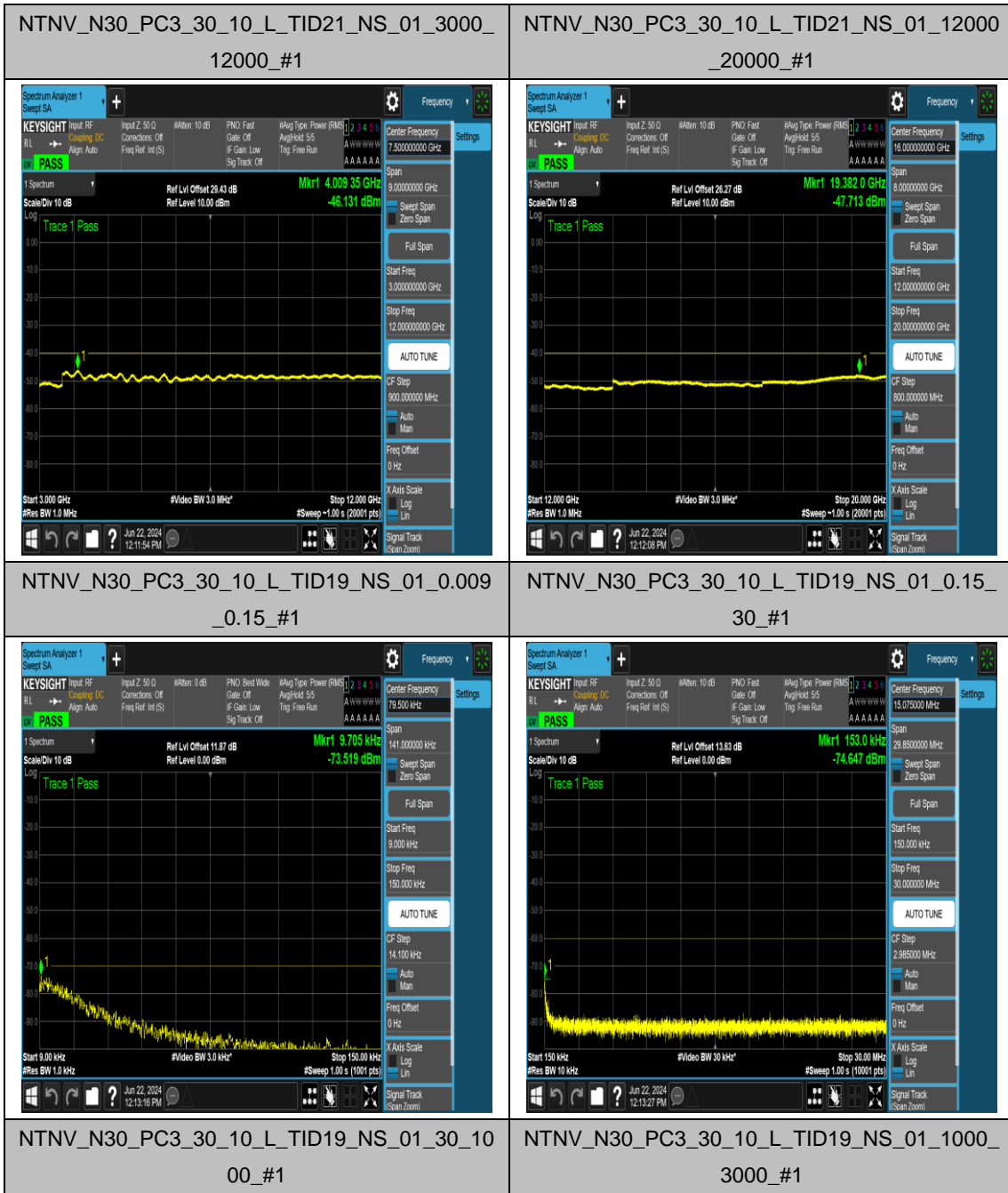


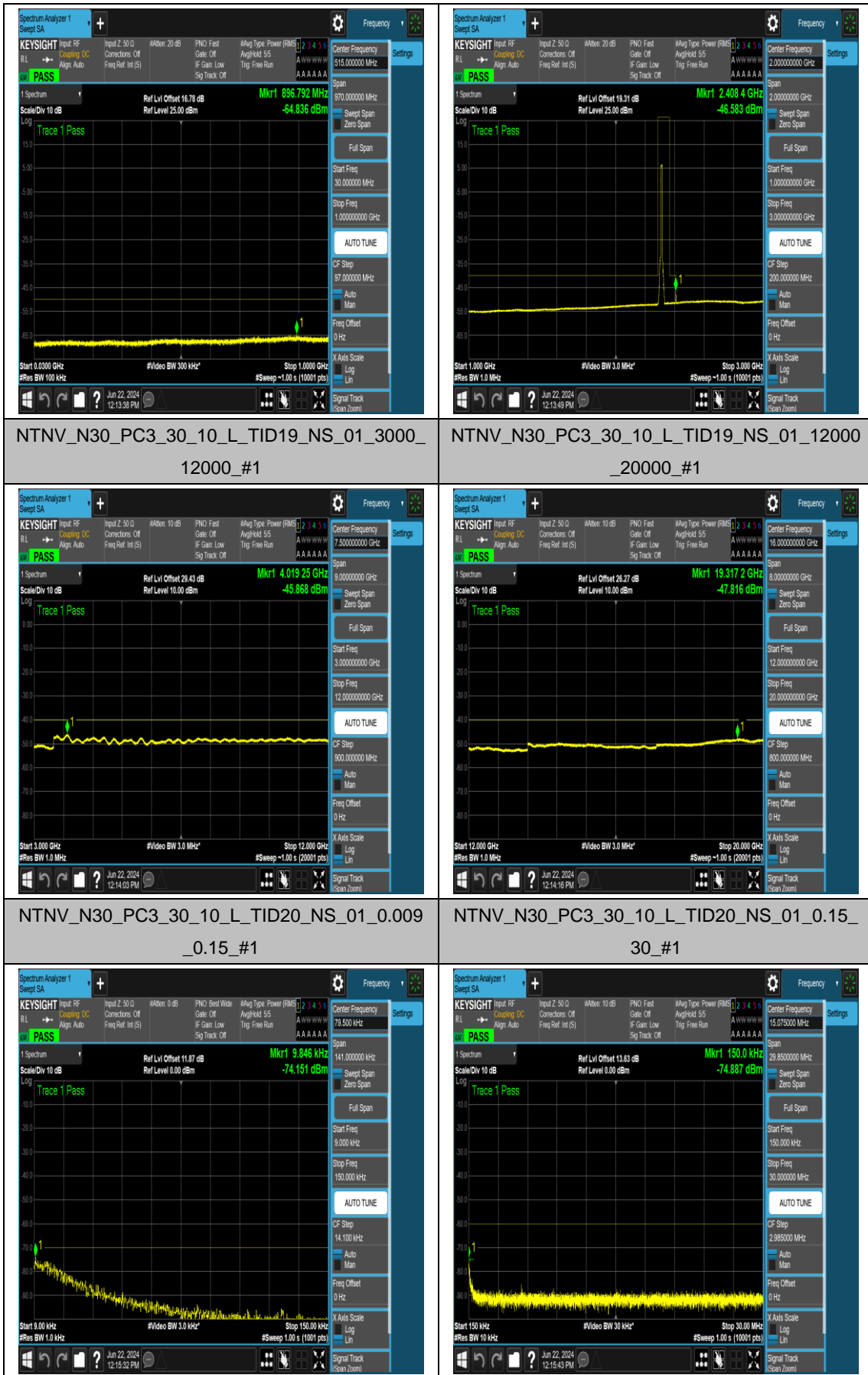
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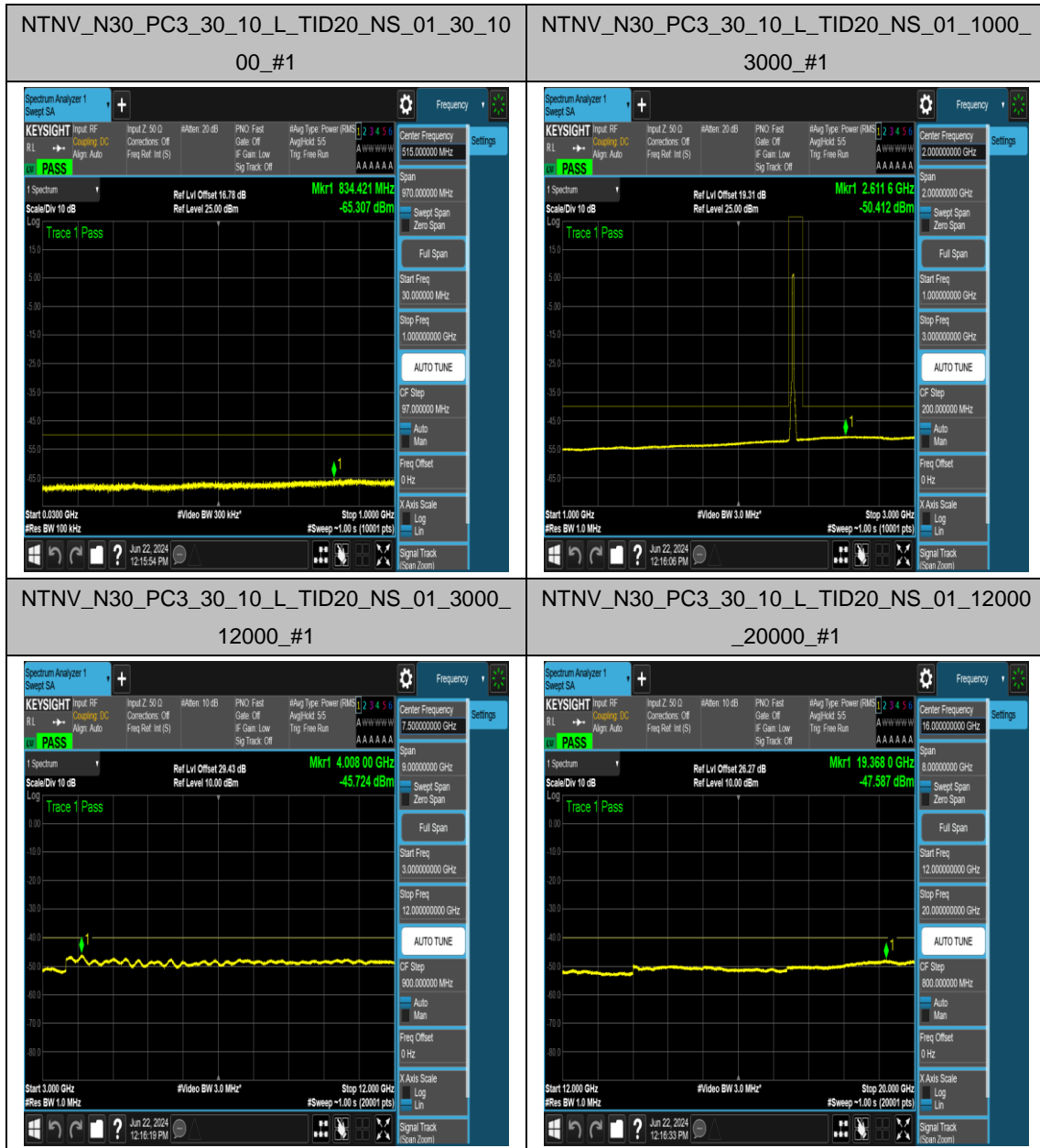
NTNV\_N30\_PC3\_30\_10\_L\_TID21\_NS\_01\_0.15\_30\_#1

NTNV\_N30\_PC3\_30\_10\_L\_TID21\_NS\_01\_30\_10\_00\_#1

NTNV\_N30\_PC3\_30\_10\_L\_TID21\_NS\_01\_1000\_3000\_#1







## 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
N30	30	5	DFT-QPSK	L	Outer_Full	VL	NT	12.000000	0.005200	PASS
N30	30	5	DFT-QPSK	L	Outer_Full	VN	NT	17.000000	0.007367	PASS
N30	30	5	DFT-QPSK	L	Outer_Full	VH	NT	16.000000	0.006934	PASS

N30	30	5	DFT-16QAM	L	Outer_Full	VL	NT	10.000000	0.004334	PASS
N30	30	5	DFT-16QAM	L	Outer_Full	VN	NT	2.000000	0.000867	PASS
N30	30	5	DFT-16QAM	L	Outer_Full	VH	NT	17.000000	0.007367	PASS
N30	30	5	DFT-QPSK	M	Outer_Full	VL	NT	10.000000	0.004329	PASS
N30	30	5	DFT-QPSK	M	Outer_Full	VN	NT	3.000000	0.001299	PASS
N30	30	5	DFT-QPSK	M	Outer_Full	VH	NT	10.000000	0.004329	PASS
N30	30	5	DFT-16QAM	M	Outer_Full	VL	NT	5.000000	0.002165	PASS
N30	30	5	DFT-16QAM	M	Outer_Full	VN	NT	6.000000	0.002597	PASS
N30	30	5	DFT-16QAM	M	Outer_Full	VH	NT	8.000000	0.003463	PASS
N30	30	5	DFT-QPSK	H	Outer_Full	VL	NT	13.000000	0.005622	PASS
N30	30	5	DFT-QPSK	H	Outer_Full	VN	NT	8.000000	0.003459	PASS
N30	30	5	DFT-QPSK	H	Outer_Full	VH	NT	1.000000	0.000432	PASS
N30	30	5	DFT-16QAM	H	Outer_Full	VL	NT	8.000000	0.003459	PASS
