

Appendix A: Frequency_Error

Test Result

Test Condition	Test Mode	Antenna	Frequency[MHz]	CenterFreq [MHz]	Result[ppm]	Limit[ppm]	Verdict
NTNV	DH5	Ant1	2402	2401.9925	-3.12240	±50	PASS
NTNV	DH5	Ant1	2441	2440.9895	-4.30152	±50	PASS
NTNV	DH5	Ant1	2480	2479.9925	-3.02419	±50	PASS
NTNV	2DH5	Ant1	2402	2402.003	1.24896	±50	PASS
NTNV	2DH5	Ant1	2441	2440.9985	-0.61450	±50	PASS
NTNV	2DH5	Ant1	2480	2480.0045	1.81452	±50	PASS
NTNV	3DH5	Ant1	2402	2402	0.00000	±50	PASS
NTNV	3DH5	Ant1	2441	2441.0105	4.30152	±50	PASS
NTNV	3DH5	Ant1	2480	2480	0.00000	±50	PASS

Note: Result[ppm]= (CenterFreq - Channel)/Channel*1000000

Test Graphs

NTNV-DH5-Ant1-2402-PASS

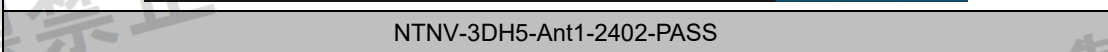
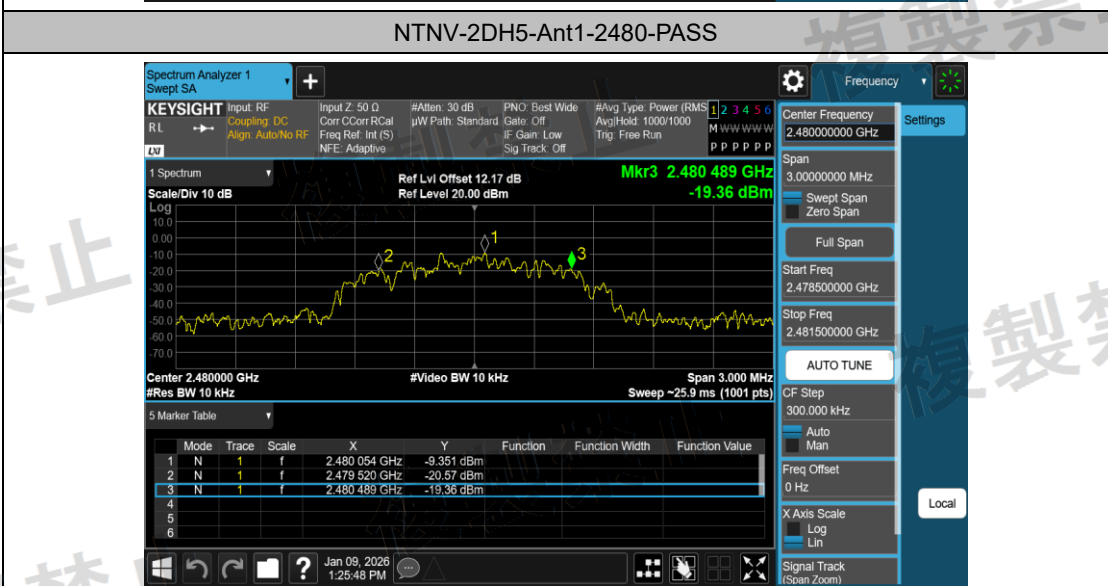
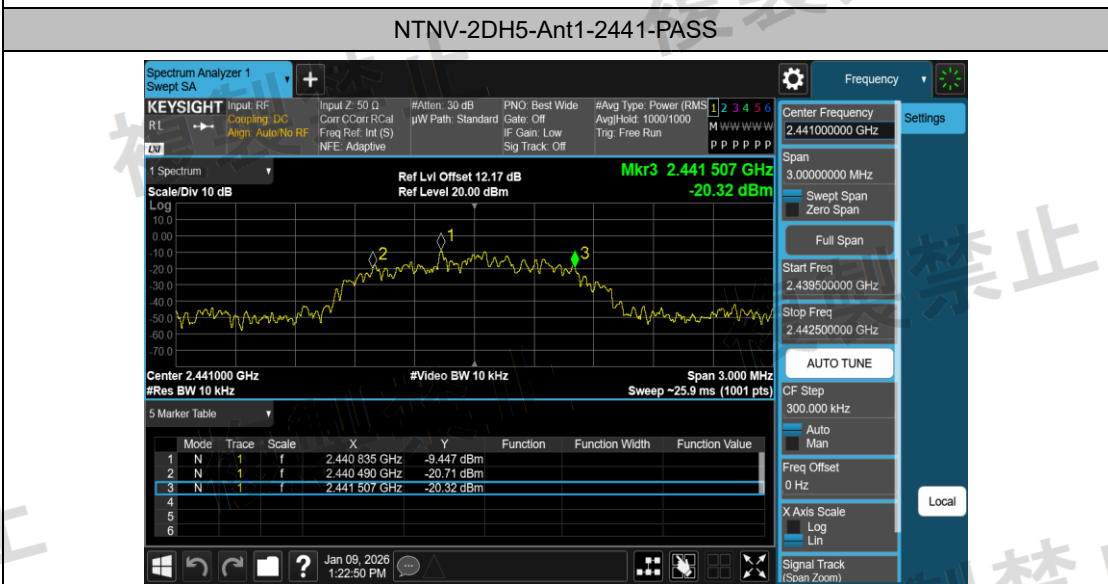
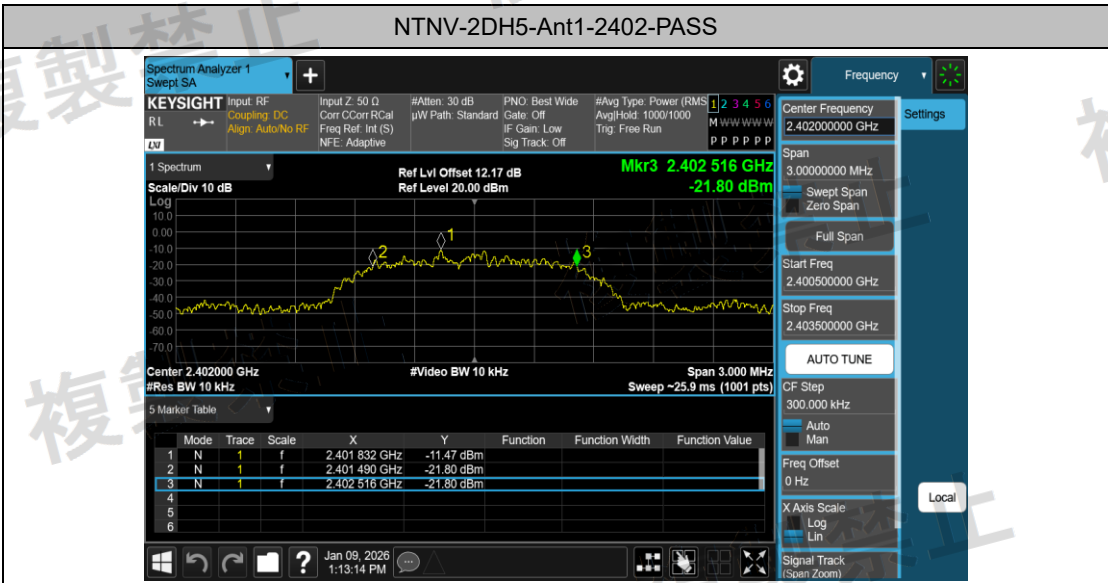


NTNV-DH5-Ant1-2441-PASS



NTNV-DH5-Ant1-2480-PASS







NTNV-3DH5-Ant1-2441-PASS



NTNV-3DH5-Ant1-2480-PASS



Appendix B: Antenna Power

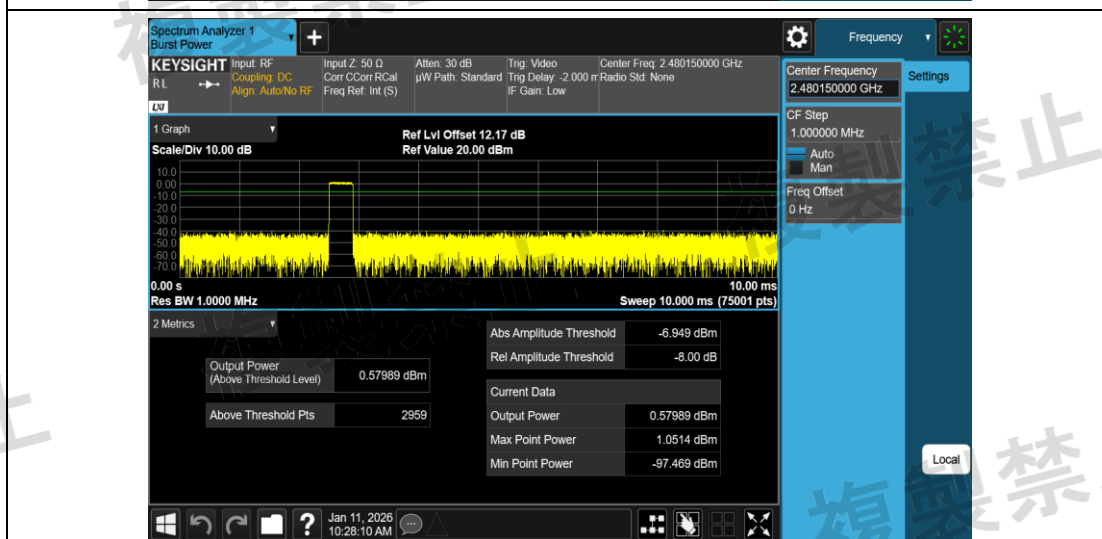
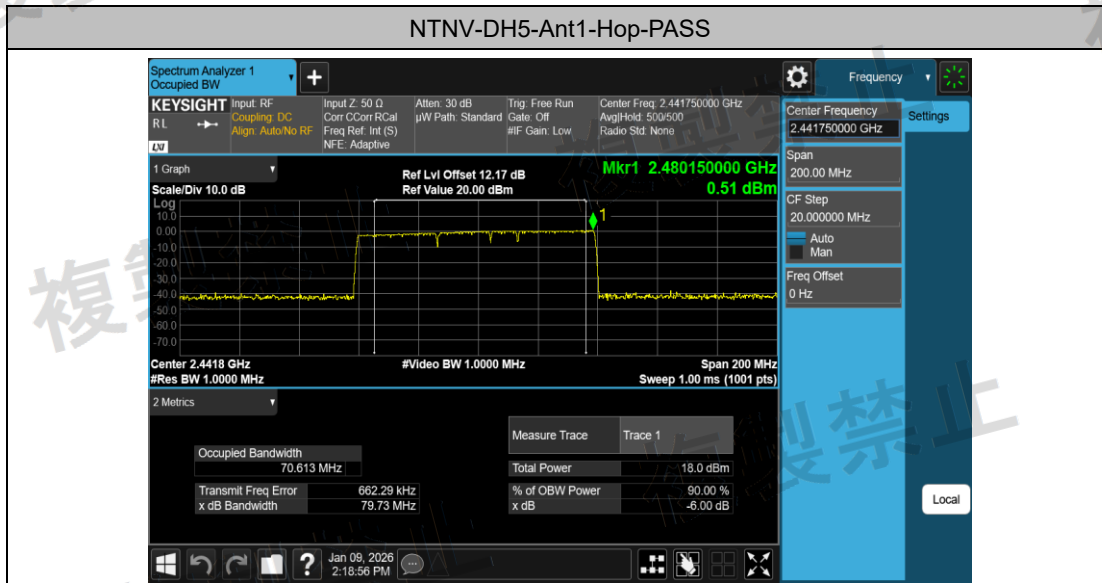
Test Condition	Test Mode	Antenna	Frequency [MHz]	Result(dBm /MHz)	Result(mW/ MHz)	Limit(mW /MHz)	Verdict
NTNV	DH5	Ant1	Hop	0.58	1.14	≤3	PASS
NTNV	2DH5	Ant1	Hop	-2.36	0.58	≤3	PASS
NTNV	3DH5	Ant1	Hop	-1.99	0.63	≤3	PASS

Note: Result(mW)= $10^{(\text{Test Result(dBm)}/10)}$

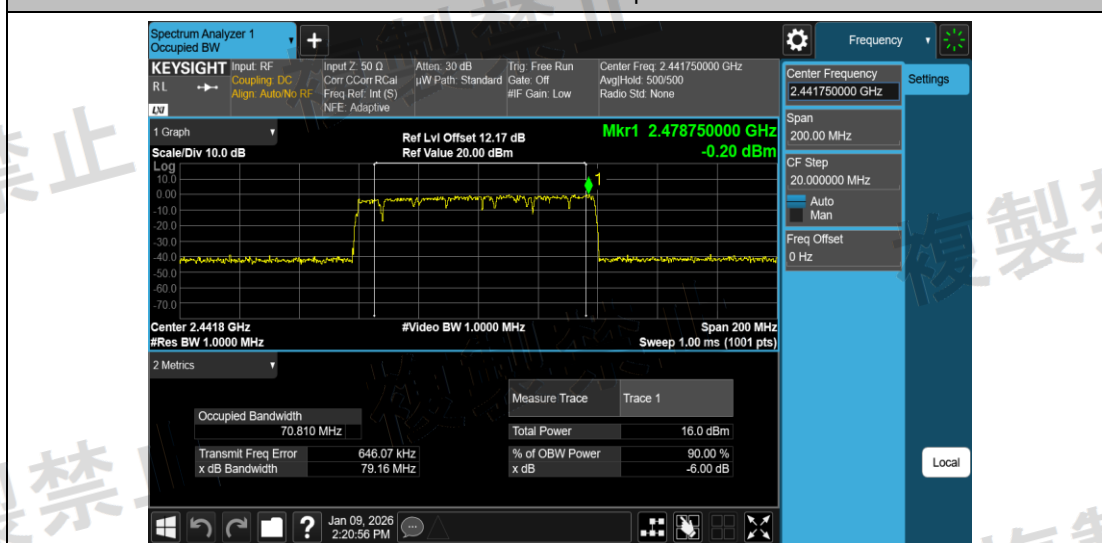
Test Condition	Test Mode	Antenna	Frequency [MHz]	Power (mW/ MHz)	RatedPower (mW/MHz)	Result (%)	Limit (%)	Verdict
NTNV	DH5	Ant1	Hop	1.14	1	14.0	-80 to +20	PASS
NTNV	2DH5	Ant1	Hop	0.58	1	-42.0	-80 to +20	PASS
NTNV	3DH5	Ant1	Hop	0.63	1	-37.0	-80 to +20	PASS

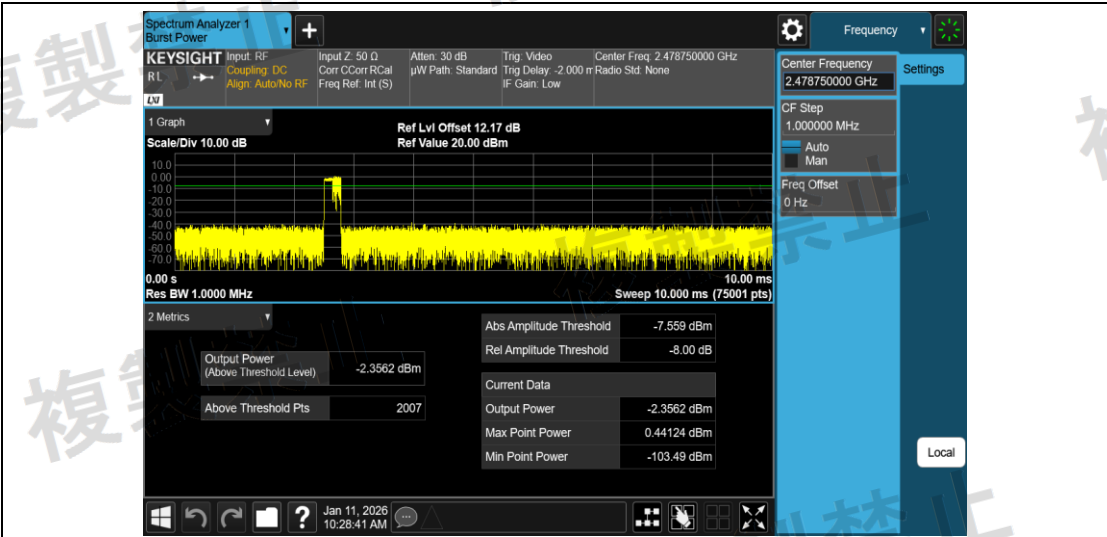
Test Condition	TestMode	Antenna	Frequency [MHz]	Result(dBm/ MHz)	EIRP(dBm/ MHz)	Limit(dBm/ MHz)	Verdict
NTNV	DH5	Ant1	Hop	0.58	2.18	≤6.91	PASS
NTNV	2DH5	Ant1	Hop	-2.36	-0.76	≤6.91	PASS
NTNV	3DH5	Ant1	Hop	-1.99	-0.39	≤6.91	PASS

Test Graphs PSD

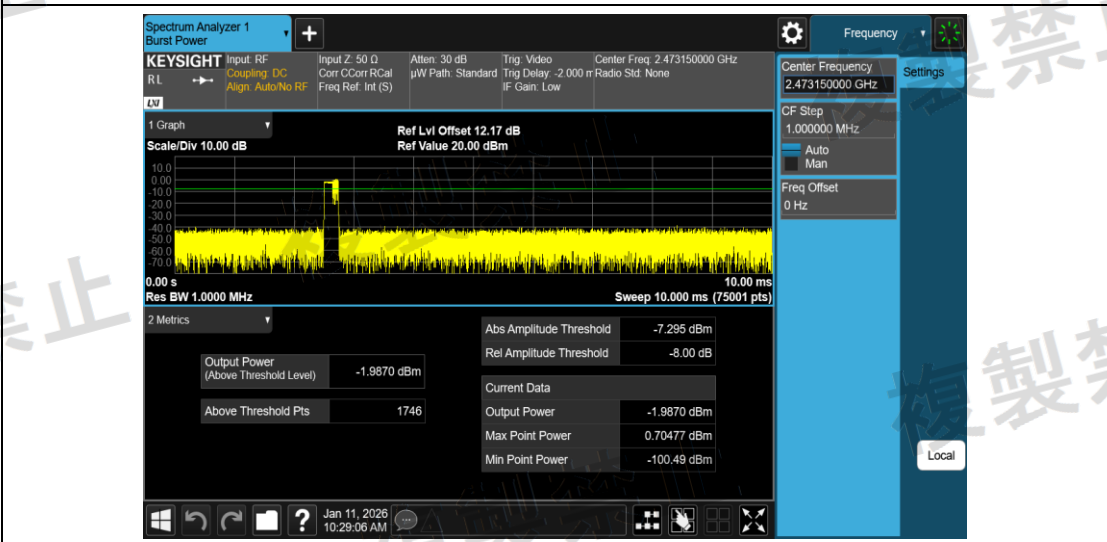
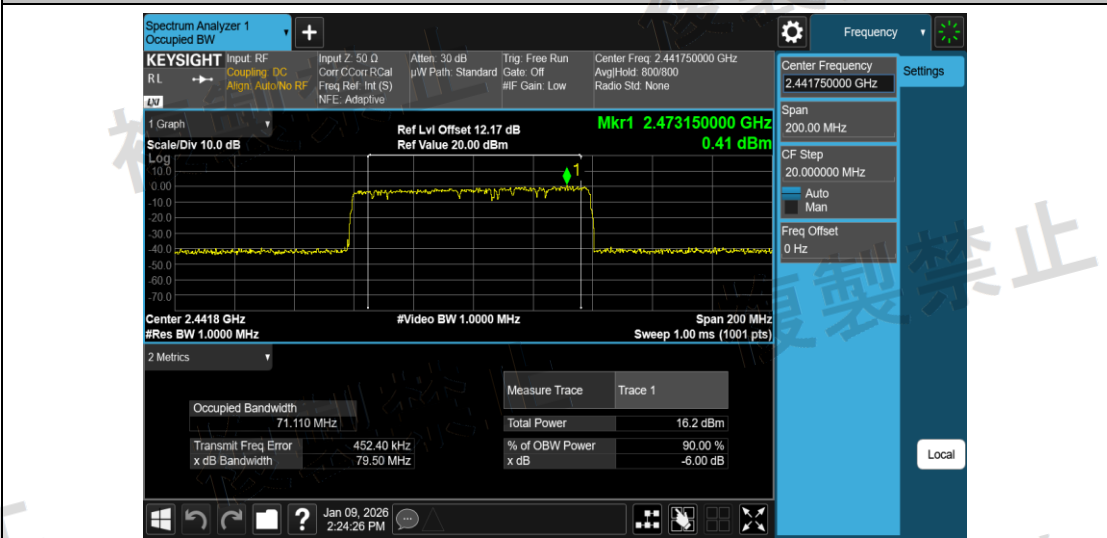


NTNV-2DH5-Ant1-Hop-PASS





NTNV-3DH5-Ant1-Hop-PASS



Appendix C: Occupied Bandwidth

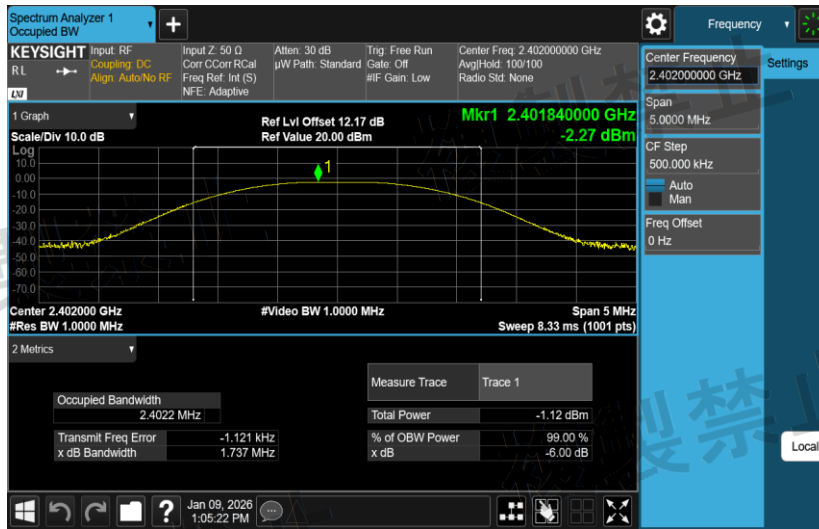
Test Result

Test Condition	Test Mode	Antenna	Frequency[MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	DH5	Ant1	2402	2.402	≤83.5	PASS
NTNV	DH5	Ant1	2441	2.401	≤83.5	PASS
NTNV	DH5	Ant1	2480	2.399	≤83.5	PASS
NTNV	2DH5	Ant1	2402	2.966	≤83.5	PASS
NTNV	2DH5	Ant1	2441	2.833	≤83.5	PASS
NTNV	2DH5	Ant1	2480	2.759	≤83.5	PASS
NTNV	3DH5	Ant1	2402	2.891	≤83.5	PASS
NTNV	3DH5	Ant1	2441	2.716	≤83.5	PASS
NTNV	3DH5	Ant1	2480	2.770	≤83.5	PASS

