

Appendix-B LTE NB-IoT Band 71

Effective (Isotropic) Radiated Power Output Data for NB

Test Result

Band	OpMode	SCS	BW	Modulation	Channel	Tones	Result (dBm)	ERP (dBm)	Limit	Verdict
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133124	1@0	21.59	21.1	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133124	1@0	21.54	21.05	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133124	1@47	21.5	21.01	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133124	1@47	21.44	20.95	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	21.16	20.67	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	21.25	20.76	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133470	1@0	21.38	20.89	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133470	1@0	21.39	20.9	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133470	1@47	21.35	20.86	34.77	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133470	1@47	21.29	20.8	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133124	1@0	21.59	21.1	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	1@0	21.59	21.1	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133124	1@11	21.53	21.04	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	1@11	21.55	21.06	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133297	1@0	20.48	19.99	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	20.48	19.99	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133297	1@11	20.39	19.9	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	20.4	19.91	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133470	1@0	21.31	20.82	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	1@0	21.3	20.81	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133470	1@11	21.2	20.71	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	1@11	21.23	20.74	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	3@3	20.94	20.45	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	3@3	20.69	20.2	34.77	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	3@3	21.03	20.54	34.77	PASS

Peak-to-Average Ratio(CCDF) for NB

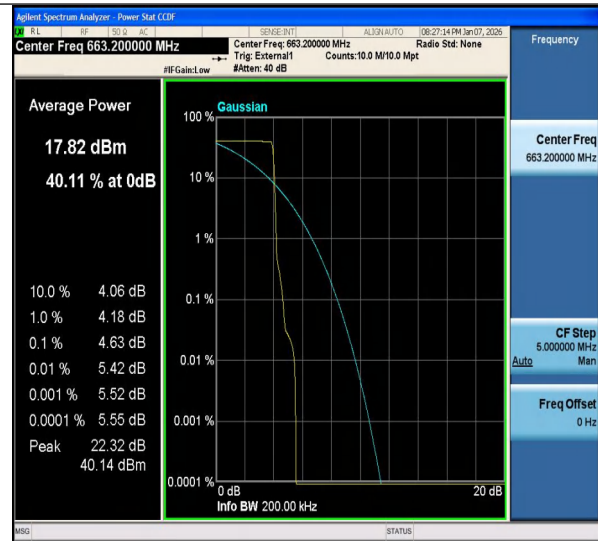
Test Result

Band	OpMode	SCS	BW	Modulation	Channel	Tones	Result (dBm)	Limit (dBm)	Verdict
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133124	1@0	5.06	<=13	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133124	1@47	4.63	<=13	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	5.06	<=13	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@47	4.64	<=13	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133470	1@0	5.12	<=13	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133470	1@47	4.59	<=13	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	1@0	6.54	<=13	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	1@11	6.48	<=13	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	6.47	<=13	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@11	6.45	<=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	6.53	<=13	PASS