N30	30	5	DFT-16QAM	H	Outer_Full	VN	NT	9.000000	0.003892	PASS
N30	30	5	DFT-16QAM	H	Outer_Full	VH	NT	2.000000	0.000865	PASS
N30	30	10	DFT-QPSK	L	Outer_Full	VL	NT	16.000000	0.006926	PASS
N30	30	10	DFT-QPSK	L	Outer_Full	VN	NT	9.000000	0.003896	PASS
N30	30	10	DFT-QPSK	L	Outer_Full	VH	NT	1.000000	0.000433	PASS
N30	30	10	DFT-16QAM	L	Outer_Full	VL	NT	17.000000	0.007359	PASS
N30	30	10	DFT-16QAM	L	Outer_Full	VN	NT	19.000000	0.008225	PASS
N30	30	10	DFT-16QAM	L	Outer_Full	VH	NT	19.000000	0.008225	PASS
N30	30	10	DFT-QPSK	M	Outer_Full	VL	NT	6.000000	0.002597	PASS
N30	30	10	DFT-QPSK	M	Outer_Full	VN	NT	8.000000	0.003463	PASS
N30	30	10	DFT-QPSK	M	Outer_Full	VH	NT	17.000000	0.007359	PASS
N30	30	10	DFT-16QAM	M	Outer_Full	VL	NT	9.000000	0.003896	PASS
N30	30	10	DFT-16QAM	M	Outer_Full	VN	NT	15.000000	0.006494	PASS
N30	30	10	DFT-16QAM	M	Outer_Full	VH	NT	17.000000	0.007359	PASS
N30	30	10	DFT-QPSK	H	Outer_Full	VL	NT	9.000000	0.003896	PASS
N30	30	10	DFT-QPSK	H	Outer_Full	VN	NT	4.000000	0.001732	PASS
N30	30	10	DFT-QPSK	H	Outer_Full	VH	NT	6.000000	0.002597	PASS
N30	30	10	DFT-16QAM	H	Outer_Full	VL	NT	12.000000	0.005195	PASS
N30	30	10	DFT-16QAM	H	Outer_Full	VN	NT	10.000000	0.004329	PASS
N30	30	10	DFT-16QAM	H	Outer_Full	VH	NT	13.000000	0.005628	PASS

### Frequency Error VS. Temperature

Voltage										
