

Appendix for LTE Band 13

Product Name: EcoFlow 4G Dongle PPS (NA)
Model No: EF HD-P2-4G-S1

Appendix A: Average Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	23.45	PASS
Band13	5MHz	16QAM	23205	1RB#0	22.51	PASS
Band13	5MHz	QPSK	23205	1RB#12	23.27	PASS
Band13	5MHz	16QAM	23205	1RB#12	21.97	PASS
Band13	5MHz	QPSK	23205	1RB#24	23.33	PASS
Band13	5MHz	16QAM	23205	1RB#24	22.39	PASS
Band13	5MHz	QPSK	23205	12RB#0	22.49	PASS
Band13	5MHz	16QAM	23205	12RB#0	21.29	PASS
Band13	5MHz	QPSK	23205	12RB#6	22.48	PASS
Band13	5MHz	16QAM	23205	12RB#6	21.38	PASS
Band13	5MHz	QPSK	23205	12RB#13	22.30	PASS
Band13	5MHz	16QAM	23205	12RB#13	21.40	PASS
Band13	5MHz	QPSK	23205	25RB#0	22.42	PASS
Band13	5MHz	16QAM	23205	25RB#0	21.53	PASS
Band13	5MHz	QPSK	23230	1RB#0	23.29	PASS
Band13	5MHz	16QAM	23230	1RB#0	22.63	PASS
Band13	5MHz	QPSK	23230	1RB#12	23.22	PASS
Band13	5MHz	16QAM	23230	1RB#12	22.48	PASS
Band13	5MHz	QPSK	23230	1RB#24	23.33	PASS
Band13	5MHz	16QAM	23230	1RB#24	22.58	PASS
Band13	5MHz	QPSK	23230	12RB#0	22.25	PASS
Band13	5MHz	16QAM	23230	12RB#0	21.28	PASS
Band13	5MHz	QPSK	23230	12RB#6	22.31	PASS
Band13	5MHz	16QAM	23230	12RB#6	21.40	PASS
Band13	5MHz	QPSK	23230	12RB#13	22.39	PASS
Band13	5MHz	16QAM	23230	12RB#13	21.21	PASS
Band13	5MHz	QPSK	23230	25RB#0	22.23	PASS
Band13	5MHz	16QAM	23230	25RB#0	21.27	PASS
Band13	5MHz	QPSK	23255	1RB#0	23.21	PASS
Band13	5MHz	16QAM	23255	1RB#0	22.32	PASS
Band13	5MHz	QPSK	23255	1RB#12	23.36	PASS
Band13	5MHz	16QAM	23255	1RB#12	22.46	PASS
Band13	5MHz	QPSK	23255	1RB#24	23.44	PASS
Band13	5MHz	16QAM	23255	1RB#24	22.55	PASS
Band13	5MHz	QPSK	23255	12RB#0	22.29	PASS

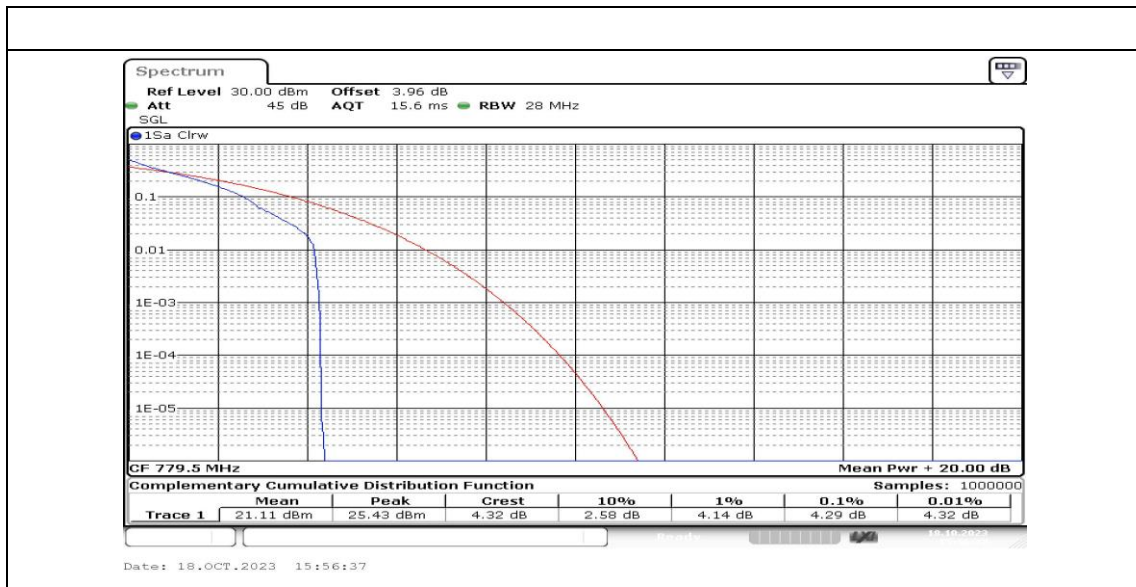
Band13	5MHz	16QAM	23255	12RB#0	21.25	PASS
Band13	5MHz	QPSK	23255	12RB#6	22.25	PASS
Band13	5MHz	16QAM	23255	12RB#6	21.27	PASS
Band13	5MHz	QPSK	23255	12RB#13	22.35	PASS
Band13	5MHz	16QAM	23255	12RB#13	21.43	PASS
Band13	5MHz	QPSK	23255	25RB#0	22.26	PASS
Band13	5MHz	16QAM	23255	25RB#0	21.43	PASS
Band13	10MHz	QPSK	23230	1RB#0	22.68	PASS
Band13	10MHz	QPSK	23230	1RB#24	22.76	PASS
Band13	10MHz	QPSK	23230	1RB#49	22.68	PASS
Band13	10MHz	QPSK	23230	25RB#0	21.49	PASS
Band13	10MHz	QPSK	23230	25RB#12	21.54	PASS
Band13	10MHz	QPSK	23230	25RB#25	21.56	PASS
Band13	10MHz	QPSK	23230	50RB#0	21.57	PASS
Band13	10MHz	16QAM	23230	1RB#0	21.53	PASS
Band13	10MHz	16QAM	23230	1RB#24	21.58	PASS
Band13	10MHz	16QAM	23230	1RB#49	21.66	PASS
Band13	10MHz	16QAM	23230	25RB#0	20.48	PASS
Band13	10MHz	16QAM	23230	25RB#12	20.44	PASS
Band13	10MHz	16QAM	23230	25RB#25	20.61	PASS

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

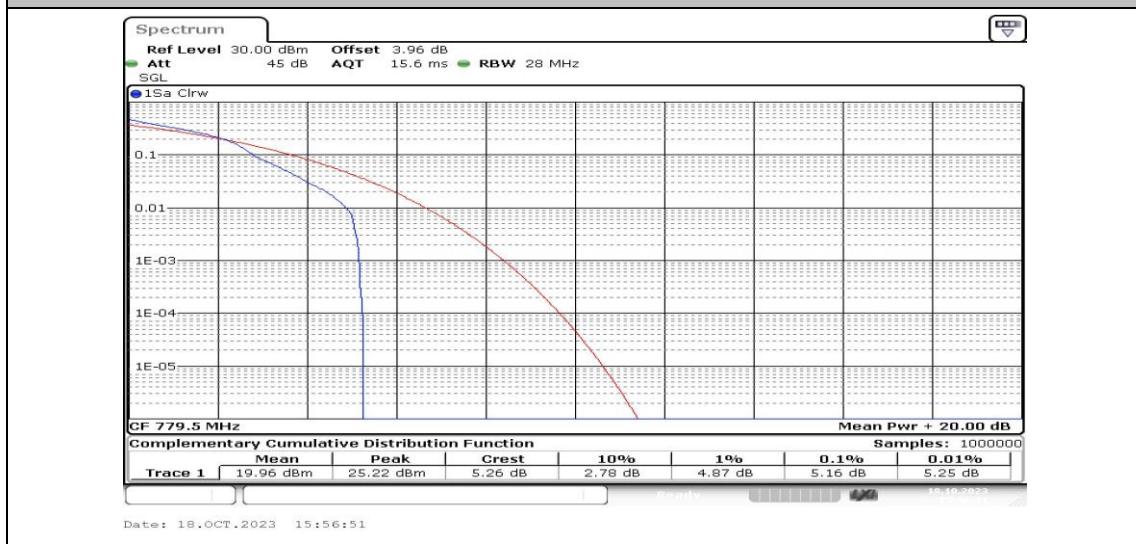
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	4.29	13	PASS
Band13	5MHz	16QAM	23205	1RB#0	5.16	13	PASS
Band13	5MHz	QPSK	23205	25RB#0	4.84	13	PASS
Band13	5MHz	16QAM	23205	25RB#0	5.62	13	PASS
Band13	5MHz	QPSK	23230	1RB#0	4.32	13	PASS
Band13	5MHz	16QAM	23230	1RB#0	5.19	13	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.93	13	PASS
Band13	5MHz	16QAM	23230	25RB#0	5.68	13	PASS
Band13	5MHz	QPSK	23255	1RB#0	4.32	13	PASS
Band13	5MHz	16QAM	23255	1RB#0	5.04	13	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.93	13	PASS
Band13	5MHz	16QAM	23255	25RB#0	5.71	13	PASS
Band13	10MHz	QPSK	23230	1RB#0	4.23	13	PASS
Band13	10MHz	QPSK	23230	50RB#0	4.99	13	PASS
Band13	10MHz	16QAM	23230	1RB#0	5.16	13	PASS
Band13	10MHz	16QAM	23230	25RB#0	5.48	13	PASS