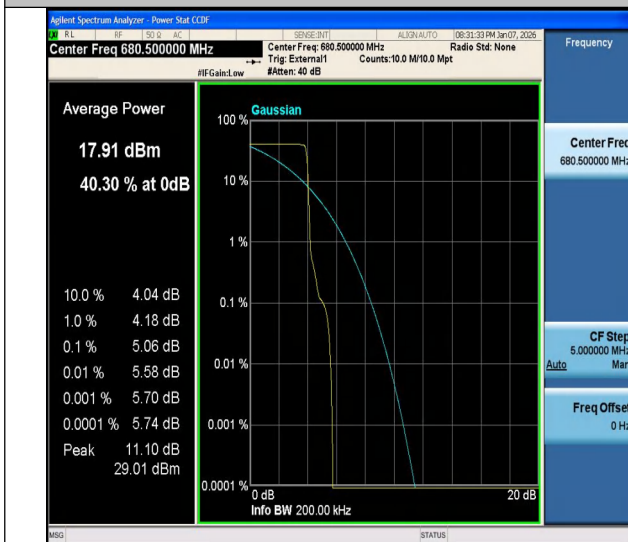
Test Graphs



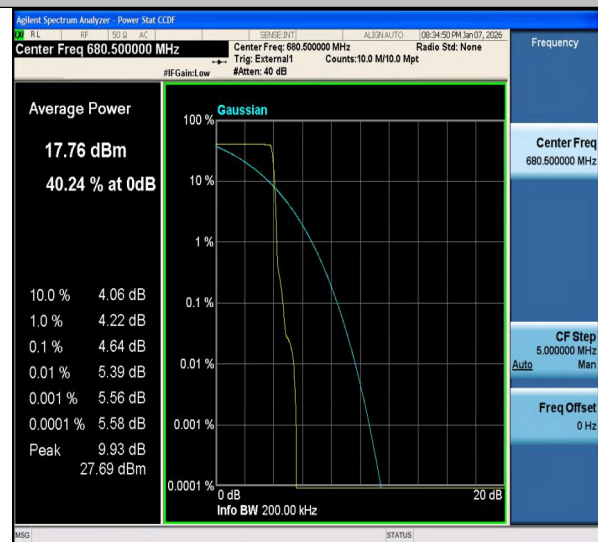
Band71-0.18-QPSK-133124-PASS



Band71-0.18-QPSK-133124-PASS



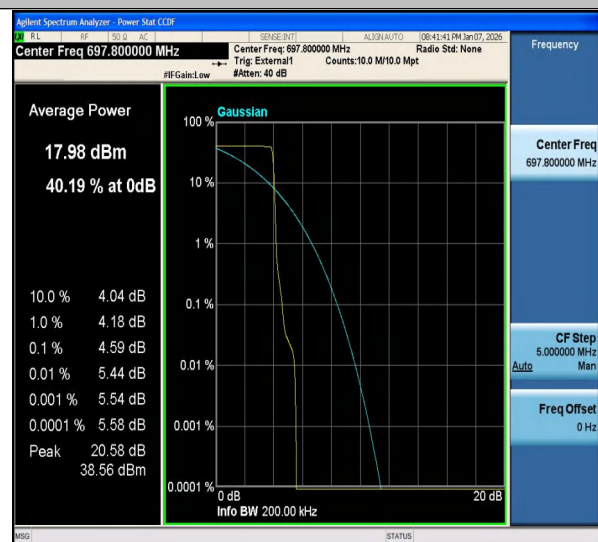
Band71-0.18-QPSK-133297-PASS



Band71-0.18-QPSK-133297-PASS



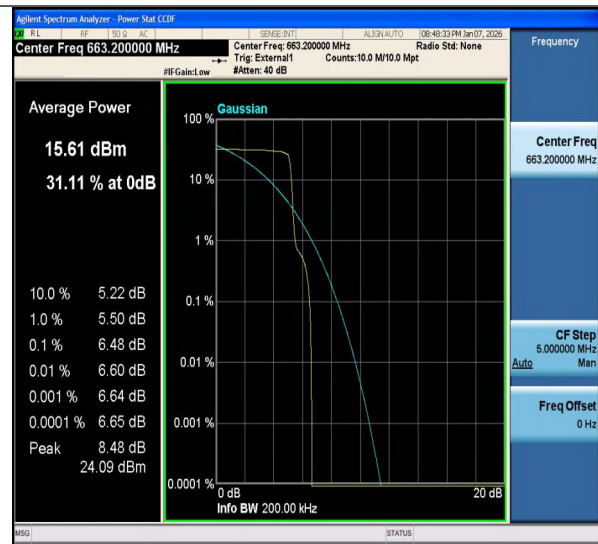
Band71-0.18-QPSK-133470-PASS



Band71-0.18-QPSK-133470-PASS



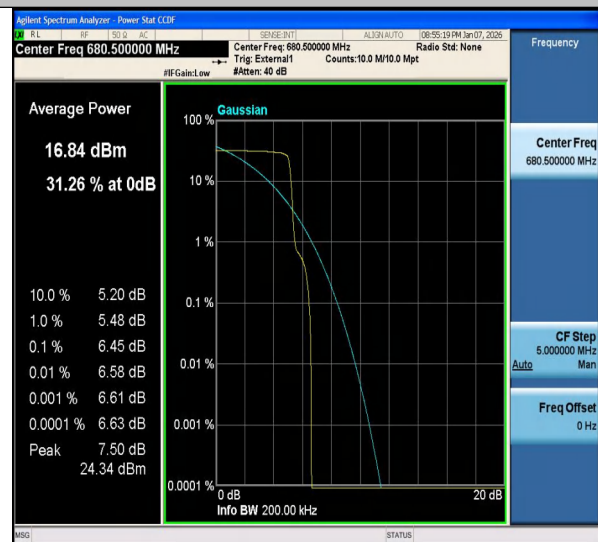
Band71-0.18-QPSK-133124-PASS



Band71-0.18-QPSK-133124-PASS



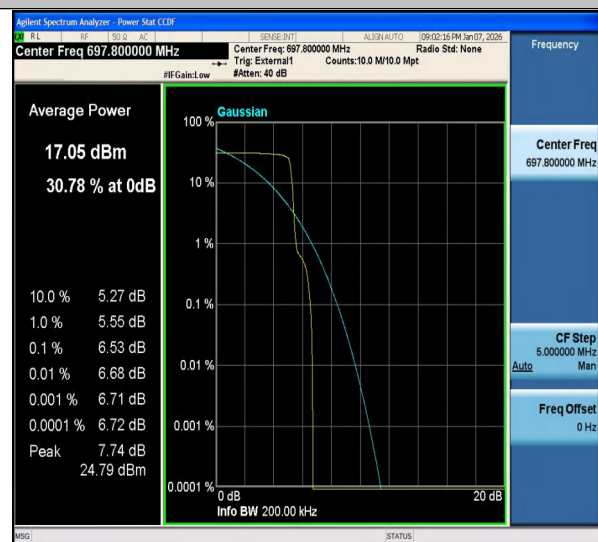
Band71-0.18-QPSK-133297-PASS



Band71-0.18-QPSK-133297-PASS



Band71-0.18-QPSK-133470-PASS



Band71-0.18-QPSK-133470-PASS

Emission Bandwidth for NB

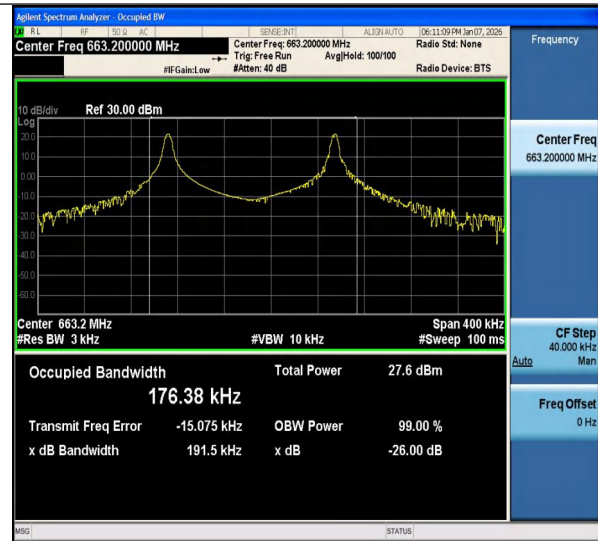
Test Result

Band	OpMode	SCS	BW	Modulation	Channel	Tones	OBW(MHz)	EBW(MHz)	Verdict
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133124	1@0	0.17848	0.1962	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133124	1@0	0.17638	0.1915	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133297	1@0	0.17683	0.1940	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	0.17554	0.1932	PASS
Band71	Stand-Alone	3.75kHz	0.18	BPSK	133470	1@0	0.17887	0.1943	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133470	1@0	0.17741	0.1940	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133124	1@0	0.13063	0.1167	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	1@0	0.12749	0.1167	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133124	12@0	0.19524	0.2241	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133124	12@0	0.19299	0.2144	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133297	1@0	0.12237	0.1167	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	0.12175	0.1154	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133297	12@0	0.19472	0.2260	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	12@0	0.19275	0.2143	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133470	1@0	0.13352	0.1176	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	1@0	0.11771	0.1139	PASS
Band71	Stand-Alone	15kHz	0.18	BPSK	133470	12@0	0.19363	0.2271	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133470	12@0	0.19319	0.2146	PASS

