

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	23.29	21.44	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	23.3	21.45	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	23.29	21.44	38.45	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	22.63	20.78	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	22.66	20.81	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#2	22.54	20.69	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	22.52	20.67	38.45	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	21.49	19.64	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	23.23	21.38	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	23.21	21.36	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	23.08	21.23	38.45	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	22.54	20.69	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	22.36	20.51	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#2	22.43	20.58	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#5	22.42	20.57	38.45	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	21.56	19.71	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	23.16	21.31	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	23.11	21.26	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	23.15	21.3	38.45	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	22.13	20.28	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	22.67	20.82	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#2	22.77	20.92	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	22.73	20.88	38.45	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	21.53	19.68	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#0	23.19	21.34	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#8	23.27	21.42	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#14	23.16	21.31	38.45	PASS
Band5	3MHz	QPSK	20415	15RB#0	22.66	20.81	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#0	22.71	20.86	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#8	22.56	20.71	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#14	22.33	20.48	38.45	PASS
Band5	3MHz	16QAM	20415	15RB#0	21.55	19.7	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#0	23.08	21.23	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#8	23.33	21.48	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#14	23.25	21.4	38.45	PASS
Band5	3MHz	QPSK	20525	15RB#0	22.52	20.67	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#0	22.41	20.56	38.45	PASS

Band5	3MHz	16QAM	20525	1RB#8	22.56	20.71	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#14	22.58	20.73	38.45	PASS
Band5	3MHz	16QAM	20525	15RB#0	21.45	19.6	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#0	23.19	21.34	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#8	23.29	21.44	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#14	23.18	21.33	38.45	PASS
Band5	3MHz	QPSK	20635	15RB#0	22.23	20.38	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#0	22.51	20.66	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#8	22.57	20.72	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#14	22.59	20.74	38.45	PASS
Band5	3MHz	16QAM	20635	15RB#0	21.11	19.26	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#0	23.01	21.16	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#12	23.12	21.27	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#24	23.01	21.16	38.45	PASS
Band5	5MHz	QPSK	20425	25RB#0	22.57	20.72	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#0	22.54	20.69	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#12	22.34	20.49	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#24	22.43	20.58	38.45	PASS
Band5	5MHz	16QAM	20425	25RB#0	21.35	19.5	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#0	23.24	21.39	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#12	23.17	21.32	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#24	23.29	21.44	38.45	PASS
Band5	5MHz	QPSK	20525	25RB#0	22.52	20.67	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#0	22.51	20.66	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#12	22.71	20.86	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#24	22.43	20.58	38.45	PASS
Band5	5MHz	16QAM	20525	25RB#0	21.53	19.68	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#0	23.14	21.29	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#12	23.03	21.18	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#24	23.03	21.18	38.45	PASS
Band5	5MHz	QPSK	20625	25RB#0	22.26	20.41	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#0	22.74	20.89	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#12	22.73	20.88	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#24	22.54	20.69	38.45	PASS
Band5	5MHz	16QAM	20625	25RB#0	21.05	19.2	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#0	23.18	21.33	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#24	23.55	21.7	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#49	23.04	21.19	38.45	PASS
Band5	10MHz	QPSK	20450	50RB#0	22.57	20.72	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#0	22.46	20.61	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#24	22.43	20.58	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#49	22.15	20.3	38.45	PASS
Band5	10MHz	16QAM	20450	50RB#0	21.54	19.69	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#0	23.03	21.18	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#24	23.48	21.63	38.45	PASS

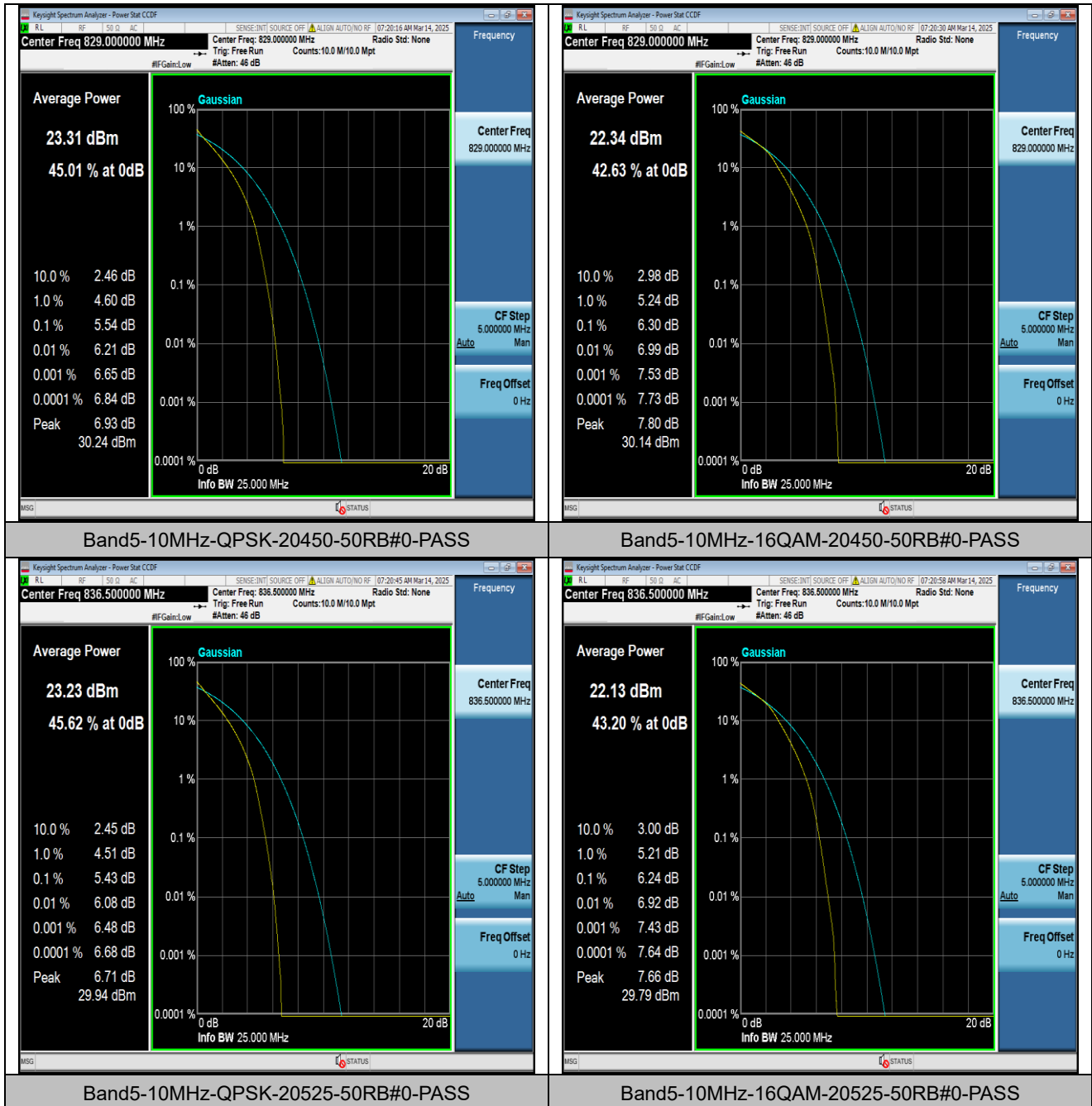
Band5	10MHz	QPSK	20525	1RB#49	23.03	21.18	38.45	PASS
Band5	10MHz	QPSK	20525	50RB#0	22.45	20.6	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#0	22.56	20.71	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#24	22.45	20.6	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#49	22.53	20.68	38.45	PASS
Band5	10MHz	16QAM	20525	50RB#0	21.47	19.62	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#0	23.06	21.21	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#24	23.18	21.33	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#49	23.23	21.38	38.45	PASS
Band5	10MHz	QPSK	20600	50RB#0	22.35	20.5	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#0	22.45	20.6	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#24	22.73	20.88	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#49	22.56	20.71	38.45	PASS
Band5	10MHz	16QAM	20600	50RB#0	21.36	19.51	38.45	PASS

