

Appendix A: Effective (Isotropic) Radiated Power Output Data for NB1

Test Result

Band	OpMode	SCS	BW	Modulation	Channel	Tones	Conducted POWER(d Bm)	EIRP(dB m)	Verdict
Band 2	Stand- Alone	3.75k Hz	0.18	QPSK	18602	1@0	21.68	23.55	PASS
Band 2	Stand- Alone	3.75k Hz	0.18	QPSK	18602	1@47	21.59	23.46	PASS
Band 2	Stand- Alone	3.75k Hz	0.18	BPSK	18602	1@0	21.6	23.47	PASS
Band 2	Stand- Alone	3.75k Hz	0.18	BPSK	18602	1@47	21.61	23.48	PASS
Band 2	Stand- Alone	3.75k Hz	0.18	QPSK	18876	1@0	21.03	22.9	PASS
Band 2	Stand- Alone	3.75k Hz	0.18	QPSK	18876	1@47	20.94	22.81	PASS
Band 2	Stand- Alone	3.75k Hz	0.18	BPSK	18876	1@0	20.93	22.8	PASS
Band 2	Stand- Alone	3.75k Hz	0.18	BPSK	18876	1@47	21	22.87	PASS
Band 2	Stand- Alone	3.75k Hz	0.18	QPSK	19198	1@0	20.93	22.8	PASS
Band 2	Stand- Alone	3.75k Hz	0.18	QPSK	19198	1@47	20.94	22.81	PASS
Band 2	Stand- Alone	3.75k Hz	0.18	BPSK	19198	1@0	20.9	22.77	PASS
Band 2	Stand- Alone	3.75k Hz	0.18	BPSK	19198	1@47	20.96	22.83	PASS
Band 2	Stand- Alone	15kHz	0.18	QPSK	18602	1@0	21.82	23.69	PASS
Band 2	Stand- Alone	15kHz	0.18	QPSK	18602	1@11	21.81	23.68	PASS
Band 2	Stand- Alone	15kHz	0.18	QPSK	18602	3@3	22.41	24.28	PASS
Band 2	Stand- Alone	15kHz	0.18	BPSK	18602	1@0	21.81	23.68	PASS
Band 2	Stand- Alone	15kHz	0.18	BPSK	18602	1@11	21.82	23.69	PASS

Band 2	Stand- Alone	15kHz	0.18	QPSK	18876	1@0	21.15	23.02	PASS
Band 2	Stand- Alone	15kHz	0.18	QPSK	18876	1@11	21.16	23.03	PASS
Band 2	Stand- Alone	15kHz	0.18	QPSK	18876	3@3	21.82	23.69	PASS
Band 2	Stand- Alone	15kHz	0.18	BPSK	18876	1@0	21.17	23.04	PASS
Band 2	Stand- Alone	15kHz	0.18	BPSK	18876	1@11	21.15	23.02	PASS
Band 2	Stand- Alone	15kHz	0.18	QPSK	19198	1@0	21.16	23.03	PASS
Band 2	Stand- Alone	15kHz	0.18	QPSK	19198	1@11	21.18	23.05	PASS
Band 2	Stand- Alone	15kHz	0.18	QPSK	19198	3@3	21.76	23.63	PASS
Band 2	Stand- Alone	15kHz	0.18	BPSK	19198	1@0	21.12	22.99	PASS
Band 2	Stand- Alone	15kHz	0.18	BPSK	19198	1@11	21.14	23.01	PASS

Appendix B: Peak-to-Average Ratio(CCDF) for NB1

Test Result

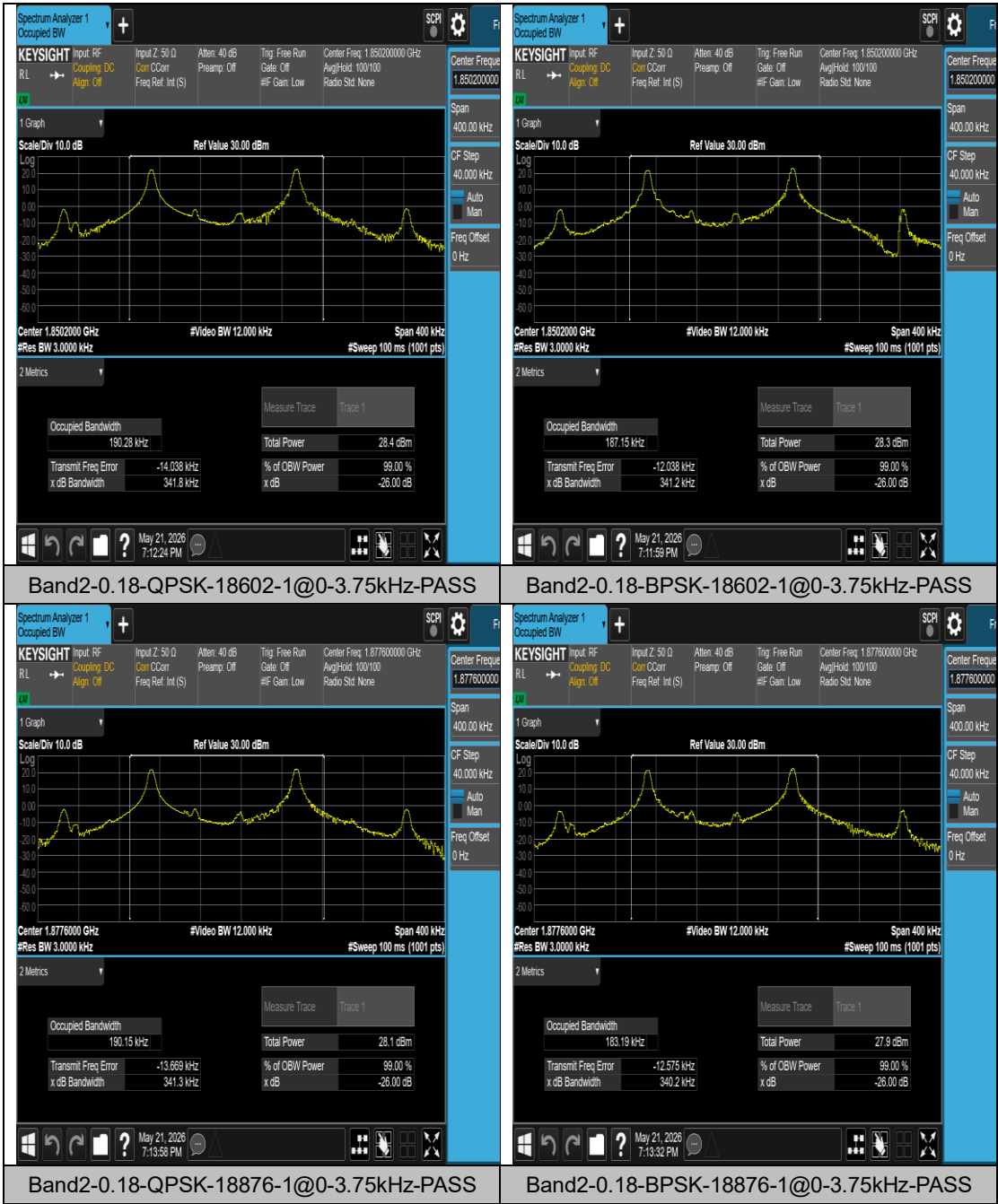
Band	OpMode	SCS	BW	Modulation	Channel	Tones	Result (dBm)	Limit (dBm)	Verdict
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	5.03	<=13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@47	4.99	<=13	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18876	1@0	5.03	<=13	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18876	1@47	4.98	<=13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	1@0	6.32	<=13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	1@11	6.26	<=13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	3@3	12.61	<=13	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	1@0	6.02	<=13	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	1@11	6.15	<=13	PASS

