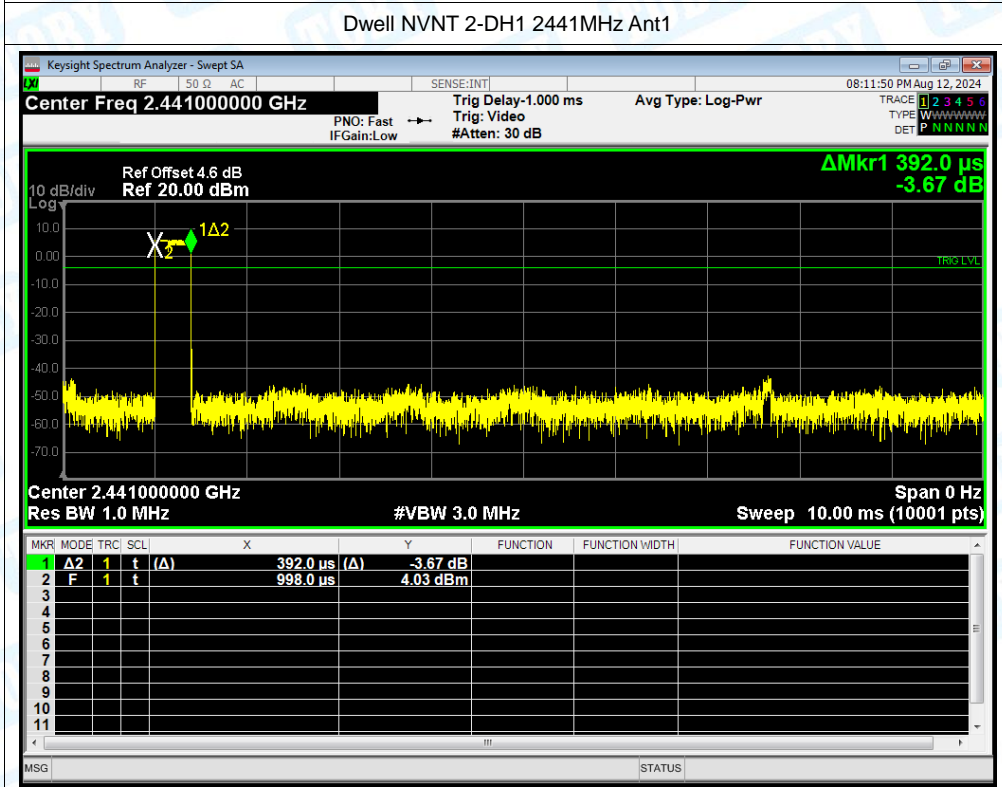
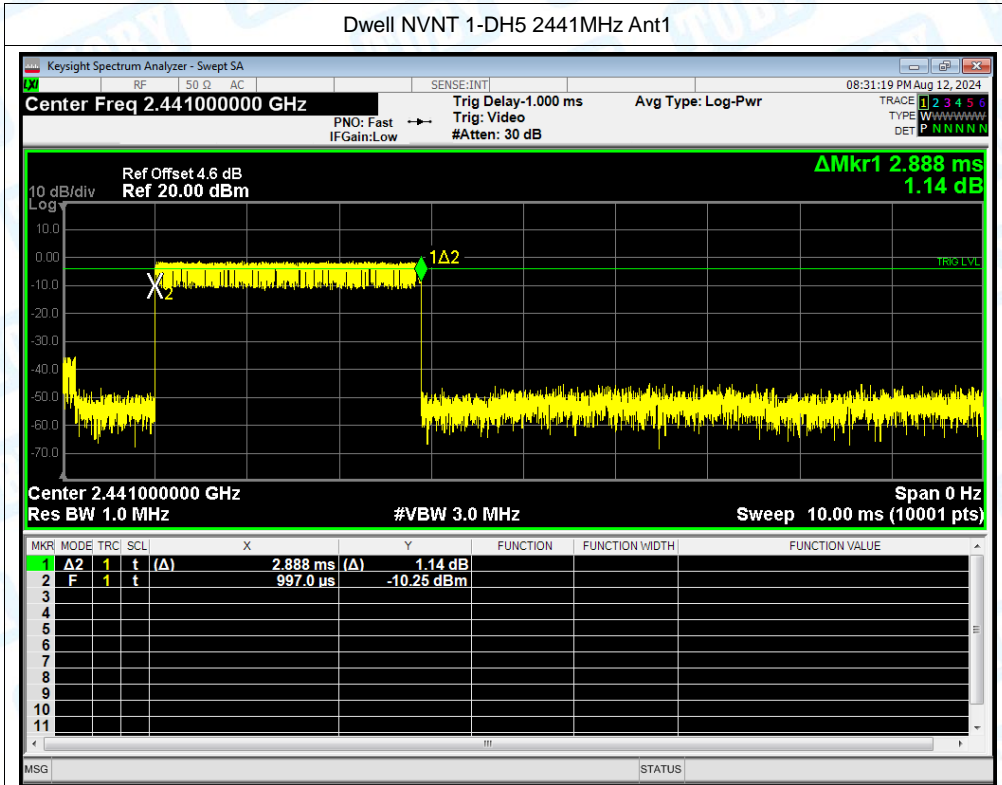
Test Graphs

