

Appendix for LTE Band 41

Product Name: Smart Phone

Model No: Black G4

Appendix A: Average Power Output Data

Test Result

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
5MHz	40265	2557.5	QPSK	1	0	21.83	21.5±1	/
				1	12	22.22	21.5±1	/
				1	24	21.88	21.5±1	/
				12	0	20.91	21.5±1	1.0
				12	6	20.9	21.5±1	1.0
				12	11	20.83	21.5±1	1.0
				25	0	20.92	21.5±1	1.0
			16QAM	1	0	21.1	20.5±1	1.0
				1	12	21.5	20.5±1	1.0
				1	24	21.19	20.5±1	1.0
				12	0	19.9	20.5±1	1.0
				12	6	19.97	20.5±1	1.0
				12	11	19.92	20.5±1	1.0
				25	0	19.86	20.5±1	1.0
	40740	2605.0	QPSK	1	0	22.23	22.0±1	/
				1	12	22.58	22.0±1	/
				1	24	22.27	22.0±1	/
				12	0	21.35	22.0±1	1.0
				12	6	21.33	22.0±1	1.0
				12	11	21.35	22.0±1	1.0
				25	0	21.37	22.0±1	1.0
			16QAM	1	0	21.44	21.0±1	1.0
				1	12	21.8	21.0±1	1.0
				1	24	21.44	21.0±1	1.0
				12	0	20.32	21.0±1	1.0
				12	6	20.36	21.0±1	1.0
				12	11	20.33	21.0±1	1.0
				25	0	20.28	21.0±1	1.0
	41215	2652.5	QPSK	1	0	22.06	22.0±1	/
				1	12	22.39	22.0±1	/
				1	24	22.09	22.0±1	/
				12	0	21.15	22.0±1	1.0
				12	6	21.13	22.0±1	1.0
				12	11	21.08	22.0±1	1.0
				25	0	21.11	22.0±1	1.0
			16QAM	1	0	21.28	21.0±1	1.0

				1	12	21.64	21.0±1	1.0
				1	24	21.34	21.0±1	1.0
				12	0	20.1	21.0±1	1.0
				12	6	20.13	21.0±1	1.0
				12	11	20.12	21.0±1	1.0
				25	0	20.14	21.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
10MHz	40290	2560.0	QPSK	1	0	21.8	21.0±1	/
				1	24	21.97	21.0±1	/
				1	49	21.93	21.0±1	/
				25	0	20.88	21.0±1	1.0
				25	12	20.92	21.0±1	1.0
				25	24	20.98	21.0±1	1.0
				50	0	20.85	21.0±1	1.0
			16QAM	1	0	21.03	20.5±1	1.0
				1	24	21.2	20.5±1	1.0
				1	49	21.17	20.5±1	1.0
				25	0	19.8	20.5±1	1.0
				25	12	19.88	20.5±1	1.0
				25	24	19.98	20.5±1	1.0
				50	0	19.87	20.5±1	1.0
	40740	2605.0	QPSK	1	0	22.44	22.0±1	/
				1	24	22.51	22.0±1	/
				1	49	22.41	22.0±1	/
				25	0	21.36	22.0±1	1.0
				25	12	21.39	22.0±1	1.0
				25	24	21.28	22.0±1	1.0
				50	0	21.33	22.0±1	1.0
			16QAM	1	0	21.72	21.0±1	1.0
				1	24	21.8	21.0±1	1.0
				1	49	21.68	21.0±1	1.0
				25	0	20.32	21.0±1	1.0
				25	12	20.31	21.0±1	1.0
				25	24	20.26	21.0±1	1.0
				50	0	20.27	21.0±1	1.0
	41190	2650.0	QPSK	1	0	22.04	22.0±1	/
				1	24	22.13	22.0±1	/
				1	49	22.1	22.0±1	/
				25	0	21.08	22.0±1	1.0

				25	12	21.07	22.0±1	1.0
				25	24	21.05	22.0±1	1.0
				50	0	21.04	22.0±1	1.0
			16QAM	1	0	21.4	21.0±1	1.0
				1	24	21.49	21.0±1	1.0
				1	49	21.47	21.0±1	1.0
				25	0	20.12	21.0±1	1.0
				25	12	20.13	21.0±1	1.0
				25	24	20.1	21.0±1	1.0
				50	0	20.1	21.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
15MHz	40315	2562.5	QPSK	1	0	21.79	21.5±1	/
				1	37	22.16	21.5±1	/
				1	74	21.88	21.5±1	/
				36	0	20.88	21.5±1	1.0
				36	16	21.02	21.5±1	1.0
				36	35	21.04	21.5±1	1.0
				75	0	20.93	21.5±1	1.0
			16QAM	1	0	20.94	20.5±1	1.0
				1	37	21.33	20.5±1	1.0
				1	74	21.13	20.5±1	1.0
				36	0	19.8	20.5±1	1.0
				36	16	19.95	20.5±1	1.0
				36	35	19.96	20.5±1	1.0
				75	0	19.87	20.5±1	1.0
	40740	2605.0	QPSK	1	0	22.35	22.0±1	/
				1	37	22.51	22.0±1	/
				1	74	22.35	22.0±1	/
				36	0	21.37	22.0±1	1.0
				36	16	21.36	22.0±1	1.0
				36	35	21.35	22.0±1	1.0
				75	0	21.34	22.0±1	1.0
			16QAM	1	0	21.64	21.0±1	1.0
				1	37	21.92	21.0±1	1.0
				1	74	21.65	21.0±1	1.0
				36	0	20.25	21.0±1	1.0
				36	16	20.31	21.0±1	1.0
				36	35	20.22	21.0±1	1.0
				75	0	20.26	21.0±1	1.0

	41165	2647.5	QPSK	1	0	21.92	22.0±1	/
				1	37	22.29	22.0±1	/
				1	74	22	22.0±1	/
				36	0	21.03	22.0±1	1.0
				36	16	21.06	22.0±1	1.0
				36	35	21.06	22.0±1	1.0
				75	0	21.04	22.0±1	1.0
			16QAM	1	0	21.21	21.0±1	1.0
				1	37	21.58	21.0±1	1.0
				1	74	21.29	21.0±1	1.0
				36	0	20.06	21.0±1	1.0
				36	16	20.07	21.0±1	1.0
				36	35	20.1	21.0±1	1.0
				75	0	20.06	21.0±1	1.0

BW(MHz)	Ch	Freq(MHz)	Mode	UL RB Allocation	UL RB Offset	Average Power (dbm)	Tune up limited(dBm)	MPR (dB)
20MHz	40340	2565.0	QPSK	1	0	21.69	21.0±1	/
				1	49	22.1	21.0±1	/
				1	99	21.86	21.0±1	/
				50	0	20.79	21.0±1	1.0
				50	24	20.93	21.0±1	1.0
				50	49	21.06	21.0±1	1.0
				100	0	20.9	21.0±1	1.0
			16QAM	1	0	20.84	20.5±1	1.0
				1	49	21.31	20.5±1	1.0
				1	99	21.1	20.5±1	1.0
				50	0	19.74	20.5±1	1.0
				50	24	19.88	20.5±1	1.0
				50	49	20.01	20.5±1	1.0
				100	0	19.89	20.5±1	1.0
	40740	2605.0	QPSK	1	0	22.19	22.0±1	/
				1	49	22.61	22.0±1	/
				1	99	22.12	22.0±1	/
				50	0	21.36	22.0±1	1.0
				50	24	21.27	22.0±1	1.0
				50	49	21.22	22.0±1	1.0
				100	0	21.27	22.0±1	1.0
			16QAM	1	0	21.24	21.0±1	1.0
				1	49	21.52	21.0±1	1.0
				1	99	21.24	21.0±1	1.0

				50	0	20.34	21.0±1	1.0
				50	24	20.26	21.0±1	1.0
				50	49	20.18	21.0±1	1.0
				100	0	20.3	21.0±1	1.0
	41140	2645.0	QPSK	1	0	21.89	21.5±1	/
				1	49	22.21	21.5±1	/
				1	99	21.89	21.5±1	/
				50	0	20.97	21.5±1	1.0
				50	24	21.02	21.5±1	1.0
				50	49	21.02	21.5±1	1.0
				100	0	20.95	21.5±1	1.0
			16QAM	1	0	21.16	21.0±1	1.0
				1	49	21.53	21.0±1	1.0
				1	99	21.26	21.0±1	1.0
				50	0	20.04	21.0±1	1.0
				50	24	20.09	21.0±1	1.0
				50	49	20.09	21.0±1	1.0
				100	0	20.04	21.0±1	1.0

