

Appendix-B 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	23.73	26.71	30.00	PASS
Band4	1.4MHz	QPSK	19957	1RB#2	23.16	26.14	30.00	PASS
Band4	1.4MHz	QPSK	19957	1RB#5	23.82	26.80	30.00	PASS
Band4	1.4MHz	QPSK	19957	6RB#0	22.95	25.93	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#0	23.68	26.66	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#2	23.16	26.14	30.00	PASS
Band4	1.4MHz	QPSK	20175	1RB#5	24.22	27.20	30.00	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	23.21	26.19	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#0	23.25	26.23	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#2	23.1	26.08	30.00	PASS
Band4	1.4MHz	QPSK	20393	1RB#5	23.92	26.90	30.00	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	23.92	26.90	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#0	23.22	26.20	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#2	22.25	25.23	30.00	PASS
Band4	1.4MHz	16QAM	19957	1RB#5	23.27	26.25	30.00	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	22.33	25.31	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#0	23.07	26.05	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#2	22.26	25.24	30.00	PASS
Band4	1.4MHz	16QAM	20175	1RB#5	23.17	26.15	30.00	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	22.34	25.32	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#0	22.4	25.38	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#2	22.19	25.17	30.00	PASS
Band4	1.4MHz	16QAM	20393	1RB#5	23.06	26.04	30.00	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	23.04	26.02	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#0	24.13	27.11	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#8	22.97	25.95	30.00	PASS
Band4	3MHz	QPSK	19965	1RB#14	23.99	26.97	30.00	PASS
Band4	3MHz	QPSK	19965	15RB#0	22.49	25.47	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#0	24	26.98	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#8	23.08	26.06	30.00	PASS
Band4	3MHz	QPSK	20175	1RB#14	24.22	27.20	30.00	PASS
Band4	3MHz	QPSK	20175	15RB#0	22.82	25.80	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#0	22.89	25.87	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#8	23.12	26.10	30.00	PASS
Band4	3MHz	QPSK	20385	1RB#14	24.14	27.12	30.00	PASS
Band4	3MHz	QPSK	20385	15RB#0	24.1	27.08	30.00	PASS

Band4	3MHz	16QAM	19965	1RB#0	23.52	26.50	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#8	21.99	24.97	30.00	PASS
Band4	3MHz	16QAM	19965	1RB#14	23.2	26.18	30.00	PASS
Band4	3MHz	16QAM	19965	15RB#0	21.77	24.75	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#0	23.22	26.20	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#8	22.09	25.07	30.00	PASS
Band4	3MHz	16QAM	20175	1RB#14	23.13	26.11	30.00	PASS
Band4	3MHz	16QAM	20175	15RB#0	21.81	24.79	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#0	22.05	25.03	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#8	22.01	24.99	30.00	PASS
Band4	3MHz	16QAM	20385	1RB#14	23.28	26.26	30.00	PASS
Band4	3MHz	16QAM	20385	15RB#0	23.19	26.17	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#0	24.45	27.43	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#12	23.03	26.01	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#24	23.47	26.45	30.00	PASS
Band4	5MHz	QPSK	19975	25RB#0	23.46	26.44	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#0	23.83	26.81	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#12	23.07	26.05	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#24	23.78	26.76	30.00	PASS
Band4	5MHz	QPSK	20175	25RB#0	23.01	25.99	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#0	23.27	26.25	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#12	23.12	26.10	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#24	23.61	26.59	30.00	PASS
Band4	5MHz	QPSK	20375	25RB#0	24.27	27.25	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#0	23.57	26.55	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#12	22.02	25.00	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#24	22.8	25.78	30.00	PASS
Band4	5MHz	16QAM	19975	25RB#0	22.59	25.57	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#0	23.07	26.05	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#12	22.01	24.99	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#24	22.62	25.60	30.00	PASS
Band4	5MHz	16QAM	20175	25RB#0	21.89	24.87	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#0	22.37	25.35	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#12	21.96	24.94	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#24	22.75	25.73	30.00	PASS
Band4	5MHz	16QAM	20375	25RB#0	23.17	26.15	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#0	24.44	27.42	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#24	23.25	26.23	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#49	24.05	27.03	30.00	PASS
Band4	10MHz	QPSK	20000	50RB#0	23.37	26.35	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#0	24.09	27.07	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#24	23.05	26.03	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#49	24.21	27.19	30.00	PASS
Band4	10MHz	QPSK	20175	50RB#0	22.94	25.92	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#0	22.81	25.79	30.00	PASS

Band4	10MHz	QPSK	20350	1RB#24	23.22	26.20	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#49	23.82	26.80	30.00	PASS
Band4	10MHz	QPSK	20350	50RB#0	24.26	27.24	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#0	23.87	26.85	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#24	22.02	25.00	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#49	23.02	26.00	30.00	PASS
Band4	10MHz	16QAM	20000	27RB#0	22.55	25.53	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#0	23.4	26.38	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#24	21.96	24.94	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#49	23.3	26.28	30.00	PASS
Band4	10MHz	16QAM	20175	27RB#0	21.94	24.92	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#0	21.95	24.93	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#24	22.08	25.06	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#49	22.94	25.92	30.00	PASS
Band4	10MHz	16QAM	20350	27RB#0	23.37	26.35	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#0	23.99	26.97	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#38	23.15	26.13	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#74	23.94	26.92	30.00	PASS
Band4	15MHz	QPSK	20025	75RB#0	23.52	26.50	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#0	24.15	27.13	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#38	23.3	26.28	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#74	23.88	26.86	30.00	PASS
Band4	15MHz	QPSK	20175	75RB#0	23.27	26.25	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#0	22.14	25.12	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#38	23.02	26.00	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#74	23.72	26.70	30.00	PASS
Band4	15MHz	QPSK	20325	75RB#0	24.39	27.37	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#0	23.28	26.26	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#38	22.06	25.04	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#74	22.83	25.81	30.00	PASS
Band4	15MHz	16QAM	20025	27RB#0	22.55	25.53	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#0	23.33	26.31	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#38	22.11	25.09	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#74	22.89	25.87	30.00	PASS
Band4	15MHz	16QAM	20175	27RB#0	22.24	25.22	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#0	23.02	26.00	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#38	21.99	24.97	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#74	23.07	26.05	30.00	PASS
Band4	15MHz	16QAM	20325	27RB#0	23.25	26.23	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#0	24.35	27.33	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#49	23.16	26.14	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#99	24.09	27.07	30.00	PASS
Band4	20MHz	QPSK	20050	100RB#0	23.21	26.19	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#0	24.24	27.22	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#49	23.49	26.47	30.00	PASS

