

Appendix-B LTE NB-IoT Band 71

Effective (Isotropic) Radiated Power Output Data for NB1

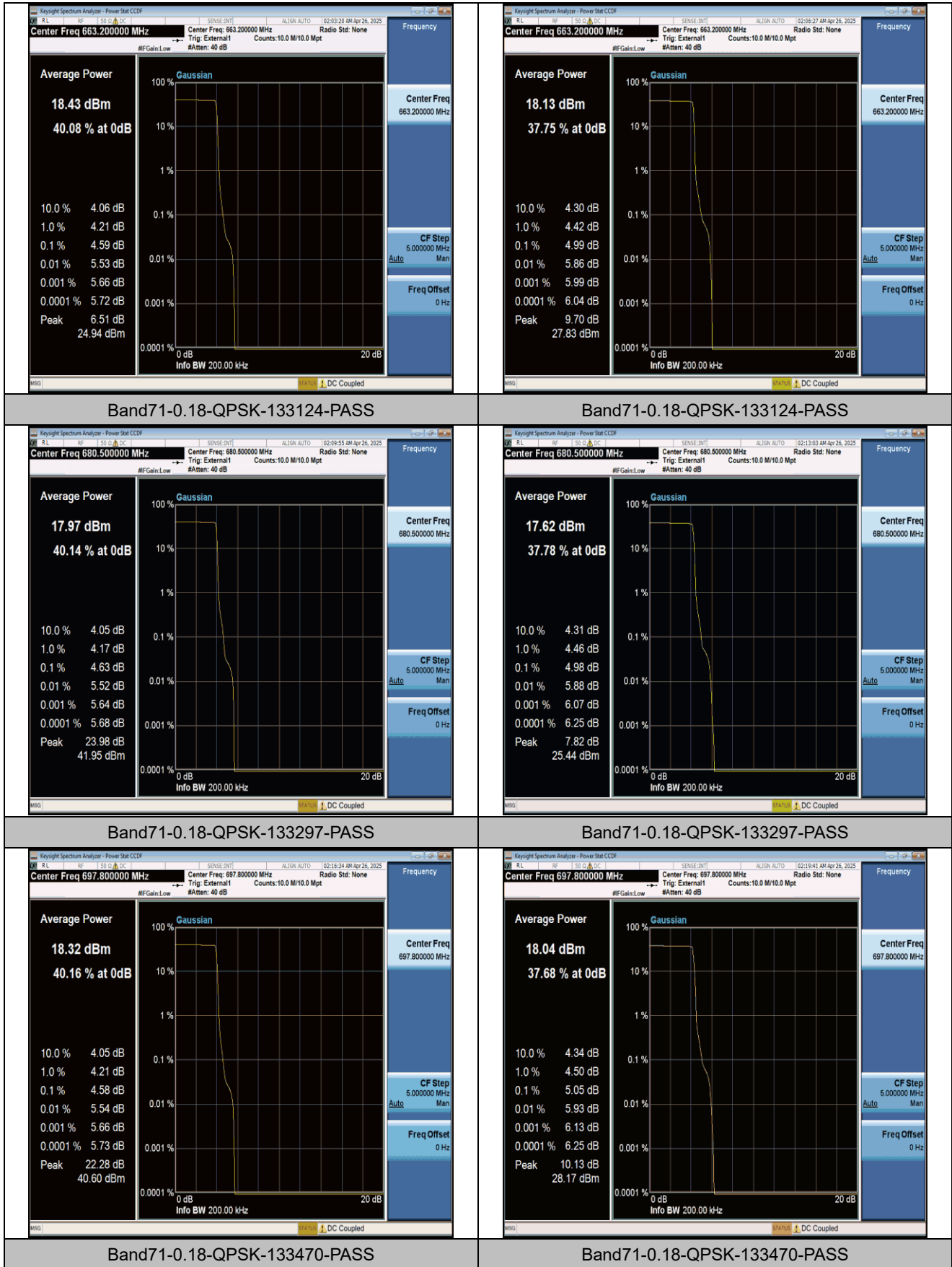
Test Result

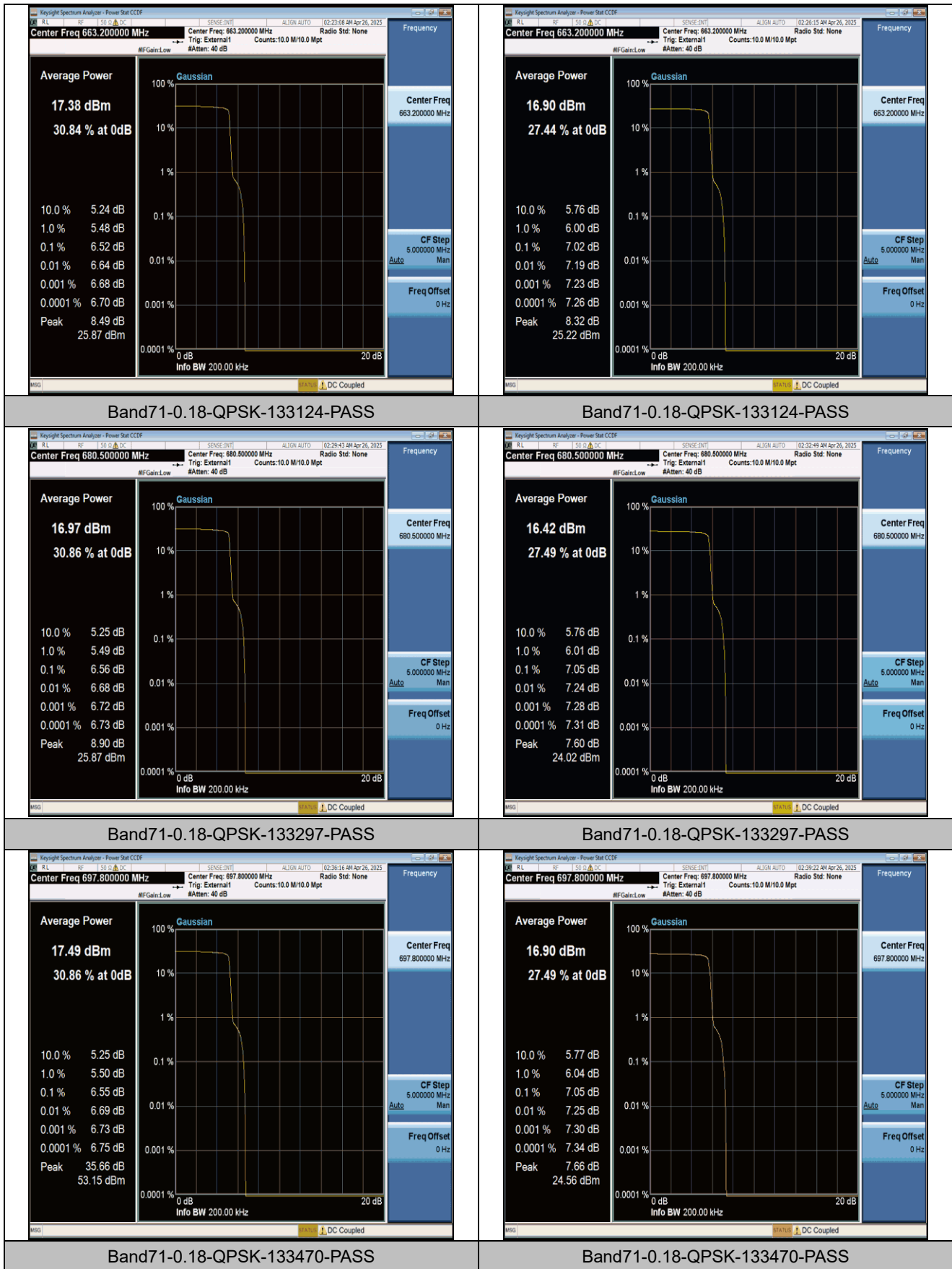
Band	OpMode	SCS	BW	Modulation	Channel	Tones	Power (dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133124	1@0	21.36	20.87	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133124	1@0	21.35	20.86	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133124	1@47	21.35	20.86	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133124	1@47	21.35	20.86	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133297	1@0	21.23	20.74	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	21.23	20.74	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133297	1@47	21.15	20.66	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	21.13	20.64	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133470	1@0	21.76	21.27	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133470	1@0	21.73	21.24	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133470	1@47	21.67	21.18	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133470	1@47	21.65	21.16	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133124	1@0	21.20	20.71	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	1@0	21.21	20.72	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133124	1@11	21.16	20.67	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	1@11	21.17	20.68	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133297	1@0	21.18	20.69	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	21.20	20.71	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133297	1@11	21.10	20.61	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	21.11	20.62	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133470	1@0	20.80	20.31	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	1@0	20.82	20.33	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133470	1@11	20.71	20.22	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	1@11	20.73	20.24	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	3@3	20.00	19.51	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	3@3	19.98	19.49	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	3@3	20.91	20.42	34.77	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	4.59	<=13	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133124	1@47	4.99	<=13	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	4.63	<=13	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	4.98	<=13	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133470	1@0	4.58	<=13	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133470	1@47	5.05	<=13	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	1@0	6.52	<=13	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	1@11	7.02	<=13	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	6.56	<=13	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	7.05	<=13	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	1@0	6.55	<=13	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	1@11	7.05	<=13	PASS