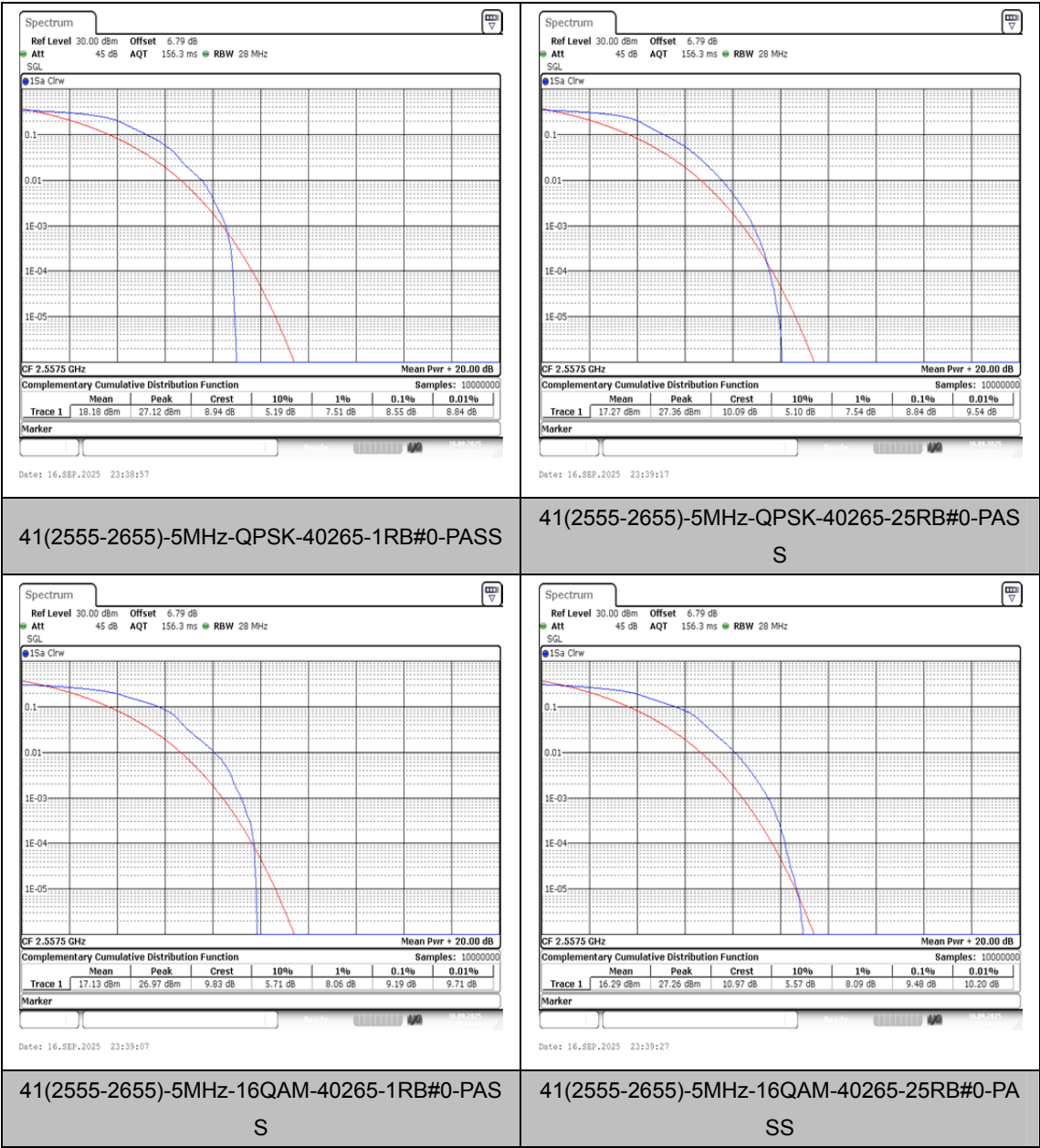
Appendix B: Peak-to-Average Ratio(CCDF)

