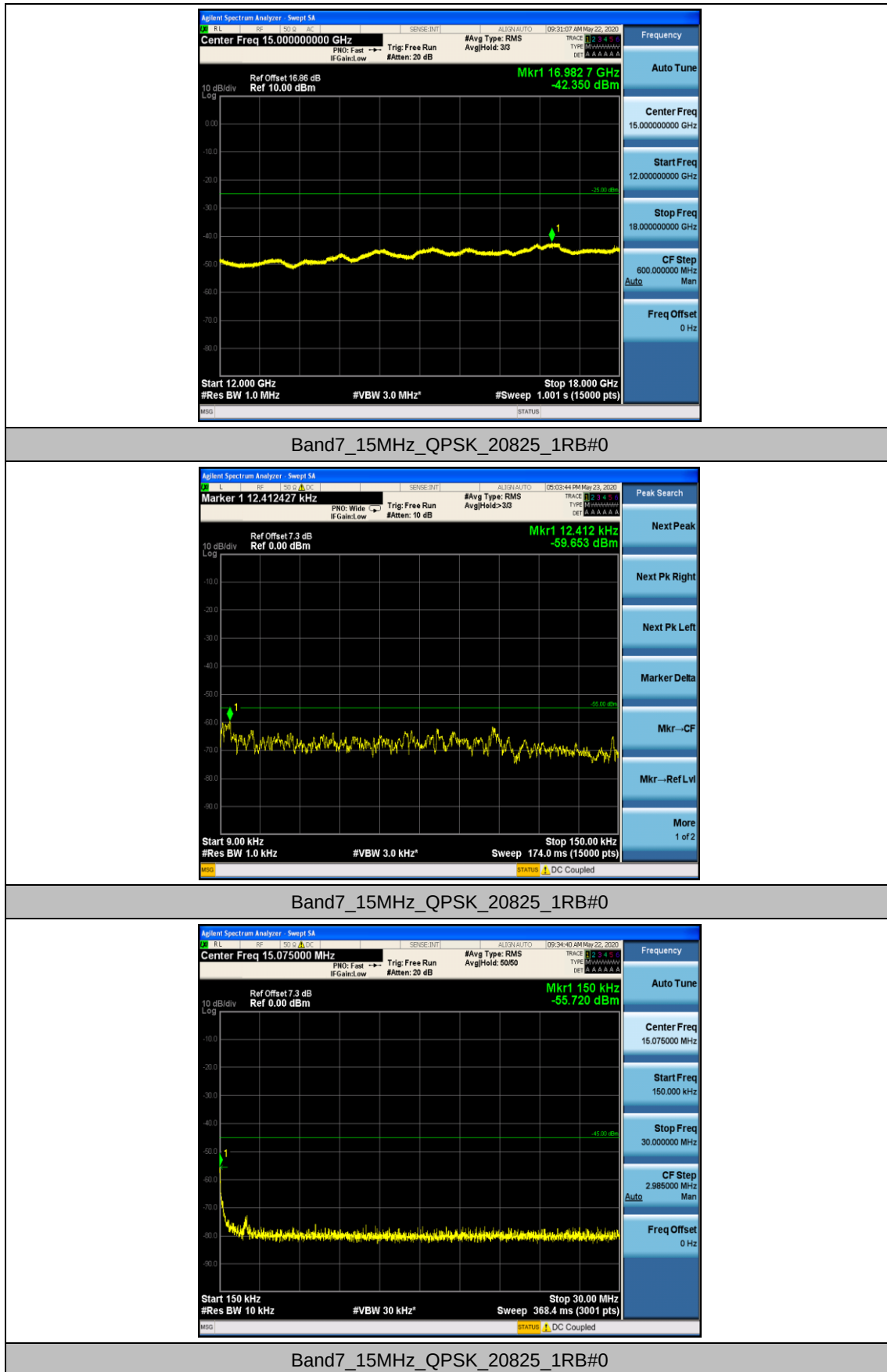
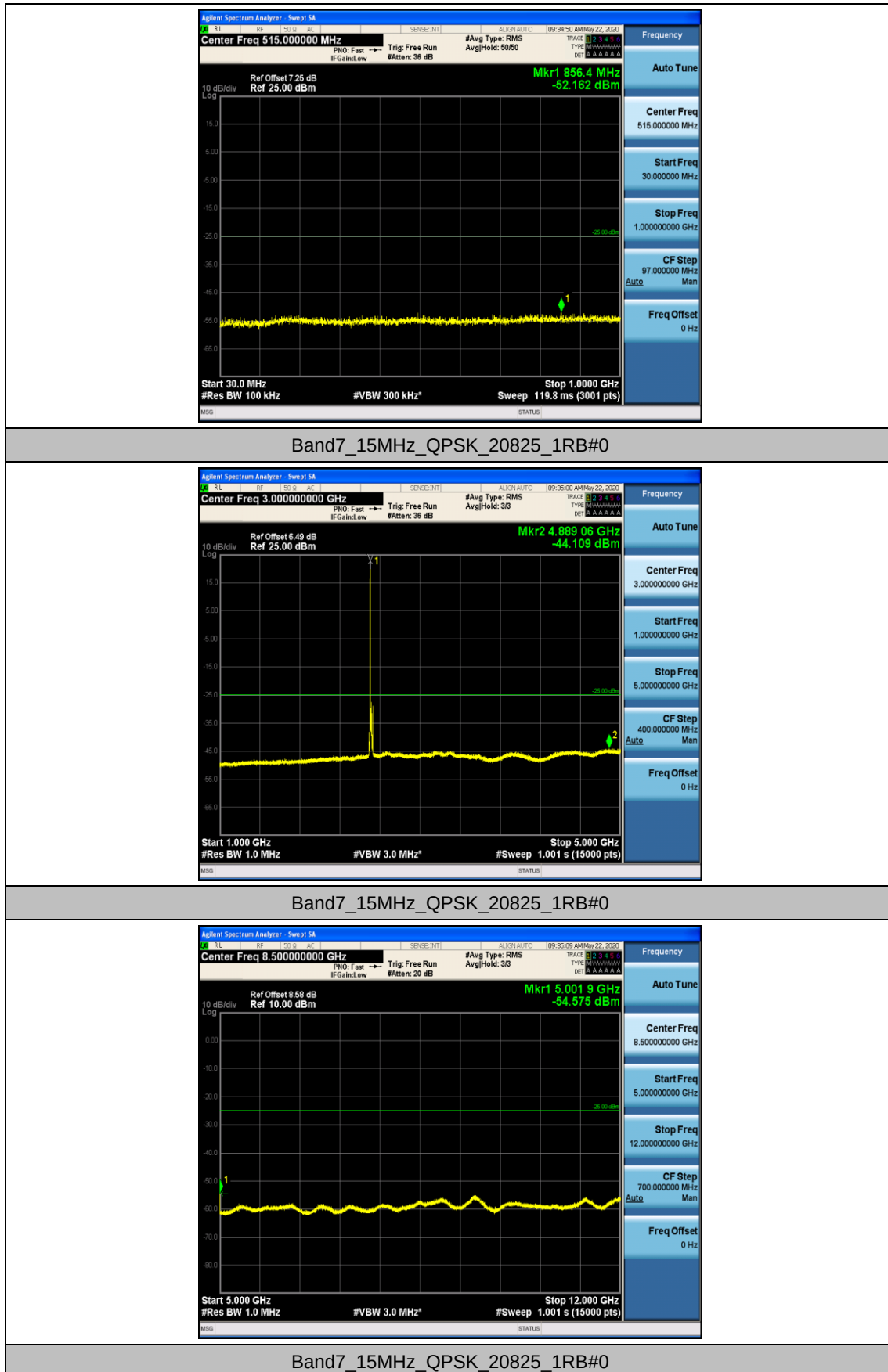
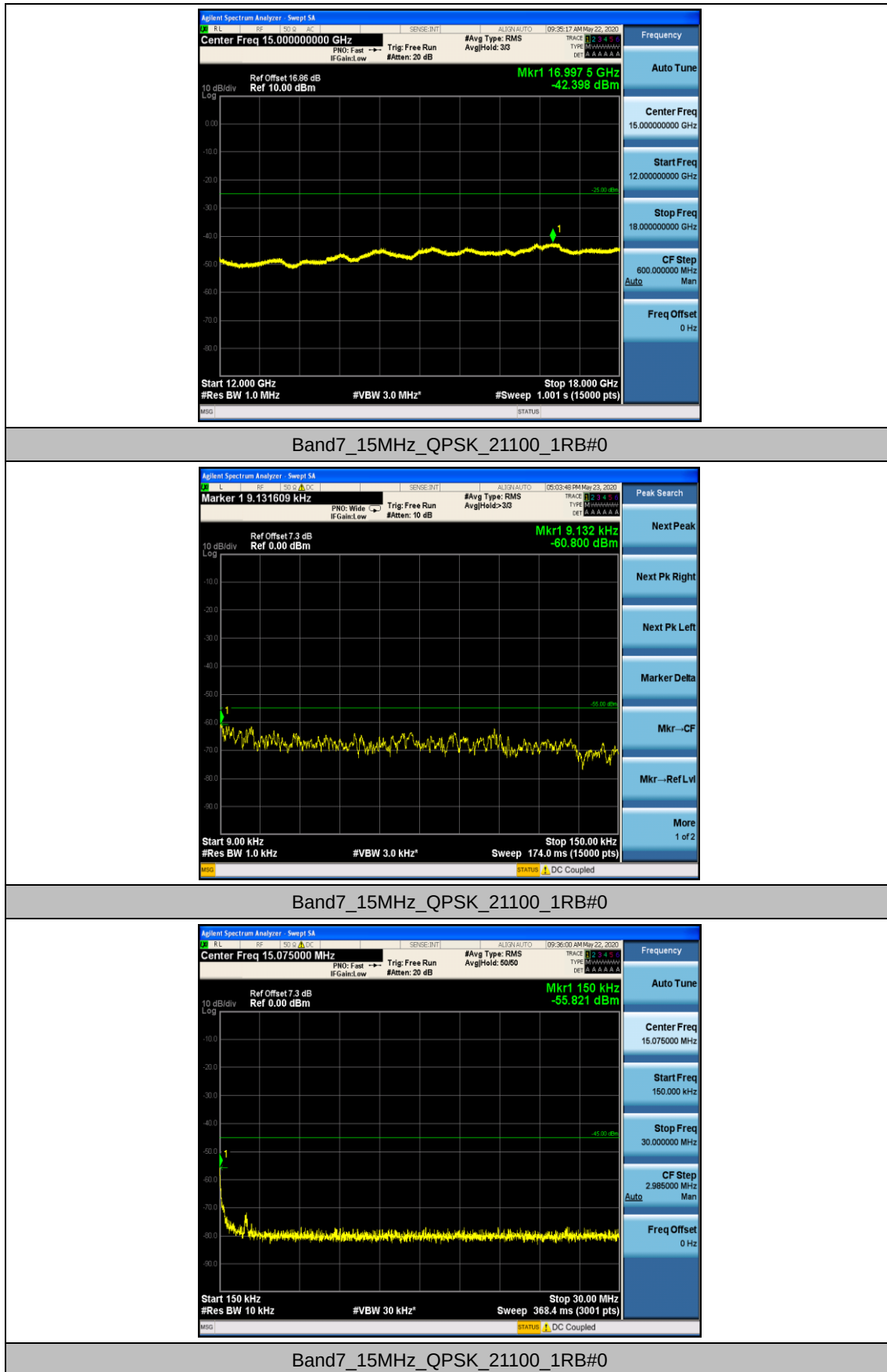
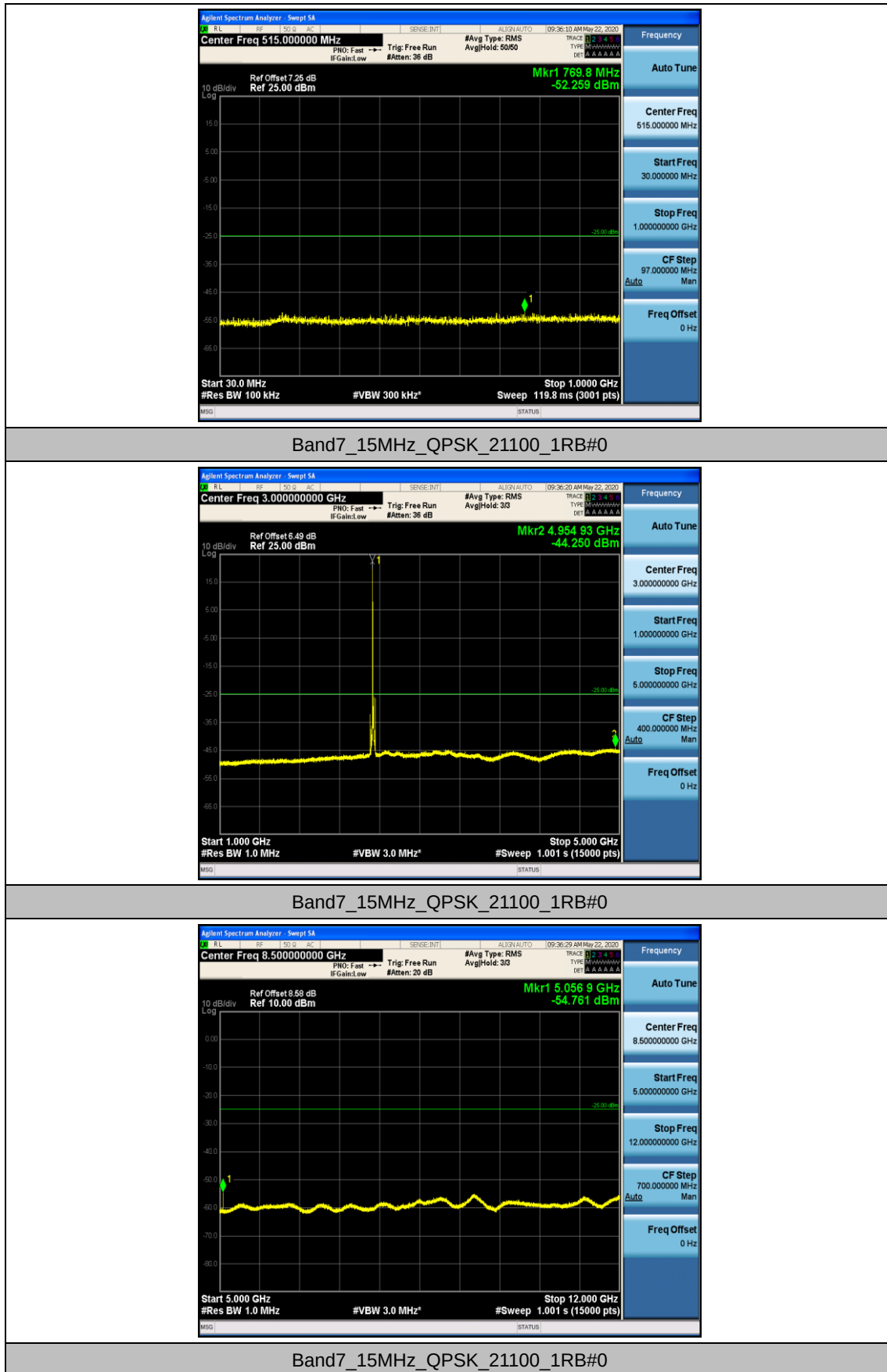
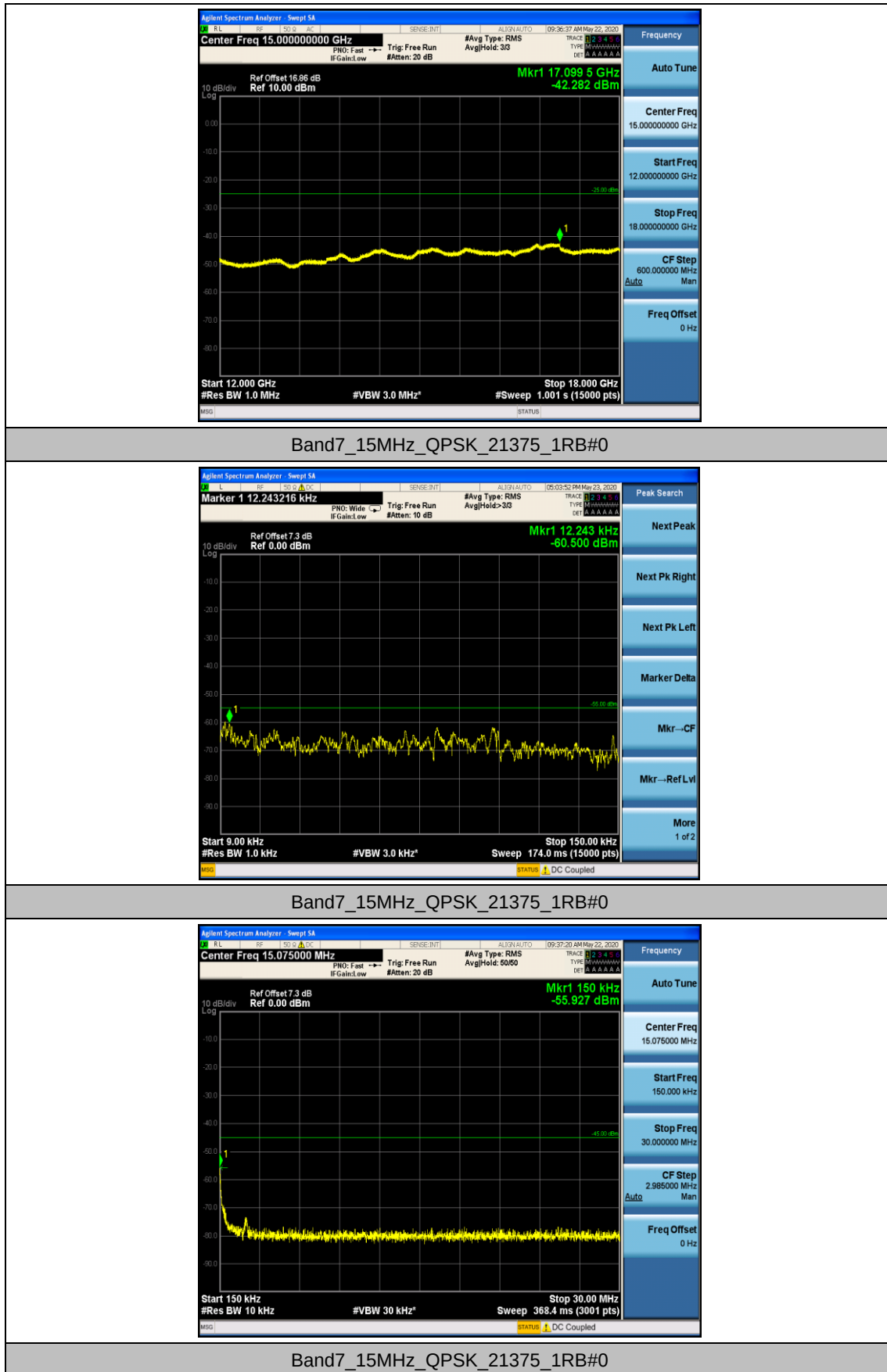


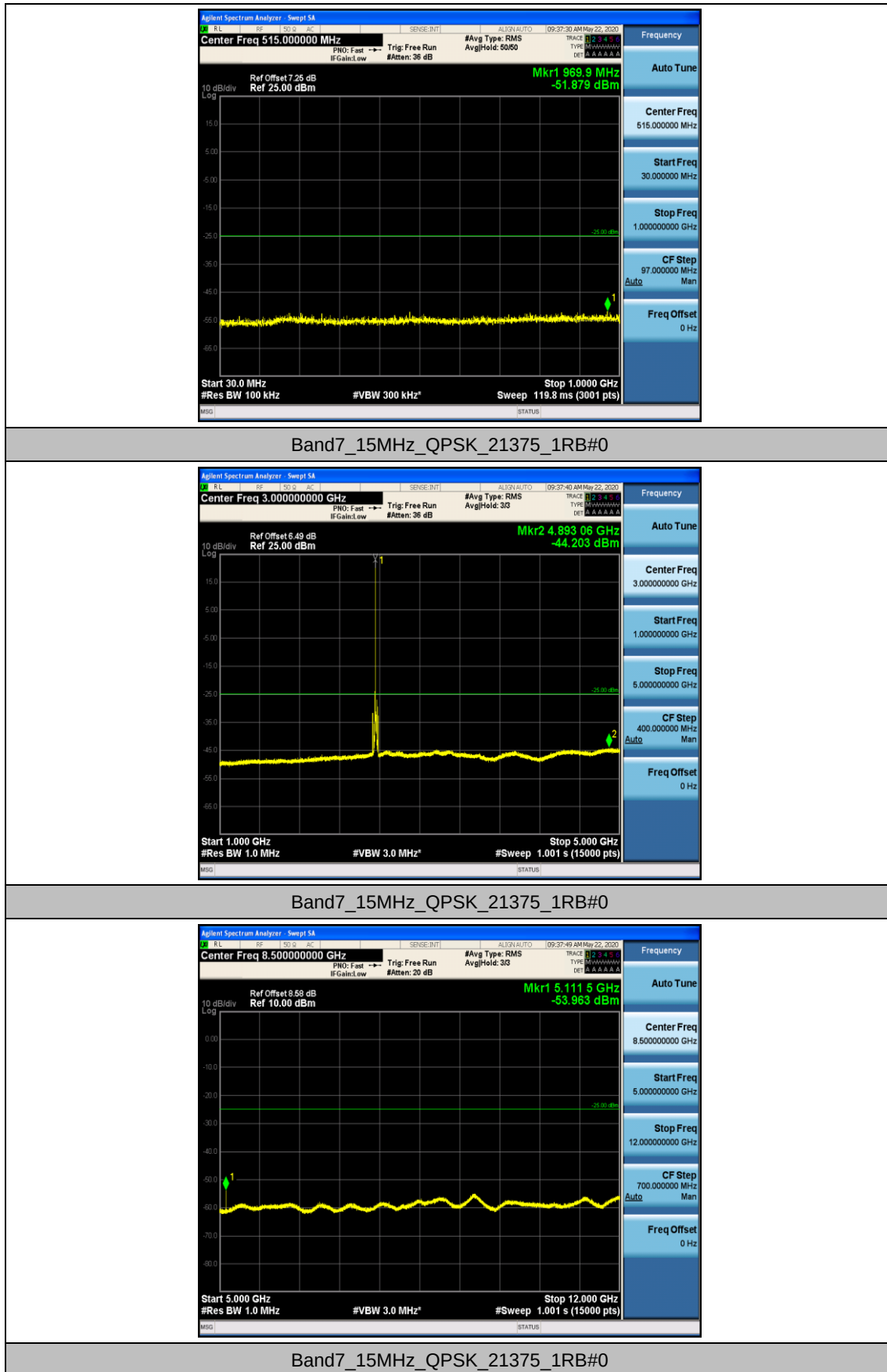


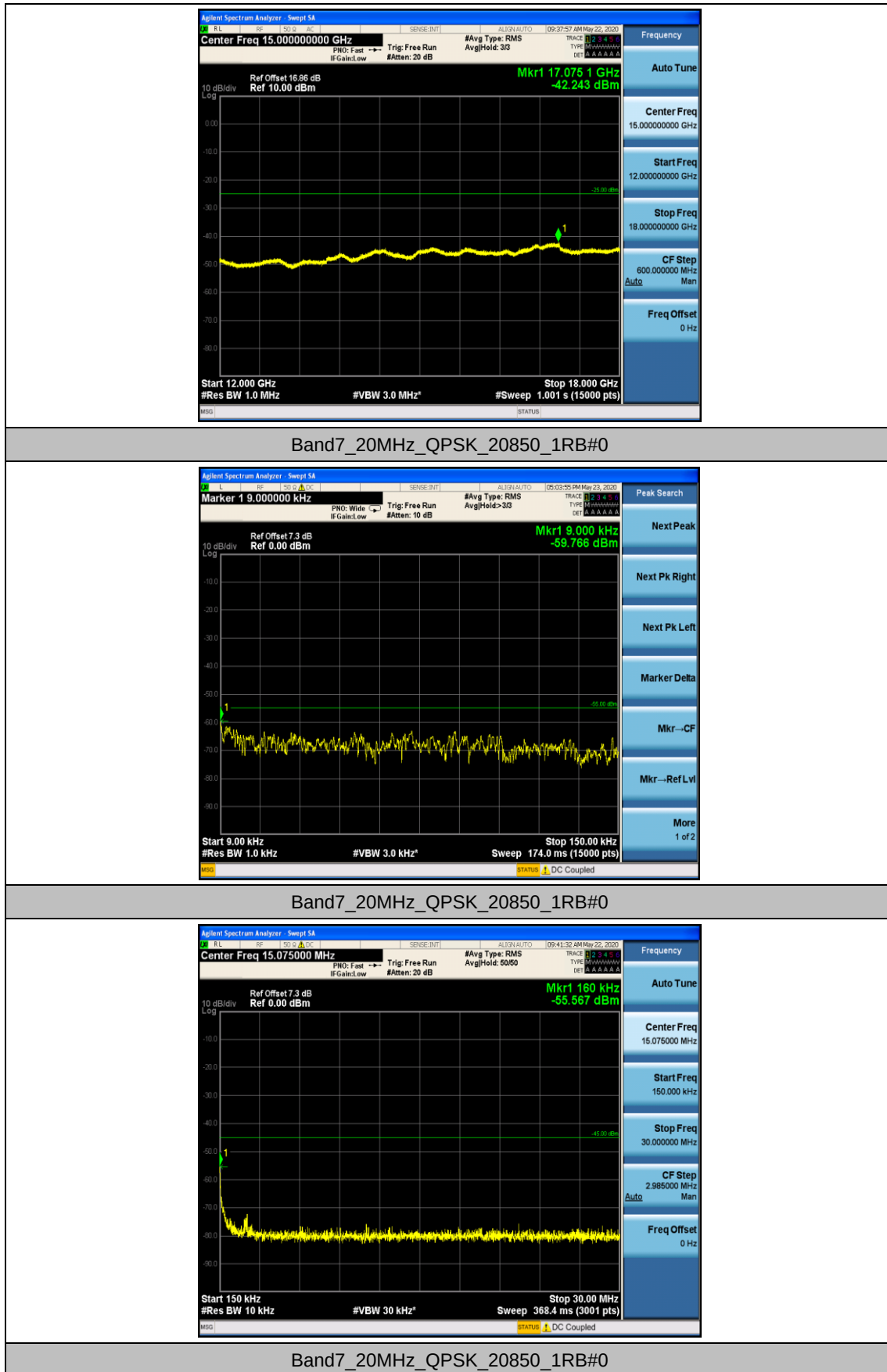


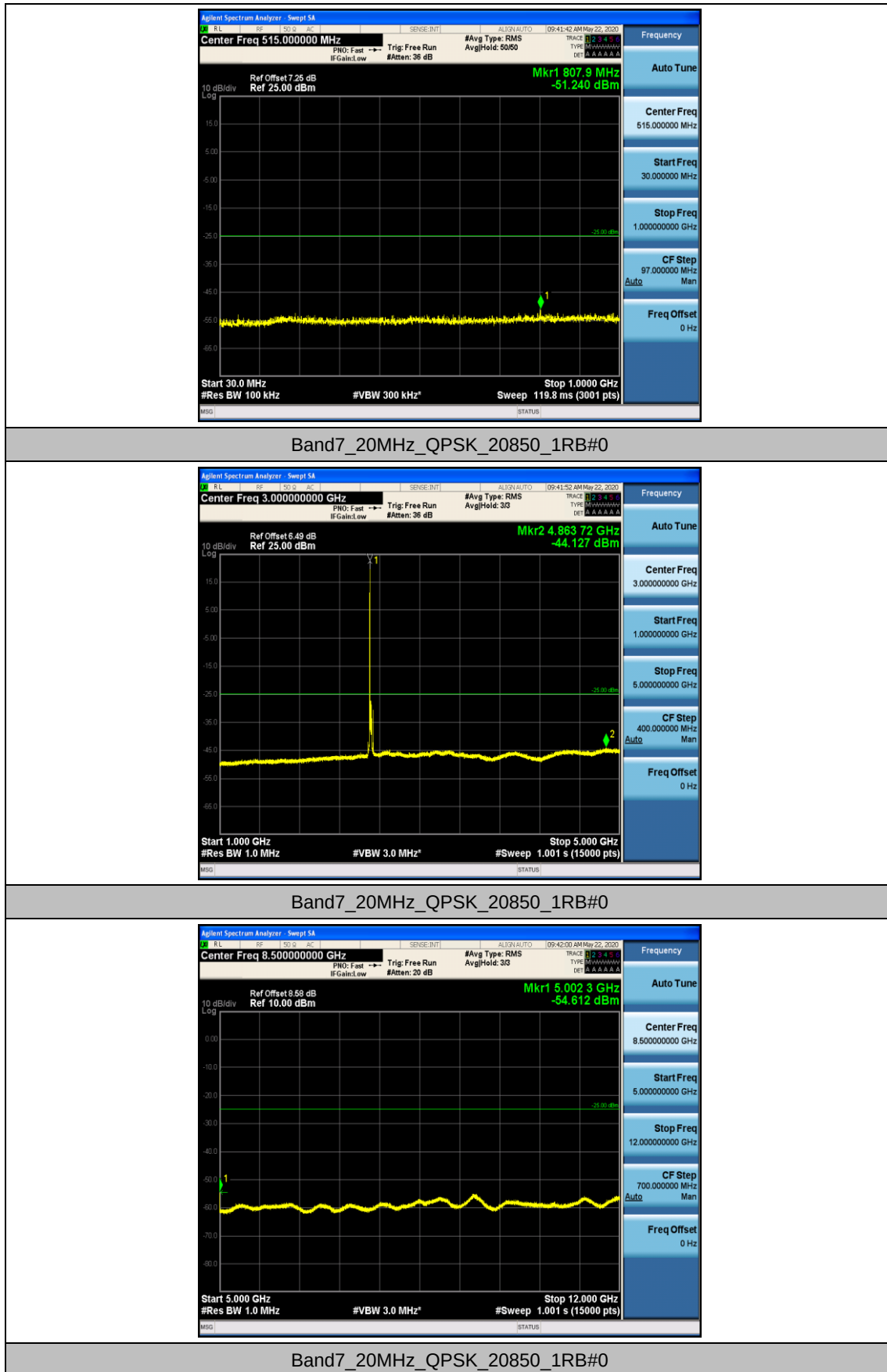


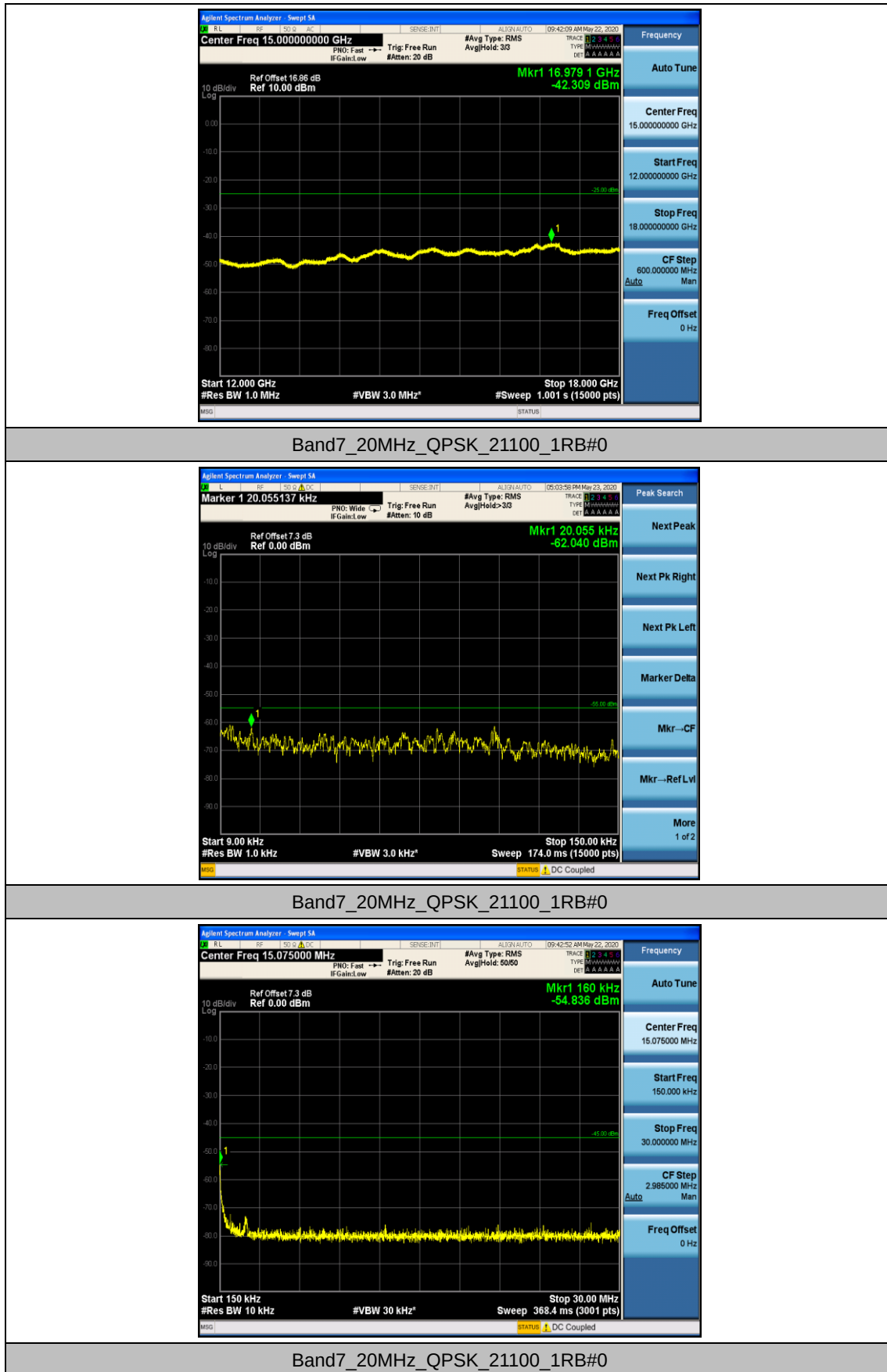


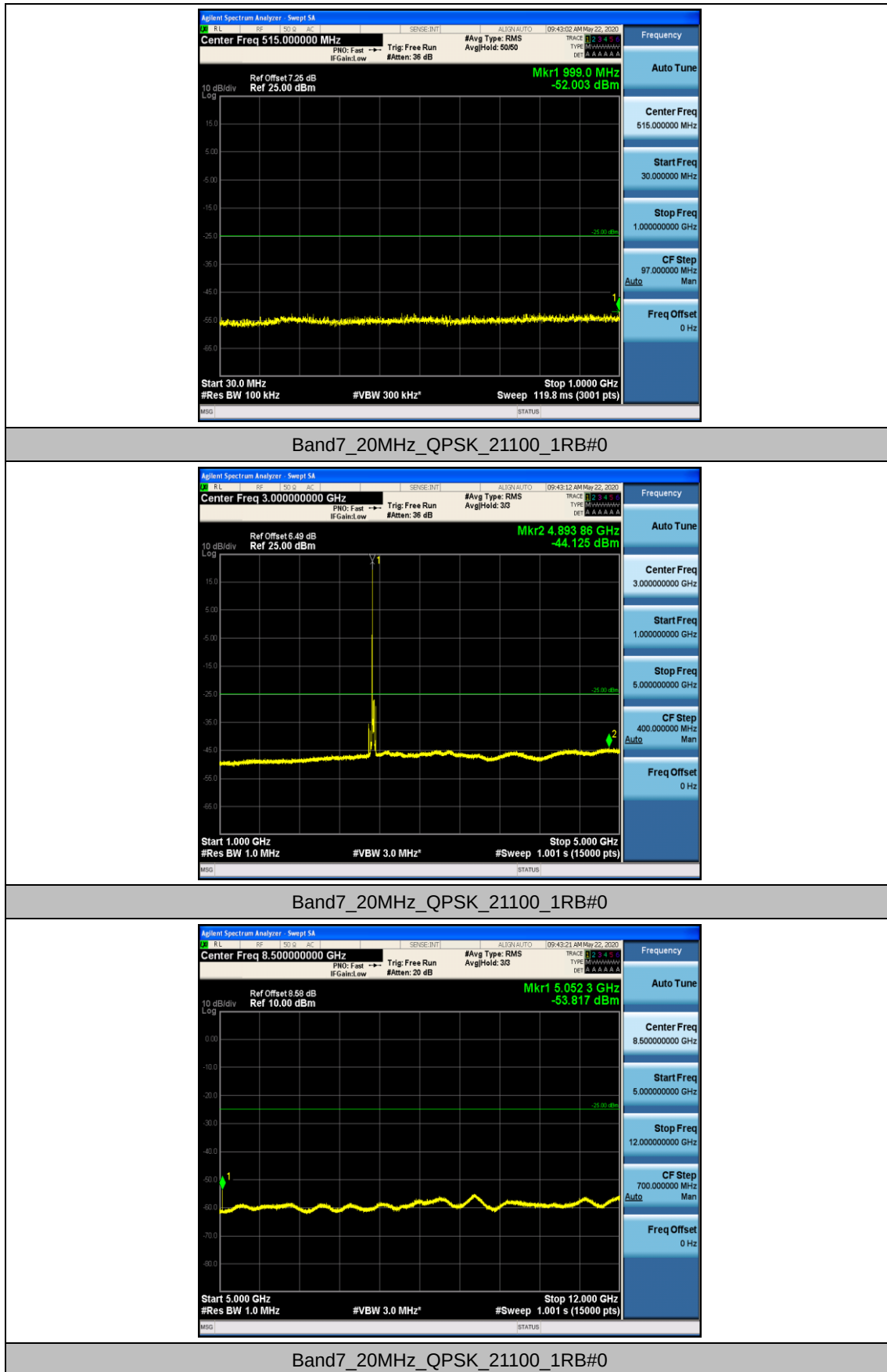


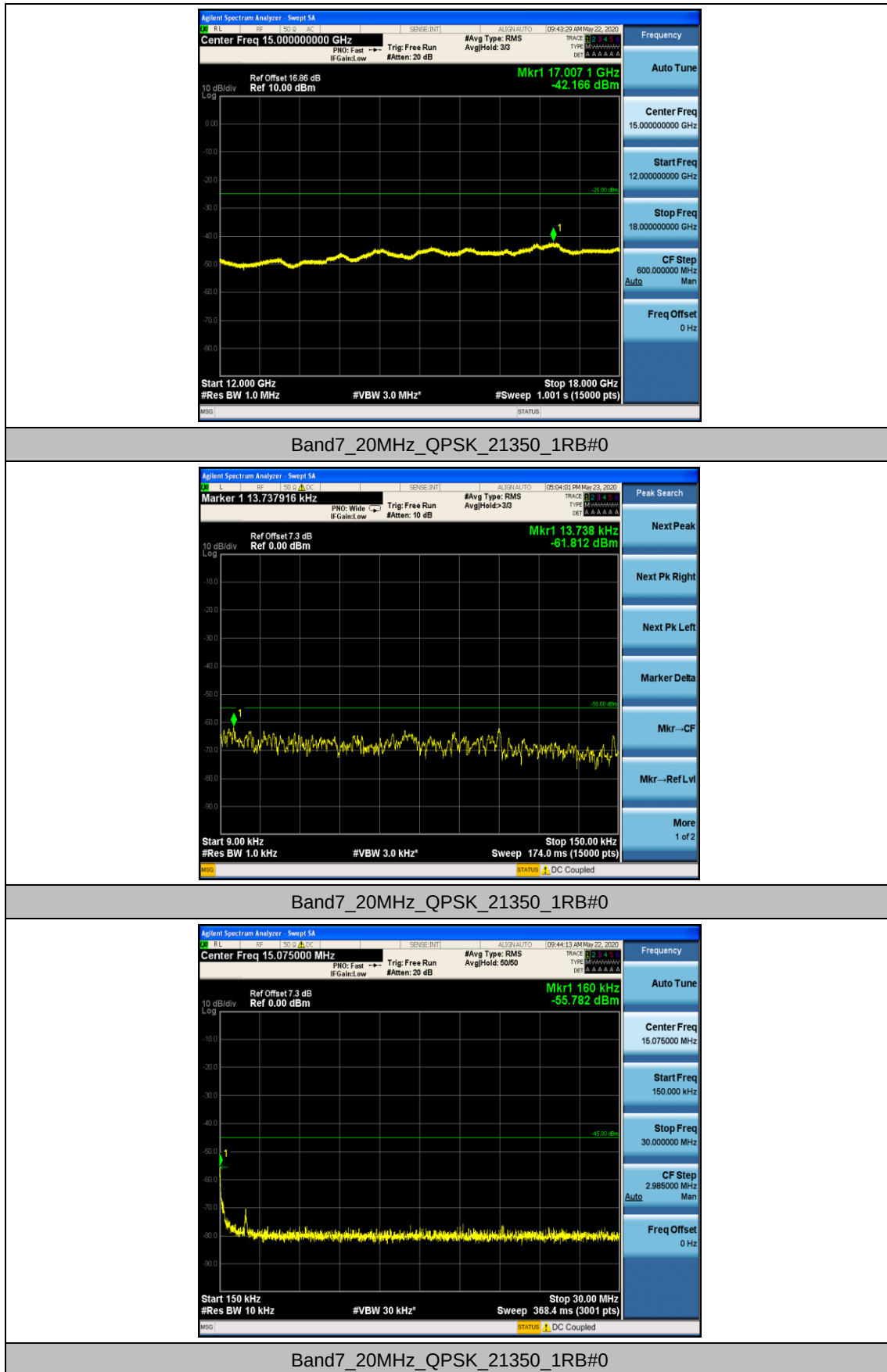


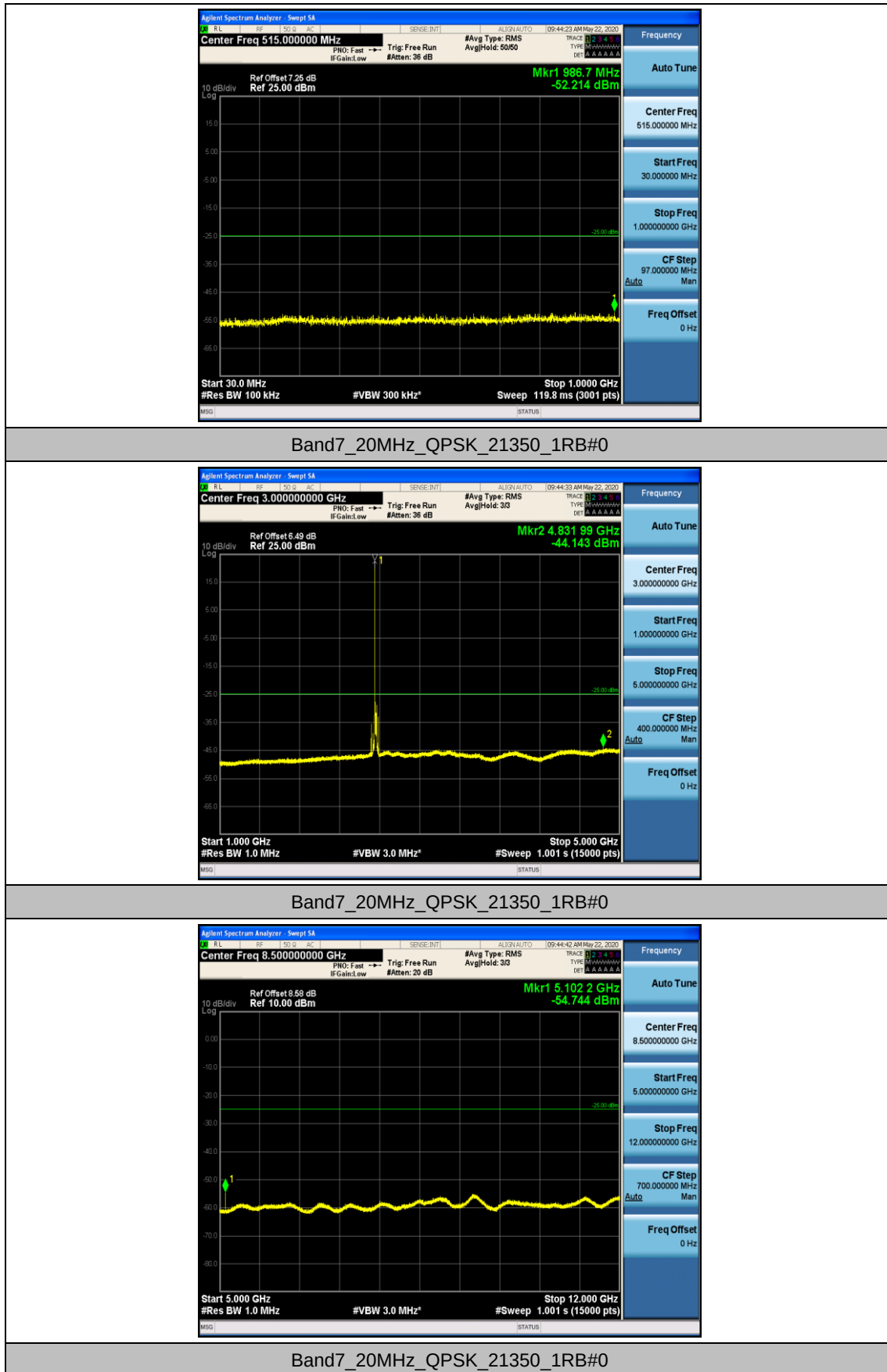














Appendix F: Frequency Stability

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	1.04	0.000416	± 2.5	PASS
		VN	TN	3.43	0.001371	± 2.5	PASS
		VH	TN	3.22	0.001287	± 2.5	PASS
	MCH	VL	TN	-0.35	-0.000138	± 2.5	PASS
