

Appendix for LTE Band 38

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
Band38	5MHz	QPSK	37775	1RB#0	23.14	PASS
Band38	5MHz	16QAM	37775	1RB#0	22.08	PASS
Band38	5MHz	QPSK	37775	1RB#12	23.22	PASS
Band38	5MHz	16QAM	37775	1RB#12	22.24	PASS
Band38	5MHz	QPSK	37775	1RB#24	23.12	PASS
Band38	5MHz	16QAM	37775	1RB#24	22.08	PASS
Band38	5MHz	QPSK	37775	12RB#0	22.25	PASS
Band38	5MHz	16QAM	37775	12RB#0	21.15	PASS
Band38	5MHz	QPSK	37775	12RB#6	22.25	PASS
Band38	5MHz	16QAM	37775	12RB#6	21.18	PASS
Band38	5MHz	QPSK	37775	12RB#13	22.23	PASS
Band38	5MHz	16QAM	37775	12RB#13	21.24	PASS
Band38	5MHz	QPSK	37775	25RB#0	22.23	PASS
Band38	5MHz	16QAM	37775	25RB#0	21.20	PASS
Band38	5MHz	QPSK	38000	1RB#0	23.07	PASS
Band38	5MHz	16QAM	38000	1RB#0	22.37	PASS
Band38	5MHz	QPSK	38000	1RB#12	23.22	PASS
Band38	5MHz	16QAM	38000	1RB#12	22.22	PASS
Band38	5MHz	QPSK	38000	1RB#24	23.17	PASS
Band38	5MHz	16QAM	38000	1RB#24	22.05	PASS
Band38	5MHz	QPSK	38000	12RB#0	22.22	PASS
Band38	5MHz	16QAM	38000	12RB#0	21.19	PASS
Band38	5MHz	QPSK	38000	12RB#6	22.22	PASS
Band38	5MHz	16QAM	38000	12RB#6	21.24	PASS
Band38	5MHz	QPSK	38000	12RB#13	22.13	PASS
Band38	5MHz	16QAM	38000	12RB#13	21.06	PASS
Band38	5MHz	QPSK	38000	25RB#0	22.14	PASS
Band38	5MHz	16QAM	38000	25RB#0	21.16	PASS
Band38	5MHz	QPSK	38225	1RB#0	23.06	PASS
Band38	5MHz	16QAM	38225	1RB#0	21.86	PASS
Band38	5MHz	QPSK	38225	1RB#12	23.04	PASS
Band38	5MHz	16QAM	38225	1RB#12	21.93	PASS
Band38	5MHz	QPSK	38225	1RB#24	22.91	PASS
Band38	5MHz	16QAM	38225	1RB#24	22.00	PASS
Band38	5MHz	QPSK	38225	12RB#0	22.02	PASS

Band38	5MHz	16QAM	38225	12RB#0	20.97	PASS
Band38	5MHz	QPSK	38225	12RB#6	22.06	PASS
Band38	5MHz	16QAM	38225	12RB#6	21.00	PASS
Band38	5MHz	QPSK	38225	12RB#13	22.00	PASS
Band38	5MHz	16QAM	38225	12RB#13	20.93	PASS
Band38	5MHz	QPSK	38225	25RB#0	22.01	PASS
Band38	5MHz	16QAM	38225	25RB#0	21.02	PASS
Band38	10MHz	QPSK	37800	1RB#0	23.15	PASS
Band38	10MHz	16QAM	37800	1RB#0	22.15	PASS
Band38	10MHz	QPSK	37800	1RB#24	23.17	PASS
Band38	10MHz	16QAM	37800	1RB#24	22.33	PASS
Band38	10MHz	QPSK	37800	1RB#49	23.15	PASS
Band38	10MHz	16QAM	37800	1RB#49	22.13	PASS
Band38	10MHz	QPSK	37800	25RB#0	22.23	PASS
Band38	10MHz	16QAM	37800	25RB#0	21.23	PASS
Band38	10MHz	QPSK	37800	25RB#12	22.24	PASS
Band38	10MHz	16QAM	37800	25RB#12	21.22	PASS
Band38	10MHz	QPSK	37800	25RB#25	22.23	PASS
Band38	10MHz	16QAM	37800	25RB#25	21.25	PASS
Band38	10MHz	QPSK	37800	50RB#0	22.27	PASS
Band38	10MHz	16QAM	37800	50RB#0	21.28	PASS
Band38	10MHz	QPSK	38000	1RB#0	23.11	PASS
Band38	10MHz	16QAM	38000	1RB#0	22.13	PASS
Band38	10MHz	QPSK	38000	1RB#24	23.14	PASS
Band38	10MHz	16QAM	38000	1RB#24	22.10	PASS
Band38	10MHz	QPSK	38000	1RB#49	23.10	PASS
Band38	10MHz	16QAM	38000	1RB#49	22.04	PASS
Band38	10MHz	QPSK	38000	25RB#0	22.22	PASS
Band38	10MHz	16QAM	38000	25RB#0	21.24	PASS
Band38	10MHz	QPSK	38000	25RB#12	22.24	PASS
Band38	10MHz	16QAM	38000	25RB#12	21.25	PASS
Band38	10MHz	QPSK	38000	25RB#25	22.12	PASS
Band38	10MHz	16QAM	38000	25RB#25	21.11	PASS
Band38	10MHz	QPSK	38000	50RB#0	22.16	PASS
Band38	10MHz	16QAM	38000	50RB#0	21.11	PASS
Band38	10MHz	QPSK	38200	1RB#0	22.99	PASS
Band38	10MHz	16QAM	38200	1RB#0	22.02	PASS
Band38	10MHz	QPSK	38200	1RB#24	23.04	PASS
Band38	10MHz	16QAM	38200	1RB#24	22.10	PASS
Band38	10MHz	QPSK	38200	1RB#49	22.93	PASS
Band38	10MHz	16QAM	38200	1RB#49	22.02	PASS
Band38	10MHz	QPSK	38200	25RB#0	22.07	PASS

Band38	10MHz	16QAM	38200	25RB#0	21.09	PASS
Band38	10MHz	QPSK	38200	25RB#12	22.08	PASS
Band38	10MHz	16QAM	38200	25RB#12	21.07	PASS
Band38	10MHz	QPSK	38200	25RB#25	21.96	PASS
Band38	10MHz	16QAM	38200	25RB#25	20.99	PASS
Band38	10MHz	QPSK	38200	50RB#0	22.06	PASS
Band38	10MHz	16QAM	38200	50RB#0	21.11	PASS
Band38	15MHz	QPSK	37825	1RB#0	23.03	PASS
Band38	15MHz	16QAM	37825	1RB#0	22.03	PASS
Band38	15MHz	QPSK	37825	1RB#38	22.97	PASS
Band38	15MHz	16QAM	37825	1RB#38	22.13	PASS
Band38	15MHz	QPSK	37825	1RB#74	22.91	PASS
Band38	15MHz	16QAM	37825	1RB#74	22.04	PASS
Band38	15MHz	QPSK	37825	38RB#0	22.14	PASS
Band38	15MHz	16QAM	37825	38RB#0	22.08	PASS
Band38	15MHz	QPSK	37825	38RB#18	22.09	PASS
Band38	15MHz	16QAM	37825	38RB#18	22.09	PASS
Band38	15MHz	QPSK	37825	38RB#37	22.09	PASS
Band38	15MHz	16QAM	37825	38RB#37	22.08	PASS
Band38	15MHz	QPSK	37825	75RB#0	22.08	PASS
Band38	15MHz	16QAM	37825	75RB#0	21.16	PASS
Band38	15MHz	QPSK	38000	1RB#0	22.94	PASS
Band38	15MHz	16QAM	38000	1RB#0	21.90	PASS
Band38	15MHz	QPSK	38000	1RB#38	22.98	PASS
Band38	15MHz	16QAM	38000	1RB#38	21.86	PASS
Band38	15MHz	QPSK	38000	1RB#74	22.85	PASS
Band38	15MHz	16QAM	38000	1RB#74	21.81	PASS
Band38	15MHz	QPSK	38000	38RB#0	21.97	PASS
Band38	15MHz	16QAM	38000	38RB#0	21.98	PASS
Band38	15MHz	QPSK	38000	38RB#18	21.98	PASS
Band38	15MHz	16QAM	38000	38RB#18	22.04	PASS
Band38	15MHz	QPSK	38000	38RB#37	21.97	PASS
Band38	15MHz	16QAM	38000	38RB#37	22.04	PASS
Band38	15MHz	QPSK	38000	75RB#0	22.03	PASS
Band38	15MHz	16QAM	38000	75RB#0	21.07	PASS
Band38	15MHz	QPSK	38175	1RB#0	22.87	PASS
Band38	15MHz	16QAM	38175	1RB#0	22.20	PASS
Band38	15MHz	QPSK	38175	1RB#38	22.80	PASS
Band38	15MHz	16QAM	38175	1RB#38	21.94	PASS
Band38	15MHz	QPSK	38175	1RB#74	22.65	PASS
Band38	15MHz	16QAM	38175	1RB#74	21.78	PASS
Band38	15MHz	QPSK	38175	38RB#0	21.92	PASS

