

Appendix-B LTE NB-IoT Band 2

Effective (Isotropic) Radiated Power Output Data for NB

Test Result

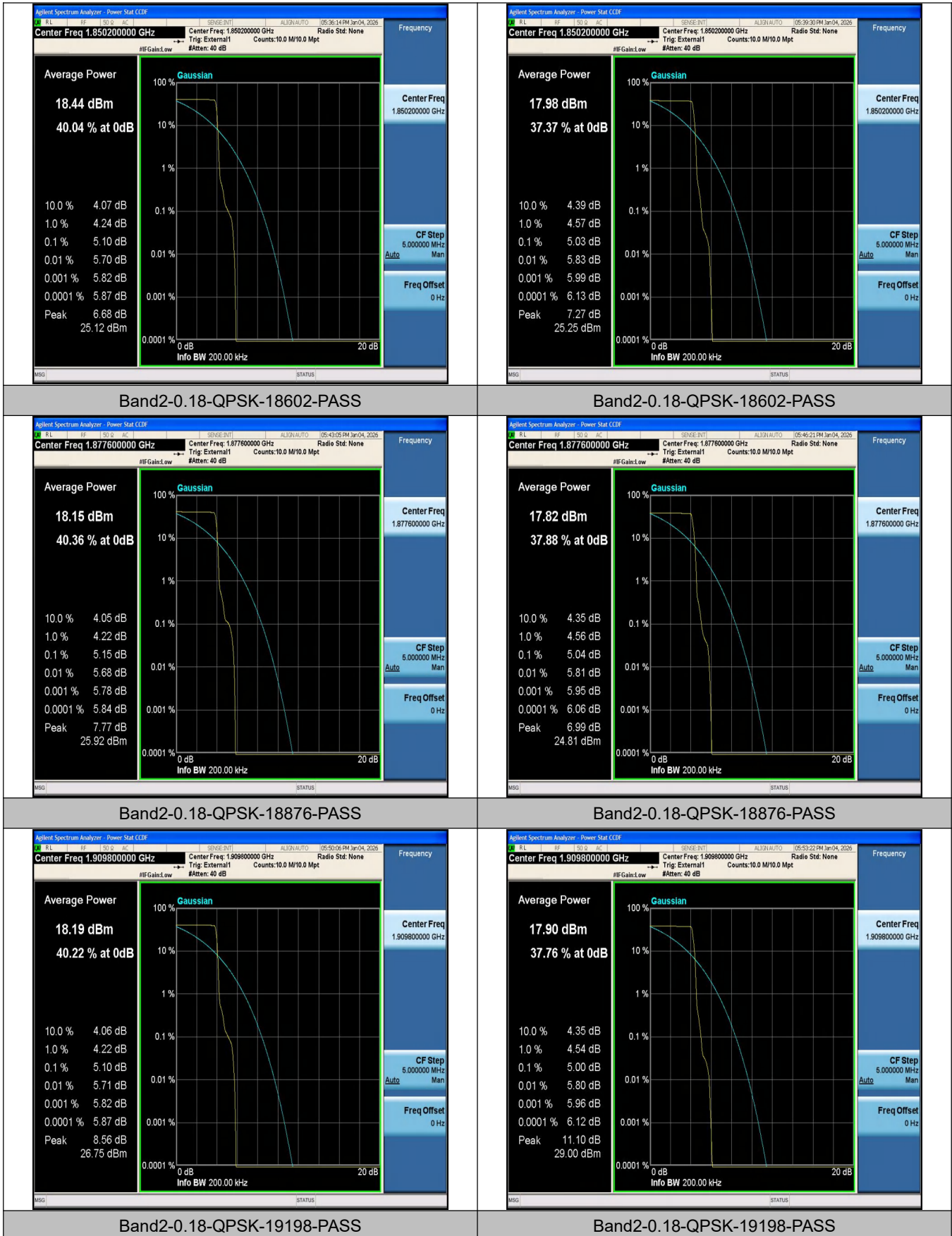
Band	OpMode	SCS	BW	Modulation	Channel	Tones	Result (dBm)	EIRP (dBm)	Limit	Verdict
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18602	1@0	21.82	23.41	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@0	21.8	23.39	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18602	1@47	21.64	23.23	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@47	21.75	23.34	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18876	1@0	21.58	23.17	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	21.66	23.25	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18876	1@47	21.53	23.12	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@47	21.55	23.14	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	19198	1@0	21.48	23.07	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@0	21.53	23.12	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	19198	1@47	21.4	22.99	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@47	21.47	23.06	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	1@0	20.89	22.48	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	1@0	20.9	22.49	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	1@11	20.82	22.41	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	1@11	20.85	22.44	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	1@0	21.71	23.3	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	1@0	21.71	23.3	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	1@11	21.62	23.21	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	1@11	21.63	23.22	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	1@0	20.66	22.25	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	1@0	20.66	22.25	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	1@11	20.55	22.14	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	1@11	20.57	22.16	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	3@3	21.14	22.73	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	3@3	20.84	22.43	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	3@3	20.65	22.24	33.00	PASS