		VN	TN	2.41	0.000951	± 2.5	PASS
		VH	TN	1.57	0.000619	± 2.5	PASS
	HCH	VL	TN	3.34	0.001301	± 2.5	PASS
		VN	TN	-0.41	-0.000160	± 2.5	PASS
		VH	TN	0.89	0.000347	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.87	0.000747	± 2.5	PASS
		VN	-20	4.88	0.001950	± 2.5	PASS
		VN	-10	0.53	0.000212	± 2.5	PASS
		VN	0	0.79	0.000316	± 2.5	PASS
		VN	10	-1.28	-0.000511	± 2.5	PASS
		VN	20	-0.14	-0.000056	± 2.5	PASS
		VN	30	0.78	0.000312	± 2.5	PASS
		VN	40	4.56	0.001822	± 2.5	PASS
		VN	50	-0.88	-0.000352	± 2.5	PASS
	MCH	VN	-30	3.02	0.001191	± 2.5	PASS
		VN	-20	3.32	0.001310	± 2.5	PASS
		VN	-10	-1.09	-0.000430	± 2.5	PASS
		VN	0	1.56	0.000615	± 2.5	PASS
		VN	10	1.98	0.000781	± 2.5	PASS
		VN	20	1.14	0.000450	± 2.5	PASS
