

Appendix E: Test Results of Band 13 for NB-IoT operation

APPENDIX E: TEST RESULTS OF BAND 13 FOR NB-IOT OPERATION	1
APPENDIX E.1: RF POWER OUTPUT AND EFFECTIVE (ISOTROPIC) RADIATED POWER OUTPUT DATA FOR NB	2
Test Result	2
APPENDIX E.2: PEAK-TO-AVERAGE RATIO(CCDF) FOR NB	3
Test Result	3
Test Graphs.....	3
APPENDIX E.3: 26dB EMISSION BANDWIDTH AND OCCUPIED BANDWIDTH FOR NB	9
Test Result	9
Test Graphs.....	9
APPENDIX E.4: BAND EDGE FOR NB.....	17
Test Result	17
Test Graphs.....	17
APPENDIX E.5: CONDUCTED SPURIOUS EMISSION FOR NB	27
Test Result	27
Test Graphs.....	28
APPENDIX E.6: FREQUENCY STABILITY FOR NB	58
Test Result	58

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

Test Result

Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Result	ERP		Limit (watts)	Verdict
							dBm	dBm	Watts		
Band13	Stand-Alone	NaN	QPSK	23181	1@11	15kHz	6.14	6.13	0.004	3	PASS
Band13	Stand-Alone	NaN	QPSK	23181	1@0	3.75kHz	7.25	7.24	0.005	3	PASS
Band13	Stand-Alone	NaN	QPSK	23181	1@0	15kHz	6.41	6.4	0.004	3	PASS
Band13	Stand-Alone	NaN	QPSK	23181	3@3	15kHz	6.33	6.32	0.004	3	PASS
Band13	Stand-Alone	NaN	QPSK	23181	1@47	3.75kHz	7.15	7.14	0.005	3	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	20.69	20.68	0.117	3	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	21.06	21.05	0.127	3	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	20.99	20.98	0.125	3	PASS
Band13	Stand-Alone	NaN	QPSK	23230	3@3	15kHz	21.11	21.1	0.129	3	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	20.66	20.65	0.116	3	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@0	3.75kHz	7.39	7.38	0.005	3	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@0	15kHz	6.87	6.86	0.005	3	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@47	3.75kHz	7.38	7.37	0.005	3	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@11	15kHz	6.67	6.66	0.005	3	PASS
Band13	Stand-Alone	NaN	QPSK	23279	3@3	15kHz	6.97	6.96	0.005	3	PASS
Band13	Stand-Alone	NaN	BPSK	23181	3@3	15kHz	6.41	6.4	0.004	3	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@0	15kHz	6.69	6.68	0.005	3	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@47	3.75kHz	6.99	6.98	0.005	3	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@11	15kHz	6.61	6.6	0.005	3	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@0	3.75kHz	7.2	7.19	0.005	3	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@47	3.75kHz	20.61	20.6	0.115	3	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@0	3.75kHz	20.68	20.67	0.117	3	PASS
Band13	Stand-Alone	NaN	BPSK	23230	3@3	15kHz	21.09	21.08	0.128	3	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@11	15kHz	20.89	20.88	0.122	3	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@0	15kHz	20.94	20.93	0.124	3	PASS
Band13	Stand-Alone	NaN	BPSK	23279	3@3	15kHz	6.76	6.75	0.005	3	PASS
Band13	Stand-Alone	NaN	BPSK	23279	1@0	3.75kHz	7.35	7.34	0.005	3	PASS
Band13	Stand-Alone	NaN	BPSK	23279	1@11	15kHz	6.79	6.78	0.005	3	PASS
Band13	Stand-Alone	NaN	BPSK	23279	1@47	3.75kHz	7.3	7.29	0.005	3	PASS
Band13	Stand-Alone	NaN	BPSK	23279	1@0	15kHz	6.2	6.19	0.004	3	PASS

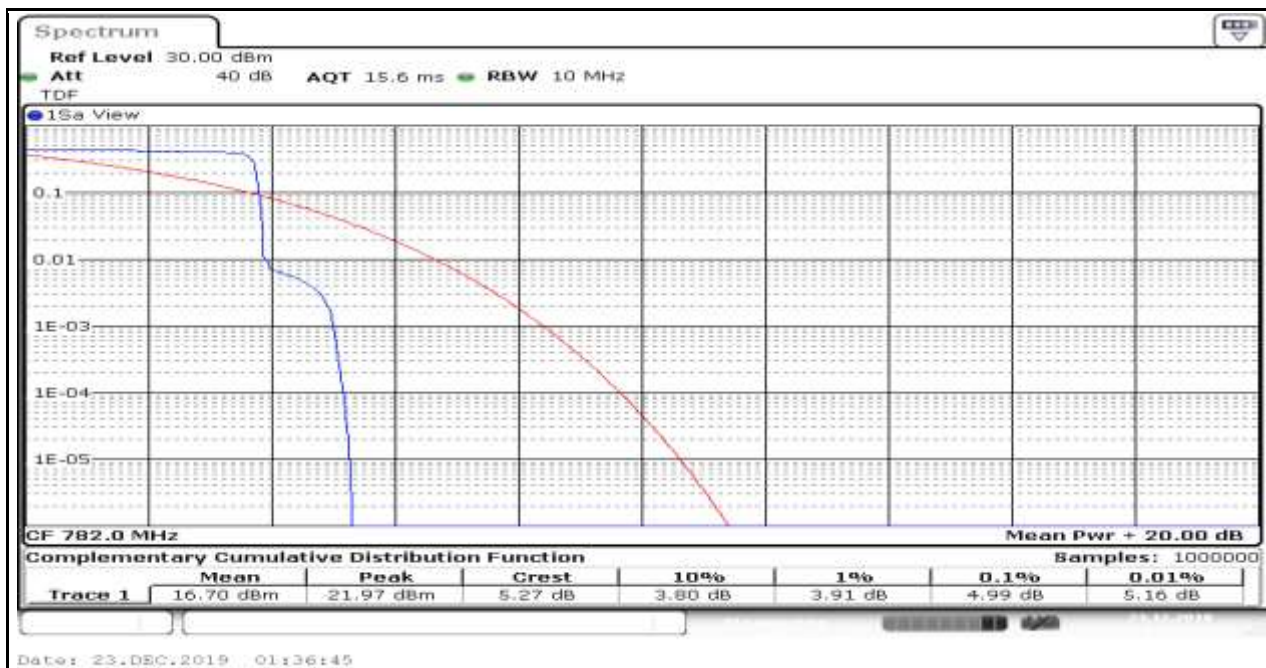
Appendix E.2: Peak-to-Average Ratio(CCDF) for NB

Test Result

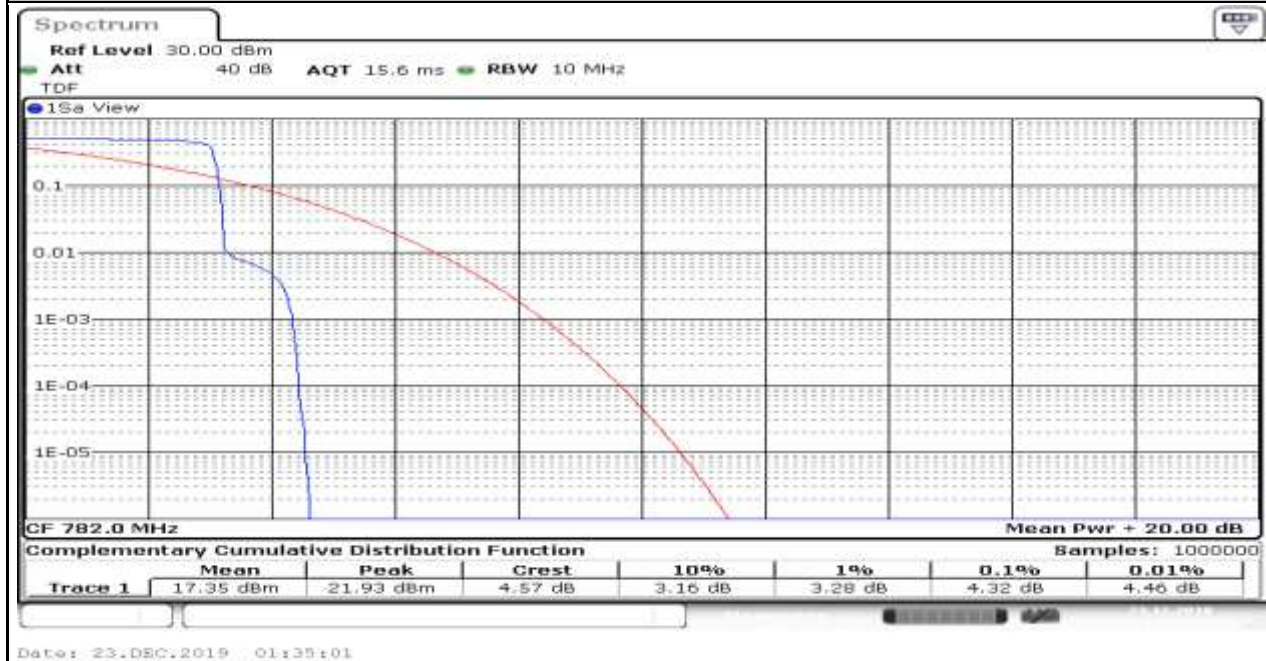
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Result (dB)	Limit (dB)	Verdict
Band13	Stand-Alone	NaN	QPSK	23230	3@3	15kHz	9.59	<=13	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	4.99	<=13	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	4.32	<=13	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	2.03	<=13	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	1.59	<=13	PASS
Band13	Stand-Alone	NaN	BPSK	23230	3@3	15kHz	9.59	<=13	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@11	15kHz	9.1	<=13	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@0	15kHz	8.43	<=13	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@47	3.75kHz	1.86	<=13	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@0	3.75kHz	8.29	<=13	PASS

Test Graphs

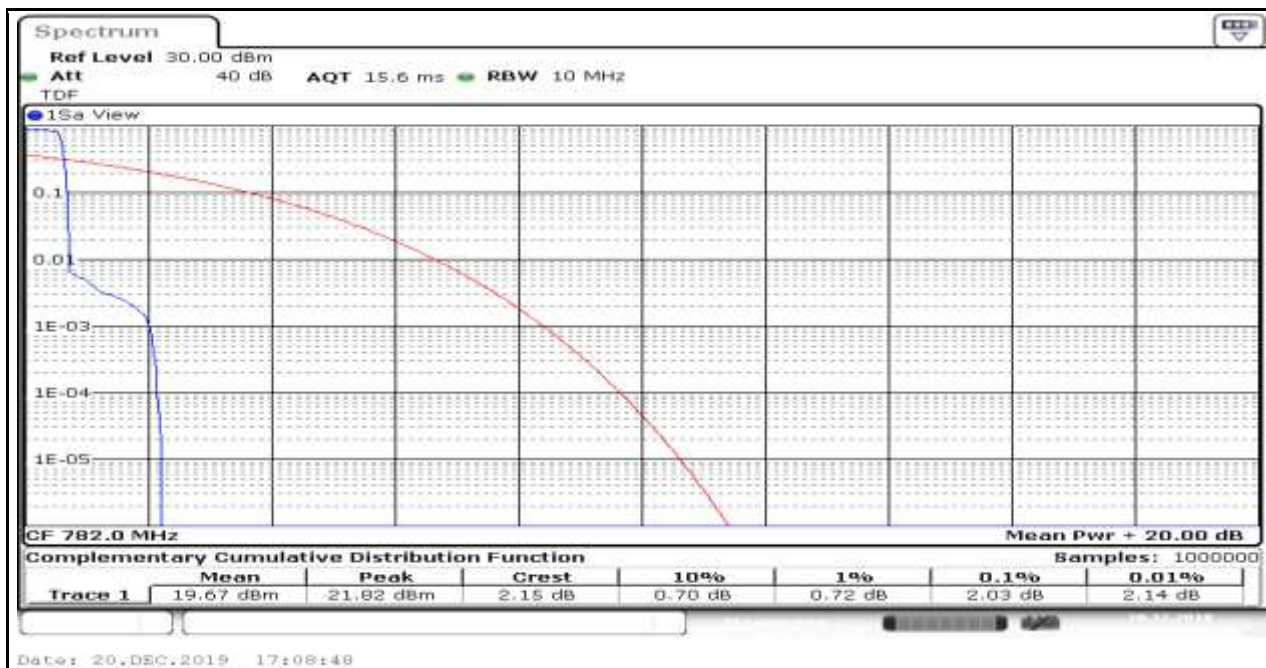




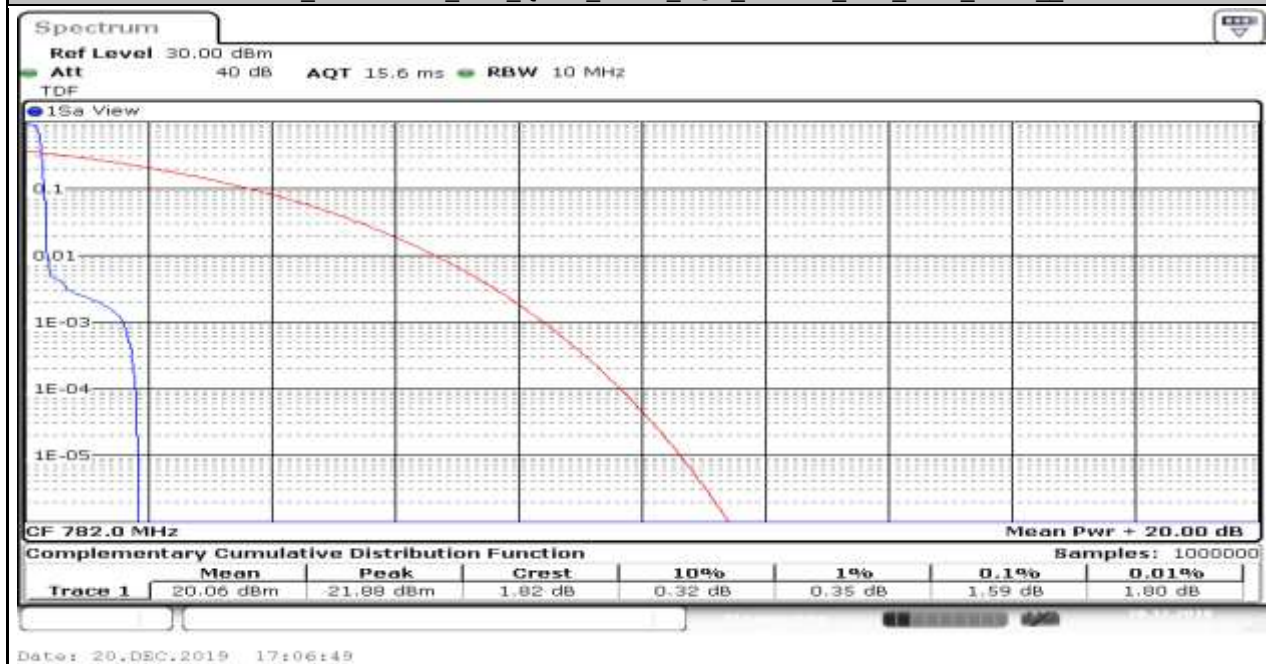
Band13_Stand-Alone_NaN_QPSK_23230_1@0_15kHz_4.32_<=13_PASS_



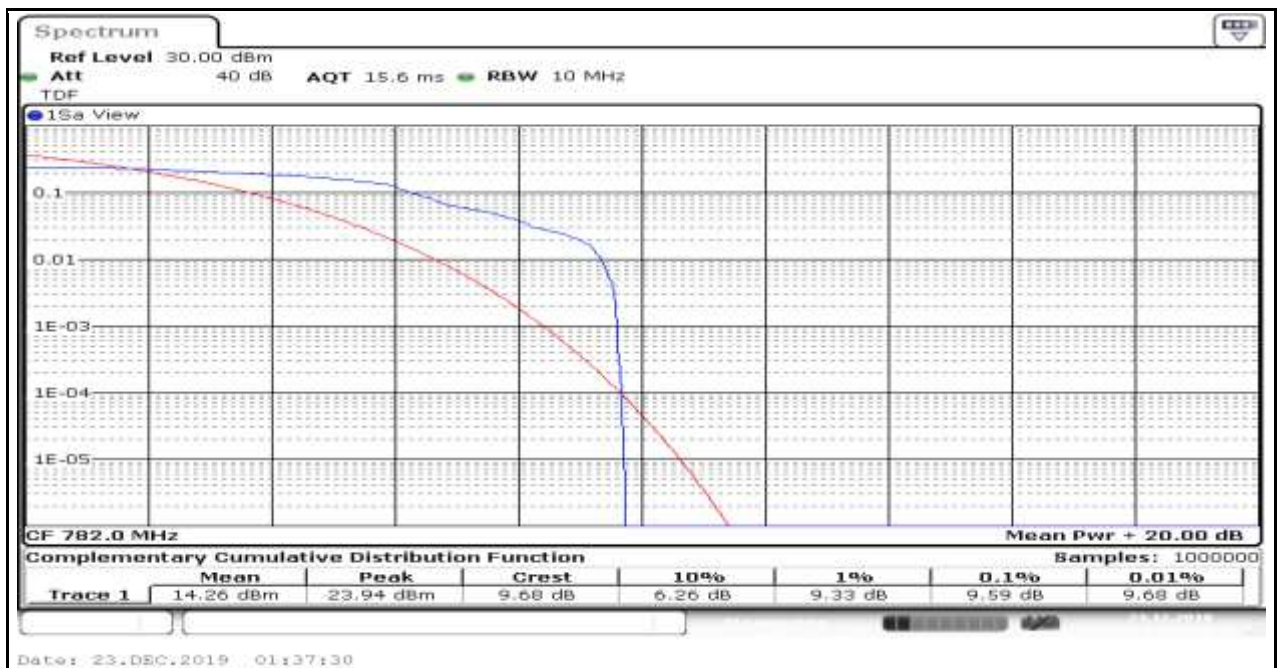
Band13_Stand-Alone_NaN_QPSK_23230_1@47_3.75kHz_2.03_<=13_PASS_



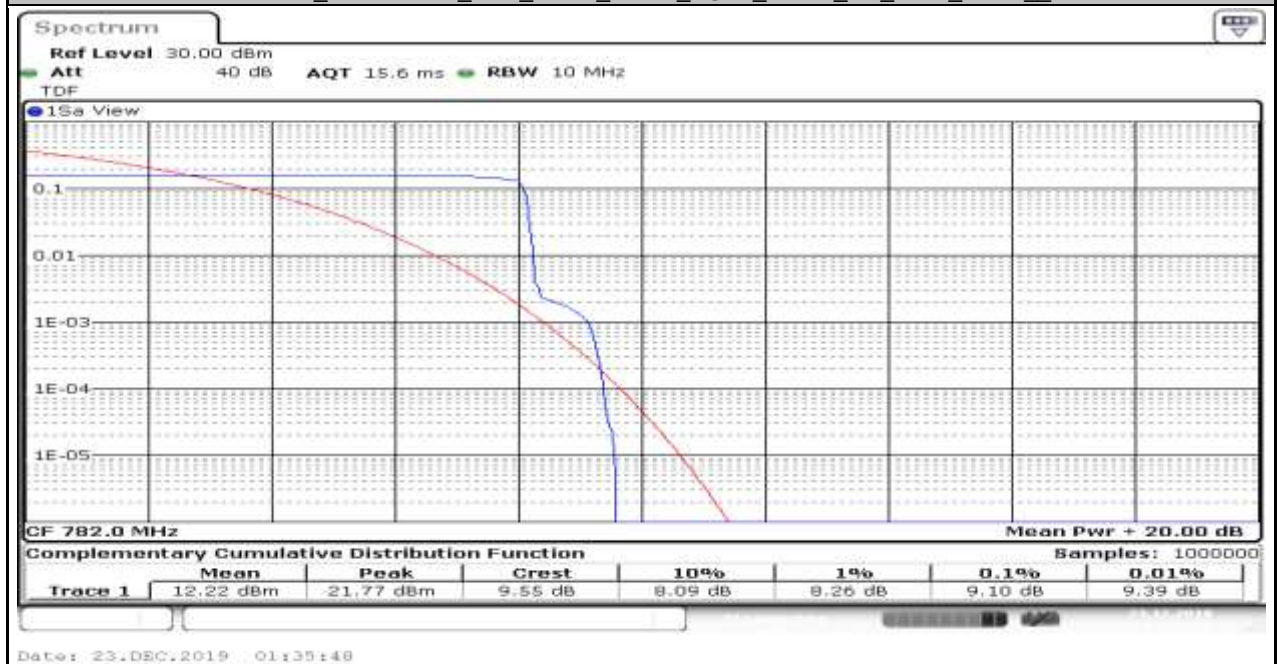
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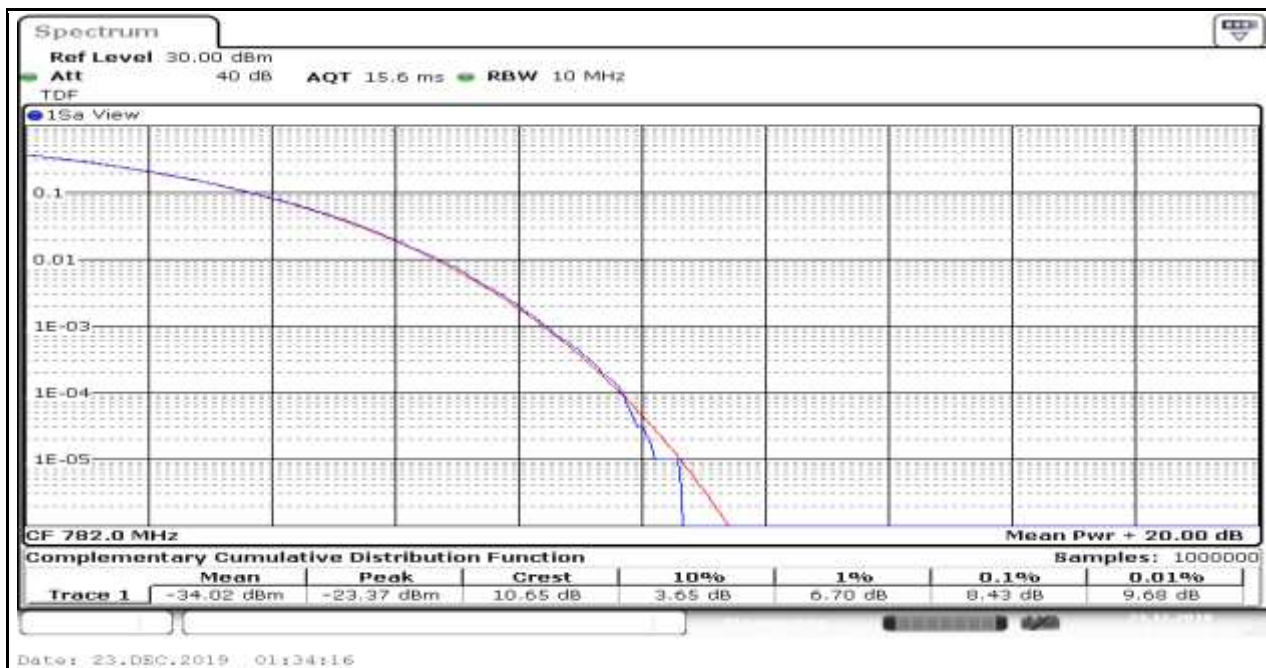
Band13_Stand-Alone_NaN_BPSK_23230_3@3_15kHz_9.59_<=13_PASS_



