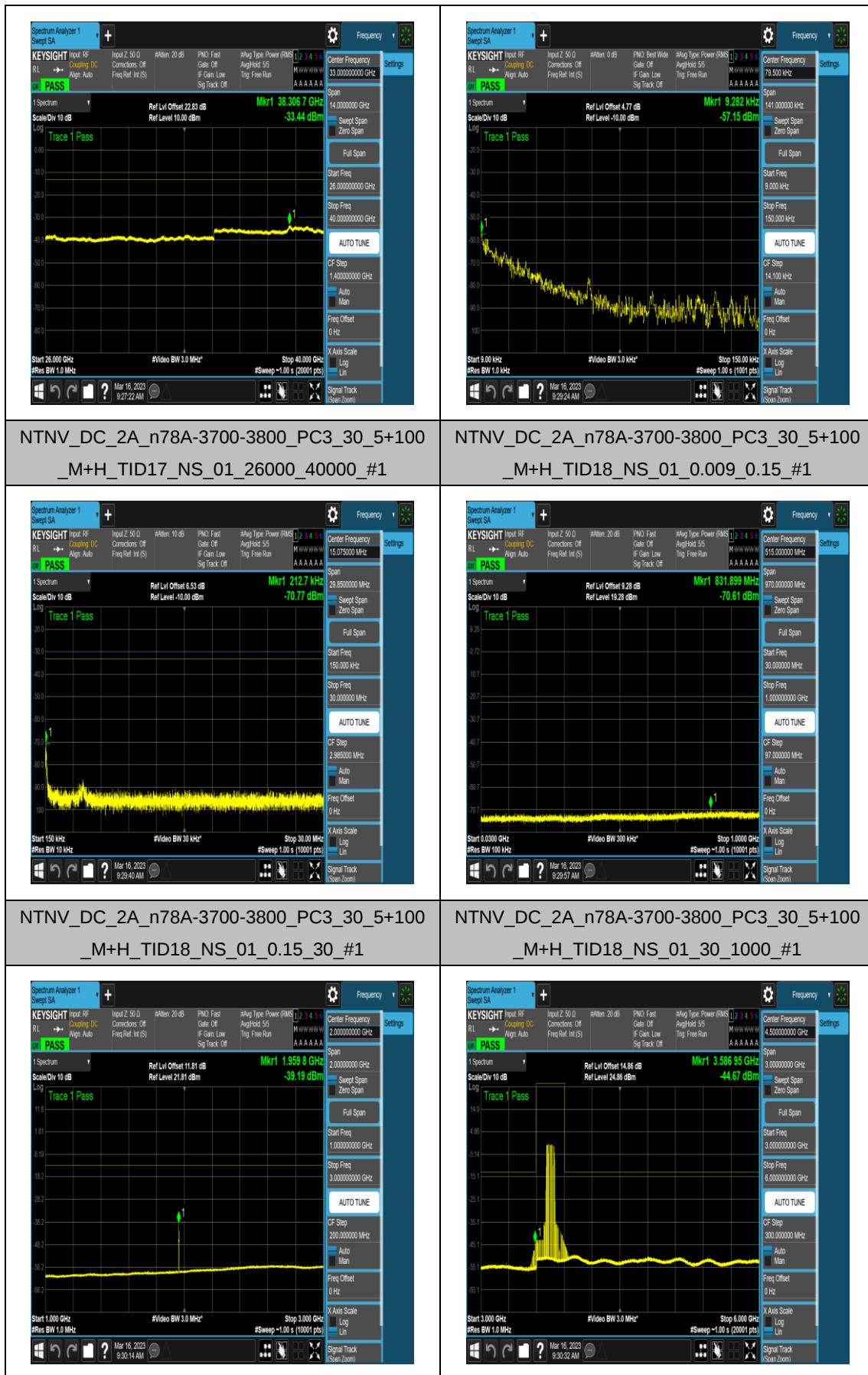






Appendix F: Frequency Stability for NSA

Test Result

Frequency Error VS. Voltage

Voltage										
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Voltage	Temperature	Deviation(Hz)	Deviation (ppm)	Verdict
DC_2A_n78A-3700-3800	30	5+20	DFT-QPSK	M+L	Outer_Full	VN	NT	-3.29	0.00	PASS
DC_2A_n78A-3700-3800	30	5+20	CP-QPSK	M+L	Outer_Full	VN	NT	-11.79	0.00	PASS
DC_2A_n78A-3700-3800	30	5+20	DFT-QPSK	M+M	Outer_Full	VN	NT	-5.99	0.00	PASS
DC_2A_n78A-3700-3800	30	5+20	CP-QPSK	M+M	Outer_Full	VN	NT	-7.11	0.00	PASS
DC_2A_n78A-3700-3800	30	5+20	DFT-QPSK	M+H	Outer_Full	VN	NT	-16.10	0.00	PASS
DC_2A_n78A-3700-3800	30	5+20	CP-QPSK	M+H	Outer_Full	VN	NT	1.17	0.00	PASS
DC_2A_n78A-3700-3800	30	5+40	DFT-QPSK	M+L	Outer_Full	VN	NT	0.31	0.00	PASS
DC_2A_n78A-3700-3800	30	5+40	CP-QPSK	M+L	Outer_Full	VN	NT	-4.42	0.00	PASS
DC_2A_n78A-3700-3800	30	5+40	DFT-QPSK	M+M	Outer_Full	VN	NT	-8.24	0.00	PASS
DC_2A_n78A-3700-3800	30	5+40	CP-QPSK	M+M	Outer_Full	VN	NT	-5.79	0.00	PASS
DC_2A_n78A-37	30	5+40	DFT-QPSK	M+H	Outer_Full	VN	NT	-9.53	0.00	PASS

