

APPENDIX J: TEST RESULTS OF BAND 85 FOR NB-IOT OPERATION

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APPENDIX J.1: EFFECTIVE (ISOTROPIC) RADIATED POWER OUTPUT DATA FOR NB-IOT

Test Result

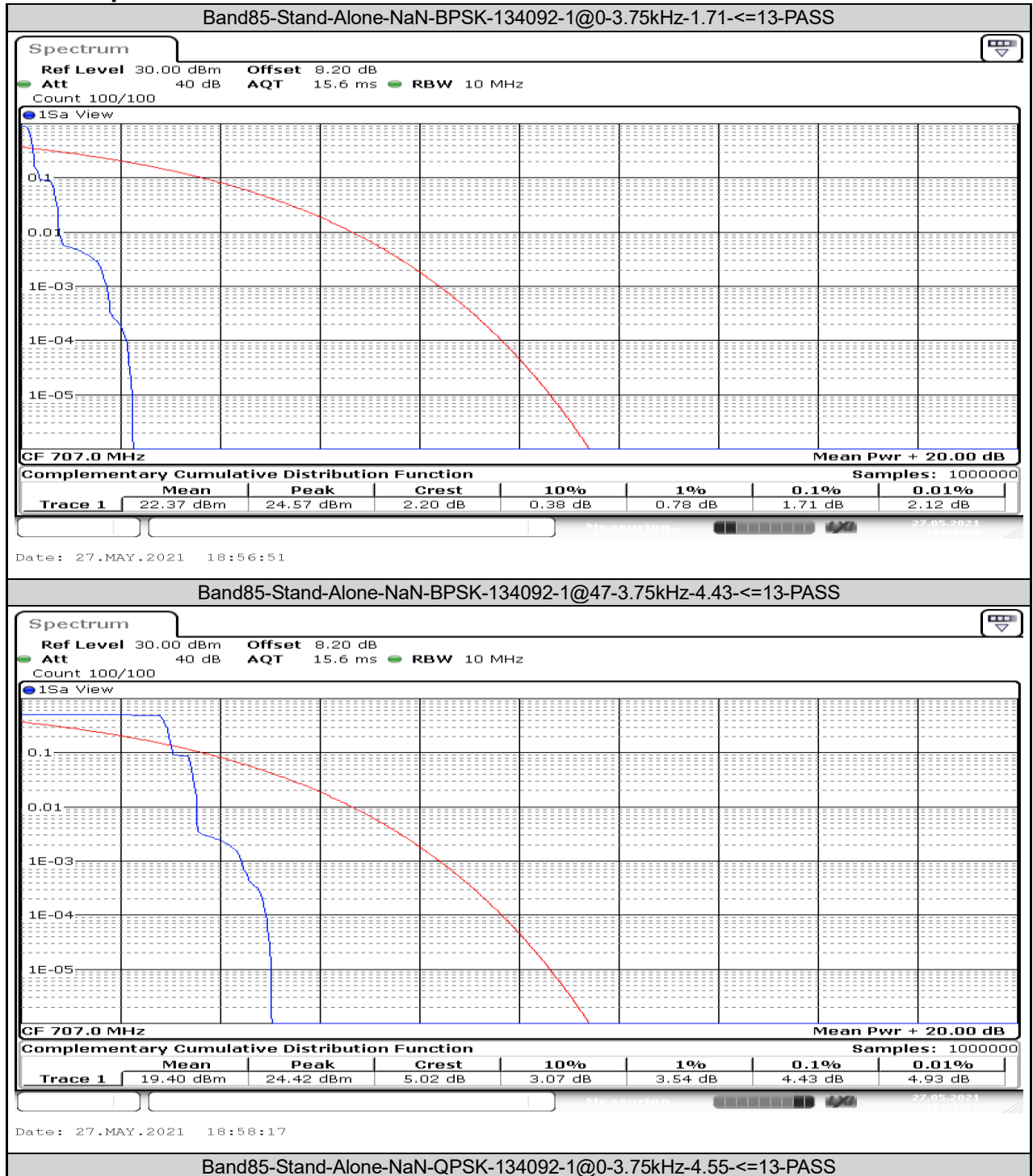
Band	OpMode	SCS	BW	Modu	Channel	Tones	Measure Result	ERP (dBm)		Limit (watts)	Verdict
							(dBm)	dBm	Watts		
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134003	1@0	6.5	6.49	0.004	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134003	1@47	6.51	6.50	0.004	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134004	1@0	22.93	22.92	0.196	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134004	1@47	22.87	22.86	0.193	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134092	1@0	23.07	23.06	0.202	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134092	1@47	23	22.99	0.199	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134180	1@0	22.93	22.92	0.196	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134180	1@47	22.85	22.84	0.192	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134181	1@0	6.57	6.56	0.005	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134181	1@47	6.52	6.51	0.004	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134003	1@0	6.6	6.59	0.005	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134003	1@47	6.5	6.49	0.004	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134004	1@0	23.04	23.03	0.201	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134004	1@47	22.89	22.88	0.194	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	23.13	23.12	0.205	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	23.1	23.09	0.204	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134180	1@0	23.06	23.05	0.202	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134180	1@47	22.97	22.96	0.198	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134181	1@0	6.67	6.66	0.005	3	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134181	1@47	6.61	6.60	0.005	3	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134003	1@0	6.55	6.54	0.005	3	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134003	1@11	6.48	6.47	0.004	3	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134003	3@3	6.53	6.52	0.004	3	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134004	1@0	21.05	21.04	0.127	3	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134004	1@11	21.01	21.00	0.126	3	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134004	3@3	23.36	23.35	0.216	3	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134092	1@0	21.15	21.14	0.130	3	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134092	1@11	21.04	21.03	0.127	3	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134092	3@3	23.39	23.38	0.218	3	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134180	1@0	22.82	22.81	0.191	3	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134180	1@11	22.87	22.86	0.193	3	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134180	3@3	23.32	23.31	0.214	3	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134181	1@0	6.59	6.58	0.005	3	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134181	1@11	6.48	6.47	0.004	3	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134181	3@3	6.66	6.65	0.005	3	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134003	1@0	6.65	6.64	0.005	3	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134003	1@11	6.59	6.58	0.005	3	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134003	3@3	6.54	6.53	0.004	3	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134004	1@0	21.31	21.30	0.135	3	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134004	1@11	21.24	21.23	0.133	3	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134004	3@3	23.47	23.46	0.222	3	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	21.33	21.32	0.136	3	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	21.25	21.24	0.133	3	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	3@3	23.39	23.38	0.218	3	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134180	1@0	23.09	23.08	0.203	3	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134180	1@11	23.06	23.05	0.202	3	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134180	3@3	23.33	23.32	0.215	3	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134181	1@0	6.72	6.71	0.005	3	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134181	1@11	6.63	6.62	0.005	3	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134181	3@3	6.67	6.66	0.005	3	PASS

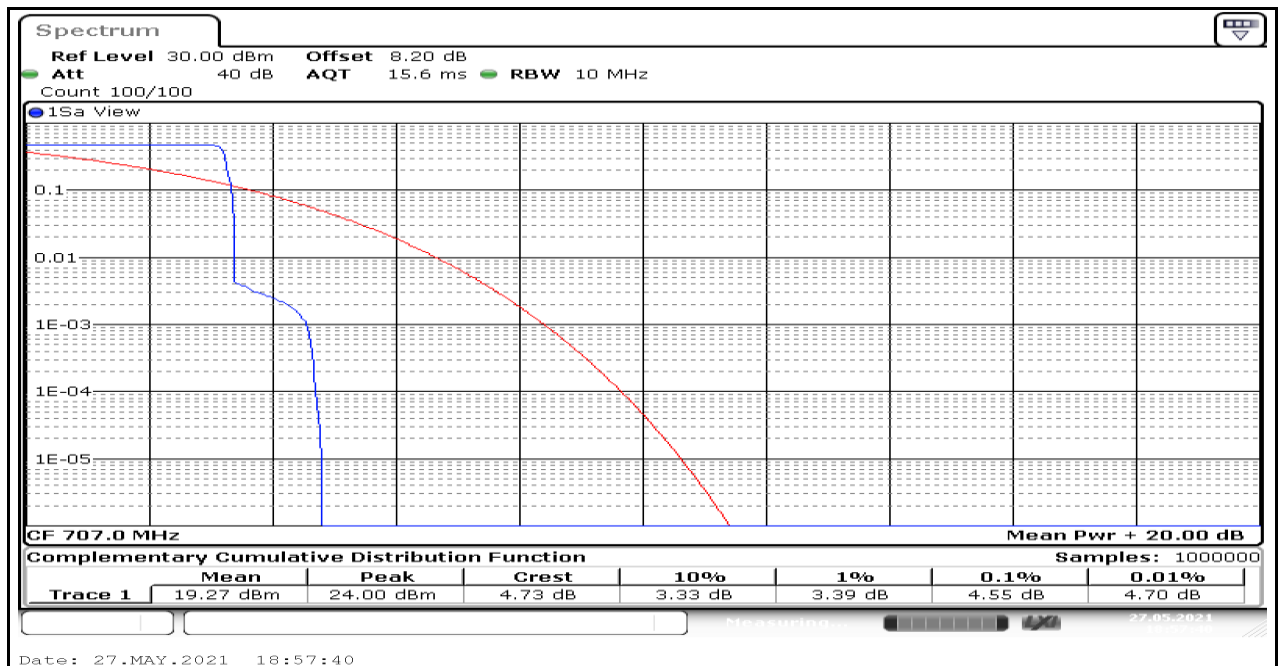
APPENDIX J.2: PEAK-TO-AVERAGE RATIO (CCDF) FOR NB-IOT

Test Result

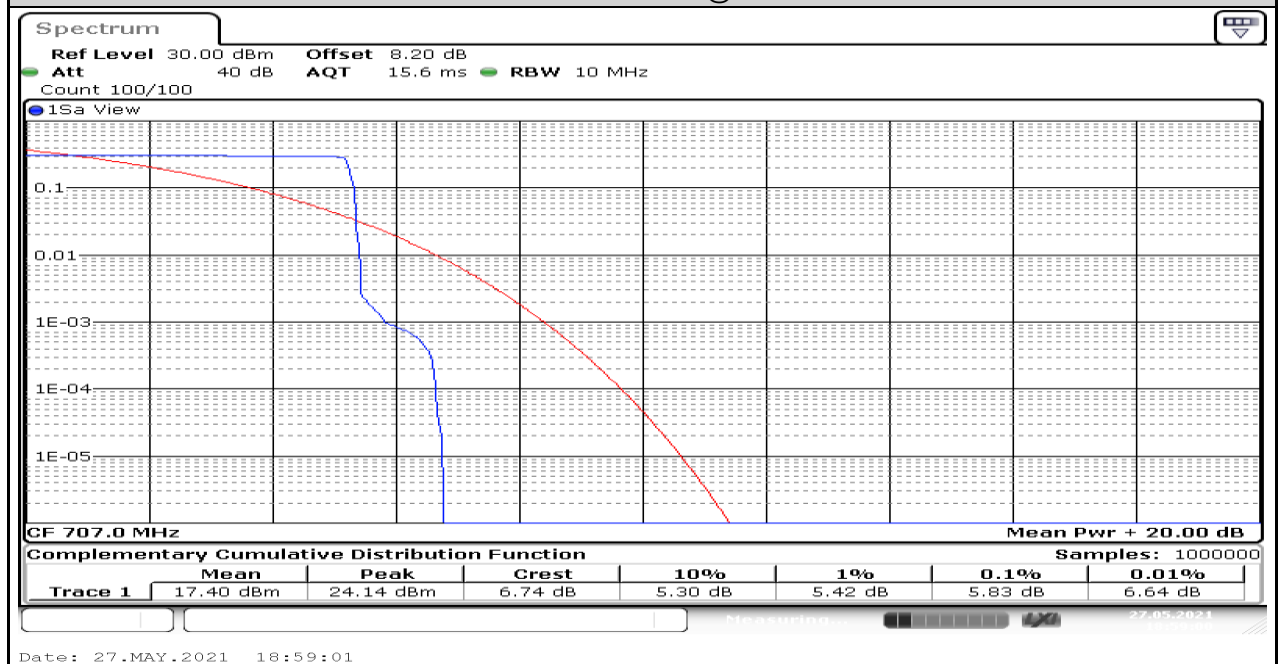
Band	OpMode	SCS	BW	Modu	Channel	Tones	Result (dB)	Limit (dB)	Verdict
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134092	1@0	1.71	<=13	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134092	1@47	4.43	<=13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	4.55	<=13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	5.83	<=13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134092	1@0	8.46	<=13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134092	1@11	7.22	<=13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134092	3@3	11.13	<=13	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	4.29	<=13	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	6.38	<=13	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	3@3	11.13	<=13	PASS

Test Graphs

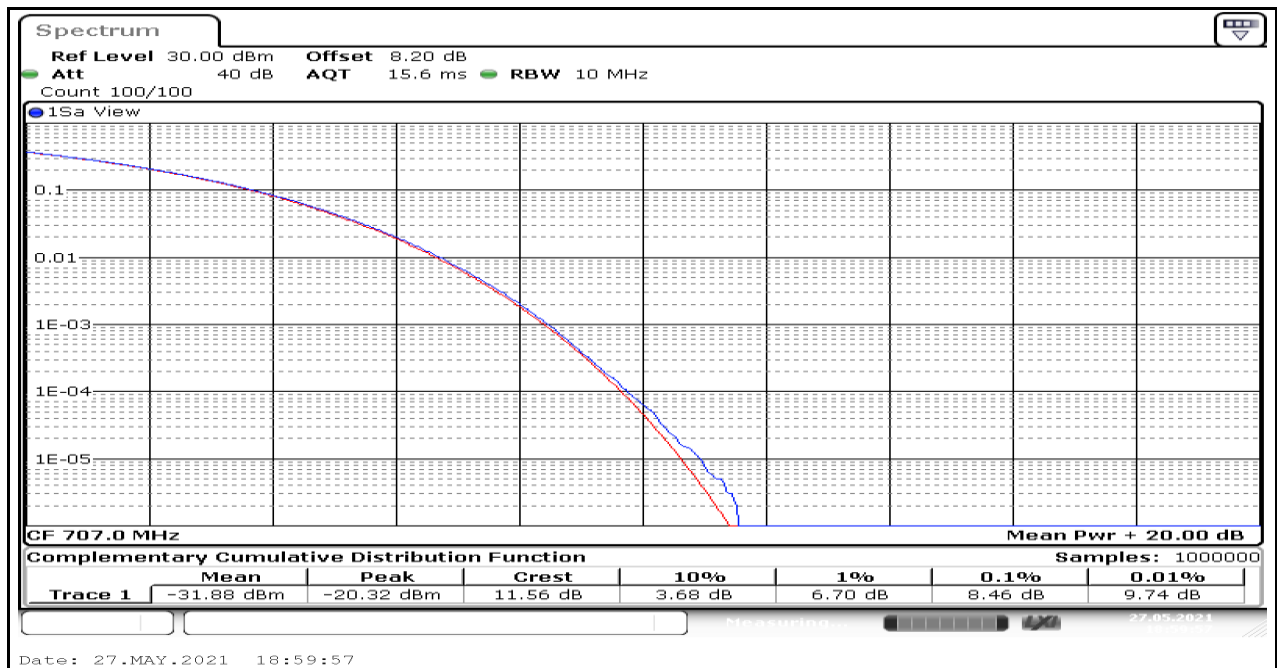




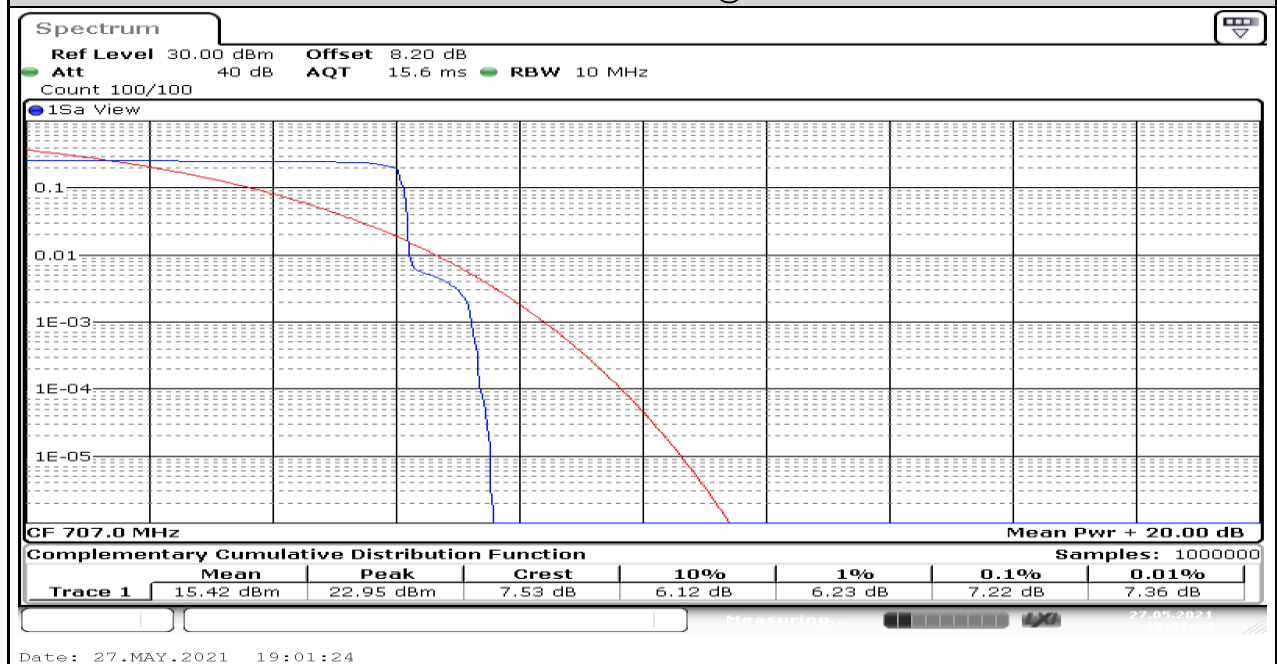
Band85-Stand-Alone-NaN-QPSK-134092-1@47-3.75kHz-5.83-<=13-PASS



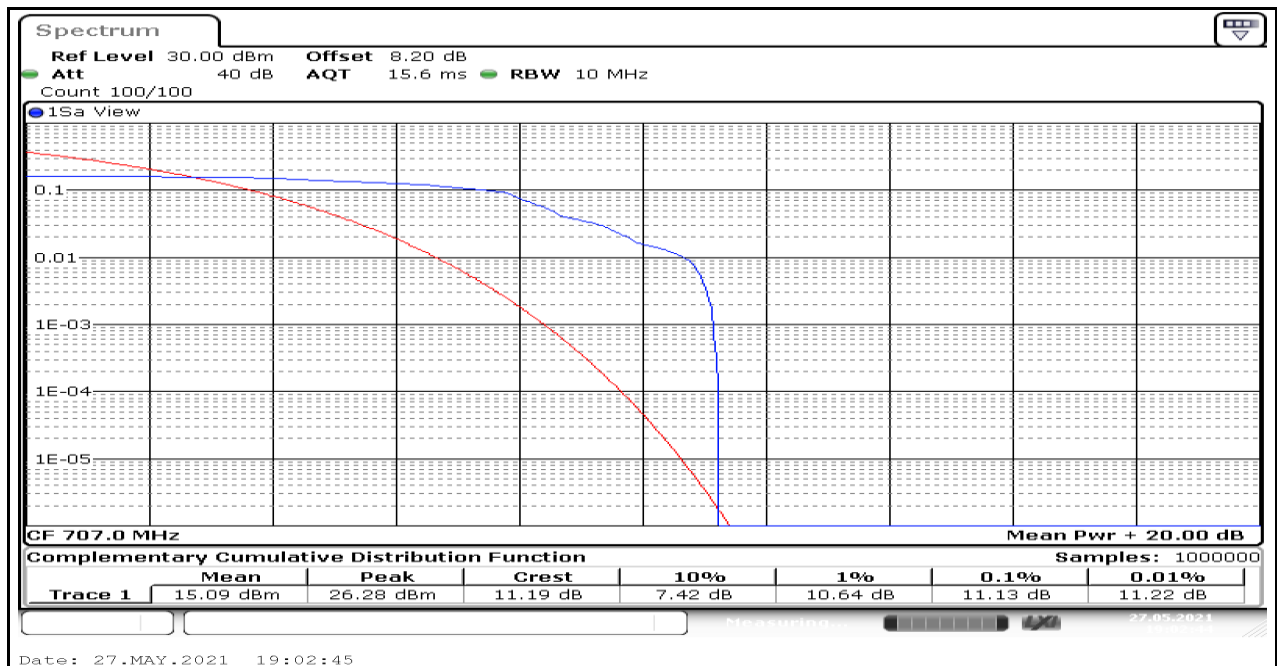
Band85-Stand-Alone-NaN-BPSK-134092-1@0-15kHz-8.46-<=13-PASS



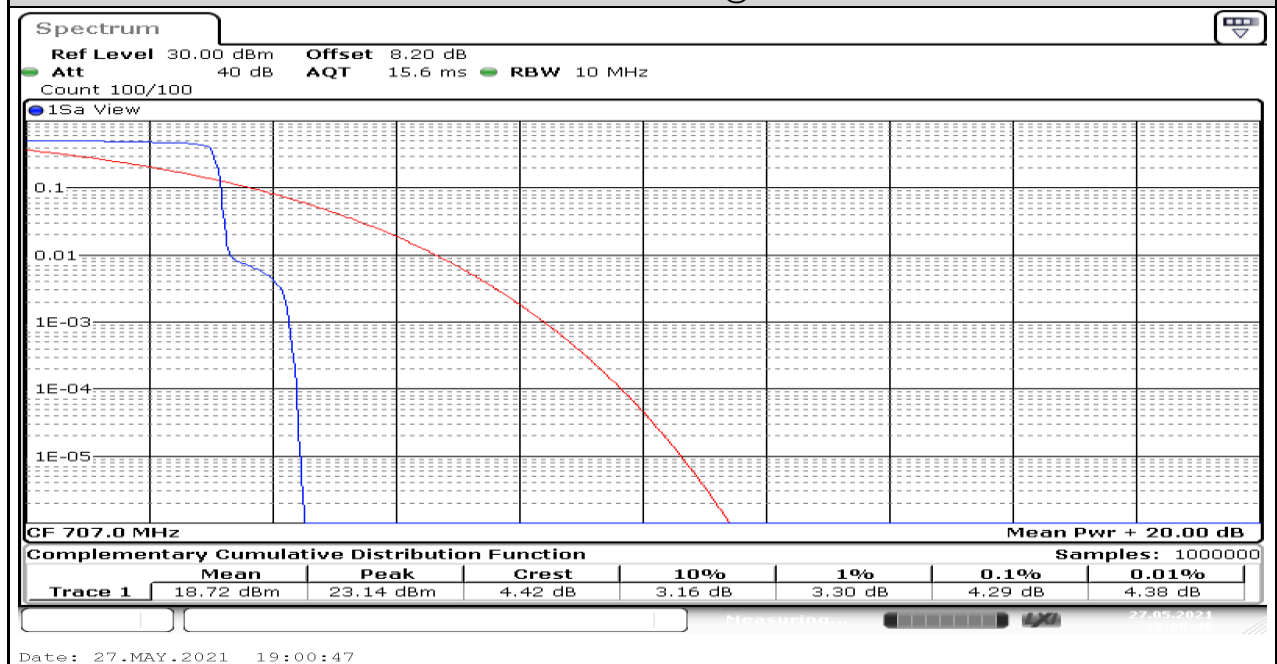
Band85-Stand-Alone-NaN-BPSK-134092-1@11-15kHz-7.22-<=13-PASS



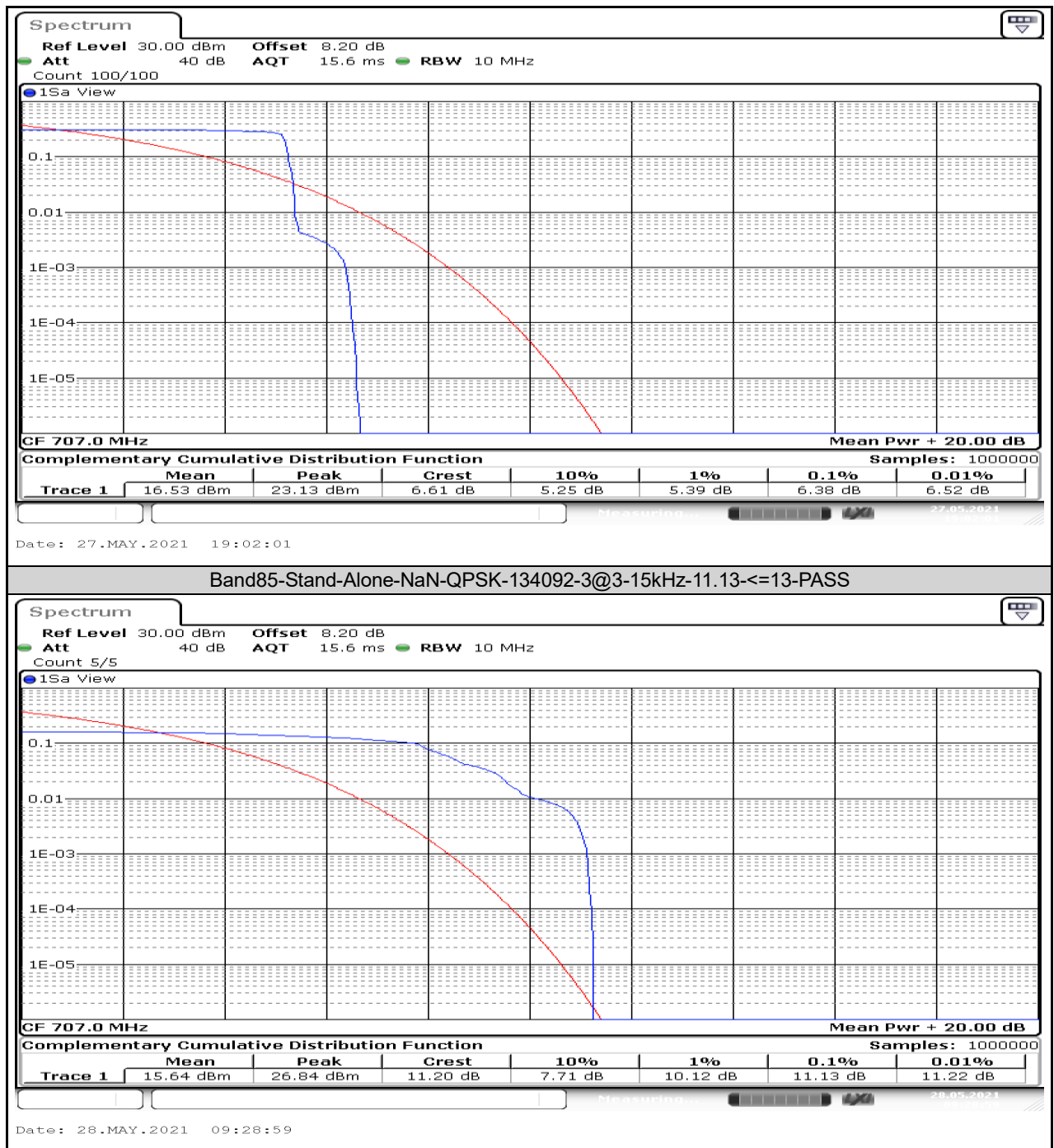
Band85-Stand-Alone-NaN-BPSK-134092-3@3-15kHz-11.13-<=13-PASS



Band85-Stand-Alone-NaN-QPSK-134092-1@0-15kHz-4.29-<=13-PASS



Band85-Stand-Alone-NaN-QPSK-134092-1@11-15kHz-6.38-<=13-PASS

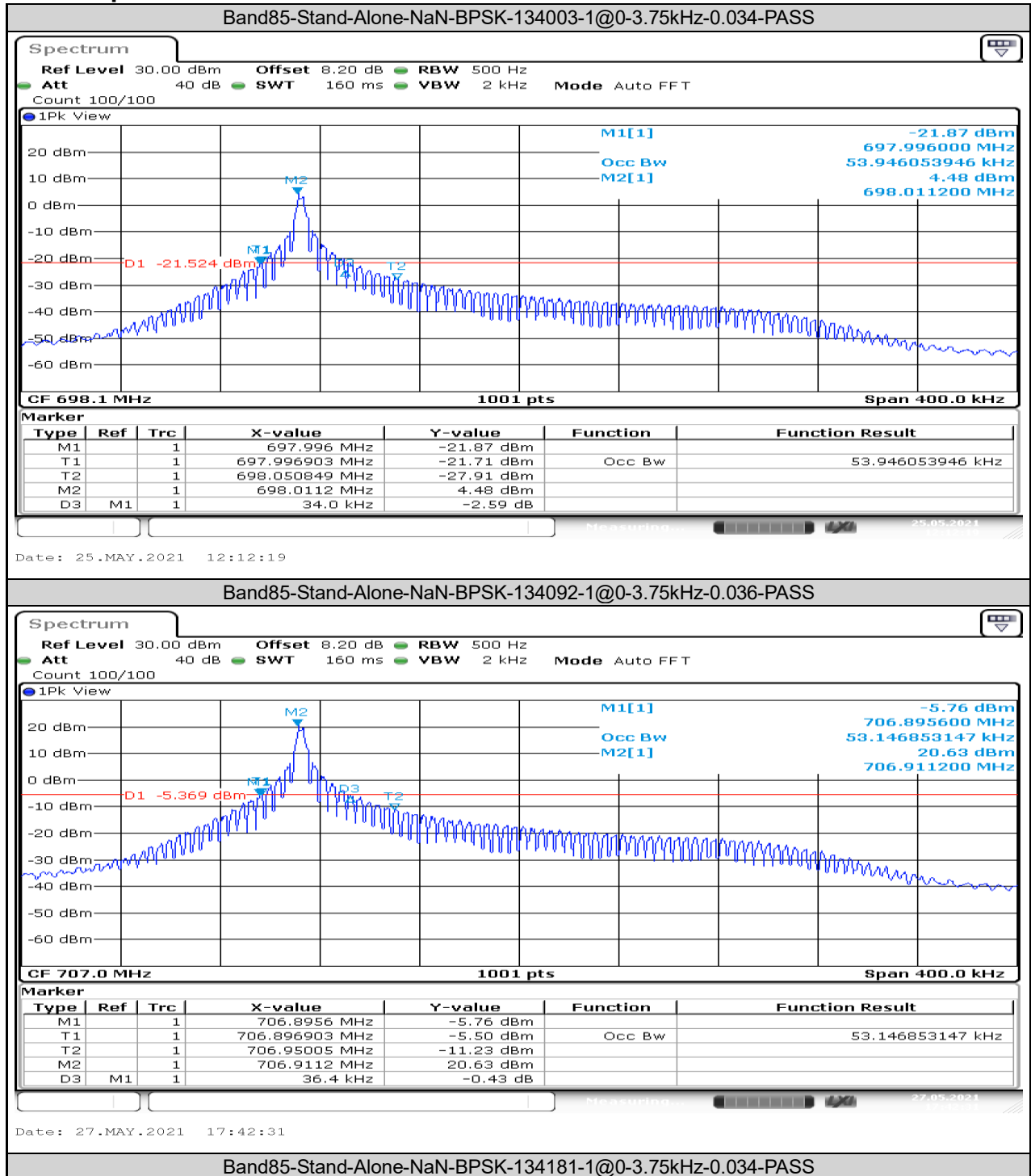


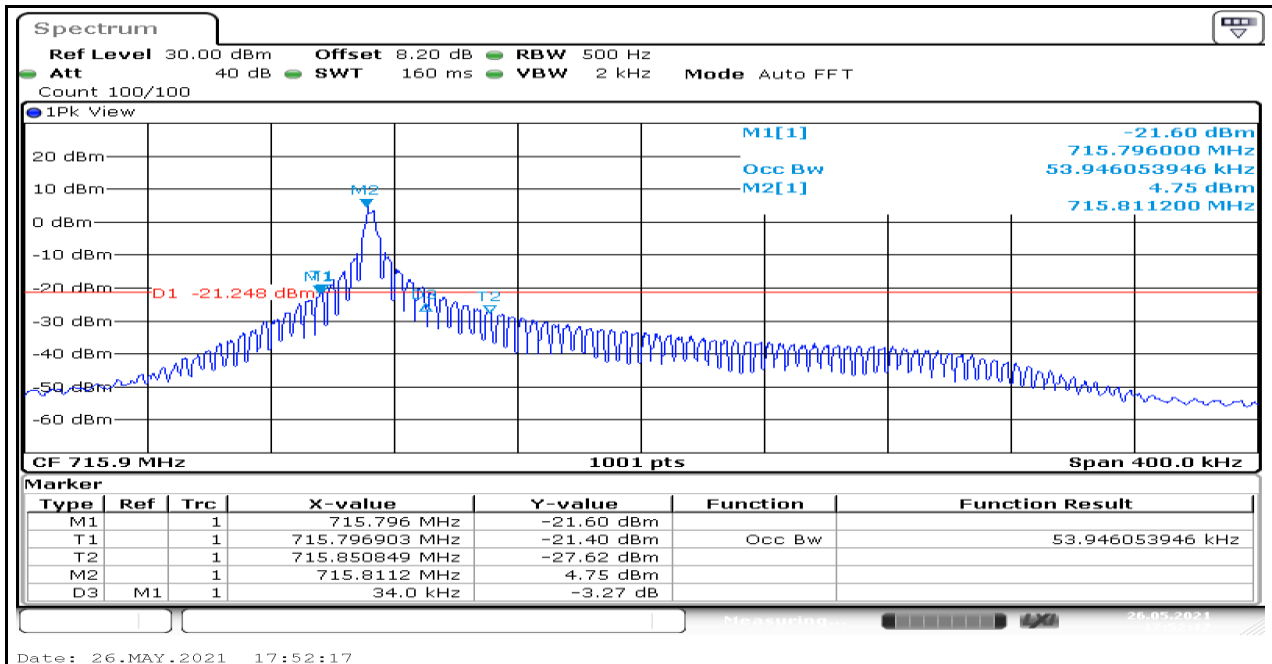
APPENDIX J.3: EMISSION BANDWIDTH FOR NB-IOT

Test Result

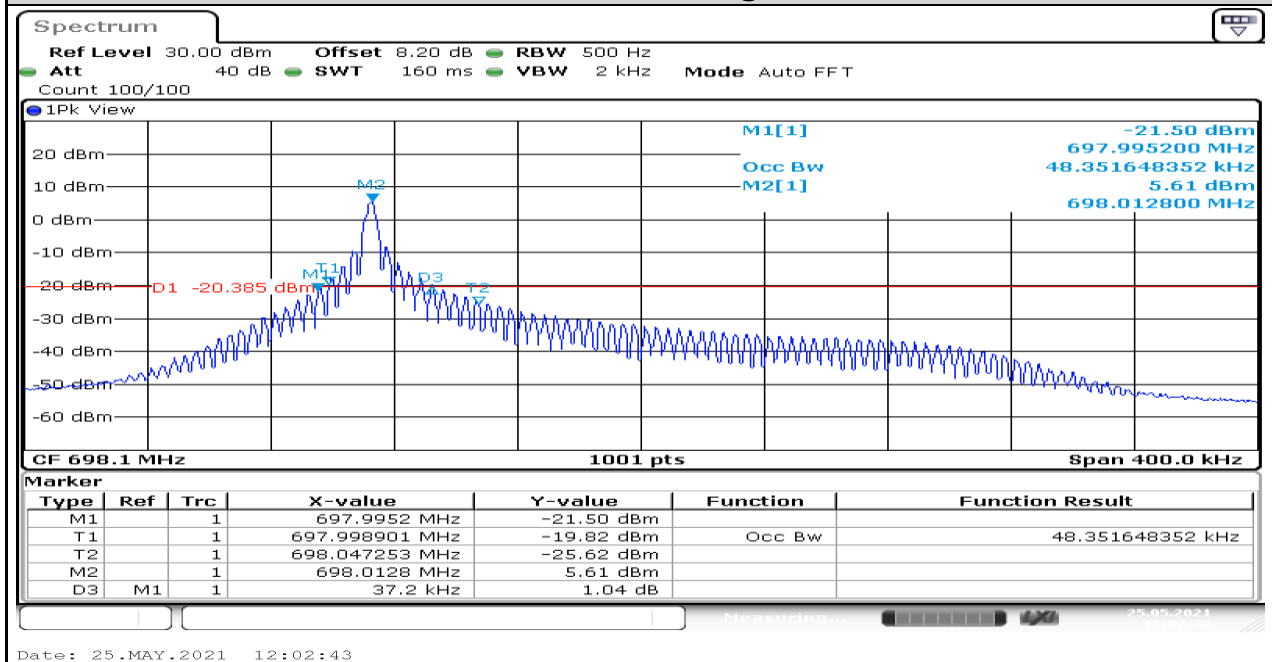
Band	OpMode	SCS	BW	Modu	Channel	Tones	Result (MHz)		Verdict
							26dB	99%	
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134003	1@0	0.034	0.054	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134092	1@0	0.036	0.053	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134181	1@0	0.034	0.054	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134003	1@0	0.037	0.048	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	0.034	0.049	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134181	1@0	0.037	0.048	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134003	1@0	0.106	0.127	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134092	1@0	0.106	0.124	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134181	1@0	0.106	0.127	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134003	1@0	0.117	0.119	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134003	12@0	0.250	0.184	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	0.117	0.119	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	12@0	0.250	0.184	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134181	1@0	0.117	0.119	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134181	12@0	0.250	0.184	PASS

