

Appendix F: Test Results of Band 25 for NB-IoT operation

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Appendix F.1: RF Power Output and Effective (Isotropic) Radiated Power Output Data for NB

Test Result

Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Result			Limit (watts)	Verdict
							dBm	dBm	Watts		
Band25	Stand-Alone	NaN	QPSK	26041	3@3	15kHz	12.35	14.49	0.028	2	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@11	15kHz	12.34	14.48	0.028	2	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@0	15kHz	12.41	14.55	0.029	2	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@47	3.75kHz	12.56	14.7	0.030	2	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@0	3.75kHz	12.57	14.71	0.030	2	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	21.24	23.38	0.218	2	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	21.42	23.56	0.227	2	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	21.05	23.19	0.208	2	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	21.52	23.66	0.232	2	PASS
Band25	Stand-Alone	NaN	QPSK	26365	3@3	15kHz	21.39	23.53	0.225	2	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@0	3.75kHz	12.45	14.59	0.029	2	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@47	3.75kHz	12.42	14.56	0.029	2	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@11	15kHz	11.83	13.97	0.025	2	PASS
Band25	Stand-Alone	NaN	QPSK	26689	3@3	15kHz	12.11	14.25	0.027	2	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@0	15kHz	12.41	14.55	0.029	2	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@47	3.75kHz	12.53	14.67	0.029	2	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@11	15kHz	12.41	14.55	0.029	2	PASS
Band25	Stand-Alone	NaN	BPSK	26041	3@3	15kHz	12.33	14.47	0.028	2	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@0	15kHz	12.49	14.63	0.029	2	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@0	3.75kHz	12.6	14.74	0.030	2	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@47	3.75kHz	21.22	23.36	0.217	2	PASS
Band25	Stand-Alone	NaN	BPSK	26365	3@3	15kHz	21.31	23.45	0.221	2	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@0	3.75kHz	21.18	23.32	0.215	2	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@11	15kHz	21.37	23.51	0.224	2	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@0	15kHz	21.47	23.61	0.230	2	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@0	15kHz	12.13	14.27	0.027	2	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@0	3.75kHz	12.44	14.58	0.029	2	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@11	15kHz	11.99	14.13	0.026	2	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@47	3.75kHz	12.45	14.59	0.029	2	PASS
Band25	Stand-Alone	NaN	BPSK	26689	3@3	15kHz	11.91	14.05	0.025	2	PASS
Band25	Stand-Alone	NaN	QPSK	26041	3@3	15kHz	12.35	14.49	0.028	2	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@11	15kHz	12.34	14.48	0.028	2	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@0	15kHz	12.41	14.55	0.029	2	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@47	3.75kHz	12.56	14.7	0.030	2	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@0	3.75kHz	12.57	14.71	0.030	2	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	21.24	23.38	0.218	2	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	21.42	23.56	0.227	2	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	21.05	23.19	0.208	2	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	21.52	23.66	0.232	2	PASS
Band25	Stand-Alone	NaN	QPSK	26365	3@3	15kHz	21.39	23.53	0.225	2	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@0	3.75kHz	12.45	14.59	0.029	2	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@47	3.75kHz	12.42	14.56	0.029	2	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@11	15kHz	11.83	13.97	0.025	2	PASS
Band25	Stand-Alone	NaN	QPSK	26689	3@3	15kHz	12.11	14.25	0.027	2	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@0	15kHz	12.41	14.55	0.029	2	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@47	3.75kHz	12.53	14.67	0.029	2	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@11	15kHz	12.41	14.55	0.029	2	PASS
Band25	Stand-Alone	NaN	BPSK	26041	3@3	15kHz	12.33	14.47	0.028	2	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@0	15kHz	12.49	14.63	0.029	2	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@0	3.75kHz	12.6	14.74	0.030	2	PASS

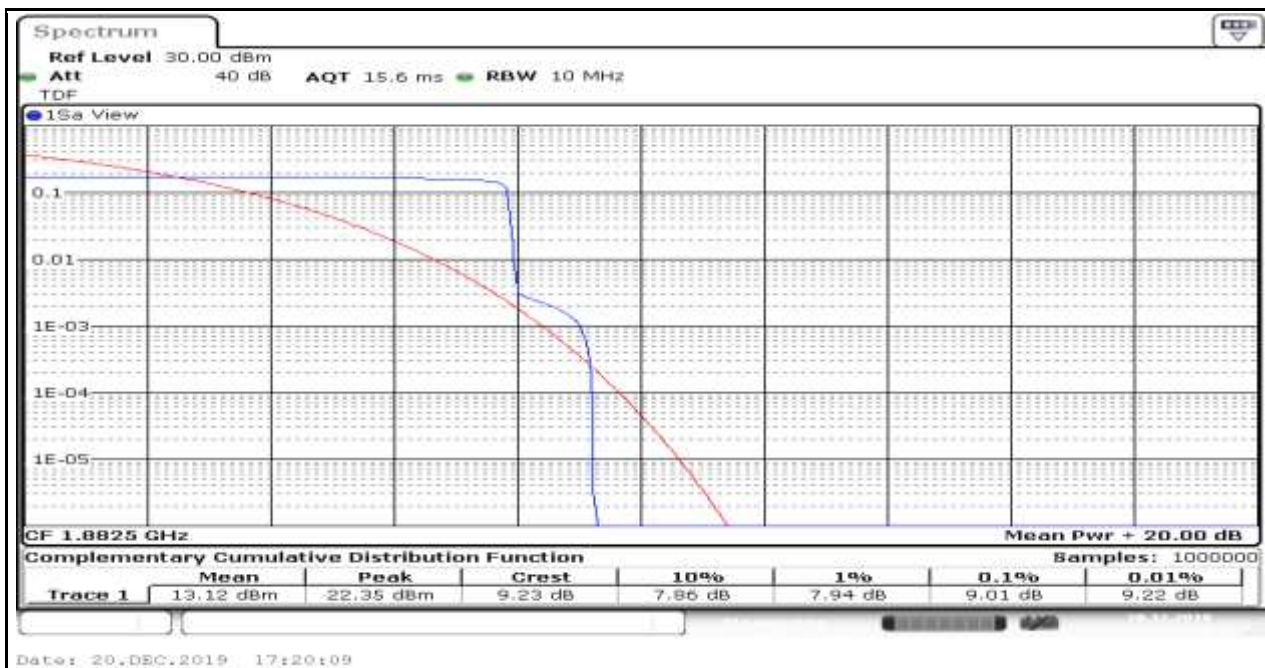
Appendix F.2: Peak-to-Average Ratio(CCDF) for NB

Test Result

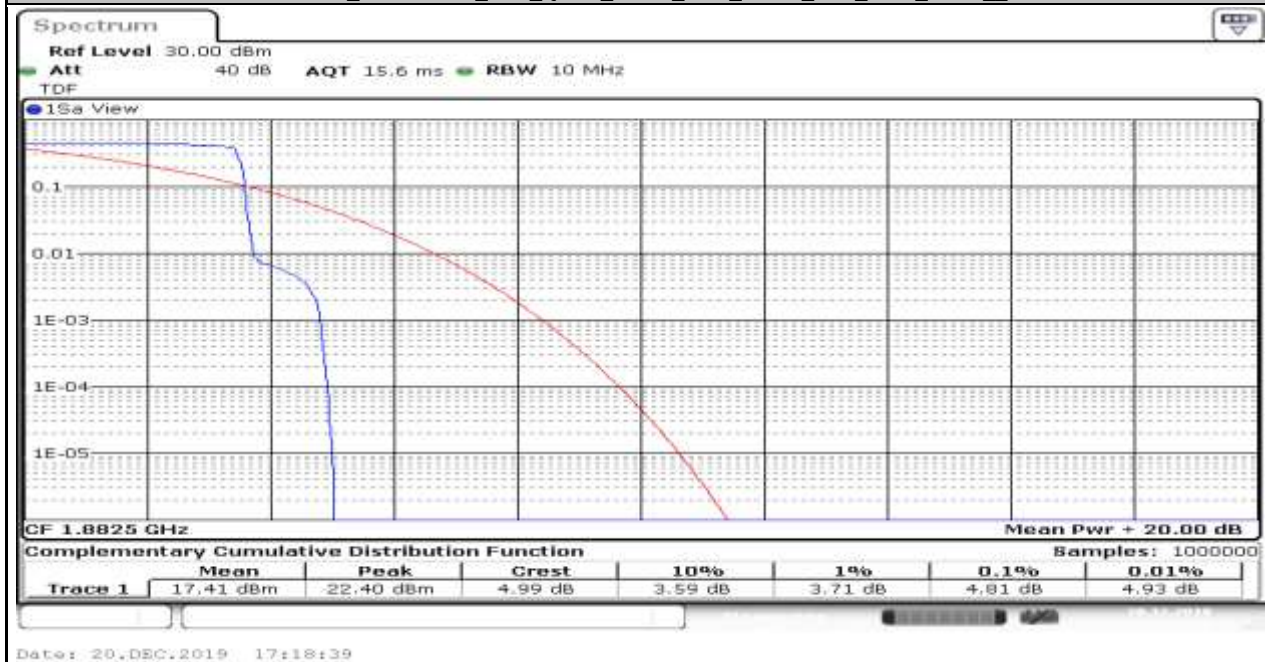
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Result (dB)	Limit (dB)	Verdict
Band25	Stand-Alone	NaN	QPSK	26365	3@3	15kHz	10.9	<=13	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	9.01	<=13	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	4.81	<=13	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	1.94	<=13	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	1.71	<=13	PASS
Band25	Stand-Alone	NaN	BPSK	26365	3@3	15kHz	9.54	<=13	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@11	15kHz	3.62	<=13	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@0	15kHz	1.48	<=13	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@47	3.75kHz	5.01	<=13	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@0	3.75kHz	1.97	<=13	PASS

Test Graphs

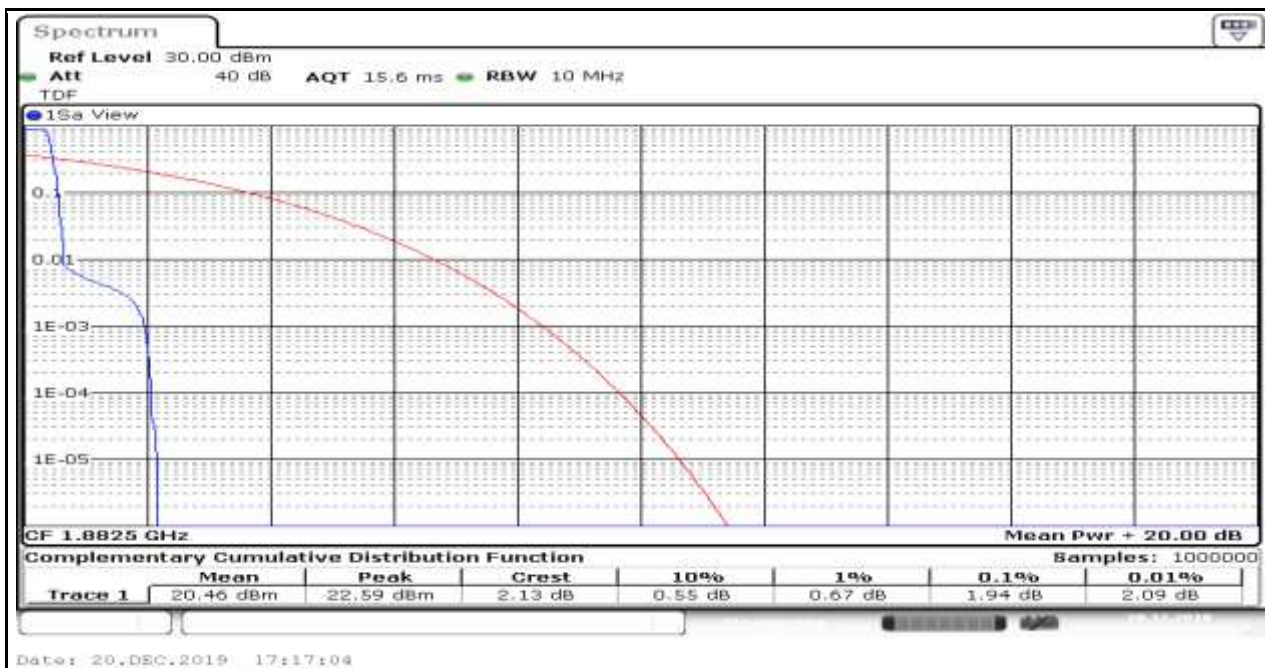




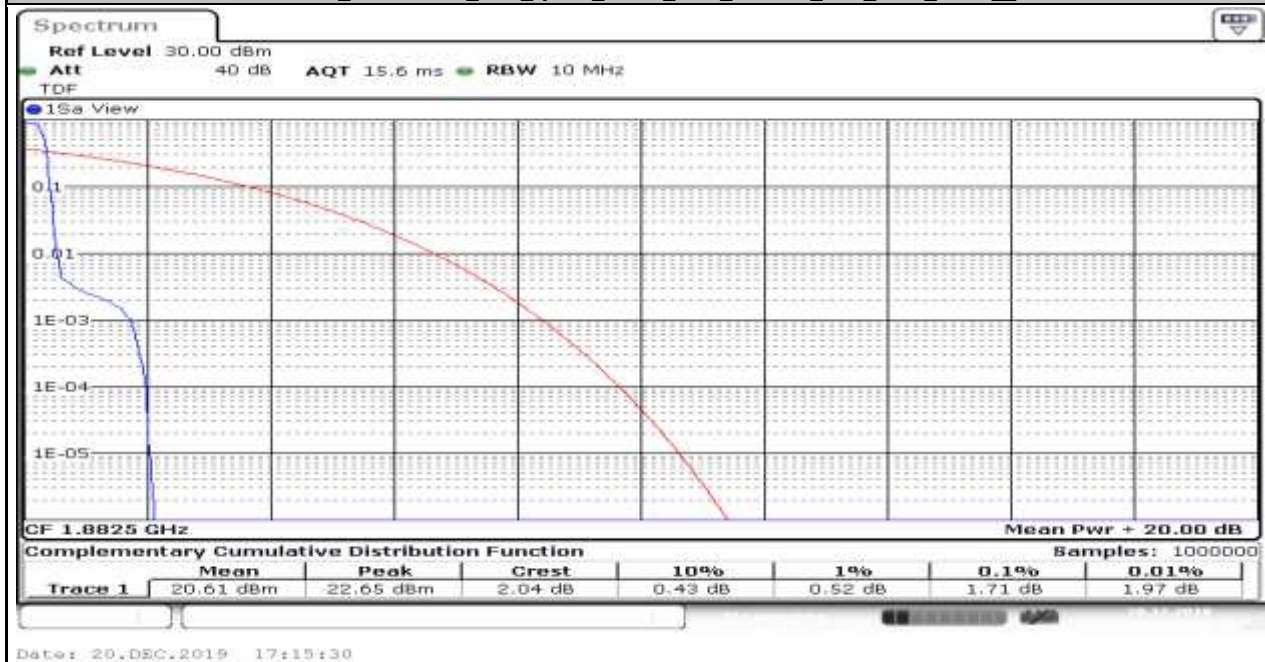
Band25_Stand-Alone_NaN_QPSK_26365_1@0_15kHz_4.81_<=13_PASS



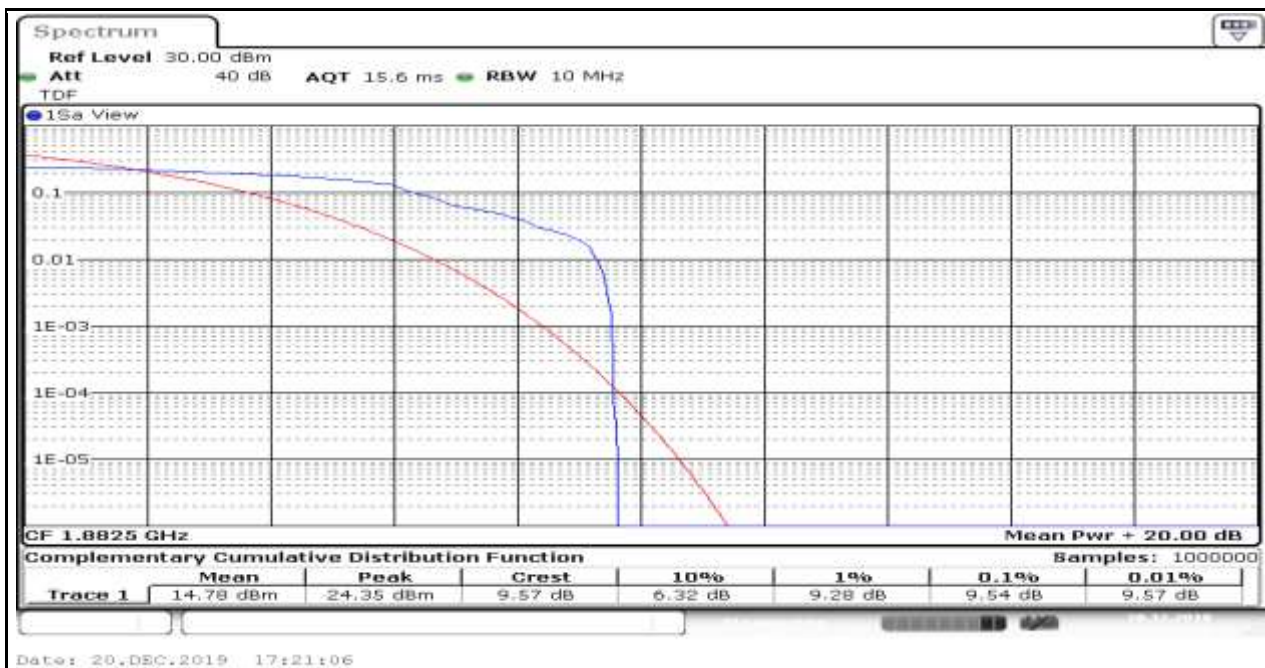
Band25_Stand-Alone_NaN_QPSK_26365_1@47_3.75kHz_1.94_<=13_PASS



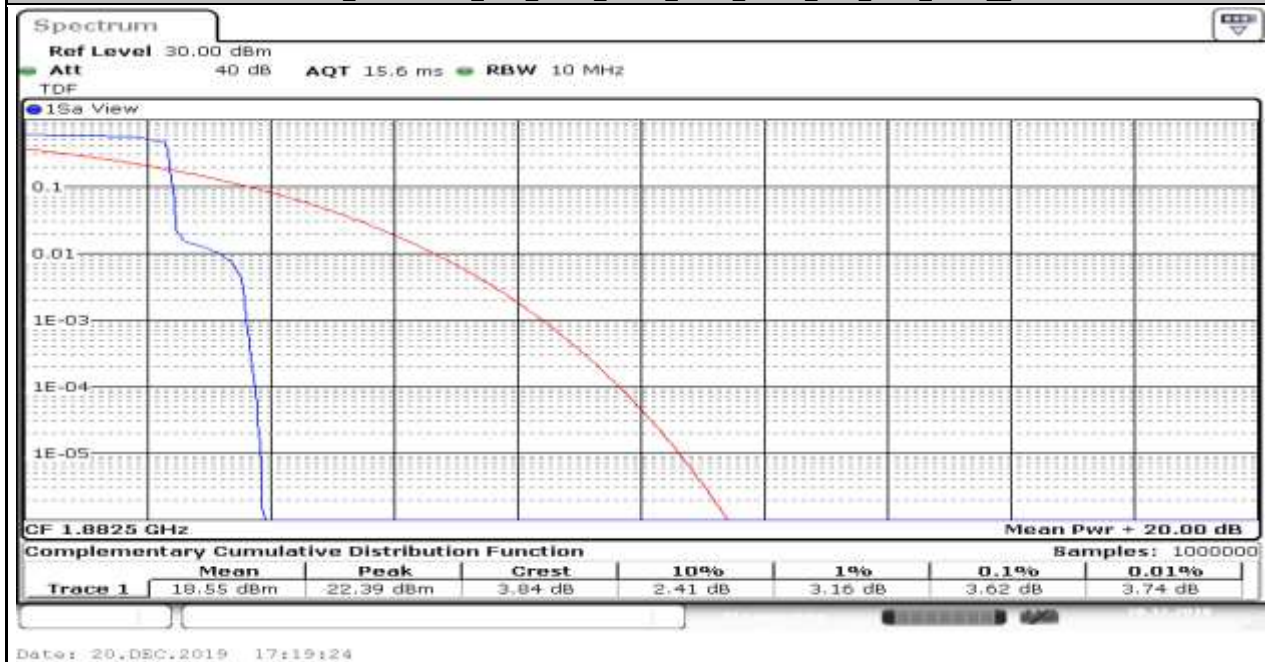
Band25_Stand-Alone_NaN_QPSK_26365_1@0_3.75kHz_1.71_<=13_PASS



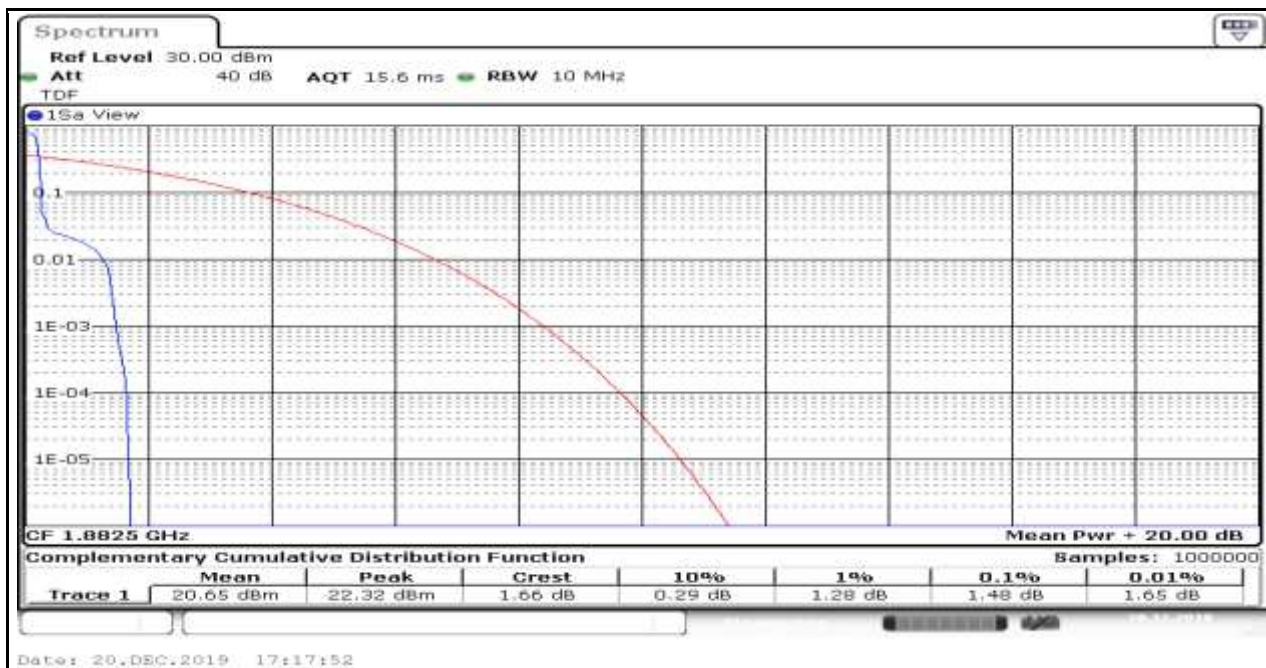
Band25_Stand-Alone_NaN_BPSK_26365_3@3_15kHz_9.54_<=13_PASS



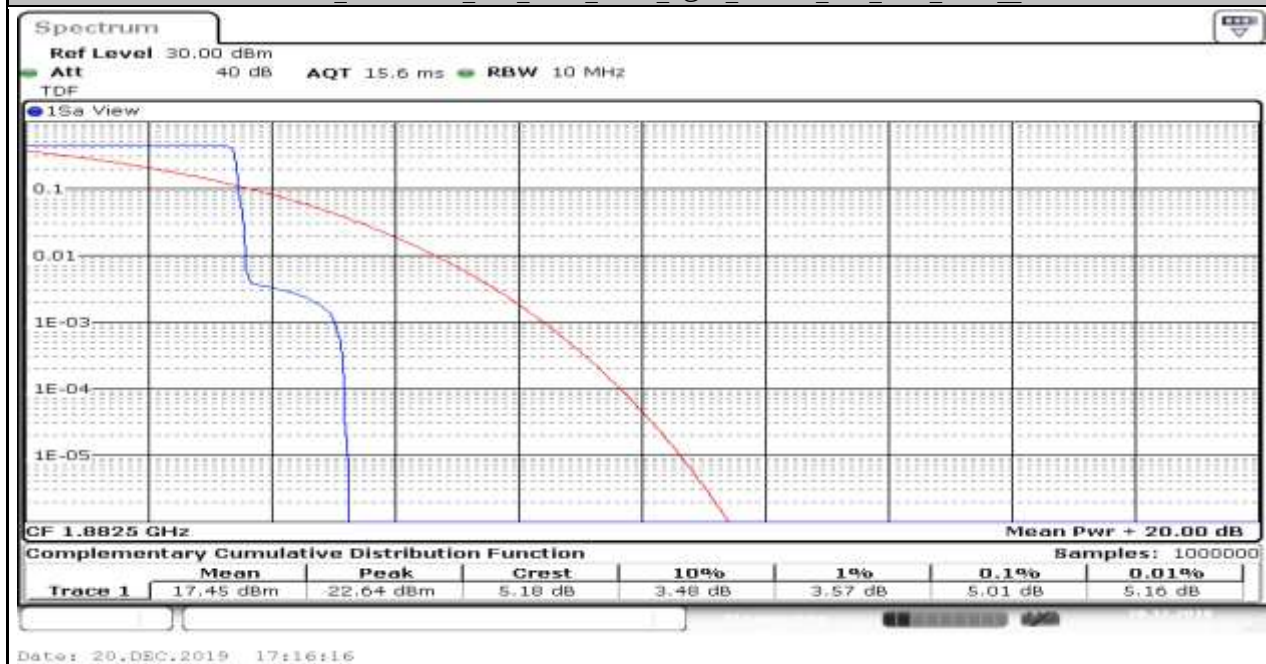
Band25_Stand-Alone_NaN_BPSK_26365_1@11_15kHz_3.62_<=13_PASS



Band25_Stand-Alone_NaN_BPSK_26365_1@0_15kHz_1.48_<=13_PASS

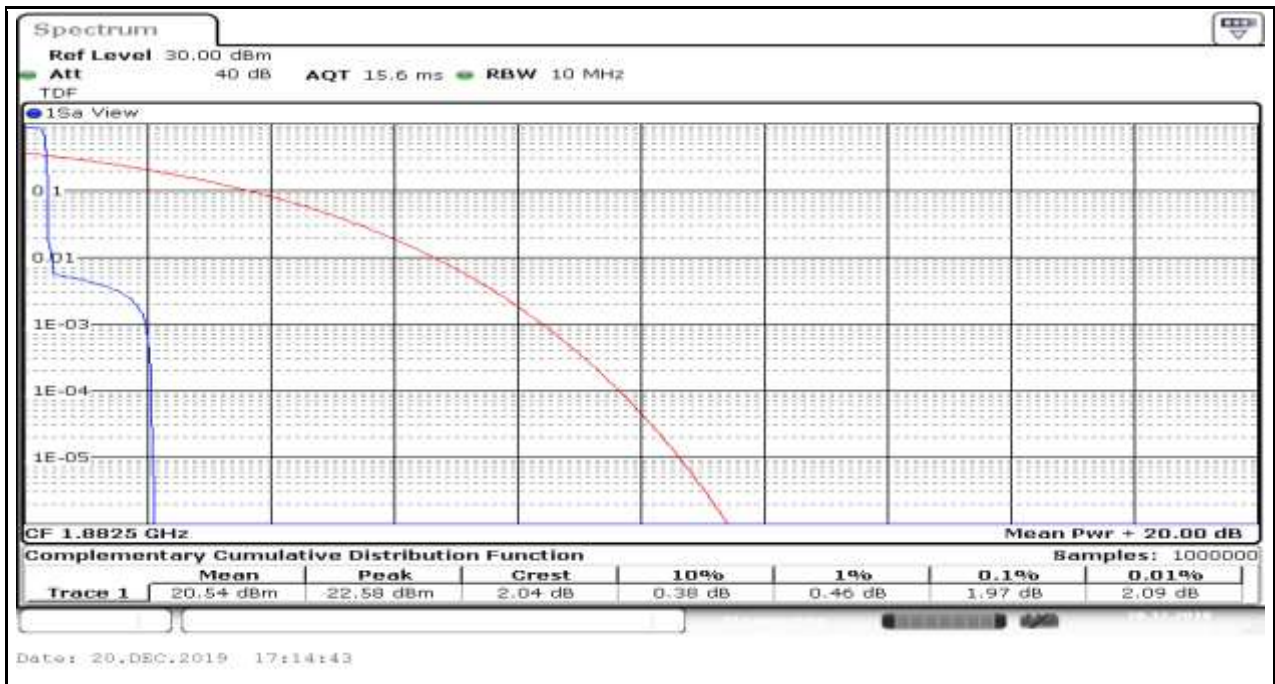


Band25_Stand-Alone_NaN_BPSK_26365_1@47_3.75kHz_5.01_<=13_PASS_



Band25_Stand-Alone_NaN_BPSK_26365_1@0_3.75kHz_1.97_<=13_PASS_

Produkte
Products

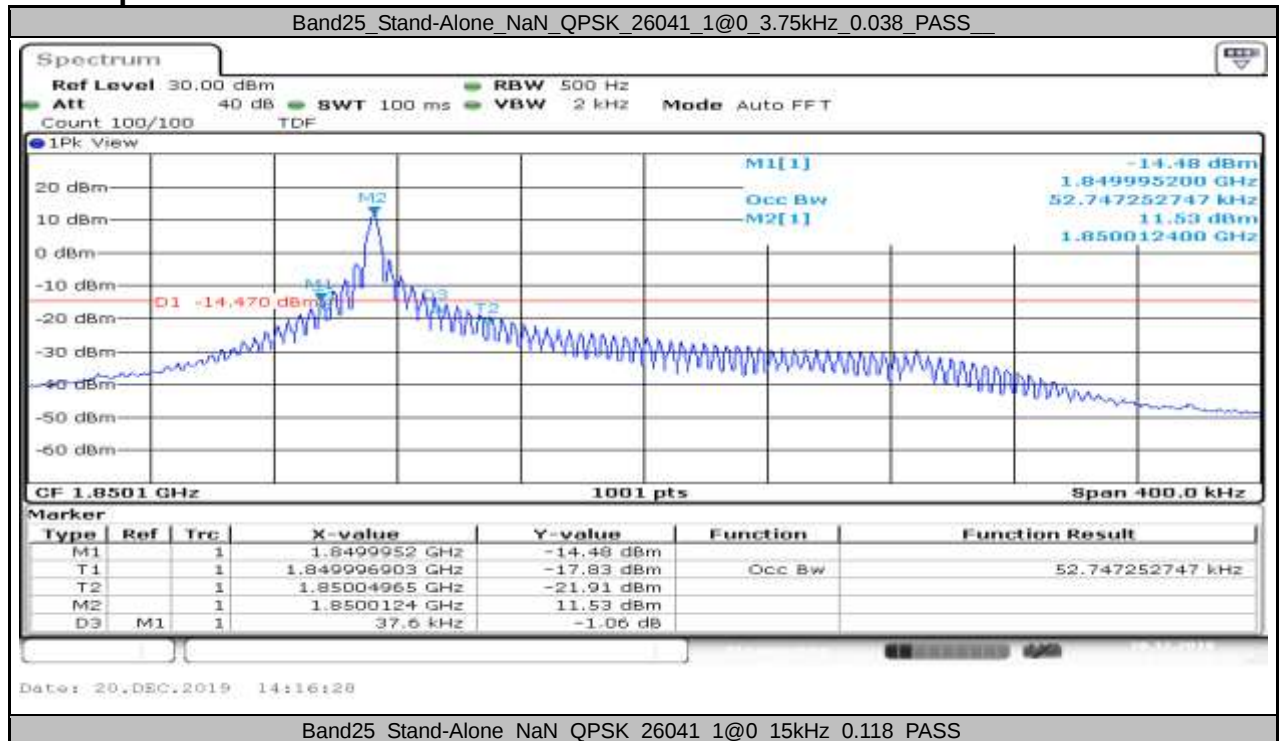


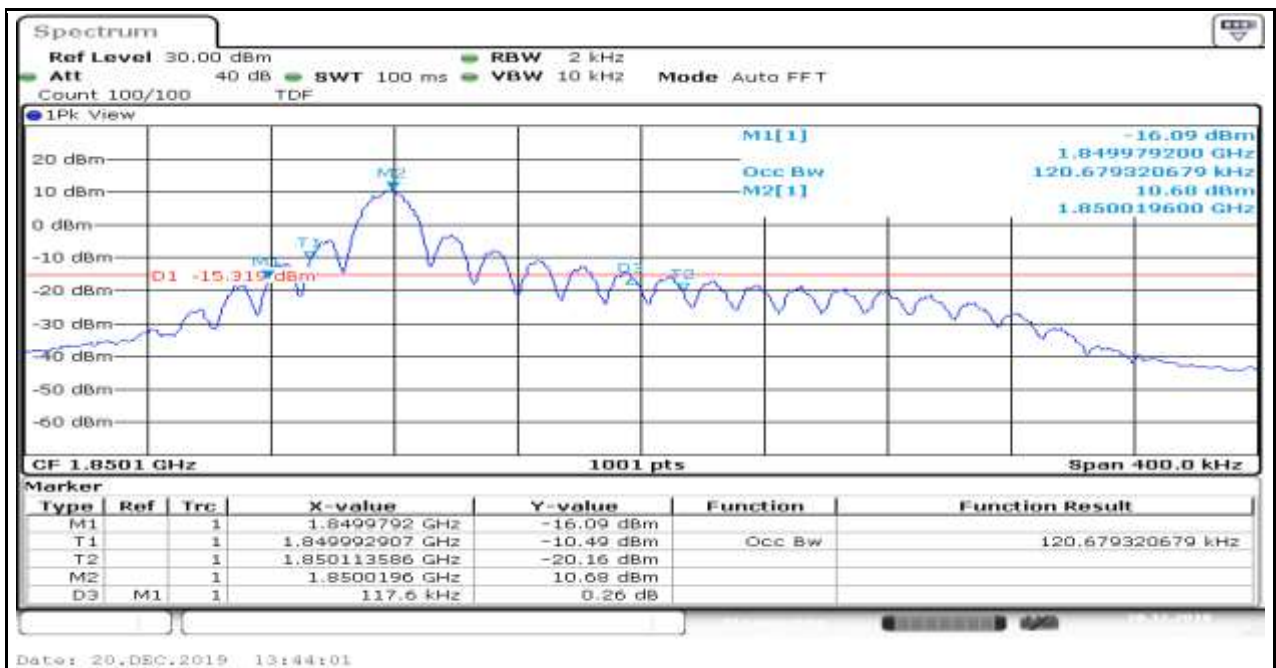
Appendix F.3: 26dB Emission Bandwidth and Occupied Bandwidth for NB