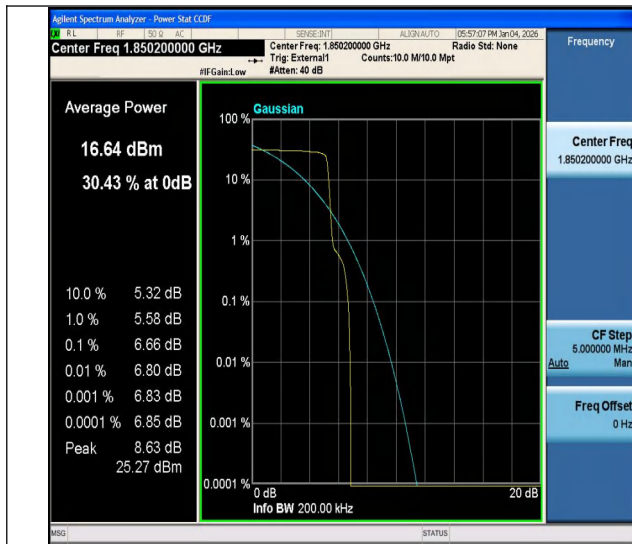
Peak-to-Average Ratio(CCDF) for NB

Test Result

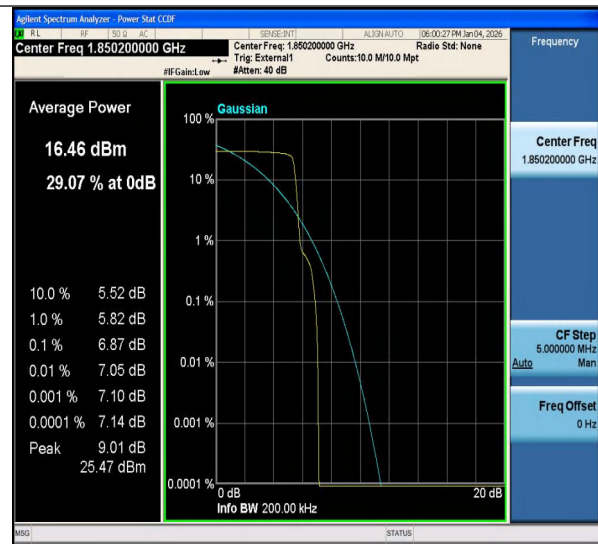
Band	OpMode	SCS	BW	Modulation	Channel	Tones	Result (dBm)	Limit (dBm)	Verdict
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@0	5.1	<=13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@47	5.03	<=13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	5.15	<=13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@47	5.04	<=13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@0	5.1	<=13	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@47	5	<=13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	1@0	6.66	<=13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	1@11	6.87	<=13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	1@0	6.64	<=13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	1@11	6.96	<=13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	1@0	6.57	<=13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	1@11	6.94	<=13	PASS

