

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

Test Result

Band	OpMode	SCS	BW	Modulation	Channel	Tones	Conducted POWER(dBm)	ERP(dBm)	Verdict
Band 5	Stand-Alone	3.75k Hz	0.18	QPSK	20402	1@0	21.26	19.75	PASS
Band 5	Stand-Alone	3.75k Hz	0.18	QPSK	20402	1@47	21.25	19.74	PASS
Band 5	Stand-Alone	3.75k Hz	0.18	BPSK	20402	1@0	21.03	19.52	PASS
Band 5	Stand-Alone	3.75k Hz	0.18	BPSK	20402	1@47	21.17	19.66	PASS
Band 5	Stand-Alone	3.75k Hz	0.18	QPSK	20525	1@0	21.42	19.91	PASS
Band 5	Stand-Alone	3.75k Hz	0.18	QPSK	20525	1@47	21.41	19.9	PASS
Band 5	Stand-Alone	3.75k Hz	0.18	BPSK	20525	1@0	21.39	19.88	PASS
Band 5	Stand-Alone	3.75k Hz	0.18	BPSK	20525	1@47	21.46	19.95	PASS
Band 5	Stand-Alone	3.75k Hz	0.18	QPSK	20648	1@0	22.01	20.5	PASS
Band 5	Stand-Alone	3.75k Hz	0.18	QPSK	20648	1@47	22.01	20.5	PASS
Band 5	Stand-Alone	3.75k Hz	0.18	BPSK	20648	1@0	21.99	20.48	PASS
Band 5	Stand-Alone	3.75k Hz	0.18	BPSK	20648	1@47	22.03	20.52	PASS
Band 5	Stand-Alone	15kHz	0.18	QPSK	20402	1@0	21.26	19.75	PASS
Band 5	Stand-Alone	15kHz	0.18	QPSK	20402	1@11	21.28	19.77	PASS
Band 5	Stand-Alone	15kHz	0.18	QPSK	20402	3@3	21.9	20.39	PASS
Band 5	Stand-Alone	15kHz	0.18	BPSK	20402	1@0	21.27	19.76	PASS
Band 5	Stand-Alone	15kHz	0.18	BPSK	20402	1@11	21.29	19.78	PASS

Band 5	Stand- Alone	15kHz	0.18	QPSK	20525	1@0	21.54	20.03	PASS
Band 5	Stand- Alone	15kHz	0.18	QPSK	20525	1@11	21.56	20.05	PASS
Band 5	Stand- Alone	15kHz	0.18	QPSK	20525	3@3	22.14	20.63	PASS
Band 5	Stand- Alone	15kHz	0.18	BPSK	20525	1@0	21.53	20.02	PASS
Band 5	Stand- Alone	15kHz	0.18	BPSK	20525	1@11	21.55	20.04	PASS
Band 5	Stand- Alone	15kHz	0.18	QPSK	20648	1@0	22.16	20.65	PASS
Band 5	Stand- Alone	15kHz	0.18	QPSK	20648	1@11	22.17	20.66	PASS
Band 5	Stand- Alone	15kHz	0.18	QPSK	20648	3@3	22.59	21.08	PASS
Band 5	Stand- Alone	15kHz	0.18	BPSK	20648	1@0	22.16	20.65	PASS
Band 5	Stand- Alone	15kHz	0.18	BPSK	20648	1@11	22.12	20.61	PASS

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

Test Result

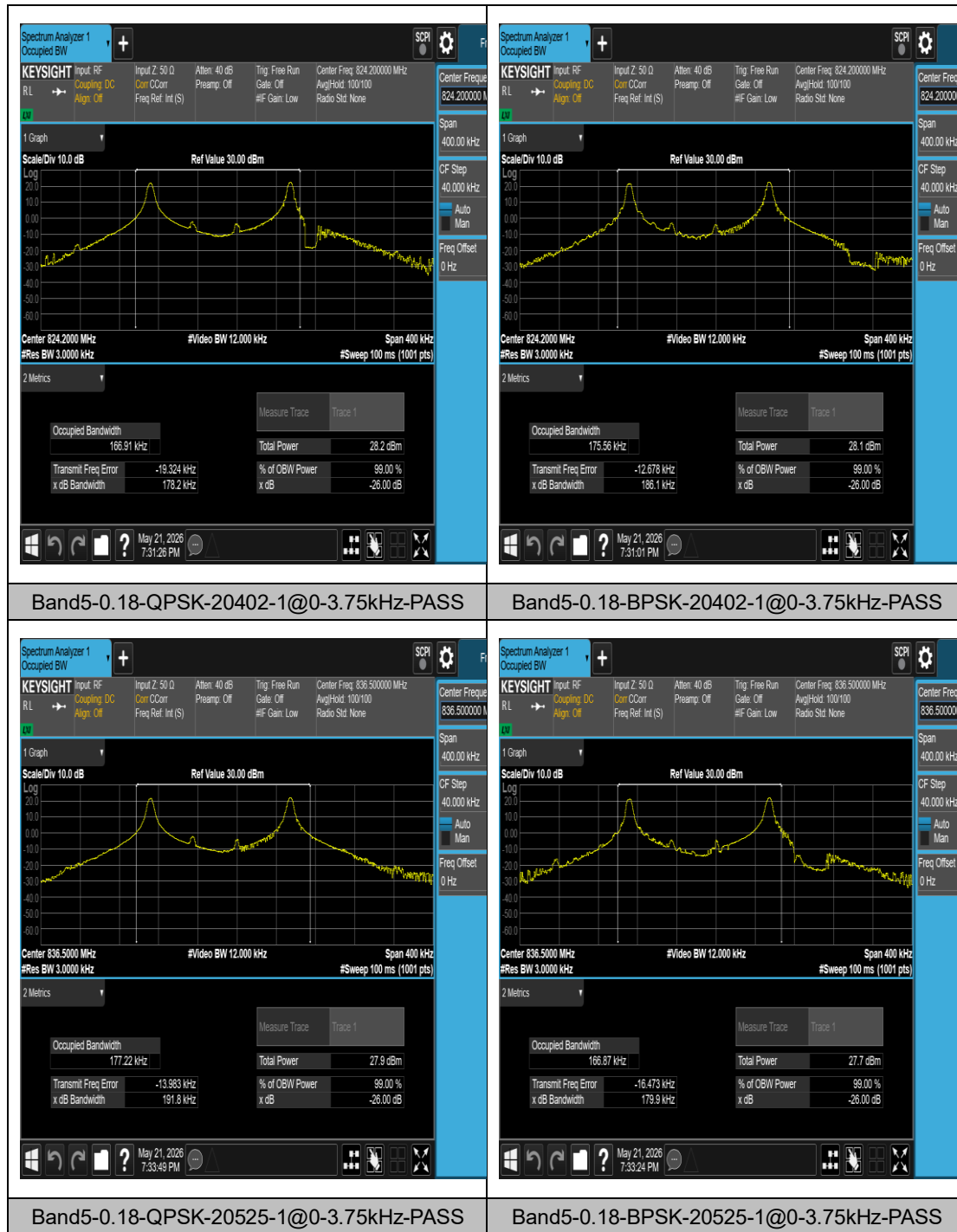
Band	OpMode	SCS	BW	Modulation	Channel	Tones	Result (dBm)	Limit (dBm)	Verdict
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20525	1@0	4.78	<=13	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20525	1@47	4.83	<=13	PASS
Band5	Stand-Alone	3.75kHz	0.18	BPSK	20525	1@0	4.9	<=13	PASS
Band5	Stand-Alone	3.75kHz	0.18	BPSK	20525	1@47	4.88	<=13	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20525	1@0	5.91	<=13	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20525	1@11	6.16	<=13	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20525	3@3	11.2	<=13	PASS

