

Appendix for LTE Band 14

Product Name: TITAN 5400

Model No: G5G-X62O

Appendix A: Average Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band14	5MHz	QPSK	23305	1RB#0	22.65	PASS
Band14	5MHz	QPSK	23305	1RB#12	22.82	PASS
Band14	5MHz	QPSK	23305	1RB#24	22.73	PASS
Band14	5MHz	QPSK	23305	12RB#0	21.68	PASS
Band14	5MHz	QPSK	23305	12RB#6	21.64	PASS
Band14	5MHz	QPSK	23305	12RB#13	21.71	PASS
Band14	5MHz	QPSK	23305	25RB#0	21.76	PASS
Band14	5MHz	16QAM	23305	1RB#0	21.82	PASS
Band14	5MHz	16QAM	23305	1RB#12	21.88	PASS
Band14	5MHz	16QAM	23305	1RB#24	21.81	PASS
Band14	5MHz	16QAM	23305	12RB#0	20.62	PASS
Band14	5MHz	16QAM	23305	12RB#6	20.60	PASS
Band14	5MHz	16QAM	23305	12RB#13	20.71	PASS
Band14	5MHz	16QAM	23305	25RB#0	20.73	PASS
Band14	5MHz	QPSK	23330	1RB#0	22.68	PASS
Band14	5MHz	QPSK	23330	1RB#12	22.81	PASS
Band14	5MHz	QPSK	23330	1RB#24	22.70	PASS
Band14	5MHz	QPSK	23330	12RB#0	21.73	PASS
Band14	5MHz	QPSK	23330	12RB#6	21.76	PASS
Band14	5MHz	QPSK	23330	12RB#13	21.70	PASS
Band14	5MHz	QPSK	23330	25RB#0	21.78	PASS
Band14	5MHz	16QAM	23330	1RB#0	21.68	PASS
Band14	5MHz	16QAM	23330	1RB#12	21.91	PASS
Band14	5MHz	16QAM	23330	1RB#24	21.72	PASS
Band14	5MHz	16QAM	23330	12RB#0	20.69	PASS
Band14	5MHz	16QAM	23330	12RB#6	20.74	PASS
Band14	5MHz	16QAM	23330	12RB#13	20.75	PASS
Band14	5MHz	16QAM	23330	25RB#0	20.72	PASS
Band14	5MHz	QPSK	23355	1RB#0	22.71	PASS
Band14	5MHz	QPSK	23355	1RB#12	22.76	PASS
Band14	5MHz	QPSK	23355	1RB#24	22.68	PASS
Band14	5MHz	QPSK	23355	12RB#0	21.83	PASS
Band14	5MHz	QPSK	23355	12RB#6	21.79	PASS
Band14	5MHz	QPSK	23355	12RB#13	21.81	PASS
Band14	5MHz	QPSK	23355	25RB#0	21.78	PASS

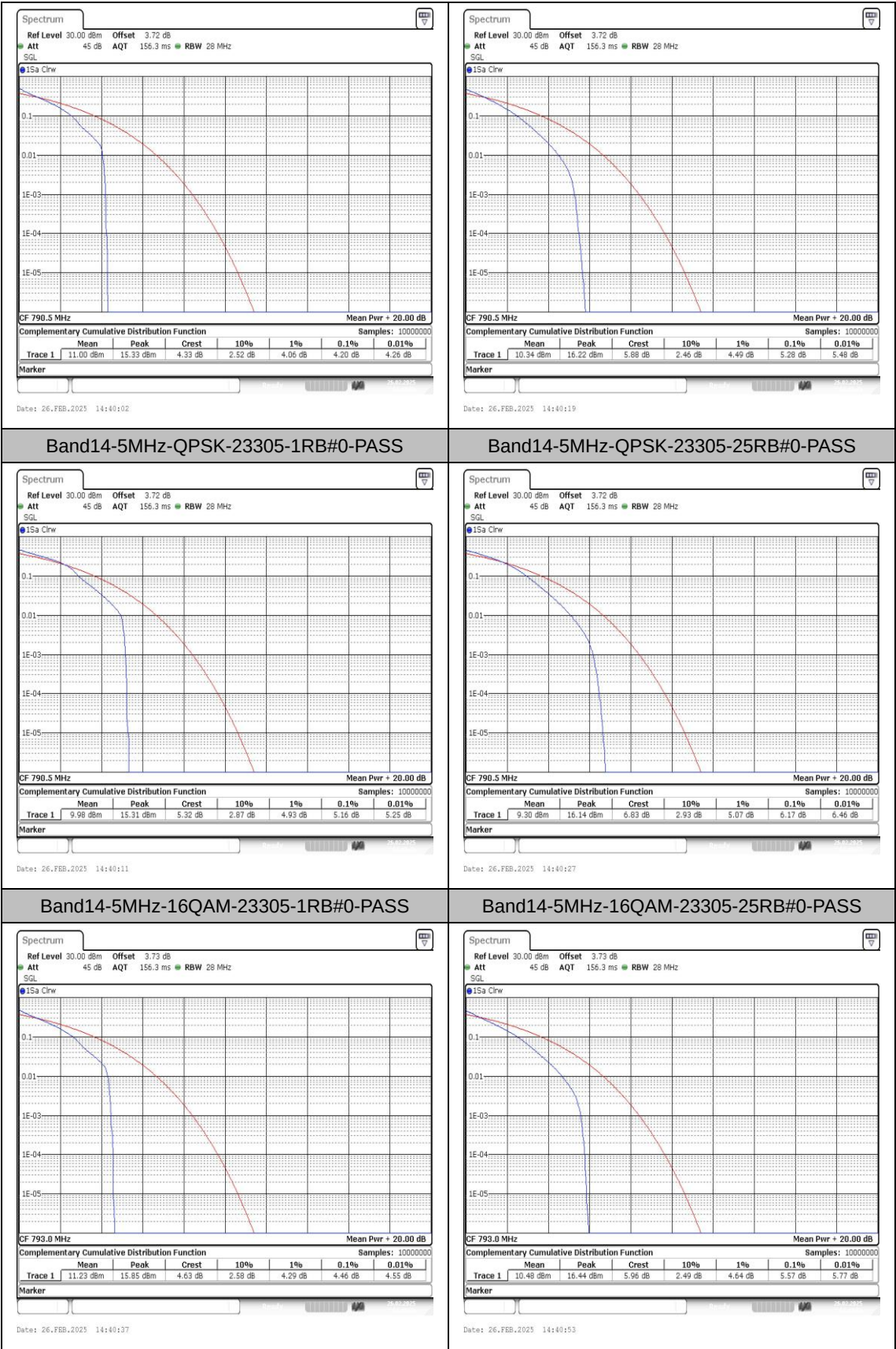
Band14	5MHz	16QAM	23355	1RB#0	21.78	PASS
Band14	5MHz	16QAM	23355	1RB#12	21.83	PASS
Band14	5MHz	16QAM	23355	1RB#24	21.65	PASS
Band14	5MHz	16QAM	23355	12RB#0	20.81	PASS
Band14	5MHz	16QAM	23355	12RB#6	20.81	PASS
Band14	5MHz	16QAM	23355	12RB#13	20.76	PASS
Band14	5MHz	16QAM	23355	25RB#0	20.79	PASS
Band14	10MHz	QPSK	23330	1RB#0	20.43	PASS
Band14	10MHz	QPSK	23330	1RB#24	22.09	PASS
Band14	10MHz	QPSK	23330	1RB#49	22.29	PASS
Band14	10MHz	QPSK	23330	25RB#0	20.77	PASS
Band14	10MHz	QPSK	23330	25RB#12	20.69	PASS
Band14	10MHz	QPSK	23330	25RB#25	21.14	PASS
Band14	10MHz	QPSK	23330	50RB#0	20.97	PASS
Band14	10MHz	16QAM	23330	1RB#0	20.48	PASS
Band14	10MHz	16QAM	23330	1RB#24	21.10	PASS
Band14	10MHz	16QAM	23330	1RB#49	21.41	PASS
Band14	10MHz	16QAM	23330	25RB#0	20.74	PASS
Band14	10MHz	16QAM	23330	25RB#12	20.69	PASS
Band14	10MHz	16QAM	23330	25RB#25	20.21	PASS
Band14	10MHz	16QAM	23330	50RB#0	20.01	PASS

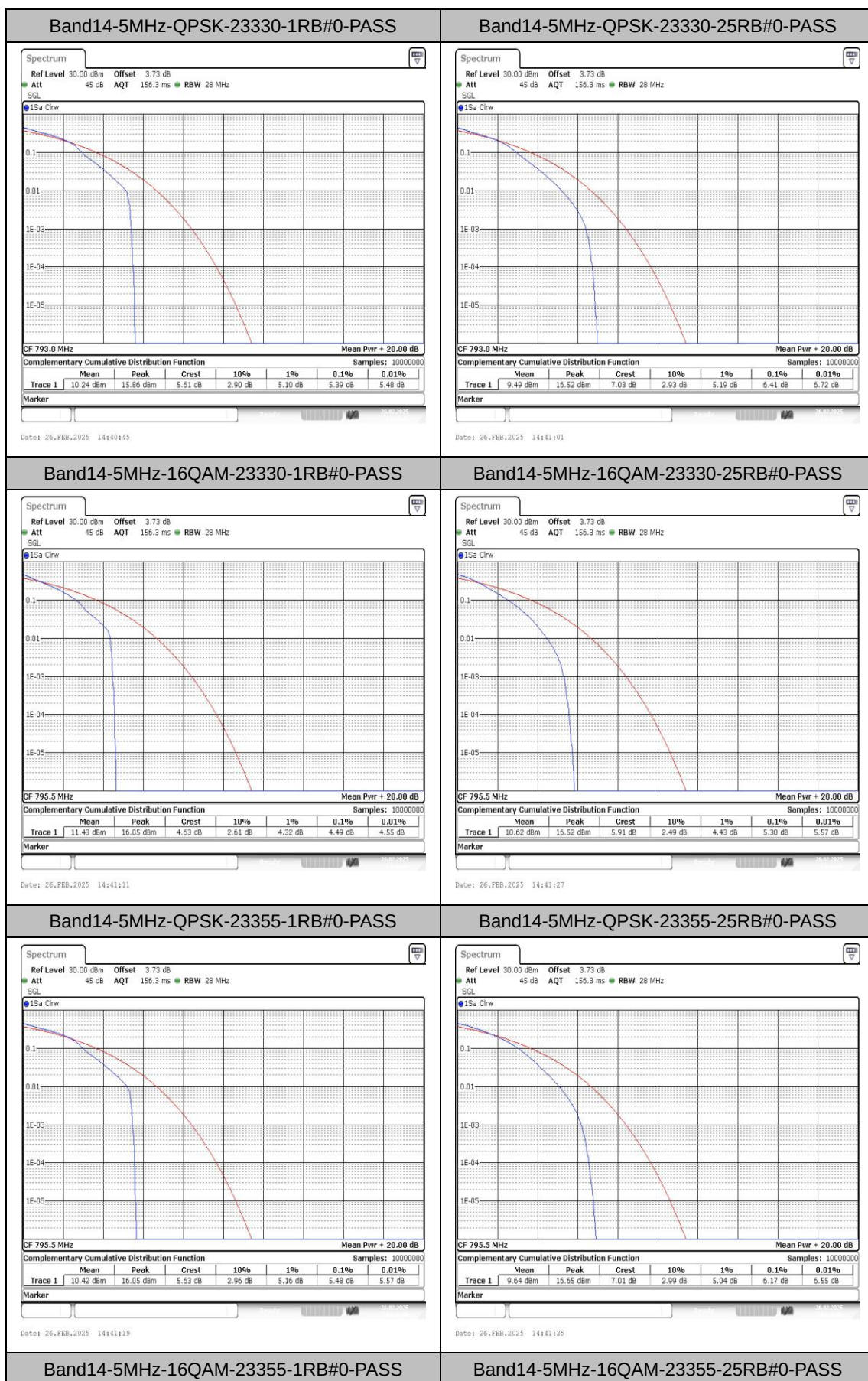
Appendix B: Peak-to-Average Ratio(CCDF)