Test Graphs



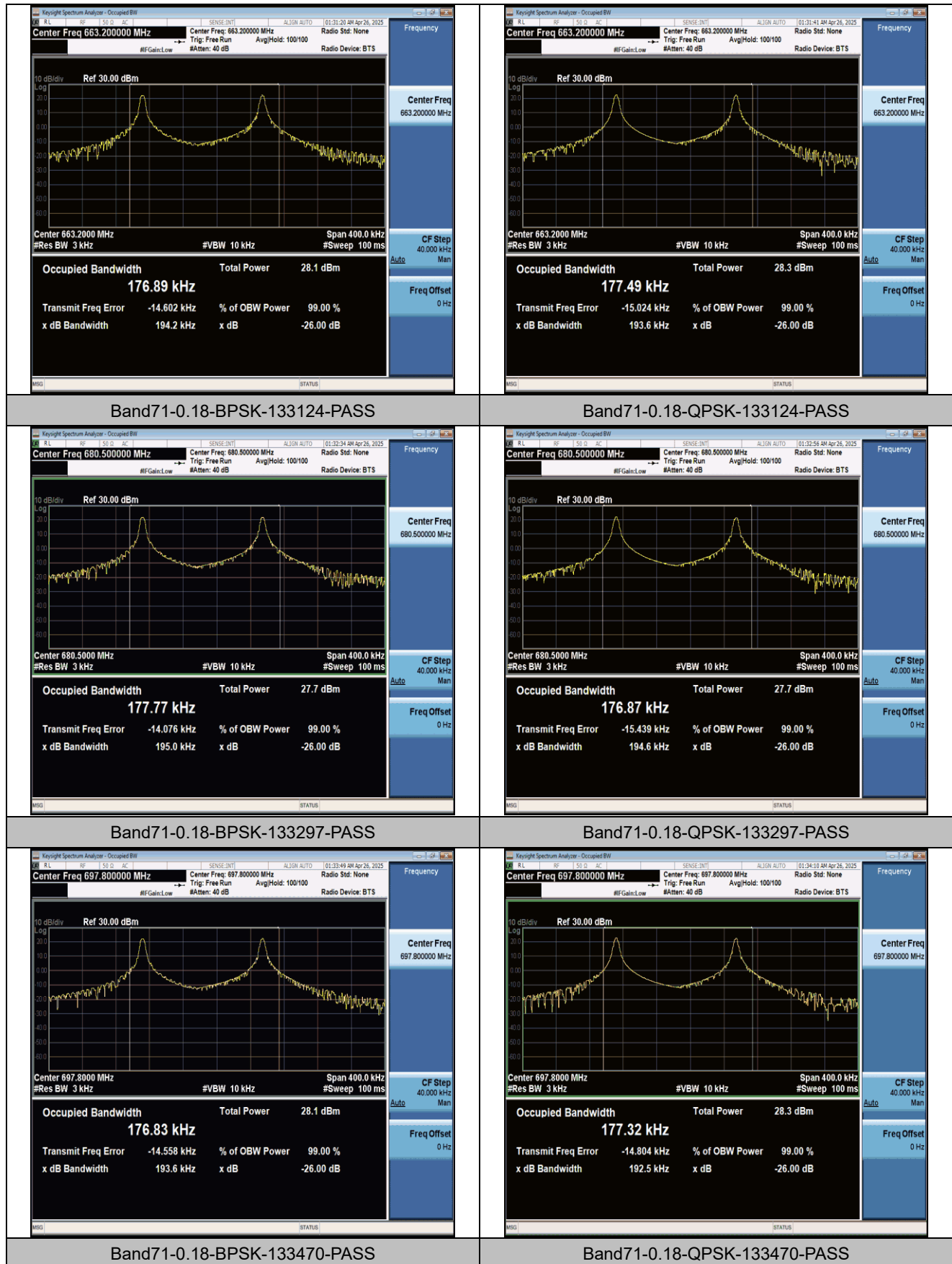


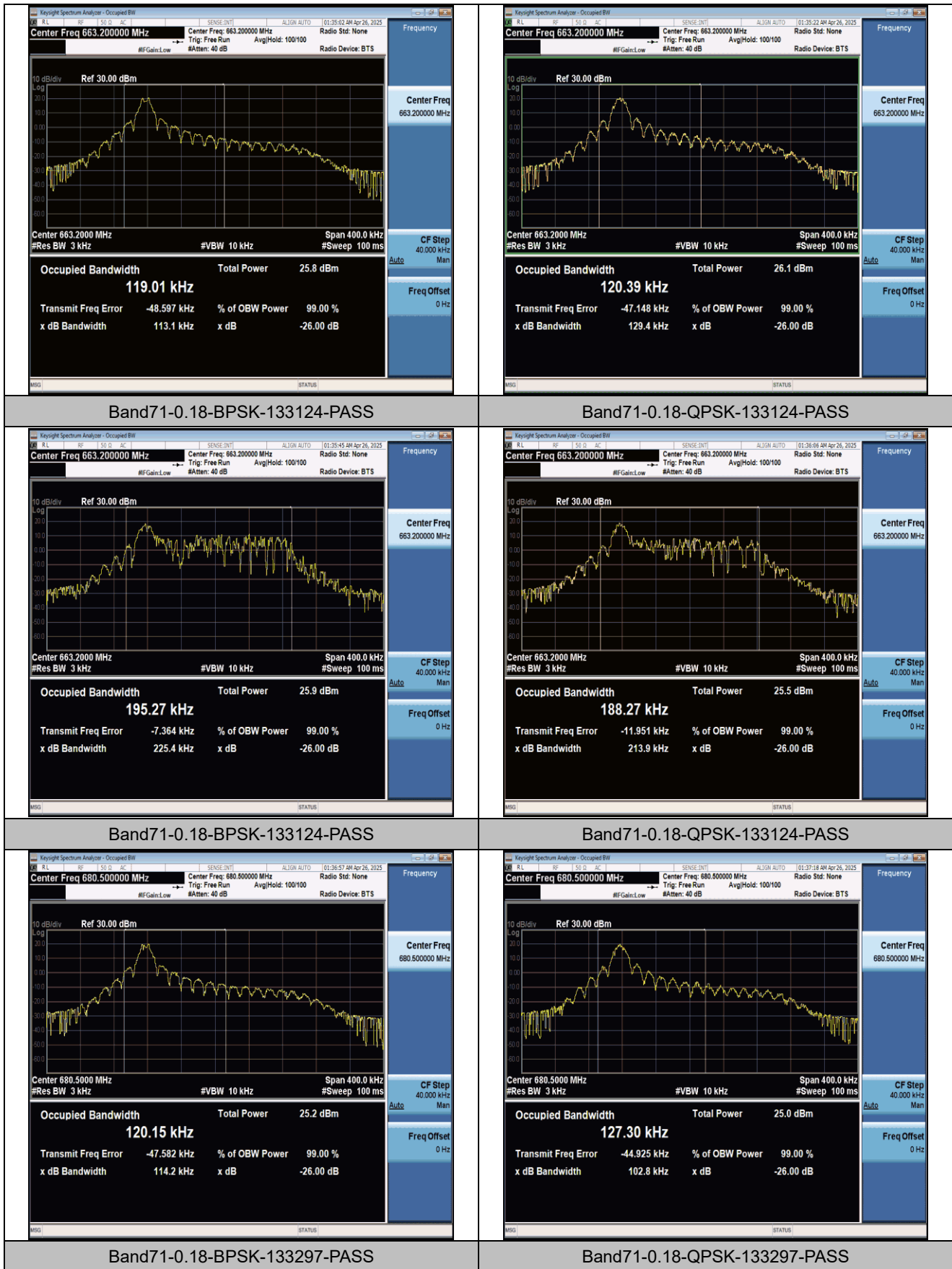
Emission Bandwidth for NB1

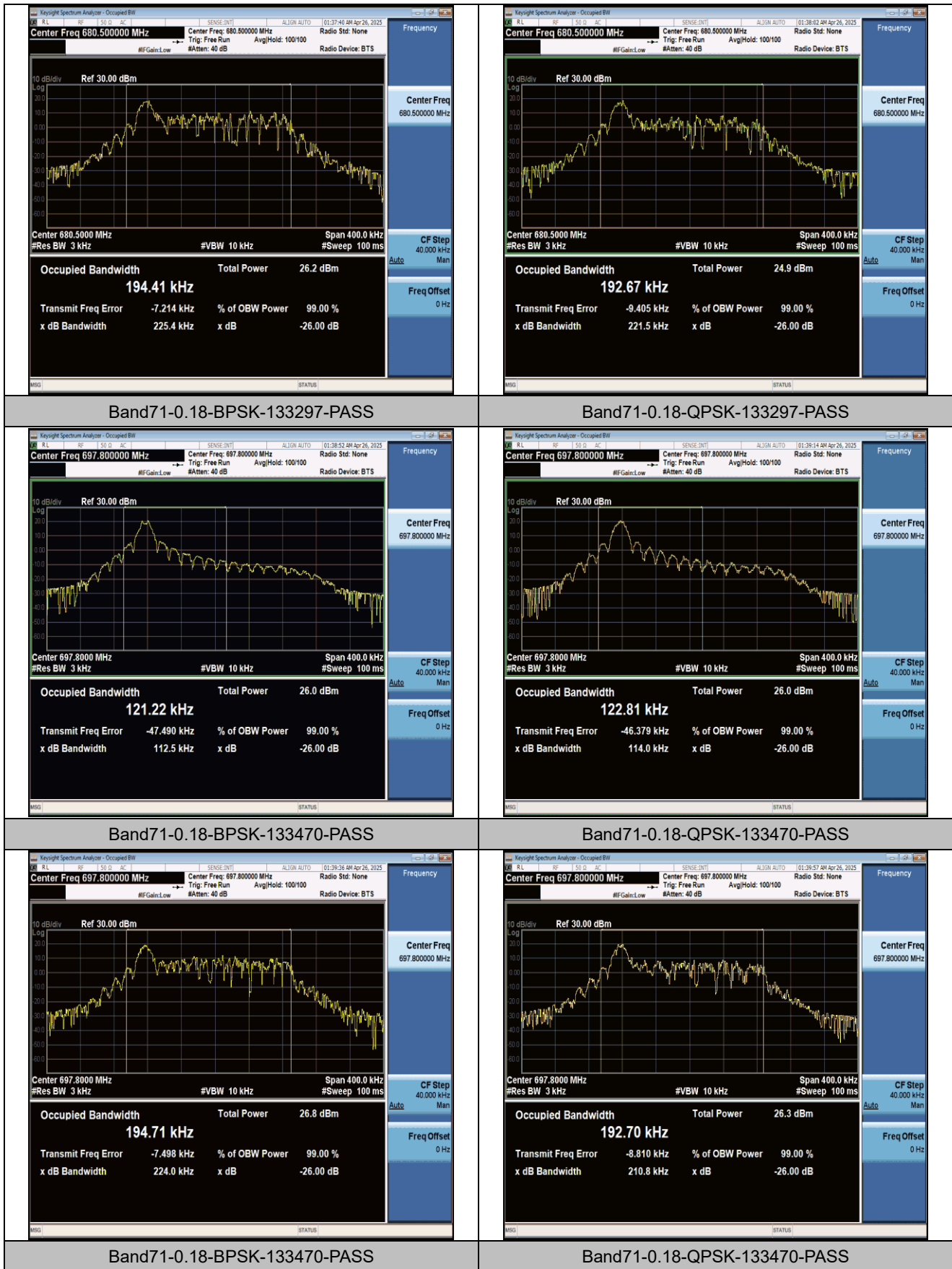
Test Result

Band	OpMode	SCS	BW	Modulation	Channel	Tones	OBW(MHz)	EBW(MHz)	Verdict
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133124	1@0	0.17689	0.1942	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133124	1@0	0.17749	0.1936	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133297	1@0	0.17777	0.1950	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	0.17687	0.1946	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133470	1@0	0.17683	0.1936	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133470	1@0	0.17732	0.1925	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133124	1@0	0.11901	0.1131	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	1@0	0.12039	0.1294	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133124	12@0	0.19527	0.2254	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	12@0	0.18827	0.2139	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133297	1@0	0.12015	0.1142	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	0.12730	0.1028	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133297	12@0	0.19441	0.2254	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	12@0	0.19267	0.2215	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133470	1@0	0.12122	0.1125	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	1@0	0.12281	0.1140	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133470	12@0	0.19471	0.2240	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	12@0	0.19270	0.2108	PASS