Test Result

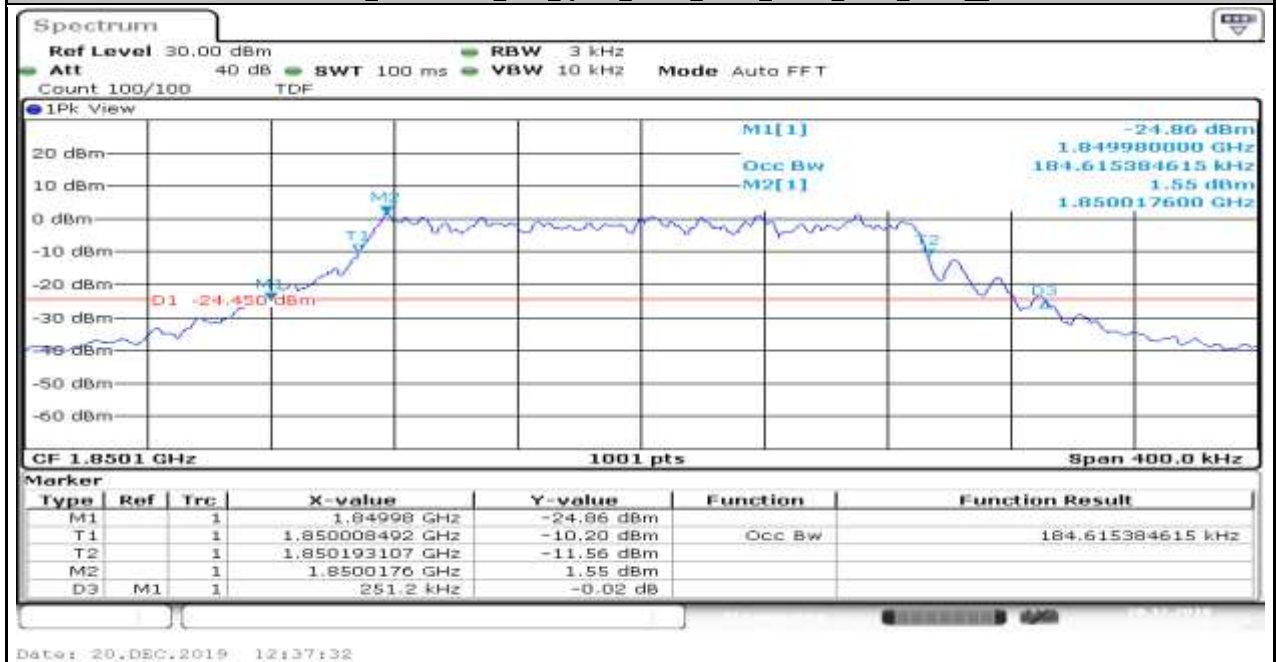
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	26dB Bandwidth (MHz)	Occupied Bandwidth (MHz)	Verdict
Band25	Stand-Alone	NaN	QPSK	26041	1@0	3.75kHz	0.038	0.053	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@0	15kHz	0.118	0.121	PASS
Band25	Stand-Alone	NaN	QPSK	26041	12@0	15kHz	0.251	0.185	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	0.038	0.053	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	0.117	0.119	PASS
Band25	Stand-Alone	NaN	QPSK	26365	12@0	15kHz	0.251	0.185	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@0	3.75kHz	0.037	0.056	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@0	15kHz	0.118	0.121	PASS
Band25	Stand-Alone	NaN	QPSK	26689	12@0	15kHz	0.251	0.185	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@0	3.75kHz	0.032	0.057	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@0	15kHz	0.106	0.129	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@0	3.75kHz	0.032	0.057	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@0	15kHz	0.106	0.128	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@0	3.75kHz	0.032	0.063	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@0	15kHz	0.106	0.130	PASS

Test Graphs

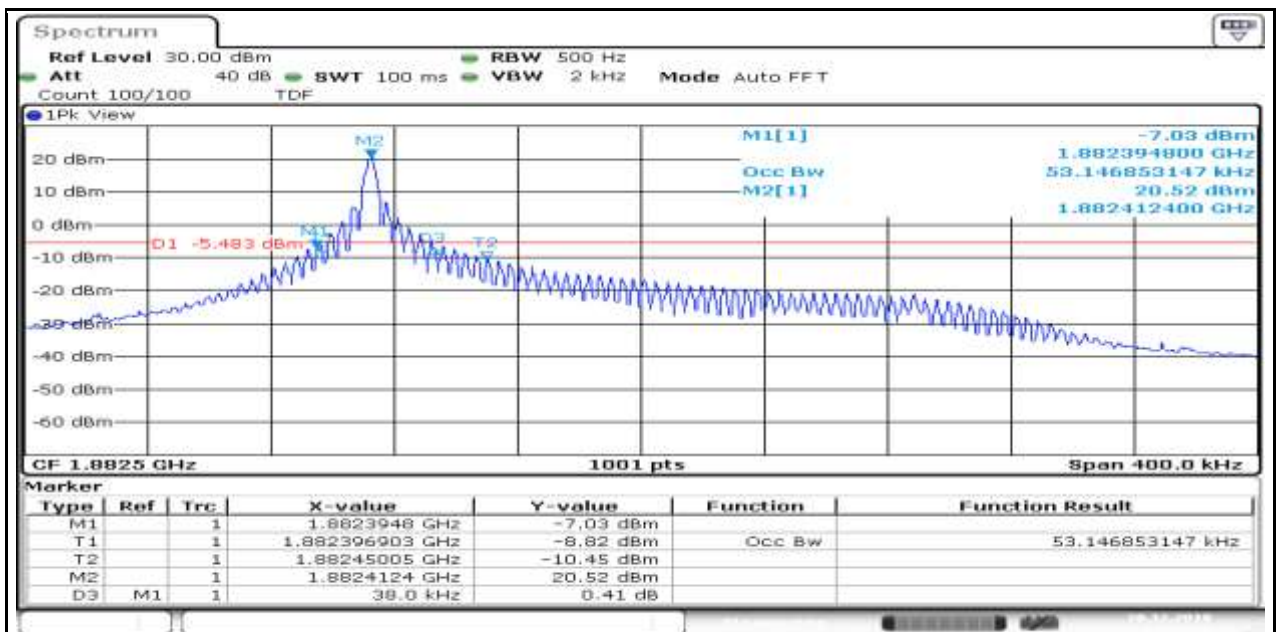




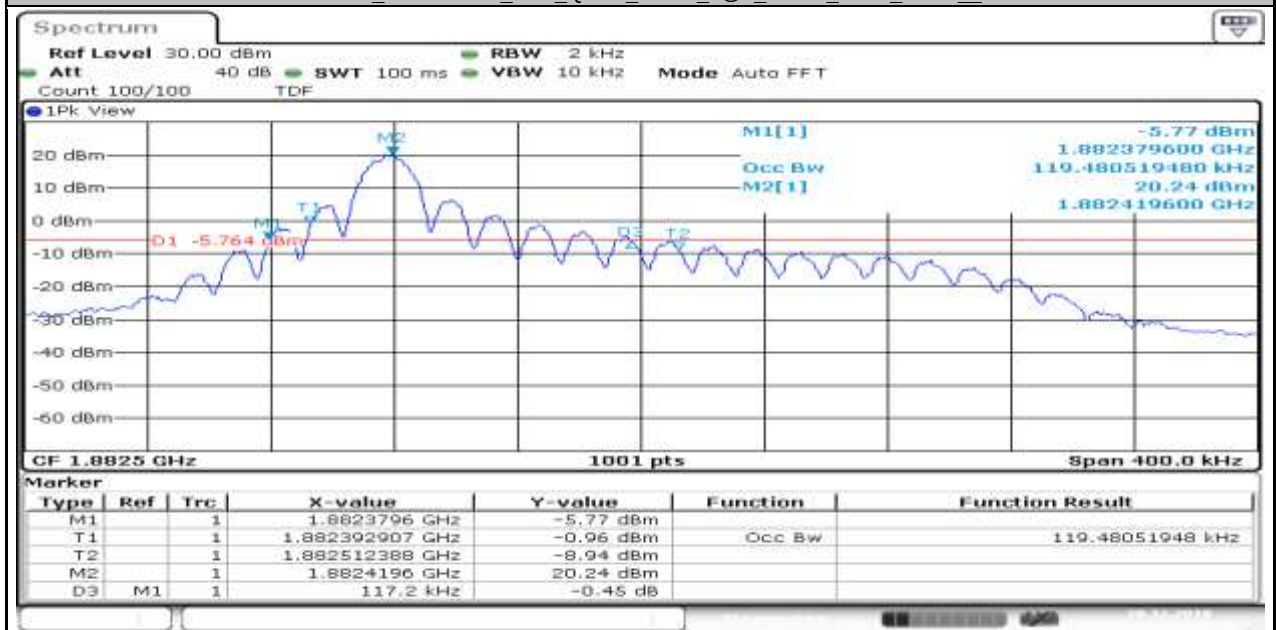
Band25_Stand-Alone_NaN_QPSK_26041_12@0_15kHz_0.251_PASS



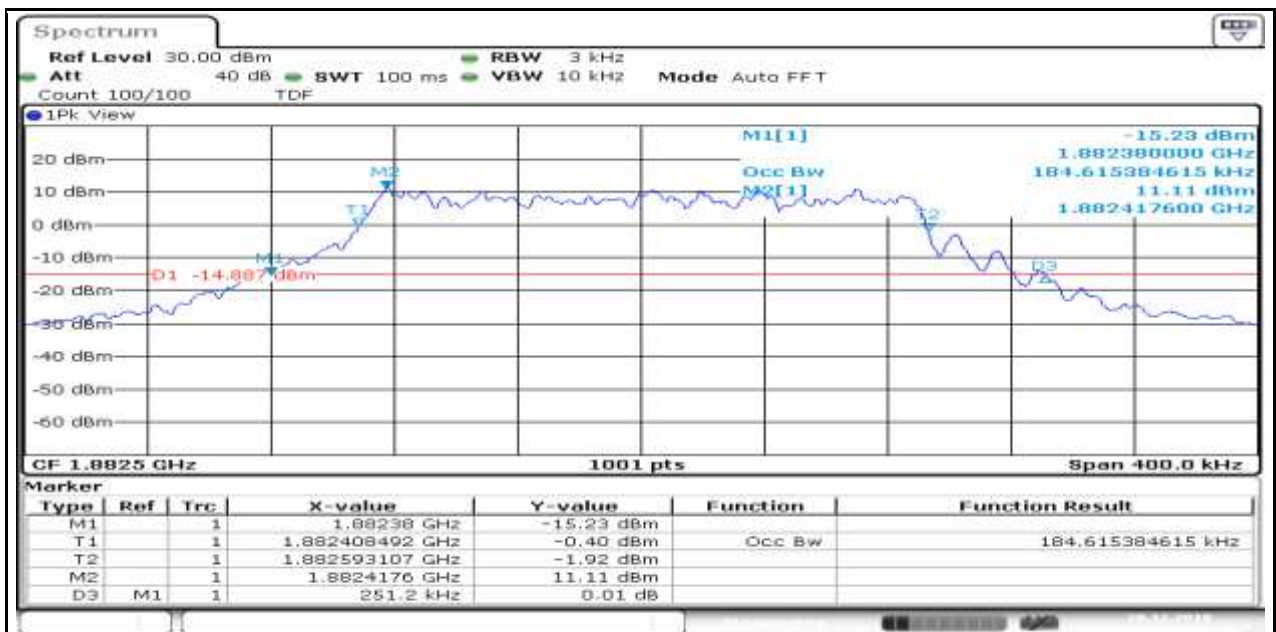
Band25_Stand-Alone_NaN_QPSK_26365_1@0_3.75kHz_0.038_PASS



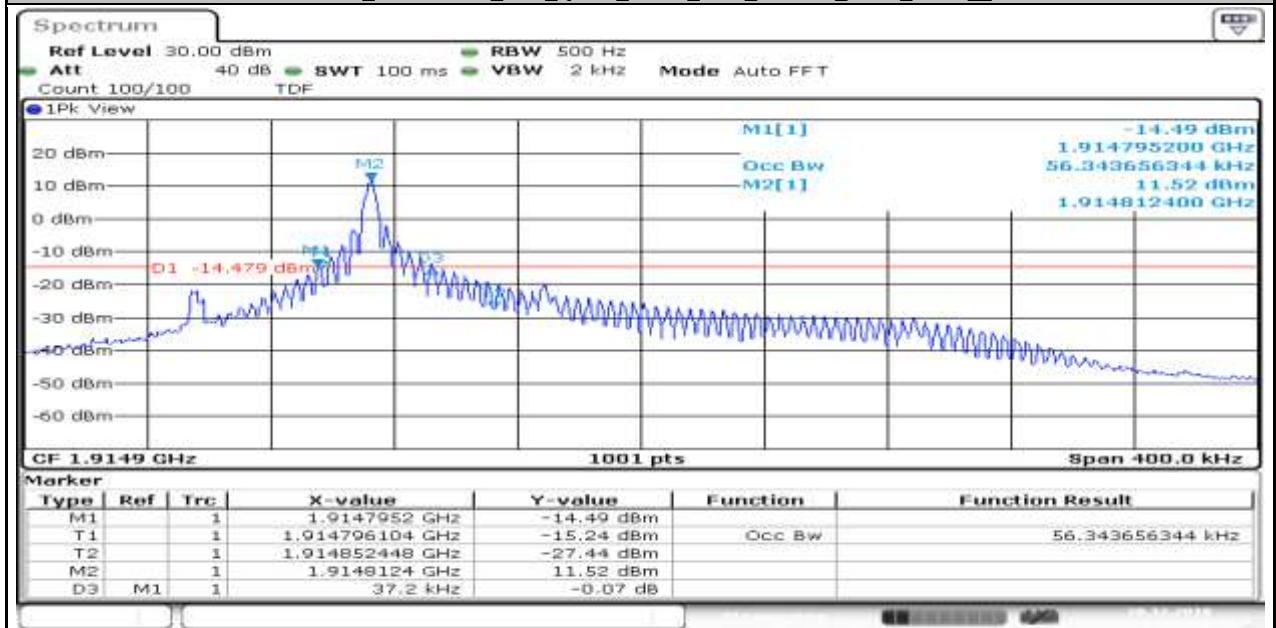
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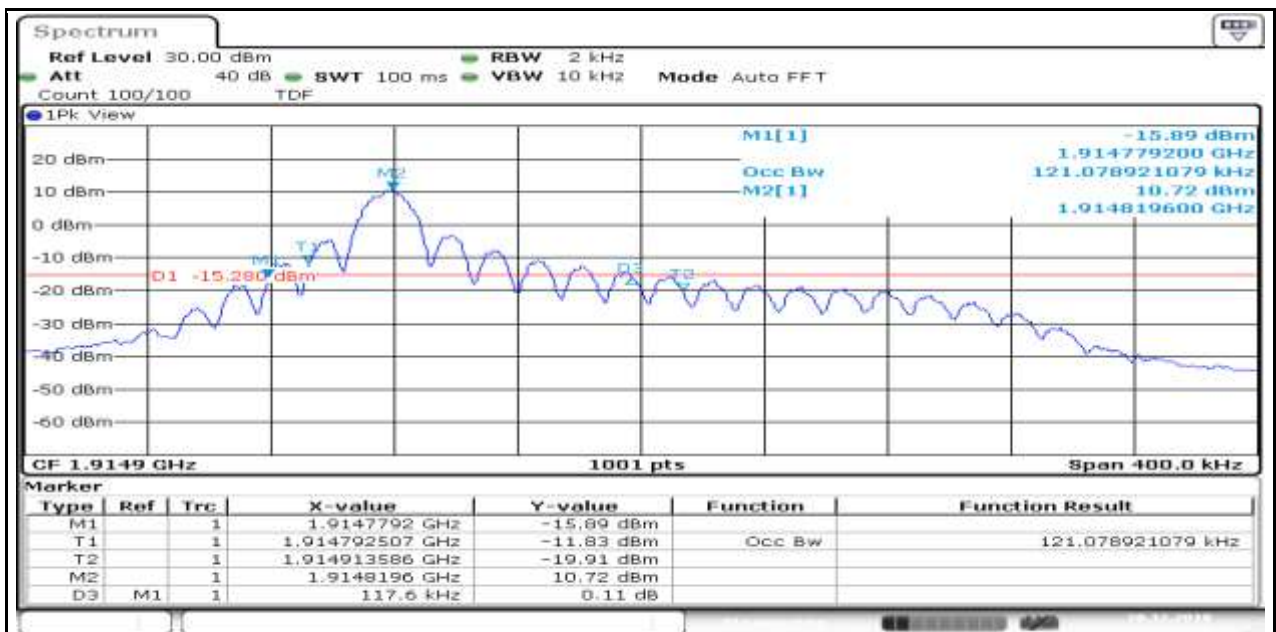
Band25_Stand-Alone_NaN_QPSK_26365_12@0_15kHz_0.251_PASS_



Band25_Stand-Alone_NaN_QPSK_26689_1@0_3.75kHz_0.037_PASS

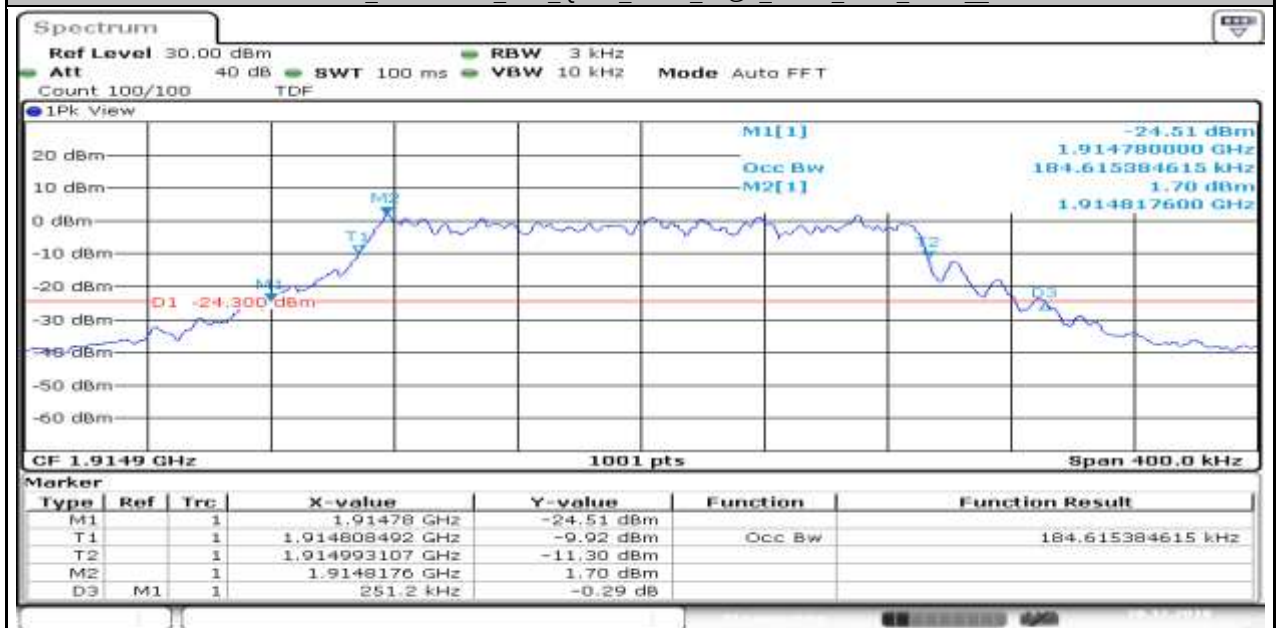


Band25_Stand-Alone_NaN_QPSK_26689_1@0_15kHz_0.118_PASS



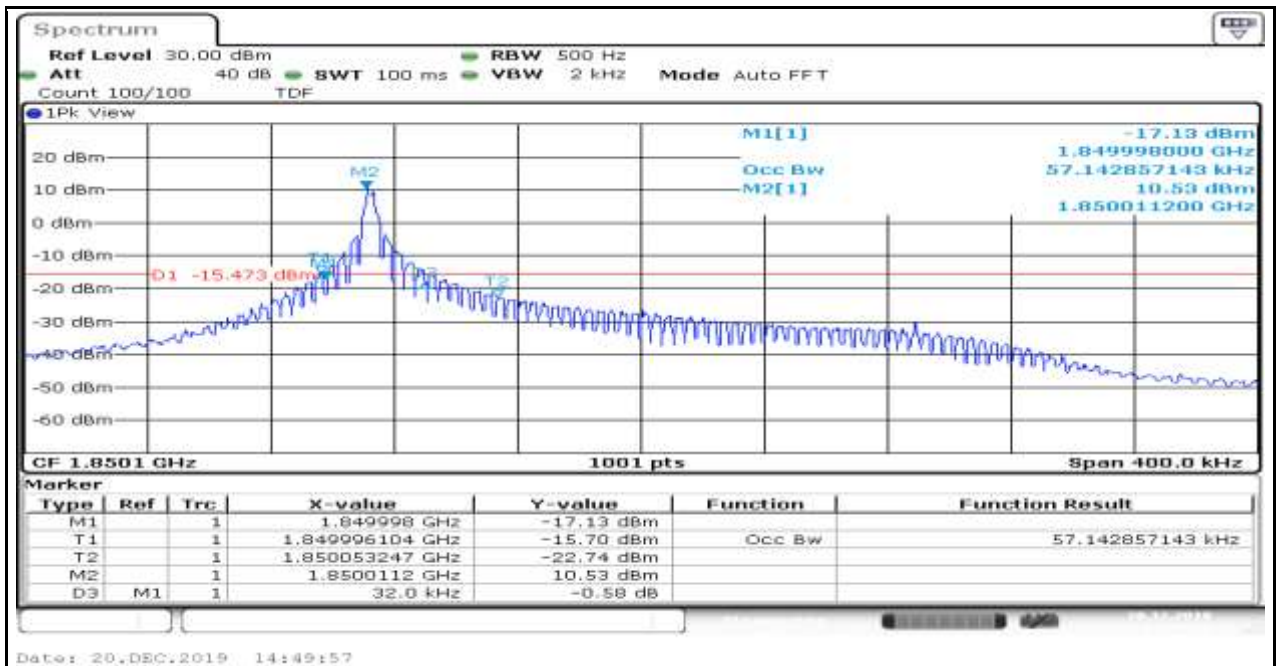
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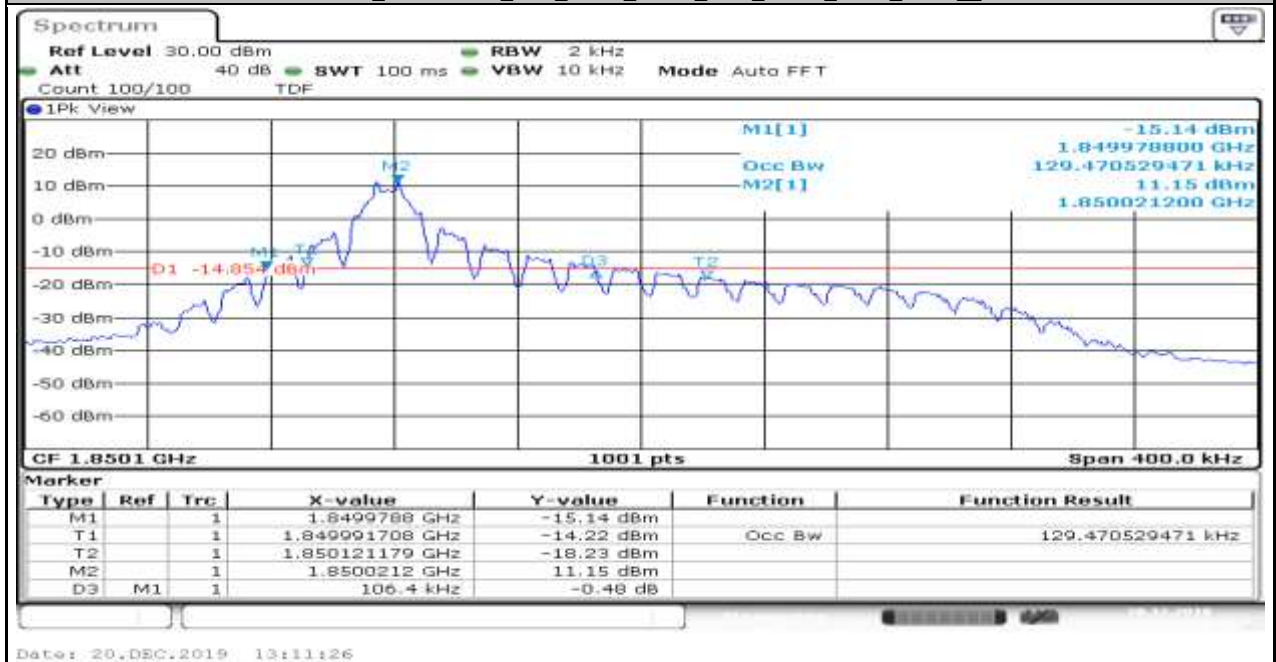


Date: 20.DEC.2019 12:39:36

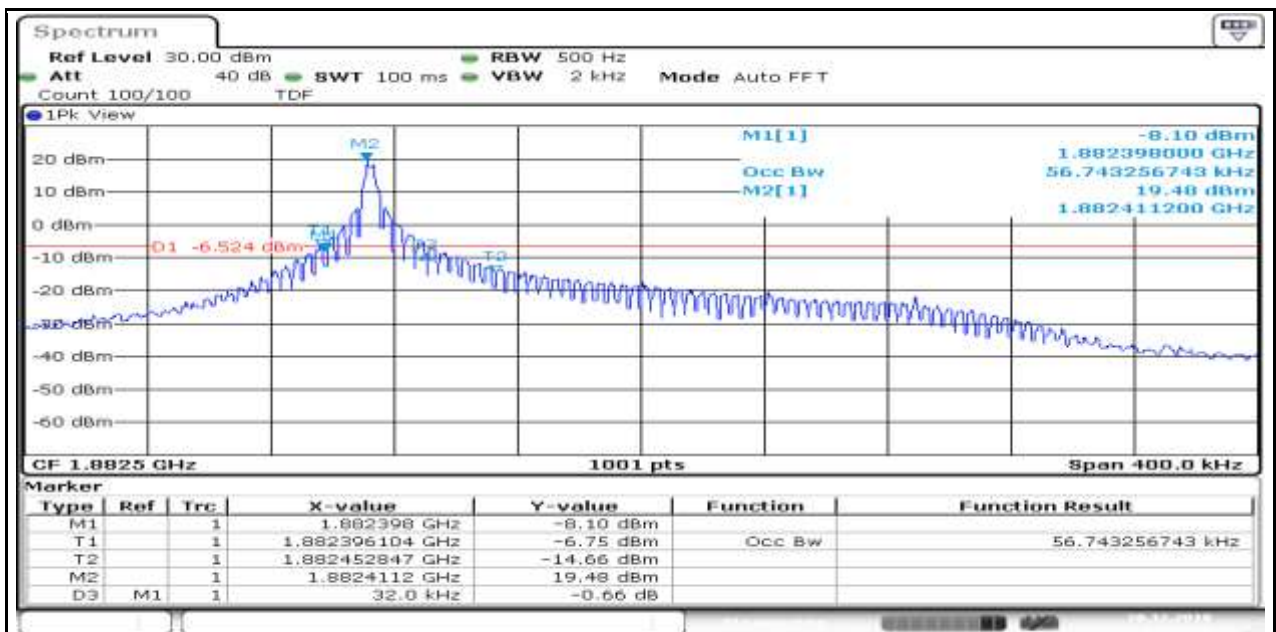
Band25_Stand-Alone_NaN_BPSK_26041_1@0_3.75kHz_0.032_PASS_



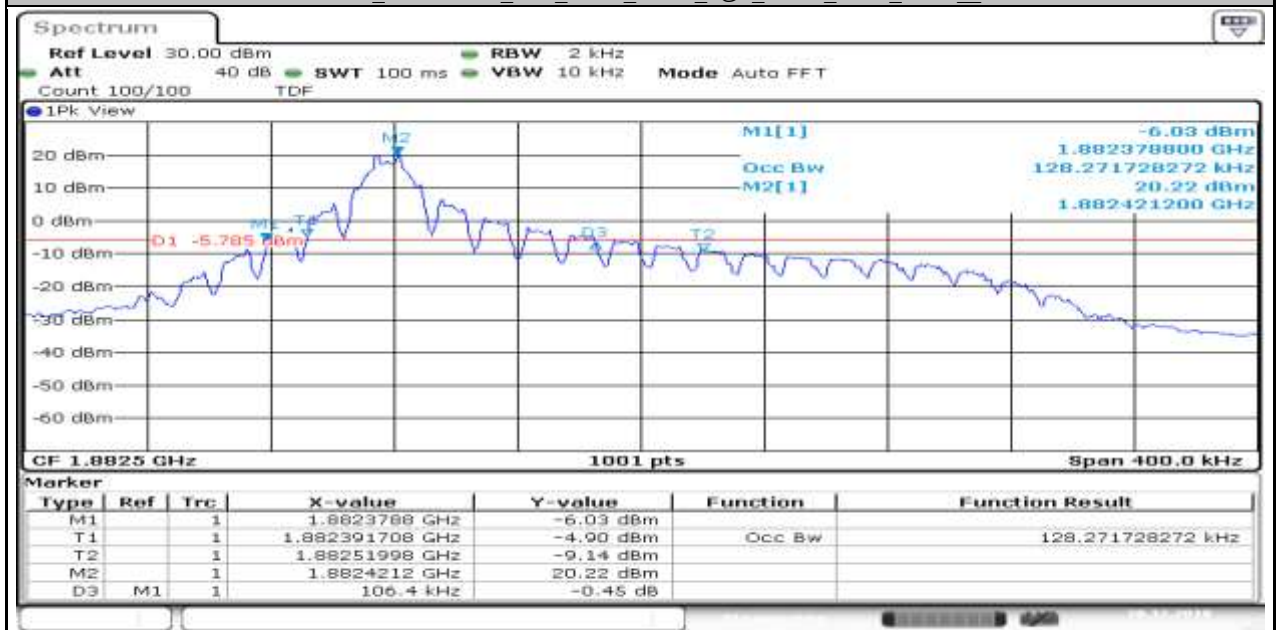
Band25_Stand-Alone_NaN_BPSK_26041_1@0_15kHz_0.106_PASS_



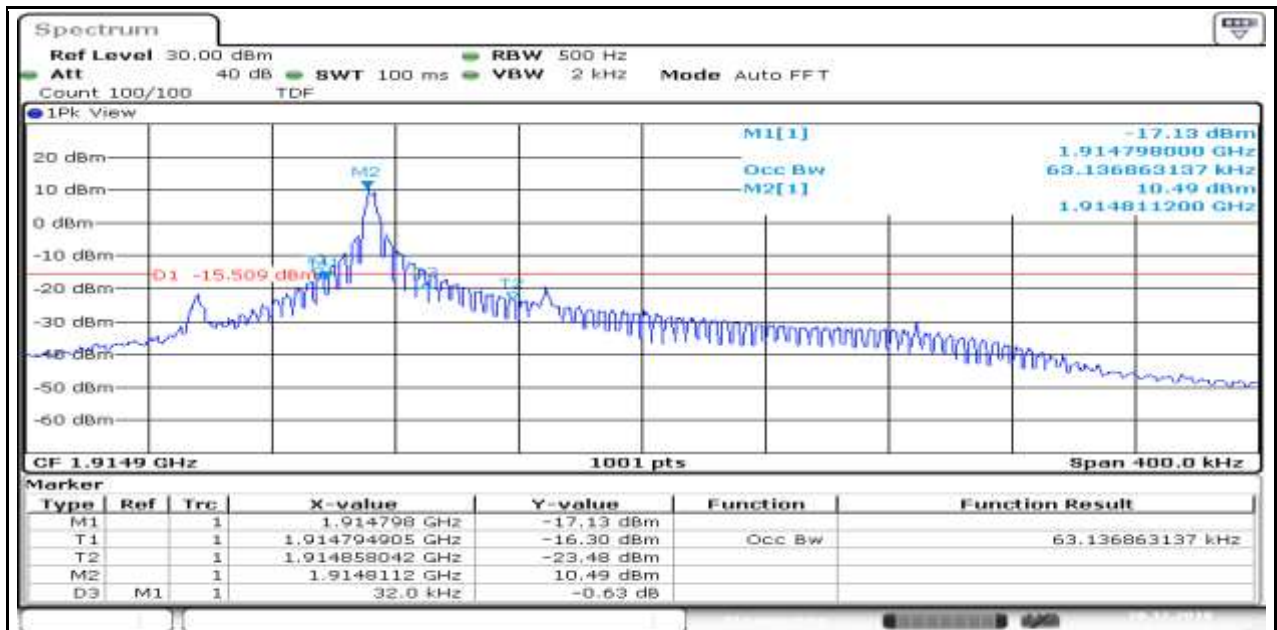
Band25_Stand-Alone_NaN_BPSK_26365_1@0_3.75kHz_0.032_PASS_