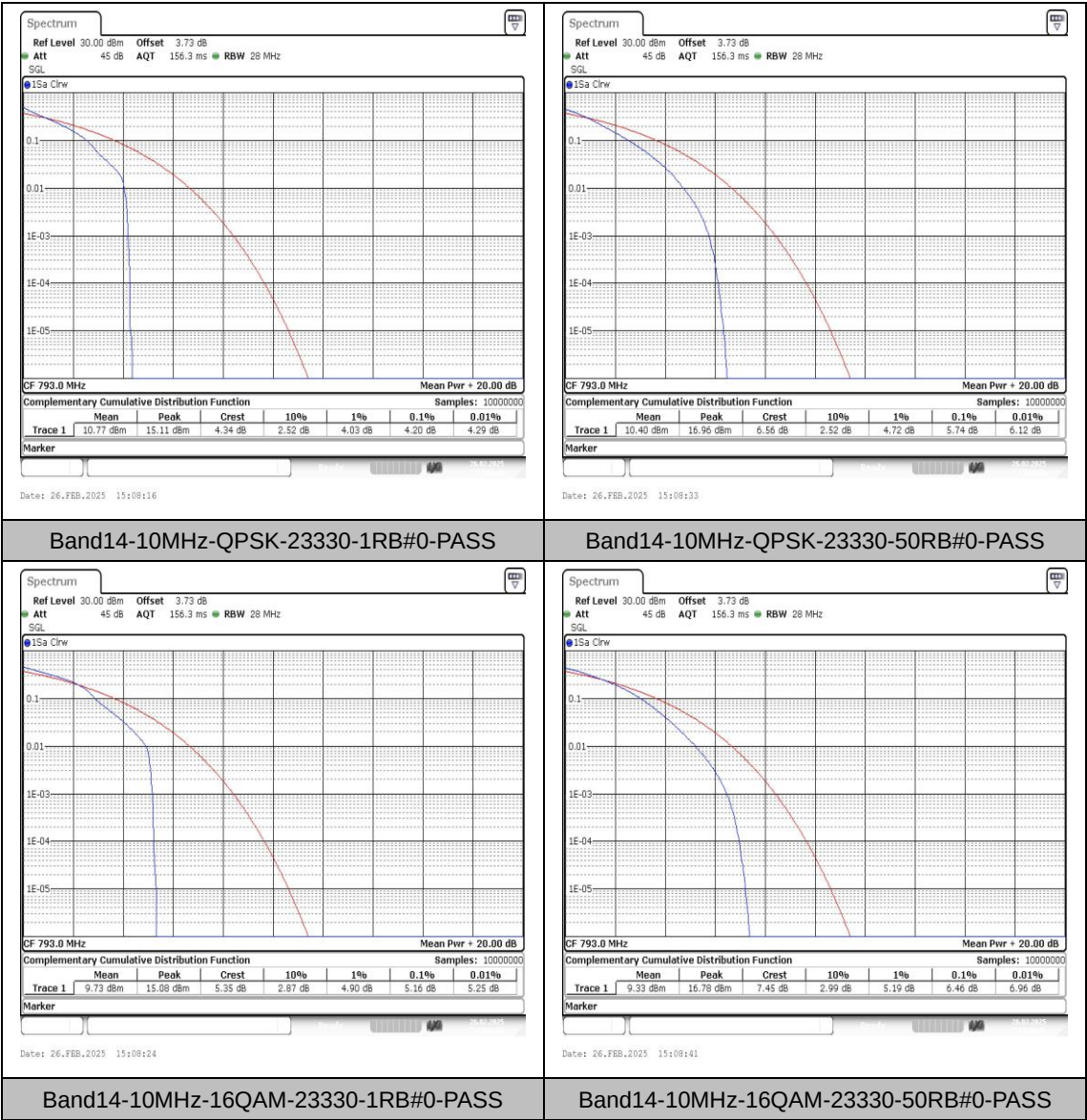
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band14	5MHz	QPSK	23305	1RB#0	4.20	13	PASS
Band14	5MHz	QPSK	23305	25RB#0	5.28	13	PASS
Band14	5MHz	16QAM	23305	1RB#0	5.16	13	PASS
Band14	5MHz	16QAM	23305	25RB#0	6.17	13	PASS
Band14	5MHz	QPSK	23330	1RB#0	4.46	13	PASS
Band14	5MHz	QPSK	23330	25RB#0	5.57	13	PASS
Band14	5MHz	16QAM	23330	1RB#0	5.39	13	PASS
Band14	5MHz	16QAM	23330	25RB#0	6.41	13	PASS
Band14	5MHz	QPSK	23355	1RB#0	4.49	13	PASS
Band14	5MHz	QPSK	23355	25RB#0	5.30	13	PASS
Band14	5MHz	16QAM	23355	1RB#0	5.48	13	PASS
Band14	5MHz	16QAM	23355	25RB#0	6.17	13	PASS
Band14	10MHz	QPSK	23330	1RB#0	4.20	13	PASS
Band14	10MHz	QPSK	23330	50RB#0	5.74	13	PASS
Band14	10MHz	16QAM	23330	1RB#0	5.16	13	PASS
Band14	10MHz	16QAM	23330	50RB#0	6.46	13	PASS

