

Appendix for LTE Band 30

Product Name: 5G Indoor CPE

Model No: TITAN 5000

Appendix A: Average Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band30	5MHz	QPSK	27685	1RB#0	22.12	PASS
Band30	5MHz	16QAM	27685	1RB#0	21.35	PASS
Band30	5MHz	QPSK	27685	1RB#12	22.02	PASS
Band30	5MHz	16QAM	27685	1RB#12	21.26	PASS
Band30	5MHz	QPSK	27685	1RB#24	22.04	PASS
Band30	5MHz	16QAM	27685	1RB#24	21.13	PASS
Band30	5MHz	QPSK	27685	12RB#0	20.53	PASS
Band30	5MHz	16QAM	27685	12RB#0	19.68	PASS
Band30	5MHz	QPSK	27685	12RB#6	20.51	PASS
Band30	5MHz	16QAM	27685	12RB#6	19.68	PASS
Band30	5MHz	QPSK	27685	12RB#13	20.61	PASS
Band30	5MHz	16QAM	27685	12RB#13	19.78	PASS
Band30	5MHz	QPSK	27685	25RB#0	20.05	PASS
Band30	5MHz	16QAM	27685	25RB#0	19.08	PASS
Band30	5MHz	QPSK	27710	1RB#0	22.08	PASS
Band30	5MHz	16QAM	27710	1RB#0	21.26	PASS
Band30	5MHz	QPSK	27710	1RB#12	22.27	PASS
Band30	5MHz	16QAM	27710	1RB#12	21.33	PASS
Band30	5MHz	QPSK	27710	1RB#24	22.13	PASS
Band30	5MHz	16QAM	27710	1RB#24	21.20	PASS
Band30	5MHz	QPSK	27710	12RB#0	20.55	PASS
Band30	5MHz	16QAM	27710	12RB#0	19.85	PASS
Band30	5MHz	QPSK	27710	12RB#6	20.57	PASS
Band30	5MHz	16QAM	27710	12RB#6	19.70	PASS
Band30	5MHz	QPSK	27710	12RB#13	20.54	PASS
Band30	5MHz	16QAM	27710	12RB#13	19.75	PASS
Band30	5MHz	QPSK	27710	25RB#0	19.99	PASS
Band30	5MHz	16QAM	27710	25RB#0	19.08	PASS
Band30	5MHz	QPSK	27735	1RB#0	22.26	PASS
Band30	5MHz	16QAM	27735	1RB#0	21.39	PASS
Band30	5MHz	QPSK	27735	1RB#12	22.17	PASS
Band30	5MHz	16QAM	27735	1RB#12	21.28	PASS
Band30	5MHz	QPSK	27735	1RB#24	22.06	PASS
Band30	5MHz	16QAM	27735	1RB#24	21.02	PASS
Band30	5MHz	QPSK	27735	12RB#0	20.64	PASS
Band30	5MHz	16QAM	27735	12RB#0	19.69	PASS

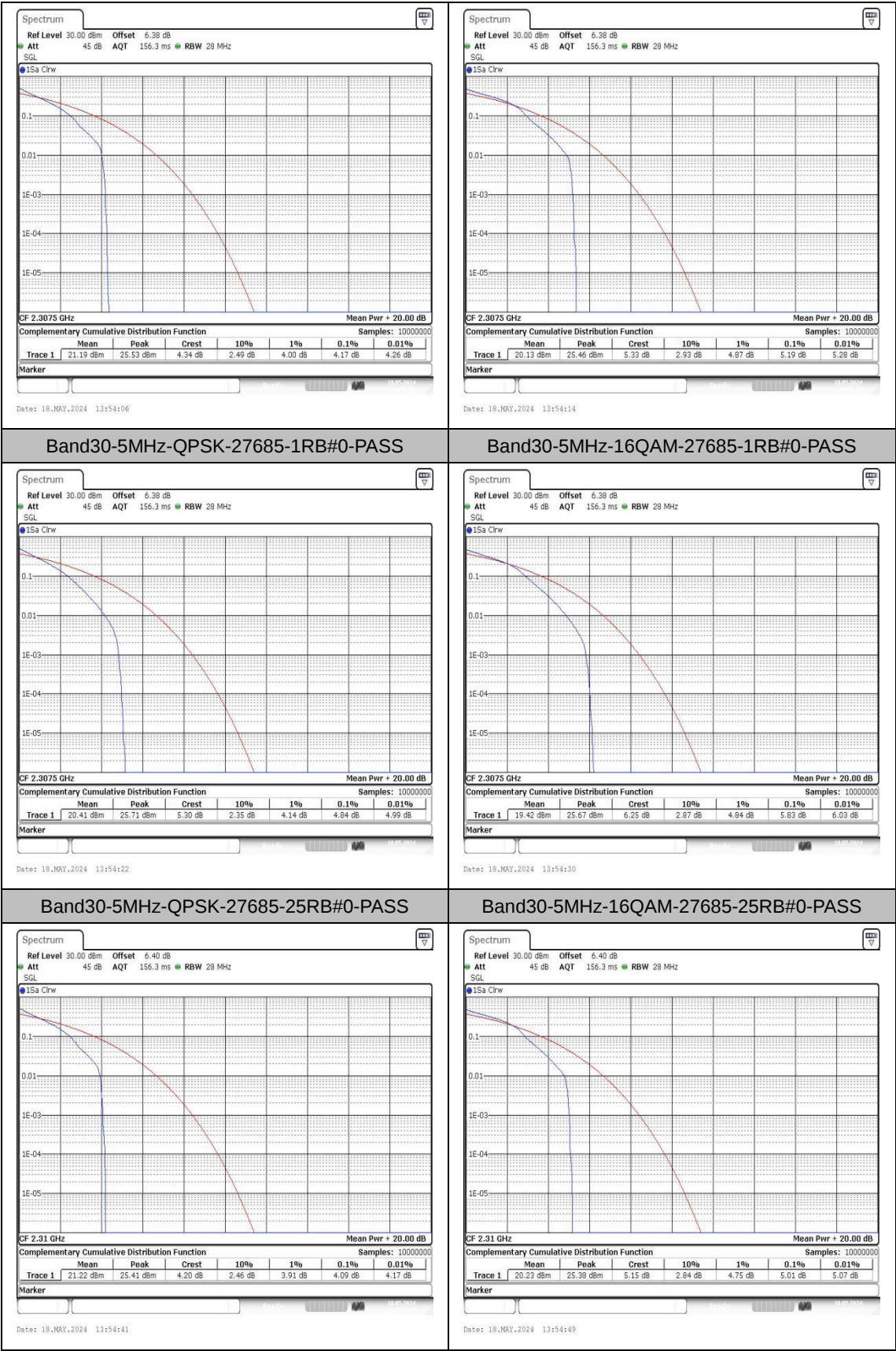
Band30	5MHz	QPSK	27735	12RB#6	20.69	PASS
Band30	5MHz	16QAM	27735	12RB#6	19.82	PASS
Band30	5MHz	QPSK	27735	12RB#13	20.57	PASS
Band30	5MHz	16QAM	27735	12RB#13	19.58	PASS
Band30	5MHz	QPSK	27735	25RB#0	20.06	PASS
Band30	5MHz	16QAM	27735	25RB#0	19.20	PASS
Band30	10MHz	QPSK	27710	1RB#0	22.04	PASS
Band30	10MHz	16QAM	27710	1RB#0	21.13	PASS
Band30	10MHz	QPSK	27710	1RB#24	22.12	PASS
Band30	10MHz	16QAM	27710	1RB#24	21.11	PASS
Band30	10MHz	QPSK	27710	1RB#49	22.05	PASS
Band30	10MHz	16QAM	27710	1RB#49	21.07	PASS
Band30	10MHz	QPSK	27710	25RB#0	20.02	PASS
Band30	10MHz	16QAM	27710	25RB#0	19.00	PASS
Band30	10MHz	QPSK	27710	25RB#12	19.98	PASS
Band30	10MHz	16QAM	27710	25RB#12	19.05	PASS
Band30	10MHz	QPSK	27710	25RB#25	20.05	PASS
Band30	10MHz	16QAM	27710	25RB#25	19.07	PASS
Band30	10MHz	QPSK	27710	50RB#0	18.50	PASS
Band30	10MHz	16QAM	27710	50RB#0	17.65	PASS

