

Appendix-D LTE Band 4

Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
Band4	1.4MHz	QPSK	19957	1RB#0	23.32	24.52	30.00	PASS
Band4	1.4MHz	QPSK	19957	1RB#2	23.2	24.4	30.00	PASS
Band4	1.4MHz	QPSK	19957	1RB#5	23.21	24.41	30.00	PASS
Band4	1.4MHz	QPSK	19957	6RB#0	22.47	23.67	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#0	23.87	25.07	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#2	23.87	25.07	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#5	23.61	24.81	30.00	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	22.65	23.85	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#0	23.85	25.05	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#2	24.18	25.38	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#5	23.86	25.06	30.00	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	22.83	24.03	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#0	22.39	23.59	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#2	22.73	23.93	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#5	22.33	23.53	30.00	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	21.54	22.74	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#0	22.38	23.58	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#2	22.89	24.09	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#5	22.65	23.85	30.00	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	21.3	22.5	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#0	23.07	24.27	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#2	22.9	24.1	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#5	23.17	24.37	30.00	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	21.83	23.03	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#0	23.41	24.61	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#8	23.57	24.77	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#14	23.4	24.6	30.00	PASS
Band4	3MHz	QPSK	19965	15RB#0	22.49	23.69	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#0	23.62	24.82	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#8	23.54	24.74	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#14	23.55	24.75	30.00	PASS
Band4	3MHz	QPSK	20175	15RB#0	22.65	23.85	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#0	23.51	24.71	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#8	24.02	25.22	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#14	24.25	25.45	30.00	PASS
Band4	3MHz	QPSK	20385	15RB#0	22.78	23.98	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#0	22.88	24.08	30.00	PASS

Band4	3MHz	16QAM	19965	1RB#8	22.86	24.06	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#14	22.96	24.16	30.00	PASS
Band4	3MHz	16QAM	19965	15RB#0	21.35	22.55	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#0	22.71	23.91	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#8	22.53	23.73	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#14	22.53	23.73	30.00	PASS
Band4	3MHz	16QAM	20175	15RB#0	21.35	22.55	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#0	22.8	24	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#8	23.04	24.24	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#14	22.63	23.83	30.00	PASS
Band4	3MHz	16QAM	20385	15RB#0	21.6	22.8	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#0	23.29	24.49	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#12	23.55	24.75	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#24	23.31	24.51	30.00	PASS
Band4	5MHz	QPSK	19975	25RB#0	22.45	23.65	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#0	23.52	24.72	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#12	23.86	25.06	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#24	23.81	25.01	30.00	PASS
Band4	5MHz	QPSK	20175	25RB#0	22.68	23.88	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#0	23.85	25.05	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#12	24.08	25.28	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#24	24.27	25.47	30.00	PASS
Band4	5MHz	QPSK	20375	25RB#0	22.93	24.13	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#0	22.3	23.5	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#12	22.71	23.91	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#24	22.48	23.68	30.00	PASS
Band4	5MHz	16QAM	19975	25RB#0	21.56	22.76	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#0	22.28	23.48	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#12	23.03	24.23	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#24	22.27	23.47	30.00	PASS
Band4	5MHz	16QAM	20175	25RB#0	21.76	22.96	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#0	22.69	23.89	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#12	22.83	24.03	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#24	23.28	24.48	30.00	PASS
Band4	5MHz	16QAM	20375	25RB#0	21.9	23.1	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#0	23.37	24.57	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#24	23.98	25.18	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#49	23.64	24.84	30.00	PASS
Band4	10MHz	QPSK	20000	50RB#0	22.65	23.85	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#0	23.63	24.83	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#24	23.66	24.86	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#49	23.53	24.73	30.00	PASS
Band4	10MHz	QPSK	20175	50RB#0	22.67	23.87	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#0	23.69	24.89	30.00	PASS

Band4	10MHz	QPSK	20350	1RB#24	23.96	25.16	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#49	23.8	25	30.00	PASS
Band4	10MHz	QPSK	20350	50RB#0	22.8	24	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#0	22.74	23.94	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#24	23.35	24.55	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#49	22.85	24.05	30.00	PASS
Band4	10MHz	16QAM	20000	50RB#0	21.6	22.8	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#0	22.69	23.89	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#24	23.25	24.45	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#49	22.53	23.73	30.00	PASS
Band4	10MHz	16QAM	20175	50RB#0	21.64	22.84	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#0	22.7	23.9	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#24	23.26	24.46	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#49	22.62	23.82	30.00	PASS
Band4	10MHz	16QAM	20350	50RB#0	21.78	22.98	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#0	23.52	24.72	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#38	23.87	25.07	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#74	23.86	25.06	30.00	PASS
Band4	15MHz	QPSK	20025	75RB#0	22.74	23.94	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#0	23.59	24.79	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#38	23.9	25.1	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#74	23.67	24.87	30.00	PASS
Band4	15MHz	QPSK	20175	75RB#0	22.74	23.94	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#0	23.59	24.79	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#38	23.59	24.79	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#74	23.8	25	30.00	PASS
Band4	15MHz	QPSK	20325	75RB#0	22.78	23.98	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#0	22.89	24.09	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#38	23.17	24.37	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#74	23.23	24.43	30.00	PASS
Band4	15MHz	16QAM	20025	75RB#0	21.53	22.73	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#0	22.69	23.89	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#38	22.58	23.78	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#74	22.59	23.79	30.00	PASS
Band4	15MHz	16QAM	20175	75RB#0	21.6	22.8	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#0	22.58	23.78	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#38	22.84	24.04	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#74	23.07	24.27	30.00	PASS
Band4	15MHz	16QAM	20325	75RB#0	21.87	23.07	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#0	23.18	24.38	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#49	24.01	25.21	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#99	23.77	24.97	30.00	PASS
Band4	20MHz	QPSK	20050	100RB#0	22.67	23.87	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#0	23.5	24.7	30.00	PASS

