

FCC Appendix RF Test Data for LTE Band 13

FCC ID : 2BG9Y-MODELXXXPXXX

Company : Hyatta Digital Technology Co., Ltd.

EUT : Portable Data Terminal

Model Number : Model 7

Report No. : CTA26052902008

Reviewed By : Eric Wang

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Appendix A: Conducted output power

Test Result

Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	Verdict
Band13	5	23205	1	#0	QPSK	23.01	PASS
Band13	5	23205	1	#Mid	QPSK	23.15	PASS
Band13	5	23205	1	#Max	QPSK	23.12	PASS
Band13	5	23205	12	#0	QPSK	22.12	PASS
Band13	5	23205	12	#Mid	QPSK	22.16	PASS
Band13	5	23205	12	#Max	QPSK	22.09	PASS
Band13	5	23205	25	#0	QPSK	22.04	PASS
Band13	5	23205	1	#0	16QAM	22.36	PASS
Band13	5	23205	1	#Mid	16QAM	22.50	PASS
Band13	5	23205	1	#Max	16QAM	22.43	PASS
Band13	5	23205	12	#0	16QAM	21.14	PASS
Band13	5	23205	12	#Mid	16QAM	21.16	PASS
Band13	5	23205	12	#Max	16QAM	21.04	PASS
Band13	5	23205	25	#0	16QAM	21.10	PASS
Band13	5	23230	1	#0	QPSK	23.05	PASS
Band13	5	23230	1	#Mid	QPSK	23.16	PASS
Band13	5	23230	1	#Max	QPSK	23.11	PASS
Band13	5	23230	12	#0	QPSK	22.12	PASS
Band13	5	23230	12	#Mid	QPSK	22.15	PASS
Band13	5	23230	12	#Max	QPSK	22.20	PASS
Band13	5	23230	25	#0	QPSK	22.19	PASS
Band13	5	23230	1	#0	16QAM	22.17	PASS
Band13	5	23230	1	#Mid	16QAM	22.29	PASS
Band13	5	23230	1	#Max	16QAM	22.23	PASS
Band13	5	23230	12	#0	16QAM	21.15	PASS
Band13	5	23230	12	#Mid	16QAM	21.23	PASS
Band13	5	23230	12	#Max	16QAM	21.27	PASS
Band13	5	23230	25	#0	16QAM	21.15	PASS
Band13	5	23255	1	#0	QPSK	23.14	PASS
Band13	5	23255	1	#Mid	QPSK	23.21	PASS
Band13	5	23255	1	#Max	QPSK	23.16	PASS
Band13	5	23255	12	#0	QPSK	22.04	PASS
Band13	5	23255	12	#Mid	QPSK	22.15	PASS
Band13	5	23255	12	#Max	QPSK	22.14	PASS
Band13	5	23255	25	#0	QPSK	22.13	PASS
Band13	5	23255	1	#0	16QAM	22.21	PASS
Band13	5	23255	1	#Mid	16QAM	22.26	PASS
Band13	5	23255	1	#Max	16QAM	22.17	PASS
Band13	5	23255	12	#0	16QAM	21.13	PASS

