













## 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_13A _n77A-3 450-3550	30	5+20	CP-QPSK	M+L	Outer_Full	VN	NT	-18.63	-0.01	PASS
DC_13A _n77A-3 450-3550	30	5+20	CP-16QAM	M+L	Outer_Full	VN	NT	-12.67	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+20	CP-QPSK	M+M	Outer_Full	VN	NT	-10.84	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+20	CP-16QAM	M+M	Outer_Full	VN	NT	-30.41	-0.01	PASS
DC_13A _n77A-3 450-3550	30	5+20	CP-QPSK	M+H	Outer_Full	VN	NT	-23.03	-0.01	PASS
DC_13A _n77A-3 450-3550	30	5+20	CP-16QAM	M+H	Outer_Full	VN	NT	-14.94	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+30	CP-QPSK	M+L	Outer_Full	VN	NT	-2.99	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+30	CP-16QAM	M+L	Outer_Full	VN	NT	-11.17	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+30	CP-QPSK	M+M	Outer_Full	VN	NT	-11.65	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+30	CP-16QAM	M+M	Outer_Full	VN	NT	-12.68	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+30	CP-QPSK	M+H	Outer_Full	VN	NT	10.52	0.00	PASS
DC_13A	30	5+30	CP-16QAM	M+H	Outer_Full	VN	NT	-20.08	-0.01	PASS

_n77A-3 450-3550										
DC_13A _n77A-3 450-3550	30	5+40	CP-QPSK	M+L	Outer_Full	VN	NT	-2.96	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+40	CP-16QAM	M+L	Outer_Full	VN	NT	-35.63	-0.01	PASS
DC_13A _n77A-3 450-3550	30	5+40	CP-QPSK	M+M	Outer_Full	VN	NT	-10.05	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+40	CP-16QAM	M+M	Outer_Full	VN	NT	-4.51	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+40	CP-QPSK	M+H	Outer_Full	VN	NT	-12.90	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+40	CP-16QAM	M+H	Outer_Full	VN	NT	-22.21	-0.01	PASS
DC_13A _n77A-3 450-3550	30	5+50	CP-QPSK	M+L	Outer_Full	VN	NT	-13.90	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+50	CP-16QAM	M+L	Outer_Full	VN	NT	-17.53	-0.01	PASS
DC_13A _n77A-3 450-3550	30	5+50	CP-QPSK	M+M	Outer_Full	VN	NT	-33.66	-0.01	PASS
DC_13A _n77A-3 450-3550	30	5+50	CP-16QAM	M+M	Outer_Full	VN	NT	-24.64	-0.01	PASS
DC_13A _n77A-3 450-3550	30	5+50	CP-QPSK	M+H	Outer_Full	VN	NT	-14.38	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+50	CP-16QAM	M+H	Outer_Full	VN	NT	2.37	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+60	CP-QPSK	M+L	Outer_Full	VN	NT	-9.64	0.00	PASS
DC_13A	30	5+60	CP-16QAM	M+L	Outer_Full	VN	NT	-16.81	0.00	PASS



_n77A-3 450-3550										
DC_13A _n77A-3 450-3550	30	5+60	CP-QPSK	M+M	Outer_Full	VN	NT	-4.12	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+60	CP-16QAM	M+M	Outer_Full	VN	NT	-12.21	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+60	CP-QPSK	M+H	Outer_Full	VN	NT	-23.20	-0.01	PASS
DC_13A _n77A-3 450-3550	30	5+60	CP-16QAM	M+H	Outer_Full	VN	NT	-22.61	-0.01	PASS
DC_13A _n77A-3 450-3550	30	5+80	CP-QPSK	M+L	Outer_Full	VN	NT	-16.81	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+80	CP-16QAM	M+L	Outer_Full	VN	NT	-24.46	-0.01	PASS
DC_13A _n77A-3 450-3550	30	5+80	CP-QPSK	M+M	Outer_Full	VN	NT	-12.62	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+80	CP-16QAM	M+M	Outer_Full	VN	NT	-35.19	-0.01	PASS
DC_13A _n77A-3 450-3550	30	5+80	CP-QPSK	M+H	Outer_Full	VN	NT	-8.94	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+80	CP-16QAM	M+H	Outer_Full	VN	NT	-8.74	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+90	CP-QPSK	M+L	Outer_Full	VN	NT	-1.36	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+90	CP-16QAM	M+L	Outer_Full	VN	NT	-2.14	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+90	CP-QPSK	M+M	Outer_Full	VN	NT	-2.12	0.00	PASS
DC_13A	30	5+90	CP-16QAM	M+M	Outer_Full	VN	NT	-0.73	0.00	PASS

