

Appendix-A LTE Cat M1 Band 2

Effective (Isotropic) Radiated Power Output Data for M1

Test Result

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NBIndex	Power (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
Band2	1.4MHz	QPSK	18607	6	0	Low	19.21	20.8	33.00	PASS
Band2	1.4MHz	QPSK	18900	6	0	Low	19.12	20.71	33.00	PASS
Band2	1.4MHz	QPSK	19193	6	0	High	18.95	20.54	33.00	PASS
Band2	1.4MHz	QPSK	18607	1	0	Low	21.21	22.8	33.00	PASS
Band2	1.4MHz	QPSK	18607	1	5	Low	21.21	22.8	33.00	PASS
Band2	1.4MHz	QPSK	18900	1	0	Low	21.34	22.93	33.00	PASS
Band2	1.4MHz	QPSK	18900	1	5	Low	21.11	22.7	33.00	PASS
Band2	1.4MHz	QPSK	19193	1	0	High	21.07	22.66	33.00	PASS
Band2	1.4MHz	QPSK	19193	1	5	High	20.92	22.51	33.00	PASS
Band2	3MHz	QPSK	18615	1	0	Low	21.23	22.82	33.00	PASS
Band2	3MHz	QPSK	18615	6	0	Low	19.1	20.69	33.00	PASS
Band2	3MHz	QPSK	18900	6	0	Low	19.16	20.75	33.00	PASS
Band2	3MHz	QPSK	19185	6	0	High	19.07	20.66	33.00	PASS
Band2	5MHz	QPSK	18625	6	0	Low	20.28	21.87	33.00	PASS
Band2	3MHz	QPSK	18900	1	0	Low	21.21	22.8	33.00	PASS
Band2	3MHz	QPSK	18900	1	5	Low	21.09	22.68	33.00	PASS
Band2	3MHz	QPSK	19185	1	0	High	21.24	22.83	33.00	PASS
Band2	3MHz	QPSK	19185	1	5	High	20.99	22.58	33.00	PASS
Band2	5MHz	QPSK	18625	1	0	Low	21.41	23	33.00	PASS
Band2	5MHz	QPSK	18625	1	5	Low	21.2	22.79	33.00	PASS
Band2	5MHz	QPSK	18900	6	0	Low	20.21	21.8	33.00	PASS
Band2	5MHz	QPSK	19175	6	0	High	20.25	21.84	33.00	PASS
Band2	10MHz	QPSK	18650	6	0	Low	20.14	21.73	33.00	PASS
Band2	5MHz	QPSK	18900	1	0	Low	21.36	22.95	33.00	PASS
Band2	5MHz	QPSK	18900	1	5	Low	21.23	22.82	33.00	PASS
Band2	5MHz	QPSK	19175	1	0	High	21.28	22.87	33.00	PASS
Band2	5MHz	QPSK	19175	1	5	High	21.12	22.71	33.00	PASS
Band2	10MHz	QPSK	18650	1	0	Low	21.37	22.96	33.00	PASS
Band2	10MHz	QPSK	18650	1	5	Low	21.17	22.76	33.00	PASS
Band2	10MHz	QPSK	18900	1	0	Low	21.38	22.97	33.00	PASS
Band2	10MHz	QPSK	18900	6	0	Low	20.3	21.89	33.00	PASS
Band2	10MHz	QPSK	19150	6	0	High	20.15	21.74	33.00	PASS
Band2	15MHz	QPSK	18675	6	0	Low	21.27	22.86	33.00	PASS
Band2	10MHz	QPSK	18900	1	5	Low	21.14	22.73	33.00	PASS
Band2	10MHz	QPSK	19150	1	0	High	21.36	22.95	33.00	PASS
Band2	10MHz	QPSK	19150	1	5	High	21.12	22.71	33.00	PASS
Band2	15MHz	QPSK	18675	1	0	Low	21.38	22.97	33.00	PASS

Band2	15MHz	QPSK	18675	1	5	Low	21.16	22.75	33.00	PASS
Band2	15MHz	QPSK	18900	1	0	Low	21.42	23.01	33.00	PASS
Band2	15MHz	QPSK	18900	1	5	Low	21.2	22.79	33.00	PASS
Band2	15MHz	QPSK	18900	6	0	Low	21.29	22.88	33.00	PASS
Band2	15MHz	QPSK	19125	6	0	High	21.29	22.88	33.00	PASS
Band2	20MHz	QPSK	18700	6	0	Low	21.35	22.94	33.00	PASS
Band2	20MHz	QPSK	18900	6	0	Low	21.27	22.86	33.00	PASS
Band2	15MHz	QPSK	19125	1	0	High	21.29	22.88	33.00	PASS
Band2	15MHz	QPSK	19125	1	5	High	21.05	22.64	33.00	PASS
Band2	20MHz	QPSK	18700	1	0	Low	21.37	22.96	33.00	PASS
Band2	20MHz	QPSK	18700	1	5	Low	21.24	22.83	33.00	PASS
Band2	20MHz	QPSK	18900	1	0	Low	21.37	22.96	33.00	PASS
Band2	20MHz	QPSK	18900	1	5	Low	21.14	22.73	33.00	PASS
Band2	20MHz	QPSK	19100	6	0	High	21.3	22.89	33.00	PASS
Band2	20MHz	QPSK	19100	1	0	High	21.38	22.97	33.00	PASS
Band2	20MHz	QPSK	19100	1	5	High	21.13	22.72	33.00	PASS
Band2	1.4MHz	QPSK	18607	5	0	Low	20.38	21.97	33.00	PASS
Band2	1.4MHz	QPSK	18900	5	0	Low	20.33	21.92	33.00	PASS
Band2	1.4MHz	QPSK	19193	5	0	High	19.94	21.53	33.00	PASS
Band2	3MHz	QPSK	18615	1	5	Low	21.04	22.63	33.00	PASS
Band2	3MHz	QPSK	18615	5	0	Low	20.21	21.8	33.00	PASS
Band2	3MHz	QPSK	18900	5	0	Low	20.38	21.97	33.00	PASS
Band2	3MHz	QPSK	19185	5	0	High	20.18	21.77	33.00	PASS
Band2	5MHz	QPSK	18625	5	0	Low	20.34	21.93	33.00	PASS
Band2	5MHz	QPSK	18900	5	0	Low	20.4	21.99	33.00	PASS
Band2	5MHz	QPSK	19175	5	0	High	20.3	21.89	33.00	PASS
Band2	10MHz	QPSK	18650	5	0	Low	21.33	22.92	33.00	PASS
Band2	10MHz	QPSK	18900	5	0	Low	21.34	22.93	33.00	PASS
Band2	10MHz	QPSK	19150	5	0	High	21.28	22.87	33.00	PASS
Band2	15MHz	QPSK	18675	5	0	Low	21.29	22.88	33.00	PASS
Band2	15MHz	QPSK	18900	5	0	Low	21.34	22.93	33.00	PASS
Band2	15MHz	QPSK	19125	5	0	High	21.23	22.82	33.00	PASS
Band2	20MHz	QPSK	18700	5	0	Low	21.36	22.95	33.00	PASS
Band2	20MHz	QPSK	18900	5	0	Low	21.29	22.88	33.00	PASS
Band2	20MHz	QPSK	19100	5	0	High	21.29	22.88	33.00	PASS
Band2	1.4MHz	16QAM	18607	1	0	Low	20.2	21.79	33.00	PASS
Band2	1.4MHz	16QAM	18607	1	5	Low	20.17	21.76	33.00	PASS
Band2	1.4MHz	16QAM	18607	5	0	Low	19.02	20.61	33.00	PASS
Band2	1.4MHz	16QAM	18900	1	0	Low	20.66	22.25	33.00	PASS
Band2	1.4MHz	16QAM	18900	1	5	Low	20.49	22.08	33.00	PASS
Band2	1.4MHz	16QAM	18900	5	0	Low	19.2	20.79	33.00	PASS
Band2	1.4MHz	16QAM	19193	1	0	High	20.43	22.02	33.00	PASS
Band2	1.4MHz	16QAM	19193	1	5	High	20.37	21.96	33.00	PASS
Band2	1.4MHz	16QAM	19193	5	0	High	19.08	20.67	33.00	PASS
Band2	3MHz	16QAM	18615	1	0	Low	20.15	21.74	33.00	PASS