Test Graphs

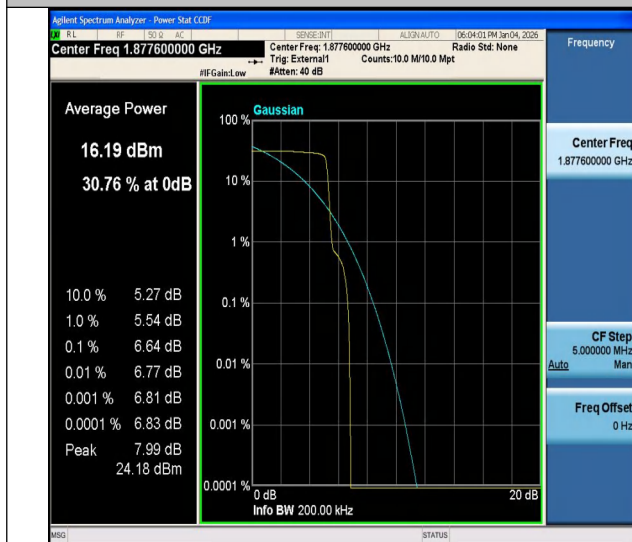




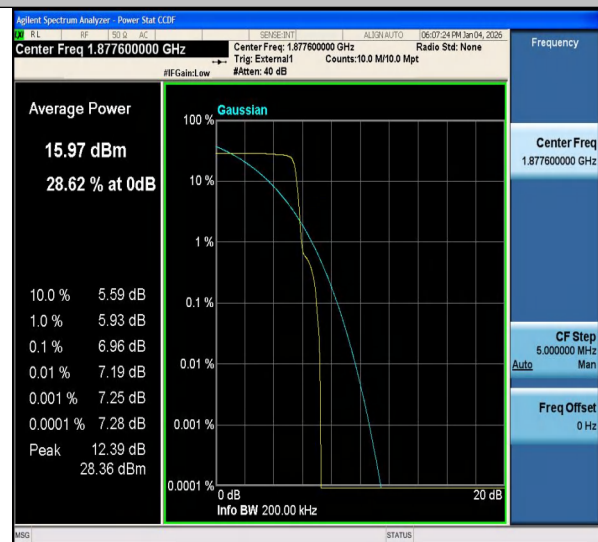
Band2-0.18-QPSK-18602-PASS



Band2-0.18-QPSK-18602-PASS



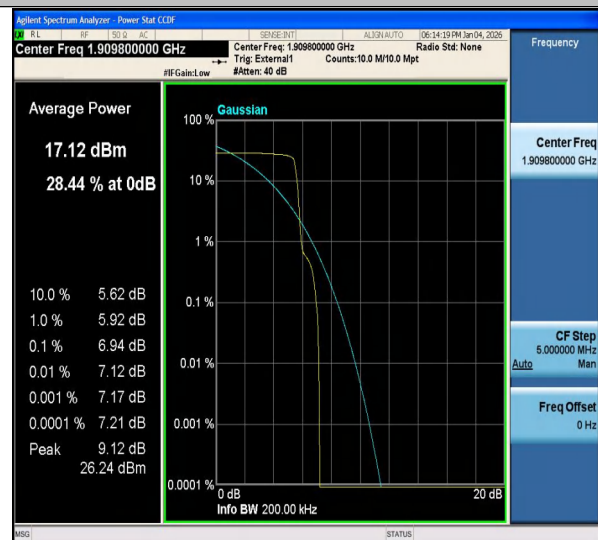
Band2-0.18-QPSK-18876-PASS



Band2-0.18-QPSK-18876-PASS



Band2-0.18-QPSK-19198-PASS



Band2-0.18-QPSK-19198-PASS

Emission Bandwidth for NB

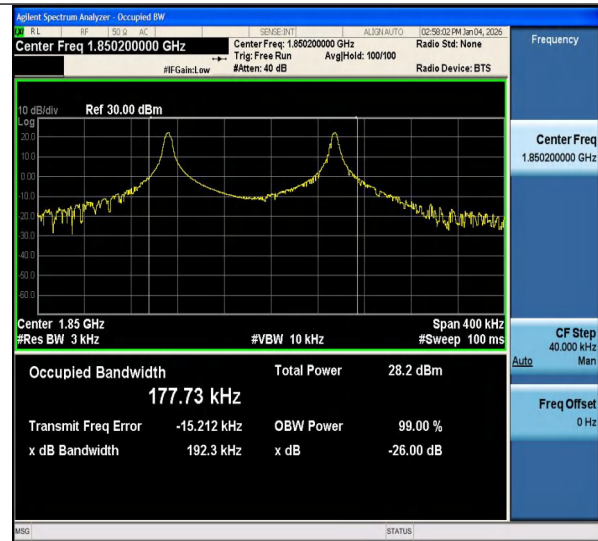
Test Result

Band	OpMode	SCS	BW	Modulation	Channel	Tones	OBW(MHz)	EBW(MHz)	Verdict
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18602	1@0	0.17692	0.1952	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@0	0.17773	0.1923	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18876	1@0	0.17780	0.1947	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	0.17797	0.1935	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	19198	1@0	0.17728	0.1948	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@0	0.17941	0.1953	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	1@0	0.12650	0.1147	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	12@0	0.19348	0.2230	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	12@0	0.19235	0.2238	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	1@0	0.12632	0.1184	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	1@0	0.11742	0.1020	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	12@0	0.19531	0.2227	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	0.19252	0.2138	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	1@0	0.12576	0.1027	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	12@0	0.19482	0.2261	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	12@0	0.19358	0.2226	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	1@0	0.12160	0.1141	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	1@0	0.11809	0.1156	PASS

