

Appendix-D 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	23.83	21.98	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	24.01	22.16	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	23.97	22.12	38.45	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	22.97	21.12	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	23.99	22.14	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	23.99	22.14	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	24.28	22.43	38.45	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	23.08	21.23	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	24.12	22.27	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	23.97	22.12	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	24.19	22.34	38.45	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	23.12	21.27	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	23	21.15	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#2	22.99	21.14	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	22.83	20.98	38.45	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	21.91	20.06	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	23.09	21.24	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#2	23.17	21.32	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#5	23.25	21.4	38.45	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	22.17	20.32	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	23.06	21.21	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#2	22.87	21.02	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	22.75	20.9	38.45	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	22.19	20.34	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#0	23.84	21.99	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#8	23.83	21.98	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#14	23.84	21.99	38.45	PASS
Band5	3MHz	QPSK	20415	15RB#0	22.96	21.11	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#0	23.78	21.93	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#8	24.09	22.24	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#14	23.87	22.02	38.45	PASS
Band5	3MHz	QPSK	20525	15RB#0	23.23	21.38	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#0	24.36	22.51	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#8	24.02	22.17	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#14	24.04	22.19	38.45	PASS
Band5	3MHz	QPSK	20635	15RB#0	23.15	21.3	38.45	PASS

Band5	3MHz	16QAM	20415	1RB#0	22.91	21.06	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#8	22.69	20.84	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#14	22.8	20.95	38.45	PASS
Band5	3MHz	16QAM	20415	15RB#0	21.91	20.06	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#0	23.05	21.2	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#8	23.09	21.24	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#14	22.99	21.14	38.45	PASS
Band5	3MHz	16QAM	20525	15RB#0	22.2	20.35	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#0	23.35	21.5	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#8	23.31	21.46	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#14	23	21.15	38.45	PASS
