

Appendix-A 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	23.60	24.8	30.00	PASS
Band4	1.4MHz	QPSK	19957	1RB#2	23.85	25.05	30.00	PASS
Band4	1.4MHz	QPSK	19957	1RB#5	23.66	24.86	30.00	PASS
Band4	1.4MHz	QPSK	19957	6RB#0	22.91	24.11	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#0	22.76	23.96	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#2	22.73	23.93	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#5	22.70	23.9	30.00	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	22.05	23.25	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#0	23.95	25.15	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#2	23.87	25.07	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#5	23.93	25.13	30.00	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	23.04	24.24	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#0	22.89	24.09	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#2	23.19	24.39	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#5	23.17	24.37	30.00	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	22.03	23.23	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#0	23.91	25.11	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#2	23.96	25.16	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#5	24.08	25.28	30.00	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	23.18	24.38	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#0	23.20	24.4	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#2	23.27	24.47	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#5	23.25	24.45	30.00	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	22.13	23.33	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#0	23.80	25	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#8	23.65	24.85	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#14	23.63	24.83	30.00	PASS
Band4	3MHz	QPSK	19965	15RB#0	22.99	24.19	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#0	23.07	24.27	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#8	23.23	24.43	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#14	22.54	23.74	30.00	PASS
Band4	3MHz	16QAM	19965	15RB#0	21.97	23.17	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#0	23.92	25.12	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#8	24.15	25.35	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#14	23.95	25.15	30.00	PASS
Band4	3MHz	QPSK	20175	15RB#0	23.03	24.23	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#0	23.21	24.41	30.00	PASS

Band4	3MHz	16QAM	20175	1RB#8	22.82	24.02	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#14	23.29	24.49	30.00	PASS
Band4	3MHz	16QAM	20175	15RB#0	22.09	23.29	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#0	24.04	25.24	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#8	23.92	25.12	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#14	23.97	25.17	30.00	PASS
Band4	3MHz	QPSK	20385	15RB#0	23.12	24.32	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#0	23.42	24.62	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#8	23.39	24.59	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#14	22.68	23.88	30.00	PASS
Band4	3MHz	16QAM	20385	15RB#0	22.09	23.29	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#0	23.62	24.82	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#12	23.73	24.93	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#24	23.78	24.98	30.00	PASS
Band4	5MHz	QPSK	19975	25RB#0	23.01	24.21	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#0	22.71	23.91	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#12	22.67	23.87	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#24	22.54	23.74	30.00	PASS
Band4	5MHz	16QAM	19975	25RB#0	22.17	23.37	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#0	23.65	24.85	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#12	23.99	25.19	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#24	23.77	24.97	30.00	PASS
Band4	5MHz	QPSK	20175	25RB#0	23.03	24.23	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#0	22.92	24.12	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#12	22.84	24.04	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#24	22.83	24.03	30.00	PASS
Band4	5MHz	16QAM	20175	25RB#0	21.93	23.13	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#0	24.16	25.36	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#12	24.38	25.58	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#24	24.15	25.35	30.00	PASS
Band4	5MHz	QPSK	20375	25RB#0	23.26	24.46	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#0	23.29	24.49	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#12	23.41	24.61	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#24	22.97	24.17	30.00	PASS
Band4	5MHz	16QAM	20375	25RB#0	22.07	23.27	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#0	23.82	25.02	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#24	23.91	25.11	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#49	23.80	25	30.00	PASS
Band4	10MHz	QPSK	20000	50RB#0	22.91	24.11	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#0	22.93	24.13	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#24	22.55	23.75	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#49	22.68	23.88	30.00	PASS
Band4	10MHz	16QAM	20000	50RB#0	21.95	23.15	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#0	23.84	25.04	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#24	24.02	25.22	30.00	PASS

Band4	10MHz	QPSK	20175	1RB#49	23.96	25.16	30.00	PASS
Band4	10MHz	QPSK	20175	50RB#0	23.04	24.24	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#0	22.79	23.99	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#24	22.83	24.03	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#49	23.31	24.51	30.00	PASS
Band4	10MHz	16QAM	20175	50RB#0	22.09	23.29	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#0	24.01	25.21	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#24	24.49	25.69	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#49	24.16	25.36	30.00	PASS
Band4	10MHz	QPSK	20350	50RB#0	23.23	24.43	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#0	23.18	24.38	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#24	22.96	24.16	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#49	23.20	24.4	30.00	PASS
Band4	10MHz	16QAM	20350	50RB#0	22.29	23.49	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#0	23.82	25.02	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#38	23.76	24.96	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#74	23.94	25.14	30.00	PASS
Band4	15MHz	QPSK	20025	75RB#0	23.03	24.23	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#0	22.63	23.83	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#38	22.41	23.61	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#74	23.26	24.46	30.00	PASS
Band4	15MHz	16QAM	20025	75RB#0	22.06	23.26	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#0	23.70	24.9	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#38	24.12	25.32	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#74	23.90	25.1	30.00	PASS
Band4	15MHz	QPSK	20175	75RB#0	23.05	24.25	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#0	22.70	23.9	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#38	22.84	24.04	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#74	22.79	23.99	30.00	PASS
Band4	15MHz	16QAM	20175	75RB#0	21.98	23.18	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#0	23.90	25.1	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#38	24.17	25.37	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#74	24.09	25.29	30.00	PASS
Band4	15MHz	QPSK	20325	75RB#0	23.11	24.31	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#0	22.77	23.97	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#38	22.82	24.02	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#74	23.03	24.23	30.00	PASS
Band4	15MHz	16QAM	20325	75RB#0	22.06	23.26	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#0	23.68	24.88	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#49	23.95	25.15	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#99	23.92	25.12	30.00	PASS
Band4	20MHz	QPSK	20050	100RB#0	23.02	24.22	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#0	23.18	24.38	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#49	23.21	24.41	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#99	22.92	24.12	30.00	PASS