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Voltage	Temperature	Deviation(Hz)	Deviation (ppm)	Verdict
N30	30	5	DFT-QPSK	L	Outer_Full	NV	-30	17.000000	0.007367	PASS
N30	30	5	DFT-QPSK	L	Outer_Full	NV	-20	9.000000	0.003900	PASS

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N30	30	5	DFT-QPSK	L	Outer_Full	NV	-10	18.000000	0.007801	PASS
N30	30	5	DFT-QPSK	L	Outer_Full	NV	0	2.000000	0.000867	PASS
N30	30	5	DFT-QPSK	L	Outer_Full	NV	10	13.000000	0.005634	PASS
N30	30	5	DFT-QPSK	L	Outer_Full	NV	20	17.000000	0.007367	PASS
N30	30	5	DFT-QPSK	L	Outer_Full	NV	30	19.000000	0.008234	PASS
N30	30	5	DFT-QPSK	L	Outer_Full	NV	40	5.000000	0.002167	PASS
N30	30	5	DFT-QPSK	L	Outer_Full	NV	50	7.000000	0.003034	PASS
N30	30	5	DFT-16QAM	L	Outer_Full	NV	-30	19.000000	0.008234	PASS
N30	30	5	DFT-16QAM	L	Outer_Full	NV	-20	2.000000	0.000867	PASS
N30	30	5	DFT-16QAM	L	Outer_Full	NV	-10	5.000000	0.002167	PASS
N30	30	5	DFT-16QAM	L	Outer_Full	NV	0	16.000000	0.006934	PASS
N30	30	5	DFT-16QAM	L	Outer_Full	NV	10	6.000000	0.002600	PASS
N30	30	5	DFT-16QAM	L	Outer_Full	NV	20	8.000000	0.003467	PASS
N30	30	5	DFT-16QAM	L	Outer_Full	NV	30	19.000000	0.008234	PASS
N30	30	5	DFT-16QAM	L	Outer_Full	NV	40	3.000000	0.001300	PASS
N30	30	5	DFT-16QAM	L	Outer_Full	NV	50	12.000000	0.005200	PASS
N30	30	5	DFT-QPSK	M	Outer_Full	NV	-30	12.000000	0.005195	PASS
N30	30	5	DFT-QPSK	M	Outer_Full	NV	-20	18.000000	0.007792	PASS
