

Appendix-B LTE Cat M1 Band 25

Effective (Isotropic) Radiated Power Output Data for M1

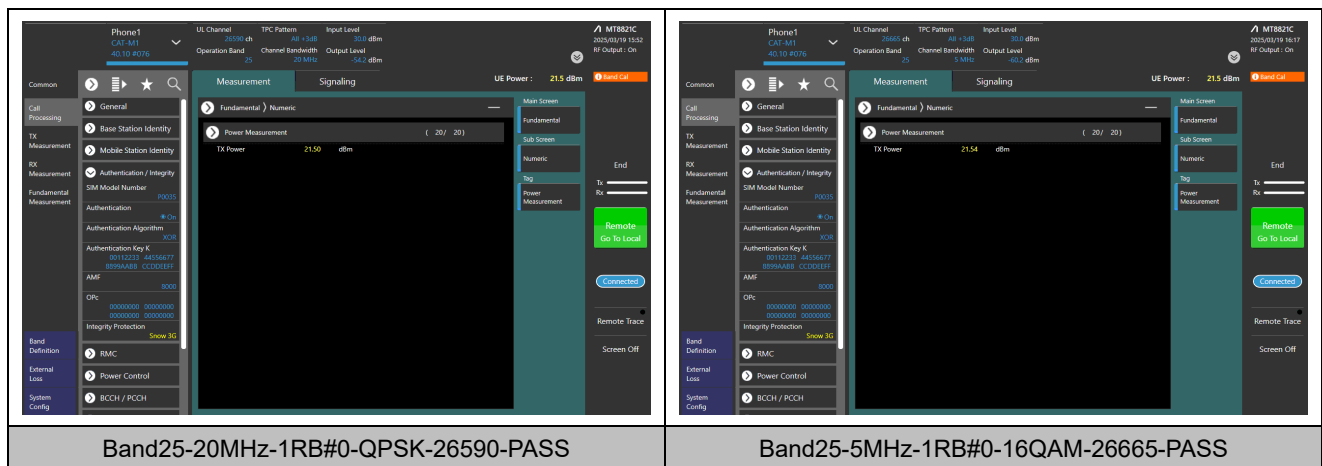
Test Result

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NBIndex	Power (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
Band25	1.4MHz	QPSK	26047	1	0	Low	20.94	22.53	33	PASS
Band25	1.4MHz	QPSK	26047	1	5	Low	20.77	22.36	33	PASS
Band25	1.4MHz	QPSK	26047	6	0	Low	20.35	21.94	33	PASS
Band25	1.4MHz	QPSK	26365	1	0	Low	21.18	22.77	33	PASS
Band25	1.4MHz	QPSK	26365	1	5	Low	21.08	22.67	33	PASS
Band25	1.4MHz	QPSK	26365	6	0	Low	20.12	21.71	33	PASS
Band25	1.4MHz	QPSK	26683	1	0	High	21.43	23.02	33	PASS
Band25	1.4MHz	QPSK	26683	1	5	High	21.18	22.77	33	PASS
Band25	1.4MHz	QPSK	26683	6	0	High	20.19	21.78	33	PASS
Band25	3MHz	QPSK	26055	1	0	Low	20.99	22.58	33	PASS
Band25	3MHz	QPSK	26055	1	5	Low	20.85	22.44	33	PASS
Band25	3MHz	QPSK	26055	6	0	Low	20.34	21.93	33	PASS
Band25	3MHz	QPSK	26365	1	0	Low	21.27	22.86	33	PASS
Band25	3MHz	QPSK	26365	1	5	Low	21.02	22.61	33	PASS
Band25	3MHz	QPSK	26365	6	0	Low	20.21	21.8	33	PASS
Band25	3MHz	QPSK	26675	1	0	High	21.44	23.03	33	PASS
Band25	3MHz	QPSK	26675	1	5	High	21.14	22.73	33	PASS
Band25	3MHz	QPSK	26675	6	0	High	20.22	21.81	33	PASS
Band25	5MHz	QPSK	26065	1	0	Low	21.07	22.66	33	PASS
Band25	5MHz	QPSK	26065	1	5	Low	20.92	22.51	33	PASS
Band25	5MHz	QPSK	26065	6	0	Low	20.06	21.65	33	PASS
Band25	5MHz	QPSK	26365	1	0	Low	21.33	22.92	33	PASS
Band25	5MHz	QPSK	26365	1	5	Low	21.19	22.78	33	PASS
Band25	5MHz	QPSK	26365	6	0	Low	20.2	21.79	33	PASS
Band25	5MHz	QPSK	26665	1	0	High	21.42	23.01	33	PASS
Band25	5MHz	QPSK	26665	1	5	High	21.32	22.91	33	PASS
Band25	5MHz	QPSK	26665	6	0	High	20.38	21.97	33	PASS
Band25	10MHz	QPSK	26090	1	0	Low	21.11	22.7	33	PASS
Band25	10MHz	QPSK	26090	1	5	Low	20.88	22.47	33	PASS
Band25	10MHz	QPSK	26090	6	0	Low	20.1	21.69	33	PASS
Band25	10MHz	QPSK	26365	1	0	Low	21.38	22.97	33	PASS
Band25	10MHz	QPSK	26365	1	5	Low	21.17	22.76	33	PASS
Band25	10MHz	QPSK	26365	6	0	Low	20.18	21.77	33	PASS
Band25	10MHz	QPSK	26640	1	0	High	21.45	23.04	33	PASS
Band25	10MHz	QPSK	26640	1	5	High	21.19	22.78	33	PASS
Band25	10MHz	QPSK	26640	6	0	High	20.39	21.98	33	PASS

Band25	15MHz	QPSK	26115	1	0	Low	21.02	22.61	33	PASS
Band25	15MHz	QPSK	26115	1	5	Low	20.89	22.48	33	PASS
Band25	15MHz	QPSK	26115	6	0	Low	20.99	22.58	33	PASS
Band25	15MHz	QPSK	26365	1	0	Low	21.28	22.87	33	PASS
Band25	15MHz	QPSK	26365	1	5	Low	21.08	22.67	33	PASS
Band25	15MHz	QPSK	26365	6	0	Low	21.19	22.78	33	PASS
Band25	15MHz	QPSK	26615	1	0	High	21.42	23.01	33	PASS
Band25	15MHz	QPSK	26615	1	5	High	21.18	22.77	33	PASS
Band25	15MHz	QPSK	26615	6	0	High	21.35	22.94	33	PASS
Band25	20MHz	QPSK	26140	1	0	Low	21	22.59	33	PASS
Band25	20MHz	QPSK	26140	1	5	Low	20.87	22.46	33	PASS
Band25	20MHz	QPSK	26140	6	0	Low	21	22.59	33	PASS
Band25	20MHz	QPSK	26365	1	0	Low	21.32	22.91	33	PASS
Band25	20MHz	QPSK	26365	1	5	Low	21.11	22.7	33	PASS
Band25	20MHz	QPSK	26365	6	0	Low	21.25	22.84	33	PASS
Band25	20MHz	QPSK	26590	1	0	High	21.5	23.09	33	PASS
Band25	20MHz	QPSK	26590	1	5	High	21.23	22.82	33	PASS
Band25	20MHz	QPSK	26590	6	0	High	21.39	22.98	33	PASS
Band25	1.4MHz	16QAM	26047	1	0	Low	20.16	21.75	33	PASS
Band25	1.4MHz	16QAM	26047	1	5	Low	20.26	21.85	33	PASS
Band25	1.4MHz	16QAM	26047	5	0	Low	20.09	21.68	33	PASS
Band25	1.4MHz	16QAM	26365	1	0	Low	20.53	22.12	33	PASS
Band25	1.4MHz	16QAM	26365	1	5	Low	20.43	22.02	33	PASS
Band25	1.4MHz	16QAM	26365	5	0	Low	20.3	21.89	33	PASS
Band25	1.4MHz	16QAM	26683	1	0	High	20.56	22.15	33	PASS
Band25	1.4MHz	16QAM	26683	1	5	High	20.45	22.04	33	PASS
Band25	1.4MHz	16QAM	26683	5	0	High	20.38	21.97	33	PASS
Band25	3MHz	16QAM	26055	1	0	Low	20.18	21.77	33	PASS
Band25	3MHz	16QAM	26055	1	5	Low	20.24	21.83	33	PASS
Band25	3MHz	16QAM	26055	5	0	Low	20.02	21.61	33	PASS
Band25	3MHz	16QAM	26365	1	0	Low	20.41	22	33	PASS
Band25	3MHz	16QAM	26365	1	5	Low	20.45	22.04	33	PASS
Band25	3MHz	16QAM	26365	5	0	Low	20.27	21.86	33	PASS
Band25	3MHz	16QAM	26675	1	0	High	20.54	22.13	33	PASS
Band25	3MHz	16QAM	26675	1	5	High	20.24	21.83	33	PASS
Band25	3MHz	16QAM	26675	5	0	High	20.33	21.92	33	PASS
Band25	5MHz	16QAM	26065	1	0	Low	21.17	22.76	33	PASS
Band25	5MHz	16QAM	26065	1	5	Low	20.95	22.54	33	PASS
Band25	5MHz	16QAM	26065	5	0	Low	20.8	22.39	33	PASS
Band25	5MHz	16QAM	26365	1	0	Low	21.32	22.91	33	PASS
Band25	5MHz	16QAM	26365	1	5	Low	21.08	22.67	33	PASS
Band25	5MHz	16QAM	26365	5	0	Low	20.16	21.75	33	PASS
Band25	5MHz	16QAM	26665	1	0	High	21.54	23.13	33	PASS
Band25	5MHz	16QAM	26665	1	5	High	21.17	22.76	33	PASS

Band25	5MHz	16QAM	26665	5	0	High	20.23	21.82	33	PASS
Band25	10MHz	16QAM	26090	1	0	Low	20.95	22.54	33	PASS
Band25	10MHz	16QAM	26090	1	5	Low	20.74	22.33	33	PASS
Band25	10MHz	16QAM	26090	5	0	Low	21.02	22.61	33	PASS
Band25	10MHz	16QAM	26365	1	0	Low	21.22	22.81	33	PASS
Band25	10MHz	16QAM	26365	1	5	Low	20.99	22.58	33	PASS
Band25	10MHz	16QAM	26365	5	0	Low	21.34	22.93	33	PASS
Band25	10MHz	16QAM	26640	1	0	High	21.3	22.89	33	PASS
Band25	10MHz	16QAM	26640	1	5	High	21.27	22.86	33	PASS
Band25	10MHz	16QAM	26640	5	0	High	21.42	23.01	33	PASS
Band25	15MHz	16QAM	26115	1	0	Low	21	22.59	33	PASS
Band25	15MHz	16QAM	26115	1	5	Low	20.83	22.42	33	PASS
Band25	15MHz	16QAM	26115	5	0	Low	20.92	22.51	33	PASS
Band25	15MHz	16QAM	26365	1	0	Low	21.11	22.7	33	PASS
Band25	15MHz	16QAM	26365	1	5	Low	21.03	22.62	33	PASS
Band25	15MHz	16QAM	26365	5	0	Low	21.25	22.84	33	PASS
Band25	15MHz	16QAM	26615	1	0	High	21.4	22.99	33	PASS
Band25	15MHz	16QAM	26615	1	5	High	21.18	22.77	33	PASS
Band25	15MHz	16QAM	26615	5	0	High	21.38	22.97	33	PASS
Band25	20MHz	16QAM	26140	1	0	Low	21.01	22.6	33	PASS
Band25	20MHz	16QAM	26140	1	5	Low	20.8	22.39	33	PASS
Band25	20MHz	16QAM	26140	5	0	Low	20.84	22.43	33	PASS
Band25	20MHz	16QAM	26365	1	0	Low	21.22	22.81	33	PASS
Band25	20MHz	16QAM	26365	1	5	Low	21.12	22.71	33	PASS
Band25	20MHz	16QAM	26365	5	0	Low	21.17	22.76	33	PASS
Band25	20MHz	16QAM	26590	1	0	High	21.51	23.1	33	PASS
Band25	20MHz	16QAM	26590	1	5	High	21.27	22.86	33	PASS
Band25	20MHz	16QAM	26590	5	0	High	21.41	23	33	PASS