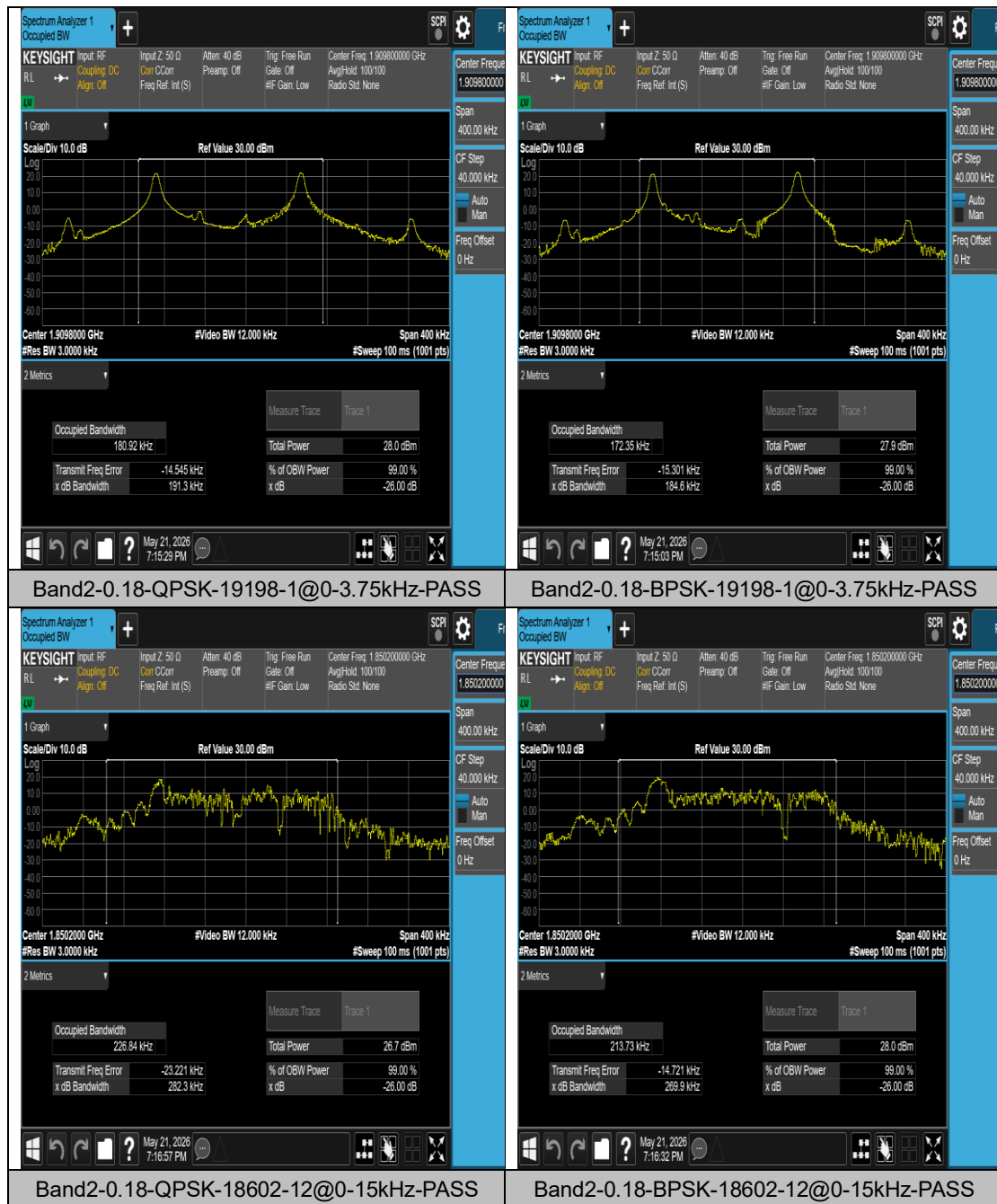
Appendix C: Emission Bandwidth for NB1

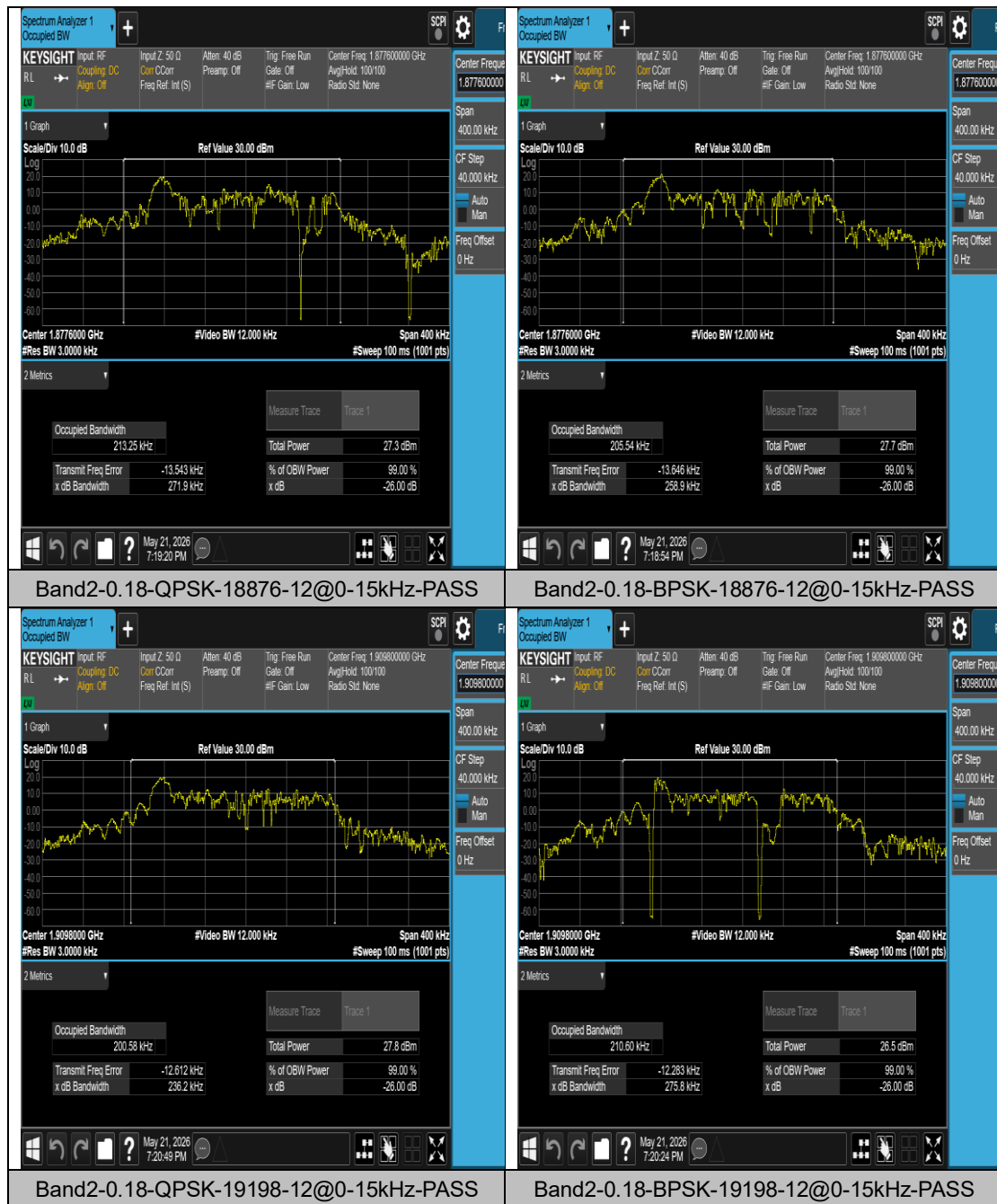
Test Result

Band	OpMode	SCS	BW	Modulation	Channel	Tones	OBW(MHz)	EBW(MHz)	Verdict
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@0	0.19028	0.3418	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18602	1@0	0.18715	0.3412	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	0.19015	0.3413	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18876	1@0	0.18319	0.3402	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@0	0.18092	0.1913	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	19198	1@0	0.17235	0.1846	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	12@0	0.22684	0.2823	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	12@0	0.21373	0.2699	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	0.21325	0.2719	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	12@0	0.20554	0.2589	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	12@0	0.20058	0.2362	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	12@0	0.21060	0.2758	PASS

