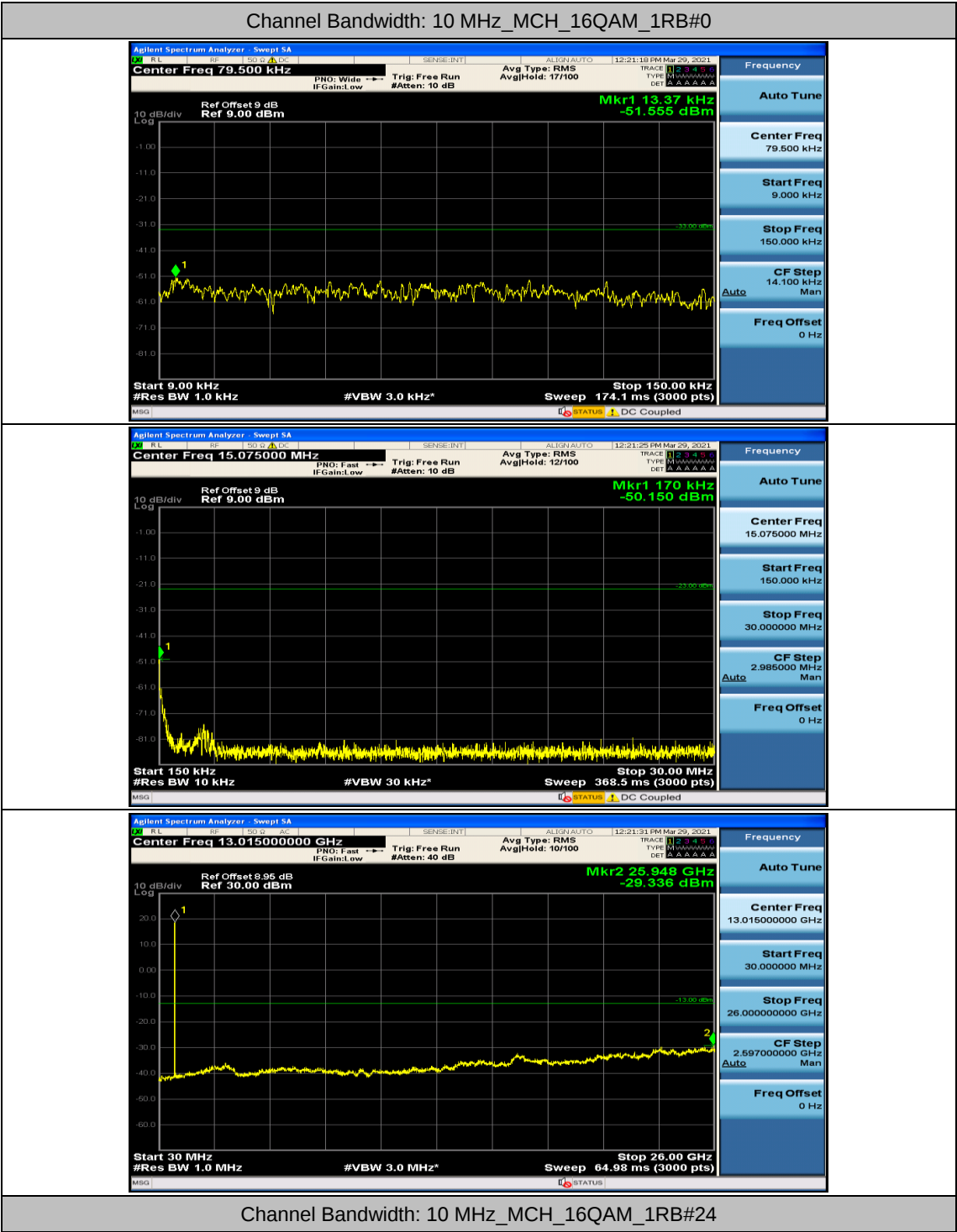
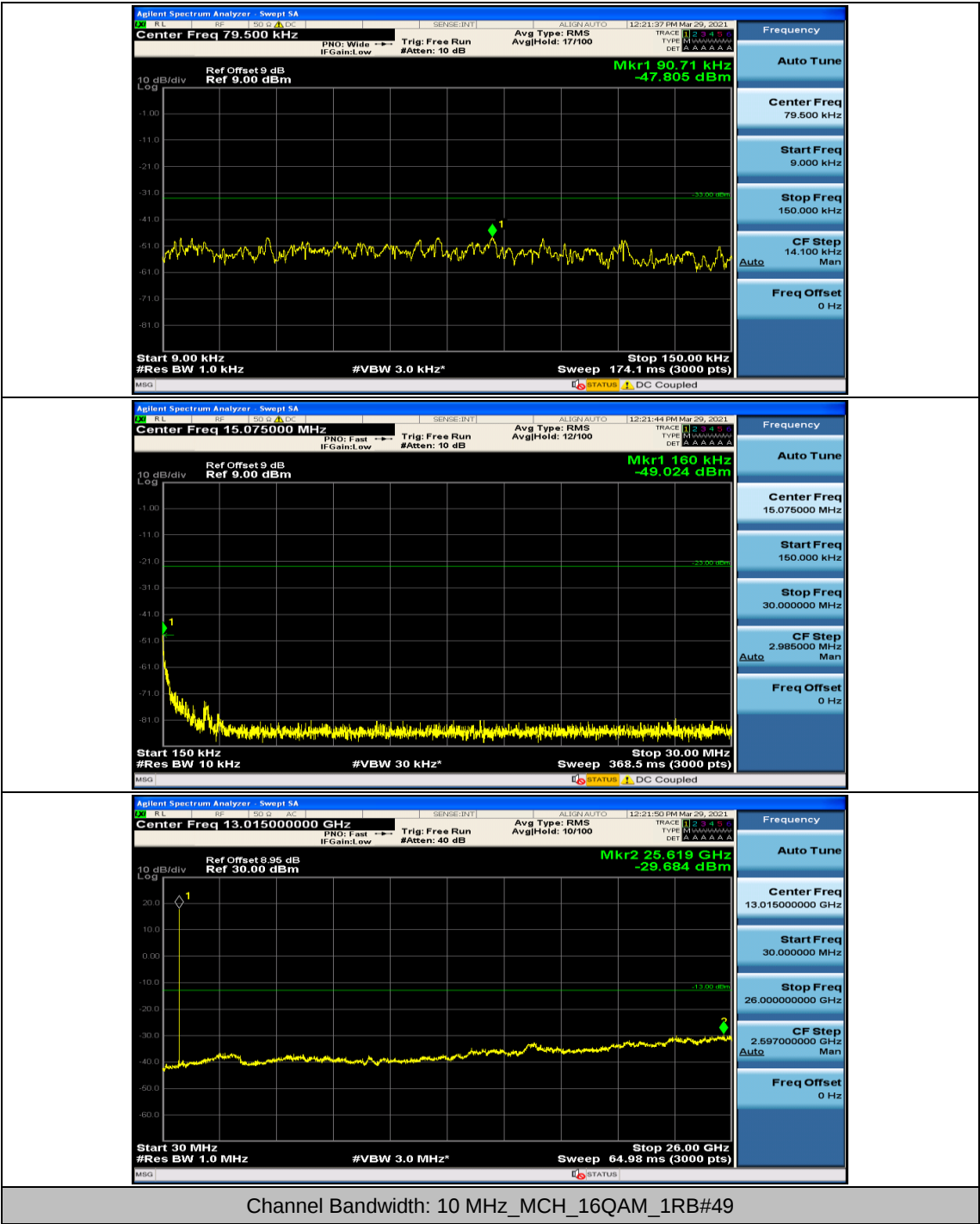
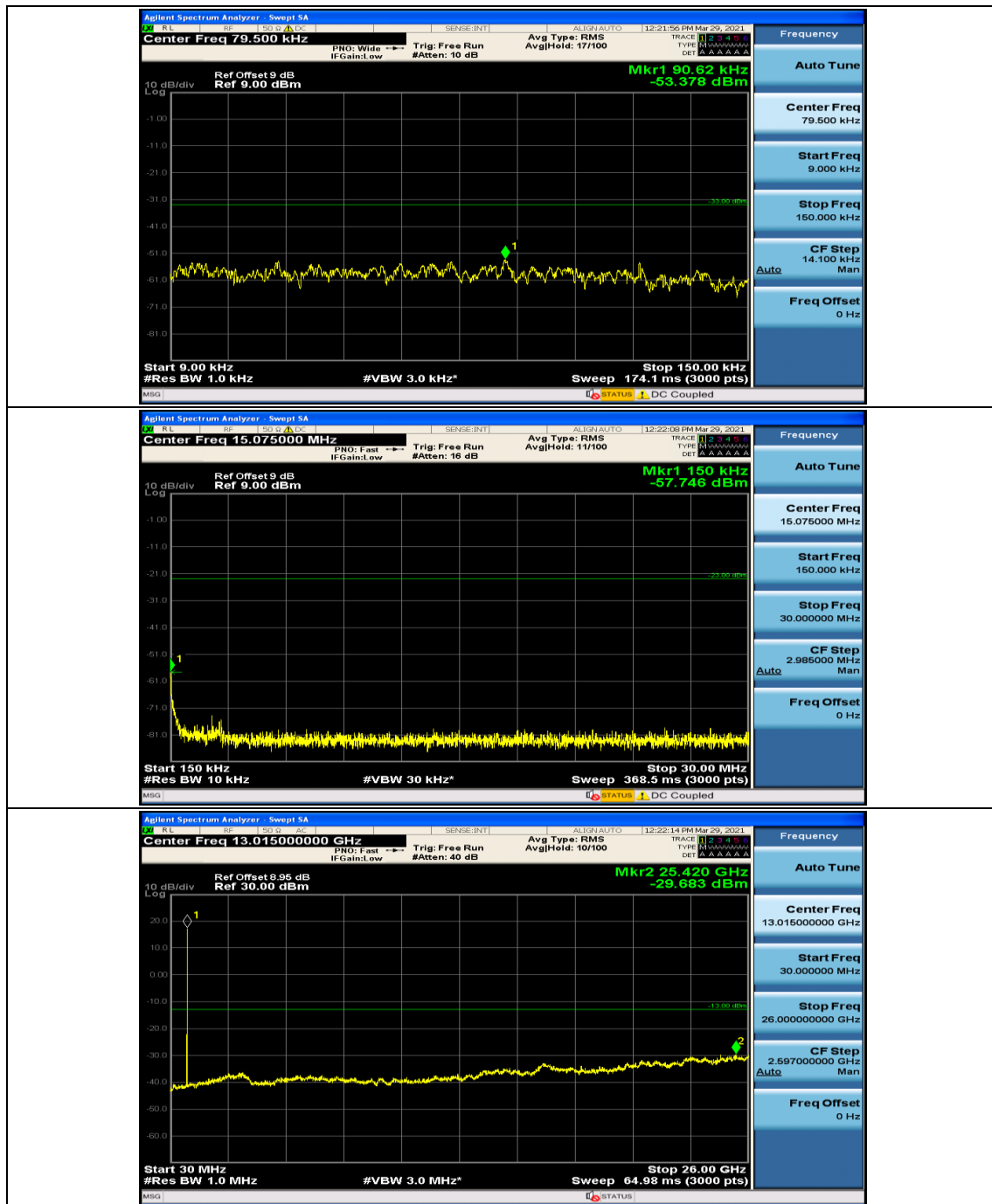








Appendix F: Frequency Stability

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	VL	TN	3.94	0.005055	± 2.5	PASS
		VN	TN	-0.1	-0.000128	± 2.5	PASS
		VH	TN	1.42	0.001822	± 2.5	PASS
	MCH	VL	TN	1.61	0.002059	± 2.5	PASS
		VN	TN	4.5	0.005754	± 2.5	PASS
		VH	TN	2.34	0.002992	± 2.5	PASS
	HCH	VL	TN	4.92	0.006272	± 2.5	PASS
		VN	TN	4.36	0.005558	± 2.5	PASS
		VH	TN	4.95	0.006310	± 2.5	PASS
16QAM	LCH	VL	TN	-0.76	-0.000975	± 2.5	PASS
		VN	TN	0.73	0.000936	± 2.5	PASS
		VH	TN	4.98	0.006389	± 2.5	PASS
	MCH	VL	TN	2.25	0.002877	± 2.5	PASS
		VN	TN	0.16	0.000205	± 2.5	PASS
		VH	TN	4.62	0.005908	± 2.5	PASS
	HCH	VL	TN	3.42	0.004359	± 2.5	PASS
		VN	TN	2.55	0.003250	± 2.5	PASS
		VH	TN	1.48	0.001887	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.19	0.001527	± 2.5	PASS
