

Appendix-A LTE Band 5

Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	23.69	24.07	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	23.74	24.12	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	23.65	24.03	38.45	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	22.75	23.13	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	22.92	23.3	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#2	23.07	23.45	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	23.04	23.42	38.45	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	21.83	22.21	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	22.88	23.26	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	22.95	23.33	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	23.04	23.42	38.45	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	22.02	22.4	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	22.1	22.48	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#2	22.02	22.4	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#5	22.15	22.53	38.45	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	21.15	21.53	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	22.81	23.19	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	22.62	23	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	22.43	22.81	38.45	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	21.66	22.04	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	21.84	22.22	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#2	21.91	22.29	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	21.49	21.87	38.45	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	20.9	21.28	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#0	23.67	24.05	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#8	23.54	23.92	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#14	23.49	23.87	38.45	PASS
Band5	3MHz	QPSK	20415	15RB#0	22.57	22.95	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#0	22.63	23.01	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#8	22.76	23.14	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#14	22.76	23.14	38.45	PASS
Band5	3MHz	16QAM	20415	15RB#0	21.67	22.05	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#0	22.99	23.37	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#8	23.04	23.42	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#14	23.04	23.42	38.45	PASS
Band5	3MHz	QPSK	20525	15RB#0	21.96	22.34	38.45	PASS

Band5	3MHz	16QAM	20525	1RB#0	22.09	22.47	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#8	21.89	22.27	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#14	22	22.38	38.45	PASS
Band5	3MHz	16QAM	20525	15RB#0	21.13	21.51	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#0	23.14	23.52	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#8	22.97	23.35	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#14	22.5	22.88	38.45	PASS
Band5	3MHz	QPSK	20635	15RB#0	21.97	22.35	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#0	22.21	22.59	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#8	22.11	22.49	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#14	21.62	22	38.45	PASS
Band5	3MHz	16QAM	20635	15RB#0	21.14	21.52	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#0	23.65	24.03	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#12	23.63	24.01	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#24	23.67	24.05	38.45	PASS
Band5	5MHz	QPSK	20425	25RB#0	22.69	23.07	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#0	22.8	23.18	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#12	22.65	23.03	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#24	22.85	23.23	38.45	PASS
Band5	5MHz	16QAM	20425	25RB#0	21.87	22.25	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#0	23.1	23.48	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#12	22.92	23.3	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#24	23.14	23.52	38.45	PASS
Band5	5MHz	QPSK	20525	25RB#0	22.07	22.45	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#0	22.37	22.75	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#12	21.97	22.35	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#24	22.08	22.46	38.45	PASS
Band5	5MHz	16QAM	20525	25RB#0	21.28	21.66	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#0	23.5	23.88	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#12	22.99	23.37	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#24	22.47	22.85	38.45	PASS
Band5	5MHz	QPSK	20625	25RB#0	22.2	22.58	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#0	22.45	22.83	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#12	22.21	22.59	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#24	21.75	22.13	38.45	PASS
Band5	5MHz	16QAM	20625	25RB#0	21.28	21.66	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#0	23.71	24.09	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#24	23.71	24.09	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#49	23.23	23.61	38.45	PASS
Band5	10MHz	QPSK	20450	50RB#0	22.65	23.03	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#0	22.66	23.04	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#24	22.94	23.32	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#49	22.48	22.86	38.45	PASS
Band5	10MHz	16QAM	20450	27RB#0	21.87	22.25	38.45	PASS

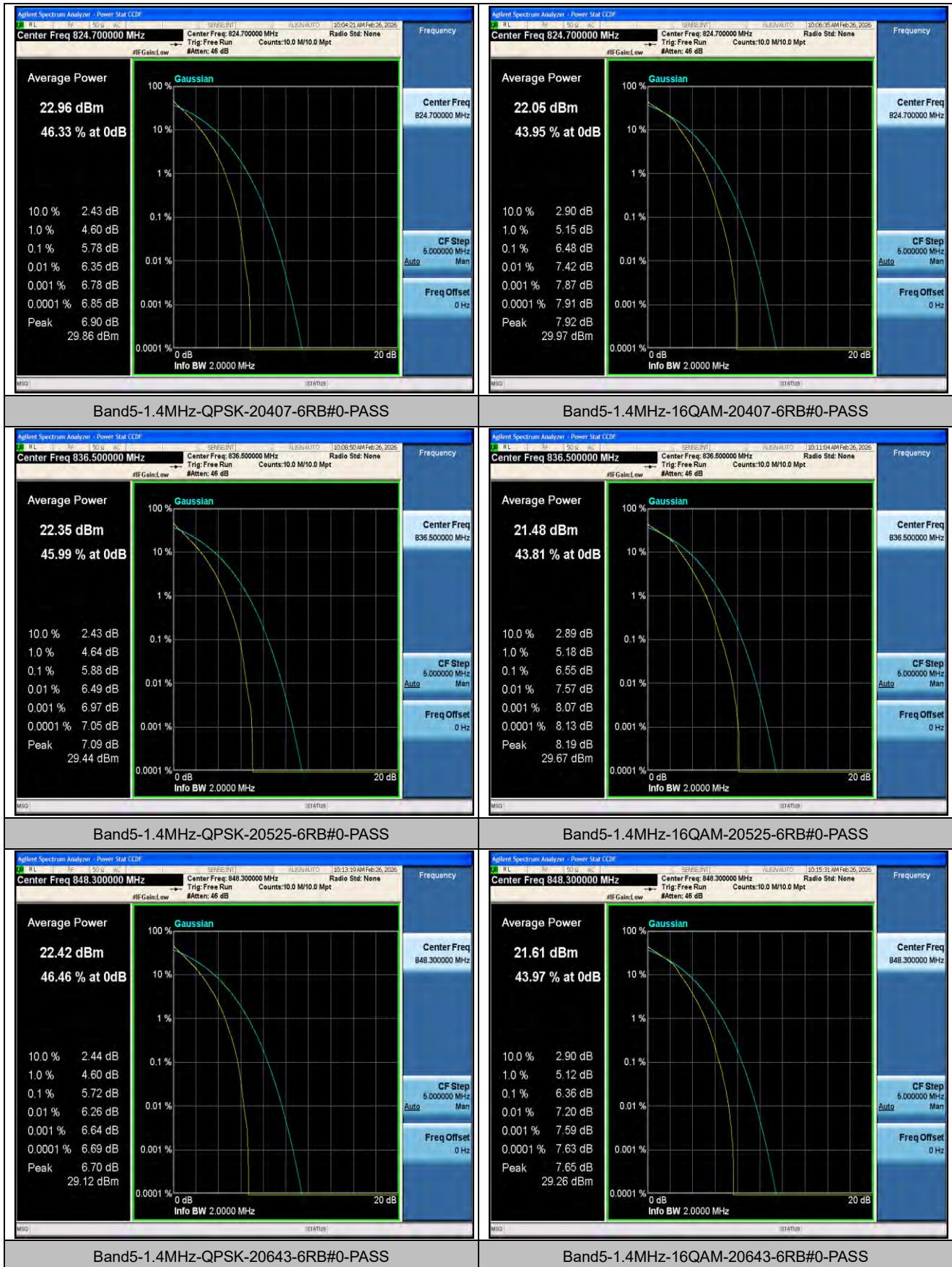
Band5	10MHz	QPSK	20525	1RB#0	23.12	23.5	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#24	23	23.38	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#49	23.27	23.65	38.45	PASS
Band5	10MHz	QPSK	20525	50RB#0	22.13	22.51	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#0	22.46	22.84	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#24	22.17	22.55	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#49	22.04	22.42	38.45	PASS
Band5	10MHz	16QAM	20525	27RB#0	21.37	21.75	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#0	23.31	23.69	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#24	23.44	23.82	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#49	22.7	23.08	38.45	PASS
Band5	10MHz	QPSK	20600	50RB#0	22.41	22.79	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#0	22.59	22.97	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#24	22.86	23.24	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#49	21.75	22.13	38.45	PASS
Band5	10MHz	16QAM	20600	27RB#0	21.56	21.94	38.45	PASS

