

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 13	Stand-Alone	3.75k Hz	0.18	QPSK	23182	1@0	22.87	22.95	PASS
Band 13	Stand-Alone	3.75k Hz	0.18	QPSK	23182	1@47	22.88	22.96	PASS
Band 13	Stand-Alone	3.75k Hz	0.18	BPSK	23182	1@0	23.1	23.18	PASS
Band 13	Stand-Alone	3.75k Hz	0.18	BPSK	23182	1@47	22.86	22.94	PASS
Band 13	Stand-Alone	3.75k Hz	0.18	QPSK	23230	1@0	23.13	23.21	PASS
Band 13	Stand-Alone	3.75k Hz	0.18	QPSK	23230	1@47	23.09	23.17	PASS
Band 13	Stand-Alone	3.75k Hz	0.18	BPSK	23230	1@0	23.13	23.21	PASS
Band 13	Stand-Alone	3.75k Hz	0.18	BPSK	23230	1@47	23.08	23.16	PASS
Band 13	Stand-Alone	3.75k Hz	0.18	QPSK	23278	1@0	22.96	23.04	PASS
Band 13	Stand-Alone	3.75k Hz	0.18	QPSK	23278	1@47	22.93	23.01	PASS
Band 13	Stand-Alone	3.75k Hz	0.18	BPSK	23278	1@0	23.21	23.29	PASS
Band 13	Stand-Alone	3.75k Hz	0.18	BPSK	23278	1@47	22.89	22.97	PASS
Band 13	Stand-Alone	15kHz	0.18	QPSK	23182	1@0	23.34	23.42	PASS
Band 13	Stand-Alone	15kHz	0.18	QPSK	23182	1@11	23.31	23.39	PASS
Band 13	Stand-Alone	15kHz	0.18	QPSK	23182	3@3	23.65	23.73	PASS
Band 13	Stand-Alone	15kHz	0.18	BPSK	23182	1@0	23.33	23.41	PASS
Band 13	Stand-Alone	15kHz	0.18	BPSK	23182	1@11	23.31	23.39	PASS

Band 13	Stand- Alone	15kHz	0.18	QPSK	23230	1@0	23.54	23.62	PASS
Band 13	Stand- Alone	15kHz	0.18	QPSK	23230	1@11	23.53	23.61	PASS
Band 13	Stand- Alone	15kHz	0.18	QPSK	23230	3@3	23.88	23.96	PASS
Band 13	Stand- Alone	15kHz	0.18	BPSK	23230	1@0	23.51	23.59	PASS
Band 13	Stand- Alone	15kHz	0.18	BPSK	23230	1@11	23.53	23.61	PASS
Band 13	Stand- Alone	15kHz	0.18	QPSK	23278	1@0	23.33	23.41	PASS
Band 13	Stand- Alone	15kHz	0.18	QPSK	23278	1@11	23.37	23.45	PASS
Band 13	Stand- Alone	15kHz	0.18	QPSK	23278	3@3	23.86	23.94	PASS
Band 13	Stand- Alone	15kHz	0.18	BPSK	23278	1@0	23.35	23.43	PASS
Band 13	Stand- Alone	15kHz	0.18	BPSK	23278	1@11	23.35	23.43	PASS

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

Test Result

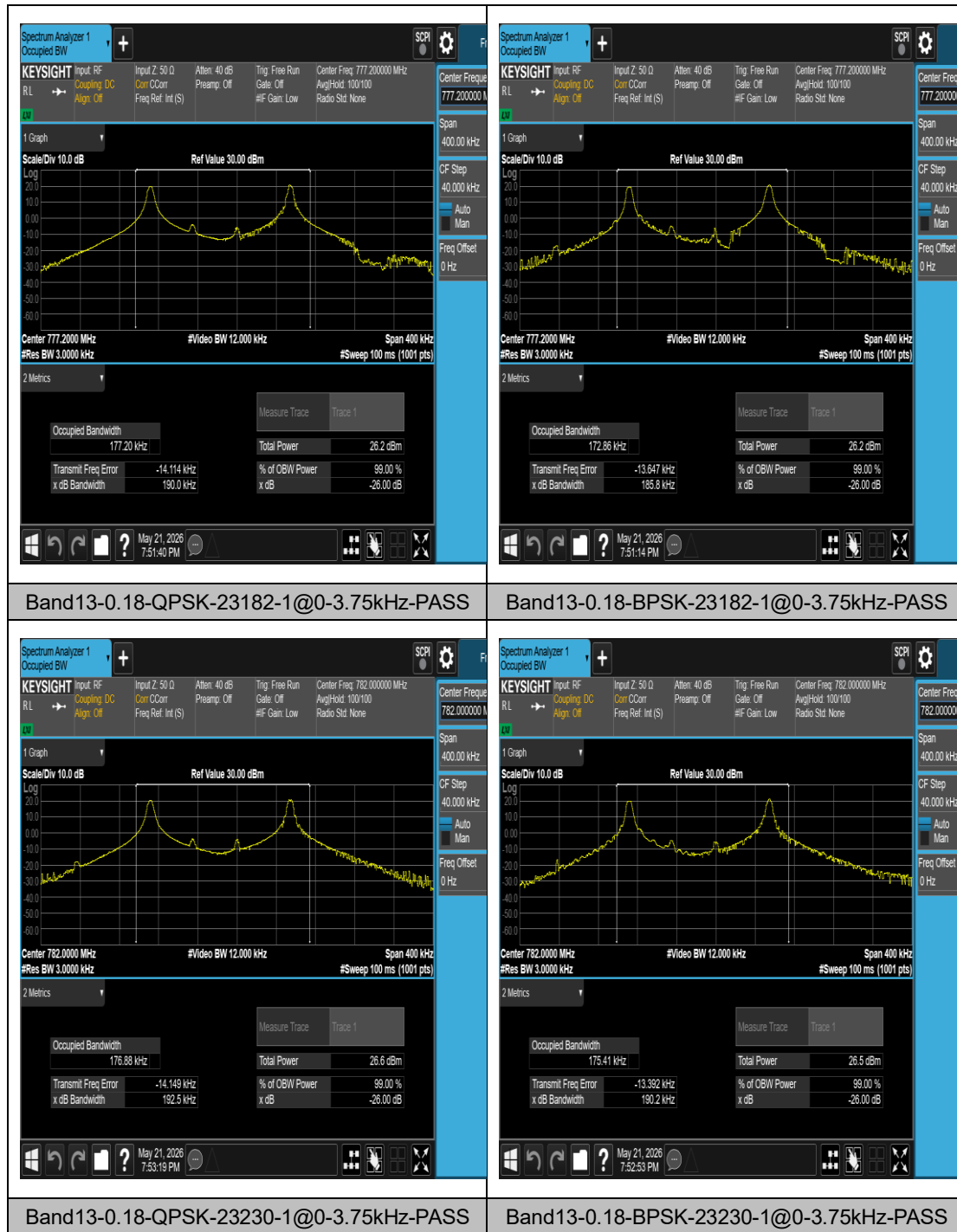
Band	OpMode	SCS	BW	Modulation	Channel	Tones	Result (dBm)	Limit (dBm)	Verdict
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23230	1@0	4.85	<=13	PASS
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23230	1@47	4.81	<=13	PASS
Band13	Stand-Alone	3.75kHz	0.18	BPSK	23230	1@0	4.92	<=13	PASS
Band13	Stand-Alone	3.75kHz	0.18	BPSK	23230	1@47	4.89	<=13	PASS
Band13	Stand-Alone	15kHz	0.18	QPSK	23230	1@0	6.15	<=13	PASS
Band13	Stand-Alone	15kHz	0.18	QPSK	23230	1@11	6.19	<=13	PASS
Band13	Stand-Alone	15kHz	0.18	QPSK	23230	3@3	12.05	<=13	PASS
Band13	Stand-Alone	15kHz	0.18	BPSK	23230	1@0	6.14	<=13	PASS
Band13	Stand-Alone	15kHz	0.18	BPSK	23230	1@11	6.08	<=13	PASS