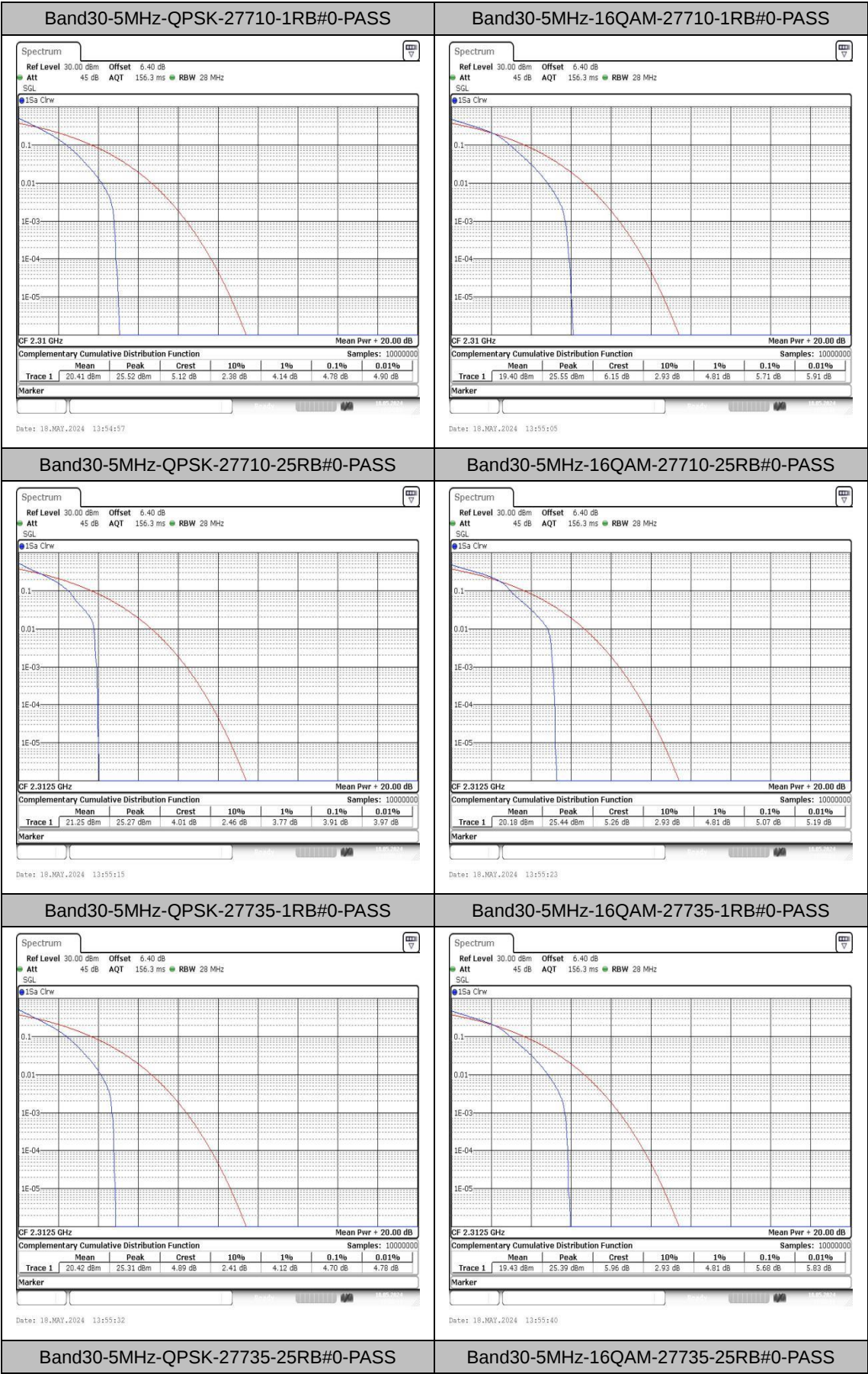
Appendix B: Peak-to-Average Ratio(CCDF)

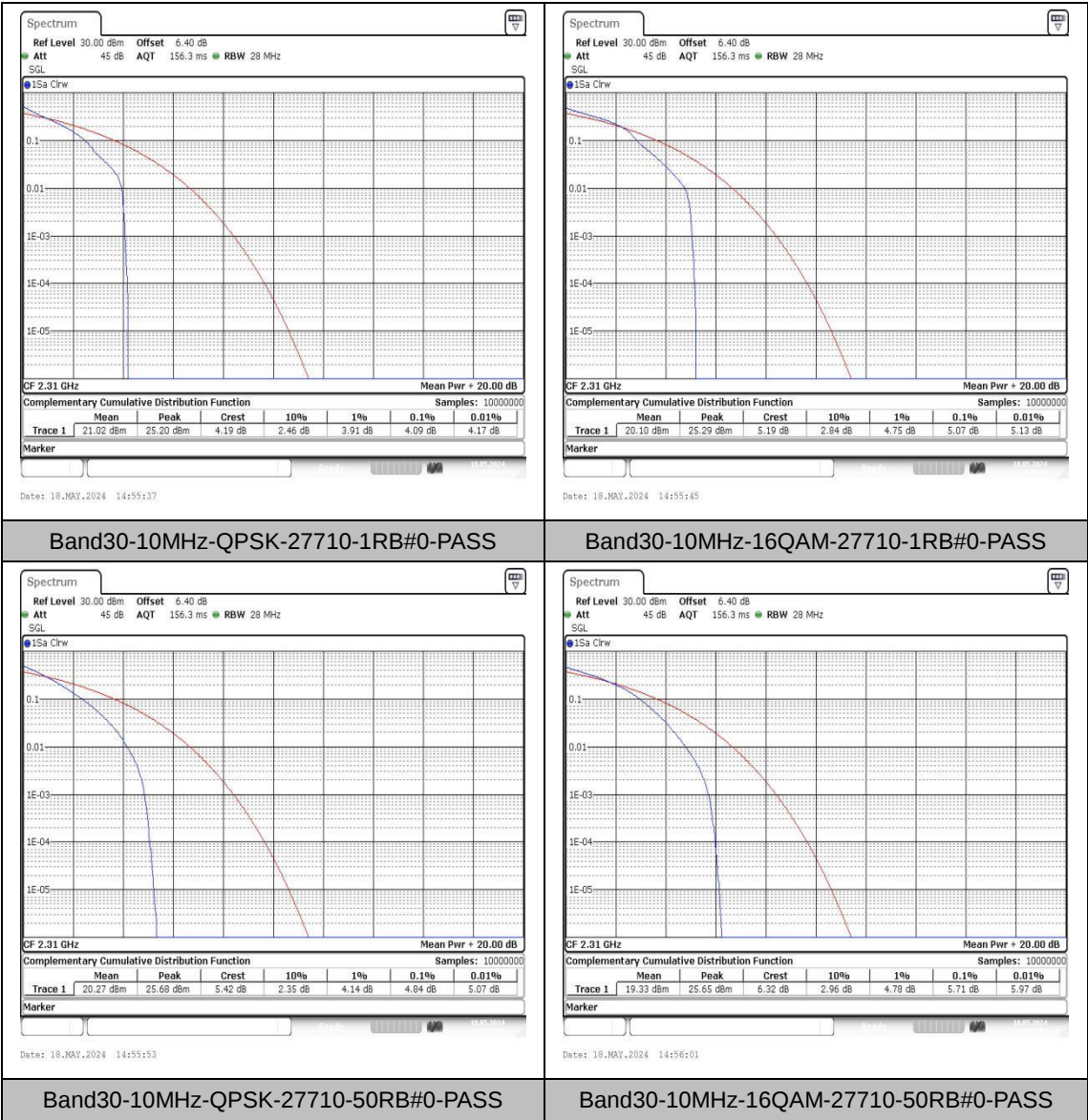
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band30	5MHz	QPSK	27685	1RB#0	4.17	13	PASS
Band30	5MHz	16QAM	27685	1RB#0	5.19	13	PASS
Band30	5MHz	QPSK	27685	25RB#0	4.84	13	PASS
Band30	5MHz	16QAM	27685	25RB#0	5.83	13	PASS
Band30	5MHz	QPSK	27710	1RB#0	4.09	13	PASS
Band30	5MHz	16QAM	27710	1RB#0	5.01	13	PASS
Band30	5MHz	QPSK	27710	25RB#0	4.78	13	PASS
Band30	5MHz	16QAM	27710	25RB#0	5.71	13	PASS
Band30	5MHz	QPSK	27735	1RB#0	3.91	13	PASS
Band30	5MHz	16QAM	27735	1RB#0	5.07	13	PASS
Band30	5MHz	QPSK	27735	25RB#0	4.70	13	PASS
Band30	5MHz	16QAM	27735	25RB#0	5.68	13	PASS
Band30	10MHz	QPSK	27710	1RB#0	4.09	13	PASS
Band30	10MHz	16QAM	27710	1RB#0	5.07	13	PASS
Band30	10MHz	QPSK	27710	50RB#0	4.84	13	PASS
Band30	10MHz	16QAM	27710	50RB#0	5.71	13	PASS