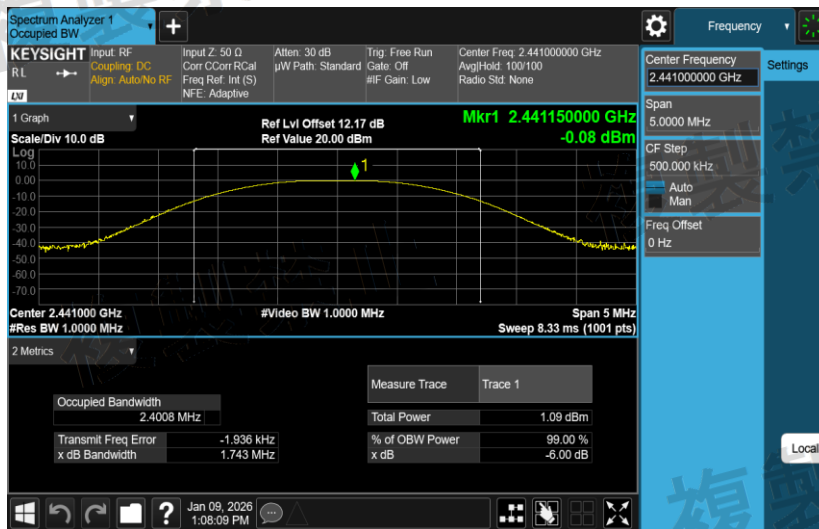
Test Condition	Test Mode	Antenna	Frequency[MHz]	Result [MHz]	Limit [MHz]	Verdict
NTNV	DH5	Ant1	Hop	78.647	≤83.5	PASS
NTNV	2DH5	Ant1	Hop	78.630	≤83.5	PASS
NTNV	3DH5	Ant1	Hop	77.830	≤83.5	PASS

Test Graphs

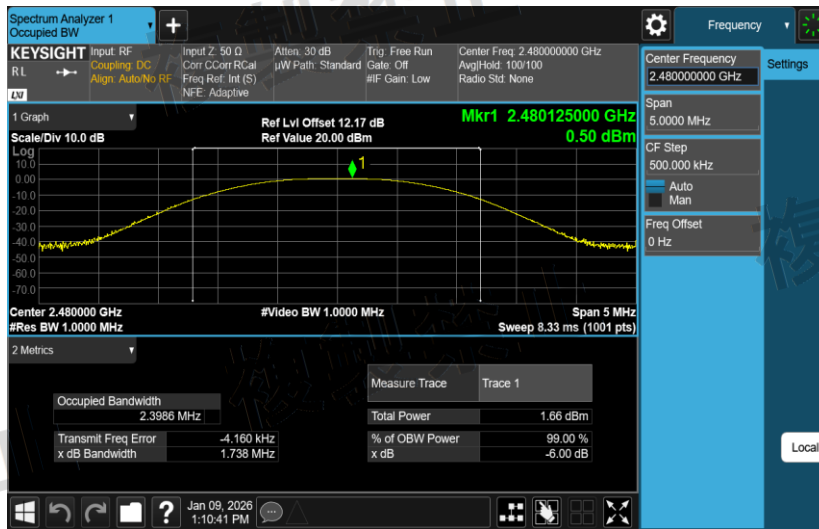
NTNV-DH5-Ant1-2402-PASS

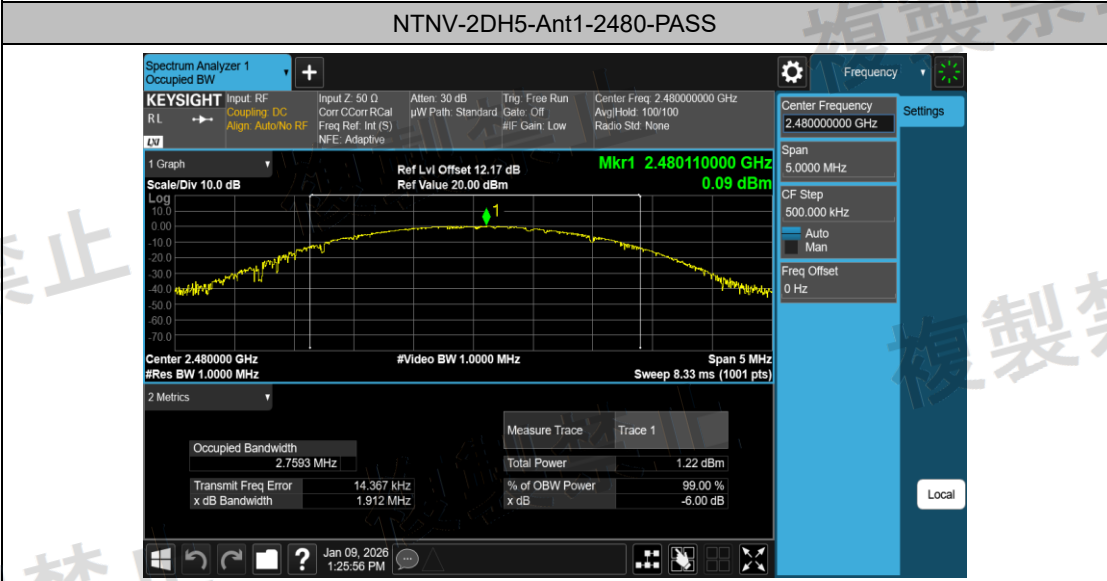
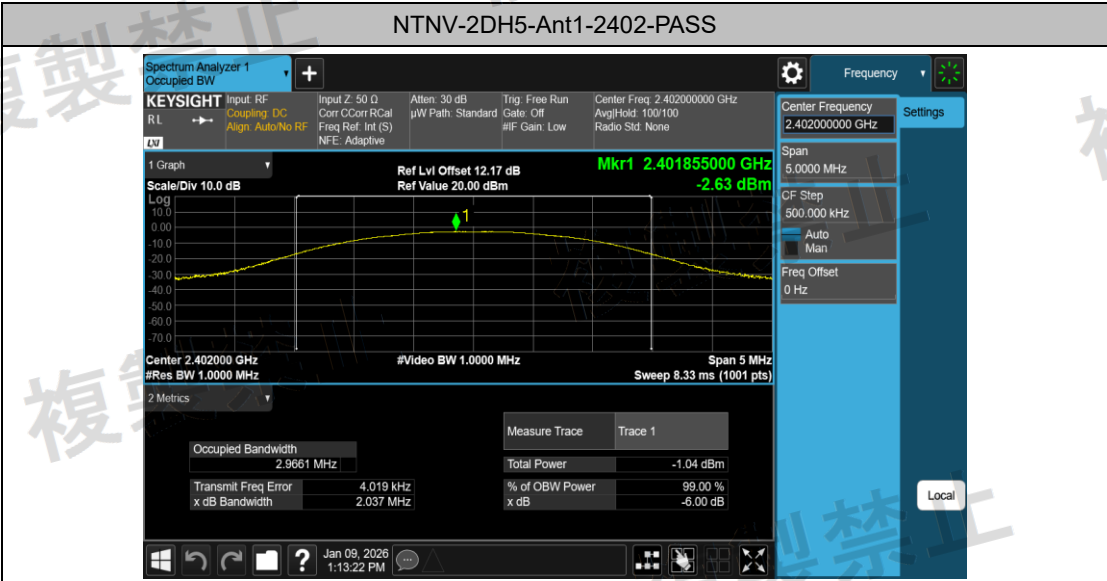


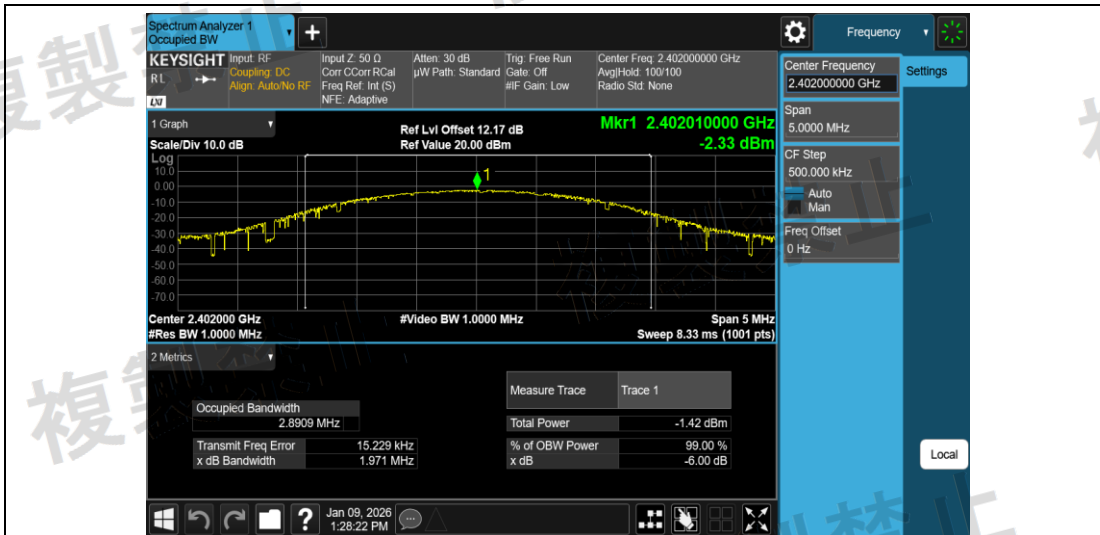
NTNV-DH5-Ant1-2441-PASS



NTNV-DH5-Ant1-2480-PASS



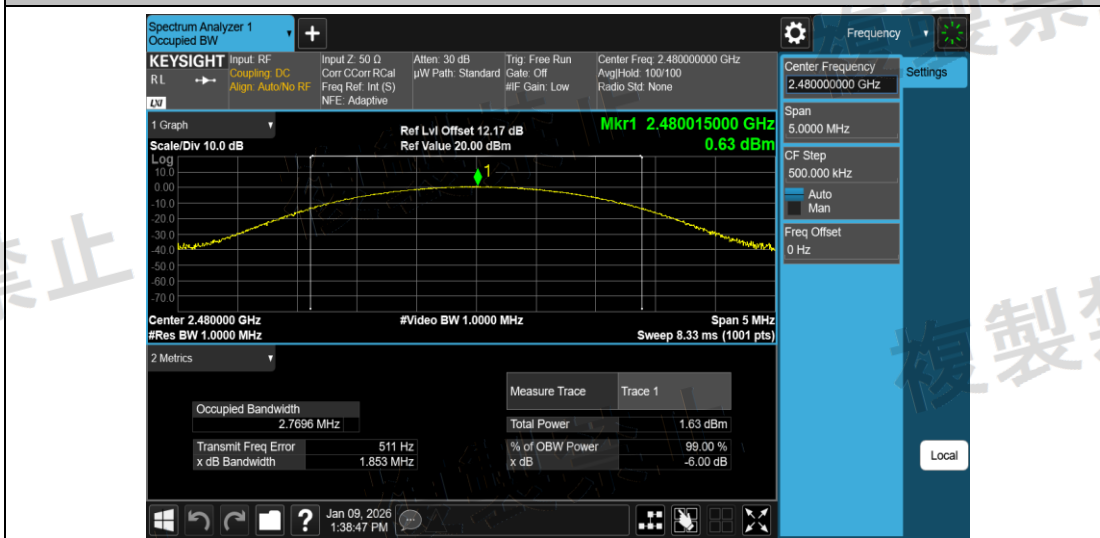


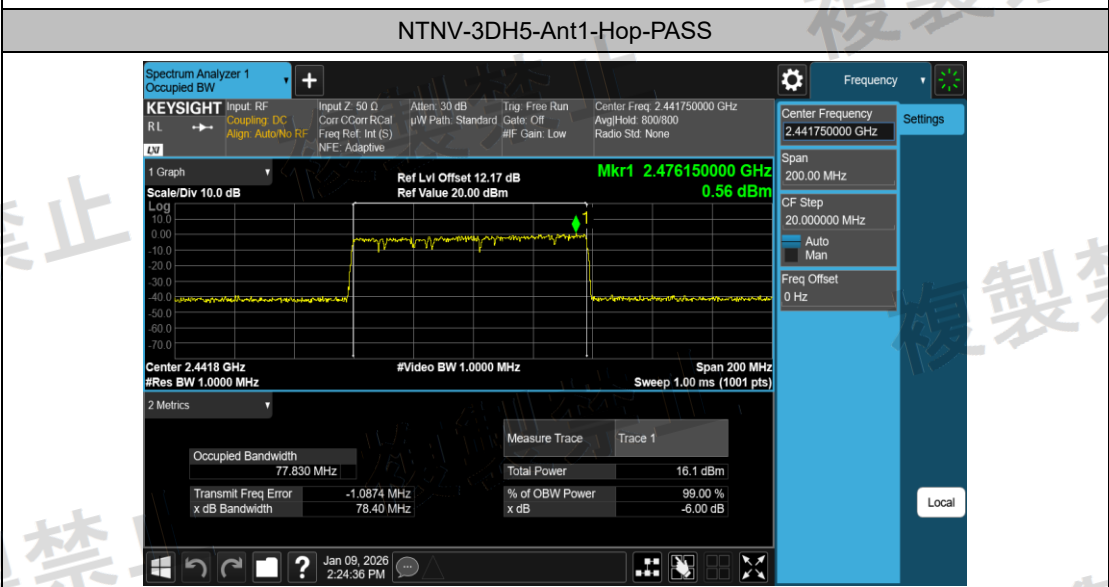
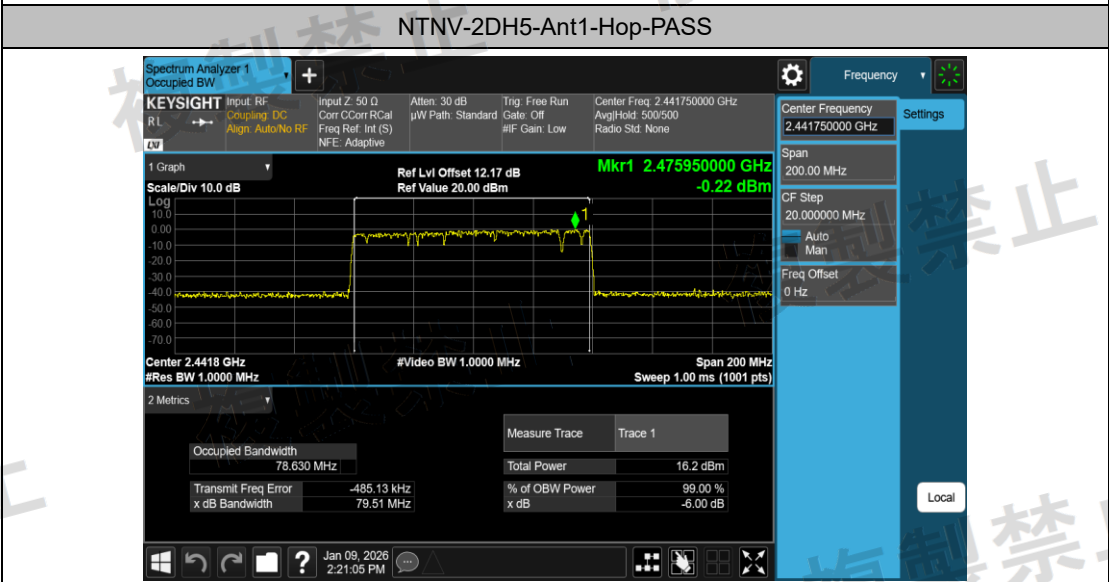
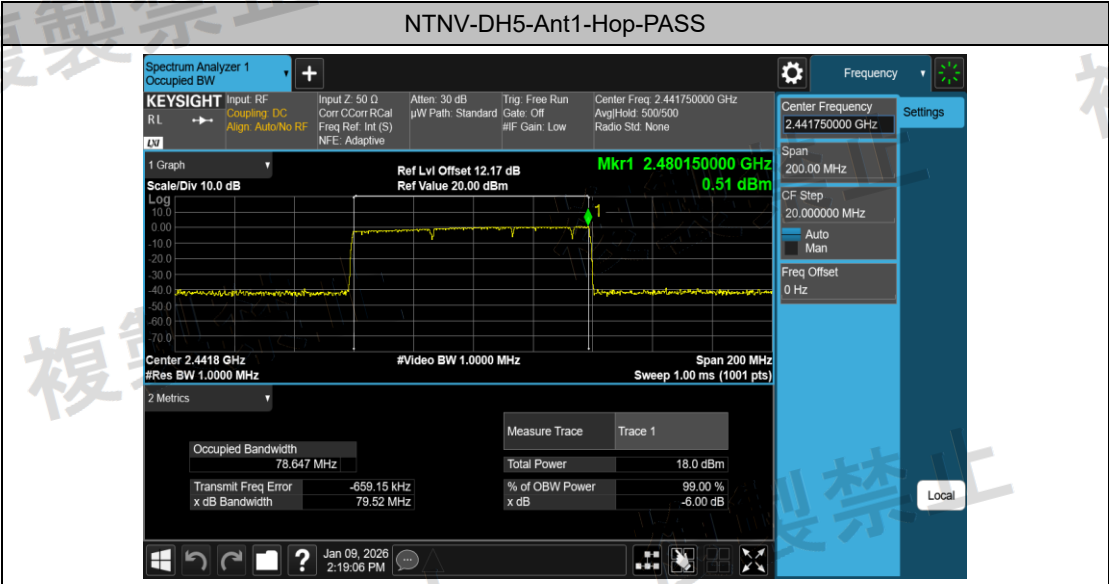


NTNV-3DH5-Ant1-2441-PASS



NTNV-3DH5-Ant1-2480-PASS





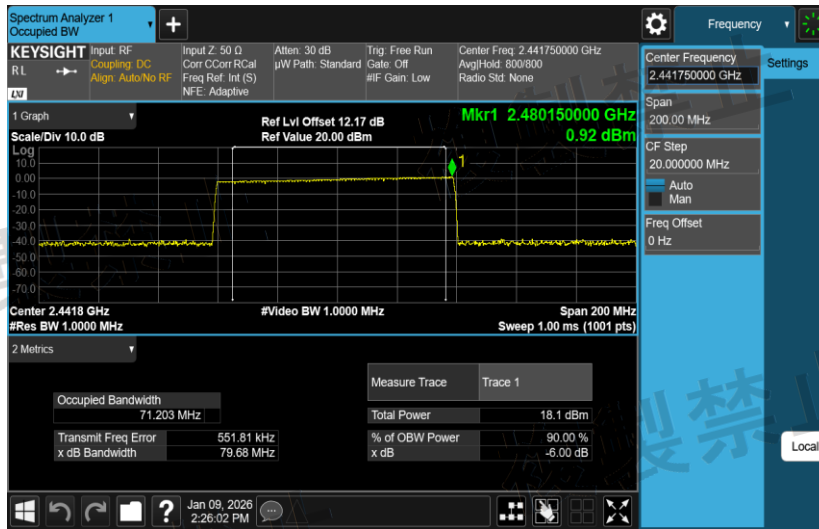
Appendix D: Spread Bandwidth

Test Result

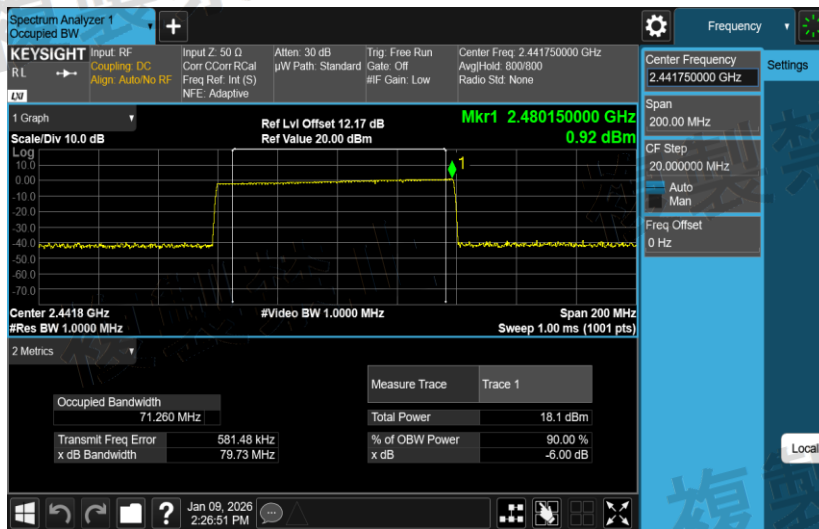
Test Condition	Test Mode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Spread Factor	Limit	Verdict
NTNV	DH1	Ant1	Hop	71.203	≥ 0.5	71.203	> 5	PASS
NTNV	DH3	Ant1	Hop	71.260	≥ 0.5	71.260	> 5	PASS
NTNV	DH5	Ant1	Hop	70.613	≥ 0.5	70.613	> 5	PASS
NTNV	2DH1	Ant1	Hop	71.378	≥ 0.5	71.378	> 5	PASS
NTNV	2DH3	Ant1	Hop	71.627	≥ 0.5	71.627	> 5	PASS
NTNV	2DH5	Ant1	Hop	70.810	≥ 0.5	70.810	> 5	PASS
NTNV	3DH1	Ant1	Hop	71.134	≥ 0.5	71.134	> 5	PASS
NTNV	3DH3	Ant1	Hop	71.654	≥ 0.5	71.654	> 5	PASS
NTNV	3DH5	Ant1	Hop	71.110	≥ 0.5	71.110	> 5	PASS

