

Appendix A: Test Results

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Maximum Peak Conducted Output Power

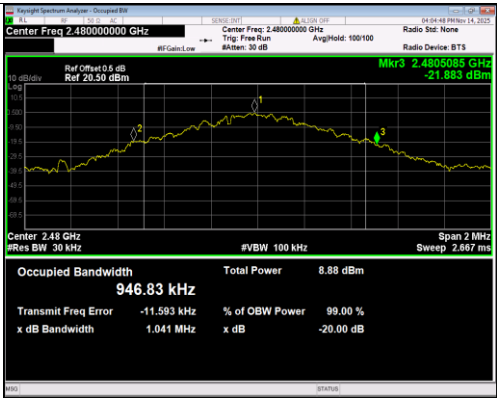
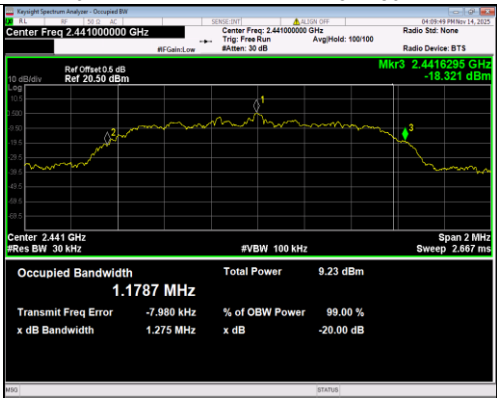
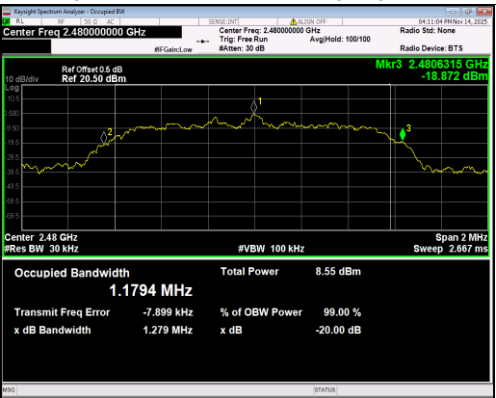
Mode	Frequency (MHz)	Conducted Power (dBm)	Duty Factor (dB)	Total Conducted Power (dBm)	Total Conducted Power (W)	Limit Conducted(dBm)	Verdict
1-DH5	2402	4.25	0	4.25	0.00266	30	Pass
1-DH5	2441	3.93	0	3.93	0.00247	30	Pass
1-DH5	2480	3.32	0	3.32	0.00215	30	Pass
2-DH5	2402	4.79	0	4.79	0.00301	30	Pass
2-DH5	2441	4.43	0	4.43	0.00277	30	Pass
2-DH5	2480	3.86	0	3.86	0.00243	30	Pass
3-DH5	2402	5.25	0	5.25	0.00335	30	Pass
3-DH5	2441	4.91	0	4.91	0.0031	30	Pass
3-DH5	2480	4.29	0	4.29	0.00269	30	Pass

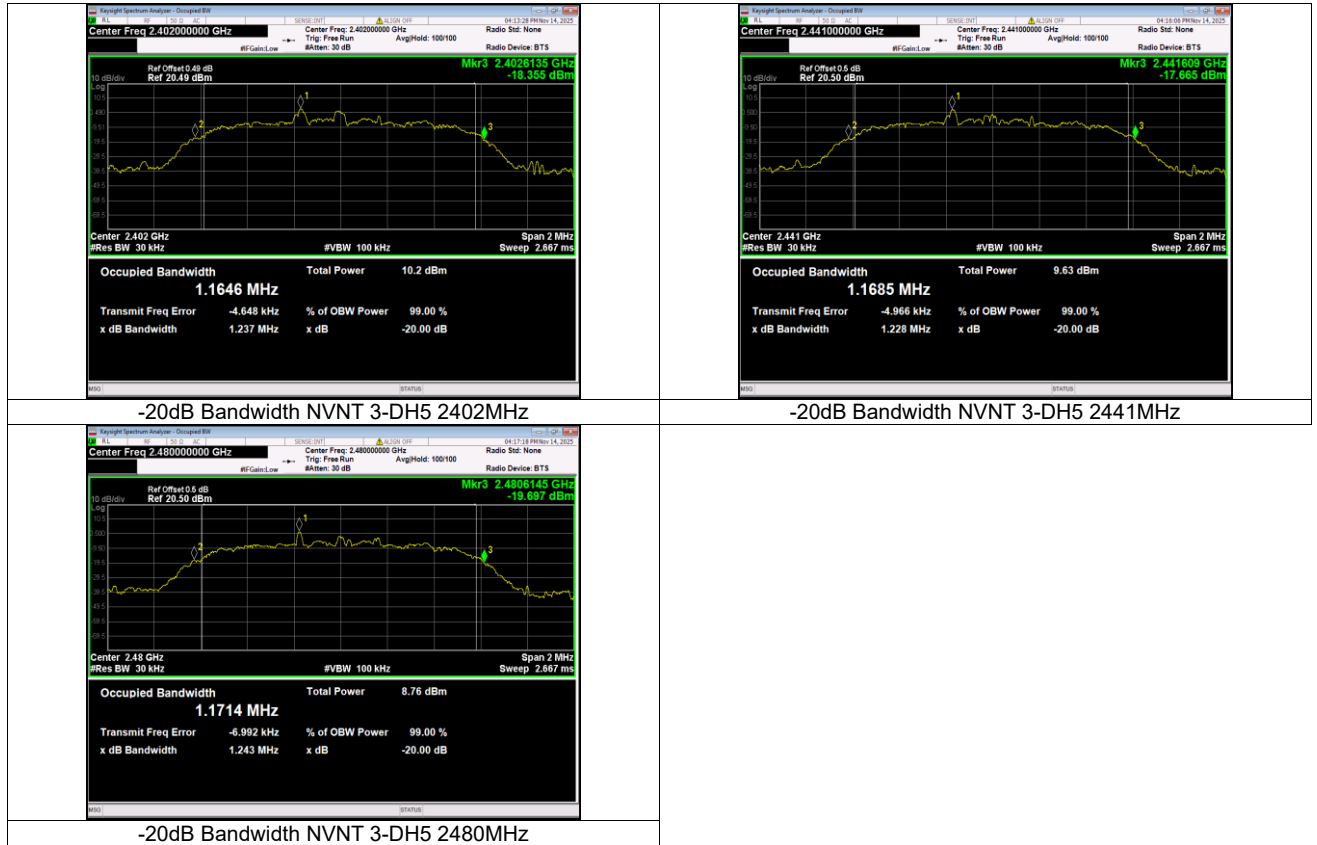
Note:

- 1) The cable loss is taken into account in results.
- 2) Antenna gain(G): 2.85 dBi.

-20dB Bandwidth

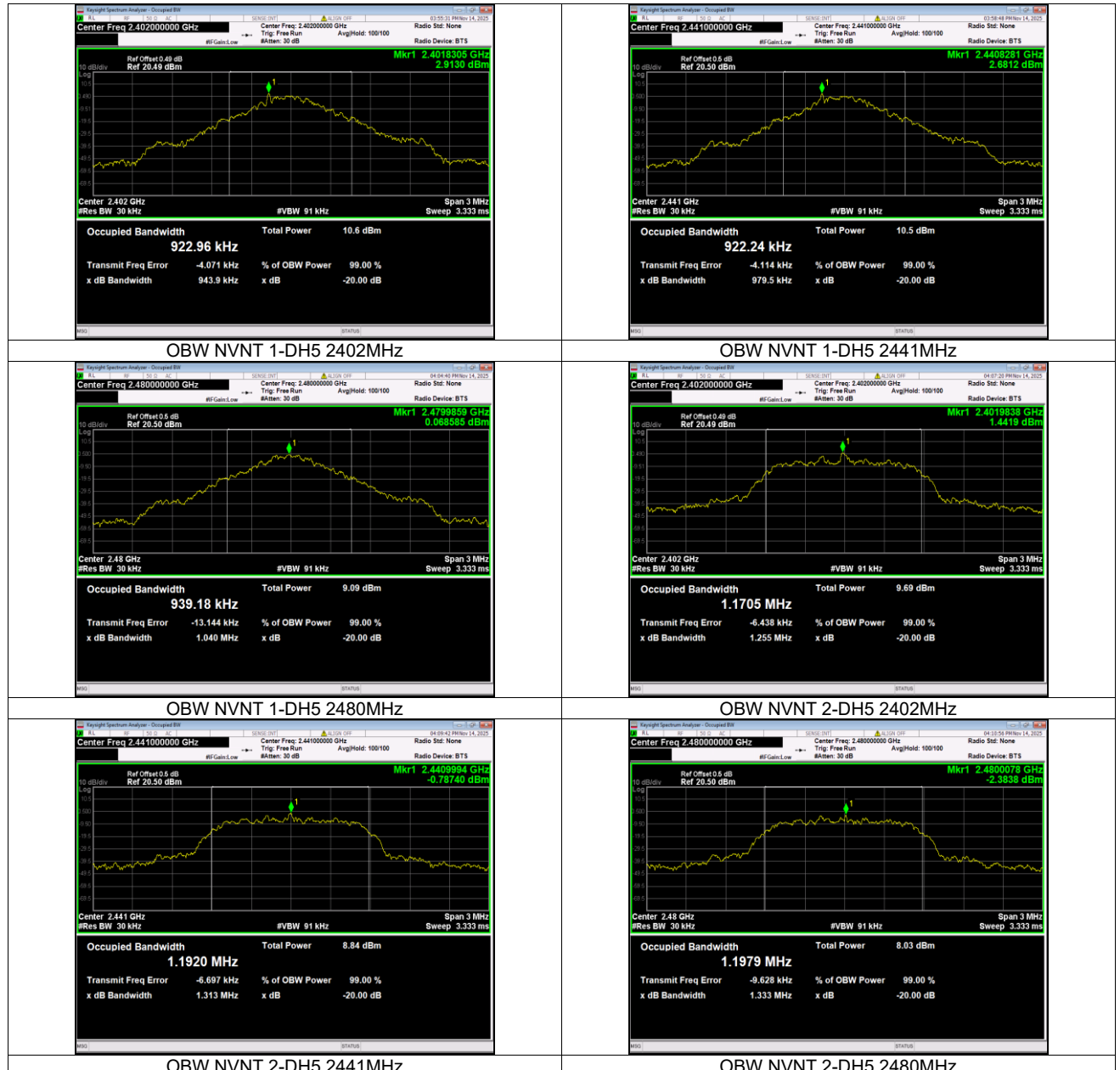
Mode	Frequency (MHz)	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
1-DH5	2402	1.028	0	Pass
1-DH5	2441	0.9917	0	Pass
1-DH5	2480	1.041	0	Pass
2-DH5	2402	1.324	0	Pass
2-DH5	2441	1.275	0	Pass
2-DH5	2480	1.279	0	Pass
3-DH5	2402	1.237	0	Pass
3-DH5	2441	1.228	0	Pass
3-DH5	2480	1.243	0	Pass