Band2	3MHz	16QAM	18615	1	5	Low	20.22	21.81	33.00	PASS
Band2	3MHz	16QAM	18615	5	0	Low	19.2	20.79	33.00	PASS
Band2	3MHz	16QAM	18900	1	0	Low	20.36	21.95	33.00	PASS
Band2	3MHz	16QAM	18900	1	5	Low	20.43	22.02	33.00	PASS
Band2	3MHz	16QAM	18900	5	0	Low	19.2	20.79	33.00	PASS
Band2	3MHz	16QAM	19185	1	0	High	20.37	21.96	33.00	PASS
Band2	3MHz	16QAM	19185	1	5	High	20.26	21.85	33.00	PASS
Band2	3MHz	16QAM	19185	5	0	High	19.23	20.82	33.00	PASS
Band2	5MHz	16QAM	18625	1	0	Low	21.22	22.81	33.00	PASS
Band2	5MHz	16QAM	18625	1	5	Low	21.09	22.68	33.00	PASS
Band2	5MHz	16QAM	18625	5	0	Low	20.13	21.72	33.00	PASS
Band2	5MHz	16QAM	18900	1	0	Low	21.4	22.99	33.00	PASS
Band2	5MHz	16QAM	18900	1	5	Low	21.18	22.77	33.00	PASS
Band2	5MHz	16QAM	18900	5	0	Low	20.13	21.72	33.00	PASS
Band2	5MHz	16QAM	19175	1	0	High	21.31	22.9	33.00	PASS
Band2	5MHz	16QAM	19175	1	5	High	21.06	22.65	33.00	PASS
Band2	5MHz	16QAM	19175	5	0	High	20.13	21.72	33.00	PASS
Band2	10MHz	16QAM	18650	1	0	Low	21.17	22.76	33.00	PASS
Band2	10MHz	16QAM	18650	1	5	Low	20.98	22.57	33.00	PASS
Band2	10MHz	16QAM	18650	5	0	Low	21.19	22.78	33.00	PASS
Band2	10MHz	16QAM	18900	1	0	Low	21.26	22.85	33.00	PASS
Band2	10MHz	16QAM	18900	1	5	Low	20.96	22.55	33.00	PASS
Band2	10MHz	16QAM	18900	5	0	Low	21.21	22.8	33.00	PASS
Band2	10MHz	16QAM	19150	1	0	High	21.13	22.72	33.00	PASS
Band2	10MHz	16QAM	19150	1	5	High	21.02	22.61	33.00	PASS
Band2	10MHz	16QAM	19150	5	0	High	21.17	22.76	33.00	PASS
Band2	15MHz	16QAM	18675	1	0	Low	21.25	22.84	33.00	PASS
Band2	15MHz	16QAM	18675	1	5	Low	21.07	22.66	33.00	PASS
Band2	15MHz	16QAM	18675	5	0	Low	21.22	22.81	33.00	PASS
Band2	15MHz	16QAM	18900	1	0	Low	21.33	22.92	33.00	PASS
Band2	15MHz	16QAM	18900	1	5	Low	21.13	22.72	33.00	PASS
Band2	15MHz	16QAM	18900	5	0	Low	21.16	22.75	33.00	PASS
Band2	15MHz	16QAM	19125	1	0	High	21.19	22.78	33.00	PASS
Band2	15MHz	16QAM	19125	1	5	High	20.97	22.56	33.00	PASS
Band2	15MHz	16QAM	19125	5	0	High	21.12	22.71	33.00	PASS
Band2	20MHz	16QAM	18700	1	0	Low	21.27	22.86	33.00	PASS
Band2	20MHz	16QAM	18700	1	5	Low	21.06	22.65	33.00	PASS
Band2	20MHz	16QAM	18700	5	0	Low	21.19	22.78	33.00	PASS
Band2	20MHz	16QAM	18900	1	0	Low	21.4	22.99	33.00	PASS
Band2	20MHz	16QAM	18900	1	5	Low	21.09	22.68	33.00	PASS
Band2	20MHz	16QAM	18900	5	0	Low	21.14	22.73	33.00	PASS
Band2	20MHz	16QAM	19100	1	0	High	21.67	23.26	33.00	PASS
Band2	20MHz	16QAM	19100	1	5	High	21.12	22.71	33.00	PASS
Band2	20MHz	16QAM	19100	5	0	High	21.17	22.76	33.00	PASS

Peak-to-Average Ratio(CCDF) for M1

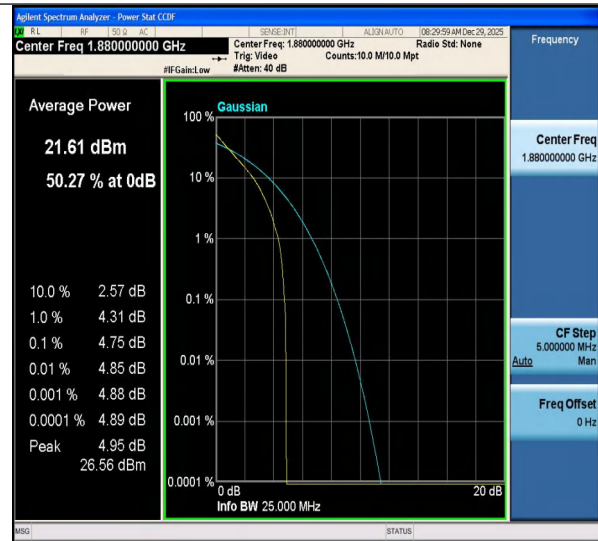
Test Result

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band2	20MHz	QPSK	18700	6	0	Low	4.59	<=13	PASS
Band2	20MHz	QPSK	18900	6	0	Low	4.75	<=13	PASS
Band2	20MHz	QPSK	19100	6	0	High	4.81	<=13	PASS
Band2	20MHz	16QAM	18700	5	0	Low	5.03	<=13	PASS
Band2	20MHz	16QAM	18900	5	0	Low	5.10	<=13	PASS
Band2	20MHz	16QAM	19100	5	0	High	5.17	<=13	PASS

