

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	Smart Watch
Test Model:	KT88
Sample ID:	HC-C-202507-0186-01-01
Environmental Conditions	
Temperature:	23.5℃
Relative Humidity:	52.1%
Test Voltage:	DC 3.85V
Test Engineer:	Lily zhang
Note: For a more detailed features description, please refer to the report TBR-C-202507-0186-20 The report only show the worst case data.	

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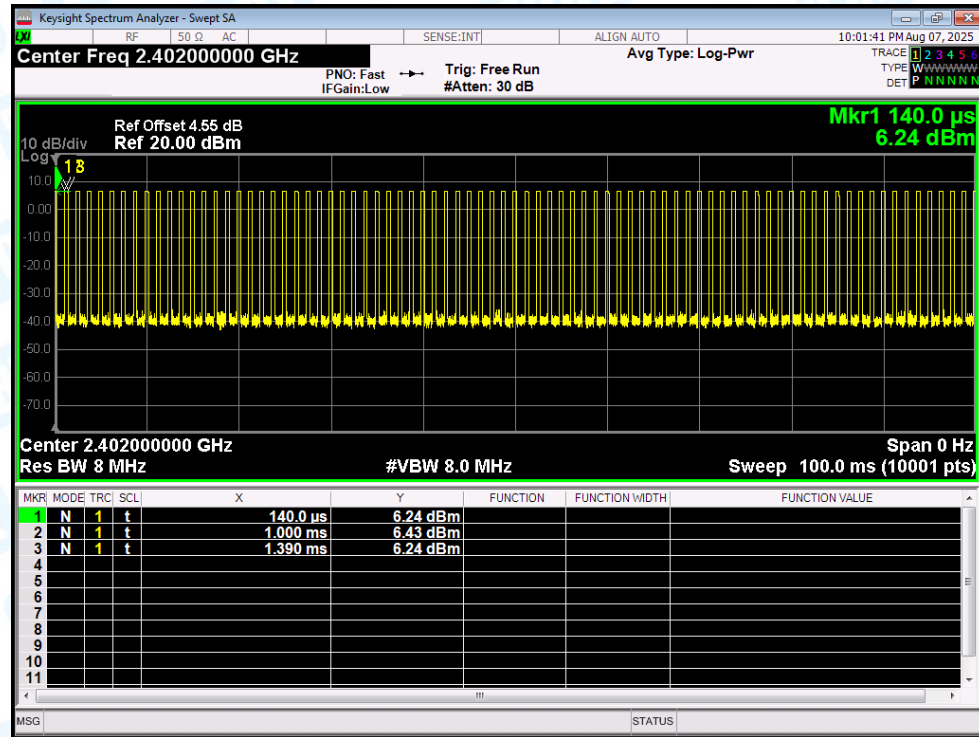
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1. Duty Cycle

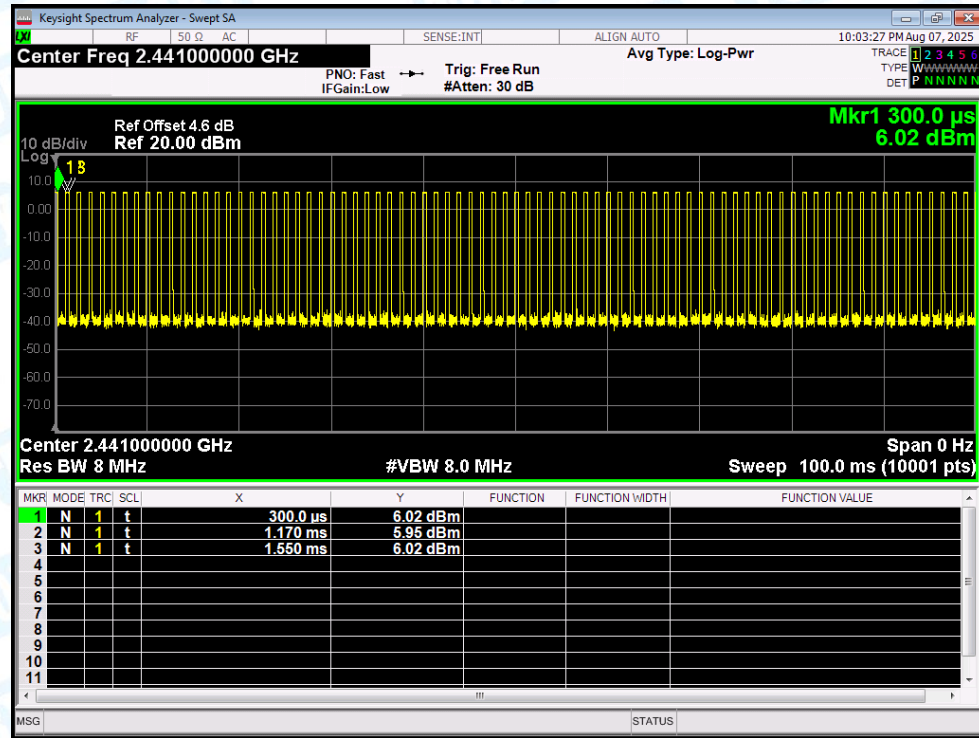
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	1-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2480	Ant1	30.4	5.17	2.63
NVNT	2-DH1	2402	Ant1	32	4.95	2.5
NVNT	2-DH1	2441	Ant1	32	4.95	2.5
NVNT	2-DH1	2480	Ant1	31.2	5.06	2.56
NVNT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

Test Graphs

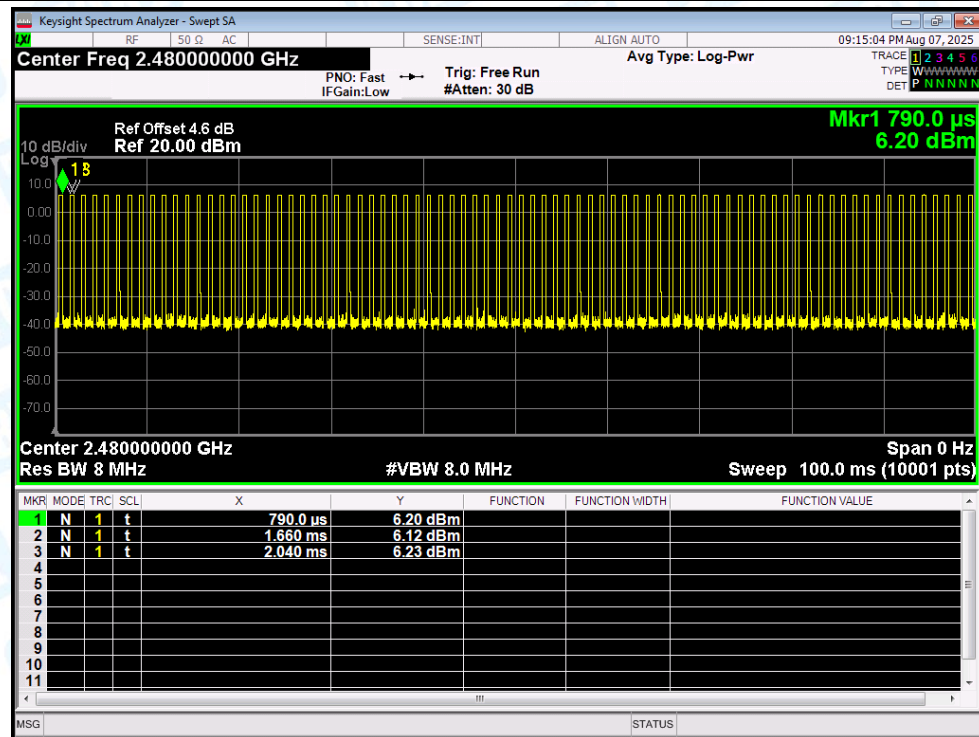
Duty Cycle NVNT 1-DH1 2402MHz Ant1



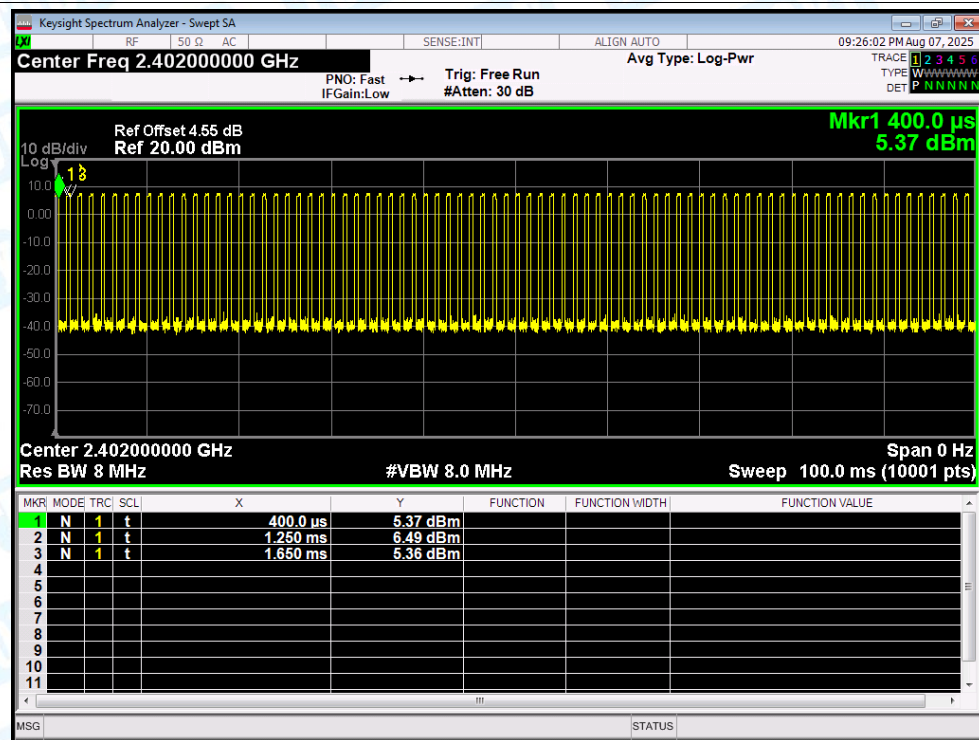
Duty Cycle NVNT 1-DH1 2441MHz Ant1



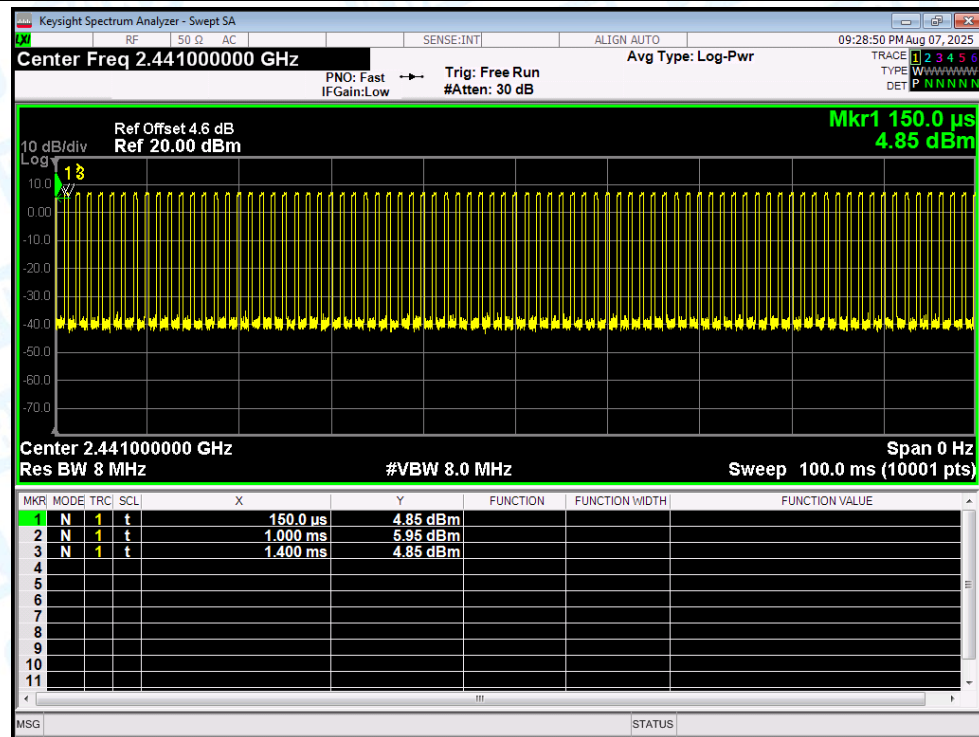
Duty Cycle NVNT 1-DH1 2480MHz Ant1



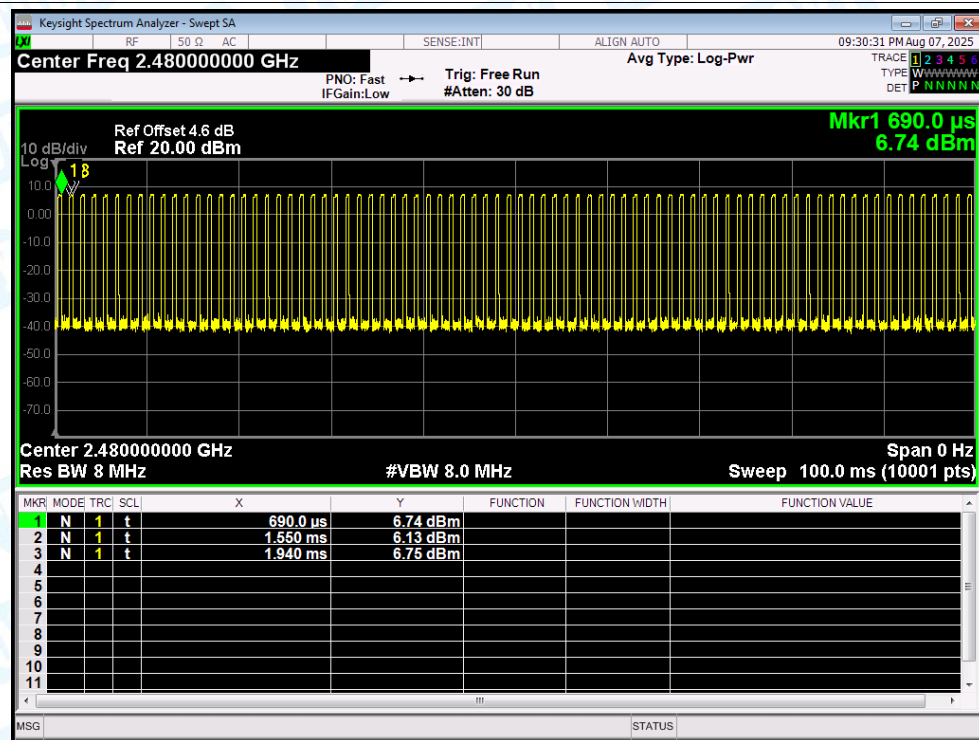
Duty Cycle NVNT 2-DH1 2402MHz Ant1



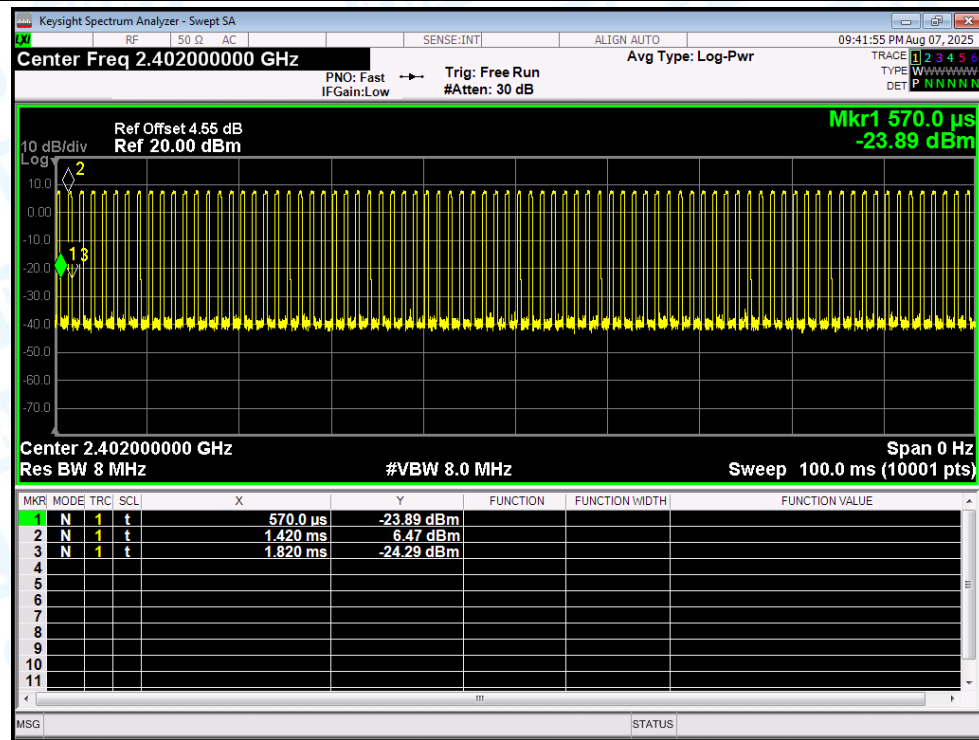
Duty Cycle NVNT 2-DH1 2441MHz Ant1



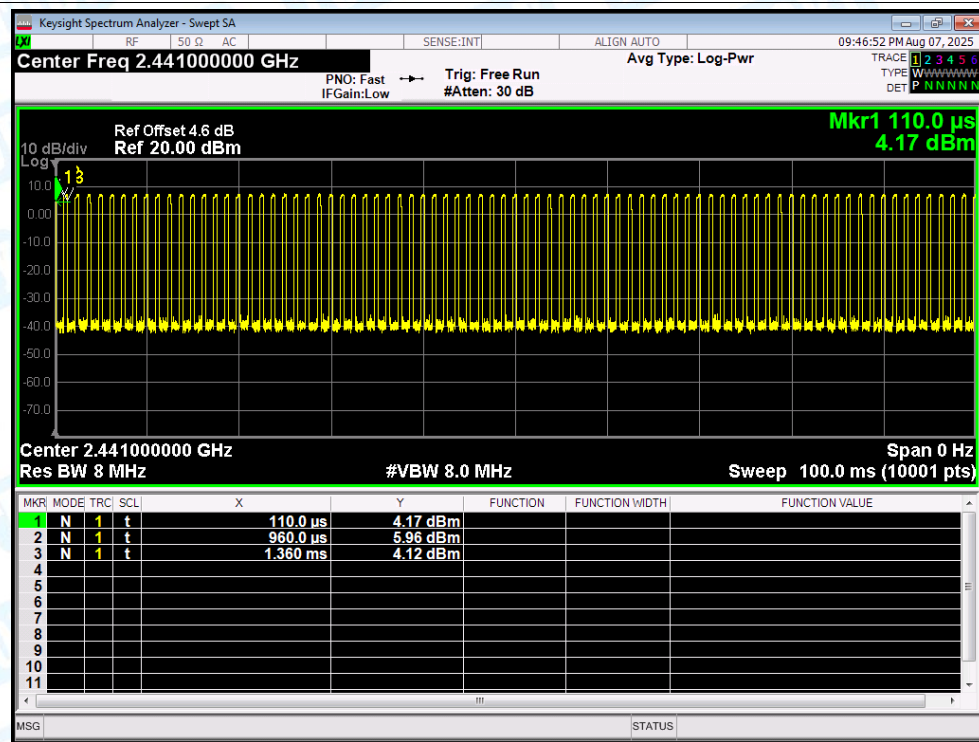
Duty Cycle NVNT 2-DH1 2480MHz Ant1

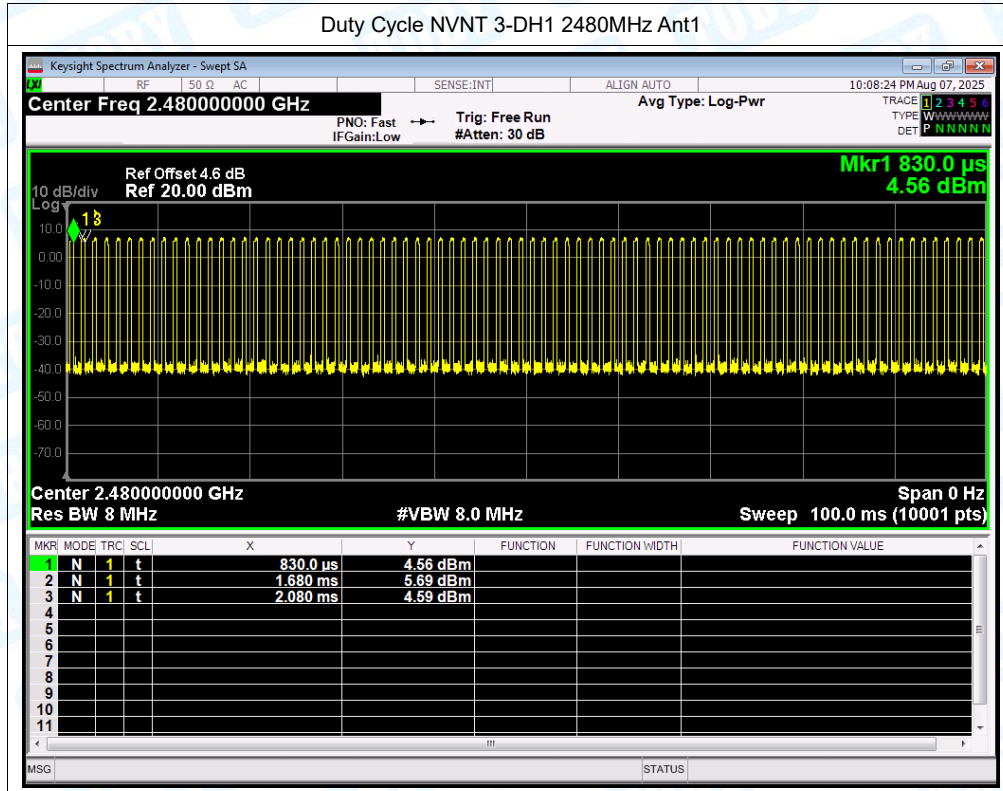


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



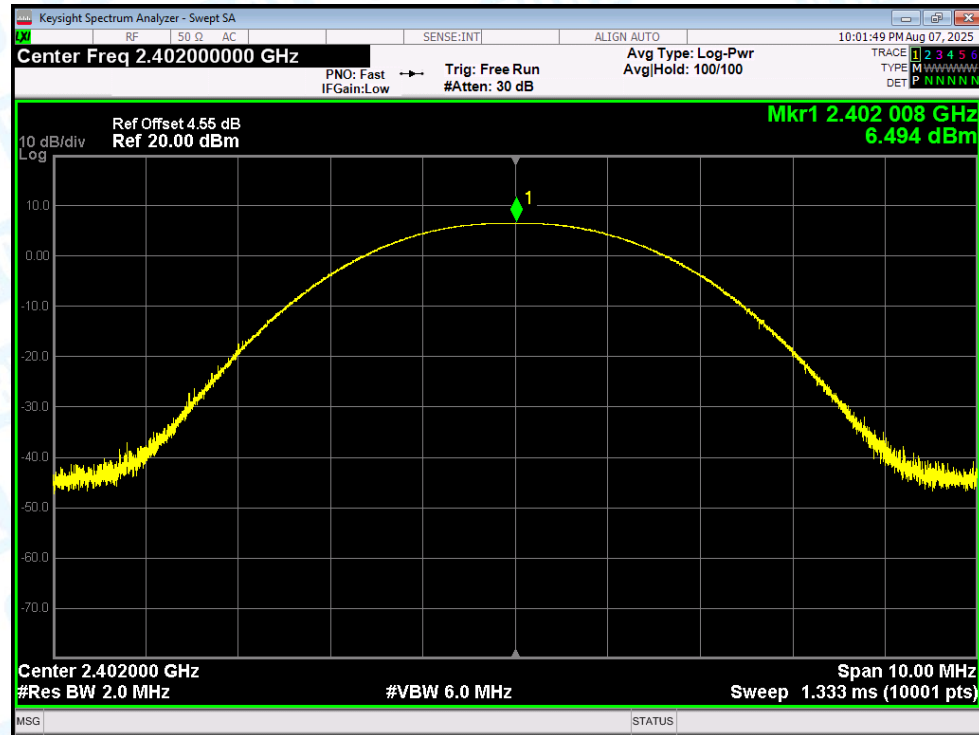


2. Maximum Conducted Output Power

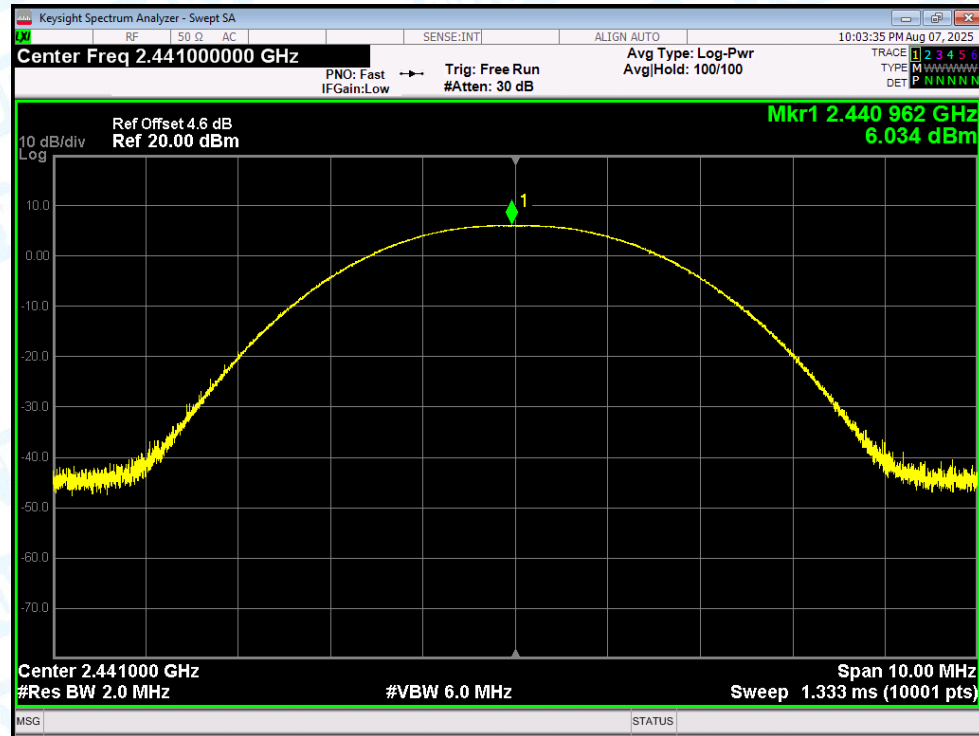
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	6.494	21	Pass
NVNT	1-DH1	2441	Ant1	6.034	21	Pass
NVNT	1-DH1	2480	Ant1	6.222	21	Pass
NVNT	2-DH1	2402	Ant1	7.165	21	Pass
NVNT	2-DH1	2441	Ant1	6.722	21	Pass
NVNT	2-DH1	2480	Ant1	6.927	21	Pass
NVNT	3-DH1	2402	Ant1	7.663	21	Pass
NVNT	3-DH1	2441	Ant1	6.826	21	Pass
NVNT	3-DH1	2480	Ant1	6.925	21	Pass

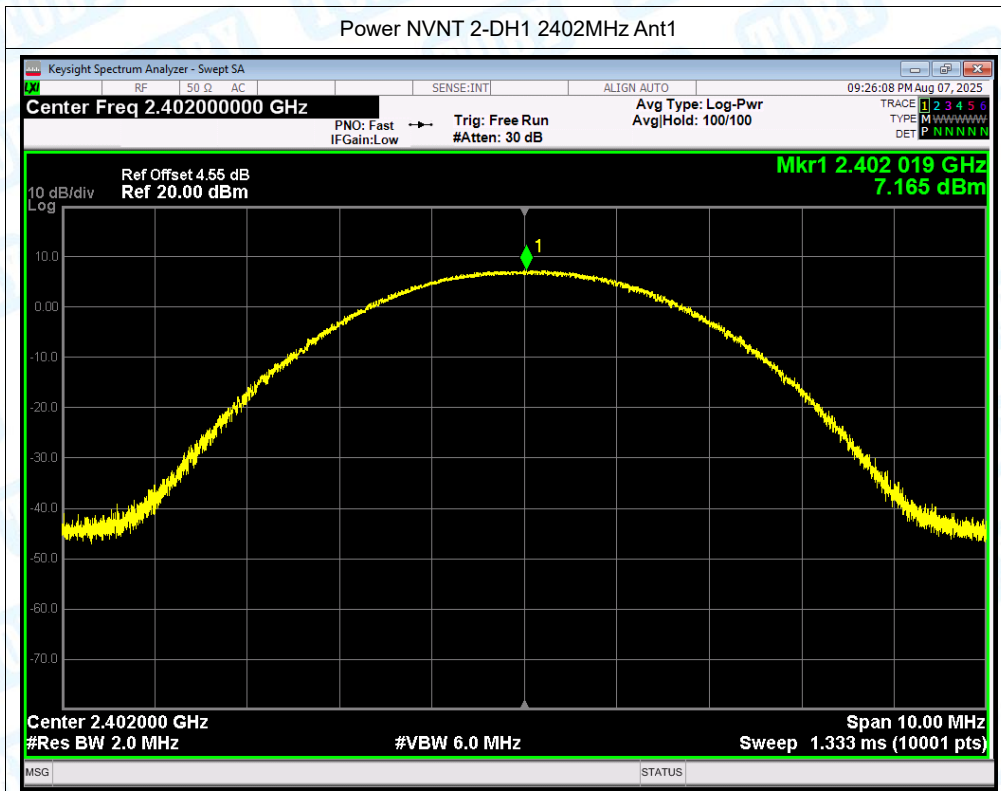
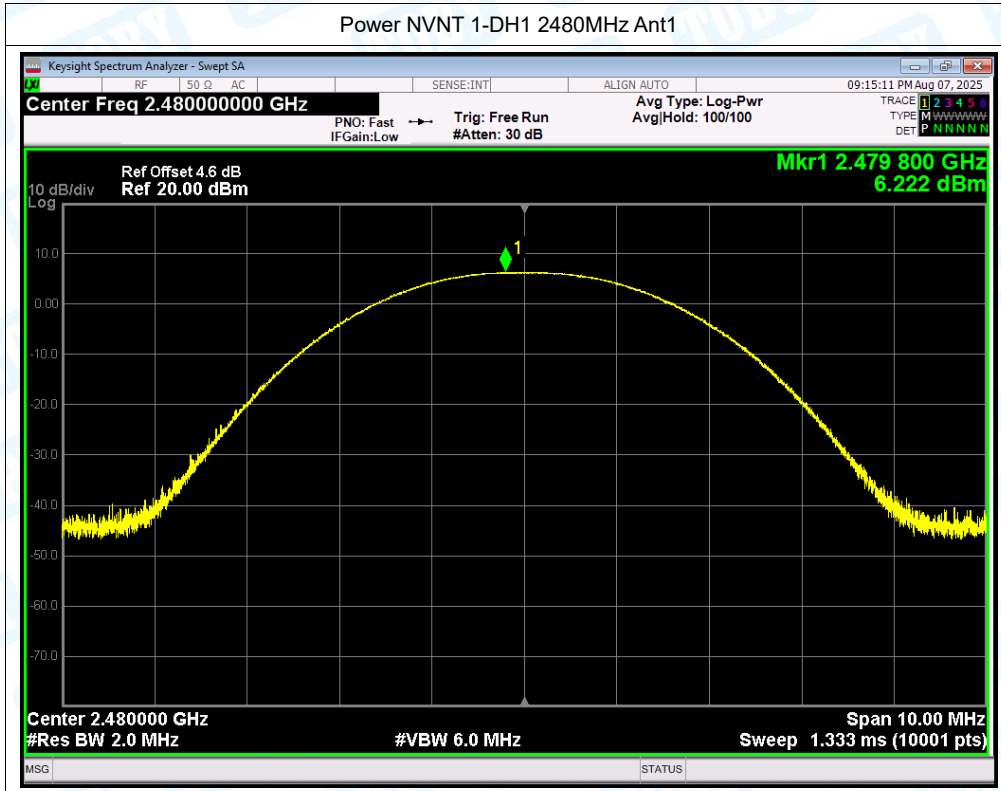
Test Graphs