Band38	15MHz	16QAM	38175	38RB#0	21.97	PASS
Band38	15MHz	QPSK	38175	38RB#18	21.91	PASS
Band38	15MHz	16QAM	38175	38RB#18	21.95	PASS
Band38	15MHz	QPSK	38175	38RB#37	21.96	PASS
Band38	15MHz	16QAM	38175	38RB#37	21.94	PASS
Band38	15MHz	QPSK	38175	75RB#0	21.92	PASS
Band38	15MHz	16QAM	38175	75RB#0	20.96	PASS
Band38	20MHz	QPSK	37850	1RB#0	23.13	PASS
Band38	20MHz	16QAM	37850	1RB#0	22.12	PASS
Band38	20MHz	QPSK	37850	1RB#49	23.05	PASS
Band38	20MHz	16QAM	37850	1RB#49	22.02	PASS
Band38	20MHz	QPSK	37850	1RB#99	22.90	PASS
Band38	20MHz	16QAM	37850	1RB#99	22.02	PASS
Band38	20MHz	QPSK	37850	50RB#0	22.10	PASS
Band38	20MHz	16QAM	37850	50RB#0	21.13	PASS
Band38	20MHz	QPSK	37850	50RB#25	22.15	PASS
Band38	20MHz	16QAM	37850	50RB#25	21.12	PASS
Band38	20MHz	QPSK	37850	50RB#50	22.09	PASS
Band38	20MHz	16QAM	37850	50RB#50	21.11	PASS
Band38	20MHz	QPSK	37850	100RB#0	22.14	PASS
Band38	20MHz	16QAM	37850	100RB#0	21.14	PASS
Band38	20MHz	QPSK	38000	1RB#0	23.10	PASS
Band38	20MHz	16QAM	38000	1RB#0	22.16	PASS
Band38	20MHz	QPSK	38000	1RB#49	23.01	PASS
Band38	20MHz	16QAM	38000	1RB#49	22.04	PASS
Band38	20MHz	QPSK	38000	1RB#99	22.98	PASS
Band38	20MHz	16QAM	38000	1RB#99	22.08	PASS
Band38	20MHz	QPSK	38000	50RB#0	22.11	PASS
Band38	20MHz	16QAM	38000	50RB#0	21.12	PASS
Band38	20MHz	QPSK	38000	50RB#25	22.13	PASS
Band38	20MHz	16QAM	38000	50RB#25	21.14	PASS
Band38	20MHz	QPSK	38000	50RB#50	21.98	PASS
Band38	20MHz	16QAM	38000	50RB#50	21.01	PASS
Band38	20MHz	QPSK	38000	100RB#0	22.02	PASS
Band38	20MHz	16QAM	38000	100RB#0	21.01	PASS
Band38	20MHz	QPSK	38150	1RB#0	22.91	PASS
Band38	20MHz	16QAM	38150	1RB#0	21.88	PASS
Band38	20MHz	QPSK	38150	1RB#49	22.97	PASS
Band38	20MHz	16QAM	38150	1RB#49	21.87	PASS
Band38	20MHz	QPSK	38150	1RB#99	22.69	PASS
Band38	20MHz	16QAM	38150	1RB#99	21.65	PASS
Band38	20MHz	QPSK	38150	50RB#0	22.01	PASS

Band38	20MHz	16QAM	38150	50RB#0	21.05	PASS
Band38	20MHz	QPSK	38150	50RB#25	22.06	PASS
Band38	20MHz	16QAM	38150	50RB#25	21.05	PASS
Band38	20MHz	QPSK	38150	50RB#50	21.88	PASS
Band38	20MHz	16QAM	38150	50RB#50	20.91	PASS
Band38	20MHz	QPSK	38150	100RB#0	22.01	PASS
Band38	20MHz	16QAM	38150	100RB#0	21.00	PASS

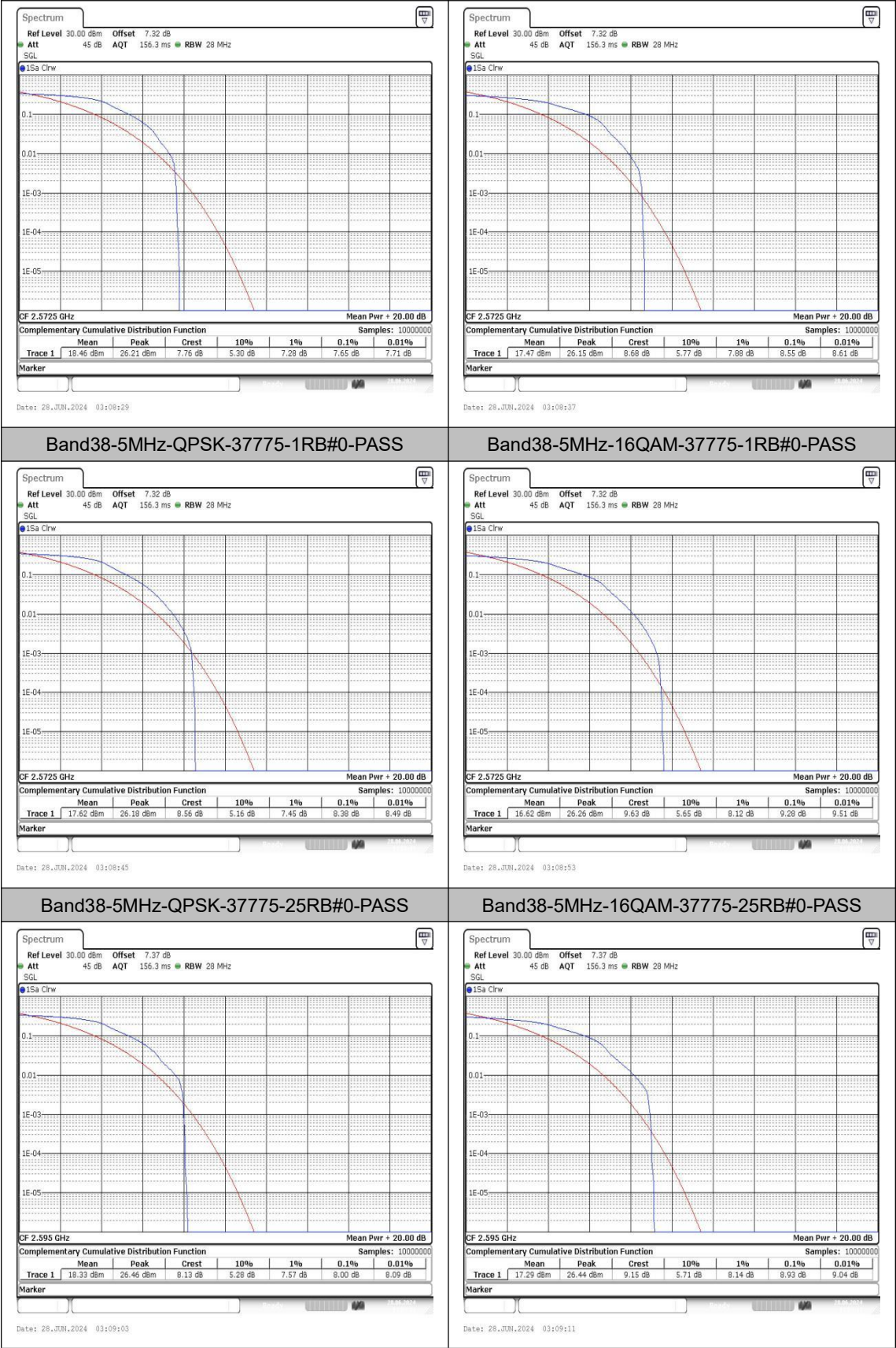
Appendix B: Peak-to-Average Ratio(CCDF)

