

Appendix for LTE Band 5

Product Name: 5G Window CPE

Model No: TITAN 5100

Appendix A: Average Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	22.24	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	21.06	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	22.29	PASS
Band5	1.4MHz	16QAM	20407	1RB#2	21.32	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	22.23	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	21.13	PASS
Band5	1.4MHz	QPSK	20407	3RB#0	22.24	PASS
Band5	1.4MHz	16QAM	20407	3RB#0	21.28	PASS
Band5	1.4MHz	QPSK	20407	3RB#1	22.30	PASS
Band5	1.4MHz	16QAM	20407	3RB#1	21.21	PASS
Band5	1.4MHz	QPSK	20407	3RB#3	22.27	PASS
Band5	1.4MHz	16QAM	20407	3RB#3	21.21	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	21.22	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	20.24	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	21.76	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	20.77	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	21.73	PASS
Band5	1.4MHz	16QAM	20525	1RB#2	20.86	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	21.74	PASS
Band5	1.4MHz	16QAM	20525	1RB#5	20.56	PASS
Band5	1.4MHz	QPSK	20525	3RB#0	21.75	PASS
Band5	1.4MHz	16QAM	20525	3RB#0	20.75	PASS
Band5	1.4MHz	QPSK	20525	3RB#1	21.75	PASS
Band5	1.4MHz	16QAM	20525	3RB#1	20.70	PASS
Band5	1.4MHz	QPSK	20525	3RB#3	21.74	PASS
Band5	1.4MHz	16QAM	20525	3RB#3	20.75	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	20.70	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	19.66	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	21.76	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	20.70	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	21.78	PASS
Band5	1.4MHz	16QAM	20643	1RB#2	20.85	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	21.68	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	20.79	PASS

Band5	1.4MHz	QPSK	20643	3RB#0	21.73	PASS
Band5	1.4MHz	16QAM	20643	3RB#0	20.65	PASS
Band5	1.4MHz	QPSK	20643	3RB#1	21.74	PASS
Band5	1.4MHz	16QAM	20643	3RB#1	20.76	PASS
Band5	1.4MHz	QPSK	20643	3RB#3	21.82	PASS
Band5	1.4MHz	16QAM	20643	3RB#3	20.81	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	20.75	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	19.76	PASS
Band5	3MHz	QPSK	20415	1RB#0	22.16	PASS
Band5	3MHz	16QAM	20415	1RB#0	21.15	PASS
Band5	3MHz	QPSK	20415	1RB#8	22.25	PASS
Band5	3MHz	16QAM	20415	1RB#8	21.22	PASS
Band5	3MHz	QPSK	20415	1RB#14	22.14	PASS
Band5	3MHz	16QAM	20415	1RB#14	21.05	PASS
Band5	3MHz	QPSK	20415	8RB#0	21.22	PASS
Band5	3MHz	16QAM	20415	8RB#0	20.12	PASS
Band5	3MHz	QPSK	20415	8RB#4	21.21	PASS
Band5	3MHz	16QAM	20415	8RB#4	20.17	PASS
Band5	3MHz	QPSK	20415	8RB#7	21.18	PASS
Band5	3MHz	16QAM	20415	8RB#7	20.19	PASS
Band5	3MHz	QPSK	20415	15RB#0	21.23	PASS
Band5	3MHz	16QAM	20415	15RB#0	20.18	PASS
Band5	3MHz	QPSK	20525	1RB#0	21.72	PASS
Band5	3MHz	16QAM	20525	1RB#0	20.78	PASS
Band5	3MHz	QPSK	20525	1RB#8	21.79	PASS
Band5	3MHz	16QAM	20525	1RB#8	20.73	PASS
Band5	3MHz	QPSK	20525	1RB#14	21.73	PASS
Band5	3MHz	16QAM	20525	1RB#14	20.65	PASS
Band5	3MHz	QPSK	20525	8RB#0	20.71	PASS
Band5	3MHz	16QAM	20525	8RB#0	19.74	PASS
Band5	3MHz	QPSK	20525	8RB#4	20.65	PASS
Band5	3MHz	16QAM	20525	8RB#4	19.67	PASS
Band5	3MHz	QPSK	20525	8RB#7	20.74	PASS
Band5	3MHz	16QAM	20525	8RB#7	19.82	PASS
Band5	3MHz	QPSK	20525	15RB#0	20.77	PASS
Band5	3MHz	16QAM	20525	15RB#0	19.78	PASS
Band5	3MHz	QPSK	20635	1RB#0	21.66	PASS
Band5	3MHz	16QAM	20635	1RB#0	20.80	PASS
Band5	3MHz	QPSK	20635	1RB#8	21.83	PASS
Band5	3MHz	16QAM	20635	1RB#8	20.79	PASS
Band5	3MHz	QPSK	20635	1RB#14	21.73	PASS

Band5	3MHz	16QAM	20635	1RB#14	20.82	PASS
Band5	3MHz	QPSK	20635	8RB#0	20.72	PASS
Band5	3MHz	16QAM	20635	8RB#0	19.79	PASS
Band5	3MHz	QPSK	20635	8RB#4	20.74	PASS
Band5	3MHz	16QAM	20635	8RB#4	19.80	PASS
Band5	3MHz	QPSK	20635	8RB#7	20.78	PASS
Band5	3MHz	16QAM	20635	8RB#7	19.90	PASS
Band5	3MHz	QPSK	20635	15RB#0	20.69	PASS
Band5	3MHz	16QAM	20635	15RB#0	19.71	PASS
Band5	5MHz	QPSK	20425	1RB#0	22.21	PASS
Band5	5MHz	16QAM	20425	1RB#0	21.09	PASS
Band5	5MHz	QPSK	20425	1RB#12	22.18	PASS
Band5	5MHz	16QAM	20425	1RB#12	21.10	PASS
Band5	5MHz	QPSK	20425	1RB#24	22.06	PASS
Band5	5MHz	16QAM	20425	1RB#24	20.97	PASS
Band5	5MHz	QPSK	20425	12RB#0	21.13	PASS
Band5	5MHz	16QAM	20425	12RB#0	20.19	PASS
Band5	5MHz	QPSK	20425	12RB#6	21.12	PASS
Band5	5MHz	16QAM	20425	12RB#6	20.18	PASS
Band5	5MHz	QPSK	20425	12RB#13	21.14	PASS
Band5	5MHz	16QAM	20425	12RB#13	20.21	PASS
Band5	5MHz	QPSK	20425	25RB#0	21.16	PASS
Band5	5MHz	16QAM	20425	25RB#0	20.13	PASS
Band5	5MHz	QPSK	20525	1RB#0	21.80	PASS
Band5	5MHz	16QAM	20525	1RB#0	20.94	PASS
Band5	5MHz	QPSK	20525	1RB#12	21.80	PASS
Band5	5MHz	16QAM	20525	1RB#12	20.82	PASS
Band5	5MHz	QPSK	20525	1RB#24	21.80	PASS
Band5	5MHz	16QAM	20525	1RB#24	20.82	PASS
Band5	5MHz	QPSK	20525	12RB#0	20.70	PASS
Band5	5MHz	16QAM	20525	12RB#0	19.68	PASS
Band5	5MHz	QPSK	20525	12RB#6	20.70	PASS
Band5	5MHz	16QAM	20525	12RB#6	19.70	PASS
Band5	5MHz	QPSK	20525	12RB#13	20.73	PASS
Band5	5MHz	16QAM	20525	12RB#13	19.74	PASS
Band5	5MHz	QPSK	20525	25RB#0	20.79	PASS
Band5	5MHz	16QAM	20525	25RB#0	19.74	PASS
Band5	5MHz	QPSK	20625	1RB#0	21.84	PASS
Band5	5MHz	16QAM	20625	1RB#0	20.83	PASS
Band5	5MHz	QPSK	20625	1RB#12	21.82	PASS
Band5	5MHz	16QAM	20625	1RB#12	20.97	PASS