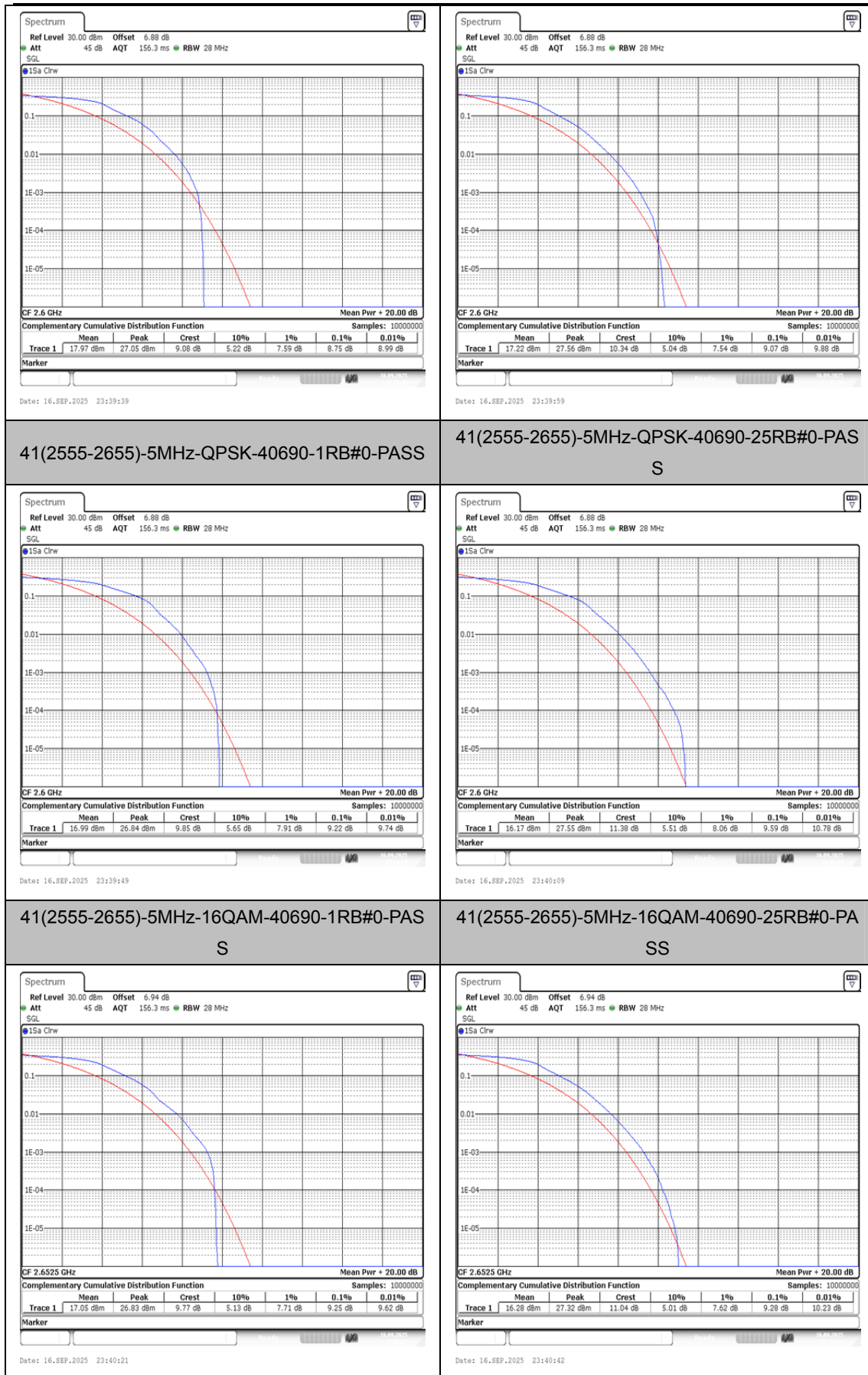
Test Result

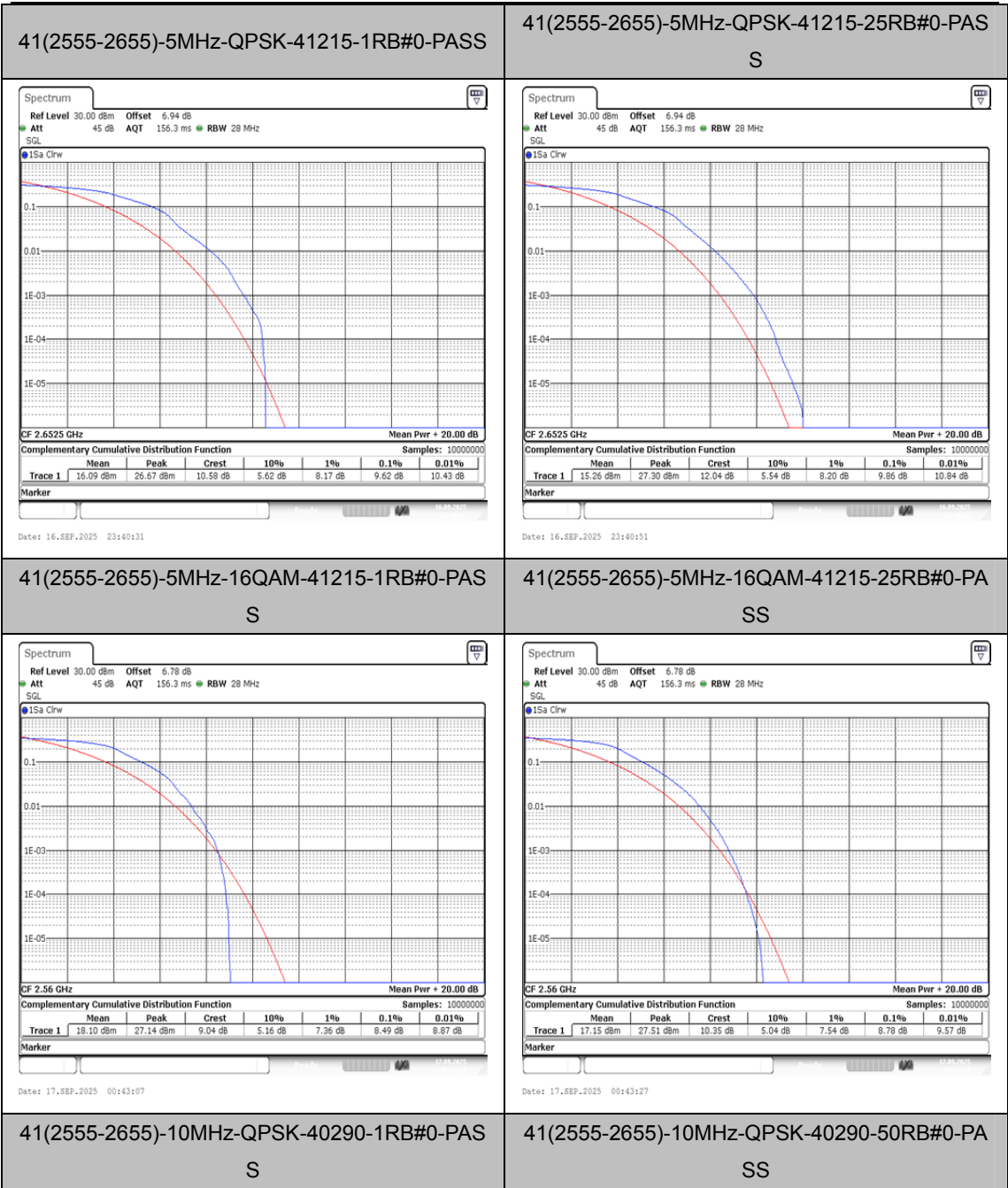
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
41(2555-2655)	5MHz	QPSK	40265	1RB#0	8.55	13	PASS
41(2555-2655)	5MHz	QPSK	40265	25RB#0	8.84	13	PASS
41(2555-2655)	5MHz	16QAM	40265	1RB#0	9.19	13	PASS
41(2555-2655)	5MHz	16QAM	40265	25RB#0	9.48	13	PASS
41(2555-2655)	5MHz	QPSK	40690	1RB#0	8.75	13	PASS
41(2555-2655)	5MHz	QPSK	40690	25RB#0	9.07	13	PASS
41(2555-2655)	5MHz	16QAM	40690	1RB#0	9.22	13	PASS
41(2555-2655)	5MHz	16QAM	40690	25RB#0	9.59	13	PASS
41(2555-2655)	5MHz	QPSK	41215	1RB#0	9.25	13	PASS
41(2555-2655)	5MHz	QPSK	41215	25RB#0	9.28	13	PASS
41(2555-2655)	5MHz	16QAM	41215	1RB#0	9.62	13	PASS
41(2555-2655)	5MHz	16QAM	41215	25RB#0	9.86	13	PASS
41(2555-2655)	10MHz	QPSK	40290	1RB#0	8.49	13	PASS
41(2555-2655)	10MHz	QPSK	40290	50RB#0	8.78	13	PASS
41(2555-2655)	10MHz	16QAM	40290	1RB#0	9.13	13	PASS
41(2555-2655)	10MHz	16QAM	40290	50RB#0	9.57	13	PASS
41(2555-2655)	10MHz	QPSK	40690	1RB#0	8.72	13	PASS
41(2555-2655)	10MHz	QPSK	40690	50RB#0	8.99	13	PASS
41(2555-2655)	10MHz	16QAM	40690	1RB#0	9.54	13	PASS
41(2555-2655)	10MHz	16QAM	40690	50RB#0	9.74	13	PASS
41(2555-2655)	10MHz	QPSK	41190	1RB#0	9.13	13	PASS
41(2555-2655)	10MHz	QPSK	41190	50RB#0	9.19	13	PASS
41(2555-2655)	10MHz	16QAM	41190	1RB#0	9.62	13	PASS