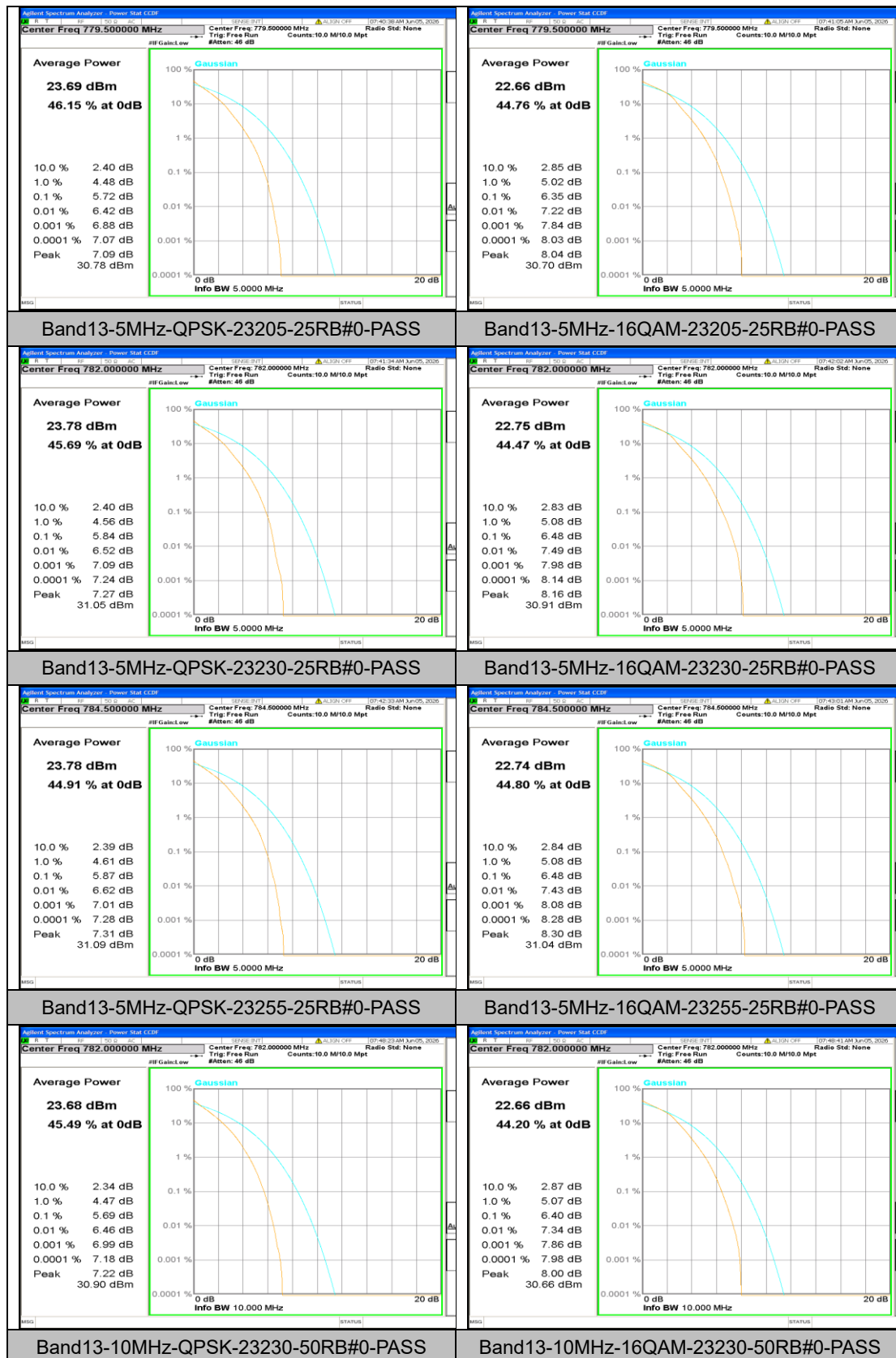
Band13	5	23255	12	#Mid	16QAM	21.29	PASS
Band13	5	23255	12	#Max	16QAM	21.24	PASS
Band13	5	23255	25	#0	16QAM	21.13	PASS
Band13	10	23230	1	#0	QPSK	23.10	PASS
Band13	10	23230	1	#Mid	QPSK	23.18	PASS
Band13	10	23230	1	#Max	QPSK	23.14	PASS
Band13	10	23230	25	#0	QPSK	22.17	PASS
Band13	10	23230	25	#Mid	QPSK	22.14	PASS
Band13	10	23230	25	#Max	QPSK	22.21	PASS
Band13	10	23230	50	#0	QPSK	22.23	PASS
Band13	10	23230	1	#0	16QAM	22.30	PASS
Band13	10	23230	1	#Mid	16QAM	22.42	PASS
Band13	10	23230	1	#Max	16QAM	22.37	PASS
Band13	10	23230	25	#0	16QAM	21.18	PASS
Band13	10	23230	25	#Mid	16QAM	21.16	PASS
Band13	10	23230	25	#Max	16QAM	21.20	PASS
Band13	10	23230	50	#0	16QAM	21.24	PASS

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

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	5.72	13	PASS
Band13	5MHz	16QAM	23205	25RB#0	6.35	13	PASS
Band13	5MHz	QPSK	23230	25RB#0	5.84	13	PASS
Band13	5MHz	16QAM	23230	25RB#0	6.48	13	PASS
Band13	5MHz	QPSK	23255	25RB#0	5.87	13	PASS
Band13	5MHz	16QAM	23255	25RB#0	6.48	13	PASS
Band13	10MHz	QPSK	23230	50RB#0	5.69	13	PASS
Band13	10MHz	16QAM	23230	50RB#0	6.40	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
Band13	5MHz	QPSK	23205	25RB#0	4.5028	4.998	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.4978	4.947	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.4962	4.968	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.5030	4.987	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.5033	5.181	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.4944	5.369	PASS
Band13	10MHz	QPSK	23230	50RB#0	8.9866	9.896	PASS
Band13	10MHz	16QAM	23230	50RB#0	8.9809	9.788	PASS

