

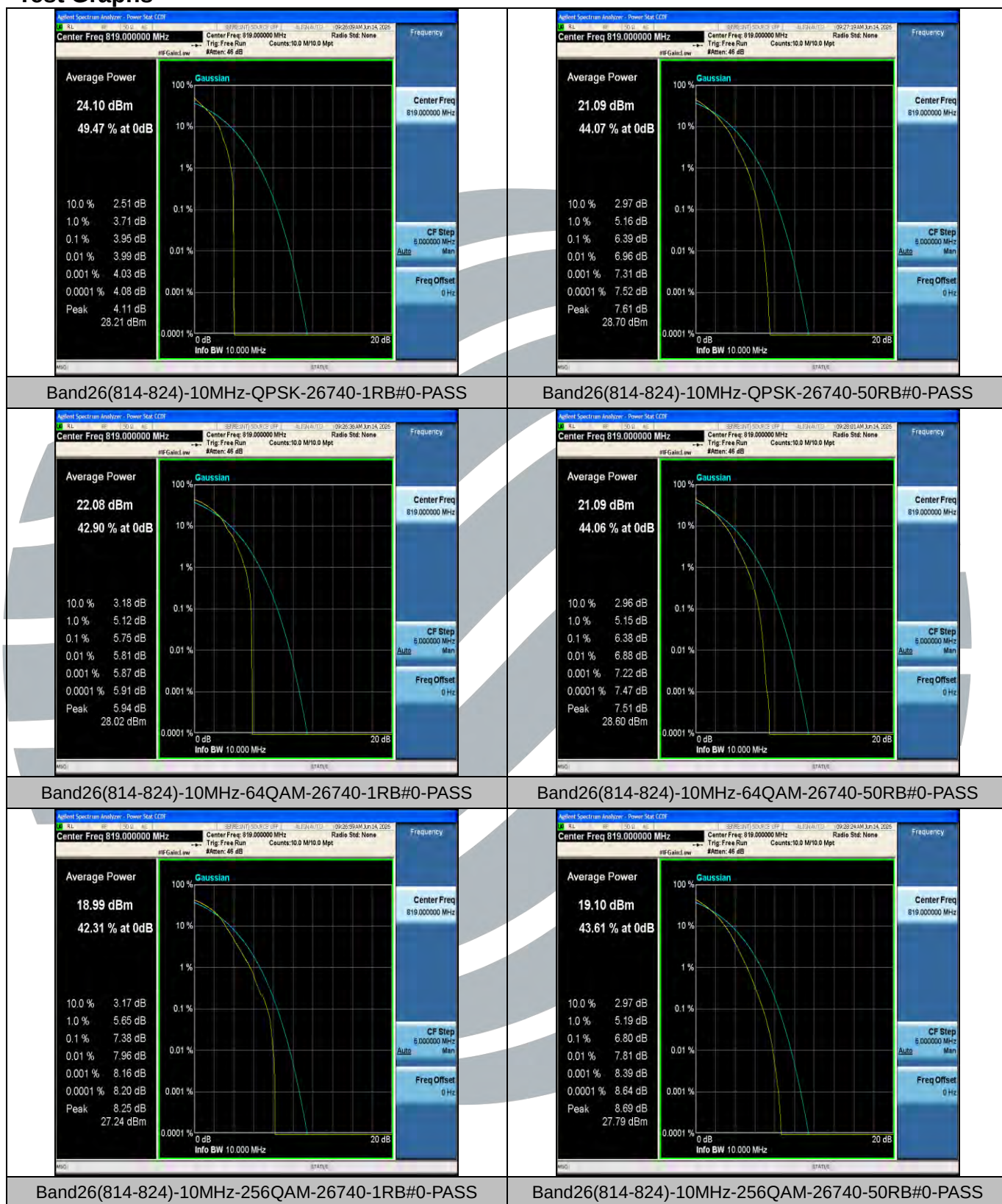
APPENDIX F LTE RF TEST DATA

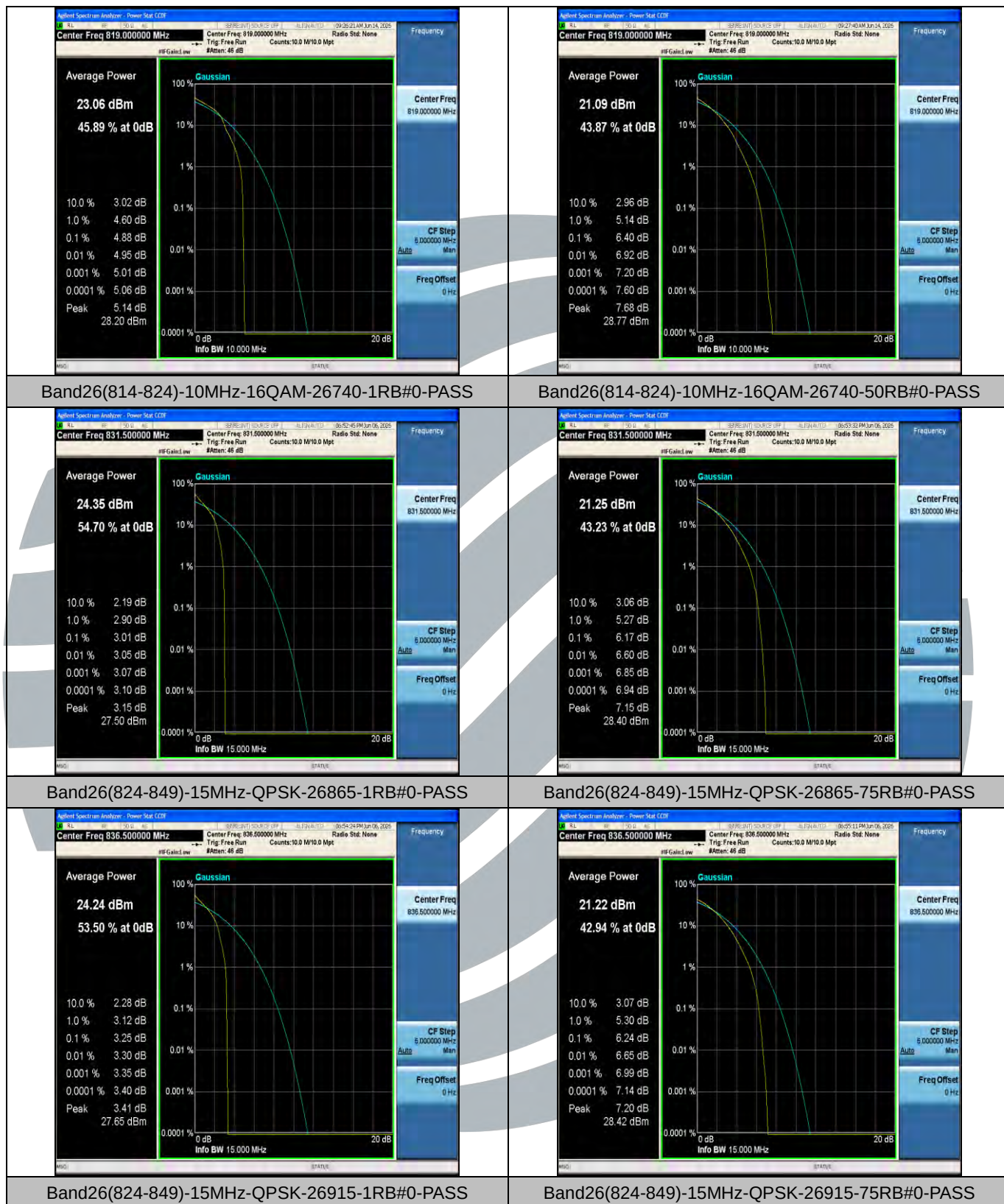
F.1 PEAK-TO-AVERAGE RATIO(CCDF)

