

Appendix F: Frequency Stability for SA

Test Result

Frequency Error VS. Voltage

Voltage										
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Voltage	Temperature	Deviation(Hz)	Deviation (ppm)	Verdict
N12	15	5	DFT-QPSK	L	Outer_Full	VL	NT	0.150000	0.000214	PASS
N12	15	5	DFT-QPSK	L	Outer_Full	VN	NT	0.010000	0.000014	PASS
N12	15	5	DFT-QPSK	L	Outer_Full	VH	NT	-0.080000	-0.000114	PASS
N12	15	5	DFT-16QAM	L	Outer_Full	VL	NT	0.080000	0.000114	PASS
N12	15	5	DFT-16QAM	L	Outer_Full	VN	NT	1.500000	0.002138	PASS
N12	15	5	DFT-16QAM	L	Outer_Full	VH	NT	-0.180000	-0.000257	PASS
N12	15	5	DFT-QPSK	M	Outer_Full	VL	NT	0.030000	0.000042	PASS
N12	15	5	DFT-QPSK	M	Outer_Full	VN	NT	-0.130000	-0.000184	PASS
N12	15	5	DFT-QPSK	M	Outer_Full	VH	NT	-0.110000	-0.000155	PASS
N12	15	5	DFT-16QAM	M	Outer_Full	VL	NT	0.700000	0.000989	PASS
N12	15	5	DFT-16QAM	M	Outer_Full	VN	NT	0.280000	0.000396	PASS
N12	15	5	DFT-16QAM	M	Outer_Full	VH	NT	0.570000	0.000806	PASS
N12	15	5	DFT-QPSK	H	Outer_Full	VL	NT	0.000000	0.000000	PASS
N12	15	5	DFT-QPSK	H	Outer_Full	VN	NT	0.340000	0.000477	PASS
N12	15	5	DFT-QPSK	H	Outer_Full	VH	NT	1.180000	0.001654	PASS
N12	15	5	DFT-16QAM	H	Outer_Full	VL	NT	0.540000	0.000757	PASS
N12	15	5	DFT-16QAM	H	Outer_Full	VN	NT	0.130000	0.000182	PASS
N12	15	5	DFT-16QAM	H	Outer_Full	VH	NT	0.700000	0.000981	PASS
N12	15	10	DFT-QPSK	L	Outer_Full	VL	NT	-0.710000	-0.001008	PASS
N12	15	10	DFT-QPSK	L	Outer_Full	VN	NT	-1.320000	-0.001875	PASS
N12	15	10	DFT-QPSK	L	Outer_Full	VH	NT	-1.230000	-0.001747	PASS
N12	15	10	DFT-16QAM	L	Outer_Full	VL	NT	-1.120000	-0.001591	PASS
N12	15	10	DFT-16QAM	L	Outer_Full	VN	NT	-0.630000	-0.000895	PASS
N12	15	10	DFT-16QAM	L	Outer_Full	VH	NT	-1.360000	-0.001932	PASS
N12	15	10	DFT-QPSK	M	Outer_Full	VL	NT	-0.360000	-0.000509	PASS
N12	15	10	DFT-QPSK	M	Outer_Full	VN	NT	0.800000	0.001131	PASS
N12	15	10	DFT-QPSK	M	Outer_Full	VH	NT	0.180000	0.000254	PASS
N12	15	10	DFT-16QAM	M	Outer_Full	VL	NT	0.180000	0.000254	PASS
N12	15	10	DFT-16QAM	M	Outer_Full	VN	NT	-0.190000	-0.000269	PASS
N12	15	10	DFT-16QAM	M	Outer_Full	VH	NT	0.390000	0.000551	PASS
N12	15	10	DFT-QPSK	H	Outer_Full	VL	NT	-0.420000	-0.000591	PASS
N12	15	10	DFT-QPSK	H	Outer_Full	VN	NT	0.660000	0.000928	PASS