Test Graphs

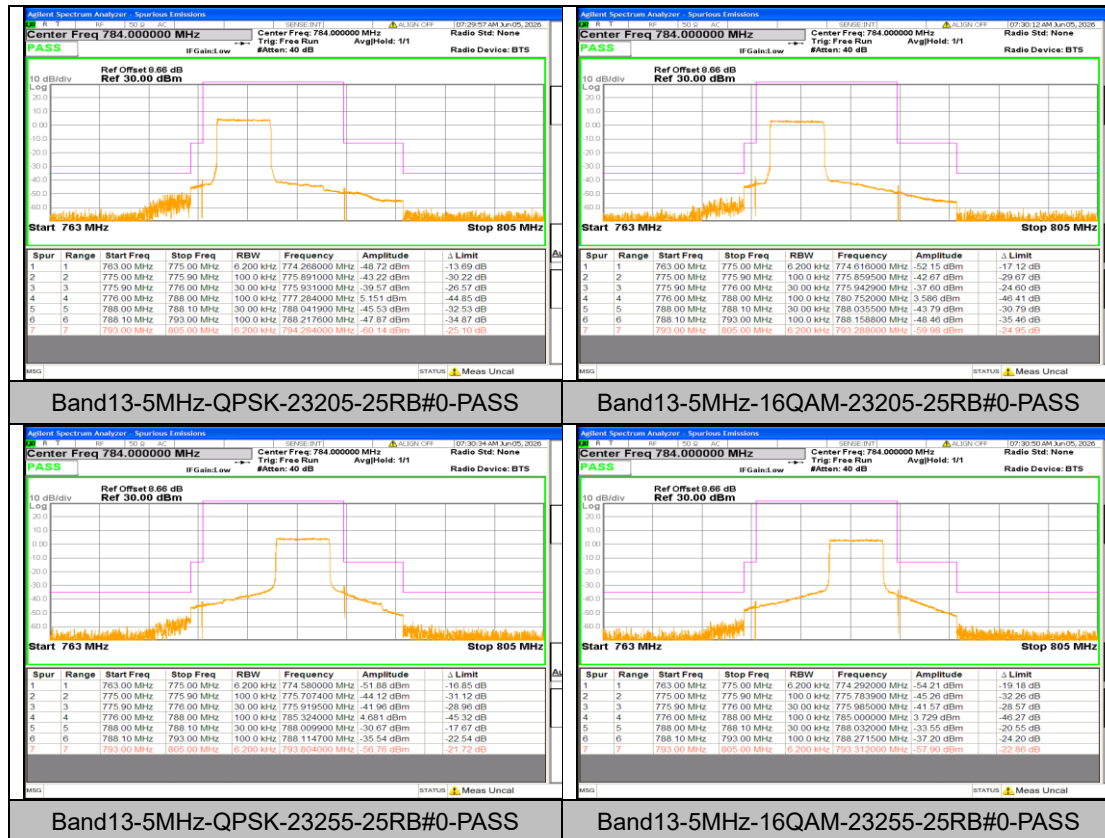


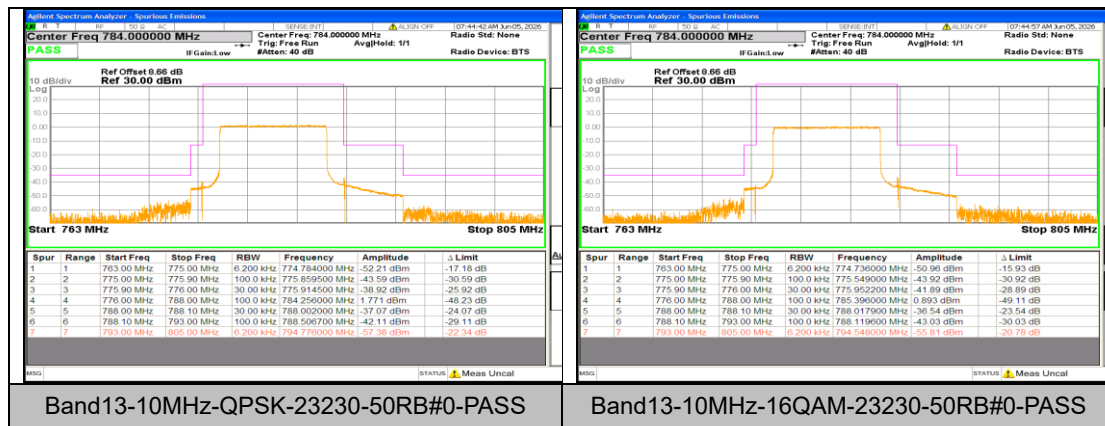
Appendix D: Band Edge

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	-48.72	PASS
Band13	5MHz	16QAM	23205	25RB#0	-52.15	PASS
Band13	5MHz	QPSK	23255	25RB#0	-51.88	PASS
Band13	5MHz	16QAM	23255	25RB#0	-54.21	PASS
Band13	10MHz	QPSK	23230	50RB#0	-52.21	PASS
Band13	10MHz	16QAM	23230	50RB#0	-50.96	PASS