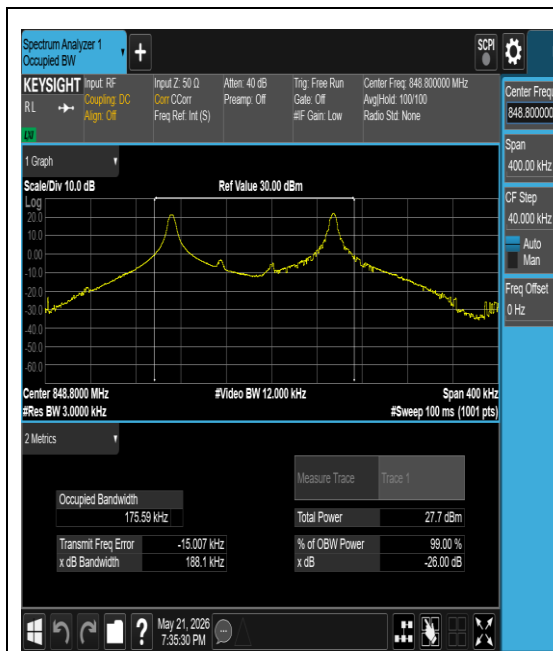
Appendix C: Emission Bandwidth for NB1

Test Result

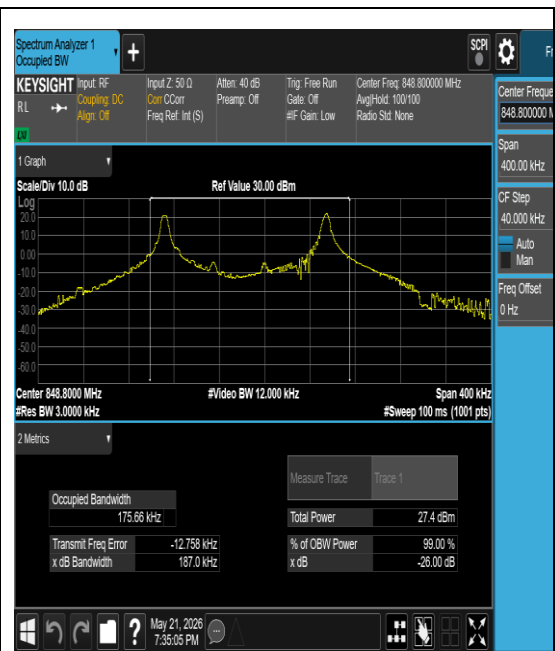
Band	OpMode	SCS	BW	Modulation	Channel	Tones	OBW(MHz)	EBW(MHz)	Verdict
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20402	1@0	0.16691	0.1782	PASS
Band5	Stand-Alone	3.75kHz	0.18	BPSK	20402	1@0	0.17556	0.1861	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20525	1@0	0.17722	0.1918	PASS
Band5	Stand-Alone	3.75kHz	0.18	BPSK	20525	1@0	0.16687	0.1799	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20648	1@0	0.17559	0.1881	PASS
Band5	Stand-Alone	3.75kHz	0.18	BPSK	20648	1@0	0.17566	0.1870	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20402	12@0	0.20103	0.2275	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20402	12@0	0.20445	0.2253	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20525	12@0	0.20445	0.2367	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20525	12@0	0.20005	0.2346	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20648	12@0	0.20040	0.2344	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20648	12@0	0.19658	0.2355	PASS