Test Graphs

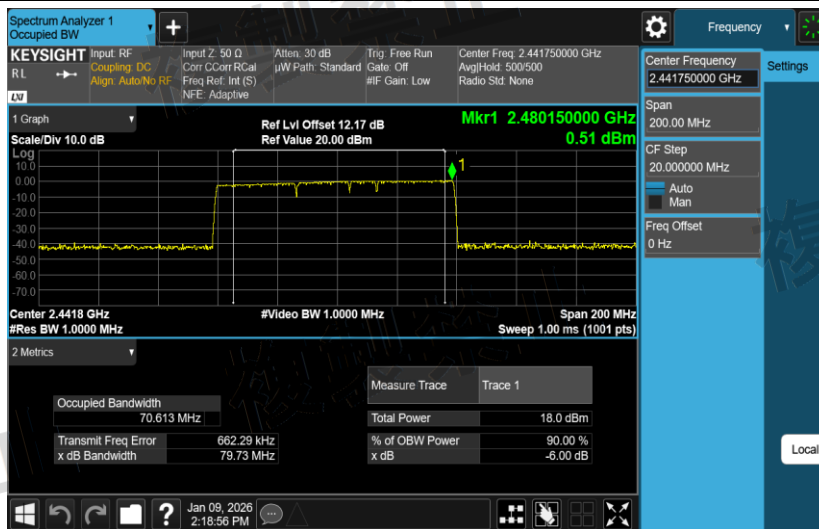
NTNV-DH1-Ant1-Hop-PASS

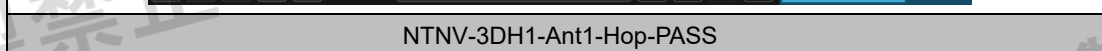
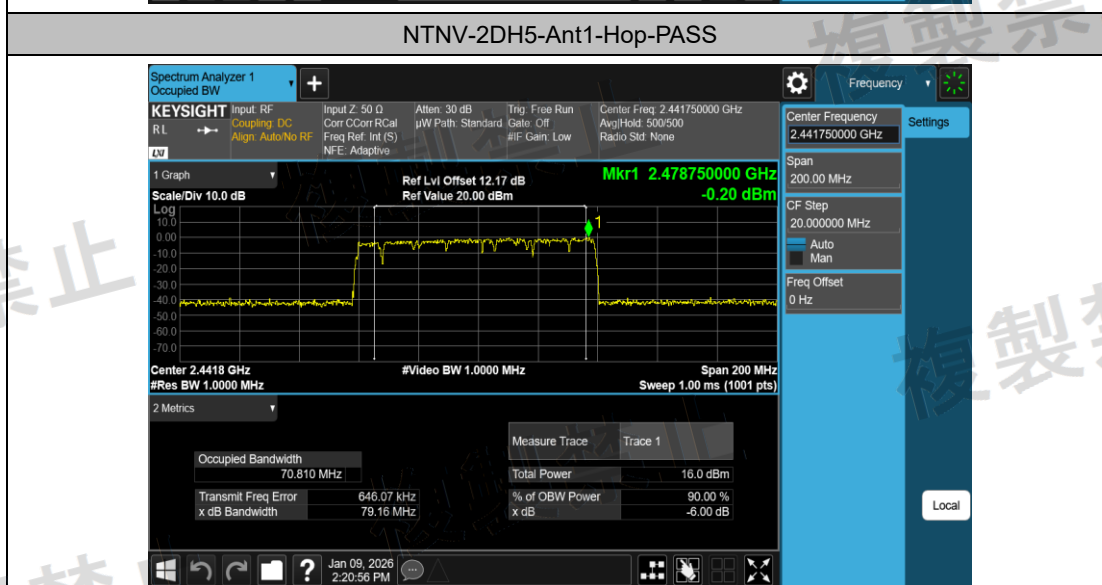
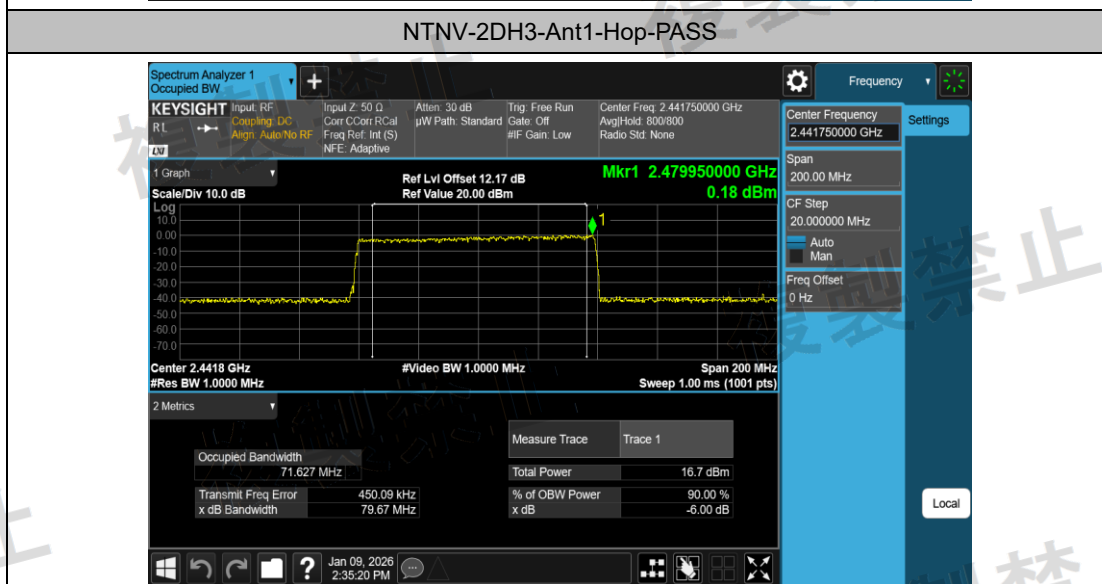
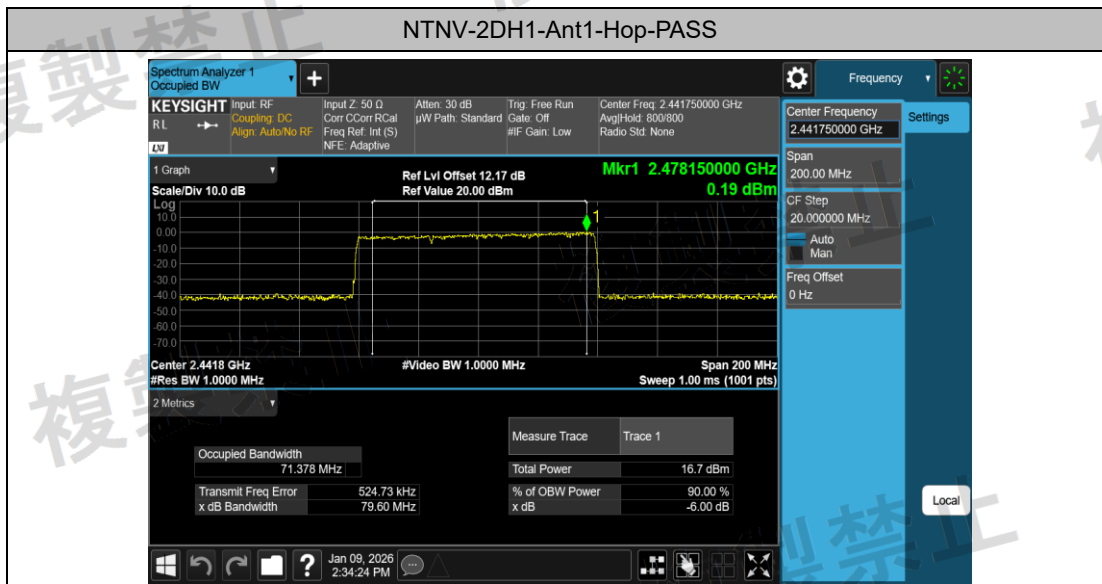


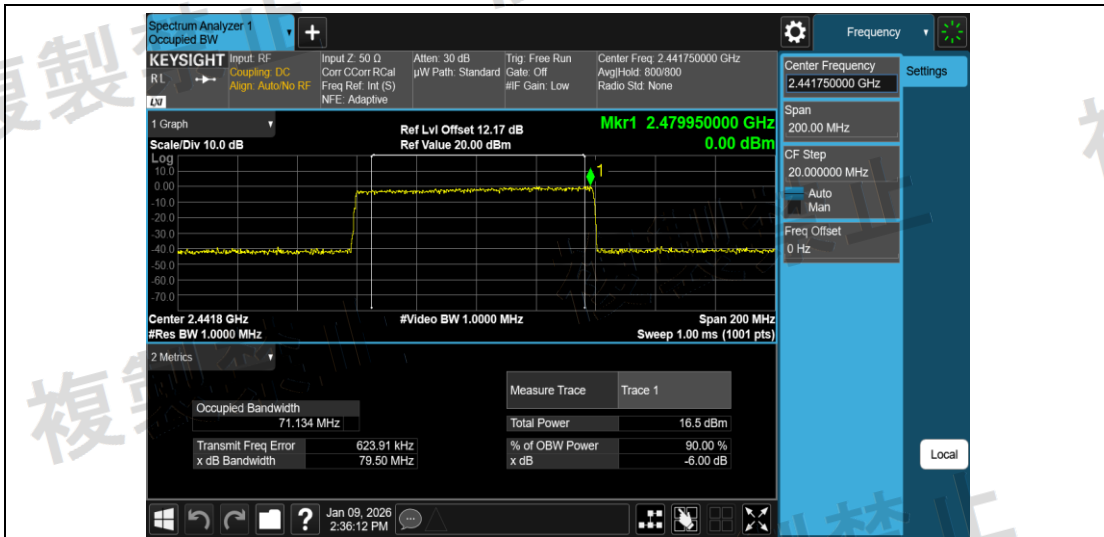
NTNV-DH3-Ant1-Hop-PASS



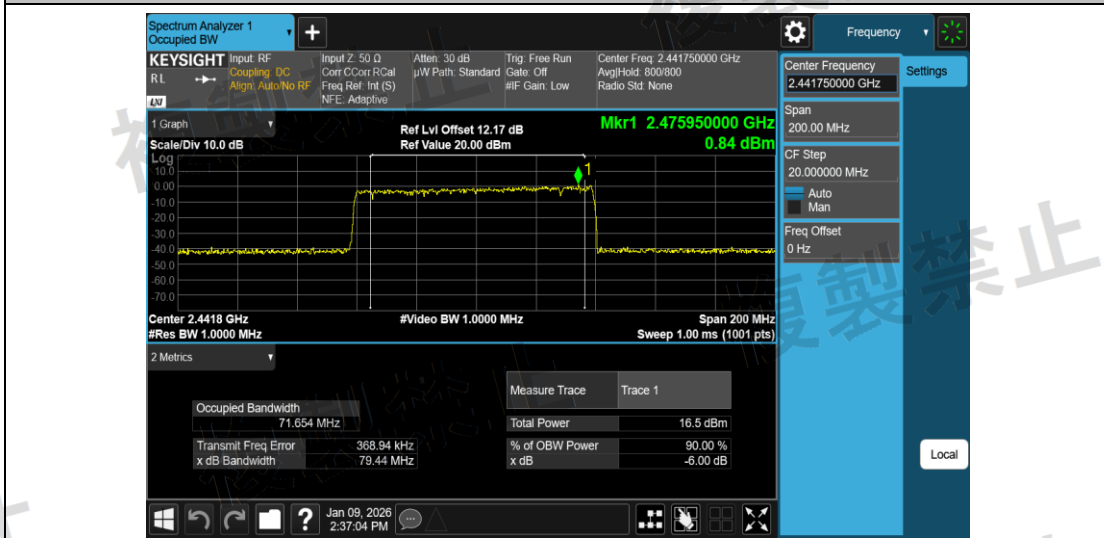
NTNV-DH5-Ant1-Hop-PASS



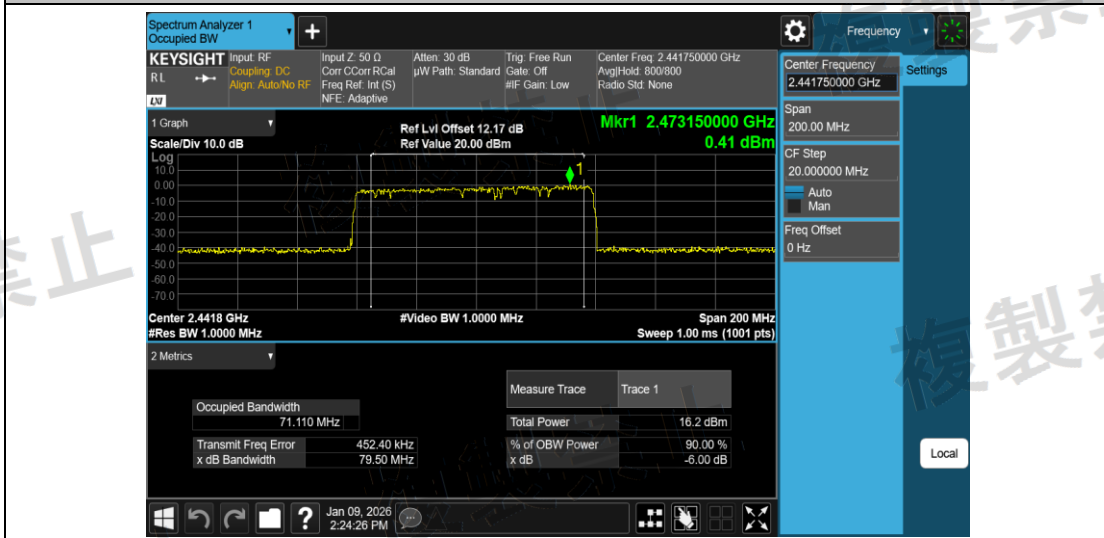




NTNV-3DH3-Ant1-Hop-PASS



NTNV-3DH5-Ant1-Hop-PASS



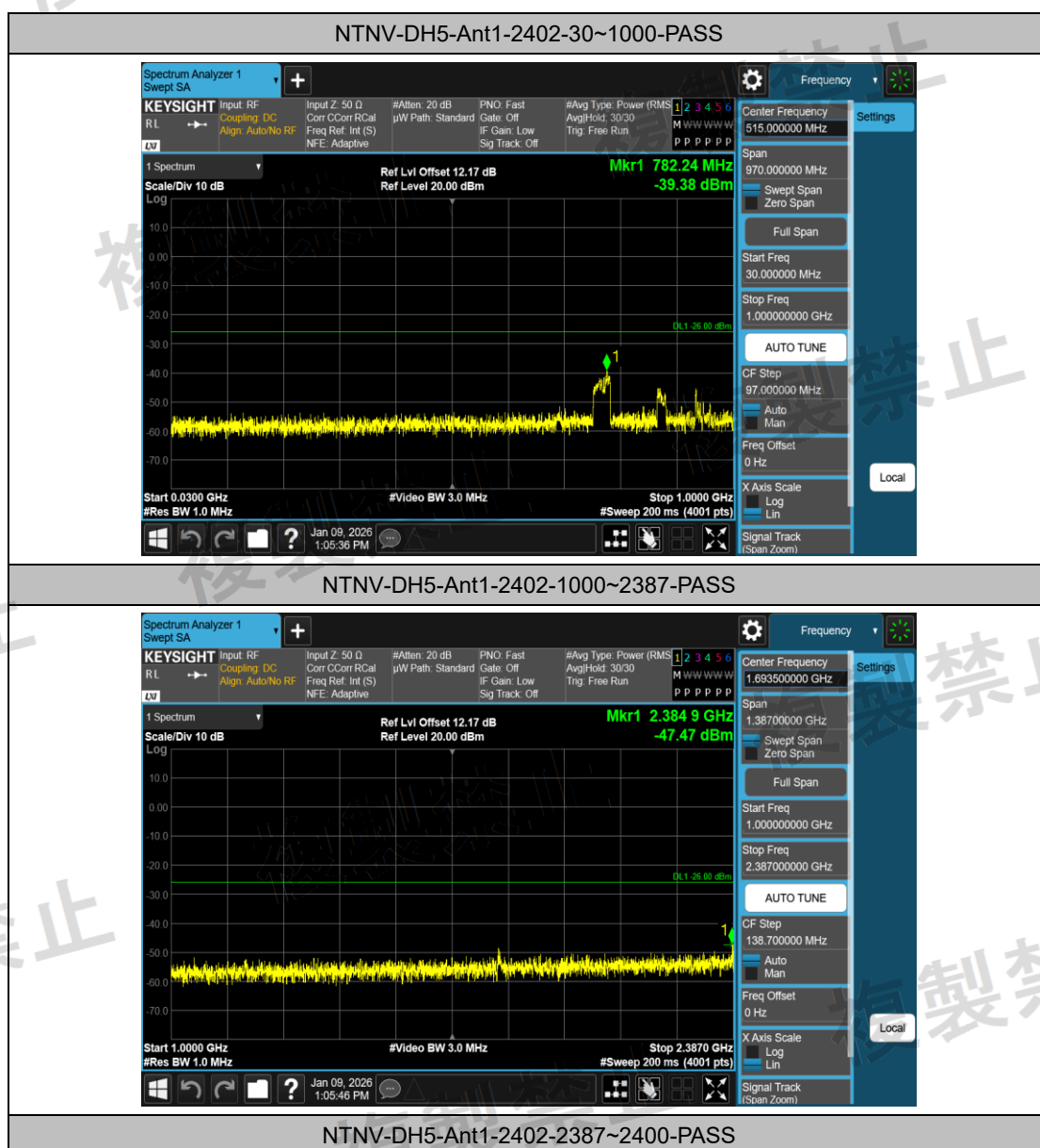
Appendix E: Spurious Emission of TX

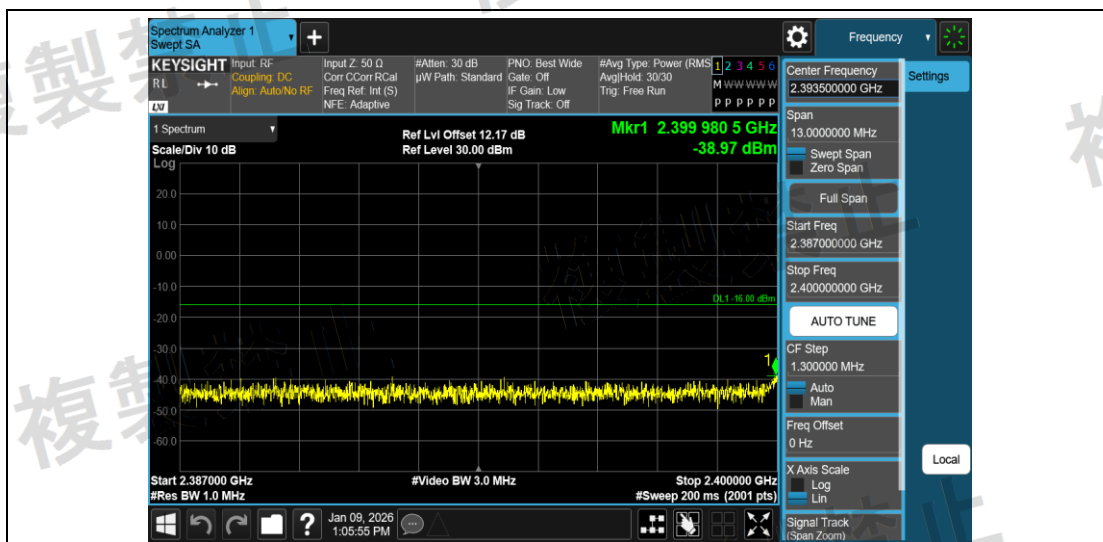
Test Result

Test Condition	Test Mode	Antenna	Frequency [MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [μ W]	Limit [μ W]	Verdict
NTNV	DH5	Ant1	2402	30~1000	-39.38	≤ -26	0.11535	≤ 2.5	PASS
NTNV	DH5	Ant1	2402	1000~2387	-47.47	≤ -26	0.01791	≤ 2.5	PASS
NTNV	DH5	Ant1	2402	2387~2400	-38.97	≤ -16	0.12677	≤ 25	PASS
NTNV	DH5	Ant1	2402	2483.5~2496.5	-39.20	≤ -16	0.12023	≤ 25	PASS
NTNV	DH5	Ant1	2402	2496.5~13000	-32.62	≤ -26	0.54702	≤ 2.5	PASS
NTNV	DH5	Ant1	2441	30~1000	-45.27	≤ -26	0.02972	≤ 2.5	PASS
NTNV	DH5	Ant1	2441	1000~2387	-47.11	≤ -26	0.01945	≤ 2.5	PASS
NTNV	DH5	Ant1	2441	2387~2400	-40.01	≤ -16	0.09977	≤ 25	PASS
NTNV	DH5	Ant1	2441	2483.5~2496.5	-38.86	≤ -16	0.13002	≤ 25	PASS
NTNV	DH5	Ant1	2441	2496.5~13000	-43.97	≤ -26	0.04009	≤ 2.5	PASS
NTNV	DH5	Ant1	2480	30~1000	-41.07	≤ -26	0.07816	≤ 2.5	PASS
NTNV	DH5	Ant1	2480	1000~2387	-48.86	≤ -26	0.01300	≤ 2.5	PASS
NTNV	DH5	Ant1	2480	2387~2400	-39.14	≤ -16	0.12190	≤ 25	PASS
NTNV	DH5	Ant1	2480	2483.5~2496.5	-39.17	≤ -16	0.12106	≤ 25	PASS
NTNV	DH5	Ant1	2480	2496.5~13000	-32.19	≤ -26	0.60395	≤ 2.5	PASS
NTNV	2DH5	Ant1	2402	30~1000	-42.39	≤ -26	0.05768	≤ 2.5	PASS
NTNV	2DH5	Ant1	2402	1000~2387	-45.92	≤ -26	0.02559	≤ 2.5	PASS
NTNV	2DH5	Ant1	2402	2387~2400	-26.34	≤ -16	2.32274	≤ 25	PASS
NTNV	2DH5	Ant1	2402	2483.5~2496.5	-39.24	≤ -16	0.11912	≤ 25	PASS
NTNV	2DH5	Ant1	2402	2496.5~13000	-43.41	≤ -26	0.04560	≤ 2.5	PASS
NTNV	2DH5	Ant1	2441	30~1000	-43.25	≤ -26	0.04732	≤ 2.5	PASS
NTNV	2DH5	Ant1	2441	1000~2387	-48.40	≤ -26	0.01445	≤ 2.5	PASS
NTNV	2DH5	Ant1	2441	2387~2400	-39.04	≤ -16	0.12474	≤ 25	PASS
NTNV	2DH5	Ant1	2441	2483.5~2496.5	-39.27	≤ -16	0.11830	≤ 25	PASS
NTNV	2DH5	Ant1	2441	2496.5~13000	-43.07	≤ -26	0.04932	≤ 2.5	PASS
NTNV	2DH5	Ant1	2480	30~1000	-43.54	≤ -26	0.04426	≤ 2.5	PASS
NTNV	2DH5	Ant1	2480	1000~2387	-47.83	≤ -26	0.01648	≤ 2.5	PASS
NTNV	2DH5	Ant1	2480	2387~2400	-38.54	≤ -16	0.13996	≤ 25	PASS
NTNV	2DH5	Ant1	2480	2483.5~2496.5	-38.83	≤ -16	0.13092	≤ 25	PASS
NTNV	2DH5	Ant1	2480	2496.5~13000	-43.17	≤ -26	0.04819	≤ 2.5	PASS
NTNV	3DH5	Ant1	2402	30~1000	-40.65	≤ -26	0.08610	≤ 2.5	PASS
NTNV	3DH5	Ant1	2402	1000~2387	-48.79	≤ -26	0.01321	≤ 2.5	PASS
NTNV	3DH5	Ant1	2402	2387~2400	-27.26	≤ -16	1.87932	≤ 25	PASS
NTNV	3DH5	Ant1	2402	2483.5~2496.5	-39.53	≤ -16	0.11143	≤ 25	PASS
NTNV	3DH5	Ant1	2402	2496.5~13000	-43.76	≤ -26	0.04207	≤ 2.5	PASS
NTNV	3DH5	Ant1	2441	30~1000	-41.24	≤ -26	0.07516	≤ 2.5	PASS
NTNV	3DH5	Ant1	2441	1000~2387	-48.16	≤ -26	0.01528	≤ 2.5	PASS