Test Graphs





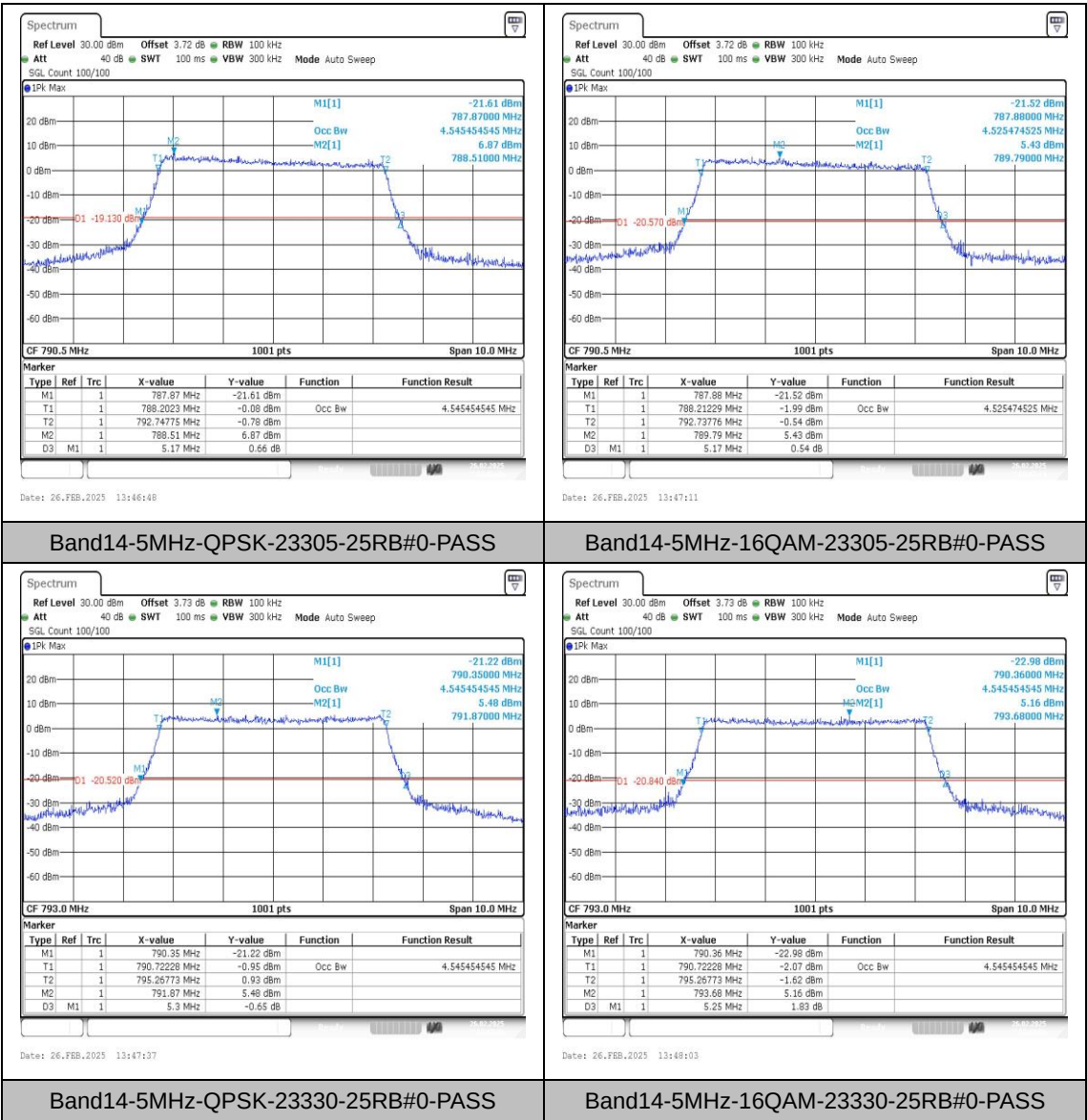


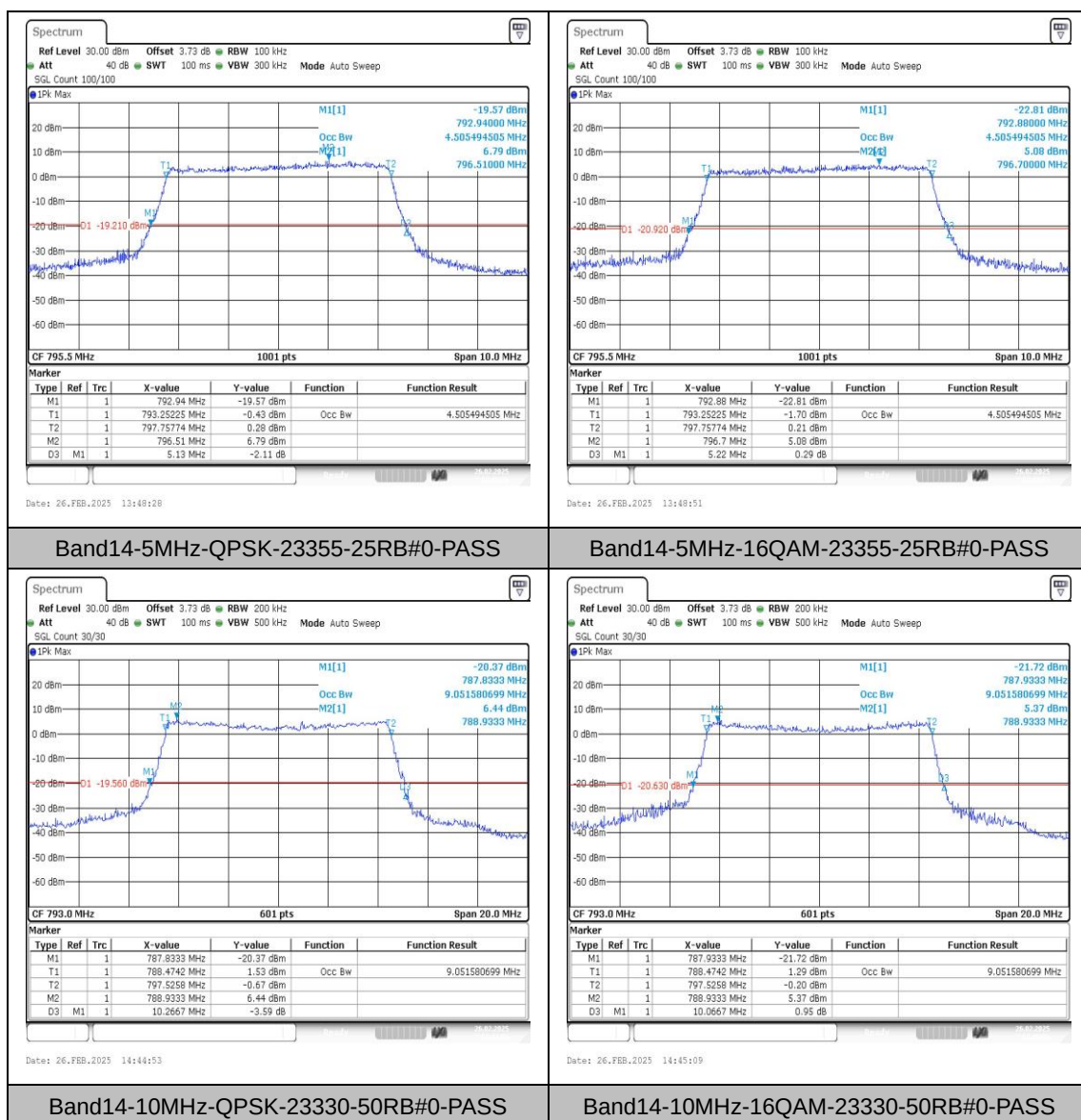
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band14	5MHz	QPSK	23305	25RB#0	4.545	5.17	PASS
Band14	5MHz	16QAM	23305	25RB#0	4.525	5.17	PASS
Band14	5MHz	QPSK	23330	25RB#0	4.545	5.30	PASS
Band14	5MHz	16QAM	23330	25RB#0	4.545	5.25	PASS
Band14	5MHz	QPSK	23355	25RB#0	4.505	5.13	PASS
Band14	5MHz	16QAM	23355	25RB#0	4.505	5.22	PASS
Band14	10MHz	QPSK	23330	50RB#0	9.052	10.27	PASS
Band14	10MHz	16QAM	23330	50RB#0	9.052	10.07	PASS