Power NVNT 1-DH1 2402MHz Ant1

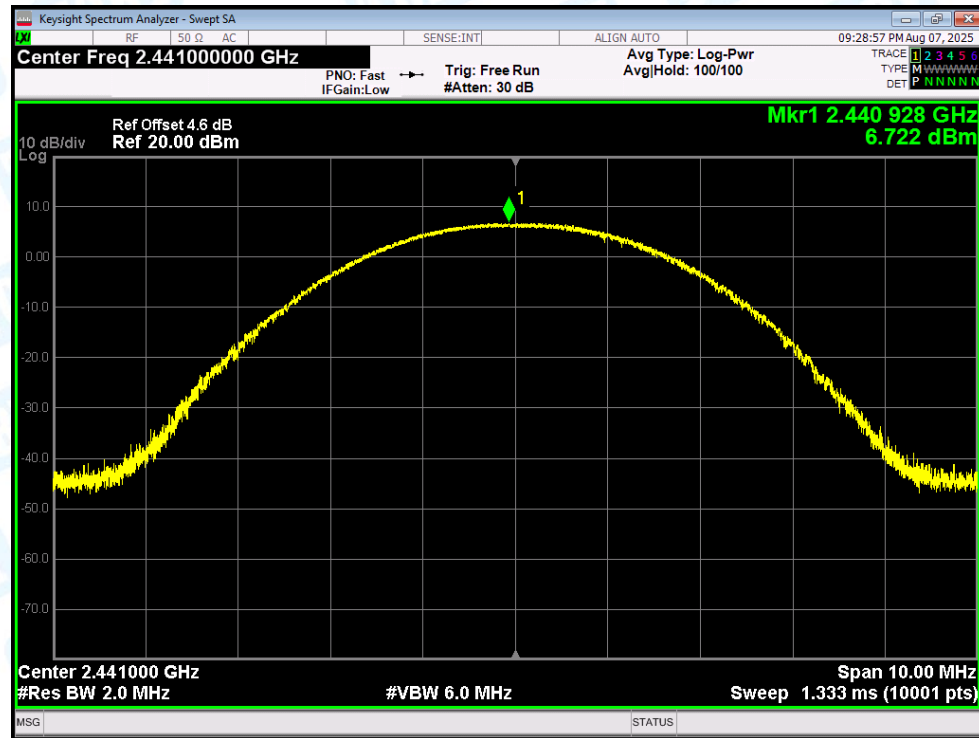


Power NVNT 1-DH1 2441MHz Ant1

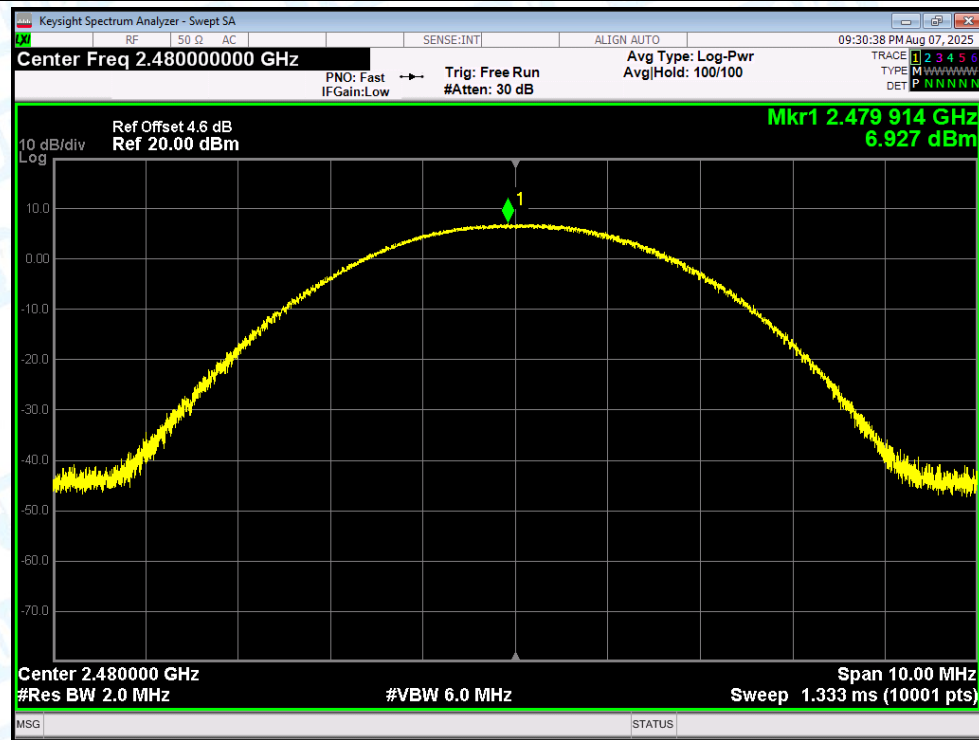




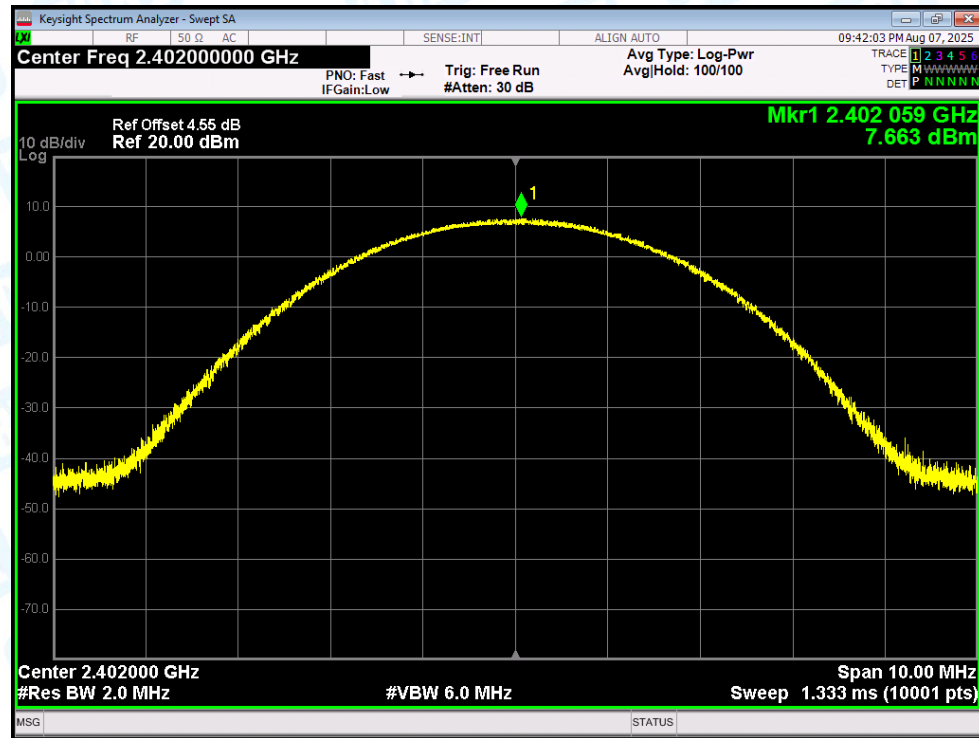
Power NVNT 2-DH1 2441MHz Ant1



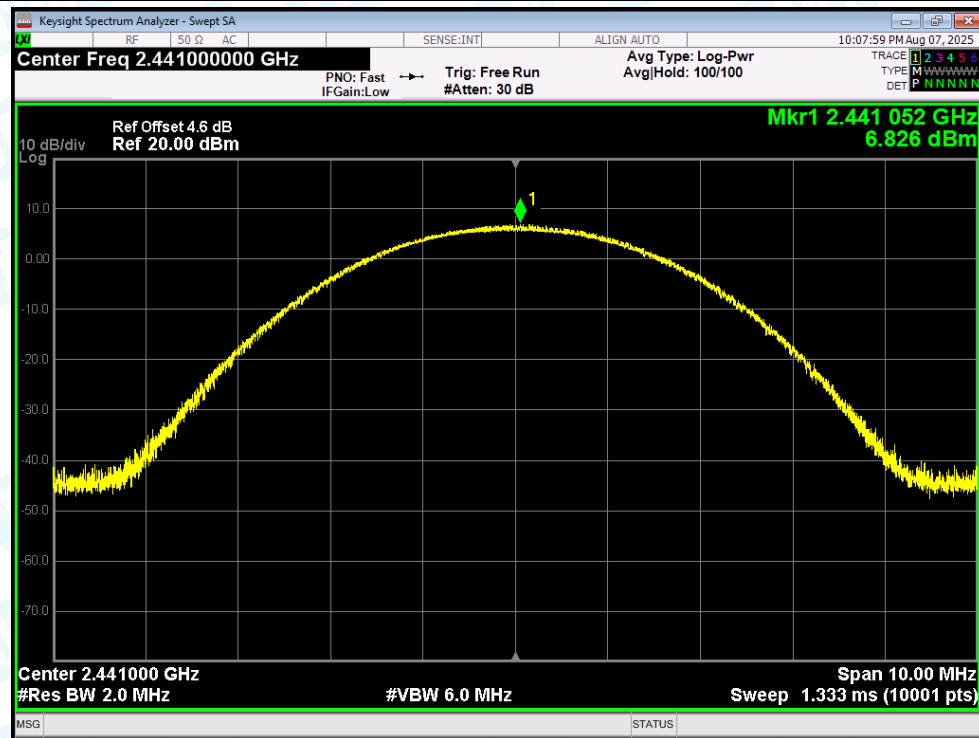
Power NVNT 2-DH1 2480MHz Ant1

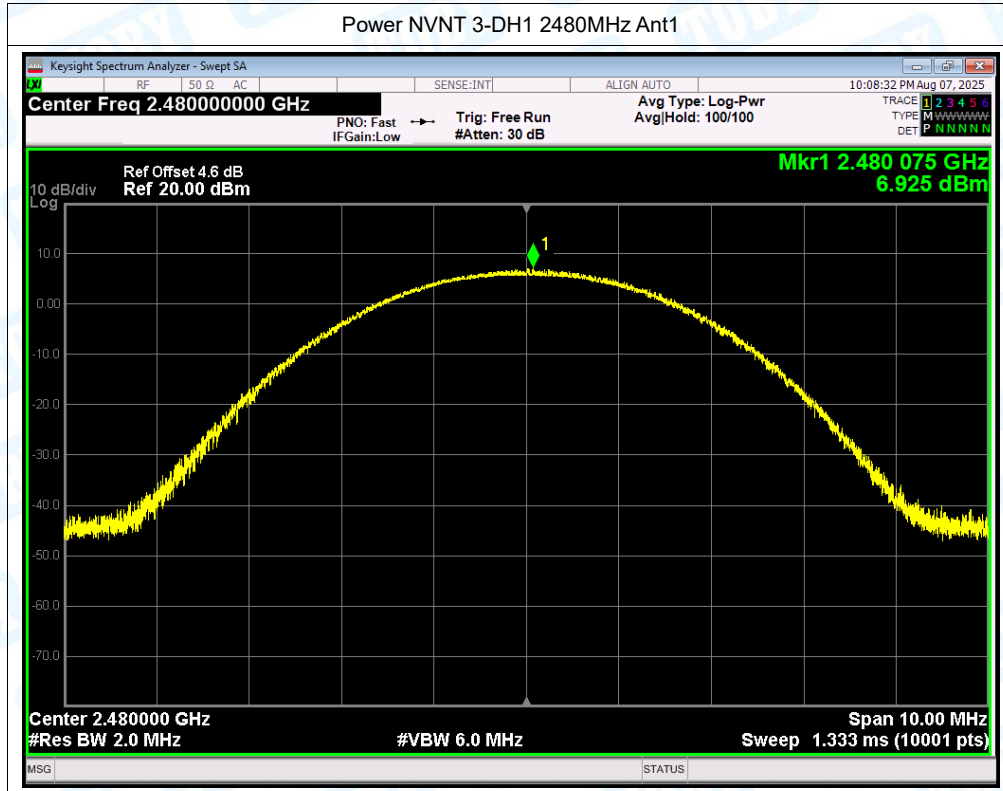


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



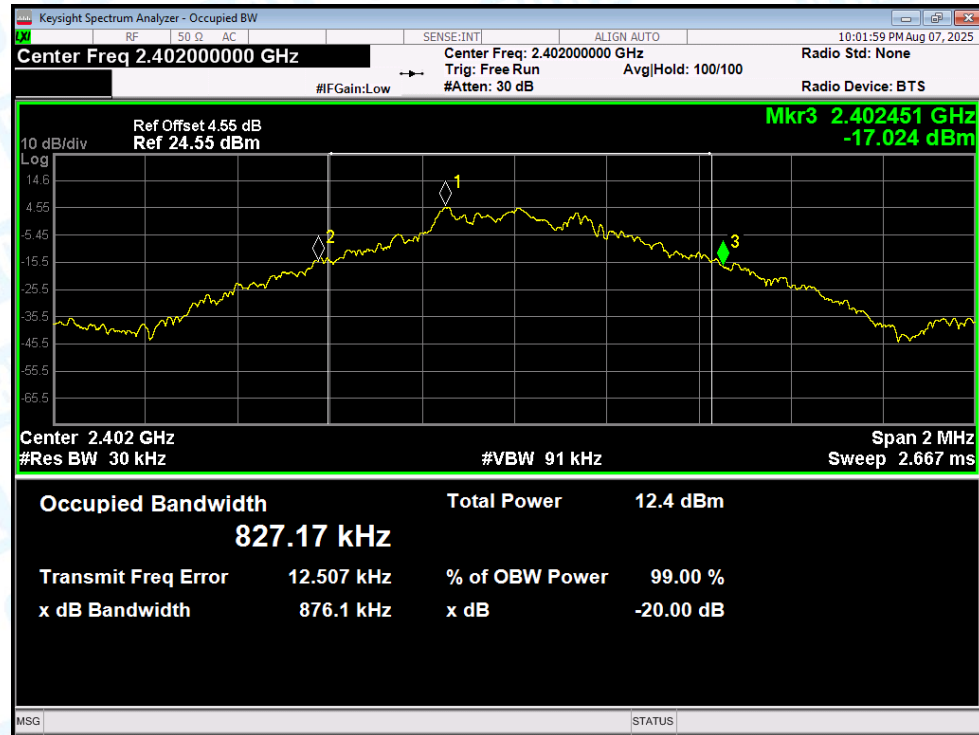


3. -20dB Bandwidth

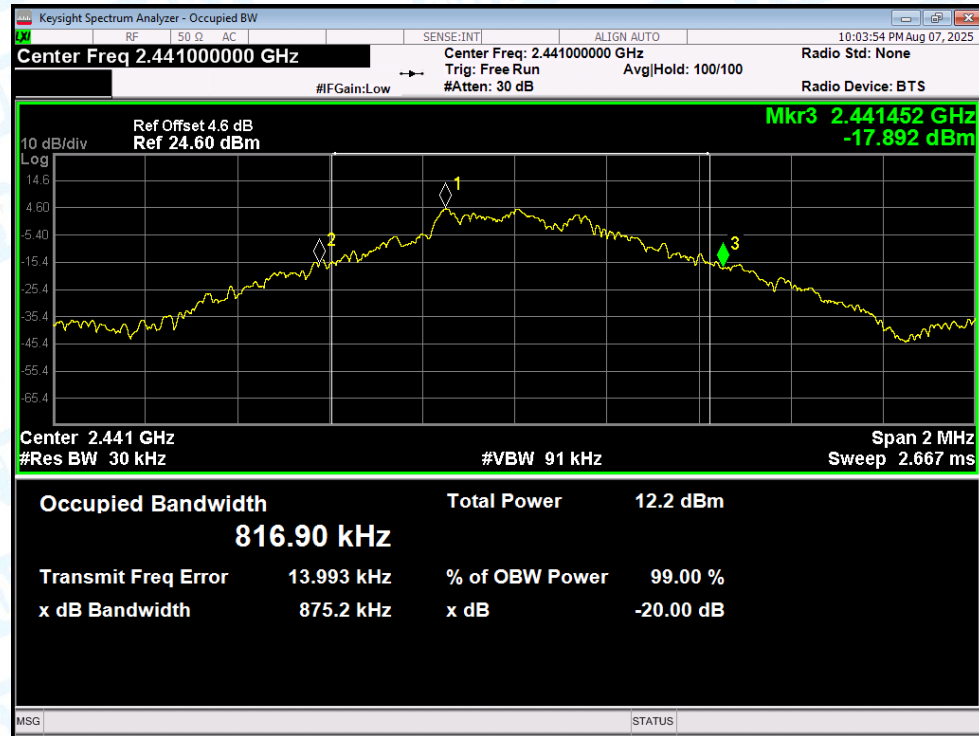
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.88	/	Pass
NVNT	1-DH1	2441	Ant1	0.88	/	Pass
NVNT	1-DH1	2480	Ant1	0.88	/	Pass
NVNT	2-DH1	2402	Ant1	1.2	/	Pass
NVNT	2-DH1	2441	Ant1	1.24	/	Pass
NVNT	2-DH1	2480	Ant1	1.22	/	Pass
NVNT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

Test Graphs

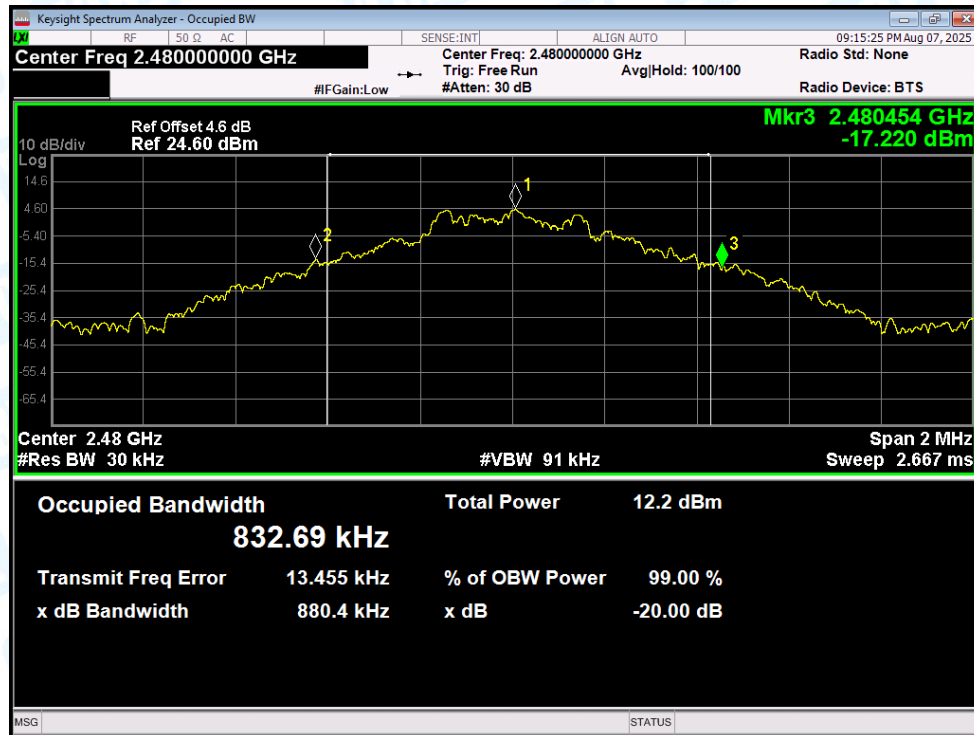
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



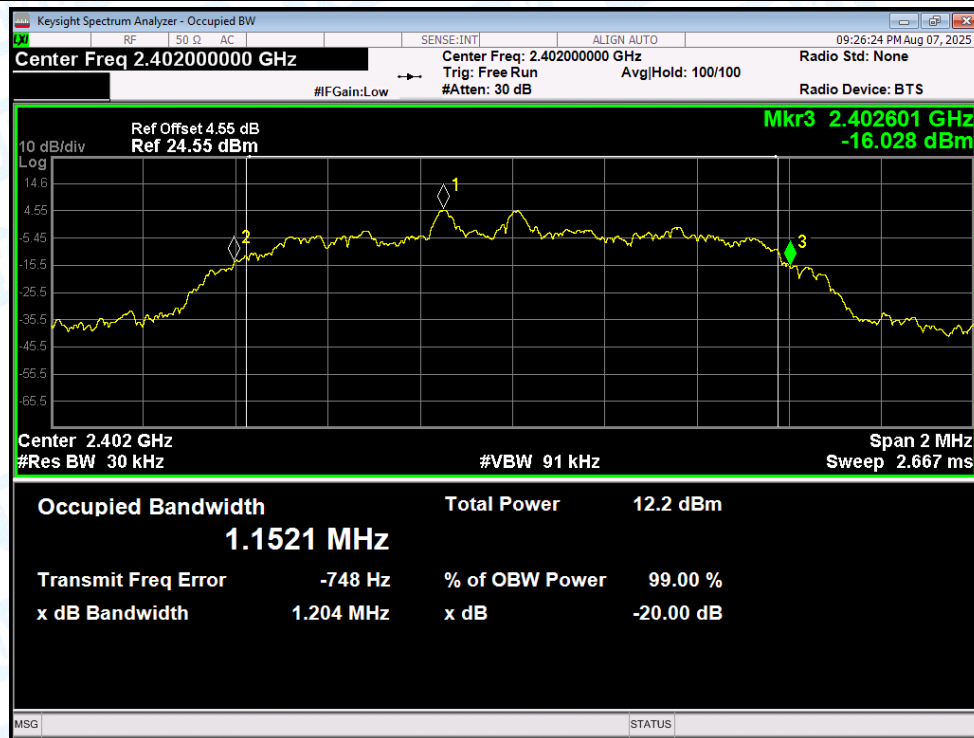
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



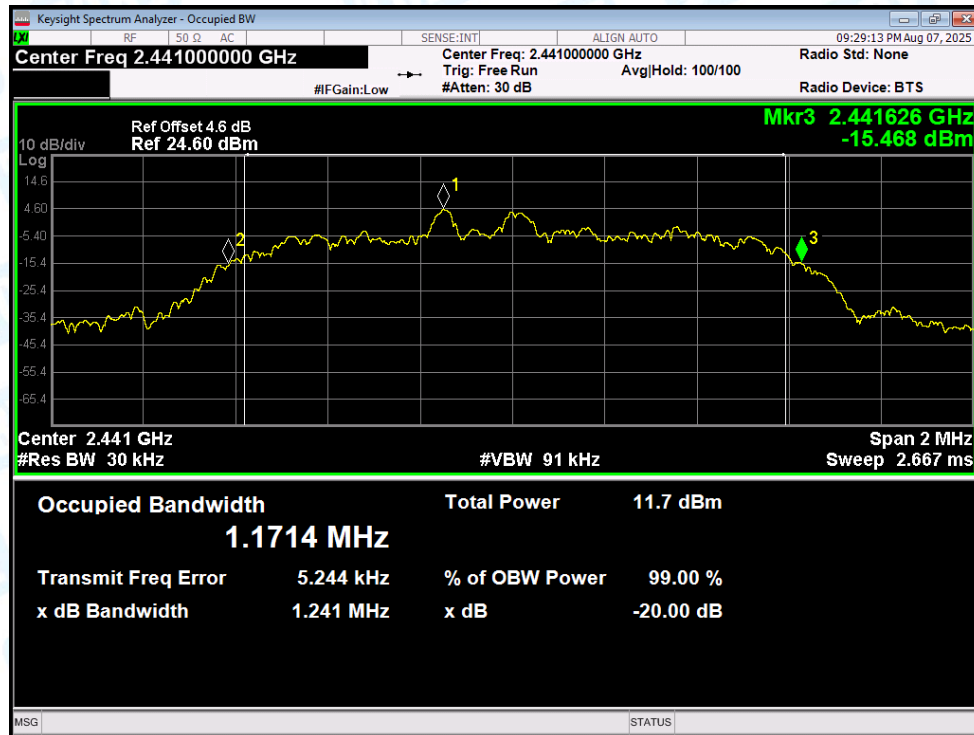
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



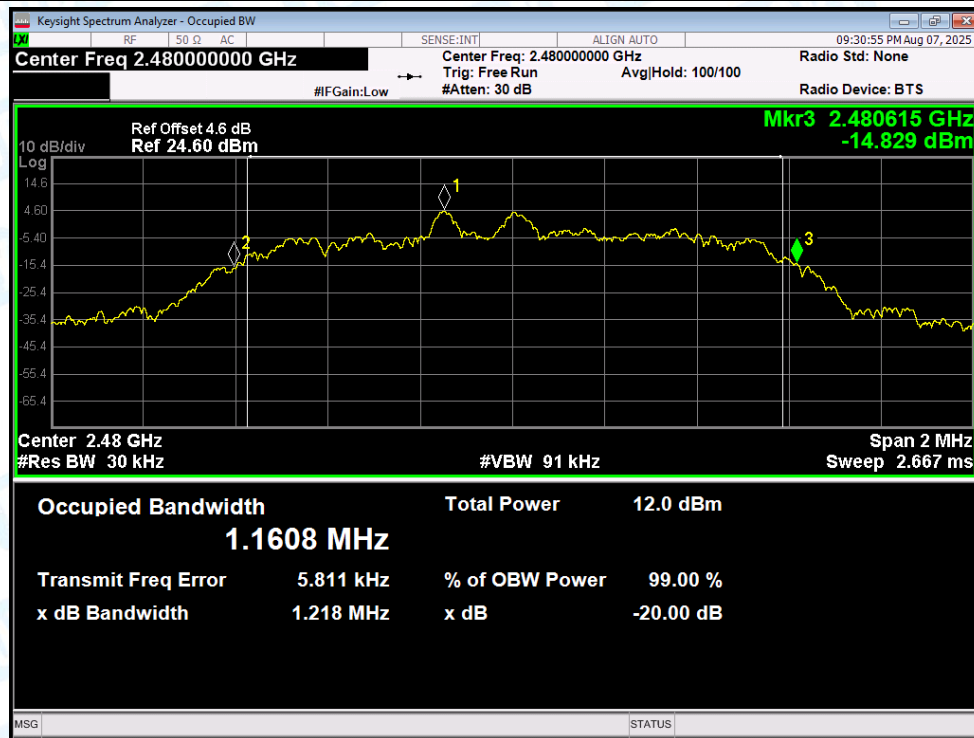
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



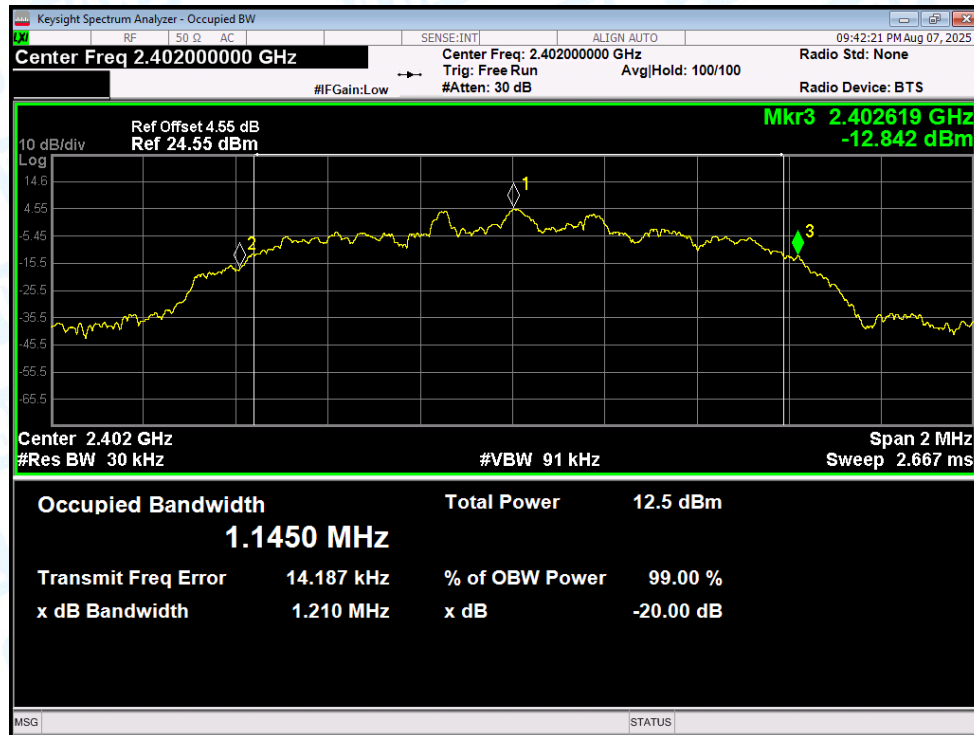
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