41(2555-2655)	10MHz	16QAM	41190	50RB#0	9.86	13	PASS
41(2555-2655)	15MHz	QPSK	40315	1RB#0	8.52	13	PASS
41(2555-2655)	15MHz	QPSK	40315	75RB#0	9.07	13	PASS
41(2555-2655)	15MHz	16QAM	40315	1RB#0	9.22	13	PASS
41(2555-2655)	15MHz	16QAM	40315	75RB#0	9.62	13	PASS
41(2555-2655)	15MHz	QPSK	40690	1RB#0	8.75	13	PASS
41(2555-2655)	15MHz	QPSK	40690	75RB#0	9.33	13	PASS
41(2555-2655)	15MHz	16QAM	40690	1RB#0	9.65	13	PASS
41(2555-2655)	15MHz	16QAM	40690	75RB#0	9.83	13	PASS
41(2555-2655)	15MHz	QPSK	41165	1RB#0	9.19	13	PASS
41(2555-2655)	15MHz	QPSK	41165	75RB#0	9.51	13	PASS
41(2555-2655)	15MHz	16QAM	41165	1RB#0	9.54	13	PASS

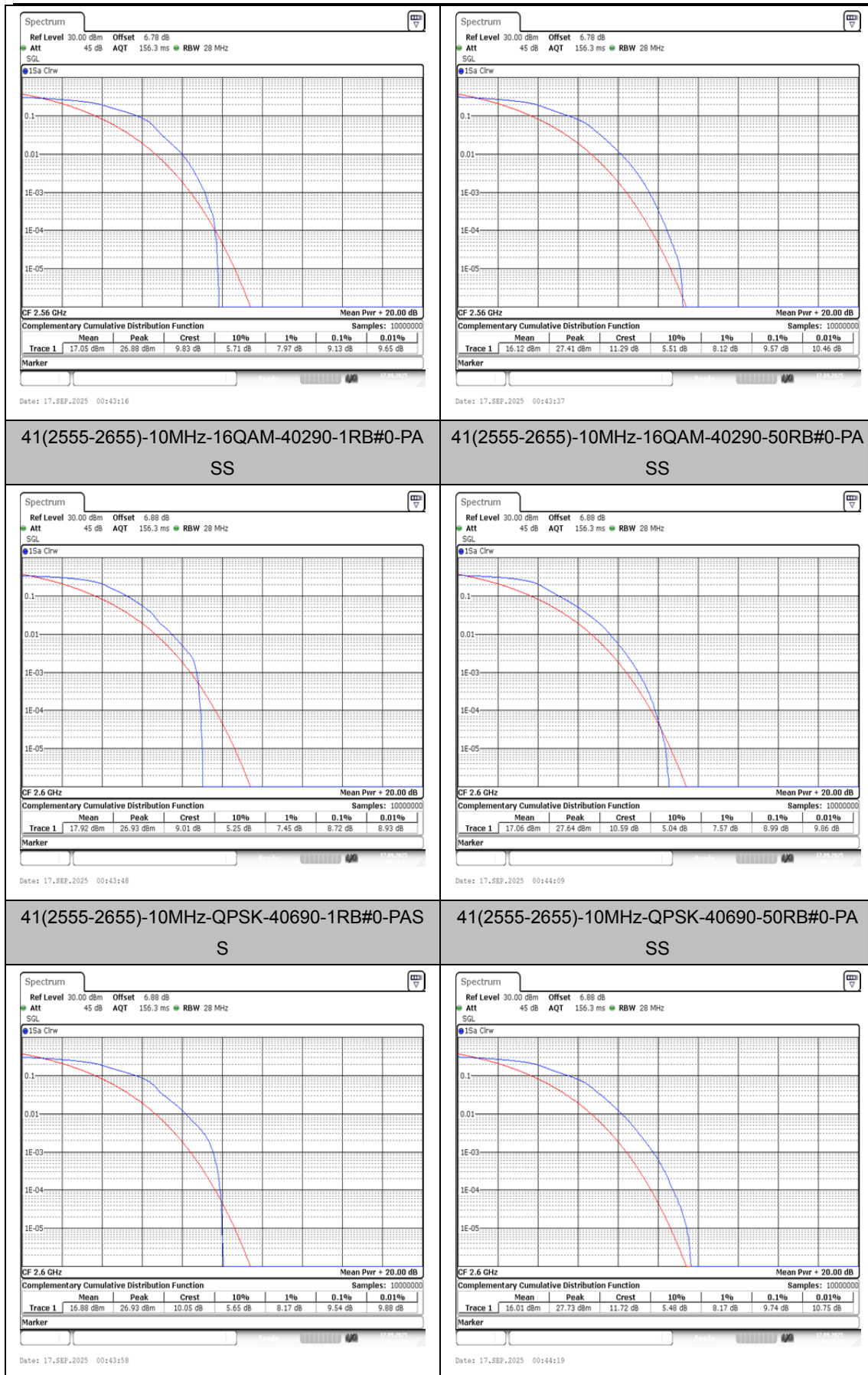
41(2555-2655)	15MHz	16QAM	41165	75RB#0	9.94	13	PASS
41(2555-2655)	20MHz	QPSK	40340	1RB#0	8.12	13	PASS
41(2555-2655)	20MHz	QPSK	40340	100RB#0	8.75	13	PASS
41(2555-2655)	20MHz	16QAM	40340	1RB#0	8.90	13	PASS
41(2555-2655)	20MHz	16QAM	40340	100RB#0	9.57	13	PASS
41(2555-2655)	20MHz	QPSK	40690	1RB#0	8.67	13	PASS
41(2555-2655)	20MHz	QPSK	40690	100RB#0	8.99	13	PASS
41(2555-2655)	20MHz	16QAM	40690	1RB#0	9.59	13	PASS
41(2555-2655)	20MHz	16QAM	40690	100RB#0	9.65	13	PASS
41(2555-2655)	20MHz	QPSK	41140	1RB#0	8.43	13	PASS
41(2555-2655)	20MHz	QPSK	41140	100RB#0	8.99	13	PASS
41(2555-2655)	20MHz	16QAM	41140	1RB#0	9.25	13	PASS
41(2555-2655)	20MHz	16QAM	41140	100RB#0	9.77	13	PASS