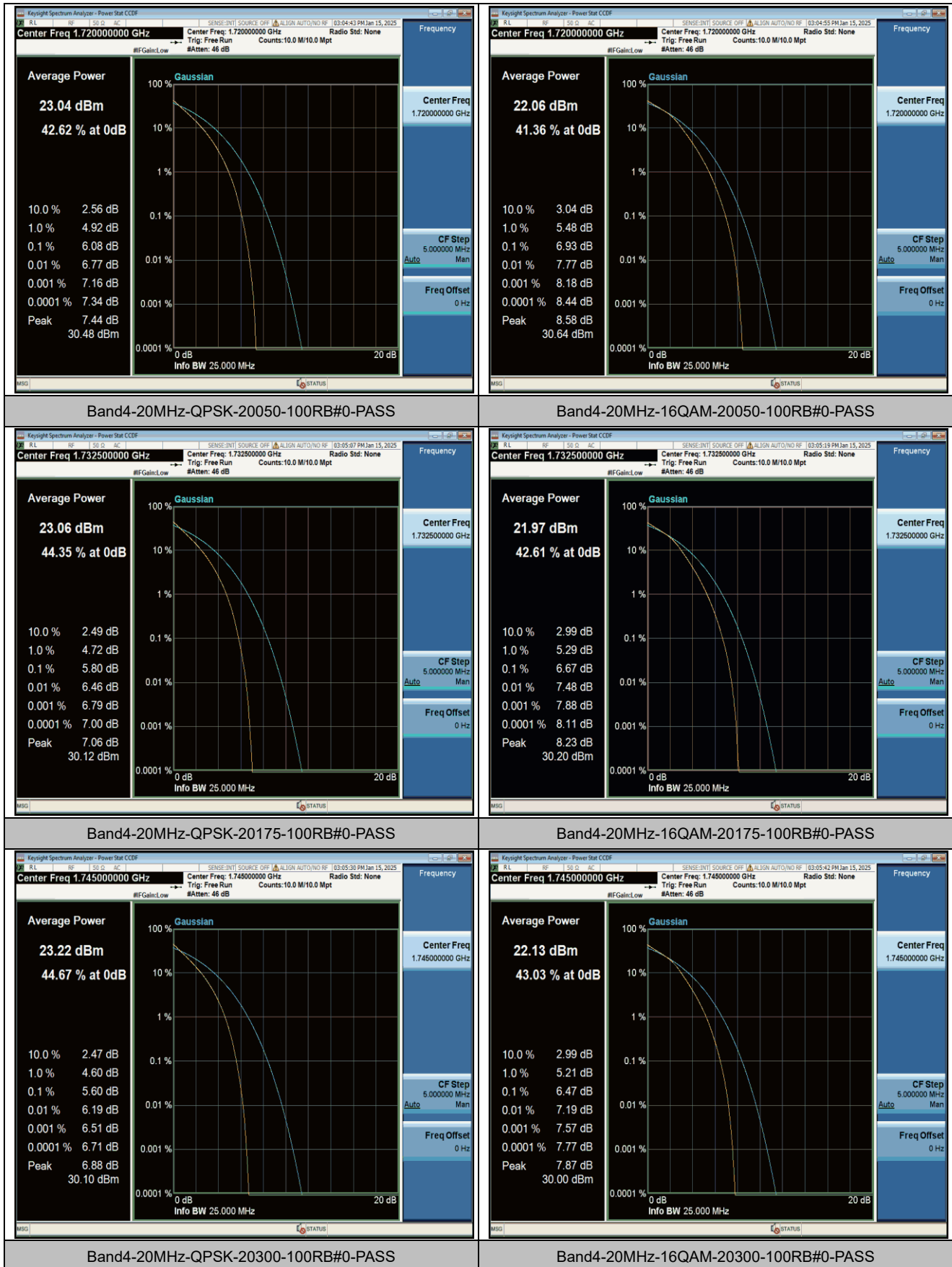
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Band4	20MHz	QPSK	20175	1RB#49	24.09	25.29	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#99	23.78	24.98	30.00	PASS
Band4	20MHz	QPSK	20175	100RB#0	23.02	24.22	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#0	23.39	24.59	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#49	22.74	23.94	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#99	22.91	24.11	30.00	PASS
Band4	20MHz	16QAM	20175	100RB#0	21.95	23.15	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#0	23.95	25.15	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#49	24.24	25.44	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#99	24.18	25.38	30.00	PASS
Band4	20MHz	QPSK	20300	100RB#0	23.09	24.29	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#0	22.58	23.78	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#49	22.70	23.9	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#99	23.37	24.57	30.00	PASS
Band4	20MHz	16QAM	20300	100RB#0	22.14	23.34	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	6.08	13	PASS
Band4	20MHz	16QAM	20050	100RB#0	6.93	13	PASS
Band4	20MHz	QPSK	20175	100RB#0	5.80	13	PASS
Band4	20MHz	16QAM	20175	100RB#0	6.67	13	PASS
Band4	20MHz	QPSK	20300	100RB#0	5.60	13	PASS
Band4	20MHz	16QAM	20300	100RB#0	6.47	13	PASS