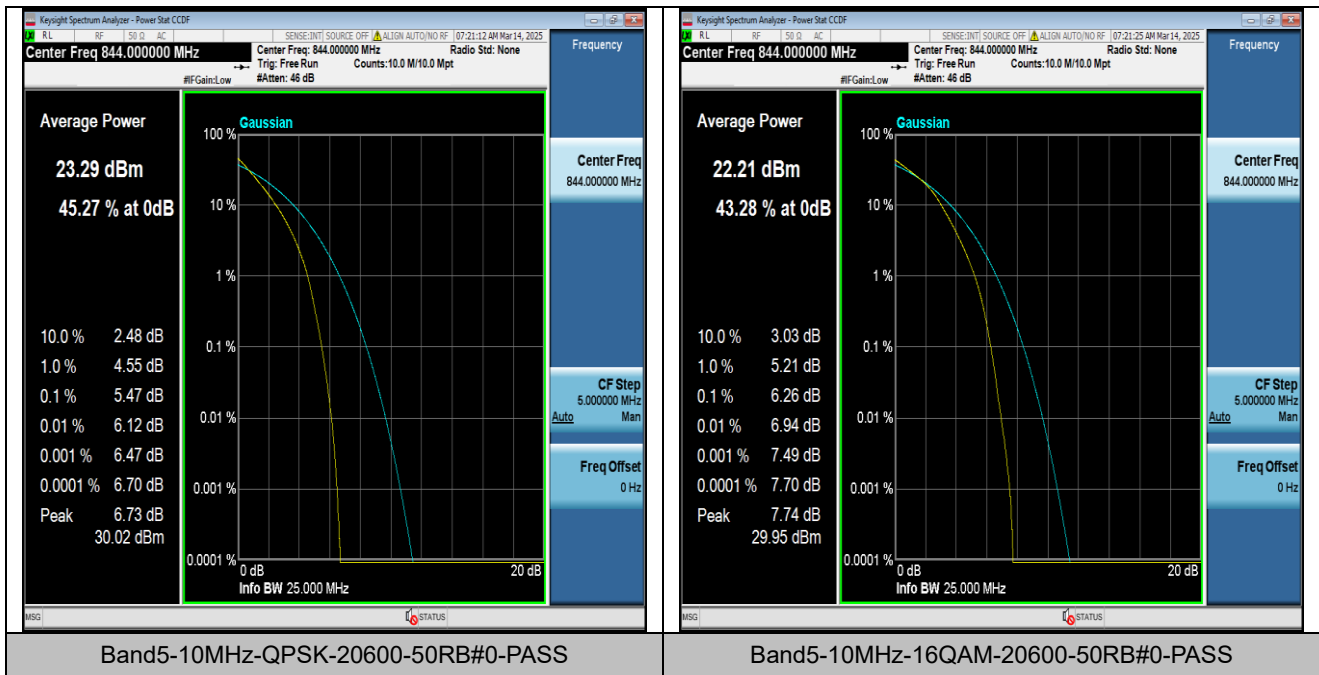
Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
Band5	10MHz	QPSK	20450	50RB#0	5.54	13	PASS
Band5	10MHz	16QAM	20450	50RB#0	6.30	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	5.43	13	PASS
Band5	10MHz	16QAM	20525	50RB#0	6.24	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	5.47	13	PASS
Band5	10MHz	16QAM	20600	50RB#0	6.26	13	PASS