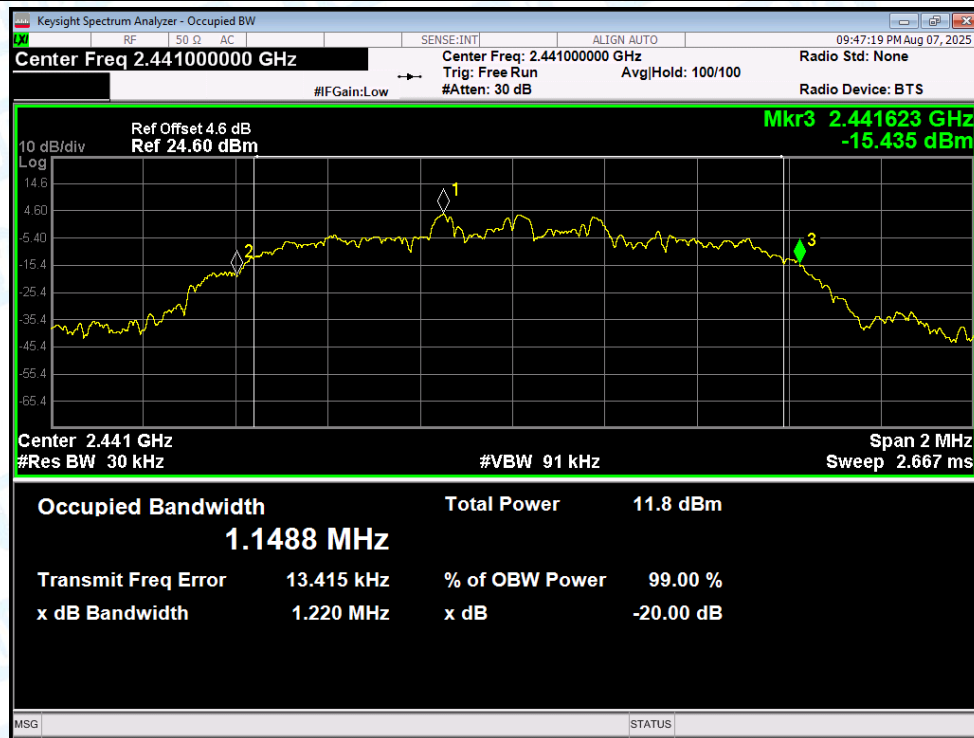
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

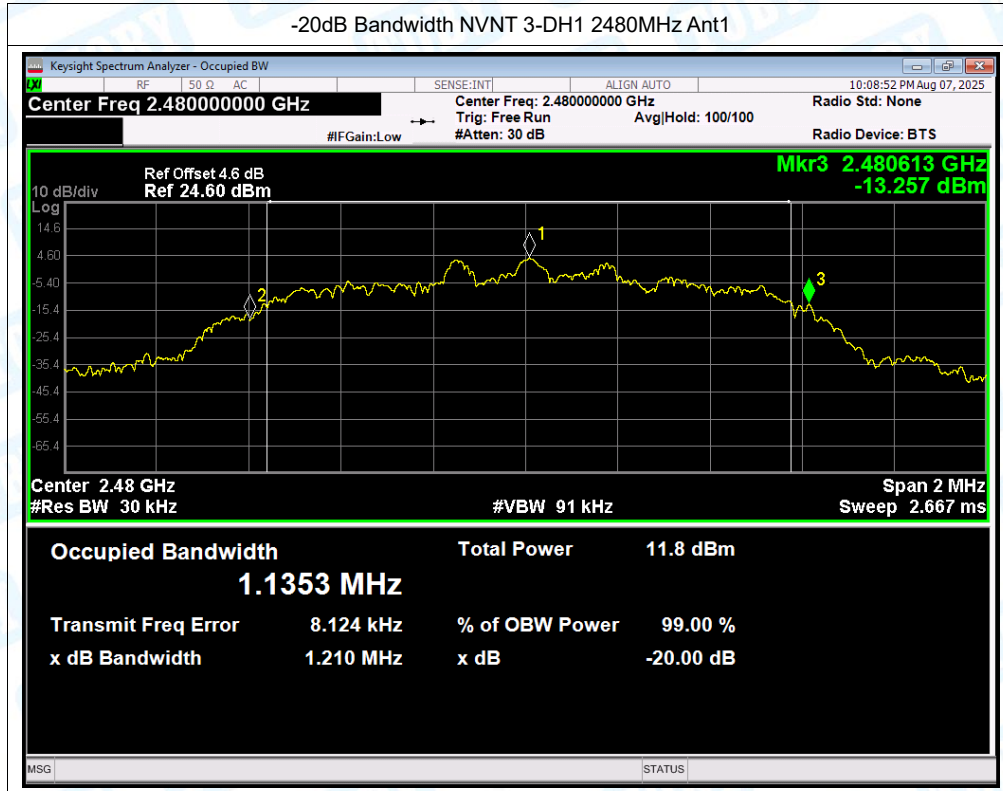


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



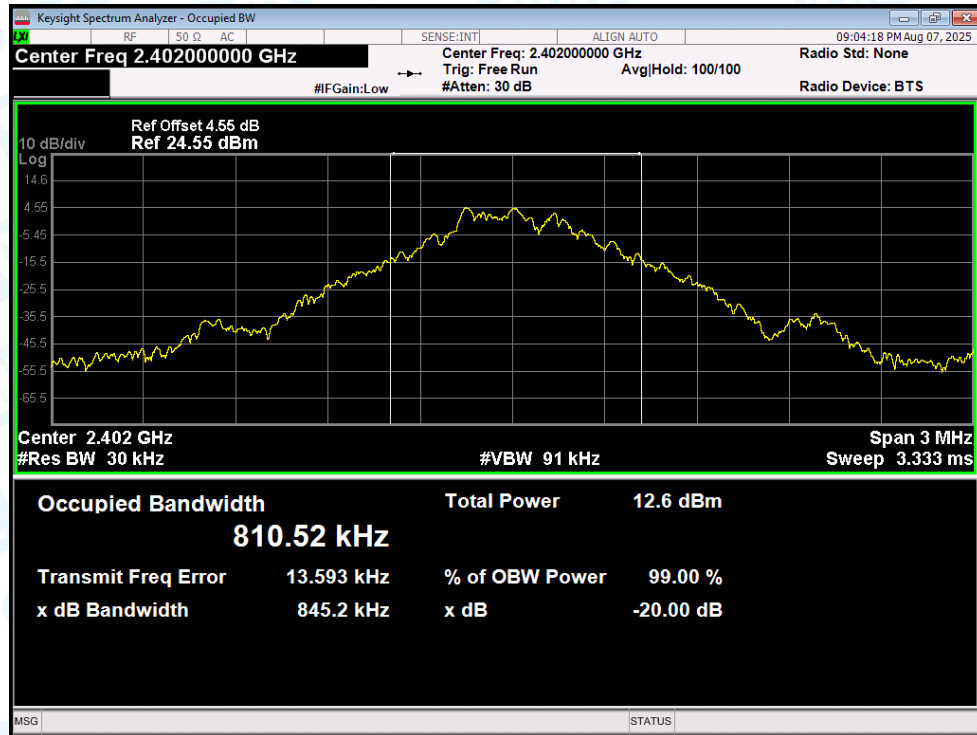


4. Occupied Channel Bandwidth

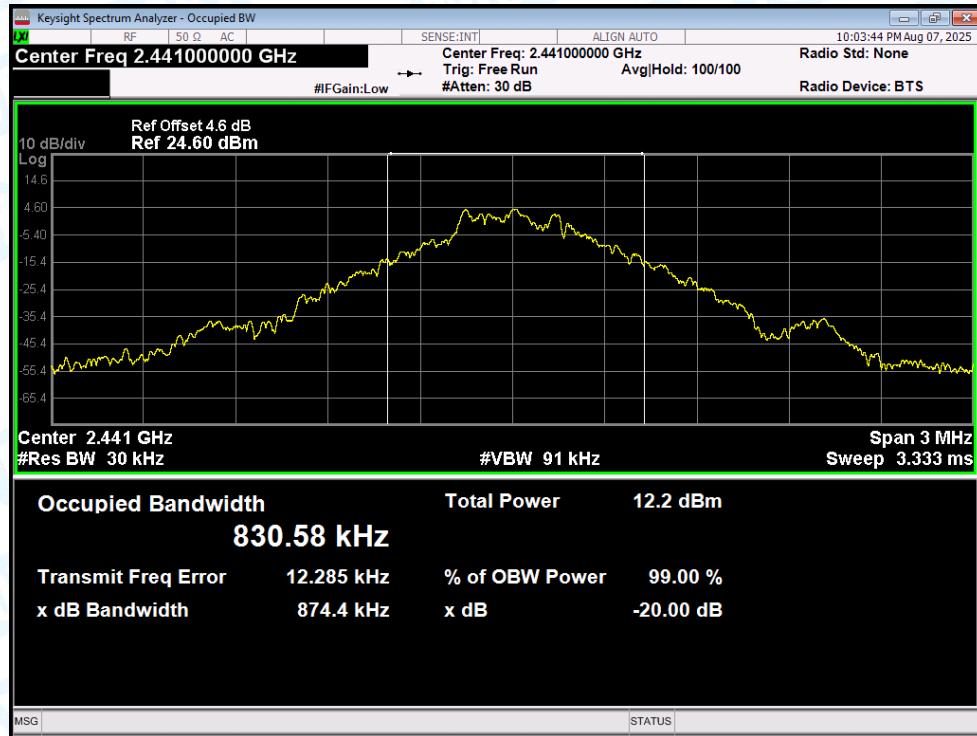
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.811
NVNT	1-DH1	2441	Ant1	0.831
NVNT	1-DH1	2480	Ant1	0.826
NVNT	2-DH1	2402	Ant1	1.162
NVNT	2-DH1	2441	Ant1	1.179
NVNT	2-DH1	2480	Ant1	1.183
NVNT	3-DH1	2402	Ant1	1.148
NVNT	3-DH1	2441	Ant1	1.141
NVNT	3-DH1	2480	Ant1	1.146

Test Graphs

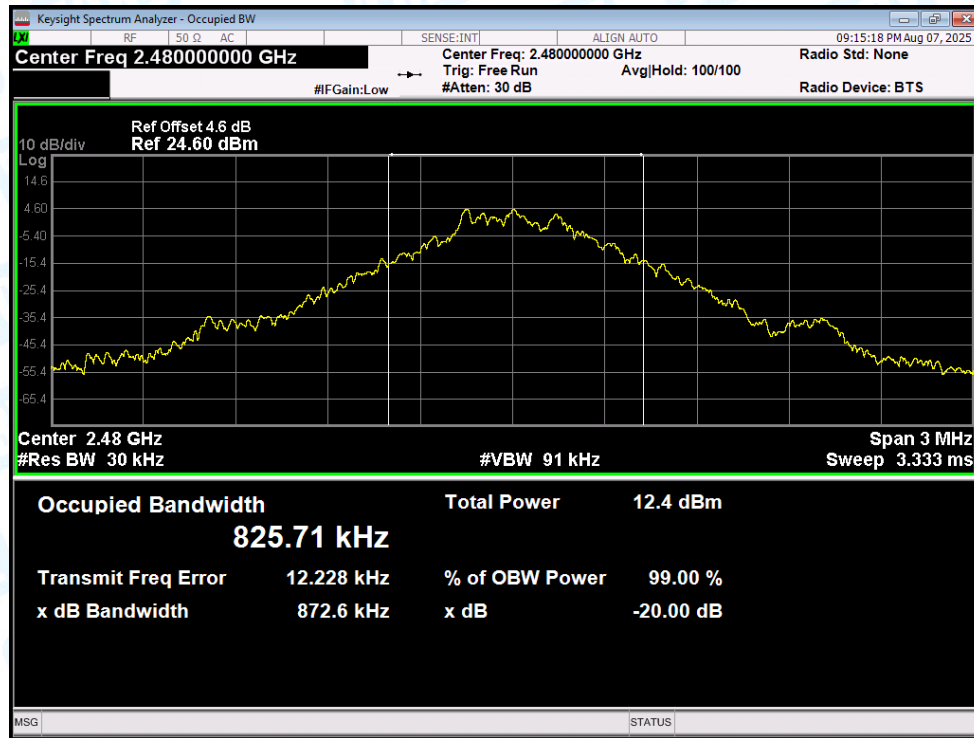
OBW NVNT 1-DH1 2402MHz Ant1



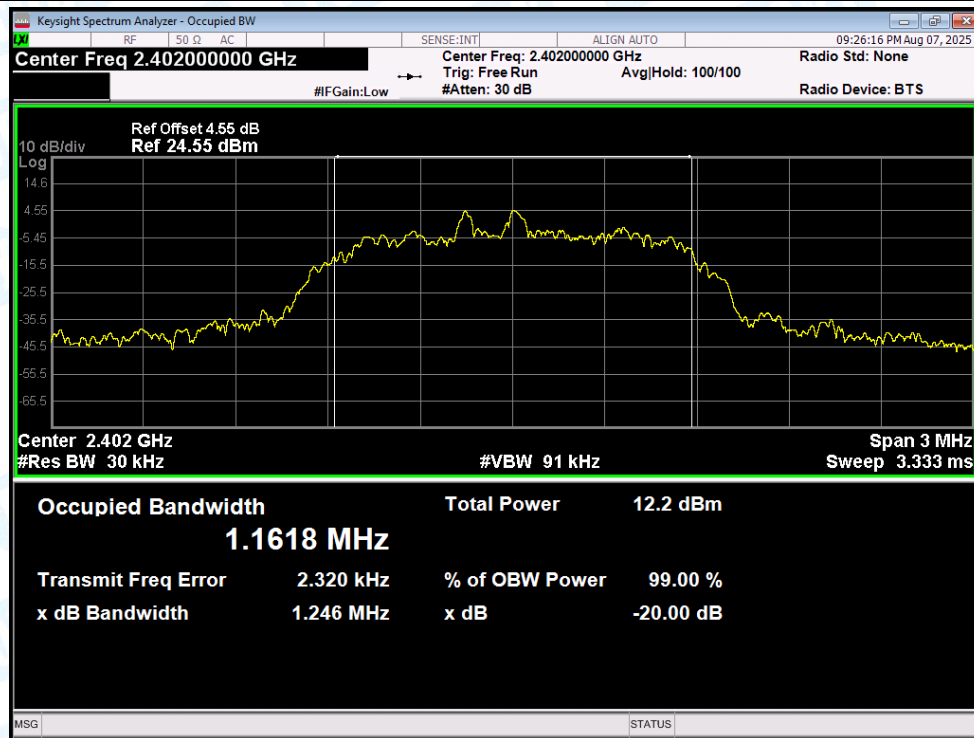
OBW NVNT 1-DH1 2441MHz Ant1



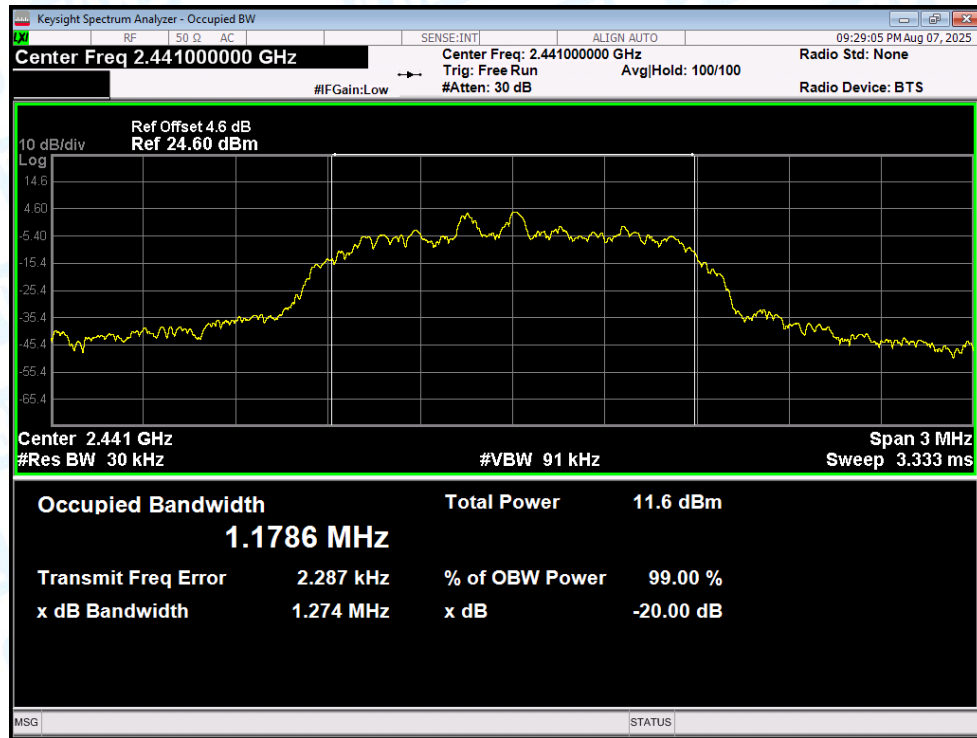
OBW NVNT 1-DH1 2480MHz Ant1



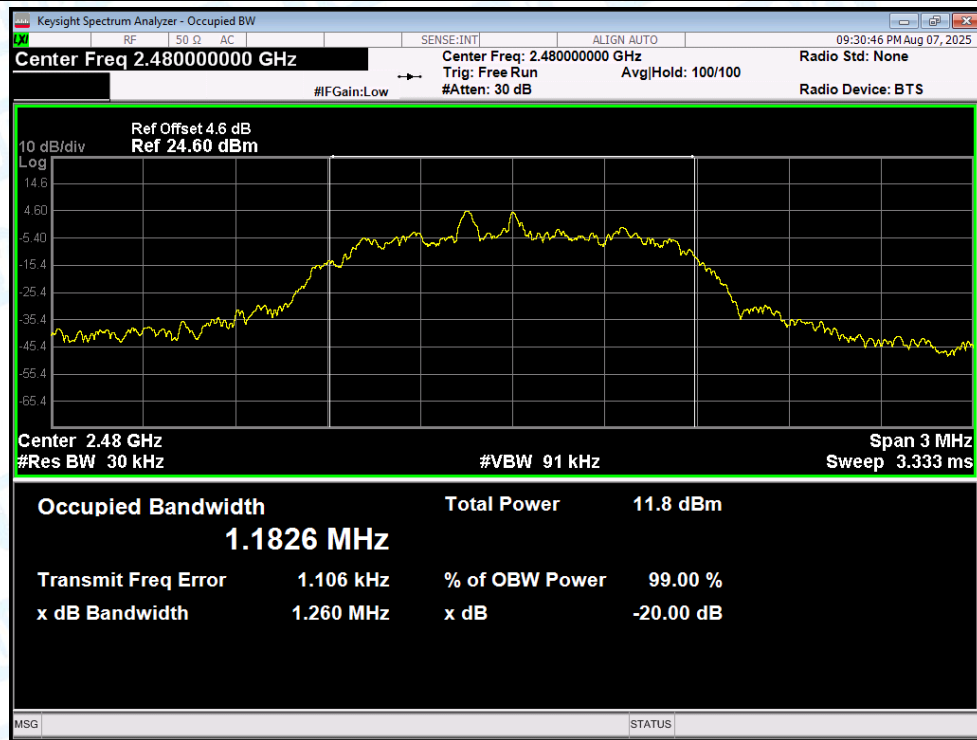
OBW NVNT 2-DH1 2402MHz Ant1



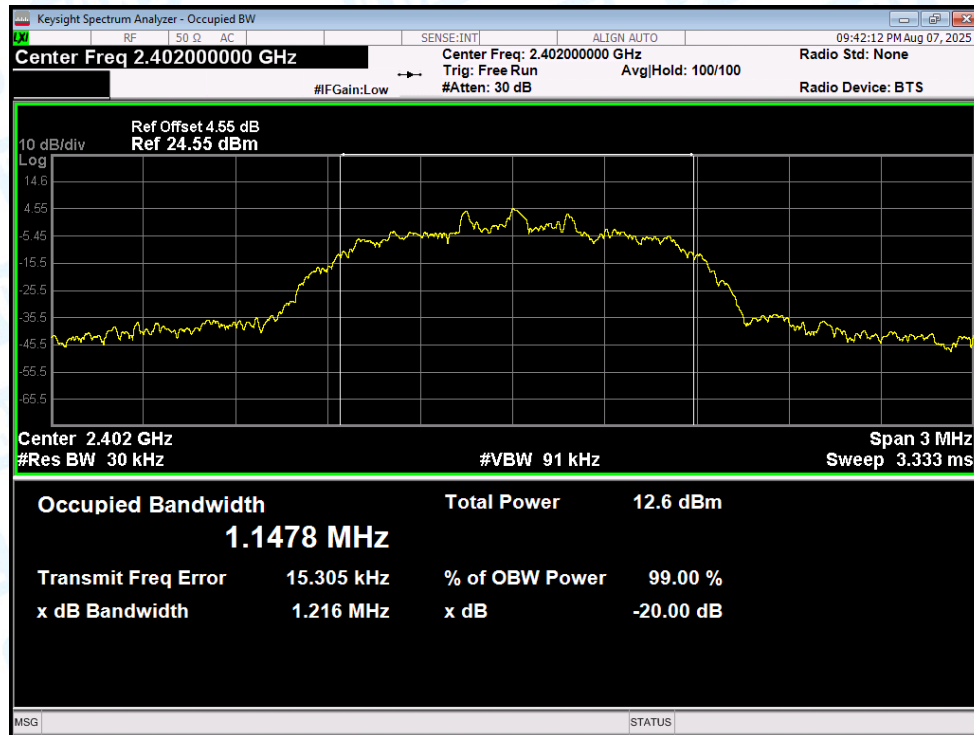
OBW NVNT 2-DH1 2441MHz Ant1



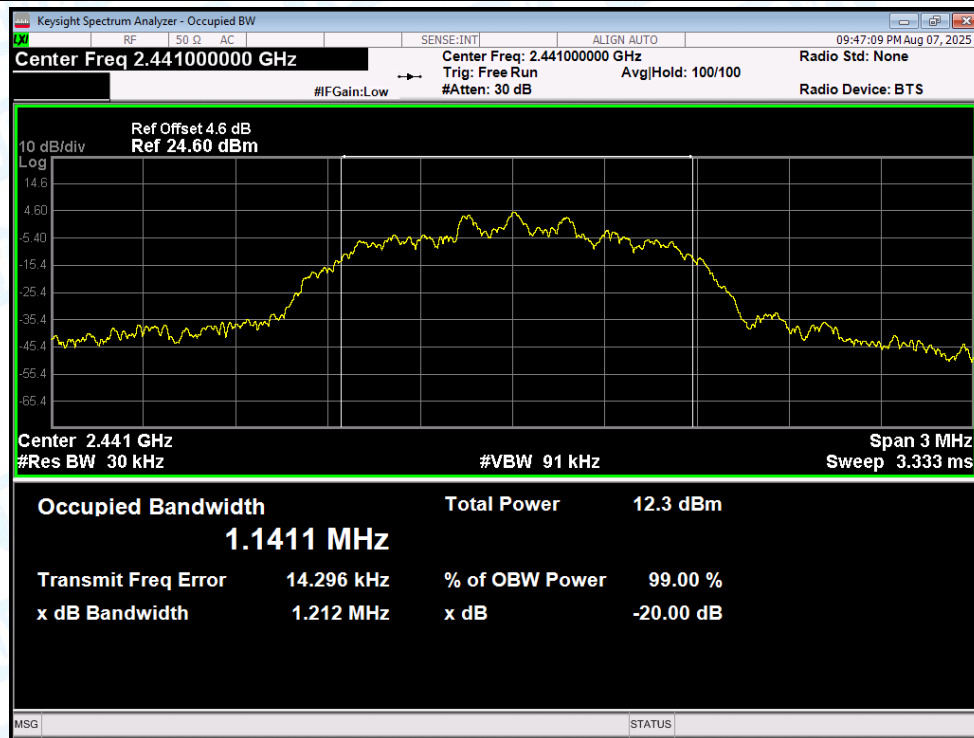
OBW NVNT 2-DH1 2480MHz Ant1

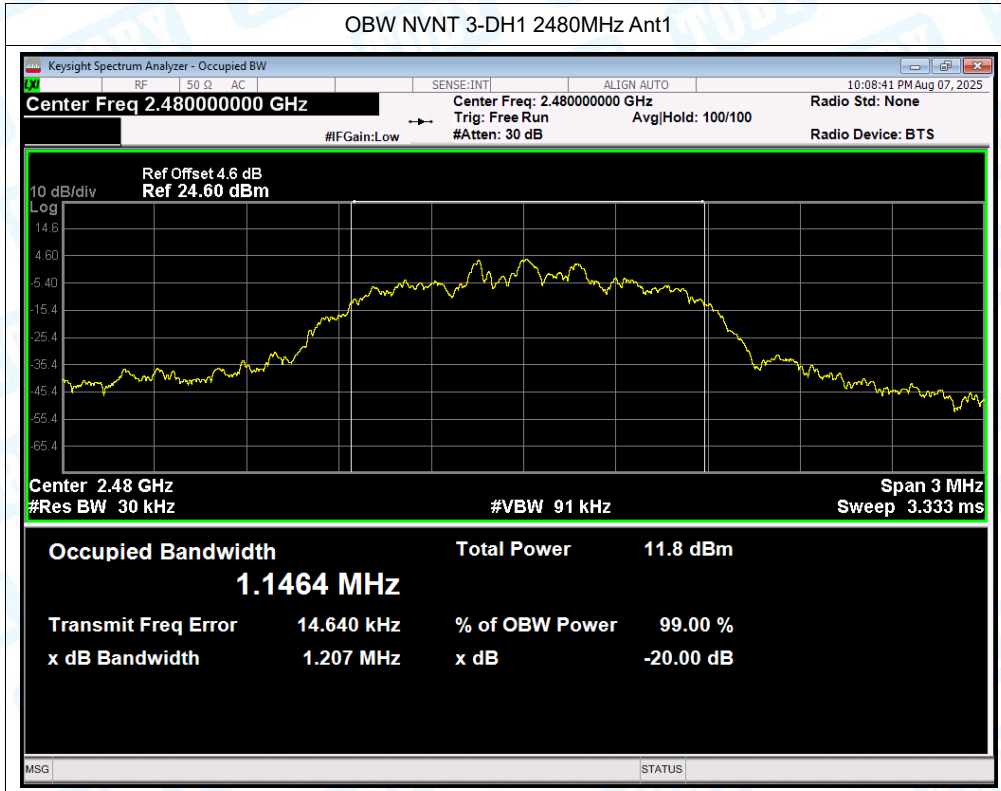


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1





5. Band Edge

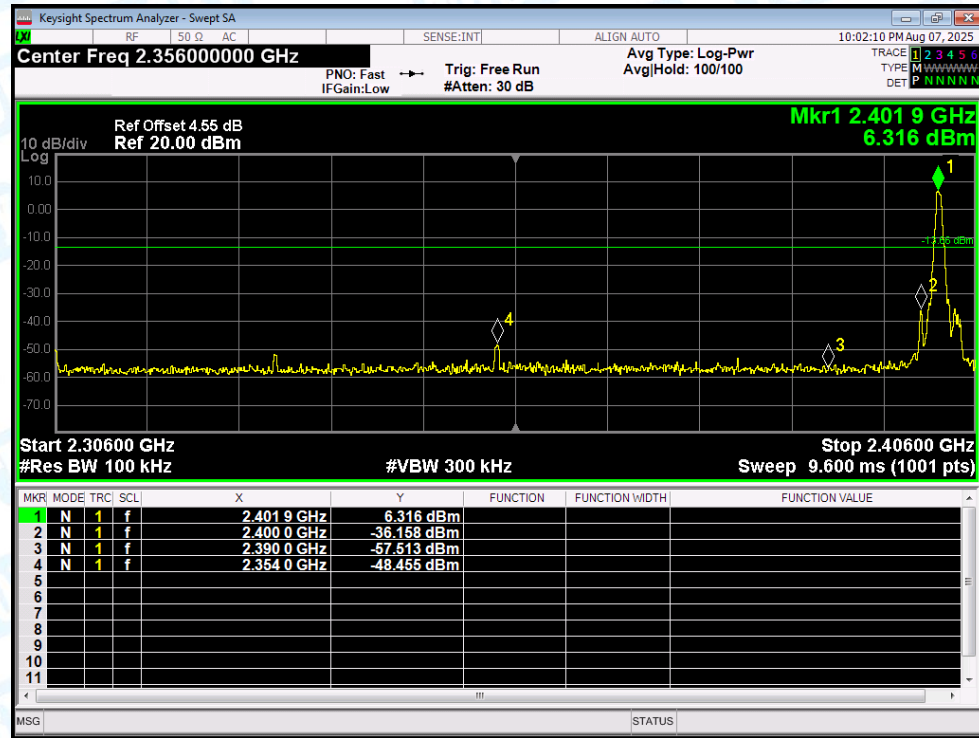
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-54.79	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-59.69	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-53.46	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-59.79	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-54.23	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-58.76	-20	Pass