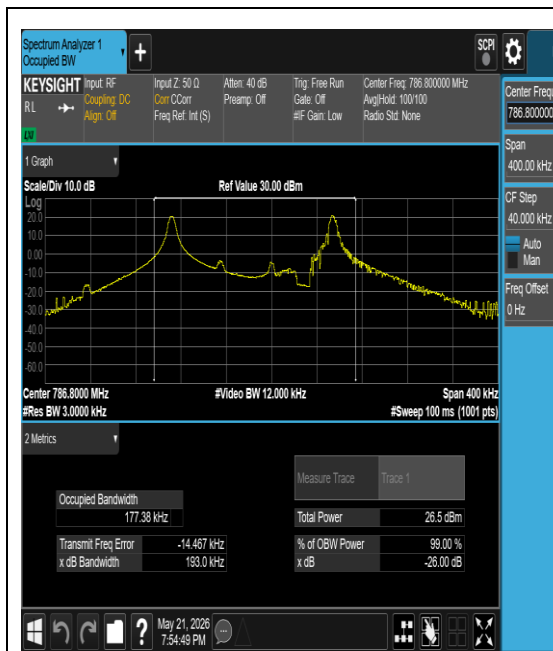
Appendix C: Emission Bandwidth for NB1

Test Result

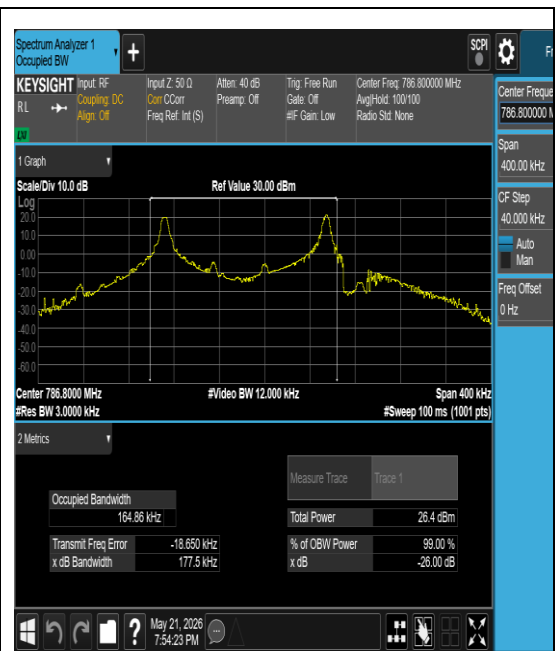
Band	OpMode	SCS	BW	Modulation	Channel	Tones	OBW(MHz)	EBW(MHz)	Verdict
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23182	1@0	0.17720	0.1900	PASS
Band13	Stand-Alone	3.75kHz	0.18	BPSK	23182	1@0	0.17286	0.1858	PASS
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23230	1@0	0.17688	0.1925	PASS
Band13	Stand-Alone	3.75kHz	0.18	BPSK	23230	1@0	0.17541	0.1902	PASS
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23278	1@0	0.17738	0.1930	PASS
Band13	Stand-Alone	3.75kHz	0.18	BPSK	23278	1@0	0.16486	0.1775	PASS
Band13	Stand-Alone	15kHz	0.18	QPSK	23182	12@0	0.19350	0.2364	PASS
Band13	Stand-Alone	15kHz	0.18	BPSK	23182	12@0	0.20348	0.2407	PASS
Band13	Stand-Alone	15kHz	0.18	QPSK	23230	12@0	0.19523	0.2244	PASS
Band13	Stand-Alone	15kHz	0.18	BPSK	23230	12@0	0.19723	0.2506	PASS
Band13	Stand-Alone	15kHz	0.18	QPSK	23278	12@0	0.19696	0.2358	PASS
Band13	Stand-Alone	15kHz	0.18	BPSK	23278	12@0	0.20188	0.2379	PASS

