

Appendix for LTE BAND 5

Product Name: Smart Phone

Model No: Nova

Appendix A: Average Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	24.20	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	23.22	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	24.33	PASS
Band5	1.4MHz	16QAM	20407	1RB#2	23.36	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	24.21	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	23.24	PASS
Band5	1.4MHz	QPSK	20407	3RB#0	24.22	PASS
Band5	1.4MHz	16QAM	20407	3RB#0	23.07	PASS
Band5	1.4MHz	QPSK	20407	3RB#1	24.25	PASS
Band5	1.4MHz	16QAM	20407	3RB#1	23.11	PASS
Band5	1.4MHz	QPSK	20407	3RB#3	24.29	PASS
Band5	1.4MHz	16QAM	20407	3RB#3	23.10	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	23.27	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	22.15	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	24.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	23.53	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	24.63	PASS
Band5	1.4MHz	16QAM	20525	1RB#2	23.74	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	24.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#5	23.06	PASS
Band5	1.4MHz	QPSK	20525	3RB#0	24.27	PASS
Band5	1.4MHz	16QAM	20525	3RB#0	22.95	PASS
Band5	1.4MHz	QPSK	20525	3RB#1	24.15	PASS
Band5	1.4MHz	16QAM	20525	3RB#1	22.94	PASS
Band5	1.4MHz	QPSK	20525	3RB#3	24.04	PASS
Band5	1.4MHz	16QAM	20525	3RB#3	23.01	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	22.99	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	22.30	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	24.63	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	23.20	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	24.44	PASS
Band5	1.4MHz	16QAM	20643	1RB#2	23.25	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	24.25	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	23.10	PASS

Band5	1.4MHz	QPSK	20643	3RB#0	24.15	PASS
Band5	1.4MHz	16QAM	20643	3RB#0	23.00	PASS
Band5	1.4MHz	QPSK	20643	3RB#1	24.24	PASS
Band5	1.4MHz	16QAM	20643	3RB#1	23.05	PASS
Band5	1.4MHz	QPSK	20643	3RB#3	24.10	PASS
Band5	1.4MHz	16QAM	20643	3RB#3	22.93	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	23.19	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	22.27	PASS
Band5	5MHz	QPSK	20425	1RB#0	24.16	PASS
Band5	5MHz	16QAM	20425	1RB#0	23.33	PASS
Band5	5MHz	QPSK	20425	1RB#12	24.26	PASS
Band5	5MHz	16QAM	20425	1RB#12	23.45	PASS
Band5	5MHz	QPSK	20425	1RB#24	24.26	PASS
Band5	5MHz	16QAM	20425	1RB#24	23.45	PASS
Band5	5MHz	QPSK	20425	12RB#0	23.13	PASS
Band5	5MHz	16QAM	20425	12RB#0	22.18	PASS
Band5	5MHz	QPSK	20425	12RB#6	23.11	PASS
Band5	5MHz	16QAM	20425	12RB#6	22.21	PASS
Band5	5MHz	QPSK	20425	12RB#13	23.29	PASS
Band5	5MHz	16QAM	20425	12RB#13	22.34	PASS
Band5	5MHz	QPSK	20425	25RB#0	23.24	PASS
Band5	5MHz	16QAM	20425	25RB#0	22.28	PASS
Band5	5MHz	QPSK	20525	1RB#0	24.49	PASS
Band5	5MHz	16QAM	20525	1RB#0	23.51	PASS
Band5	5MHz	QPSK	20525	1RB#12	24.62	PASS
Band5	5MHz	16QAM	20525	1RB#12	23.55	PASS
Band5	5MHz	QPSK	20525	1RB#24	24.52	PASS
Band5	5MHz	16QAM	20525	1RB#24	23.50	PASS
Band5	5MHz	QPSK	20525	12RB#0	23.47	PASS
Band5	5MHz	16QAM	20525	12RB#0	22.49	PASS
Band5	5MHz	QPSK	20525	12RB#6	23.51	PASS
Band5	5MHz	16QAM	20525	12RB#6	22.51	PASS
Band5	5MHz	QPSK	20525	12RB#13	23.51	PASS
Band5	5MHz	16QAM	20525	12RB#13	22.54	PASS
Band5	5MHz	QPSK	20525	25RB#0	23.50	PASS
Band5	5MHz	16QAM	20525	25RB#0	22.58	PASS
Band5	5MHz	QPSK	20625	1RB#0	24.58	PASS
Band5	5MHz	16QAM	20625	1RB#0	23.53	PASS
Band5	5MHz	QPSK	20625	1RB#12	24.62	PASS
Band5	5MHz	16QAM	20625	1RB#12	23.59	PASS
Band5	5MHz	QPSK	20625	1RB#24	24.52	PASS
Band5	5MHz	16QAM	20625	1RB#24	23.49	PASS

Band5	5MHz	QPSK	20625	12RB#0	23.59	PASS
Band5	5MHz	16QAM	20625	12RB#0	22.55	PASS
Band5	5MHz	QPSK	20625	12RB#6	23.59	PASS
Band5	5MHz	16QAM	20625	12RB#6	22.57	PASS
Band5	5MHz	QPSK	20625	12RB#13	23.57	PASS
Band5	5MHz	16QAM	20625	12RB#13	22.54	PASS
Band5	5MHz	QPSK	20625	25RB#0	23.53	PASS
Band5	5MHz	16QAM	20625	25RB#0	22.54	PASS
Band5	10MHz	QPSK	20450	1RB#0	24.19	PASS
Band5	10MHz	16QAM	20450	1RB#0	23.15	PASS
Band5	10MHz	QPSK	20450	1RB#24	24.42	PASS
Band5	10MHz	16QAM	20450	1RB#24	23.44	PASS
Band5	10MHz	QPSK	20450	1RB#49	24.41	PASS
Band5	10MHz	16QAM	20450	1RB#49	23.45	PASS
Band5	10MHz	QPSK	20450	25RB#0	23.27	PASS
Band5	10MHz	16QAM	20450	25RB#0	22.27	PASS
Band5	10MHz	QPSK	20450	25RB#12	23.28	PASS
Band5	10MHz	16QAM	20450	25RB#12	22.29	PASS
Band5	10MHz	QPSK	20450	25RB#25	23.40	PASS
Band5	10MHz	16QAM	20450	25RB#25	22.35	PASS
Band5	10MHz	QPSK	20450	50RB#0	23.34	PASS
Band5	10MHz	16QAM	20450	50RB#0	22.32	PASS
Band5	10MHz	QPSK	20525	1RB#0	24.44	PASS
Band5	10MHz	16QAM	20525	1RB#0	23.42	PASS
Band5	10MHz	QPSK	20525	1RB#24	24.51	PASS
Band5	10MHz	16QAM	20525	1RB#24	23.60	PASS
Band5	10MHz	QPSK	20525	1RB#49	24.57	PASS
Band5	10MHz	16QAM	20525	1RB#49	23.56	PASS
Band5	10MHz	QPSK	20525	25RB#0	23.60	PASS
Band5	10MHz	16QAM	20525	25RB#0	22.53	PASS
Band5	10MHz	QPSK	20525	25RB#12	23.60	PASS
Band5	10MHz	16QAM	20525	25RB#12	22.55	PASS
Band5	10MHz	QPSK	20525	25RB#25	23.60	PASS
Band5	10MHz	16QAM	20525	25RB#25	22.60	PASS
Band5	10MHz	QPSK	20525	50RB#0	23.56	PASS
Band5	10MHz	16QAM	20525	50RB#0	22.59	PASS
Band5	10MHz	QPSK	20600	1RB#0	24.58	PASS
Band5	10MHz	16QAM	20600	1RB#0	23.59	PASS
Band5	10MHz	QPSK	20600	1RB#24	24.65	PASS
Band5	10MHz	16QAM	20600	1RB#24	23.71	PASS
Band5	10MHz	QPSK	20600	1RB#49	24.54	PASS
Band5	10MHz	16QAM	20600	1RB#49	23.51	PASS

