

Appendix for NB-IOT Band 5

Product Name: NBloT Meter Interface Unit

Model No: AGIL WRPMIU 301

Appendix A: Average Power Output Data

Test Result

Band	OpMode	SCS	BW	Modulation	Channel	Tones	Conducted POWER(d Bm)	Verdict
Band 5	Stand-Al one	3.75kHz	NaN	BPSK	20401	1@0	23.09	PASS
Band 5	Stand-Al one	3.75kHz	NaN	BPSK	20401	1@47	23.98	PASS
Band 5	Stand-Al one	3.75kHz	NaN	BPSK	20525	1@0	22.89	PASS
Band 5	Stand-Al one	3.75kHz	NaN	BPSK	20525	1@47	22.91	PASS
Band 5	Stand-Al one	3.75kHz	NaN	BPSK	20649	1@0	23.86	PASS
Band 5	Stand-Al one	3.75kHz	NaN	BPSK	20649	1@47	23.13	PASS
Band 5	Stand-Al one	3.75kHz	NaN	QPSK	20401	1@0	23.10	PASS
Band 5	Stand-Al one	3.75kHz	NaN	QPSK	20401	1@47	23.10	PASS
Band 5	Stand-Al one	3.75kHz	NaN	QPSK	20525	1@0	22.94	PASS
Band 5	Stand-Al one	3.75kHz	NaN	QPSK	20525	1@47	22.95	PASS
Band 5	Stand-Al one	3.75kHz	NaN	QPSK	20649	1@0	23.17	PASS
Band 5	Stand-Al one	3.75kHz	NaN	QPSK	20649	1@47	23.17	PASS
Band 5	Stand-Al one	15kHz	NaN	BPSK	20401	1@0	23.11	PASS
Band 5	Stand-Al one	15kHz	NaN	BPSK	20401	1@11	23.14	PASS
Band 5	Stand-Al one	15kHz	NaN	BPSK	20525	1@0	22.99	PASS
Band 5	Stand-Al one	15kHz	NaN	BPSK	20525	1@11	23.01	PASS
Band 5	Stand-Al one	15kHz	NaN	BPSK	20649	1@0	23.25	PASS

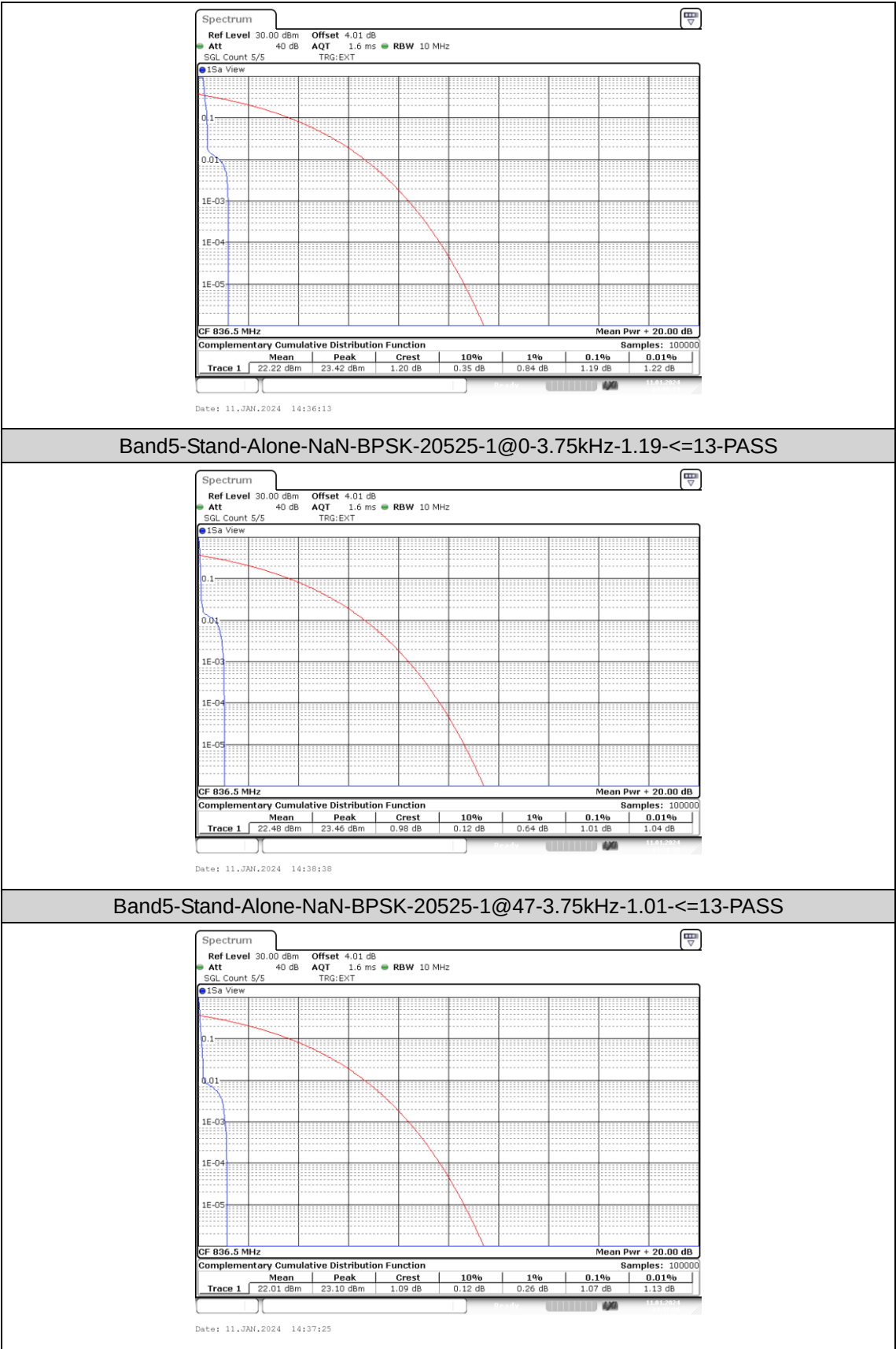
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Band 5	Stand-Al one	15kHz	NaN	BPSK	20649	1@11	23.24	PASS
Band 5	Stand-Al one	15kHz	NaN	QPSK	20401	1@0	23.29	PASS
Band 5	Stand-Al one	15kHz	NaN	QPSK	20401	1@11	23.30	PASS
Band 5	Stand-Al one	15kHz	NaN	QPSK	20401	3@3	22.89	PASS
Band 5	Stand-Al one	15kHz	NaN	QPSK	20525	1@0	23.15	PASS
Band 5	Stand-Al one	15kHz	NaN	QPSK	20525	1@11	23.15	PASS
Band 5	Stand-Al one	15kHz	NaN	QPSK	20525	3@3	22.70	PASS
Band 5	Stand-Al one	15kHz	NaN	QPSK	20649	1@0	23.39	PASS
Band 5	Stand-Al one	15kHz	NaN	QPSK	20649	1@11	23.37	PASS
Band 5	Stand-Al one	15kHz	NaN	QPSK	20649	3@3	23.01	PASS

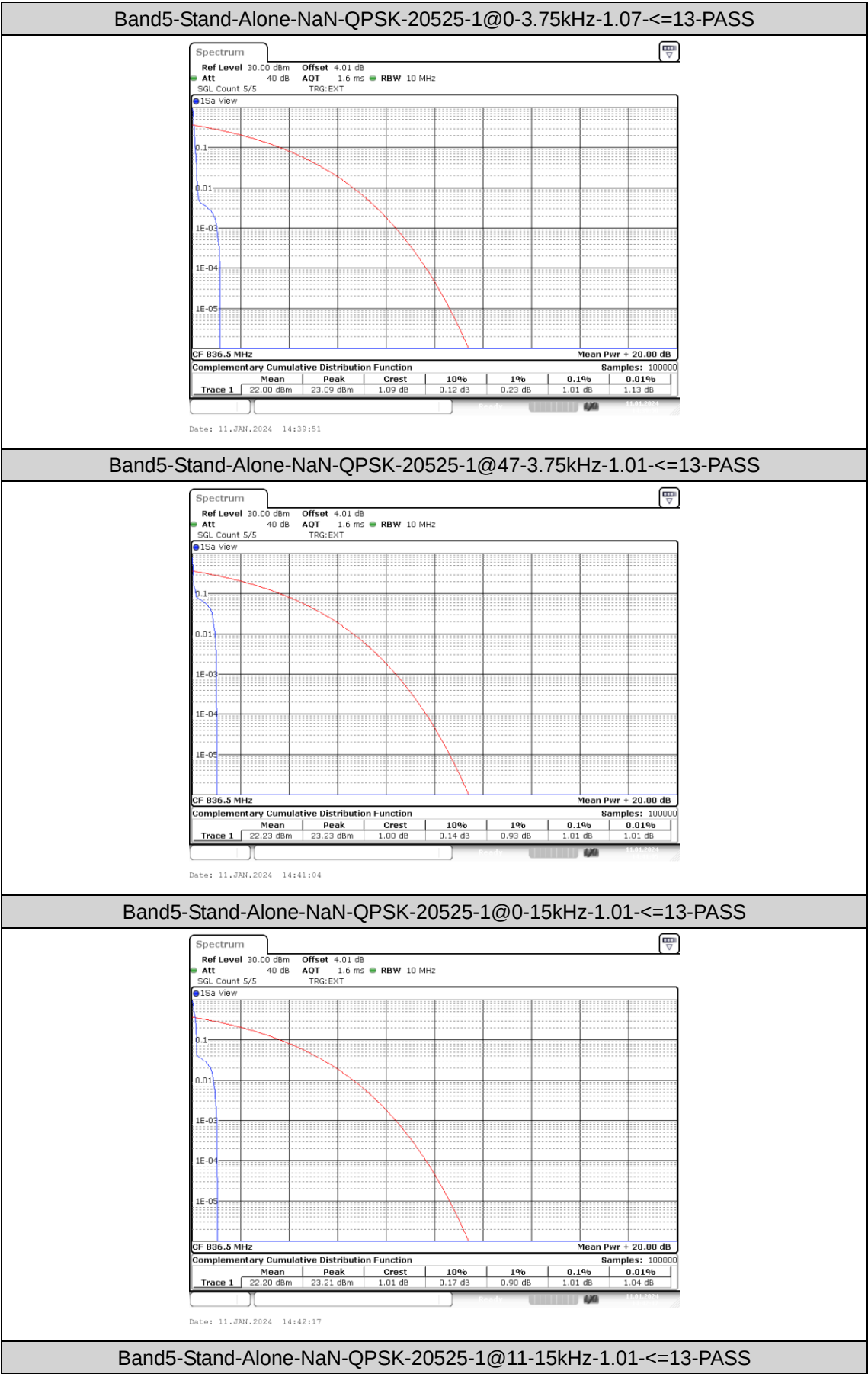
Appendix B: Peak-to-Average Ratio(CCDF)

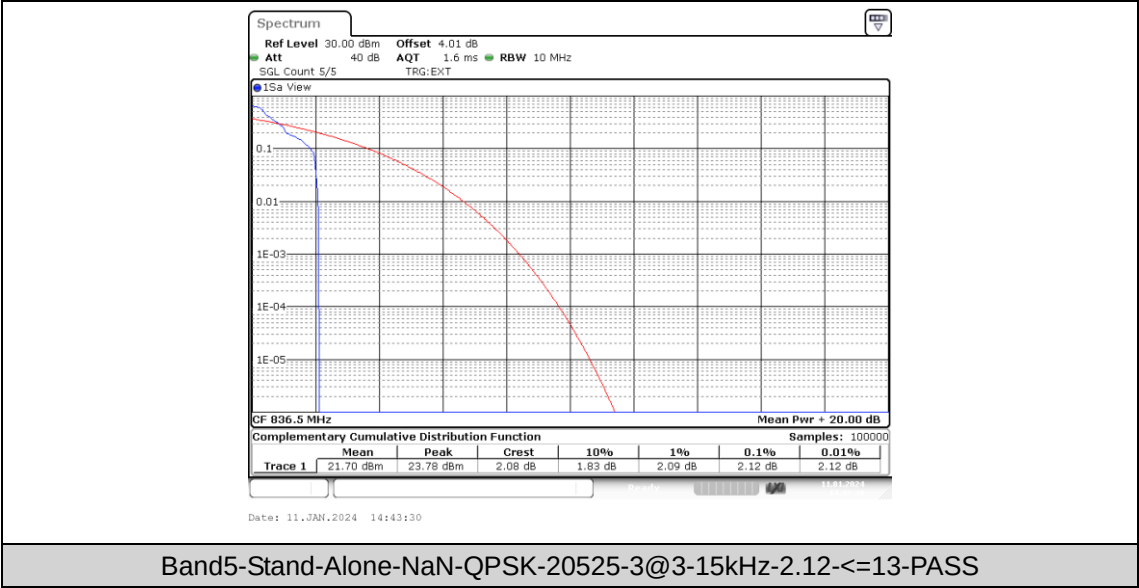
Test Result

Band	OpMode	SCS	BW	Modu	Channel	Tones	Result (dBm)	Limit (dBm)	Verdict
Band5	Stand-Alone	3.75kHz	NaN	BPSK	20525	1@0	1.19	<=13	PASS
Band5	Stand-Alone	3.75kHz	NaN	BPSK	20525	1@47	1.01	<=13	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20525	1@0	1.07	<=13	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20525	1@47	1.01	<=13	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20525	1@0	1.01	<=13	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20525	1@11	1.01	<=13	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20525	3@3	2.12	<=13	PASS

Test Graphs







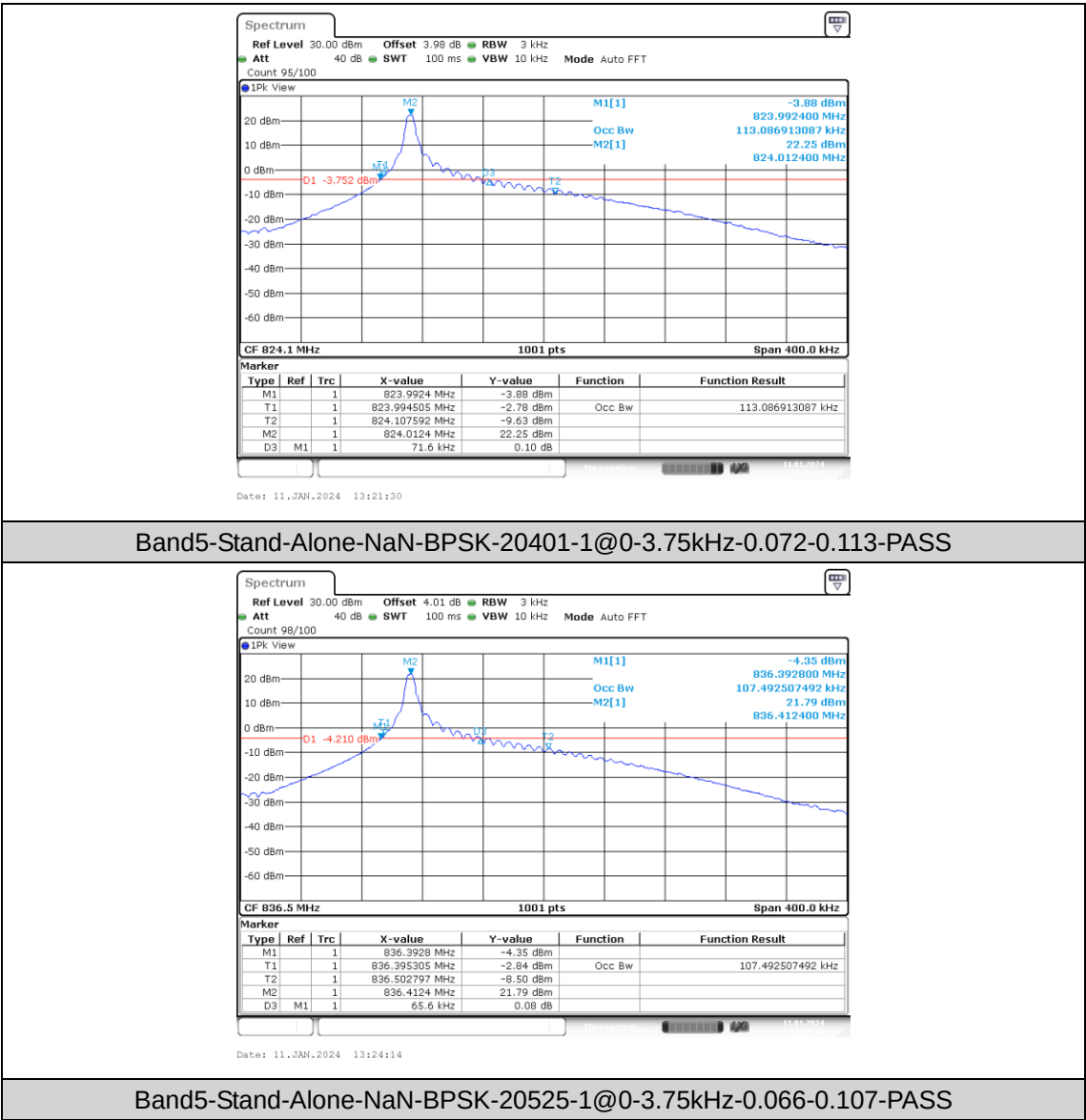
Appendix C: Emission Bandwidth

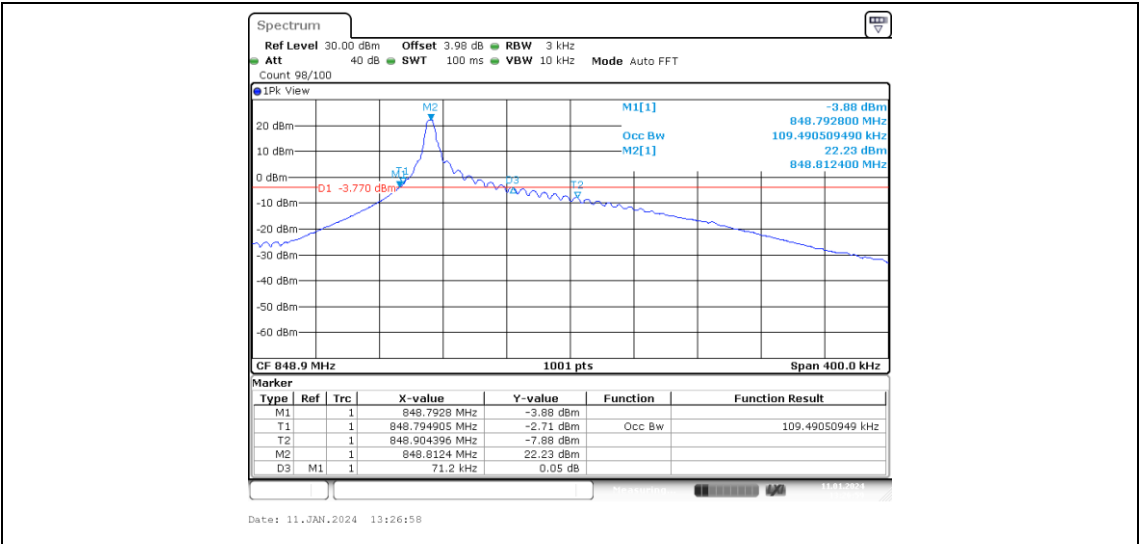
Test Result

Band	OpMode	SCS	BW	Modu	Channel	Tones	OBW(MHz)	EBW(MHz)	Verdict
Band5	Stand-Alone	3.75kHz	NaN	BPSK	20401	1@0	0.113	0.072	PASS
Band5	Stand-Alone	3.75kHz	NaN	BPSK	20525	1@0	0.107	0.066	PASS
Band5	Stand-Alone	3.75kHz	NaN	BPSK	20649	1@0	0.109	0.071	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20401	1@0	0.113	0.068	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20525	1@0	0.111	0.067	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20649	1@0	0.11	0.067	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20401	1@0	0.111	0.124	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20401	12@0	0.177	0.235	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20525	1@0	0.109	0.117	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20525	12@0	0.177	0.236	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20649	1@0	0.109	0.124	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20649	12@0	0.178	0.236	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20401	1@0	0.133	0.161	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20401	12@0	0.177	0.235	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20525	1@0	0.132	0.161	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20525	12@0	0.177	0.236	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20649	1@0	0.132	0.161	PASS

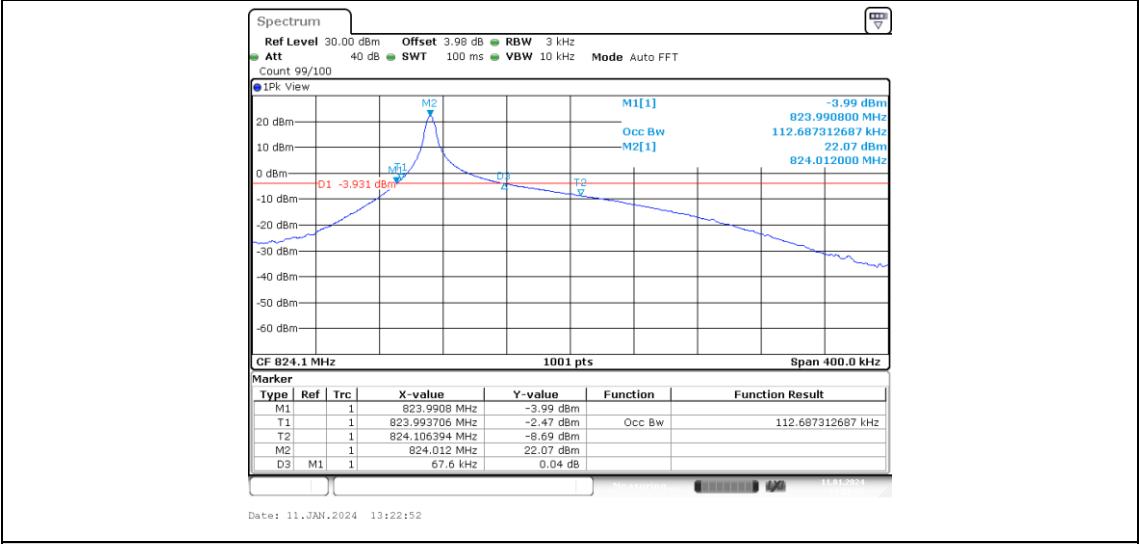
Band5	Stand-Al one	15kHz	NaN	QPSK	20649	12@0	0.178	0.236	PASS
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Test Graphs

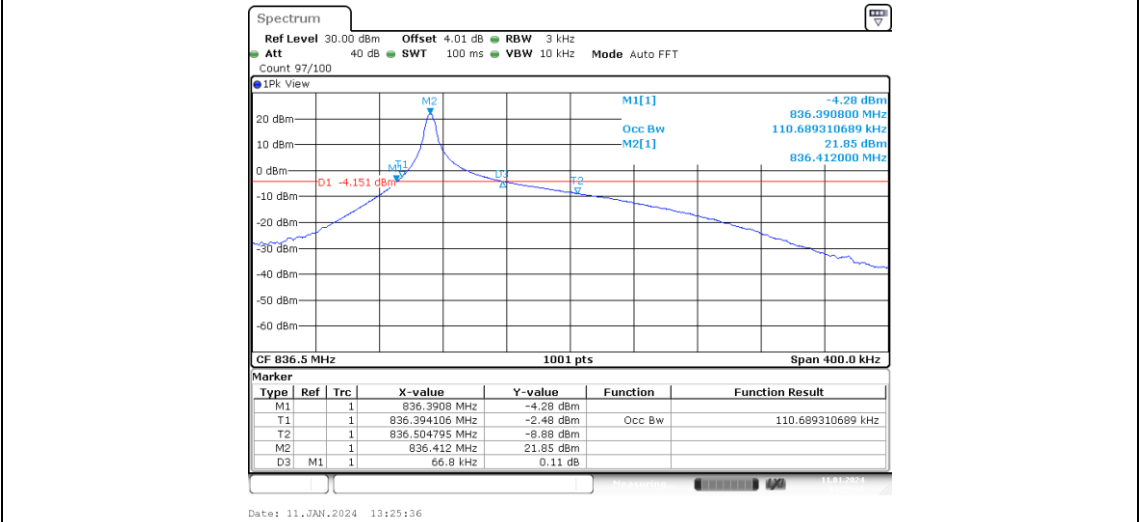




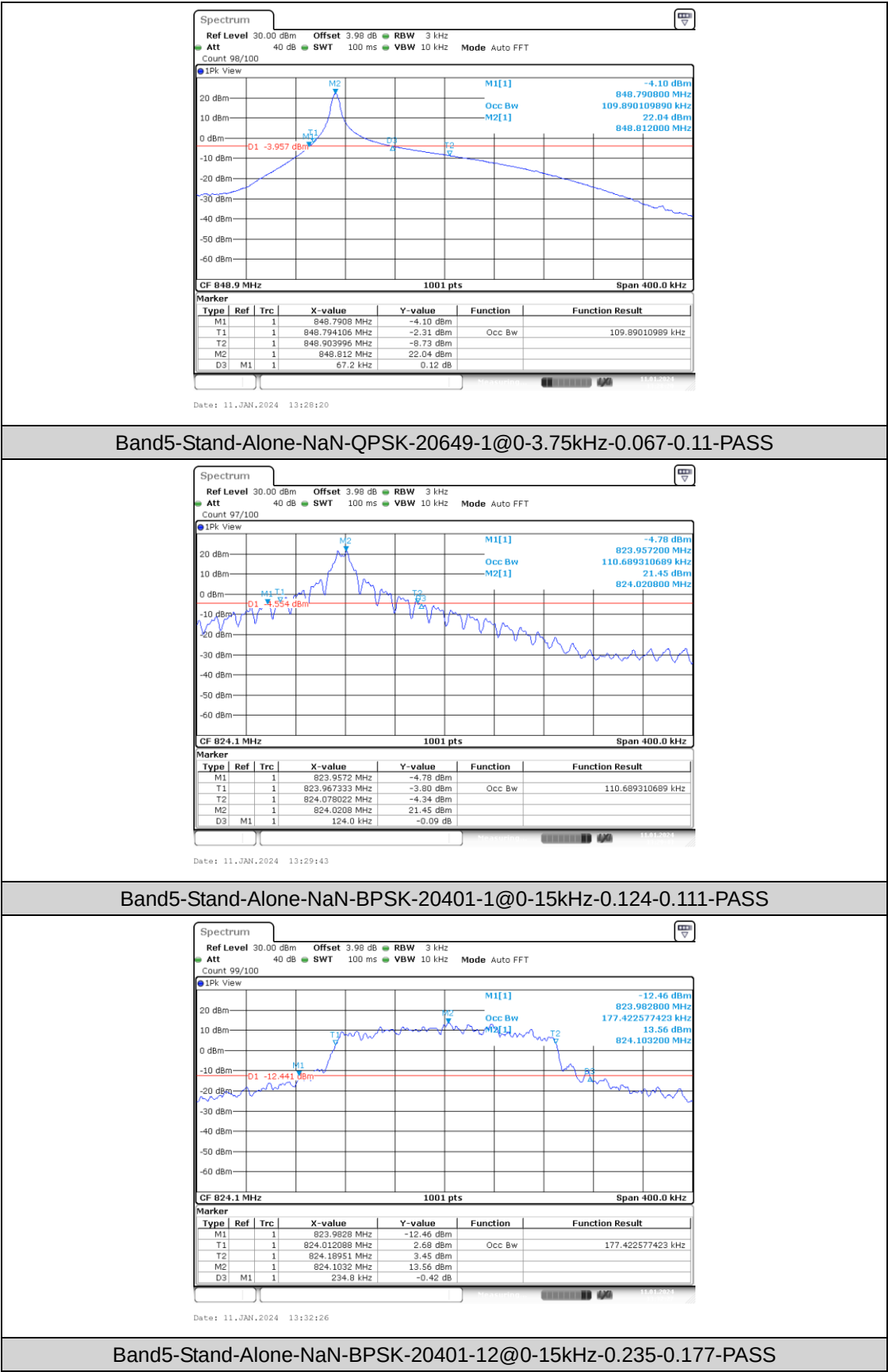
Band5-Stand-Alone-NaN-BPSK-20649-1@0-3.75kHz-0.071-0.109-PASS