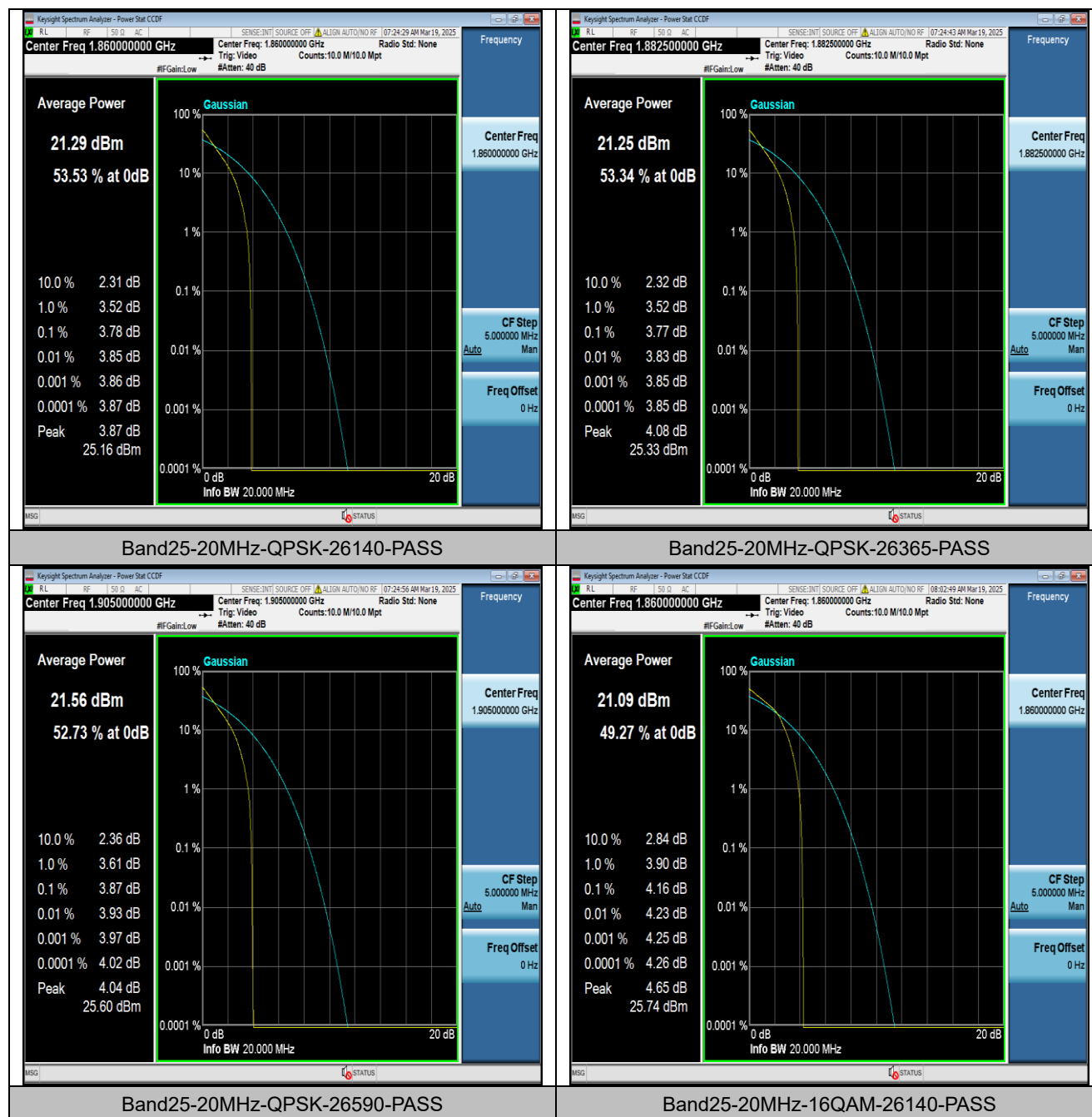
Test Graphs

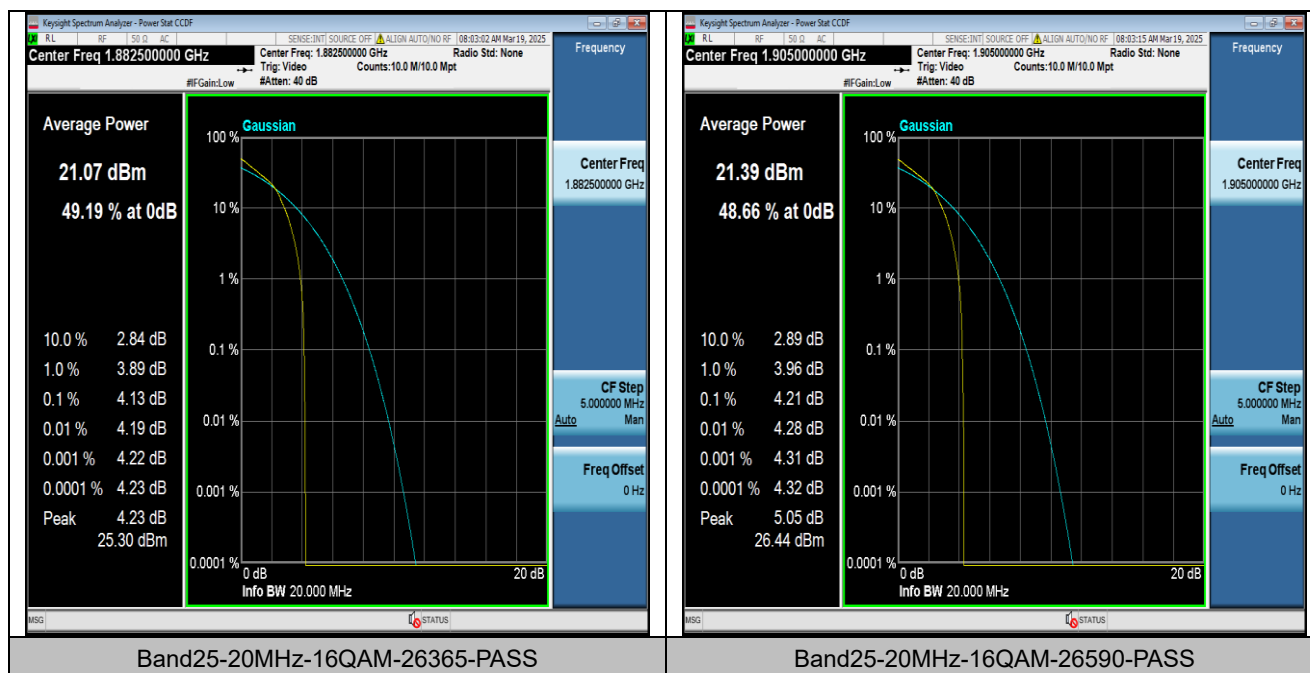


Peak-to-Average Ratio(CCDF) for M1**Test Result**

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band25	20MHz	QPSK	26140	6	0	Low	3.78	<=13	PASS
Band25	20MHz	QPSK	26365	6	0	Low	3.77	<=13	PASS
Band25	20MHz	QPSK	26590	6	0	High	3.87	<=13	PASS
Band25	20MHz	16QAM	26140	5	0	Low	4.16	<=13	PASS
Band25	20MHz	16QAM	26365	5	0	Low	4.13	<=13	PASS
Band25	20MHz	16QAM	26590	5	0	High	4.21	<=13	PASS

