

Appendix for LTE Band 38

Applicant: UCLOUDLINK (SINGAPORE) PTE.LTD

**Address: 80 ROBINSON ROAD #02-00
SINGAPORE(068898)**

Product Name: Cloudsim Kit

Model: GLMU24A02

TABLE OF CONTENTS

APPENDIX A: CONDUCTED OUTPUT POWER DATA.....	3
APPENDIX B: PEAK-TO-AVERAGE RATIO(CCDF).....	7
APPENDIX C: 26DB BANDWIDTH AND OCCUPIED BANDWIDTH	22
APPENDIX D: BAND EDGE	28
APPENDIX E: CONDUCTED SPURIOUS EMISSION.....	44
APPENDIX F: FREQUENCY STABILITY	87

Appendix A: Conducted Output Power Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band38	5MHz	QPSK	37775	1RB#0	21.68	PASS
Band38	5MHz	16QAM	37775	1RB#0	20.97	PASS
Band38	5MHz	QPSK	37775	1RB#12	22.45	PASS
Band38	5MHz	16QAM	37775	1RB#12	21.44	PASS
Band38	5MHz	QPSK	37775	1RB#24	22.41	PASS
Band38	5MHz	16QAM	37775	1RB#24	21.36	PASS
Band38	5MHz	QPSK	37775	12RB#0	21.55	PASS
Band38	5MHz	16QAM	37775	12RB#0	21.46	PASS
Band38	5MHz	QPSK	37775	12RB#6	21.51	PASS
Band38	5MHz	16QAM	37775	12RB#6	21.43	PASS
Band38	5MHz	QPSK	37775	12RB#13	21.50	PASS
Band38	5MHz	16QAM	37775	12RB#13	21.45	PASS
Band38	5MHz	QPSK	37775	25RB#0	21.43	PASS
Band38	5MHz	16QAM	37775	25RB#0	20.55	PASS
Band38	5MHz	QPSK	38000	1RB#0	22.69	PASS
Band38	5MHz	16QAM	38000	1RB#0	21.86	PASS
Band38	5MHz	QPSK	38000	1RB#12	22.29	PASS
Band38	5MHz	16QAM	38000	1RB#12	21.53	PASS
Band38	5MHz	QPSK	38000	1RB#24	22.28	PASS
Band38	5MHz	16QAM	38000	1RB#24	21.40	PASS
Band38	5MHz	QPSK	38000	12RB#0	21.40	PASS
Band38	5MHz	16QAM	38000	12RB#0	21.38	PASS
Band38	5MHz	QPSK	38000	12RB#6	21.48	PASS
Band38	5MHz	16QAM	38000	12RB#6	21.48	PASS
Band38	5MHz	QPSK	38000	12RB#13	21.46	PASS
Band38	5MHz	16QAM	38000	12RB#13	21.43	PASS
Band38	5MHz	QPSK	38000	25RB#0	21.43	PASS
Band38	5MHz	16QAM	38000	25RB#0	20.43	PASS
Band38	5MHz	QPSK	38225	1RB#0	22.20	PASS
Band38	5MHz	16QAM	38225	1RB#0	21.31	PASS
Band38	5MHz	QPSK	38225	1RB#12	22.33	PASS
Band38	5MHz	16QAM	38225	1RB#12	21.49	PASS
Band38	5MHz	QPSK	38225	1RB#24	22.27	PASS
Band38	5MHz	16QAM	38225	1RB#24	21.27	PASS
Band38	5MHz	QPSK	38225	12RB#0	21.41	PASS
Band38	5MHz	16QAM	38225	12RB#0	21.50	PASS
Band38	5MHz	QPSK	38225	12RB#6	21.48	PASS
Band38	5MHz	16QAM	38225	12RB#6	21.47	PASS

Band38	5MHz	QPSK	38225	12RB#13	21.46	PASS
Band38	5MHz	16QAM	38225	12RB#13	21.43	PASS
Band38	5MHz	QPSK	38225	25RB#0	21.43	PASS
Band38	5MHz	16QAM	38225	25RB#0	20.44	PASS
Band38	10MHz	QPSK	37800	1RB#0	22.39	PASS
Band38	10MHz	16QAM	37800	1RB#0	21.58	PASS
Band38	10MHz	QPSK	37800	1RB#24	22.39	PASS
Band38	10MHz	16QAM	37800	1RB#24	21.51	PASS
Band38	10MHz	QPSK	37800	1RB#49	22.44	PASS
Band38	10MHz	16QAM	37800	1RB#49	21.61	PASS
Band38	10MHz	QPSK	37800	25RB#0	21.48	PASS
Band38	10MHz	16QAM	37800	25RB#0	21.57	PASS
Band38	10MHz	QPSK	37800	25RB#12	21.55	PASS
Band38	10MHz	16QAM	37800	25RB#12	21.52	PASS
Band38	10MHz	QPSK	37800	25RB#25	21.61	PASS
Band38	10MHz	16QAM	37800	25RB#25	21.60	PASS
Band38	10MHz	QPSK	37800	50RB#0	21.60	PASS
Band38	10MHz	QPSK	38000	1RB#0	22.63	PASS
Band38	10MHz	16QAM	38000	1RB#0	21.33	PASS
Band38	10MHz	QPSK	38000	1RB#24	22.22	PASS
Band38	10MHz	16QAM	38000	1RB#24	21.01	PASS
Band38	10MHz	QPSK	38000	1RB#49	22.54	PASS
Band38	10MHz	16QAM	38000	1RB#49	21.35	PASS
Band38	10MHz	QPSK	38000	25RB#0	21.66	PASS
Band38	10MHz	16QAM	38000	25RB#0	21.63	PASS
Band38	10MHz	QPSK	38000	25RB#12	21.74	PASS
Band38	10MHz	16QAM	38000	25RB#12	21.71	PASS
Band38	10MHz	QPSK	38000	25RB#25	21.82	PASS
Band38	10MHz	16QAM	38000	25RB#25	21.78	PASS
Band38	10MHz	QPSK	38000	50RB#0	21.46	PASS
Band38	10MHz	QPSK	38200	1RB#0	22.28	PASS
Band38	10MHz	16QAM	38200	1RB#0	21.39	PASS
Band38	10MHz	QPSK	38200	1RB#24	22.18	PASS
Band38	10MHz	16QAM	38200	1RB#24	21.28	PASS
Band38	10MHz	QPSK	38200	1RB#49	21.91	PASS
Band38	10MHz	16QAM	38200	1RB#49	21.21	PASS
Band38	10MHz	QPSK	38200	25RB#0	21.37	PASS
Band38	10MHz	16QAM	38200	25RB#0	21.33	PASS
Band38	10MHz	QPSK	38200	25RB#12	21.42	PASS
Band38	10MHz	16QAM	38200	25RB#12	21.40	PASS
Band38	10MHz	QPSK	38200	25RB#25	21.46	PASS
Band38	10MHz	16QAM	38200	25RB#25	21.44	PASS
Band38	10MHz	QPSK	38200	50RB#0	21.37	PASS

Band38	15MHz	QPSK	37825	1RB#0	22.62	PASS
Band38	15MHz	16QAM	37825	1RB#0	21.78	PASS
Band38	15MHz	QPSK	37825	1RB#38	22.70	PASS
Band38	15MHz	16QAM	37825	1RB#38	21.93	PASS
Band38	15MHz	QPSK	37825	1RB#74	22.75	PASS
Band38	15MHz	16QAM	37825	1RB#74	21.92	PASS
Band38	15MHz	QPSK	37825	38RB#0	21.77	PASS
Band38	15MHz	16QAM	37825	38RB#0	21.84	PASS
Band38	15MHz	QPSK	37825	38RB#18	21.81	PASS
Band38	15MHz	16QAM	37825	38RB#18	21.79	PASS
Band38	15MHz	QPSK	37825	38RB#37	21.77	PASS
Band38	15MHz	16QAM	37825	38RB#37	21.89	PASS
Band38	15MHz	QPSK	37825	75RB#0	21.88	PASS
Band38	15MHz	QPSK	38000	1RB#0	22.97	PASS
Band38	15MHz	16QAM	38000	1RB#0	22.27	PASS
Band38	15MHz	QPSK	38000	1RB#38	22.52	PASS
Band38	15MHz	16QAM	38000	1RB#38	21.71	PASS
Band38	15MHz	QPSK	38000	1RB#74	22.69	PASS
Band38	15MHz	16QAM	38000	1RB#74	21.91	PASS
Band38	15MHz	QPSK	38000	38RB#0	21.60	PASS
Band38	15MHz	16QAM	38000	38RB#0	21.65	PASS
Band38	15MHz	QPSK	38000	38RB#18	21.60	PASS
Band38	15MHz	16QAM	38000	38RB#18	21.69	PASS
Band38	15MHz	QPSK	38000	38RB#37	21.64	PASS
Band38	15MHz	16QAM	38000	38RB#37	21.60	PASS
Band38	15MHz	QPSK	38000	75RB#0	21.70	PASS
Band38	15MHz	QPSK	38175	1RB#0	22.57	PASS
Band38	15MHz	16QAM	38175	1RB#0	21.96	PASS
Band38	15MHz	QPSK	38175	1RB#38	22.55	PASS
Band38	15MHz	16QAM	38175	1RB#38	21.72	PASS
Band38	15MHz	QPSK	38175	1RB#74	22.57	PASS
Band38	15MHz	16QAM	38175	1RB#74	21.77	PASS
Band38	15MHz	QPSK	38175	38RB#0	21.56	PASS
Band38	15MHz	16QAM	38175	38RB#0	21.61	PASS
Band38	15MHz	QPSK	38175	38RB#18	21.56	PASS
Band38	15MHz	16QAM	38175	38RB#18	21.62	PASS
Band38	15MHz	QPSK	38175	38RB#37	21.70	PASS
Band38	15MHz	16QAM	38175	38RB#37	21.65	PASS
Band38	15MHz	QPSK	38175	75RB#0	21.62	PASS
Band38	20MHz	QPSK	37850	1RB#0	22.89	PASS
Band38	20MHz	16QAM	37850	1RB#0	21.85	PASS
Band38	20MHz	QPSK	37850	1RB#49	22.99	PASS
Band38	20MHz	16QAM	37850	1RB#49	21.98	PASS