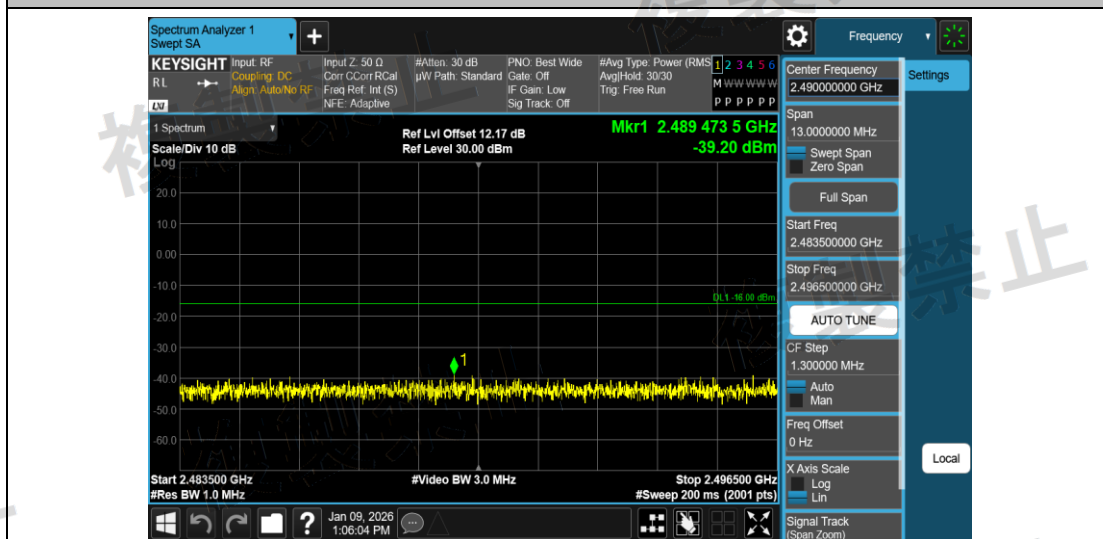
NTNV	3DH5	Ant1	2441	2387~2400	-39.11	≤-16	0.12274	≤25	PASS
NTNV	3DH5	Ant1	2441	2483.5~2496.5	-39.05	≤-16	0.12445	≤25	PASS
NTNV	3DH5	Ant1	2441	2496.5~13000	-43.33	≤-26	0.04645	≤2.5	PASS
NTNV	3DH5	Ant1	2480	30~1000	-40.94	≤-26	0.08054	≤2.5	PASS
NTNV	3DH5	Ant1	2480	1000~2387	-49.40	≤-26	0.01148	≤2.5	PASS
NTNV	3DH5	Ant1	2480	2387~2400	-37.63	≤-16	0.17258	≤25	PASS
NTNV	3DH5	Ant1	2480	2483.5~2496.5	-38.84	≤-16	0.13062	≤25	PASS
NTNV	3DH5	Ant1	2480	2496.5~13000	-43.64	≤-26	0.04325	≤2.5	PASS