		VN	30	3.33	0.001314	± 2.5	PASS
		VN	40	-0.09	-0.000036	± 2.5	PASS
		VN	50	-0.15	-0.000059	± 2.5	PASS
	HCH	VN	-30	1.81	0.000705	± 2.5	PASS

		VN	-20	-1.02	-0.000397	± 2.5	PASS
		VN	-10	3	0.001168	± 2.5	PASS
		VN	0	0.3	0.000117	± 2.5	PASS
		VN	10	-0.53	-0.000206	± 2.5	PASS
		VN	20	2.31	0.000900	± 2.5	PASS
		VN	30	1.72	0.000670	± 2.5	PASS
		VN	40	4.92	0.001916	± 2.5	PASS
		VN	50	4.18	0.001628	± 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	LCH	VL	TN	4.01	0.001601	± 2.5	PASS
		VN	TN	4.92	0.001964	± 2.5	PASS
		VH	TN	2.13	0.000850	± 2.5	PASS
	MCH	VL	TN	1.57	0.000619	± 2.5	PASS
		VN	TN	-0.2	-0.000079	± 2.5	PASS
		VH	TN	4.57	0.001803	± 2.5	PASS
	HCH	VL	TN	4.51	0.001758	± 2.5	PASS
		VN	TN	4.91	0.001914	± 2.5	PASS
		VH	TN	-0.92	-0.000359	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.55	0.000220	± 2.5	PASS
		VN	-20	0.39	0.000156	± 2.5	PASS
		VN	-10	-1.23	-0.000491	± 2.5	PASS
		VN	0	1.57	0.000627	± 2.5	PASS
		VN	10	3.58	0.001429	± 2.5	PASS
		VN	20	1.45	0.000579	± 2.5	PASS
		VN	30	4	0.001597	± 2.5	PASS
		VN	40	0.83	0.000331	± 2.5	PASS
		VN	50	2.85	0.001138	± 2.5	PASS
	MCH	VN	-30	4.04	0.001594	± 2.5	PASS
		VN	-20	-0.83	-0.000327	± 2.5	PASS
		VN	-10	3.13	0.001235	± 2.5	PASS
		VN	0	1.31	0.000517	± 2.5	PASS
		VN	10	0.11	0.000043	± 2.5	PASS
		VN	20	3.17	0.001250	± 2.5	PASS

		VN	30	1.84	0.000726	± 2.5	PASS
		VN	40	2.4	0.000947	± 2.5	PASS
		VN	50	2.8	0.001105	± 2.5	PASS
	HCH	VN	-30	0.57	0.000222	± 2.5	PASS