N12	15	10	DFT-QPSK	H	Outer_Full	VH	NT	-0.140000	-0.000197	PASS
N12	15	10	DFT-16QAM	H	Outer_Full	VL	NT	0.640000	0.000900	PASS
N12	15	10	DFT-16QAM	H	Outer_Full	VN	NT	0.110000	0.000155	PASS
N12	15	10	DFT-16QAM	H	Outer_Full	VH	NT	-1.420000	-0.001997	PASS
N12	15	15	DFT-QPSK	L	Outer_Full	VL	NT	-4.190000	-0.005931	PASS
N12	15	15	DFT-QPSK	L	Outer_Full	VN	NT	-3.790000	-0.005364	PASS
N12	15	15	DFT-QPSK	L	Outer_Full	VH	NT	-4.260000	-0.006030	PASS
N12	15	15	DFT-16QAM	L	Outer_Full	VL	NT	-4.170000	-0.005902	PASS
N12	15	15	DFT-16QAM	L	Outer_Full	VN	NT	-4.650000	-0.006582	PASS
N12	15	15	DFT-16QAM	L	Outer_Full	VH	NT	-3.820000	-0.005407	PASS
N12	15	15	DFT-QPSK	M	Outer_Full	VL	NT	-3.270000	-0.004622	PASS
N12	15	15	DFT-QPSK	M	Outer_Full	VN	NT	-5.390000	-0.007618	PASS
N12	15	15	DFT-QPSK	M	Outer_Full	VH	NT	-3.650000	-0.005159	PASS
N12	15	15	DFT-16QAM	M	Outer_Full	VL	NT	-3.210000	-0.004537	PASS
N12	15	15	DFT-16QAM	M	Outer_Full	VN	NT	-3.350000	-0.004735	PASS
N12	15	15	DFT-16QAM	M	Outer_Full	VH	NT	-3.920000	-0.005541	PASS
N12	15	15	DFT-QPSK	H	Outer_Full	VL	NT	-4.490000	-0.006337	PASS
N12	15	15	DFT-QPSK	H	Outer_Full	VN	NT	-4.280000	-0.006041	PASS
N12	15	15	DFT-QPSK	H	Outer_Full	VH	NT	-4.410000	-0.006224	PASS
N12	15	15	DFT-16QAM	H	Outer_Full	VL	NT	-4.290000	-0.006055	PASS
N12	15	15	DFT-16QAM	H	Outer_Full	VN	NT	-4.700000	-0.006634	PASS
N12	15	15	DFT-16QAM	H	Outer_Full	VH	NT	-3.600000	-0.005081	PASS

Frequency Error VS. Temperature

Voltage										
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Voltage	Temperature	Deviation(Hz)	Deviation (ppm)	Verdict
N12	15	5	DFT-QPSK	L	Outer_Full	NV	-30	-0.080000	-0.000114	PASS
N12	15	5	DFT-QPSK	L	Outer_Full	NV	-20	1.220000	0.001739	PASS
N12	15	5	DFT-QPSK	L	Outer_Full	NV	-10	-0.270000	-0.000385	PASS
N12	15	5	DFT-QPSK	L	Outer_Full	NV	0	1.070000	0.001525	PASS
N12	15	5	DFT-QPSK	L	Outer_Full	NV	10	0.740000	0.001055	PASS
N12	15	5	DFT-QPSK	L	Outer_Full	NV	20	0.090000	0.000128	PASS
N12	15	5	DFT-QPSK	L	Outer_Full	NV	30	-0.280000	-0.000399	PASS
N12	15	5	DFT-QPSK	L	Outer_Full	NV	40	-0.500000	-0.000713	PASS
N12	15	5	DFT-QPSK	L	Outer_Full	NV	50	0.140000	0.000200	PASS
N12	15	5	DFT-16QAM	L	Outer_Full	NV	-30	0.740000	0.001055	PASS
N12	15	5	DFT-16QAM	L	Outer_Full	NV	-20	1.540000	0.002195	PASS
N12	15	5	DFT-16QAM	L	Outer_Full	NV	-10	0.670000	0.000955	PASS