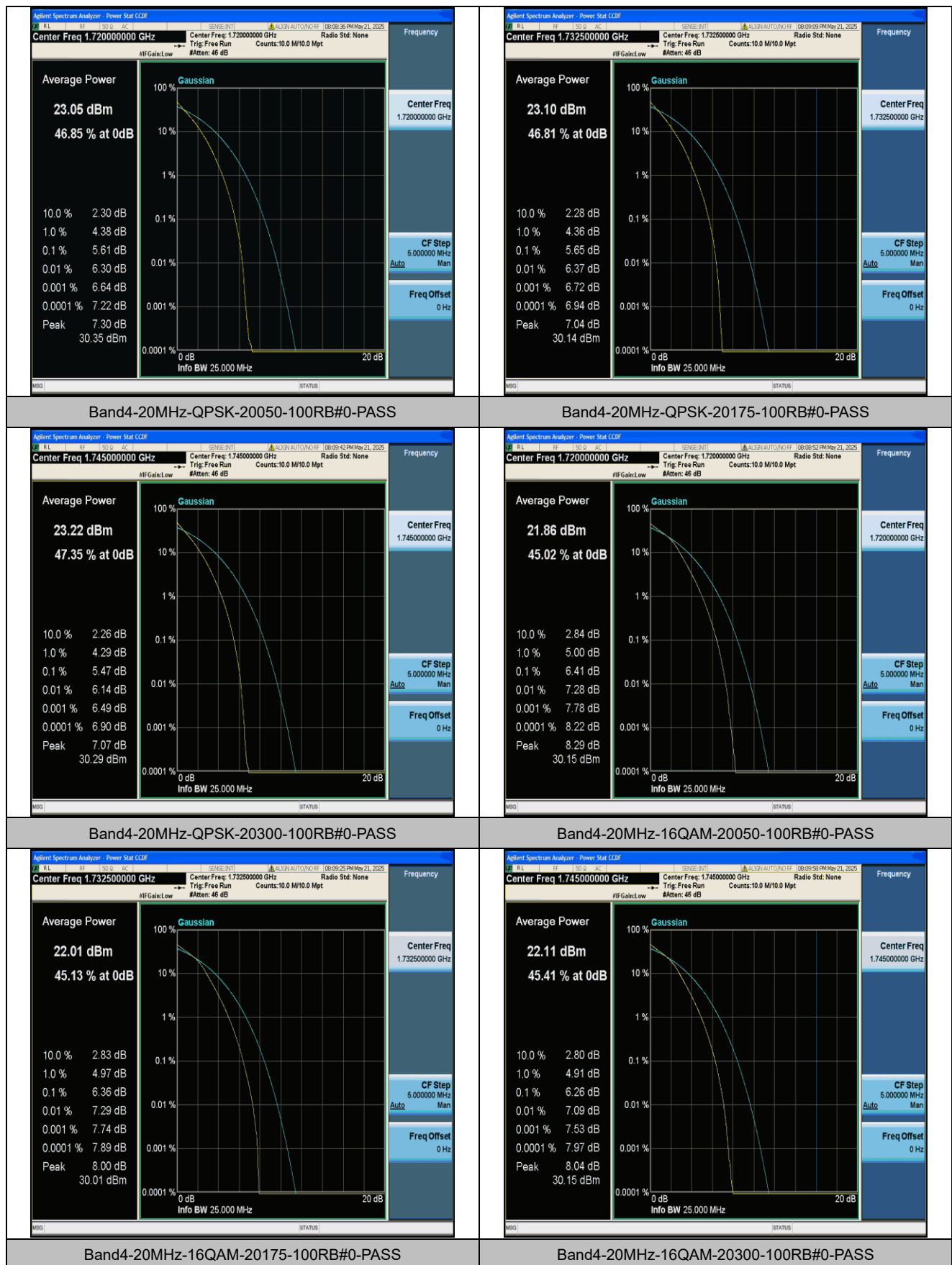
Band4	20MHz	QPSK	20175	1RB#49	24.05	25.25	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#99	23.66	24.86	30.00	PASS
Band4	20MHz	QPSK	20175	100RB#0	22.67	23.87	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#0	23.95	25.15	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#49	23.95	25.15	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#99	24.06	25.26	30.00	PASS
Band4	20MHz	QPSK	20300	100RB#0	22.8	24	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#0	22.25	23.45	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#49	23.25	24.45	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#99	22.61	23.81	30.00	PASS
Band4	20MHz	16QAM	20050	100RB#0	21.67	22.87	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#0	22.51	23.71	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#49	23.21	24.41	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#99	22.44	23.64	30.00	PASS
Band4	20MHz	16QAM	20175	100RB#0	21.62	22.82	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#0	23.59	24.79	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#49	23.66	24.86	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#99	23.58	24.78	30.00	PASS
Band4	20MHz	16QAM	20300	100RB#0	21.72	22.92	30.00	PASS

Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
Band4	20MHz	QPSK	20050	100RB#0	5.61	13	PASS
Band4	20MHz	QPSK	20175	100RB#0	5.65	13	PASS
Band4	20MHz	QPSK	20300	100RB#0	5.47	13	PASS
Band4	20MHz	16QAM	20050	100RB#0	6.41	13	PASS
Band4	20MHz	16QAM	20175	100RB#0	6.36	13	PASS
Band4	20MHz	16QAM	20300	100RB#0	6.26	13	PASS