Test Graphs



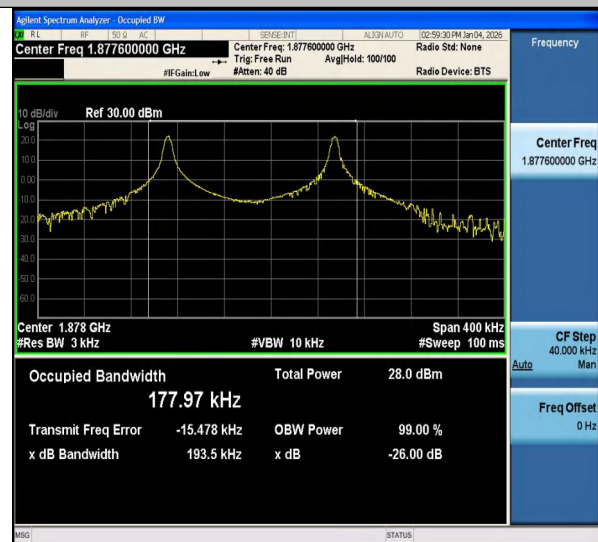
Band2-0.18-BPSK-18602-PASS



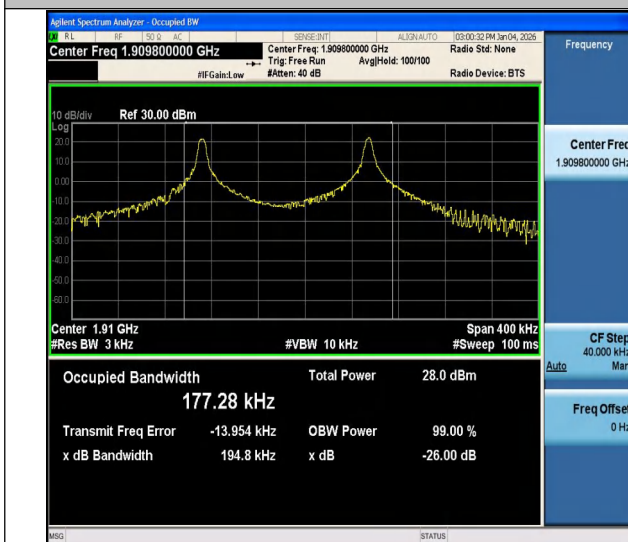
Band2-0.18-QPSK-18602-PASS



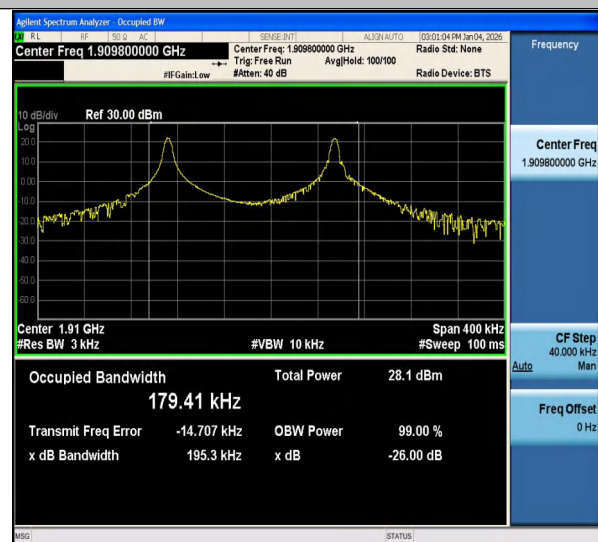
Band2-0.18-BPSK-18876-PASS



Band2-0.18-QPSK-18876-PASS



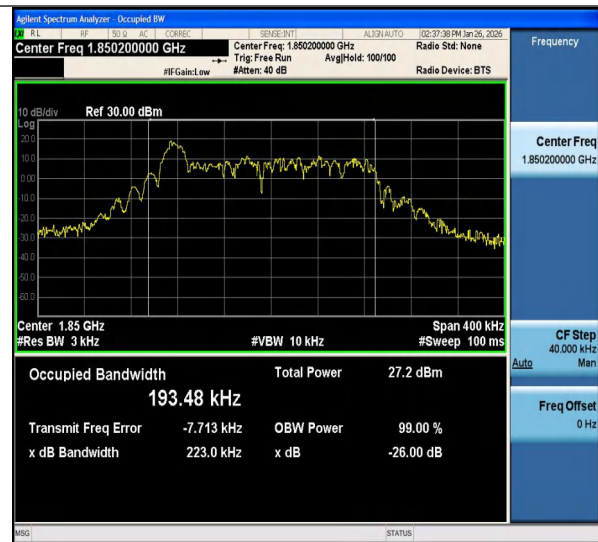
Band2-0.18-BPSK-19198-PASS



Band2-0.18-QPSK-19198-PASS



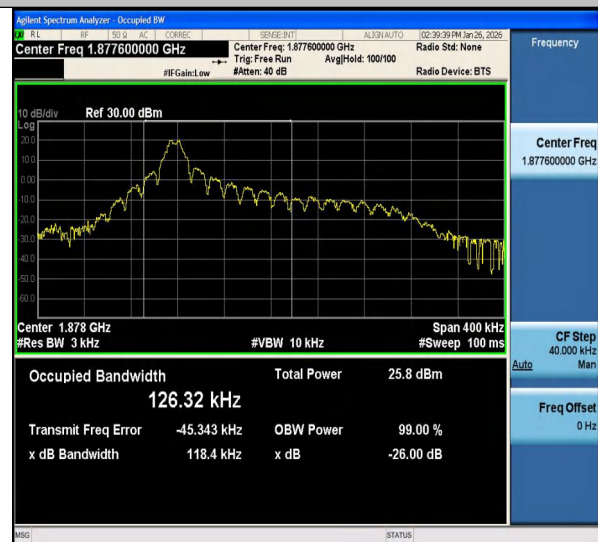
Band2-0.18-QPSK-18602-PASS



Band2-0.18-BPSK-18602-PASS



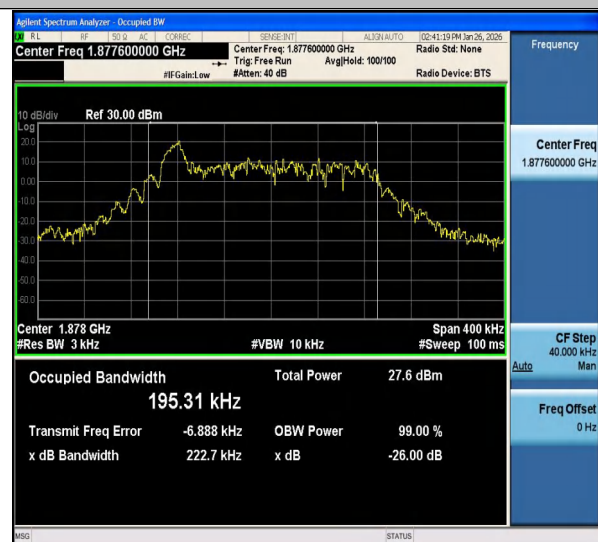
Band2-0.18-QPSK-18602-PASS



Band2-0.18-BPSK-18776-PASS



Band2-0.18-QPSK-18876-PASS



Band2-0.18-BPSK-18876-PASS



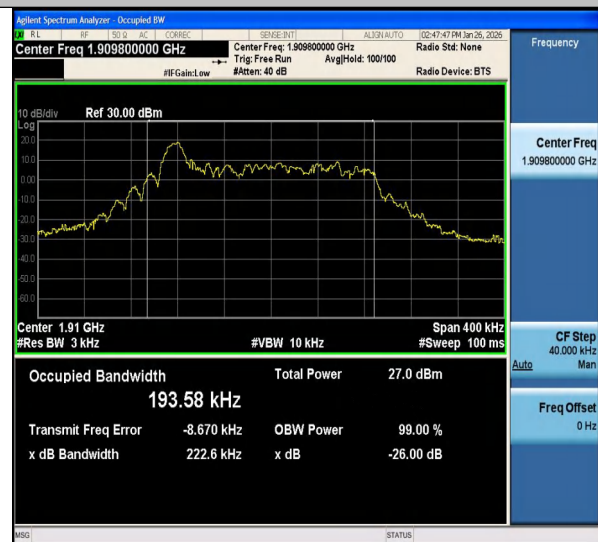
Band2-0.18-QPSK-18876-PASS



Band2-0.18-BPSK-19198-PASS



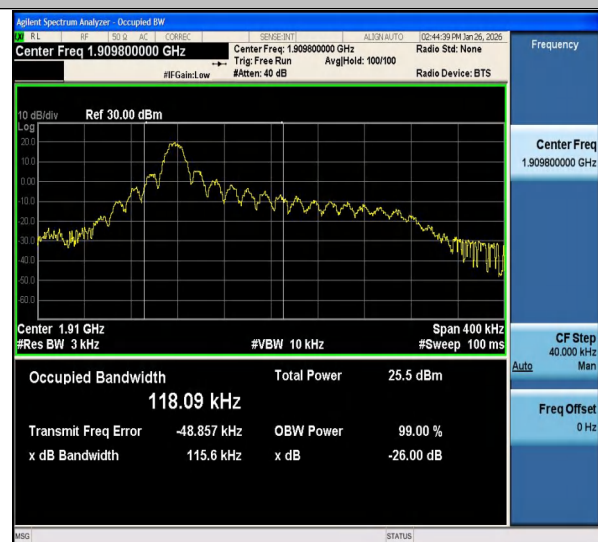
Band2-0.18-BPSK-19198-PASS



Band2-0.18-QPSK-19198-PASS



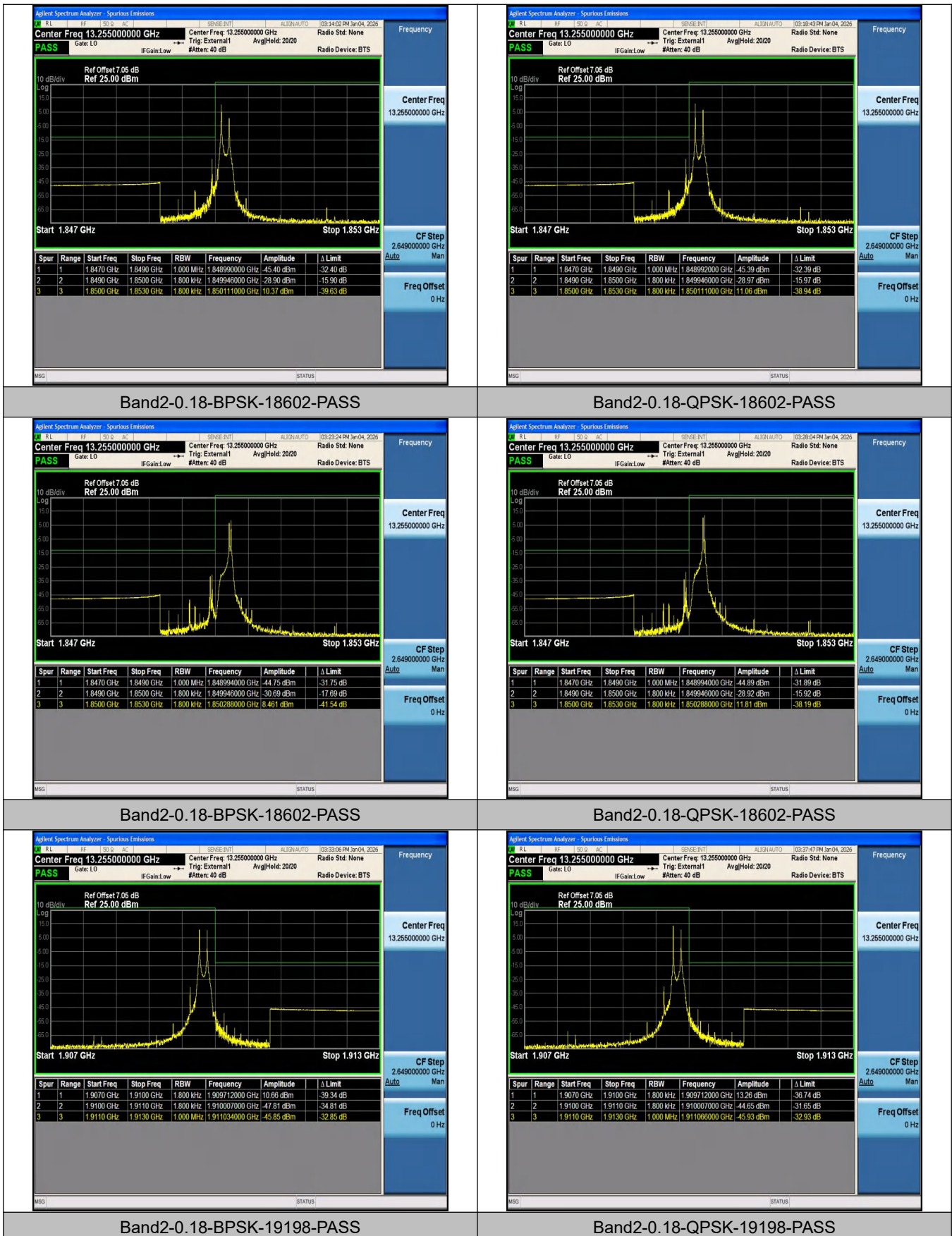
Band2-0.18-BPSK-18602-PASS

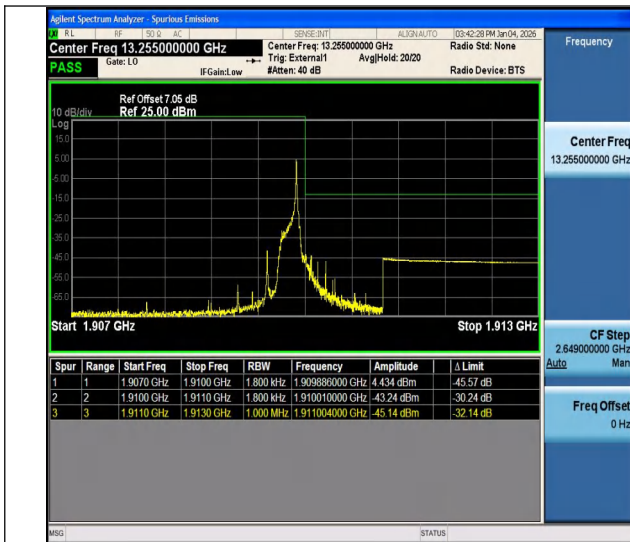