 -20dB Bandwidth NVNT 1-DH5 2402MHz	 -20dB Bandwidth NVNT 1-DH5 2441MHz
 -20dB Bandwidth NVNT 1-DH5 2480MHz	 -20dB Bandwidth NVNT 2-DH5 2402MHz
 -20dB Bandwidth NVNT 2-DH5 2441MHz	 -20dB Bandwidth NVNT 2-DH5 2480MHz



Occupied Channel Bandwidth

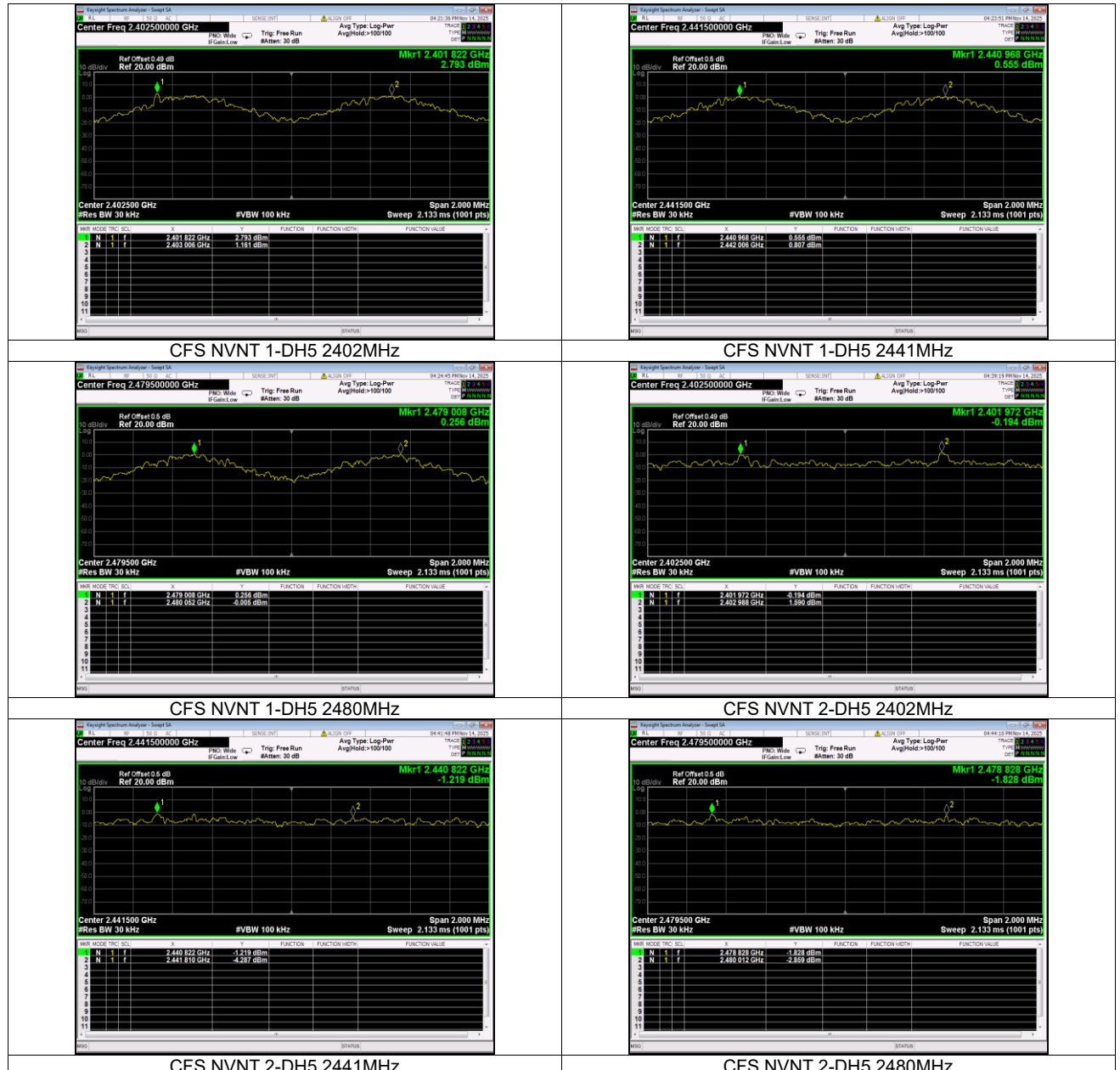
Mode	Frequency (MHz)	99% OBW (MHz)
1-DH5	2402	0.92296
1-DH5	2441	0.92224
1-DH5	2480	0.93918
2-DH5	2402	1.1705
2-DH5	2441	1.192
2-DH5	2480	1.1979
3-DH5	2402	1.1838
3-DH5	2441	1.179
3-DH5	2480	1.1879