Test Graphs

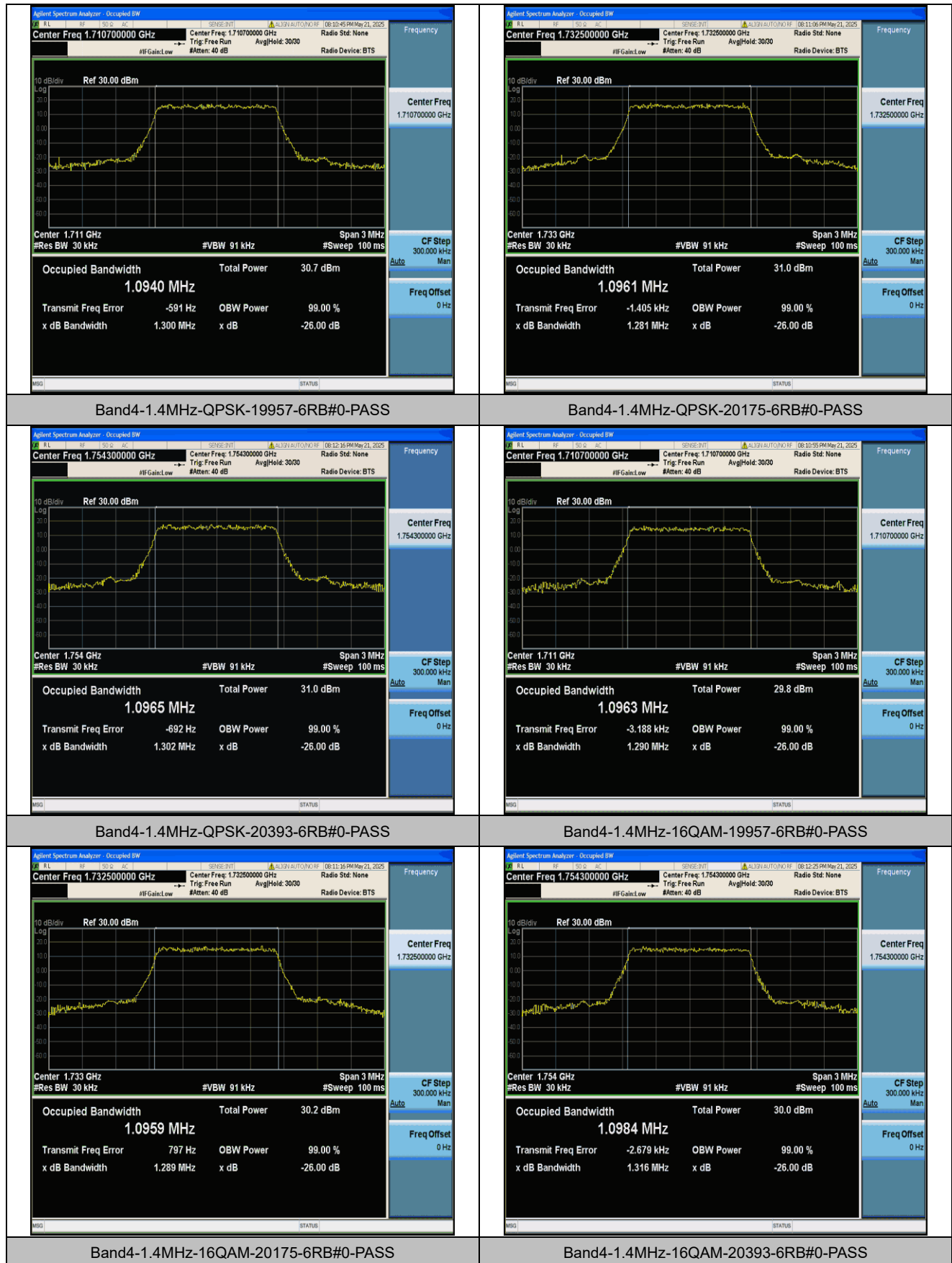


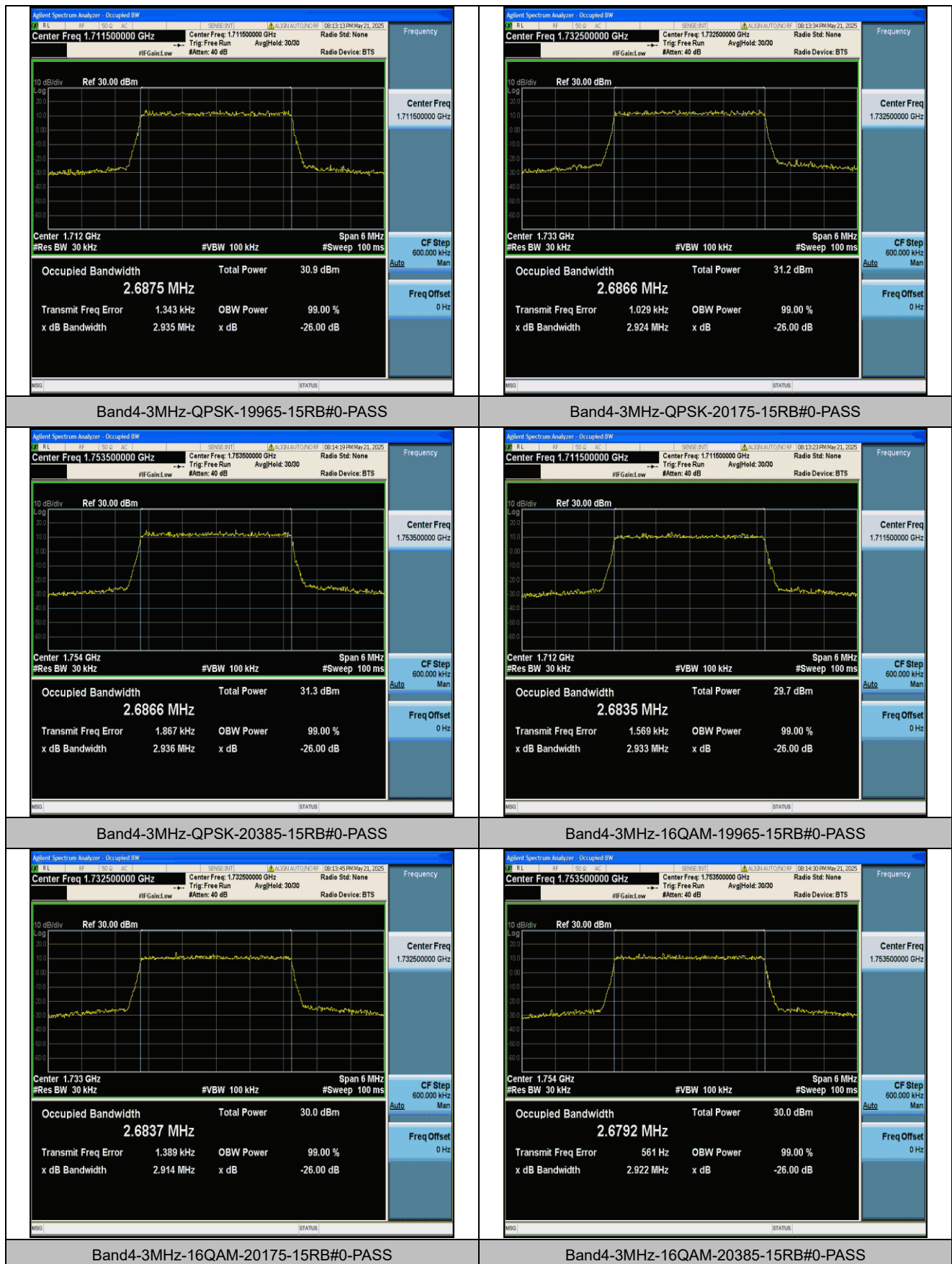
26dB Bandwidth and Occupied Bandwidth

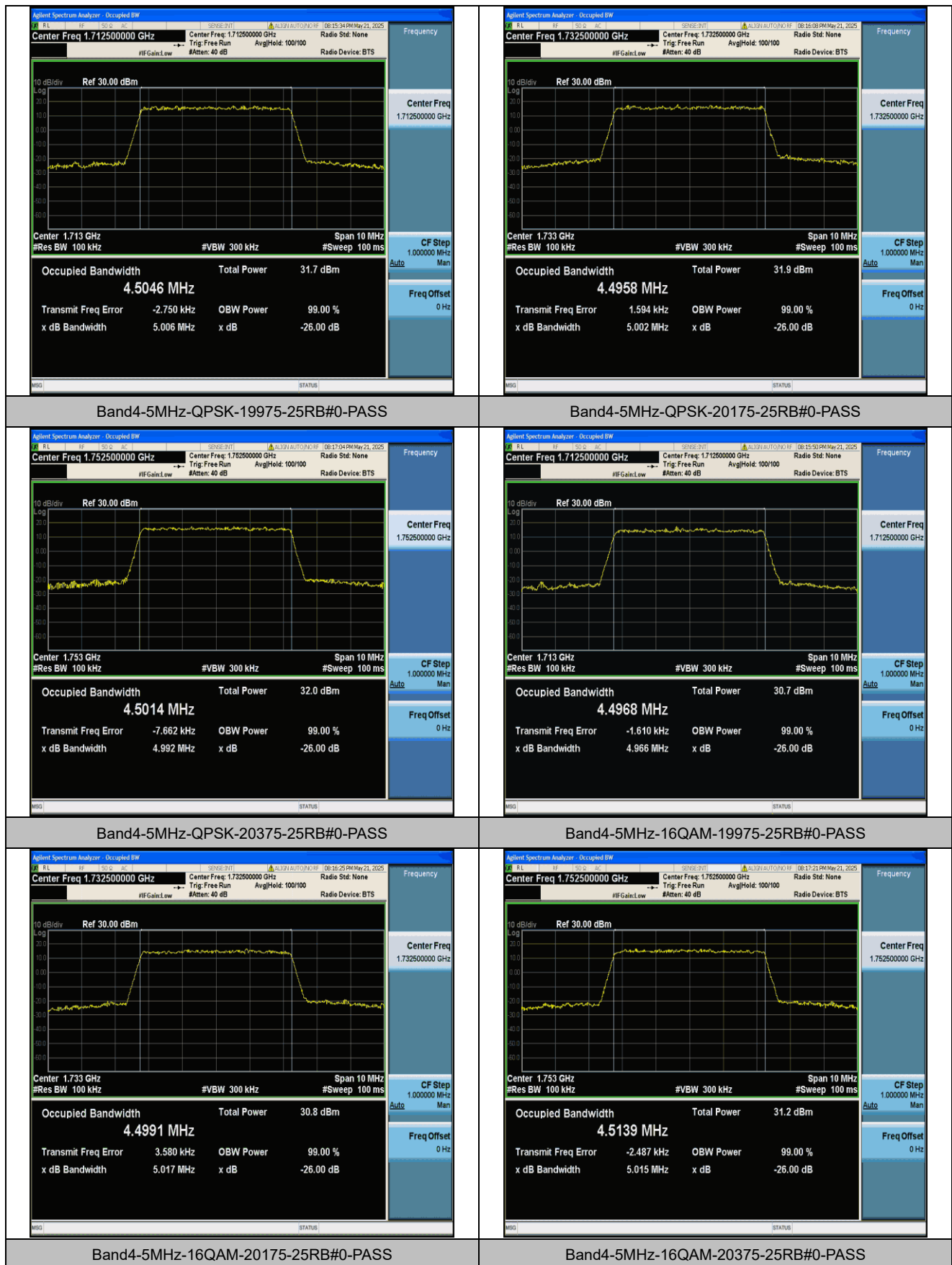
Test Result

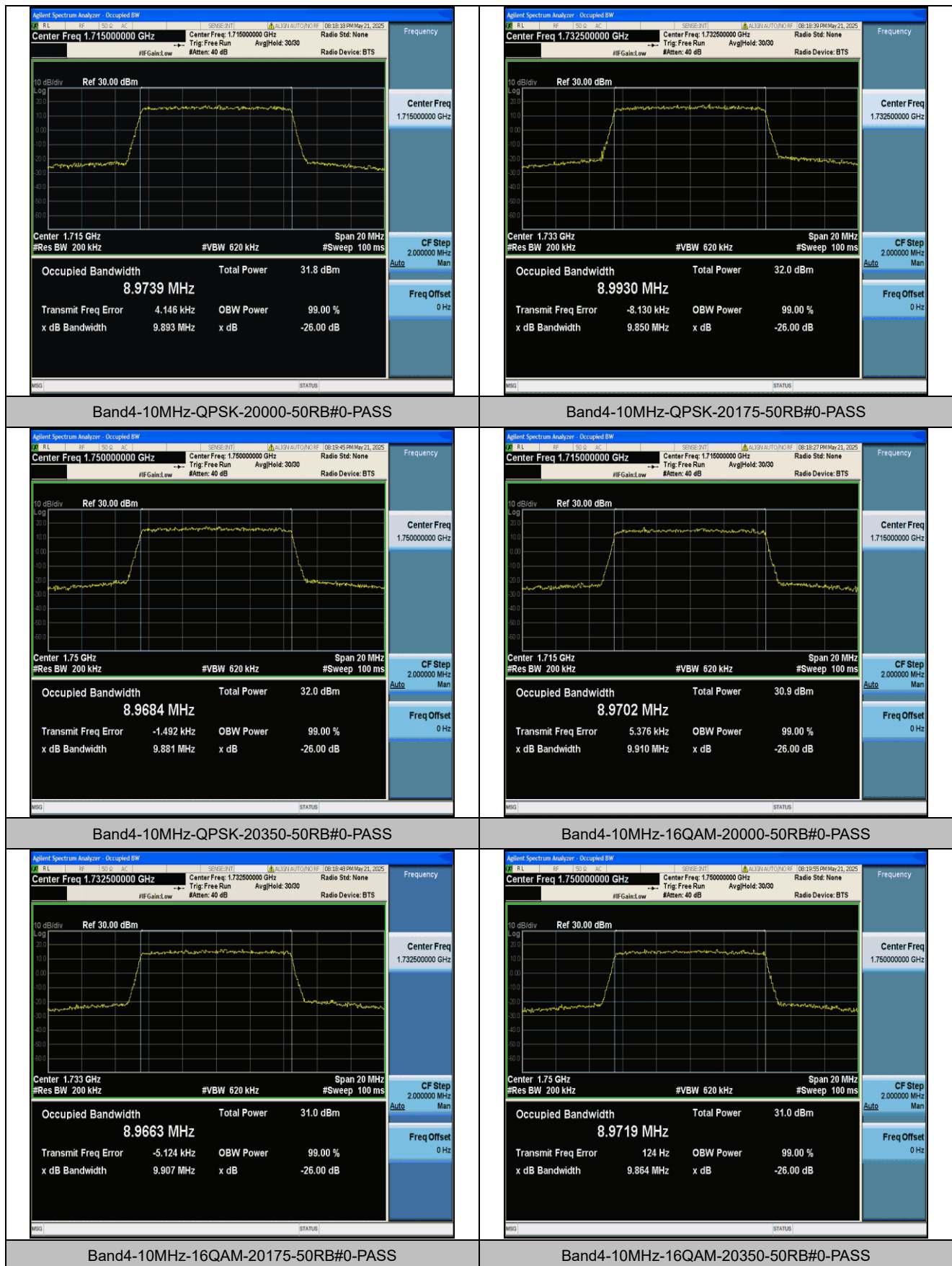
Band	Bandwidth	Modulation	Channel	RB Configuration	OBW (MHz)	26dB EBW (MHz)	Verdict
Band4	1.4MHz	QPSK	19957	6RB#0	1.0940	1.300	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	1.0961	1.281	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	1.0965	1.302	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	1.0963	1.290	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	1.0959	1.289	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	1.0984	1.316	PASS
Band4	3MHz	QPSK	19965	15RB#0	2.6875	2.935	PASS
Band4	3MHz	QPSK	20175	15RB#0	2.6866	2.924	PASS
Band4	3MHz	QPSK	20385	15RB#0	2.6866	2.936	PASS
Band4	3MHz	16QAM	19965	15RB#0	2.6835	2.933	PASS
Band4	3MHz	16QAM	20175	15RB#0	2.6837	2.914	PASS
Band4	3MHz	16QAM	20385	15RB#0	2.6792	2.922	PASS
Band4	5MHz	QPSK	19975	25RB#0	4.5046	5.006	PASS
Band4	5MHz	QPSK	20175	25RB#0	4.4958	5.002	PASS