		VN	-20	-1.5	-0.001924	± 2.5	PASS
		VN	-10	2.31	0.002963	± 2.5	PASS
		VN	0	0.58	0.000744	± 2.5	PASS
		VN	10	3.36	0.004310	± 2.5	PASS
		VN	20	1.56	0.002001	± 2.5	PASS
		VN	30	-1.84	-0.002360	± 2.5	PASS
		VN	40	3.36	0.004310	± 2.5	PASS
		VN	50	4.07	0.005221	± 2.5	PASS
	MCH	VN	-30	1.24	0.001586	± 2.5	PASS

		VN	-20	0.61	0.000780	± 2.5	PASS
		VN	-10	-1.32	-0.001688	± 2.5	PASS
		VN	0	1.6	0.002046	± 2.5	PASS
		VN	10	0.78	0.000997	± 2.5	PASS
		VN	20	3.83	0.004898	± 2.5	PASS
		VN	30	-1.38	-0.001765	± 2.5	PASS
		VN	40	-0.47	-0.000601	± 2.5	PASS
		VN	50	-0.81	-0.001036	± 2.5	PASS
	HCH	VN	-30	1.76	0.002243	± 2.5	PASS
		VN	-20	1.06	0.001351	± 2.5	PASS
		VN	-10	0.61	0.000778	± 2.5	PASS
		VN	0	1.55	0.001976	± 2.5	PASS
		VN	10	-1.7	-0.002167	± 2.5	PASS
		VN	20	3.41	0.004347	± 2.5	PASS
		VN	30	-0.89	-0.001134	± 2.5	PASS
		VN	40	-0.63	-0.000803	± 2.5	PASS
		VN	50	4.74	0.006042	± 2.5	PASS
16QAM	LCH	VN	-30	3.17	0.004067	± 2.5	PASS