00-3800										
DC_2A_ n78A-37 00-3800	30	5+40	CP-QPSK	M+H	Outer_Full	VN	NT	-3.07	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+50	DFT-QPSK	M+L	Outer_Full	VN	NT	-3.31	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+50	CP-QPSK	M+L	Outer_Full	VN	NT	-6.33	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+50	DFT-QPSK	M+M	Outer_Full	VN	NT	-2.25	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+50	CP-QPSK	M+M	Outer_Full	VN	NT	6.56	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+50	DFT-QPSK	M+H	Outer_Full	VN	NT	-10.88	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+50	CP-QPSK	M+H	Outer_Full	VN	NT	-3.99	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+60	DFT-QPSK	M+L	Outer_Full	VN	NT	-8.41	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+60	CP-QPSK	M+L	Outer_Full	VN	NT	-5.12	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+60	DFT-QPSK	M+M	Outer_Full	VN	NT	-12.28	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+60	CP-QPSK	M+M	Outer_Full	VN	NT	-10.77	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+60	DFT-QPSK	M+H	Outer_Full	VN	NT	-23.62	-0.01	PASS
DC_2A_ n78A-37 00-3800	30	5+60	CP-QPSK	M+H	Outer_Full	VN	NT	-6.34	0.00	PASS
DC_2A_ n78A-37	30	5+80	DFT-QPSK	M+L	Outer_Full	VN	NT	-3.57	0.00	PASS

00-3800										
DC_2A_ n78A-37 00-3800	30	5+80	CP-QPSK	M+L	Outer_Full	VN	NT	-5.54	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+80	DFT-QPSK	M+M	Outer_Full	VN	NT	-18.99	-0.01	PASS
DC_2A_ n78A-37 00-3800	30	5+80	CP-QPSK	M+M	Outer_Full	VN	NT	-16.20	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+80	DFT-QPSK	M+H	Outer_Full	VN	NT	-13.08	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+80	CP-QPSK	M+H	Outer_Full	VN	NT	-19.27	-0.01	PASS
DC_2A_ n78A-37 00-3800	30	5+90	DFT-QPSK	M+L	Outer_Full	VN	NT	1.24	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+90	CP-QPSK	M+L	Outer_Full	VN	NT	-4.44	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+90	DFT-QPSK	M+M	Outer_Full	VN	NT	-8.92	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+90	CP-QPSK	M+M	Outer_Full	VN	NT	-11.68	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+90	DFT-QPSK	M+H	Outer_Full	VN	NT	-18.41	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+90	CP-QPSK	M+H	Outer_Full	VN	NT	-20.58	-0.01	PASS
DC_2A_ n78A-37 00-3800	30	5+100	DFT-QPSK	M+L	Outer_Full	VN	NT	-9.75	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+100	CP-QPSK	M+L	Outer_Full	VN	NT	-3.56	0.00	PASS
DC_2A_ n78A-37	30	5+100	DFT-QPSK	M+M	Outer_Full	VN	NT	2.79	0.00	PASS

00-3800										
DC_2A_ n78A-37 00-3800	30	5+100	CP-QPSK	M+M	Outer_Full	VN	NT	-2.56	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+100	DFT-QPSK	M+H	Outer_Full	VN	NT	-10.76	0.00	PASS
DC_2A_ n78A-37 00-3800	30	5+100	CP-QPSK	M+H	Outer_Full	VN	NT	-8.38	0.00	PASS

Frequency Error VS. Temperature

Voltage										
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Voltage	Temperature	Deviation(Hz)	Deviation (ppm)	Verdict
DC_2A_ n78A-37 00-3800	30	5+20	DFT-QPSK	M+L	Outer_Full	NV	TN	-3.308286	-0.000892	PASS
DC_2A_ n78A-37 00-3800	30	5+20	CP-QPSK	M+L	Outer_Full	NV	TN	-5.289487	-0.001426	PASS
DC_2A_ n78A-37 00-3800	30	5+20	DFT-QPSK	M+M	Outer_Full	NV	TN	-8.141506	-0.002171	PASS
DC_2A_ n78A-37 00-3800	30	5+20	CP-QPSK	M+M	Outer_Full	NV	TN	-5.385577	-0.001436	PASS
DC_2A_ n78A-37 00-3800	30	5+20	DFT-QPSK	M+H	Outer_Full	NV	TN	-3.245229	-0.000856	PASS
DC_2A_ n78A-37 00-3800	30	5+20	CP-QPSK	M+H	Outer_Full	NV	TN	-20.211229	-0.005333	PASS
DC_2A_ n78A-37 00-3800	30	5+40	DFT-QPSK	M+L	Outer_Full	NV	TN	-3.605356	-0.000969	PASS
DC_2A_ n78A-37 00-3800	30	5+40	CP-QPSK	M+L	Outer_Full	NV	TN	-0.520075	-0.000140	PASS
DC_2A_ n78A-37 00-3800	30	5+40	DFT-QPSK	M+M	Outer_Full	NV	TN	-2.149653	-0.000573	PASS

DC_2A_ n78A-37 00-3800	30	5+40	CP-QPSK	M+M	Outer_Full	NV	TN	-9.285182	-0.002476	PASS
DC_2A_ n78A-37 00-3800	30	5+40	DFT-QPSK	M+H	Outer_Full	NV	TN	-4.144306	-0.001096	PASS
DC_2A_ n78A-37 00-3800	30	5+40	CP-QPSK	M+H	Outer_Full	NV	TN	-15.961931	-0.004223	PASS
DC_2A_ n78A-37 00-3800	30	5+50	DFT-QPSK	M+L	Outer_Full	NV	TN	-0.917027	-0.000246	PASS
DC_2A_ n78A-37 00-3800	30	5+50	CP-QPSK	M+L	Outer_Full	NV	TN	-10.236538	-0.002748	PASS
DC_2A_ n78A-37 00-3800	30	5+50	DFT-QPSK	M+M	Outer_Full	NV	TN	-10.853957	-0.002894	PASS
DC_2A_ n78A-37 00-3800	30	5+50	CP-QPSK	M+M	Outer_Full	NV	TN	-7.686032	-0.002050	PASS
DC_2A_ n78A-37 00-3800	30	5+50	DFT-QPSK	M+H	Outer_Full	NV	TN	-10.922810	-0.002893	PASS
DC_2A_ n78A-37 00-3800	30	5+50	CP-QPSK	M+H	Outer_Full	NV	TN	-12.168558	-0.003223	PASS
DC_2A_ n78A-37 00-3800	30	5+60	DFT-QPSK	M+L	Outer_Full	NV	TN	-8.769893	-0.002351	PASS
DC_2A_ n78A-37 00-3800	30	5+60	CP-QPSK	M+L	Outer_Full	NV	TN	-16.488838	-0.004421	PASS
DC_2A_ n78A-37 00-3800	30	5+60	DFT-QPSK	M+M	Outer_Full	NV	TN	3.750521	0.001000	PASS
DC_2A_ n78A-37 00-3800	30	5+60	CP-QPSK	M+M	Outer_Full	NV	TN	-3.735256	-0.000996	PASS
DC_2A_ n78A-37 00-3800	30	5+60	DFT-QPSK	M+H	Outer_Full	NV	TN	-11.601667	-0.003077	PASS

