

Appendix-C LTE NB-IoT Band 71

Effective (Isotropic) Radiated Power Output Data for NB1

Test Result

Band	OpMode	SCS	BW	Modulation	Channel	Tones	POWER (dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133124	1@0	20.51	20.02	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133124	1@0	20.58	20.09	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133124	1@47	20.54	20.05	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133124	1@47	20.51	20.02	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133297	1@0	20.57	20.08	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	20.58	20.09	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133297	1@47	20.52	20.03	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	20.55	20.06	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133470	1@0	20.51	20.02	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133470	1@0	20.56	20.07	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133470	1@47	20.42	19.93	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133470	1@47	20.51	20.02	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133124	1@0	20.68	20.19	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	1@0	20.73	20.24	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133124	1@11	20.67	20.18	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	1@11	20.68	20.19	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133297	1@0	20.68	20.19	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	20.72	20.23	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133297	1@11	20.63	20.14	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	20.65	20.16	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133470	1@0	20.51	20.02	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	1@0	20.41	19.92	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133470	1@11	20.53	20.04	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	1@11	20.48	19.99	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	3@3	20.49	20	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	3@3	20.45	19.96	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	3@3	20.47	19.98	34.77	PASS

Band 71-15kHz-1@0-BPSK-133124-PASS

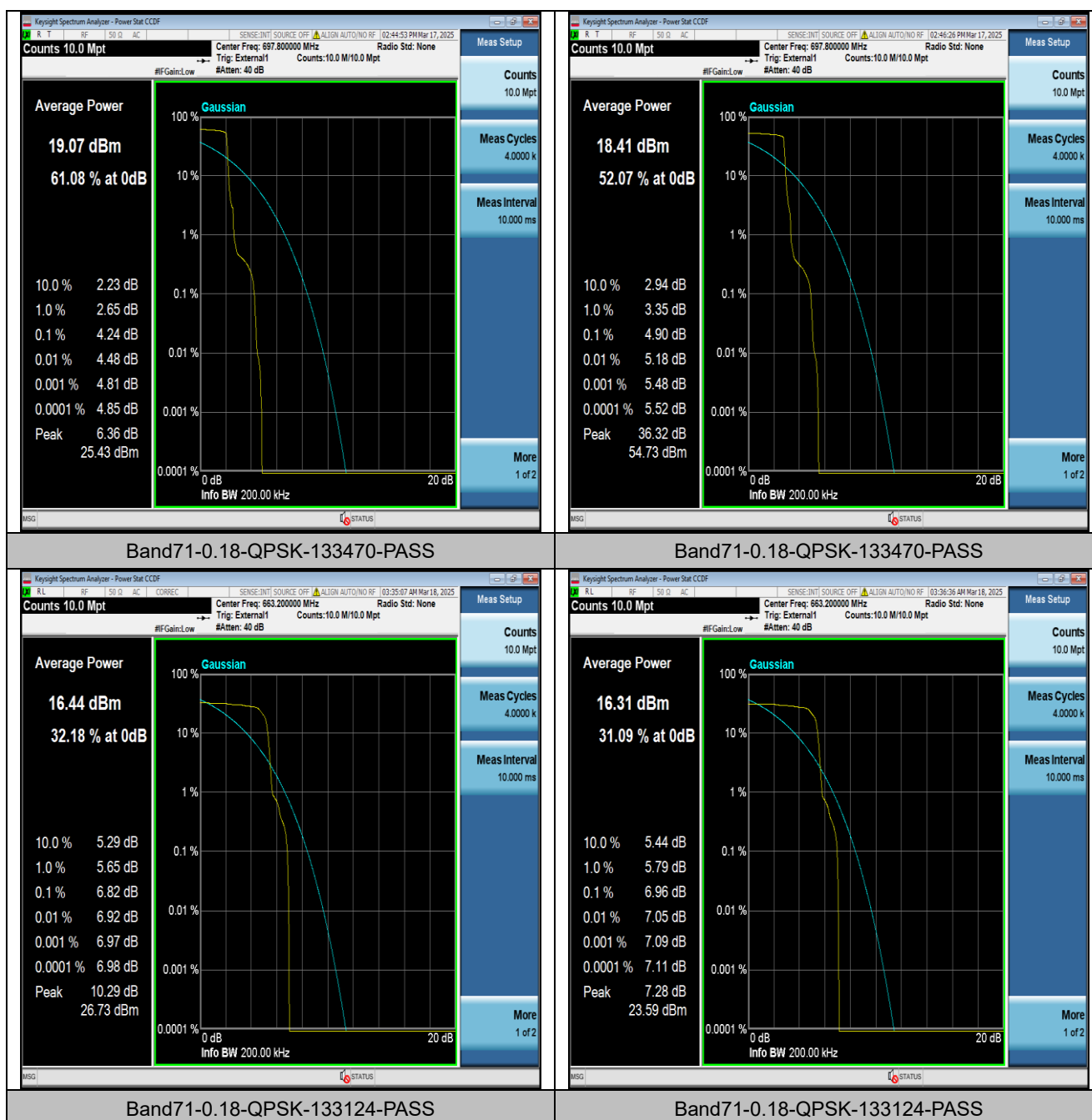
Band 71-15kHz-3@3-QPSK-133124-PASS

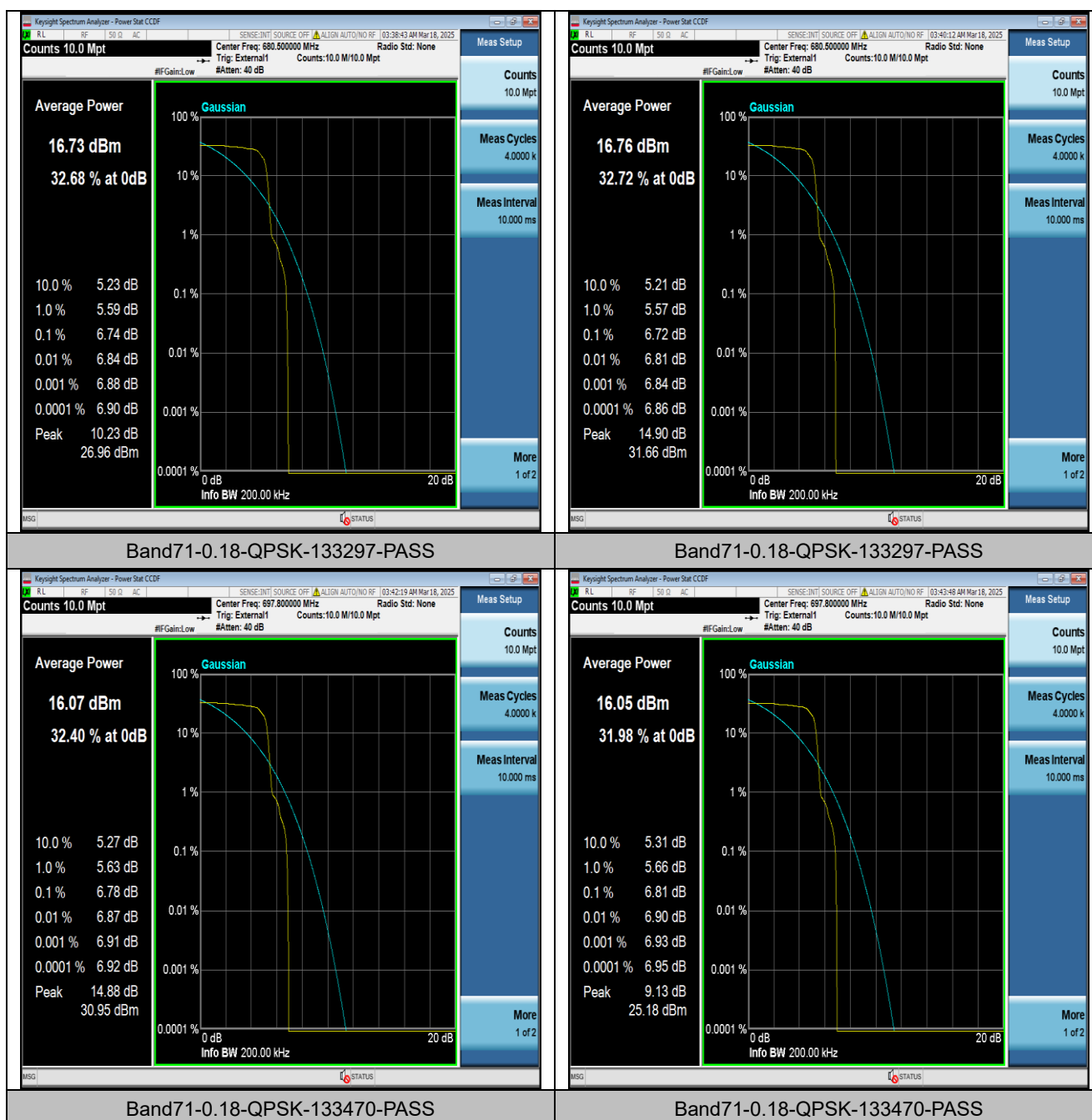
Peak-to-Average Ratio(CCDF) for NB1**Test Result**