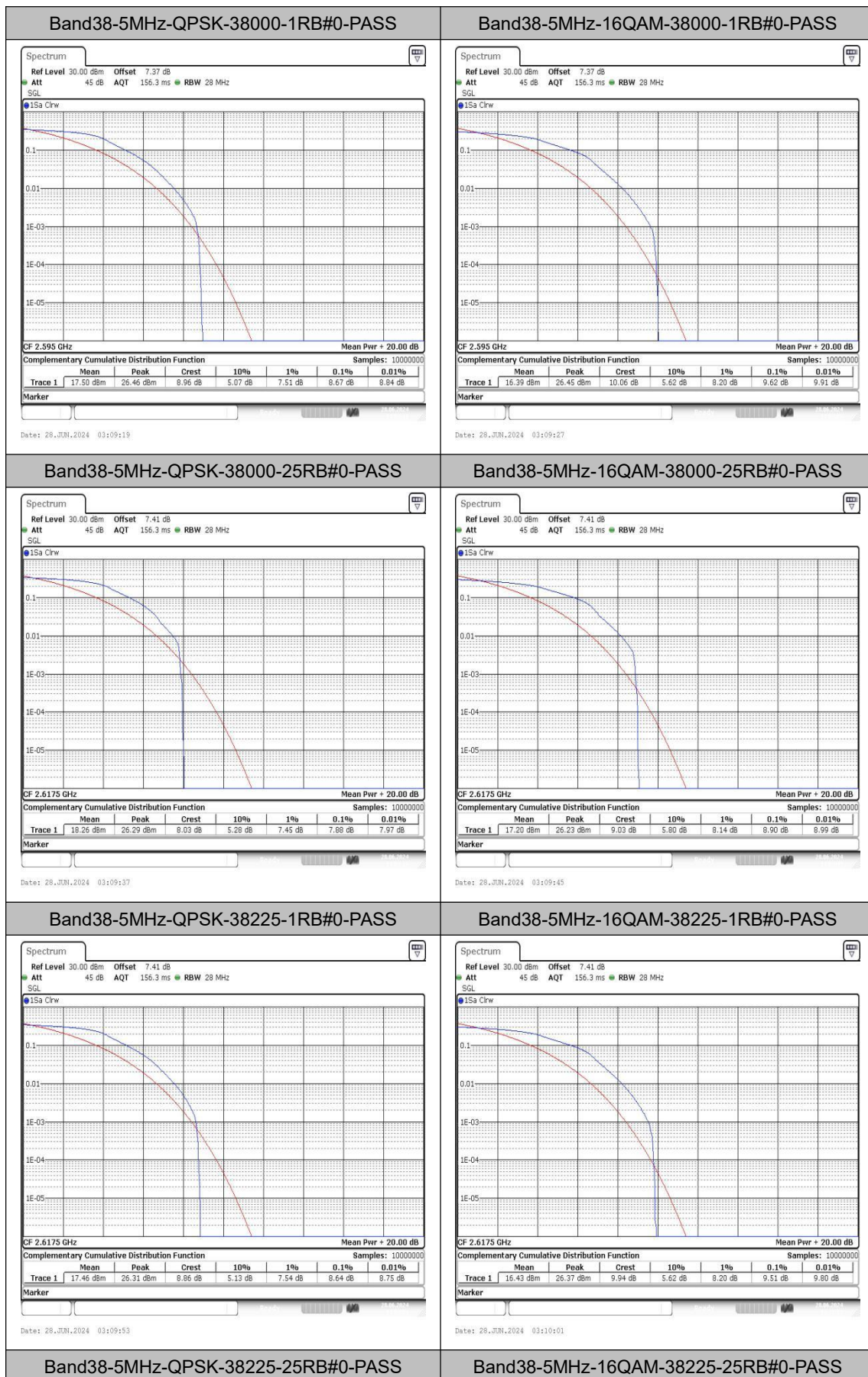
Test Result

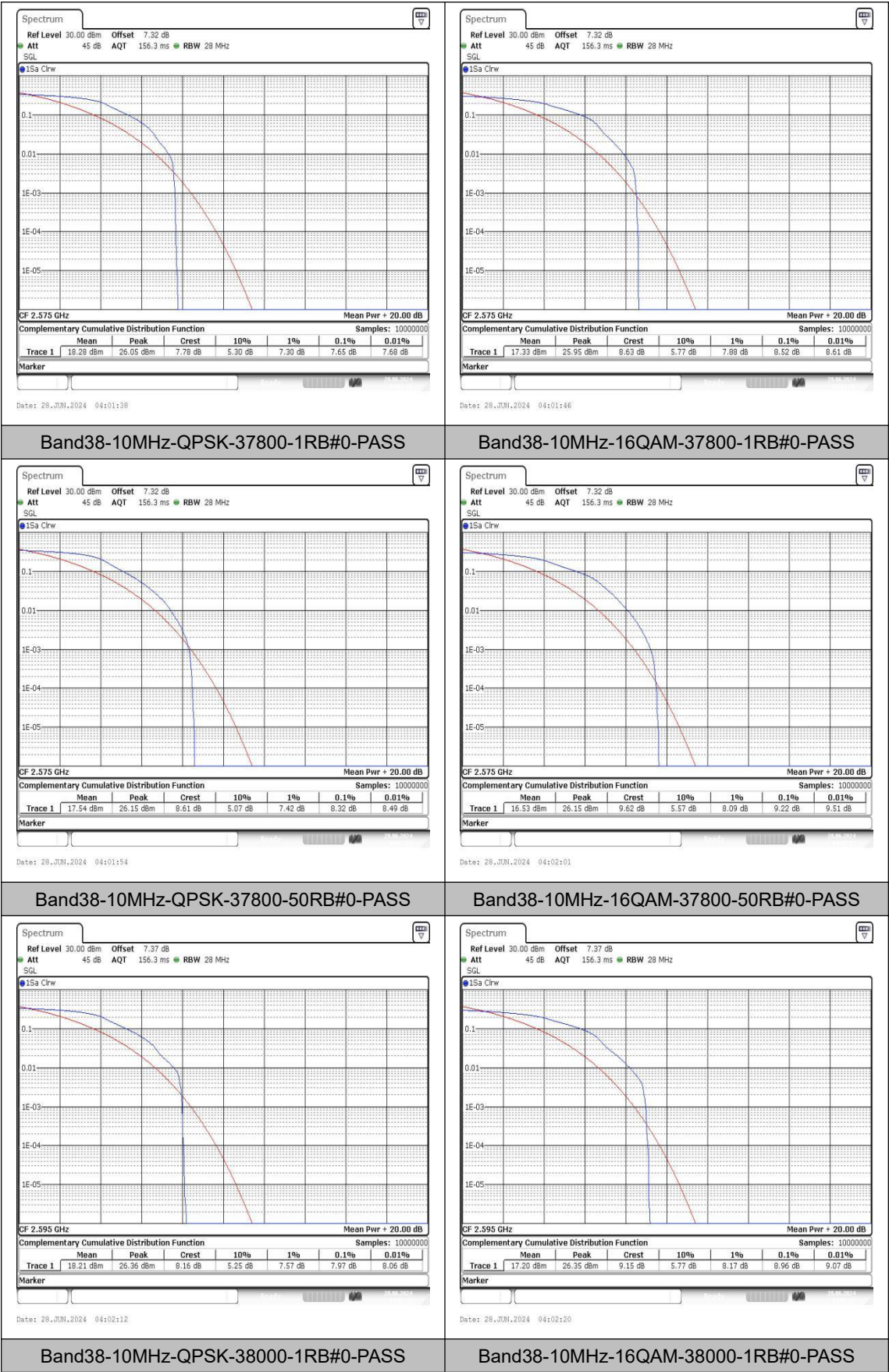
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band38	5MHz	QPSK	37775	1RB#0	7.65	13	PASS
Band38	5MHz	16QAM	37775	1RB#0	8.55	13	PASS
Band38	5MHz	QPSK	37775	25RB#0	8.38	13	PASS
Band38	5MHz	16QAM	37775	25RB#0	9.28	13	PASS
Band38	5MHz	QPSK	38000	1RB#0	8.00	13	PASS
Band38	5MHz	16QAM	38000	1RB#0	8.93	13	PASS
Band38	5MHz	QPSK	38000	25RB#0	8.67	13	PASS
Band38	5MHz	16QAM	38000	25RB#0	9.62	13	PASS
Band38	5MHz	QPSK	38225	1RB#0	7.88	13	PASS
Band38	5MHz	16QAM	38225	1RB#0	8.90	13	PASS
Band38	5MHz	QPSK	38225	25RB#0	8.64	13	PASS
Band38	5MHz	16QAM	38225	25RB#0	9.51	13	PASS
Band38	10MHz	QPSK	37800	1RB#0	7.65	13	PASS
Band38	10MHz	16QAM	37800	1RB#0	8.52	13	PASS
Band38	10MHz	QPSK	37800	50RB#0	8.32	13	PASS
Band38	10MHz	16QAM	37800	50RB#0	9.22	13	PASS
Band38	10MHz	QPSK	38000	1RB#0	7.97	13	PASS
Band38	10MHz	16QAM	38000	1RB#0	8.96	13	PASS
Band38	10MHz	QPSK	38000	50RB#0	8.67	13	PASS
Band38	10MHz	16QAM	38000	50RB#0	9.51	13	PASS
Band38	10MHz	QPSK	38200	1RB#0	7.77	13	PASS
Band38	10MHz	16QAM	38200	1RB#0	8.72	13	PASS
Band38	10MHz	QPSK	38200	50RB#0	8.58	13	PASS