DC_2A_ n78A-37 00-3800	30	5+60	CP-QPSK	M+H	Outer_Full	NV	TN	-3.175938	-0.000842	PASS
DC_2A_ n78A-37 00-3800	30	5+80	DFT-QPSK	M+L	Outer_Full	NV	TN	-2.993593	-0.000800	PASS
DC_2A_ n78A-37 00-3800	30	5+80	CP-QPSK	M+L	Outer_Full	NV	TN	-4.194001	-0.001121	PASS
DC_2A_ n78A-37 00-3800	30	5+80	DFT-QPSK	M+M	Outer_Full	NV	TN	-0.966591	-0.000258	PASS
DC_2A_ n78A-37 00-3800	30	5+80	CP-QPSK	M+M	Outer_Full	NV	TN	-7.010797	-0.001870	PASS
DC_2A_ n78A-37 00-3800	30	5+80	DFT-QPSK	M+H	Outer_Full	NV	TN	-14.797462	-0.003936	PASS
DC_2A_ n78A-37 00-3800	30	5+80	CP-QPSK	M+H	Outer_Full	NV	TN	-10.368417	-0.002758	PASS
DC_2A_ n78A-37 00-3800	30	5+90	DFT-QPSK	M+L	Outer_Full	NV	TN	0.747434	0.000200	PASS
DC_2A_ n78A-37 00-3800	30	5+90	CP-QPSK	M+L	Outer_Full	NV	TN	-7.094989	-0.001895	PASS
DC_2A_ n78A-37 00-3800	30	5+90	DFT-QPSK	M+M	Outer_Full	NV	TN	-6.630707	-0.001768	PASS
DC_2A_ n78A-37 00-3800	30	5+90	CP-QPSK	M+M	Outer_Full	NV	TN	-9.118060	-0.002431	PASS
DC_2A_ n78A-37 00-3800	30	5+90	DFT-QPSK	M+H	Outer_Full	NV	TN	-10.119615	-0.002695	PASS
DC_2A_ n78A-37 00-3800	30	5+90	CP-QPSK	M+H	Outer_Full	NV	TN	-9.081673	-0.002419	PASS
DC_2A_ n78A-37 00-3800	30	5+100	DFT-QPSK	M+L	Outer_Full	NV	TN	-3.553938	-0.000948	PASS

DC_2A_ n78A-37 00-3800	30	5+100	CP-QPSK	M+L	Outer_Full	NV	TN	2.181182	0.000582	PASS
DC_2A_ n78A-37 00-3800	30	5+100	DFT-QPSK	M+M	Outer_Full	NV	TN	-12.023011	-0.003206	PASS
DC_2A_ n78A-37 00-3800	30	5+100	CP-QPSK	M+M	Outer_Full	NV	TN	-10.499433	-0.002800	PASS
DC_2A_ n78A-37 00-3800	30	5+100	DFT-QPSK	M+H	Outer_Full	NV	TN	-2.445259	-0.000652	PASS
DC_2A_ n78A-37 00-3800	30	5+100	CP-QPSK	M+H	Outer_Full	NV	TN	-13.259490	-0.003536	PASS