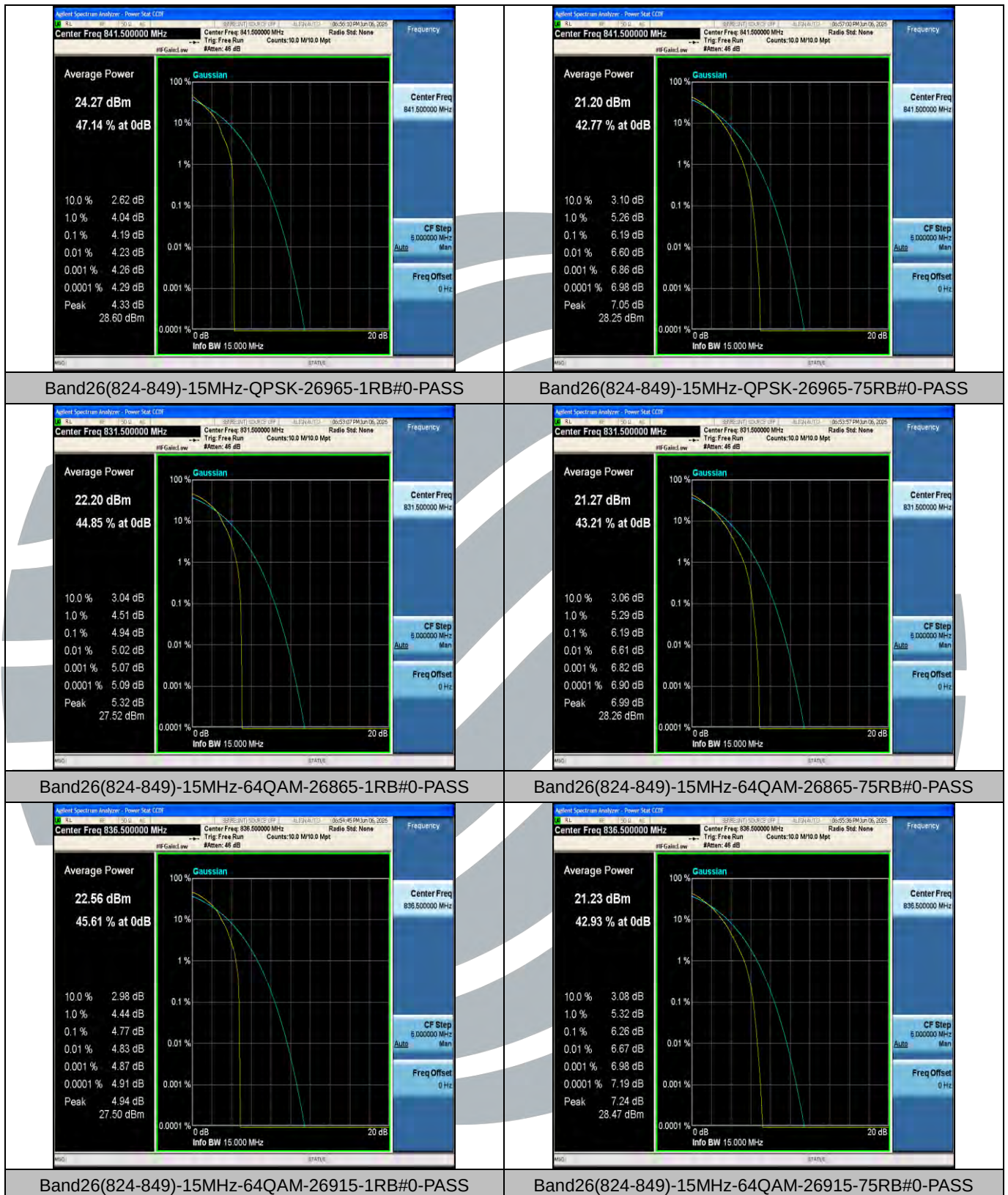
Test Result

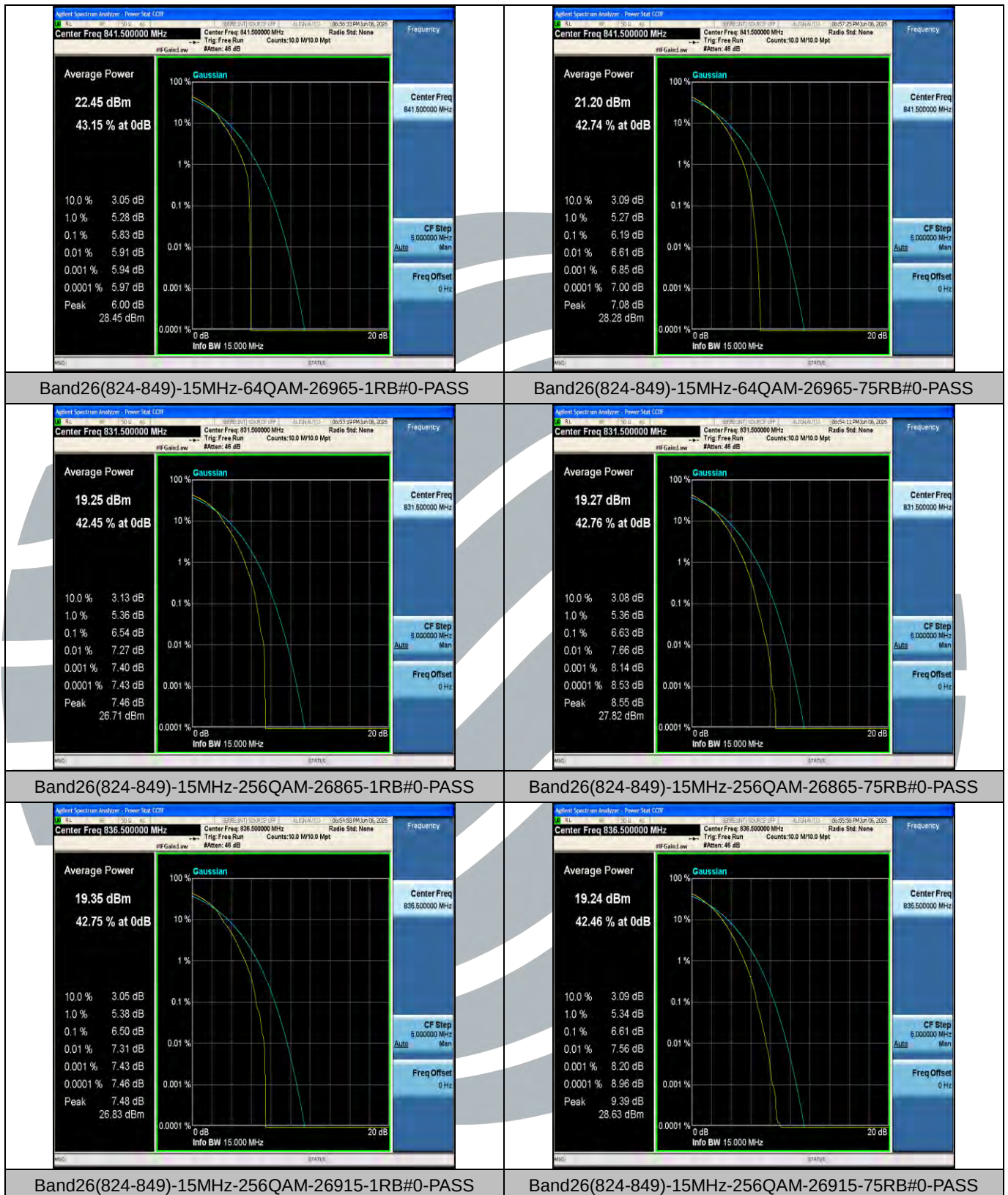
Band	BW	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
Band26(814-824)	10MHz	QPSK	26740	1RB#0	3.95	13	PASS
Band26(814-824)	10MHz	QPSK	26740	50RB#0	6.39	13	PASS
Band26(814-824)	10MHz	64QAM	26740	1RB#0	5.75	13	PASS
Band26(814-824)	10MHz	64QAM	26740	50RB#0	6.38	13	PASS
Band26(814-824)	10MHz	256QAM	26740	1RB#0	7.38	13	PASS
Band26(814-824)	10MHz	256QAM	26740	50RB#0	6.80	13	PASS
Band26(814-824)	10MHz	16QAM	26740	1RB#0	4.88	13	PASS
Band26(814-824)	10MHz	16QAM	26740	50RB#0	6.40	13	PASS
Band26(824-849)	15MHz	QPSK	26865	1RB#0	3.01	13	PASS
Band26(824-849)	15MHz	QPSK	26865	75RB#0	6.17	13	PASS
Band26(824-849)	15MHz	QPSK	26915	1RB#0	3.25	13	PASS
Band26(824-849)	15MHz	QPSK	26915	75RB#0	6.24	13	PASS
Band26(824-849)	15MHz	QPSK	26965	1RB#0	4.19	13	PASS
Band26(824-849)	15MHz	QPSK	26965	75RB#0	6.19	13	PASS
Band26(824-849)	15MHz	64QAM	26865	1RB#0	4.94	13	PASS
Band26(824-849)	15MHz	64QAM	26865	75RB#0	6.19	13	PASS
Band26(824-849)	15MHz	64QAM	26915	1RB#0	4.77	13	PASS
Band26(824-849)	15MHz	64QAM	26915	75RB#0	6.26	13	PASS
Band26(824-849)	15MHz	64QAM	26965	1RB#0	5.83	13	PASS
Band26(824-849)	15MHz	64QAM	26965	75RB#0	6.19	13	PASS
Band26(824-849)	15MHz	256QAM	26865	1RB#0	6.54	13	PASS
Band26(824-849)	15MHz	256QAM	26865	75RB#0	6.63	13	PASS
Band26(824-849)	15MHz	256QAM	26915	1RB#0	6.50	13	PASS
Band26(824-849)	15MHz	256QAM	26915	75RB#0	6.61	13	PASS
Band26(824-849)	15MHz	256QAM	26965	1RB#0	7.34	13	PASS
Band26(824-849)	15MHz	256QAM	26965	75RB#0	6.62	13	PASS
Band26(824-849)	15MHz	16QAM	26865	1RB#0	4.02	13	PASS
Band26(824-849)	15MHz	16QAM	26865	75RB#0	6.13	13	PASS
Band26(824-849)	15MHz	16QAM	26915	1RB#0	4.15	13	PASS
Band26(824-849)	15MHz	16QAM	26915	75RB#0	6.23	13	PASS
Band26(824-849)	15MHz	16QAM	26965	1RB#0	5.19	13	PASS
Band26(824-849)	15MHz	16QAM	26965	75RB#0	6.17	13	PASS

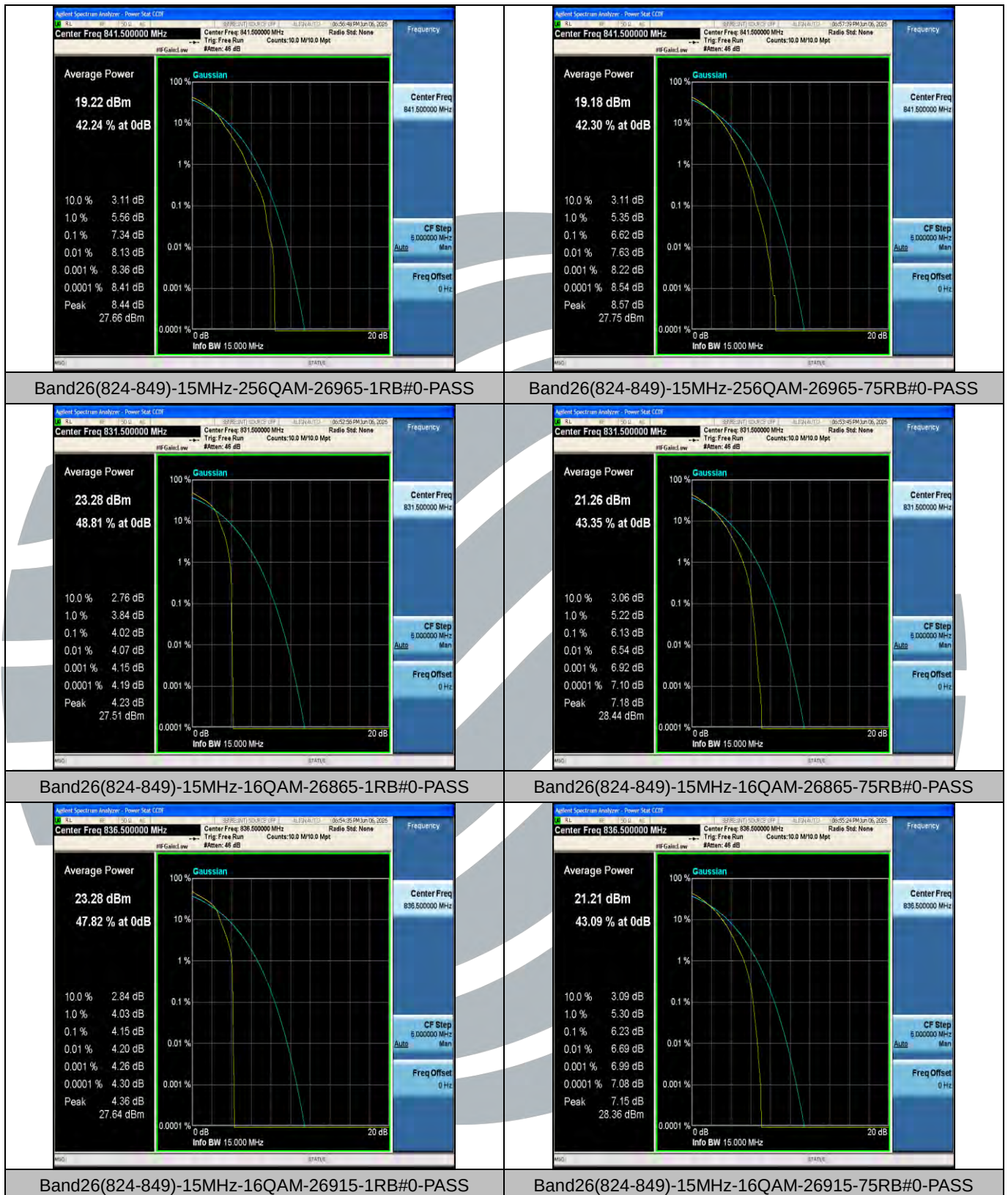
Test Graphs

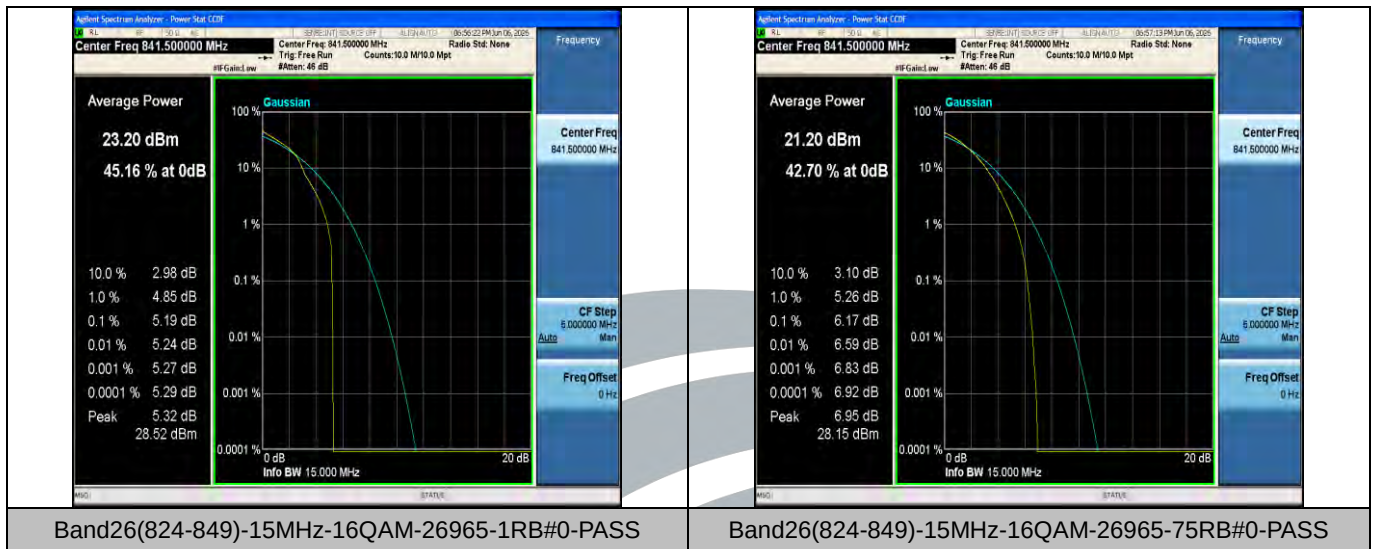












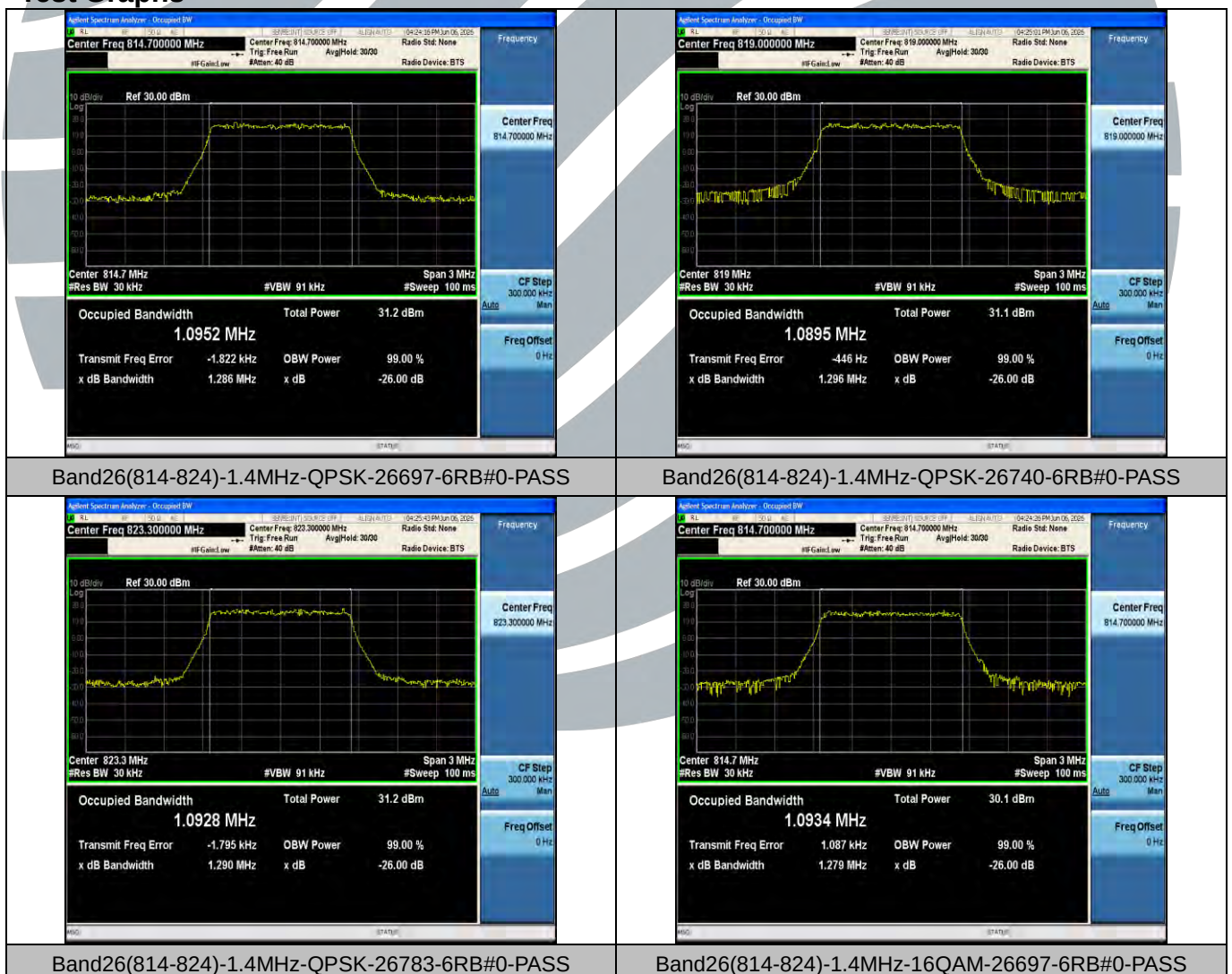
F.226DB BANDWIDTH AND OCCUPIED BANDWIDTH