Test Graphs





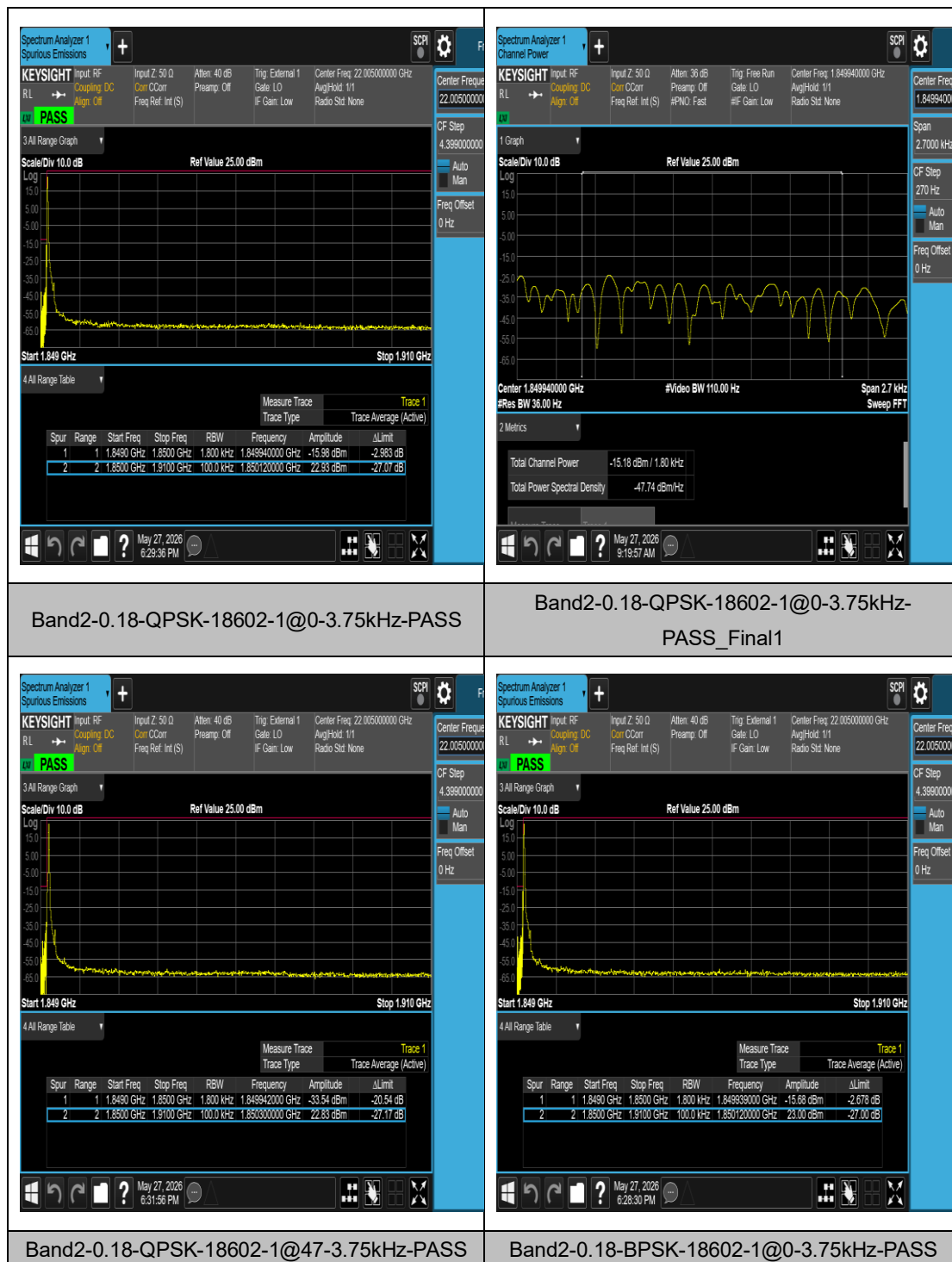


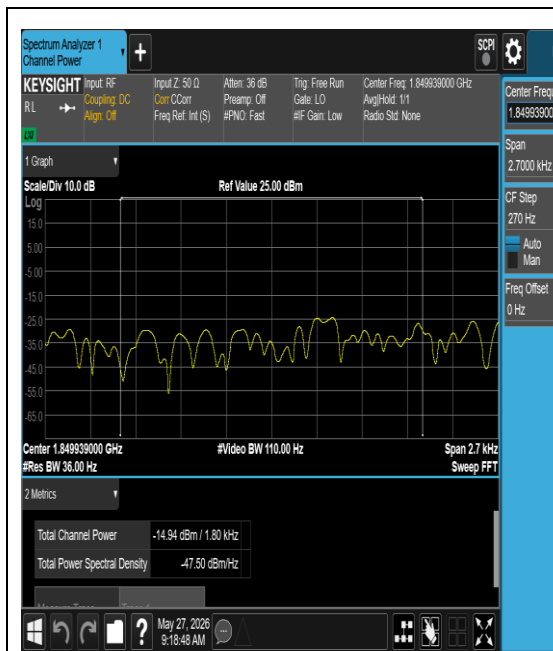
Appendix D: Band Edge for NB1

Test Result

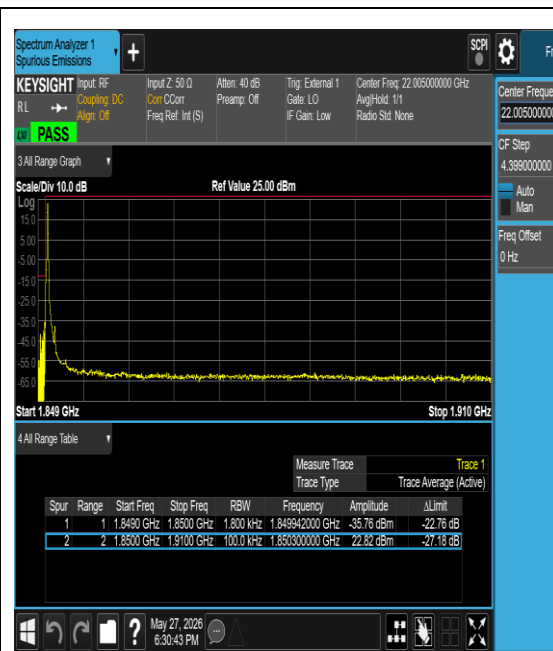
Band	OpMode	SCS	BW	Modulation	Channel	Tones	Result (dBm)	Verdict
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@0	-15.98	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@0	-15.18	PASS_Final1
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@47	-33.54	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18602	1@0	-15.68	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18602	1@0	-14.94	PASS_Final1
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18602	1@47	-35.76	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@0	-36.27	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@47	-14.43	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	19198	1@0	-33.91	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	19198	1@47	-14.67	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	1@0	-17.08	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	1@11	-31.42	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	12@0	-29.04	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	1@0	-13.48	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	1@11	-34.63	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	1@0	-36.46	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	1@11	-18.93	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	12@0	-32.73	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	1@0	-32.47	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	1@11	-16.55	PASS

Test Graphs

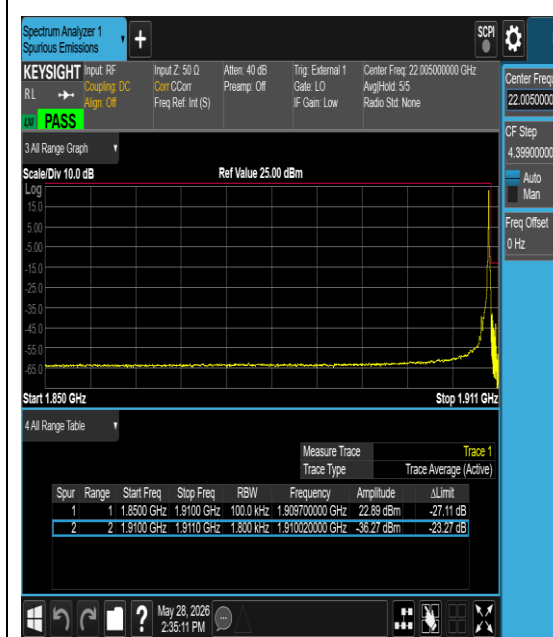




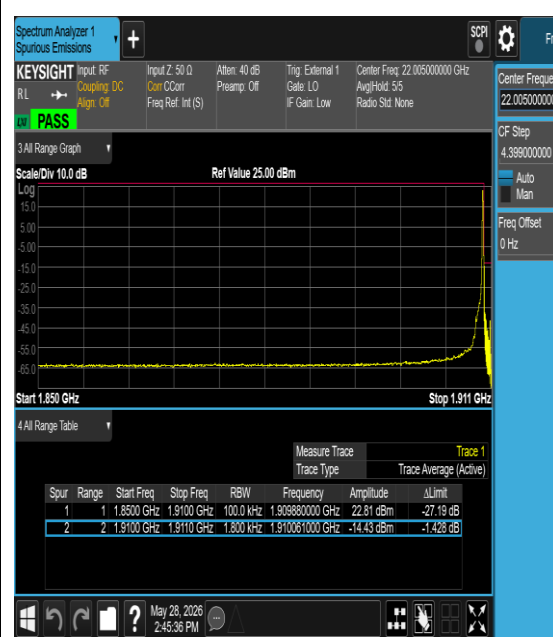
Band2-0.18-BPSK-18602-1@0-3.75kHz-PASS_Final1