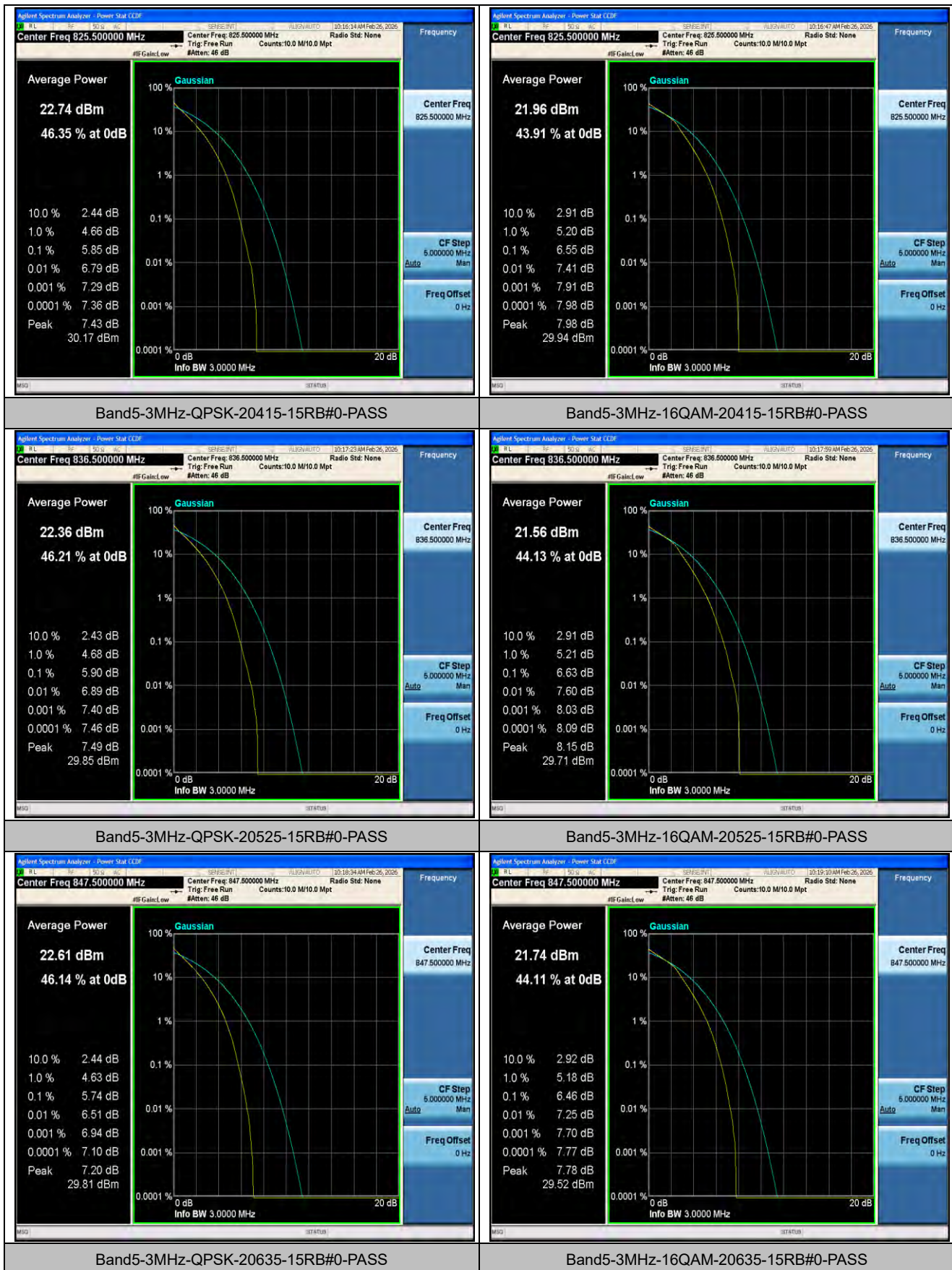
Peak-to-Average Ratio(CCDF)

