

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	1	0	Low	23.49	31.39	33.00	PASS
Band2	1.4MHz	16QAM	18607	1	0	Low	22.45	30.35	33.00	PASS
Band2	1.4MHz	QPSK	18607	1	5	Low	23.48	31.38	33.00	PASS
Band2	1.4MHz	16QAM	18607	1	5	Low	22.59	30.49	33.00	PASS
Band2	1.4MHz	QPSK	18900	1	0	Low	21.41	29.31	33.00	PASS
Band2	1.4MHz	16QAM	18900	1	0	Low	16.67	24.57	33.00	PASS
Band2	1.4MHz	QPSK	18900	1	5	Low	23.35	31.25	33.00	PASS
Band2	1.4MHz	16QAM	18900	1	5	Low	22.34	30.24	33.00	PASS
Band2	1.4MHz	QPSK	18607	6	0	Low	23.4	31.3	33.00	PASS
Band2	1.4MHz	16QAM	18607	6	0	Low	22.42	30.32	33.00	PASS
Band2	1.4MHz	QPSK	19193	1	0	High	21.37	29.27	33.00	PASS
Band2	1.4MHz	16QAM	19193	1	0	High	16.55	24.45	33.00	PASS
Band2	1.4MHz	QPSK	19193	1	5	High	23.39	31.29	33.00	PASS
Band2	1.4MHz	16QAM	19193	1	5	High	22.43	30.33	33.00	PASS
Band2	3MHz	QPSK	18615	1	0	Low	23.41	31.31	33.00	PASS
Band2	3MHz	16QAM	18615	1	0	Low	22.48	30.38	33.00	PASS
Band2	1.4MHz	QPSK	18900	6	0	Low	21.32	29.22	33.00	PASS
Band2	1.4MHz	16QAM	18900	6	0	Low	17.55	25.45	33.00	PASS
Band2	1.4MHz	QPSK	19193	6	0	High	23.4	31.3	33.00	PASS
Band2	1.4MHz	16QAM	19193	6	0	High	22.46	30.36	33.00	PASS
Band2	3MHz	QPSK	18615	1	5	Low	23.49	31.39	33.00	PASS
Band2	3MHz	16QAM	18615	1	5	Low	22.51	30.41	33.00	PASS
Band2	3MHz	QPSK	18900	1	0	Low	21.37	29.27	33.00	PASS
Band2	3MHz	16QAM	18900	1	0	Low	18.34	26.24	33.00	PASS
Band2	3MHz	QPSK	18900	1	5	Low	22.2	30.1	33.00	PASS
Band2	3MHz	16QAM	18900	1	5	Low	21.18	29.08	33.00	PASS
Band2	3MHz	QPSK	18615	6	0	Low	22.29	30.19	33.00	PASS
Band2	3MHz	16QAM	18615	6	0	Low	21.33	29.23	33.00	PASS
Band2	3MHz	QPSK	18900	6	0	Low	20.68	28.58	33.00	PASS
Band2	3MHz	16QAM	18900	6	0	Low	17.09	24.99	33.00	PASS
Band2	3MHz	QPSK	19185	1	0	High	23.3	31.2	33.00	PASS
Band2	3MHz	16QAM	19185	1	0	High	22.43	30.33	33.00	PASS
Band2	3MHz	QPSK	19185	1	5	High	23.35	31.25	33.00	PASS
Band2	3MHz	16QAM	19185	1	5	High	22.34	30.24	33.00	PASS
Band2	5MHz	QPSK	18625	1	0	Low	21.24	29.14	33.00	PASS
Band2	5MHz	16QAM	18625	1	0	Low	18.27	26.17	33.00	PASS

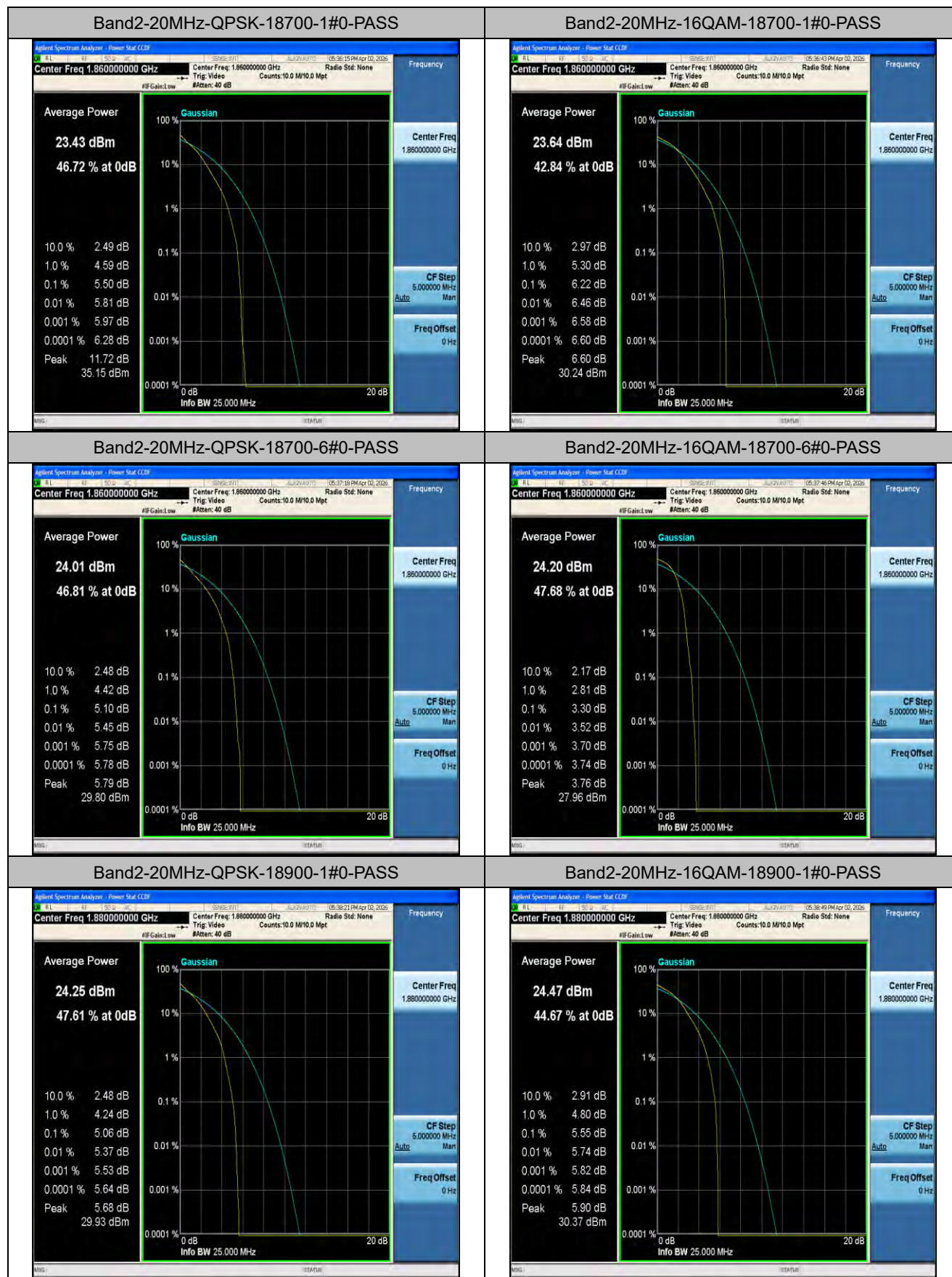
Band2	5MHz	QPSK	18625	1	5	Low	23.43	31.33	33.00	PASS
Band2	5MHz	16QAM	18625	1	5	Low	23.67	31.57	33.00	PASS
Band2	3MHz	QPSK	19185	6	0	High	23.49	31.39	33.00	PASS
Band2	3MHz	16QAM	19185	6	0	High	23.76	31.66	33.00	PASS
Band2	5MHz	QPSK	18625	6	0	Low	22.37	30.27	33.00	PASS
Band2	5MHz	16QAM	18625	6	0	Low	23.33	31.23	33.00	PASS
Band2	5MHz	QPSK	18900	1	0	Low	23.26	31.16	33.00	PASS
Band2	5MHz	16QAM	18900	1	0	Low	23.47	31.37	33.00	PASS
Band2	5MHz	QPSK	18900	1	5	Low	23.4	31.3	33.00	PASS
Band2	5MHz	16QAM	18900	1	5	Low	23.51	31.41	33.00	PASS
Band2	5MHz	QPSK	18900	6	0	Low	22.29	30.19	33.00	PASS
Band2	5MHz	16QAM	18900	6	0	Low	23.24	31.14	33.00	PASS
Band2	5MHz	QPSK	19175	1	0	High	23.22	31.12	33.00	PASS
Band2	5MHz	16QAM	19175	1	0	High	23.51	31.41	33.00	PASS
Band2	5MHz	QPSK	19175	1	5	High	23.41	31.31	33.00	PASS
Band2	5MHz	16QAM	19175	1	5	High	23.6	31.5	33.00	PASS
Band2	5MHz	QPSK	19175	6	0	High	22.29	30.19	33.00	PASS
Band2	5MHz	16QAM	19175	6	0	High	23.31	31.21	33.00	PASS
Band2	10MHz	QPSK	18650	1	0	Low	23.65	31.55	33.00	PASS
Band2	10MHz	16QAM	18650	1	0	Low	23.81	31.71	33.00	PASS
Band2	10MHz	QPSK	18650	1	5	Low	23.67	31.57	33.00	PASS
Band2	10MHz	16QAM	18650	1	5	Low	23.98	31.88	33.00	PASS
Band2	10MHz	QPSK	18650	6	0	Low	22.58	30.48	33.00	PASS
Band2	10MHz	16QAM	18650	6	0	Low	23.53	31.43	33.00	PASS
Band2	10MHz	QPSK	18900	1	0	Low	23.44	31.34	33.00	PASS
Band2	10MHz	16QAM	18900	1	0	Low	23.65	31.55	33.00	PASS
Band2	10MHz	QPSK	18900	1	5	Low	23.48	31.38	33.00	PASS
Band2	10MHz	16QAM	18900	1	5	Low	23.62	31.52	33.00	PASS
Band2	10MHz	QPSK	18900	6	0	Low	22.36	30.26	33.00	PASS
Band2	10MHz	16QAM	18900	6	0	Low	23.15	31.05	33.00	PASS
Band2	10MHz	QPSK	19150	1	0	High	23.31	31.21	33.00	PASS
Band2	10MHz	16QAM	19150	1	0	High	23.5	31.4	33.00	PASS
Band2	10MHz	QPSK	19150	1	5	High	23.38	31.28	33.00	PASS
Band2	10MHz	16QAM	19150	1	5	High	23.54	31.44	33.00	PASS
Band2	10MHz	QPSK	19150	6	0	High	22.26	30.16	33.00	PASS
Band2	10MHz	16QAM	19150	6	0	High	23.33	31.23	33.00	PASS
Band2	15MHz	QPSK	18675	1	0	Low	23.66	31.56	33.00	PASS
Band2	15MHz	16QAM	18675	1	0	Low	23.8	31.7	33.00	PASS
Band2	15MHz	QPSK	18675	1	5	Low	23.73	31.63	33.00	PASS
Band2	15MHz	16QAM	18675	1	5	Low	23.85	31.75	33.00	PASS
Band2	15MHz	QPSK	18675	6	0	Low	23.54	31.44	33.00	PASS
Band2	15MHz	16QAM	18675	6	0	Low	23.45	31.35	33.00	PASS
Band2	15MHz	QPSK	18900	1	0	Low	23.47	31.37	33.00	PASS
Band2	15MHz	16QAM	18900	1	0	Low	23.64	31.54	33.00	PASS