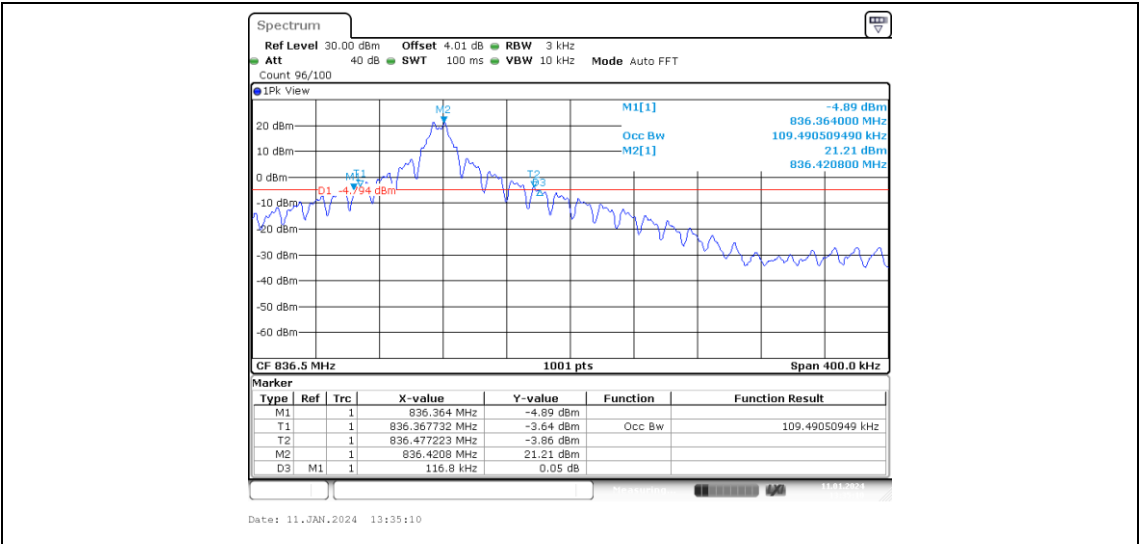


Band5-Stand-Alone-NaN-QPSK-20401-1@0-3.75kHz-0.068-0.113-PASS

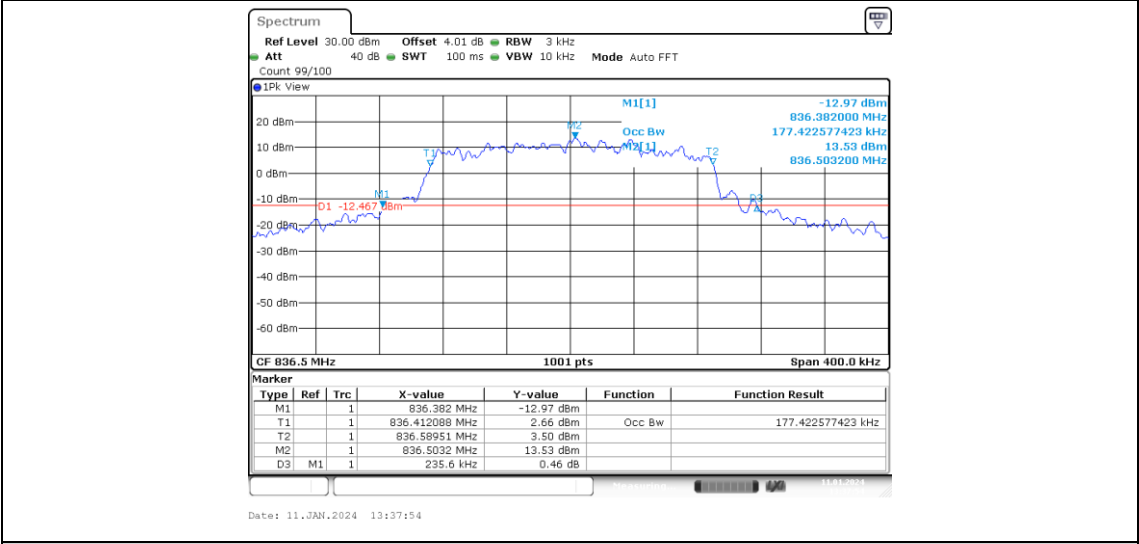


Band5-Stand-Alone-NaN-QPSK-20525-1@0-3.75kHz-0.067-0.111-PASS

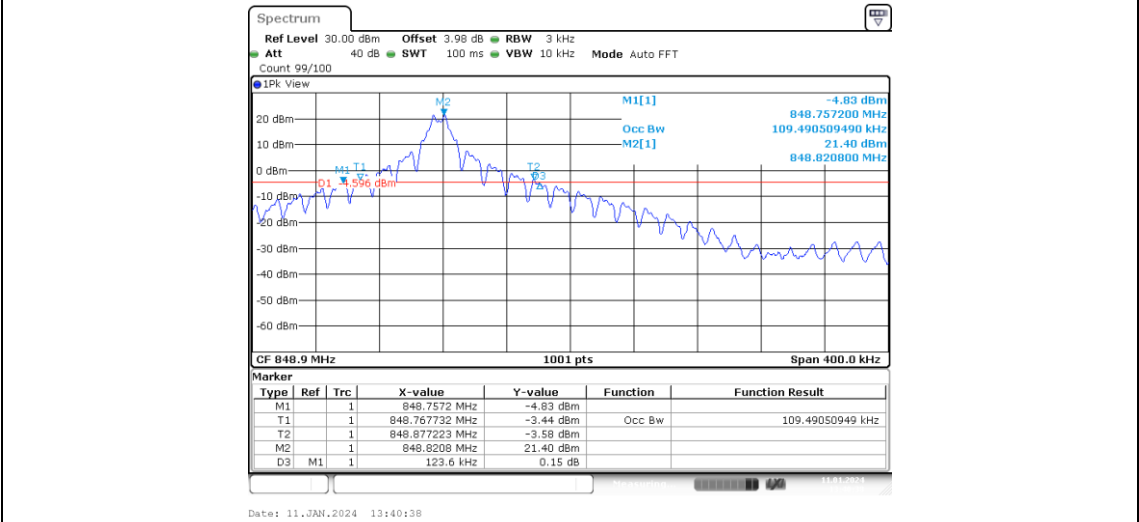




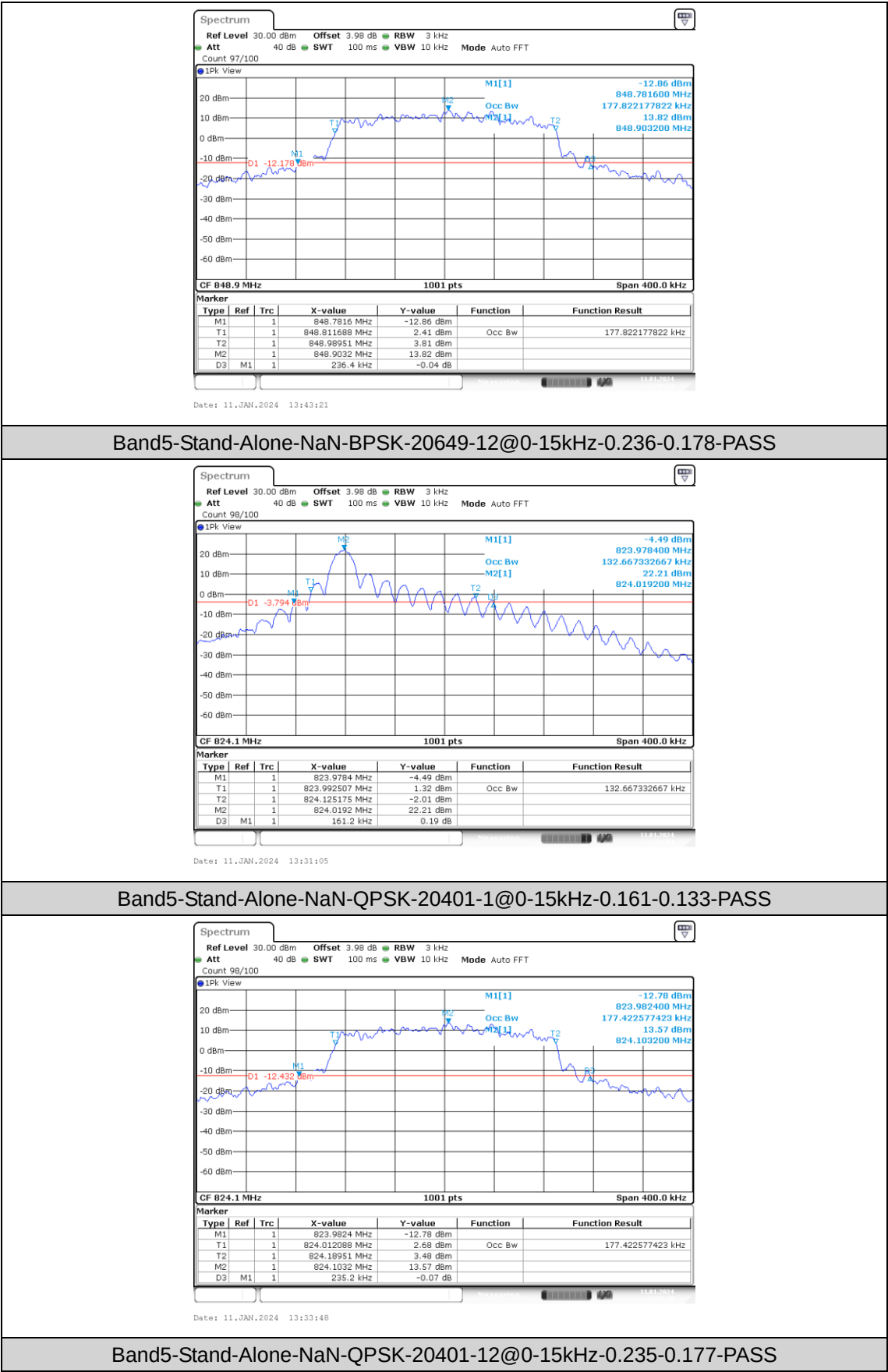
Band5-Stand-Alone-NaN-BPSK-20525-1@0-15kHz-0.117-0.109-PASS



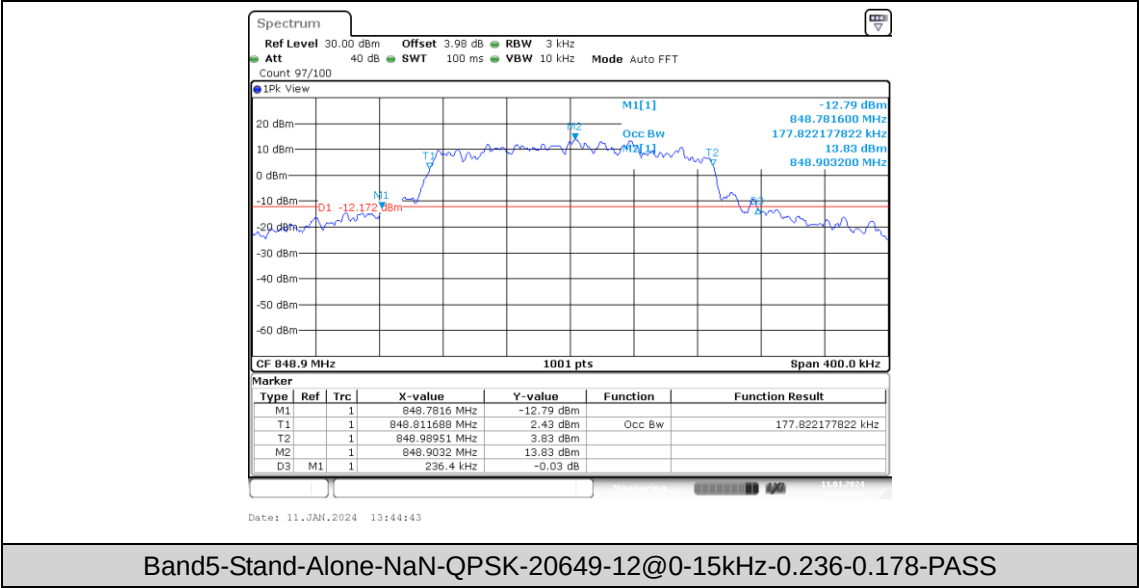
Band5-Stand-Alone-NaN-BPSK-20525-12@0-15kHz-0.236-0.177-PASS



Band5-Stand-Alone-NaN-BPSK-20649-1@0-15kHz-0.124-0.109-PASS







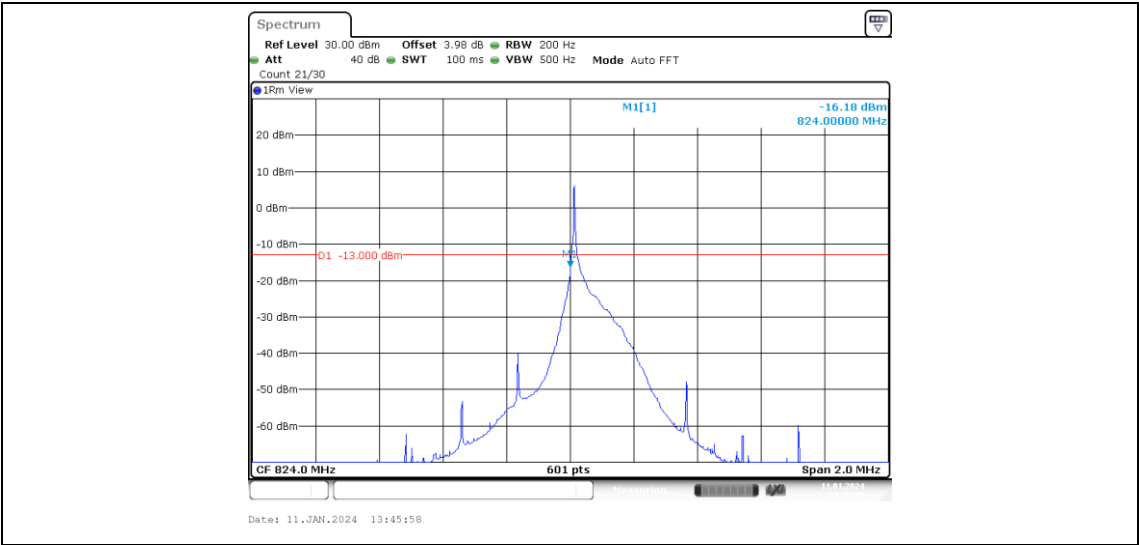
Appendix D: Band Edge

Test Result

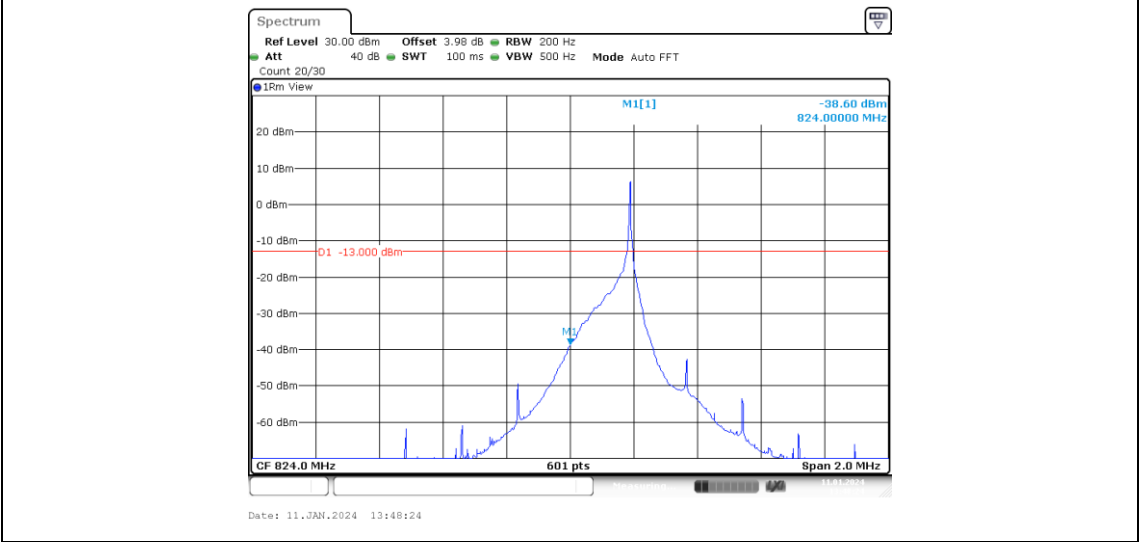
Band	OpMode	SCS	BW	Modu	Channel	Tones	Result (dBm)	Verdict
Band5	Stand-Alone	3.75kHz	NaN	BPSK	20401	1@0	-16.18	PASS
Band5	Stand-Alone	3.75kHz	NaN	BPSK	20401	1@47	-38.60	PASS
Band5	Stand-Alone	3.75kHz	NaN	BPSK	20649	1@0	-38.98	PASS
Band5	Stand-Alone	3.75kHz	NaN	BPSK	20649	1@47	-15.73	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20401	1@0	-18.09	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20401	1@47	-41.39	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20649	1@0	-41.81	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20649	1@47	-17.46	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20401	1@0	-13.53	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20401	1@11	-47.74	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20401	12@0	-31.76	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20649	1@0	-47.06	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20649	1@11	-13.55	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20649	12@0	-24.54	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20401	1@0	-17.61	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20401	1@11	-37.67	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20401	12@0	-27.9	PASS

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Band5	Stand-Alone	15kHz	NaN	QPSK	20649	1@0	-38.1 2	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20649	1@11	-16.8 8	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20649	12@0	-27.1 0	PASS

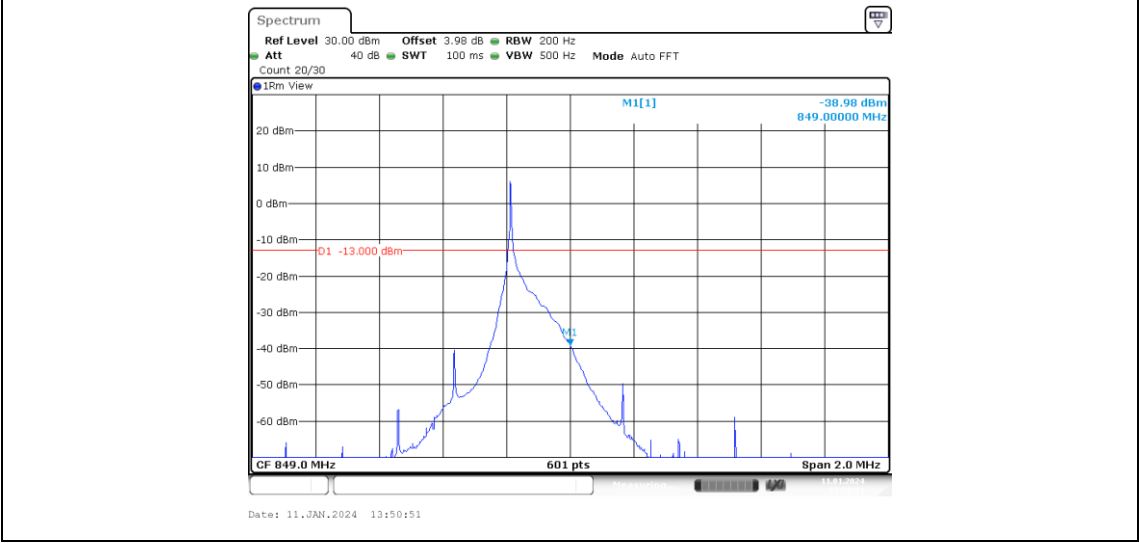
Test Graphs



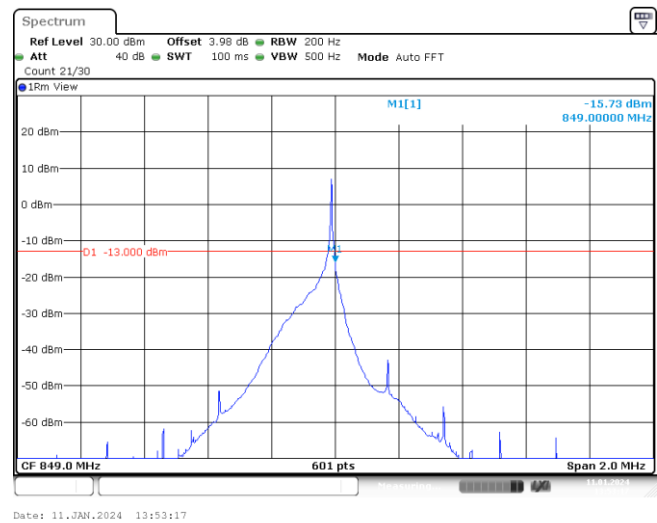
Band5-Stand-Alone-NaN-BPSK-20401-1@0-3.75kHz--16.18-PASS



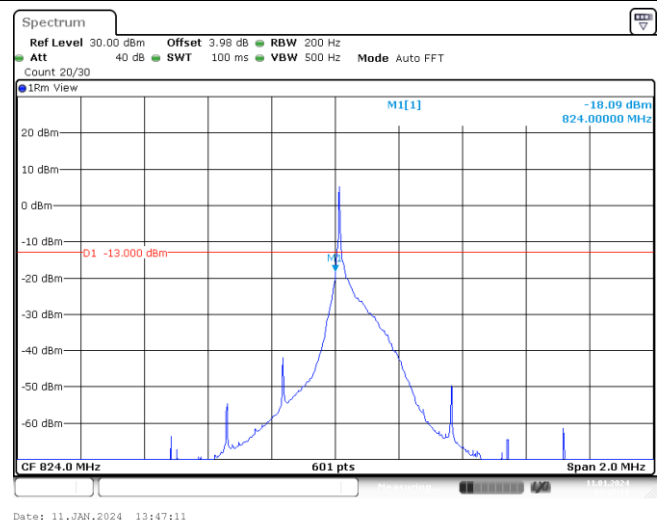
Band5-Stand-Alone-NaN-BPSK-20401-1@47-3.75kHz--38.60-PASS



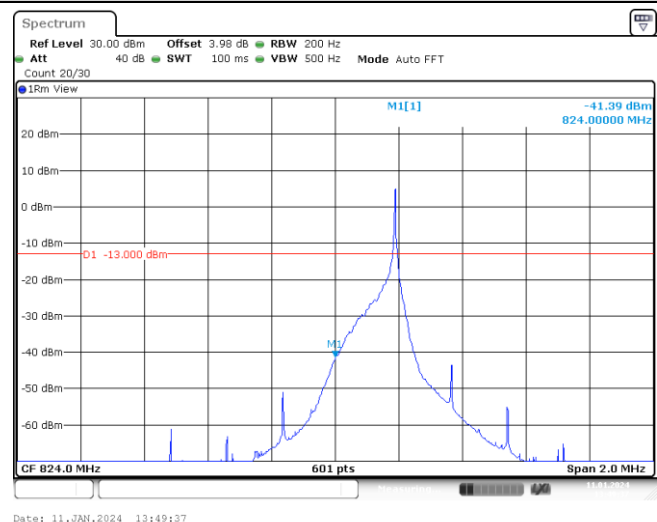
Band5-Stand-Alone-NaN-BPSK-20649-1@0-3.75kHz--38.98-PASS



