

Appendix-A LTE Cat M1 Band 25

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
Band25	1.4MHz	QPSK	26047	1	0	Low	23.72	30.72	33.00	PASS
Band25	1.4MHz	16QAM	26047	1	0	Low	22.75	29.75	33.00	PASS
Band25	1.4MHz	QPSK	26047	1	5	Low	23.73	30.73	33.00	PASS
Band25	1.4MHz	16QAM	26047	1	5	Low	22.82	29.82	33.00	PASS
Band25	1.4MHz	QPSK	26047	6	0	Low	21.67	28.67	33.00	PASS
Band25	1.4MHz	16QAM	26047	6	0	Low	17.89	24.89	33.00	PASS
Band25	1.4MHz	QPSK	26365	1	0	Low	22.46	29.46	33.00	PASS
Band25	1.4MHz	16QAM	26365	1	0	Low	21.51	28.51	33.00	PASS
Band25	1.4MHz	QPSK	26365	1	5	Low	22.45	29.45	33.00	PASS
Band25	1.4MHz	16QAM	26365	1	5	Low	21.5	28.5	33.00	PASS
Band25	1.4MHz	QPSK	26365	6	0	Low	20.93	27.93	33.00	PASS
Band25	1.4MHz	16QAM	26365	6	0	Low	15.54	22.54	33.00	PASS
Band25	1.4MHz	QPSK	26683	1	0	High	23.45	30.45	33.00	PASS
Band25	1.4MHz	16QAM	26683	1	0	High	22.49	29.49	33.00	PASS
Band25	1.4MHz	QPSK	26683	1	5	High	23.55	30.55	33.00	PASS
Band25	1.4MHz	16QAM	26683	1	5	High	22.55	29.55	33.00	PASS
Band25	1.4MHz	QPSK	26683	6	0	High	21.41	28.41	33.00	PASS
Band25	1.4MHz	16QAM	26683	6	0	High	17.58	24.58	33.00	PASS
Band25	3MHz	QPSK	26055	1	0	Low	22.61	29.61	33.00	PASS
Band25	3MHz	16QAM	26055	1	0	Low	22.57	29.57	33.00	PASS
Band25	3MHz	QPSK	26055	1	5	Low	23.62	30.62	33.00	PASS
Band25	3MHz	16QAM	26055	1	5	Low	22.57	29.57	33.00	PASS
Band25	3MHz	QPSK	26055	6	0	Low	21.48	28.48	33.00	PASS
Band25	3MHz	16QAM	26055	6	0	Low	18.45	25.45	33.00	PASS
Band25	3MHz	QPSK	26365	1	0	Low	23.39	30.39	33.00	PASS
Band25	3MHz	16QAM	26365	1	0	Low	22.3	29.3	33.00	PASS
Band25	3MHz	QPSK	26365	1	5	Low	23.43	30.43	33.00	PASS
Band25	3MHz	16QAM	26365	1	5	Low	22.49	29.49	33.00	PASS
Band25	3MHz	QPSK	26365	6	0	Low	21.39	28.39	33.00	PASS
Band25	3MHz	16QAM	26365	6	0	Low	18.33	25.33	33.00	PASS
Band25	3MHz	QPSK	26675	1	0	High	22.41	29.41	33.00	PASS
Band25	3MHz	16QAM	26675	1	0	High	21.35	28.35	33.00	PASS
Band25	3MHz	QPSK	26675	1	5	High	22.42	29.42	33.00	PASS
Band25	3MHz	16QAM	26675	1	5	High	21.5	28.5	33.00	PASS
Band25	3MHz	QPSK	26675	6	0	High	20.82	27.82	33.00	PASS
Band25	3MHz	16QAM	26675	6	0	High	17.27	24.27	33.00	PASS

Band25	5MHz	QPSK	26065	1	0	Low	23.5	30.5	33.00	PASS
Band25	5MHz	16QAM	26065	1	0	Low	23.69	30.69	33.00	PASS
Band25	5MHz	QPSK	26065	1	5	Low	23.51	30.51	33.00	PASS
Band25	5MHz	16QAM	26065	1	5	Low	23.75	30.75	33.00	PASS
Band25	5MHz	QPSK	26065	6	0	Low	22.45	29.45	33.00	PASS
Band25	5MHz	16QAM	26065	6	0	Low	23.41	30.41	33.00	PASS
Band25	5MHz	QPSK	26365	1	0	Low	23.34	30.34	33.00	PASS
Band25	5MHz	16QAM	26365	1	0	Low	23.48	30.48	33.00	PASS
Band25	5MHz	QPSK	26365	1	5	Low	23.41	30.41	33.00	PASS
Band25	5MHz	16QAM	26365	1	5	Low	23.6	30.6	33.00	PASS
Band25	5MHz	QPSK	26365	6	0	Low	22.33	29.33	33.00	PASS
Band25	5MHz	16QAM	26365	6	0	Low	23.25	30.25	33.00	PASS
Band25	5MHz	QPSK	26665	1	0	High	23.31	30.31	33.00	PASS
Band25	5MHz	16QAM	26665	1	0	High	23.56	30.56	33.00	PASS
Band25	5MHz	QPSK	26665	1	5	High	23.37	30.37	33.00	PASS
Band25	5MHz	16QAM	26665	1	5	High	23.56	30.56	33.00	PASS
Band25	5MHz	QPSK	26665	6	0	High	22.26	29.26	33.00	PASS
Band25	5MHz	16QAM	26665	6	0	High	23.29	30.29	33.00	PASS
Band25	10MHz	QPSK	26090	1	0	Low	23.69	30.69	33.00	PASS
Band25	10MHz	16QAM	26090	1	0	Low	23.77	30.77	33.00	PASS
Band25	10MHz	QPSK	26090	1	5	Low	23.74	30.74	33.00	PASS
Band25	10MHz	16QAM	26090	1	5	Low	23.91	30.91	33.00	PASS
Band25	10MHz	QPSK	26090	6	0	Low	22.64	29.64	33.00	PASS
Band25	10MHz	16QAM	26090	6	0	Low	23.53	30.53	33.00	PASS
Band25	10MHz	QPSK	26365	1	0	Low	23.44	30.44	33.00	PASS
Band25	10MHz	16QAM	26365	1	0	Low	23.55	30.55	33.00	PASS
Band25	10MHz	QPSK	26365	1	5	Low	23.49	30.49	33.00	PASS
Band25	10MHz	16QAM	26365	1	5	Low	23.62	30.62	33.00	PASS
Band25	10MHz	QPSK	26365	6	0	Low	22.39	29.39	33.00	PASS
Band25	10MHz	16QAM	26365	6	0	Low	23.33	30.33	33.00	PASS
Band25	10MHz	QPSK	26640	1	0	High	23.33	30.33	33.00	PASS
Band25	10MHz	16QAM	26640	1	0	High	23.46	30.46	33.00	PASS
Band25	10MHz	QPSK	26640	1	5	High	23.38	30.38	33.00	PASS
Band25	10MHz	16QAM	26640	1	5	High	23.67	30.67	33.00	PASS
Band25	10MHz	QPSK	26640	6	0	High	22.3	29.3	33.00	PASS
Band25	10MHz	16QAM	26640	6	0	High	23.35	30.35	33.00	PASS
Band25	15MHz	QPSK	26115	1	0	Low	23.79	30.79	33.00	PASS
Band25	15MHz	16QAM	26115	1	0	Low	23.85	30.85	33.00	PASS
Band25	15MHz	QPSK	26115	1	5	Low	23.84	30.84	33.00	PASS
Band25	15MHz	16QAM	26115	1	5	Low	23.98	30.98	33.00	PASS
Band25	15MHz	QPSK	26115	6	0	Low	23.72	30.72	33.00	PASS
Band25	15MHz	16QAM	26115	6	0	Low	23.67	30.67	33.00	PASS
Band25	15MHz	QPSK	26365	1	0	Low	23.54	30.54	33.00	PASS
Band25	15MHz	16QAM	26365	1	0	Low	23.74	30.74	33.00	PASS