Test Graphs

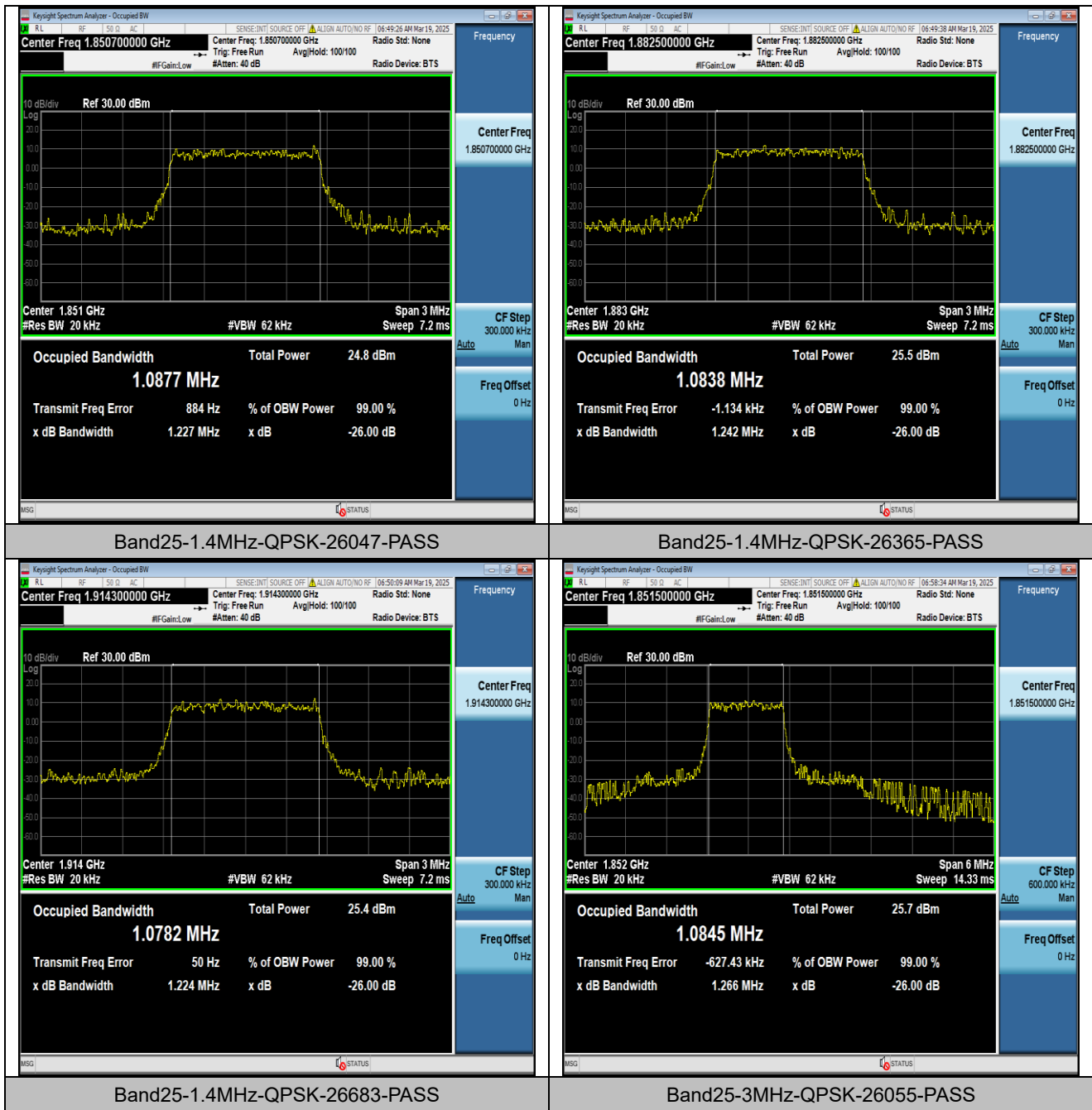


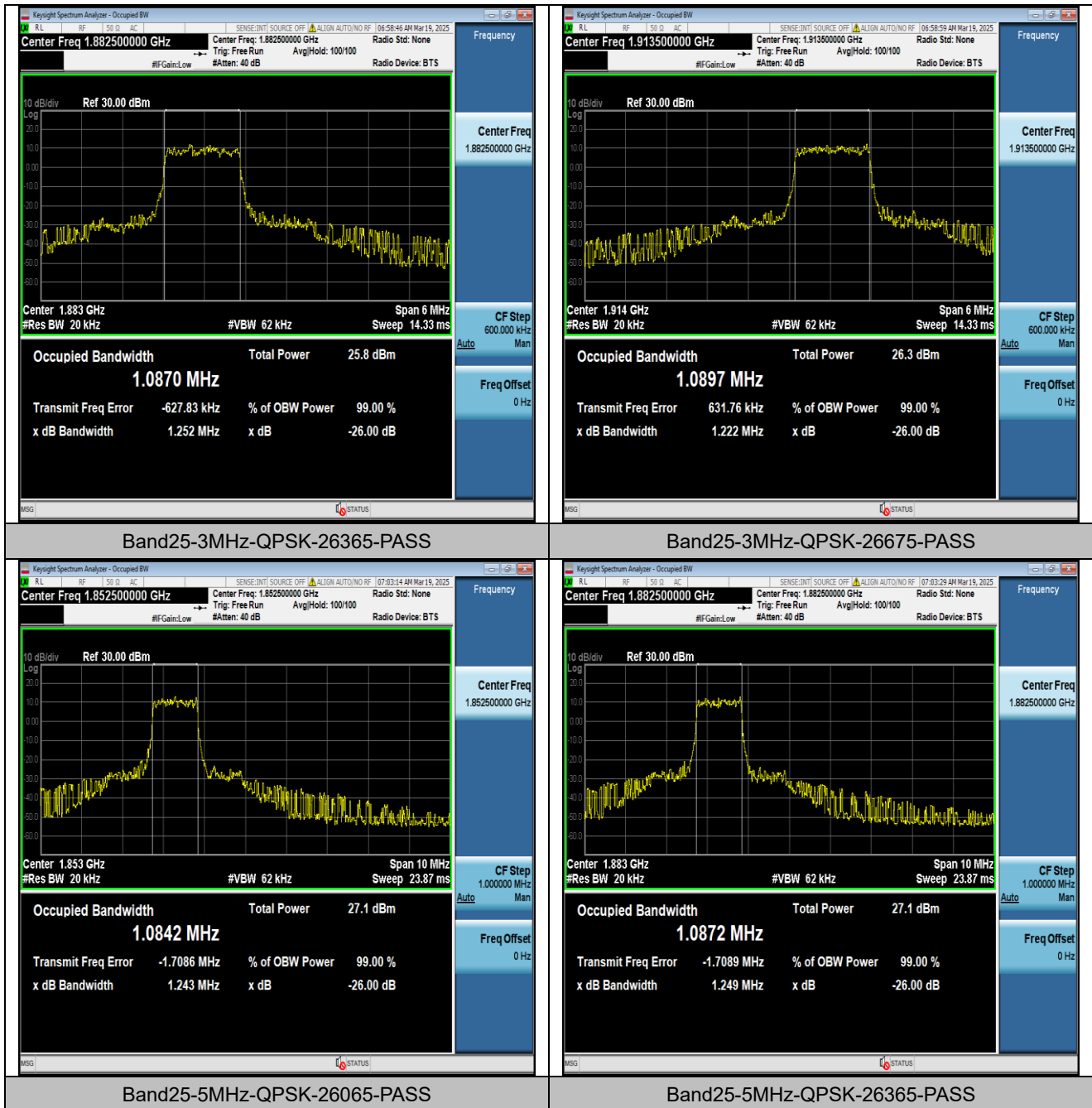


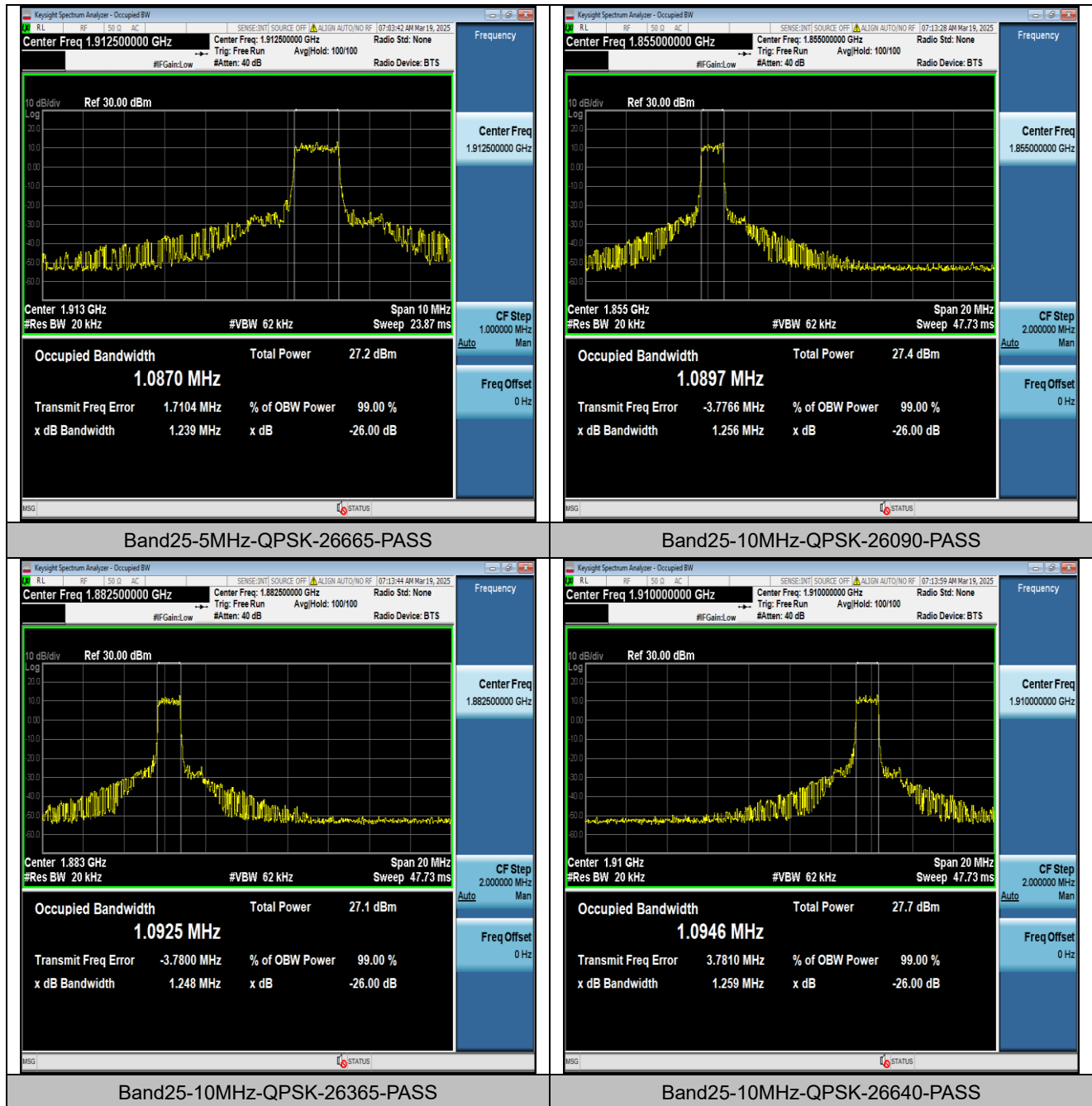
26dB Bandwidth and Occupied Bandwidth for M1**Test Result**

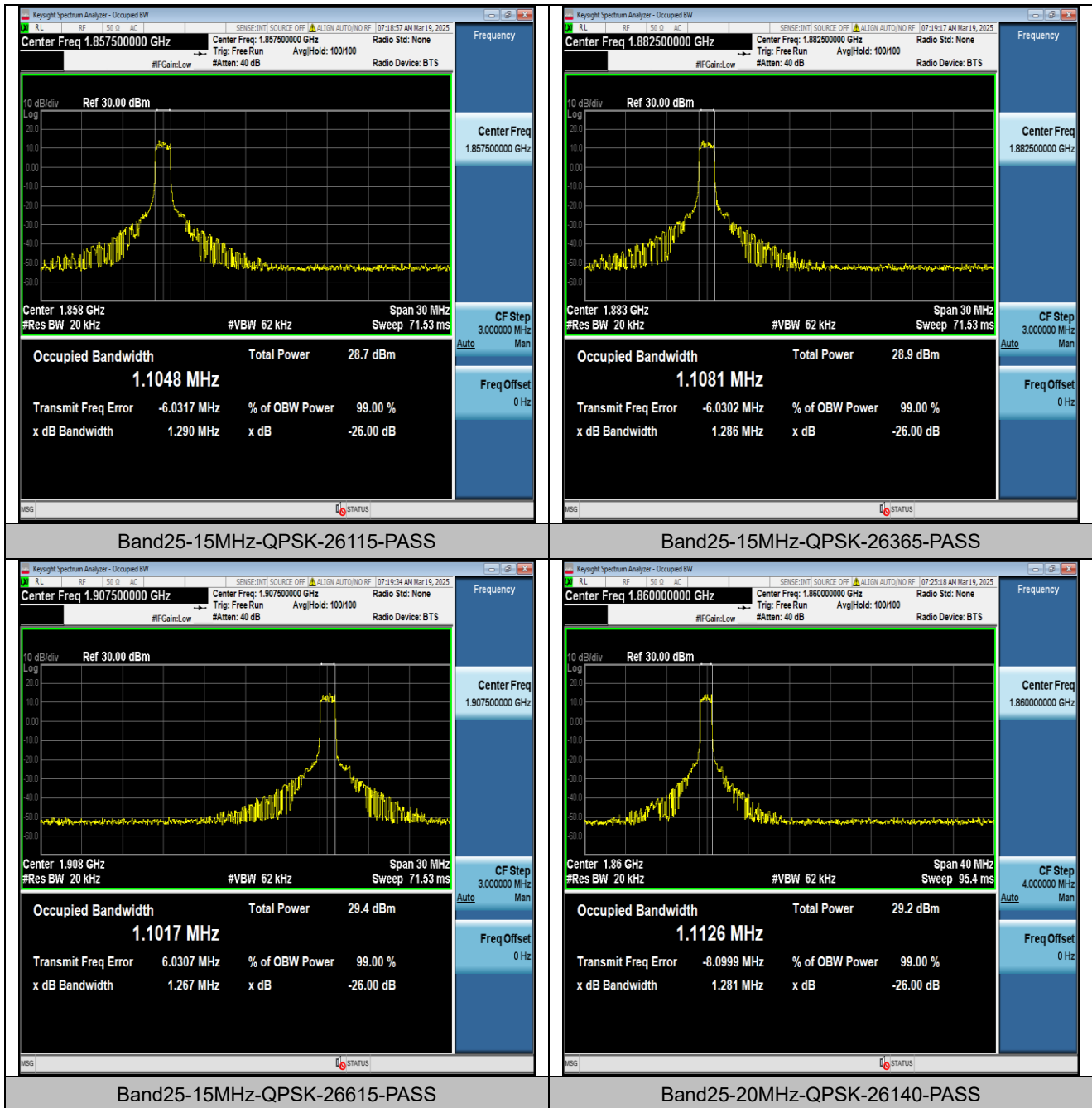
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band25	1.4MHz	QPSK	26047	6	0	Low	1.0877	1.227	PASS
Band25	1.4MHz	QPSK	26365	6	0	Low	1.0838	1.242	PASS
Band25	1.4MHz	QPSK	26683	6	0	High	1.0782	1.224	PASS
Band25	3MHz	QPSK	26055	6	0	Low	1.0845	1.266	PASS
Band25	3MHz	QPSK	26365	6	0	Low	1.0870	1.252	PASS
Band25	3MHz	QPSK	26675	6	0	High	1.0897	1.222	PASS
Band25	5MHz	QPSK	26065	6	0	Low	1.0842	1.243	PASS
Band25	5MHz	QPSK	26365	6	0	Low	1.0872	1.249	PASS
Band25	5MHz	QPSK	26665	6	0	High	1.0870	1.239	PASS
Band25	10MHz	QPSK	26090	6	0	Low	1.0897	1.256	PASS
Band25	10MHz	QPSK	26365	6	0	Low	1.0925	1.248	PASS
Band25	10MHz	QPSK	26640	6	0	High	1.0946	1.259	PASS
Band25	15MHz	QPSK	26115	6	0	Low	1.1048	1.290	PASS
Band25	15MHz	QPSK	26365	6	0	Low	1.1081	1.286	PASS
Band25	15MHz	QPSK	26615	6	0	High	1.1017	1.267	PASS
Band25	20MHz	QPSK	26140	6	0	Low	1.1126	1.281	PASS
Band25	20MHz	QPSK	26365	6	0	Low	1.1101	1.276	PASS
Band25	20MHz	QPSK	26590	6	0	High	1.1091	1.284	PASS
Band25	1.4MHz	16QAM	26047	5	0	Low	0.91048	1.088	PASS
Band25	1.4MHz	16QAM	26365	5	0	Low	0.91028	1.079	PASS
Band25	1.4MHz	16QAM	26683	5	0	High	0.91018	1.086	PASS
Band25	3MHz	16QAM	26055	5	0	Low	0.91605	1.091	PASS
Band25	3MHz	16QAM	26365	5	0	Low	0.91006	1.104	PASS
Band25	3MHz	16QAM	26675	5	0	High	0.91712	1.082	PASS
Band25	5MHz	16QAM	26065	5	0	Low	0.90945	1.130	PASS
Band25	5MHz	16QAM	26365	5	0	Low	0.91822	1.106	PASS
Band25	5MHz	16QAM	26665	5	0	High	0.91751	1.119	PASS
Band25	10MHz	16QAM	26090	5	0	Low	0.92175	1.270	PASS
Band25	10MHz	16QAM	26365	5	0	Low	0.92482	1.176	PASS
Band25	10MHz	16QAM	26640	5	0	High	0.92713	1.127	PASS
Band25	15MHz	16QAM	26115	5	0	Low	0.93637	1.127	PASS
Band25	15MHz	16QAM	26365	5	0	Low	0.92730	1.153	PASS
Band25	15MHz	16QAM	26615	5	0	High	0.92845	1.147	PASS
Band25	20MHz	16QAM	26140	5	0	Low	0.95500	1.186	PASS
Band25	20MHz	16QAM	26365	5	0	Low	0.95664	1.288	PASS
Band25	20MHz	16QAM	26590	5	0	High	0.95068	1.164	PASS