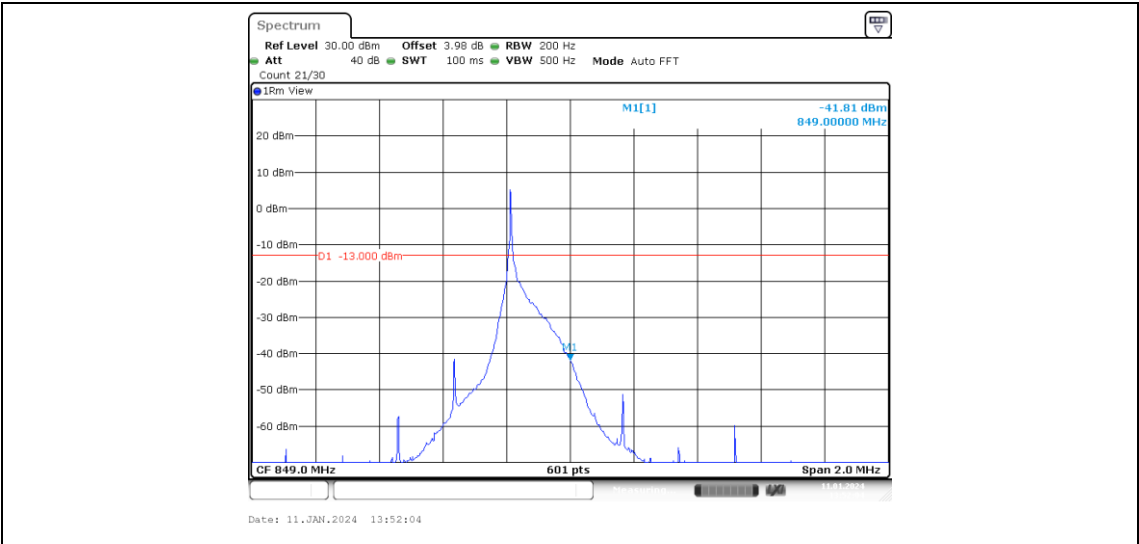
Band5-Stand-Alone-NaN-BPSK-20649-1@47-3.75kHz--15.73-PASS



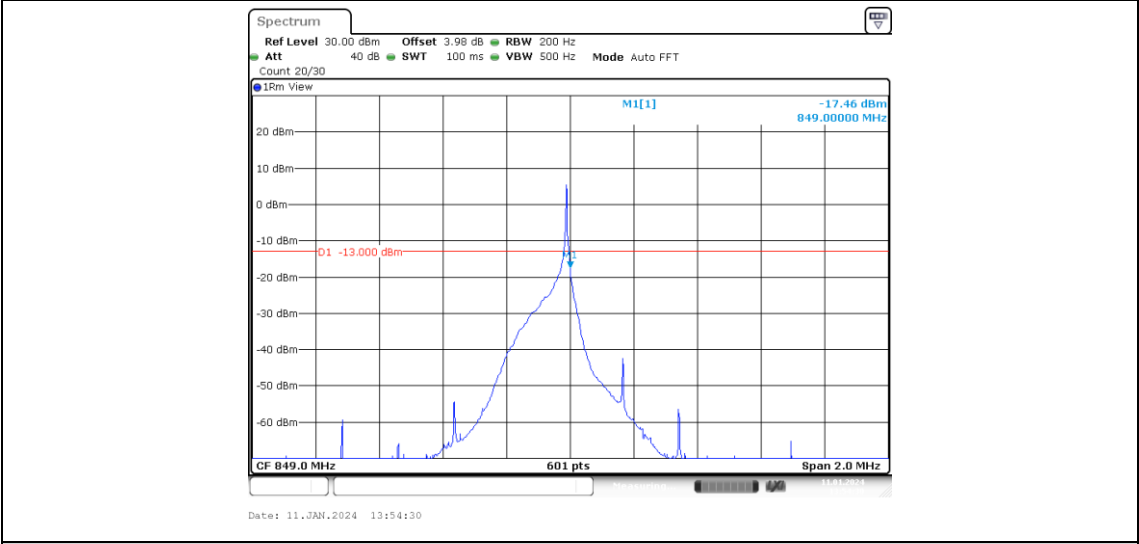
Band5-Stand-Alone-NaN-QPSK-20401-1@0-3.75kHz--18.09-PASS



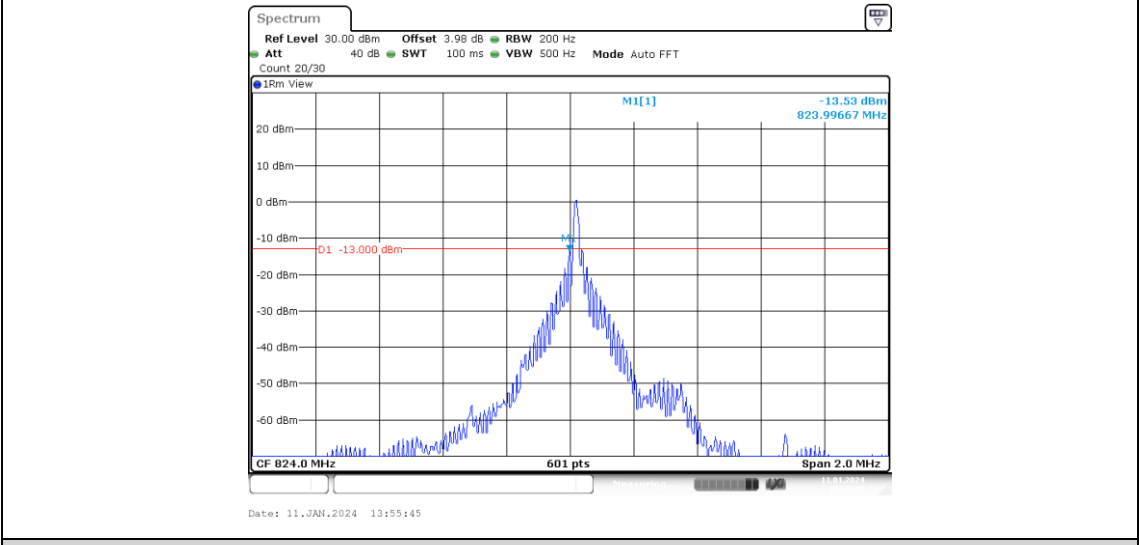
Band5-Stand-Alone-NaN-QPSK-20401-1@47-3.75kHz--41.39-PASS



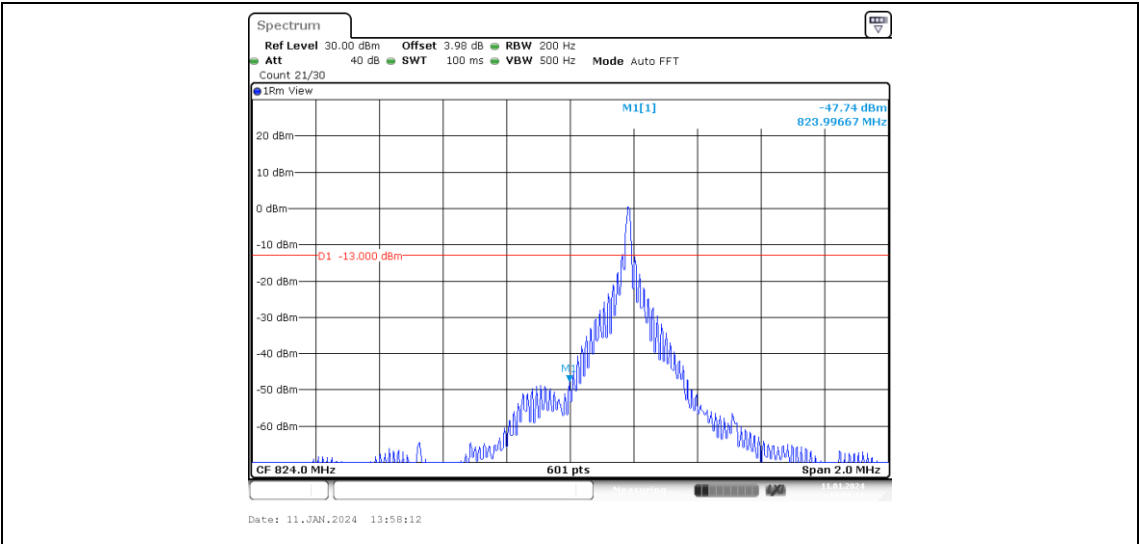
Band5-Stand-Alone-NaN-QPSK-20649-1@0-3.75kHz--41.81-PASS



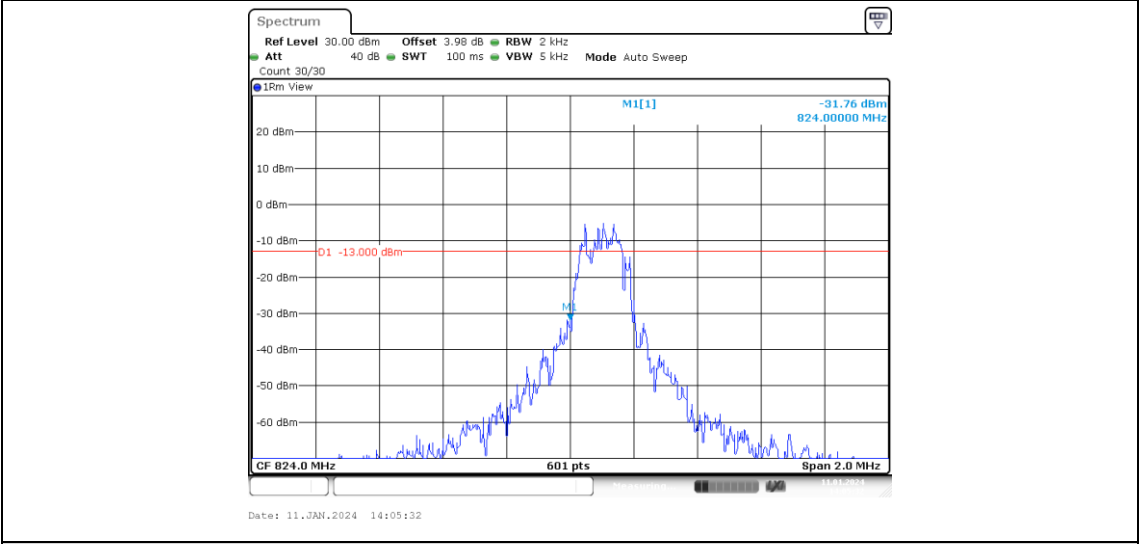
Band5-Stand-Alone-NaN-QPSK-20649-1@47-3.75kHz--17.46-PASS



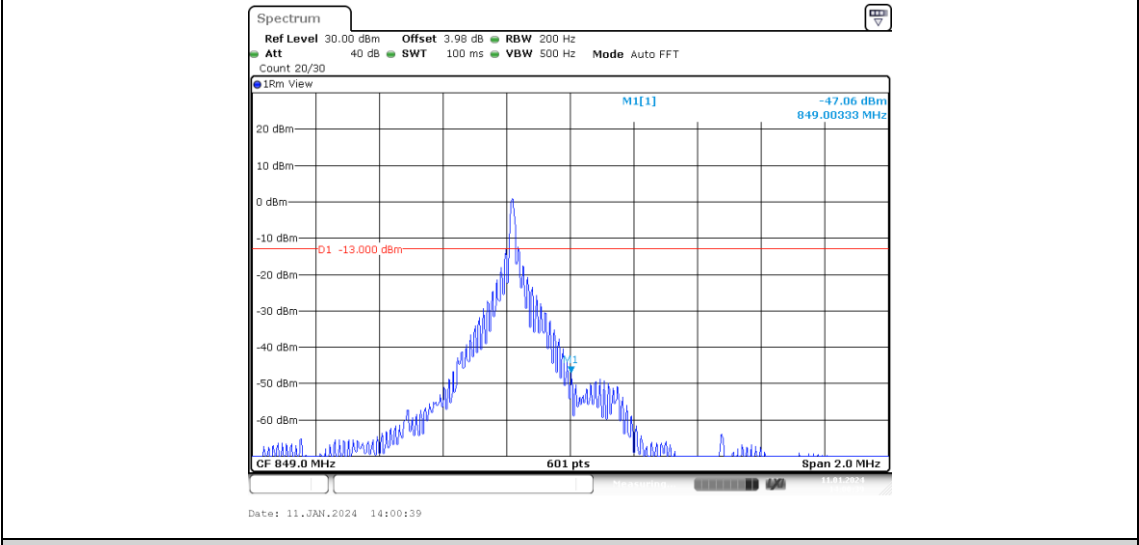
Band5-Stand-Alone-NaN-BPSK-20401-1@0-15kHz--13.53-PASS



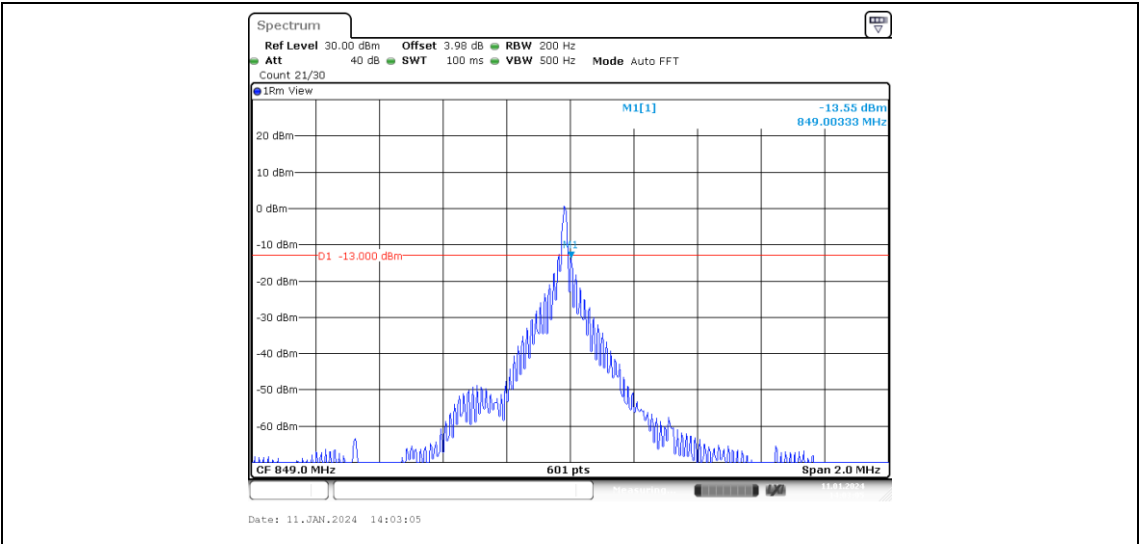
Band5-Stand-Alone-NaN-BPSK-20401-1@11-15kHz--47.74-PASS



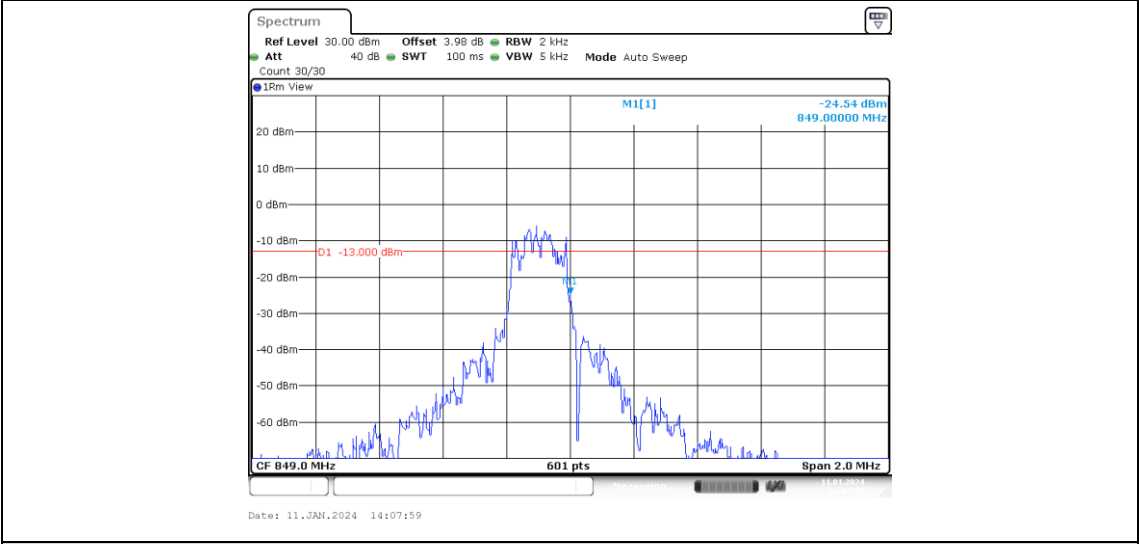
Band5-Stand-Alone-NaN-BPSK-20401-12@0-15kHz--31.76-PASS



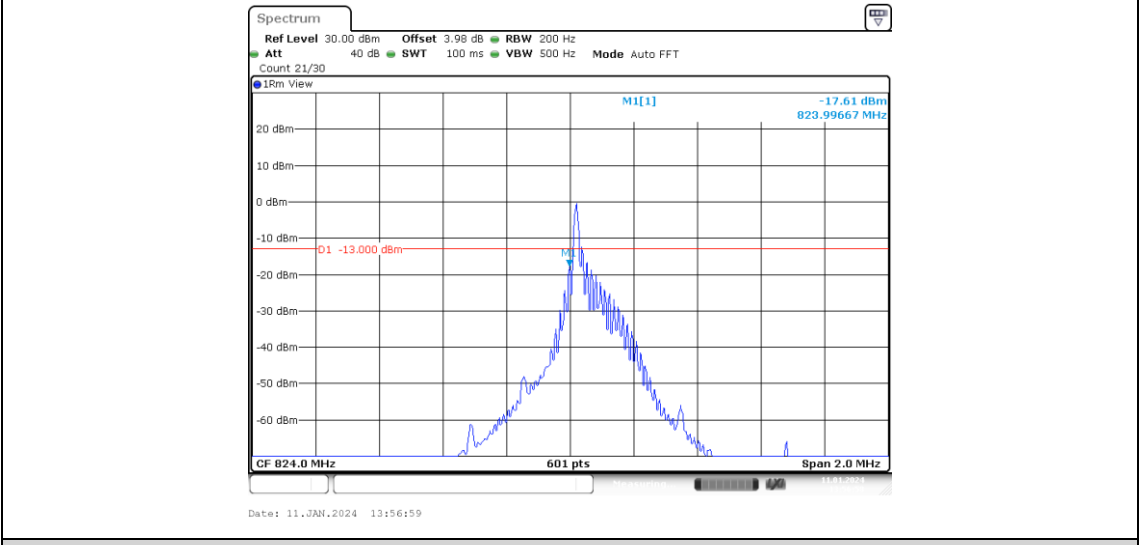
Band5-Stand-Alone-NaN-BPSK-20649-1@0-15kHz--47.06-PASS



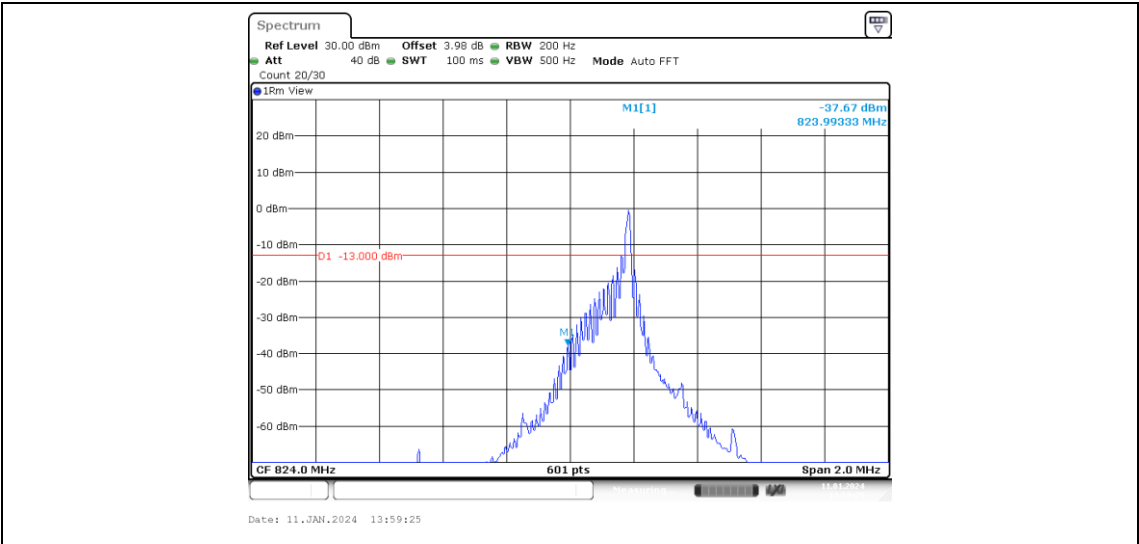
Band5-Stand-Alone-NaN-BPSK-20649-1@11-15kHz--13.55-PASS



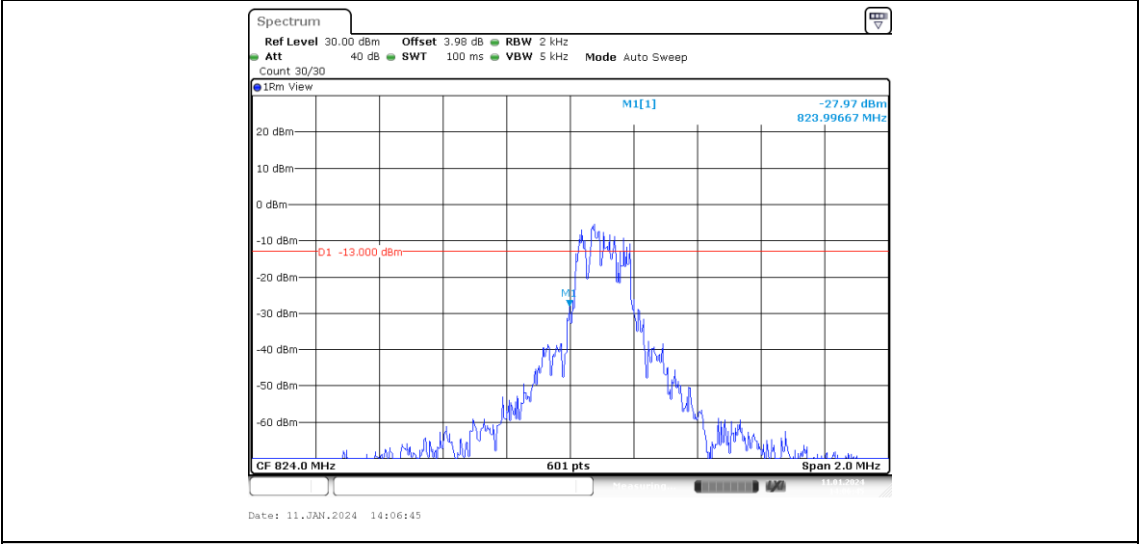
Band5-Stand-Alone-NaN-BPSK-20649-12@0-15kHz--24.54-PASS



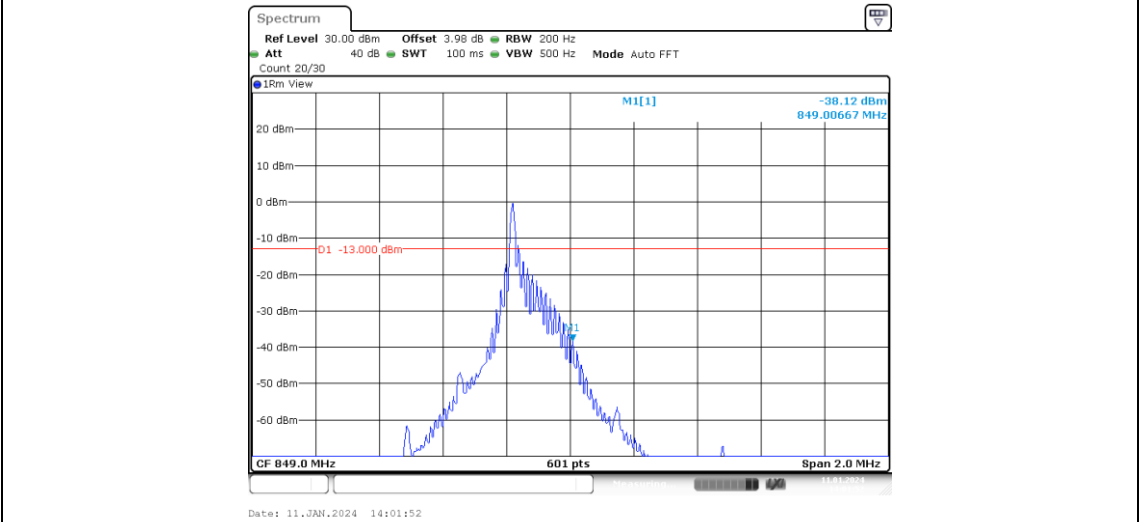
Band5-Stand-Alone-NaN-QPSK-20401-1@0-15kHz--17.61-PASS