Test Graphs





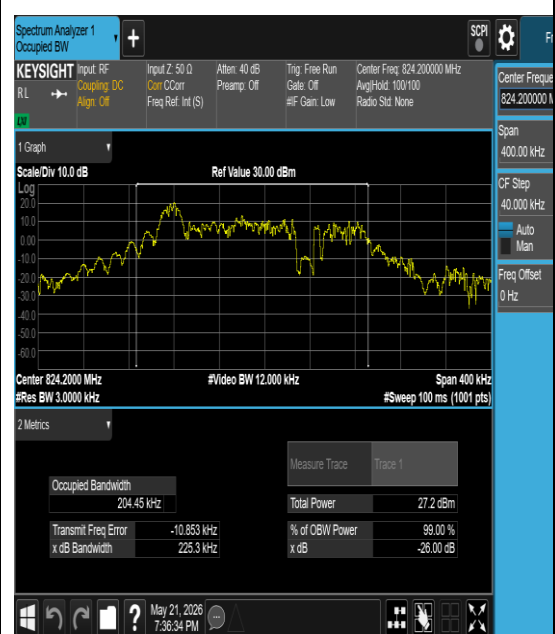
Band5-0.18-QPSK-20648-1@0-3.75kHz-PASS



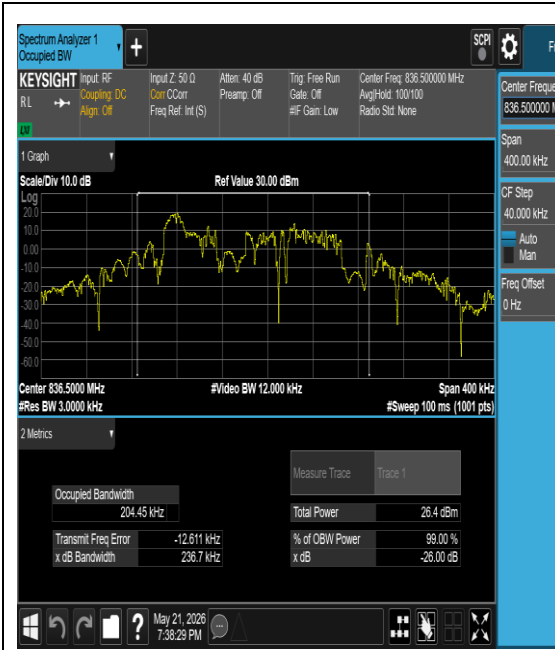
Band5-0.18-BPSK-20648-1@0-3.75kHz-PASS



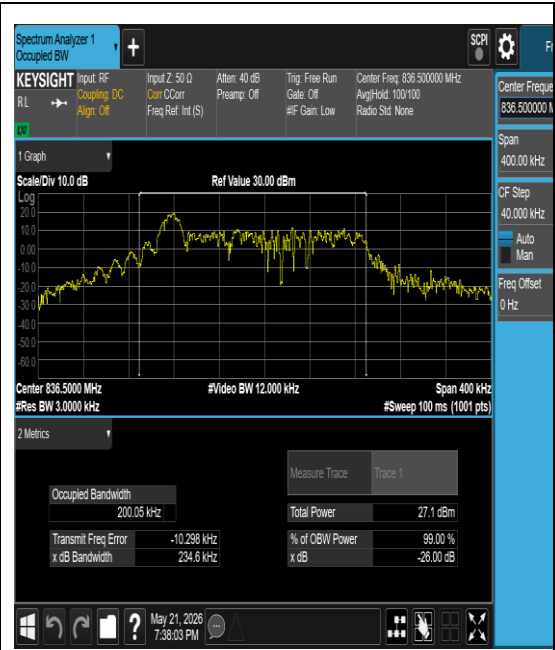
Band5-0.18-QPSK-20402-12@0-15kHz-PASS



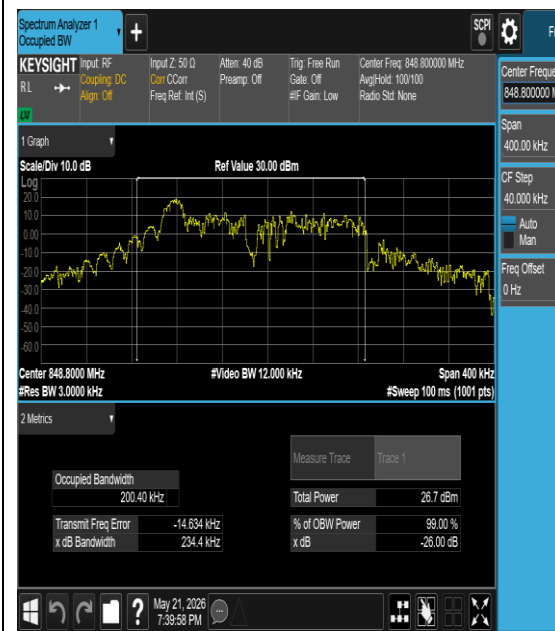
Band5-0.18-BPSK-20402-12@0-15kHz-PASS



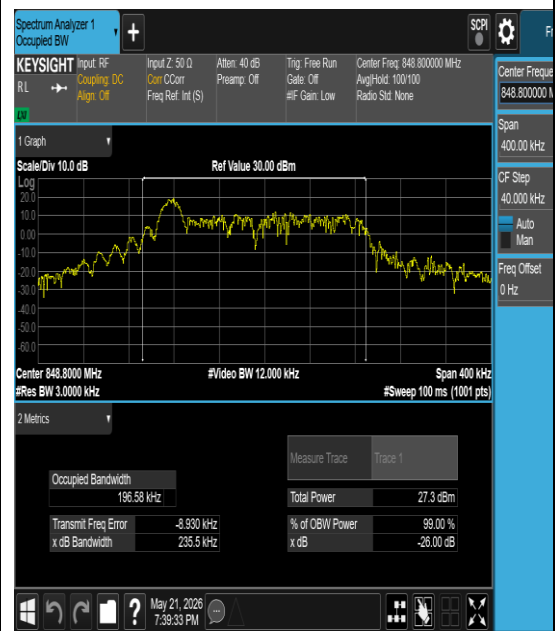
Band5-0.18-QPSK-20525-12@0-15kHz-PASS



Band5-0.18-BPSK-20525-12@0-15kHz-PASS



Band5-0.18-QPSK-20648-12@0-15kHz-PASS



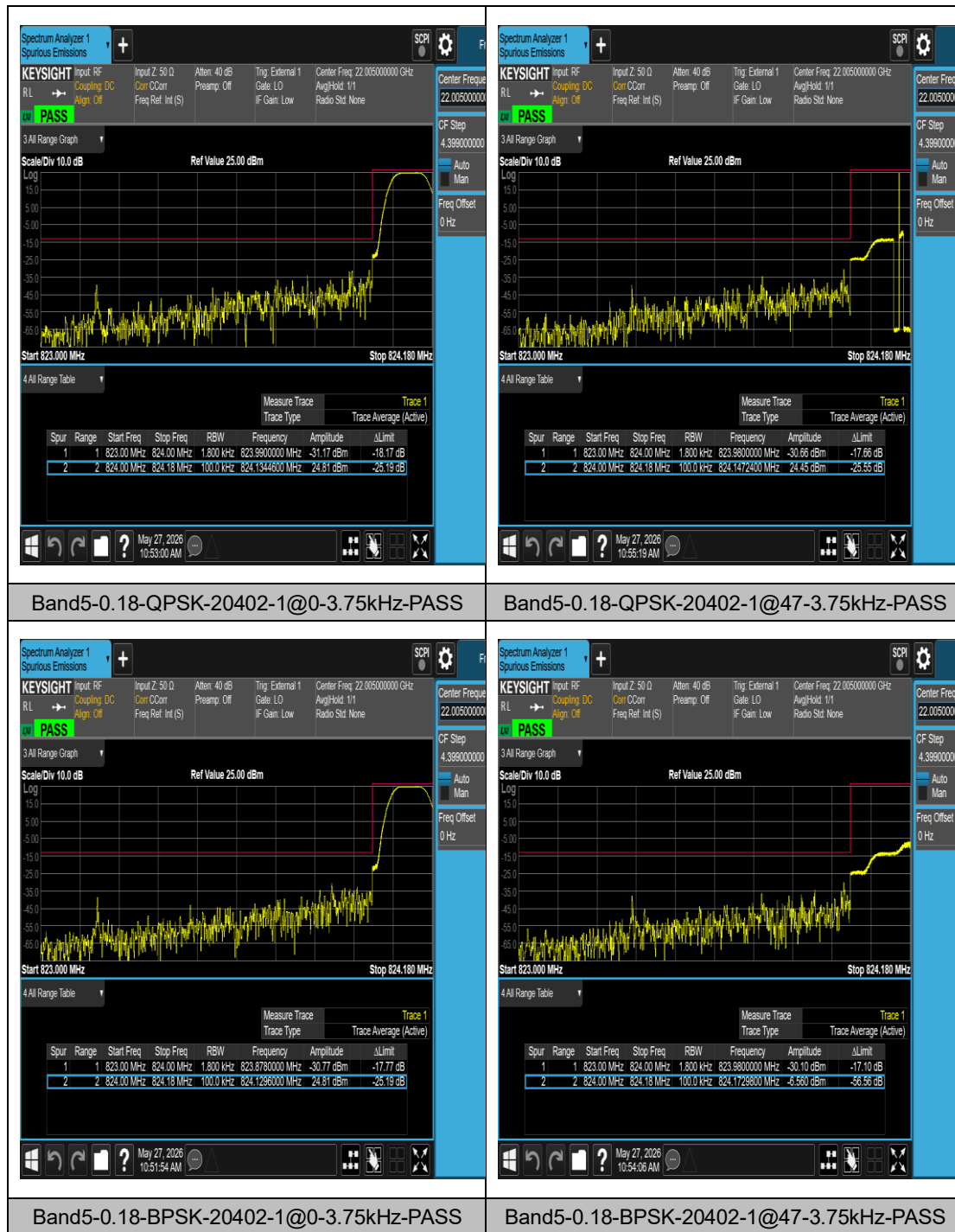
Band5-0.18-BPSK-20648-12@0-15kHz-PASS

Appendix D: Band Edge for NB1

Test Result

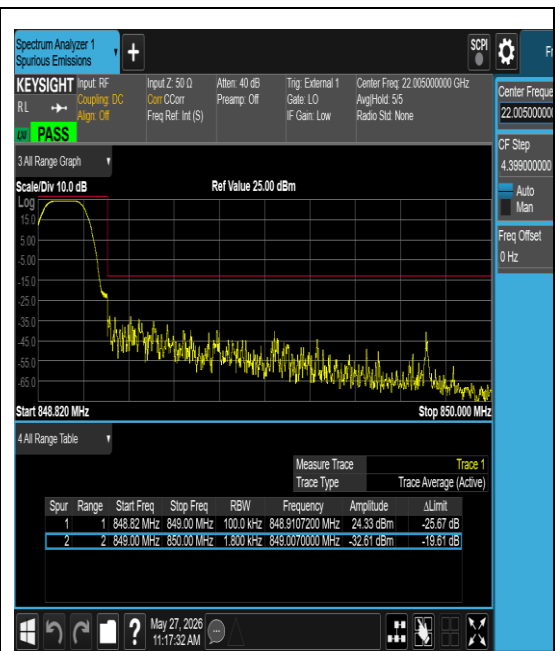
Band	OpMode	SCS	BW	Modulation	Channel	Tones	Result (dBm)	Verdict
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20402	1@0	-31.17	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20402	1@47	-30.66	PASS
Band5	Stand-Alone	3.75kHz	0.18	BPSK	20402	1@0	-30.77	PASS
Band5	Stand-Alone	3.75kHz	0.18	BPSK	20402	1@47	-30.10	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20648	1@0	-33.05	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20648	1@47	-32.61	PASS
Band5	Stand-Alone	3.75kHz	0.18	BPSK	20648	1@0	-34.54	PASS
Band5	Stand-Alone	3.75kHz	0.18	BPSK	20648	1@47	-30.22	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20402	1@0	-27.26	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20402	1@11	-31.86	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20402	12@0	-29.69	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20402	1@0	-30.25	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20402	1@11	-32.51	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20648	1@0	-37.60	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20648	1@11	-33.08	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20648	12@0	-30.94	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20648	1@0	-34.84	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20648	1@11	-29.89	PASS