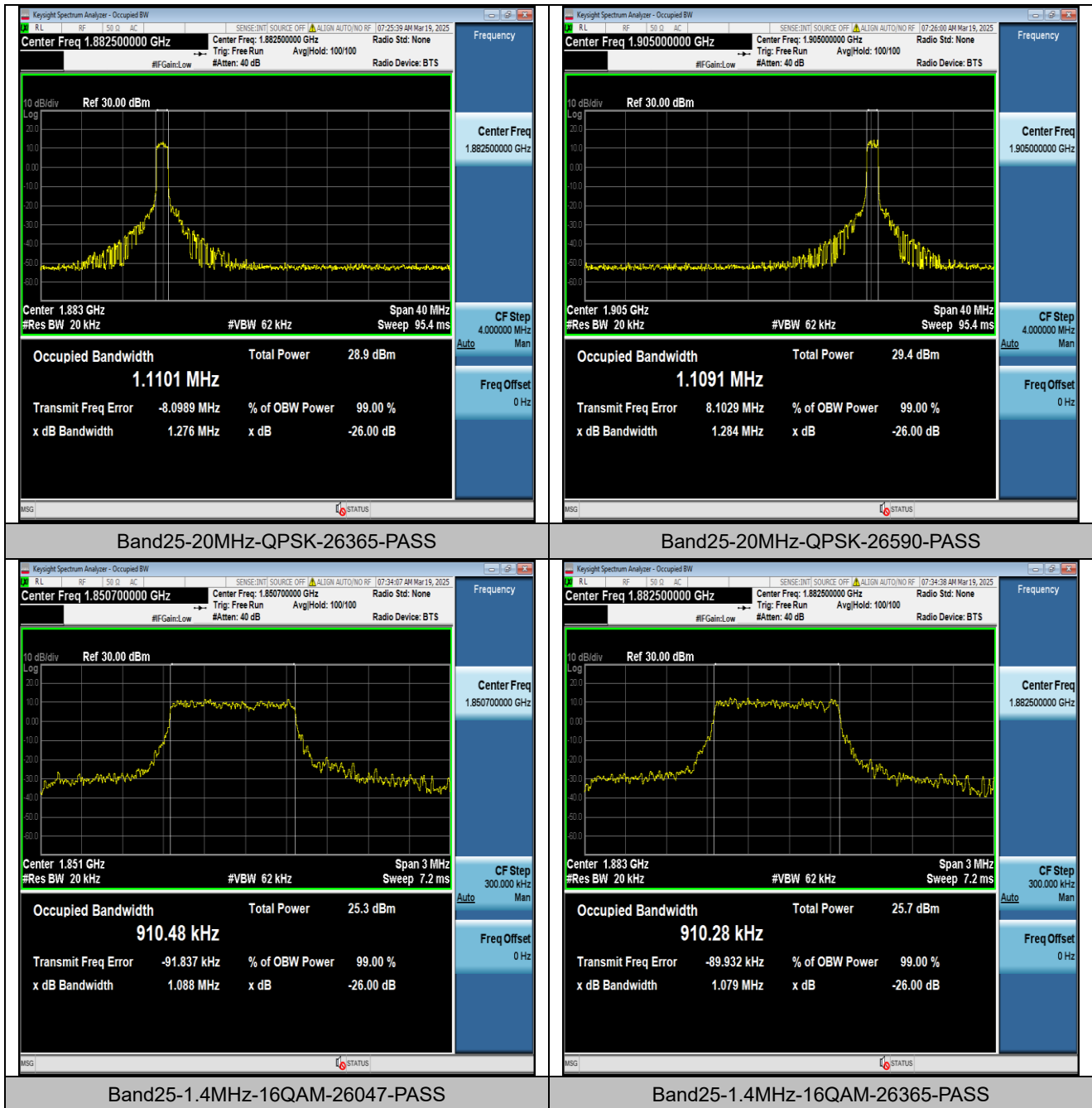
Test Graphs

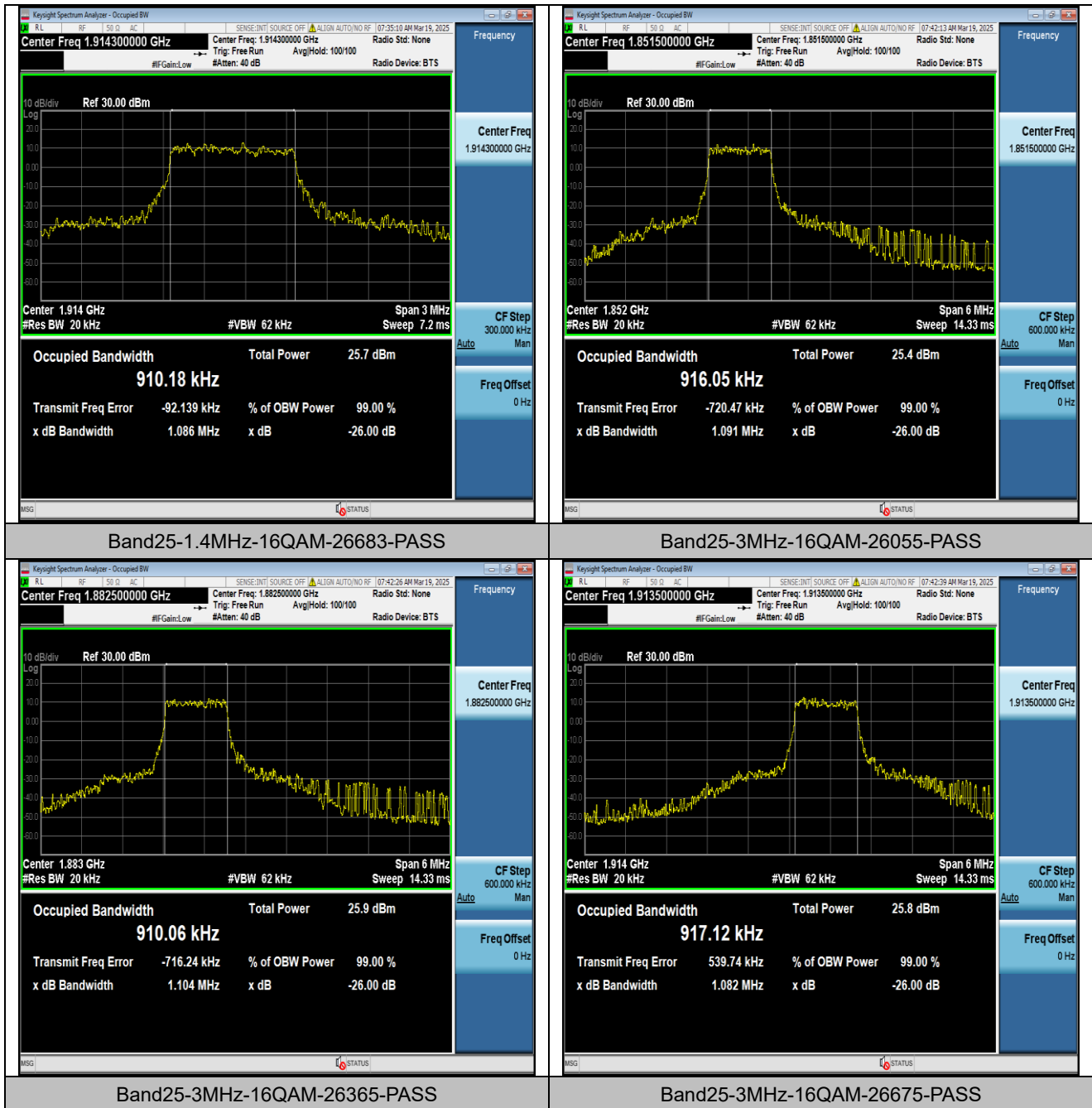


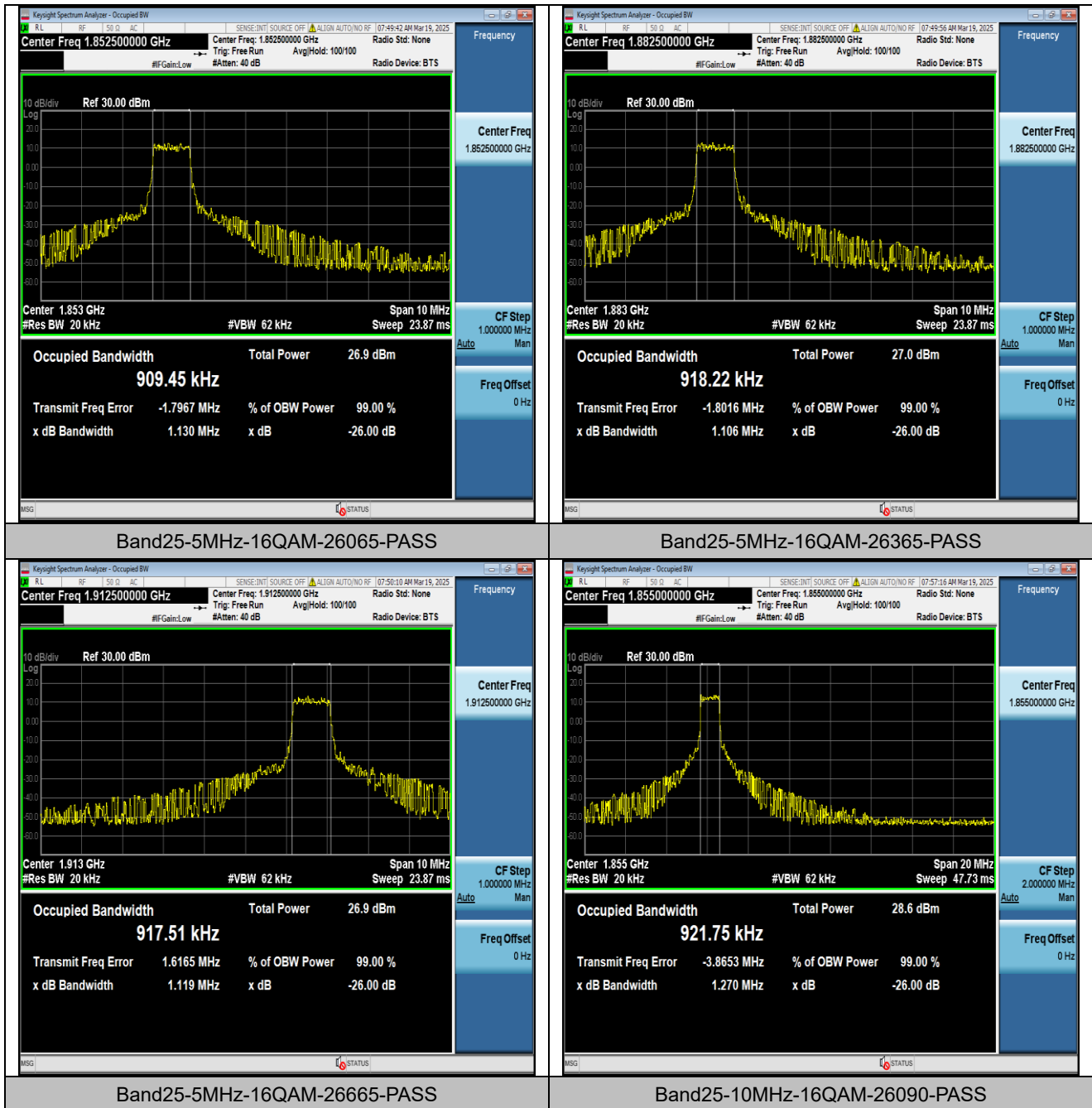


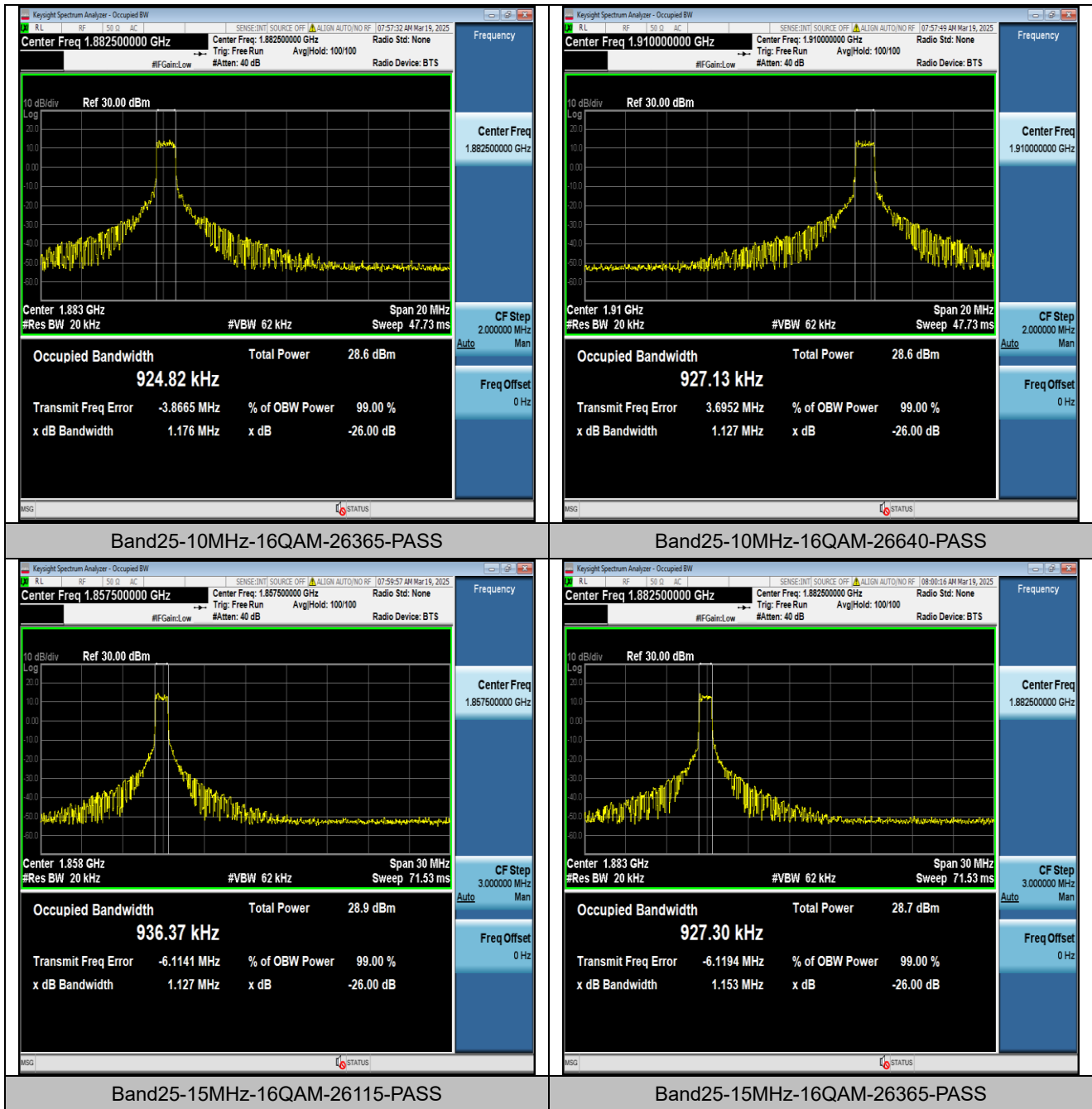


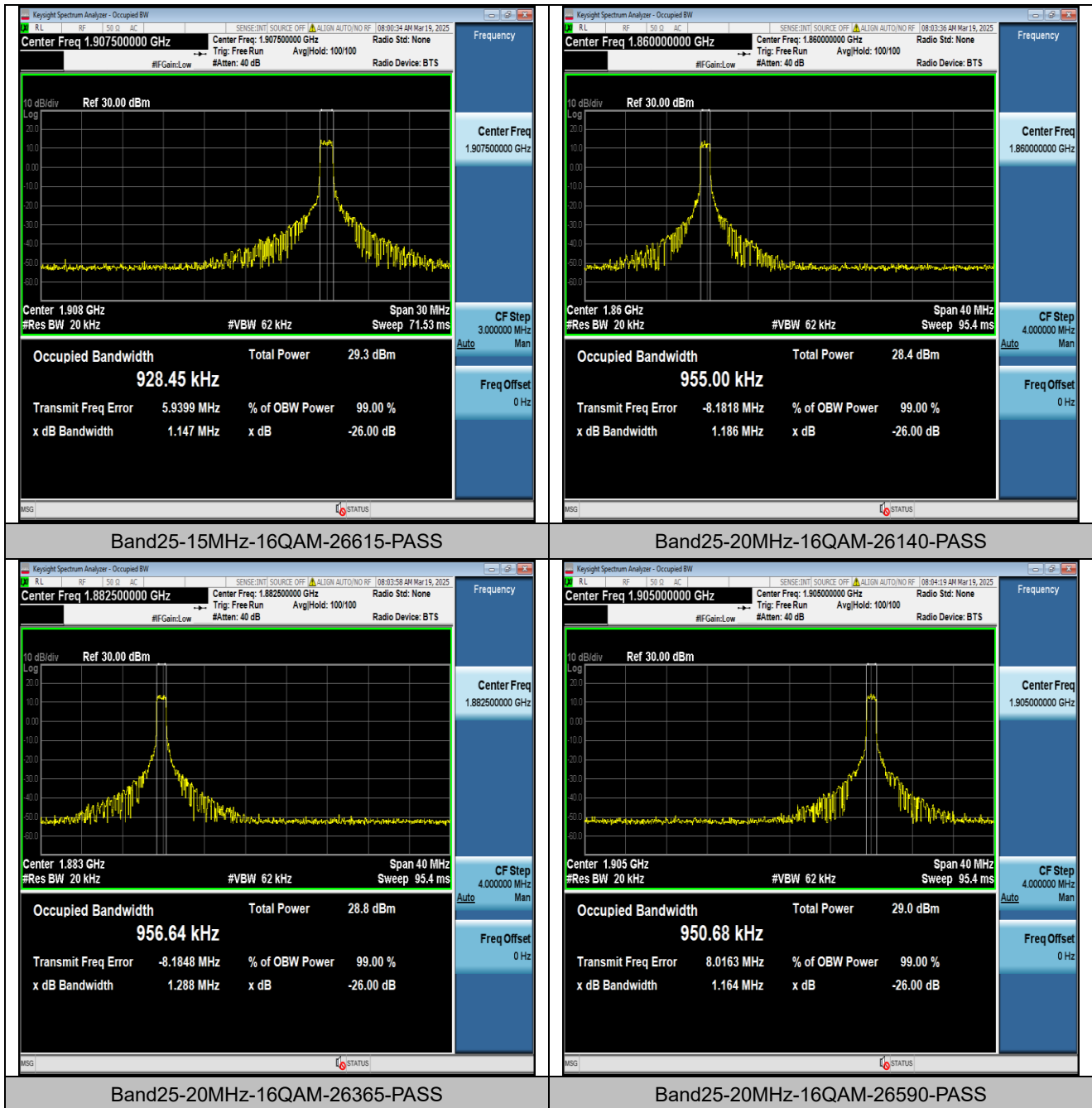






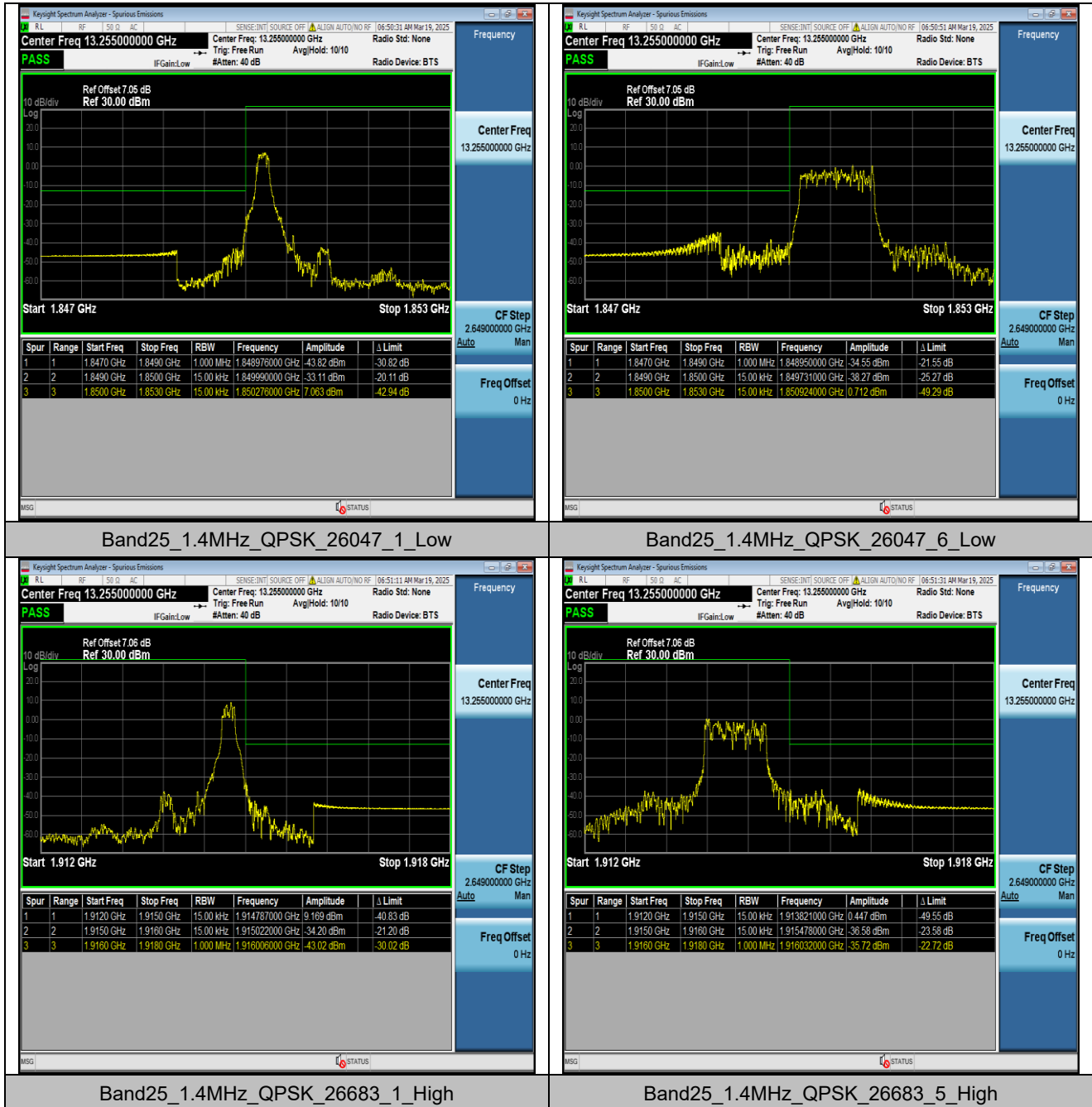


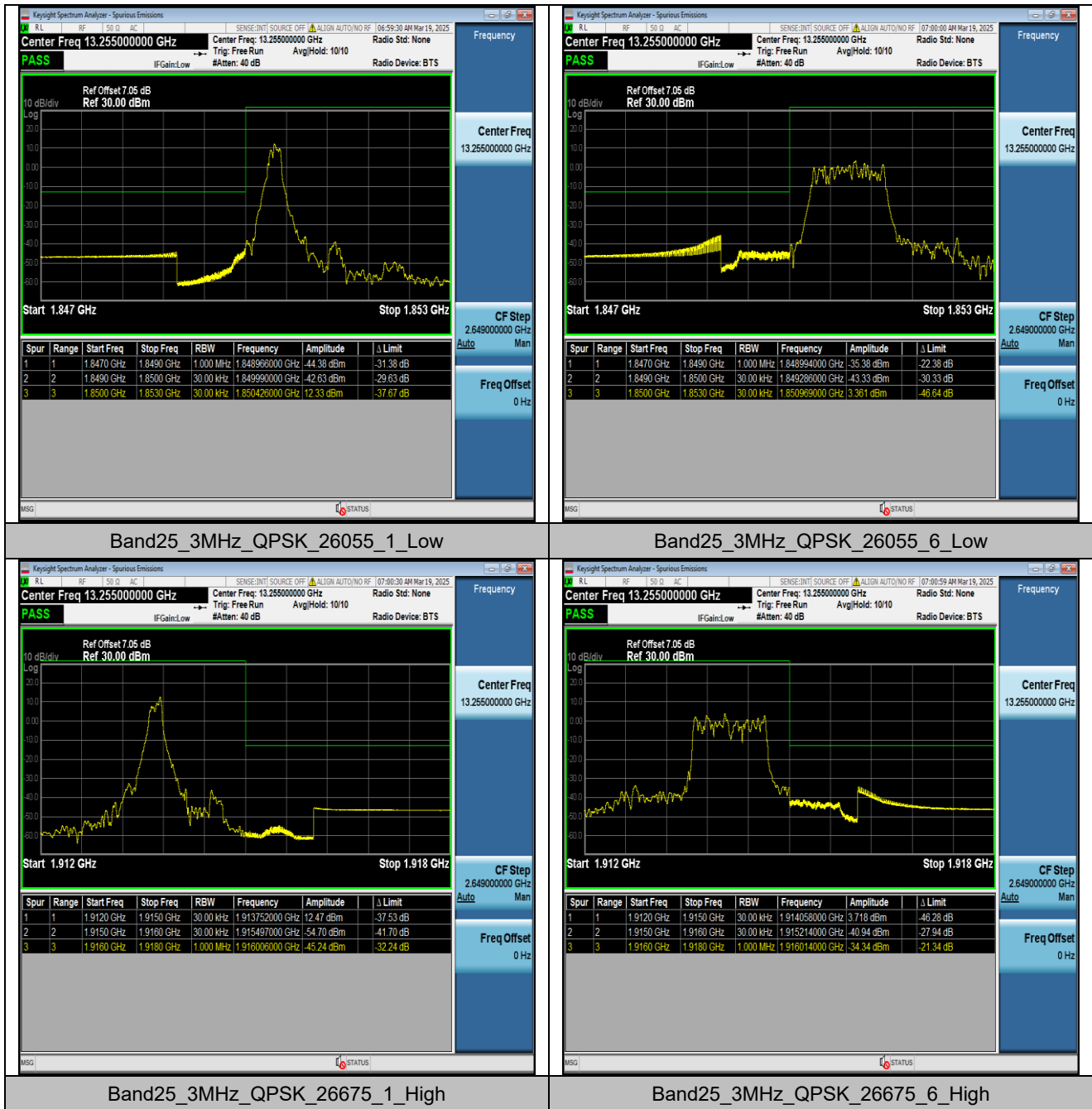