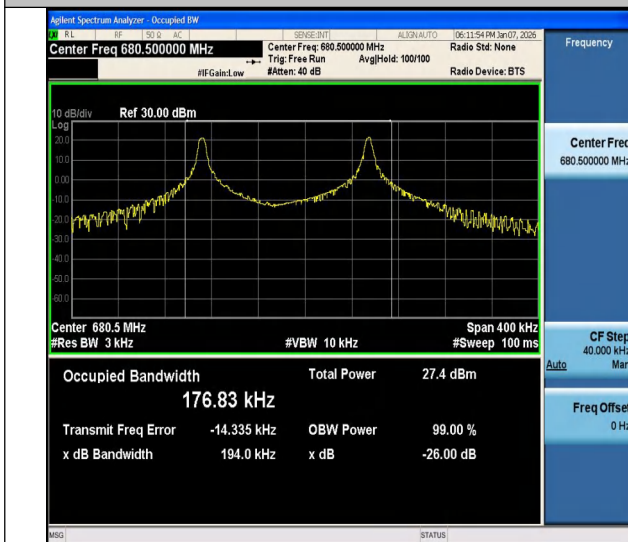
Test Graphs



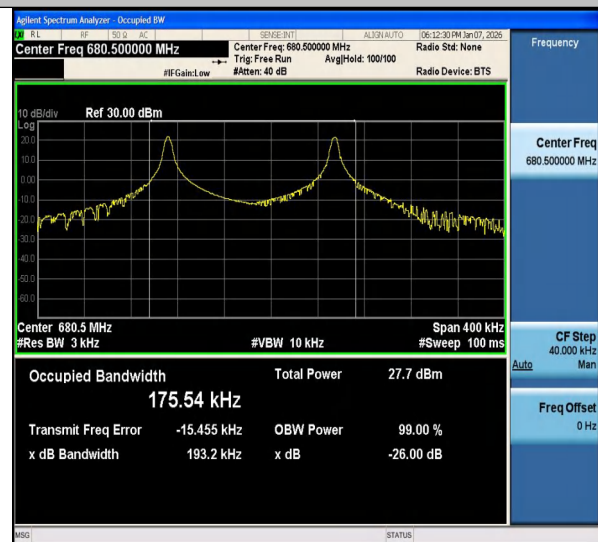
Band71-0.18-BPSK-133124-PASS



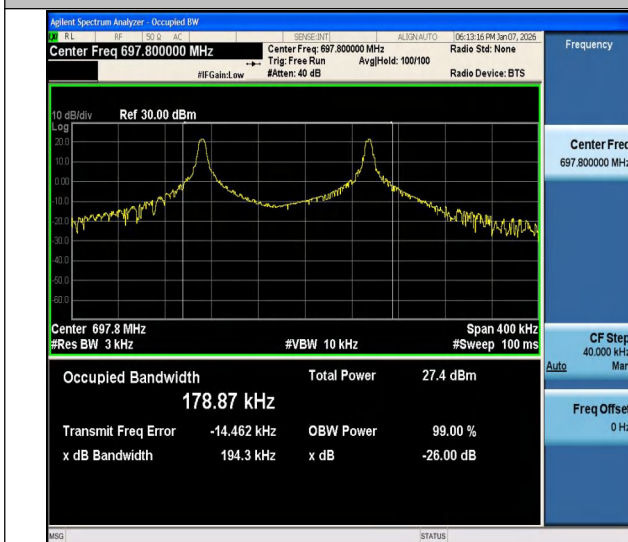
Band71-0.18-QPSK-133124-PASS



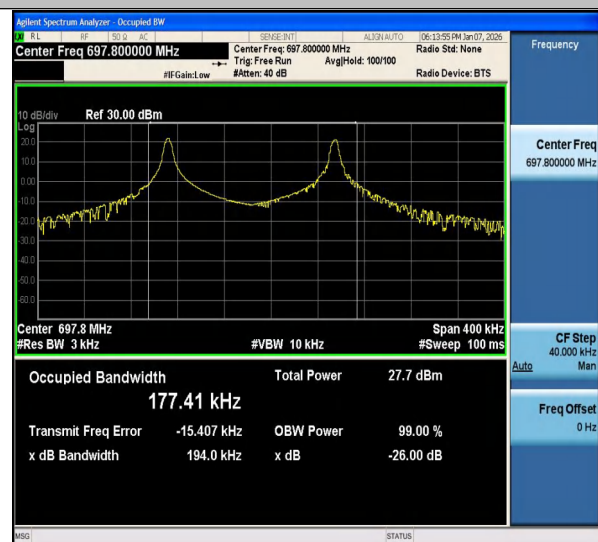
Band71-0.18-BPSK-133297-PASS



Band71-0.18-QPSK-133297-PASS



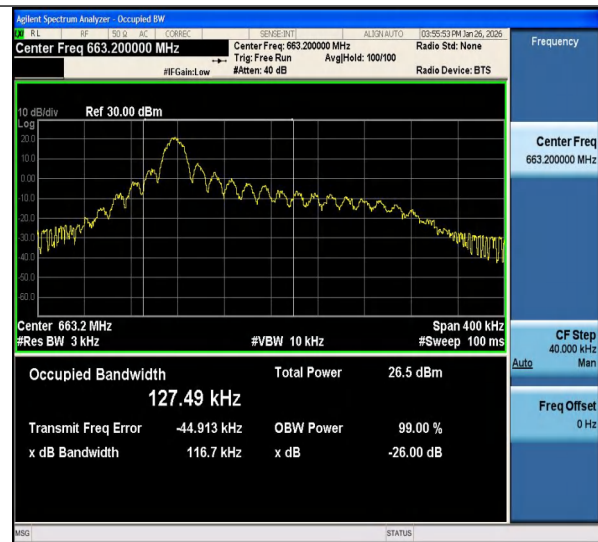
Band71-0.18-BPSK-133470-PASS



Band71-0.18-QPSK-133470-PASS



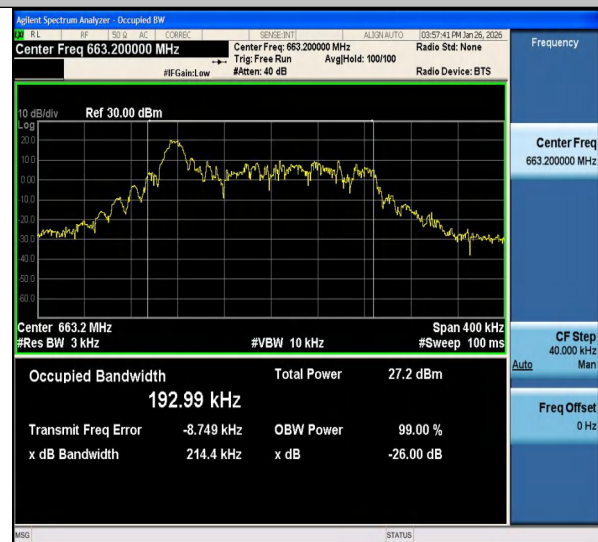
Band71-0.18-BPSK-133124-PASS



Band71-0.18-QPSK-133124-PASS



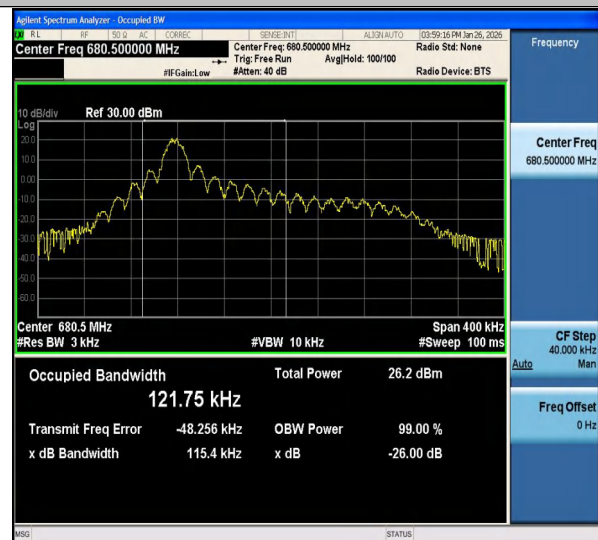
Band71-0.18-BPSK-133124-PASS



Band71-0.18-QPSK-133124-PASS



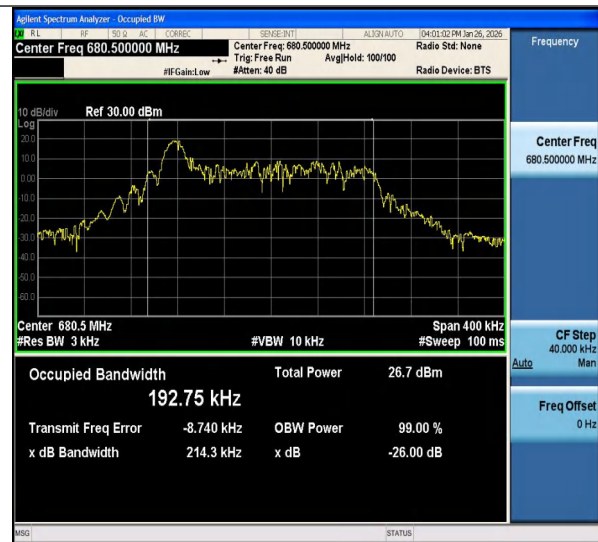
Band71-0.18-BPSK-133297-PASS



Band71-0.18-QPSK-133297-PASS



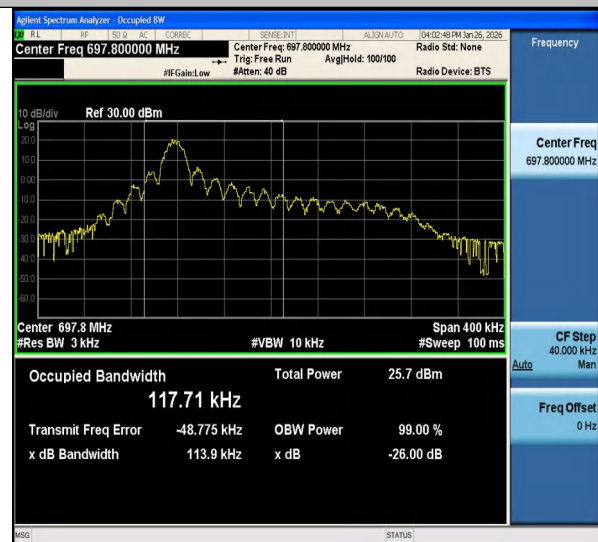
Band71-0.18-BPSK-133297-PASS