Test Graphs

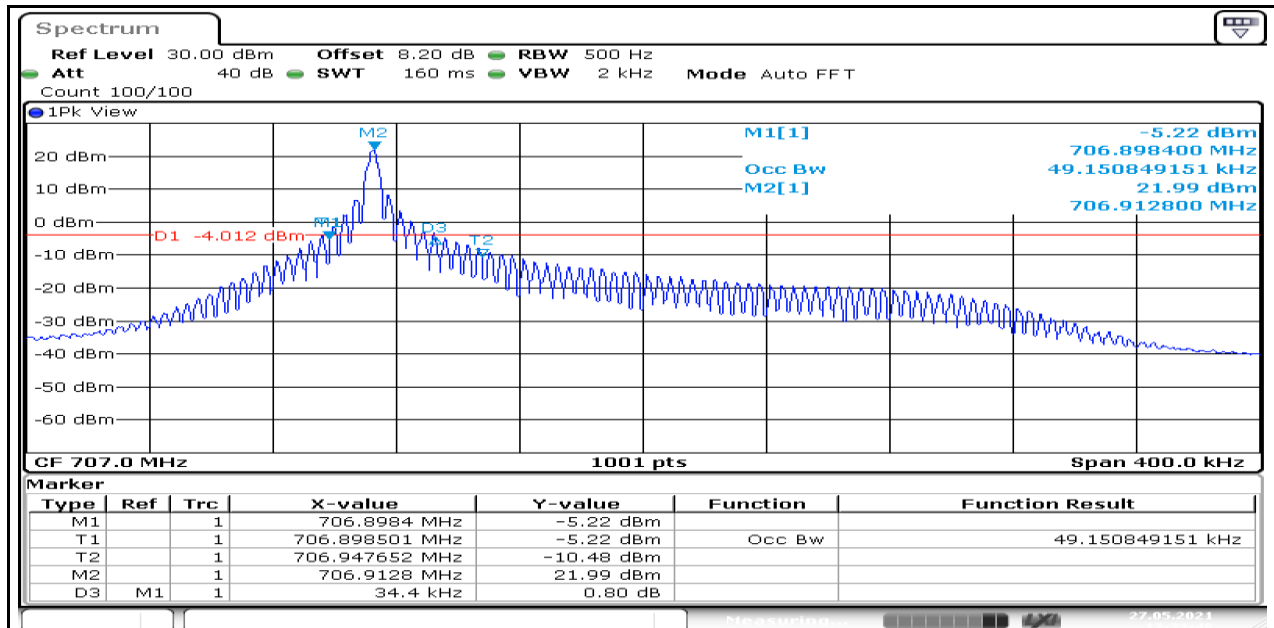




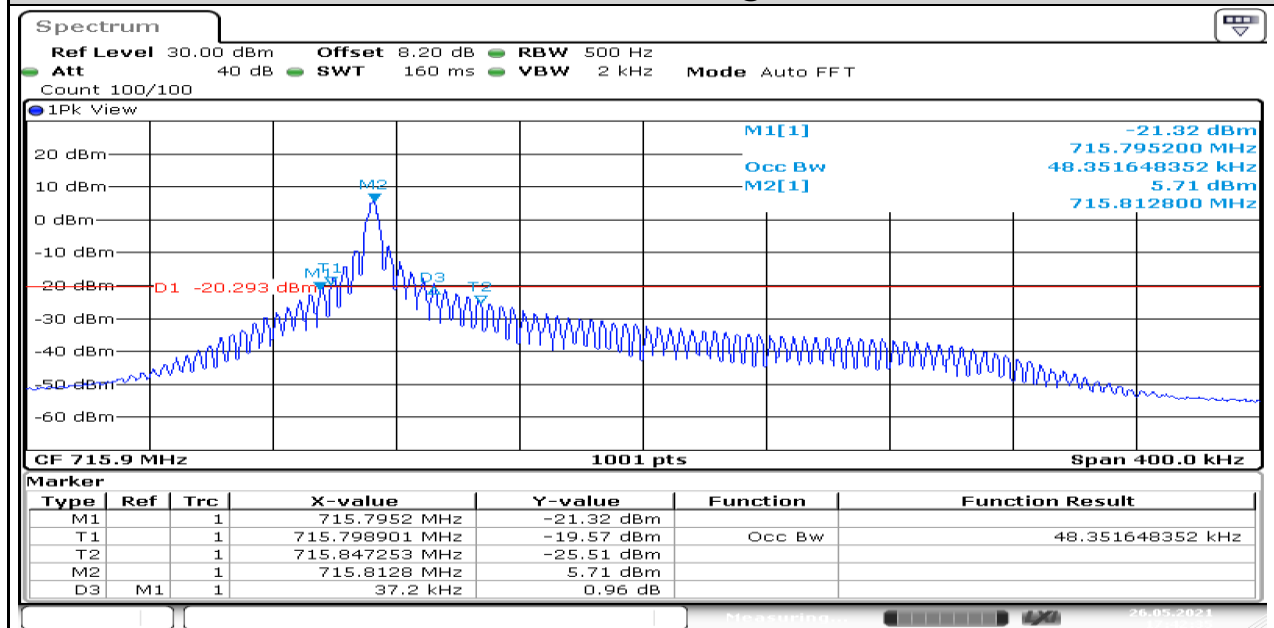
Band85-Stand-Alone-Na-N-QPSK-134003-1@0-3.75kHz-0.037-PASS



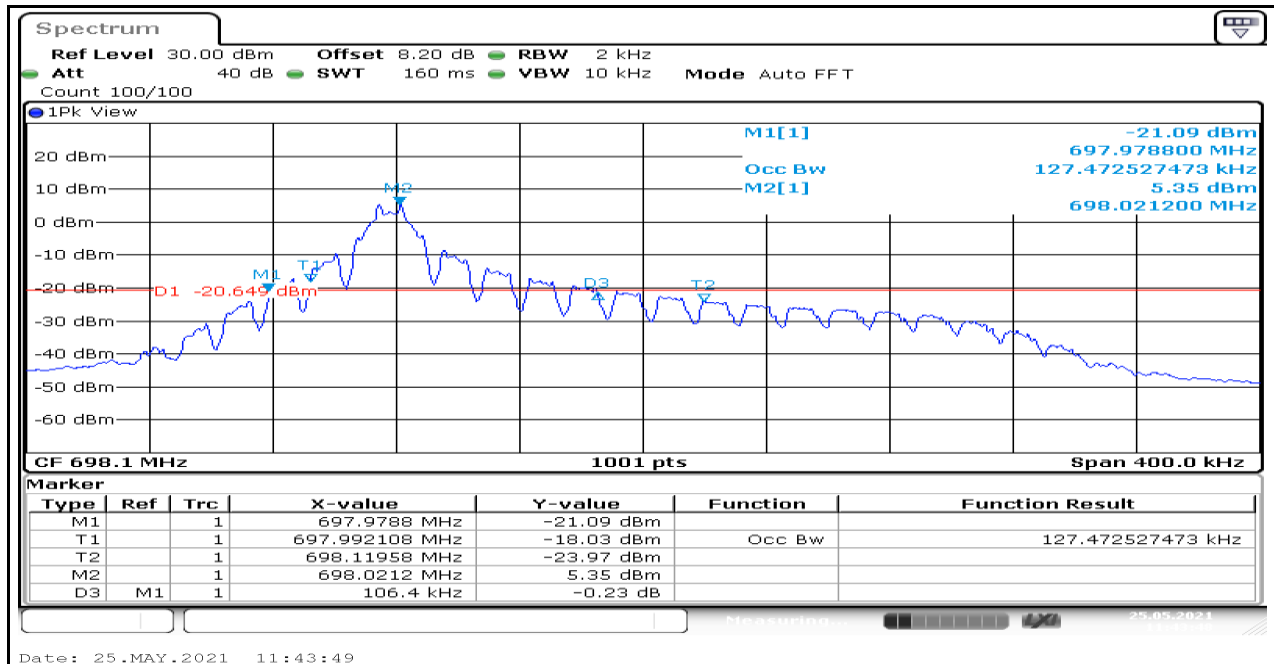
Band85-Stand-Alone-Na-N-QPSK-134092-1@0-3.75kHz-0.034-PASS



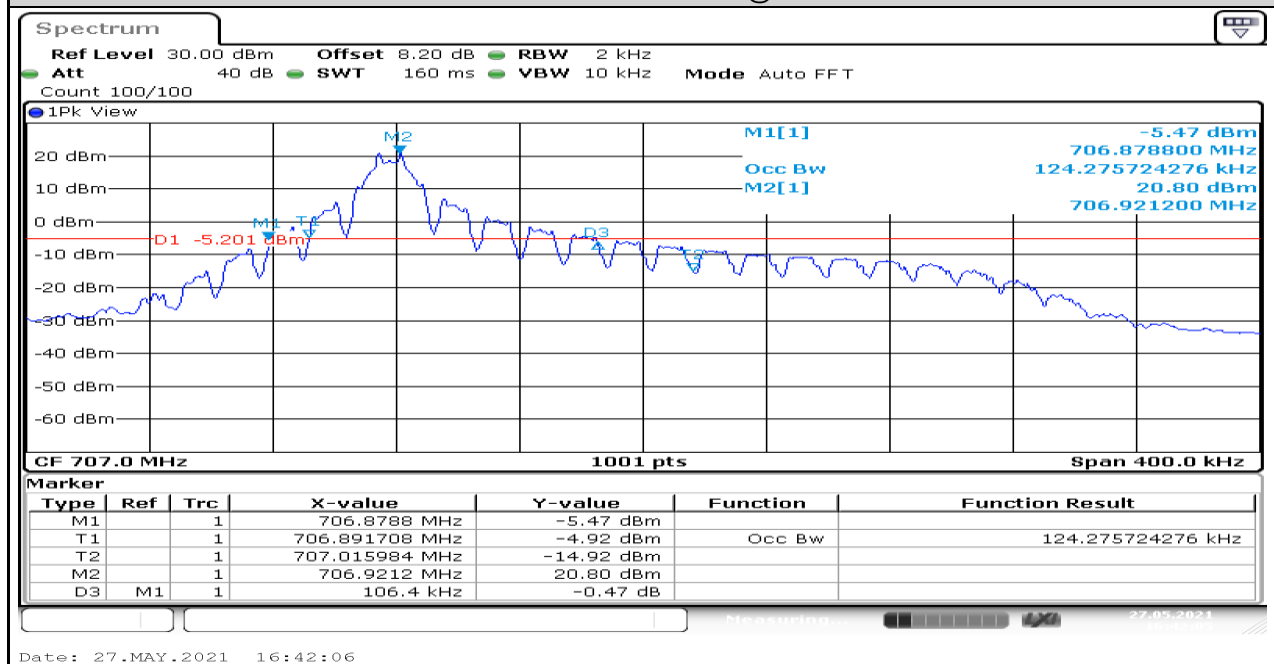
Band85-Stand-Alone-NaN-QPSK-134181-1@0-3.75kHz-0.037-PASS



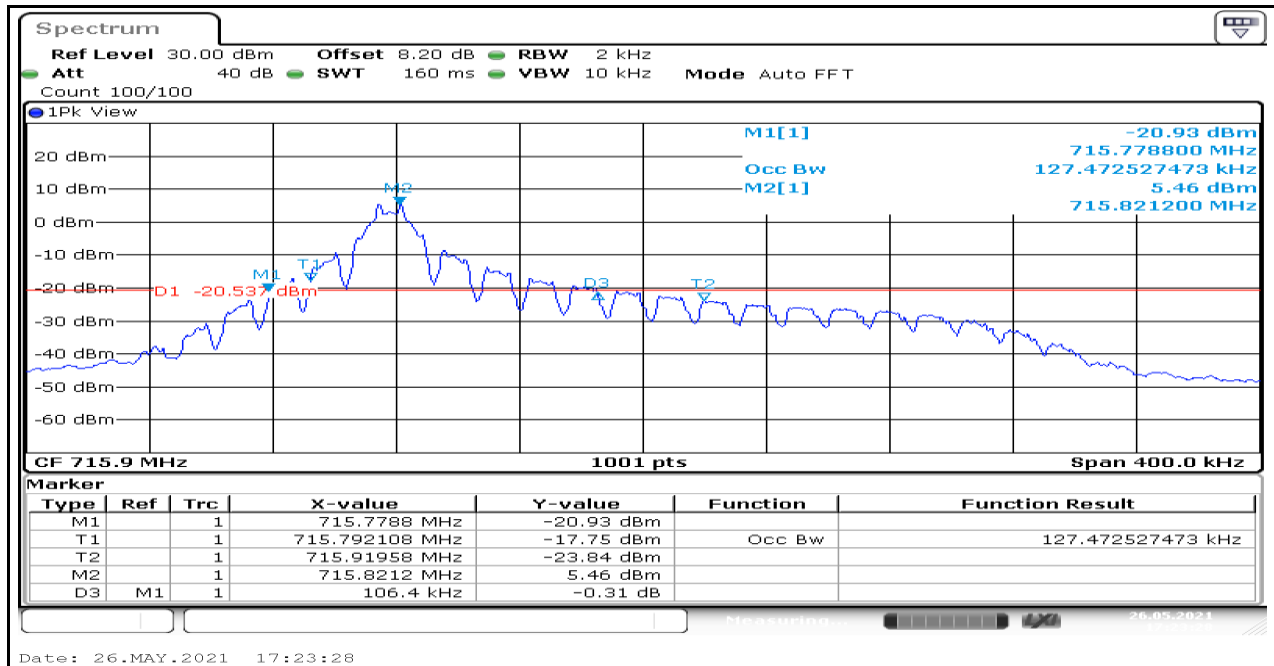
Band85-Stand-Alone-NaN-BPSK-134003-1@0-15kHz-0.106-PASS



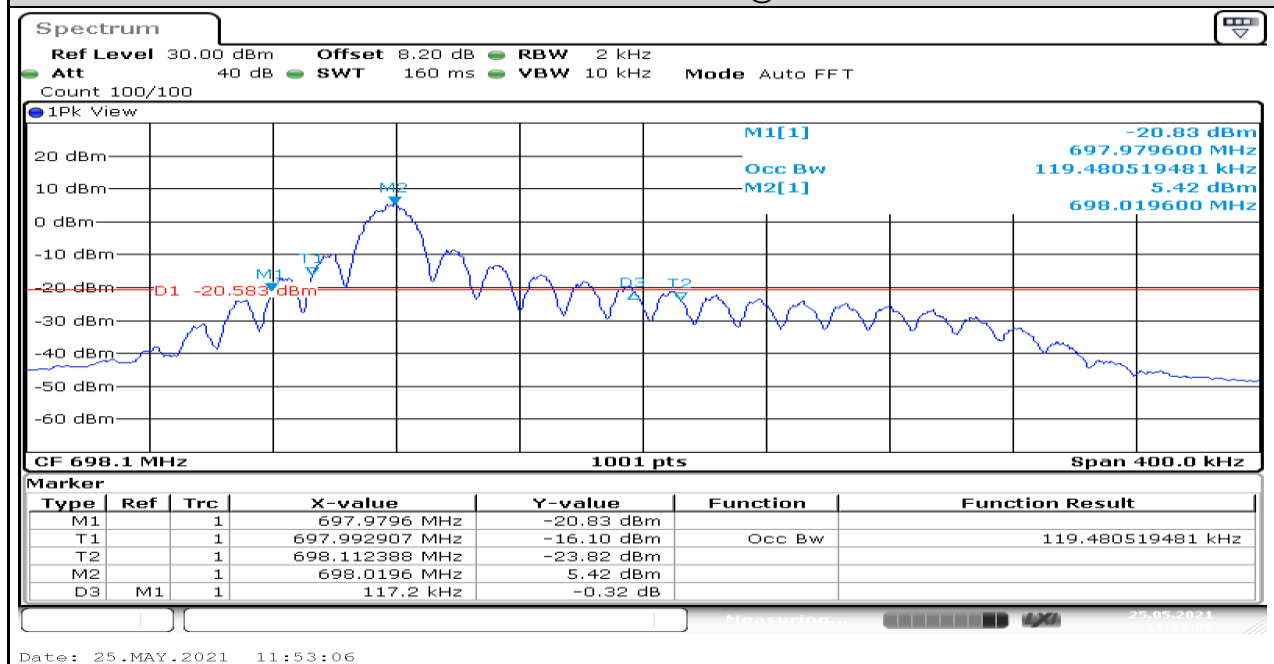
Band85-Stand-Alone-NaN-BPSK-134092-1@0-15kHz-0.106-PASS



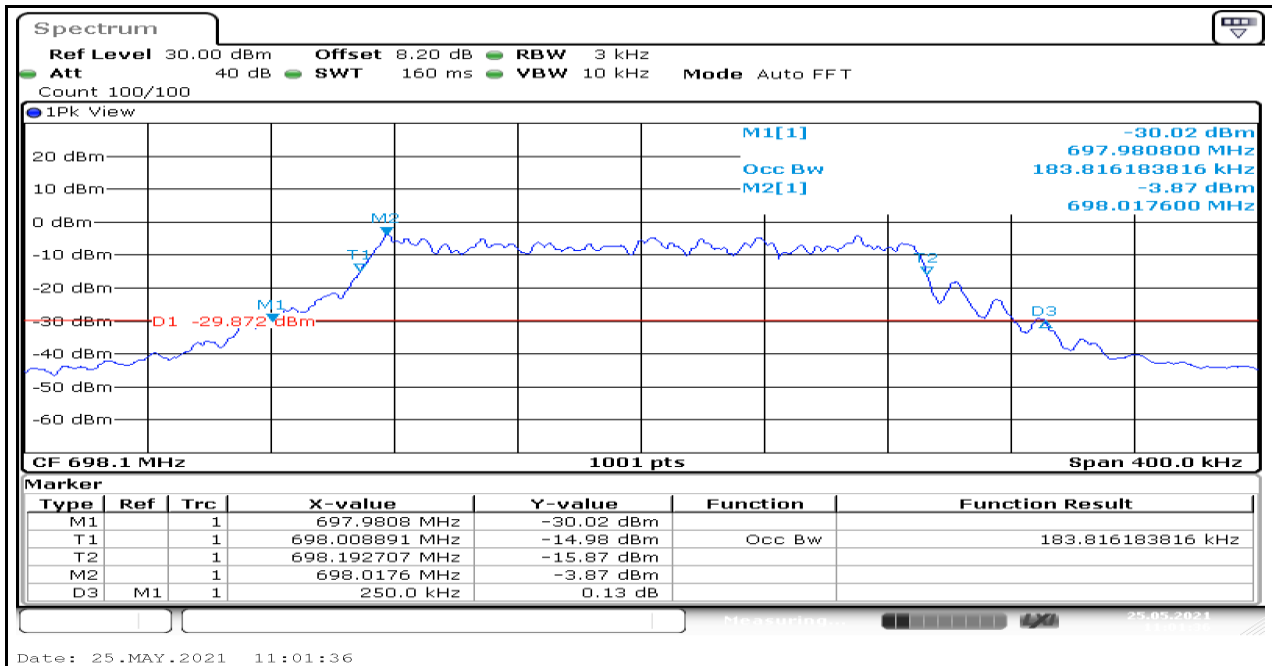
Band85-Stand-Alone-NaN-BPSK-134181-1@0-15kHz-0.106-PASS



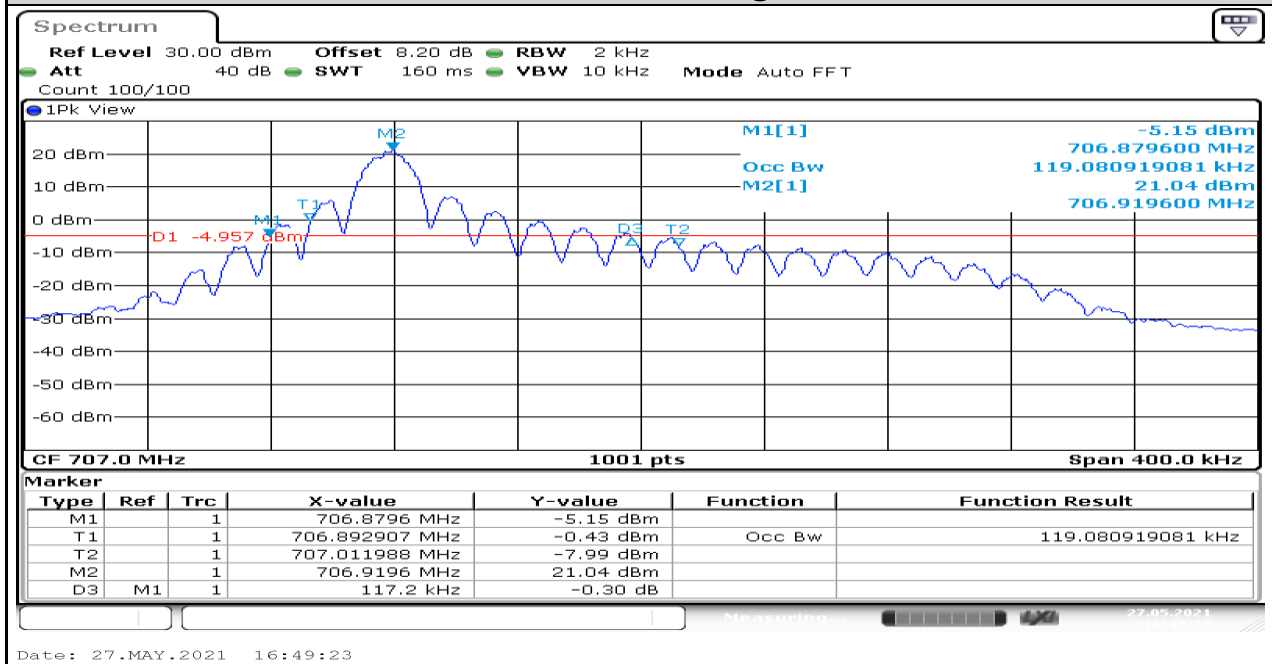
Band85-Stand-Alone-NaN-QPSK-134003-1@0-15kHz-0.117-PASS



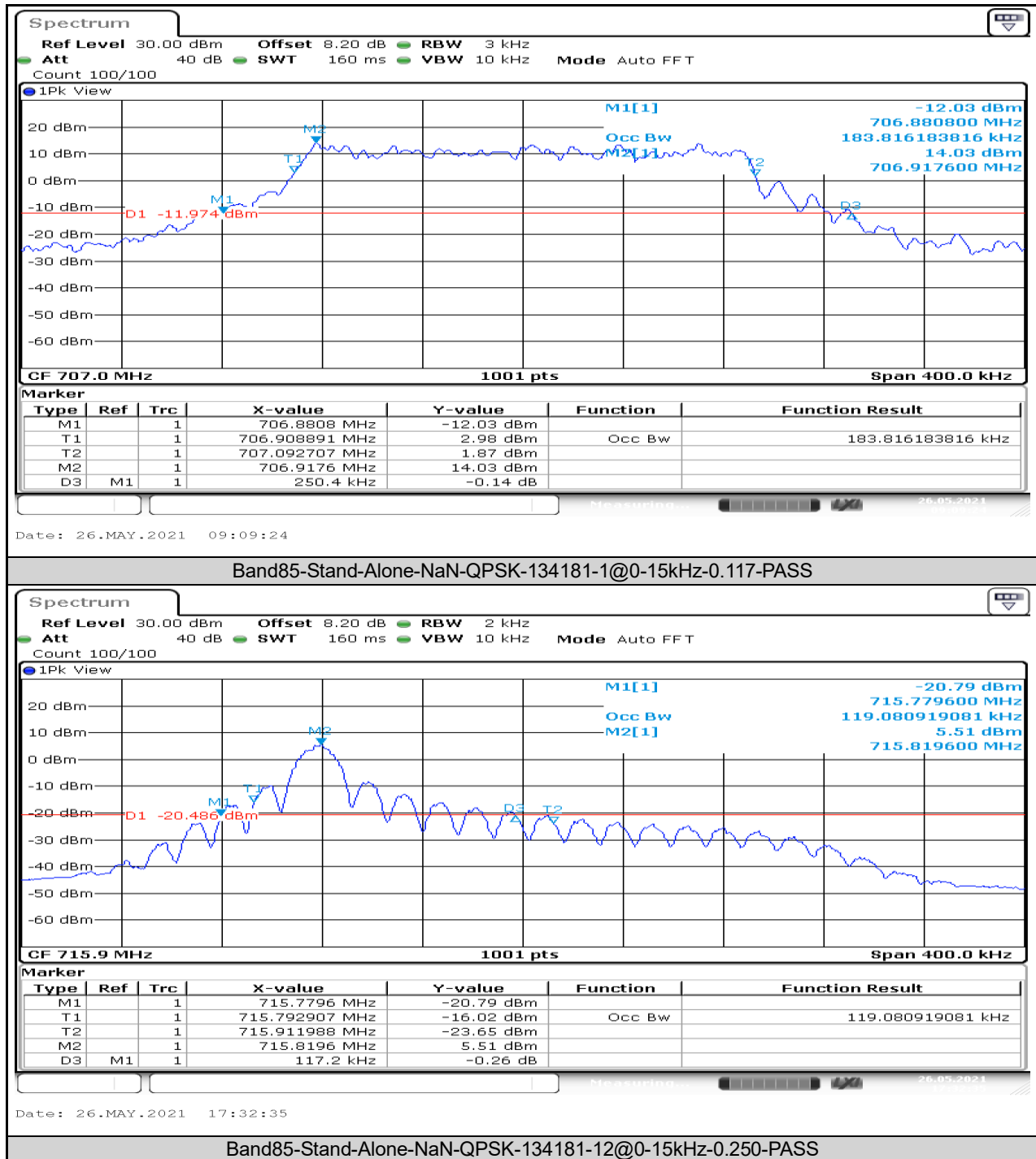
Band85-Stand-Alone-NaN-QPSK-134003-12@0-15kHz-0.250-PASS

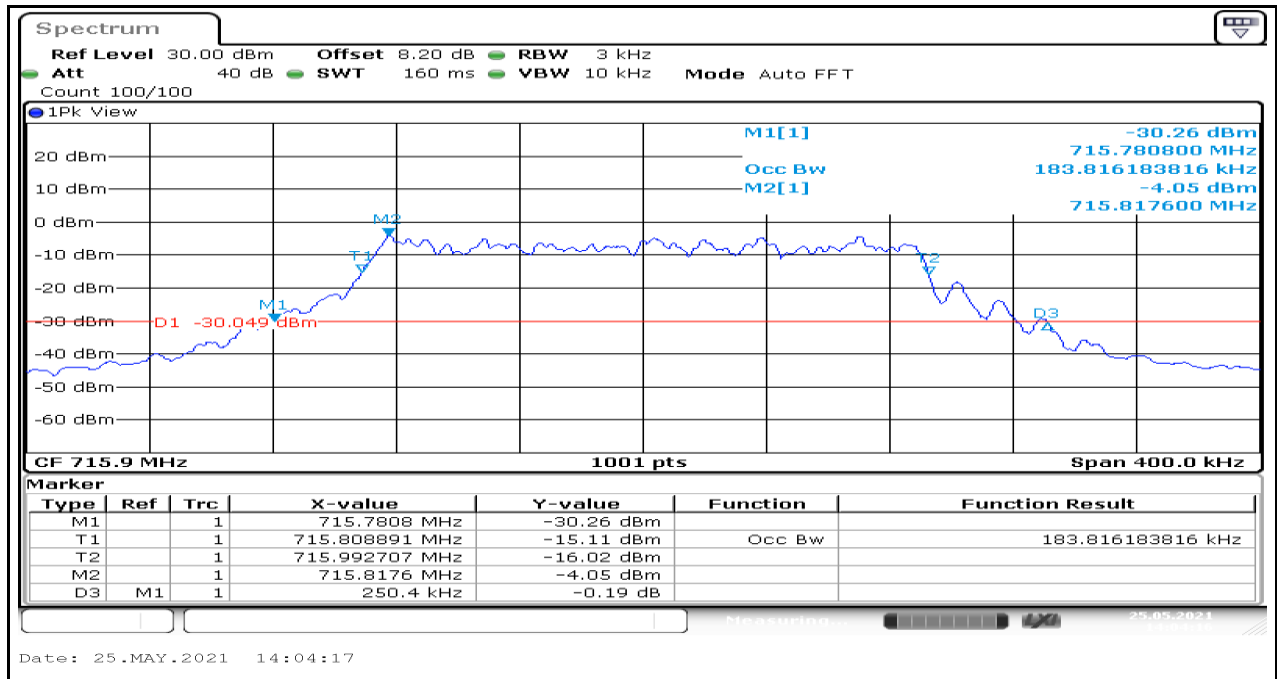


Band85-Stand-Alone-NaN-QPSK-134092-1@0-15kHz-0.117-PASS



Band85-Stand-Alone-NaN-QPSK-134092-12@0-15kHz-0.250-PASS



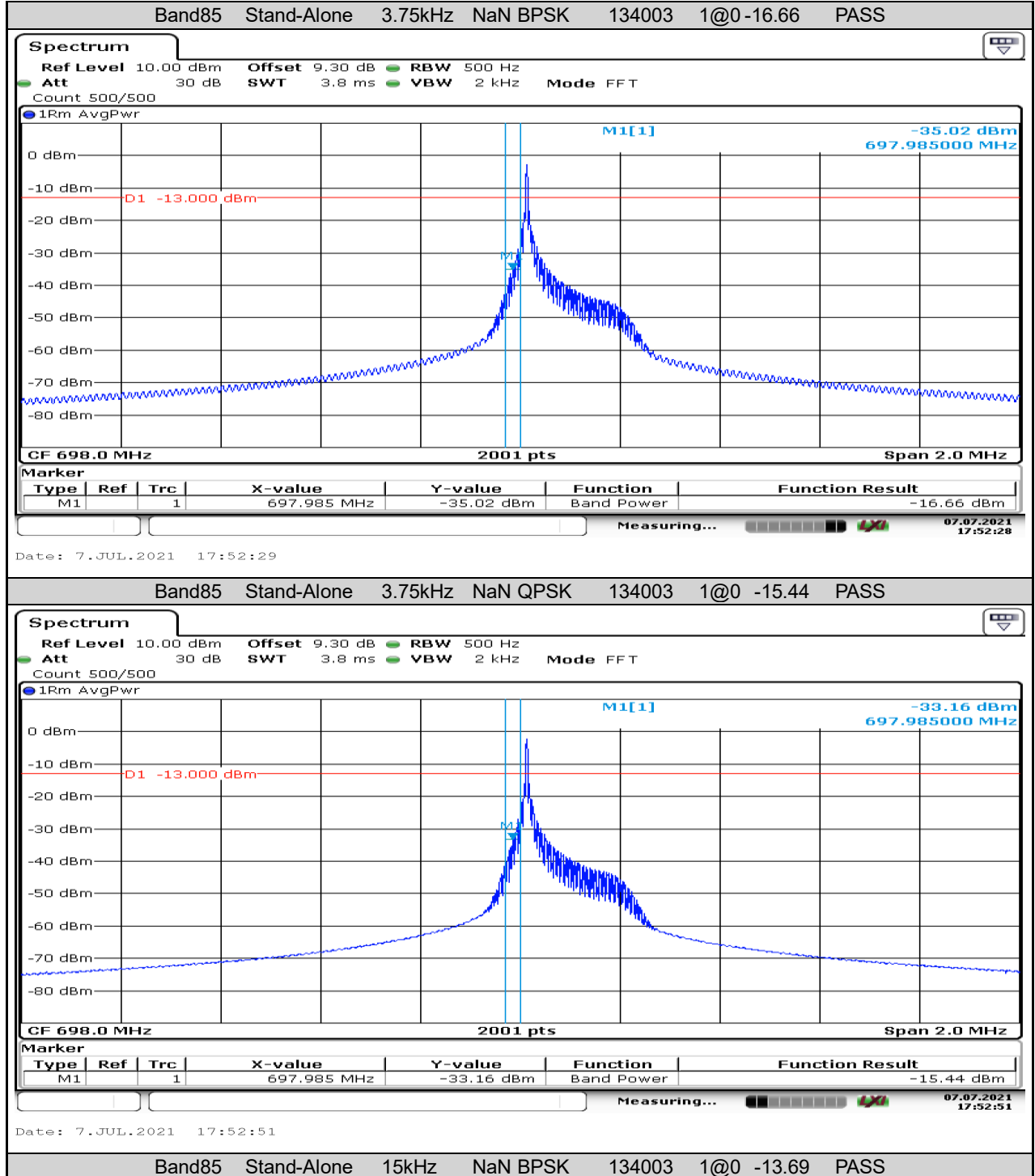


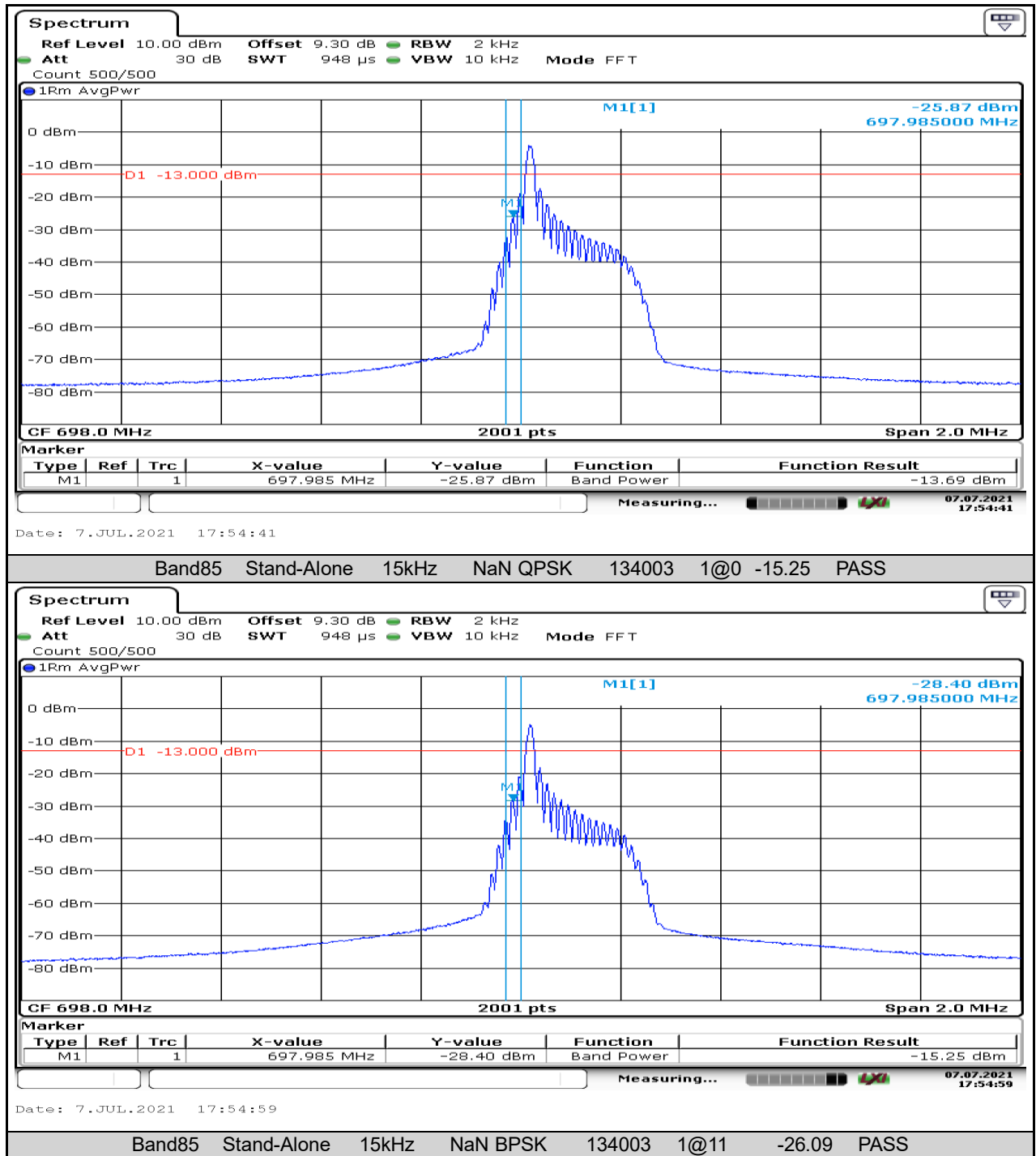
APPENDIX J.4: BAND EDGE FOR NB-IOT

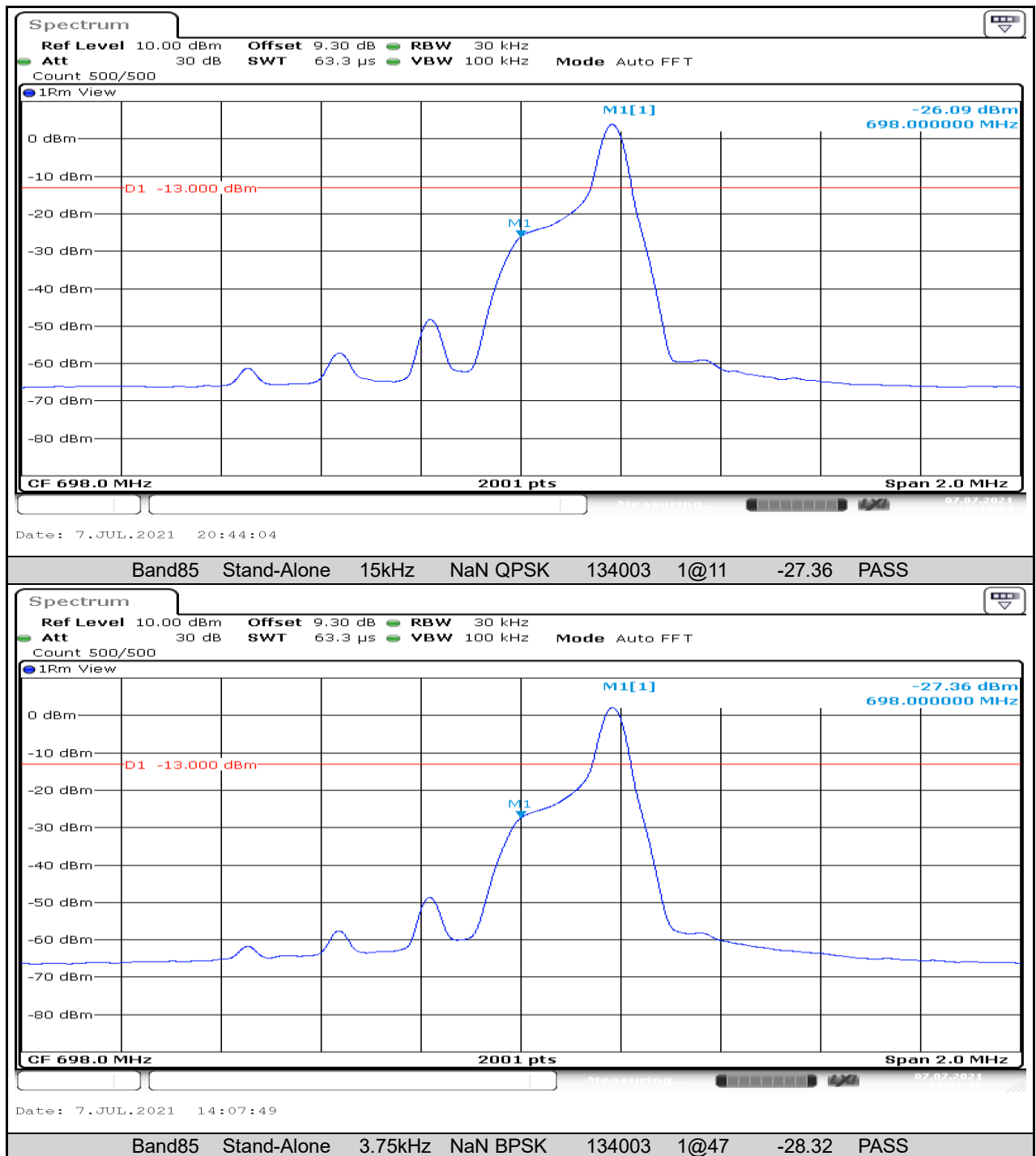
Test Result

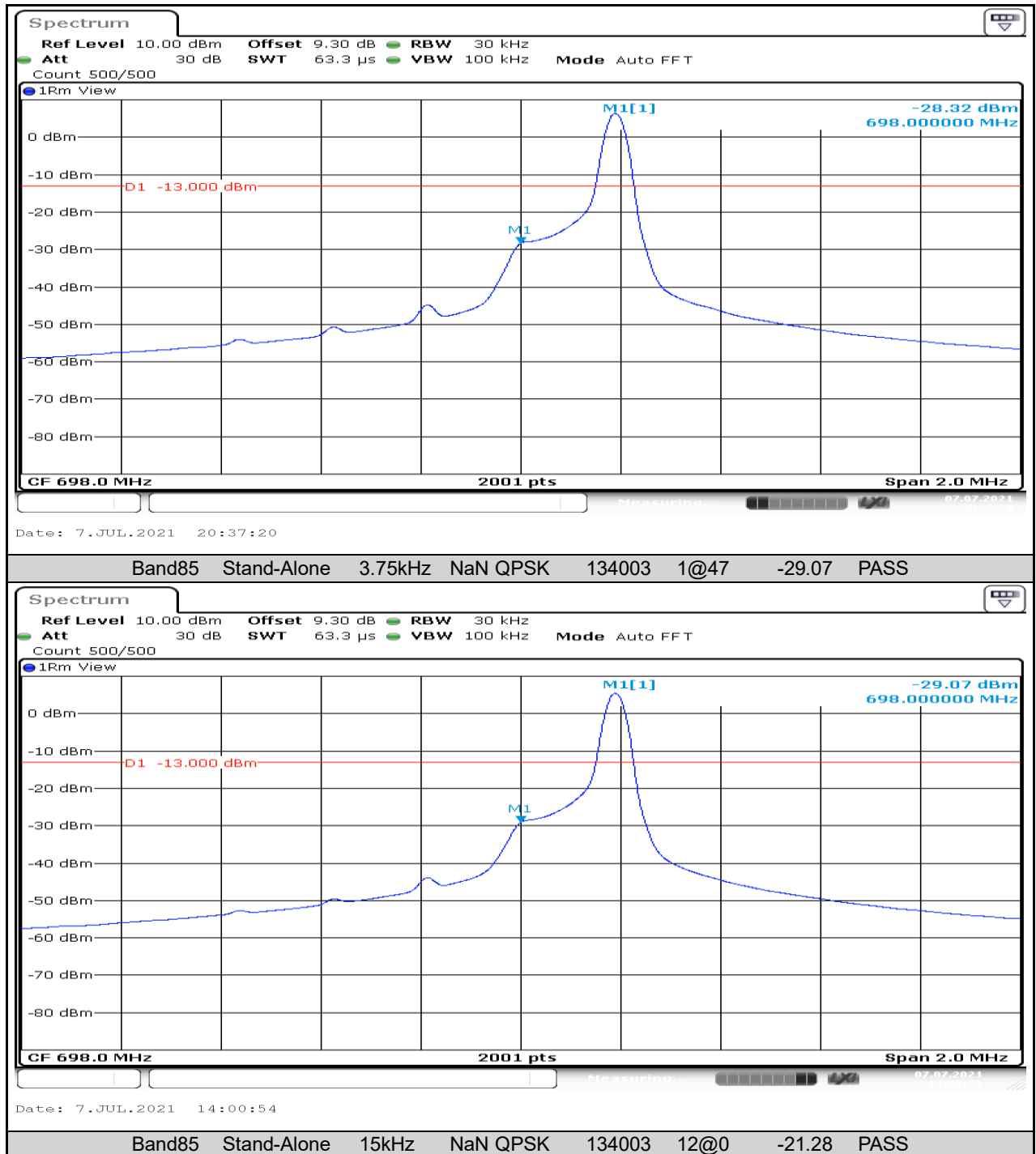
Band	OpMode	SCS	BW	Modu	Channel	Tones	Result (dBm)	Verdict
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134003	1@0	-16.66	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134003	1@0	-15.44	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134003	1@0	-13.69	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134003	1@0	-15.25	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134003	1@11	-26.09	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134003	1@11	-27.36	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134003	1@47	-28.32	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134003	1@47	-29.07	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134003	12@0	-21.28	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134181	1@0	-31.00	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134181	1@0	-31.11	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134181	1@0	-26.38	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134181	1@0	-28.19	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134181	1@11	-13.47	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134181	1@11	-15.33	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134181	1@47	-16.17	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134181	1@47	-15.11	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134181	12@0	-19.70	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134004	1@0	-24.71	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134004	1@0	-26.36	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134004	1@0	-40.29	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134004	1@0	-32.86	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134004	1@11	-34.40	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134004	1@11	-34.25	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134004	1@47	-28.24	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134004	1@47	-28.94	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134004	12@0	-34.67	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134180	1@0	-29.68	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134180	1@0	-29.16	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134180	1@0	-41.72	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134180	1@0	-36.81	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134180	1@11	-37.71	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134180	1@11	-36.31	PASS
Band85	Stand-Alone	3.75kHz	NaN	BPSK	134180	1@47	-25.27	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134180	1@47	-26.10	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134180	12@0	-35.68	PASS

