

Appendix-B LTE NB-IoT Band 2

Effective (Isotropic) Radiated Power Output Data for NB

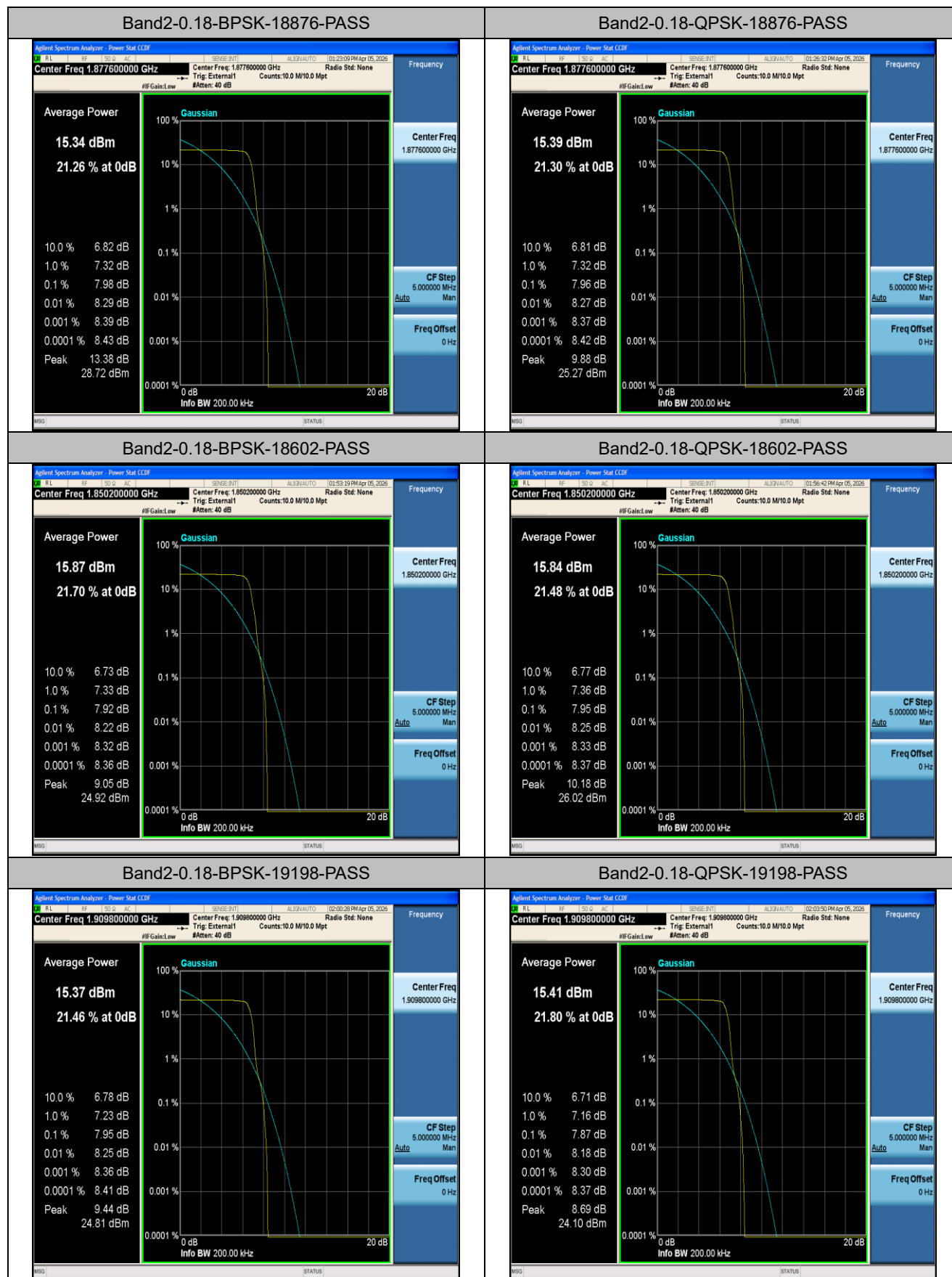
Test Result

Band	OpMode	SCS	BW	Modulation	Channel	Tones	Result (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18602	1@0	22.49	30.39	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@0	22.46	30.36	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18602	1@47	22.52	30.42	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@47	21.48	29.38	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18876	1@0	22.29	30.19	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	22	29.9	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18876	1@47	22.01	29.91	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@47	22.03	29.93	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	19198	1@0	22.01	29.91	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@0	22.01	29.91	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	19198	1@47	22.05	29.95	33.00	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@47	22.03	29.93	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	1@0	22.57	30.47	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	1@0	22.58	30.48	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	1@11	22.56	30.46	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	1@11	22.52	30.42	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	1@0	22.52	30.42	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	1@0	22.52	30.42	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	1@11	22.5	30.4	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	1@11	22.5	30.4	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	1@0	22.64	30.54	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	1@0	22.62	30.52	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	1@11	22.62	30.52	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	1@11	22.61	30.51	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	3@3	23.57	31.47	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	3@3	23.49	31.39	33.00	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	3@3	23.52	31.42	33.00	PASS

Peak-to-Average Ratio(CCDF) for NB**Test Result**

Band	OpMode	SCS	BW	Modulation	Channel	Tones	Result (dB)	Limit (dB)	Verdict
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	12@0	7.98	<=13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	7.96	<=13	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	12@0	7.92	<=13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	12@0	7.95	<=13	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	12@0	7.95	<=13	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	12@0	7.87	<=13	PASS