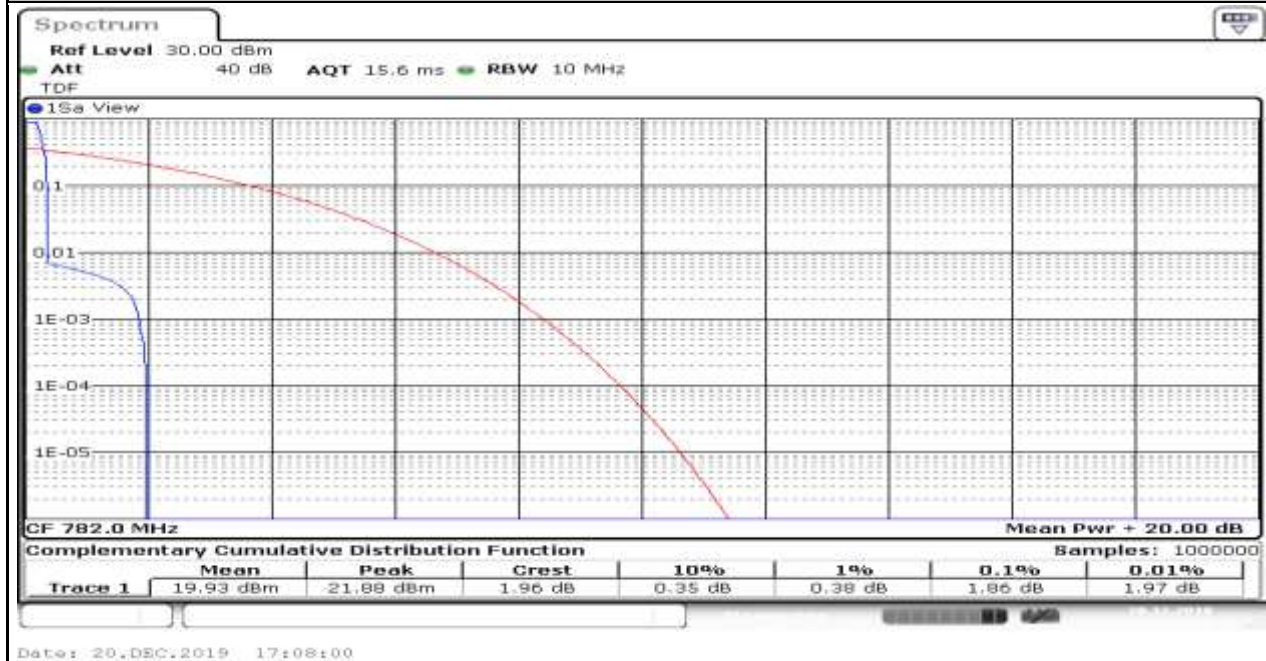
Band13_Stand-Alone_NaN_BPSK_23230_1@11_15kHz_9.1_<=13_PASS_



Band13_Stand-Alone_NaN_BPSK_23230_1@0_15kHz_8.43_<=13_PASS_

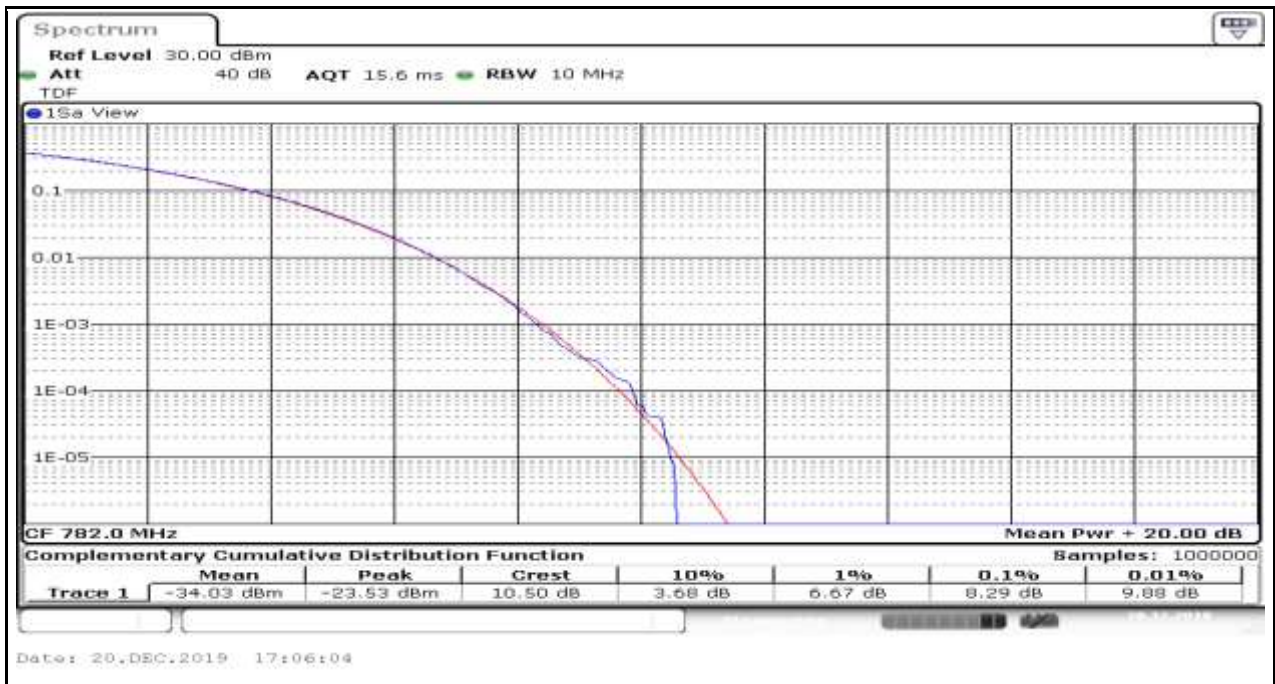


Band13_Stand-Alone_NaN_BPSK_23230_1@47_3.75kHz_1.86_<=13_PASS_



Band13_Stand-Alone_NaN_BPSK_23230_1@0_3.75kHz_8.29_<=13_PASS_

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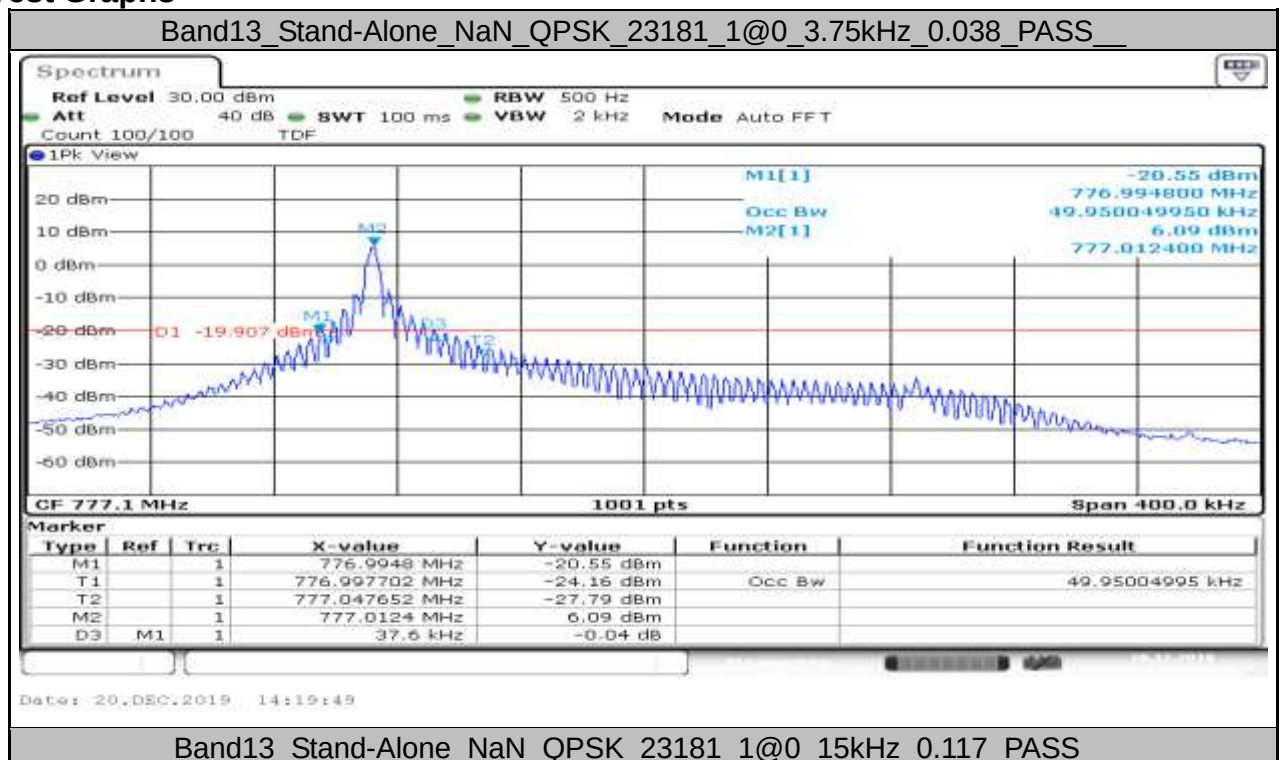


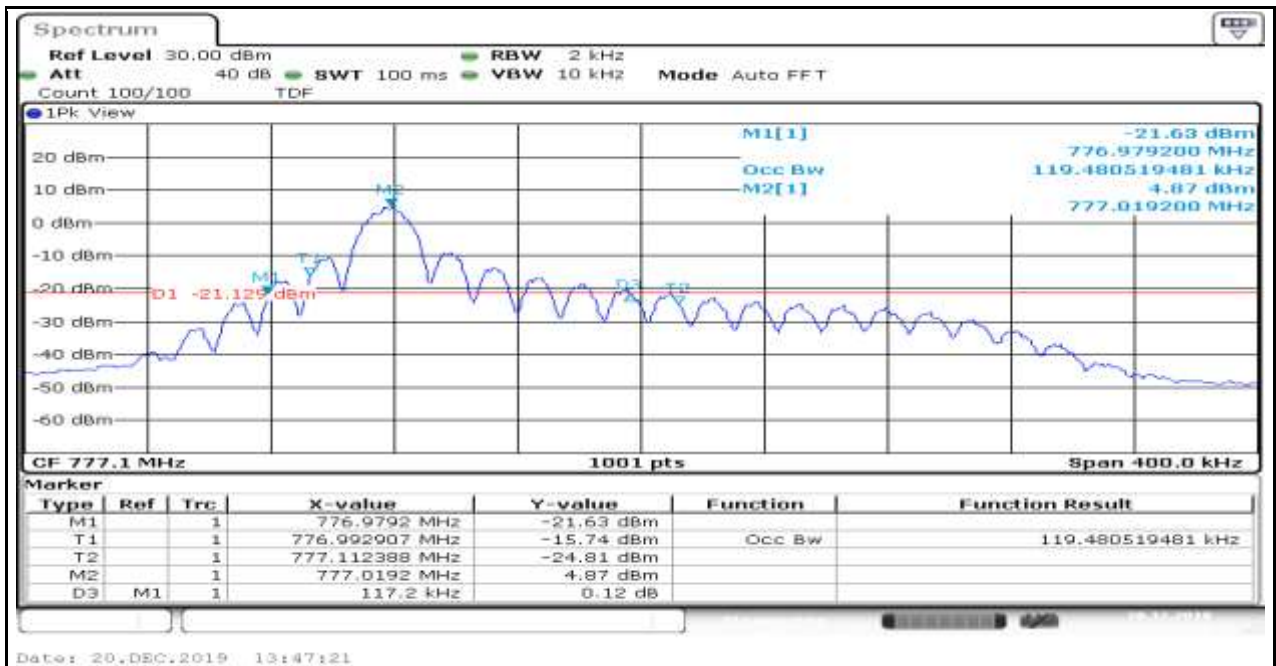
Appendix E.3: 26dB Emission Bandwidth and Occupied Bandwidth for NB

Test Result

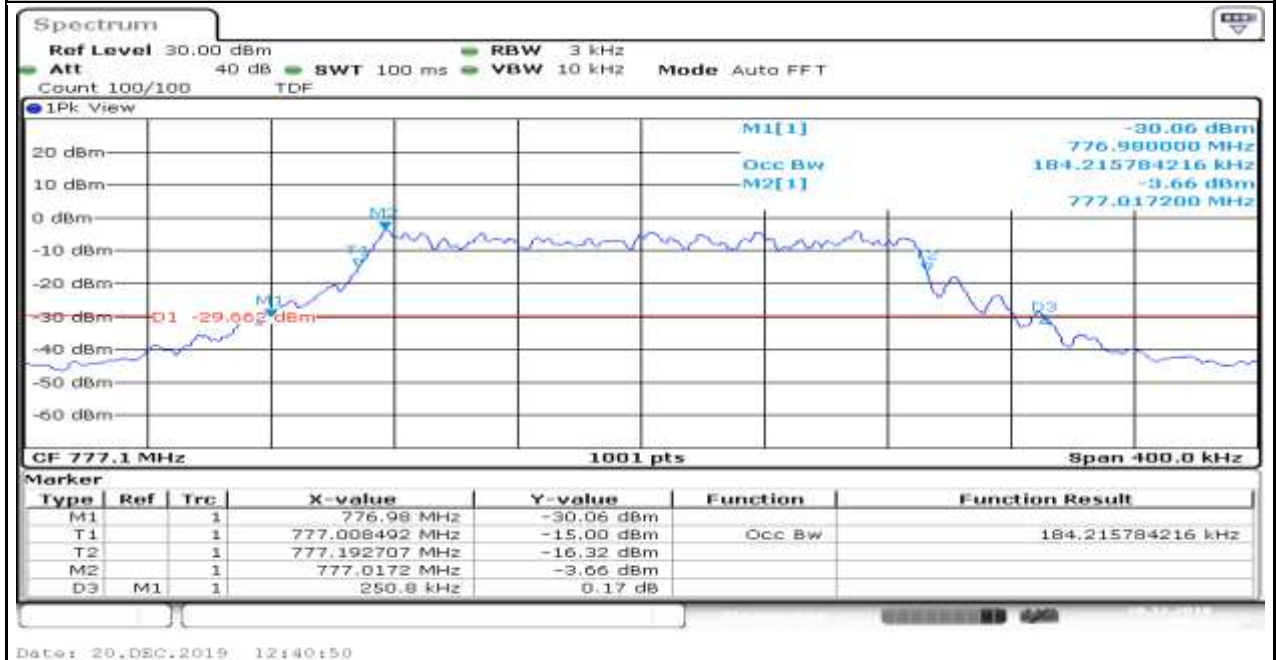
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	26dB Bandwidth (MHz)	Occupied Bandwidth (MHz)	Verdict
Band13	Stand-Alone	NaN	QPSK	23181	1@0	3.75kHz	0.038	0.050	PASS
Band13	Stand-Alone	NaN	QPSK	23181	1@0	15kHz	0.117	0.119	PASS
Band13	Stand-Alone	NaN	QPSK	23181	12@0	15kHz	0.251	0.184	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	0.038	0.051	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	0.117	0.120	PASS
Band13	Stand-Alone	NaN	QPSK	23230	12@0	15kHz	0.250	0.184	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@0	3.75kHz	0.038	0.050	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@0	15kHz	0.117	0.119	PASS
Band13	Stand-Alone	NaN	QPSK	23279	12@0	15kHz	0.251	0.184	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@0	3.75kHz	0.032	0.053	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@0	15kHz	0.104	0.128	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@0	3.75kHz	0.032	0.053	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@0	15kHz	0.106	0.126	PASS
Band13	Stand-Alone	NaN	BPSK	23279	1@0	3.75kHz	0.032	0.053	PASS
Band13	Stand-Alone	NaN	BPSK	23279	1@0	15kHz	0.104	0.128	PASS

Test Graphs

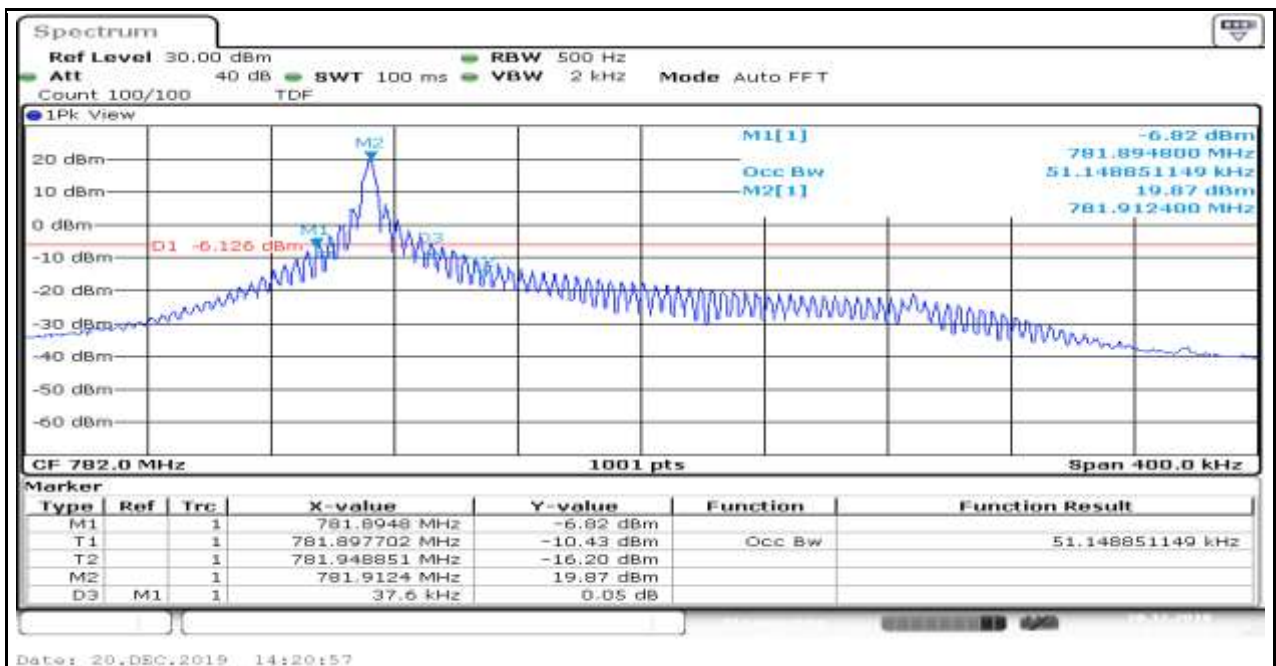




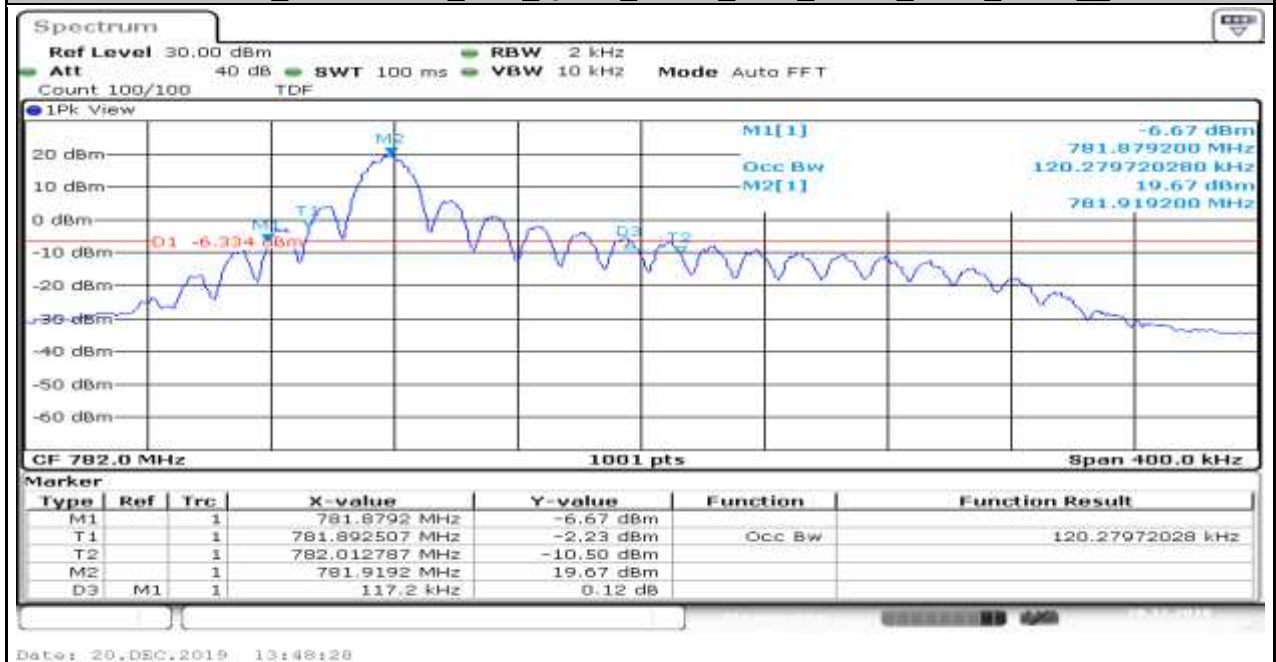
Band13_Stand-Alone_NaN_QPSK_23181_12@0_15kHz_0.251_PASS



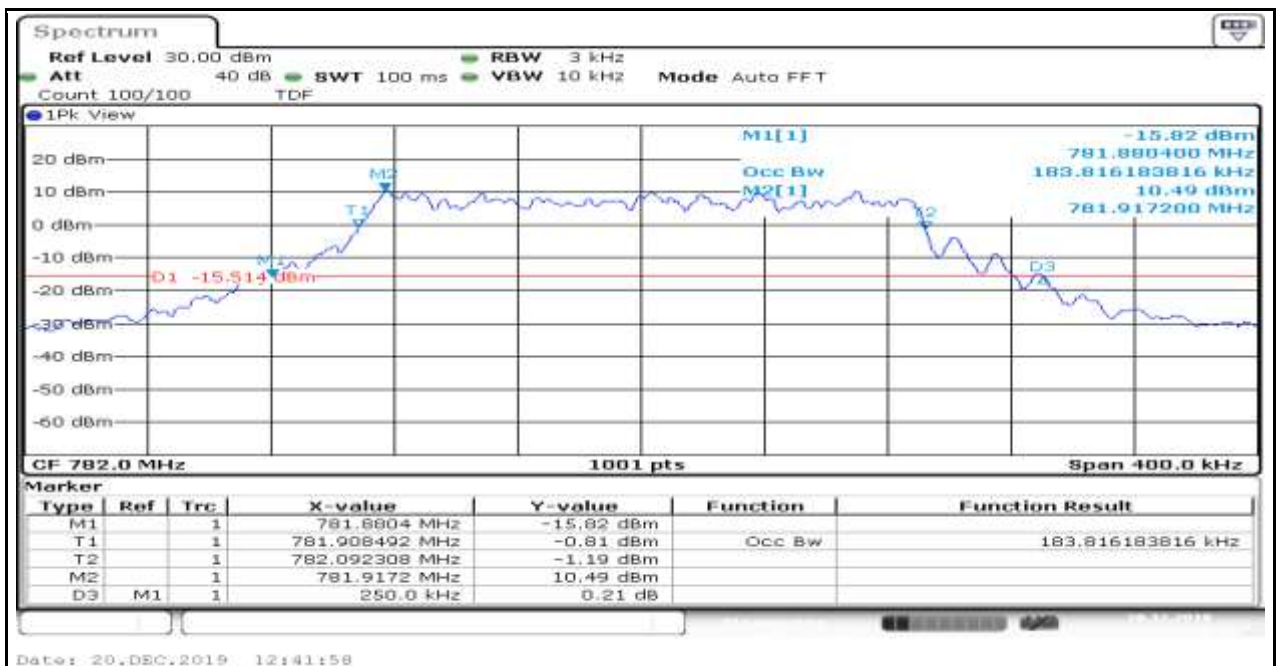
Band13_Stand-Alone_NaN_QPSK_23230_1@0_3.75kHz_0.038_PASS