Test Graphs

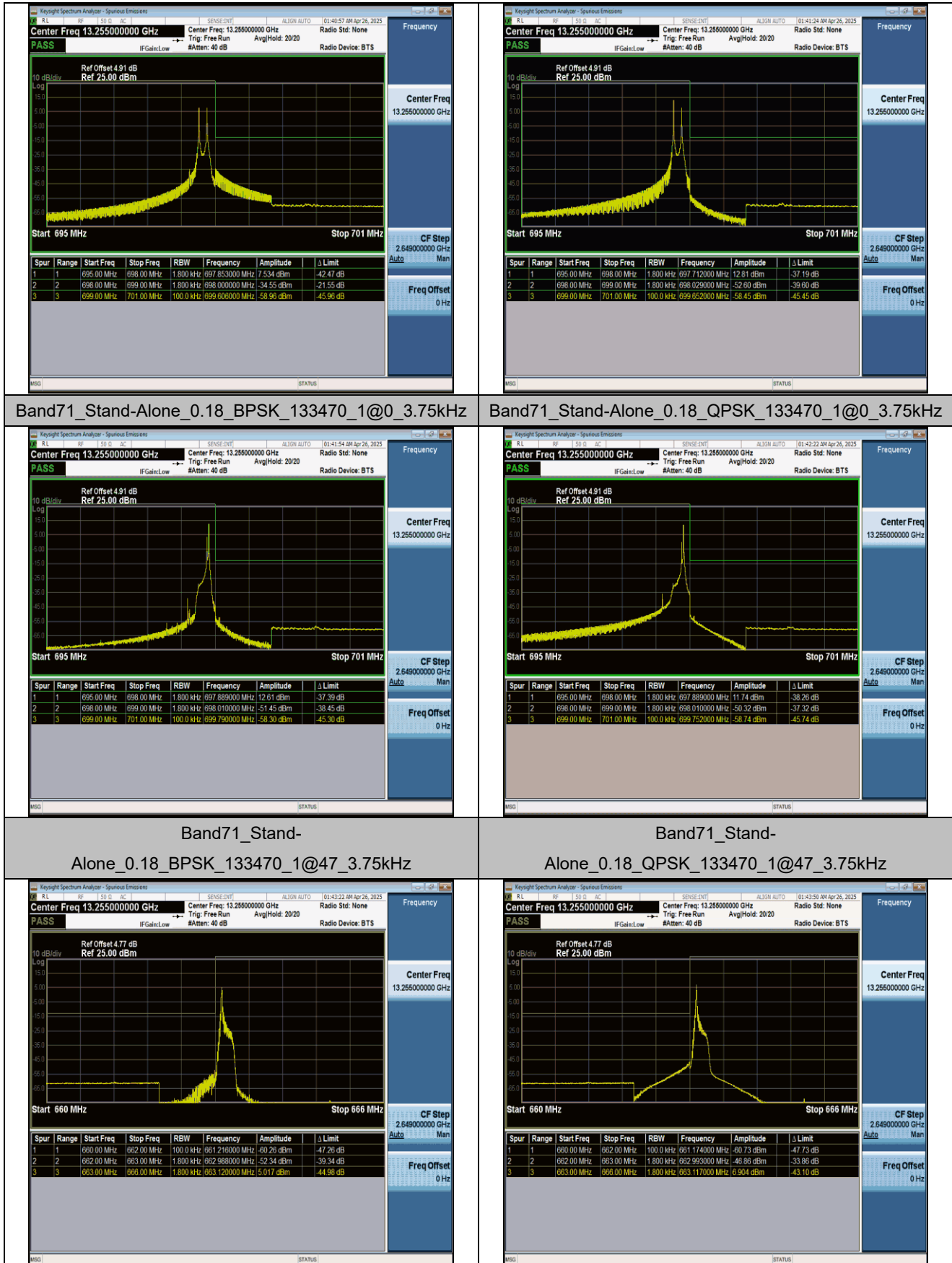




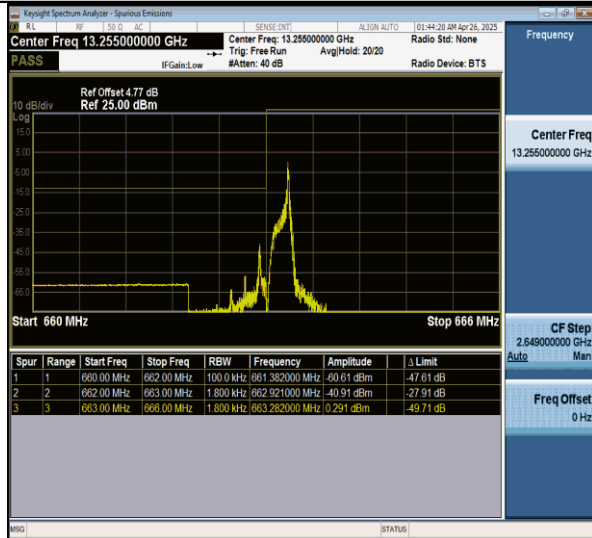


Band Edge for NB1

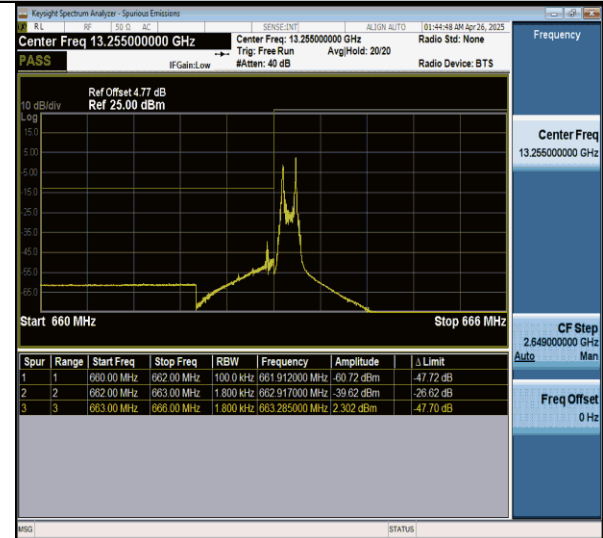
Test Graphs



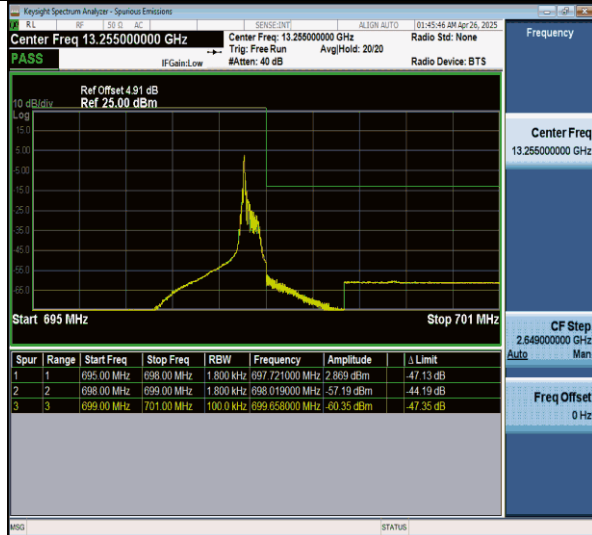
Band71_Stand-Alone_0.18_BPSK_133124_1@0_15kHz



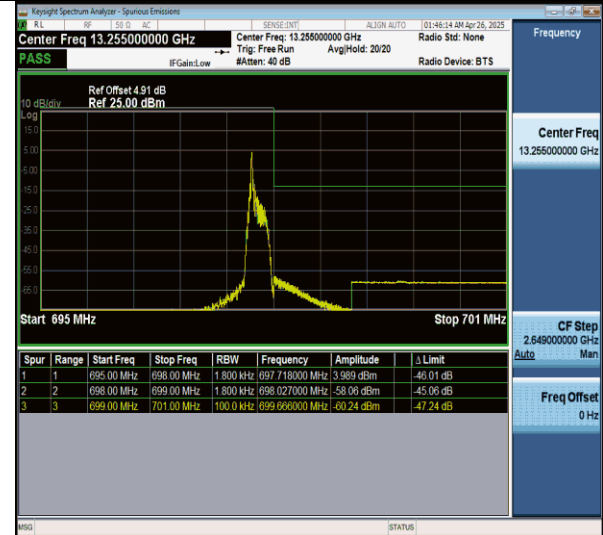
Band71_Stand-Alone_0.18_QPSK_133124_1@0_15kHz



Band71_Stand-Alone_0.18_BPSK_133124_1@11_15kHz



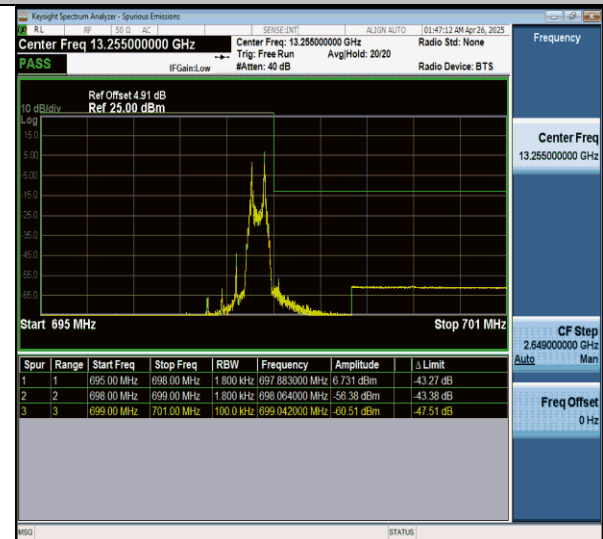
Band71_Stand-Alone_0.18_QPSK_133124_1@11_15kHz