Test Graphs





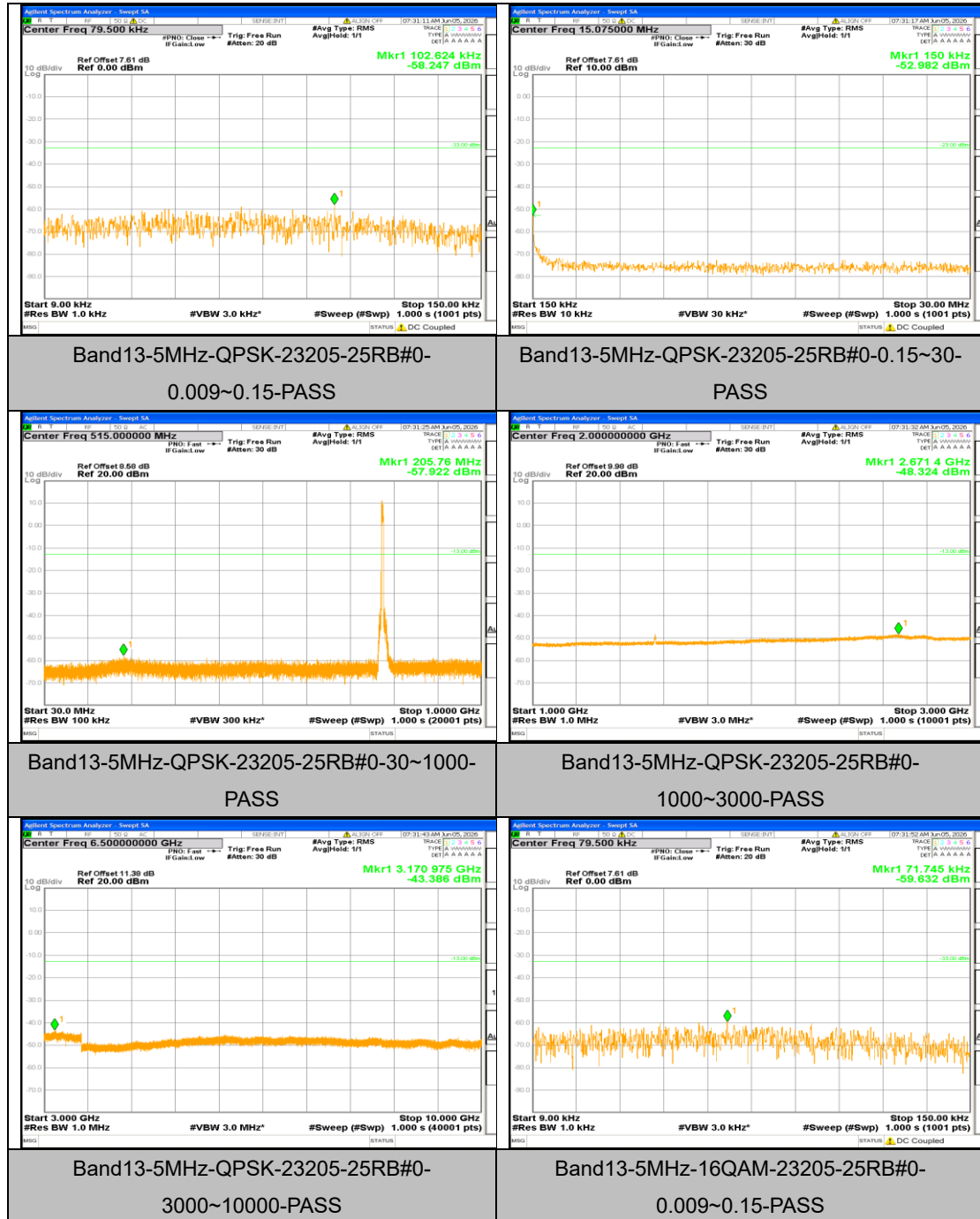
Appendix E: Conducted Spurious Emission

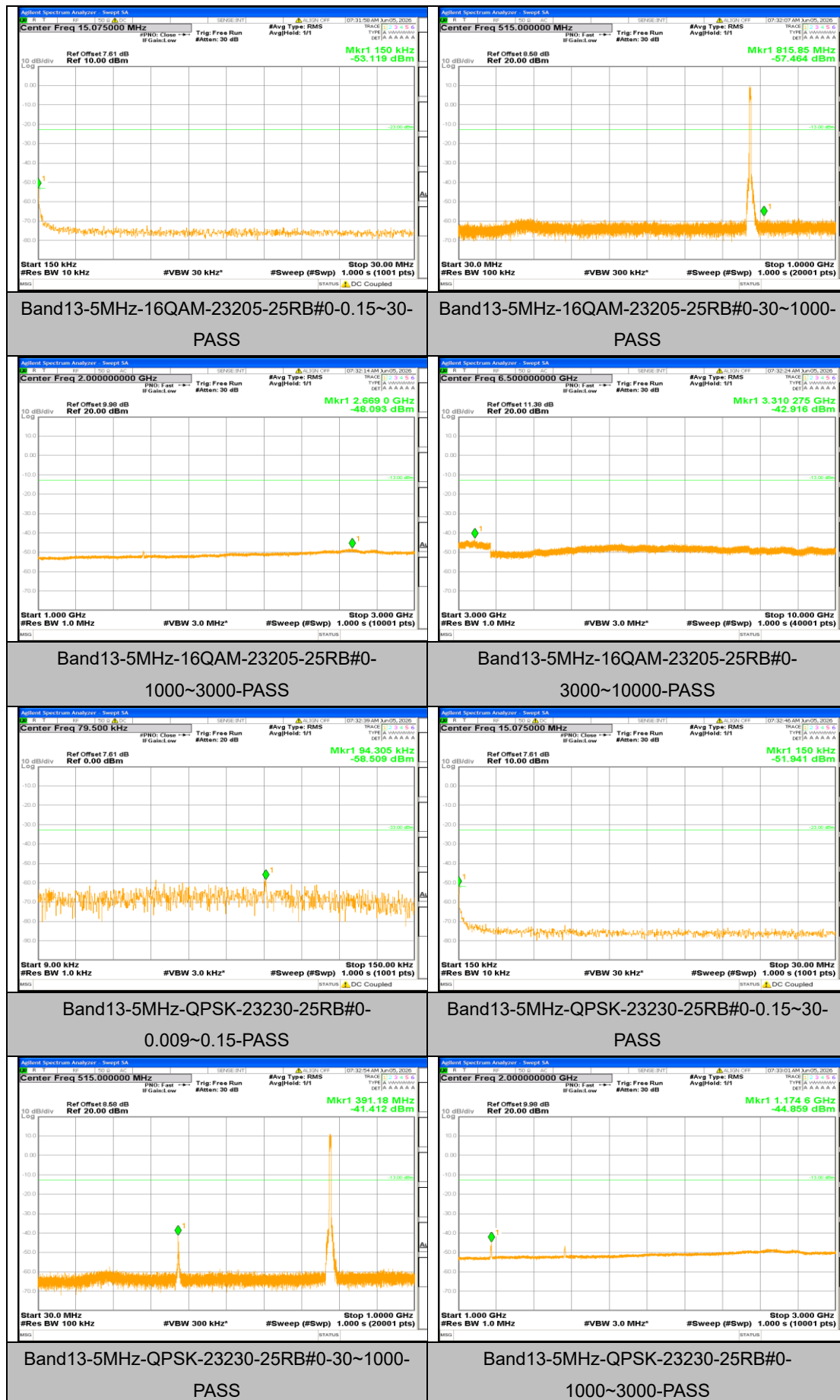
Test Result

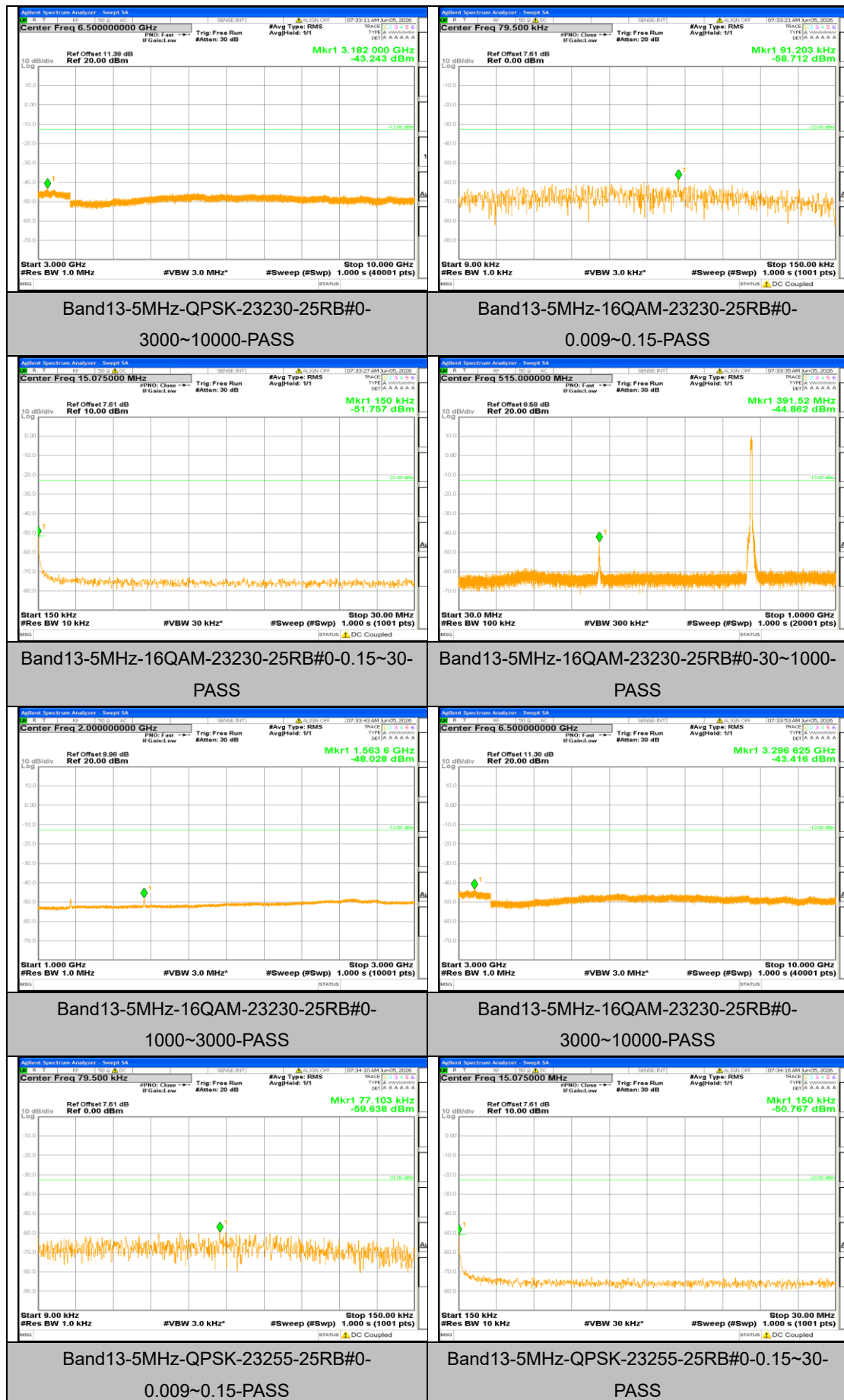
Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	0.009~0.15	-58.25	PASS
Band13	5MHz	QPSK	23205	25RB#0	0.15~30	-52.98	PASS
Band13	5MHz	QPSK	23205	25RB#0	30~1000	-57.92	PASS
Band13	5MHz	QPSK	23205	25RB#0	1000~3000	-48.32	PASS
Band13	5MHz	QPSK	23205	25RB#0	3000~10000	-43.39	PASS
Band13	5MHz	16QAM	23205	25RB#0	0.009~0.15	-59.63	PASS
Band13	5MHz	16QAM	23205	25RB#0	0.15~30	-53.12	PASS
Band13	5MHz	16QAM	23205	25RB#0	30~1000	-57.46	PASS
Band13	5MHz	16QAM	23205	25RB#0	1000~3000	-48.09	PASS
Band13	5MHz	16QAM	23205	25RB#0	3000~10000	-42.92	PASS
Band13	5MHz	QPSK	23230	25RB#0	0.009~0.15	-58.51	PASS
Band13	5MHz	QPSK	23230	25RB#0	0.15~30	-51.94	PASS
Band13	5MHz	QPSK	23230	25RB#0	30~1000	-41.41	PASS
Band13	5MHz	QPSK	23230	25RB#0	1000~3000	-44.86	PASS
Band13	5MHz	QPSK	23230	25RB#0	3000~10000	-43.24	PASS
Band13	5MHz	16QAM	23230	25RB#0	0.009~0.15	-58.71	PASS