Test Graphs

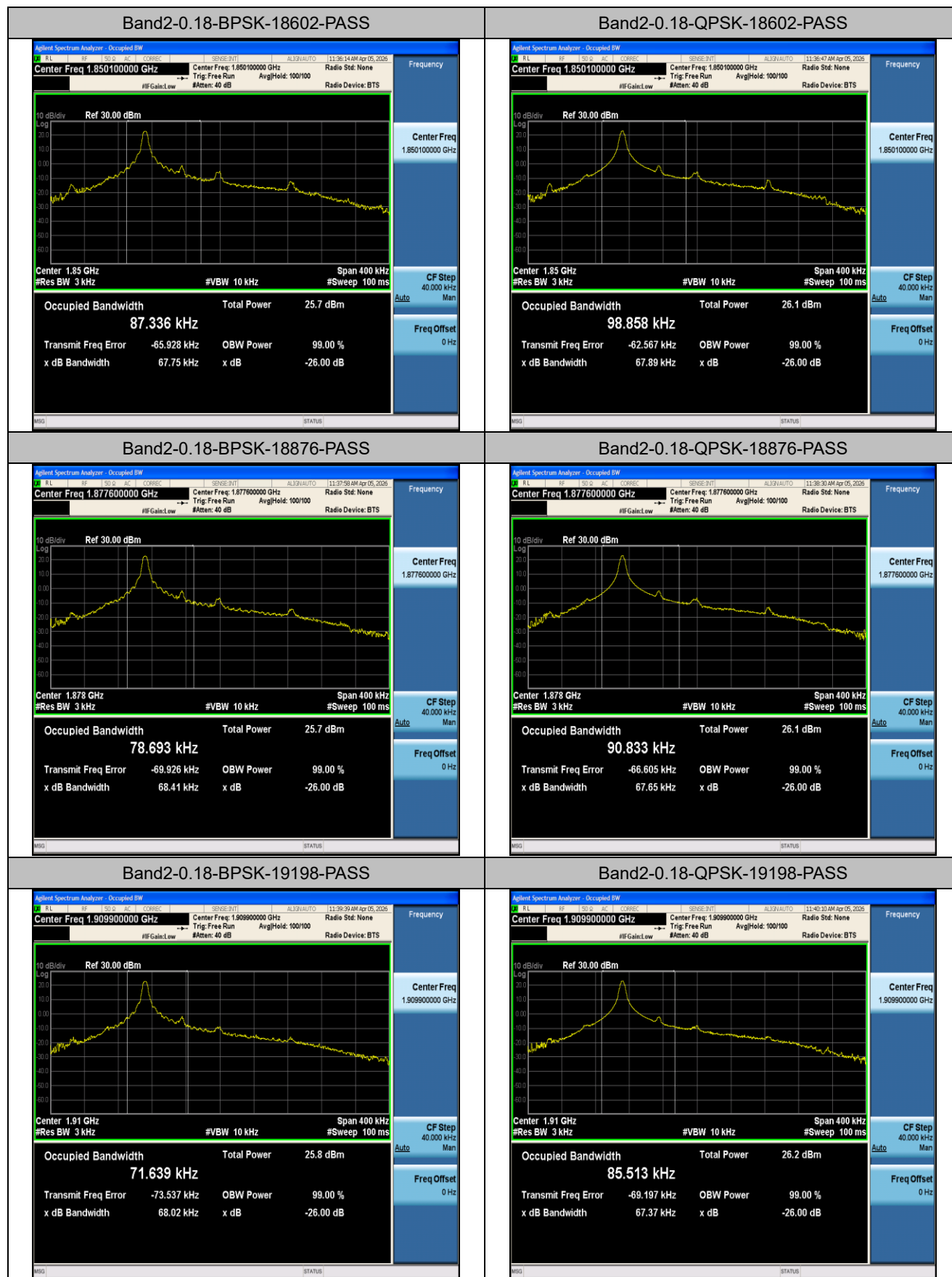


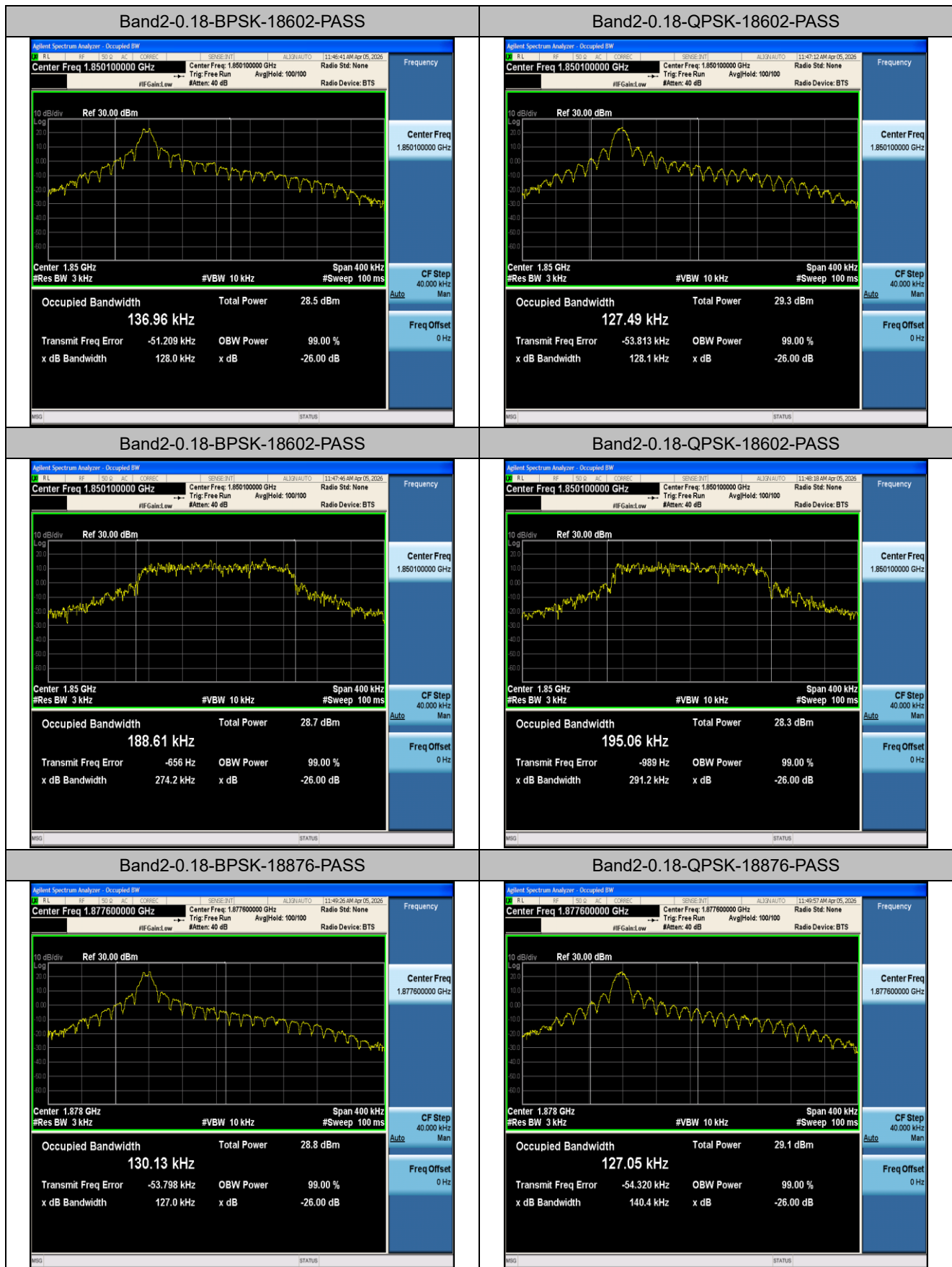
Emission Bandwidth for NB

Test Result

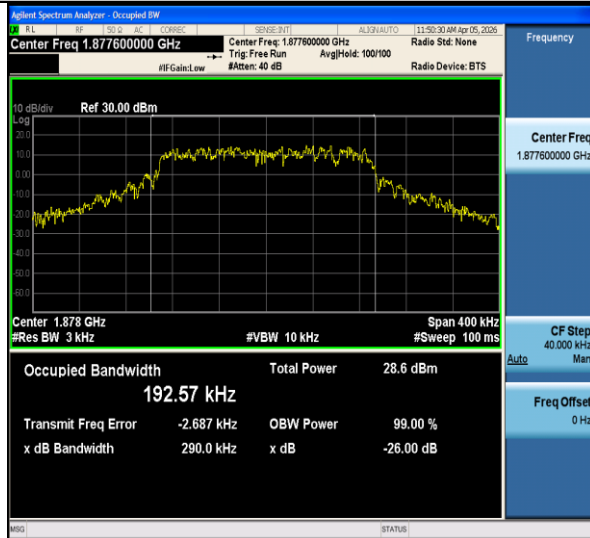
Band	OpMode	SCS	BW	Modulation	Channel	Tones	OBW(MHz)	EBW(MHz)	Verdict
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18602	1@0	0.08734	0.0678	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18602	1@0	0.09886	0.0679	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	18876	1@0	0.07869	0.0684	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	18876	1@0	0.09083	0.0676	PASS
Band2	Stand-Alone	3.75kHz	0.18	BPSK	19198	1@0	0.07164	0.0680	PASS
Band2	Stand-Alone	3.75kHz	0.18	QPSK	19198	1@0	0.08551	0.0674	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	1@0	0.13696	0.1280	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	1@0	0.12749	0.1281	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18602	12@0	0.18861	0.2742	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18602	12@0	0.19506	0.2912	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	1@0	0.13013	0.1270	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	1@0	0.12705	0.1404	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	18876	12@0	0.19257	0.2900	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	0.19460	0.2881	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	1@0	0.13301	0.1238	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	1@0	0.12747	0.1288	PASS
Band2	Stand-Alone	15kHz	0.18	BPSK	19198	12@0	0.18991	0.2626	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	19198	12@0	0.18906	0.2868	PASS