Band5	5MHz	QPSK	20625	1RB#24	21.71	PASS
Band5	5MHz	16QAM	20625	1RB#24	20.85	PASS
Band5	5MHz	QPSK	20625	12RB#0	20.74	PASS
Band5	5MHz	16QAM	20625	12RB#0	19.75	PASS
Band5	5MHz	QPSK	20625	12RB#6	20.73	PASS
Band5	5MHz	16QAM	20625	12RB#6	19.76	PASS
Band5	5MHz	QPSK	20625	12RB#13	20.73	PASS
Band5	5MHz	16QAM	20625	12RB#13	19.83	PASS
Band5	5MHz	QPSK	20625	25RB#0	20.77	PASS
Band5	5MHz	16QAM	20625	25RB#0	19.75	PASS
Band5	10MHz	QPSK	20450	1RB#0	22.27	PASS
Band5	10MHz	16QAM	20450	1RB#0	21.13	PASS
Band5	10MHz	QPSK	20450	1RB#24	22.01	PASS
Band5	10MHz	16QAM	20450	1RB#24	21.12	PASS
Band5	10MHz	QPSK	20450	1RB#49	21.84	PASS
Band5	10MHz	16QAM	20450	1RB#49	20.74	PASS
Band5	10MHz	QPSK	20450	25RB#0	21.07	PASS
Band5	10MHz	16QAM	20450	25RB#0	20.03	PASS
Band5	10MHz	QPSK	20450	25RB#12	21.06	PASS
Band5	10MHz	16QAM	20450	25RB#12	20.11	PASS
Band5	10MHz	QPSK	20450	25RB#25	20.99	PASS
Band5	10MHz	16QAM	20450	25RB#25	19.93	PASS
Band5	10MHz	QPSK	20450	50RB#0	21.05	PASS
Band5	10MHz	16QAM	20450	50RB#0	20.11	PASS
Band5	10MHz	QPSK	20525	1RB#0	21.91	PASS
Band5	10MHz	16QAM	20525	1RB#0	20.99	PASS
Band5	10MHz	QPSK	20525	1RB#24	21.82	PASS
Band5	10MHz	16QAM	20525	1RB#24	20.76	PASS
Band5	10MHz	QPSK	20525	1RB#49	21.75	PASS
Band5	10MHz	16QAM	20525	1RB#49	20.71	PASS
Band5	10MHz	QPSK	20525	25RB#0	20.79	PASS
Band5	10MHz	16QAM	20525	25RB#0	19.77	PASS
Band5	10MHz	QPSK	20525	25RB#12	20.83	PASS
Band5	10MHz	16QAM	20525	25RB#12	19.82	PASS
Band5	10MHz	QPSK	20525	25RB#25	20.81	PASS
Band5	10MHz	16QAM	20525	25RB#25	19.83	PASS
Band5	10MHz	QPSK	20525	50RB#0	20.84	PASS
Band5	10MHz	16QAM	20525	50RB#0	19.82	PASS
Band5	10MHz	QPSK	20600	1RB#0	21.80	PASS
Band5	10MHz	16QAM	20600	1RB#0	20.87	PASS
Band5	10MHz	QPSK	20600	1RB#24	21.87	PASS

Band5	10MHz	16QAM	20600	1RB#24	20.77	PASS
Band5	10MHz	QPSK	20600	1RB#49	21.69	PASS
Band5	10MHz	16QAM	20600	1RB#49	20.62	PASS
Band5	10MHz	QPSK	20600	25RB#0	20.81	PASS
Band5	10MHz	16QAM	20600	25RB#0	19.82	PASS
Band5	10MHz	QPSK	20600	25RB#12	20.82	PASS
Band5	10MHz	16QAM	20600	25RB#12	19.85	PASS
Band5	10MHz	QPSK	20600	25RB#25	20.81	PASS
Band5	10MHz	16QAM	20600	25RB#25	19.77	PASS
Band5	10MHz	QPSK	20600	50RB#0	20.83	PASS
Band5	10MHz	16QAM	20600	50RB#0	19.87	PASS

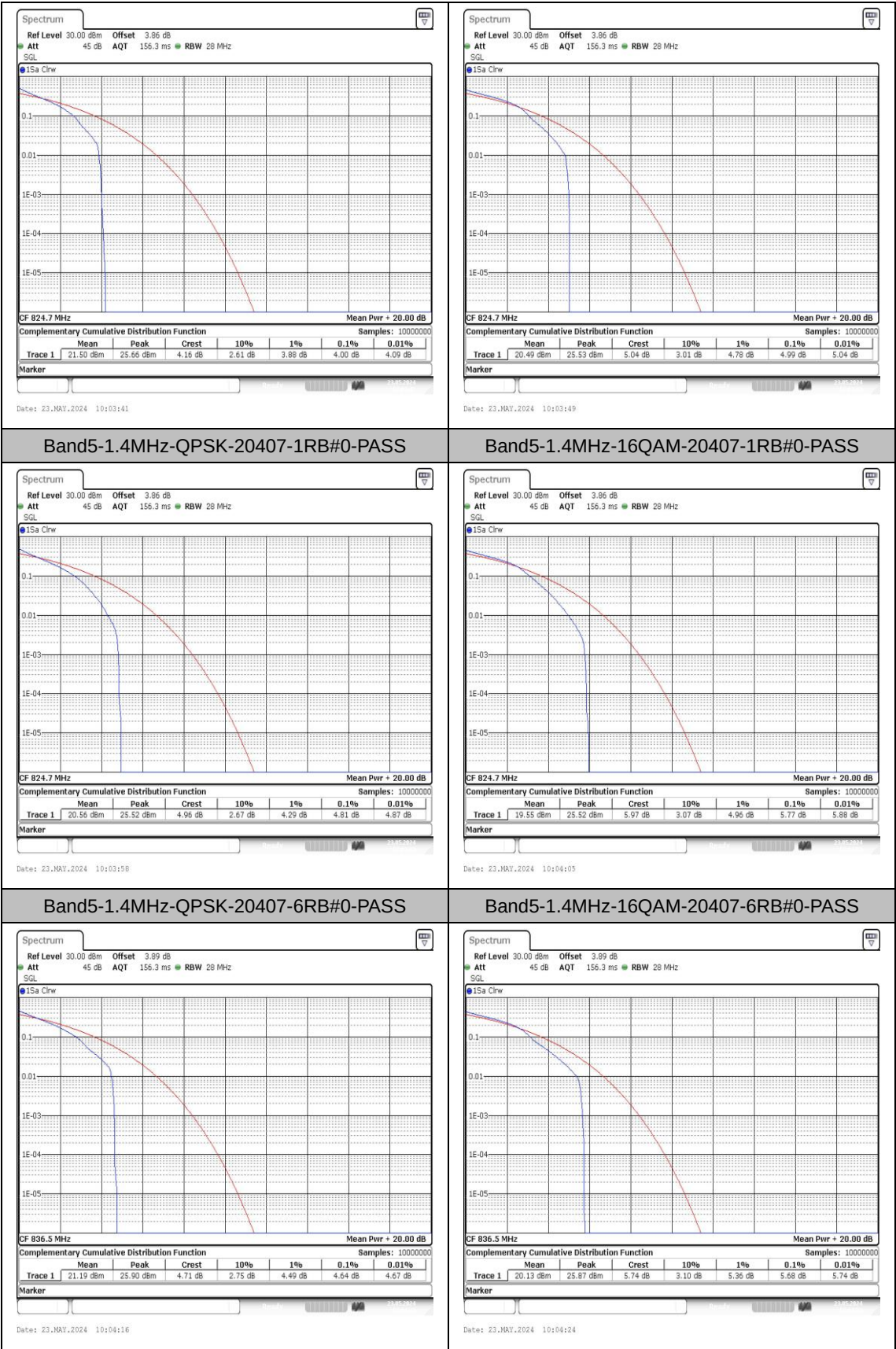
Appendix B: Peak-to-Average Ratio(CCDF)