Band13	5MHz	16QAM	23230	25RB#0	0.15~30	-51.76	PASS
Band13	5MHz	16QAM	23230	25RB#0	30~1000	-44.86	PASS
Band13	5MHz	16QAM	23230	25RB#0	1000~3000	-48.03	PASS
Band13	5MHz	16QAM	23230	25RB#0	3000~10000	-43.42	PASS
Band13	5MHz	QPSK	23255	25RB#0	0.009~0.15	-59.64	PASS
Band13	5MHz	QPSK	23255	25RB#0	0.15~30	-50.77	PASS
Band13	5MHz	QPSK	23255	25RB#0	30~1000	-36.39	PASS
Band13	5MHz	QPSK	23255	25RB#0	1000~3000	-42.36	PASS
Band13	5MHz	QPSK	23255	25RB#0	3000~10000	-43.50	PASS
Band13	5MHz	16QAM	23255	25RB#0	0.009~0.15	-58.89	PASS
Band13	5MHz	16QAM	23255	25RB#0	0.15~30	-50.19	PASS
Band13	5MHz	16QAM	23255	25RB#0	30~1000	-37.15	PASS
Band13	5MHz	16QAM	23255	25RB#0	1000~3000	-44.14	PASS
Band13	5MHz	16QAM	23255	25RB#0	3000~10000	-43.40	PASS
Band13	10MHz	QPSK	23230	50RB#0	0.009~0.15	-59.52	PASS
Band13	10MHz	QPSK	23230	50RB#0	0.15~30	-51.98	PASS
Band13	10MHz	QPSK	23230	50RB#0	30~1000	-45.42	PASS
Band13	10MHz	QPSK	23230	50RB#0	1000~3000	-48.10	PASS
Band13	10MHz	QPSK	23230	50RB#0	3000~10000	-43.71	PASS
Band13	10MHz	16QAM	23230	50RB#0	0.009~0.15	-60.45	PASS