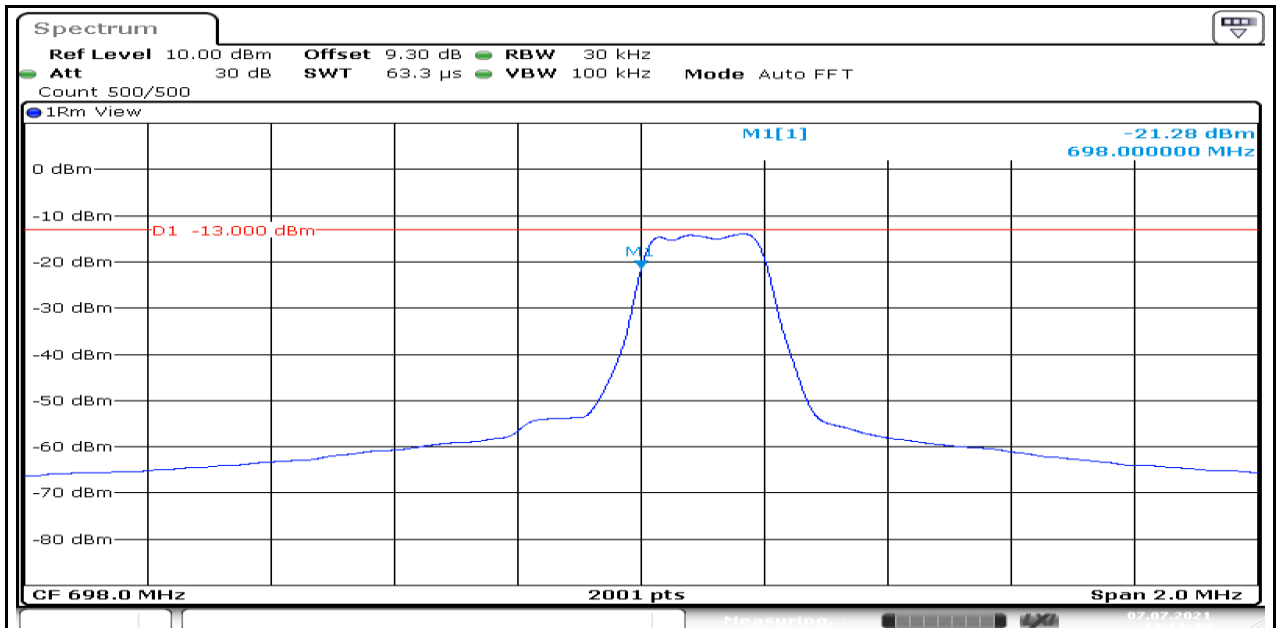
Test Graphs



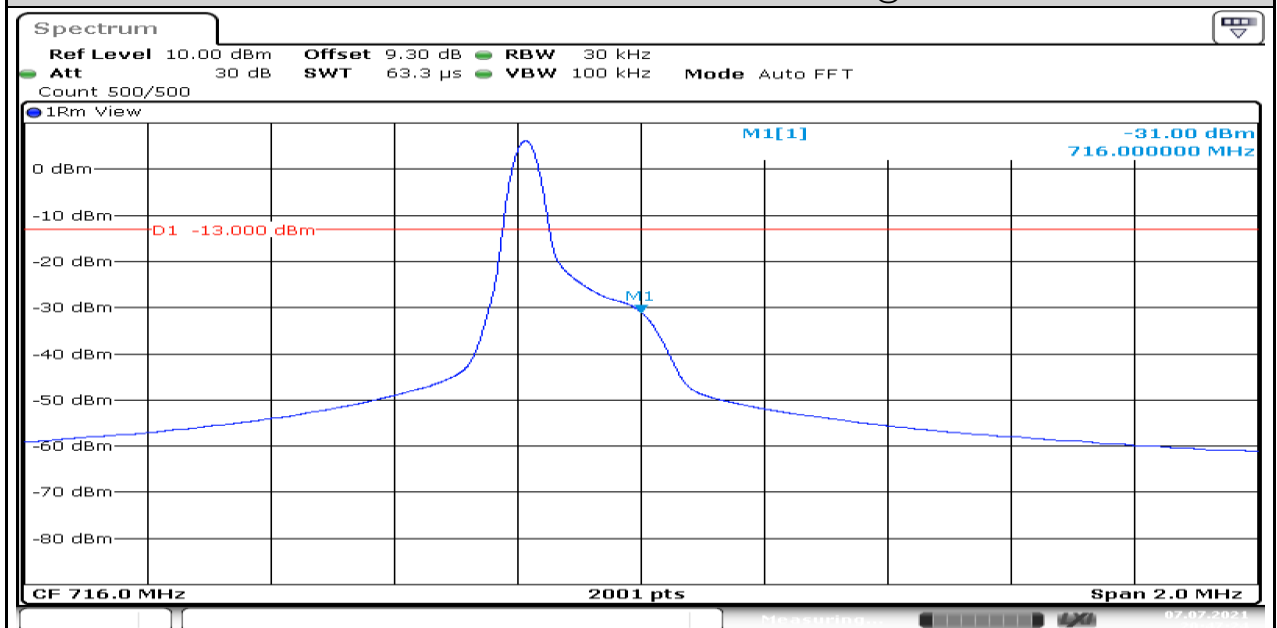




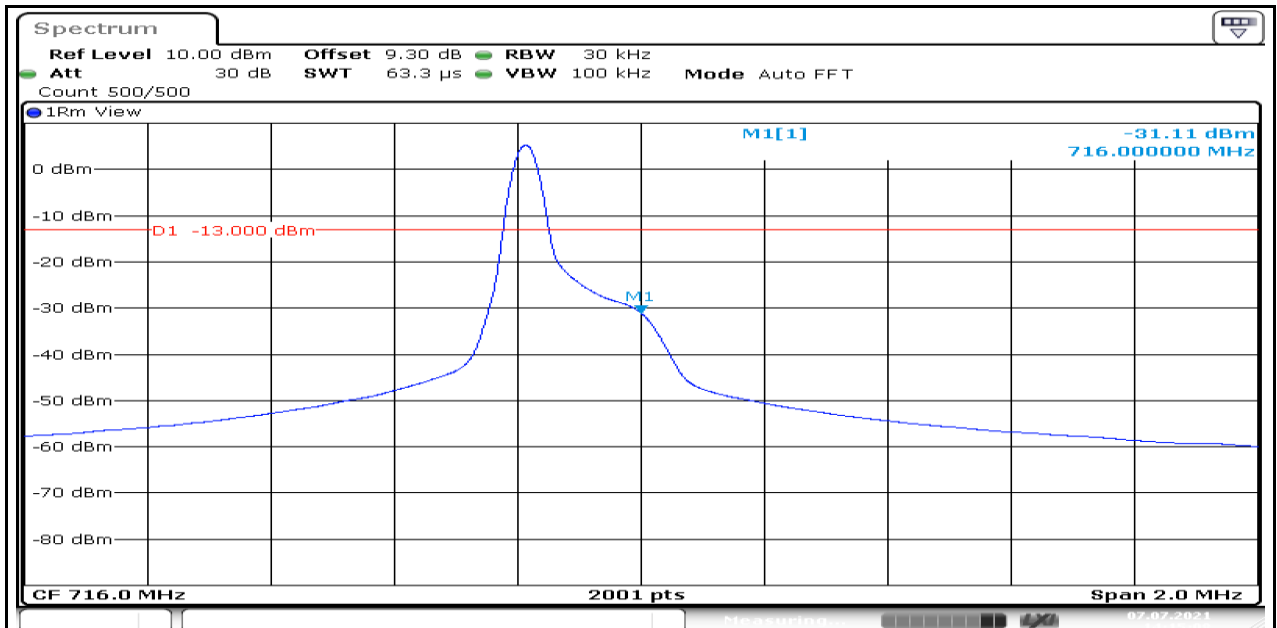




Band85 Stand-Alone 3.75kHz NaN BPSK 134181 1@0 -31.00 PASS

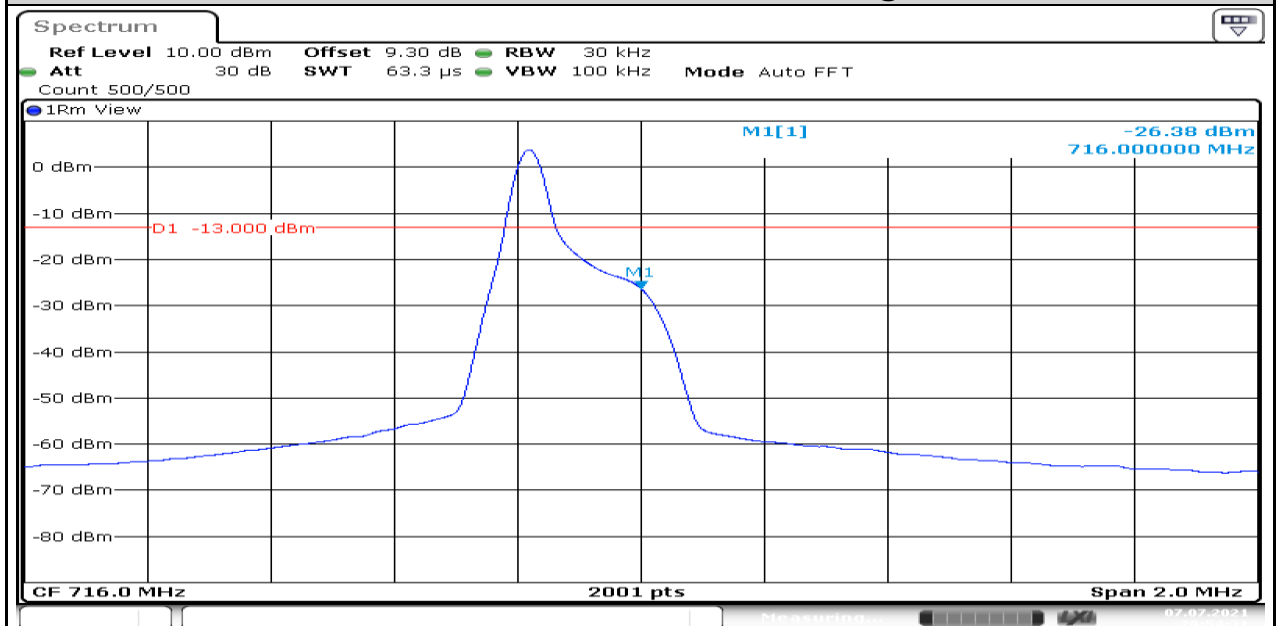


Band85 Stand-Alone 3.75kHz NaN QPSK 134181 1@0 -31.11 PASS



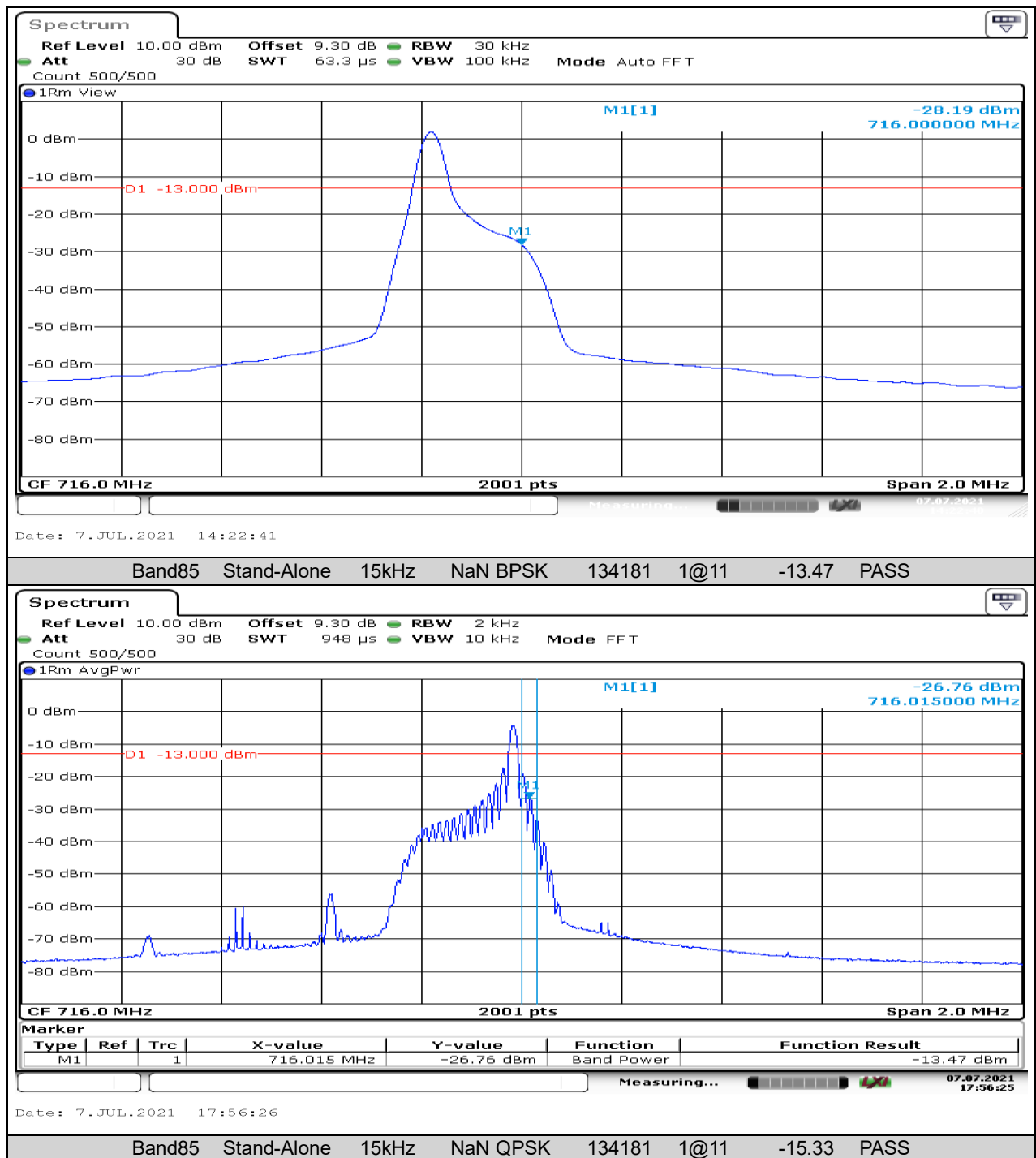
Date: 7.JUL.2021 14:15:09

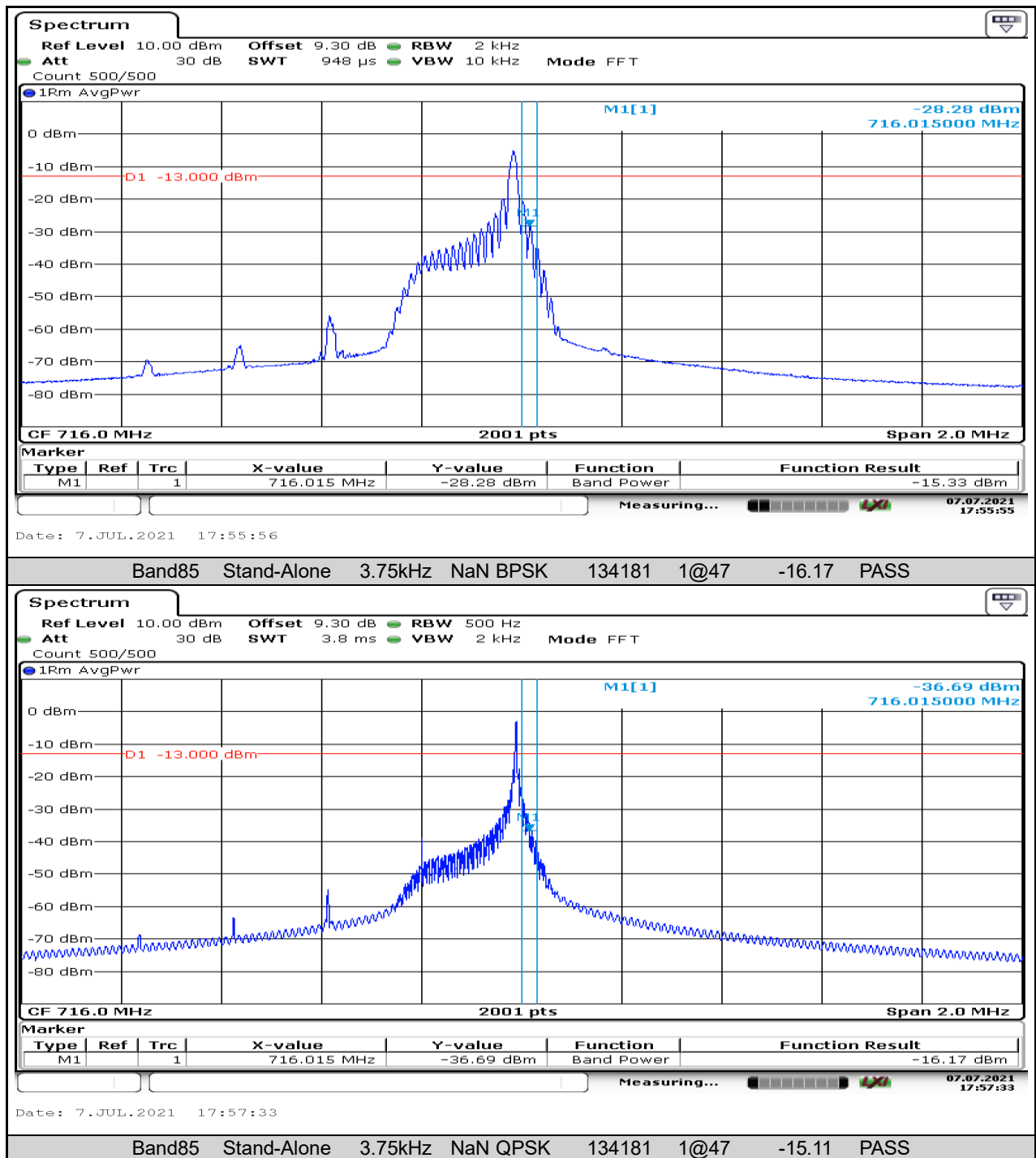
Band85 Stand-Alone 15kHz NaN BPSK 134181 1@0 -26.38 PASS

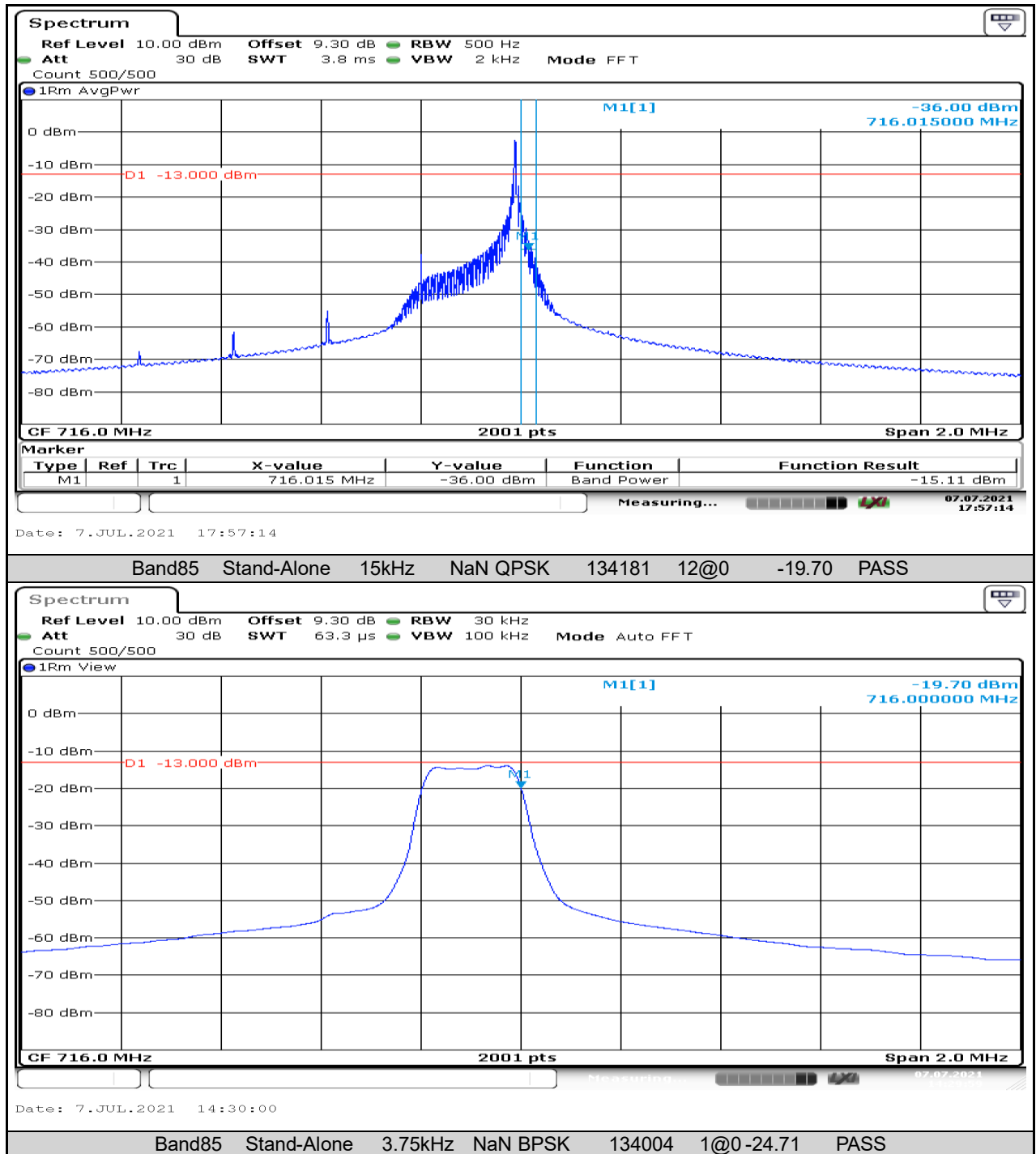


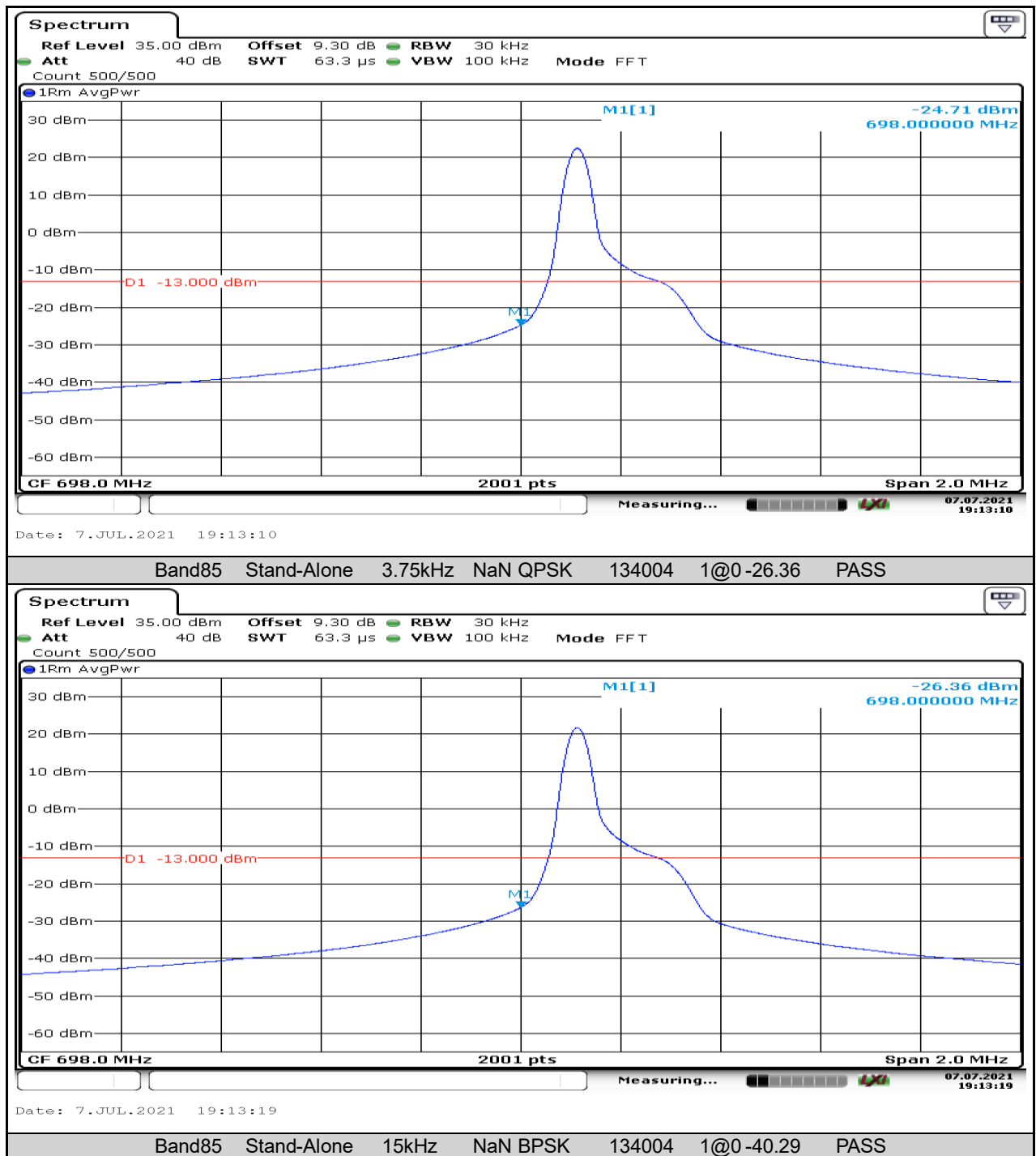
Date: 7.JUL.2021 20:54:31

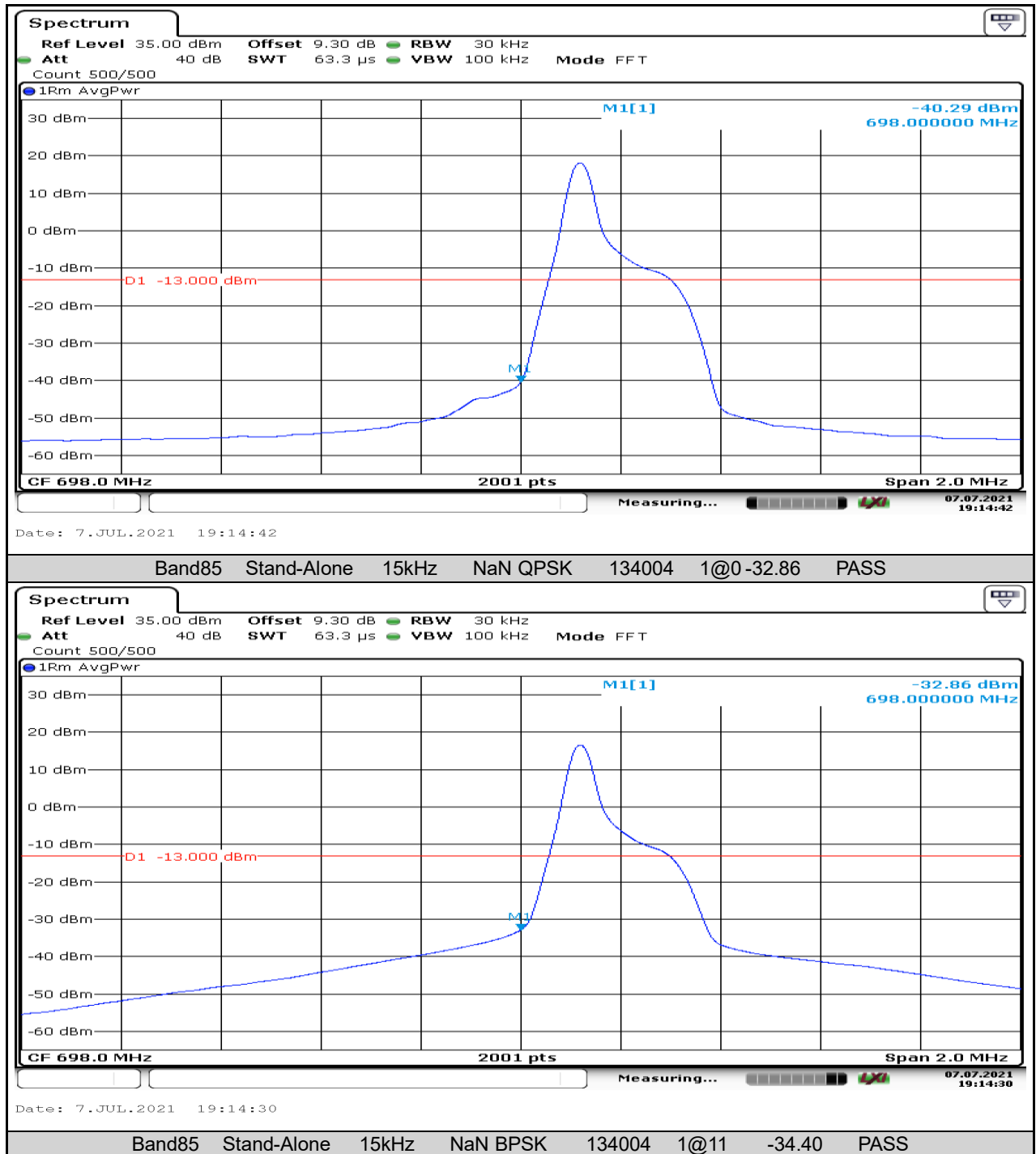
Band85 Stand-Alone 15kHz NaN QPSK 134181 1@0 -28.19 PASS