Test Graphs

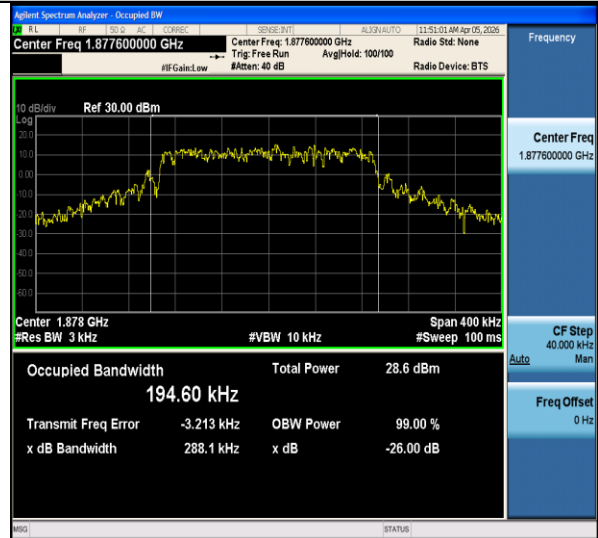




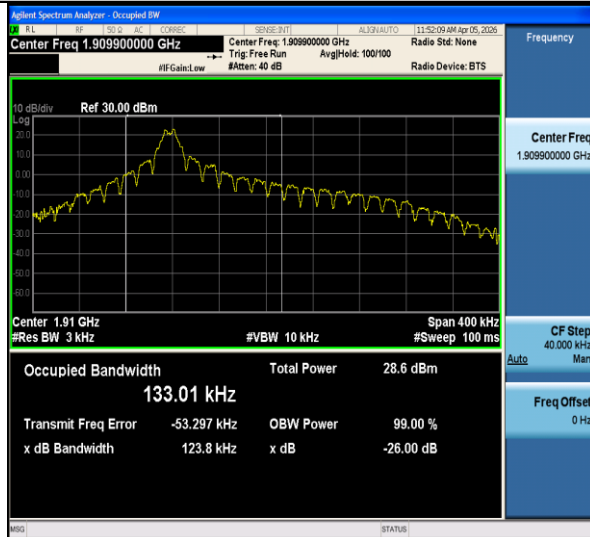
Band2-0.18-BPSK-18876-PASS



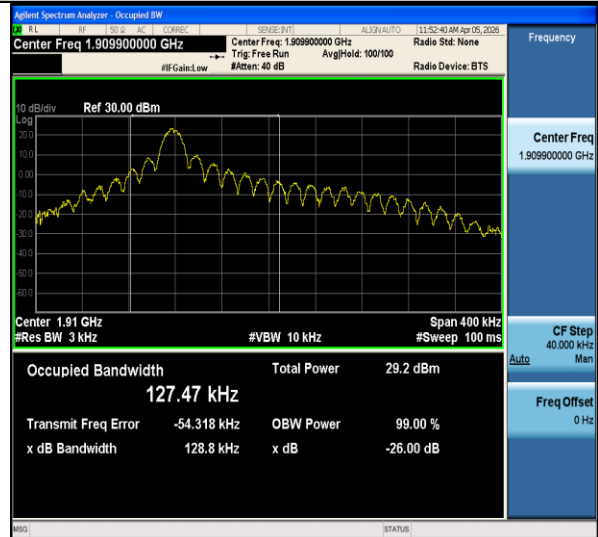
Band2-0.18-QPSK-18876-PASS



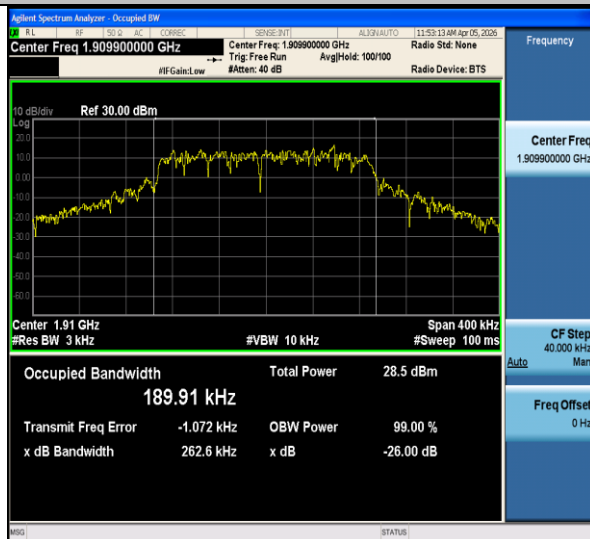
Band2-0.18-BPSK-19198-PASS



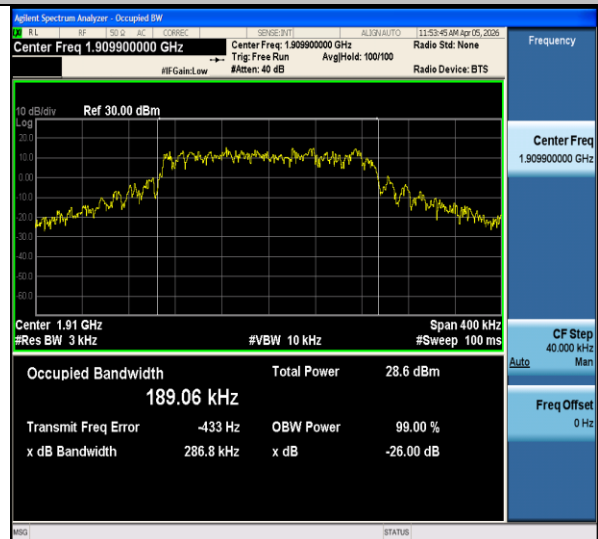
Band2-0.18-QPSK-19198-PASS



Band2-0.18-BPSK-19198-PASS

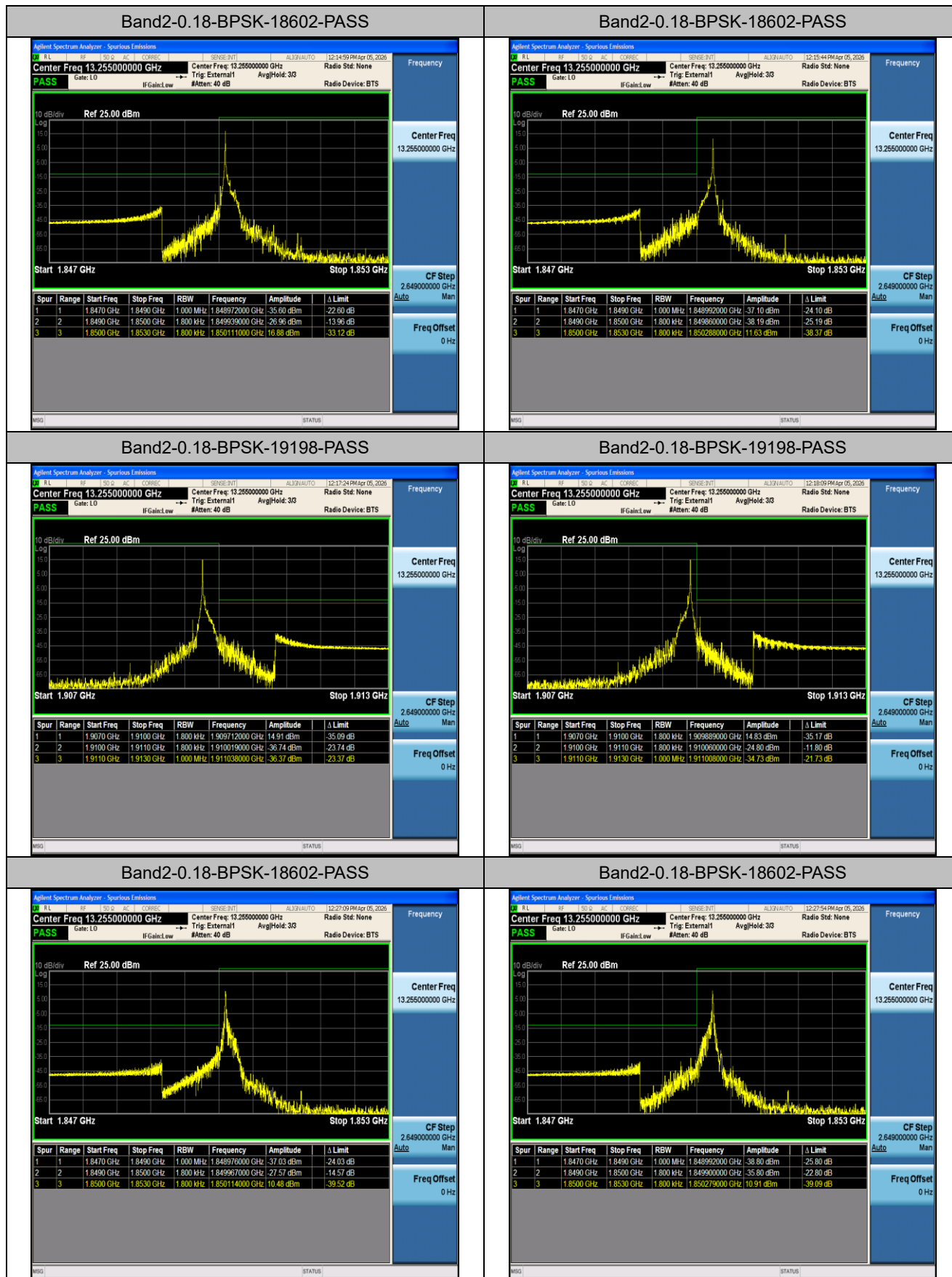


Band2-0.18-QPSK-19198-PASS

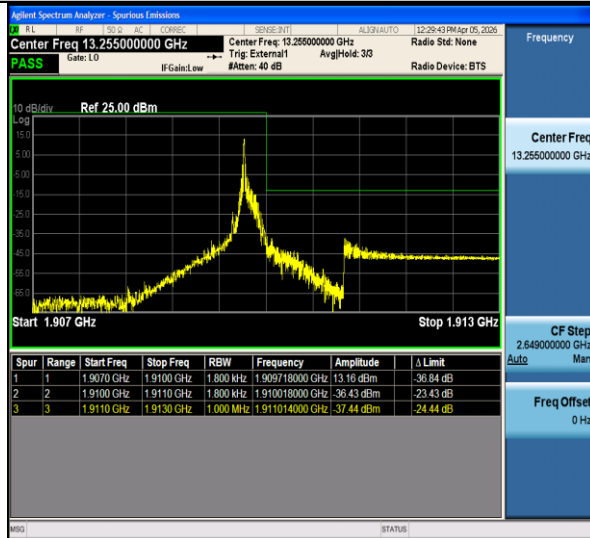


Band Edge for NB

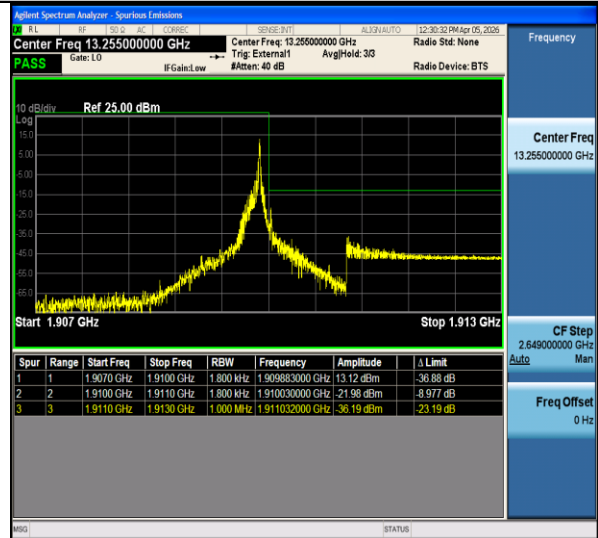
Test Graphs



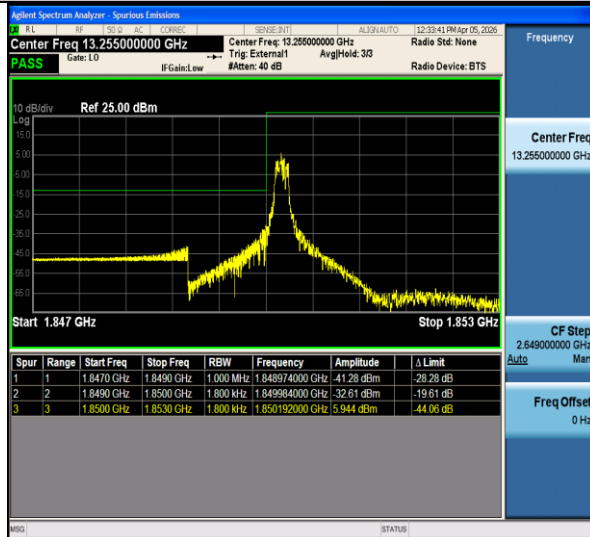
Band2-0.18-BPSK-19198-PASS