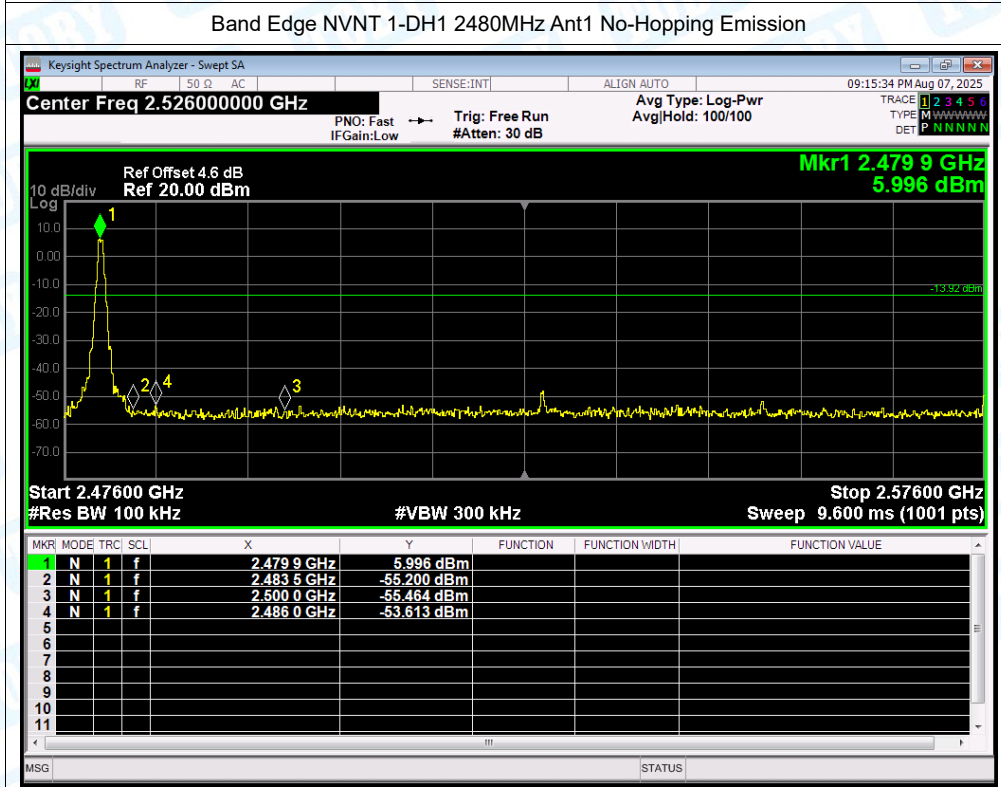
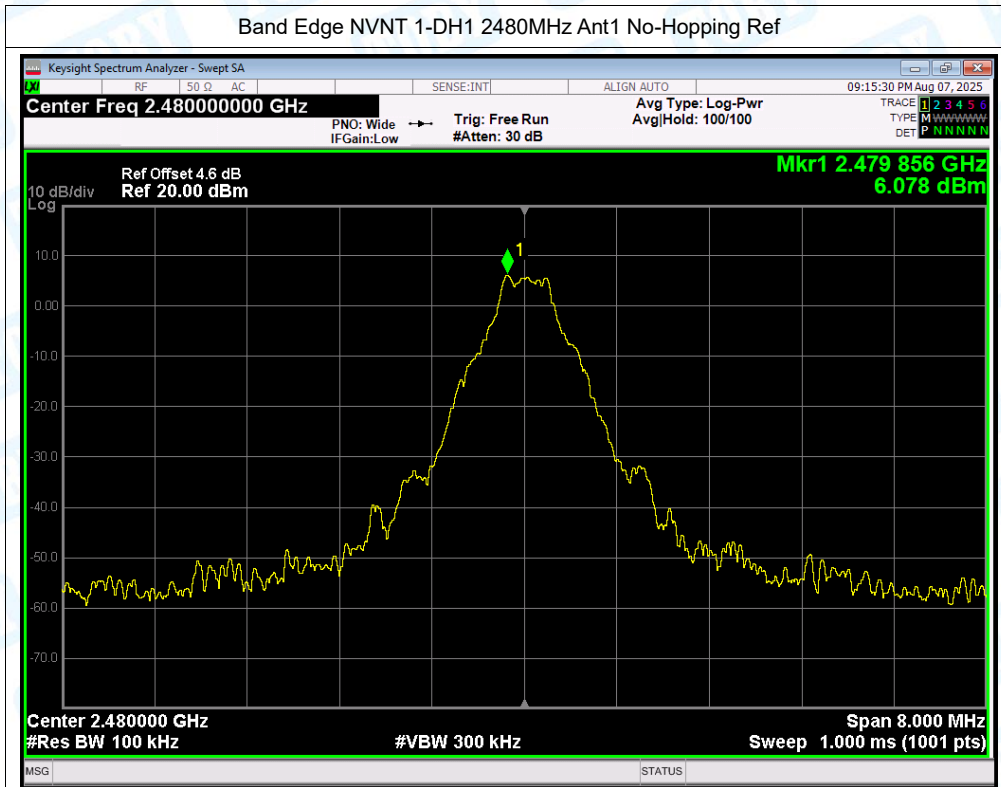
Test Graphs

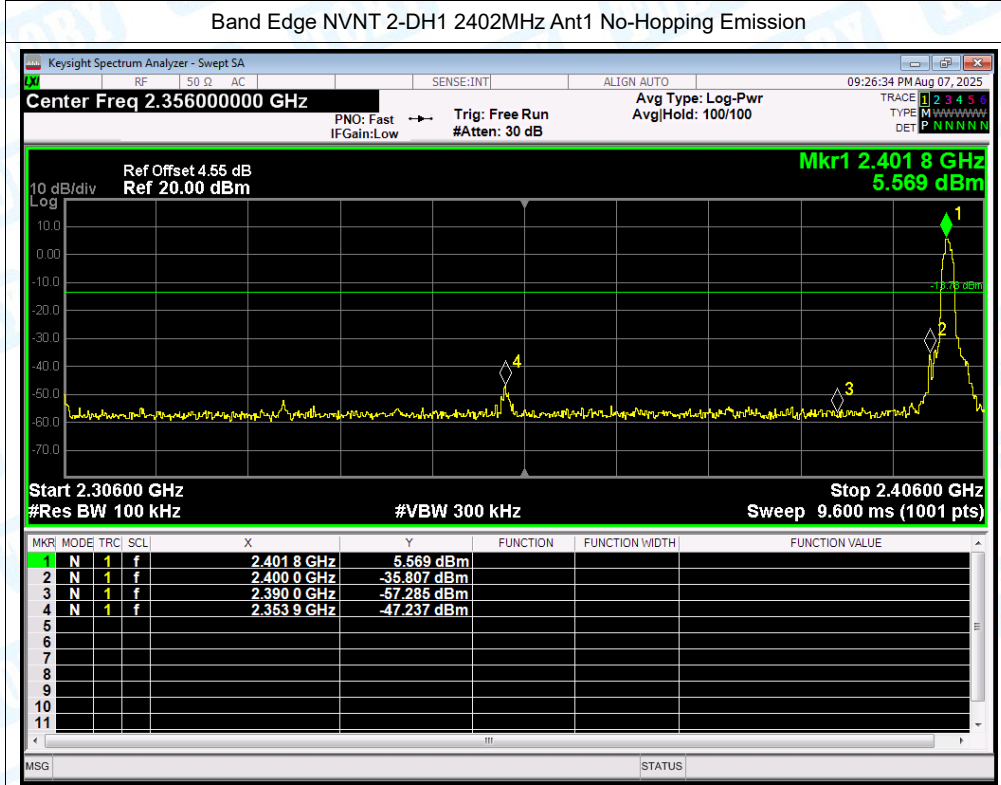
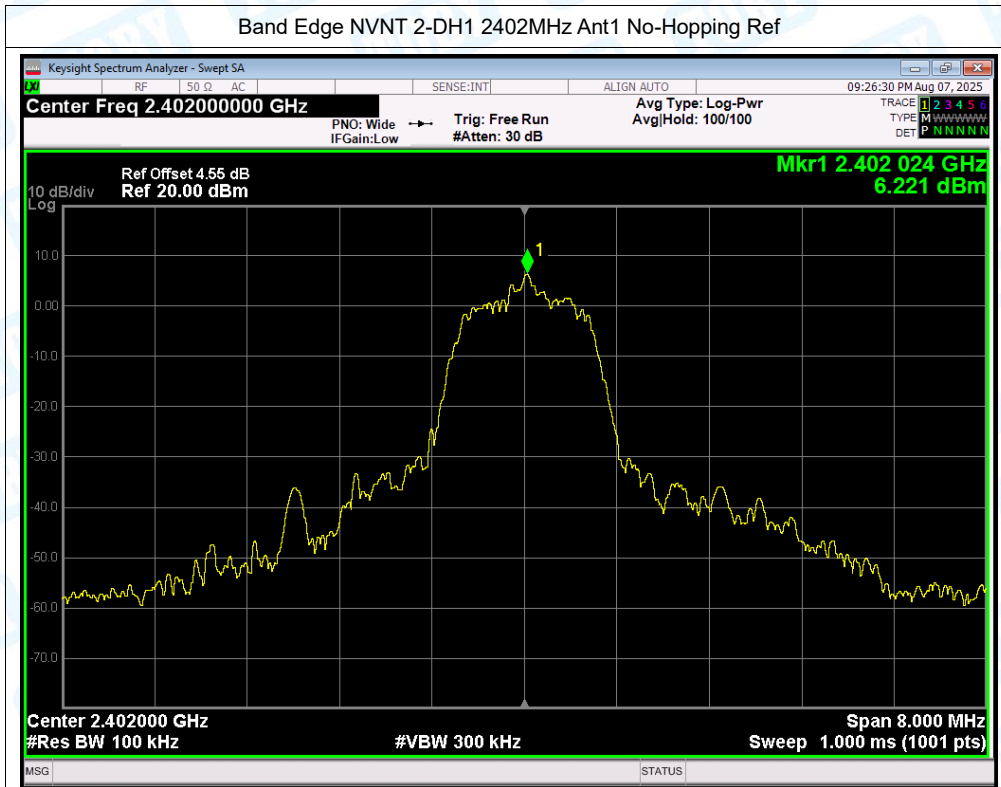
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref

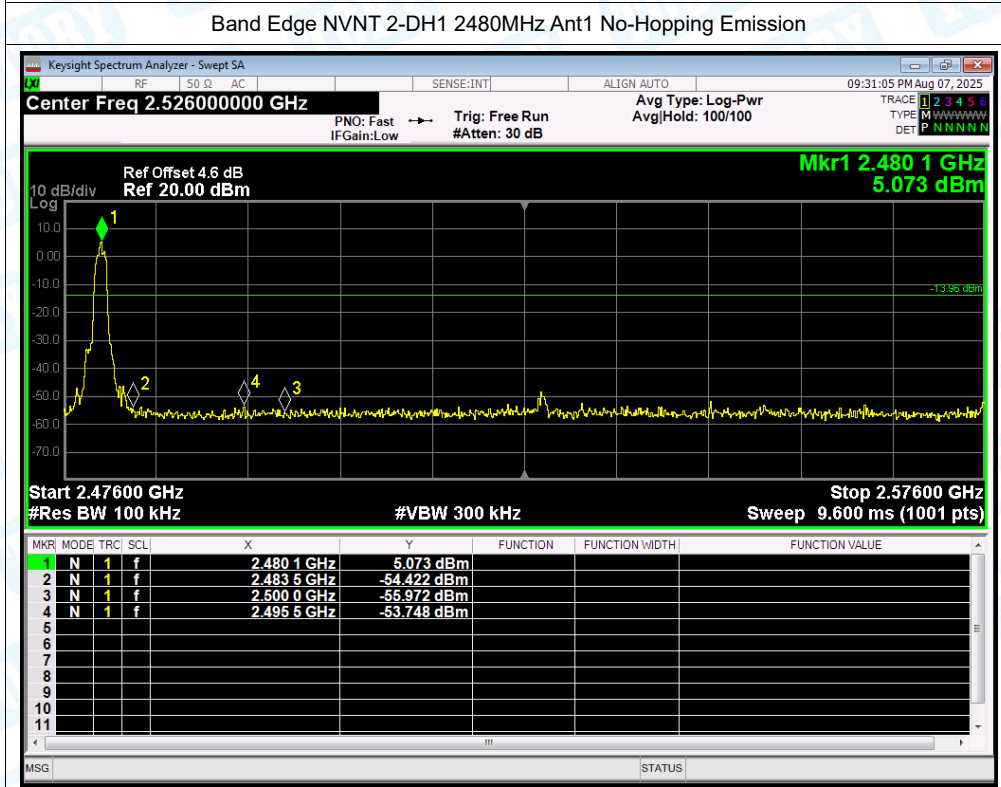
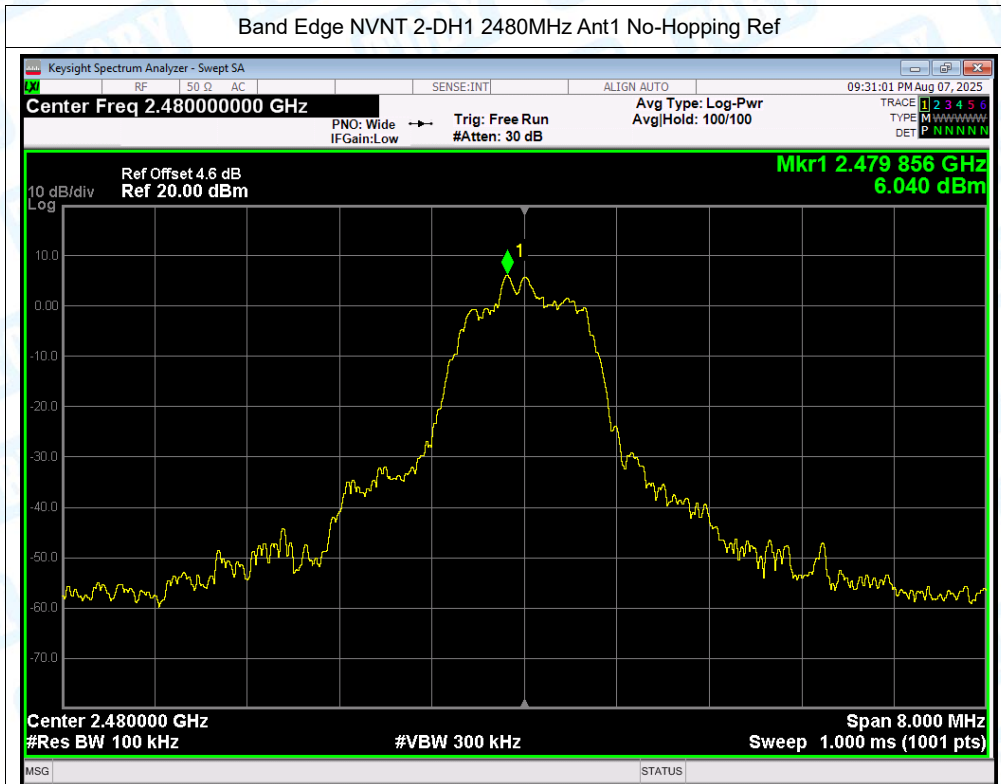


Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission

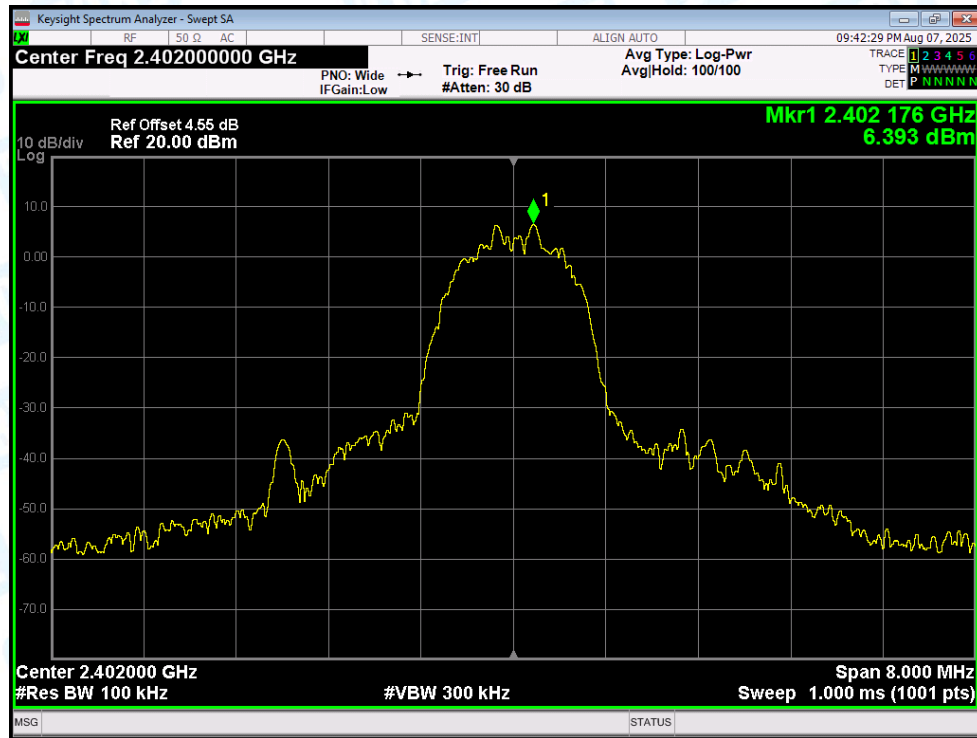




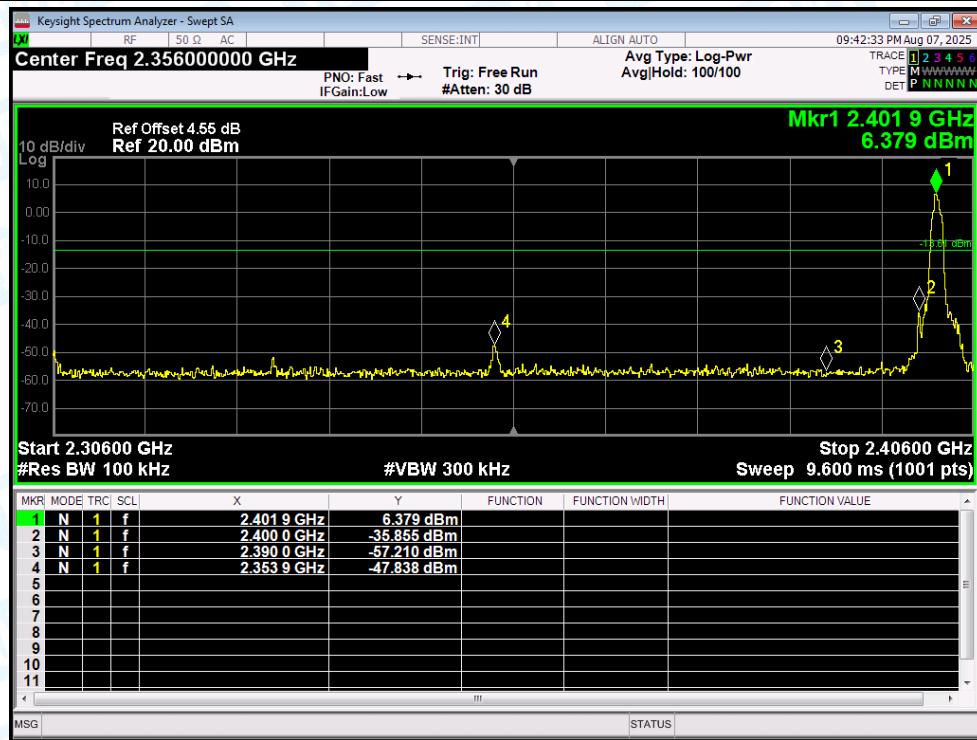


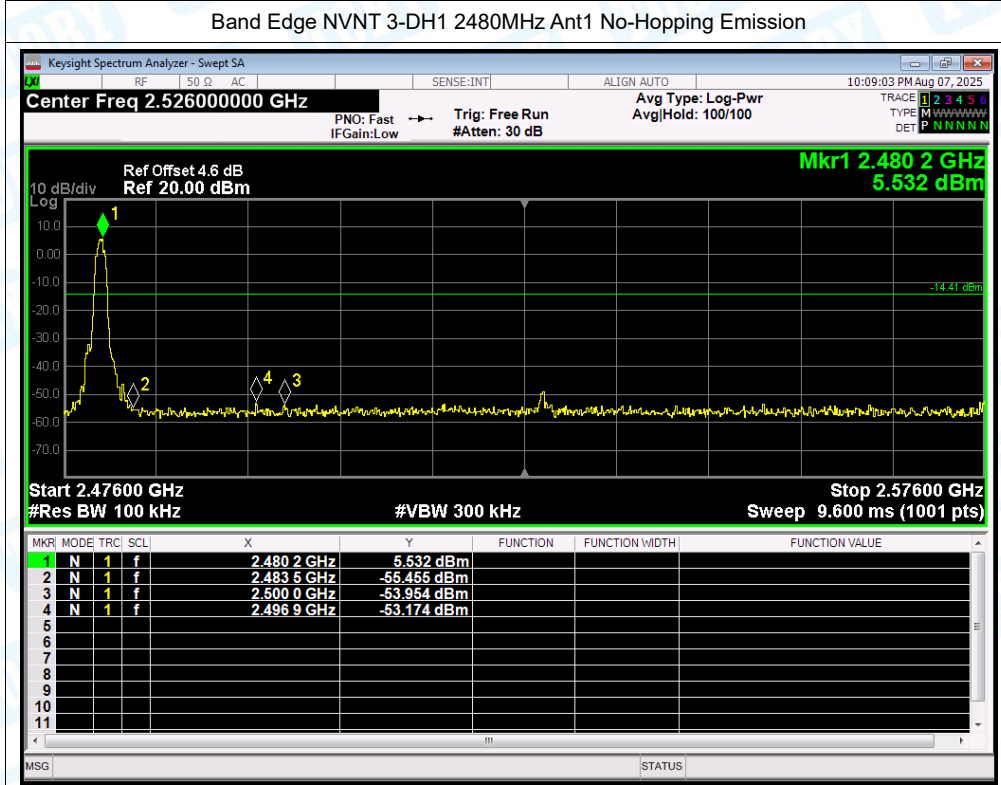
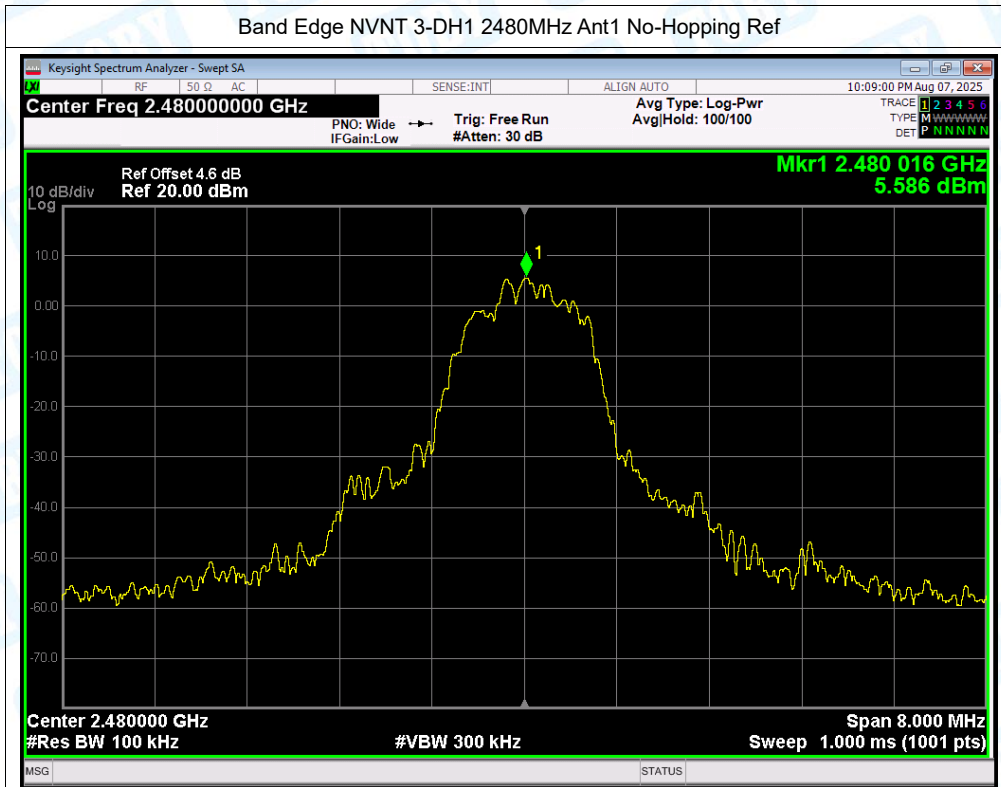


Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



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





6. Band Edge(Hopping)

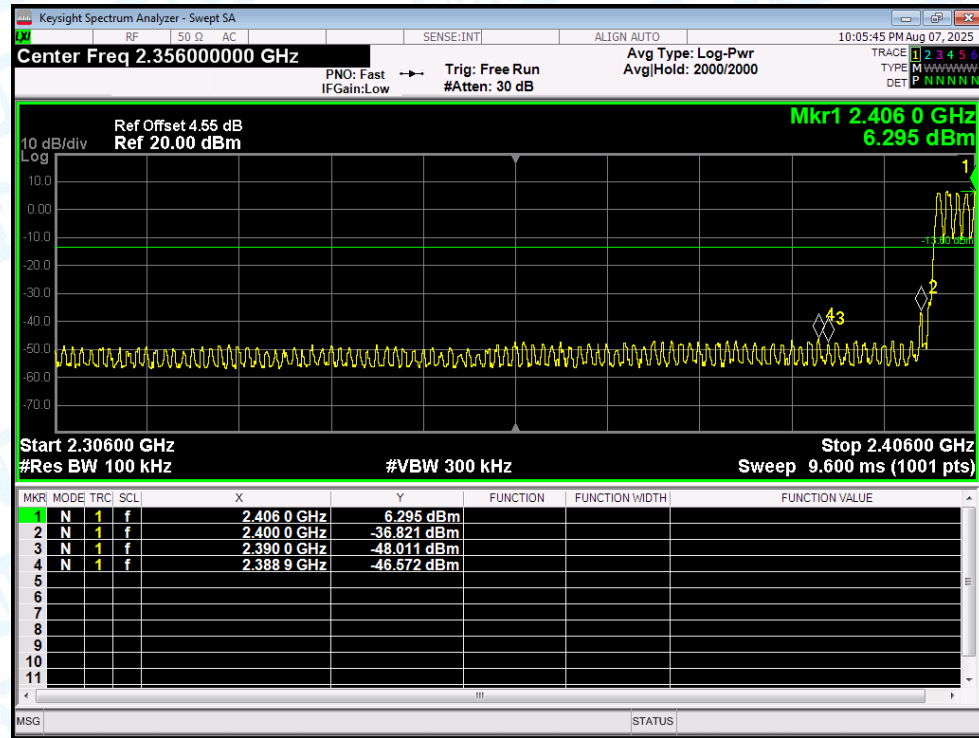
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-52.97	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-53.18	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-53.19	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-54.23	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-53.42	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-54	-20	Pass

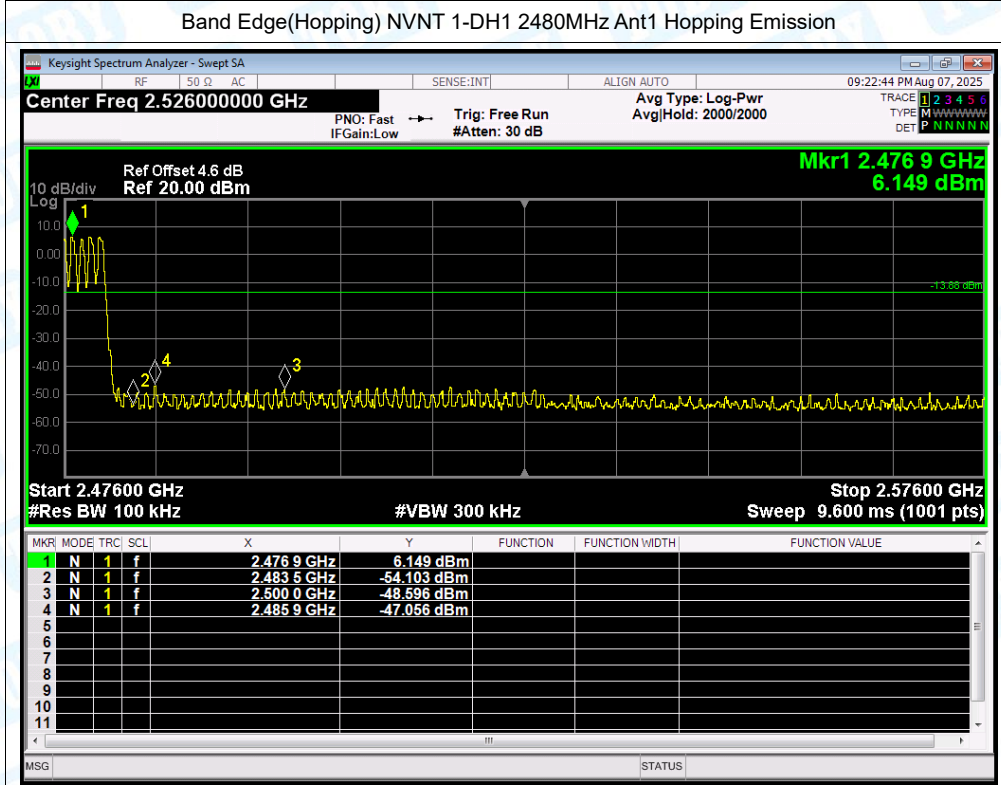
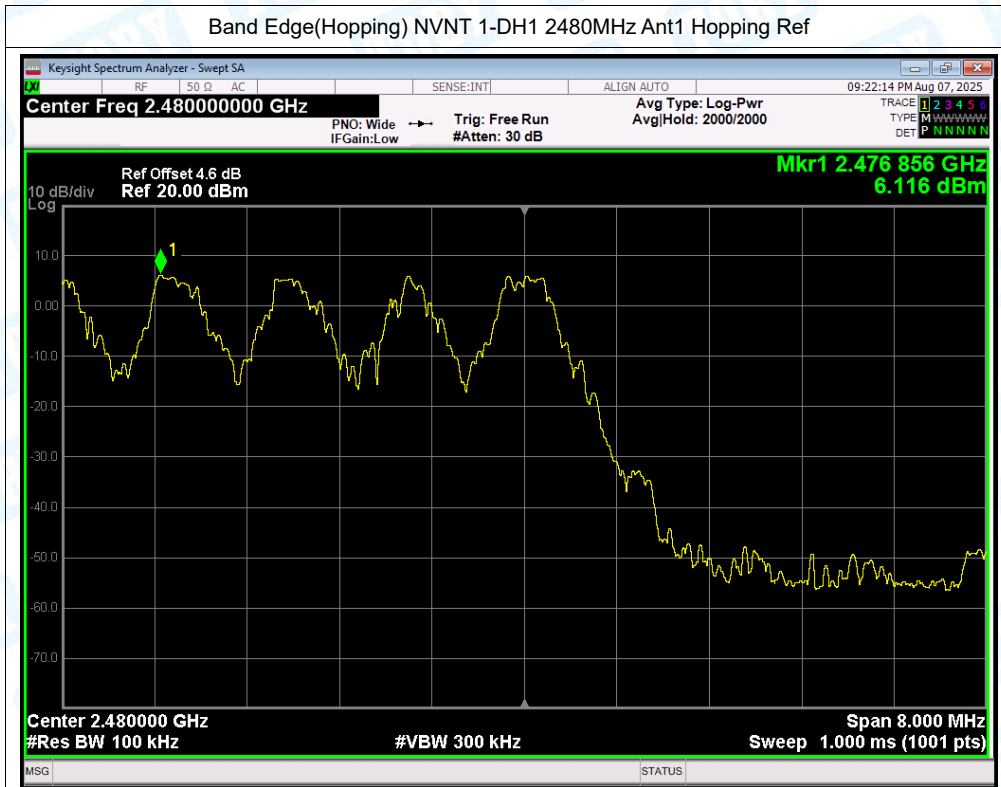
Test Graphs