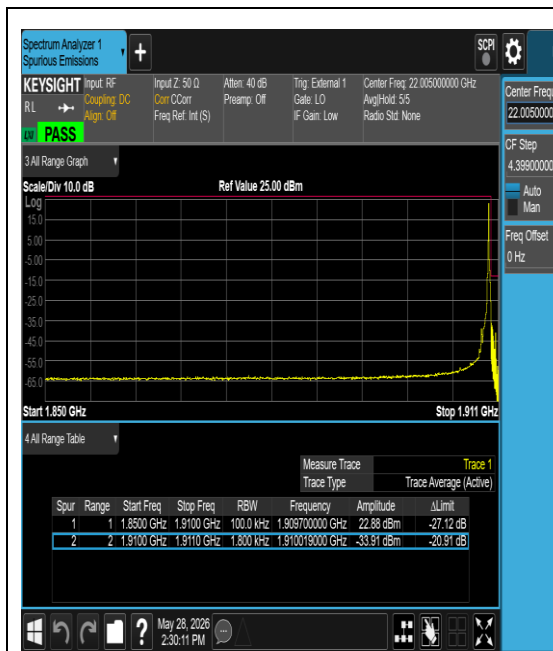
Band2-0.18-BPSK-18602-1@47-3.75kHz-PASS



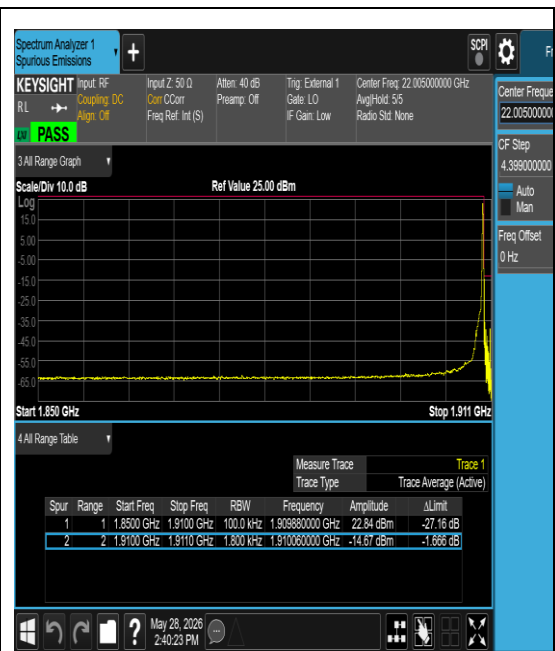
Band2-0.18-QPSK-19198-1@0-3.75kHz-PASS



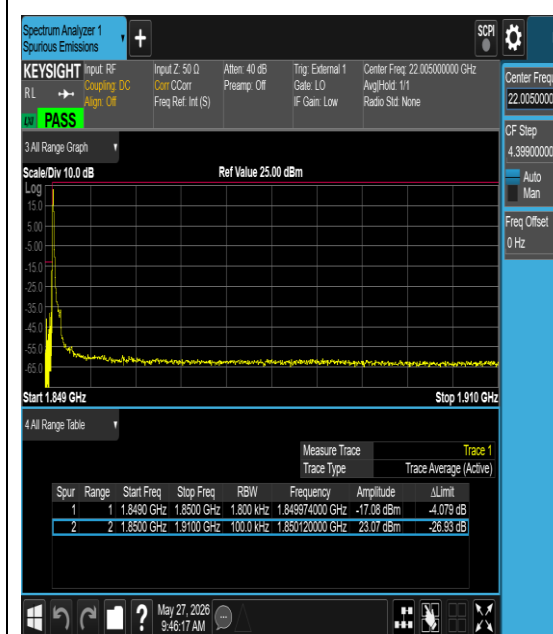
Band2-0.18-QPSK-19198-1@47-3.75kHz-PASS



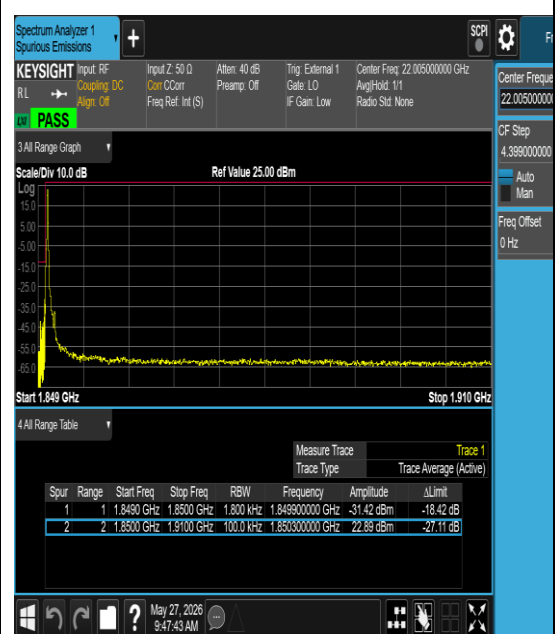
Band2-0.18-BPSK-19198-1@0-3.75kHz-PASS



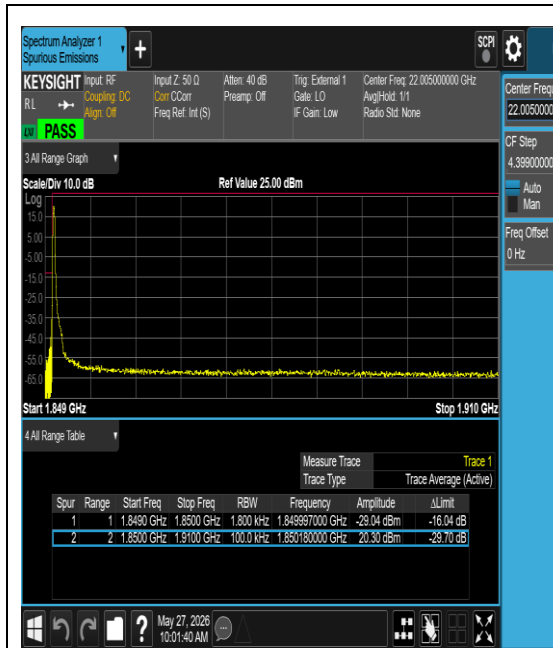
Band2-0.18-BPSK-19198-1@47-3.75kHz-PASS



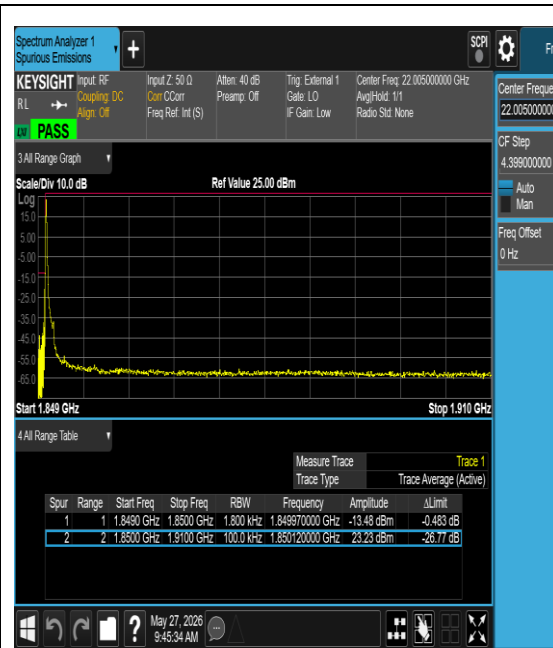
Band2-0.18-QPSK-18602-1@0-15kHz-PASS



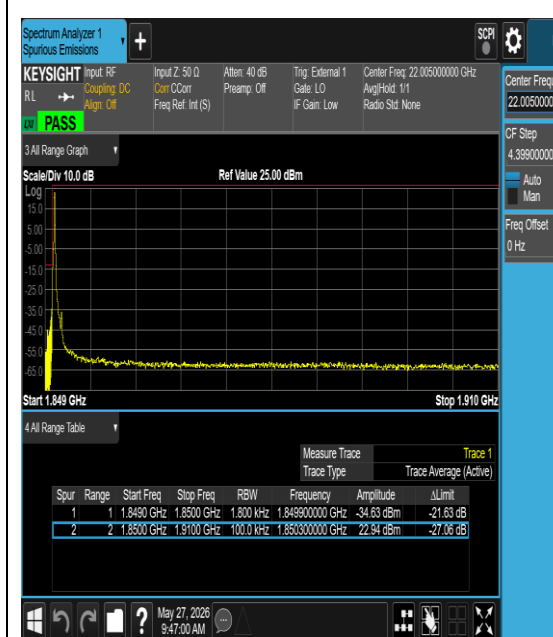
Band2-0.18-QPSK-18602-1@11-15kHz-PASS



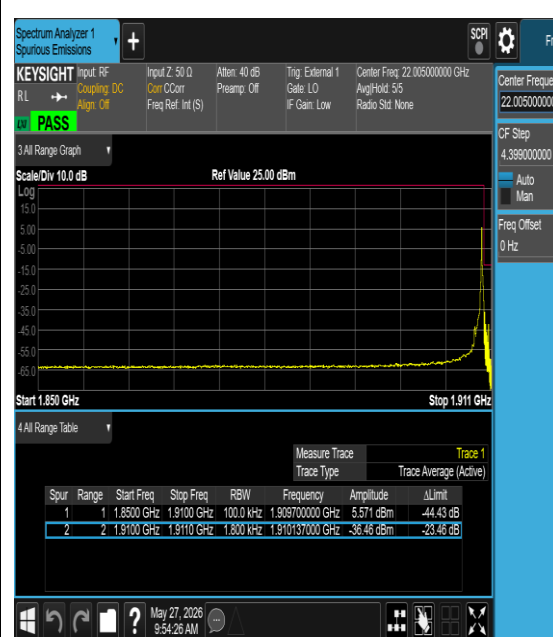
Band2-0.18-QPSK-18602-12@0-15kHz-PASS



Band2-0.18-BPSK-18602-1@0-15kHz-PASS



Band2-0.18-BPSK-18602-1@11-15kHz-PASS



Band2-0.18-QPSK-19198-1@0-15kHz-PASS



Appendix E: Conducted Spurious Emission for NB1

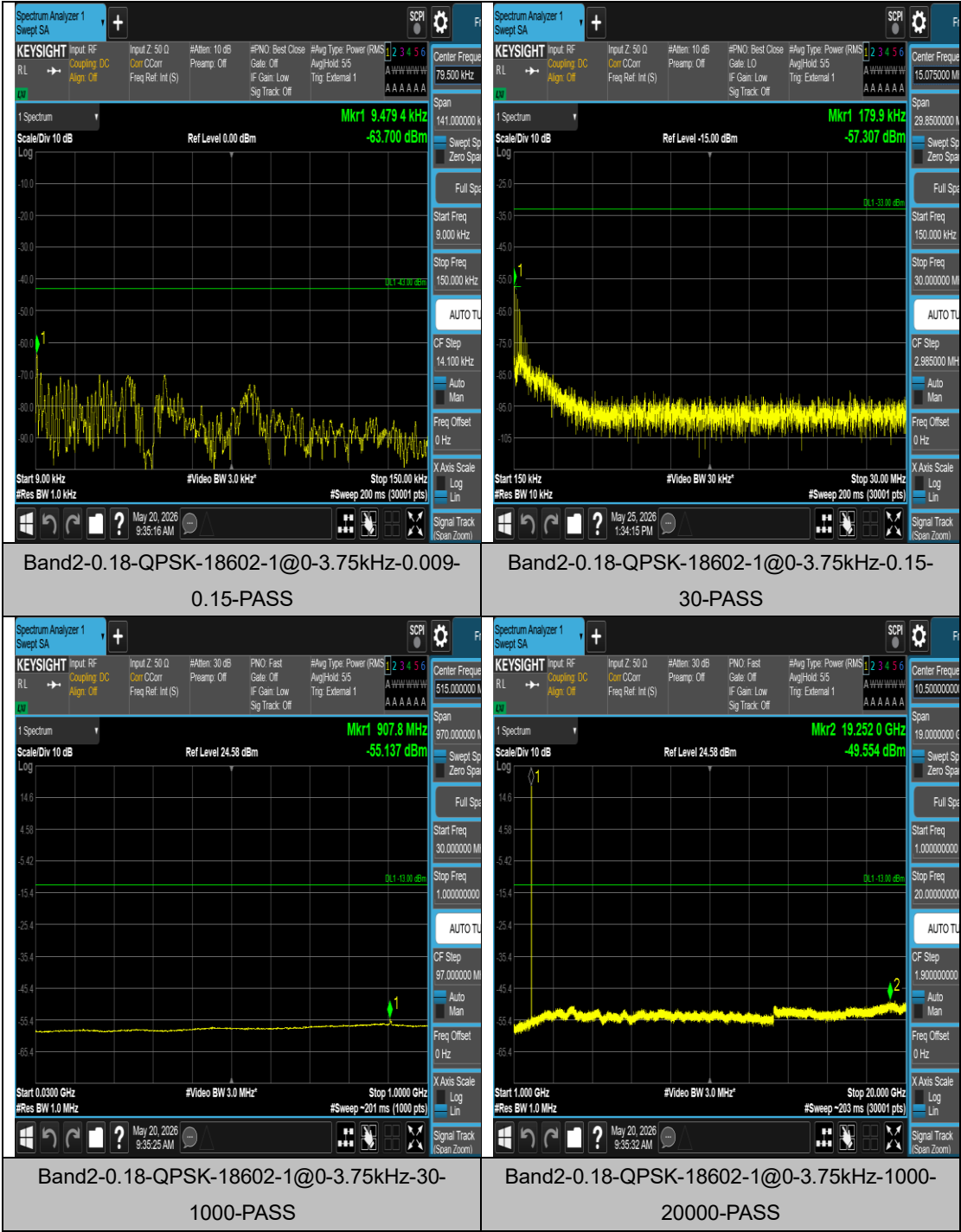
Test Result

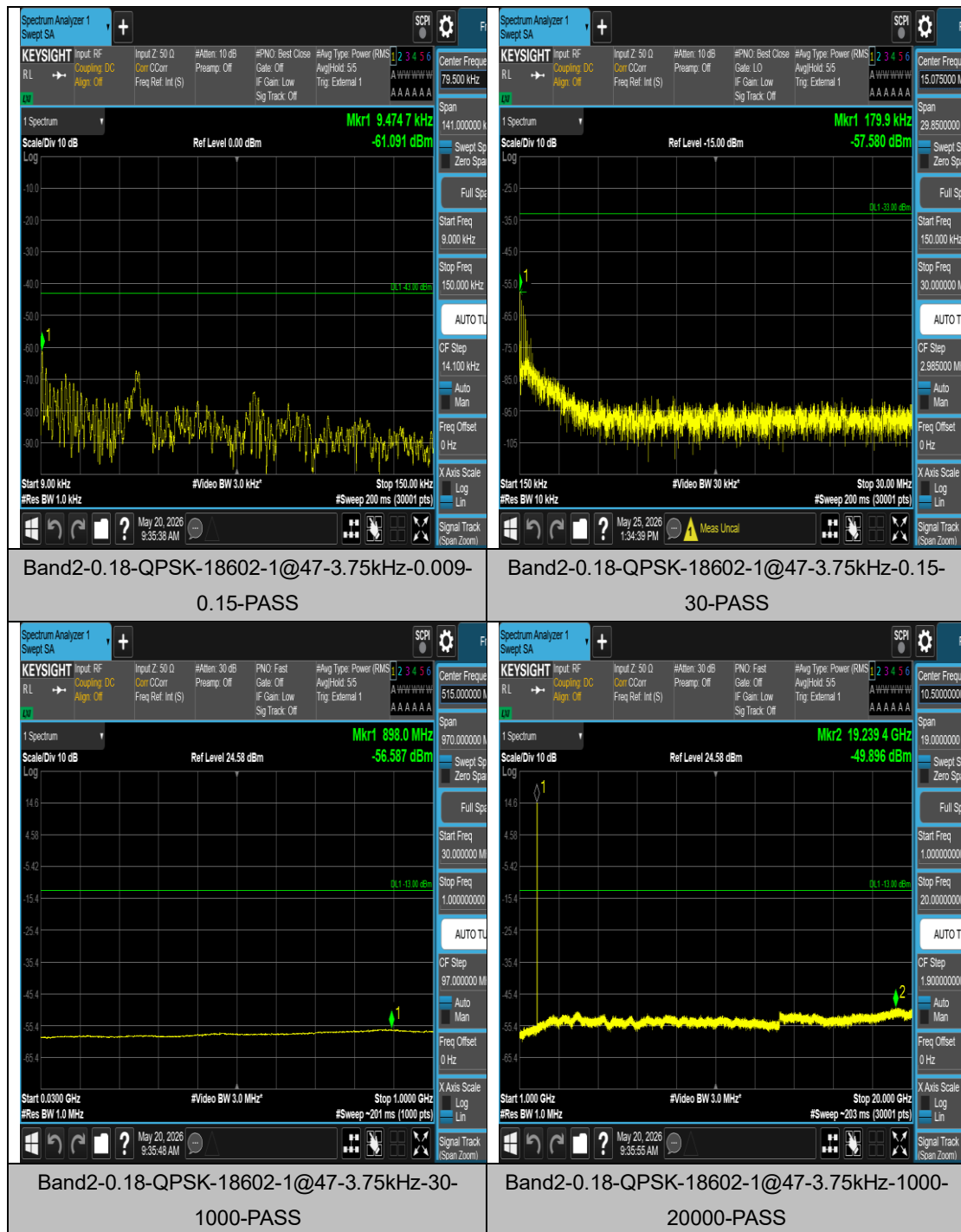
Band	OpMode	SCS	BW	Modulation	Channel	Tones	Freq Start [MHz]	Freq Stop [MHz]	Result (dBm)	Limit (dBm)	Verdict
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@0	0.009	0.15	-63.7	-43	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@0	0.15	30	-57.31	-33	PASS

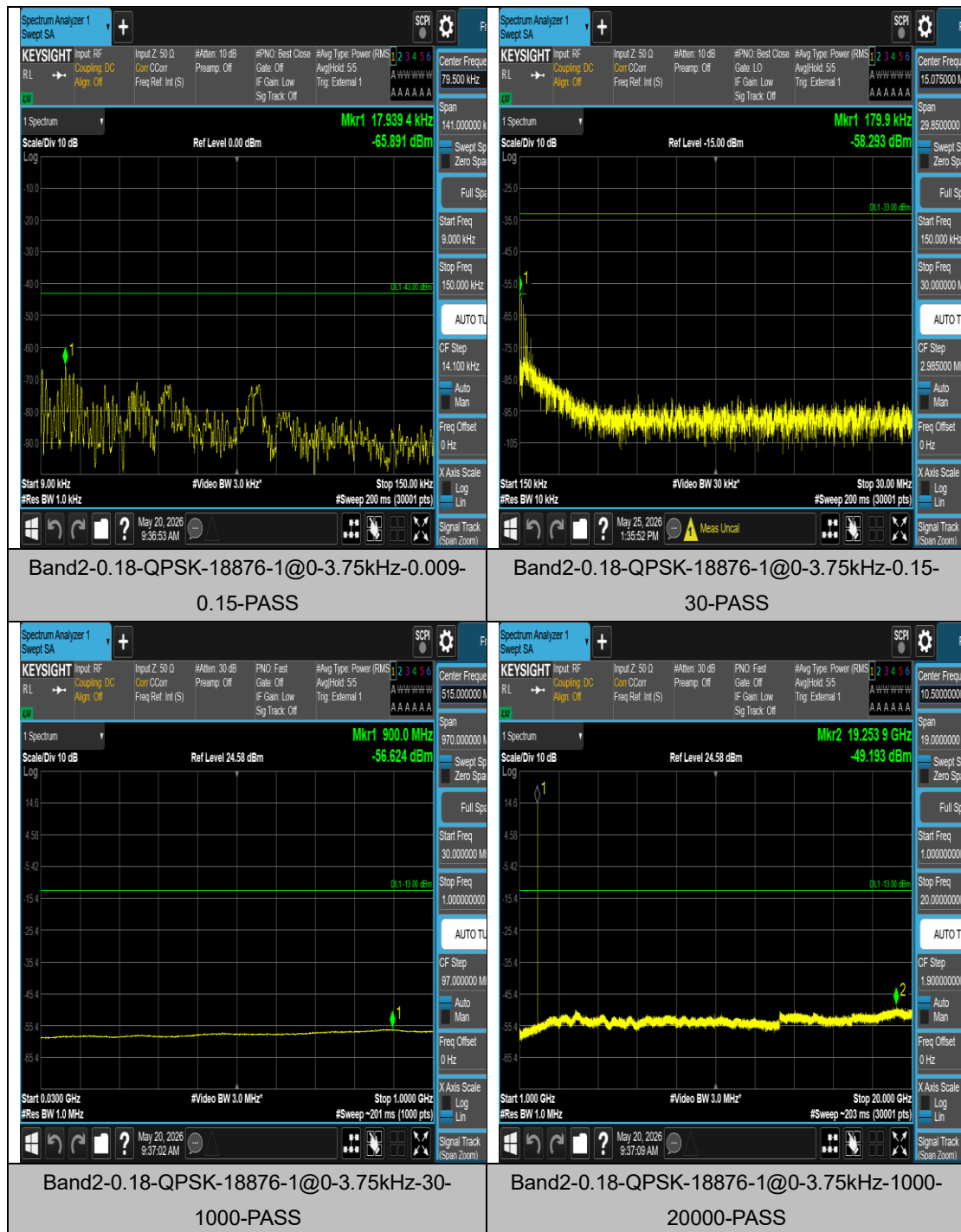