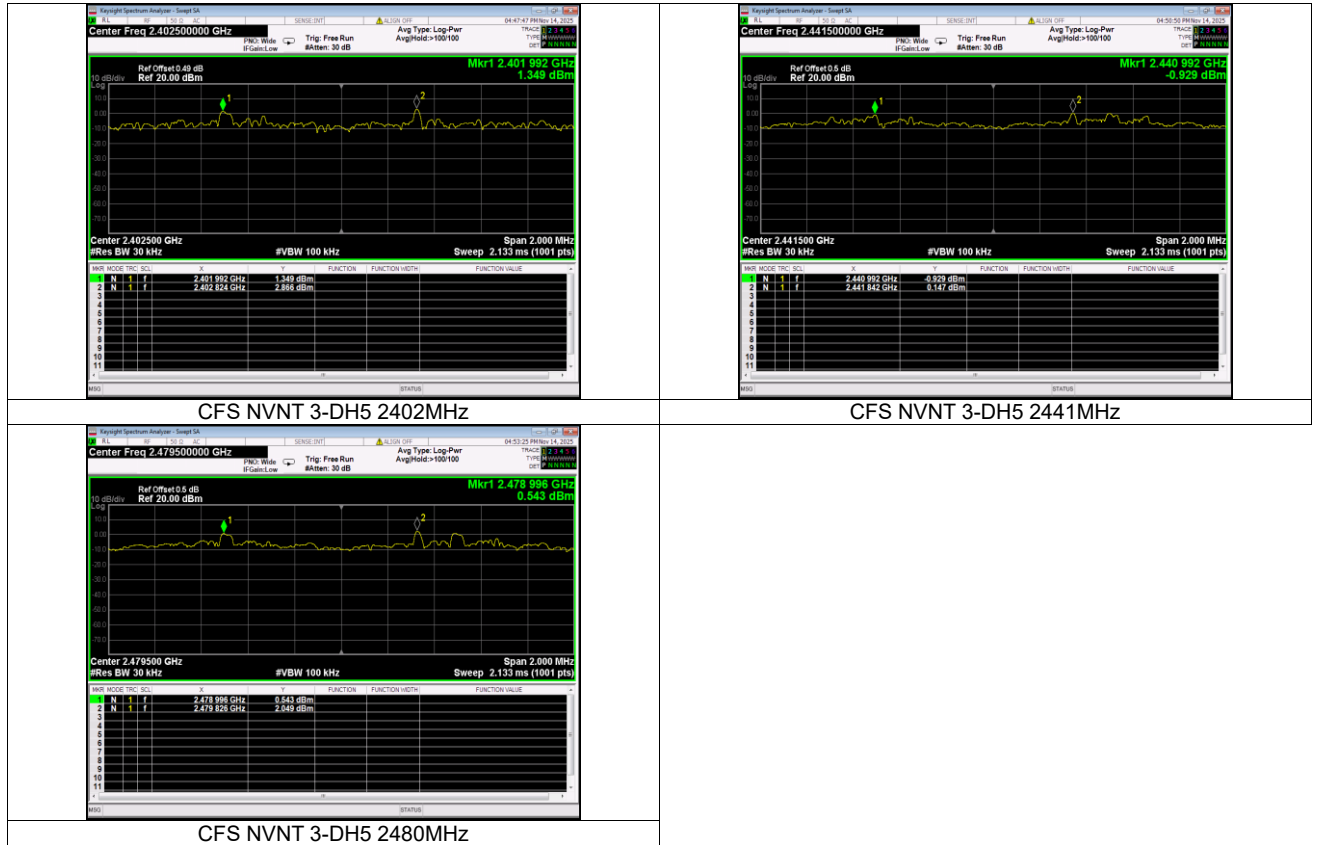




Carrier Frequencies Separation

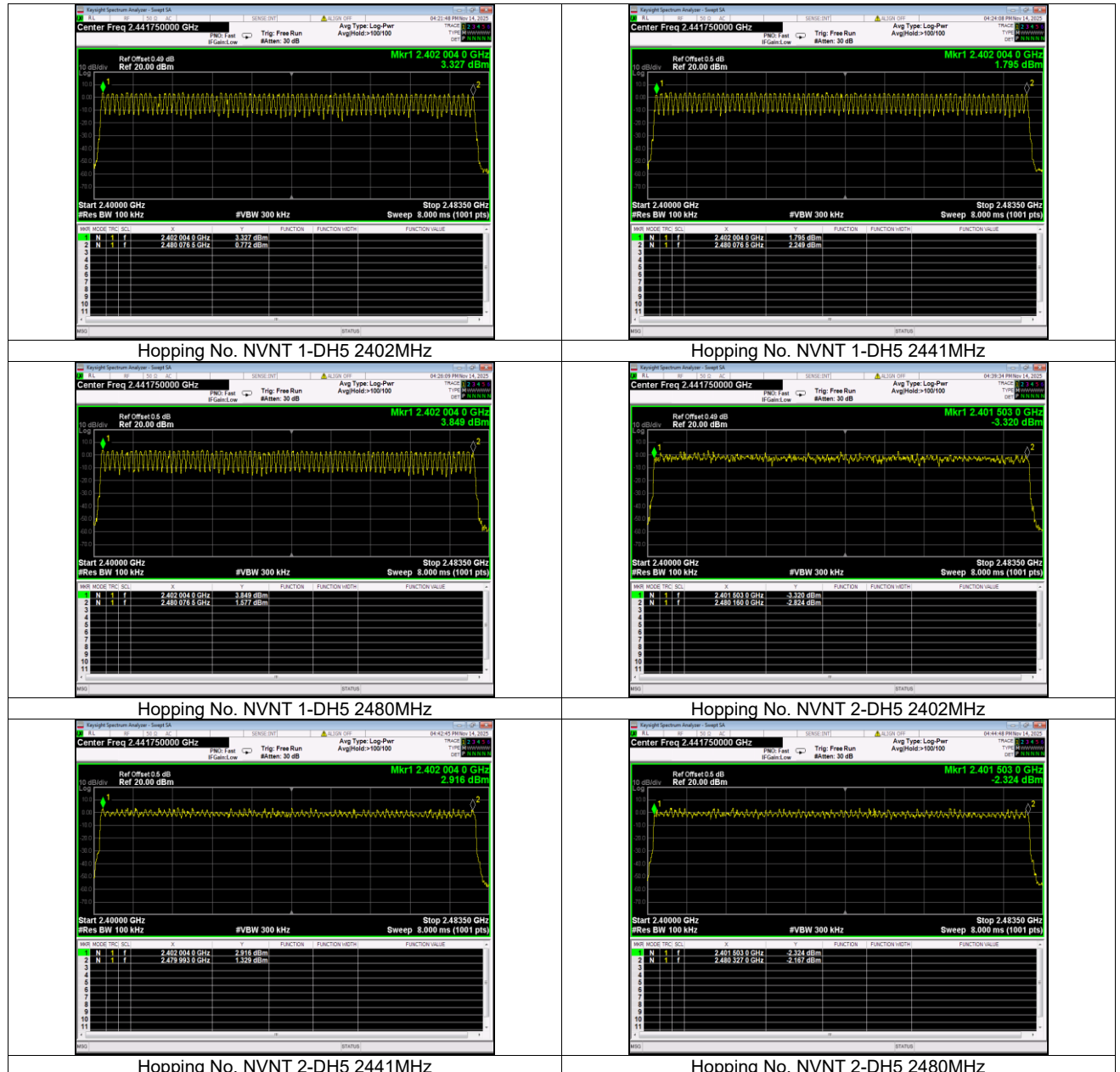
Mode	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
1-DH5	2401.822	2403.006	1.184	0.685	Pass
1-DH5	2440.968	2442.006	1.038	0.661	Pass
1-DH5	2479.008	2480.052	1.044	0.694	Pass
2-DH5	2401.972	2402.988	1.016	0.883	Pass
2-DH5	2440.822	2441.81	0.988	0.85	Pass
2-DH5	2478.828	2480.012	1.184	0.853	Pass
3-DH5	2401.992	2402.824	0.832	0.825	Pass
3-DH5	2440.992	2441.842	0.85	0.819	Pass
3-DH5	2478.996	2479.826	0.83	0.829	Pass

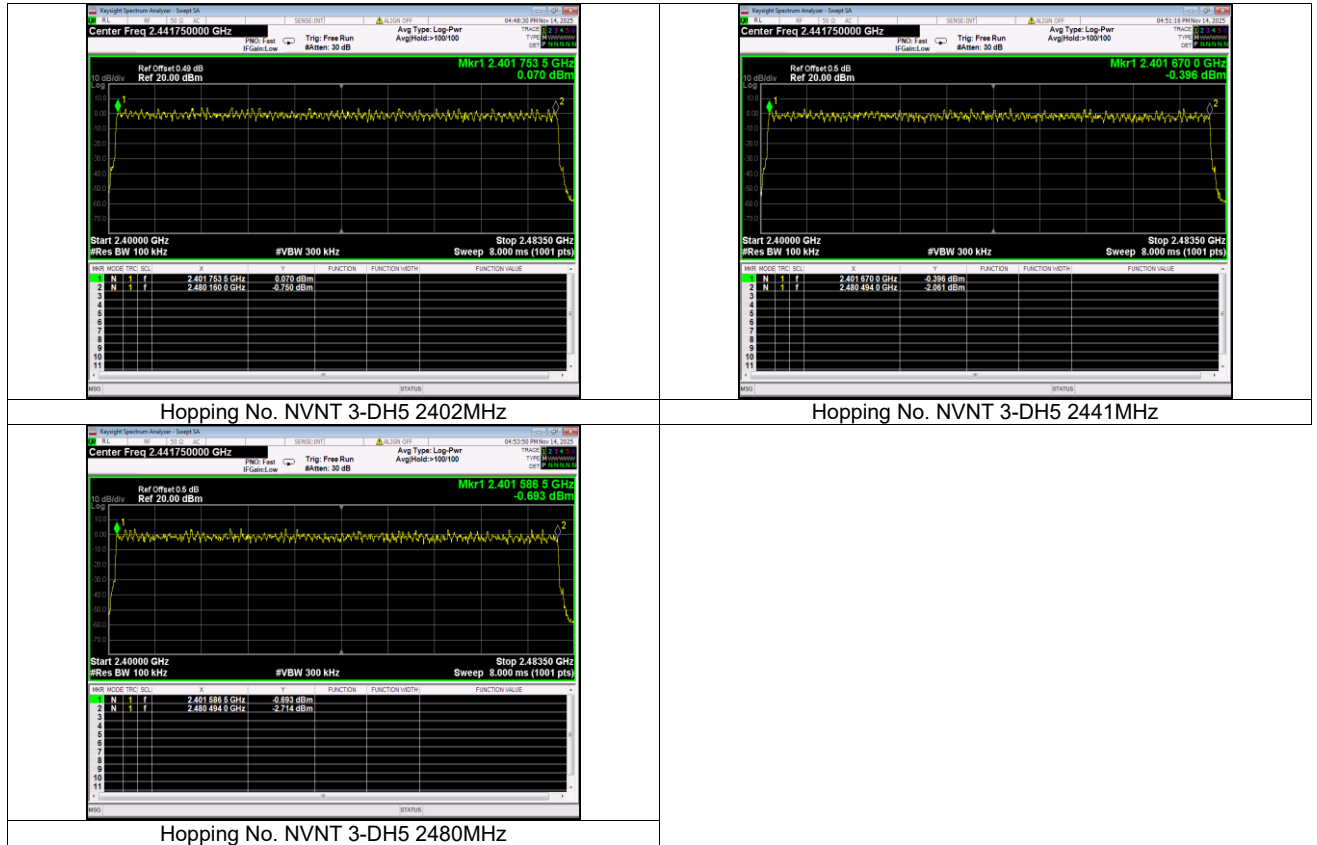




Number of Hopping Channel

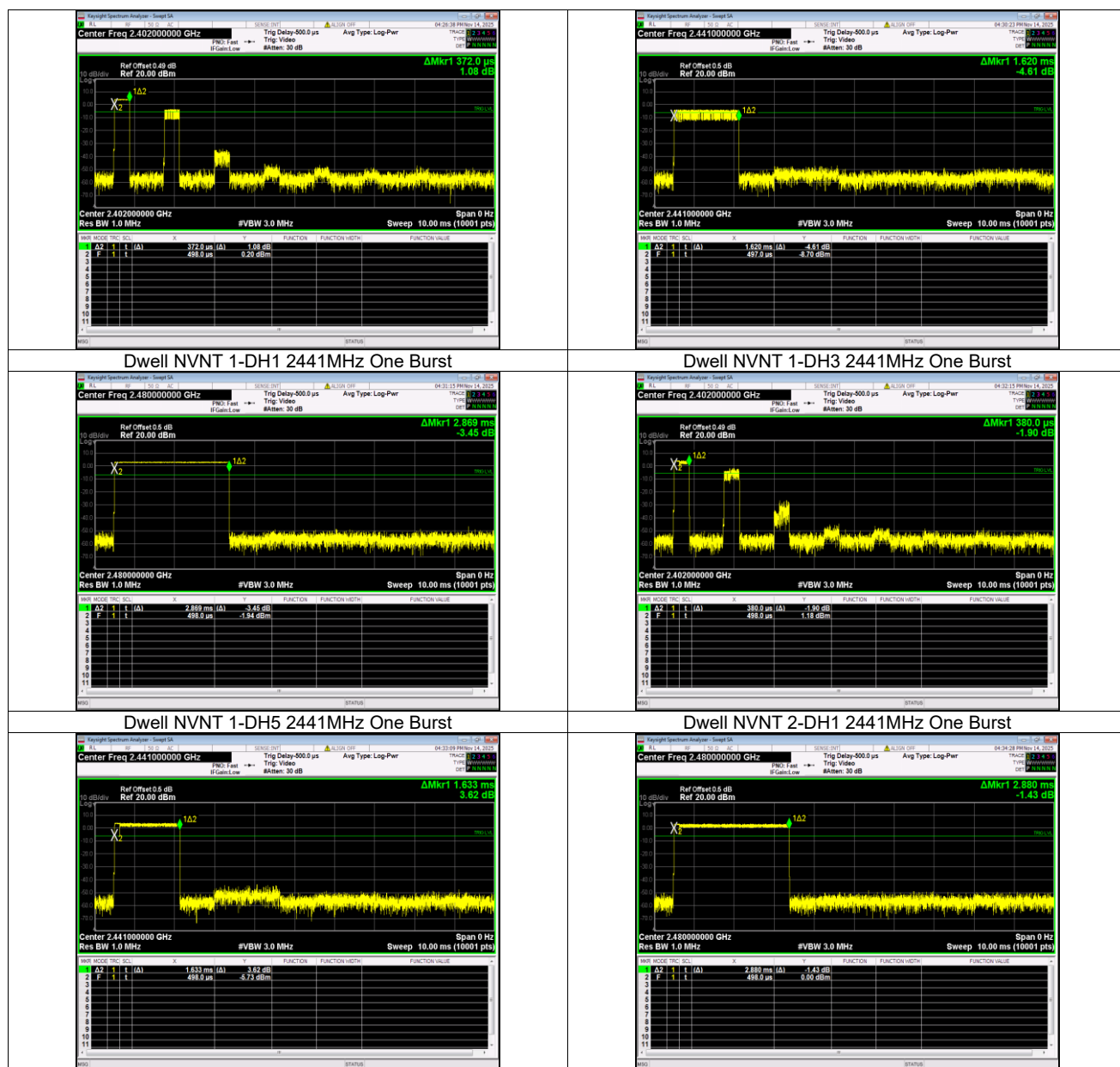
Mode	Hopping Number	Limit	Verdict
1-DH5	79	15	Pass
1-DH5	79	15	Pass
1-DH5	79	15	Pass
2-DH5	79	15	Pass
2-DH5	79	15	Pass
2-DH5	79	15	Pass
3-DH5	79	15	Pass
3-DH5	79	15	Pass
3-DH5	79	15	Pass