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



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

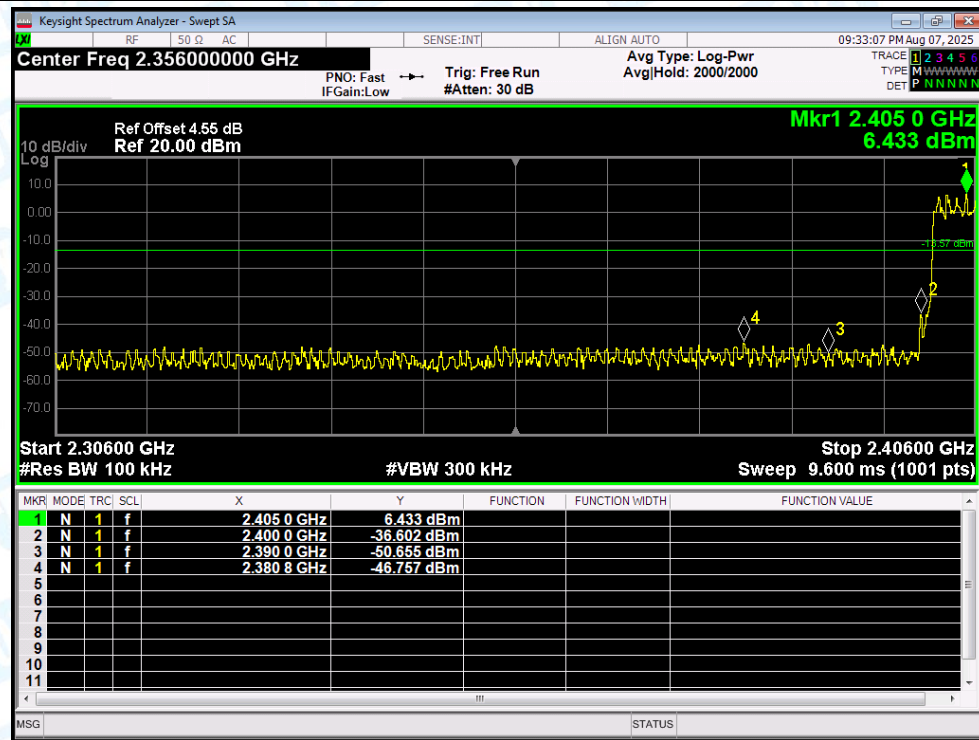


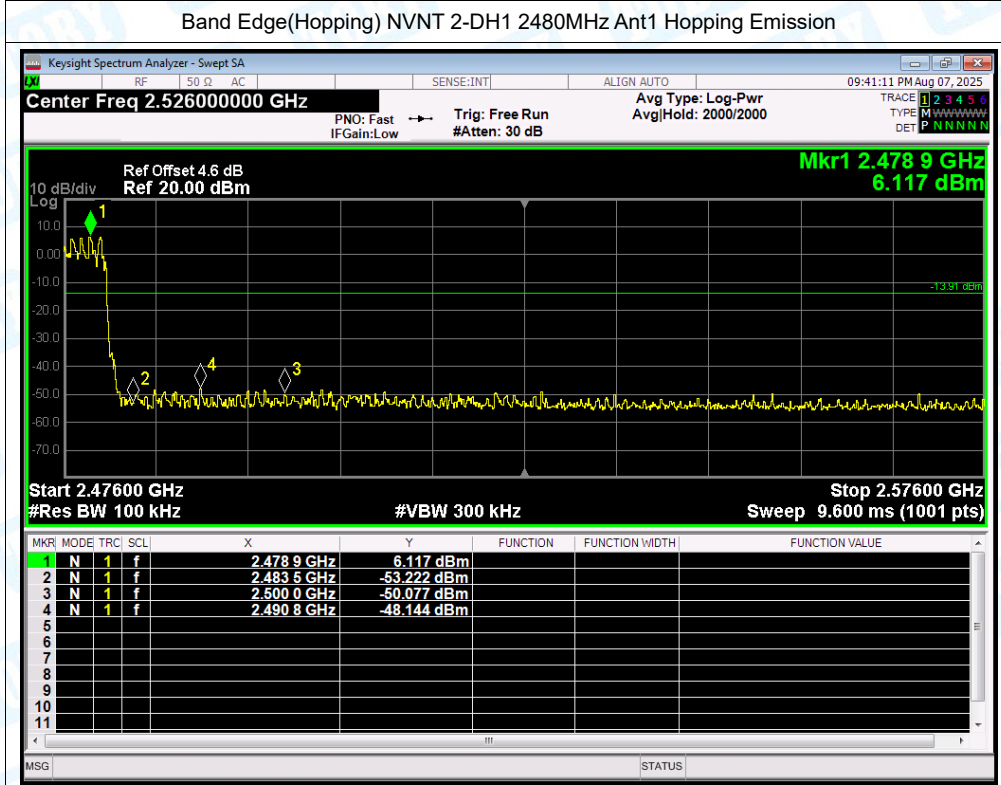
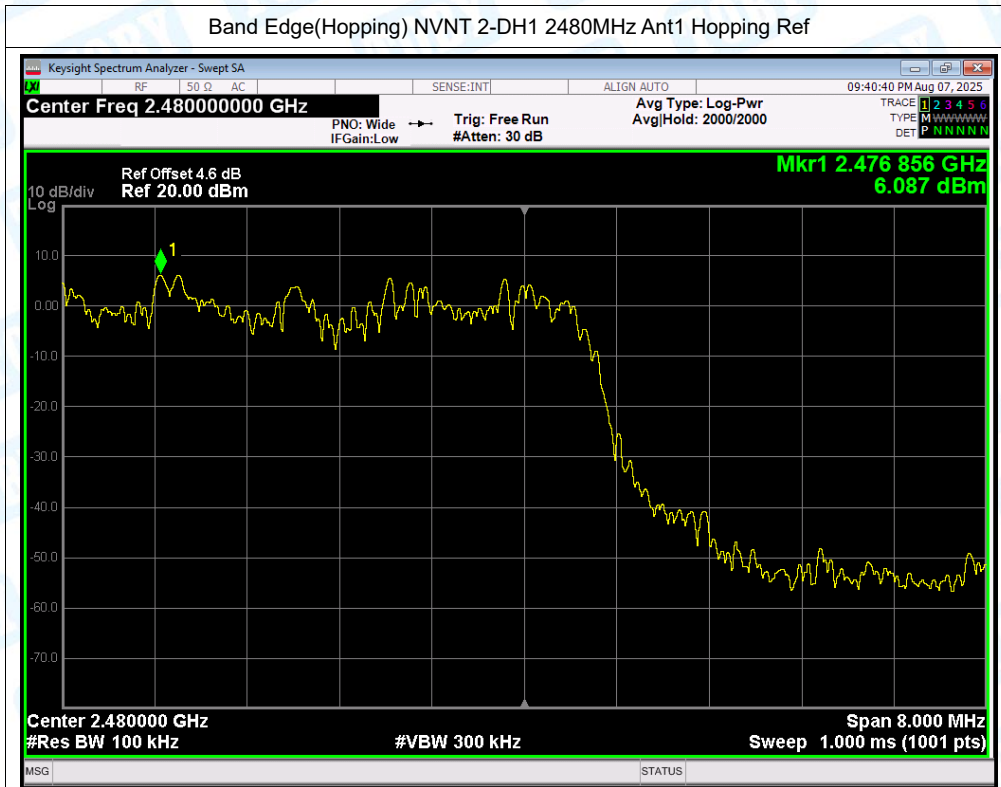


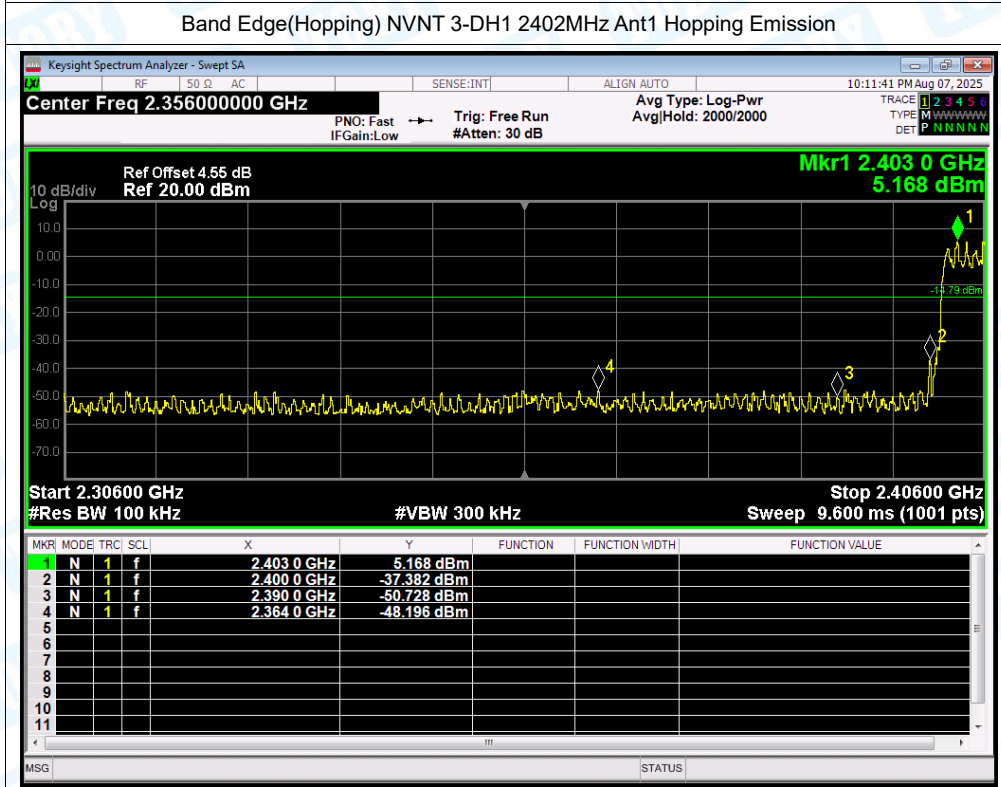
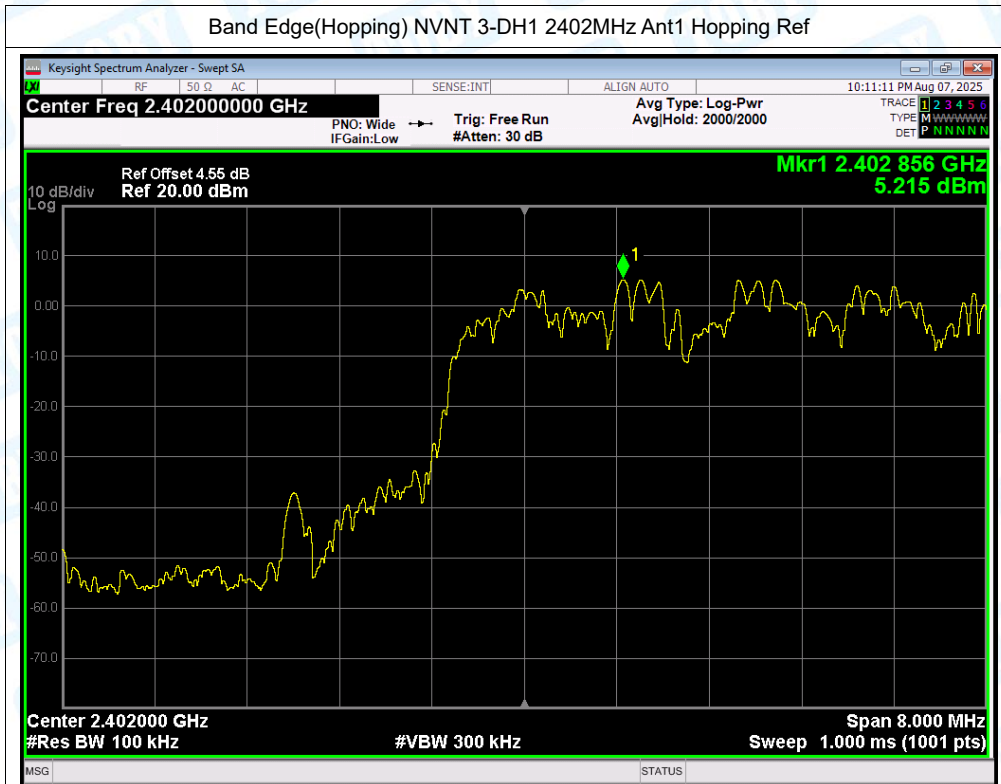
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref

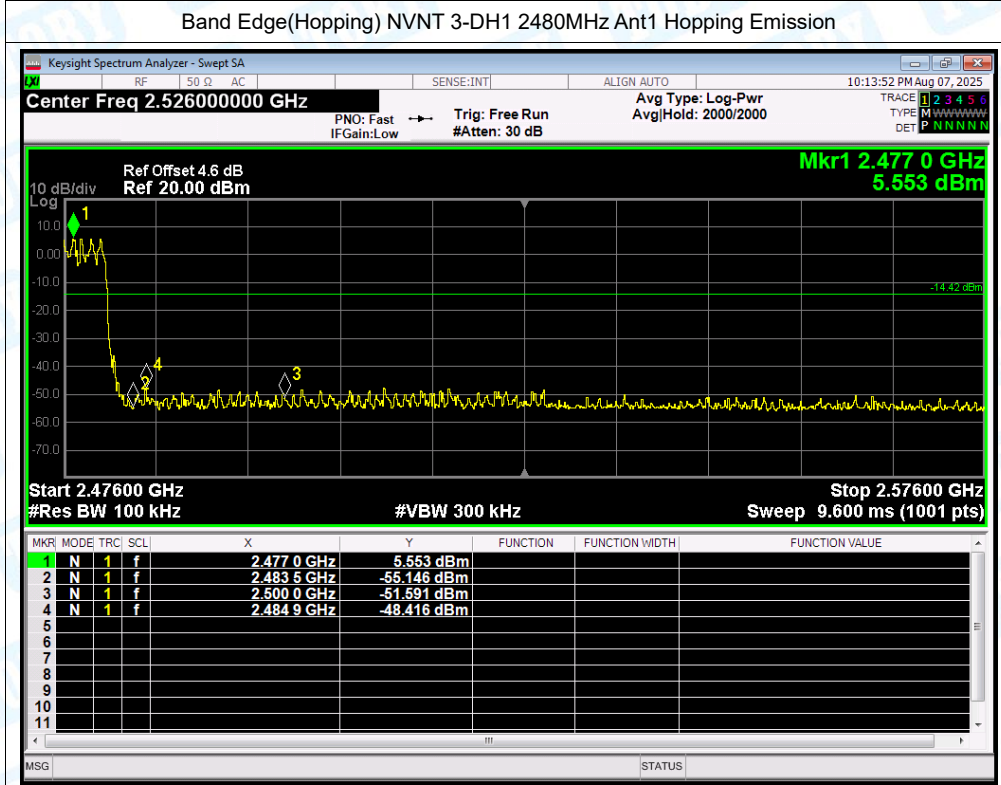


Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission







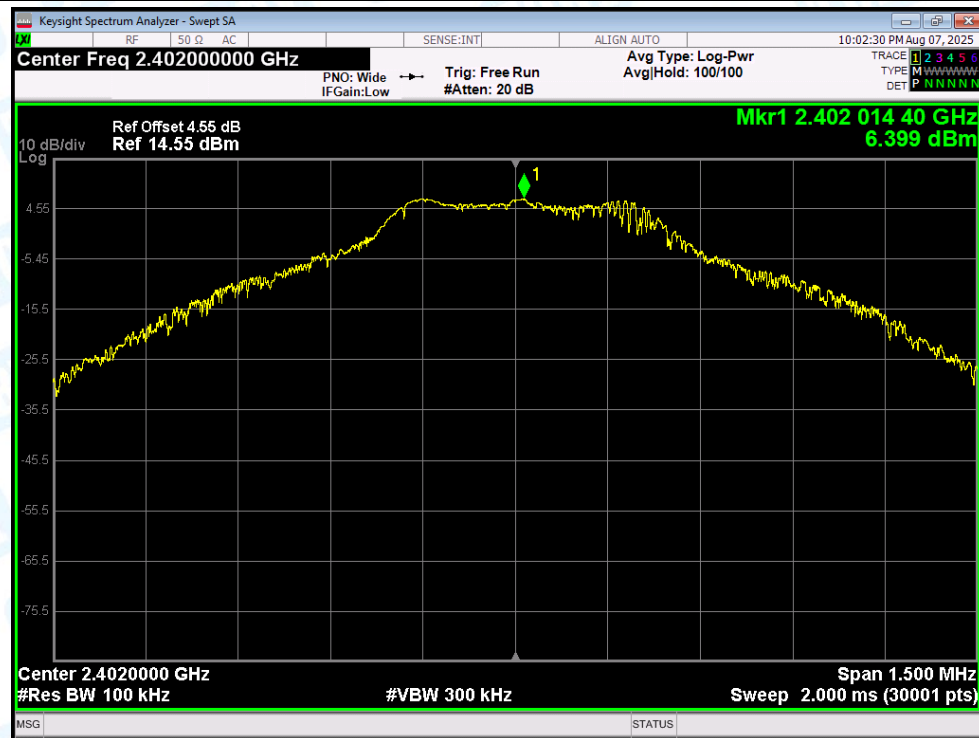


7. Conducted RF Spurious Emission

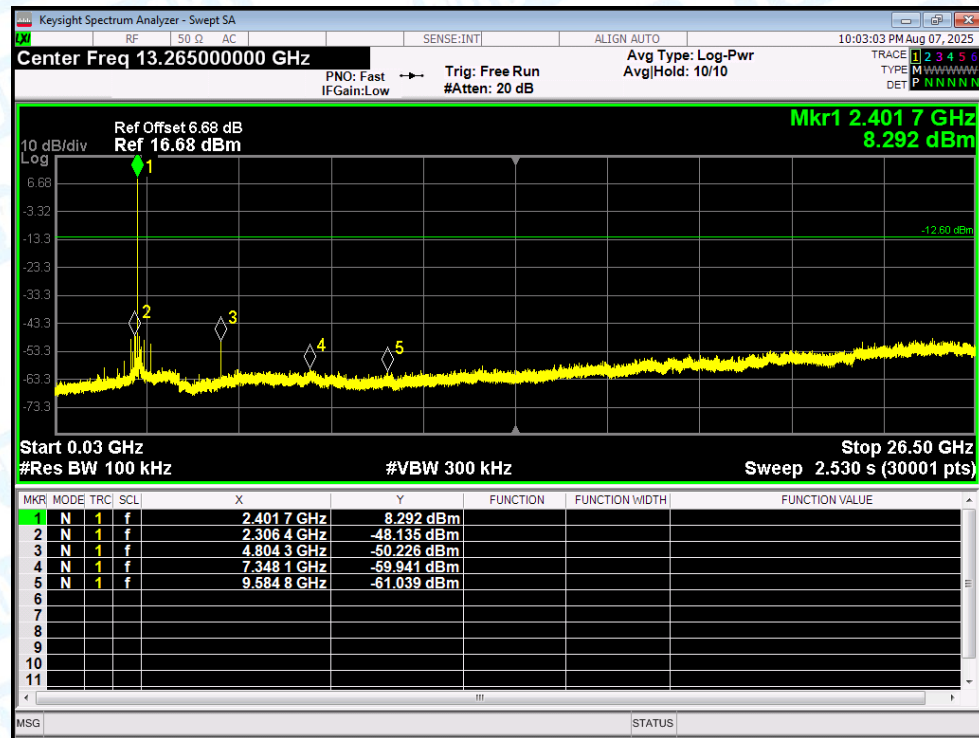
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-54.53	-19	Pass
NVNT	1-DH1	2441	Ant1	-52.44	-20	Pass
NVNT	1-DH1	2480	Ant1	-52.1	-20	Pass
NVNT	2-DH1	2402	Ant1	-54.32	-20	Pass
NVNT	2-DH1	2441	Ant1	-55.04	-20	Pass
NVNT	2-DH1	2480	Ant1	-53.93	-20	Pass
NVNT	3-DH1	2402	Ant1	-55.1	-20	Pass
NVNT	3-DH1	2441	Ant1	-54.38	-20	Pass
NVNT	3-DH1	2480	Ant1	-54.69	-20	Pass

Test Graphs

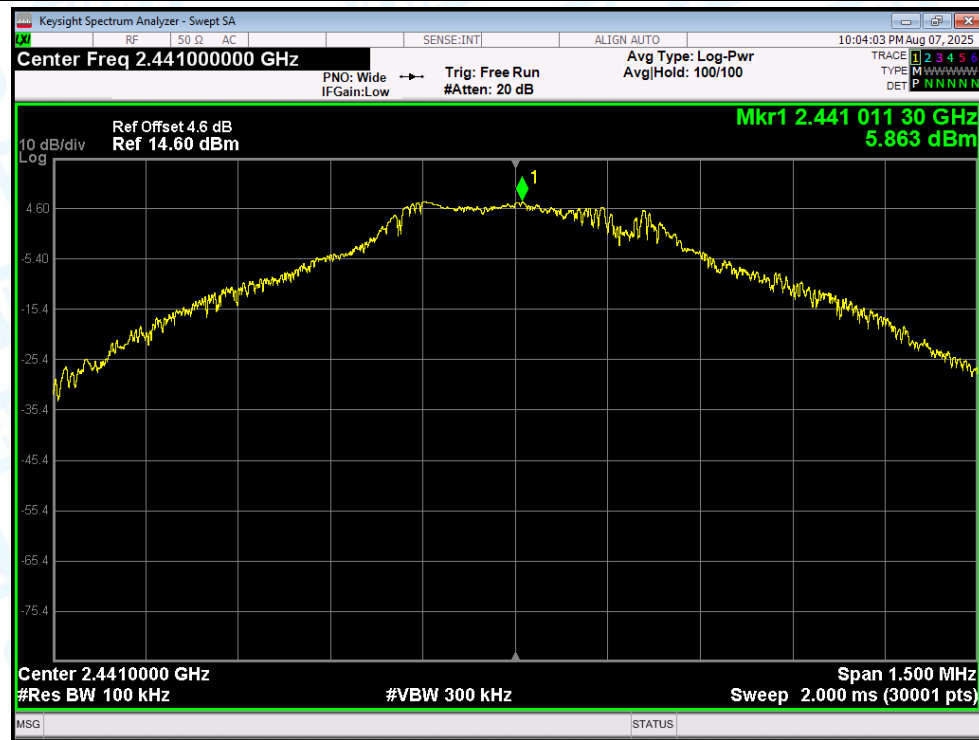
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



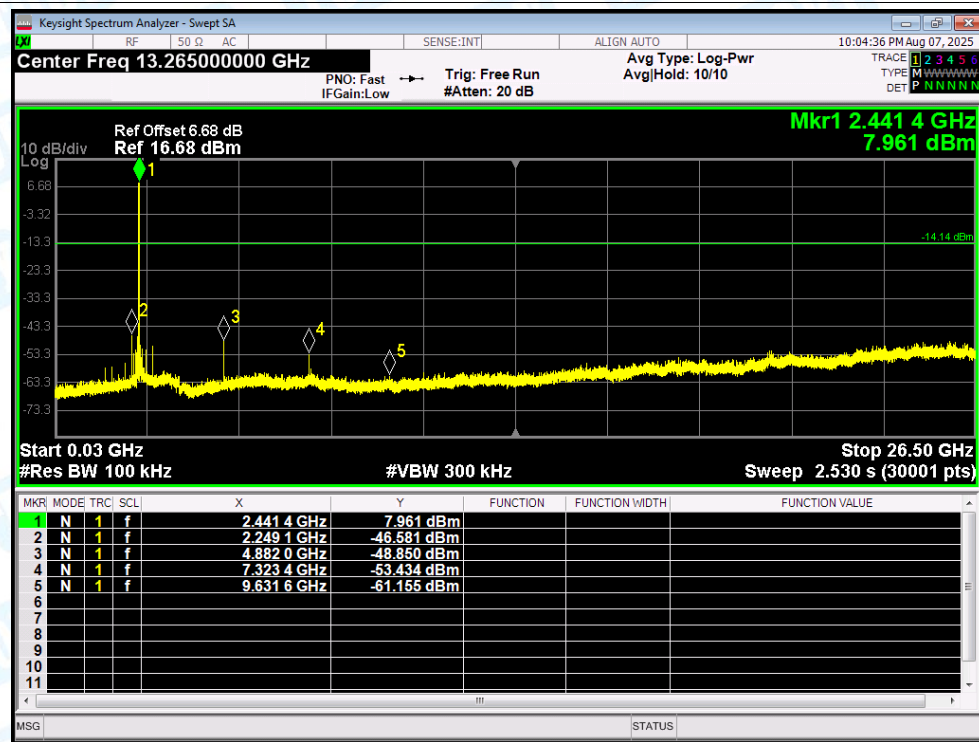
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



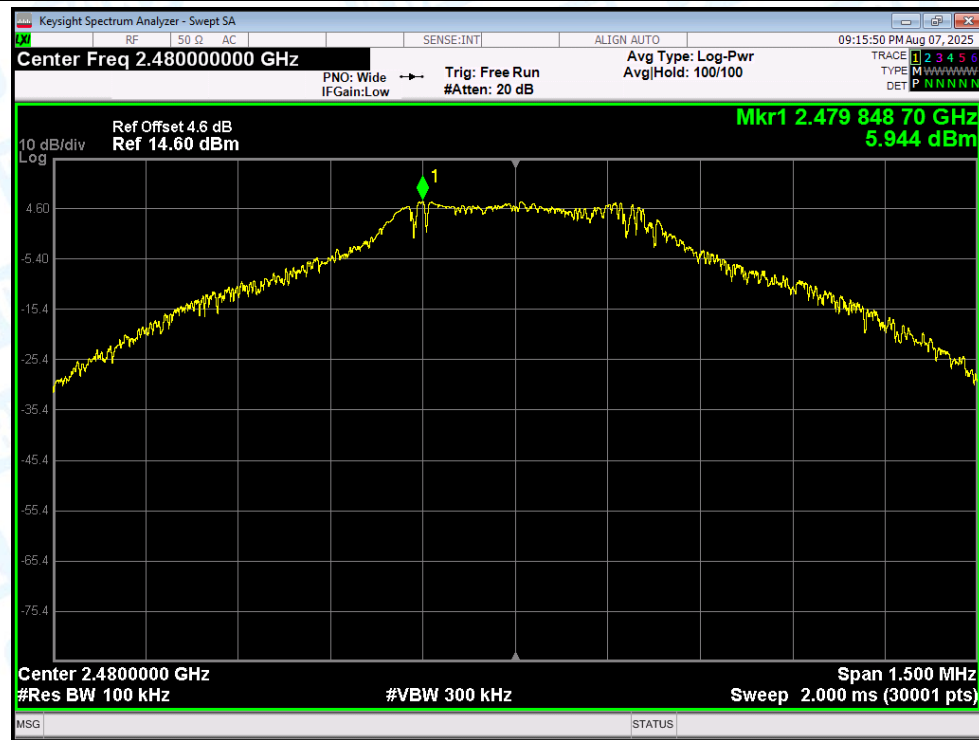
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



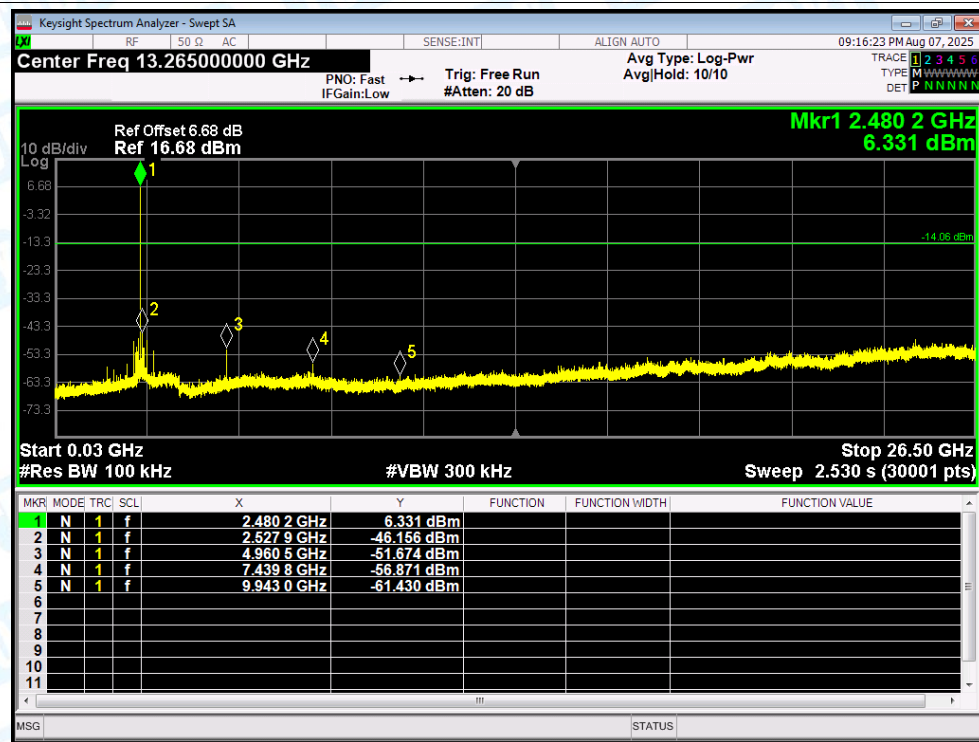
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