Appendix F: Modulation characteristics for NSA

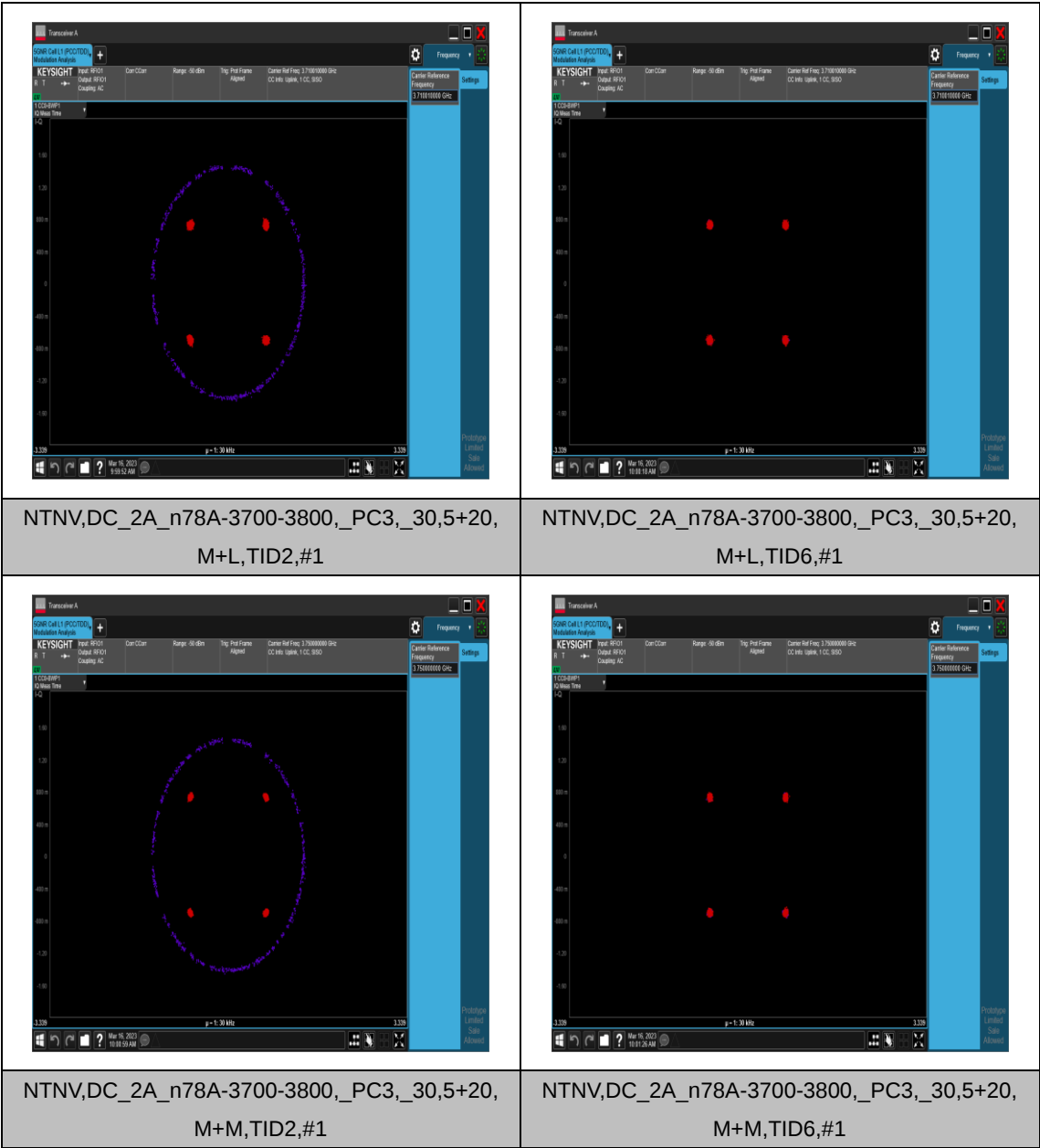
Test Result

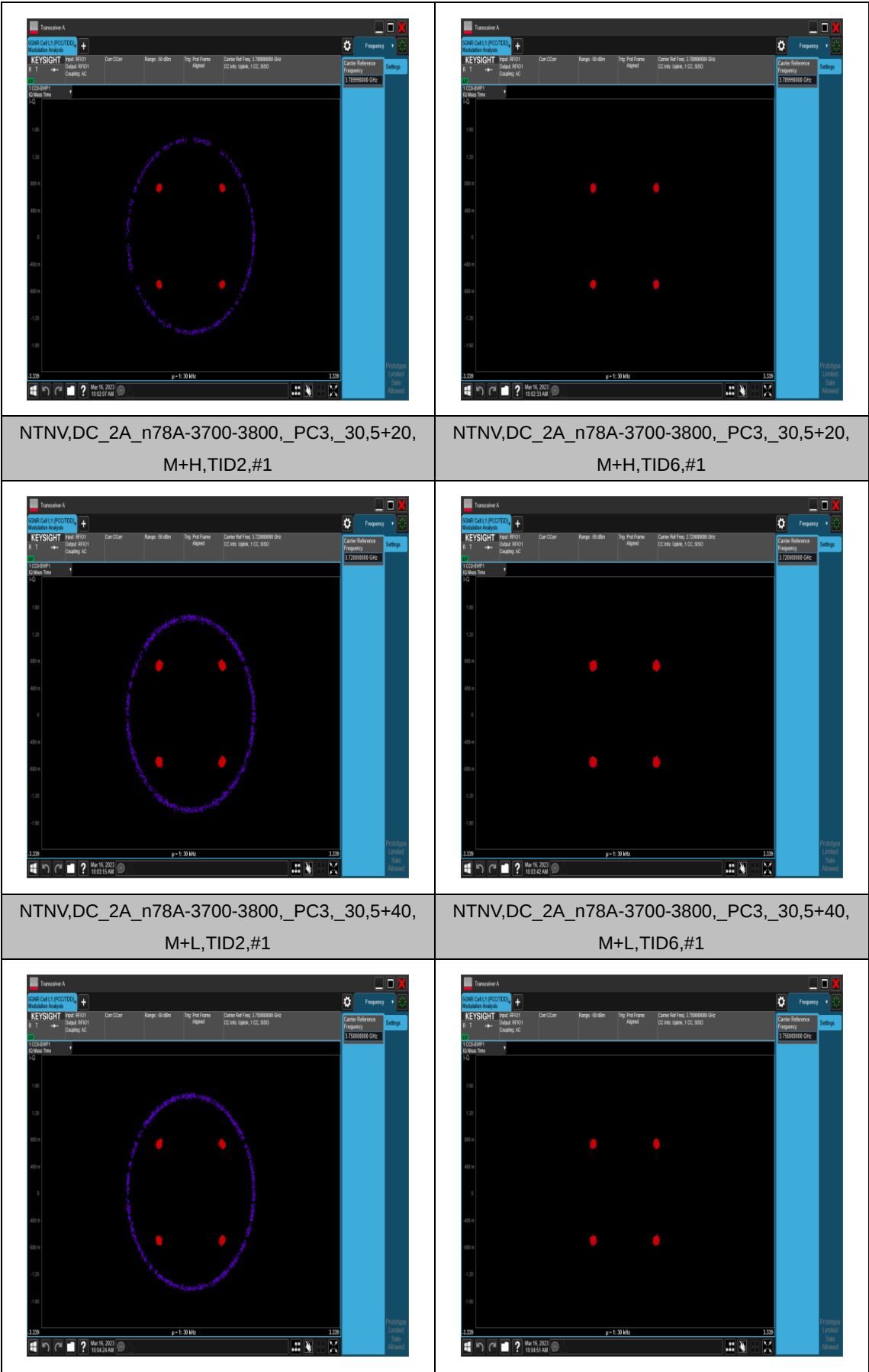
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Result	Verdict
DC_2A_n78A-3700-3800	30	5+20	DFT-QPSK	M+L	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+20	CP-QPSK	M+L	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+20	DFT-QPSK	M+M	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+20	CP-QPSK	M+M	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+20	DFT-QPSK	M+H	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+20	CP-QPSK	M+H	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+40	DFT-QPSK	M+L	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+40	CP-QPSK	M+L	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+40	DFT-QPSK	M+M	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+40	CP-QPSK	M+M	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+40	DFT-QPSK	M+H	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+40	CP-QPSK	M+H	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+50	DFT-QPSK	M+L	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+50	CP-QPSK	M+L	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+50	DFT-QPSK	M+M	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+50	CP-QPSK	M+M	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+50	DFT-QPSK	M+H	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3800	30	5+50	CP-QPSK	M+H	Outer_Full	see graph	PASS