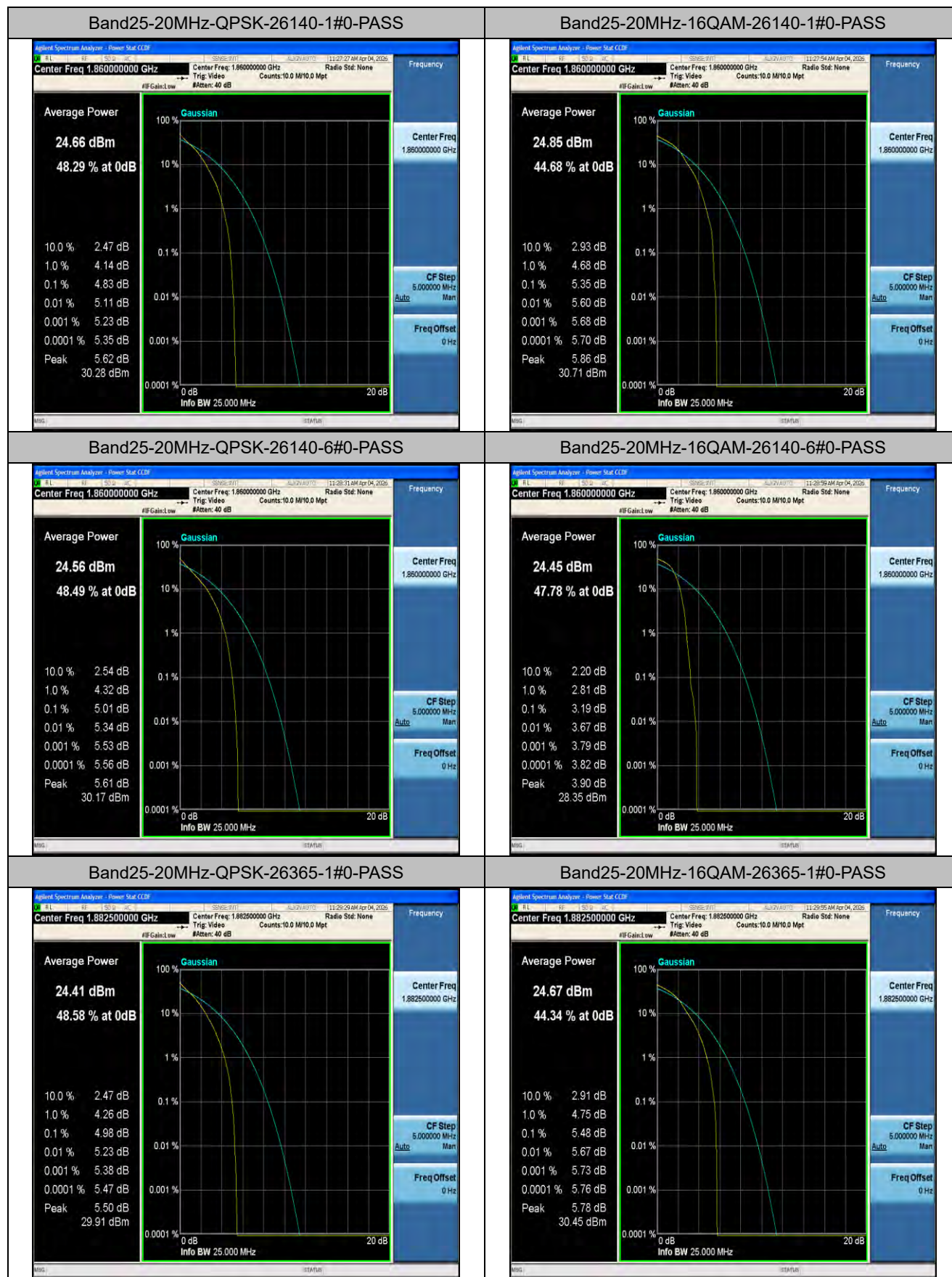
Band25	15MHz	QPSK	26365	1	5	Low	23.59	30.59	33.00	PASS
Band25	15MHz	16QAM	26365	1	5	Low	23.79	30.79	33.00	PASS
Band25	15MHz	QPSK	26365	6	0	Low	23.48	30.48	33.00	PASS
Band25	15MHz	16QAM	26365	6	0	Low	23.2	30.2	33.00	PASS
Band25	15MHz	QPSK	26615	1	0	High	23.29	30.29	33.00	PASS
Band25	15MHz	16QAM	26615	1	0	High	23.48	30.48	33.00	PASS
Band25	15MHz	QPSK	26615	1	5	High	23.37	30.37	33.00	PASS
Band25	15MHz	16QAM	26615	1	5	High	23.59	30.59	33.00	PASS
Band25	15MHz	QPSK	26615	6	0	High	23.24	30.24	33.00	PASS
Band25	15MHz	16QAM	26615	6	0	High	23.43	30.43	33.00	PASS
Band25	20MHz	QPSK	26140	1	0	Low	22.75	29.75	33.00	PASS
Band25	20MHz	16QAM	26140	1	0	Low	22.99	29.99	33.00	PASS
Band25	20MHz	QPSK	26140	1	5	Low	22.77	29.77	33.00	PASS
Band25	20MHz	16QAM	26140	1	5	Low	23.04	30.04	33.00	PASS
Band25	20MHz	QPSK	26140	6	0	Low	23.24	30.24	33.00	PASS
Band25	20MHz	16QAM	26140	6	0	Low	23.39	30.39	33.00	PASS
Band25	20MHz	QPSK	26365	1	0	Low	23.56	30.56	33.00	PASS
Band25	20MHz	16QAM	26365	1	0	Low	23.74	30.74	33.00	PASS
Band25	20MHz	QPSK	26365	1	5	Low	23.6	30.6	33.00	PASS
Band25	20MHz	16QAM	26365	1	5	Low	23.76	30.76	33.00	PASS
Band25	20MHz	QPSK	26365	6	0	Low	23.48	30.48	33.00	PASS
Band25	20MHz	16QAM	26365	6	0	Low	23.42	30.42	33.00	PASS
Band25	20MHz	QPSK	26590	1	0	High	23.28	30.28	33.00	PASS
Band25	20MHz	16QAM	26590	1	0	High	23.49	30.49	33.00	PASS
Band25	20MHz	QPSK	26590	1	5	High	23.33	30.33	33.00	PASS
Band25	20MHz	16QAM	26590	1	5	High	23.52	30.52	33.00	PASS
Band25	20MHz	QPSK	26590	6	0	High	23.25	30.25	33.00	PASS
Band25	20MHz	16QAM	26590	6	0	High	23.46	30.46	33.00	PASS

Peak-to-Average Ratio(CCDF) for M1

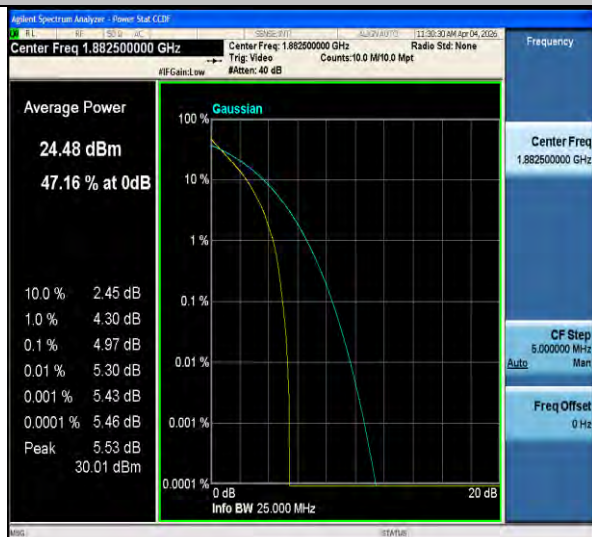
Test Result

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band25	20MHz	QPSK	26140	1	0	Low	4.83	<=13	PASS
Band25	20MHz	16QAM	26140	1	0	Low	5.35	<=13	PASS
Band25	20MHz	QPSK	26140	6	0	Low	5.01	<=13	PASS
Band25	20MHz	16QAM	26140	6	0	Low	3.19	<=13	PASS
Band25	20MHz	QPSK	26365	1	0	Low	4.98	<=13	PASS
Band25	20MHz	16QAM	26365	1	0	Low	5.48	<=13	PASS
Band25	20MHz	QPSK	26365	6	0	Low	4.97	<=13	PASS
Band25	20MHz	16QAM	26365	6	0	Low	3.18	<=13	PASS
Band25	20MHz	QPSK	26590	1	0	High	5.03	<=13	PASS
Band25	20MHz	16QAM	26590	1	0	High	5.80	<=13	PASS
Band25	20MHz	QPSK	26590	6	0	High	5.22	<=13	PASS
Band25	20MHz	16QAM	26590	6	0	High	3.27	<=13	PASS