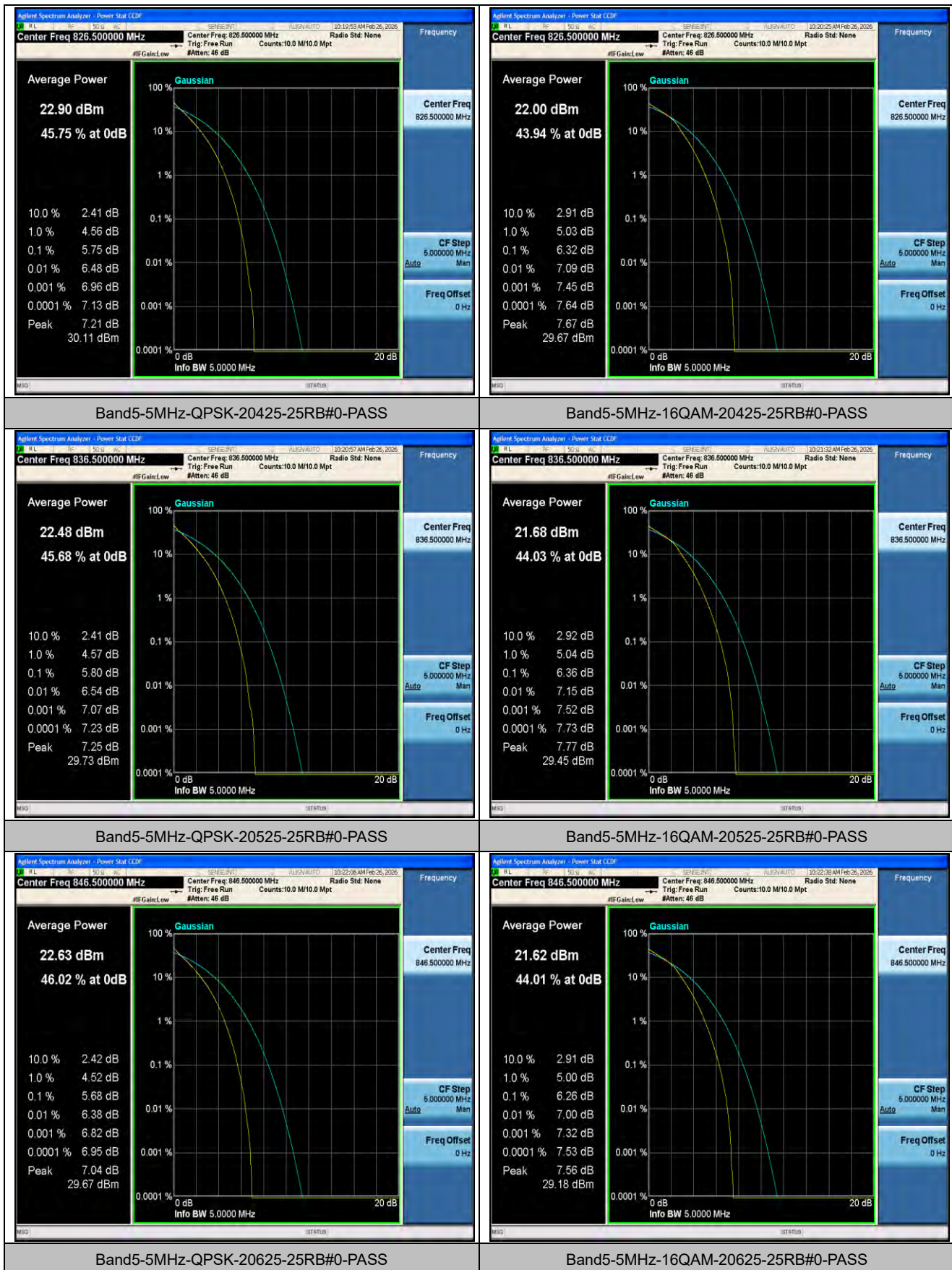
Test Result

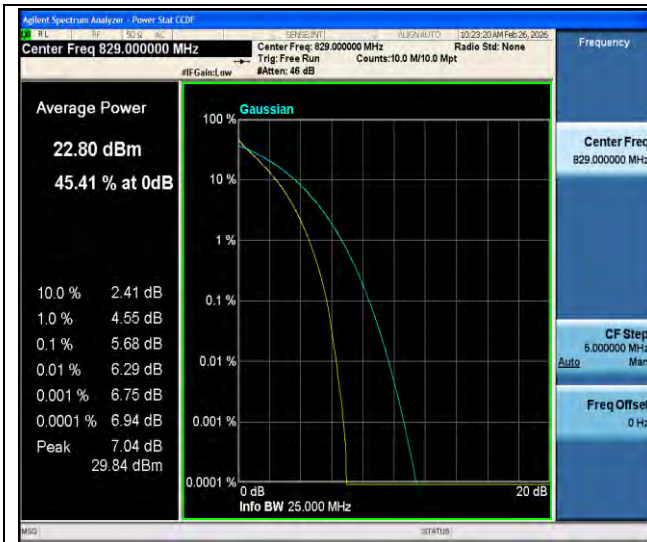
Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	5.78	13	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	6.48	13	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	5.88	13	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	6.55	13	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	5.72	13	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	6.36	13	PASS
Band5	3MHz	QPSK	20415	15RB#0	5.85	13	PASS
Band5	3MHz	16QAM	20415	15RB#0	6.55	13	PASS
Band5	3MHz	QPSK	20525	15RB#0	5.90	13	PASS
Band5	3MHz	16QAM	20525	15RB#0	6.63	13	PASS
Band5	3MHz	QPSK	20635	15RB#0	5.74	13	PASS
Band5	3MHz	16QAM	20635	15RB#0	6.46	13	PASS
Band5	5MHz	QPSK	20425	25RB#0	5.75	13	PASS
Band5	5MHz	16QAM	20425	25RB#0	6.32	13	PASS
Band5	5MHz	QPSK	20525	25RB#0	5.80	13	PASS
Band5	5MHz	16QAM	20525	25RB#0	6.36	13	PASS
Band5	5MHz	QPSK	20625	25RB#0	5.68	13	PASS
Band5	5MHz	16QAM	20625	25RB#0	6.26	13	PASS
Band5	10MHz	QPSK	20450	50RB#0	5.68	13	PASS
Band5	10MHz	16QAM	20450	27RB#0	6.39	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	5.77	13	PASS
Band5	10MHz	16QAM	20525	27RB#0	6.44	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	5.59	13	PASS
Band5	10MHz	16QAM	20600	27RB#0	6.32	13	PASS