Band38	10MHz	16QAM	38200	50RB#0	9.48	13	PASS
Band38	15MHz	QPSK	37825	1RB#0	7.88	13	PASS
Band38	15MHz	16QAM	37825	1RB#0	9.04	13	PASS
Band38	15MHz	QPSK	37825	75RB#0	8.99	13	PASS
Band38	15MHz	16QAM	37825	75RB#0	9.80	13	PASS
Band38	15MHz	QPSK	38000	1RB#0	8.00	13	PASS
Band38	15MHz	16QAM	38000	1RB#0	9.01	13	PASS
Band38	15MHz	QPSK	38000	75RB#0	8.93	13	PASS
Band38	15MHz	16QAM	38000	75RB#0	9.65	13	PASS
Band38	15MHz	QPSK	38175	1RB#0	7.88	13	PASS
Band38	15MHz	16QAM	38175	1RB#0	8.93	13	PASS
Band38	15MHz	QPSK	38175	75RB#0	8.70	13	PASS

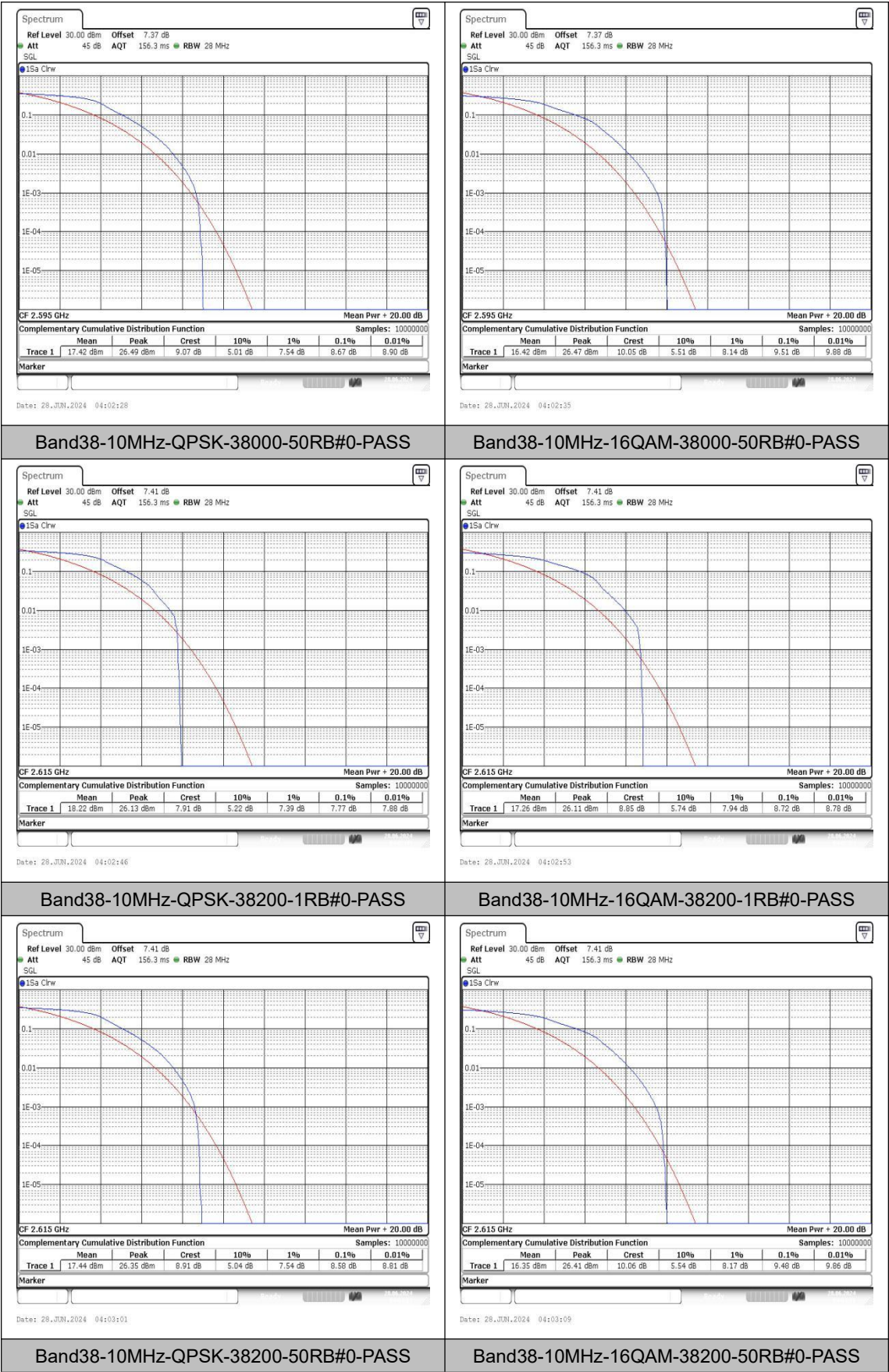
Band38	15MHz	16QAM	38175	75RB#0	9.57	13	PASS
Band38	20MHz	QPSK	37850	1RB#0	7.97	13	PASS
Band38	20MHz	16QAM	37850	1RB#0	8.96	13	PASS
Band38	20MHz	QPSK	37850	100RB#0	8.78	13	PASS
Band38	20MHz	16QAM	37850	100RB#0	9.62	13	PASS
Band38	20MHz	QPSK	38000	1RB#0	7.97	13	PASS
Band38	20MHz	16QAM	38000	1RB#0	8.93	13	PASS
Band38	20MHz	QPSK	38000	100RB#0	8.75	13	PASS
Band38	20MHz	16QAM	38000	100RB#0	9.57	13	PASS
Band38	20MHz	QPSK	38150	1RB#0	8.03	13	PASS
Band38	20MHz	16QAM	38150	1RB#0	8.96	13	PASS
Band38	20MHz	QPSK	38150	100RB#0	8.64	13	PASS
Band38	20MHz	16QAM	38150	100RB#0	9.45	13	PASS