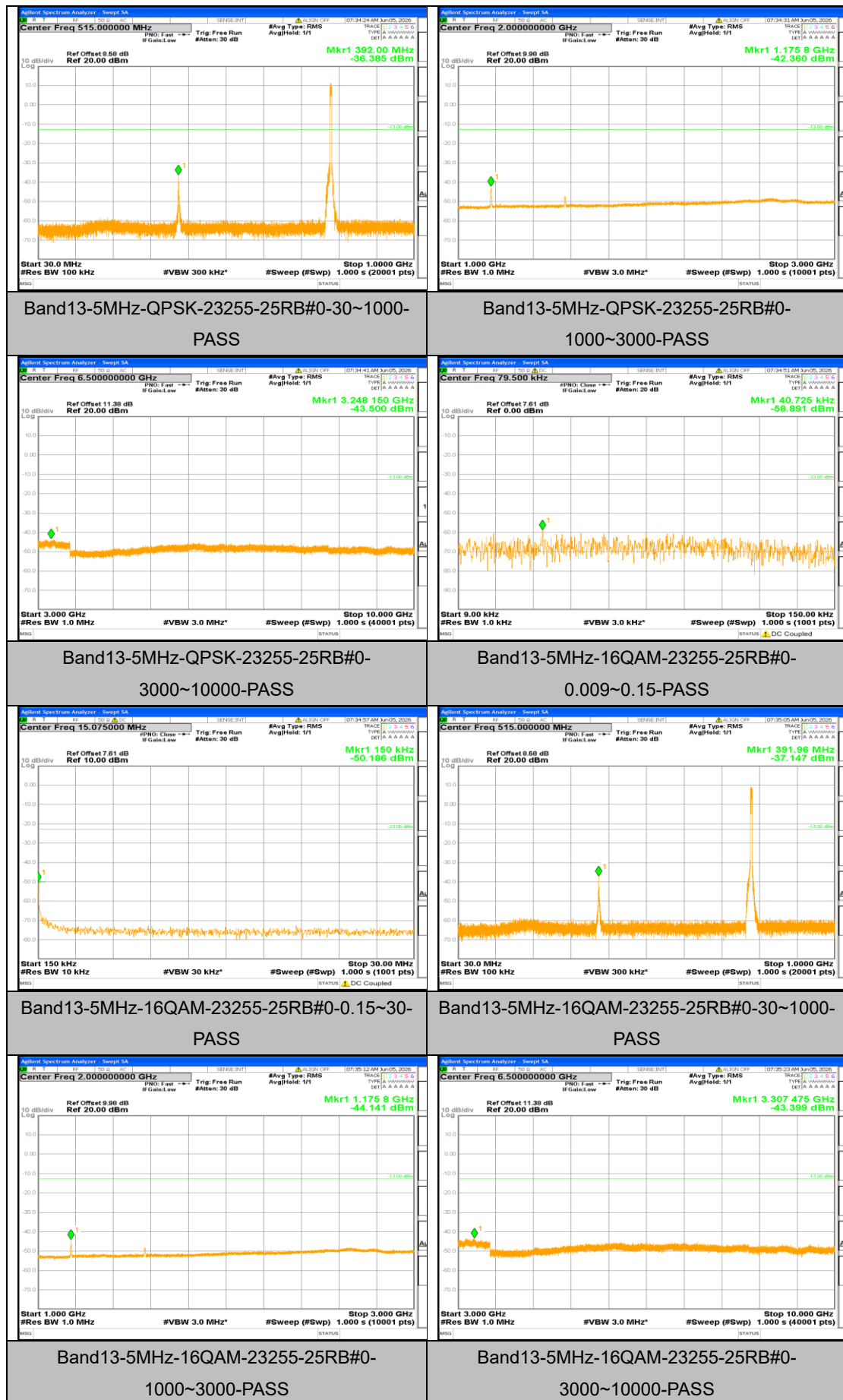
Band13	10MHz	16QAM	23230	50RB#0	0.15~30	-52.82	PASS
Band13	10MHz	16QAM	23230	50RB#0	30~1000	-49.49	PASS
Band13	10MHz	16QAM	23230	50RB#0	1000~3000	-48.29	PASS
Band13	10MHz	16QAM	23230	50RB#0	3000~10000	-43.72	PASS