Test Graphs

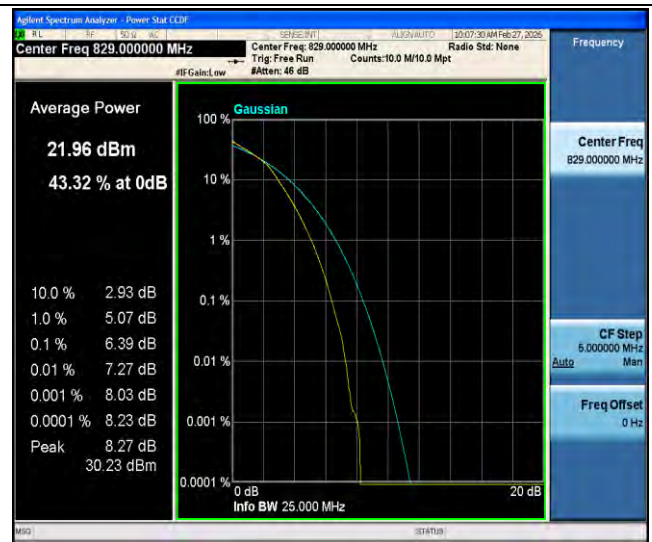








Band5-10MHz-QPSK-20450-50RB#0-PASS



Band5-10MHz-16QAM-20450-27RB#0-PASS



Band5-10MHz-QPSK-20525-50RB#0-PASS



Band5-10MHz-16QAM-20525-27RB#0-PASS



Band5-10MHz-QPSK-20600-50RB#0-PASS



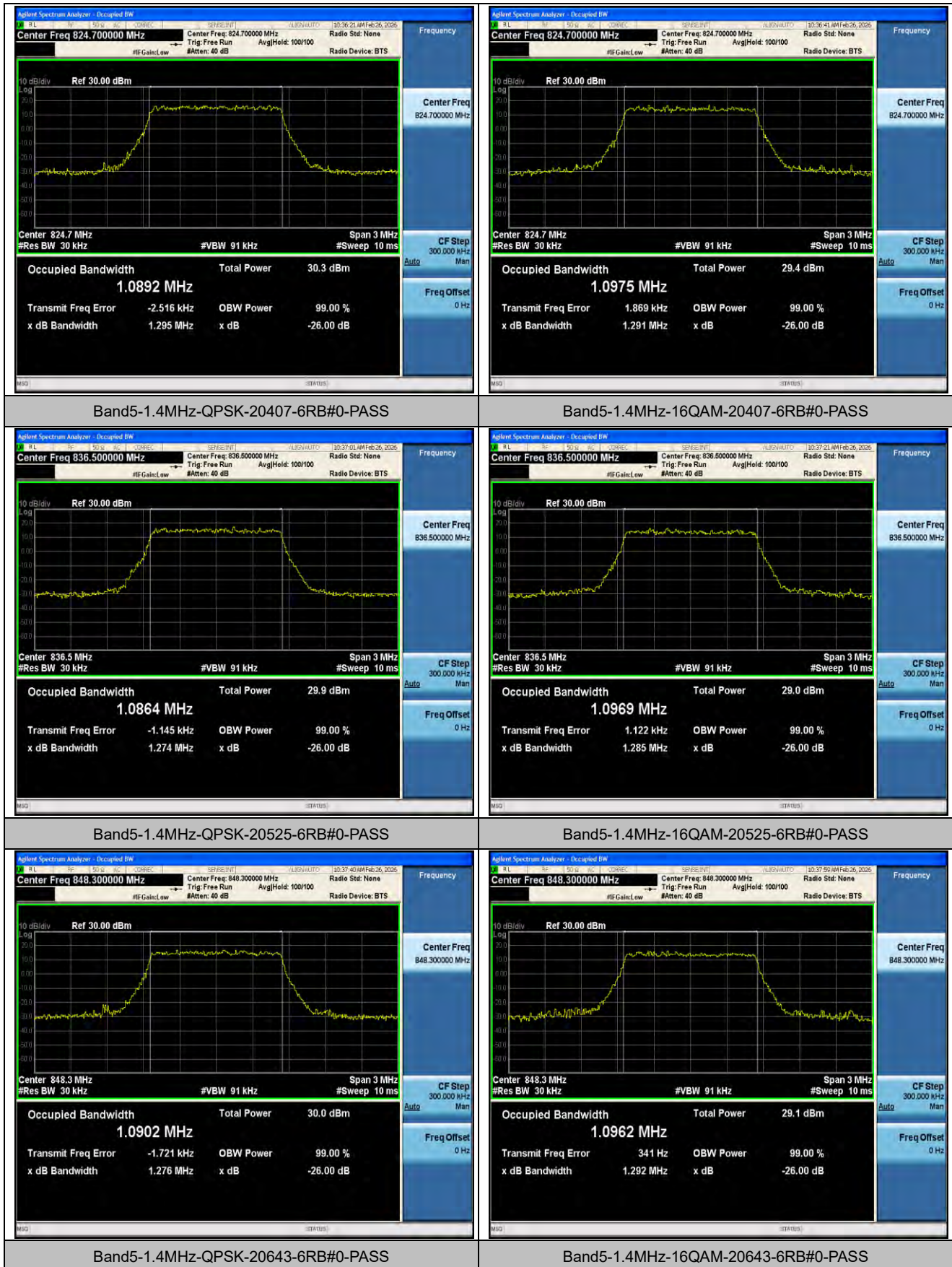
Band5-10MHz-16QAM-20600-27RB#0-PASS

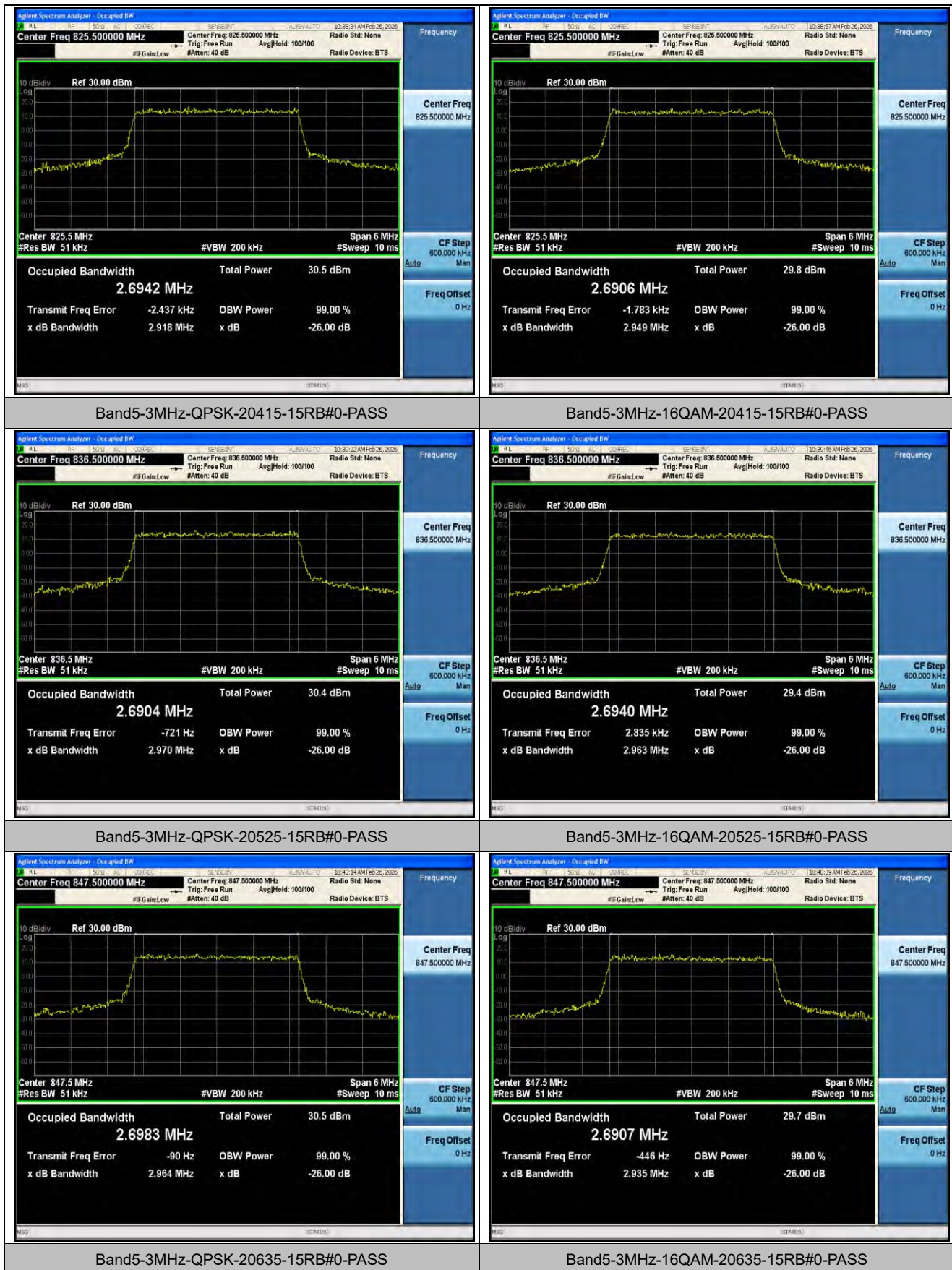
26dB Bandwidth and Occupied Bandwidth

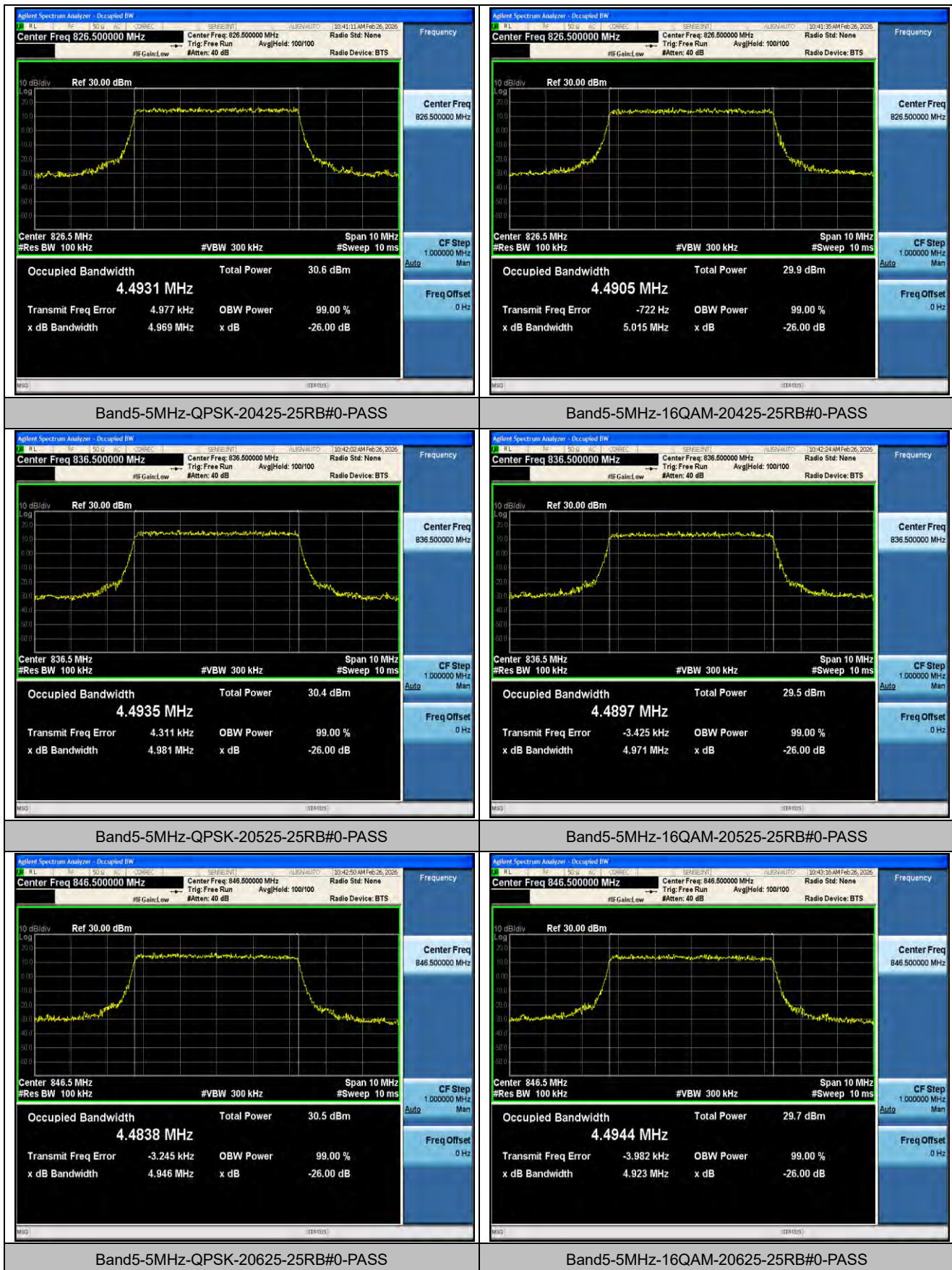
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	OBW (MHz)	26dB EBW (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.0892	1.295	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.0975	1.291	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.0864	1.274	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.0969	1.285	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.0902	1.276	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.0962	1.292	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.6942	2.918	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.6906	2.949	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.6904	2.970	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.6940	2.963	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.6983	2.964	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.6907	2.935	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.4931	4.969	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.4905	5.015	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.4935	4.981	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.4897	4.971	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.4838	4.946	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.4944	4.923	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.9726	10.06	PASS
Band5	10MHz	16QAM	20450	27RB#0	4.9972	6.066	PASS
Band5	10MHz	QPSK	20525	50RB#0	9.0237	10.09	PASS
Band5	10MHz	16QAM	20525	27RB#0	4.9793	6.085	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.9673	10.04	PASS
Band5	10MHz	16QAM	20600	27RB#0	4.9970	6.058	PASS