Test Graphs

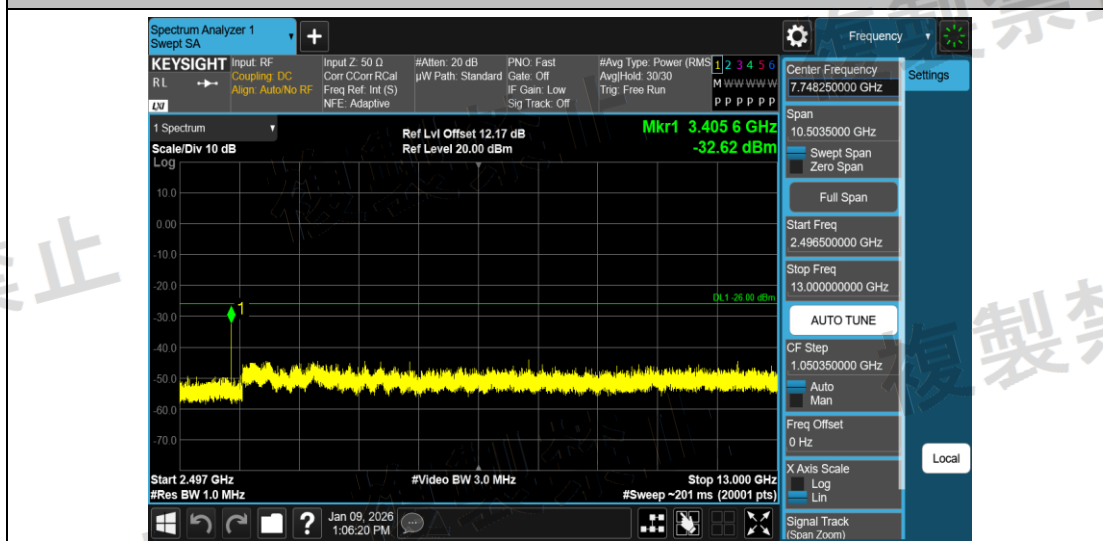




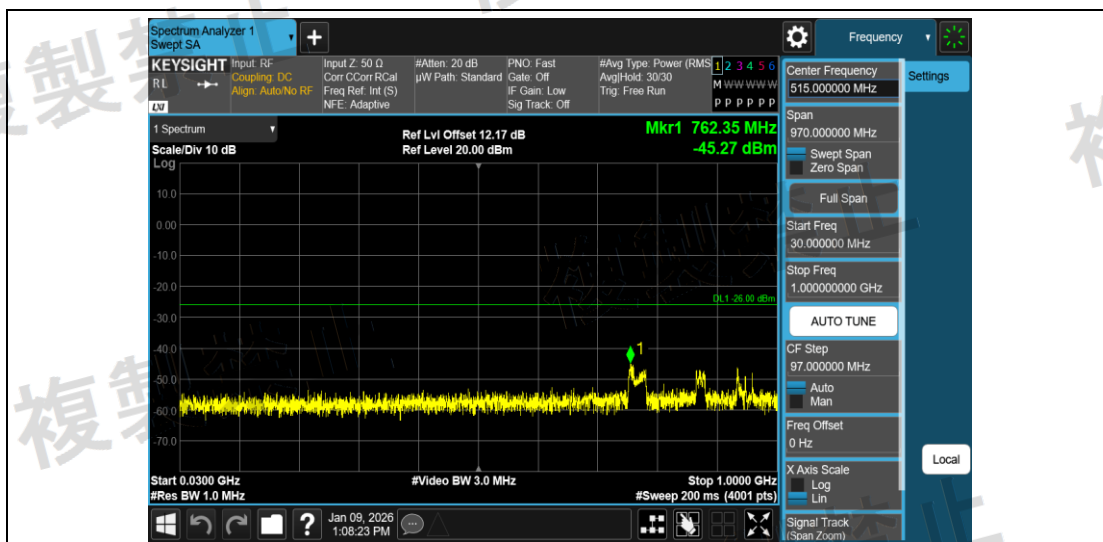
NTNV-DH5-Ant1-2402-2483.5~2496.5-PASS



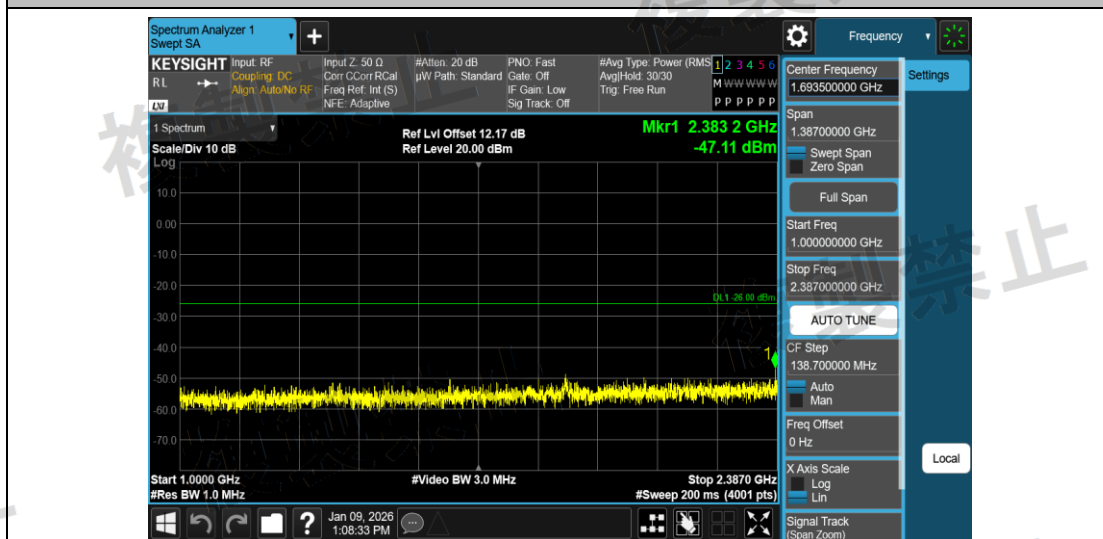
NTNV-DH5-Ant1-2402-2496.5~13000-PASS



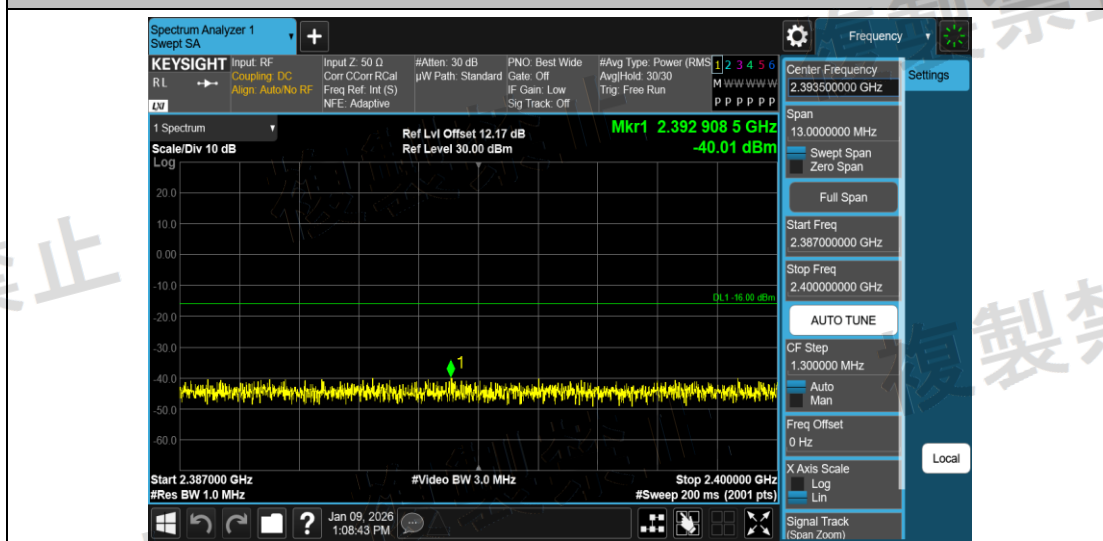
NTNV-DH5-Ant1-2441-30~1000-PASS



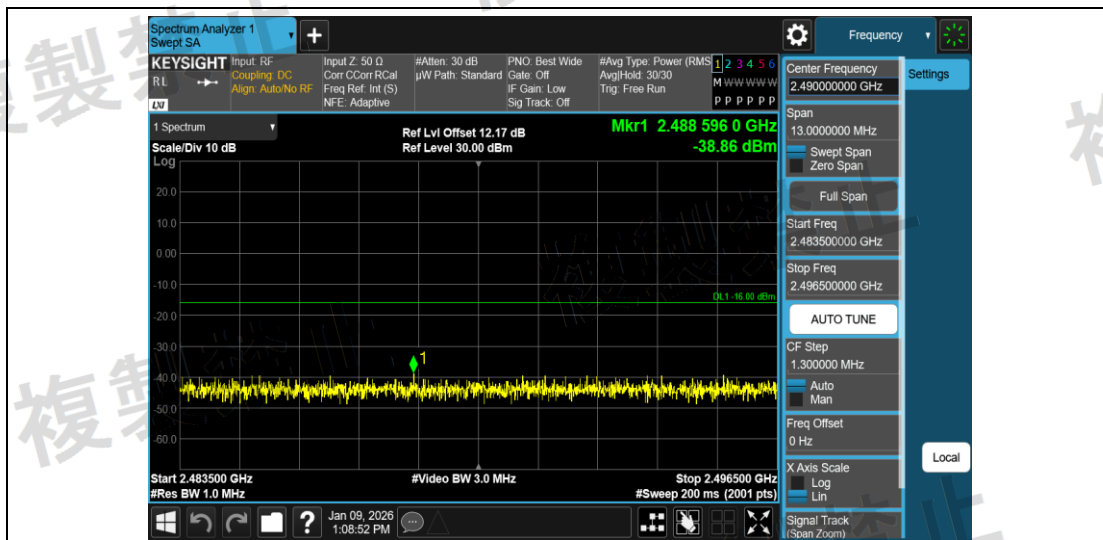
NTNV-DH5-Ant1-2441-1000~2387-PASS



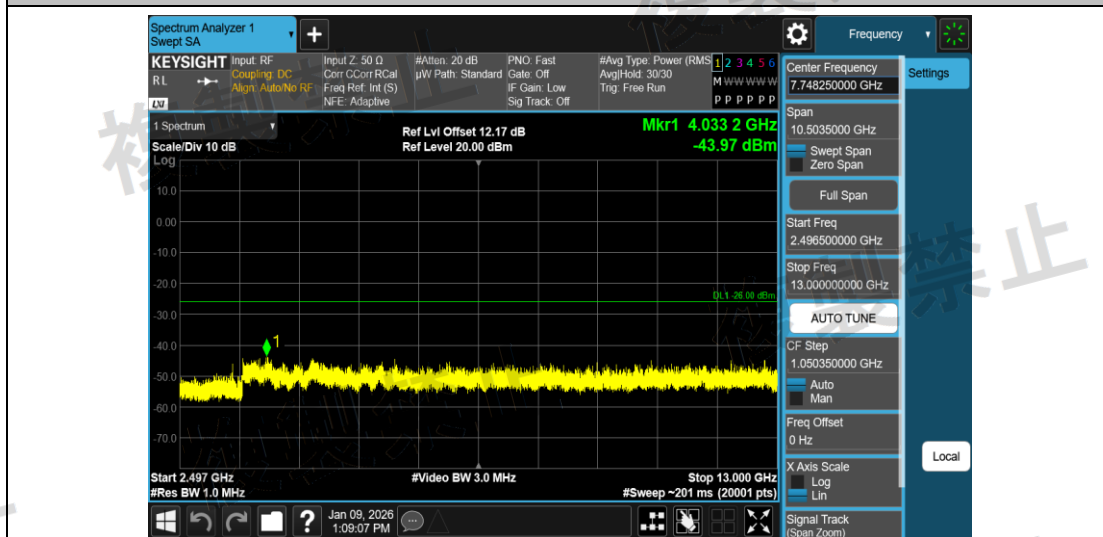
NTNV-DH5-Ant1-2441-2387~2400-PASS



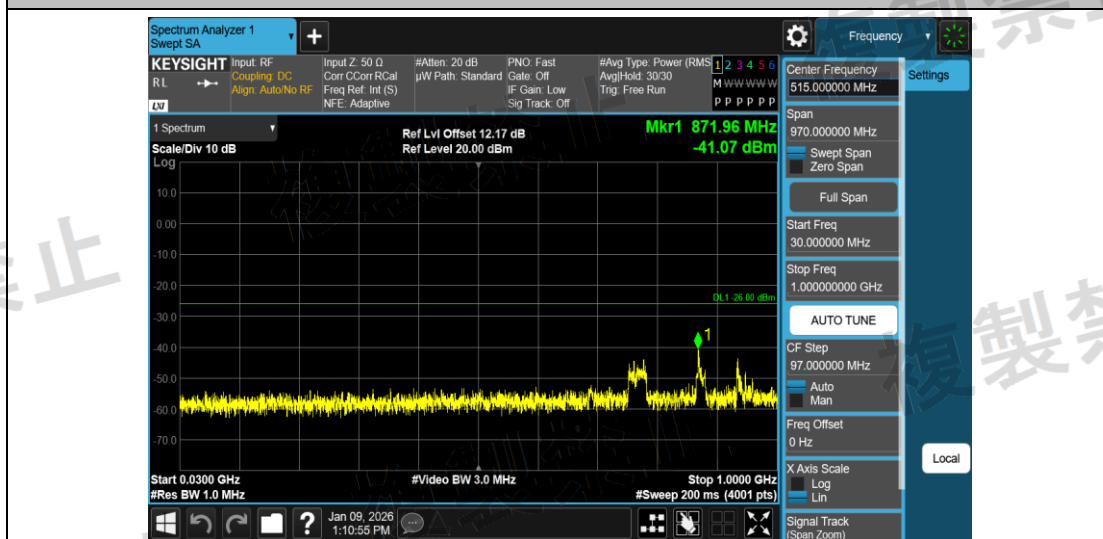
NTNV-DH5-Ant1-2441-2483.5~2496.5-PASS



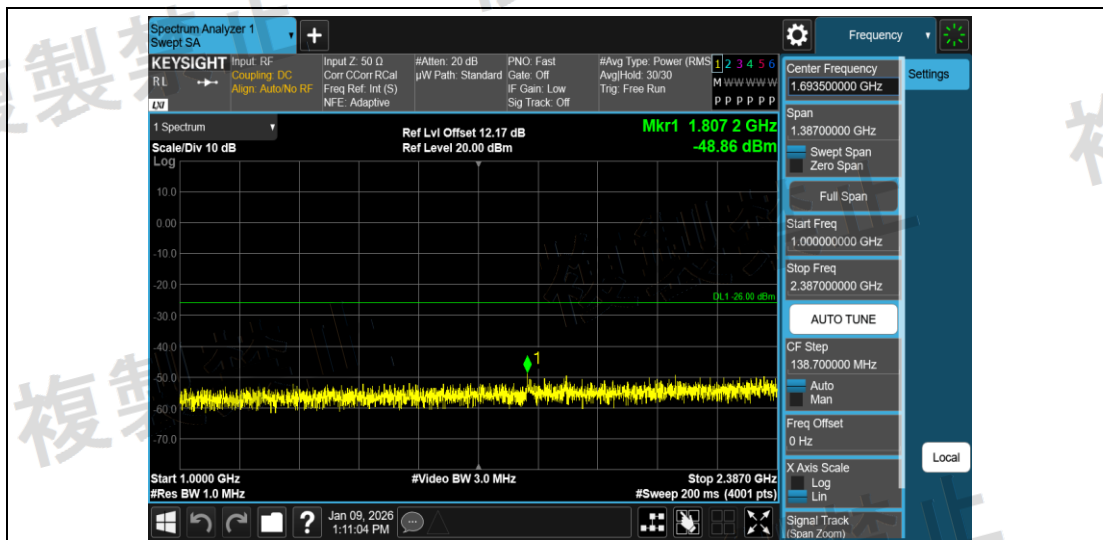
NTNV-DH5-Ant1-2441-2496.5~13000-PASS



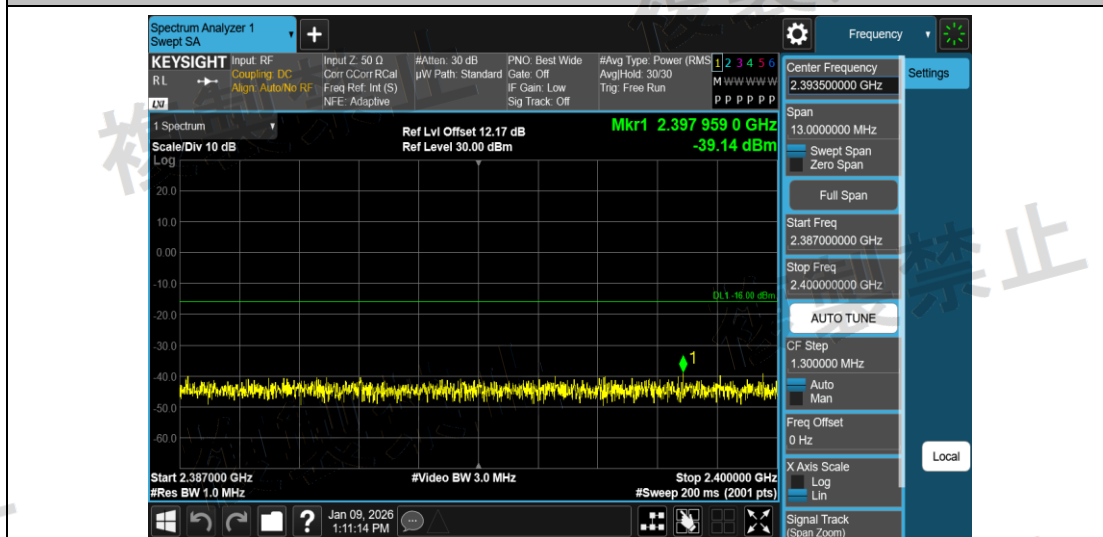
NTNV-DH5-Ant1-2480-30~1000-PASS



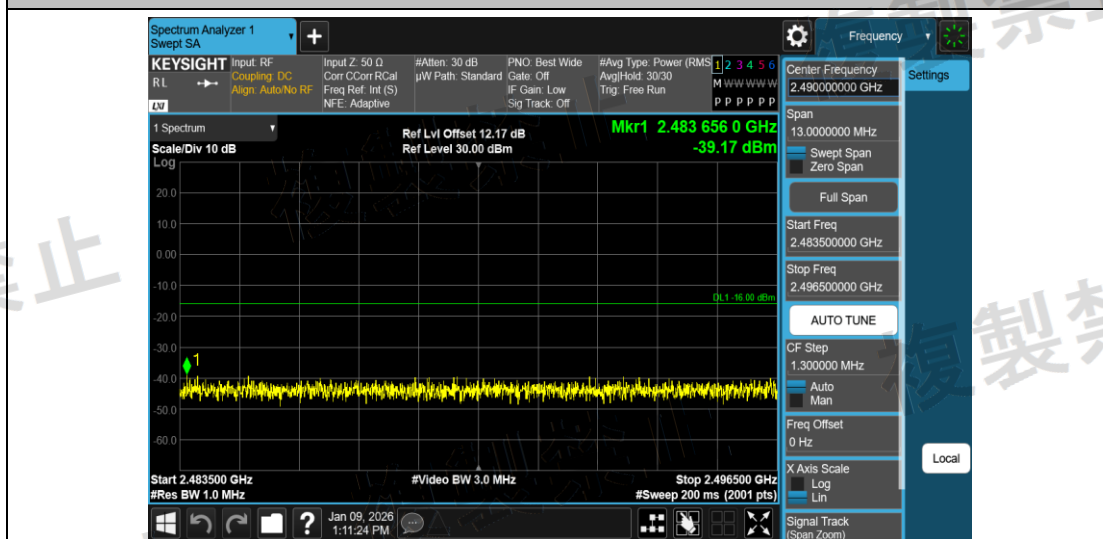
NTNV-DH5-Ant1-2480-1000~2387-PASS



NTNV-DH5-Ant1-2480-2387~2400-PASS



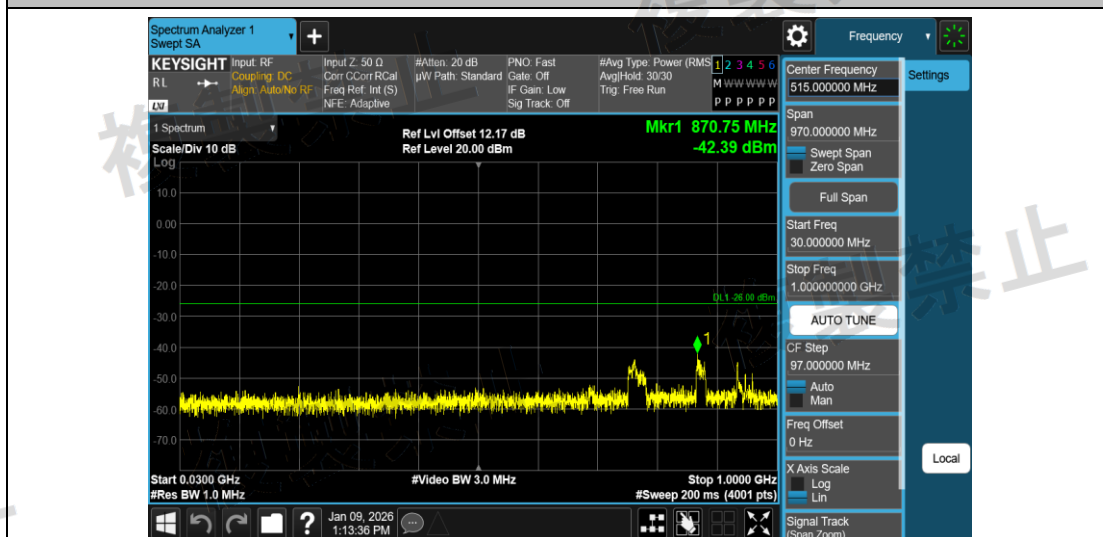
NTNV-DH5-Ant1-2480-2483.5~2496.5-PASS



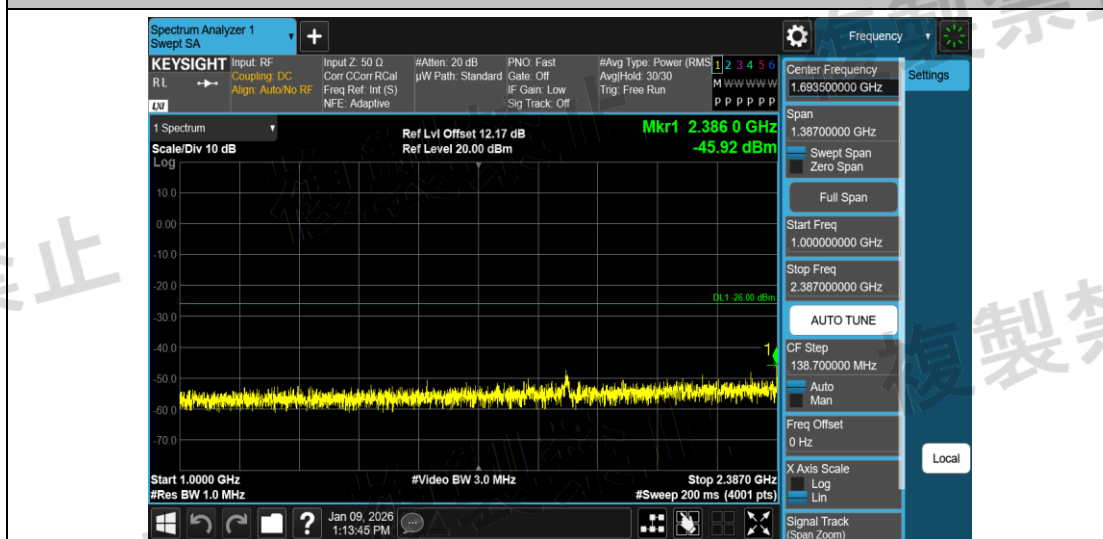
NTNV-DH5-Ant1-2480-2496.5~13000-PASS



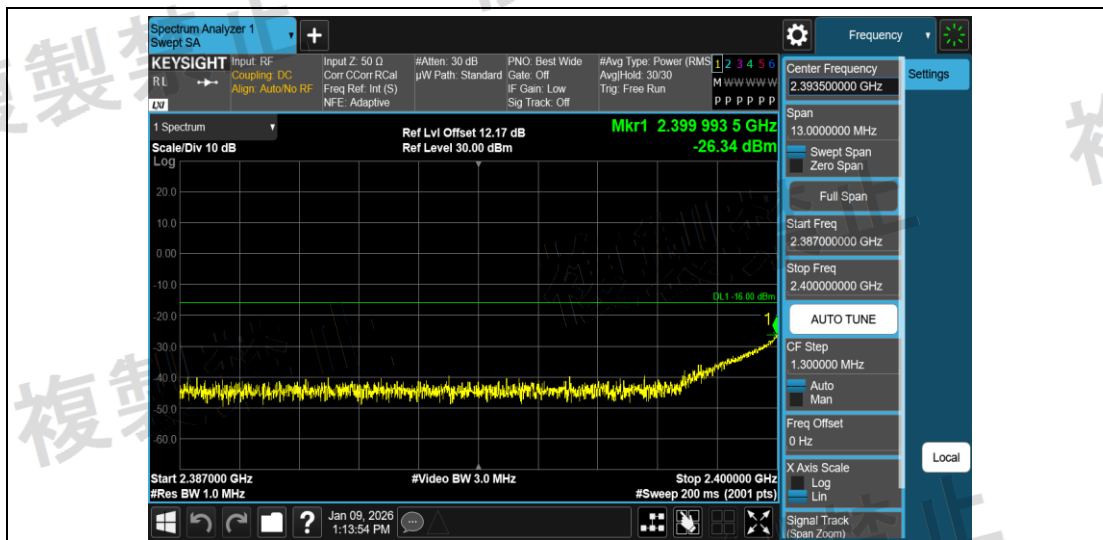
NTNV-2DH5-Ant1-2402-30~1000-PASS



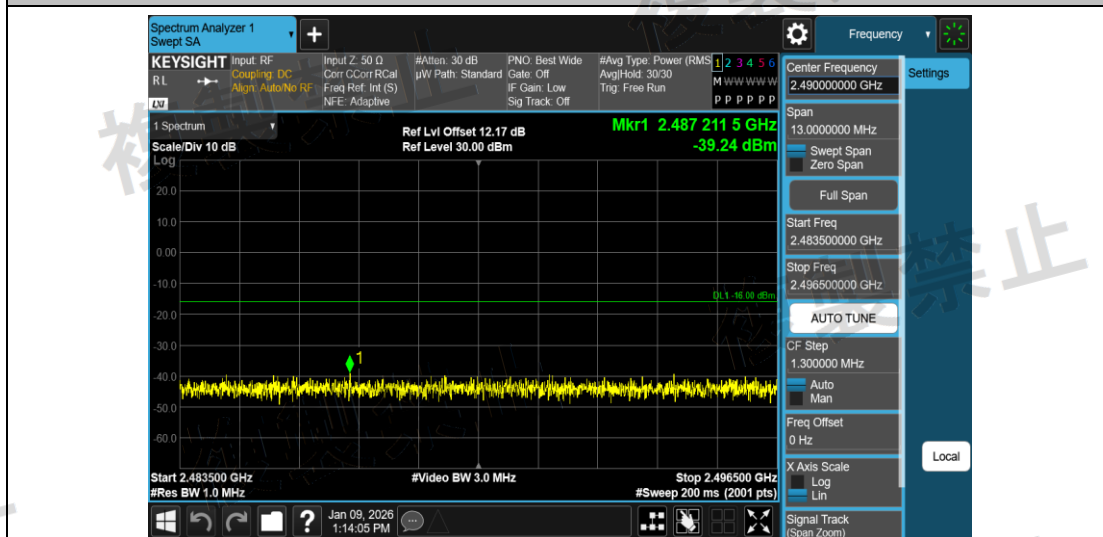
NTNV-2DH5-Ant1-2402-1000~2387-PASS



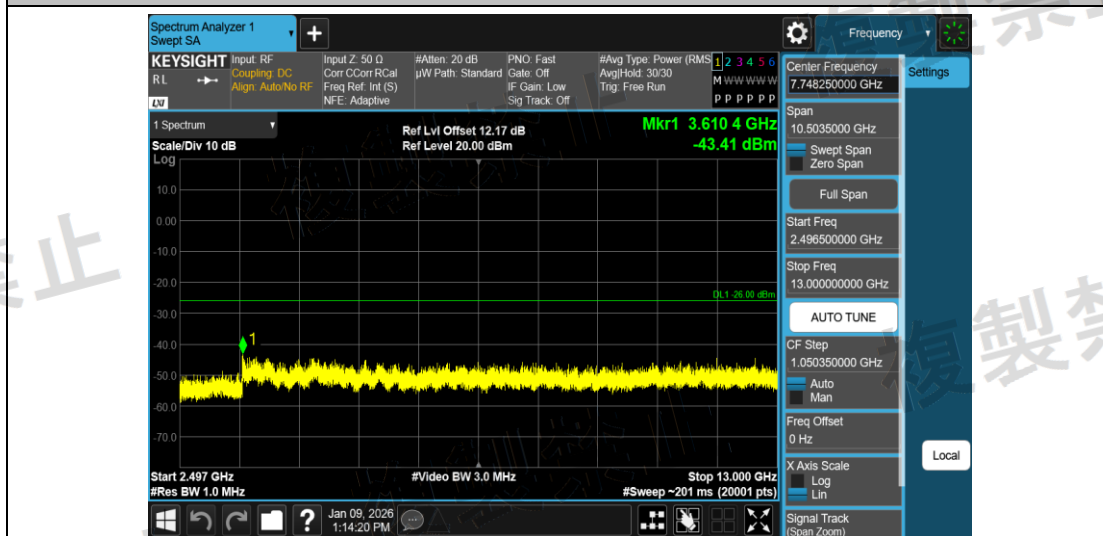
NTNV-2DH5-Ant1-2402-2387~2400-PASS



NTNV-2DH5-Ant1-2402-2483.5~2496.5-PASS



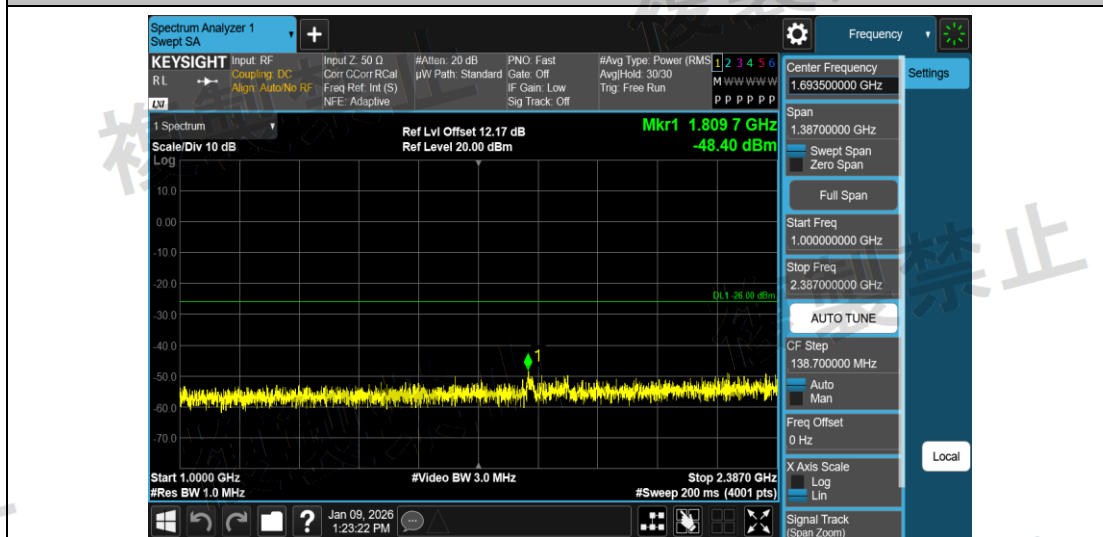
NTNV-2DH5-Ant1-2402-2496.5~13000-PASS



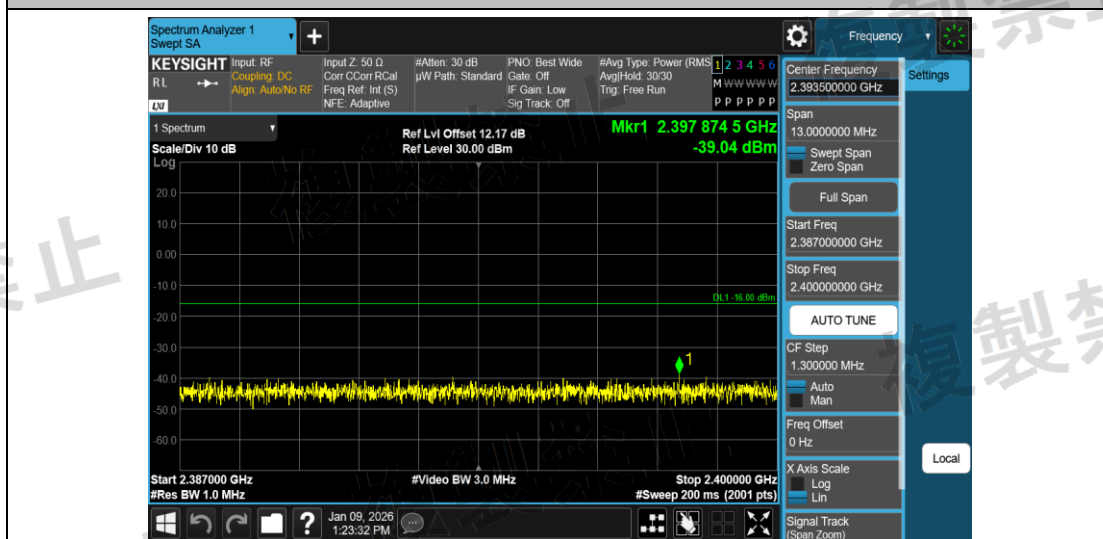
NTNV-2DH5-Ant1-2441-30~1000-PASS



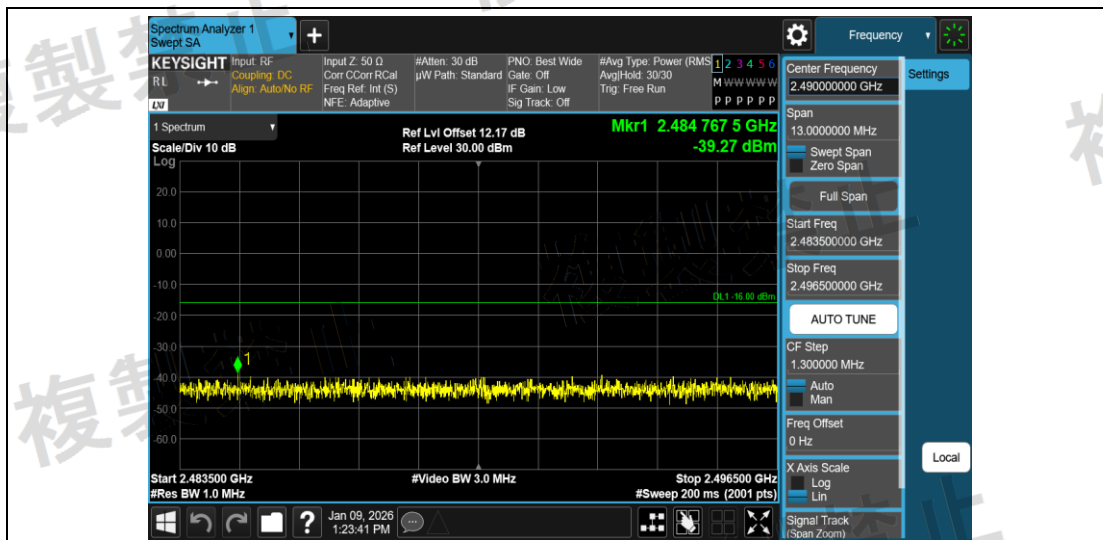
NTNV-2DH5-Ant1-2441-1000~2387-PASS



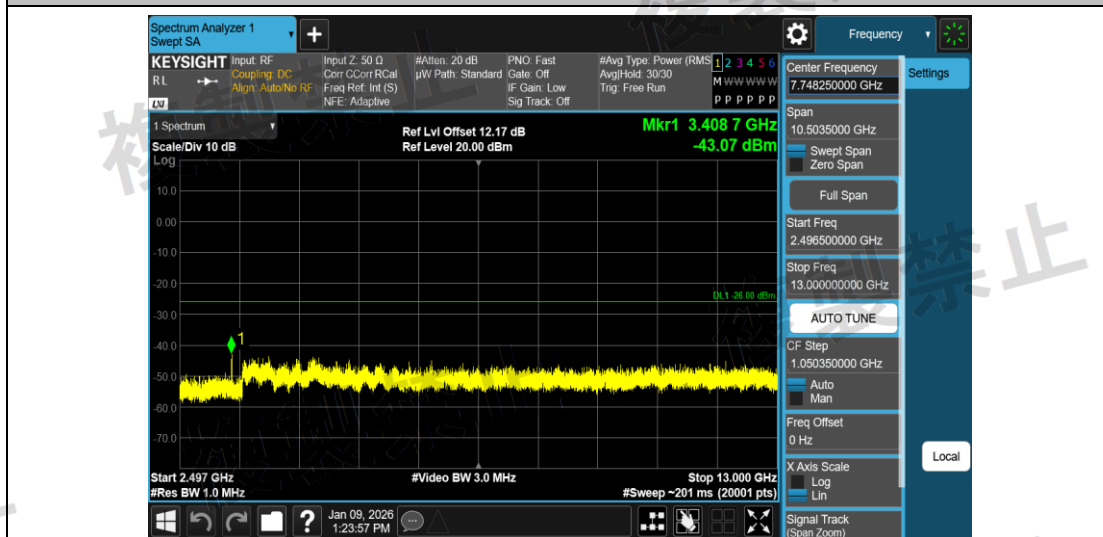