Test Result

Band	BW	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band26(814-824)	1.4MHz	QPSK	26697	6RB#0	1.0952	1.286	PASS
Band26(814-824)	1.4MHz	QPSK	26740	6RB#0	1.0895	1.296	PASS
Band26(814-824)	1.4MHz	QPSK	26783	6RB#0	1.0928	1.290	PASS
Band26(814-824)	1.4MHz	16QAM	26697	6RB#0	1.0934	1.279	PASS
Band26(814-824)	1.4MHz	16QAM	26740	6RB#0	1.0972	1.315	PASS
Band26(814-824)	1.4MHz	16QAM	26783	6RB#0	1.0926	1.286	PASS
Band26(814-824)	3MHz	QPSK	26705	15RB#0	2.6929	2.933	PASS
Band26(814-824)	3MHz	QPSK	26740	15RB#0	2.6968	2.932	PASS
Band26(814-824)	3MHz	QPSK	26775	15RB#0	2.6934	2.926	PASS
Band26(814-824)	3MHz	16QAM	26705	15RB#0	2.6922	2.923	PASS
Band26(814-824)	3MHz	16QAM	26740	15RB#0	2.6893	2.939	PASS
Band26(814-824)	3MHz	16QAM	26775	15RB#0	2.6915	2.931	PASS
Band26(814-824)	5MHz	QPSK	26715	25RB#0	4.4977	4.982	PASS
Band26(814-824)	5MHz	QPSK	26740	25RB#0	4.4976	4.959	PASS
Band26(814-824)	5MHz	QPSK	26765	25RB#0	4.5018	5.046	PASS
Band26(814-824)	5MHz	16QAM	26715	25RB#0	4.4938	4.945	PASS
Band26(814-824)	5MHz	16QAM	26740	25RB#0	4.5019	4.994	PASS
Band26(814-824)	5MHz	16QAM	26765	25RB#0	4.5120	4.991	PASS
Band26(814-824)	10MHz	QPSK	26740	50RB#0	8.9919	9.893	PASS
Band26(814-824)	10MHz	16QAM	26740	50RB#0	8.9815	9.782	PASS
Band26(814-824)	15MHz	QPSK	26765	75RB#0	13.425	14.63	PASS
Band26(814-824)	15MHz	16QAM	26765	75RB#0	13.423	14.53	PASS
Band26(824-849)	1.4MHz	QPSK	26797	6RB#0	1.0952	1.300	PASS
Band26(824-849)	1.4MHz	QPSK	26915	6RB#0	1.0929	1.290	PASS
Band26(824-849)	1.4MHz	QPSK	27033	6RB#0	1.0929	1.281	PASS
Band26(824-849)	1.4MHz	16QAM	26797	6RB#0	1.0897	1.275	PASS
Band26(824-849)	1.4MHz	16QAM	26915	6RB#0	1.0986	1.308	PASS
Band26(824-849)	1.4MHz	16QAM	27033	6RB#0	1.0940	1.286	PASS
Band26(824-849)	3MHz	QPSK	26805	15RB#0	2.6942	2.936	PASS
Band26(824-849)	3MHz	QPSK	26915	15RB#0	2.6954	2.931	PASS
Band26(824-849)	3MHz	QPSK	27025	15RB#0	2.6936	2.932	PASS
Band26(824-849)	3MHz	16QAM	26805	15RB#0	2.6818	2.940	PASS
Band26(824-849)	3MHz	16QAM	26915	15RB#0	2.6922	2.930	PASS
Band26(824-849)	3MHz	16QAM	27025	15RB#0	2.6925	2.938	PASS
Band26(824-849)	5MHz	QPSK	26815	25RB#0	4.5029	4.997	PASS
Band26(824-849)	5MHz	QPSK	26915	25RB#0	4.4932	4.949	PASS
Band26(824-849)	5MHz	QPSK	27015	25RB#0	4.5055	4.977	PASS

Band26(824-849)	5MHz	16QAM	26815	25RB#0	4.4981	4.961	PASS
Band26(824-849)	5MHz	16QAM	26915	25RB#0	4.5028	5.001	PASS
Band26(824-849)	5MHz	16QAM	27015	25RB#0	4.5123	4.983	PASS
Band26(824-849)	10MHz	QPSK	26840	50RB#0	8.9820	9.814	PASS
Band26(824-849)	10MHz	QPSK	26915	50RB#0	8.9893	9.880	PASS
Band26(824-849)	10MHz	QPSK	26990	50RB#0	8.9662	9.731	PASS
Band26(824-849)	10MHz	16QAM	26840	50RB#0	8.9743	9.820	PASS
Band26(824-849)	10MHz	16QAM	26915	50RB#0	8.9807	9.828	PASS
Band26(824-849)	10MHz	16QAM	26990	50RB#0	8.9676	9.739	PASS
Band26(824-849)	15MHz	QPSK	26865	75RB#0	13.484	14.76	PASS
Band26(824-849)	15MHz	QPSK	26915	75RB#0	13.482	14.84	PASS
Band26(824-849)	15MHz	QPSK	26965	75RB#0	13.412	14.62	PASS
Band26(824-849)	15MHz	16QAM	26865	75RB#0	13.475	14.68	PASS
Band26(824-849)	15MHz	16QAM	26915	75RB#0	13.492	14.78	PASS
Band26(824-849)	15MHz	16QAM	26965	75RB#0	13.449	14.63	PASS