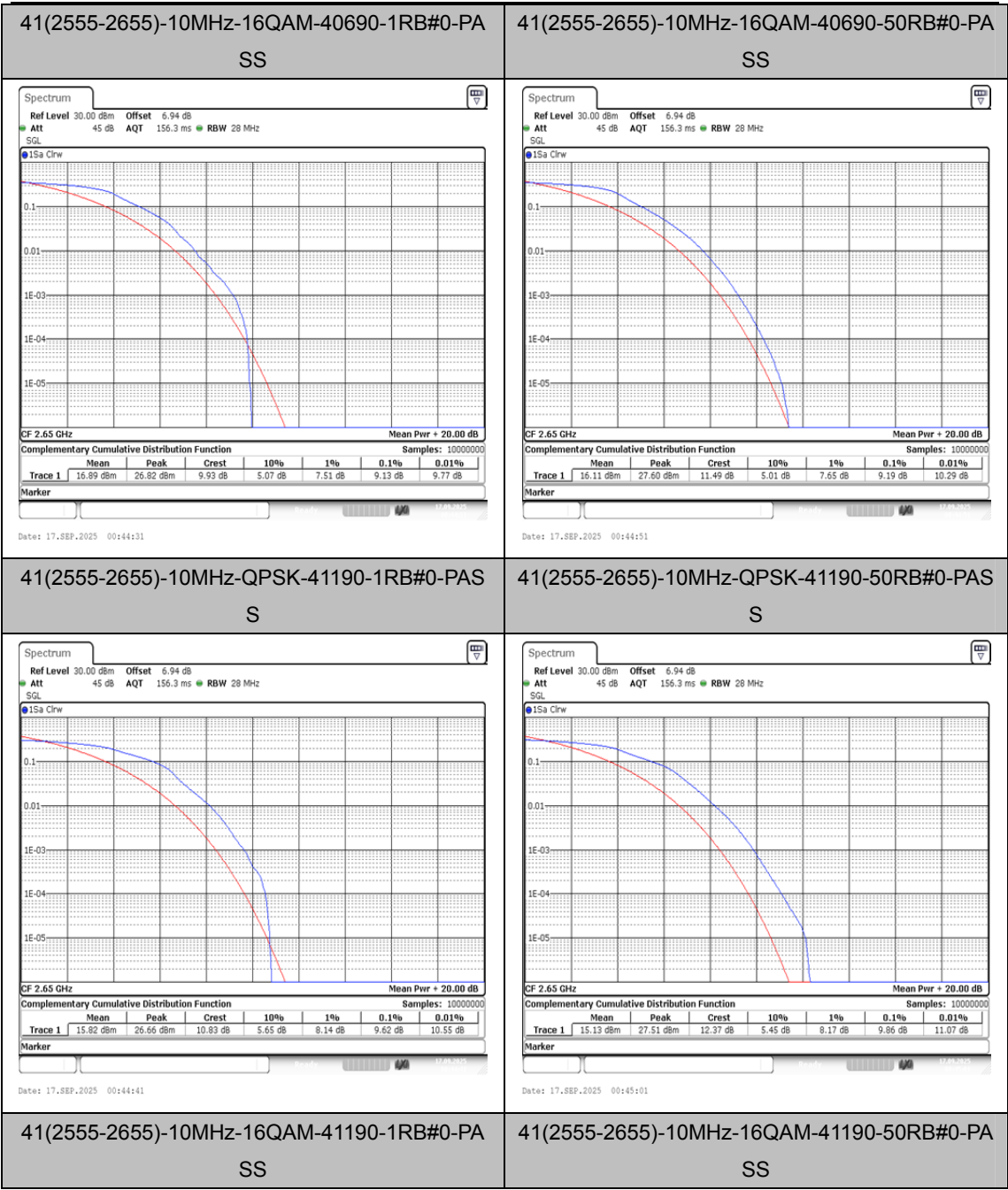
Test Graphs

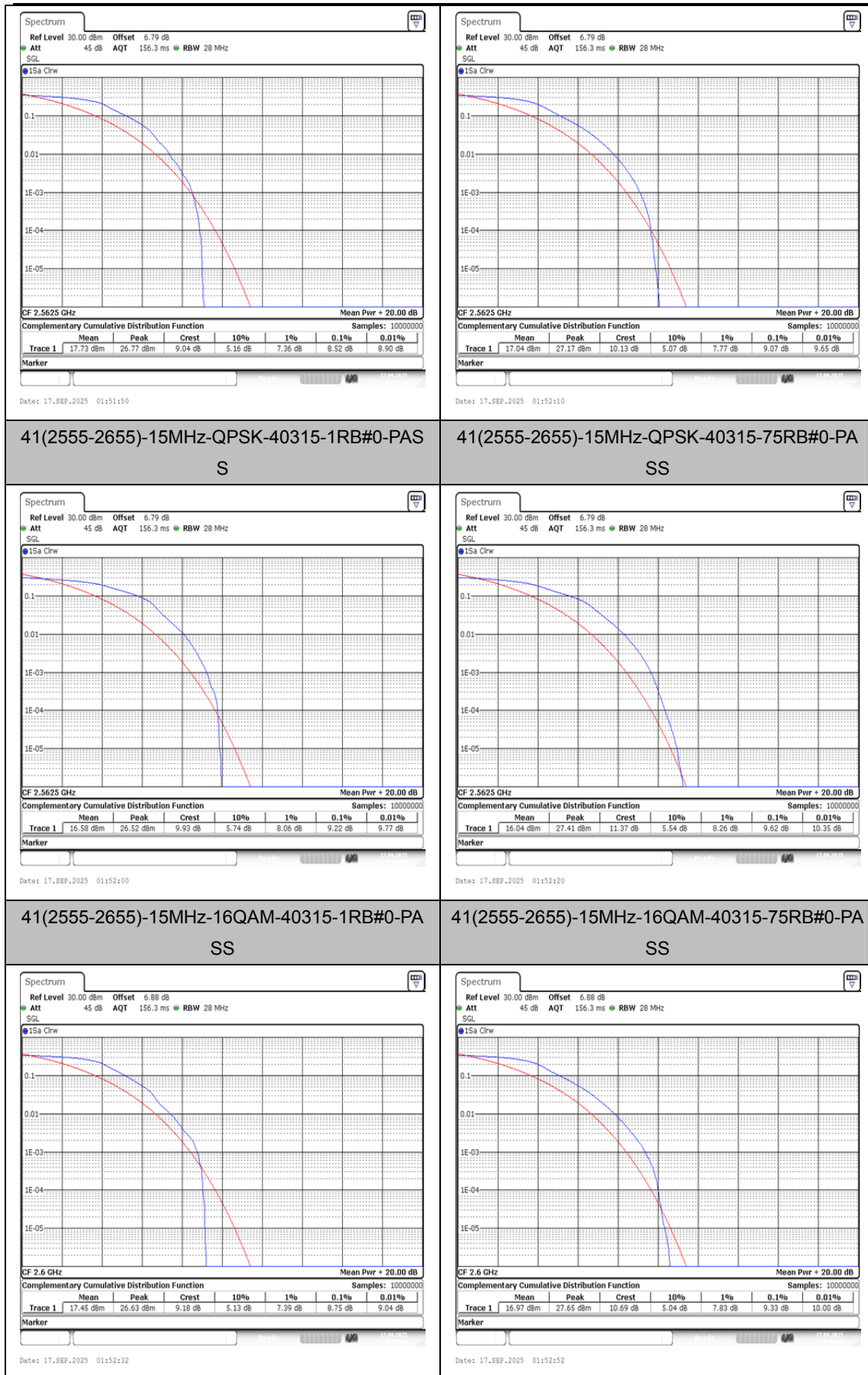


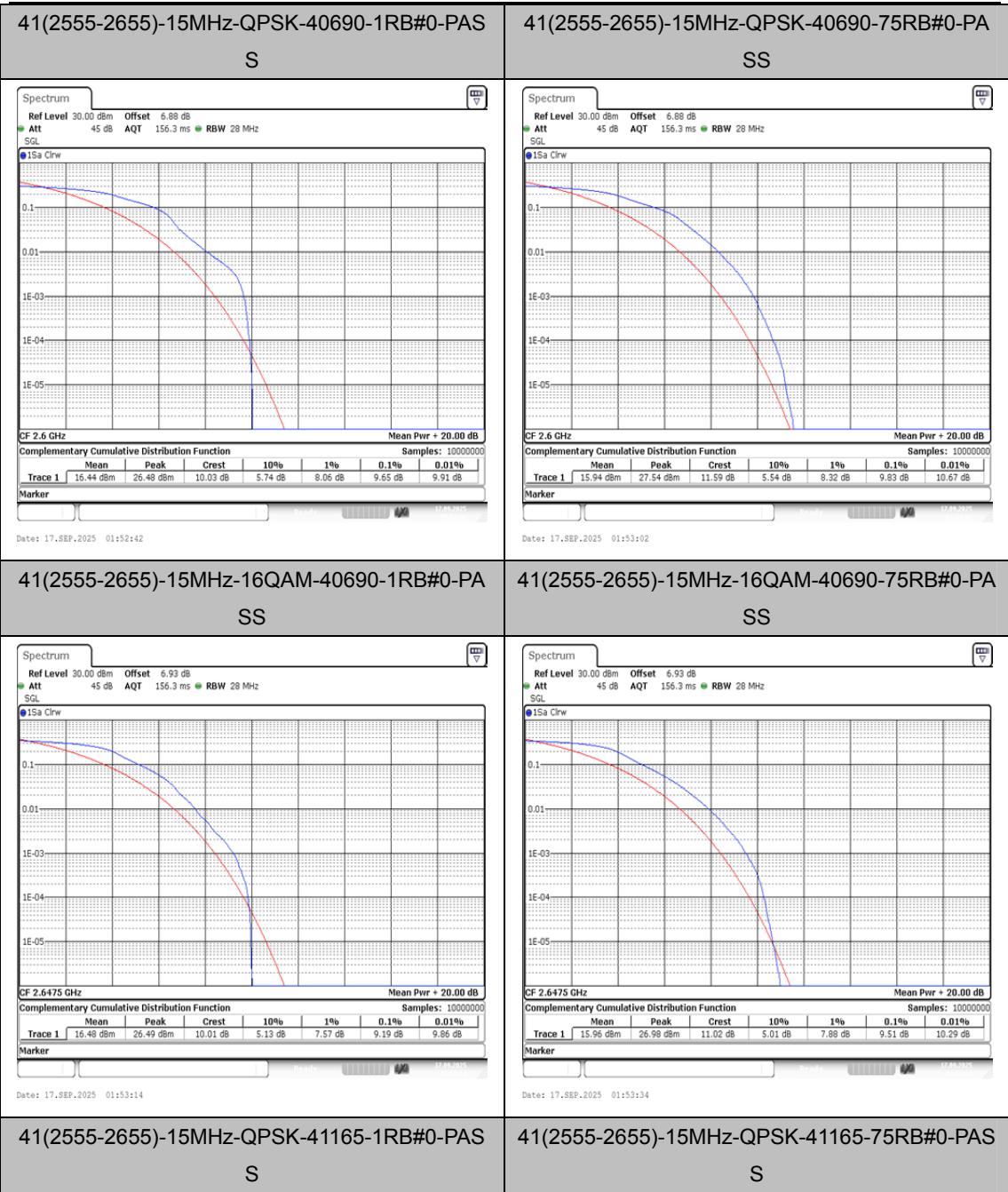