NTNV-2DH5-Ant1-2441-2387~2400-PASS



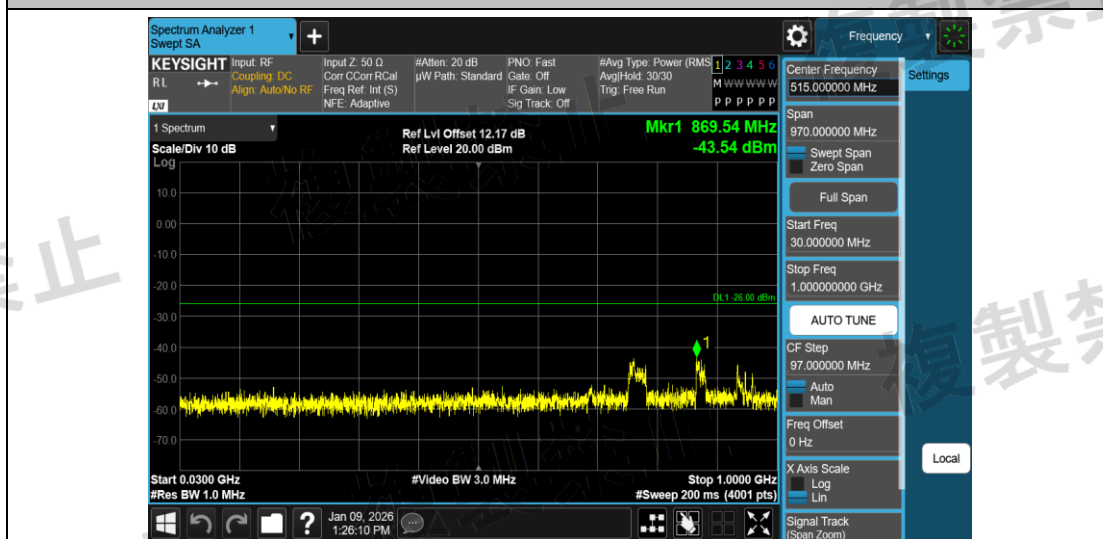
NTNV-2DH5-Ant1-2441-2483.5~2496.5-PASS



NTNV-2DH5-Ant1-2441-2496.5~13000-PASS



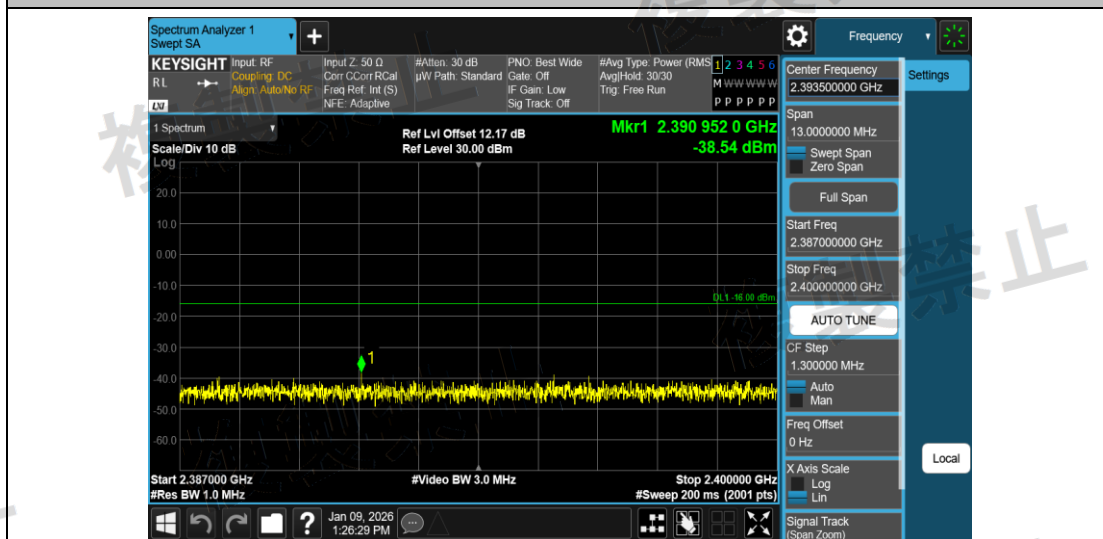
NTNV-2DH5-Ant1-2480-30~1000-PASS



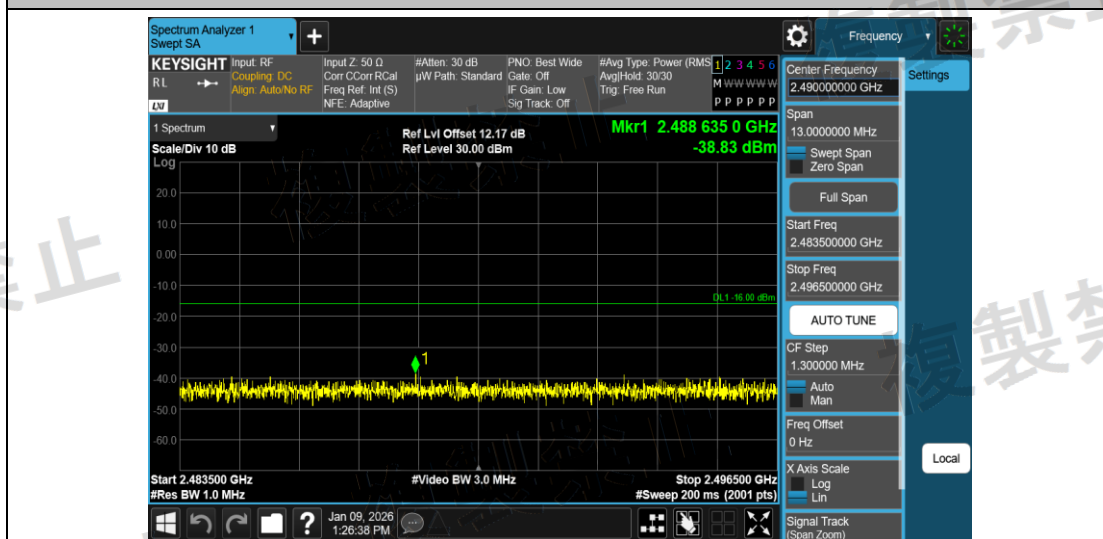
NTNV-2DH5-Ant1-2480-1000~2387-PASS



NTNV-2DH5-Ant1-2480-2387~2400-PASS



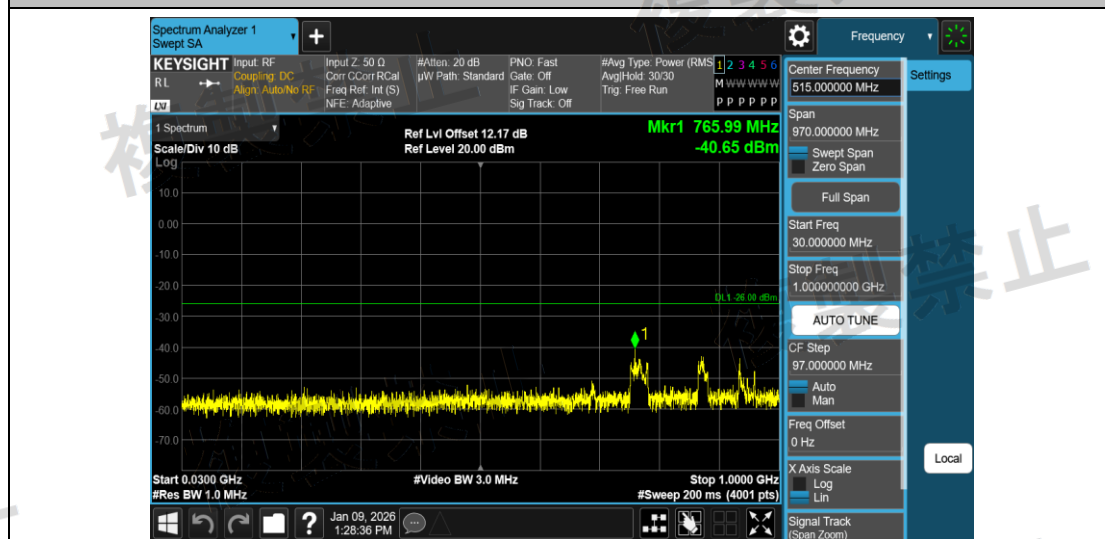
NTNV-2DH5-Ant1-2480-2483.5~2496.5-PASS



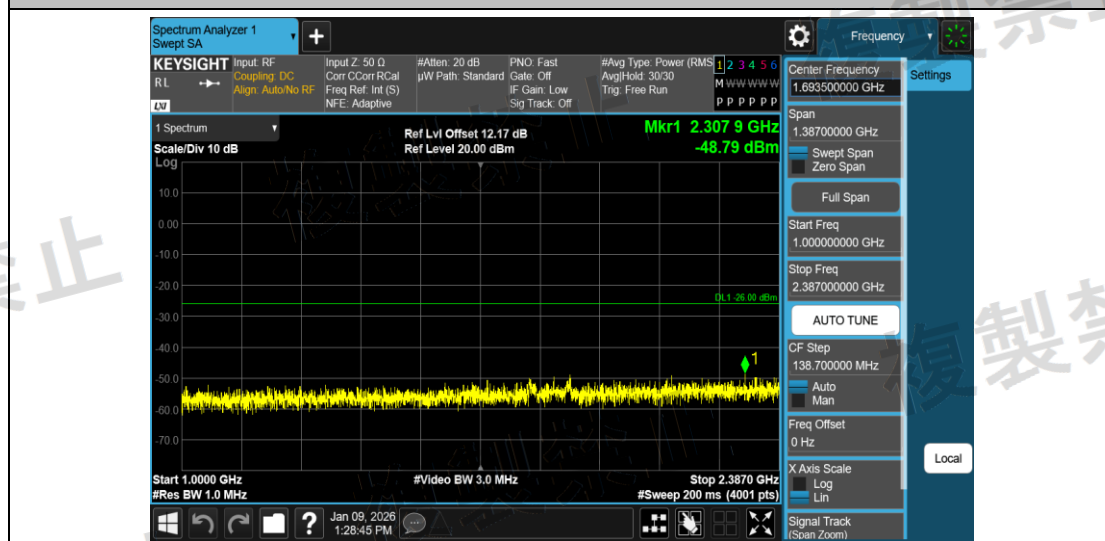
NTNV-2DH5-Ant1-2480-2496.5~13000-PASS



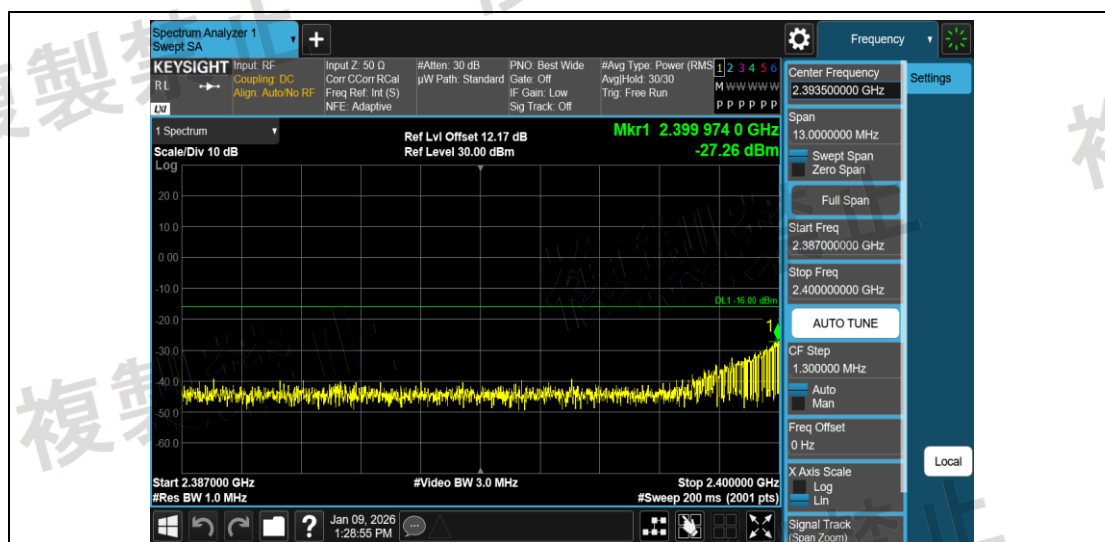
NTNV-3DH5-Ant1-2402-30~1000-PASS



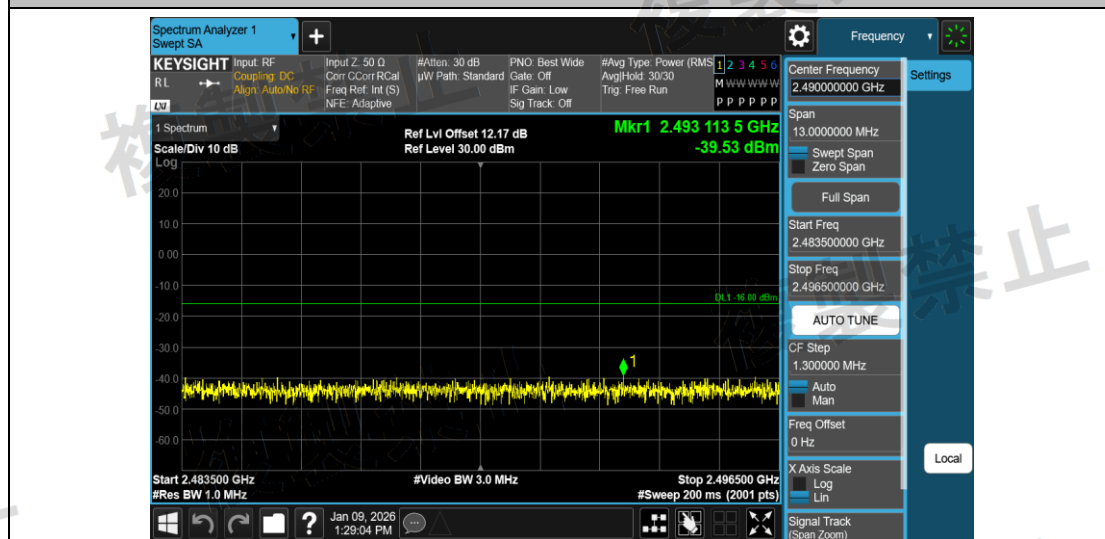
NTNV-3DH5-Ant1-2402-1000~2387-PASS



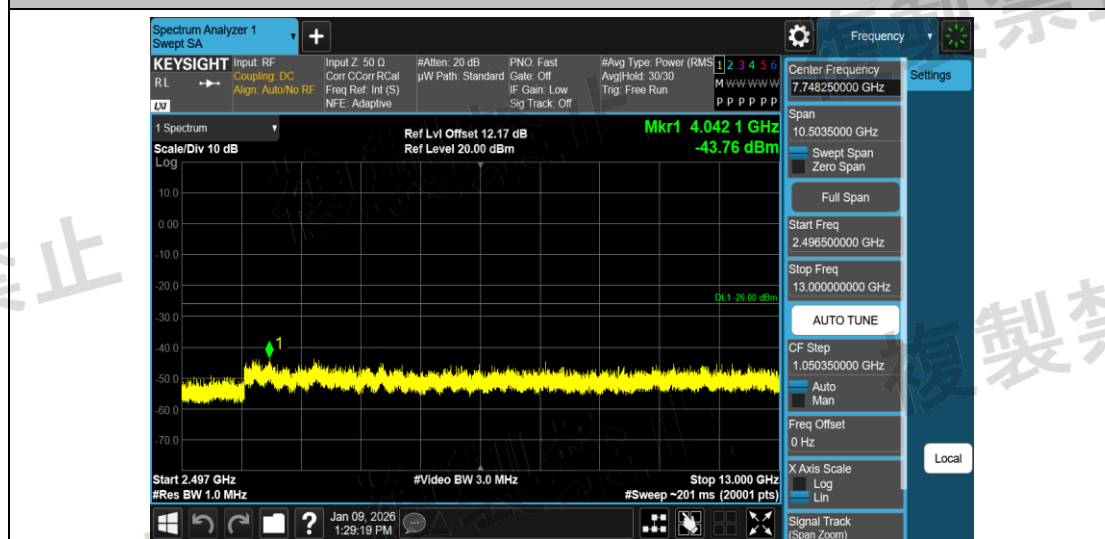
NTNV-3DH5-Ant1-2402-2387~2400-PASS



NTNV-3DH5-Ant1-2402-2483.5~2496.5-PASS



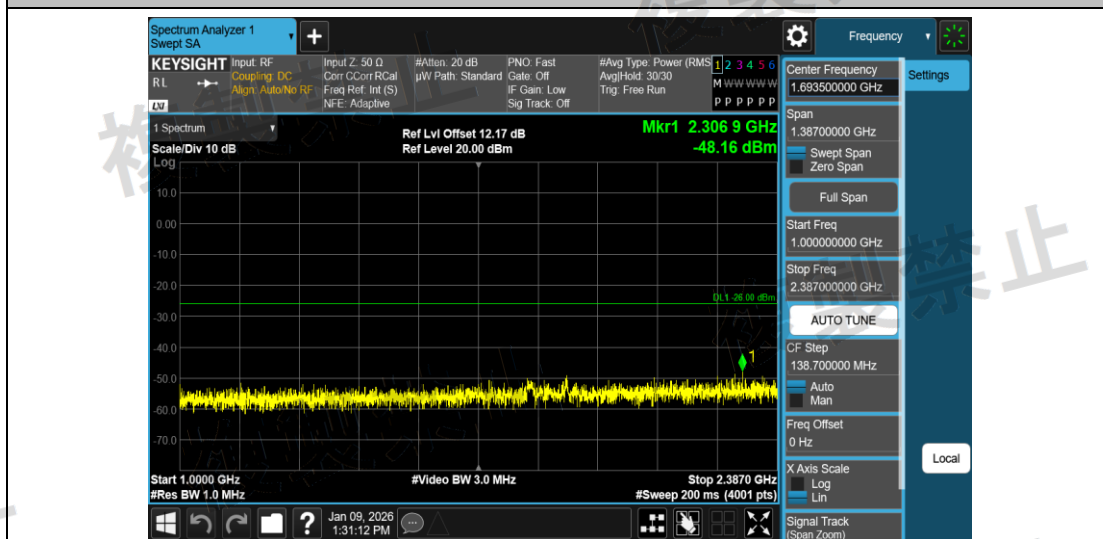
NTNV-3DH5-Ant1-2402-2496.5~13000-PASS



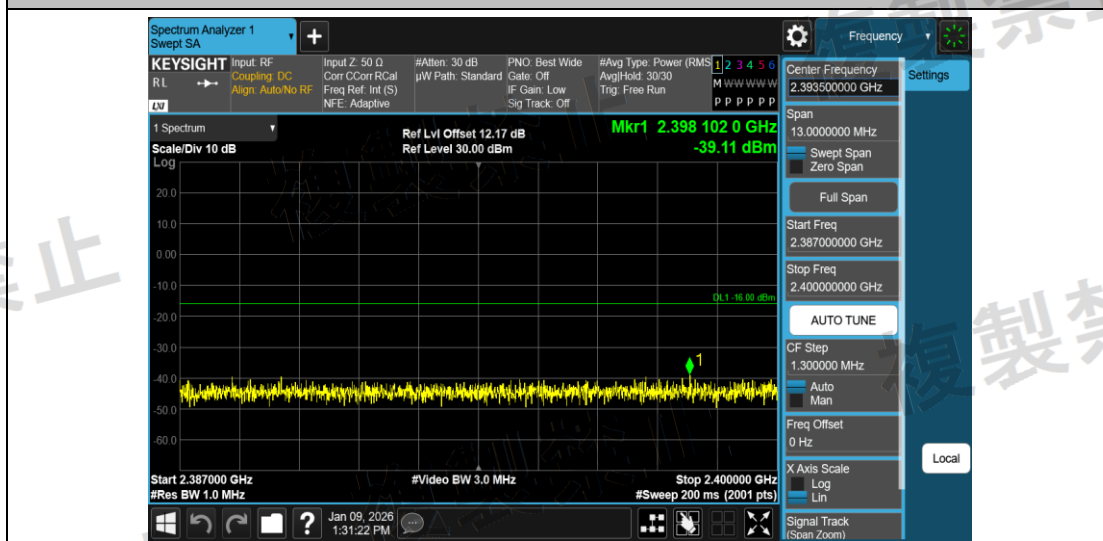
NTNV-3DH5-Ant1-2441-30~1000-PASS



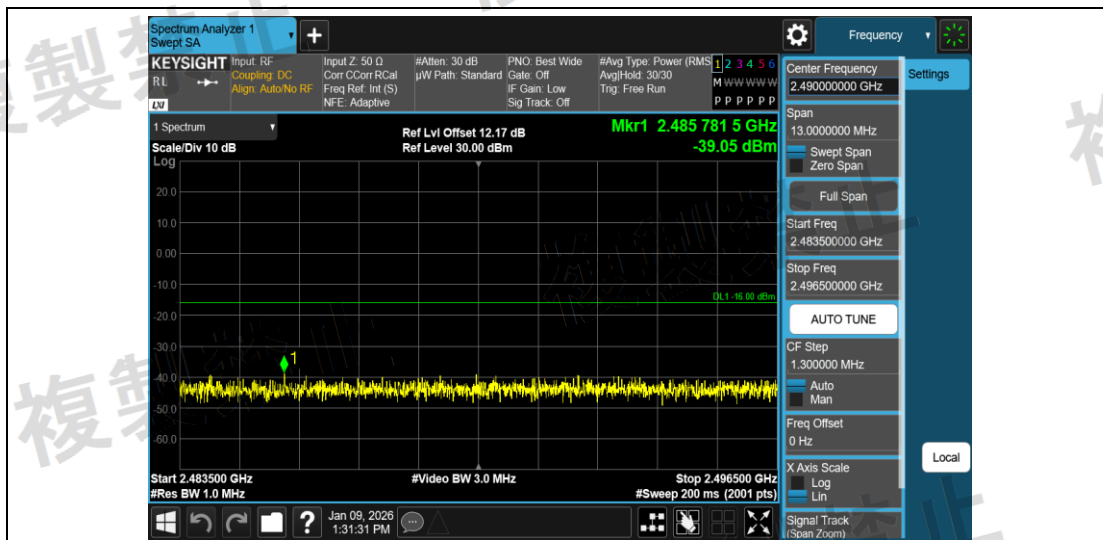
NTNV-3DH5-Ant1-2441-1000~2387-PASS



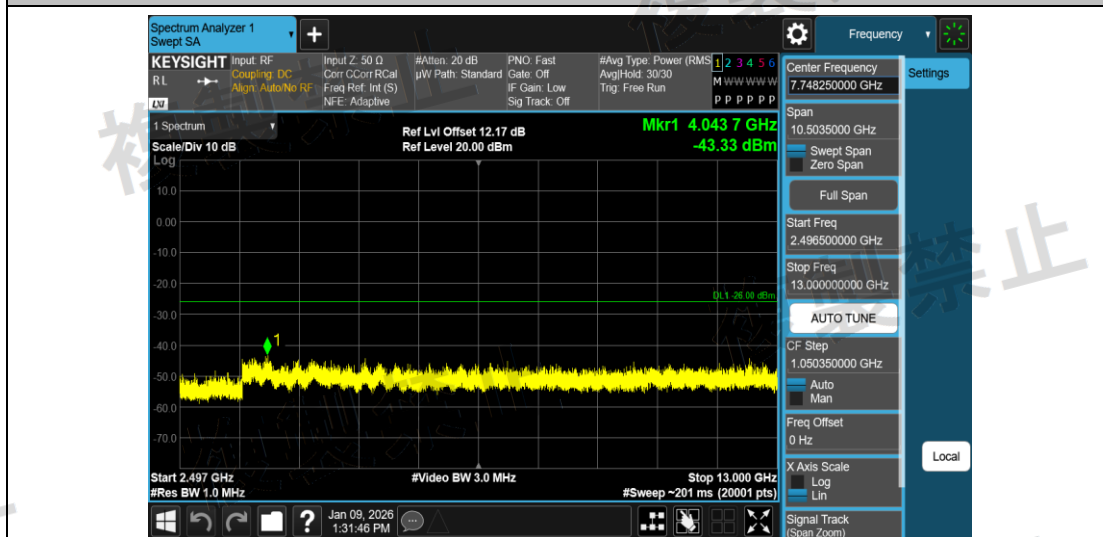
NTNV-3DH5-Ant1-2441-2387~2400-PASS



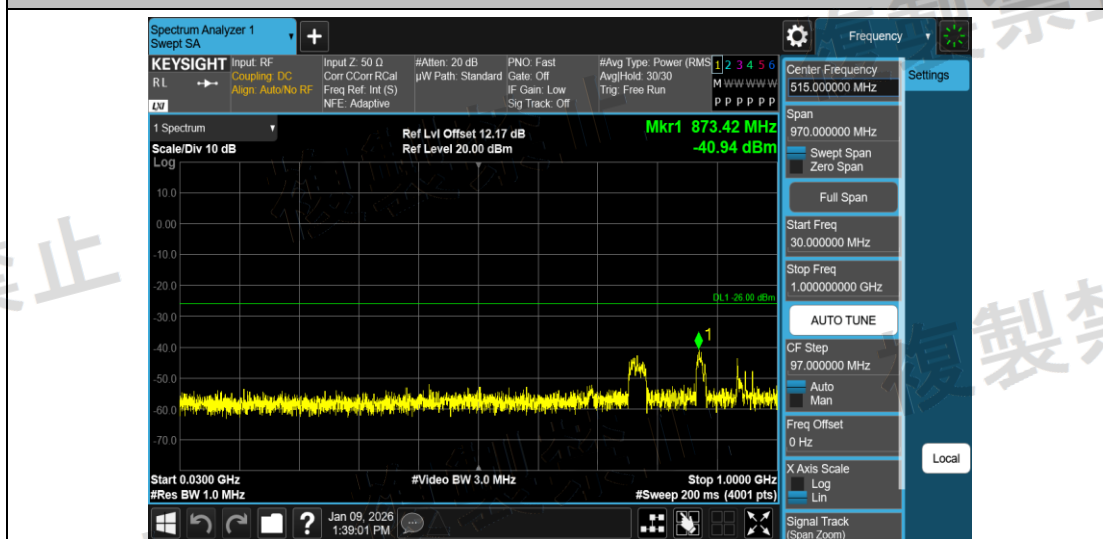
NTNV-3DH5-Ant1-2441-2483.5~2496.5-PASS



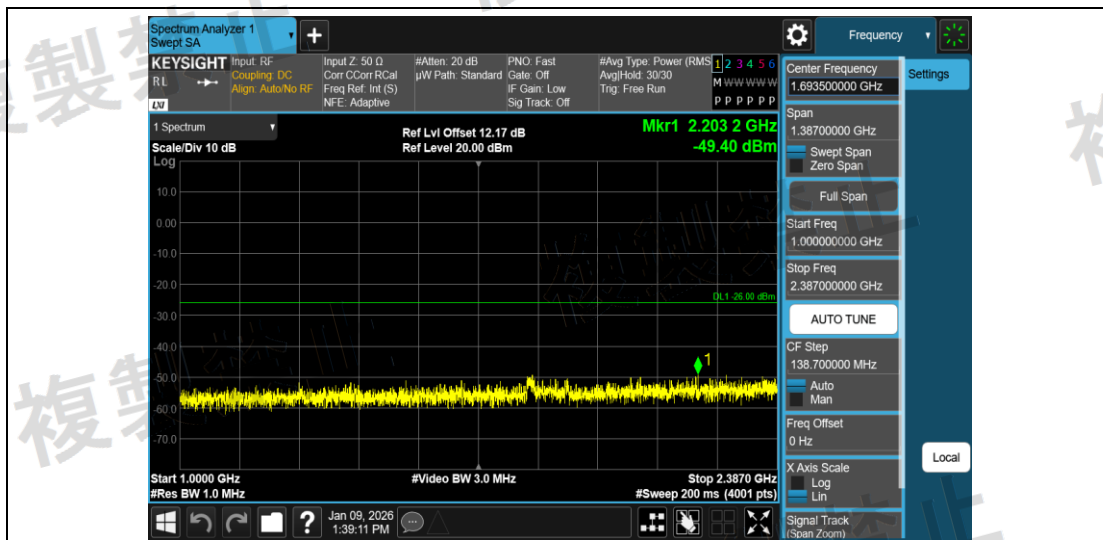
NTNV-3DH5-Ant1-2441-2496.5~13000-PASS



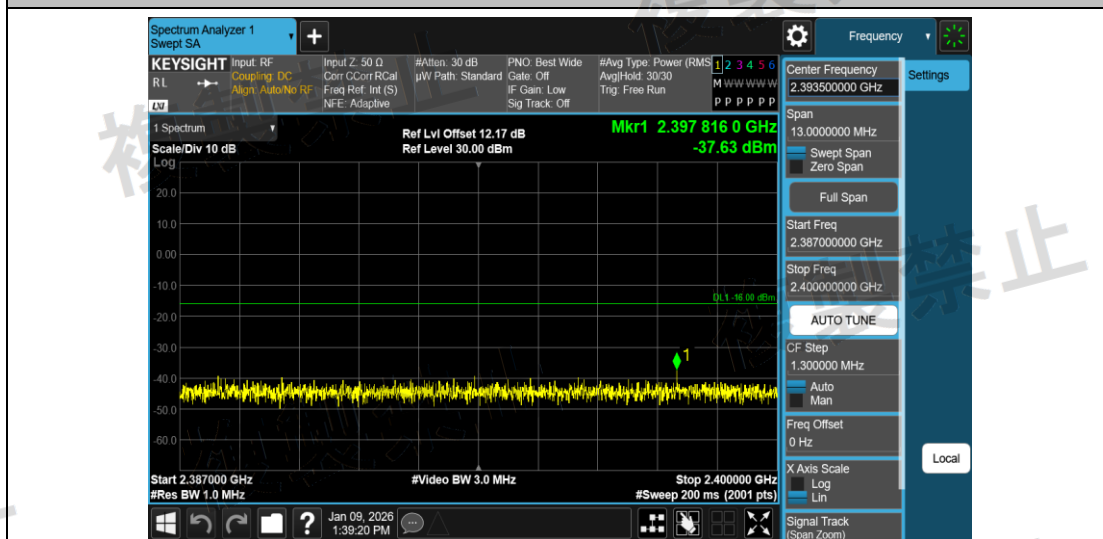
NTNV-3DH5-Ant1-2480-30~1000-PASS



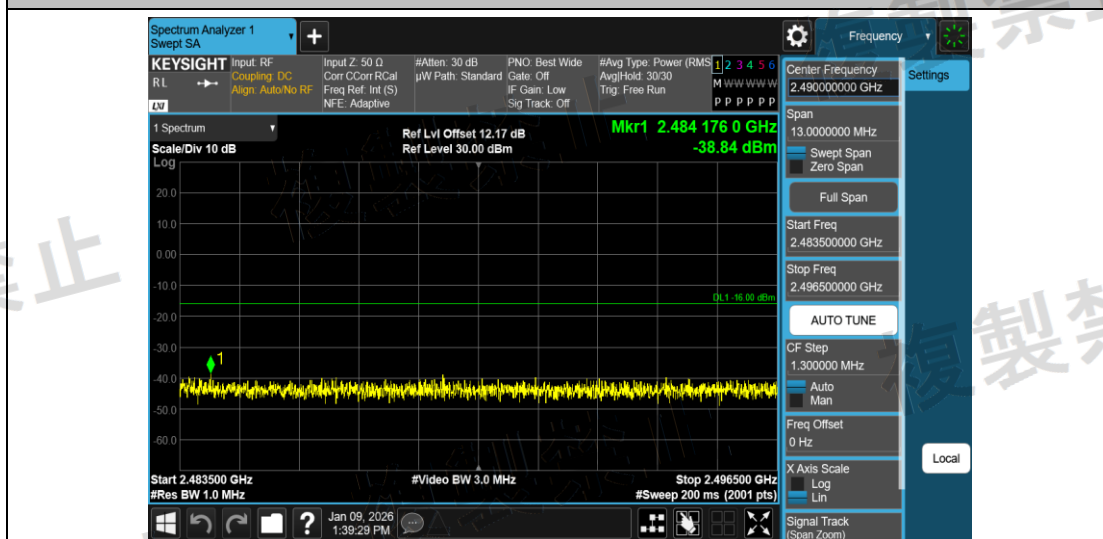
NTNV-3DH5-Ant1-2480-1000~2387-PASS



NTNV-3DH5-Ant1-2480-2387~2400-PASS



NTNV-3DH5-Ant1-2480-2483.5~2496.5-PASS



NTNV-3DH5-Ant1-2480-2496.5~13000-PASS