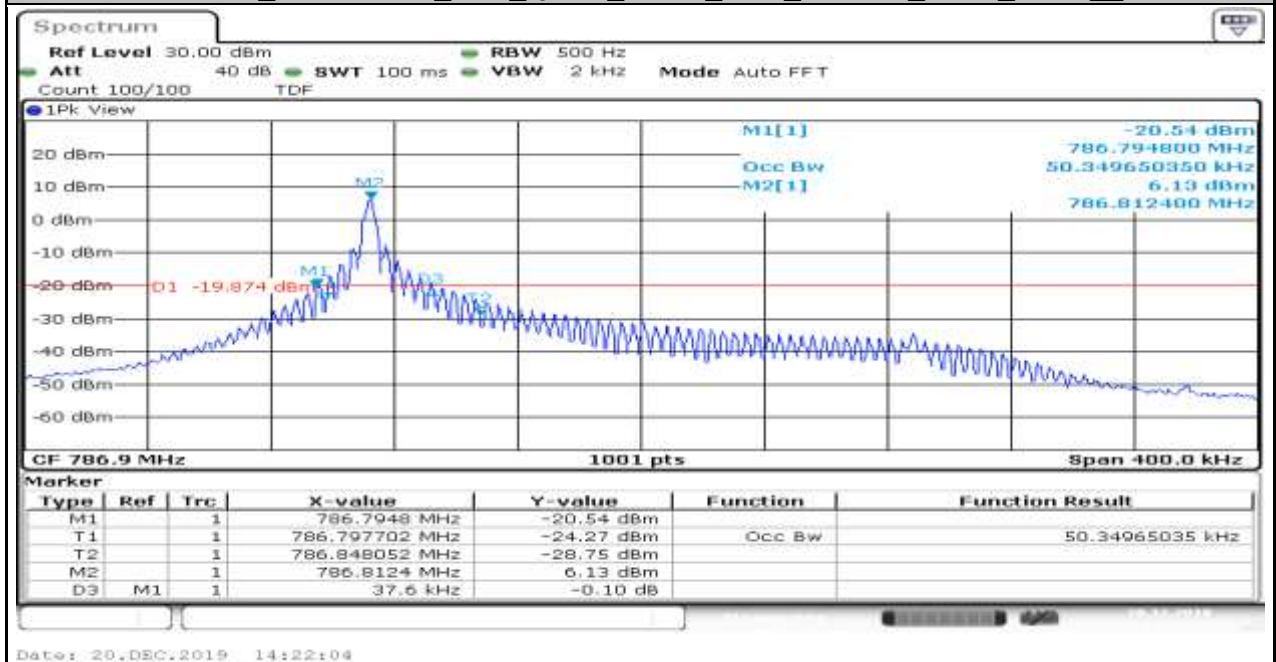
Band13_Stand-Alone_NaN_QPSK_23230_1@0_15kHz_0.117_PASS__



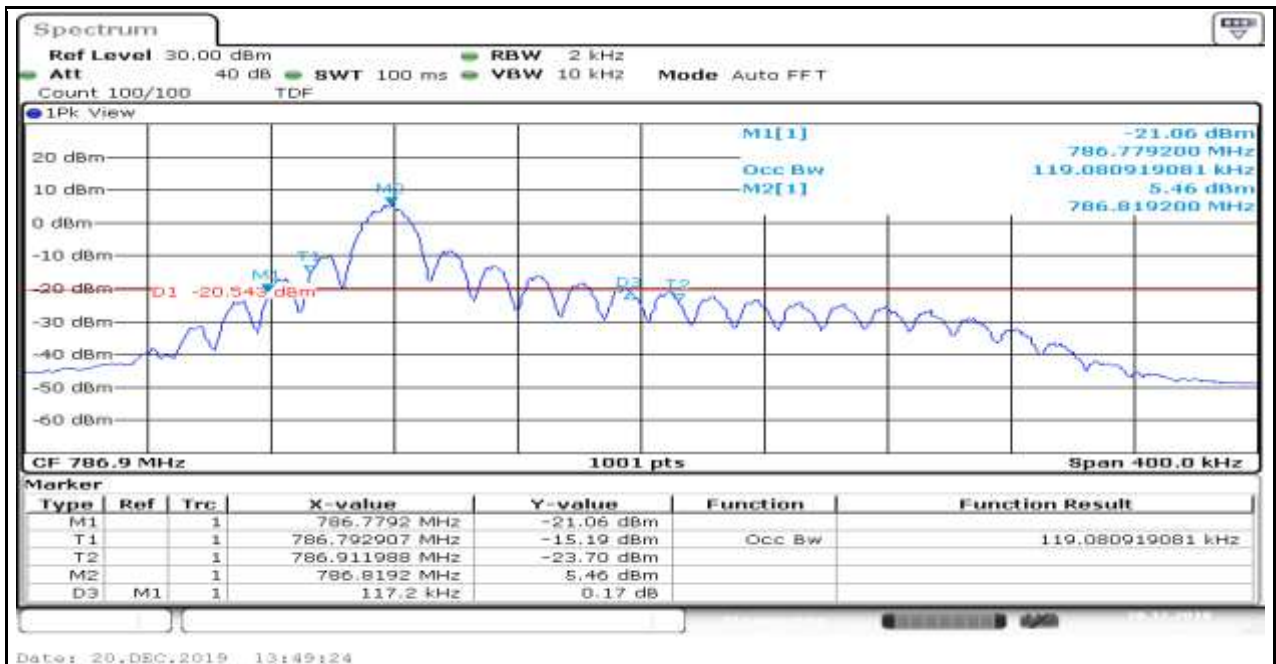
Band13_Stand-Alone_NaN_QPSK_23230_12@0_15kHz_0.250_PASS__



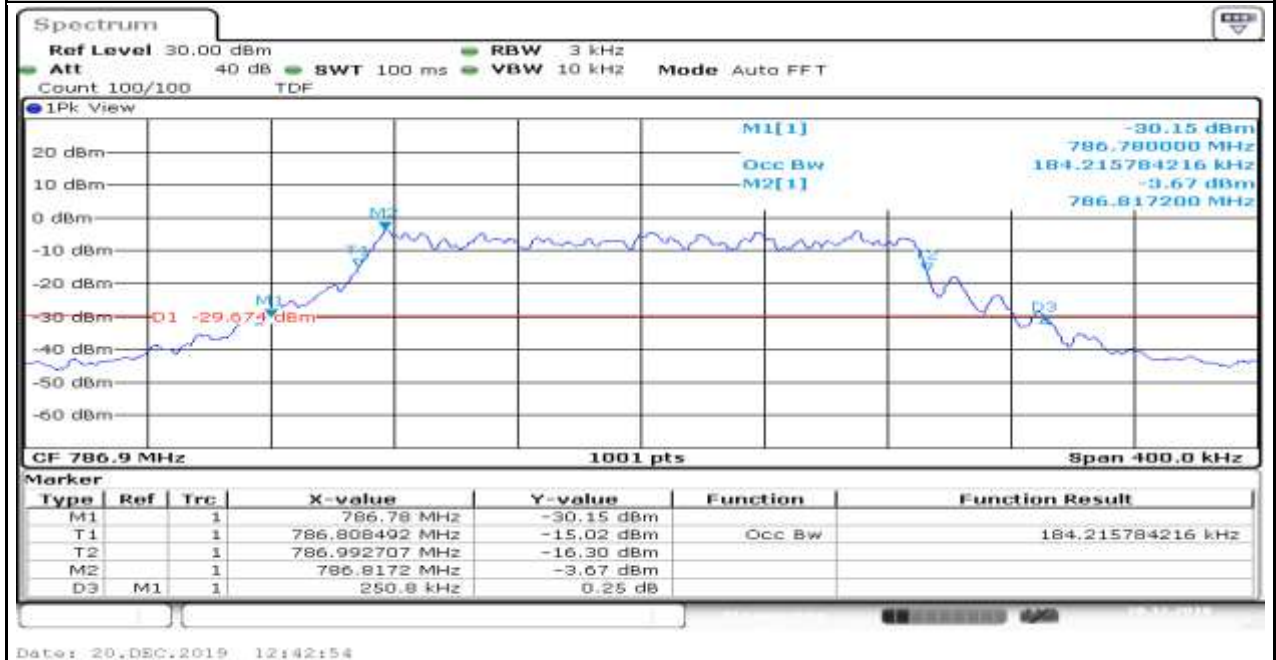
Band13_Stand-Alone_NaN_QPSK_23279_1@0_3.75kHz_0.038_PASS



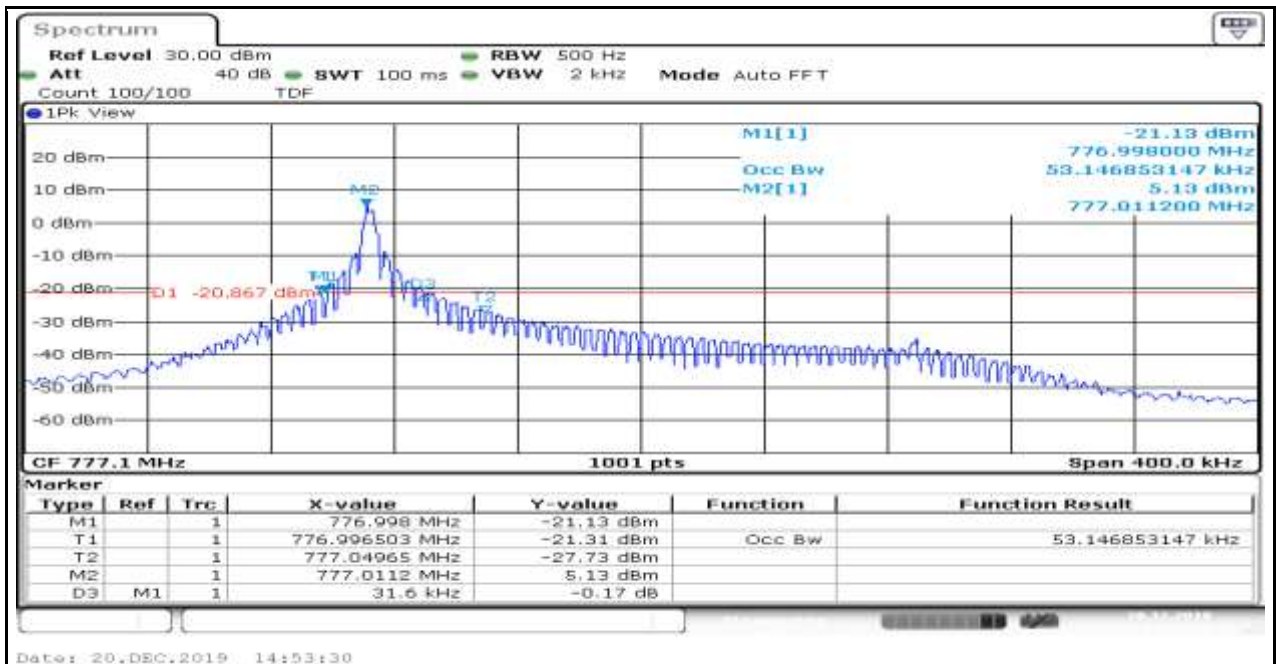
Band13_Stand-Alone_NaN_QPSK_23279_1@0_15kHz_0.117_PASS



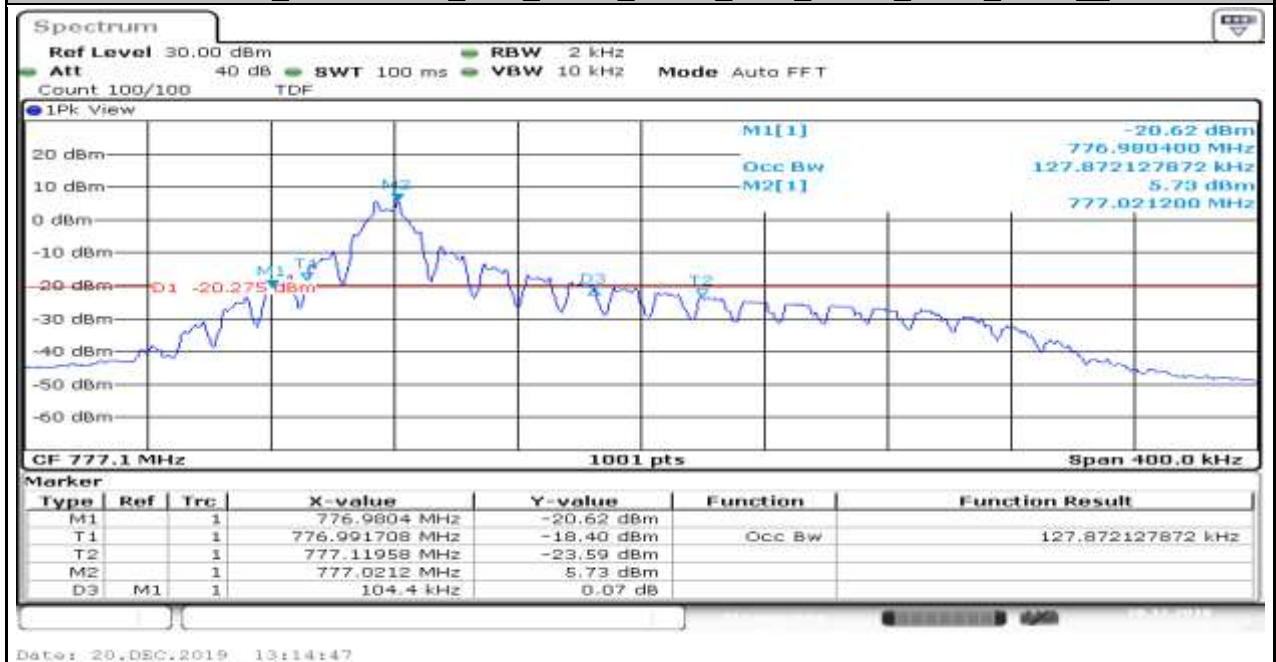
Band13_Stand-Alone_NaN_QPSK_23279_12@0_15kHz_0.251_PASS



Band13_Stand-Alone_NaN_BPSK_23181_1@0_3.75kHz_0.032_PASS

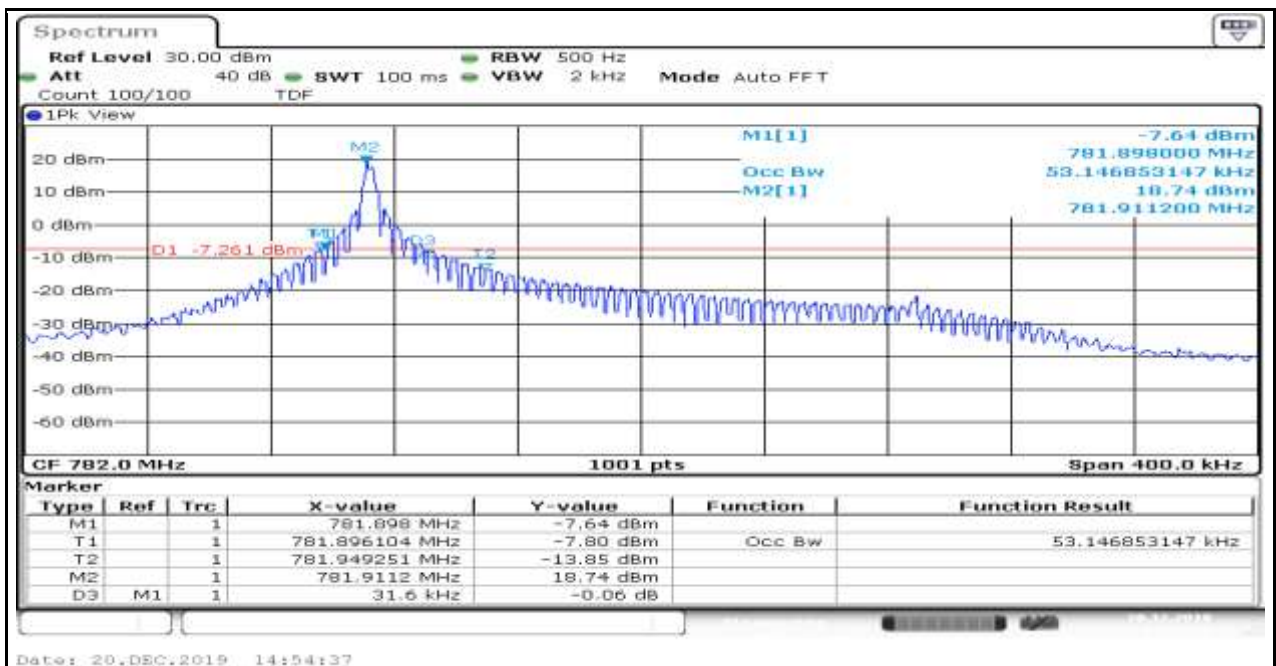


Band13_Stand-Alone_NaN_BPSK_23181_1@0_15kHz_0.104_PASS__

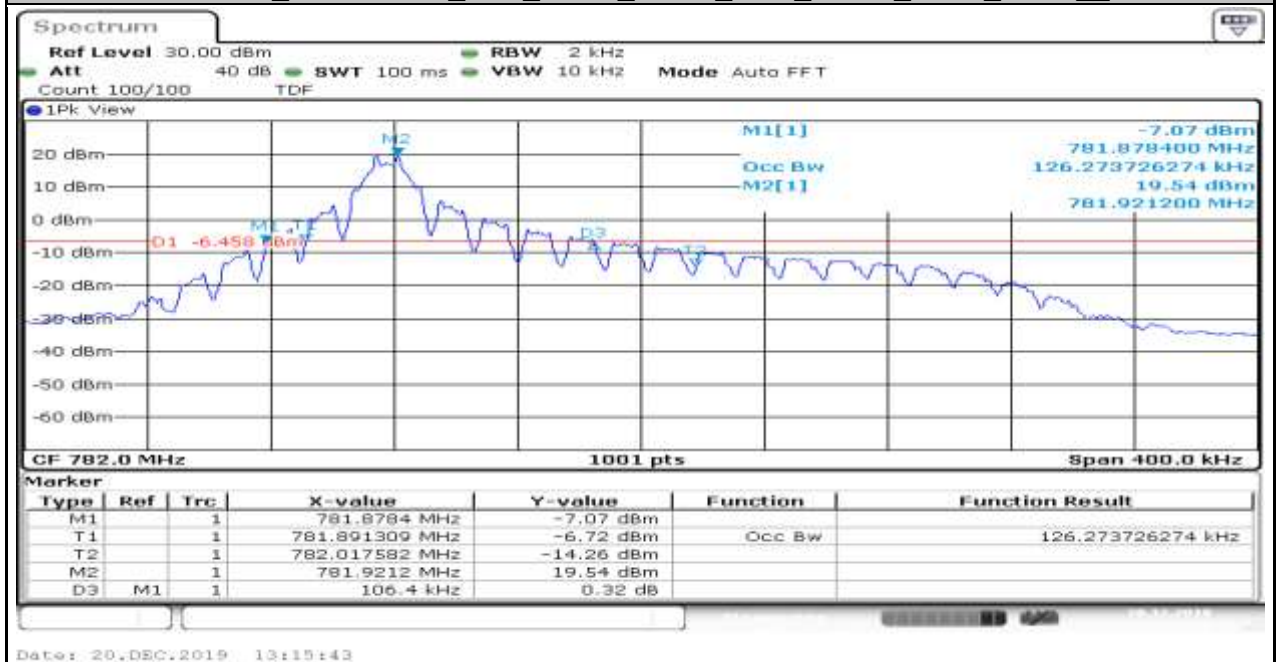


Band13_Stand-Alone_NaN_BPSK_23230_1@0_3.75kHz_0.032_PASS__

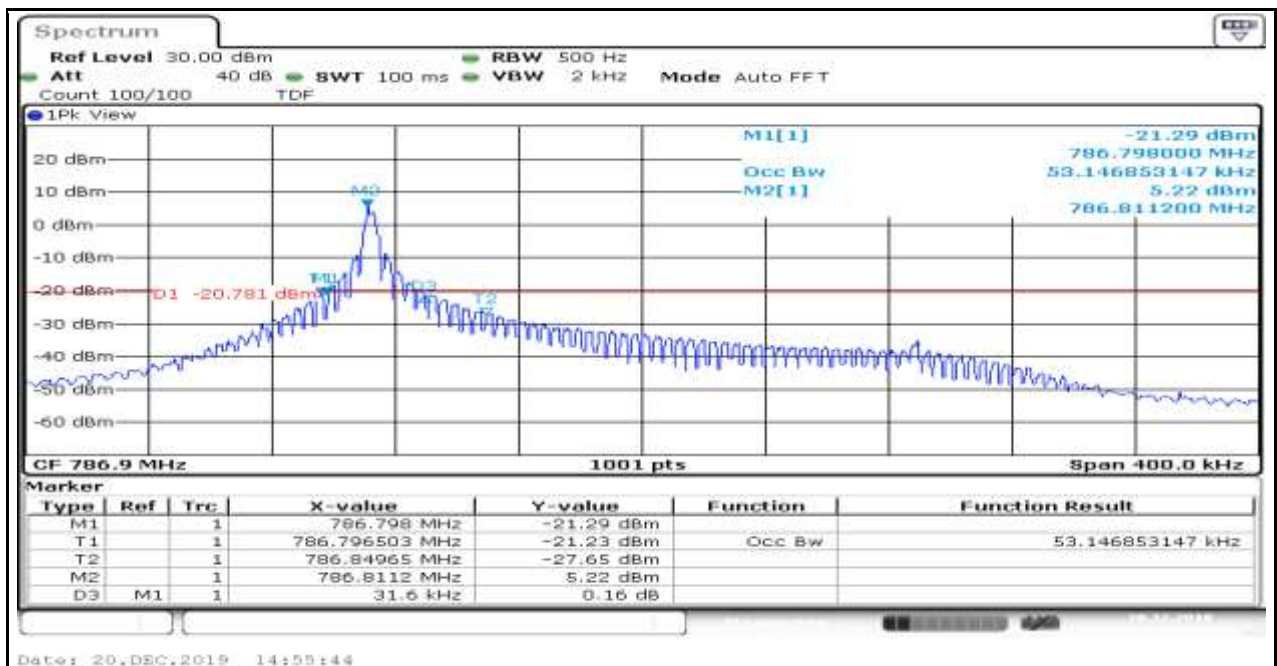
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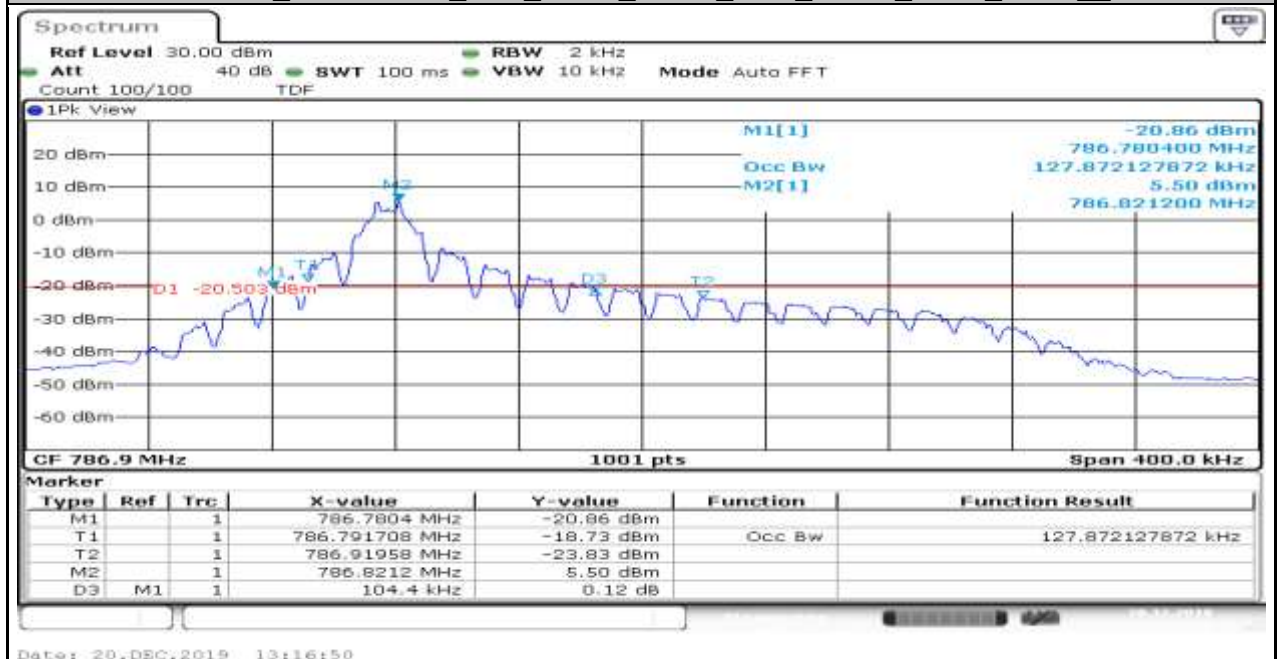
Band13_Stand-Alone_NaN_BPSK_23230_1@0_15kHz_0.106_PASS__