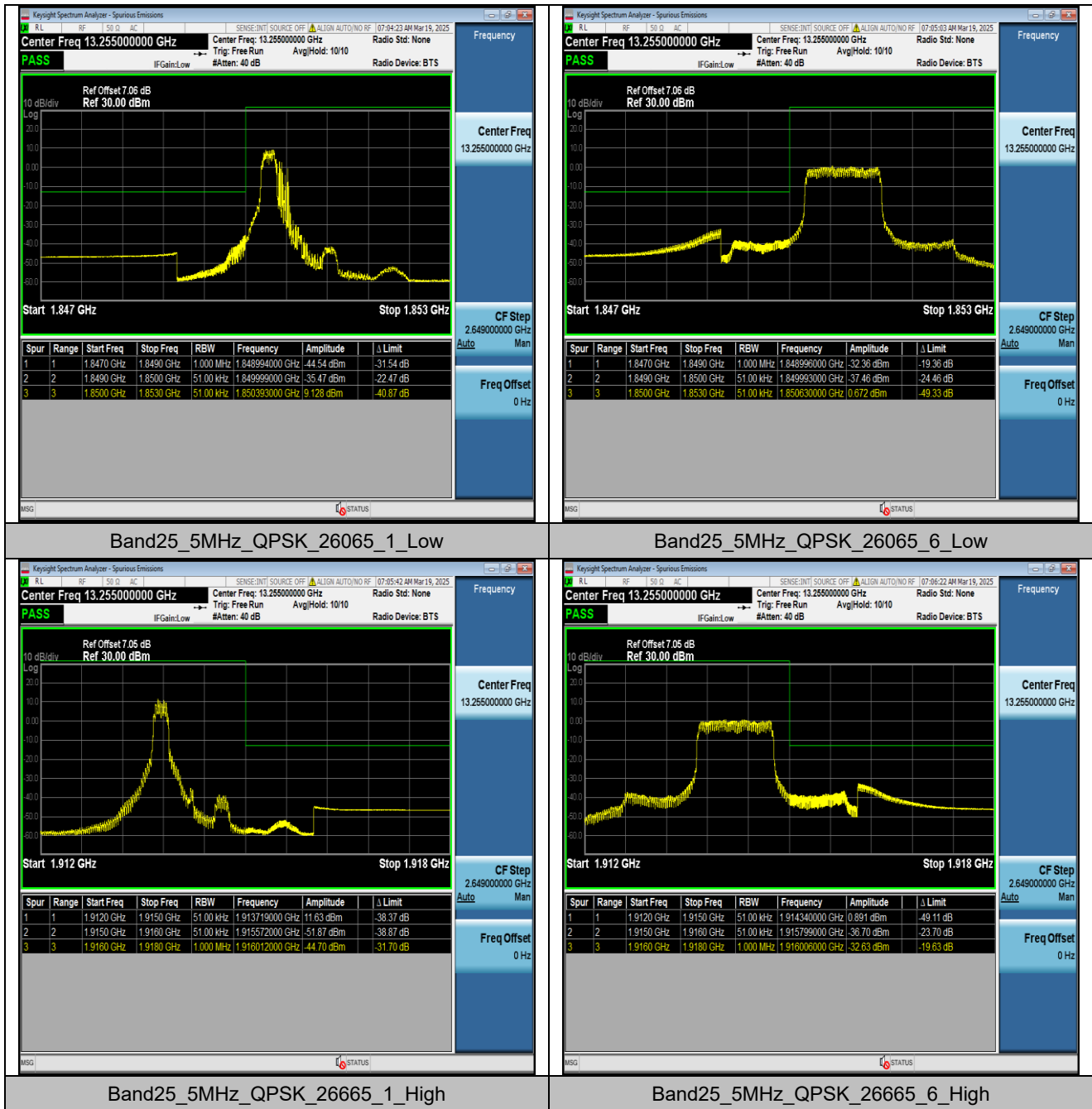


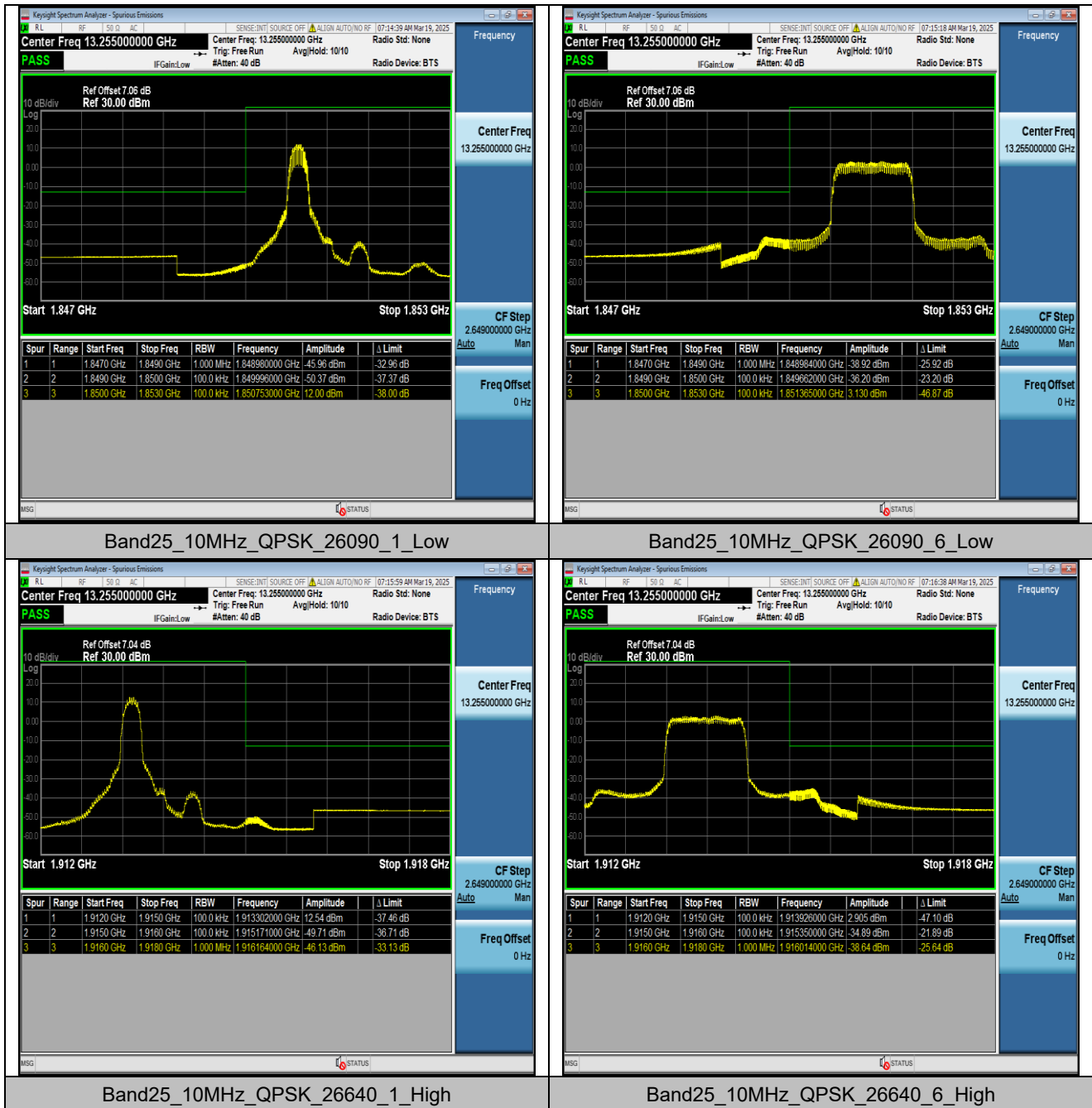
Band Edge for M1

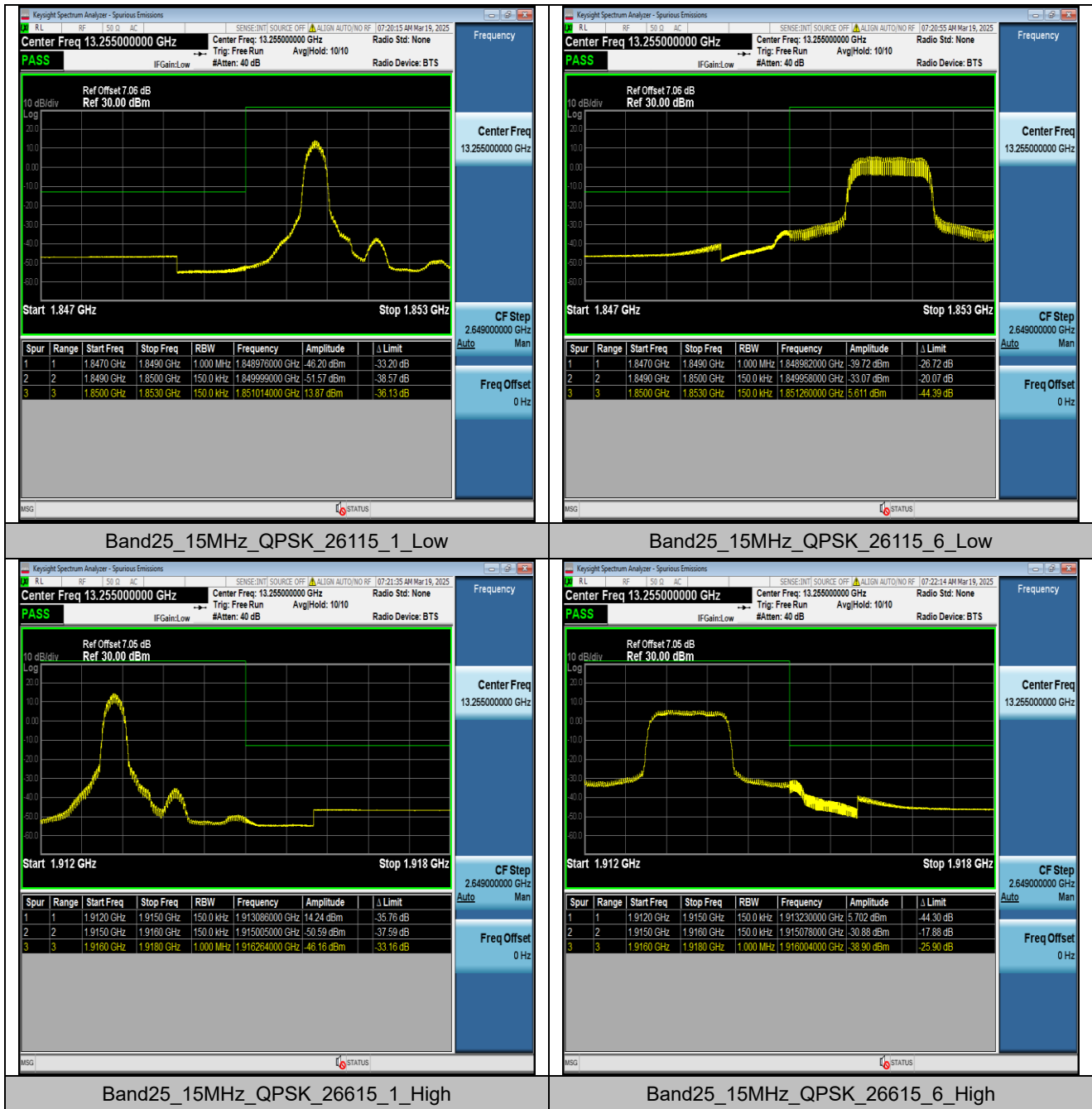
Test Graphs

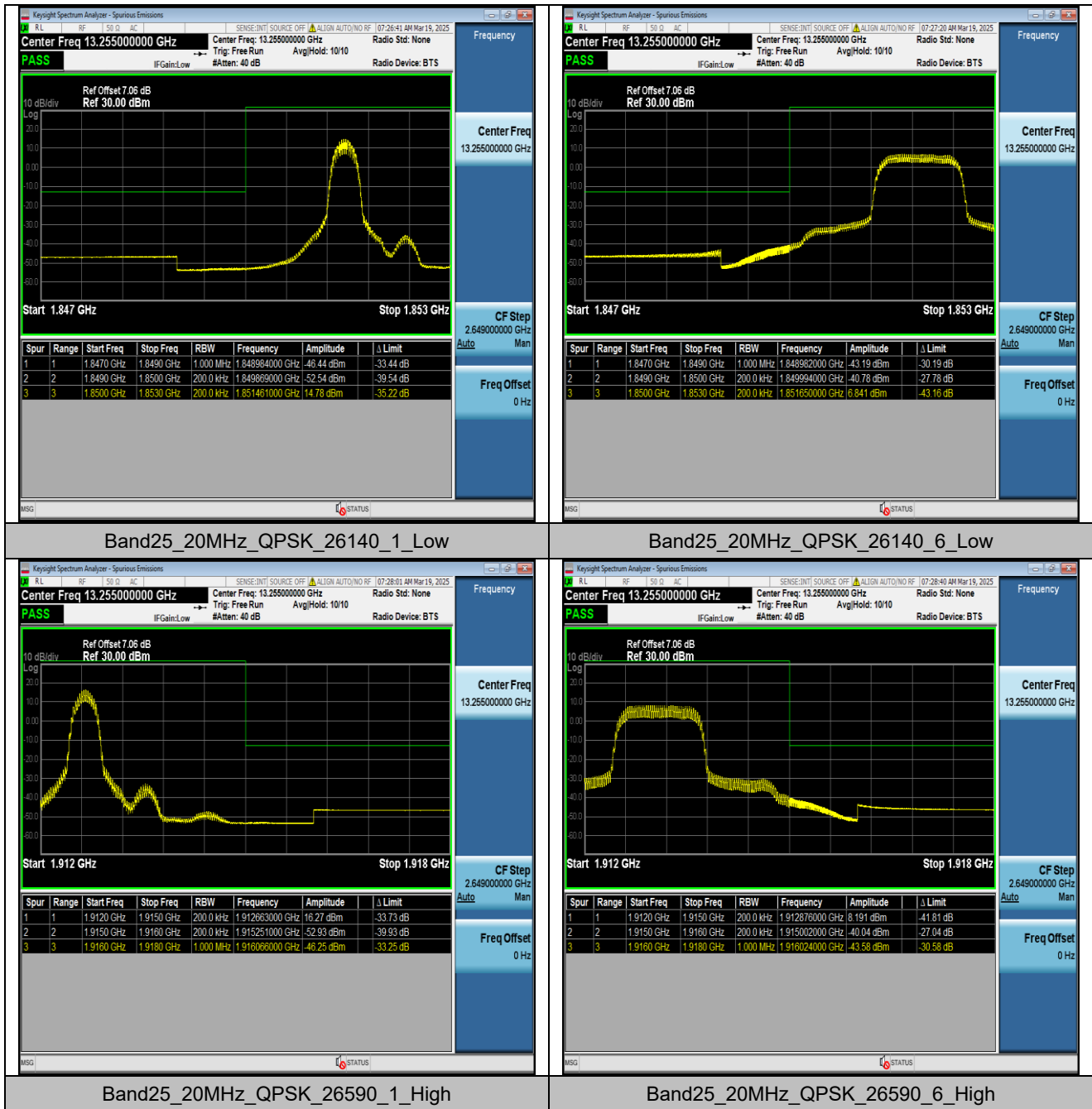






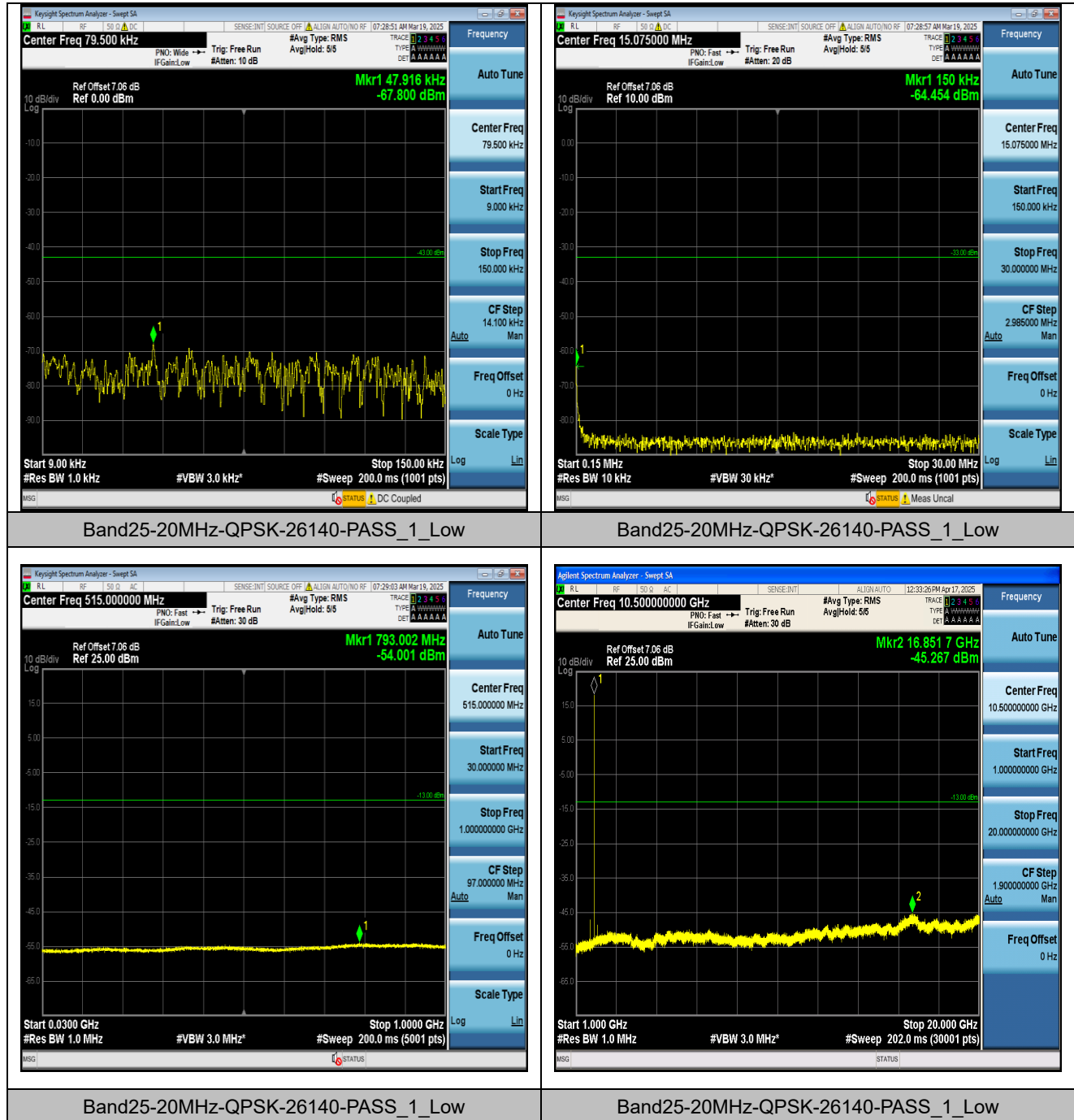


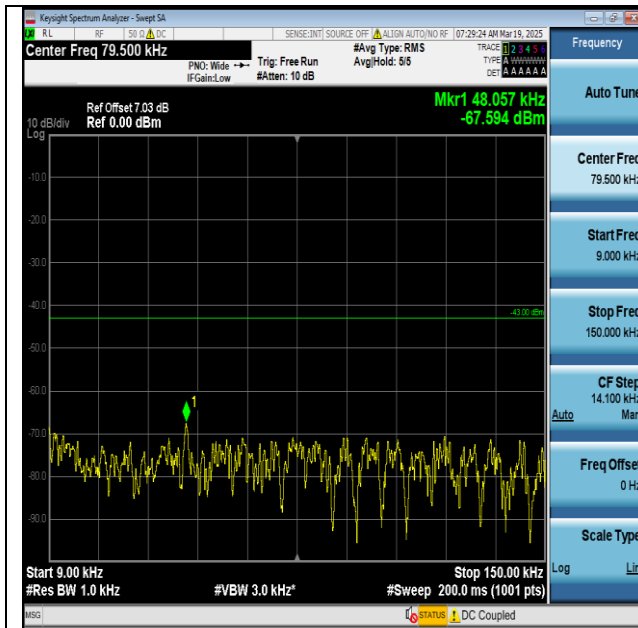




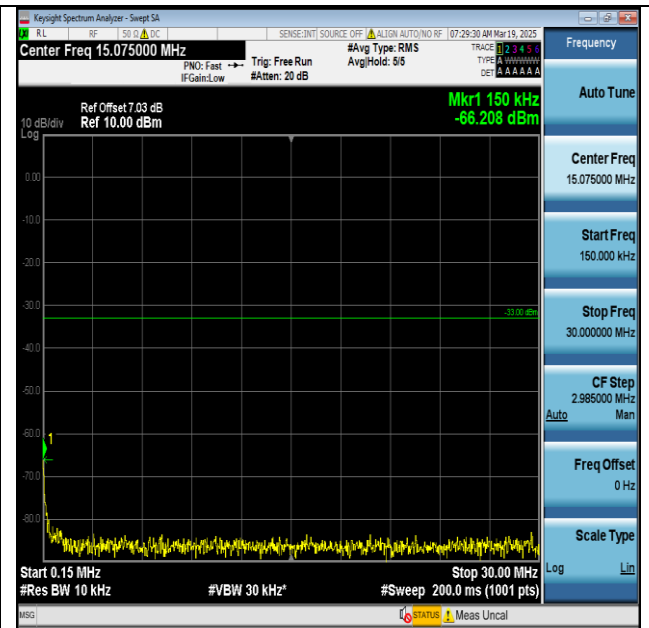
Conducted Spurious Emission for M1