Test Graphs



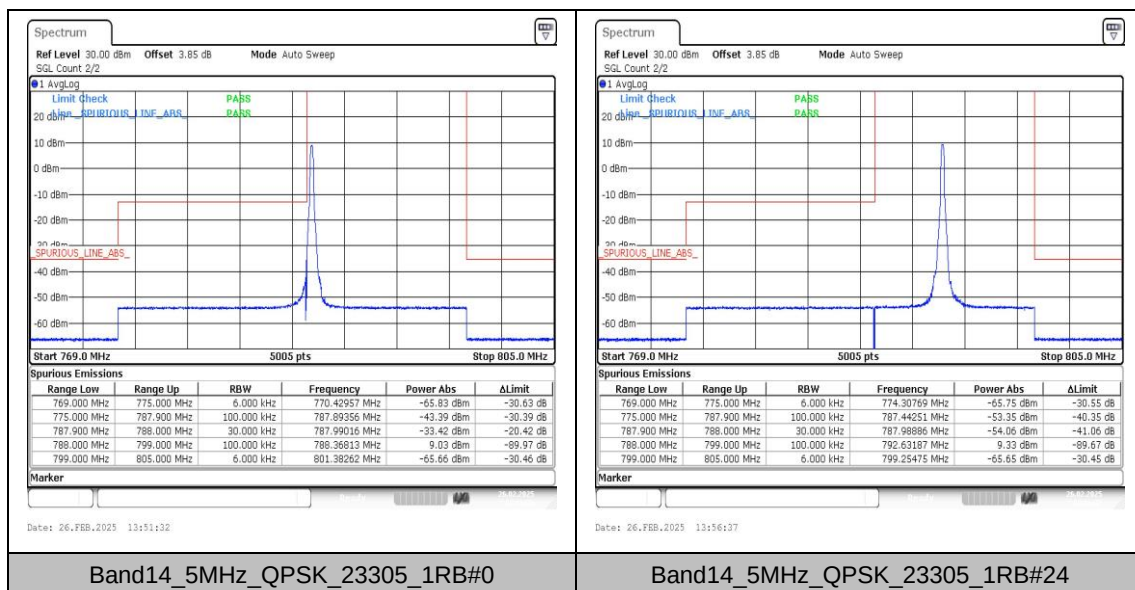


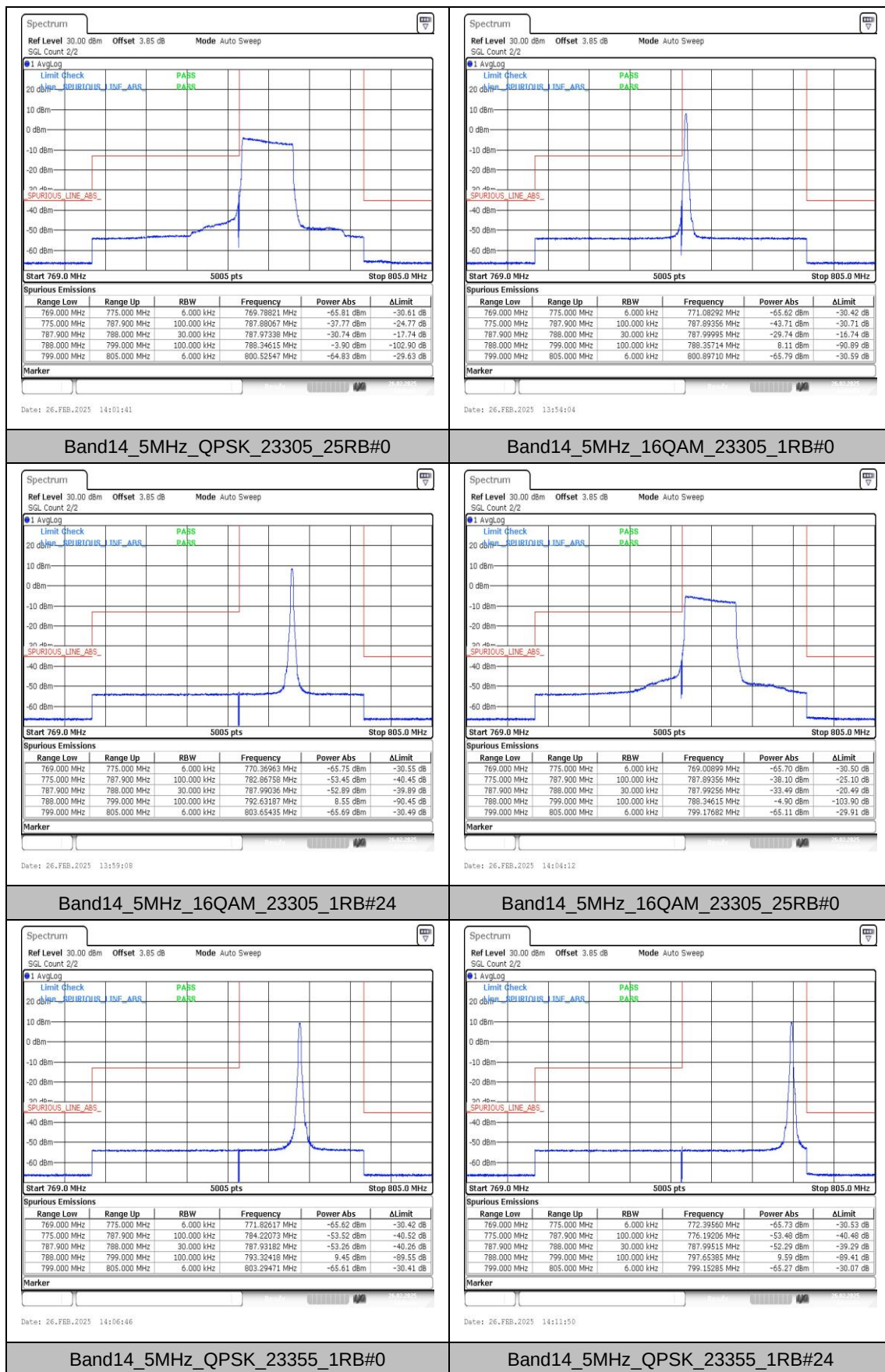
Appendix D: Band Edge

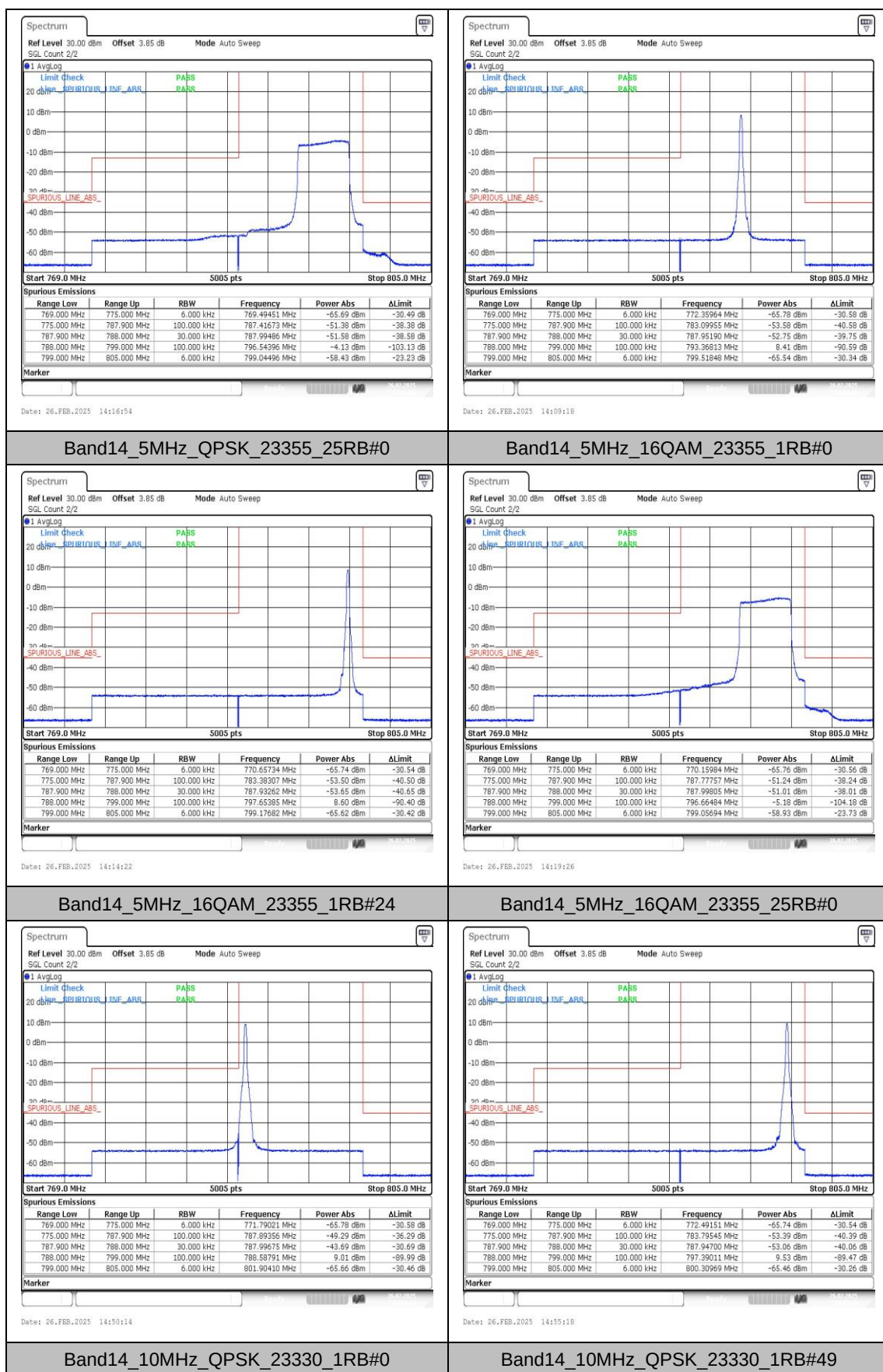
Test Result

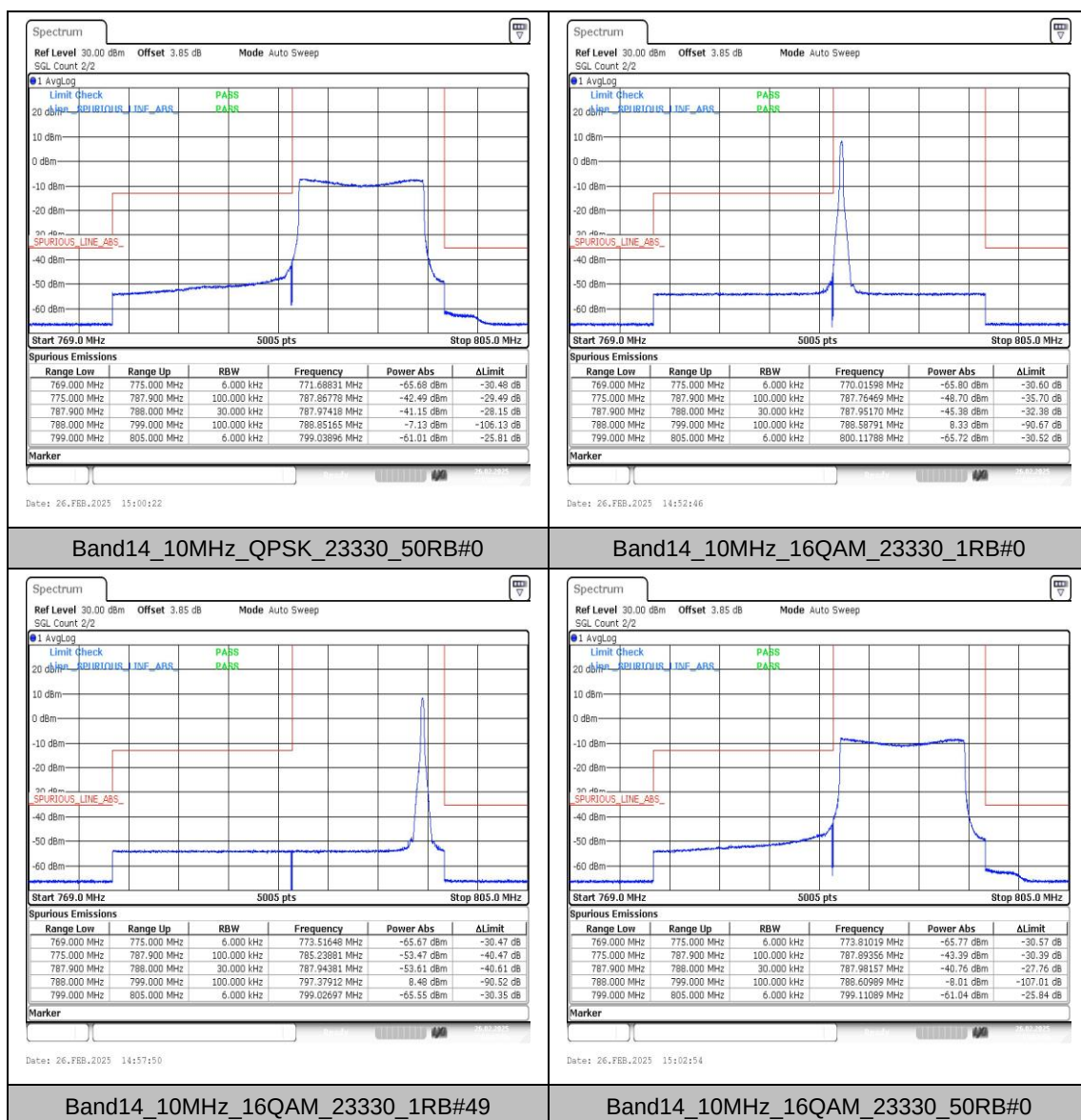
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band14	5MHz	QPSK	23305	1RB#0	-33.42	PASS
Band14	5MHz	QPSK	23305	1RB#24	-65.65	PASS
Band14	5MHz	QPSK	23305	25RB#0	-30.74	PASS
Band14	5MHz	16QAM	23305	1RB#0	-29.74	PASS
Band14	5MHz	16QAM	23305	1RB#24	-65.69	PASS
Band14	5MHz	16QAM	23305	25RB#0	-33.49	PASS
Band14	5MHz	QPSK	23355	1RB#0	-65.61	PASS
Band14	5MHz	QPSK	23355	1RB#24	-65.27	PASS
Band14	5MHz	QPSK	23355	25RB#0	-58.43	PASS
Band14	5MHz	16QAM	23355	1RB#0	-65.54	PASS
Band14	5MHz	16QAM	23355	1RB#24	-65.62	PASS
Band14	5MHz	16QAM	23355	25RB#0	-58.93	PASS
Band14	10MHz	QPSK	23330	1RB#0	-65.66	PASS
Band14	10MHz	QPSK	23330	1RB#49	-65.46	PASS
Band14	10MHz	QPSK	23330	50RB#0	-61.01	PASS
Band14	10MHz	16QAM	23330	1RB#0	-65.72	PASS
Band14	10MHz	16QAM	23330	1RB#49	-65.55	PASS
Band14	10MHz	16QAM	23330	50RB#0	-61.04	PASS