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@0	30	1000	-55.14	-13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@0	1000	2000 0	-49.55	-13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@47	0.009	0.15	-61.09	-43	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@47	0.15	30	-57.58	-33	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@47	30	1000	-56.59	-13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@47	1000	2000 0	-49.9	-13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	0.009	0.15	-65.89	-43	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	0.15	30	-58.29	-33	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	30	1000	-56.62	-13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	1000	2000 0	-49.19	-13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@47	0.009	0.15	-63.59	-43	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@47	0.15	30	-57.47	-33	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@47	30	1000	-56.67	-13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@47	1000	2000 0	-49.4	-13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@0	0.009	0.15	-63.35	-43	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@0	0.15	30	-59.11	-33	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@0	30	1000	-54.71	-13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@0	1000	2000 0	-49.72	-13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@47	0.009	0.15	-62.72	-43	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@47	0.15	30	-58.04	-33	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@47	30	1000	-56.6	-13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@47	1000	2000 0	-49.71	-13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	12@0	0.009	0.15	-63.82	-43	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	12@0	0.15	30	-58.14	-33	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	12@0	30	1000	-55.26	-13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	12@0	1000	2000 0	-49.28	-13	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	1@0	0.009	0.15	-66.93	-43	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	1@0	0.15	30	-58.15	-33	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	1@0	30	1000	-56.65	-13	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	1@0	1000	2000 0	-49.28	-13	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	1@11	0.009	0.15	-68.02	-43	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	1@11	0.15	30	-57.58	-33	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	1@11	30	1000	-56.64	-13	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	1@11	1000	2000 0	-49.61	-13	PASS