Test Graphs



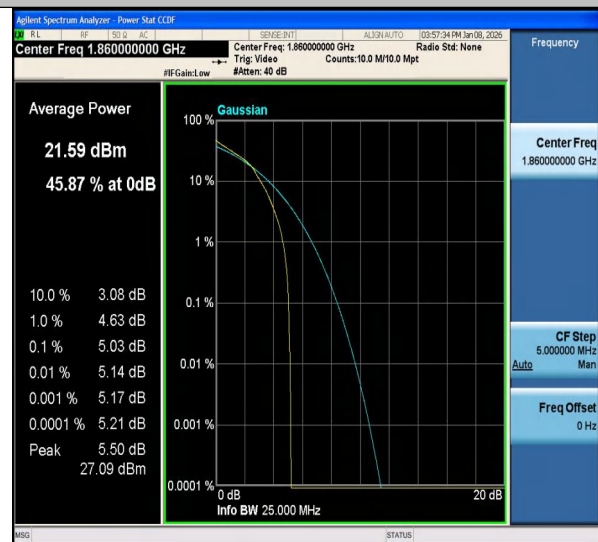
Band2-20MHz-QPSK-18700-6#0-PASS



Band2-20MHz-QPSK-18900-6#0-PASS



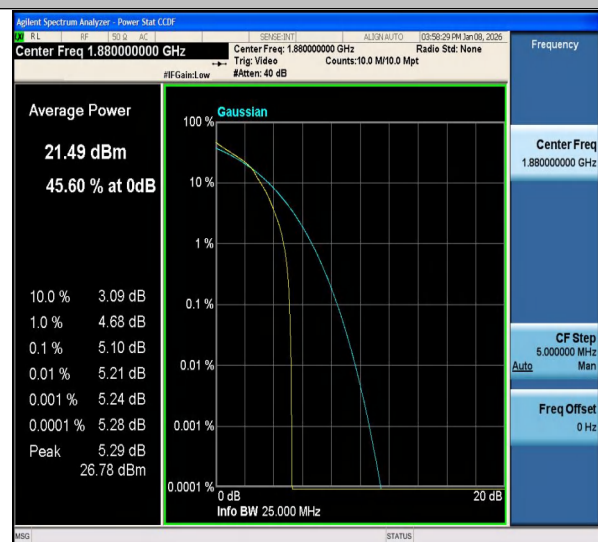
Band2-20MHz-QPSK-19100-6#0-PASS



Band2-20MHz-16QAM-18700-5#0-PASS



Band2-20MHz-16QAM-19100-5#0-PASS



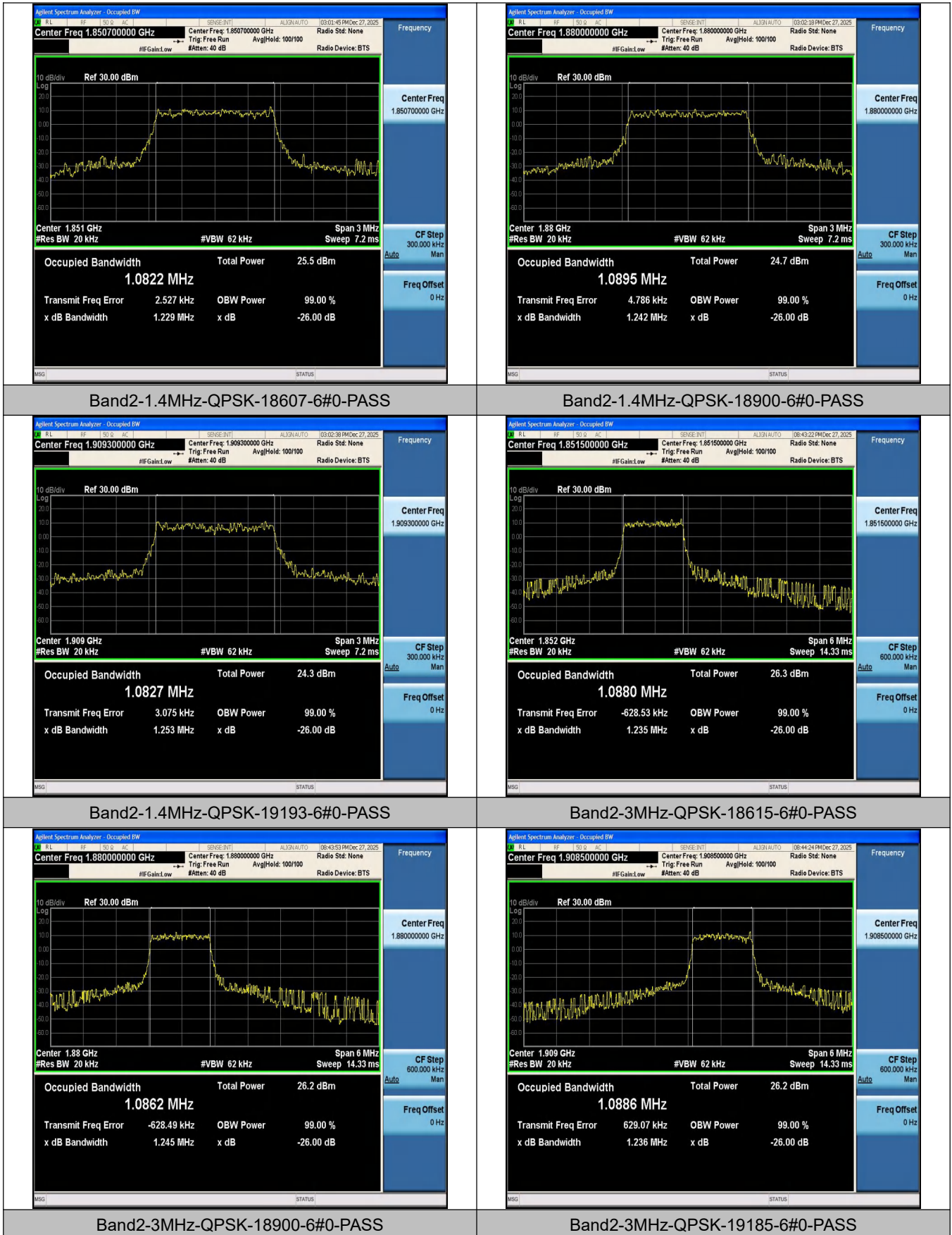
Band2-20MHz-16QAM-18900-5#0-PASS

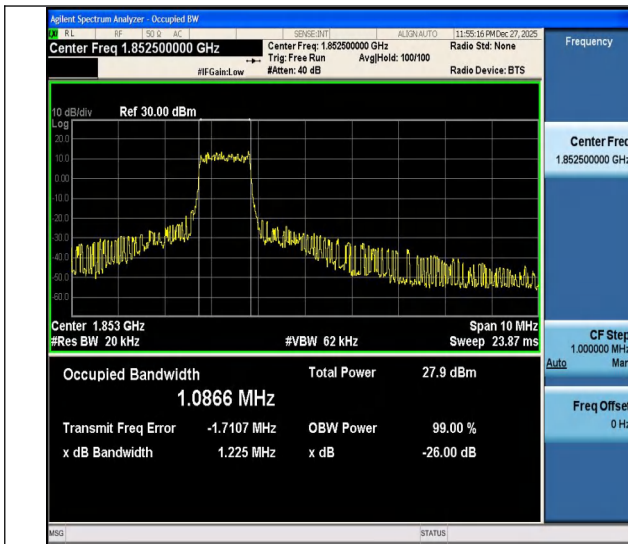
26dB Bandwidth and Occupied Bandwidth for M1

Test Result

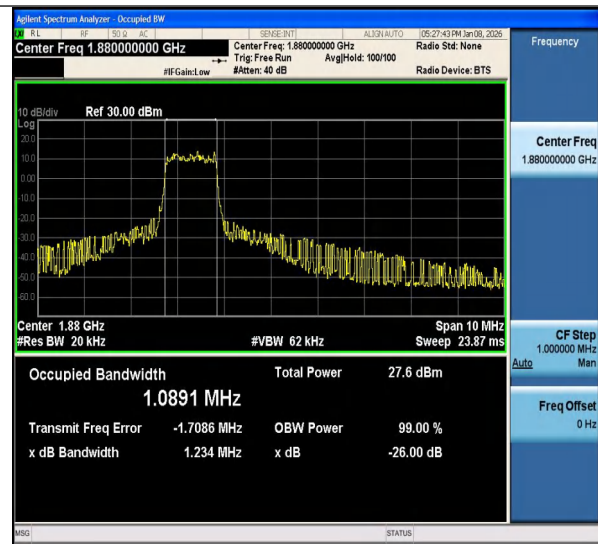
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band2	1.4MHz	QPSK	18607	6	0	Low	1.0822	1.229	PASS
Band2	1.4MHz	QPSK	18900	6	0	Low	1.0895	1.242	PASS
Band2	1.4MHz	QPSK	19193	6	0	High	1.0827	1.253	PASS
Band2	3MHz	QPSK	18615	6	0	Low	1.0880	1.235	PASS
Band2	3MHz	QPSK	18900	6	0	Low	1.0862	1.245	PASS
Band2	3MHz	QPSK	19185	6	0	High	1.0886	1.236	PASS
Band2	5MHz	QPSK	18625	6	0	Low	1.0866	1.225	PASS
Band2	5MHz	QPSK	18900	6	0	Low	1.0891	1.234	PASS
Band2	5MHz	QPSK	19175	6	0	High	1.0877	1.242	PASS
Band2	10MHz	QPSK	18650	6	0	Low	1.0932	1.240	PASS
Band2	10MHz	QPSK	18900	6	0	Low	1.0947	1.275	PASS
Band2	10MHz	QPSK	19150	6	0	High	1.0943	1.282	PASS
Band2	15MHz	QPSK	18675	6	0	Low	1.1021	1.249	PASS
Band2	15MHz	QPSK	18900	6	0	Low	1.1059	1.281	PASS
Band2	15MHz	QPSK	19125	6	0	High	1.0984	1.273	PASS
Band2	20MHz	QPSK	18700	6	0	Low	1.1105	1.295	PASS
Band2	20MHz	QPSK	18900	6	0	Low	1.1123	1.259	PASS
Band2	20MHz	QPSK	19100	6	0	High	1.1155	1.297	PASS
Band2	1.4MHz	16QAM	18607	5	0	Low	0.90482	1.072	PASS
Band2	1.4MHz	16QAM	18900	5	0	Low	0.91248	1.049	PASS
Band2	1.4MHz	16QAM	19193	5	0	High	0.90817	1.096	PASS
Band2	3MHz	16QAM	18615	5	0	Low	0.91644	1.068	PASS
Band2	3MHz	16QAM	18900	5	0	Low	0.91415	1.072	PASS
Band2	3MHz	16QAM	19185	5	0	High	0.90933	1.093	PASS
Band2	5MHz	16QAM	18625	5	0	Low	0.91352	1.102	PASS
Band2	5MHz	16QAM	18900	5	0	Low	0.91761	1.108	PASS
Band2	5MHz	16QAM	19175	5	0	High	0.91456	1.109	PASS
Band2	10MHz	16QAM	18650	5	0	Low	0.92278	1.132	PASS
Band2	10MHz	16QAM	18900	5	0	Low	0.92328	1.099	PASS
Band2	10MHz	16QAM	19150	5	0	High	0.91650	1.096	PASS
Band2	15MHz	16QAM	18675	5	0	Low	0.93300	1.110	PASS
Band2	15MHz	16QAM	18900	5	0	Low	0.92898	1.158	PASS
Band2	15MHz	16QAM	19125	5	0	High	0.93093	1.118	PASS
Band2	20MHz	16QAM	18700	5	0	Low	0.95328	1.137	PASS
Band2	20MHz	16QAM	18900	5	0	Low	0.94824	1.115	PASS
Band2	20MHz	16QAM	19100	5	0	High	0.95160	1.142	PASS