Band5	3MHz	16QAM	20635	15RB#0	22.11	20.26	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#0	23.74	21.89	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#12	24.03	22.18	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#24	23.99	22.14	38.45	PASS
Band5	5MHz	QPSK	20425	25RB#0	22.87	21.02	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#0	23.81	21.96	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#12	23.83	21.98	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#24	23.91	22.06	38.45	PASS
Band5	5MHz	QPSK	20525	25RB#0	23.1	21.25	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#0	23.82	21.97	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#12	24.2	22.35	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#24	23.92	22.07	38.45	PASS
Band5	5MHz	QPSK	20625	25RB#0	23.1	21.25	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#0	22.74	20.89	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#12	22.5	20.65	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#24	22.84	20.99	38.45	PASS
Band5	5MHz	16QAM	20425	25RB#0	21.97	20.12	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#0	22.73	20.88	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#12	23.03	21.18	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#24	23.04	21.19	38.45	PASS
Band5	5MHz	16QAM	20525	25RB#0	22.19	20.34	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#0	23.08	21.23	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#12	23.29	21.44	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#24	23.12	21.27	38.45	PASS
Band5	5MHz	16QAM	20625	25RB#0	22.03	20.18	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#0	23.55	21.7	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#24	23.73	21.88	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#49	23.73	21.88	38.45	PASS
Band5	10MHz	QPSK	20450	50RB#0	23.03	21.18	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#0	23.83	21.98	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#24	24	22.15	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#49	23.86	22.01	38.45	PASS
Band5	10MHz	QPSK	20525	50RB#0	23.11	21.26	38.45	PASS

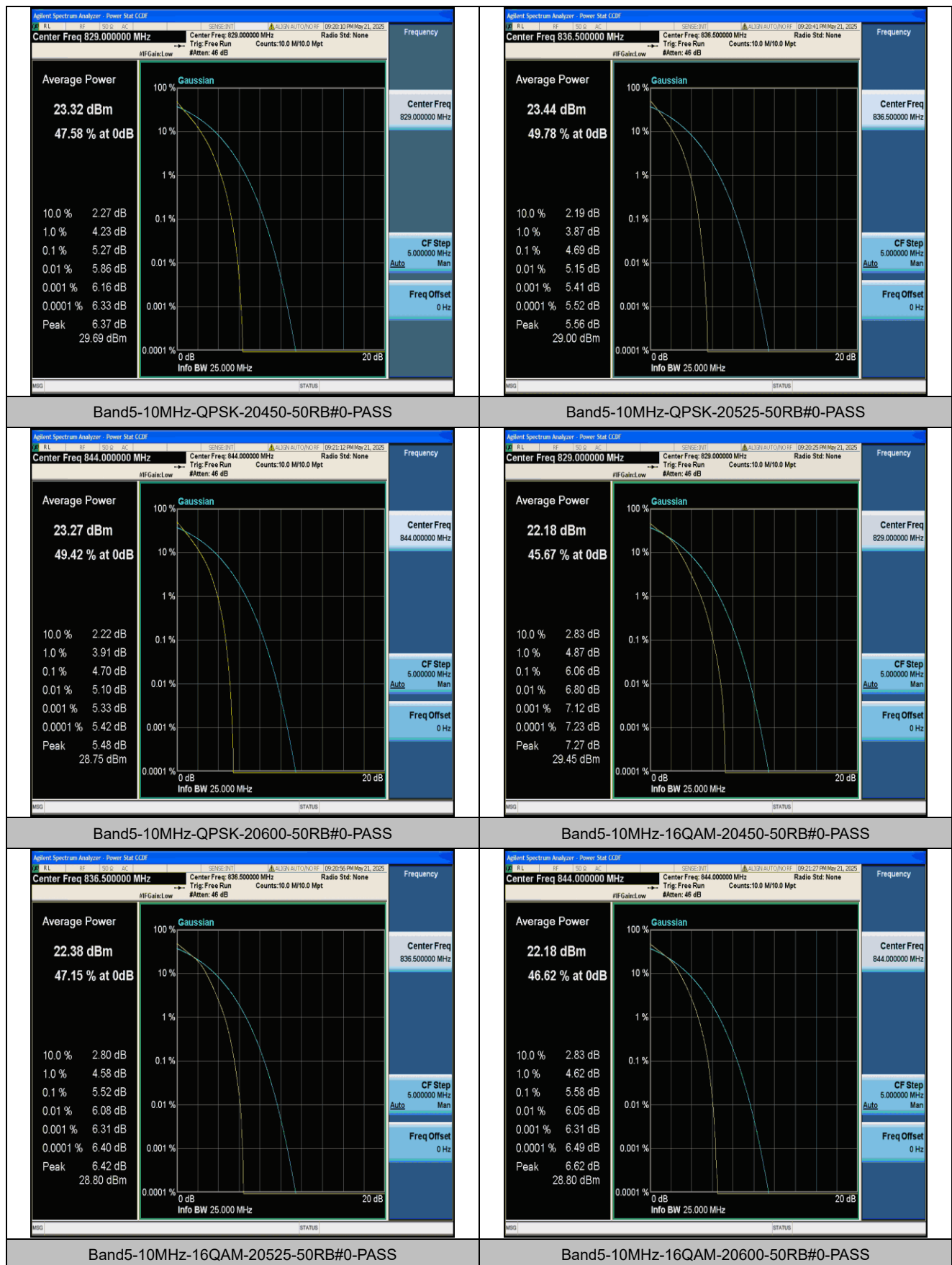
Band5	10MHz	QPSK	20600	1RB#0	23.87	22.02	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#24	24.15	22.3	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#49	24.28	22.43	38.45	PASS
Band5	10MHz	QPSK	20600	50RB#0	23.09	21.24	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#0	22.86	21.01	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#24	23.12	21.27	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#49	22.94	21.09	38.45	PASS
Band5	10MHz	16QAM	20450	50RB#0	22.11	20.26	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#0	22.82	20.97	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#24	23.57	21.72	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#49	23.08	21.23	38.45	PASS
Band5	10MHz	16QAM	20525	50RB#0	22.21	20.36	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#0	23.23	21.38	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#24	23.21	21.36	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#49	22.95	21.1	38.45	PASS
Band5	10MHz	16QAM	20600	50RB#0	21.88	20.03	38.45	PASS

Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
Band5	10MHz	QPSK	20450	50RB#0	5.27	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	4.69	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	4.70	13	PASS
Band5	10MHz	16QAM	20450	50RB#0	6.06	13	PASS
Band5	10MHz	16QAM	20525	50RB#0	5.52	13	PASS
Band5	10MHz	16QAM	20600	50RB#0	5.58	13	PASS

Test Graphs

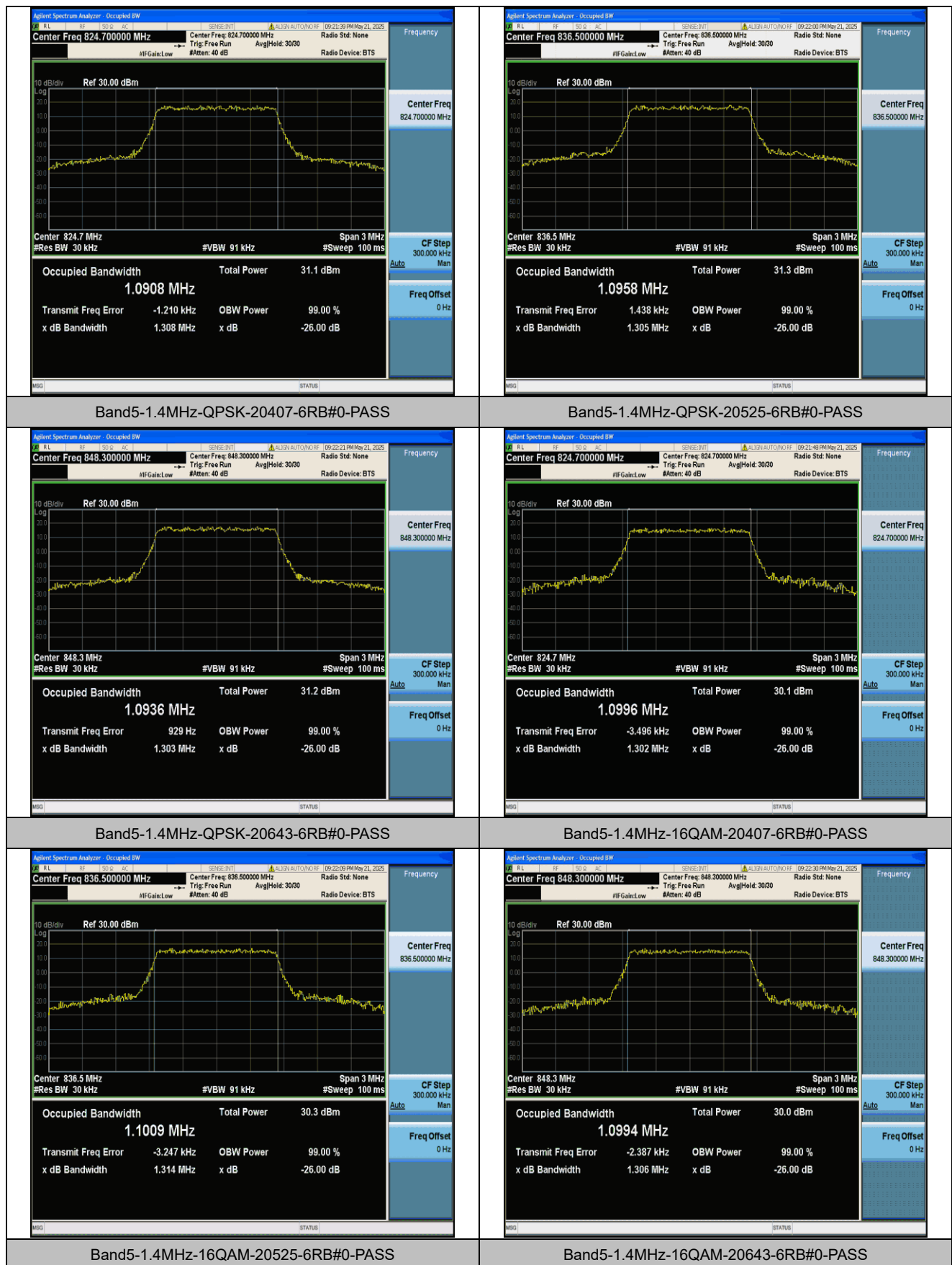


26dB Bandwidth and Occupied Bandwidth

Test Result

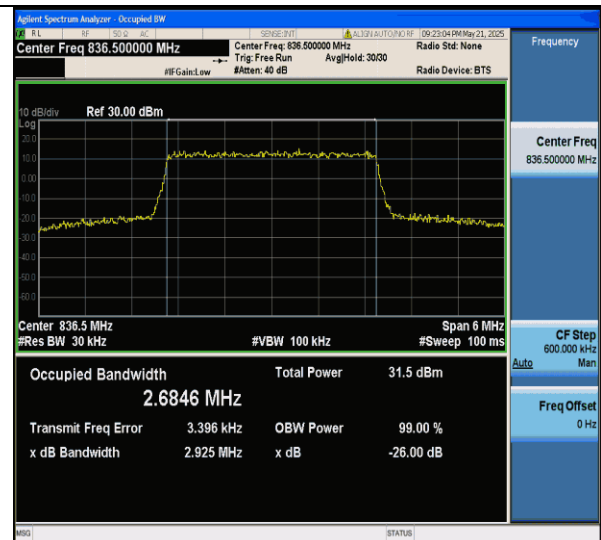
Band	Bandwidth	Modulation	Channel	RB Configuration	OBW (MHz)	26dB EBW (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.0908	1.308	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.0958	1.305	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.0936	1.303	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.0996	1.302	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.1009	1.314	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.0994	1.306	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.6843	2.920	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.6846	2.925	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.6819	2.919	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.6786	2.911	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.6760	2.927	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.6805	2.929	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.5070	5.017	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.5032	5.008	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.5028	5.001	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.4964	4.964	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.4966	4.971	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.4974	4.986	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.9838	9.969	PASS
Band5	10MHz	QPSK	20525	50RB#0	8.9723	9.889	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.9829	9.886	PASS
Band5	10MHz	16QAM	20450	50RB#0	8.9895	9.890	PASS
Band5	10MHz	16QAM	20525	50RB#0	8.9652	9.810	PASS
Band5	10MHz	16QAM	20600	50RB#0	8.9845	9.858	PASS