Test Graphs

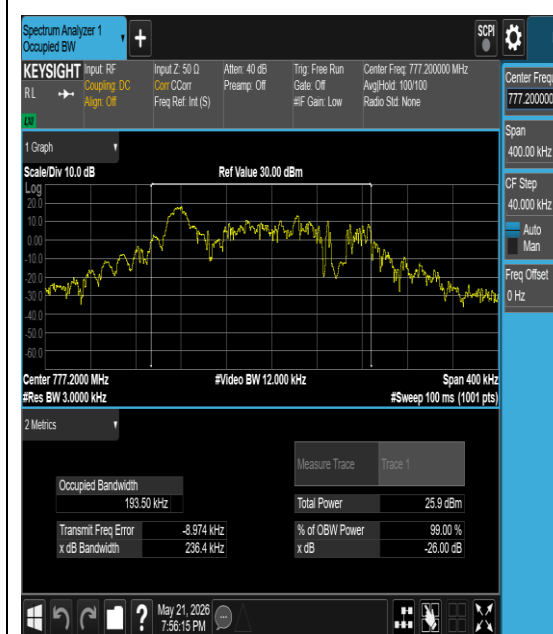




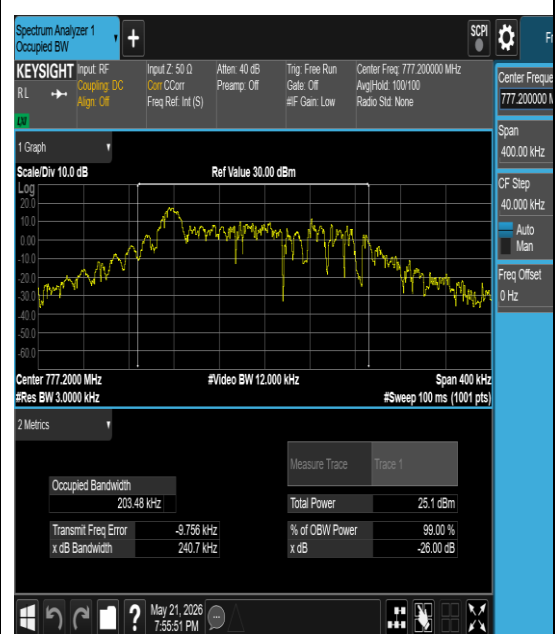
Band13-0.18-QPSK-23278-1@0-3.75kHz-PASS



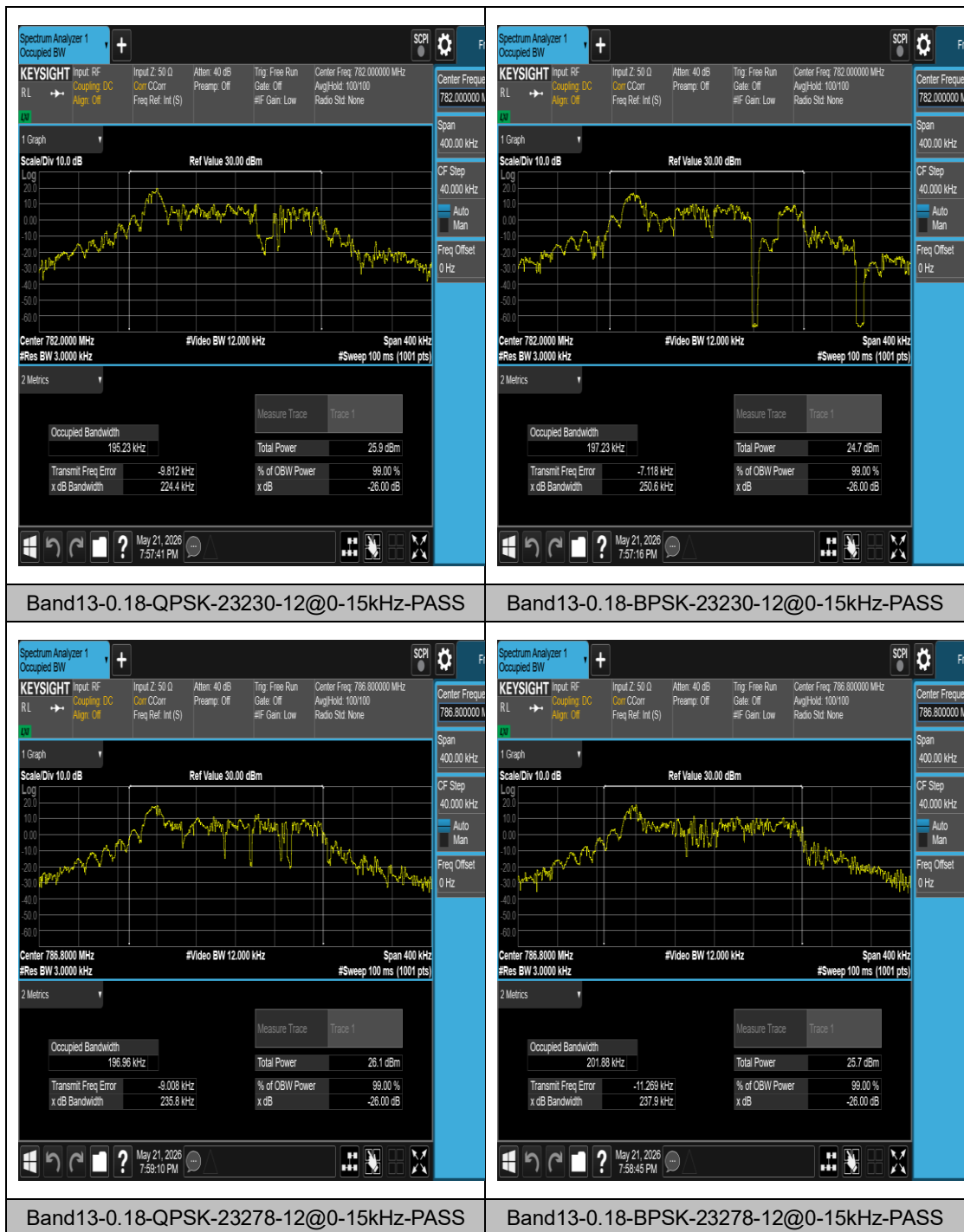
Band13-0.18-BPSK-23278-1@0-3.75kHz-PASS



Band13-0.18-QPSK-23182-12@0-15kHz-PASS



Band13-0.18-BPSK-23182-12@0-15kHz-PASS

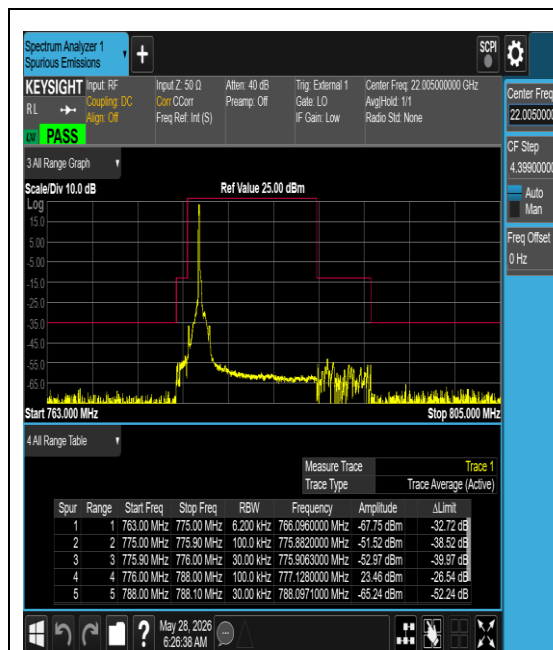


Appendix D: Band Edge for NB1

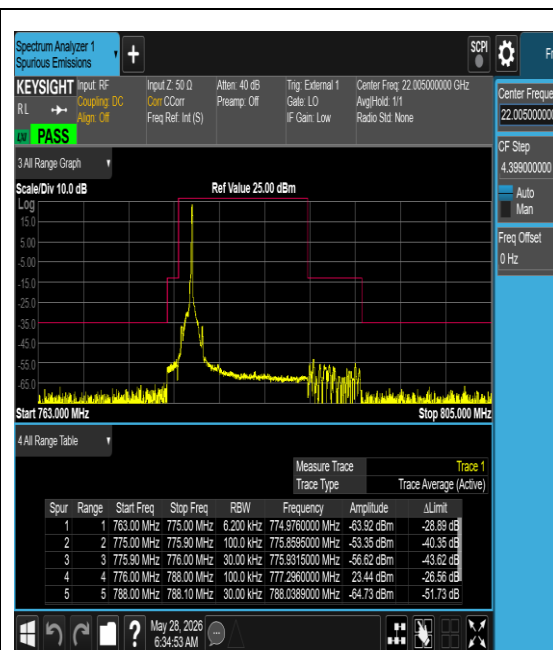
Test Result

Band	OpMode	SCS	BW	Modulation	Channel	Tones	Result (dBm)	Verdict
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23182	1@0	-65.93	PASS
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23182	1@47	-63.92	PASS
Band13	Stand-Alone	3.75kHz	0.18	BPSK	23182	1@0	-65.93	PASS
Band13	Stand-Alone	3.75kHz	0.18	BPSK	23182	1@47	-67.19	PASS
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23278	1@0	-66.21	PASS