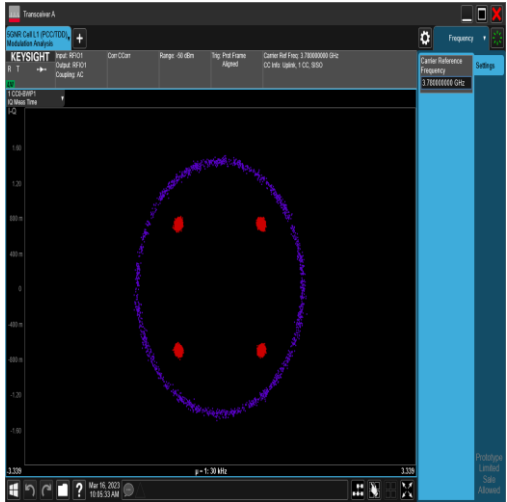
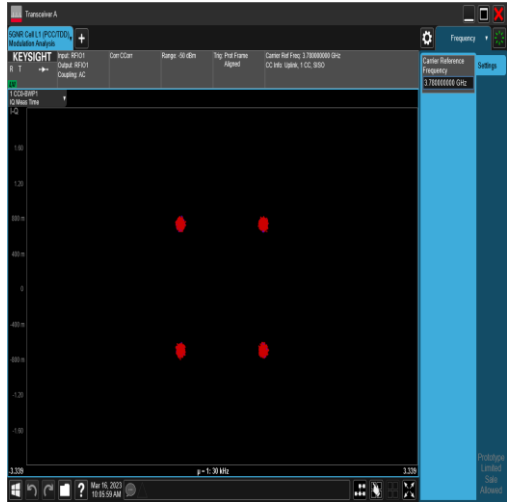
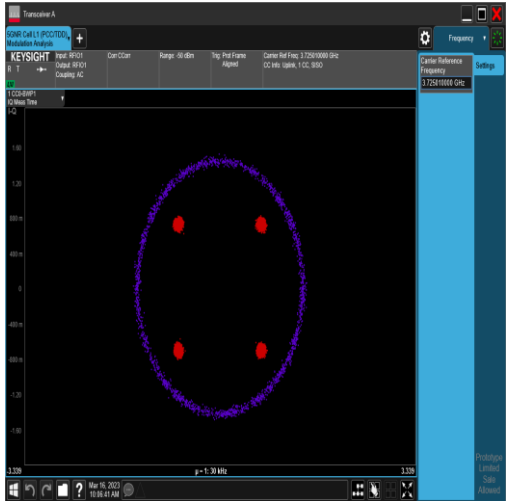
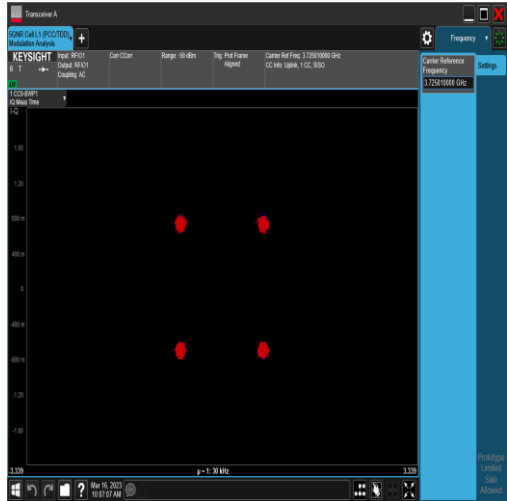
DC_2A_n78A-3700-3 800	30	5+60	DFT-QPSK	M+L	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+60	CP-QPSK	M+L	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+60	DFT-QPSK	M+M	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+60	CP-QPSK	M+M	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+60	DFT-QPSK	M+H	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+60	CP-QPSK	M+H	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+80	DFT-QPSK	M+L	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+80	CP-QPSK	M+L	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+80	DFT-QPSK	M+M	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+80	CP-QPSK	M+M	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+80	DFT-QPSK	M+H	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+80	CP-QPSK	M+H	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+90	DFT-QPSK	M+L	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+90	CP-QPSK	M+L	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+90	DFT-QPSK	M+M	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+90	CP-QPSK	M+M	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+90	DFT-QPSK	M+H	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+90	CP-QPSK	M+H	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+100	DFT-QPSK	M+L	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+100	CP-QPSK	M+L	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+100	DFT-QPSK	M+M	Outer_Full	see graph	PASS

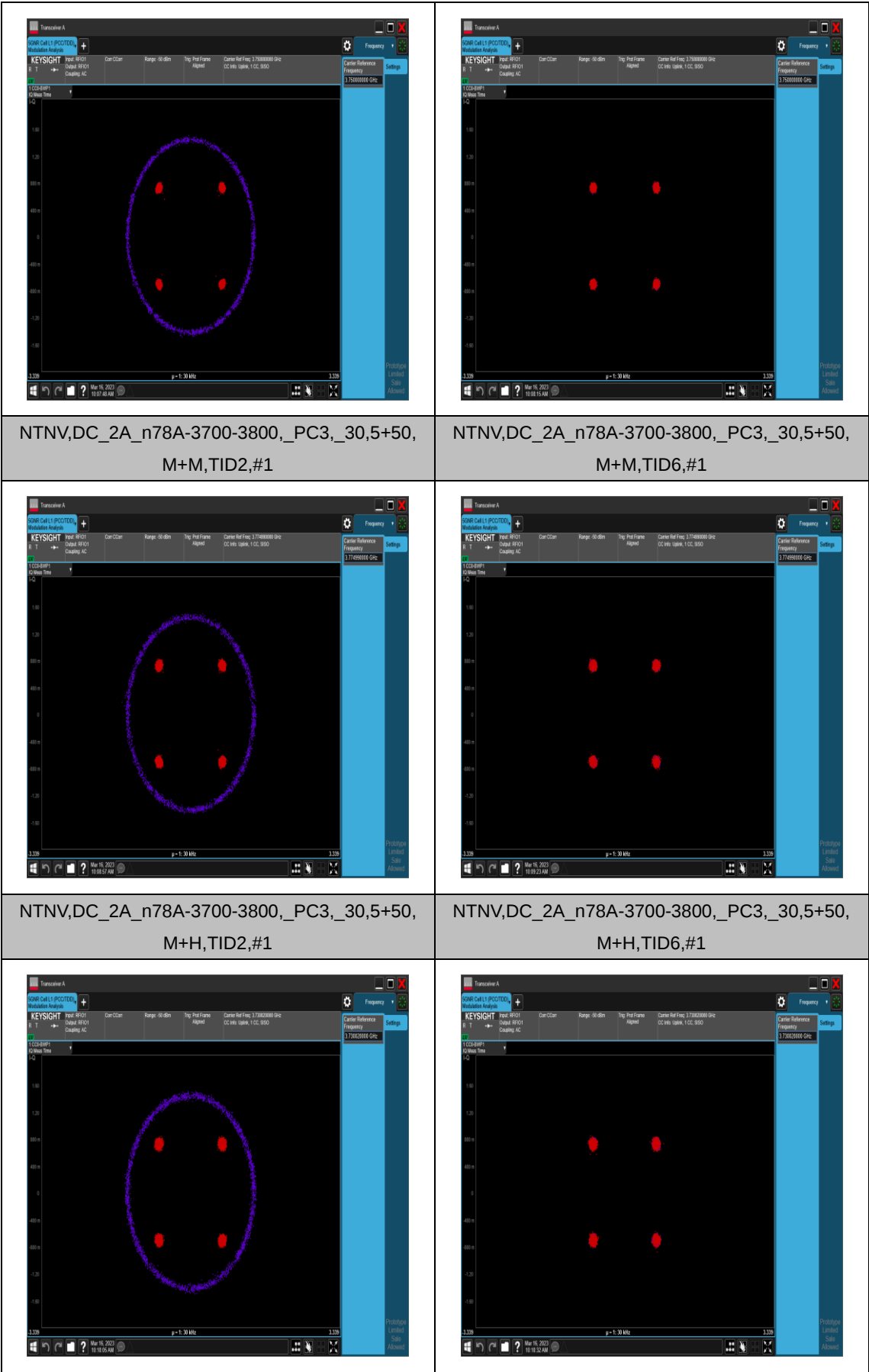
DC_2A_n78A-3700-3 800	30	5+100	CP-QPSK	M+M	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+100	DFT-QPSK	M+H	Outer_Full	see graph	PASS
DC_2A_n78A-3700-3 800	30	5+100	CP-QPSK	M+H	Outer_Full	see graph	PASS