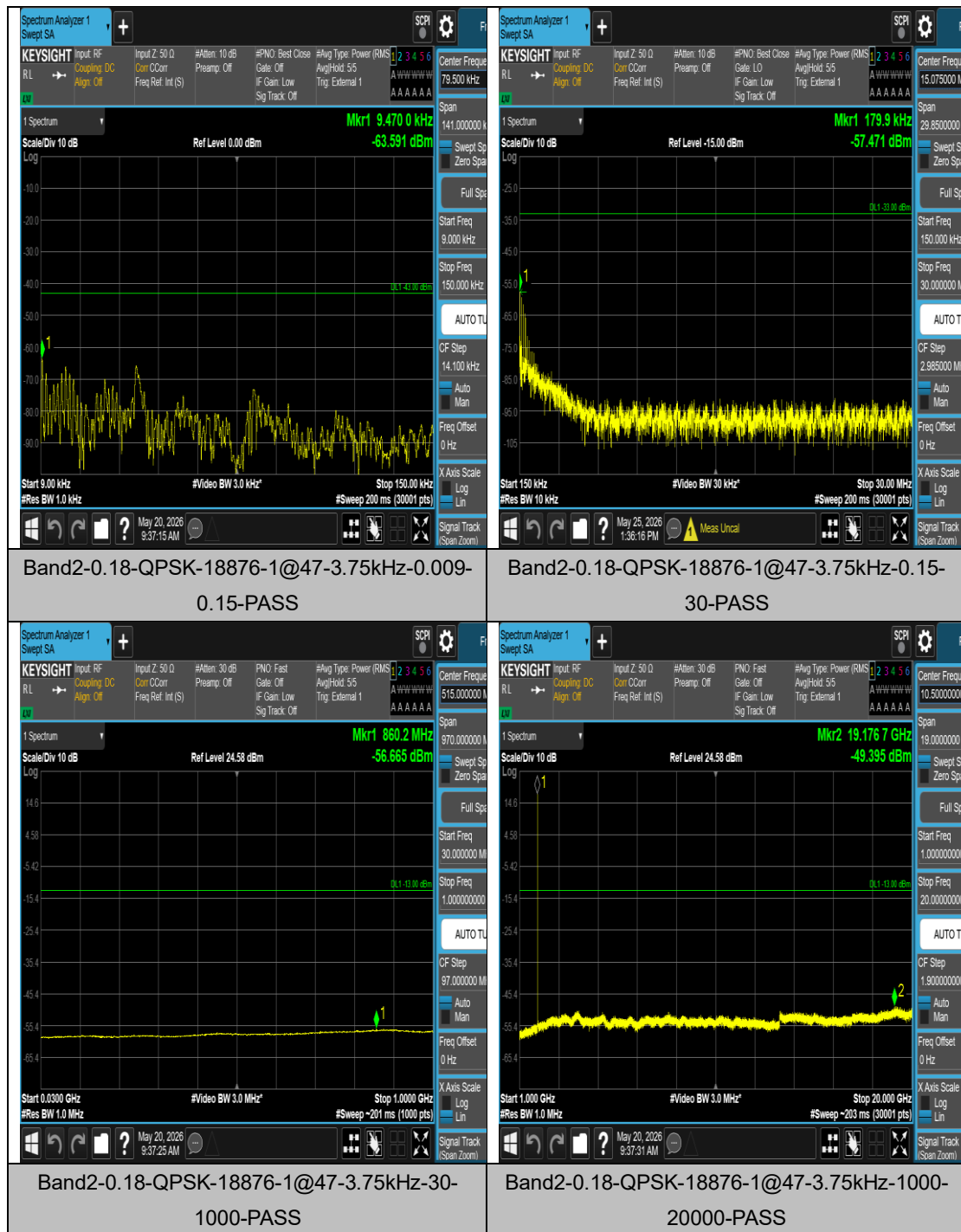
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	0.009	0.15	-61.57	-43	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	0.15	30	-58.36	-33	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	30	1000	-56.53	-13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	1000	2000 0	-49.42	-13	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	1@0	0.009	0.15	-66.12	-43	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	1@0	0.15	30	-57.9	-33	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	1@0	30	1000	-56.59	-13	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	1@0	1000	2000 0	-49.66	-13	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	1@11	0.009	0.15	-67.62	-43	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	1@11	0.15	30	-57.79	-33	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	1@11	30	1000	-56.69	-13	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	1@11	1000	2000 0	-49.49	-13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	12@0	0.009	0.15	-63.2	-43	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	12@0	0.15	30	-58.8	-33	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	12@0	30	1000	-56.62	-13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	12@0	1000	2000 0	-49.49	-13	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	1@0	0.009	0.15	-67.66	-43	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	1@0	0.15	30	-57.64	-33	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	1@0	30	1000	-56.62	-13	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	1@0	1000	2000 0	-49.57	-13	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	1@11	0.009	0.15	-64.98	-43	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	1@11	0.15	30	-57.53	-33	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	1@11	30	1000	-56.65	-13	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	1@11	1000	2000 0	-49.13	-13	PASS