Band71_Stand-Alone_0.18_BPSK_133470_1@0_15kHz

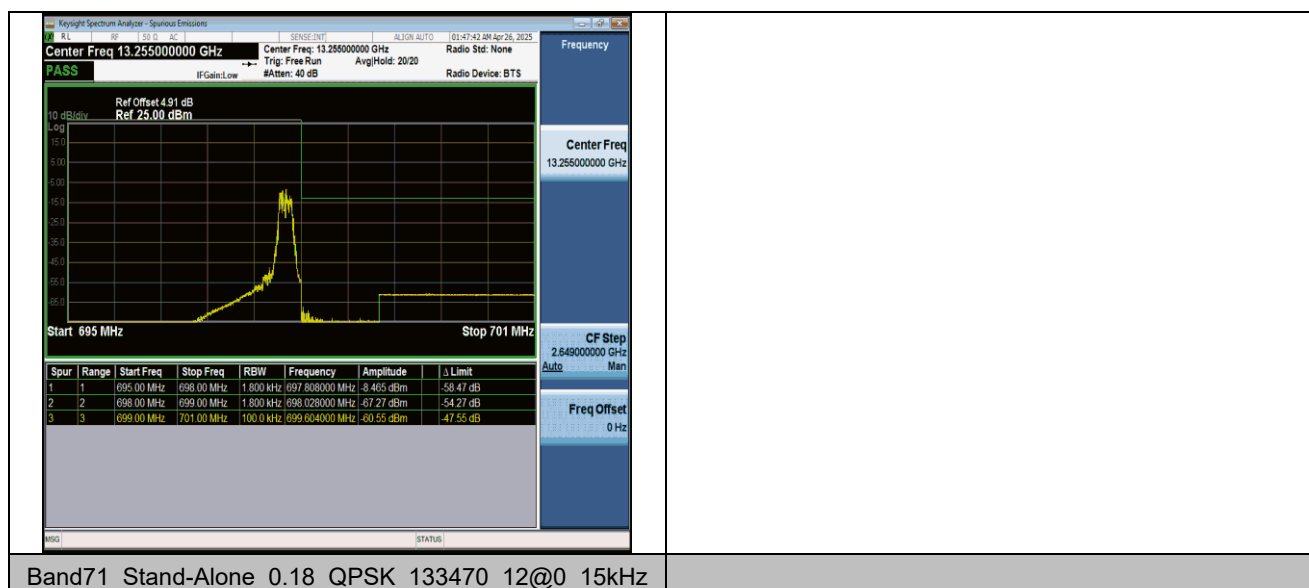


Band71_Stand-Alone_0.18_QPSK_133470_1@0_15kHz



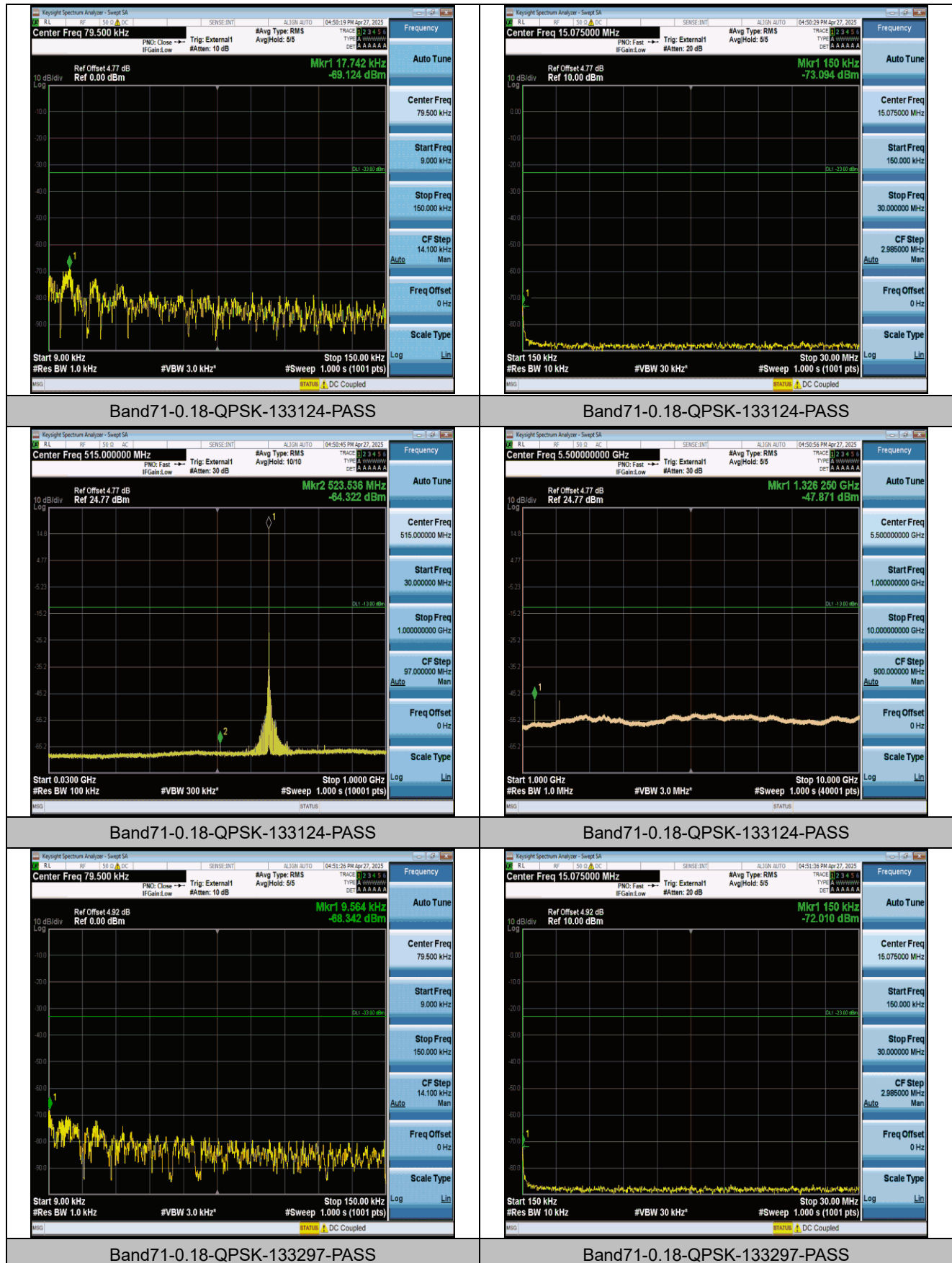
Band71_Stand-Alone_0.18_BPSK_133470_1@11_15kHz