Test Graphs



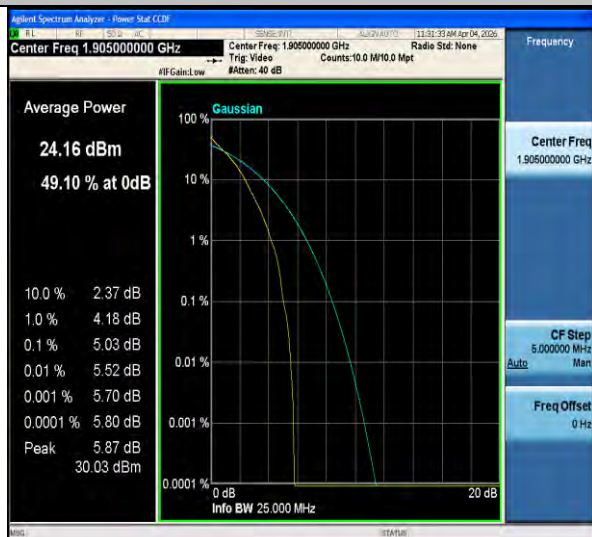
Band25-20MHz-QPSK-26365-6#0-PASS



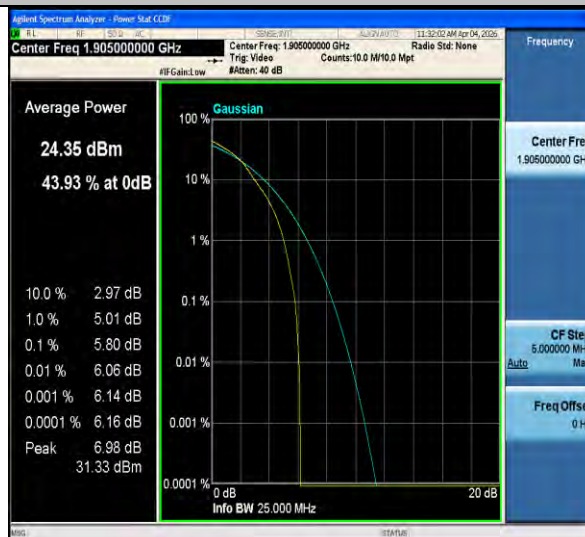
Band25-20MHz-16QAM-26365-6#0-PASS



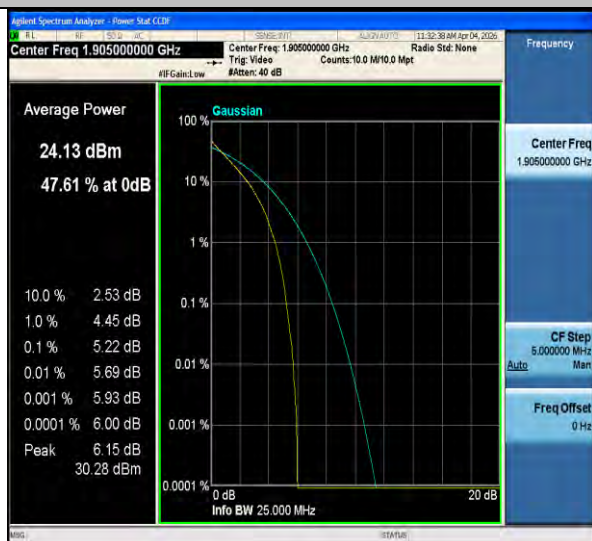
Band25-20MHz-QPSK-26590-1#0-PASS



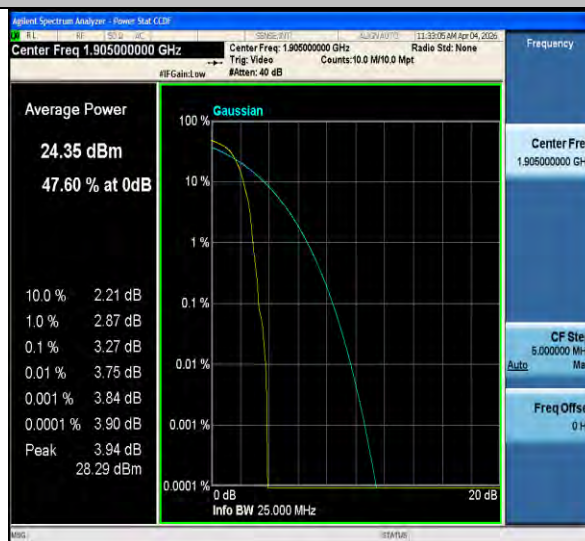
Band25-20MHz-16QAM-26590-1#0-PASS



Band25-20MHz-QPSK-26590-6#0-PASS



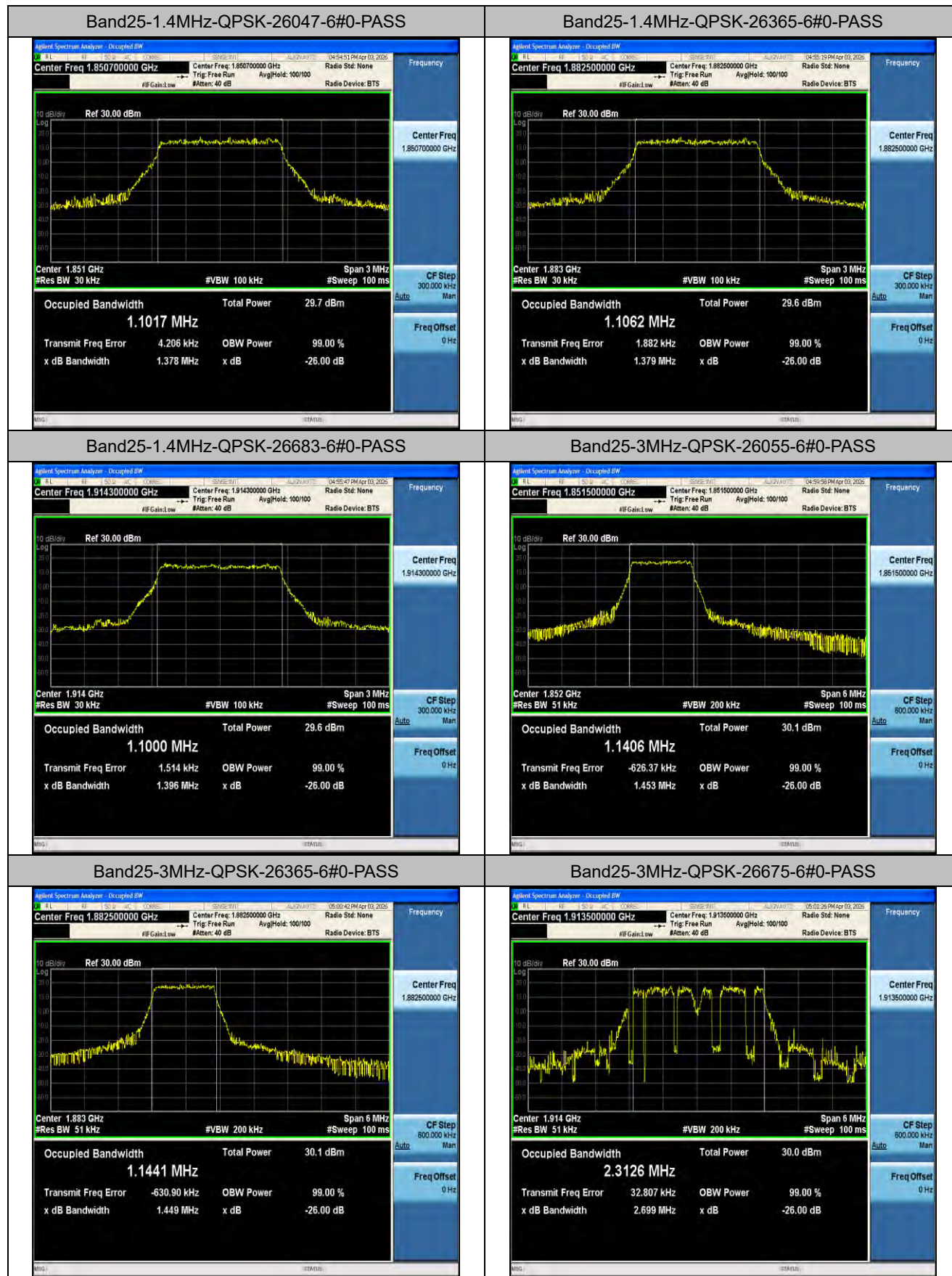
Band25-20MHz-16QAM-26590-6#0-PASS



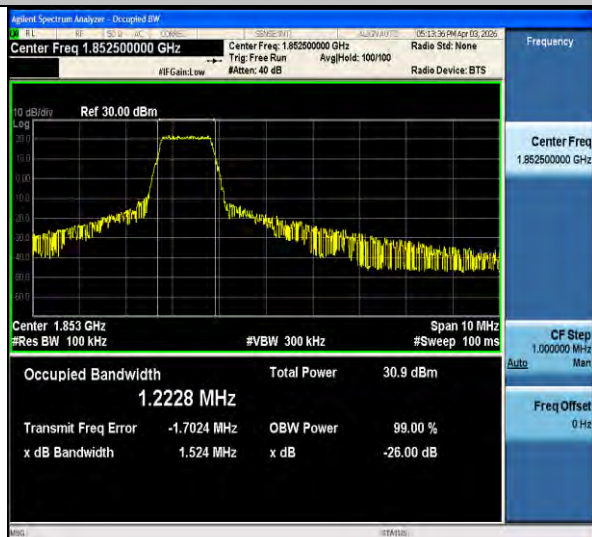
26dB Bandwidth and Occupied Bandwidth for M1**Test Result**

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band25	1.4MHz	QPSK	26047	6	0	Low	1.1017	1.378	PASS
Band25	1.4MHz	QPSK	26365	6	0	Low	1.1062	1.379	PASS
Band25	1.4MHz	QPSK	26683	6	0	High	1.1000	1.396	PASS
Band25	3MHz	QPSK	26055	6	0	Low	1.1406	1.453	PASS
Band25	3MHz	QPSK	26365	6	0	Low	1.1441	1.449	PASS
Band25	3MHz	QPSK	26675	6	0	High	2.3126	2.699	PASS
Band25	5MHz	QPSK	26065	6	0	Low	1.2228	1.524	PASS
Band25	5MHz	QPSK	26365	6	0	Low	1.2306	1.592	PASS
Band25	5MHz	QPSK	26665	6	0	High	1.2121	1.529	PASS
Band25	10MHz	QPSK	26090	6	0	Low	1.3701	1.746	PASS
Band25	10MHz	QPSK	26365	6	0	Low	1.3606	1.718	PASS
Band25	10MHz	QPSK	26640	6	0	High	1.3674	1.693	PASS
Band25	15MHz	QPSK	26115	6	0	Low	1.5476	2.216	PASS
Band25	15MHz	QPSK	26365	6	0	Low	1.5372	1.975	PASS
Band25	15MHz	QPSK	26615	6	0	High	1.5225	1.901	PASS
Band25	20MHz	QPSK	26140	6	0	Low	1.9061	2.548	PASS
Band25	20MHz	QPSK	26365	6	0	Low	1.9097	2.663	PASS
Band25	20MHz	QPSK	26590	6	0	High	1.9064	2.695	PASS
Band25	1.4MHz	16QAM	26047	5	0	Low	0.97651	1.382	PASS
Band25	1.4MHz	16QAM	26365	5	0	Low	0.96859	1.366	PASS
Band25	1.4MHz	16QAM	26683	5	0	High	0.97506	1.371	PASS
Band25	3MHz	16QAM	26055	5	0	Low	1.0335	1.407	PASS
Band25	3MHz	16QAM	26365	5	0	Low	1.0332	1.422	PASS
Band25	3MHz	16QAM	26675	5	0	High	1.0410	1.431	PASS
Band25	5MHz	16QAM	26065	5	0	Low	1.1393	1.481	PASS
Band25	5MHz	16QAM	26365	5	0	Low	1.1382	1.505	PASS
Band25	5MHz	16QAM	26665	5	0	High	1.1369	1.505	PASS
Band25	10MHz	16QAM	26090	5	0	Low	1.2889	1.666	PASS
Band25	10MHz	16QAM	26365	5	0	Low	1.2936	1.810	PASS
Band25	10MHz	16QAM	26640	5	0	High	1.2589	1.666	PASS
Band25	15MHz	16QAM	26115	5	0	Low	1.4501	2.386	PASS
Band25	15MHz	16QAM	26365	5	0	Low	1.4396	2.285	PASS
Band25	15MHz	16QAM	26615	5	0	High	1.4705	2.212	PASS
Band25	20MHz	16QAM	26140	5	0	Low	1.8400	2.929	PASS
Band25	20MHz	16QAM	26365	5	0	Low	1.8533	2.958	PASS
Band25	20MHz	16QAM	26590	5	0	High	1.8274	3.486	PASS