Band2-0.18-QPSK-19198-PASS

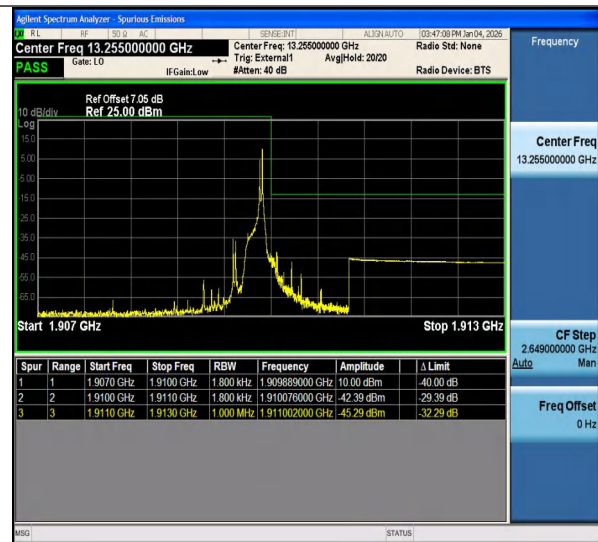
Band Edge for NB

Test Graphs

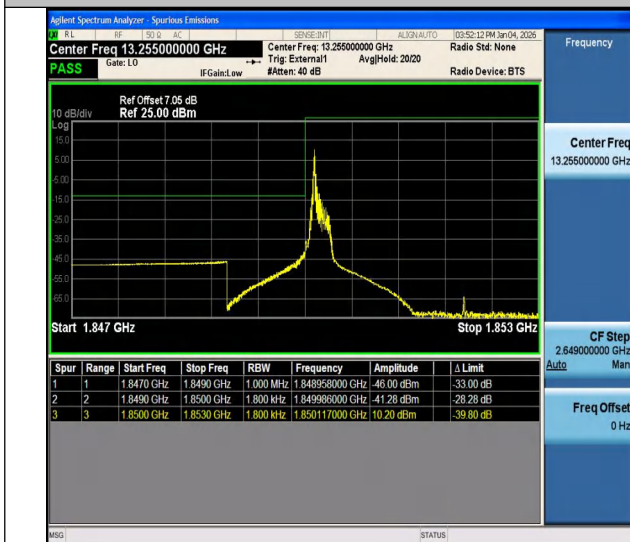




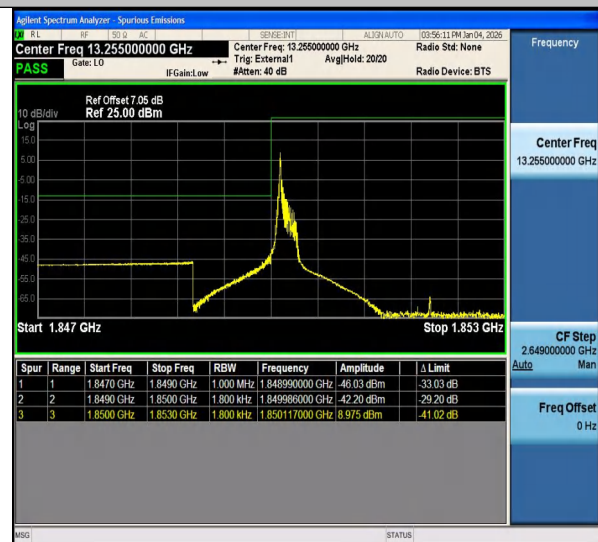
Band2-0.18-BPSK-19198-PASS



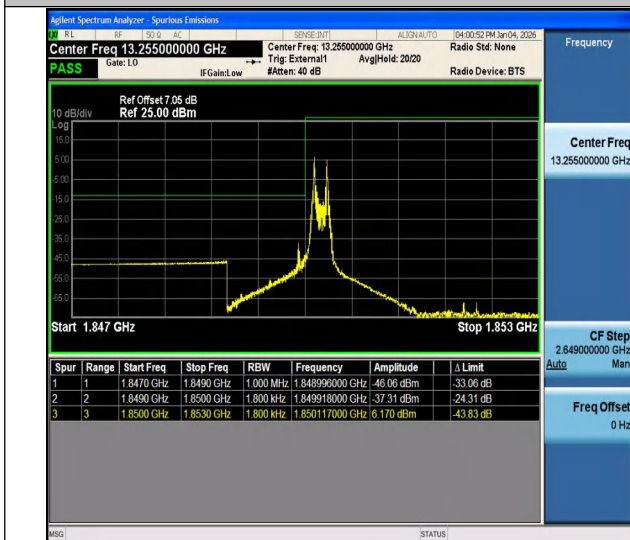
Band2-0.18-QPSK-19198-PASS



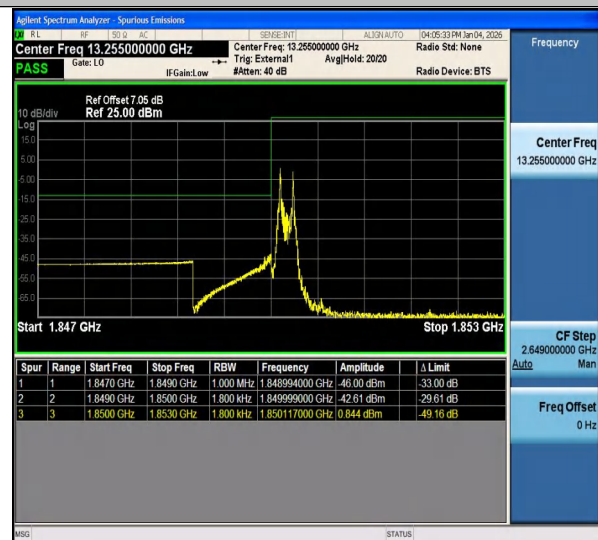
Band2-0.18-BPSK-18602-PASS



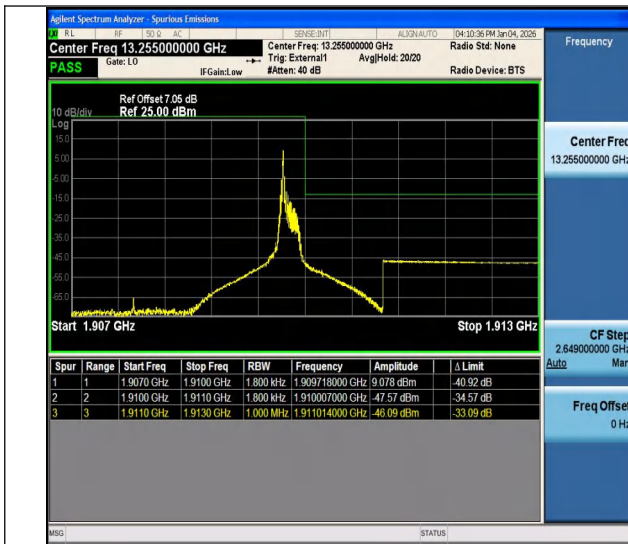
Band2-0.18-QPSK-18602-PASS



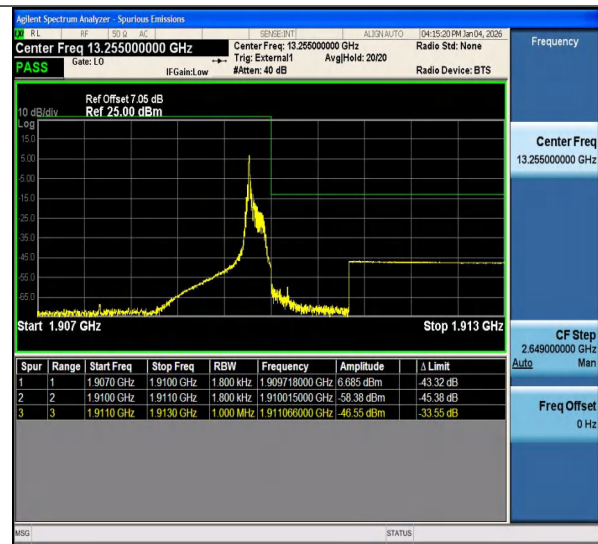
Band2-0.18-BPSK-18602-PASS



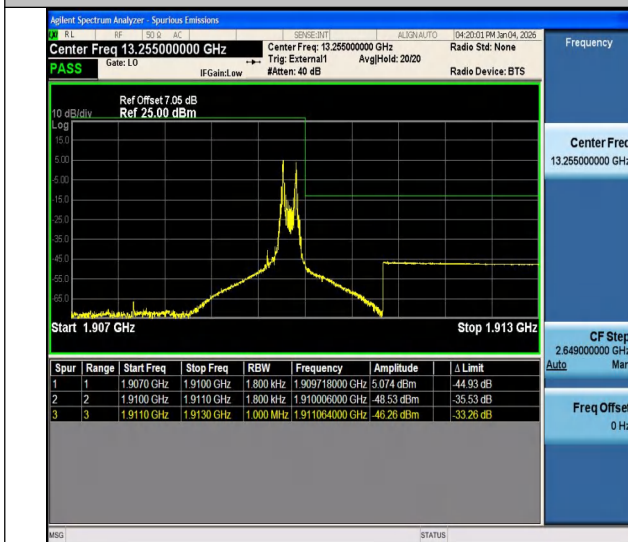
Band2-0.18-QPSK-18602-PASS



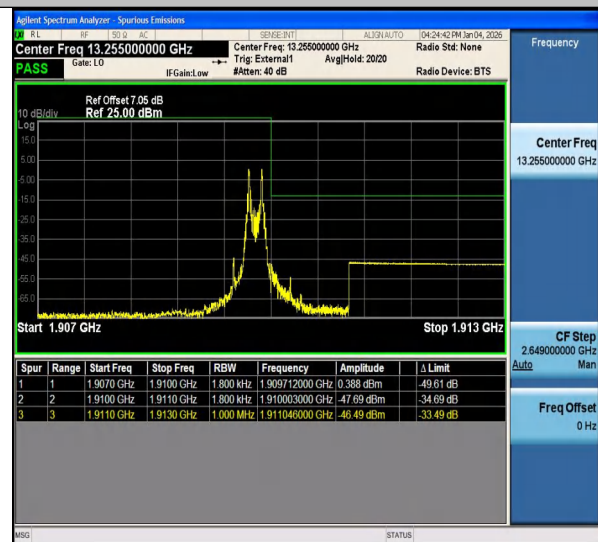
Band2-0.18-BPSK-19198-PASS



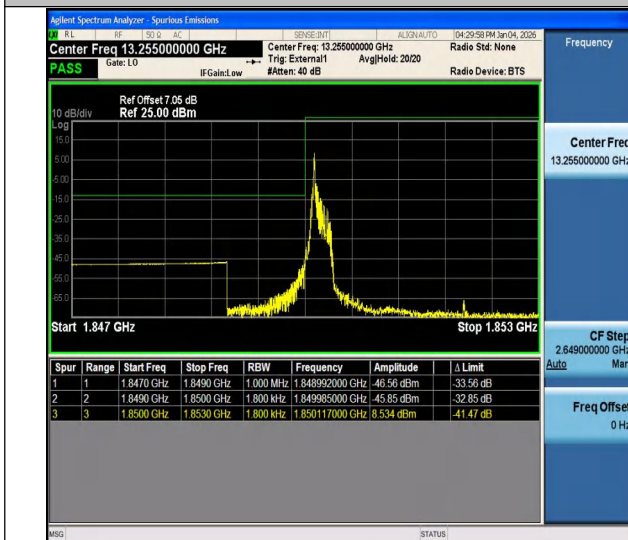
Band2-0.18-QPSK-19198-PASS



Band2-0.18-BPSK-19198-PASS



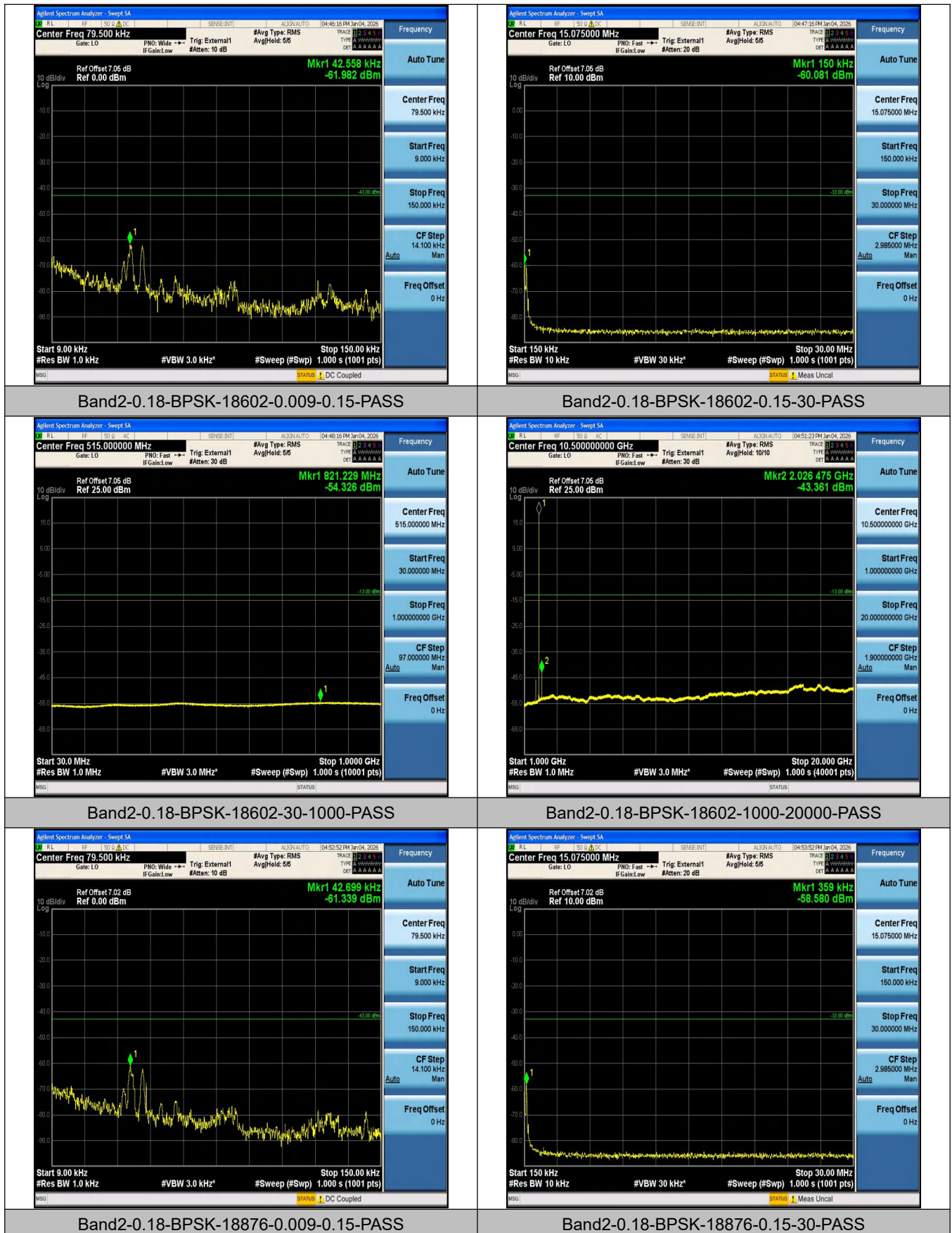
Band2-0.18-QPSK-19198-PASS



Band2-0.18-QPSK-18602-PASS

Conducted Spurious Emission for NB

Test Graphs