Band	OpMode	SCS	BW	Modulation	Channel	Tones	Result (dBm)	Limit (dBm)	Verdict
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133124	1@0	4.3	<=13	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133124	1@47	4.25	<=13	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	4.27	<=13	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	4.87	<=13	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133470	1@0	4.24	<=13	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133470	1@47	4.9	<=13	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	1@0	6.82	<=13	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	1@11	6.96	<=13	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	6.74	<=13	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	6.72	<=13	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	1@0	6.78	<=13	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	1@11	6.81	<=13	PASS

Test Graphs





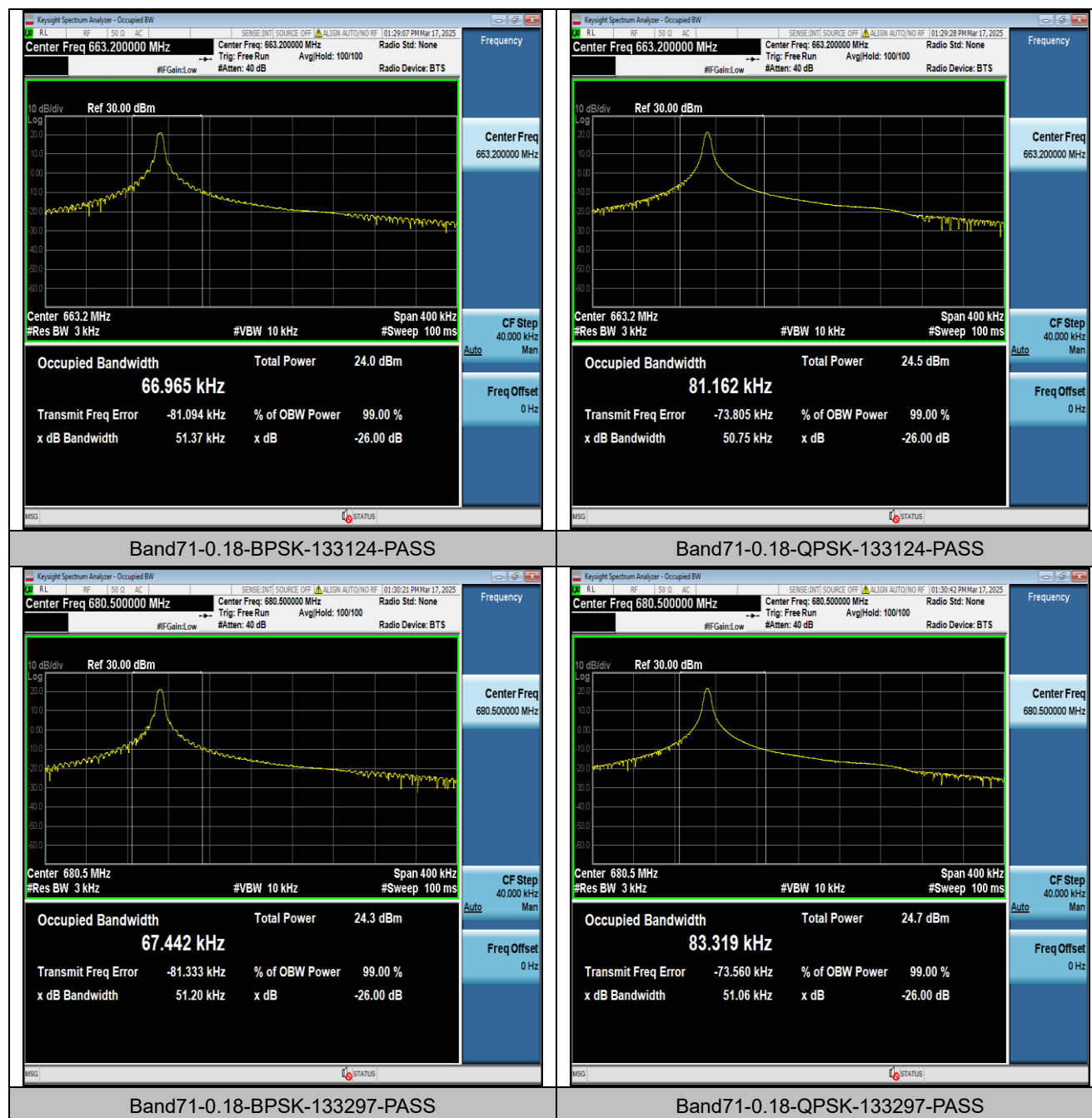


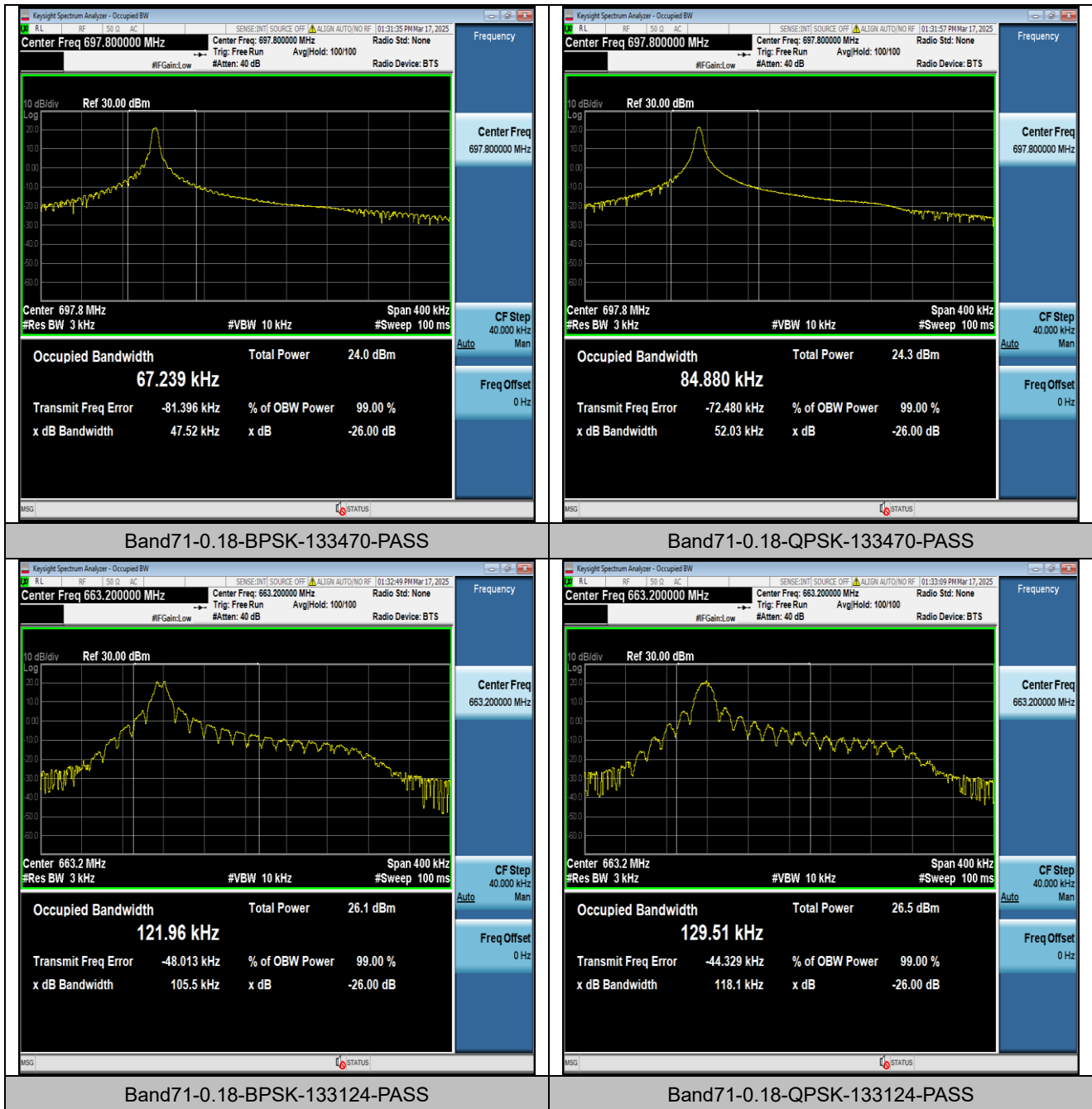
Emission Bandwidth for NB1

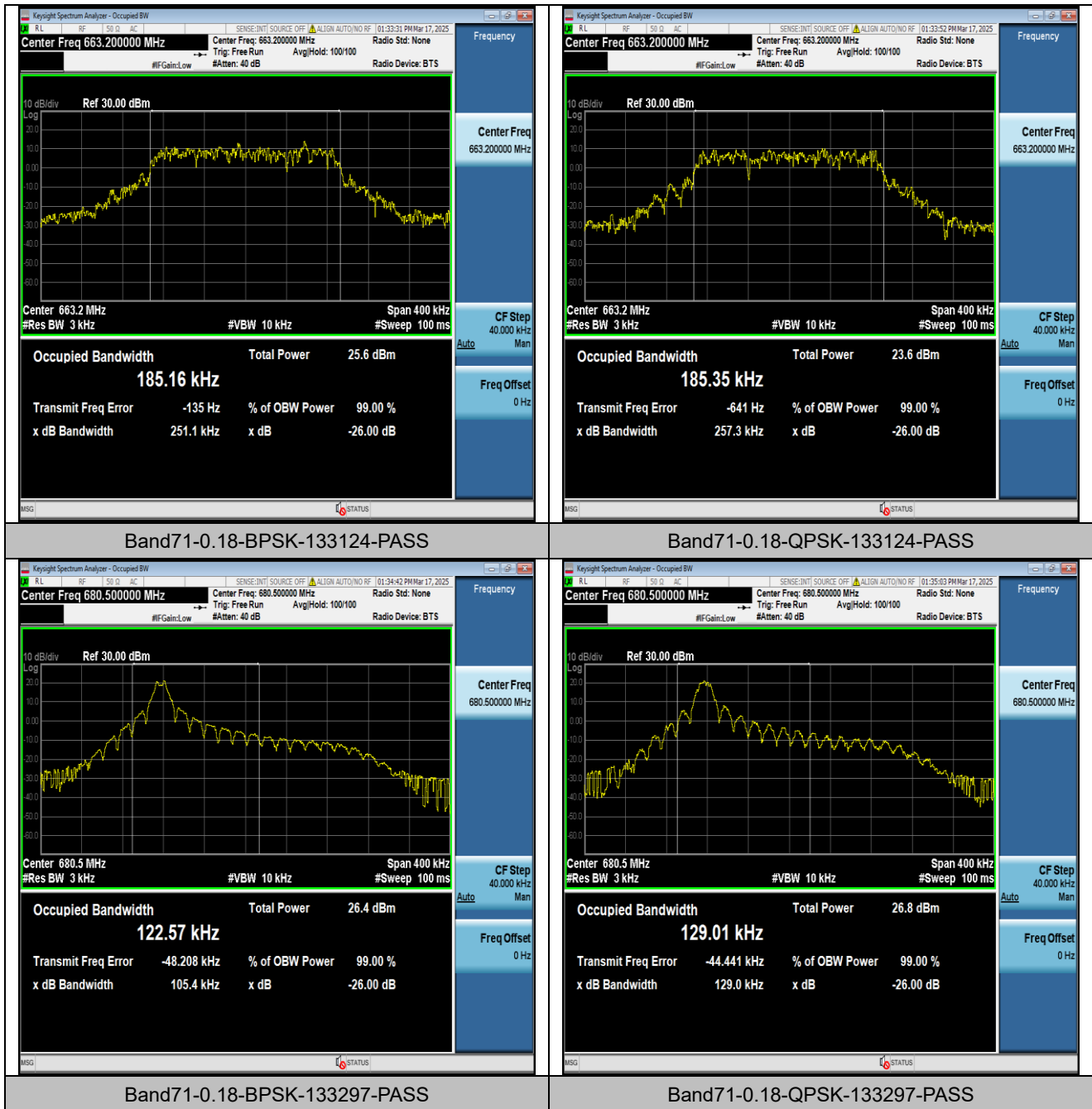
Test Result

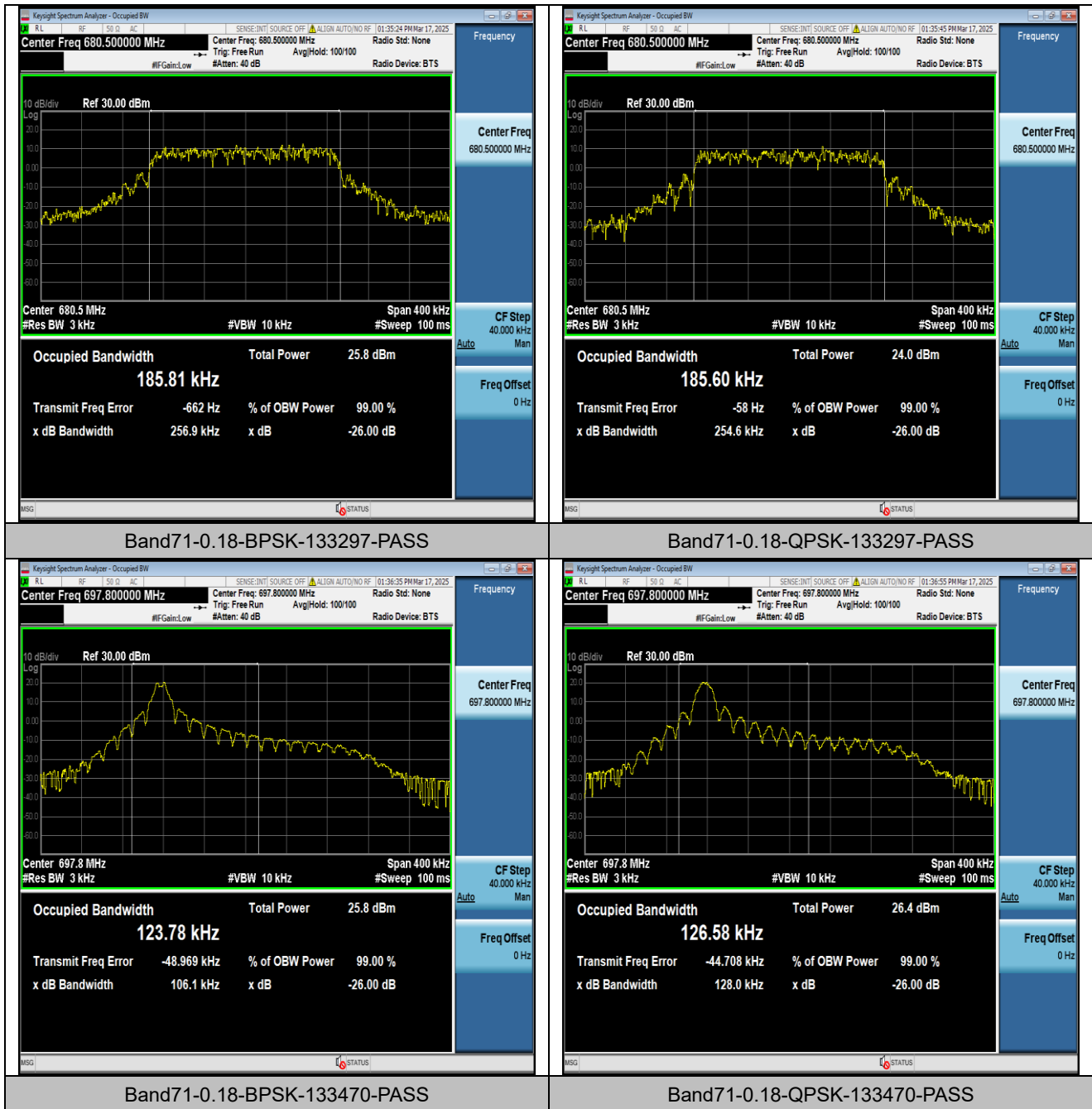
Band	OpMode	SCS	BW	Modulation	Channel	Tones	OBW(MHz)	EBW(MHz)	Verdict
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133124	1@0	0.06697	0.0514	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133124	1@0	0.08116	0.0507	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133297	1@0	0.06744	0.0512	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	0.08332	0.0511	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133470	1@0	0.06724	0.0475	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133470	1@0	0.08488	0.0520	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133124	1@0	0.12196	0.1055	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	1@0	0.12951	0.1181	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133124	12@0	0.18516	0.2511	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	12@0	0.18535	0.2573	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133297	1@0	0.12257	0.1054	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	0.12901	0.1290	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133297	12@0	0.18581	0.2569	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	12@0	0.18560	0.2546	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133470	1@0	0.12378	0.1061	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	1@0	0.12658	0.1280	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133470	12@0	0.18621	0.2375	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	12@0	0.18957	0.2492	PASS