Band13_Stand-Alone_NaN_BPSK_23279_1@0_3.75kHz_0.032_PASS__



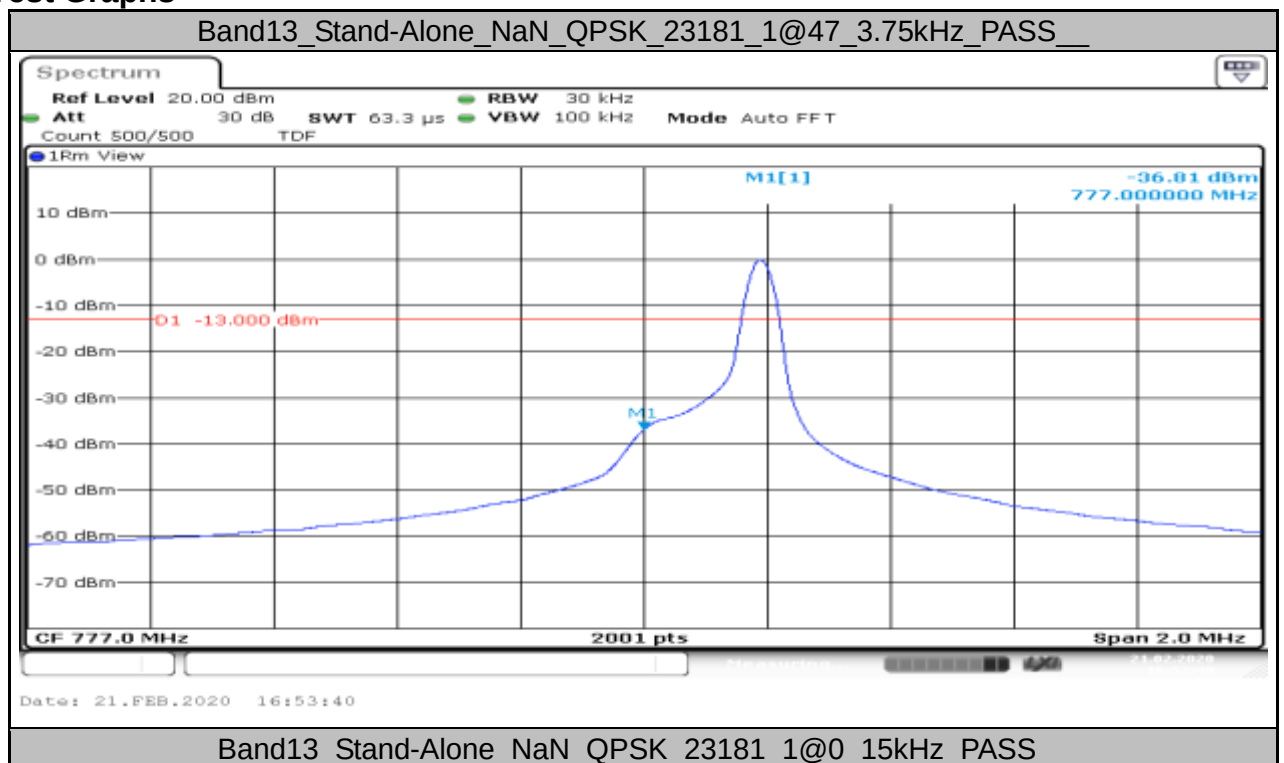
Band13_Stand-Alone_NaN_BPSK_23279_1@0_15kHz_0.104_PASS

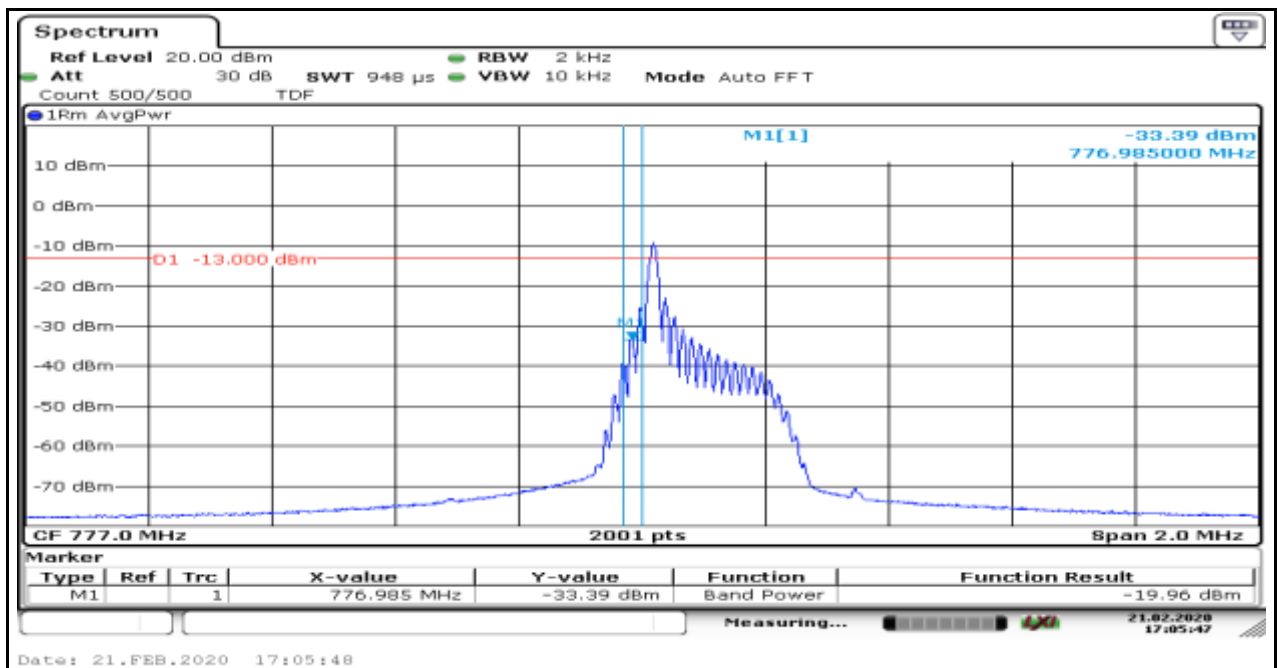


Appendix E.4: Band Edge for NB Test Result

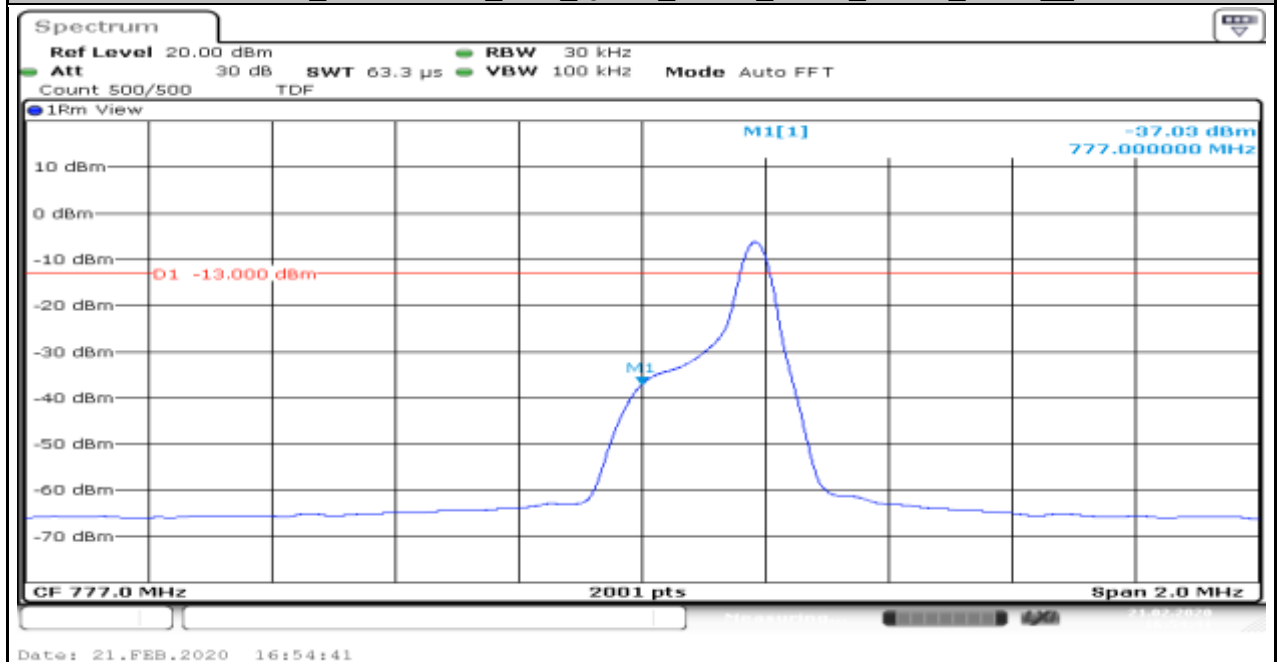
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Result (dBm)	Verdict
Band13	Stand-Alone	NaN	QPSK	23181	1@47	3.75kHz	-36.81	PASS
Band13	Stand-Alone	NaN	QPSK	23181	1@0	15kHz	-19.96	PASS
Band13	Stand-Alone	NaN	QPSK	23181	1@11	15kHz	-37.03	PASS
Band13	Stand-Alone	NaN	QPSK	23181	12@0	15kHz	-28.44	PASS
Band13	Stand-Alone	NaN	QPSK	23181	1@0	3.75kHz	-22.74	PASS
Band13	Stand-Alone	NaN	QPSK	23279	12@0	15kHz	-20.51	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@0	3.75kHz	-31.56	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@47	3.75kHz	-19.62	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@11	15kHz	-18.15	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@0	15kHz	-28.49	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@0	3.75kHz	-21.56	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@47	3.75kHz	-35.80	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@0	15kHz	-18.05	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@11	15kHz	-31.93	PASS
Band13	Stand-Alone	NaN	BPSK	23279	1@11	15kHz	-16.62	PASS
Band13	Stand-Alone	NaN	BPSK	23279	1@0	3.75kHz	-30.11	PASS
Band13	Stand-Alone	NaN	BPSK	23279	1@47	3.75kHz	-18.52	PASS
Band13	Stand-Alone	NaN	BPSK	23279	1@0	15kHz	-25.92	PASS

Test Graphs

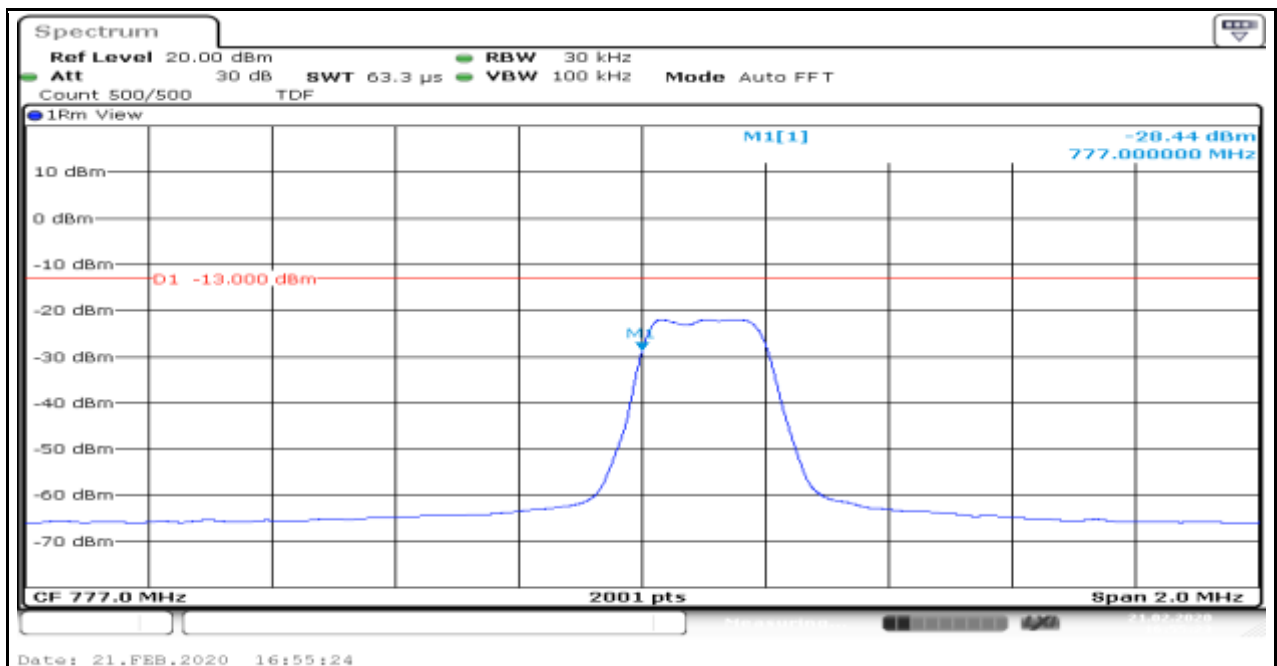




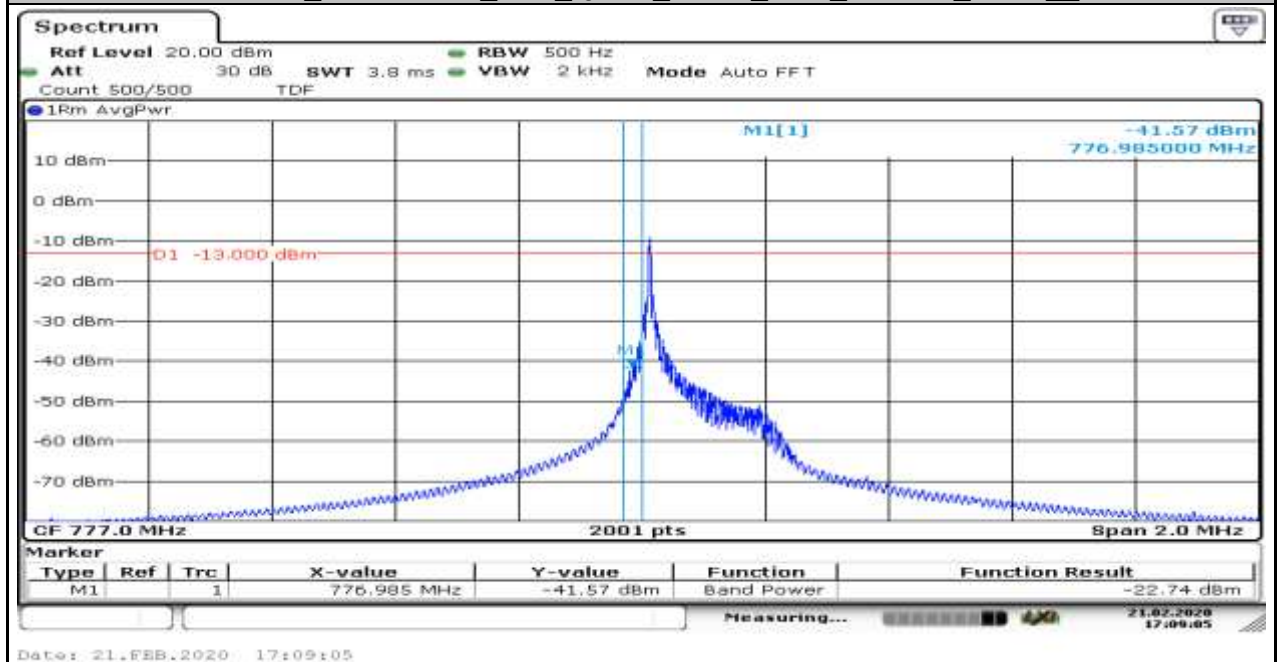
Band13_Stand-Alone_NaN_QPSK_23181_1@11_15kHz_PASS



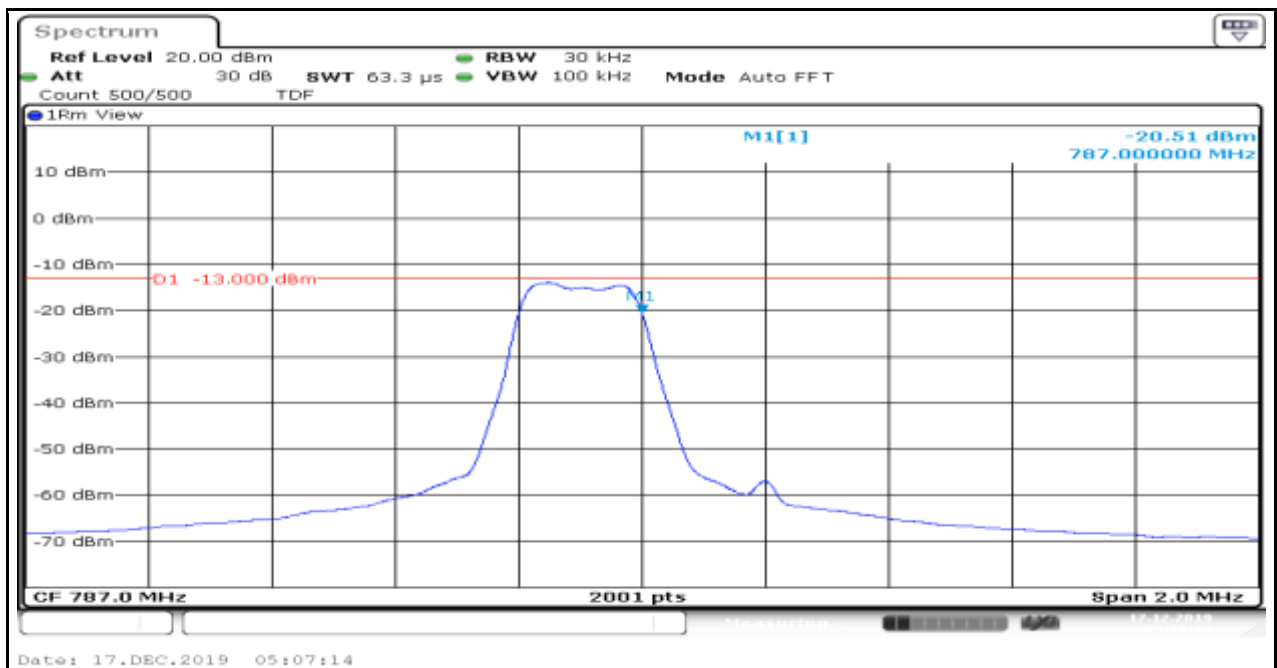
Band13_Stand-Alone_NaN_QPSK_23181_12@0_15kHz_PASS



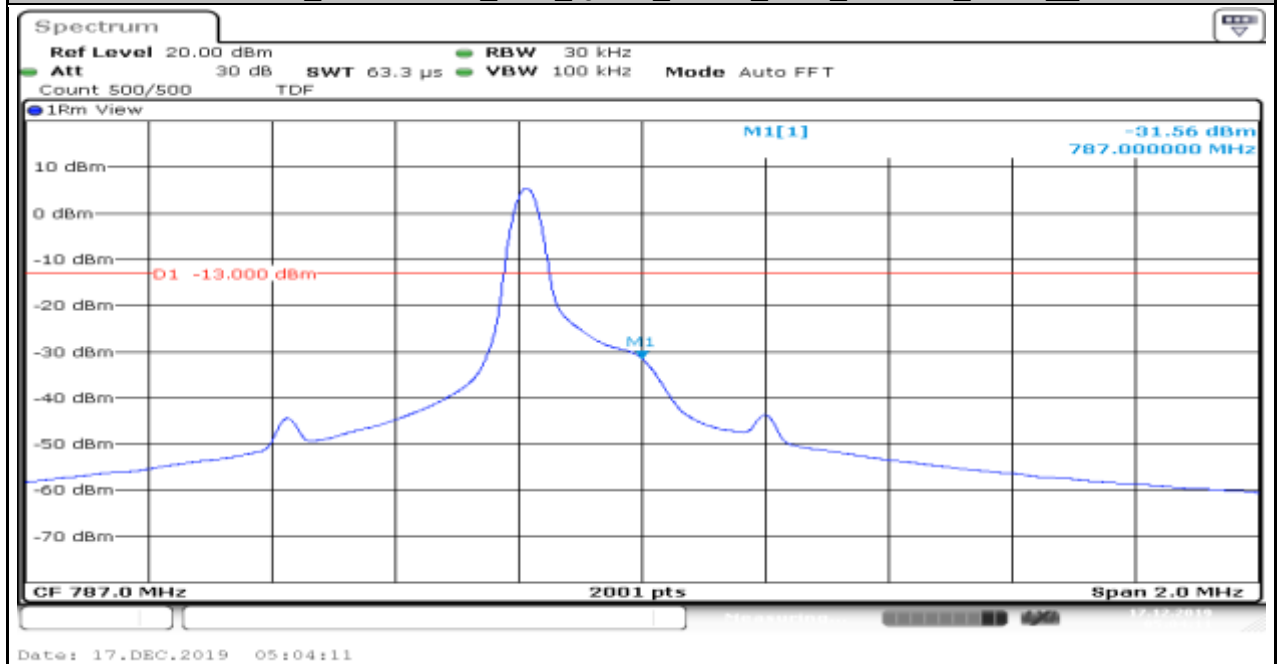
Band13_Stand-Alone_Na_N_QPSK_23181_1@0_3.75kHz_PASS__