Test Graphs





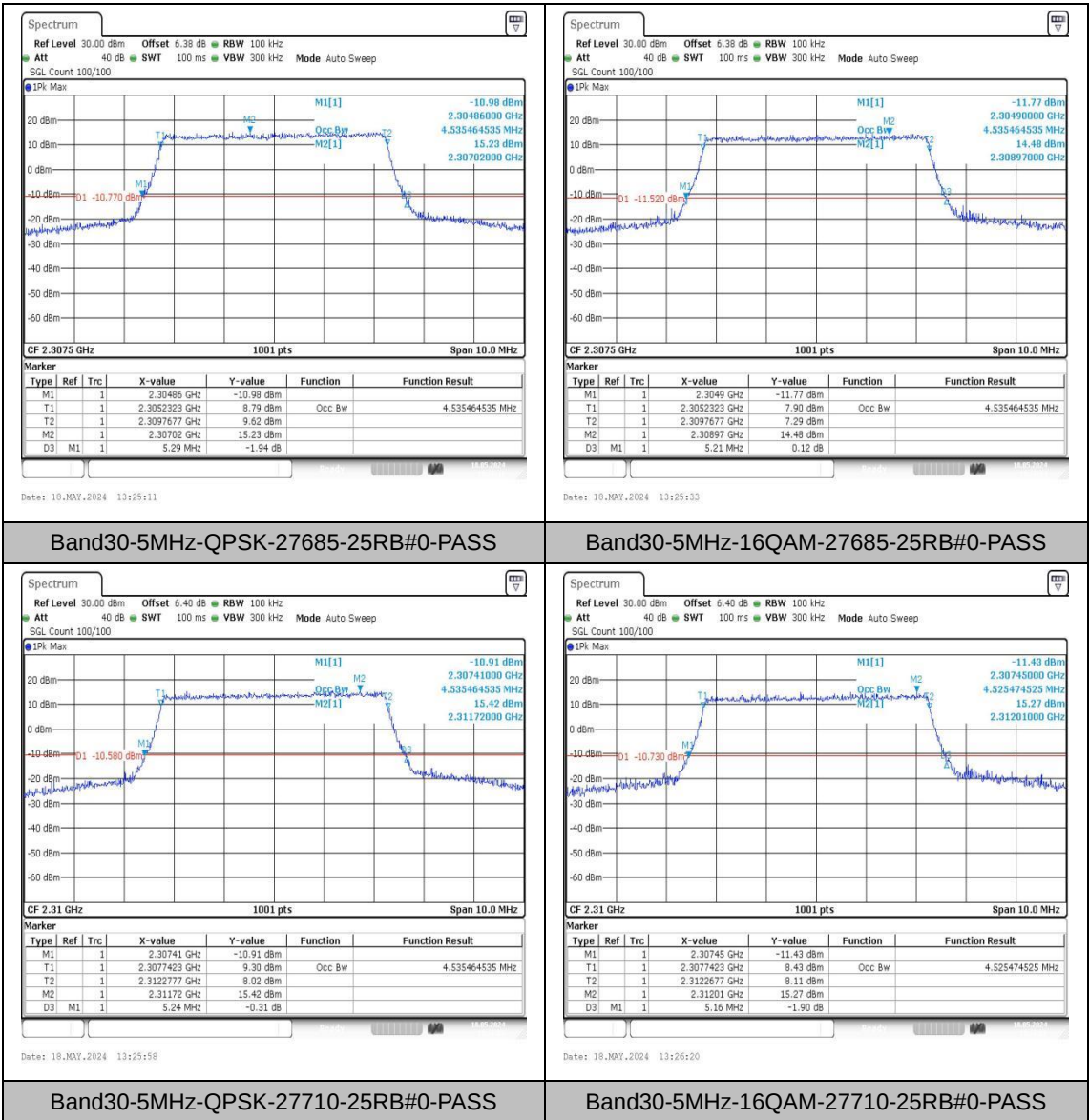


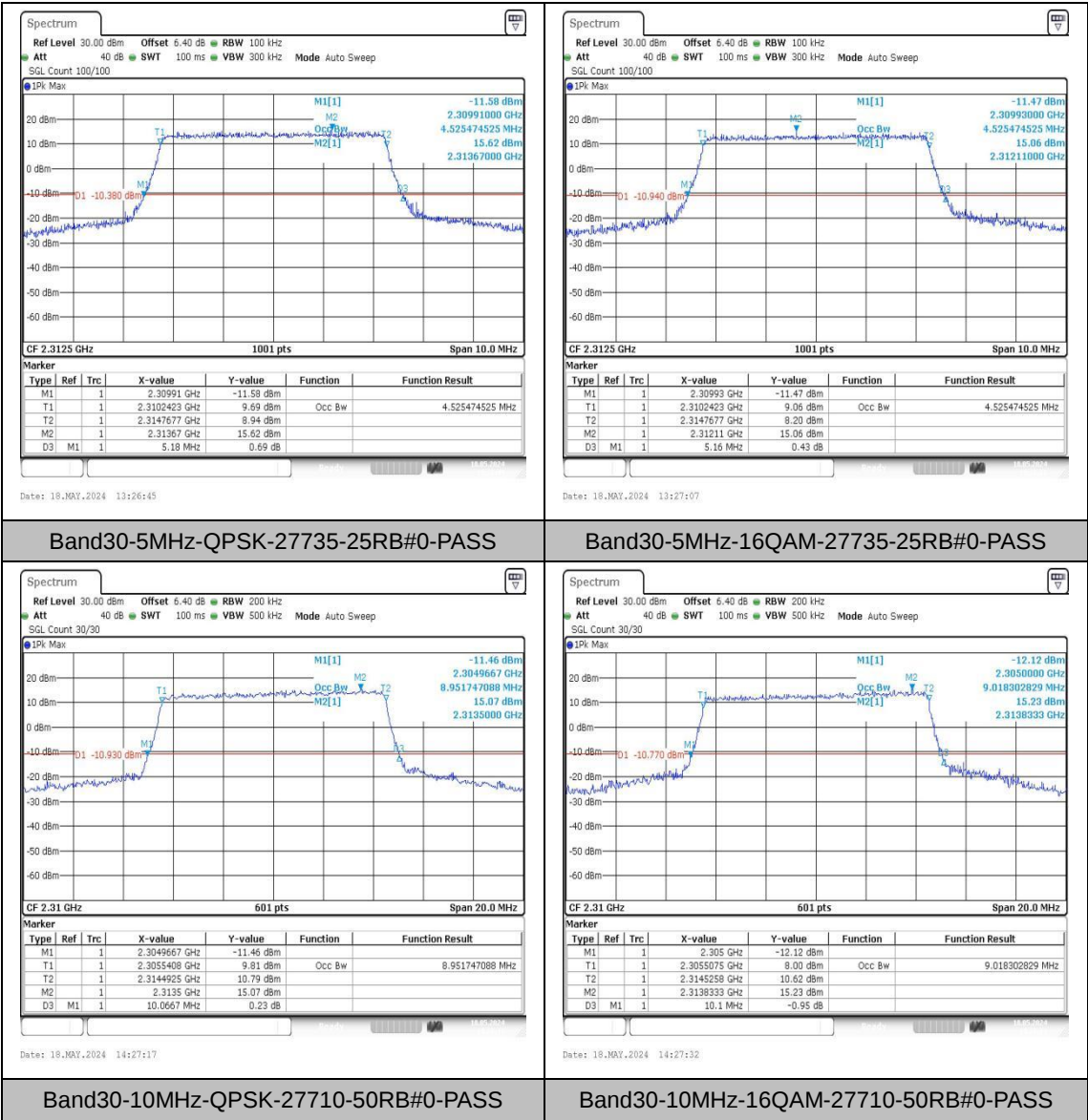
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band30	5MHz	QPSK	27685	25RB#0	4.535	5.29	PASS
Band30	5MHz	16QAM	27685	25RB#0	4.535	5.21	PASS
Band30	5MHz	QPSK	27710	25RB#0	4.535	5.24	PASS
Band30	5MHz	16QAM	27710	25RB#0	4.525	5.16	PASS
Band30	5MHz	QPSK	27735	25RB#0	4.525	5.18	PASS
Band30	5MHz	16QAM	27735	25RB#0	4.525	5.16	PASS
Band30	10MHz	QPSK	27710	50RB#0	8.952	10.07	PASS
Band30	10MHz	16QAM	27710	50RB#0	9.018	10.10	PASS