Test Graphs



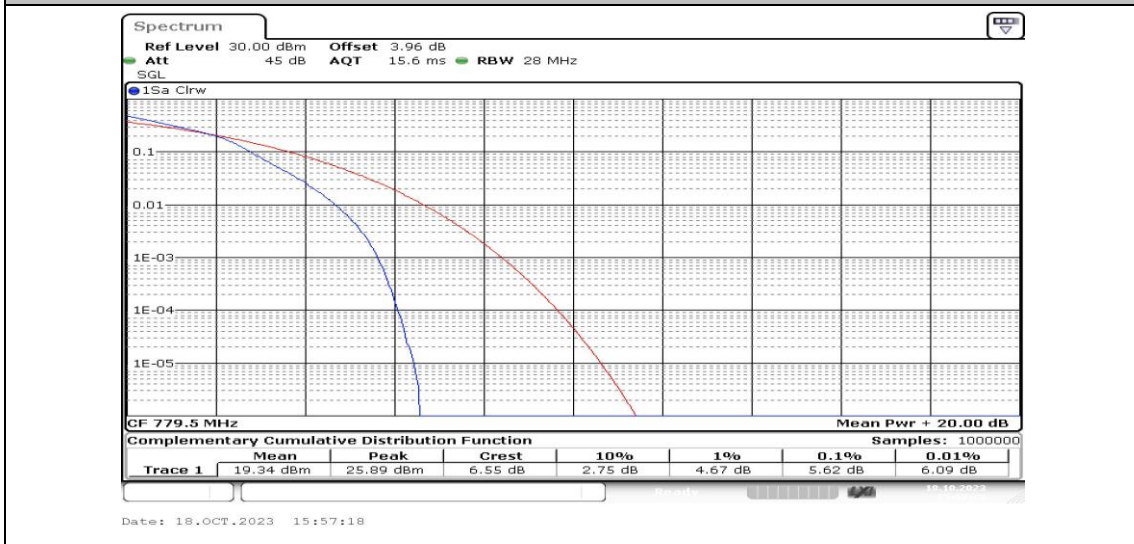
Band13-5MHz-QPSK-23205-1RB#0-PASS



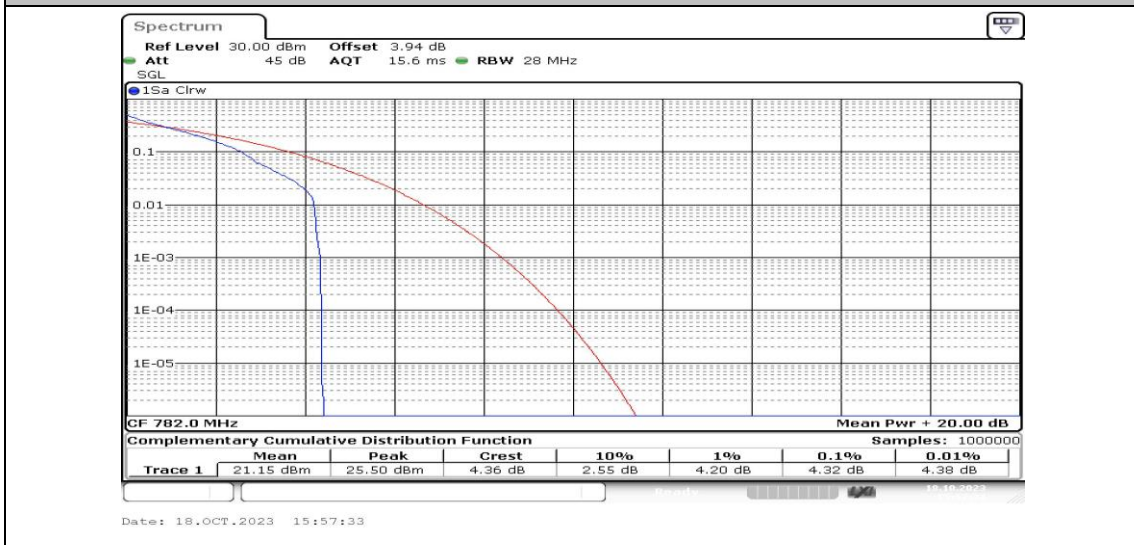
Band13-5MHz-16QAM-23205-1RB#0-PASS



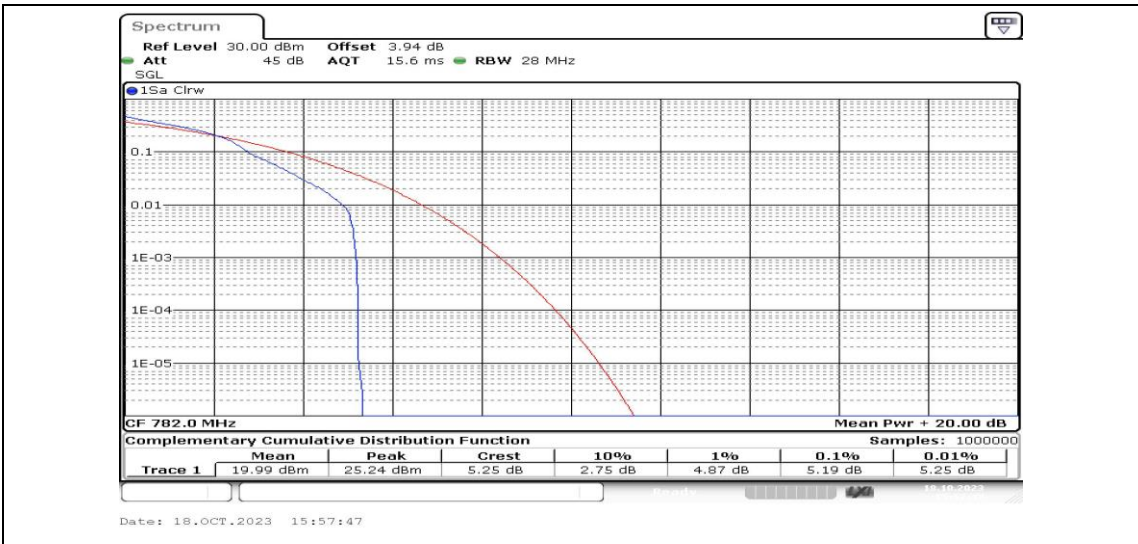
Band13-5MHz-QPSK-23205-25RB#0-PASS



Band13-5MHz-16QAM-23205-25RB#0-PASS



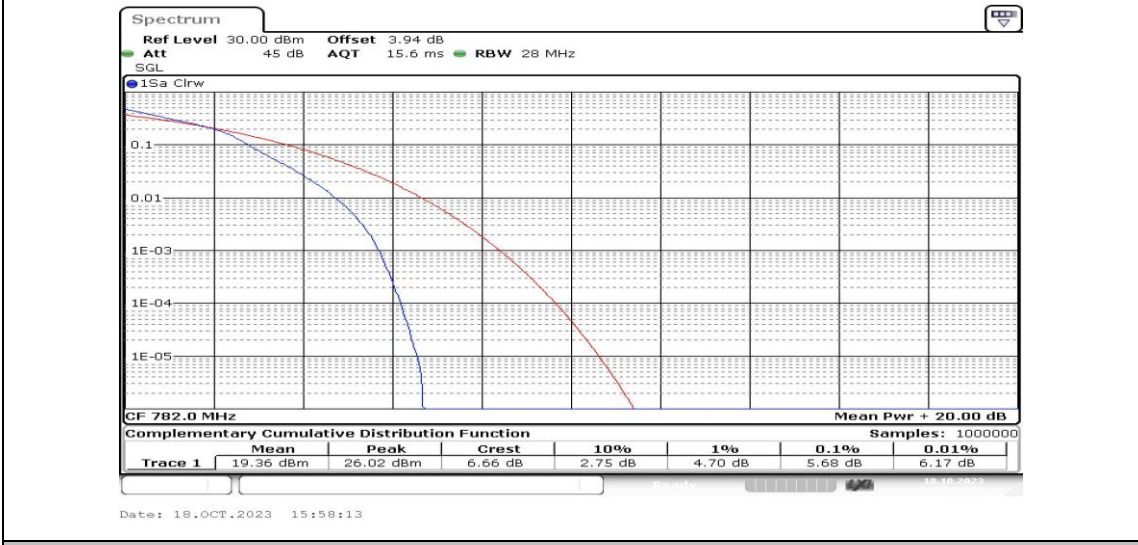
Band13-5MHz-QPSK-23230-1RB#0-PASS



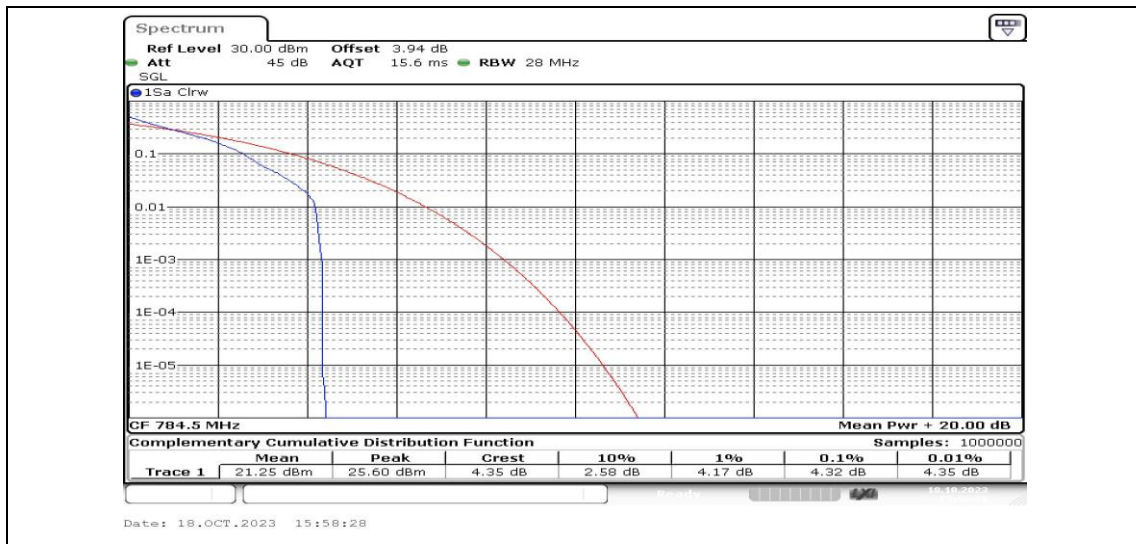
Band13-5MHz-16QAM-23230-1RB#0-PASS



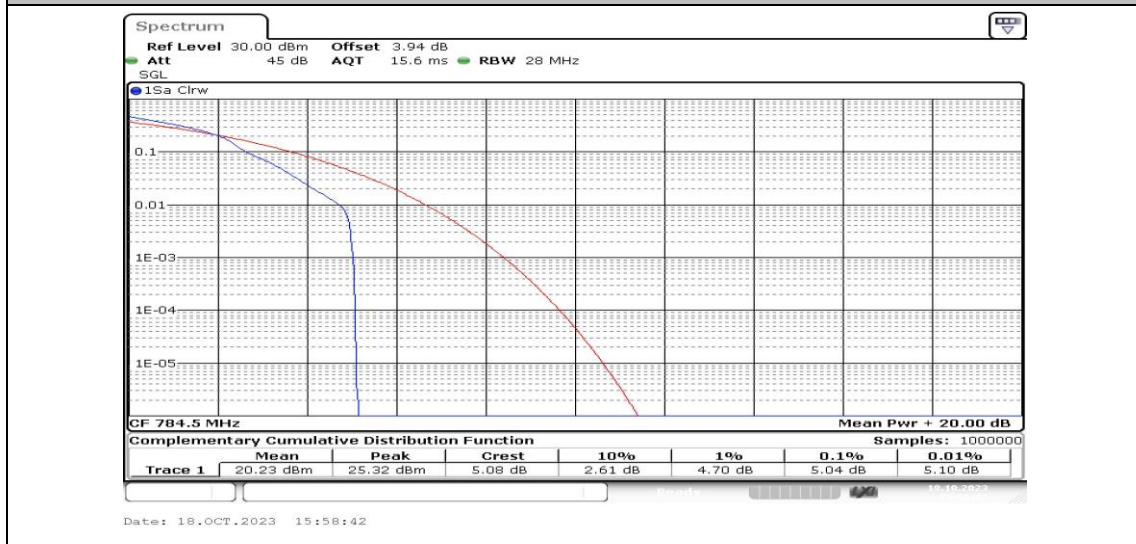
Band13-5MHz-QPSK-23230-25RB#0-PASS



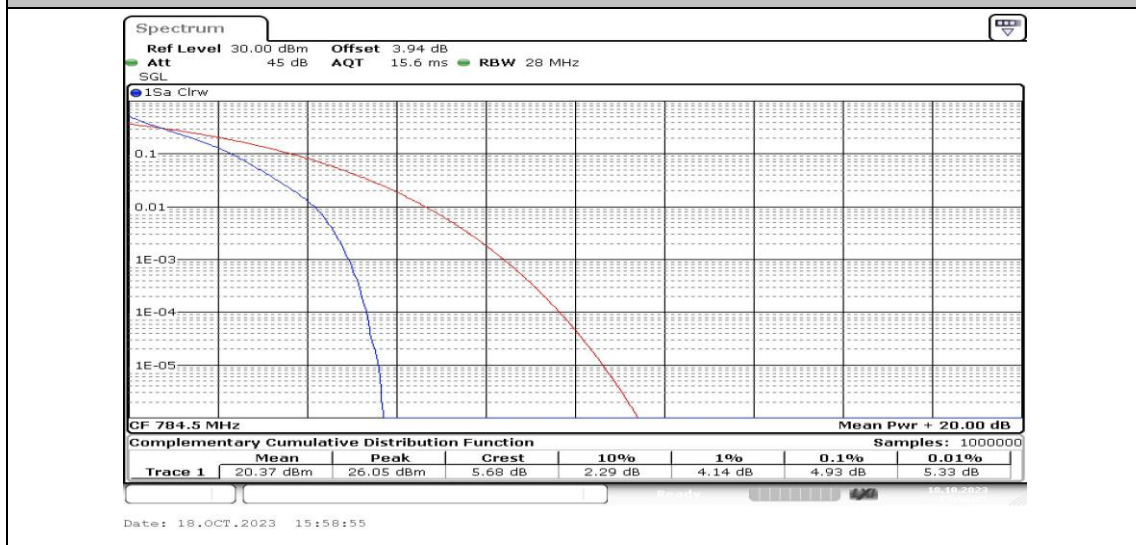
Band13-5MHz-16QAM-23230-25RB#0-PASS



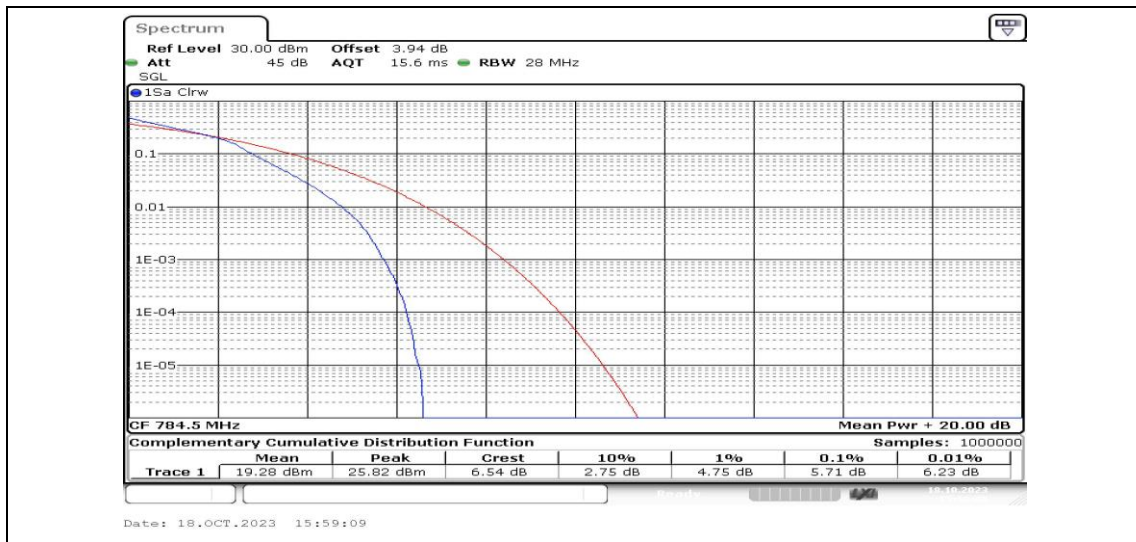
Band13-5MHz-QPSK-23255-1RB#0-PASS



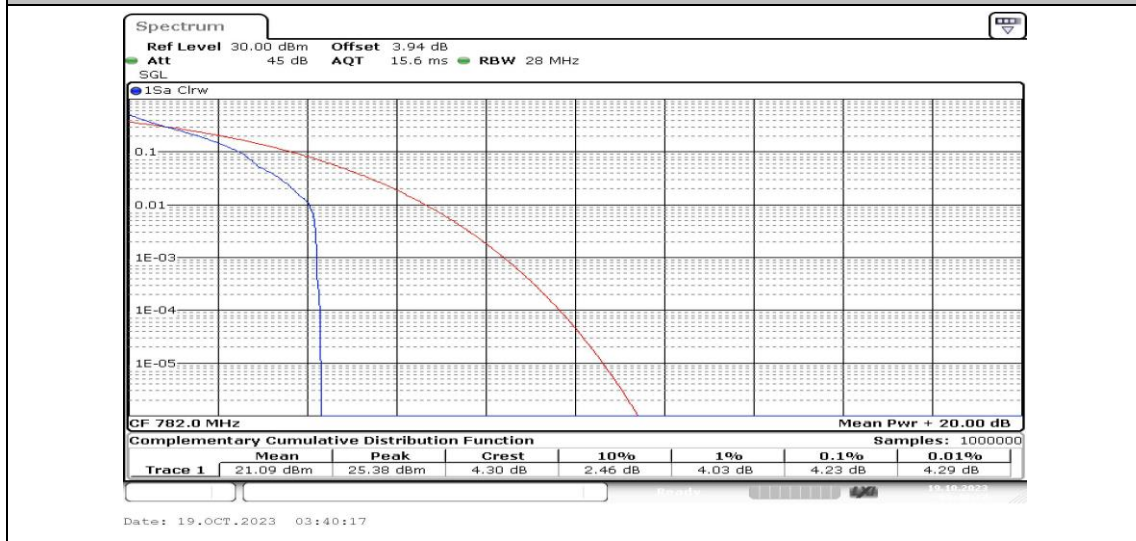
Band13-5MHz-16QAM-23255-1RB#0-PASS



Band13-5MHz-QPSK-23255-25RB#0-PASS



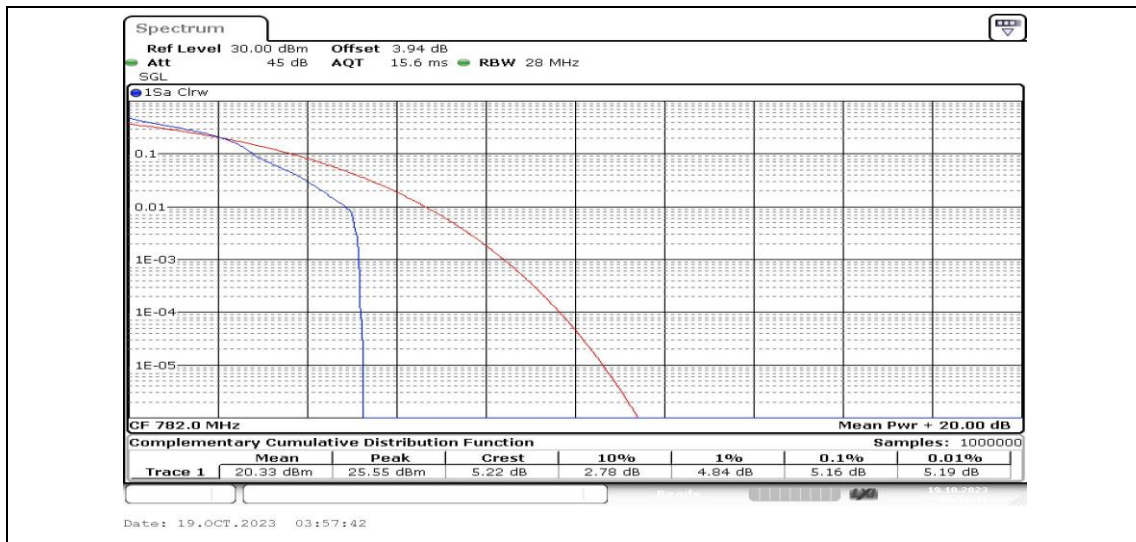