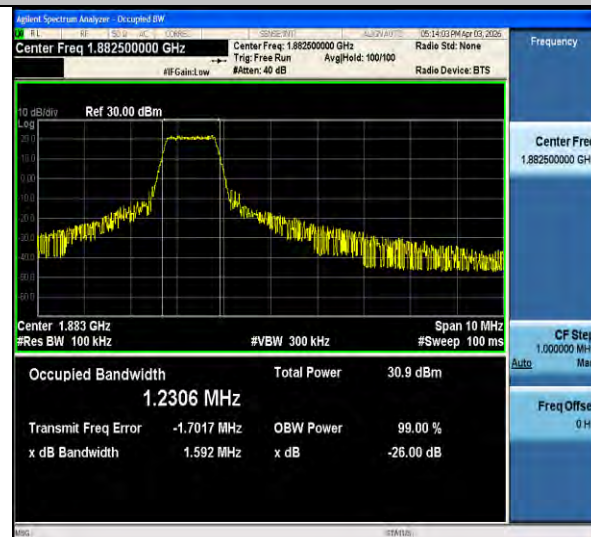
Test Graphs



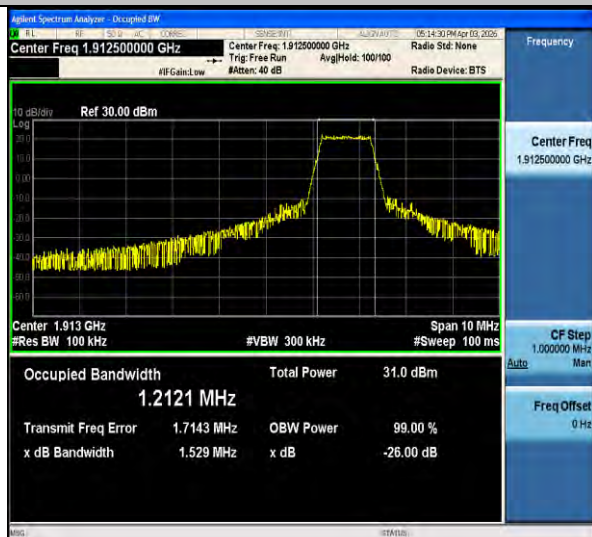
Band25-5MHz-QPSK-26065-6#0-PASS



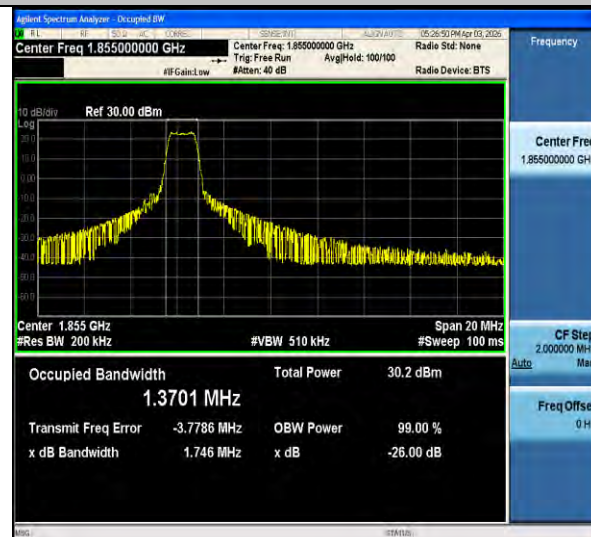
Band25-5MHz-QPSK-26365-6#0-PASS



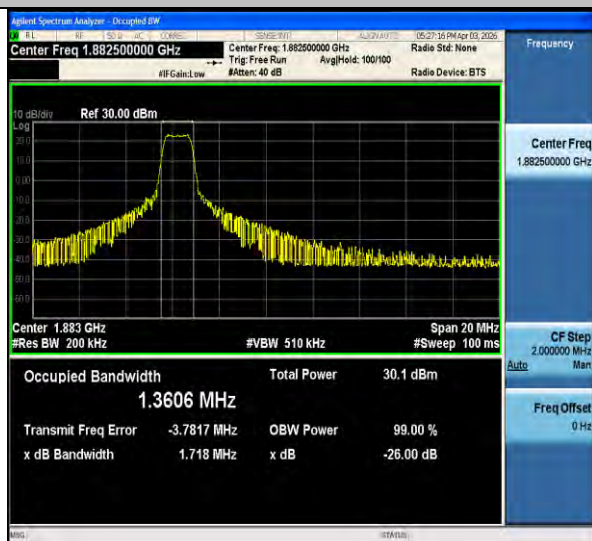
Band25-5MHz-QPSK-26665-6#0-PASS



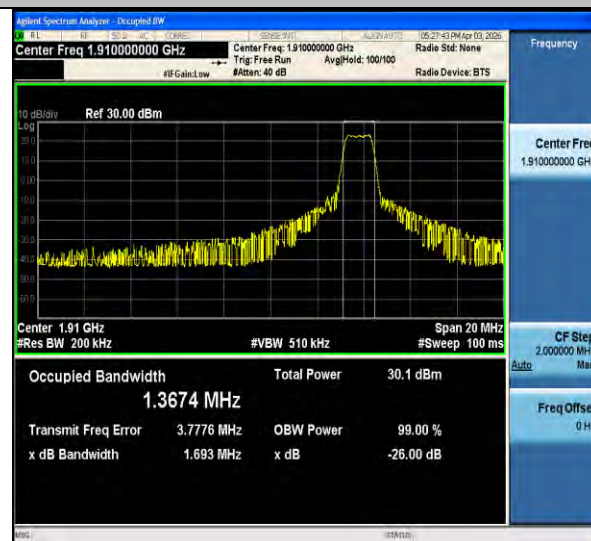
Band25-10MHz-QPSK-26090-6#0-PASS



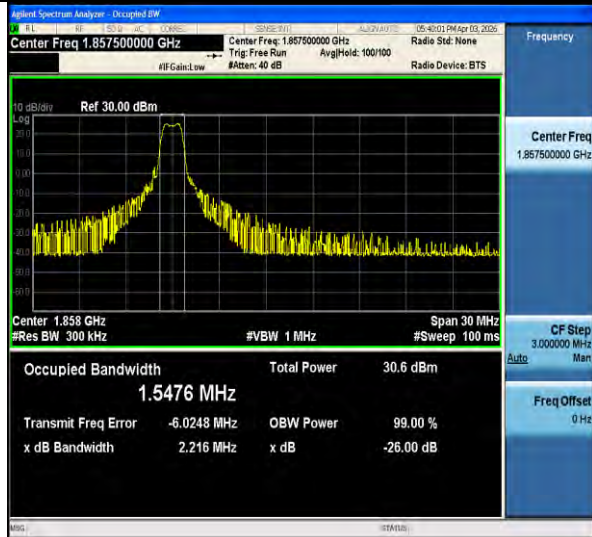
Band25-10MHz-QPSK-26365-6#0-PASS



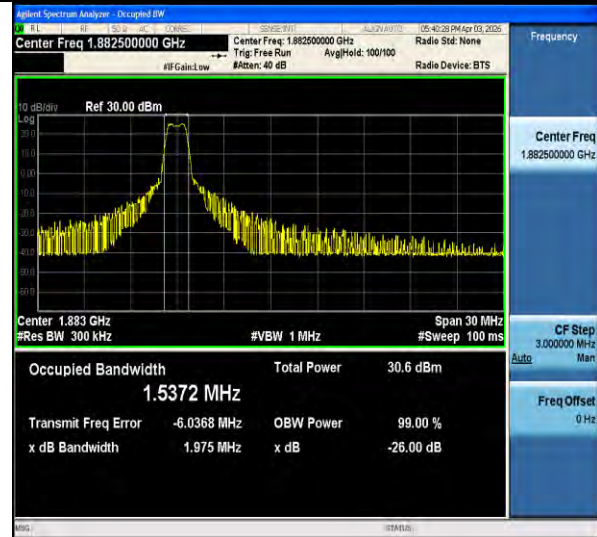
Band25-10MHz-QPSK-26640-6#0-PASS



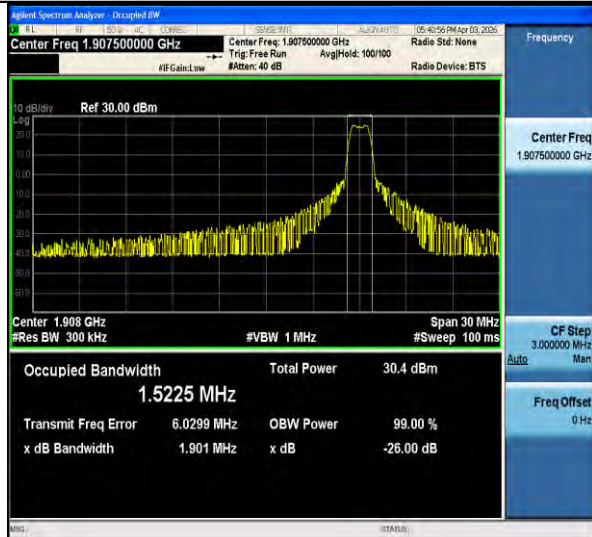
Band25-15MHz-QPSK-26115-6#0-PASS



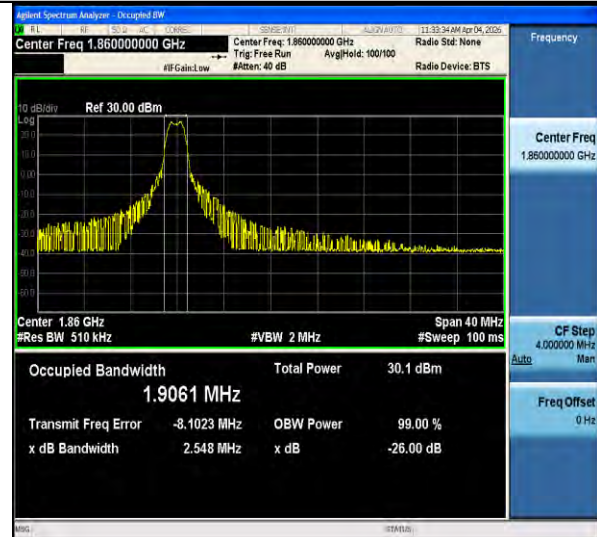
Band25-15MHz-QPSK-26365-6#0-PASS



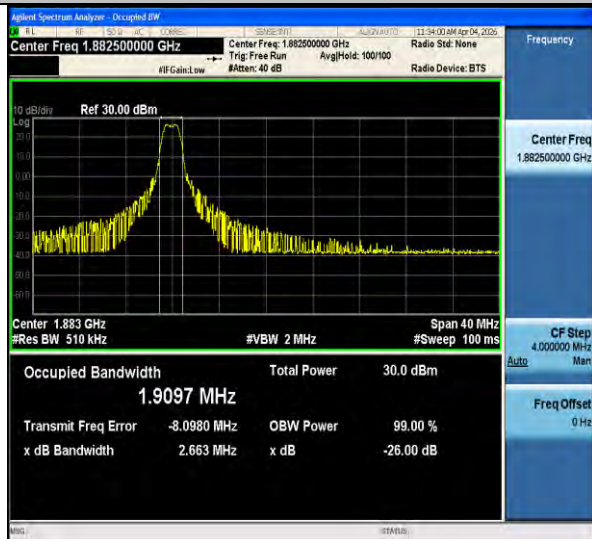
Band25-15MHz-QPSK-26615-6#0-PASS



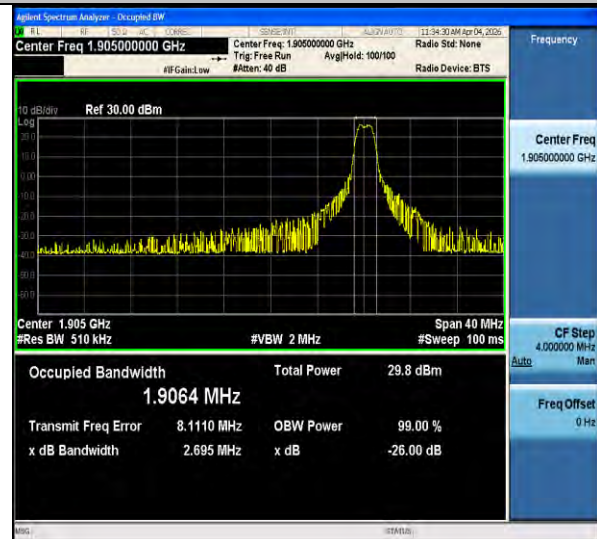
Band25-20MHz-QPSK-26140-6#0-PASS



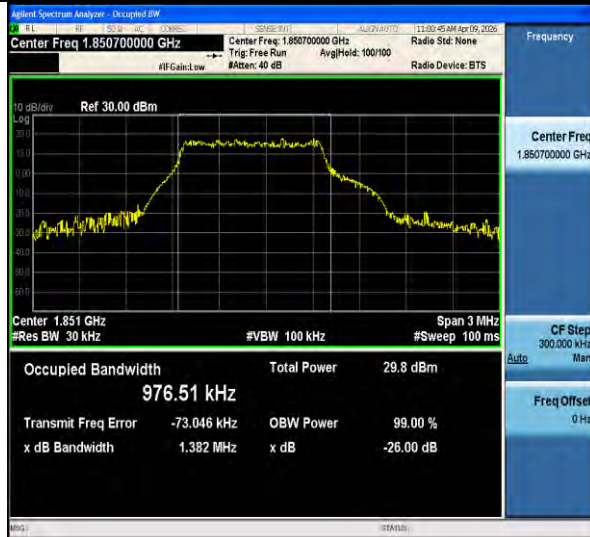