Band71-0.18-QPSK-133297-PASS



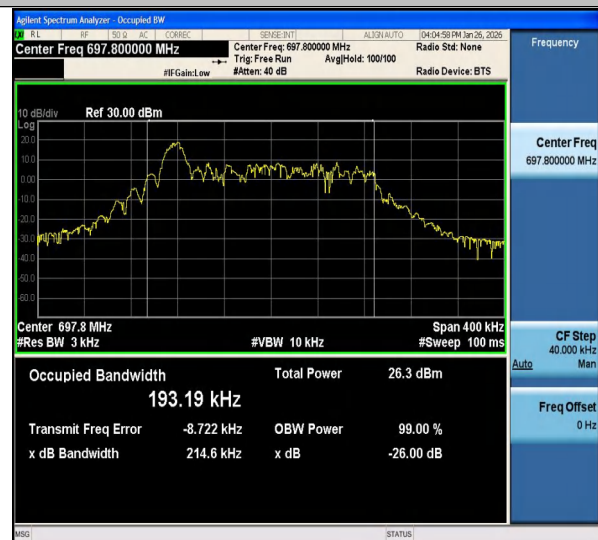
Band71-0.18-BPSK-133470-PASS



Band71-0.18-QPSK-133470-PASS



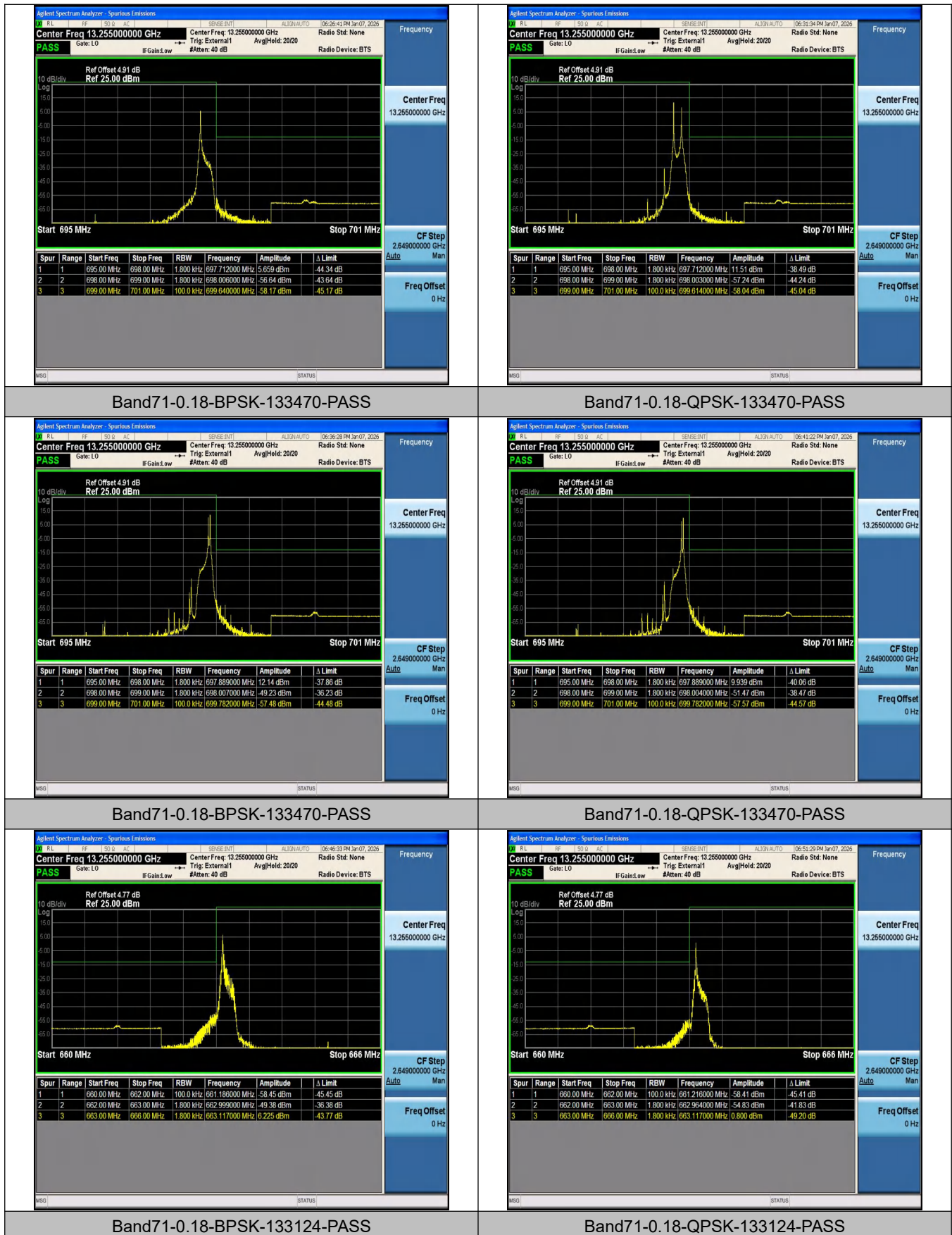
Band71-0.18-BPSK-133470-PASS



Band71-0.18-QPSK-133470-PASS

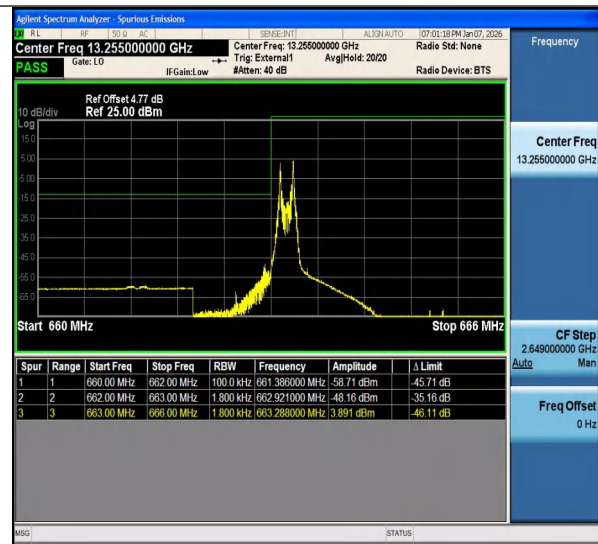
Band Edge for NB

Test Graphs





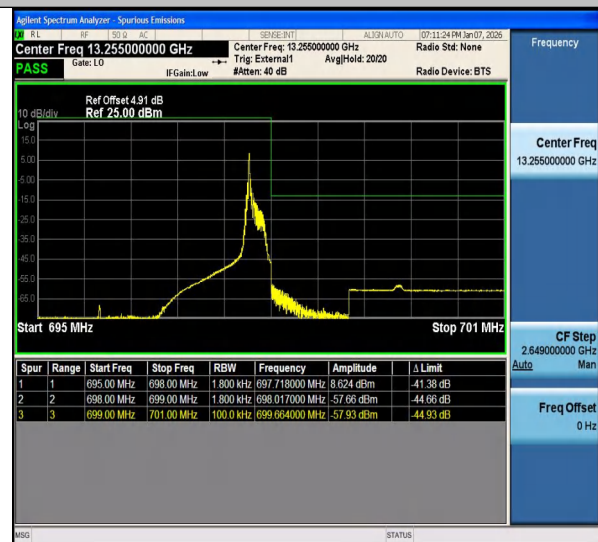
Band71-0.18-BPSK-133124-PASS



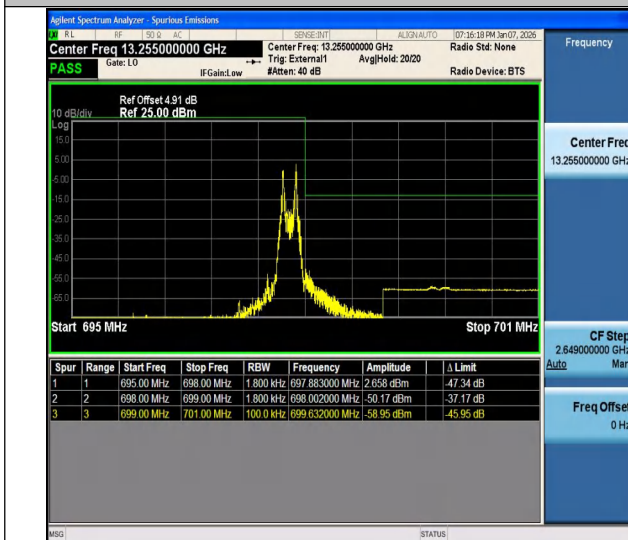
Band71-0.18-QPSK-133124-PASS



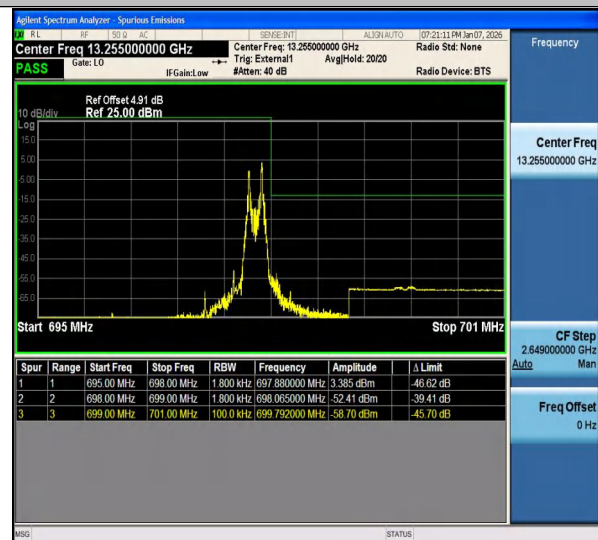
Band71-0.18-BPSK-133470-PASS



Band71-0.18-QPSK-133470-PASS



Band71-0.18-BPSK-133470-PASS



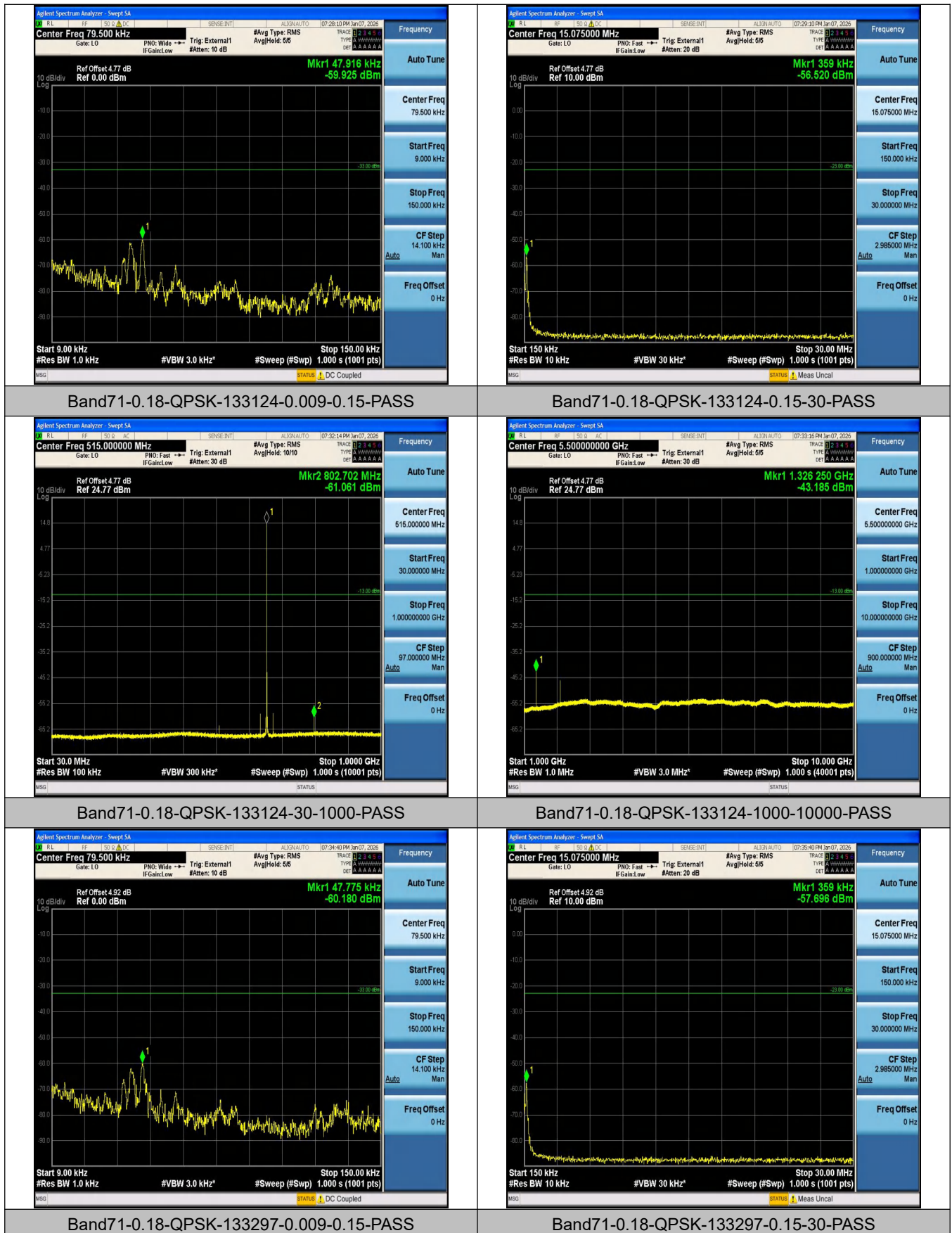
Band71-0.18-QPSK-133470-PASS

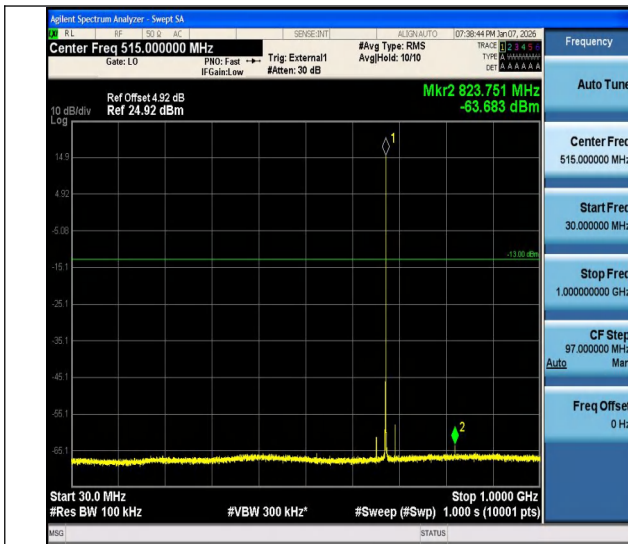


Band71-0.18-QPSK-133470-PASS

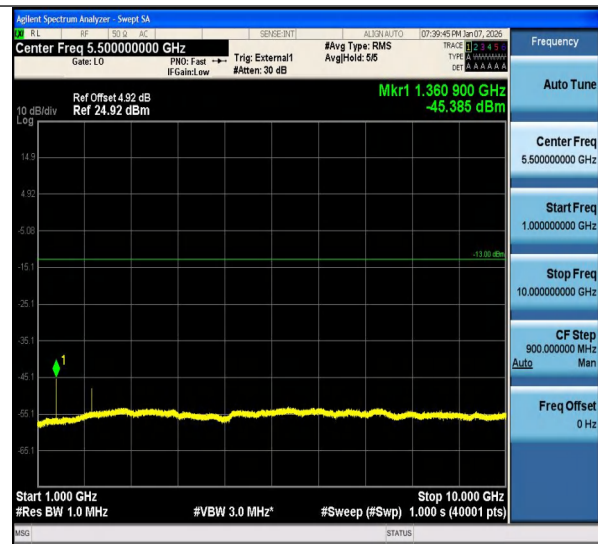