Band13-5MHz-16QAM-23255-25RB#0-PASS



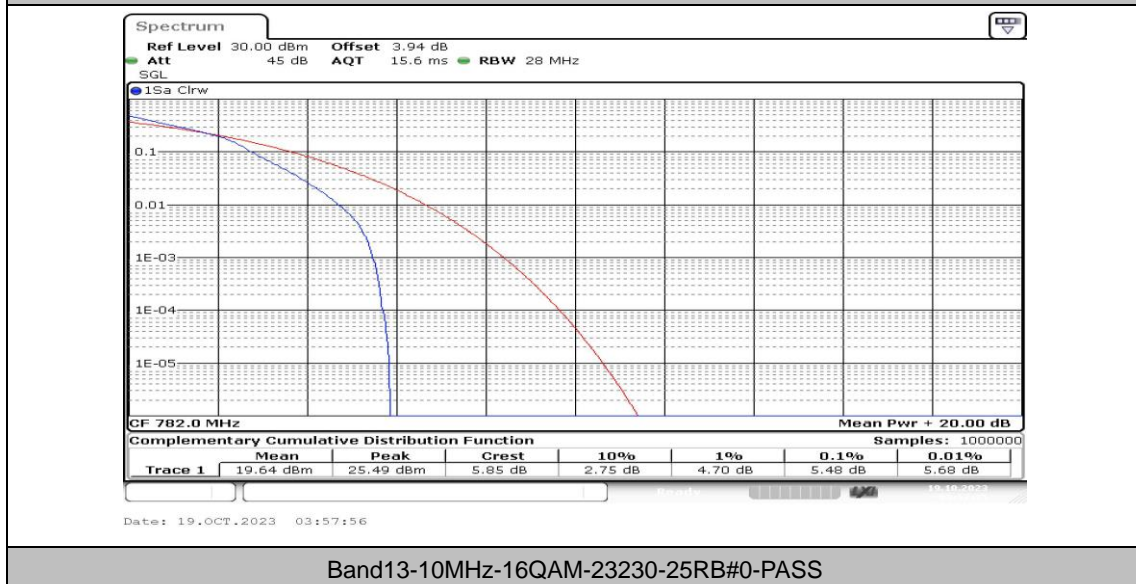
Band13-10MHz-QPSK-23230-1RB#0-PASS



Band13-10MHz-QPSK-23230-50RB#0-PASS



Band13-10MHz-16QAM-23230-1RB#0-PASS



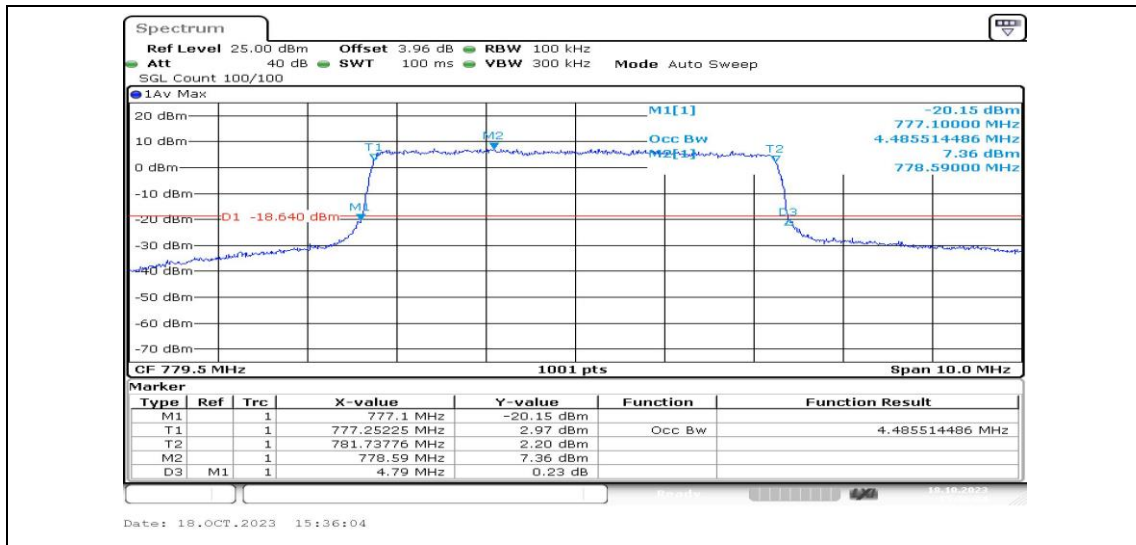
Band13-10MHz-16QAM-23230-25RB#0-PASS

Appendix C: 26dB Bandwidth and Occupied Bandwidth

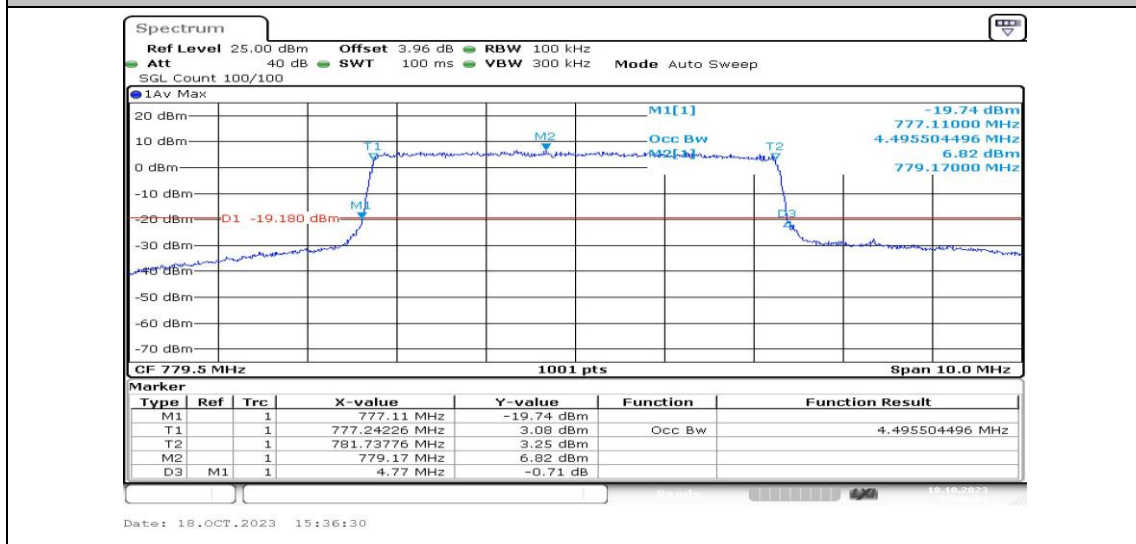
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.486	4.79	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.496	4.77	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.496	4.78	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.505	4.79	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.505	4.80	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.505	4.79	PASS
Band13	10MHz	QPSK	23230	50RB#0	8.952	9.53	PASS
Band13	10MHz	16QAM	23230	25RB#0	4.559	5.03	PASS