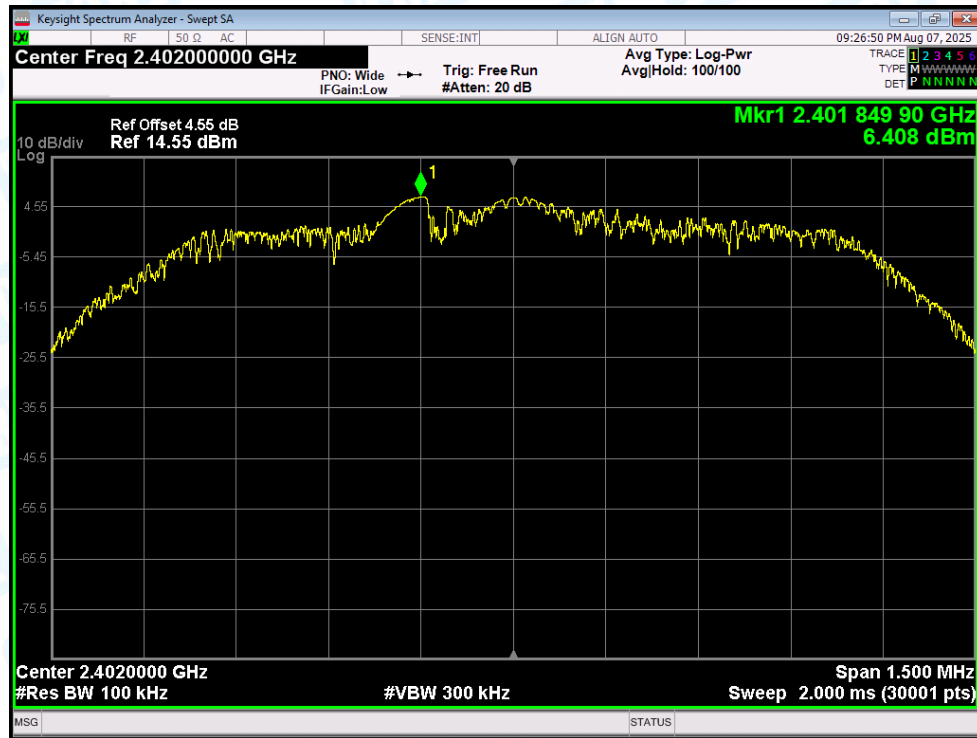
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



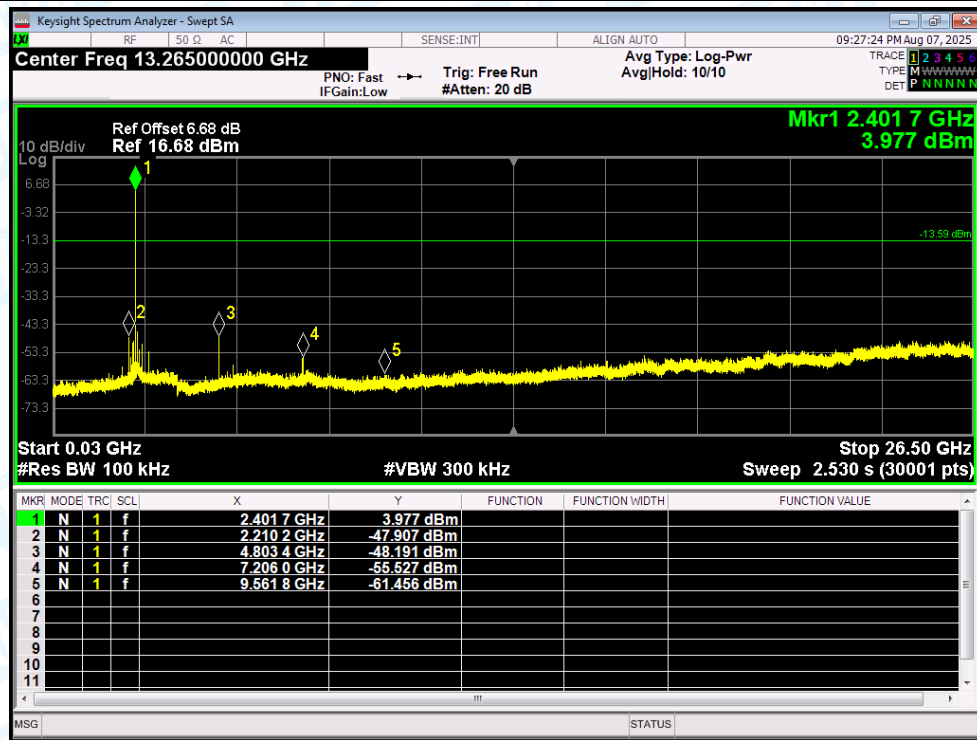
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



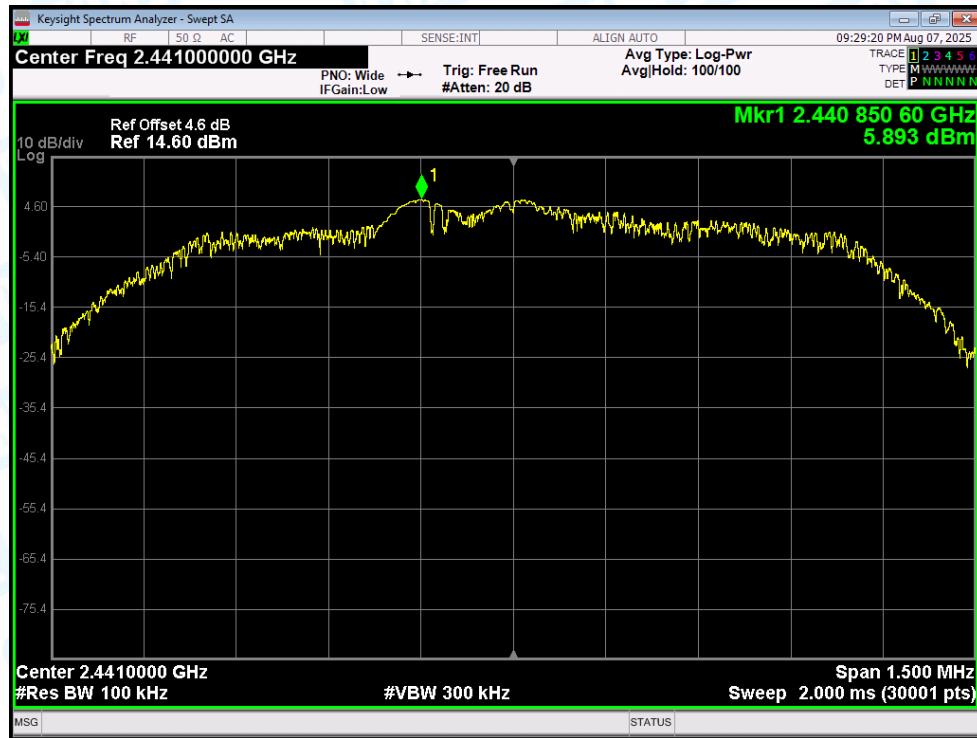
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



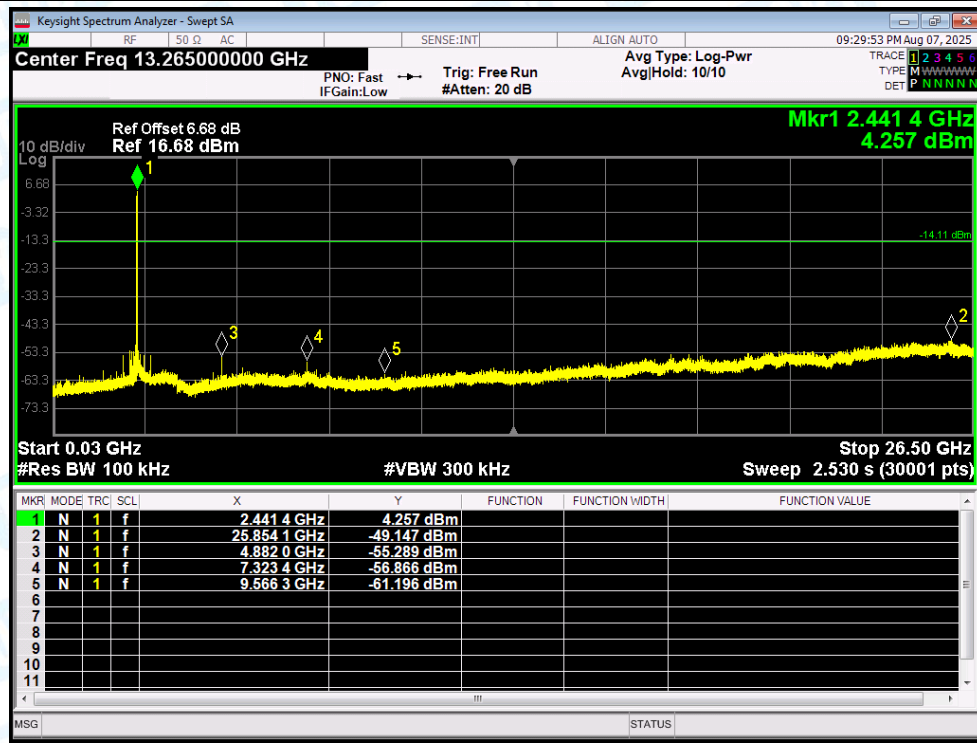
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



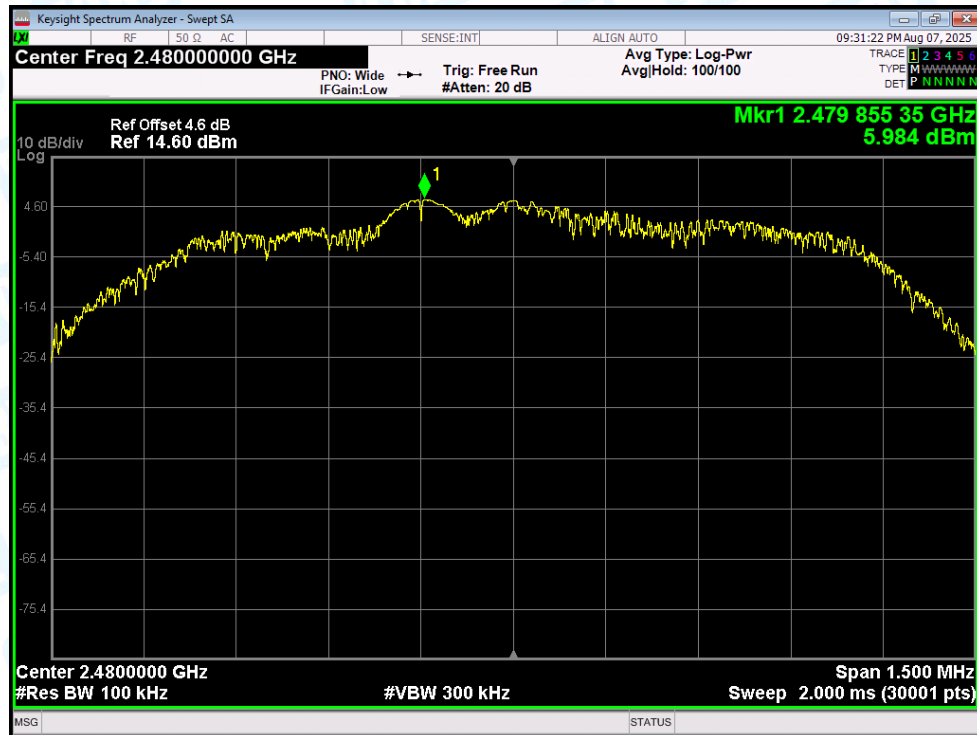
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



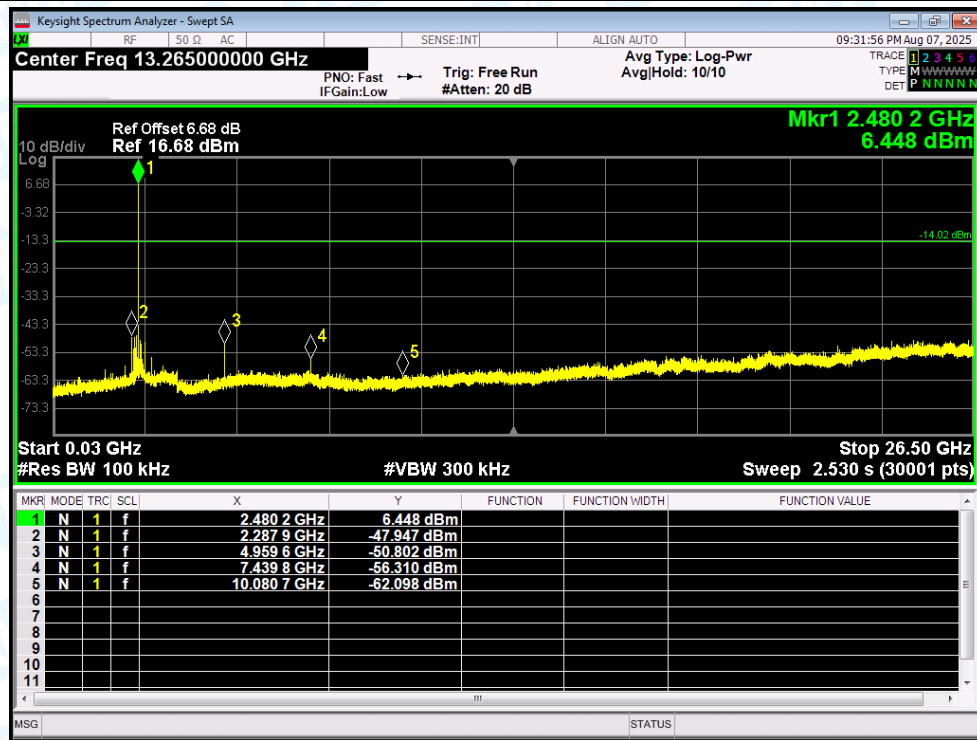
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



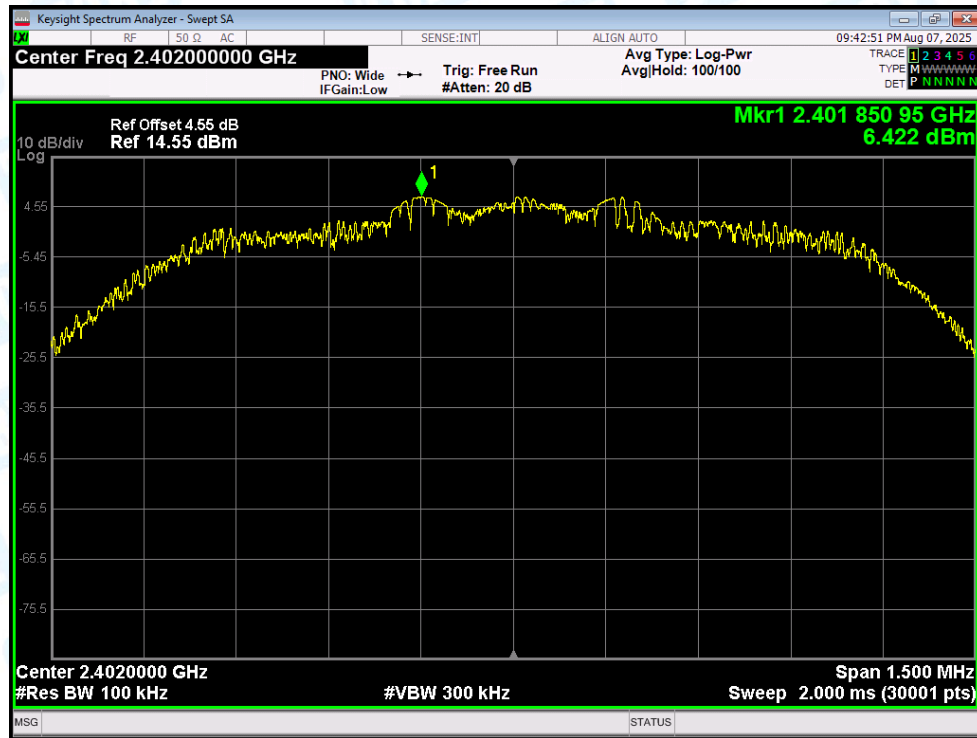
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



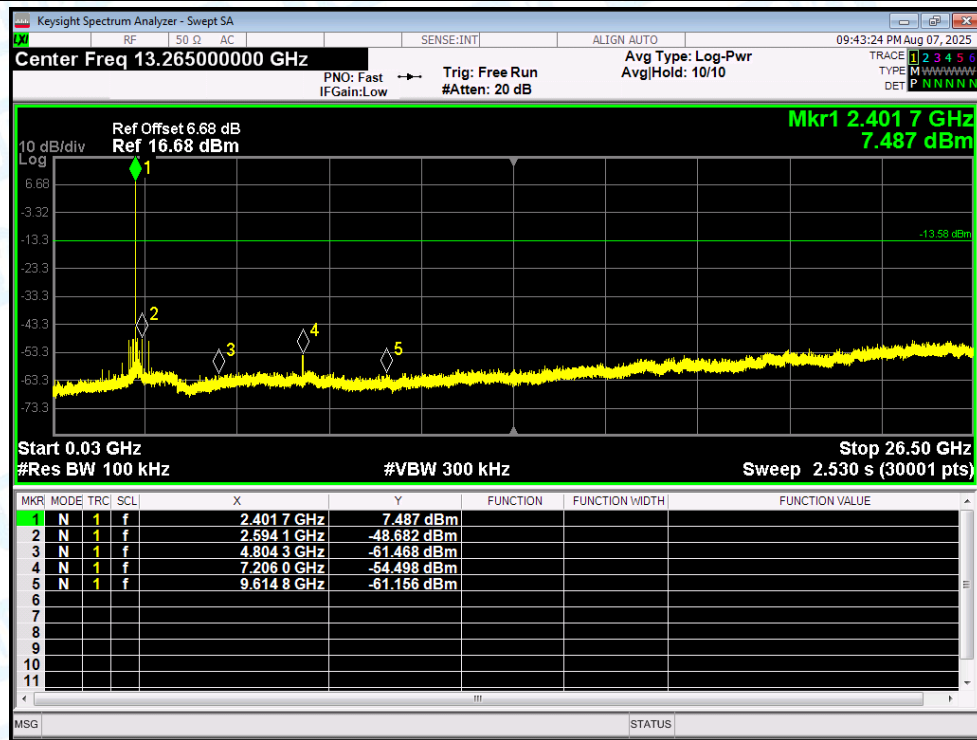
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



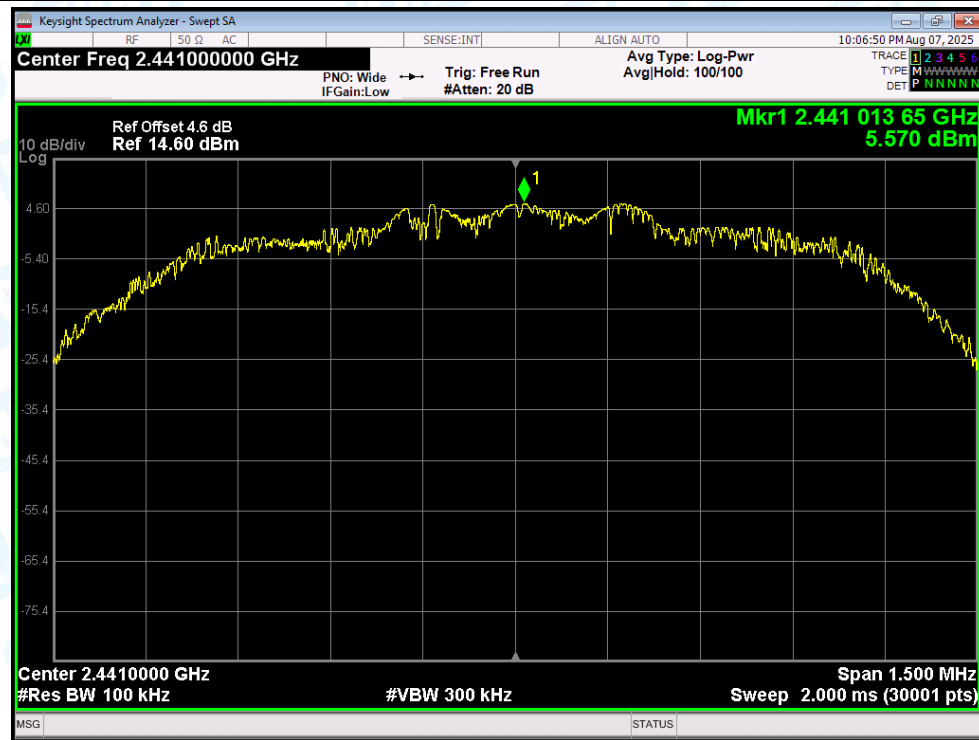
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



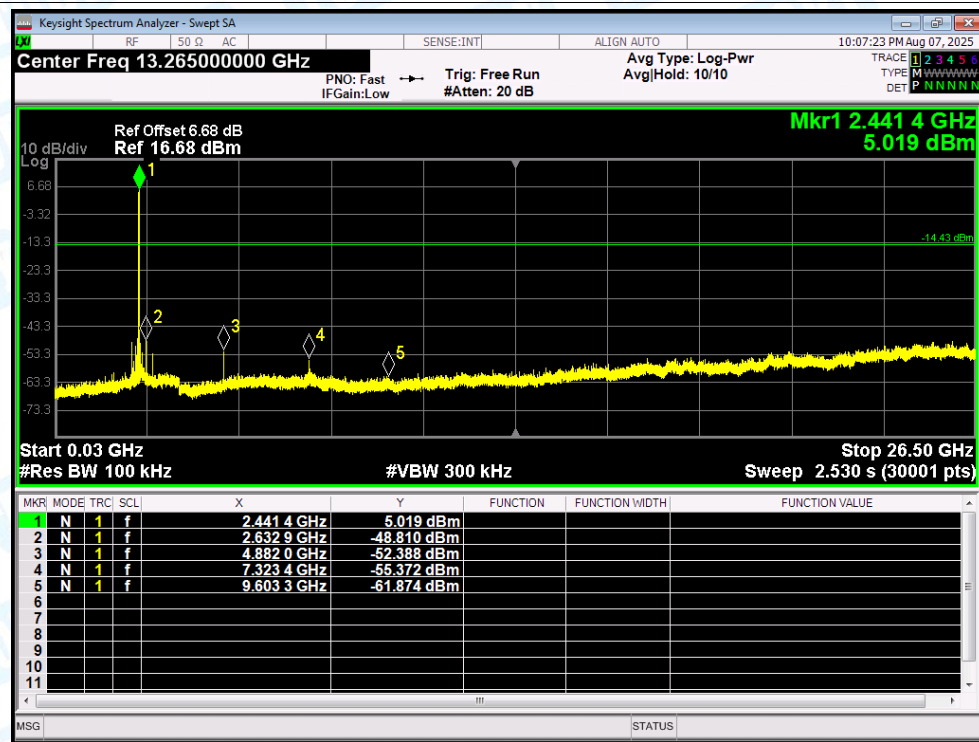
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



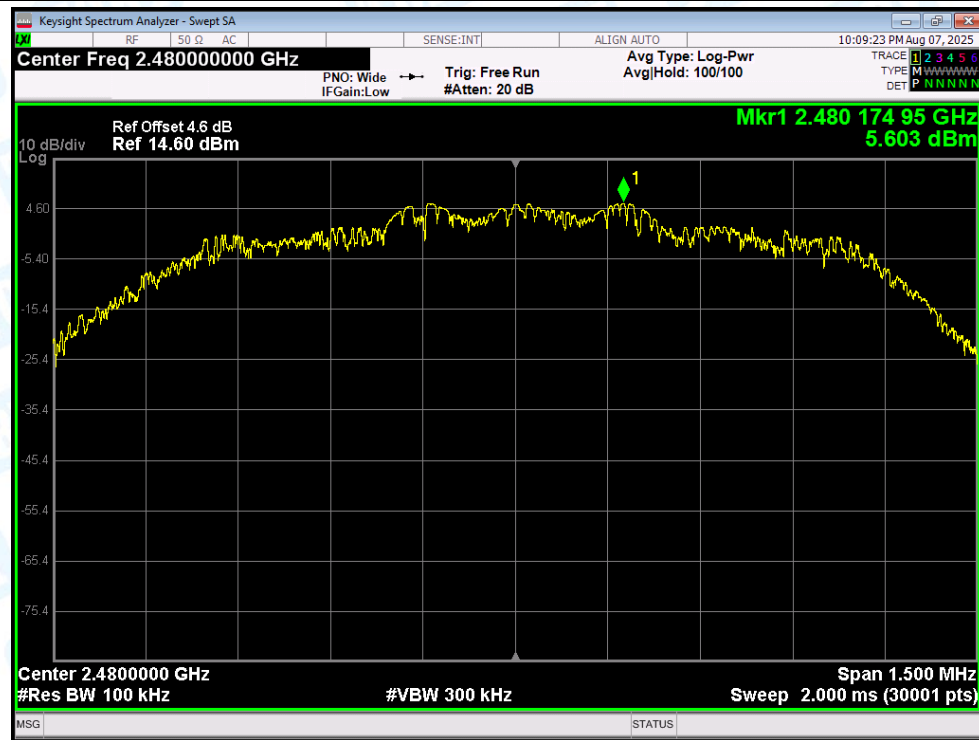
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



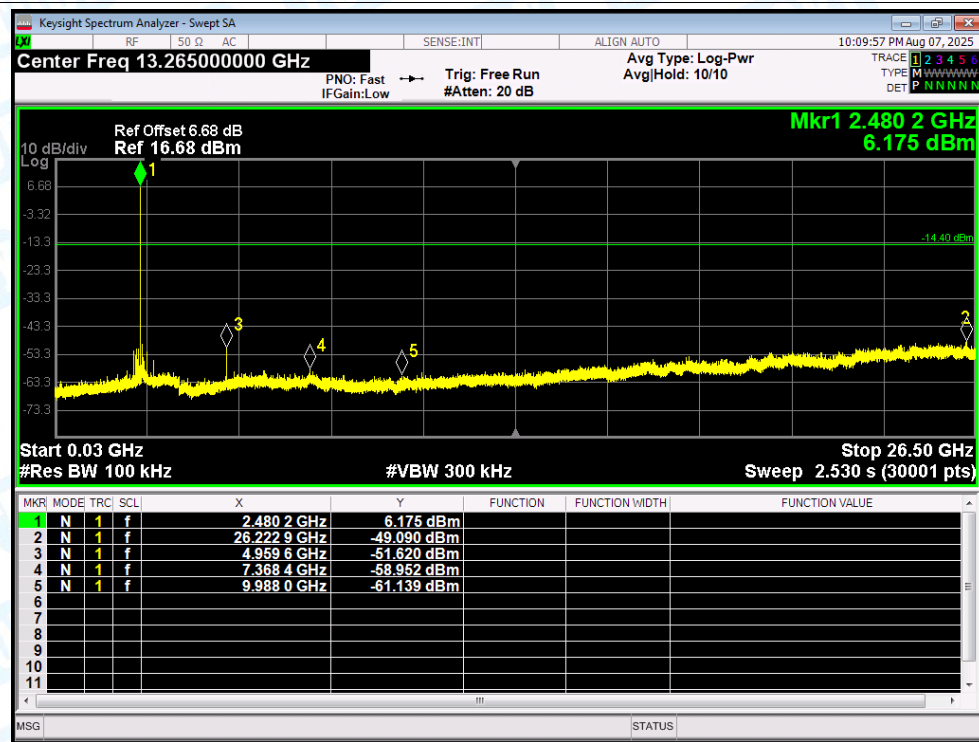
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

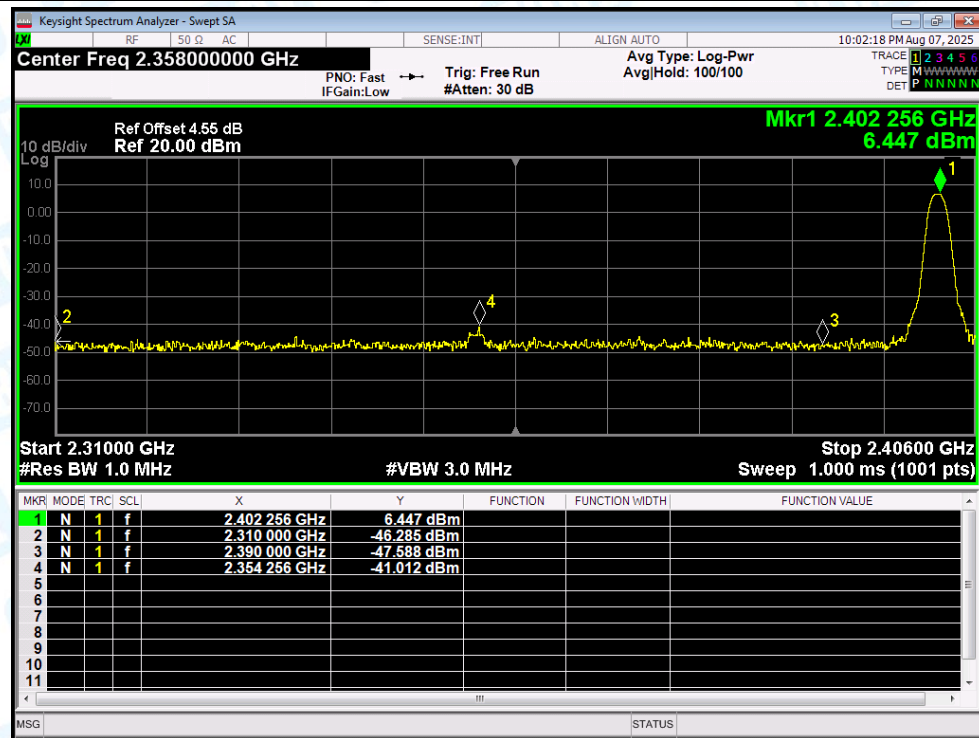


8. Restrict Band

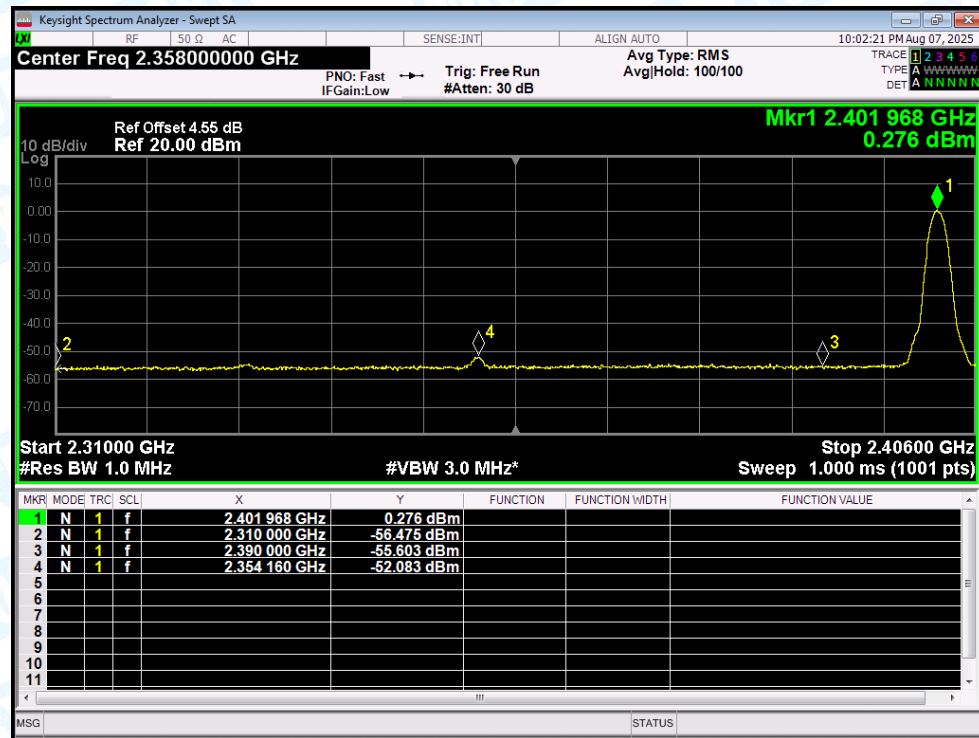
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-46.29	2	-	50.97	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-56.48	2	5.06	45.84	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2354.256	-41.01	2	-	56.25	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2354.16	-52.08	2	5.06	50.24	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-47.59	2	-	49.67	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-55.6	2	5.06	46.72	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-46.53	2	-	50.73	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-54.26	2	5.17	48.17	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.872	-44.2	2	-	53.06	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.608	-53.65	2	5.17	48.78	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-45.63	2	-	51.63	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-54.95	2	5.17	47.48	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-48.73	2	-	48.53	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	2354.064	-42.75	2	-	54.51	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2353.968	-52.24	2	4.95	49.97	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-48.34	2	-	48.92	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-56.08	2	4.95	46.13	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-45.03	2	-	52.23	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-54.63	2	5.06	47.69	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2484.088	-43.41	2	-	53.85	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.536	-54.11	2	5.06	48.21	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-46.87	2	-	50.39	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-54.52	2	5.06	47.8	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-47.95	2	-	49.31	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-55.93	2	4.95	46.28	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2354.352	-42.27	2	-	54.99	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2353.968	-52.13	2	4.95	50.08	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-47.16	2	-	50.1	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-55.36	2	4.95	46.85	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-44.96	2	-	52.3	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-54.69	2	4.95	47.52	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2484.76	-43.66	2	-	53.6	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2486.944	-54.36	2	4.95	47.85	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-47.25	2	-	50.01	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-55.58	2	4.95	46.63	Average	54	Pass