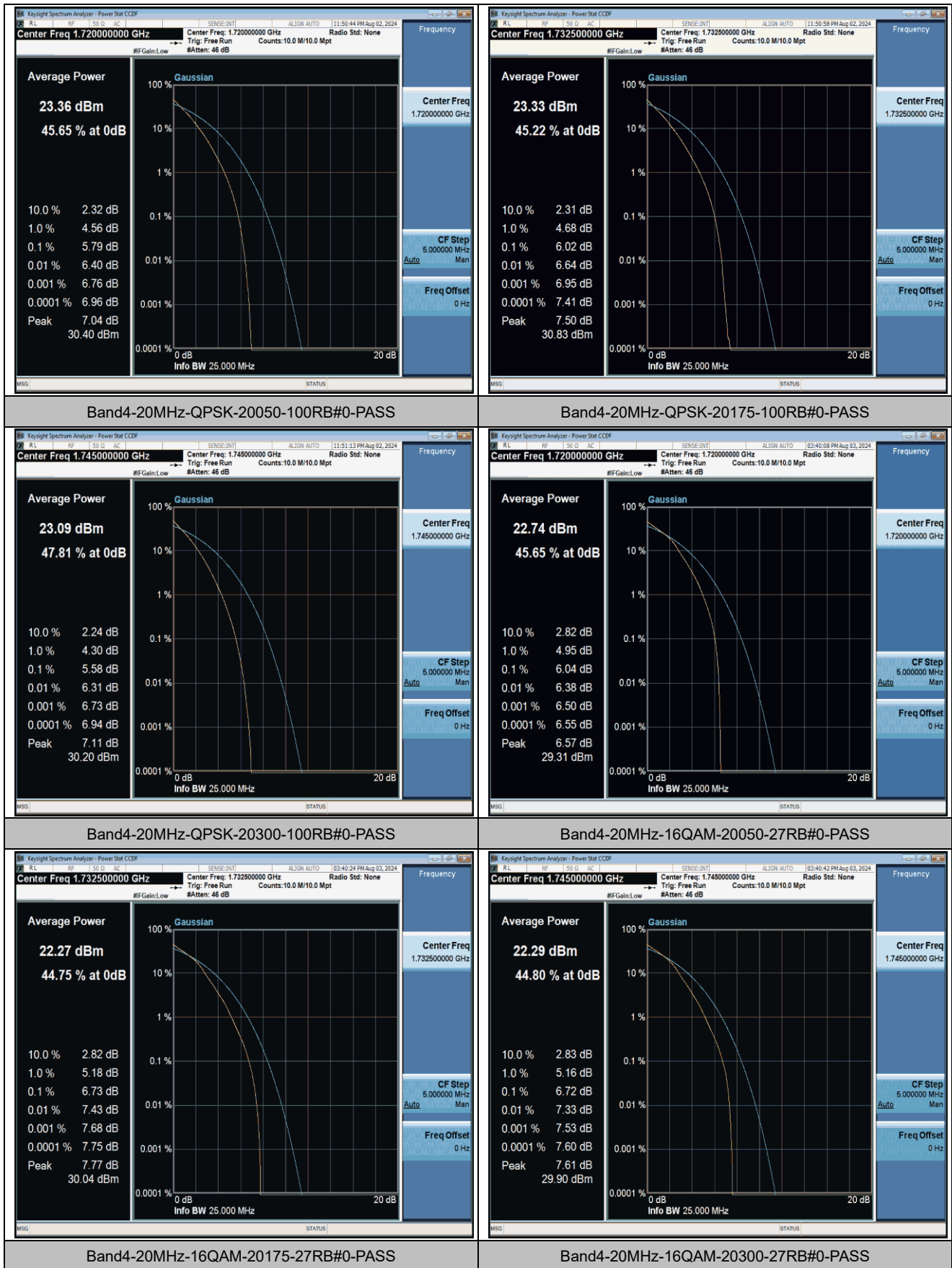
Band4	20MHz	QPSK	20175	1RB#99	24.2	27.18	30.00	PASS
Band4	20MHz	QPSK	20175	100RB#0	23.14	26.12	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#0	22.27	25.25	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#49	23.12	26.10	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#99	23.97	26.95	30.00	PASS
Band4	20MHz	QPSK	20300	100RB#0	24.35	27.33	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#0	23.34	26.32	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#49	22.12	25.10	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#99	22.9	25.88	30.00	PASS
Band4	20MHz	16QAM	20050	27RB#0	22.31	25.29	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#0	23.23	26.21	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#49	22.09	25.07	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#99	23.39	26.37	30.00	PASS
Band4	20MHz	16QAM	20175	27RB#0	22.07	25.05	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#0	23.02	26.00	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#49	22.16	25.14	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#99	23.21	26.19	30.00	PASS
Band4	20MHz	16QAM	20300	27RB#0	23.31	26.29	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	5.79	13	PASS
Band4	20MHz	QPSK	20175	100RB#0	6.02	13	PASS
Band4	20MHz	QPSK	20300	100RB#0	5.58	13	PASS
Band4	20MHz	16QAM	20050	27RB#0	6.04	13	PASS
Band4	20MHz	16QAM	20175	27RB#0	6.73	13	PASS
Band4	20MHz	16QAM	20300	27RB#0	6.72	13	PASS