Band5	10MHz	QPSK	20600	25RB#0	23.69	PASS
Band5	10MHz	16QAM	20600	25RB#0	22.62	PASS
Band5	10MHz	QPSK	20600	25RB#12	23.69	PASS
Band5	10MHz	16QAM	20600	25RB#12	22.64	PASS
Band5	10MHz	QPSK	20600	25RB#25	23.65	PASS
Band5	10MHz	16QAM	20600	25RB#25	22.57	PASS
Band5	10MHz	QPSK	20600	50RB#0	23.64	PASS
Band5	10MHz	16QAM	20600	50RB#0	22.62	PASS
Band5	3MHz	QPSK	20415	1RB#0	24.19	PASS
Band5	3MHz	16QAM	20415	1RB#0	23.34	PASS
Band5	3MHz	QPSK	20415	1RB#8	24.20	PASS
Band5	3MHz	16QAM	20415	1RB#8	23.33	PASS
Band5	3MHz	QPSK	20415	1RB#14	24.20	PASS
Band5	3MHz	16QAM	20415	1RB#14	23.36	PASS
Band5	3MHz	QPSK	20415	8RB#0	23.24	PASS
Band5	3MHz	16QAM	20415	8RB#0	22.31	PASS
Band5	3MHz	QPSK	20415	8RB#4	23.24	PASS
Band5	3MHz	16QAM	20415	8RB#4	22.30	PASS
Band5	3MHz	QPSK	20415	8RB#7	23.28	PASS
Band5	3MHz	16QAM	20415	8RB#7	22.33	PASS
Band5	3MHz	QPSK	20415	15RB#0	23.20	PASS
Band5	3MHz	16QAM	20415	15RB#0	22.24	PASS
Band5	3MHz	QPSK	20525	1RB#0	24.41	PASS
Band5	3MHz	16QAM	20525	1RB#0	23.68	PASS
Band5	3MHz	QPSK	20525	1RB#8	24.46	PASS
Band5	3MHz	16QAM	20525	1RB#8	23.62	PASS
Band5	3MHz	QPSK	20525	1RB#14	24.49	PASS
Band5	3MHz	16QAM	20525	1RB#14	23.65	PASS
Band5	3MHz	QPSK	20525	8RB#0	23.48	PASS
Band5	3MHz	16QAM	20525	8RB#0	22.58	PASS
Band5	3MHz	QPSK	20525	8RB#4	23.49	PASS
Band5	3MHz	16QAM	20525	8RB#4	22.57	PASS
Band5	3MHz	QPSK	20525	8RB#7	23.51	PASS
Band5	3MHz	16QAM	20525	8RB#7	22.60	PASS
Band5	3MHz	QPSK	20525	15RB#0	23.50	PASS
Band5	3MHz	16QAM	20525	15RB#0	22.54	PASS
Band5	3MHz	QPSK	20635	1RB#0	24.53	PASS
Band5	3MHz	16QAM	20635	1RB#0	23.72	PASS
Band5	3MHz	QPSK	20635	1RB#8	24.48	PASS
Band5	3MHz	16QAM	20635	1RB#8	23.64	PASS
Band5	3MHz	QPSK	20635	1RB#14	24.53	PASS
Band5	3MHz	16QAM	20635	1RB#14	23.66	PASS

Band5	3MHz	QPSK	20635	8RB#0	23.62	PASS
Band5	3MHz	16QAM	20635	8RB#0	22.61	PASS
Band5	3MHz	QPSK	20635	8RB#4	23.59	PASS
Band5	3MHz	16QAM	20635	8RB#4	22.61	PASS
Band5	3MHz	QPSK	20635	8RB#7	23.60	PASS
Band5	3MHz	16QAM	20635	8RB#7	22.58	PASS
Band5	3MHz	QPSK	20635	15RB#0	23.56	PASS
Band5	3MHz	16QAM	20635	15RB#0	22.56	PASS

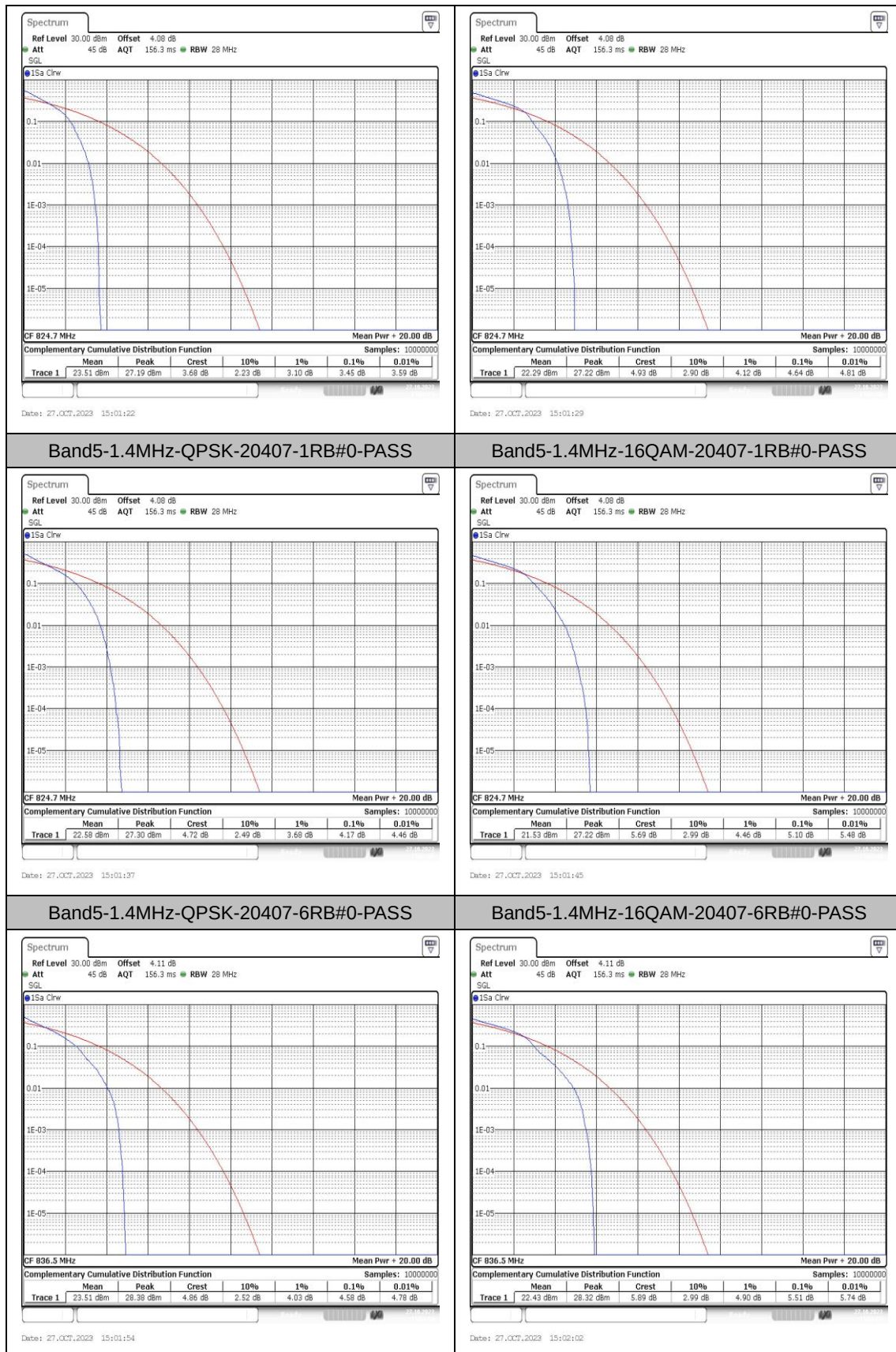
Appendix B: Peak-to-Average Ratio(CCDF)