Test Graphs

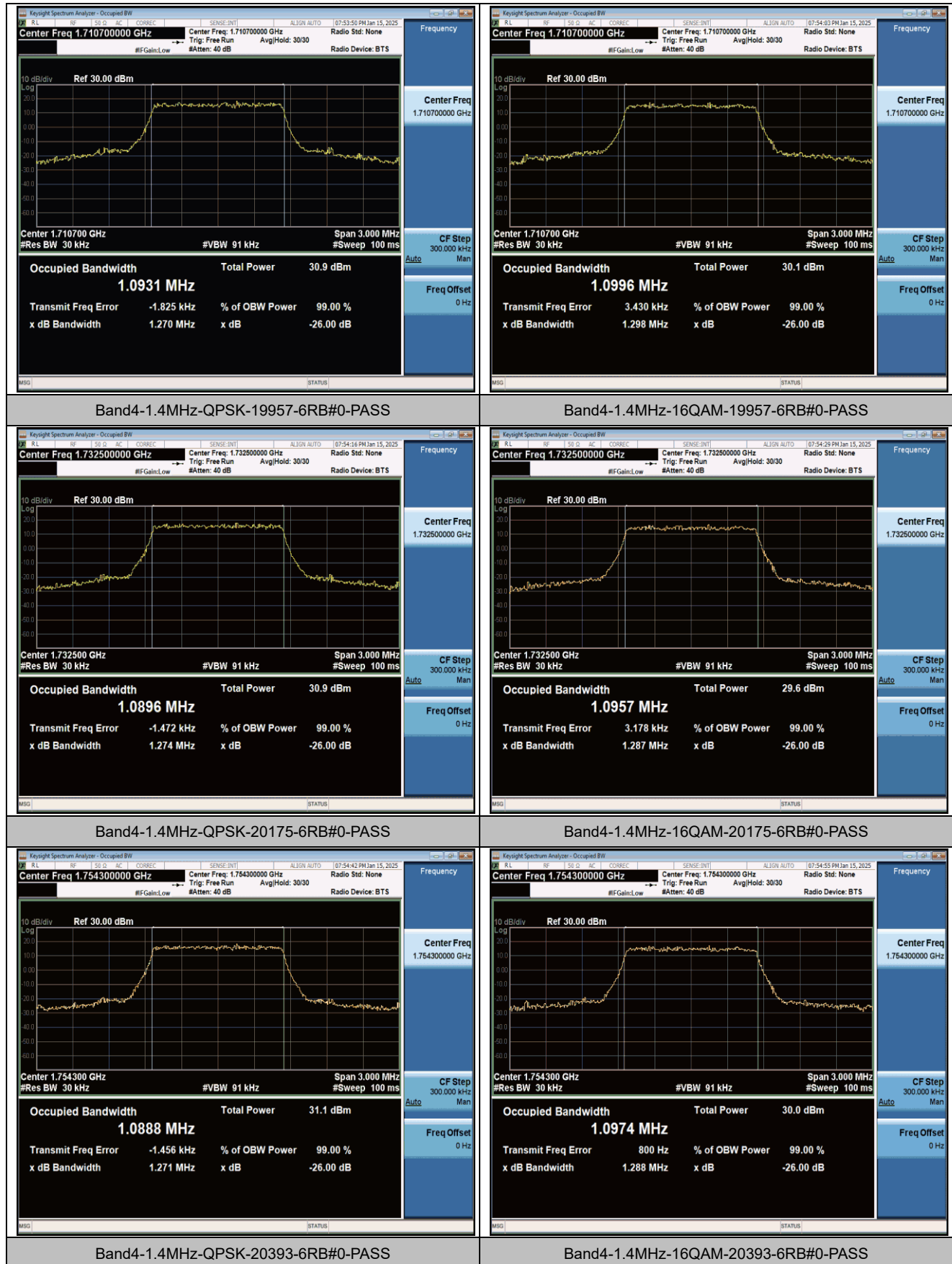


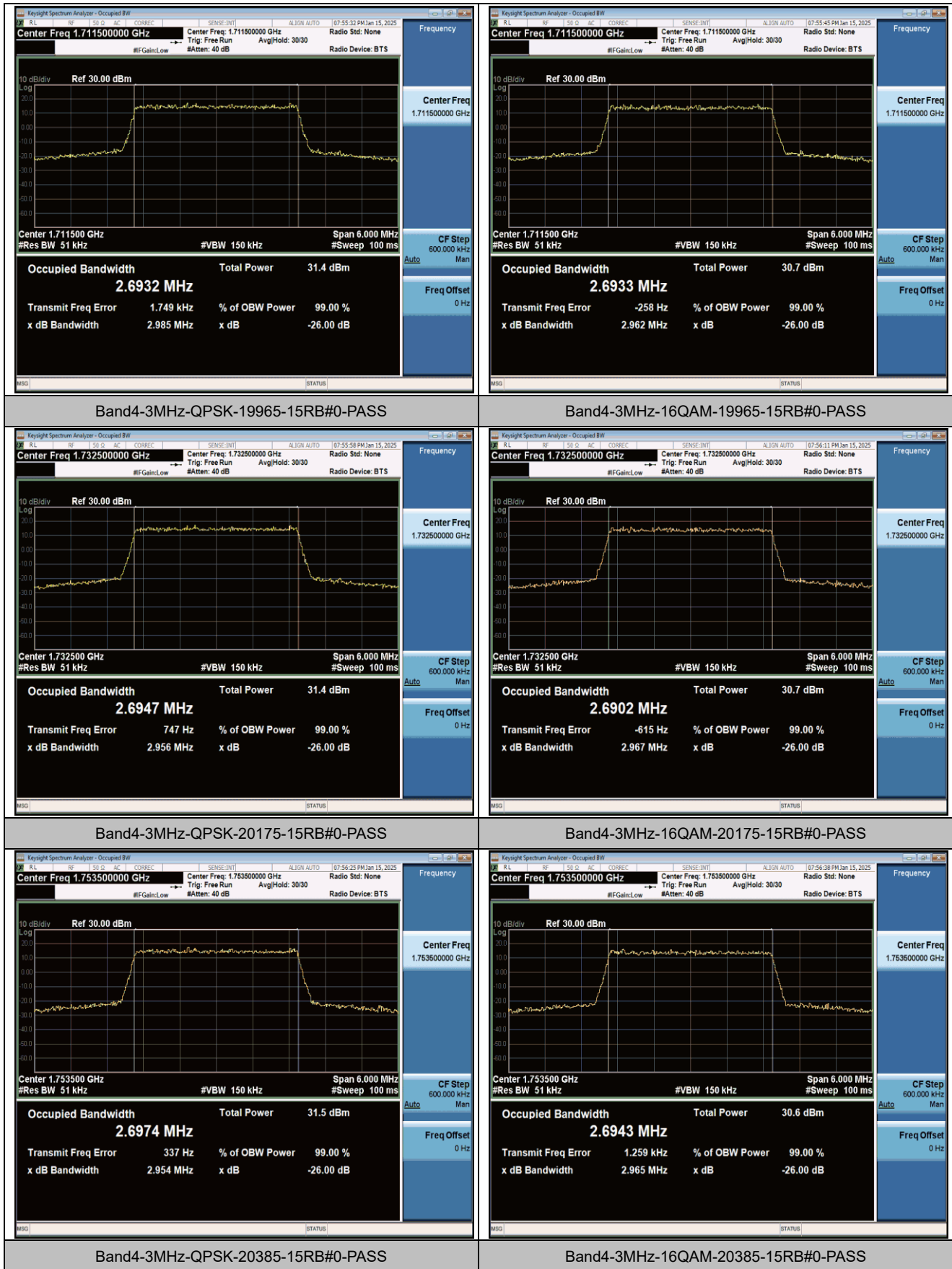
26dB Bandwidth and Occupied Bandwidth

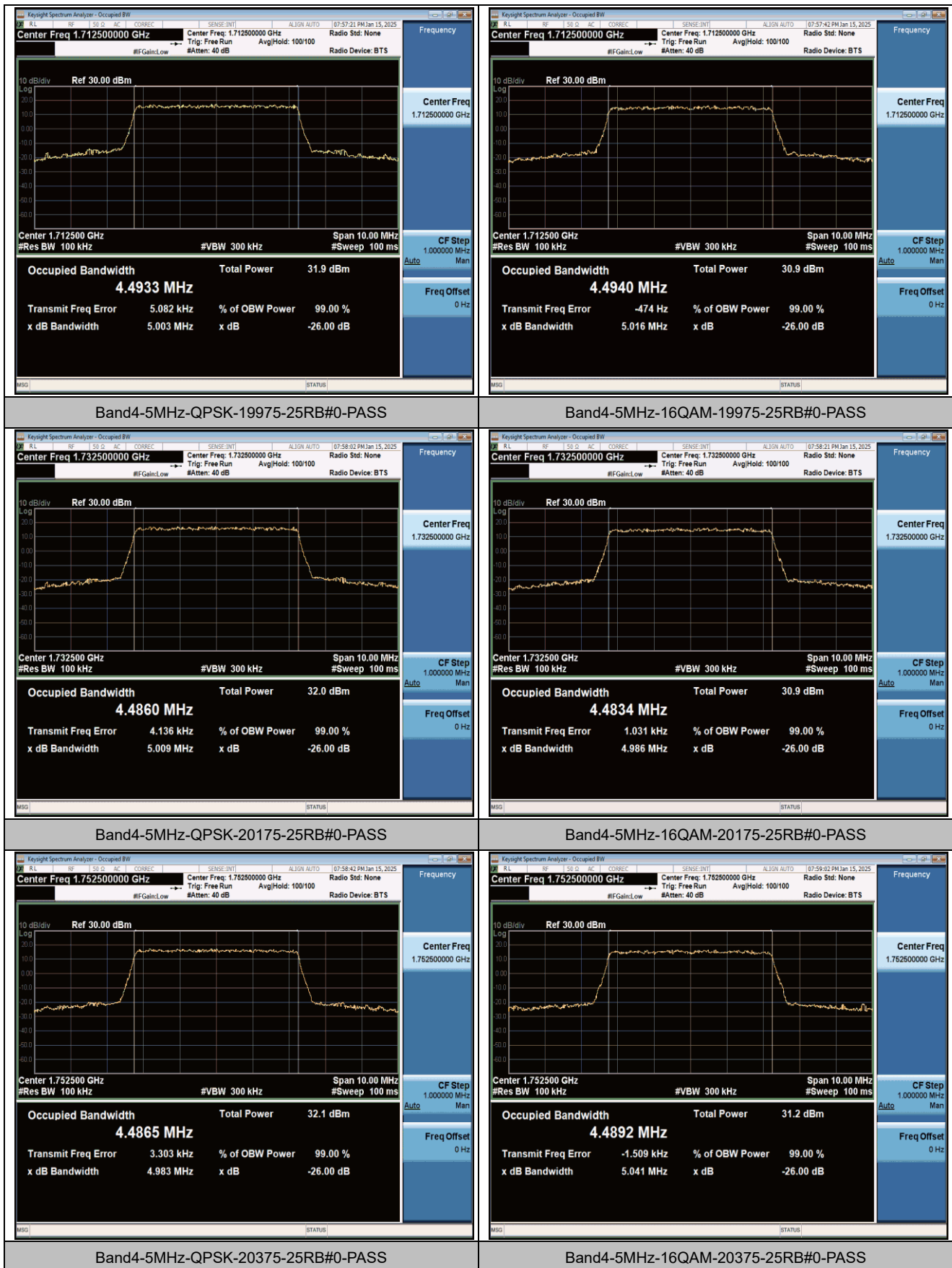
Test Result

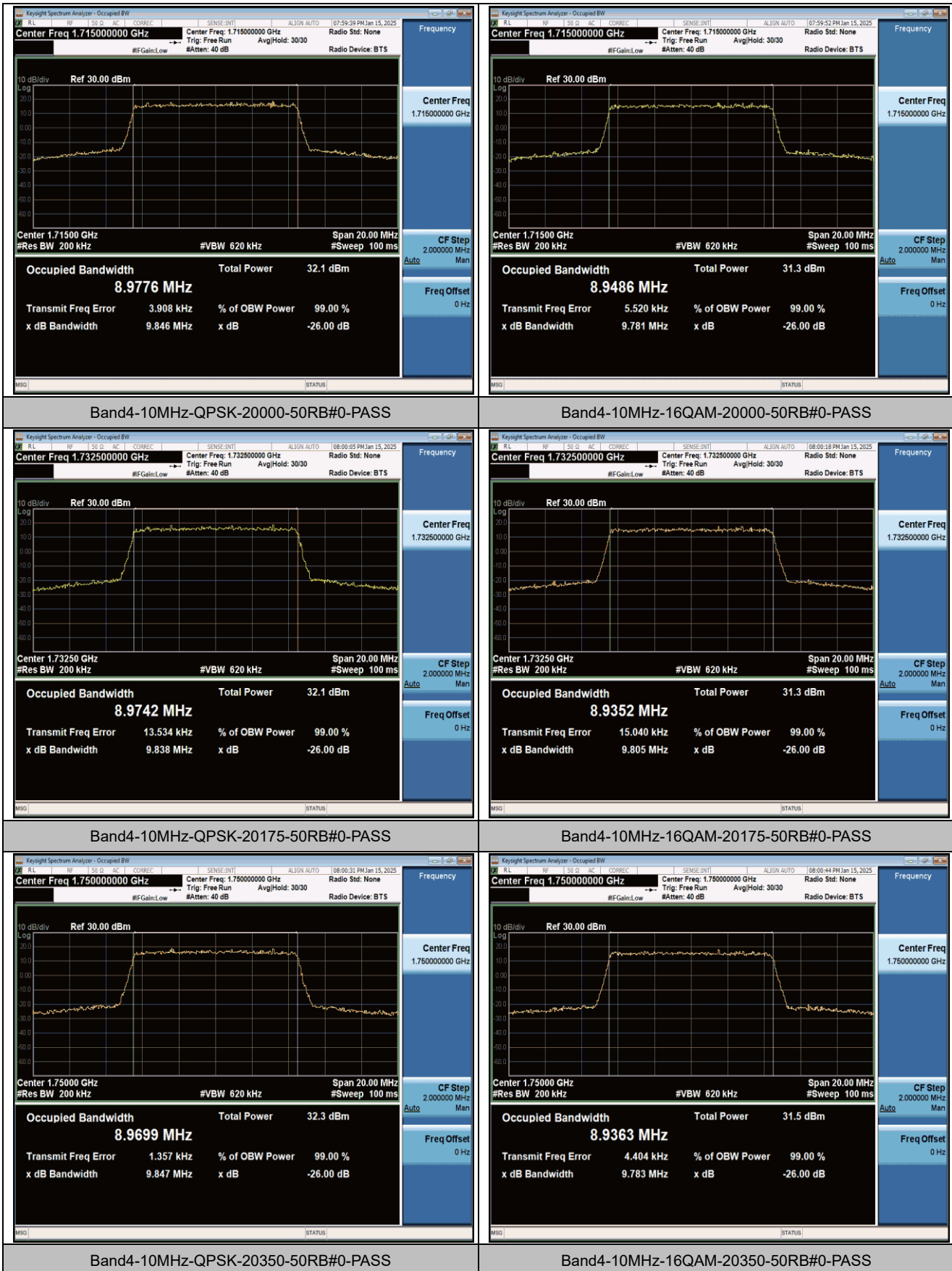
Band	Bandwidth	Modulation	Channel	RB Configuration	OBW (MHz)	26dB EBW (MHz)	Verdict
Band4	1.4MHz	QPSK	19957	6RB#0	1.0931	1.270	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	1.0996	1.298	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	1.0896	1.274	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	1.0957	1.287	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	1.0888	1.271	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	1.0974	1.288	PASS
Band4	3MHz	QPSK	19965	15RB#0	2.6932	2.985	PASS
Band4	3MHz	16QAM	19965	15RB#0	2.6933	2.962	PASS
Band4	3MHz	QPSK	20175	15RB#0	2.6947	2.956	PASS
Band4	3MHz	16QAM	20175	15RB#0	2.6902	2.967	PASS
Band4	3MHz	QPSK	20385	15RB#0	2.6974	2.954	PASS
Band4	3MHz	16QAM	20385	15RB#0	2.6943	2.965	PASS
Band4	5MHz	QPSK	19975	25RB#0	4.4933	5.003	PASS
Band4	5MHz	16QAM	19975	25RB#0	4.4940	5.016	PASS