N12	15	5	DFT-16QAM	L	Outer_Full	NV	0	0.410000	0.000584	PASS
N12	15	5	DFT-16QAM	L	Outer_Full	NV	10	0.190000	0.000271	PASS
N12	15	5	DFT-16QAM	L	Outer_Full	NV	20	0.130000	0.000185	PASS
N12	15	5	DFT-16QAM	L	Outer_Full	NV	30	-0.740000	-0.001055	PASS
N12	15	5	DFT-16QAM	L	Outer_Full	NV	40	0.410000	0.000584	PASS
N12	15	5	DFT-16QAM	L	Outer_Full	NV	50	-0.670000	-0.000955	PASS
N12	15	5	DFT-QPSK	M	Outer_Full	NV	-30	-0.450000	-0.000636	PASS
N12	15	5	DFT-QPSK	M	Outer_Full	NV	-20	0.300000	0.000424	PASS
N12	15	5	DFT-QPSK	M	Outer_Full	NV	-10	0.660000	0.000933	PASS
N12	15	5	DFT-QPSK	M	Outer_Full	NV	0	0.470000	0.000664	PASS
N12	15	5	DFT-QPSK	M	Outer_Full	NV	10	0.030000	0.000042	PASS
N12	15	5	DFT-QPSK	M	Outer_Full	NV	20	-0.660000	-0.000933	PASS
N12	15	5	DFT-QPSK	M	Outer_Full	NV	30	0.310000	0.000438	PASS
N12	15	5	DFT-QPSK	M	Outer_Full	NV	40	0.850000	0.001201	PASS
N12	15	5	DFT-QPSK	M	Outer_Full	NV	50	-0.070000	-0.000099	PASS
N12	15	5	DFT-16QAM	M	Outer_Full	NV	-30	0.080000	0.000113	PASS
N12	15	5	DFT-16QAM	M	Outer_Full	NV	-20	0.790000	0.001117	PASS
N12	15	5	DFT-16QAM	M	Outer_Full	NV	-10	0.910000	0.001286	PASS
N12	15	5	DFT-16QAM	M	Outer_Full	NV	0	-0.270000	-0.000382	PASS
N12	15	5	DFT-16QAM	M	Outer_Full	NV	10	0.380000	0.000537	PASS
N12	15	5	DFT-16QAM	M	Outer_Full	NV	20	0.330000	0.000466	PASS
N12	15	5	DFT-16QAM	M	Outer_Full	NV	30	0.980000	0.001385	PASS
N12	15	5	DFT-16QAM	M	Outer_Full	NV	40	0.540000	0.000763	PASS
N12	15	5	DFT-16QAM	M	Outer_Full	NV	50	0.500000	0.000707	PASS
N12	15	5	DFT-QPSK	H	Outer_Full	NV	-30	0.130000	0.000182	PASS
N12	15	5	DFT-QPSK	H	Outer_Full	NV	-20	0.210000	0.000294	PASS
N12	15	5	DFT-QPSK	H	Outer_Full	NV	-10	0.830000	0.001163	PASS
N12	15	5	DFT-QPSK	H	Outer_Full	NV	0	0.090000	0.000126	PASS
N12	15	5	DFT-QPSK	H	Outer_Full	NV	10	0.020000	0.000028	PASS
N12	15	5	DFT-QPSK	H	Outer_Full	NV	20	0.330000	0.000463	PASS
N12	15	5	DFT-QPSK	H	Outer_Full	NV	30	-0.020000	-0.000028	PASS
N12	15	5	DFT-QPSK	H	Outer_Full	NV	40	-0.620000	-0.000869	PASS
N12	15	5	DFT-QPSK	H	Outer_Full	NV	50	0.280000	0.000392	PASS
N12	15	5	DFT-16QAM	H	Outer_Full	NV	-30	-0.480000	-0.000673	PASS
N12	15	5	DFT-16QAM	H	Outer_Full	NV	-20	1.180000	0.001654	PASS
N12	15	5	DFT-16QAM	H	Outer_Full	NV	-10	0.280000	0.000392	PASS
N12	15	5	DFT-16QAM	H	Outer_Full	NV	0	0.410000	0.000575	PASS
N12	15	5	DFT-16QAM	H	Outer_Full	NV	10	0.300000	0.000420	PASS
N12	15	5	DFT-16QAM	H	Outer_Full	NV	20	-0.150000	-0.000210	PASS
N12	15	5	DFT-16QAM	H	Outer_Full	NV	30	0.940000	0.001317	PASS