Band2	15MHz	QPSK	18900	1	5	Low	23.51	31.41	33.00	PASS
Band2	15MHz	16QAM	18900	1	5	Low	23.72	31.62	33.00	PASS
Band2	15MHz	QPSK	18900	6	0	Low	23.4	31.3	33.00	PASS
Band2	15MHz	16QAM	18900	6	0	Low	23.21	31.11	33.00	PASS
Band2	15MHz	QPSK	19125	1	0	High	23.07	30.97	33.00	PASS
Band2	15MHz	16QAM	19125	1	0	High	23.27	31.17	33.00	PASS
Band2	15MHz	QPSK	19125	1	5	High	23.17	31.07	33.00	PASS
Band2	15MHz	16QAM	19125	1	5	High	23.29	31.19	33.00	PASS
Band2	15MHz	QPSK	19125	6	0	High	23	30.9	33.00	PASS
Band2	15MHz	16QAM	19125	6	0	High	23.26	31.16	33.00	PASS
Band2	20MHz	QPSK	18700	1	0	Low	23.68	31.58	33.00	PASS
Band2	20MHz	16QAM	18700	1	0	Low	23.89	31.79	33.00	PASS
Band2	20MHz	QPSK	18700	1	5	Low	23.75	31.65	33.00	PASS
Band2	20MHz	16QAM	18700	1	5	Low	23.93	31.83	33.00	PASS
Band2	20MHz	QPSK	18700	6	0	Low	23.63	31.53	33.00	PASS
Band2	20MHz	16QAM	18700	6	0	Low	23.54	31.44	33.00	PASS
Band2	20MHz	QPSK	18900	1	0	Low	23.52	31.42	33.00	PASS
Band2	20MHz	16QAM	18900	1	0	Low	23.65	31.55	33.00	PASS
Band2	20MHz	QPSK	18900	1	5	Low	23.6	31.5	33.00	PASS
Band2	20MHz	16QAM	18900	1	5	Low	23.81	31.71	33.00	PASS
Band2	20MHz	QPSK	18900	6	0	Low	23.47	31.37	33.00	PASS
Band2	20MHz	16QAM	18900	6	0	Low	23.4	31.3	33.00	PASS
Band2	20MHz	QPSK	19100	1	0	High	23.11	31.01	33.00	PASS
Band2	20MHz	16QAM	19100	1	0	High	23.25	31.15	33.00	PASS
Band2	20MHz	QPSK	19100	1	5	High	23.14	31.04	33.00	PASS
Band2	20MHz	16QAM	19100	1	5	High	23.22	31.12	33.00	PASS
Band2	20MHz	QPSK	19100	6	0	High	23.05	30.95	33.00	PASS
Band2	20MHz	16QAM	19100	6	0	High	23.29	31.19	33.00	PASS

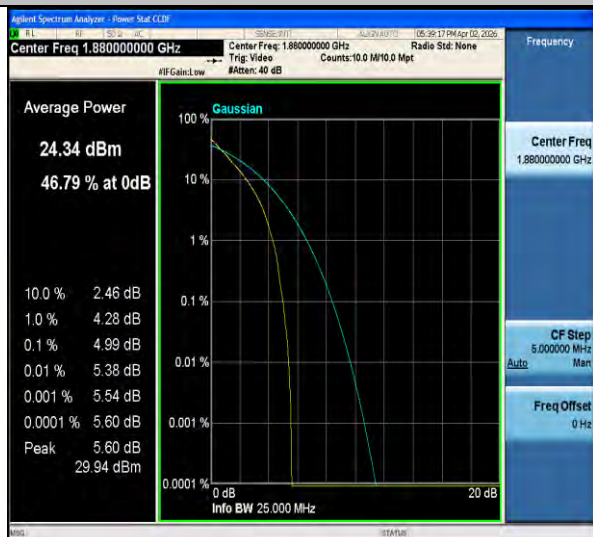
Peak-to-Average Ratio(CCDF) for M1**Test Result**

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band2	20MHz	QPSK	18700	1	0	Low	5.50	<=13	PASS
Band2	20MHz	16QAM	18700	1	0	Low	6.22	<=13	PASS
Band2	20MHz	QPSK	18700	6	0	Low	5.10	<=13	PASS
Band2	20MHz	16QAM	18700	6	0	Low	3.30	<=13	PASS
Band2	20MHz	QPSK	18900	1	0	Low	5.06	<=13	PASS
Band2	20MHz	16QAM	18900	1	0	Low	5.55	<=13	PASS
Band2	20MHz	QPSK	18900	6	0	Low	4.99	<=13	PASS
Band2	20MHz	16QAM	18900	6	0	Low	3.58	<=13	PASS
Band2	20MHz	QPSK	19100	1	0	High	5.13	<=13	PASS
Band2	20MHz	16QAM	19100	1	0	High	6.00	<=13	PASS
Band2	20MHz	QPSK	19100	6	0	High	5.25	<=13	PASS
Band2	20MHz	16QAM	19100	6	0	High	3.35	<=13	PASS

Test Graphs



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



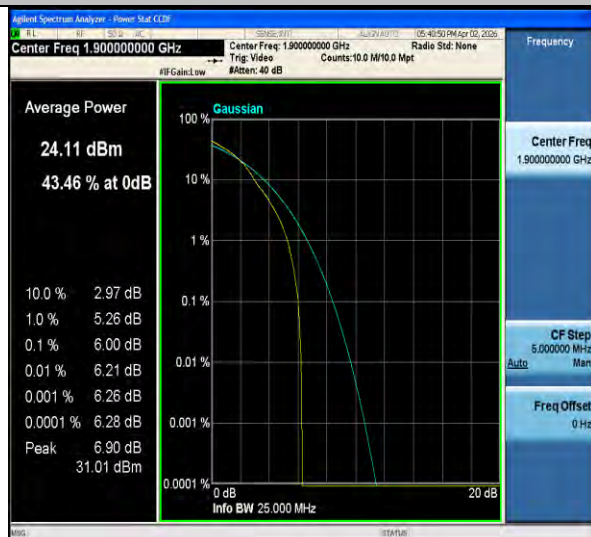
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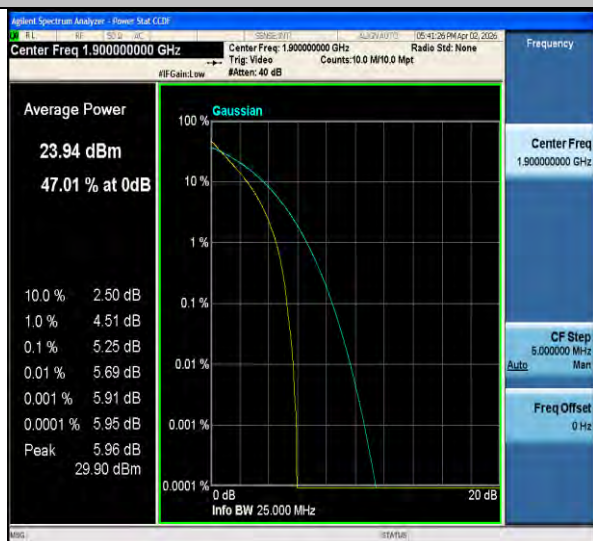
Band2-20MHz-QPSK-19100-1#0-PASS