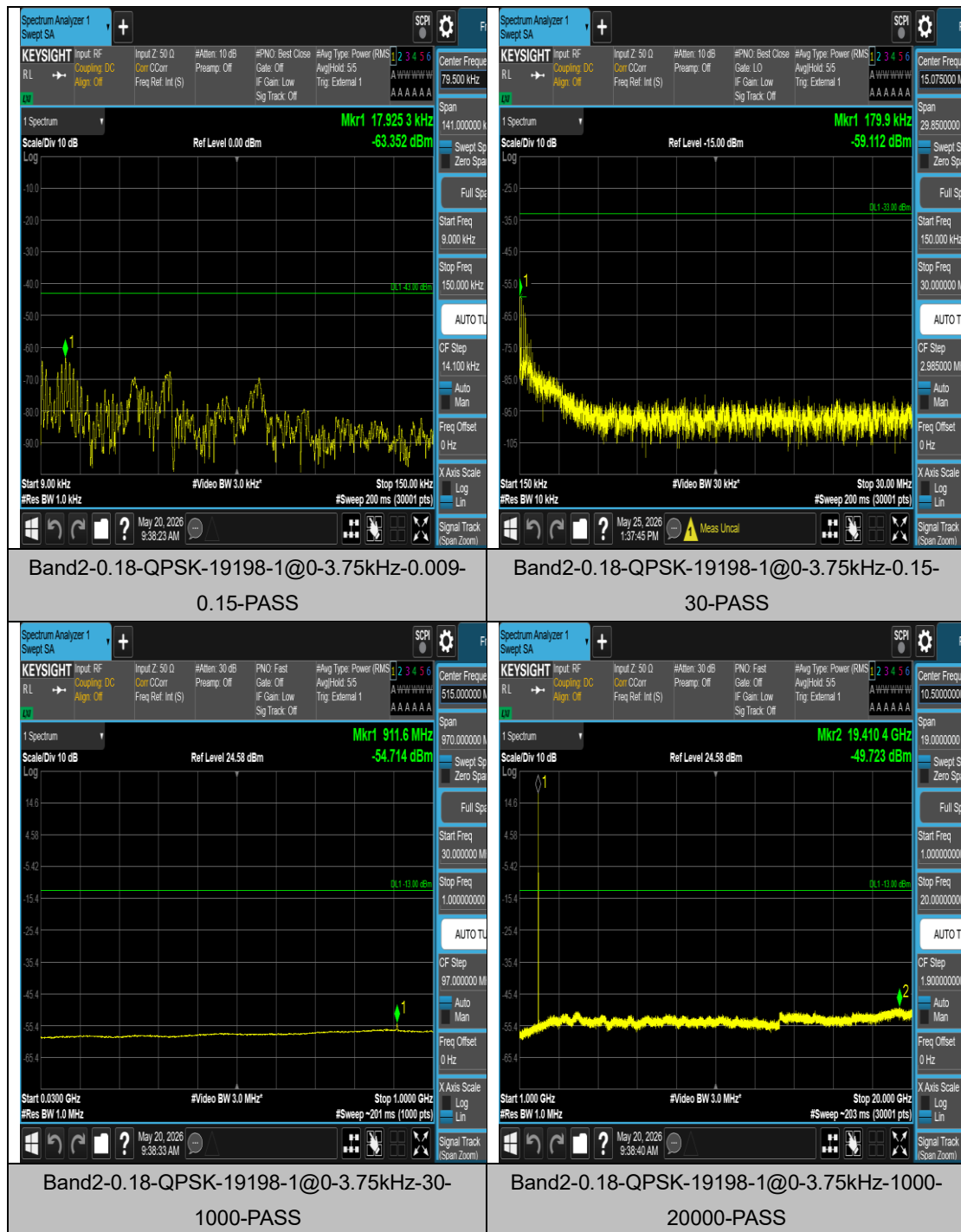
Test Graphs

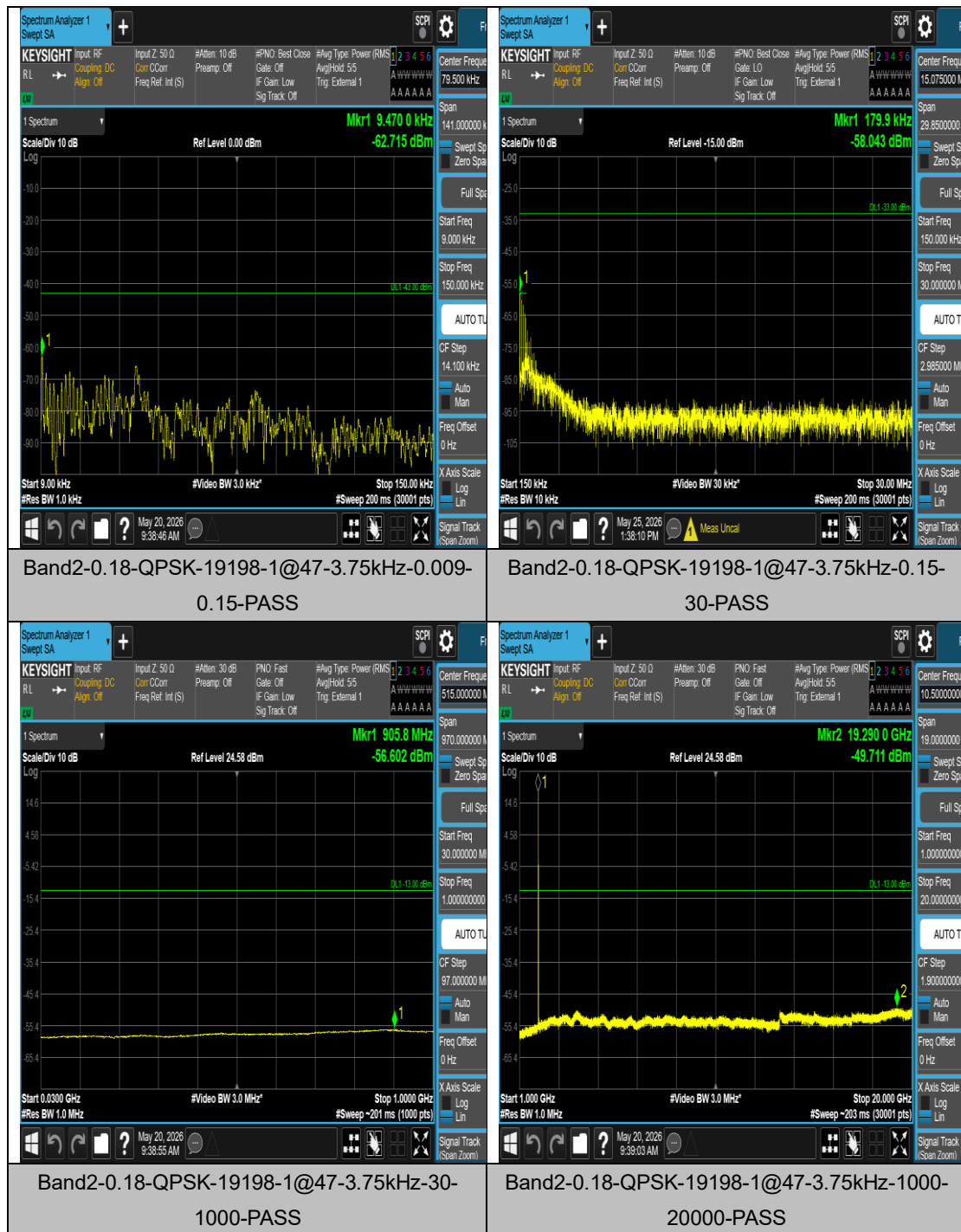


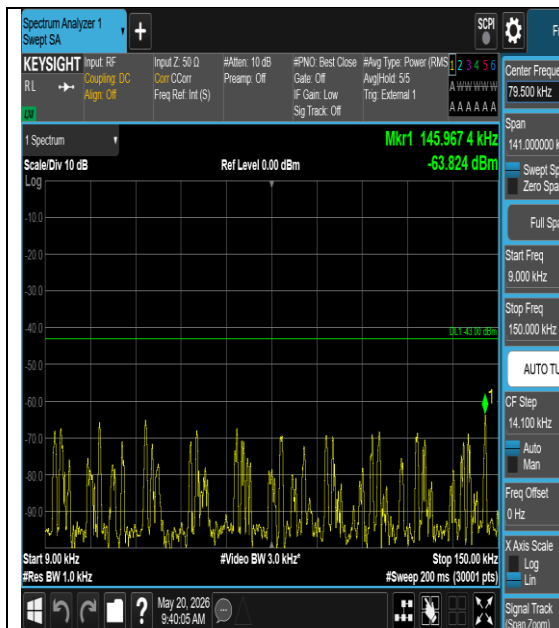




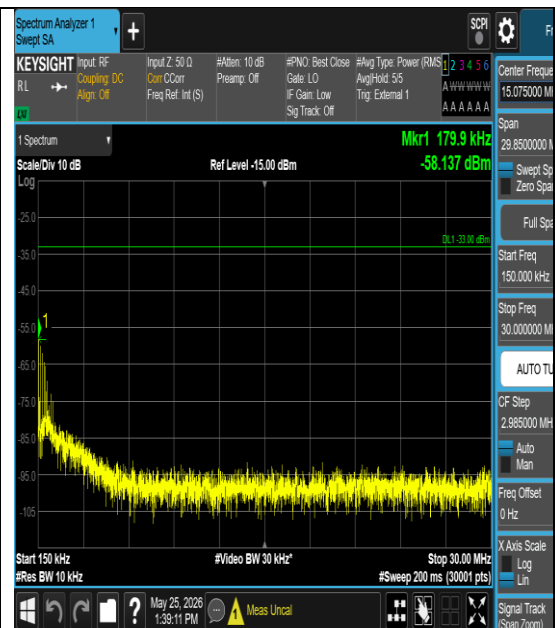








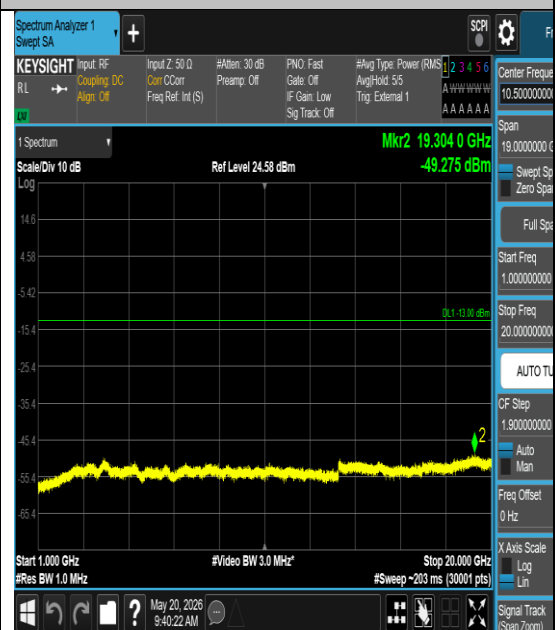
Band2-0.18-QPSK-18602-12@0-15kHz-0.009-0.15-PASS



Band2-0.18-QPSK-18602-12@0-15kHz-0.15-30-PASS



Band2-0.18-QPSK-18602-12@0-15kHz-30-1000-PASS



Band2-0.18-QPSK-18602-12@0-15kHz-1000-20000-PASS