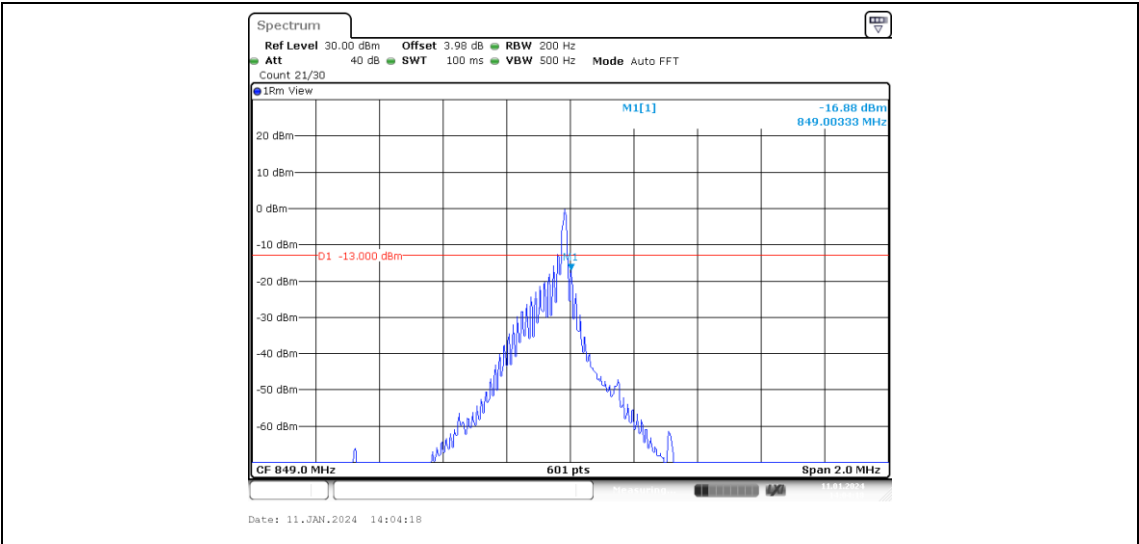
Band5-Stand-Alone-NaN-QPSK-20401-1@11-15kHz--37.67-PASS



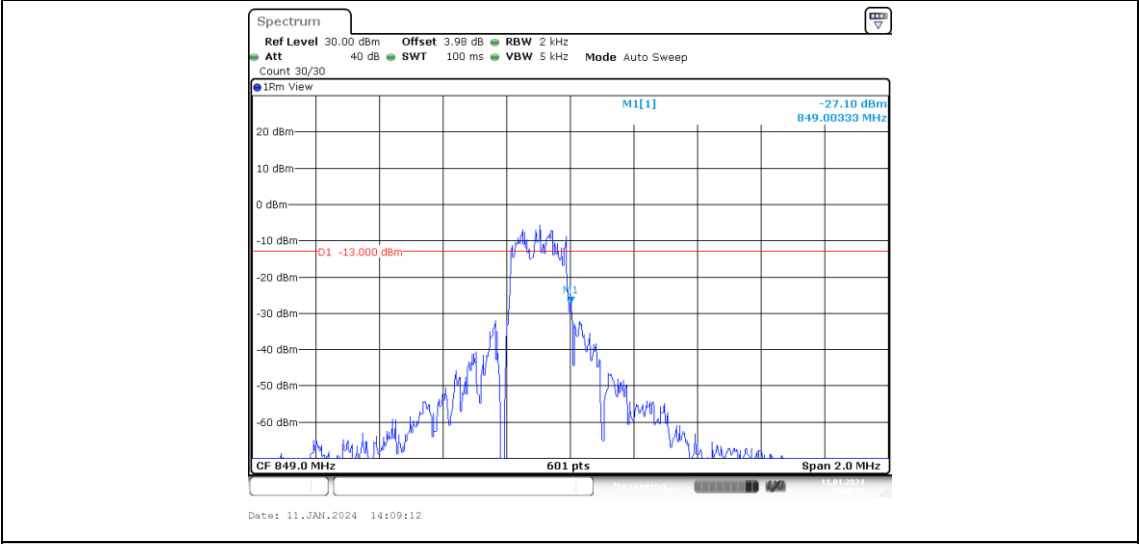
Band5-Stand-Alone-NaN-QPSK-20401-12@0-15kHz--27.97-PASS



Band5-Stand-Alone-NaN-QPSK-20649-1@0-15kHz--38.12-PASS



Band5-Stand-Alone-NaN-QPSK-20649-1@11-15kHz--16.88-PASS



Band5-Stand-Alone-NaN-QPSK-20649-12@0-15kHz--27.10-PASS

Appendix E: Conducted Spurious Emission for NB1

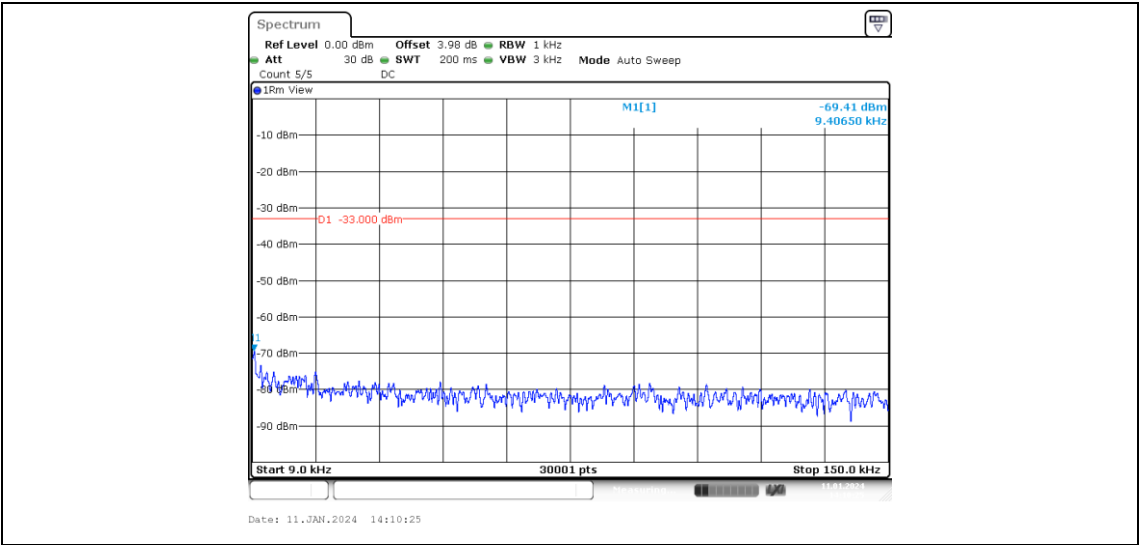
Test Result

Band	OpMode	SCS	BW	Modu	Channel	Tones	Freq Start [MHz]	Freq Stop [MHz]	Result (dBm)	Limit (dBm)	Verdict
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20401	1@0	0.009	0.15	-69.41	-33	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20401	1@0	0.15	30	-80.02	-23	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20401	1@0	30	1000	-58.15	-13	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20401	1@0	1000	10000	-47.2	-13	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20401	1@47	0.009	0.15	-70.67	-33	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20401	1@47	0.15	30	-79.62	-23	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20401	1@47	30	1000	-59.75	-13	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20401	1@47	1000	10000	-45.07	-13	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20525	1@0	0.009	0.15	-68.95	-33	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20525	1@0	0.15	30	-80.13	-23	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20525	1@0	30	1000	-62.1	-13	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20525	1@0	1000	10000	-45.95	-13	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20525	1@47	0.009	0.15	-71.21	-33	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20525	1@47	0.15	30	-80.42	-23	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20525	1@47	30	1000	-62.58	-13	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20525	1@47	1000	10000	-45.24	-13	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20649	1@0	0.009	0.15	-73.2	-33	PASS

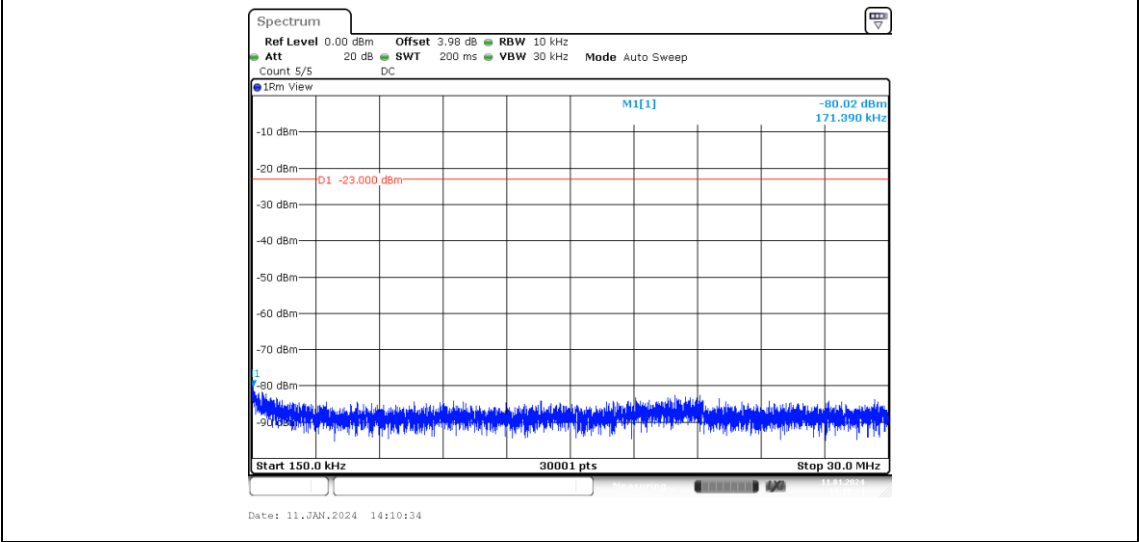
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20649	1@0	0.15	30	-79.15	-23	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20649	1@0	30	1000	-62.54	-13	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20649	1@0	1000	10000	-48.14	-13	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20649	1@47	0.009	0.15	-69.03	-33	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20649	1@47	0.15	30	-78.4	-23	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20649	1@47	30	1000	-64.09	-13	PASS
Band5	Stand-Alone	3.75kHz	NaN	QPSK	20649	1@47	1000	10000	-47.44	-13	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20401	1@0	0.009	0.15	-74.2	-33	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20401	1@0	0.15	30	-80.25	-23	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20401	1@0	30	1000	-60.9	-13	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20401	1@0	1000	10000	-47.41	-13	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20401	1@11	0.009	0.15	-71.03	-33	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20401	1@11	0.15	30	-80.12	-23	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20401	1@11	30	1000	-61.57	-13	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20401	1@11	1000	10000	-47.48	-13	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20525	1@0	0.009	0.15	-73.33	-33	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20525	1@0	0.15	30	-79.7	-23	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20525	1@0	30	1000	-61.81	-13	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20525	1@0	1000	10000	-45.34	-13	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20525	1@11	0.009	0.15	-74.41	-33	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20525	1@11	0.15	30	-79.66	-23	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20525	1@11	30	1000	-62.24	-13	PASS

	e										
Band5	Stand-Alone	15kHz	NaN	BPSK	20525	1@11	1000	1000 0	-46.92	-13	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20649	1@0	0.009	0.15	-72.48	-33	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20649	1@0	0.15	30	-80.46	-23	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20649	1@0	30	1000	-62.52	-13	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20649	1@0	1000	1000 0	-49.2	-13	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20649	1@11	0.009	0.15	-75.13	-33	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20649	1@11	0.15	30	-80.64	-23	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20649	1@11	30	1000	-64.57	-13	PASS
Band5	Stand-Alone	15kHz	NaN	BPSK	20649	1@11	1000	1000 0	-49.62	-13	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20401	12@0	0.009	0.15	-73.39	-33	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20401	12@0	0.15	30	-79.98	-23	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20401	12@0	30	1000	-64.69	-13	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20401	12@0	1000	1000 0	-50.25	-13	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20525	12@0	0.009	0.15	-73.67	-33	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20525	12@0	0.15	30	-74.77	-23	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20525	12@0	30	1000	-62.95	-13	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20525	12@0	1000	1000 0	-49.88	-13	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20649	12@0	0.009	0.15	-73.05	-33	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20649	12@0	0.15	30	-79.3	-23	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20649	12@0	30	1000	-64.64	-13	PASS
Band5	Stand-Alone	15kHz	NaN	QPSK	20649	12@0	1000	1000 0	-50.08	-13	PASS

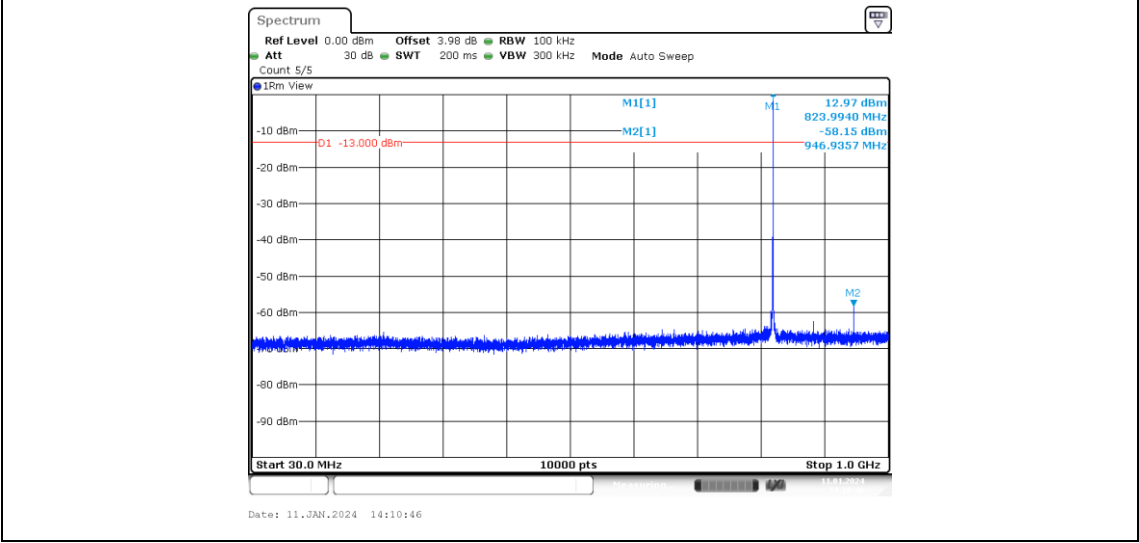
Test Graphs

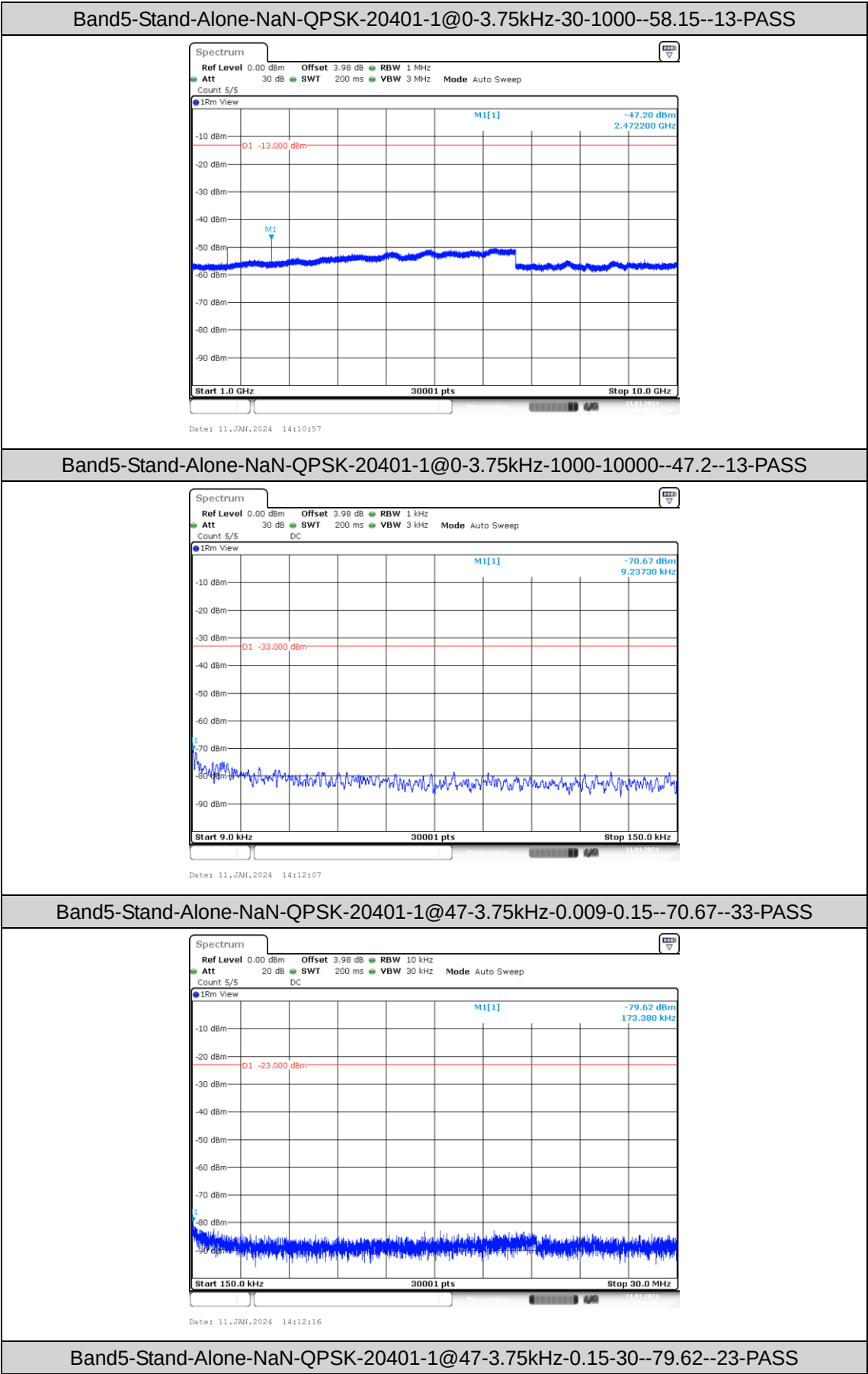


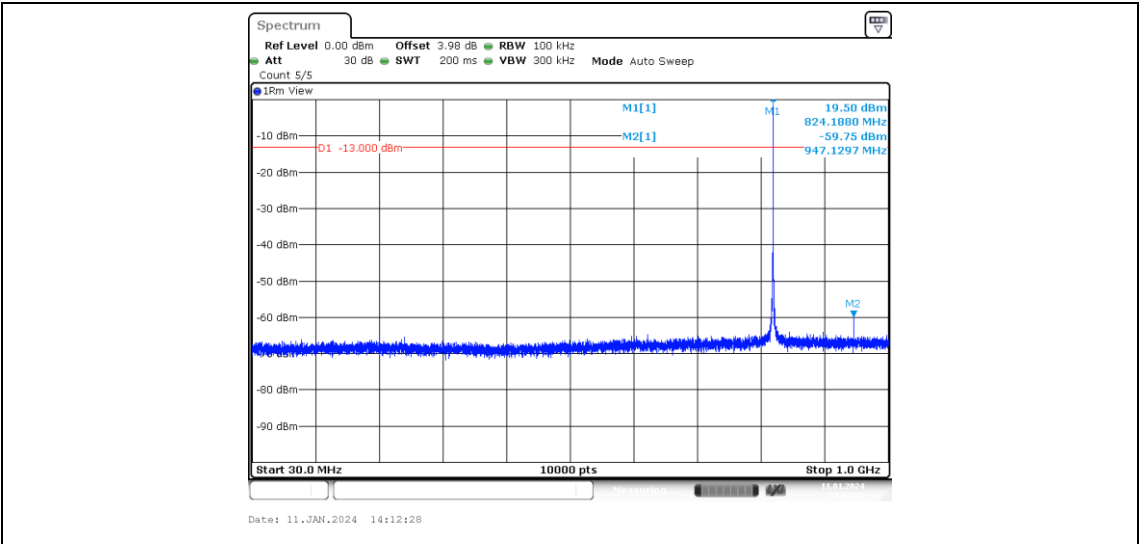
Band5-Stand-Alone-NaN-QPSK-20401-1@0-3.75kHz-0.009-0.15--69.41--33-PASS



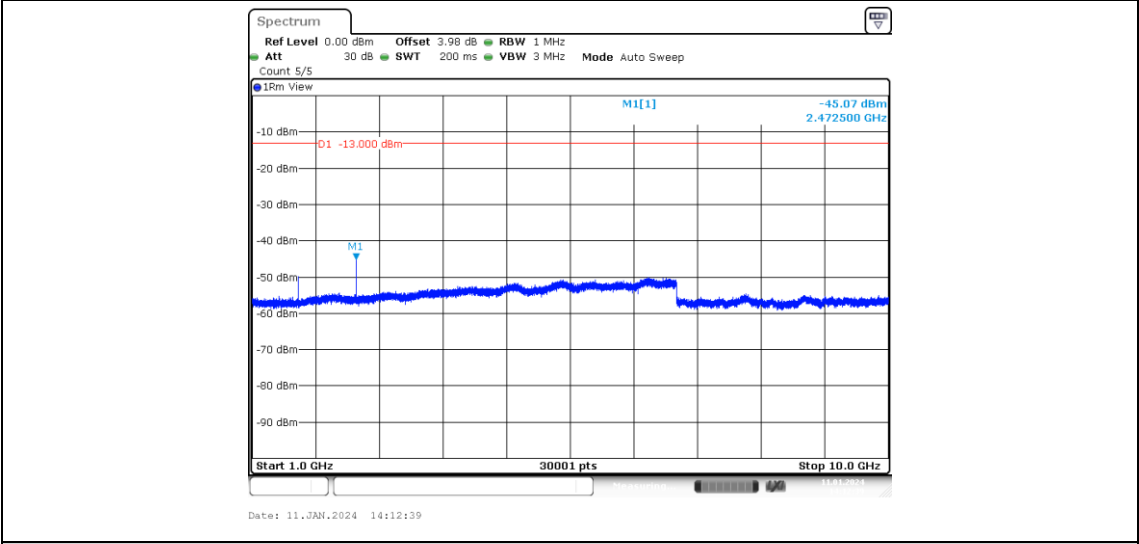
Band5-Stand-Alone-NaN-QPSK-20401-1@0-3.75kHz-0.15-30--80.02--23-PASS



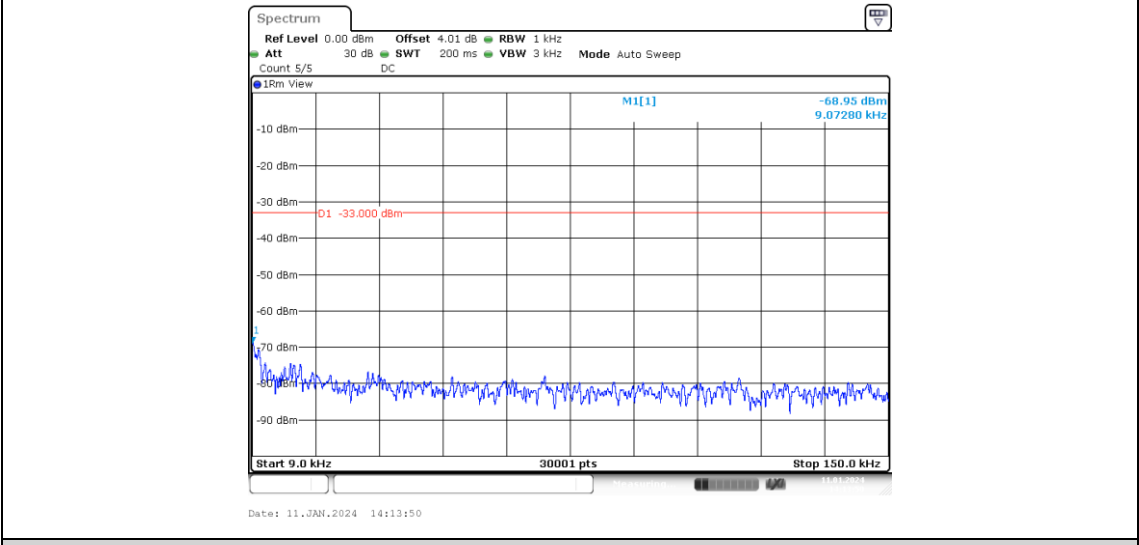




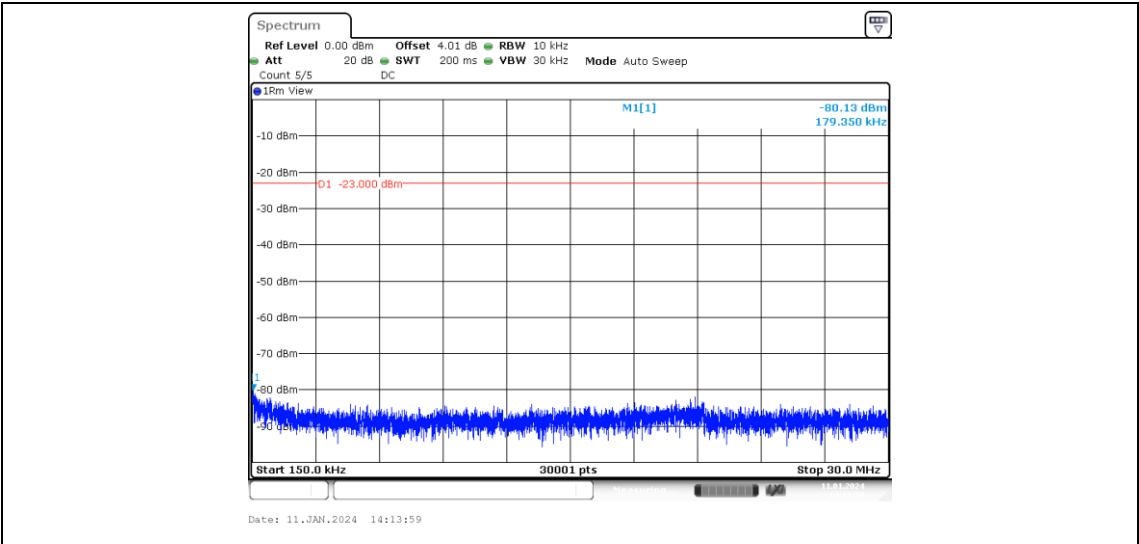
Band5-Stand-Alone-NaN-QPSK-20401-1@47-3.75kHz-30-1000--59.75--13-PASS