_n77A-3 450-3550										
DC_13A _n77A-3 450-3550	30	5+90	CP-QPSK	M+H	Outer_Full	VN	NT	-7.11	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+90	CP-16QAM	M+H	Outer_Full	VN	NT	-12.84	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+100	CP-QPSK	M+L	Outer_Full	VN	NT	-9.33	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+100	CP-16QAM	M+L	Outer_Full	VN	NT	-17.42	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+100	CP-QPSK	M+M	Outer_Full	VN	NT	-8.13	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+100	CP-16QAM	M+M	Outer_Full	VN	NT	-8.17	0.00	PASS
DC_13A _n77A-3 450-3550	30	5+100	CP-QPSK	M+H	Outer_Full	VN	NT	-20.90	-0.01	PASS
DC_13A _n77A-3 450-3550	30	5+100	CP-16QAM	M+H	Outer_Full	VN	NT	-10.37	0.00	PASS

### Frequency Error VS. Temperature

Voltage										
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Voltage	Temperature	Deviation(Hz)	Deviation (ppm)	Verdict
DC_13A _n77A-3 450-3550	30	5+20	CP-QPSK	M+L	Outer_Full	NV	TN	-14.796802	-0.004277	PASS
DC_13A _n77A-3 450-3550	30	5+20	CP-16QAM	M+L	Outer_Full	NV	TN	6.255885	0.001808	PASS
DC_13A _n77A-3 450-3550	30	5+20	CP-QPSK	M+M	Outer_Full	NV	TN	-28.285324	-0.008082	PASS
DC_13A _n77A-3	30	5+20	CP-16QAM	M+M	Outer_Full	NV	TN	-19.350607	-0.005529	PASS

450-3550										
DC_13A _n77A-3 450-3550	30	5+20	CP-QPSK	M+H	Outer_Full	NV	TN	-8.368291	-0.002364	PASS
DC_13A _n77A-3 450-3550	30	5+20	CP-16QAM	M+H	Outer_Full	NV	TN	-30.221880	-0.008537	PASS
DC_13A _n77A-3 450-3550	30	5+30	CP-QPSK	M+L	Outer_Full	NV	TN	-25.291677	-0.007299	PASS
DC_13A _n77A-3 450-3550	30	5+30	CP-16QAM	M+L	Outer_Full	NV	TN	-33.361103	-0.009628	PASS
DC_13A _n77A-3 450-3550	30	5+30	CP-QPSK	M+M	Outer_Full	NV	TN	-17.876091	-0.005107	PASS
DC_13A _n77A-3 450-3550	30	5+30	CP-16QAM	M+M	Outer_Full	NV	TN	-35.180092	-0.010051	PASS
DC_13A _n77A-3 450-3550	30	5+30	CP-QPSK	M+H	Outer_Full	NV	TN	1.409678	0.000399	PASS
DC_13A _n77A-3 450-3550	30	5+30	CP-16QAM	M+H	Outer_Full	NV	TN	-2.679349	-0.000758	PASS
DC_13A _n77A-3 450-3550	30	5+40	CP-QPSK	M+L	Outer_Full	NV	TN	-16.621746	-0.004790	PASS
DC_13A _n77A-3 450-3550	30	5+40	CP-16QAM	M+L	Outer_Full	NV	TN	-22.096968	-0.006368	PASS
DC_13A _n77A-3 450-3550	30	5+40	CP-QPSK	M+M	Outer_Full	NV	TN	-0.658482	-0.000188	PASS
DC_13A _n77A-3 450-3550	30	5+40	CP-16QAM	M+M	Outer_Full	NV	TN	-12.660193	-0.003617	PASS
DC_13A _n77A-3 450-3550	30	5+40	CP-QPSK	M+H	Outer_Full	NV	TN	-12.025218	-0.003407	PASS
DC_13A _n77A-3	30	5+40	CP-16QAM	M+H	Outer_Full	NV	TN	-12.521953	-0.003547	PASS