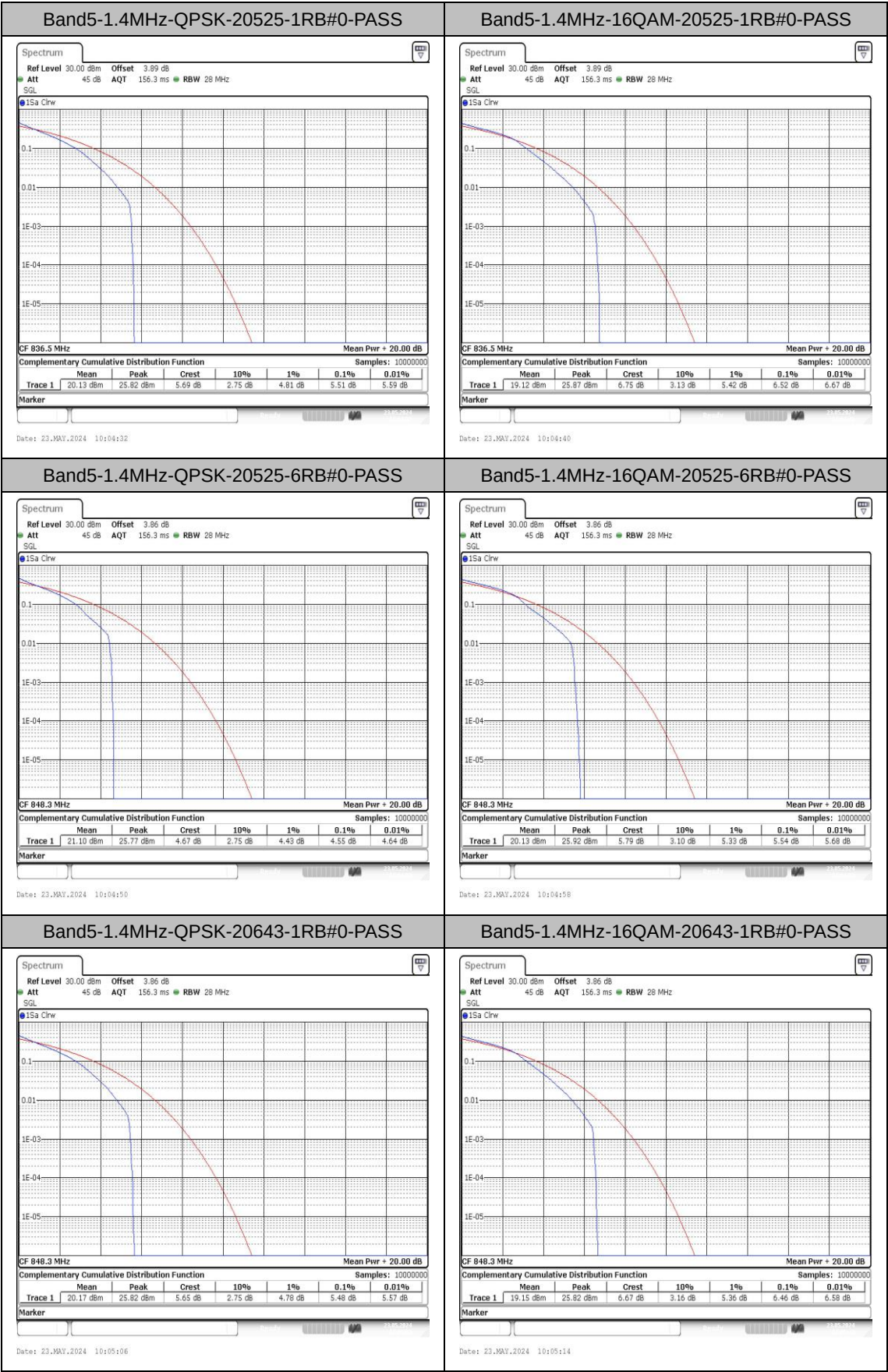
Test Result

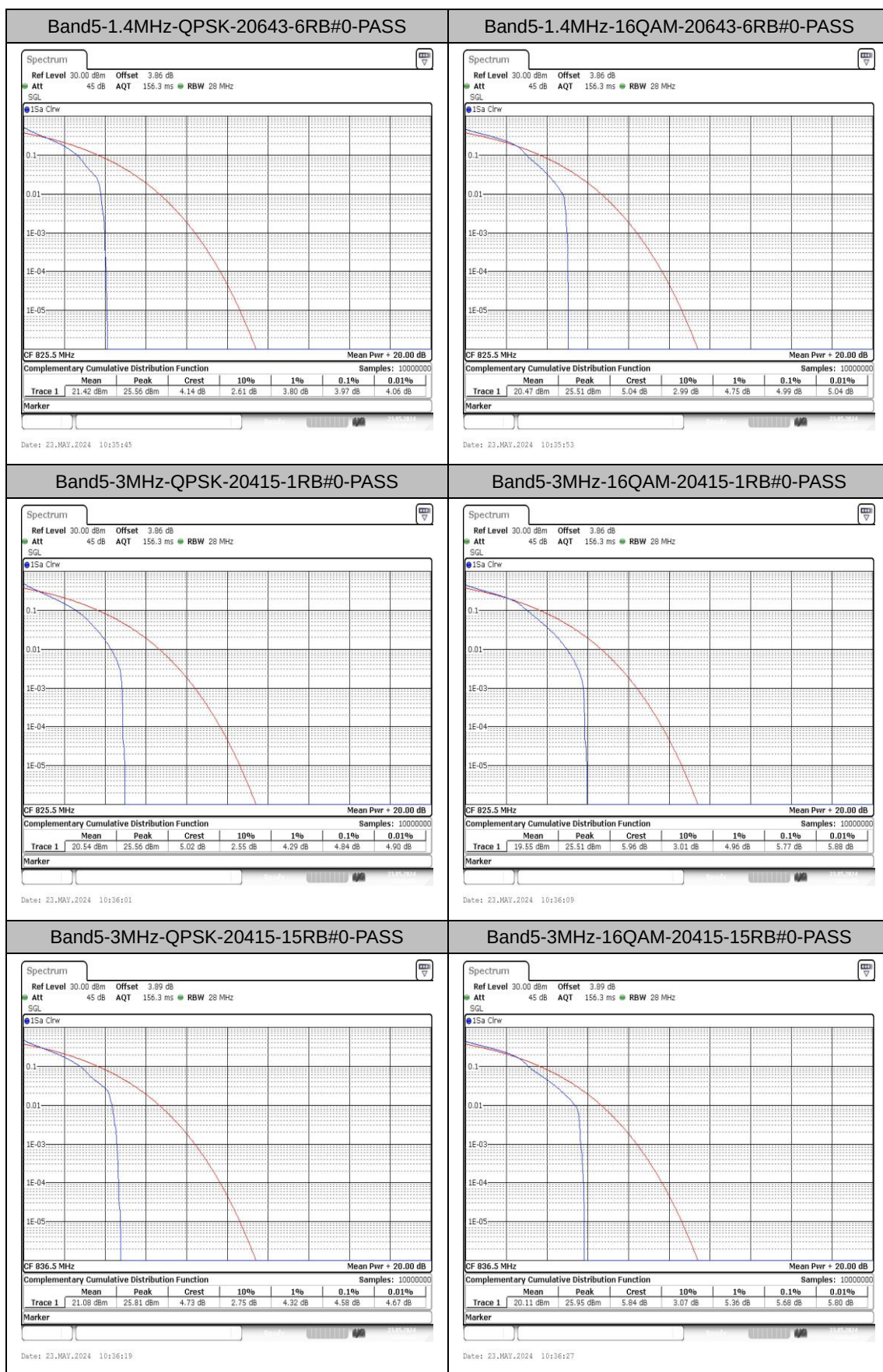
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	4.00	13	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	4.99	13	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	4.81	13	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	5.77	13	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	4.64	13	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	5.68	13	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	5.51	13	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	6.52	13	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	4.55	13	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	5.54	13	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	5.48	13	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	6.46	13	PASS
Band5	3MHz	QPSK	20415	1RB#0	3.97	13	PASS
Band5	3MHz	16QAM	20415	1RB#0	4.99	13	PASS
Band5	3MHz	QPSK	20415	15RB#0	4.84	13	PASS
Band5	3MHz	16QAM	20415	15RB#0	5.77	13	PASS
Band5	3MHz	QPSK	20525	1RB#0	4.58	13	PASS
Band5	3MHz	16QAM	20525	1RB#0	5.68	13	PASS
Band5	3MHz	QPSK	20525	15RB#0	5.54	13	PASS
Band5	3MHz	16QAM	20525	15RB#0	6.52	13	PASS
Band5	3MHz	QPSK	20635	1RB#0	4.41	13	PASS
Band5	3MHz	16QAM	20635	1RB#0	5.51	13	PASS
Band5	3MHz	QPSK	20635	15RB#0	5.51	13	PASS
Band5	3MHz	16QAM	20635	15RB#0	6.46	13	PASS
Band5	5MHz	QPSK	20425	1RB#0	3.97	13	PASS
Band5	5MHz	16QAM	20425	1RB#0	5.01	13	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.84	13	PASS
Band5	5MHz	16QAM	20425	25RB#0	5.83	13	PASS
Band5	5MHz	QPSK	20525	1RB#0	4.61	13	PASS
Band5	5MHz	16QAM	20525	1RB#0	5.57	13	PASS
Band5	5MHz	QPSK	20525	25RB#0	5.57	13	PASS
Band5	5MHz	16QAM	20525	25RB#0	6.49	13	PASS
Band5	5MHz	QPSK	20625	1RB#0	4.03	13	PASS
Band5	5MHz	16QAM	20625	1RB#0	5.07	13	PASS
Band5	5MHz	QPSK	20625	25RB#0	5.45	13	PASS