Test Graphs

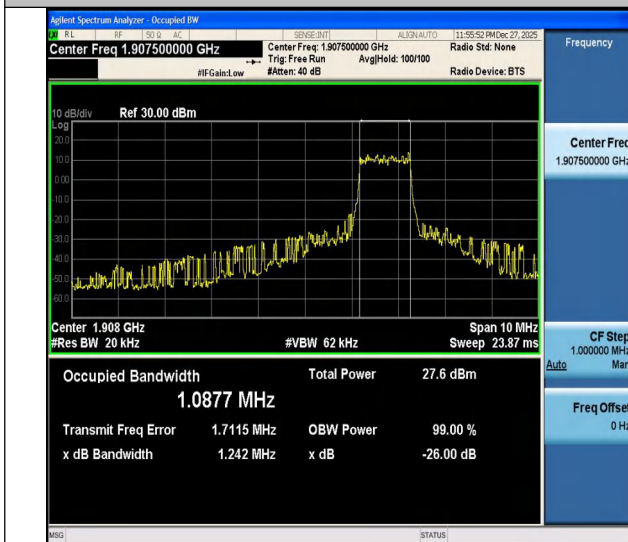




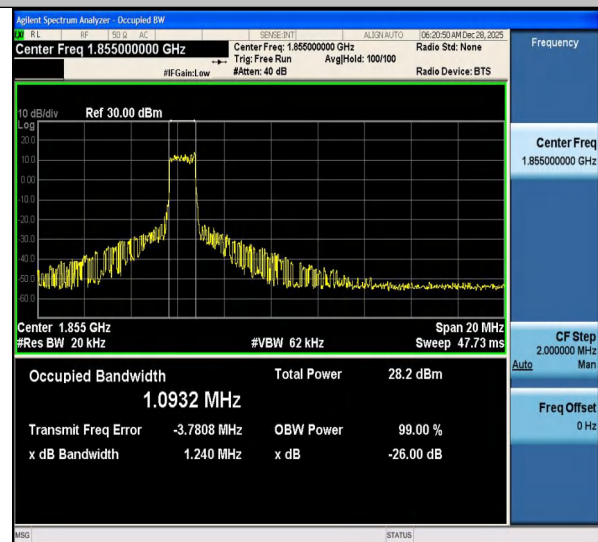
Band2-5MHz-QPSK-18625-6#0-PASS



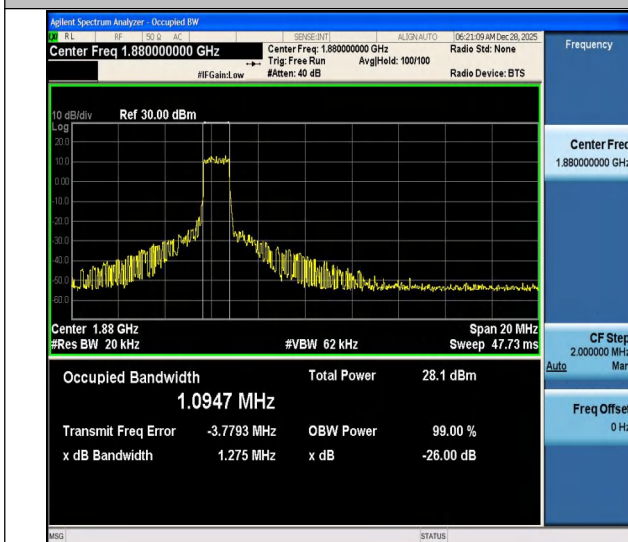
Band2-5MHz-QPSK-18900-6#0-PASS



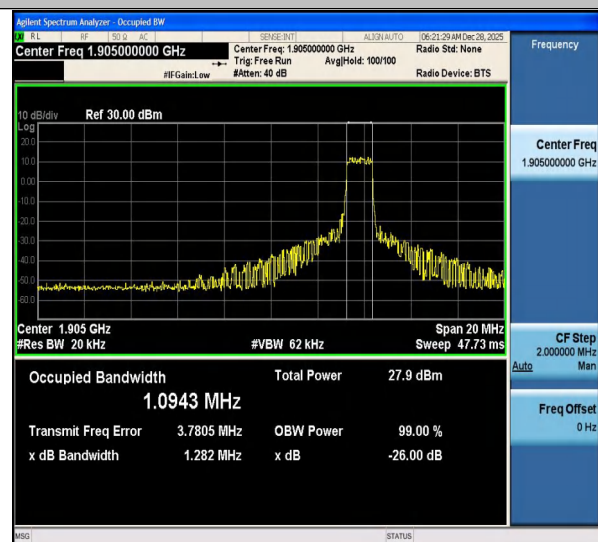
Band2-5MHz-QPSK-19175-6#0-PASS



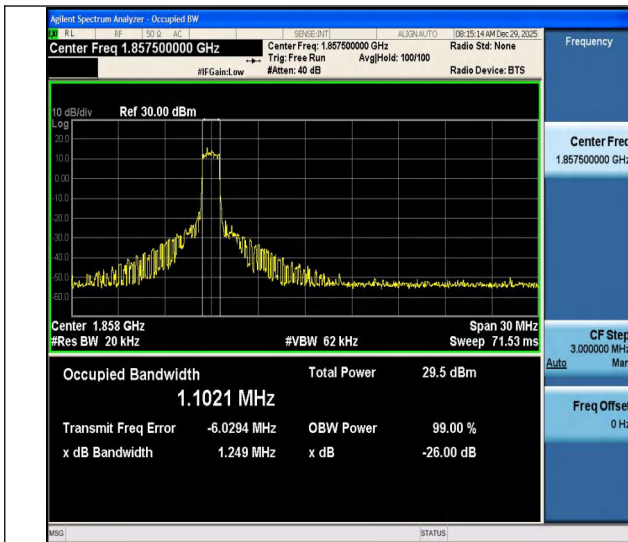
Band2-10MHz-QPSK-18650-6#0-PASS



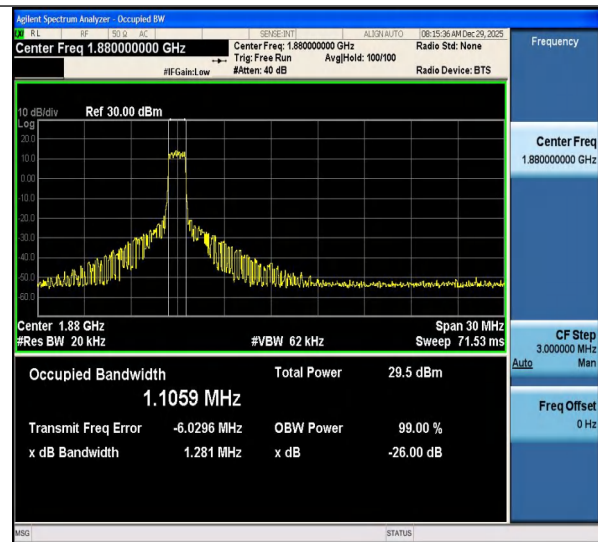
Band2-10MHz-QPSK-18900-6#0-PASS



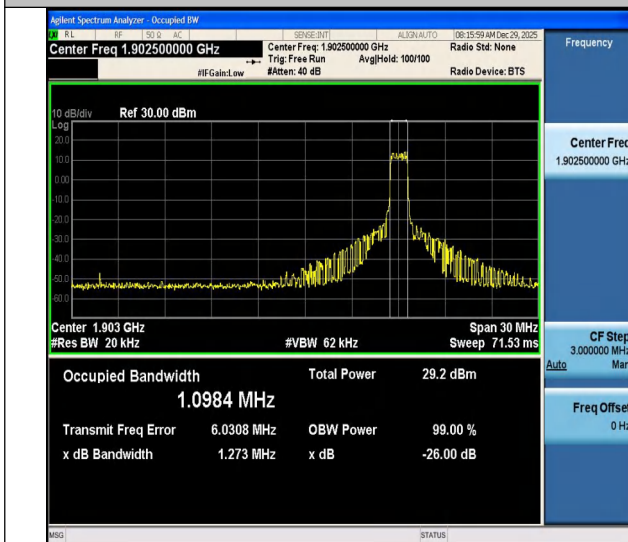
Band2-10MHz-QPSK-19150-6#0-PASS



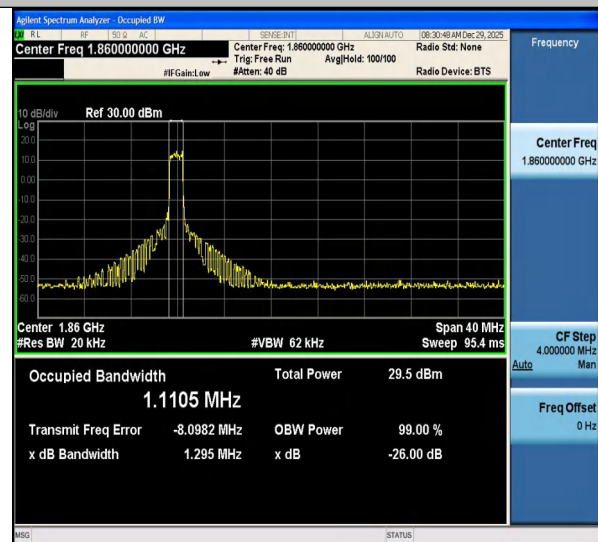
Band2-15MHz-QPSK-18675-6#0-PASS



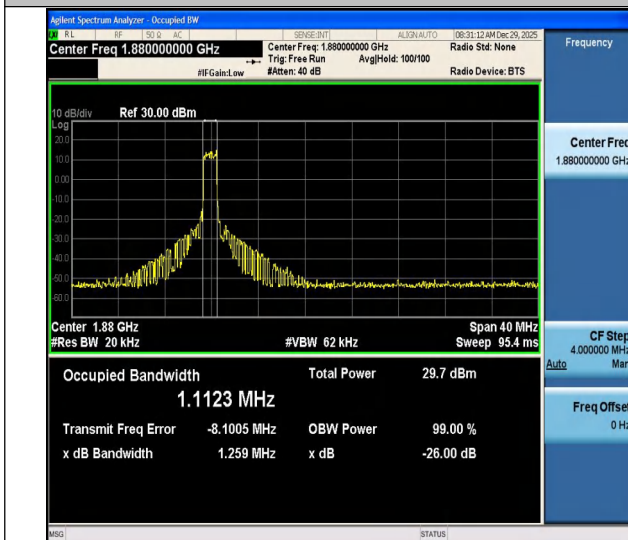