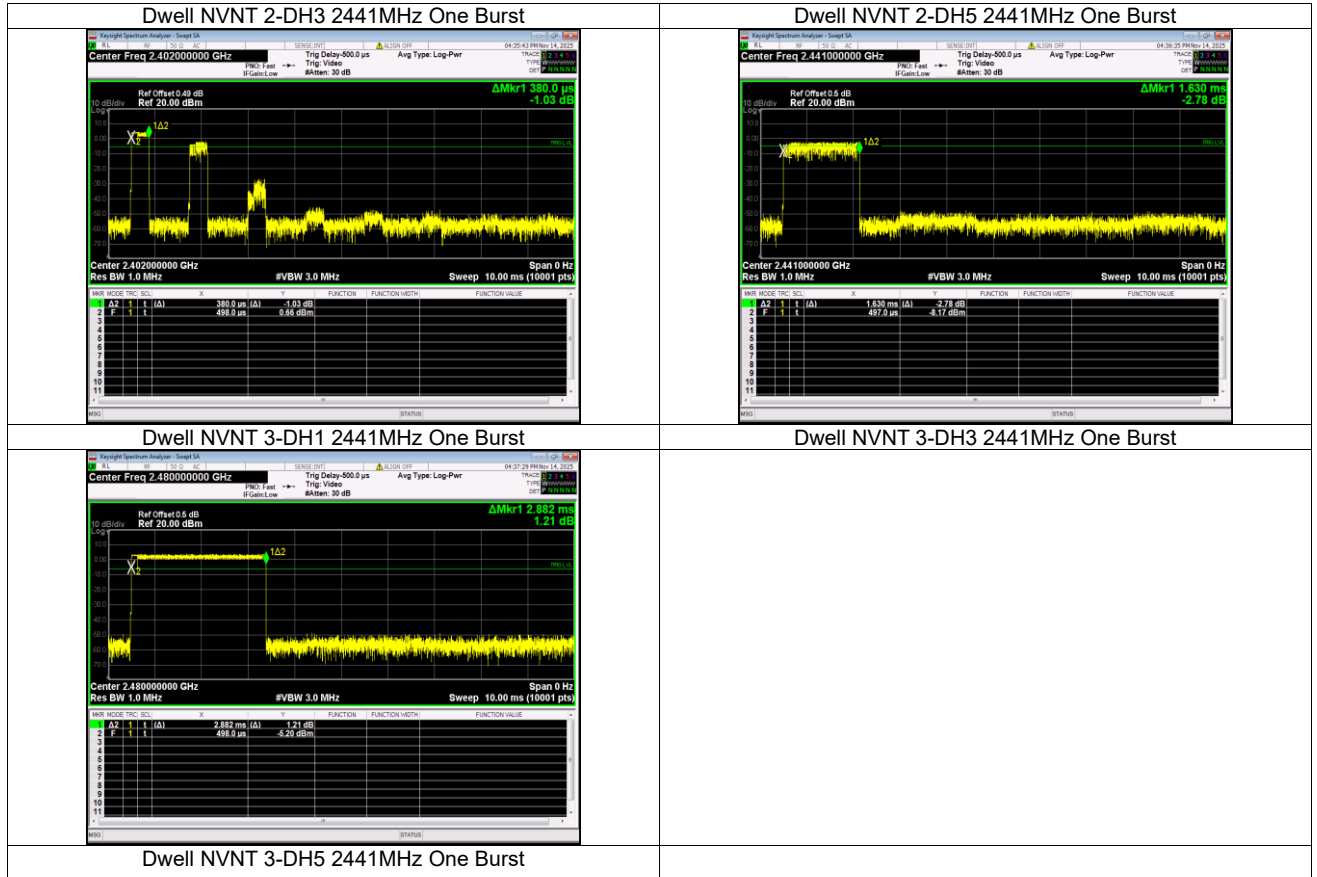




Mode	Frequency (MHz)	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
1-DH1	2402	0.372	119.04	31600	400	Pass
1-DH3	2441	1.62	259.20	31600	400	Pass
1-DH5	2480	2.869	305.84	31600	400	Pass
2-DH1	2402	0.38	121.60	31600	400	Pass
2-DH3	2441	1.633	261.28	31600	400	Pass
2-DH5	2480	2.88	307.01	31600	400	Pass
3-DH1	2402	0.38	121.60	31600	400	Pass
3-DH3	2441	1.63	260.80	31600	400	Pass
3-DH5	2480	2.882	307.22	31600	400	Pass

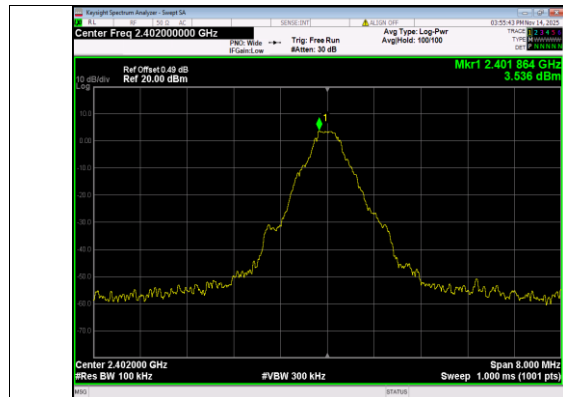
1. DH1 Packet permit maximum $1600 / 79 / 2 = 10.12$ hops per second in each channel (1 time slot RX, 1 time slot TX). So the dwell time is the time duration of the pulse times $10.12 \times 31.6 = 320$ within 31.6 seconds.
2. DH3 Packet permit maximum $1600 / 79 / 4 = 5.06$ hops per second in each channel (3 time slots RX, 1 time slot TX). Sothe dwell time is the time duration of the pulse times $5.06 \times 31.6 = 160$ within 31.6 seconds
3. DH5 Packet permit maximum $1600 / 79 / 6 = 3.37$ hops per second in each channel (5 time slots RX, 1 time slot TX). Sothe dwell time is the time duration of the pulse times $3.37 \times 31.6 = 106.6$ within 31.6 seconds.



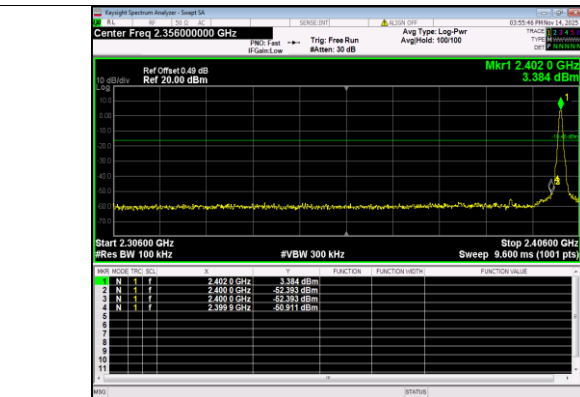


Band Edge

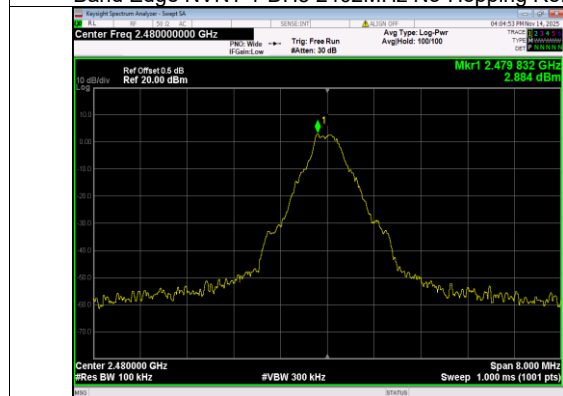
Mode	Frequency (MHz)	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
1-DH5	2402	No-Hopping	-54.45	-20	Pass
1-DH5	2480	No-Hopping	-56.63	-20	Pass
2-DH5	2402	No-Hopping	-53.03	-20	Pass
2-DH5	2480	No-Hopping	-57.71	-20	Pass
3-DH5	2402	No-Hopping	-54.68	-20	Pass
3-DH5	2480	No-Hopping	-58.17	-20	Pass



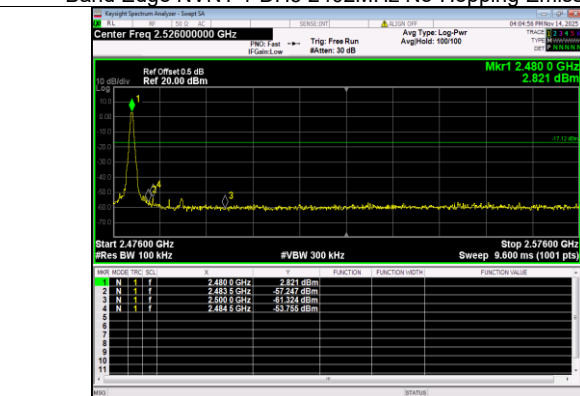
Band Edge NVNT 1-DH5 2402MHz No-Hopping Ref



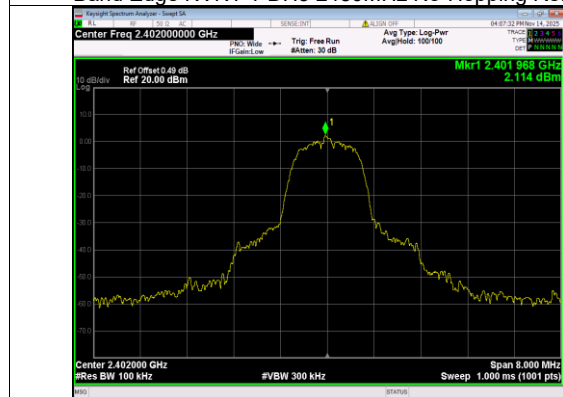
Band Edge NVNT 1-DH5 2402MHz No-Hopping Emission