Band4	5MHz	QPSK	20175	25RB#0	4.4860	5.009	PASS
Band4	5MHz	16QAM	20175	25RB#0	4.4834	4.986	PASS
Band4	5MHz	QPSK	20375	25RB#0	4.4865	4.983	PASS
Band4	5MHz	16QAM	20375	25RB#0	4.4892	5.041	PASS
Band4	10MHz	QPSK	20000	50RB#0	8.9776	9.846	PASS
Band4	10MHz	16QAM	20000	50RB#0	8.9486	9.781	PASS
Band4	10MHz	QPSK	20175	50RB#0	8.9742	9.838	PASS
Band4	10MHz	16QAM	20175	50RB#0	8.9352	9.805	PASS
Band4	10MHz	QPSK	20350	50RB#0	8.9699	9.847	PASS
Band4	10MHz	16QAM	20350	50RB#0	8.9363	9.783	PASS
Band4	15MHz	QPSK	20025	75RB#0	13.476	14.75	PASS
Band4	15MHz	16QAM	20025	75RB#0	13.441	14.76	PASS
Band4	15MHz	QPSK	20175	75RB#0	13.439	14.70	PASS
Band4	15MHz	16QAM	20175	75RB#0	13.404	14.74	PASS
Band4	15MHz	QPSK	20325	75RB#0	13.434	14.67	PASS
Band4	15MHz	16QAM	20325	75RB#0	13.418	14.74	PASS
Band4	20MHz	QPSK	20050	100RB#0	17.968	19.56	PASS
Band4	20MHz	16QAM	20050	100RB#0	17.898	19.45	PASS
Band4	20MHz	QPSK	20175	100RB#0	17.955	19.50	PASS
Band4	20MHz	16QAM	20175	100RB#0	17.886	19.39	PASS
Band4	20MHz	QPSK	20300	100RB#0	17.970	19.41	PASS
Band4	20MHz	16QAM	20300	100RB#0	17.918	19.48	PASS