Test Graphs



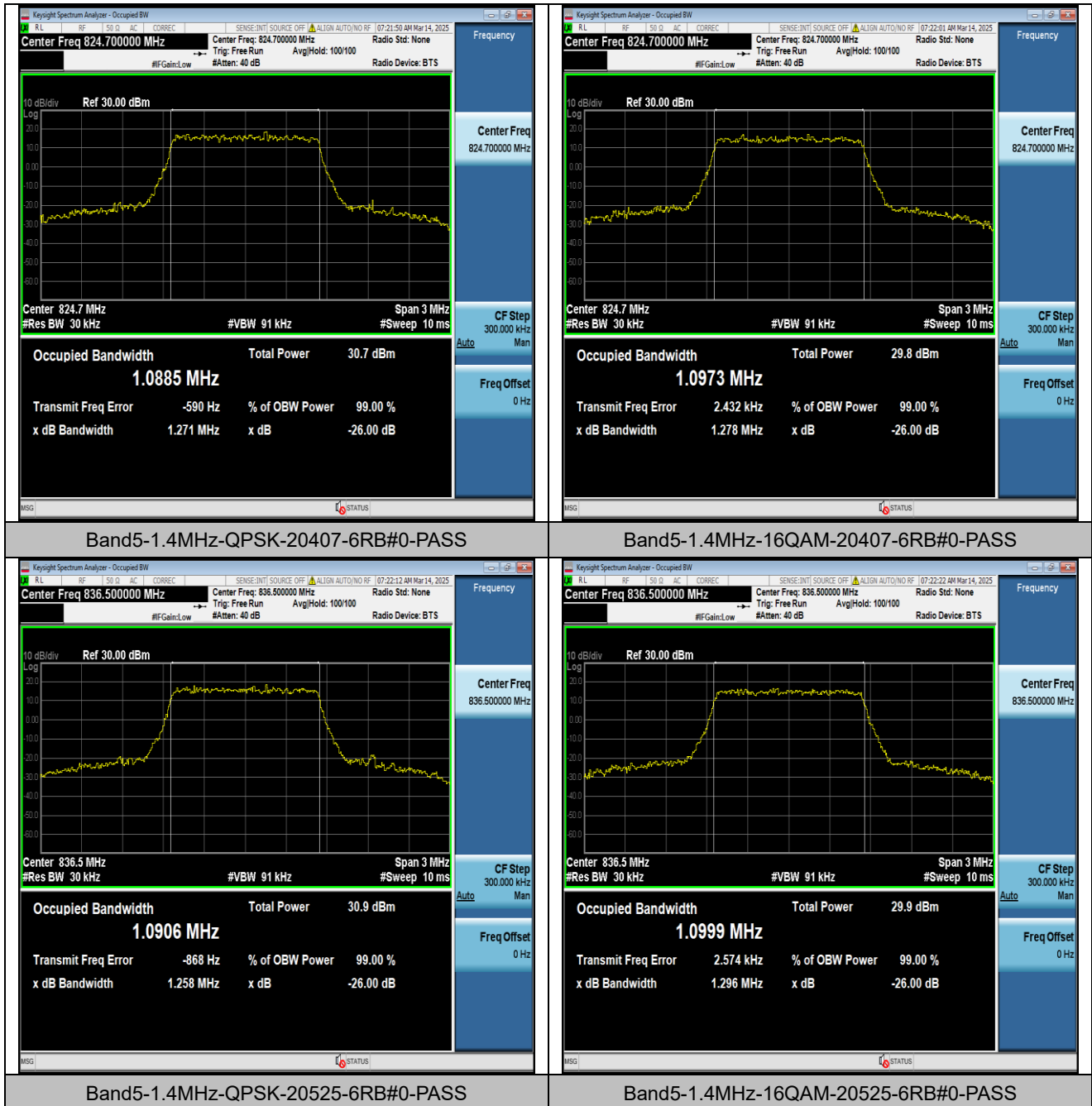


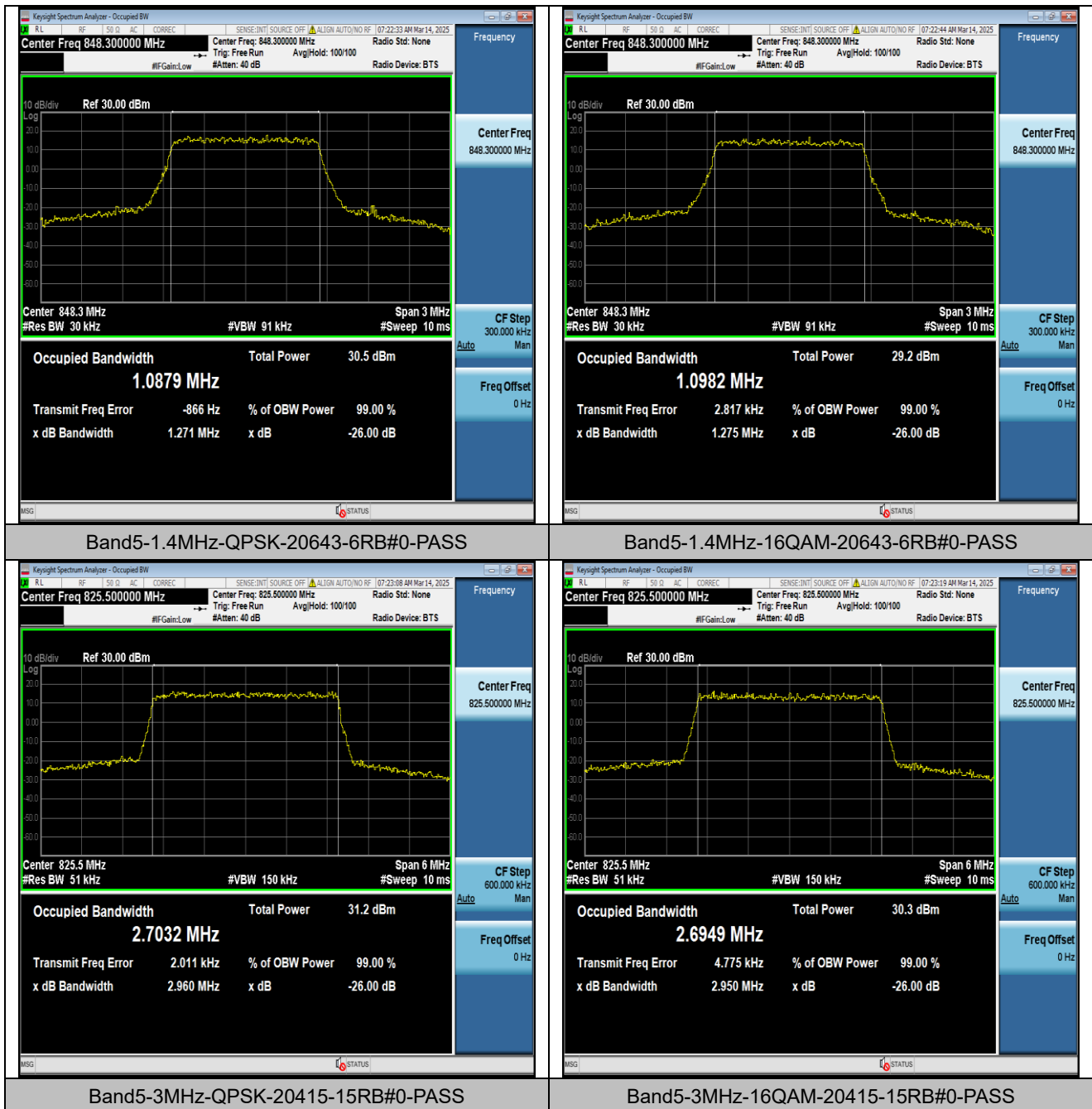
26dB Bandwidth and Occupied Bandwidth

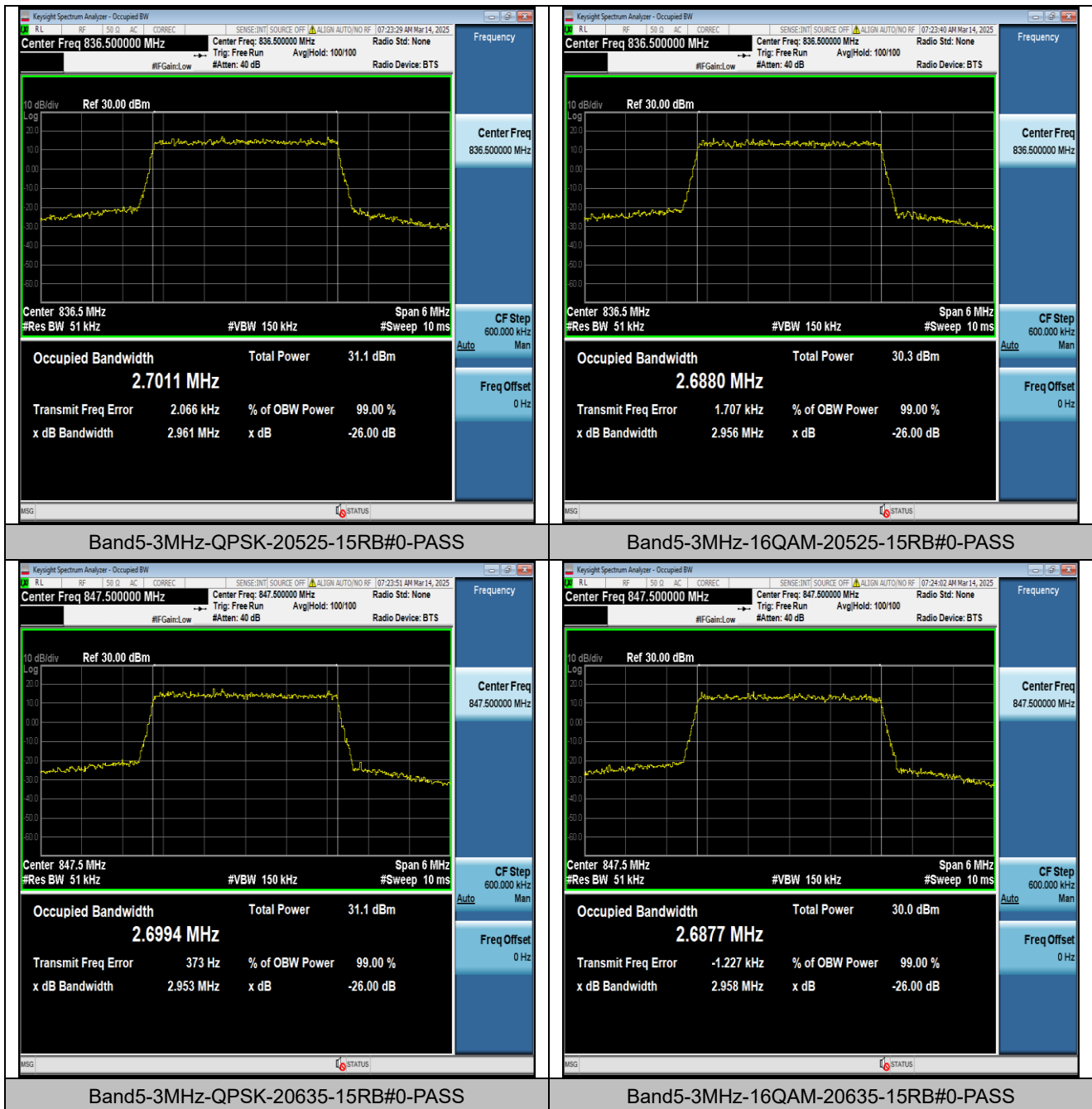
Test Result

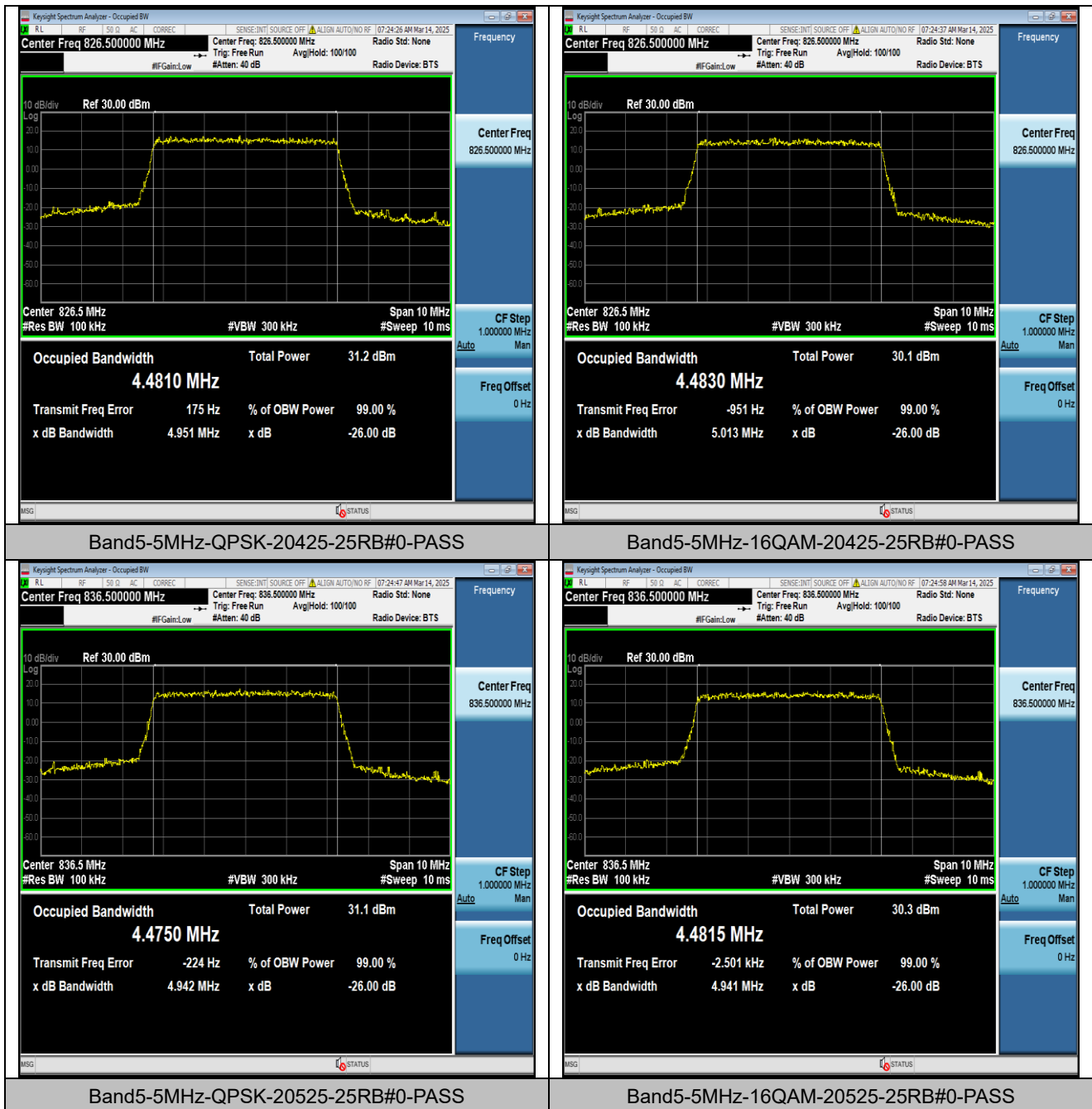
Band	Bandwidth	Modulation	Channel	RB Configuration	OBW (MHz)	26dB EBW (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.0885	1.271	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.0973	1.278	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.0906	1.258	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.0999	1.296	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.0879	1.271	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.0982	1.275	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.7032	2.960	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.6949	2.950	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.7011	2.961	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.6880	2.956	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.6994	2.953	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.6877	2.958	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.4810	4.951	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.4830	5.013	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.4750	4.942	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.4815	4.941	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.4759	4.926	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.4793	4.945	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.9657	9.852	PASS
Band5	10MHz	16QAM	20450	50RB#0	8.9495	9.769	PASS
Band5	10MHz	QPSK	20525	50RB#0	8.9766	9.760	PASS
Band5	10MHz	16QAM	20525	50RB#0	8.9422	9.777	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.9722	9.855	PASS
Band5	10MHz	16QAM	20600	50RB#0	8.9517	9.817	PASS