Band38	20MHz	QPSK	37850	1RB#99	22.95	PASS
Band38	20MHz	16QAM	37850	1RB#99	21.93	PASS
Band38	20MHz	QPSK	37850	50RB#0	21.96	PASS
Band38	20MHz	QPSK	37850	50RB#25	21.20	PASS
Band38	20MHz	16QAM	37850	50RB#25	20.35	PASS
Band38	20MHz	QPSK	37850	50RB#50	21.21	PASS
Band38	20MHz	16QAM	37850	50RB#50	20.30	PASS
Band38	20MHz	QPSK	37850	100RB#0	20.95	PASS
Band38	20MHz	QPSK	38000	1RB#0	21.99	PASS
Band38	20MHz	16QAM	38000	1RB#0	21.49	PASS
Band38	20MHz	QPSK	38000	1RB#49	22.89	PASS
Band38	20MHz	16QAM	38000	1RB#49	22.23	PASS
Band38	20MHz	QPSK	38000	1RB#99	22.67	PASS
Band38	20MHz	16QAM	38000	1RB#99	21.83	PASS
Band38	20MHz	QPSK	38000	50RB#0	22.06	PASS
Band38	20MHz	QPSK	38000	50RB#25	21.18	PASS
Band38	20MHz	16QAM	38000	50RB#25	20.60	PASS
Band38	20MHz	QPSK	38000	50RB#50	21.45	PASS
Band38	20MHz	16QAM	38000	50RB#50	20.71	PASS
Band38	20MHz	QPSK	38000	100RB#0	20.83	PASS
Band38	20MHz	QPSK	38150	1RB#0	21.98	PASS
Band38	20MHz	16QAM	38150	1RB#0	21.49	PASS
Band38	20MHz	QPSK	38150	1RB#49	22.47	PASS
Band38	20MHz	16QAM	38150	1RB#49	21.84	PASS
Band38	20MHz	QPSK	38150	1RB#99	22.65	PASS
Band38	20MHz	16QAM	38150	1RB#99	21.81	PASS
Band38	20MHz	QPSK	38150	50RB#0	21.78	PASS
Band38	20MHz	QPSK	38150	50RB#25	20.80	PASS
Band38	20MHz	16QAM	38150	50RB#25	20.02	PASS
Band38	20MHz	QPSK	38150	50RB#50	21.13	PASS
Band38	20MHz	16QAM	38150	50RB#50	20.31	PASS
Band38	20MHz	QPSK	38150	100RB#0	20.74	PASS

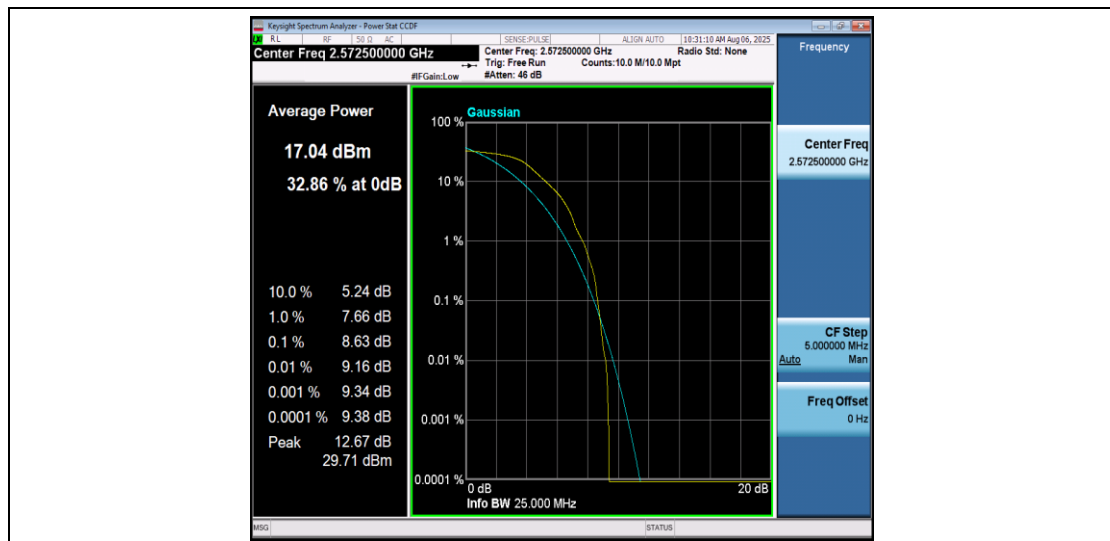
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

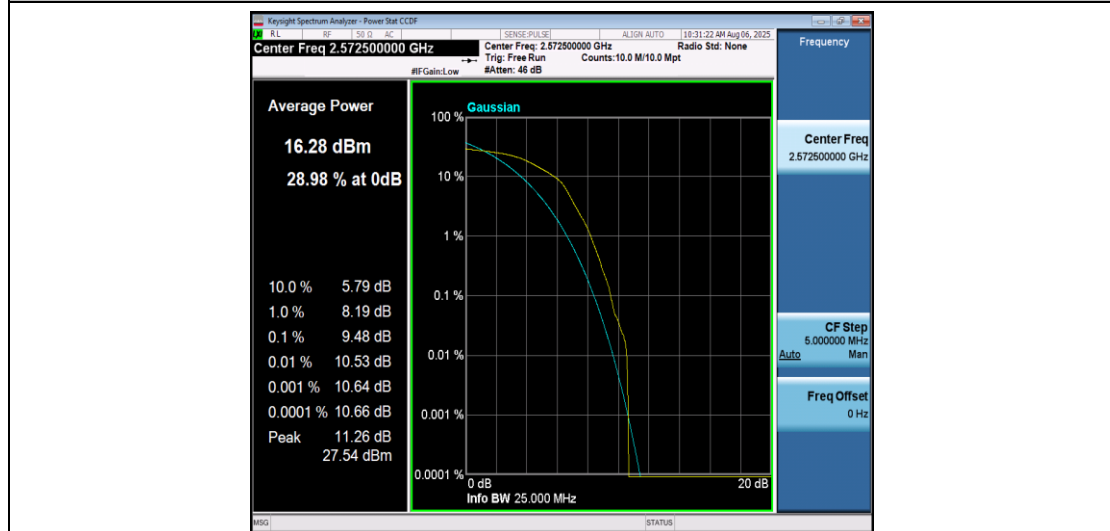
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band38	5MHz	QPSK	37775	1RB#0	8.63	13	PASS
Band38	5MHz	16QAM	37775	1RB#0	9.48	13	PASS
Band38	5MHz	QPSK	37775	25RB#0	8.96	13	PASS
Band38	5MHz	16QAM	37775	25RB#0	9.86	13	PASS
Band38	5MHz	QPSK	38000	1RB#0	7.98	13	PASS
Band38	5MHz	16QAM	38000	1RB#0	9.14	13	PASS
Band38	5MHz	QPSK	38000	25RB#0	9.09	13	PASS
Band38	5MHz	16QAM	38000	25RB#0	9.93	13	PASS
Band38	5MHz	QPSK	38225	1RB#0	8.60	13	PASS
Band38	5MHz	16QAM	38225	1RB#0	8.97	13	PASS
Band38	5MHz	QPSK	38225	25RB#0	8.84	13	PASS
Band38	5MHz	16QAM	38225	25RB#0	9.77	13	PASS
Band38	10MHz	QPSK	37800	1RB#0	9.14	13	PASS
Band38	10MHz	16QAM	37800	1RB#0	9.34	13	PASS
Band38	10MHz	QPSK	37800	50RB#0	9.32	13	PASS
Band38	10MHz	QPSK	38000	1RB#0	8.98	13	PASS
Band38	10MHz	16QAM	38000	1RB#0	9.24	13	PASS
Band38	10MHz	QPSK	38000	50RB#0	8.90	13	PASS
Band38	10MHz	QPSK	38200	1RB#0	8.41	13	PASS
Band38	10MHz	16QAM	38200	1RB#0	8.94	13	PASS
Band38	10MHz	QPSK	38200	50RB#0	8.89	13	PASS
Band38	15MHz	QPSK	37825	1RB#0	8.68	13	PASS
Band38	15MHz	16QAM	37825	1RB#0	9.01	13	PASS
Band38	15MHz	QPSK	37825	75RB#0	9.14	13	PASS
Band38	15MHz	QPSK	38000	1RB#0	8.79	13	PASS
Band38	15MHz	16QAM	38000	1RB#0	9.01	13	PASS
Band38	15MHz	QPSK	38000	75RB#0	8.98	13	PASS
Band38	15MHz	QPSK	38175	1RB#0	8.63	13	PASS
Band38	15MHz	16QAM	38175	1RB#0	9.03	13	PASS
Band38	15MHz	QPSK	38175	75RB#0	9.14	13	PASS
Band38	20MHz	QPSK	37850	1RB#0	8.89	13	PASS
Band38	20MHz	16QAM	37850	1RB#0	8.94	13	PASS
Band38	20MHz	QPSK	37850	100RB#0	9.04	13	PASS
Band38	20MHz	QPSK	38000	1RB#0	8.79	13	PASS
Band38	20MHz	16QAM	38000	1RB#0	9.06	13	PASS
Band38	20MHz	QPSK	38000	100RB#0	8.94	13	PASS
Band38	20MHz	QPSK	38150	1RB#0	8.59	13	PASS
Band38	20MHz	16QAM	38150	1RB#0	8.65	13	PASS

Band38	20MHz	QPSK	38150	100RB#0	9.02	13	PASS
--------	-------	------	-------	---------	------	----	------