Band25-20MHz-QPSK-26365-6#0-PASS



Band25-20MHz-QPSK-26590-6#0-PASS



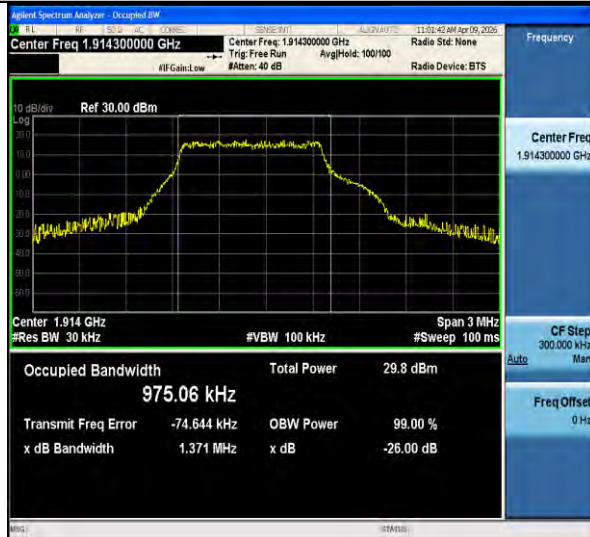
Band25-1.4MHz-16QAM-26047-5#0-PASS



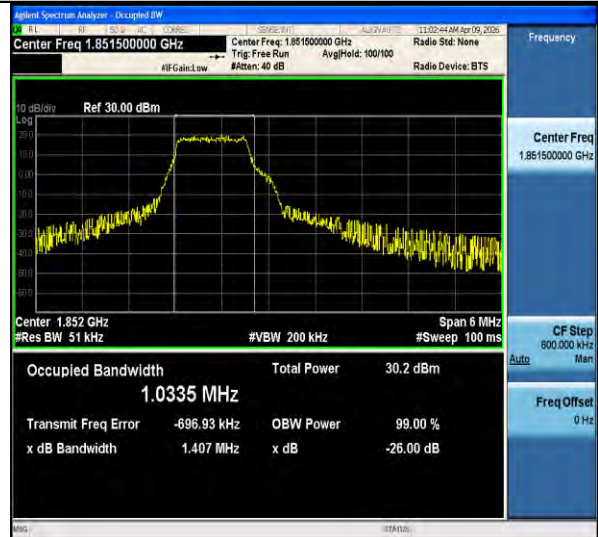
Band25-1.4MHz-16QAM-26365-5#0-PASS



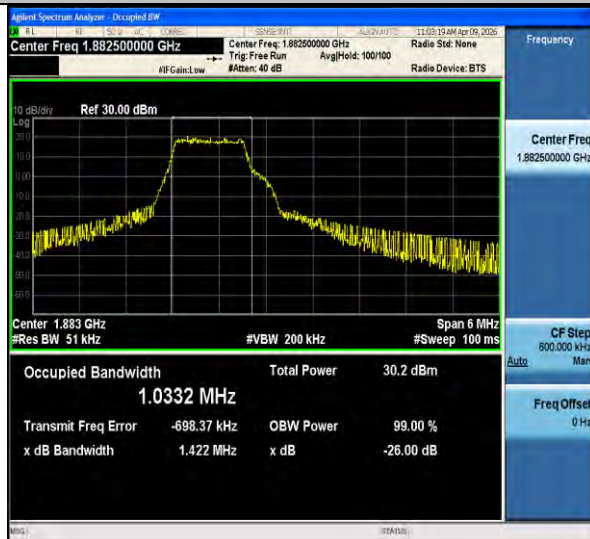
Band25-1.4MHz-16QAM-26683-5#0-PASS



Band25-3MHz-16QAM-26055-5#0-PASS



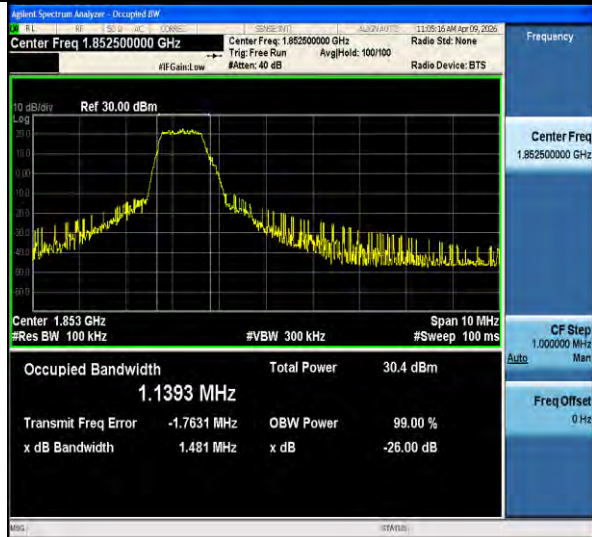
Band25-3MHz-16QAM-26365-5#0-PASS



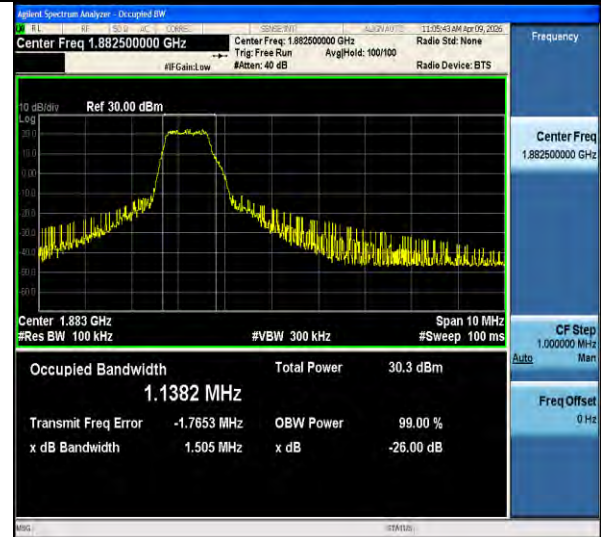
Band25-3MHz-16QAM-26675-5#0-PASS



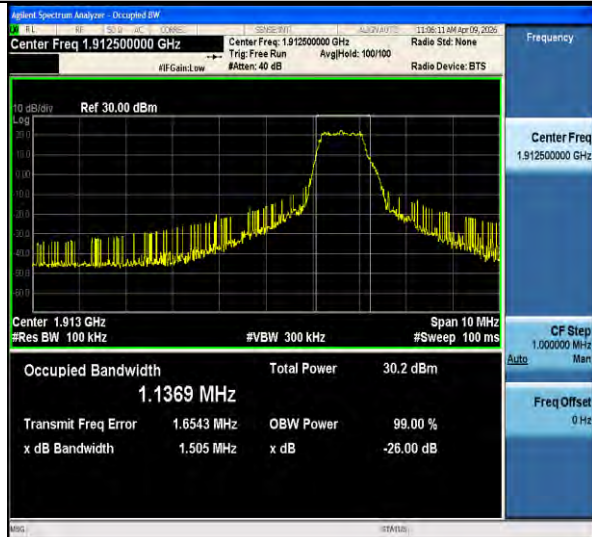
Band25-5MHz-16QAM-26065-5#0-PASS



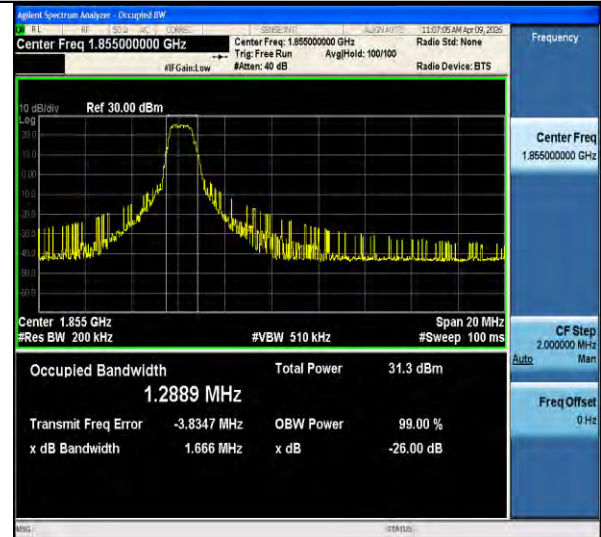
Band25-5MHz-16QAM-26365-5#0-PASS



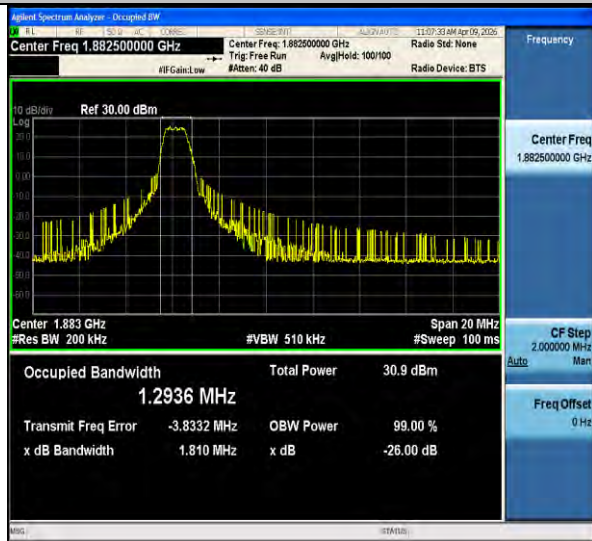
Band25-5MHz-16QAM-26665-5#0-PASS



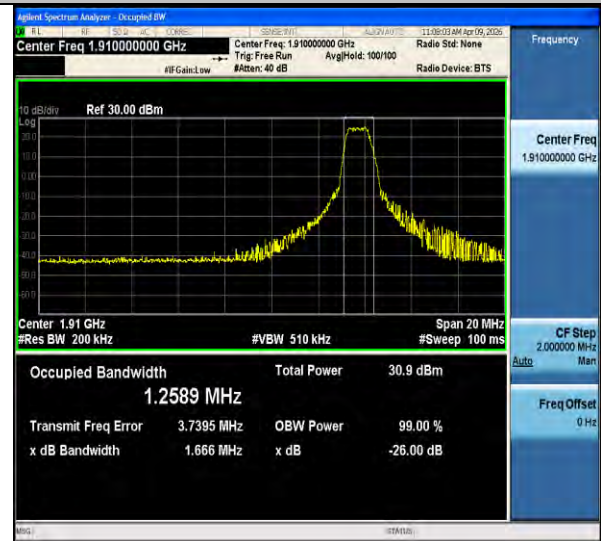
Band25-10MHz-16QAM-26090-5#0-PASS



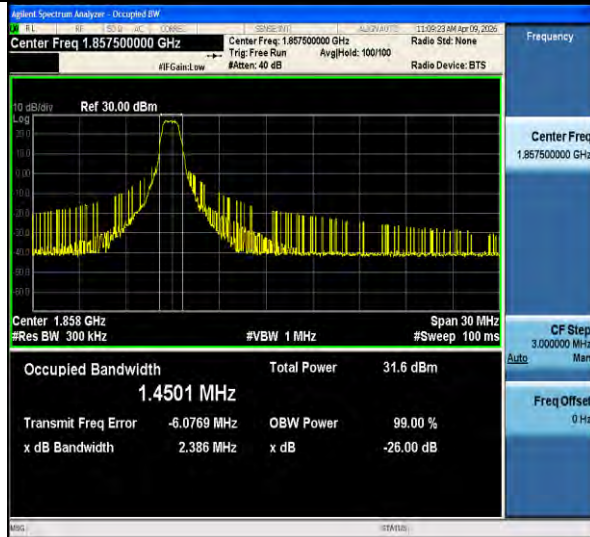
Band25-10MHz-16QAM-26365-5#0-PASS