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23278	1@47	-65.15	PASS
Band13	Stand-Alone	3.75kHz	0.18	BPSK	23278	1@0	-67.29	PASS
Band13	Stand-Alone	3.75kHz	0.18	BPSK	23278	1@47	-66.65	PASS
Band13	Stand-Alone	15kHz	0.18	QPSK	23182	1@0	-64.15	PASS
Band13	Stand-Alone	15kHz	0.18	QPSK	23182	1@11	-65.26	PASS
Band13	Stand-Alone	15kHz	0.18	QPSK	23182	12@0	-63.21	PASS
Band13	Stand-Alone	15kHz	0.18	BPSK	23182	1@0	-65.03	PASS
Band13	Stand-Alone	15kHz	0.18	BPSK	23182	1@11	-63.68	PASS
Band13	Stand-Alone	15kHz	0.18	QPSK	23278	1@0	-66.00	PASS
Band13	Stand-Alone	15kHz	0.18	QPSK	23278	1@11	-44.49	PASS
Band13	Stand-Alone	15kHz	0.18	QPSK	23278	12@0	-65.64	PASS
Band13	Stand-Alone	15kHz	0.18	BPSK	23278	1@0	-65.63	PASS
Band13	Stand-Alone	15kHz	0.18	BPSK	23278	1@11	-64.18	PASS