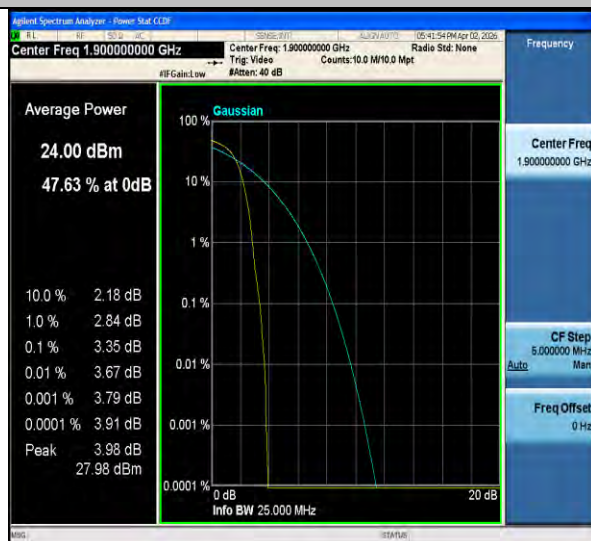
Band2-20MHz-16QAM-19100-1#0-PASS



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



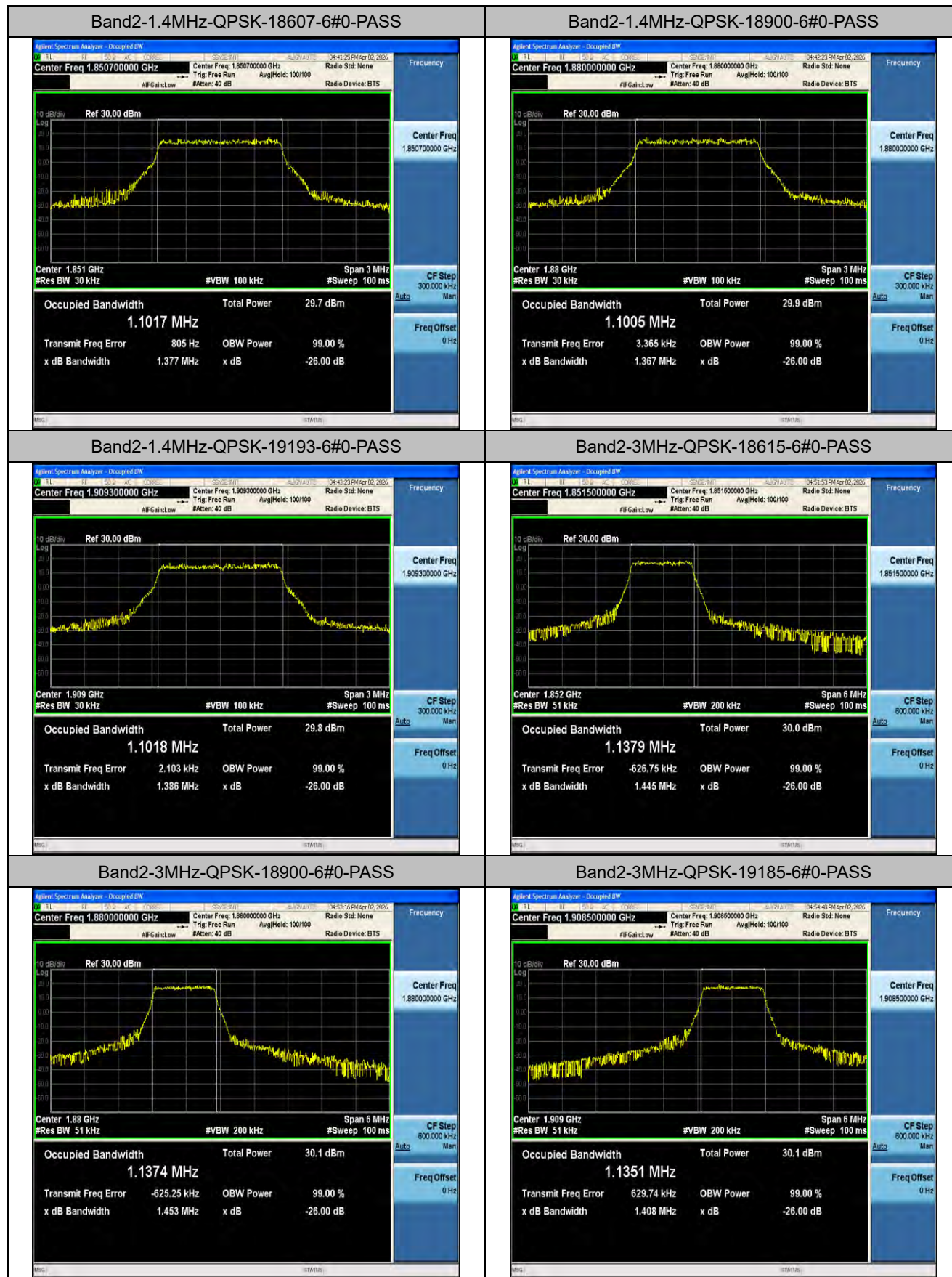
Band2-20MHz-16QAM-19100-6#0-PASS



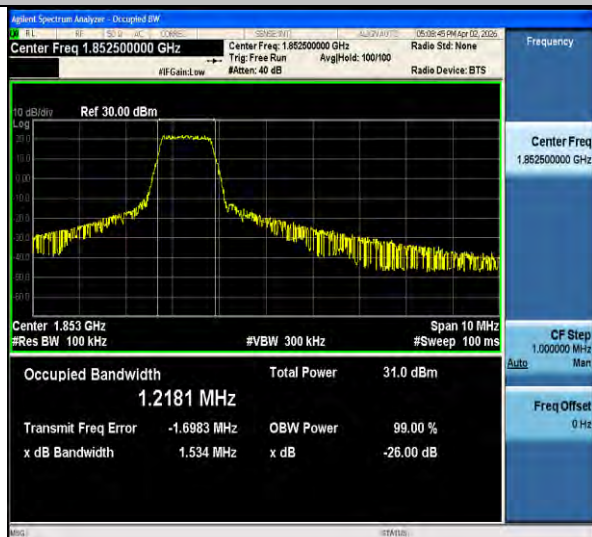
26dB Bandwidth and Occupied Bandwidth for M1**Test Result**

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	1.1017	1.377	PASS
Band2	1.4MHz	QPSK	18900	6	0	Low	1.1005	1.367	PASS
Band2	1.4MHz	QPSK	19193	6	0	High	1.1018	1.386	PASS
Band2	3MHz	QPSK	18615	6	0	Low	1.1379	1.445	PASS
Band2	3MHz	QPSK	18900	6	0	Low	1.1374	1.453	PASS
Band2	3MHz	QPSK	19185	6	0	High	1.1351	1.408	PASS
Band2	5MHz	QPSK	18625	6	0	Low	1.2181	1.534	PASS
Band2	5MHz	QPSK	18900	6	0	Low	1.2358	1.569	PASS
Band2	5MHz	QPSK	19175	6	0	High	1.2297	1.554	PASS
Band2	10MHz	QPSK	18650	6	0	Low	1.3547	1.692	PASS
Band2	10MHz	QPSK	18900	6	0	Low	1.3673	1.710	PASS
Band2	10MHz	QPSK	19150	6	0	High	1.3762	1.736	PASS
Band2	15MHz	QPSK	18675	6	0	Low	1.5451	2.183	PASS
Band2	15MHz	QPSK	18900	6	0	Low	1.5245	2.040	PASS
Band2	15MHz	QPSK	19125	6	0	High	1.5125	1.943	PASS
Band2	20MHz	QPSK	18700	6	0	Low	1.8878	2.497	PASS
Band2	20MHz	QPSK	18900	6	0	Low	1.9046	2.460	PASS
Band2	20MHz	QPSK	19100	6	0	High	1.8984	2.522	PASS
Band2	1.4MHz	16QAM	18607	5	0	Low	0.96540	1.360	PASS
Band2	1.4MHz	16QAM	18900	5	0	Low	0.96698	1.366	PASS
Band2	1.4MHz	16QAM	19193	5	0	High	0.97252	1.366	PASS
Band2	3MHz	16QAM	18900	5	0	Low	1.0158	1.408	PASS
Band2	3MHz	16QAM	19185	5	0	High	1.0123	1.428	PASS
Band2	3MHz	16QAM	18615	5	0	Low	1.0431	1.439	PASS
Band2	5MHz	16QAM	18625	5	0	Low	1.1509	1.478	PASS
Band2	5MHz	16QAM	18900	5	0	Low	1.1302	1.492	PASS
Band2	5MHz	16QAM	19175	5	0	High	1.1271	1.485	PASS
Band2	10MHz	16QAM	18650	5	0	Low	1.2995	1.693	PASS
Band2	10MHz	16QAM	18900	5	0	Low	1.2939	1.674	PASS
Band2	10MHz	16QAM	19150	5	0	High	1.2802	1.631	PASS
Band2	15MHz	16QAM	18675	5	0	Low	1.4522	1.945	PASS
Band2	15MHz	16QAM	18900	5	0	Low	1.4243	1.977	PASS
Band2	15MHz	16QAM	19125	5	0	High	1.4825	2.686	PASS
Band2	20MHz	16QAM	18900	5	0	Low	1.7816	2.337	PASS
Band2	20MHz	16QAM	19100	5	0	High	1.7990	2.336	PASS
Band2	20MHz	16QAM	18700	5	0	Low	1.8298	2.595	PASS