Test Graphs



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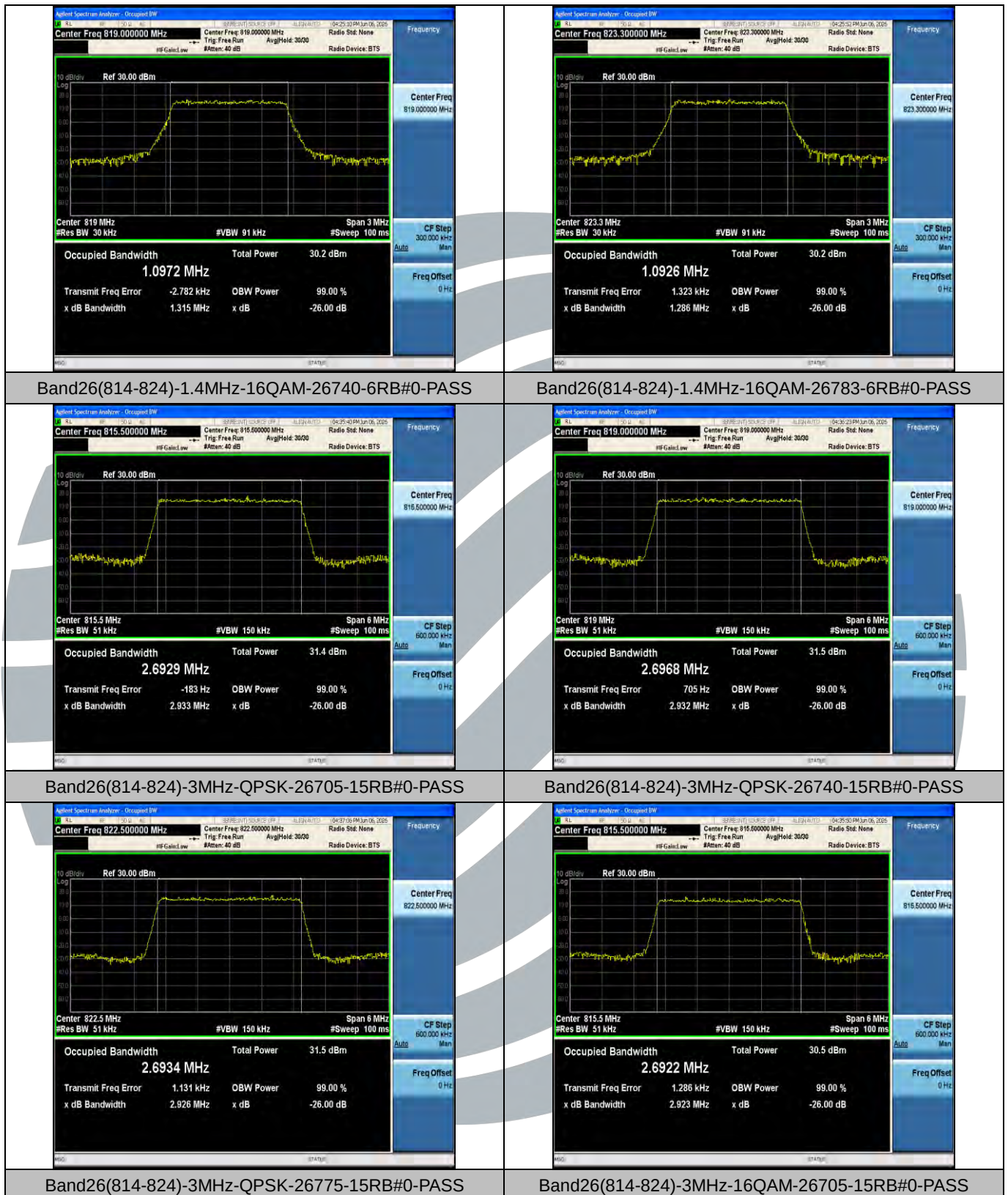
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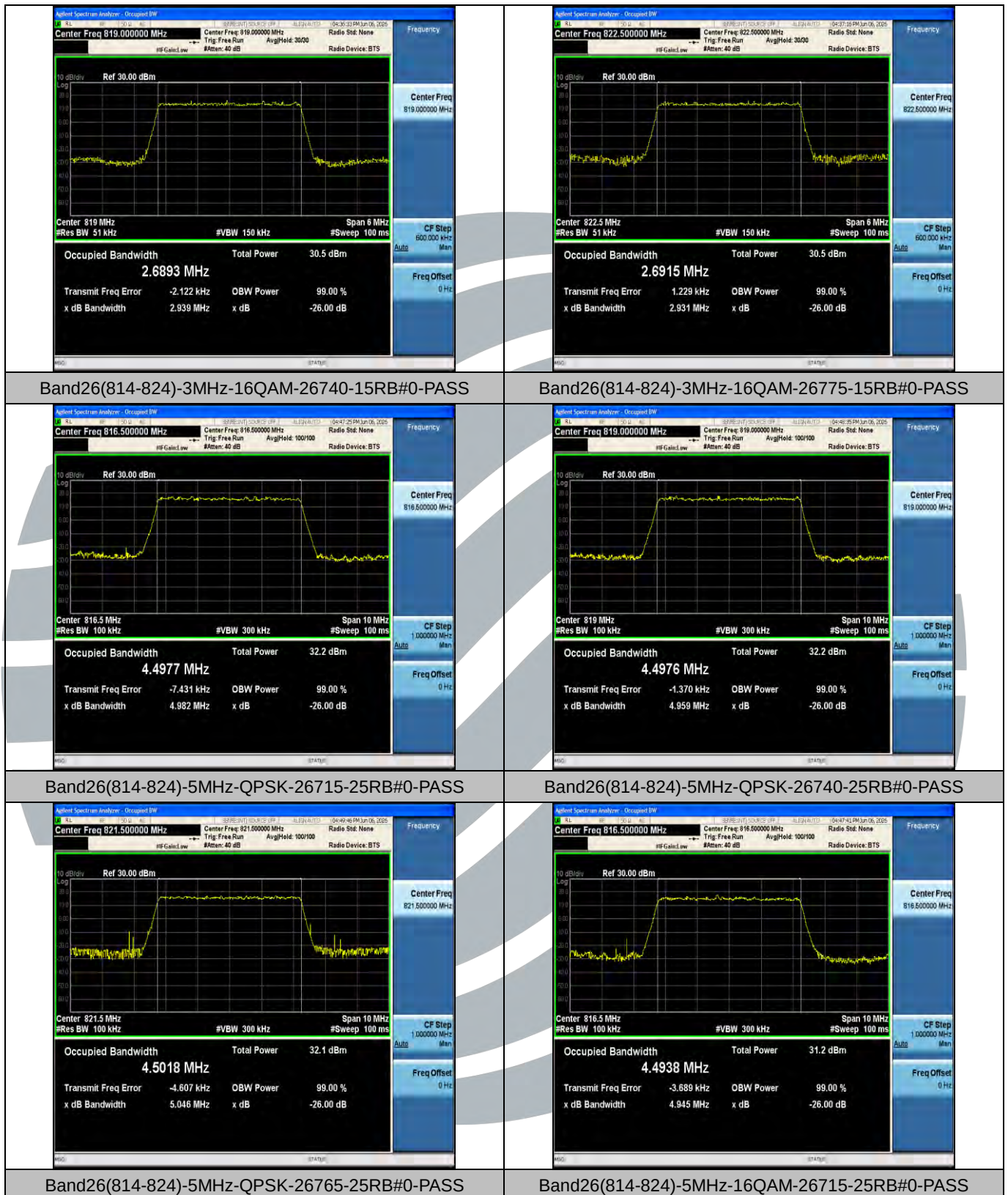
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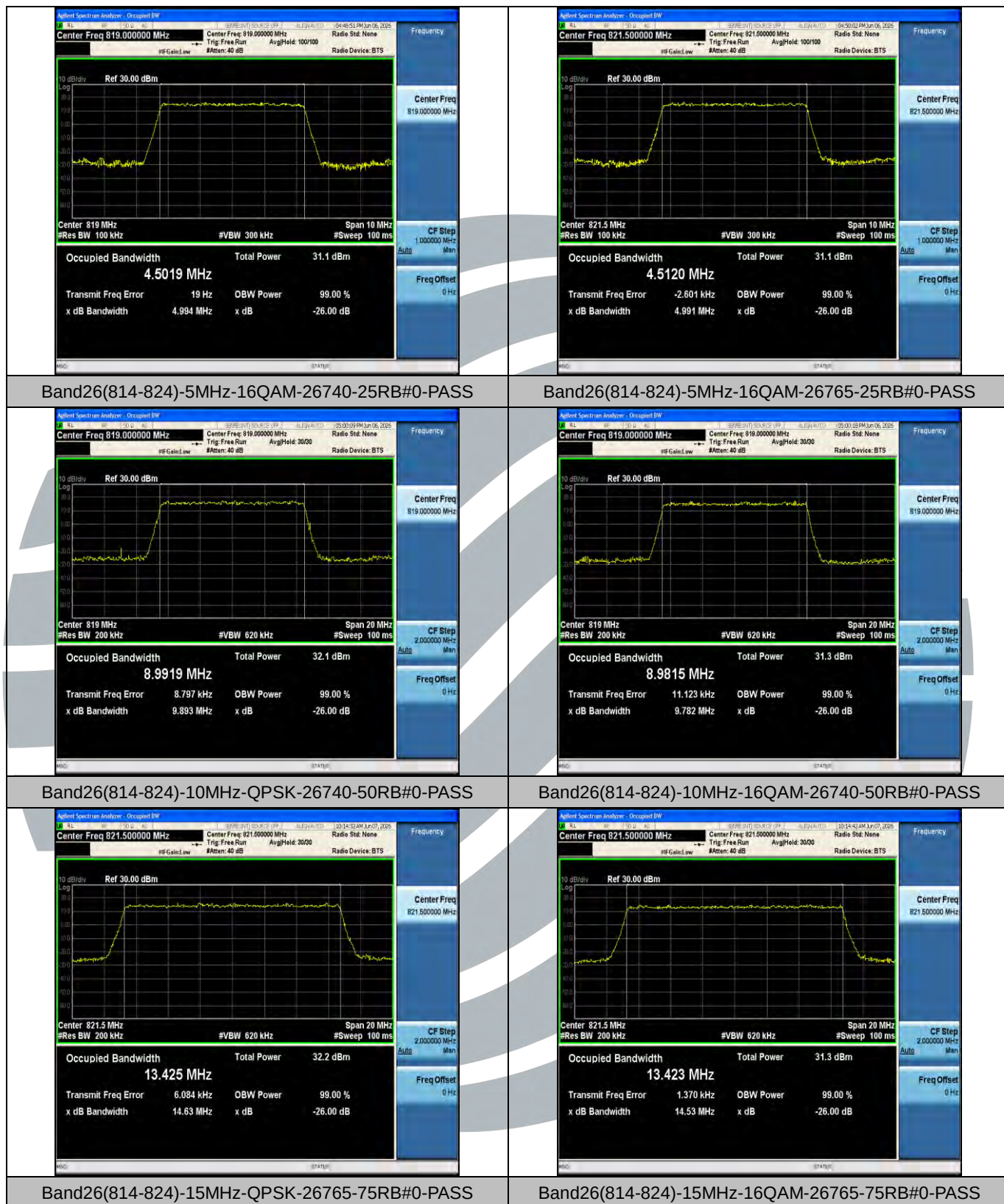
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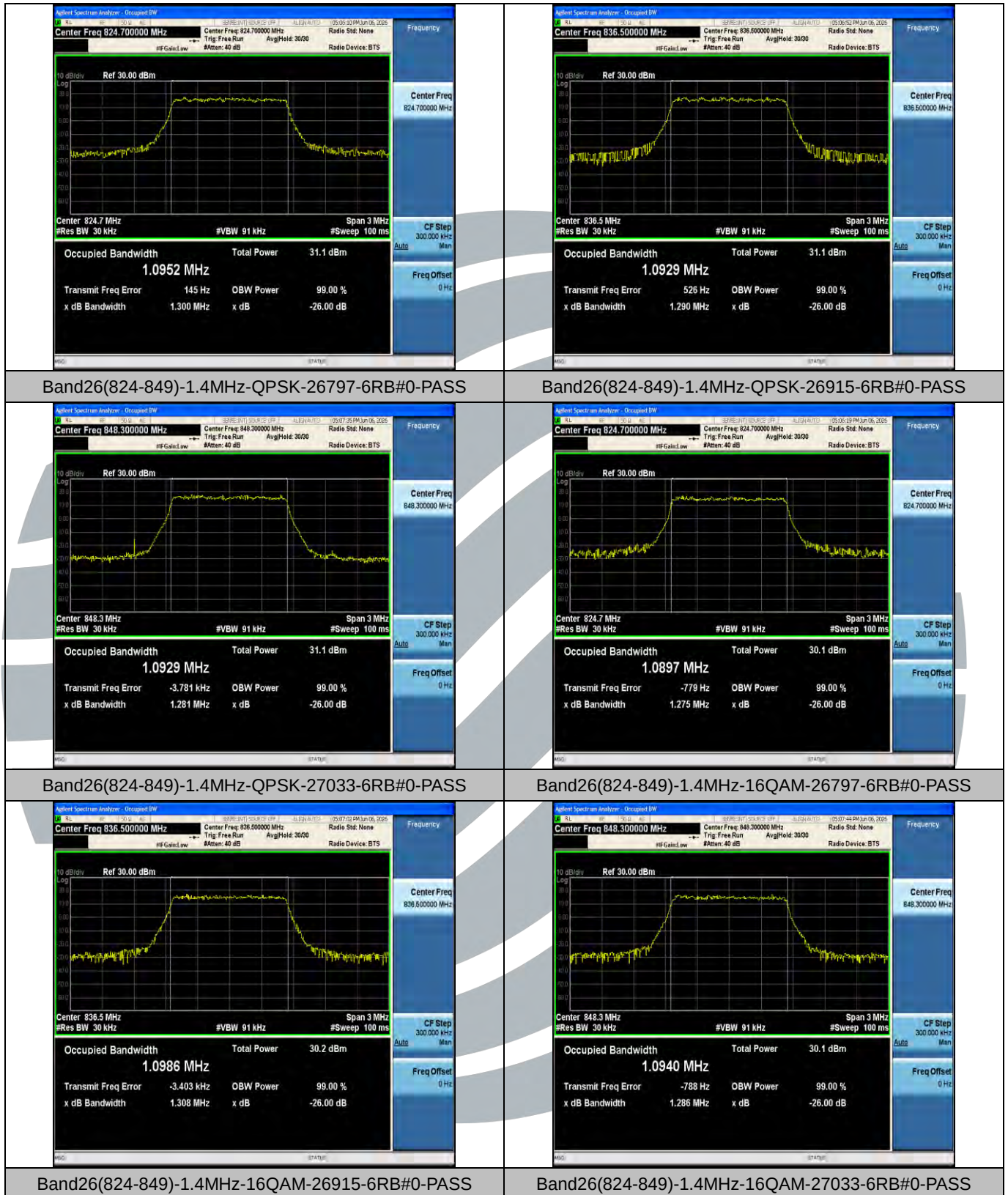
E-mail: info@uttlab.com

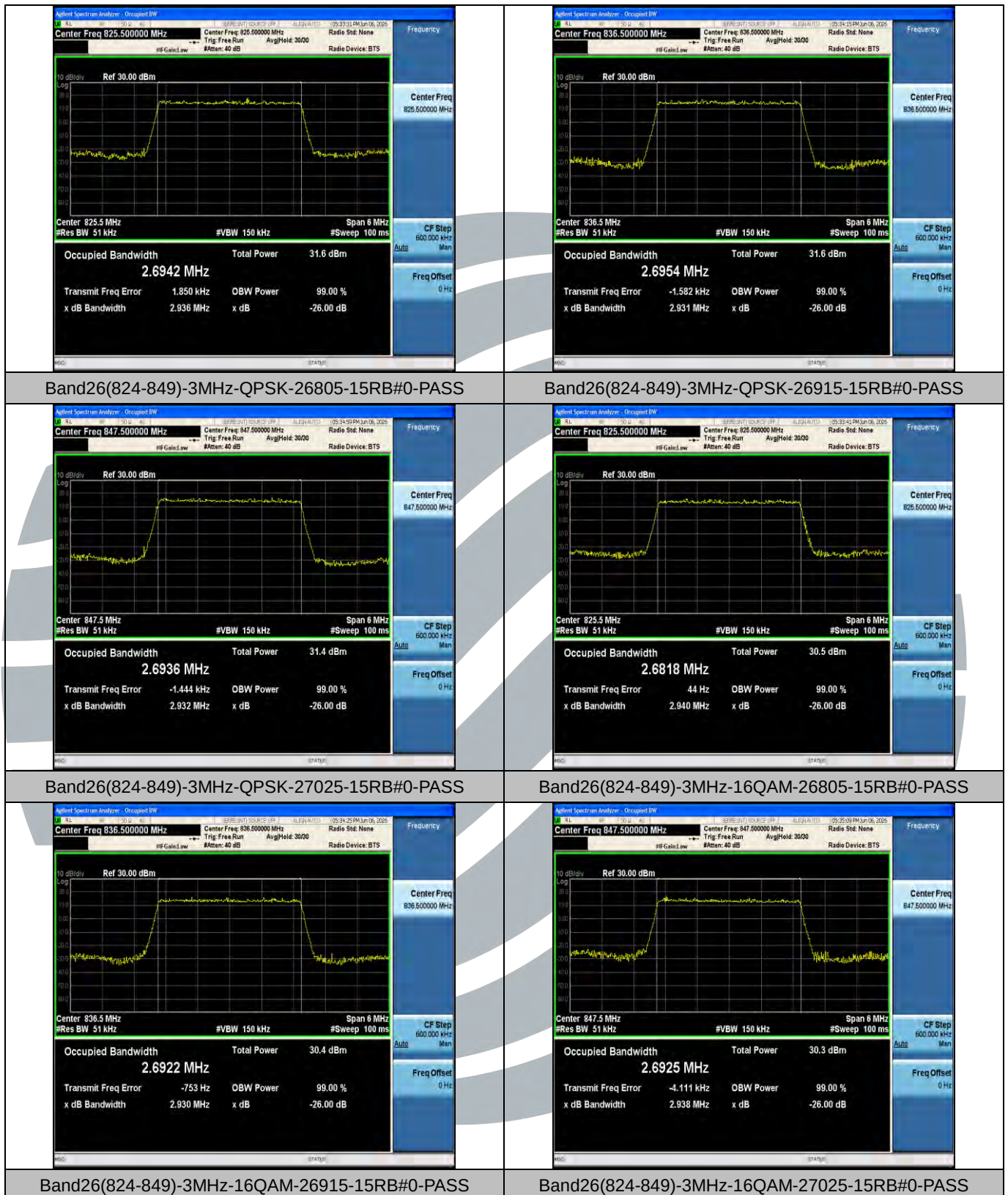
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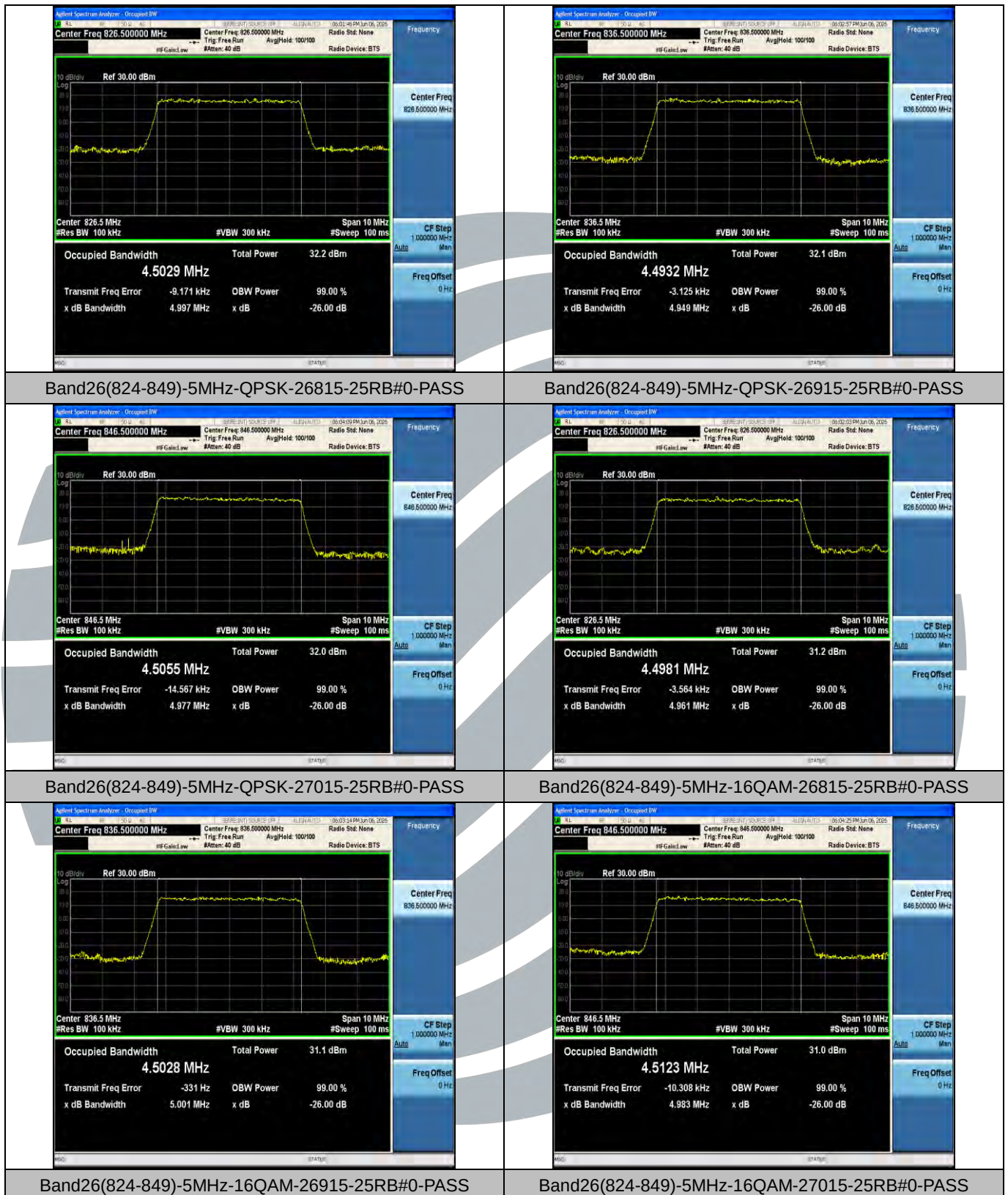