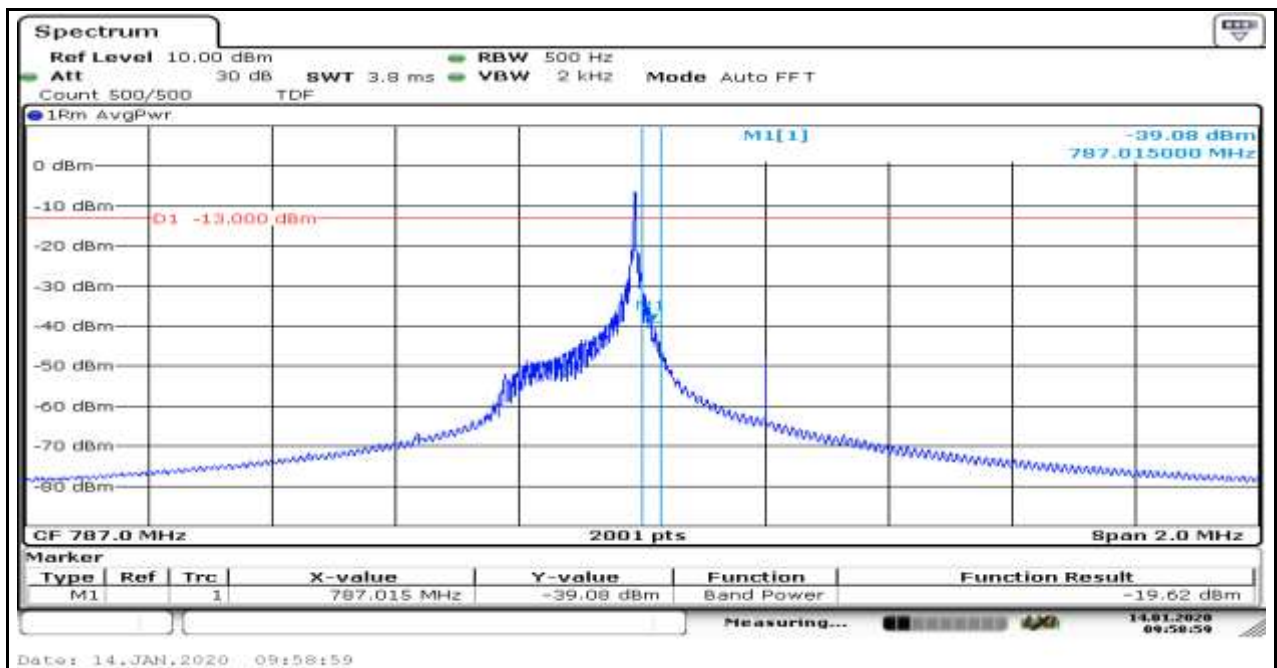
Band13_Stand-Alone_Na_N_QPSK_23279_12@0_15kHz_PASS__



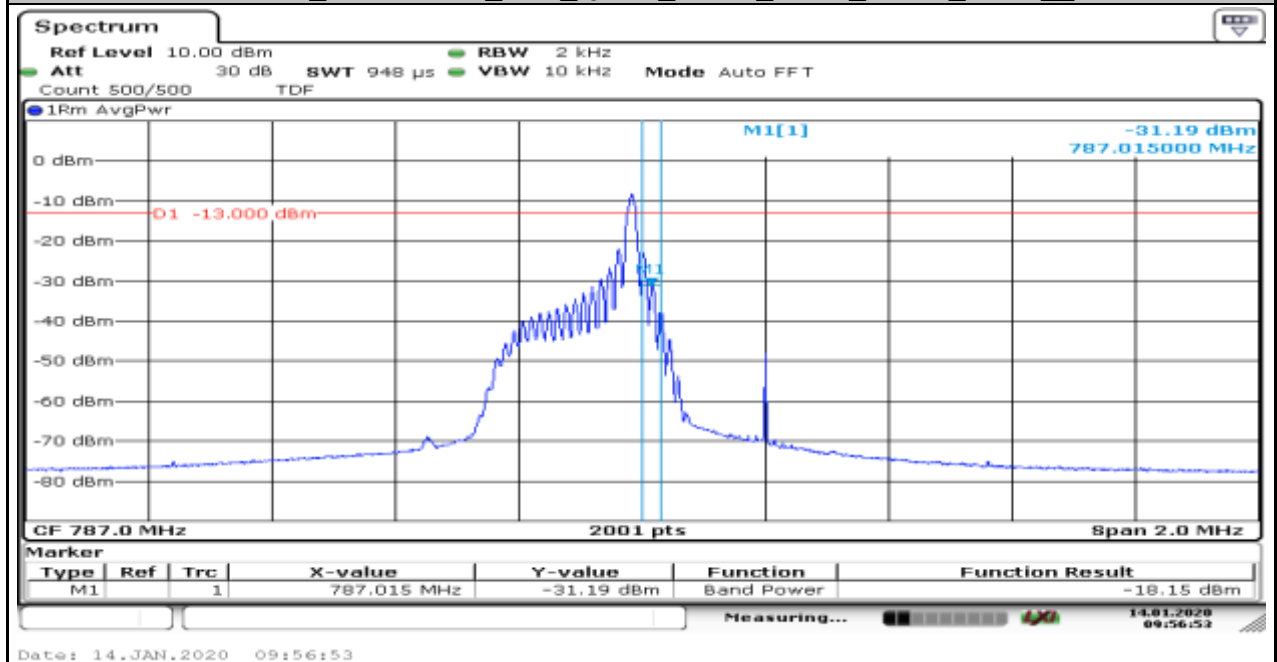
Band13_Stand-Alone_NaN_QPSK_23279_1@0_3.75kHz_PASS__



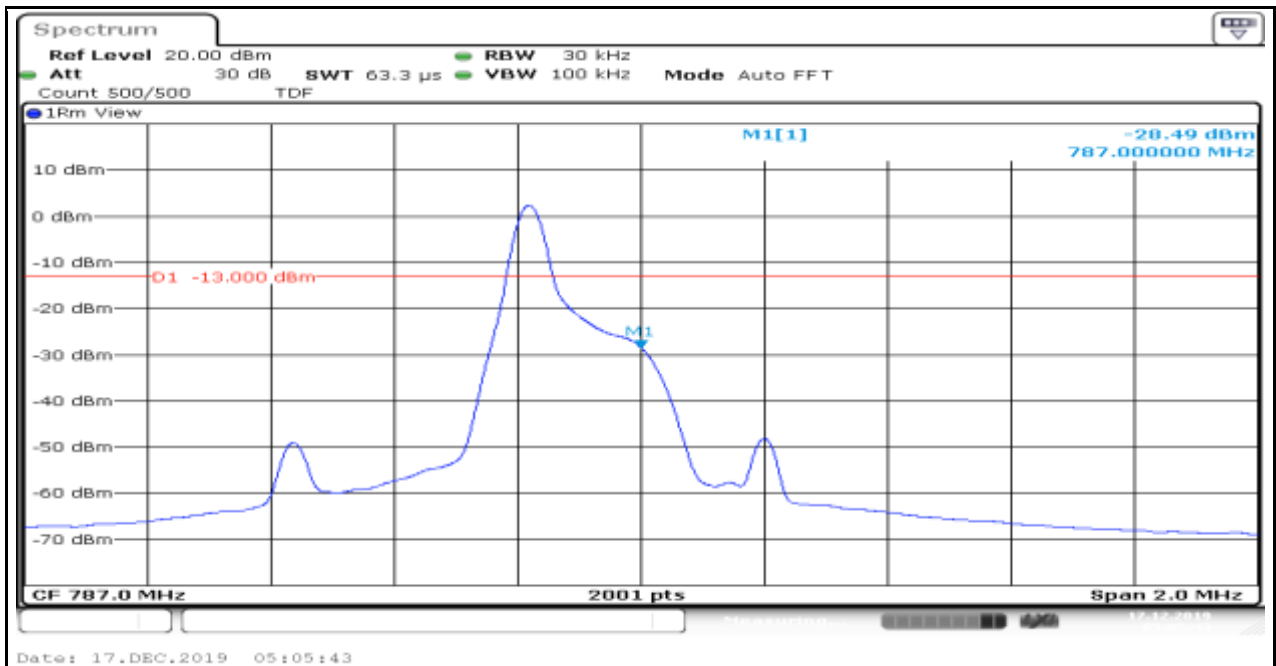
Band13_Stand-Alone_NaN_QPSK_23279_1@47_3.75kHz_PASS__



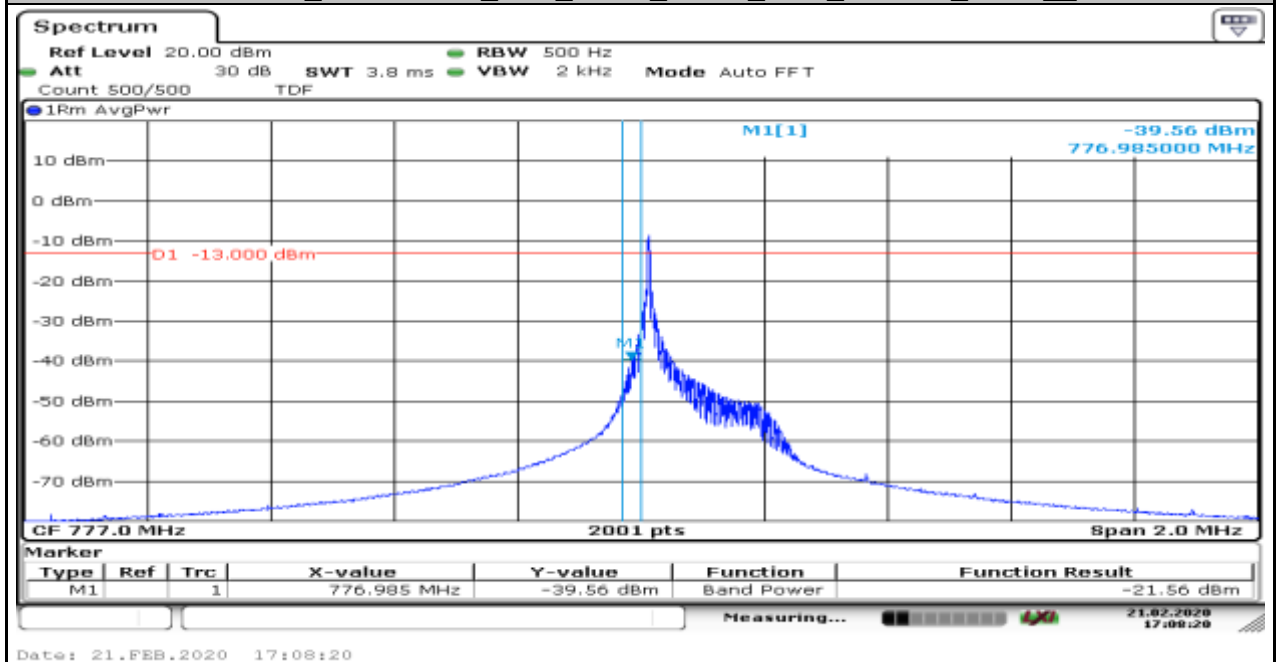
Band13_Stand-Alone_NaN_QPSK_23279_1@11_15kHz_PASS



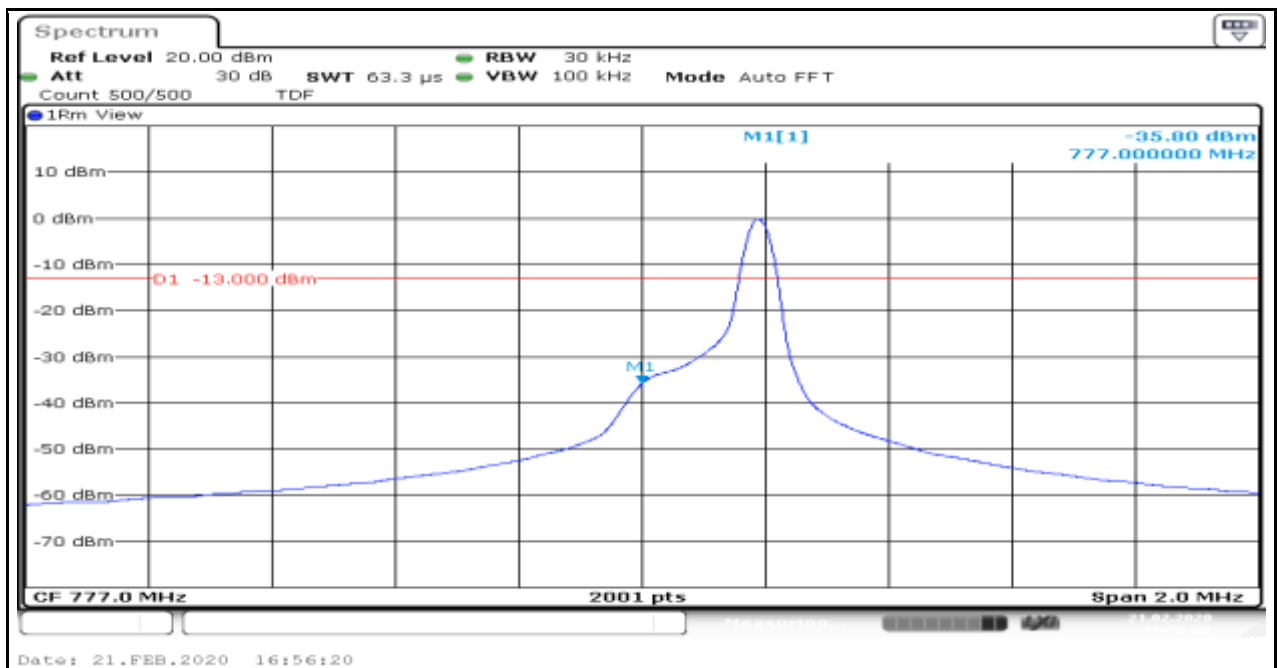
Band13_Stand-Alone_NaN_QPSK_23279_1@0_15kHz_PASS



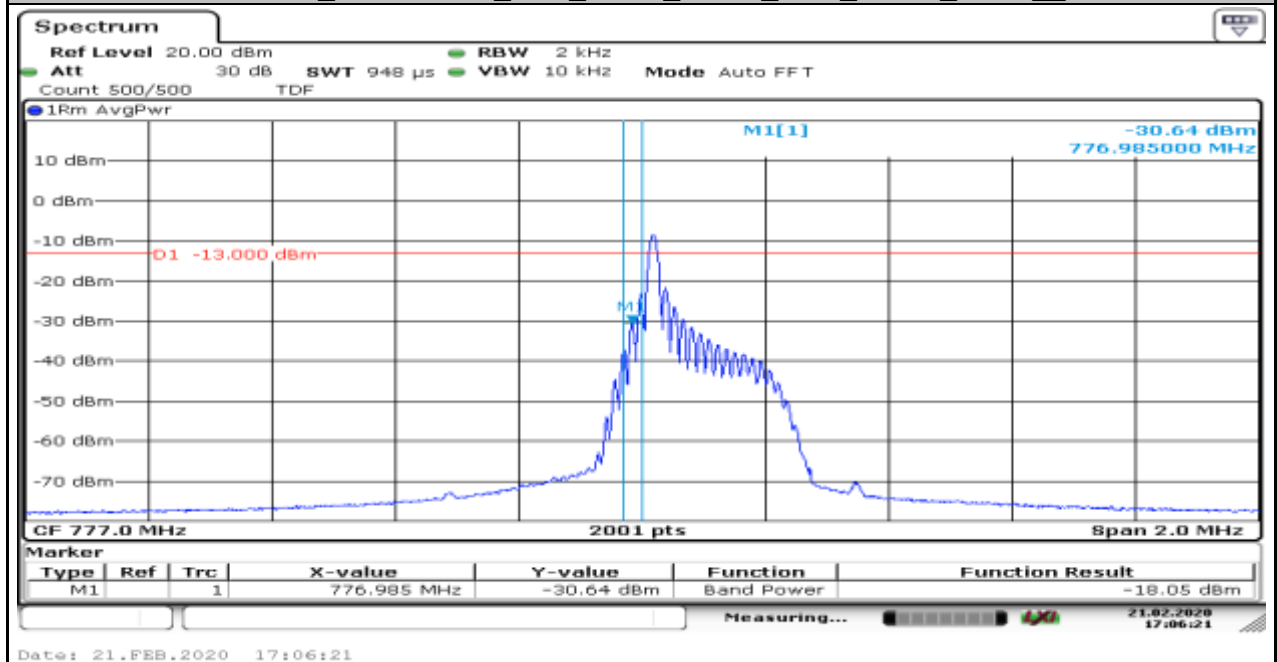
Band13_Stand-Alone_NaN_BPSK_23181_1@0_3.75kHz_PASS__



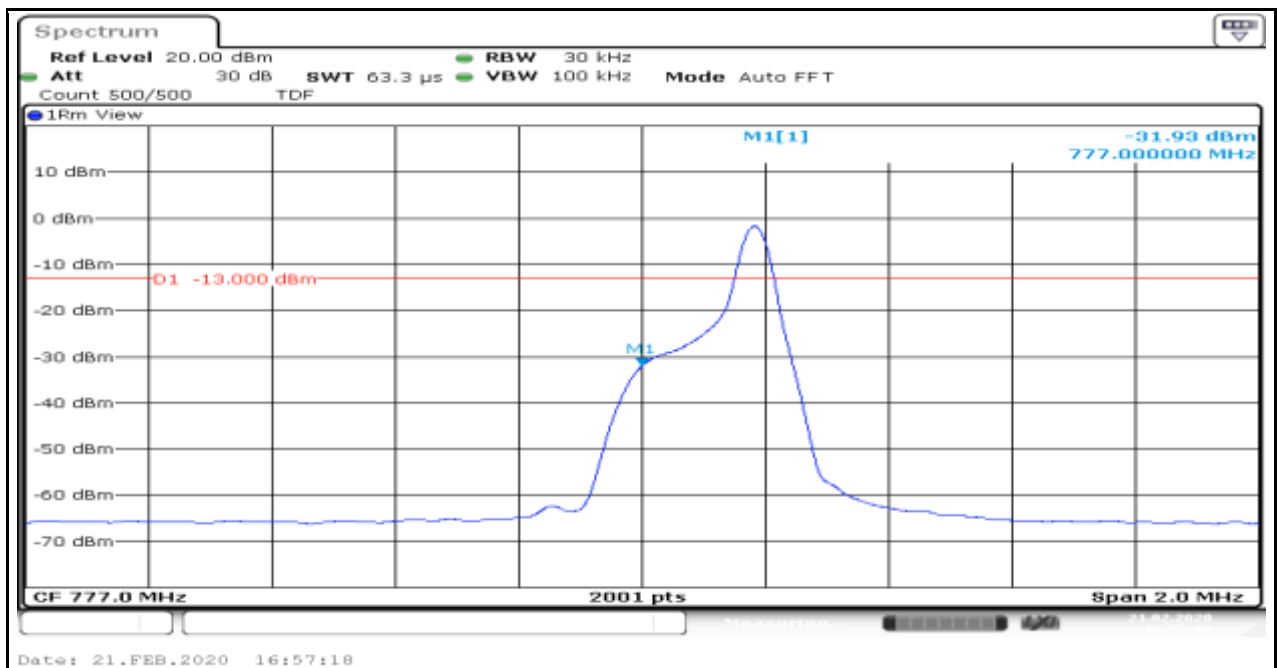
Band13_Stand-Alone_NaN_BPSK_23181_1@47_3.75kHz_PASS__



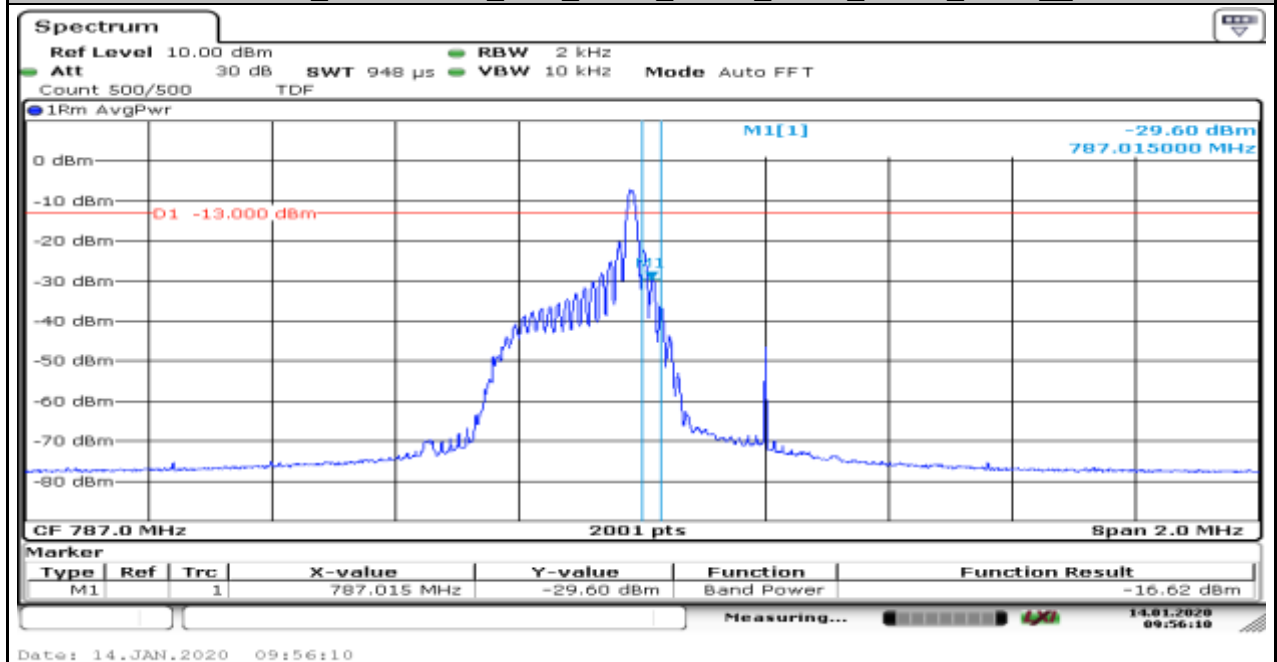
Band13_Stand-Alone_NaN_BPSK_23181_1@0_15kHz_PASS_



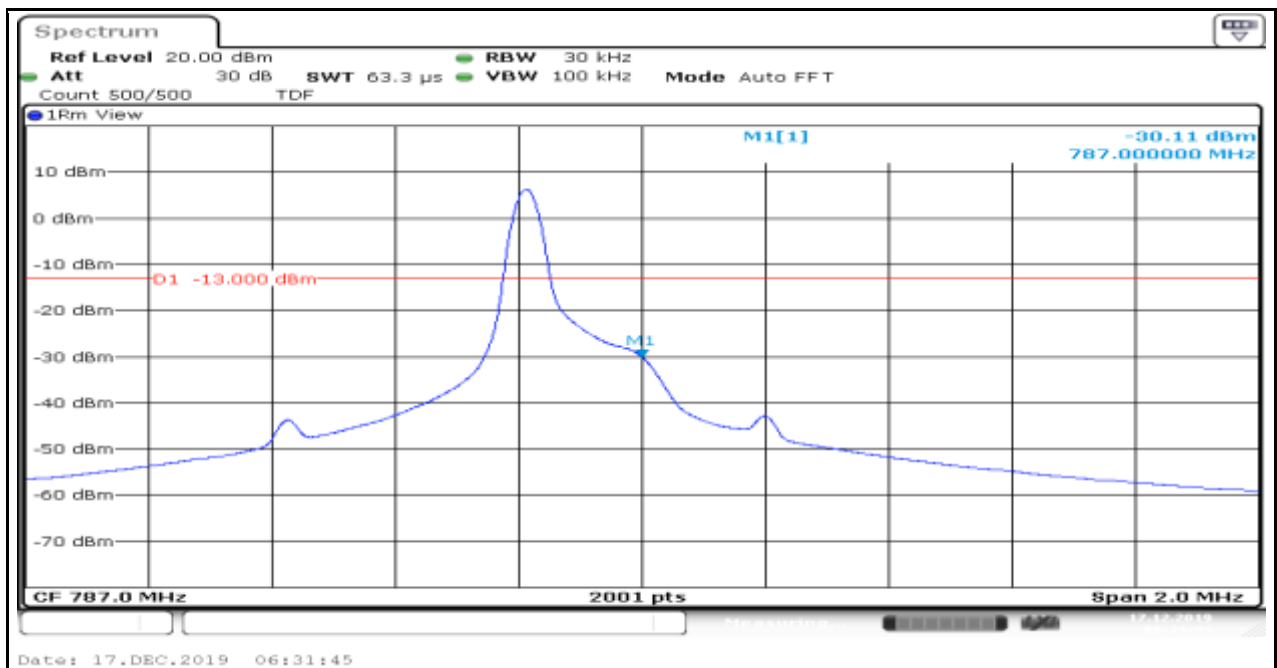
Band13_Stand-Alone_NaN_BPSK_23181_1@11_15kHz_PASS_