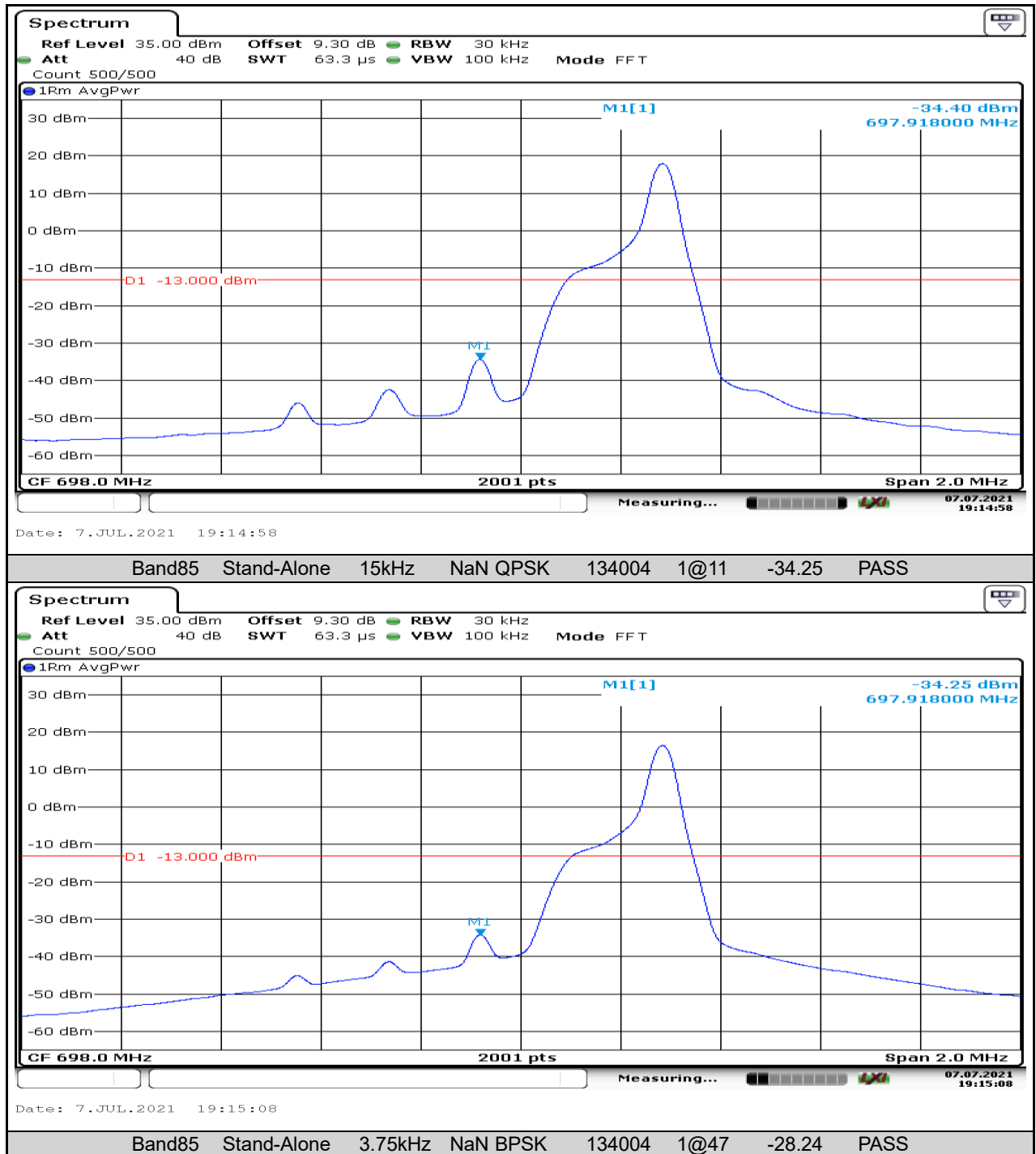


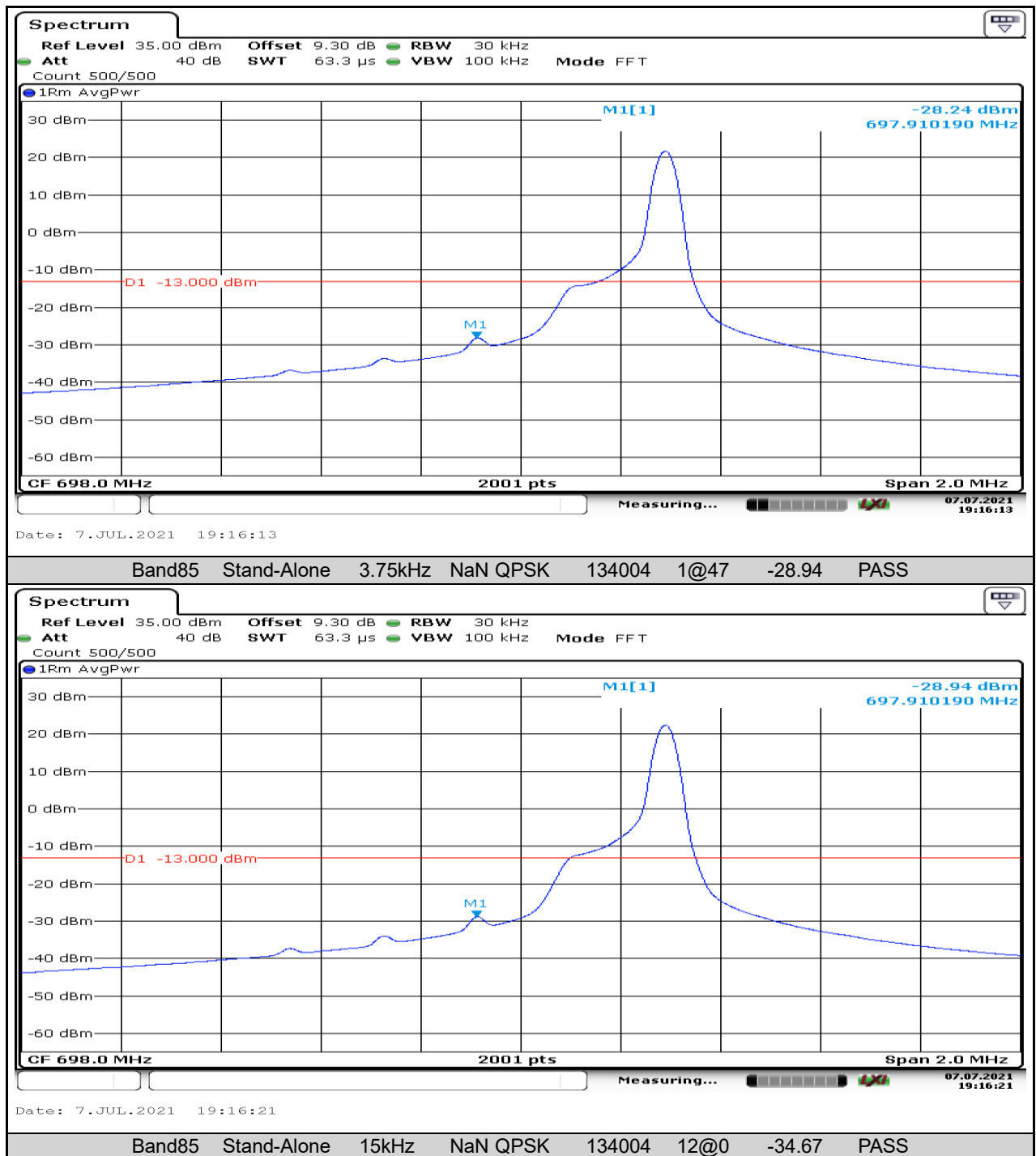


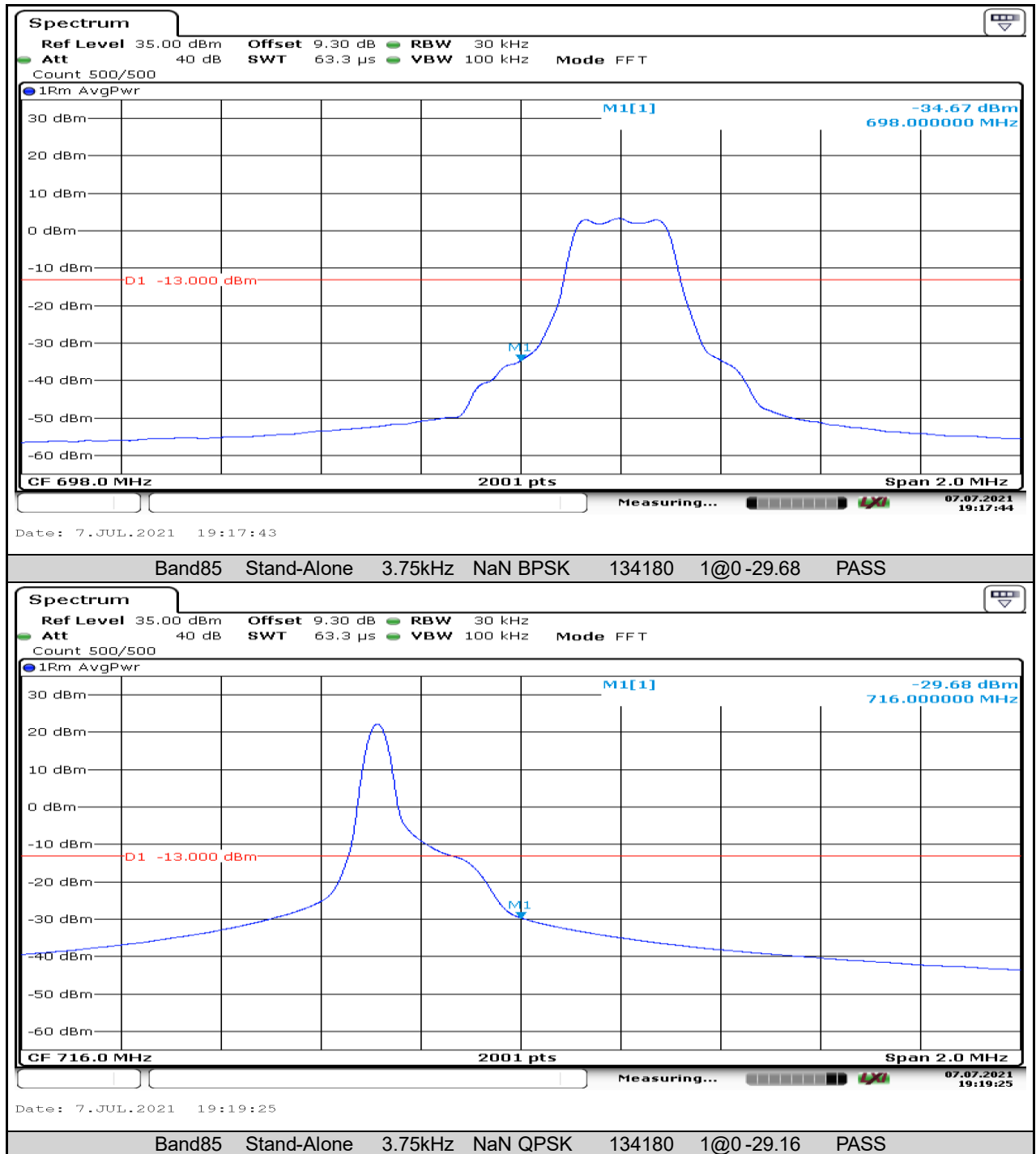


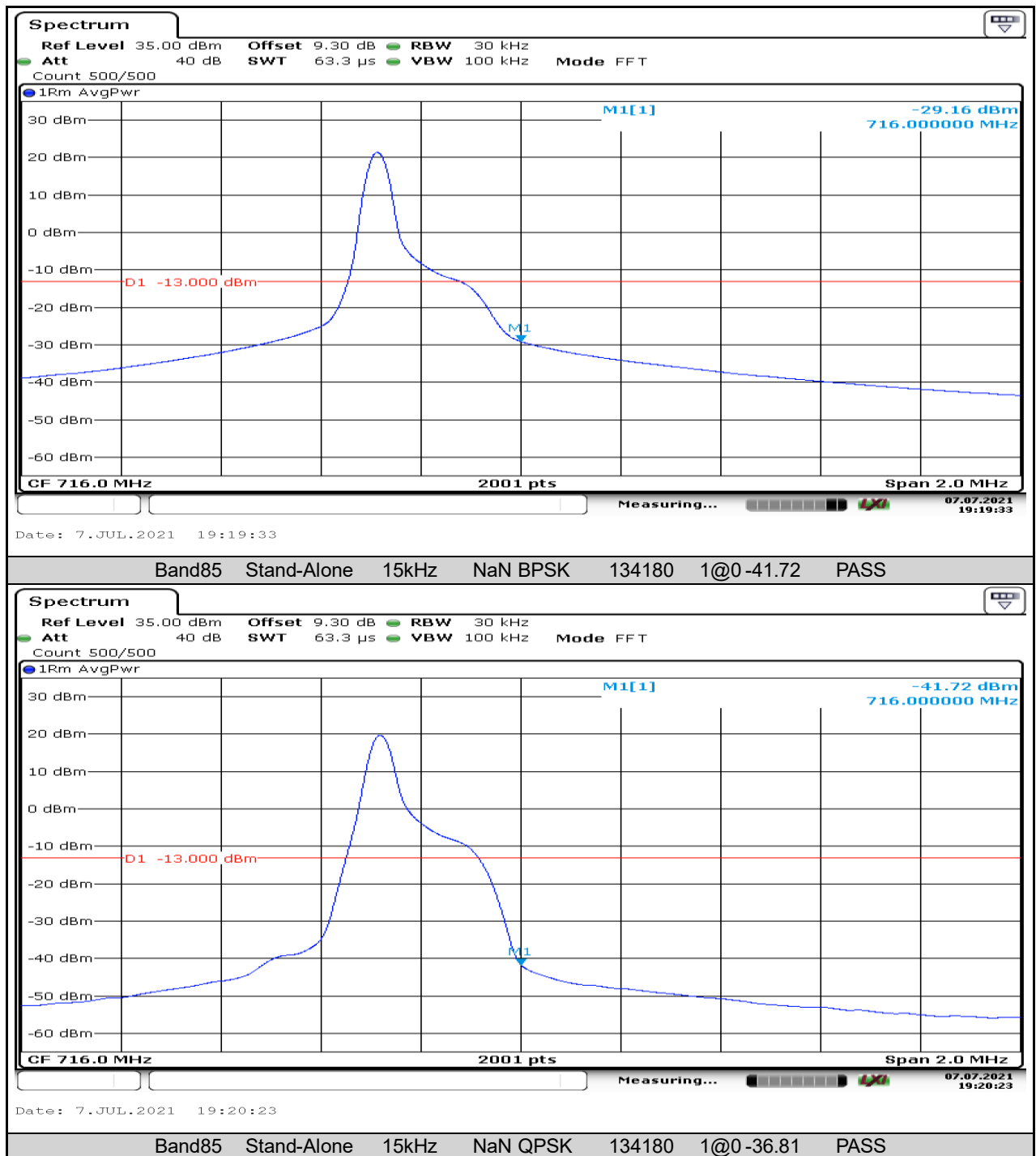


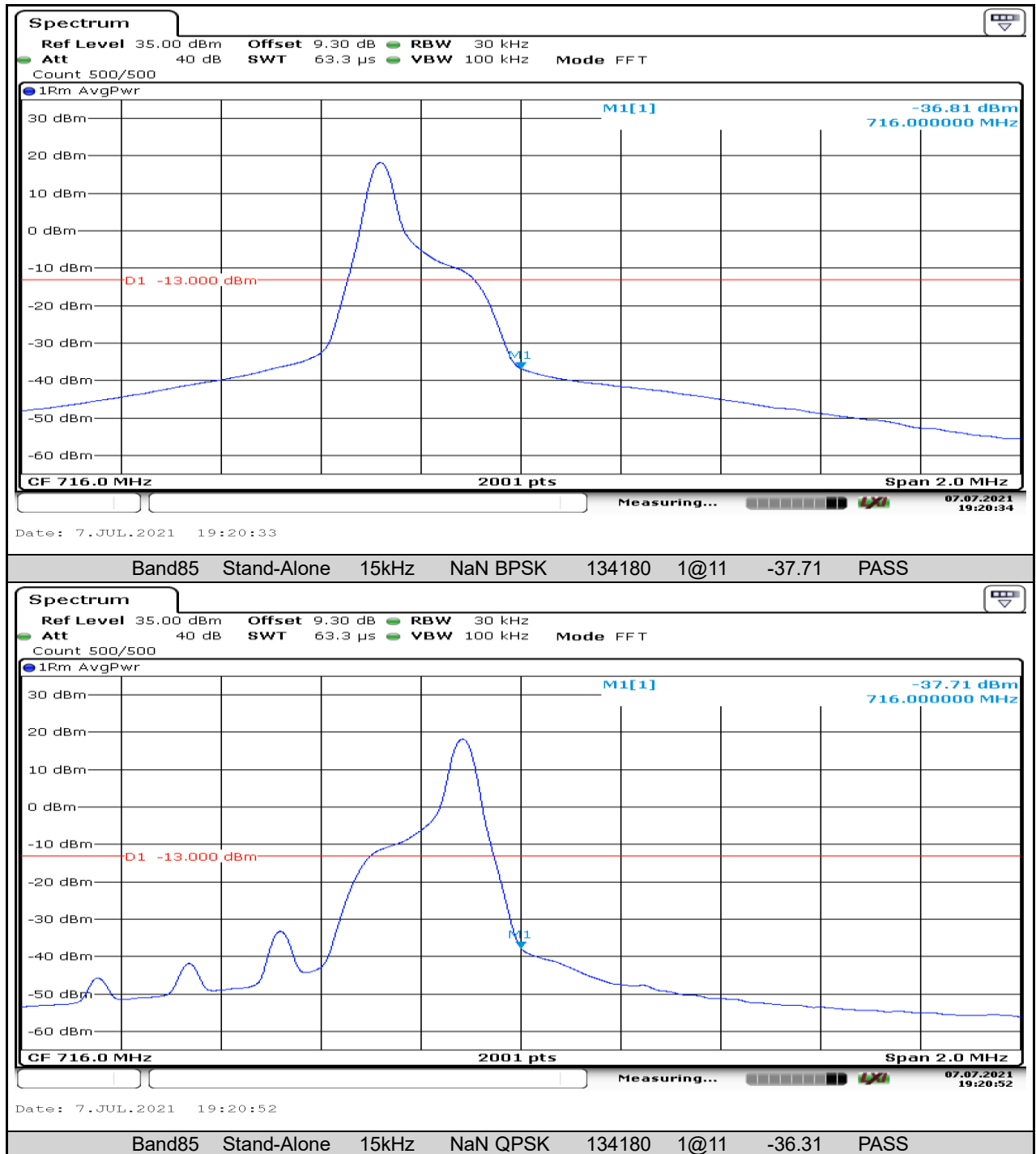


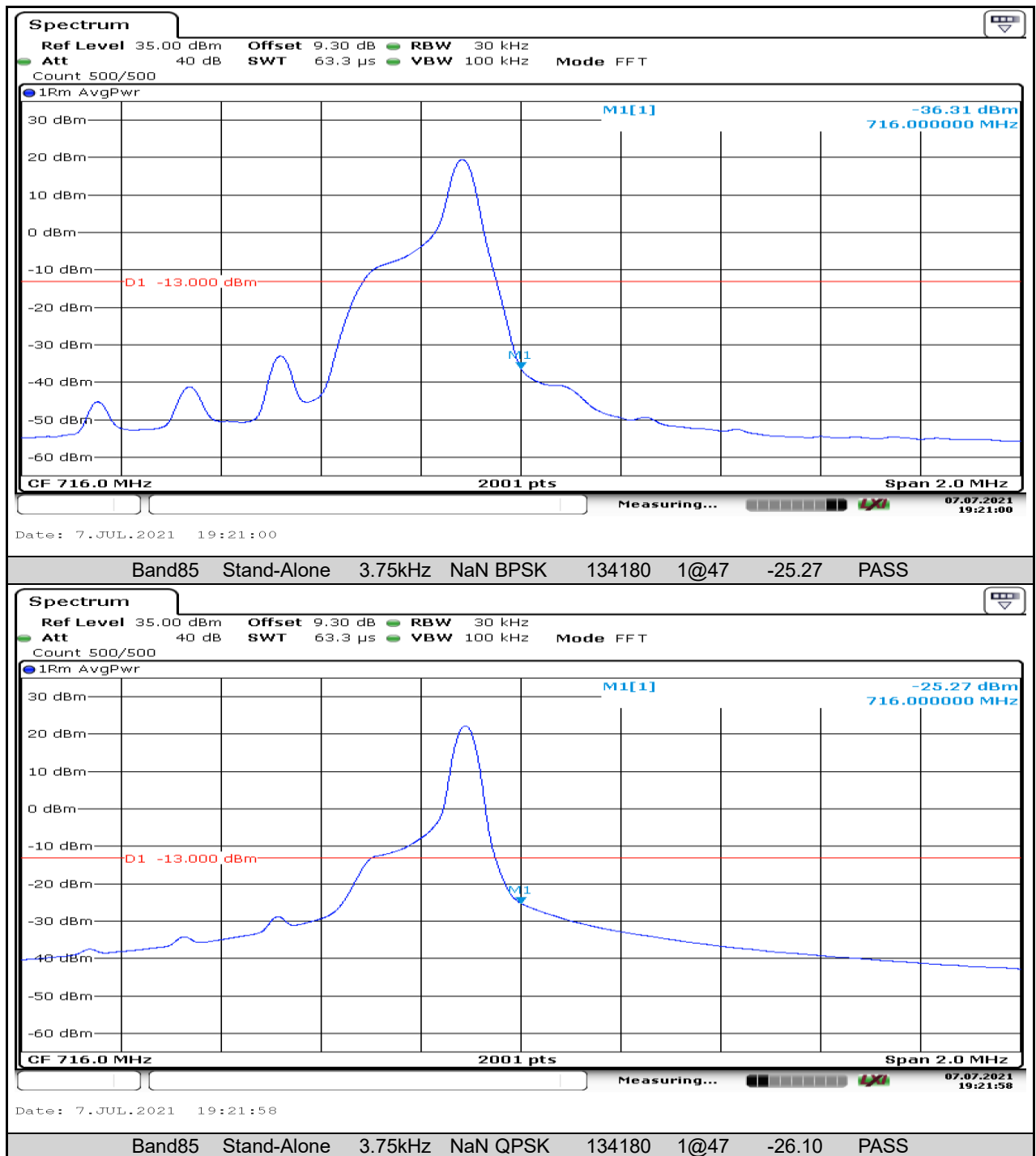


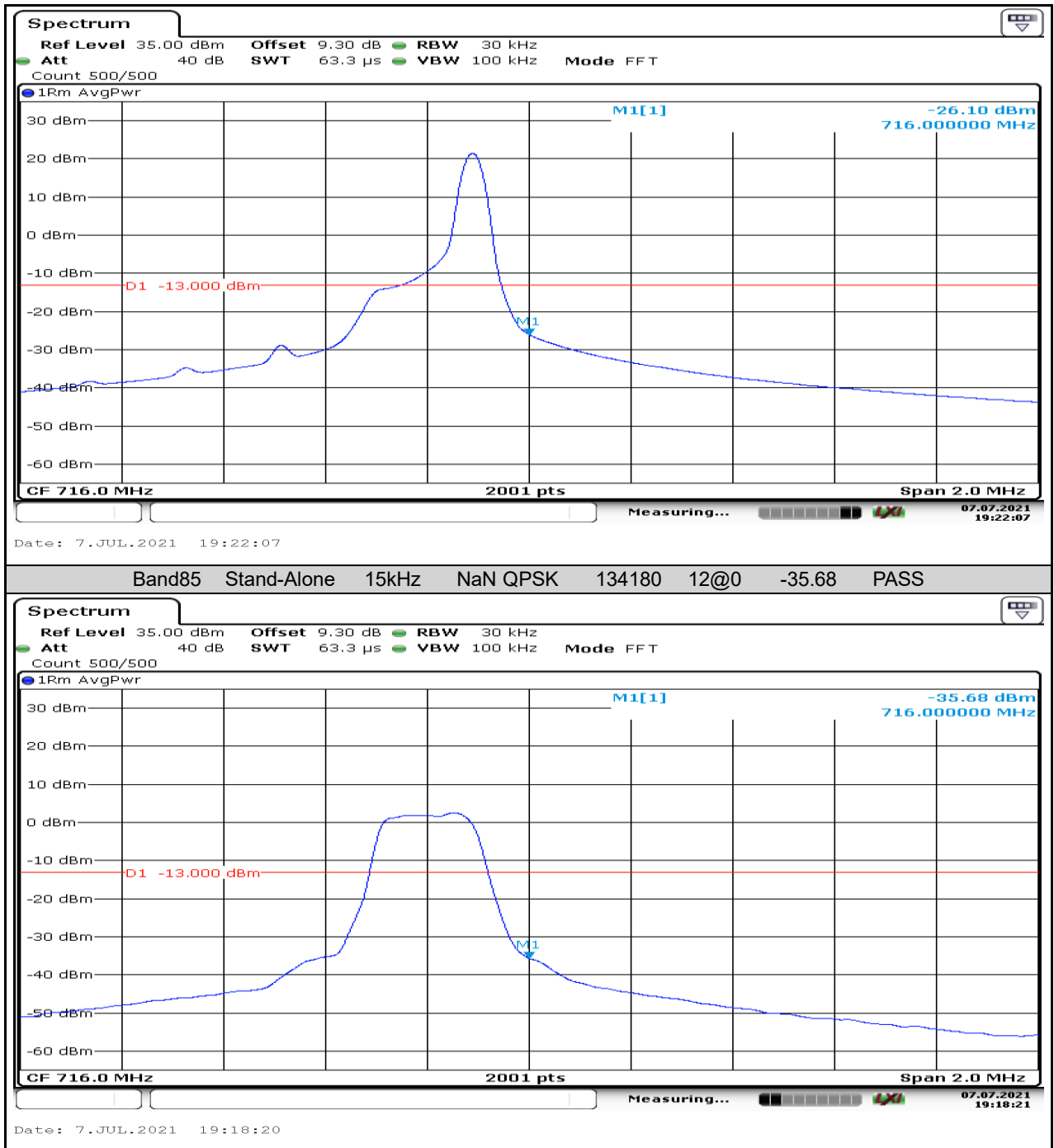












APPENDIX J.5: CONDUCTED SPURIOUS EMISSION FOR NB-IOT

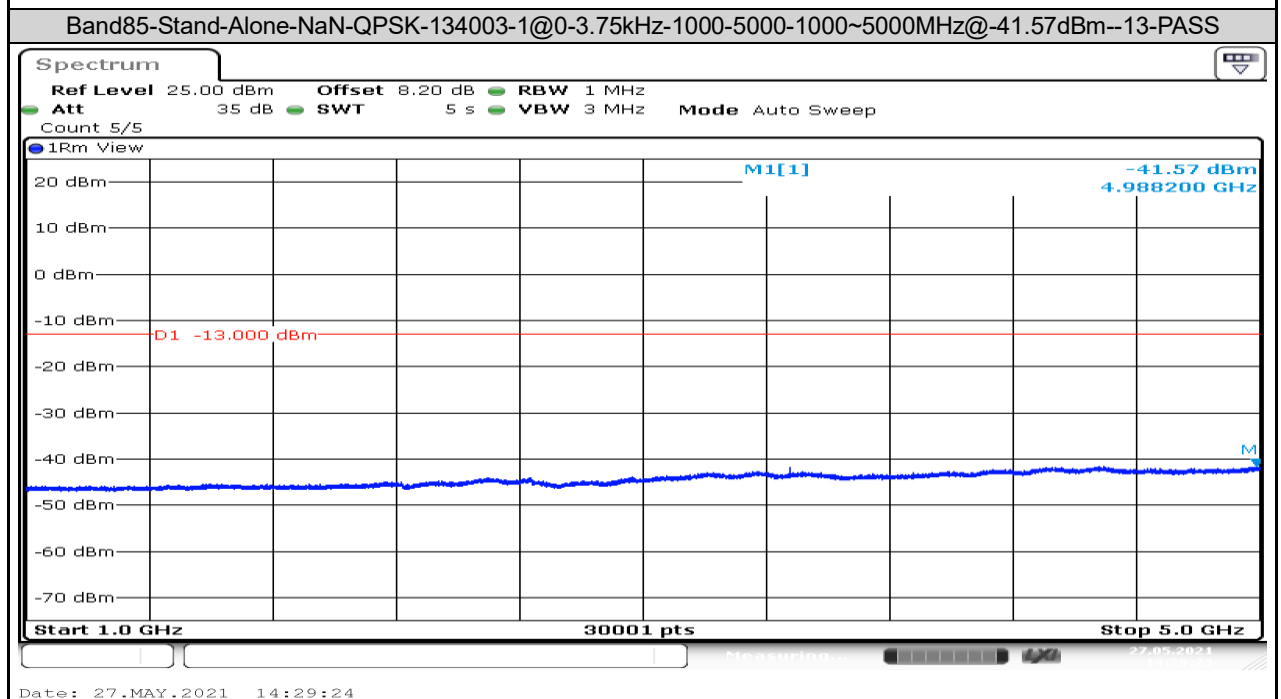
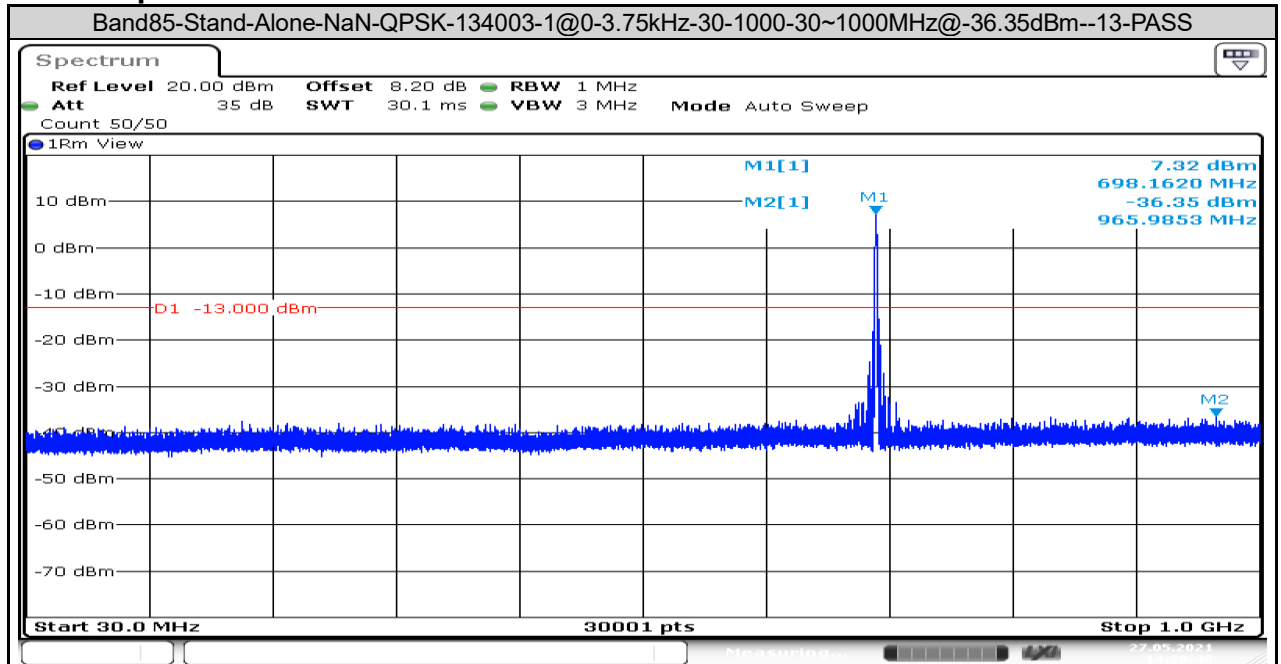
Test Result

Band	OpMode	SCS	BW	Modu	Channel	Tones	Result (dBm)	Limit (dBm)	Verdict
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134003	1@0	30~1000MHz@-36.35dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134003	1@0	1000~5000MHz@-41.57dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134003	1@0	5000~12000MHz@-54.62dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134003	1@0	12000~26500MHz@-50.95dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134003	1@47	30~1000MHz@-36.2dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134003	1@47	1000~5000MHz@-41.61dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134003	1@47	5000~12000MHz@-54.58dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134003	1@47	12000~26500MHz@-50.8dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	30~1000MHz@-35.04dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	1000~5000MHz@-38.09dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	5000~12000MHz@-54.59dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	12000~26500MHz@-50.68dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	30~1000MHz@-36dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	1000~5000MHz@-38.47dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	5000~12000MHz@-54.43dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	12000~26500MHz@-50.67dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134181	1@0	30~1000MHz@-36.16dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134181	1@0	1000~5000MHz@-41.69dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134181	1@0	5000~12000MHz@-54.73dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134181	1@0	12000~26500MHz@-50.71dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134181	1@47	30~1000MHz@-36.3dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134181	1@47	1000~5000MHz@-41.57dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134181	1@47	5000~12000MHz@-54.78dBm	-13	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134181	1@47	12000~26500MHz@-51.04dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134003	1@0	30~1000MHz@-36.6dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134003	1@0	1000~5000MHz@-41.52dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134003	1@0	5000~12000MHz@-54.68dBm	-13	PASS

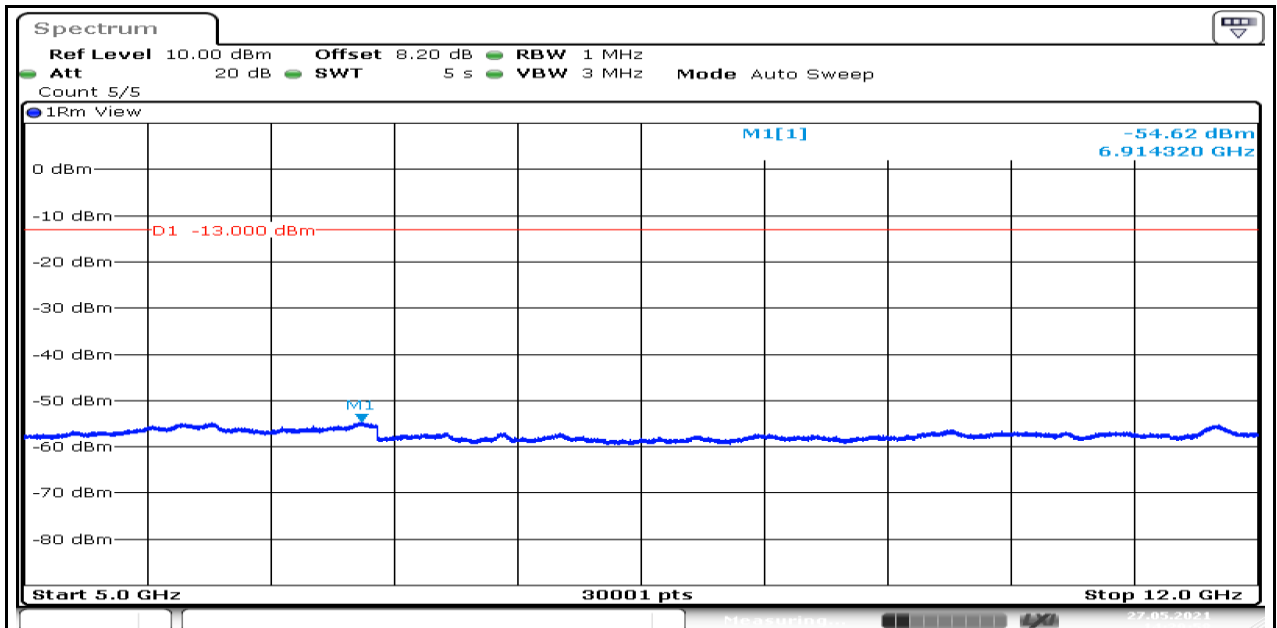
Band85	Stand-Alone	15kHz	NaN	BPSK	134003	1@0	12000~26500MHz@-50.98dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134003	1@11	30~1000MHz@-36.23dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134003	1@11	1000~5000MHz@-41.53dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134003	1@11	5000~12000MHz@-54.75dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134003	1@11	12000~26500MHz@-50.94dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134092	1@0	30~1000MHz@-35.94dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134092	1@0	1000~5000MHz@-40.65dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134092	1@0	5000~12000MHz@-54.46dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134092	1@0	12000~26500MHz@-50.51dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134092	1@11	30~1000MHz@-35.38dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134092	1@11	1000~5000MHz@-40.63dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134092	1@11	5000~12000MHz@-54.51dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134092	1@11	12000~26500MHz@-50.64dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134181	1@0	30~1000MHz@-36.7dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134181	1@0	1000~5000MHz@-41.56dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134181	1@0	5000~12000MHz@-54.8dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134181	1@0	12000~26500MHz@-51dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134181	1@11	30~1000MHz@-36.49dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134181	1@11	1000~5000MHz@-41.66dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134181	1@11	5000~12000MHz@-54.67dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	BPSK	134181	1@11	12000~26500MHz@-50.98dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134003	12@0	30~1000MHz@-36.33dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134003	12@0	1000~5000MHz@-41.66dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134003	12@0	5000~12000MHz@-54.73dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134003	12@0	12000~26500MHz@-50.95dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	12@0	30~1000MHz@-35.97dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	12@0	1000~5000MHz@-41.38dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	12@0	5000~12000MHz@-54.59dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	12@0	12000~26500MHz@-50.51dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134181	12@0	30~1000MHz@-36.75dBm	-13	PASS

Band85	Stand-Alone	15kHz	NaN	QPSK	134181	12@0	1000~5000MHz@-41.74dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134181	12@0	5000~12000MHz@-54.75dBm	-13	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134181	12@0	12000~26500MHz@-50.93dBm	-13	PASS

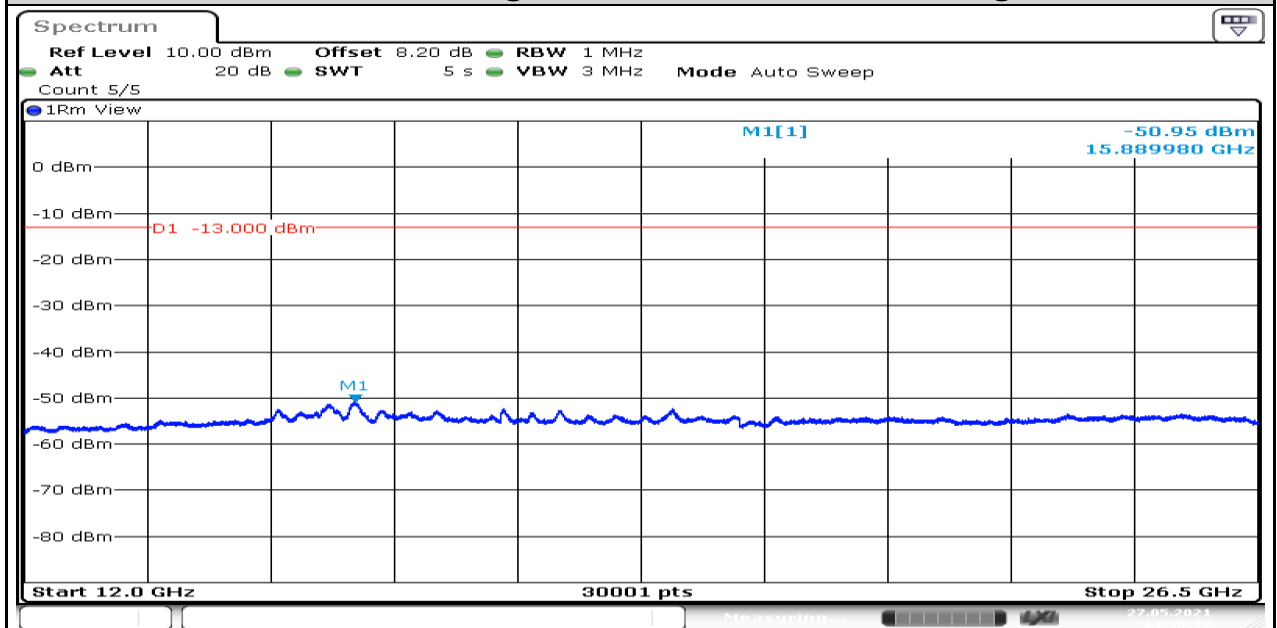
Test Graphs



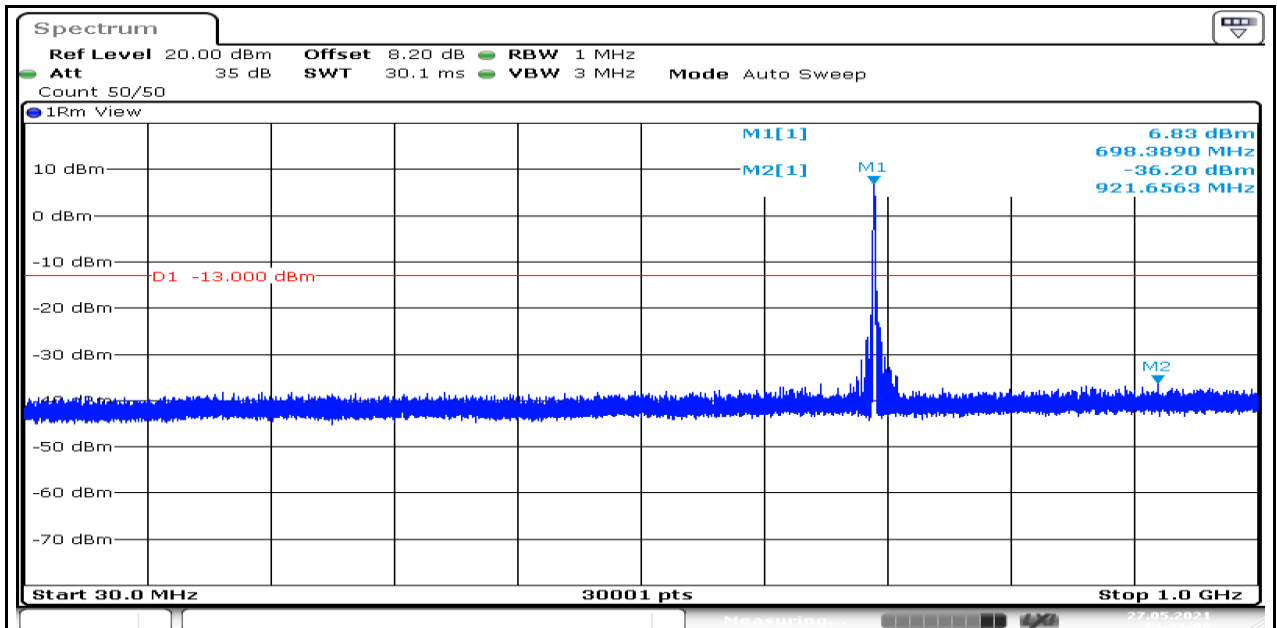
Band85-Stand-Alone-NaN-QPSK-134003-1@0-3.75kHz-5000-12000-5000~12000MHz@-54.62dBm--13-PASS