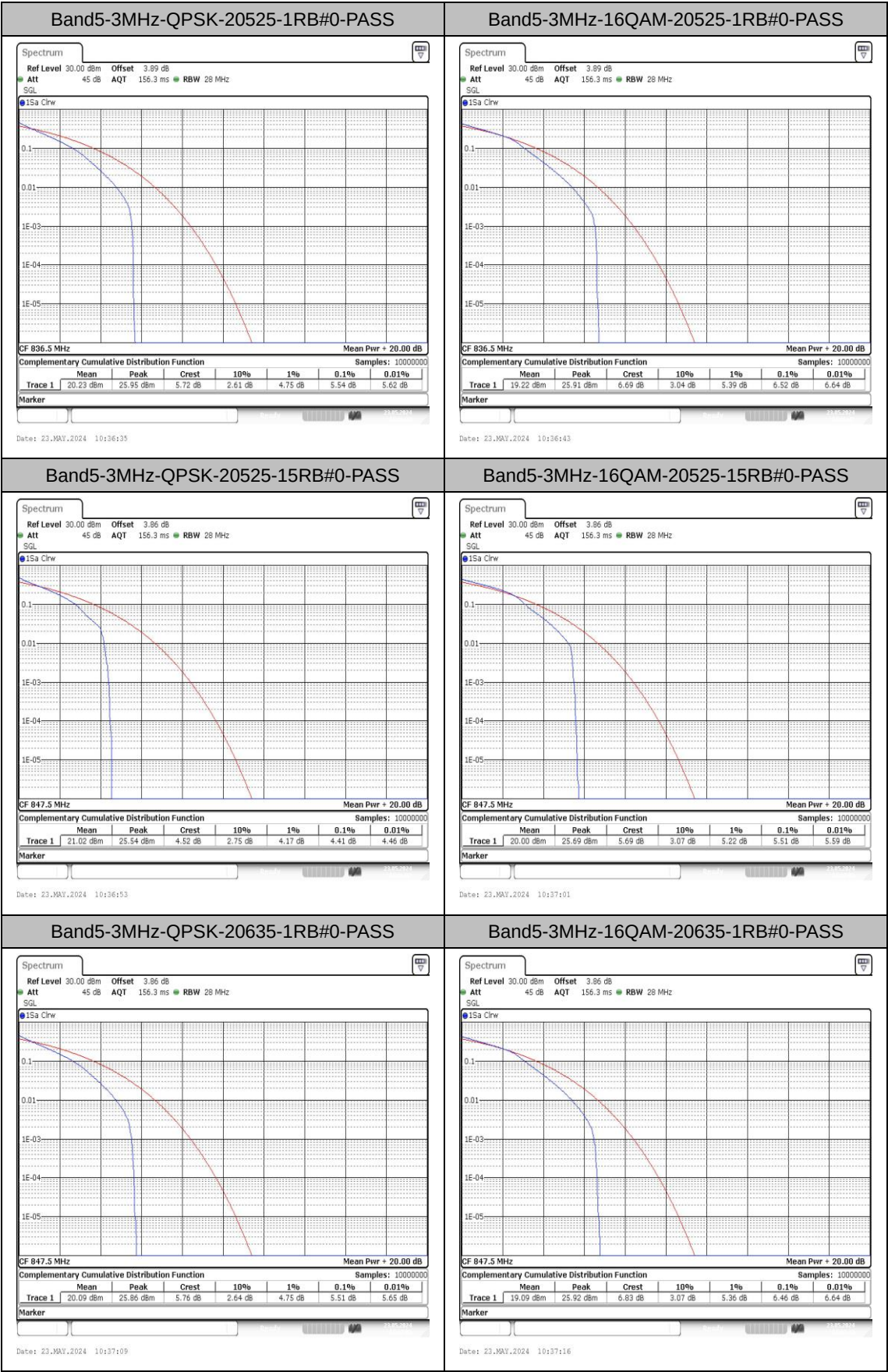
Band5	5MHz	16QAM	20625	25RB#0	6.38	13	PASS
Band5	10MHz	QPSK	20450	1RB#0	3.94	13	PASS
Band5	10MHz	16QAM	20450	1RB#0	4.93	13	PASS
Band5	10MHz	QPSK	20450	50RB#0	5.07	13	PASS
Band5	10MHz	16QAM	20450	50RB#0	5.97	13	PASS
Band5	10MHz	QPSK	20525	1RB#0	4.38	13	PASS
Band5	10MHz	16QAM	20525	1RB#0	5.42	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	5.51	13	PASS
Band5	10MHz	16QAM	20525	50RB#0	6.41	13	PASS
Band5	10MHz	QPSK	20600	1RB#0	4.35	13	PASS
Band5	10MHz	16QAM	20600	1RB#0	5.33	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	5.30	13	PASS
Band5	10MHz	16QAM	20600	50RB#0	6.17	13	PASS