Band2-15MHz-QPSK-18900-6#0-PASS



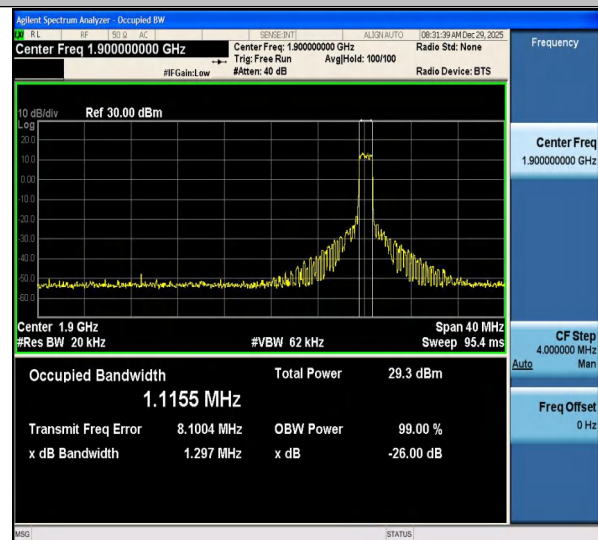
Band2-15MHz-QPSK-19125-6#0-PASS



Band2-20MHz-QPSK-18700-6#0-PASS



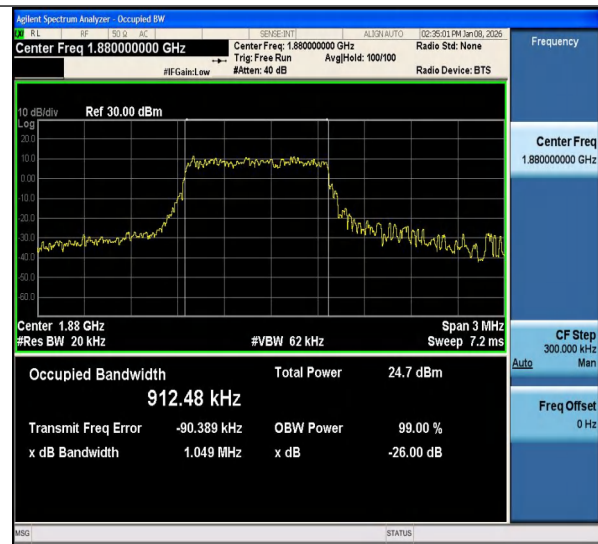
Band2-20MHz-QPSK-18900-6#0-PASS



Band2-20MHz-QPSK-19100-6#0-PASS



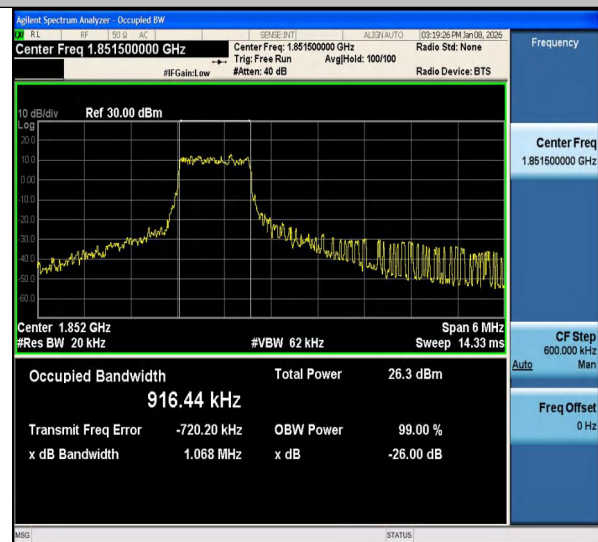
Band2-1.4MHz-16QAM-18607-5#0-PASS



Band2-1.4MHz-16QAM-18900-5#0-PASS



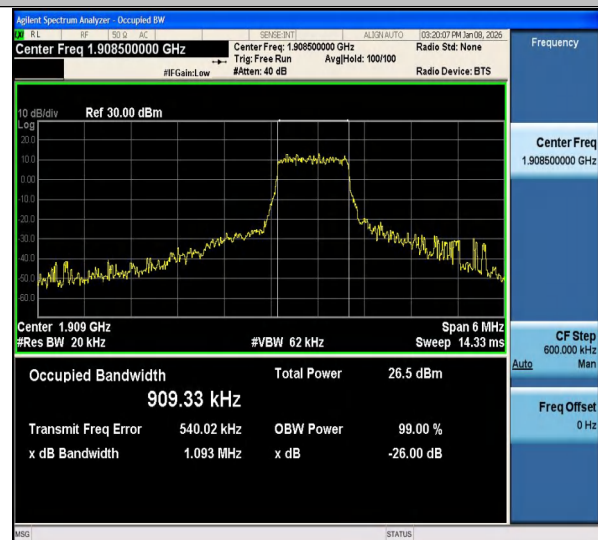
Band2-1.4MHz-16QAM-19093-5#0-PASS



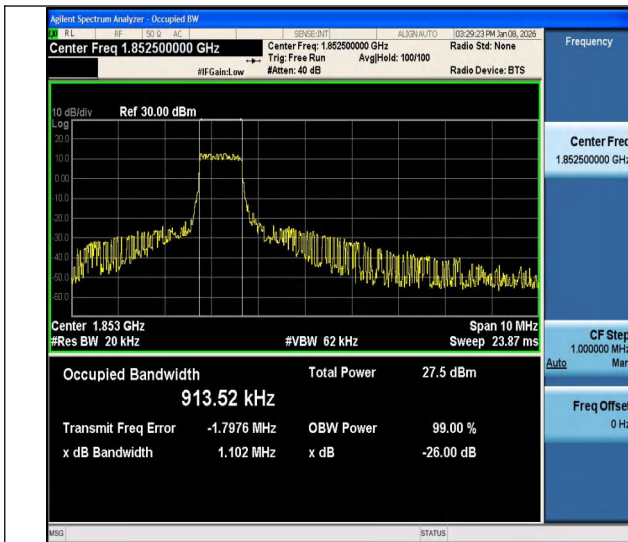
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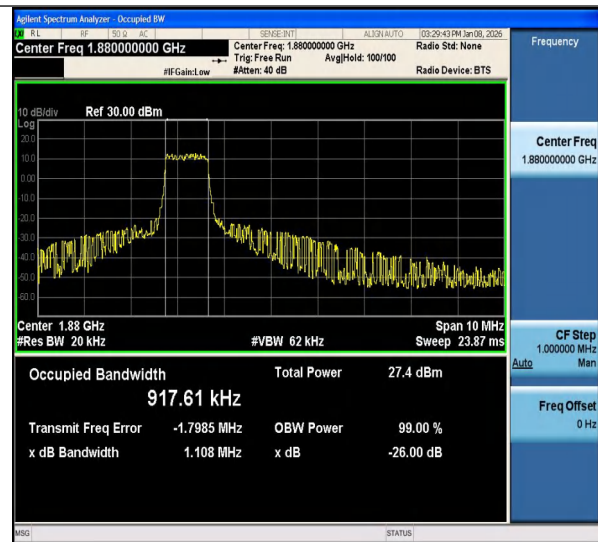
Band2-3MHz-16QAM-18900-5#0-PASS