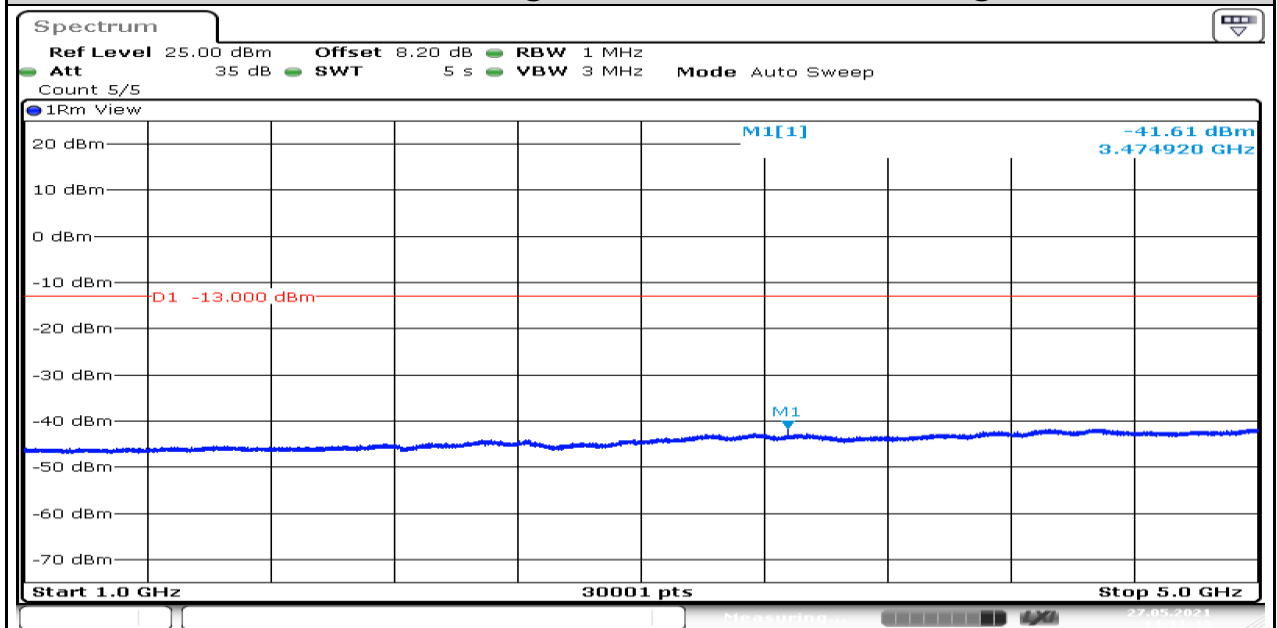
Band85-Stand-Alone-NaN-QPSK-134003-1@0-3.75kHz-12000-26500-12000~26500MHz@-50.95dBm--13-PASS



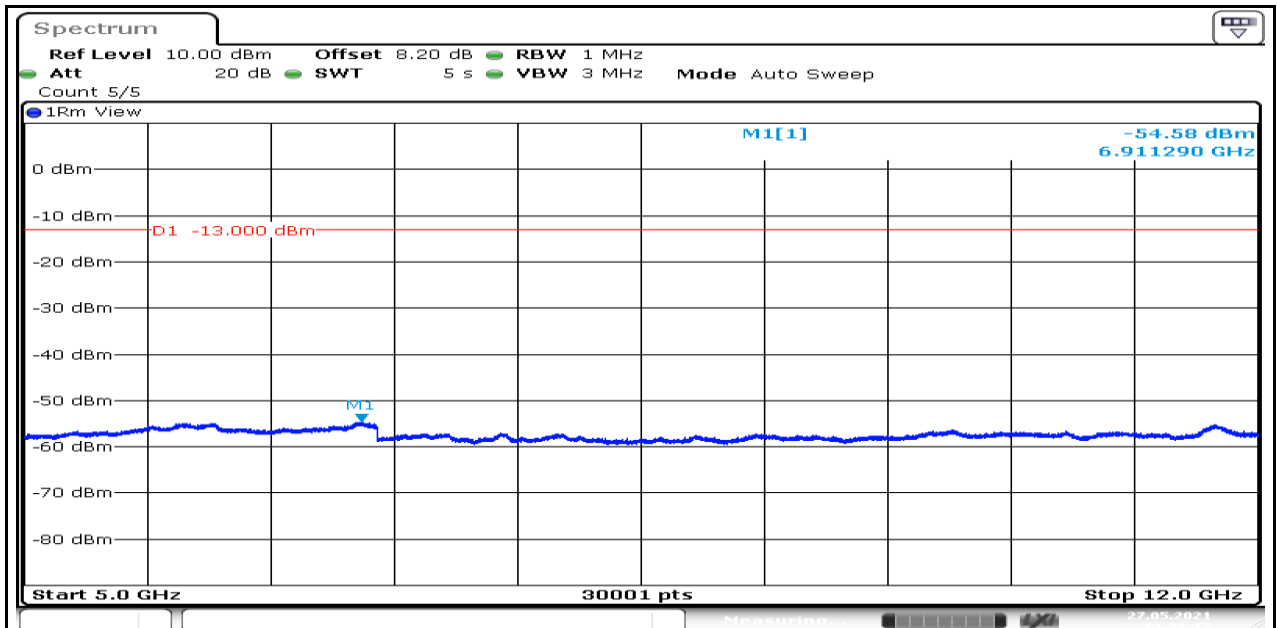
Band85-Stand-Alone-NaN-QPSK-134003-1@47-3.75kHz-30-1000-30~1000MHz@-36.2dBm--13-PASS



Band85-Stand-Alone-NaN-QPSK-134003-1@47-3.75kHz-1000-5000-1000~5000MHz@-41.61dBm--13-PASS

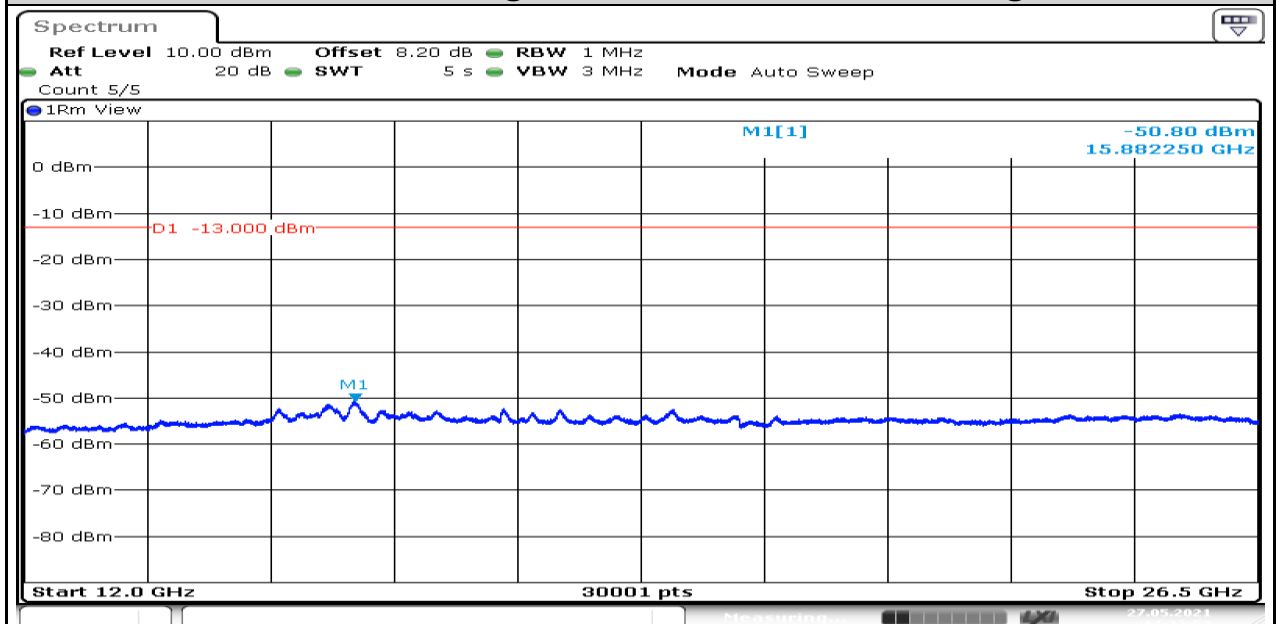


Band85-Stand-Alone-NaN-QPSK-134003-1@47-3.75kHz-5000-12000-5000~12000MHz@-54.58dBm--13-PASS



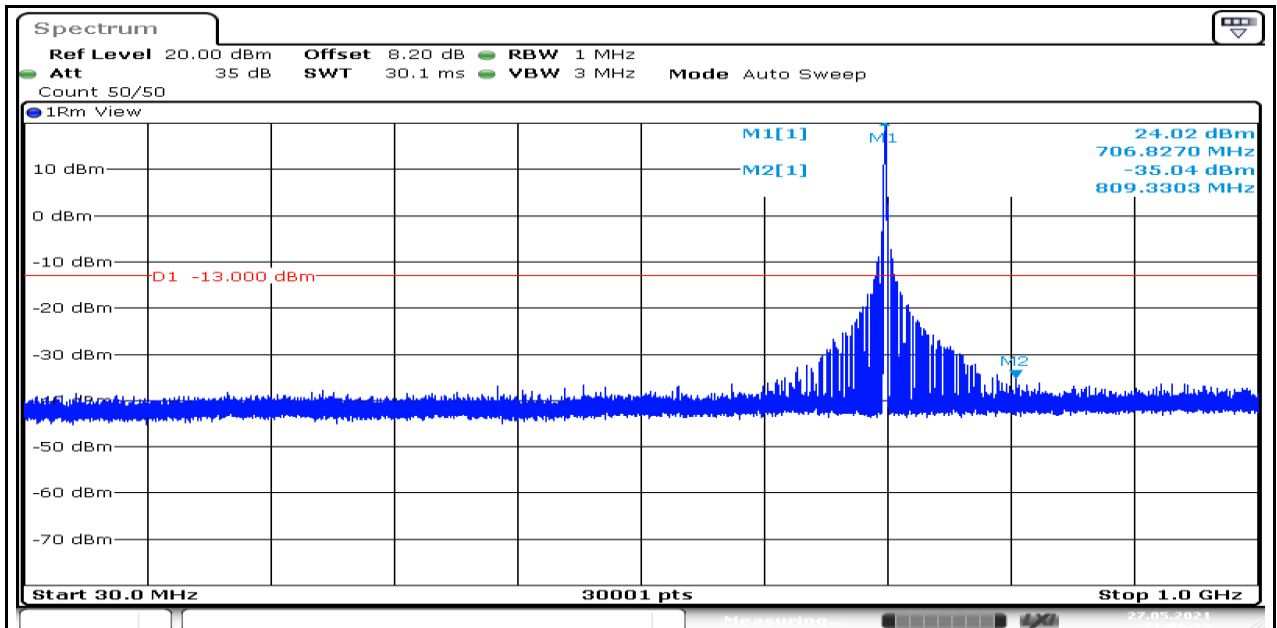
Date: 27.MAY.2021 14:32:18

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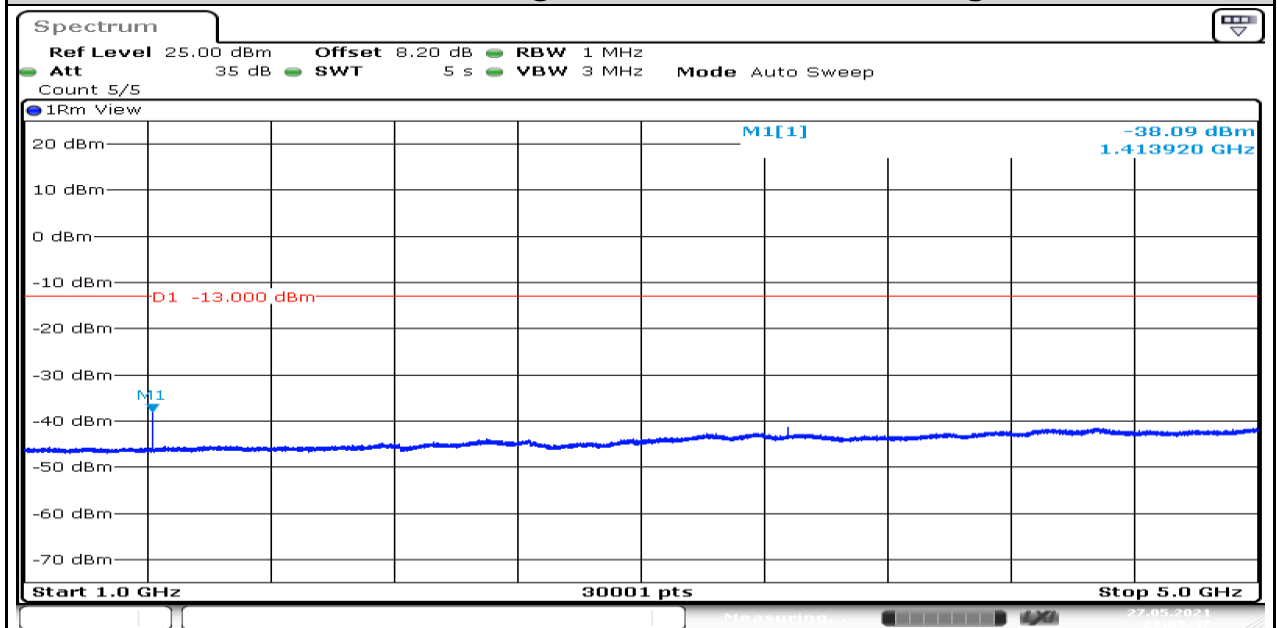


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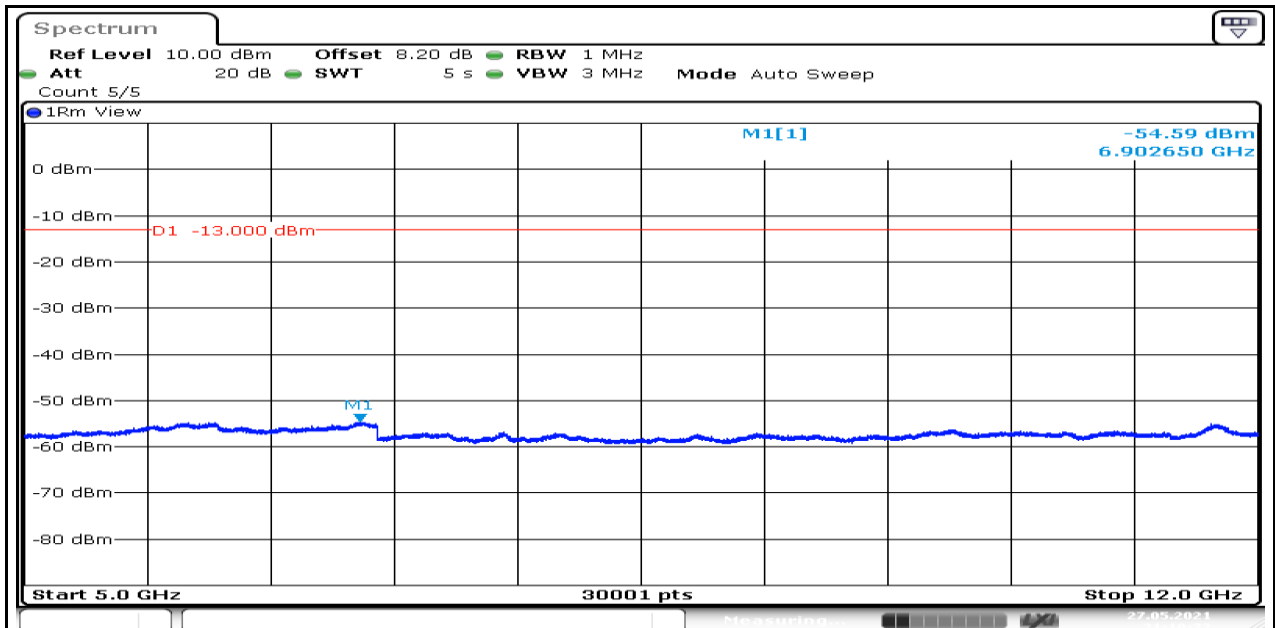
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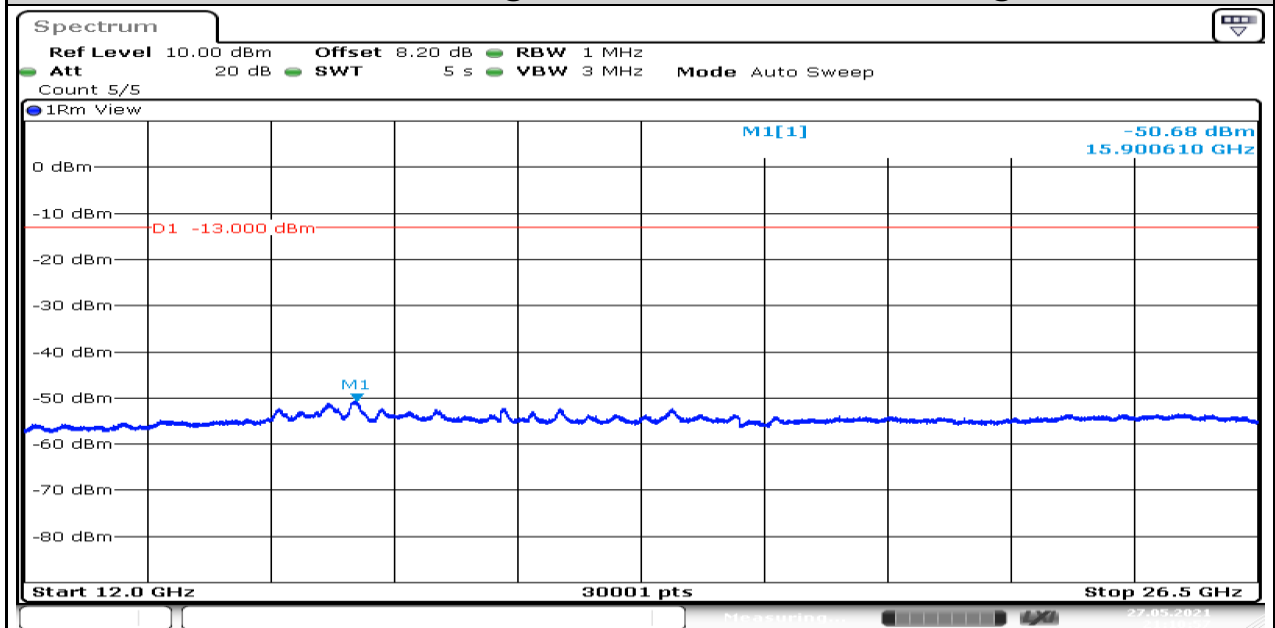
Band85-Stand-Alone-NaN-QPSK-134092-1@0-3.75kHz-1000-5000-1000~5000MHz@-38.09dBm--13-PASS



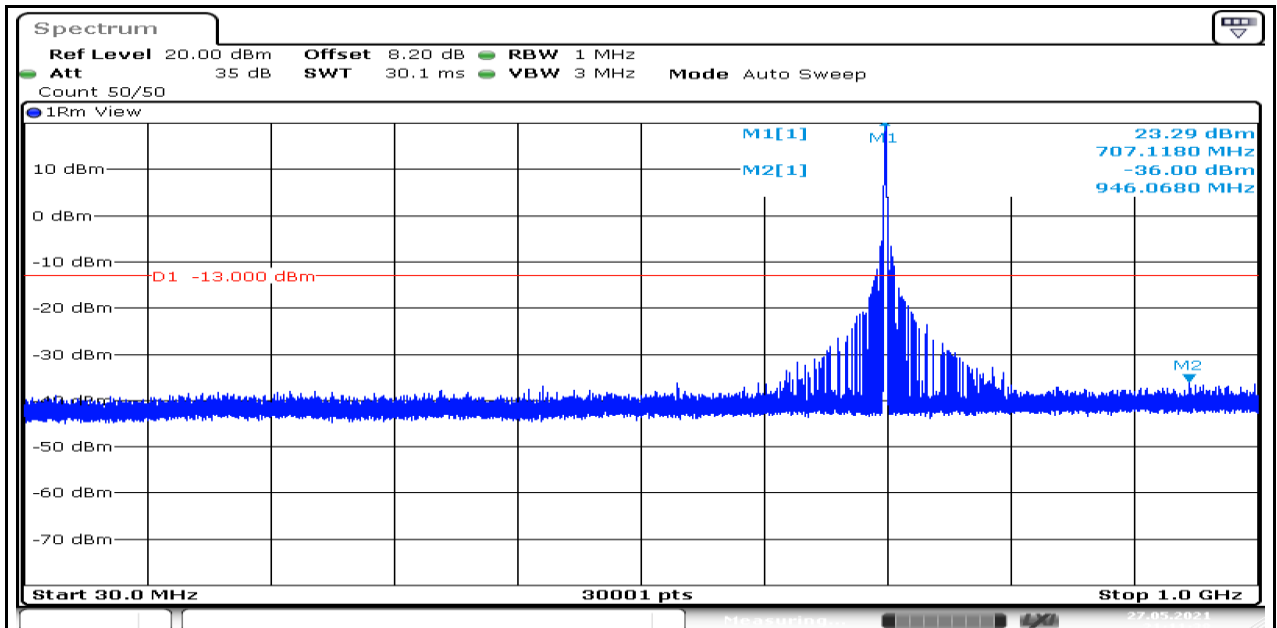
Band85-Stand-Alone-NaN-QPSK-134092-1@0-3.75kHz-5000-12000-5000~12000MHz@-54.59dBm--13-PASS



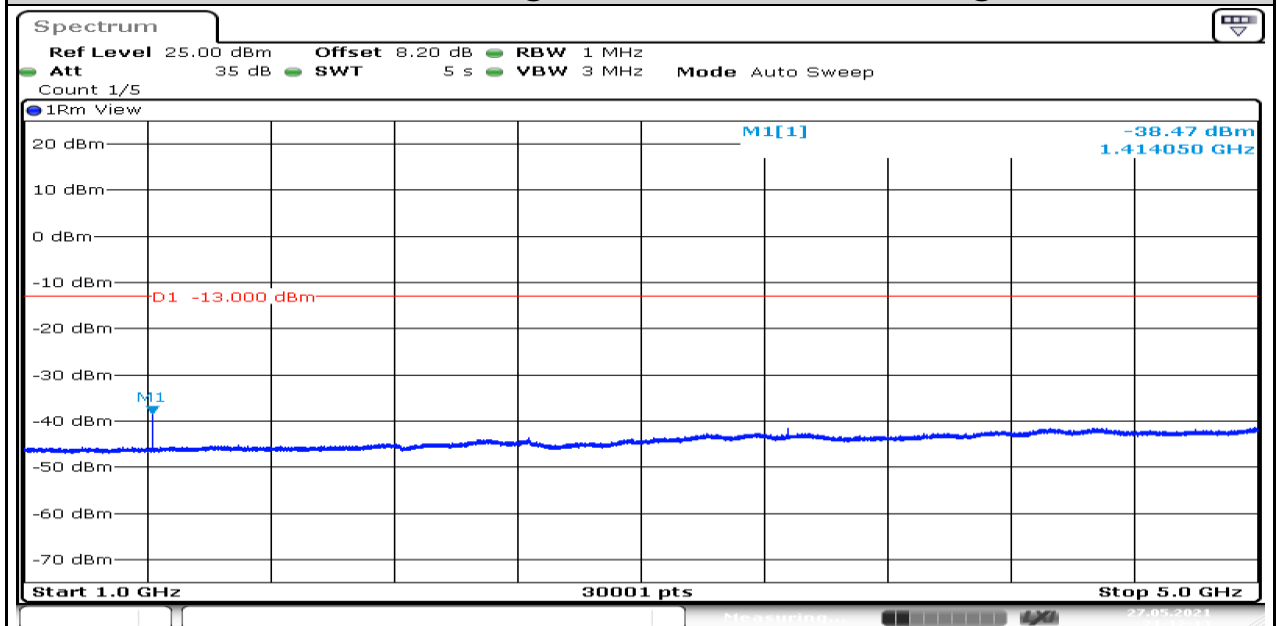
Band85-Stand-Alone-NaN-QPSK-134092-1@0-3.75kHz-12000-26500-12000~26500MHz@-50.68dBm--13-PASS



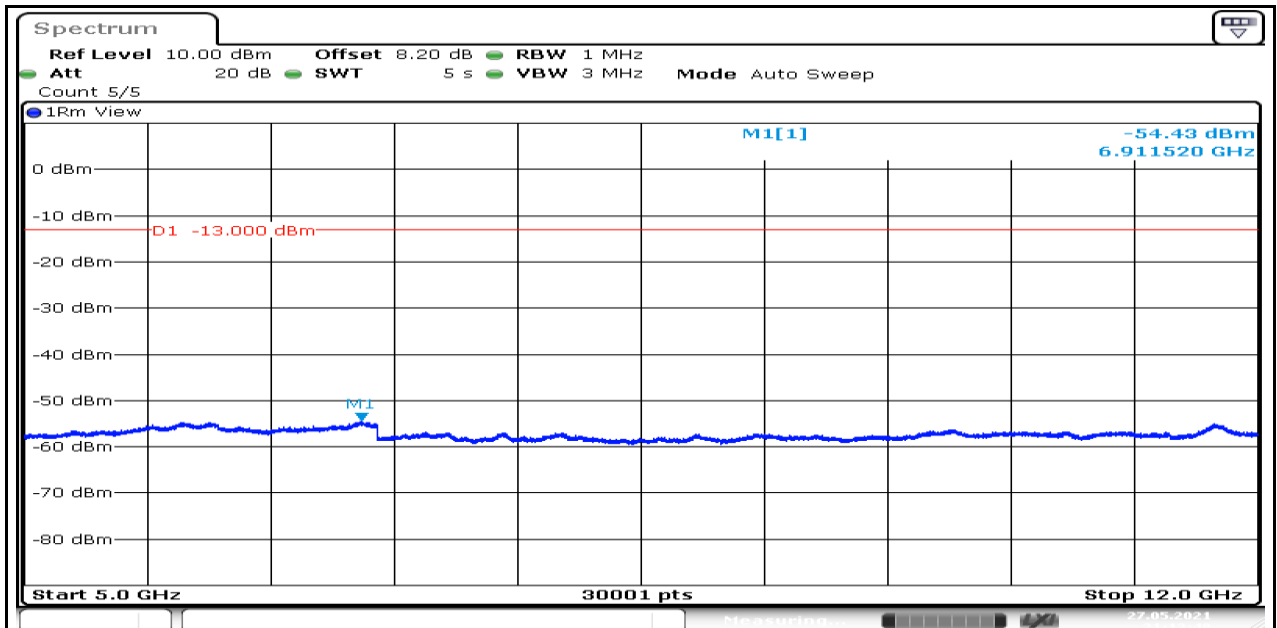
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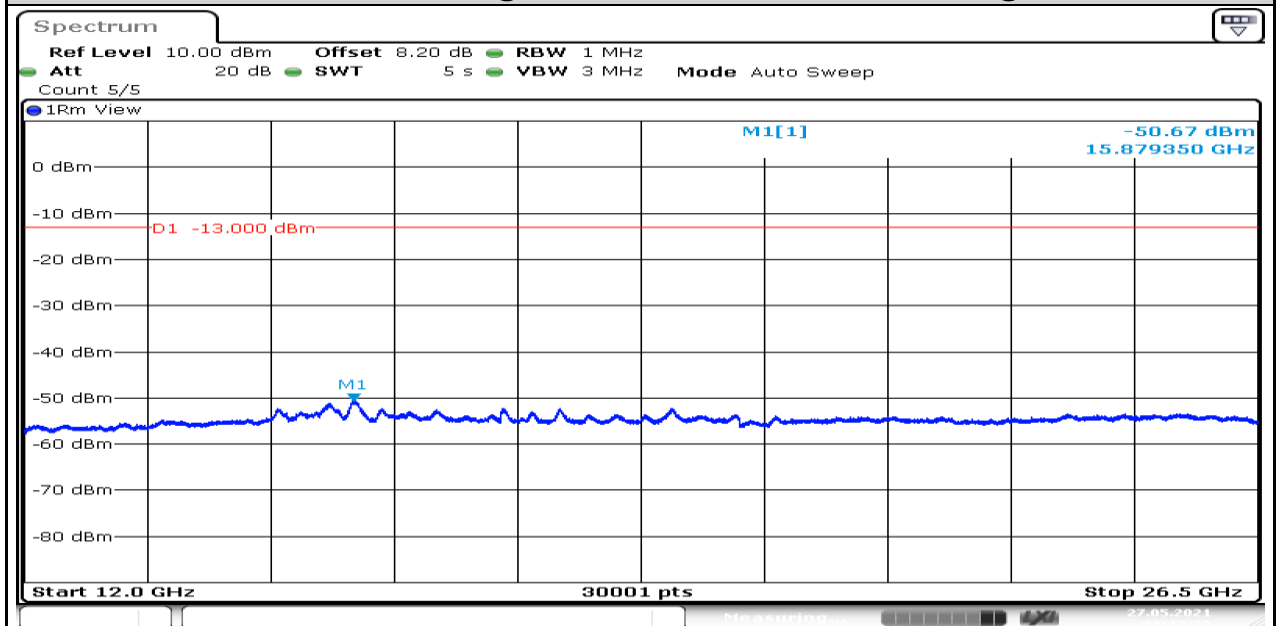
Band85-Stand-Alone-NaN-QPSK-134092-1@47-3.75kHz-1000-5000-1000~5000MHz@-38.47dBm--13-PASS



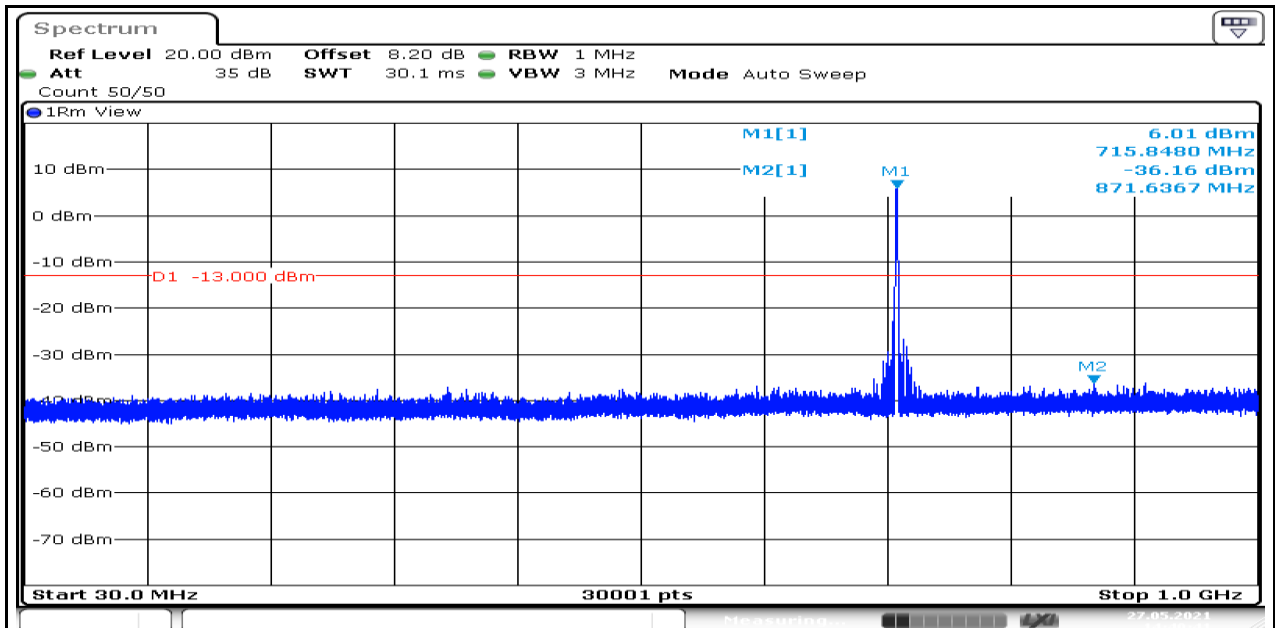
Band85-Stand-Alone-NaN-QPSK-134092-1@47-3.75kHz-5000-12000-5000~12000MHz@-54.43dBm--13-PASS



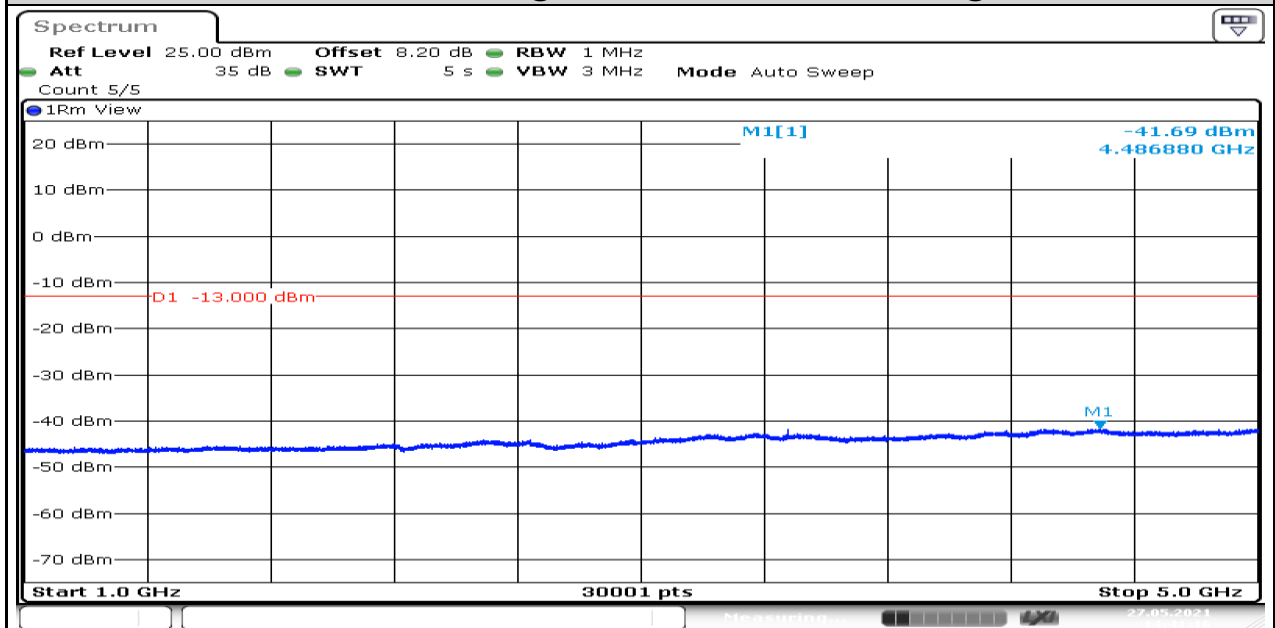
Band85-Stand-Alone-NaN-QPSK-134092-1@47-3.75kHz-12000-26500-12000~26500MHz@-50.67dBm--13-PASS



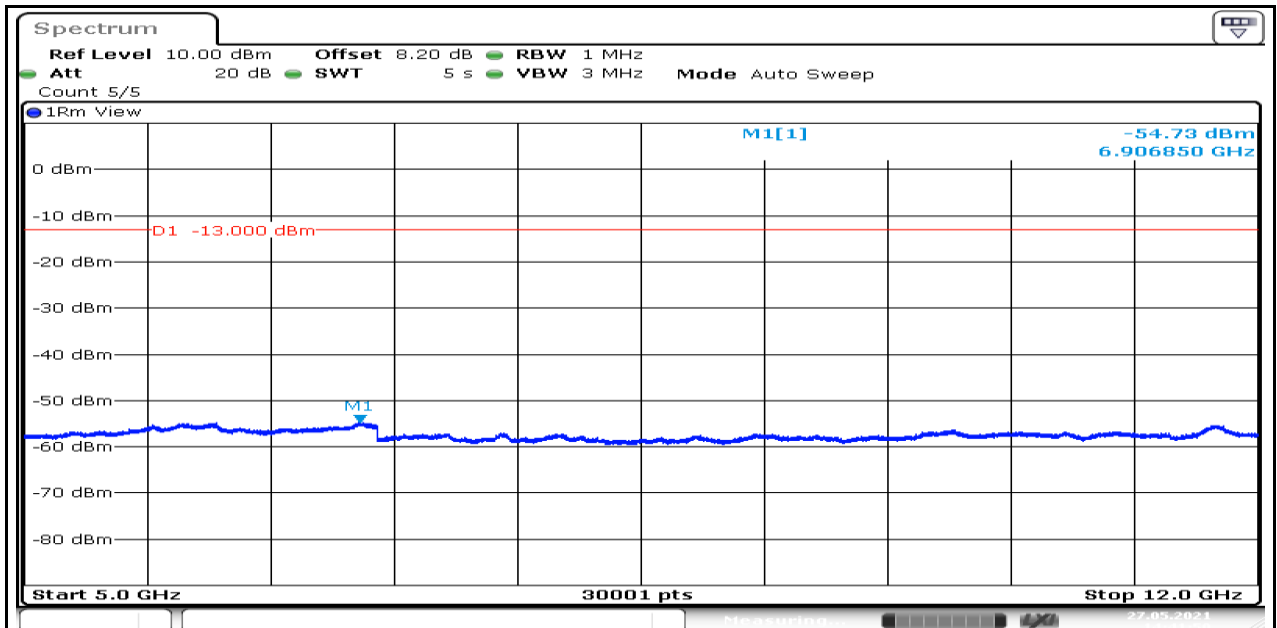
Band85-Stand-Alone-NaN-QPSK-134181-1@0-3.75kHz-30-1000-30~1000MHz@-36.16dBm--13-PASS