Test Graphs

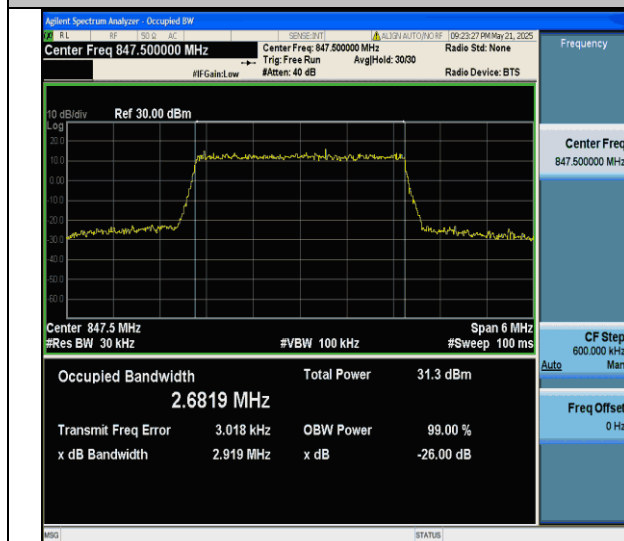




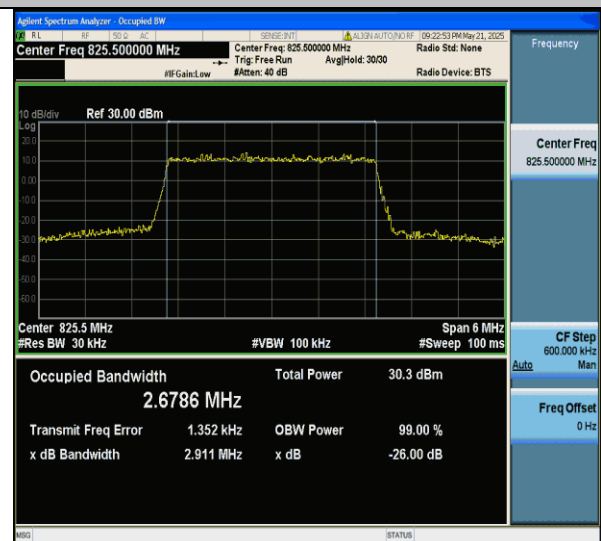
Band5-3MHz-QPSK-20415-15RB#0-PASS



Band5-3MHz-QPSK-20525-15RB#0-PASS



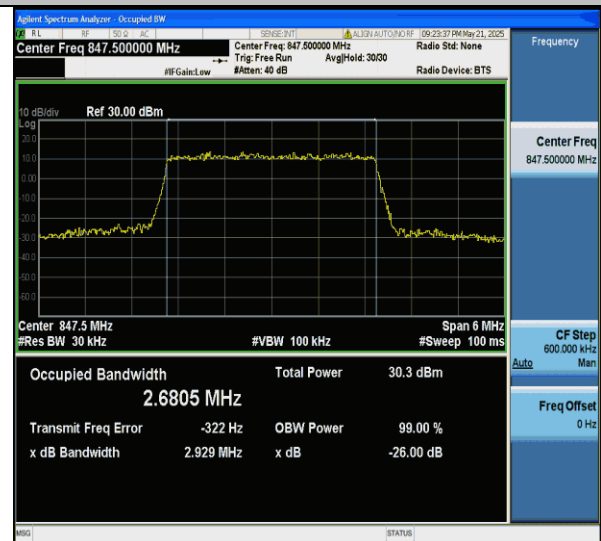
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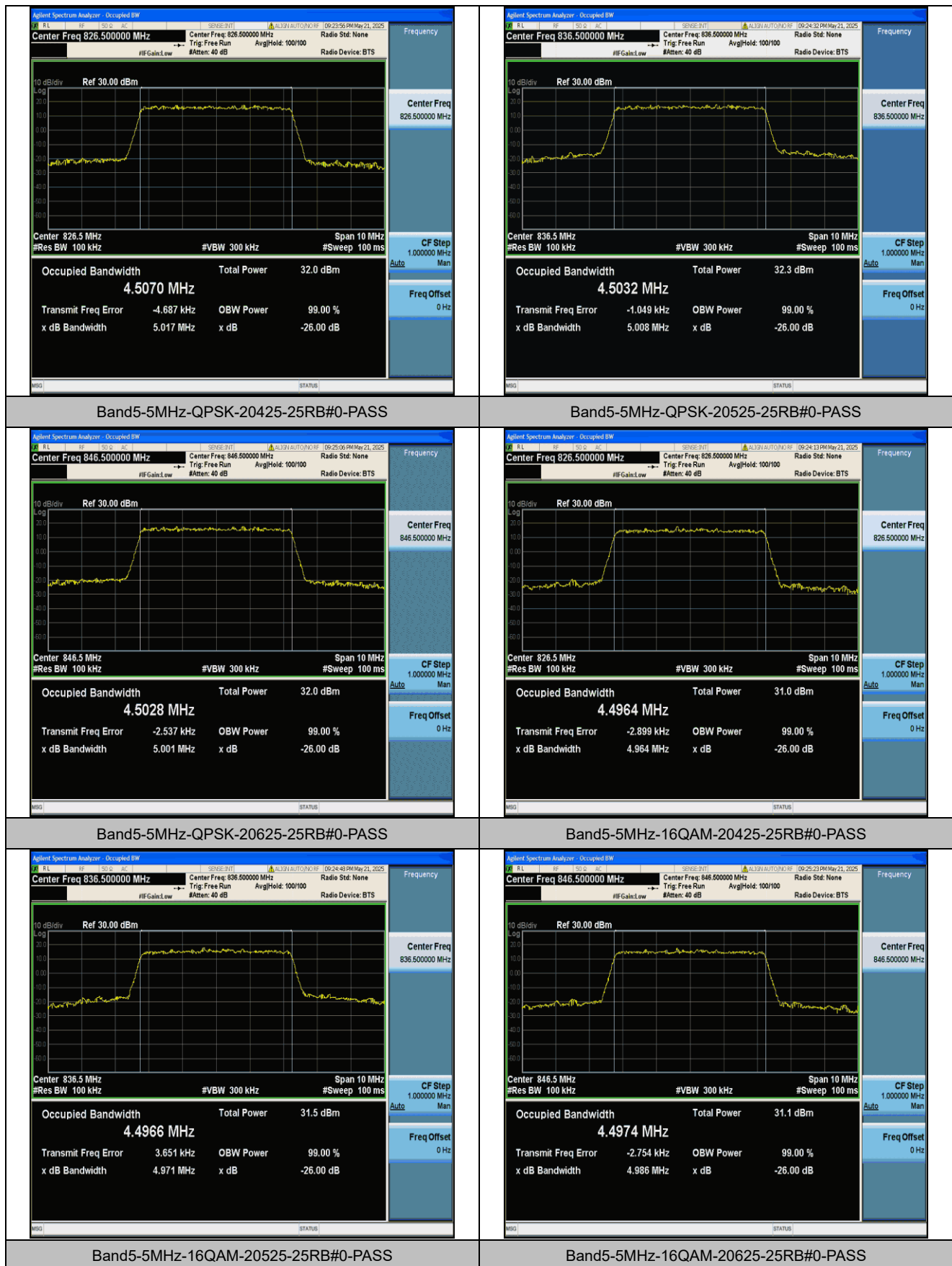
Band5-3MHz-16QAM-20415-15RB#0-PASS