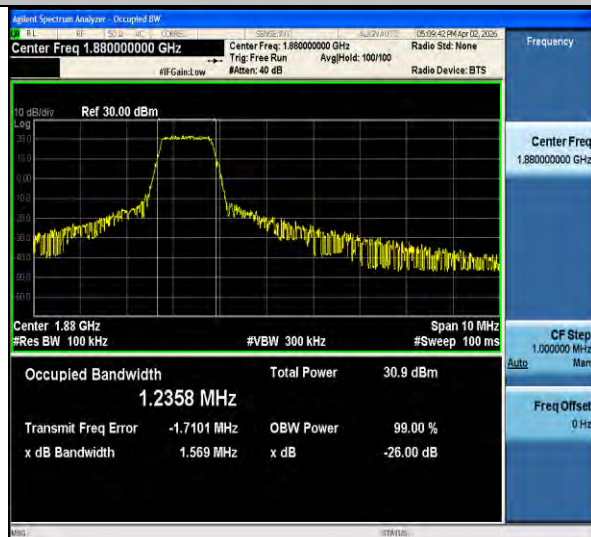
Test Graphs



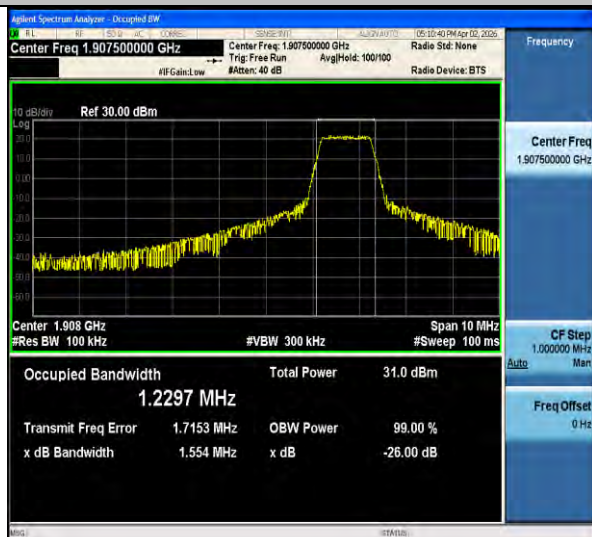
Band2-5MHz-QPSK-18625-6#0-PASS



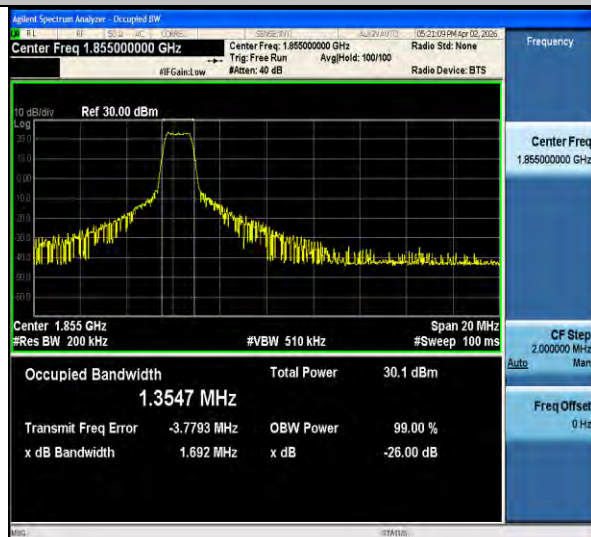
Band2-5MHz-QPSK-18900-6#0-PASS



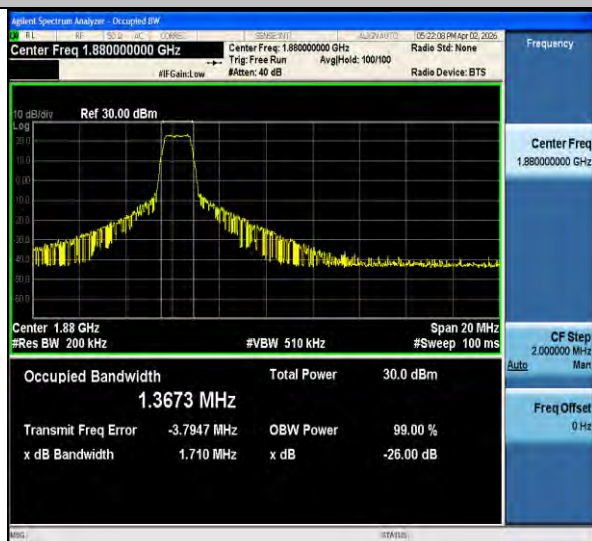
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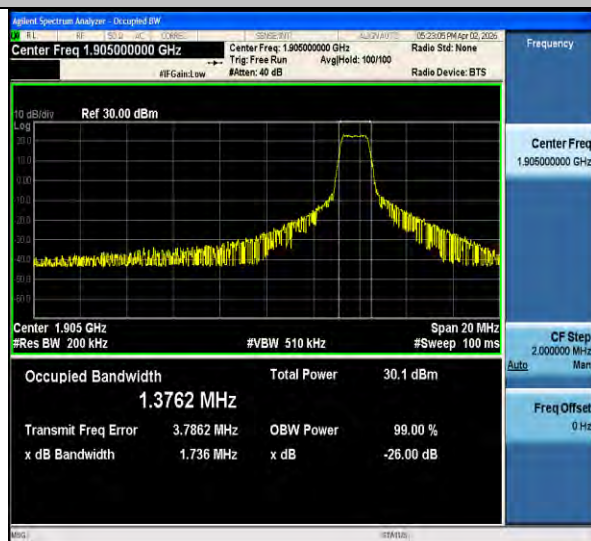
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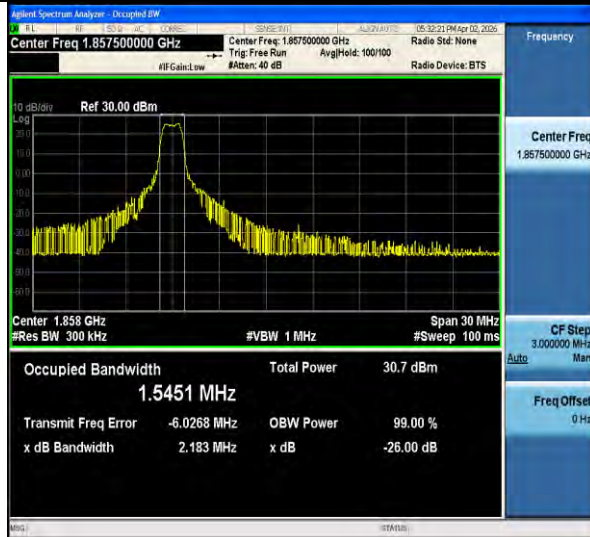
Band2-10MHz-QPSK-18900-6#0-PASS