Test Graphs







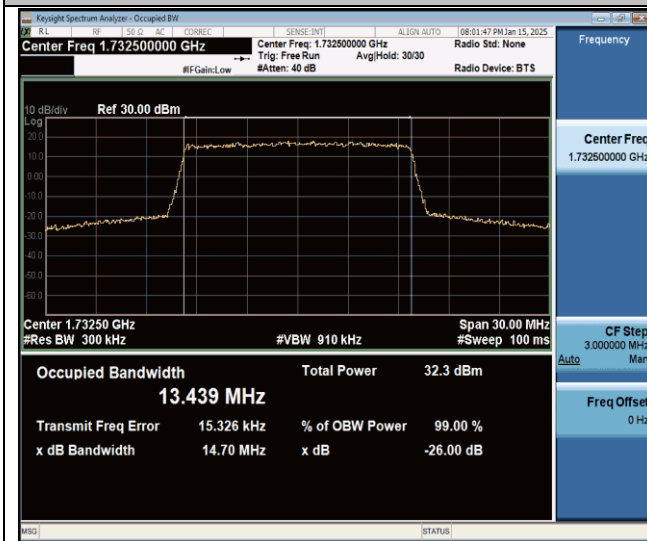




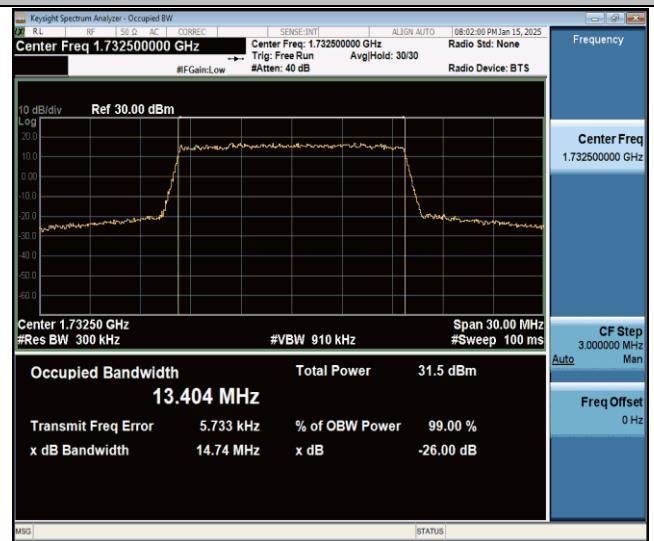
Band4-15MHz-QPSK-20025-75RB#0-PASS



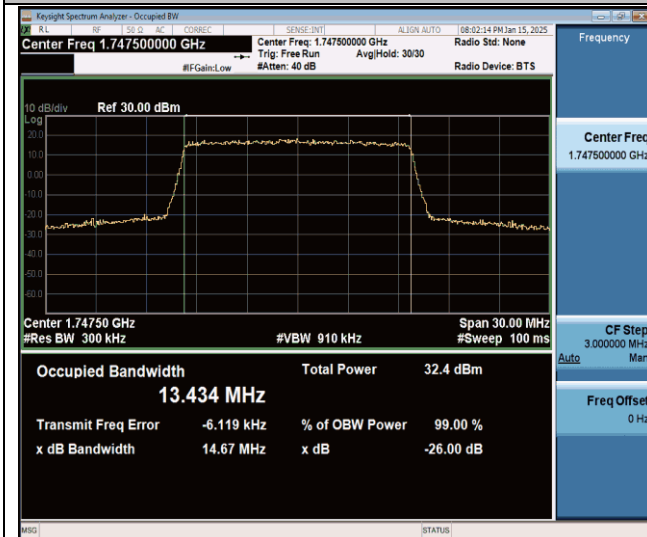
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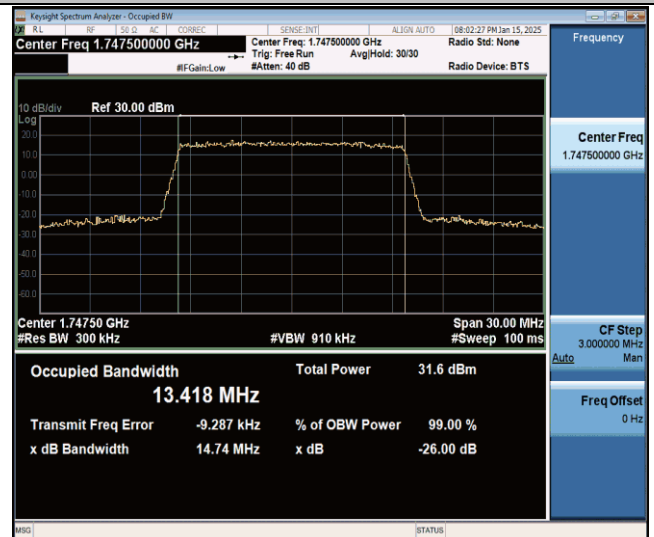
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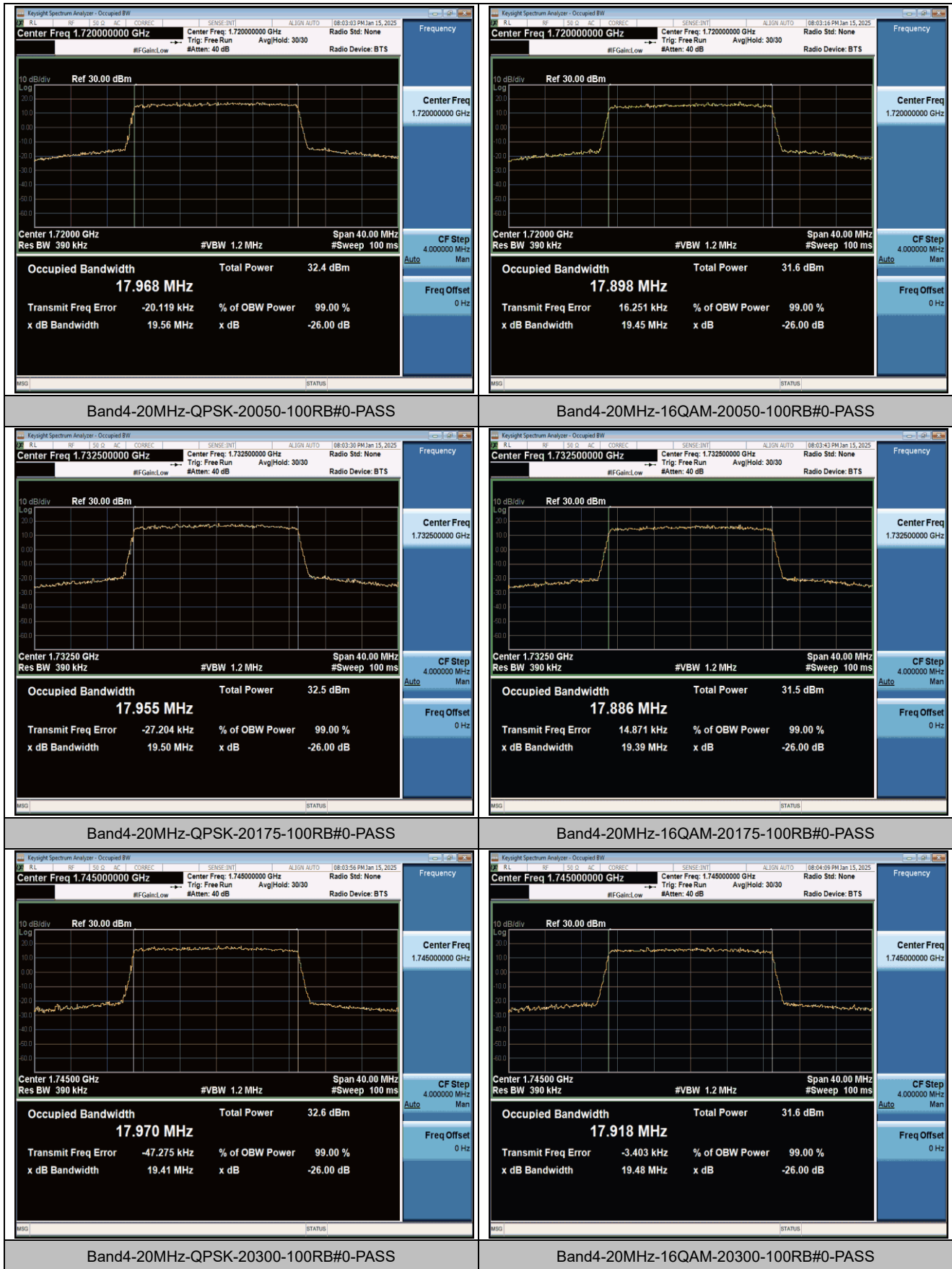
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Band4-15MHz-QPSK-20325-75RB#0-PASS