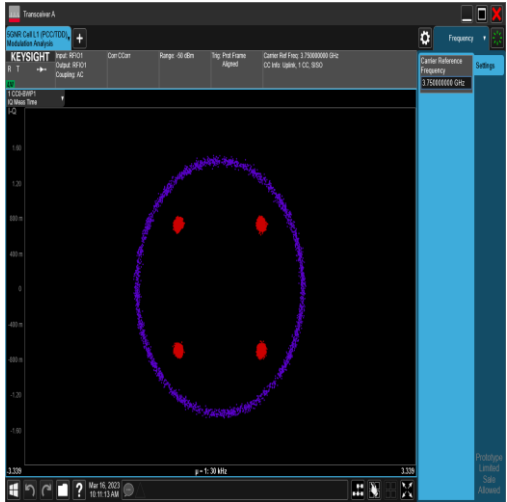
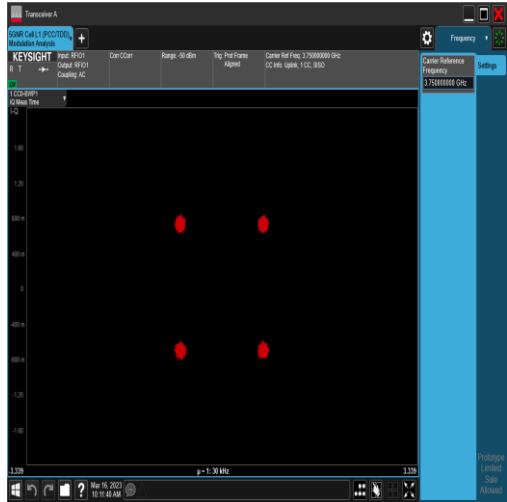
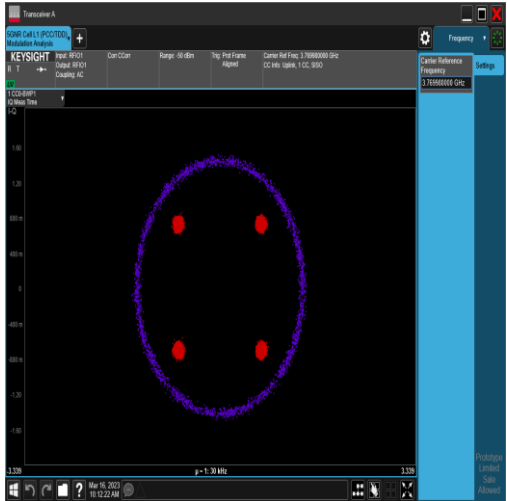
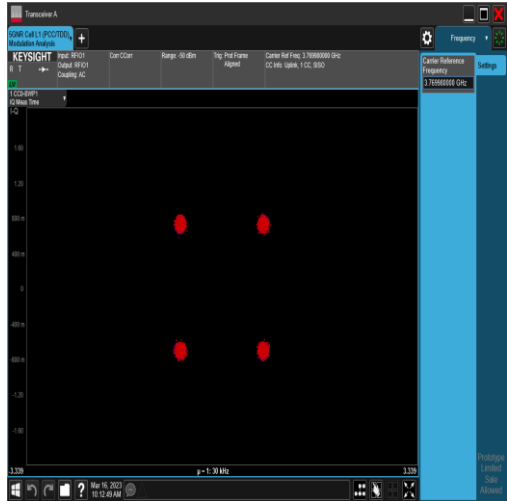
Test Graphs