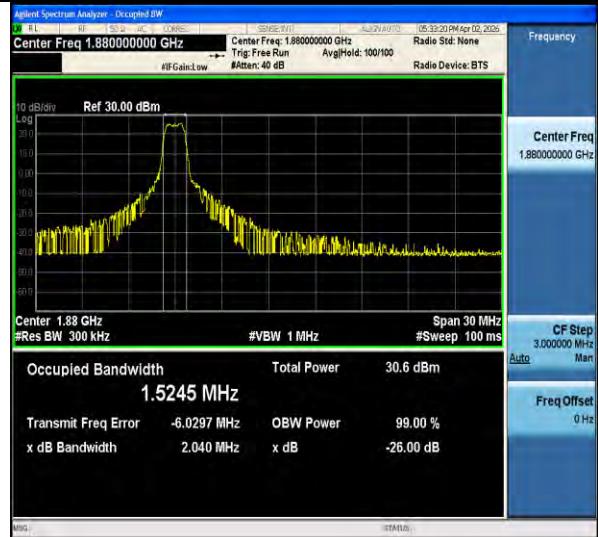
Band2-10MHz-QPSK-19150-6#0-PASS



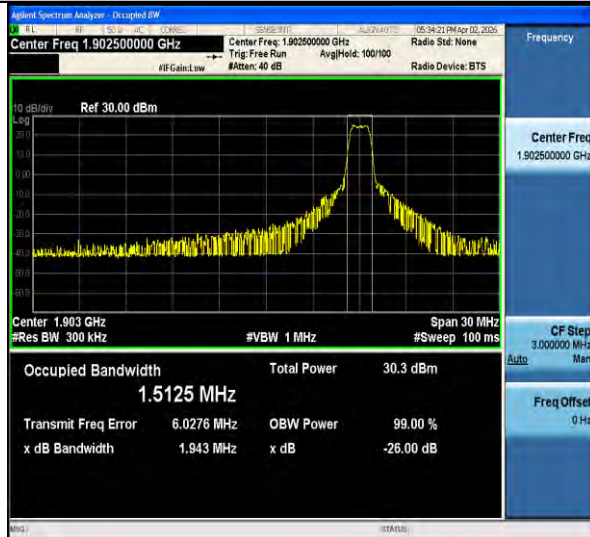
Band2-15MHz-QPSK-18675-6#0-PASS



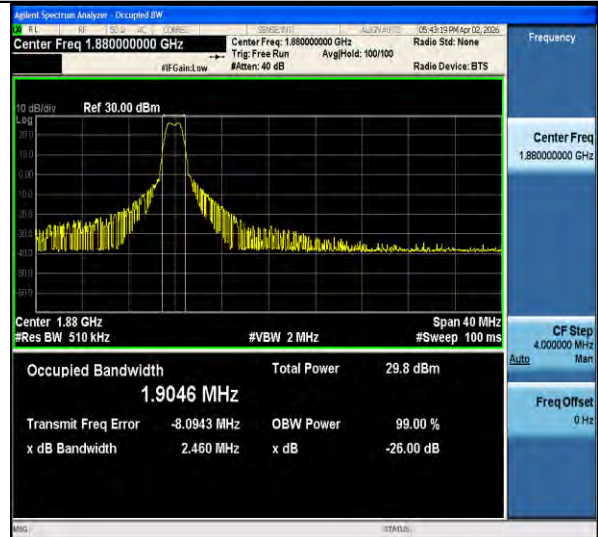
Band2-15MHz-QPSK-18900-6#0-PASS



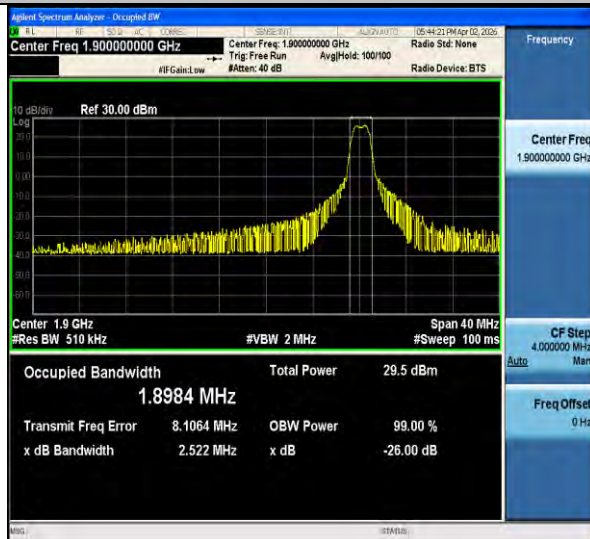
Band2-15MHz-QPSK-19125-6#0-PASS



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



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



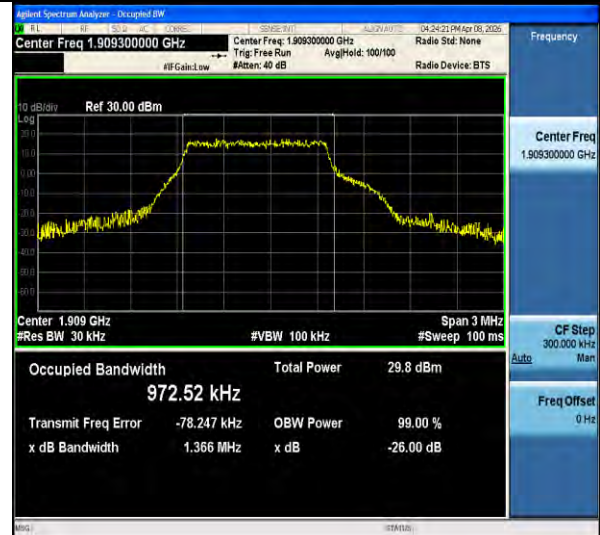
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Band2-1.4MHz-16QAM-18900-5#0-PASS



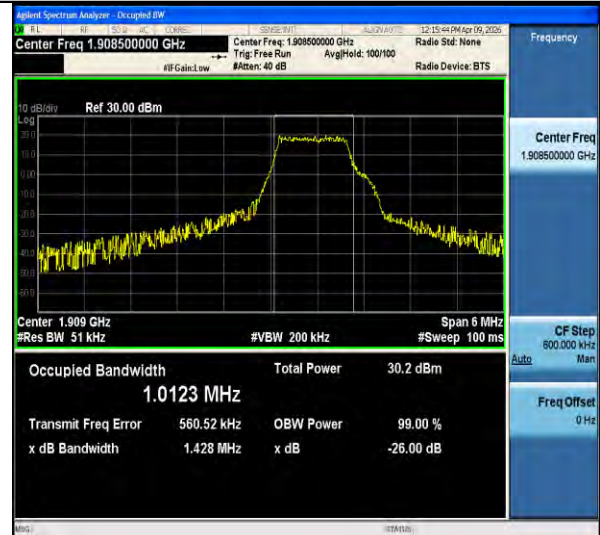
Band2-1.4MHz-16QAM-19193-5#0-PASS



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



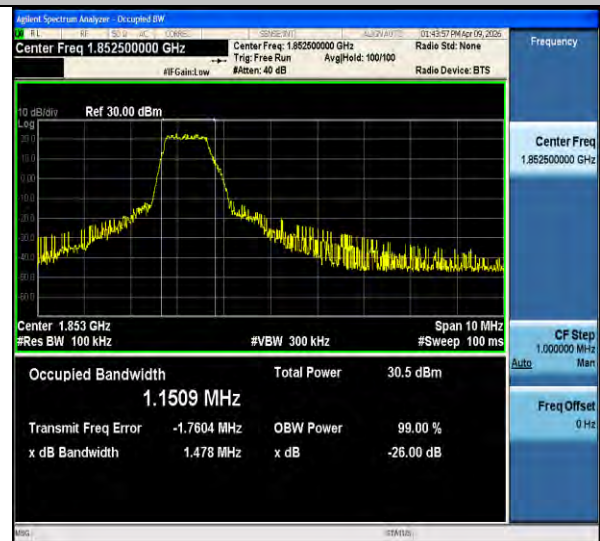
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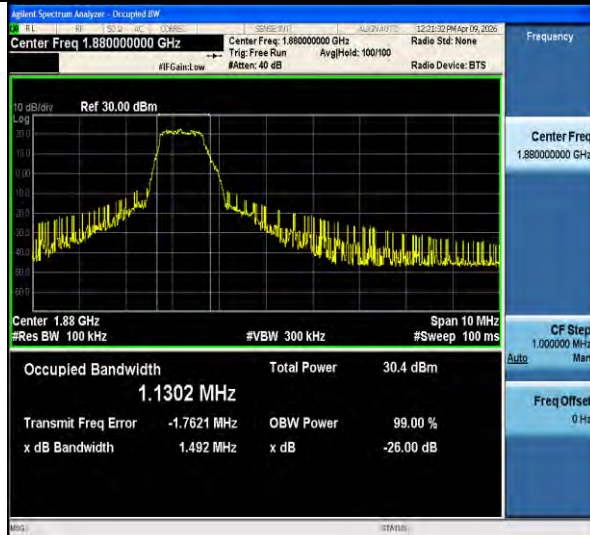
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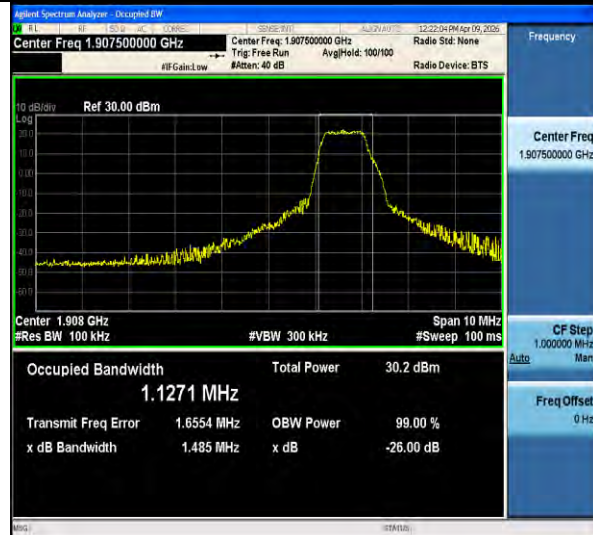
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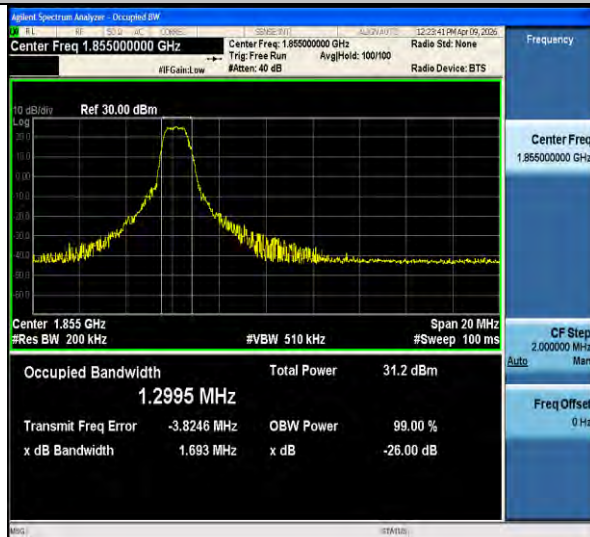
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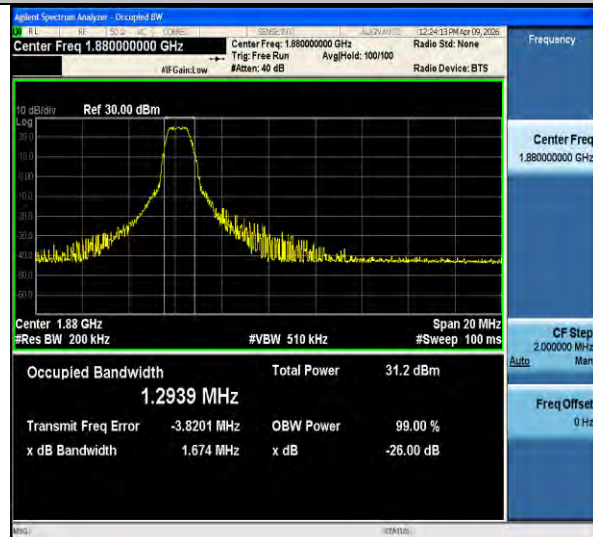
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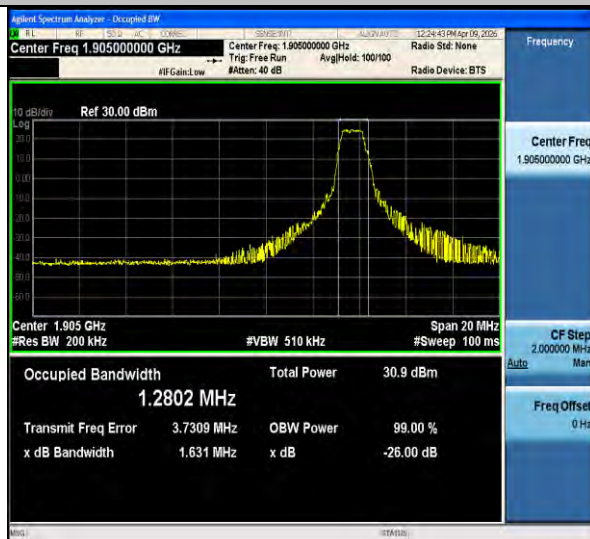
Band2-10MHz-16QAM-18650-5#0-PASS