Test Graphs

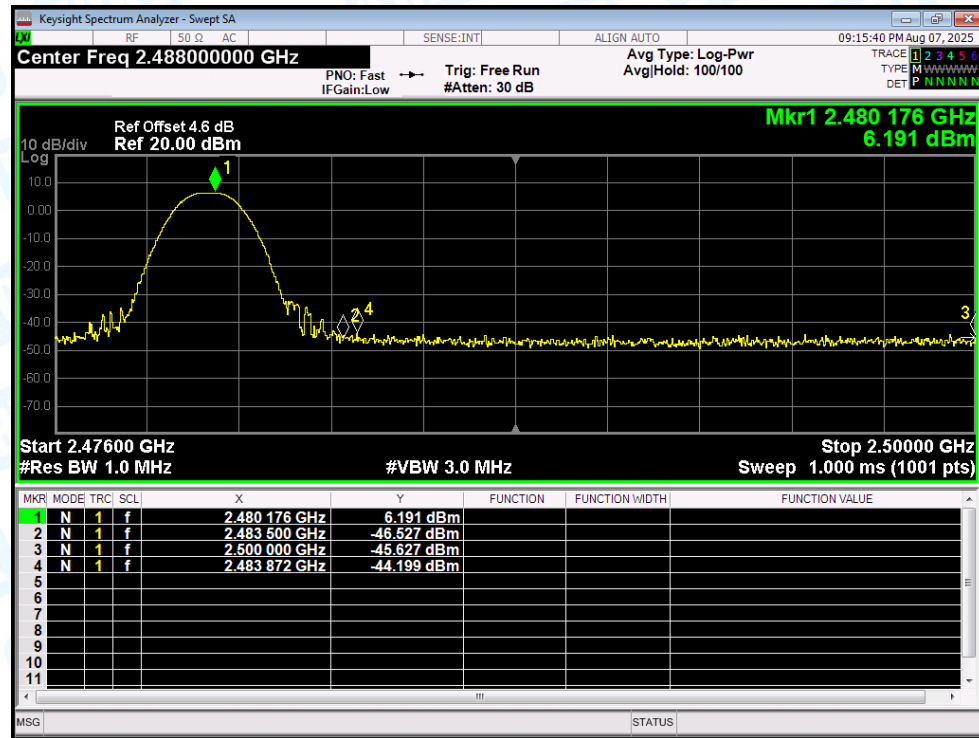
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



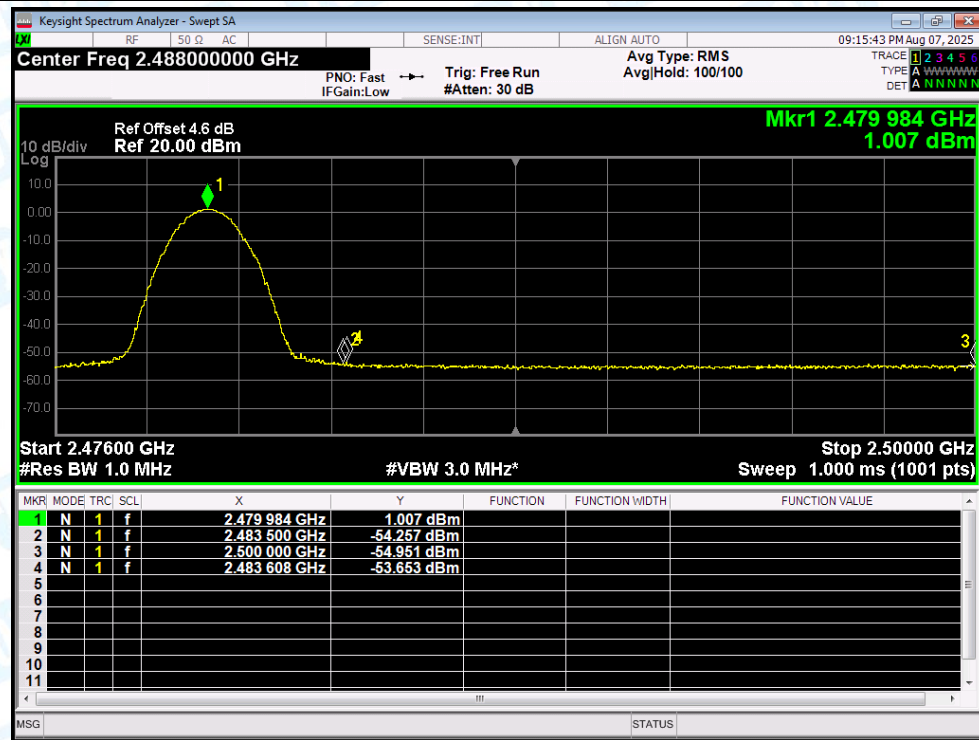
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



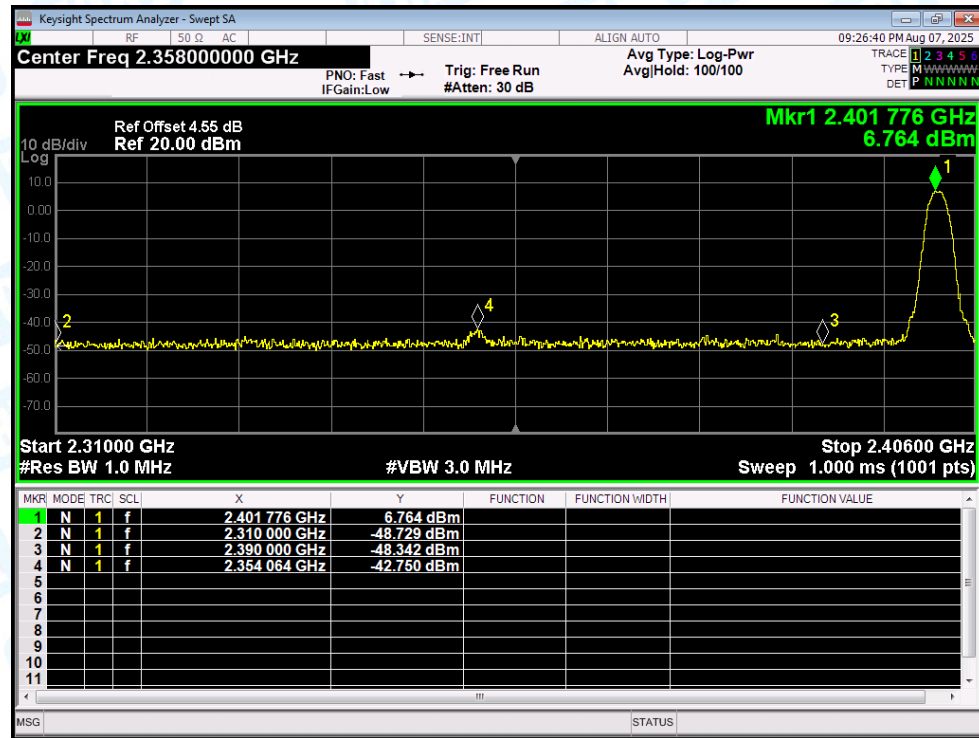
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



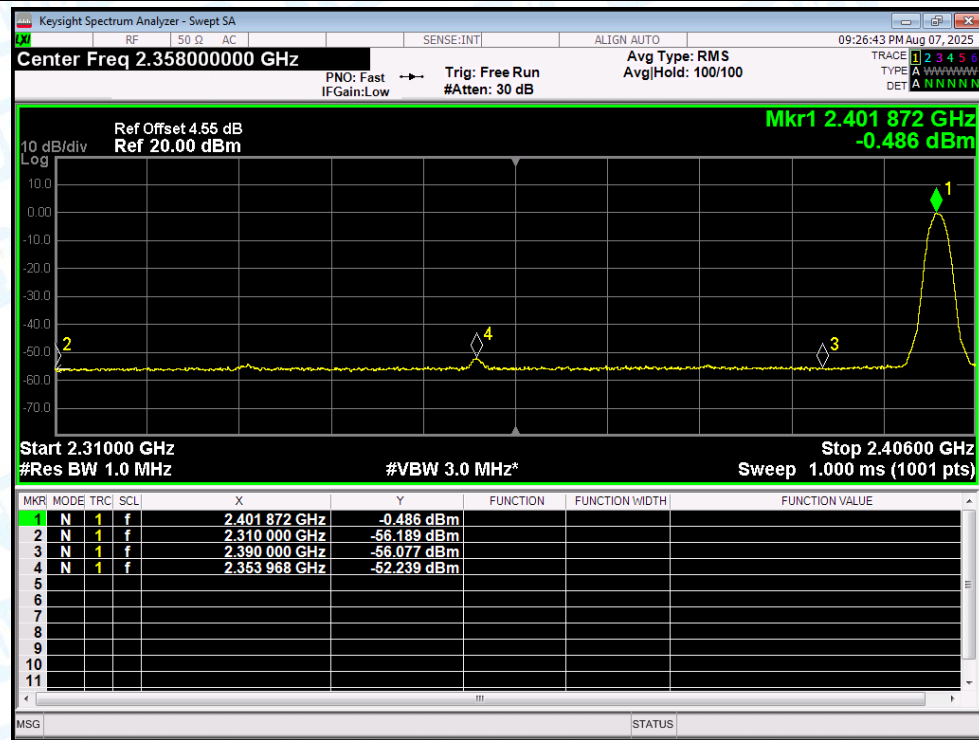
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



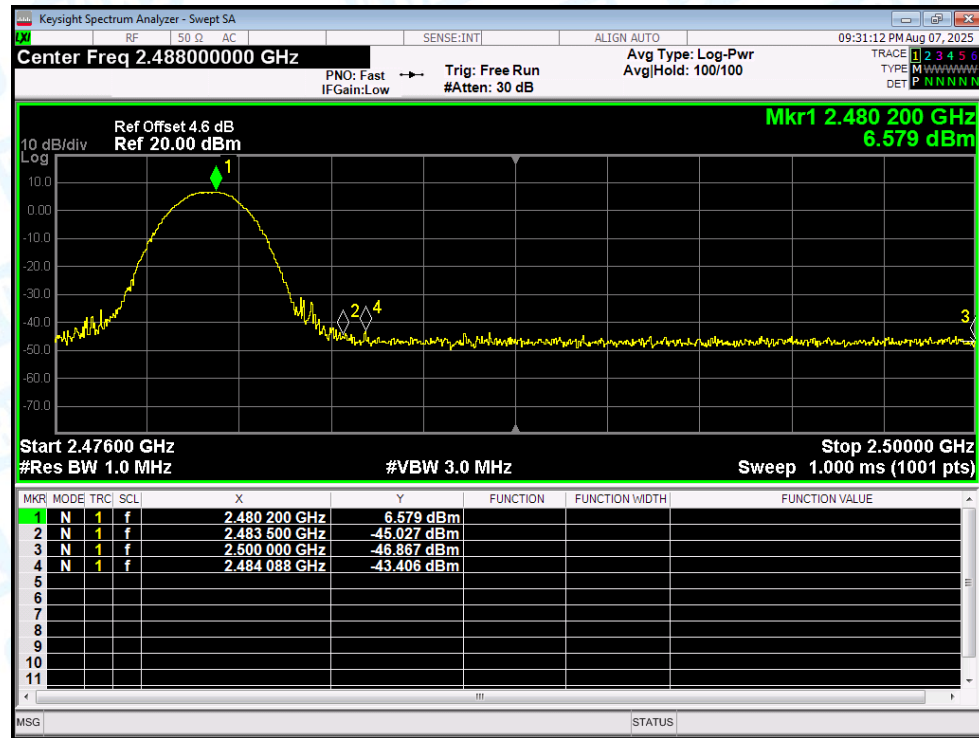
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



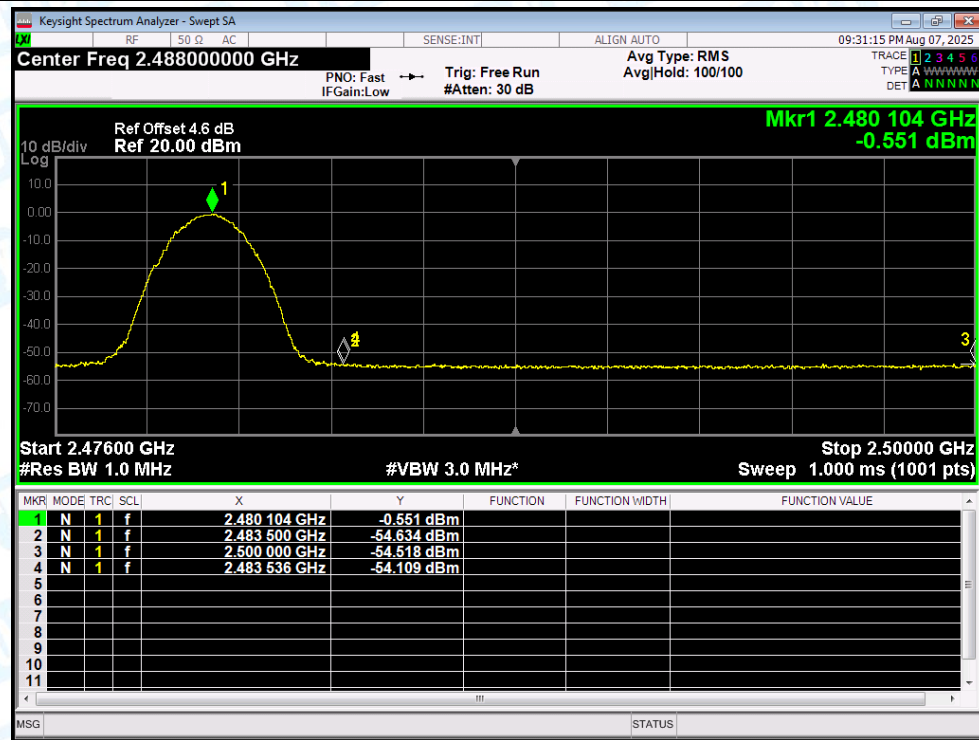
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



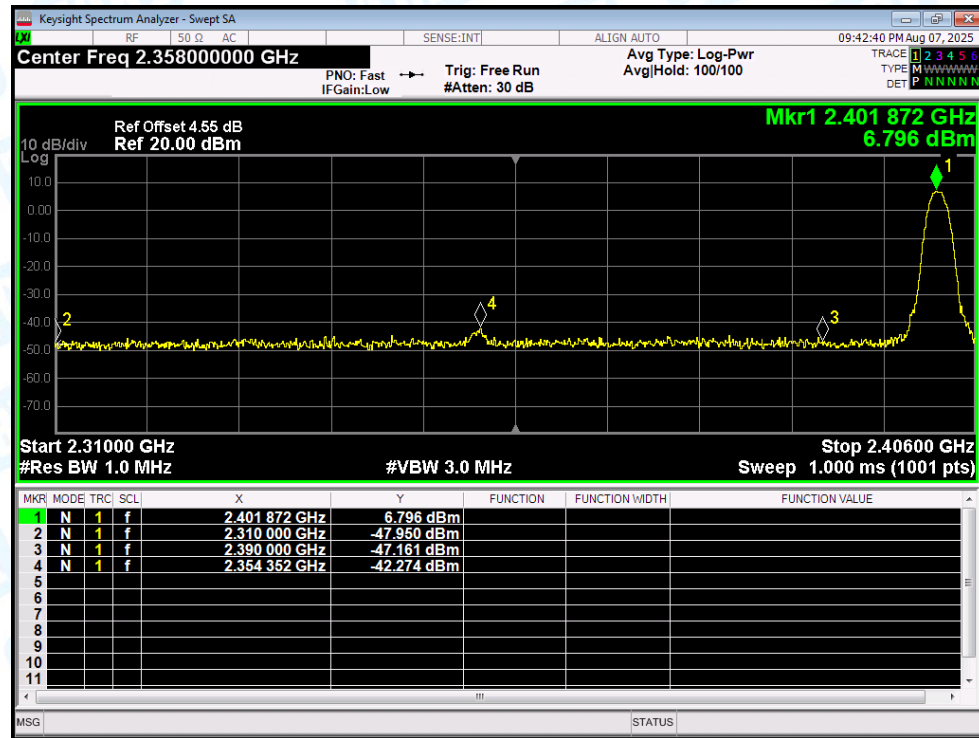
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



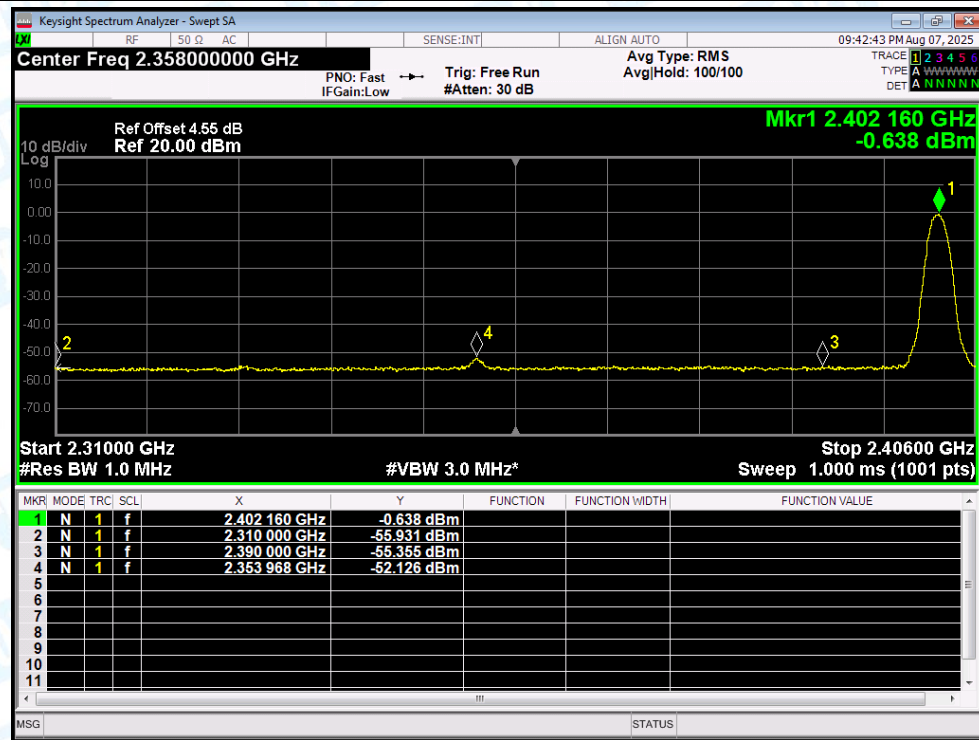
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



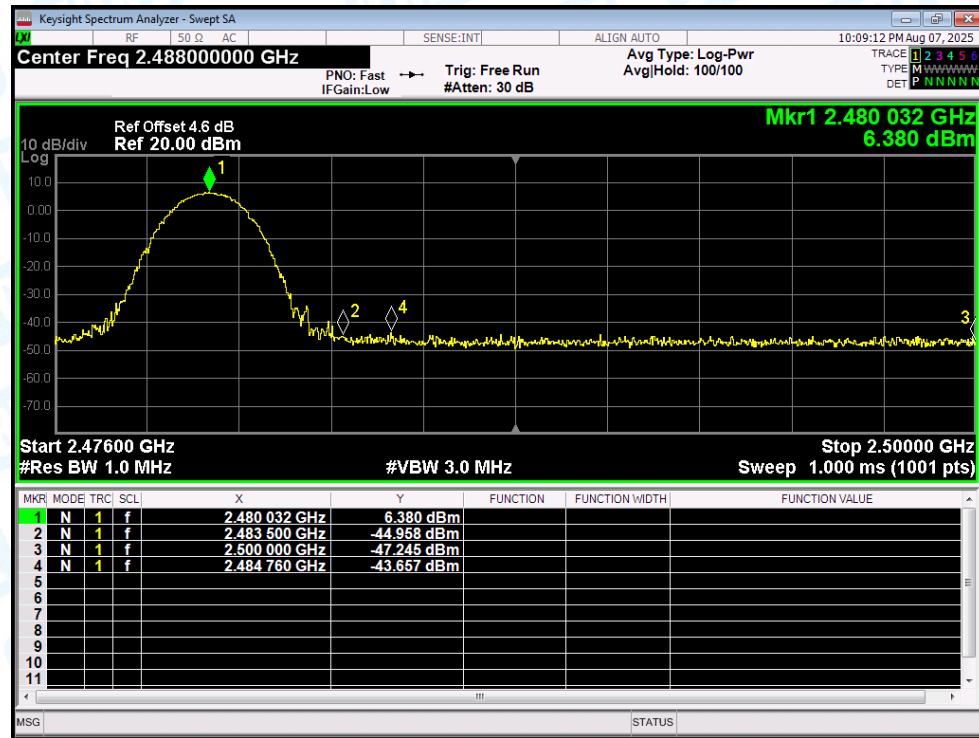
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



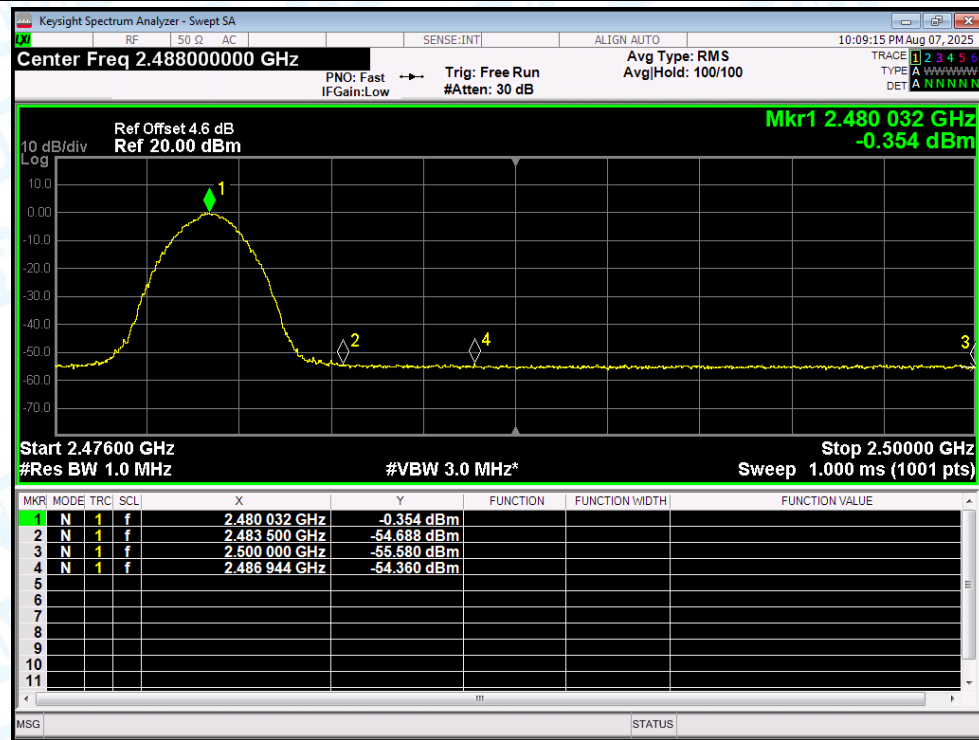
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

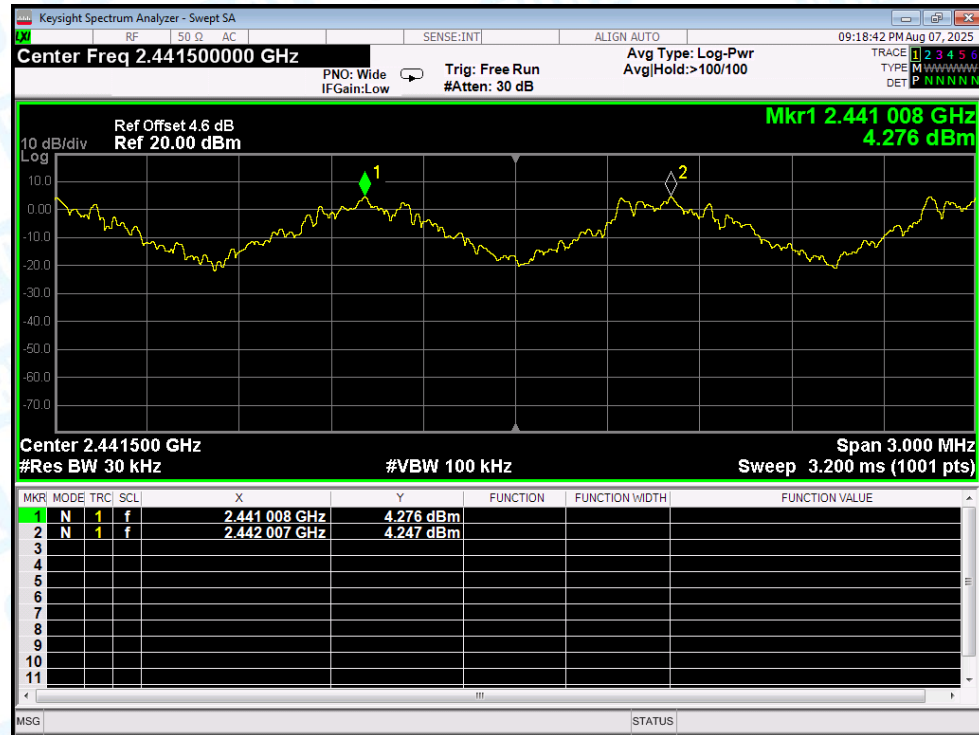


9. Carrier Frequencies Separation

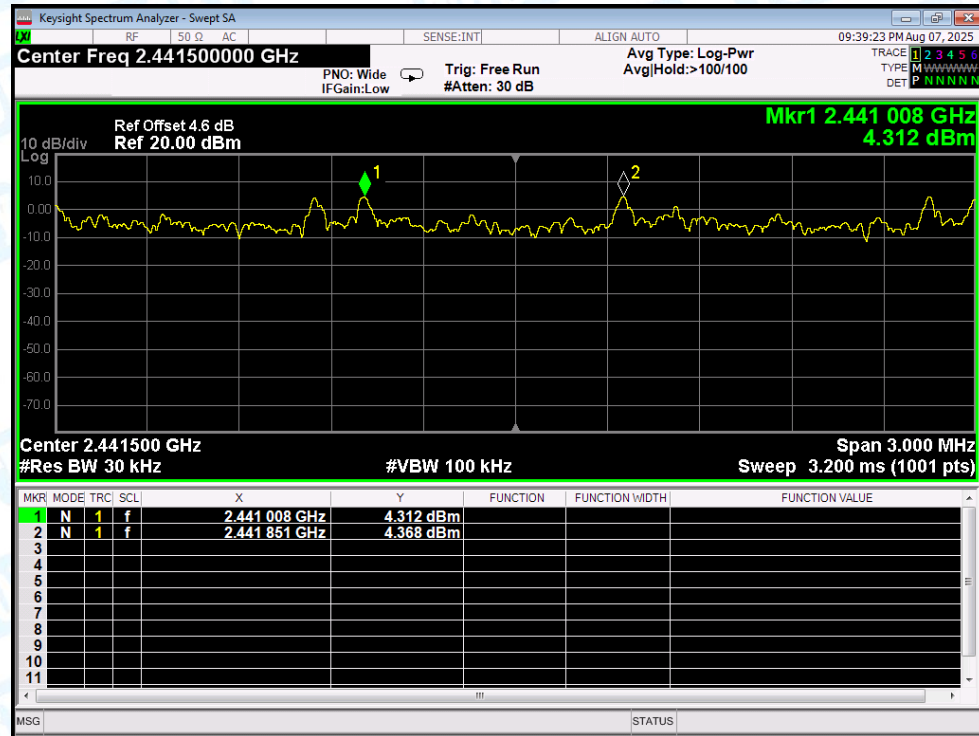
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2441.008	2442.007	0.999	0.573	Pass
NVNT	2-DH1	Ant1	2441.008	2441.851	0.843	0.827	Pass
NVNT	3-DH1	Ant1	2441.011	2442.01	0.999	0.813	Pass