Test Graphs

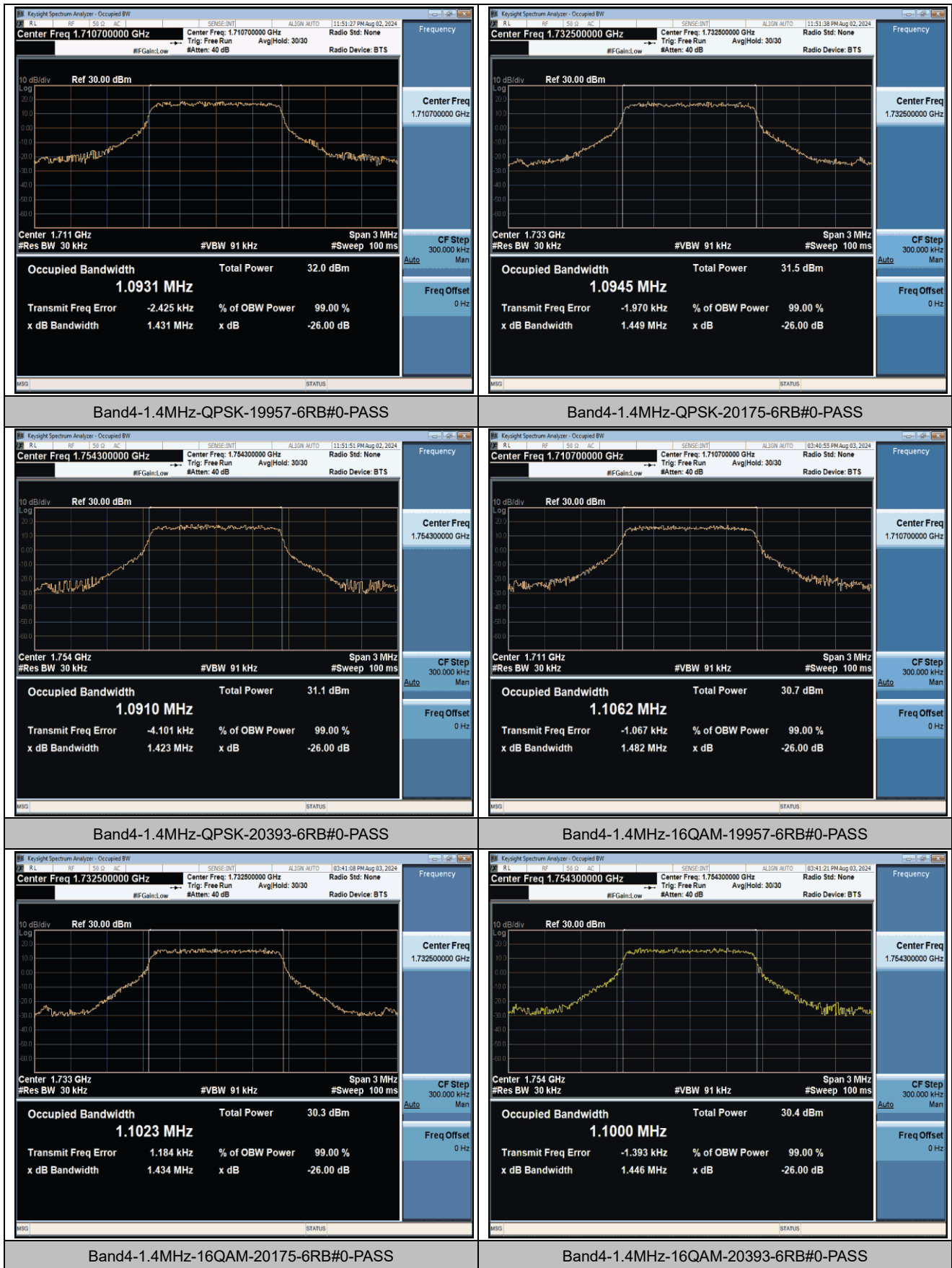


26dB Bandwidth and Occupied Bandwidth

Test Result

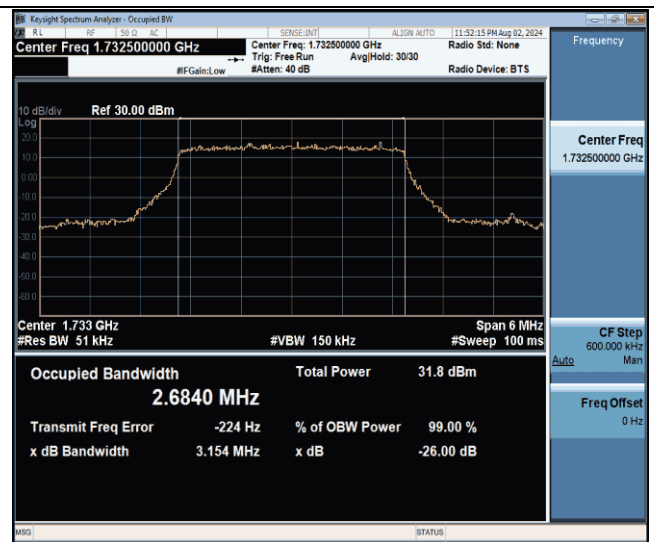
Band	Bandwidth	Modulation	Channel	RB Configuration	OBW (MHz)	26dB EBW (MHz)	Verdict
Band4	1.4MHz	QPSK	19957	6RB#0	1.0931	1.431	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	1.0945	1.449	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	1.0910	1.423	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	1.1062	1.482	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	1.1023	1.434	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	1.1000	1.446	PASS
Band4	3MHz	QPSK	19965	15RB#0	2.6935	3.105	PASS
Band4	3MHz	QPSK	20175	15RB#0	2.6840	3.154	PASS
Band4	3MHz	QPSK	20385	15RB#0	2.6945	3.109	PASS
Band4	3MHz	16QAM	19965	15RB#0	2.6849	3.127	PASS
Band4	3MHz	16QAM	20175	15RB#0	2.6867	3.180	PASS
Band4	3MHz	16QAM	20385	15RB#0	2.6863	3.109	PASS
Band4	5MHz	QPSK	19975	25RB#0	4.4770	5.053	PASS
Band4	5MHz	QPSK	20175	25RB#0	4.4768	5.121	PASS
Band4	5MHz	QPSK	20375	25RB#0	4.4799	5.083	PASS
Band4	5MHz	16QAM	19975	25RB#0	4.4711	5.110	PASS
Band4	5MHz	16QAM	20175	25RB#0	4.4802	5.076	PASS
Band4	5MHz	16QAM	20375	25RB#0	4.4725	5.071	PASS
Band4	10MHz	QPSK	20000	50RB#0	8.9110	9.652	PASS
Band4	10MHz	QPSK	20175	50RB#0	8.9239	9.693	PASS
Band4	10MHz	QPSK	20350	50RB#0	8.9192	9.676	PASS
Band4	10MHz	16QAM	20000	27RB#0	5.2113	8.315	PASS
Band4	10MHz	16QAM	20175	27RB#0	5.3742	8.990	PASS
Band4	10MHz	16QAM	20350	27RB#0	5.2594	8.183	PASS
Band4	15MHz	QPSK	20025	75RB#0	13.555	16.52	PASS
Band4	15MHz	QPSK	20175	75RB#0	13.553	16.64	PASS
Band4	15MHz	QPSK	20325	75RB#0	13.537	16.45	PASS
Band4	15MHz	16QAM	20025	27RB#0	5.8539	10.27	PASS
Band4	15MHz	16QAM	20175	27RB#0	5.9851	8.409	PASS
Band4	15MHz	16QAM	20325	27RB#0	6.0613	11.40	PASS
Band4	20MHz	QPSK	20050	100RB#0	17.993	21.14	PASS
Band4	20MHz	QPSK	20175	100RB#0	18.072	21.28	PASS
Band4	20MHz	QPSK	20300	100RB#0	17.977	20.91	PASS
Band4	20MHz	16QAM	20050	27RB#0	6.9426	10.22	PASS
Band4	20MHz	16QAM	20175	27RB#0	7.2180	9.602	PASS
Band4	20MHz	16QAM	20300	27RB#0	7.8663	11.11	PASS

Test Graphs





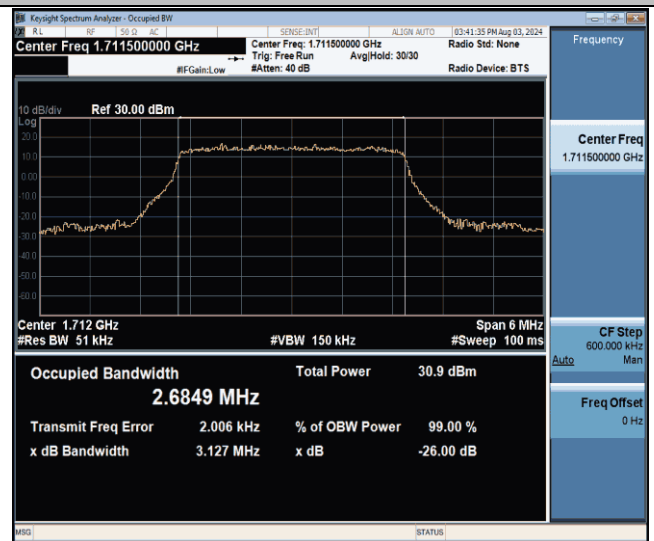
Band4-3MHz-QPSK-19965-15RB#0-PASS



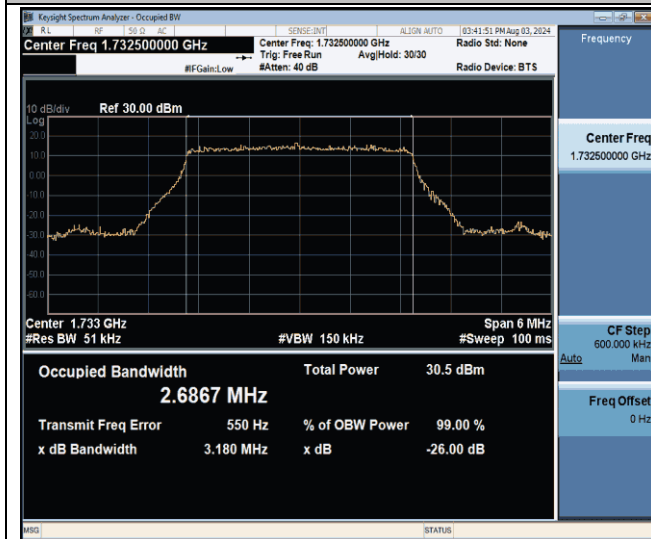
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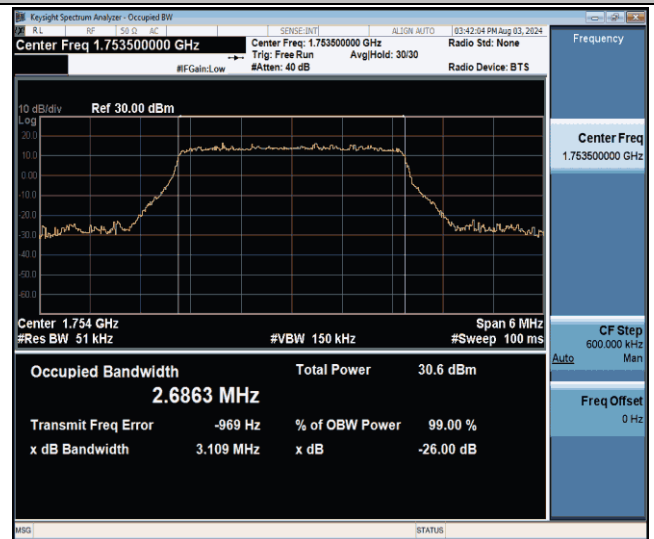
Band4-3MHz-QPSK-20385-15RB#0-PASS