Band25_Stand-Alone_NaN_BPSK_26365_1@0_15kHz_0.106_PASS_

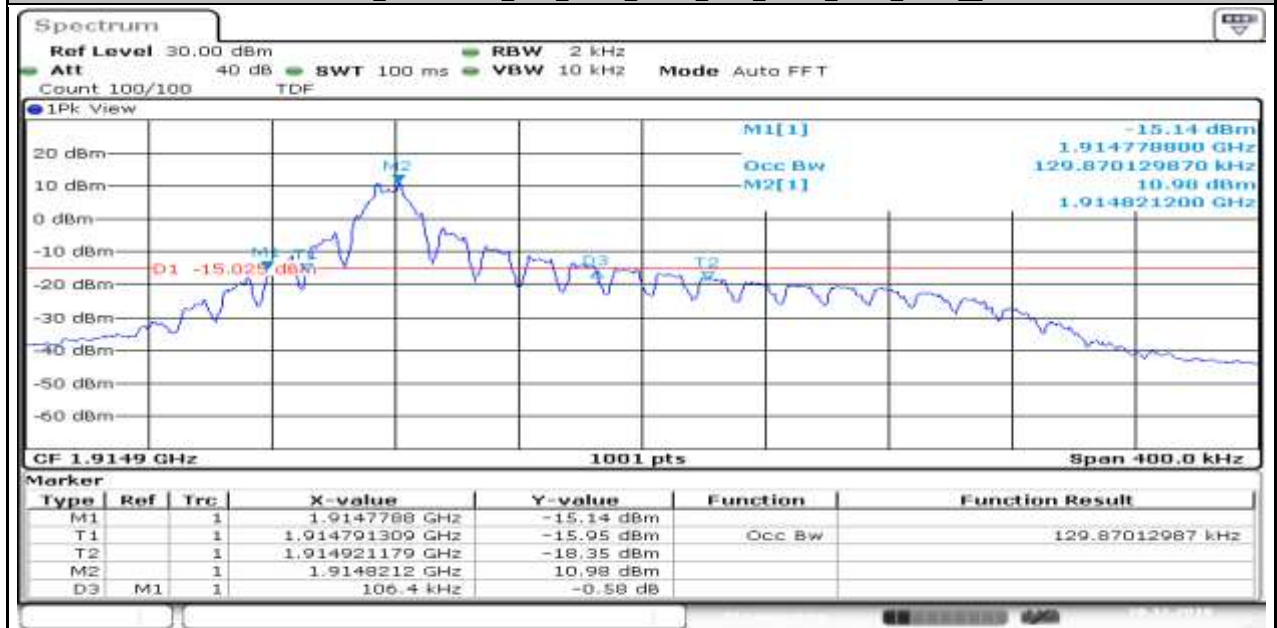


Band25_Stand-Alone_NaN_BPSK_26689_1@0_3.75kHz_0.032_PASS_



Date: 20.DEC.2019 14:52:04

Band25_Stand-Alone_NaN_BPSK_26689_1@0_15kHz_0.106_PASS_



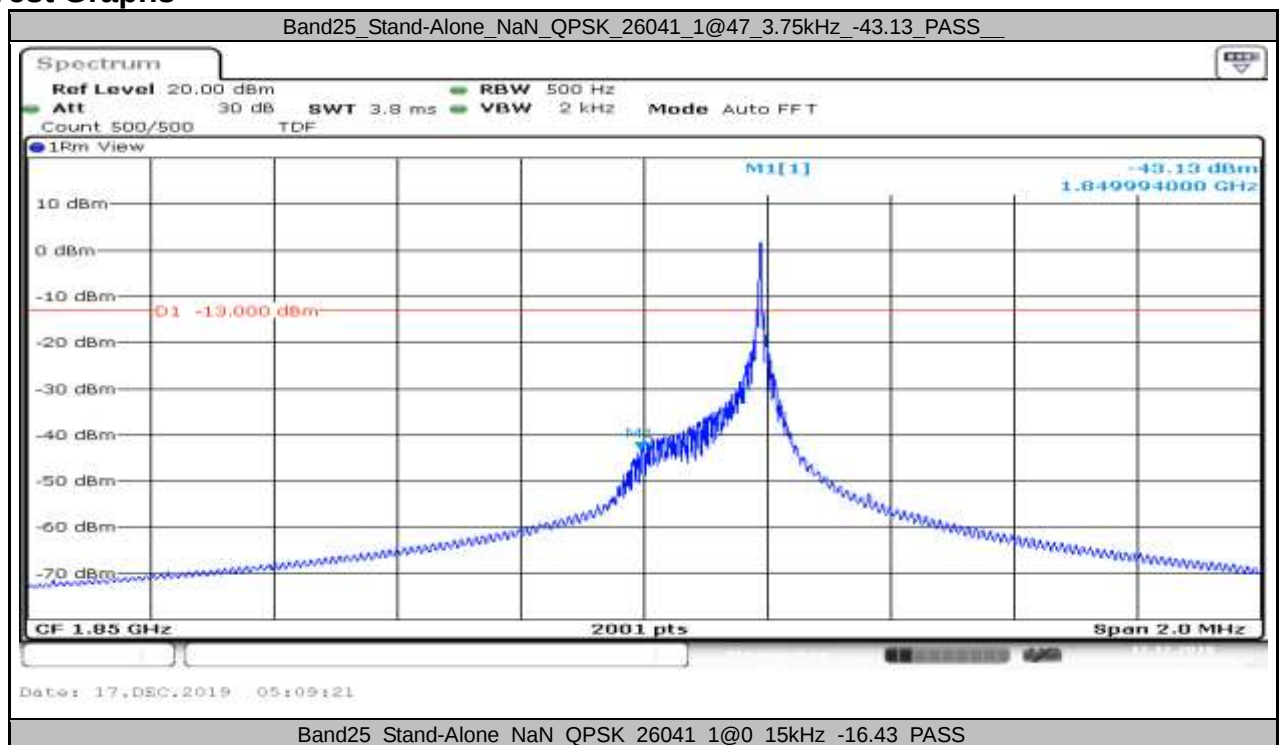
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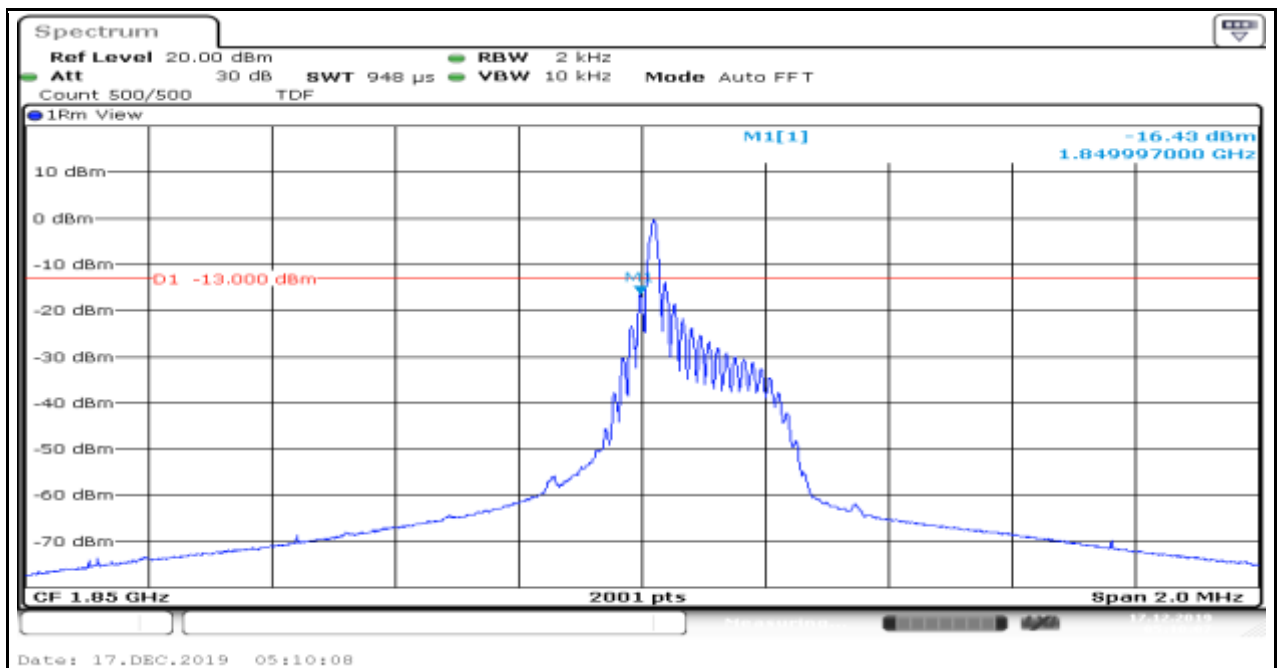
Appendix F.4: Band Edge for NB

Test Result

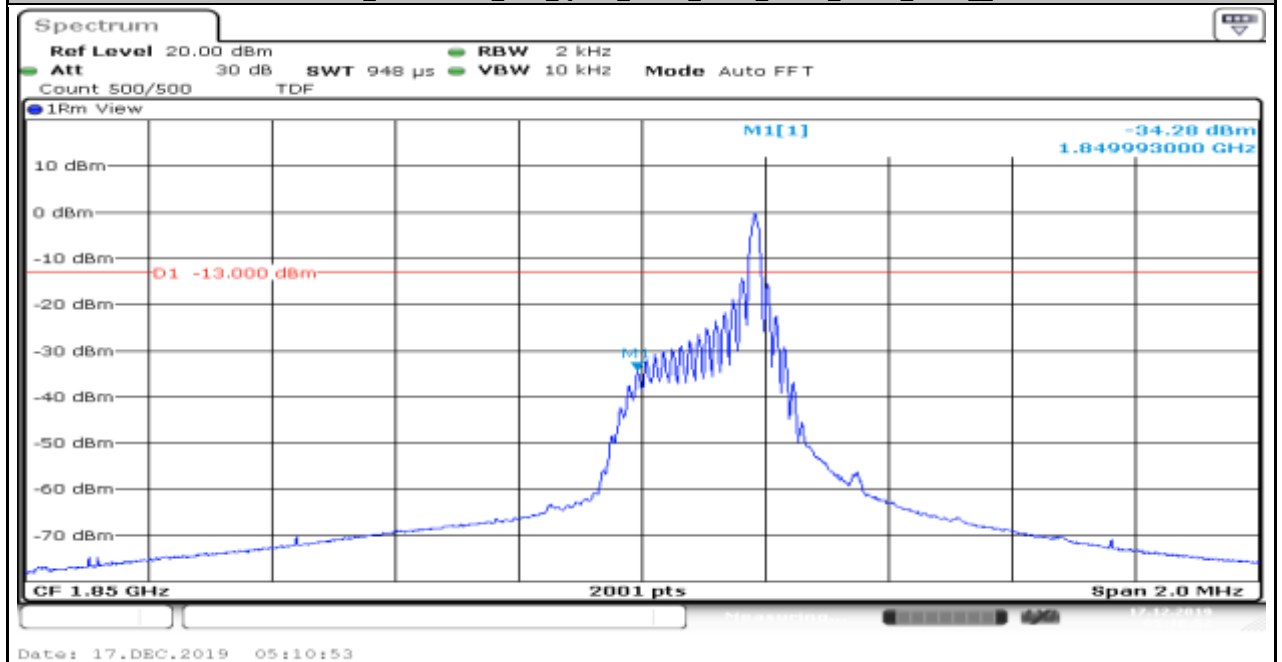
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Result (dBm)	Verdict
Band25	Stand-Alone	NaN	QPSK	26041	1@47	3.75kHz	-43.13	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@0	15kHz	-16.43	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@11	15kHz	-34.28	PASS
Band25	Stand-Alone	NaN	QPSK	26041	12@0	15kHz	-32.62	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@0	3.75kHz	-21.83	PASS
Band25	Stand-Alone	NaN	QPSK	26689	12@0	15kHz	-29.55	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@0	3.75kHz	-42.17	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@47	3.75kHz	-20.65	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@11	15kHz	-15.05	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@0	15kHz	-34.00	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@0	3.75kHz	-20.13	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@47	3.75kHz	-41.85	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@0	15kHz	-14.15	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@11	15kHz	-32.86	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@11	15kHz	-14.29	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@0	3.75kHz	-41.27	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@47	3.75kHz	-19.97	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@0	15kHz	-33.15	PASS

Test Graphs

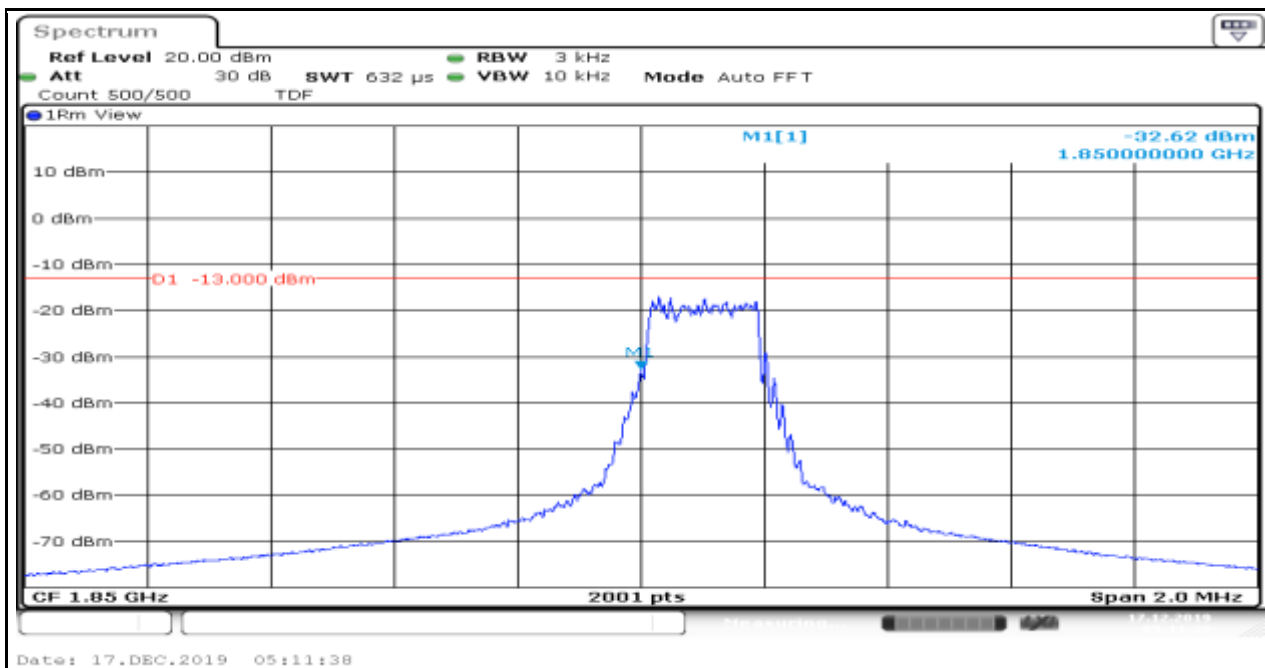




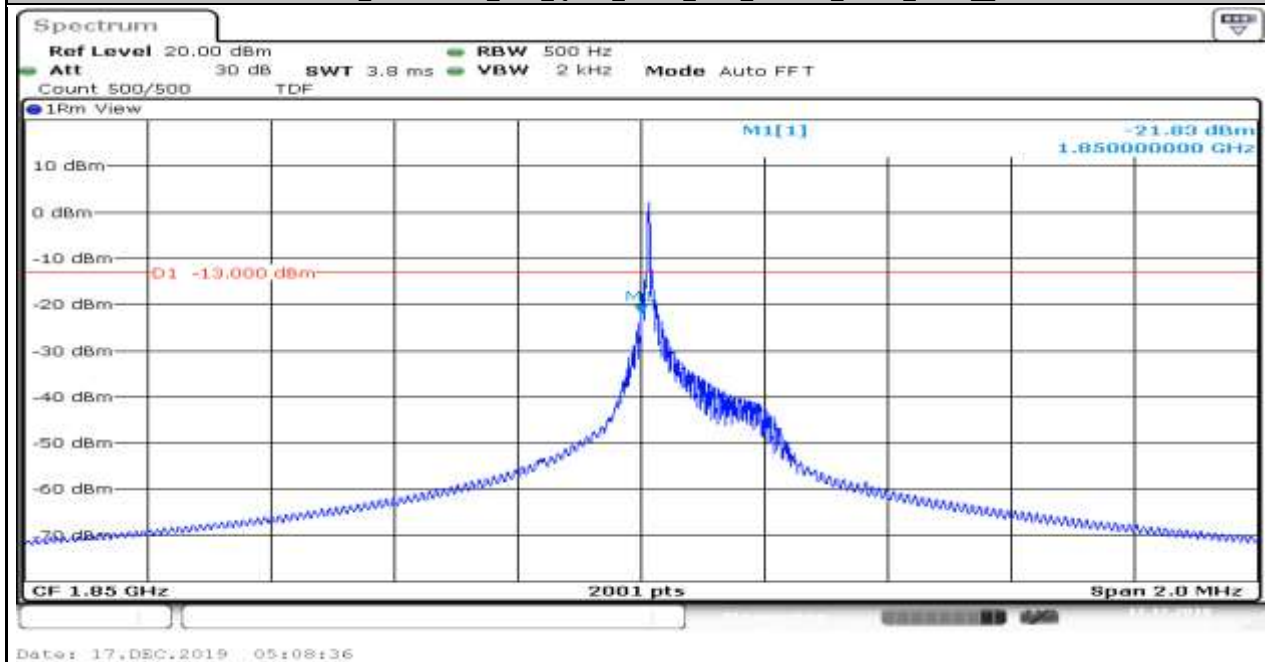
Band25_Stand-Alone_NaN_QPSK_26041_1@11_15kHz_-34.28_PASS_



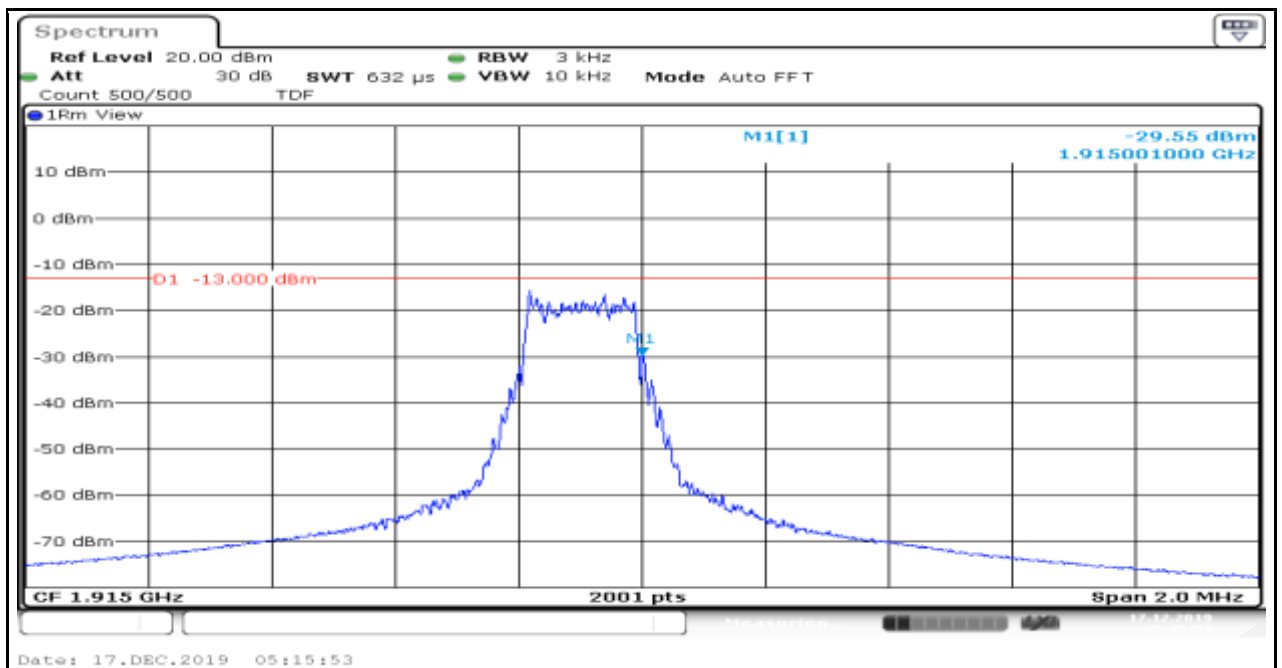
Band25_Stand-Alone_NaN_QPSK_26041_12@0_15kHz_-32.62_PASS_



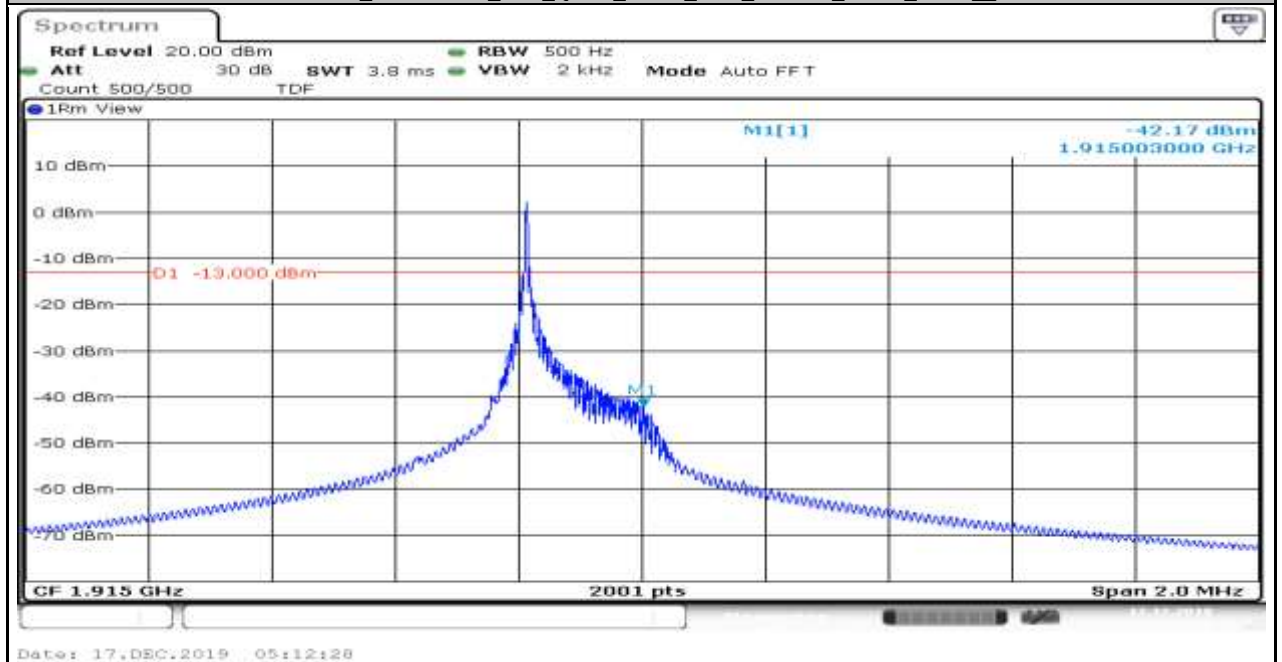
Band25_Stand-Alone_NaN_QPSK_26041_1@0_3.75kHz_-21.83_PASS_



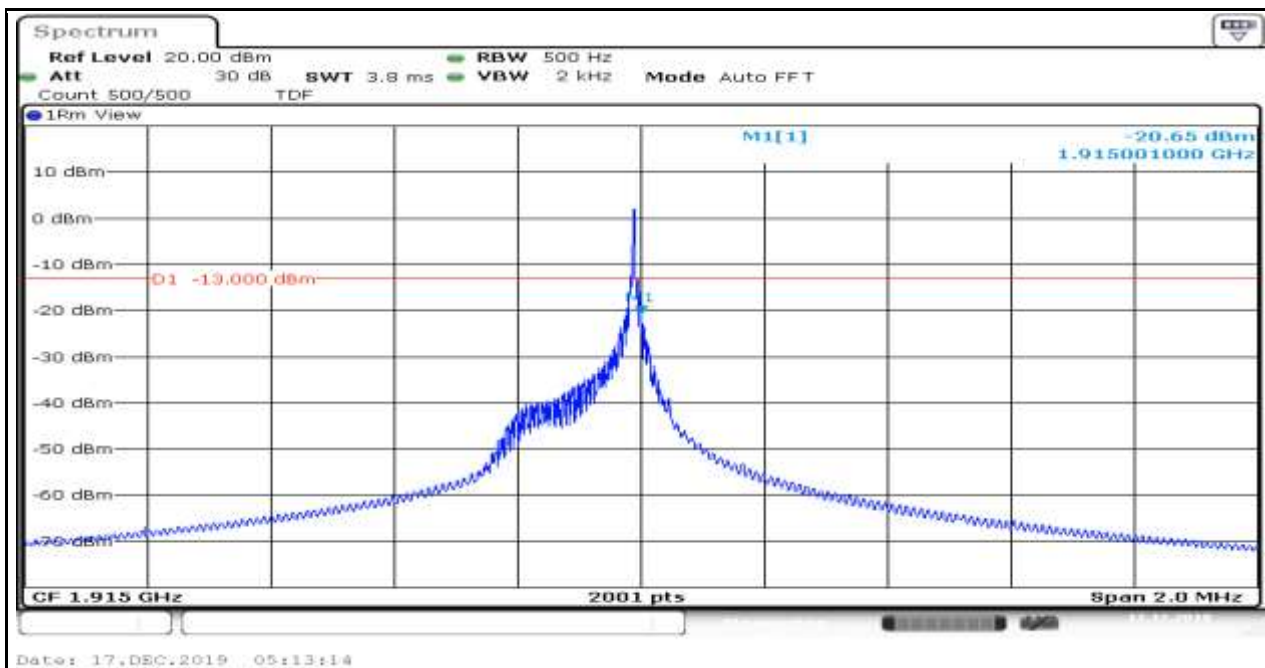
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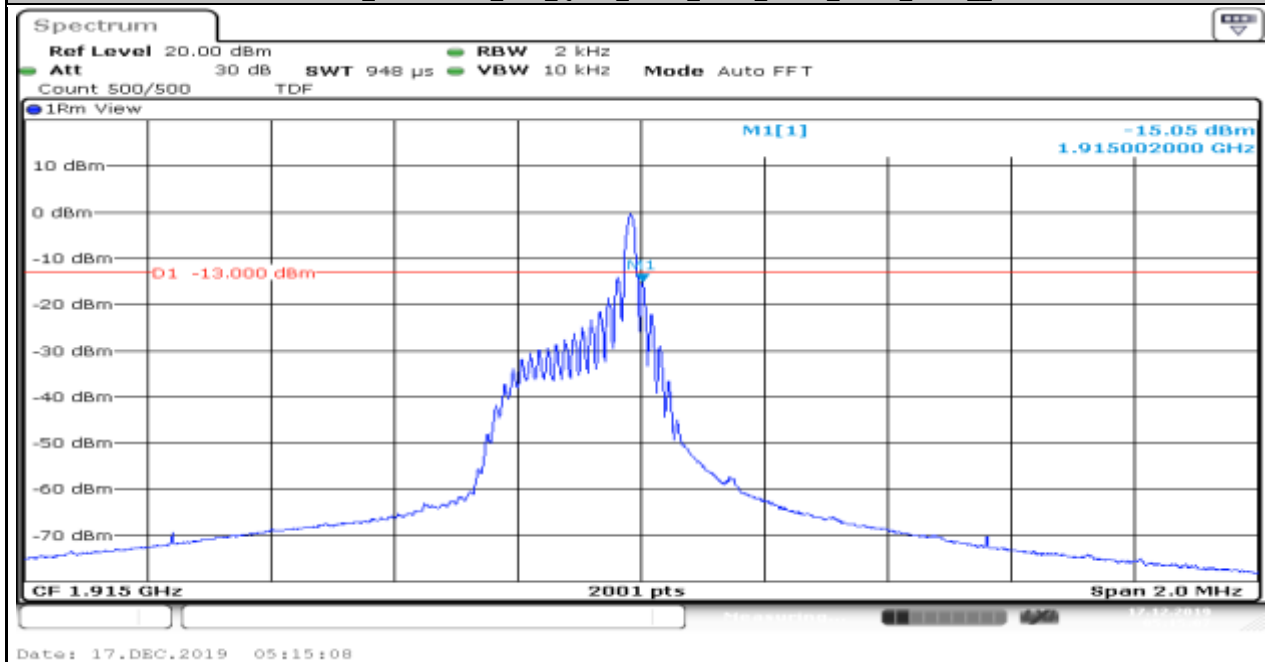
Band25_Stand-Alone_NaN_QPSK_26689_1@0_3.75kHz_-42.17_PASS_



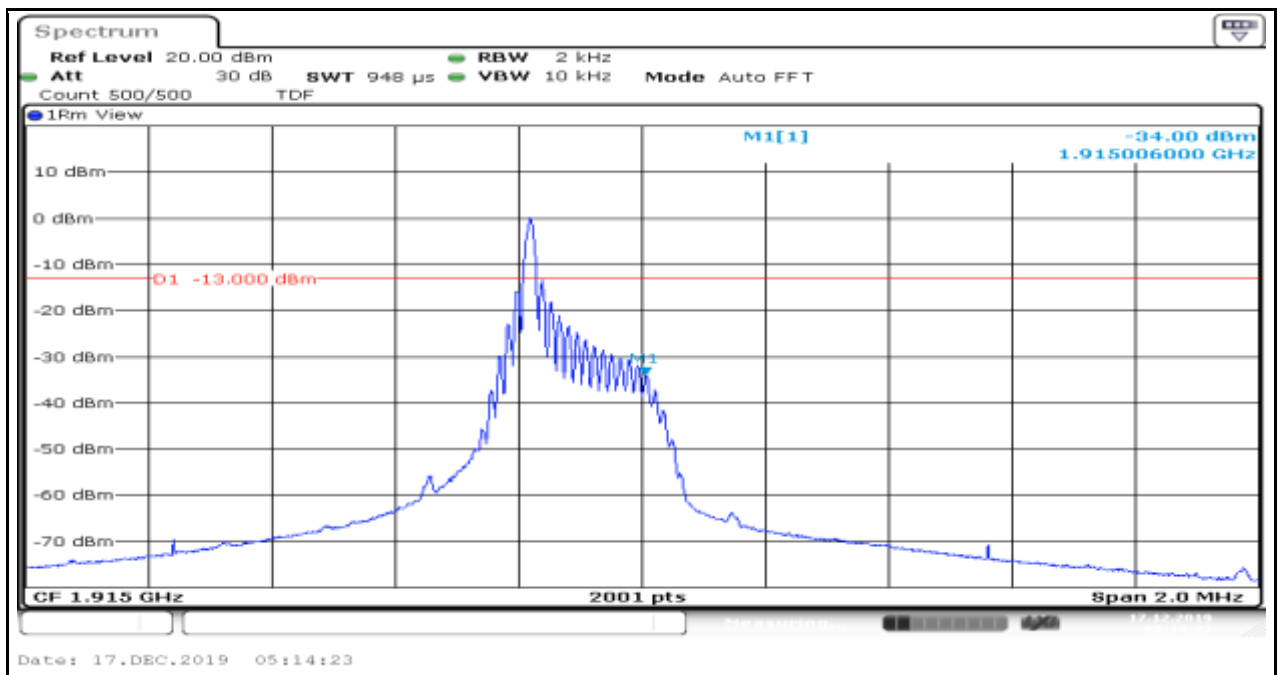
Band25_Stand-Alone_NaN_QPSK_26689_1@47_3.75kHz_-20.65_PASS_



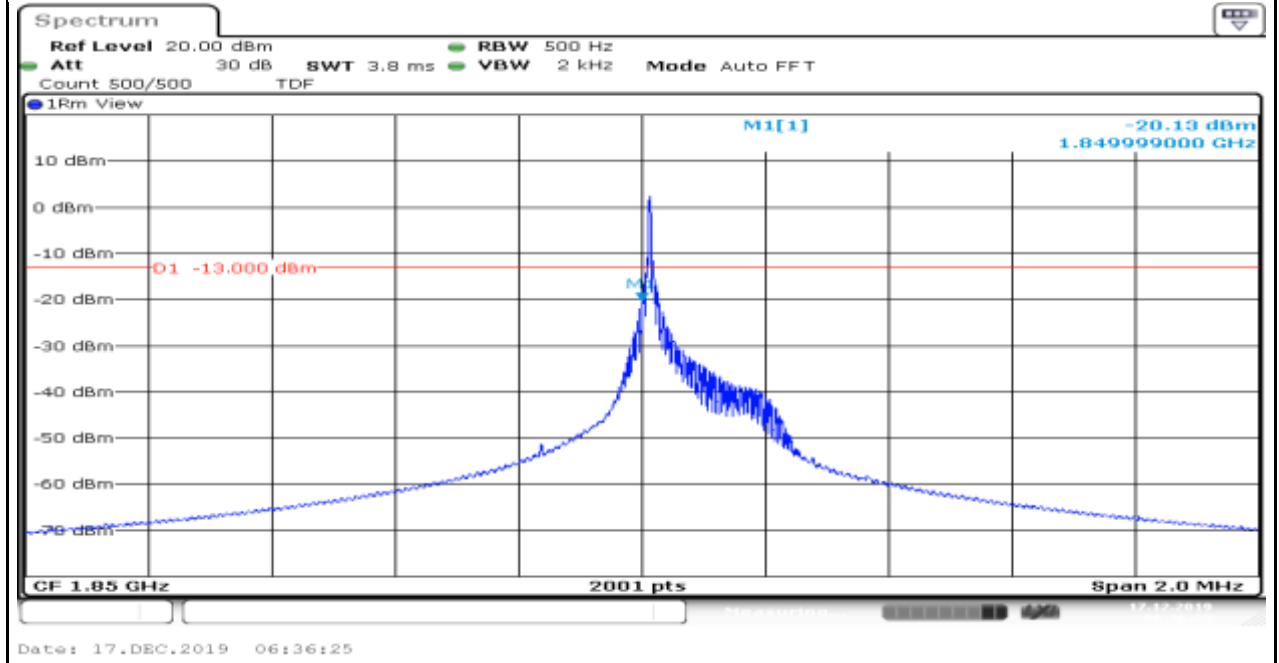
Band25_Stand-Alone_NaN_QPSK_26689_1@11_15kHz_-15.05_PASS_



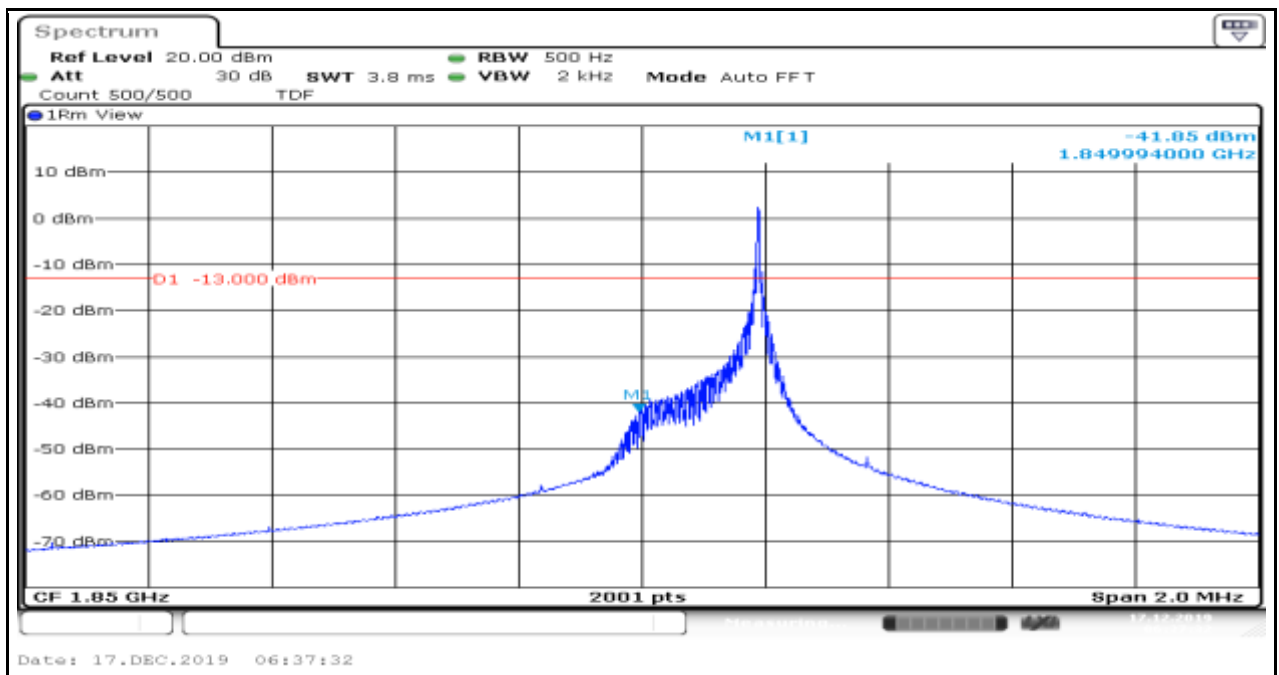
Band25_Stand-Alone_NaN_QPSK_26689_1@0_15kHz_-34.00_PASS_