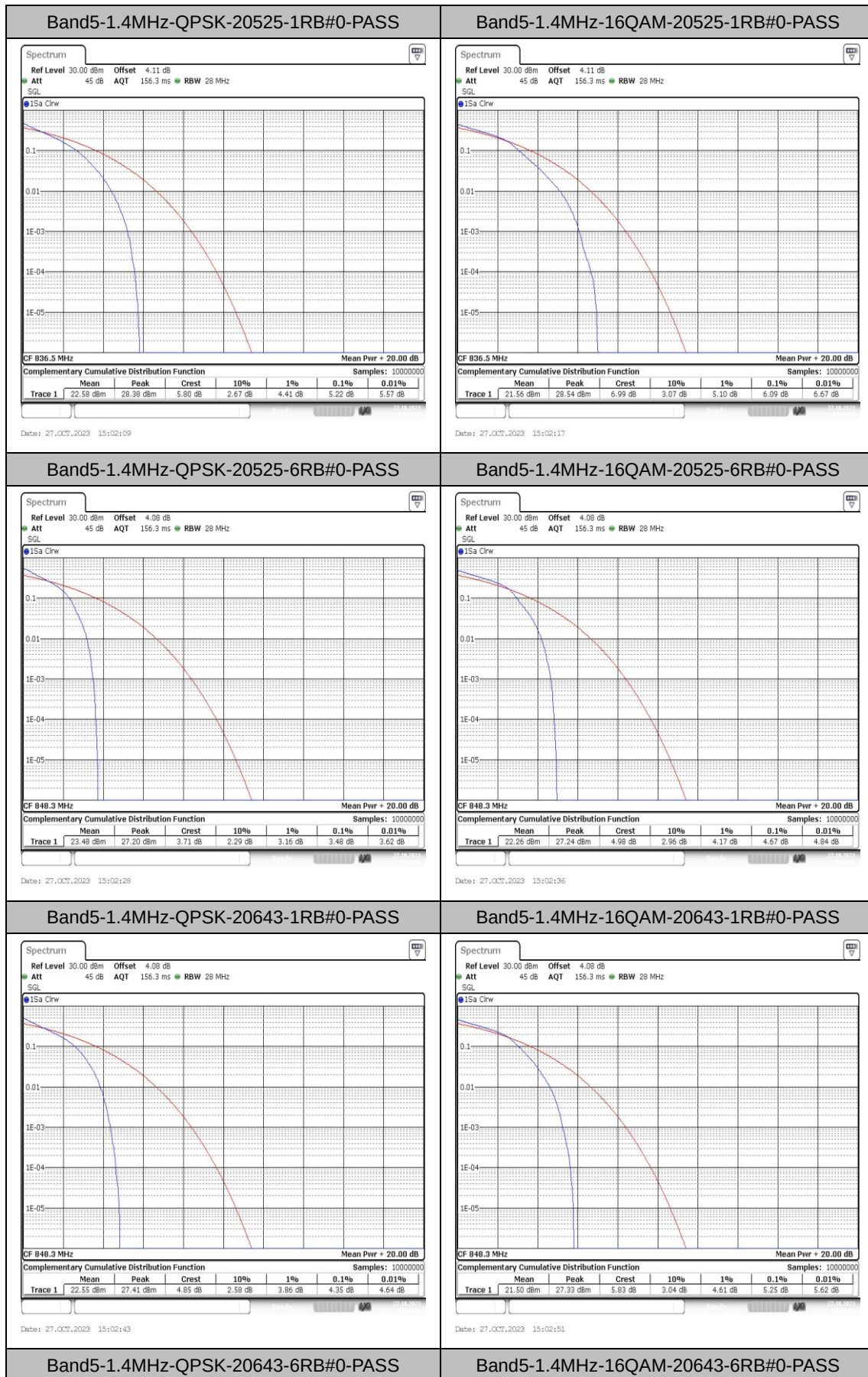
Test Result

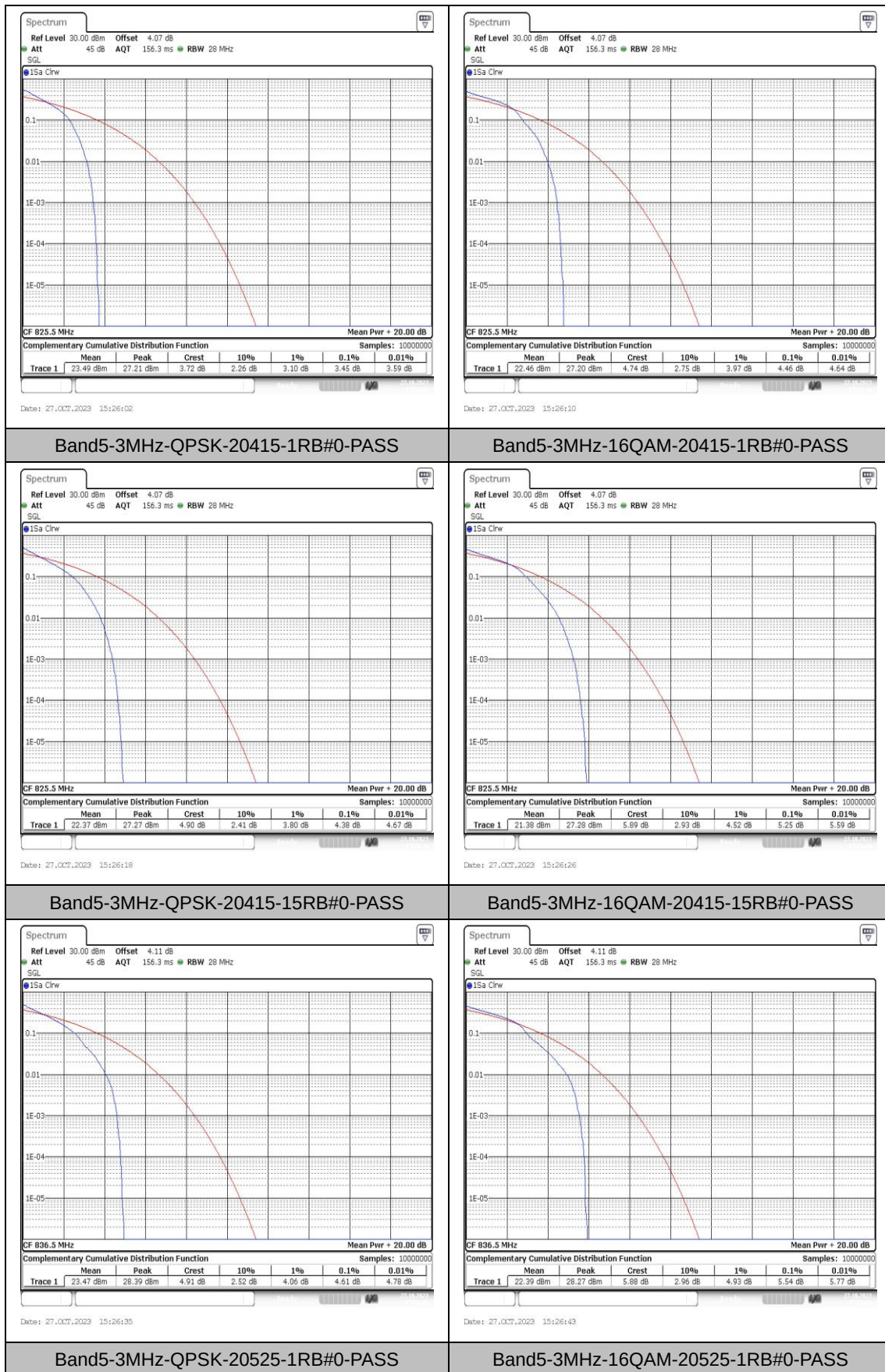
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	3.45	13	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	4.64	13	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	4.17	13	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	5.10	13	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	4.58	13	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	5.51	13	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	5.22	13	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	6.09	13	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	3.48	13	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	4.67	13	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	4.35	13	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	5.25	13	PASS
Band5	3MHz	QPSK	20415	1RB#0	3.45	13	PASS
Band5	3MHz	16QAM	20415	1RB#0	4.46	13	PASS
Band5	3MHz	QPSK	20415	15RB#0	4.38	13	PASS
Band5	3MHz	16QAM	20415	15RB#0	5.25	13	PASS
Band5	3MHz	QPSK	20525	1RB#0	4.61	13	PASS
Band5	3MHz	16QAM	20525	1RB#0	5.54	13	PASS
Band5	3MHz	QPSK	20525	15RB#0	5.28	13	PASS
Band5	3MHz	16QAM	20525	15RB#0	6.09	13	PASS
Band5	3MHz	QPSK	20635	1RB#0	3.36	13	PASS
Band5	3MHz	16QAM	20635	1RB#0	4.35	13	PASS
Band5	3MHz	QPSK	20635	15RB#0	4.38	13	PASS
Band5	3MHz	16QAM	20635	15RB#0	5.28	13	PASS
Band5	5MHz	QPSK	20425	1RB#0	3.57	13	PASS
Band5	5MHz	16QAM	20425	1RB#0	4.46	13	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.58	13	PASS
Band5	5MHz	16QAM	20425	25RB#0	5.39	13	PASS
Band5	5MHz	QPSK	20525	1RB#0	4.81	13	PASS
Band5	5MHz	16QAM	20525	1RB#0	5.54	13	PASS
Band5	5MHz	QPSK	20525	25RB#0	5.30	13	PASS
Band5	5MHz	16QAM	20525	25RB#0	6.06	13	PASS
Band5	5MHz	QPSK	20625	1RB#0	3.59	13	PASS
Band5	5MHz	16QAM	20625	1RB#0	4.52	13	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.43	13	PASS
Band5	5MHz	16QAM	20625	25RB#0	5.28	13	PASS