Band4	5MHz	QPSK	20375	25RB#0	4.5014	4.992	PASS
Band4	5MHz	16QAM	19975	25RB#0	4.4968	4.966	PASS
Band4	5MHz	16QAM	20175	25RB#0	4.4991	5.017	PASS
Band4	5MHz	16QAM	20375	25RB#0	4.5139	5.015	PASS
Band4	10MHz	QPSK	20000	50RB#0	8.9739	9.893	PASS
Band4	10MHz	QPSK	20175	50RB#0	8.9930	9.850	PASS
Band4	10MHz	QPSK	20350	50RB#0	8.9684	9.881	PASS
Band4	10MHz	16QAM	20000	50RB#0	8.9702	9.910	PASS
Band4	10MHz	16QAM	20175	50RB#0	8.9663	9.907	PASS
Band4	10MHz	16QAM	20350	50RB#0	8.9719	9.864	PASS
Band4	15MHz	QPSK	20025	75RB#0	13.441	14.81	PASS
Band4	15MHz	QPSK	20175	75RB#0	13.437	14.80	PASS
Band4	15MHz	QPSK	20325	75RB#0	13.441	14.68	PASS
Band4	15MHz	16QAM	20025	75RB#0	13.446	14.69	PASS
Band4	15MHz	16QAM	20175	75RB#0	13.439	14.75	PASS
Band4	15MHz	16QAM	20325	75RB#0	13.437	14.66	PASS
Band4	20MHz	QPSK	20050	100RB#0	17.914	19.39	PASS
Band4	20MHz	QPSK	20175	100RB#0	17.955	19.53	PASS
Band4	20MHz	QPSK	20300	100RB#0	17.888	19.37	PASS
Band4	20MHz	16QAM	20050	100RB#0	17.964	19.50	PASS
Band4	20MHz	16QAM	20175	100RB#0	17.904	19.36	PASS
Band4	20MHz	16QAM	20300	100RB#0	17.952	19.43	PASS