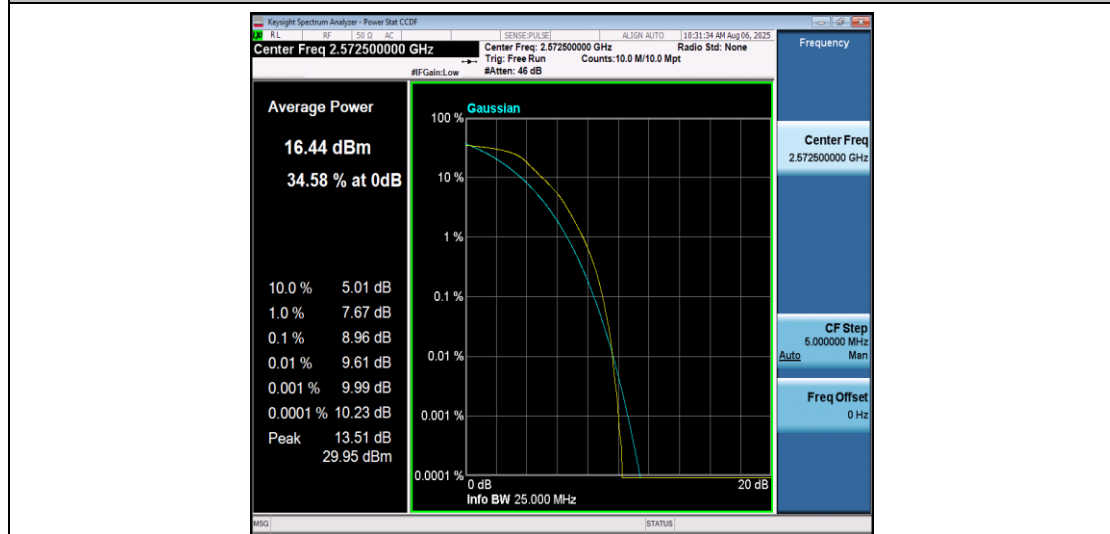
Test Graphs



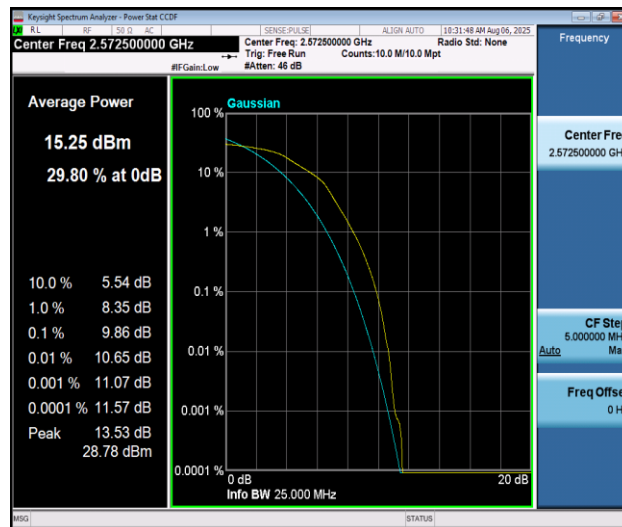
Band38-5MHz-QPSK-37775-1RB#0-PASS



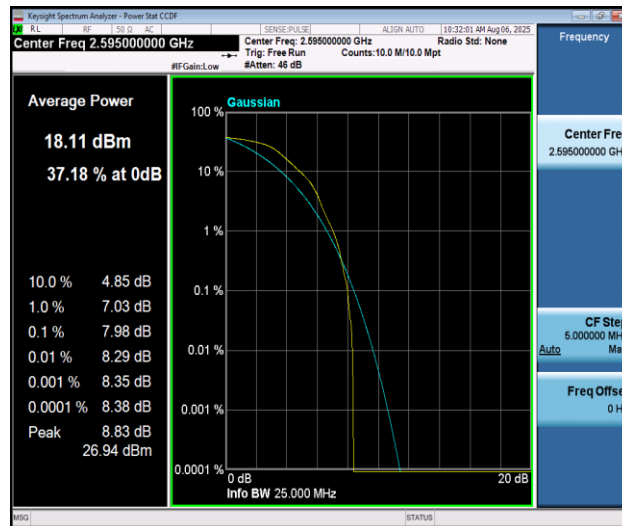
Band38-5MHz-16QAM-37775-1RB#0-PASS



Band38-5MHz-QPSK-37775-25RB#0-PASS



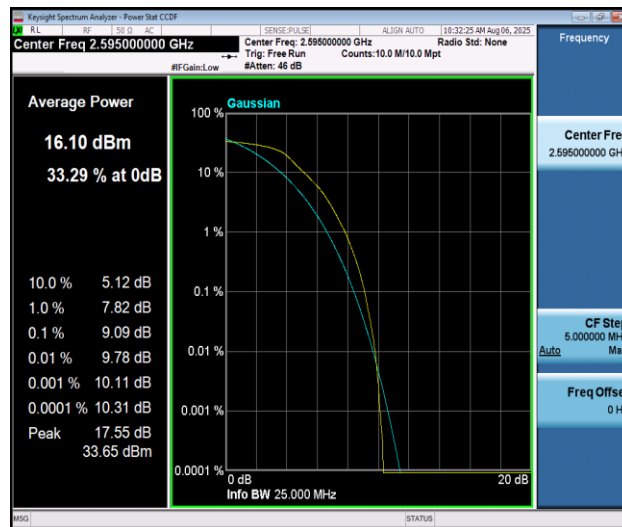
Band38-5MHz-16QAM-37775-25RB#0-PASS



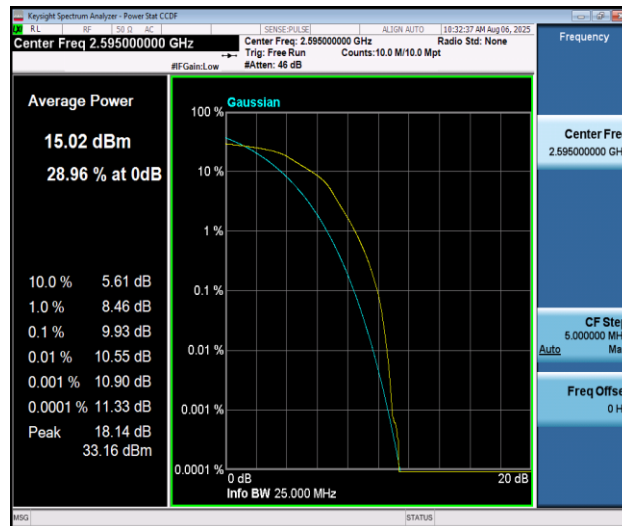
Band38-5MHz-QPSK-38000-1RB#0-PASS



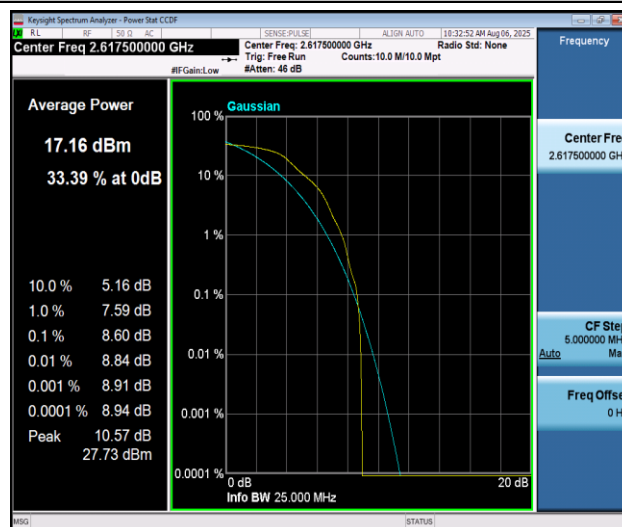
Band38-5MHz-16QAM-38000-1RB#0-PASS



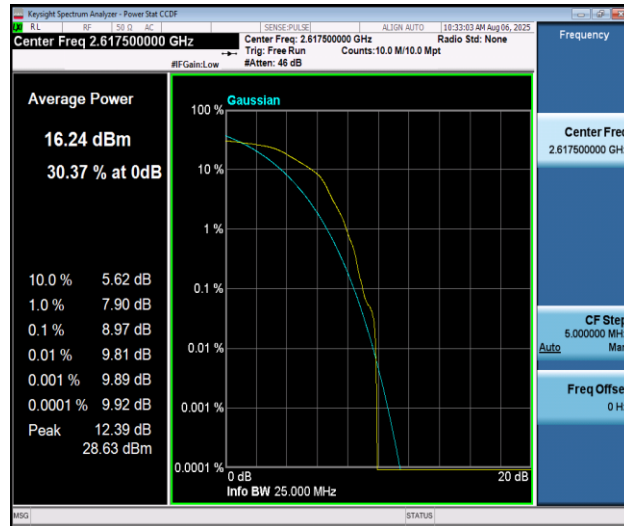
Band38-5MHz-QPSK-38000-25RB#0-PASS



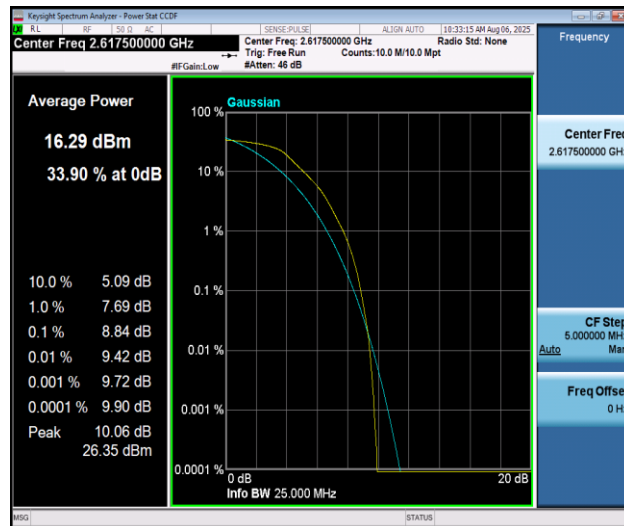
Band38-5MHz-16QAM-38000-25RB#0-PASS



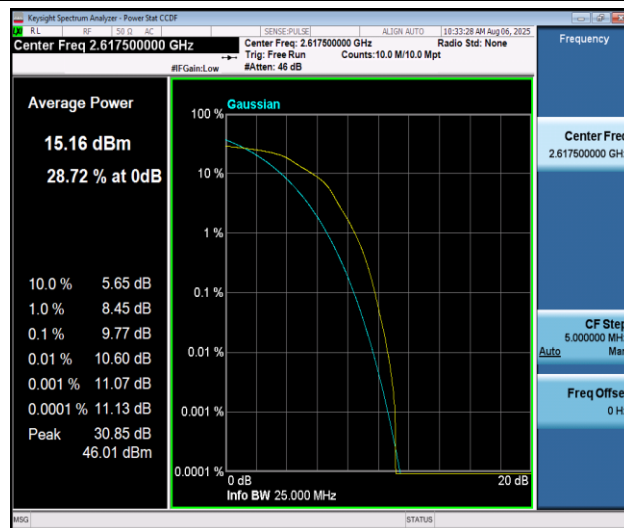
Band38-5MHz-QPSK-38225-1RB#0-PASS



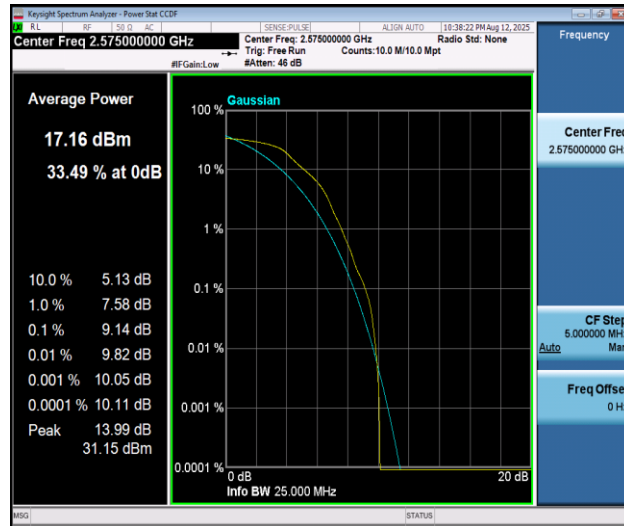