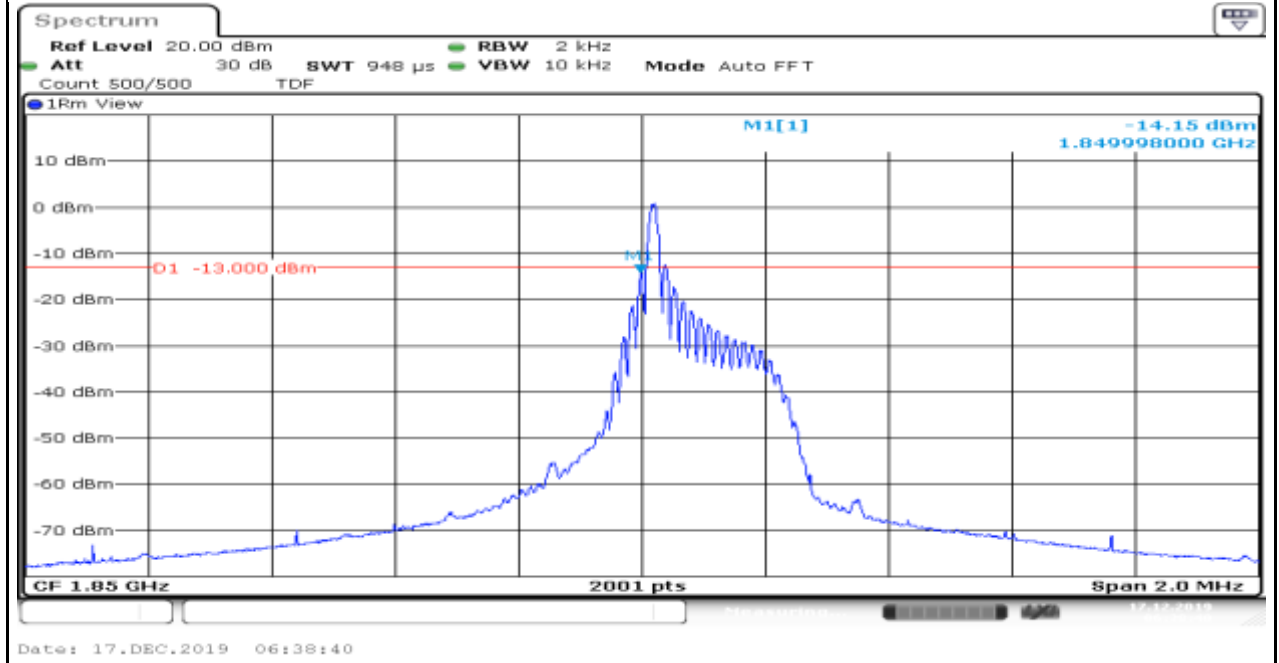
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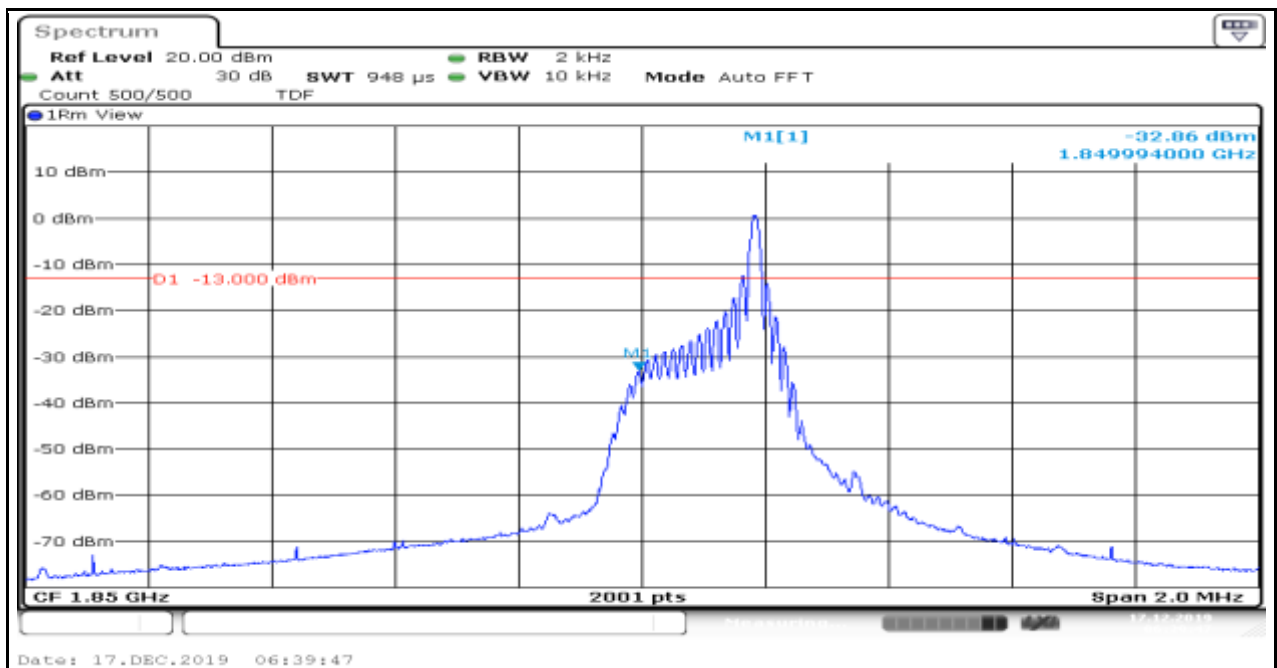
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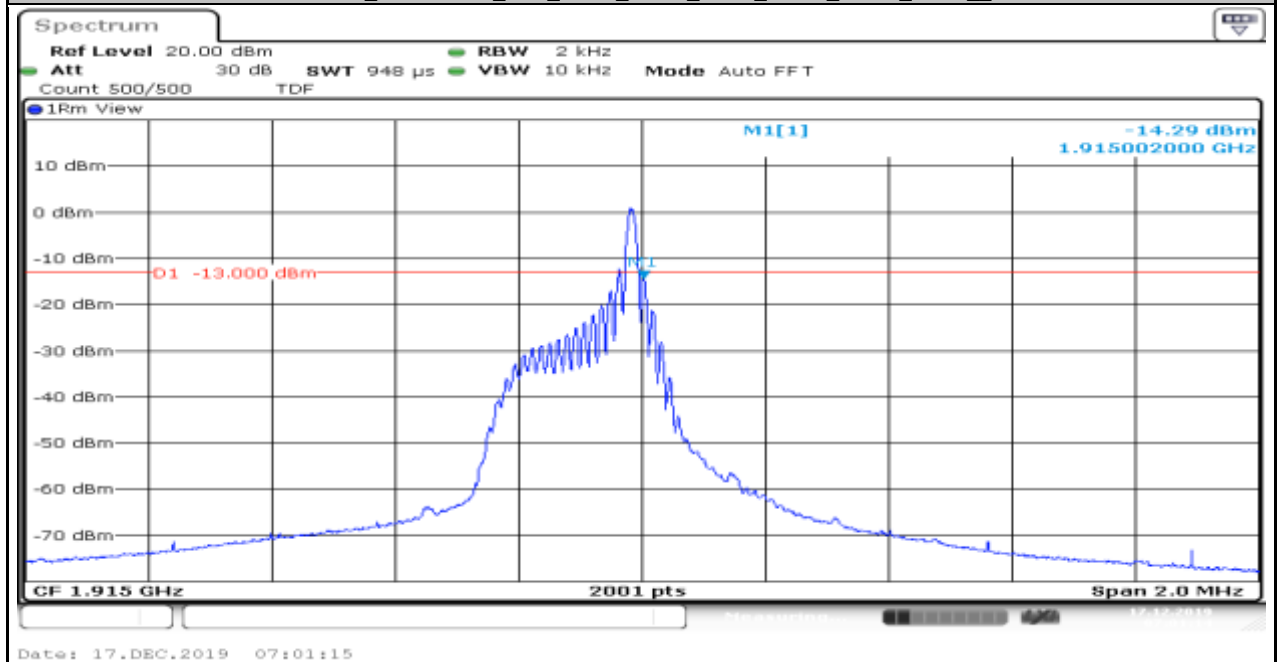
Band25_Stand-Alone_NaN_BPSK_26041_1@0_15kHz_-14.15_PASS_



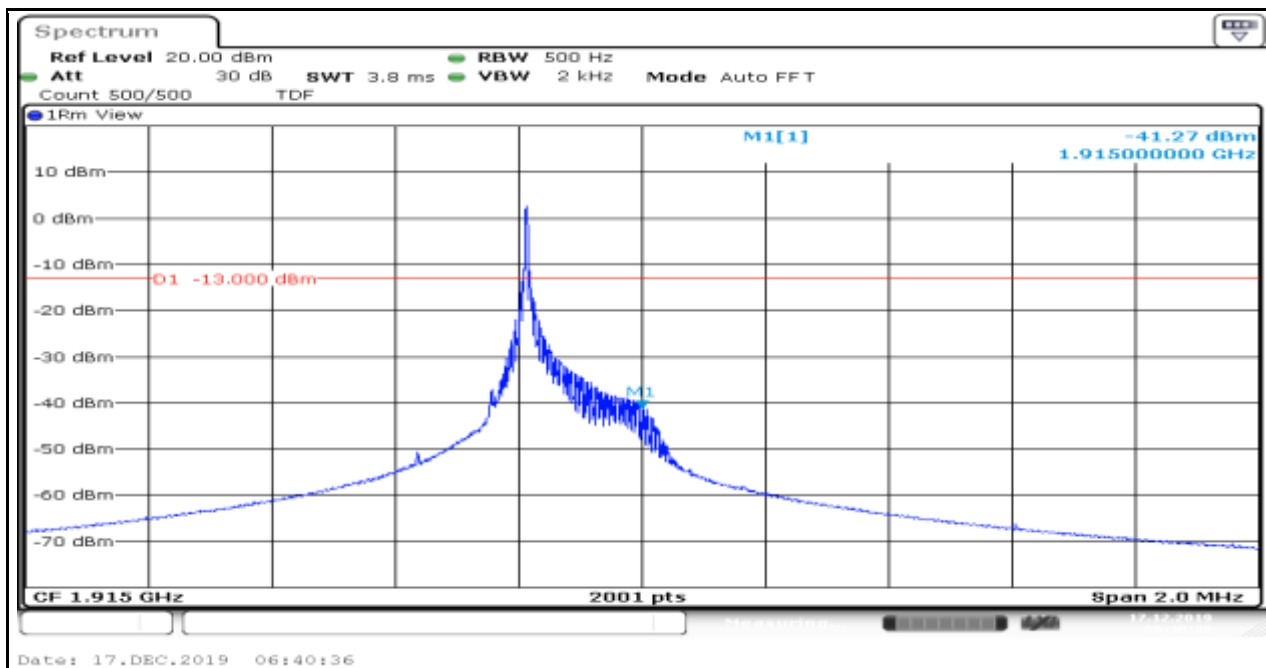
Band25_Stand-Alone_NaN_BPSK_26041_1@11_15kHz_-32.86_PASS_



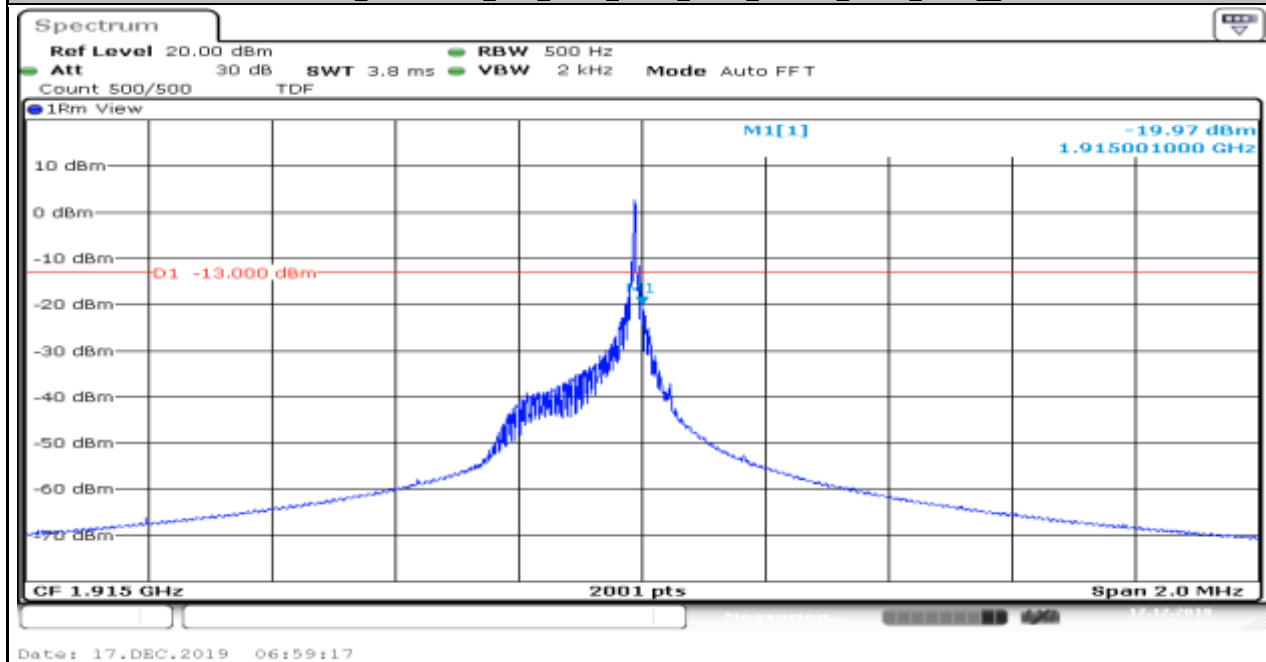
Band25_Stand-Alone_NaN_BPSK_26689_1@11_15kHz_-14.29_PASS_



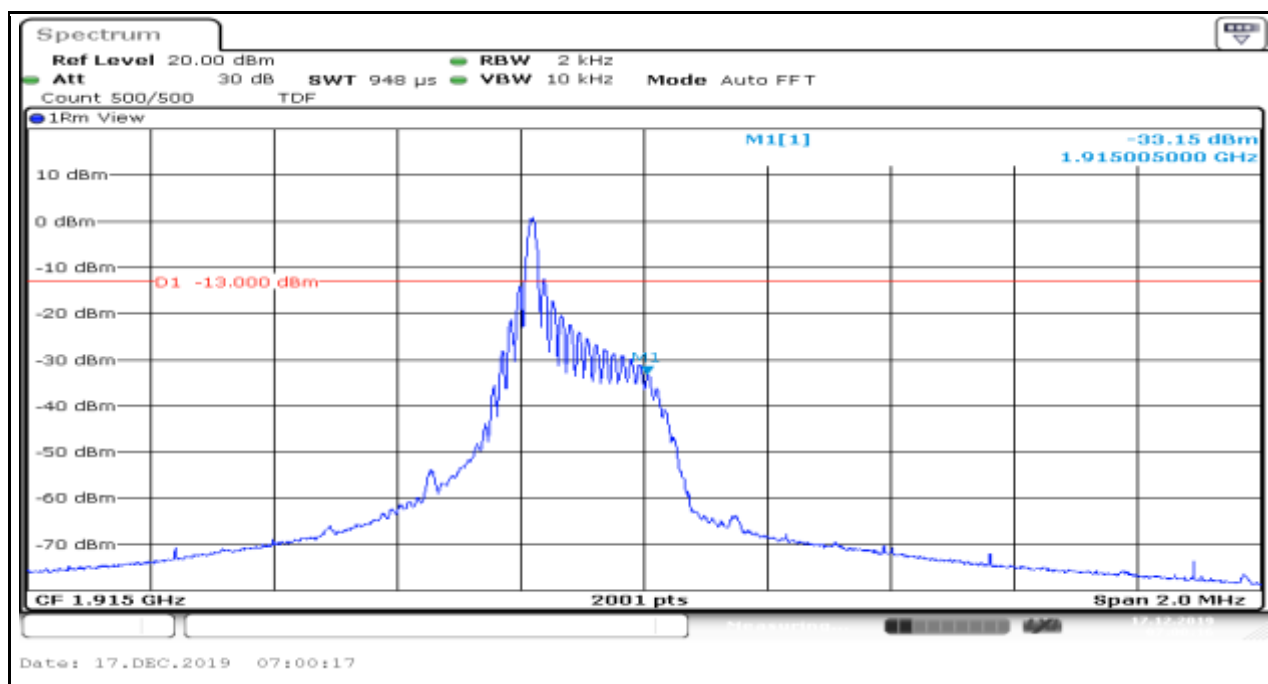
Band25_Stand-Alone_NaN_BPSK_26689_1@0_3.75kHz_-41.27_PASS_



Band25_Stand-Alone_NaN_BPSK_26689_1@47_3.75kHz_-19.97_PASS_



Band25_Stand-Alone_NaN_BPSK_26689_1@0_15kHz_-33.15_PASS_



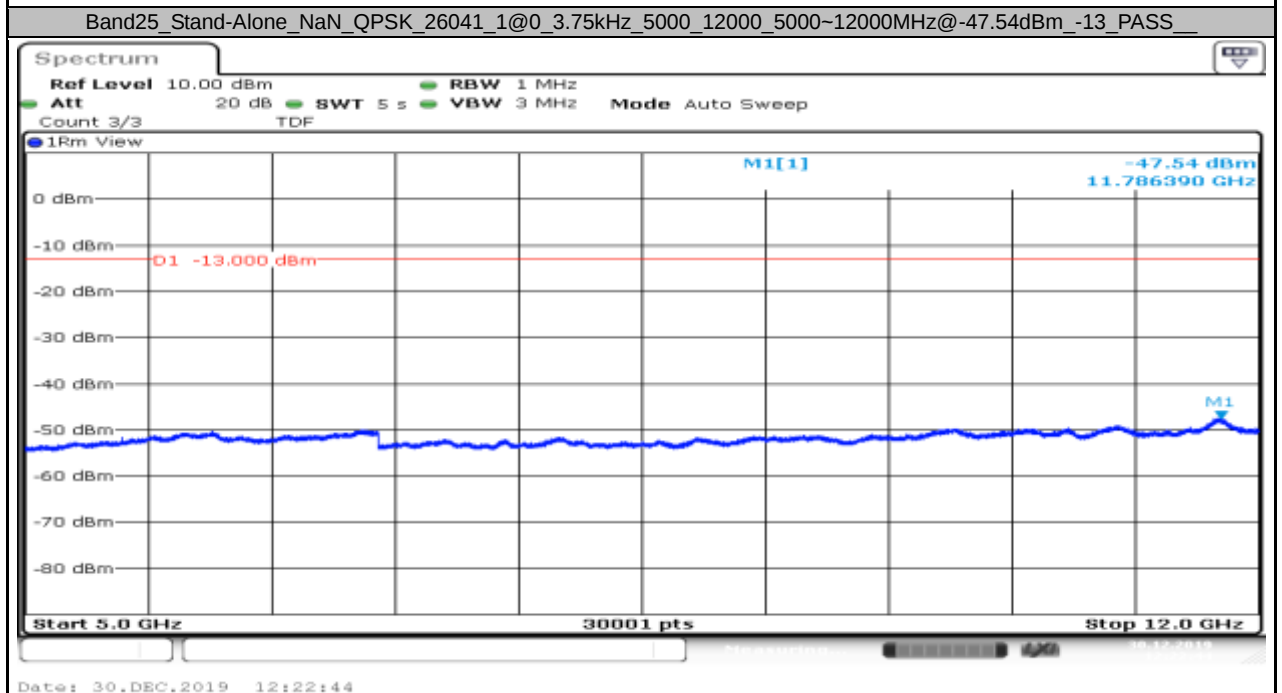
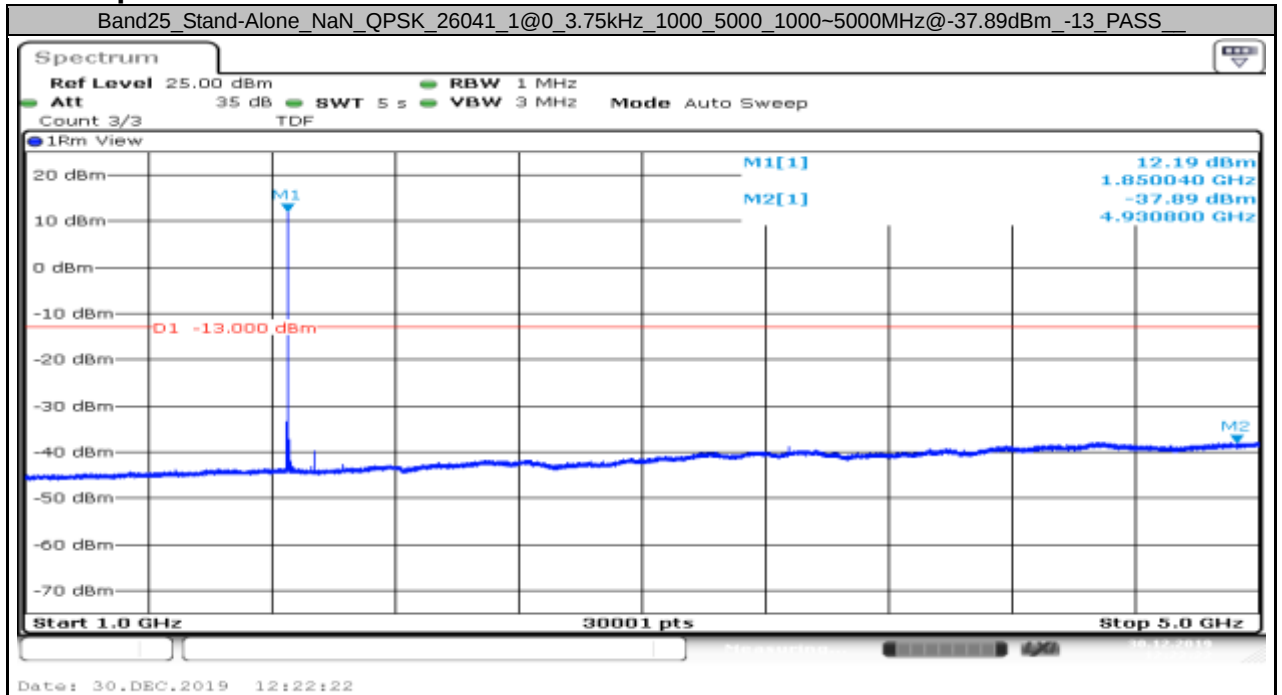
Appendix F.5: Conducted Spurious Emission for NB

Test Result

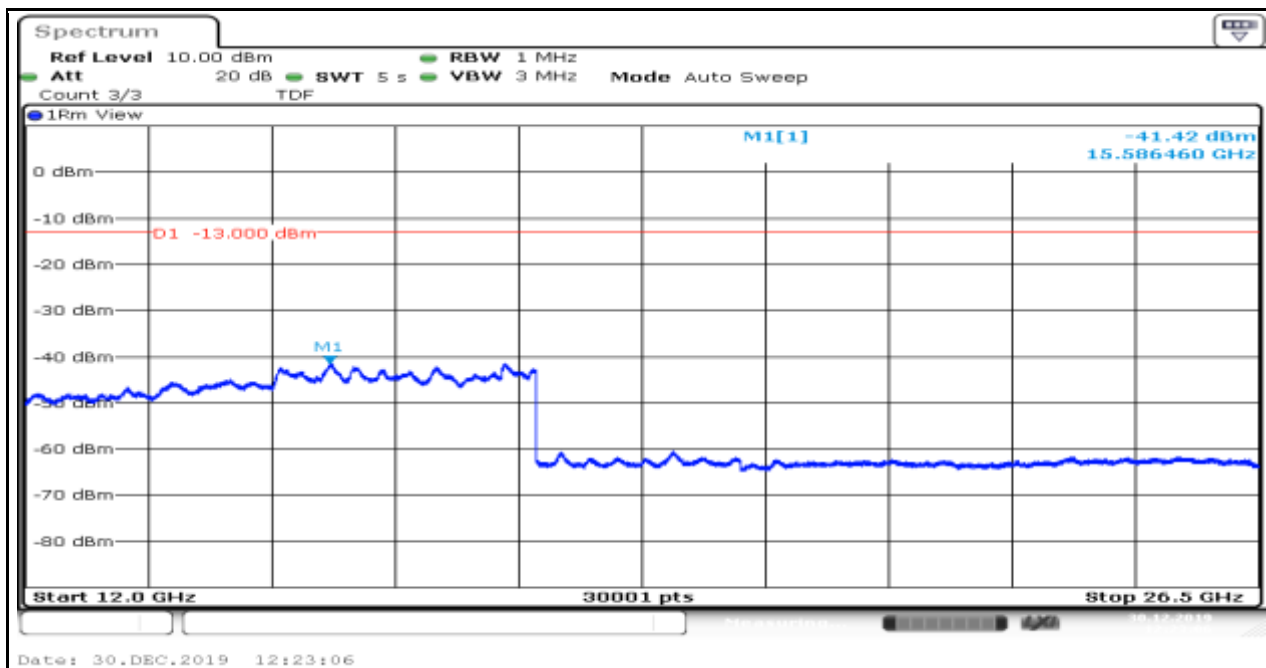
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	StartFreq (MHz)	StopFreq (MHz)	Result (dBm)	Limit (dBm)	Verdict
Band25	Stand-Alone	NaN	QPSK	26041	1@0	3.75kHz	1000	5000	1000-5000MHz@-37.89dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@0	3.75kHz	5000	12000	5000-12000MHz@-47.54dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@0	3.75kHz	12000	26500	12000-26500MHz@-41.42dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@47	3.75kHz	30	1000	30-1000MHz@-36.13dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@47	3.75kHz	1000	5000	1000-5000MHz@-37.81dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@47	3.75kHz	5000	12000	5000-12000MHz@-47.36dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@47	3.75kHz	12000	26500	12000-26500MHz@-41.12dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26041	1@0	3.75kHz	30	1000	30-1000MHz@-35.44dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26041	12@0	15kHz	12000	26500	12000-26500MHz@-41.47dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26041	12@0	15kHz	5000	12000	5000-12000MHz@-47.43dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26041	12@0	15kHz	1000	5000	1000-5000MHz@-37.86dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26041	12@0	15kHz	30	1000	30-1000MHz@-35.53dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	5000	12000	5000-12000MHz@-44.21dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26365	12@0	15kHz	1000	5000	1000-5000MHz@-37.87dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	12000	26500	12000-26500MHz@-41.49dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	5000	12000	5000-12000MHz@-44.07dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	1000	5000	1000-5000MHz@-35.14dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26365	12@0	15kHz	12000	26500	12000-26500MHz@-41.42dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	12000	26500	12000-26500MHz@-41.49dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26365	12@0	15kHz	5000	12000	5000-12000MHz@-45.79dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	1000	5000	1000-5000MHz@-35.14dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	30	1000	30-1000MHz@-35.31dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	30	1000	30-1000MHz@-35.82dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26365	12@0	15kHz	30	1000	30-1000MHz@-35.9dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@0	3.75kHz	12000	26500	12000-26500MHz@-41.47dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@0	3.75kHz	30	1000	30-1000MHz@-35.86dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@0	3.75kHz	5000	12000	5000-12000MHz@-47.38dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@47	3.75kHz	30	1000	30-1000MHz@-36.07dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@47	3.75kHz	1000	5000	1000-5000MHz@-37.91dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@47	3.75kHz	5000	12000	5000-12000MHz@-47.49dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@47	3.75kHz	12000	26500	12000-26500MHz@-41.44dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26689	12@0	15kHz	30	1000	30-1000MHz@-35.82dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26689	1@0	3.75kHz	1000	5000	1000-5000MHz@-37.64dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26689	12@0	15kHz	12000	26500	12000-26500MHz@-41.4dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26689	12@0	15kHz	5000	12000	5000-12000MHz@-47.27dBm	-13	PASS
Band25	Stand-Alone	NaN	QPSK	26689	12@0	15kHz	1000	5000	1000-5000MHz@-37.77dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@0	15kHz	12000	26500	12000-26500MHz@-41.11dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@0	15kHz	1000	5000	1000-5000MHz@-37.89dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@0	15kHz	5000	12000	5000-12000MHz@-47.23dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@11	15kHz	12000	26500	12000-26500MHz@-41.57dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@11	15kHz	5000	12000	5000-12000MHz@-47.44dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@11	15kHz	1000	5000	1000-5000MHz@-37.71dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@11	15kHz	30	1000	30-1000MHz@-35.67dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26041	1@0	15kHz	30	1000	30-1000MHz@-35.67dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@0	15kHz	30	1000	30-1000MHz@-35.09dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@11	15kHz	12000	26500	12000-26500MHz@-41.46dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@11	15kHz	1000	5000	1000-5000MHz@-35.06dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@11	15kHz	5000	12000	5000-12000MHz@-44.36dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@11	15kHz	30	1000	30-1000MHz@-35.88dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@0	15kHz	12000	26500	12000-26500MHz@-41.44dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@0	15kHz	1000	5000	1000-5000MHz@-34.89dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26365	1@0	15kHz	5000	12000	5000-12000MHz@-47.01dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@11	15kHz	12000	26500	12000-26500MHz@-41.47dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@0	15kHz	30	1000	30-1000MHz@-35.57dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@0	15kHz	1000	5000	1000-5000MHz@-37.71dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@0	15kHz	5000	12000	5000-12000MHz@-47.28dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@0	15kHz	12000	26500	12000-26500MHz@-41.51dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@11	15kHz	30	1000	30-1000MHz@-35.89dBm	-13	PASS

Band25	Stand-Alone	NaN	BPSK	26689	1@11	15kHz	1000	5000	1000-5000MHz@-37.74dBm	-13	PASS
Band25	Stand-Alone	NaN	BPSK	26689	1@11	15kHz	5000	12000	5000-12000MHz@-47.38dBm	-13	PASS