Band2-3MHz-16QAM-19185-5#0-PASS



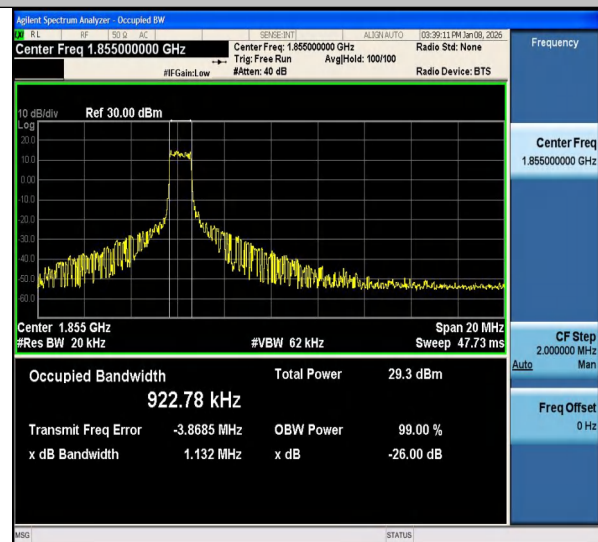
Band2-5MHz-16QAM-18625-5#0-PASS



Band2-5MHz-16QAM-18900-5#0-PASS



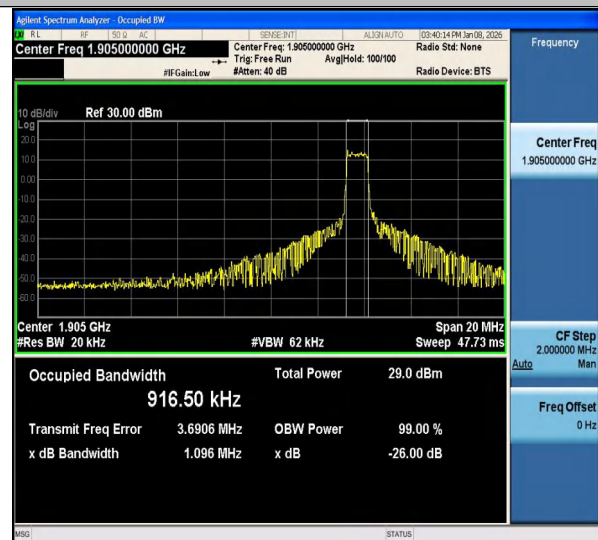
Band2-5MHz-16QAM-19175-5#0-PASS



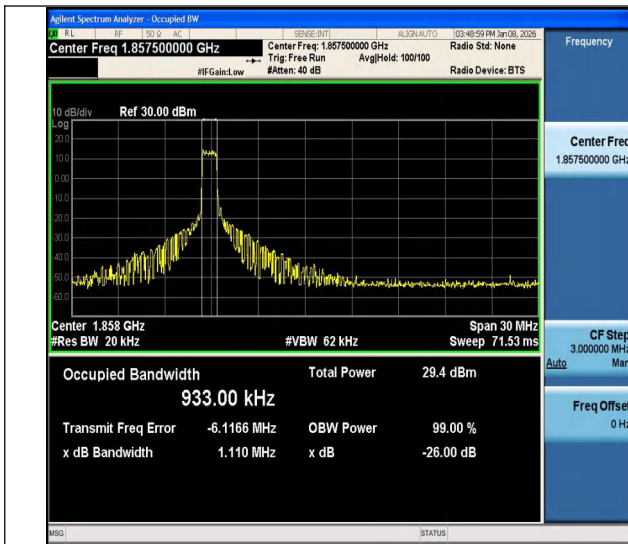
Band2-10MHz-16QAM-18650-5#0-PASS



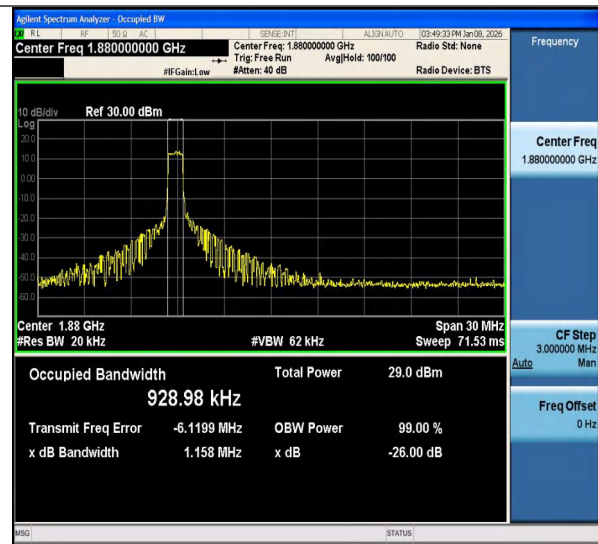
Band2-10MHz-16QAM-18900-5#0-PASS



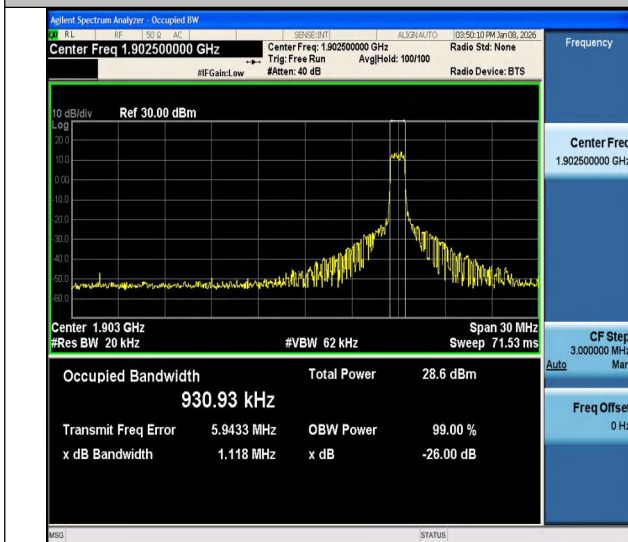
Band2-10MHz-16QAM-19150-5#0-PASS



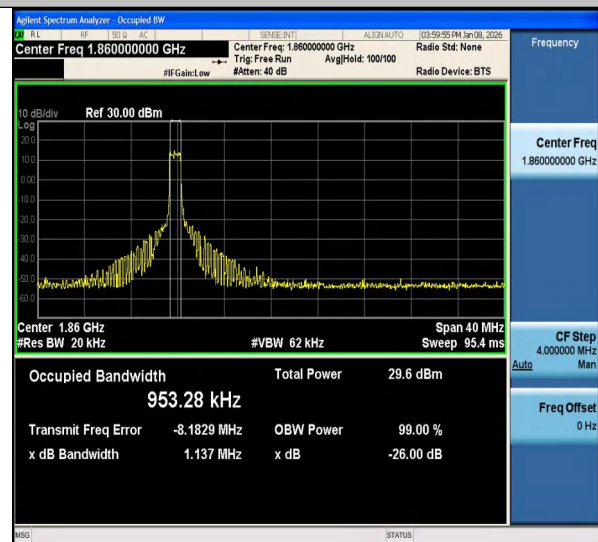
Band2-15MHz-16QAM-18675-5#0-PASS



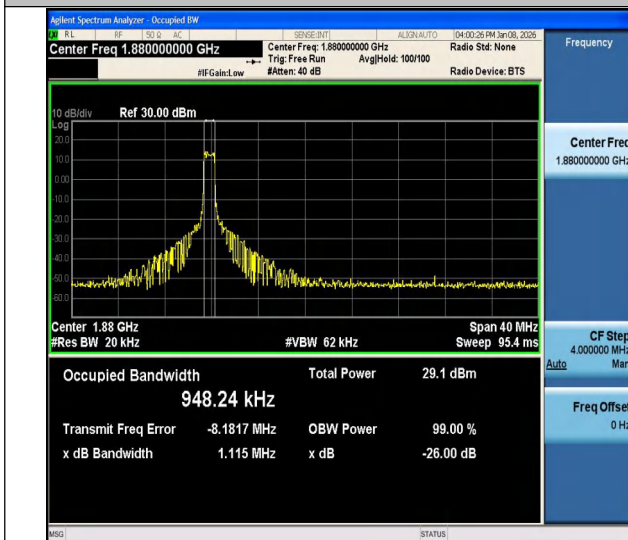
Band2-15MHz-16QAM-18900-5#0-PASS



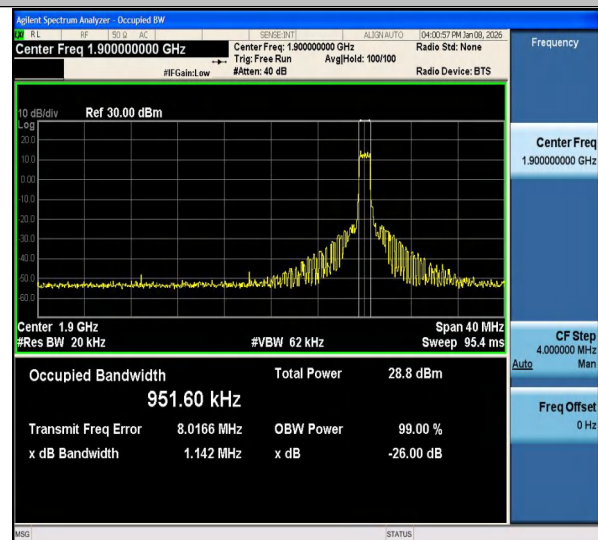
Band2-15MHz-16QAM-19125-5#0-PASS



Band2-20MHz-16QAM-18700-5#0-PASS



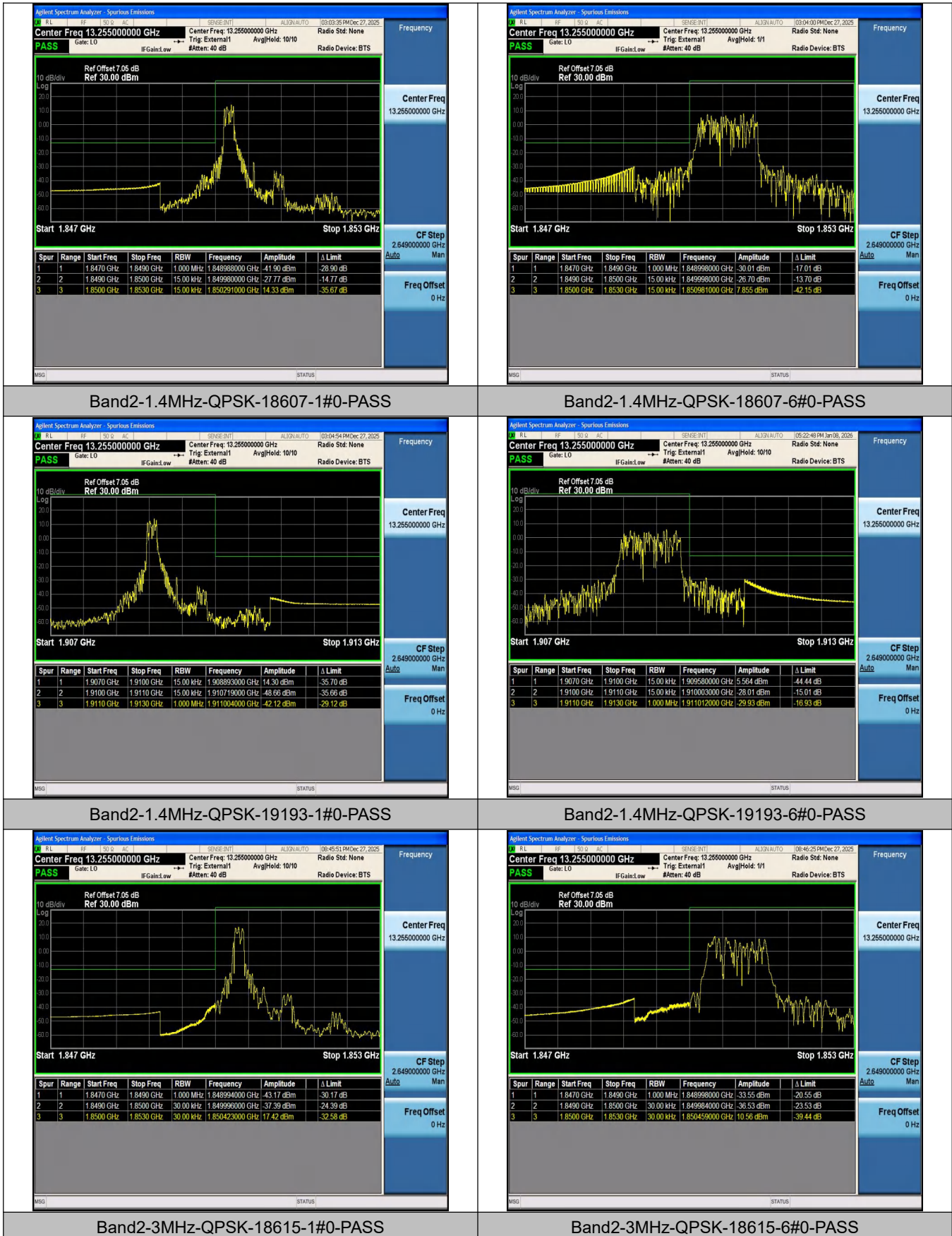
Band2-20MHz-16QAM-18900-5#0-PASS



Band2-20MHz-16QAM-19100-5#0-PASS

Band Edge for M1

Test Graphs





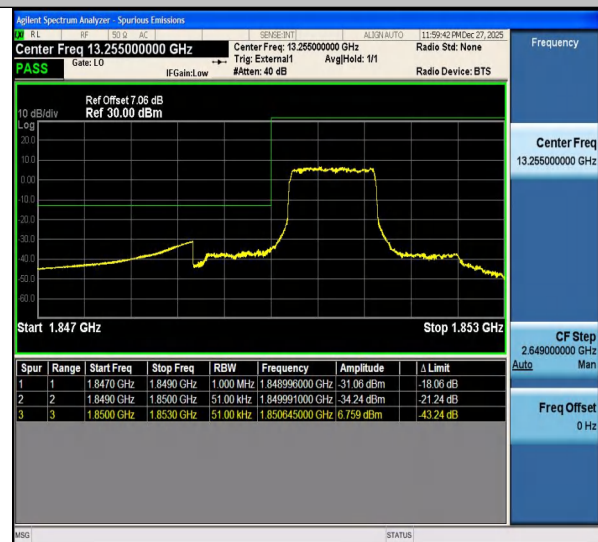
Band2-3MHz-QPSK-19185-1#0-PASS



Band2-3MHz-QPSK-19185-6#0-PASS



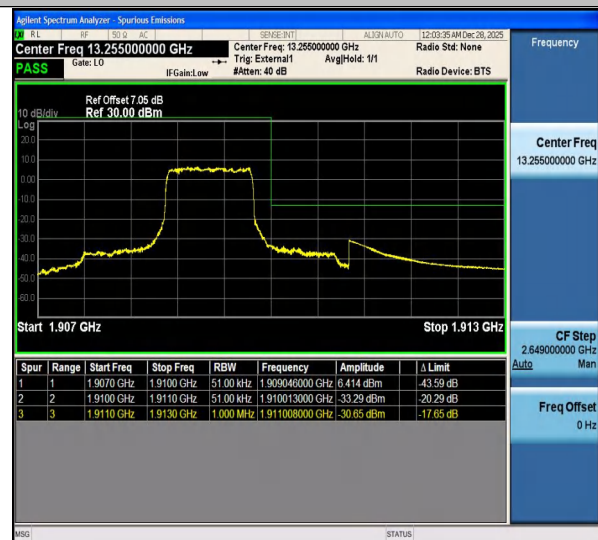
Band2-5MHz-QPSK-18625-1#0-PASS