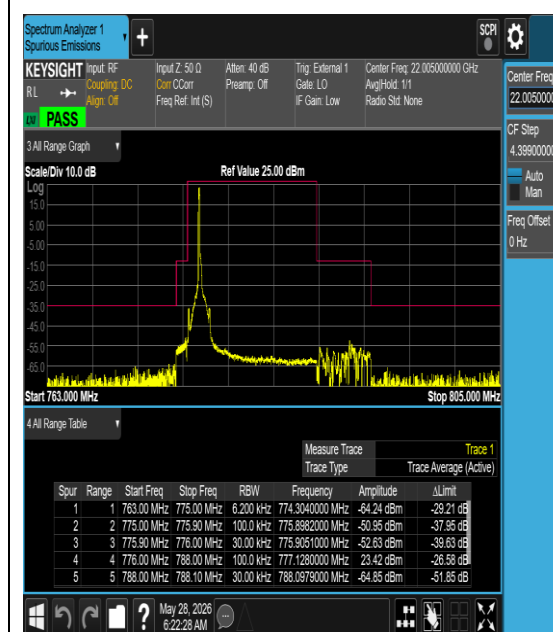
Test Graphs



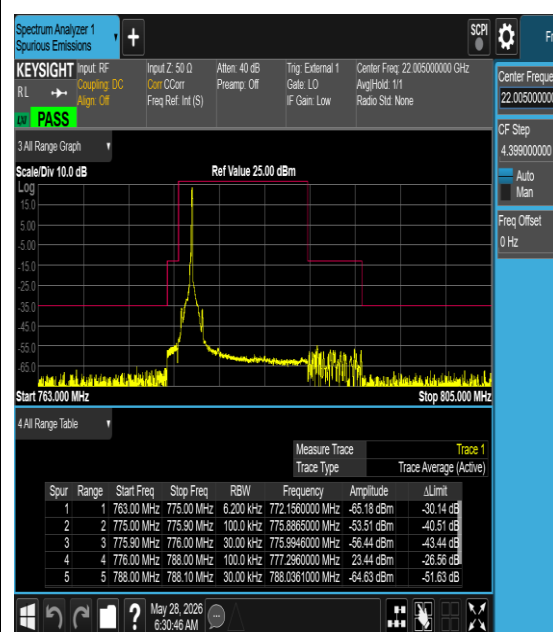
Band13-0.18-QPSK-23182-1@0-3.75kHz-PASS



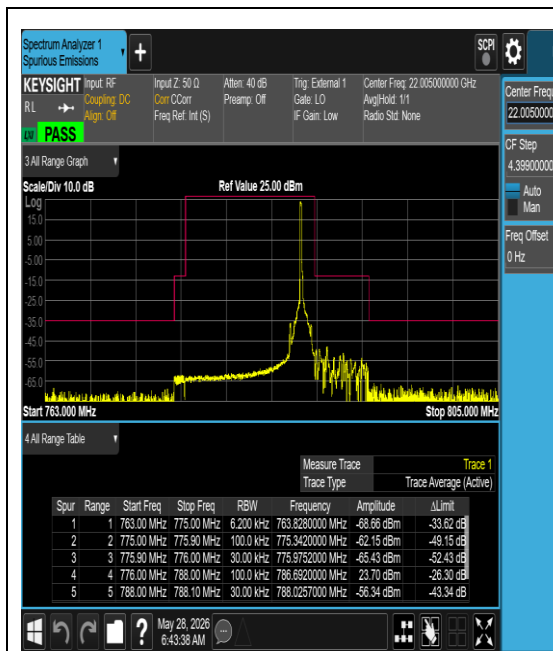
Band13-0.18-QPSK-23182-1@47-3.75kHz-
PASS



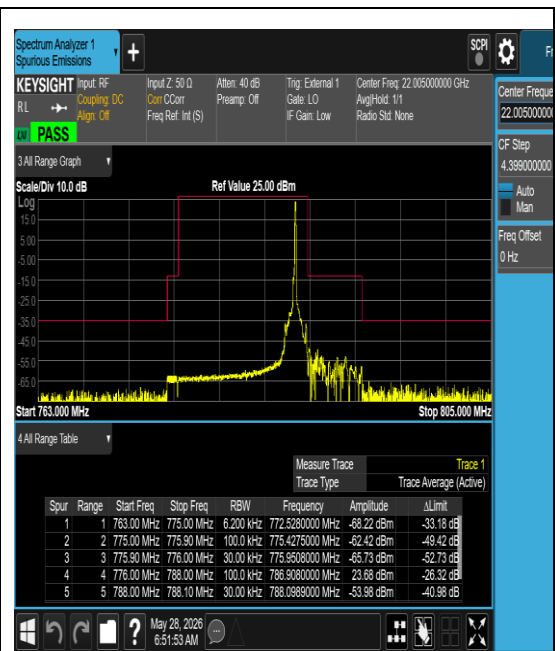
Band13-0.18-BPSK-23182-1@0-3.75kHz-PASS



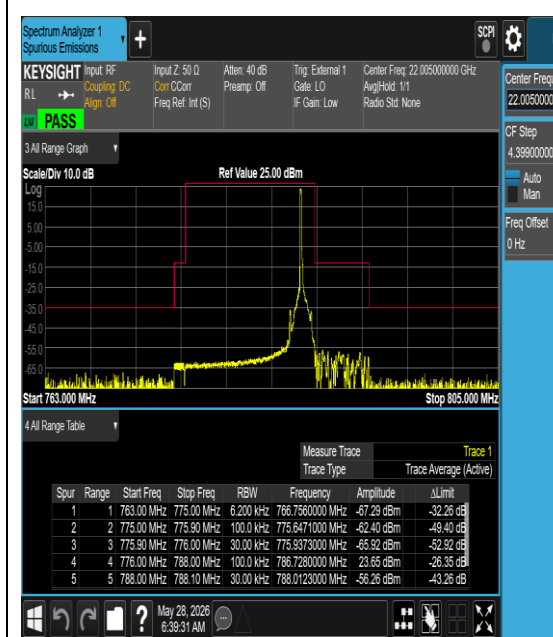
Band13-0.18-BPSK-23182-1@47-3.75kHz-PASS