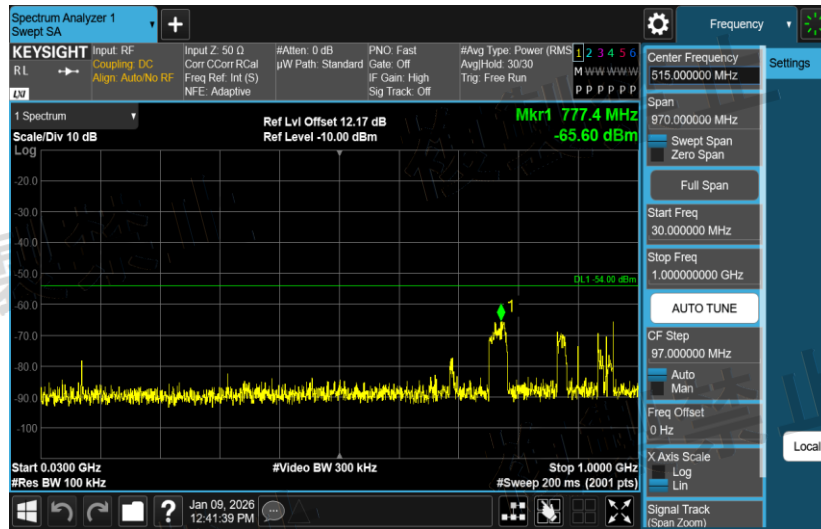
Appendix F: Spurious Emission of RX

Test Result

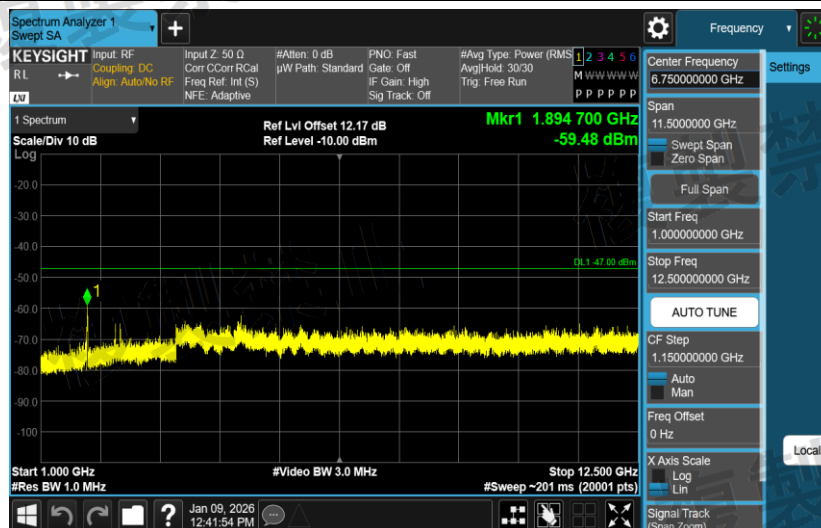
Test Condition	Test Mode	Antenna	Frequency [MHz]	Freq.Range [MHz]	Result [dBm]	Limit [dBm]	Result [nW]	Limit [nW]	Verdict
NTNV	DH5	Ant1	2402	30~1000	-65.6	≤-54	0.27542	≤4	PASS
NTNV	DH5	Ant1	2402	1000~12500	-59.48	≤-47	1.12720	≤20	PASS
NTNV	DH5	Ant1	2441	30~1000	-63.33	≤-54	0.46452	≤4	PASS
NTNV	DH5	Ant1	2441	1000~12500	-61.81	≤-47	0.65917	≤20	PASS
NTNV	DH5	Ant1	2480	30~1000	-63.17	≤-54	0.48195	≤4	PASS
NTNV	DH5	Ant1	2480	1000~12500	-49.43	≤-47	11.40250	≤20	PASS
NTNV	2DH5	Ant1	2402	30~1000	-64.8	≤-54	0.33113	≤4	PASS
NTNV	2DH5	Ant1	2402	1000~12500	-61.23	≤-47	0.75336	≤20	PASS
NTNV	2DH5	Ant1	2441	30~1000	-65.22	≤-54	0.30061	≤4	PASS
NTNV	2DH5	Ant1	2441	1000~12500	-61.64	≤-47	0.68549	≤20	PASS
NTNV	2DH5	Ant1	2480	30~1000	-65.54	≤-54	0.27925	≤4	PASS
NTNV	2DH5	Ant1	2480	1000~12500	-58.3	≤-47	1.47911	≤20	PASS
NTNV	3DH5	Ant1	2402	30~1000	-61.74	≤-54	0.66988	≤4	PASS
NTNV	3DH5	Ant1	2402	1000~12500	-57.38	≤-47	1.82810	≤20	PASS
NTNV	3DH5	Ant1	2441	30~1000	-65.11	≤-54	0.30832	≤4	PASS
NTNV	3DH5	Ant1	2441	1000~12500	-60.29	≤-47	0.93541	≤20	PASS
NTNV	3DH5	Ant1	2480	30~1000	-66.38	≤-54	0.23014	≤4	PASS
NTNV	3DH5	Ant1	2480	1000~12500	-50.29	≤-47	9.35406	≤20	PASS

Test Graphs

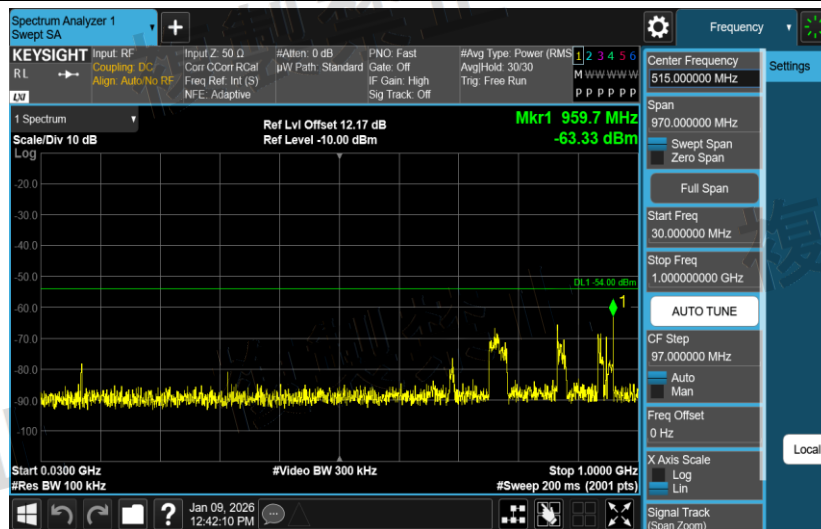
NTNV-DH5-Ant1-2402-30~1000-PASS

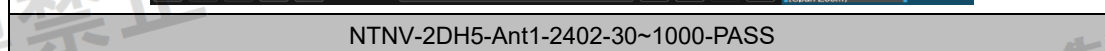
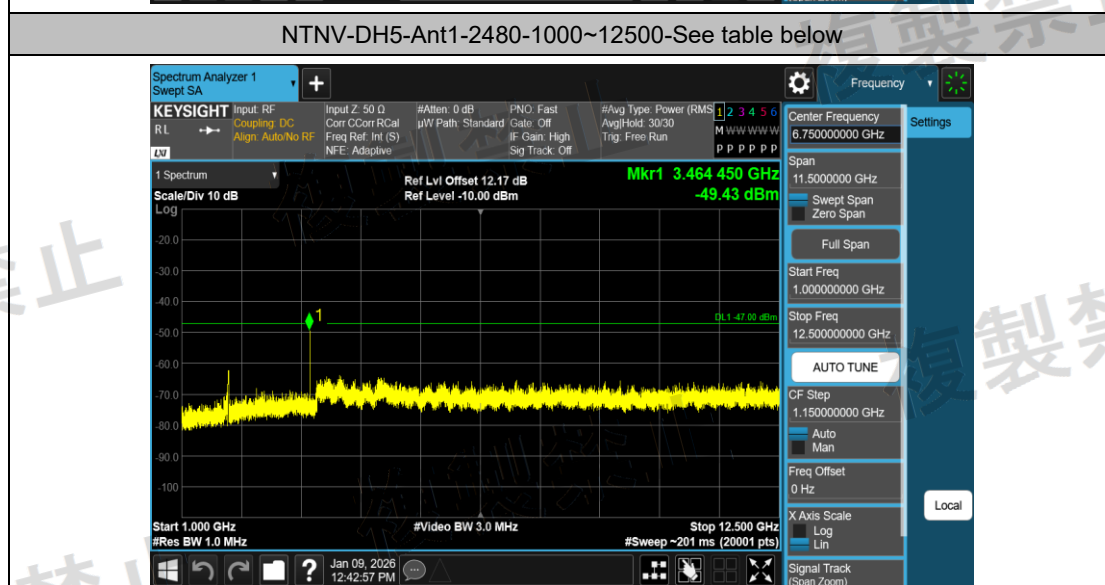
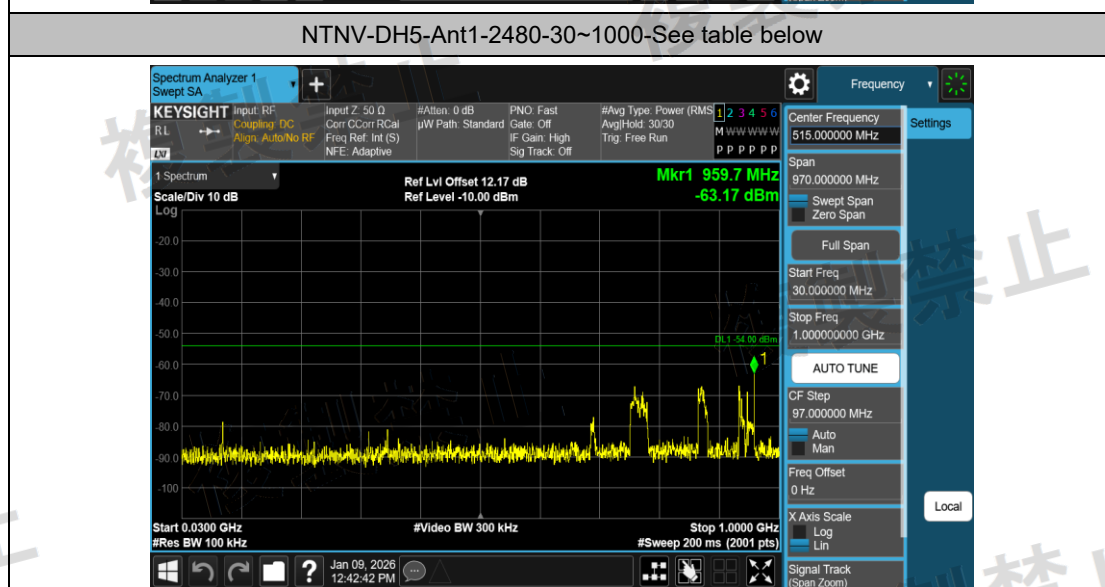
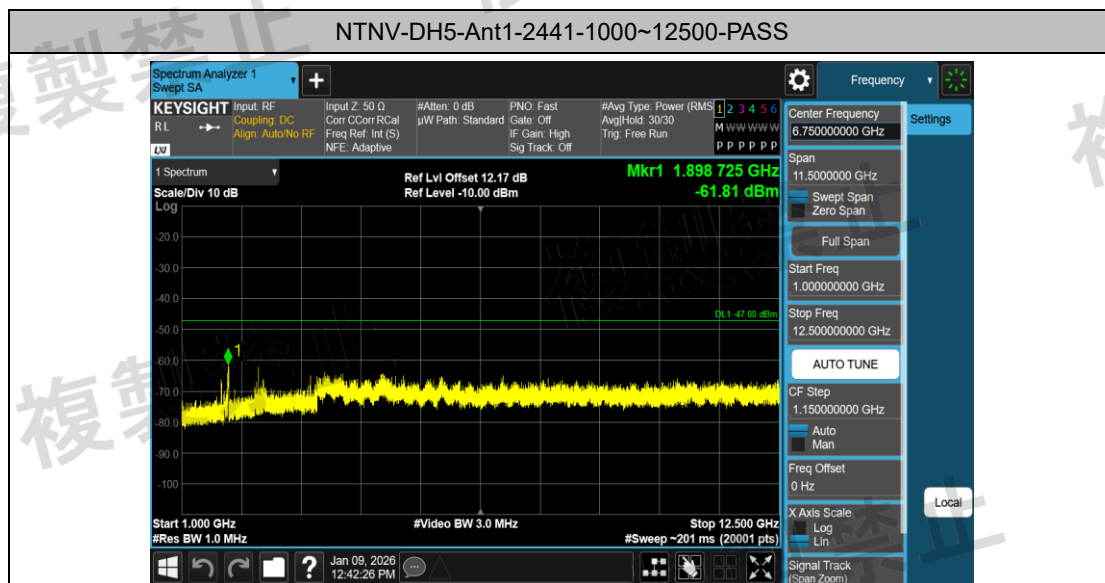