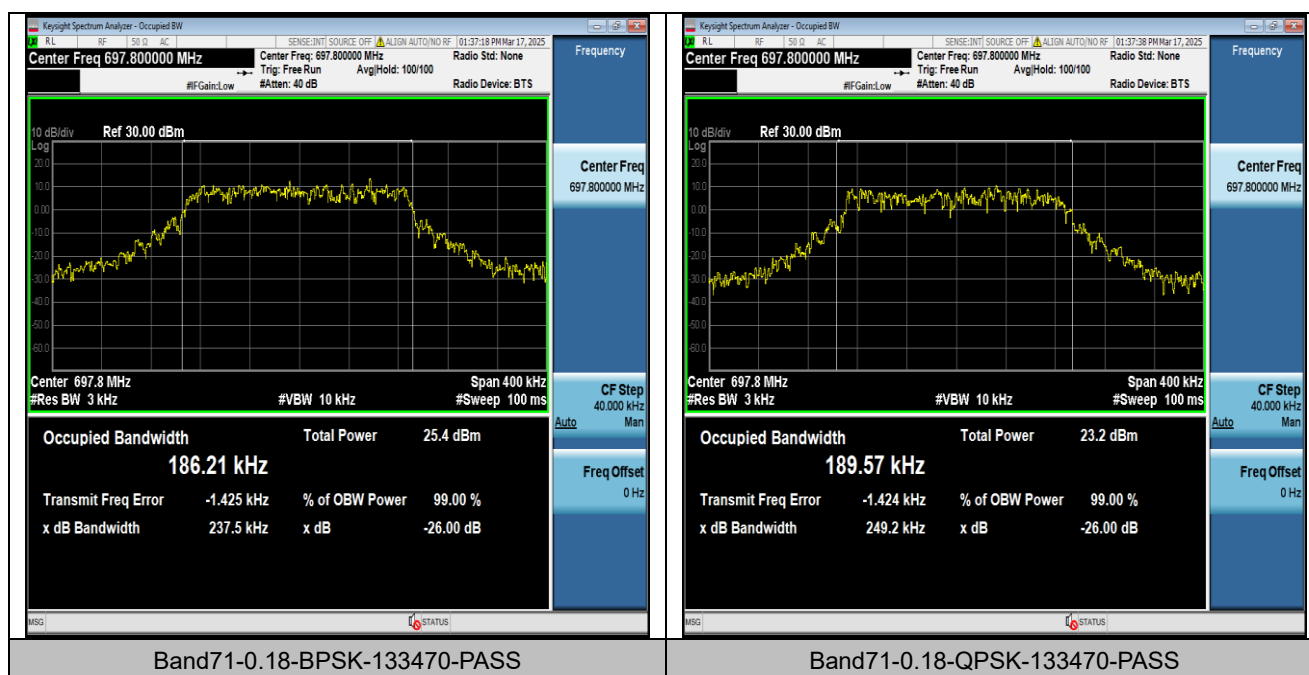
Test Graphs





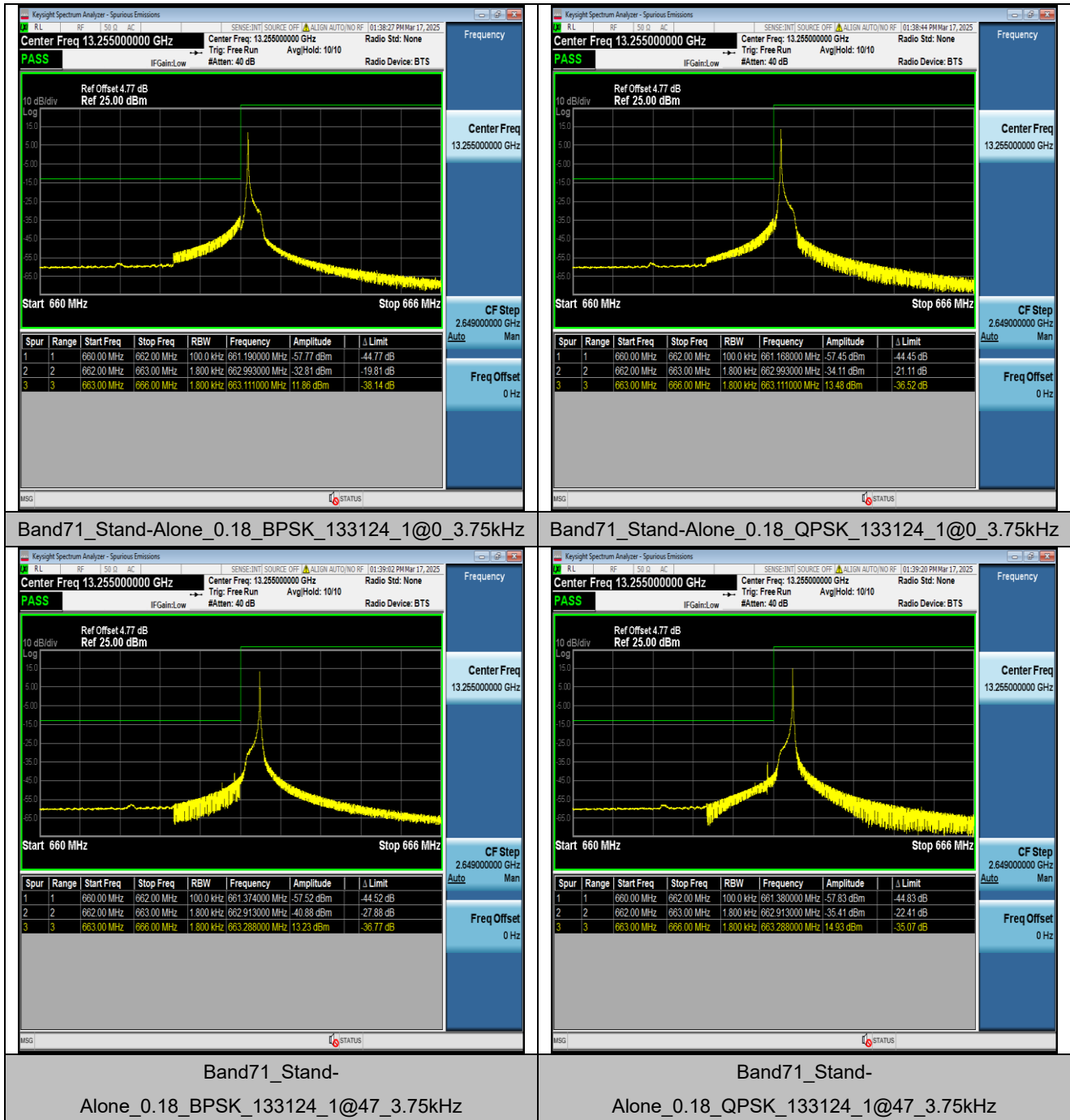


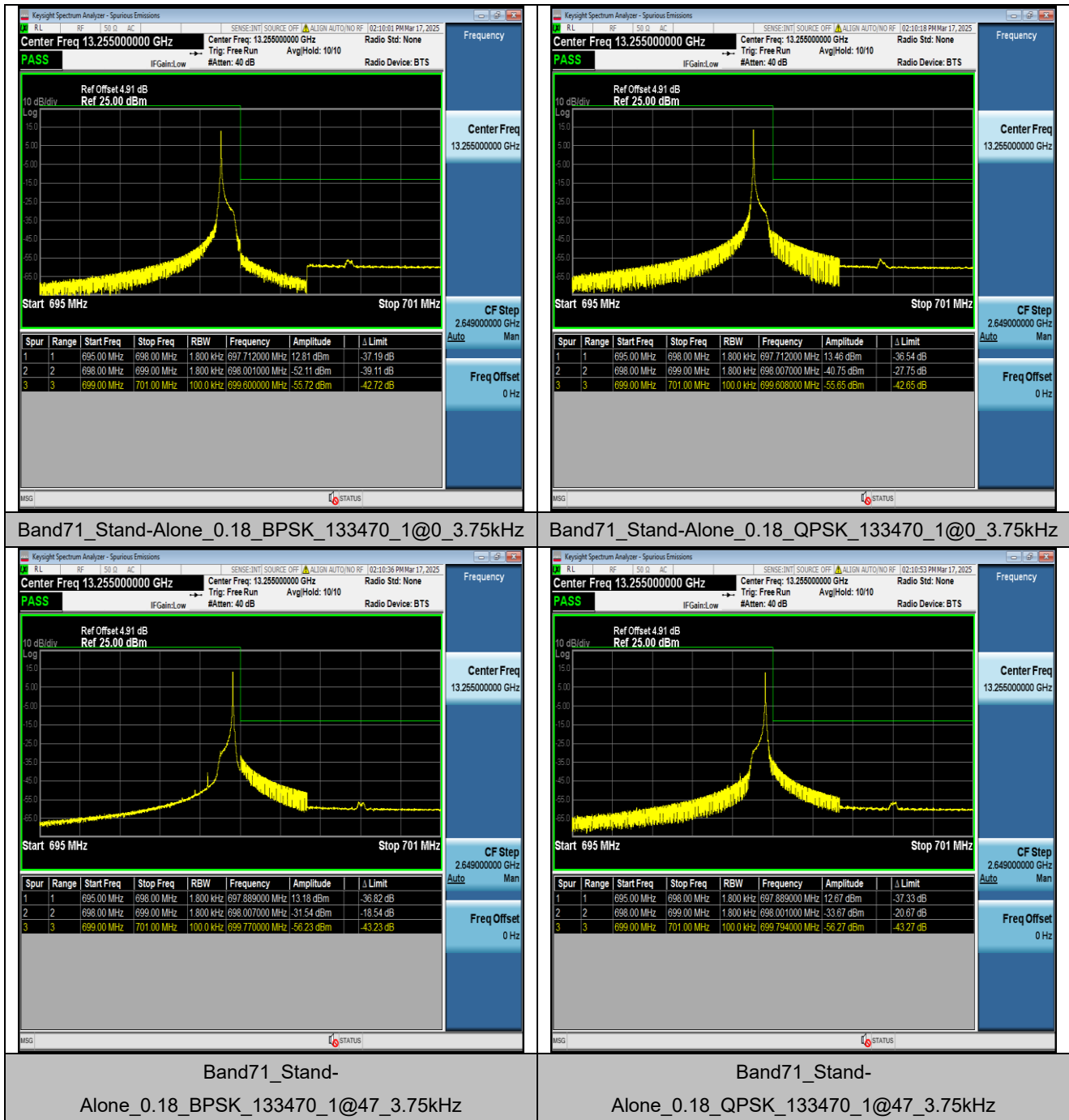


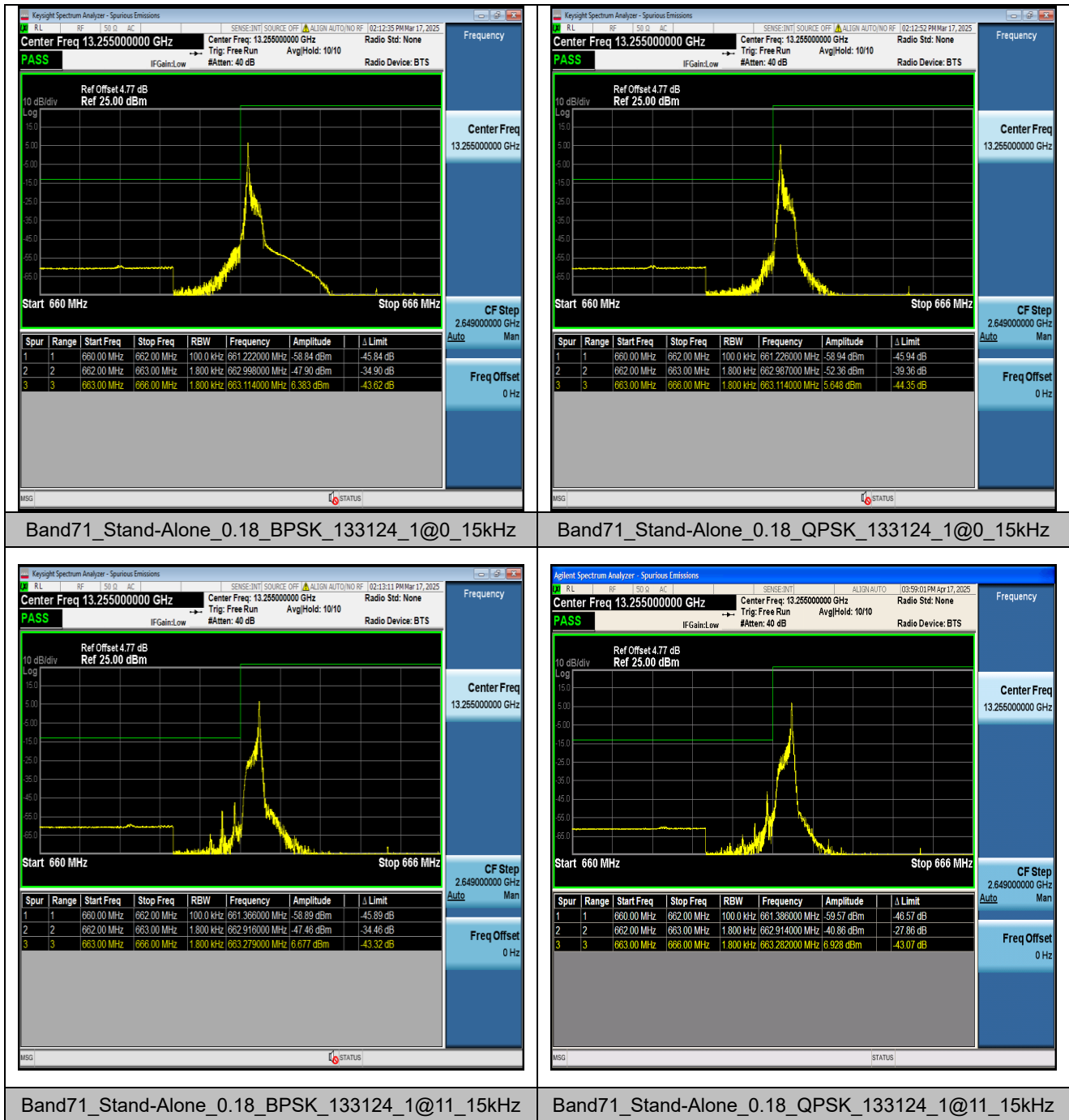


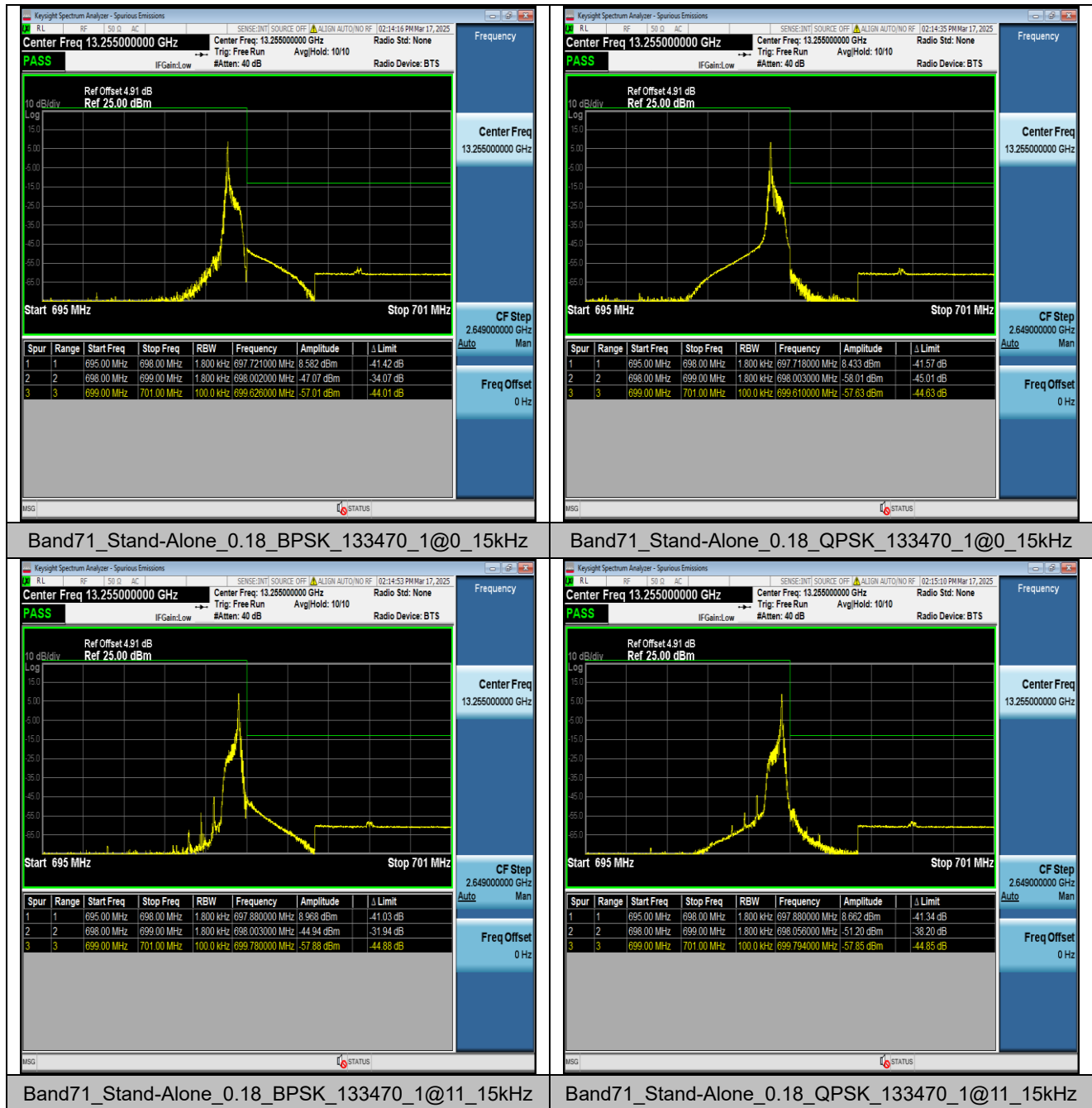
Band Edge for NB1

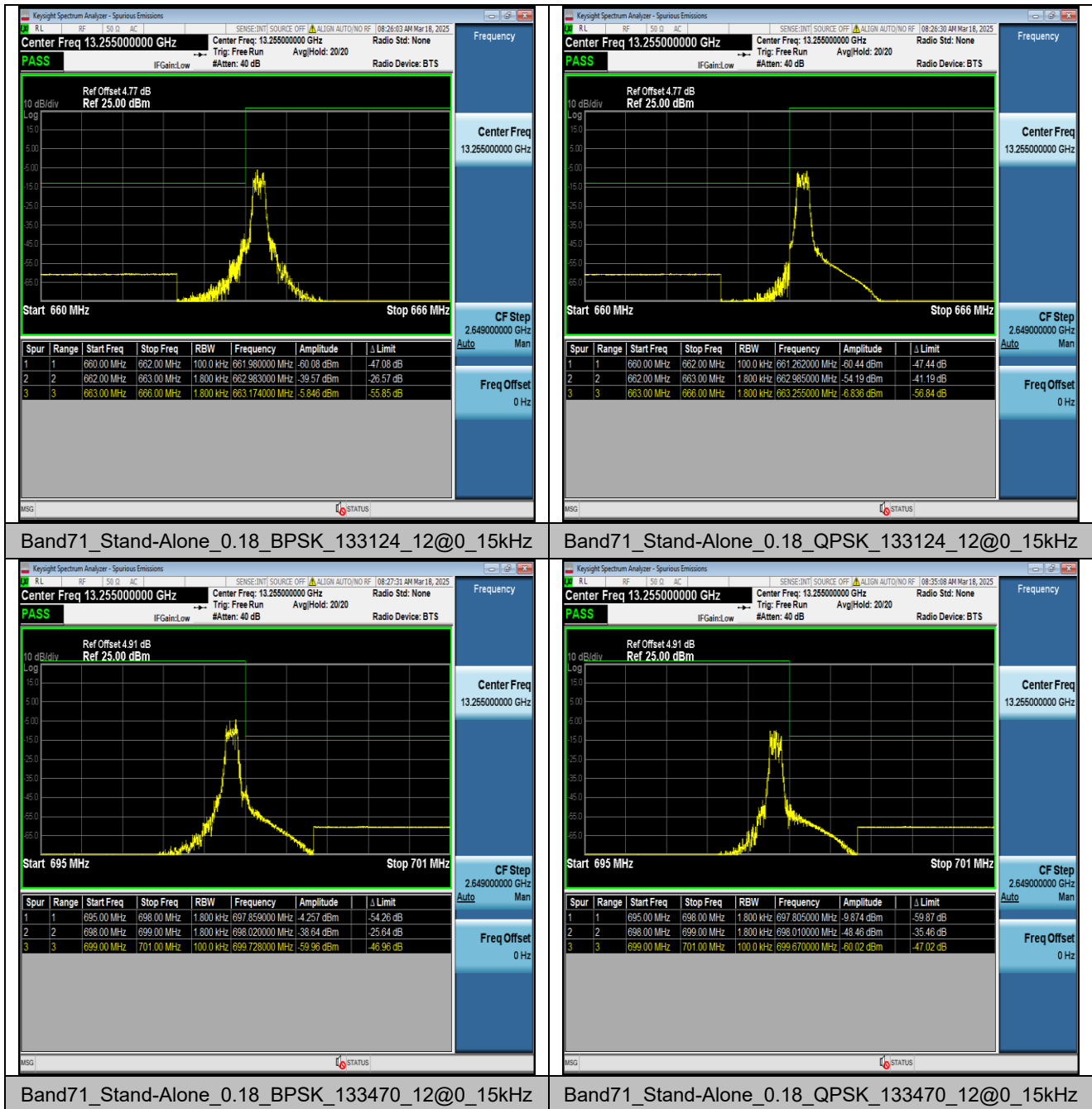
Test Graphs





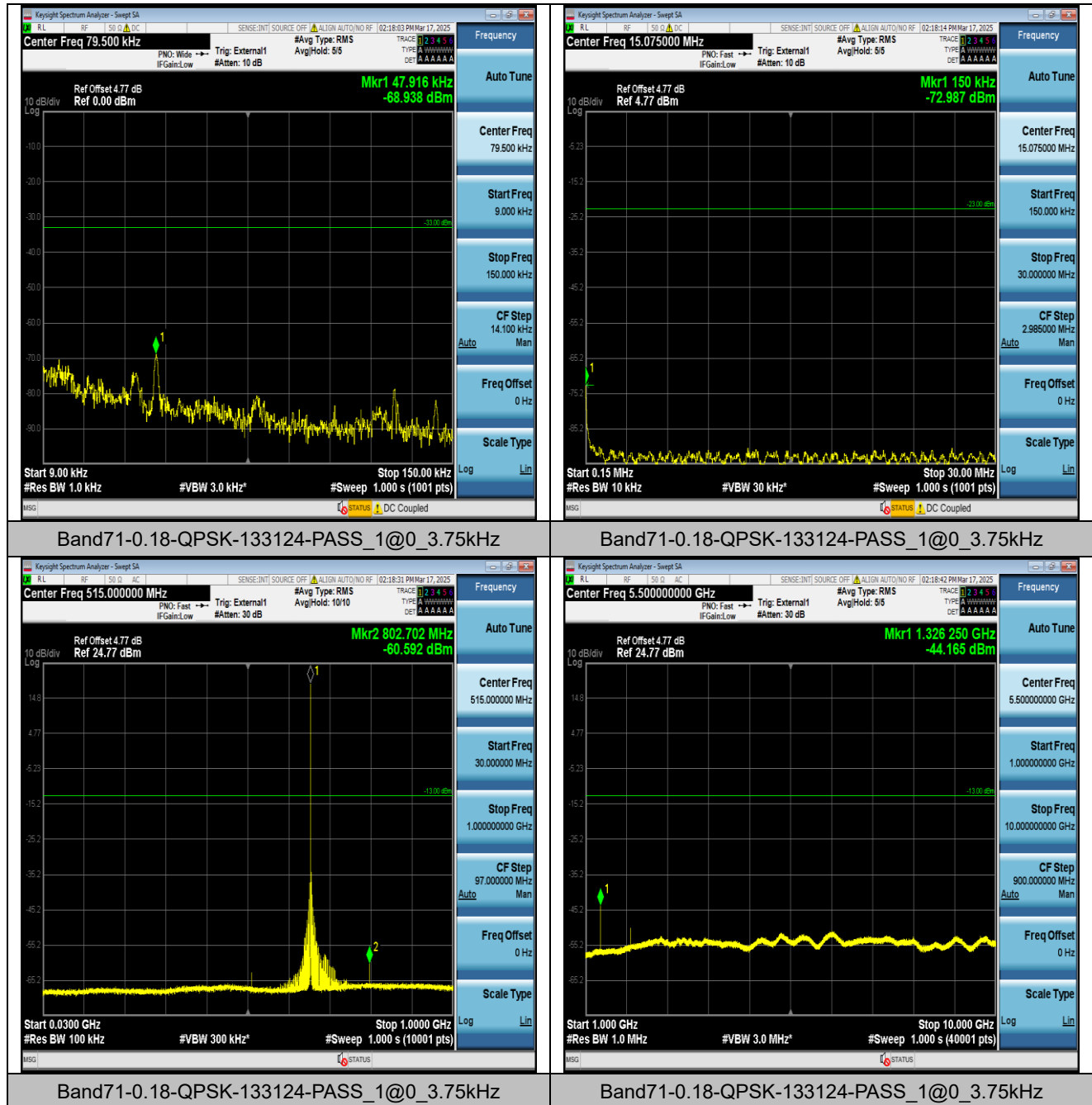


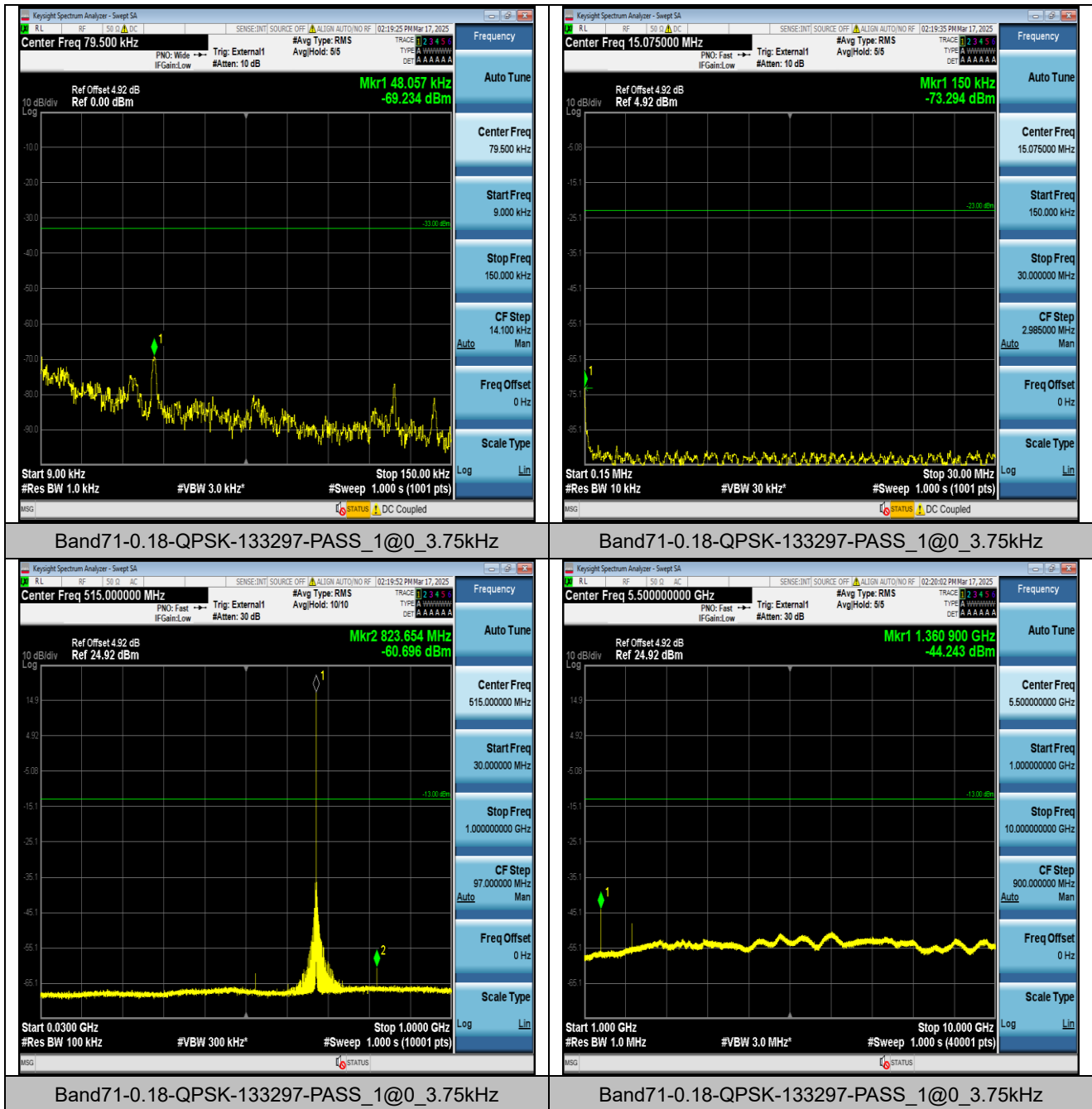


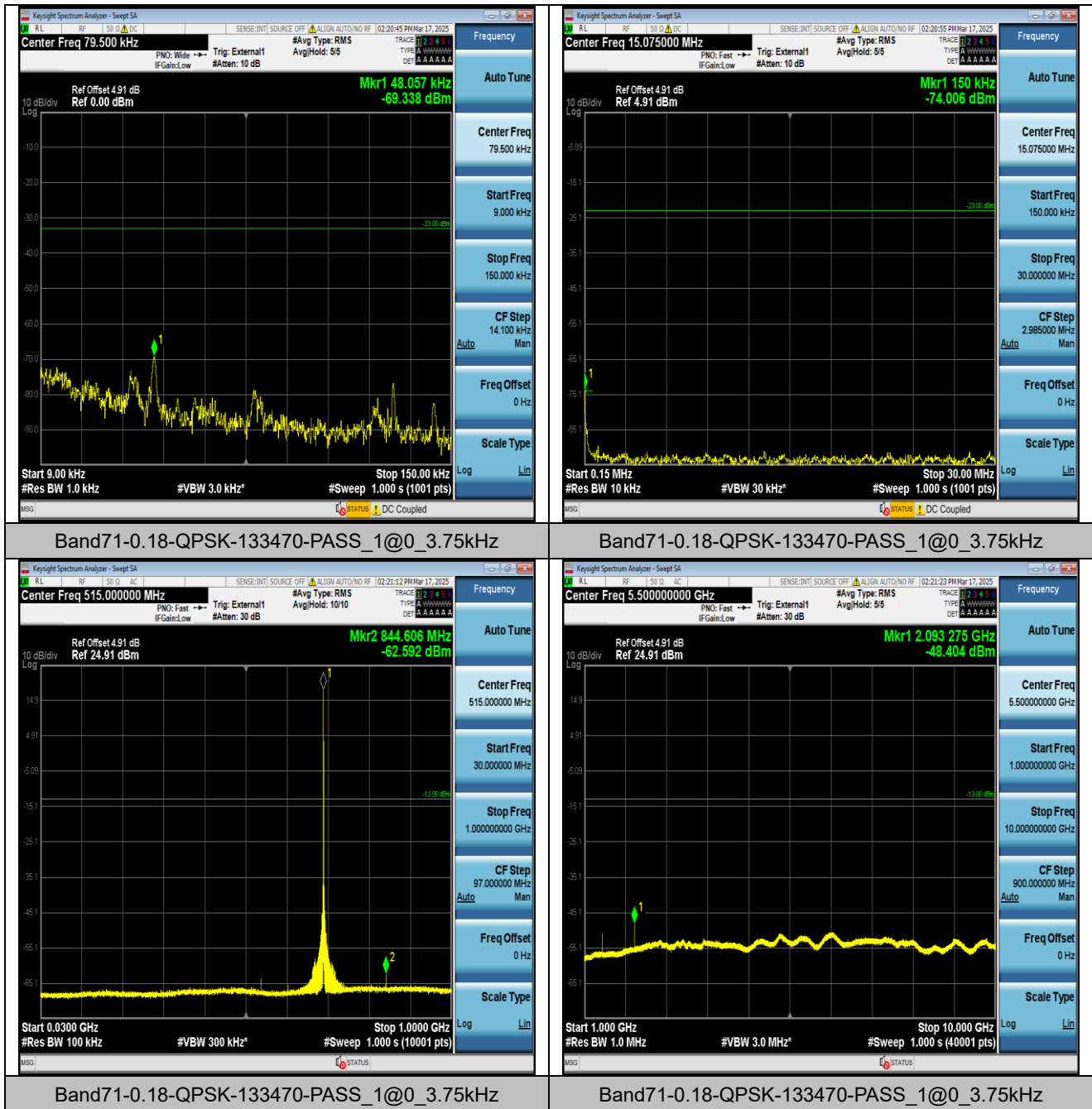


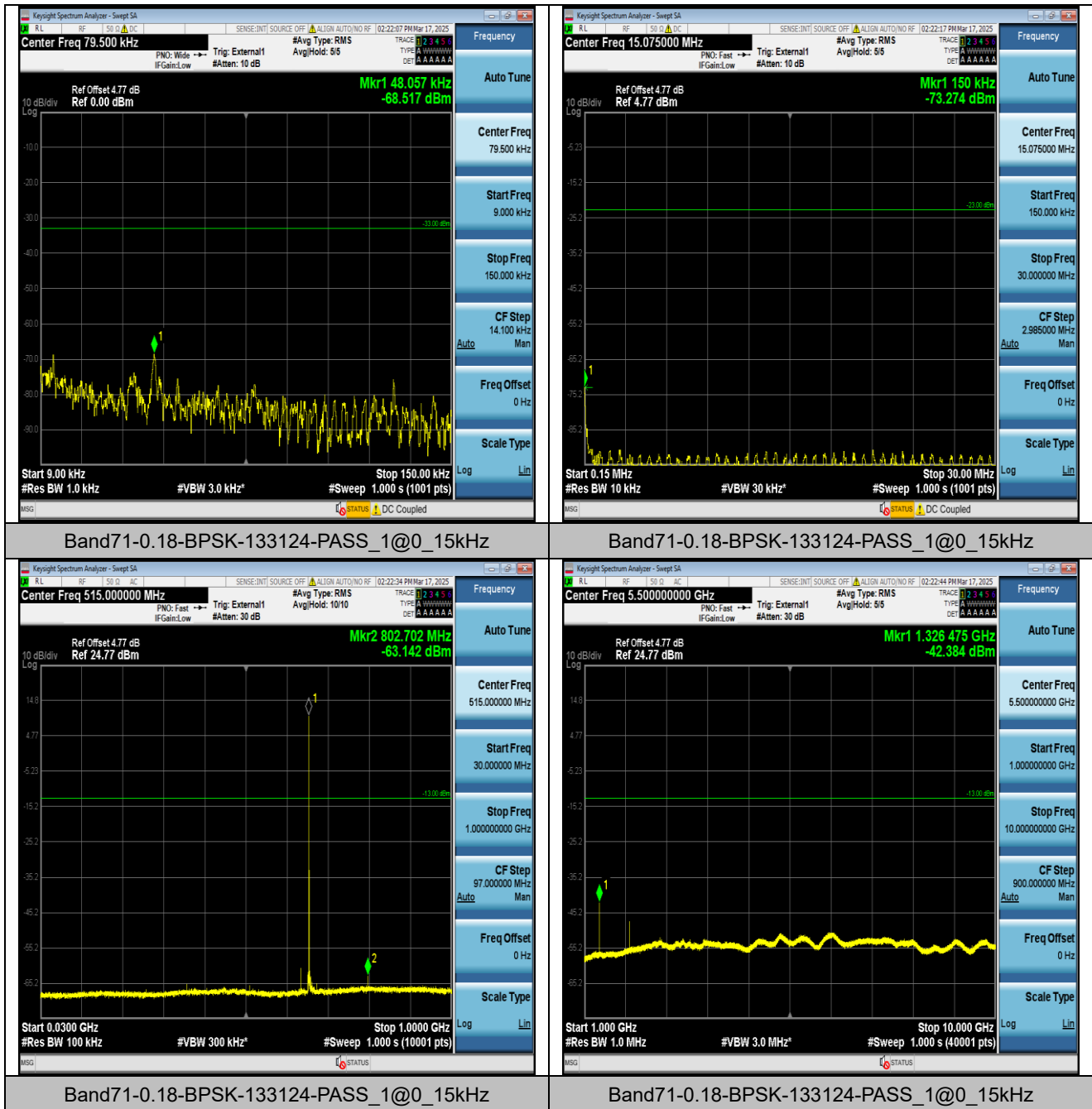
Conducted Spurious Emission for NB1

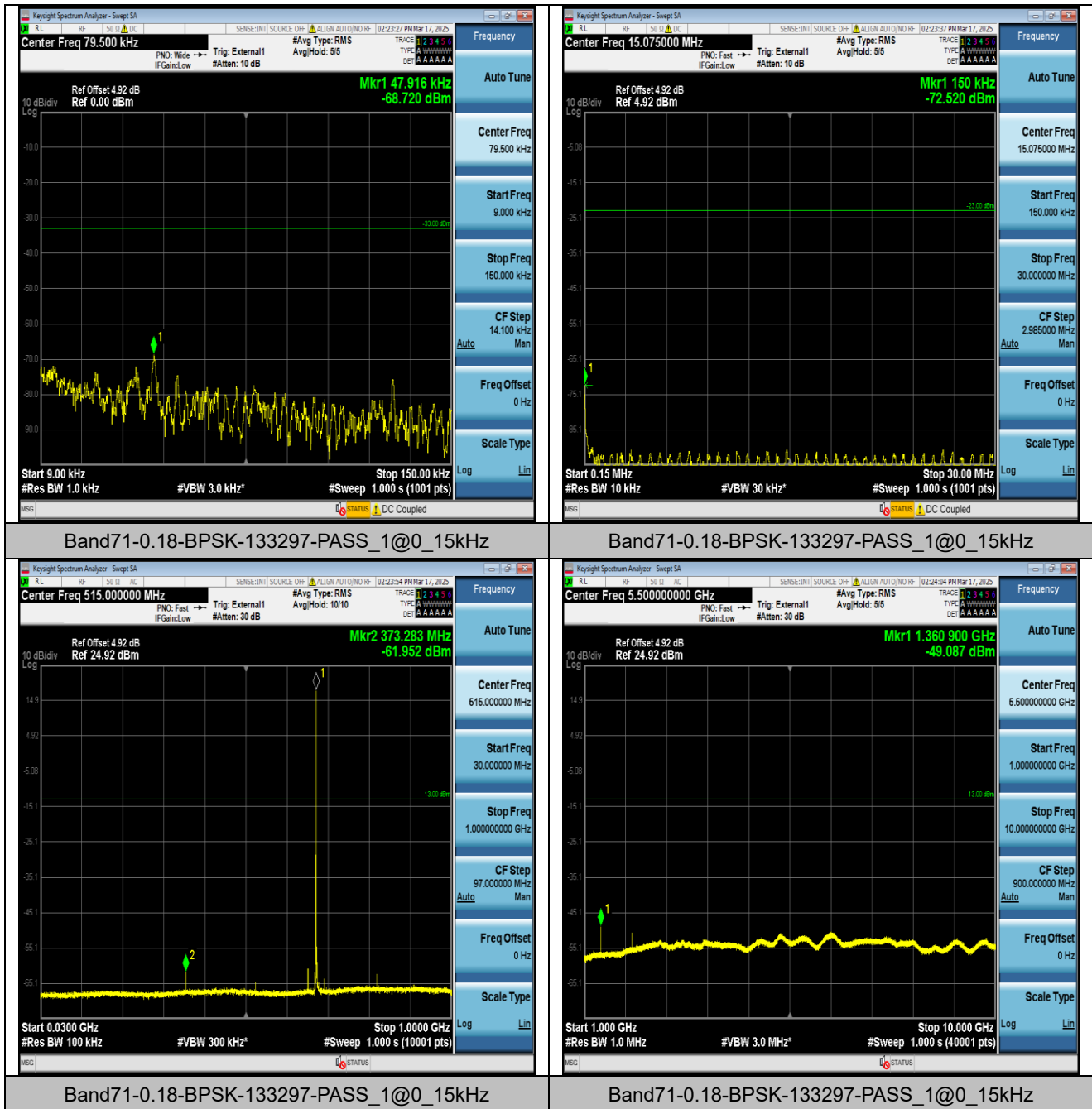