		VN	-20	4.74	0.006081	± 2.5	PASS
		VN	-10	-1.02	-0.001309	± 2.5	PASS
		VN	0	-1.02	-0.001309	± 2.5	PASS
		VN	10	1.53	0.001963	± 2.5	PASS
		VN	20	3.87	0.004965	± 2.5	PASS
		VN	30	3.11	0.003990	± 2.5	PASS
		VN	40	1.51	0.001937	± 2.5	PASS
		VN	50	-1.97	-0.002527	± 2.5	PASS
	MCH	VN	-30	3.23	0.004130	± 2.5	PASS
		VN	-20	2.07	0.002647	± 2.5	PASS
		VN	-10	-0.3	-0.000384	± 2.5	PASS
		VN	0	2.54	0.003248	± 2.5	PASS
		VN	10	2.52	0.003223	± 2.5	PASS
		VN	20	-1.19	-0.001522	± 2.5	PASS
		VN	30	-1.32	-0.001688	± 2.5	PASS
		VN	40	3.42	0.004373	± 2.5	PASS
		VN	50	1.61	0.002059	± 2.5	PASS
	HCH	VN	-30	-0.08	-0.000102	± 2.5	PASS
		VN	-20	0.96	0.001224	± 2.5	PASS
		VN	-10	4.53	0.005774	± 2.5	PASS
		VN	0	4.98	0.006348	± 2.5	PASS
		VN	10	1.88	0.002396	± 2.5	PASS
		VN	20	4.28	0.005456	± 2.5	PASS

		VN	30	3.83	0.004882	± 2.5	PASS
		VN	40	0.23	0.000293	± 2.5	PASS