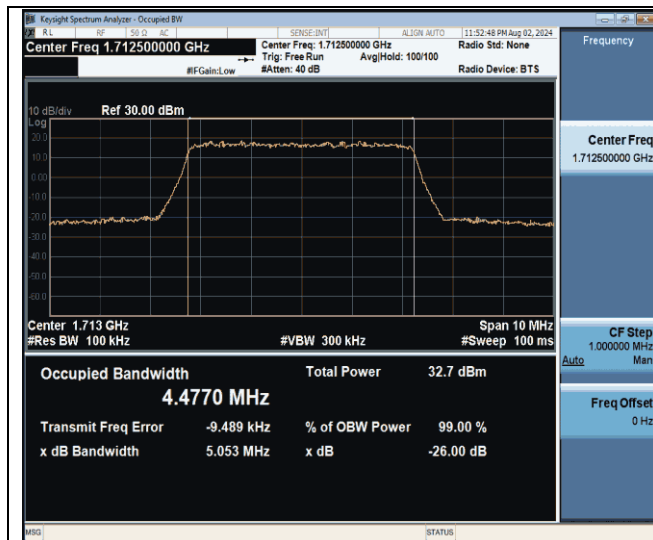
Band4-3MHz-16QAM-19965-15RB#0-PASS



Band4-3MHz-16QAM-20175-15RB#0-PASS



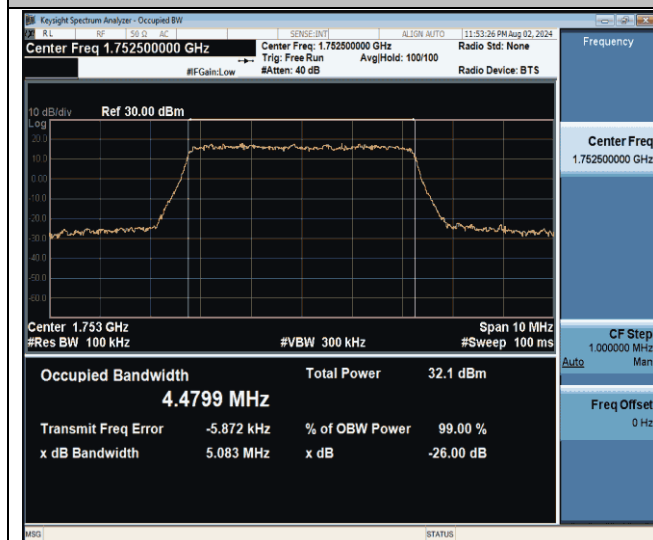
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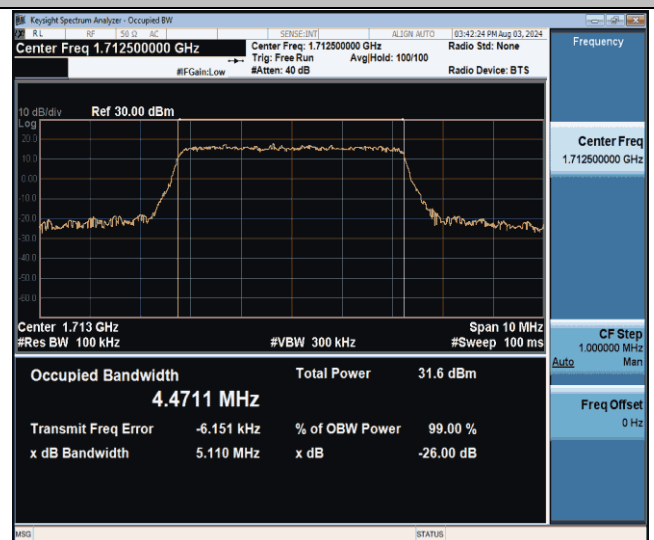
Band4-5MHz-QPSK-19975-25RB#0-PASS



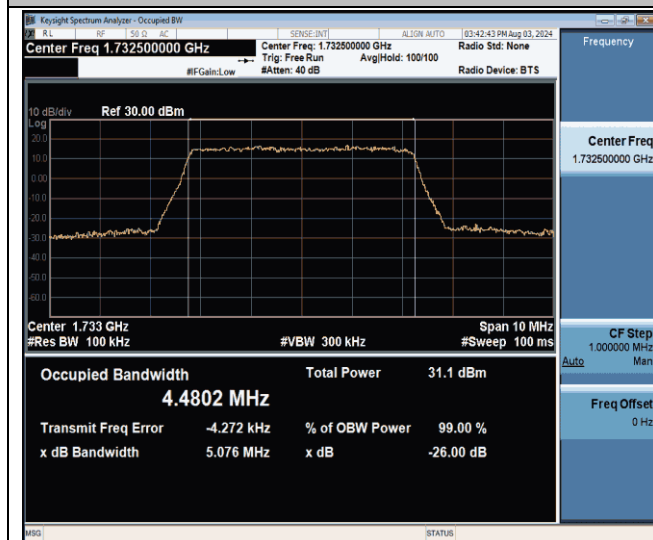
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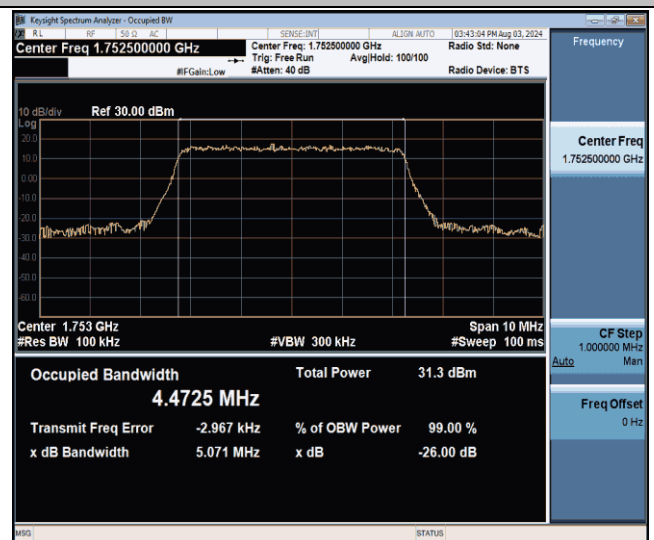
Band4-5MHz-QPSK-20375-25RB#0-PASS



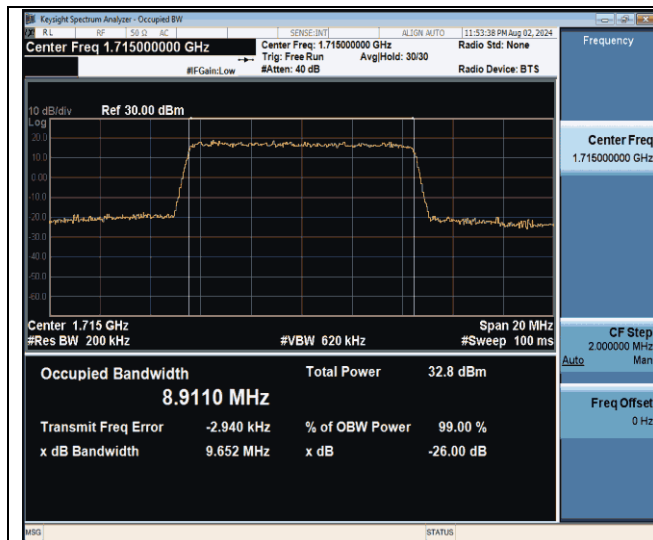
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Band4-5MHz-16QAM-20175-25RB#0-PASS