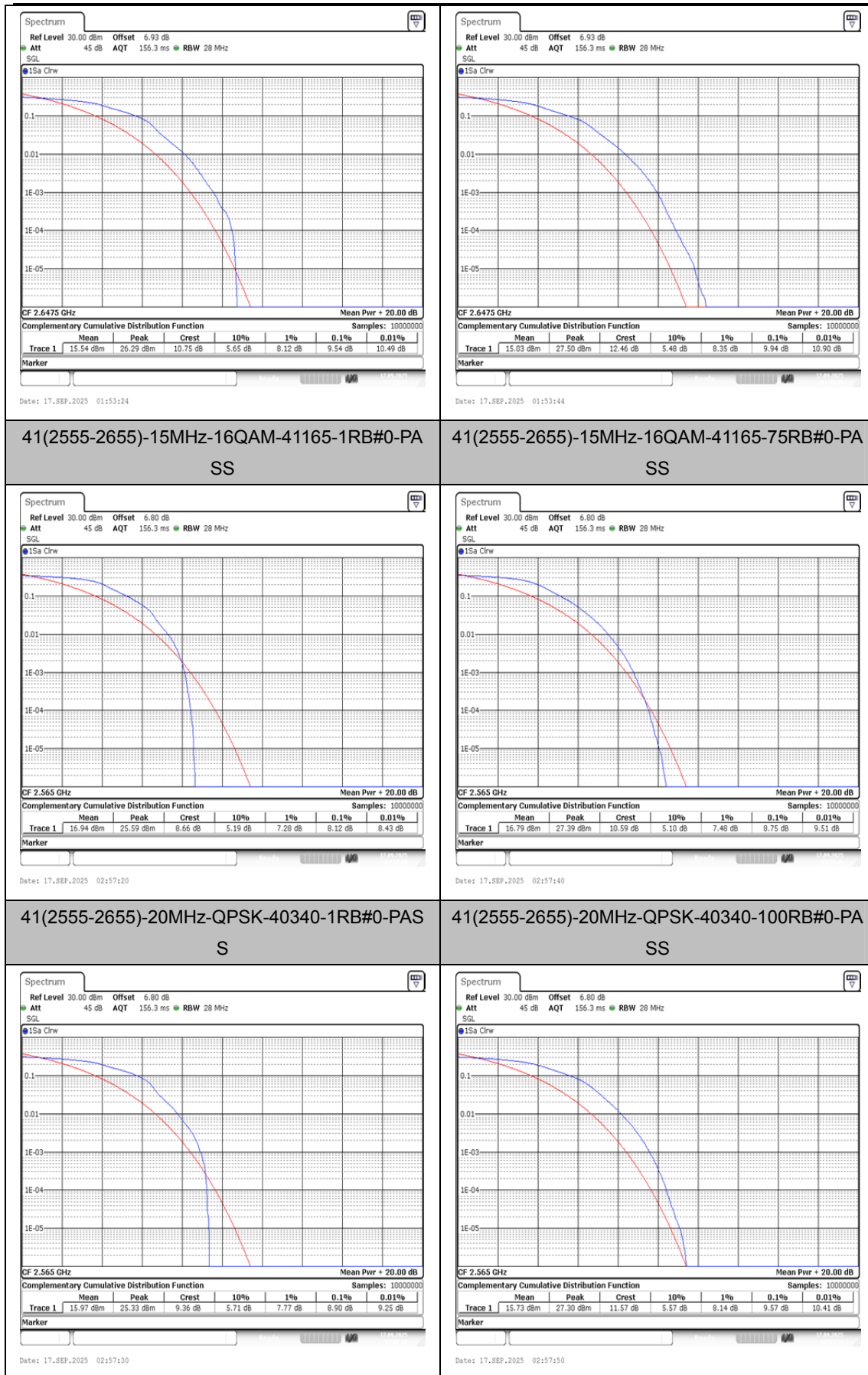


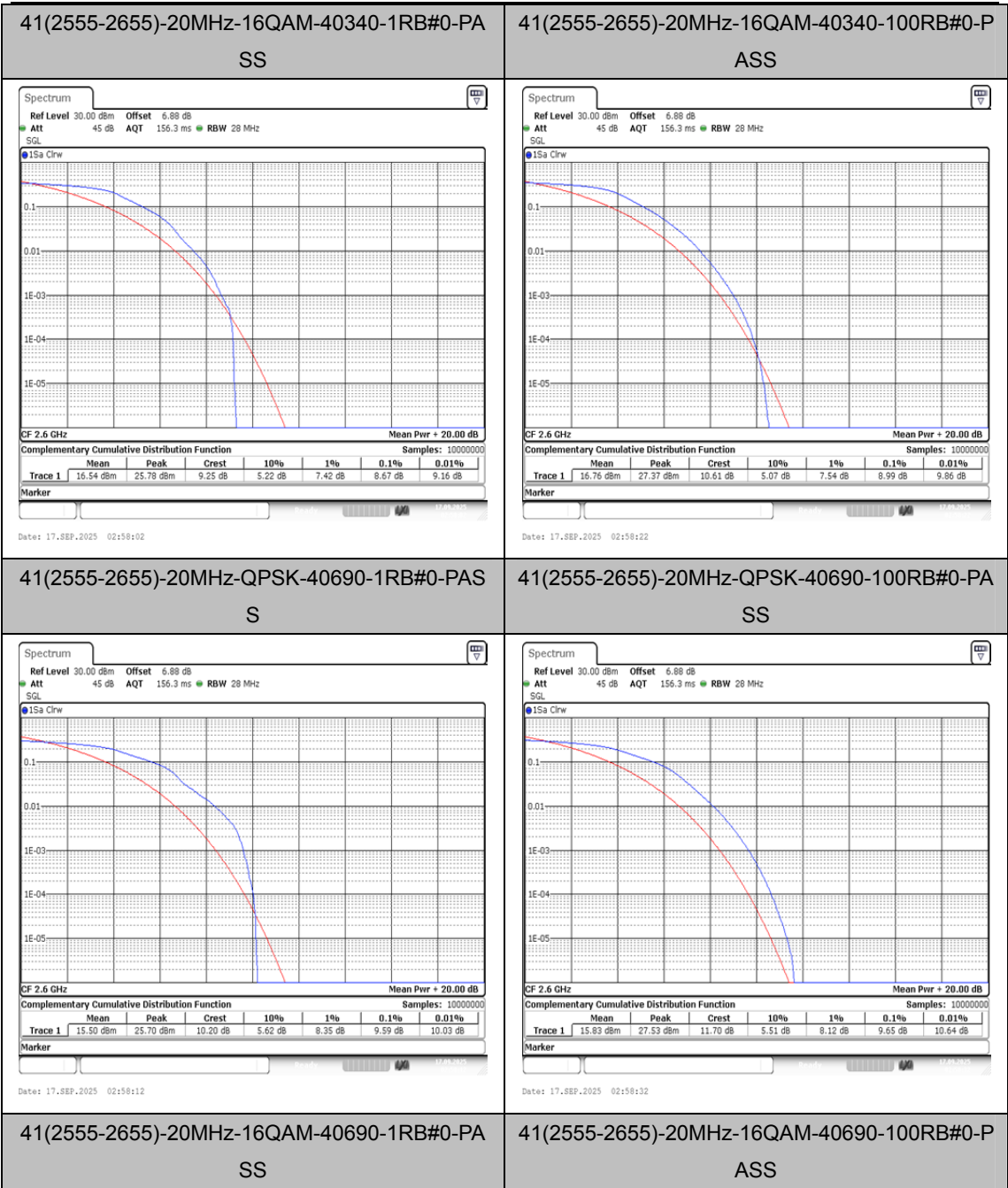


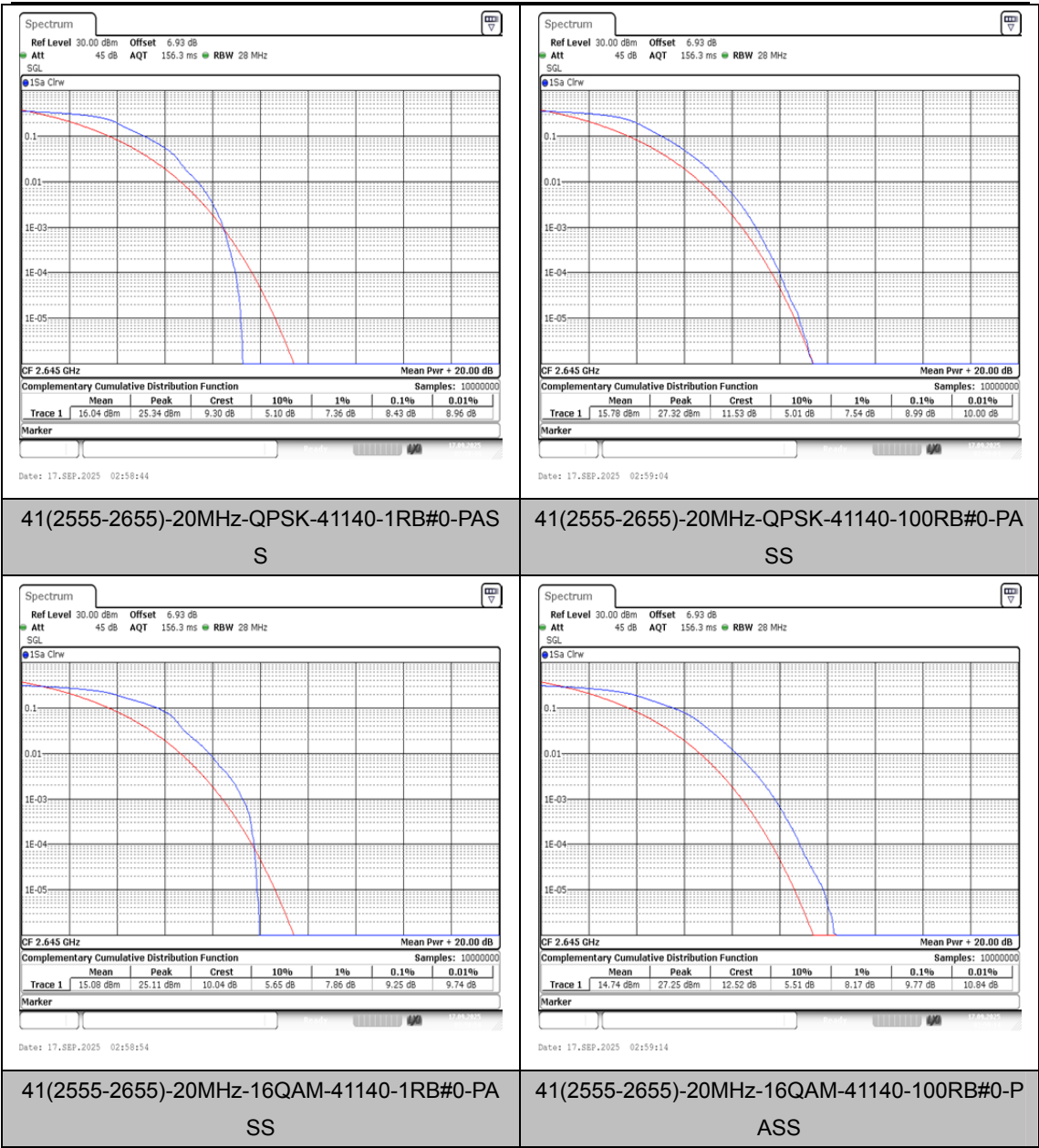