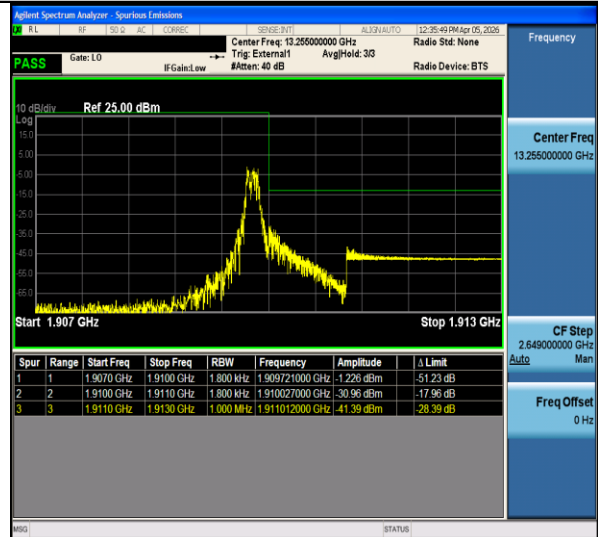
Band2-0.18-BPSK-19198-PASS



Band2-0.18-BPSK-18602-PASS

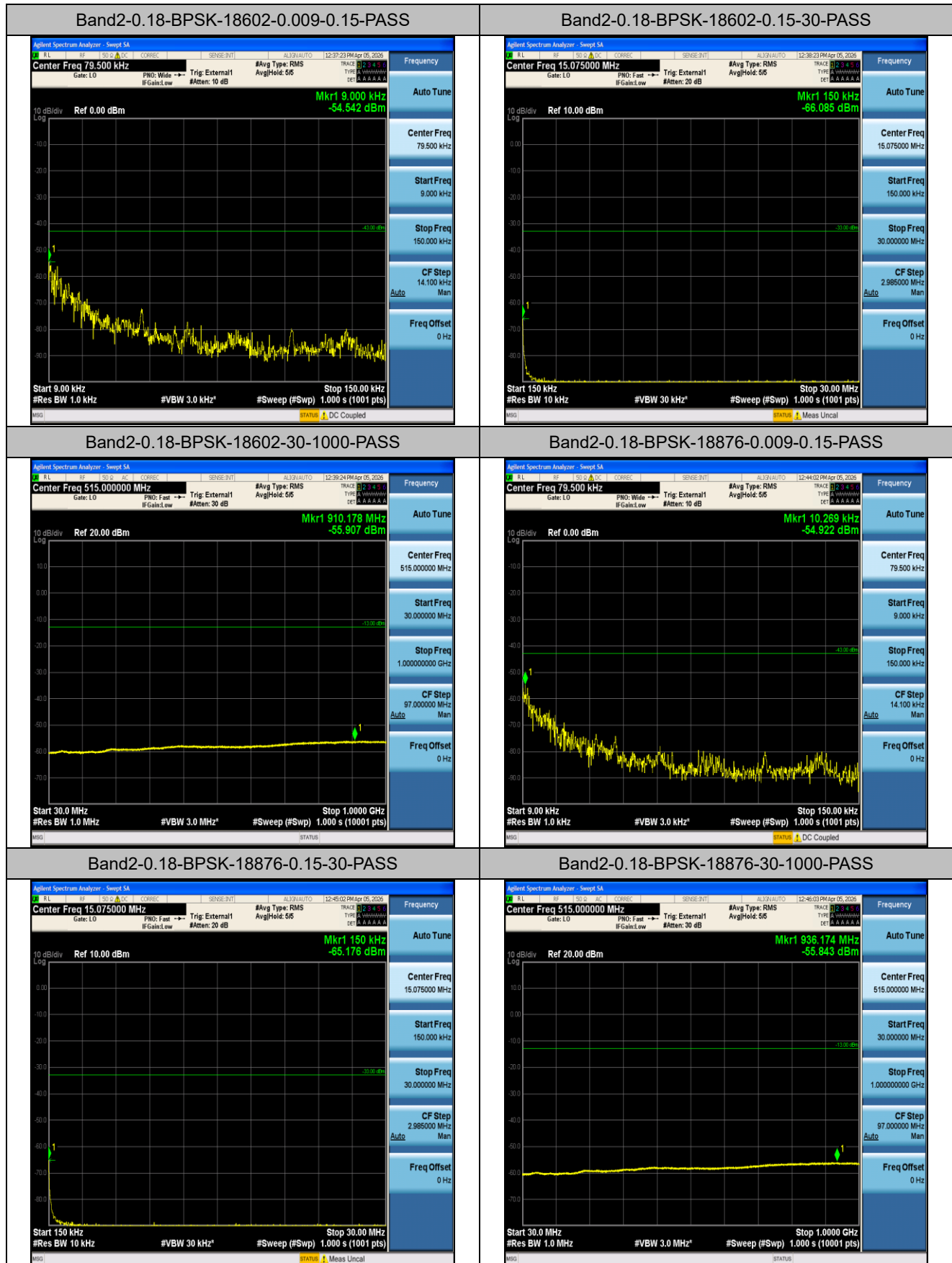


Band2-0.18-BPSK-19198-PASS

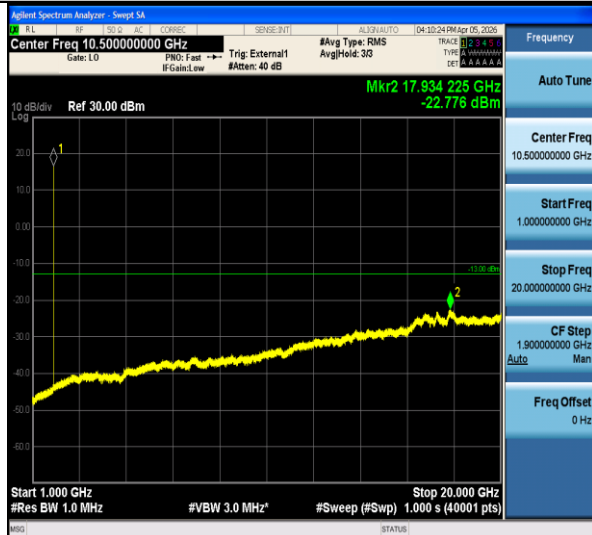


Conducted Spurious Emission for NB

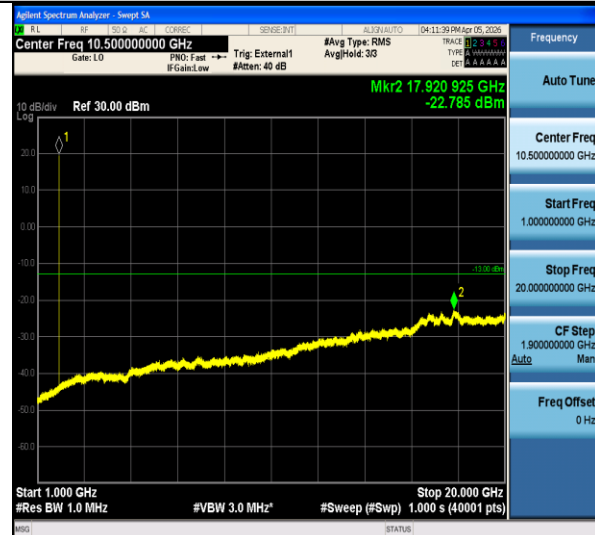
Test Graphs



Band2-0.18-BPSK-18602-1000-20000-PASS



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



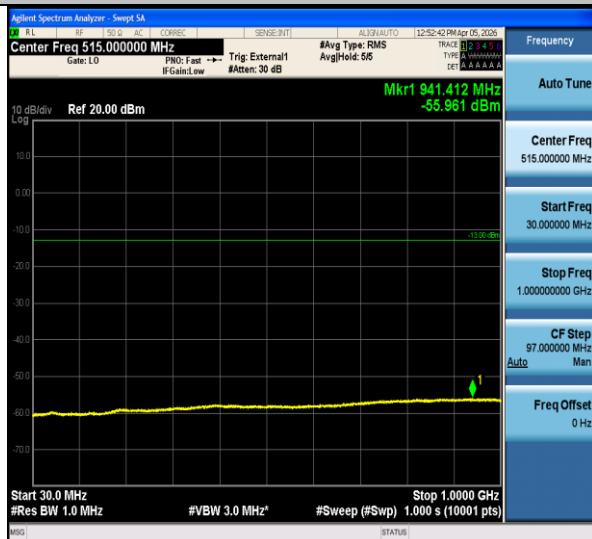
Band2-0.18-BPSK-19198-0.009-0.15-PASS



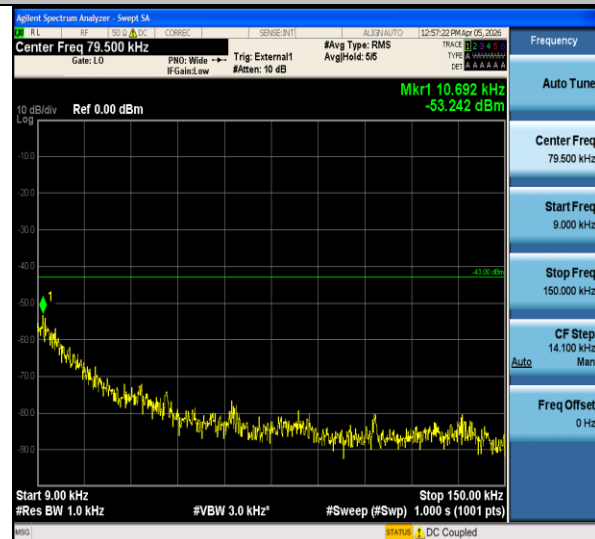
Band2-0.18-BPSK-19198-0.15-30-PASS



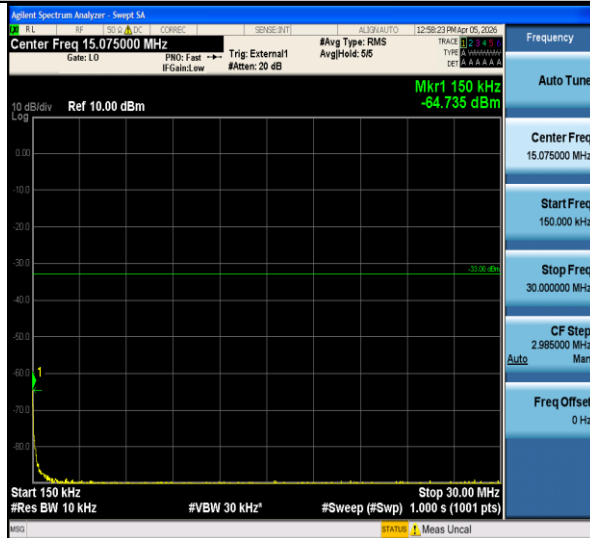