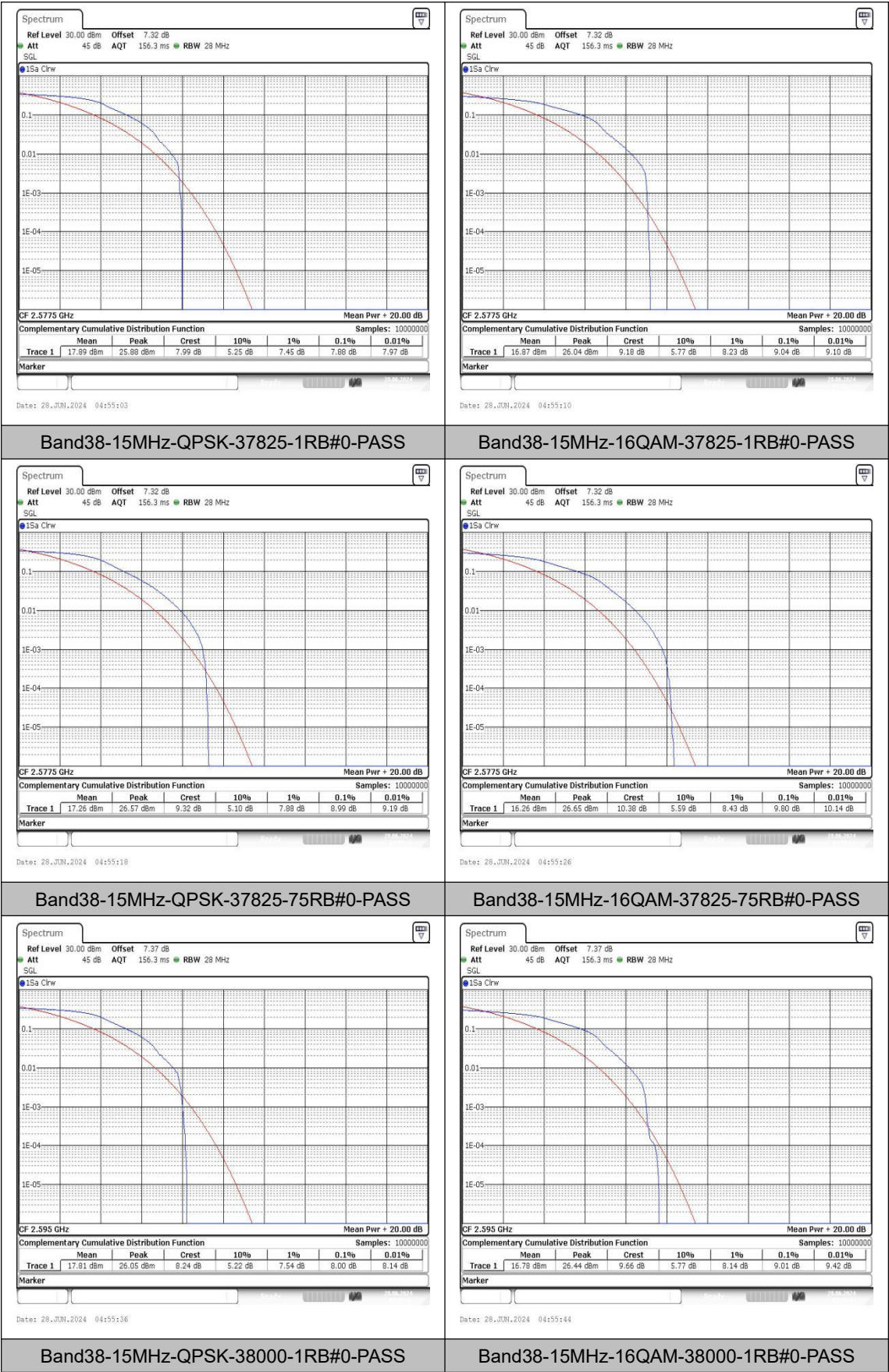
Test Graphs

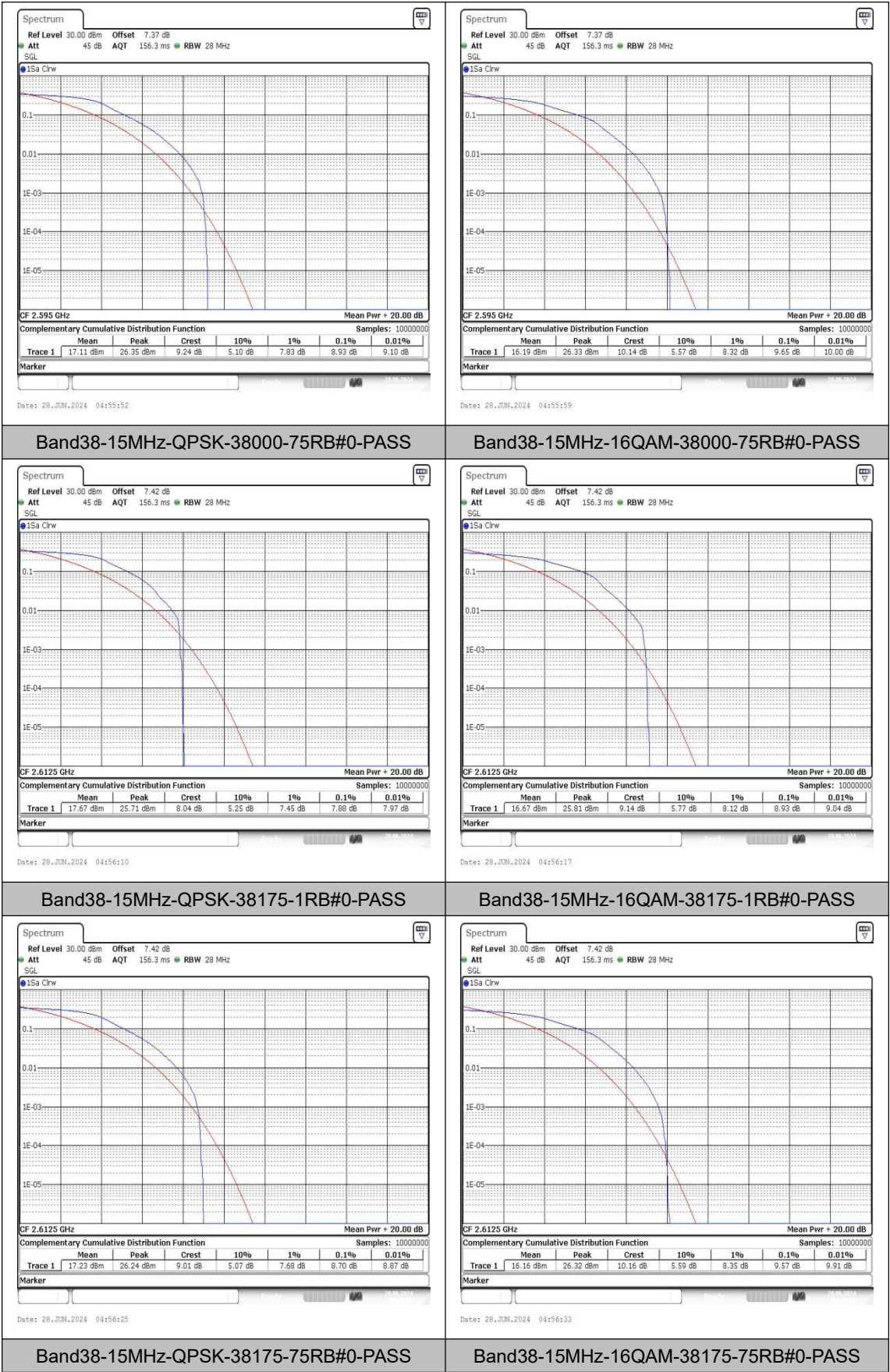