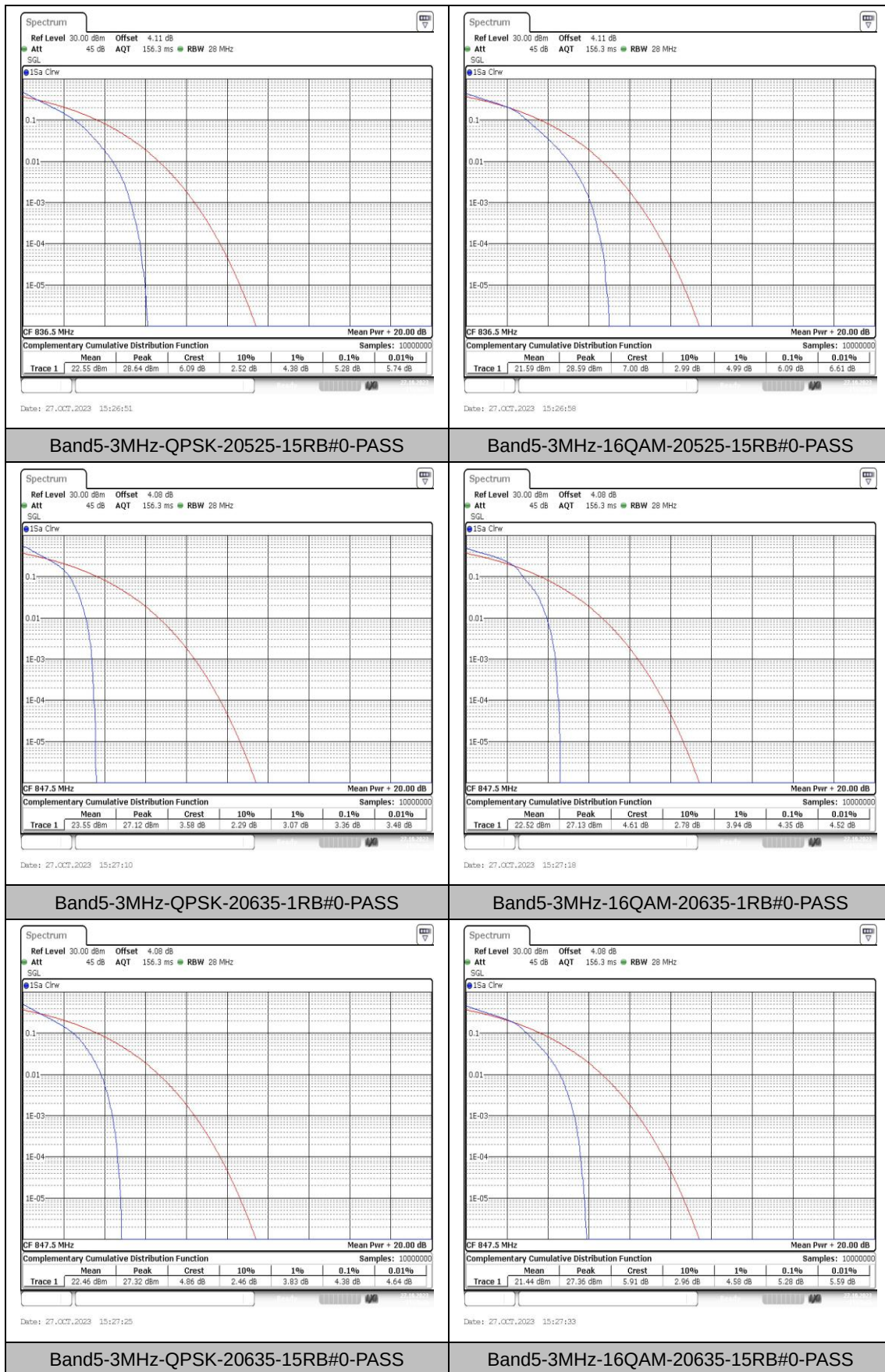
Band5	10MHz	QPSK	20450	1RB#0	3.42	13	PASS
Band5	10MHz	16QAM	20450	1RB#0	4.41	13	PASS
Band5	10MHz	QPSK	20450	50RB#0	5.04	13	PASS
Band5	10MHz	16QAM	20450	50RB#0	5.86	13	PASS
Band5	10MHz	QPSK	20525	1RB#0	4.75	13	PASS
Band5	10MHz	16QAM	20525	1RB#0	5.62	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	5.28	13	PASS
Band5	10MHz	16QAM	20525	50RB#0	6.12	13	PASS
Band5	10MHz	QPSK	20600	1RB#0	4.14	13	PASS
Band5	10MHz	16QAM	20600	1RB#0	5.10	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	4.64	13	PASS
Band5	10MHz	16QAM	20600	50RB#0	5.51	13	PASS