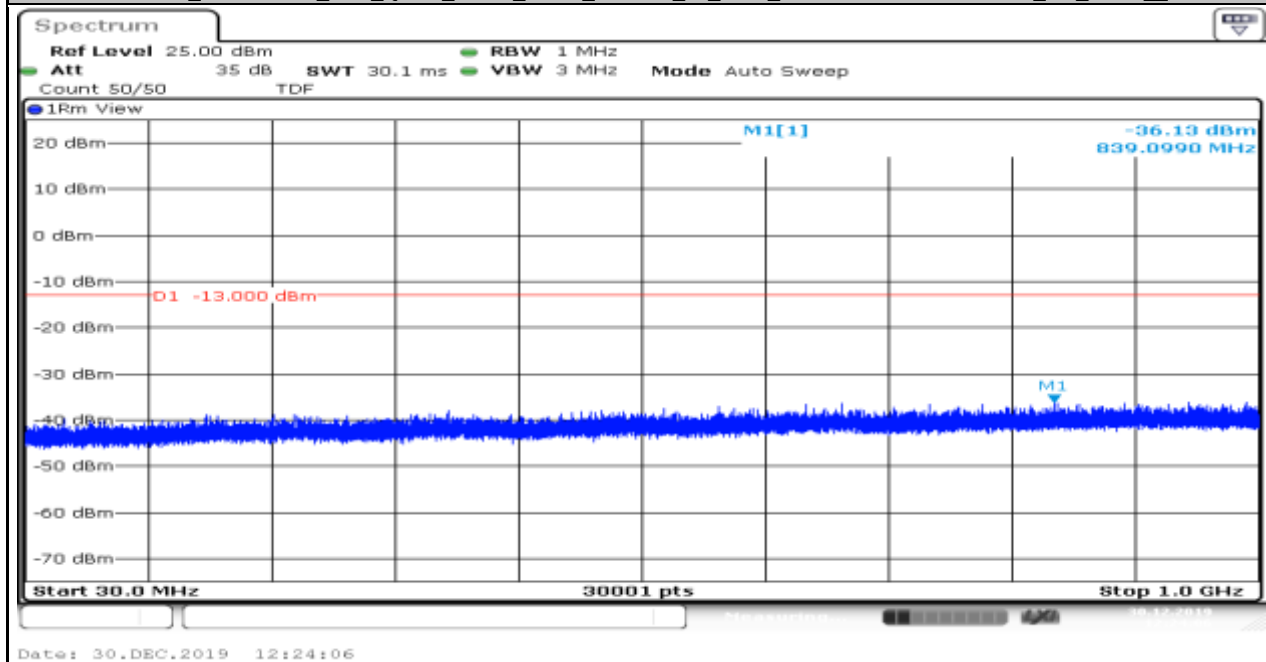
Test Graphs



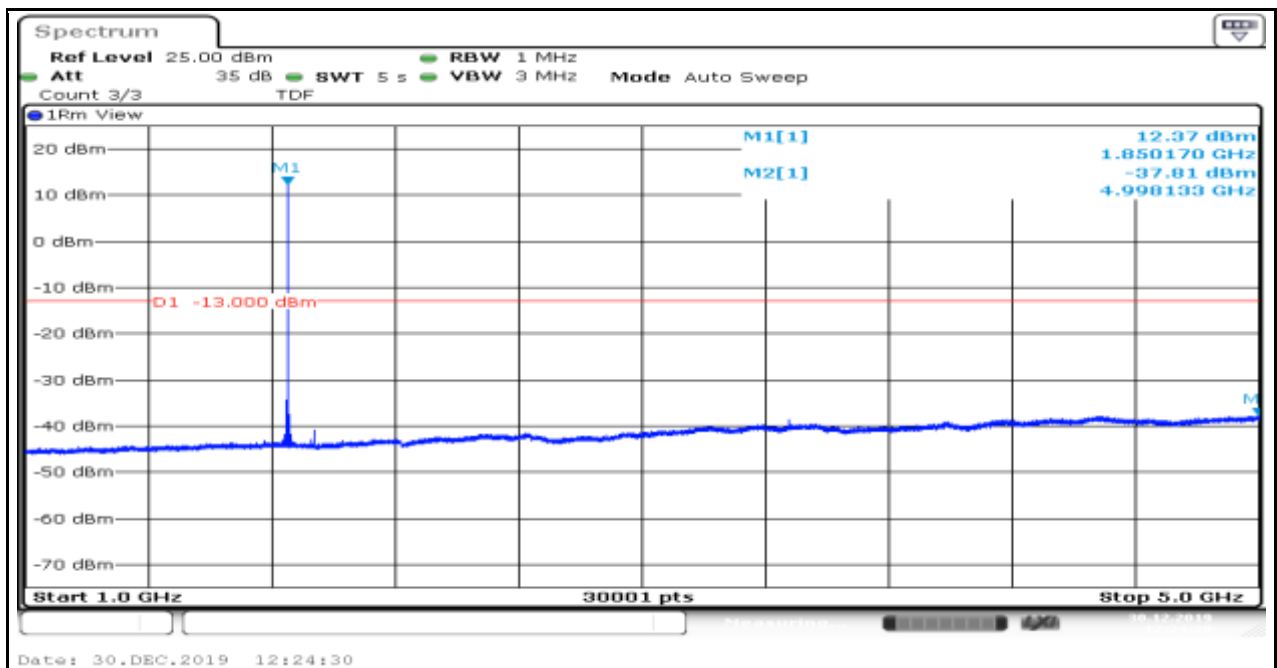
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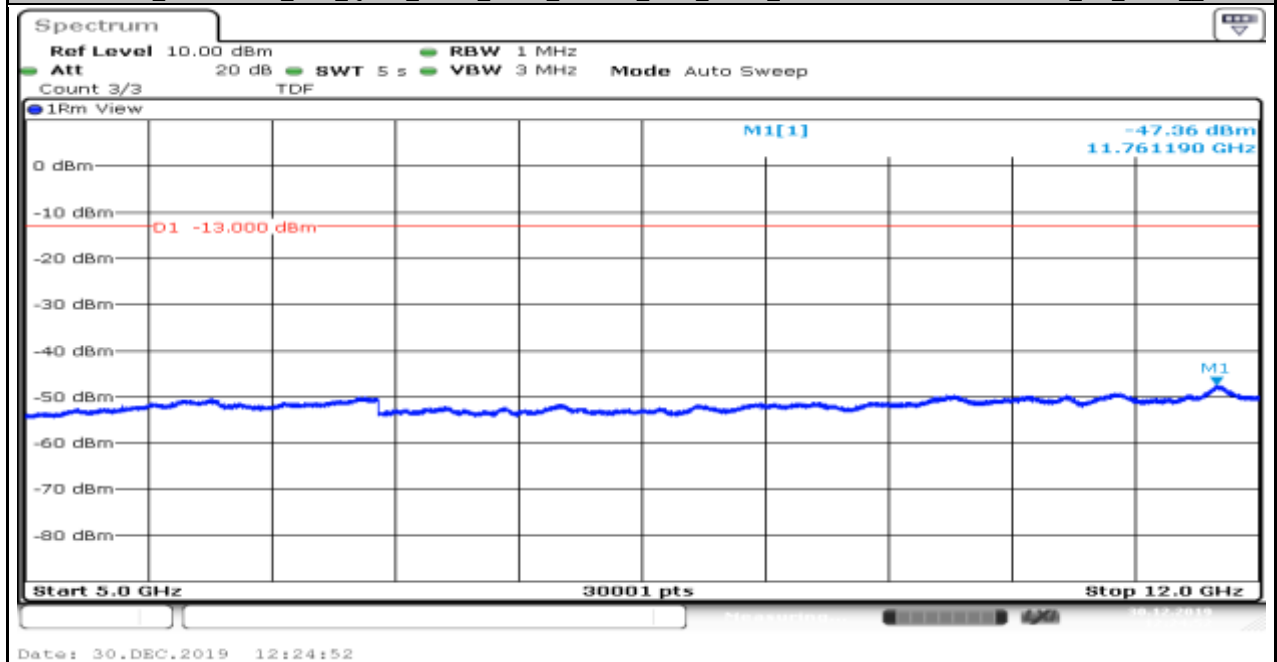
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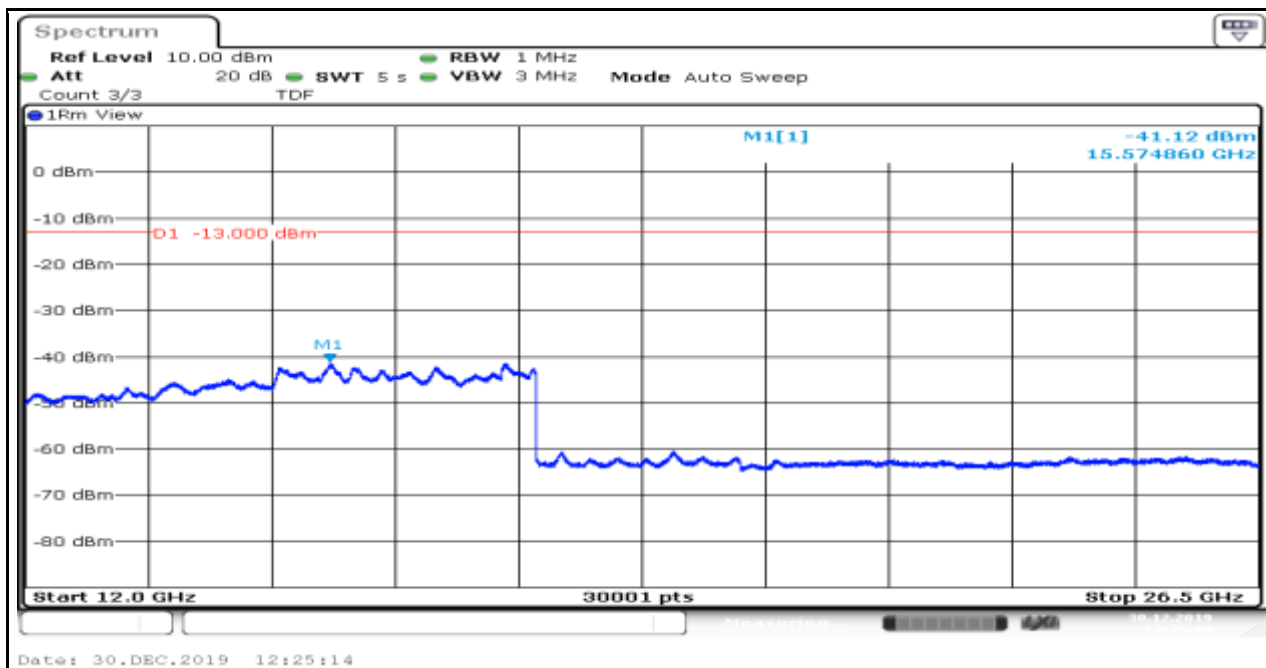
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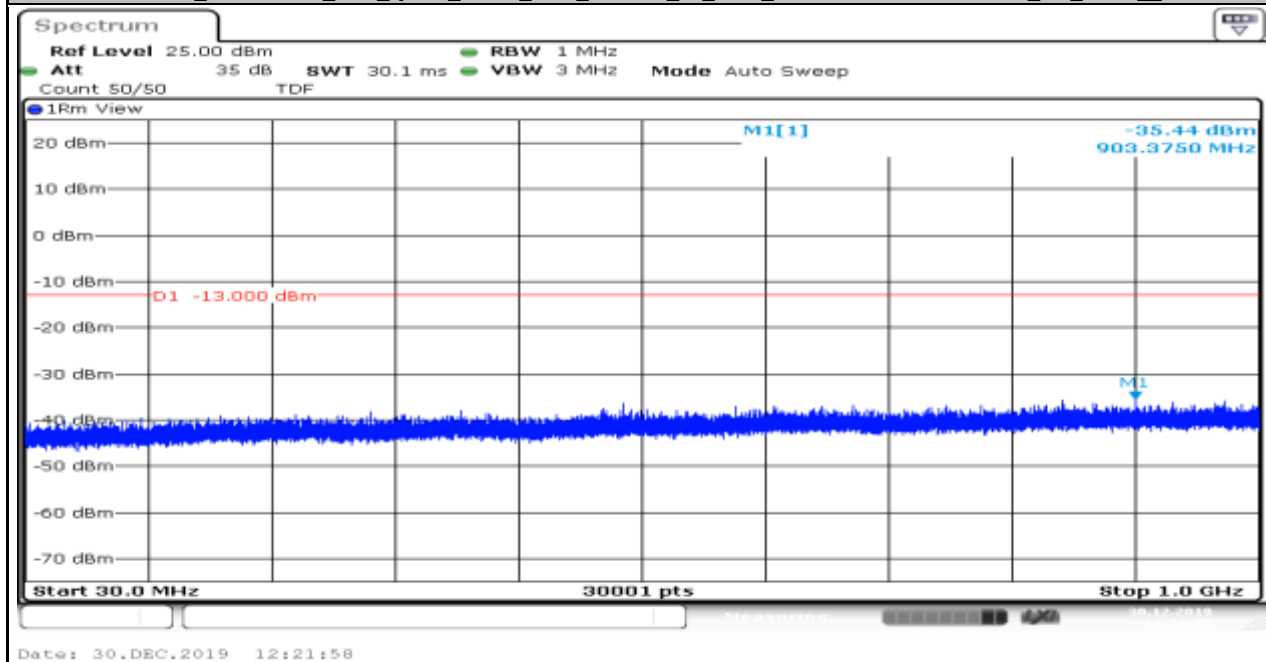
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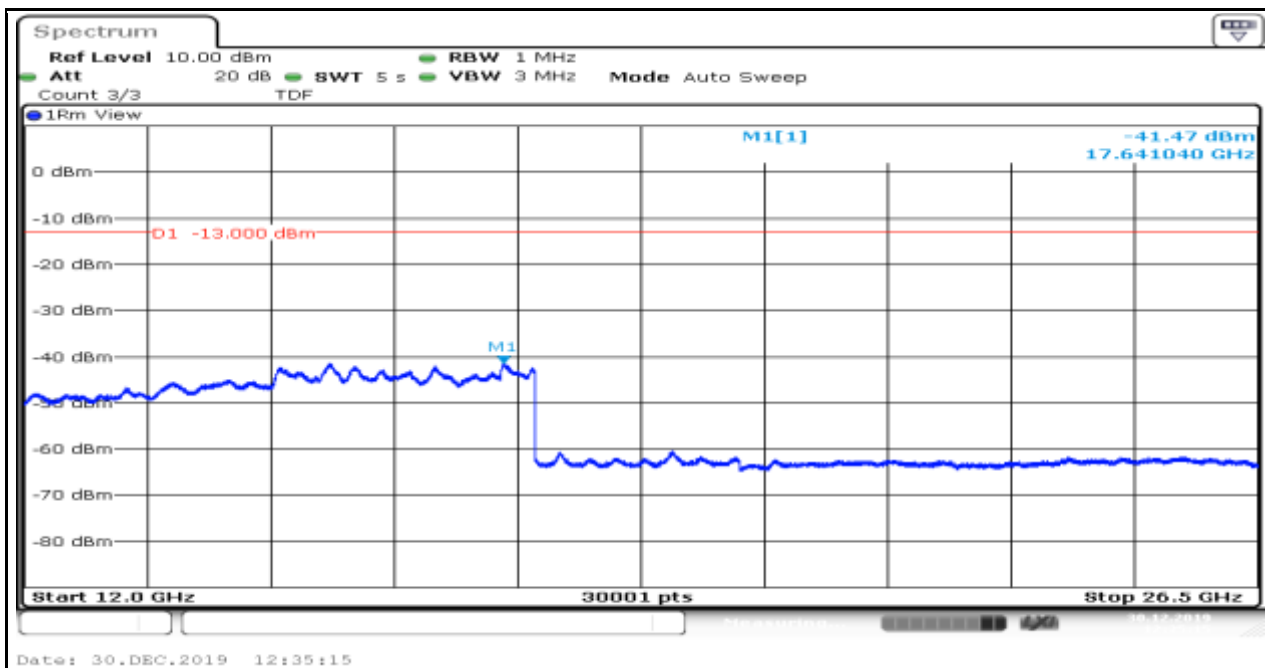
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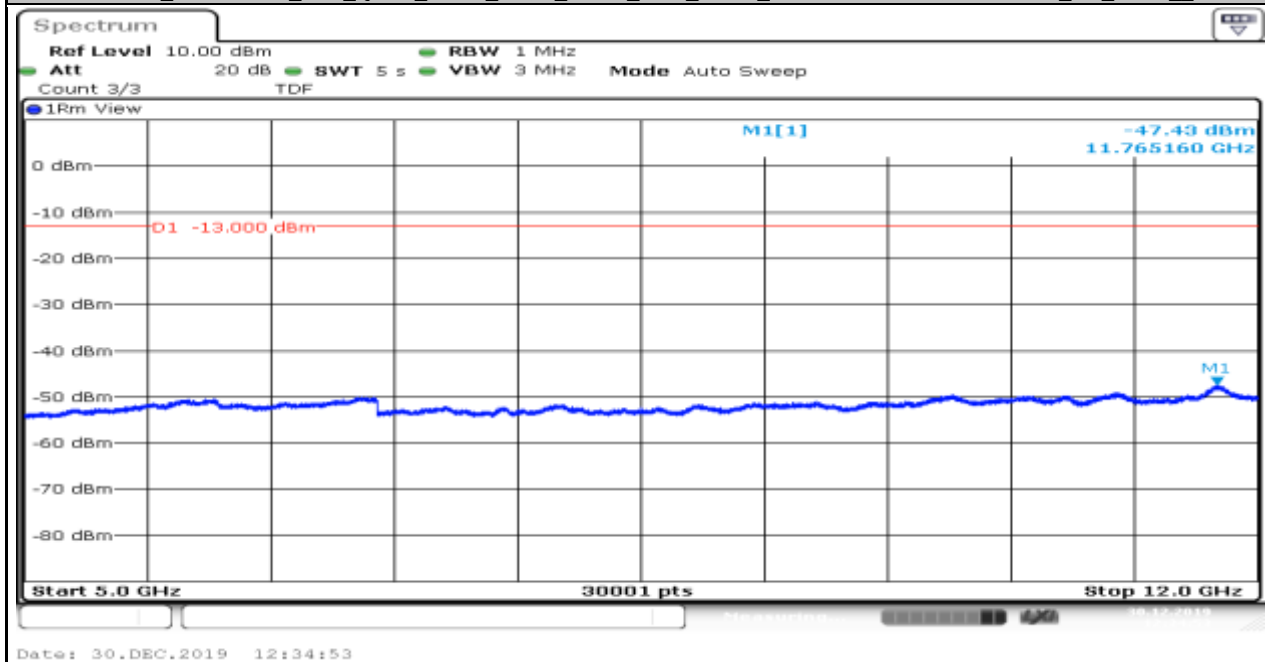
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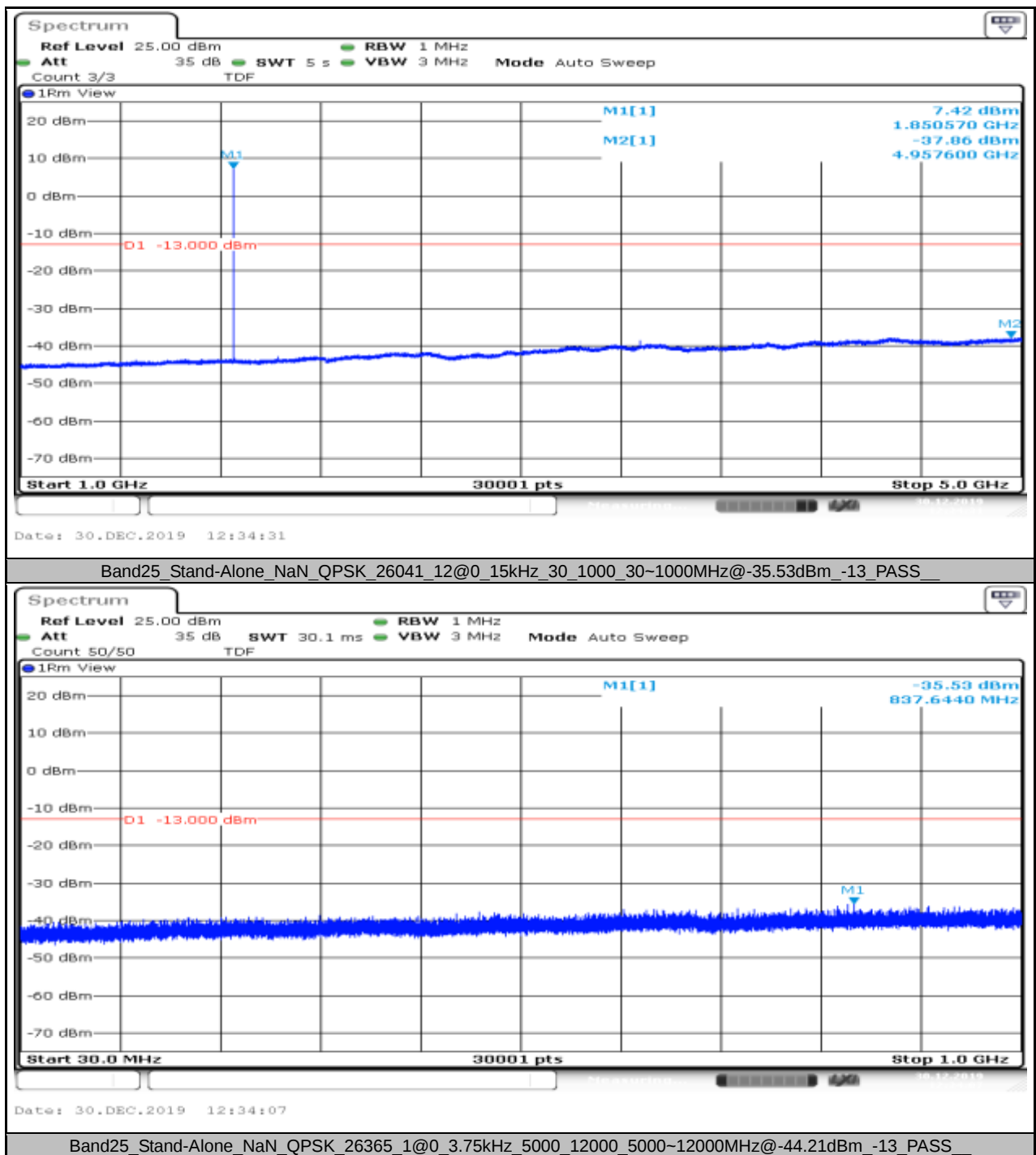
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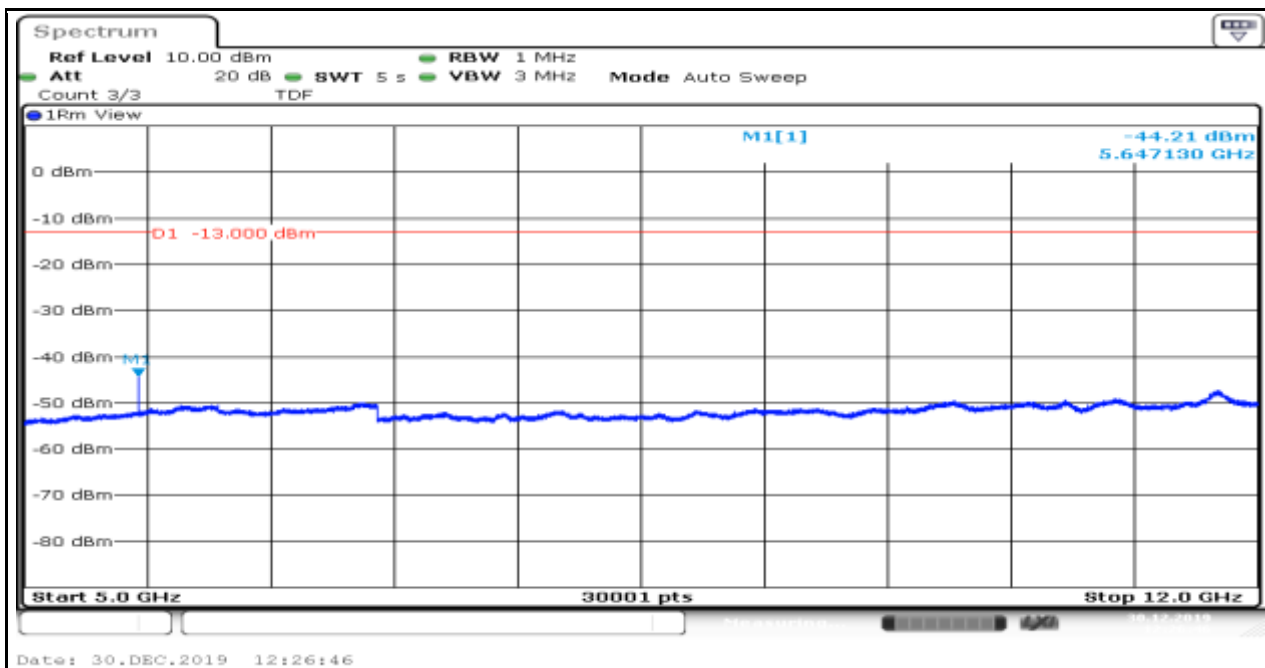


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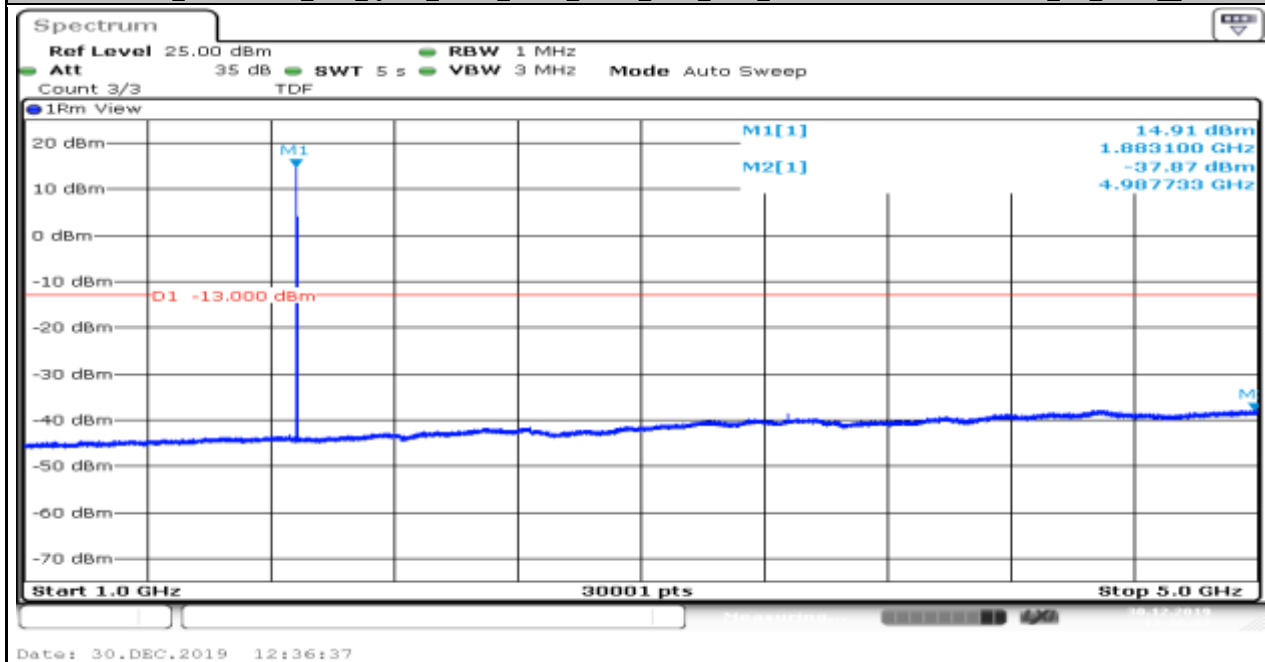


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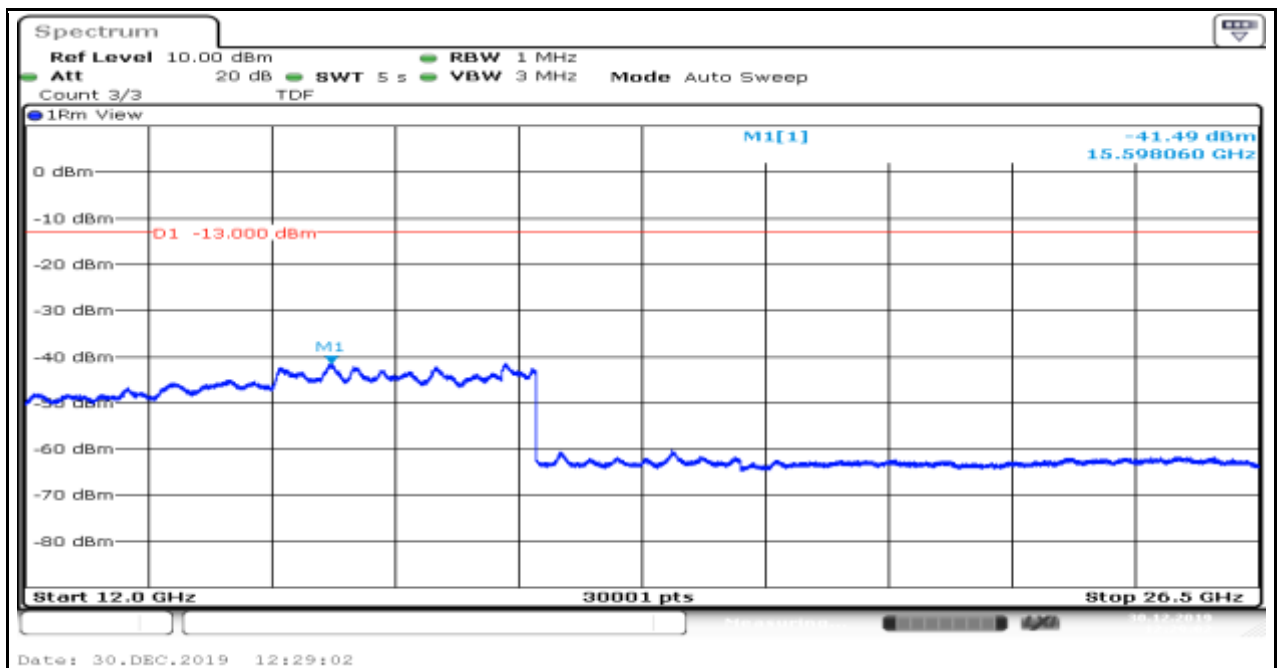




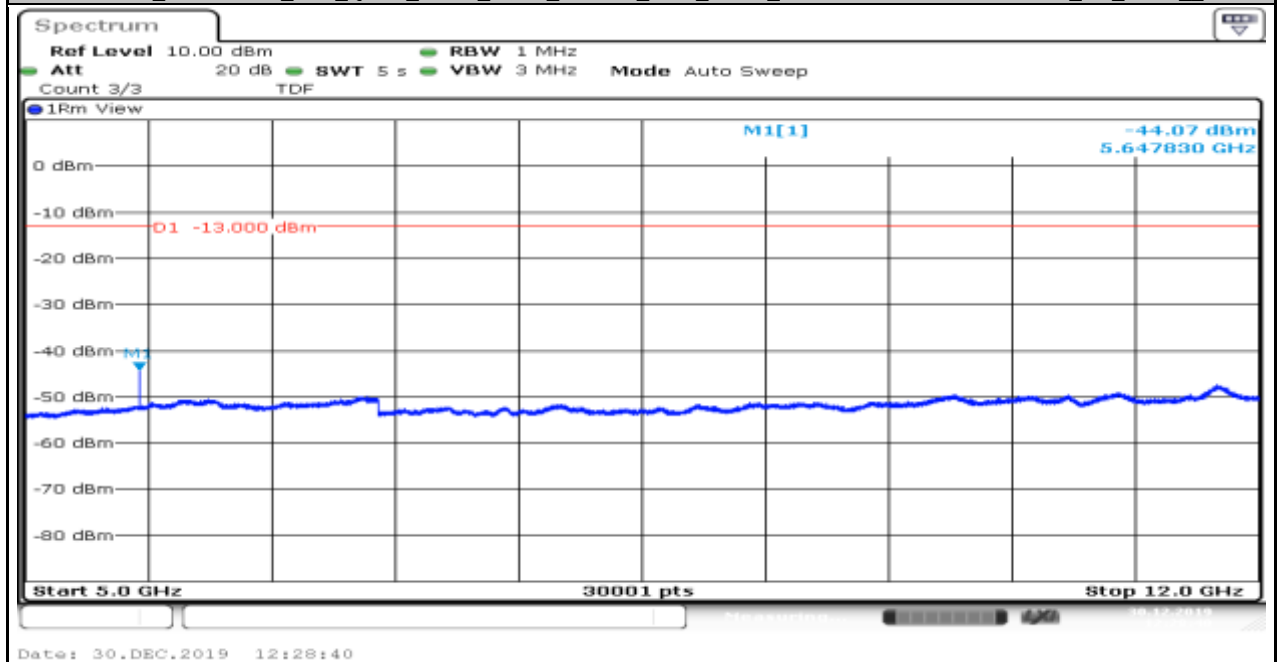
Band25_Stand-Alone_NaN_QPSK_26365_12@0_15kHz_1000_5000_1000~5000MHz@-37.87dBm_-13_PASS_



Band25_Stand-Alone_NaN_QPSK_26365_1@47_3.75kHz_12000_26500_12000~26500MHz@-41.49dBm_-13_PASS_

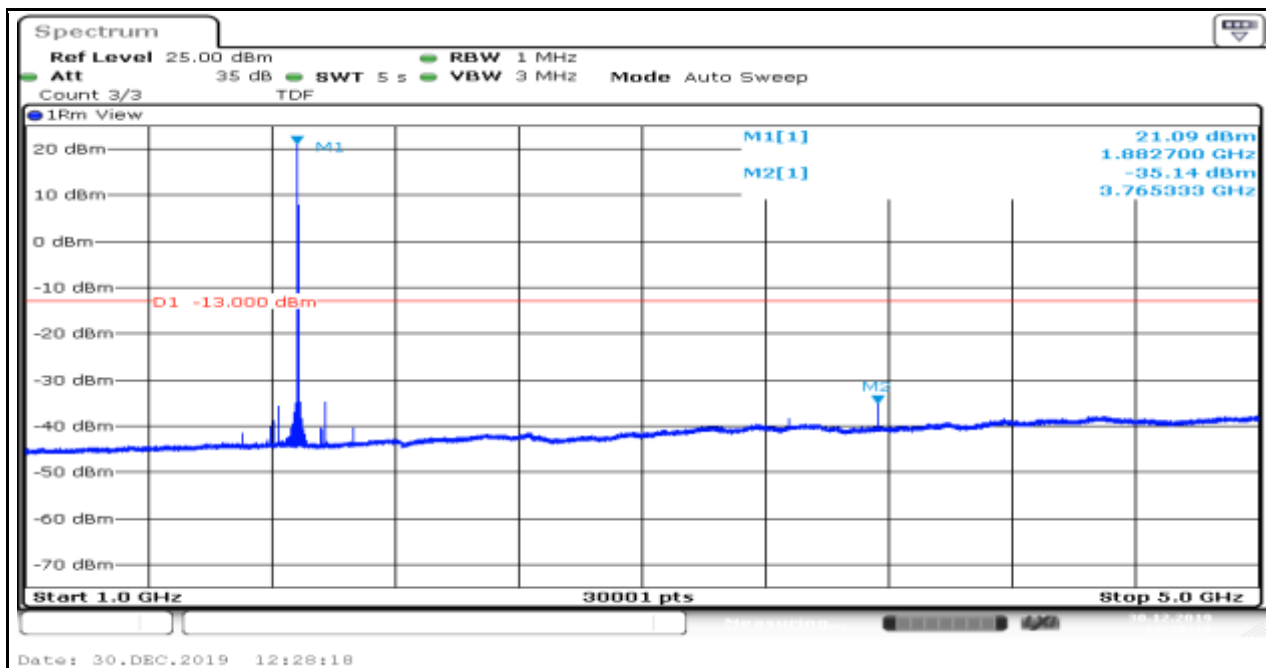


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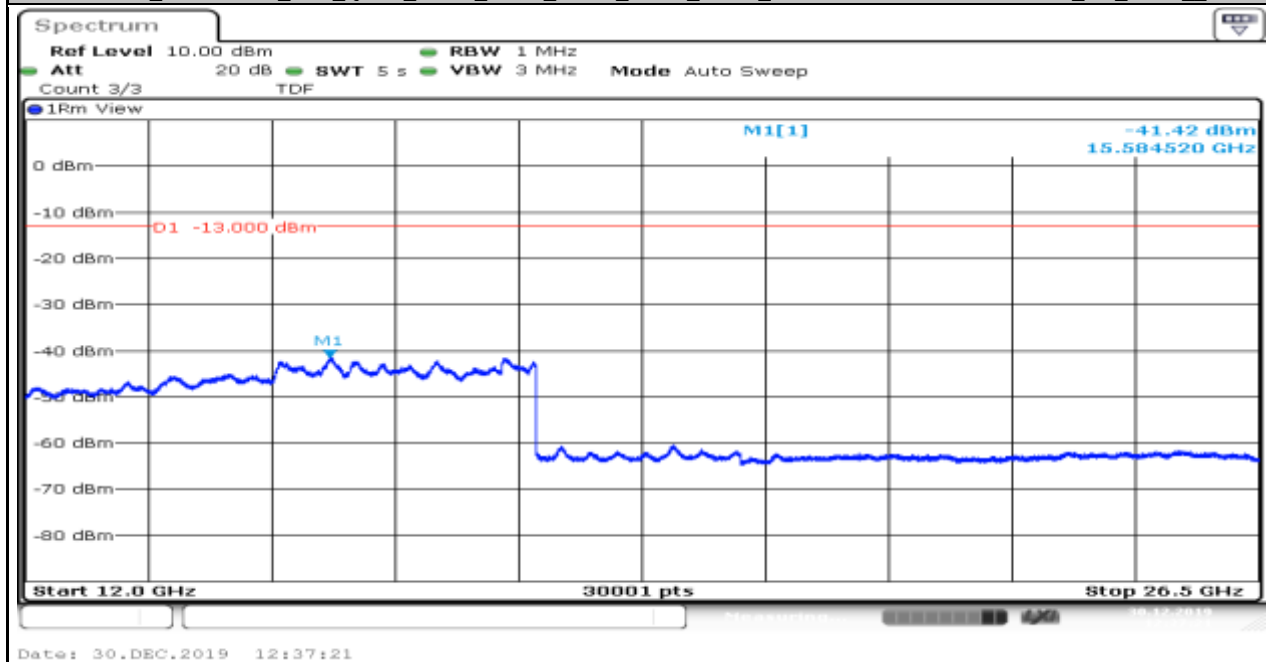


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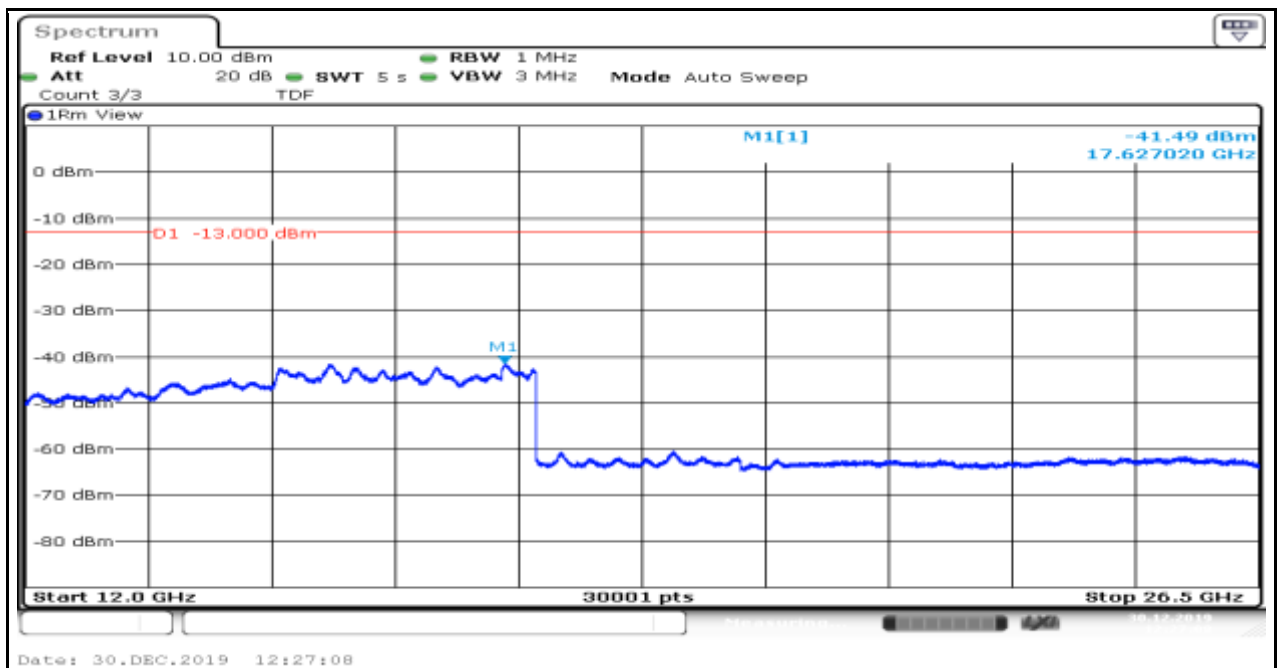
Produkte
Products