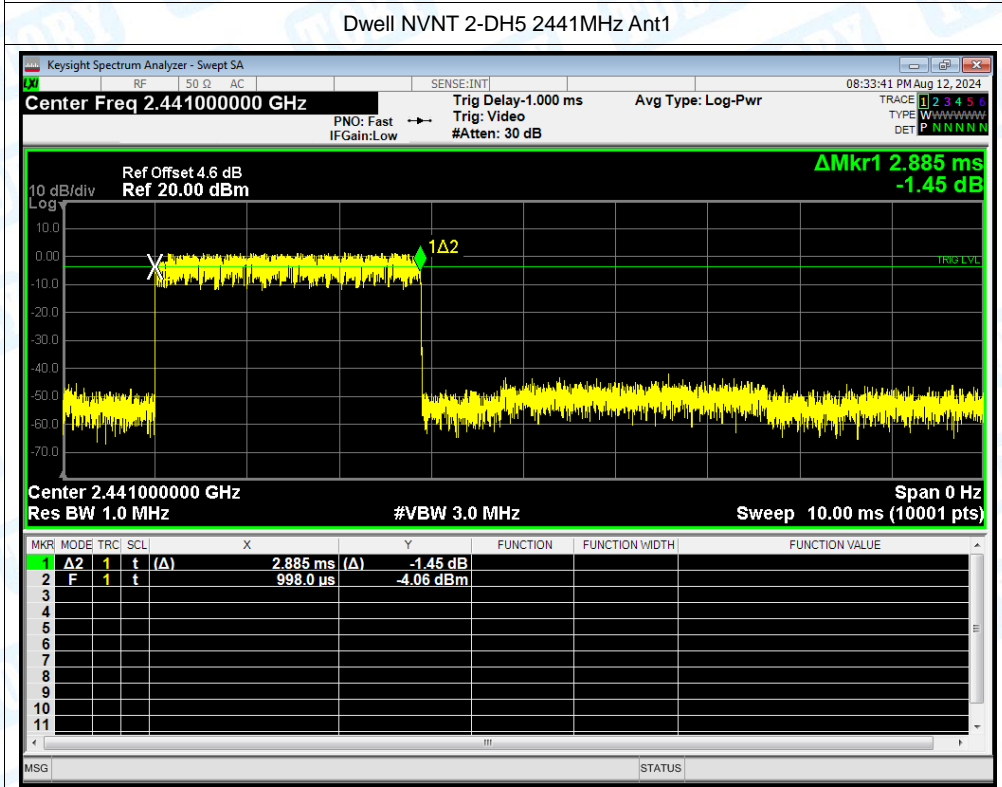
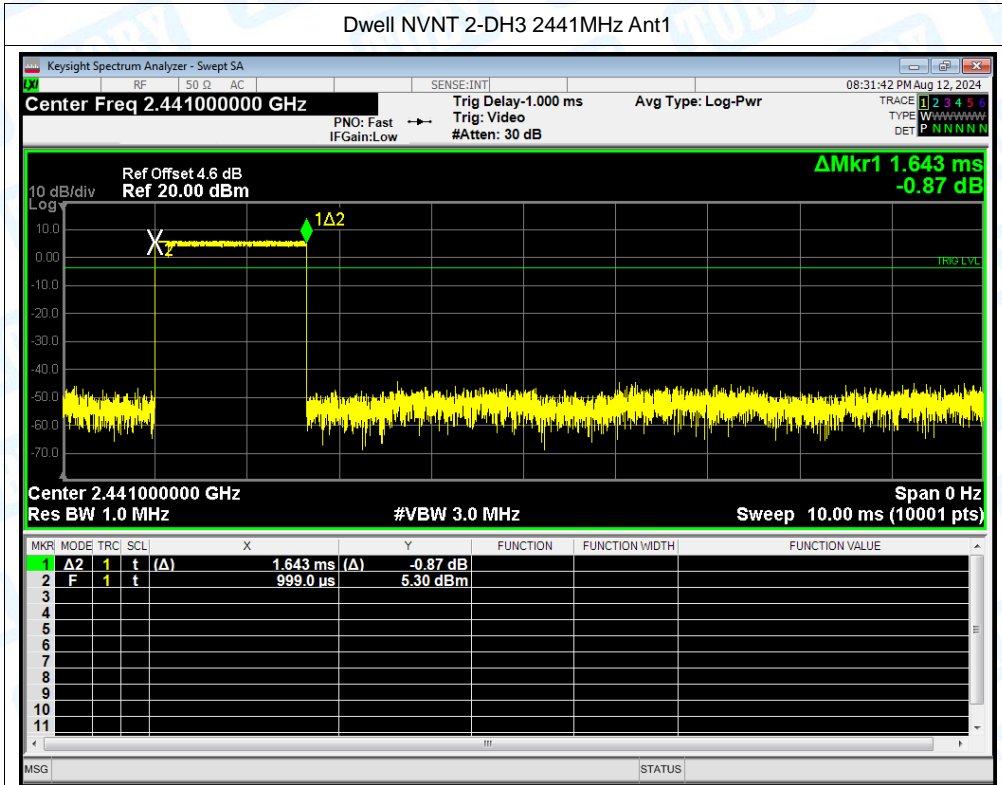
Dwell NVNT 1-DH1 2441MHz Ant1