Test Graphs



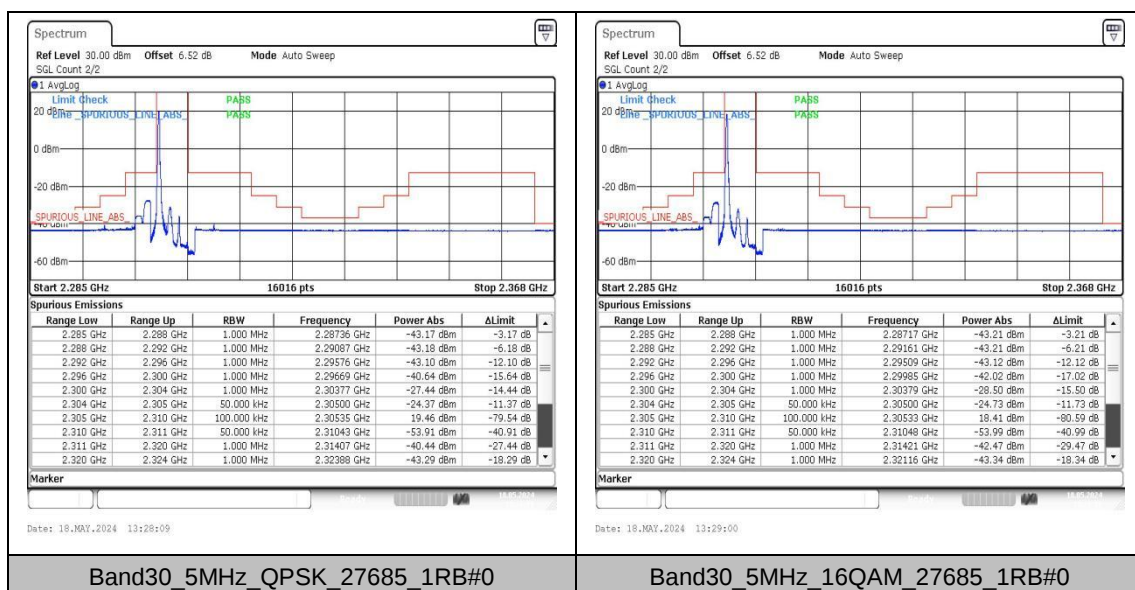


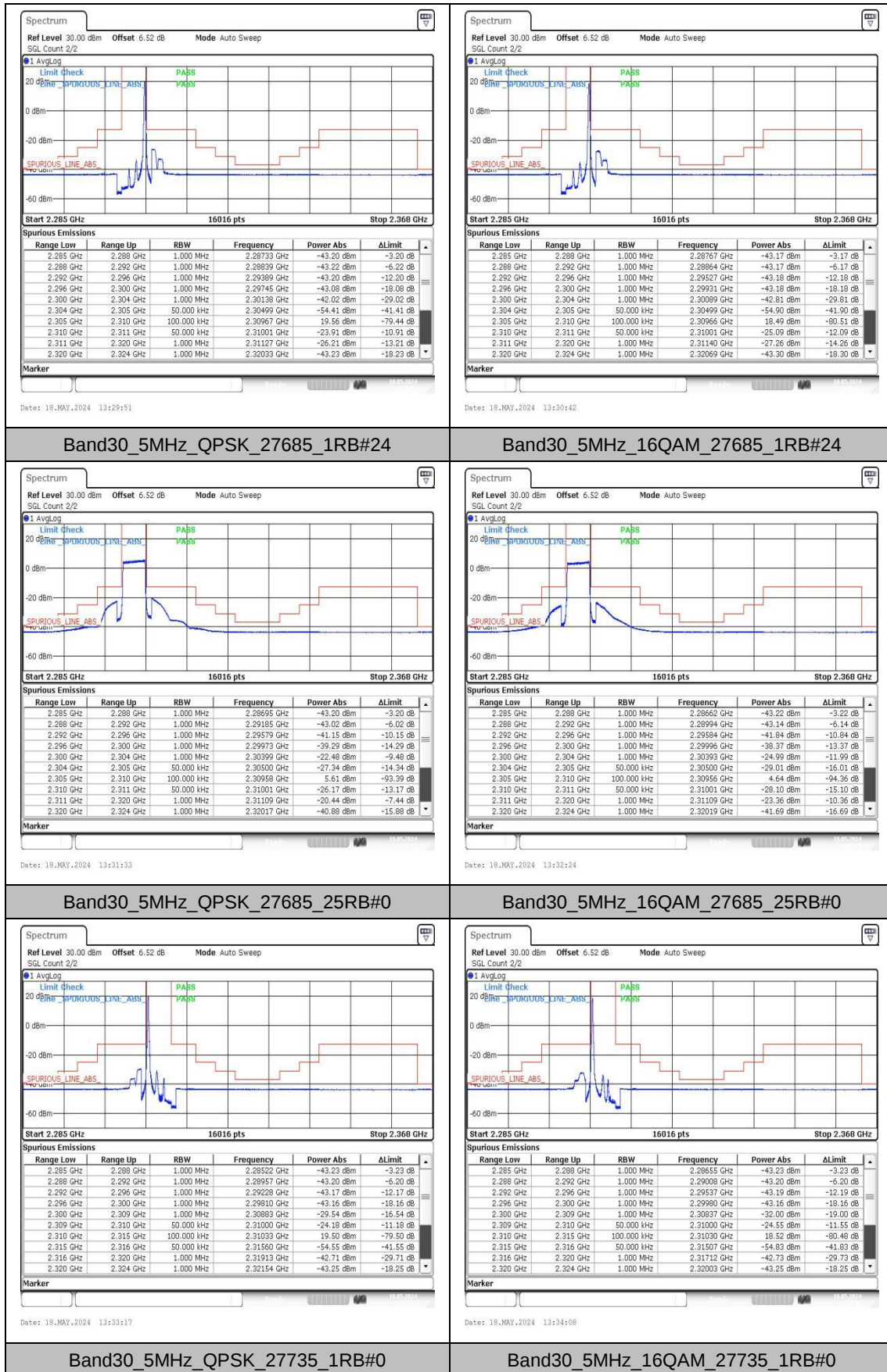
Appendix D: Band Edge

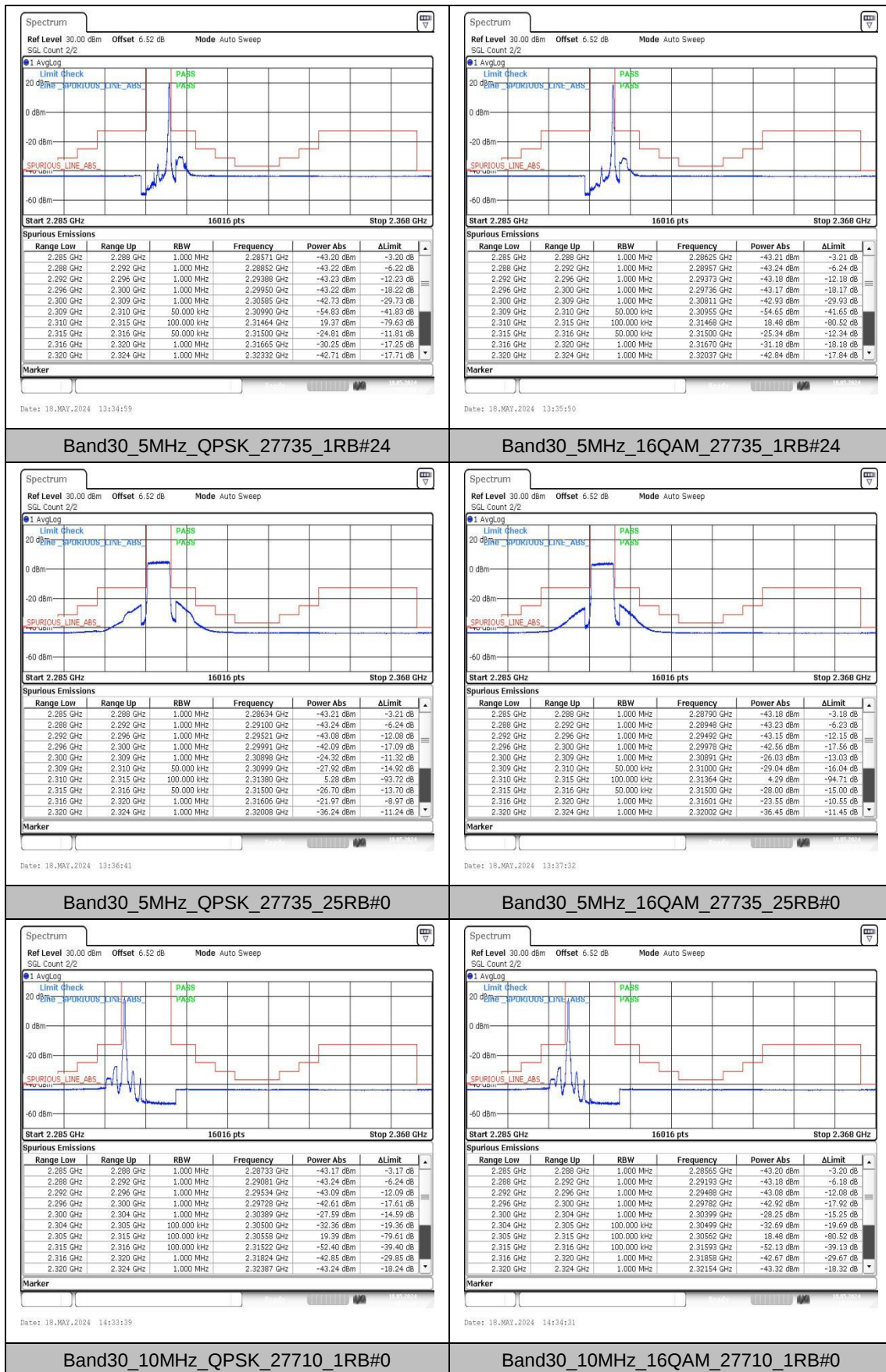
Test Result

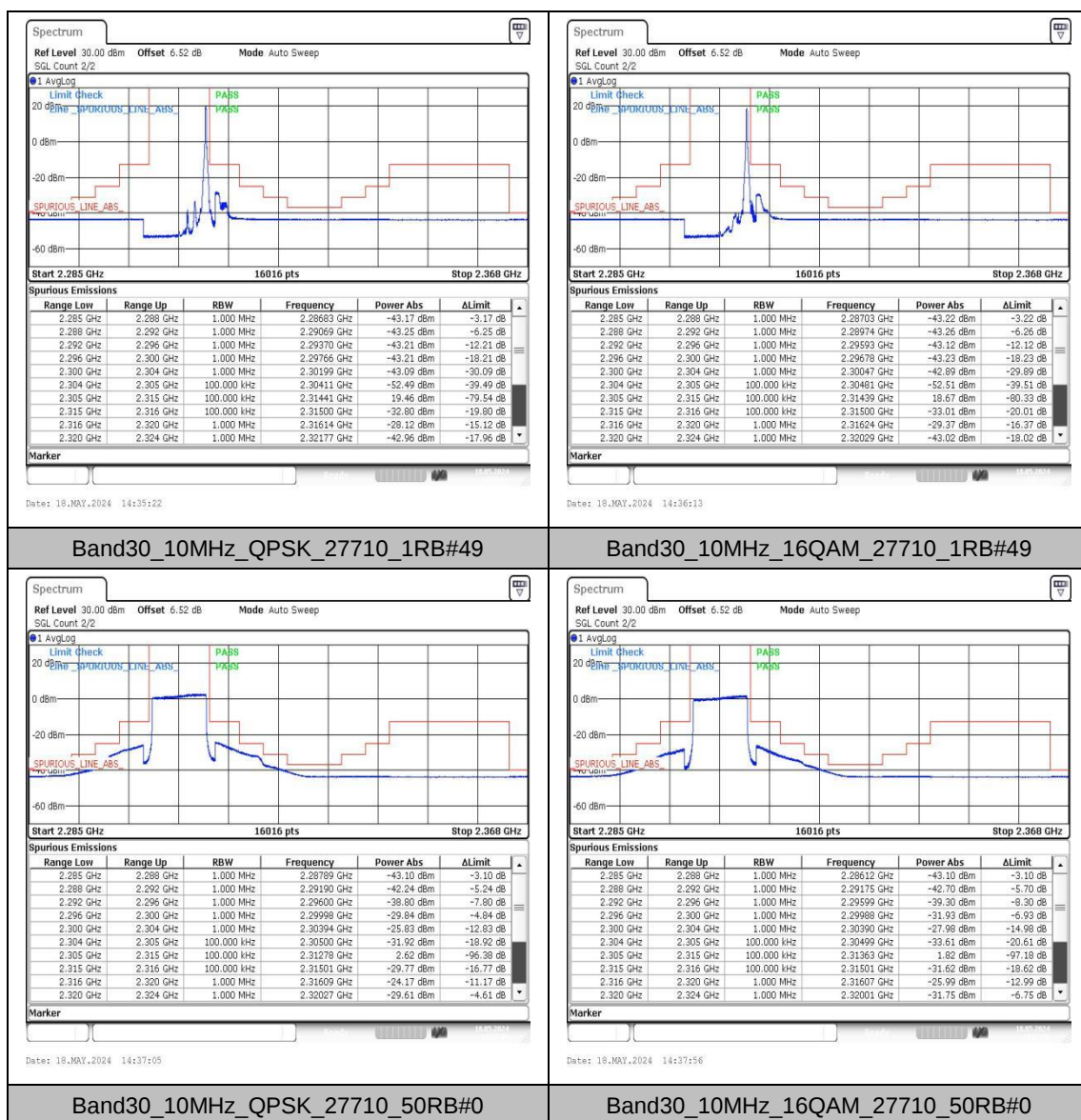
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band30	5MHz	QPSK	27685	1RB#0	-43.17	PASS
Band30	5MHz	16QAM	27685	1RB#0	-43.21	PASS
Band30	5MHz	QPSK	27685	1RB#24	-43.20	PASS
Band30	5MHz	16QAM	27685	1RB#24	-43.17	PASS
Band30	5MHz	QPSK	27685	25RB#0	-43.20	PASS
Band30	5MHz	16QAM	27685	25RB#0	-43.22	PASS
Band30	5MHz	QPSK	27735	1RB#0	-43.23	PASS
Band30	5MHz	16QAM	27735	1RB#0	-43.23	PASS
Band30	5MHz	QPSK	27735	1RB#24	-43.20	PASS
Band30	5MHz	16QAM	27735	1RB#24	-43.21	PASS
Band30	5MHz	QPSK	27735	25RB#0	-43.21	PASS
Band30	5MHz	16QAM	27735	25RB#0	-43.18	PASS
Band30	10MHz	QPSK	27710	1RB#0	-43.17	PASS
Band30	10MHz	16QAM	27710	1RB#0	-43.20	PASS
Band30	10MHz	QPSK	27710	1RB#49	-43.17	PASS
Band30	10MHz	16QAM	27710	1RB#49	-43.22	PASS
Band30	10MHz	QPSK	27710	50RB#0	-43.10	PASS
Band30	10MHz	16QAM	27710	50RB#0	-43.10	PASS