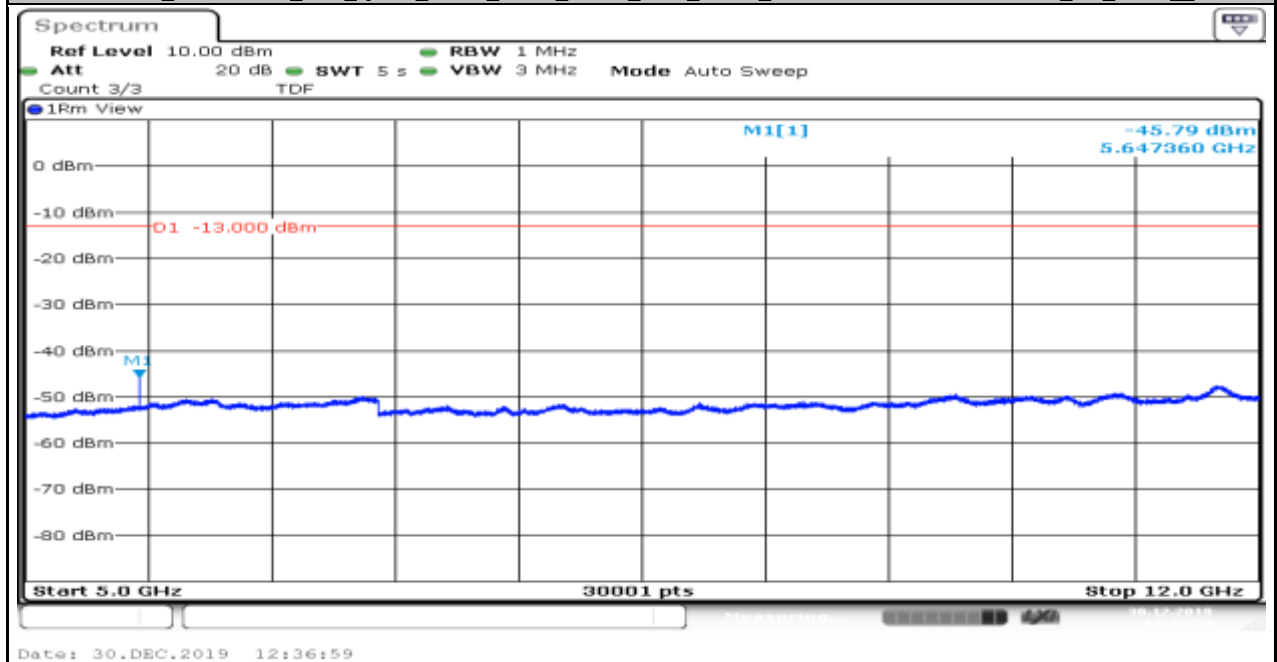
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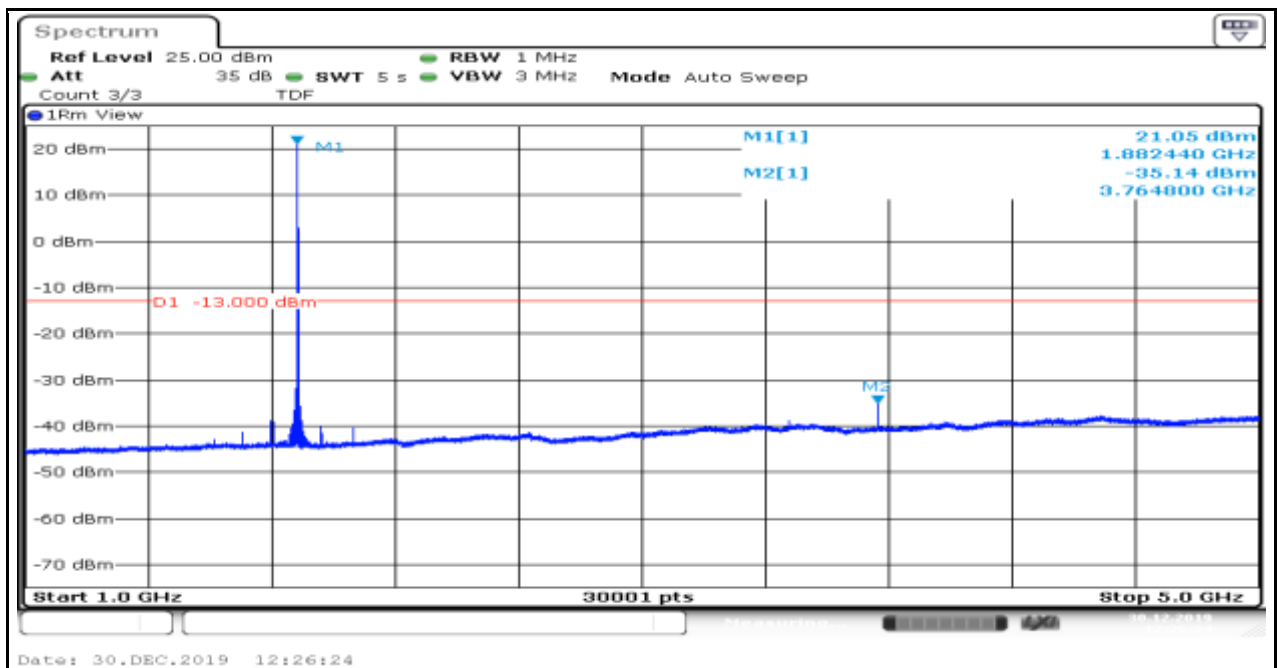
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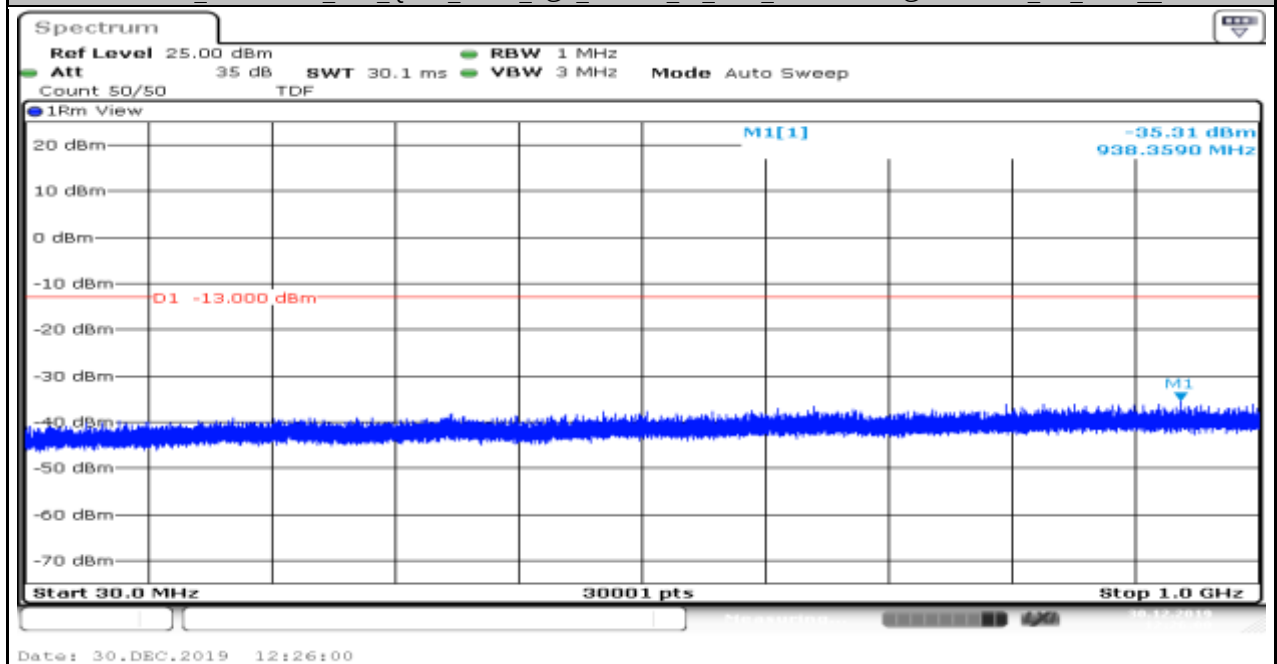
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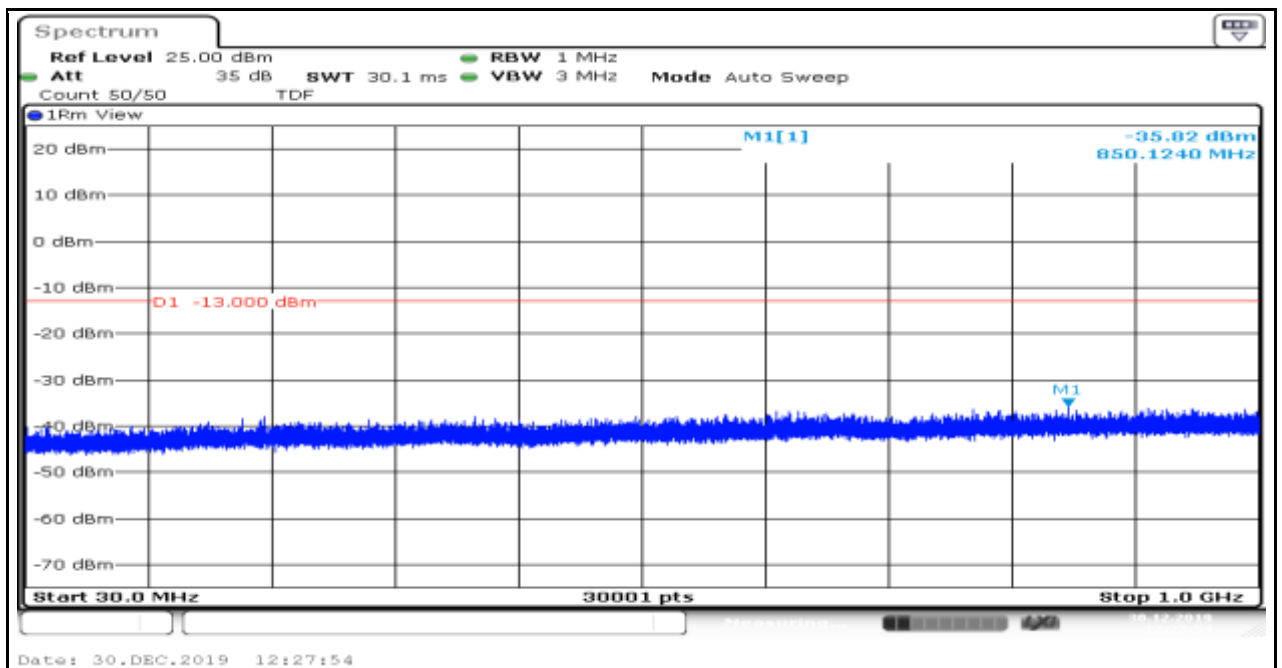
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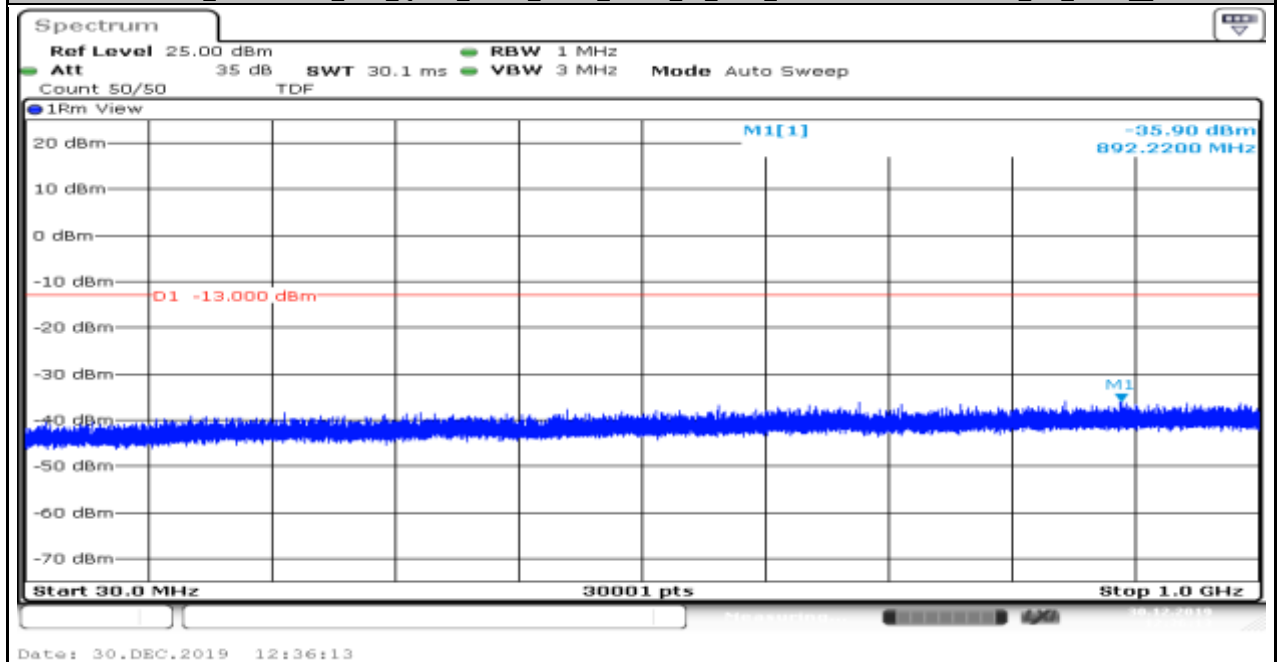
Band25_Stand-Alone_NaN_QPSK_26365_1@0_3.75kHz_30_1000_30~1000MHz@-35.31dBm_-13_PASS



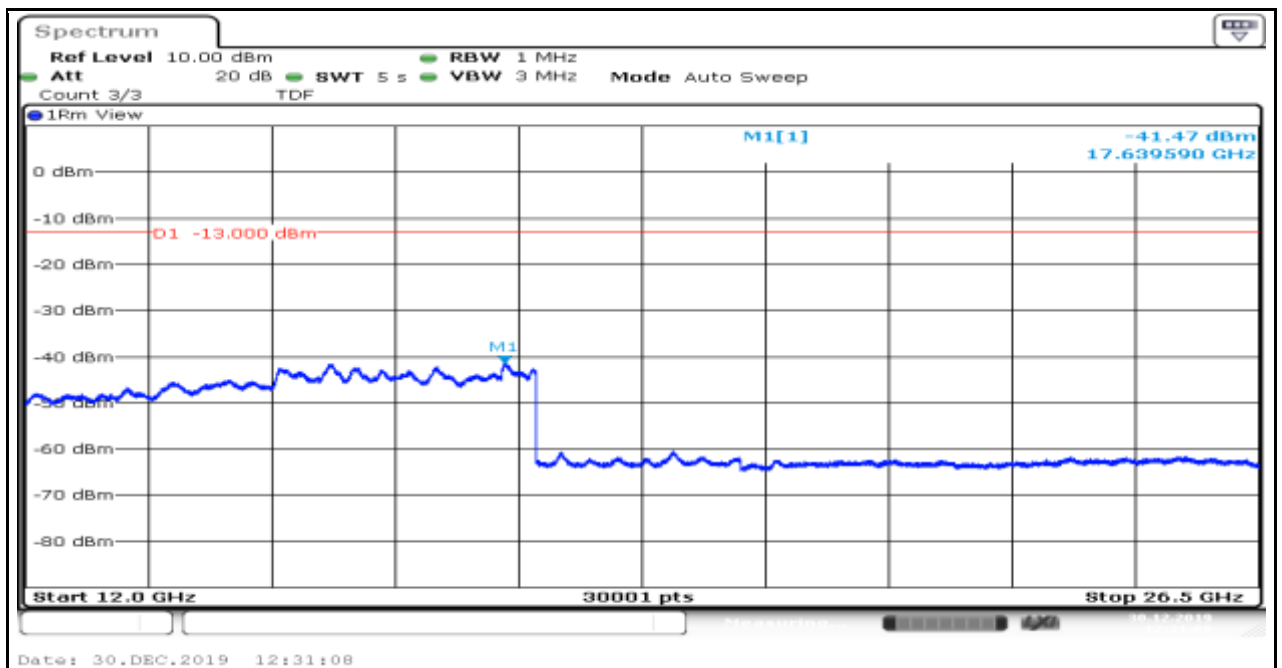
Band25_Stand-Alone_NaN_QPSK_26365_1@47_3.75kHz_30_1000_30~1000MHz@-35.82dBm_-13_PASS



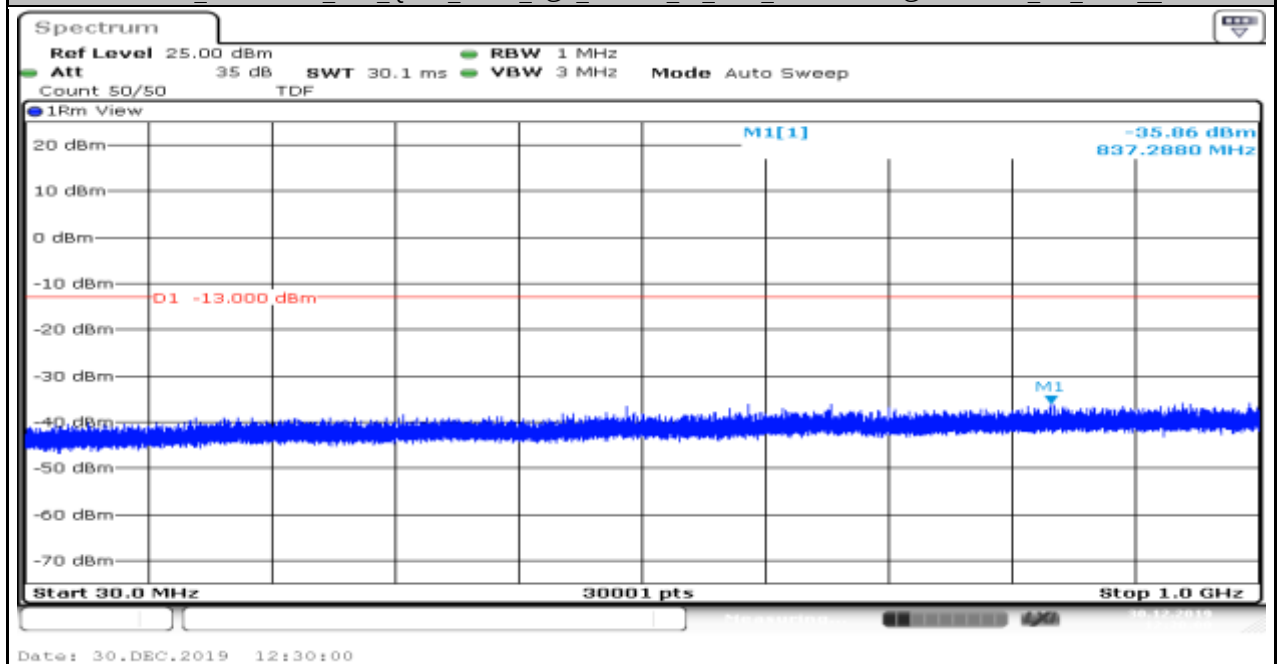
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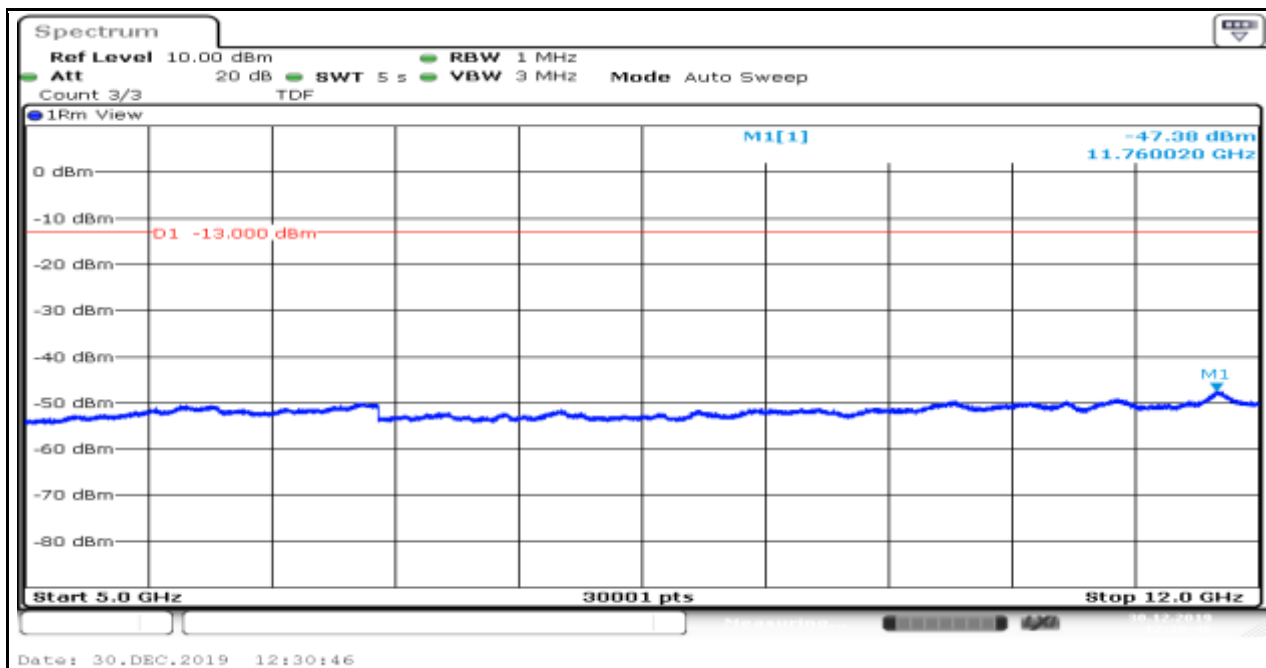
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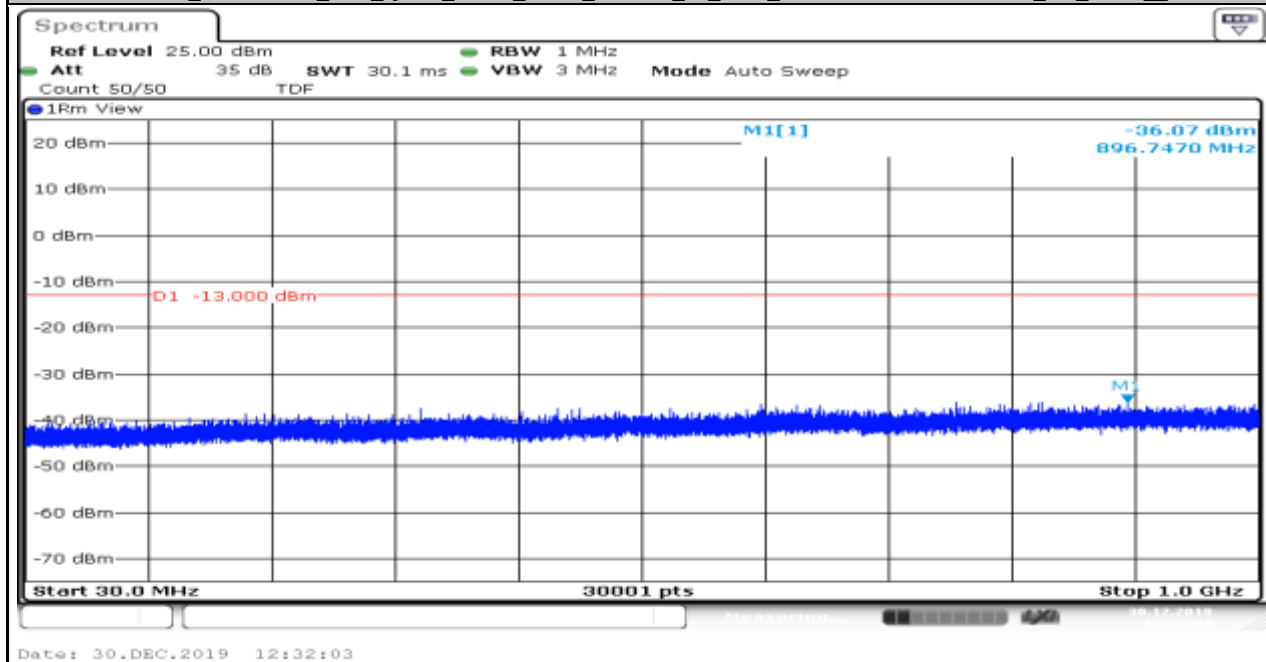
Band25_Stand-Alone_NaN_QPSK_26689_1@0_3.75kHz_30_1000_30~1000MHz@-35.86dBm_-13_PASS



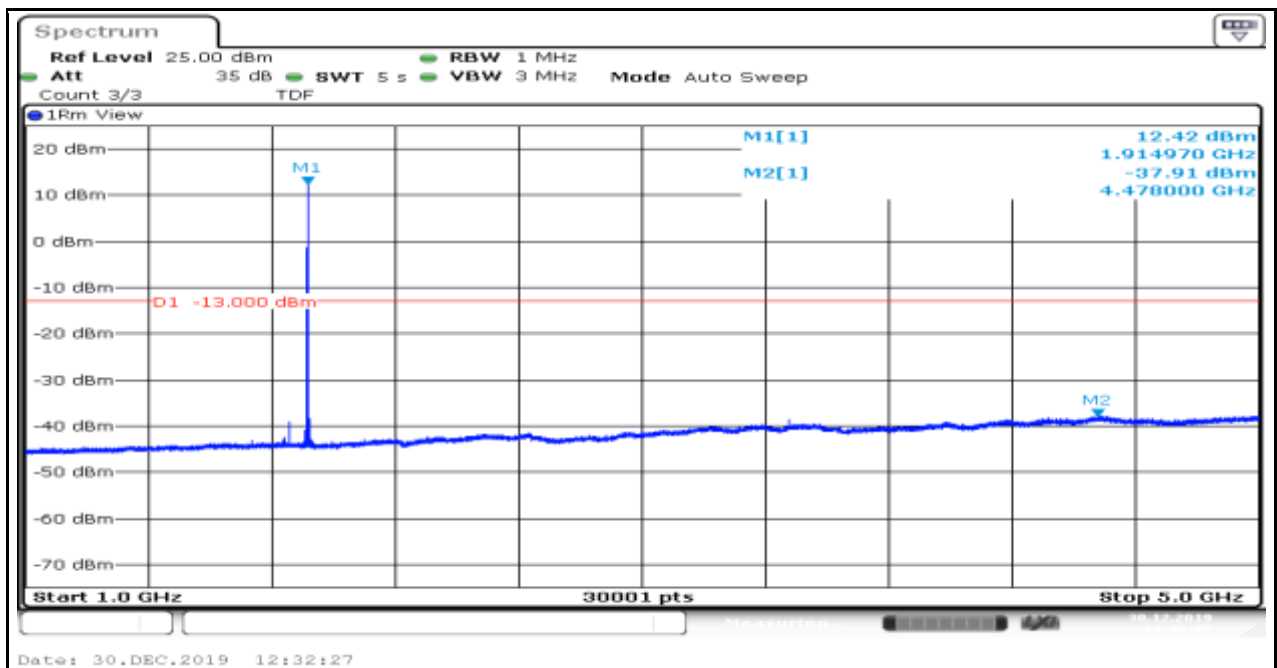
Band25_Stand-Alone_NaN_QPSK_26689_1@0_3.75kHz_5000_12000_5000~12000MHz@-47.38dBm_-13_PASS



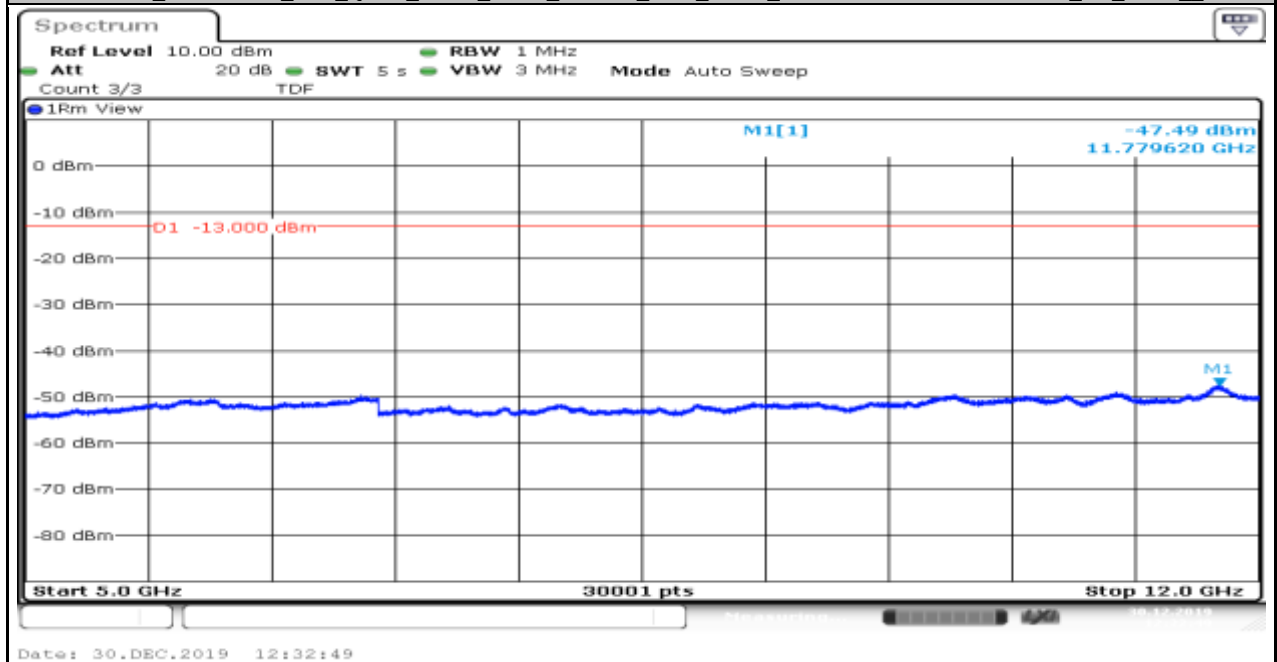
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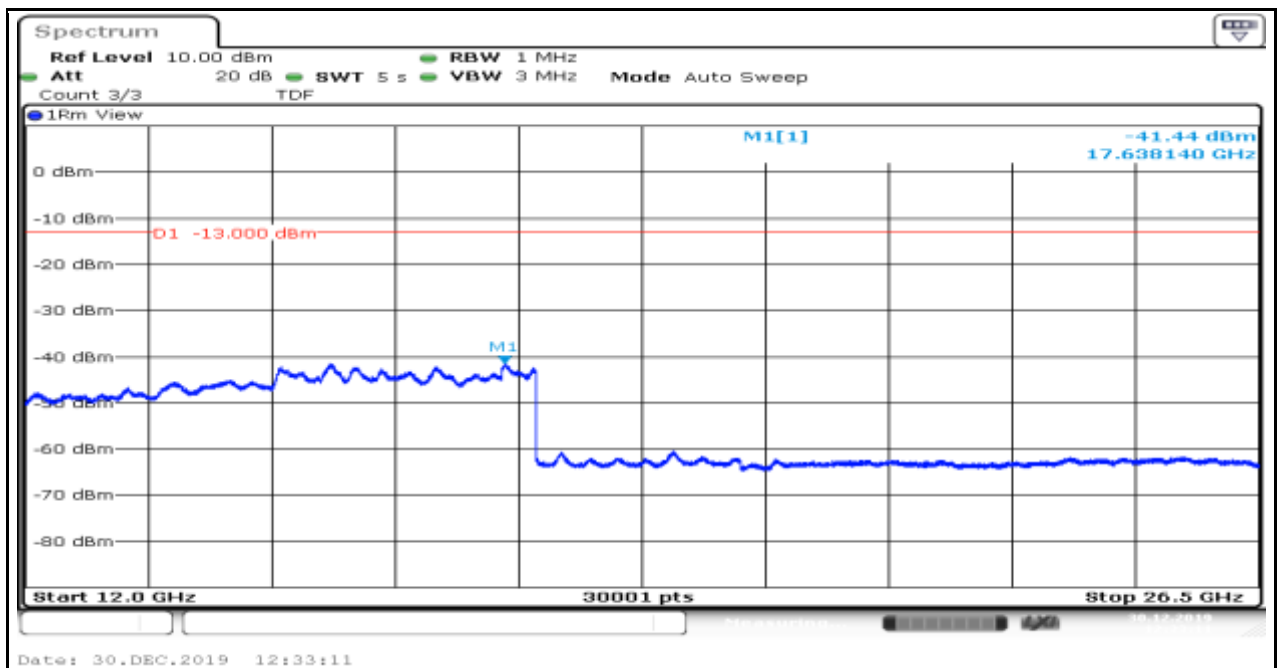
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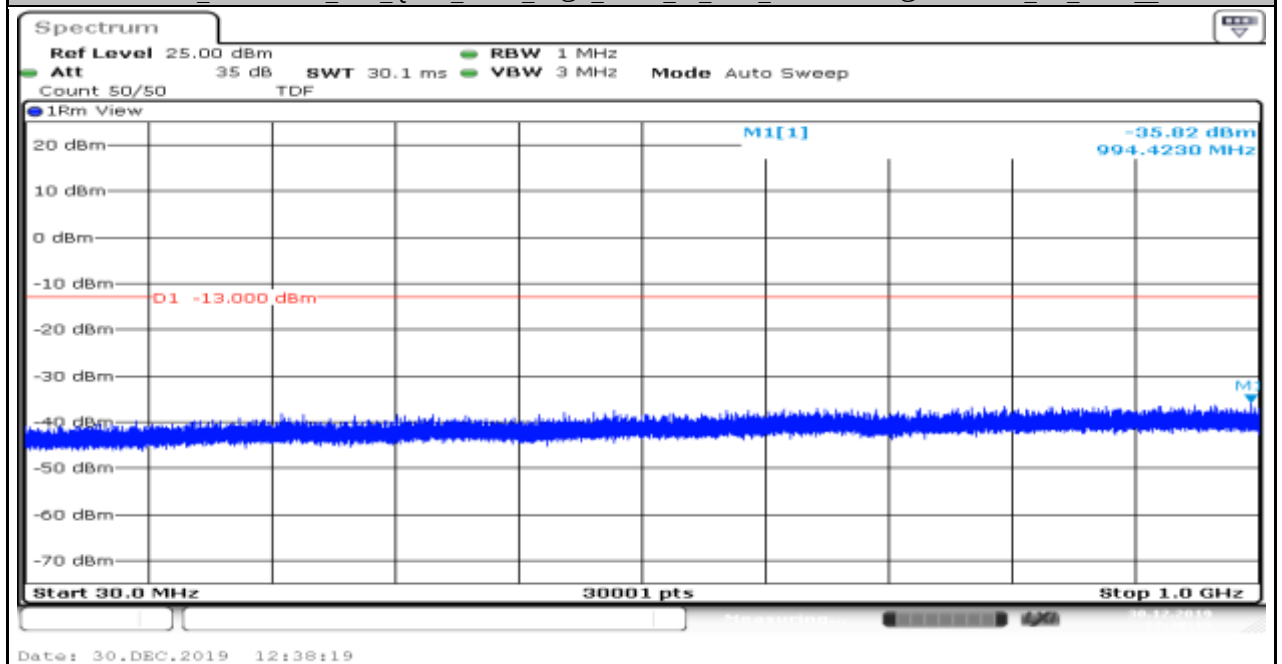
Band25_Stand-Alone_NaN_QPSK_26689_1@47_3.75kHz_5000_12000_5000~12000MHz@-47.49dBm_-13_PASS_



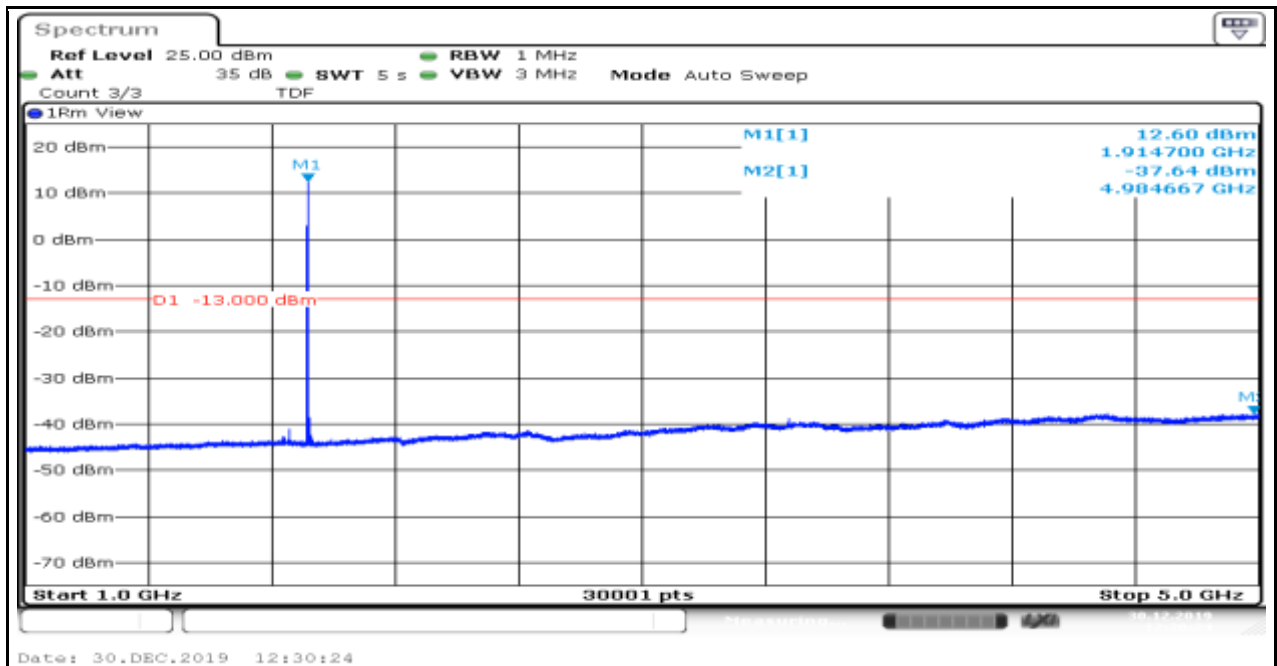
Band25_Stand-Alone_NaN_QPSK_26689_1@47_3.75kHz_12000_26500_12000~26500MHz@-41.44dBm_-13_PASS_



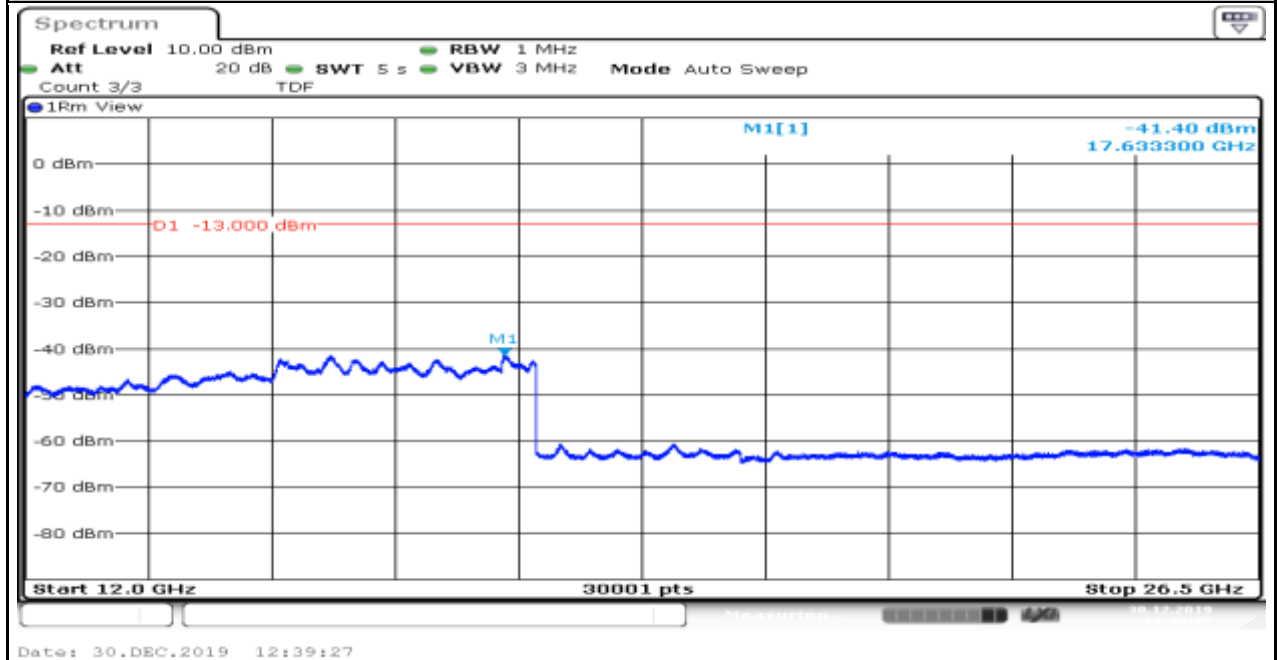
Band25_Stand-Alone_NaN_QPSK_26689_12@0_15kHz_30_1000_30~1000MHz@-35.82dBm_-13_PASS_