Band38-5MHz-16QAM-38225-1RB#0-PASS



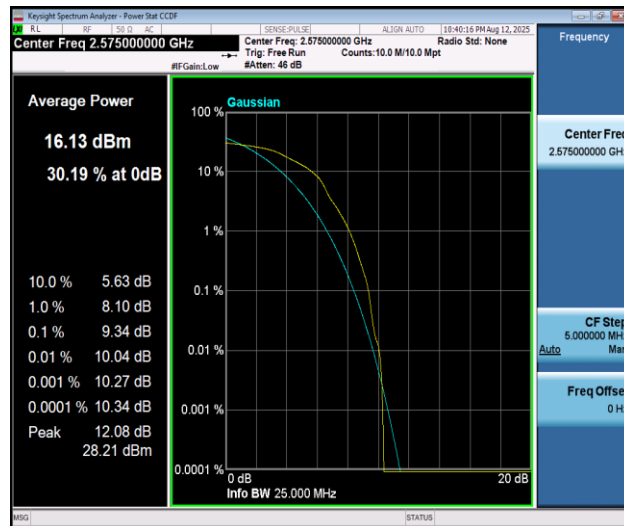
Band38-5MHz-QPSK-38225-25RB#0-PASS



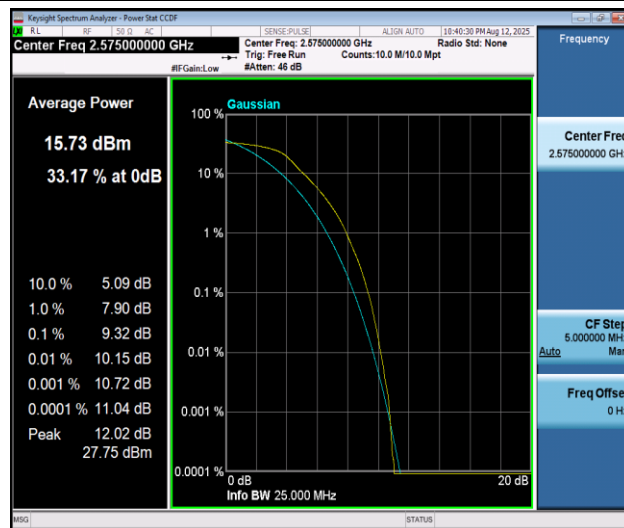
Band38-5MHz-16QAM-38225-25RB#0-PASS



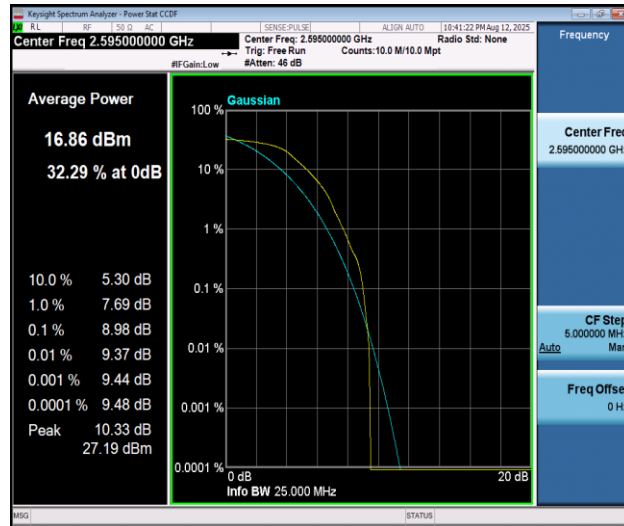
Band38-10MHz-QPSK-37800-1RB#0-PASS



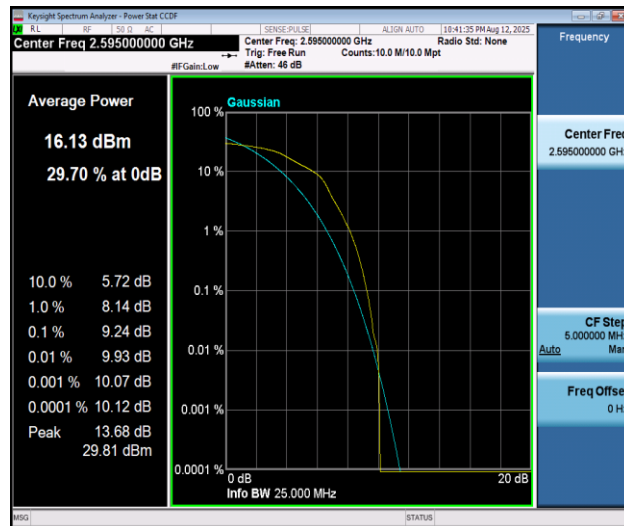
Band38-10MHz-16QAM-37800-1RB#0-PASS



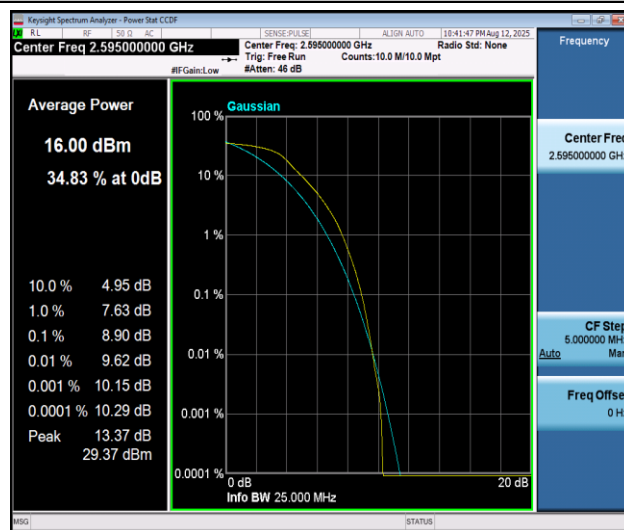
Band38-10MHz-QPSK-37800-50RB#0-PASS



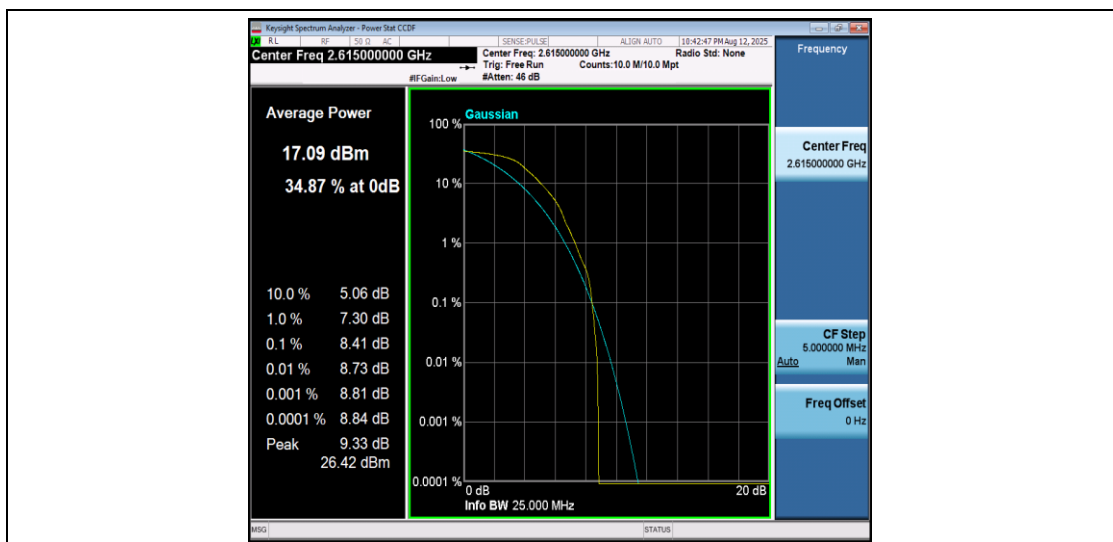
Band38-10MHz-QPSK-38000-1RB#0-PASS



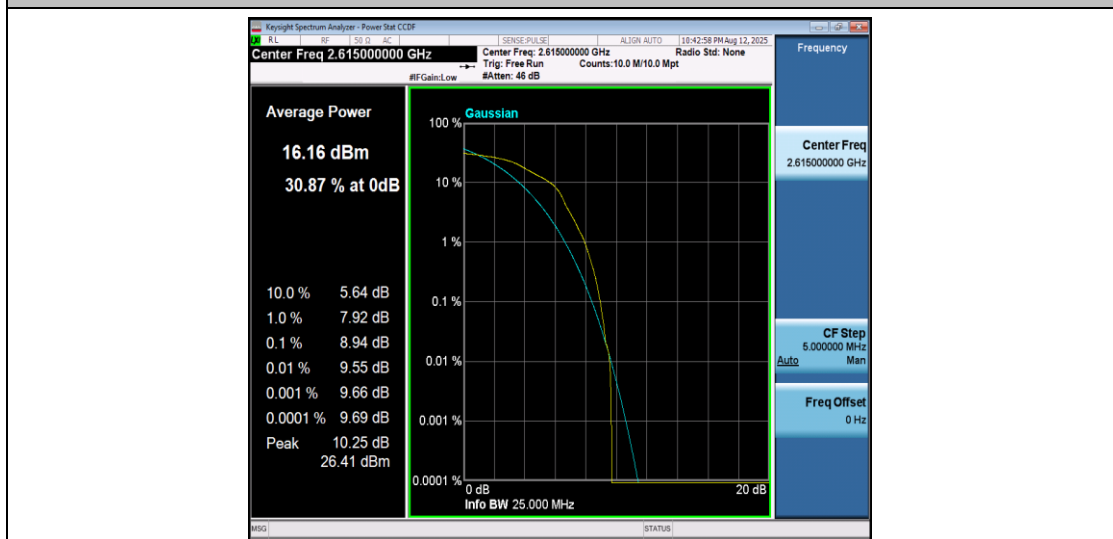
Band38-10MHz-16QAM-38000-1RB#0-PASS



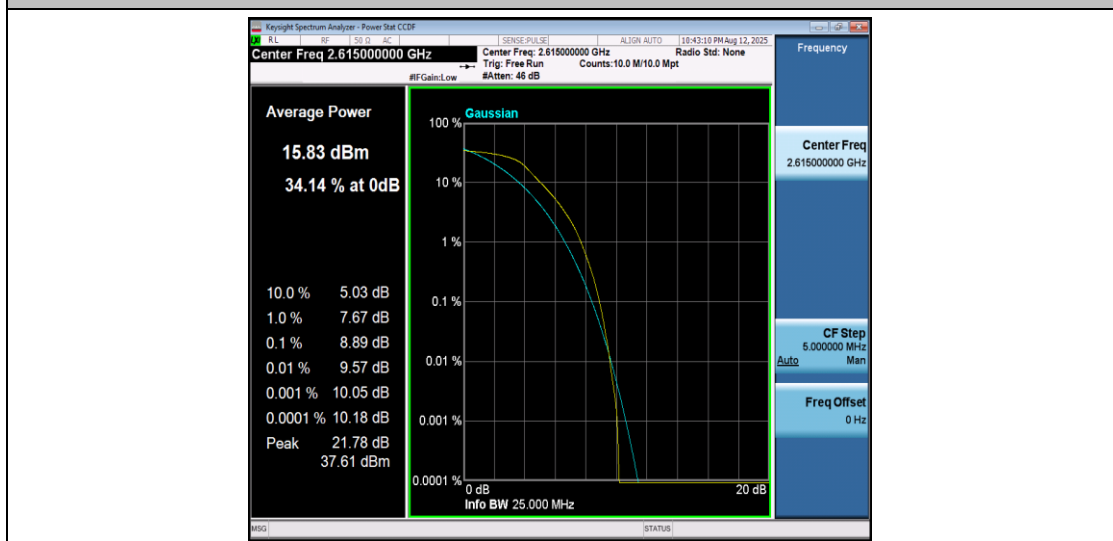
Band38-10MHz-QPSK-38000-50RB#0-PASS



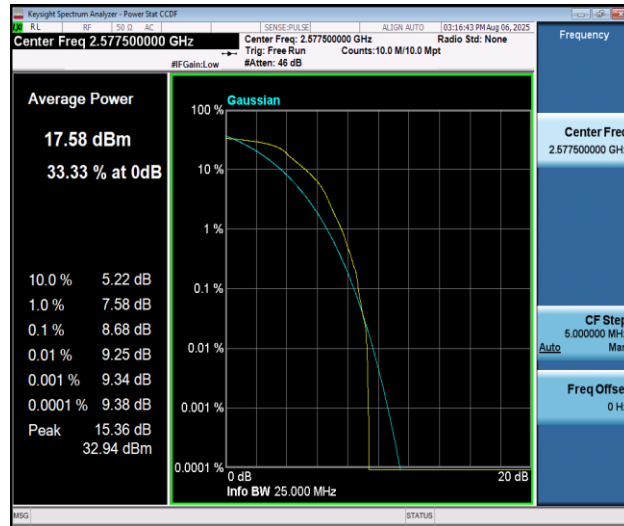
Band38-10MHz-QPSK-38200-1RB#0-PASS



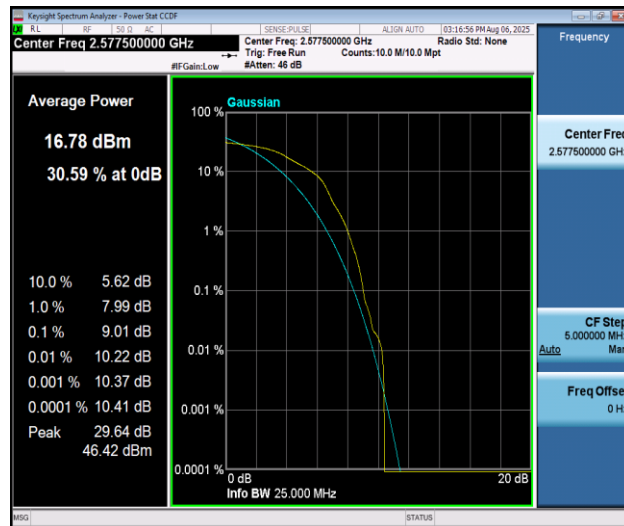
