



















Appendix F: Frequency Stability

Test Result

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	3.35	25	4.19	0.002368	± 2.5	PASS
		3.85	25	-13.32	-0.007524	± 2.5	PASS
		4.45	25	19.56	0.011048	± 2.5	PASS
	MCH	3.35	25	7.11	0.004017	± 2.5	PASS
		3.85	25	7.91	0.011142	± 2.5	PASS
		4.45	25	-8.51	-0.004850	± 2.5	PASS
	HCH	3.35	25	36.21	0.020630	± 2.5	PASS
		3.85	25	28.98	0.016514	± 2.5	PASS
		4.45	25	29.34	0.016718	± 2.5	PASS
16QAM	LCH	3.35	25	15.48	0.008999	± 2.5	PASS
		3.85	25	21.76	0.012650	± 2.5	PASS
		4.45	25	36.23	0.021067	± 2.5	PASS
	MCH	3.35	25	12.67	0.007369	± 2.5	PASS
		3.85	25	-19.35	-0.027260	± 2.5	PASS
		4.45	25	-20.63	-0.011654	± 2.5	PASS
	HCH	3.35	25	-30.16	-0.017037	± 2.5	PASS
		3.85	25	-32.62	-0.018427	± 2.5	PASS
		4.45	25	-20.04	-0.011323	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	3.85	-30	-13.80	-0.019470	± 2.5	PASS
		3.85	-20	-7.52	-0.010613	± 2.5	PASS
		3.85	-10	-29.03	-0.040938	± 2.5	PASS
		3.85	0	-48.77	-0.068782	± 2.5	PASS
		3.85	10	-10.81	-0.015253	± 2.5	PASS
		3.85	20	-32.17	-0.045537	± 2.5	PASS
		3.85	30	-44.09	-0.062404	± 2.5	PASS
		3.85	40	-3.25	-0.004596	± 2.5	PASS
		3.85	50	-9.93	-0.014052	± 2.5	PASS
	MCH	3.85	-30	-10.10	-0.014205	± 2.5	PASS
		3.85	-20	2.79	0.003934	± 2.5	PASS

		3.85	-10	17.38	0.024514	± 2.5	PASS
		3.85	0	27.88	0.039324	± 2.5	PASS
		3.85	10	37.15	0.052398	± 2.5	PASS
		3.85	20	-0.19	-0.000262	± 2.5	PASS
		3.85	30	-8.74	-0.012310	± 2.5	PASS
		3.85	40	-15.78	-0.022223	± 2.5	PASS
		3.85	50	-22.46	-0.031632	± 2.5	PASS
	HCH	3.85	-30	-4.66	-0.006568	± 2.5	PASS
		3.85	-20	-19.74	-0.027804	± 2.5	PASS
		3.85	-10	-33.99	-0.047872	± 2.5	PASS
		3.85	0	-2.33	-0.003284	± 2.5	PASS
		3.85	10	-12.77	-0.017992	± 2.5	PASS
		3.85	20	-3.03	-0.004250	± 2.5	PASS
		3.85	30	-12.17	-0.017062	± 2.5	PASS
	LCH	3.85	40	-20.53	-0.028771	± 2.5	PASS
		3.85	50	-27.92	-0.039136	± 2.5	PASS
		3.85	-30	-8.40	-0.011810	± 2.5	PASS
		3.85	-20	13.82	0.019463	± 2.5	PASS
		3.85	-10	29.74	0.041888	± 2.5	PASS
		3.85	0	41.84	0.058933	± 2.5	PASS
		3.85	10	2.98	0.004191	± 2.5	PASS
		3.85	20	-2.76	-0.003908	± 2.5	PASS
		3.85	30	8.84	0.012513	± 2.5	PASS
		3.85	40	19.54	0.027659	± 2.5	PASS
	MCH	3.85	50	28.00	0.039625	± 2.5	PASS
		3.85	-30	-1.09	-0.001531	± 2.5	PASS
		3.85	-20	5.06	0.007122	± 2.5	PASS
		3.85	-10	19.91	0.028007	± 2.5	PASS
3.85		0	31.64	0.044505	± 2.5	PASS	
3.85		10	40.44	0.056878	± 2.5	PASS	
3.85		20	-5.58	-0.007858	± 2.5	PASS	
3.85		30	6.90	0.009711	± 2.5	PASS	
3.85		40	16.28	0.022928	± 2.5	PASS	
HCH	3.85	50	25.99	0.036609	± 2.5	PASS	
	3.85	-30	-25.28	-0.035552	± 2.5	PASS	
	3.85	-20	-39.65	-0.055772	± 2.5	PASS	
	3.85	-10	-2.07	-0.002917	± 2.5	PASS	
	3.85	0	-11.64	-0.016377	± 2.5	PASS	
	3.85	10	18.17	0.025624	± 2.5	PASS	
	3.85	20	-8.71	-0.012210	± 2.5	PASS	
3.85	30	2.69	0.003769	± 2.5	PASS		

16QAM

		3.85	40	13.79	0.019327	± 2.5	PASS
		3.85	50	20.94	0.029352	± 2.5	PASS