Test Graphs









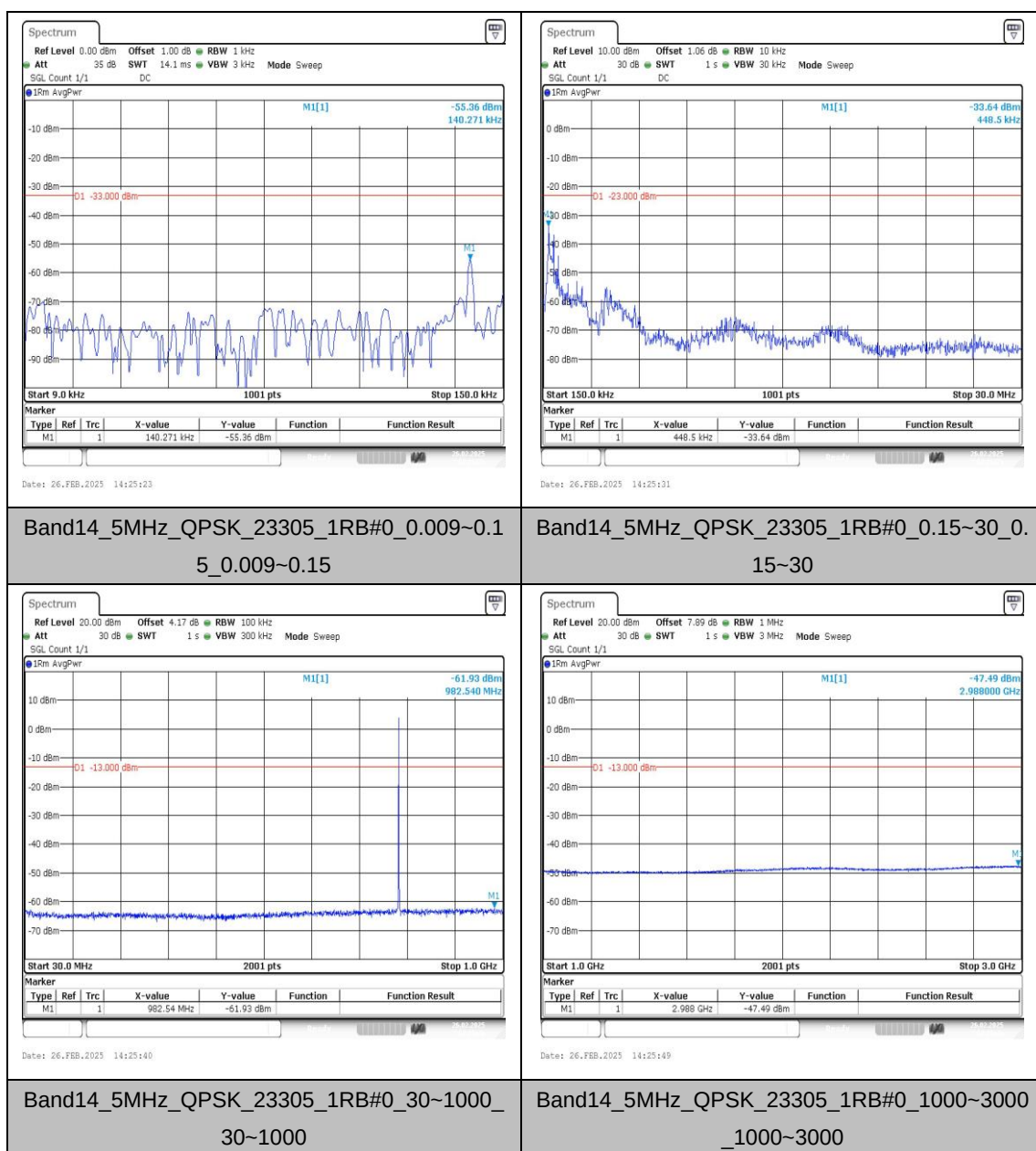
Appendix E: Conducted Spurious Emission

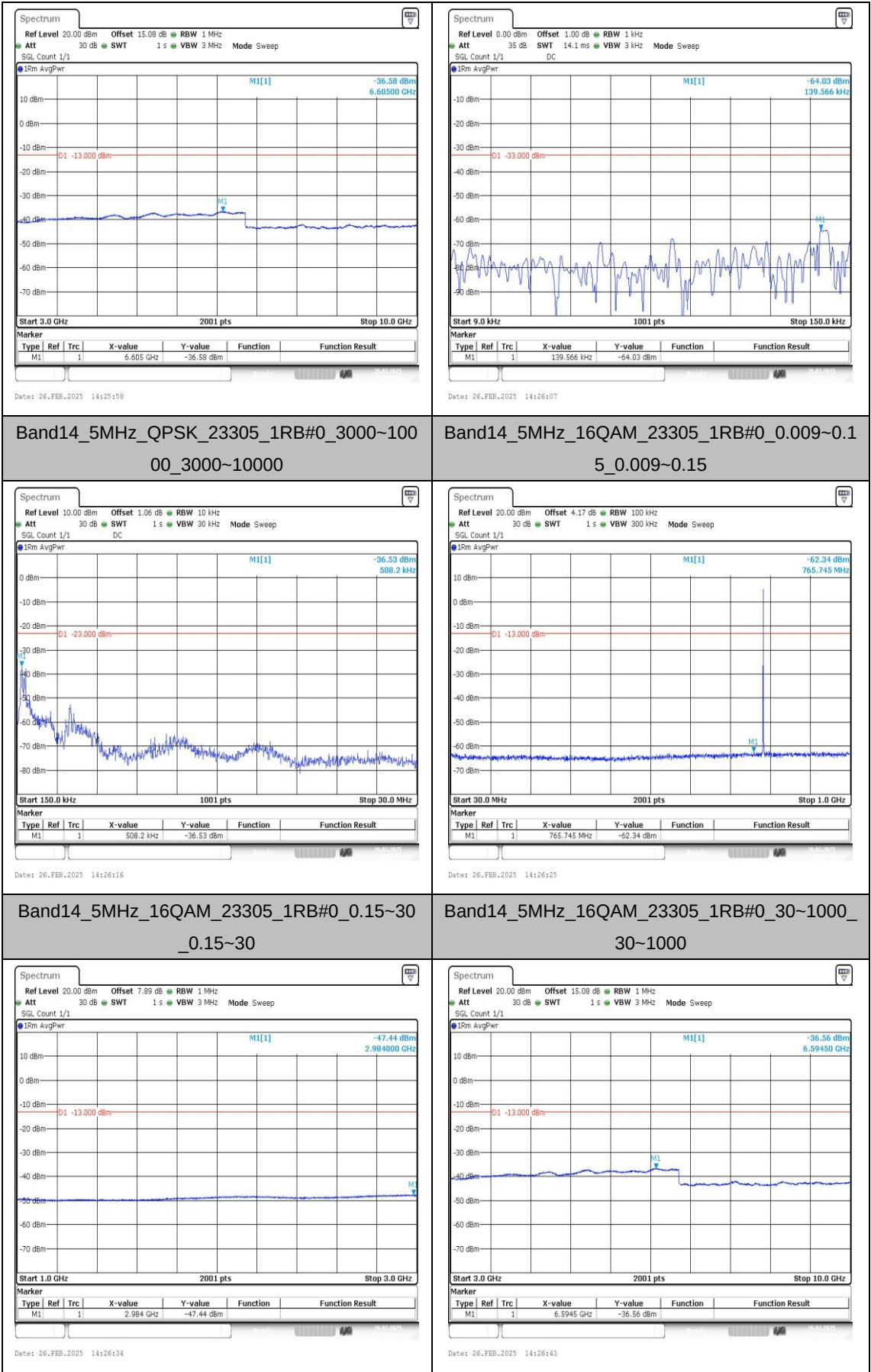
Test Result

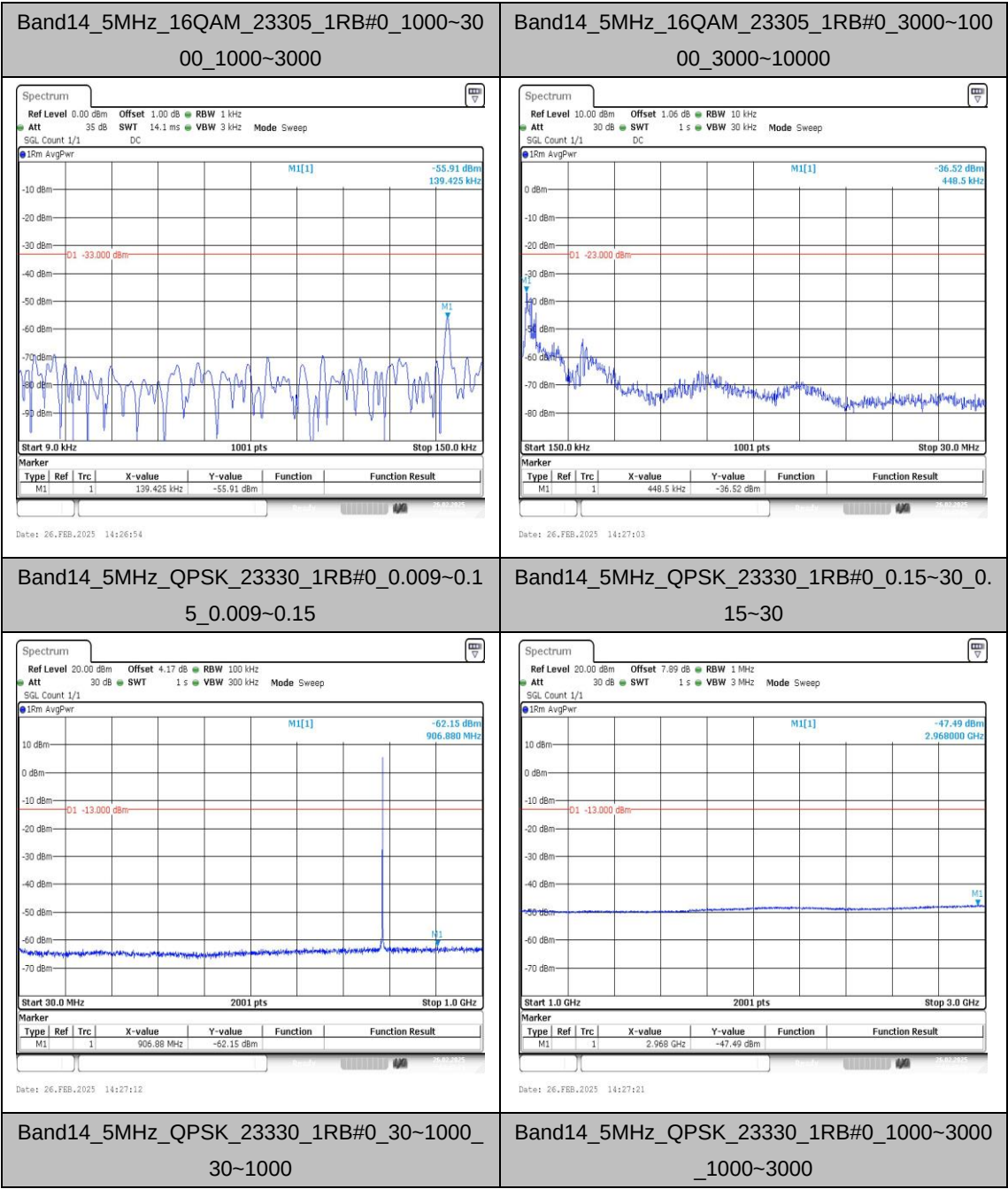
Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band14	5MHz	QPSK	23305	1RB#0	0.009~0.15	-55.36	PASS
Band14	5MHz	QPSK	23305	1RB#0	0.15~30	-33.64	PASS
Band14	5MHz	QPSK	23305	1RB#0	30~1000	-61.93	PASS
Band14	5MHz	QPSK	23305	1RB#0	1000~3000	-47.49	PASS
Band14	5MHz	QPSK	23305	1RB#0	3000~10000	-36.58	PASS
Band14	5MHz	16QAM	23305	1RB#0	0.009~0.15	-64.03	PASS
Band14	5MHz	16QAM	23305	1RB#0	0.15~30	-36.53	PASS
Band14	5MHz	16QAM	23305	1RB#0	30~1000	-62.34	PASS
Band14	5MHz	16QAM	23305	1RB#0	1000~3000	-47.44	PASS
Band14	5MHz	16QAM	23305	1RB#0	3000~10000	-36.56	PASS
Band14	5MHz	QPSK	23330	1RB#0	0.009~0.15	-55.91	PASS
Band14	5MHz	QPSK	23330	1RB#0	0.15~30	-36.52	PASS
Band14	5MHz	QPSK	23330	1RB#0	30~1000	-62.15	PASS
Band14	5MHz	QPSK	23330	1RB#0	1000~3000	-47.49	PASS
Band14	5MHz	QPSK	23330	1RB#0	3000~10000	-36.58	PASS
Band14	5MHz	16QAM	23330	1RB#0	0.009~0.15	-55.21	PASS
Band14	5MHz	16QAM	23330	1RB#0	0.15~30	-34.87	PASS
Band14	5MHz	16QAM	23330	1RB#0	30~1000	-61.89	PASS
Band14	5MHz	16QAM	23330	1RB#0	1000~3000	-47.53	PASS
Band14	5MHz	16QAM	23330	1RB#0	3000~10000	-36.57	PASS
Band14	5MHz	QPSK	23355	1RB#0	0.009~0.15	-55.71	PASS
Band14	5MHz	QPSK	23355	1RB#0	0.15~30	-35.44	PASS
Band14	5MHz	QPSK	23355	1RB#0	30~1000	-61.97	PASS
Band14	5MHz	QPSK	23355	1RB#0	1000~3000	-46.40	PASS
Band14	5MHz	QPSK	23355	1RB#0	3000~10000	-36.59	PASS
Band14	5MHz	16QAM	23355	1RB#0	0.009~0.15	-58.86	PASS
Band14	5MHz	16QAM	23355	1RB#0	0.15~30	-35.66	PASS
Band14	5MHz	16QAM	23355	1RB#0	30~1000	-62.17	PASS
Band14	5MHz	16QAM	23355	1RB#0	1000~3000	-47.32	PASS
Band14	5MHz	16QAM	23355	1RB#0	3000~10000	-36.60	PASS
Band14	10MHz	QPSK	23330	1RB#0	0.009~0.15	-59.69	PASS
Band14	10MHz	QPSK	23330	1RB#0	0.15~30	-33.59	PASS
Band14	10MHz	QPSK	23330	1RB#0	30~1000	-62.01	PASS
Band14	10MHz	QPSK	23330	1RB#0	1000~3000	-47.54	PASS
Band14	10MHz	QPSK	23330	1RB#0	3000~10000	-36.55	PASS