Test Graphs









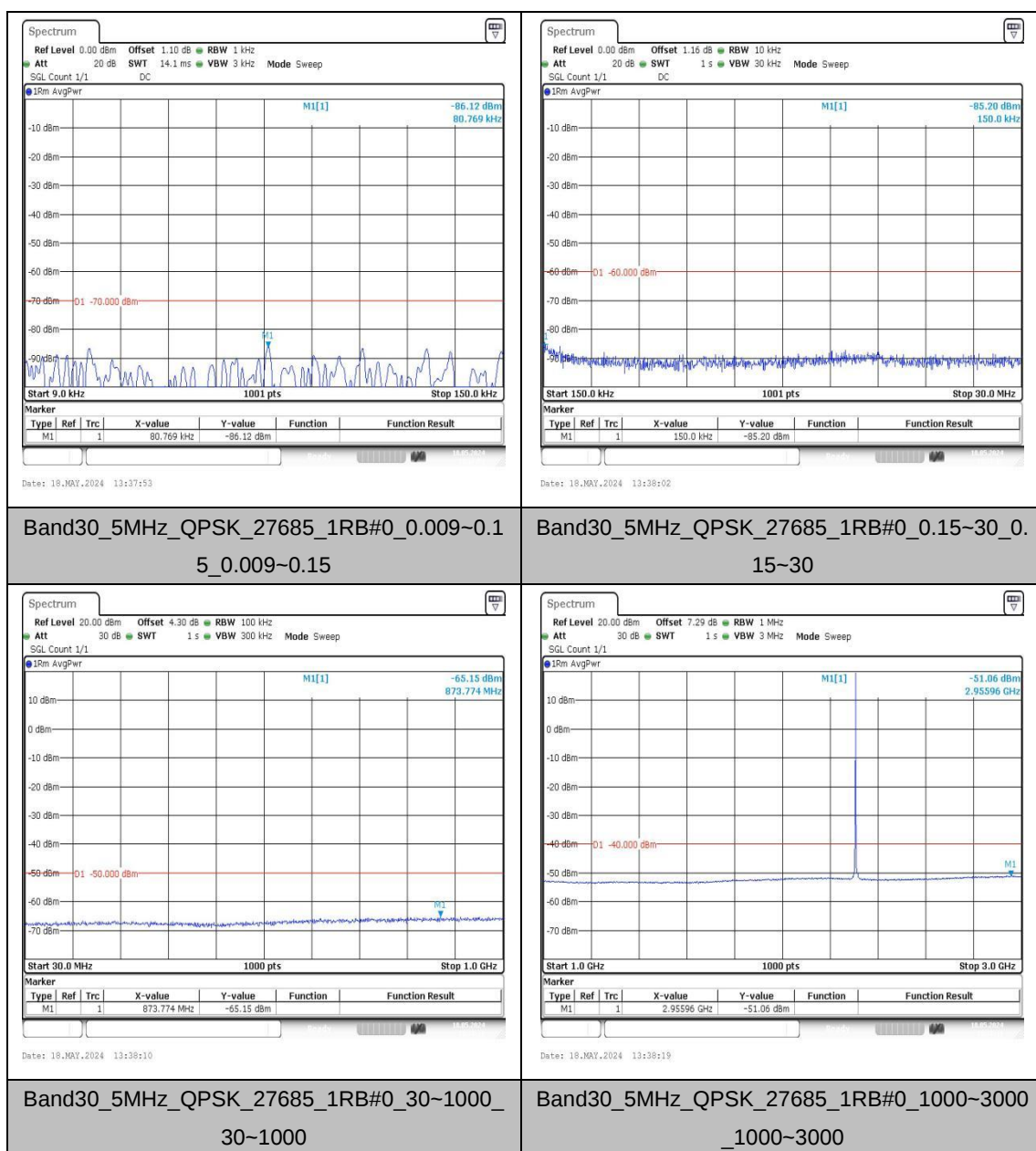
Appendix E: Conducted Spurious Emission

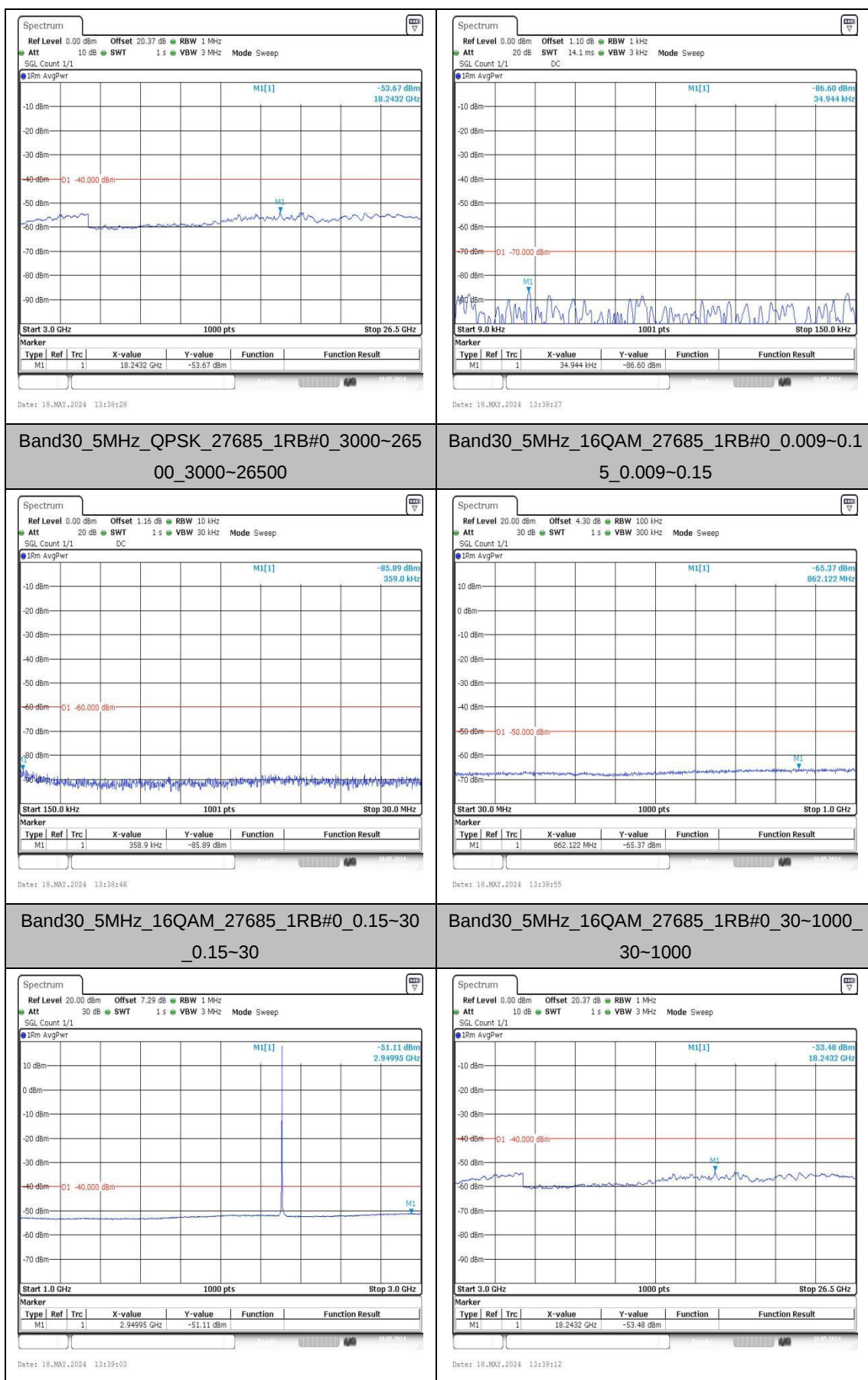
Test Result

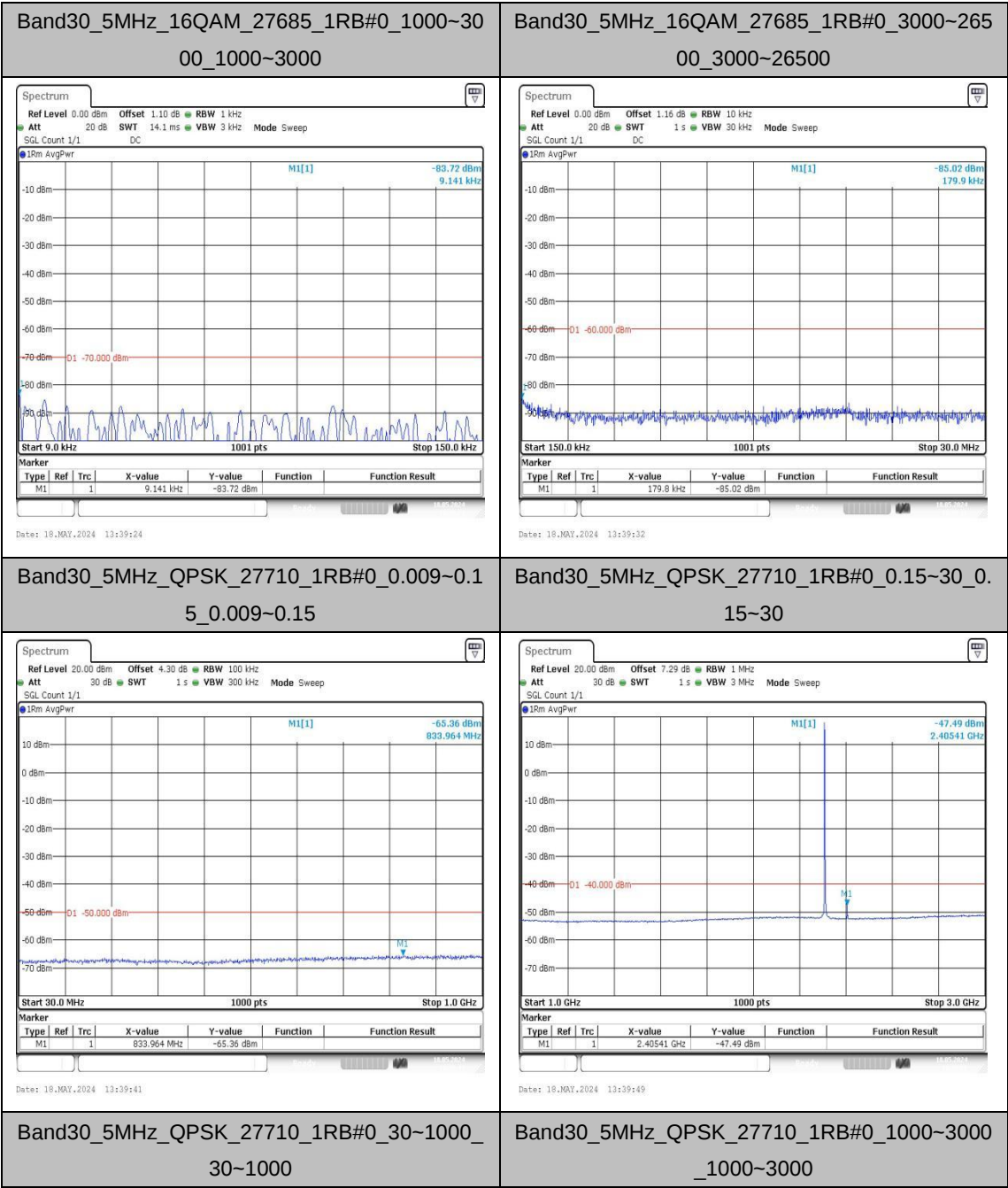
Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band30	5MHz	QPSK	27685	1RB#0	0.009~0.15	-86.12	PASS
Band30	5MHz	QPSK	27685	1RB#0	0.15~30	-85.20	PASS
Band30	5MHz	QPSK	27685	1RB#0	30~1000	-65.15	PASS
Band30	5MHz	QPSK	27685	1RB#0	1000~3000	-51.06	PASS
Band30	5MHz	QPSK	27685	1RB#0	3000~26500	-53.67	PASS
Band30	5MHz	16QAM	27685	1RB#0	0.009~0.15	-86.60	PASS
Band30	5MHz	16QAM	27685	1RB#0	0.15~30	-85.89	PASS
Band30	5MHz	16QAM	27685	1RB#0	30~1000	-65.37	PASS
Band30	5MHz	16QAM	27685	1RB#0	1000~3000	-51.11	PASS
Band30	5MHz	16QAM	27685	1RB#0	3000~26500	-53.48	PASS
Band30	5MHz	QPSK	27710	1RB#0	0.009~0.15	-83.72	PASS
Band30	5MHz	QPSK	27710	1RB#0	0.15~30	-85.02	PASS
Band30	5MHz	QPSK	27710	1RB#0	30~1000	-65.36	PASS
Band30	5MHz	QPSK	27710	1RB#0	1000~3000	-47.49	PASS
Band30	5MHz	QPSK	27710	1RB#0	3000~26500	-53.52	PASS