Conducted Spurious Emission for NB

Test Graphs

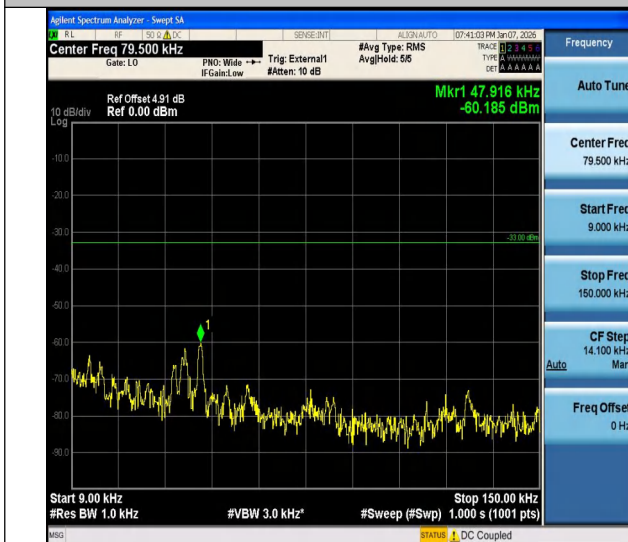




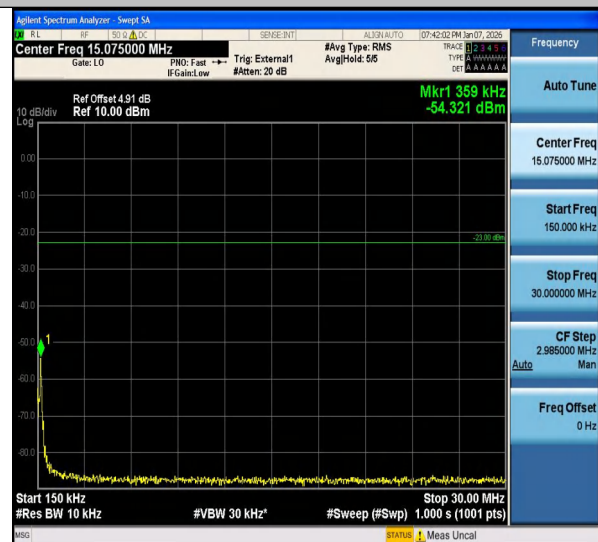
Band71-0.18-QPSK-133297-30-1000-PASS



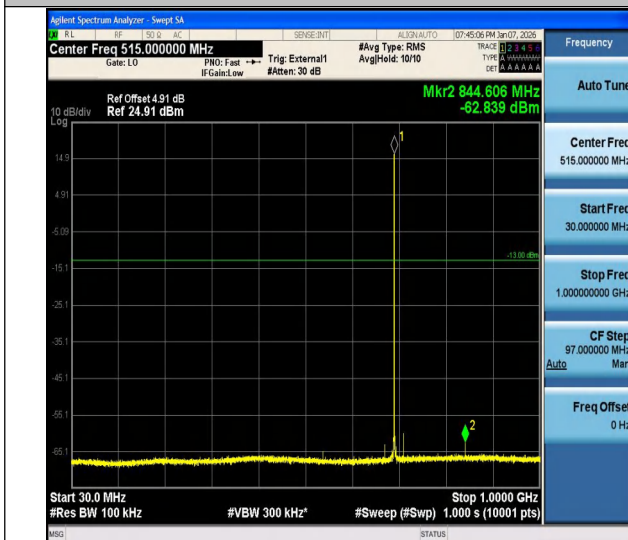
Band71-0.18-QPSK-133297-1000-10000-PASS



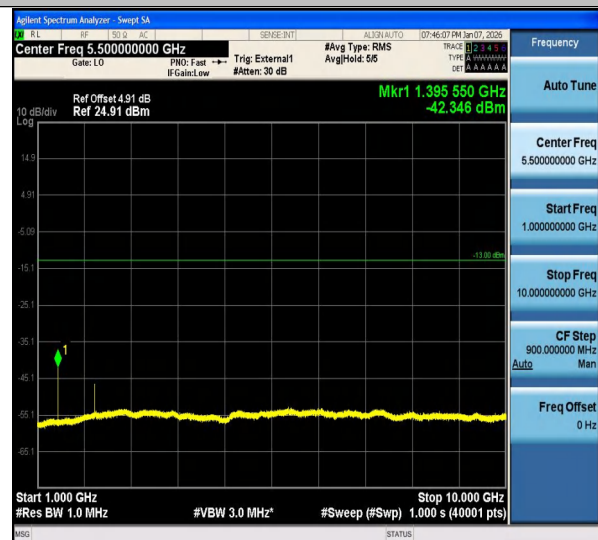
Band71-0.18-QPSK-133470-0.009-0.15-PASS



Band71-0.18-QPSK-133470-0.15-30-PASS



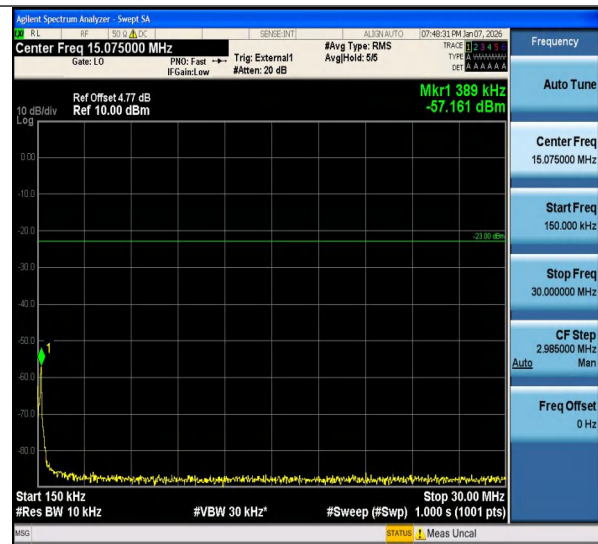
Band71-0.18-QPSK-133470-30-1000-PASS



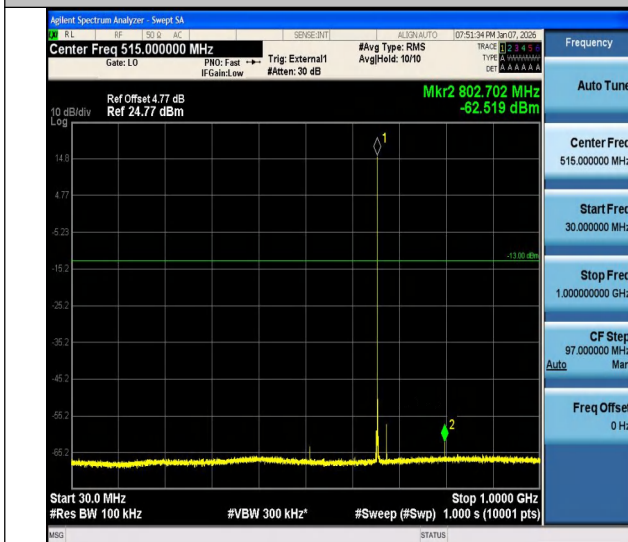
Band71-0.18-QPSK-133470-1000-10000-PASS



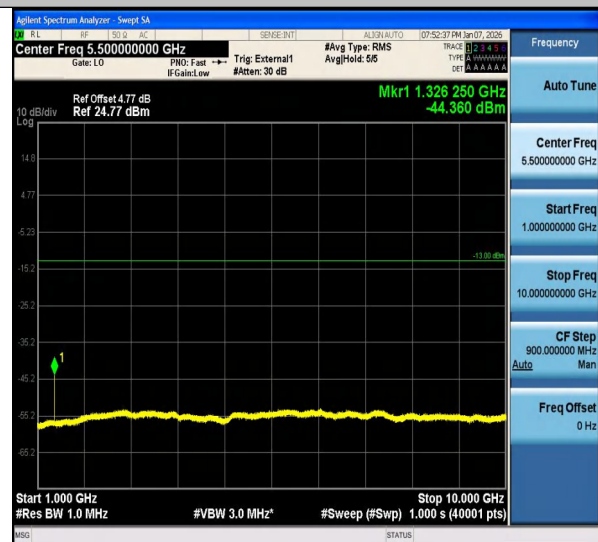
Band71-0.18-BPSK-133124-0.009-0.15-PASS



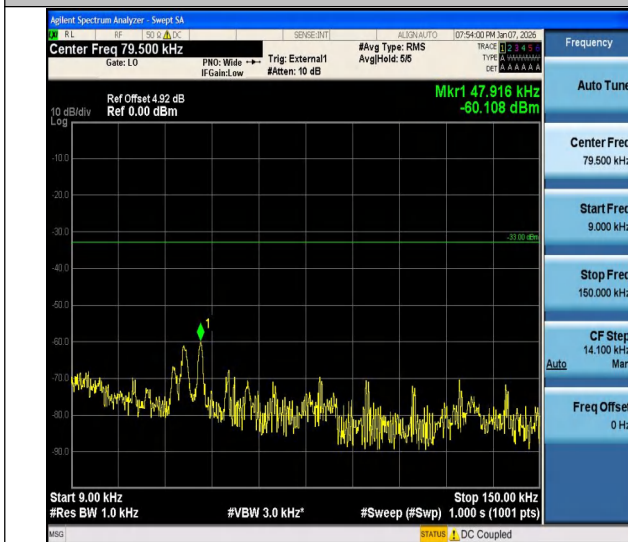
Band71-0.18-BPSK-133124-0.15-30-PASS



Band71-0.18-BPSK-133124-30-1000-PASS



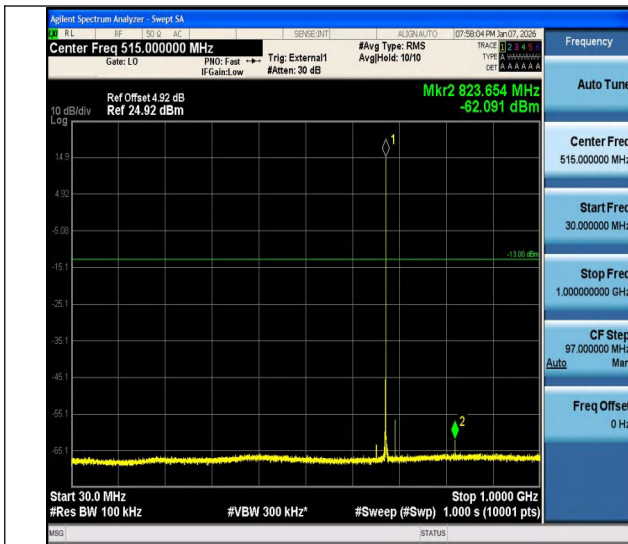