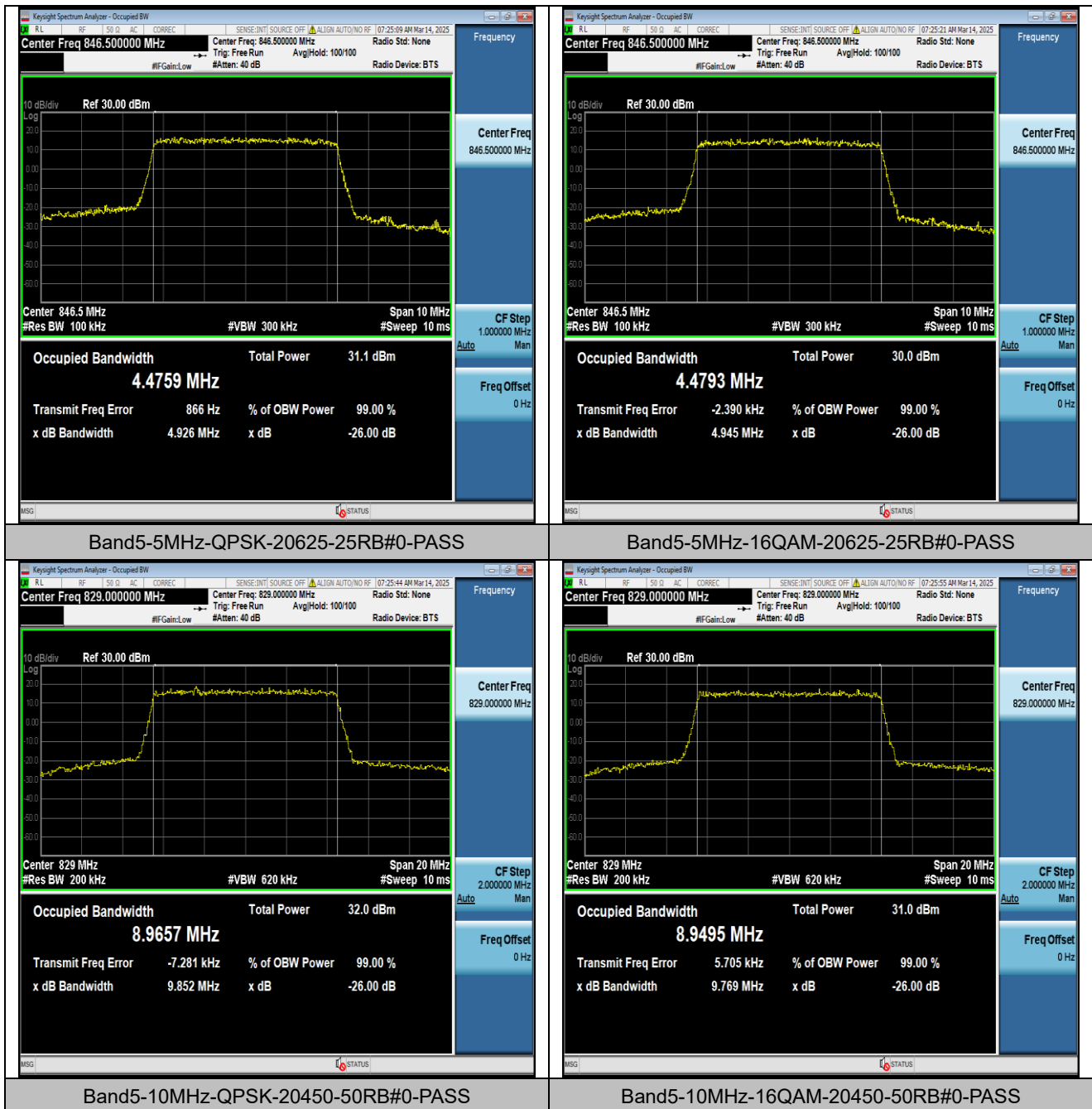
Test Graphs

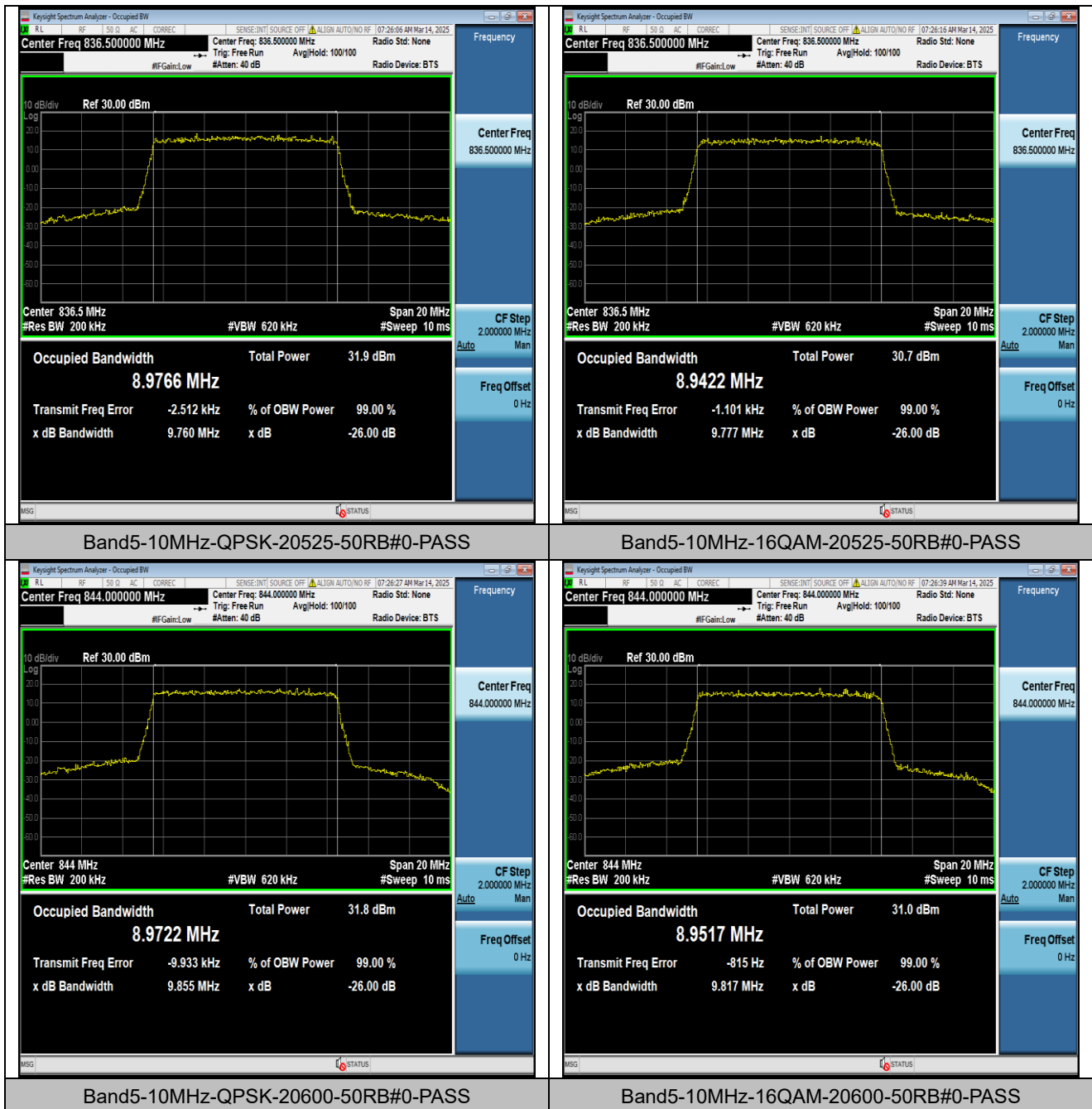






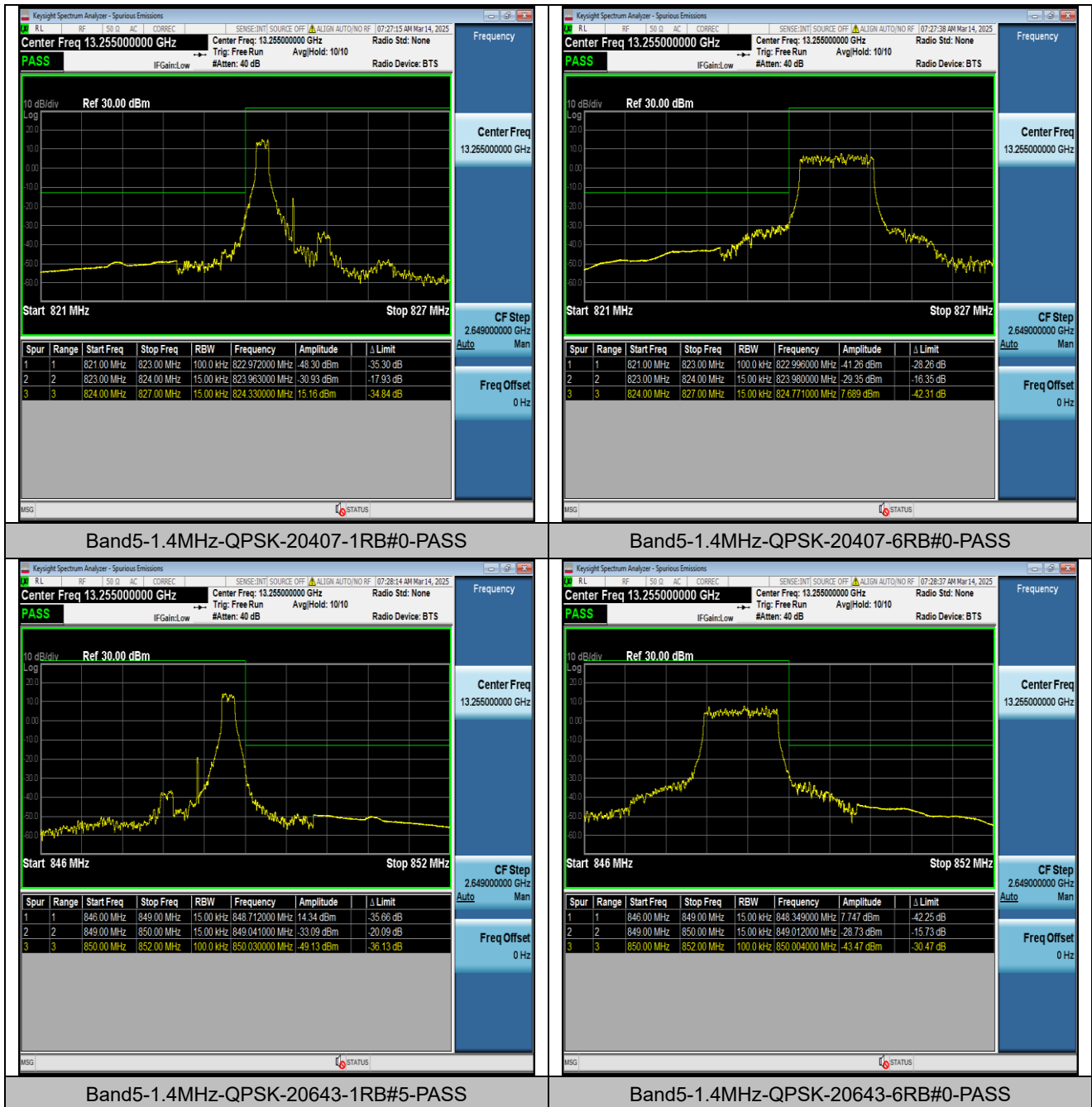


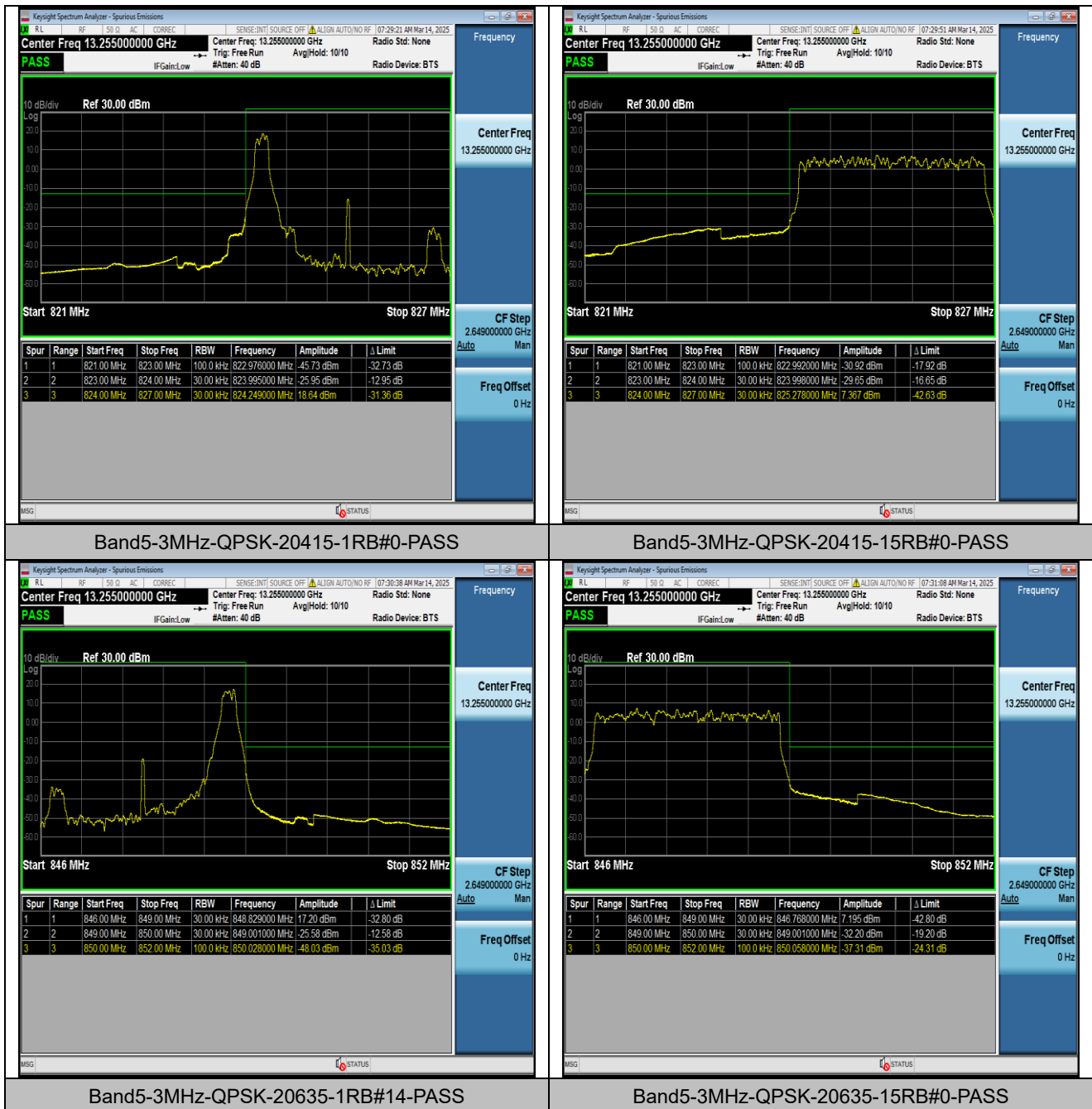


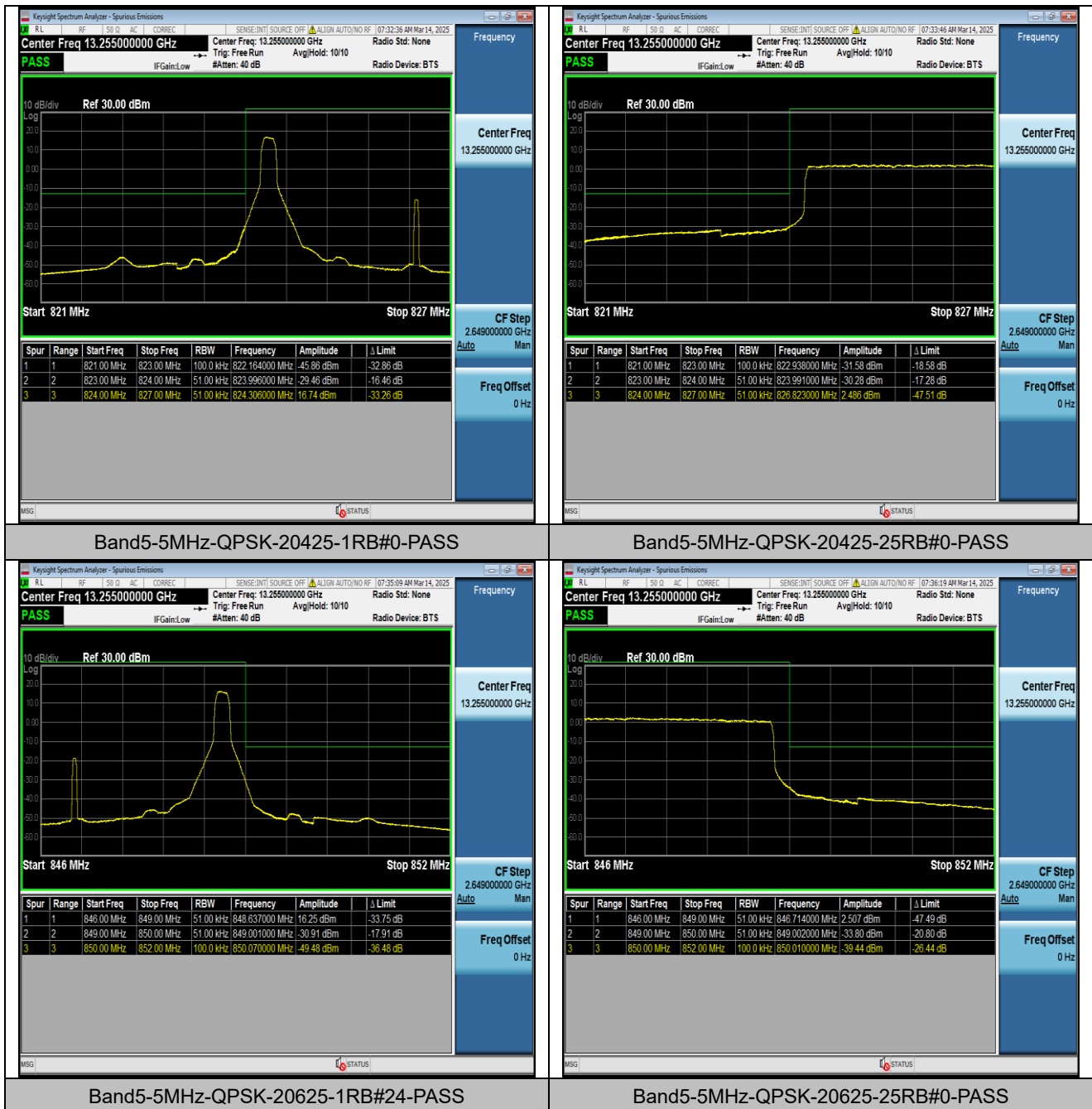


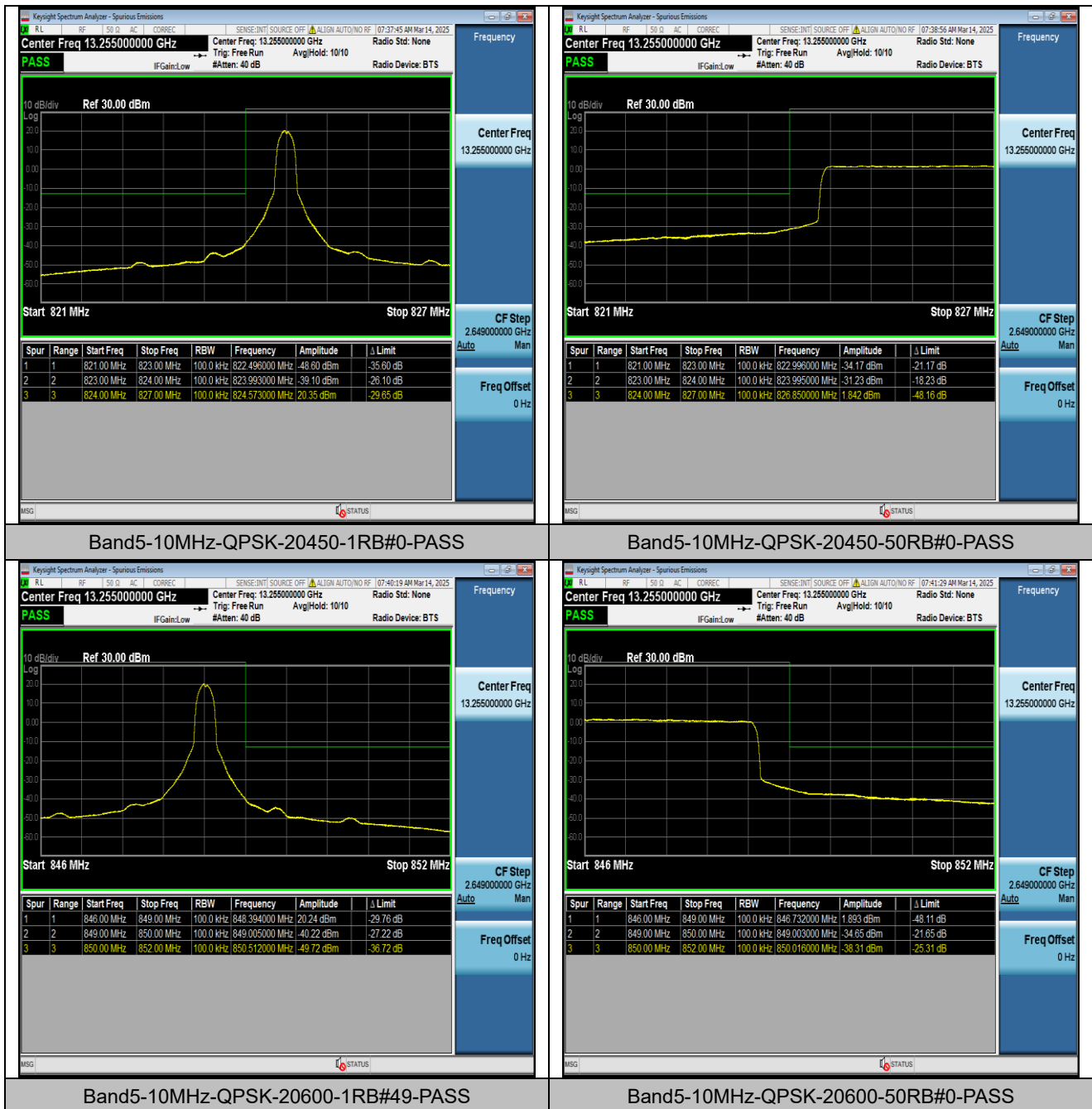
Band Edge

Test Graphs



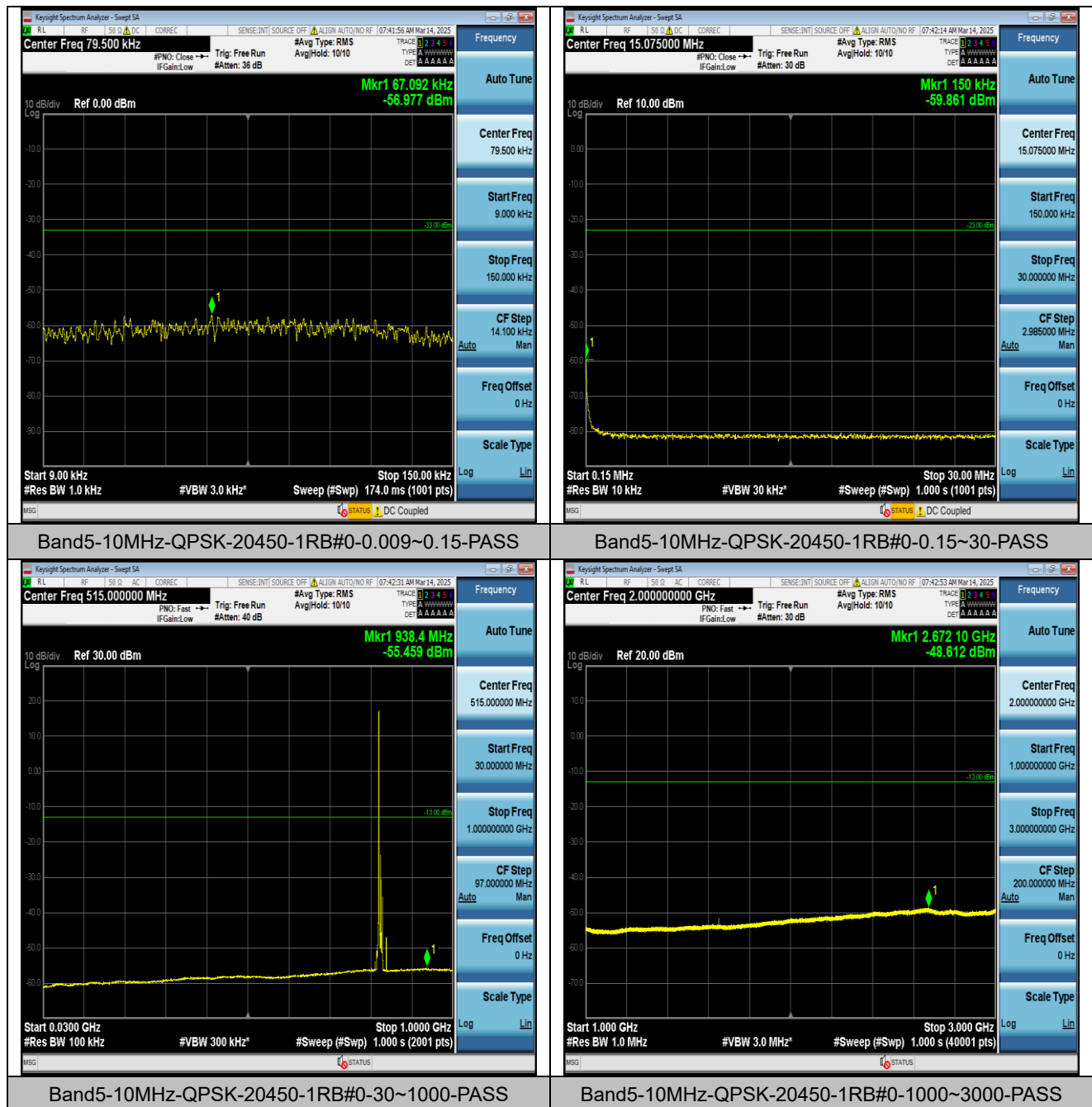


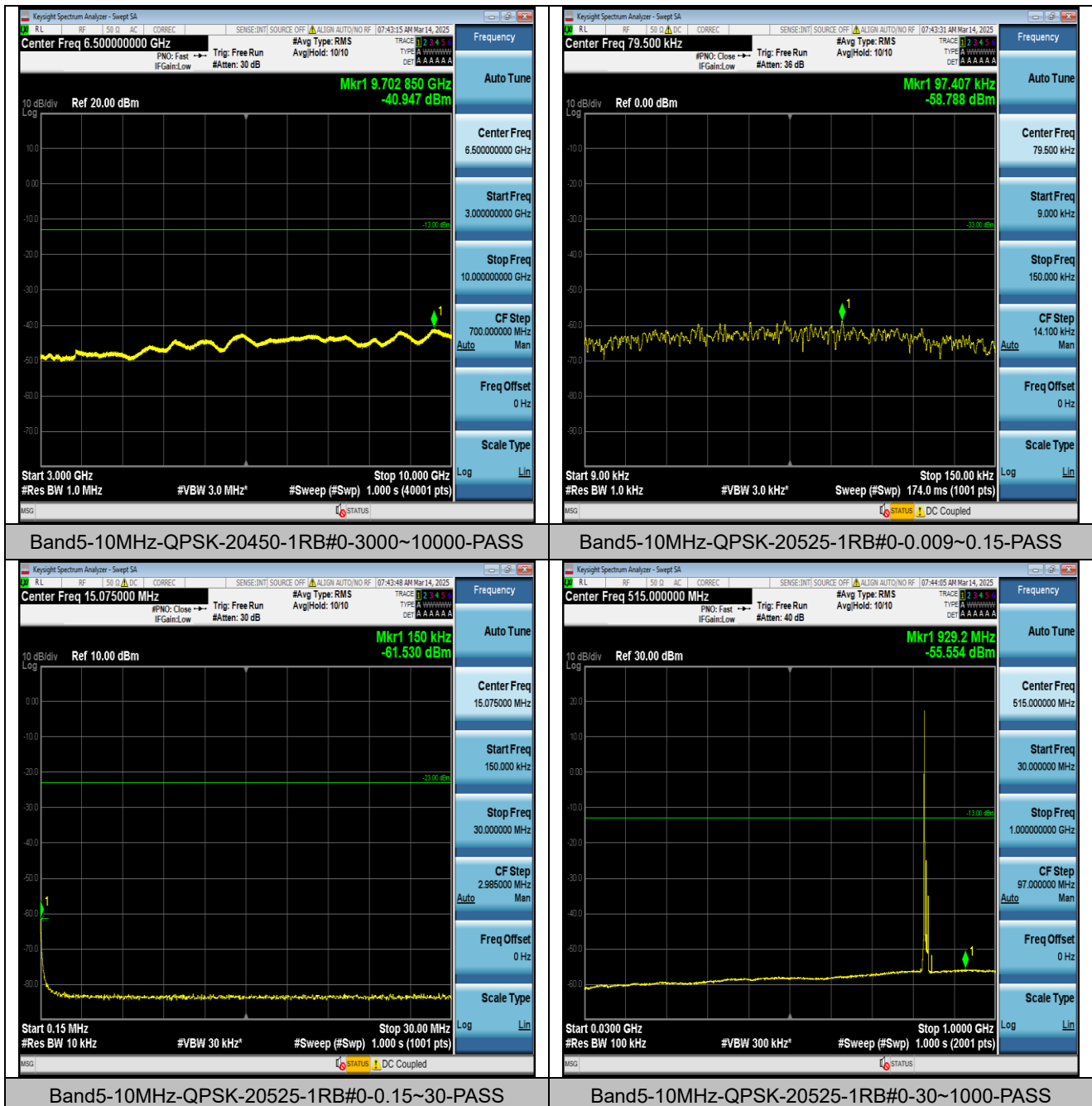