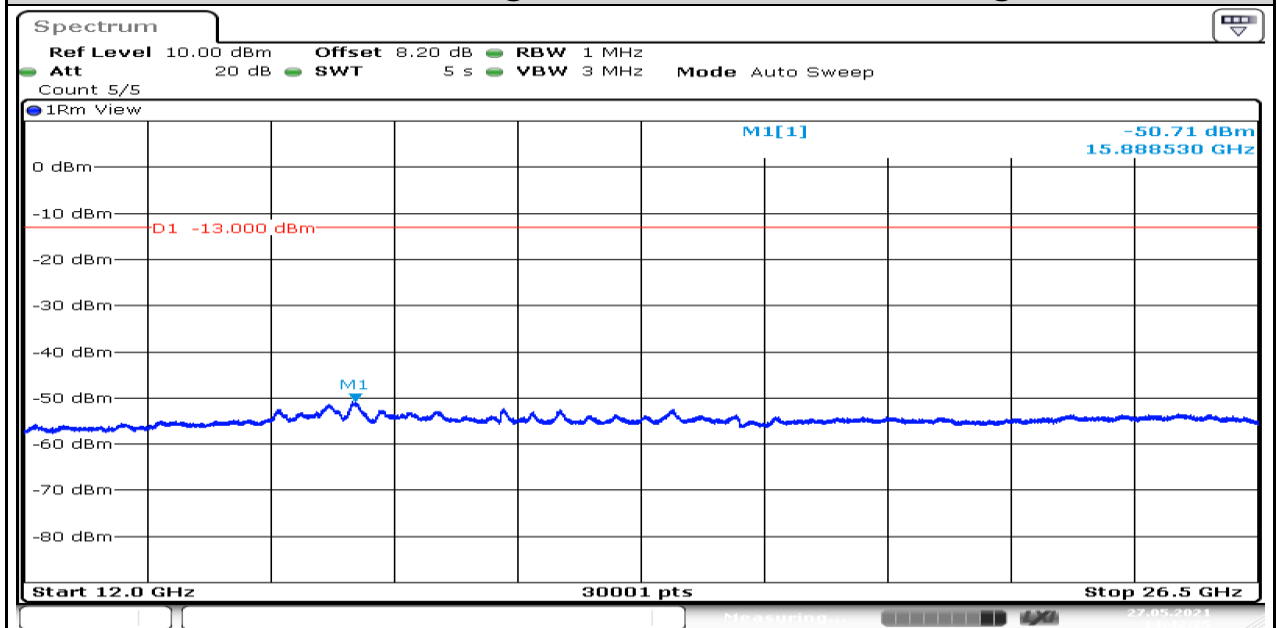
Band85-Stand-Alone-NaN-QPSK-134181-1@0-3.75kHz-1000-5000-1000~5000MHz@-41.69dBm--13-PASS



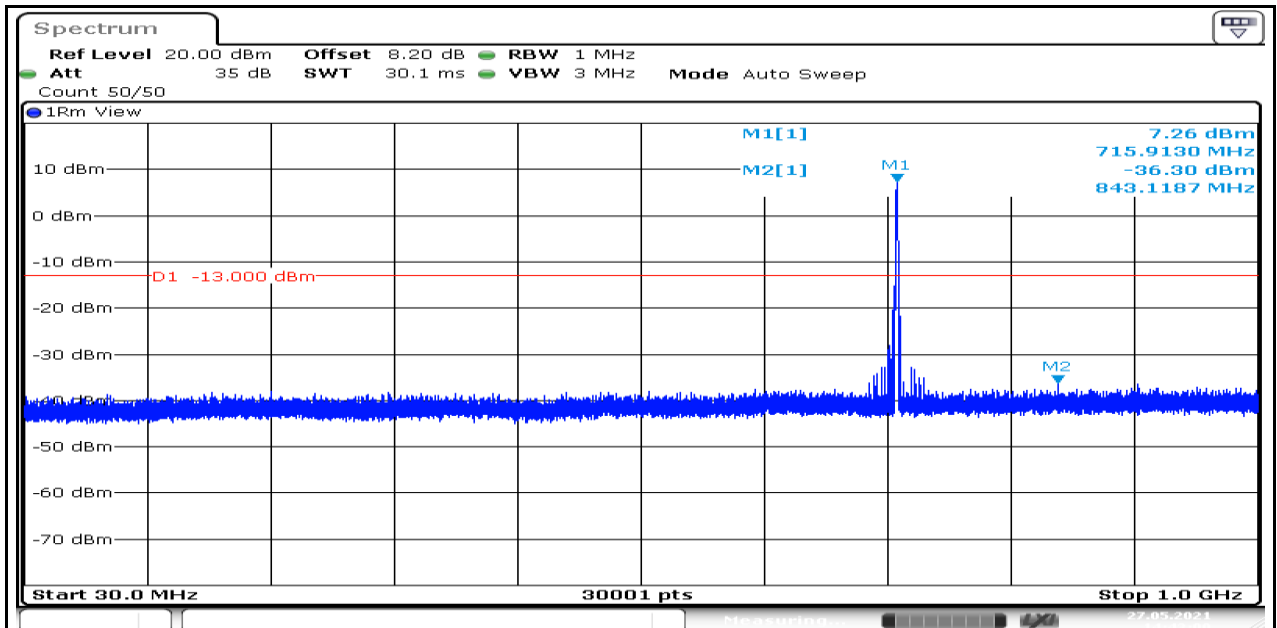
Band85-Stand-Alone-NaN-QPSK-134181-1@0-3.75kHz-5000-12000-5000~12000MHz@-54.73dBm--13-PASS



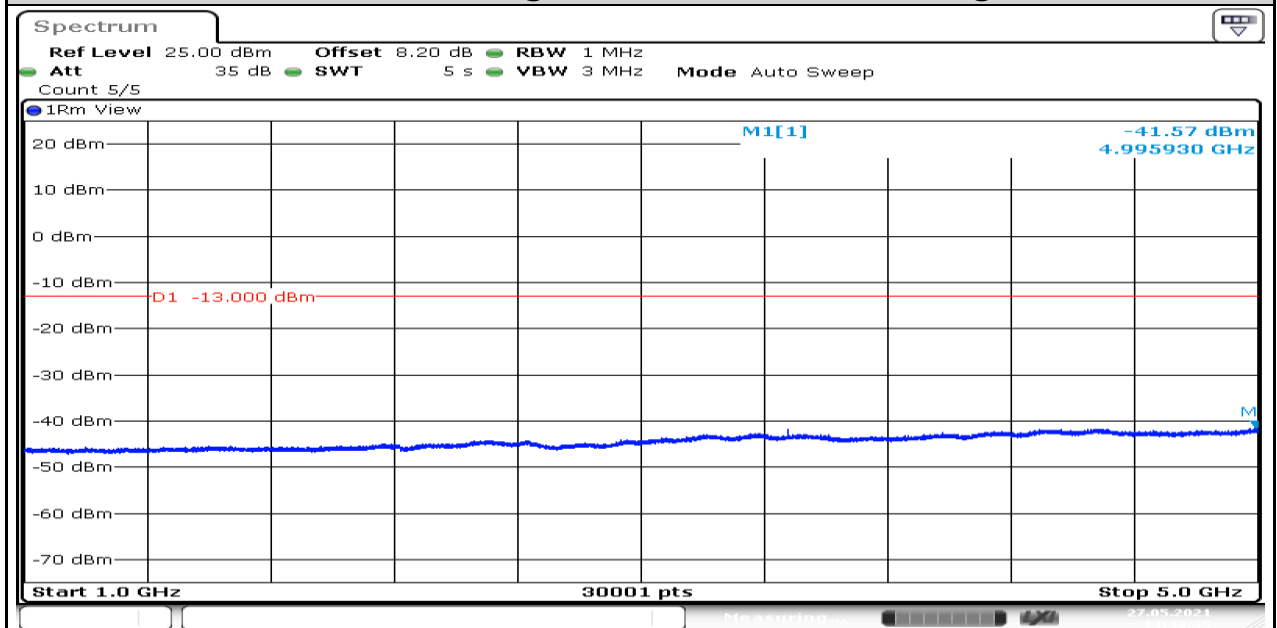
Band85-Stand-Alone-NaN-QPSK-134181-1@0-3.75kHz-12000-26500-12000~26500MHz@-50.71dBm--13-PASS



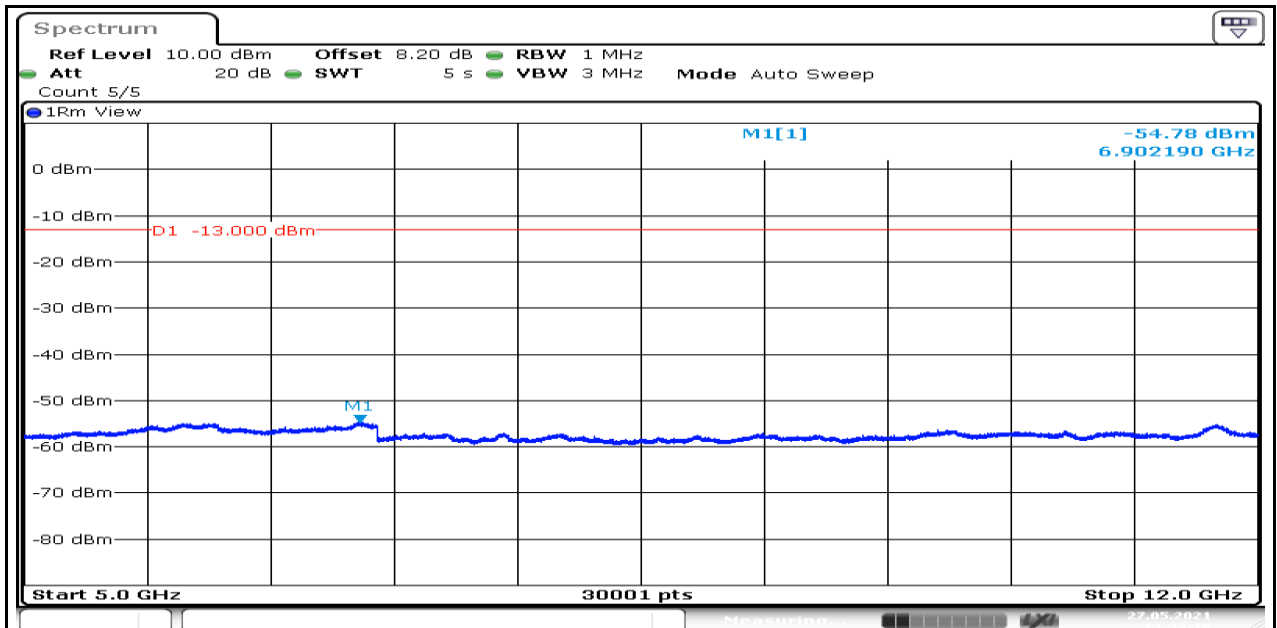
Band85-Stand-Alone-NaN-QPSK-134181-1@47-3.75kHz-30-1000-30~1000MHz@-36.3dBm--13-PASS



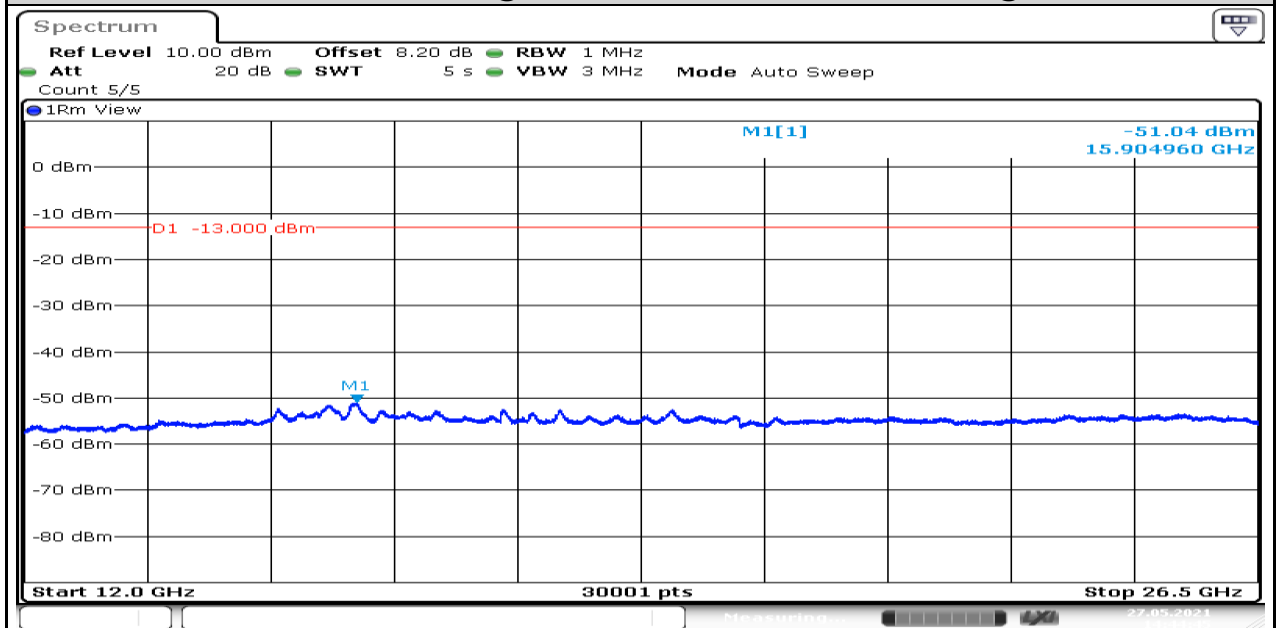
Band85-Stand-Alone-NaN-QPSK-134181-1@47-3.75kHz-1000-5000-1000~5000MHz@-41.57dBm--13-PASS



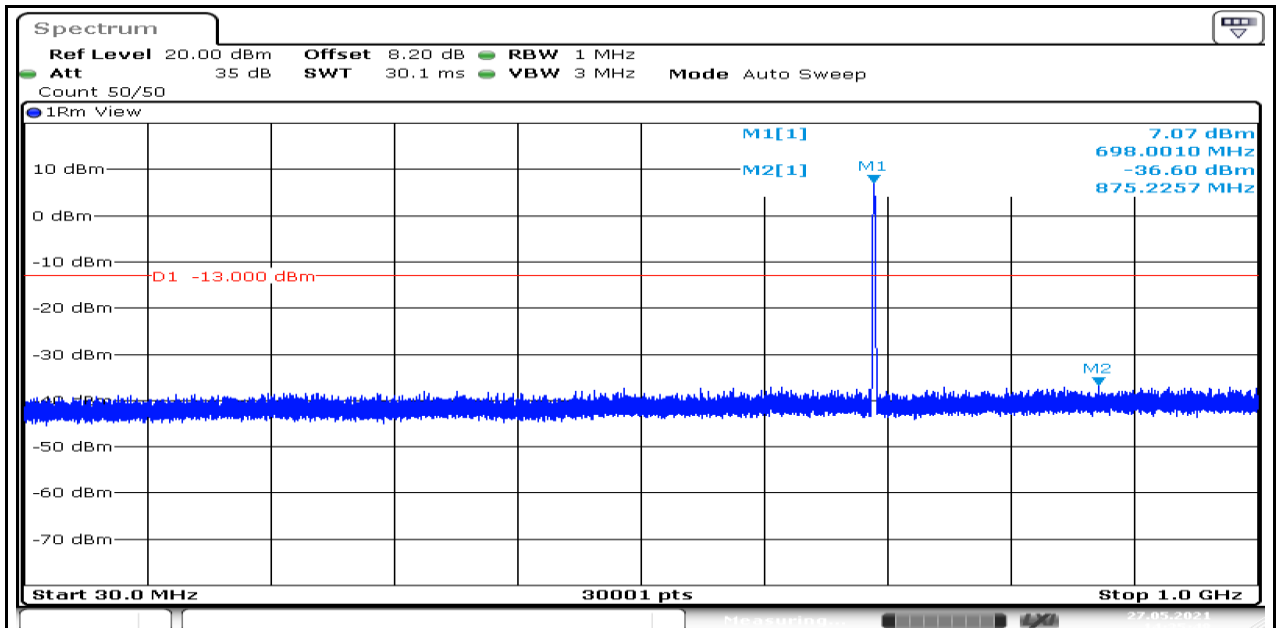
Band85-Stand-Alone-NaN-QPSK-134181-1@47-3.75kHz-5000-12000-5000~12000MHz@-54.78dBm--13-PASS



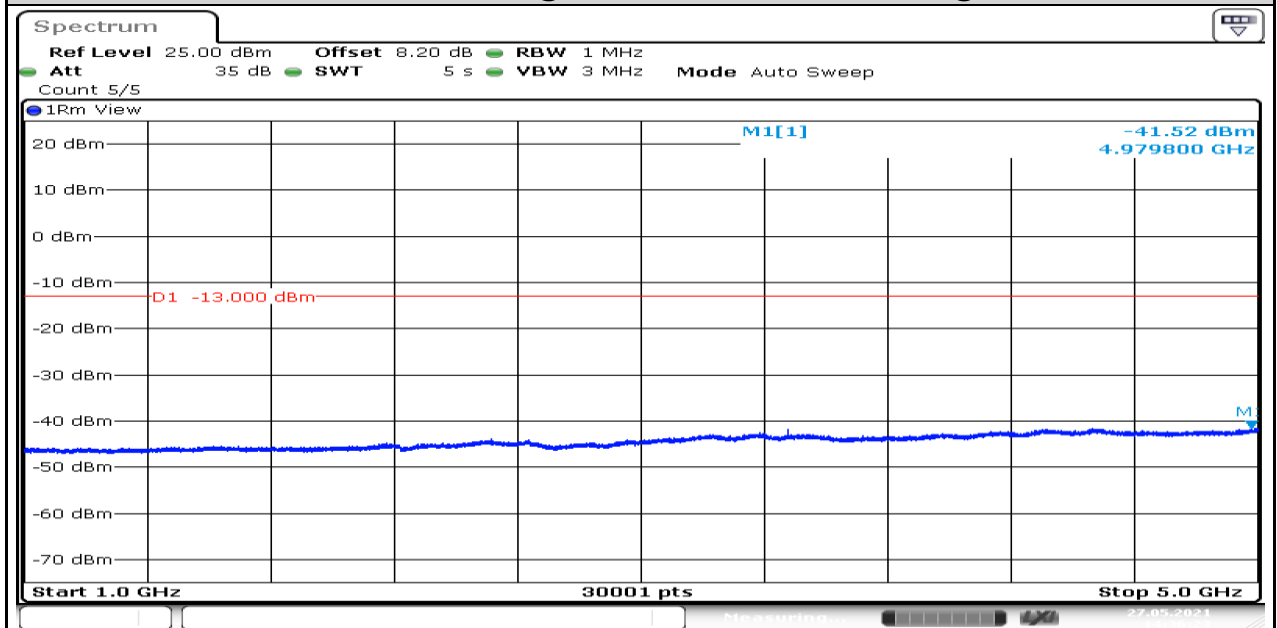
Band85-Stand-Alone-NaN-QPSK-134181-1@47-3.75kHz-12000-26500-12000~26500MHz@-51.04dBm--13-PASS



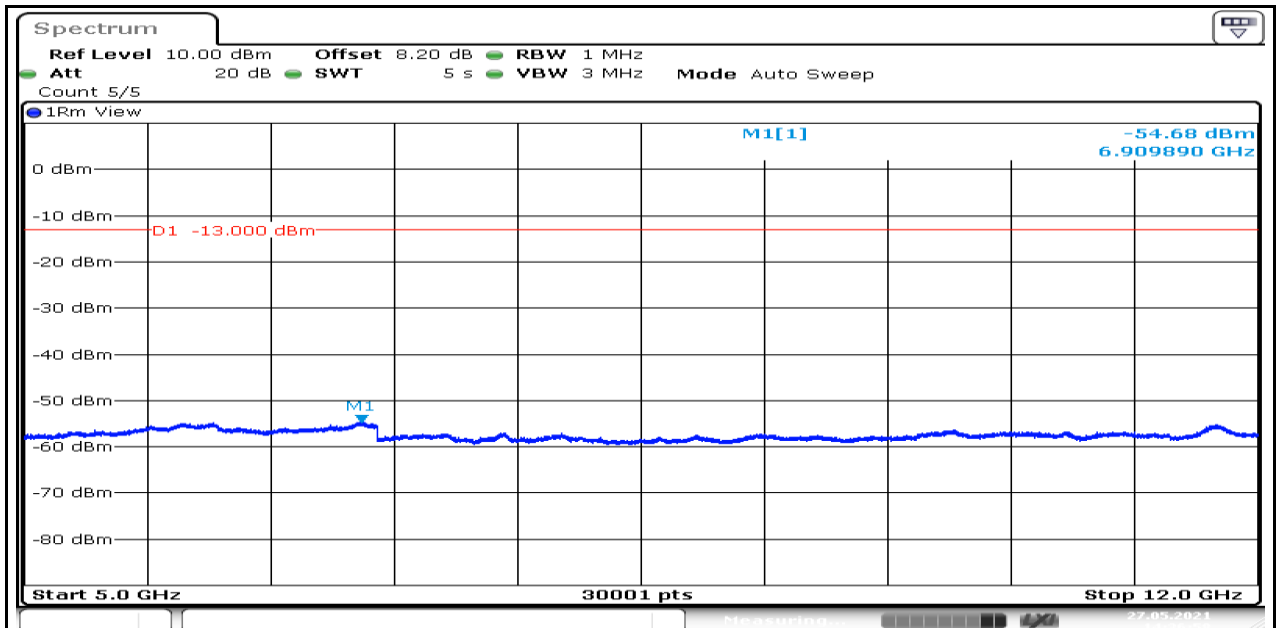
Band85-Stand-Alone-NaN-BPSK-134003-1@0-15kHz-30-1000-30~1000MHz@-36.6dBm--13-PASS



Band85-Stand-Alone-NaN-BPSK-134003-1@0-15kHz-1000-5000-1000~5000MHz@-41.52dBm-13-PASS

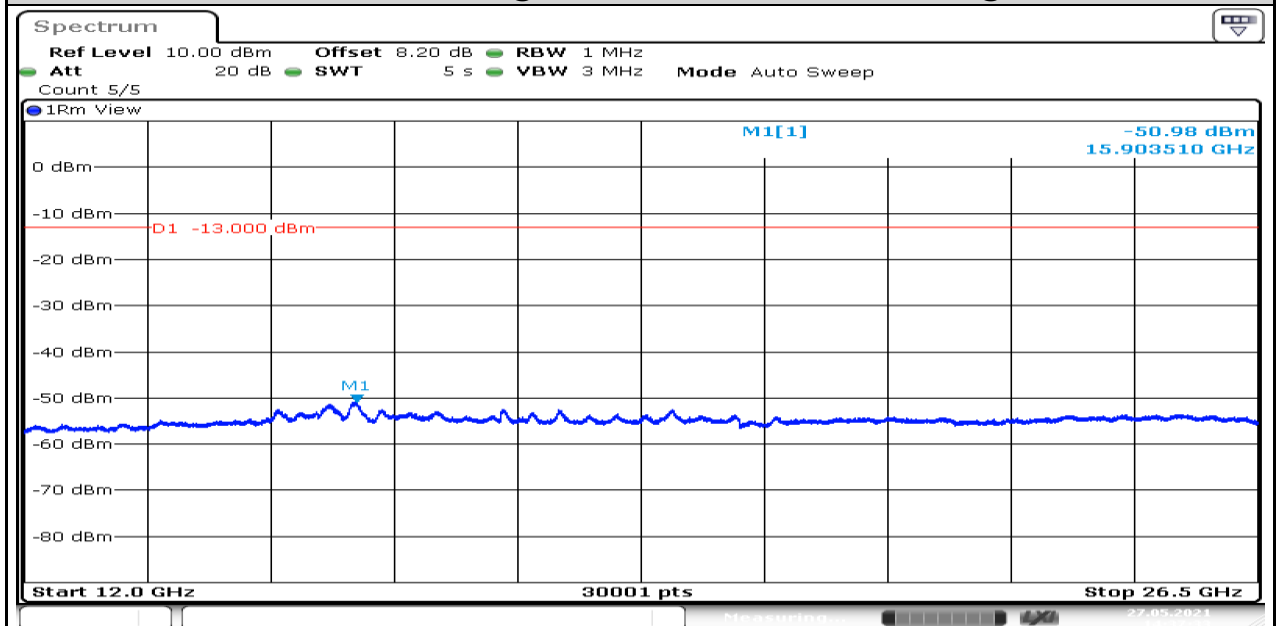


Band85-Stand-Alone-NaN-BPSK-134003-1@0-15kHz-5000-12000-5000~12000MHz@-54.68dBm-13-PASS



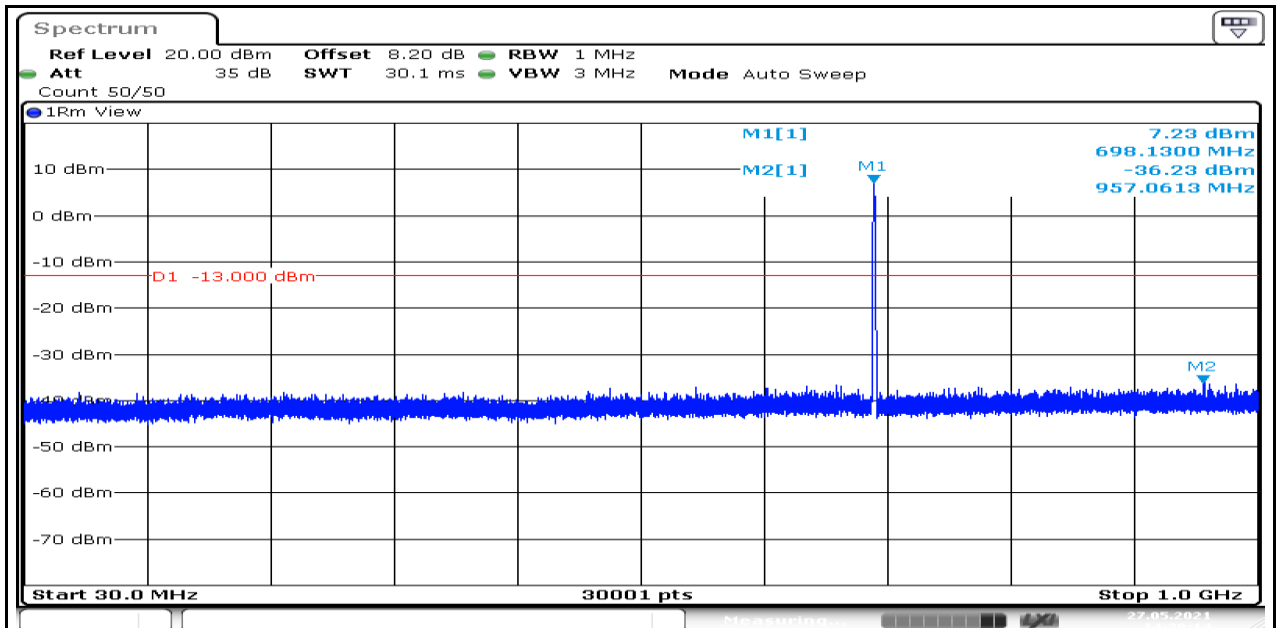
Date: 27.MAY.2021 14:36:58

Band85-Stand-Alone-NaN-BPSK-134003-1@0-15kHz-12000-26500-12000~26500MHz@-50.98dBm--13-PASS

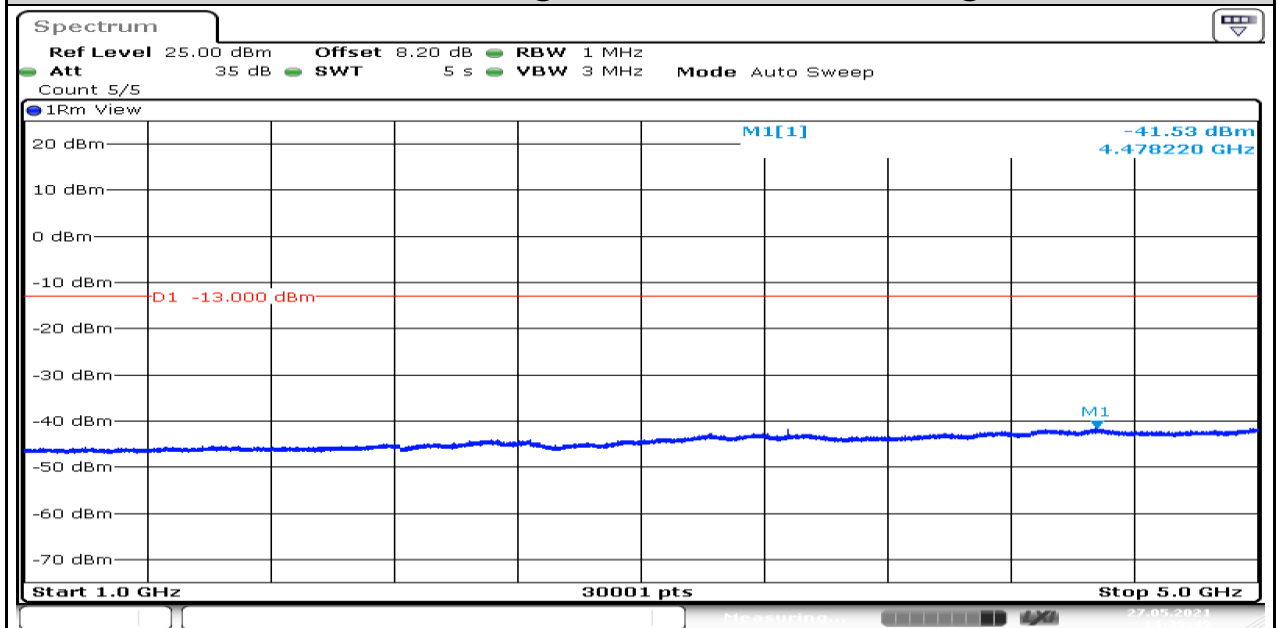


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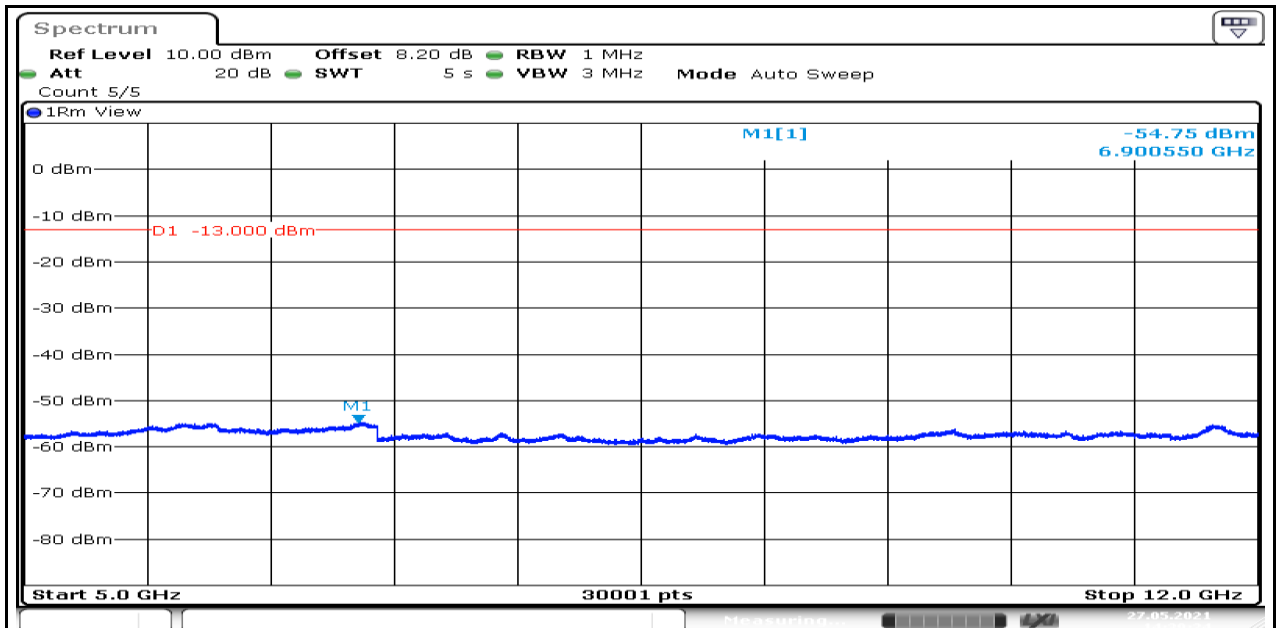
Band85-Stand-Alone-NaN-BPSK-134003-1@11-15kHz-30-1000-30~1000MHz@-36.23dBm--13-PASS



Band85-Stand-Alone-NaN-BPSK-134003-1@11-15kHz-1000-5000-1000~5000MHz@-41.53dBm--13-PASS

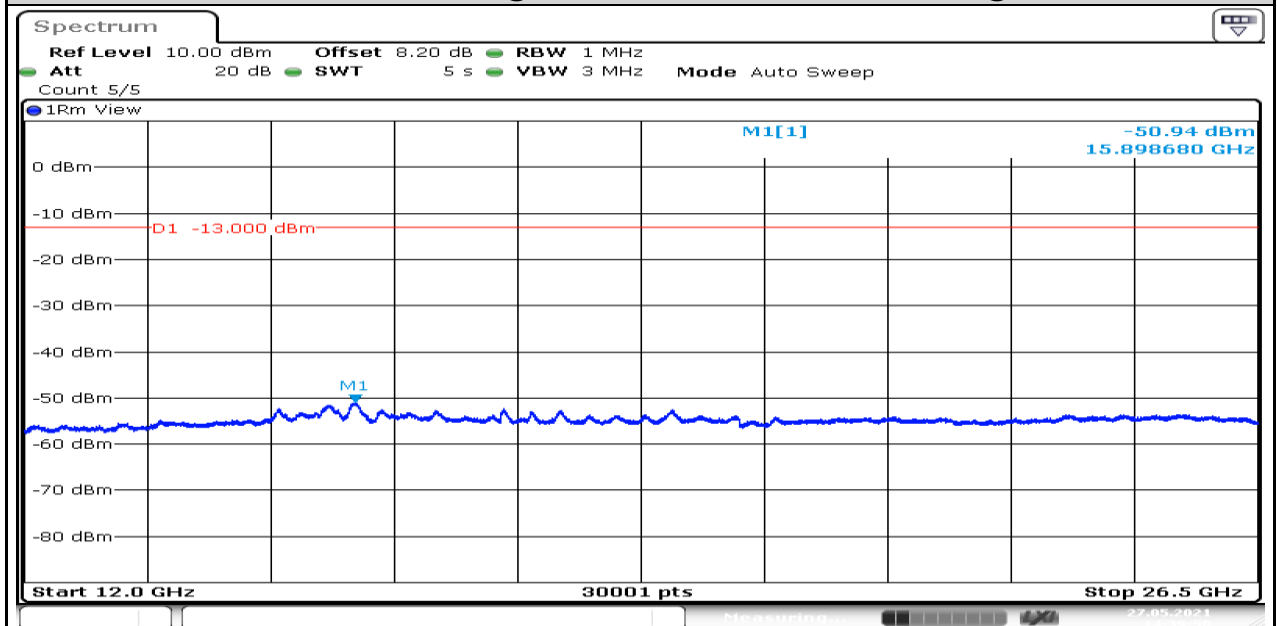


Band85-Stand-Alone-NaN-BPSK-134003-1@11-15kHz-5000-12000-5000~12000MHz@-54.75dBm--13-PASS



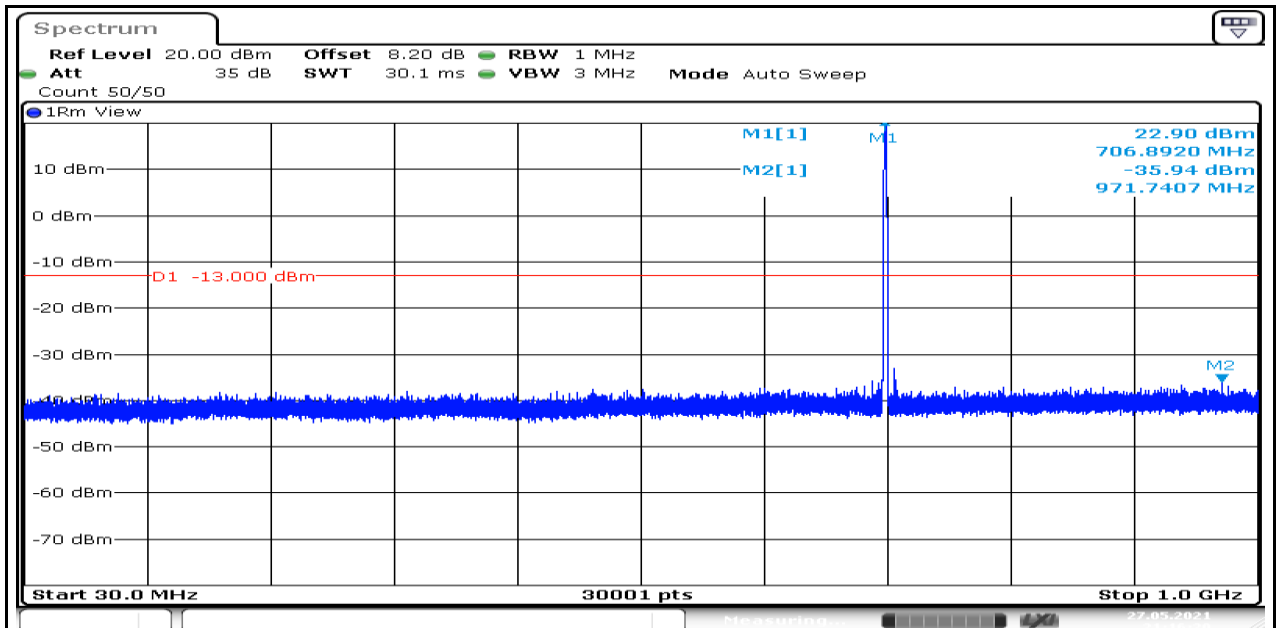
Date: 27.MAY.2021 14:39:24

Band85-Stand-Alone-NaN-BPSK-134003-1@11-15kHz-12000-26500-12000~26500MHz@-50.94dBm--13-PASS