N12	15	5	DFT-16QAM	H	Outer_Full	NV	40	2.230000	0.003125	PASS
N12	15	5	DFT-16QAM	H	Outer_Full	NV	50	0.570000	0.000799	PASS
N12	15	10	DFT-QPSK	L	Outer_Full	NV	-30	0.130000	0.000185	PASS
N12	15	10	DFT-QPSK	L	Outer_Full	NV	-20	-0.830000	-0.001179	PASS
N12	15	10	DFT-QPSK	L	Outer_Full	NV	-10	-0.400000	-0.000568	PASS
N12	15	10	DFT-QPSK	L	Outer_Full	NV	0	0.550000	0.000781	PASS
N12	15	10	DFT-QPSK	L	Outer_Full	NV	10	0.580000	0.000824	PASS
N12	15	10	DFT-QPSK	L	Outer_Full	NV	20	-1.010000	-0.001435	PASS
N12	15	10	DFT-QPSK	L	Outer_Full	NV	30	-0.080000	-0.000114	PASS
N12	15	10	DFT-QPSK	L	Outer_Full	NV	40	-0.600000	-0.000852	PASS
N12	15	10	DFT-QPSK	L	Outer_Full	NV	50	0.120000	0.000170	PASS
N12	15	10	DFT-16QAM	L	Outer_Full	NV	-30	-1.030000	-0.001463	PASS
N12	15	10	DFT-16QAM	L	Outer_Full	NV	-20	-0.590000	-0.000838	PASS
N12	15	10	DFT-16QAM	L	Outer_Full	NV	-10	0.270000	0.000384	PASS
N12	15	10	DFT-16QAM	L	Outer_Full	NV	0	0.250000	0.000355	PASS
N12	15	10	DFT-16QAM	L	Outer_Full	NV	10	-0.760000	-0.001080	PASS
N12	15	10	DFT-16QAM	L	Outer_Full	NV	20	-0.560000	-0.000795	PASS
N12	15	10	DFT-16QAM	L	Outer_Full	NV	30	-0.810000	-0.001151	PASS
N12	15	10	DFT-16QAM	L	Outer_Full	NV	40	-0.740000	-0.001051	PASS
N12	15	10	DFT-16QAM	L	Outer_Full	NV	50	0.450000	0.000639	PASS
N12	15	10	DFT-QPSK	M	Outer_Full	NV	-30	0.660000	0.000933	PASS
N12	15	10	DFT-QPSK	M	Outer_Full	NV	-20	0.210000	0.000297	PASS
N12	15	10	DFT-QPSK	M	Outer_Full	NV	-10	1.450000	0.002049	PASS
N12	15	10	DFT-QPSK	M	Outer_Full	NV	0	-0.550000	-0.000777	PASS
N12	15	10	DFT-QPSK	M	Outer_Full	NV	10	-1.060000	-0.001498	PASS
N12	15	10	DFT-QPSK	M	Outer_Full	NV	20	0.290000	0.000410	PASS
N12	15	10	DFT-QPSK	M	Outer_Full	NV	30	0.870000	0.001230	PASS
N12	15	10	DFT-QPSK	M	Outer_Full	NV	40	0.030000	0.000042	PASS
N12	15	10	DFT-QPSK	M	Outer_Full	NV	50	0.110000	0.000155	PASS
N12	15	10	DFT-16QAM	M	Outer_Full	NV	-30	0.570000	0.000806	PASS
N12	15	10	DFT-16QAM	M	Outer_Full	NV	-20	-0.380000	-0.000537	PASS
N12	15	10	DFT-16QAM	M	Outer_Full	NV	-10	-0.580000	-0.000820	PASS
N12	15	10	DFT-16QAM	M	Outer_Full	NV	0	0.820000	0.001159	PASS
N12	15	10	DFT-16QAM	M	Outer_Full	NV	10	1.110000	0.001569	PASS
N12	15	10	DFT-16QAM	M	Outer_Full	NV	20	0.490000	0.000693	PASS
N12	15	10	DFT-16QAM	M	Outer_Full	NV	30	-0.760000	-0.001074	PASS
N12	15	10	DFT-16QAM	M	Outer_Full	NV	40	1.290000	0.001823	PASS
N12	15	10	DFT-16QAM	M	Outer_Full	NV	50	-0.730000	-0.001032	PASS
N12	15	10	DFT-QPSK	H	Outer_Full	NV	-30	0.710000	0.000999	PASS
N12	15	10	DFT-QPSK	H	Outer_Full	NV	-20	-0.350000	-0.000492	PASS