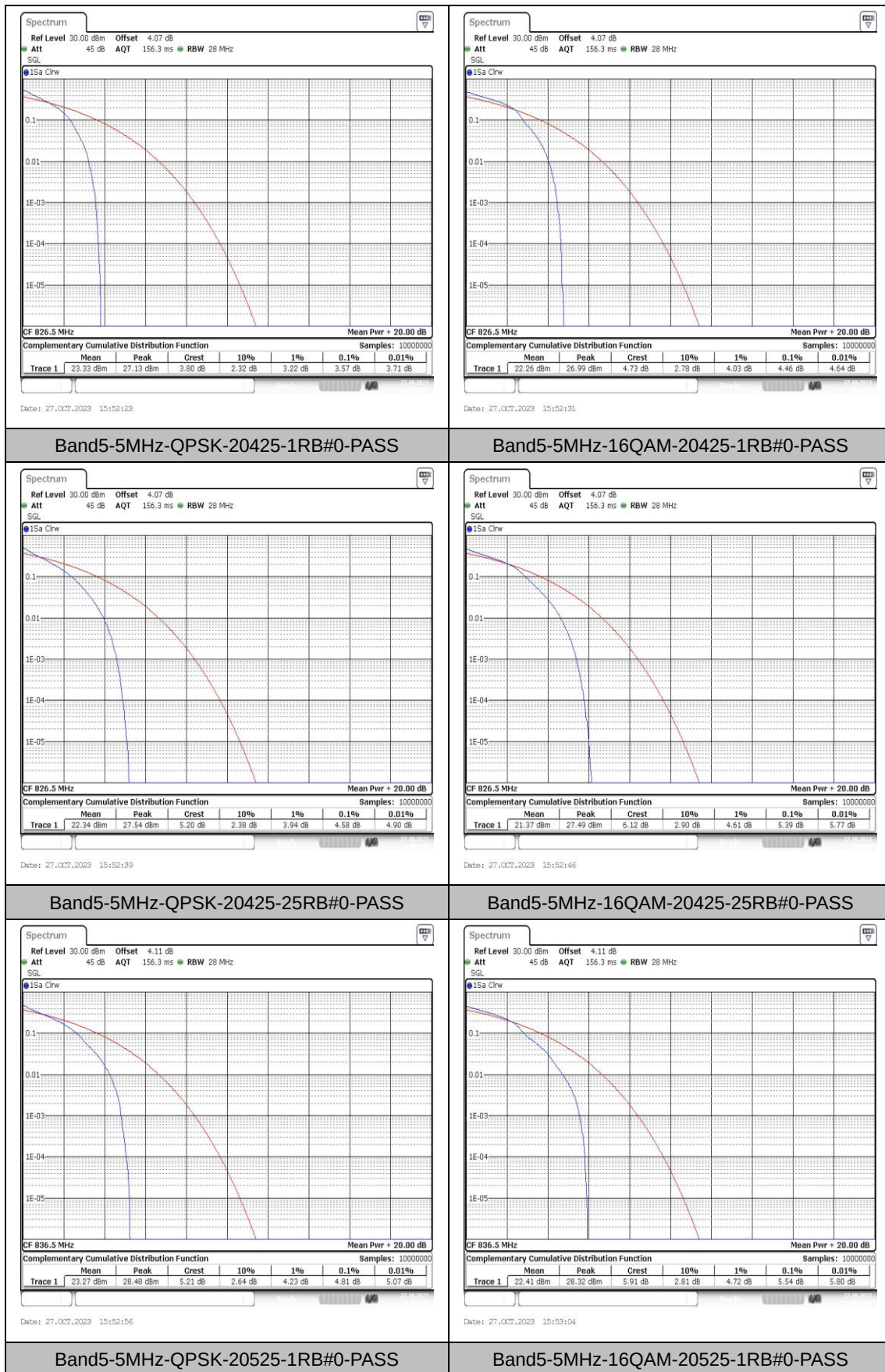
Test Graphs

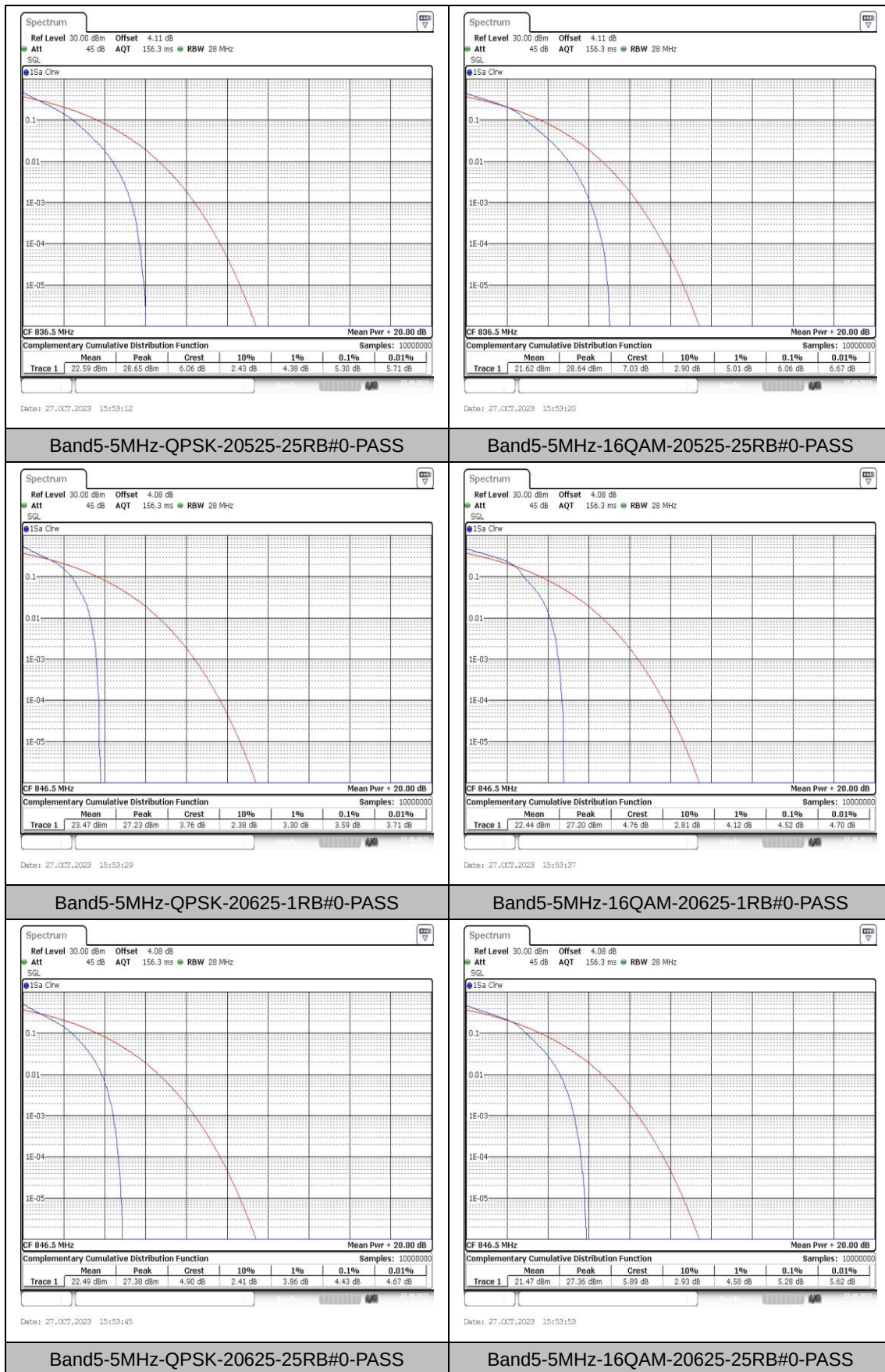