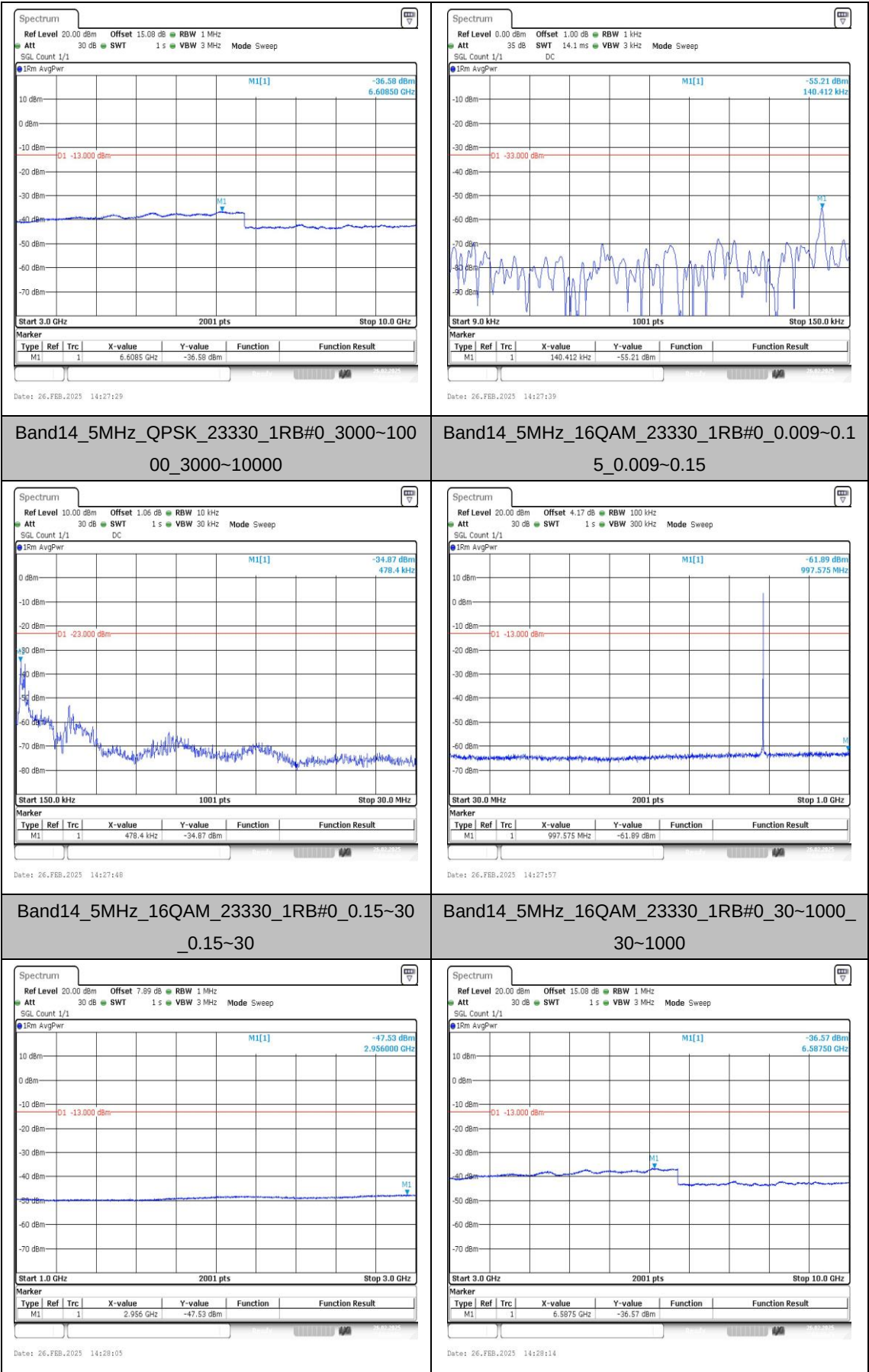
Band14	10MHz	16QAM	23330	1RB#0	0.009~0.15	-56.58	PASS
Band14	10MHz	16QAM	23330	1RB#0	0.15~30	-36.04	PASS
Band14	10MHz	16QAM	23330	1RB#0	30~1000	-61.88	PASS
Band14	10MHz	16QAM	23330	1RB#0	1000~3000	-47.35	PASS
Band14	10MHz	16QAM	23330	1RB#0	3000~10000	-36.48	PASS