Test Graphs





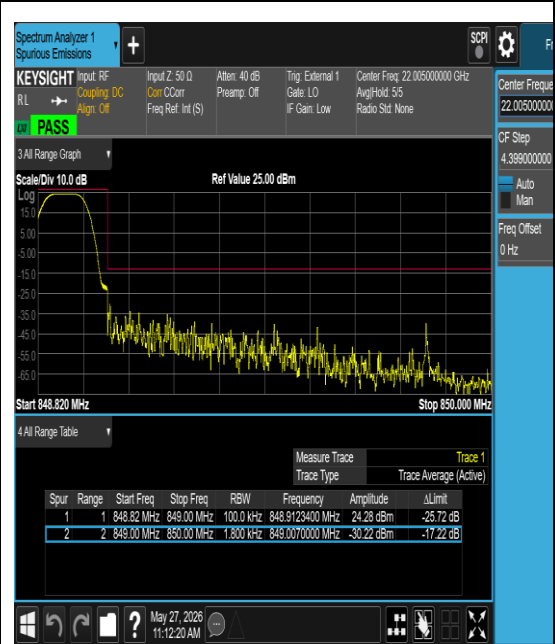
Band5-0.18-QPSK-20648-1@0-3.75kHz-PASS



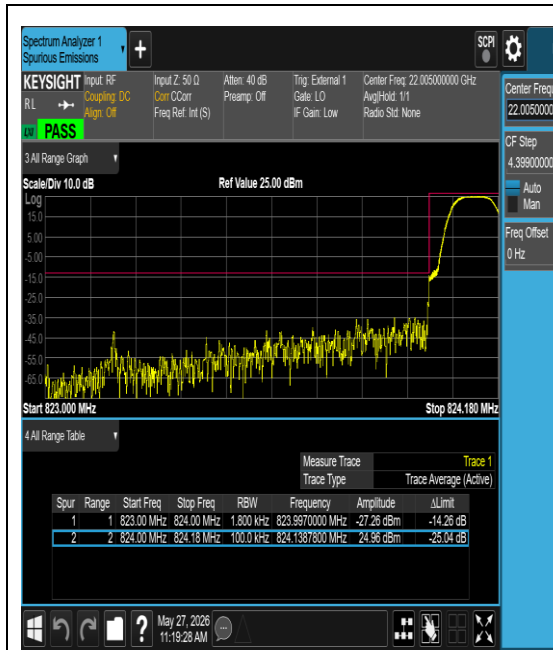
Band5-0.18-QPSK-20648-1@47-3.75kHz-PASS



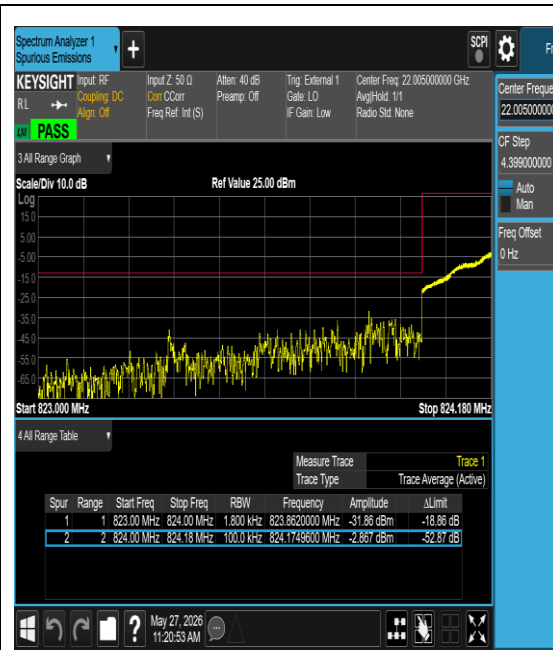
Band5-0.18-BPSK-20648-1@0-3.75kHz-PASS



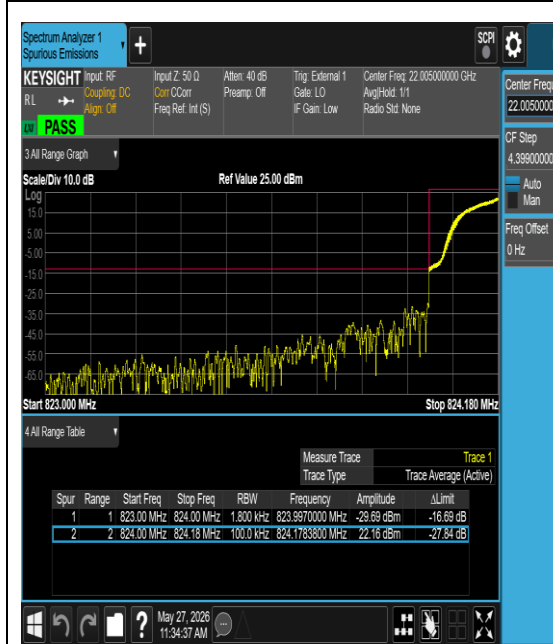
Band5-0.18-BPSK-20648-1@47-3.75kHz-PASS



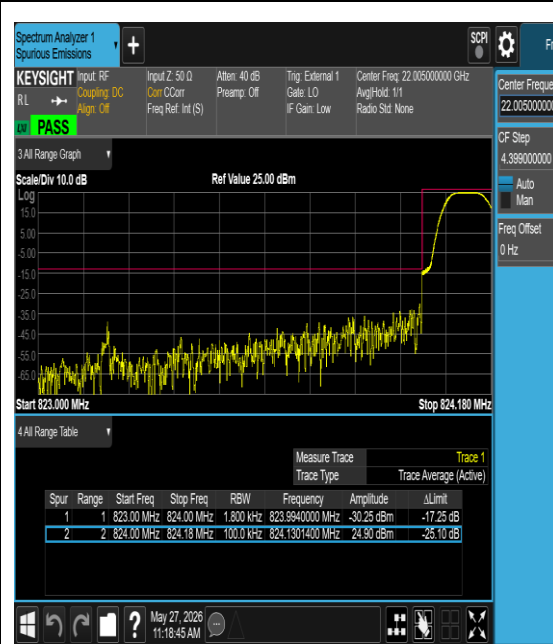
Band5-0.18-QPSK-20402-1@0-15kHz-PASS



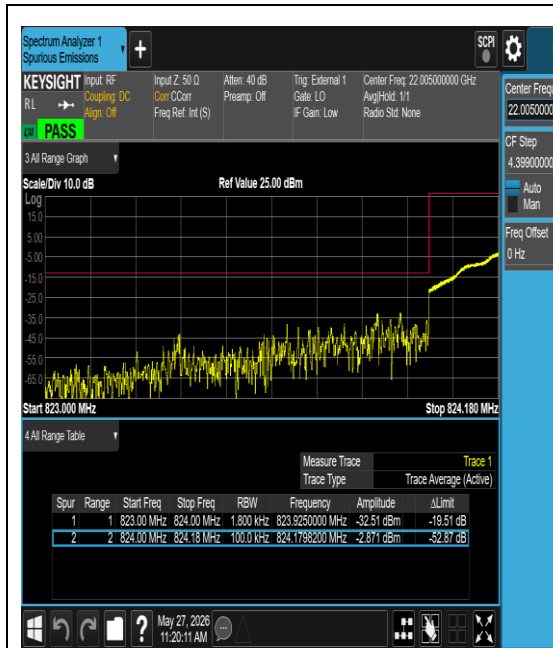
Band5-0.18-QPSK-20402-1@11-15kHz-PASS



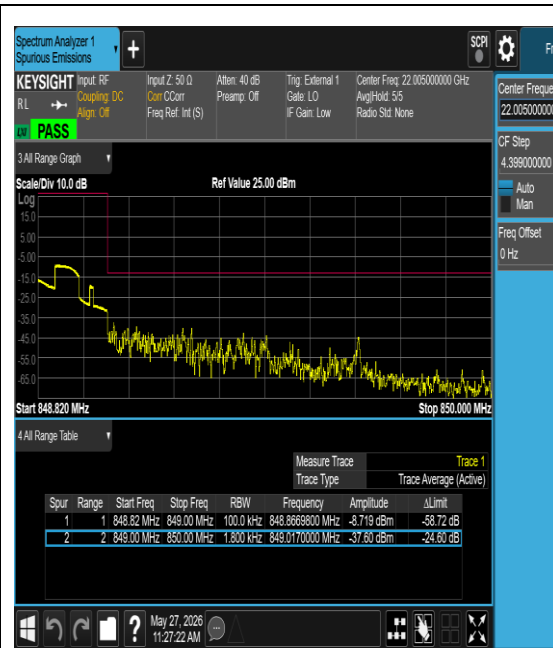
Band5-0.18-QPSK-20402-12@0-15kHz-PASS



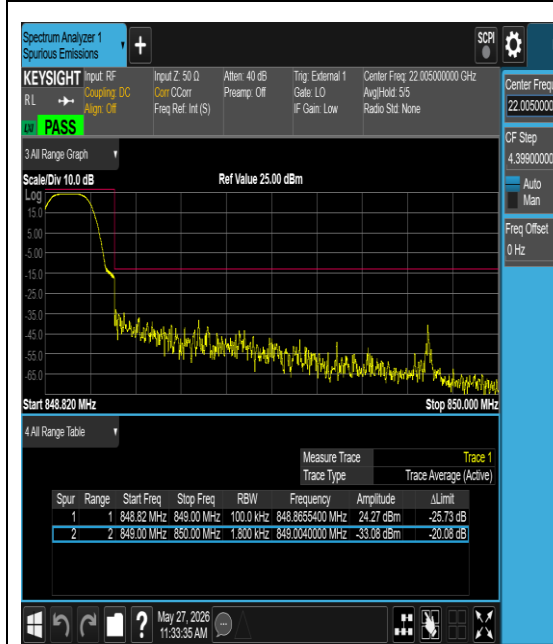
Band5-0.18-BPSK-20402-1@0-15kHz-PASS



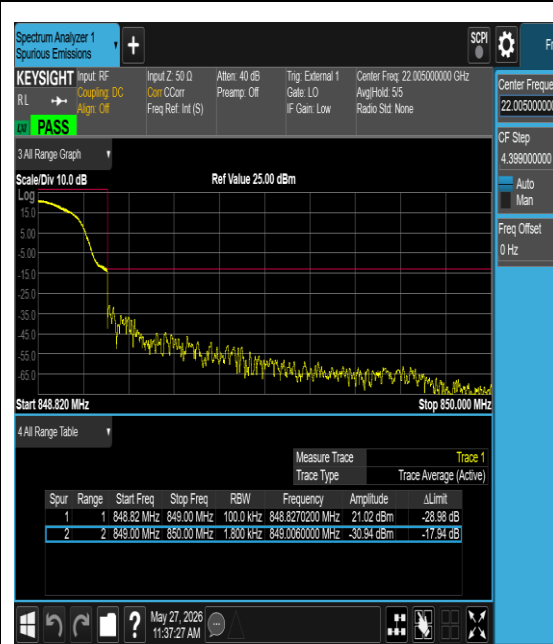
Band5-0.18-BPSK-20402-1@11-15kHz-PASS



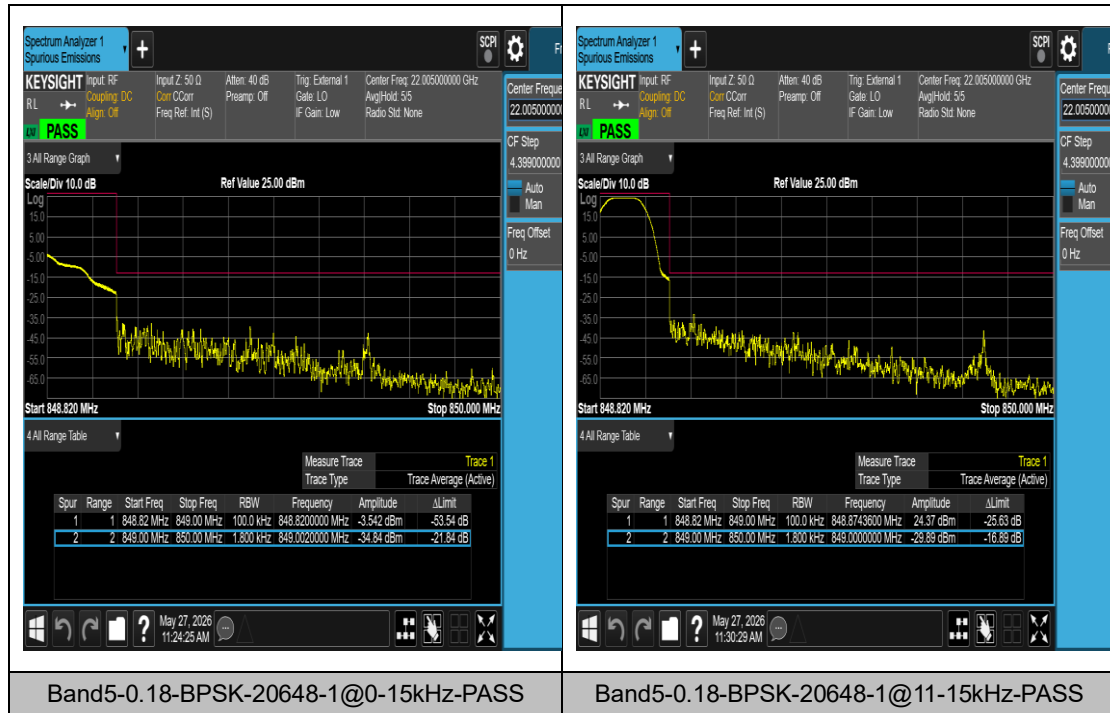
Band5-0.18-QPSK-20648-1@0-15kHz-PASS



Band5-0.18-QPSK-20648-1@11-15kHz-PASS



Band5-0.18-QPSK-20648-12@0-15kHz-PASS



Appendix E: Conducted Spurious Emission for NB1

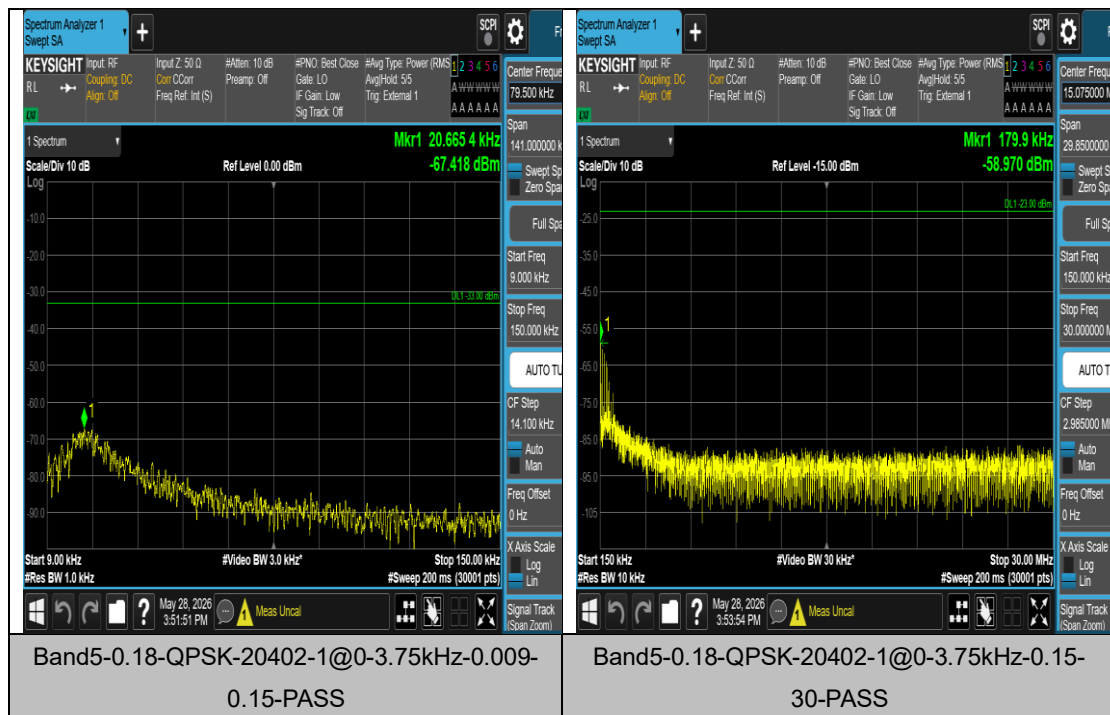
Test Result

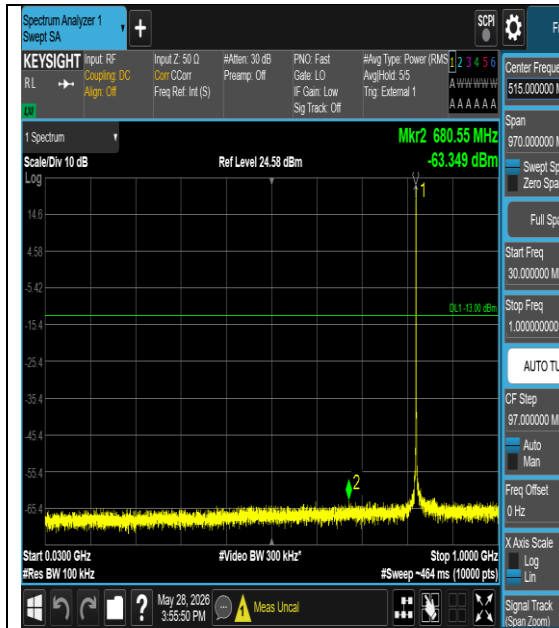
Band	OpMode	SCS	BW	Modulation	Channel	Tones	Freq Start [MHz]	Freq Stop [MHz]	Result (dBm)	Limit (dBm)	Verdict
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20402	1@0	0.009	0.15	-67.42	-33	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20402	1@0	0.15	30	-58.97	-23	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20402	1@0	30	1000	-63.35	-13	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20402	1@0	1000	10000	-44.27	-13	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20402	1@47	0.009	0.15	-64.93	-33	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20402	1@47	0.15	30	-59.07	-23	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20402	1@47	30	1000	-62.29	-13	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20402	1@47	1000	10000	-43.79	-13	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20525	1@0	0.009	0.15	-67.33	-33	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20525	1@0	0.15	30	-57.88	-23	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20525	1@0	30	1000	-64.07	-13	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20525	1@0	1000	10000	-50.62	-13	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20525	1@47	0.009	0.15	-66.66	-33	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20525	1@47	0.15	30	-57.43	-23	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20525	1@47	30	1000	-64.48	-13	PASS