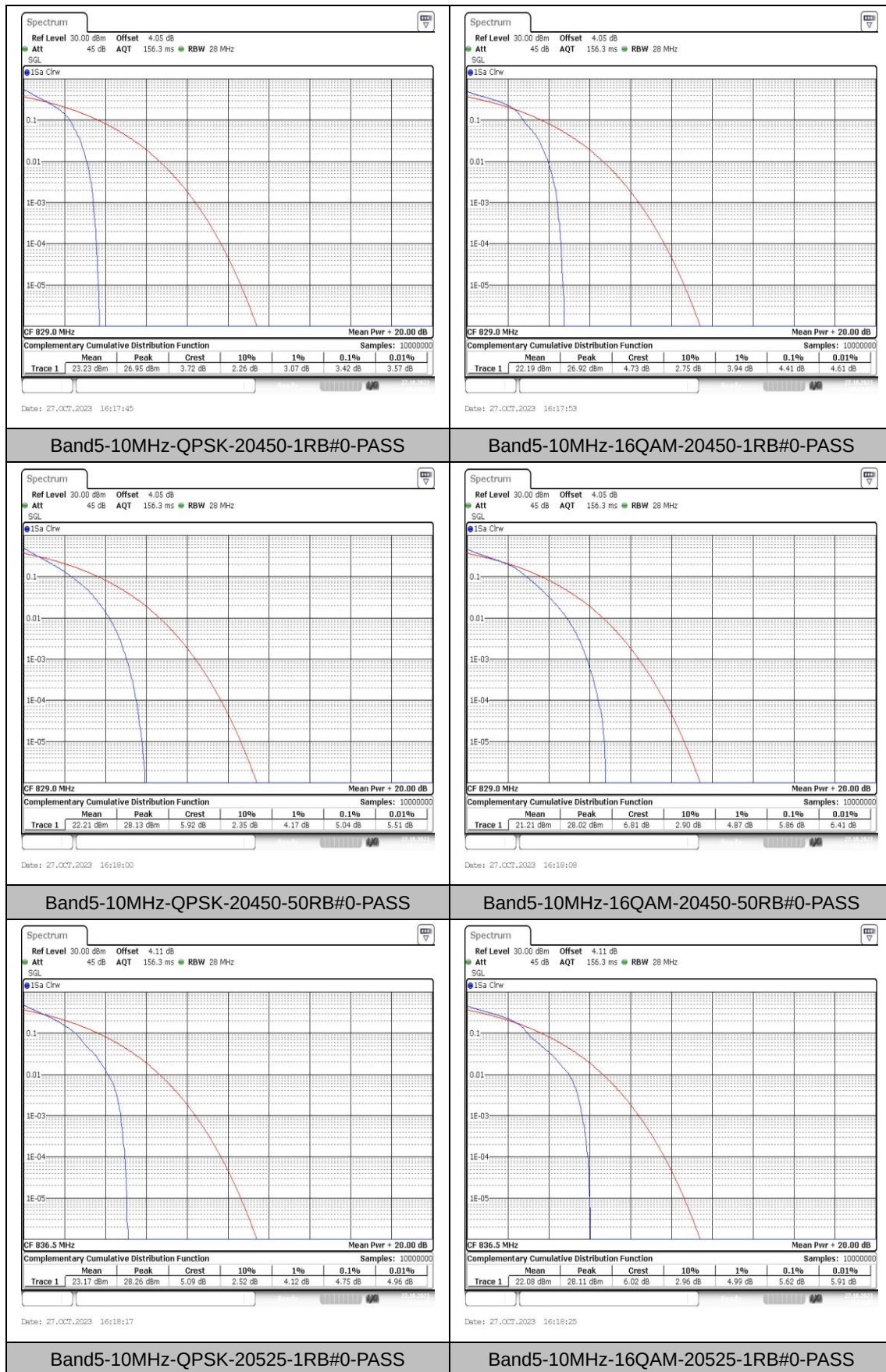


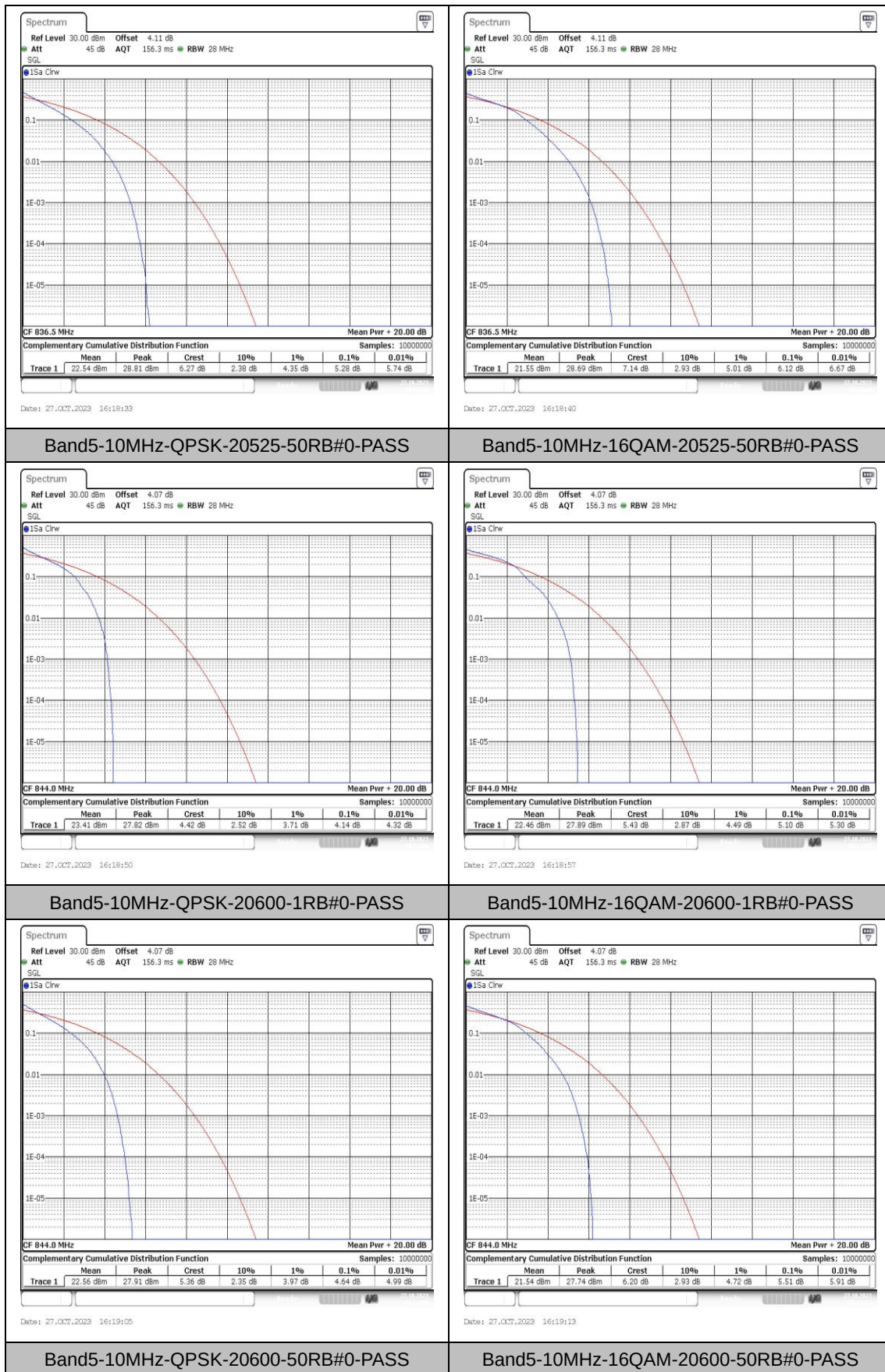










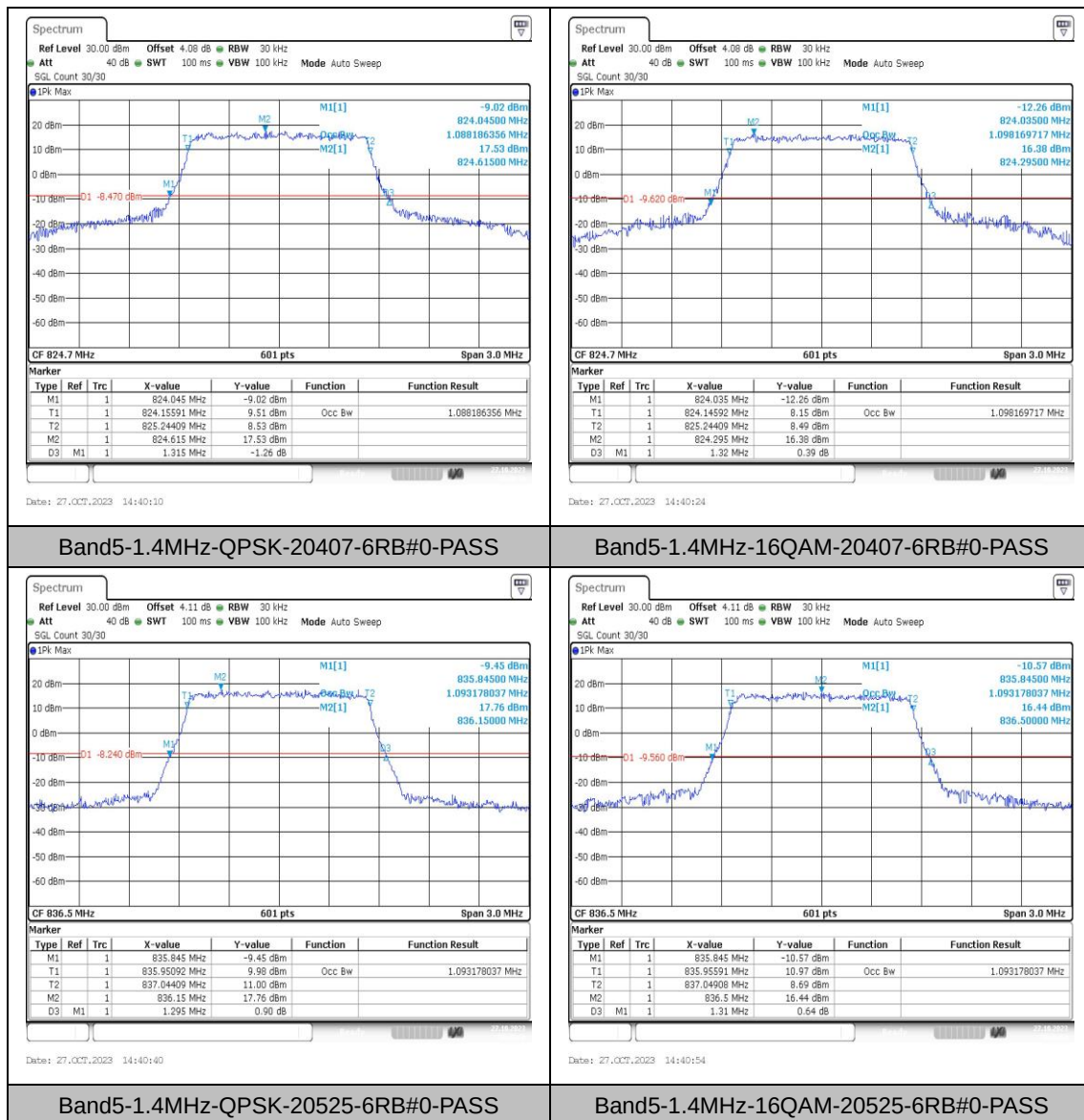