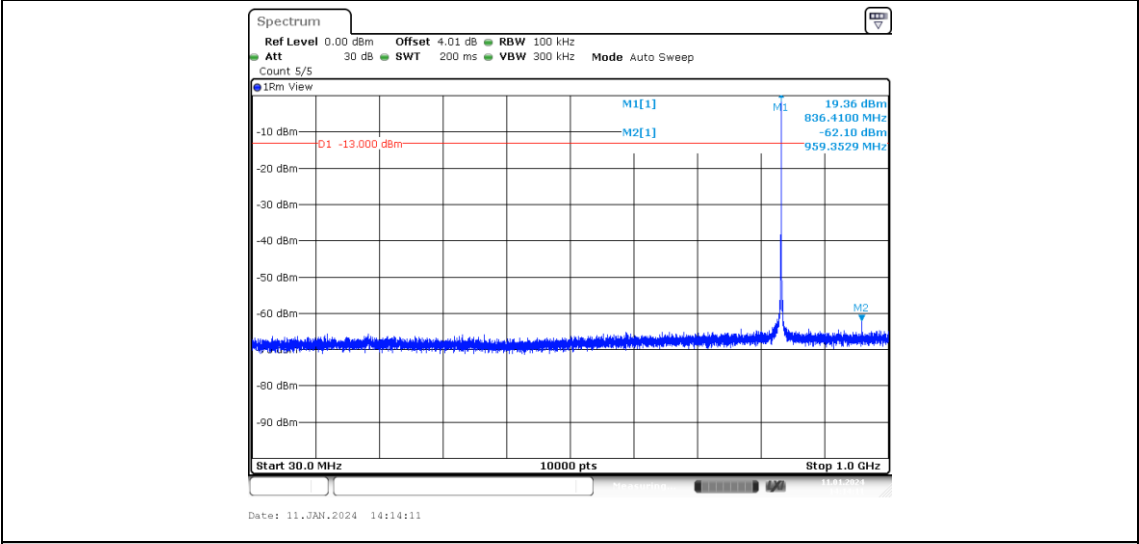
Band5-Stand-Alone-NaN-QPSK-20401-1@47-3.75kHz-1000-10000--45.07--13-PASS



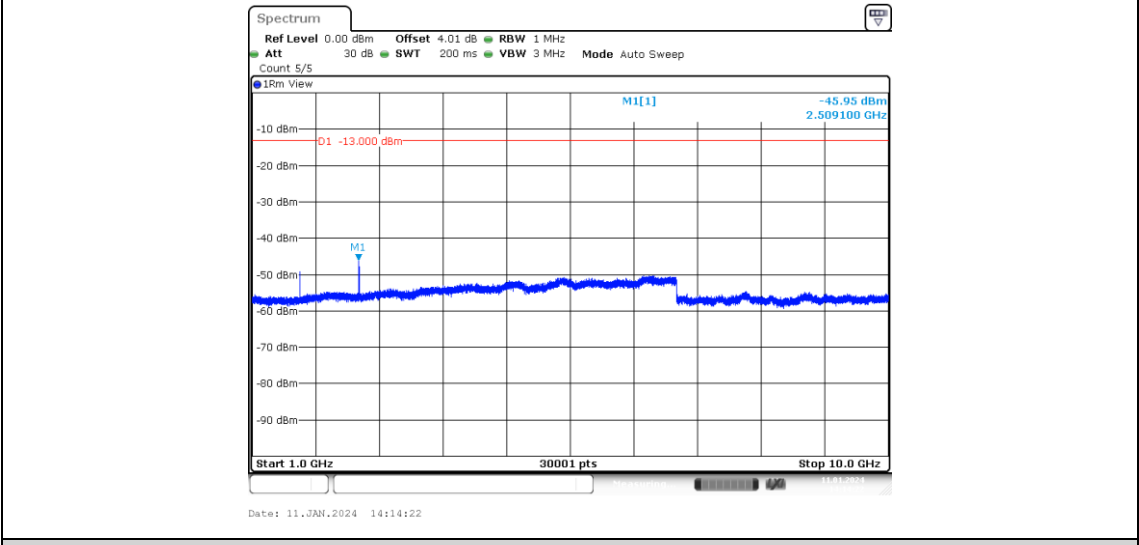
Band5-Stand-Alone-NaN-QPSK-20525-1@0-3.75kHz-0.009-0.15--68.95--33-PASS



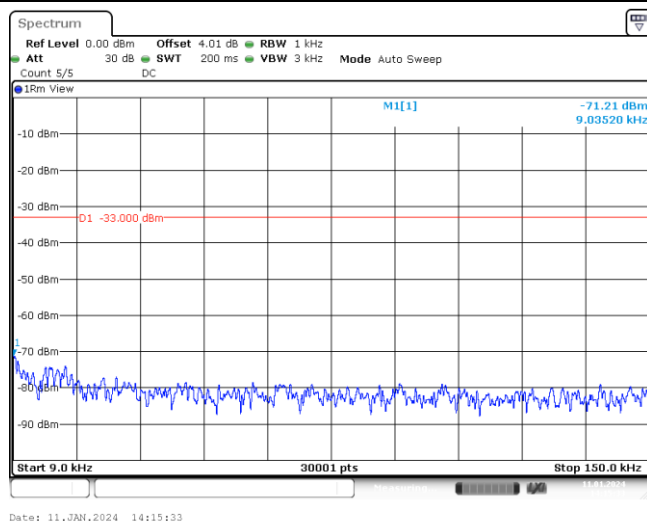
Band5-Stand-Alone-NaN-QPSK-20525-1@0-3.75kHz-0.15-30--80.13--23-PASS



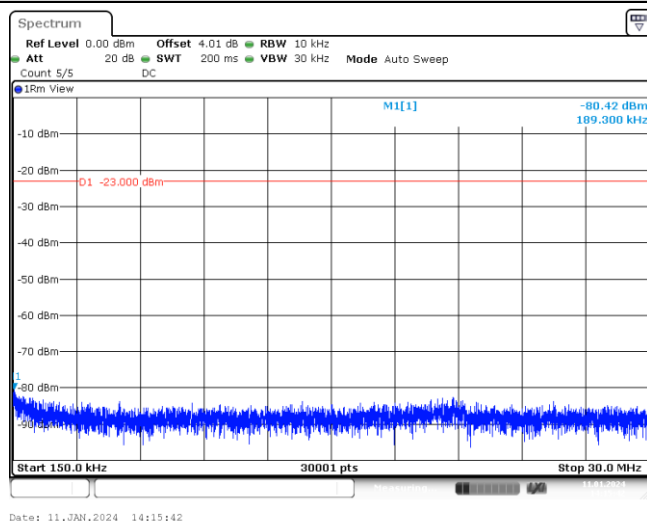
Band5-Stand-Alone-NaN-QPSK-20525-1@0-3.75kHz-30-1000--62.1--13-PASS



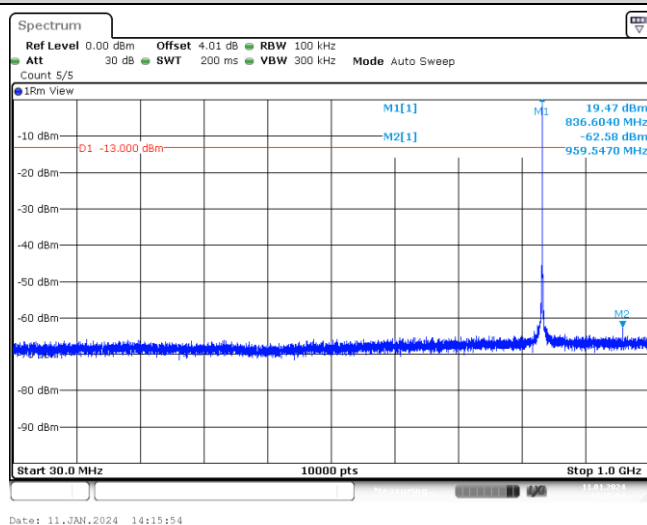
Band5-Stand-Alone-NaN-QPSK-20525-1@0-3.75kHz-1000-10000--45.95--13-PASS



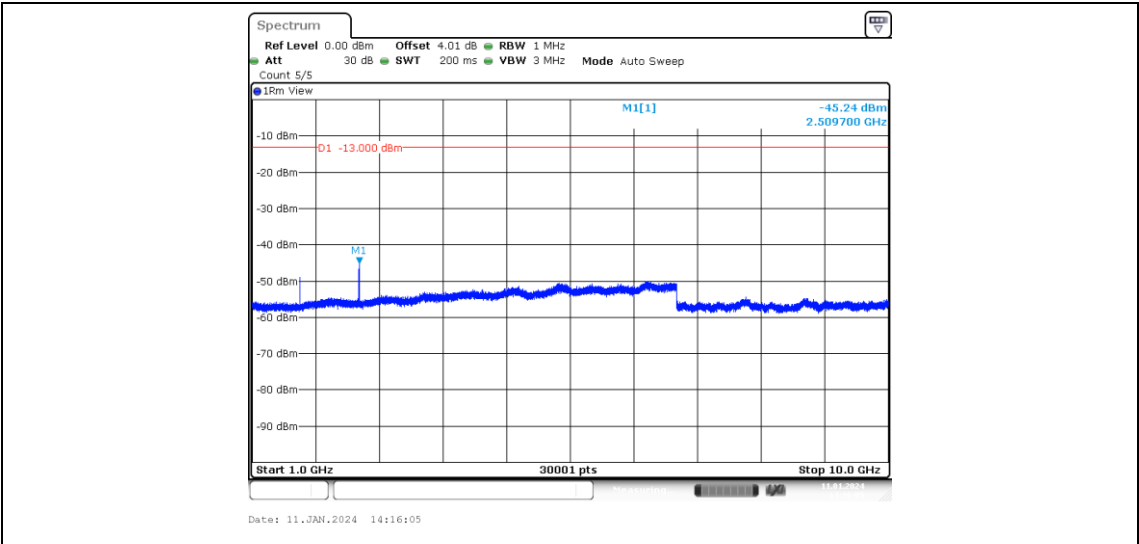
Band5-Stand-Alone-NaN-QPSK-20525-1@47-3.75kHz-0.009-0.15--71.21--33-PASS



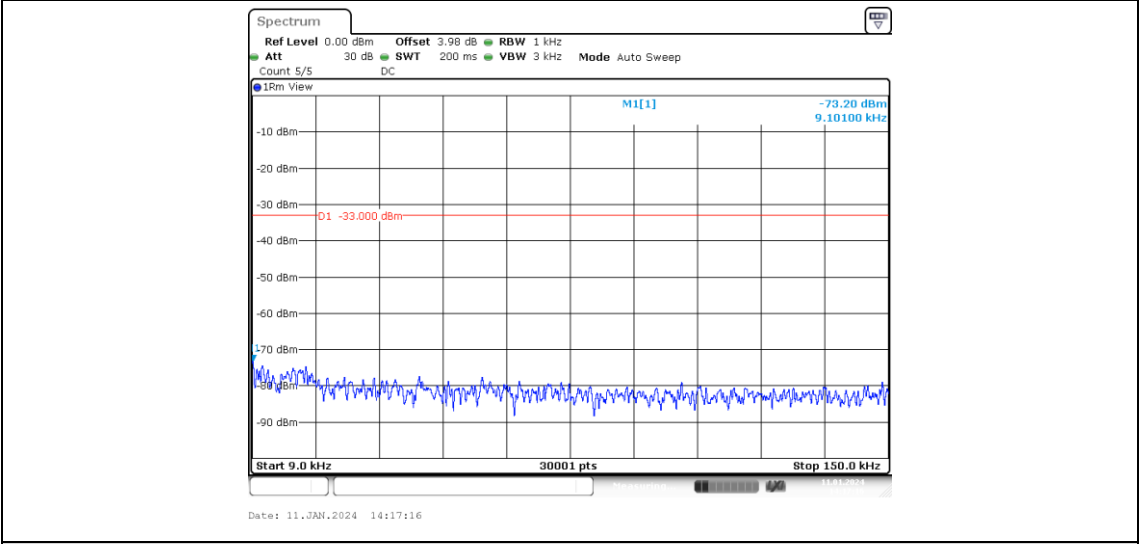
Band5-Stand-Alone-NaN-QPSK-20525-1@47-3.75kHz-0.15-30--80.42--23-PASS



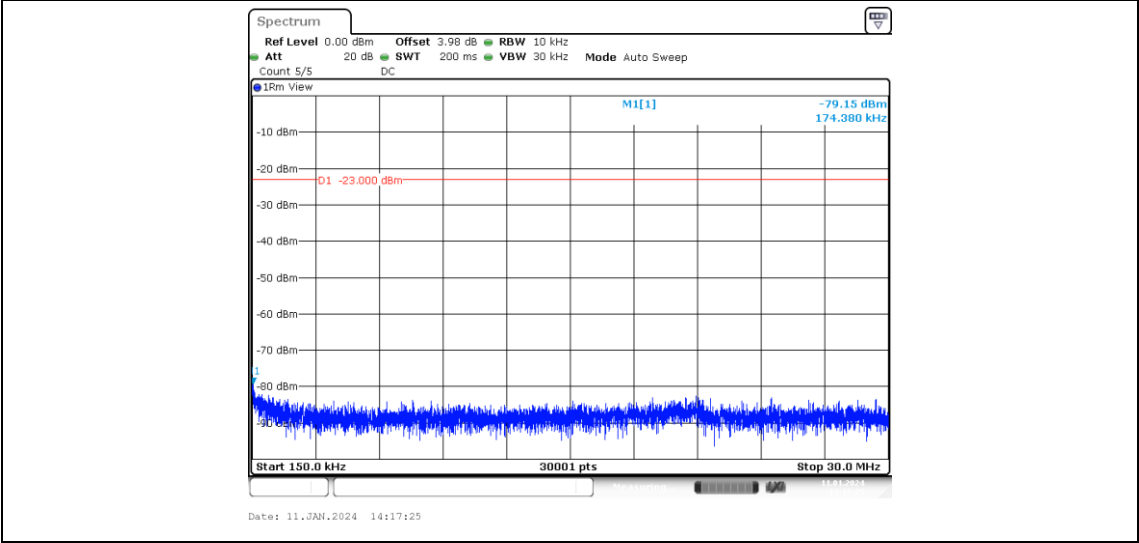
Band5-Stand-Alone-NaN-QPSK-20525-1@47-3.75kHz-30-1000--62.58--13-PASS



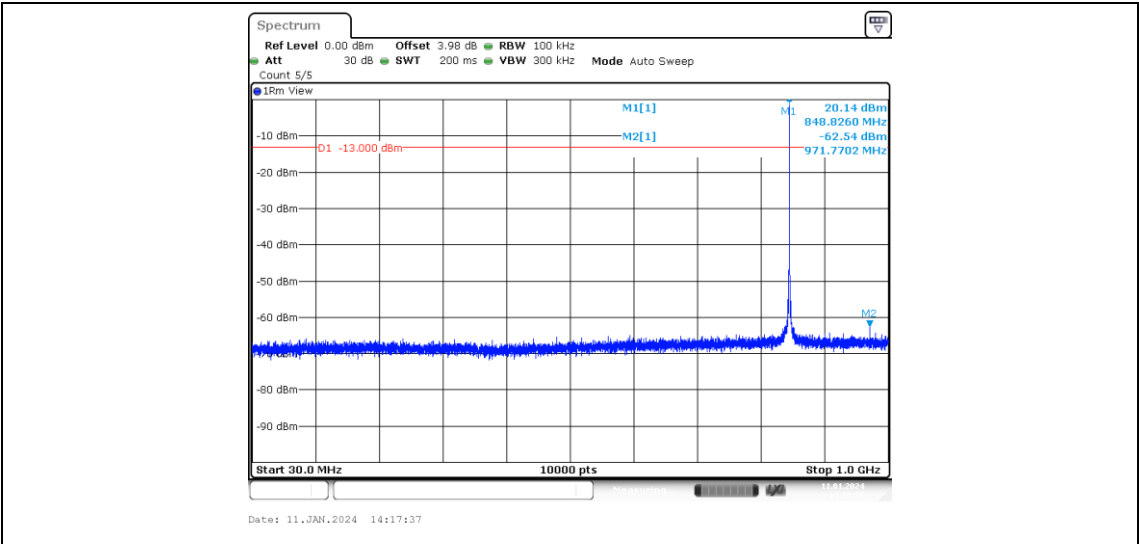
Band5-Stand-Alone-NaN-QPSK-20525-1@47-3.75kHz-1000-10000--45.24--13-PASS



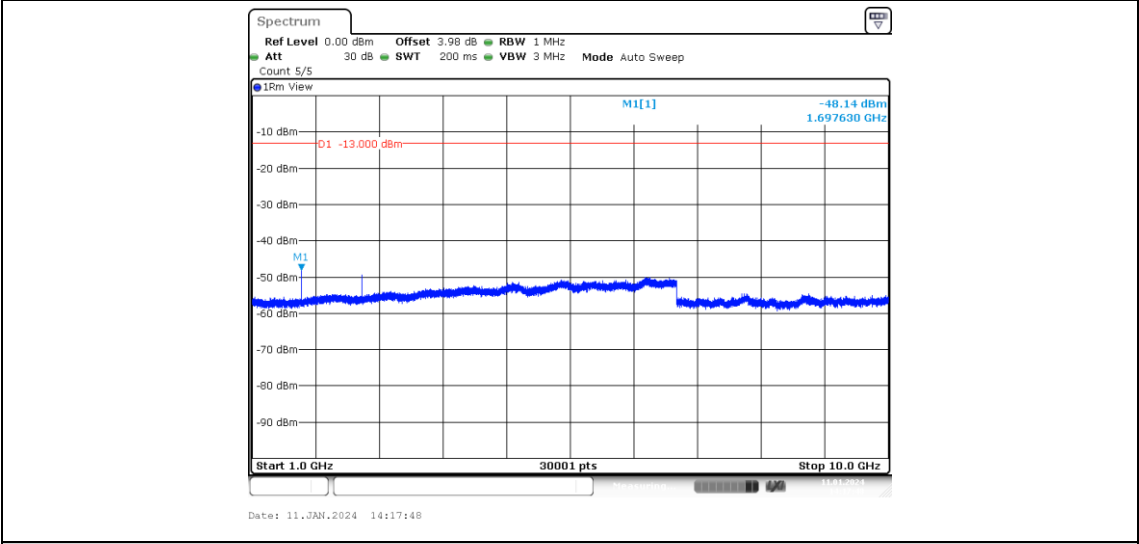
Band5-Stand-Alone-NaN-QPSK-20649-1@0-3.75kHz-0.009-0.15--73.2--33-PASS



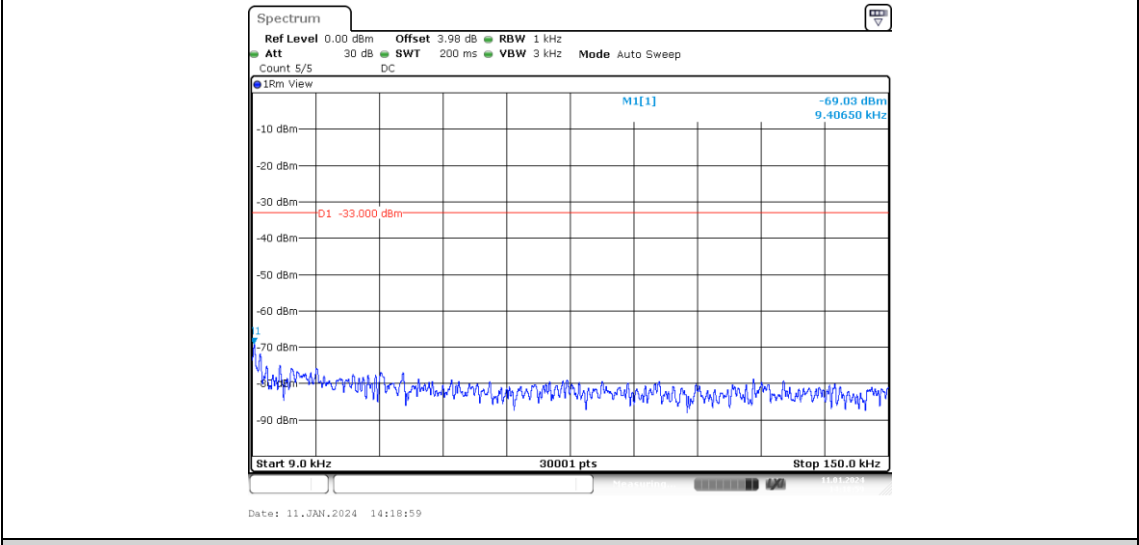
Band5-Stand-Alone-NaN-QPSK-20649-1@0-3.75kHz-0.15-30--79.15--23-PASS



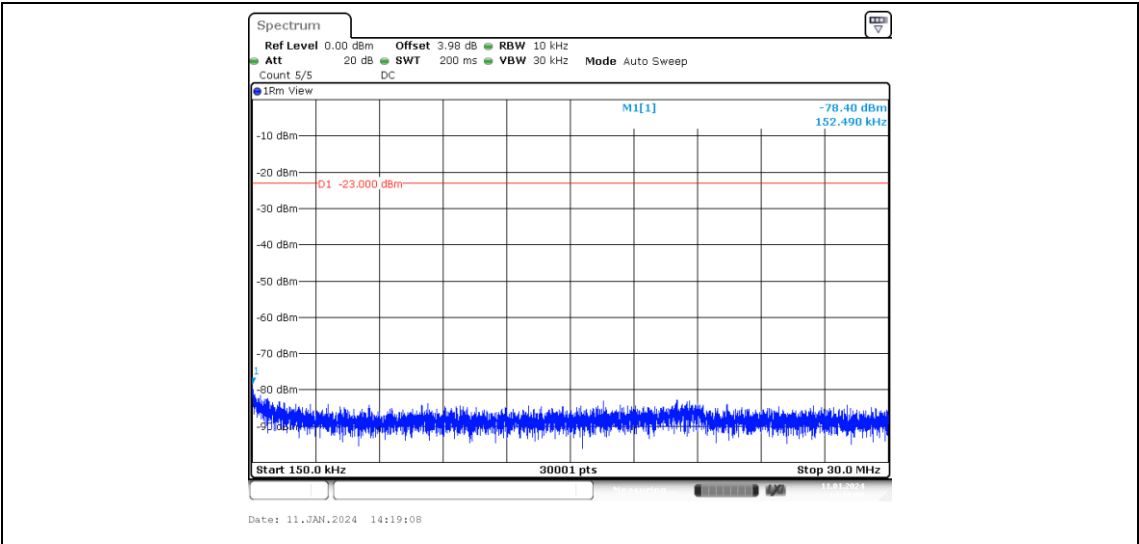
Band5-Stand-Alone-NaN-QPSK-20649-1@0-3.75kHz-30-1000--62.54--13-PASS



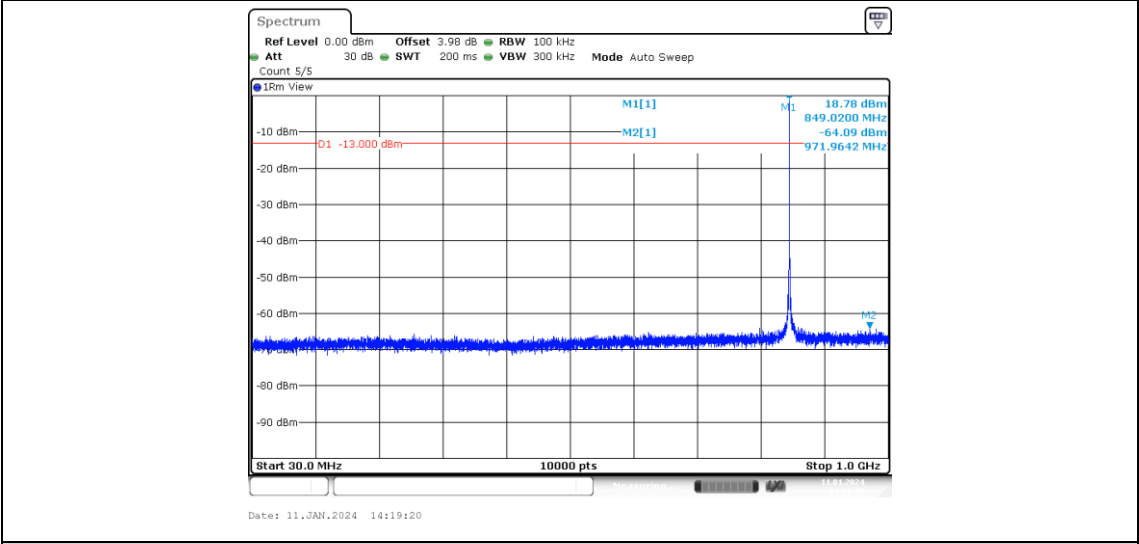
Band5-Stand-Alone-NaN-QPSK-20649-1@0-3.75kHz-1000-10000--48.14--13-PASS