NTNV-DH5-Ant1-2402-1000~12500-PASS



NTNV-DH5-Ant1-2441-30~1000-See table below



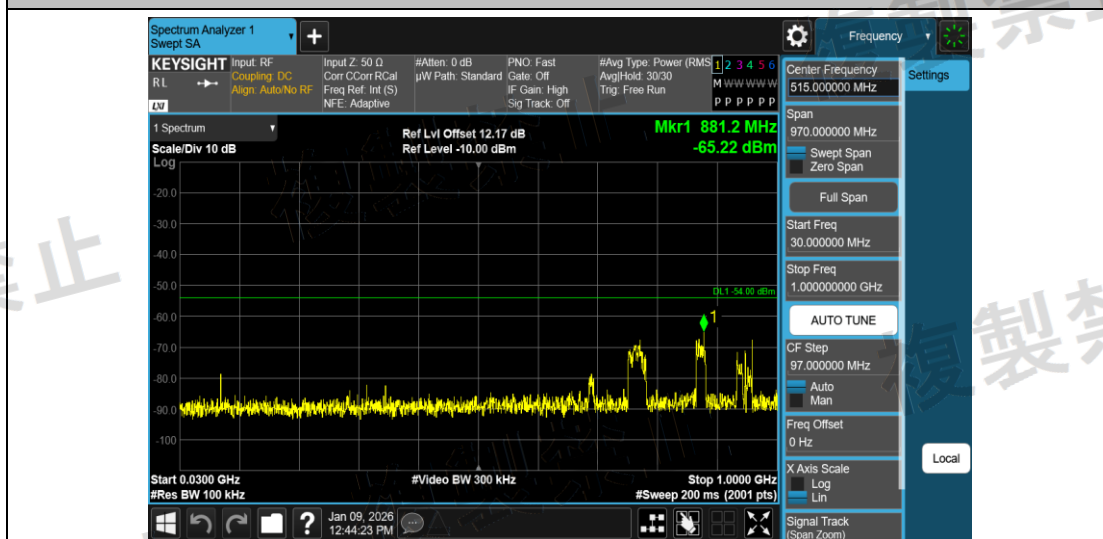




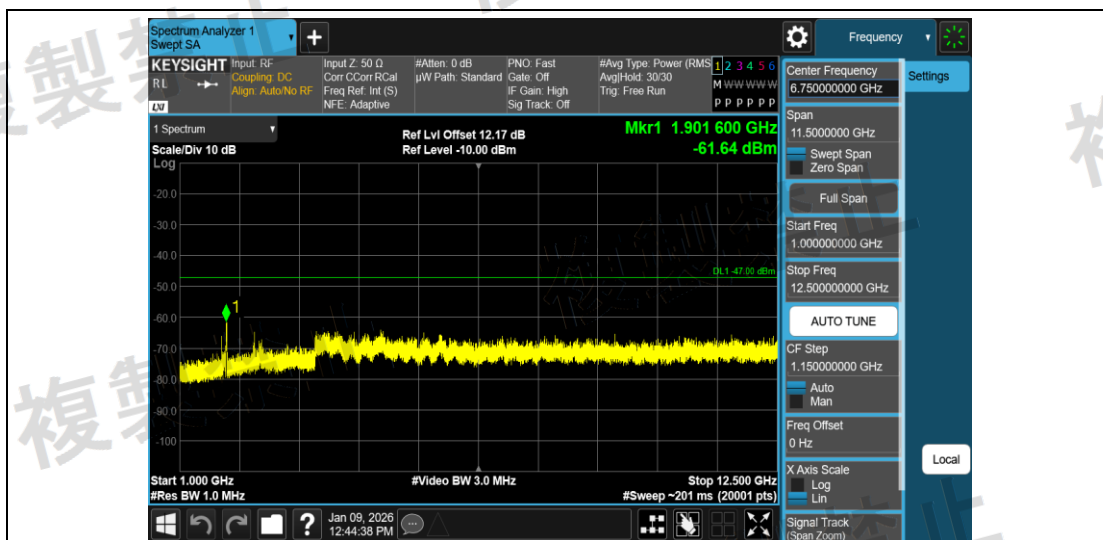
NTNV-2DH5-Ant1-2402-1000~12500-PASS



NTNV-2DH5-Ant1-2441-30~1000-PASS



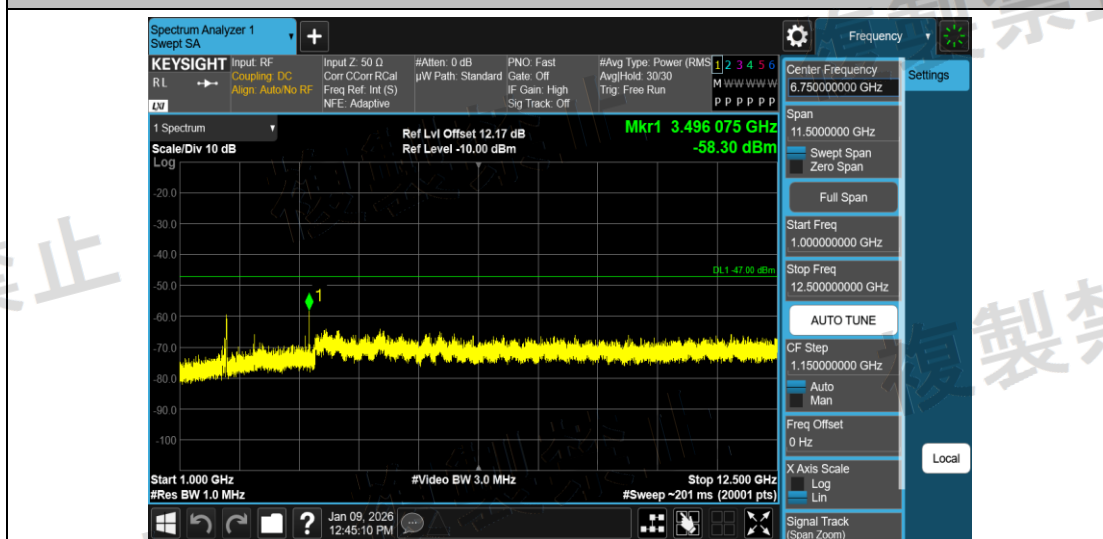
NTNV-2DH5-Ant1-2441-1000~12500-PASS



NTNV-2DH5-Ant1-2480-30~1000-PASS



NTNV-2DH5-Ant1-2480-1000~12500-PASS



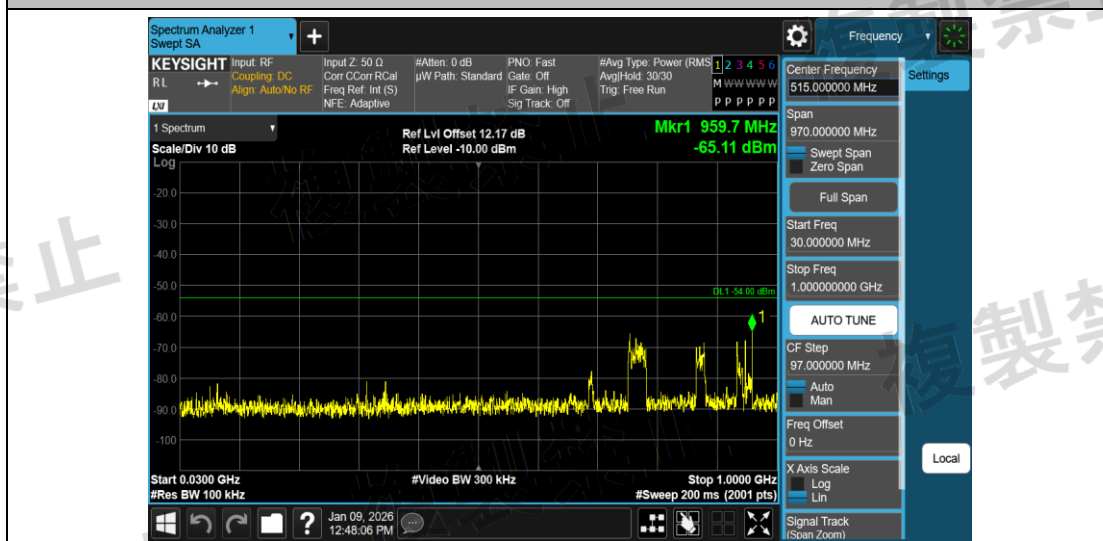
NTNV-3DH5-Ant1-2402-30~1000-See table below



NTNV-3DH5-Ant1-2402-1000~12500-PASS



NTNV-3DH5-Ant1-2441-30~1000-PASS



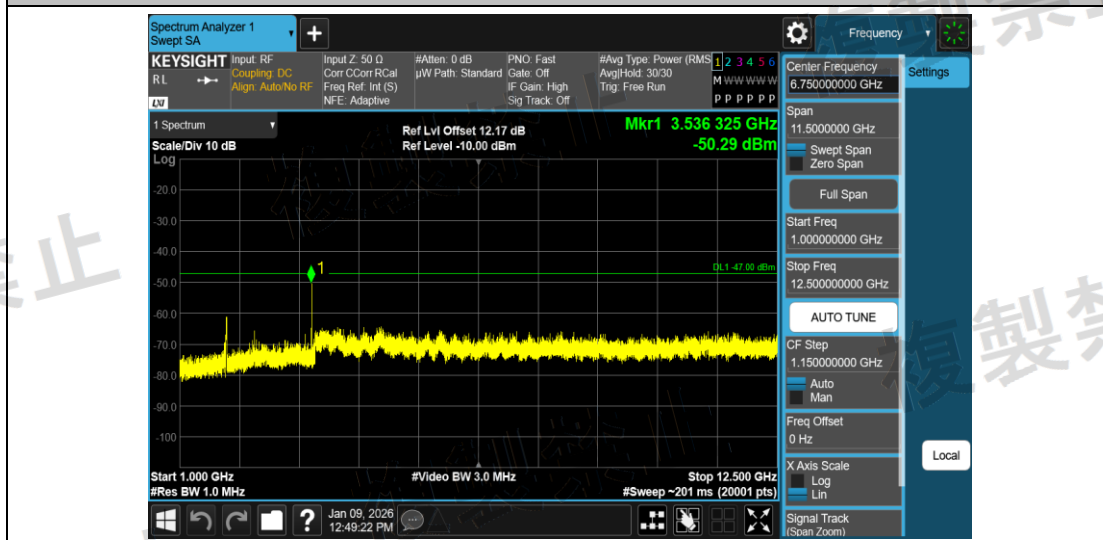
NTNV-3DH5-Ant1-2441-1000~12500-PASS



NTNV-3DH5-Ant1-2480-30~1000-PASS



NTNV-3DH5-Ant1-2480-1000~12500-See table below

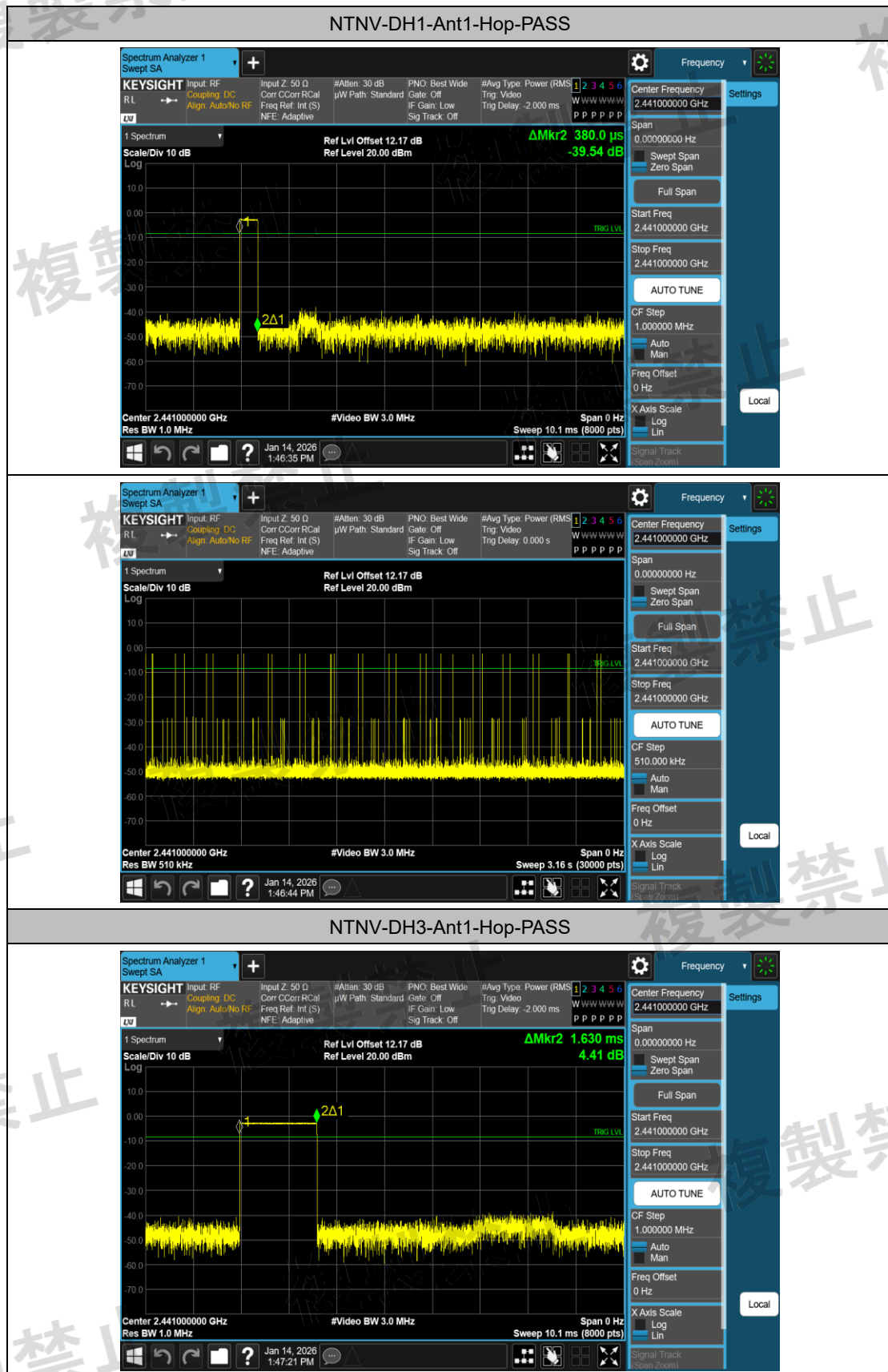


Appendix G: Dwell Time

Test Result

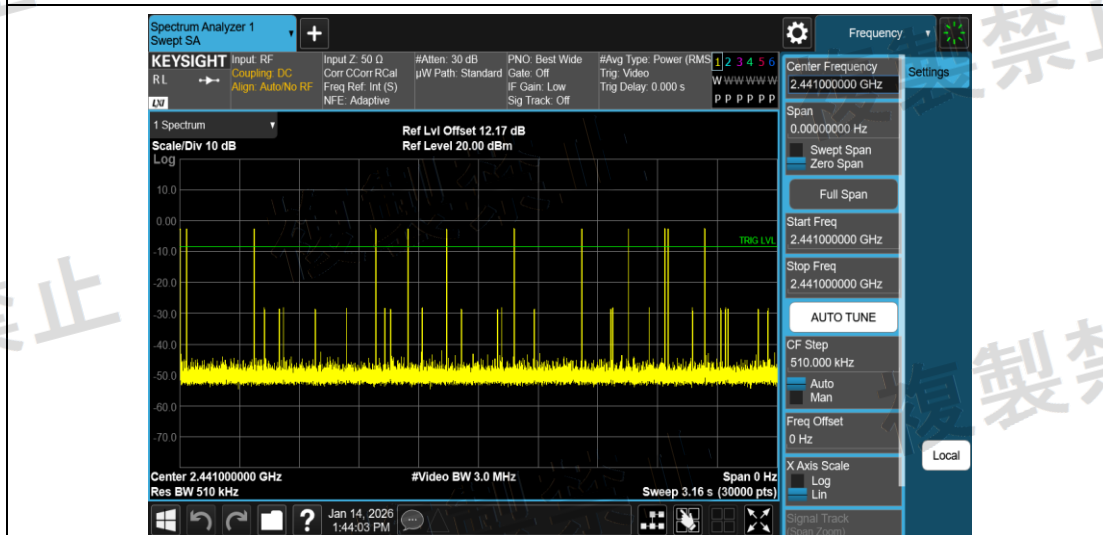
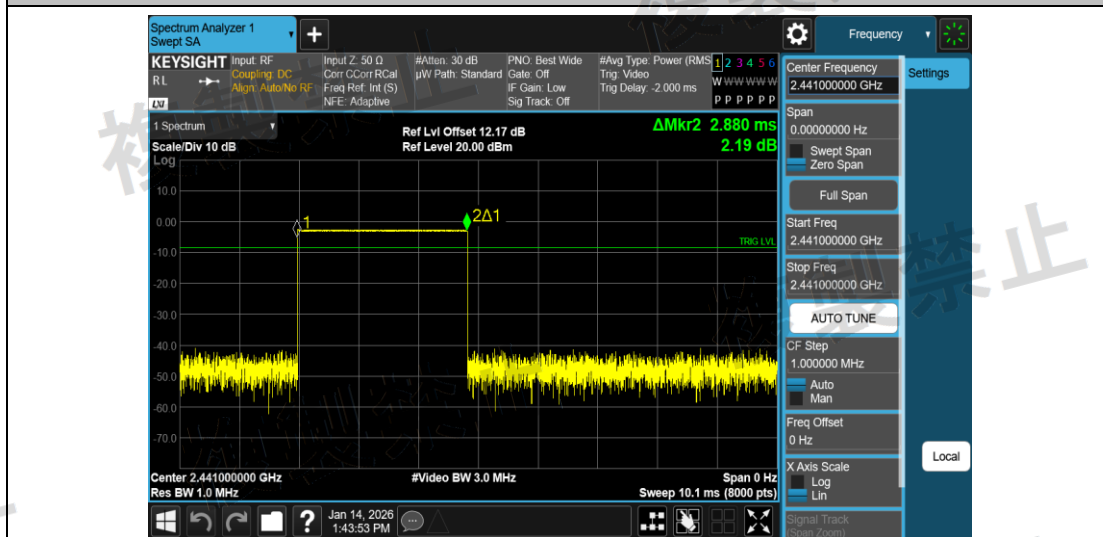
Test Condition	Test Mode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit [s]	Verdict
NTNV	DH1	Ant1	Hop	0.38	320	0.122	≤0.4	PASS
NTNV	DH3	Ant1	Hop	1.63	160	0.261	≤0.4	PASS
NTNV	DH5	Ant1	Hop	2.88	120	0.346	≤0.4	PASS
NTNV	2DH1	Ant1	Hop	0.39	330	0.129	≤0.4	PASS
NTNV	2DH3	Ant1	Hop	1.64	170	0.279	≤0.4	PASS
NTNV	2DH5	Ant1	Hop	2.89	110	0.318	≤0.4	PASS
NTNV	3DH1	Ant1	Hop	0.39	330	0.129	≤0.4	PASS
NTNV	3DH3	Ant1	Hop	1.64	180	0.295	≤0.4	PASS
NTNV	3DH5	Ant1	Hop	2.89	130	0.376	≤0.4	PASS

Test Graphs

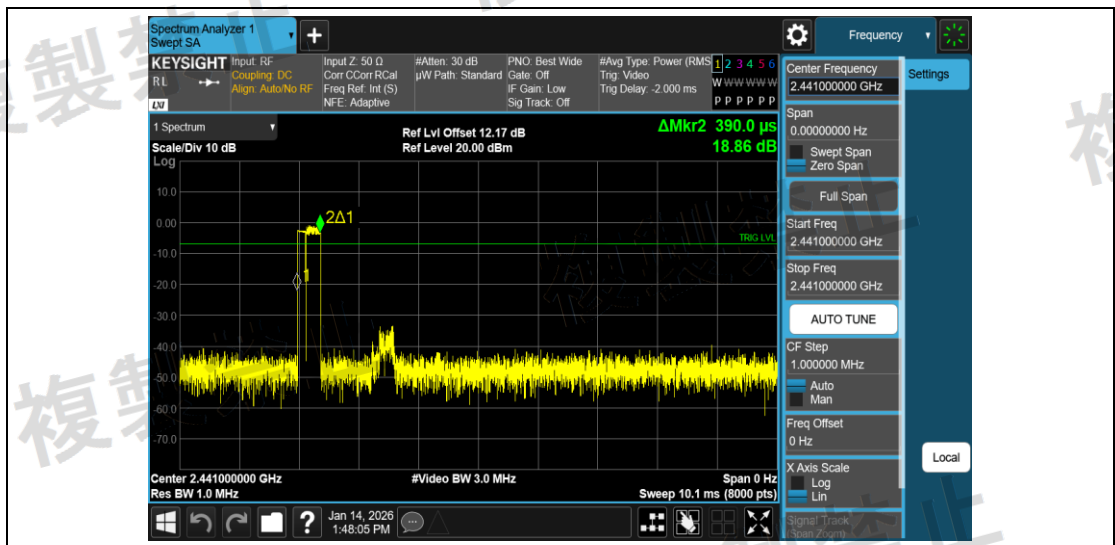




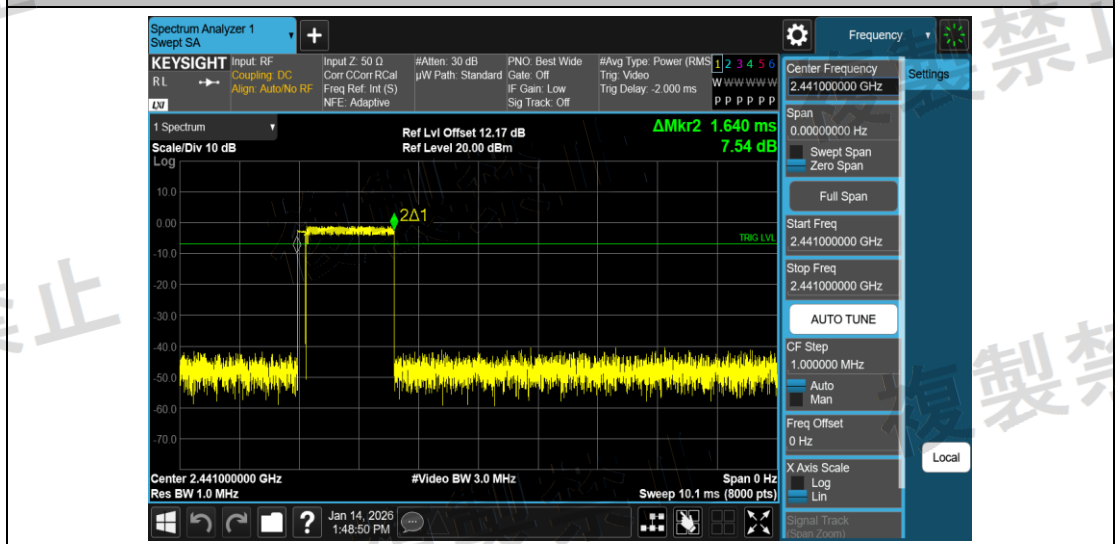
NTNV-DH5-Ant1-Hop-PASS



NTNV-2DH1-Ant1-Hop-PASS



NTNV-2DH3-Ant1-Hop-PASS

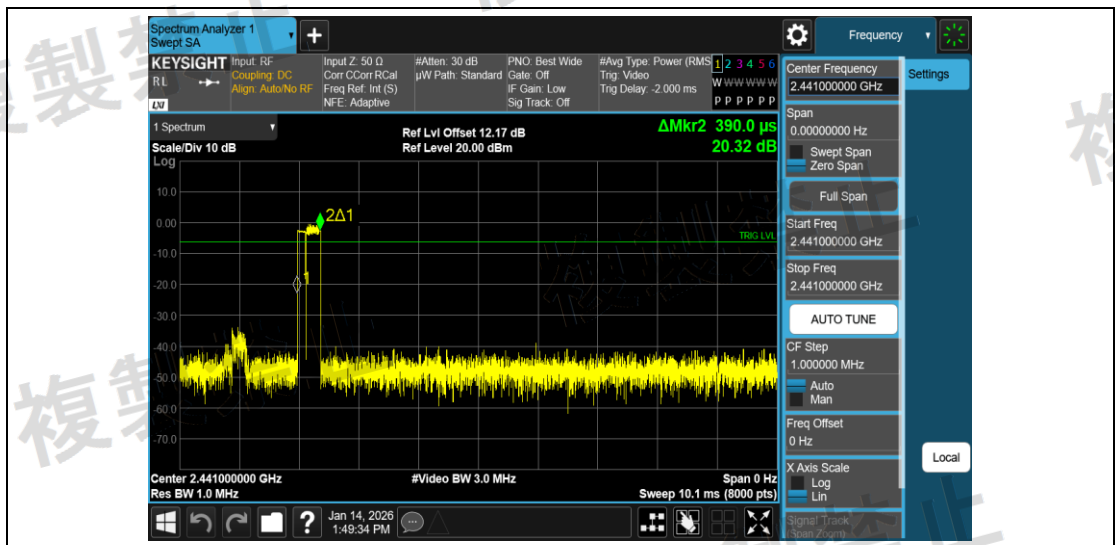




NTNV-2DH5-Ant1-Hop-PASS



NTNV-3DH1-Ant1-Hop-PASS



NTNV-3DH3-Ant1-Hop-PASS





NTNV-3DH5-Ant1-Hop-PASS