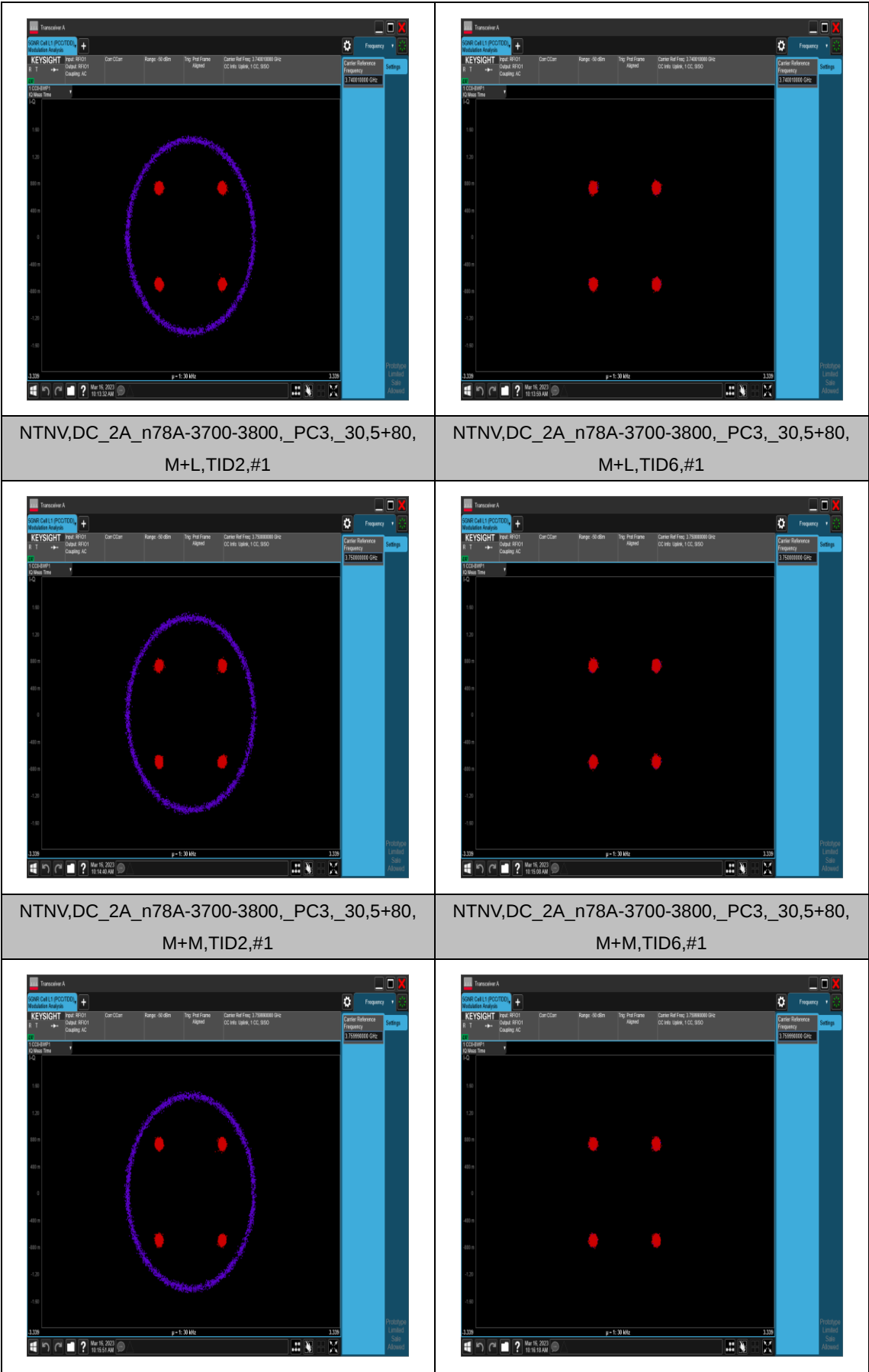


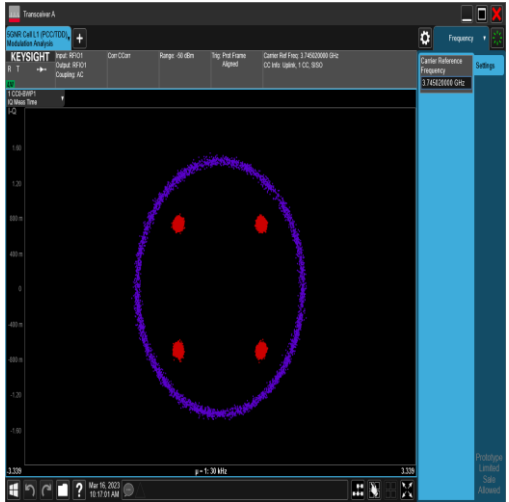
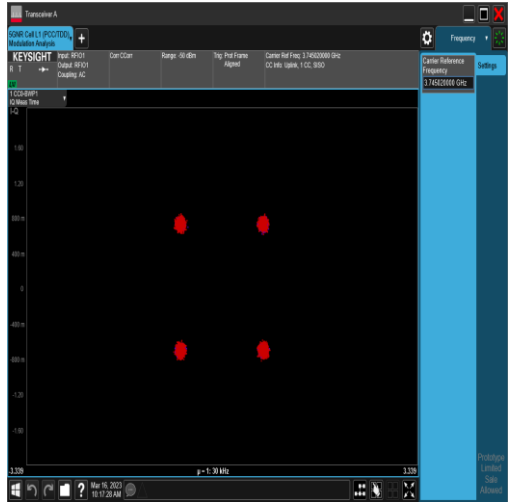
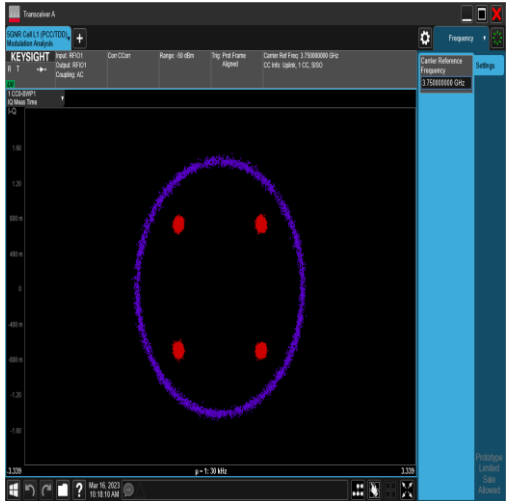
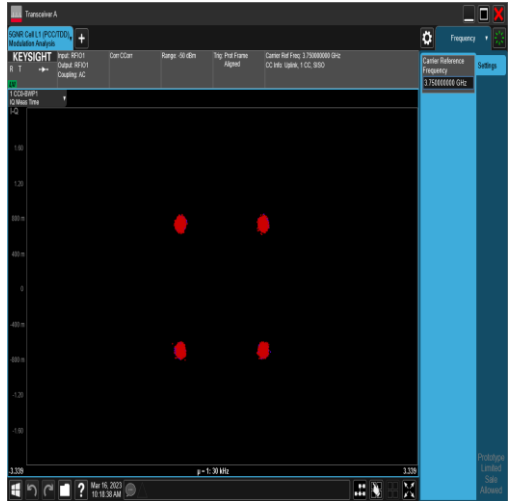