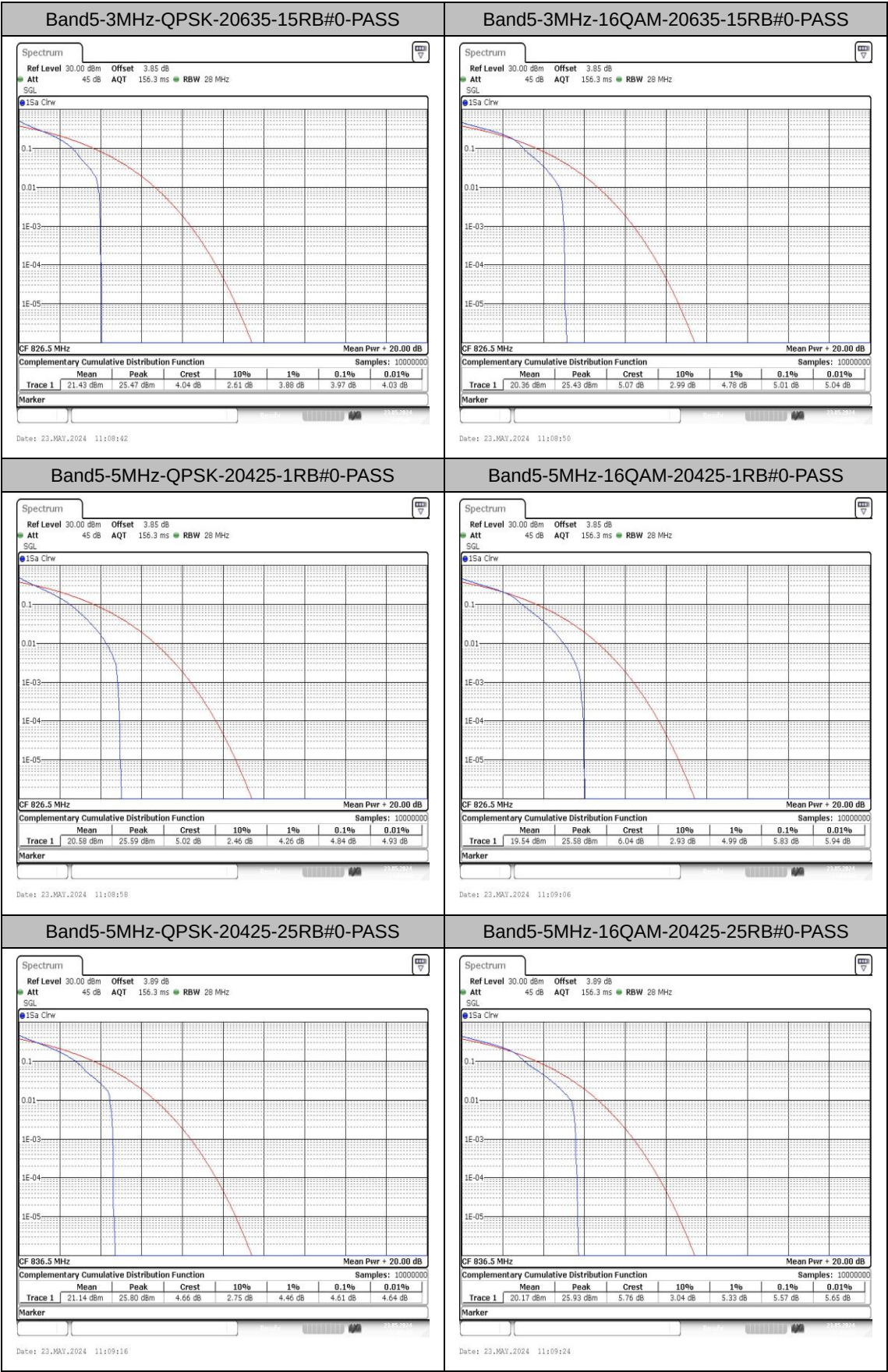
Test Graphs

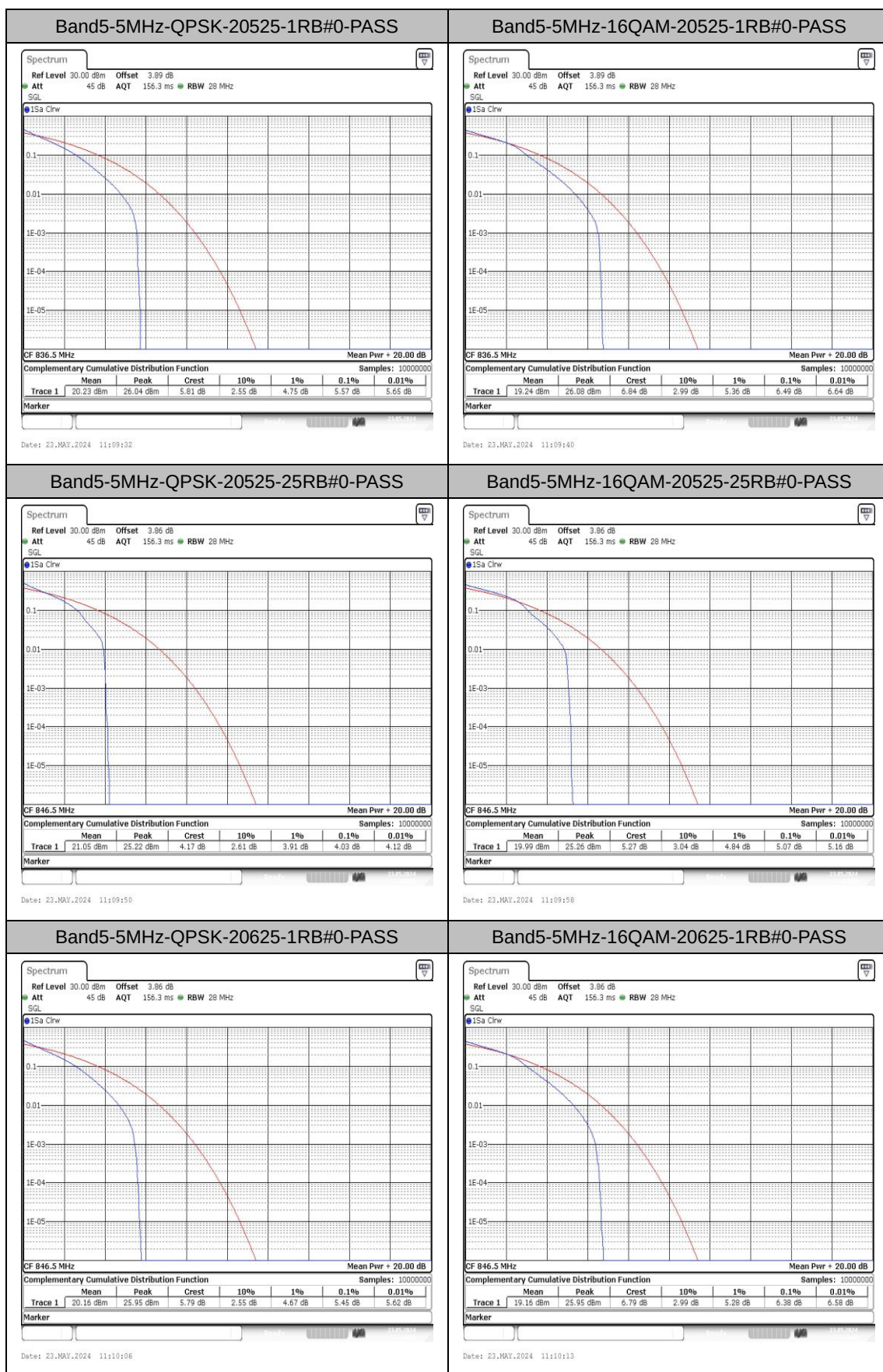


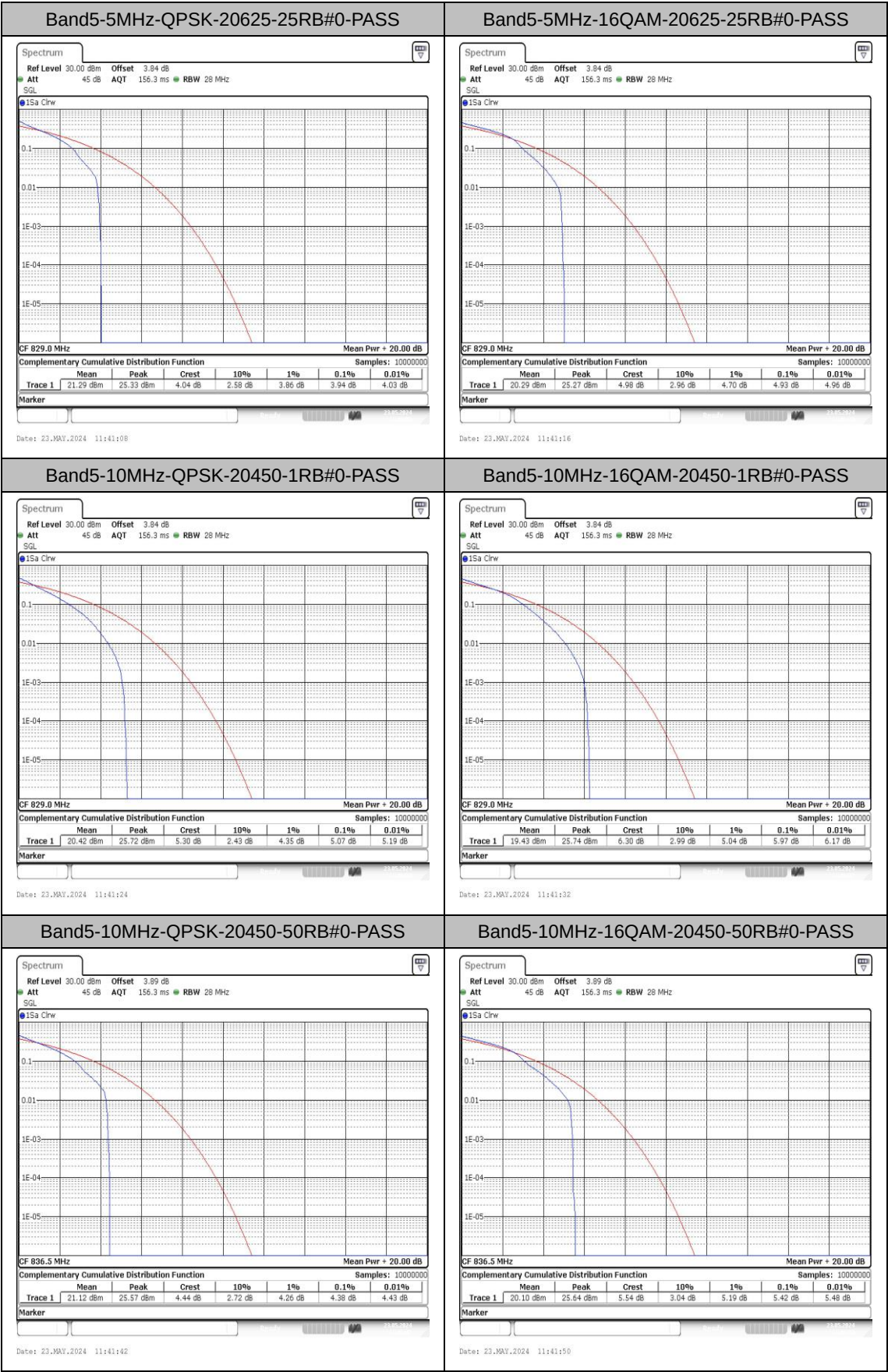