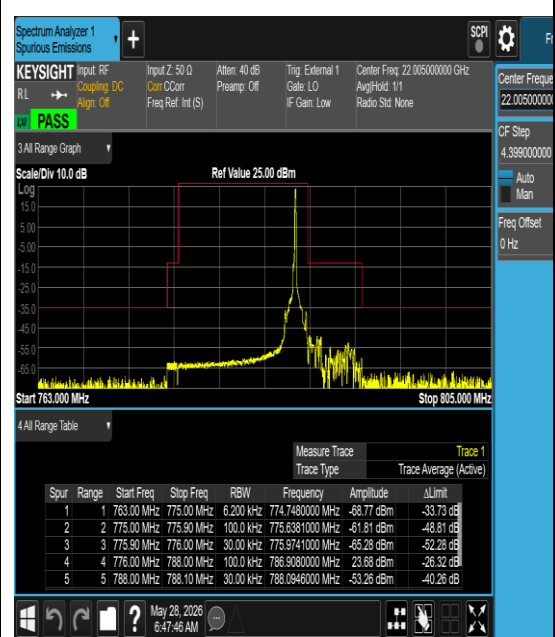
Band13-0.18-QPSK-23278-1@0-3.75kHz-PASS



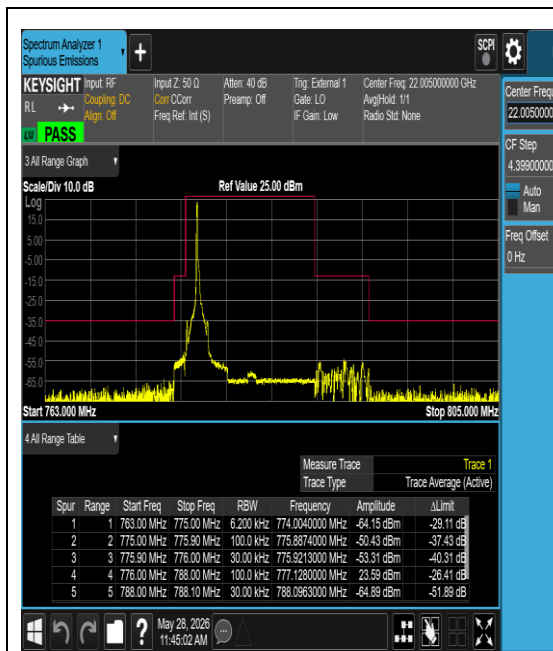
Band13-0.18-QPSK-23278-1@47-3.75kHz-PASS



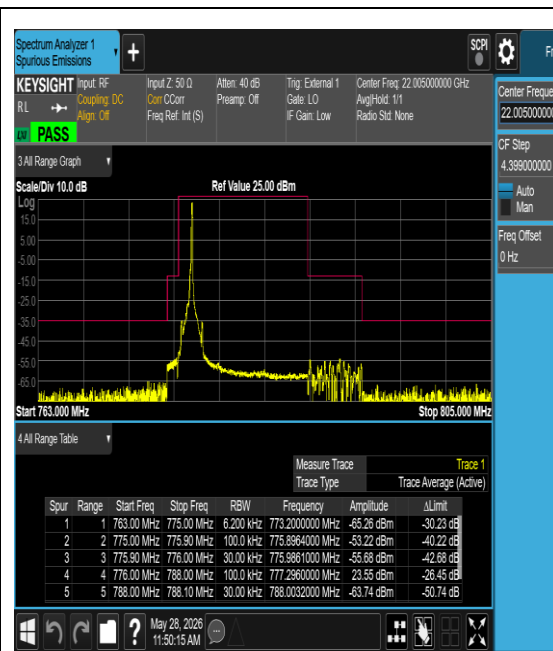
Band13-0.18-BPSK-23278-1@0-3.75kHz-PASS



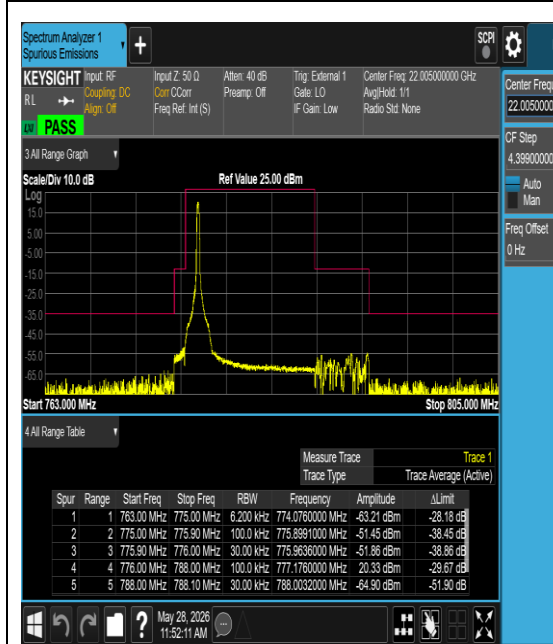
Band13-0.18-BPSK-23278-1@47-3.75kHz-PASS