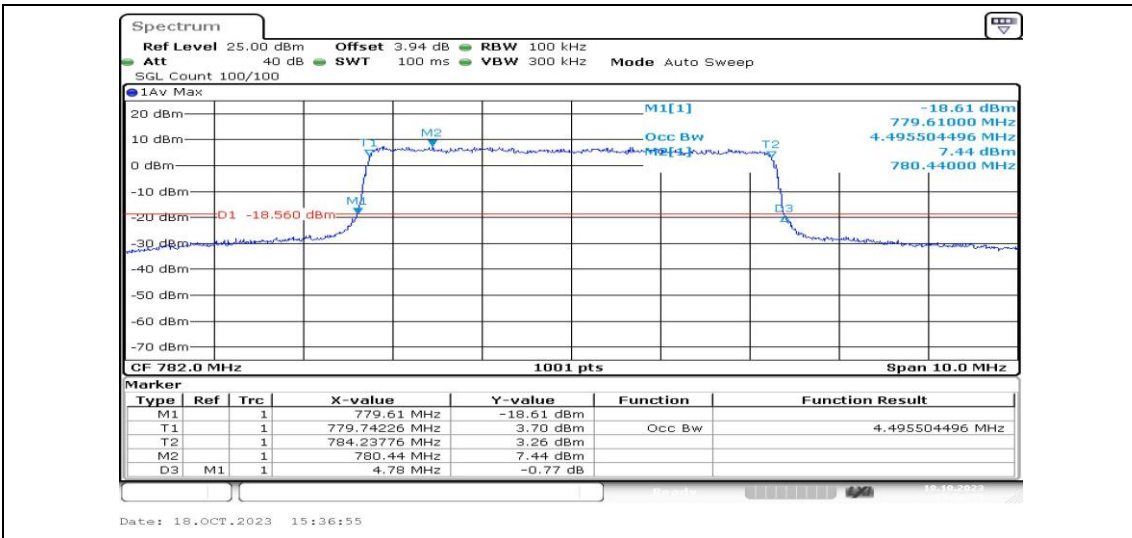
Test Graphs



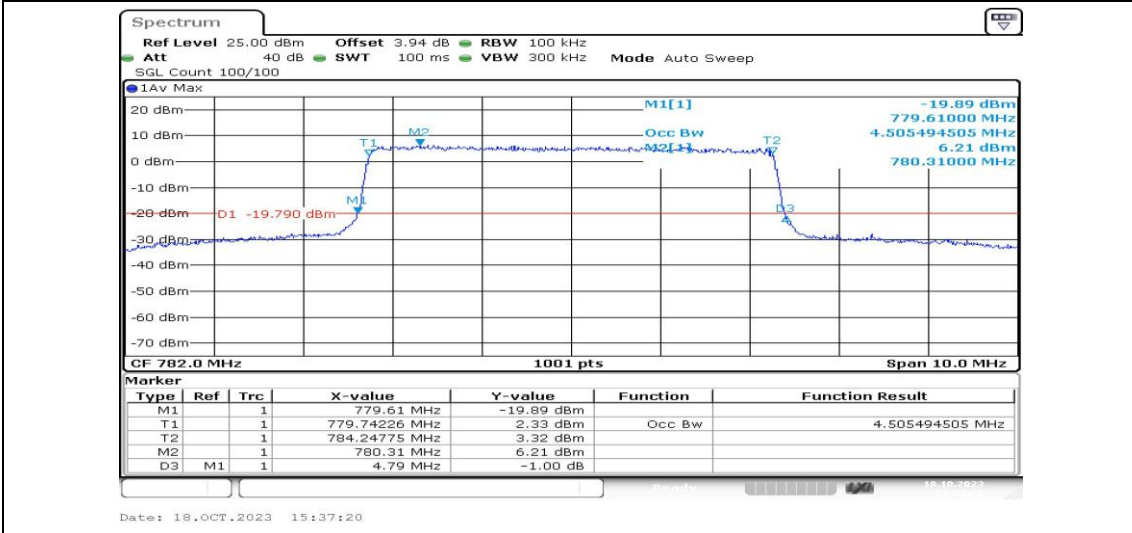
Band13-5MHz-QPSK-23205-25RB#0-PASS



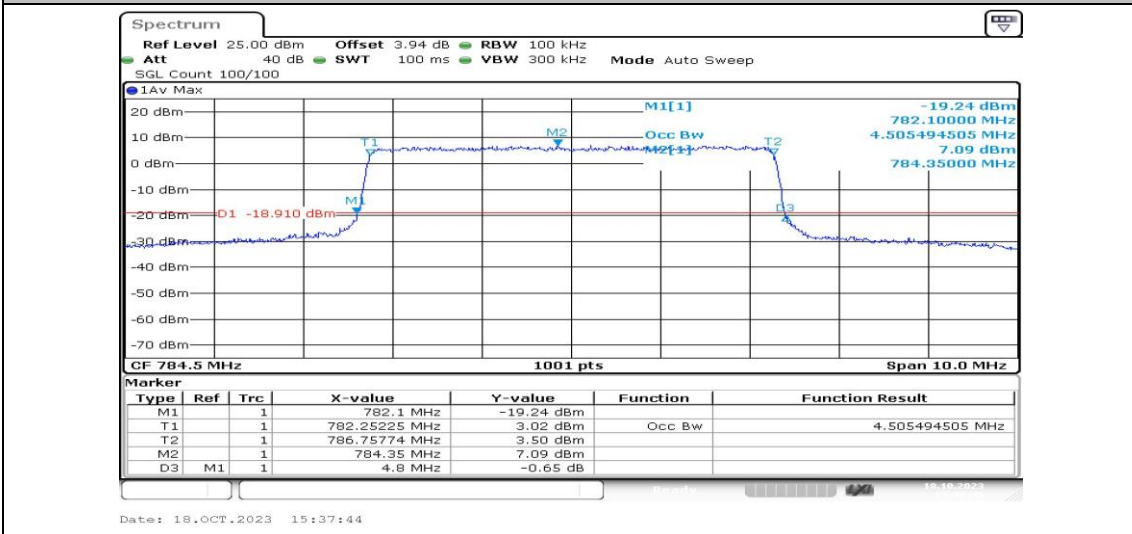
Band13-5MHz-16QAM-23205-25RB#0-PASS



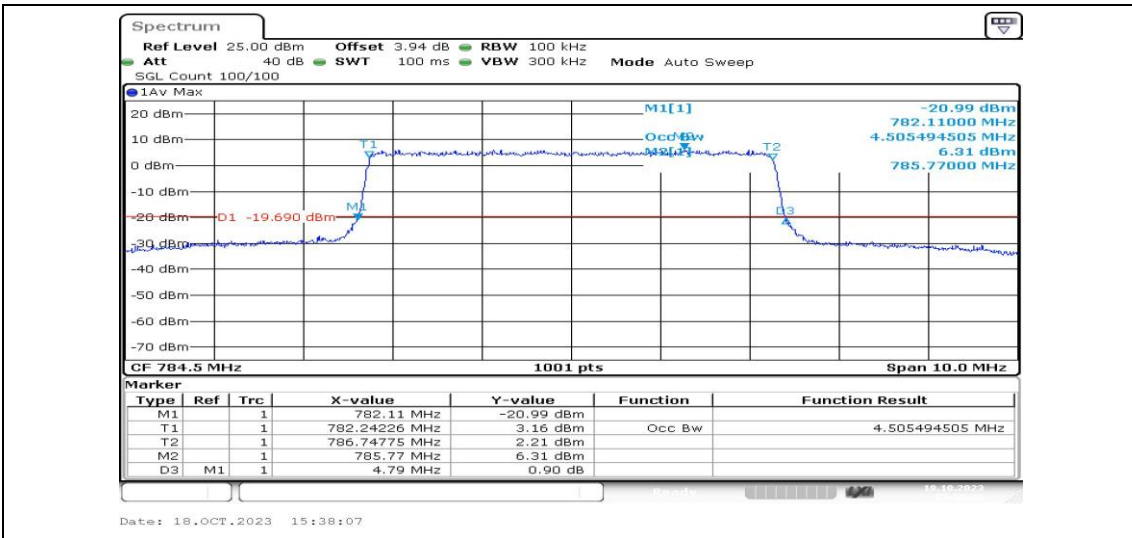
Band13-5MHz-QPSK-23230-25RB#0-PASS



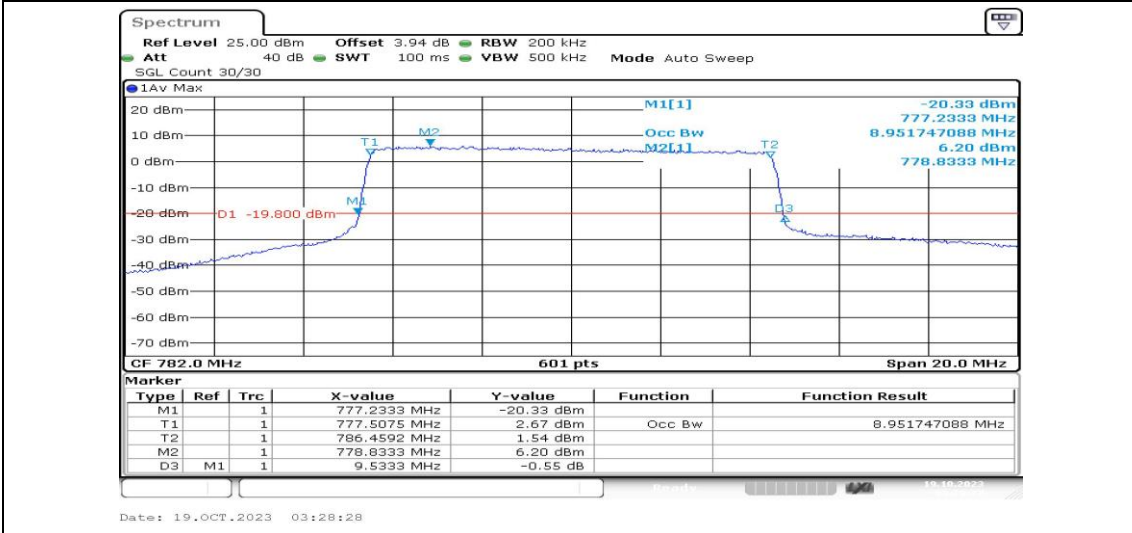
Band13-5MHz-16QAM-23230-25RB#0-PASS



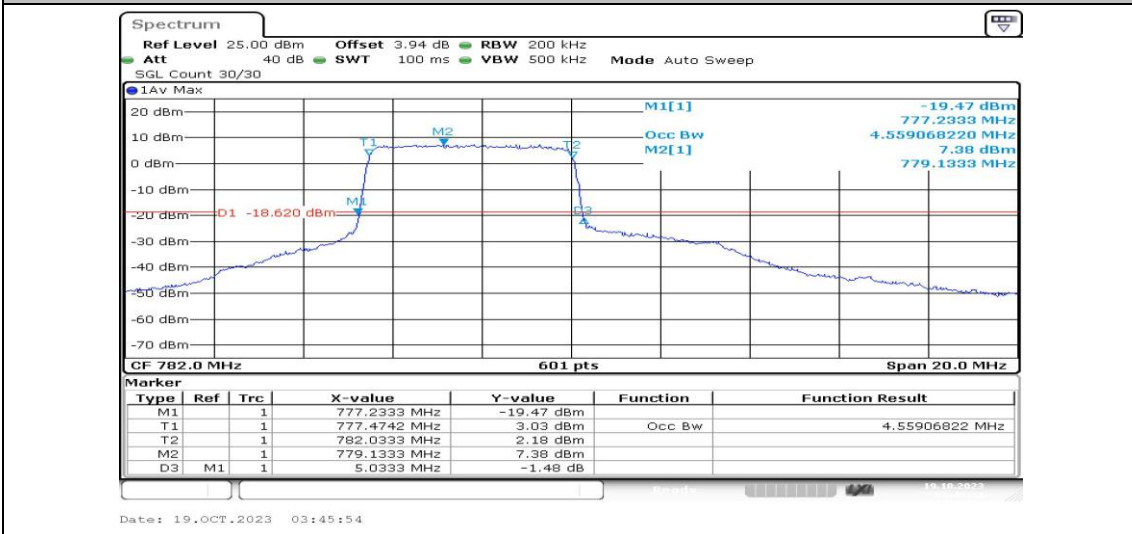
Band13-5MHz-QPSK-23255-25RB#0-PASS



Band13-5MHz-16QAM-23255-25RB#0-PASS



Band13-10MHz-QPSK-23230-50RB#0-PASS



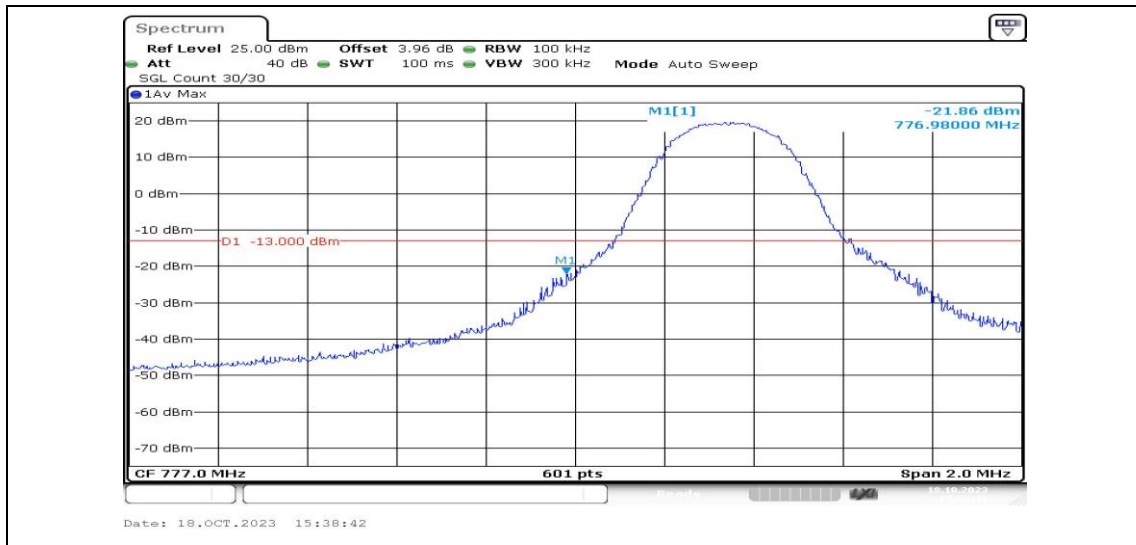
Band13-10MHz-16QAM-23230-25RB#0-PASS

Appendix D: Band Edge

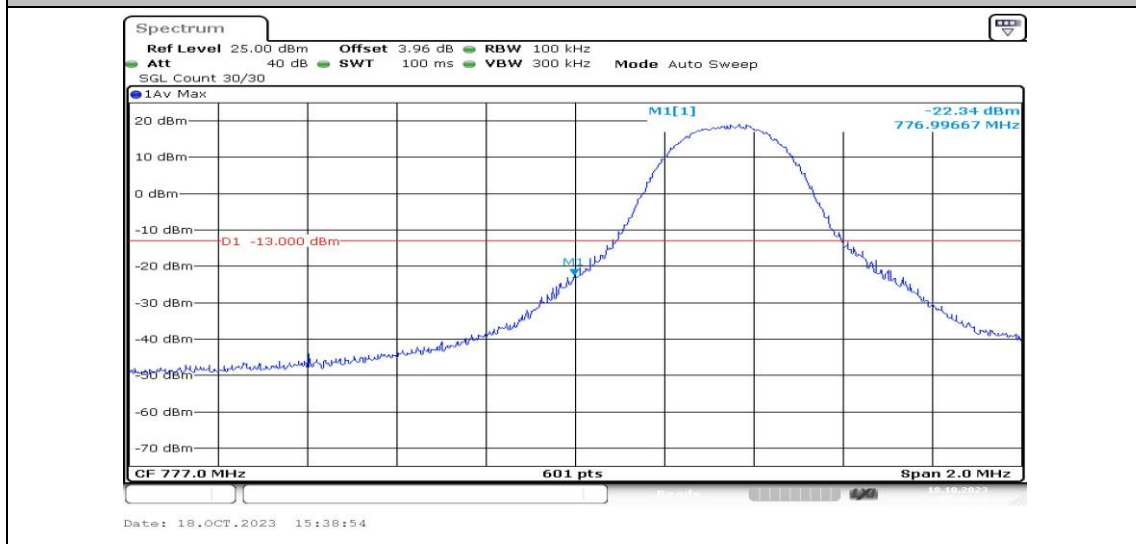
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	-21.86	PASS
Band13	5MHz	16QAM	23205	1RB#0	-22.34	PASS
Band13	5MHz	QPSK	23205	1RB#24	-51.41	PASS
Band13	5MHz	16QAM	23205	1RB#24	-52.99	PASS
Band13	5MHz	QPSK	23205	25RB#0	-25.67	PASS
Band13	5MHz	16QAM	23205	25RB#0	-27.17	PASS
Band13	5MHz	QPSK	23255	1RB#0	-52.04	PASS
Band13	5MHz	16QAM	23255	1RB#0	-53.25	PASS
Band13	5MHz	QPSK	23255	1RB#24	-21.35	PASS
Band13	5MHz	16QAM	23255	1RB#24	-22.40	PASS
Band13	5MHz	QPSK	23255	25RB#0	-25.39	PASS
Band13	5MHz	16QAM	23255	25RB#0	-26.76	PASS
Band13	10MHz	QPSK	23230	1RB#0	-31.78,-51.28	PASS
Band13	10MHz	QPSK	23230	1RB#49	-49.68,-31.72	PASS
Band13	10MHz	QPSK	23230	50RB#0	-26.61,-26.76	PASS
Band13	10MHz	16QAM	23230	1RB#0	-31.07,-51.26	PASS
Band13	10MHz	16QAM	23230	1RB#49	-49.68,-32.02	PASS
Band13	10MHz	16QAM	23230	25RB#0	-26.98,-40.85	PASS