Band2-0.18-BPSK-19198-30-1000-PASS



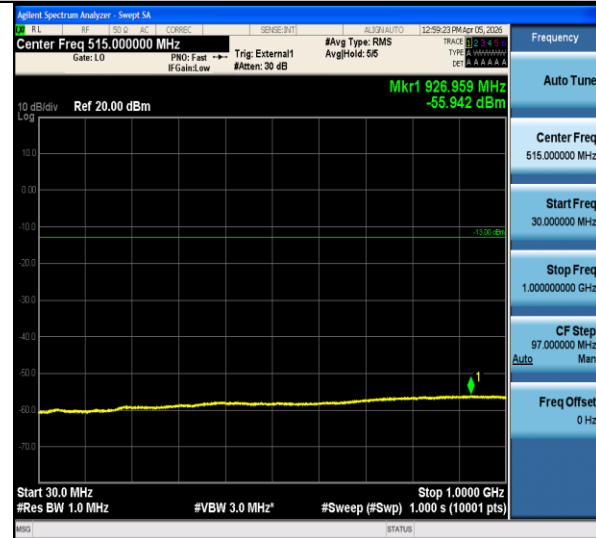
Band2-0.18-BPSK-18602-0.009-0.15-PASS



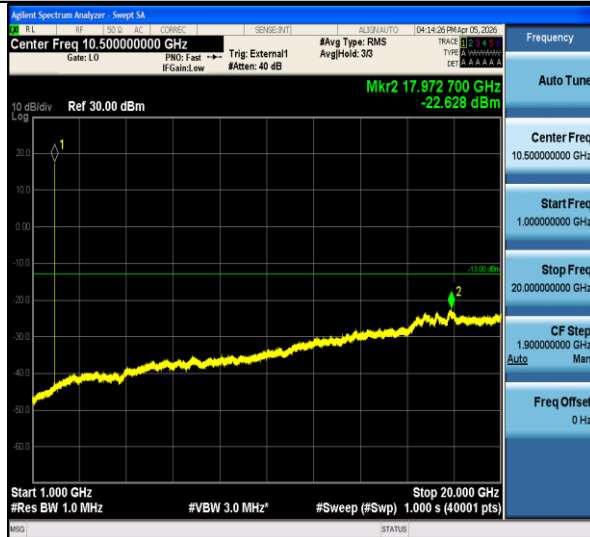
Band2-0.18-BPSK-18602-0.15-30-PASS



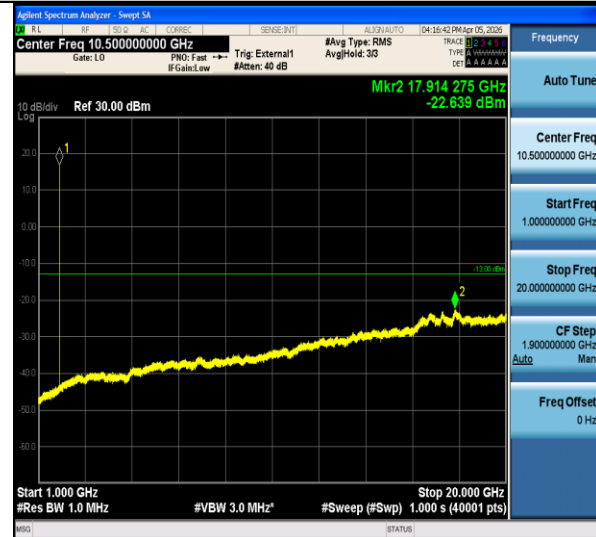
Band2-0.18-BPSK-18602-30-1000-PASS



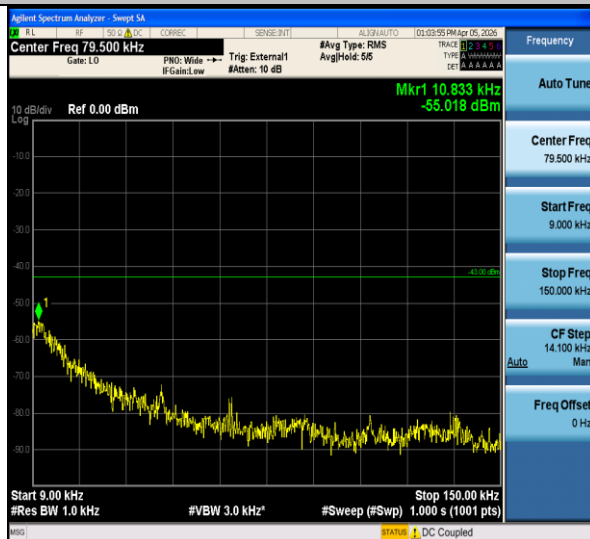
Band2-0.18-BPSK-19198-1000-20000-PASS



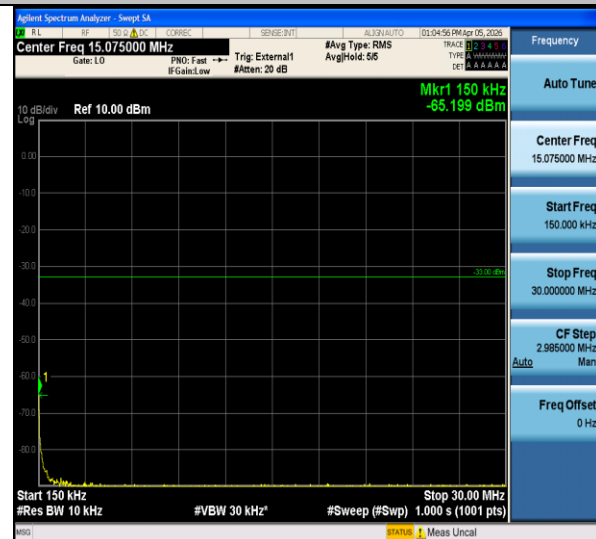
Band2-0.18-BPSK-18602-1000-20000-PASS



Band2-0.18-BPSK-18876-0.009-0.15-PASS



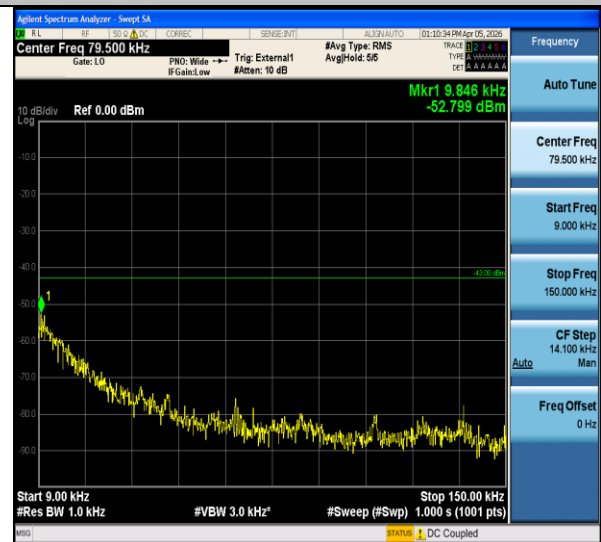
Band2-0.18-BPSK-18876-0.15-30-PASS



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