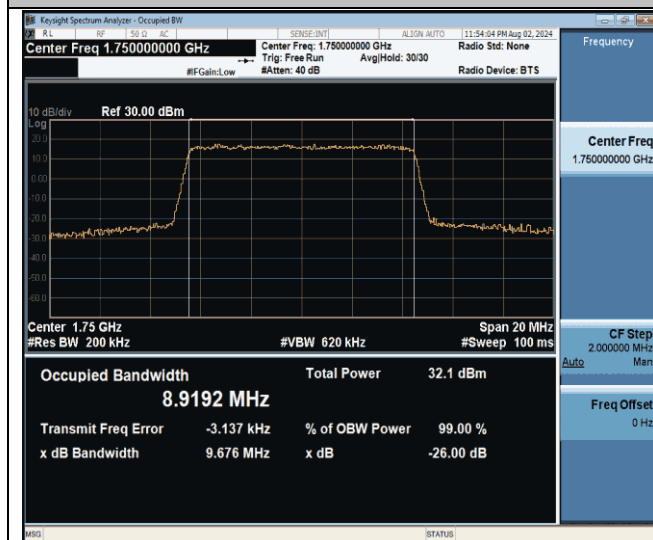
Band4-5MHz-16QAM-20375-25RB#0-PASS



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



Band4-10MHz-QPSK-20175-50RB#0-PASS



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



Band4-10MHz-16QAM-20000-27RB#0-PASS



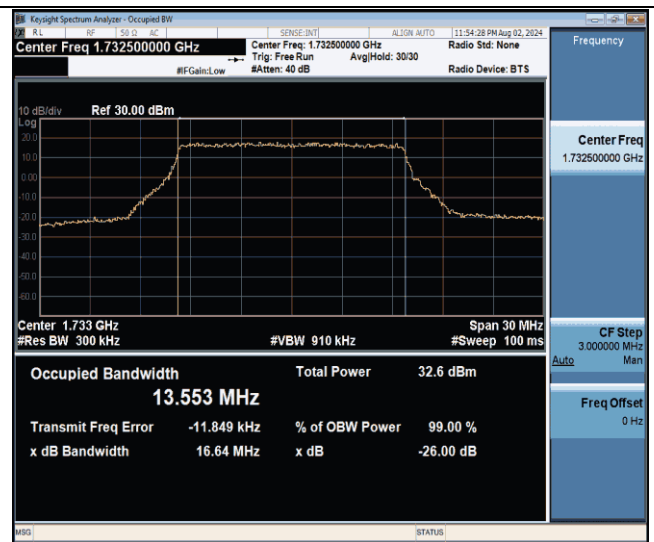
Band4-10MHz-16QAM-20175-27RB#0-PASS



Band4-10MHz-16QAM-20350-27RB#0-PASS



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



Band4-15MHz-QPSK-20175-75RB#0-PASS



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



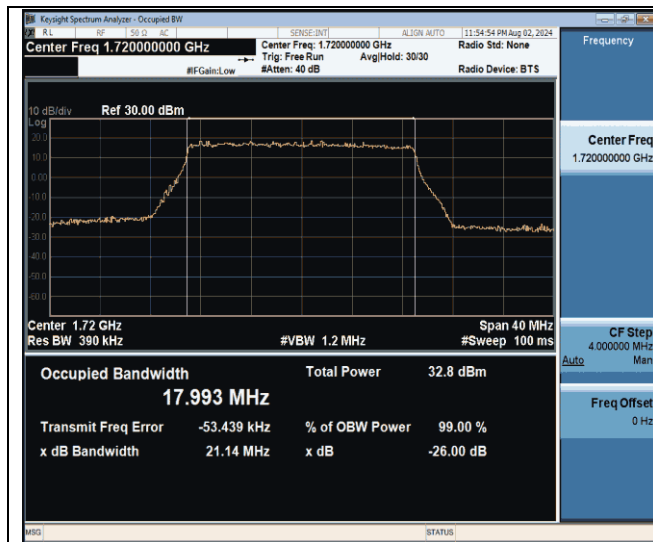
Band4-15MHz-16QAM-20025-27RB#0-PASS



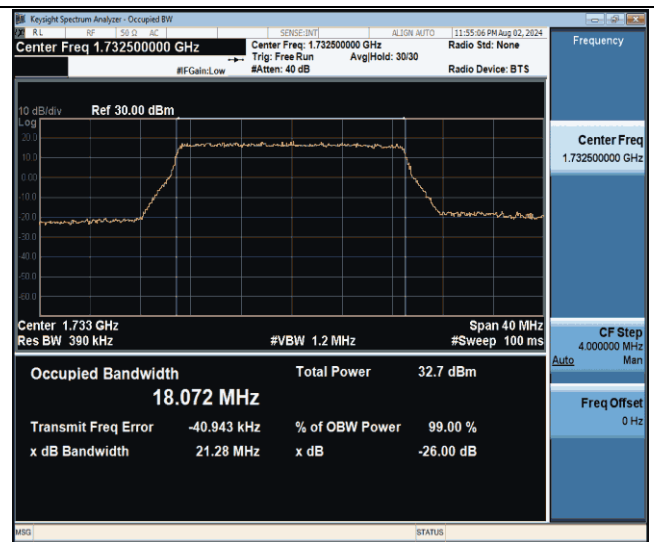
Band4-15MHz-16QAM-20175-27RB#0-PASS