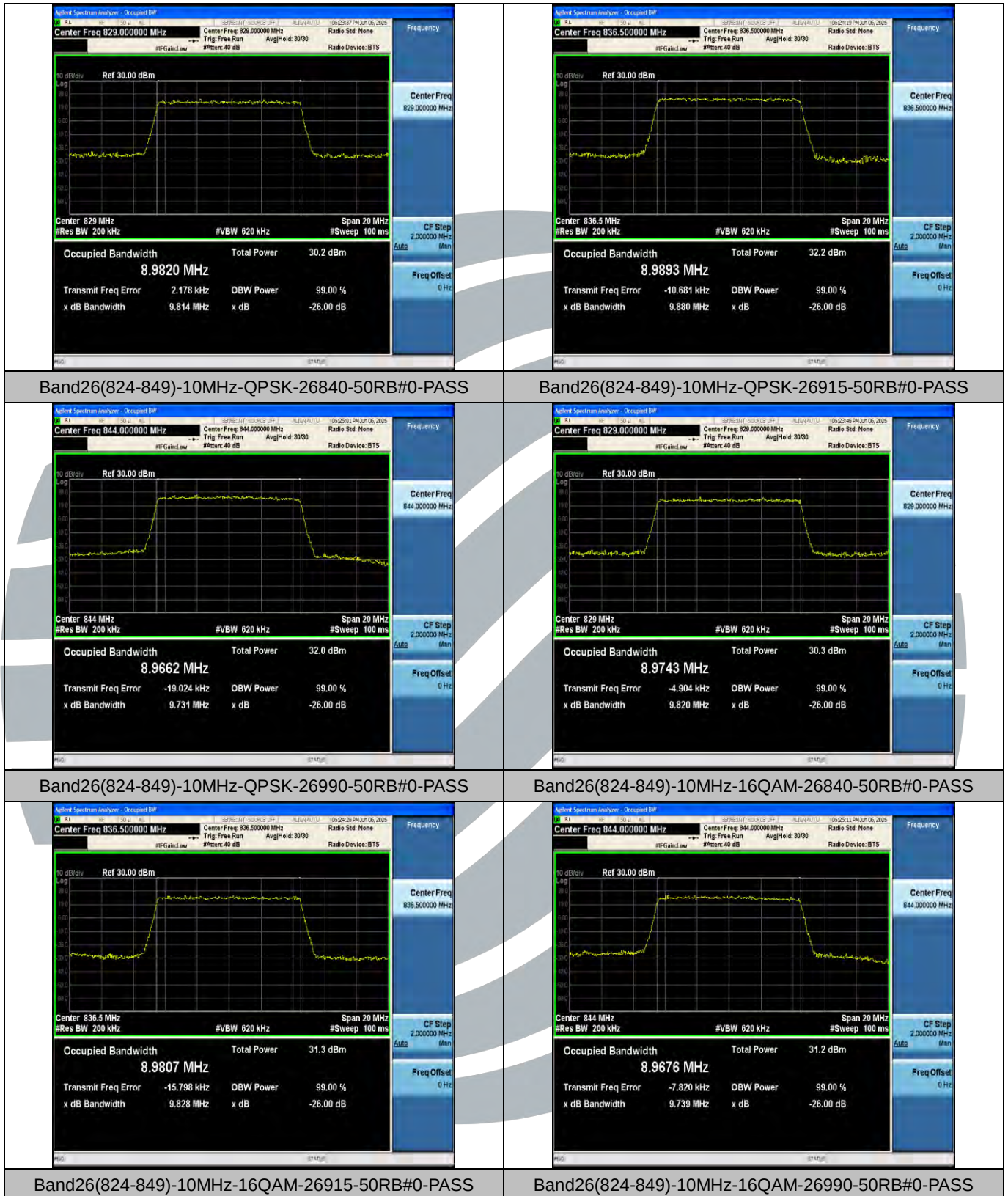


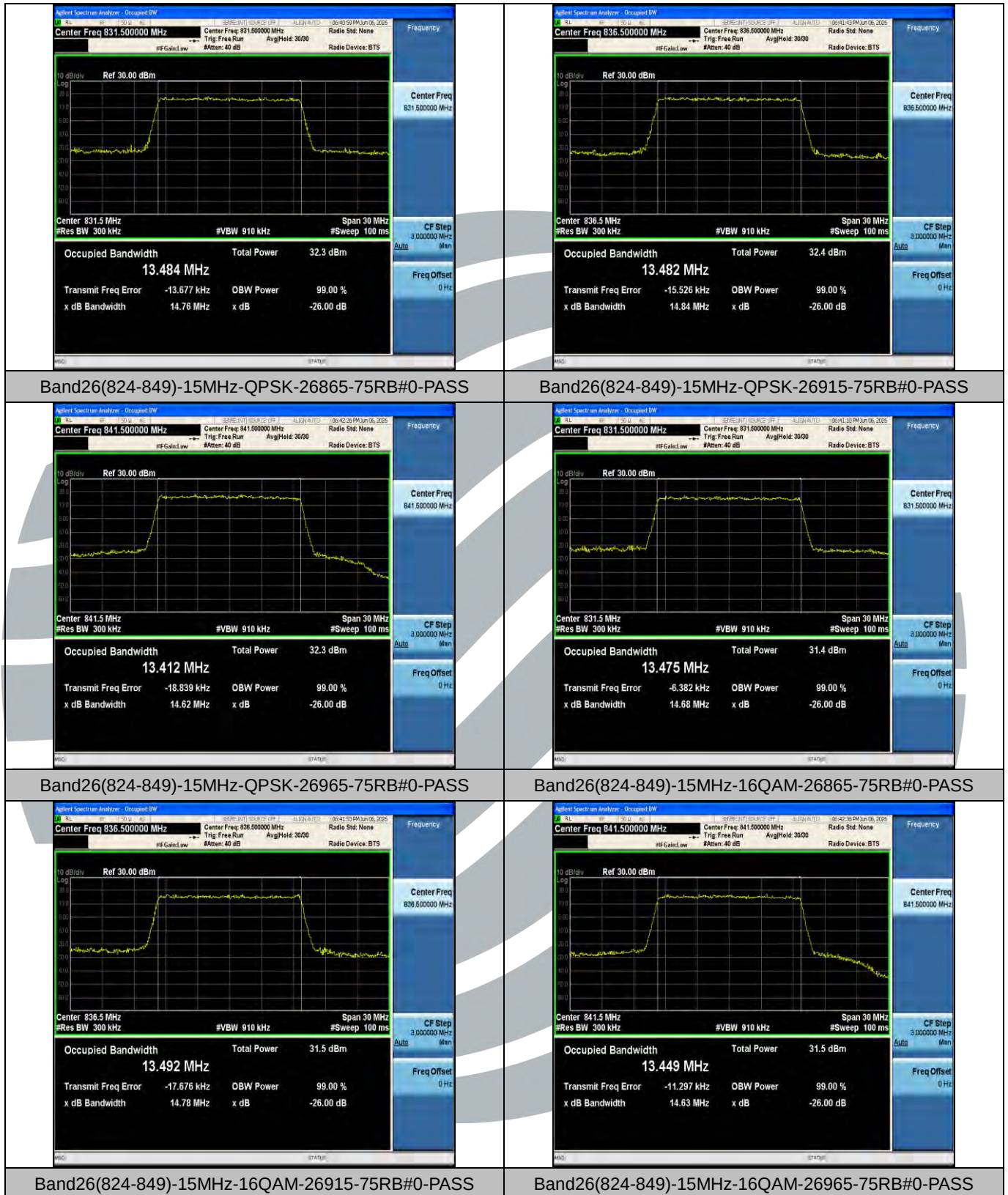








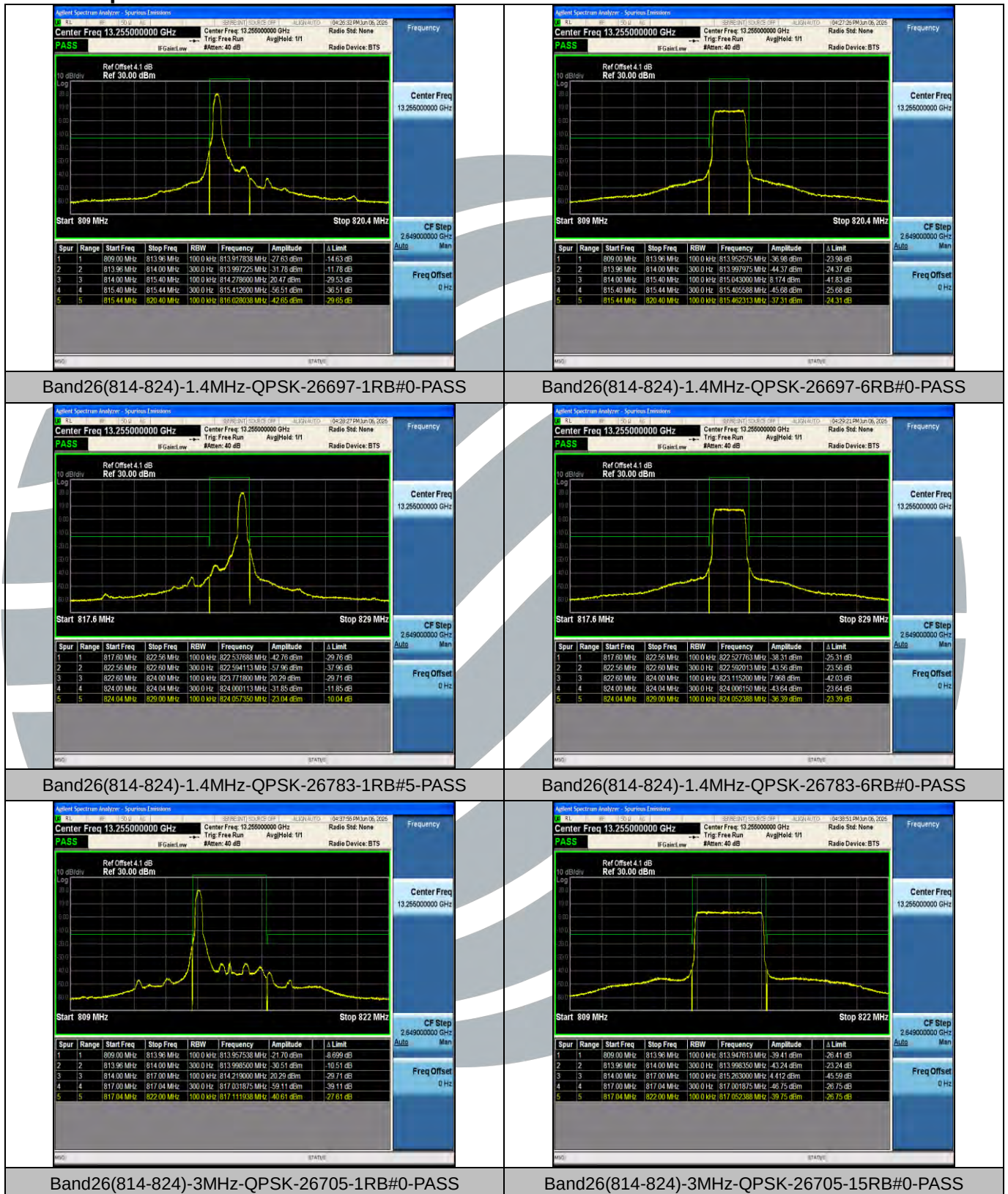


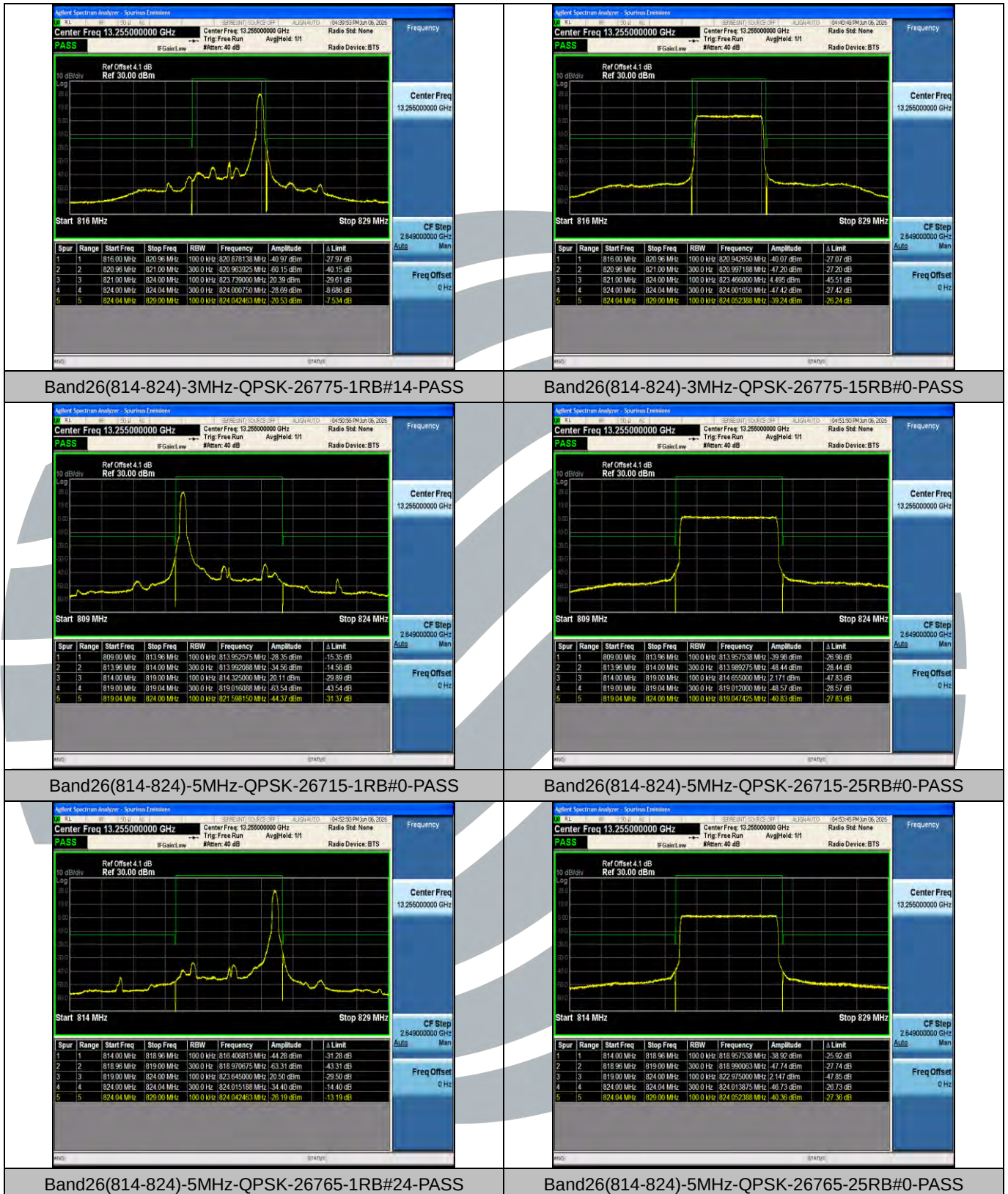


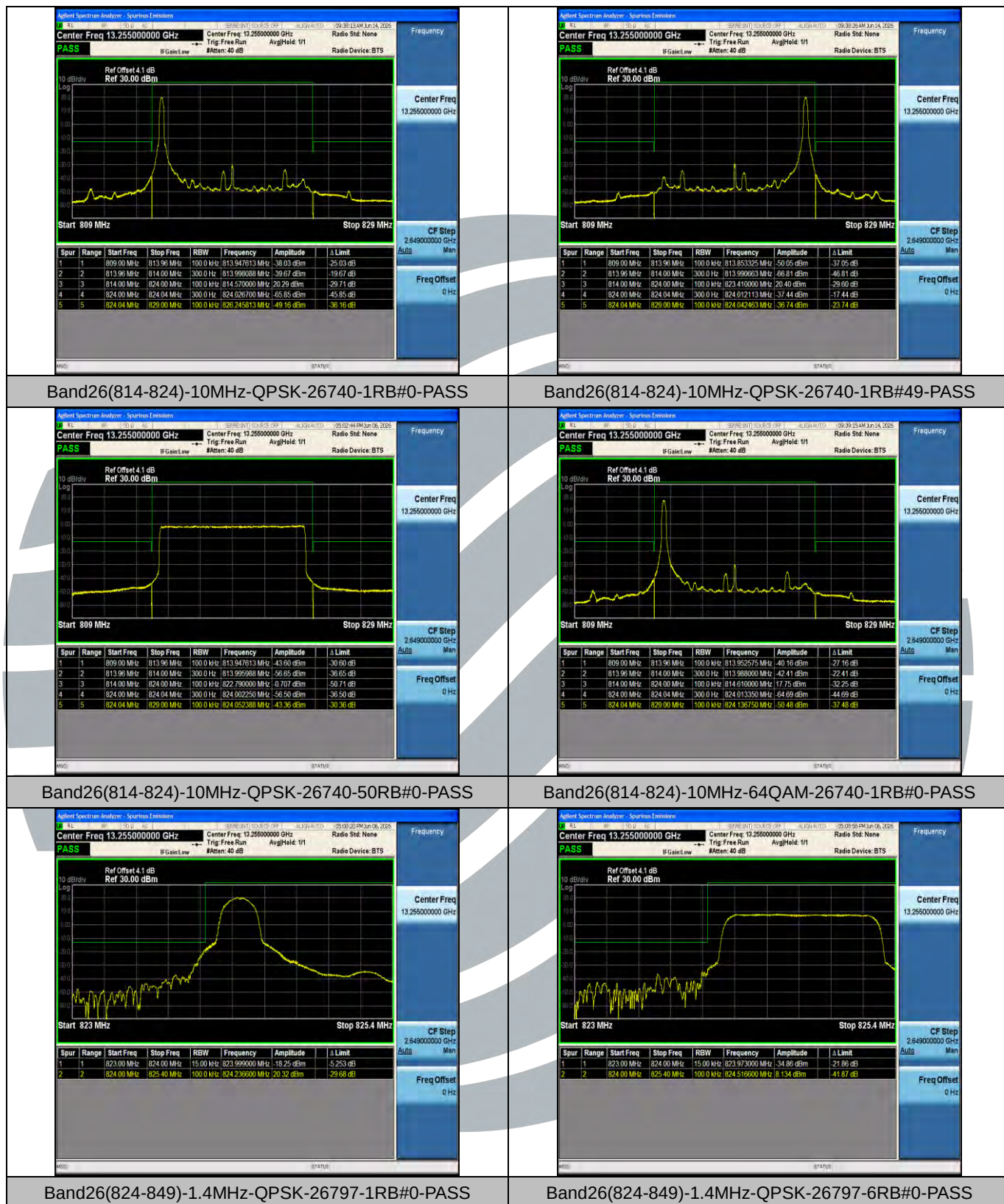
F.3BAND EDGE Test Result

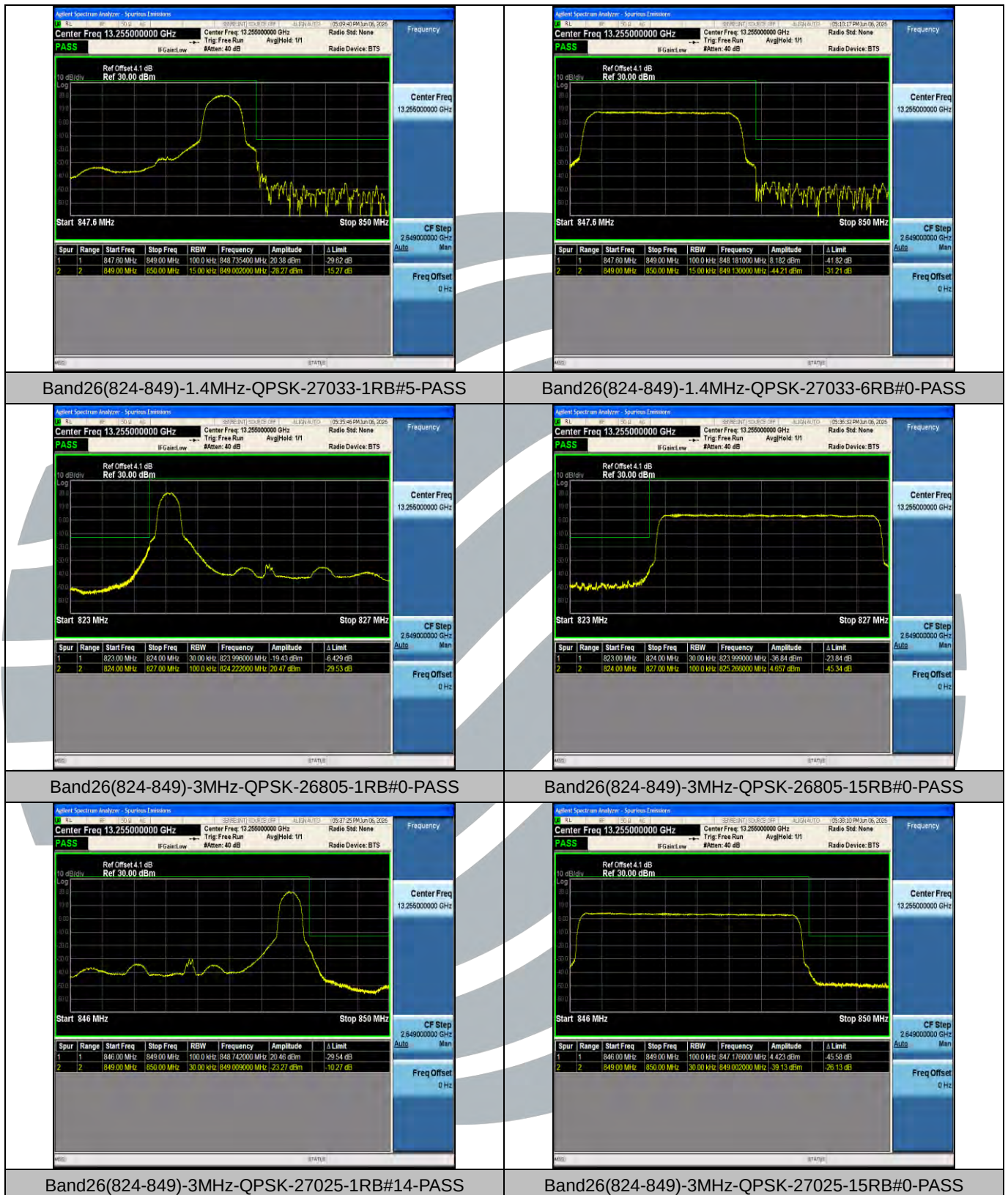
Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	Verdict
Band26(814-824)	1.4MHz	QPSK	26697	1RB#0	-31.78	PASS
Band26(814-824)	1.4MHz	QPSK	26697	6RB#0	-36.98	PASS
Band26(814-824)	1.4MHz	QPSK	26783	1RB#5	-23.04	PASS
Band26(814-824)	1.4MHz	QPSK	26783	6RB#0	-36.39	PASS
Band26(814-824)	3MHz	QPSK	26705	1RB#0	-21.70	PASS
Band26(814-824)	3MHz	QPSK	26705	15RB#0	-43.24	PASS
Band26(814-824)	3MHz	QPSK	26775	1RB#14	-20.53	PASS
Band26(814-824)	3MHz	QPSK	26775	15RB#0	-39.24	PASS
Band26(814-824)	5MHz	QPSK	26715	1RB#0	-34.56	PASS
Band26(814-824)	5MHz	QPSK	26715	25RB#0	-39.98	PASS
Band26(814-824)	5MHz	QPSK	26765	1RB#24	-26.19	PASS
Band26(814-824)	5MHz	QPSK	26765	25RB#0	-38.92	PASS
Band26(814-824)	10MHz	QPSK	26740	1RB#0	-39.67	PASS
Band26(814-824)	10MHz	QPSK	26740	1RB#49	-37.44	PASS