450-3550										
DC_13A _n77A-3 450-3550	30	5+50	CP-QPSK	M+L	Outer_Full	NV	TN	-19.108164	-0.005499	PASS
DC_13A _n77A-3 450-3550	30	5+50	CP-16QAM	M+L	Outer_Full	NV	TN	-14.001737	-0.004029	PASS
DC_13A _n77A-3 450-3550	30	5+50	CP-QPSK	M+M	Outer_Full	NV	TN	3.346976	0.000956	PASS
DC_13A _n77A-3 450-3550	30	5+50	CP-16QAM	M+M	Outer_Full	NV	TN	-18.493328	-0.005284	PASS
DC_13A _n77A-3 450-3550	30	5+50	CP-QPSK	M+H	Outer_Full	NV	TN	2.404011	0.000682	PASS
DC_13A _n77A-3 450-3550	30	5+50	CP-16QAM	M+H	Outer_Full	NV	TN	-15.461761	-0.004386	PASS
DC_13A _n77A-3 450-3550	30	5+60	CP-QPSK	M+L	Outer_Full	NV	TN	-15.708704	-0.004514	PASS
DC_13A _n77A-3 450-3550	30	5+60	CP-16QAM	M+L	Outer_Full	NV	TN	-2.412095	-0.000693	PASS
DC_13A _n77A-3 450-3550	30	5+60	CP-QPSK	M+M	Outer_Full	NV	TN	-47.263088	-0.013504	PASS
DC_13A _n77A-3 450-3550	30	5+60	CP-16QAM	M+M	Outer_Full	NV	TN	-21.328125	-0.006094	PASS
DC_13A _n77A-3 450-3550	30	5+60	CP-QPSK	M+H	Outer_Full	NV	TN	-14.701312	-0.004177	PASS
DC_13A _n77A-3 450-3550	30	5+60	CP-16QAM	M+H	Outer_Full	NV	TN	-3.864416	-0.001098	PASS
DC_13A _n77A-3 450-3550	30	5+80	CP-QPSK	M+L	Outer_Full	NV	TN	-3.066145	-0.000879	PASS
DC_13A _n77A-3	30	5+80	CP-16QAM	M+L	Outer_Full	NV	TN	-20.361567	-0.005834	PASS

450-3550										
DC_13A _n77A-3 450-3550	30	5+80	CP-QPSK	M+M	Outer_Full	NV	TN	-9.959044	-0.002845	PASS
DC_13A _n77A-3 450-3550	30	5+80	CP-16QAM	M+M	Outer_Full	NV	TN	-36.751621	-0.010500	PASS
DC_13A _n77A-3 450-3550	30	5+80	CP-QPSK	M+H	Outer_Full	NV	TN	5.539932	0.001578	PASS
DC_13A _n77A-3 450-3550	30	5+80	CP-16QAM	M+H	Outer_Full	NV	TN	-10.694593	-0.003047	PASS
DC_13A _n77A-3 450-3550	30	5+90	CP-QPSK	M+L	Outer_Full	NV	TN	-14.921518	-0.004269	PASS
DC_13A _n77A-3 450-3550	30	5+90	CP-16QAM	M+L	Outer_Full	NV	TN	3.064971	0.000877	PASS
DC_13A _n77A-3 450-3550	30	5+90	CP-QPSK	M+M	Outer_Full	NV	TN	-19.416672	-0.005548	PASS
DC_13A _n77A-3 450-3550	30	5+90	CP-16QAM	M+M	Outer_Full	NV	TN	-49.838139	-0.014239	PASS
DC_13A _n77A-3 450-3550	30	5+90	CP-QPSK	M+H	Outer_Full	NV	TN	-6.012119	-0.001715	PASS
DC_13A _n77A-3 450-3550	30	5+90	CP-16QAM	M+H	Outer_Full	NV	TN	-5.639536	-0.001609	PASS
DC_13A _n77A-3 450-3550	30	5+100	CP-QPSK	M+L	Outer_Full	NV	TN	-15.683665	-0.004481	PASS
DC_13A _n77A-3 450-3550	30	5+100	CP-16QAM	M+L	Outer_Full	NV	TN	-28.197357	-0.008056	PASS
DC_13A _n77A-3 450-3550	30	5+100	CP-QPSK	M+M	Outer_Full	NV	TN	-15.003704	-0.004287	PASS
DC_13A _n77A-3	30	5+100	CP-16QAM	M+M	Outer_Full	NV	TN	-31.543270	-0.009012	PASS

450-3550										
DC_13A _n77A-3 450-3550	30	5+100	CP-QPSK	M+H	Outer_Full	NV	TN	-12.610428	-0.003603	PASS
DC_13A _n77A-3 450-3550	30	5+100	CP-16QAM	M+H	Outer_Full	NV	TN	-18.188972	-0.005197	PASS