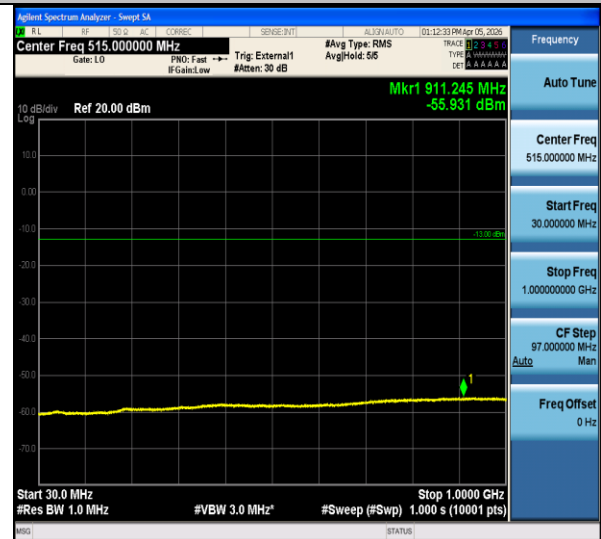
Band2-0.18-BPSK-19198-0.009-0.15-PASS



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



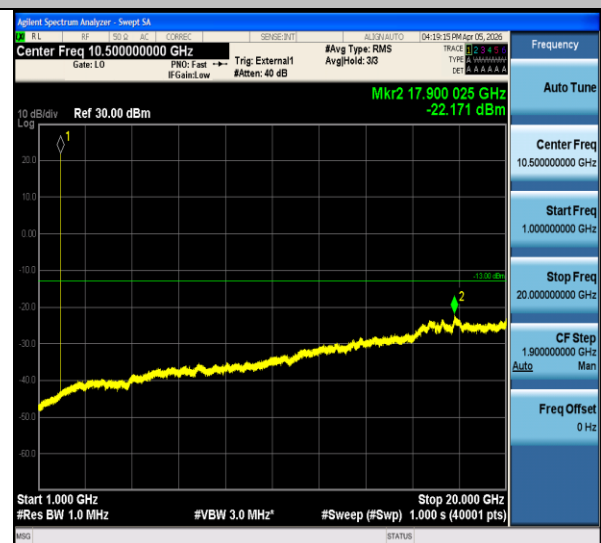
Band2-0.18-BPSK-19198-30-1000-PASS



Band2-0.18-BPSK-18876-1000-20000-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	15kHz	0.18	QPSK	18876	12@0	VN	NT	12.10	0.006444	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	VL	NT	11.80	0.006285	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	VH	NT	10.00	0.005326	PASS

Temperature											
Band	OpMode	SCS	Bandwidth	Modulation	Channel	Tones	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	-30	11.40	0.006072	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	-20	11.30	0.006018	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	-10	11.40	0.006072	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	0	13.10	0.006977	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	10	10.80	0.005752	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	20	10.40	0.005539	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	30	12.60	0.006711	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	40	12.20	0.006498	PASS
Band2	Stand-Alone	15kHz	0.18	QPSK	18876	12@0	NV	50	14.40	0.007669	PASS

~The End~