Band38-10MHz-16QAM-38200-1RB#0-PASS



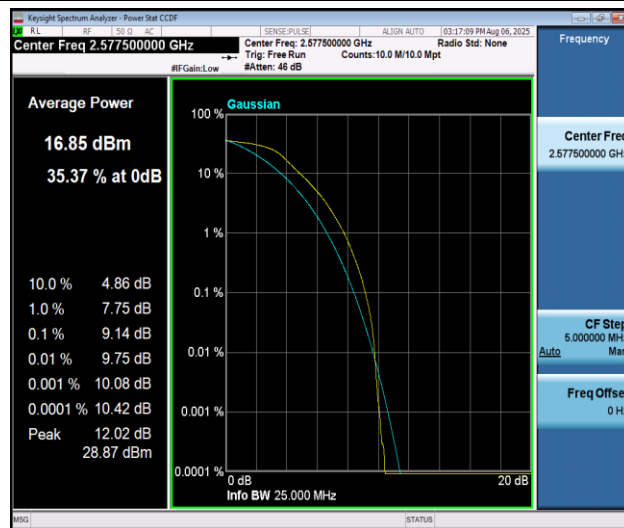
Band38-10MHz-QPSK-38200-50RB#0-PASS



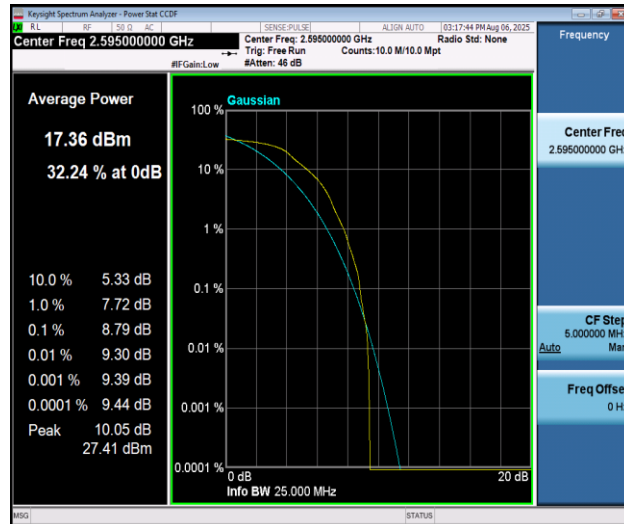
Band38-15MHz-QPSK-37825-1RB#0-PASS



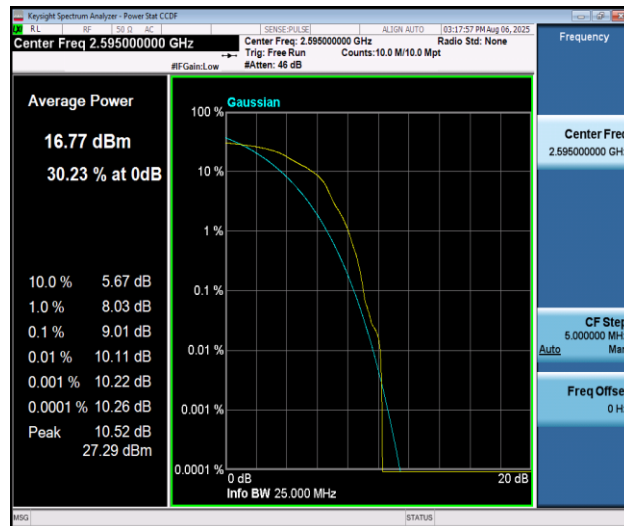
Band38-15MHz-16QAM-37825-1RB#0-PASS



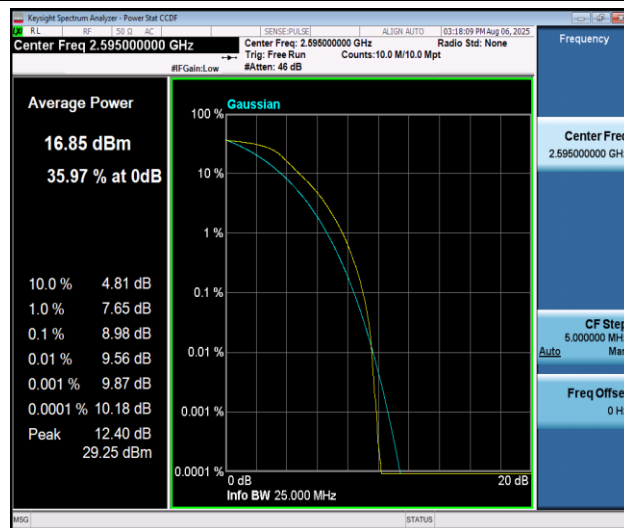
Band38-15MHz-QPSK-37825-75RB#0-PASS



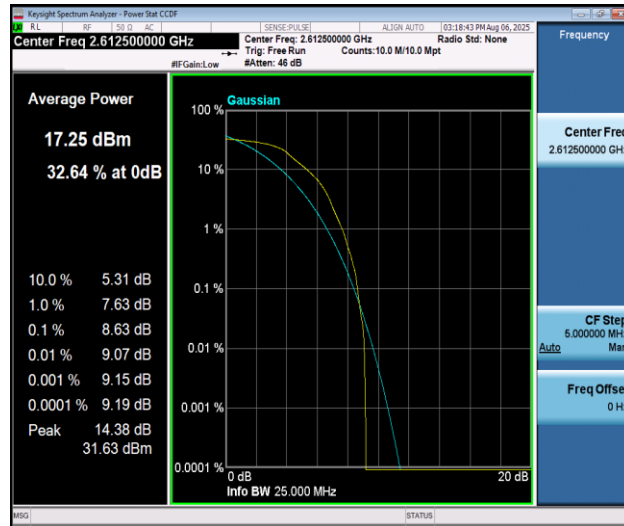
Band38-15MHz-QPSK-38000-1RB#0-PASS



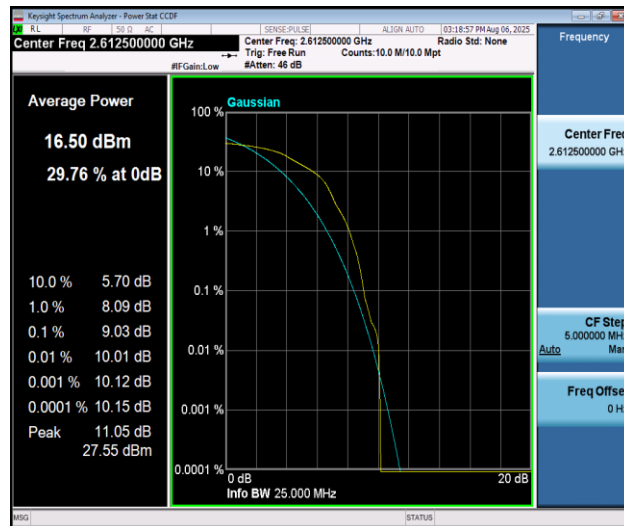
Band38-15MHz-16QAM-38000-1RB#0-PASS



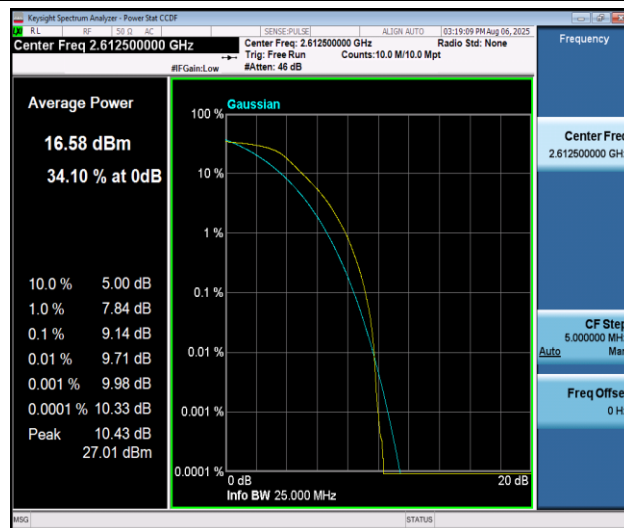
Band38-15MHz-QPSK-38000-75RB#0-PASS



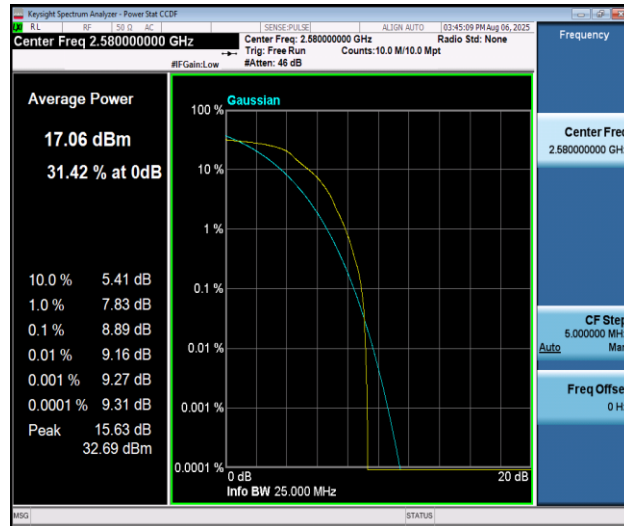
Band38-15MHz-QPSK-38175-1RB#0-PASS



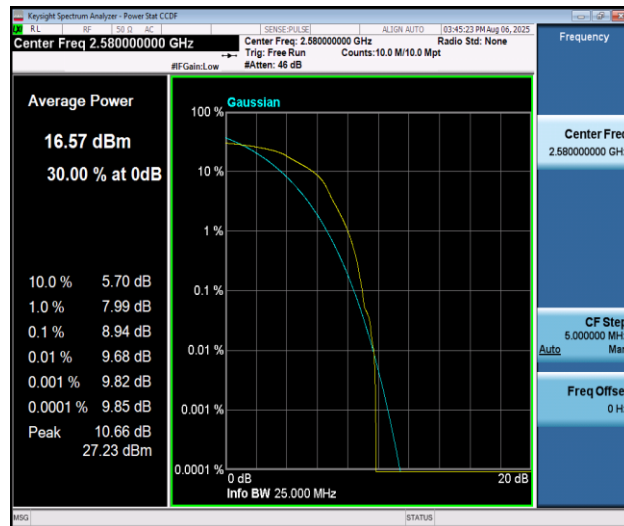
Band38-15MHz-16QAM-38175-1RB#0-PASS



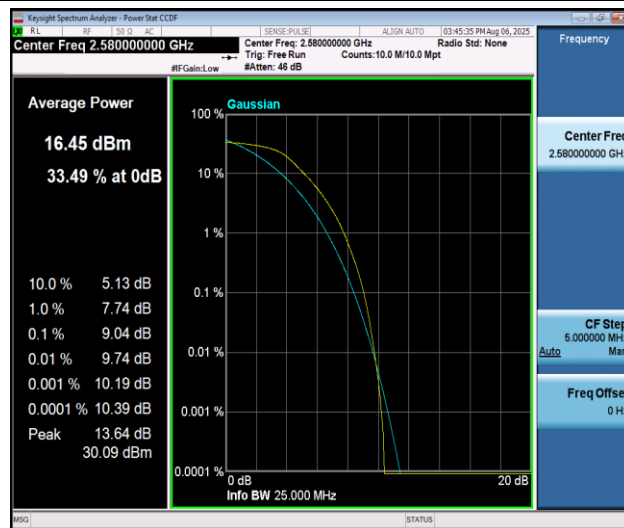