Test Graphs







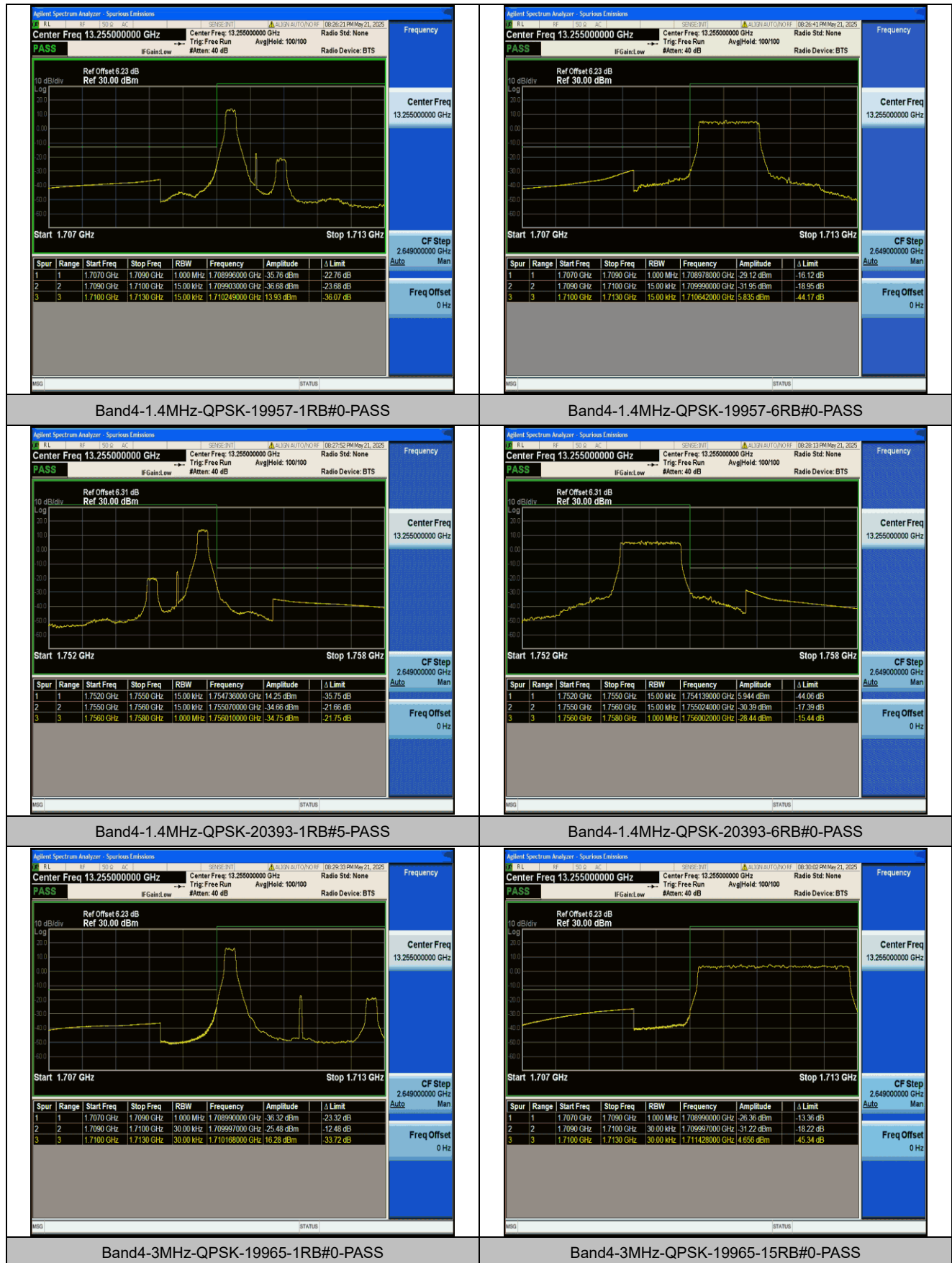


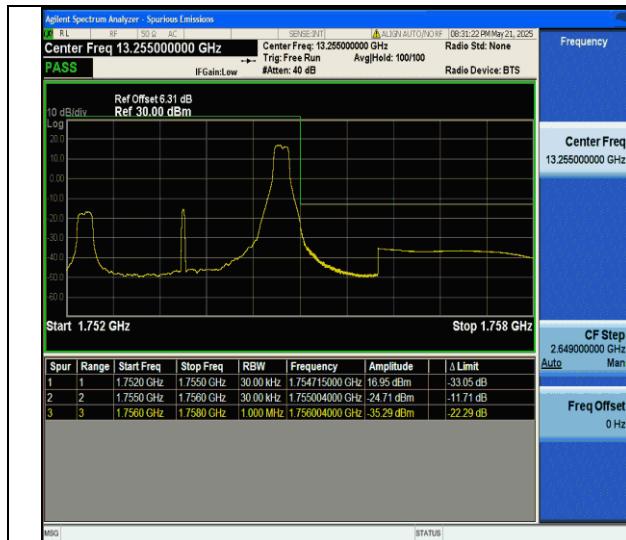




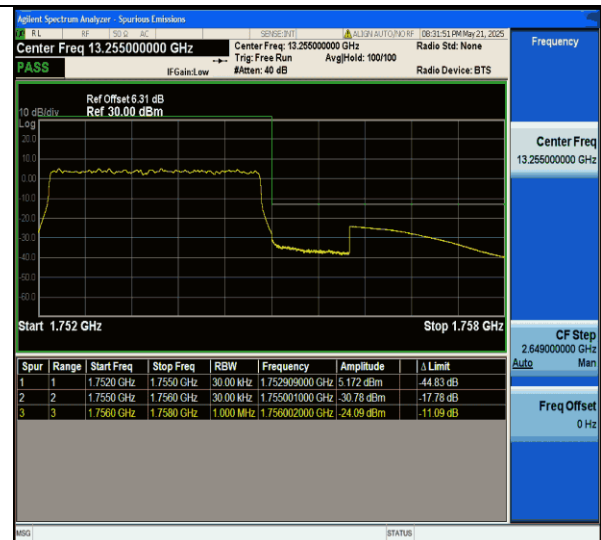
Band Edge

Test Graphs

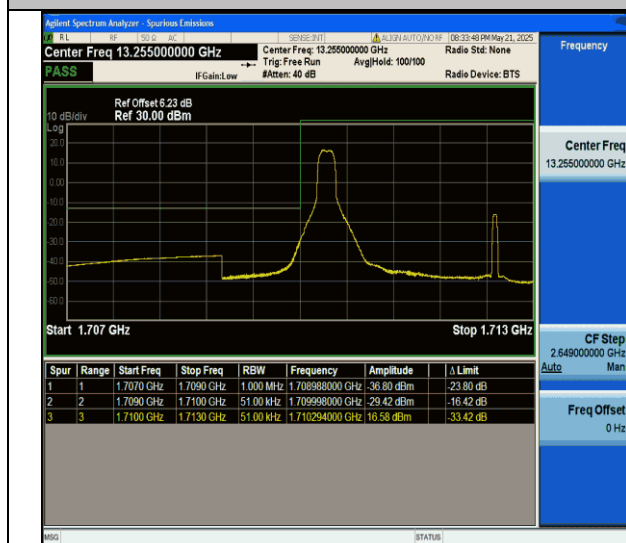




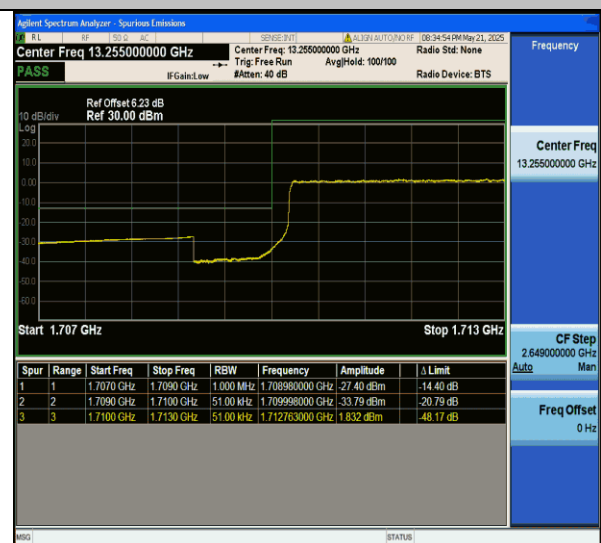
Band4-3MHz-QPSK-20385-1RB#14-PASS



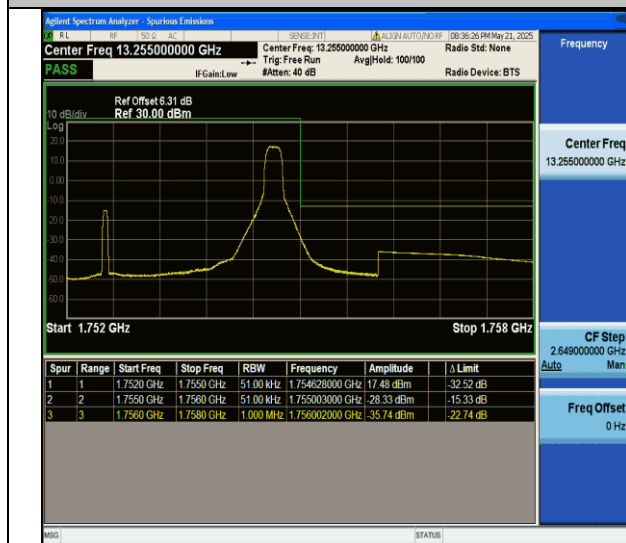
Band4-3MHz-QPSK-20385-15RB#0-PASS



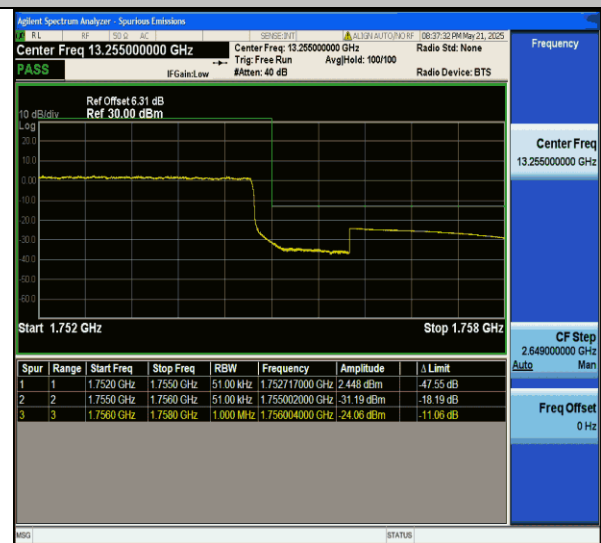
Band4-5MHz-QPSK-19975-1RB#0-PASS



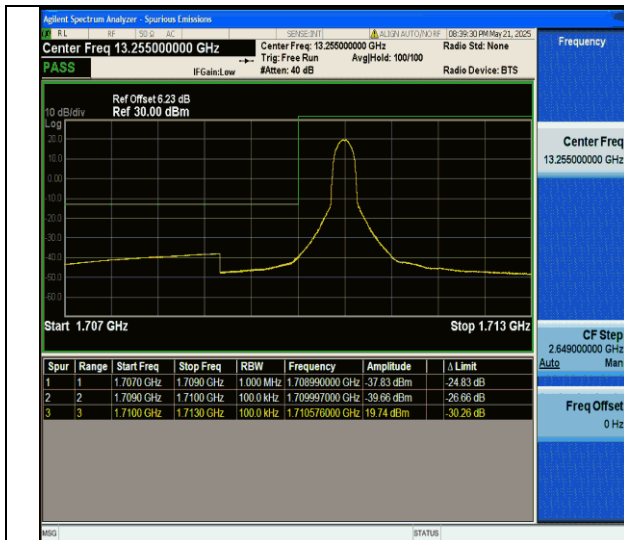
Band4-5MHz-QPSK-19975-25RB#0-PASS