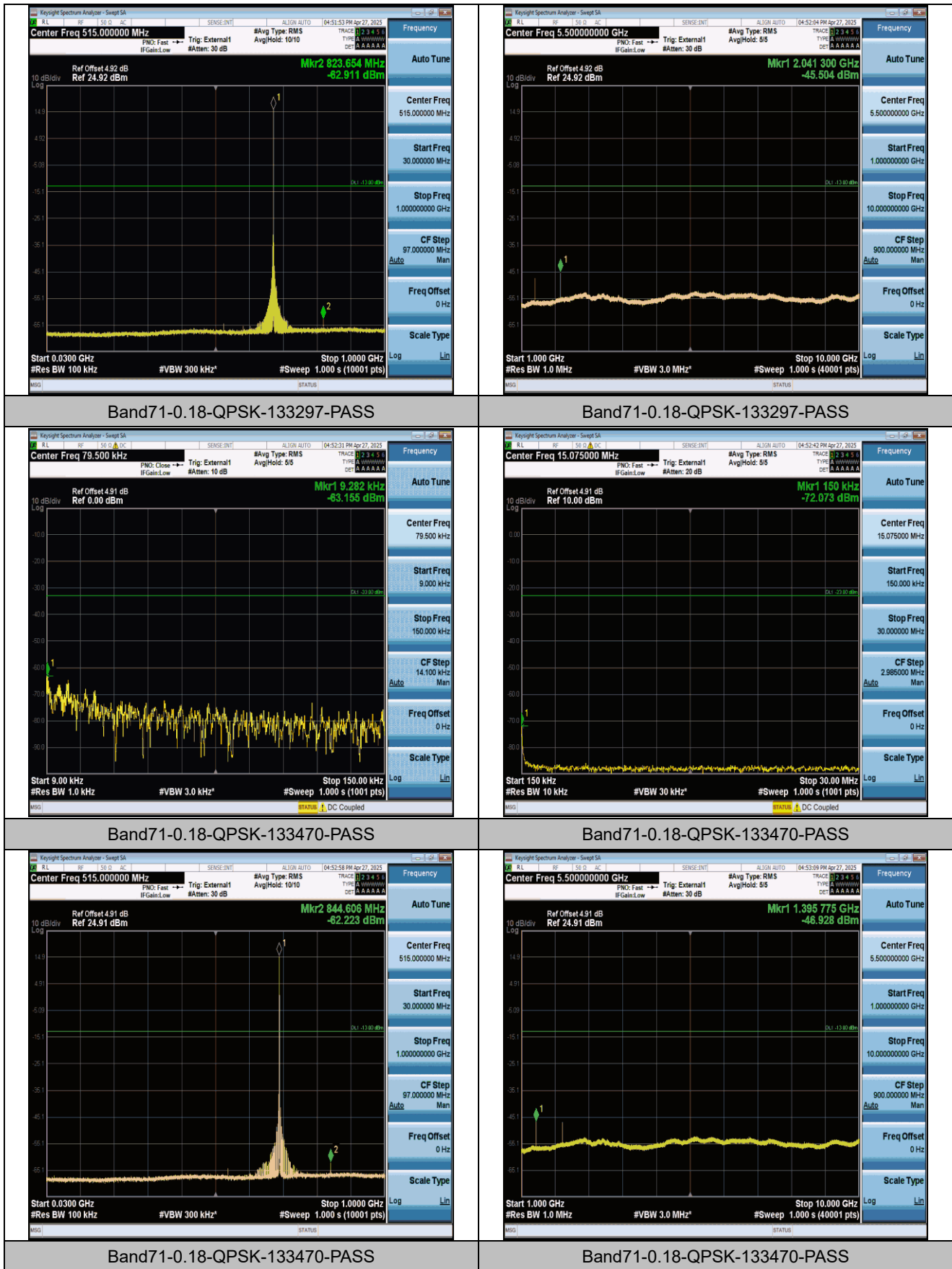
Band71_Stand-Alone_0.18_QPSK_133470_1@11_15kHz