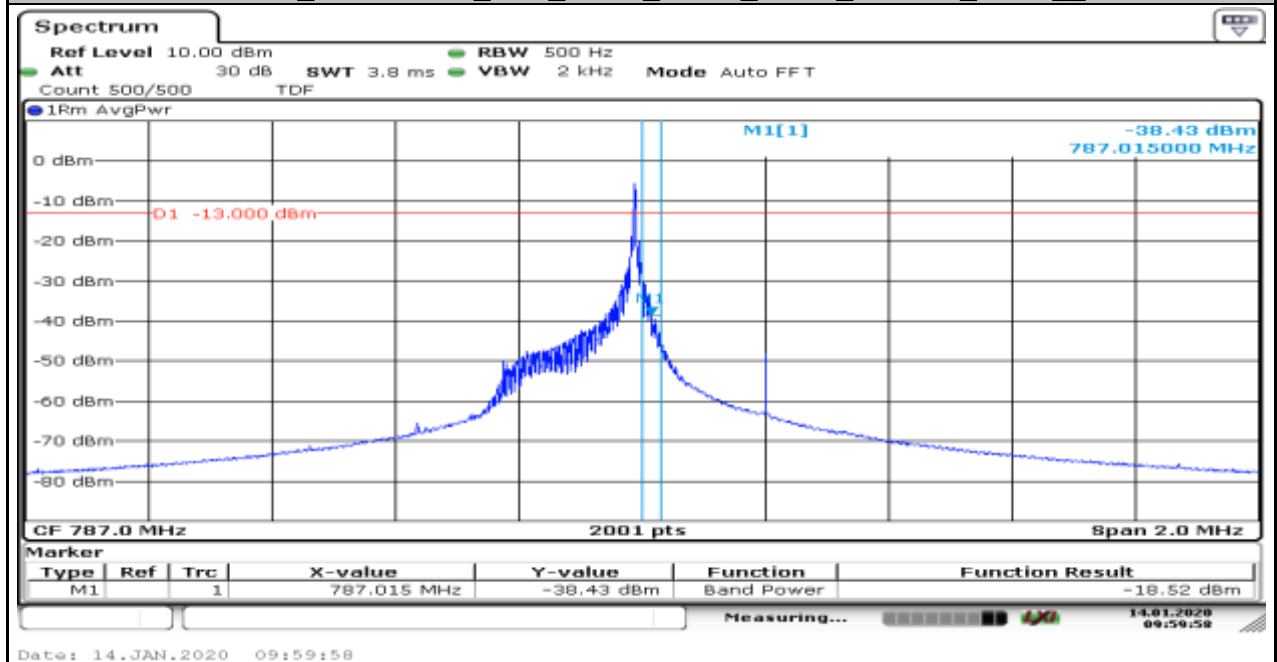
Band13_Stand-Alone_NaN_BPSK_23279_1@11_15kHz_PASS



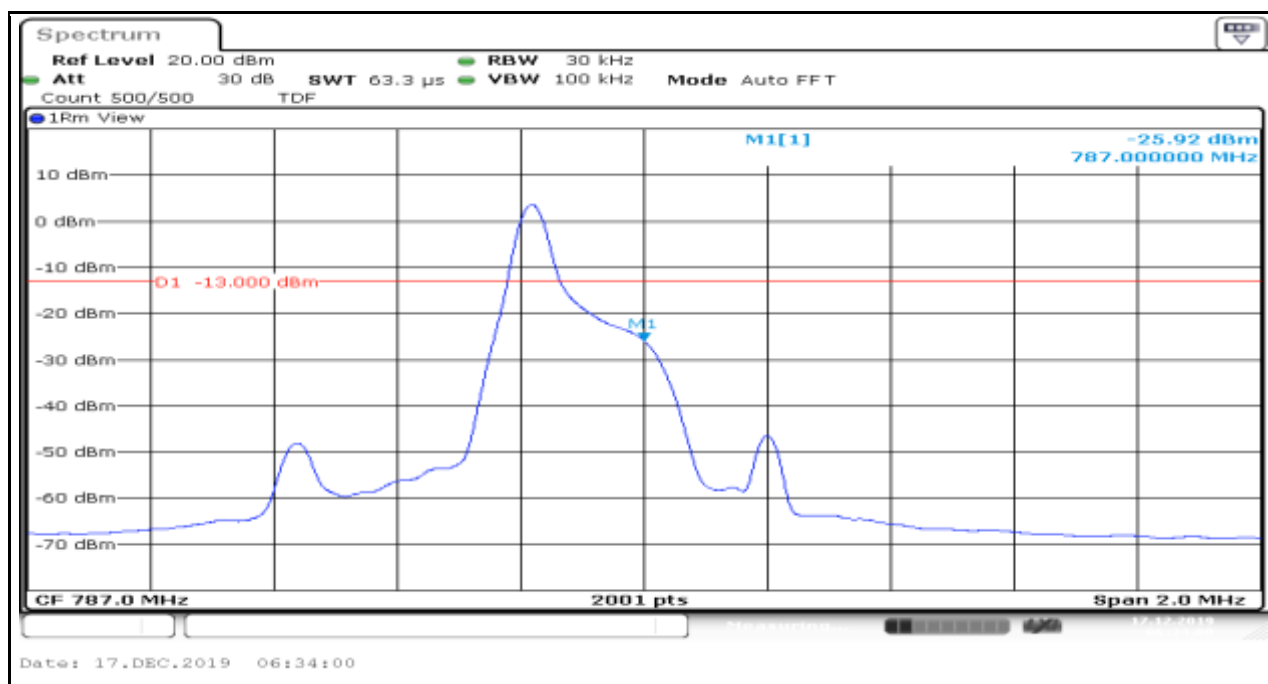
Band13_Stand-Alone_NaN_BPSK_23279_1@0_3.75kHz_PASS



Band13_Stand-Alone_NaN_BPSK_23279_1@47_3.75kHz_PASS__



Band13_Stand-Alone_NaN_BPSK_23279_1@0_15kHz_PASS__



Appendix E.5: Conducted Spurious Emission for NB

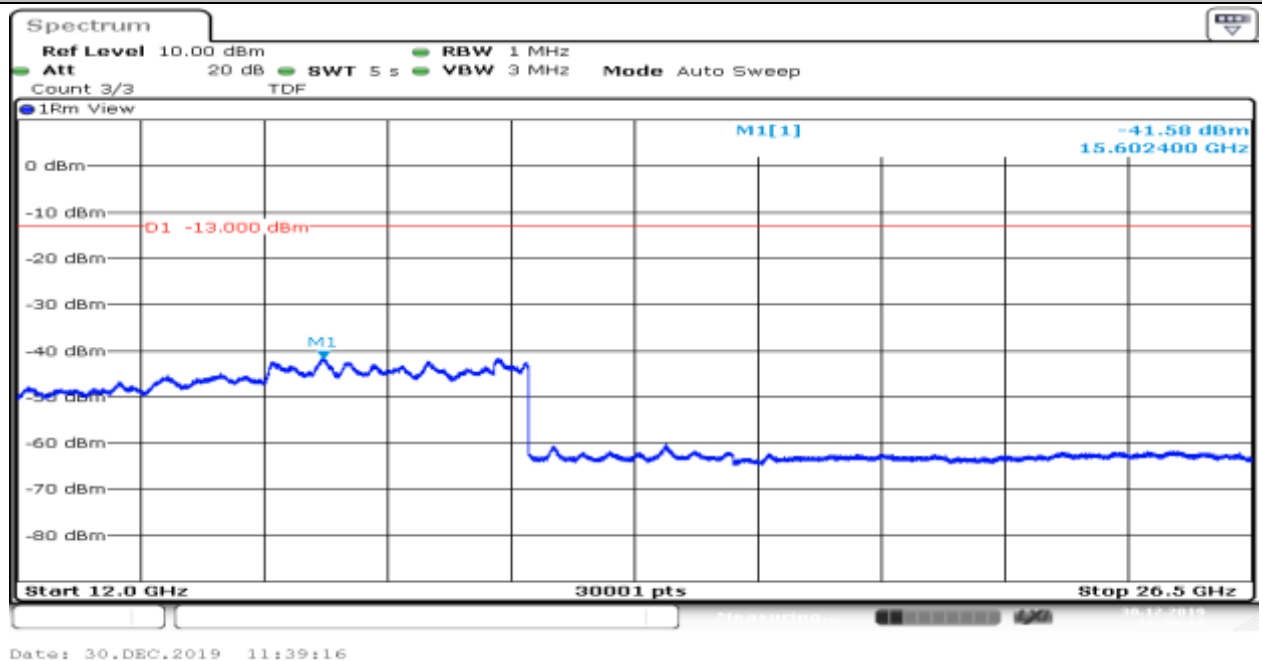
Test Result

Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	StartFreq (MHz)	StopFreq (MHz)	Result (dBm)	Limit (dBm)	Verdict
Band13	Stand-Alone	NaN	QPSK	23181	1@47	3.75kHz	12000	26500	12000~26500MHz@-41.58dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23181	1@0	3.75kHz	5000	12000	5000~12000MHz@-47.58dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23181	1@0	3.75kHz	1000	5000	1000~5000MHz@-37.93dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23181	1@0	3.75kHz	12000	26500	12000~26500MHz@-41.5dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23181	1@47	3.75kHz	30	1000	30~1000MHz@-35.01dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23181	1@47	3.75kHz	1000	5000	1000~5000MHz@-37.62dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23181	1@47	3.75kHz	5000	12000	5000~12000MHz@-47.38dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23181	1@0	3.75kHz	30	1000	30~1000MHz@-35.53dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23181	12@0	15kHz	30	1000	30~1000MHz@-36.11dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23181	12@0	15kHz	12000	26500	12000~26500MHz@-41.57dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23181	12@0	15kHz	5000	12000	5000~12000MHz@-47.55dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23181	12@0	15kHz	1000	5000	1000~5000MHz@-37.78dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23230	12@0	15kHz	5000	12000	5000~12000MHz@-47.46dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23230	12@0	15kHz	1000	5000	1000~5000MHz@-37.84dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23230	12@0	15kHz	30	1000	30~1000MHz@-35.43dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23230	12@0	15kHz	12000	26500	12000~26500MHz@-41.51dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	30	1000	30~1000MHz@-35.93dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	1000	5000	1000~5000MHz@-37.53dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	5000	12000	5000~12000MHz@-47.51dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	12000	26500	12000~26500MHz@-41.5dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	30	1000	30~1000MHz@-35.73dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	1000	5000	1000~5000MHz@-37.7dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	5000	12000	5000~12000MHz@-47.57dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	12000	26500	12000~26500MHz@-41.56dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@47	3.75kHz	5000	12000	5000~12000MHz@-47.43dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@0	3.75kHz	30	1000	30~1000MHz@-36.13dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23279	12@0	15kHz	30	1000	30~1000MHz@-36.25dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23279	12@0	15kHz	1000	5000	1000~5000MHz@-37.91dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@47	3.75kHz	12000	26500	12000~26500MHz@-41.48dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23279	12@0	15kHz	12000	26500	12000~26500MHz@-41.39dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@47	3.75kHz	1000	5000	1000~5000MHz@-37.86dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@47	3.75kHz	30	1000	30~1000MHz@-36.09dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@0	3.75kHz	12000	26500	12000~26500MHz@-41.55dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@0	3.75kHz	5000	12000	5000~12000MHz@-47.37dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23279	1@0	3.75kHz	1000	5000	1000~5000MHz@-37.77dBm	-13	PASS
Band13	Stand-Alone	NaN	QPSK	23279	12@0	15kHz	5000	12000	5000~12000MHz@-47.57dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@0	15kHz	5000	12000	5000~12000MHz@-47.65dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@11	15kHz	12000	26500	12000~26500MHz@-41.51dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@11	15kHz	5000	12000	5000~12000MHz@-47.62dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@11	15kHz	1000	5000	1000~5000MHz@-37.69dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@0	15kHz	1000	5000	1000~5000MHz@-37.75dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@0	15kHz	30	1000	30~1000MHz@-35.32dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@11	15kHz	30	1000	30~1000MHz@-35.86dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23181	1@0	15kHz	12000	26500	12000~26500MHz@-41.55dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@11	15kHz	1000	5000	1000~5000MHz@-37.86dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@11	15kHz	5000	12000	5000~12000MHz@-47.21dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@11	15kHz	30	1000	30~1000MHz@-35.58dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@0	15kHz	12000	26500	12000~26500MHz@-41.36dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@0	15kHz	5000	12000	5000~12000MHz@-47.48dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@0	15kHz	1000	5000	1000~5000MHz@-37.86dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@0	15kHz	30	1000	30~1000MHz@-36.32dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23230	1@11	15kHz	12000	26500	12000~26500MHz@-41.4dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23279	1@11	15kHz	12000	26500	12000~26500MHz@-41.56dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23279	1@0	15kHz	30	1000	30~1000MHz@-36.12dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23279	1@0	15kHz	1000	5000	1000~5000MHz@-37.81dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23279	1@0	15kHz	5000	12000	5000~12000MHz@-47.5dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23279	1@0	15kHz	12000	26500	12000~26500MHz@-41.5dBm	-13	PASS
Band13	Stand-Alone	NaN	BPSK	23279	1@11	15kHz	30	1000	30~1000MHz@-35.71dBm	-13	PASS

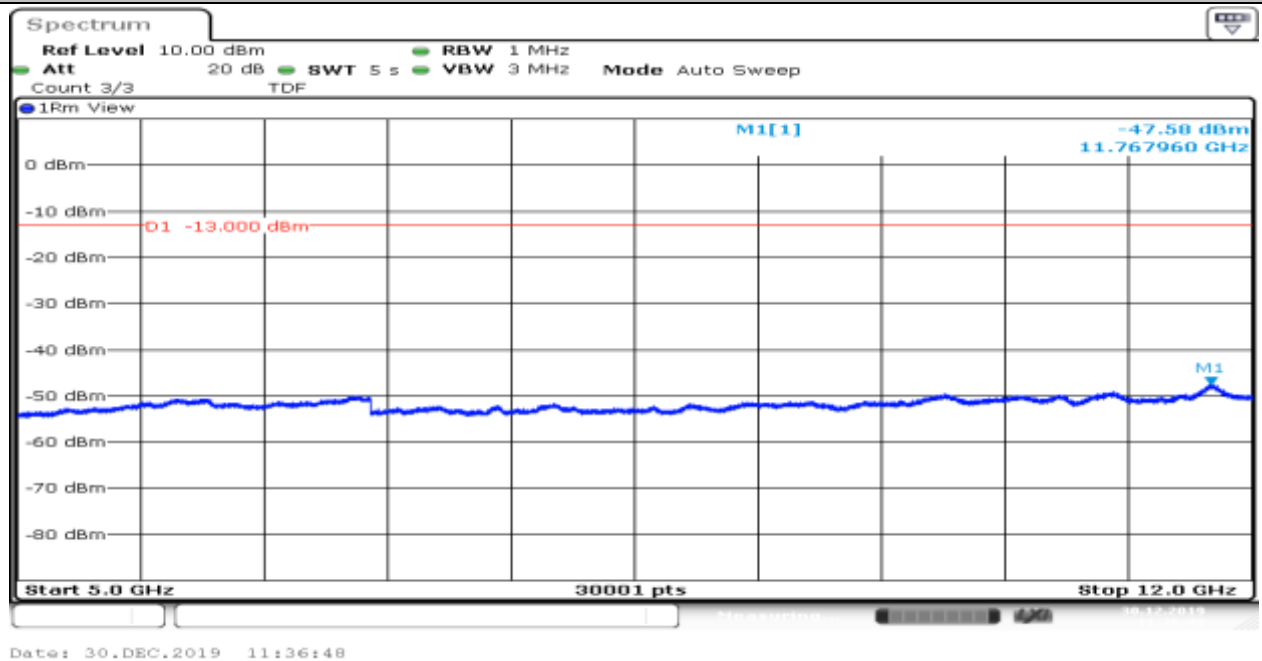
Band13	Stand-Alone	NaN	BPSK	23279	1@11	15kHz	1000	5000	1000~5000MHz@-37.84dBm	-13	PASS
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Test Graphs

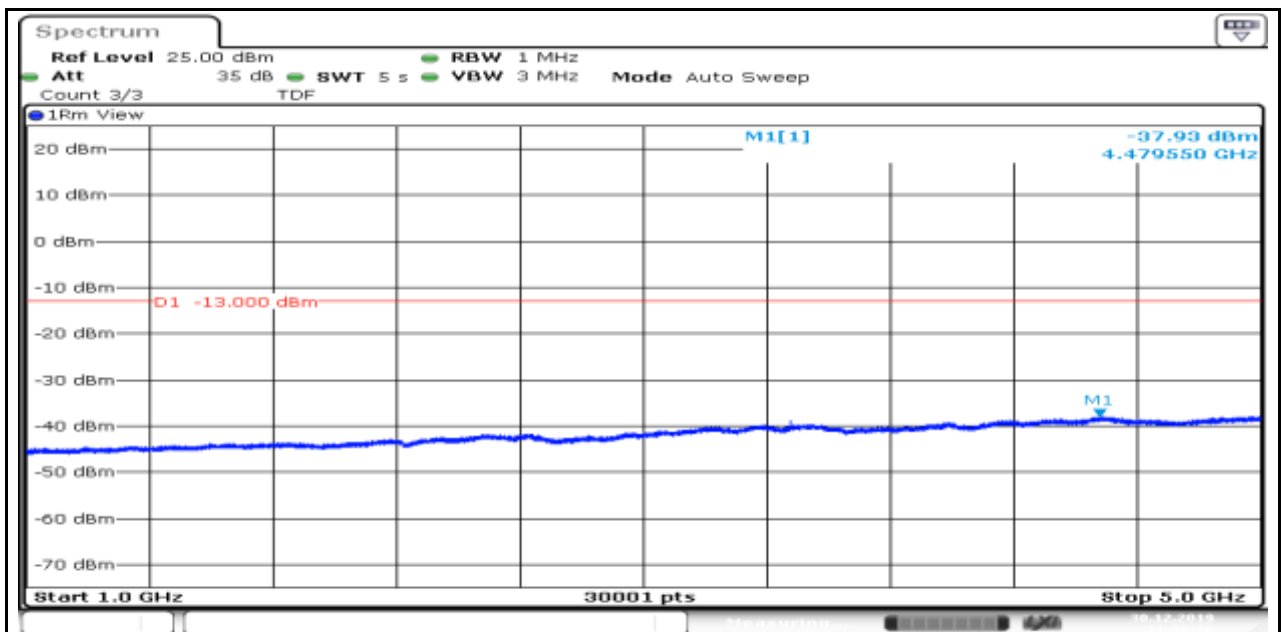
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S_



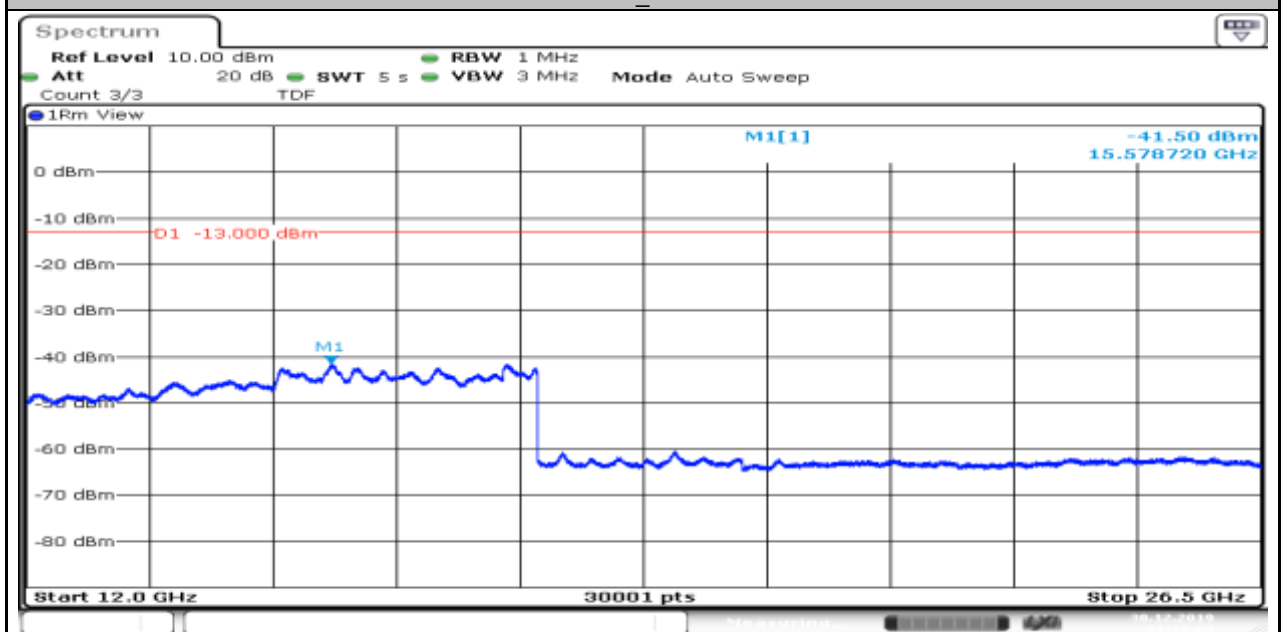
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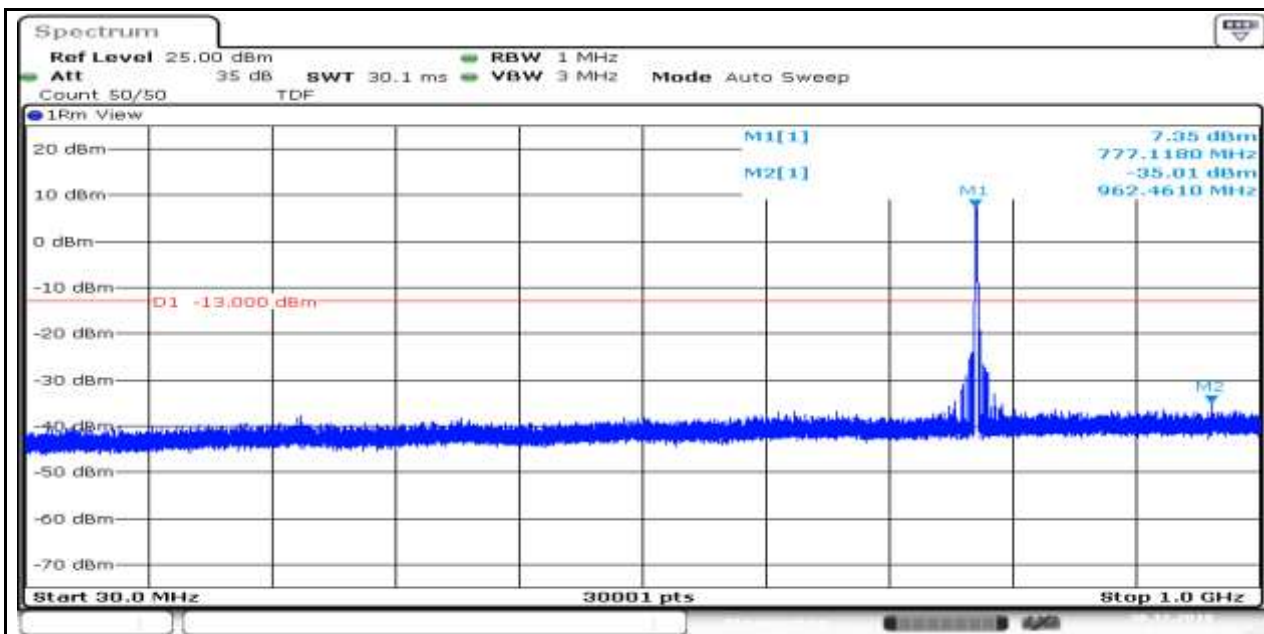
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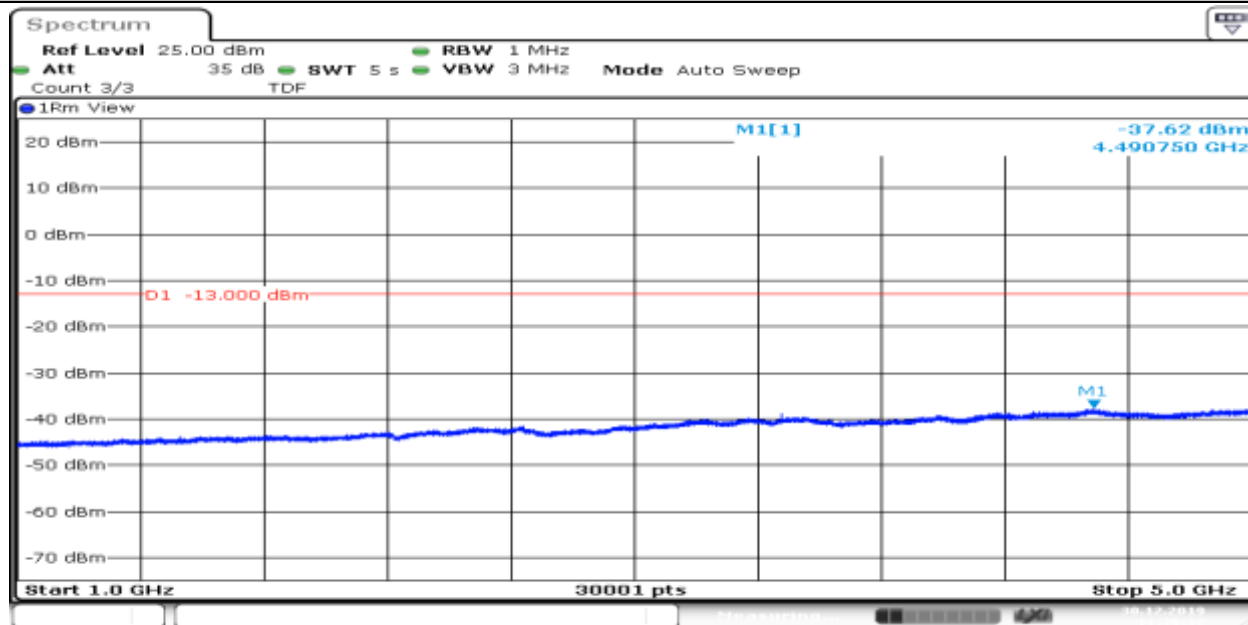