Band30	5MHz	16QAM	27710	1RB#0	0.009~0.15	-87.08	PASS
Band30	5MHz	16QAM	27710	1RB#0	0.15~30	-84.87	PASS
Band30	5MHz	16QAM	27710	1RB#0	30~1000	-65.30	PASS
Band30	5MHz	16QAM	27710	1RB#0	1000~3000	-51.06	PASS
Band30	5MHz	16QAM	27710	1RB#0	3000~26500	-53.76	PASS
Band30	5MHz	QPSK	27735	1RB#0	0.009~0.15	-84.24	PASS
Band30	5MHz	QPSK	27735	1RB#0	0.15~30	-85.37	PASS
Band30	5MHz	QPSK	27735	1RB#0	30~1000	-65.15	PASS
Band30	5MHz	QPSK	27735	1RB#0	1000~3000	-50.90	PASS
Band30	5MHz	QPSK	27735	1RB#0	3000~26500	-53.50	PASS
Band30	5MHz	16QAM	27735	1RB#0	0.009~0.15	-84.83	PASS
Band30	5MHz	16QAM	27735	1RB#0	0.15~30	-84.08	PASS
Band30	5MHz	16QAM	27735	1RB#0	30~1000	-65.05	PASS
Band30	5MHz	16QAM	27735	1RB#0	1000~3000	-50.98	PASS
Band30	5MHz	16QAM	27735	1RB#0	3000~26500	-53.72	PASS
Band30	10MHz	QPSK	27710	1RB#0	0.009~0.15	-85.68	PASS
Band30	10MHz	QPSK	27710	1RB#0	0.15~30	-85.23	PASS
Band30	10MHz	QPSK	27710	1RB#0	30~1000	-65.09	PASS
Band30	10MHz	QPSK	27710	1RB#0	1000~3000	-51.08	PASS
Band30	10MHz	QPSK	27710	1RB#0	3000~26500	-53.73	PASS