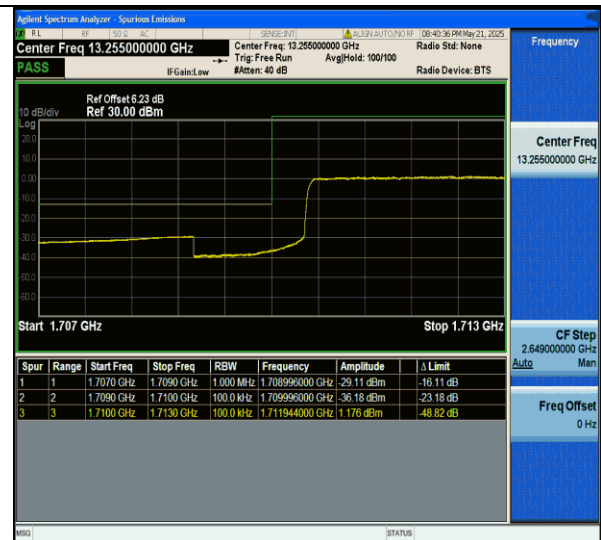
Band4-5MHz-QPSK-20375-1RB#24-PASS



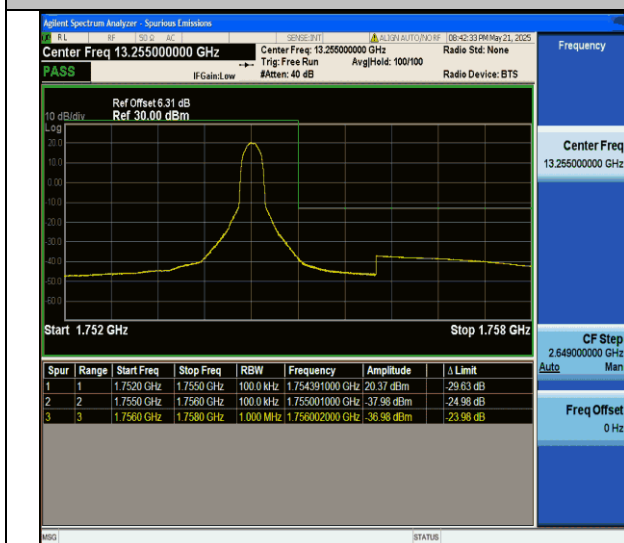
Band4-5MHz-QPSK-20375-25RB#0-PASS



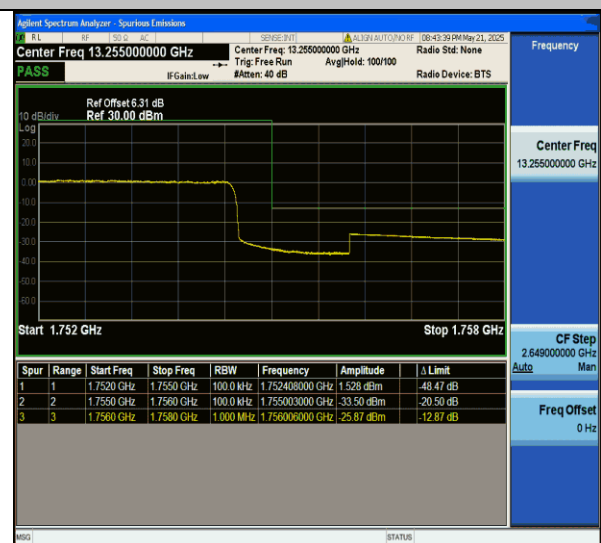
Band4-10MHz-QPSK-20000-1RB#0-PASS



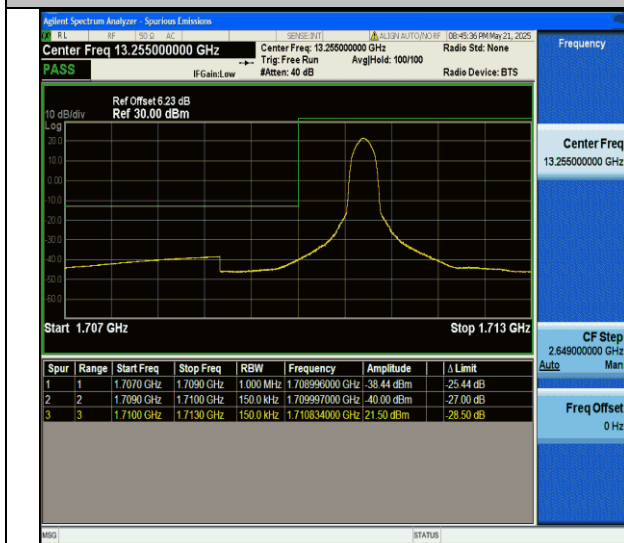
Band4-10MHz-QPSK-20000-50RB#0-PASS



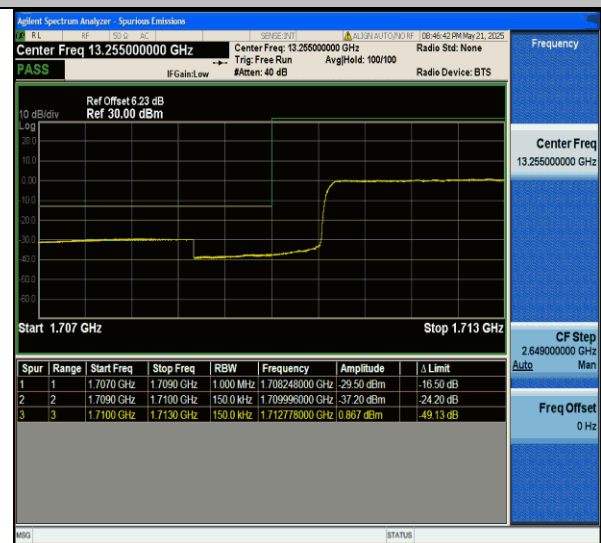
Band4-10MHz-QPSK-20350-1RB#49-PASS



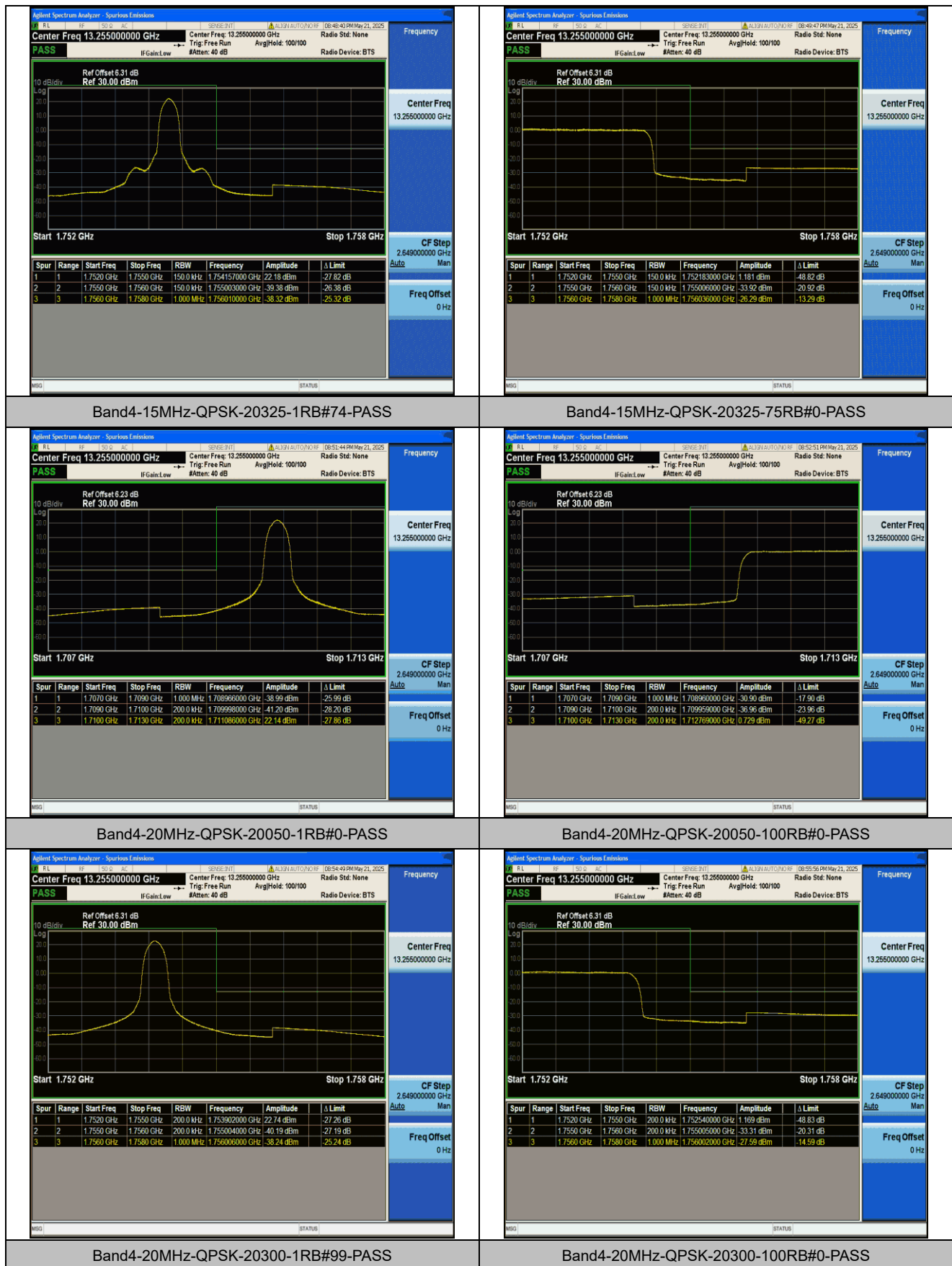
Band4-10MHz-QPSK-20350-50RB#0-PASS



Band4-15MHz-QPSK-20025-1RB#0-PASS



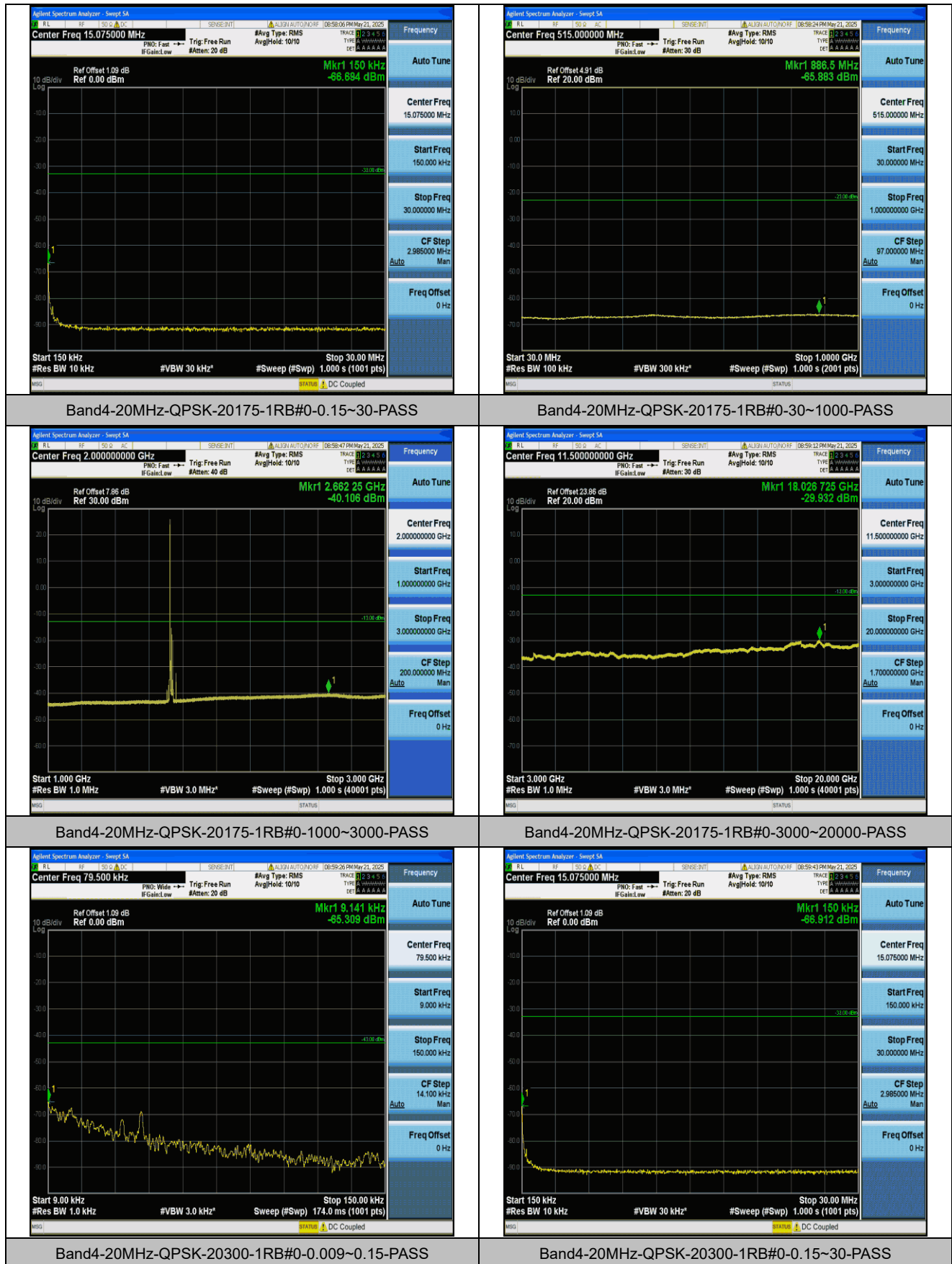