Band5	Stand-Alone	3.75kHz	0.18	QPSK	20525	1@47	1000	1000 0	-50.69	-13	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20648	1@0	0.009	0.15	-66.88	-33	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20648	1@0	0.15	30	-59.06	-23	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20648	1@0	30	1000	-63.02	-13	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20648	1@0	1000	1000 0	-44.66	-13	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20648	1@47	0.009	0.15	-65.95	-33	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20648	1@47	0.15	30	-58.72	-23	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20648	1@47	30	1000	-63.79	-13	PASS
Band5	Stand-Alone	3.75kHz	0.18	QPSK	20648	1@47	1000	1000 0	-44.03	-13	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20402	12@0	0.009	0.15	-60.17	-33	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20402	12@0	0.15	30	-62.62	-23	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20402	12@0	30	1000	-63.91	-13	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20402	12@0	1000	1000 0	-50.47	-13	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20402	1@0	0.009	0.15	-64.82	-33	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20402	1@0	0.15	30	-65.33	-23	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20402	1@0	30	1000	-63.83	-13	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20402	1@0	1000	1000 0	-45.78	-13	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20402	1@11	0.009	0.15	-63.57	-33	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20402	1@11	0.15	30	-67.04	-23	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20402	1@11	30	1000	-63.76	-13	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20402	1@11	1000	1000 0	-44.04	-13	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20525	12@0	0.009	0.15	-60.15	-33	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20525	12@0	0.15	30	-67.23	-23	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20525	12@0	30	1000	-64.12	-13	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20525	12@0	1000	1000 0	-45.35	-13	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20525	1@0	0.009	0.15	-64.21	-33	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20525	1@0	0.15	30	-69.24	-23	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20525	1@0	30	1000	-63.1	-13	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20525	1@0	1000	1000 0	-46.46	-13	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20525	1@11	0.009	0.15	-62.65	-33	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20525	1@11	0.15	30	-61.58	-23	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20525	1@11	30	1000	-63.16	-13	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20525	1@11	1000	1000 0	-50.54	-13	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20648	12@0	0.009	0.15	-71.45	-33	PASS