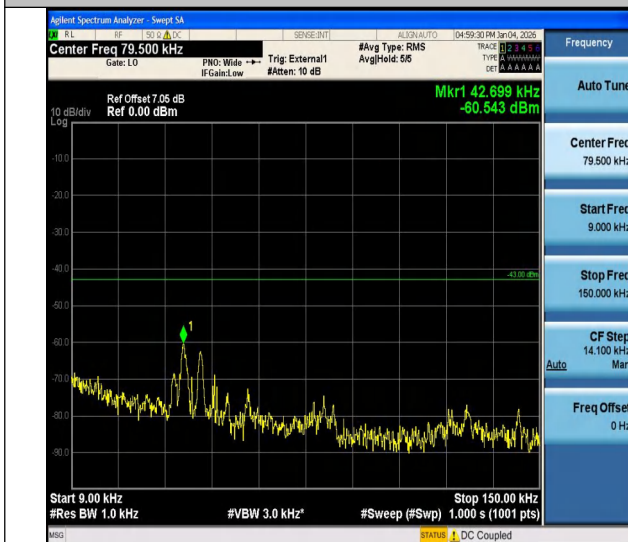




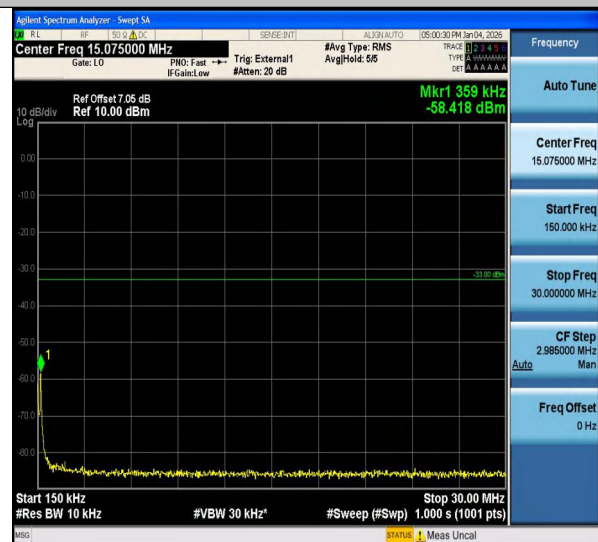
Band2-0.18-BPSK-18876-30-1000-PASS



Band2-0.18-BPSK-18876-1000-20000-PASS



Band2-0.18-BPSK-19198-0.009-0.15-PASS



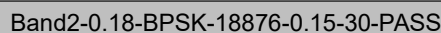
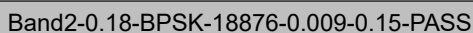
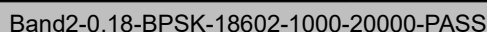
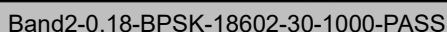
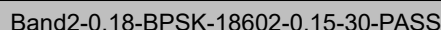
Band2-0.18-BPSK-19198-0.15-30-PASS



Band2-0.18-BPSK-19198-30-1000-PASS



Band2-0.18-BPSK-19198-1000-20000-PASS

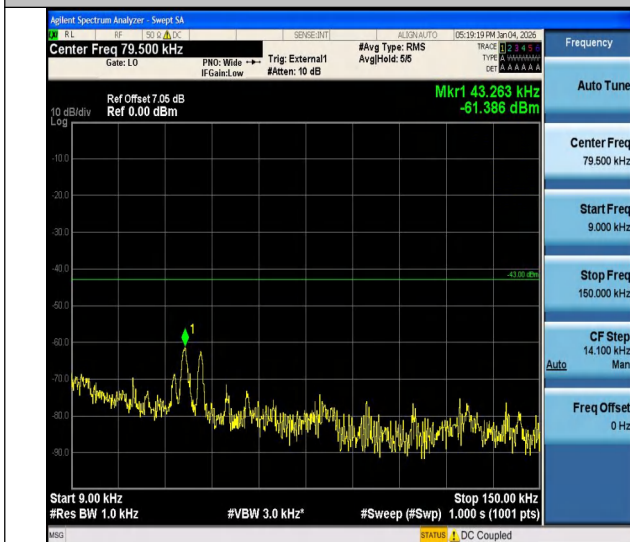




Band2-0.18-BPSK-18876-30-1000-PASS



Band2-0.18-BPSK-18876-1000-20000-PASS



Band2-0.18-BPSK-19198-0.009-0.15-PASS



Band2-0.18-BPSK-19198-0.15-30-PASS



Band2-0.18-BPSK-19198-30-1000-PASS



Band2-0.18-BPSK-19198-1000-20000-PASS

Frequency Stability for NB

Test Result

Voltage											
Band	OpMode	SCS	Bandwidth	Modulation	Channel	Tones	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	VN	NT	-7.70	-0.004101	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	VL	NT	-4.40	-0.002343	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	VH	NT	-9.00	-0.004793	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	VN	NT	-8.40	-0.004474	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	VL	NT	-9.20	-0.004900	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	VH	NT	-8.90	-0.004740	PASS

Temperature											
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	NV	-30	-4.10	-0.002184	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	NV	-20	-4.00	-0.002130	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	NV	-10	-0.80	-0.000426	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	NV	0	-3.90	-0.002077	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	NV	10	-2.10	-0.001118	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	NV	20	-5.30	-0.002823	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	NV	30	-5.70	-0.003036	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	NV	40	-6.10	-0.003249	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	NV	50	-2.90	-0.001545	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	-30	-9.30	-0.004953	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	-20	-7.50	-0.003994	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	-10	-8.90	-0.004740	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	0	-8.40	-0.004474	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	10	-6.70	-0.003568	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	20	-8.40	-0.004474	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	30	-7.80	-0.004154	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	40	-6.50	-0.003462	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	50	-8.30	-0.004421	PASS

~The End~