Band2-5MHz-QPSK-18625-6#0-PASS



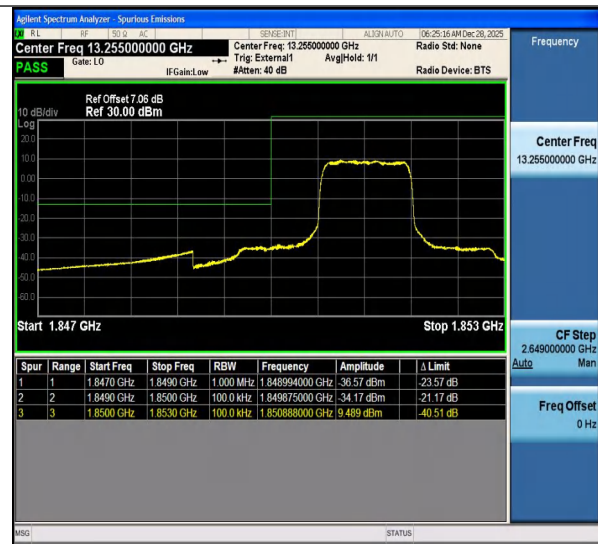
Band2-5MHz-QPSK-19175-1#0-PASS



Band2-5MHz-QPSK-19175-6#0-PASS



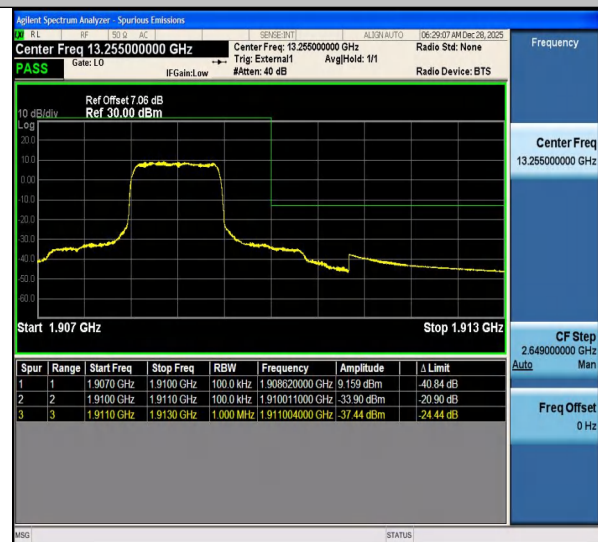
Band2-10MHz-QPSK-18650-1#0-PASS



Band2-10MHz-QPSK-18650-6#0-PASS



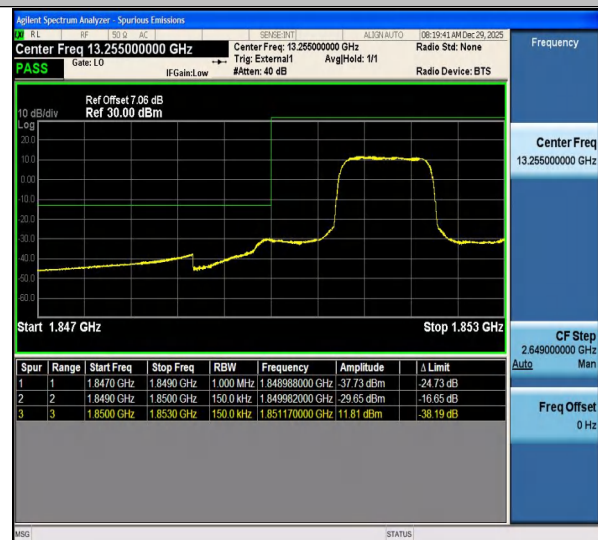
Band2-10MHz-QPSK-19150-1#0-PASS



Band2-10MHz-QPSK-19150-6#0-PASS



Band2-15MHz-QPSK-18675-1#0-PASS



Band2-15MHz-QPSK-18675-6#0-PASS



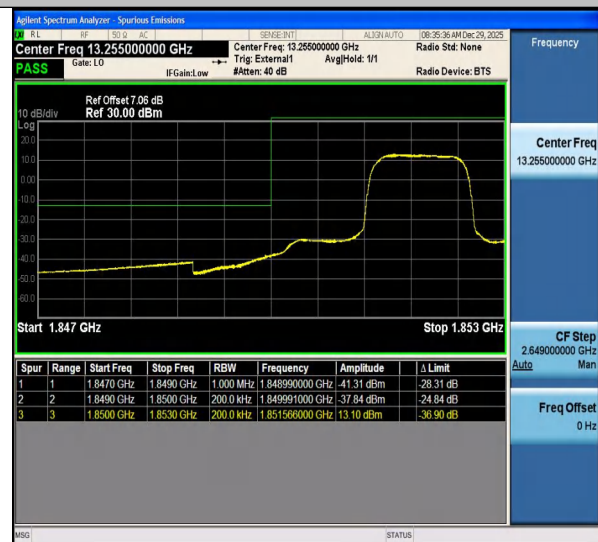
Band2-15MHz-QPSK-19125-1#0-PASS



Band2-15MHz-QPSK-19125-6#0-PASS



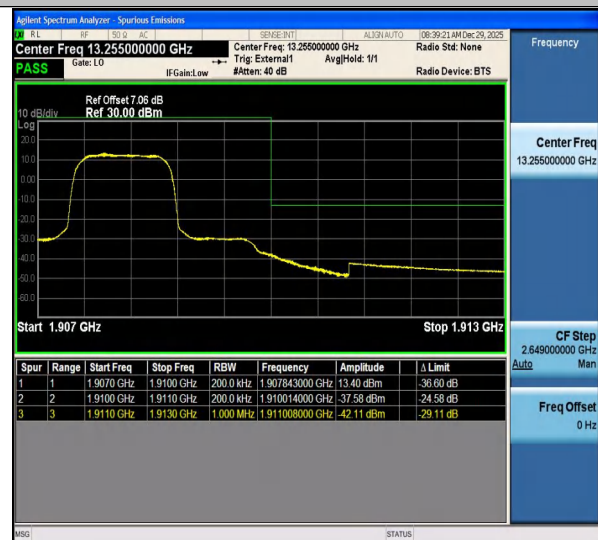
Band2-20MHz-QPSK-18700-1#0-PASS



Band2-20MHz-QPSK-18700-6#0-PASS



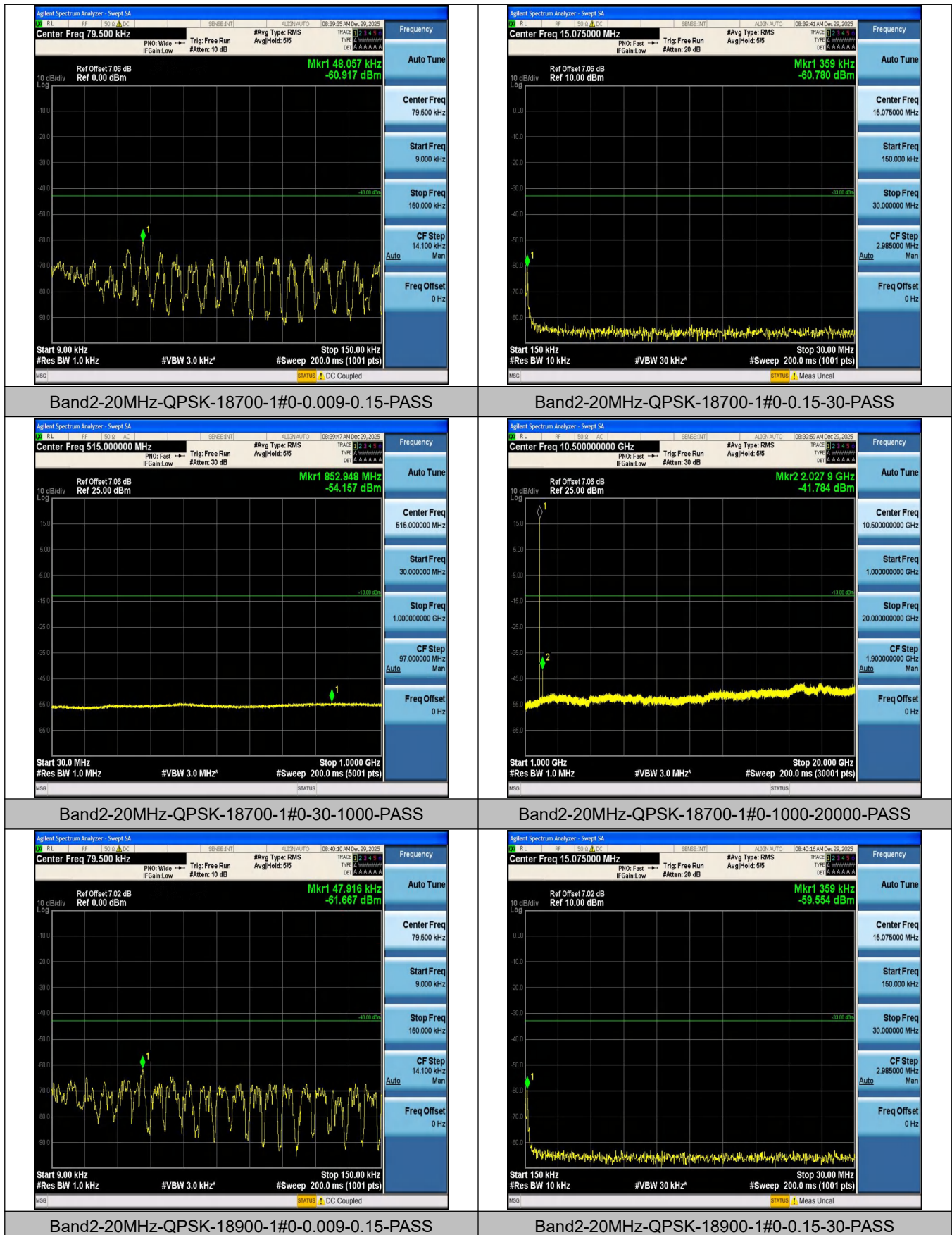
Band2-20MHz-QPSK-19100-1#0-PASS



Band2-20MHz-QPSK-19100-6#0-PASS

Conducted Spurious Emission for M1

Test Graphs

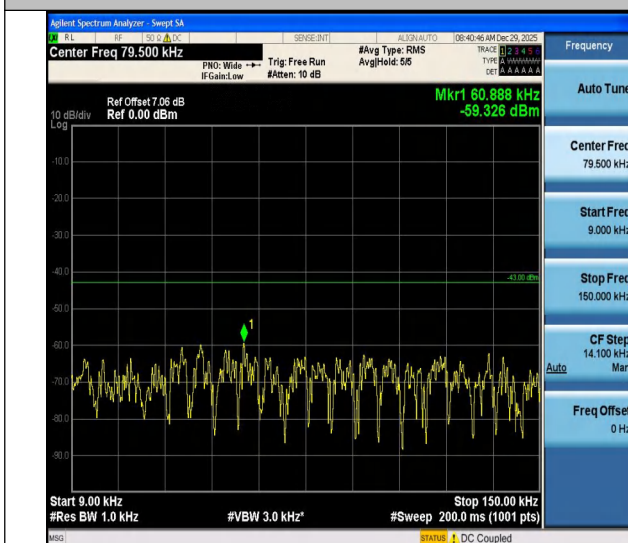




Band2-20MHz-QPSK-18900-1#0-30-1000-PASS



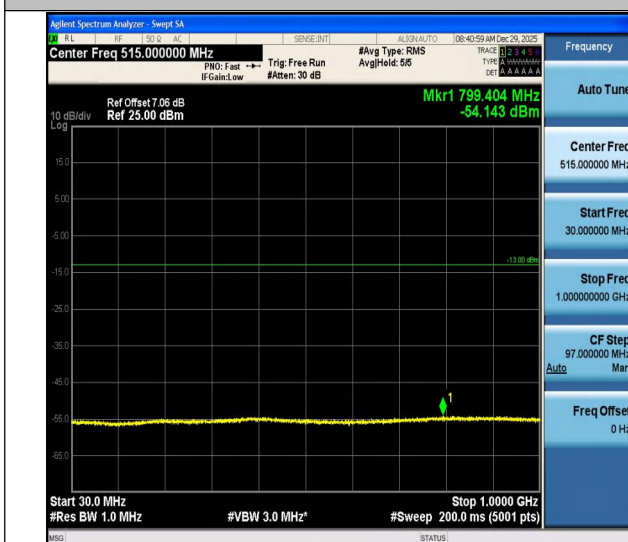
Band2-20MHz-QPSK-18900-1#0-1000-20000-PASS



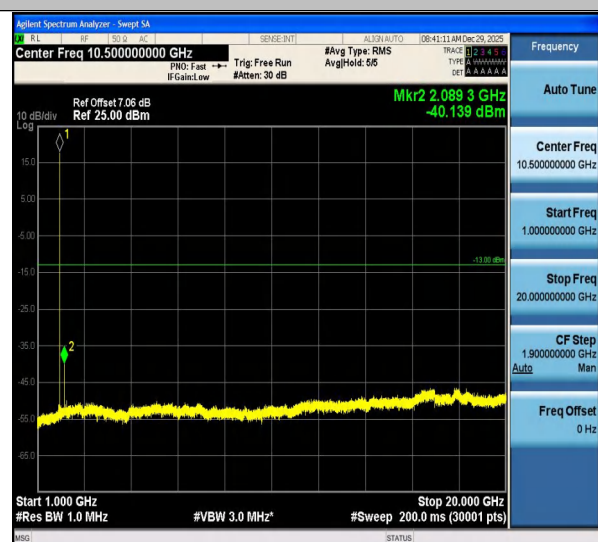