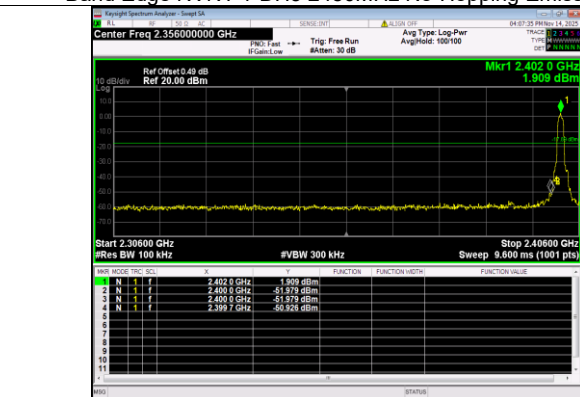
Band Edge NVNT 1-DH5 2480MHz No-Hopping Ref



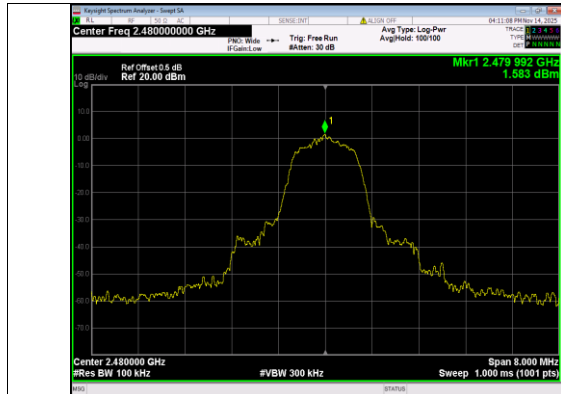
Band Edge NVNT 1-DH5 2480MHz No-Hopping Emission



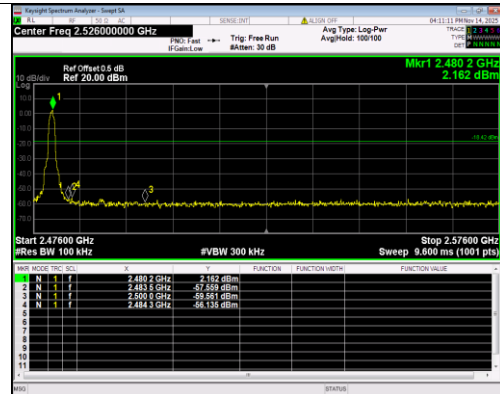
Band Edge NVNT 2-DH5 2402MHz No-Hopping Ref



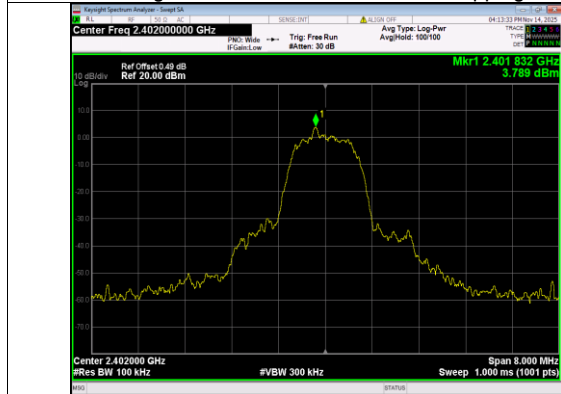
Band Edge NVNT 2-DH5 2402MHz No-Hopping Emission



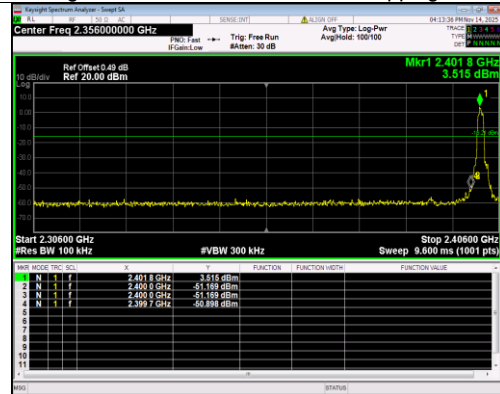
Band Edge NVNT 2-DH5 2480MHz No-Hopping Ref



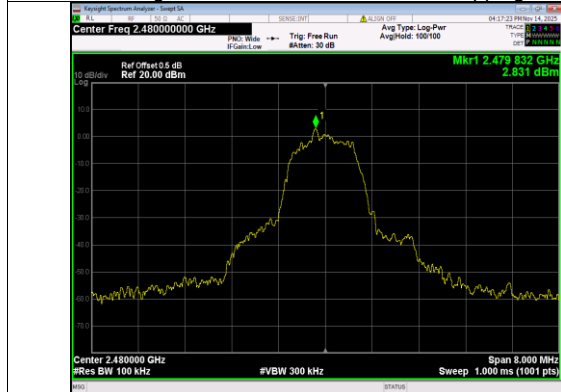
Band Edge NVNT 2-DH5 2480MHz No-Hopping Emission



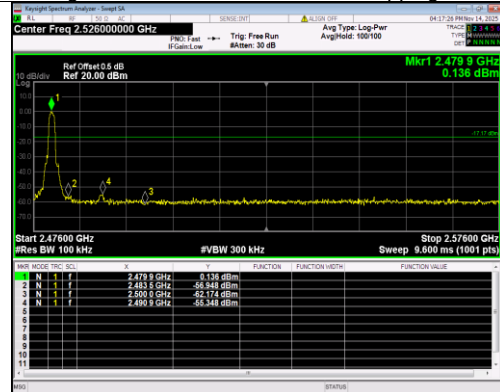
Band Edge NVNT 3-DH5 2402MHz No-Hopping Ref



Band Edge NVNT 3-DH5 2402MHz No-Hopping Emission



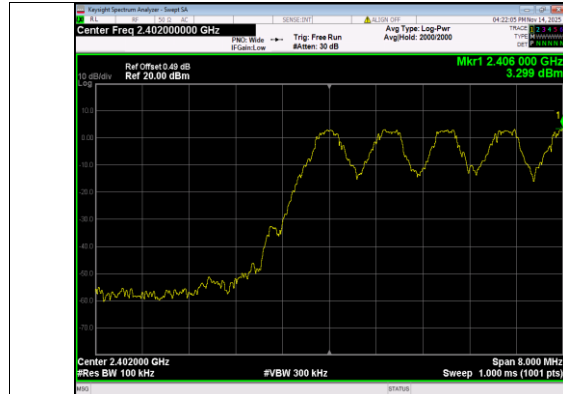
Band Edge NVNT 3-DH5 2480MHz No-Hopping Ref



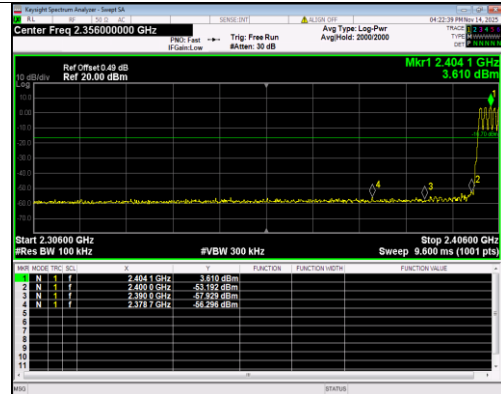
Band Edge NVNT 3-DH5 2480MHz No-Hopping Emission

Band Edge(Hopping)

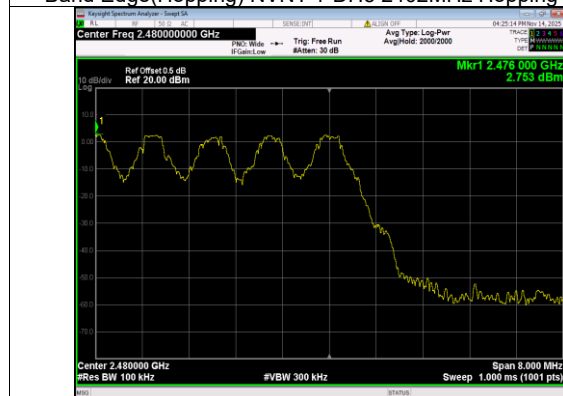
Mode	Frequency (MHz)	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
1-DH5	2402	Hopping	-59.59	-20	Pass
1-DH5	2480	Hopping	-54.65	-20	Pass
2-DH5	2402	Hopping	-60.1	-20	Pass
2-DH5	2480	Hopping	-55.06	-20	Pass
3-DH5	2402	Hopping	-58.8	-20	Pass
3-DH5	2480	Hopping	-56.76	-20	Pass



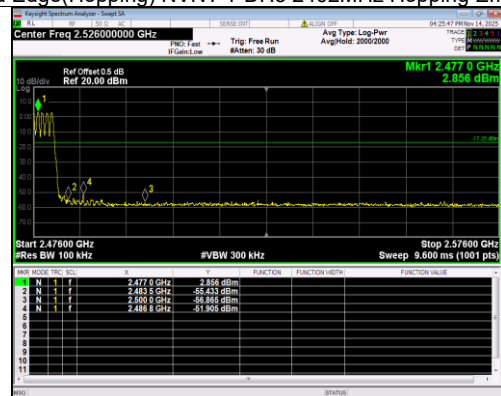
Band Edge(Hopping) NVNT 1-DH5 2402MHz Hopping Ref



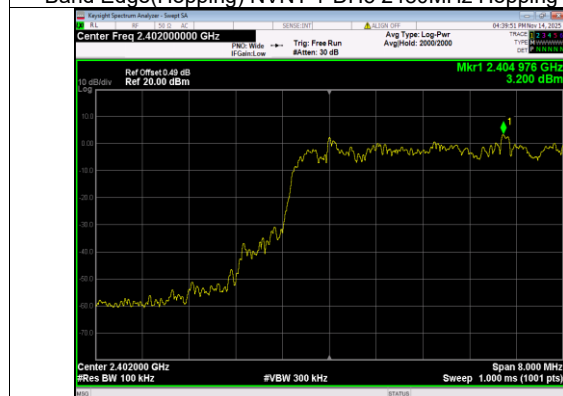
Band Edge(Hopping) NVNT 1-DH5 2402MHz Hopping Emission