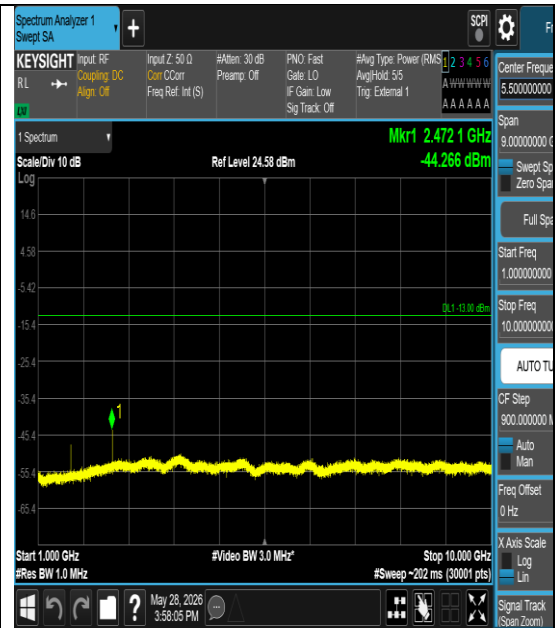
Band5	Stand-Alone	15kHz	0.18	QPSK	20648	12@0	0.15	30	-77.47	-23	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20648	12@0	30	1000	-63.38	-13	PASS
Band5	Stand-Alone	15kHz	0.18	QPSK	20648	12@0	1000	1000 0	-50.93	-13	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20648	1@0	0.009	0.15	-63.81	-33	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20648	1@0	0.15	30	-77.31	-23	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20648	1@0	30	1000	-63.91	-13	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20648	1@0	1000	1000 0	-44.85	-13	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20648	1@11	0.009	0.15	-63.22	-33	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20648	1@11	0.15	30	-64.01	-23	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20648	1@11	30	1000	-63.93	-13	PASS
Band5	Stand-Alone	15kHz	0.18	BPSK	20648	1@11	1000	1000 0	-50.73	-13	PASS

Test Graphs

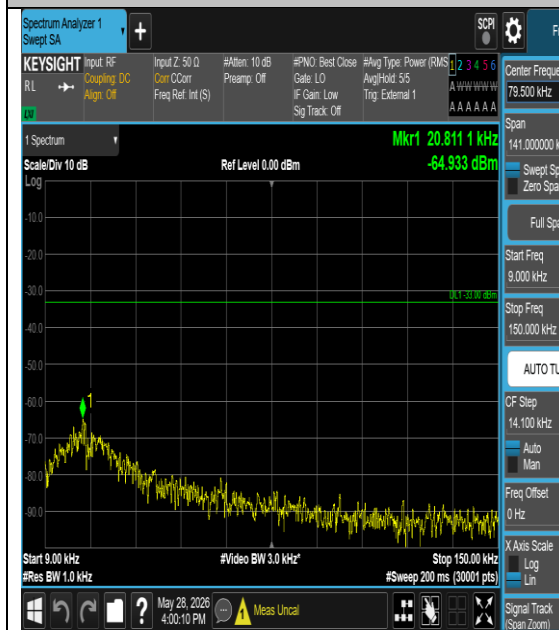




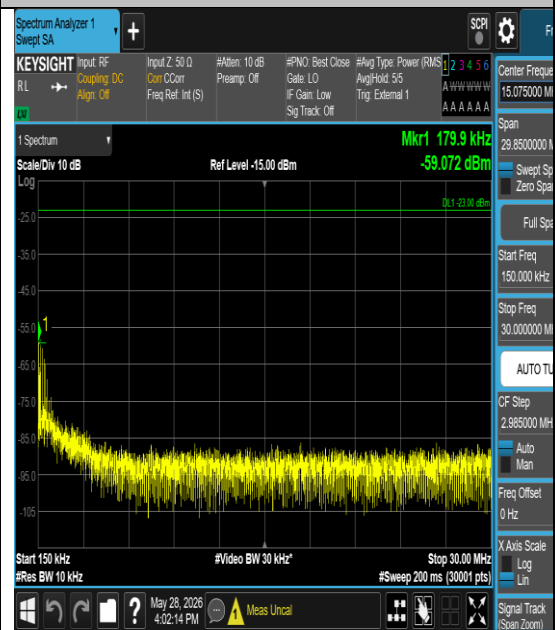
Band5-0.18-QPSK-20402-1@0-3.75kHz-30-1000-PASS



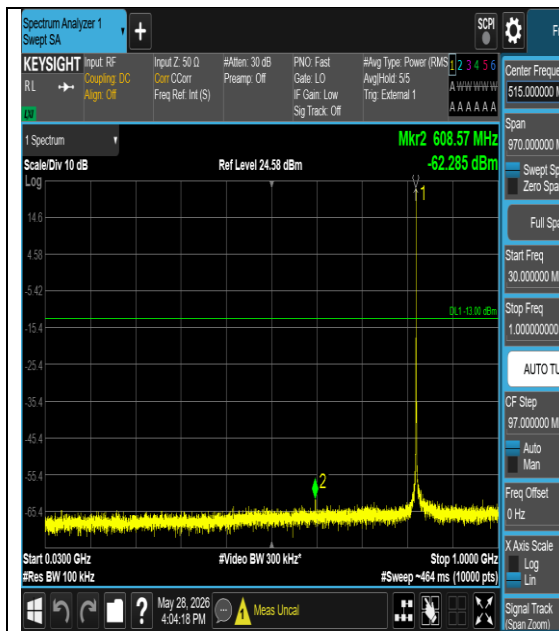
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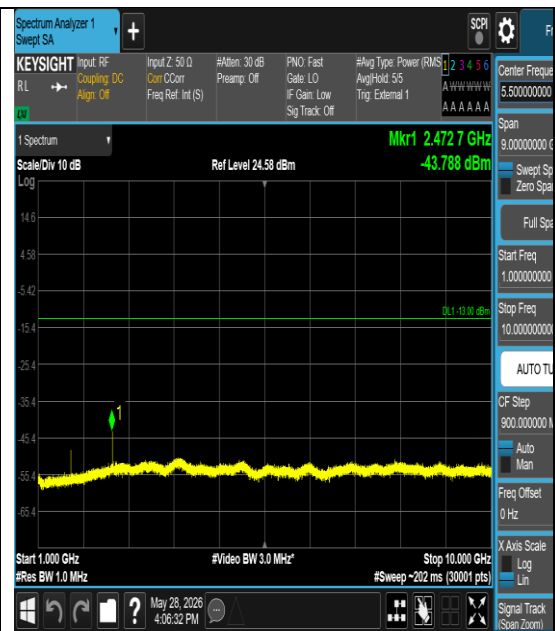
Band5-0.18-QPSK-20402-1@47-3.75kHz-0.009-0.15-PASS