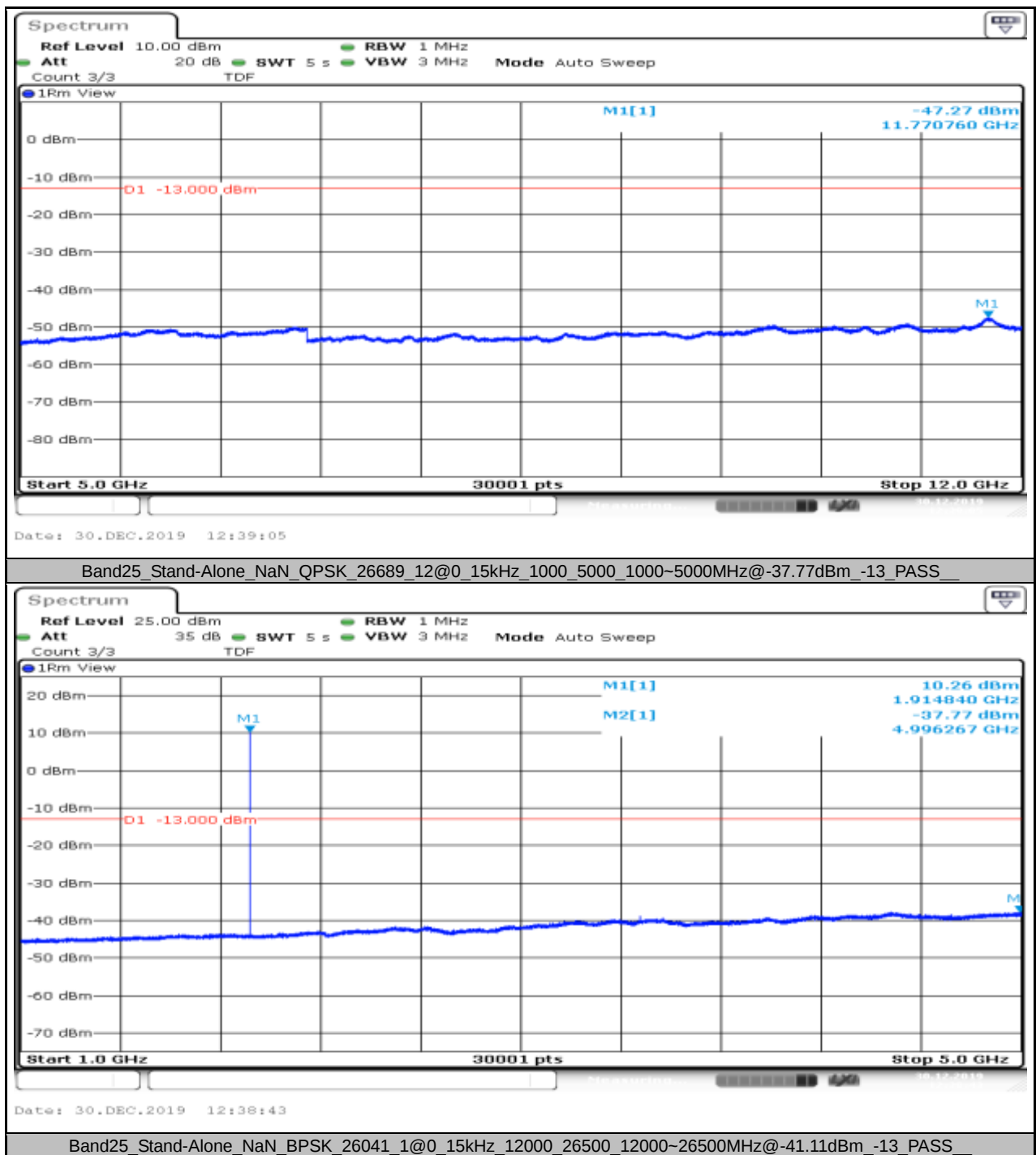
Band25_Stand-Alone_NaN_QPSK_26689_1@0_3.75kHz_1000_5000_1000~5000MHz@-37.64dBm_-13_PASS_

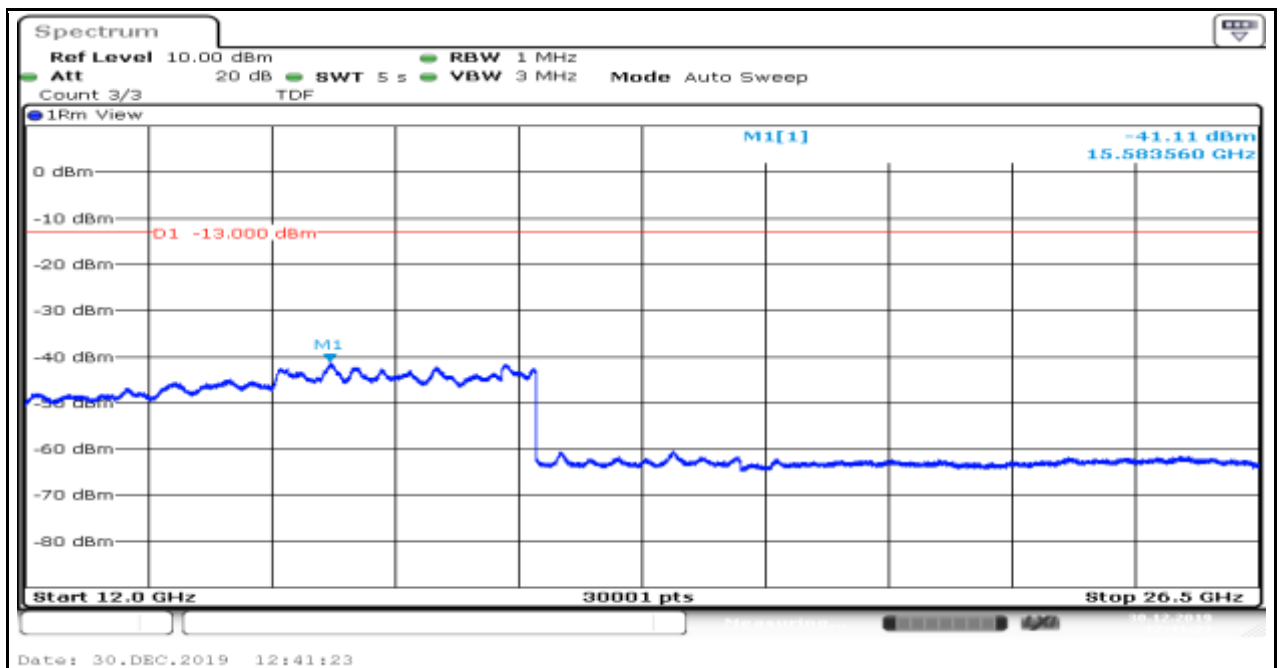


Band25_Stand-Alone_NaN_QPSK_26689_12@0_15kHz_12000_26500_12000~26500MHz@-41.4dBm_-13_PASS

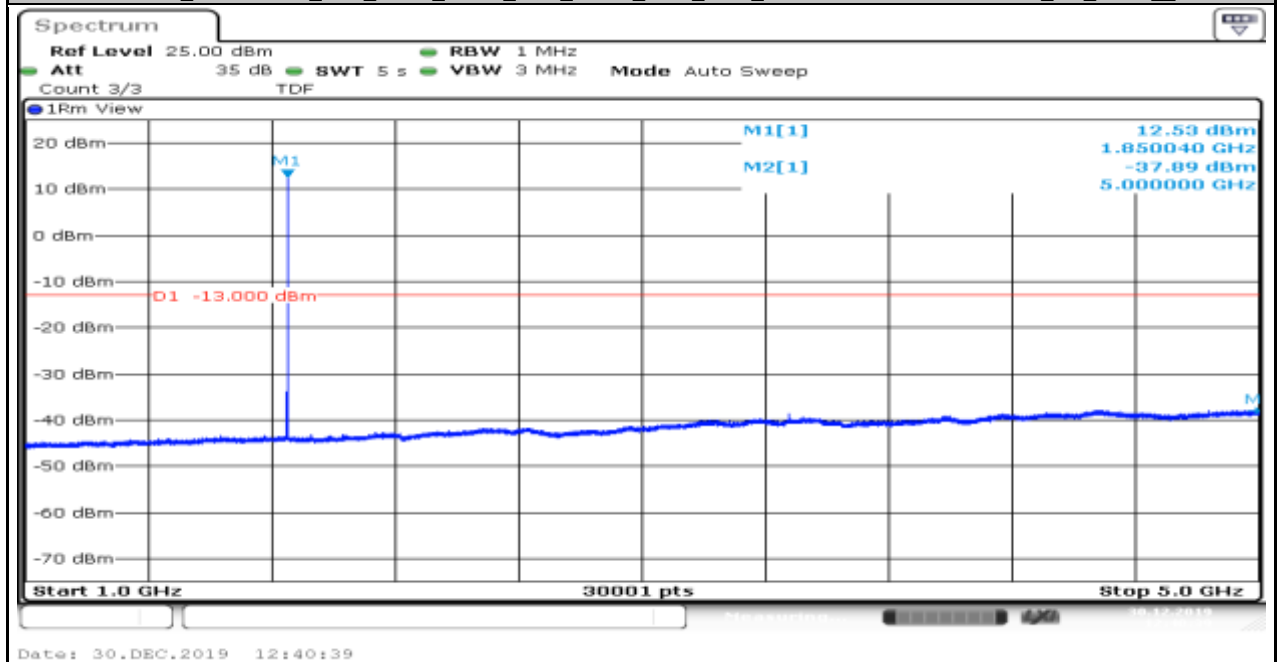


Band25_Stand-Alone_NaN_QPSK_26689_12@0_15kHz_5000_12000_5000~12000MHz@-47.27dBm_-13_PASS

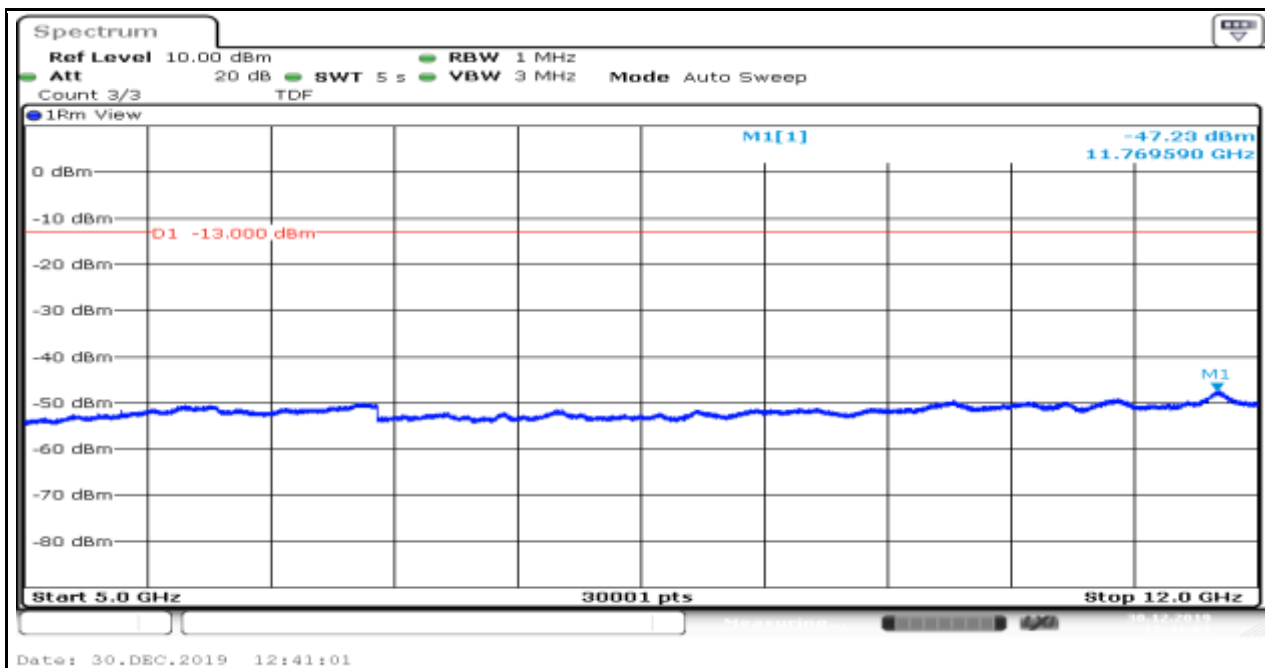




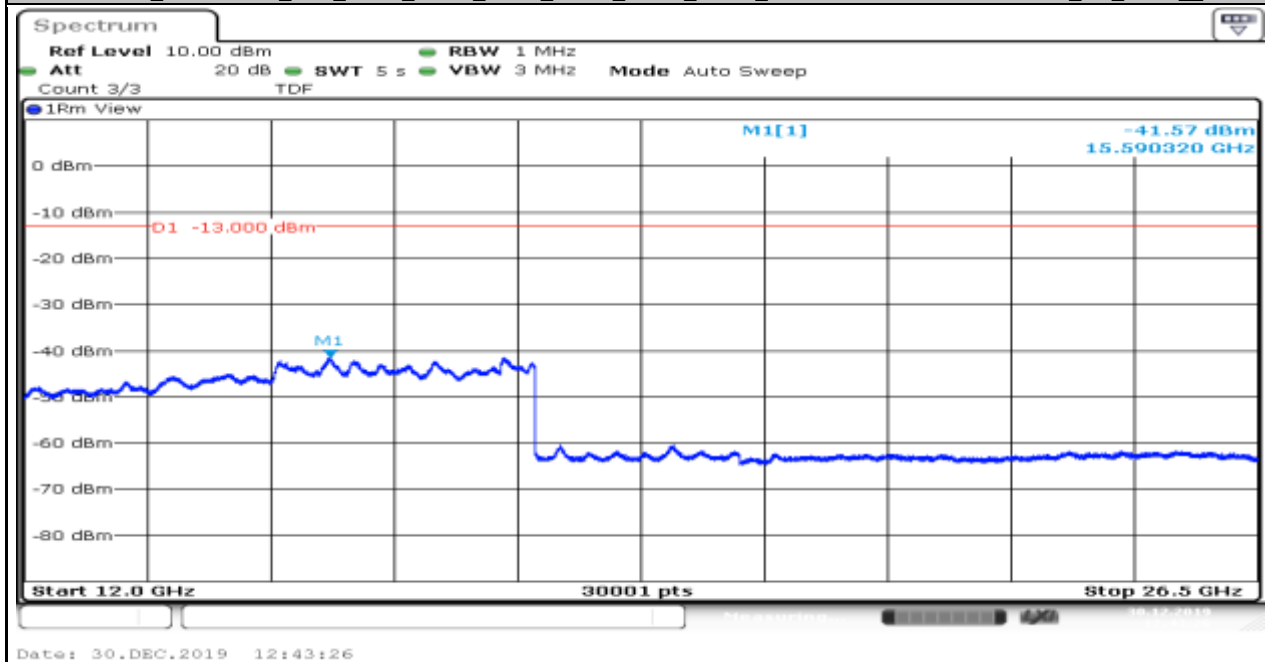
Band25_Stand-Alone_NaN_BPSK_26041_1@0_15kHz_1000_5000_1000-5000MHz@-37.89dBm_-13_PASS_



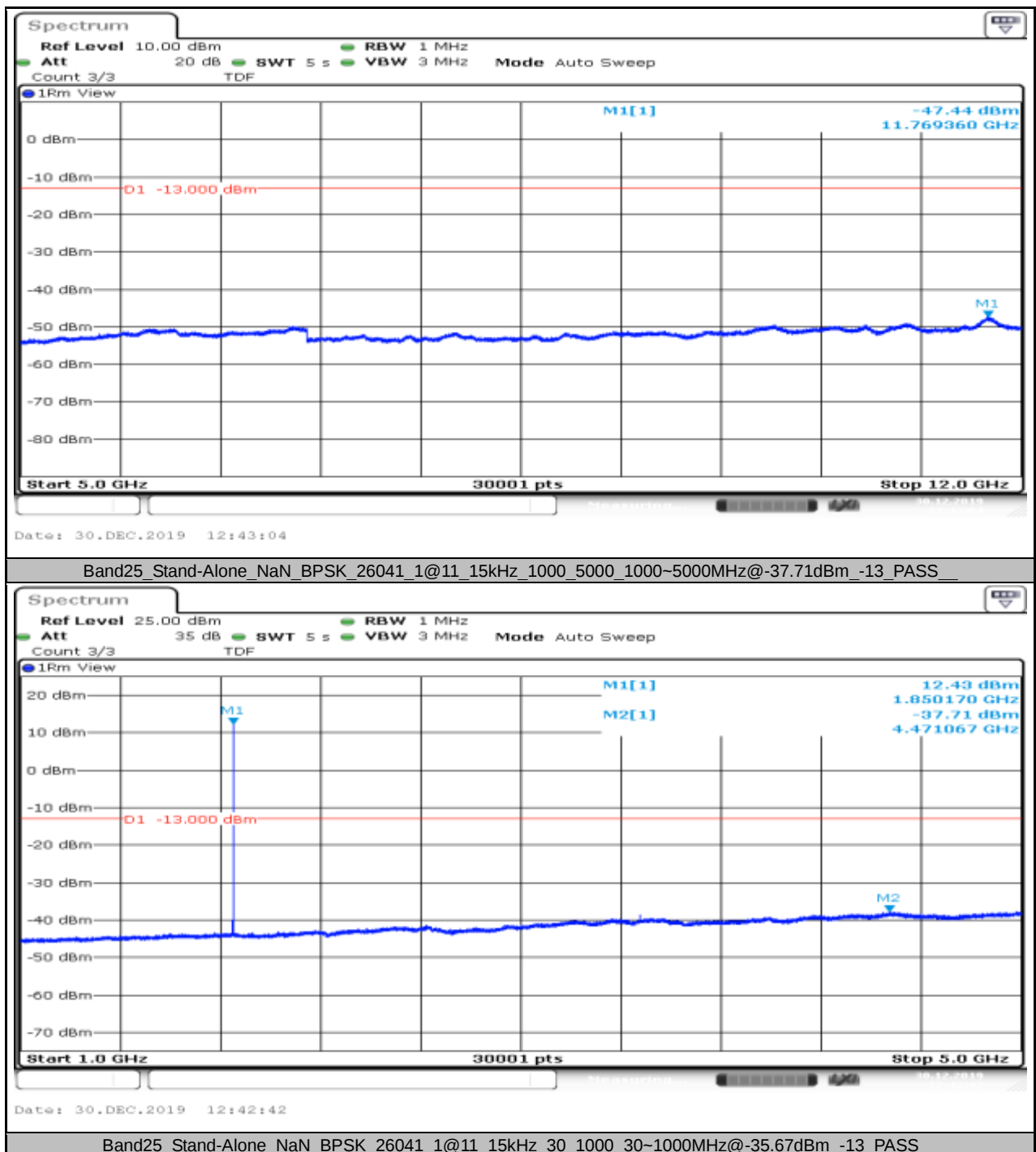
Band25_Stand-Alone_NaN_BPSK_26041_1@0_15kHz_5000_12000_5000-12000MHz@-47.23dBm_-13_PASS_

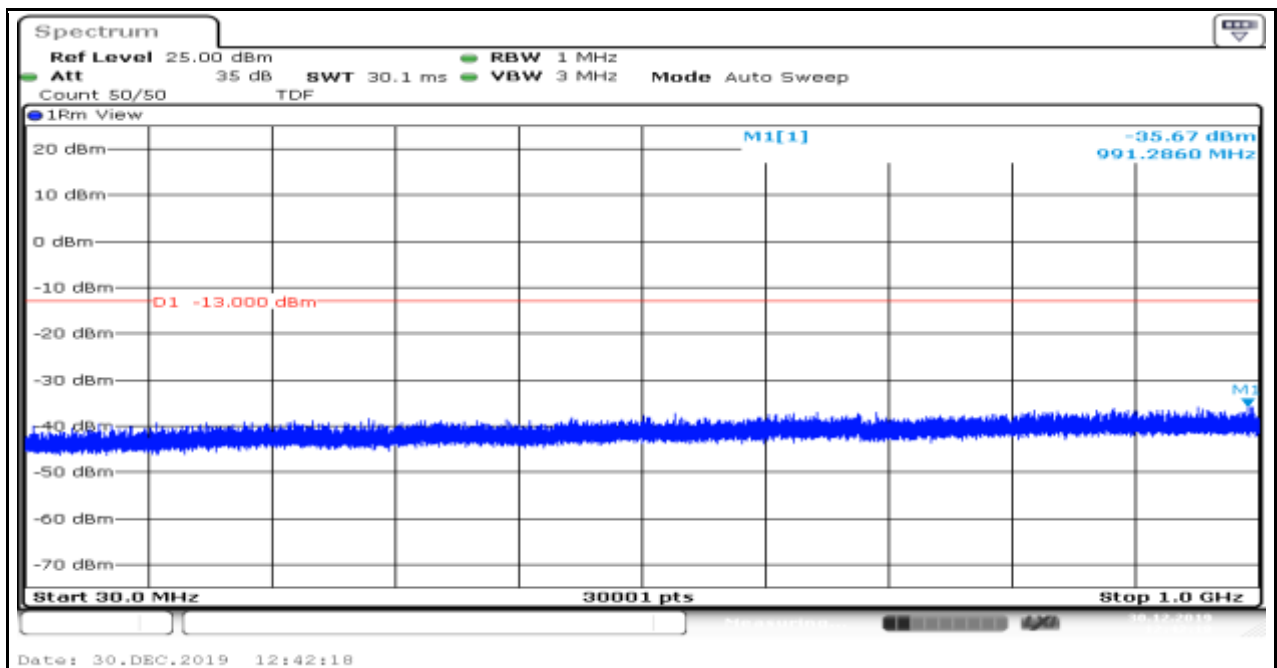


Band25_Stand-Alone_NaN_BPSK_26041_1@11_15kHz_12000_26500_12000-26500MHz@-41.57dBm_-13_PASS

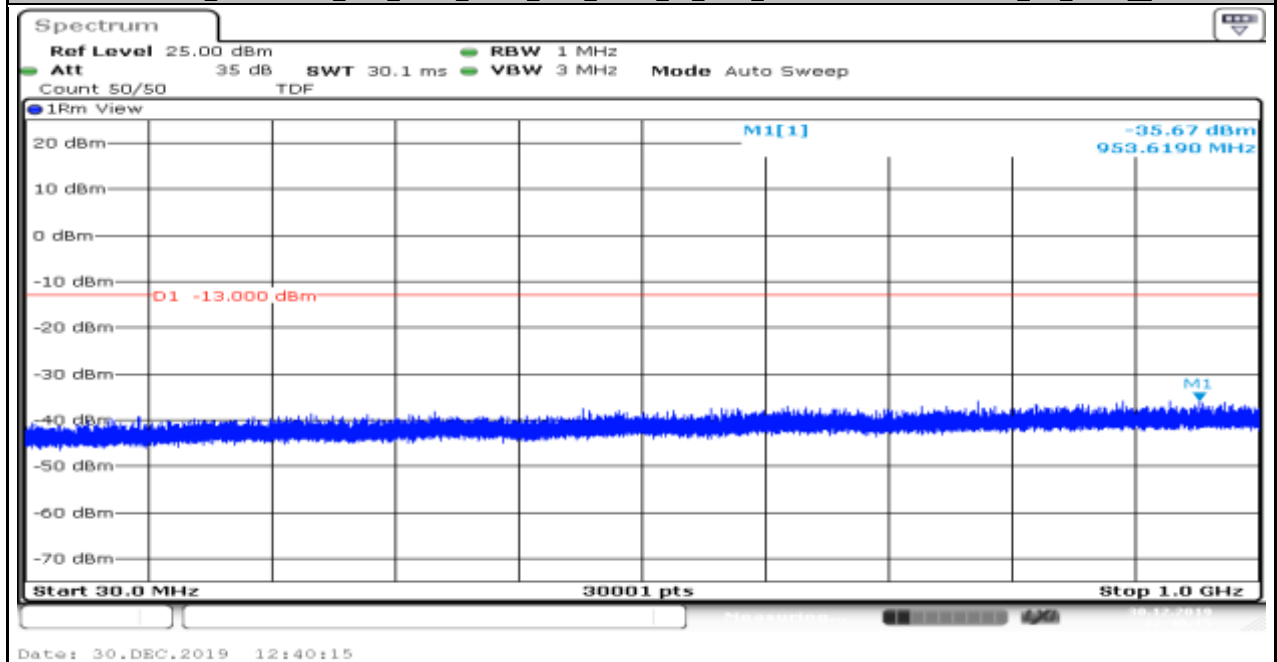


Band25_Stand-Alone_NaN_BPSK_26041_1@11_15kHz_5000_12000_5000-12000MHz@-47.44dBm_-13_PASS

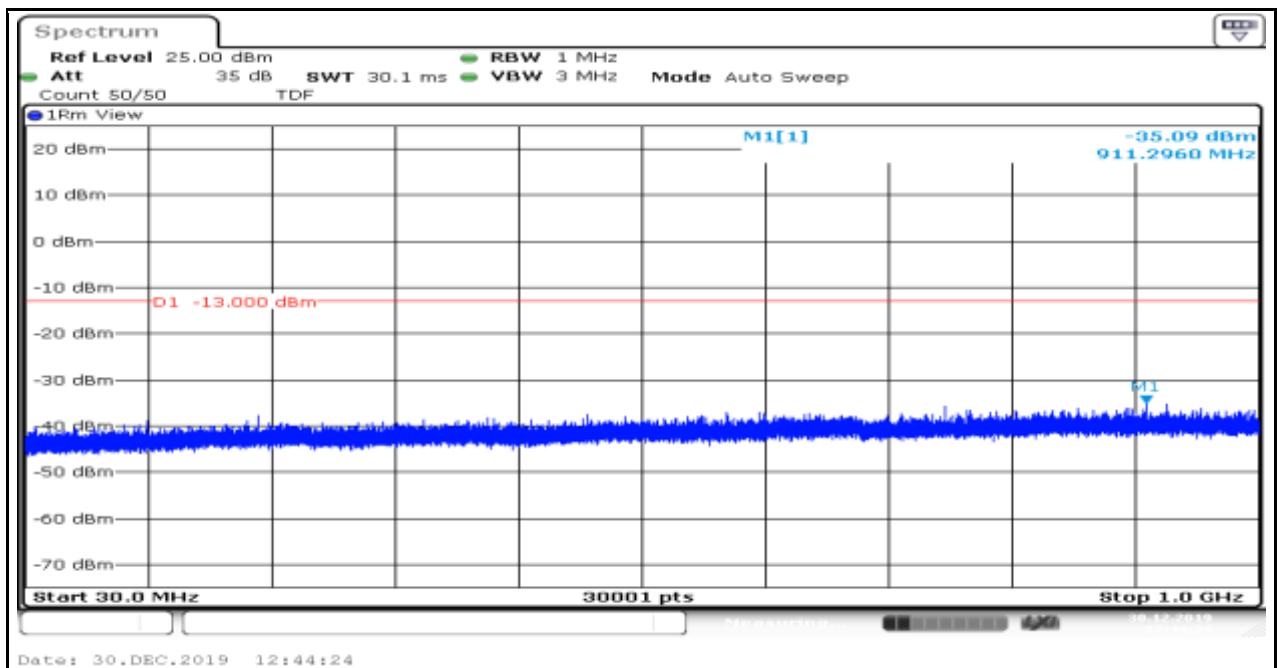




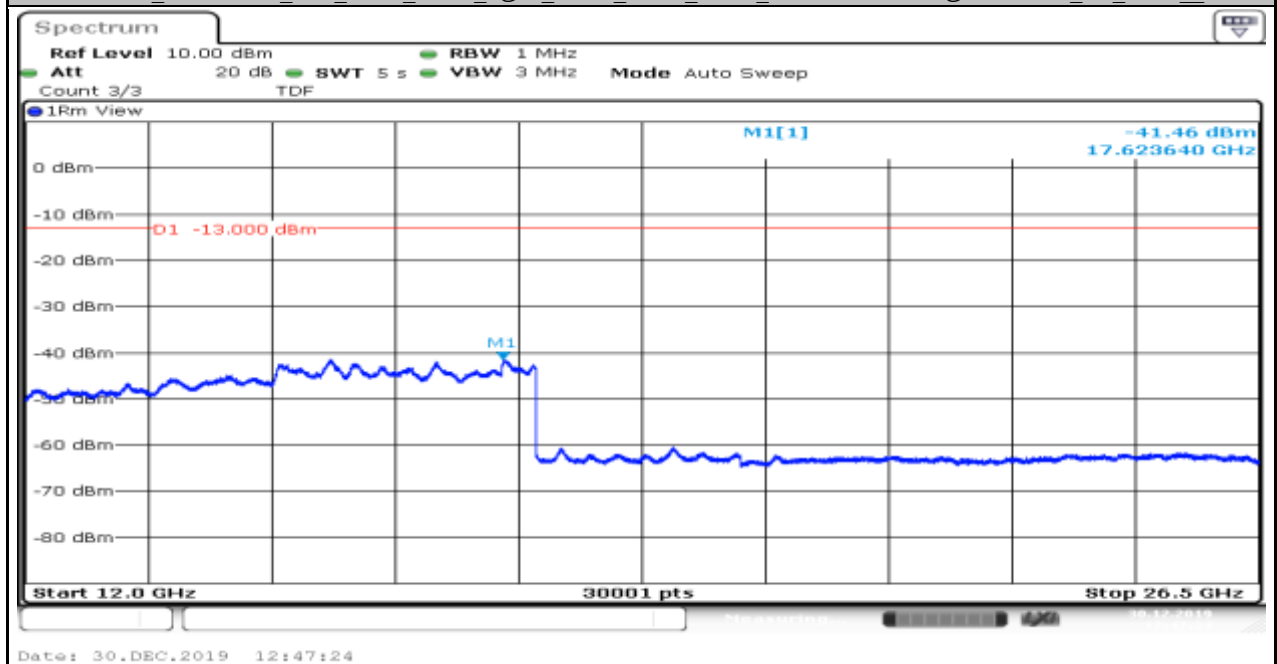
Band25_Stand-Alone_NaN_BPSK_26041_1@0_15kHz_30_1000_30~1000MHz@-35.67dBm_-13_PASS_



Band25_Stand-Alone_NaN_BPSK_26365_1@0_15kHz_30_1000_30~1000MHz@-35.09dBm_-13_PASS_

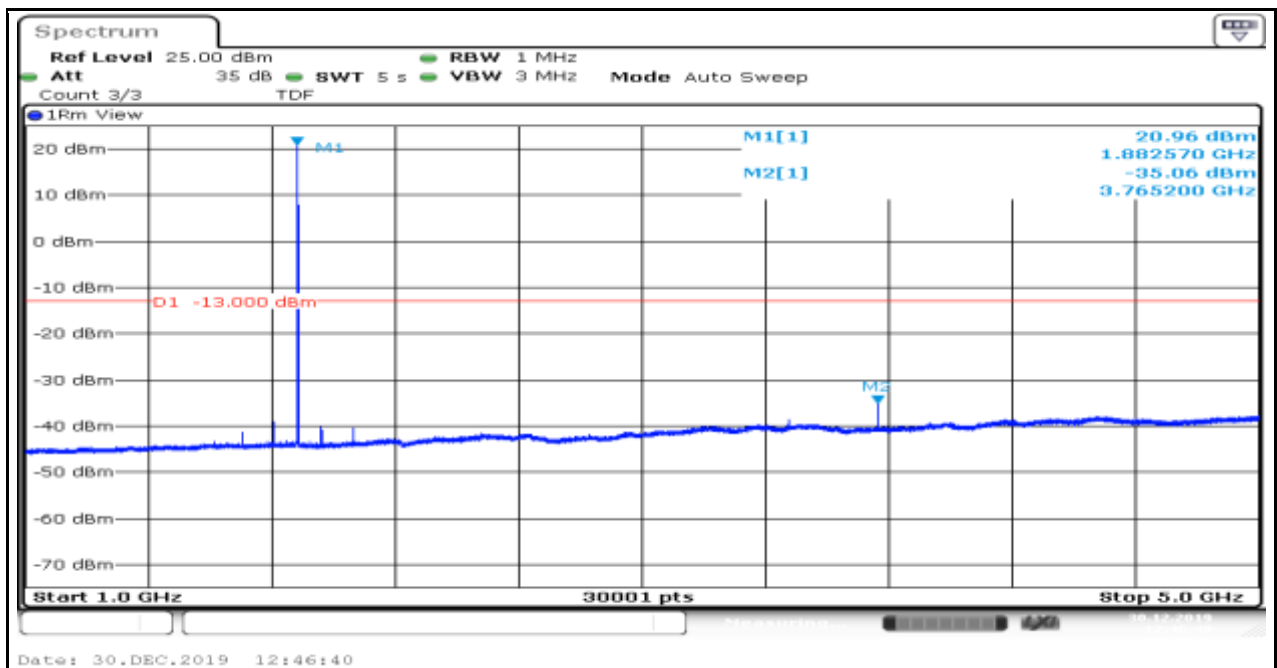


Band25_Stand-Alone_NaN_BPSK_26365_1@11_15kHz_12000_26500_12000-26500MHz@-41.46dBm_-13_PASS_

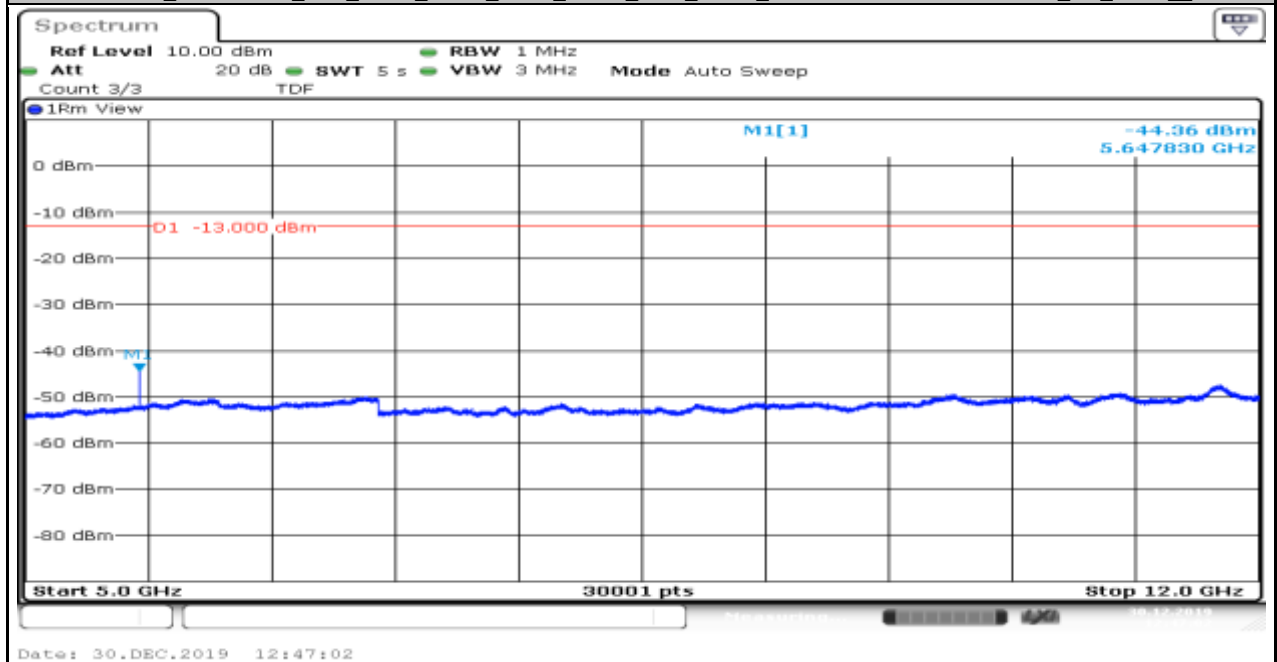


Band25_Stand-Alone_NaN_BPSK_26365_1@11_15kHz_1000_5000_1000-5000MHz@-35.06dBm_-13_PASS_