		VN	-20	3.69	0.001439	± 2.5	PASS
		VN	-10	-0.41	-0.000160	± 2.5	PASS
		VN	0	-1.45	-0.000565	± 2.5	PASS
		VN	10	1.72	0.000671	± 2.5	PASS
		VN	20	-1.29	-0.000503	± 2.5	PASS
		VN	30	0.32	0.000125	± 2.5	PASS
		VN	40	2.35	0.000916	± 2.5	PASS
		VN	50	4.61	0.001797	± 2.5	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	2.75	0.001097	± 2.5	PASS
		VN	TN	1.94	0.000774	± 2.5	PASS
		VH	TN	3.47	0.001384	± 2.5	PASS
	MCH	VL	TN	1.55	0.000611	± 2.5	PASS
		VN	TN	2.82	0.001112	± 2.5	PASS
		VH	TN	1.59	0.000627	± 2.5	PASS
	HCH	VL	TN	2.2	0.000859	± 2.5	PASS
		VN	TN	4.89	0.001908	± 2.5	PASS
		VH	TN	2.51	0.000980	± 2.5	PASS

Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.43	0.001767	± 2.5	PASS
		VN	-20	4.68	0.001866	± 2.5	PASS
		VN	-10	1.97	0.000786	± 2.5	PASS
		VN	0	3.89	0.001551	± 2.5	PASS
		VN	10	-1.35	-0.000538	± 2.5	PASS
		VN	20	2.96	0.001180	± 2.5	PASS
		VN	30	-1.44	-0.000574	± 2.5	PASS
		VN	40	3.07	0.001224	± 2.5	PASS
		VN	50	2.63	0.001049	± 2.5	PASS
	MCH	VN	-30	1.66	0.000655	± 2.5	PASS
		VN	-20	-1.57	-0.000619	± 2.5	PASS

		VN	-10	-0.81	-0.000320	± 2.5	PASS
		VN	0	3.59	0.001416	± 2.5	PASS
		VN	10	-0.88	-0.000347	± 2.5	PASS
		VN	20	-1.6	-0.000631	± 2.5	PASS
		VN	30	1.02	0.000402	± 2.5	PASS
		VN	40	1.77	0.000698	± 2.5	PASS
		VN	50	4.73	0.001866	± 2.5	PASS
	HCH	VN	-30	1.58	0.000617	± 2.5	PASS
		VN	-20	3.89	0.001518	± 2.5	PASS
		VN	-10	0.54	0.000211	± 2.5	PASS
		VN	0	3.72	0.001452	± 2.5	PASS
		VN	10	2.54	0.000991	± 2.5	PASS