Test Graphs









Band5-10MHz-QPSK-20450-50RB#0-PASS



Band5-10MHz-16QAM-20450-27RB#0-PASS



Band5-10MHz-QPSK-20525-50RB#0-PASS



Band5-10MHz-16QAM-20525-27RB#0-PASS



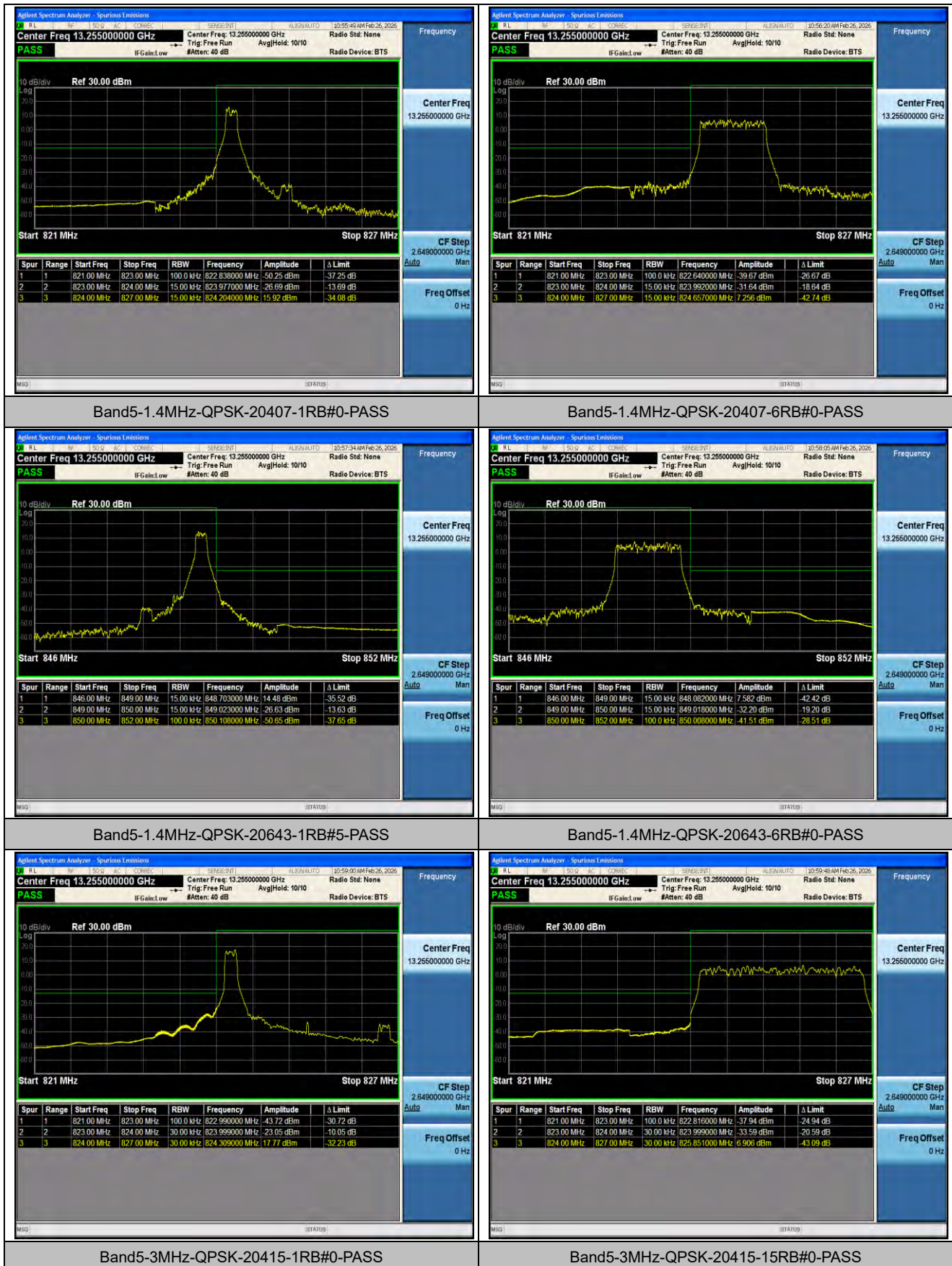
Band5-10MHz-QPSK-20600-50RB#0-PASS



Band5-10MHz-16QAM-20600-27RB#0-PASS

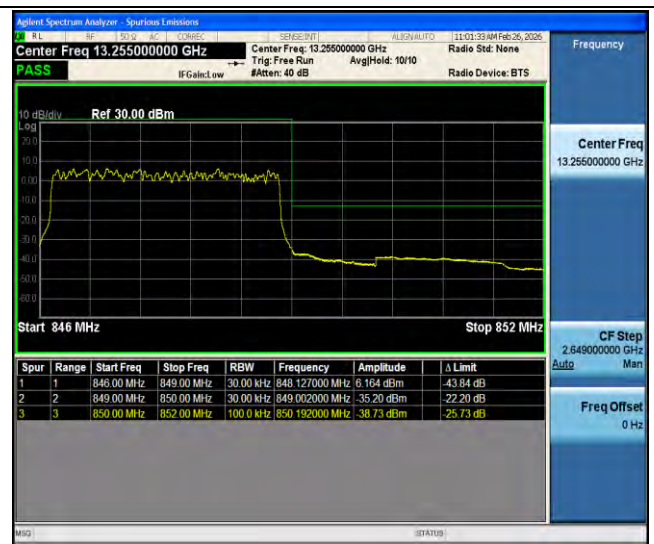
Band Edge

Test Graphs

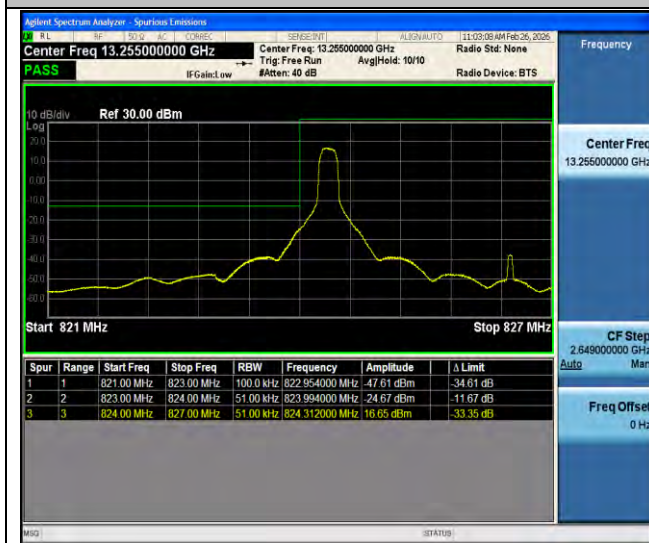




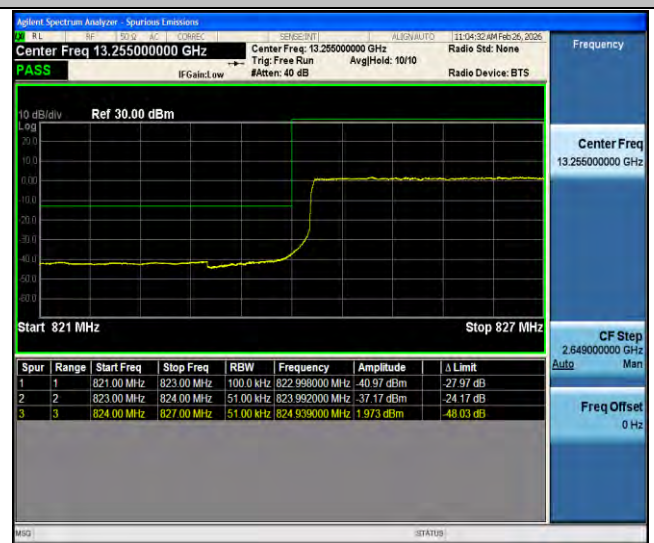
Band5-3MHz-QPSK-20635-1RB#14-PASS



Band5-3MHz-QPSK-20635-15RB#0-PASS



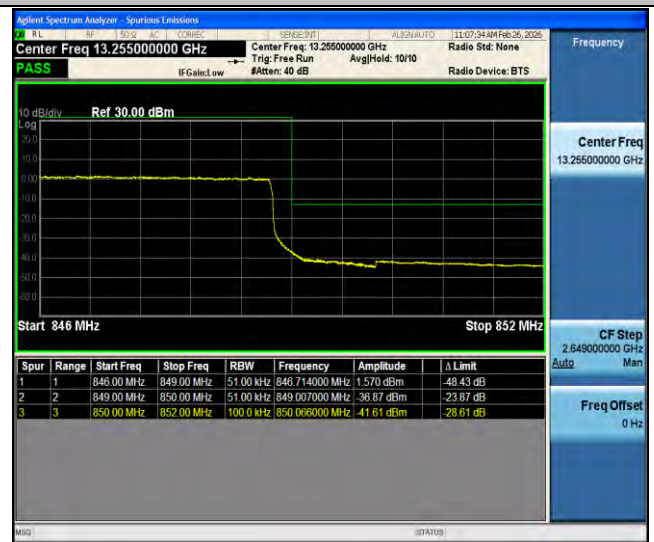
Band5-5MHz-QPSK-20425-1RB#0-PASS



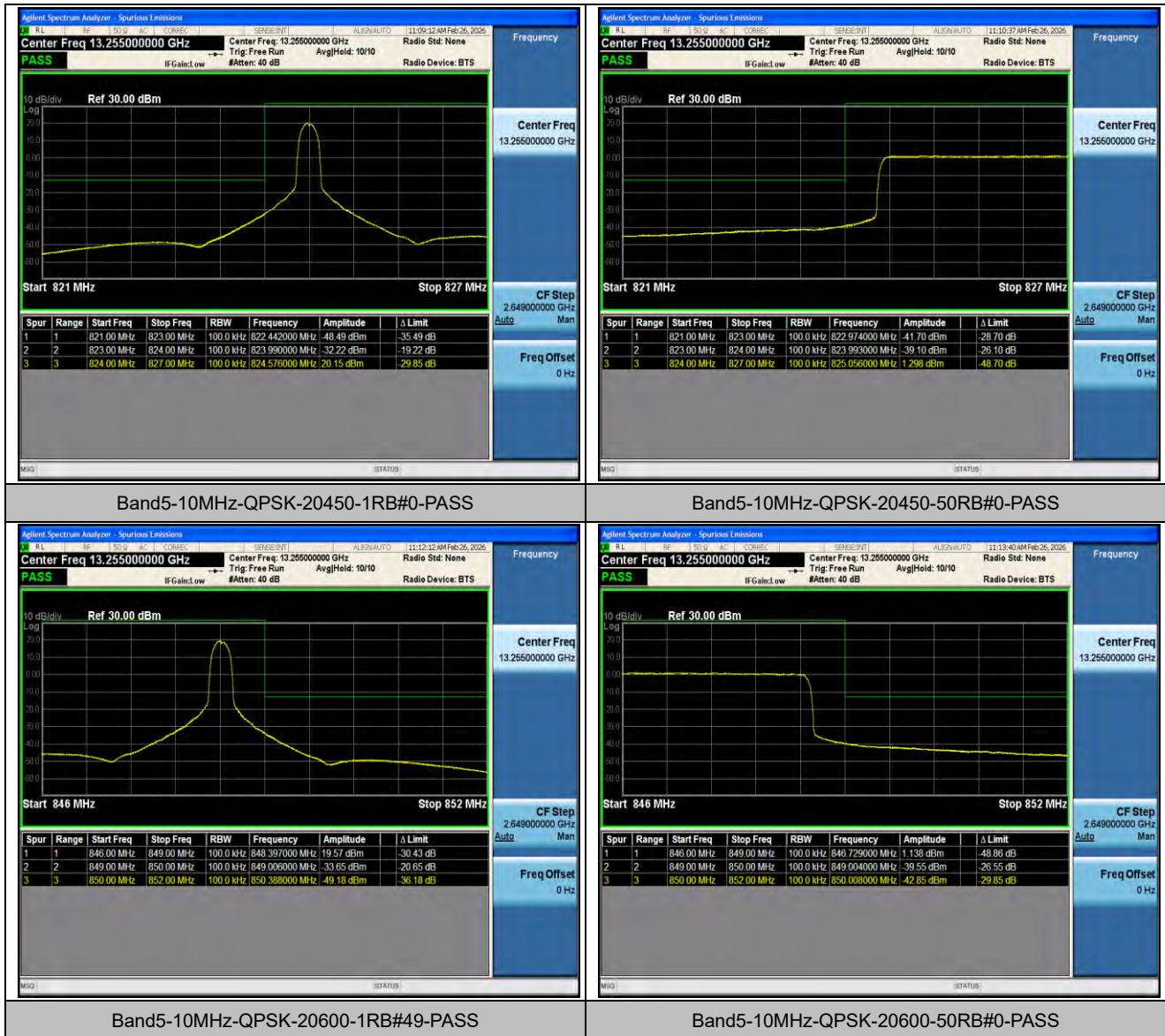
Band5-5MHz-QPSK-20425-25RB#0-PASS



Band5-5MHz-QPSK-20625-1RB#24-PASS

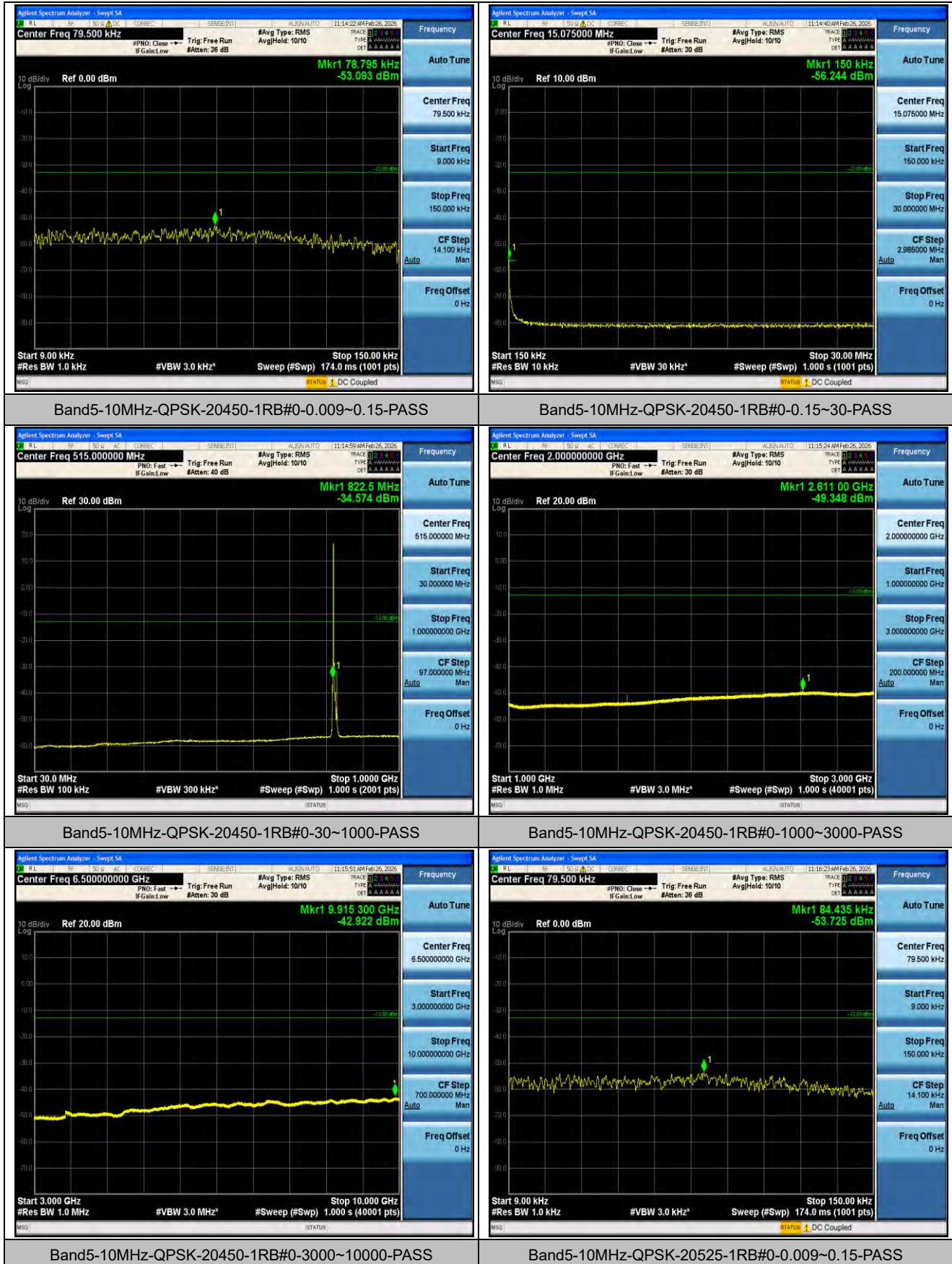


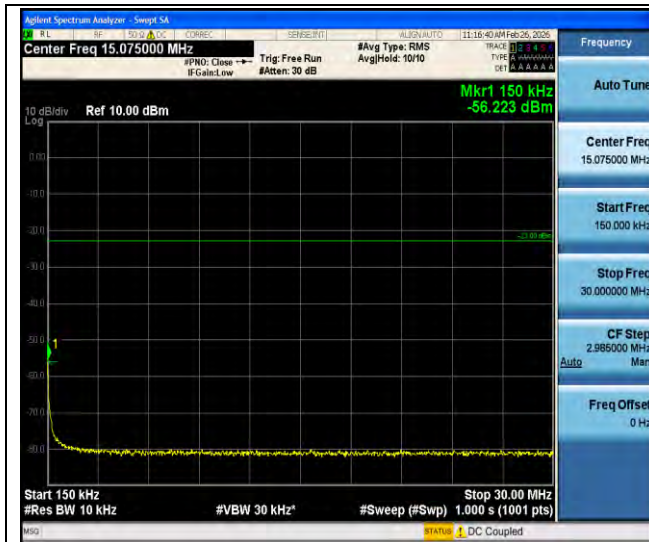