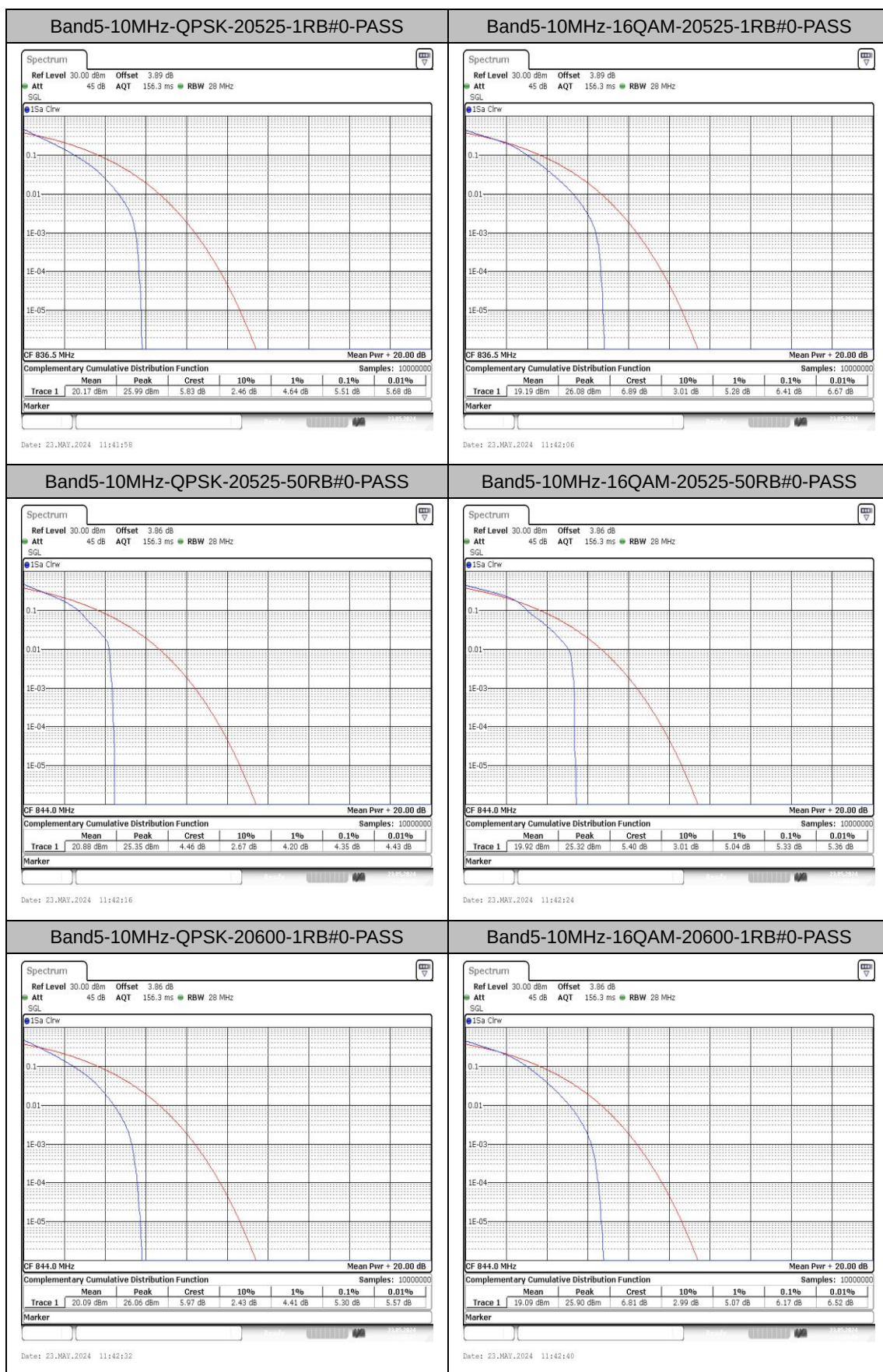












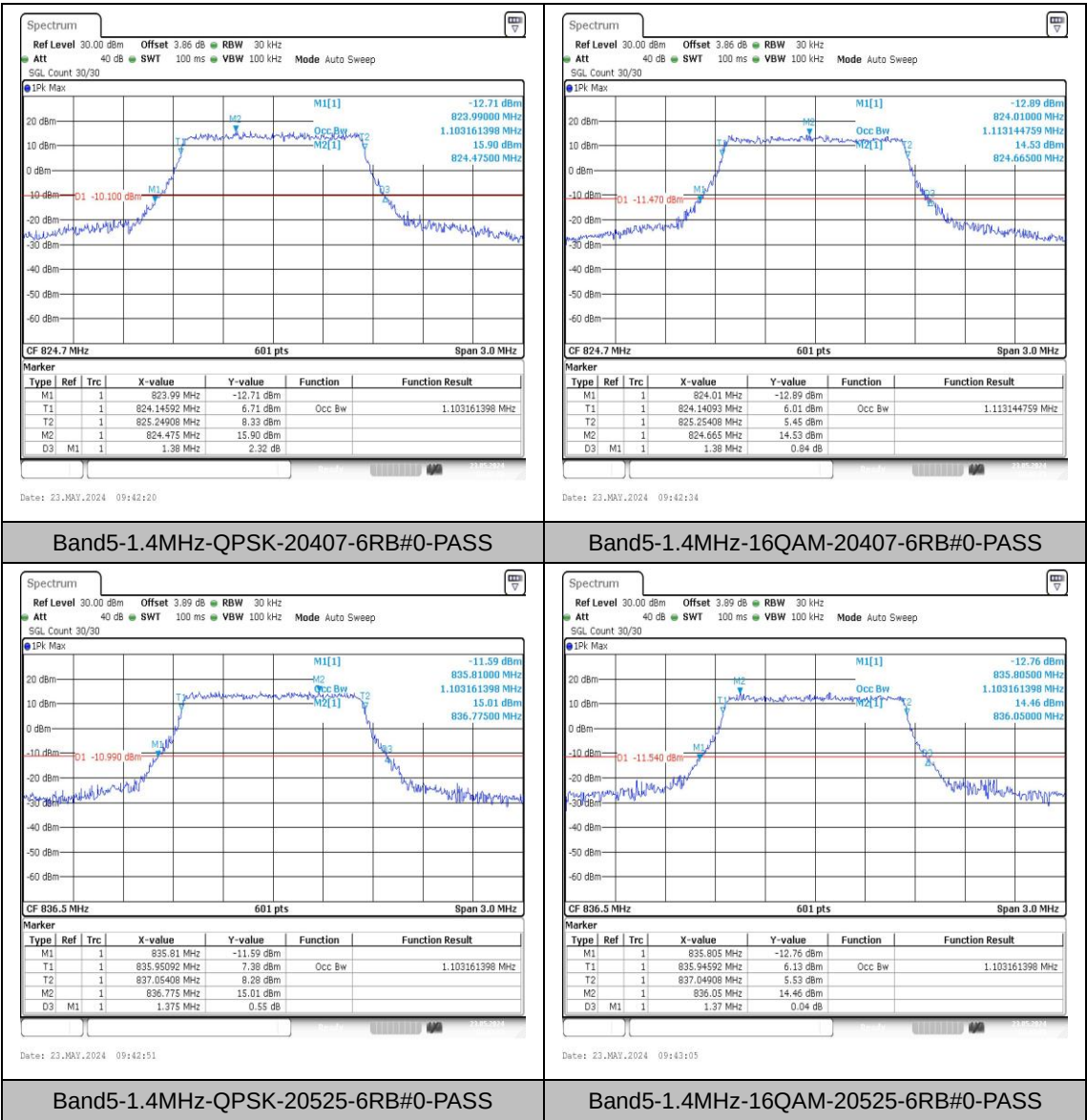
Band5-10MHz-QPSK-20600-50RB#0-PASS	Band5-10MHz-16QAM-20600-50RB#0-PASS