N12	15	10	DFT-QPSK	H	Outer_Full	NV	-10	0.050000	0.000070	PASS
N12	15	10	DFT-QPSK	H	Outer_Full	NV	0	-0.170000	-0.000239	PASS
N12	15	10	DFT-QPSK	H	Outer_Full	NV	10	-0.890000	-0.001252	PASS
N12	15	10	DFT-QPSK	H	Outer_Full	NV	20	0.200000	0.000281	PASS
N12	15	10	DFT-QPSK	H	Outer_Full	NV	30	-0.870000	-0.001224	PASS
N12	15	10	DFT-QPSK	H	Outer_Full	NV	40	0.300000	0.000422	PASS
N12	15	10	DFT-QPSK	H	Outer_Full	NV	50	0.080000	0.000113	PASS
N12	15	10	DFT-16QAM	H	Outer_Full	NV	-30	0.760000	0.001069	PASS
N12	15	10	DFT-16QAM	H	Outer_Full	NV	-20	0.110000	0.000155	PASS
N12	15	10	DFT-16QAM	H	Outer_Full	NV	-10	0.170000	0.000239	PASS
N12	15	10	DFT-16QAM	H	Outer_Full	NV	0	-1.150000	-0.001617	PASS
N12	15	10	DFT-16QAM	H	Outer_Full	NV	10	-0.390000	-0.000549	PASS
N12	15	10	DFT-16QAM	H	Outer_Full	NV	20	0.540000	0.000759	PASS
N12	15	10	DFT-16QAM	H	Outer_Full	NV	30	1.250000	0.001758	PASS
N12	15	10	DFT-16QAM	H	Outer_Full	NV	40	0.560000	0.000788	PASS
N12	15	10	DFT-16QAM	H	Outer_Full	NV	50	0.400000	0.000563	PASS
N12	15	15	DFT-QPSK	L	Outer_Full	NV	-30	-3.690000	-0.005223	PASS
N12	15	15	DFT-QPSK	L	Outer_Full	NV	-20	-3.770000	-0.005336	PASS
N12	15	15	DFT-QPSK	L	Outer_Full	NV	-10	-3.580000	-0.005067	PASS
N12	15	15	DFT-QPSK	L	Outer_Full	NV	0	-3.770000	-0.005336	PASS
N12	15	15	DFT-QPSK	L	Outer_Full	NV	10	-3.870000	-0.005478	PASS
N12	15	15	DFT-QPSK	L	Outer_Full	NV	20	-3.870000	-0.005478	PASS
N12	15	15	DFT-QPSK	L	Outer_Full	NV	30	-2.870000	-0.004061	PASS
N12	15	15	DFT-QPSK	L	Outer_Full	NV	40	-3.860000	-0.005464	PASS
N12	15	15	DFT-QPSK	L	Outer_Full	NV	50	-3.350000	-0.004742	PASS
N12	15	15	DFT-16QAM	L	Outer_Full	NV	-30	-3.840000	-0.005435	PASS
N12	15	15	DFT-16QAM	L	Outer_Full	NV	-20	-4.520000	-0.006398	PASS
N12	15	15	DFT-16QAM	L	Outer_Full	NV	-10	-3.500000	-0.004954	PASS
N12	15	15	DFT-16QAM	L	Outer_Full	NV	0	-3.460000	-0.004897	PASS
N12	15	15	DFT-16QAM	L	Outer_Full	NV	10	-3.880000	-0.005492	PASS
N12	15	15	DFT-16QAM	L	Outer_Full	NV	20	-4.310000	-0.006100	PASS
N12	15	15	DFT-16QAM	L	Outer_Full	NV	30	-3.860000	-0.005464	PASS
N12	15	15	DFT-16QAM	L	Outer_Full	NV	40	-3.390000	-0.004798	PASS
N12	15	15	DFT-16QAM	L	Outer_Full	NV	50	-3.630000	-0.005138	PASS
N12	15	15	DFT-QPSK	M	Outer_Full	NV	-30	-3.540000	-0.005004	PASS
N12	15	15	DFT-QPSK	M	Outer_Full	NV	-20	-3.280000	-0.004636	PASS
N12	15	15	DFT-QPSK	M	Outer_Full	NV	-10	-3.390000	-0.004792	PASS
N12	15	15	DFT-QPSK	M	Outer_Full	NV	0	-2.440000	-0.003449	PASS
N12	15	15	DFT-QPSK	M	Outer_Full	NV	10	-4.070000	-0.005753	PASS
N12	15	15	DFT-QPSK	M	Outer_Full	NV	20	-3.240000	-0.004580	PASS