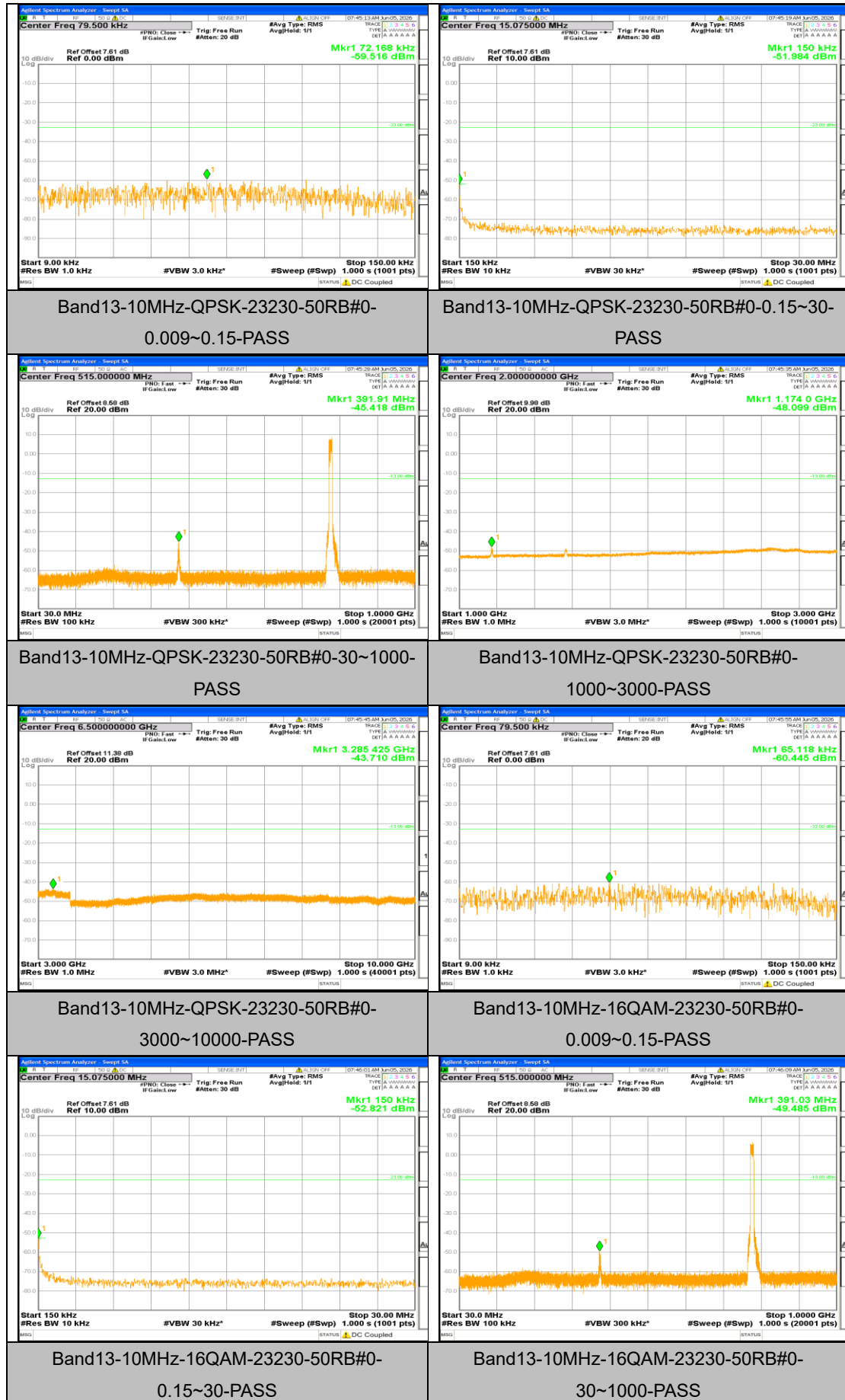
Test Graphs

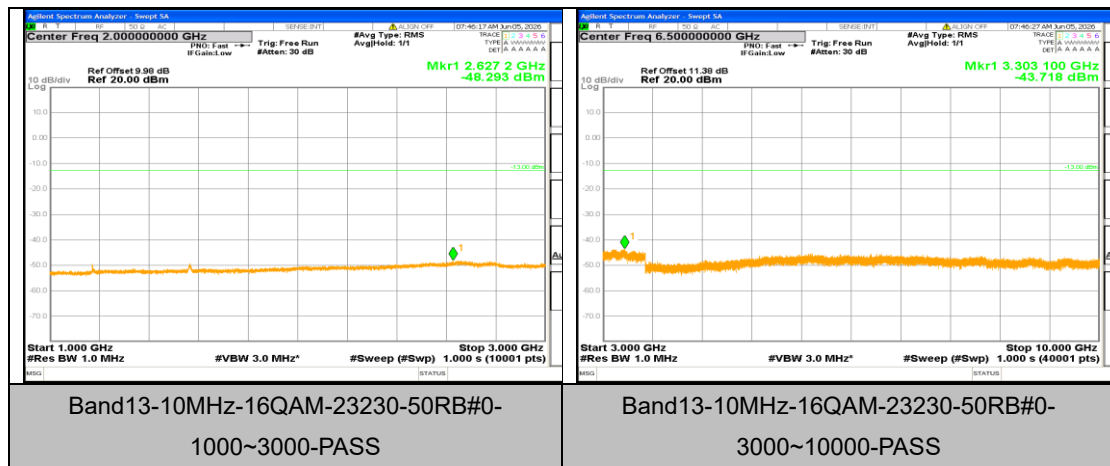












Appendix F: Frequency Stability

Test Result

Temperature										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	NV	-30	-2.56	-0.003284	±2.5	PASS
Band13	5MHz	QPSK	23205	25RB#0	NV	-20	-3.45	-0.004426	±2.5	PASS
Band13	5MHz	QPSK	23205	25RB#0	NV	-10	-4.39	-0.005632	±2.5	PASS
Band13	5MHz	QPSK	23205	25RB#0	NV	0	-2.79	-0.003579	±2.5	PASS
Band13	5MHz	QPSK	23205	25RB#0	NV	10	-7.10	-0.009108	±2.5	PASS
Band13	5MHz	QPSK	23205	25RB#0	NV	20	-9.88	-0.012675	±2.5	PASS
Band13	5MHz	QPSK	23205	25RB#0	NV	30	-2.37	-0.003040	±2.5	PASS
Band13	5MHz	QPSK	23205	25RB#0	NV	40	-3.02	-0.003874	±2.5	PASS
Band13	5MHz	QPSK	23205	25RB#0	NV	50	-4.26	-0.005465	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	-30	-3.25	-0.004169	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	-20	-3.25	-0.004169	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	-10	-2.93	-0.003759	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	0	-6.22	-0.007979	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	10	-7.05	-0.009044	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	20	-2.55	-0.003271	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	30	-2.83	-0.003631	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	40	-3.33	-0.004272	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	50	-1.43	-0.001835	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	-30	-6.25	-0.007992	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	-20	-3.78	-0.004834	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	-10	-7.11	-0.009092	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	0	-5.36	-0.006854	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	10	-3.83	-0.004898	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	20	1.17	0.001496	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	30	-5.71	-0.007302	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	40	3.72	0.004757	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	50	-4.69	-0.005997	±2.5	PASS
Band13	5MHz	16QAM	23230	25RB#0	NV	-30	-3.03	-0.003875	±2.5	PASS
Band13	5MHz	16QAM	23230	25RB#0	NV	-20	-5.08	-0.006496	±2.5	PASS
Band13	5MHz	16QAM	23230	25RB#0	NV	-10	-4.41	-0.005639	±2.5	PASS
Band13	5MHz	16QAM	23230	25RB#0	NV	0	-5.38	-0.006880	±2.5	PASS
Band13	5MHz	16QAM	23230	25RB#0	NV	10	-4.82	-0.006164	±2.5	PASS
Band13	5MHz	16QAM	23230	25RB#0	NV	20	-3.95	-0.005051	±2.5	PASS
Band13	5MHz	16QAM	23230	25RB#0	NV	30	-3.63	-0.004642	±2.5	PASS
Band13	5MHz	16QAM	23230	25RB#0	NV	40	-5.98	-0.007647	±2.5	PASS