Band38-15MHz-QPSK-38175-75RB#0-PASS



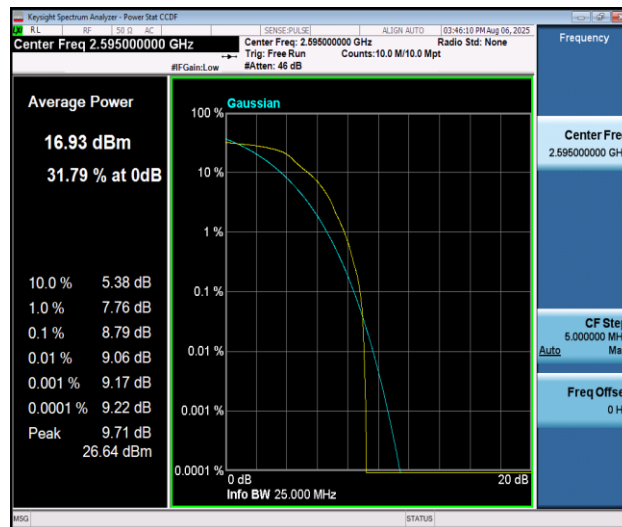
Band38-20MHz-QPSK-37850-1RB#0-PASS



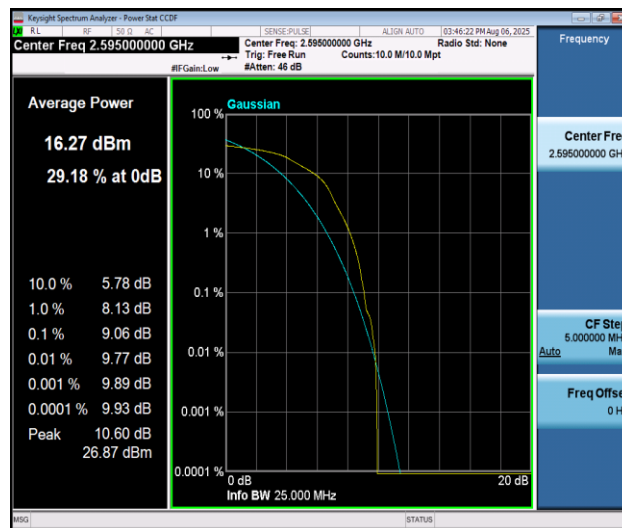
Band38-20MHz-16QAM-37850-1RB#0-PASS



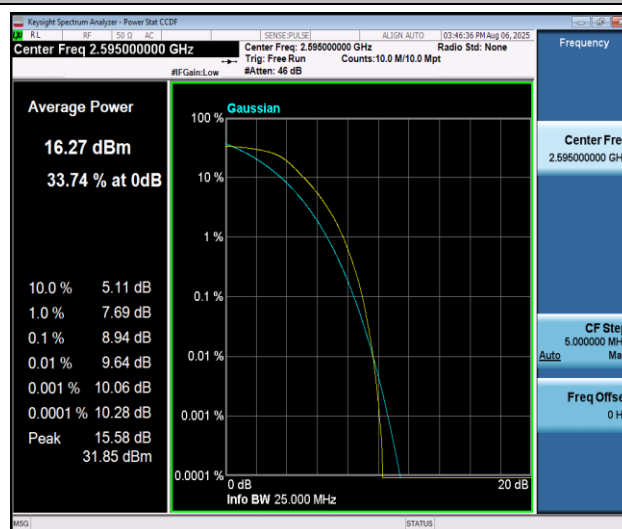
Band38-20MHz-QPSK-37850-100RB#0-PASS



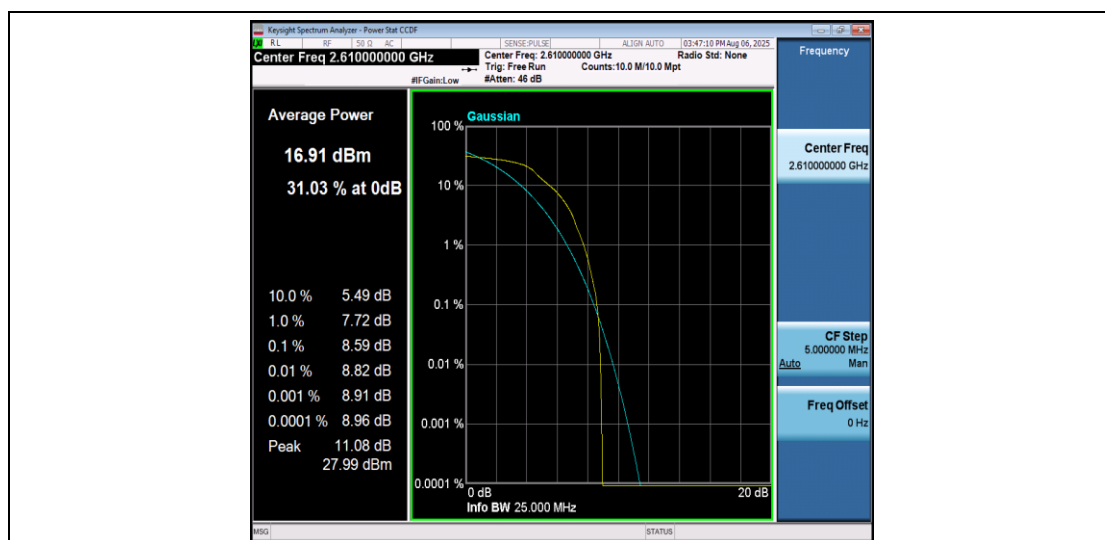
Band38-20MHz-QPSK-38000-1RB#0-PASS



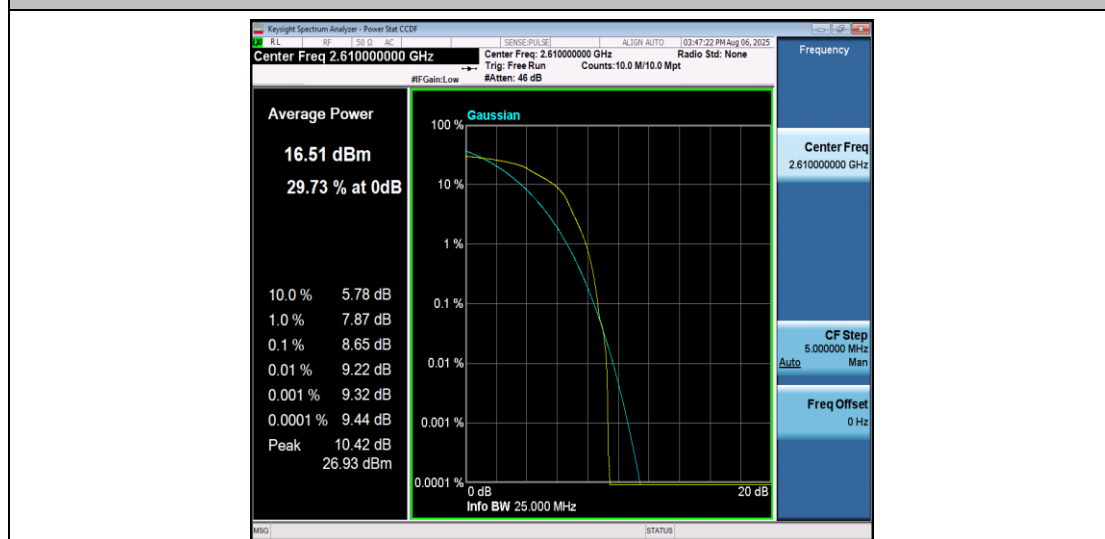
Band38-20MHz-16QAM-38000-1RB#0-PASS



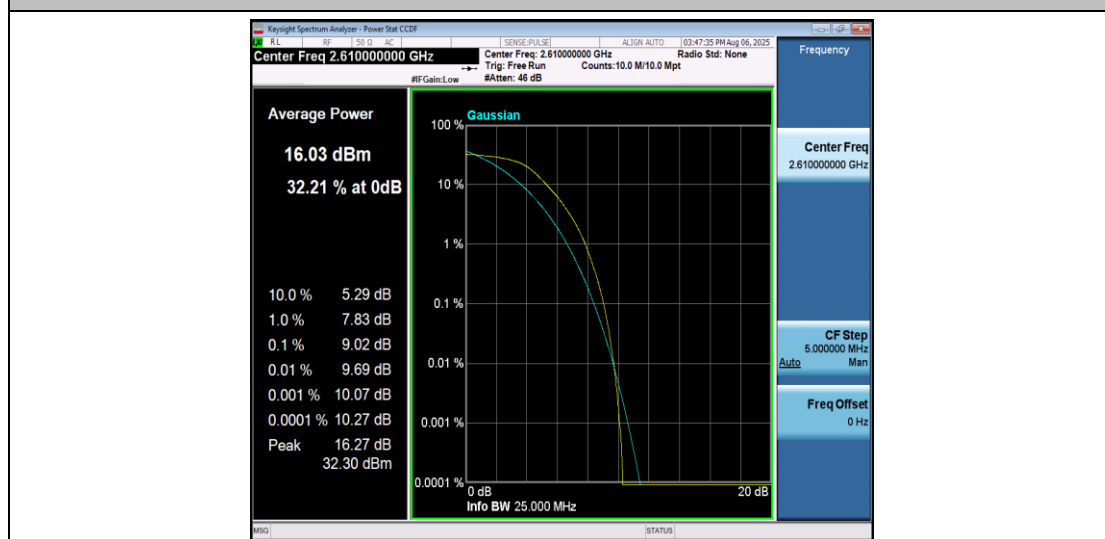
Band38-20MHz-QPSK-38000-100RB#0-PASS



Band38-20MHz-QPSK-38150-1RB#0-PASS



Band38-20MHz-16QAM-38150-1RB#0-PASS



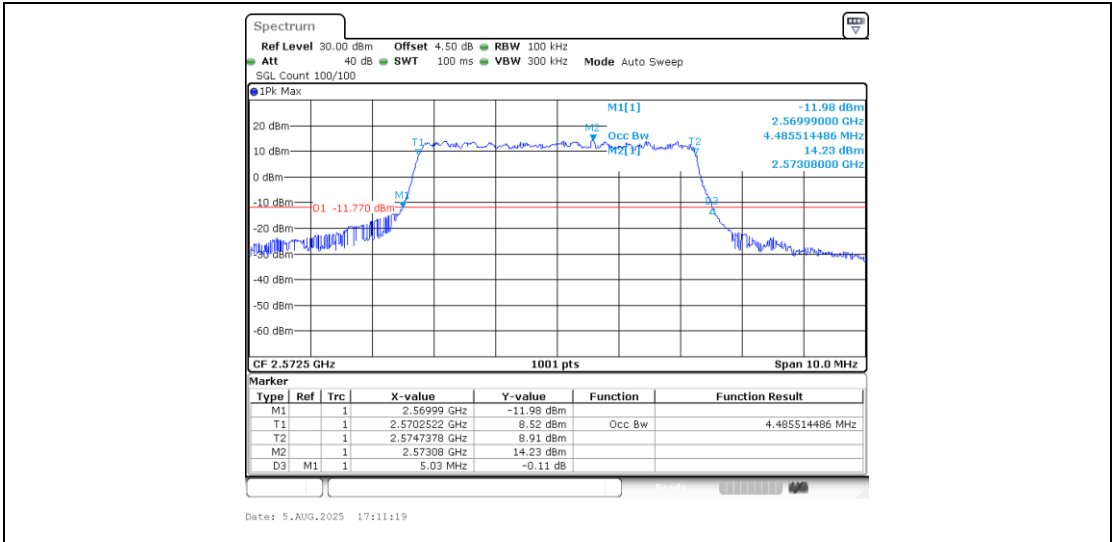
Band38-20MHz-QPSK-38150-100RB#0-PASS

Appendix C: 26dB Bandwidth and Occupied Bandwidth

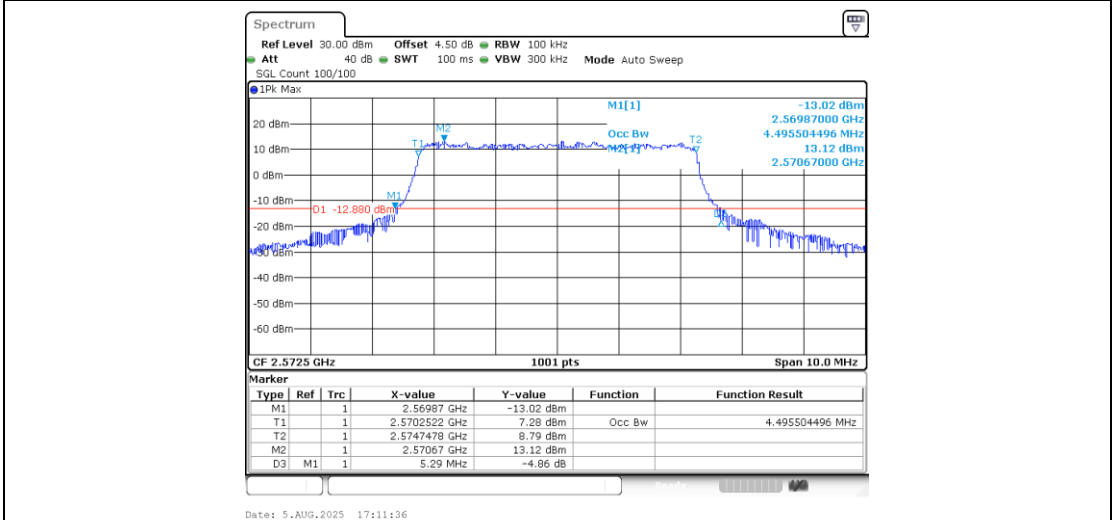