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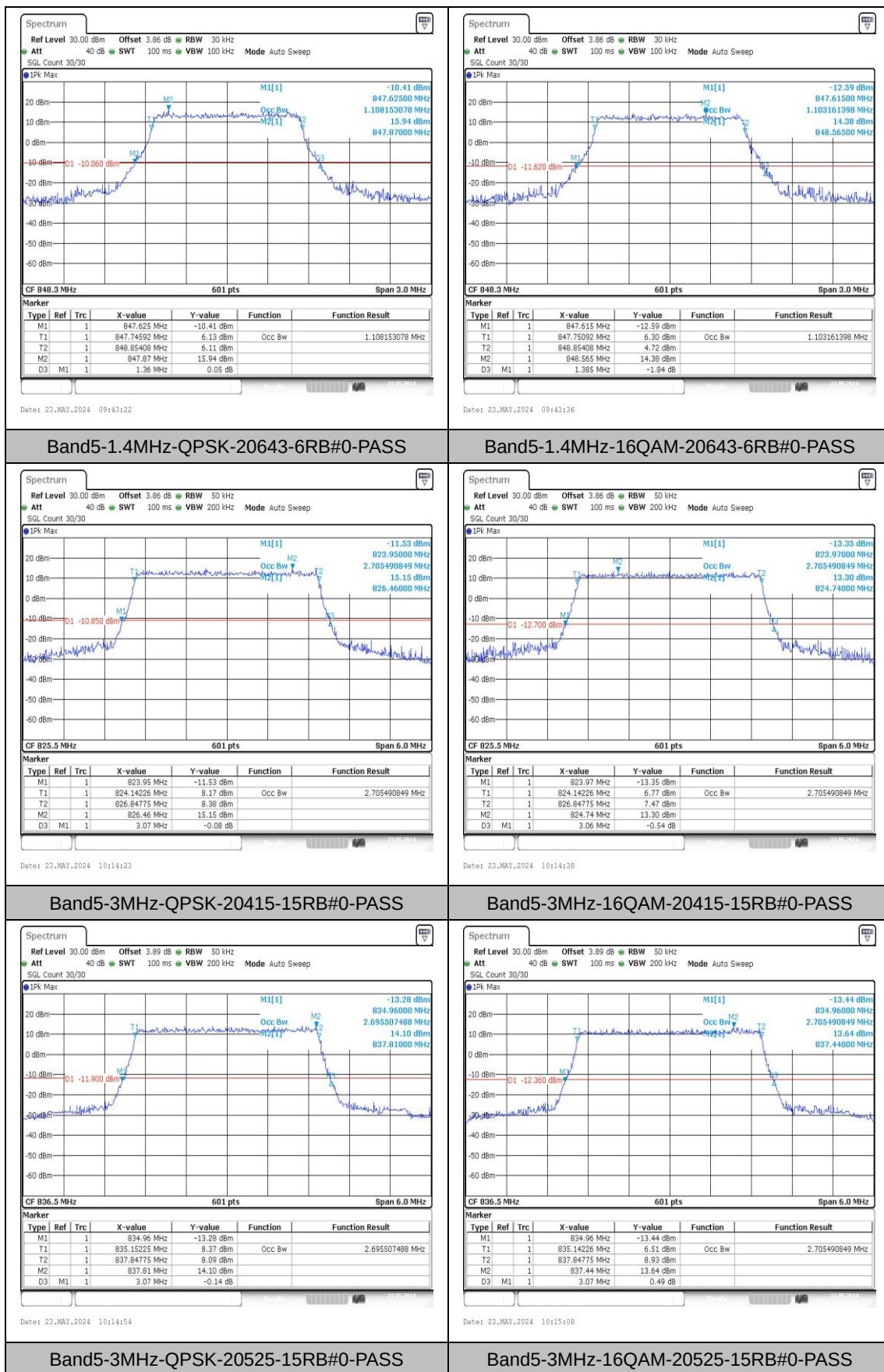
Appendix C: 26dB Bandwidth and Occupied Bandwidth