Test Graphs





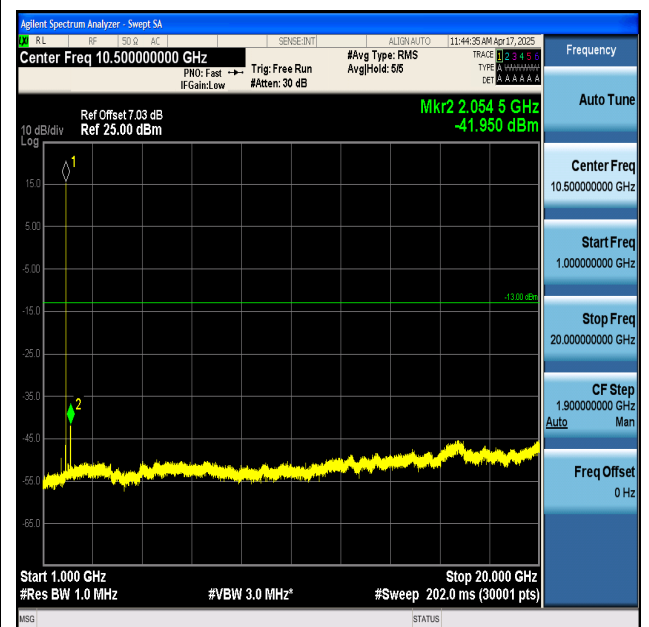
Band25-20MHz-QPSK-26365-PASS_1_Low



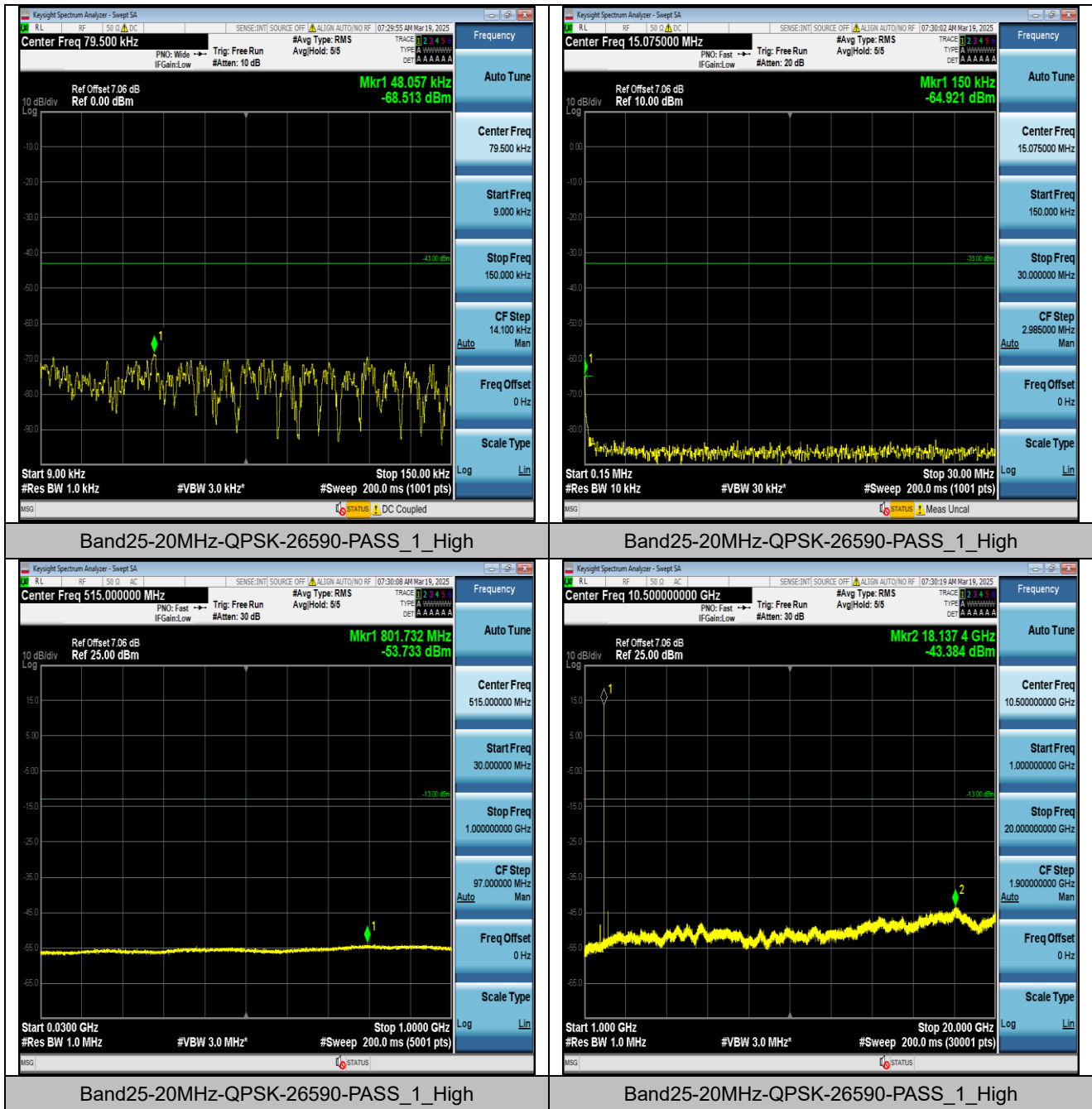
Band25-20MHz-QPSK-26365-PASS_1_Low



Band25-20MHz-QPSK-26365-PASS_1_Low



Band25-20MHz-QPSK-26365-PASS_1_Low



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	-5.10	-0.002709	PASS
Band25	20MHz	QPSK	26365	6	0	Low	VL	NT	-7.80	-0.004143	PASS
Band25	20MHz	QPSK	26365	6	0	Low	VH	NT	-5.80	-0.003081	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	-5.10	-0.002709	PASS
Band25	20MHz	QPSK	26365	6	0	Low	NV	-20	-6.10	-0.003240	PASS
Band25	20MHz	QPSK	26365	6	0	Low	NV	-10	-7.50	-0.003984	PASS
Band25	20MHz	QPSK	26365	6	0	Low	NV	0	-8.30	-0.004409	PASS
Band25	20MHz	QPSK	26365	6	0	Low	NV	10	-8.20	-0.004356	PASS
Band25	20MHz	QPSK	26365	6	0	Low	NV	20	-10.10	-0.005365	PASS
Band25	20MHz	QPSK	26365	6	0	Low	NV	30	-10.80	-0.005737	PASS
Band25	20MHz	QPSK	26365	6	0	Low	NV	40	-7.30	-0.003878	PASS
Band25	20MHz	QPSK	26365	6	0	Low	NV	50	-7.20	-0.003825	PASS

~The End~