Band2-20MHz-QPSK-19100-1#0-0.009-0.15-PASS



Band2-20MHz-QPSK-19100-1#0-0.15-30-PASS



Band2-20MHz-QPSK-19100-1#0-30-1000-PASS



Band2-20MHz-QPSK-19100-1#0-1000-20000-PASS

Frequency Stability for M1

Test Result

Voltage											
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band2	20MHz	QPSK	18900	6	0	Low	VN	NT	7.80	0.004149	PASS
Band2	20MHz	QPSK	18900	6	0	Low	VL	NT	7.50	0.003989	PASS
Band2	20MHz	QPSK	18900	6	0	Low	VH	NT	4.60	0.002447	PASS

Temperature											
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band2	20MHz	QPSK	18900	6	0	Low	NV	-30	4.50	0.002394	PASS
Band2	20MHz	QPSK	18900	6	0	Low	NV	-20	6.30	0.003351	PASS
Band2	20MHz	QPSK	18900	6	0	Low	NV	-10	4.20	0.002234	PASS
Band2	20MHz	QPSK	18900	6	0	Low	NV	0	6.90	0.003670	PASS
Band2	20MHz	QPSK	18900	6	0	Low	NV	10	8.80	0.004681	PASS
Band2	20MHz	QPSK	18900	6	0	Low	NV	20	7.30	0.003883	PASS
Band2	20MHz	QPSK	18900	6	0	Low	NV	30	6.90	0.003670	PASS
Band2	20MHz	QPSK	18900	6	0	Low	NV	40	7.70	0.004096	PASS
Band2	20MHz	QPSK	18900	6	0	Low	NV	50	6.50	0.003457	PASS

~The End~