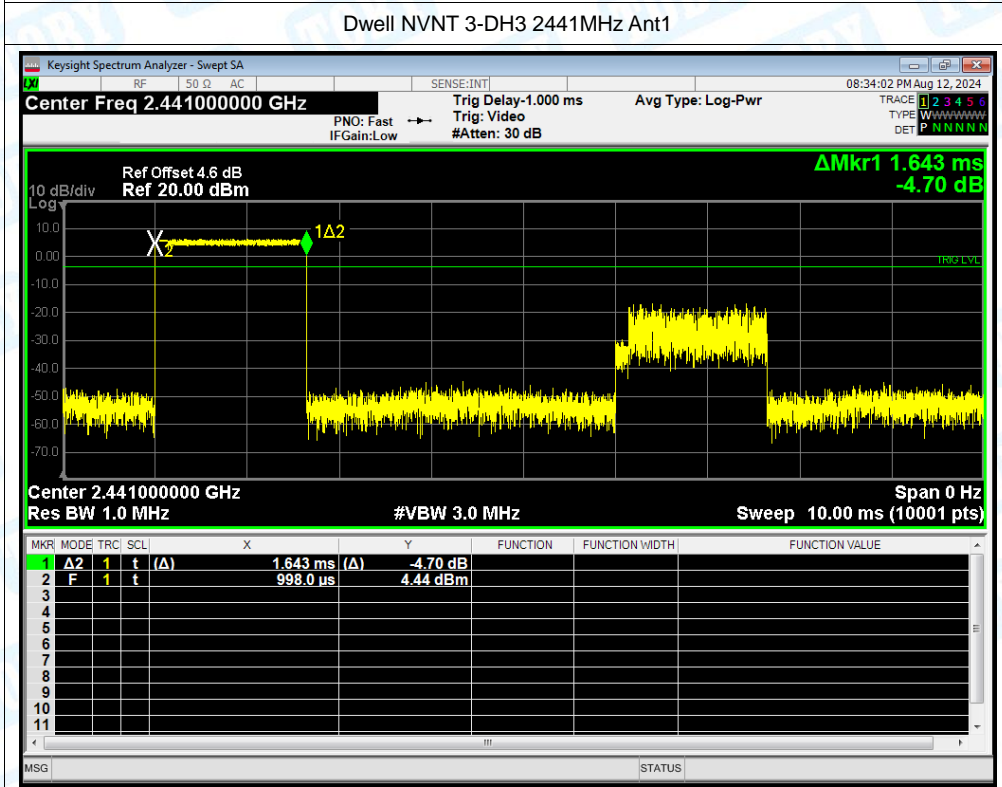
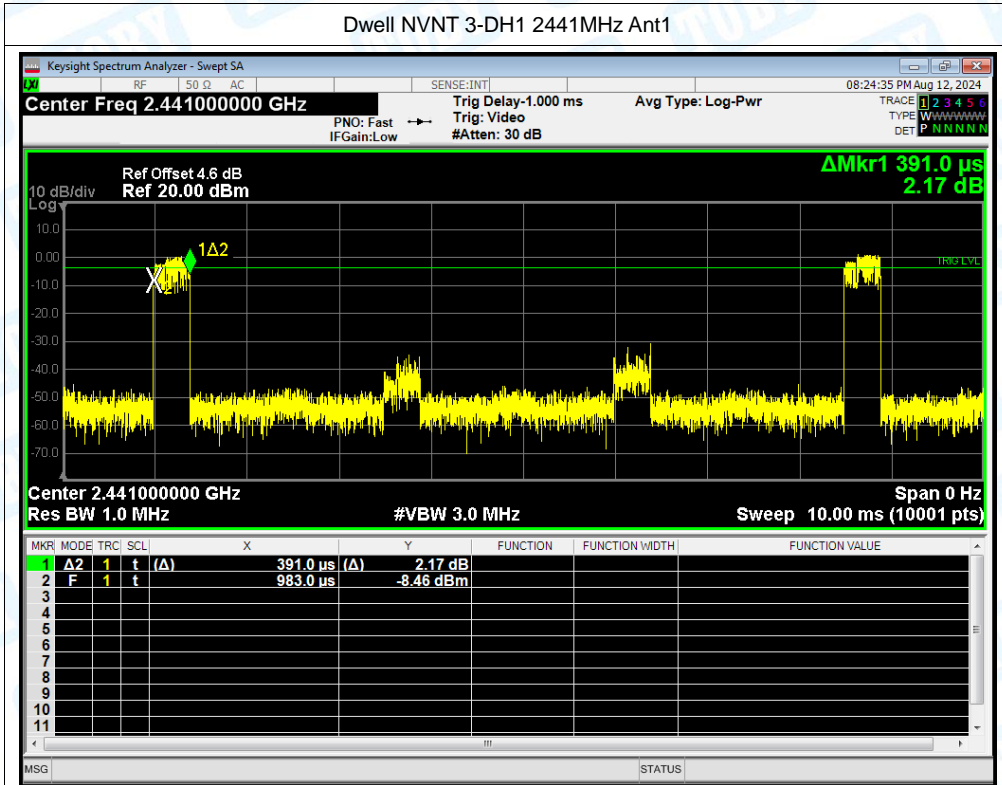