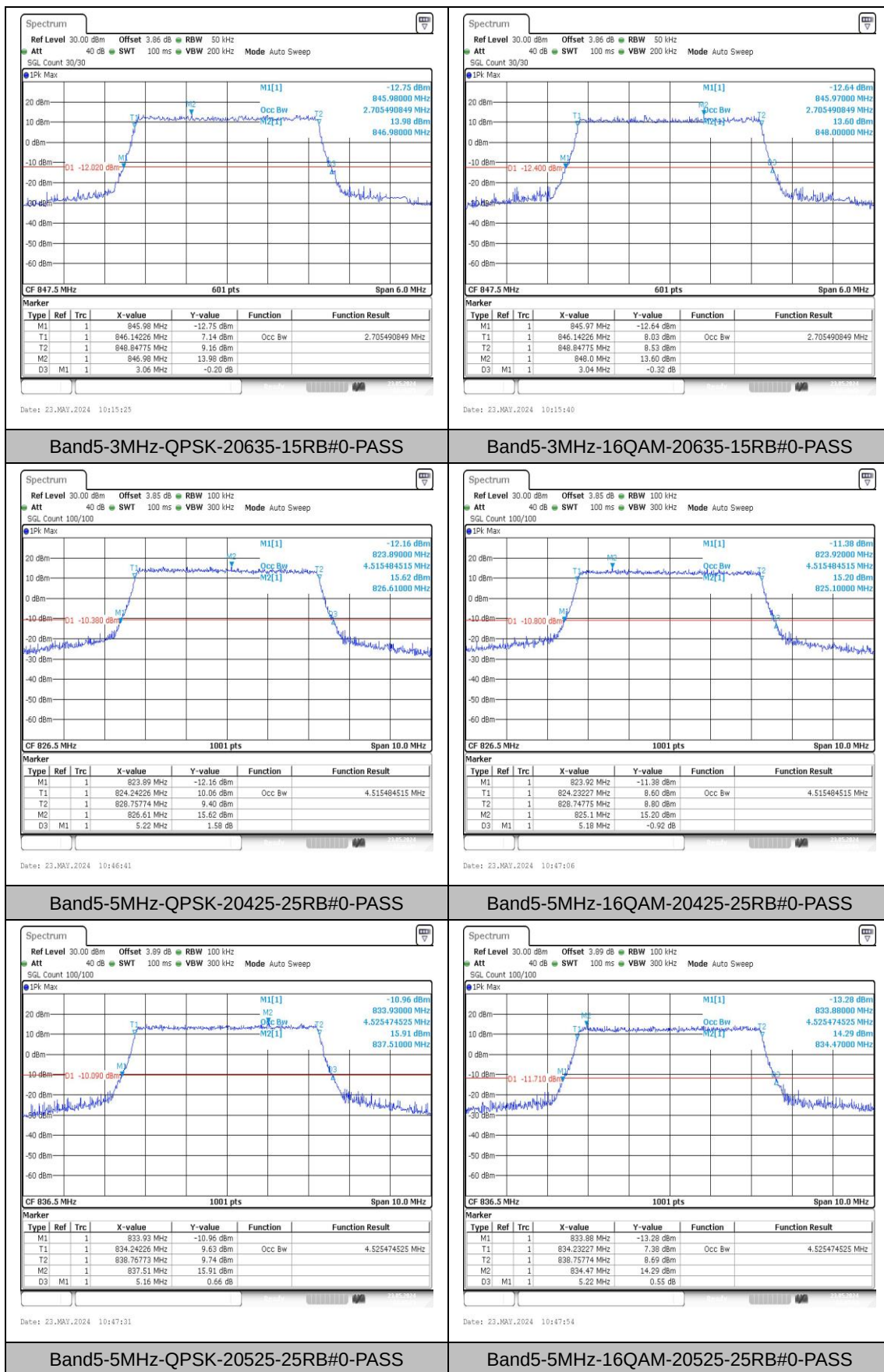
Test Result

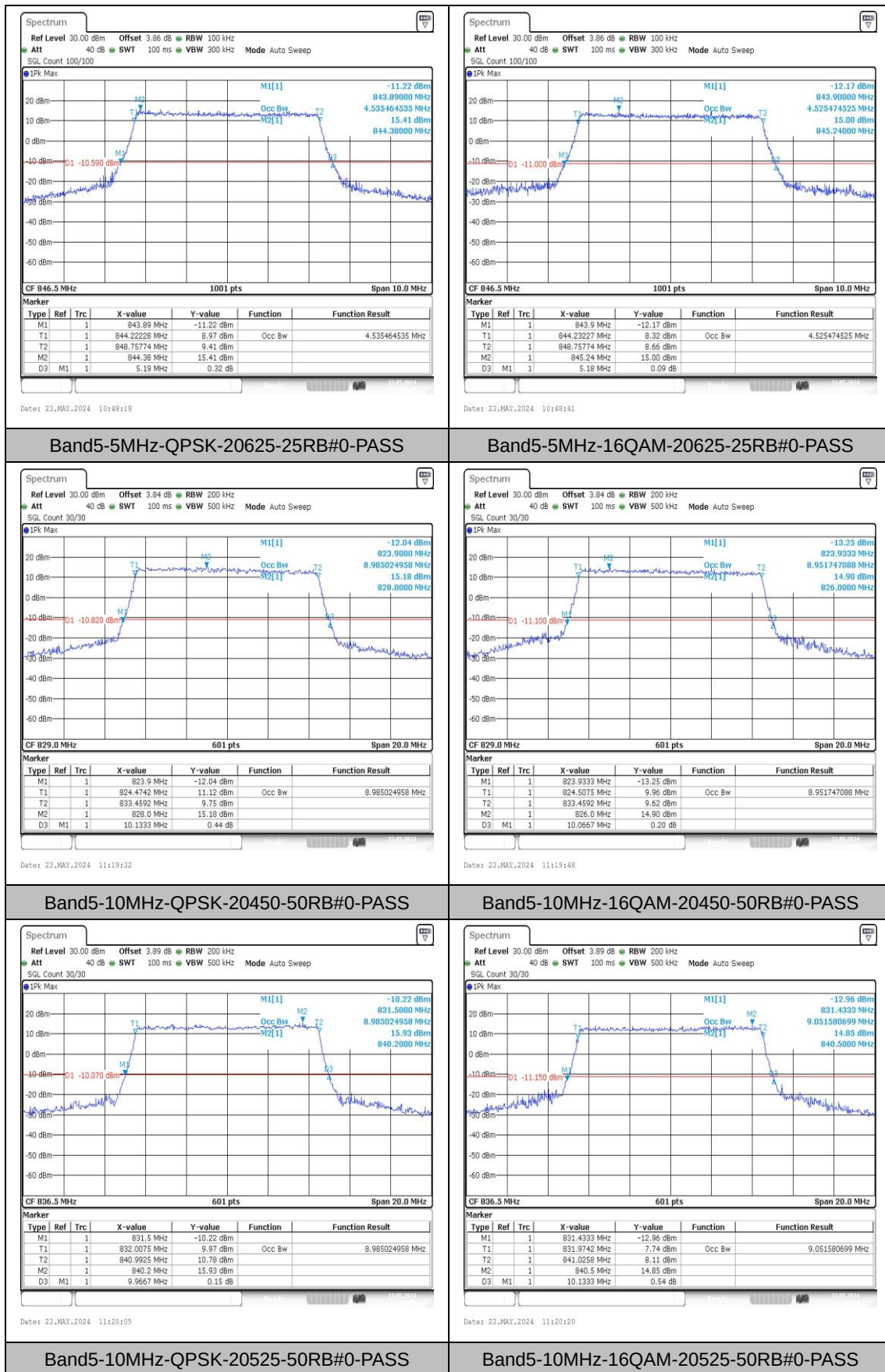
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.103	1.38	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.113	1.38	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.103	1.38	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.103	1.37	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.108	1.36	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.103	1.38	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.705	3.07	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.705	3.06	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.696	3.07	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.705	3.07	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.705	3.06	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.705	3.04	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.515	5.22	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.515	5.18	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.525	5.16	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.525	5.22	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.535	5.19	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.525	5.18	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.985	10.13	PASS
Band5	10MHz	16QAM	20450	50RB#0	8.952	10.07	PASS
Band5	10MHz	QPSK	20525	50RB#0	8.985	9.97	PASS
Band5	10MHz	16QAM	20525	50RB#0	9.052	10.13	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.985	10.00	PASS
Band5	10MHz	16QAM	20600	50RB#0	8.985	10.07	PASS

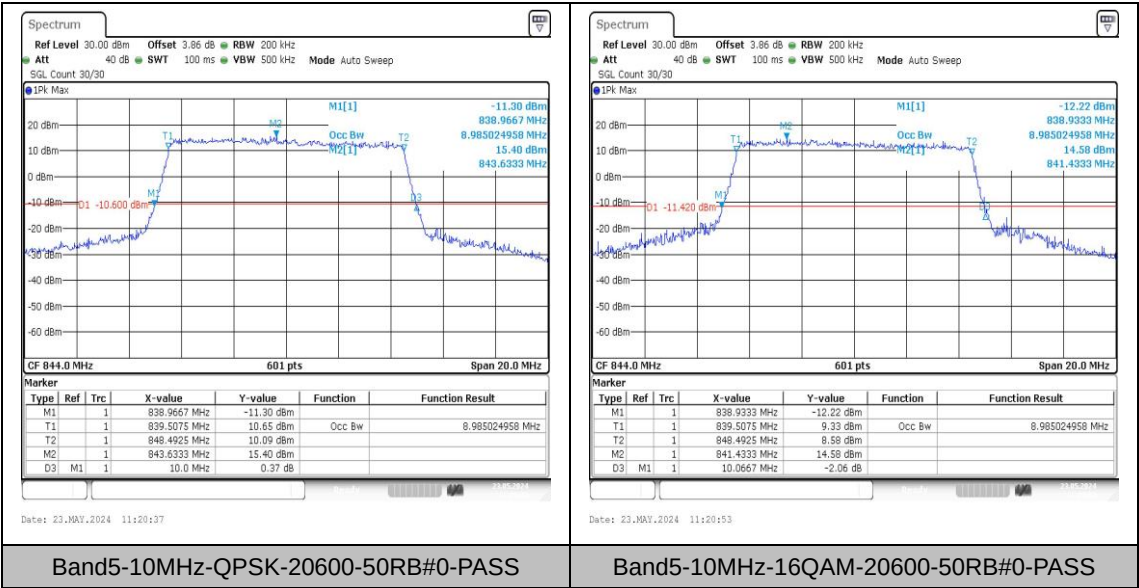
Test Graphs











Appendix D: Band Edge

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	-22.89	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	-24.00	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	-53.25	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	-53.67	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	-28.18	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	-28.80	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	-52.62	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	-53.26	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	-23.40	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	-24.62	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	-28.43	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	-29.00	PASS
Band5	3MHz	QPSK	20415	1RB#0	-23.82	PASS
Band5	3MHz	16QAM	20415	1RB#0	-23.96	PASS
Band5	3MHz	QPSK	20415	1RB#14	-51.46	PASS
Band5	3MHz	16QAM	20415	1RB#14	-52.75	PASS
Band5	3MHz	QPSK	20415	15RB#0	-26.08	PASS
Band5	3MHz	16QAM	20415	15RB#0	-27.65	PASS
Band5	3MHz	QPSK	20635	1RB#0	-52.73	PASS
Band5	3MHz	16QAM	20635	1RB#0	-53.46	PASS
Band5	3MHz	QPSK	20635	1RB#14	-24.41	PASS
Band5	3MHz	16QAM	20635	1RB#14	-25.82	PASS
Band5	3MHz	QPSK	20635	15RB#0	-27.43	PASS
Band5	3MHz	16QAM	20635	15RB#0	-28.38	PASS
Band5	5MHz	QPSK	20425	1RB#0	-24.31	PASS
Band5	5MHz	16QAM	20425	1RB#0	-25.19	PASS
Band5	5MHz	QPSK	20425	1RB#24	-51.26	PASS
Band5	5MHz	16QAM	20425	1RB#24	-51.00	PASS
Band5	5MHz	QPSK	20425	25RB#0	-27.80	PASS
Band5	5MHz	16QAM	20425	25RB#0	-28.78	PASS
Band5	5MHz	QPSK	20625	1RB#0	-55.06	PASS
Band5	5MHz	16QAM	20625	1RB#0	-54.77	PASS
Band5	5MHz	QPSK	20625	1RB#24	-24.47	PASS
Band5	5MHz	16QAM	20625	1RB#24	-25.72	PASS
Band5	5MHz	QPSK	20625	25RB#0	-28.63	PASS

Band5	5MHz	16QAM	20625	25RB#0	-29.03	PASS
Band5	10MHz	QPSK	20450	1RB#0	-33.25	PASS
Band5	10MHz	16QAM	20450	1RB#0	-34.18	PASS
Band5	10MHz	QPSK	20450	1RB#49	-55.73	PASS
Band5	10MHz	16QAM	20450	1RB#49	-55.86	PASS
Band5	10MHz	QPSK	20450	50RB#0	-33.02	PASS
Band5	10MHz	16QAM	20450	50RB#0	-33.48	PASS
Band5	10MHz	QPSK	20600	1RB#0	-55.89	PASS
Band5	10MHz	16QAM	20600	1RB#0	-56.03	PASS
Band5	10MHz	QPSK	20600	1RB#49	-33.02	PASS
Band5	10MHz	16QAM	20600	1RB#49	-34.72	PASS
Band5	10MHz	QPSK	20600	50RB#0	-34.16	PASS
Band5	10MHz	16QAM	20600	50RB#0	-35.49	PASS

Test Graphs