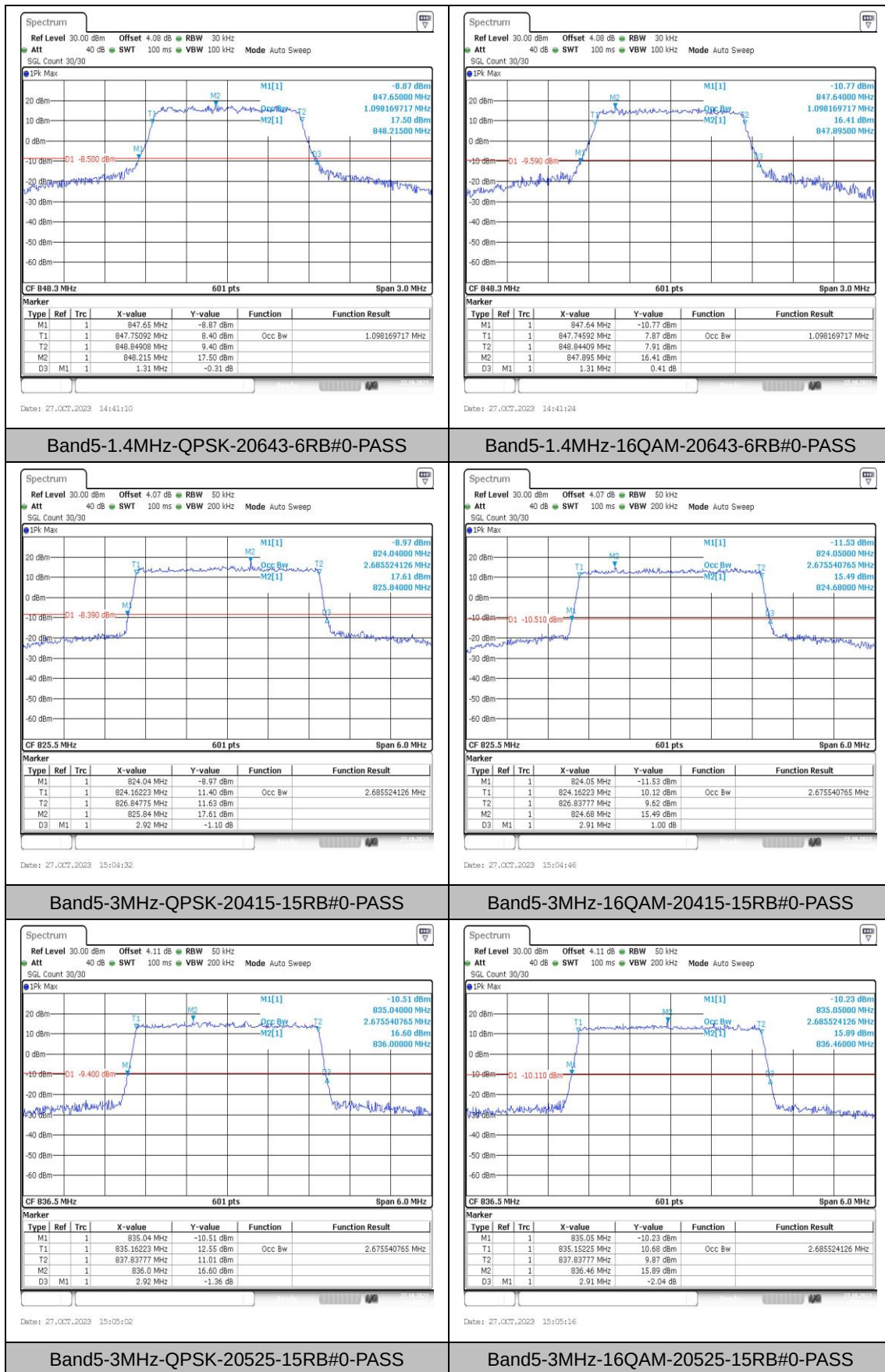
Appendix C: 26dB Bandwidth and Occupied Bandwidth