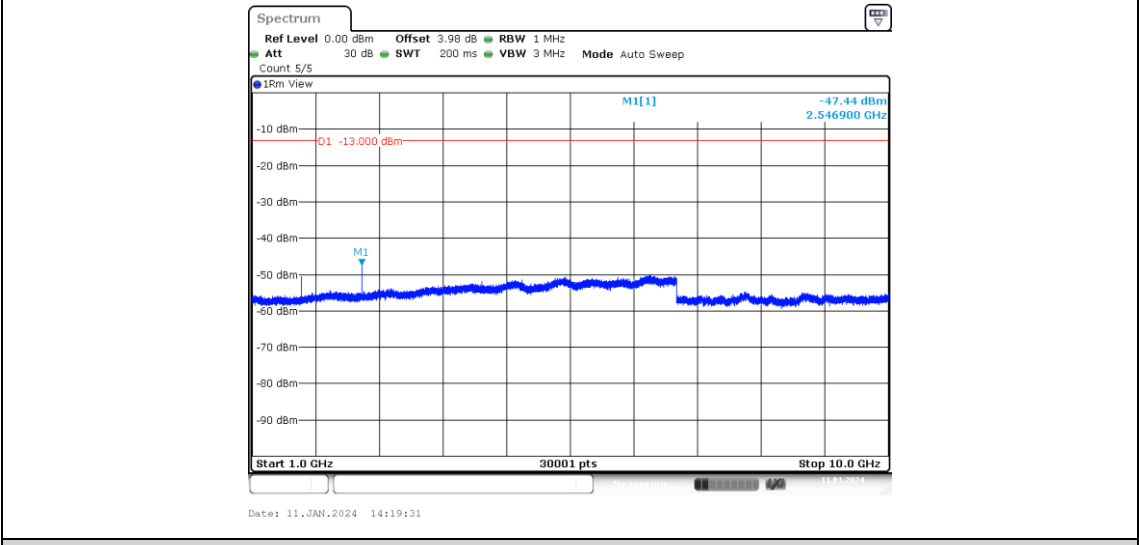
Band5-Stand-Alone-NaN-QPSK-20649-1@47-3.75kHz-0.009-0.15--69.03--33-PASS



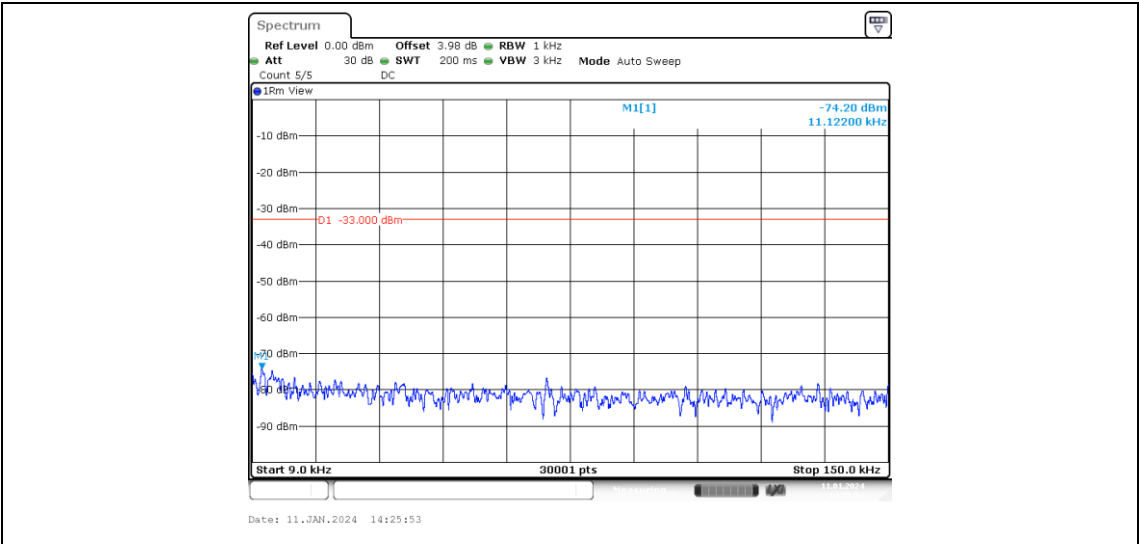
Band5-Stand-Alone-NaN-QPSK-20649-1@47-3.75kHz-0.15-30--78.4--23-PASS



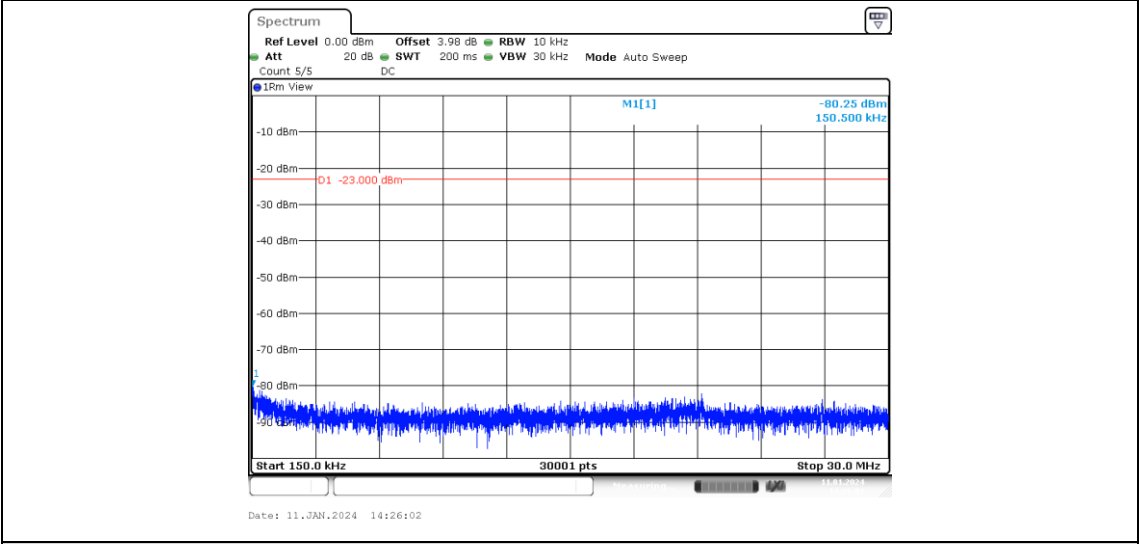
Band5-Stand-Alone-NaN-QPSK-20649-1@47-3.75kHz-30-1000--64.09--13-PASS



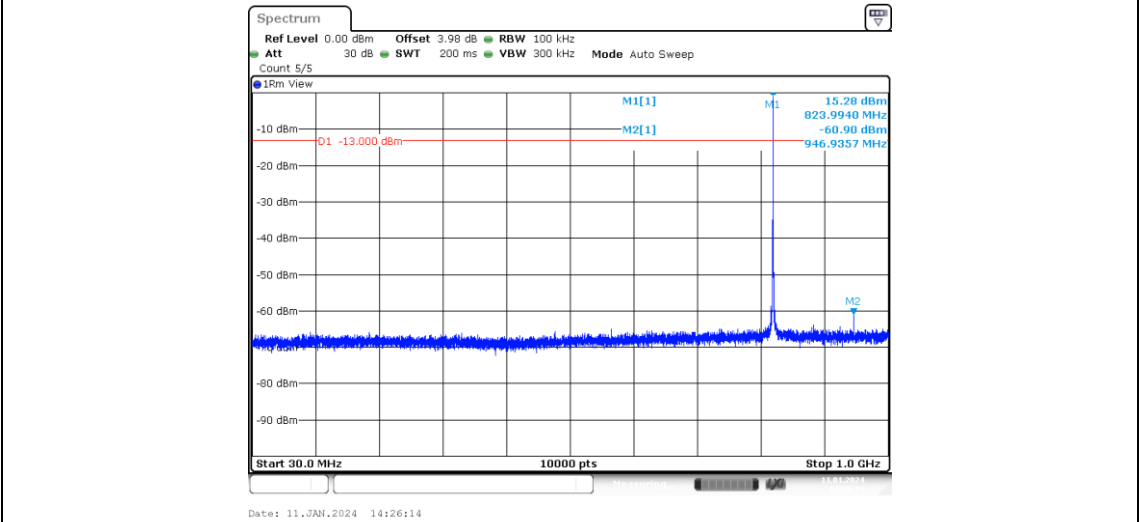
Band5-Stand-Alone-NaN-QPSK-20649-1@47-3.75kHz-1000-10000--47.44--13-PASS



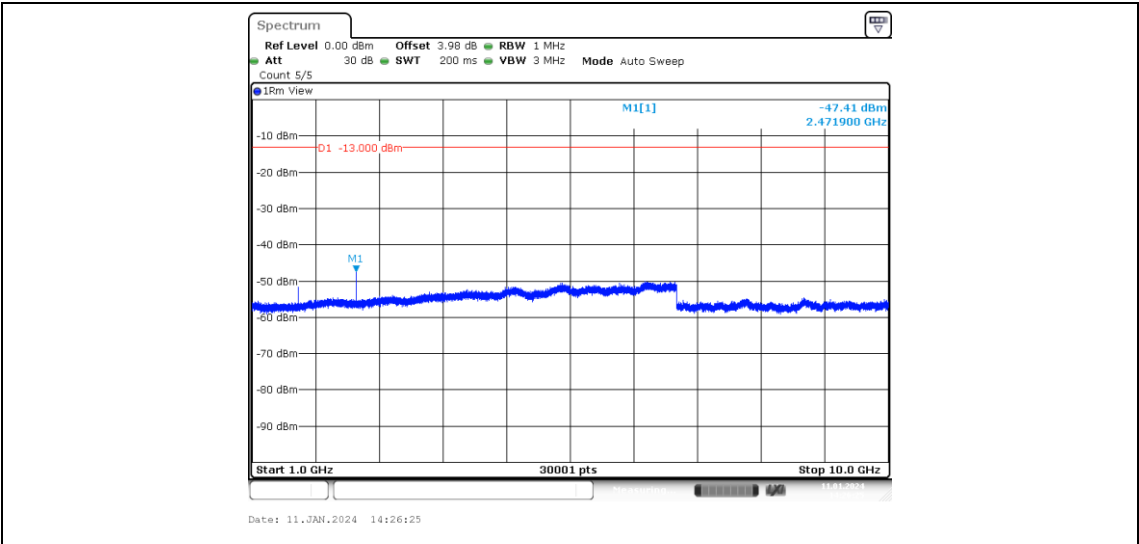
Band5-Stand-Alone-NaN-BPSK-20401-1@0-15kHz-0.009-0.15--74.2--33-PASS



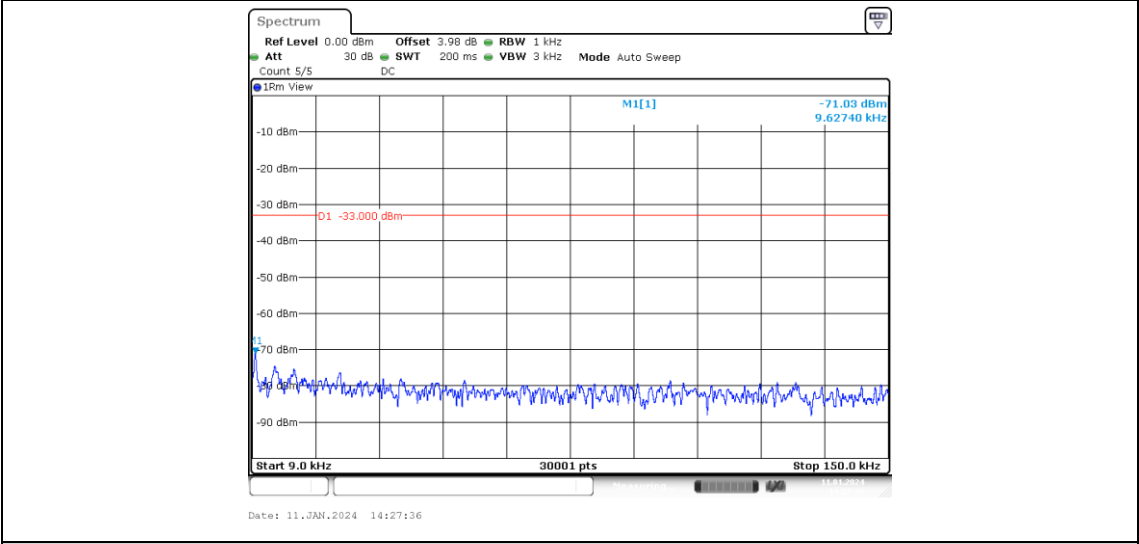
Band5-Stand-Alone-NaN-BPSK-20401-1@0-15kHz-0.15-30--80.25--23-PASS



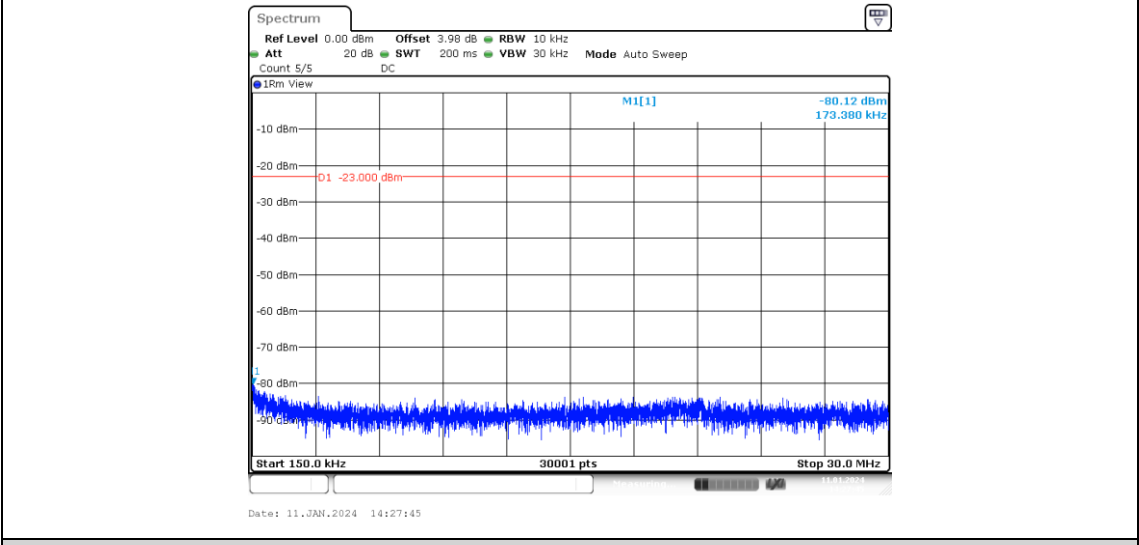
Band5-Stand-Alone-NaN-BPSK-20401-1@0-15kHz-30-1000--60.9--13-PASS



Band5-Stand-Alone-NaN-BPSK-20401-1@0-15kHz-1000-10000--47.41--13-PASS



Band5-Stand-Alone-NaN-BPSK-20401-1@11-15kHz-0.009-0.15--71.03--33-PASS



Band5-Stand-Alone-NaN-BPSK-20401-1@11-15kHz-0.15-30--80.12--23-PASS



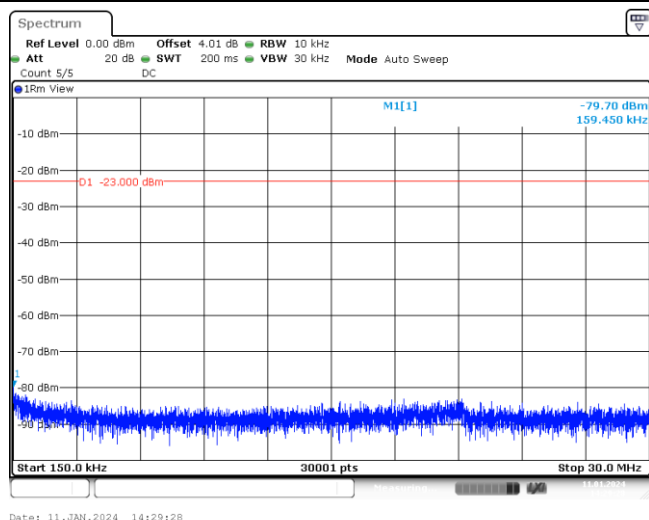
Band5-Stand-Alone-NaN-BPSK-20401-1@11-15kHz-30-1000--61.57--13-PASS



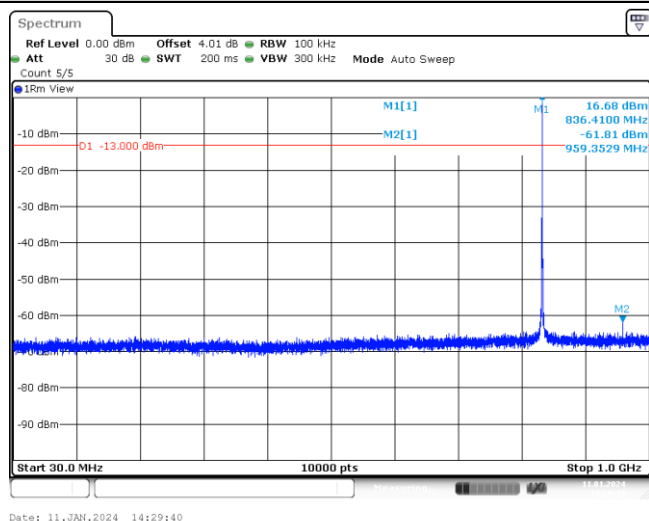
Band5-Stand-Alone-NaN-BPSK-20401-1@11-15kHz-1000-10000--47.48--13-PASS



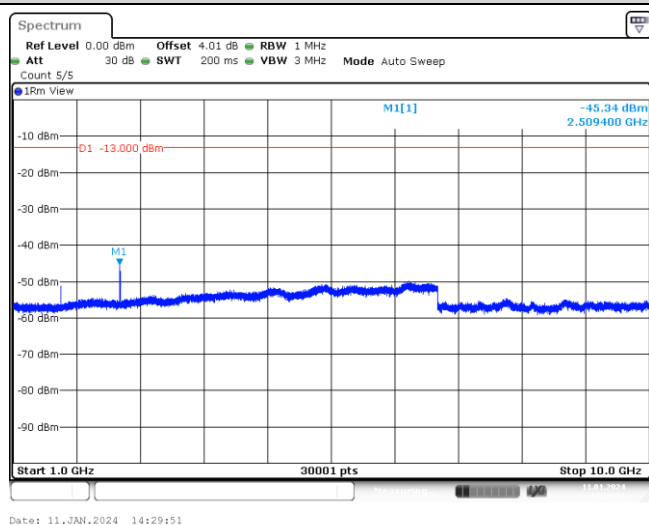
Band5-Stand-Alone-NaN-BPSK-20525-1@0-15kHz-0.009-0.15--73.33--33-PASS



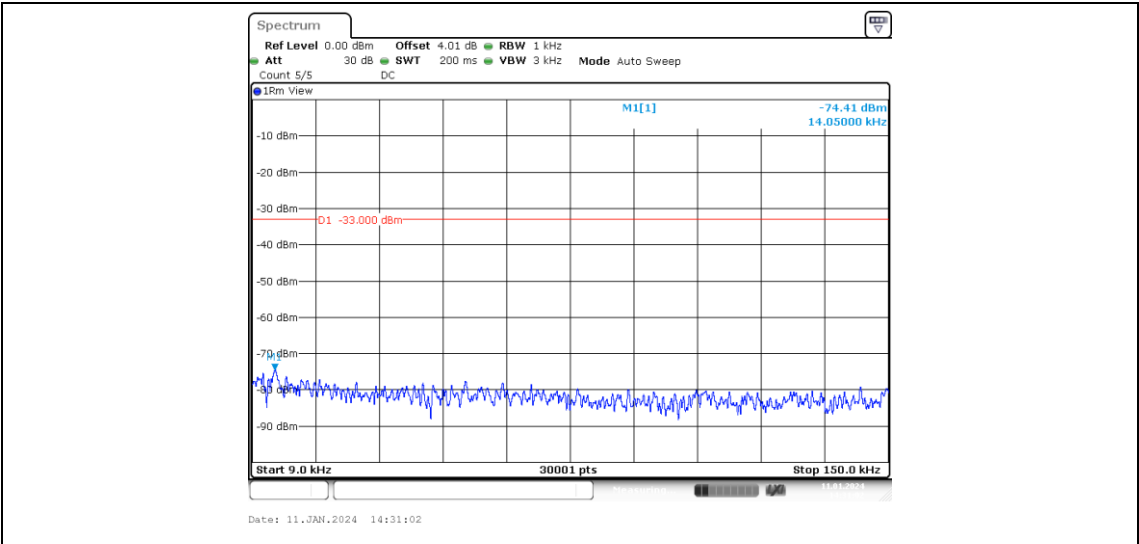
Band5-Stand-Alone-NaN-BPSK-20525-1@0-15kHz-0.15-30--79.7--23-PASS



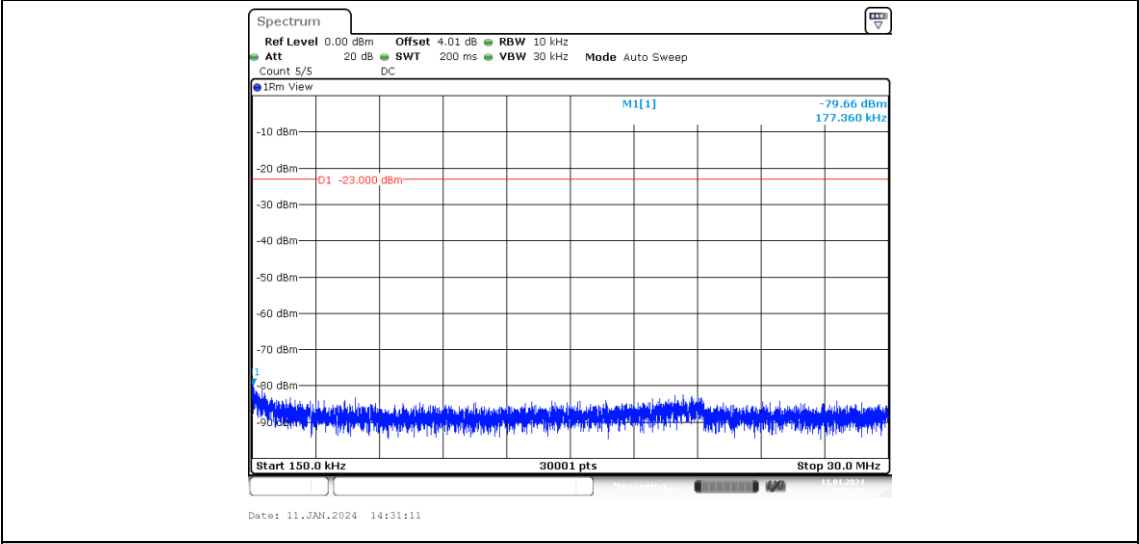
Band5-Stand-Alone-NaN-BPSK-20525-1@0-15kHz-30-1000--61.81--13-PASS



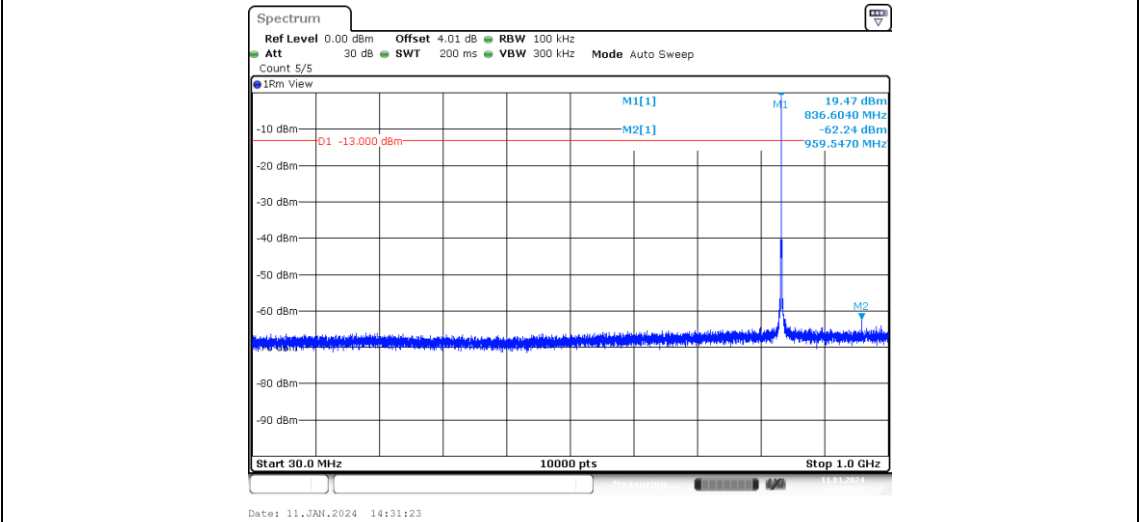
Band5-Stand-Alone-NaN-BPSK-20525-1@0-15kHz-1000-10000--45.34--13-PASS