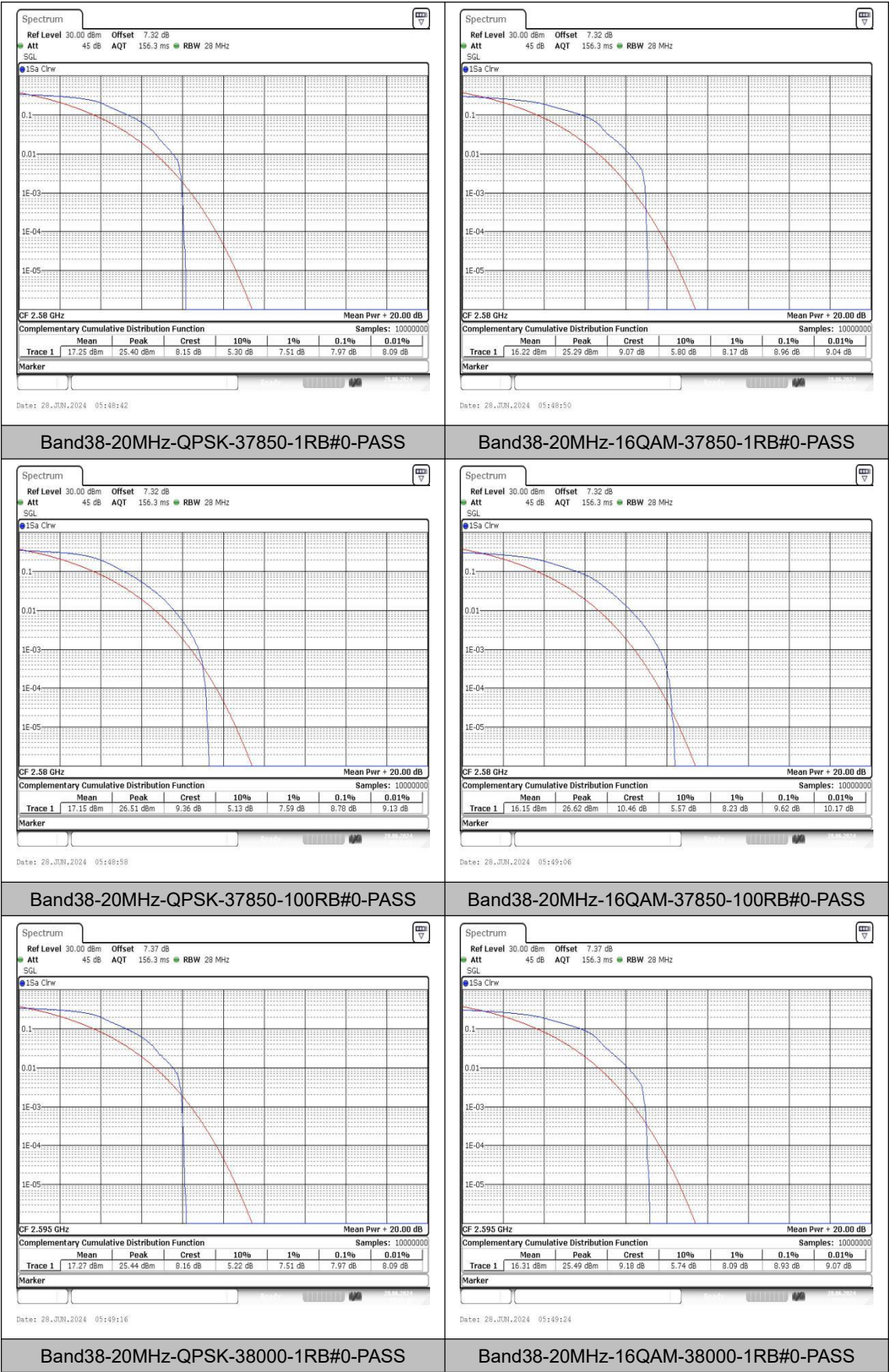


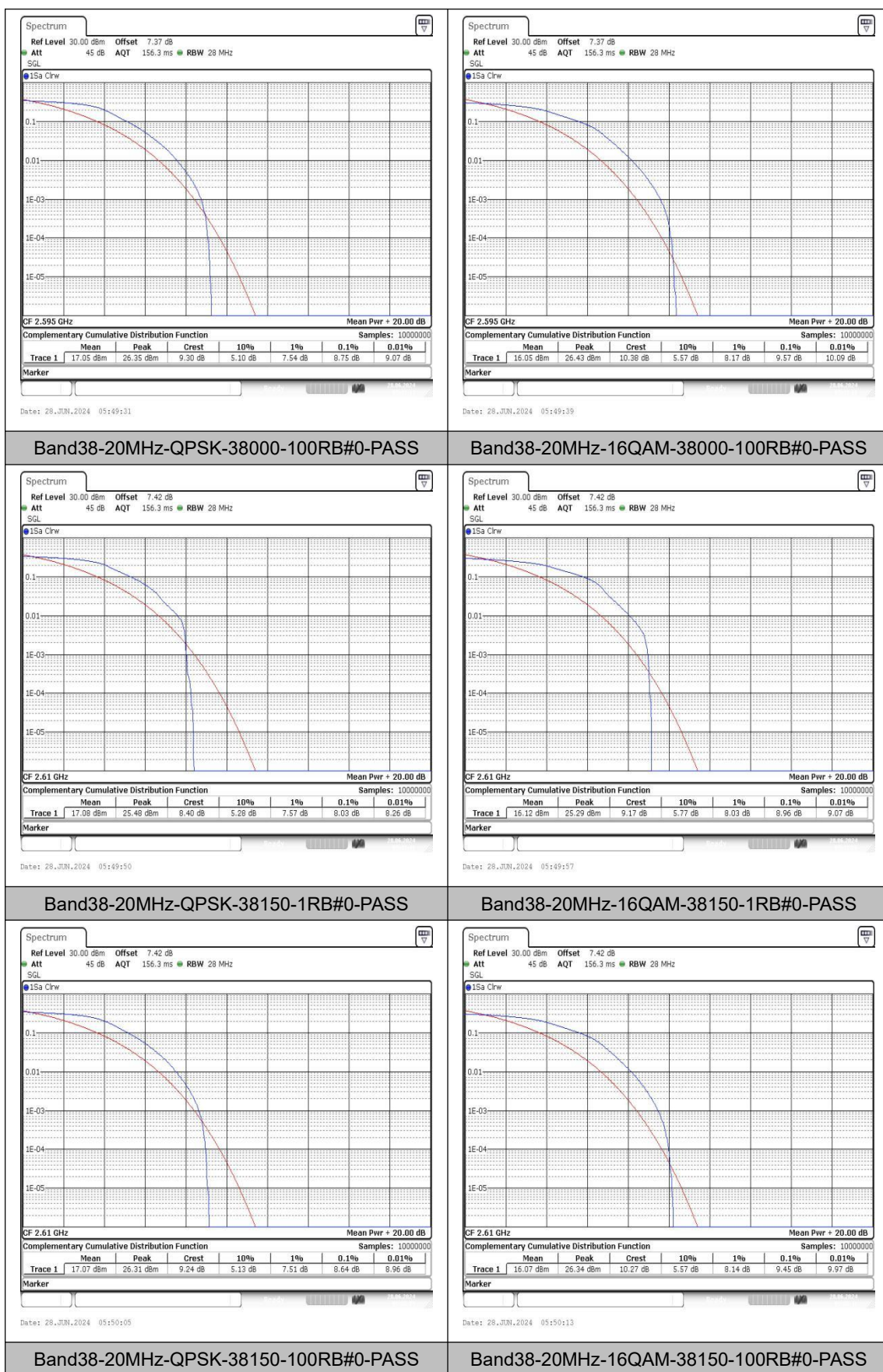










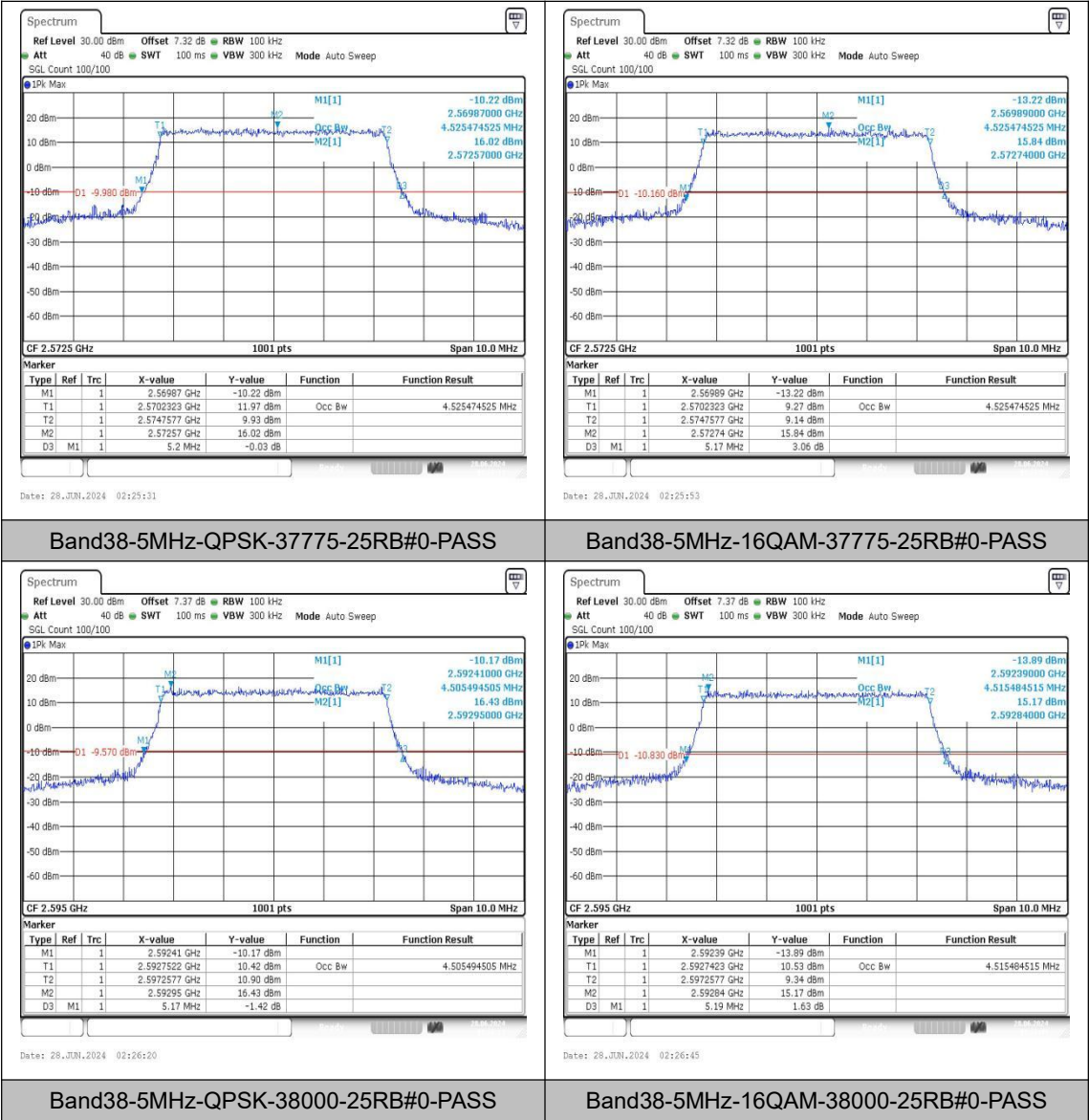