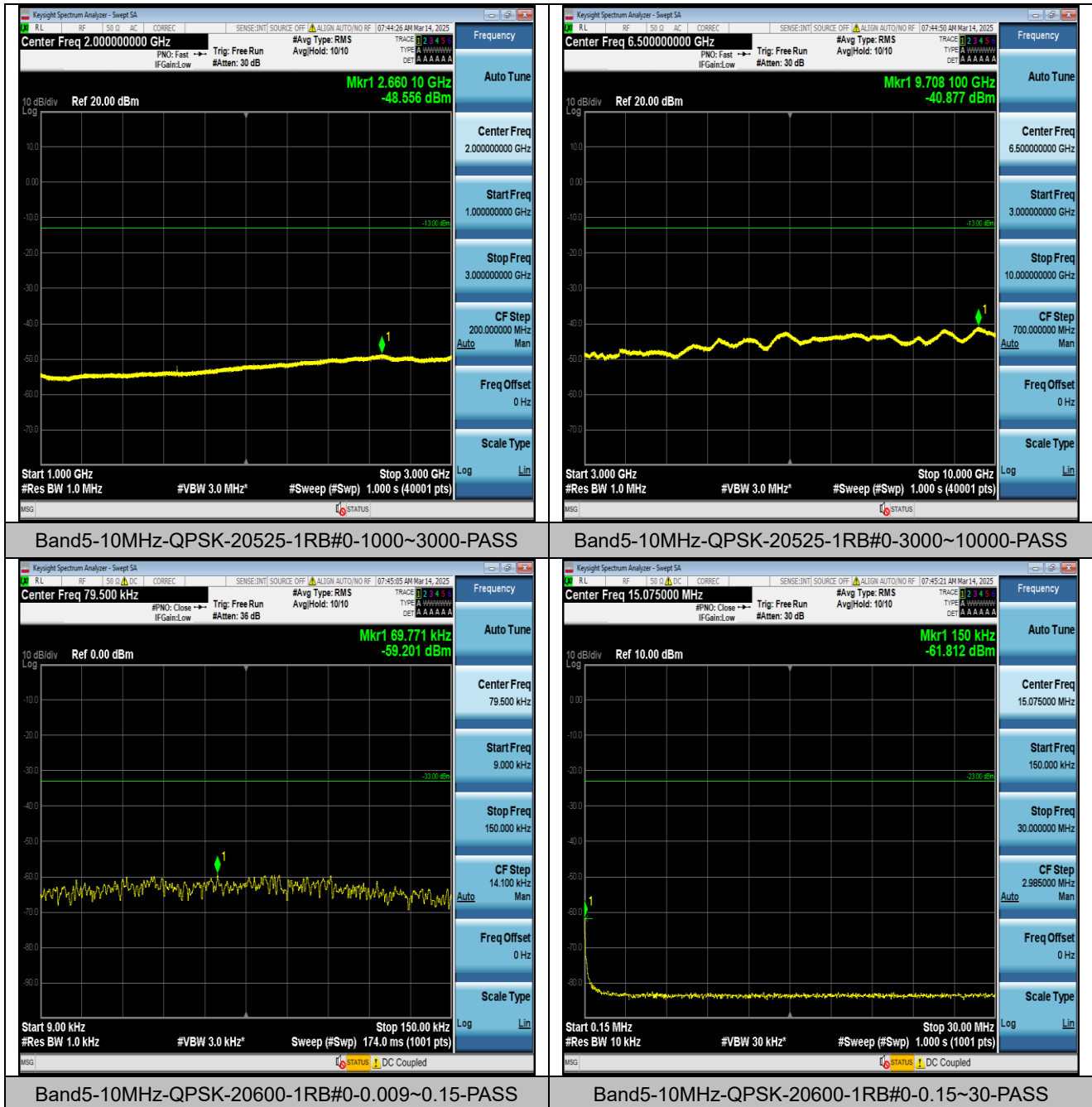


Conducted Spurious Emission

Test Graphs

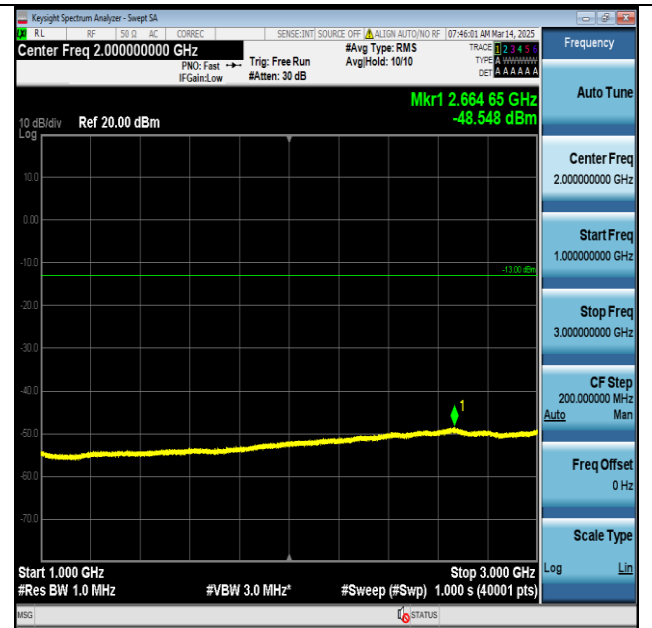




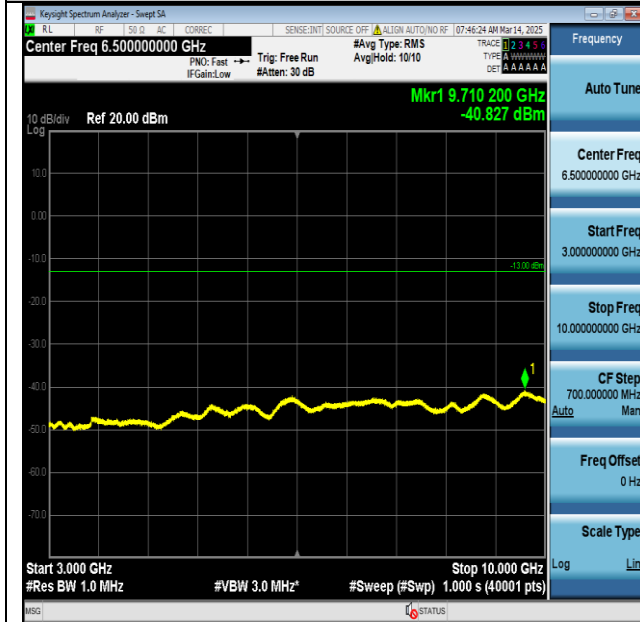




Band5-10MHz-QPSK-20600-1RB#0-30~1000-PASS



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	100RB#0	VN	NT	1.60	0.001913	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	VL	NT	2.10	0.002510	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	VH	NT	1.40	0.001674	±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	100RB#0	NV	-30	1.90	0.002271	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	NV	-20	0.60	0.000717	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	NV	-10	1.80	0.002152	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	NV	0	0.60	0.000717	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	NV	10	-0.20	-0.000239	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	NV	20	0.60	0.000717	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	NV	30	1.90	0.002271	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	NV	40	-0.20	-0.000239	±2.5	PASS
Band5	10MHz	QPSK	20525	100RB#0	NV	50	0.80	0.000956	±2.5	PASS

~The End~