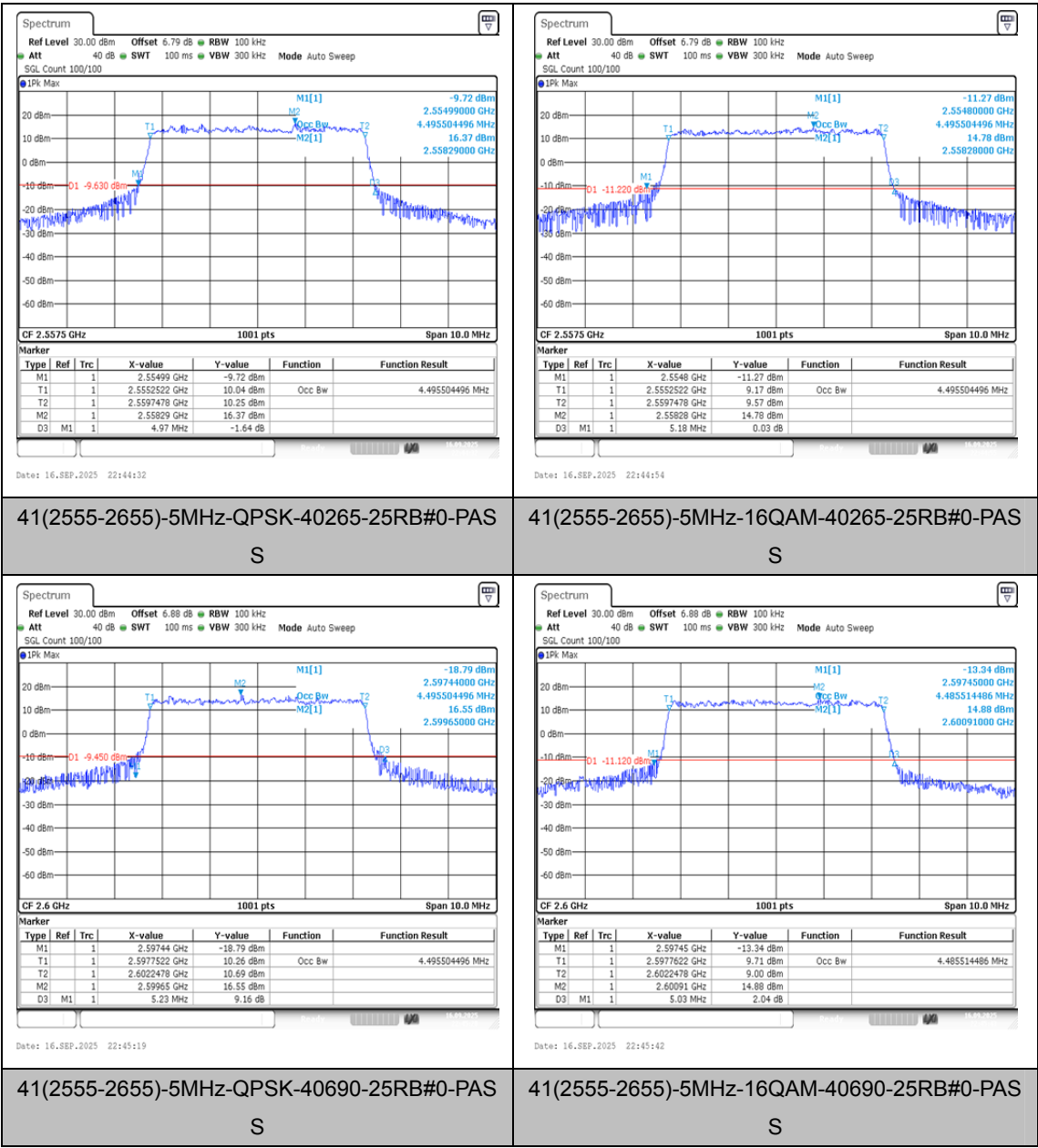


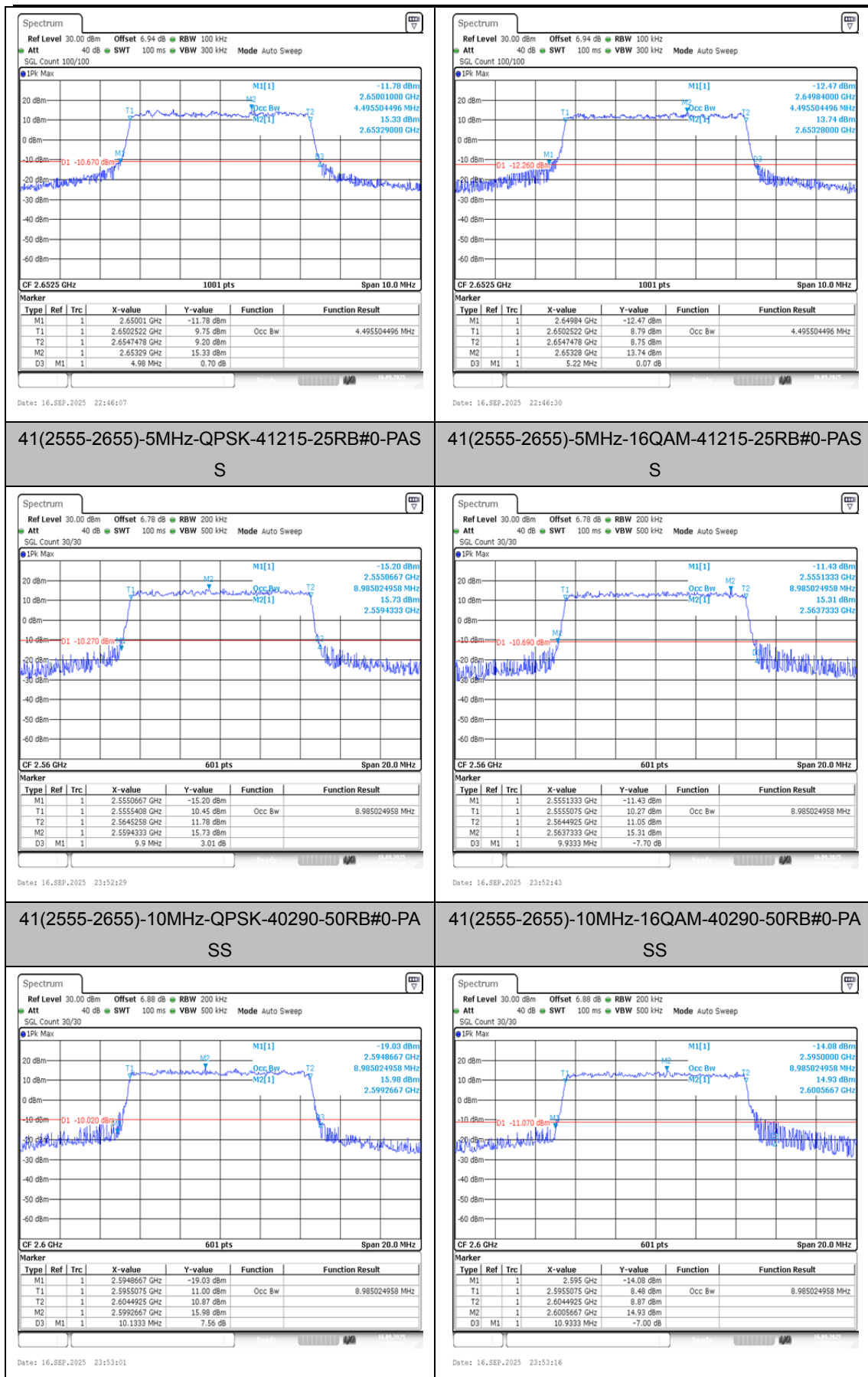
Appendix C: 26dB Bandwidth and Occupied Bandwidth