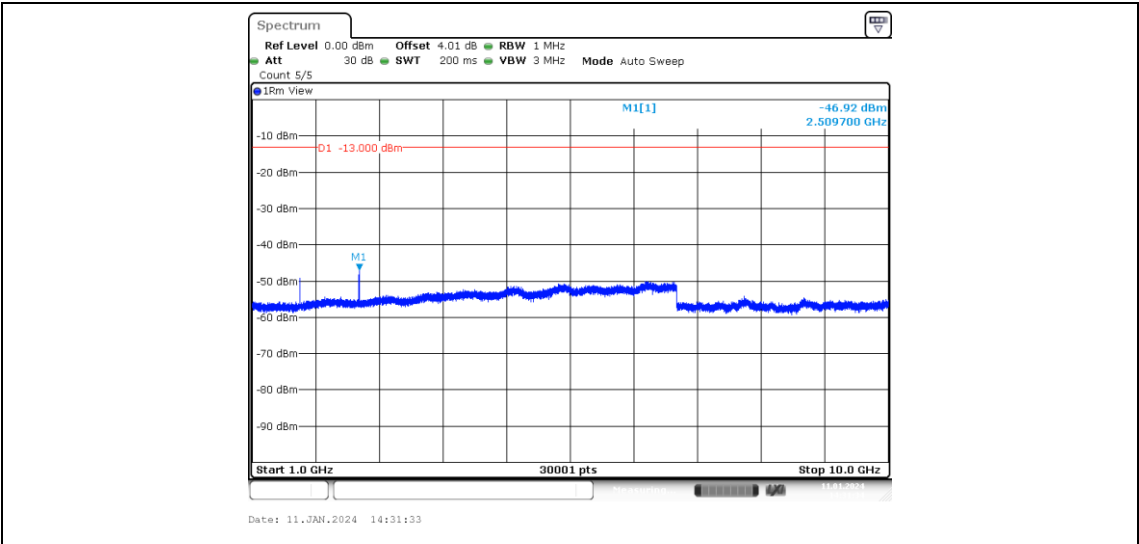
Band5-Stand-Alone-NaN-BPSK-20525-1@11-15kHz-0.009-0.15--74.41--33-PASS



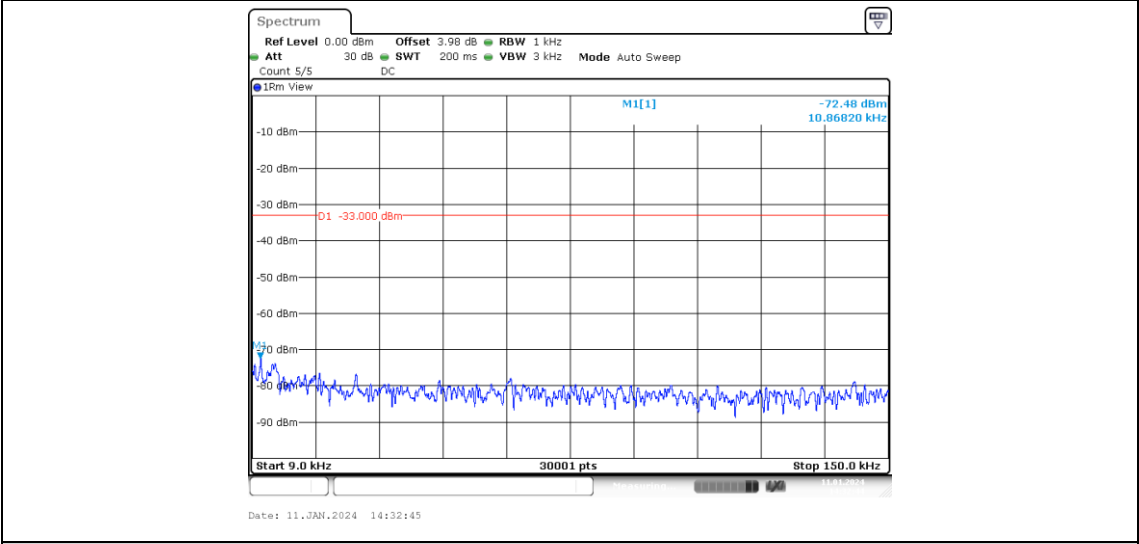
Band5-Stand-Alone-NaN-BPSK-20525-1@11-15kHz-0.15-30--79.66--23-PASS



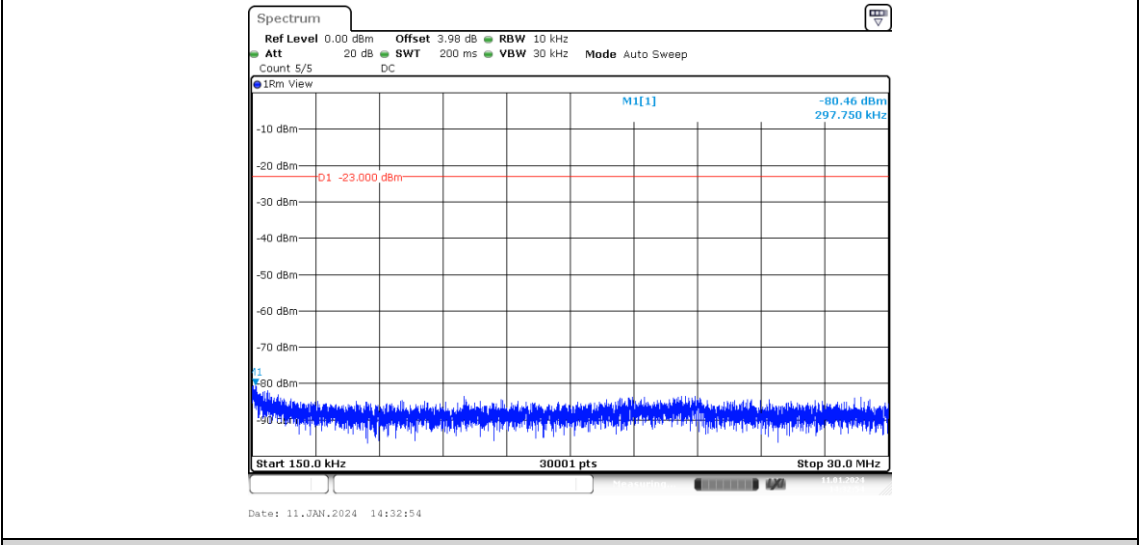
Band5-Stand-Alone-NaN-BPSK-20525-1@11-15kHz-30-1000--62.24--13-PASS



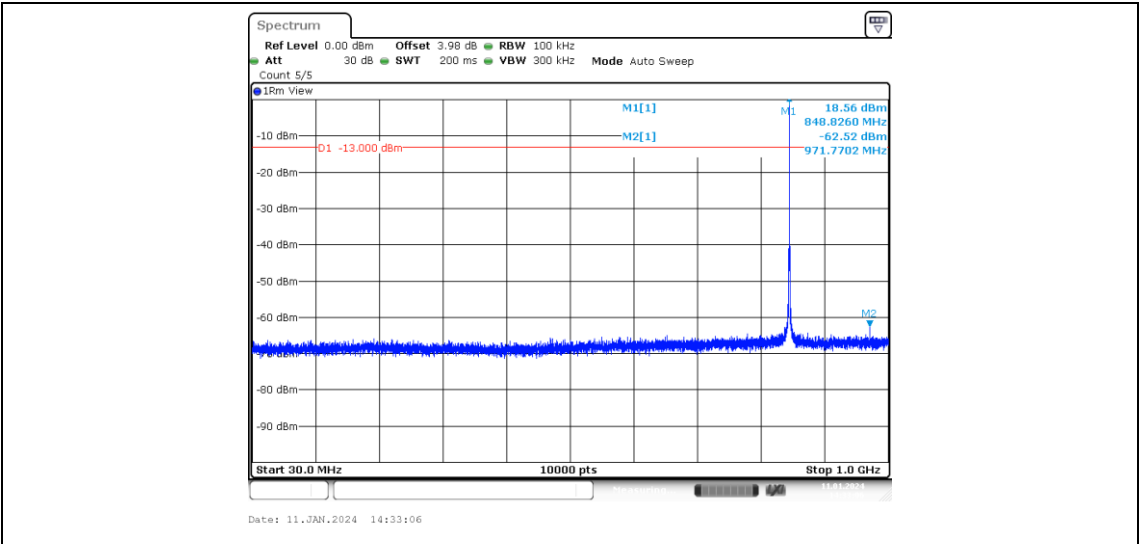
Band5-Stand-Alone-NaN-BPSK-20525-1@11-15kHz-1000-10000--46.92--13-PASS



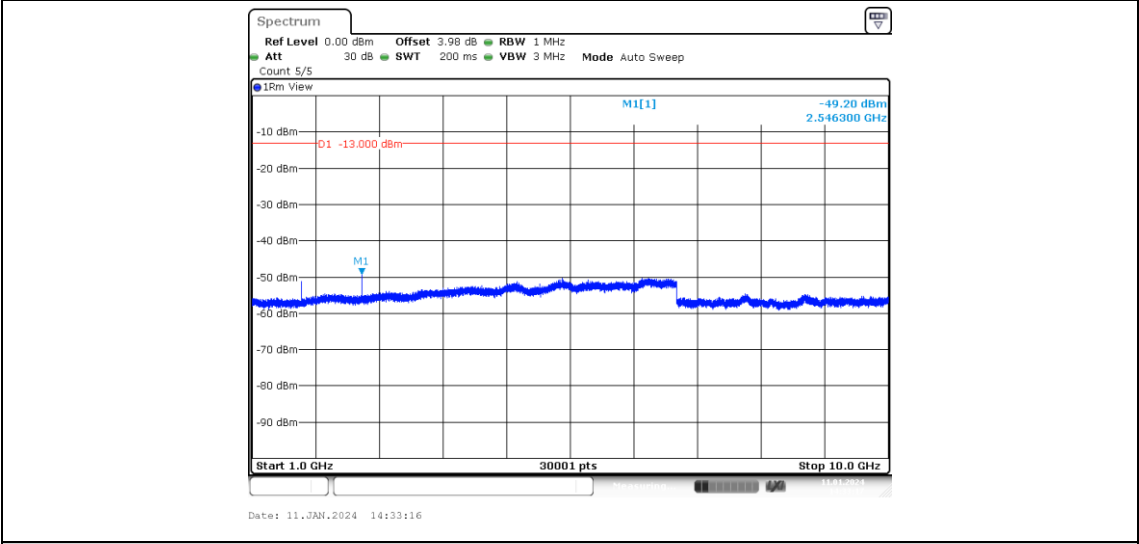
Band5-Stand-Alone-NaN-BPSK-20649-1@0-15kHz-0.009-0.15--72.48--33-PASS



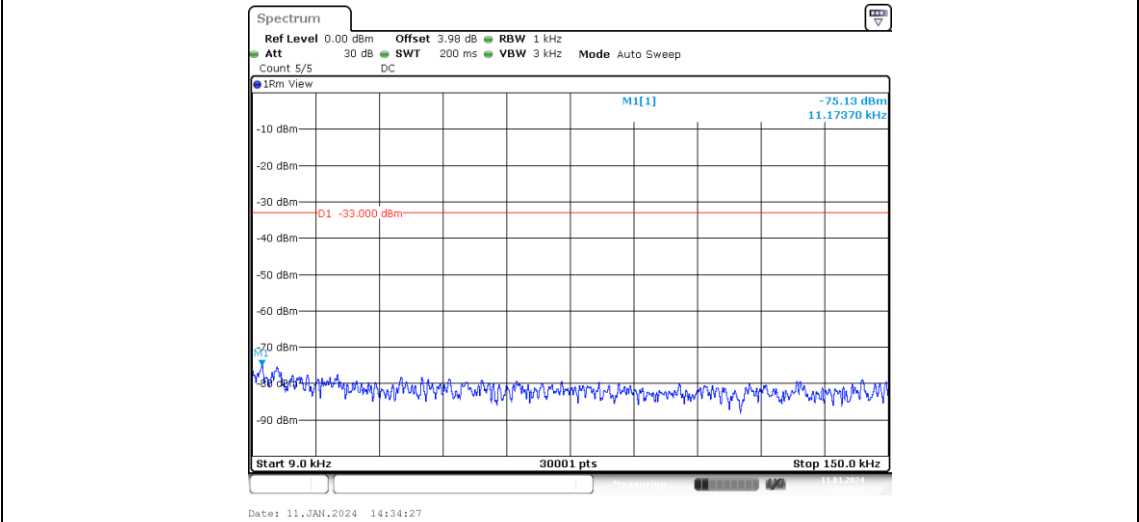
Band5-Stand-Alone-NaN-BPSK-20649-1@0-15kHz-0.15-30--80.46--23-PASS



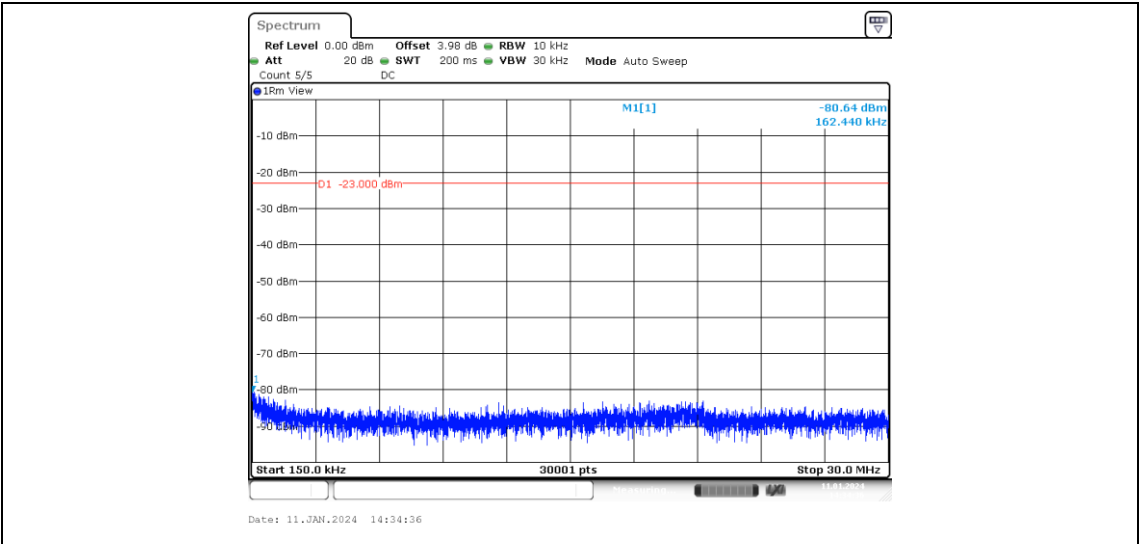
Band5-Stand-Alone-NaN-BPSK-20649-1@0-15kHz-30-1000--62.52--13-PASS



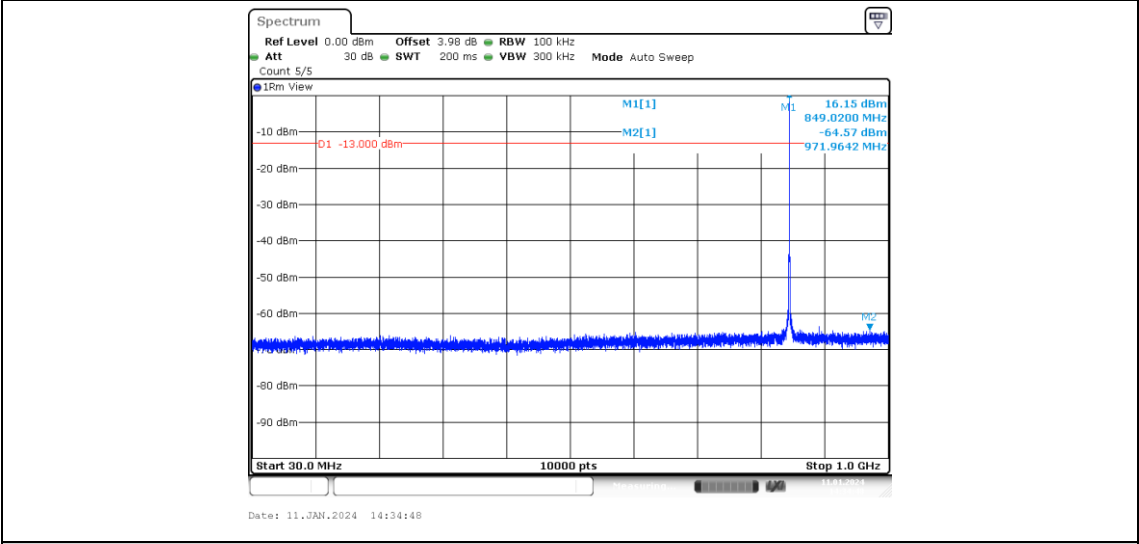
Band5-Stand-Alone-NaN-BPSK-20649-1@0-15kHz-1000-10000--49.2--13-PASS



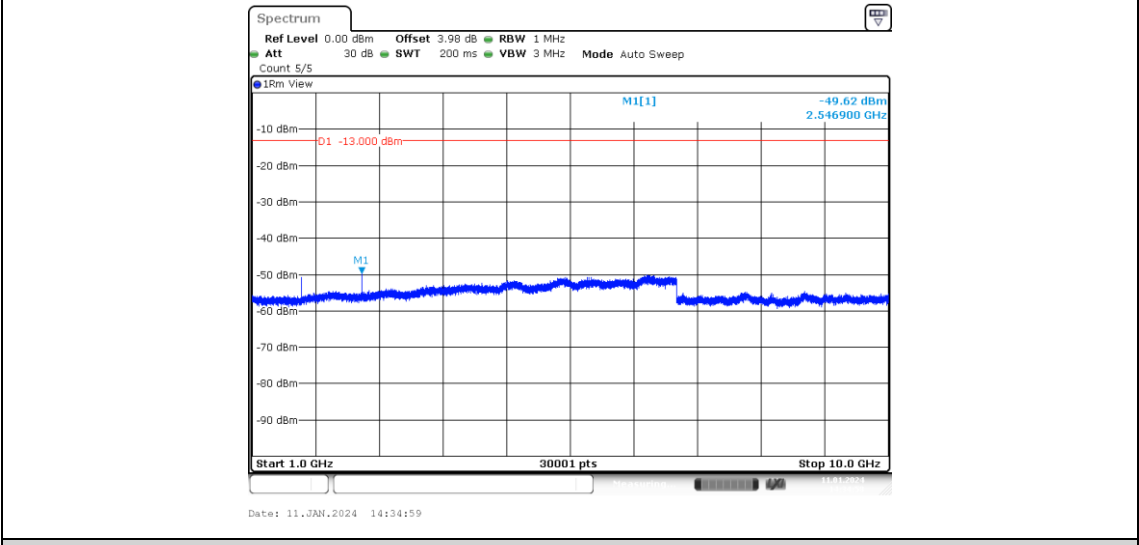
Band5-Stand-Alone-NaN-BPSK-20649-1@11-15kHz-0.009-0.15--75.13--33-PASS



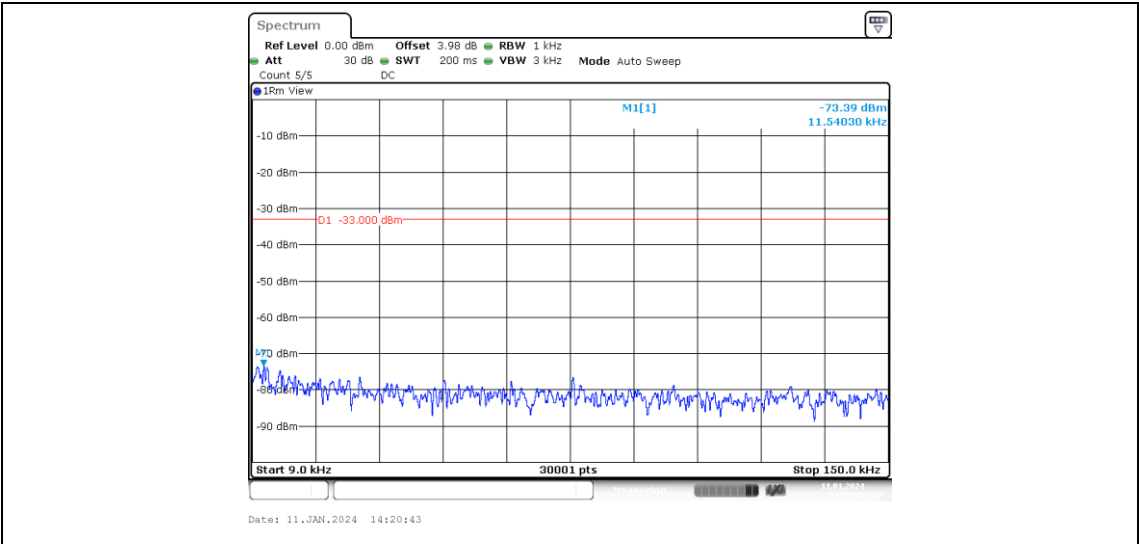
Band5-Stand-Alone-NaN-BPSK-20649-1@11-15kHz-0.15-30--80.64--23-PASS



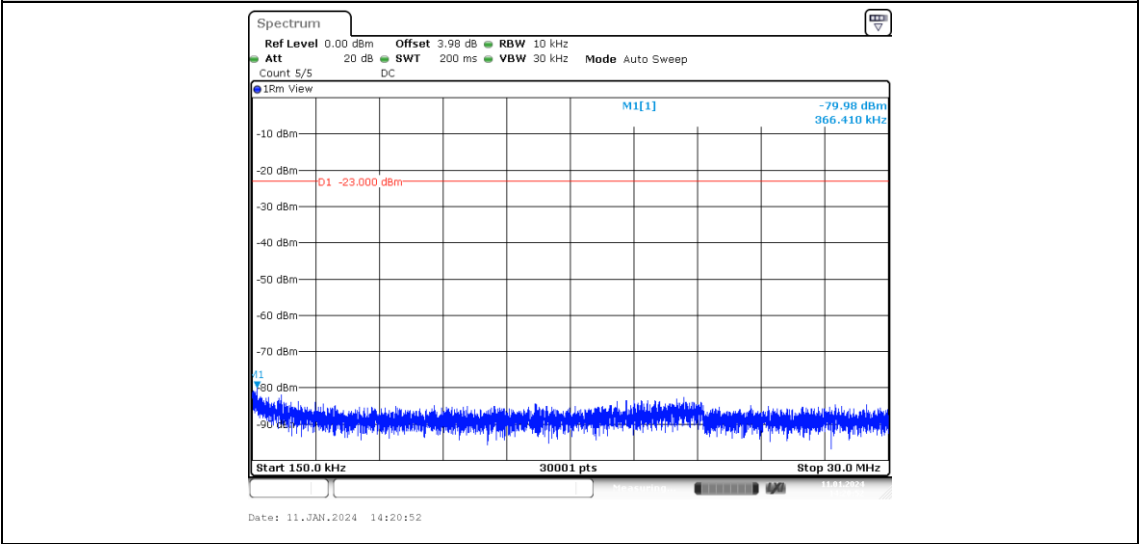
Band5-Stand-Alone-NaN-BPSK-20649-1@11-15kHz-30-1000--64.57--13-PASS



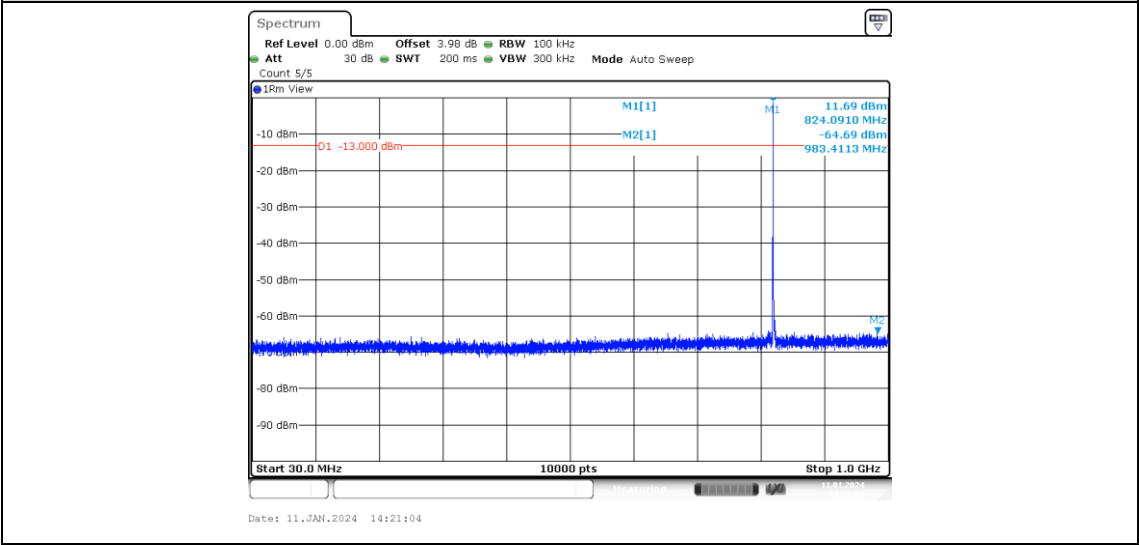
Band5-Stand-Alone-NaN-BPSK-20649-1@11-15kHz-1000-10000--49.62--13-PASS