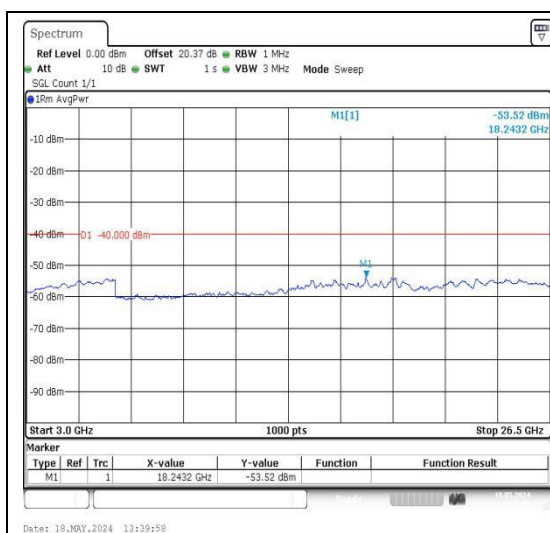
Band30	10MHz	16QAM	27710	1RB#0	0.009~0.15	-86.69	PASS
Band30	10MHz	16QAM	27710	1RB#0	0.15~30	-85.03	PASS
Band30	10MHz	16QAM	27710	1RB#0	30~1000	-65.28	PASS
Band30	10MHz	16QAM	27710	1RB#0	1000~3000	-51.04	PASS
Band30	10MHz	16QAM	27710	1RB#0	3000~26500	-53.70	PASS

Test Graphs

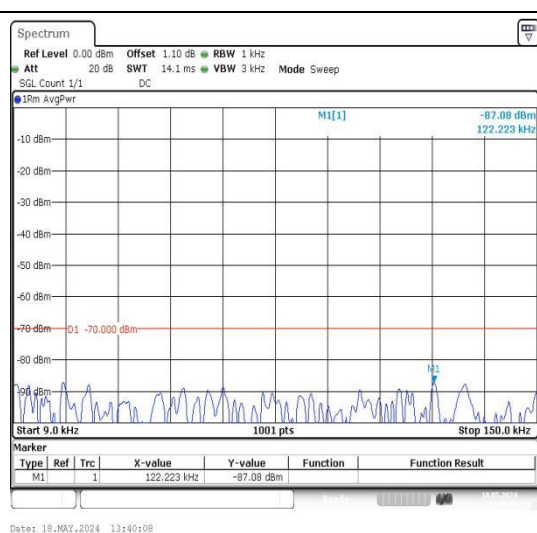




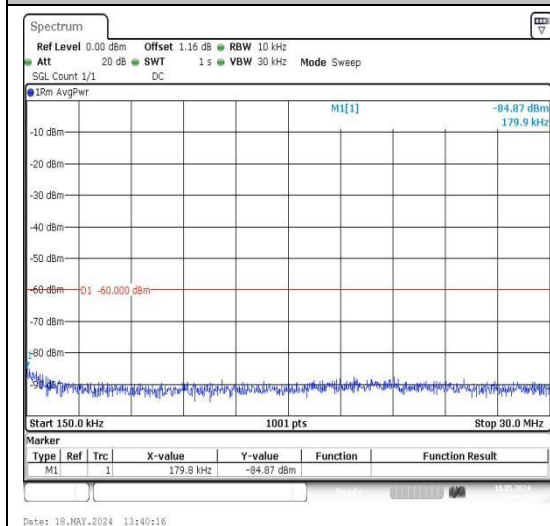




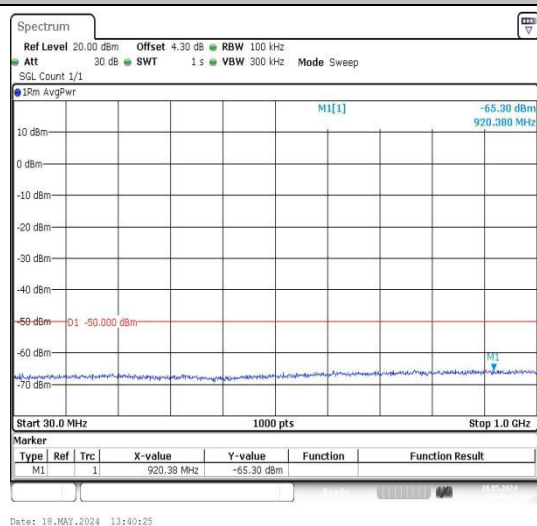
Band30_5MHz_QPSK_27710_1RB#0_3000~26500_3000~26500



Band30_5MHz_16QAM_27710_1RB#0_0.009~0.15_0.009~0.15



Band30_5MHz_16QAM_27710_1RB#0_0.15~30_0.15~30



Band30_5MHz_16QAM_27710_1RB#0_30~1000_30~1000