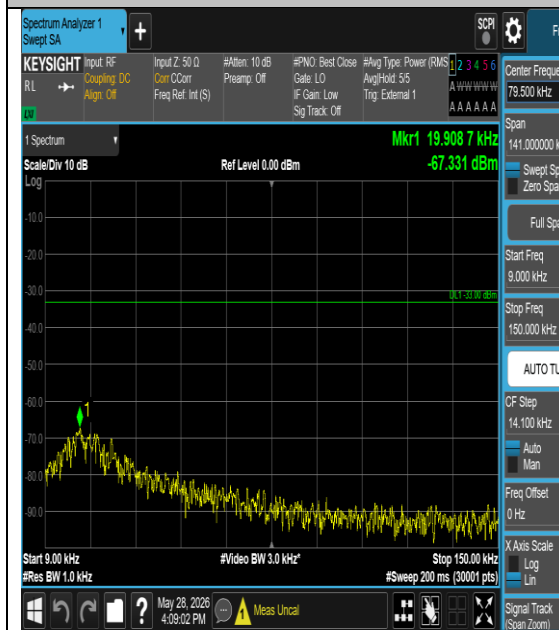
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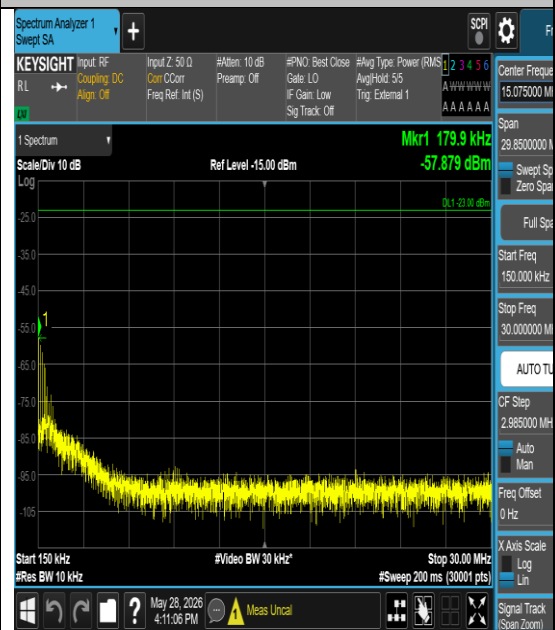
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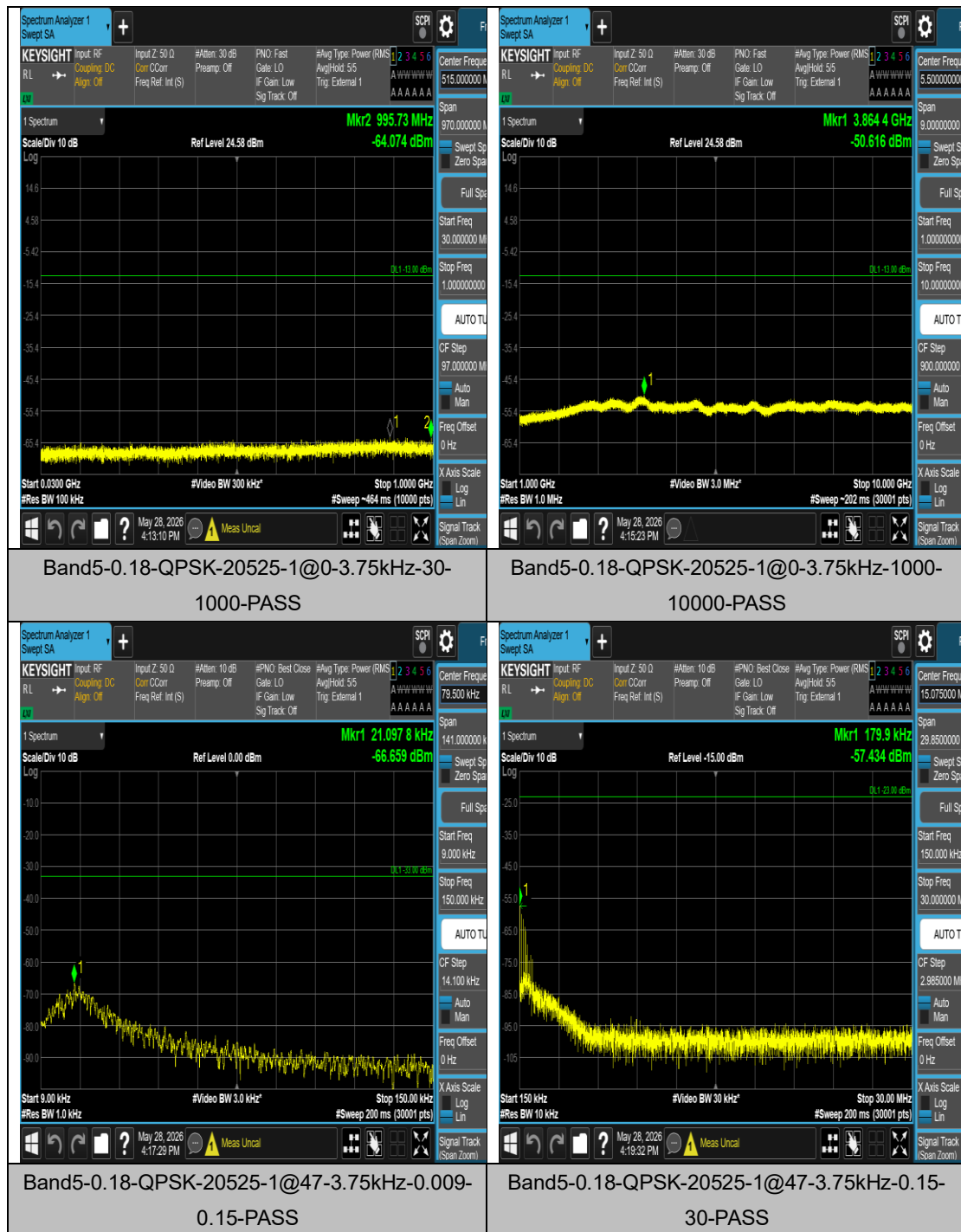
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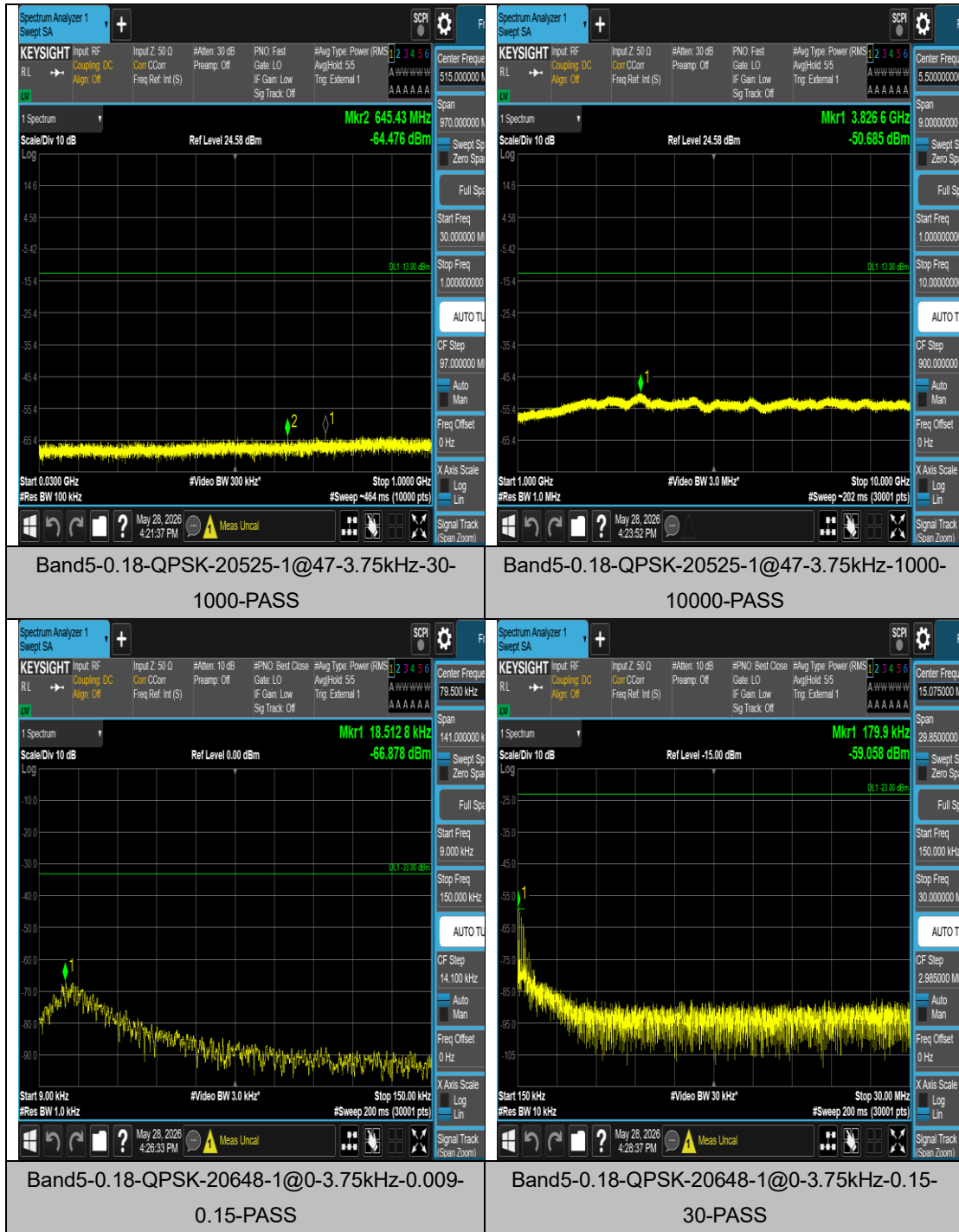