Band13	5MHz	16QAM	23230	25RB#0	NV	50	-5.58	-0.007136	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	-30	-7.77	-0.009904	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	-20	-8.00	-0.010198	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	-10	-3.03	-0.003862	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	0	-5.09	-0.006488	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	10	-4.51	-0.005749	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	20	-3.79	-0.004831	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	30	-5.45	-0.006947	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	40	-2.39	-0.003047	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	50	-2.07	-0.002639	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	-30	-3.29	-0.004194	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	-20	-1.87	-0.002384	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	-10	-2.37	-0.003021	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	0	-2.26	-0.002881	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	10	-7.45	-0.009496	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	20	-6.92	-0.008821	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	30	-3.59	-0.004576	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	40	-3.03	-0.003862	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	50	-3.85	-0.004908	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	-30	-3.16	-0.004041	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	-20	-4.29	-0.005486	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	-10	-5.06	-0.006471	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	0	-4.16	-0.005320	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	10	-4.03	-0.005153	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	20	-3.53	-0.004514	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	30	-4.19	-0.005358	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	40	-3.96	-0.005064	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	50	-3.28	-0.004194	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	-30	-3.50	-0.004476	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	-20	-5.28	-0.006752	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	-10	-5.18	-0.006624	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	0	-8.20	-0.010486	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	10	-5.32	-0.006803	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	20	-2.79	-0.003568	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	30	-6.04	-0.007724	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	40	-3.75	-0.004795	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	50	-4.46	-0.005703	±2.5	PASS

Appendix G: Modulation Characteristics

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Verdict
Band13	5MHz	QPSK	23205	25RB#0	PASS
Band13	5MHz	16QAM	23205	25RB#0	PASS
Band13	5MHz	QPSK	23230	25RB#0	PASS
Band13	5MHz	16QAM	23230	25RB#0	PASS
Band13	5MHz	QPSK	23255	25RB#0	PASS
Band13	5MHz	16QAM	23255	25RB#0	PASS
Band13	10MHz	QPSK	23230	50RB#0	PASS
Band13	10MHz	16QAM	23230	50RB#0	PASS

Test Graphs