Test Graphs

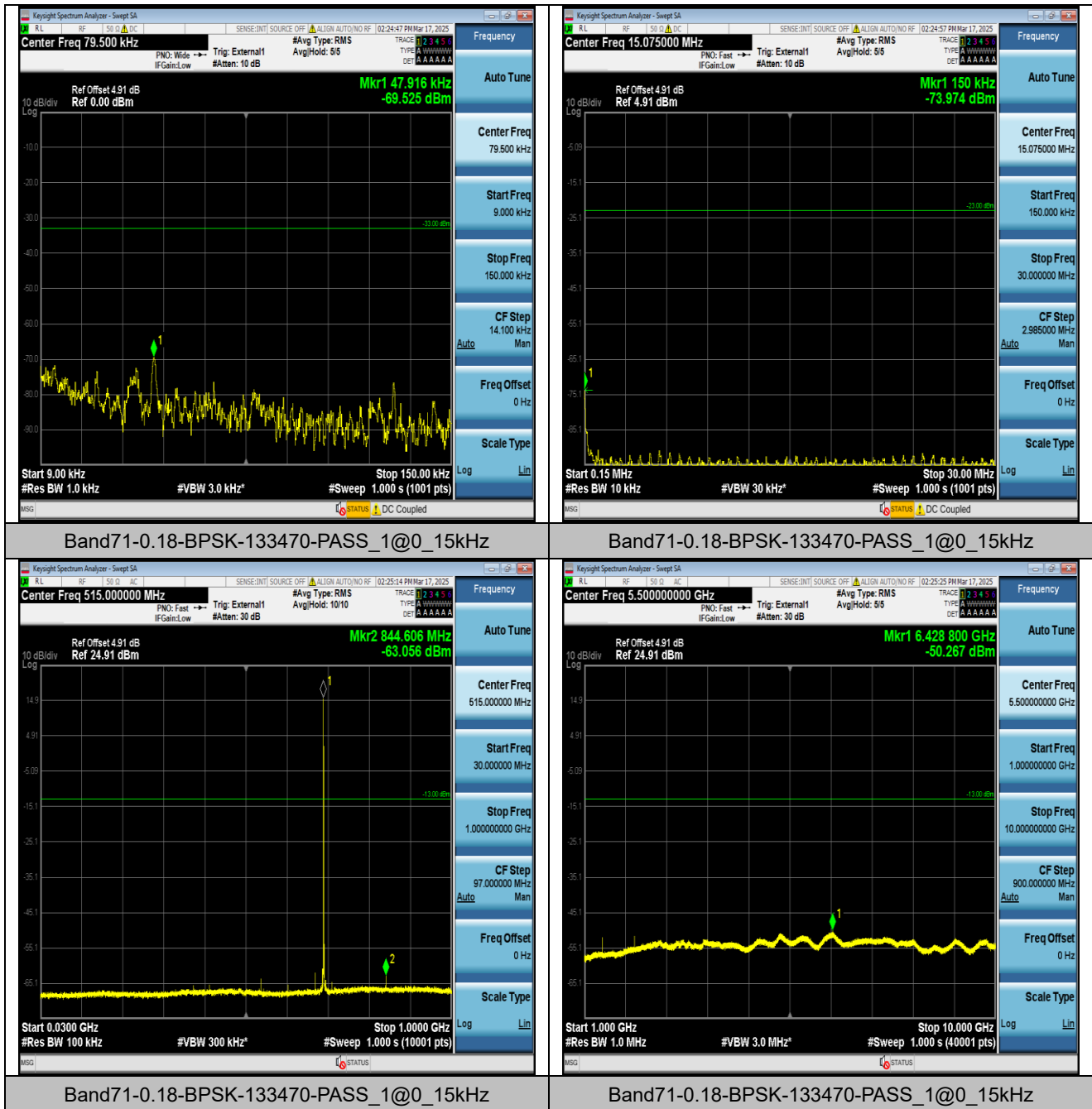












Frequency Stability for NB1

Test Result

Voltage											
Band	OpMode	SCS	Bandwidth	Modulation	Channel	Tones	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	VN	NT	-4.10	-0.006025	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	VL	NT	-2.90	-0.004262	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	VH	NT	-3.10	-0.004555	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	12@0	VN	NT	-3.40	-0.004996	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	12@0	VL	NT	-3.20	-0.004702	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	12@0	VH	NT	-2.10	-0.003086	PASS

Temperature											
Band	OpMode	SCS	Bandwidth	Modulation	Channel	Tones	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	-30	-3.50	-0.005143	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	-20	-2.10	-0.003086	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	-10	-2.30	-0.003380	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	0	-1.50	-0.002204	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	10	-3.10	-0.004555	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	20	-2.40	-0.003527	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	30	-3.00	-0.004409	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	40	-0.70	-0.001029	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	50	-1.50	-0.002204	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	12@0	NV	-30	-3.20	-0.004702	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	12@0	NV	-20	-1.80	-0.002645	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	12@0	NV	-10	-1.20	-0.001763	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	12@0	NV	0	-1.70	-0.002498	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	12@0	NV	10	-2.90	-0.004262	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	12@0	NV	20	-1.80	-0.002645	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	12@0	NV	30	-3.30	-0.004849	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	12@0	NV	40	-2.70	-0.003968	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	12@0	NV	50	-1.20	-0.001763	PASS

~The End~