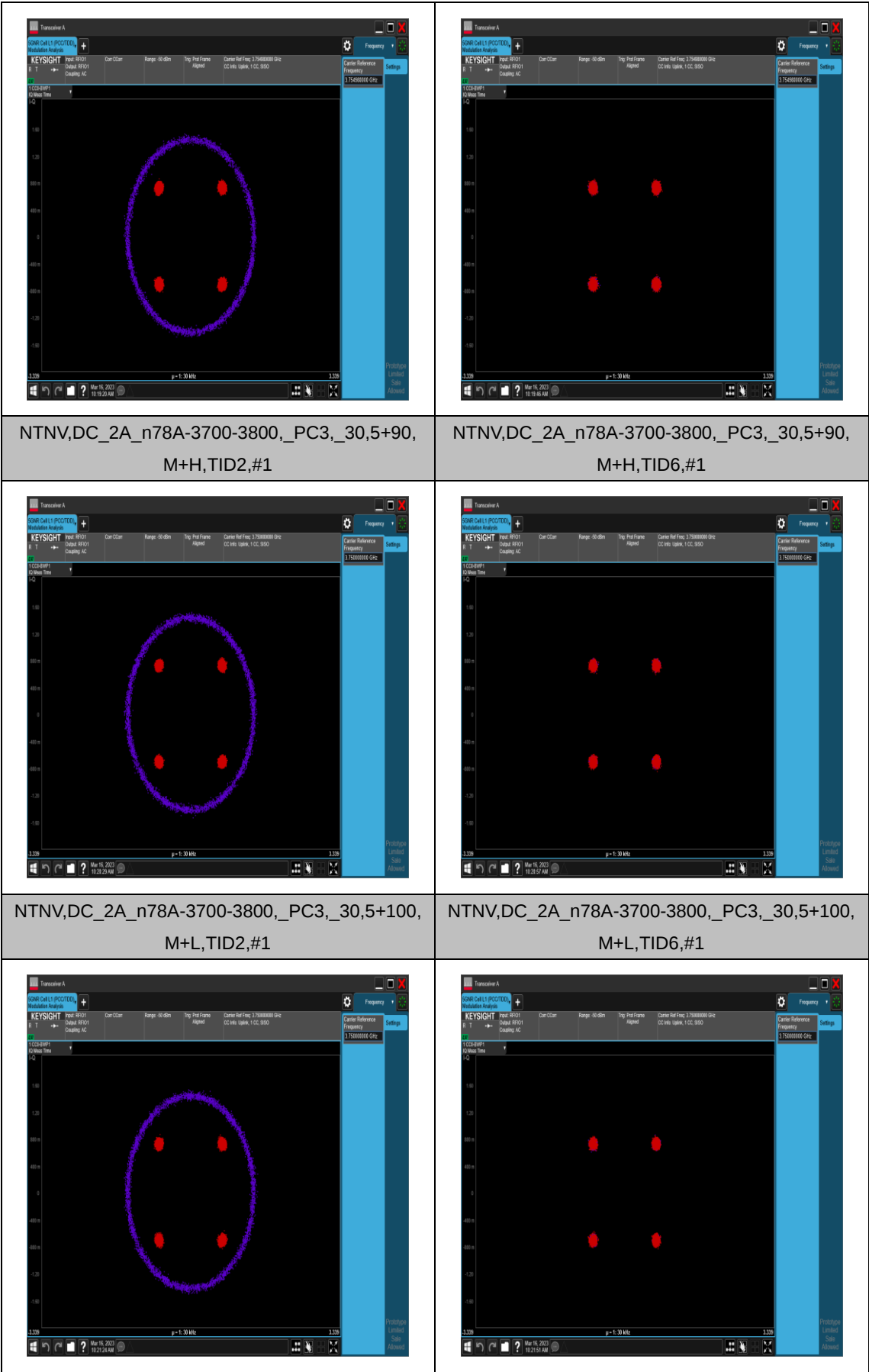
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NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+40, M+H,TID2,#1	NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+40, M+H,TID6,#1
	
NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+50, M+L,TID2,#1	NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+50, M+L,TID6,#1

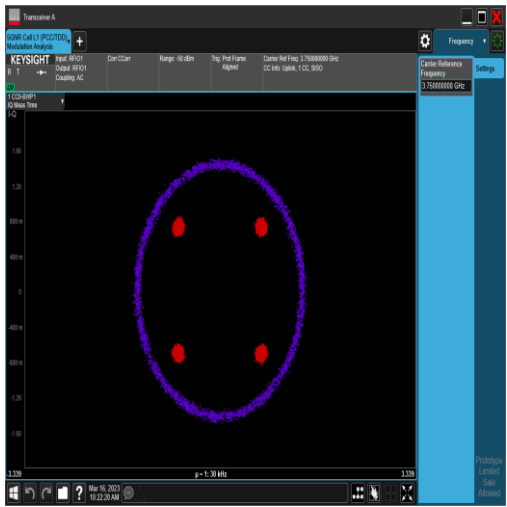
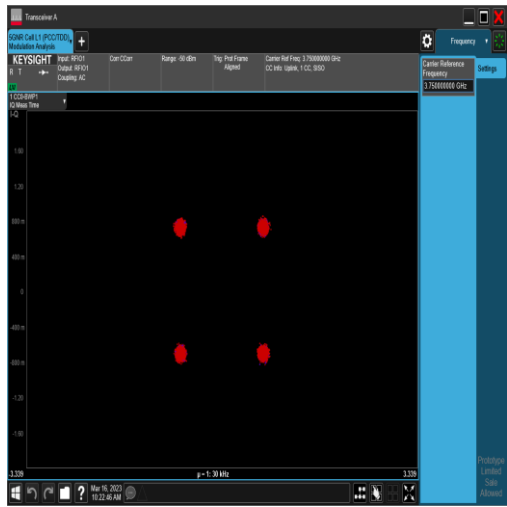


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NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+60, M+M,TID2,#1	NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+60, M+M,TID6,#1
	
NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+60, M+H,TID2,#1	NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+60, M+H,TID6,#1



NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+80, M+H,TID2,#1	NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+80, M+H,TID6,#1
	
NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+90, M+L,TID2,#1	NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+90, M+L,TID6,#1
	
NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+90, M+M,TID2,#1	NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+90, M+M,TID6,#1



NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+100, M+M,TID2,#1	NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+100, M+M,TID6,#1
	
NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+100, M+H,TID2,#1	NTNV,DC_2A_n78A-3700-3800,_PC3,_30,5+100, M+H,TID6,#1