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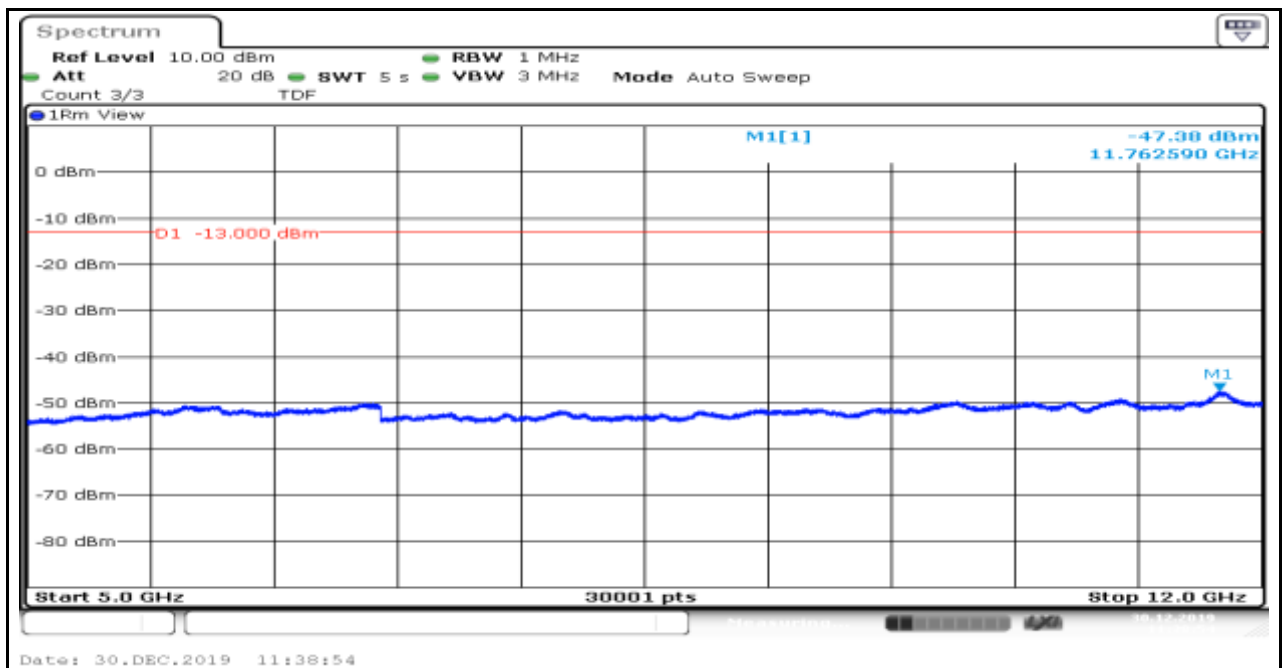
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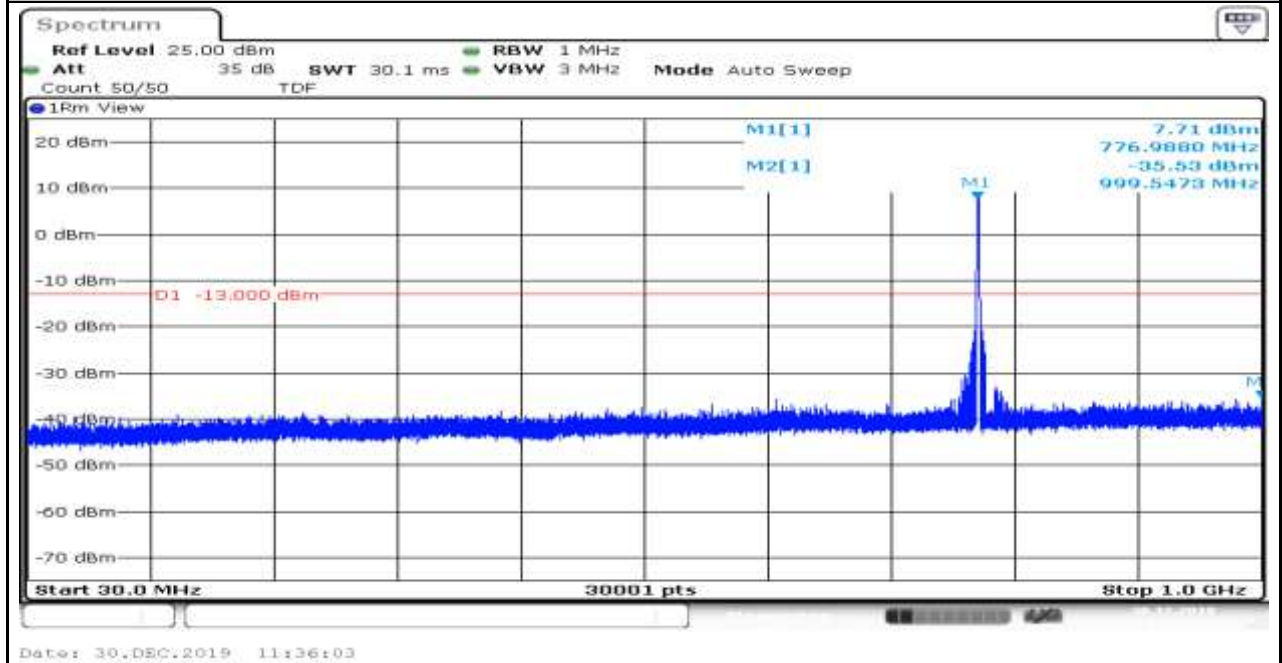


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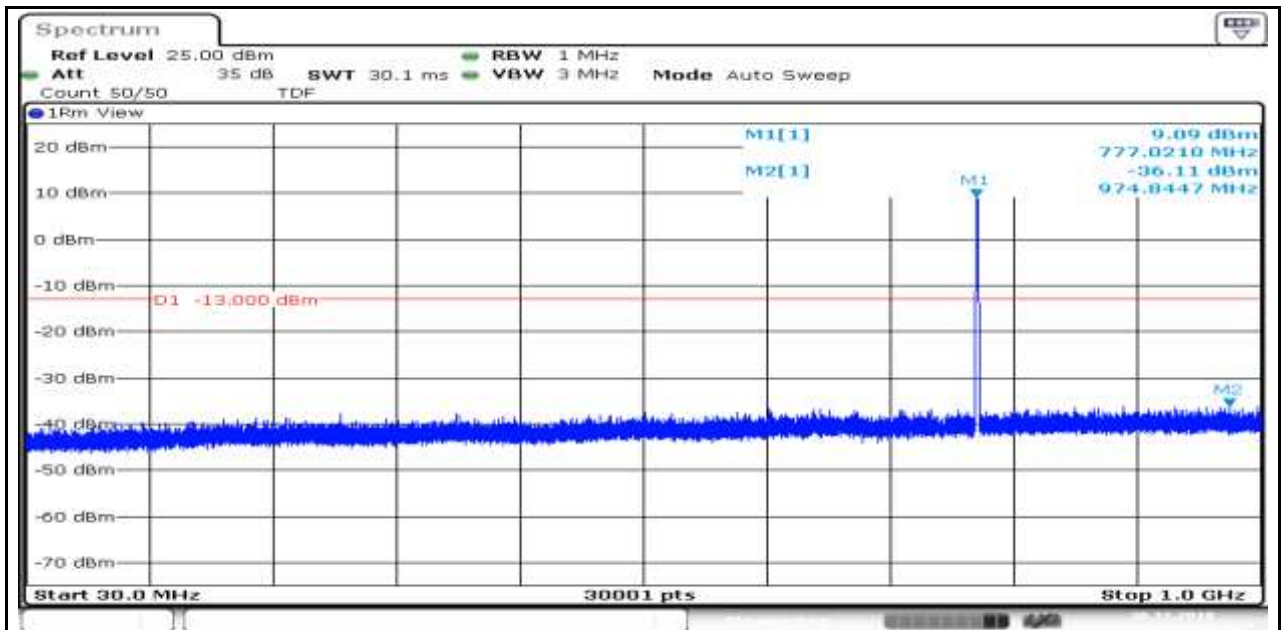
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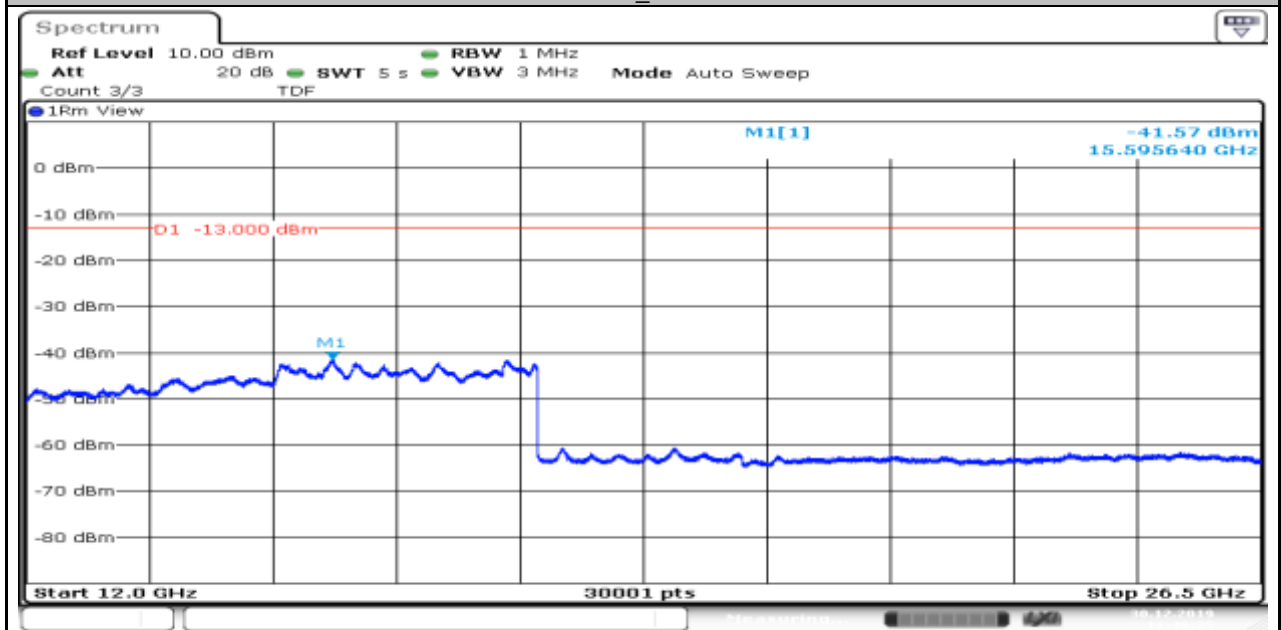
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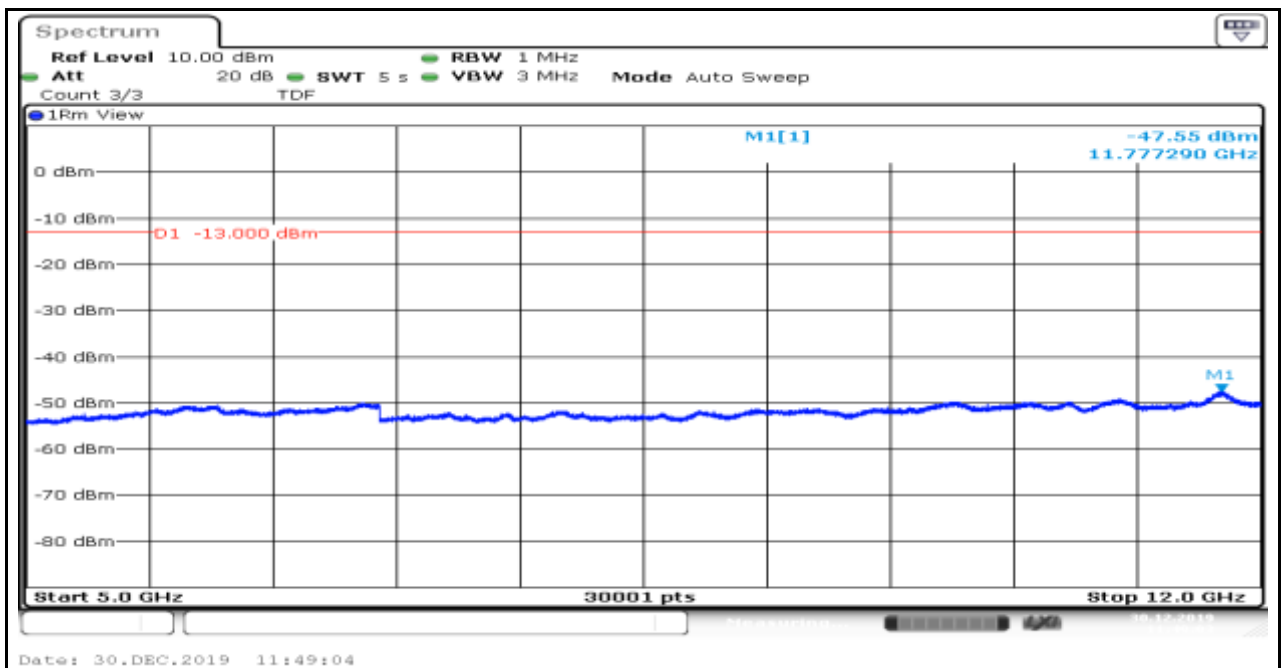
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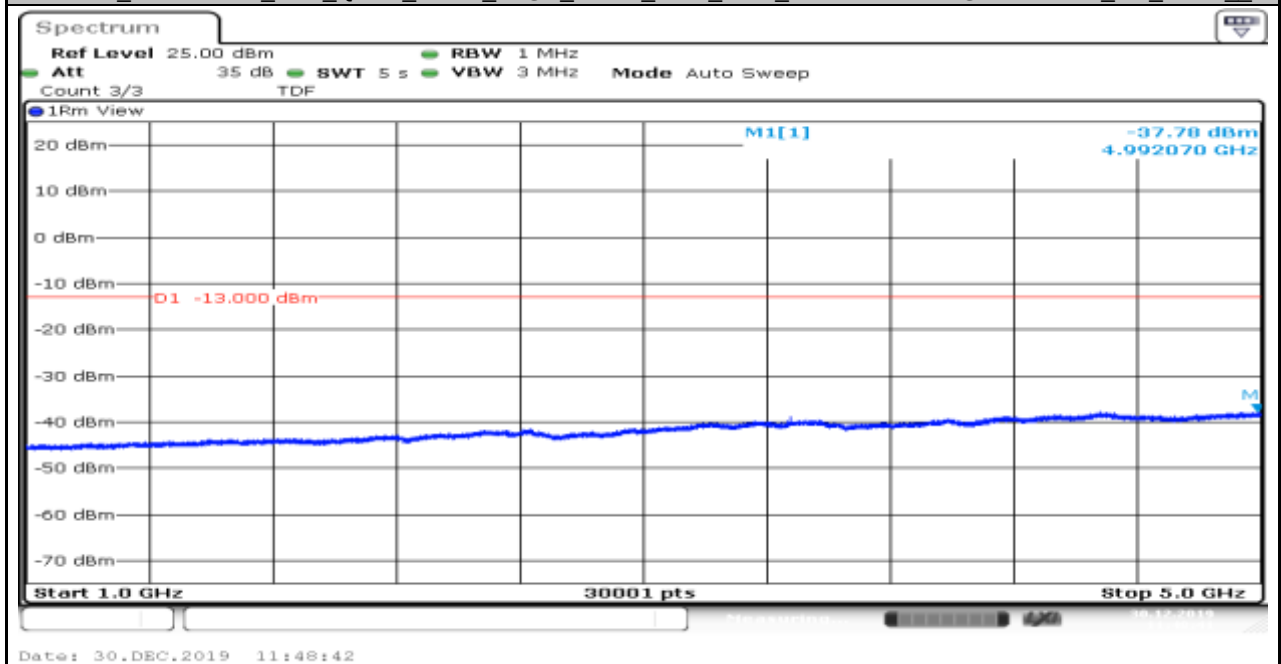
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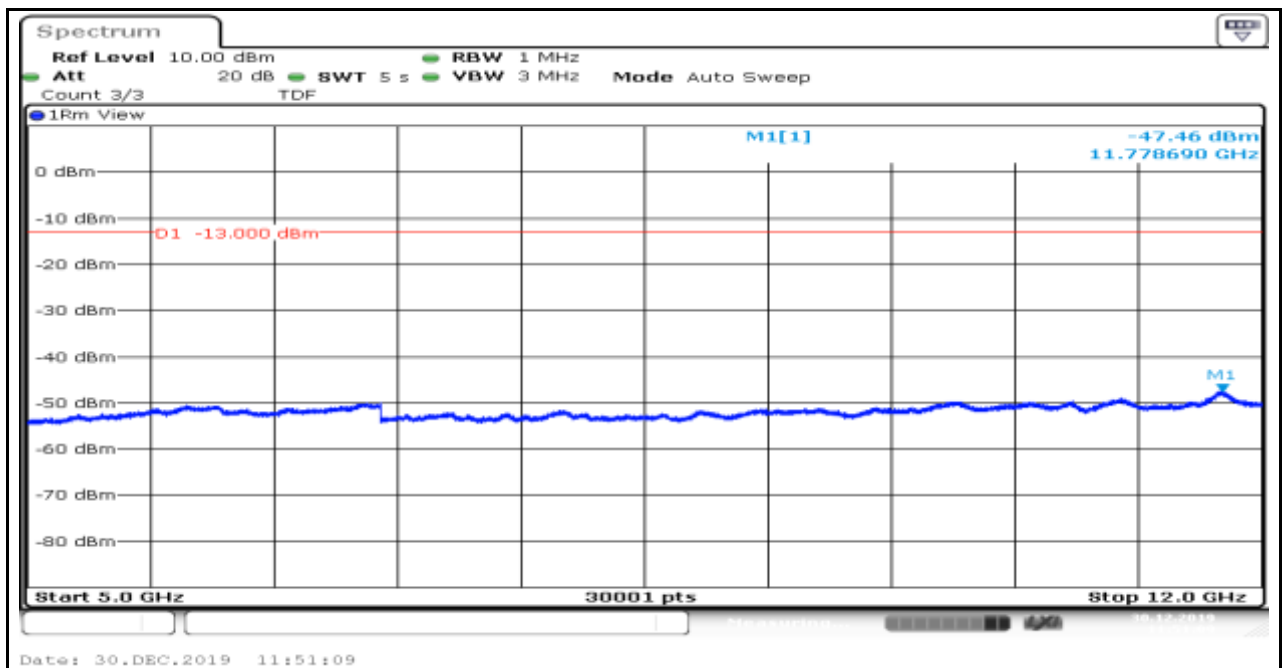
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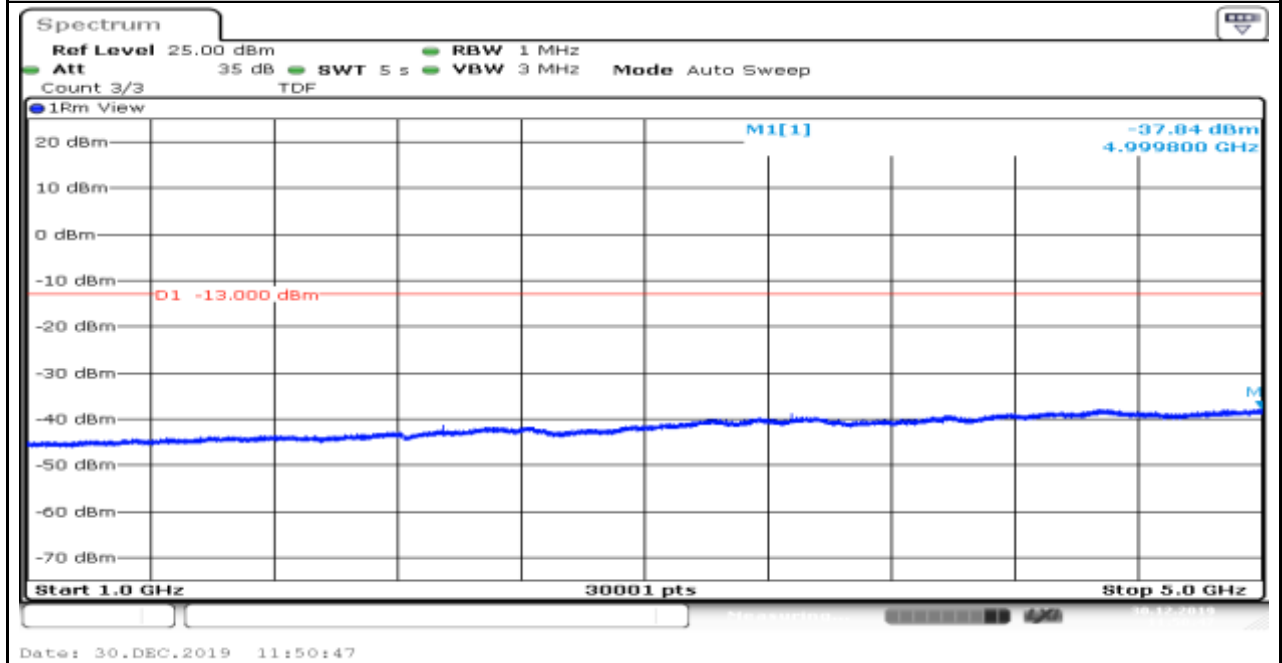
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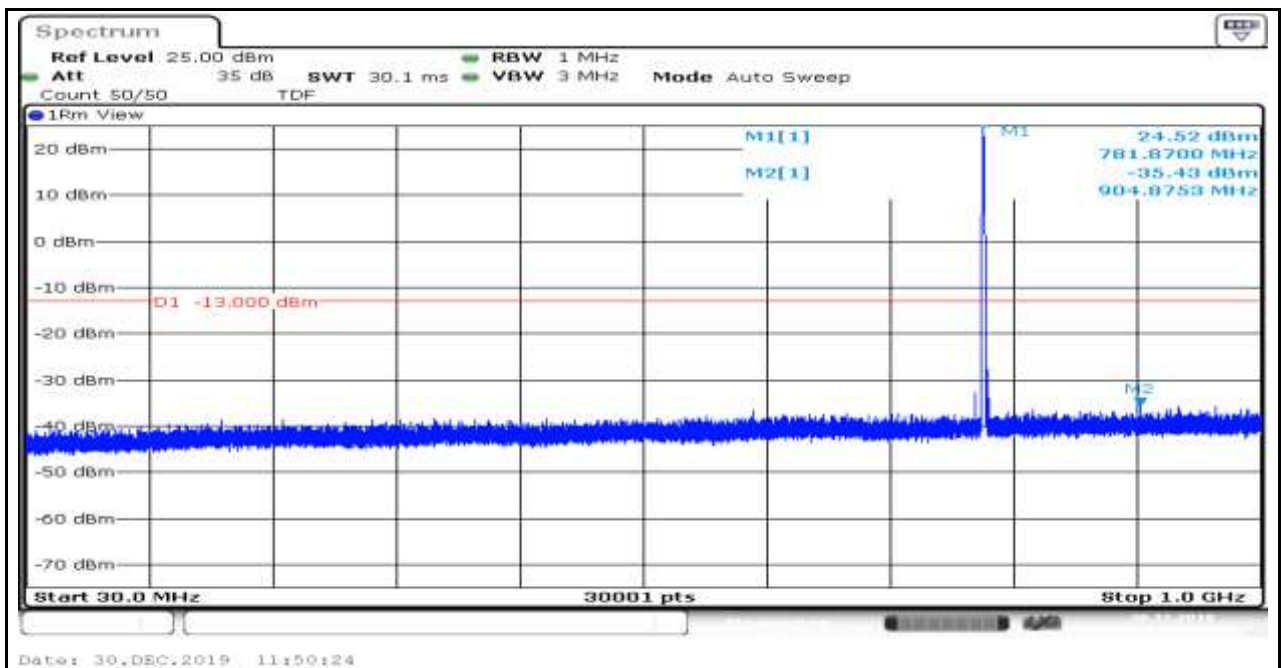
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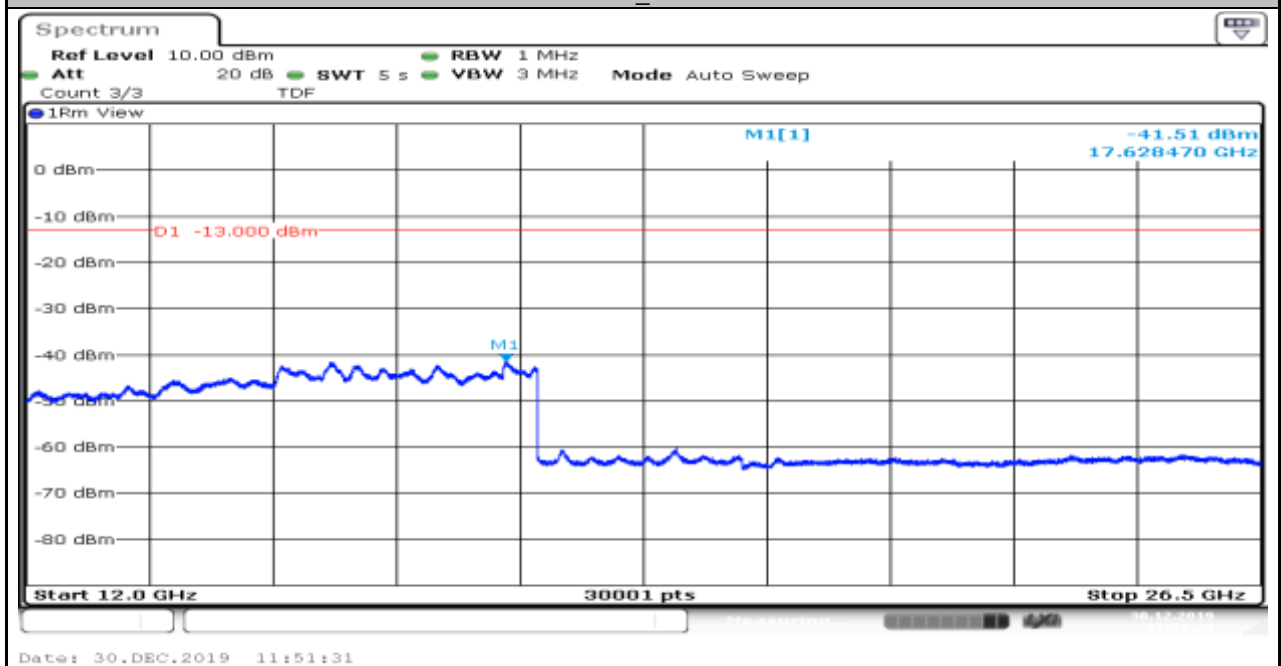
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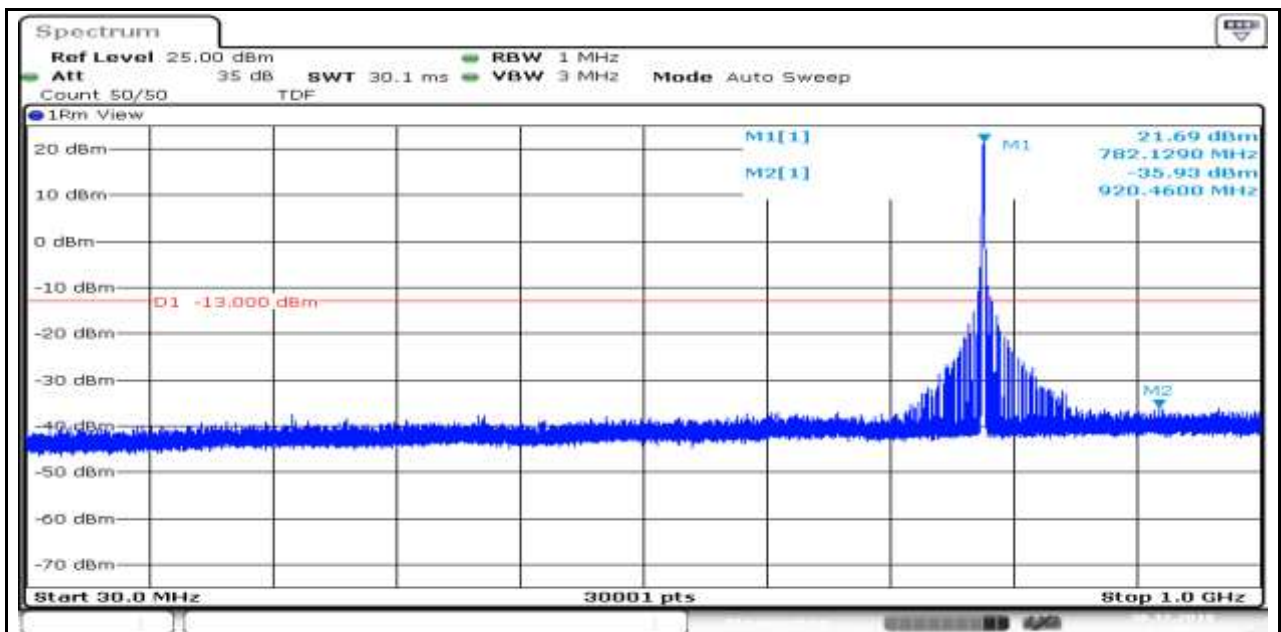
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Band13_Stand-Alone_NaN_QPSK_23230_12@0_15kHz_12000_26500_12000~26500MHz@-41.51dBm_-13_PASS