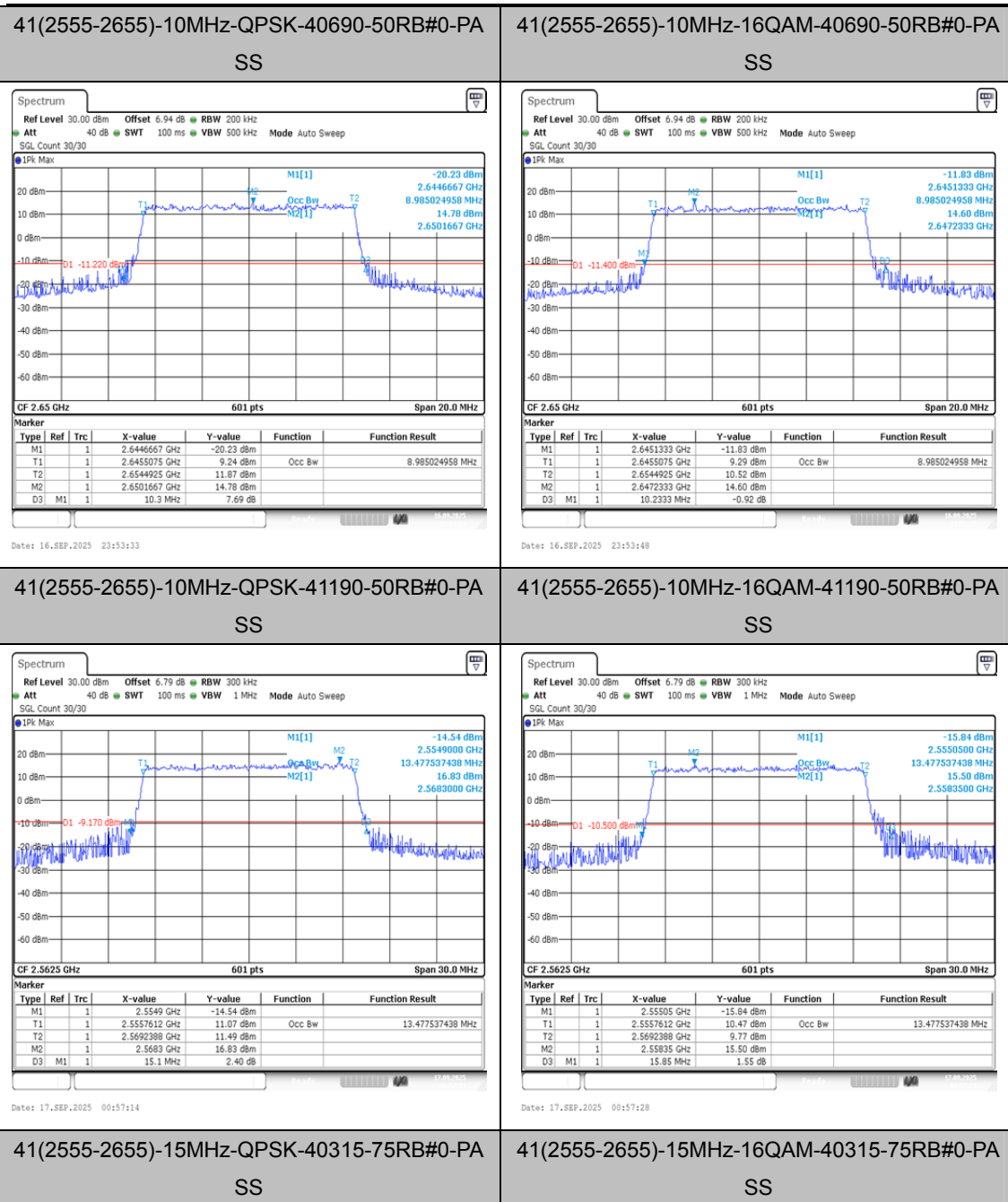
Test Result

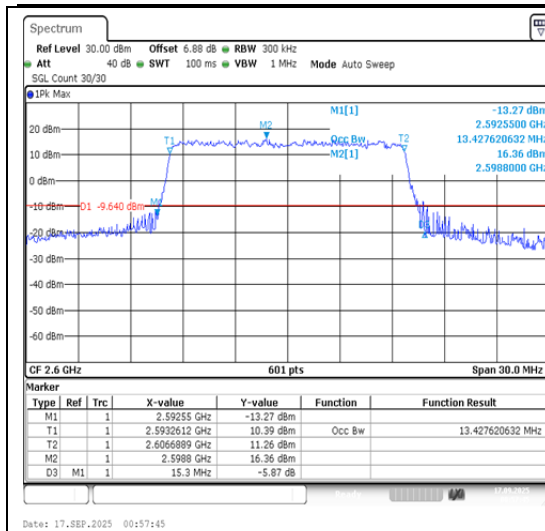
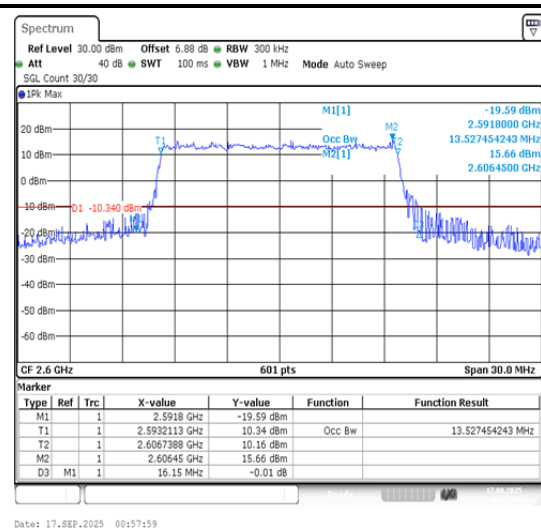
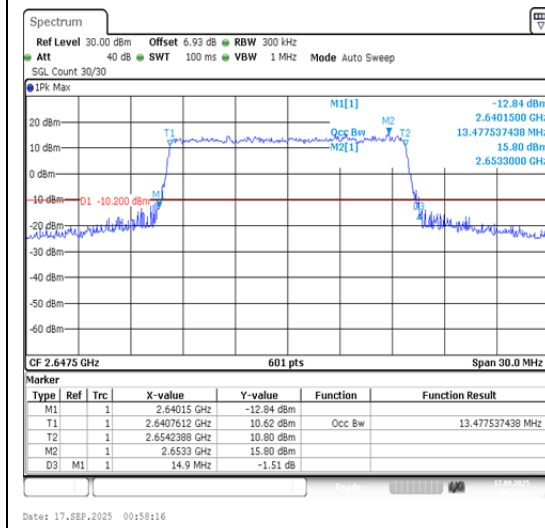
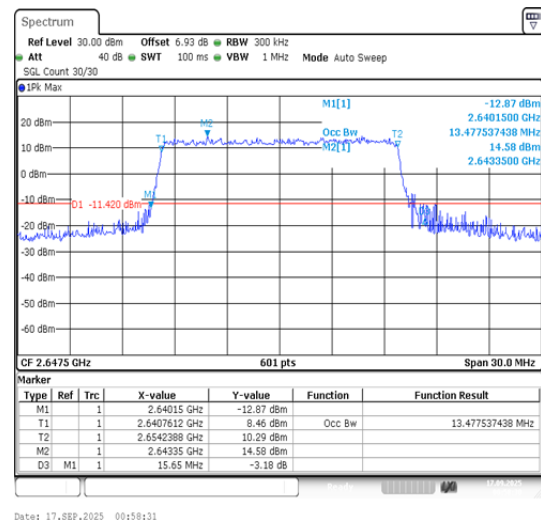
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
41(2555-2655)	5MHz	QPSK	40265	25RB#0	4.496	4.97	PASS
41(2555-2655)	5MHz	16QAM	40265	25RB#0	4.496	5.18	PASS
41(2555-2655)	5MHz	QPSK	40690	25RB#0	4.496	5.23	PASS
41(2555-2655)	5MHz	16QAM	40690	25RB#0	4.486	5.03	PASS
41(2555-2655)	5MHz	QPSK	41215	25RB#0	4.496	4.98	PASS
41(2555-2655)	5MHz	16QAM	41215	25RB#0	4.496	5.22	PASS
41(2555-2655)	10MHz	QPSK	40290	50RB#0	8.985	9.90	PASS
41(2555-2655)	10MHz	16QAM	40290	50RB#0	8.985	9.93	PASS
41(2555-2655)	10MHz	QPSK	40690	50RB#0	8.985	10.13	PASS
41(2555-2655)	10MHz	16QAM	40690	50RB#0	8.985	10.93	PASS
41(2555-2655)	10MHz	QPSK	41190	50RB#0	8.985	10.30	PASS
41(2555-2655)	10MHz	16QAM	41190	50RB#0	8.985	10.23	PASS
41(2555-2655)	15MHz	QPSK	40315	75RB#0	13.478	15.10	PASS
41(2555-2655)	15MHz	16QAM	40315	75RB#0	13.478	15.85	PASS
41(2555-2655)	15MHz	QPSK	40690	75RB#0	13.428	15.30	PASS
41(2555-2655)	15MHz	16QAM	40690	75RB#0	13.527	16.15	PASS
41(2555-2655)	15MHz	QPSK	41165	75RB#0	13.478	14.90	PASS
41(2555-2655)	15MHz	16QAM	41165	75RB#0	13.478	15.65	PASS
41(2555-2655)	20MHz	QPSK	40340	100RB#0	18.037	20.53	PASS
41(2555-2655)	20MHz	16QAM	40340	100RB#0	17.97	20.53	PASS
41(2555-2655)	20MHz	QPSK	40690	100RB#0	18.037	21.13	PASS
41(2555-2655)	20MHz	16QAM	40690	100RB#0	18.037	20.73	PASS
41(2555-2655)	20MHz	QPSK	41140	100RB#0	18.103	20.93	PASS
41(2555-2655)	20MHz	16QAM	41140	100RB#0	17.97	20.60	PASS

Test Graphs







41(2555-2655)-15MHz-QPSK-40690-75RB#0-PA
SS41(2555-2655)-15MHz-16QAM-40690-75RB#0-PA
SS41(2555-2655)-15MHz-QPSK-41165-75RB#0-PA
SS41(2555-2655)-15MHz-16QAM-41165-75RB#0-PA
SS