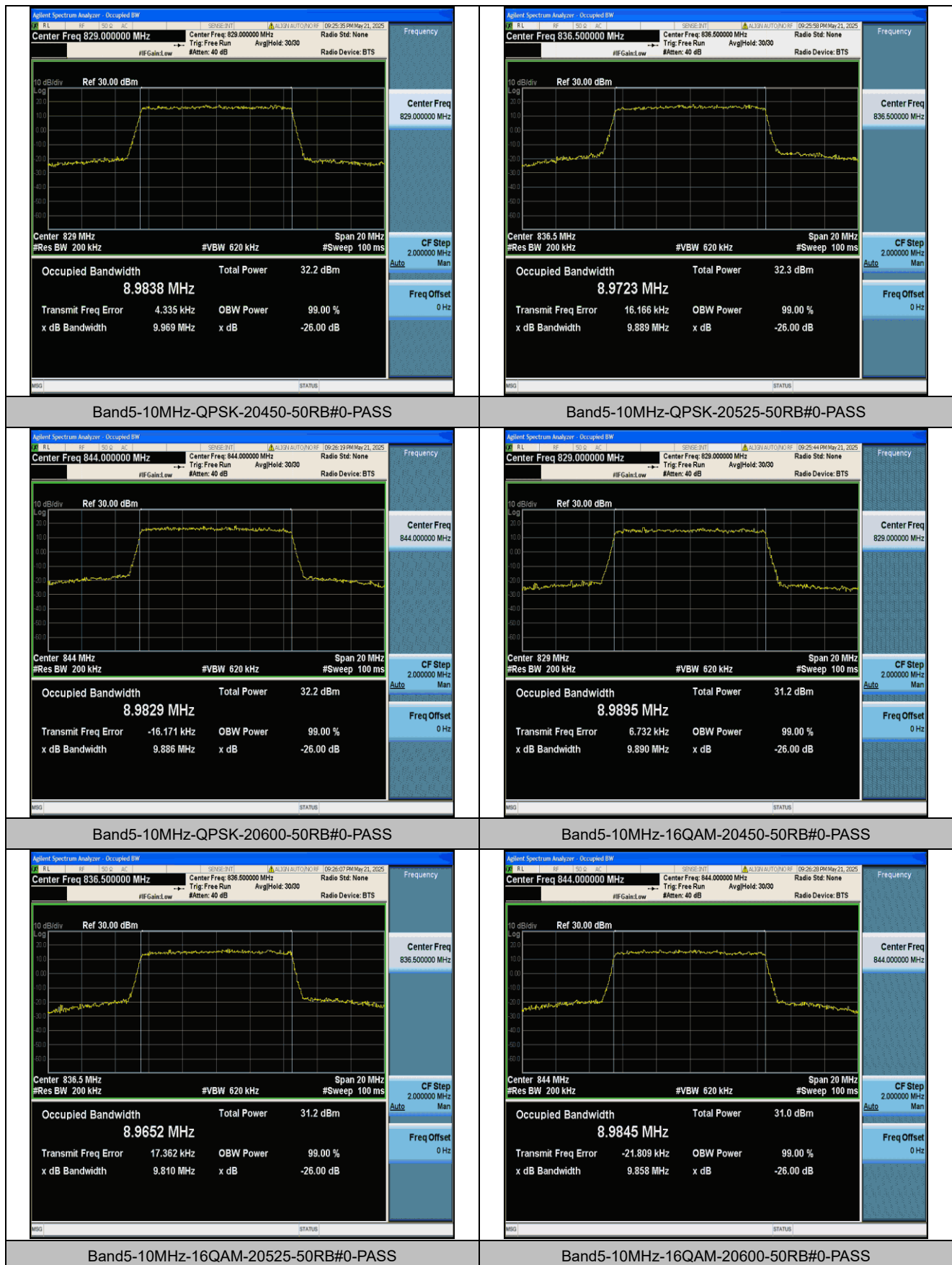


Band5-3MHz-16QAM-20525-15RB#0-PASS



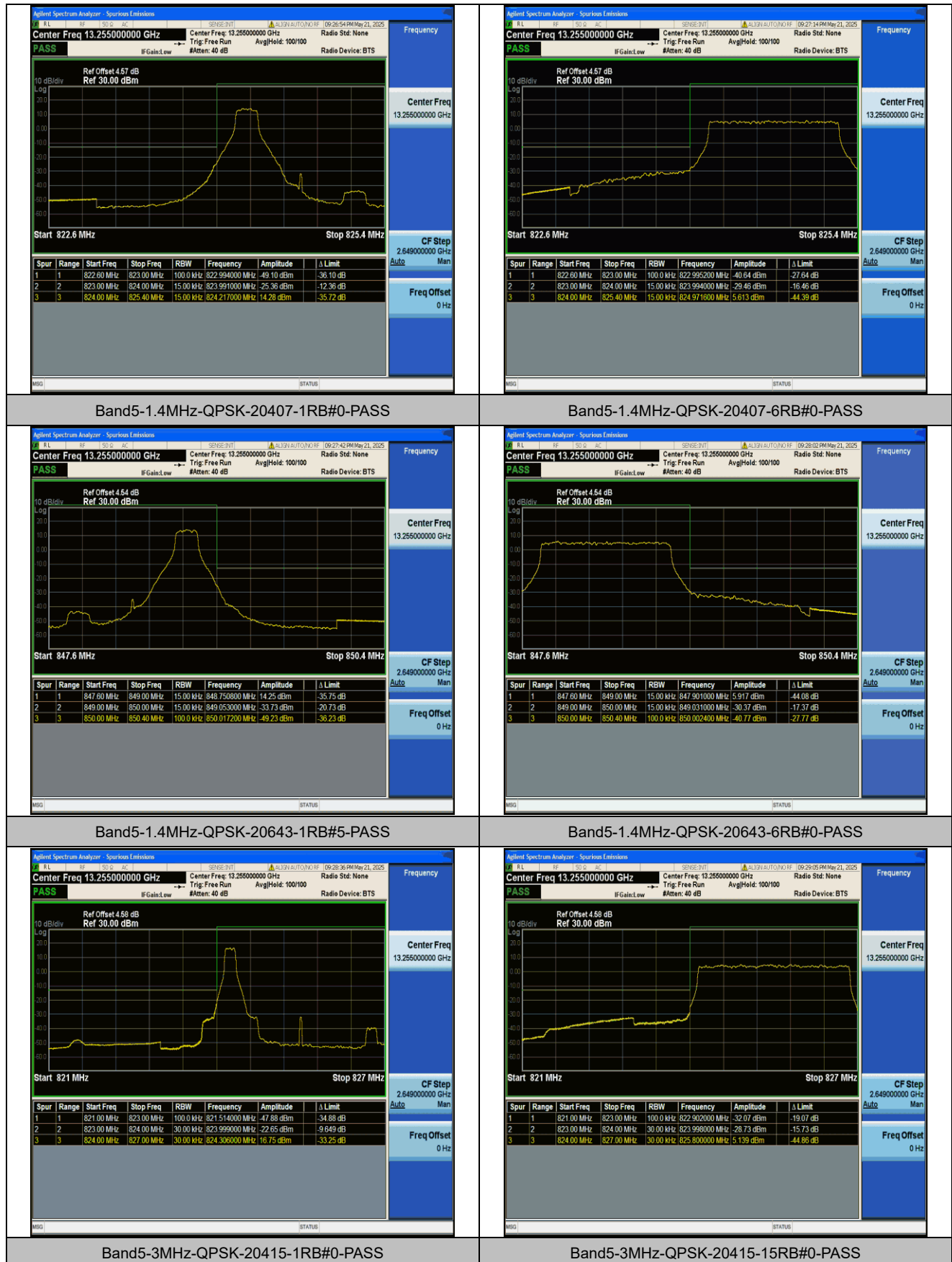
Band5-3MHz-16QAM-20635-15RB#0-PASS

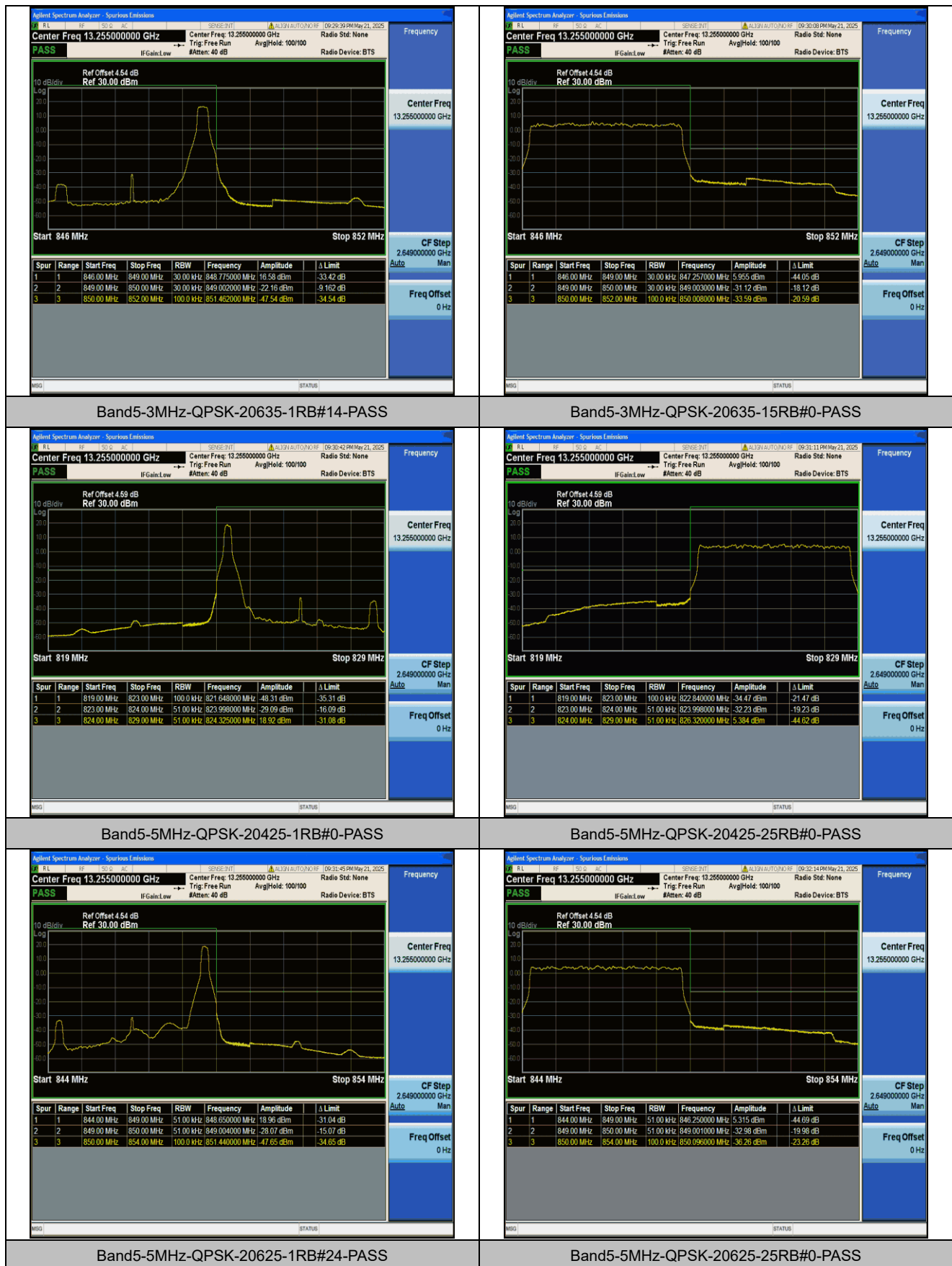


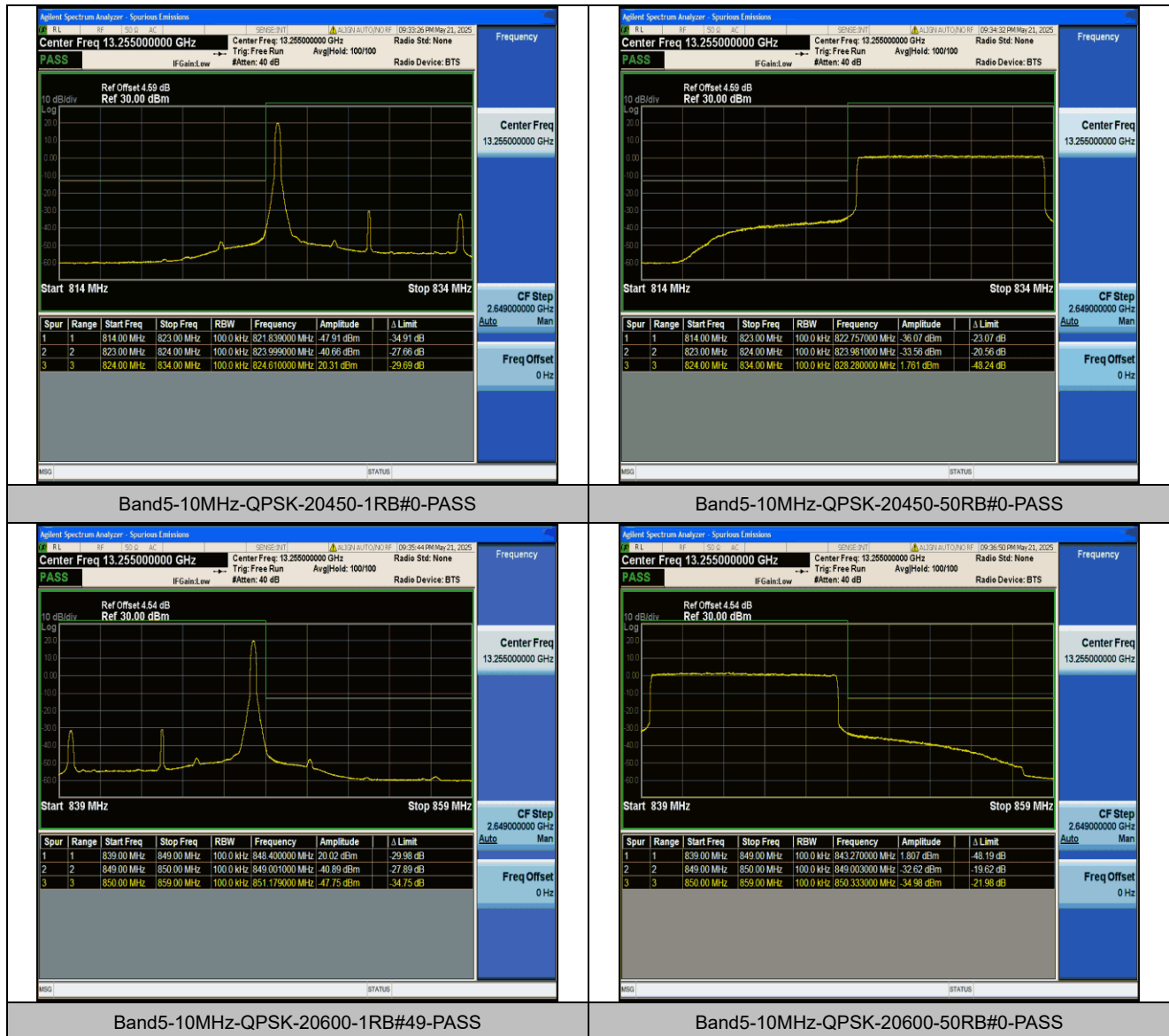


Band Edge

Test Graphs

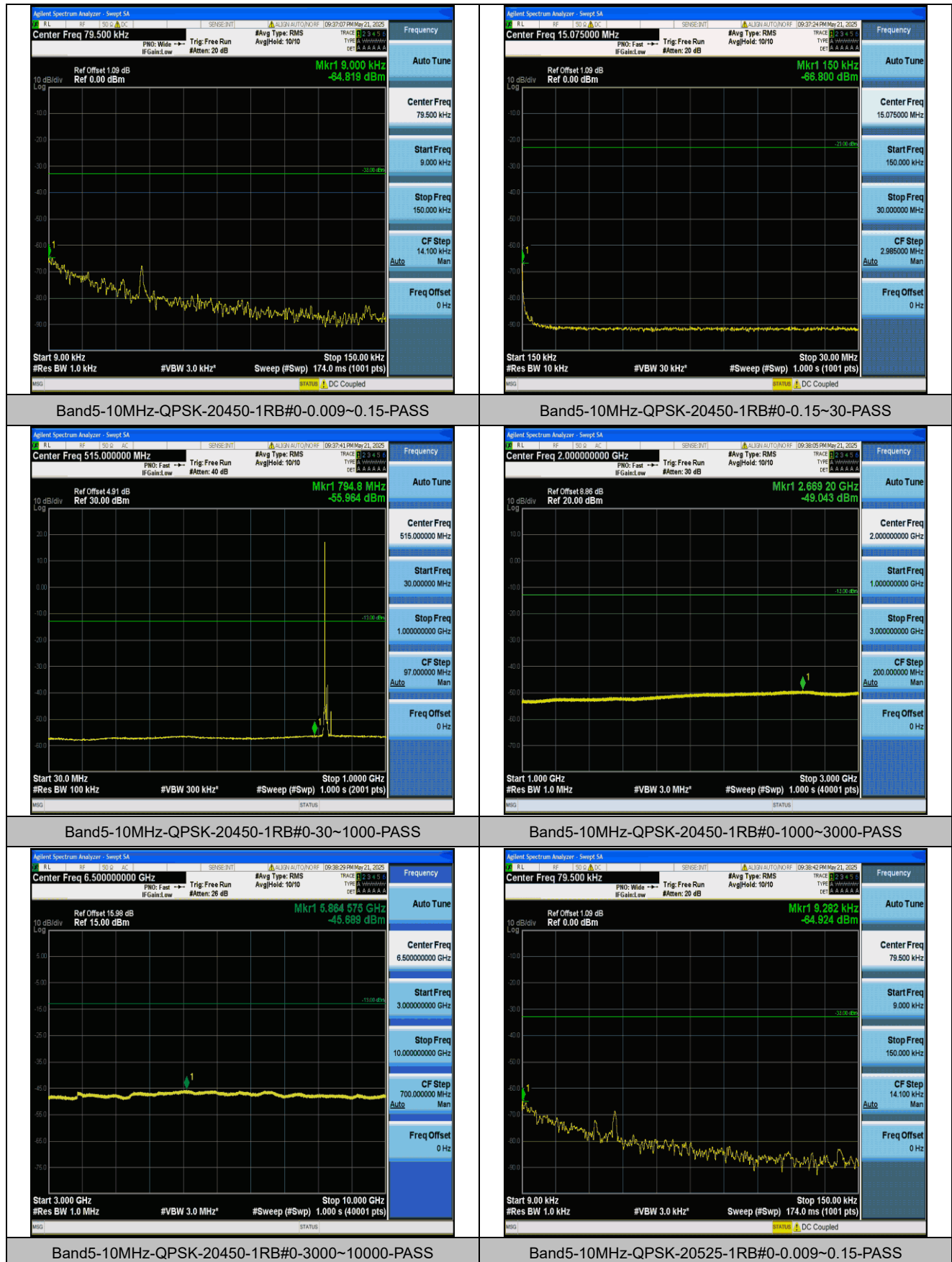


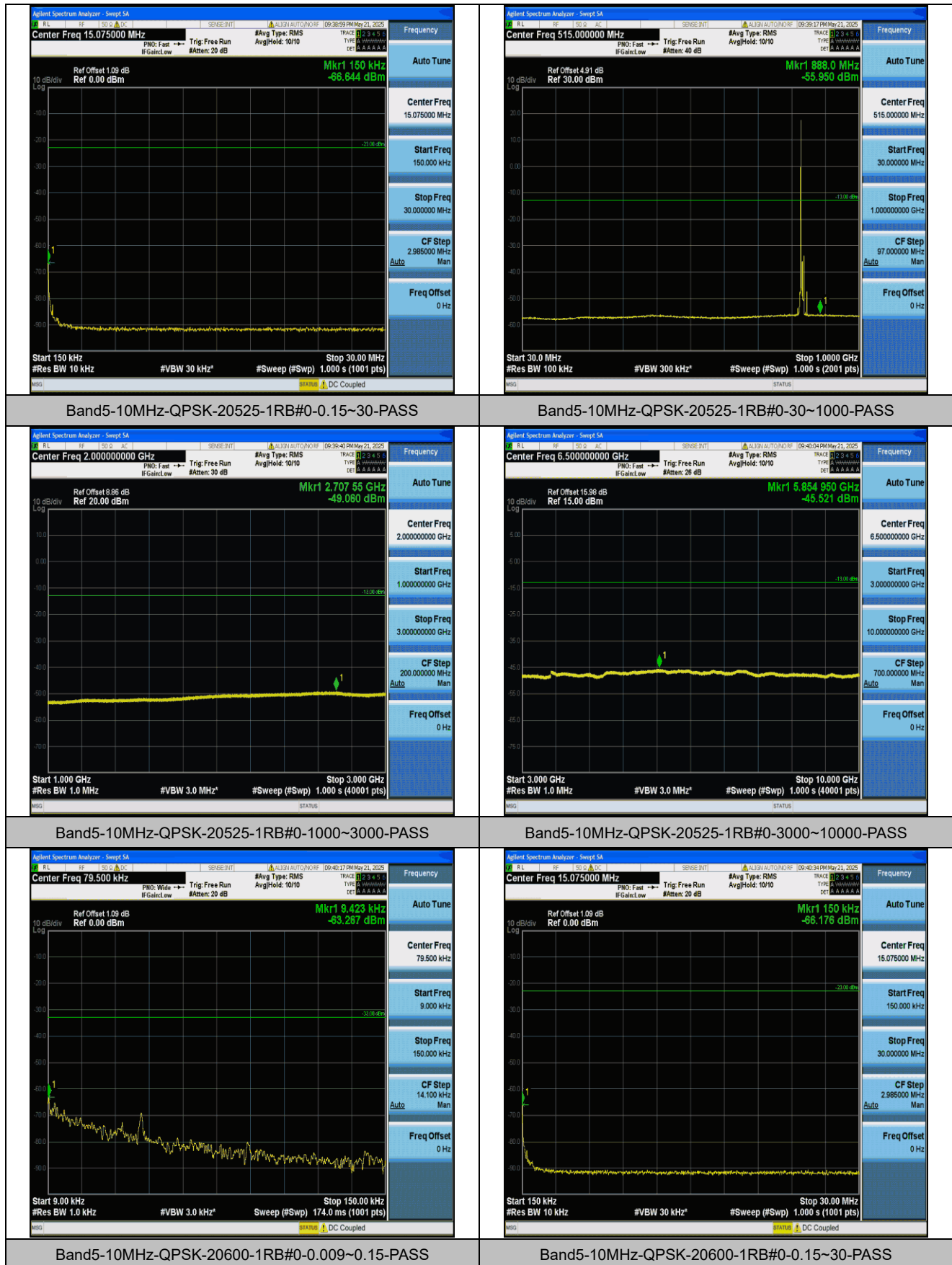




Conducted Spurious Emission