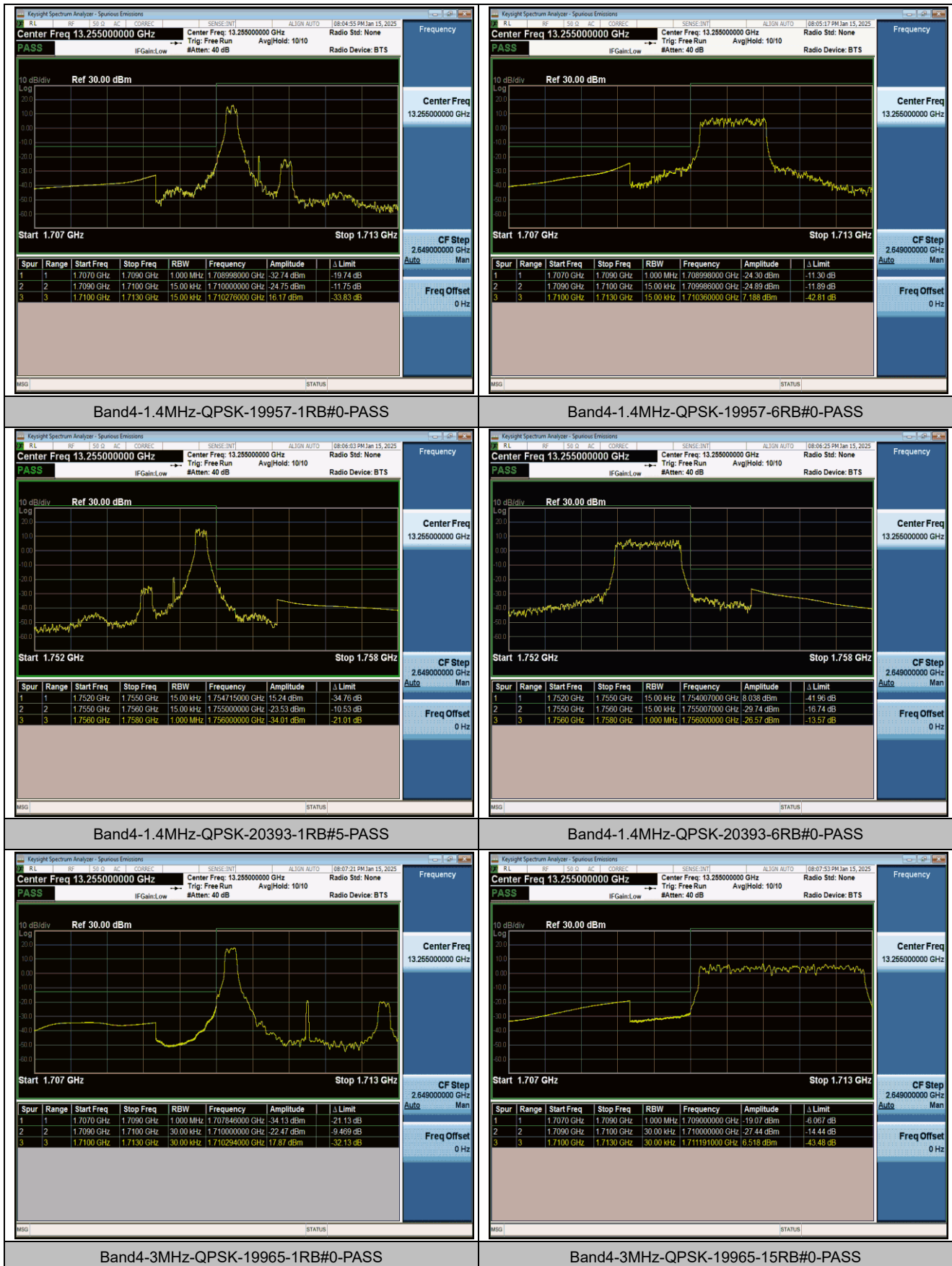


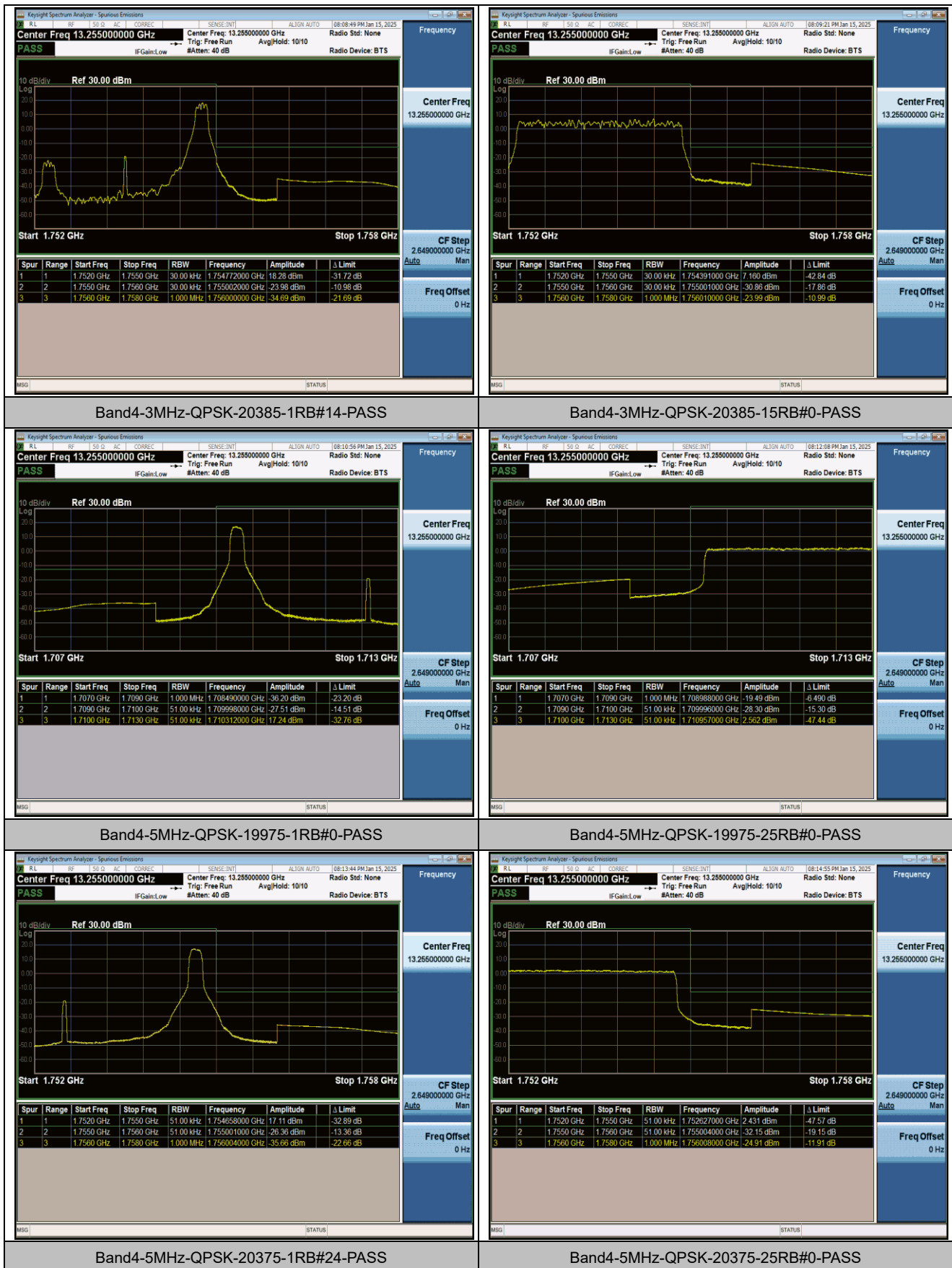
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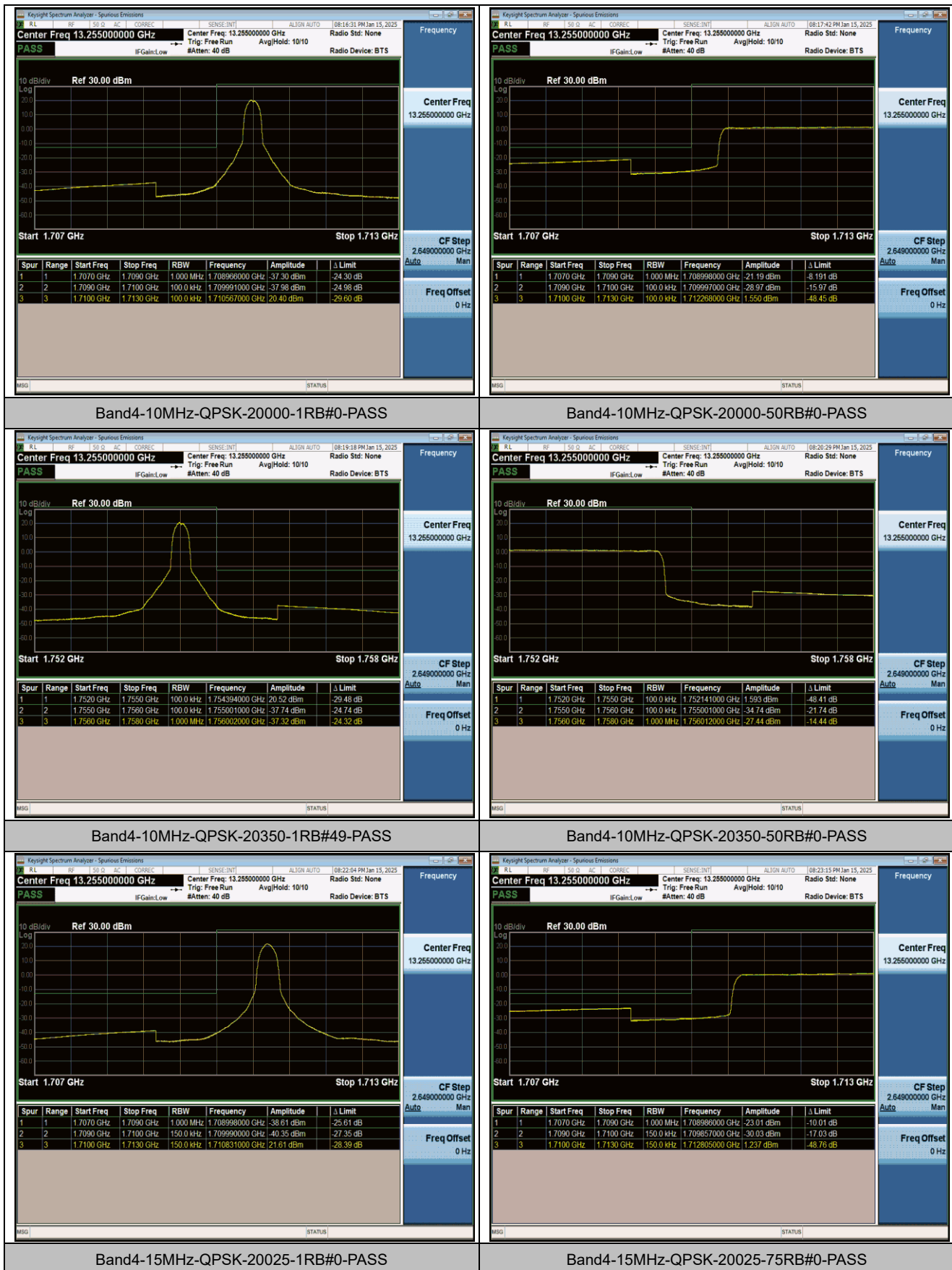