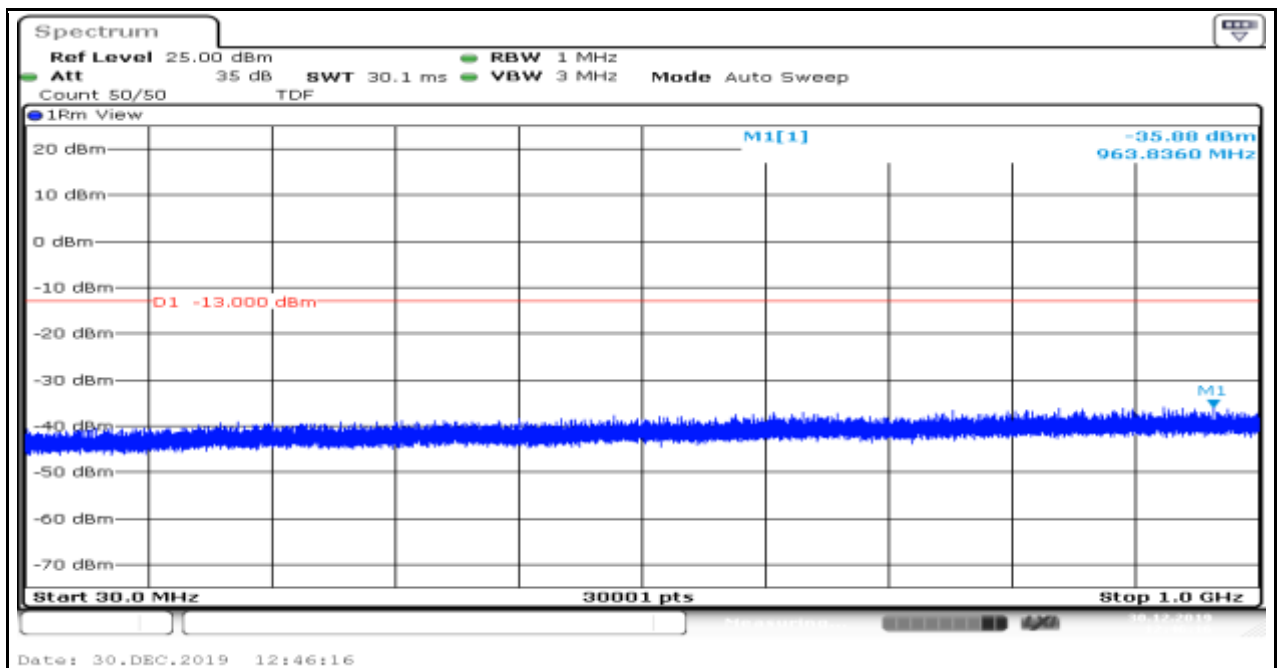
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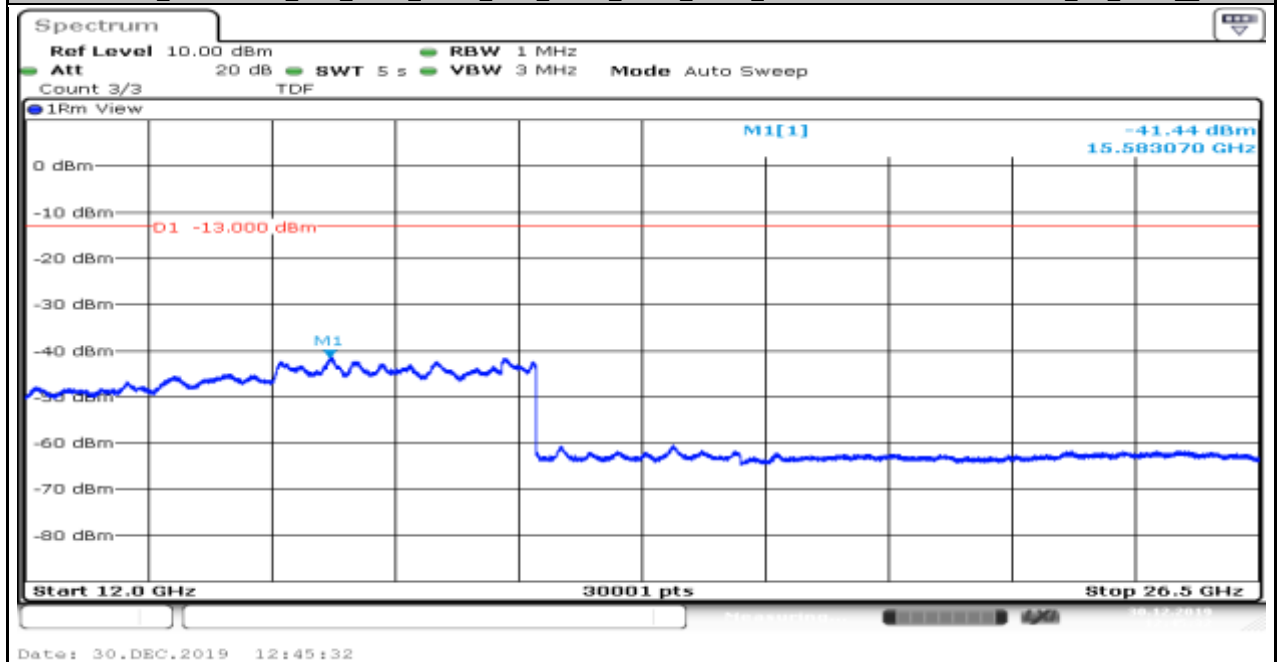
Band25_Stand-Alone_NaN_BPSK_26365_1@11_15kHz_5000_12000_5000~12000MHz@-44.36dBm_-13_PASS



Band25_Stand-Alone_NaN_BPSK_26365_1@11_15kHz_30_1000_30~1000MHz@-35.88dBm_-13_PASS

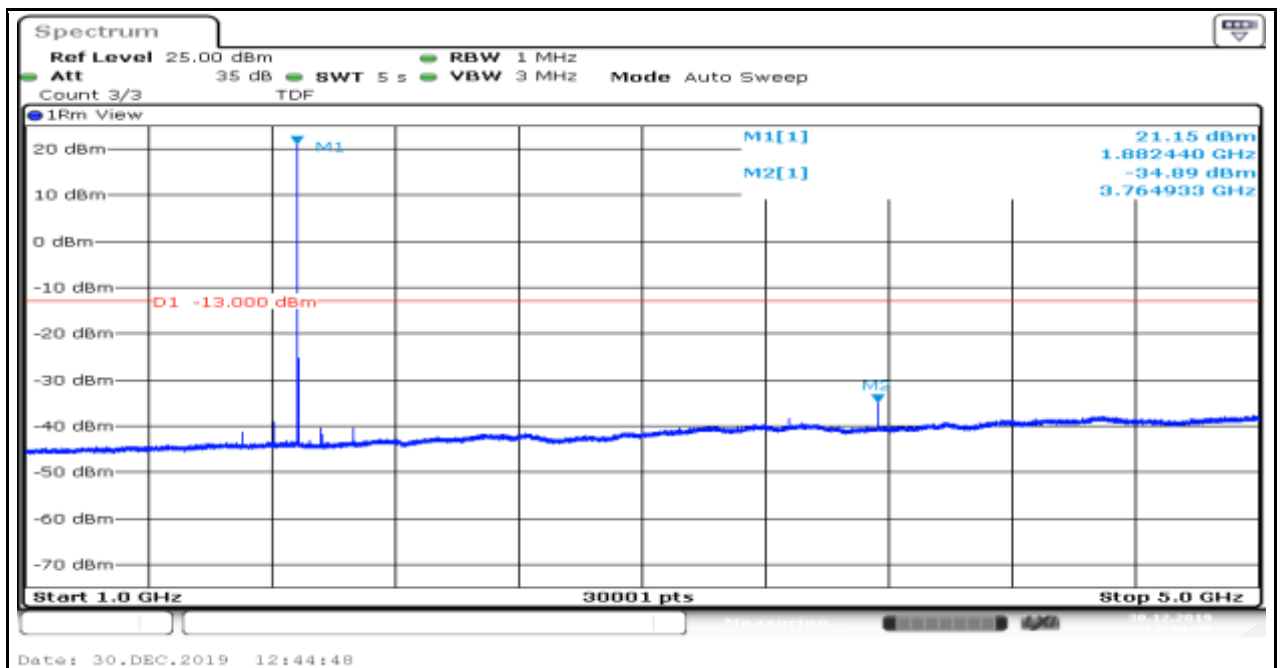


Band25_Stand-Alone_NaN_BPSK_26365_1@0_15kHz_12000_26500_12000~26500MHz@-41.44dBm_-13_PASS

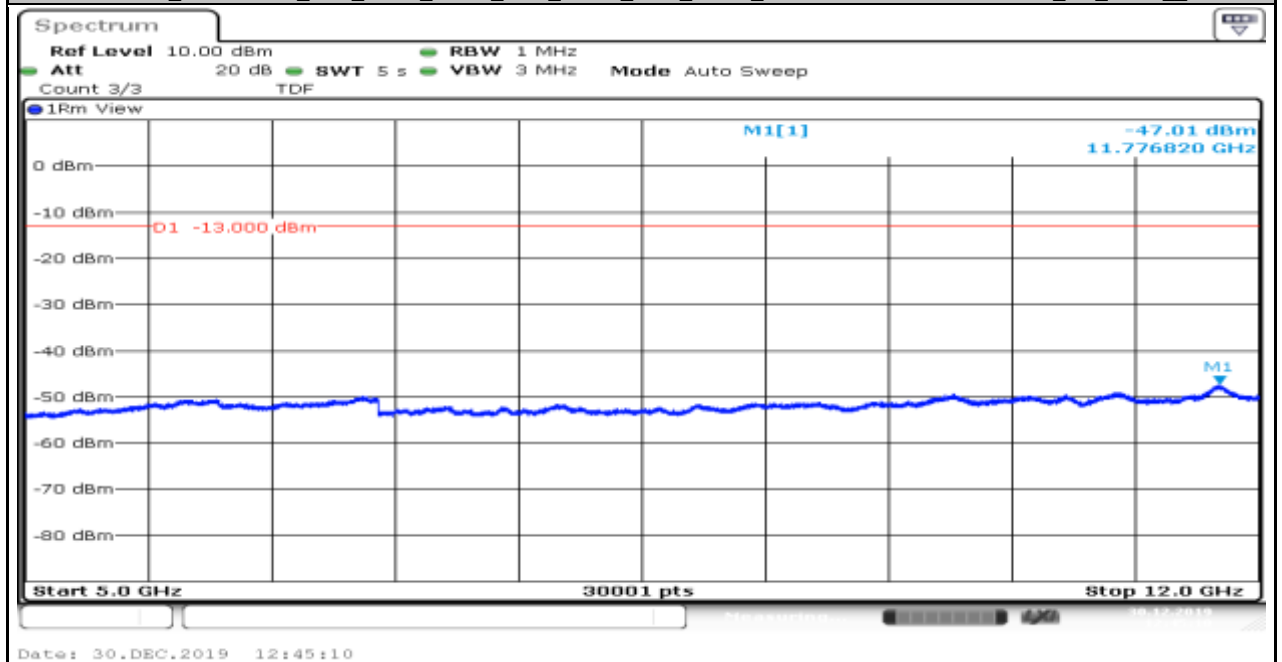


Band25_Stand-Alone_NaN_BPSK_26365_1@0_15kHz_1000_5000_1000~5000MHz@-34.89dBm_-13_PASS

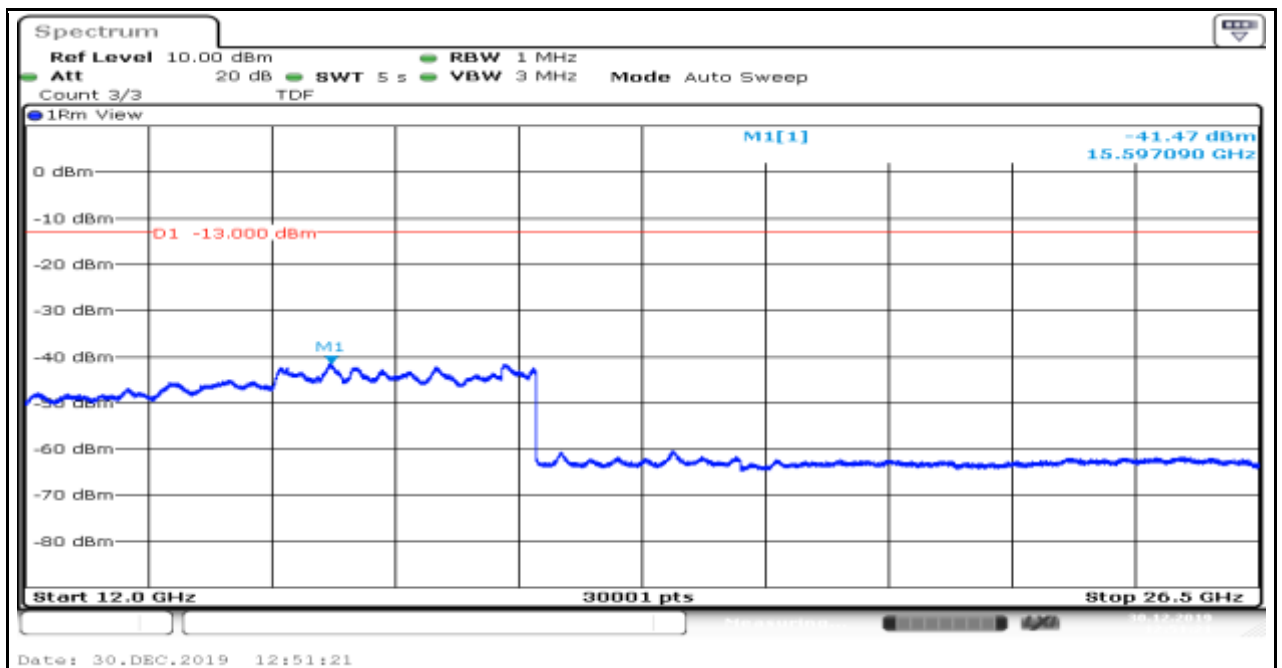
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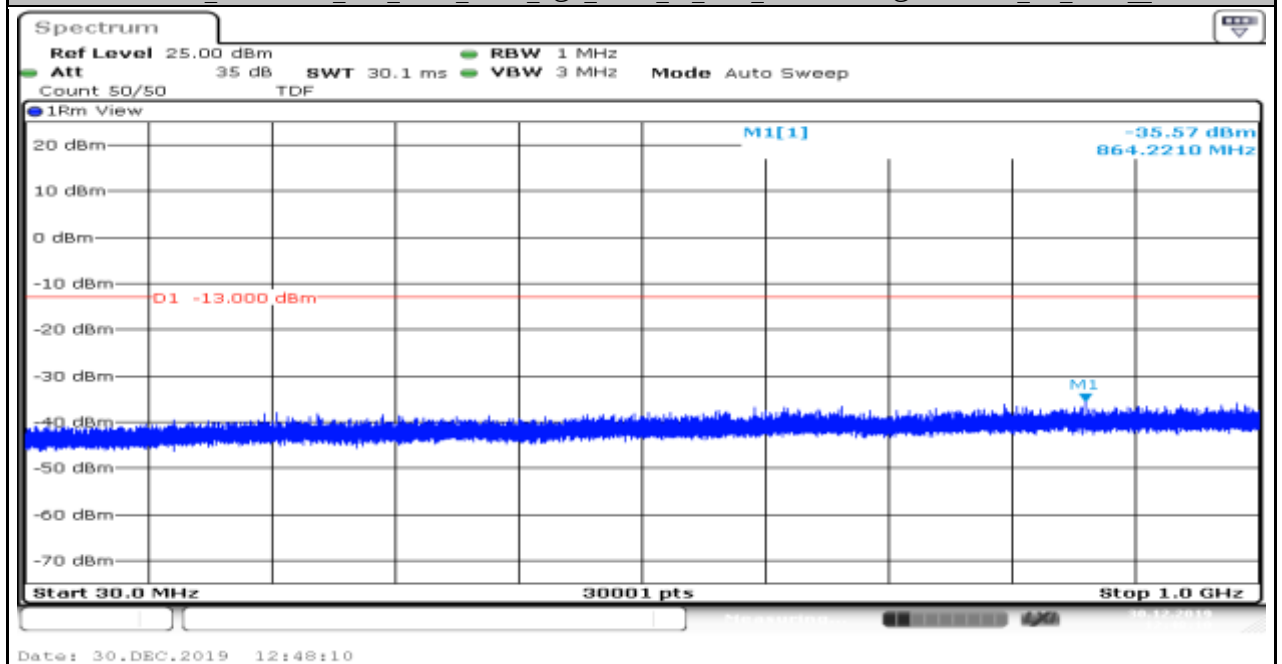
Band25_Stand-Alone_NaN_BPSK_26365_1@0_15kHz_5000_12000_5000-12000MHz@-47.01dBm_-13_PASS



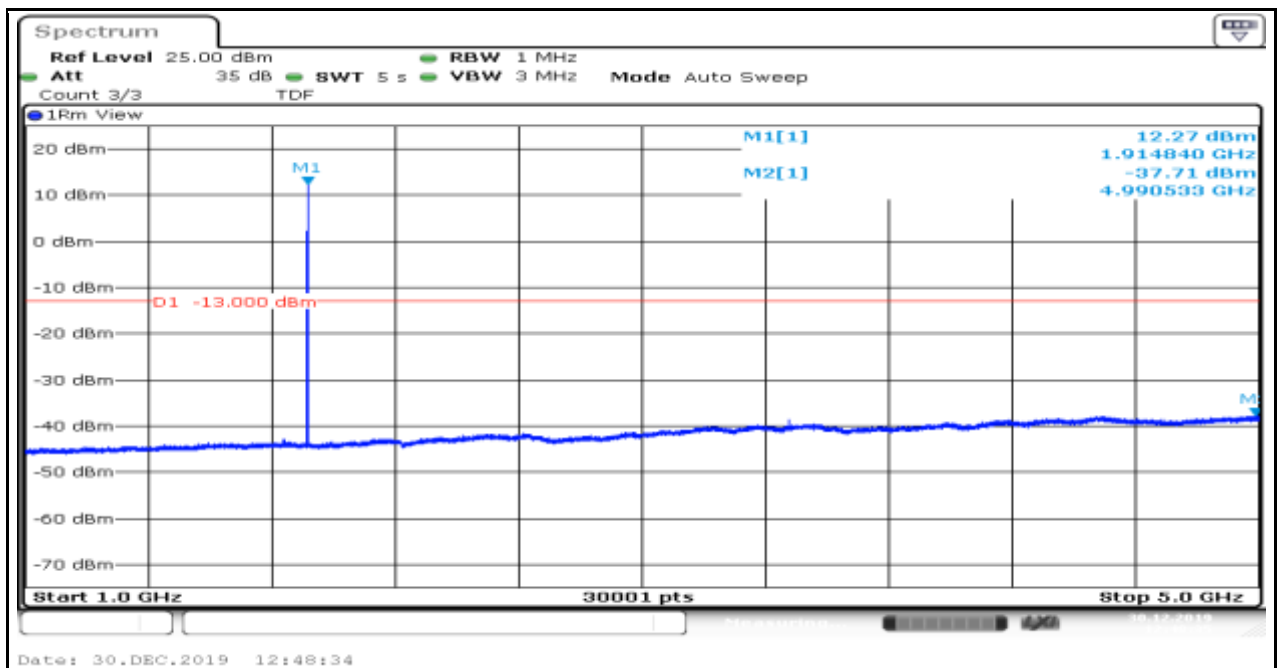
Band25_Stand-Alone_NaN_BPSK_26689_1@11_15kHz_12000_26500_12000-26500MHz@-41.47dBm_-13_PASS



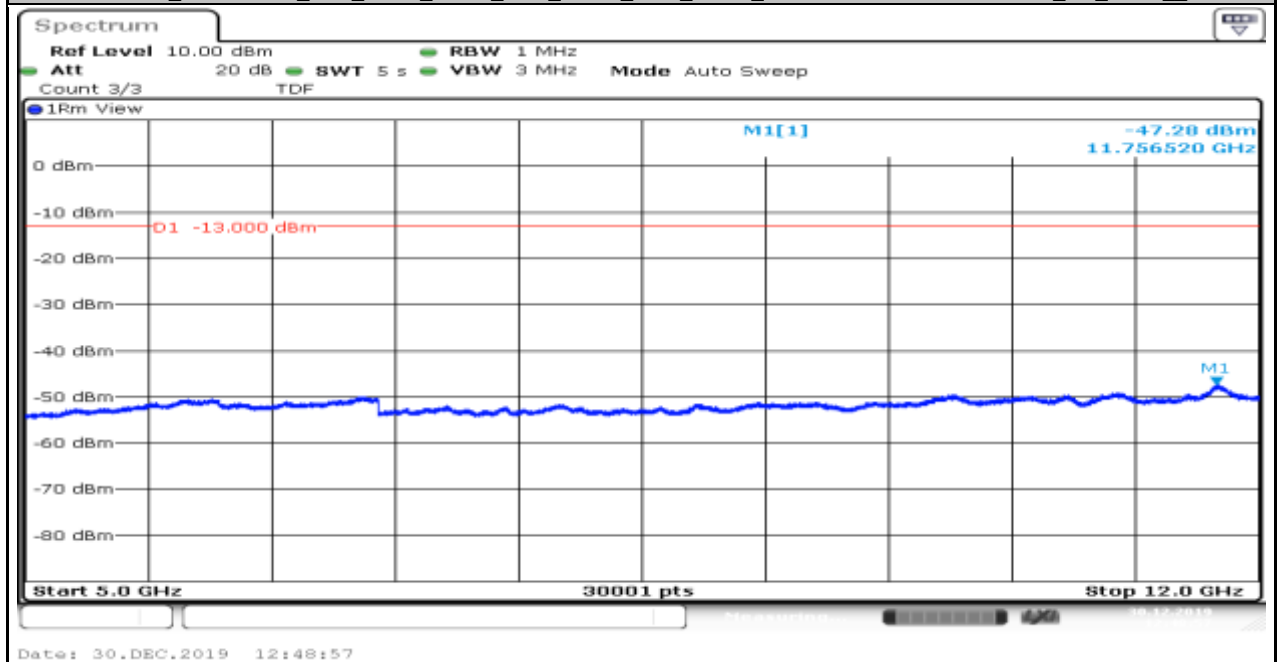
Band25_Stand-Alone_NaN_BPSK_26689_1@0_15kHz_30_1000_30~1000MHz@-35.57dBm_-13_PASS_



Band25_Stand-Alone_NaN_BPSK_26689_1@0_15kHz_1000_5000_1000~5000MHz@-37.71dBm_-13_PASS_

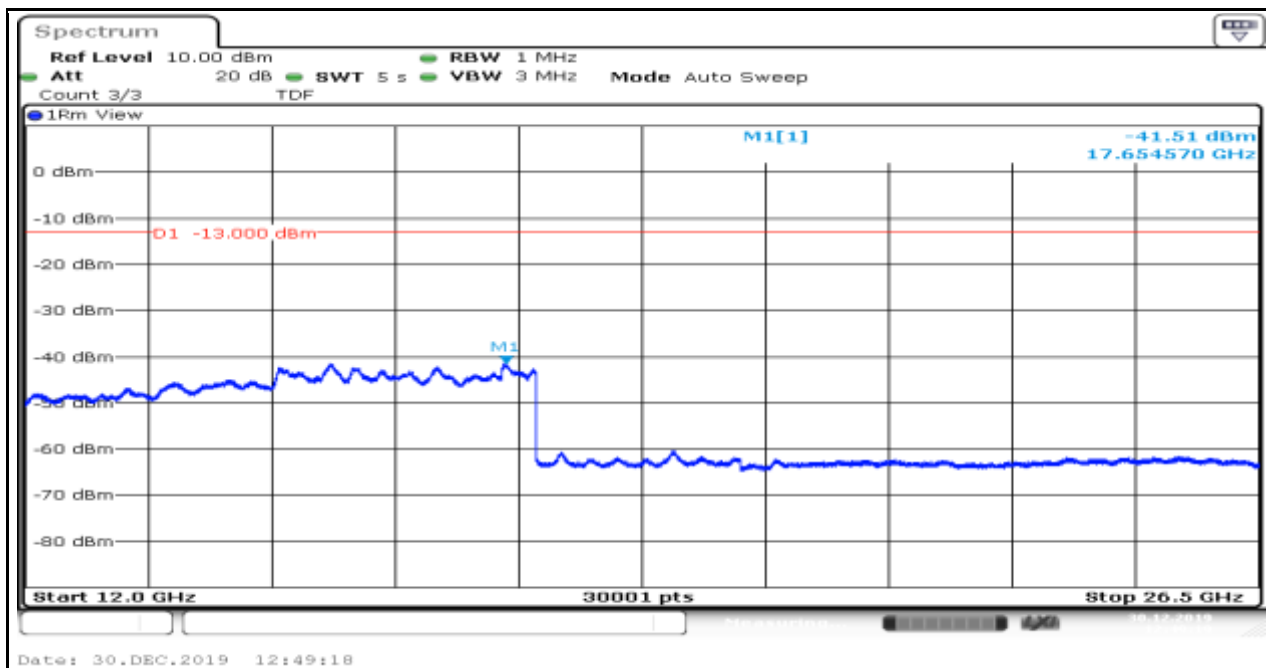


Band25_Stand-Alone_NaN_BPSK_26689_1@0_15kHz_5000_12000_5000-12000MHz@-47.28dBm_-13_PASS

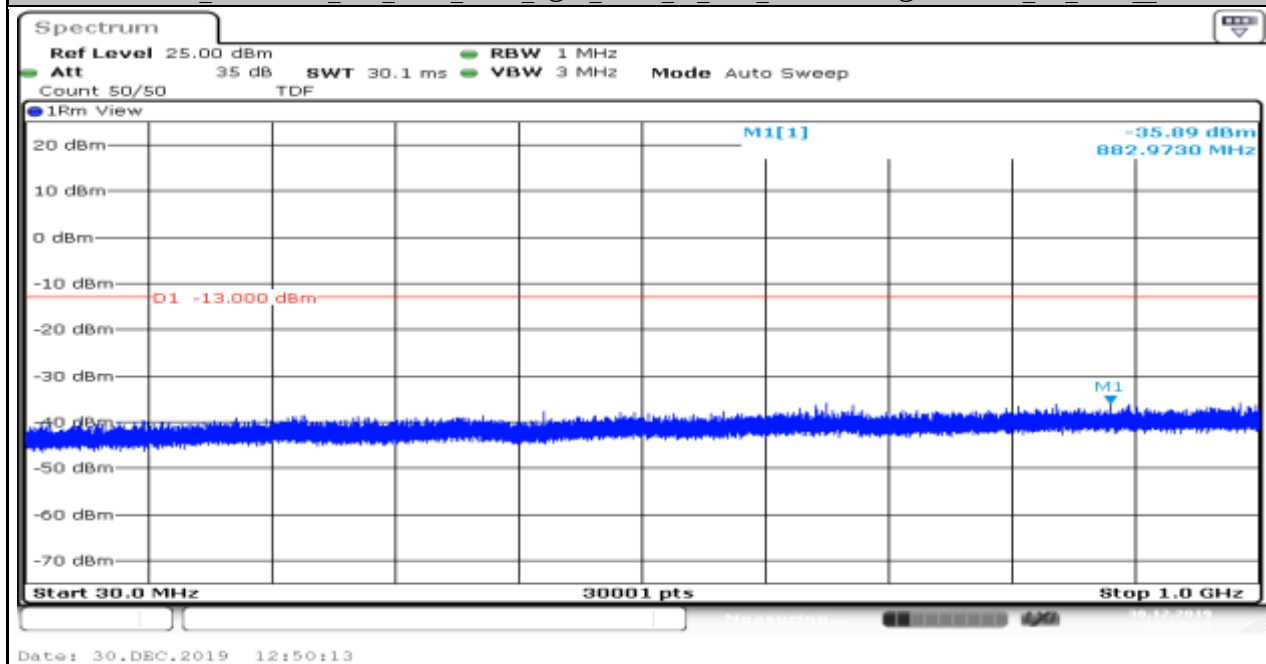


Band25_Stand-Alone_NaN_BPSK_26689_1@0_15kHz_12000_26500_12000-26500MHz@-41.51dBm_-13_PASS

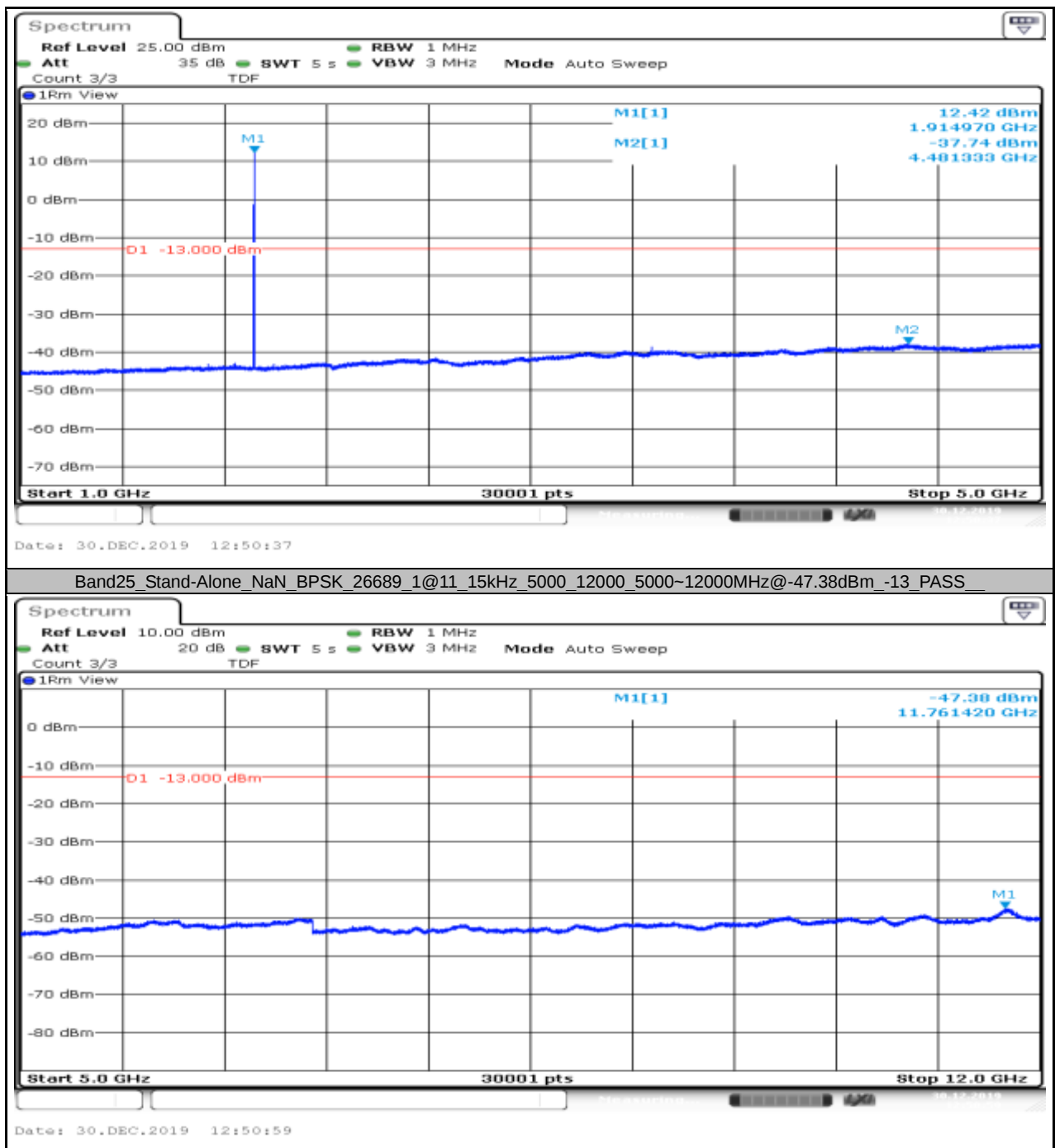
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Band25_Stand-Alone_NaN_BPSK_26689_1@11_15kHz_30_1000_30~1000MHz@-35.89dBm_-13_PASS_



Band25_Stand-Alone_NaN_BPSK_26689_1@11_15kHz_1000_5000_1000~5000MHz@-37.74dBm_-13_PASS_



Appendix F.6: Frequency Stability for NB

Test Result

Voltage												
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	HV	NT	-14.65	-0.007782	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	NV	NT	-18.71	-0.009939	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	LV	NT	-16.41	-0.008717	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	HV	NT	-15.54	-0.008255	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	NV	NT	-21.66	-0.011506	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	NV	NT	-34.53	-0.018343	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	LV	NT	-36.89	-0.019596	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	HV	NT	-28.72	-0.015256	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	NV	NT	-29.97	-0.015920	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	LV	NT	-29.27	-0.015548	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	HV	NT	-31.47	-0.016717	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	LV	NT	-13.53	-0.007187	±2.5	PASS

Temperature												
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	NV	60	-6.90	-0.003665	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	NV	-30	-11.46	-0.006088	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	NV	-20	-13.99	-0.007432	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	NV	-10	-9.90	-0.005259	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	NV	0	-10.70	-0.005684	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	NV	10	-14.13	-0.007506	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	NV	20	-10.06	-0.005344	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	NV	30	-12.04	-0.006396	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	NV	-40	-29.50	-0.015671	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	NV	50	-12.30	-0.006534	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	NV	-40	-14.06	-0.007469	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	NV	70	-8.97	-0.004765	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	NV	85	-12.32	-0.006544	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	NV	40	-10.64	-0.005652	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	NV	85	-12.15	-0.006454	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	NV	80	-10.70	-0.005684	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	NV	70	-11.26	-0.005981	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	NV	60	-7.54	-0.004005	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	NV	50	-12.96	-0.006884	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	NV	40	-11.10	-0.005896	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	NV	30	-10.16	-0.005397	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	NV	20	-14.00	-0.007437	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	NV	10	-9.94	-0.005280	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	NV	0	-12.42	-0.006598	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	NV	-10	-10.46	-0.005556	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	NV	-20	-13.55	-0.007198	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	NV	-40	-12.57	-0.006677	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	3.75kHz	NV	-30	-13.78	-0.007320	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	NV	80	-31.30	-0.016627	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	NV	85	-30.94	-0.016436	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	NV	70	-32.16	-0.017084	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	NV	60	-25.71	-0.013657	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	NV	50	-32.74	-0.017392	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	NV	40	-29.23	-0.015527	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	NV	30	-33.83	-0.017971	±2.5	PASS

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Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	NV	20	-25.21	-0.013392	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	NV	10	-34.76	-0.018465	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	NV	0	-27.22	-0.014459	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	NV	-10	-36.03	-0.019139	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	NV	-20	-31.29	-0.016622	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	NV	-30	-24.82	-0.013185	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@11	15kHz	NV	-40	-31.11	-0.016526	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	NV	10	-34.25	-0.018194	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@47	3.75kHz	NV	80	-11.76	-0.006247	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	NV	-20	-36.08	-0.019166	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	NV	85	-34.12	-0.018125	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	NV	0	-38.67	-0.020542	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	NV	-30	-33.87	-0.017992	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	NV	20	-31.11	-0.016526	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	NV	30	-26.88	-0.014279	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	NV	40	-38.91	-0.020669	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	NV	50	-31.40	-0.016680	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	NV	60	-35.98	-0.019113	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	NV	70	-38.77	-0.020595	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	NV	80	-31.37	-0.016664	±2.5	PASS
Band25	Stand-Alone	NaN	QPSK	26365	1@0	15kHz	NV	-10	-32.03	-0.017015	±2.5	PASS