Band26(814-824)	10MHz	QPSK	26740	50RB#0	-43.36	PASS
Band26(824-849)	1.4MHz	QPSK	26797	1RB#0	-18.25	PASS
Band26(824-849)	1.4MHz	QPSK	26797	6RB#0	-34.86	PASS
Band26(824-849)	1.4MHz	QPSK	27033	1RB#5	-28.27	PASS
Band26(824-849)	1.4MHz	QPSK	27033	6RB#0	-44.21	PASS
Band26(824-849)	3MHz	QPSK	26805	1RB#0	-19.43	PASS
Band26(824-849)	3MHz	QPSK	26805	15RB#0	-36.84	PASS
Band26(824-849)	3MHz	QPSK	27025	1RB#14	-23.27	PASS
Band26(824-849)	3MHz	QPSK	27025	15RB#0	-39.13	PASS
Band26(824-849)	5MHz	QPSK	26815	1RB#0	-24.82	PASS
Band26(824-849)	5MHz	QPSK	26815	25RB#0	-37.46	PASS
Band26(824-849)	5MHz	QPSK	27015	1RB#24	-25.90	PASS
Band26(824-849)	5MHz	QPSK	27015	25RB#0	-39.86	PASS
Band26(824-849)	10MHz	QPSK	26840	1RB#0	-35.92	PASS
Band26(824-849)	10MHz	QPSK	26840	50RB#0	-40.10	PASS
Band26(824-849)	10MHz	QPSK	26990	1RB#49	-36.12	PASS
Band26(824-849)	10MHz	QPSK	26990	50RB#0	-43.72	PASS
Band26(824-849)	15MHz	QPSK	26865	1RB#0	-39.13	PASS
Band26(824-849)	15MHz	QPSK	26865	75RB#0	-39.56	PASS
Band26(824-849)	15MHz	QPSK	26965	1RB#74	-39.65	PASS
Band26(824-849)	15MHz	QPSK	26965	75RB#0	-43.61	PASS