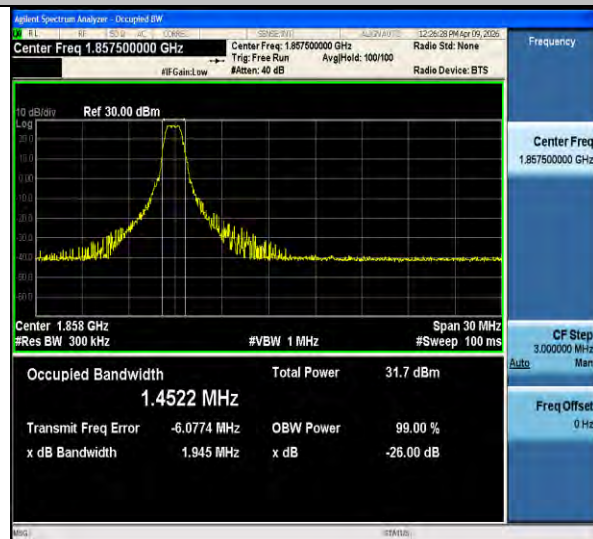
Band2-10MHz-16QAM-18900-5#0-PASS



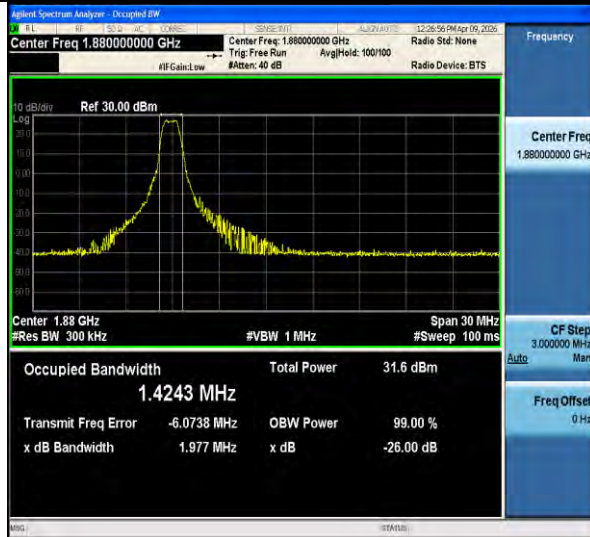
Band2-10MHz-16QAM-19150-5#0-PASS



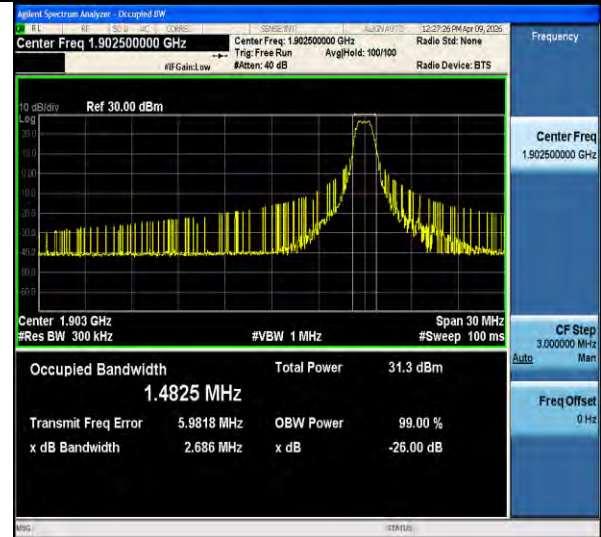
Band2-15MHz-16QAM-18675-5#0-PASS



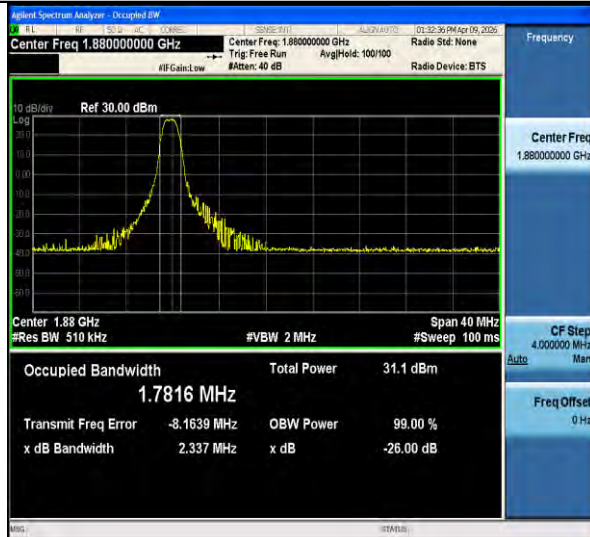
Band2-15MHz-16QAM-18900-5#0-PASS



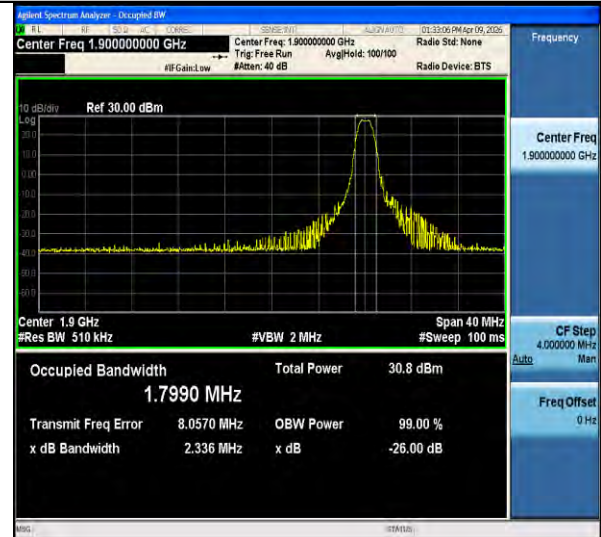
Band2-15MHz-16QAM-19125-5#0-PASS



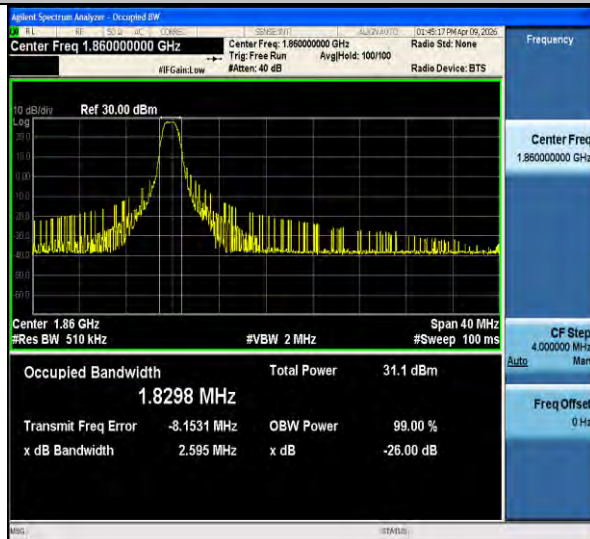
Band2-20MHz-16QAM-18900-5#0-PASS



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

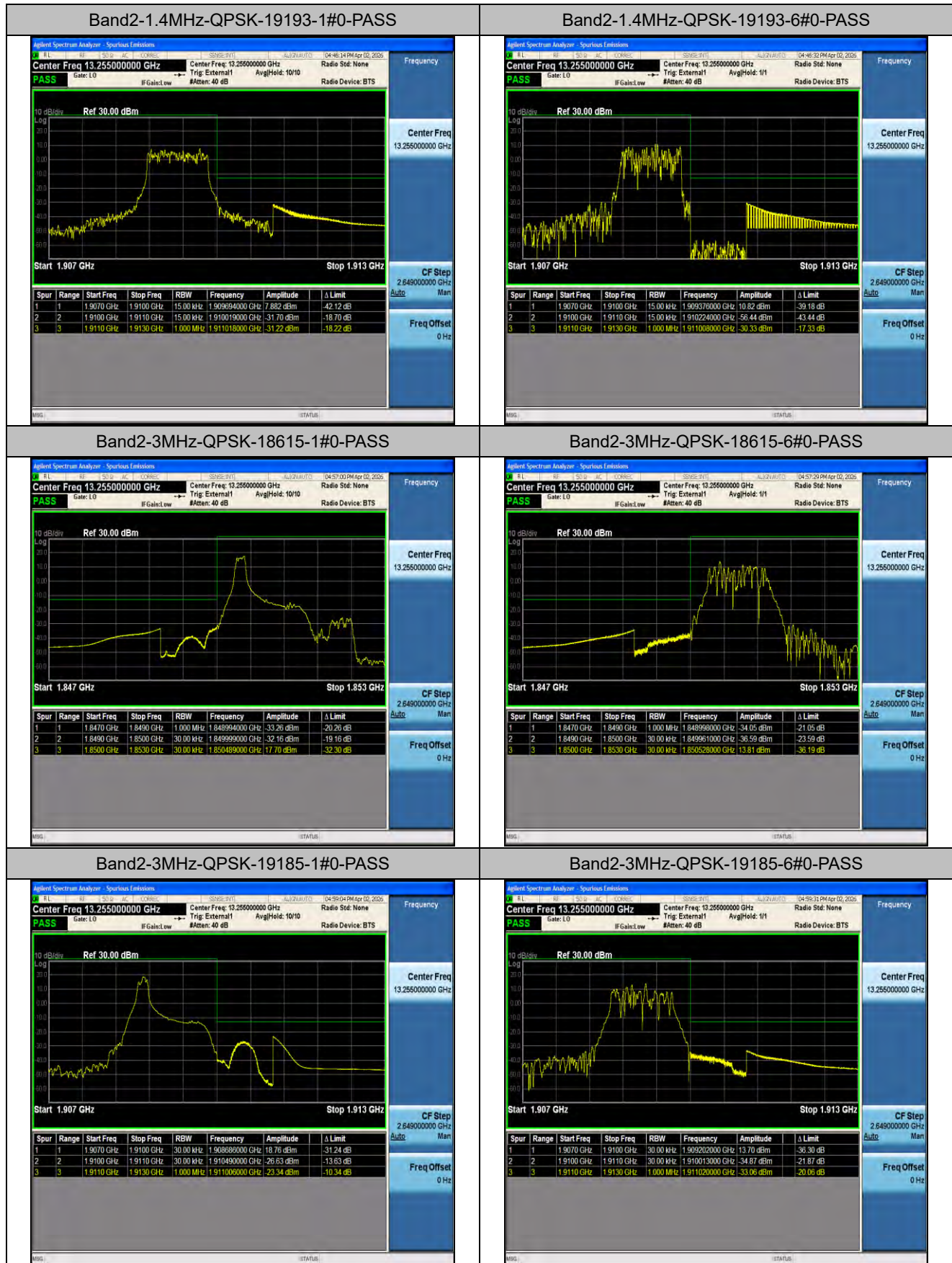


Band2-20MHz-16QAM-18700-5#0-PASS



Band Edge for M1

Test Graphs



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



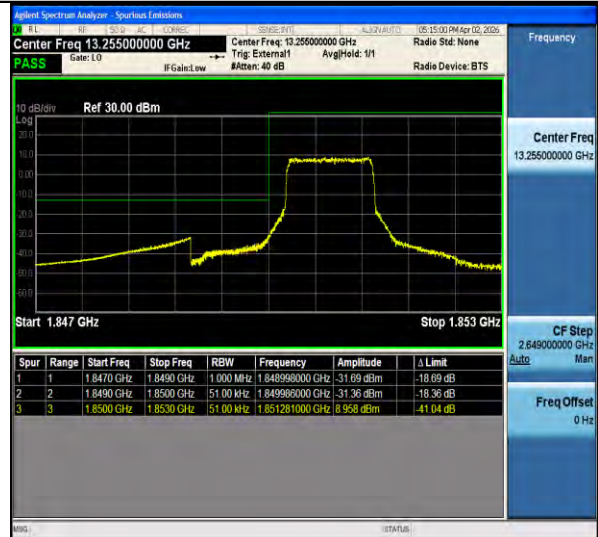
Band2-1.4MHz-QPSK-18607-1#0-PASS