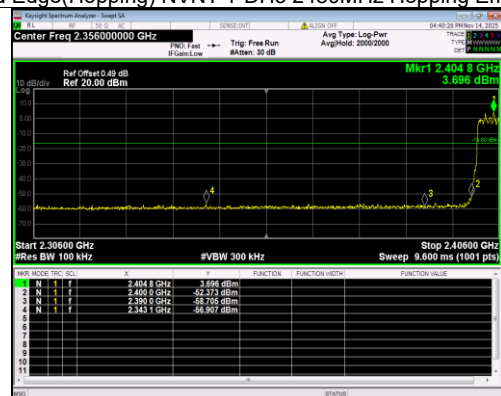
Band Edge(Hopping) NVNT 1-DH5 2480MHz Hopping Ref



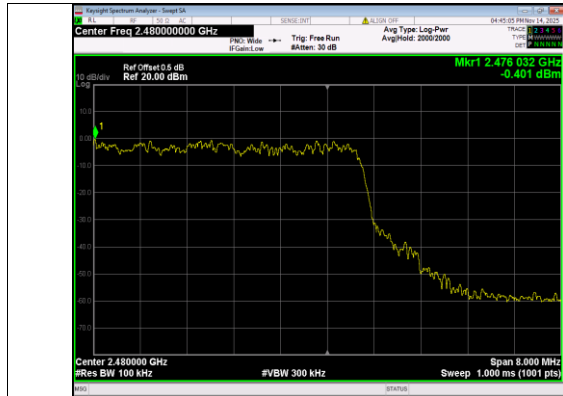
Band Edge(Hopping) NVNT 1-DH5 2480MHz Hopping Emission



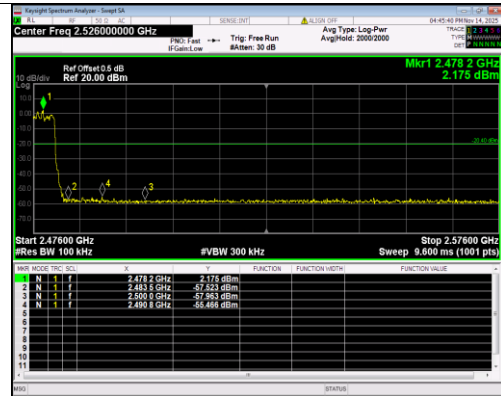
Band Edge(Hopping) NVNT 2-DH5 2402MHz Hopping Ref



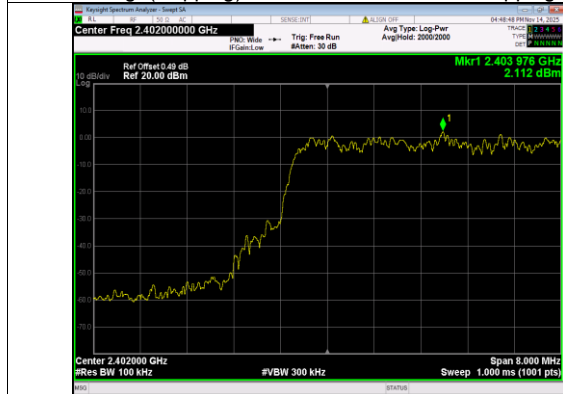
Band Edge(Hopping) NVNT 2-DH5 2402MHz Hopping Emission



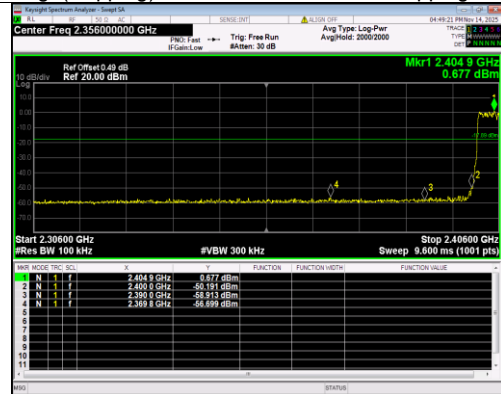
Band Edge(Hopping) NVNT 2-DH5 2480MHz Hopping Ref



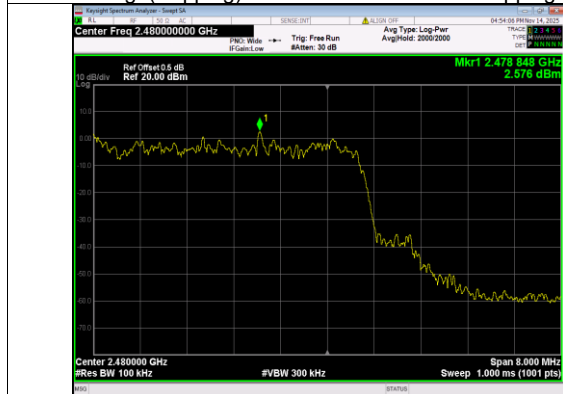
Band Edge(Hopping) NVNT 2-DH5 2480MHz Hopping Emission



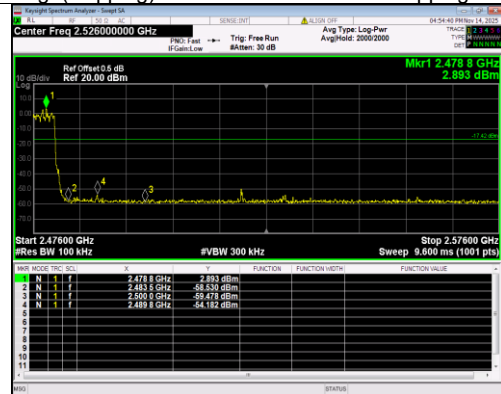
Band Edge(Hopping) NVNT 3-DH5 2402MHz Hopping Ref



Band Edge(Hopping) NVNT 3-DH5 2402MHz Hopping Emission



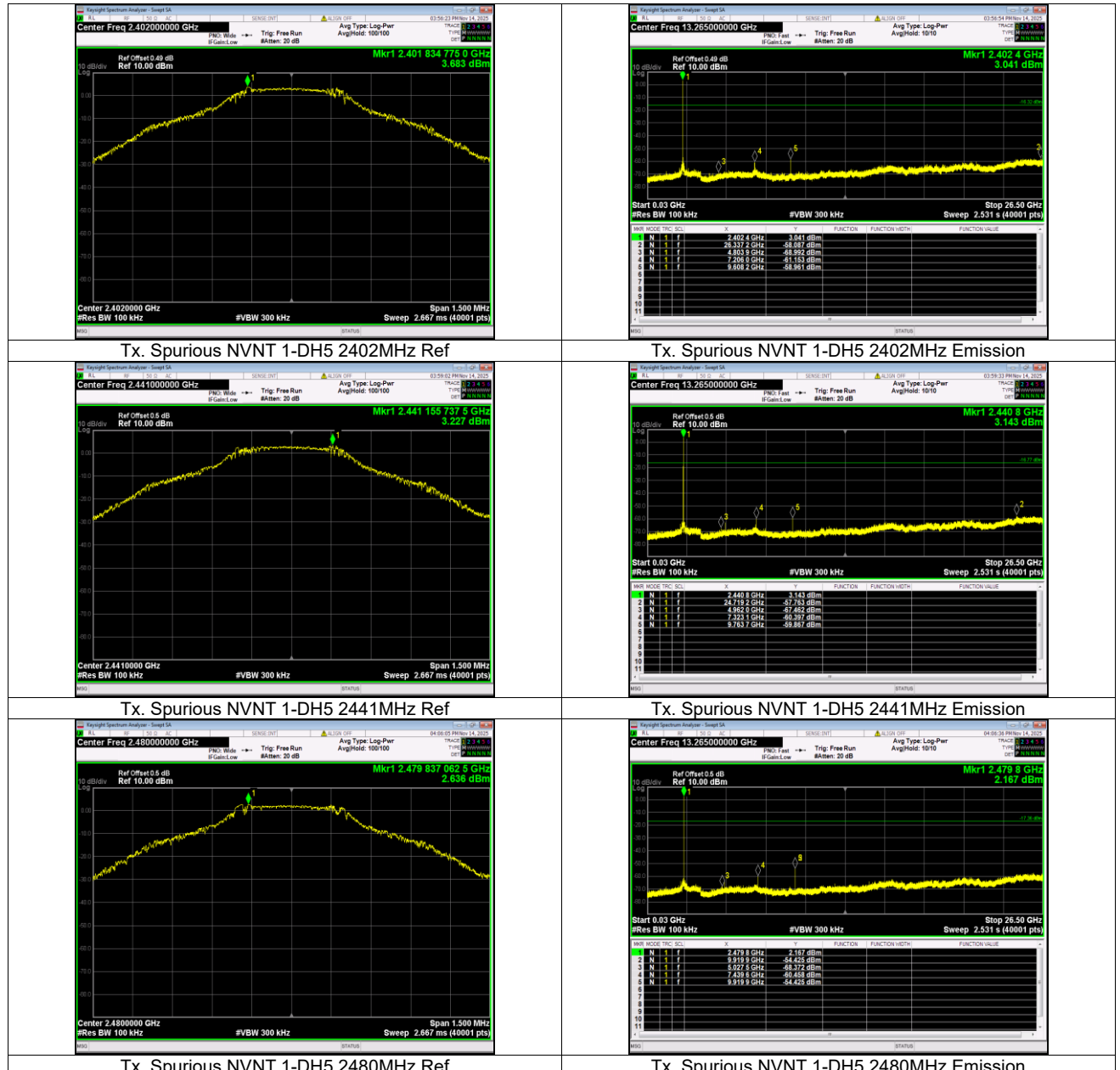
Band Edge(Hopping) NVNT 3-DH5 2480MHz Hopping Ref