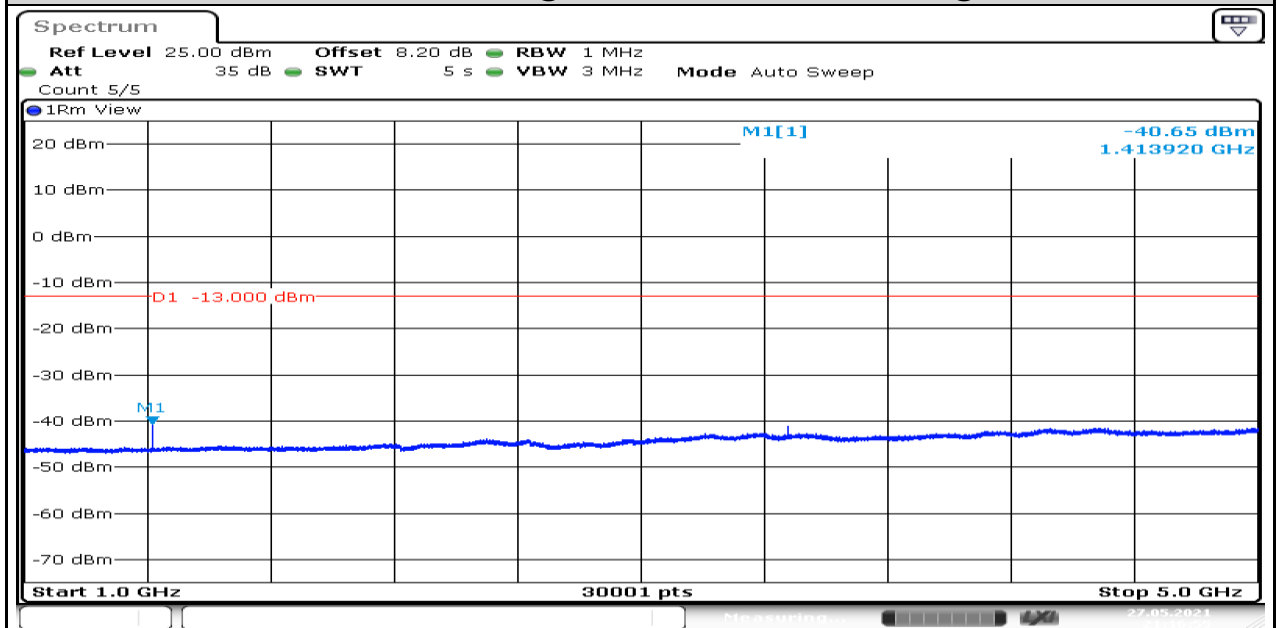
Date: 27.MAY.2021 14:39:59

Band85-Stand-Alone-NaN-BPSK-134092-1@0-15kHz-30-1000-30~1000MHz@-35.94dBm--13-PASS



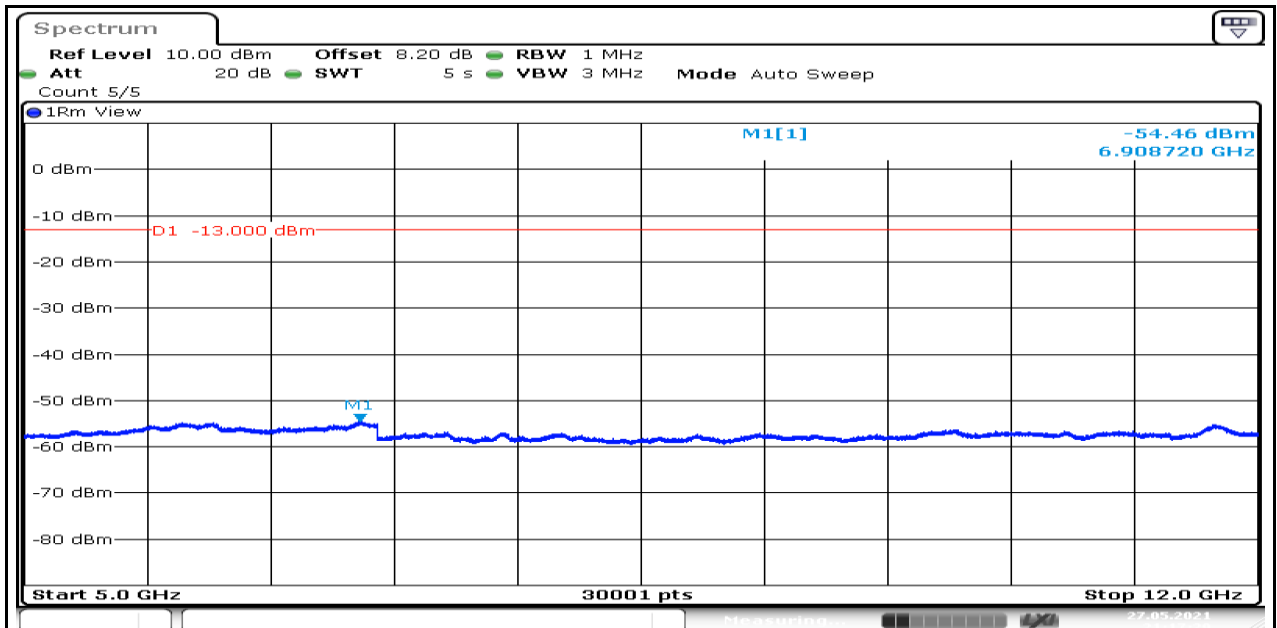
Date: 27.MAY.2021 21:16:20

Band85-Stand-Alone-NaN-BPSK-134092-1@0-15kHz-1000-5000-1000~5000MHz@-40.65dBm-13-PASS



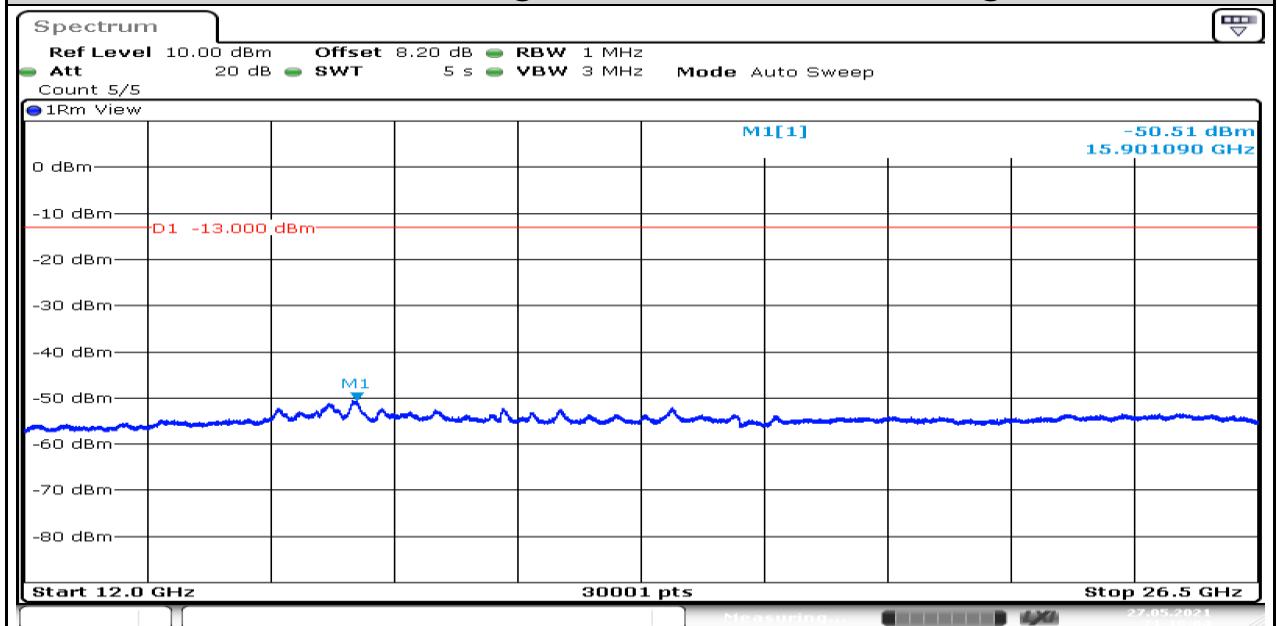
Date: 27.MAY.2021 21:16:55

Band85-Stand-Alone-NaN-BPSK-134092-1@0-15kHz-5000-12000-5000~12000MHz@-54.46dBm-13-PASS



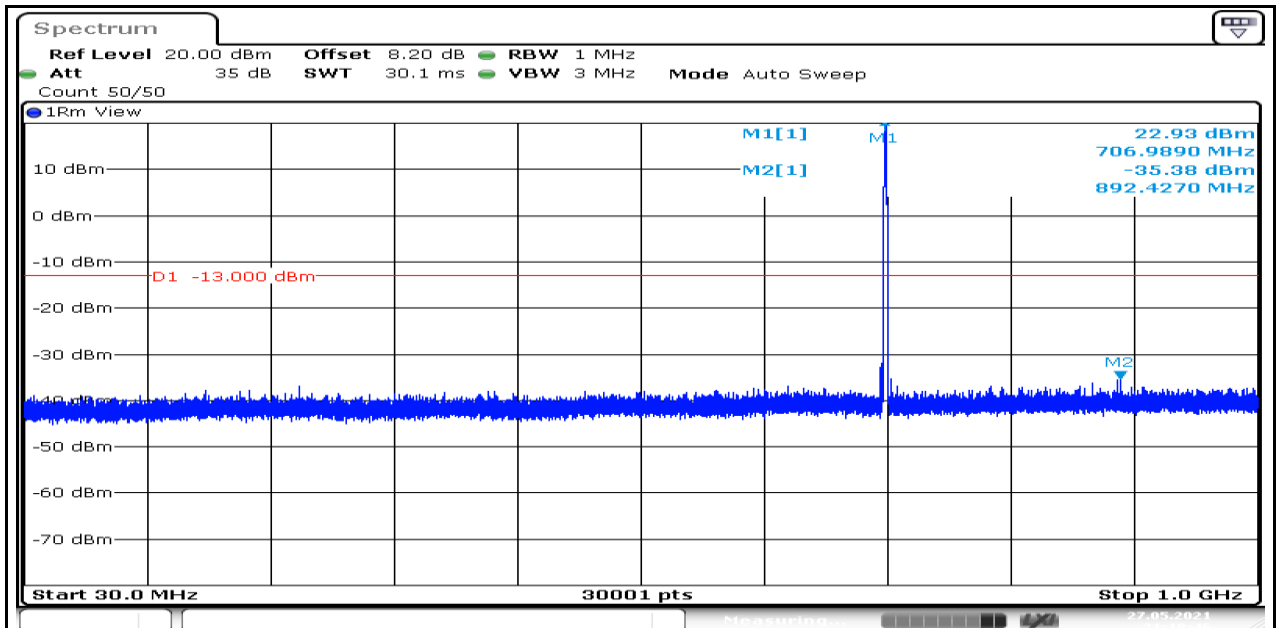
Date: 27.MAY.2021 21:17:30

Band85-Stand-Alone-NaN-BPSK-134092-1@0-15kHz-12000-26500-12000~26500MHz@-50.51dBm--13-PASS

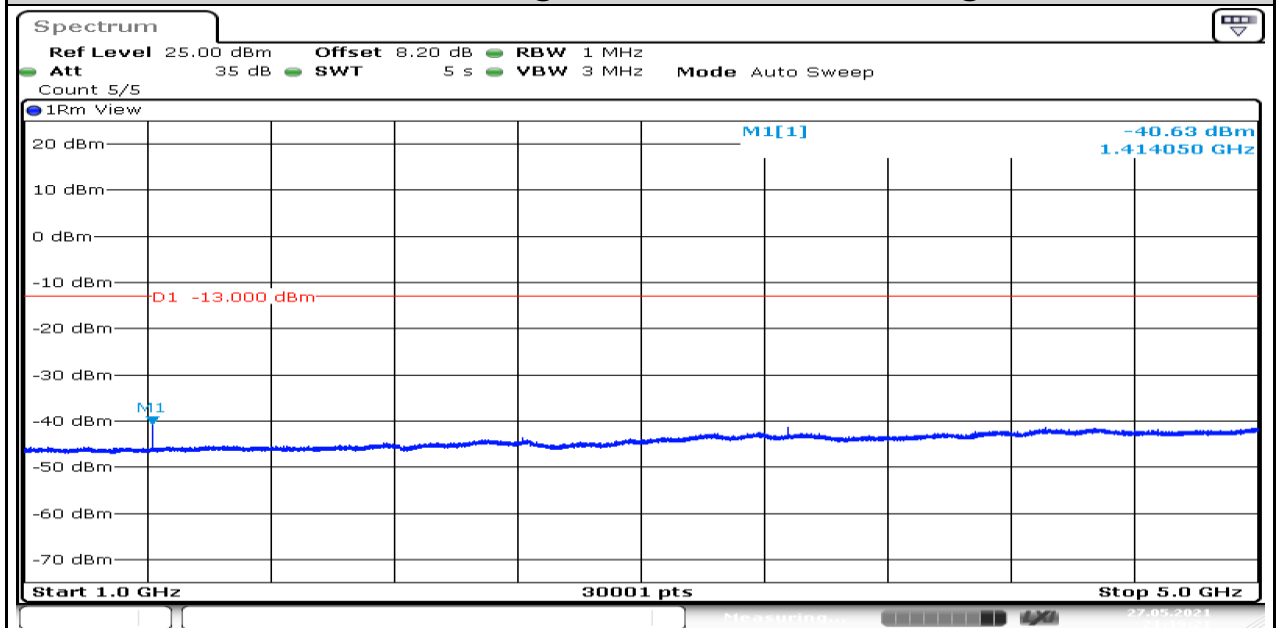


Date: 27.MAY.2021 21:18:05

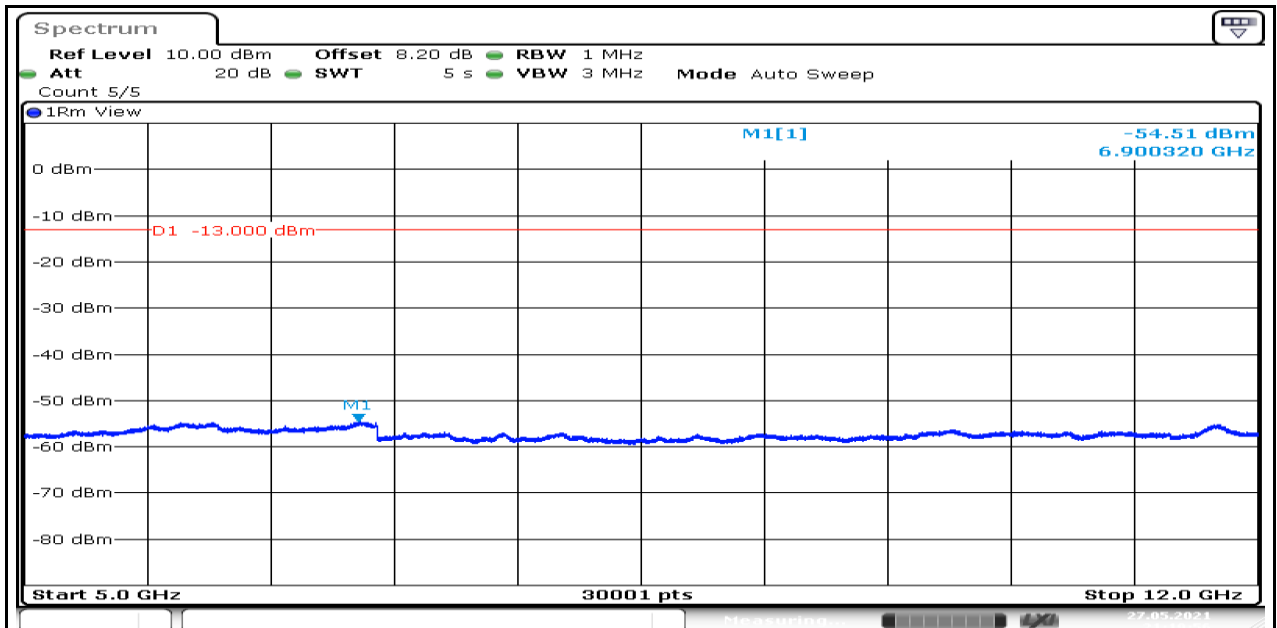
Band85-Stand-Alone-NaN-BPSK-134092-1@11-15kHz-30-1000-30~1000MHz@-35.38dBm--13-PASS



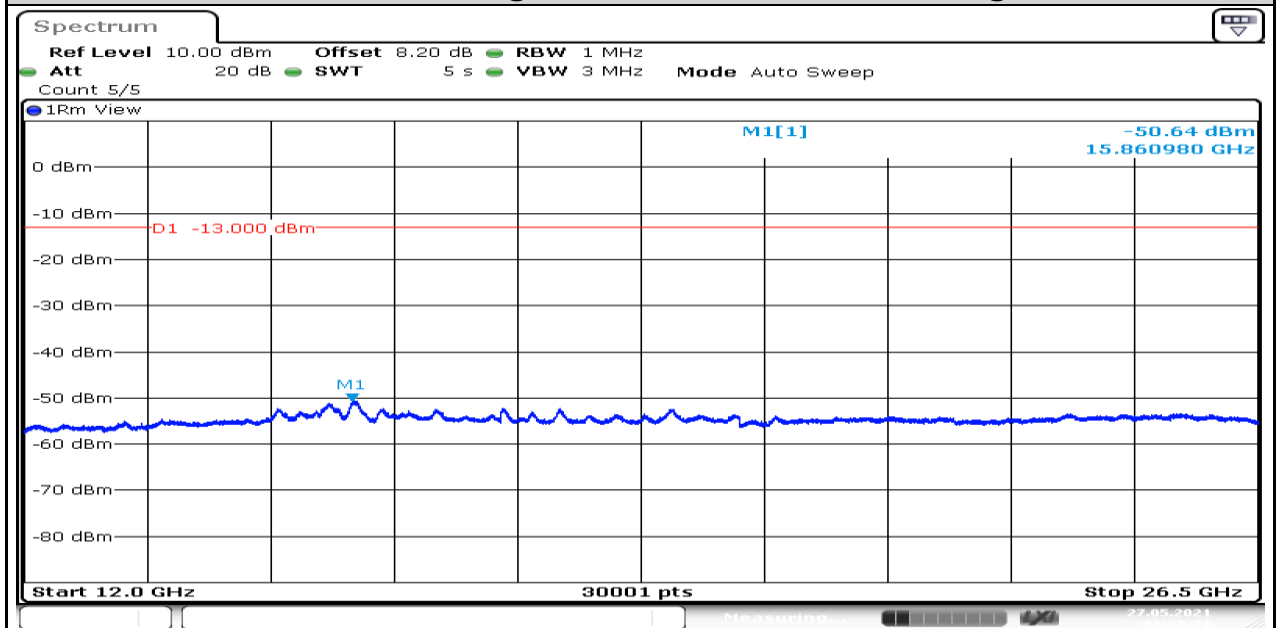
Band85-Stand-Alone-NaN-BPSK-134092-1@11-15kHz-1000-5000-1000~5000MHz@-40.63dBm--13-PASS



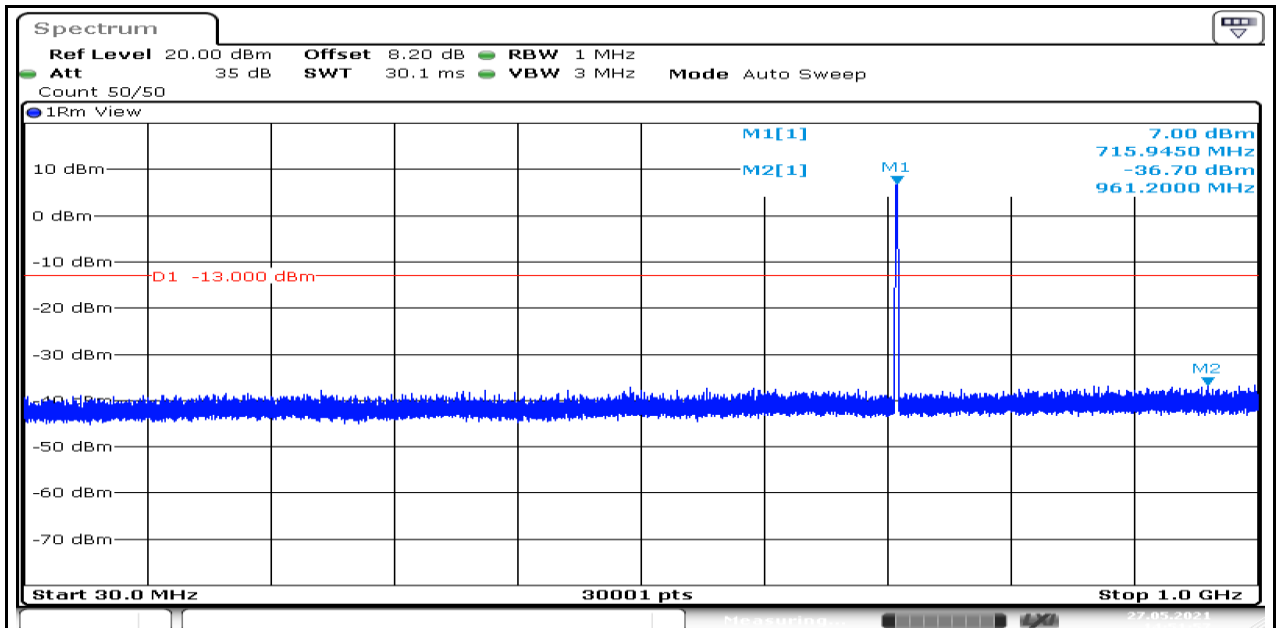
Band85-Stand-Alone-NaN-BPSK-134092-1@11-15kHz-5000-12000-5000~12000MHz@-54.51dBm--13-PASS



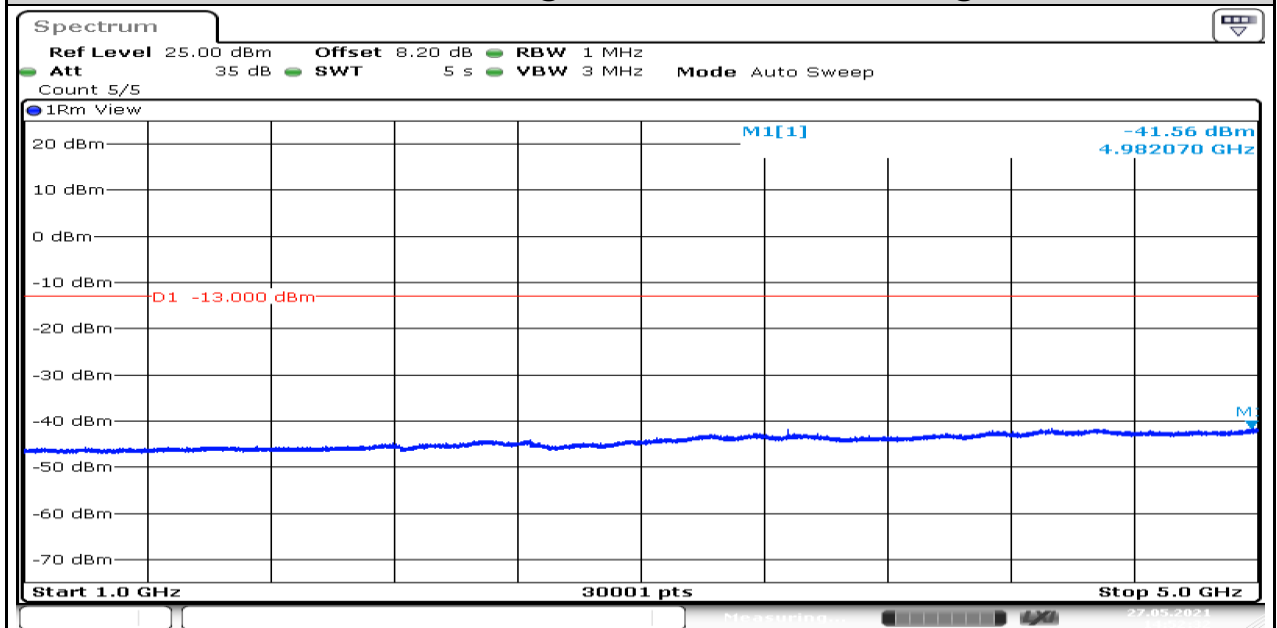
Band85-Stand-Alone-NaN-BPSK-134092-1@11-15kHz-12000-26500-12000~26500MHz@-50.64dBm--13-PASS



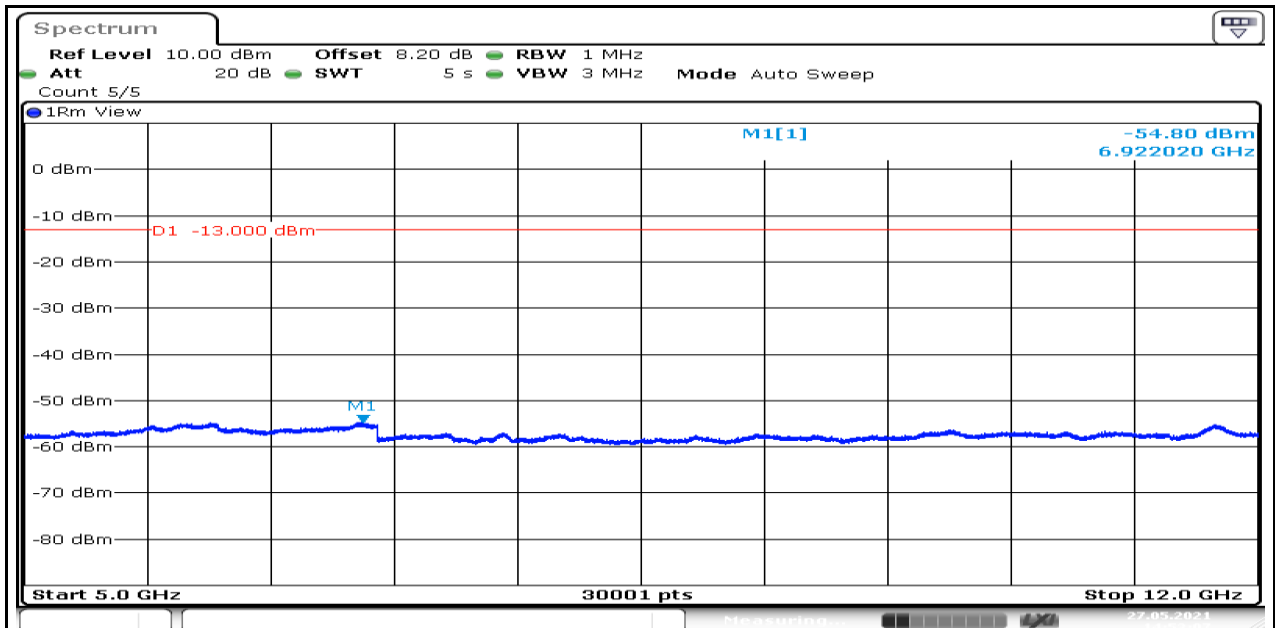
Band85-Stand-Alone-NaN-BPSK-134181-1@0-15kHz-30-1000-30~1000MHz@-36.7dBm--13-PASS



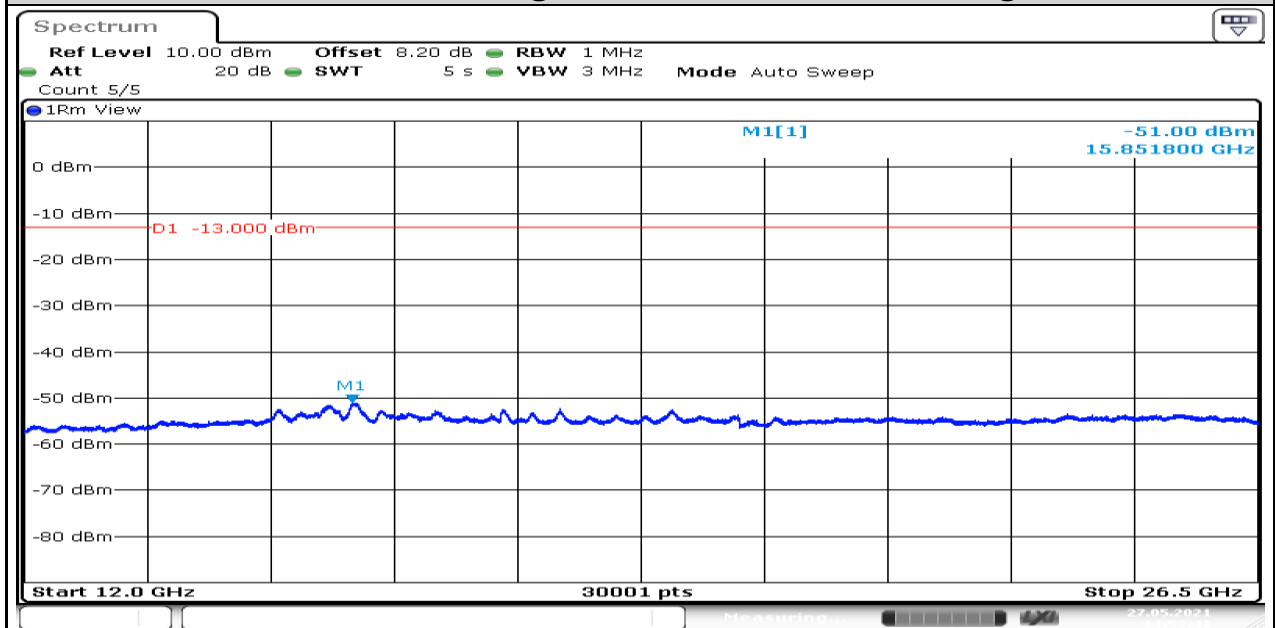
Band85-Stand-Alone-NaN-BPSK-134181-1@0-15kHz-1000-5000-1000~5000MHz@-41.56dBm--13-PASS



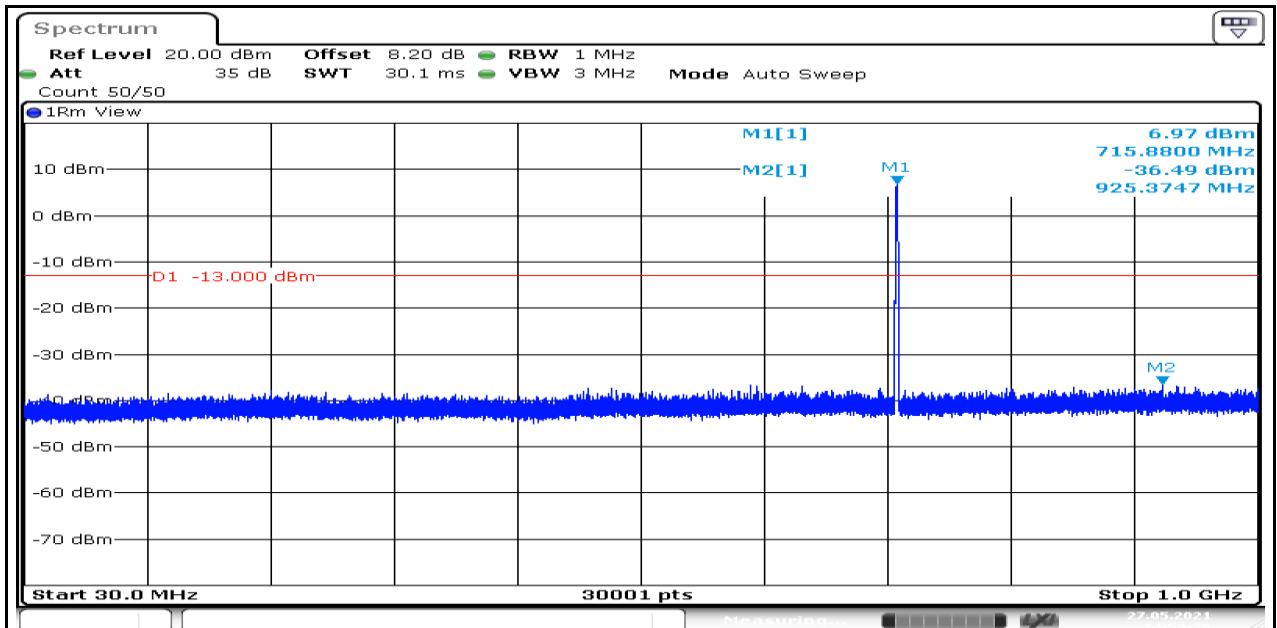
Band85-Stand-Alone-NaN-BPSK-134181-1@0-15kHz-5000-12000-5000~12000MHz@-54.8dBm--13-PASS



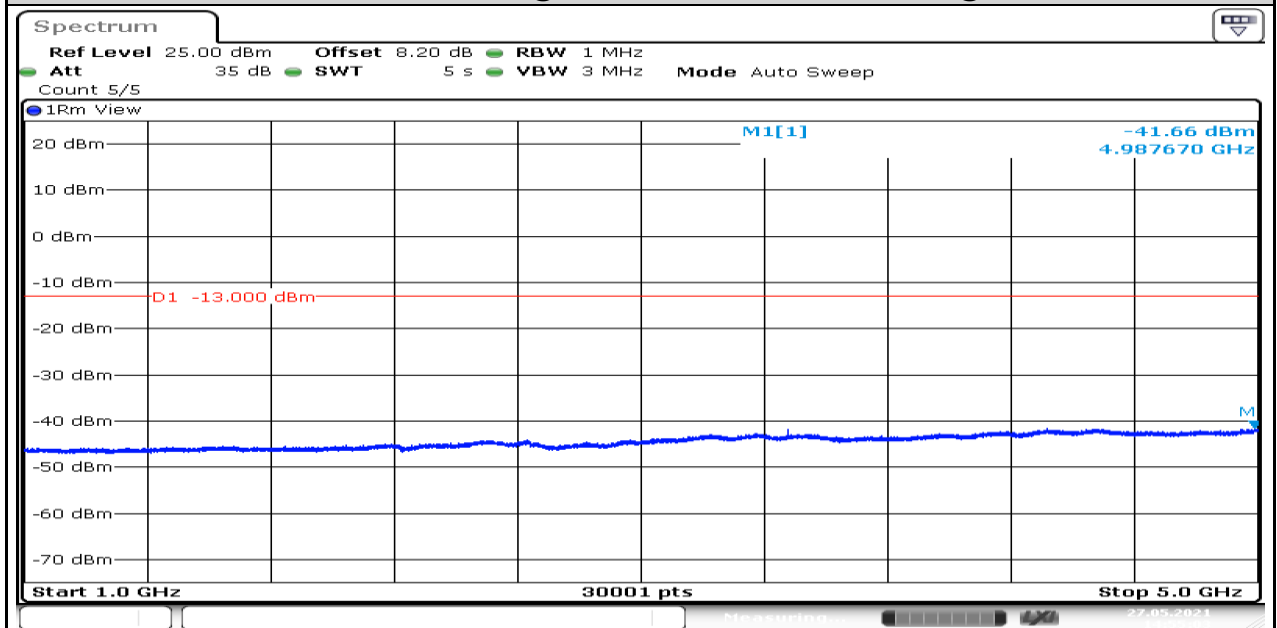
Band85-Stand-Alone-NaN-BPSK-134181-1@0-15kHz-12000-26500-12000~26500MHz@-51dBm--13-PASS



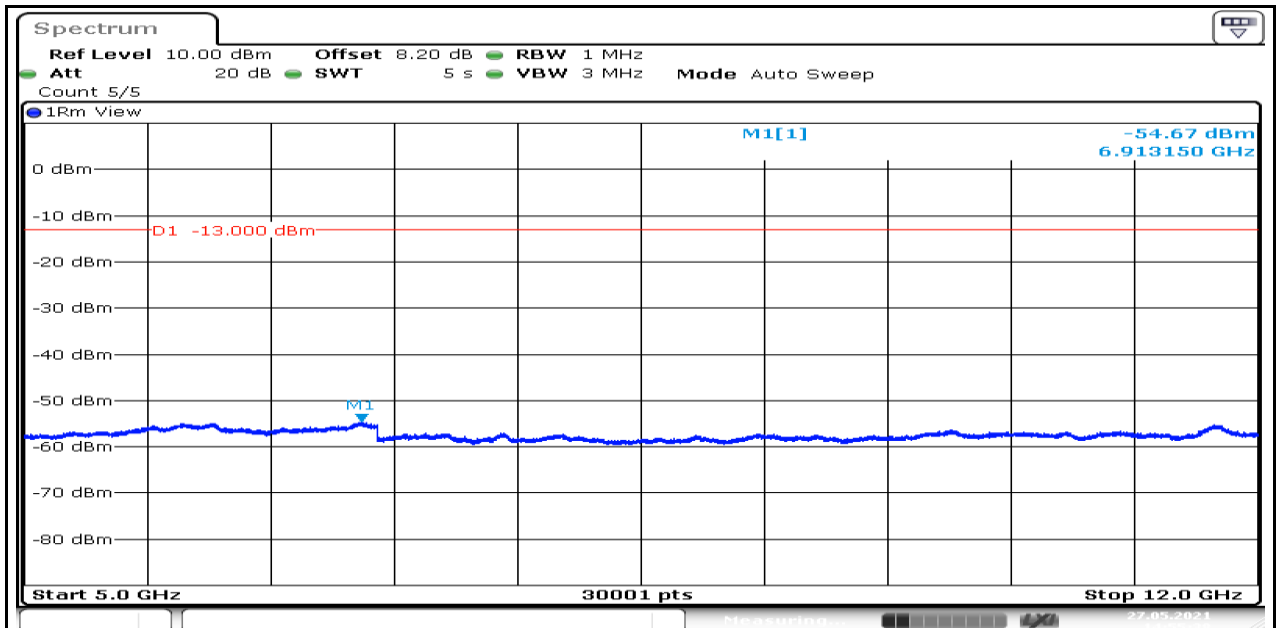
Band85-Stand-Alone-NaN-BPSK-134181-1@11-15kHz-30-1000-30~1000MHz@-36.49dBm--13-PASS



Band85-Stand-Alone-NaN-BPSK-134181-1@11-15kHz-1000-5000-1000~5000MHz@-41.66dBm--13-PASS