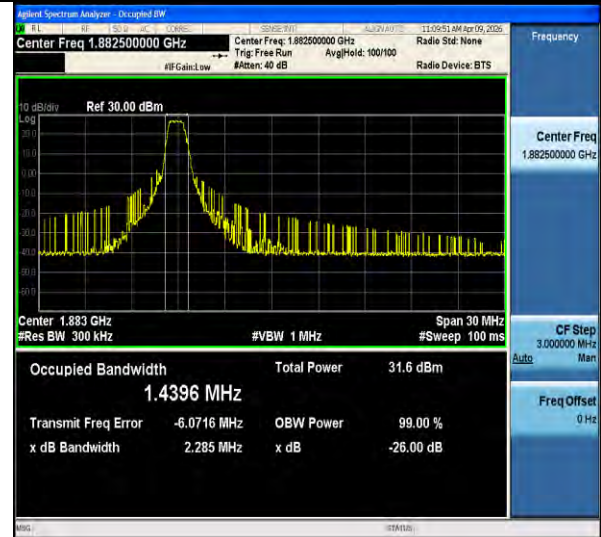
Band25-10MHz-16QAM-26640-5#0-PASS



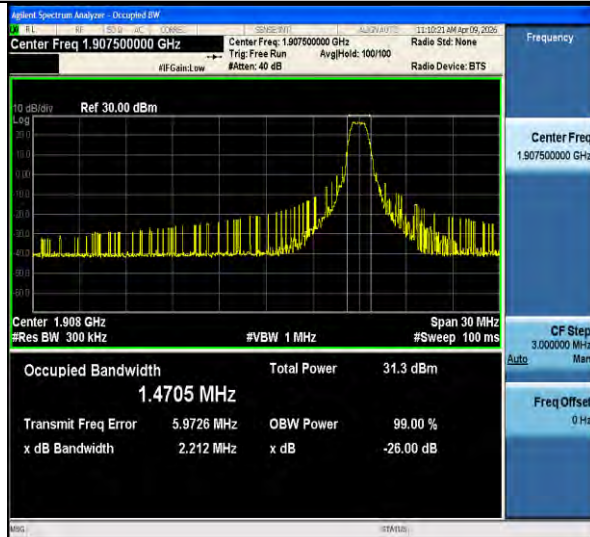
Band25-15MHz-16QAM-26115-5#0-PASS



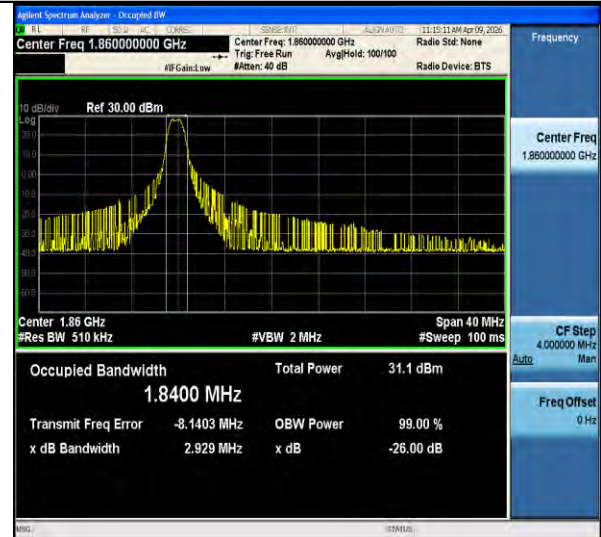
Band25-15MHz-16QAM-26365-5#0-PASS



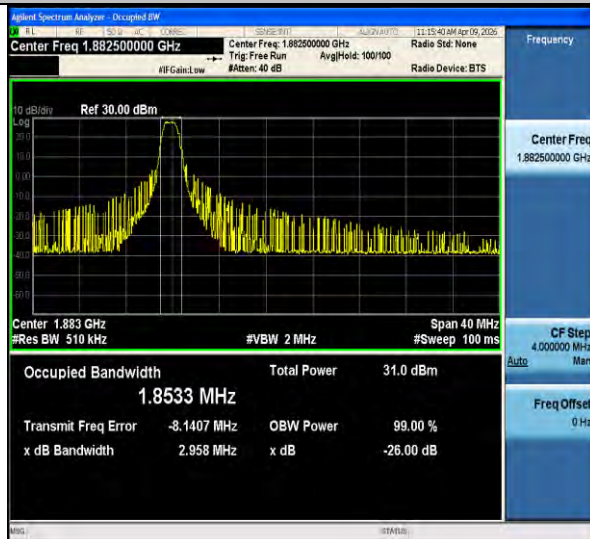
Band25-15MHz-16QAM-26615-5#0-PASS



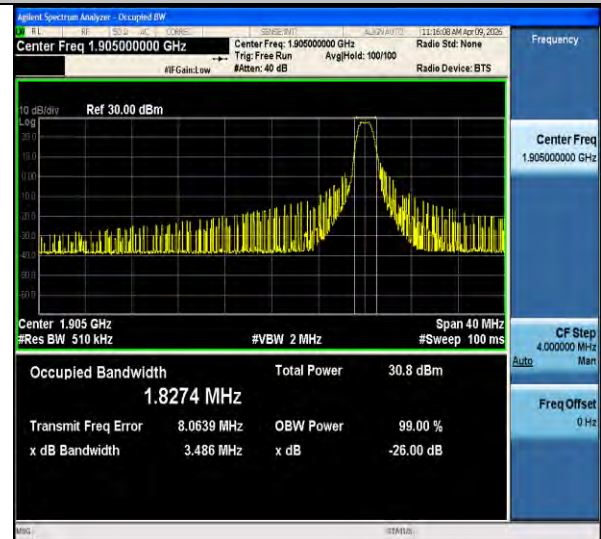
Band25-20MHz-16QAM-26140-5#0-PASS



Band25-20MHz-16QAM-26365-5#0-PASS

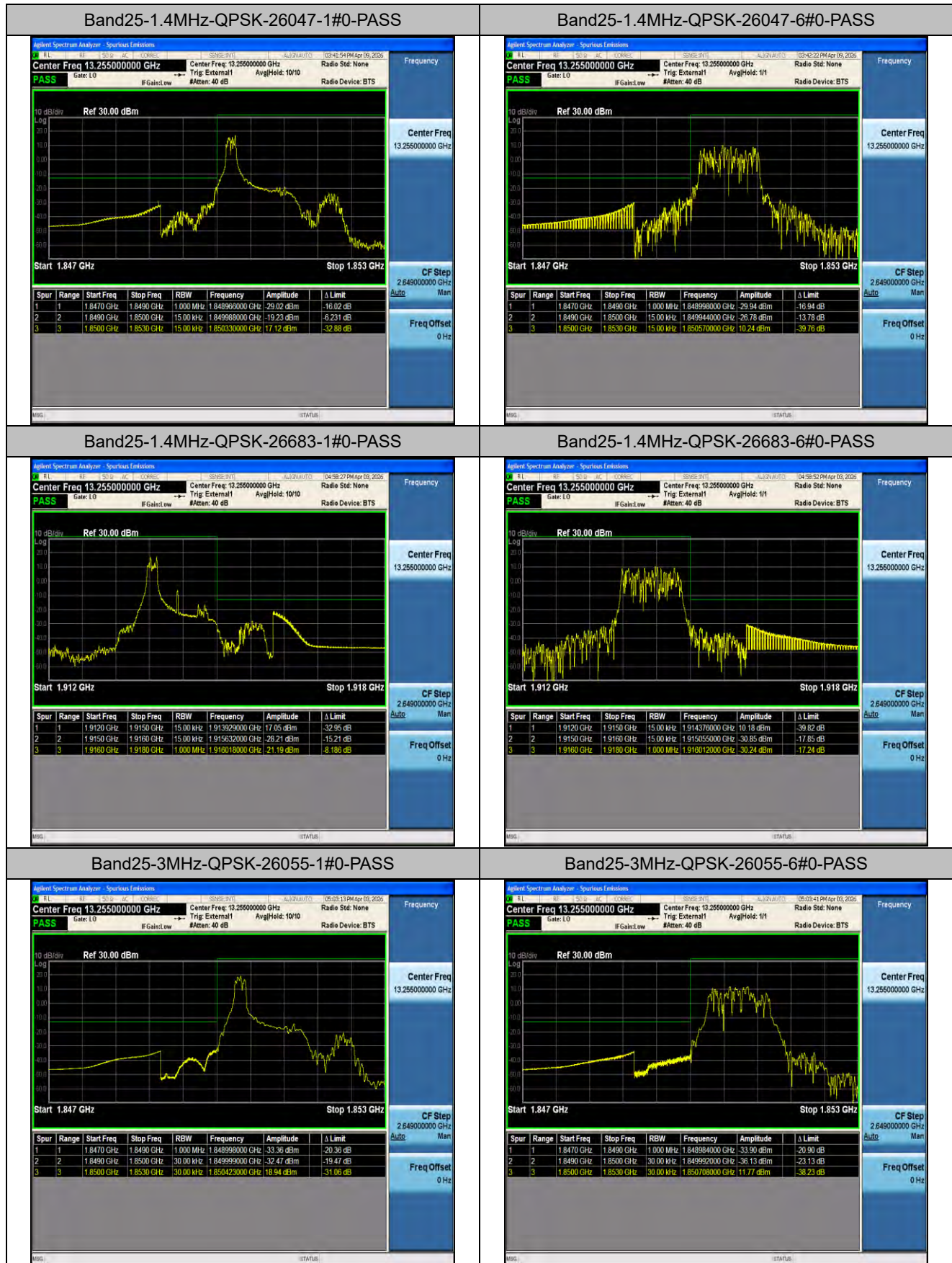


Band25-20MHz-16QAM-26590-5#0-PASS



Band Edge for M1

Test Graphs



Band25-3MHz-QPSK-26675-1#0-PASS



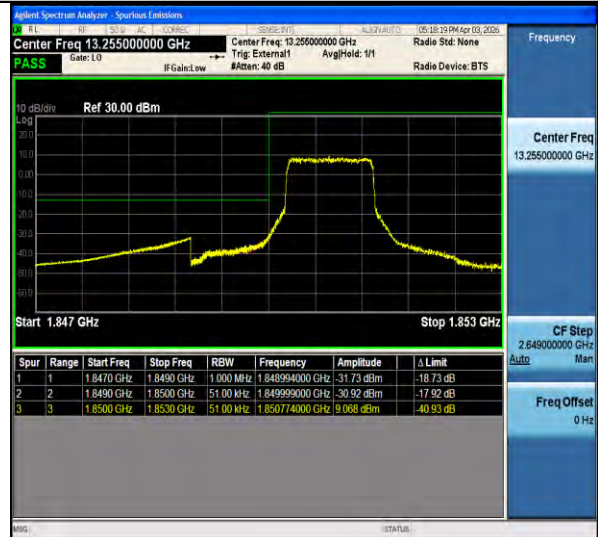
Band25-3MHz-QPSK-26675-6#0-PASS



Band25-5MHz-QPSK-26065-1#0-PASS



Band25-5MHz-QPSK-26065-6#0-PASS



Band25-5MHz-QPSK-26665-1#0-PASS



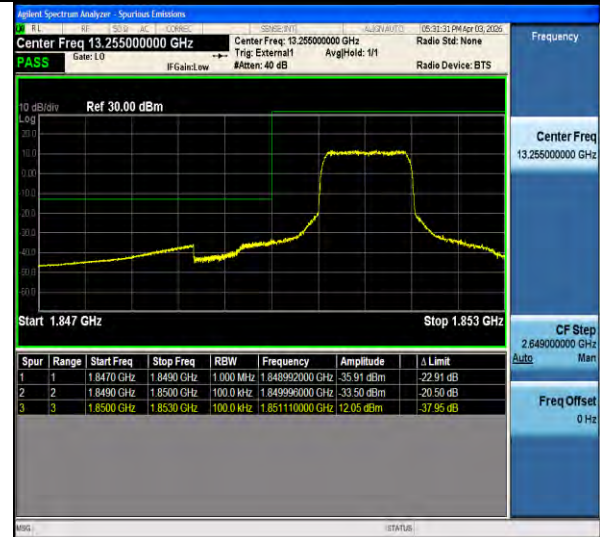
Band25-5MHz-QPSK-26665-6#0-PASS



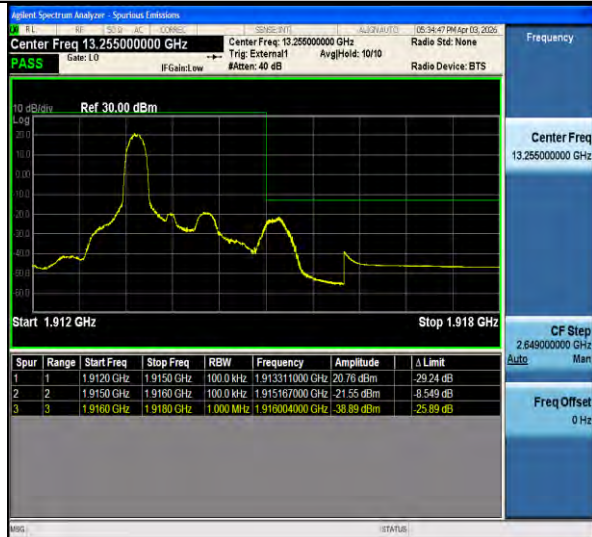