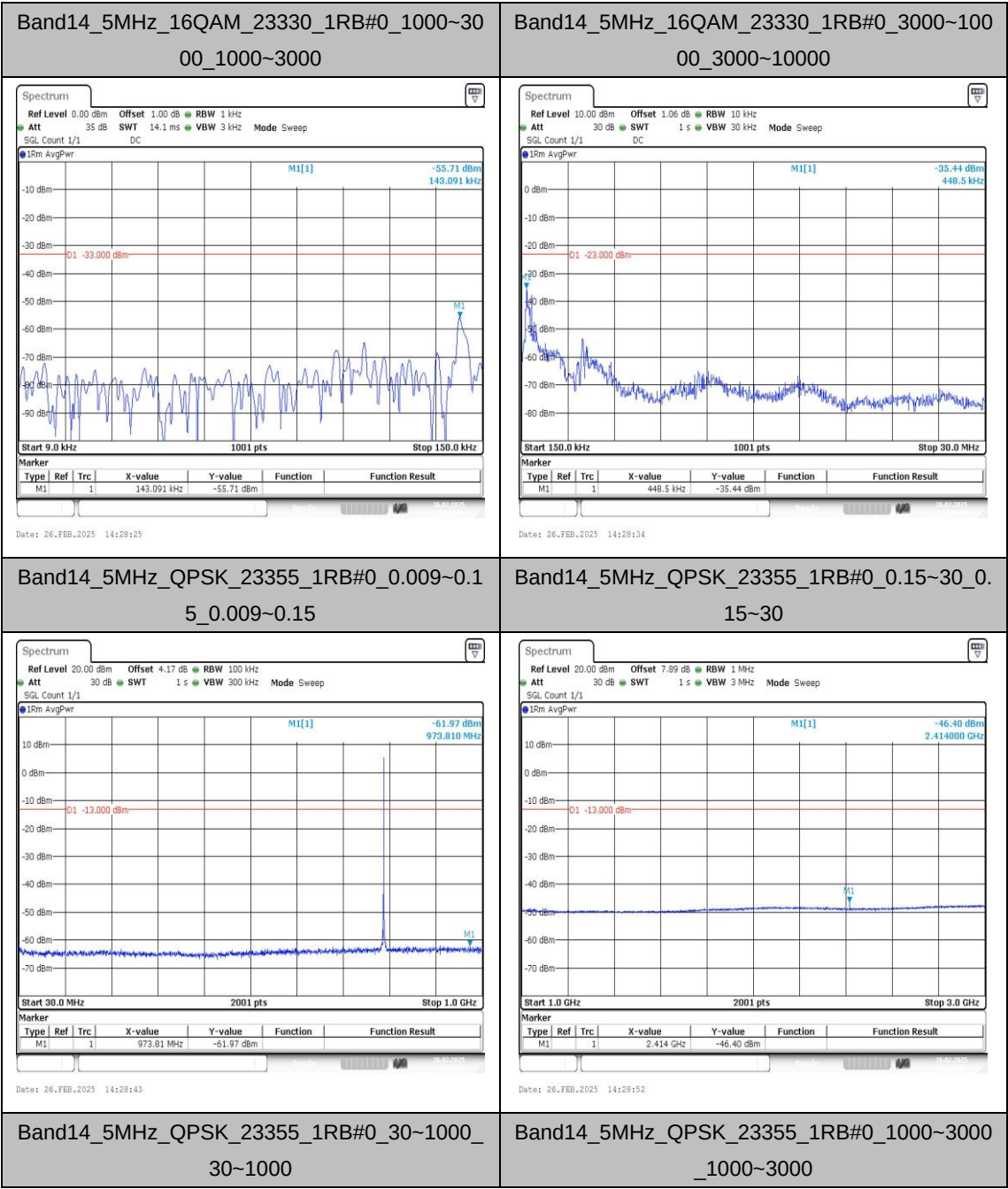
Test Graphs

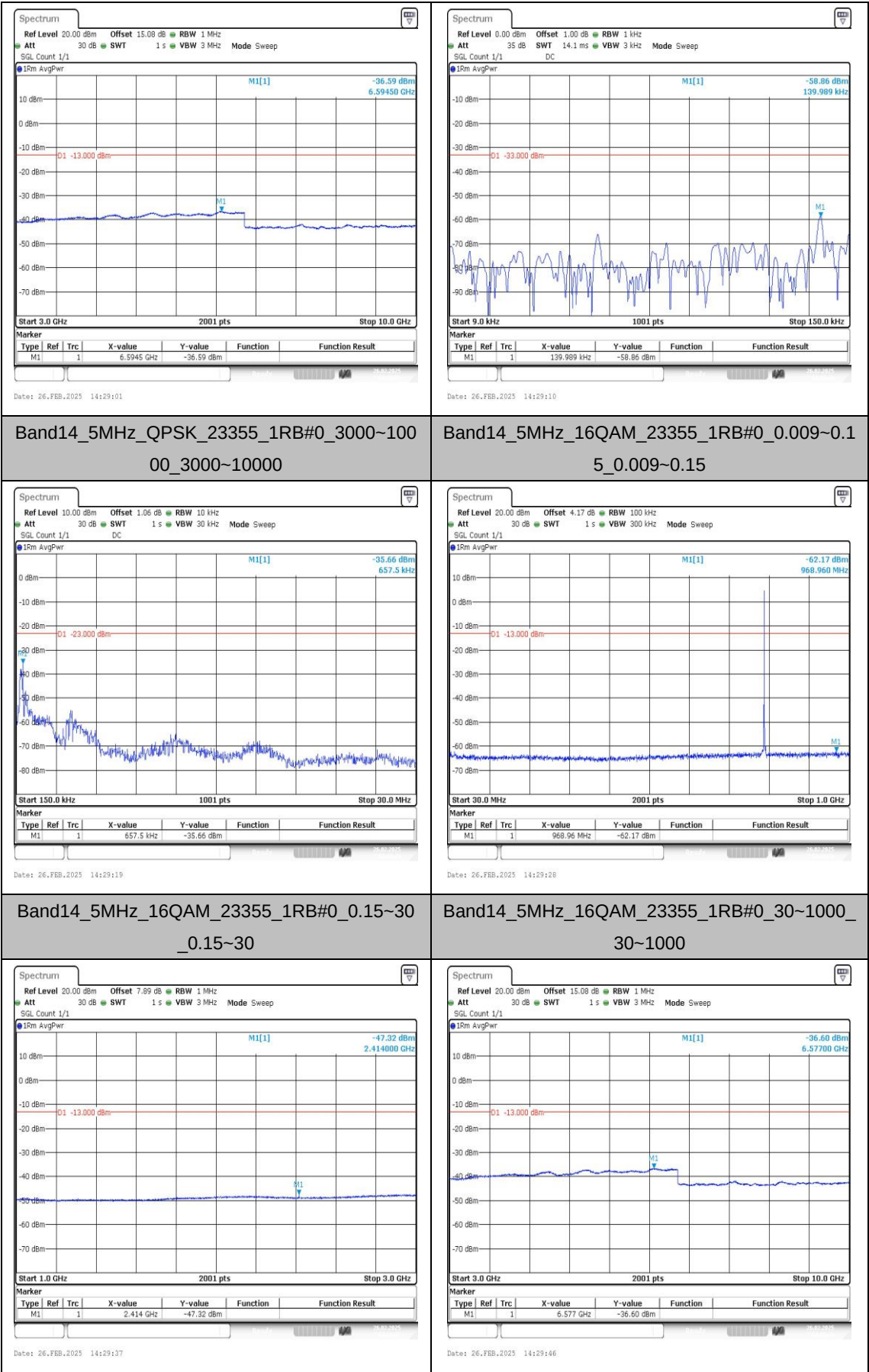


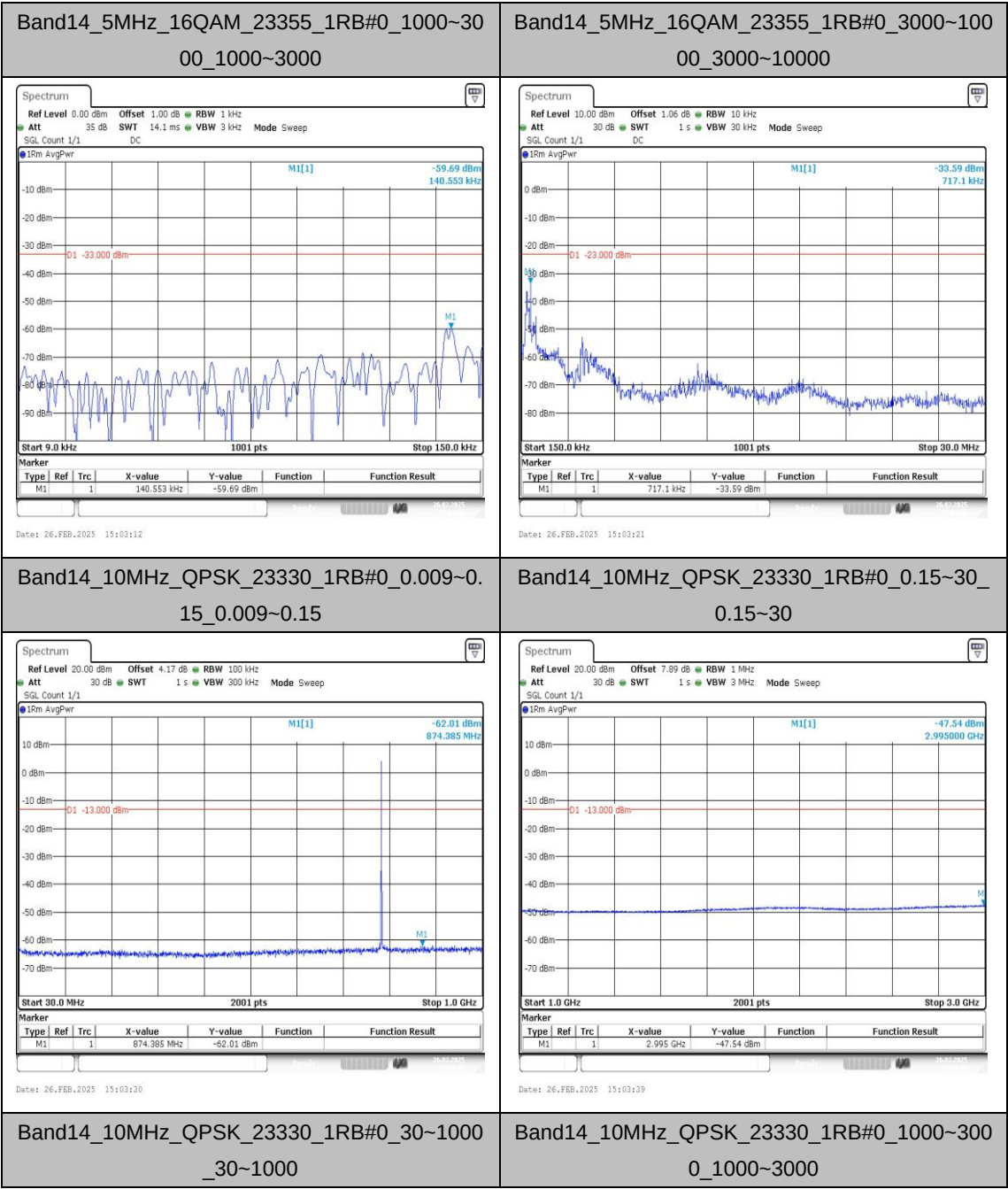


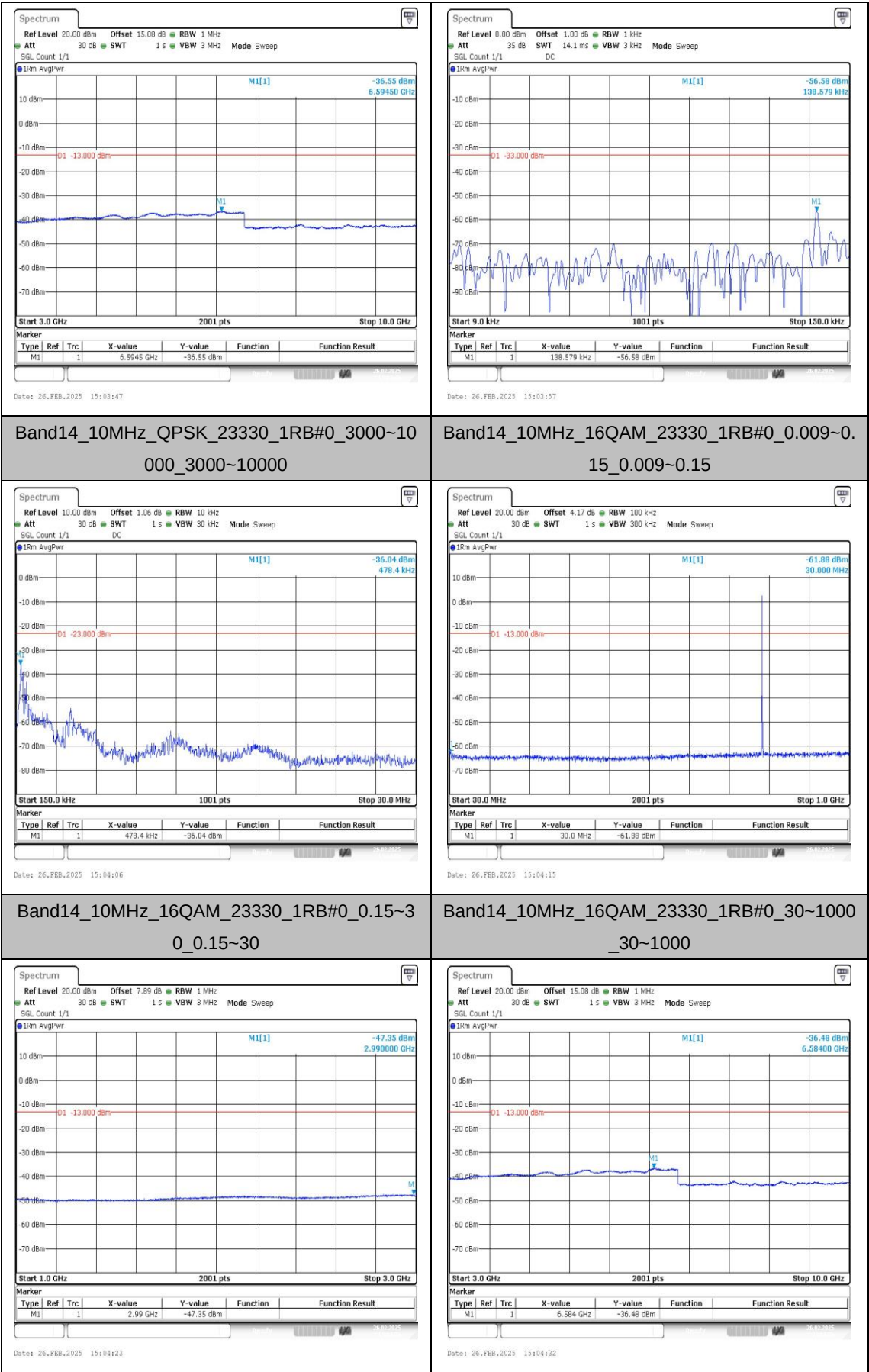












Band14_10MHz_16QAM_23330_1RB#0_1000~3000_1000~3000	Band14_10MHz_16QAM_23330_1RB#0_3000~10000_3000~10000
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Appendix F: Frequency Stability