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band38	5MHz	QPSK	37775	25RB#0	4.486	5.03	PASS
Band38	5MHz	16QAM	37775	25RB#0	4.496	5.29	PASS
Band38	5MHz	QPSK	38000	25RB#0	4.496	5.10	PASS
Band38	5MHz	16QAM	38000	25RB#0	4.486	5.09	PASS
Band38	5MHz	QPSK	38225	25RB#0	4.486	5.01	PASS
Band38	5MHz	16QAM	38225	25RB#0	4.476	5.05	PASS
Band38	10MHz	QPSK	37800	50RB#0	8.9785	9.889	PASS
Band38	10MHz	QPSK	38000	50RB#0	8.9765	9.867	PASS
Band38	10MHz	QPSK	38200	50RB#0	8.9737	9.858	PASS
Band38	15MHz	QPSK	37825	75RB#0	13.487	15.03	PASS
Band38	15MHz	QPSK	38000	75RB#0	13.484	15.21	PASS
Band38	15MHz	QPSK	38175	75RB#0	13.449	15.01	PASS
Band38	20MHz	QPSK	37850	100RB#0	17.913	19.57	PASS
Band38	20MHz	QPSK	38000	100RB#0	17.936	19.56	PASS
Band38	20MHz	QPSK	38150	100RB#0	17.932	19.52	PASS