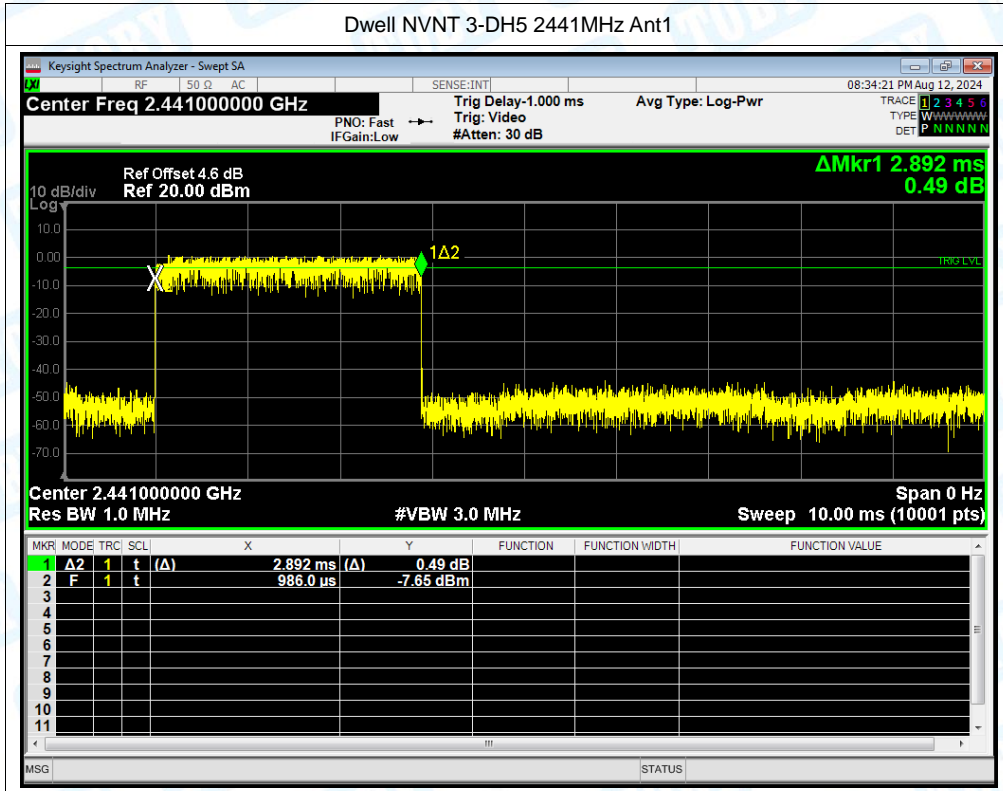
Dwell NVNT 1-DH3 2441MHz Ant1











---- END OF REPORT ----