Band25-10MHz-QPSK-26090-1#0-PASS



Band25-10MHz-QPSK-26090-6#0-PASS



Band25-10MHz-QPSK-26640-1#0-PASS



Band25-10MHz-QPSK-26640-6#0-PASS



Band25-15MHz-QPSK-26115-1#0-PASS



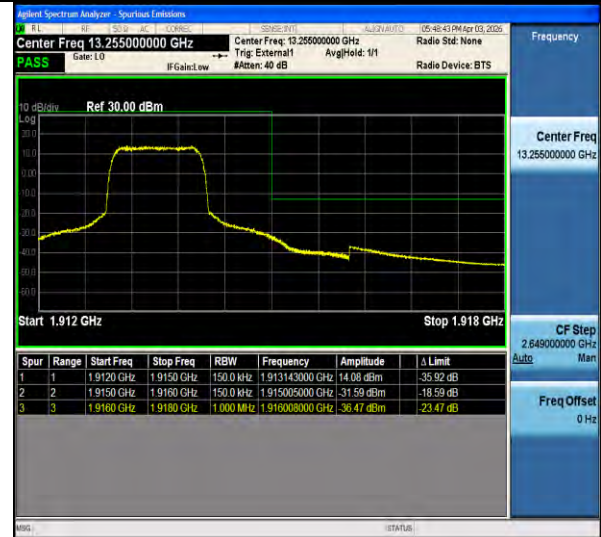
Band25-15MHz-QPSK-26115-6#0-PASS



Band25-15MHz-QPSK-26615-1#0-PASS



Band25-15MHz-QPSK-26615-6#0-PASS



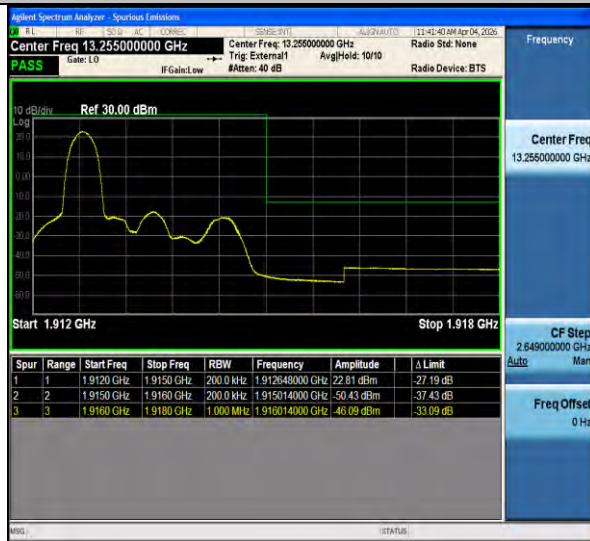
Band25-20MHz-QPSK-26140-1#0-PASS



Band25-20MHz-QPSK-26140-6#0-PASS



Band25-20MHz-QPSK-26590-1#0-PASS

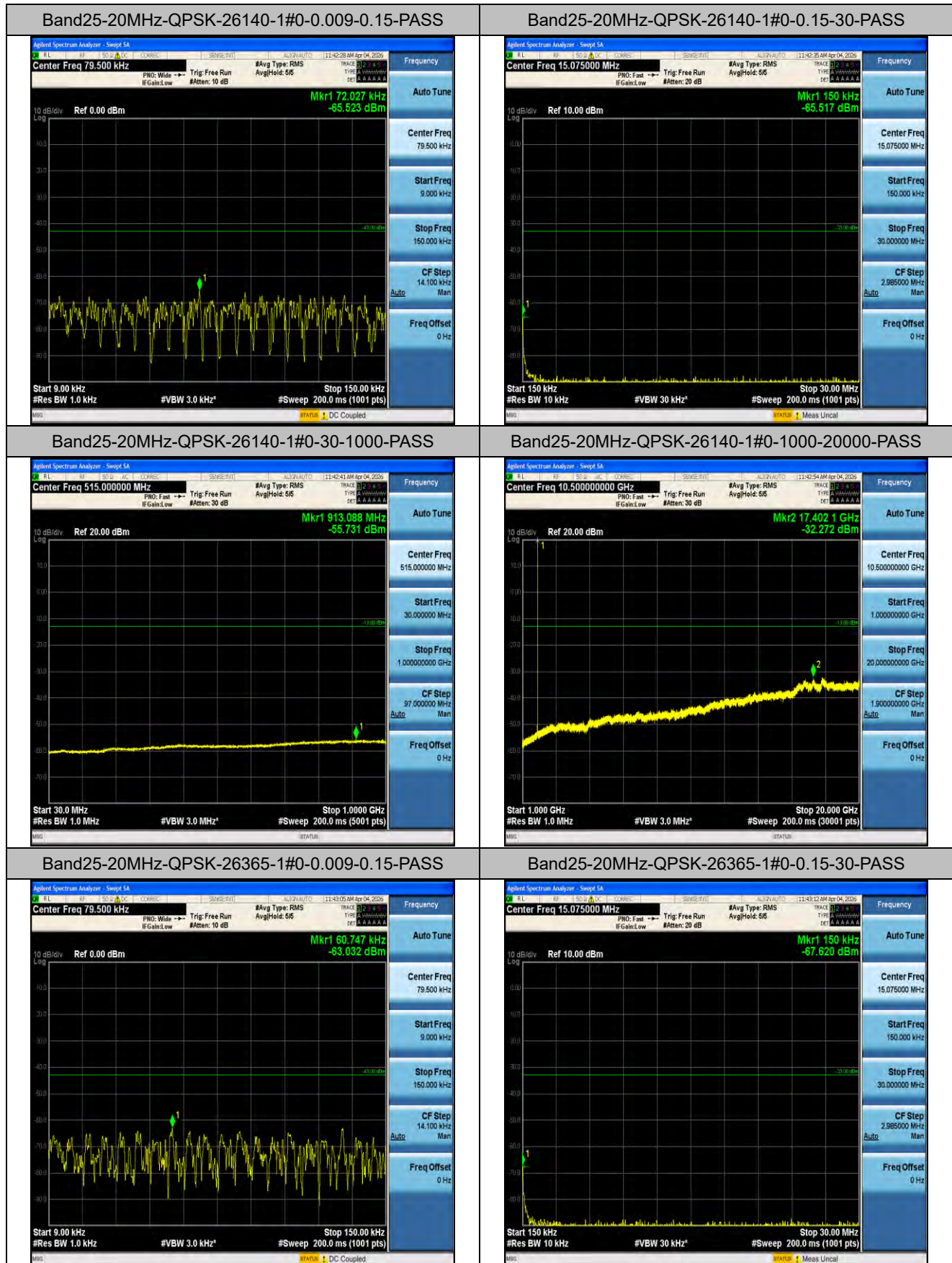


Band25-20MHz-QPSK-26590-6#0-PASS



Conducted Spurious Emission for M1

Test Graphs



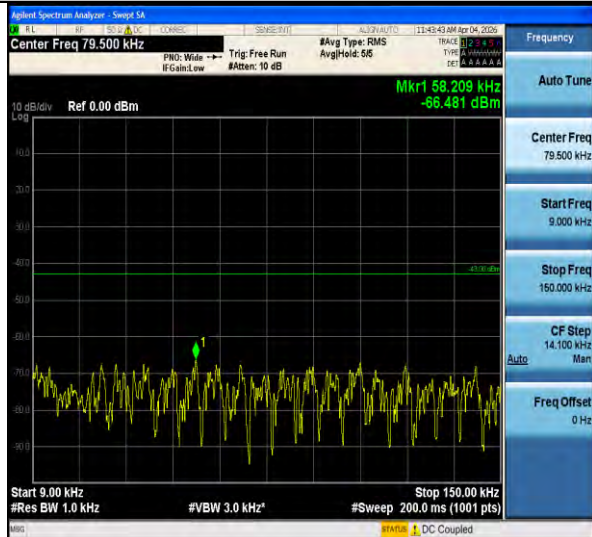
Band25-20MHz-QPSK-26365-1#0-30-1000-PASS



Band25-20MHz-QPSK-26365-1#0-1000-20000-PASS



Band25-20MHz-QPSK-26590-1#0-0.009-0.15-PASS



Band25-20MHz-QPSK-26590-1#0-0.15-30-PASS



Band25-20MHz-QPSK-26590-1#0-30-1000-PASS