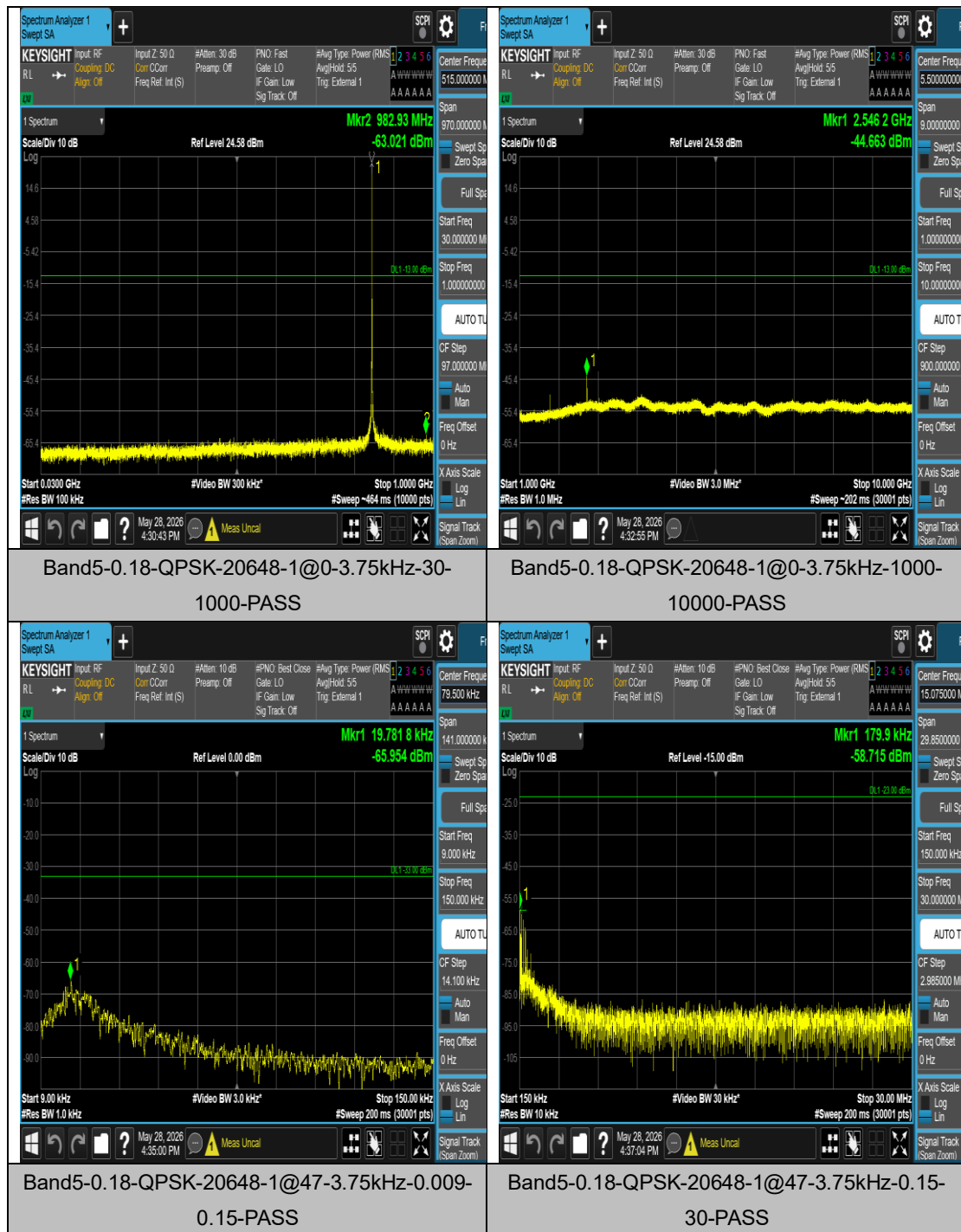
Band5-0.18-QPSK-20525-1@0-3.75kHz-0.009-0.15-PASS

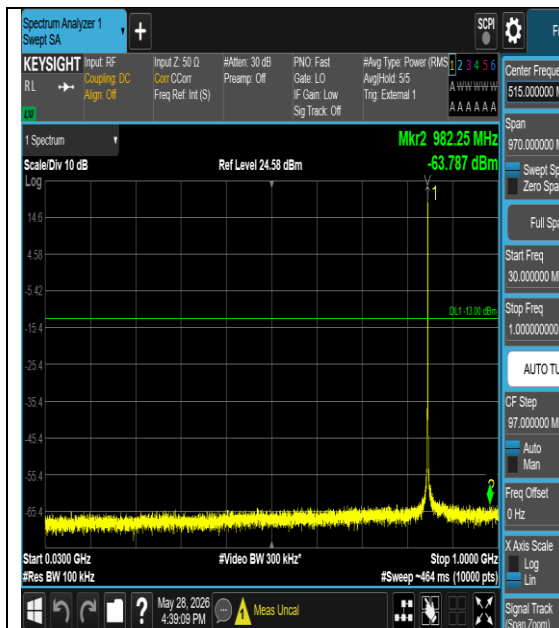


Band5-0.18-QPSK-20525-1@0-3.75kHz-0.15-30-PASS

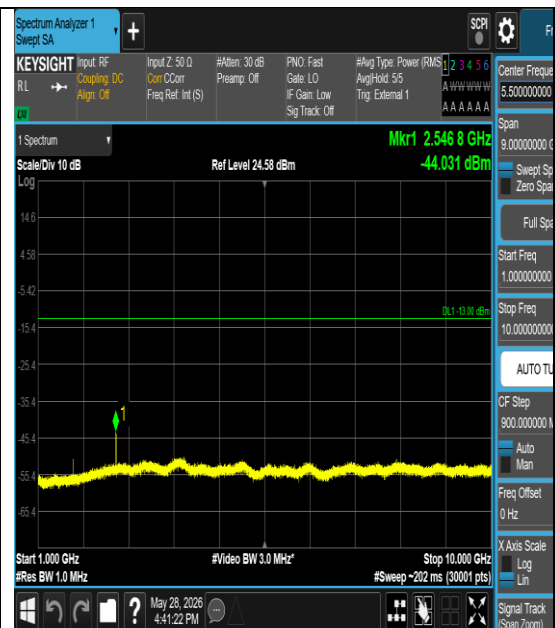




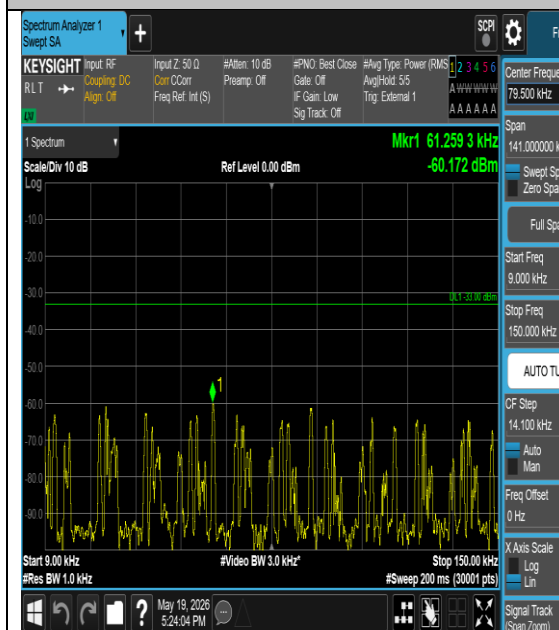




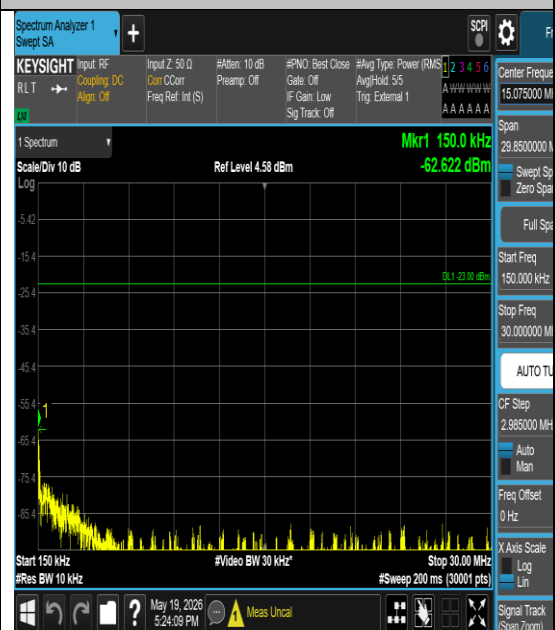
Band5-0.18-QPSK-20648-1@47-3.75kHz-30-1000-PASS



Band5-0.18-QPSK-20648-1@47-3.75kHz-1000-10000-PASS



Band5-0.18-QPSK-20402-12@0-15kHz-0.009-0.15-PASS



Band5-0.18-QPSK-20402-12@0-15kHz-0.15-30-PASS