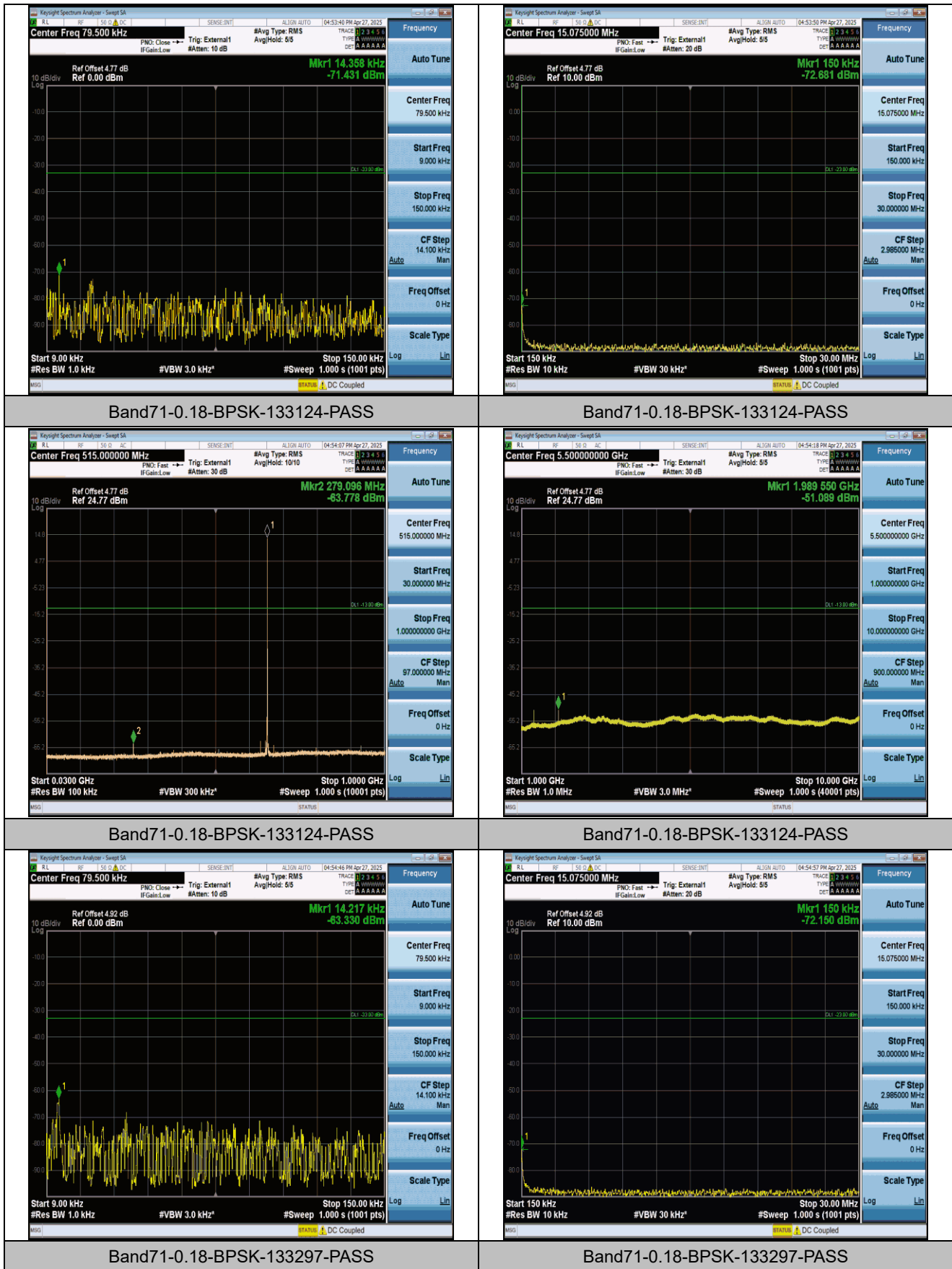


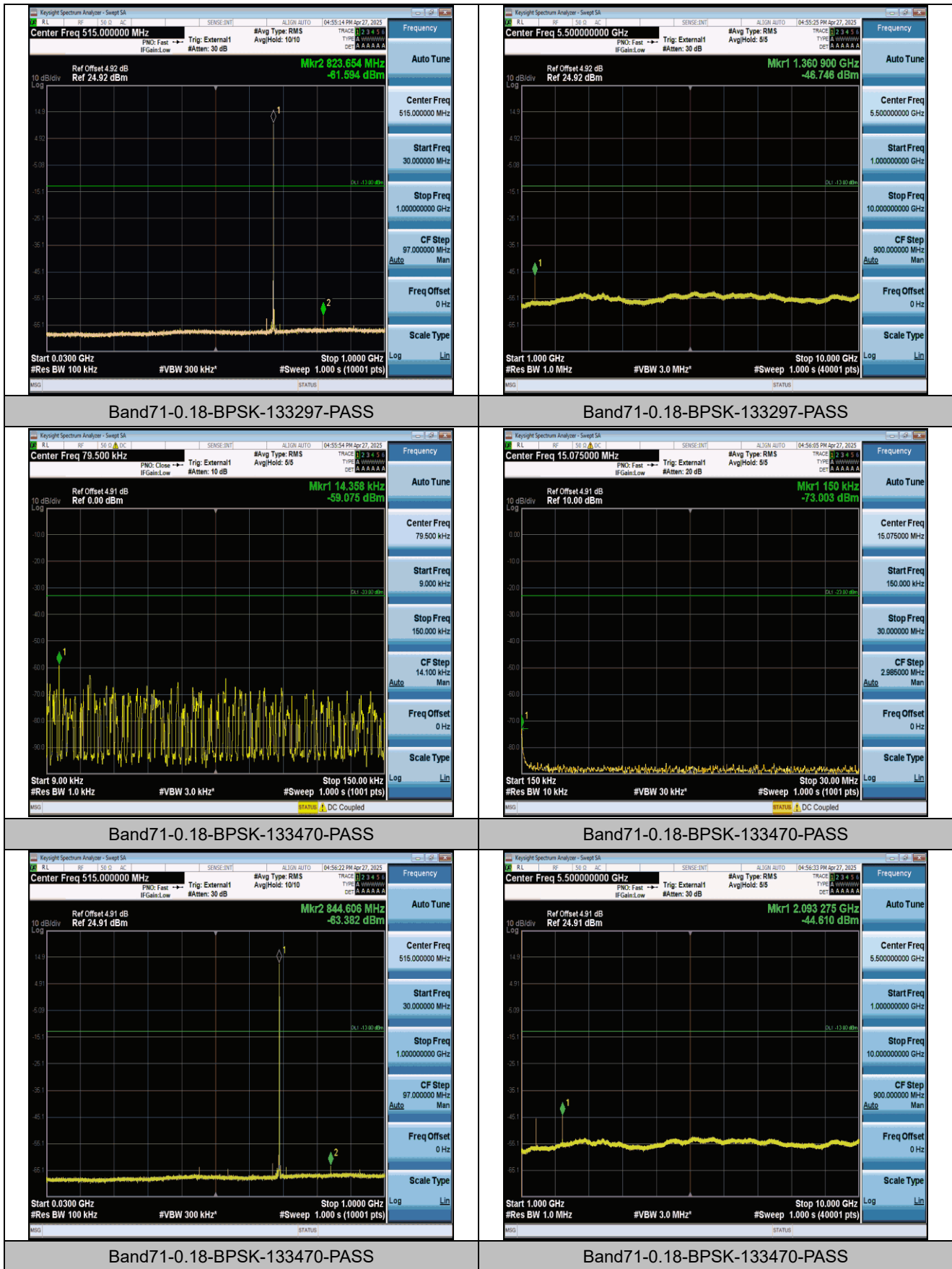
Conducted Spurious Emission for NB1

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	-1.60	-0.002351	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	VL	NT	-1.60	-0.002351	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	VH	NT	-3.10	-0.004555	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	VN	NT	-0.10	-0.000147	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	VL	NT	0.20	0.000294	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	VH	NT	-0.50	-0.000735	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	VN	NT	-1.60	-0.002351	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	VL	NT	-0.90	-0.001323	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	VH	NT	-1.50	-0.002204	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	VN	NT	0.60	0.000882	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	VL	NT	-3.10	-0.004555	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	VH	NT	-0.40	-0.000588	PASS

Temperature											
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	-30	-0.60	-0.000882	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	-20	-0.90	-0.001323	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	-10	-1.90	-0.002792	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	0	-2.60	-0.003821	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	10	-1.90	-0.002792	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	20	1.30	0.001910	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	30	-0.30	-0.000441	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	40	-1.10	-0.001616	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	50	-2.60	-0.003821	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	NV	-30	-1.40	-0.002057	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	NV	-20	-2.30	-0.003380	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	NV	-10	-1.60	-0.002351	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	NV	0	-1.70	-0.002498	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	NV	10	-2.80	-0.004115	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	NV	20	-1.30	-0.001910	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	NV	30	-0.40	-0.000588	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	NV	40	-1.30	-0.001910	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	NV	50	-0.90	-0.001323	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	-30	-1.10	-0.001616	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	-20	-0.90	-0.001323	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	-10	0.70	0.001029	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	0	0.00	0.000000	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	10	-0.70	-0.001029	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	20	-1.60	-0.002351	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	30	1.50	0.002204	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	40	-1.90	-0.002792	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	50	-0.80	-0.001176	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	NV	-30	-3.00	-0.004409	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	NV	-20	-1.50	-0.002204	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	NV	-10	-1.60	-0.002351	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	NV	0	-1.00	-0.001470	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	NV	10	-0.30	-0.000441	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	NV	20	-0.60	-0.000882	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	NV	30	-2.20	-0.003233	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	NV	40	-1.60	-0.002351	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	NV	50	-2.40	-0.003527	PASS

~The End~