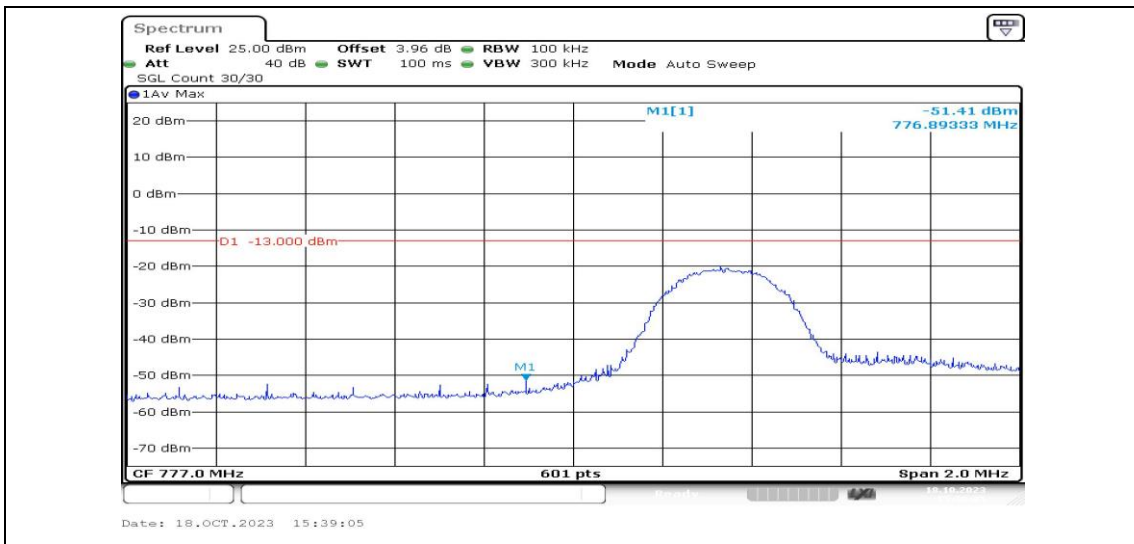
Test Graphs



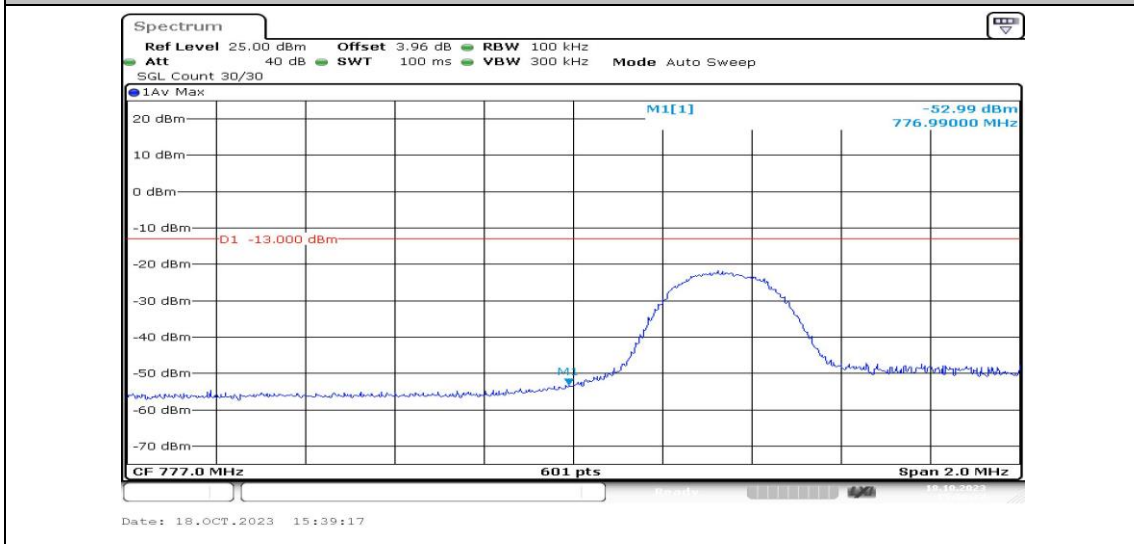
Band13-5MHz-QPSK-23205-1RB#0-PASS



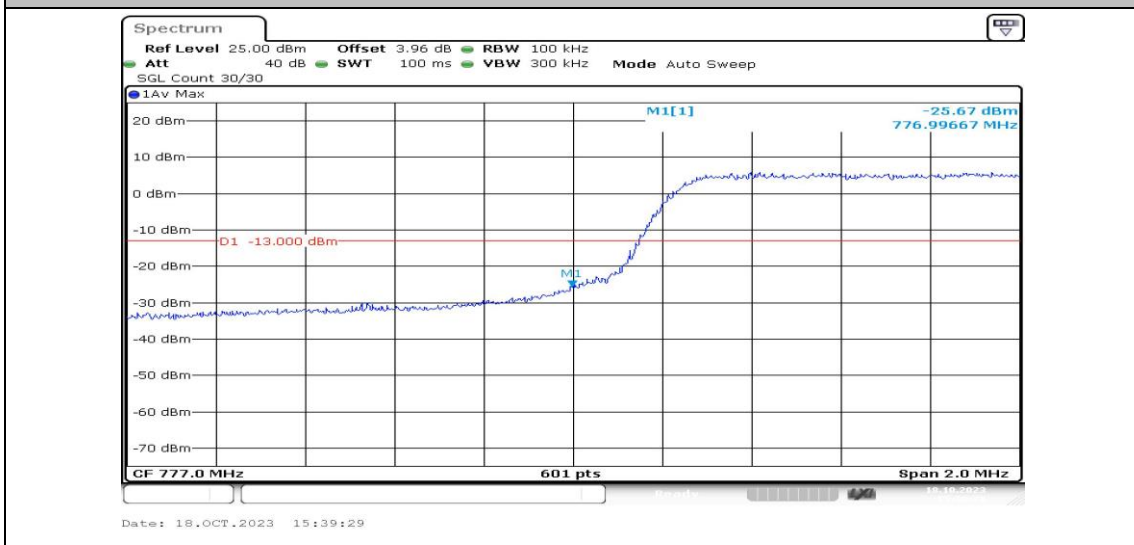
Band13-5MHz-16QAM-23205-1RB#0-PASS



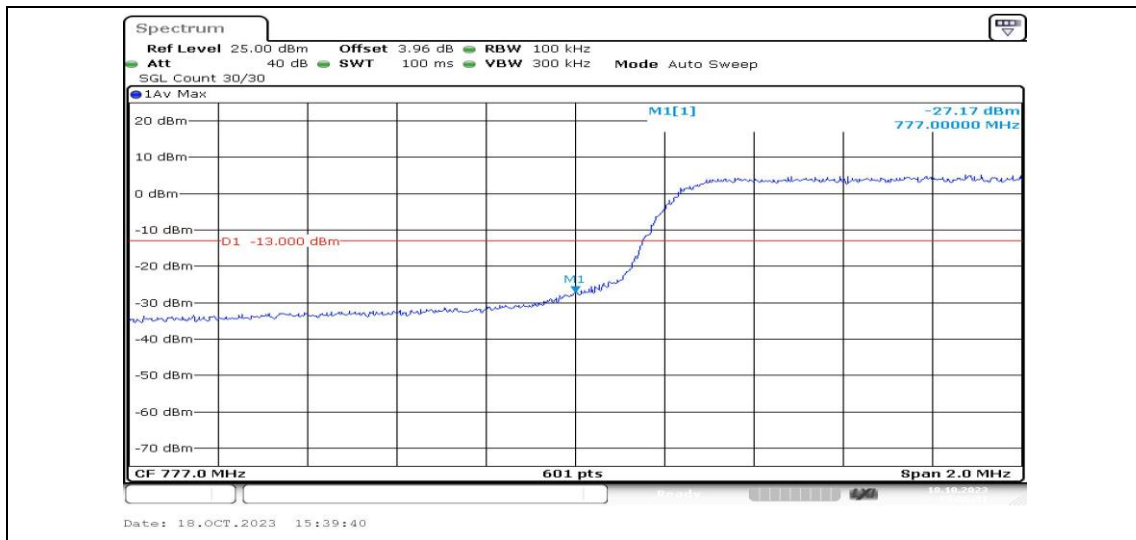
Band13-5MHz-QPSK-23205-1RB#24-PASS



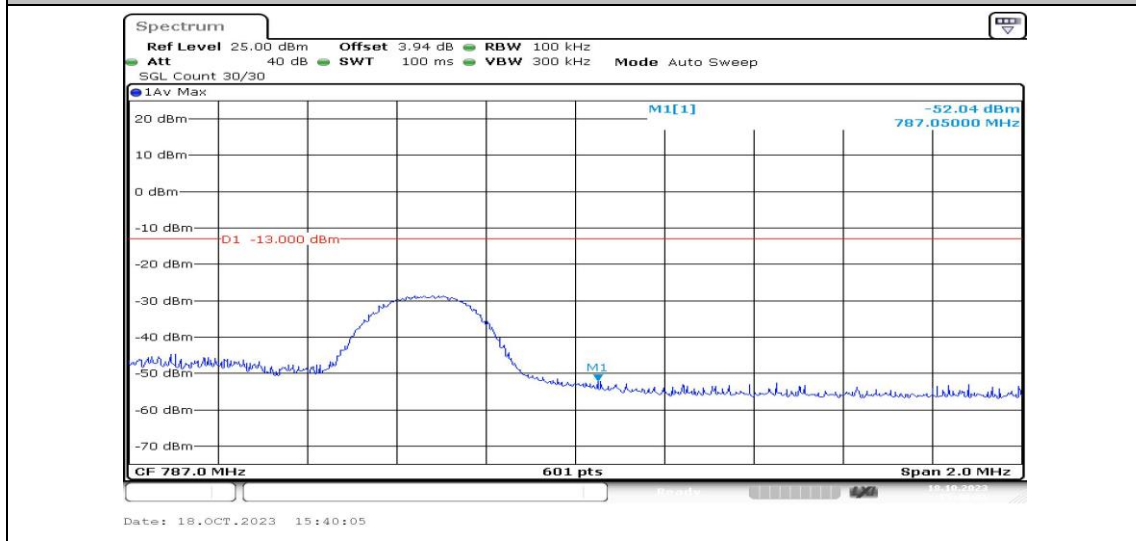
Band13-5MHz-16QAM-23205-1RB#24-PASS



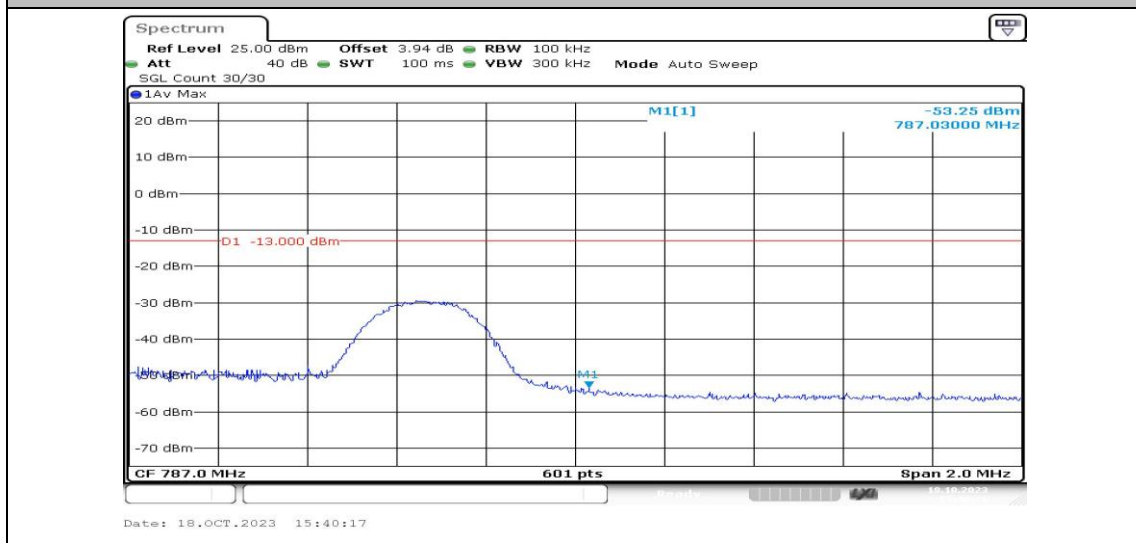
Band13-5MHz-QPSK-23205-25RB#0-PASS



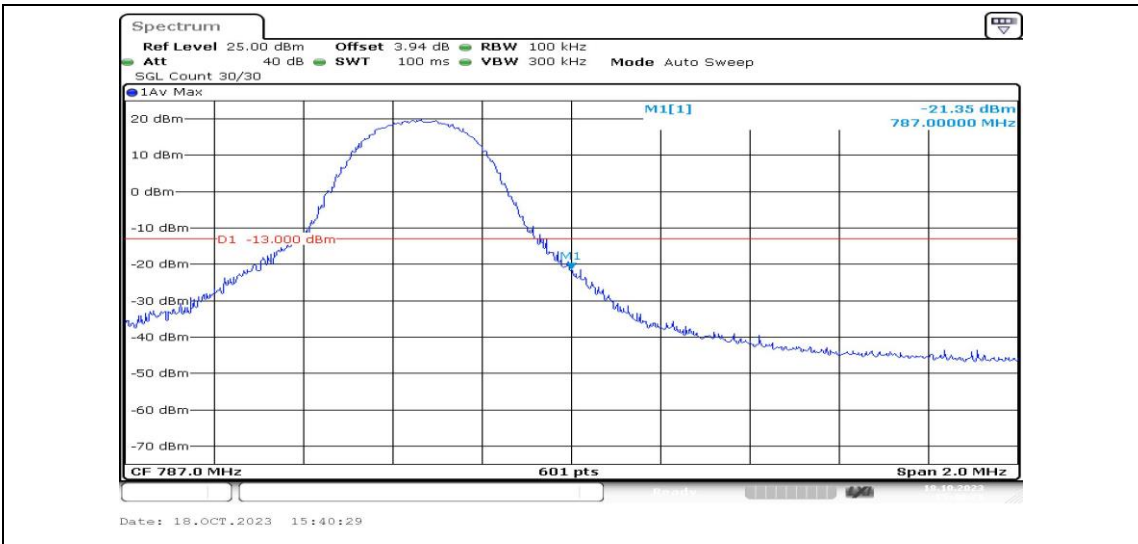
Band13-5MHz-16QAM-23205-25RB#0-PASS



Band13-5MHz-QPSK-23255-1RB#0-PASS



Band13-5MHz-16QAM-23255-1RB#0-PASS



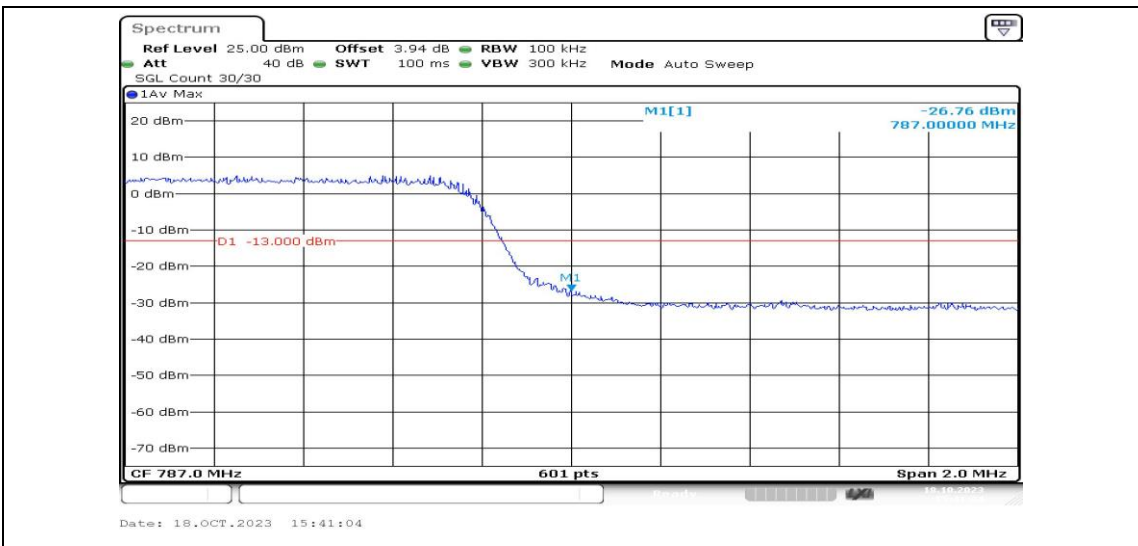
Band13-5MHz-QPSK-23255-1RB#24-PASS



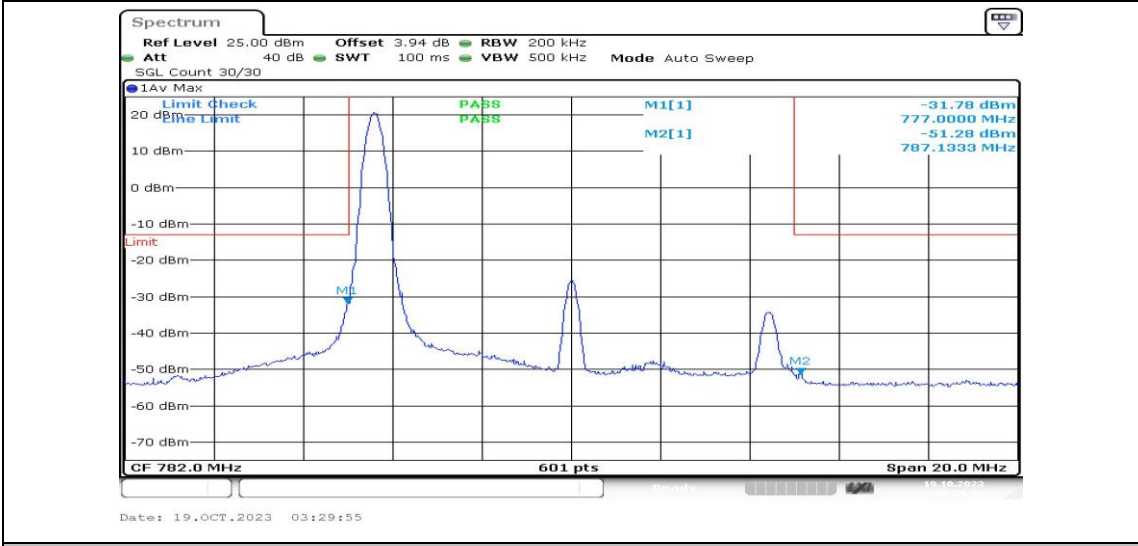
Band13-5MHz-16QAM-23255-1RB#24-PASS



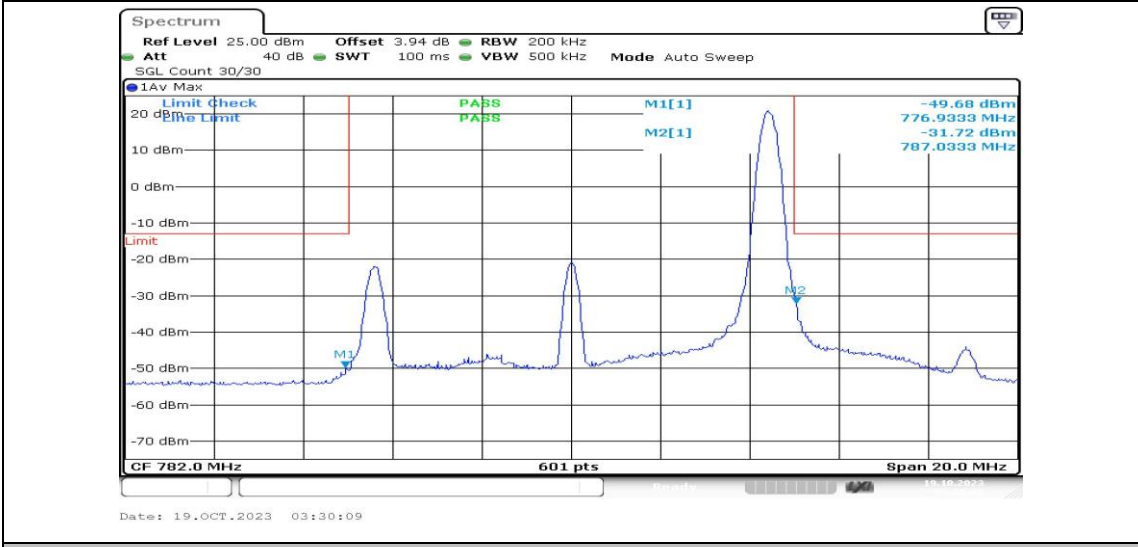
Band13-5MHz-QPSK-23255-25RB#0-PASS



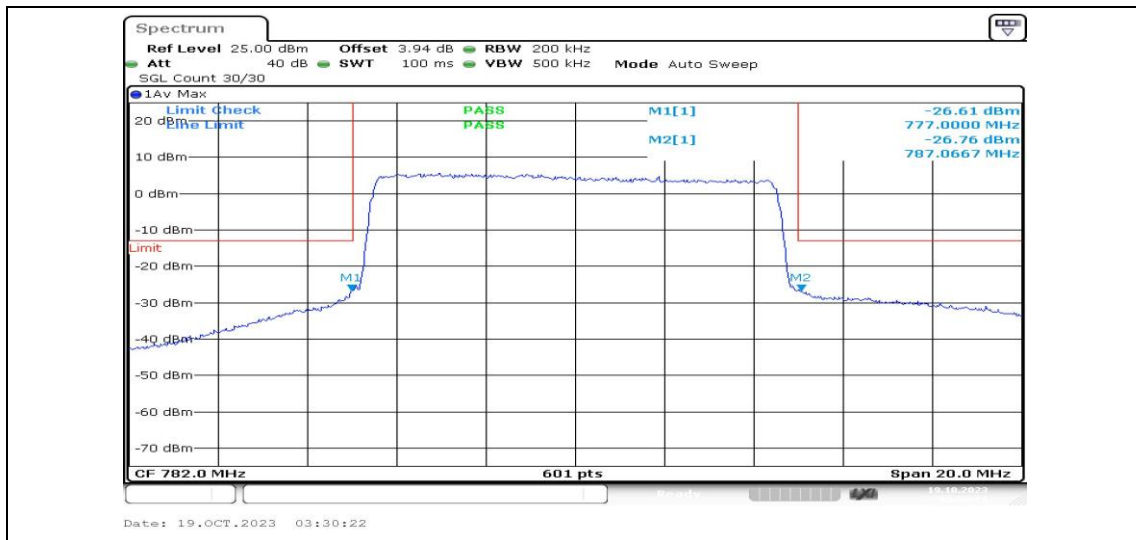
Band13-5MHz-16QAM-23255-25RB#0-PASS



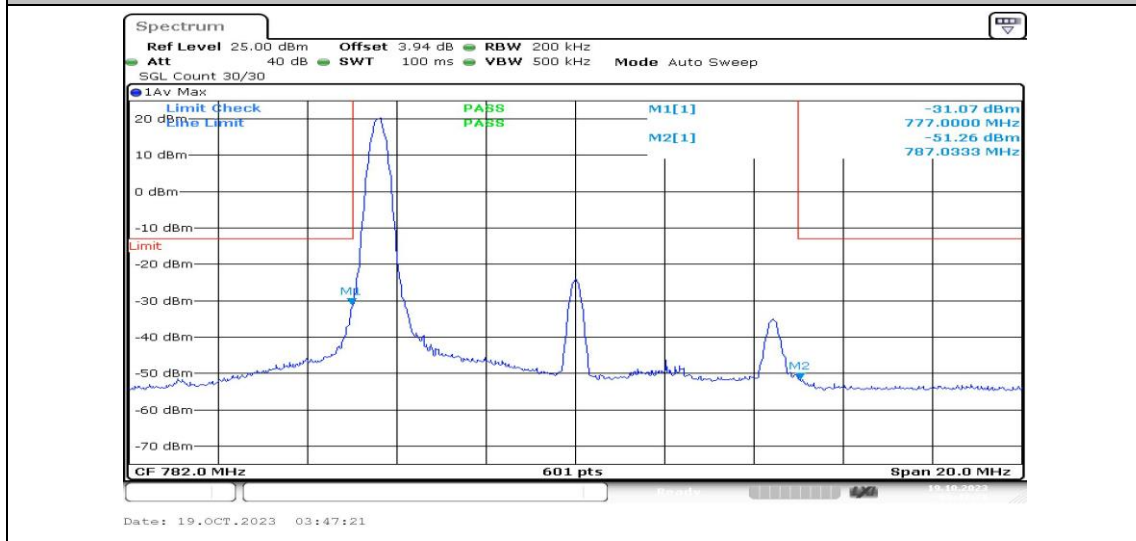
Band13-10MHz-QPSK-23230-1RB#0-PASS



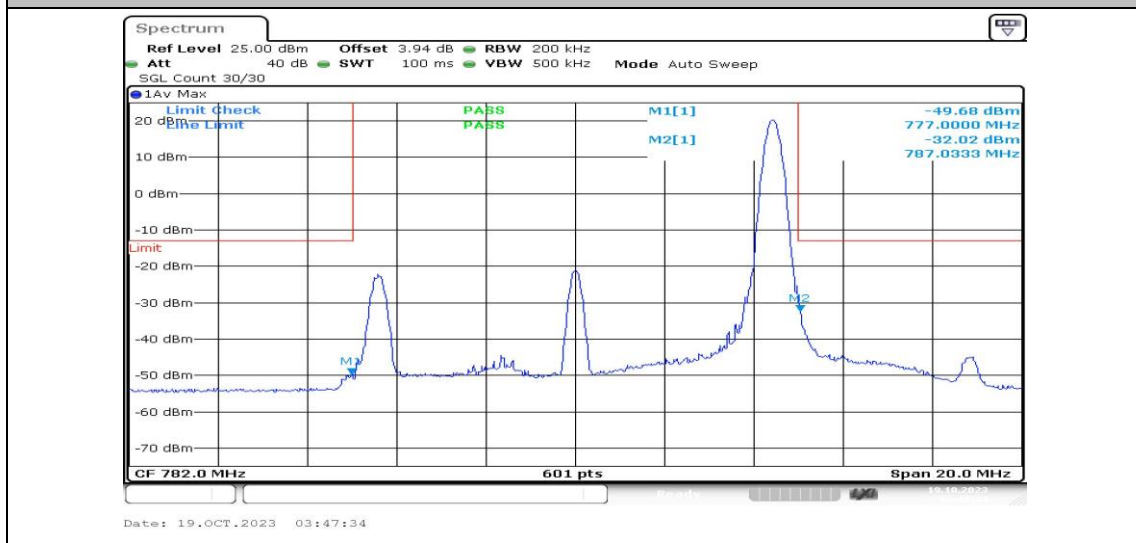
Band13-10MHz-QPSK-23230-1RB#49-PASS



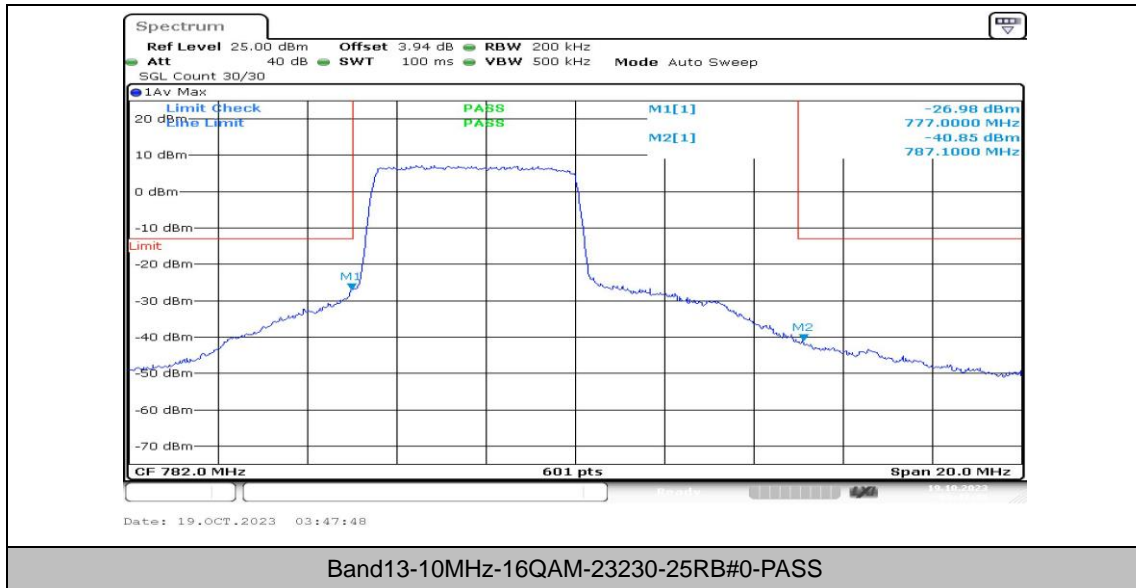
Band13-10MHz-QPSK-23230-50RB#0-PASS



Band13-10MHz-16QAM-23230-1RB#0-PASS



Band13-10MHz-16QAM-23230-1RB#49-PASS



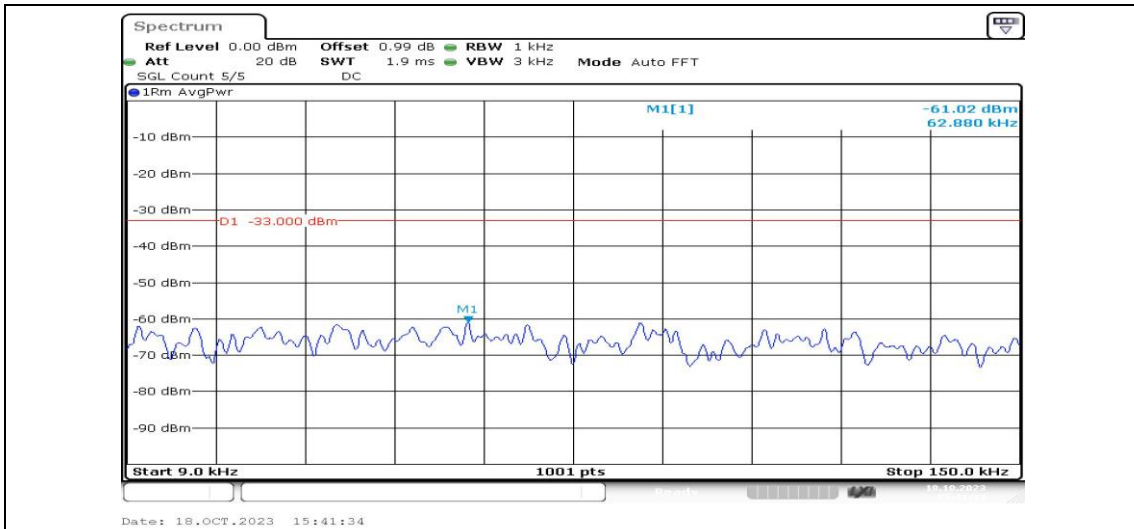
Appendix E: Conducted Spurious Emission

Test Result

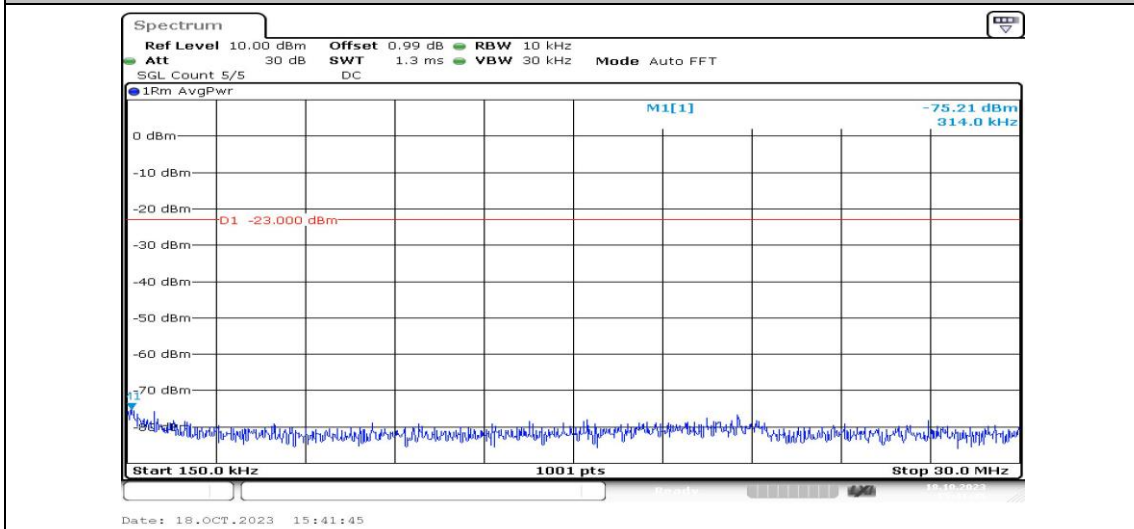
Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band1 3	5MHz	QPSK	23205	1RB#0	Range1:0.009~0.15MHz	-61.0 2	PASS
Band1 3	5MHz	QPSK	23205	1RB#0	Range2:0.15~30MHz	-75.2 1	PASS
Band1 3	5MHz	QPSK	23205	1RB#0	Range3:30~1000MHz	-67.0 8	PASS
Band1 3	5MHz	QPSK	23205	1RB#0	Range4:1000~10000MHz	-47.8	PASS
Band1 3	5MHz	16QAM	23205	1RB#0	Range1:0.009~0.15MHz	-62.0 9	PASS