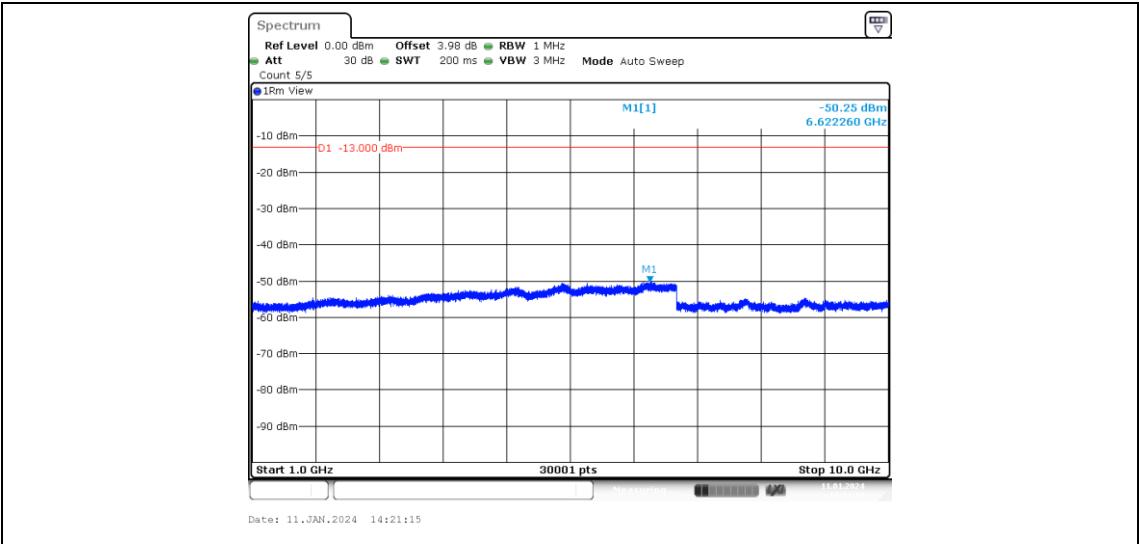
Band5-Stand-Alone-NaN-QPSK-20401-12@0-15kHz-0.009-0.15--73.39--33-PASS



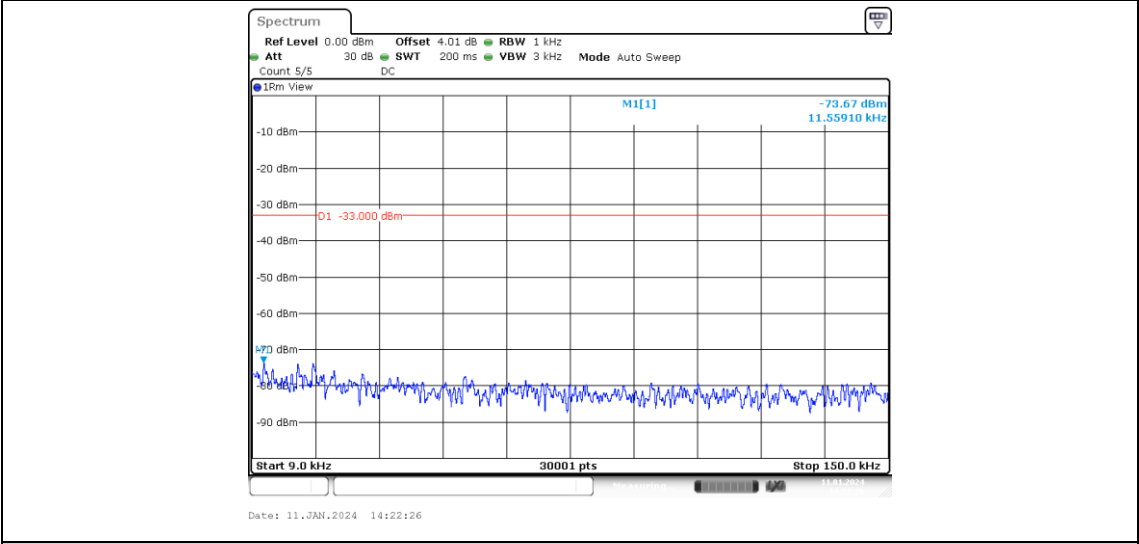
Band5-Stand-Alone-NaN-QPSK-20401-12@0-15kHz-0.15-30--79.98--23-PASS



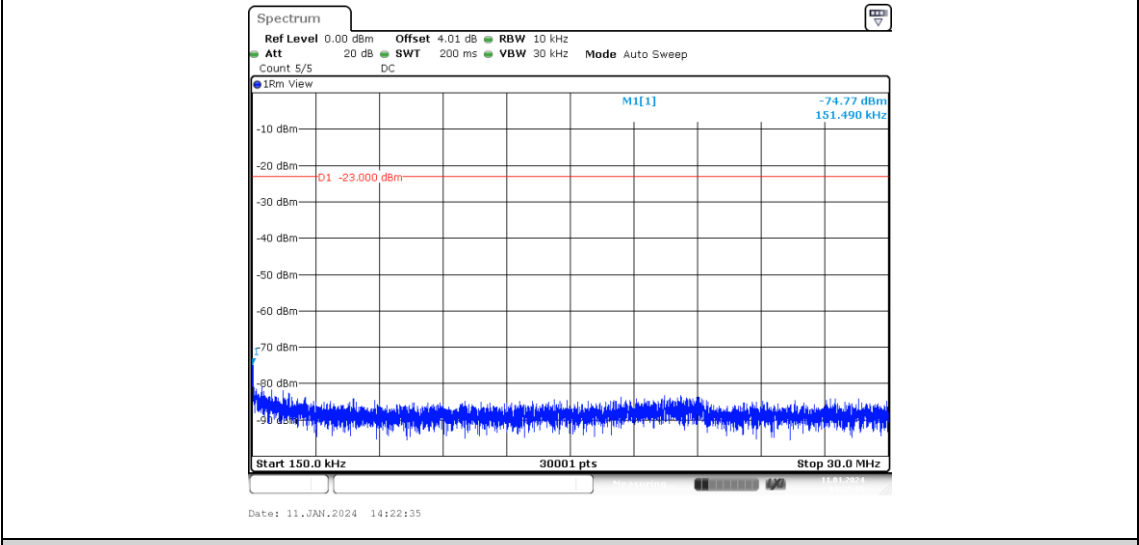
Band5-Stand-Alone-NaN-QPSK-20401-12@0-15kHz-30-1000--64.69--13-PASS



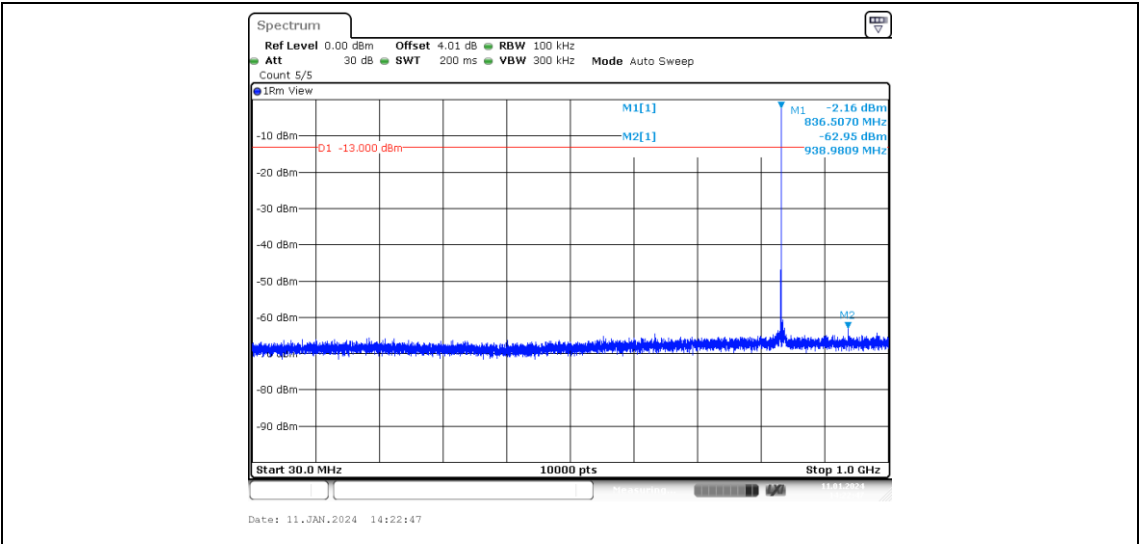
Band5-Stand-Alone-NaN-QPSK-20401-12@0-15kHz-1000-10000--50.25--13-PASS



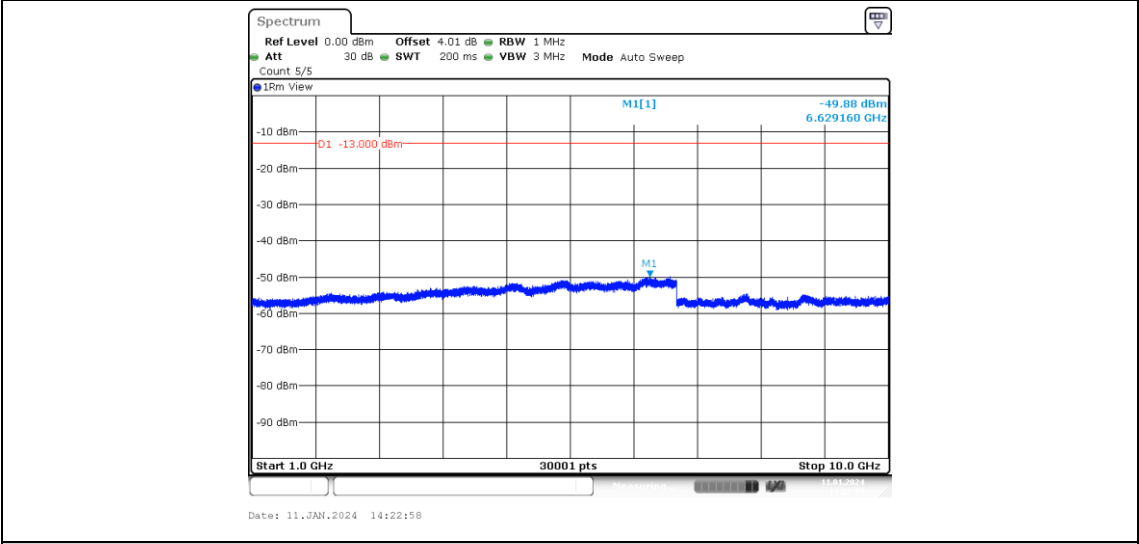
Band5-Stand-Alone-NaN-QPSK-20525-12@0-15kHz-0.009-0.15--73.67--33-PASS



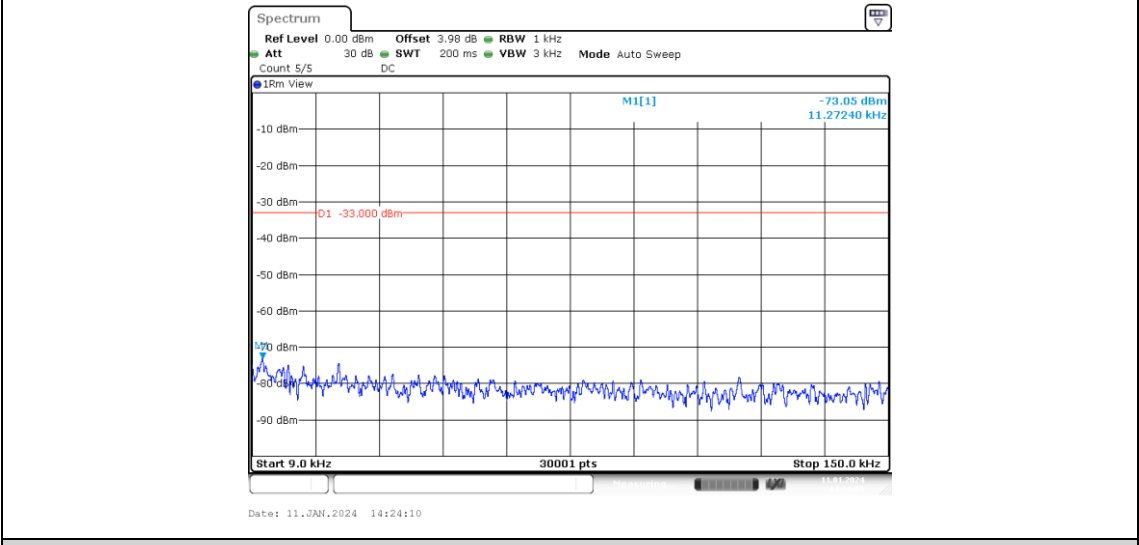
Band5-Stand-Alone-NaN-QPSK-20525-12@0-15kHz-0.15-30--74.77--23-PASS



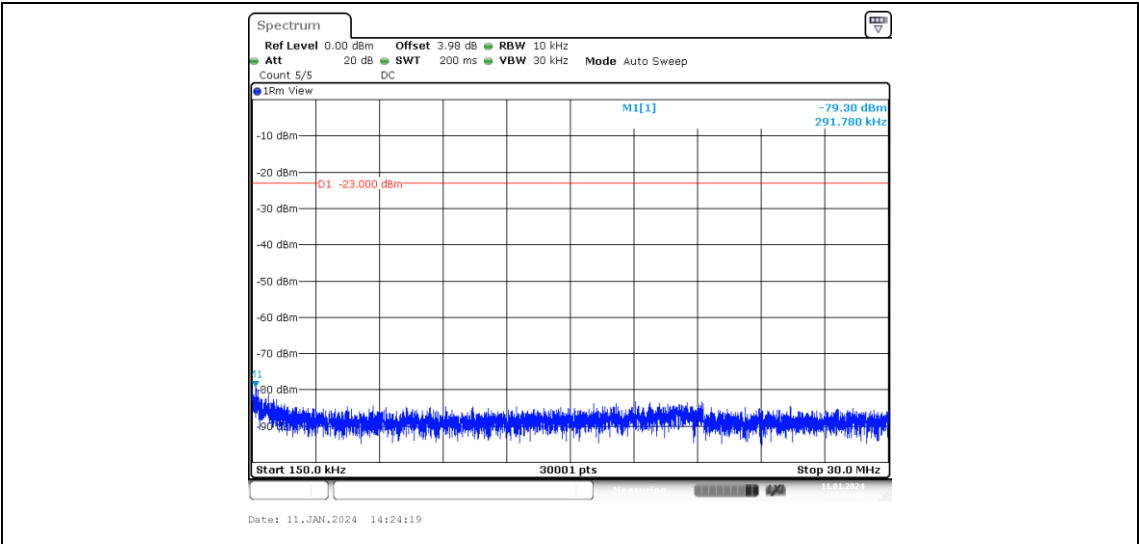
Band5-Stand-Alone-NaN-QPSK-20525-12@0-15kHz-30-1000--62.95--13-PASS



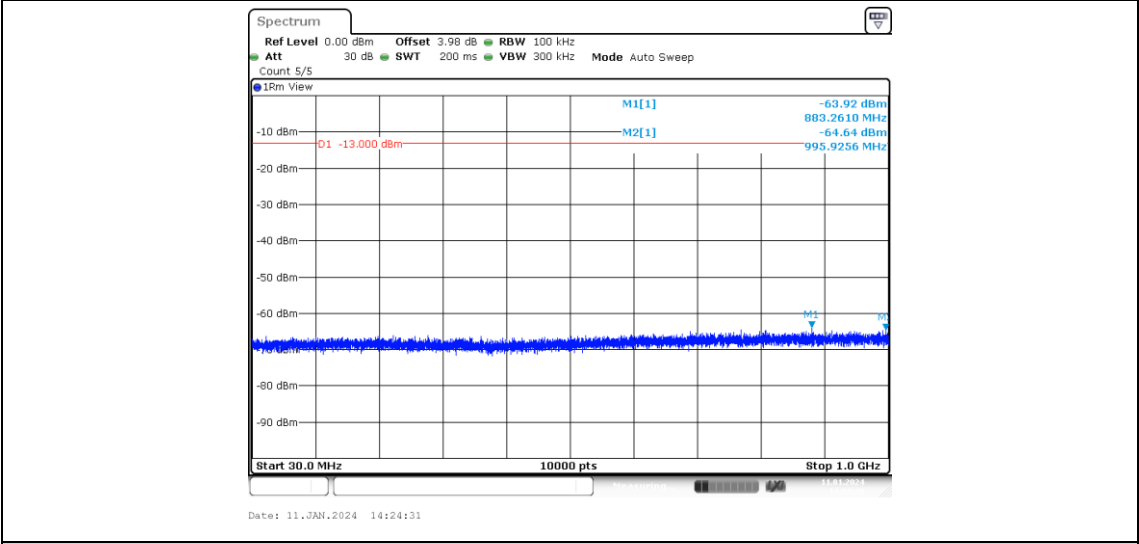
Band5-Stand-Alone-NaN-QPSK-20525-12@0-15kHz-1000-10000--49.88--13-PASS



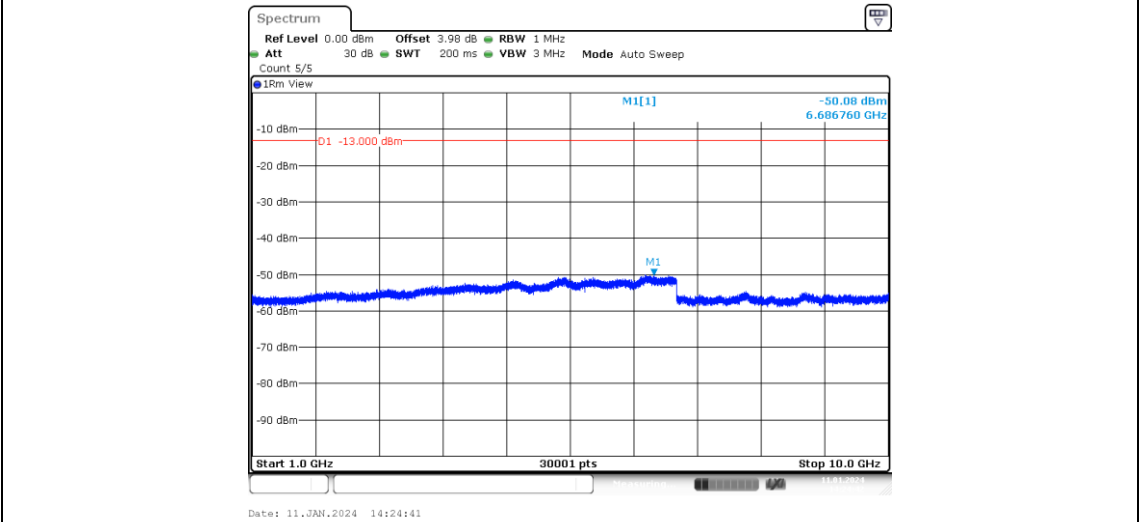
Band5-Stand-Alone-NaN-QPSK-20649-12@0-15kHz-0.009-0.15--73.05--33-PASS



Band5-Stand-Alone-NaN-QPSK-20649-12@0-15kHz-0.15-30--79.3--23-PASS



Band5-Stand-Alone-NaN-QPSK-20649-12@0-15kHz-30-1000--64.64--13-PASS



Band5-Stand-Alone-NaN-QPSK-20649-12@0-15kHz-1000-10000--50.08--13-PASS

Appendix F: Frequency Stability for NB1

Test Result

Voltage												
Band	OpMode	SCS	Bandwidth	Modulation	Channel	Tones	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band 5	Stand-Alone	3.75 kHz	NaN	QPSK	20525	1 @ 0	VH	NT	7.34	0.008775	±2.5	PASS
Band 5	Stand-Alone	3.75 kHz	NaN	QPSK	20525	1 @ 0	VL	NT	6.49	0.007759	±2.5	PASS
Band 5	Stand-Alone	3.75 kHz	NaN	QPSK	20525	1 @ 0	VN	NT	5.22	0.006240	±2.5	PASS
Band 5	Stand-Alone	3.75 kHz	NaN	QPSK	20525	1 @ 47	VH	NT	7.67	0.009169	±2.5	PASS
Band 5	Stand-Alone	3.75 kHz	NaN	QPSK	20525	1 @ 47	VL	NT	11.22	0.013413	±2.5	PASS
Band 5	Stand-Alone	3.75 kHz	NaN	QPSK	20525	1 @ 47	VN	NT	12.43	0.014860	±2.5	PASS
Band 5	Stand-Alone	15k Hz	NaN	QPSK	20525	1 @ 0	VH	NT	15.75	0.018828	±2.5	PASS
Band 5	Stand-Alone	15k Hz	NaN	QPSK	20525	1 @ 0	VL	NT	13.82	0.016521	±2.5	PASS
Band 5	Stand-Alone	15k Hz	NaN	QPSK	20525	1 @ 0	VN	NT	15.92	0.019032	±2.5	PASS
Band 5	Stand-Alone	15k Hz	NaN	QPSK	20525	1 @ 11	VH	NT	12.86	0.015374	±2.5	PASS
Band 5	Stand-Alone	15k Hz	NaN	QPSK	20525	1 @ 11	VL	NT	14.06	0.016808	±2.5	PASS
Ba	Stand-	15k	NaN	QPS	205	1	VN	NT	-14.7	-0.01	±2.	PA

nd 5	Alone	Hz		K	25	@1 1			1	7585	5	SS
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Temperature												
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band5	Stand-Alone	3.75k Hz	NaN	QPSK	20525	1 @ 0	NV	50	-6.55	-0.007830	±2.5	PASS
Band5	Stand-Alone	3.75k Hz	NaN	QPSK	20525	1 @ 0	NV	-20	10.21	0.012206	±2.5	PASS
Band5	Stand-Alone	3.75k Hz	NaN	QPSK	20525	1 @ 0	NV	-10	9.43	0.011273	±2.5	PASS
Band5	Stand-Alone	3.75k Hz	NaN	QPSK	20525	1 @ 0	NV	0	-17.02	-0.020347	±2.5	PASS
Band5	Stand-Alone	3.75k Hz	NaN	QPSK	20525	1 @ 0	NV	10	8.80	0.010520	±2.5	PASS
Band5	Stand-Alone	3.75k Hz	NaN	QPSK	20525	1 @ 0	NV	20	11.93	0.014262	±2.5	PASS
Band5	Stand-Alone	3.75k Hz	NaN	QPSK	20525	1 @ 0	NV	30	9.44	0.011285	±2.5	PASS
Band5	Stand-Alone	3.75k Hz	NaN	QPSK	20525	1 @ 0	NV	40	9.23	0.011034	±2.5	PASS
Band5	Stand-Alone	3.75k Hz	NaN	QPSK	20525	1 @ 0	NV	-30	9.91	0.011847	±2.5	PASS
Band5	Stand-Alone	3.75k Hz	NaN	QPSK	20525	1 @ 47	NV	30	8.04	0.009611	±2.5	PASS
Band5	Stand-Alone	3.75k Hz	NaN	QPSK	20525	1 @ 47	NV	20	-9.27	-0.011082	±2.5	PASS
Band5	Stand-Alone	3.75k Hz	NaN	QPSK	20525	1 @ 47	NV	10	-14.26	-0.017047	±2.5	PASS

Ba nd5	Stand- Alone	3.75k Hz	NaN	QP SK	20 52 5	1 @ 47	NV	0	12.7 6	0.015 254	±2. 5	PA SS
Ba nd5	Stand- Alone	3.75k Hz	NaN	QP SK	20 52 5	1 @ 47	NV	-10	11.8 0	0.014 106	±2. 5	PA SS
Ba nd5	Stand- Alone	3.75k Hz	NaN	QP SK	20 52 5	1 @ 47	NV	40	11.3 0	0.013 509	±2. 5	PA SS
Ba nd5	Stand- Alone	3.75k Hz	NaN	QP SK	20 52 5	1 @ 47	NV	-30	13.1 0	0.015 660	±2. 5	PA SS
Ba nd5	Stand- Alone	3.75k Hz	NaN	QP SK	20 52 5	1 @ 47	NV	50	18.7 8	0.022 451	±2. 5	PA SS
Ba nd5	Stand- Alone	3.75k Hz	NaN	QP SK	20 52 5	1 @ 47	NV	-20	-7.41	-0.00 8858	±2. 5	PA SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @ 0	NV	50	18.1 0	0.021 638	±2. 5	PA SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @ 0	NV	-20	13.6 0	0.016 258	±2. 5	PA SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @ 0	NV	-10	12.2 6	0.014 656	±2. 5	PA SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @ 0	NV	0	14.5 5	0.017 394	±2. 5	PA SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @ 0	NV	10	12.3 5	0.014 764	±2. 5	PA SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @ 0	NV	20	13.1 9	0.015 768	±2. 5	PA SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @ 0	NV	30	12.8 9	0.015 409	±2. 5	PA SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @ 0	NV	40	11.5 7	0.013 831	±2. 5	PA SS
Ba	Stand-	15kH	NaN	QP	20	1	NV	-30	-10.8	-0.01	±2.	PA

nd5	Alone	z		SK	52 5	@ 0			3	2947	5	SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @1 1	NV	40	11.6 4	0.013 915	±2. 5	PA SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @1 1	NV	30	15.4 1	0.018 422	±2. 5	PA SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @1 1	NV	20	-18.6 8	-0.02 2331	±2. 5	PA SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @1 1	NV	10	-11.0 3	-0.01 3186	±2. 5	PA SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @1 1	NV	0	14.7 1	0.017 585	±2. 5	PA SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @1 1	NV	-10	19.3 1	0.023 084	±2. 5	PA SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @1 1	NV	-30	15.9 2	0.019 032	±2. 5	PA SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @1 1	NV	50	-13.4 8	-0.01 6115	±2. 5	PA SS
Ba nd5	Stand- Alone	15kH z	NaN	QP SK	20 52 5	1 @1 1	NV	-20	15.7 4	0.018 816	±2. 5	PA SS