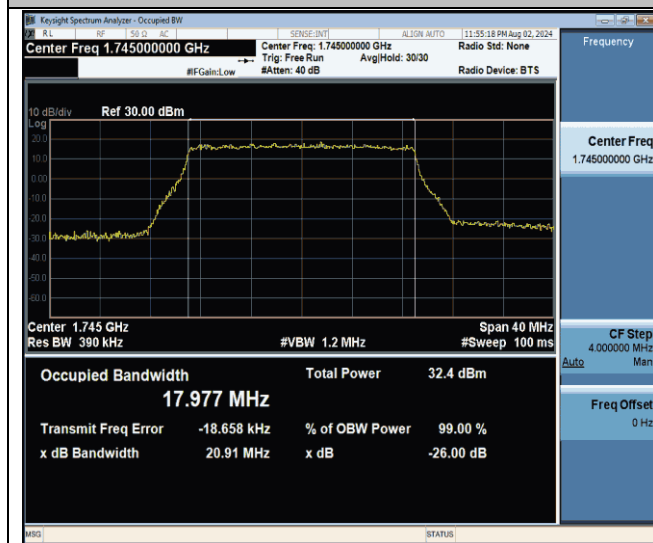
Band4-15MHz-16QAM-20325-27RB#0-PASS



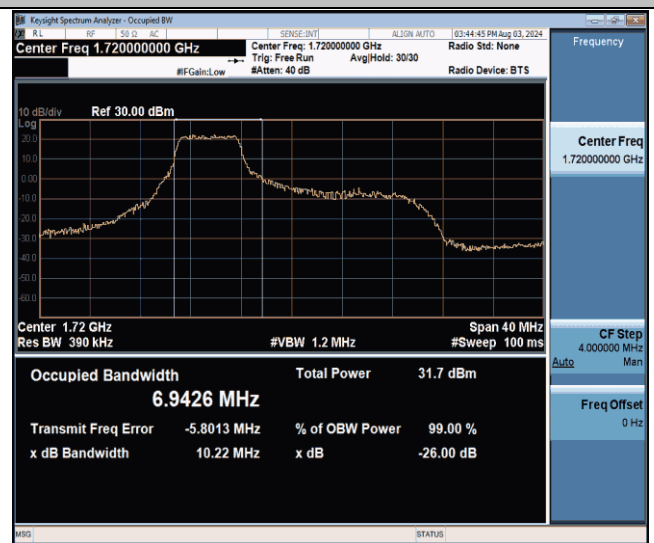
Band4-20MHz-QPSK-20050-100RB#0-PASS



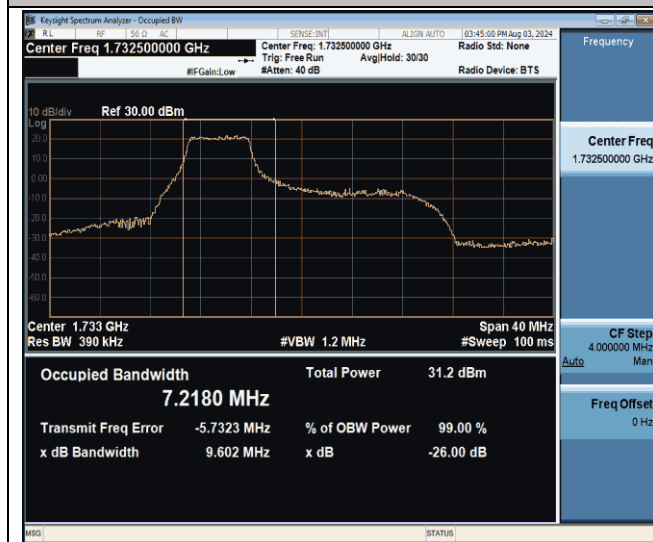
Band4-20MHz-QPSK-20175-100RB#0-PASS



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



Band4-20MHz-16QAM-20050-27RB#0-PASS



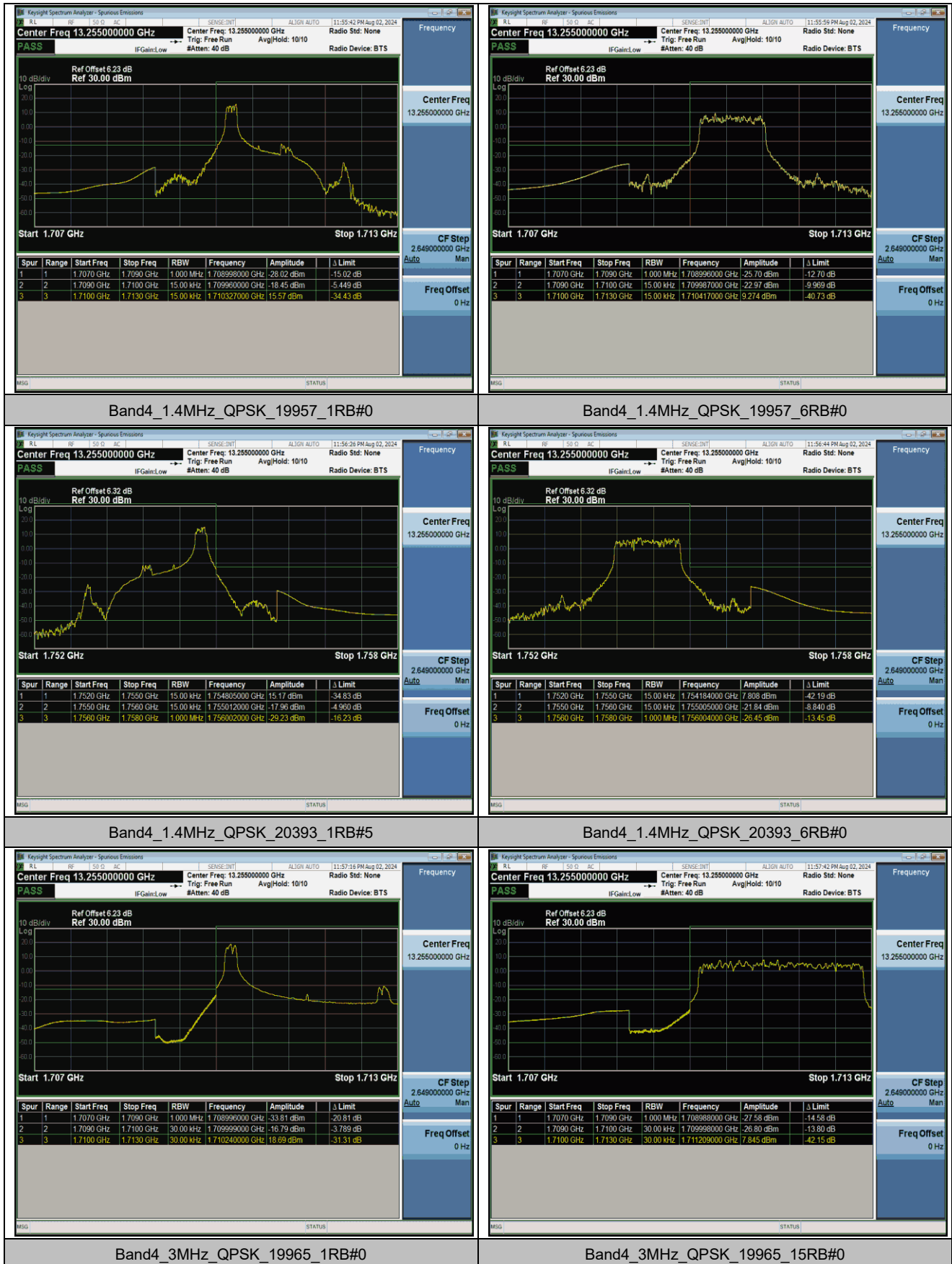
Band4-20MHz-16QAM-20175-27RB#0-PASS

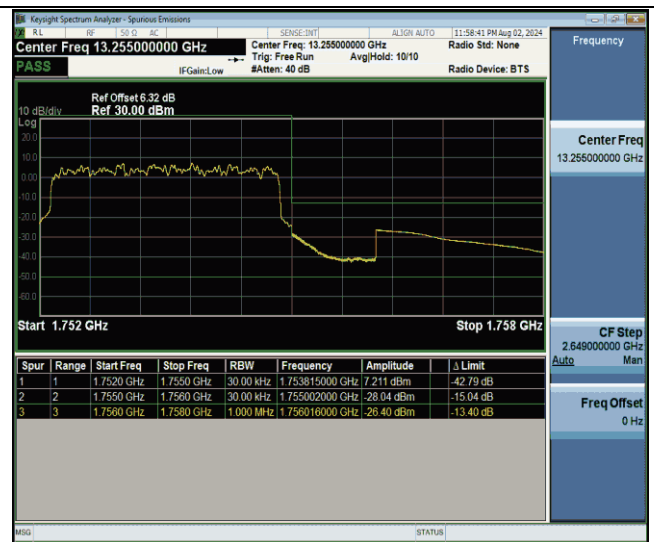


Band4-20MHz-16QAM-20300-27RB#0-PASS

Band Edge

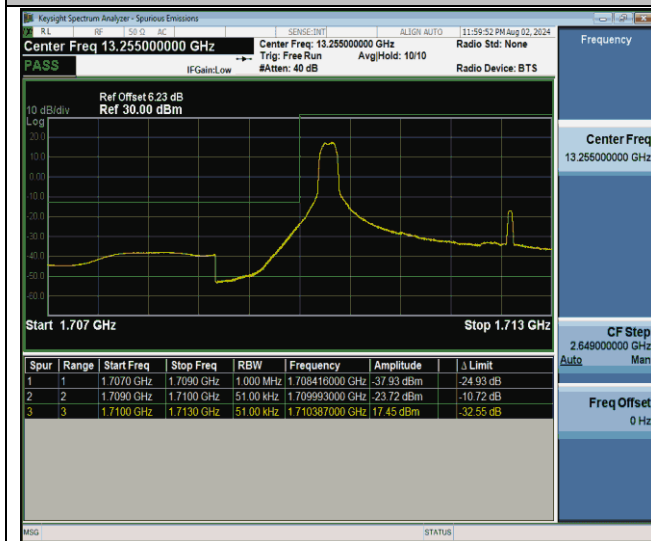
Test Graphs





Band4_3MHz_QPSK_20385_1RB#14

Band4_3MHz_QPSK_20385_15RB#0



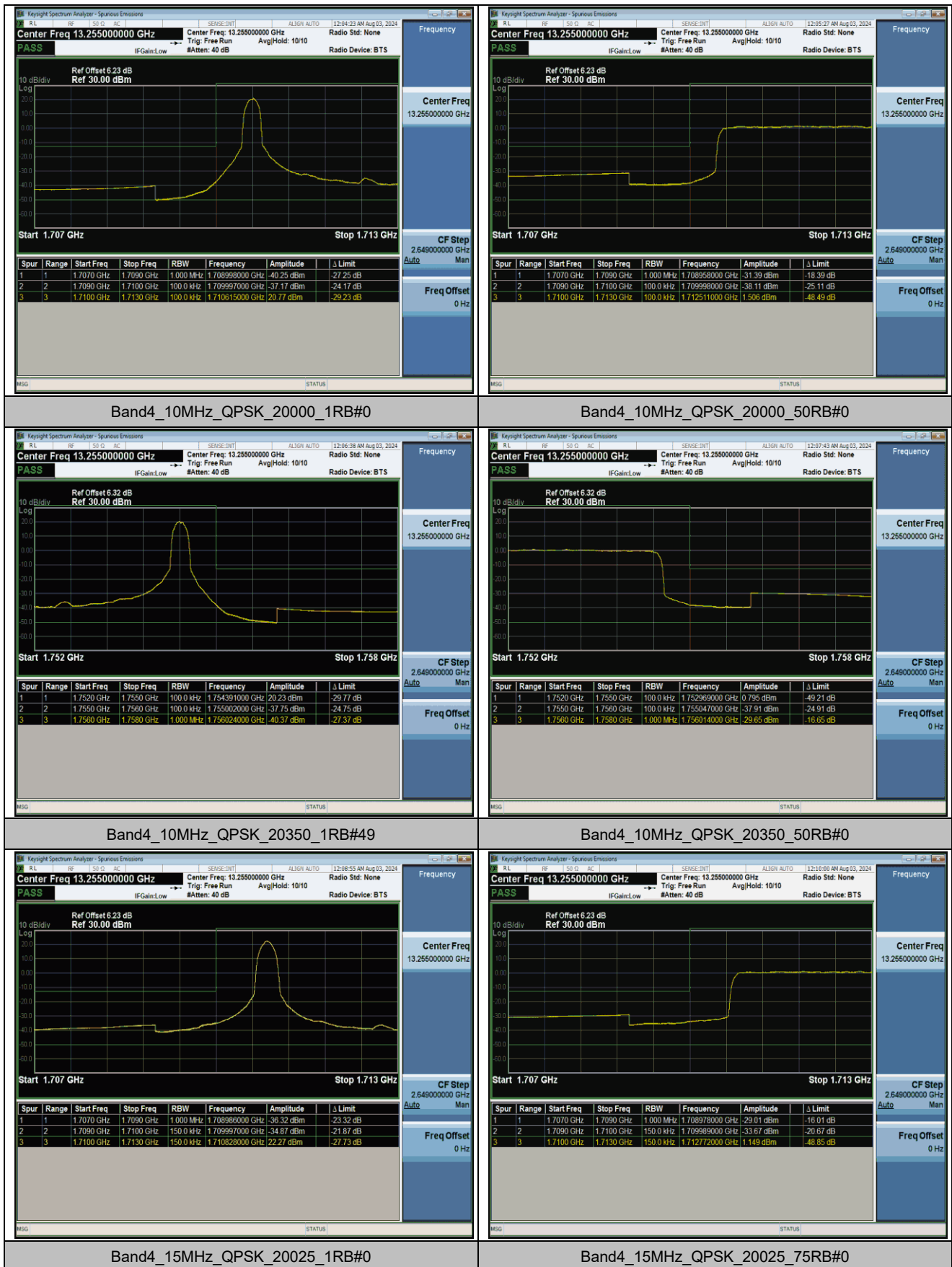
Band4_5MHz_QPSK_19975_1RB#0