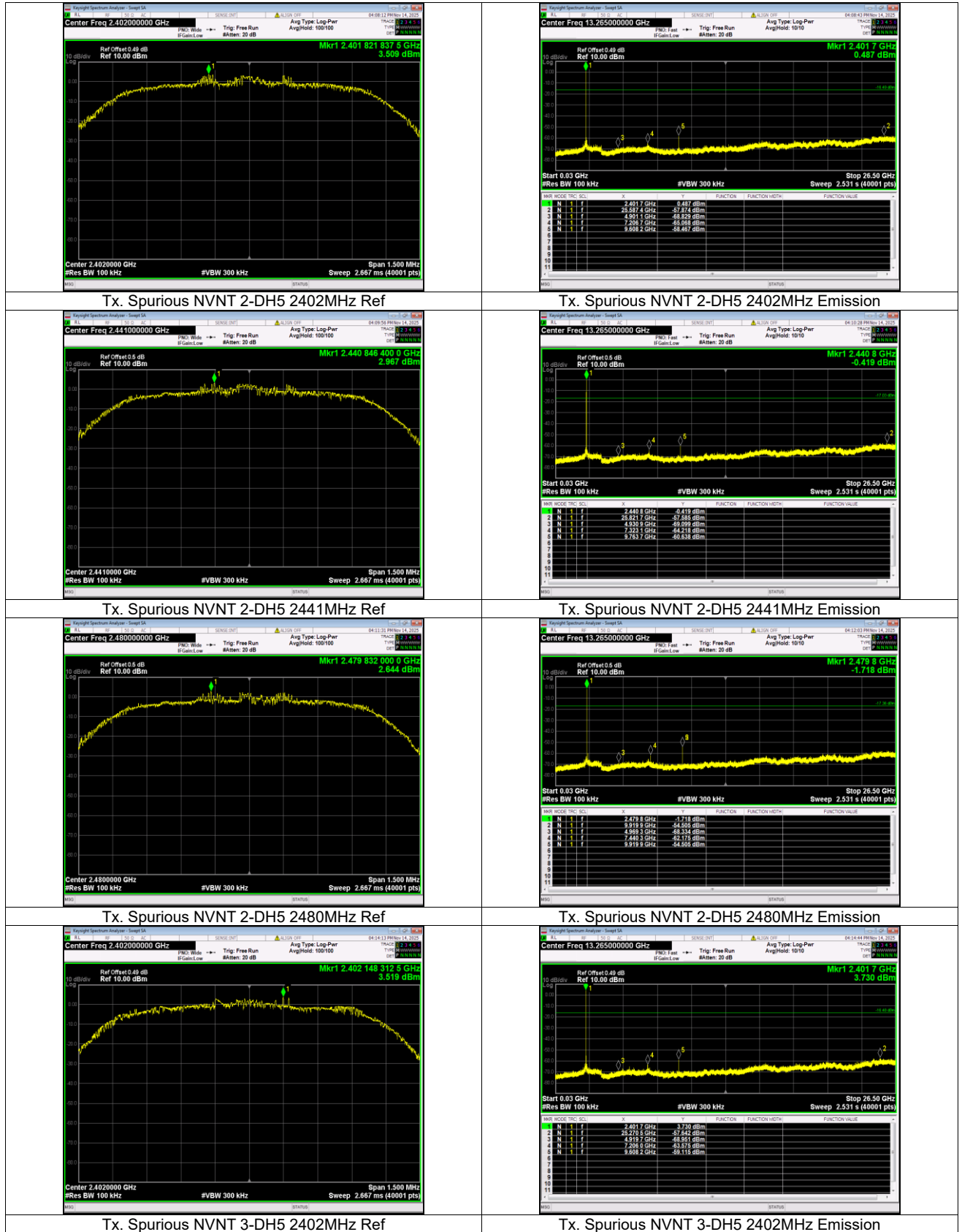


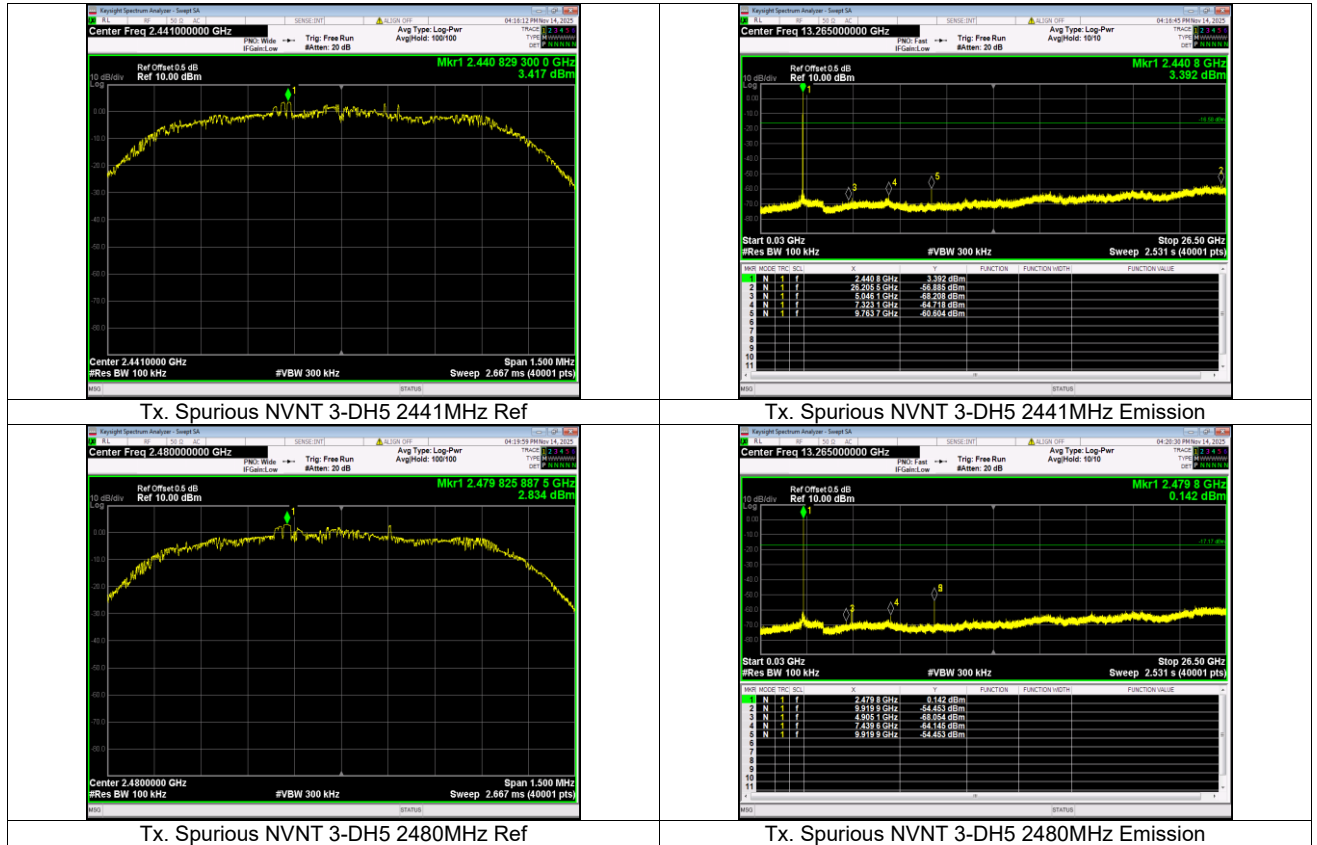
Band Edge(Hopping) NVNT 3-DH5 2480MHz Hopping Emission

Conducted RF Spurious Emission

Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
1-DH5	2402	-61.76	-20	Pass
1-DH5	2441	-60.99	-20	Pass
1-DH5	2480	-57.06	-20	Pass
2-DH5	2402	-61.38	-20	Pass
2-DH5	2441	-60.55	-20	Pass
2-DH5	2480	-57.14	-20	Pass
3-DH5	2402	-61.16	-20	Pass
3-DH5	2441	-60.3	-20	Pass
3-DH5	2480	-57.28	-20	Pass







Restrict Band

Mode	Frequency (MHz)	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
1-DH5	2402	No-Hopping	2310	-47.48	2.85	50.63	Peak	74	Pass
1-DH5	2402	No-Hopping	2310	-58	2.85	40.11	Average	54	Pass
1-DH5	2402	No-Hopping	2319.12	-44.26	2.85	53.85	Peak	74	Pass
1-DH5	2402	No-Hopping	2380.752	-56.22	2.85	41.89	Average	54	Pass
1-DH5	2402	No-Hopping	2390	-49.01	2.85	49.1	Peak	74	Pass
1-DH5	2402	No-Hopping	2390	-57.12	2.85	40.99	Average	54	Pass
1-DH5	2480	No-Hopping	2483.5	-44.53	2.85	53.58	Peak	74	Pass
1-DH5	2480	No-Hopping	2483.5	-54.4	2.85	43.71	Average	54	Pass
1-DH5	2480	No-Hopping	2484.376	-43.16	2.85	54.95	Peak	74	Pass
1-DH5	2480	No-Hopping	2490.592	-53.01	2.85	45.1	Average	54	Pass
1-DH5	2480	No-Hopping	2500	-48.3	2.85	49.81	Peak	74	Pass
1-DH5	2480	No-Hopping	2500	-57.73	2.85	40.38	Average	54	Pass
2-DH5	2402	No-Hopping	2310	-49.35	2.85	48.76	Peak	74	Pass
2-DH5	2402	No-Hopping	2310	-58.37	2.85	39.74	Average	54	Pass
2-DH5	2402	No-Hopping	2370.768	-42.62	2.85	55.49	Peak	74	Pass
2-DH5	2402	No-Hopping	2380.464	-56.7	2.85	41.41	Average	54	Pass
2-DH5	2402	No-Hopping	2390	-47.28	2.85	50.83	Peak	74	Pass
2-DH5	2402	No-Hopping	2390	-57.36	2.85	40.75	Average	54	Pass
2-DH5	2480	No-Hopping	2483.5	-44.09	2.85	54.02	Peak	74	Pass
2-DH5	2480	No-Hopping	2483.5	-54.9	2.85	43.21	Average	54	Pass
2-DH5	2480	No-Hopping	2490.208	-43.14	2.85	54.97	Peak	74	Pass
2-DH5	2480	No-Hopping	2490.592	-54.25	2.85	43.86	Average	54	Pass
2-DH5	2480	No-Hopping	2500	-47.7	2.85	50.41	Peak	74	Pass
2-DH5	2480	No-Hopping	2500	-57.73	2.85	40.38	Average	54	Pass
3-DH5	2402	No-Hopping	2310	-49.84	2.85	48.27	Peak	74	Pass
3-DH5	2402	No-Hopping	2310	-58.2	2.85	39.91	Average	54	Pass
3-DH5	2402	No-Hopping	2380.944	-43.81	2.85	54.3	Peak	74	Pass
3-DH5	2402	No-Hopping	2369.904	-56.64	2.85	41.47	Average	54	Pass
3-DH5	2402	No-Hopping	2390	-47.7	2.85	50.41	Peak	74	Pass
3-DH5	2402	No-Hopping	2390	-57.36	2.85	40.75	Average	54	Pass
3-DH5	2480	No-Hopping	2483.5	-45.69	2.85	52.42	Peak	74	Pass
3-DH5	2480	No-Hopping	2483.5	-54.96	2.85	43.15	Average	54	Pass
3-DH5	2480	No-Hopping	2483.632	-43.69	2.85	54.42	Peak	74	Pass
3-DH5	2480	No-Hopping	2490.664	-54.06	2.85	44.05	Average	54	Pass
3-DH5	2480	No-Hopping	2500	-48.21	2.85	49.9	Peak	74	Pass
3-DH5	2480	No-Hopping	2500	-57.76	2.85	40.35	Average	54	Pass