Band2-1.4MHz-QPSK-18607-6#0-PASS



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



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



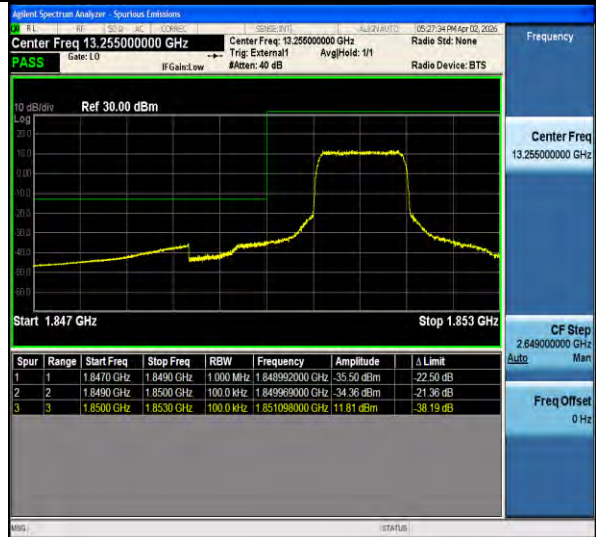
Band2-5MHz-QPSK-19175-6#0-PASS



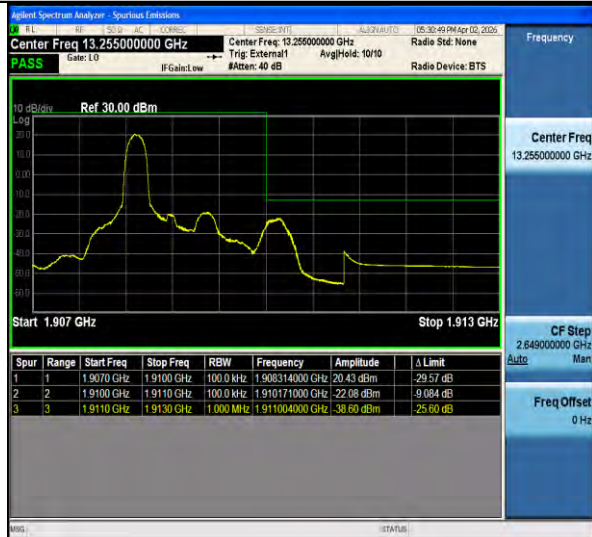
Band2-10MHz-QPSK-18650-1#0-PASS



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



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



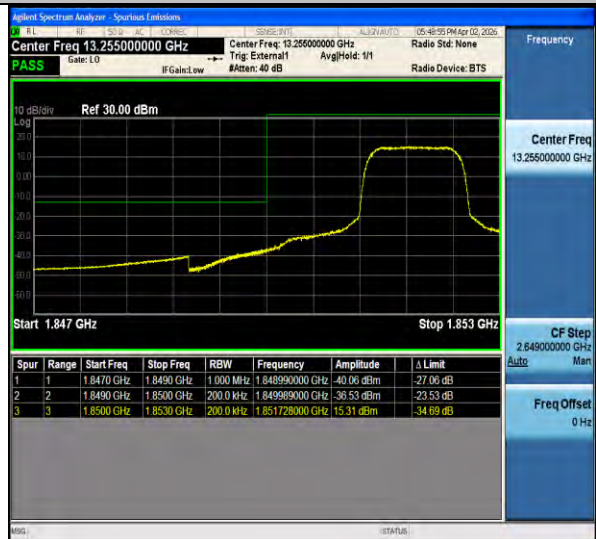
Band2-10MHz-QPSK-19150-6#0-PASS

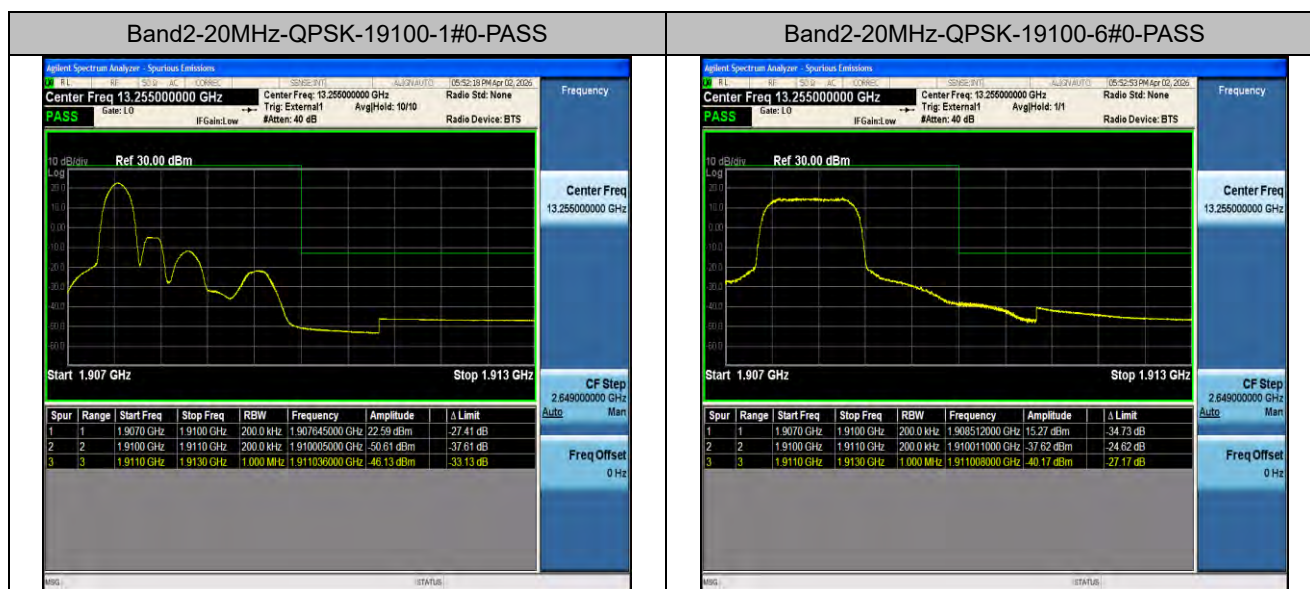


Band2-20MHz-QPSK-18700-1#0-PASS



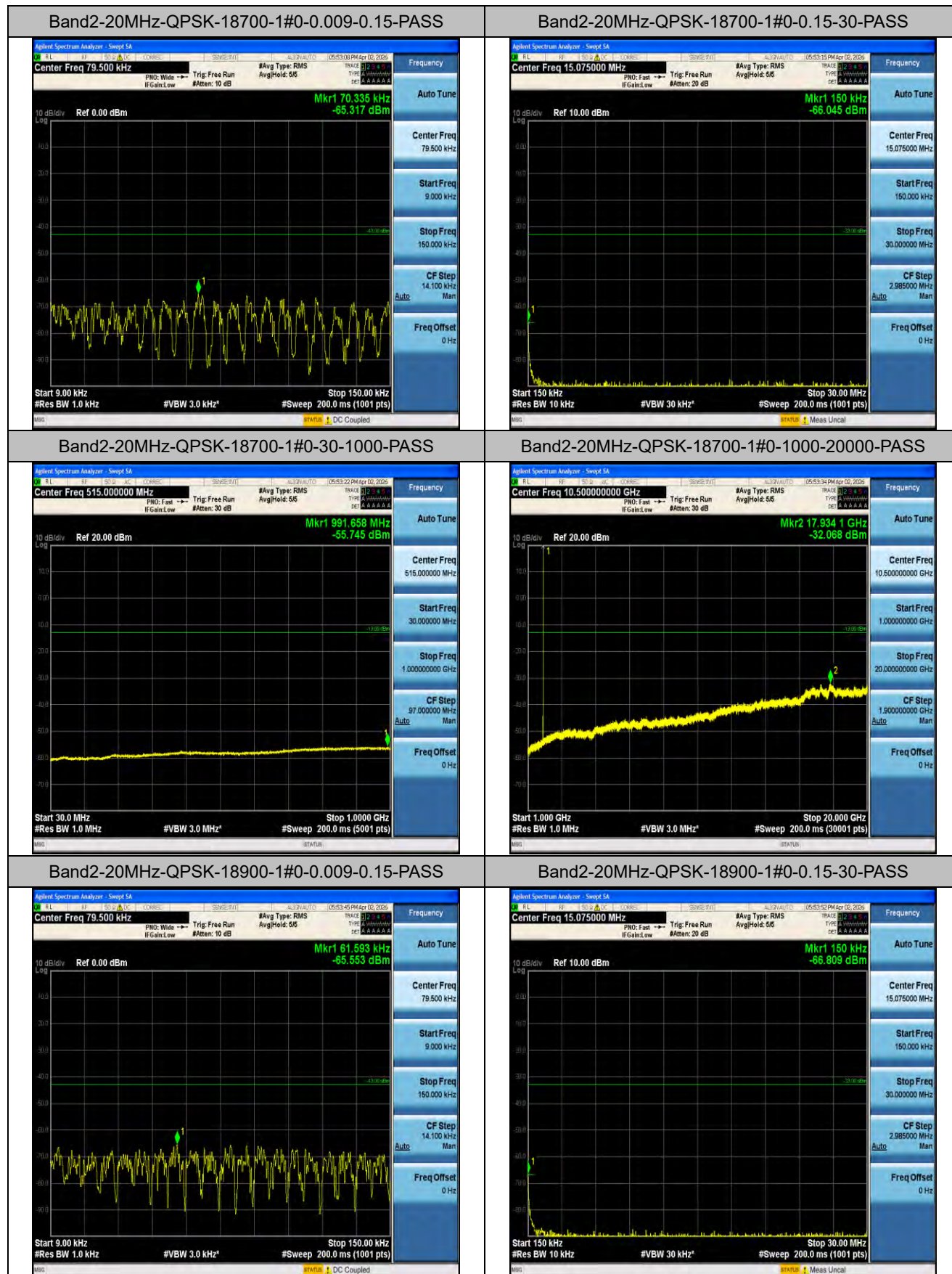
Band2-20MHz-QPSK-18700-6#0-PASS





Conducted Spurious Emission for M1

Test Graphs



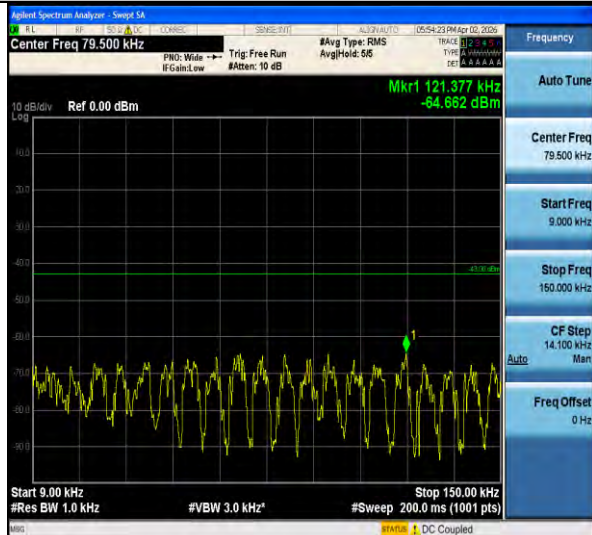
Band2-20MHz-QPSK-18900-1#0-30-1000-PASS



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	-12.70	-0.006755	PASS
Band2	20MHz	QPSK	18900	6	0	Low	VL	NT	-12.40	-0.006596	PASS
Band2	20MHz	QPSK	18900	6	0	Low	VH	NT	-12.70	-0.006755	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	-13.50	-0.007181	PASS
Band2	20MHz	QPSK	18900	6	0	Low	NV	-20	-12.40	-0.006596	PASS
Band2	20MHz	QPSK	18900	6	0	Low	NV	-10	-12.60	-0.006702	PASS
Band2	20MHz	QPSK	18900	6	0	Low	NV	0	-12.90	-0.006862	PASS
Band2	20MHz	QPSK	18900	6	0	Low	NV	10	-13.10	-0.006968	PASS
Band2	20MHz	QPSK	18900	6	0	Low	NV	20	-11.80	-0.006277	PASS
Band2	20MHz	QPSK	18900	6	0	Low	NV	30	-12.80	-0.006809	PASS
Band2	20MHz	QPSK	18900	6	0	Low	NV	40	-11.50	-0.006117	PASS
Band2	20MHz	QPSK	18900	6	0	Low	NV	50	-12.70	-0.006755	PASS

~The End~