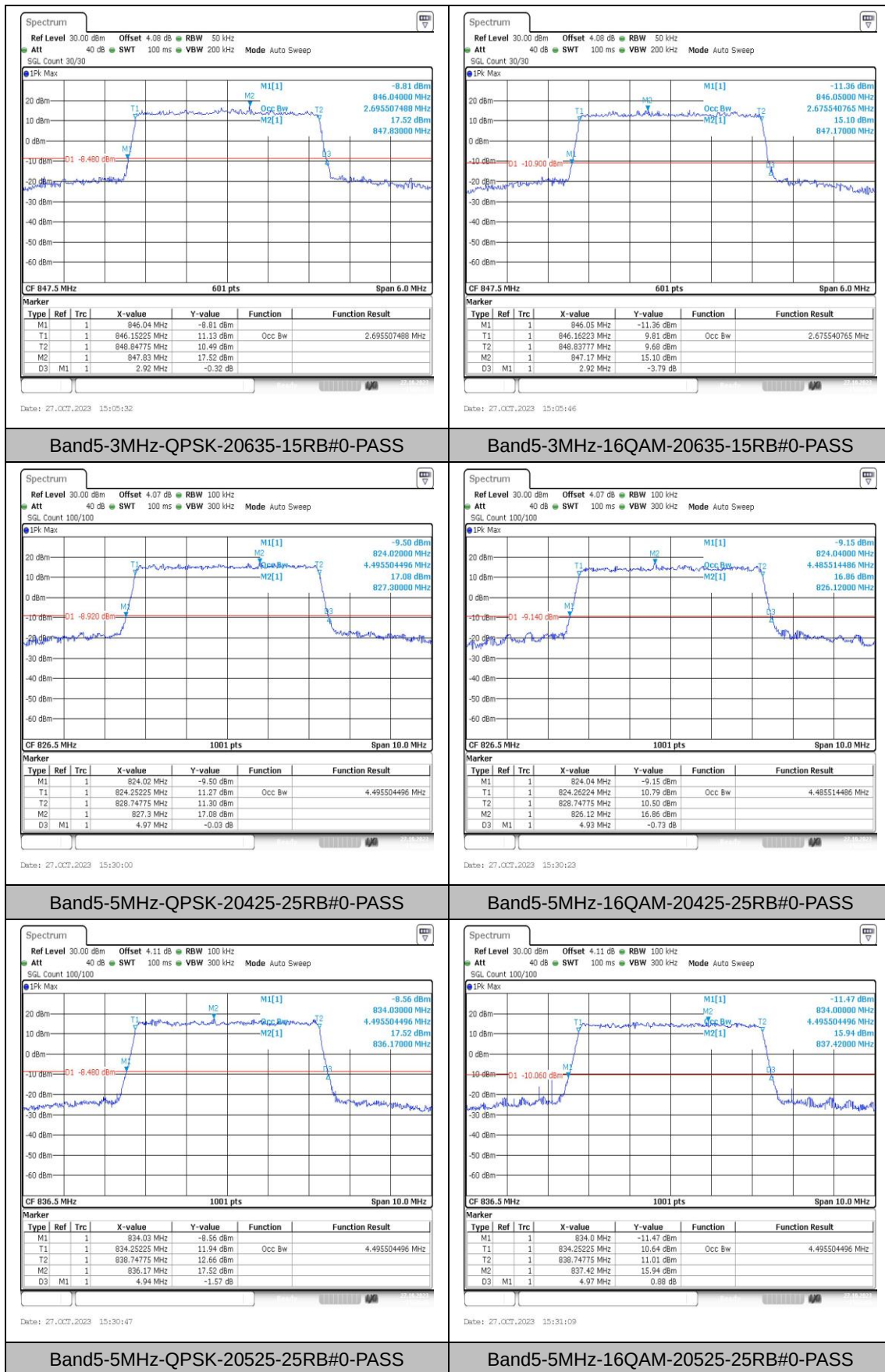
Test Result

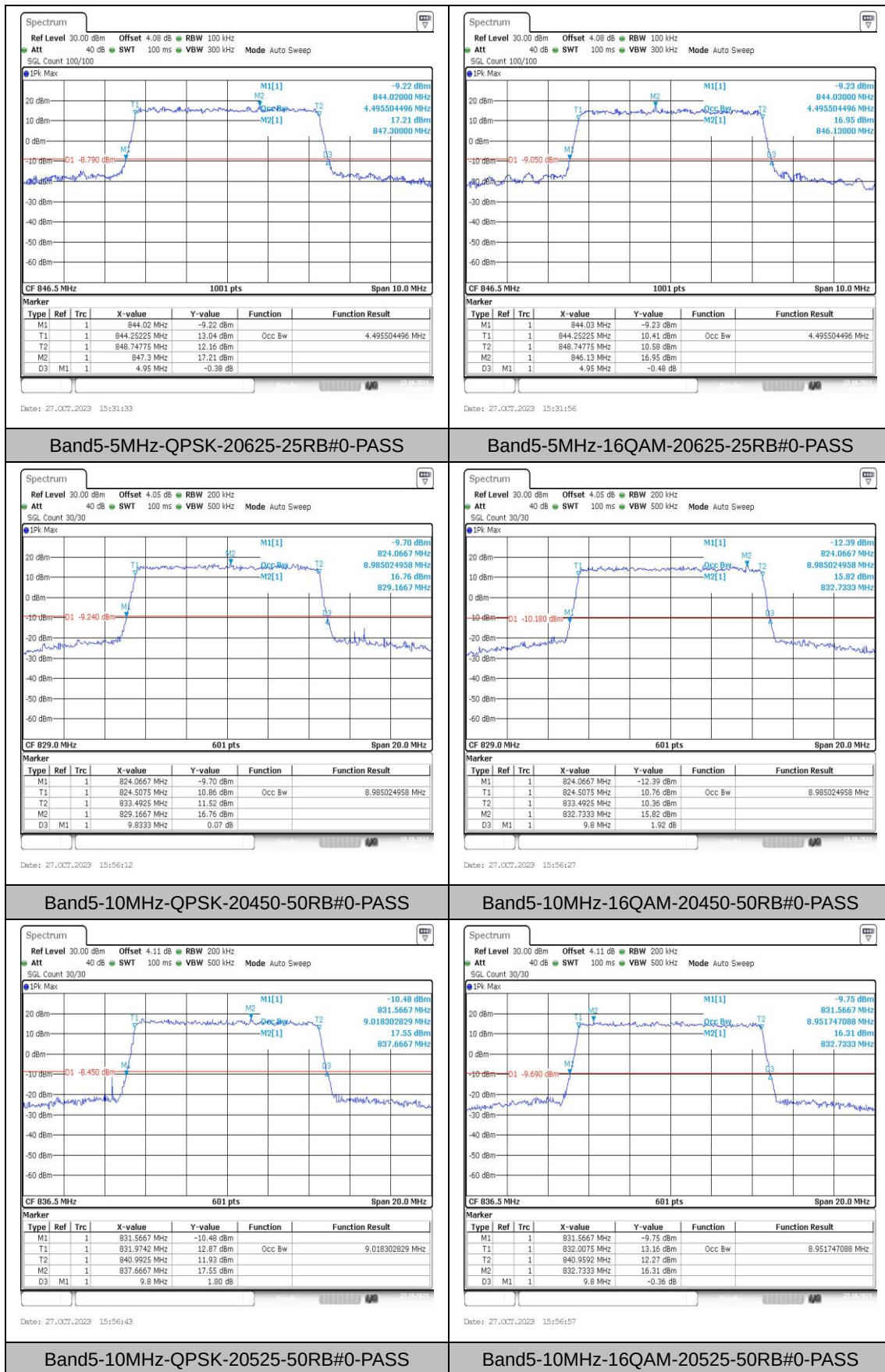
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.088	1.31	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.098	1.32	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.093	1.29	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.093	1.31	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.098	1.31	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.098	1.31	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.686	2.92	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.676	2.91	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.676	2.92	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.686	2.91	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.696	2.92	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.676	2.92	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.496	4.97	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.486	4.93	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.496	4.94	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.496	4.97	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.496	4.95	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.496	4.95	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.985	9.83	PASS
Band5	10MHz	16QAM	20450	50RB#0	8.985	9.80	PASS
Band5	10MHz	QPSK	20525	50RB#0	9.018	9.80	PASS
Band5	10MHz	16QAM	20525	50RB#0	8.952	9.80	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.985	9.90	PASS
Band5	10MHz	16QAM	20600	50RB#0	8.985	9.77	PASS

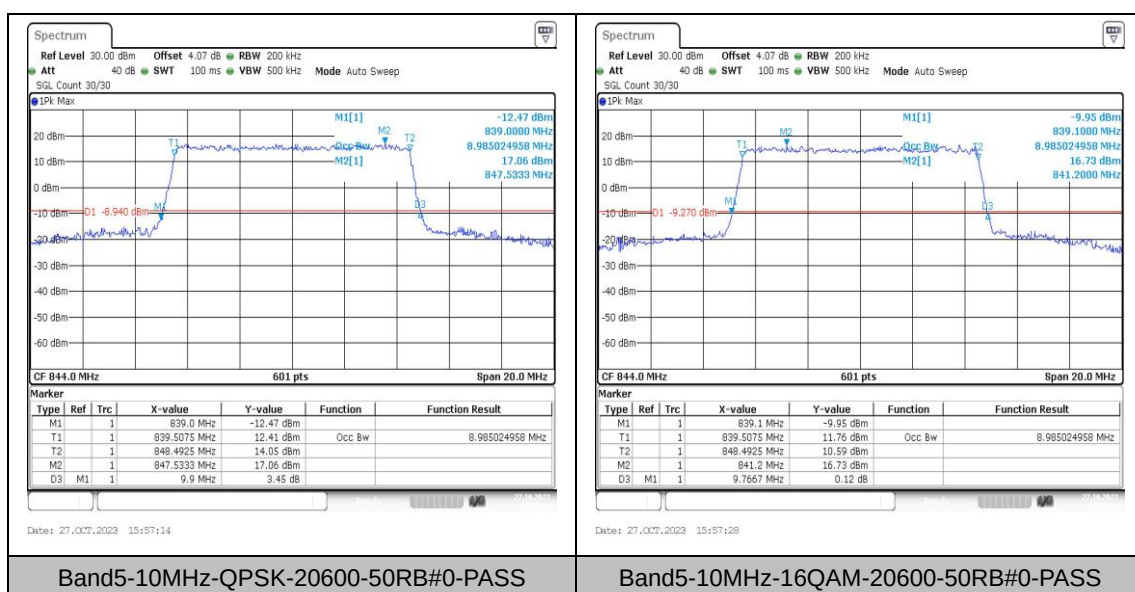
Test Graphs











Appendix D: Band Edge

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	-22.61	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	-25.09	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	-42.59	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	-44.85	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	-27.86	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	-30.95	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	-41.31	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	-44.09	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	-23.05	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	-24.63	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	-28.23	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	-31.26	PASS
Band5	3MHz	QPSK	20415	1RB#0	-18.81	PASS
Band5	3MHz	16QAM	20415	1RB#0	-20.98	PASS
Band5	3MHz	QPSK	20415	1RB#14	-44.63	PASS
Band5	3MHz	16QAM	20415	1RB#14	-45.09	PASS
Band5	3MHz	QPSK	20415	15RB#0	-28.38	PASS
Band5	3MHz	16QAM	20415	15RB#0	-30.83	PASS
Band5	3MHz	QPSK	20635	1RB#0	-44.62	PASS
Band5	3MHz	16QAM	20635	1RB#0	-44.70	PASS

Band5	3MHz	QPSK	20635	1RB#14	-19.29	PASS
Band5	3MHz	16QAM	20635	1RB#14	-20.10	PASS
Band5	3MHz	QPSK	20635	15RB#0	-28.39	PASS
Band5	3MHz	16QAM	20635	15RB#0	-30.81	PASS
Band5	5MHz	QPSK	20425	1RB#0	-19.84	PASS
Band5	5MHz	16QAM	20425	1RB#0	-20.39	PASS
Band5	5MHz	QPSK	20425	1RB#24	-46.34	PASS
Band5	5MHz	16QAM	20425	1RB#24	-47.00	PASS
Band5	5MHz	QPSK	20425	25RB#0	-30.20	PASS
Band5	5MHz	16QAM	20425	25RB#0	-31.80	PASS
Band5	5MHz	QPSK	20625	1RB#0	-45.57	PASS
Band5	5MHz	16QAM	20625	1RB#0	-46.66	PASS
Band5	5MHz	QPSK	20625	1RB#24	-19.31	PASS
Band5	5MHz	16QAM	20625	1RB#24	-20.95	PASS
Band5	5MHz	QPSK	20625	25RB#0	-28.42	PASS
Band5	5MHz	16QAM	20625	25RB#0	-30.39	PASS
Band5	10MHz	QPSK	20450	1RB#0	-22.11	PASS
Band5	10MHz	16QAM	20450	1RB#0	-23.85	PASS
Band5	10MHz	QPSK	20450	1RB#49	-48.36	PASS
Band5	10MHz	16QAM	20450	1RB#49	-48.76	PASS
Band5	10MHz	QPSK	20450	50RB#0	-33.86	PASS
Band5	10MHz	16QAM	20450	50RB#0	-36.34	PASS
Band5	10MHz	QPSK	20600	1RB#0	-48.71	PASS
Band5	10MHz	16QAM	20600	1RB#0	-48.68	PASS
Band5	10MHz	QPSK	20600	1RB#49	-22.10	PASS
Band5	10MHz	16QAM	20600	1RB#49	-22.47	PASS
Band5	10MHz	QPSK	20600	50RB#0	-30.20	PASS
Band5	10MHz	16QAM	20600	50RB#0	-32.84	PASS

Test Graphs