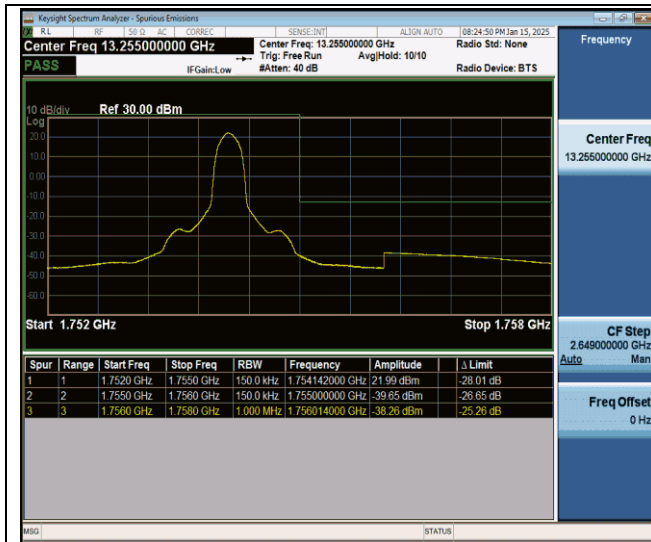
Band Edge

Test Graphs

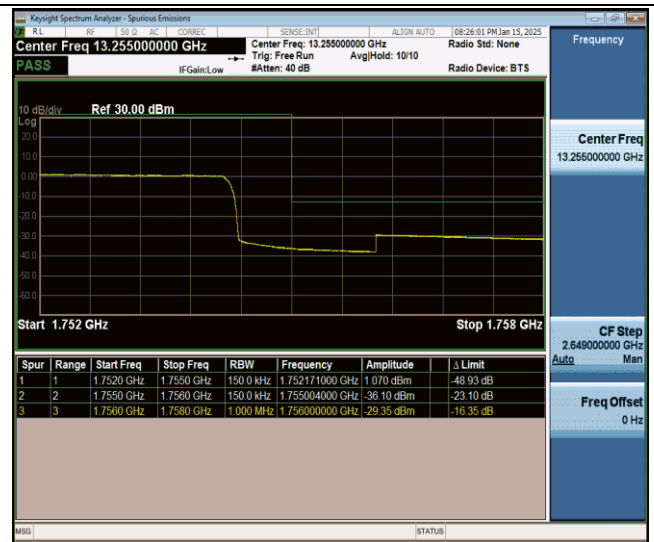




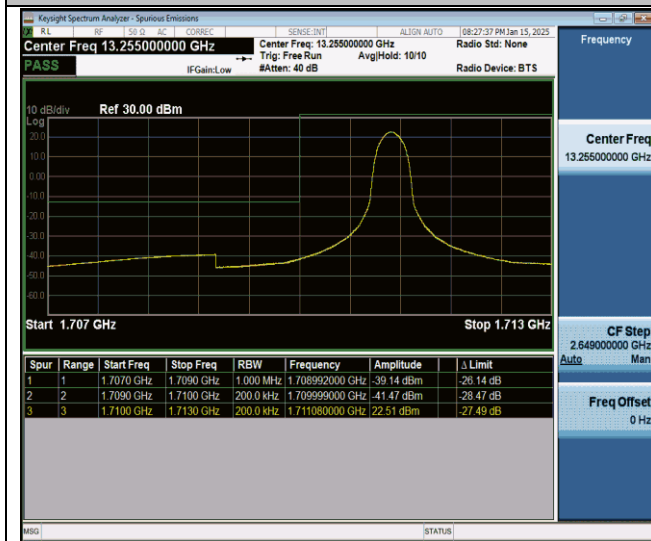




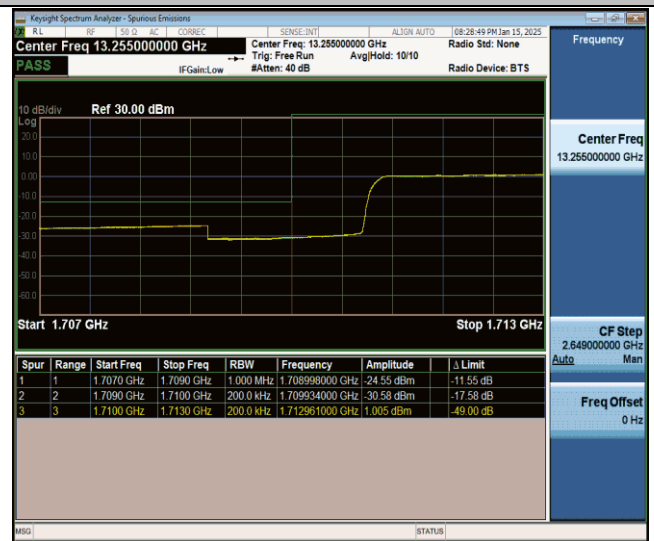
Band4-15MHz-QPSK-20325-1RB#74-PASS



Band4-15MHz-QPSK-20325-75RB#0-PASS



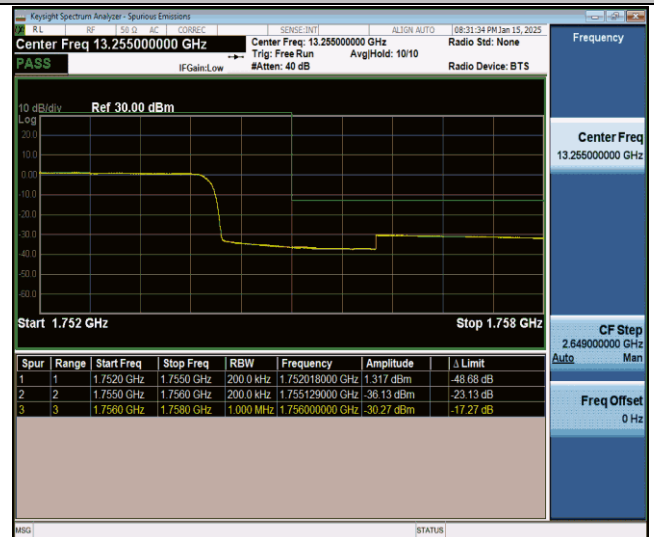
Band4-20MHz-QPSK-20050-1RB#0-PASS



Band4-20MHz-QPSK-20050-100RB#0-PASS



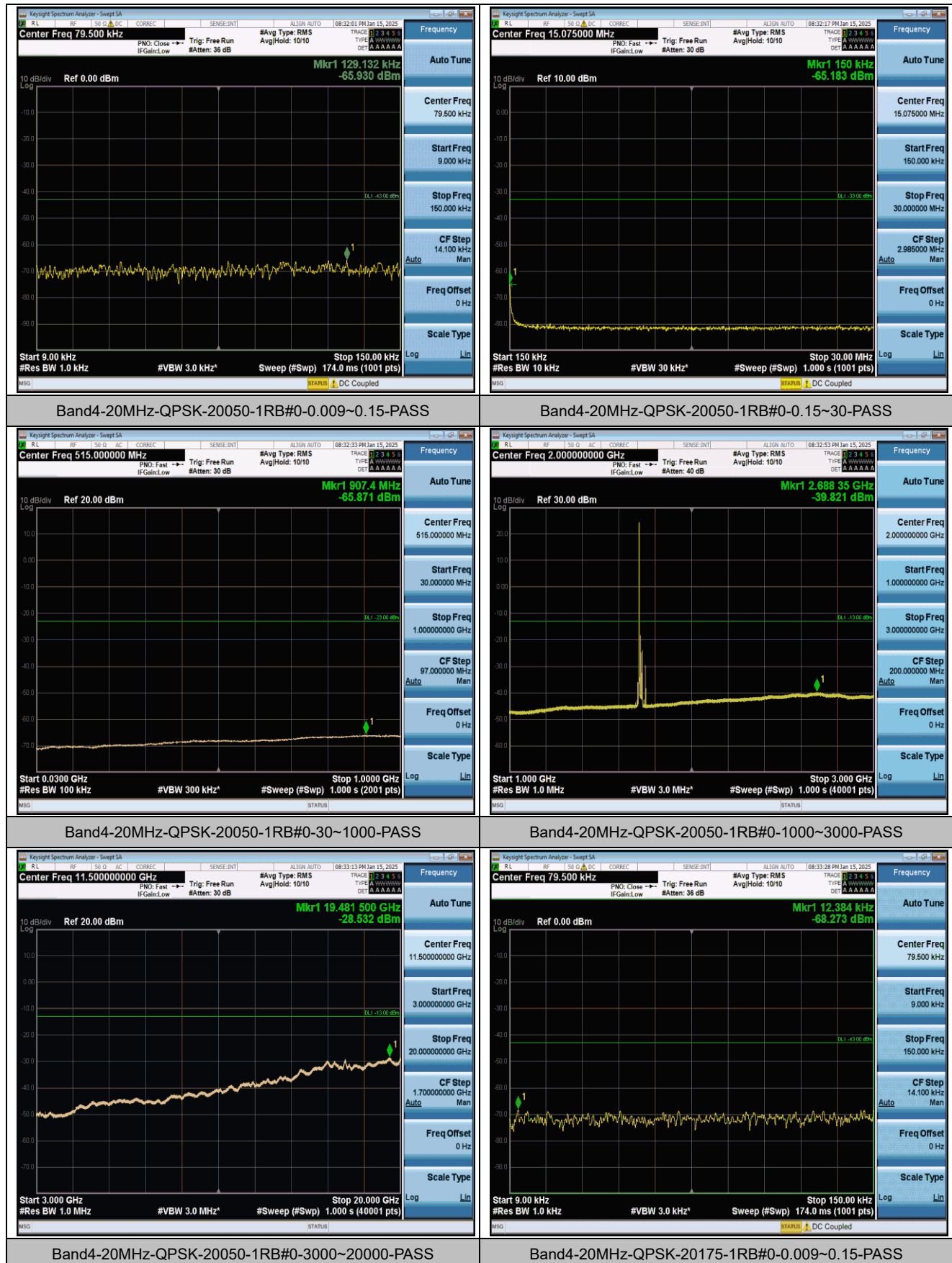
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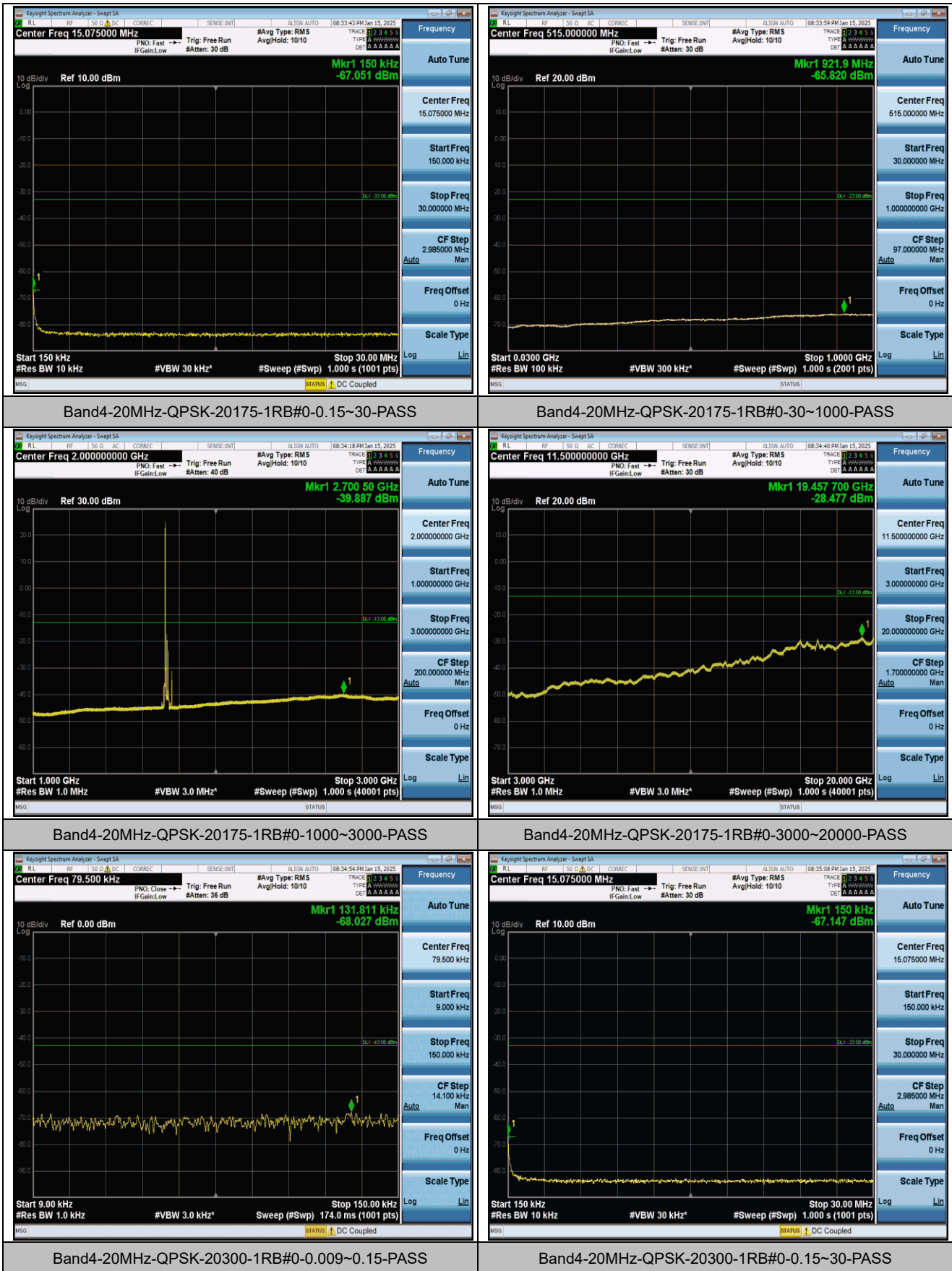


Band4-20MHz-QPSK-20300-100RB#0-PASS

Conducted Spurious Emission

Test Graphs







Frequency Stability

Test Result

Voltage									
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band4	20MHz	QPSK	20175	100RB#0	VN	NT	0.30	0.000173	PASS
Band4	20MHz	QPSK	20175	100RB#0	VL	NT	0.90	0.000519	PASS
Band4	20MHz	QPSK	20175	100RB#0	VH	NT	2.70	0.001558	PASS

Temperature									
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band4	20MHz	QPSK	20175	100RB#0	NV	-30	0.90	0.000519	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-20	1.20	0.000693	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-10	0.50	0.000289	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	0	-0.70	-0.000404	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	10	0.50	0.000289	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	20	1.10	0.000635	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	30	0.90	0.000519	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	40	1.20	0.000693	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	50	1.40	0.000808	PASS

~The End~