Band1 3	5MHz	16QAM	23205	1RB#0	Range2:0.15~30MHz	-74.0 8	PASS
Band1 3	5MHz	16QAM	23205	1RB#0	Range3:30~1000MHz	-67.5	PASS
Band1 3	5MHz	16QAM	23205	1RB#0	Range4:1000~10000MHz	-48.4 5	PASS
Band1 3	5MHz	QPSK	23230	1RB#0	Range1:0.009~0.15MHz	-60.4 7	PASS
Band1 3	5MHz	QPSK	23230	1RB#0	Range2:0.15~30MHz	-74.4 2	PASS
Band1 3	5MHz	QPSK	23230	1RB#0	Range3:30~1000MHz	-67.3	PASS
Band1 3	5MHz	QPSK	23230	1RB#0	Range4:1000~10000MHz	-47.6 2	PASS
Band1 3	5MHz	16QAM	23230	1RB#0	Range1:0.009~0.15MHz	-63.6 1	PASS
Band1 3	5MHz	16QAM	23230	1RB#0	Range2:0.15~30MHz	-75.9 2	PASS
Band1 3	5MHz	16QAM	23230	1RB#0	Range3:30~1000MHz	-66.9 2	PASS
Band1 3	5MHz	16QAM	23230	1RB#0	Range4:1000~10000MHz	-47.6 2	PASS
Band1 3	5MHz	QPSK	23255	1RB#0	Range1:0.009~0.15MHz	-61.1 4	PASS

Band1 3	5MHz	QPSK	23255	1RB#0	Range2:0.15~30MHz	-74.9 8	PASS
Band1 3	5MHz	QPSK	23255	1RB#0	Range3:30~1000MHz	-66.9	PASS
Band1 3	5MHz	QPSK	23255	1RB#0	Range4:1000~10000M Hz	-47.7 9	PASS
Band1 3	5MHz	16QAM	23255	1RB#0	Range1:0.009~0.15MH z	-63.9	PASS
Band1 3	5MHz	16QAM	23255	1RB#0	Range2:0.15~30MHz	-74.4 6	PASS
Band1 3	5MHz	16QAM	23255	1RB#0	Range3:30~1000MHz	-67.5 9	PASS
Band1 3	5MHz	16QAM	23255	1RB#0	Range4:1000~10000M Hz	-46.3 1	PASS
Band1 3	10MHz	QPSK	23230	1RB#0	Range1:0.009~0.15MH z	-59.6	PASS
Band1 3	10MHz	QPSK	23230	1RB#0	Range2:0.15~30MHz	-75.0 1	PASS
Band1 3	10MHz	QPSK	23230	1RB#0	Range3:30~1000MHz	-67.2 6	PASS
Band1 3	10MHz	QPSK	23230	1RB#0	Range4:1000~10000M Hz	-46.7 9	PASS
Band1 3	10MHz	16QAM	23230	1RB#0	Range1:0.009~0.15MH z	-62.9 6	PASS
Band1 3	10MHz	16QAM	23230	1RB#0	Range2:0.15~30MHz	-74.9 3	PASS
Band1 3	10MHz	16QAM	23230	1RB#0	Range3:30~1000MHz	-66.7 8	PASS
Band1 3	10MHz	16QAM	23230	1RB#0	Range4:1000~10000M Hz	-47.6 7	PASS