Band4-15MHz-QPSK-20025-75RB#0-PASS

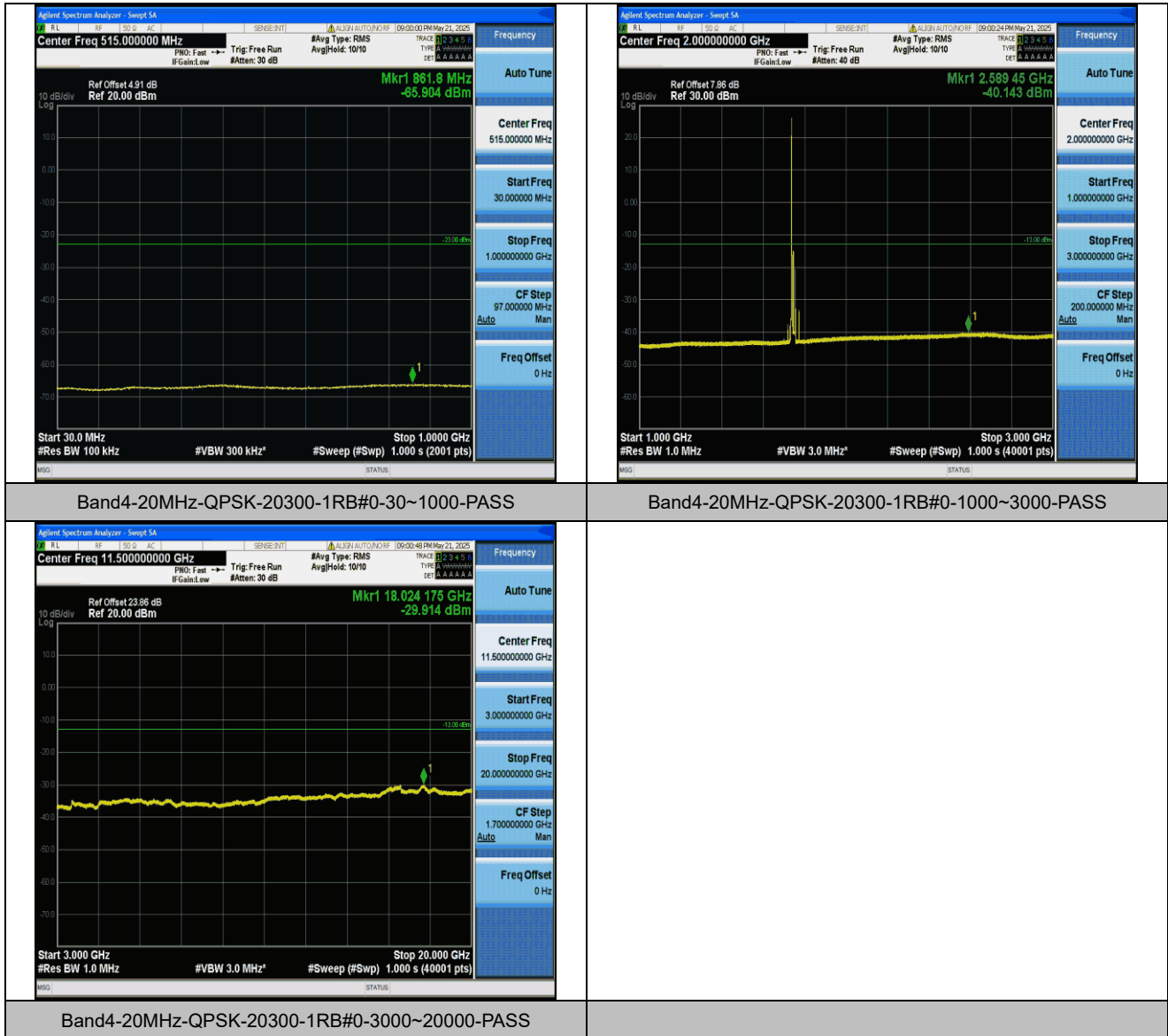


Conducted Spurious Emission

Test Graphs







Frequency Stability

Test Result

Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band4	20MHz	QPSK	20175	100RB#0	VN	NT	4.63	0.002672	PASS
Band4	20MHz	QPSK	20175	100RB#0	VL	NT	5.89	0.003400	PASS
Band4	20MHz	QPSK	20175	100RB#0	VH	NT	3.69	0.002130	PASS

Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band4	20MHz	QPSK	20175	100RB#0	NV	-30	3.75	0.002165	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-20	2.85	0.001645	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-10	4.05	0.002338	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	0	4.41	0.002545	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	10	3.39	0.001957	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	20	5.02	0.002898	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	30	3.43	0.001980	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	40	-6.09	-0.003515	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	50	4.49	0.002592	PASS

~The End~