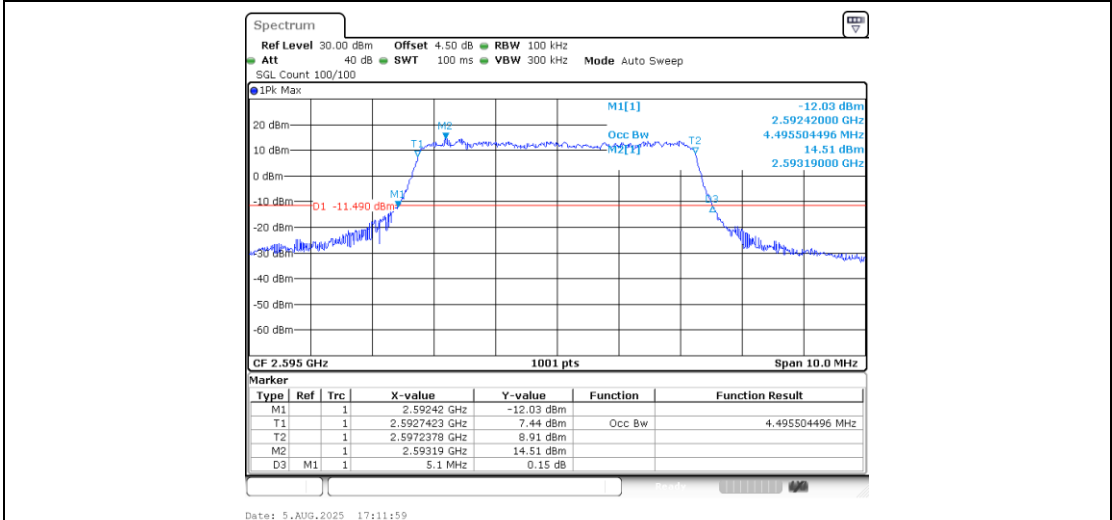
Test Graphs



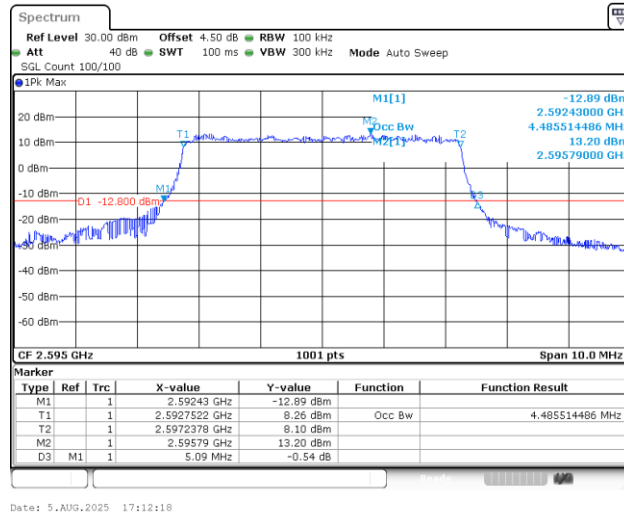
Band38-5MHz-QPSK-37775-25RB#0-PASS



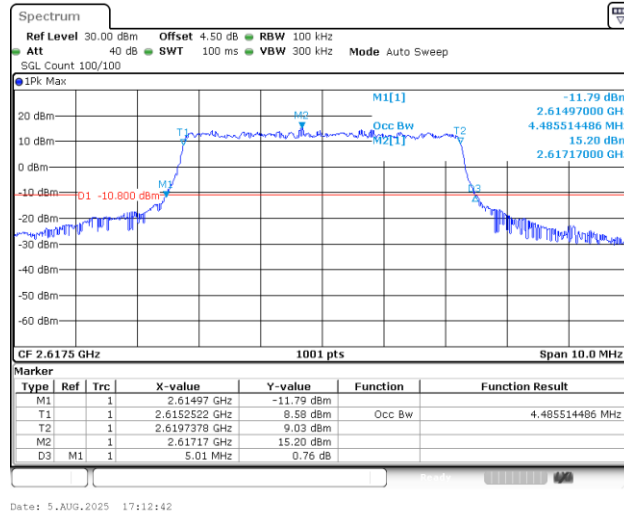
Band38-5MHz-16QAM-37775-25RB#0-PASS



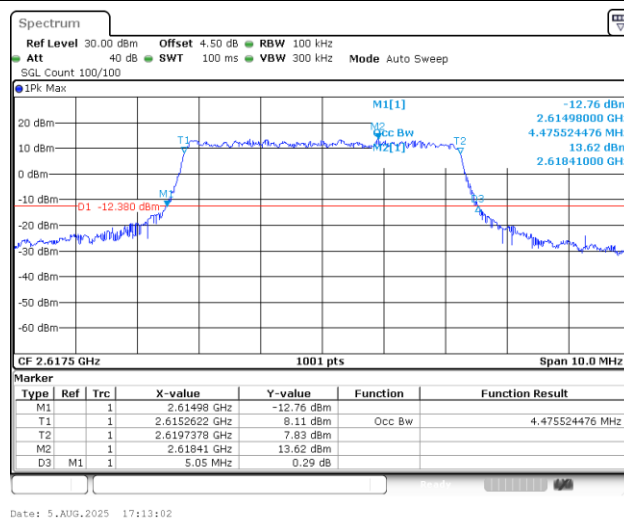
Band38-5MHz-QPSK-38000-25RB#0-PASS



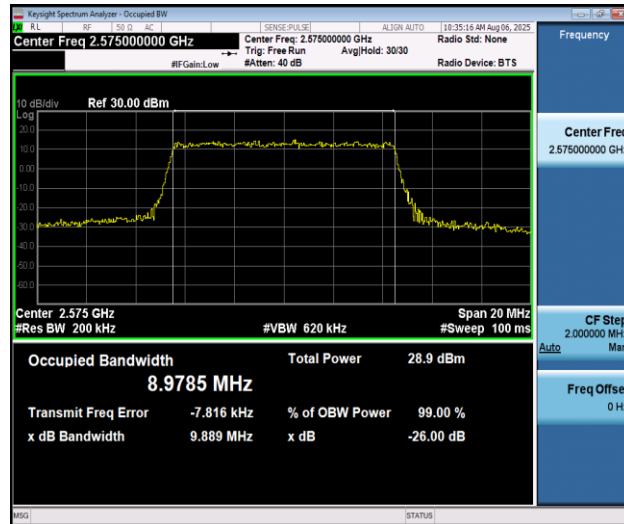
Band38-5MHz-16QAM-38000-25RB#0-PASS



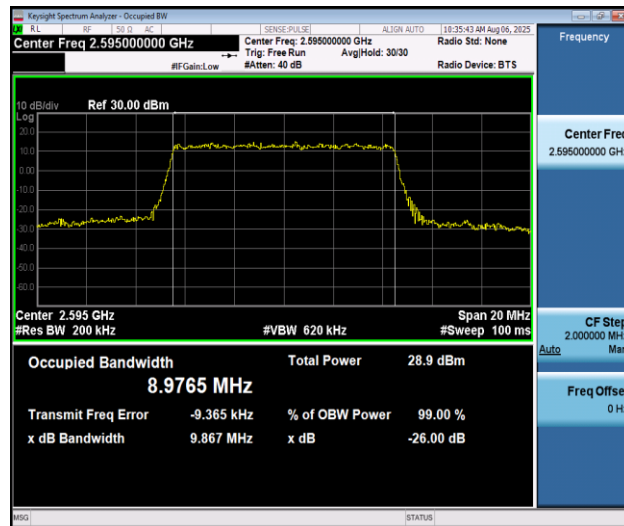
Band38-5MHz-QPSK-38225-25RB#0-PASS



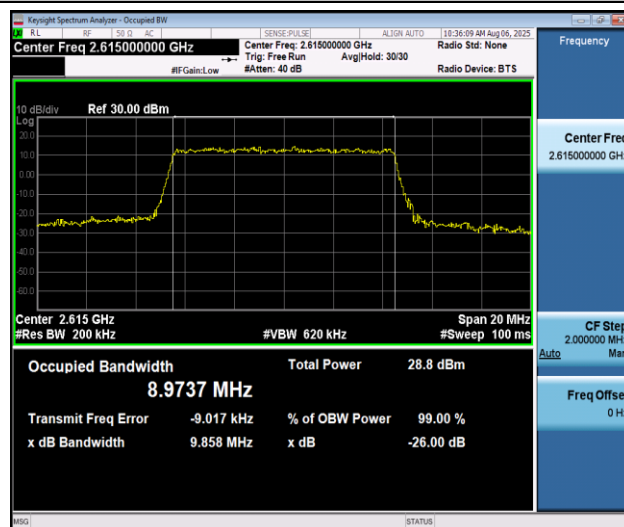
Band38-5MHz-16QAM-38225-25RB#0-PASS



Band38-10MHz-QPSK-37800-50RB#0-PASS



Band38-10MHz-QPSK-38000-50RB#0-PASS



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