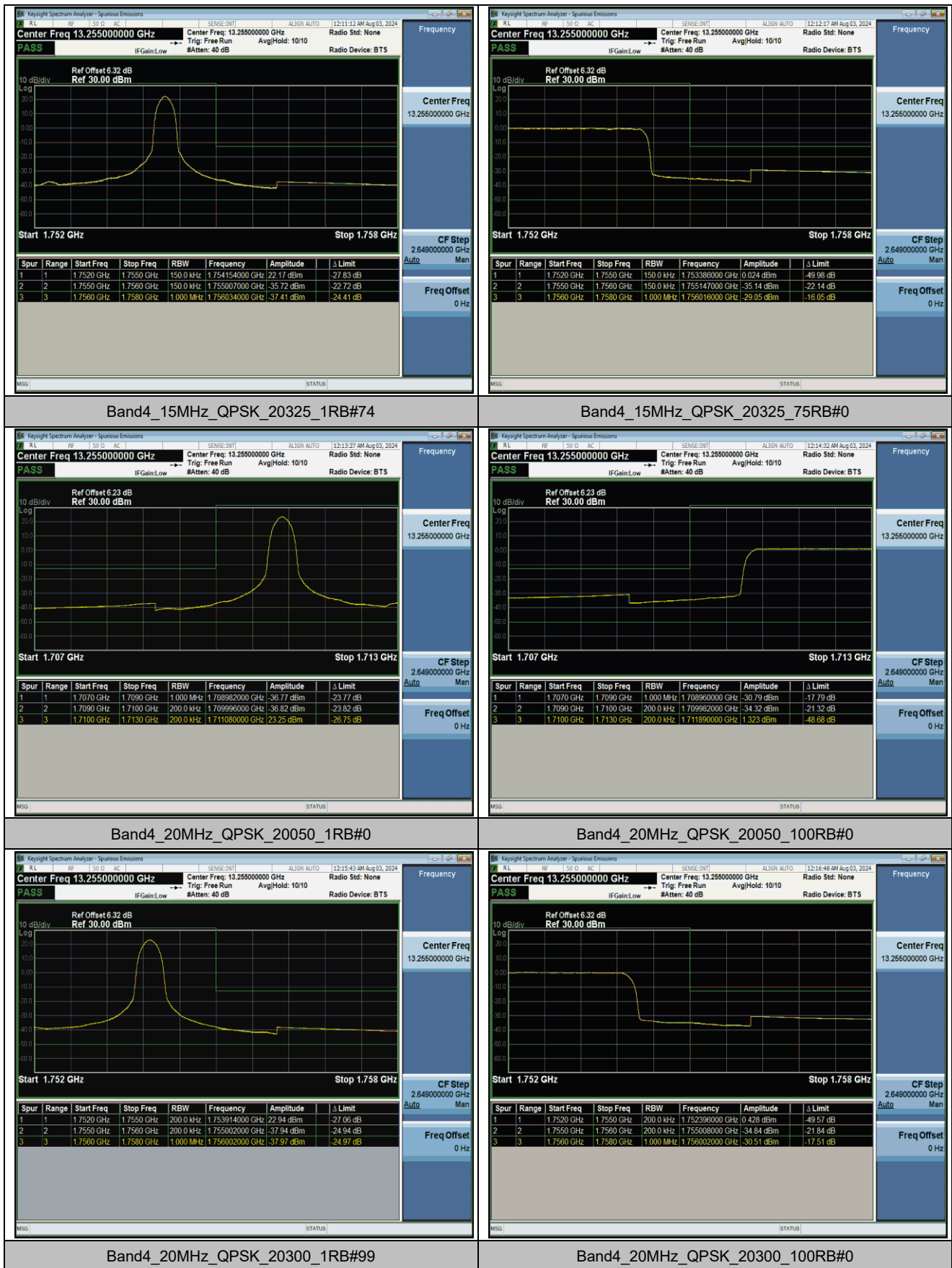
Band4_5MHz_QPSK_19975_25RB#0



Band4_5MHz_QPSK_20375_1RB#24

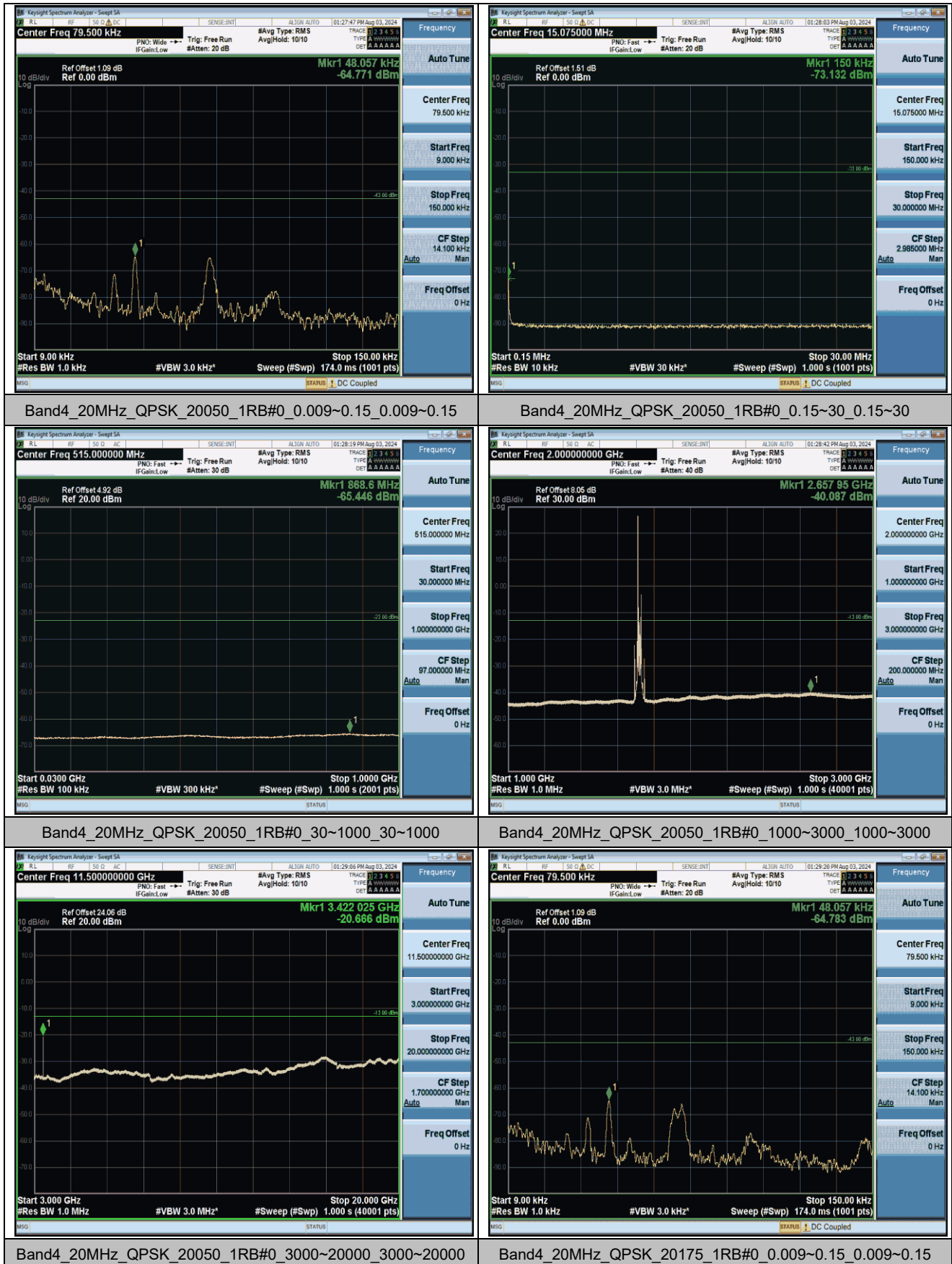
Band4_5MHz_QPSK_20375_25RB#0





Conducted Spurious Emission

Test Graphs





Band4_20MHz_QPSK_20175_1RB#0_0.15~30_0.15~30



Band4_20MHz_QPSK_20175_1RB#0_30~1000_30~1000



Band4_20MHz_QPSK_20175_1RB#0_1000~3000_1000~3000



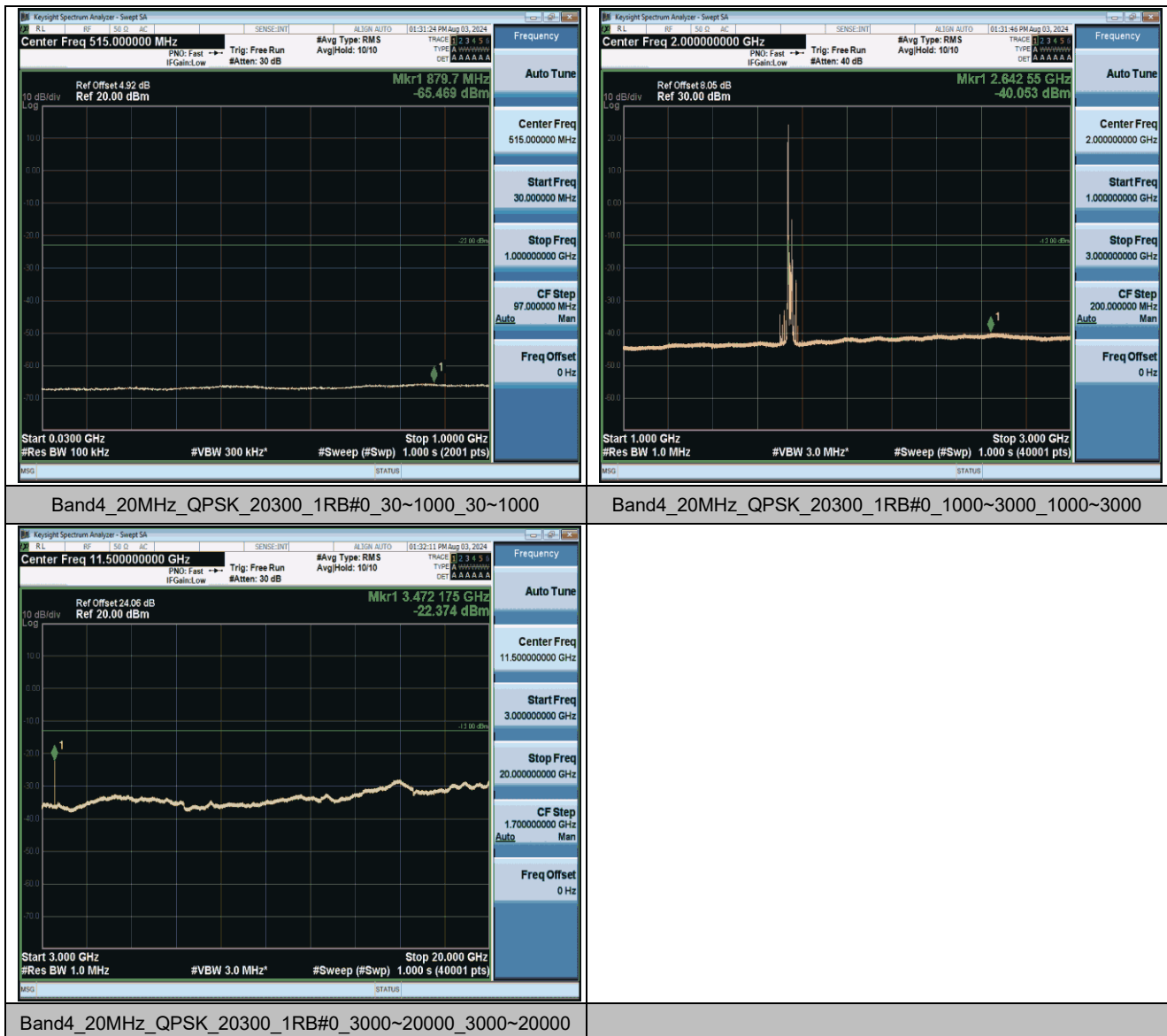
Band4_20MHz_QPSK_20175_1RB#0_3000~20000_3000~20000



Band4_20MHz_QPSK_20300_1RB#0_0.009~0.15_0.009~0.15



Band4_20MHz_QPSK_20300_1RB#0_0.15~30_0.15~30



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	-15.11	-0.008722	PASS
Band4	20MHz	QPSK	20175	100RB#0	VL	NT	-6.78	-0.003913	PASS
Band4	20MHz	QPSK	20175	100RB#0	VH	NT	-12.00	-0.006926	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	-9.83	-0.005674	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-20	-7.21	-0.004162	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-10	5.59	0.003227	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	0	-8.27	-0.004773	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	10	-7.75	-0.004473	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	20	-10.20	-0.005887	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	30	-6.92	-0.003994	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	40	6.35	0.003665	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	50	-9.07	-0.005235	PASS