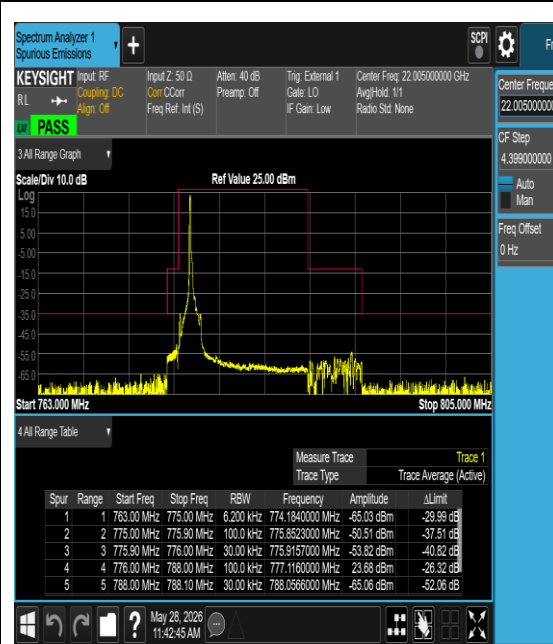
Band13-0.18-QPSK-23182-1@0-15kHz-PASS



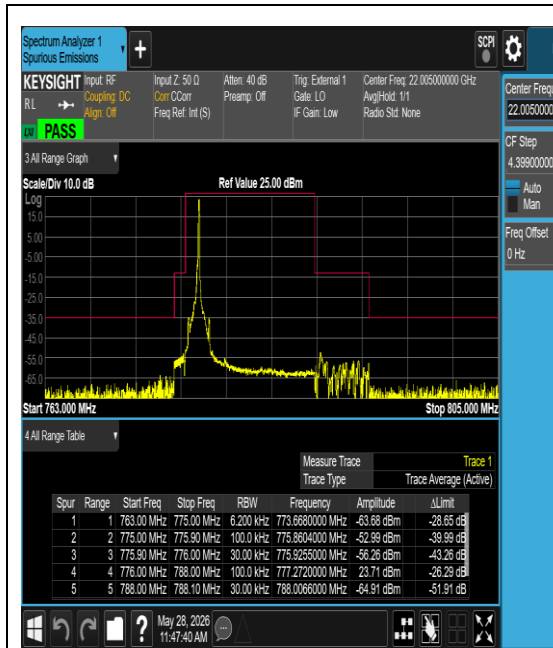
Band13-0.18-QPSK-23182-1@11-15kHz-PASS



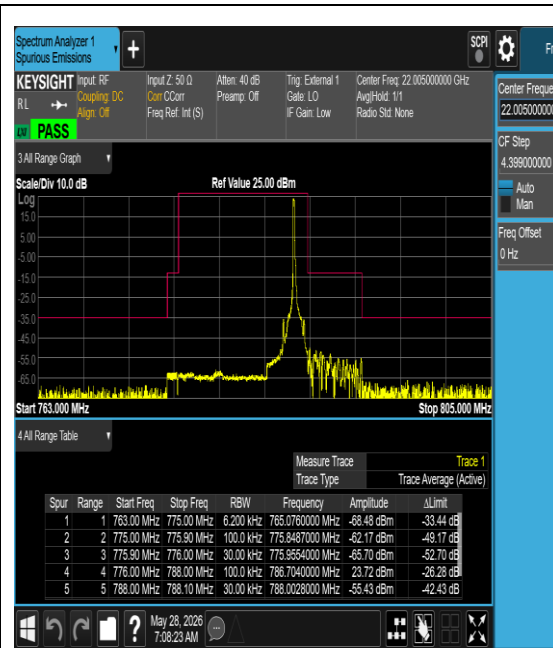
Band13-0.18-QPSK-23182-12@0-15kHz-PASS



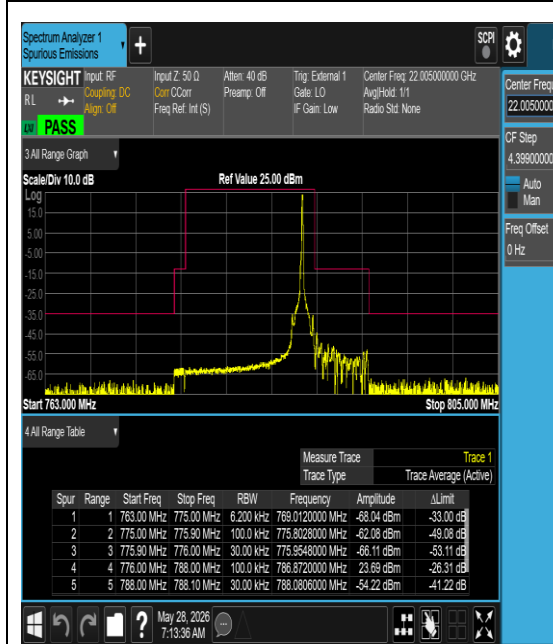
Band13-0.18-BPSK-23182-1@0-15kHz-PASS



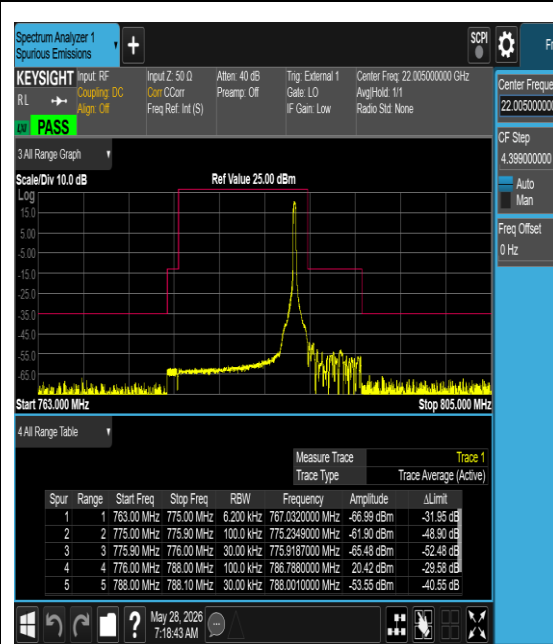
Band13-0.18-BPSK-23182-1@11-15kHz-PASS



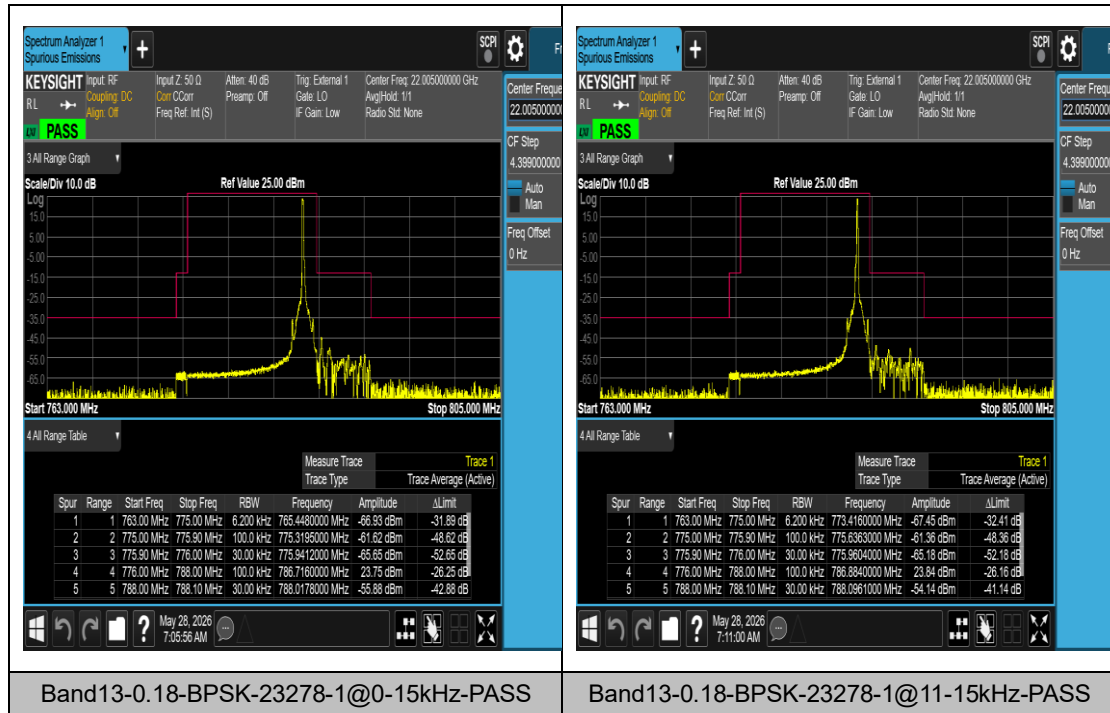
Band13-0.18-QPSK-23278-1@0-15kHz-PASS



Band13-0.18-QPSK-23278-1@11-15kHz-PASS



Band13-0.18-QPSK-23278-12@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
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23182	1@0	0.009	0.15	-56.5	-33	PASS
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23182	1@0	0.15	30	-62.06	-23	PASS
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23182	1@0	30	1000	-63.36	-13	PASS
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23182	1@0	763	775	-65.22	-35	PASS
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23182	1@0	793	805	-65.42	-35	PASS
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23182	1@0	1000	10000	-48.45	-13	PASS
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23182	1@47	0.009	0.15	-56.44	-33	PASS
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23182	1@47	0.15	30	-63.27	-23	PASS
Band13	Stand-Alone	3.75kHz	0.18	QPSK	23182	1@47	30	1000	-63.04	-13	PASS

Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23182	1@47	763	775	-64.51	-35	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23182	1@47	793	805	-65.56	-35	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23182	1@47	1000	1000 0	-49.21	-13	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23230	1@0	0.009	0.15	-56.12	-33	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23230	1@0	0.15	30	-62.89	-23	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23230	1@0	30	1000	-63.13	-13	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23230	1@0	763	775	-65.66	-35	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23230	1@0	793	805	-65.28	-35	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23230	1@0	1000	1000 0	-48.06	-13	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23230	1@47	0.009	0.15	-57.01	-33	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23230	1@47	0.15	30	-62.98	-23	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23230	1@47	30	1000	-62.89	-13	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23230	1@47	763	775	-66.31	-35	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23230	1@47	793	805	-65.88	-35	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23230	1@47	1000	1000 0	-50.4	-13	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23278	1@0	0.009	0.15	-57.69	-33	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23278	1@0	0.15	30	-65.39	-23	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23278	1@0	30	1000	-62.43	-13	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23278	1@0	763	775	-66.15	-35	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23278	1@0	793	805	-65.75	-35	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23278	1@0	1000	1000 0	-50.69	-13	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23278	1@47	0.009	0.15	-57.51	-33	PASS

Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23278	1@47	0.15	30	-67.9	-23	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23278	1@47	30	1000	-60.75	-13	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23278	1@47	763	775	-66.36	-35	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23278	1@47	793	805	-65.58	-35	PASS