		VN	50	0.71	0.000905	± 2.5	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	MCH	VL	TN	1	0.001279	± 2.5	PASS
		VN	TN	0.21	0.000269	± 2.5	PASS
		VH	TN	4.19	0.005358	± 2.5	PASS
16QAM	MCH	VL	TN	-1.69	-0.002161	± 2.5	PASS
		VN	TN	-1.6	-0.002046	± 2.5	PASS
		VH	TN	0.32	0.000409	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	MCH	VN	-30	1.12	0.001432	± 2.5	PASS
		VN	-20	2.82	0.003606	± 2.5	PASS
		VN	-10	0.37	0.000473	± 2.5	PASS
		VN	0	3.8	0.004859	± 2.5	PASS
		VN	10	1.27	0.001624	± 2.5	PASS
		VN	20	-0.28	-0.000358	± 2.5	PASS
		VN	30	-0.56	-0.000716	± 2.5	PASS
		VN	40	2.25	0.002877	± 2.5	PASS
		VN	50	4.14	0.005294	± 2.5	PASS
16QAM	MCH	VN	-30	2.9	0.003708	± 2.5	PASS
		VN	-20	0.2	0.000256	± 2.5	PASS
		VN	-10	1	0.001279	± 2.5	PASS
		VN	0	4.2	0.005371	± 2.5	PASS
		VN	10	0.04	0.000051	± 2.5	PASS
		VN	20	1.1	0.001407	± 2.5	PASS
		VN	30	1.07	0.001368	± 2.5	PASS
		VN	40	-0.05	-0.000064	± 2.5	PASS
		VN	50	0.77	0.000985	± 2.5	PASS