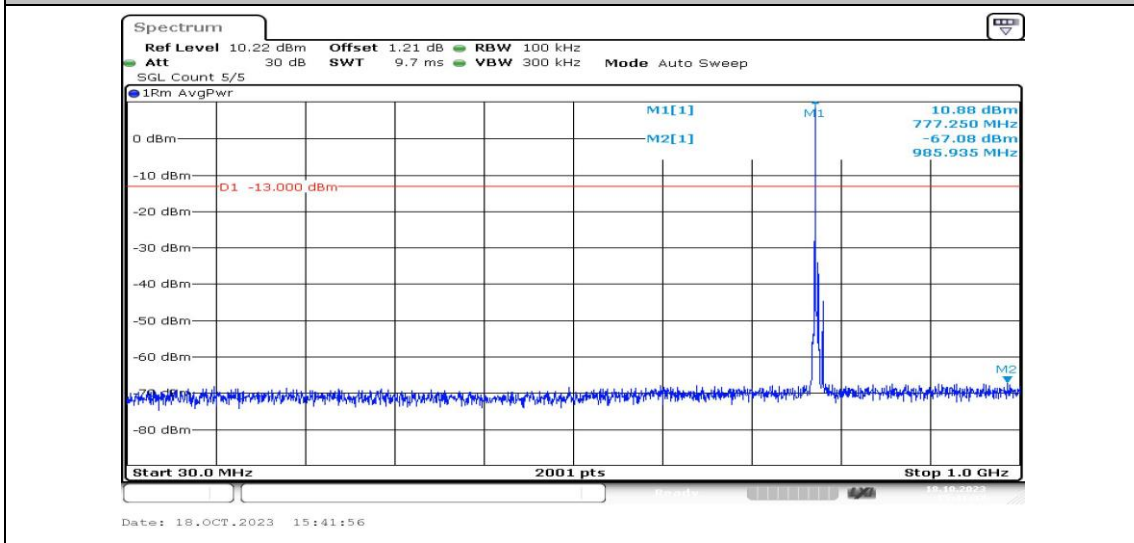
Test Graphs

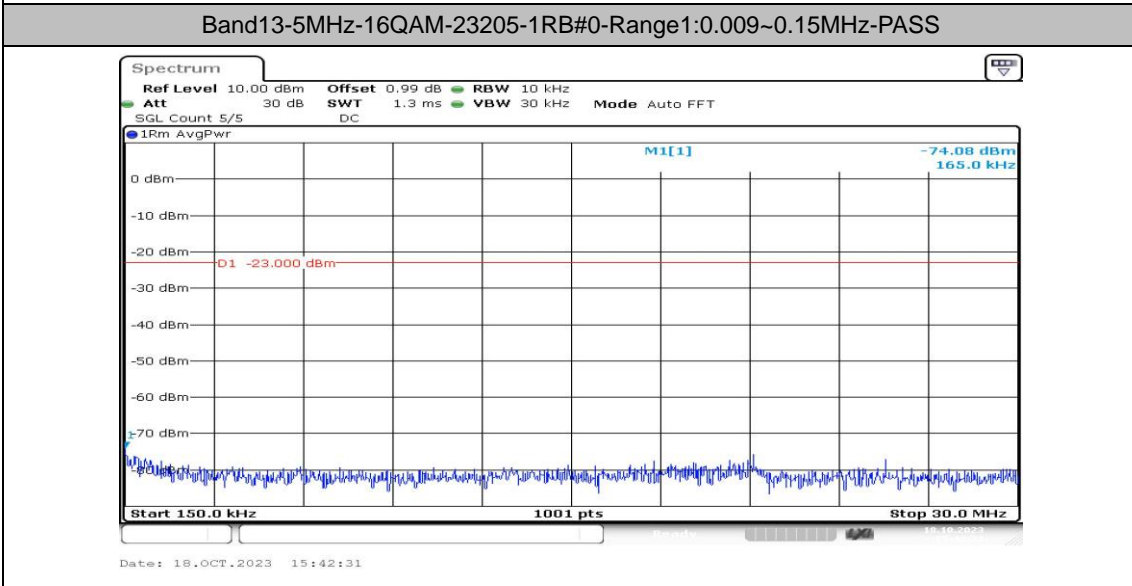
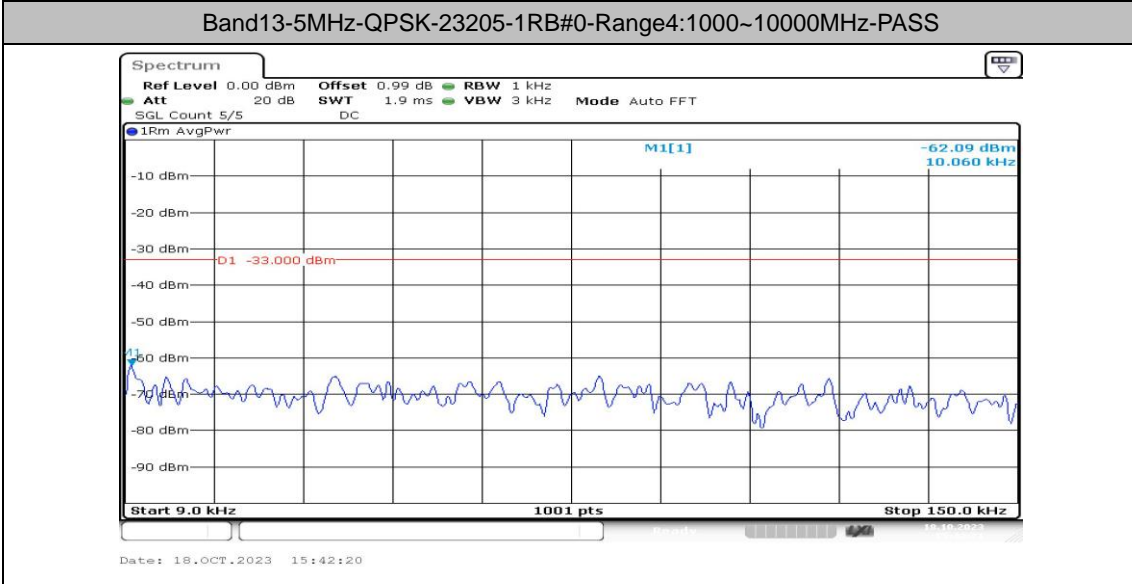
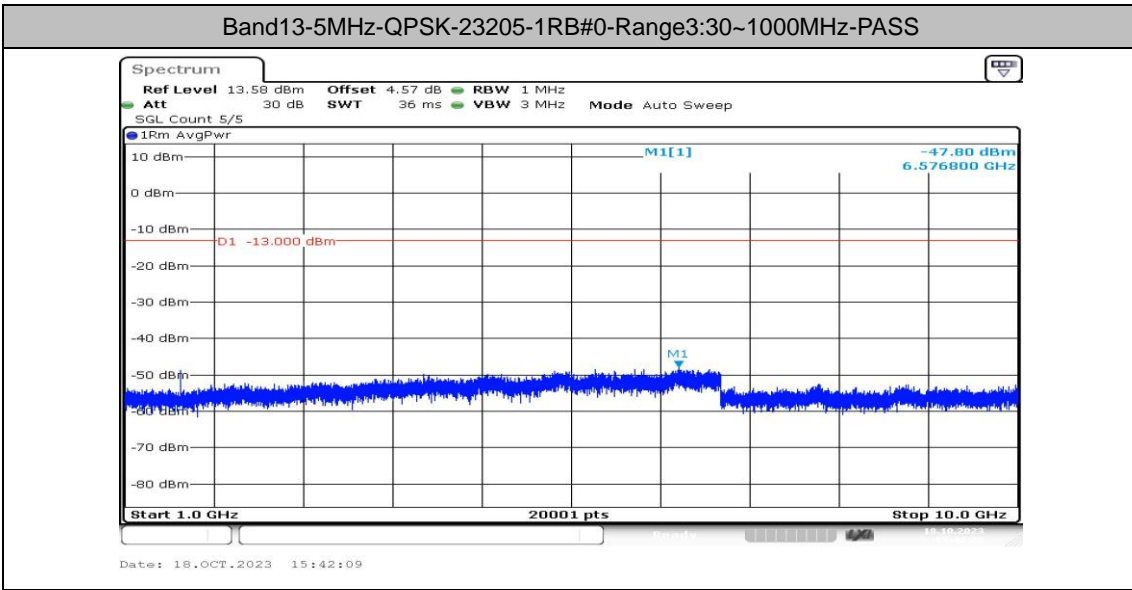


Band13-5MHz-QPSK-23205-1RB#0-Range1:0.009~0.15MHz-PASS

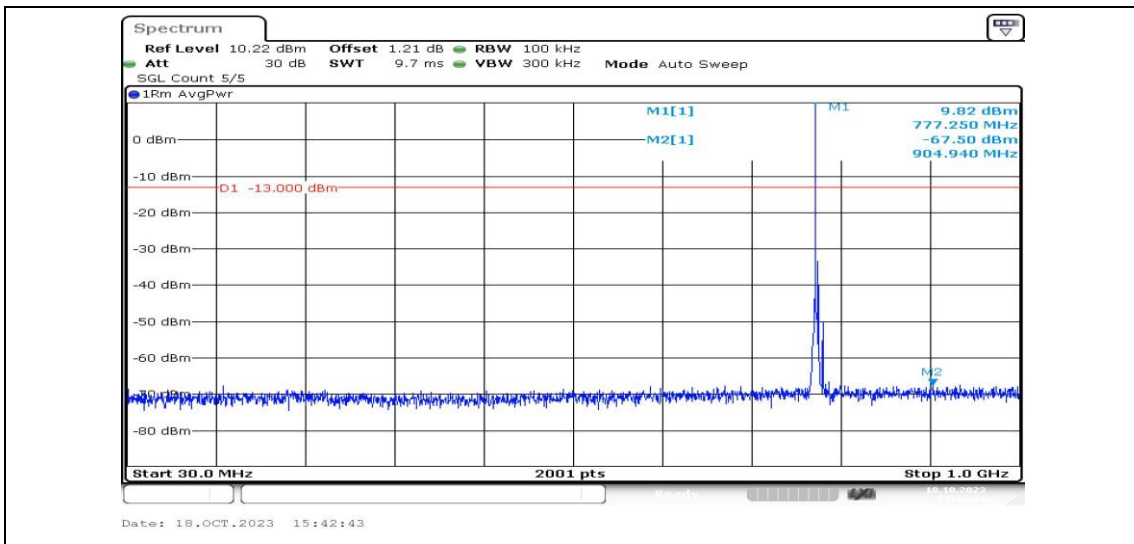


Band13-5MHz-QPSK-23205-1RB#0-Range2:0.15~30MHz-PASS

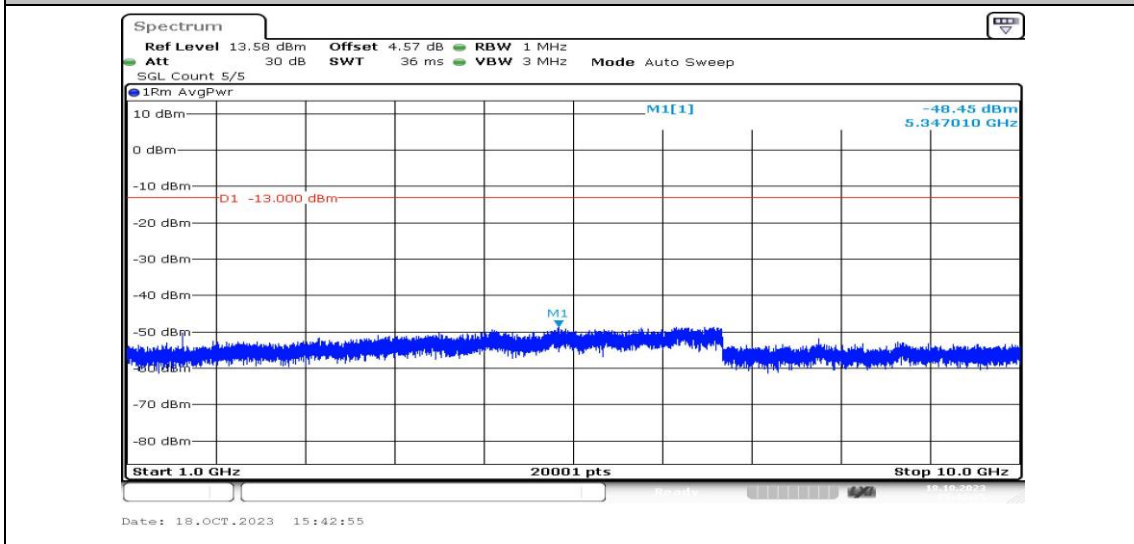




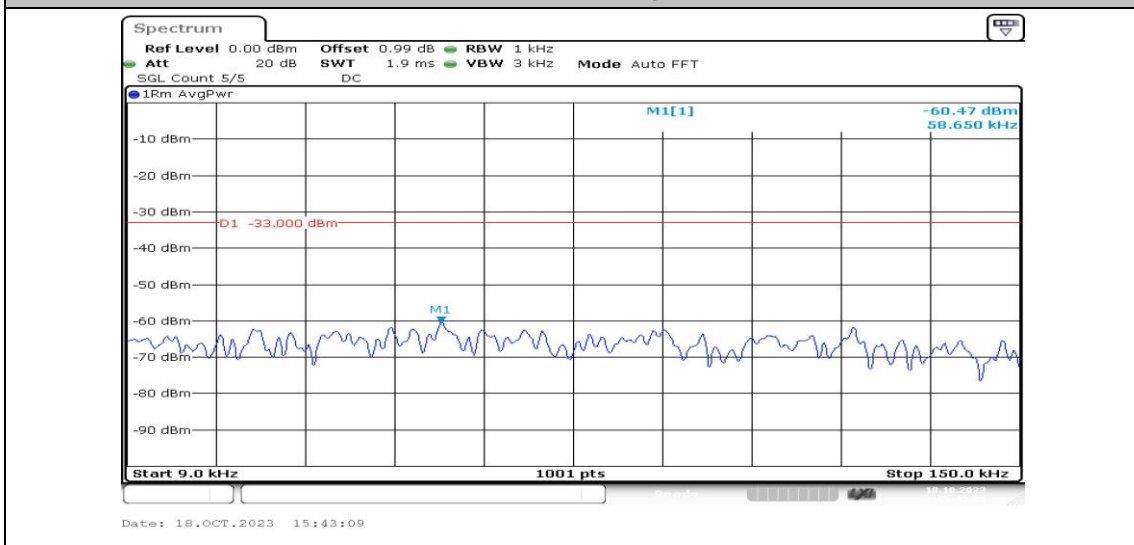
Band13-5MHz-16QAM-23205-1RB#0-Range2:0.15~30MHz-PASS



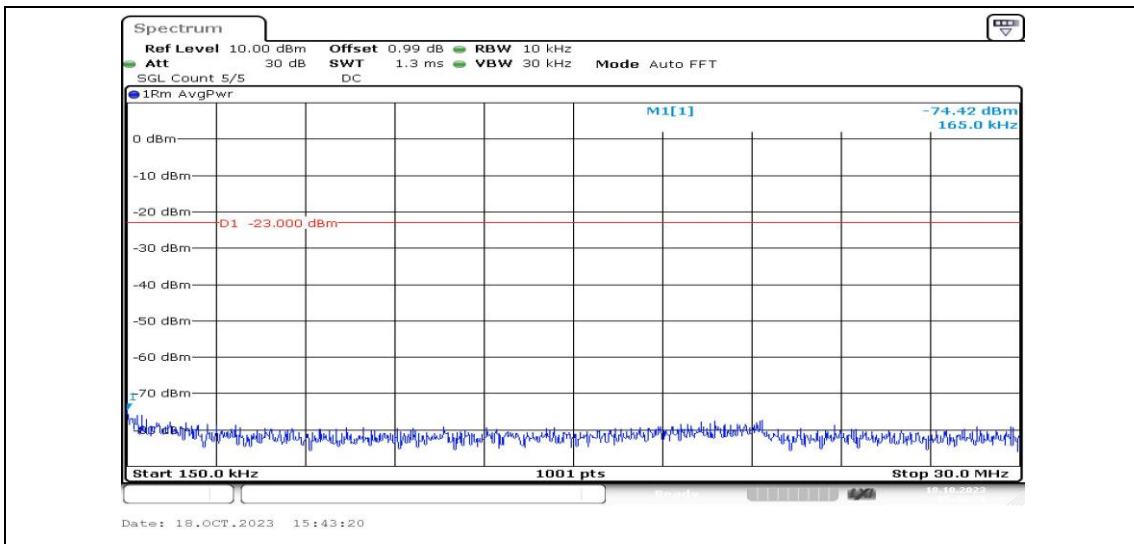
Band13-5MHz-16QAM-23205-1RB#0-Range3:30~1000MHz-PASS



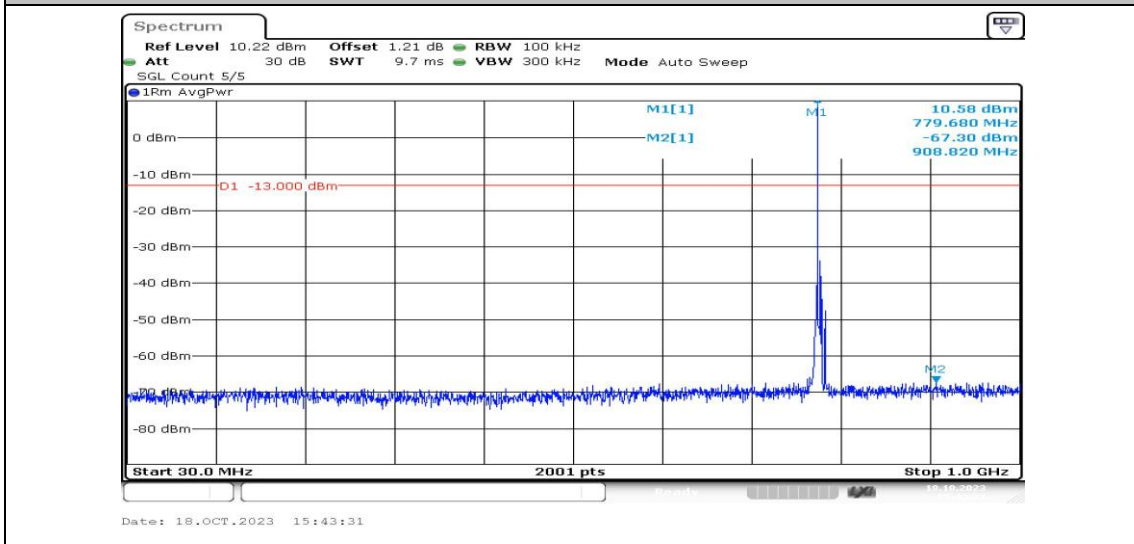
Band13-5MHz-16QAM-23205-1RB#0-Range4:1000~10000MHz-PASS