Band25-20MHz-QPSK-26590-1#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
Band25	20MHz	QPSK	26365	6	0	Low	VN	NT	-15.60	-0.008287	PASS
Band25	20MHz	QPSK	26365	6	0	Low	VL	NT	-15.40	-0.008181	PASS
Band25	20MHz	QPSK	26365	6	0	Low	VH	NT	-15.80	-0.008393	PASS

Temperature											
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band25	20MHz	QPSK	26365	6	0	Low	NV	-30	-15.90	-0.008446	PASS
Band25	20MHz	QPSK	26365	6	0	Low	NV	-20	-16.70	-0.008871	PASS
Band25	20MHz	QPSK	26365	6	0	Low	NV	-10	-15.40	-0.008181	PASS
Band25	20MHz	QPSK	26365	6	0	Low	NV	0	-15.90	-0.008446	PASS
Band25	20MHz	QPSK	26365	6	0	Low	NV	10	-16.10	-0.008552	PASS
Band25	20MHz	QPSK	26365	6	0	Low	NV	20	-15.50	-0.008234	PASS
Band25	20MHz	QPSK	26365	6	0	Low	NV	30	-15.80	-0.008393	PASS
Band25	20MHz	QPSK	26365	6	0	Low	NV	40	-16.10	-0.008552	PASS
Band25	20MHz	QPSK	26365	6	0	Low	NV	50	-16.80	-0.008924	PASS

~The End~