N30	30	5	DFT-QPSK	M	Outer_Full	NV	-10	18.000000	0.007792	PASS
N30	30	5	DFT-QPSK	M	Outer_Full	NV	0	1.000000	0.000433	PASS
N30	30	5	DFT-QPSK	M	Outer_Full	NV	10	10.000000	0.004329	PASS
N30	30	5	DFT-QPSK	M	Outer_Full	NV	20	6.000000	0.002597	PASS
N30	30	5	DFT-QPSK	M	Outer_Full	NV	30	5.000000	0.002165	PASS
N30	30	5	DFT-QPSK	M	Outer_Full	NV	40	14.000000	0.006061	PASS
N30	30	5	DFT-QPSK	M	Outer_Full	NV	50	6.000000	0.002597	PASS
N30	30	5	DFT-16QAM	M	Outer_Full	NV	-30	2.000000	0.000866	PASS
N30	30	5	DFT-16QAM	M	Outer_Full	NV	-20	4.000000	0.001732	PASS
N30	30	5	DFT-16QAM	M	Outer_Full	NV	-10	12.000000	0.005195	PASS
N30	30	5	DFT-16QAM	M	Outer_Full	NV	0	9.000000	0.003896	PASS
N30	30	5	DFT-16QAM	M	Outer_Full	NV	10	8.000000	0.003463	PASS
N30	30	5	DFT-16QAM	M	Outer_Full	NV	20	10.000000	0.004329	PASS
N30	30	5	DFT-16QAM	M	Outer_Full	NV	30	9.000000	0.003896	PASS
N30	30	5	DFT-16QAM	M	Outer_Full	NV	40	15.000000	0.006494	PASS
N30	30	5	DFT-16QAM	M	Outer_Full	NV	50	7.000000	0.003030	PASS
N30	30	5	DFT-QPSK	H	Outer_Full	NV	-30	3.000000	0.001297	PASS
N30	30	5	DFT-QPSK	H	Outer_Full	NV	-20	2.000000	0.000865	PASS
N30	30	5	DFT-QPSK	H	Outer_Full	NV	-10	5.000000	0.002162	PASS
N30	30	5	DFT-QPSK	H	Outer_Full	NV	0	7.000000	0.003027	PASS
N30	30	5	DFT-QPSK	H	Outer_Full	NV	10	6.000000	0.002595	PASS
N30	30	5	DFT-QPSK	H	Outer_Full	NV	20	8.000000	0.003459	PASS