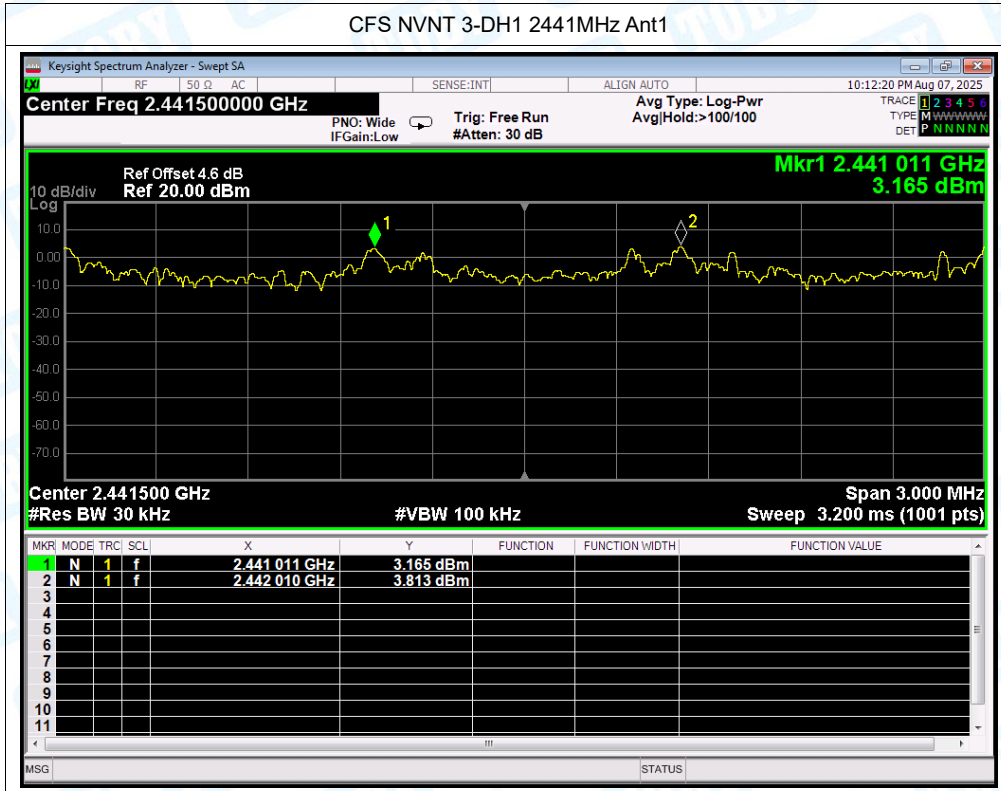
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



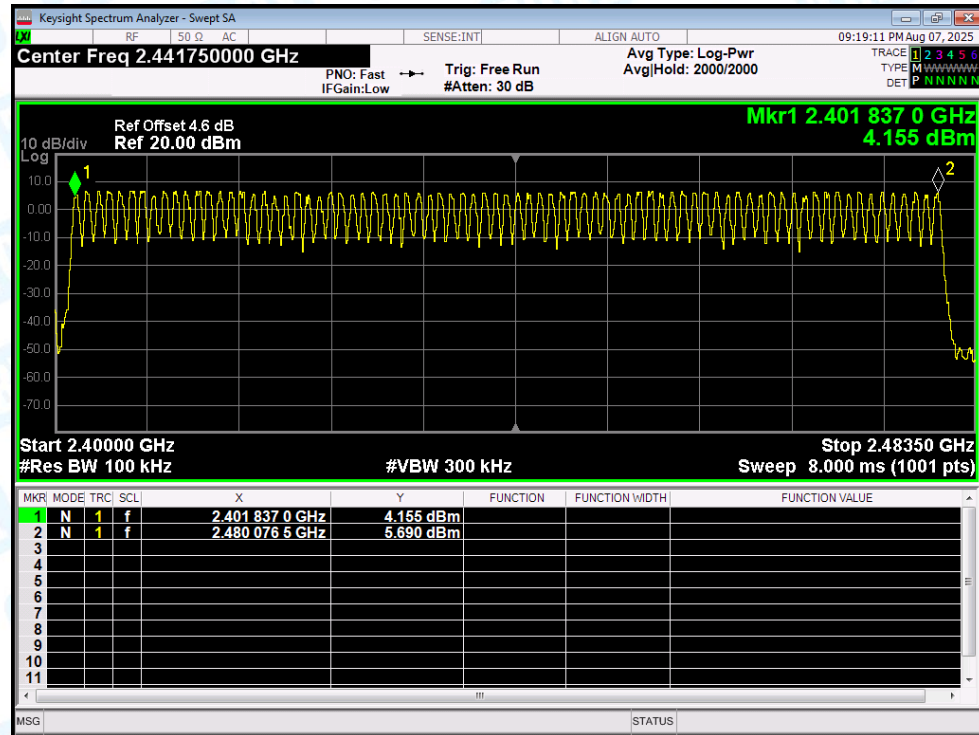


10. Number of Hopping Channel

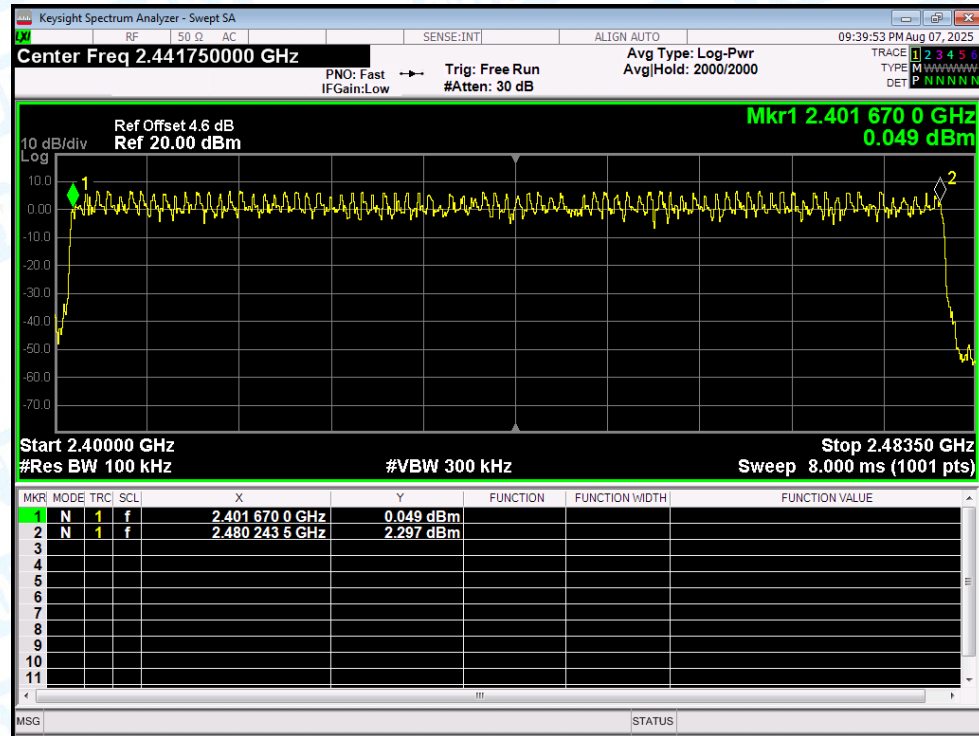
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

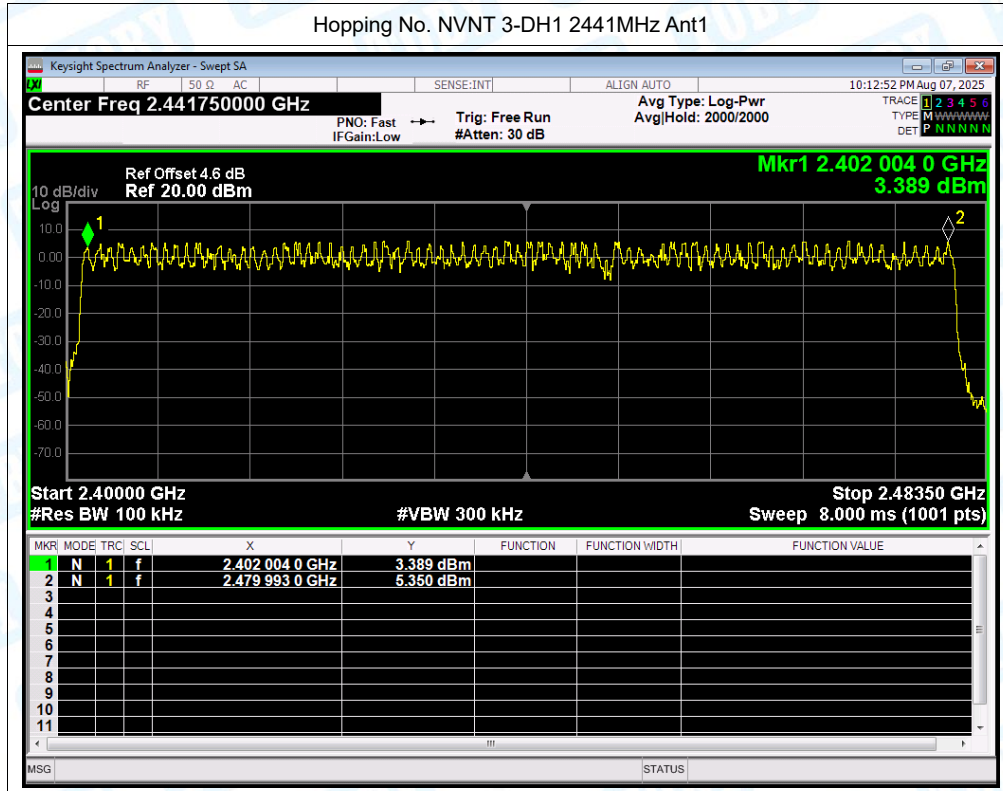
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



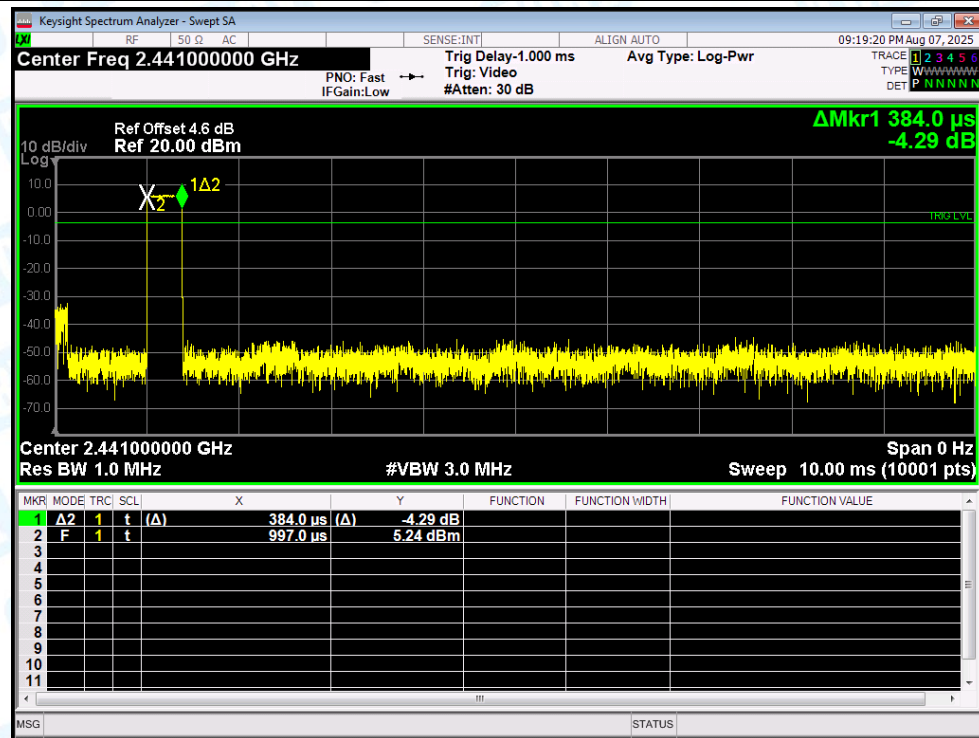


11. Dwell Time

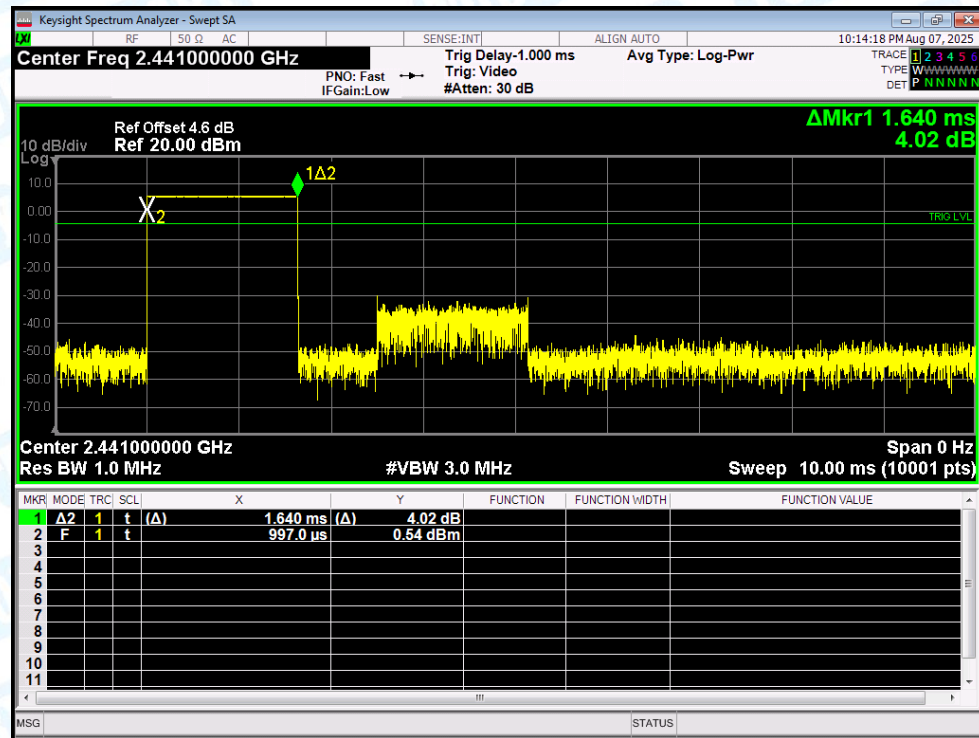
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.384	122.88	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.64	262.4	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.888	308.053	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.394	126.08	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.646	263.36	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.894	308.693	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.394	126.08	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.646	263.36	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.896	308.907	31600	400	Pass

Test Graphs

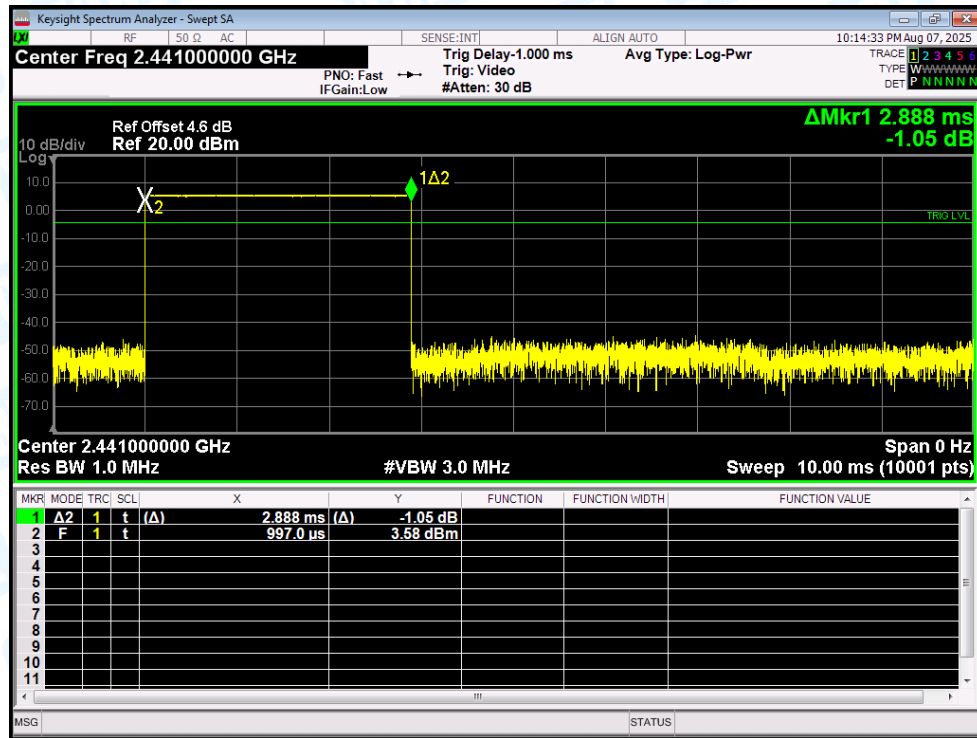
Dwell NVNT 1-DH1 2441MHz Ant1



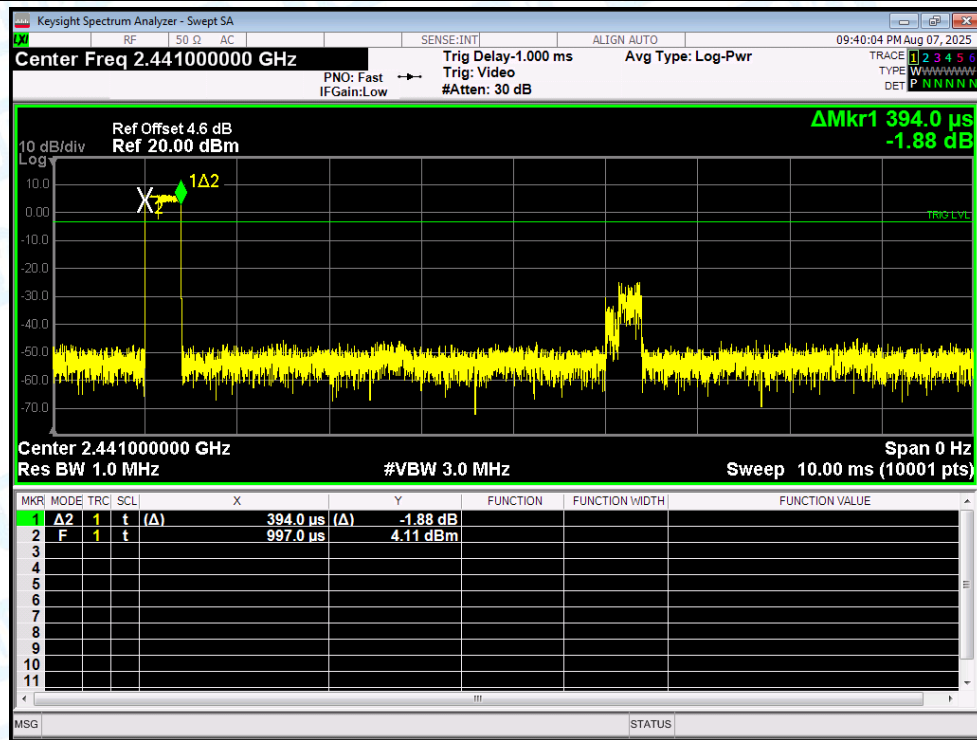
Dwell NVNT 1-DH3 2441MHz Ant1



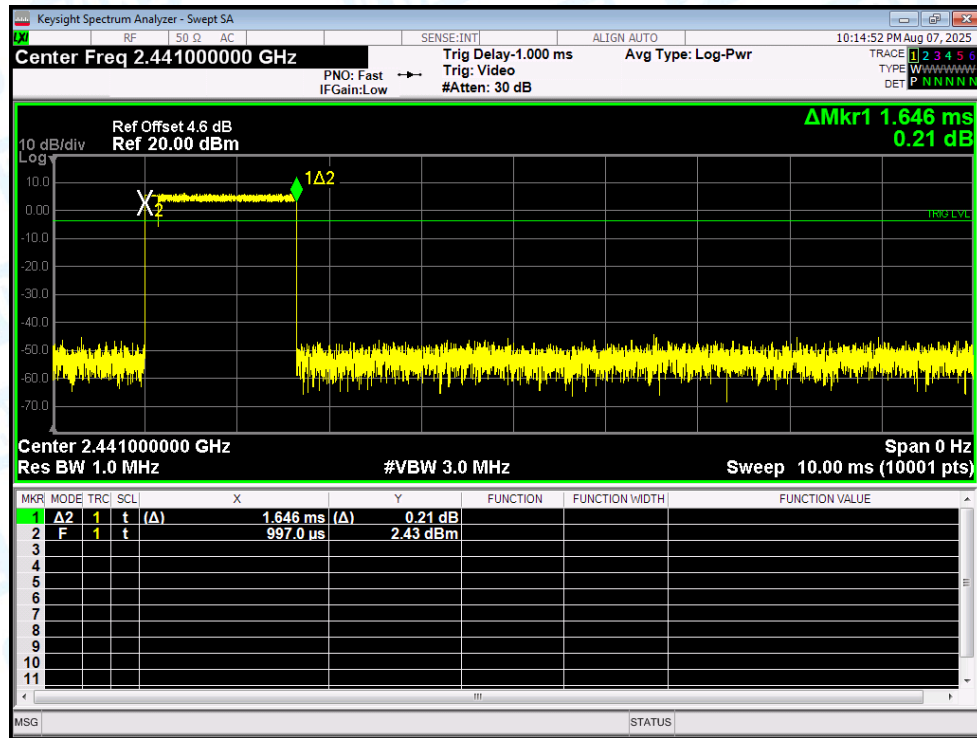
Dwell NVNT 1-DH5 2441MHz Ant1



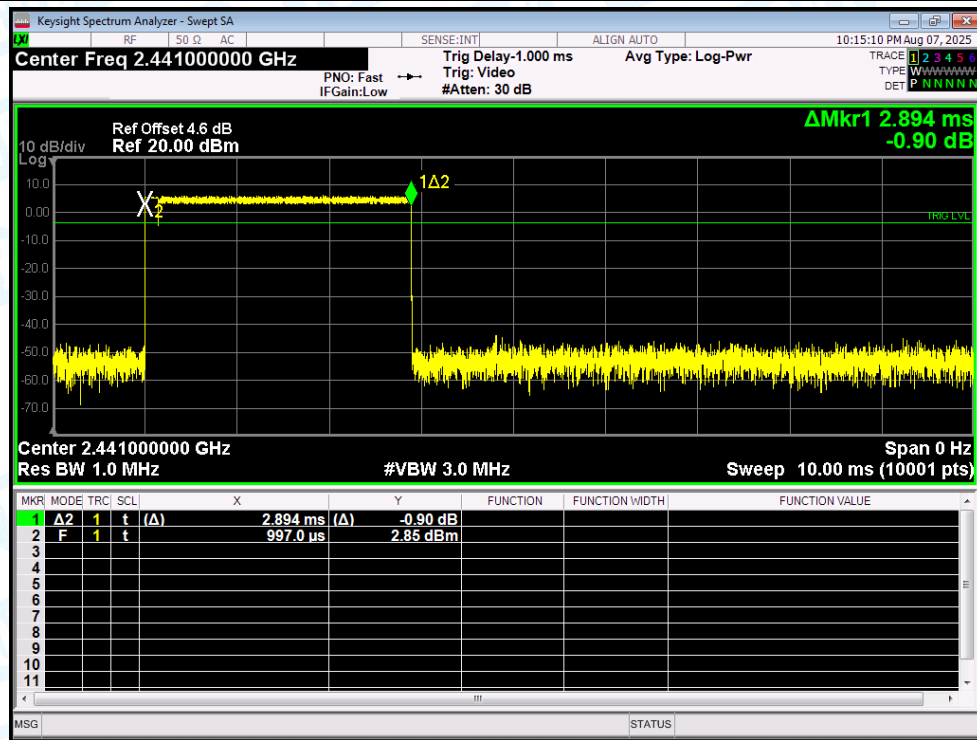
Dwell NVNT 2-DH1 2441MHz Ant1



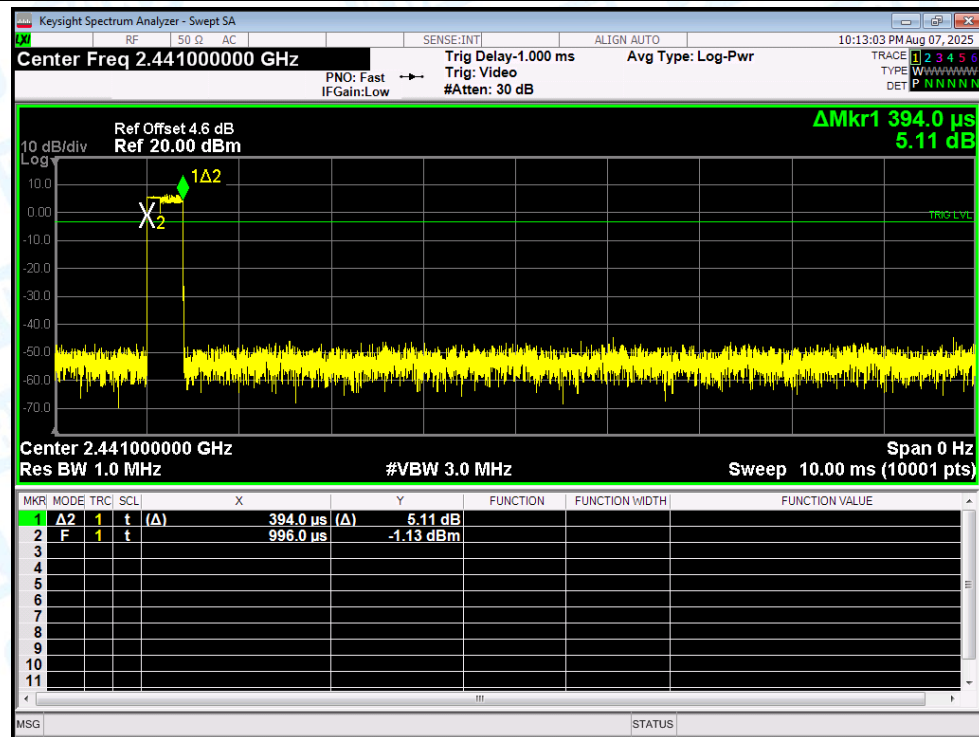
Dwell NVNT 2-DH3 2441MHz Ant1



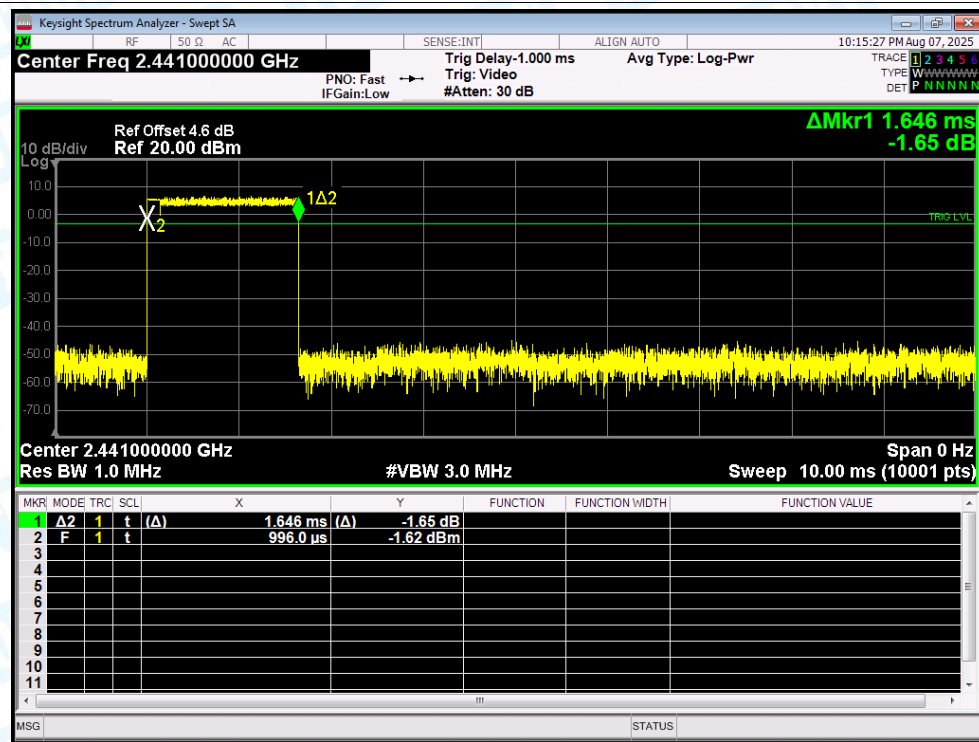
Dwell NVNT 2-DH5 2441MHz Ant1

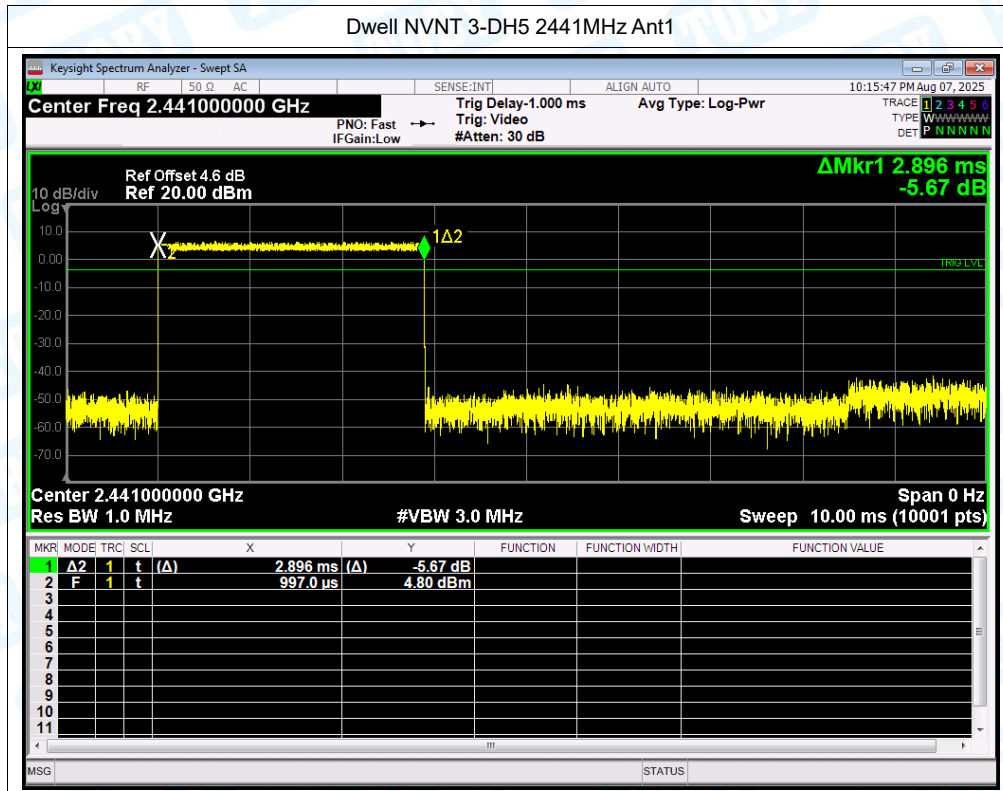


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





--- END OF REPORT ---