N12	15	15	DFT-QPSK	M	Outer_Full	NV	30	-4.190000	-0.005922	PASS
N12	15	15	DFT-QPSK	M	Outer_Full	NV	40	-3.920000	-0.005541	PASS
N12	15	15	DFT-QPSK	M	Outer_Full	NV	50	-3.070000	-0.004339	PASS
N12	15	15	DFT-16QAM	M	Outer_Full	NV	-30	-3.620000	-0.005117	PASS
N12	15	15	DFT-16QAM	M	Outer_Full	NV	-20	-5.050000	-0.007138	PASS
N12	15	15	DFT-16QAM	M	Outer_Full	NV	-10	-2.880000	-0.004071	PASS
N12	15	15	DFT-16QAM	M	Outer_Full	NV	0	-3.470000	-0.004905	PASS
N12	15	15	DFT-16QAM	M	Outer_Full	NV	10	-2.680000	-0.003788	PASS
N12	15	15	DFT-16QAM	M	Outer_Full	NV	20	-4.680000	-0.006615	PASS
N12	15	15	DFT-16QAM	M	Outer_Full	NV	30	-2.960000	-0.004184	PASS
N12	15	15	DFT-16QAM	M	Outer_Full	NV	40	-3.510000	-0.004961	PASS
N12	15	15	DFT-16QAM	M	Outer_Full	NV	50	-3.030000	-0.004283	PASS
N12	15	15	DFT-QPSK	H	Outer_Full	NV	-30	-4.139999	-0.005843	PASS
N12	15	15	DFT-QPSK	H	Outer_Full	NV	-20	-4.750000	-0.006704	PASS
N12	15	15	DFT-QPSK	H	Outer_Full	NV	-10	-3.540000	-0.004996	PASS
N12	15	15	DFT-QPSK	H	Outer_Full	NV	0	-5.220000	-0.007368	PASS
N12	15	15	DFT-QPSK	H	Outer_Full	NV	10	-4.230000	-0.005970	PASS
N12	15	15	DFT-QPSK	H	Outer_Full	NV	20	-3.290000	-0.004644	PASS
N12	15	15	DFT-QPSK	H	Outer_Full	NV	30	-3.720000	-0.005251	PASS
N12	15	15	DFT-QPSK	H	Outer_Full	NV	40	-4.850000	-0.006845	PASS
N12	15	15	DFT-QPSK	H	Outer_Full	NV	50	-3.780000	-0.005335	PASS
N12	15	15	DFT-16QAM	H	Outer_Full	NV	-30	-4.560000	-0.006436	PASS
N12	15	15	DFT-16QAM	H	Outer_Full	NV	-20	-4.480000	-0.006323	PASS
N12	15	15	DFT-16QAM	H	Outer_Full	NV	-10	-3.660000	-0.005166	PASS
N12	15	15	DFT-16QAM	H	Outer_Full	NV	0	-3.600000	-0.005081	PASS
N12	15	15	DFT-16QAM	H	Outer_Full	NV	10	-3.900000	-0.005505	PASS
N12	15	15	DFT-16QAM	H	Outer_Full	NV	20	-4.270000	-0.006027	PASS
N12	15	15	DFT-16QAM	H	Outer_Full	NV	30	-4.410000	-0.006224	PASS
N12	15	15	DFT-16QAM	H	Outer_Full	NV	40	-4.050000	-0.005716	PASS
N12	15	15	DFT-16QAM	H	Outer_Full	NV	50	-4.560000	-0.006436	PASS