		VN	20	0.91	0.000355	± 2.5	PASS
		VN	30	0.33	0.000129	± 2.5	PASS
		VN	40	-0.4	-0.000156	± 2.5	PASS
		VN	50	-0.21	-0.000082	± 2.5	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	4.46	0.001777	± 2.5	PASS
		VN	TN	4.85	0.001932	± 2.5	PASS
		VH	TN	1.1	0.000438	± 2.5	PASS
	MCH	VL	TN	2.44	0.000963	± 2.5	PASS
		VN	TN	3.83	0.001511	± 2.5	PASS
		VH	TN	-0.85	-0.000335	± 2.5	PASS
	HCH	VL	TN	4.83	0.001887	± 2.5	PASS
		VN	TN	1.67	0.000652	± 2.5	PASS
		VH	TN	2.06	0.000805	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.51	-0.000602	± 2.5	PASS
		VN	-20	0.91	0.000363	± 2.5	PASS
		VN	-10	0.41	0.000163	± 2.5	PASS
		VN	0	2.03	0.000809	± 2.5	PASS
		VN	10	0.48	0.000191	± 2.5	PASS
		VN	20	4.62	0.001841	± 2.5	PASS
		VN	30	4.49	0.001789	± 2.5	PASS

		VN	40	3.17	0.001263	± 2.5	PASS
		VN	50	1.41	0.000562	± 2.5	PASS
	MCH	VN	-30	-0.97	-0.000383	± 2.5	PASS
		VN	-20	3.36	0.001325	± 2.5	PASS
		VN	-10	2.39	0.000943	± 2.5	PASS
		VN	0	-0.68	-0.000268	± 2.5	PASS
		VN	10	2.98	0.001176	± 2.5	PASS
		VN	20	3.71	0.001464	± 2.5	PASS
		VN	30	0.88	0.000347	± 2.5	PASS
		VN	40	2.27	0.000895	± 2.5	PASS
		VN	50	2.14	0.000844	± 2.5	PASS
	HCH	VN	-30	3.48	0.001359	± 2.5	PASS
		VN	-20	2.46	0.000961	± 2.5	PASS
		VN	-10	-1.79	-0.000699	± 2.5	PASS
		VN	0	-0.58	-0.000227	± 2.5	PASS
		VN	10	2.1	0.000820	± 2.5	PASS
		VN	20	1.92	0.000750	± 2.5	PASS
		VN	30	-0.24	-0.000094	± 2.5	PASS
		VN	40	3.67	0.001434	± 2.5	PASS
		VN	50	-0.87	-0.000340	± 2.5	PASS