Test Result

Voltage										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band14	5MHz	QPSK	23305	25RB#0	VN	NT	10.09	0.012764	±2.5	PASS
Band14	5MHz	QPSK	23305	25RB#0	VL	NT	15.64	0.019785	±2.5	PASS
Band14	5MHz	QPSK	23305	25RB#0	VH	NT	-32.17	-0.040696	±2.5	PASS
Band14	5MHz	16QAM	23305	25RB#0	VN	NT	-27.14	-0.034333	±2.5	PASS
Band14	5MHz	16QAM	23305	25RB#0	VL	NT	-6.69	-0.008463	±2.5	PASS
Band14	5MHz	16QAM	23305	25RB#0	VH	NT	20.13	0.025465	±2.5	PASS
Band14	5MHz	QPSK	23330	25RB#0	VN	NT	-37.52	-0.047314	±2.5	PASS
Band14	5MHz	QPSK	23330	25RB#0	VL	NT	13.95	0.017591	±2.5	PASS
Band14	5MHz	QPSK	23330	25RB#0	VH	NT	9.23	0.011639	±2.5	PASS
Band14	5MHz	16QAM	23330	25RB#0	VN	NT	12.85	0.016204	±2.5	PASS
Band14	5MHz	16QAM	23330	25RB#0	VL	NT	-7.35	-0.009269	±2.5	PASS
Band14	5MHz	16QAM	23330	25RB#0	VH	NT	19.18	0.024187	±2.5	PASS
Band14	5MHz	QPSK	23355	25RB#0	VN	NT	19.67	0.024727	±2.5	PASS
Band14	5MHz	QPSK	23355	25RB#0	VL	NT	4.33	0.005443	±2.5	PASS
Band14	5MHz	QPSK	23355	25RB#0	VH	NT	15.41	0.019371	±2.5	PASS
Band14	5MHz	16QAM	23355	25RB#0	VN	NT	6.12	0.007693	±2.5	PASS
Band14	5MHz	16QAM	23355	25RB#0	VL	NT	-10.03	-0.012608	±2.5	PASS
Band14	5MHz	16QAM	23355	25RB#0	VH	NT	11.32	0.014230	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	VN	NT	7.42	0.009357	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	VL	NT	-5.11	-0.006444	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	VH	NT	7.91	0.009975	±2.5	PASS
Band14	10MHz	16QAM	23330	50RB#0	VN	NT	-9.38	-0.011828	±2.5	PASS
Band14	10MHz	16QAM	23330	50RB#0	VL	NT	-12.15	-0.015322	±2.5	PASS
Band14	10MHz	16QAM	23330	50RB#0	VH	NT	5.56	0.007011	±2.5	PASS

Temperature										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band14	5MHz	QPSK	23305	25RB#0	NV	-30	16.78	0.021227	±2.5	PASS
Band14	5MHz	QPSK	23305	25RB#0	NV	-20	13.83	0.017495	±2.5	PASS
Band14	5MHz	QPSK	23305	25RB#0	NV	-10	-33.16	-0.041948	±2.5	PASS
Band14	5MHz	QPSK	23305	25RB#0	NV	0	23.36	0.029551	±2.5	PASS
Band14	5MHz	QPSK	23305	25RB#0	NV	10	-7.47	-0.009450	±2.5	PASS

Band14	5MHz	QPSK	23305	25RB#0	NV	20	6.44	0.008147	±2.5	PASS
Band14	5MHz	QPSK	23305	25RB#0	NV	30	9.84	0.012448	±2.5	PASS
Band14	5MHz	QPSK	23305	25RB#0	NV	40	-11.44	-0.014472	±2.5	PASS
Band14	5MHz	QPSK	23305	25RB#0	NV	50	-11.03	-0.013953	±2.5	PASS
Band14	5MHz	16QAM	23305	25RB#0	NV	-30	7.58	0.009589	±2.5	PASS
Band14	5MHz	16QAM	23305	25RB#0	NV	-20	17.01	0.021518	±2.5	PASS
Band14	5MHz	16QAM	23305	25RB#0	NV	-10	-18.47	-0.023365	±2.5	PASS
Band14	5MHz	16QAM	23305	25RB#0	NV	0	-7.30	-0.009235	±2.5	PASS
Band14	5MHz	16QAM	23305	25RB#0	NV	10	-17.47	-0.022100	±2.5	PASS
Band14	5MHz	16QAM	23305	25RB#0	NV	20	-11.93	-0.015092	±2.5	PASS
Band14	5MHz	16QAM	23305	25RB#0	NV	30	-15.28	-0.019330	±2.5	PASS
Band14	5MHz	16QAM	23305	25RB#0	NV	40	16.32	0.020645	±2.5	PASS
Band14	5MHz	16QAM	23305	25RB#0	NV	50	-31.63	-0.040013	±2.5	PASS
Band14	5MHz	QPSK	23330	25RB#0	NV	-30	14.20	0.017907	±2.5	PASS
Band14	5MHz	QPSK	23330	25RB#0	NV	-20	-20.57	-0.025939	±2.5	PASS
Band14	5MHz	QPSK	23330	25RB#0	NV	-10	7.18	0.009054	±2.5	PASS
Band14	5MHz	QPSK	23330	25RB#0	NV	0	11.74	0.014805	±2.5	PASS
Band14	5MHz	QPSK	23330	25RB#0	NV	10	14.05	0.017718	±2.5	PASS
Band14	5MHz	QPSK	23330	25RB#0	NV	20	17.62	0.022219	±2.5	PASS
Band14	5MHz	QPSK	23330	25RB#0	NV	30	-23.75	-0.029950	±2.5	PASS
Band14	5MHz	QPSK	23330	25RB#0	NV	40	-11.84	-0.014931	±2.5	PASS
Band14	5MHz	QPSK	23330	25RB#0	NV	50	-7.11	-0.008966	±2.5	PASS
Band14	5MHz	16QAM	23330	25RB#0	NV	-30	6.45	0.008134	±2.5	PASS
Band14	5MHz	16QAM	23330	25RB#0	NV	-20	-22.40	-0.028247	±2.5	PASS
Band14	5MHz	16QAM	23330	25RB#0	NV	-10	-21.57	-0.027201	±2.5	PASS
Band14	5MHz	16QAM	23330	25RB#0	NV	0	-8.38	-0.010567	±2.5	PASS
Band14	5MHz	16QAM	23330	25RB#0	NV	10	3.92	0.004943	±2.5	PASS
Band14	5MHz	16QAM	23330	25RB#0	NV	20	14.36	0.018108	±2.5	PASS
Band14	5MHz	16QAM	23330	25RB#0	NV	30	7.70	0.009710	±2.5	PASS
Band14	5MHz	16QAM	23330	25RB#0	NV	40	-8.91	-0.011236	±2.5	PASS
Band14	5MHz	16QAM	23330	25RB#0	NV	50	12.95	0.016330	±2.5	PASS
Band14	5MHz	QPSK	23355	25RB#0	NV	-30	10.50	0.013199	±2.5	PASS
Band14	5MHz	QPSK	23355	25RB#0	NV	-20	15.79	0.019849	±2.5	PASS
Band14	5MHz	QPSK	23355	25RB#0	NV	-10	-7.57	-0.009516	±2.5	PASS
Band14	5MHz	QPSK	23355	25RB#0	NV	0	5.79	0.007278	±2.5	PASS
Band14	5MHz	QPSK	23355	25RB#0	NV	10	5.94	0.007467	±2.5	PASS
Band14	5MHz	QPSK	23355	25RB#0	NV	20	17.47	0.021961	±2.5	PASS
Band14	5MHz	QPSK	23355	25RB#0	NV	30	-9.18	-0.011540	±2.5	PASS
Band14	5MHz	QPSK	23355	25RB#0	NV	40	-9.03	-0.011351	±2.5	PASS
Band14	5MHz	QPSK	23355	25RB#0	NV	50	10.00	0.012571	±2.5	PASS

Band14	5MHz	16QAM	23355	25RB#0	NV	-30	-14.88	-0.018705	±2.5	PASS
Band14	5MHz	16QAM	23355	25RB#0	NV	-20	-17.84	-0.022426	±2.5	PASS
Band14	5MHz	16QAM	23355	25RB#0	NV	-10	15.09	0.018969	±2.5	PASS
Band14	5MHz	16QAM	23355	25RB#0	NV	0	14.58	0.018328	±2.5	PASS
Band14	5MHz	16QAM	23355	25RB#0	NV	10	7.87	0.009893	±2.5	PASS
Band14	5MHz	16QAM	23355	25RB#0	NV	20	-28.00	-0.035198	±2.5	PASS
Band14	5MHz	16QAM	23355	25RB#0	NV	30	14.10	0.017725	±2.5	PASS
Band14	5MHz	16QAM	23355	25RB#0	NV	40	-14.12	-0.017750	±2.5	PASS
Band14	5MHz	16QAM	23355	25RB#0	NV	50	10.57	0.013287	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	NV	-30	-11.67	-0.014716	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	NV	-20	-5.24	-0.006608	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	NV	-10	8.83	0.011135	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	NV	0	-9.07	-0.011438	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	NV	10	8.75	0.011034	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	NV	20	-11.69	-0.014741	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	NV	30	-12.22	-0.015410	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	NV	40	-7.74	-0.009760	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	NV	50	17.80	0.022446	±2.5	PASS
Band14	10MHz	16QAM	23330	50RB#0	NV	-30	-7.40	-0.009332	±2.5	PASS
Band14	10MHz	16QAM	23330	50RB#0	NV	-20	2.55	0.003216	±2.5	PASS
Band14	10MHz	16QAM	23330	50RB#0	NV	-10	10.57	0.013329	±2.5	PASS
Band14	10MHz	16QAM	23330	50RB#0	NV	0	7.72	0.009735	±2.5	PASS
Band14	10MHz	16QAM	23330	50RB#0	NV	10	9.58	0.012081	±2.5	PASS
Band14	10MHz	16QAM	23330	50RB#0	NV	20	-10.57	-0.013329	±2.5	PASS
Band14	10MHz	16QAM	23330	50RB#0	NV	30	8.97	0.011311	±2.5	PASS
Band14	10MHz	16QAM	23330	50RB#0	NV	40	6.39	0.008058	±2.5	PASS
Band14	10MHz	16QAM	23330	50RB#0	NV	50	9.48	0.011955	±2.5	PASS