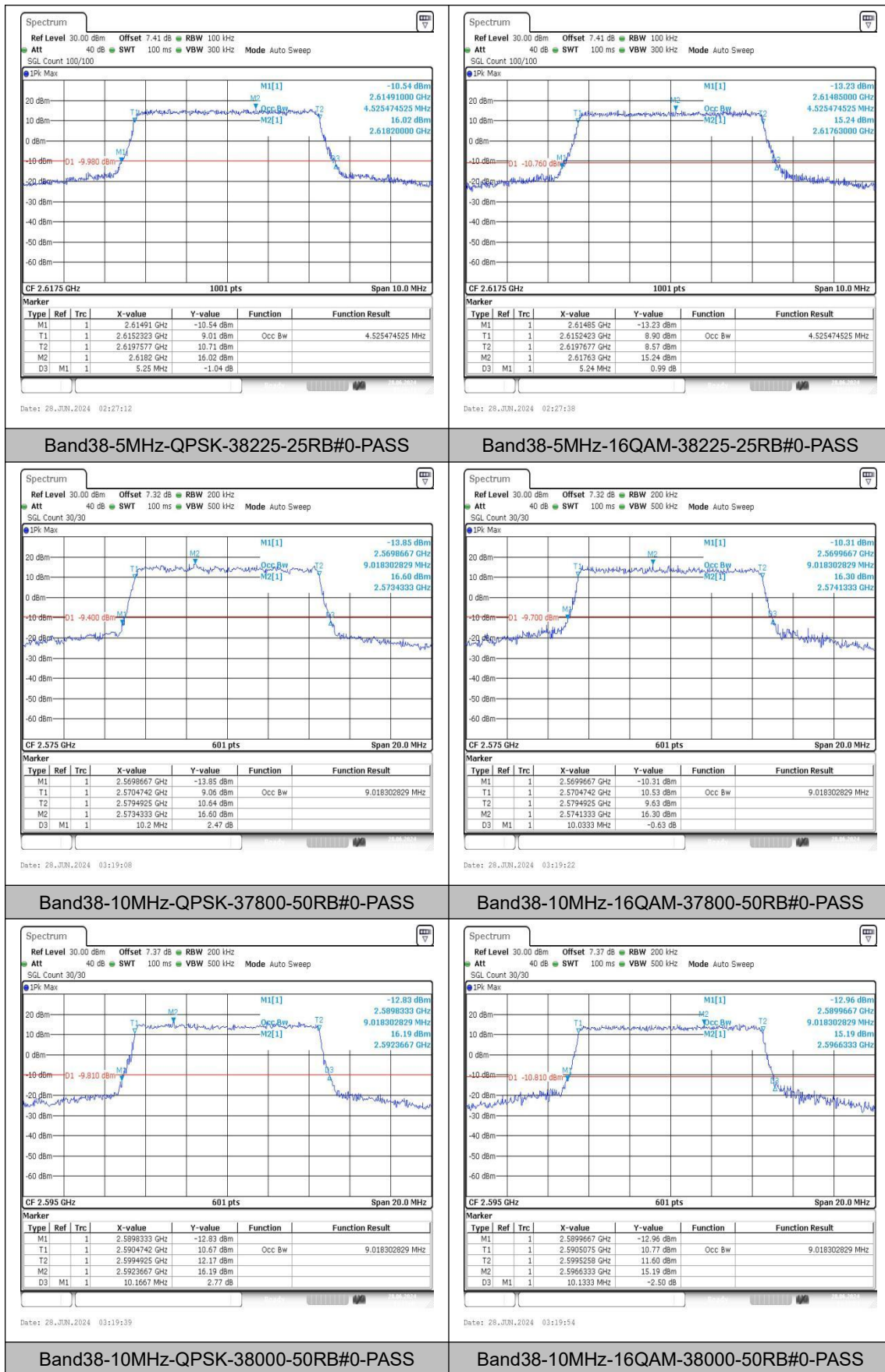
Appendix C: 26dB Bandwidth and Occupied Bandwidth