Band1 3	Stand-Alone	3.75kHz	0.18	QPSK	23278	1@47	1000	1000 0	-48.54	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23182	12@0	0.009	0.15	-57.82	-33	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23182	12@0	0.15	30	-64.09	-23	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23182	12@0	30	1000	-63.5	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23182	12@0	763	775	-65.94	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23182	12@0	793	805	-65.87	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23182	12@0	1000	1000 0	-50.39	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23182	1@0	0.009	0.15	-56.77	-33	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23182	1@0	0.15	30	-65.21	-23	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23182	1@0	30	1000	-63.52	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23182	1@0	763	775	-65.03	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23182	1@0	793	805	-66.06	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23182	1@0	1000	1000 0	-51	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23182	1@11	0.009	0.15	-58.31	-33	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23182	1@11	0.15	30	-68.03	-23	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23182	1@11	30	1000	-63.59	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23182	1@11	763	775	-65.36	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23182	1@11	793	805	-66.2	-35	PASS

Band1 3	Stand-Alone	15kHz	0.18	BPSK	23182	1@11	1000	1000 0	-50.81	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23230	12@0	0.009	0.15	-59.23	-33	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23230	12@0	0.15	30	-63.11	-23	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23230	12@0	30	1000	-63.83	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23230	12@0	763	775	-66.38	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23230	12@0	793	805	-66.14	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23230	12@0	1000	1000 0	-50.78	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23230	1@0	0.009	0.15	-57.21	-33	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23230	1@0	0.15	30	-65.51	-23	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23230	1@0	30	1000	-62.91	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23230	1@0	763	775	-66.3	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23230	1@0	793	805	-66.38	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23230	1@0	1000	1000 0	-47.91	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23230	1@11	0.009	0.15	-59.01	-33	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23230	1@11	0.15	30	-65.24	-23	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23230	1@11	30	1000	-63.43	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23230	1@11	763	775	-65.7	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23230	1@11	793	805	-65.69	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23230	1@11	1000	1000 0	-50.45	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23278	12@0	0.009	0.15	-59.13	-33	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23278	12@0	0.15	30	-66.2	-23	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23278	12@0	30	1000	-63.73	-13	PASS

Band1 3	Stand-Alone	15kHz	0.18	QPSK	23278	12@0	763	775	-66.14	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23278	12@0	793	805	-65.58	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	QPSK	23278	12@0	1000	1000 0	-50.95	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23278	1@0	0.009	0.15	-56.87	-33	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23278	1@0	0.15	30	-66.29	-23	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23278	1@0	30	1000	-63.51	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23278	1@0	763	775	-65.89	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23278	1@0	793	805	-65.33	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23278	1@0	1000	1000 0	-50.6	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23278	1@11	0.009	0.15	-57.42	-33	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23278	1@11	0.15	30	-61.04	-23	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23278	1@11	30	1000	-63.61	-13	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23278	1@11	763	775	-66.27	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23278	1@11	793	805	-65.24	-35	PASS
Band1 3	Stand-Alone	15kHz	0.18	BPSK	23278	1@11	1000	1000 0	-50.93	-13	PASS

Test Graphs