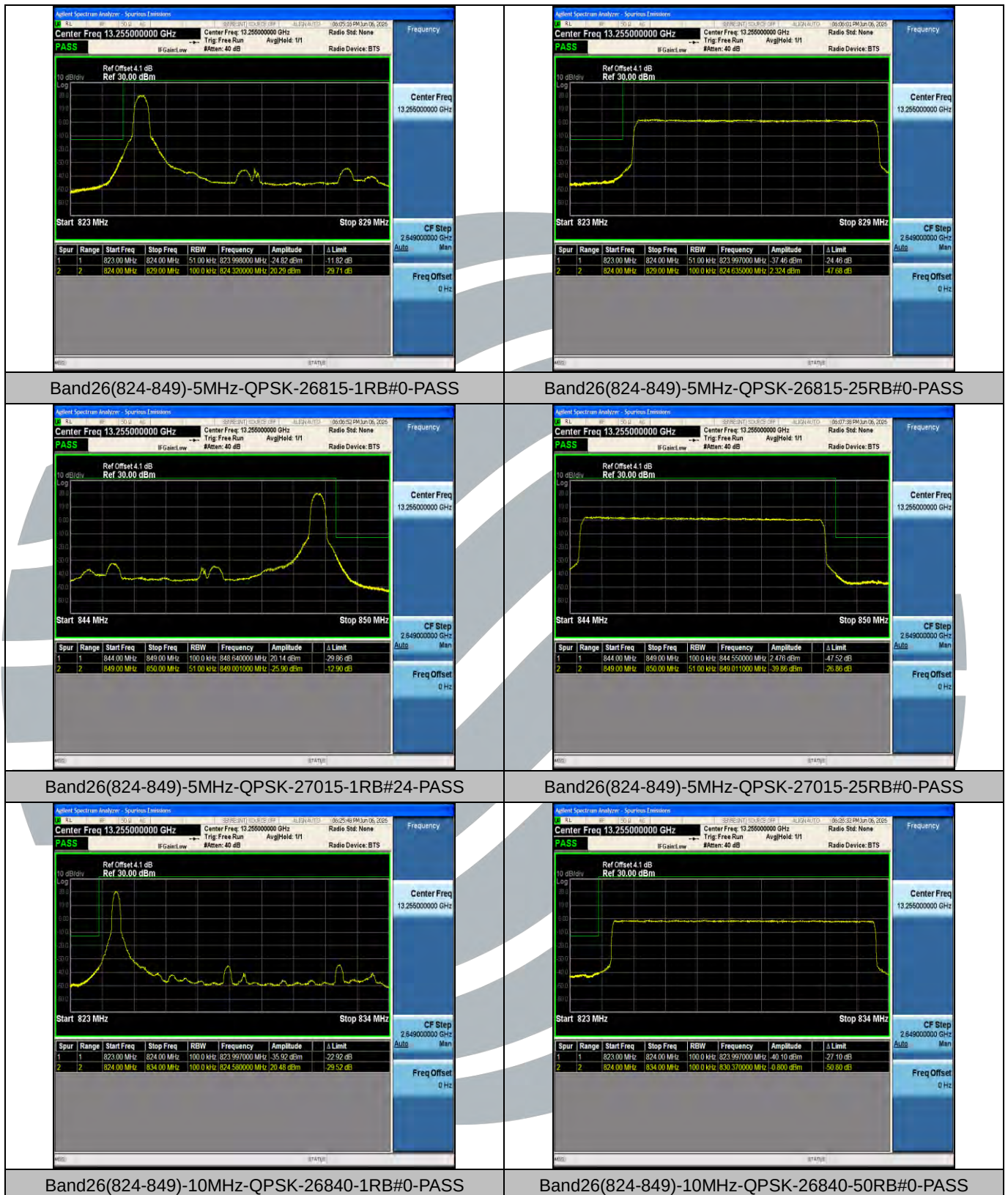
Test Graphs

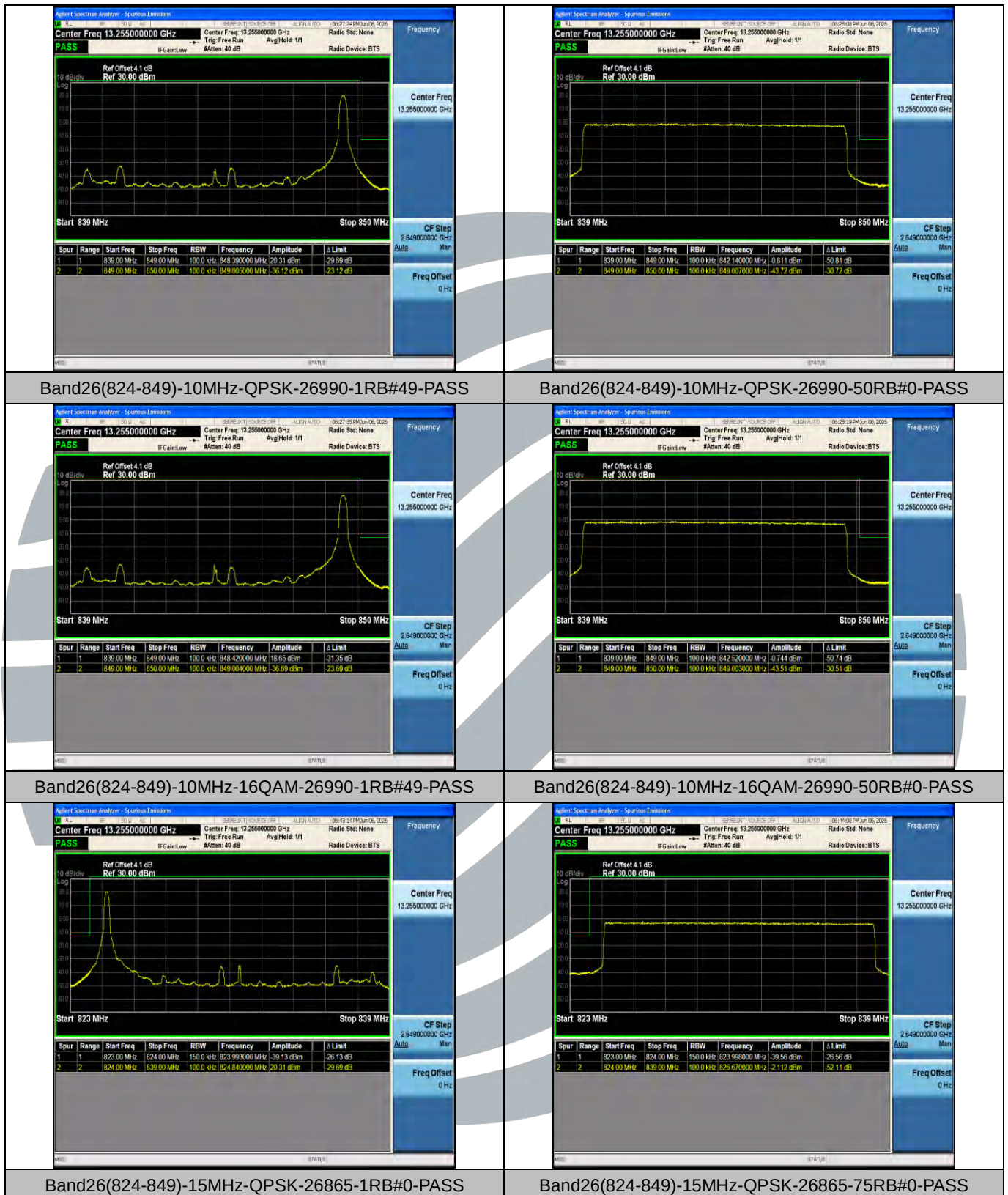


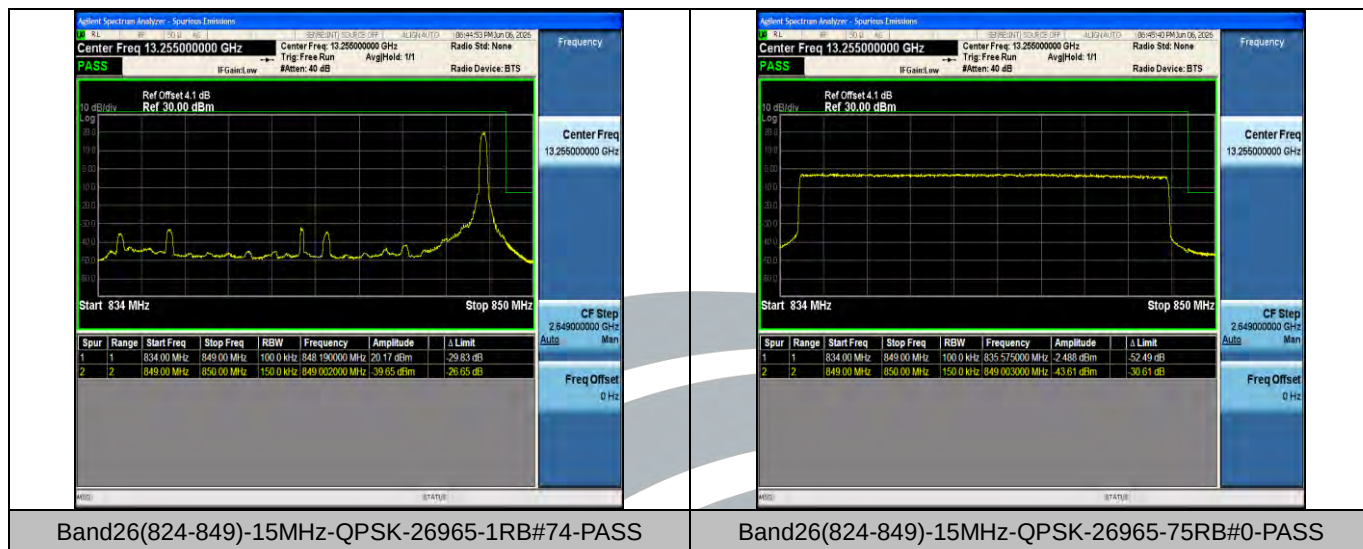










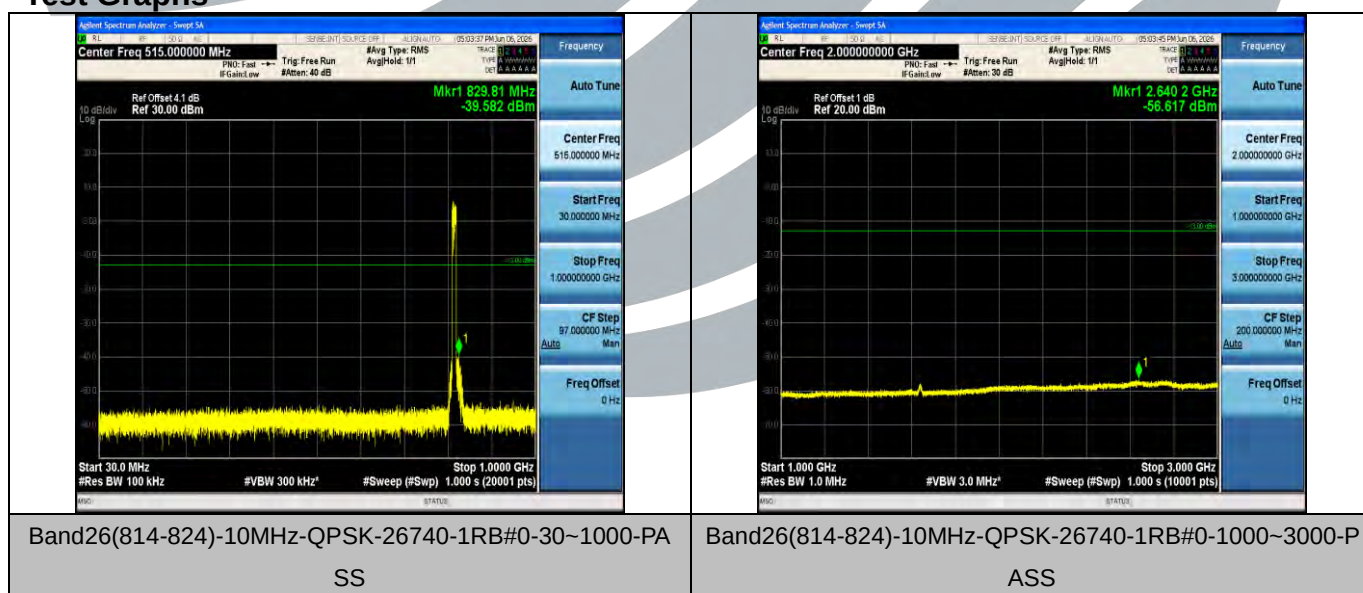


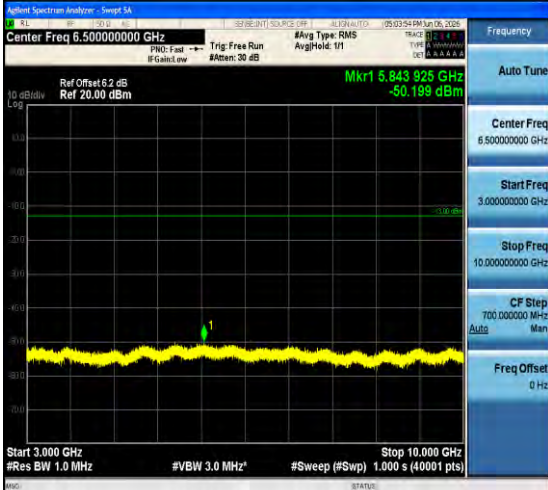
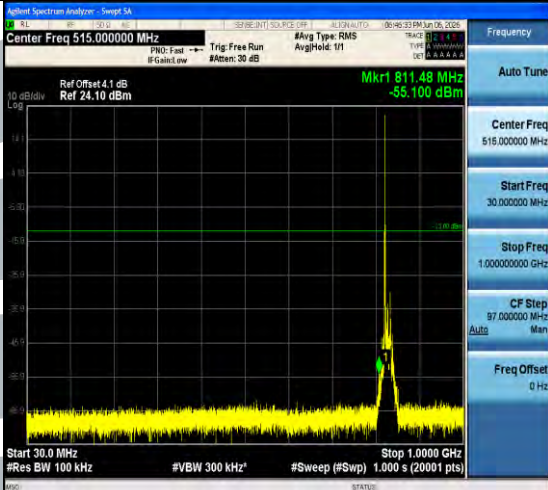
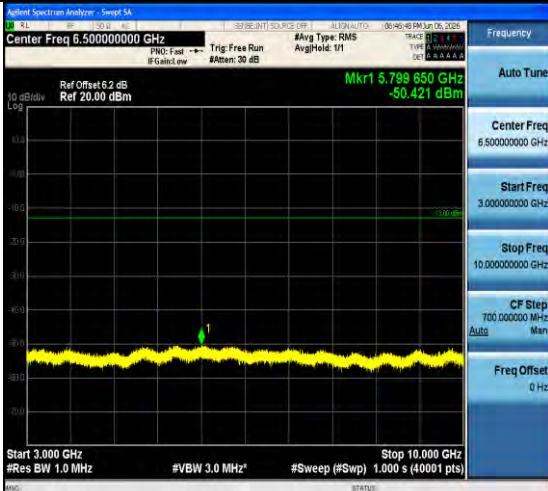
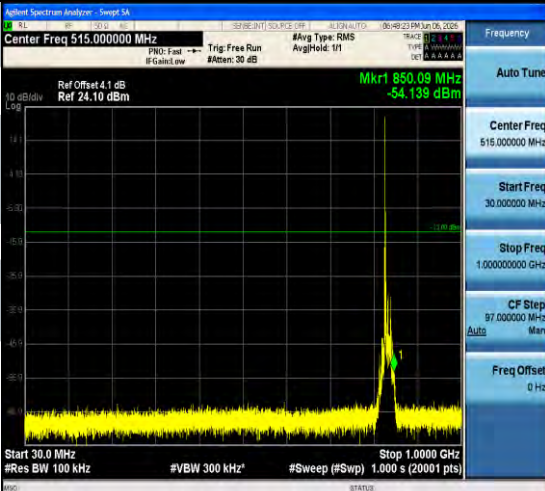
F.4 CONDUCTED SPURIOUS EMISSION

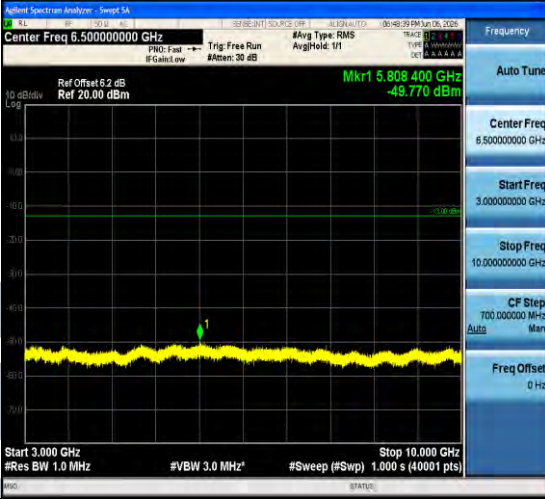
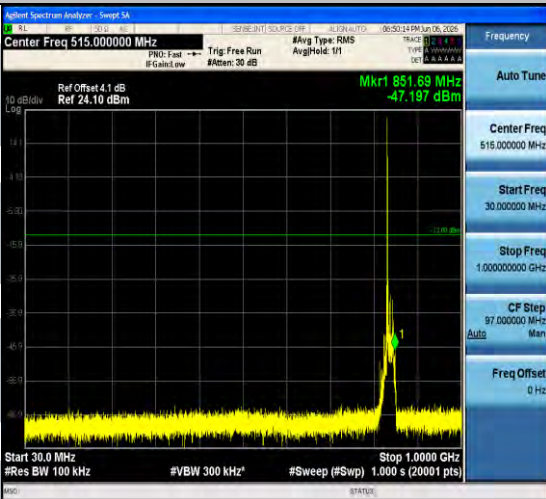
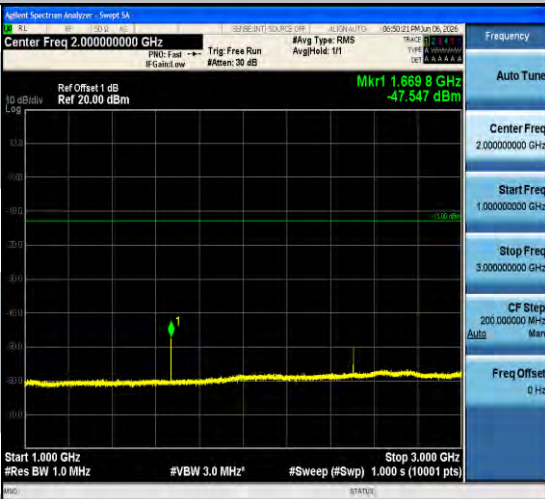
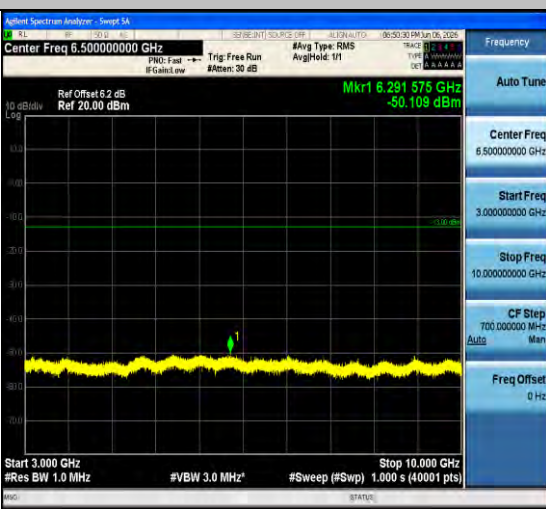
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range (MHz)	Result (dBm)	Verdict
Band26(814-824)	10MHz	QPSK	26740	1RB#0	30~1000	-39.58	PASS
Band26(814-824)	10MHz	QPSK	26740	1RB#0	1000~3000	-56.62	PASS
Band26(814-824)	10MHz	QPSK	26740	1RB#0	3000~10000	-50.20	PASS
Band26(814-824)	10MHz	64QAM	26740	1RB#0	30~1000	-43.14	PASS
Band26(814-824)	10MHz	64QAM	26740	1RB#0	1000~3000	-56.69	PASS
Band26(814-824)	10MHz	64QAM	26740	1RB#0	3000~10000	-50.41	PASS
Band26(814-824)	10MHz	256QAM	26740	1RB#0	30~1000	-44.05	PASS
Band26(814-824)	10MHz	256QAM	26740	1RB#0	1000~3000	-53.51	PASS
Band26(814-824)	10MHz	256QAM	26740	1RB#0	3000~10000	-50.20	PASS
Band26(814-824)	10MHz	16QAM	26740	1RB#0	30~1000	-42.52	PASS
Band26(814-824)	10MHz	16QAM	26740	1RB#0	1000~3000	-56.79	PASS
Band26(814-824)	10MHz	16QAM	26740	1RB#0	3000~10000	-50.18	PASS
Band26(824-849)	15MHz	QPSK	26865	1RB#0	30~1000	-55.10	PASS
Band26(824-849)	15MHz	QPSK	26865	1RB#0	1000~3000	-47.43	PASS
Band26(824-849)	15MHz	QPSK	26865	1RB#0	3000~10000	-50.42	PASS
Band26(824-849)	15MHz	QPSK	26915	1RB#0	30~1000	-54.14	PASS
Band26(824-849)	15MHz	QPSK	26915	1RB#0	1000~3000	-47.81	PASS
Band26(824-849)	15MHz	QPSK	26915	1RB#0	3000~10000	-49.77	PASS
Band26(824-849)	15MHz	QPSK	26965	1RB#0	30~1000	-47.20	PASS
Band26(824-849)	15MHz	QPSK	26965	1RB#0	1000~3000	-47.55	PASS