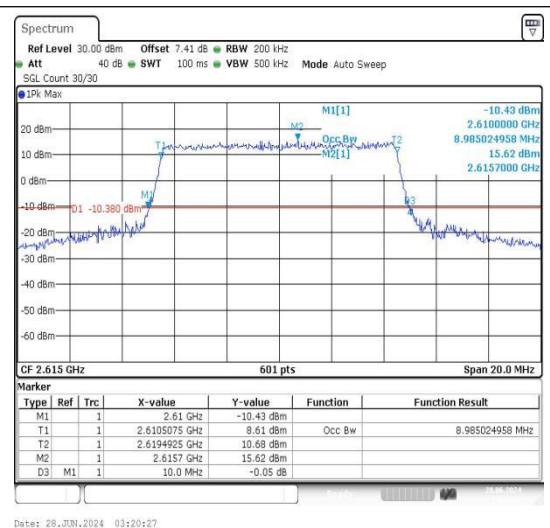
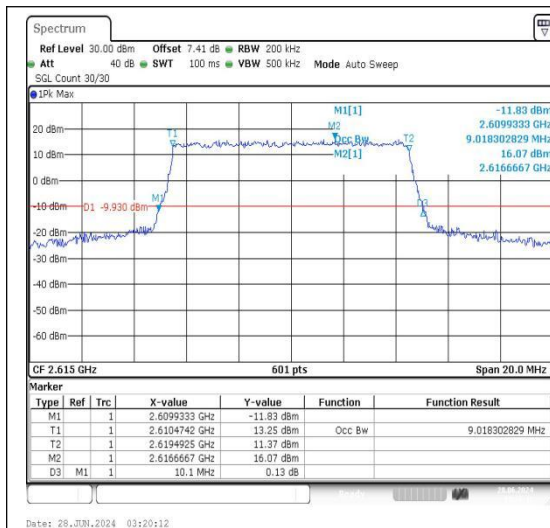
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band38	5MHz	QPSK	37775	25RB#0	4.525	5.20	PASS
Band38	5MHz	16QAM	37775	25RB#0	4.525	5.17	PASS
Band38	5MHz	QPSK	38000	25RB#0	4.505	5.17	PASS
Band38	5MHz	16QAM	38000	25RB#0	4.515	5.19	PASS
Band38	5MHz	QPSK	38225	25RB#0	4.525	5.25	PASS
Band38	5MHz	16QAM	38225	25RB#0	4.525	5.24	PASS
Band38	10MHz	QPSK	37800	50RB#0	9.018	10.20	PASS
Band38	10MHz	16QAM	37800	50RB#0	9.018	10.03	PASS
Band38	10MHz	QPSK	38000	50RB#0	9.018	10.17	PASS
Band38	10MHz	16QAM	38000	50RB#0	9.018	10.13	PASS
Band38	10MHz	QPSK	38200	50RB#0	9.018	10.10	PASS
Band38	10MHz	16QAM	38200	50RB#0	8.985	10.00	PASS
Band38	15MHz	QPSK	37825	75RB#0	13.478	15.10	PASS
Band38	15MHz	16QAM	37825	75RB#0	13.478	15.00	PASS
Band38	15MHz	QPSK	38000	75RB#0	13.478	15.00	PASS
Band38	15MHz	16QAM	38000	75RB#0	13.478	15.05	PASS
Band38	15MHz	QPSK	38175	75RB#0	13.527	15.05	PASS
Band38	15MHz	16QAM	38175	75RB#0	13.428	15.05	PASS
Band38	20MHz	QPSK	37850	100RB#0	18.103	20.07	PASS
Band38	20MHz	16QAM	37850	100RB#0	18.103	20.00	PASS
Band38	20MHz	QPSK	38000	100RB#0	18.037	20.13	PASS
Band38	20MHz	16QAM	38000	100RB#0	18.037	20.20	PASS
Band38	20MHz	QPSK	38150	100RB#0	18.103	20.13	PASS
Band38	20MHz	16QAM	38150	100RB#0	18.037	20.00	PASS

Test Graphs

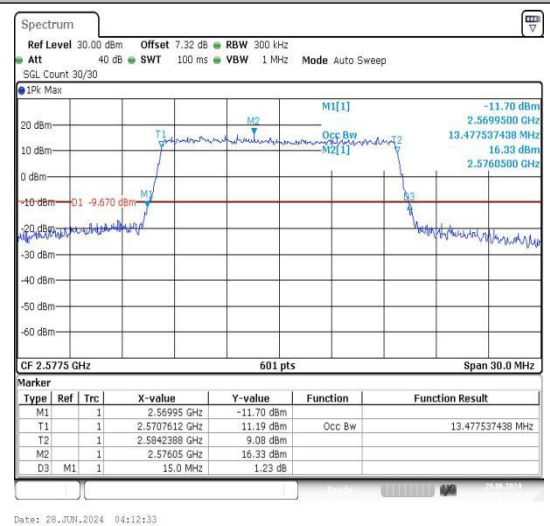
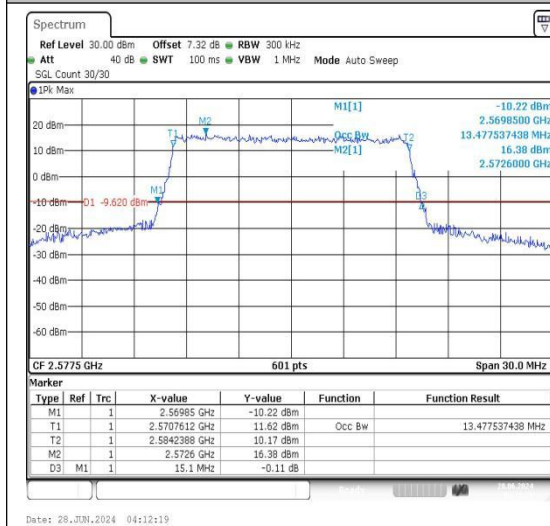






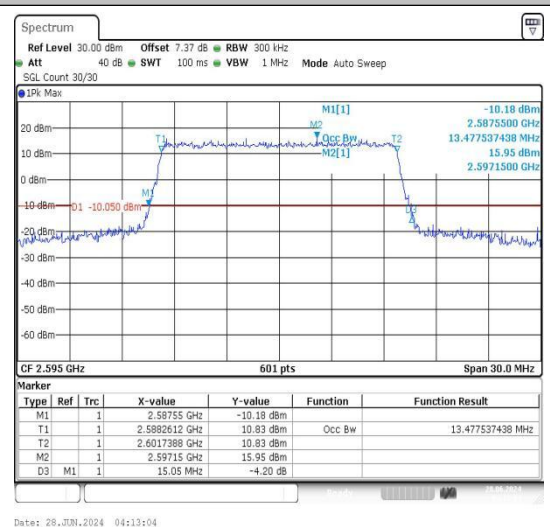
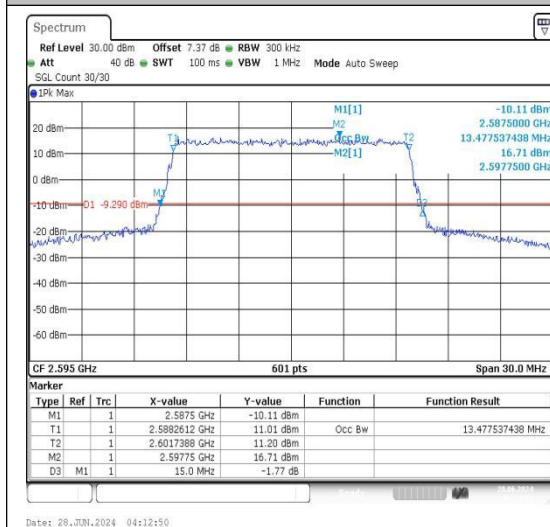
Band38-10MHz-QPSK-38200-50RB#0-PASS

Band38-10MHz-16QAM-38200-50RB#0-PASS



Band38-15MHz-QPSK-37825-75RB#0-PASS

Band38-15MHz-16QAM-37825-75RB#0-PASS



Band38-15MHz-QPSK-38000-75RB#0-PASS

Band38-15MHz-16QAM-38000-75RB#0-PASS