Note:

- Convert the resultant EIRP to an equivalent electric field strength using the following relationship:

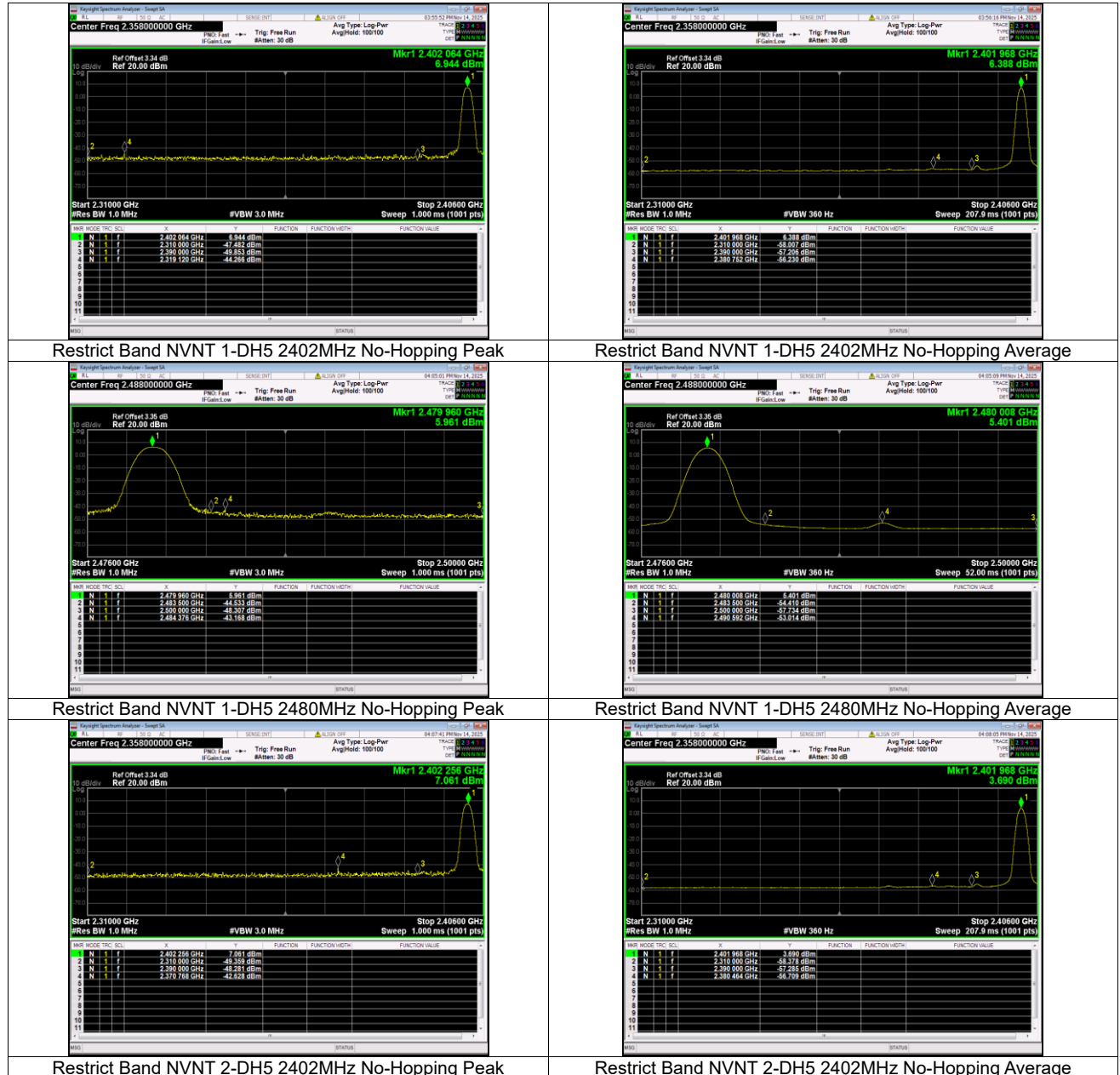
$$E = \text{EIRP} - 20 \log d + 104.8$$

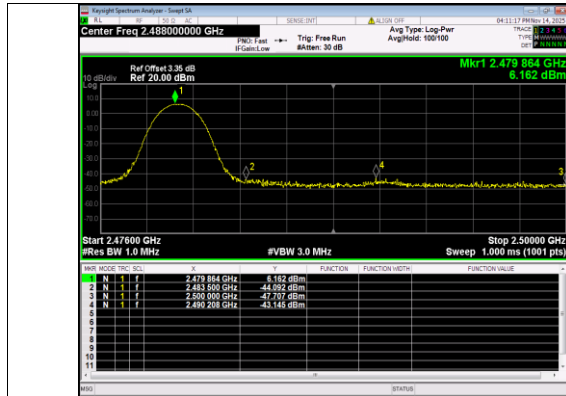
Where,

E is the electric field strength in dBuV/m.

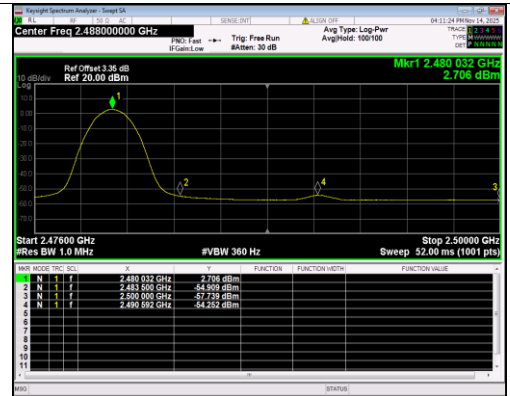
EIRP is the equivalent isotropically radiated power in dBm.

d is the specified measurement distance in m.

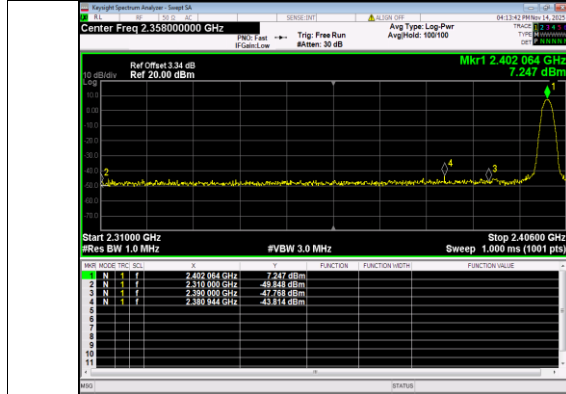




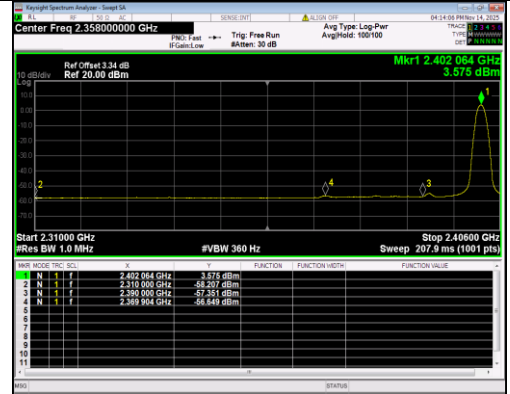
Restrict Band NVNT 2-DH5 2480MHz No-Hopping Peak



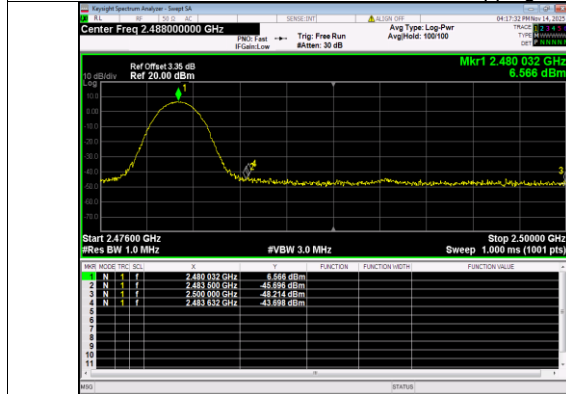
Restrict Band NVNT 2-DH5 2480MHz No-Hopping Average



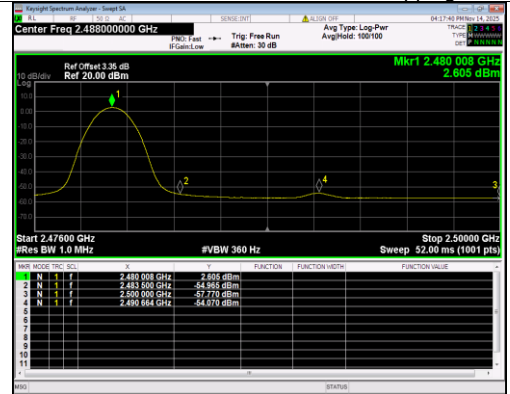
Restrict Band NVNT 3-DH5 2402MHz No-Hopping Peak



Restrict Band NVNT 3-DH5 2402MHz No-Hopping Average



Restrict Band NVNT 3-DH5 2480MHz No-Hopping Peak



Restrict Band NVNT 3-DH5 2480MHz No-Hopping Average