Band26(824-849)	15MHz	QPSK	26965	1RB#0	3000~10000	-50.11	PASS

Test Graphs



	N/A
Band26(814-824)-10MHz-QPSK-26740-1RB#0-3000~10000-PASS	
	
Band26(824-849)-15MHz-QPSK-26865-1RB#0-30~1000-PA SS	
Band26(824-849)-15MHz-QPSK-26865-1RB#0-1000~3000-P ASS	
	
Band26(824-849)-15MHz-QPSK-26865-1RB#0-3000~10000-PASS	
Band26(824-849)-15MHz-QPSK-26915-1RB#0-30~1000-PA SS	

	
Band26(824-849)-15MHz-QPSK-26915-1RB#0-1000~3000-P ASS	Band26(824-849)-15MHz-QPSK-26915-1RB#0-3000~10000-P PASS
	
Band26(824-849)-15MHz-QPSK-26965-1RB#0-30~1000-PA SS	Band26(824-849)-15MHz-QPSK-26965-1RB#0-1000~3000-P ASS
	N/A
Band26(824-849)-15MHz-QPSK-26965-1RB#0-3000~10000-P PASS	

F.5 FREQUENCY STABILITY

Test Result

Voltage										
Band	BW	Modulation	Ch.	RB Configure	Voltage [Vdc]	Temp. (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band26 (824-849)	15MHz	QPSK	26915	75RB#0	VN	NT	-4.63	-0.005535	±2.5	PASS
Band26 (824-849)	15MHz	QPSK	26915	75RB#0	VL	NT	-4.63	-0.005535	±2.5	PASS
Band26 (824-849)	15MHz	QPSK	26915	75RB#0	VH	NT	-3.10	-0.003706	±2.5	PASS

Temperature										
Band	BW	Modulation	Ch.	RB Configure	Voltage [Vdc]	Temp. (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band26(824-849)	15MHz	QPSK	26915	75RB#0	NV	-30	-4.84	-0.005786	±2.5	PASS
Band26(824-849)	15MHz	QPSK	26915	75RB#0	NV	-20	-3.88	-0.004638	±2.5	PASS
Band26(824-849)	15MHz	QPSK	26915	75RB#0	NV	-10	3.69	0.004411	±2.5	PASS
Band26(824-849)	15MHz	QPSK	26915	75RB#0	NV	0	-3.32	-0.003969	±2.5	PASS
Band26(824-849)	15MHz	QPSK	26915	75RB#0	NV	10	3.82	0.004567	±2.5	PASS
Band26(824-849)	15MHz	QPSK	26915	75RB#0	NV	20	-5.01	-0.005989	±2.5	PASS
Band26(824-849)	15MHz	QPSK	26915	75RB#0	NV	30	-4.52	-0.005403	±2.5	PASS
Band26(824-849)	15MHz	QPSK	26915	75RB#0	NV	40	-4.55	-0.005439	±2.5	PASS
Band26(824-849)	15MHz	QPSK	26915	75RB#0	NV	50	-3.59	-0.004292	±2.5	PASS