Band71-0.18-BPSK-133124-1000-10000-PASS



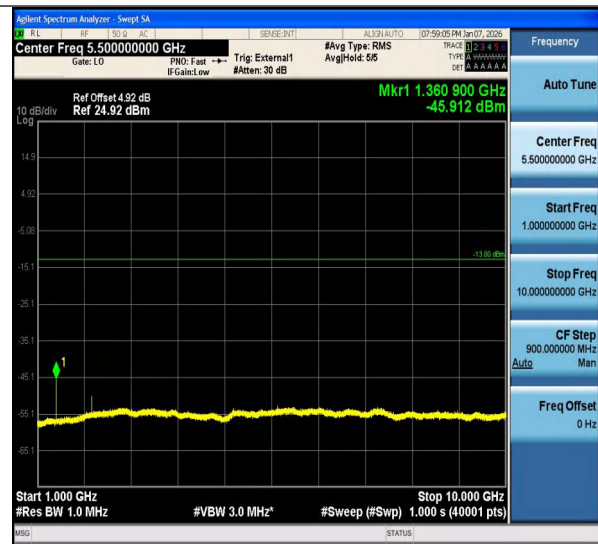
Band71-0.18-BPSK-133297-0.009-0.15-PASS



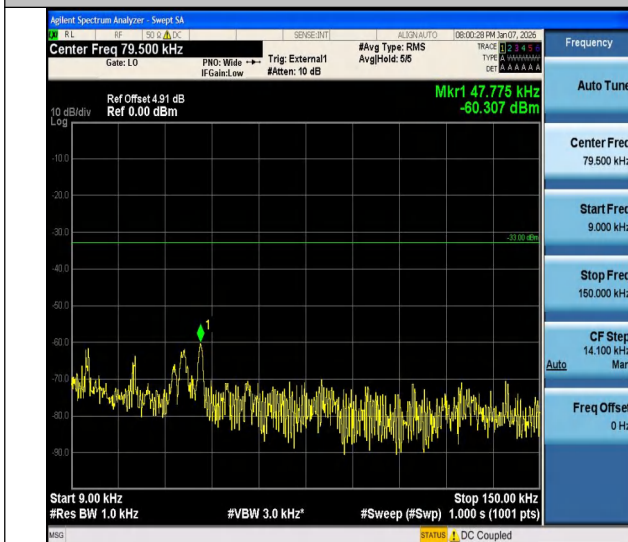
Band71-0.18-BPSK-133297-0.15-30-PASS



Band71-0.18-BPSK-133297-30-1000-PASS



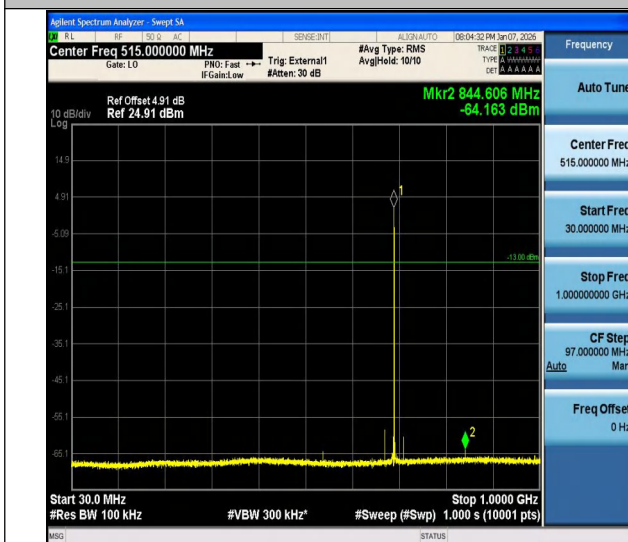
Band71-0.18-BPSK-133297-1000-10000-PASS



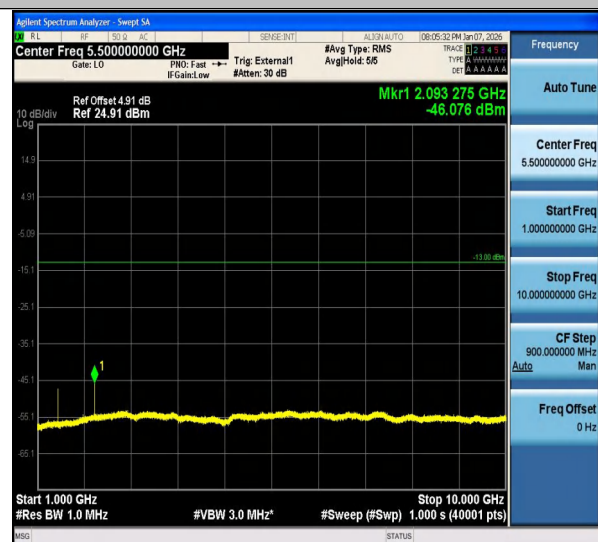
Band71-0.18-BPSK-133470-0.009-0.15-PASS



Band71-0.18-BPSK-133470-0.15-30-PASS



Band71-0.18-BPSK-133470-30-1000-PASS



Band71-0.18-BPSK-133470-1000-10000-PASS

Frequency Stability for NB

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	-4.00	-0.005878	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	VL	NT	-0.70	-0.001029	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	VH	NT	-3.00	-0.004409	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	VN	NT	-1.20	-0.001763	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	VL	NT	0.30	0.000441	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	VH	NT	-1.30	-0.001910	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	-1.30	-0.001910	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	-20	0.40	0.000588	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	-10	-0.30	-0.000441	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	0	-1.60	-0.002351	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	10	-1.80	-0.002645	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	20	-3.40	-0.004996	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	30	-1.60	-0.002351	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	40	-2.30	-0.003380	PASS
Band71	Stand-Alone	3.75kHz	0.18	QPSK	133297	1@0	NV	50	-3.00	-0.004409	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	-30	-2.60	-0.003821	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	-20	-0.60	-0.000882	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	-10	-0.80	-0.001176	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	0	-0.30	-0.000441	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	10	-2.10	-0.003086	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	20	-2.50	-0.003674	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	30	-1.30	-0.001910	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	40	-0.40	-0.000588	PASS
Band71	Stand-Alone	15kHz	0.18	QPSK	133297	1@0	NV	50	-2.20	-0.003233	PASS

~The End~