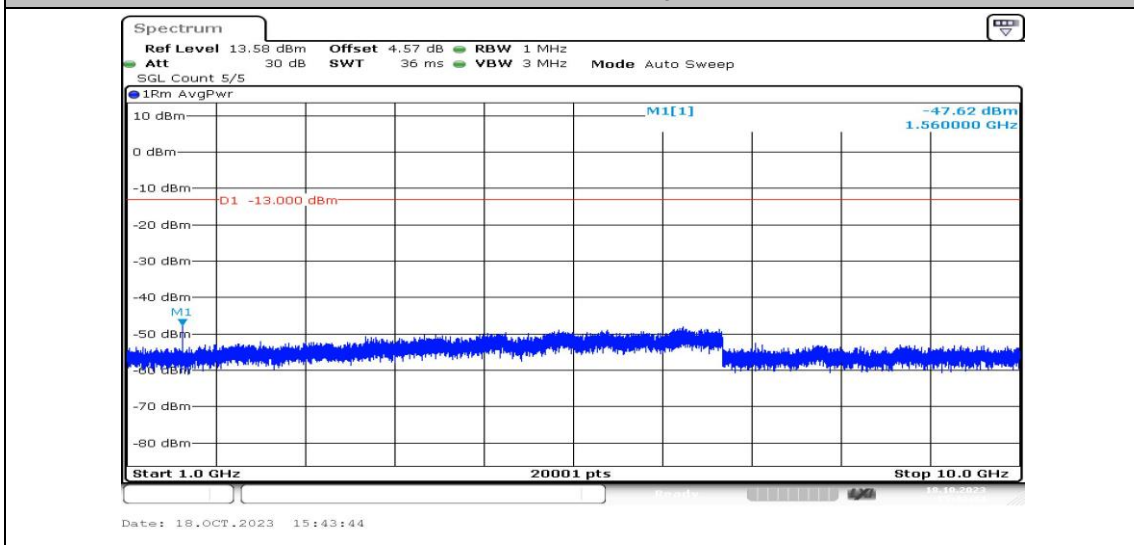
Band13-5MHz-QPSK-23230-1RB#0-Range1:0.009~0.15MHz-PASS



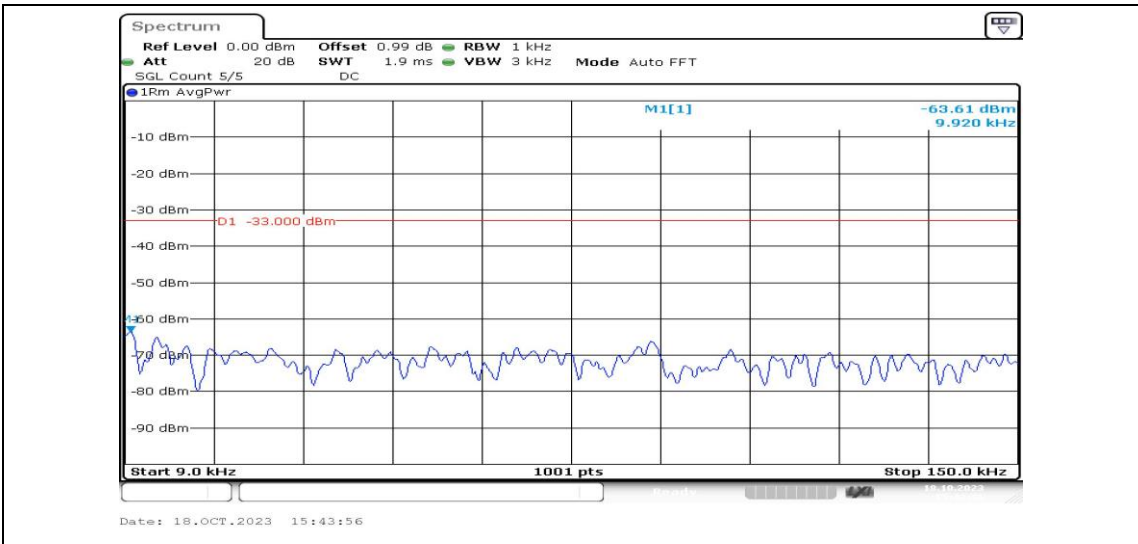
Band13-5MHz-QPSK-23230-1RB#0-Range2:0.15~30MHz-PASS



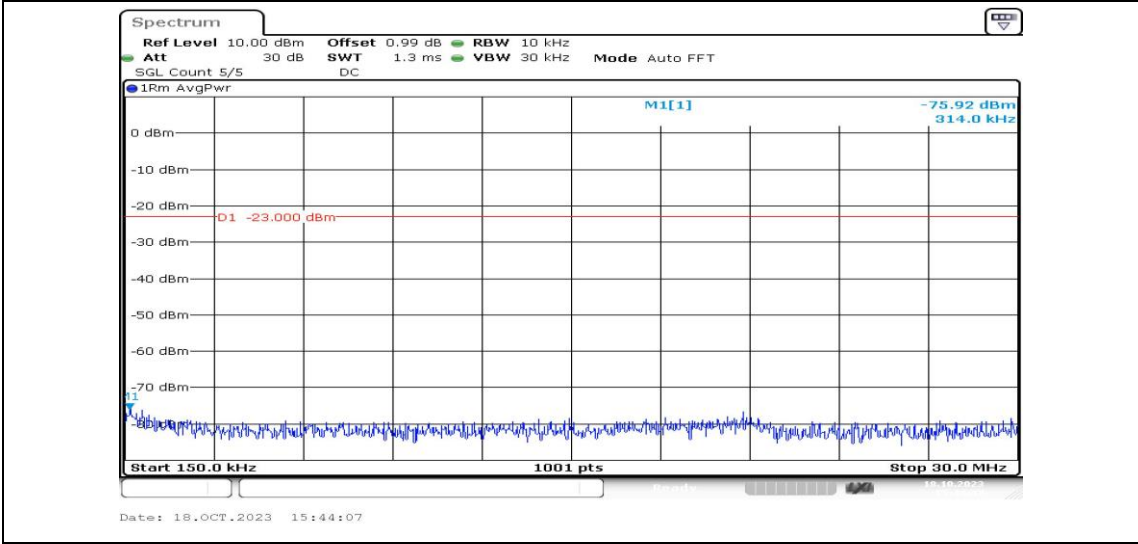
Band13-5MHz-QPSK-23230-1RB#0-Range3:30~100MHz-PASS



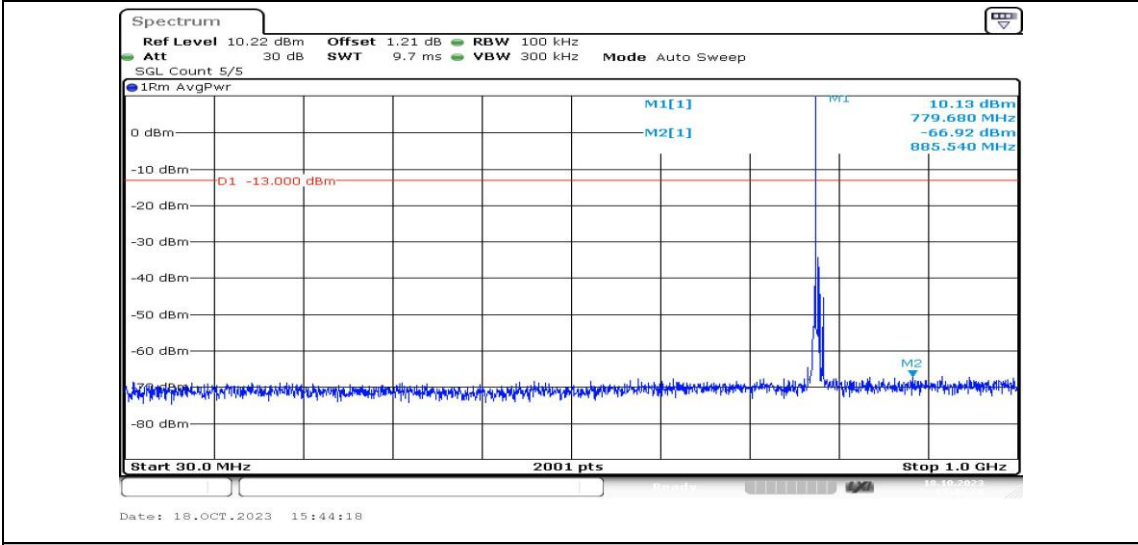
Band13-5MHz-QPSK-23230-1RB#0-Range4:1000~10000MHz-PASS



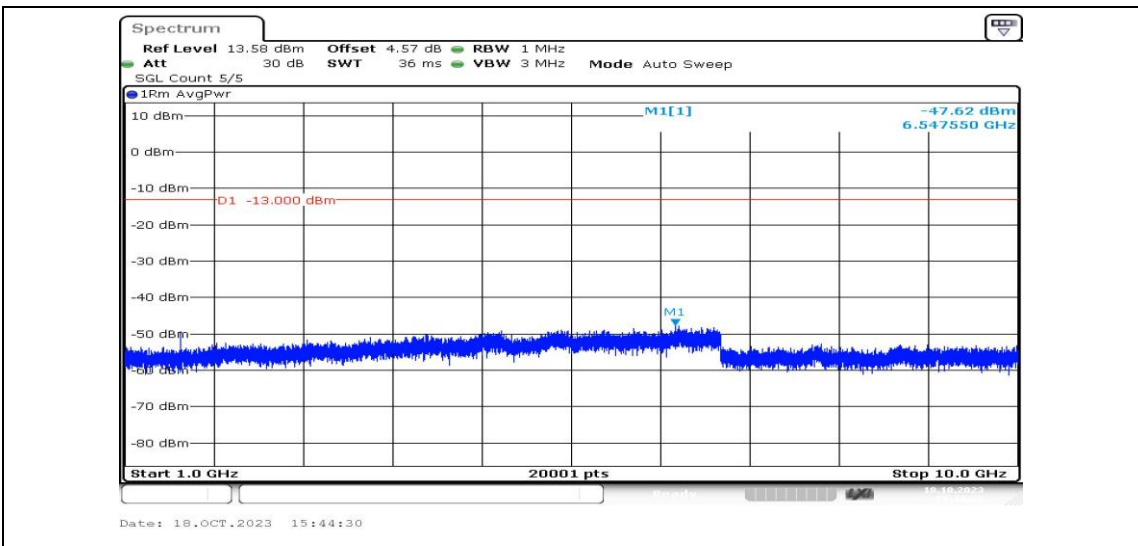
Band13-5MHz-16QAM-23230-1RB#0-Range1:0.009~0.15MHz-PASS



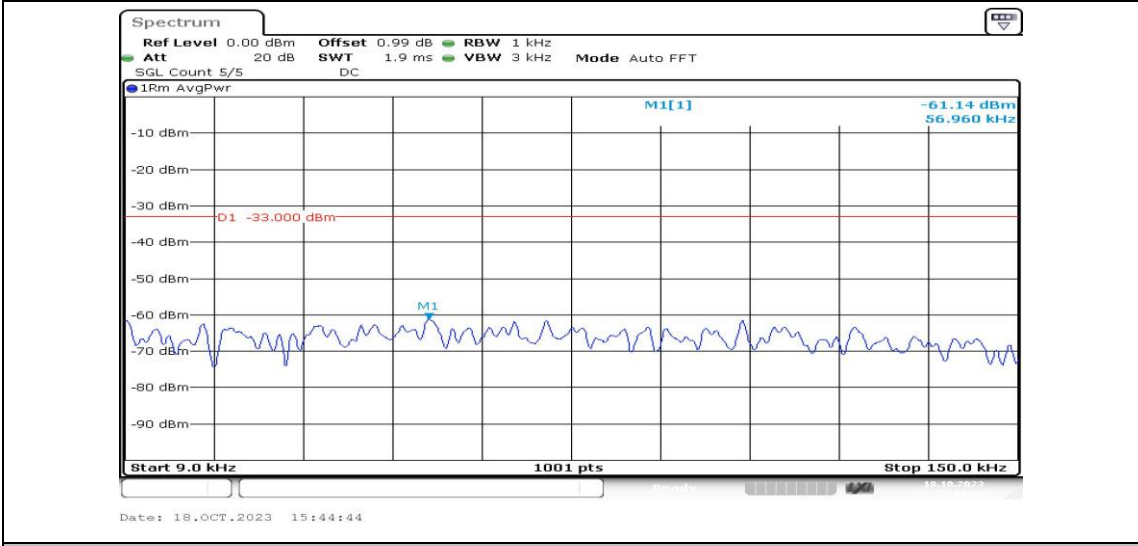
Band13-5MHz-16QAM-23230-1RB#0-Range2:0.15~30MHz-PASS



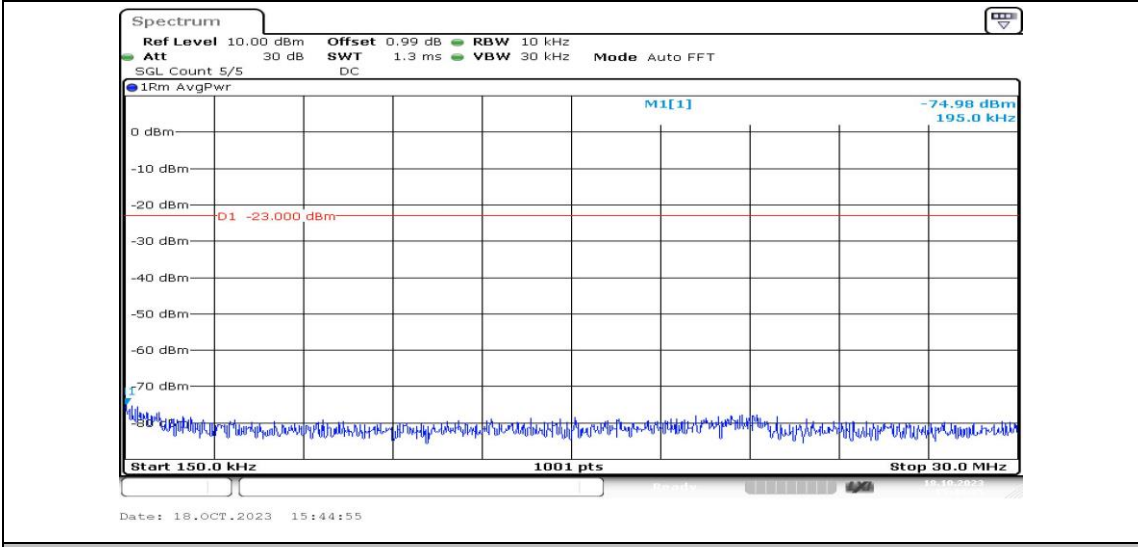
Band13-5MHz-16QAM-23230-1RB#0-Range3:30~1000MHz-PASS



Band13-5MHz-16QAM-23230-1RB#0-Range4:1000~10000MHz-PASS



Band13-5MHz-QPSK-23255-1RB#0-Range1:0.009~0.15MHz-PASS



Band13-5MHz-QPSK-23255-1RB#0-Range2:0.15~30MHz-PASS