N30	30	5	DFT-QPSK	H	Outer_Full	NV	30	18.000000	0.007784	PASS

N30	30	5	DFT-QPSK	H	Outer_Full	NV	40	4.000000	0.001730	PASS
N30	30	5	DFT-QPSK	H	Outer_Full	NV	50	16.000000	0.006919	PASS
N30	30	5	DFT-16QAM	H	Outer_Full	NV	-30	13.000000	0.005622	PASS
N30	30	5	DFT-16QAM	H	Outer_Full	NV	-20	5.000000	0.002162	PASS
N30	30	5	DFT-16QAM	H	Outer_Full	NV	-10	4.000000	0.001730	PASS
N30	30	5	DFT-16QAM	H	Outer_Full	NV	0	19.000000	0.008216	PASS
N30	30	5	DFT-16QAM	H	Outer_Full	NV	10	6.000000	0.002595	PASS
N30	30	5	DFT-16QAM	H	Outer_Full	NV	20	9.000000	0.003892	PASS
N30	30	5	DFT-16QAM	H	Outer_Full	NV	30	11.000000	0.004757	PASS
N30	30	5	DFT-16QAM	H	Outer_Full	NV	40	10.000000	0.004324	PASS
N30	30	5	DFT-16QAM	H	Outer_Full	NV	50	12.000000	0.005189	PASS
N30	30	10	DFT-QPSK	L	Outer_Full	NV	-30	3.000000	0.001299	PASS
N30	30	10	DFT-QPSK	L	Outer_Full	NV	-20	18.000000	0.007792	PASS
N30	30	10	DFT-QPSK	L	Outer_Full	NV	-10	5.000000	0.002165	PASS
N30	30	10	DFT-QPSK	L	Outer_Full	NV	0	8.000000	0.003463	PASS
N30	30	10	DFT-QPSK	L	Outer_Full	NV	10	10.000000	0.004329	PASS
N30	30	10	DFT-QPSK	L	Outer_Full	NV	20	13.000000	0.005628	PASS
N30	30	10	DFT-QPSK	L	Outer_Full	NV	30	12.000000	0.005195	PASS
N30	30	10	DFT-QPSK	L	Outer_Full	NV	40	14.000000	0.006061	PASS
N30	30	10	DFT-QPSK	L	Outer_Full	NV	50	16.000000	0.006926	PASS
N30	30	10	DFT-16QAM	L	Outer_Full	NV	-30	2.000000	0.000866	PASS