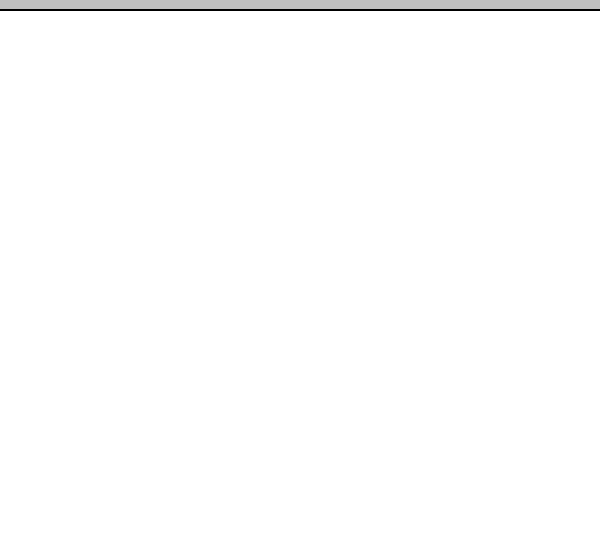
Test Graphs







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



Frequency Stability

Test Result

Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band5	10MHz	QPSK	20525	100RB#0	VN	NT	4.05	0.004842	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	VL	NT	2.72	0.003252	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	VH	NT	3.19	0.003814	±2.5	PASS

Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band5	10MHz	QPSK	20525	100RB#0	NV	-30	3.99	0.004770	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	NV	-20	2.73	0.003264	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	NV	-10	2.98	0.003562	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	NV	0	2.25	0.002690	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	NV	10	3.12	0.003730	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	NV	20	3.15	0.003766	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	NV	30	2.45	0.002929	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	NV	40	2.52	0.003013	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	NV	50	2.02	0.002415	±2.5	PASS

~The End~