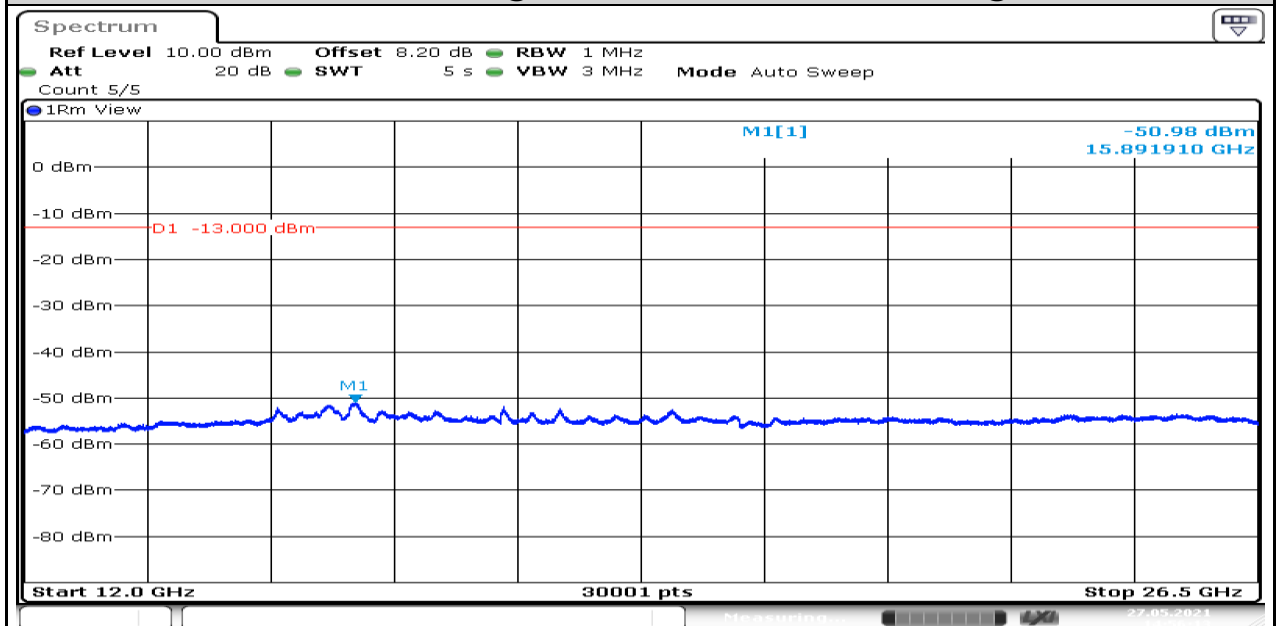


Band85-Stand-Alone-NaN-BPSK-134181-1@11-15kHz-5000-12000-5000~12000MHz@-54.67dBm--13-PASS



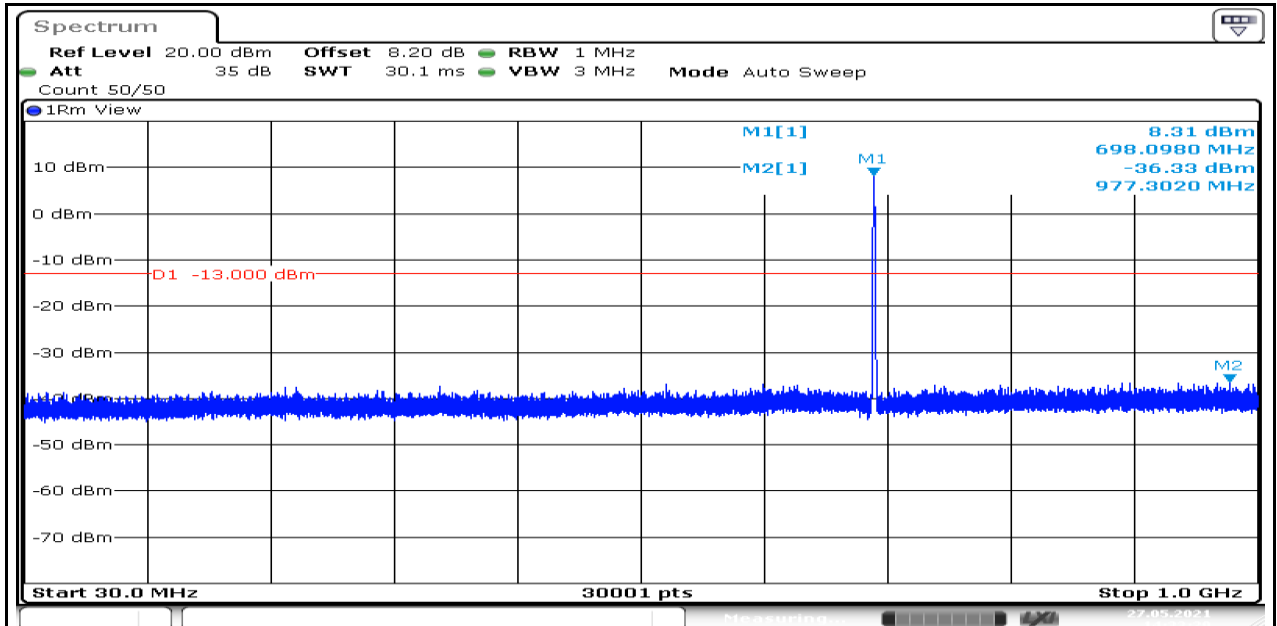
Date: 27.MAY.2021 14:55:38

Band85-Stand-Alone-NaN-BPSK-134181-1@11-15kHz-12000-26500-12000~26500MHz@-50.98dBm--13-PASS



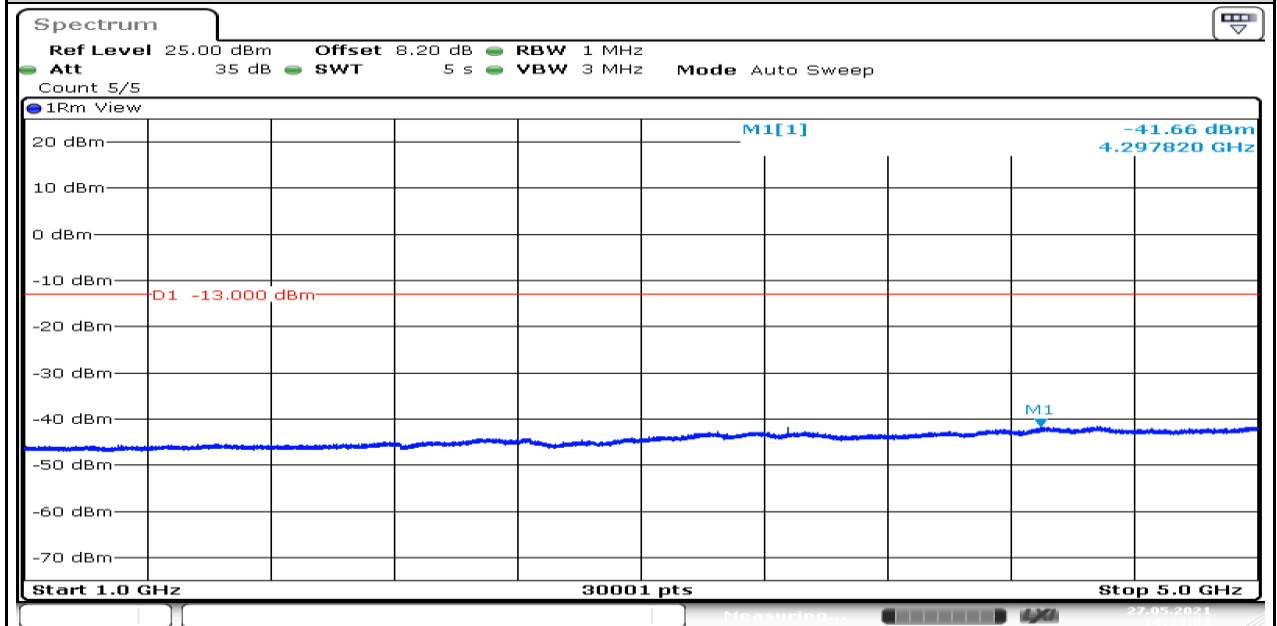
Date: 27.MAY.2021 14:56:13

Band85-Stand-Alone-NaN-QPSK-134003-12@0-15kHz-30-1000-30~1000MHz@-36.33dBm--13-PASS



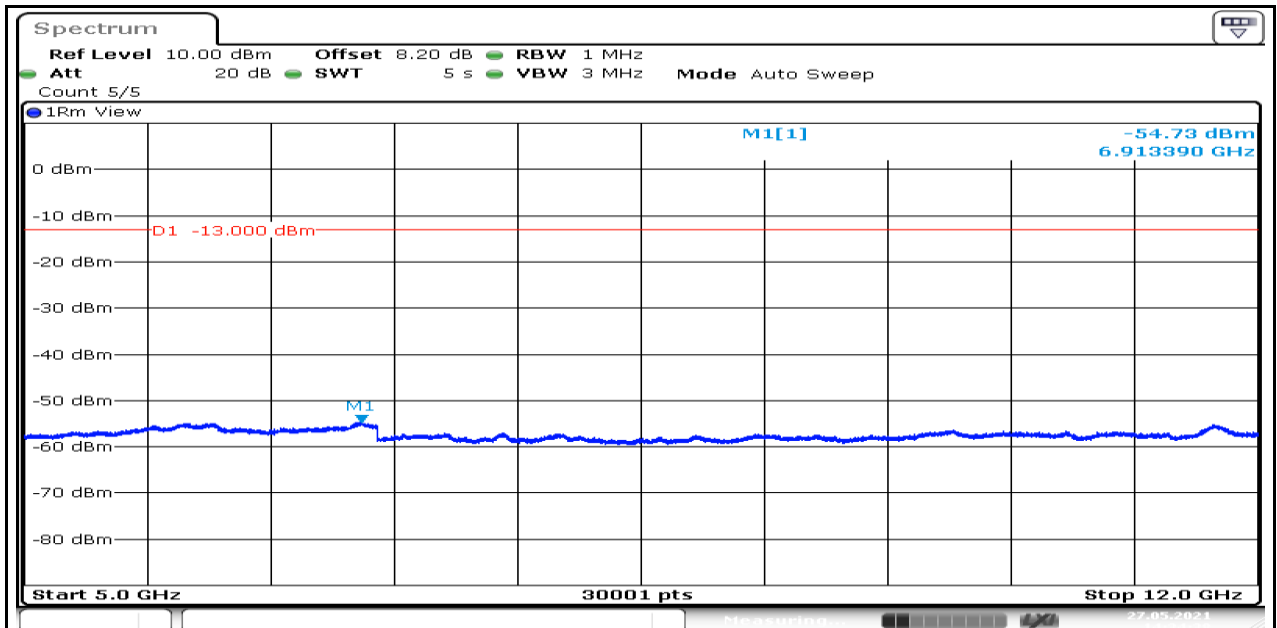
Date: 27.MAY.2021 14:33:29

Band85-Stand-Alone-NaN-QPSK-134003-12@0-15kHz-1000-5000-1000~5000MHz@-41.66dBm--13-PASS



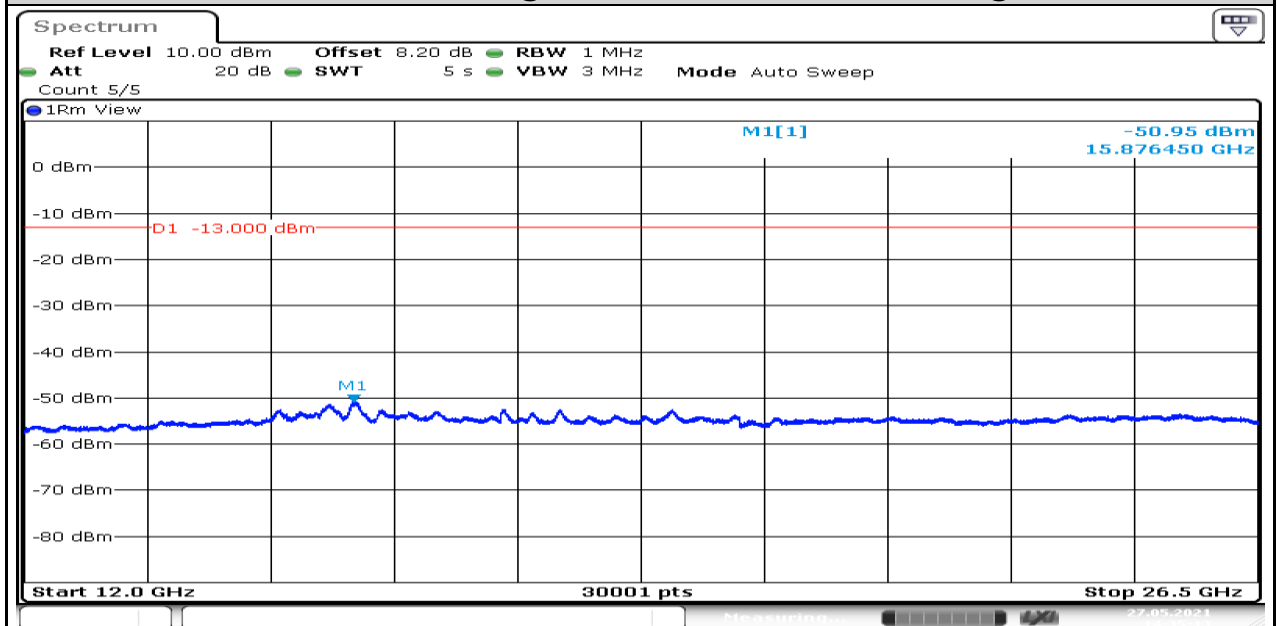
Date: 27.MAY.2021 14:34:04

Band85-Stand-Alone-NaN-QPSK-134003-12@0-15kHz-5000-12000-5000~12000MHz@-54.73dBm--13-PASS



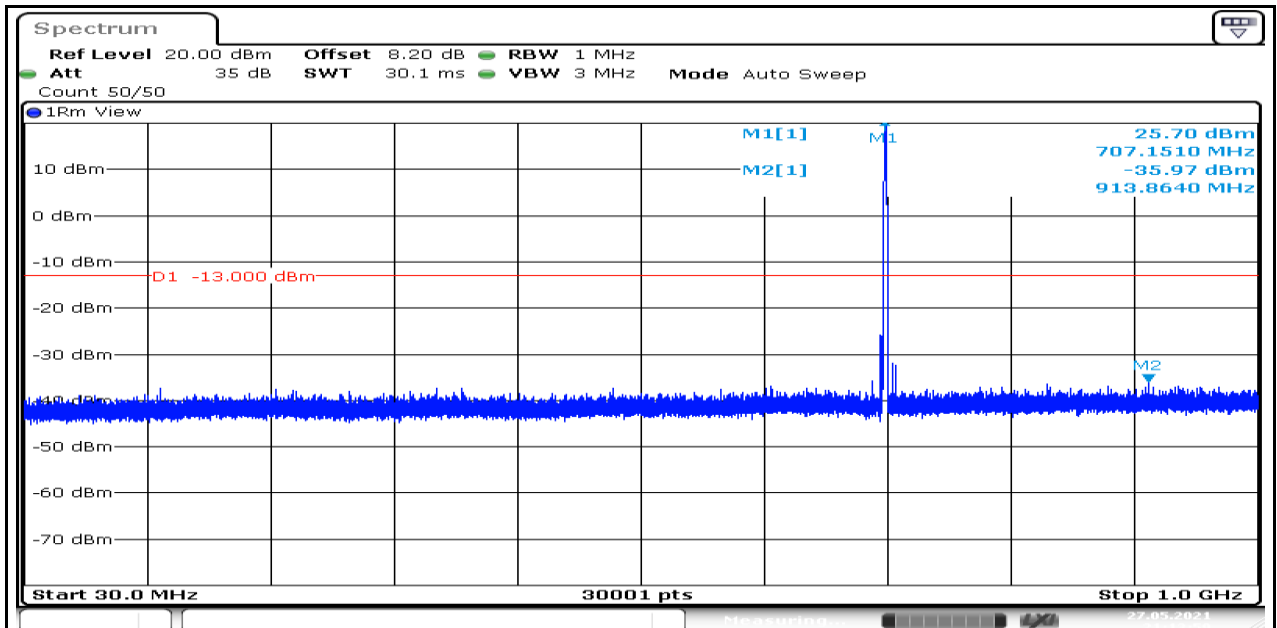
Date: 27.MAY.2021 14:34:39

Band85-Stand-Alone-NaN-QPSK-134003-12@0-15kHz-12000-26500-12000~26500MHz@-50.95dBm--13-PASS

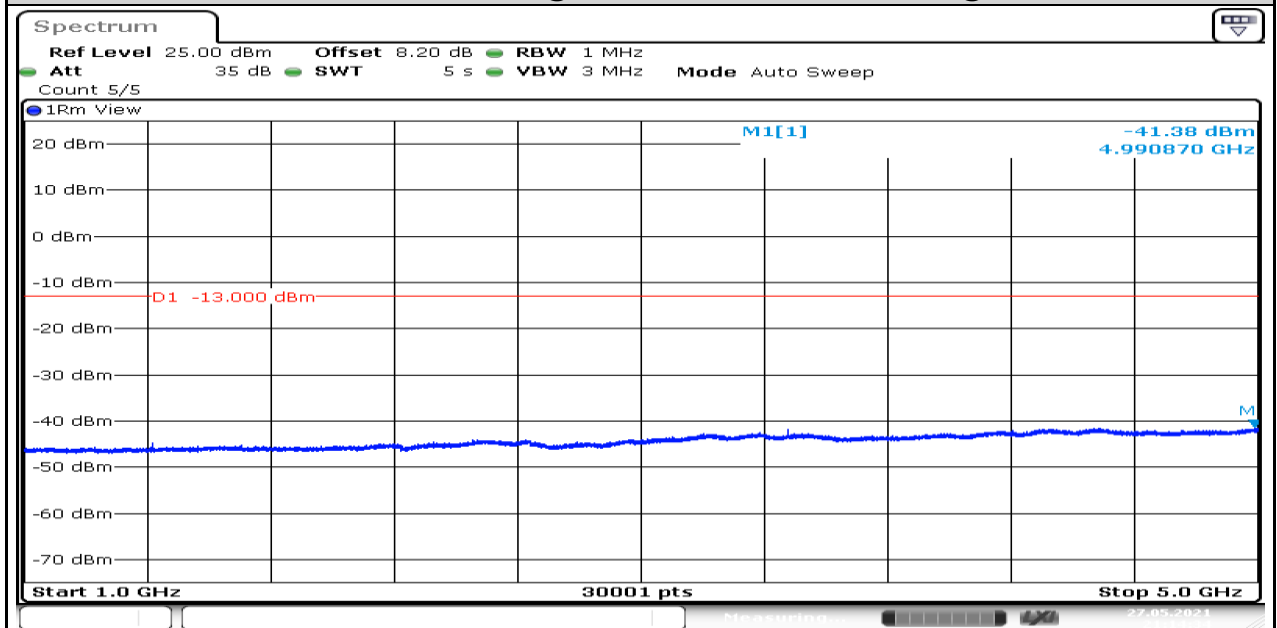


Date: 27.MAY.2021 14:35:13

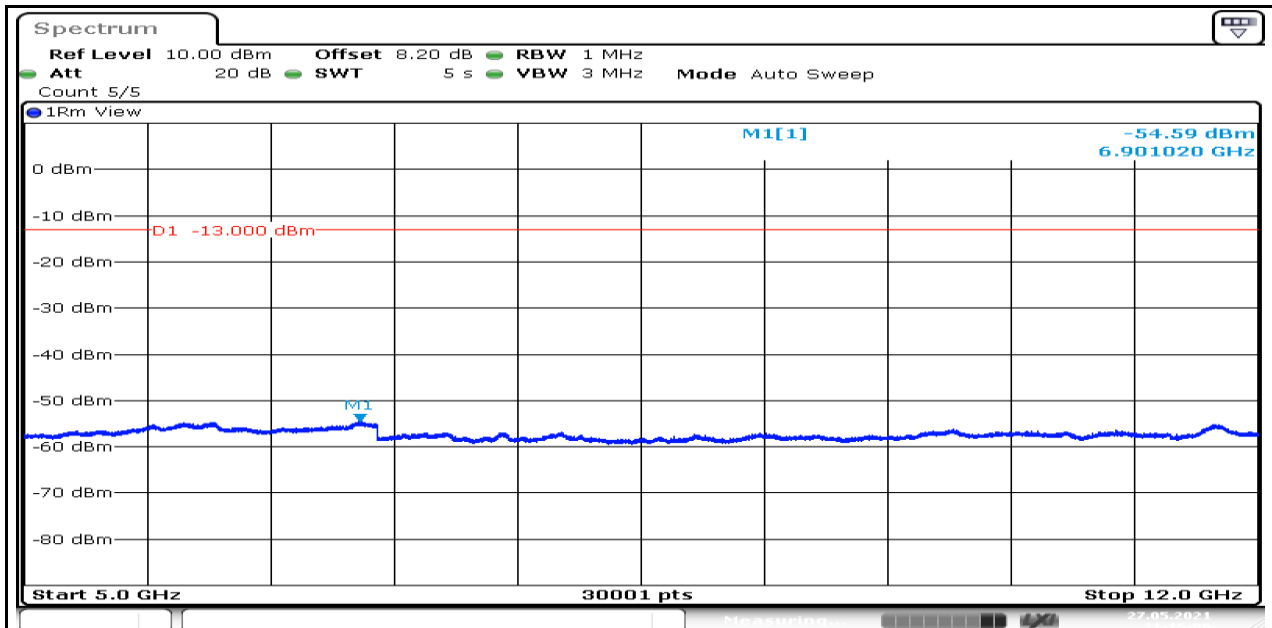
Band85-Stand-Alone-NaN-QPSK-134092-12@0-15kHz-30-1000-30~1000MHz@-35.97dBm--13-PASS



Band85-Stand-Alone-NaN-QPSK-134092-12@0-15kHz-1000-5000-1000~5000MHz@-41.38dBm--13-PASS

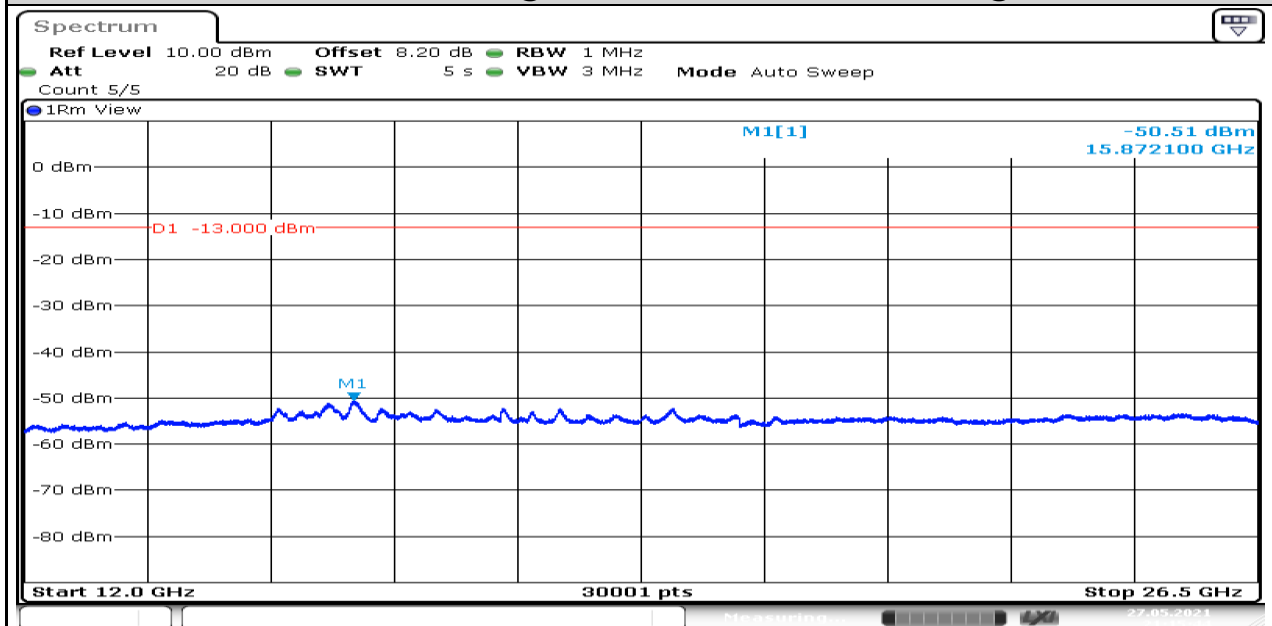


Band85-Stand-Alone-NaN-QPSK-134092-12@0-15kHz-5000-12000-5000~12000MHz@-54.59dBm--13-PASS



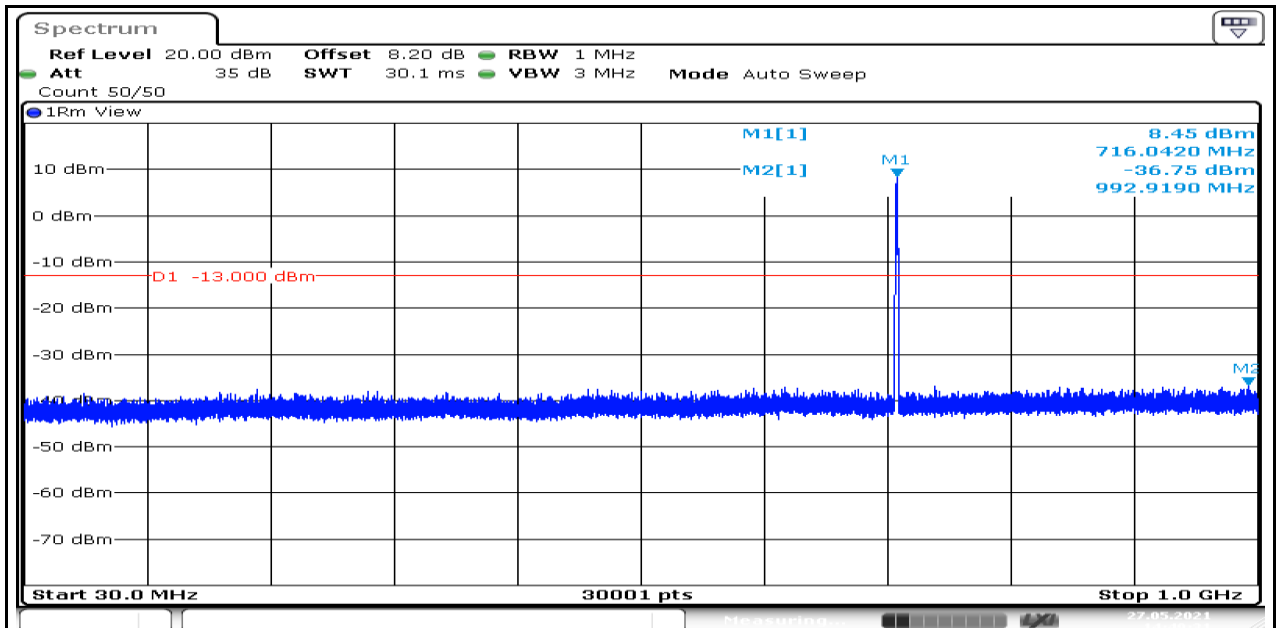
Date: 27.MAY.2021 21:15:10

Band85-Stand-Alone-NaN-QPSK-134092-12@0-15kHz-12000-26500-12000~26500MHz@-50.51dBm--13-PASS



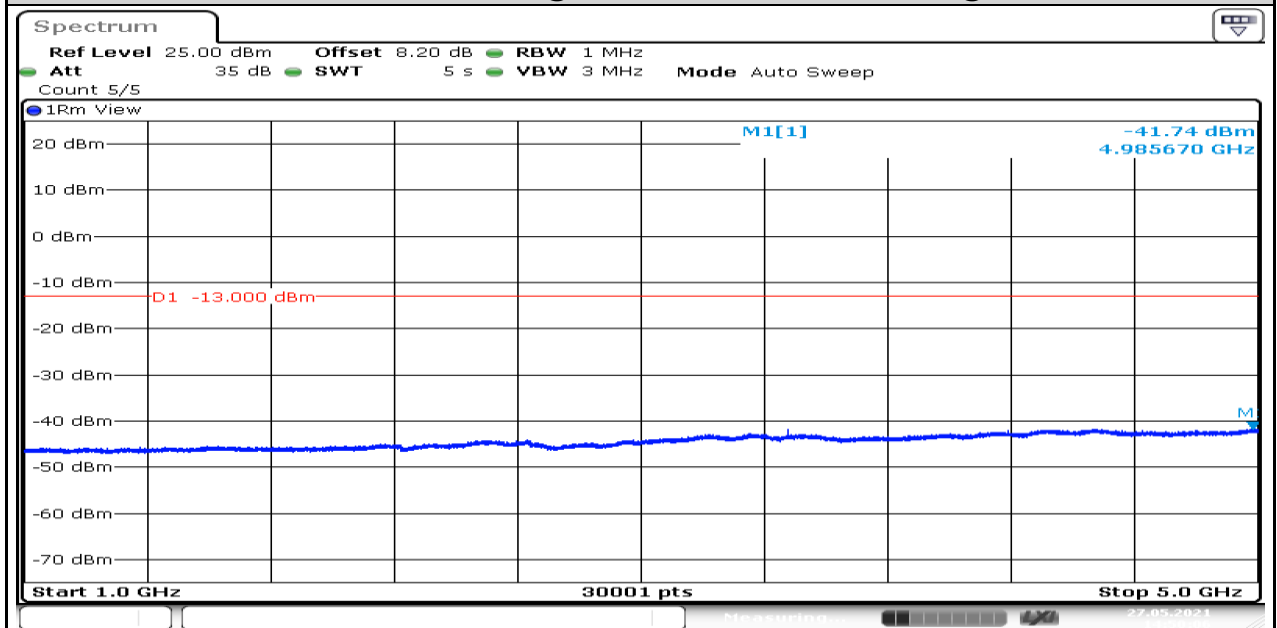
Date: 27.MAY.2021 21:15:45

Band85-Stand-Alone-NaN-QPSK-134181-12@0-15kHz-30-1000-30~1000MHz@-36.75dBm--13-PASS



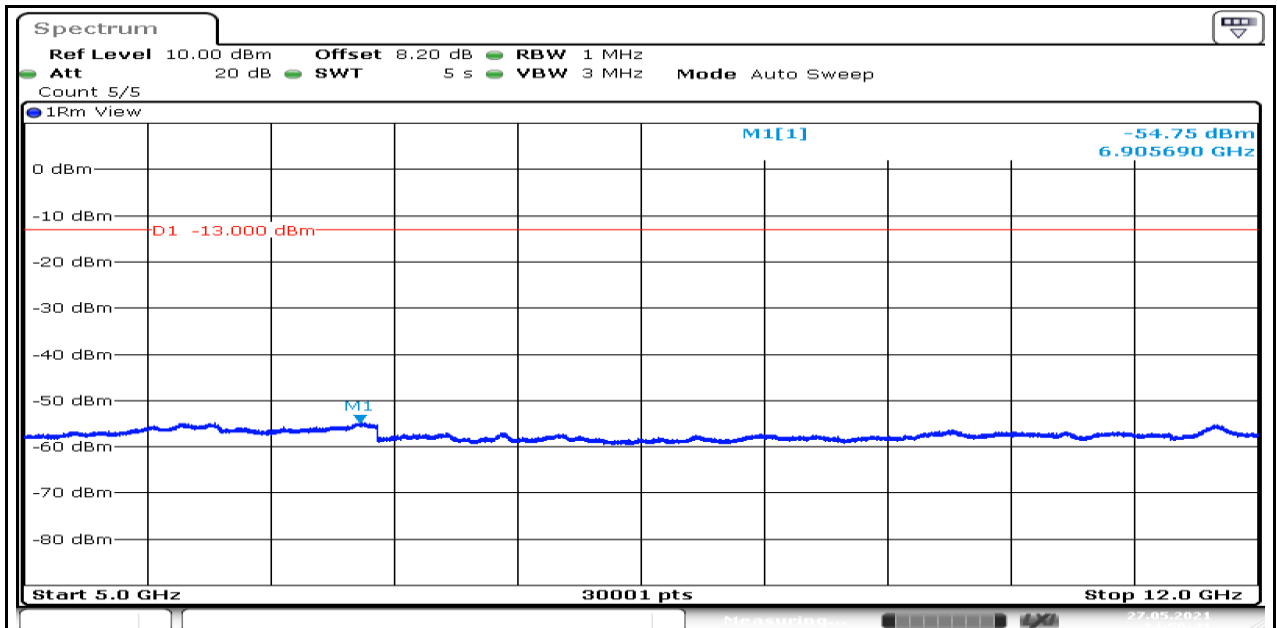
Date: 27.MAY.2021 14:49:31

Band85-Stand-Alone-NaN-QPSK-134181-12@0-15kHz-1000-5000-1000~5000MHz@-41.74dBm--13-PASS

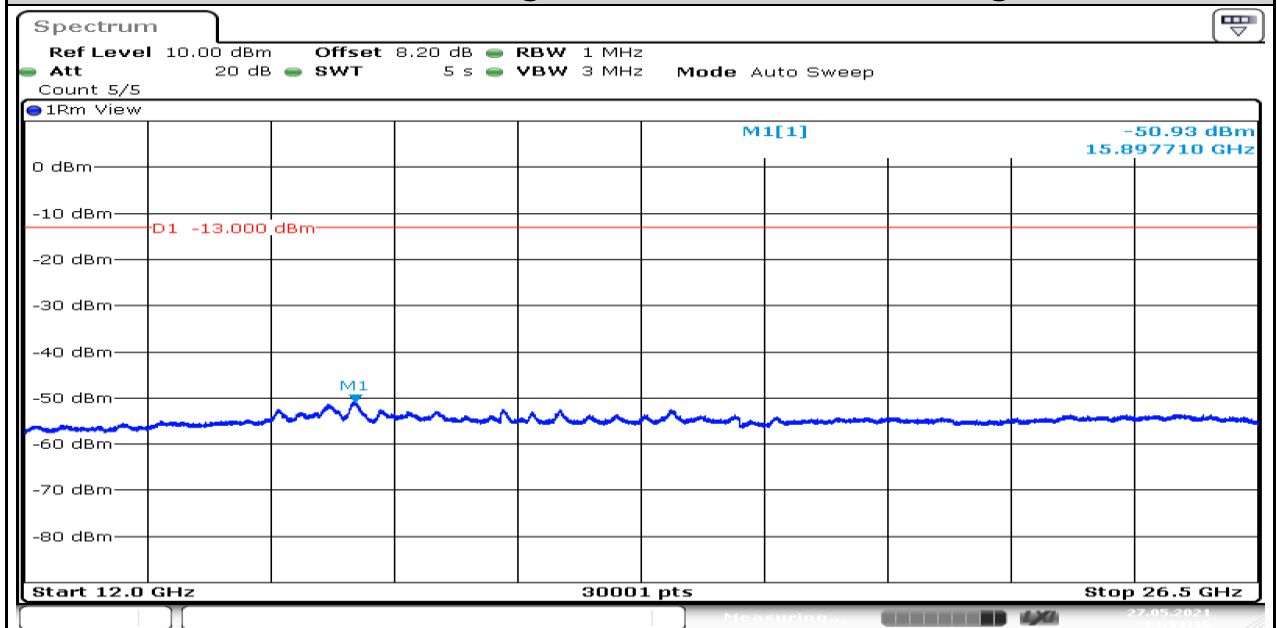


Date: 27.MAY.2021 14:50:06

Band85-Stand-Alone-NaN-QPSK-134181-12@0-15kHz-5000-12000-5000~12000MHz@-54.75dBm--13-PASS



Band85-Stand-Alone-NaN-QPSK-134181-12@0-15kHz-12000-26500-12000~26500MHz@-50.93dBm--13-PASS



APPENDIX J.6: FREQUENCY STABILITY FOR NB-IOT

Test Result

Voltage												
Band	OpMode	SCS	Bandwidth	Modulation	Channel	Tones	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	HV	NT	-20.43	-0.028897	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	LV	NT	-8.60	-0.012164	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	NV	NT	-20.74	-0.029335	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	HV	NT	-19.91	-0.028161	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	LV	NT	-8.50	-0.012023	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	NV	NT	-17.61	-0.024908	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	HV	NT	-7.45	-0.010537	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	LV	NT	7.25	0.010255	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	NV	NT	-7.24	-0.010240	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	HV	NT	-10.40	-0.014710	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	LV	NT	-6.71	-0.009491	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	NV	NT	-10.19	-0.014413	±2.5	PASS

Temperature												
Band	OpMode	SCS	Bandwidth	Modulation	Channel	Tones	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	NV	50	-5.14	-0.007270	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	NV	-40	-4.65	-0.006577	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	NV	80	-5.12	-0.007242	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	NV	60	-5.01	-0.007086	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	NV	85	-3.88	-0.005488	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	NV	40	-4.94	-0.006987	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	NV	30	-6.61	-0.009349	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	NV	20	-4.38	-0.006195	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	NV	10	-5.52	-0.007808	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	NV	0	-4.19	-0.005926	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	NV	-10	-4.98	-0.007044	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	NV	-20	-6.35	-0.008982	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	NV	-30	-6.02	-0.008515	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@0	NV	70	-5.81	-0.008218	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	NV	20	-5.06	-0.007157	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	NV	70	-5.25	-0.007426	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	NV	60	-5.76	-0.008147	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	NV	50	-5.21	-0.007369	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	NV	40	-5.08	-0.007185	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	NV	30	-4.66	-0.006591	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	NV	10	-4.85	-0.006860	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	NV	0	-5.42	-0.007666	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	NV	-10	-4.52	-0.006393	±2.5	PASS

Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	NV	-20	-5.26	-0.007440	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	NV	80	-5.08	-0.007185	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	NV	-40	-4.94	-0.006987	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	NV	85	-3.89	-0.005502	±2.5	PASS
Band85	Stand-Alone	3.75kHz	NaN	QPSK	134092	1@47	NV	-30	-4.73	-0.006690	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	NV	50	6.78	0.009590	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	NV	-40	-8.50	-0.012023	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	NV	80	-8.53	-0.012065	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	NV	60	-6.87	-0.009717	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	NV	85	6.87	0.009717	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	NV	40	-8.04	-0.011372	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	NV	30	-6.07	-0.008586	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	NV	20	-7.00	-0.009901	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	NV	10	-8.75	-0.012376	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	NV	0	6.17	0.008727	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	NV	-10	-7.17	-0.010141	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	NV	-20	-8.30	-0.011740	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	NV	-30	-6.15	-0.008699	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@0	NV	70	-7.70	-0.010891	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	NV	30	-8.04	-0.011372	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	NV	80	-8.25	-0.011669	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	NV	70	-7.74	-0.010948	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	NV	60	-5.36	-0.007581	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	NV	50	-6.37	-0.009010	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	NV	40	-7.65	-0.010820	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	NV	20	-6.51	-0.009208	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	NV	10	7.54	0.010665	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	NV	0	-6.85	-0.009689	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	NV	-10	-7.17	-0.010141	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	NV	-20	5.75	0.008133	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	NV	-40	6.68	0.009448	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	NV	85	-7.60	-0.010750	±2.5	PASS
Band85	Stand-Alone	15kHz	NaN	QPSK	134092	1@11	NV	-30	-6.75	-0.009547	±2.5	PASS