N30	30	10	DFT-16QAM	L	Outer_Full	NV	-20	1.000000	0.000433	PASS
N30	30	10	DFT-16QAM	L	Outer_Full	NV	-10	4.000000	0.001732	PASS
N30	30	10	DFT-16QAM	L	Outer_Full	NV	0	6.000000	0.002597	PASS
N30	30	10	DFT-16QAM	L	Outer_Full	NV	10	5.000000	0.002165	PASS
N30	30	10	DFT-16QAM	L	Outer_Full	NV	20	7.000000	0.003030	PASS
N30	30	10	DFT-16QAM	L	Outer_Full	NV	30	5.000000	0.002165	PASS
N30	30	10	DFT-16QAM	L	Outer_Full	NV	40	14.000000	0.006061	PASS
N30	30	10	DFT-16QAM	L	Outer_Full	NV	50	10.000000	0.004329	PASS
N30	30	10	DFT-QPSK	M	Outer_Full	NV	-30	12.000000	0.005195	PASS
N30	30	10	DFT-QPSK	M	Outer_Full	NV	-20	14.000000	0.006061	PASS
N30	30	10	DFT-QPSK	M	Outer_Full	NV	-10	17.000000	0.007359	PASS
N30	30	10	DFT-QPSK	M	Outer_Full	NV	0	16.000000	0.006926	PASS
N30	30	10	DFT-QPSK	M	Outer_Full	NV	10	6.000000	0.002597	PASS
N30	30	10	DFT-QPSK	M	Outer_Full	NV	20	17.000000	0.007359	PASS
N30	30	10	DFT-QPSK	M	Outer_Full	NV	30	15.000000	0.006494	PASS
N30	30	10	DFT-QPSK	M	Outer_Full	NV	40	14.000000	0.006061	PASS
N30	30	10	DFT-QPSK	M	Outer_Full	NV	50	17.000000	0.007359	PASS
N30	30	10	DFT-16QAM	M	Outer_Full	NV	-30	13.000000	0.005628	PASS
N30	30	10	DFT-16QAM	M	Outer_Full	NV	-20	12.000000	0.005195	PASS
N30	30	10	DFT-16QAM	M	Outer_Full	NV	-10	3.000000	0.001299	PASS

N30	30	10	DFT-16QAM	M	Outer_Full	NV	0	5.000000	0.002165	PASS
N30	30	10	DFT-16QAM	M	Outer_Full	NV	10	17.000000	0.007359	PASS