Band5-5MHz-QPSK-20625-25RB#0-PASS



Conducted Spurious Emission

Test Graphs





Band5-10MHz-QPSK-20525-1RB#0-0.15~30-PASS



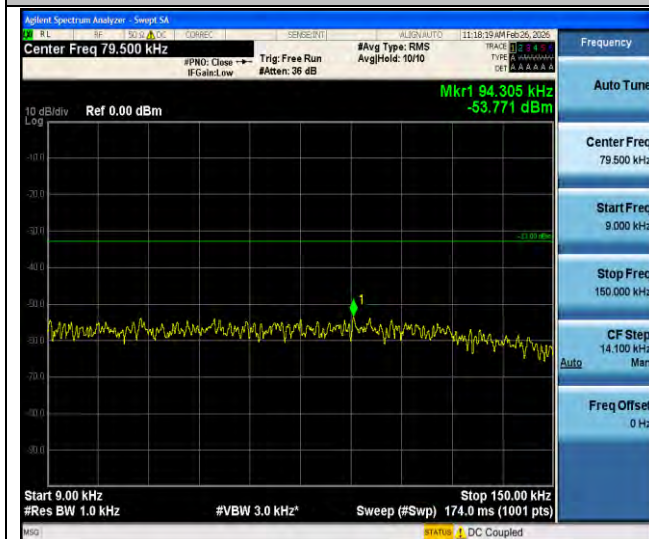
Band5-10MHz-QPSK-20525-1RB#0-30~1000-PASS



Band5-10MHz-QPSK-20525-1RB#0-1000~3000-PASS



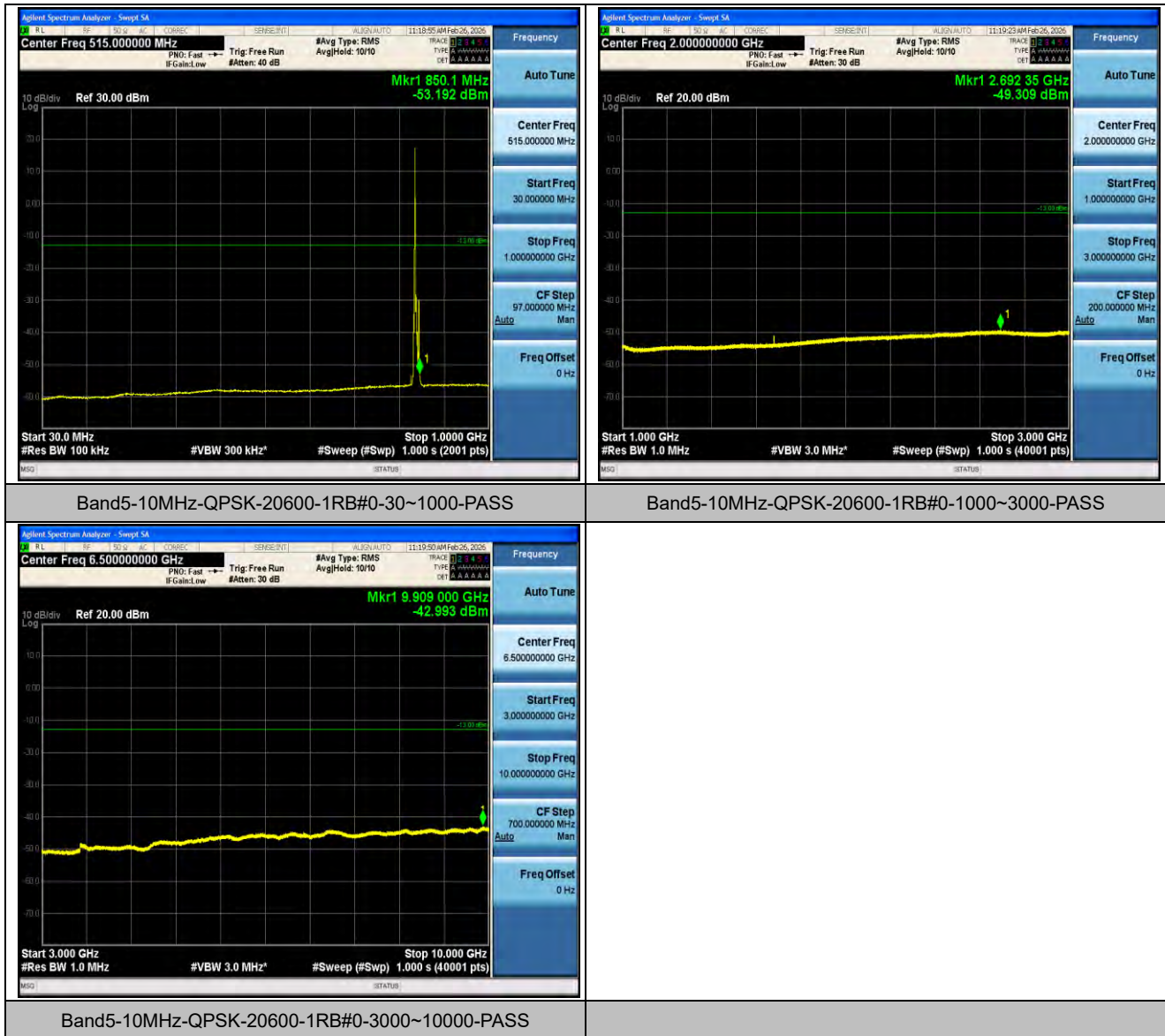
Band5-10MHz-QPSK-20525-1RB#0-3000~10000-PASS



Band5-10MHz-QPSK-20600-1RB#0-0.009~0.15-PASS



Band5-10MHz-QPSK-20600-1RB#0-0.15~30-PASS



Band5-10MHz-QPSK-20600-1RB#0-30~1000-PASS

Band5-10MHz-QPSK-20600-1RB#0-1000~3000-PASS

Band5-10MHz-QPSK-20600-1RB#0-3000~10000-PASS

Frequency Stability

Test Result

Voltage										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band5	10MHz	QPSK	20525	50RB#0	VN	NT	-0.20	-0.000239	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VL	NT	-2.60	-0.003108	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VH	NT	0.00	0.000000	±2.5	PASS

Temperature										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band5	10MHz	QPSK	20525	50RB#0	NV	0	0.10	0.000120	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	10	0.20	0.000239	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	20	-0.20	-0.000239	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	30	0.40	0.000478	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	40	-0.30	-0.000359	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	50	-0.60	-0.000717	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-30	-0.20	-0.000239	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-20	-0.10	-0.000120	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-10	-0.20	-0.000239	±2.5	PASS

~The End~