N30	30	10	DFT-16QAM	M	Outer_Full	NV	20	19.000000	0.008225	PASS
N30	30	10	DFT-16QAM	M	Outer_Full	NV	30	12.000000	0.005195	PASS
N30	30	10	DFT-16QAM	M	Outer_Full	NV	40	14.000000	0.006061	PASS
N30	30	10	DFT-16QAM	M	Outer_Full	NV	50	13.000000	0.005628	PASS
N30	30	10	DFT-QPSK	H	Outer_Full	NV	-30	8.000000	0.003463	PASS
N30	30	10	DFT-QPSK	H	Outer_Full	NV	-20	19.000000	0.008225	PASS
N30	30	10	DFT-QPSK	H	Outer_Full	NV	-10	5.000000	0.002165	PASS
N30	30	10	DFT-QPSK	H	Outer_Full	NV	0	16.000000	0.006926	PASS
N30	30	10	DFT-QPSK	H	Outer_Full	NV	10	15.000000	0.006494	PASS
N30	30	10	DFT-QPSK	H	Outer_Full	NV	20	17.000000	0.007359	PASS
N30	30	10	DFT-QPSK	H	Outer_Full	NV	30	16.000000	0.006926	PASS
N30	30	10	DFT-QPSK	H	Outer_Full	NV	40	14.000000	0.006061	PASS
N30	30	10	DFT-QPSK	H	Outer_Full	NV	50	16.000000	0.006926	PASS
N30	30	10	DFT-16QAM	H	Outer_Full	NV	-30	4.000000	0.001732	PASS
N30	30	10	DFT-16QAM	H	Outer_Full	NV	-20	13.000000	0.005628	PASS
N30	30	10	DFT-16QAM	H	Outer_Full	NV	-10	5.000000	0.002165	PASS
N30	30	10	DFT-16QAM	H	Outer_Full	NV	0	14.000000	0.006061	PASS
N30	30	10	DFT-16QAM	H	Outer_Full	NV	10	12.000000	0.005195	PASS
N30	30	10	DFT-16QAM	H	Outer_Full	NV	20	4.000000	0.001732	PASS
N30	30	10	DFT-16QAM	H	Outer_Full	NV	30	14.000000	0.006061	PASS
N30	30	10	DFT-16QAM	H	Outer_Full	NV	40	13.000000	0.005628	PASS
N30	30	10	DFT-16QAM	H	Outer_Full	NV	50	15.000000	0.006494	PASS