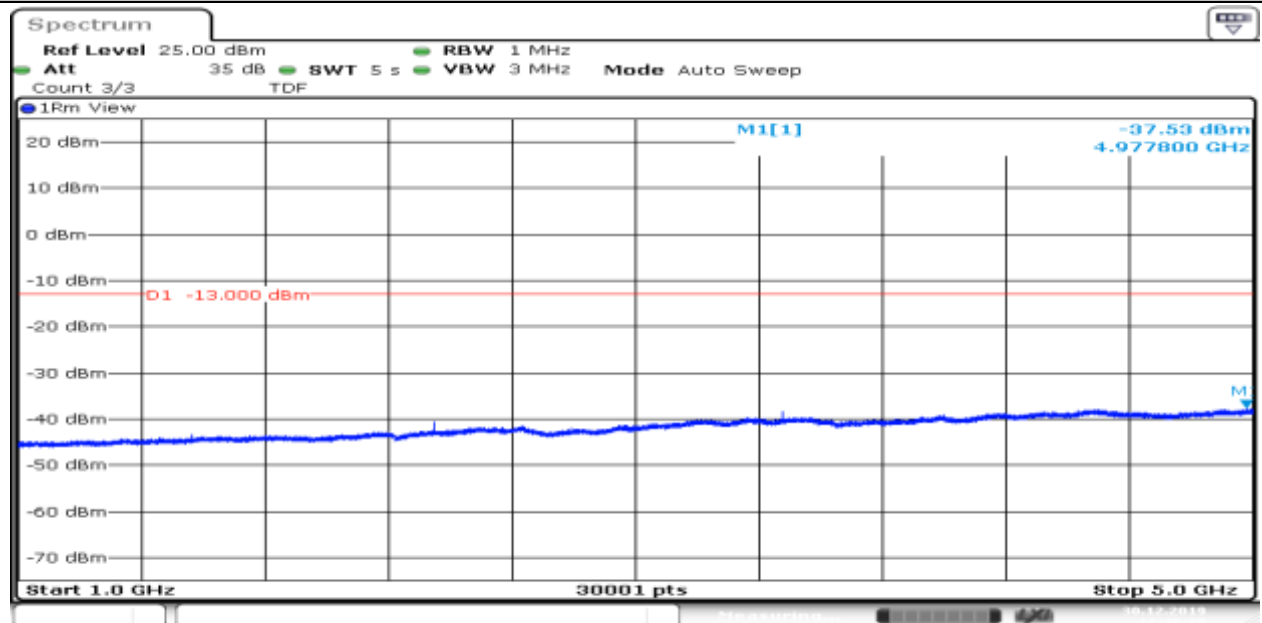


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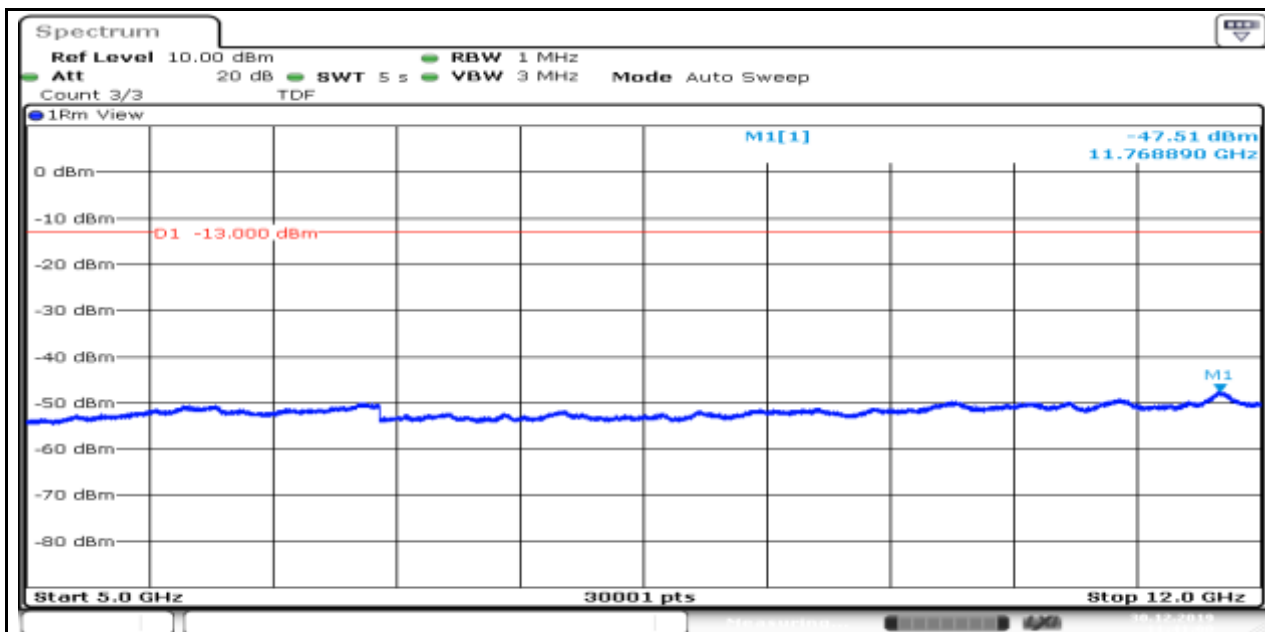
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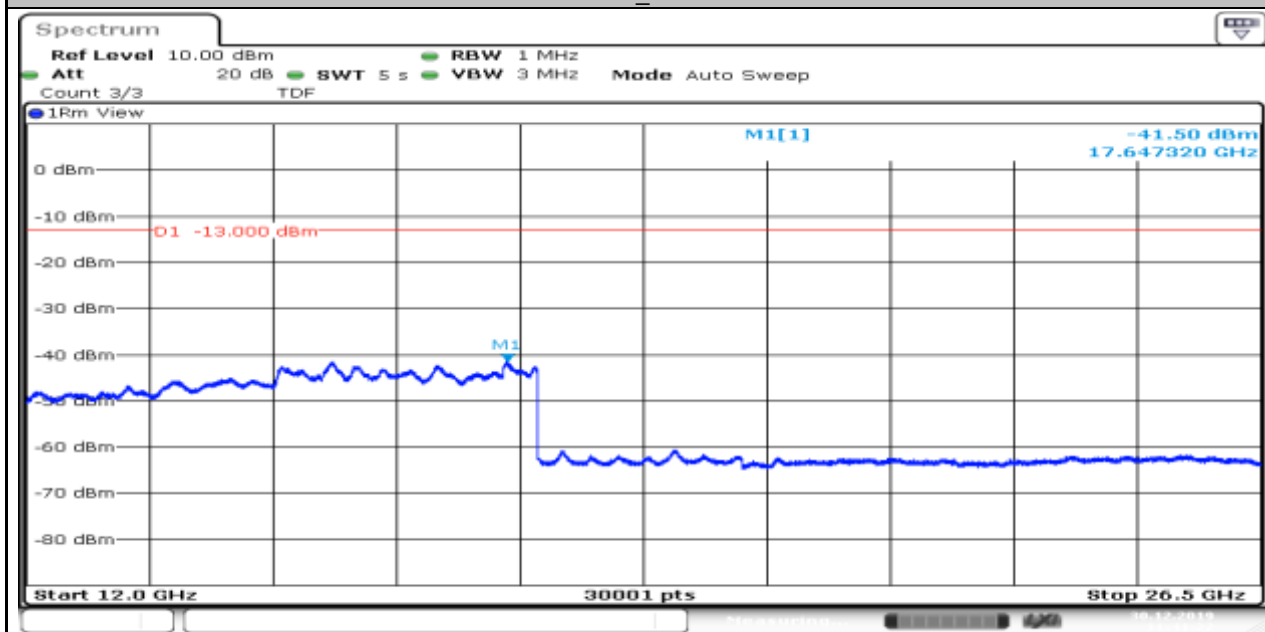


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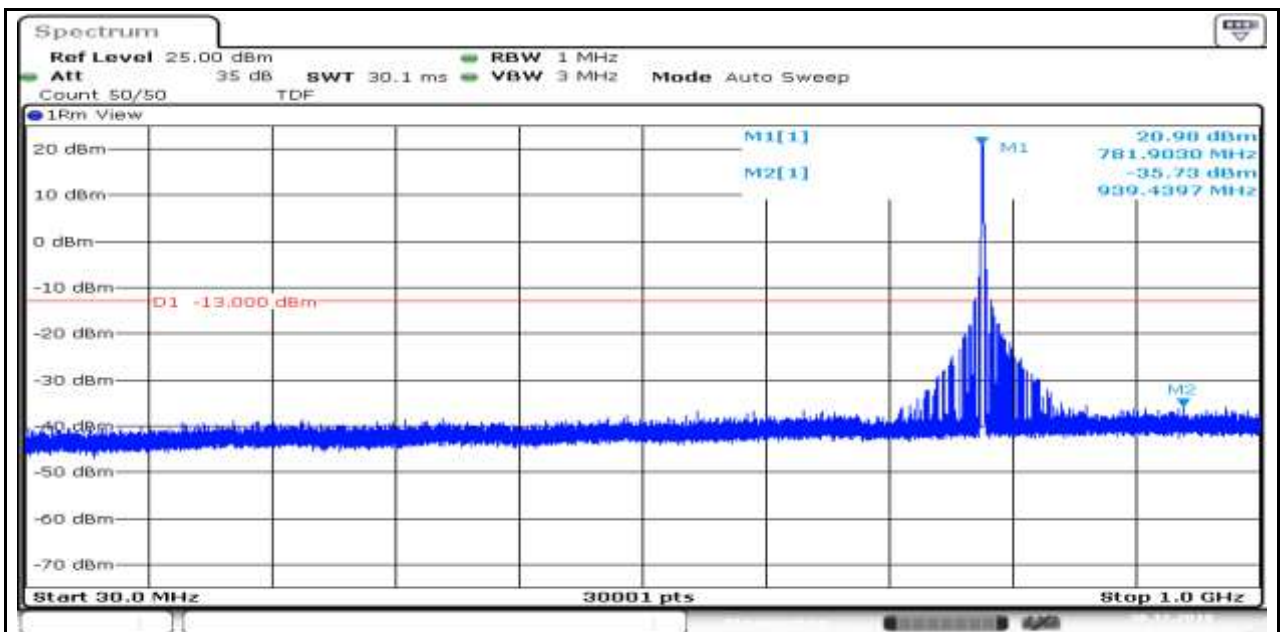
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Band13_Stand-Alone_NaN_QPSK_23230_1@0_3.75kHz_12000_26500_12000~26500MHz@-41.5dBm_-13_PASS_

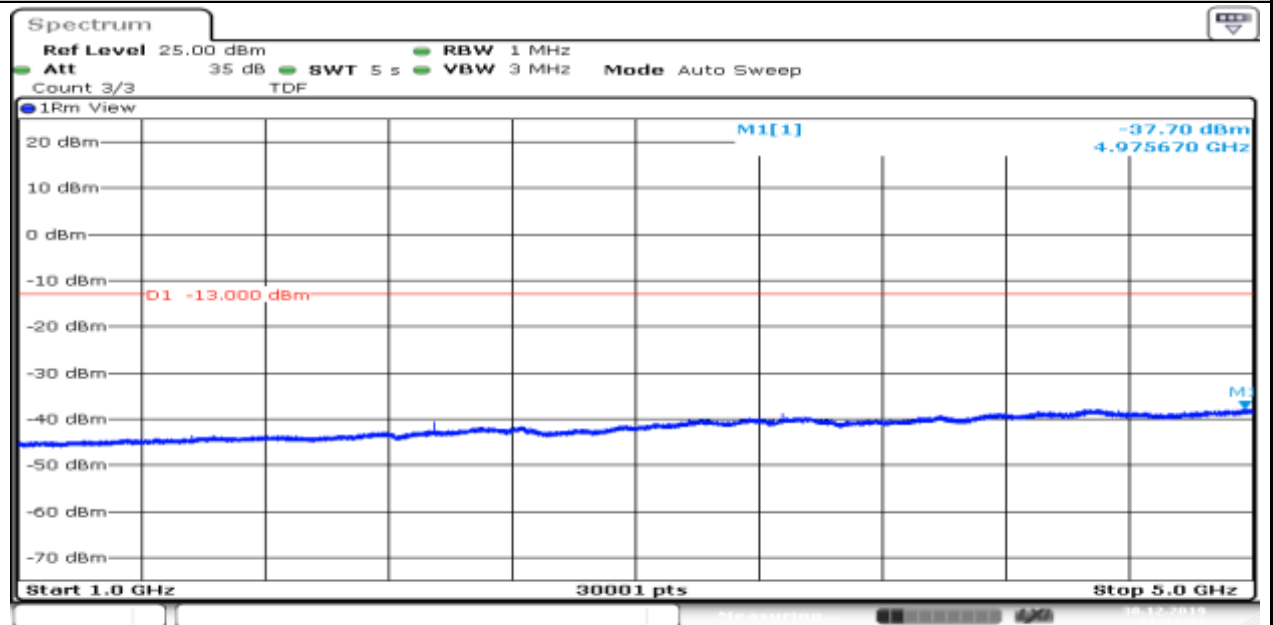


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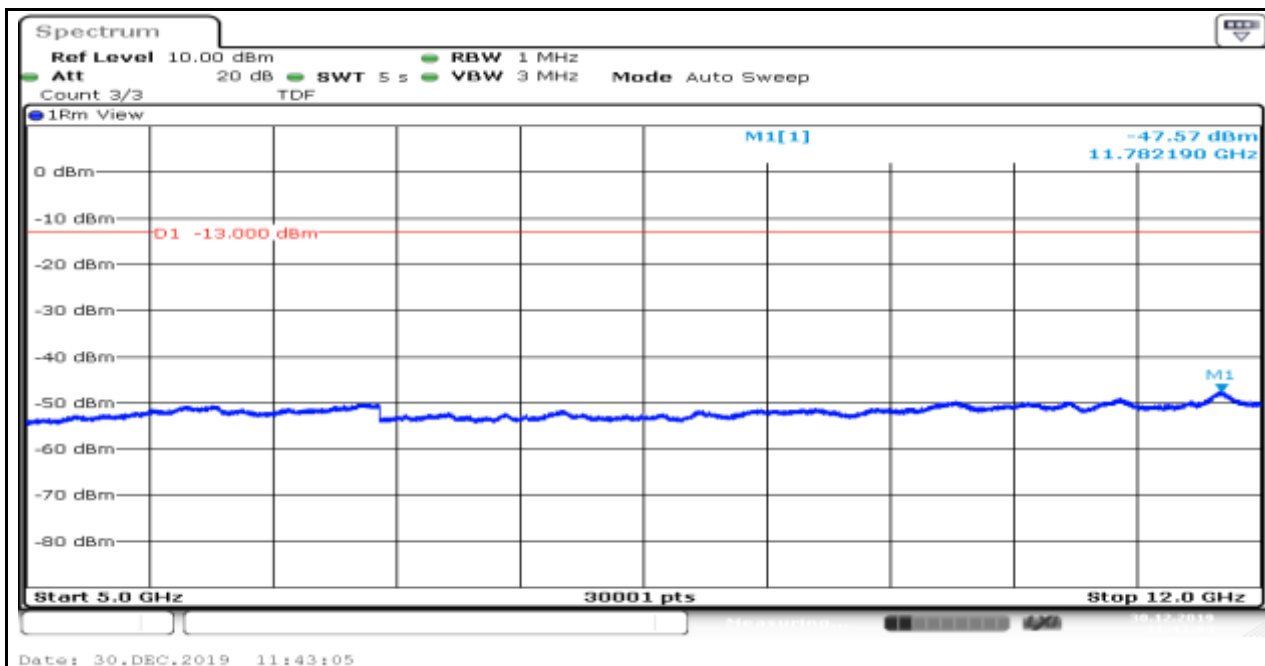
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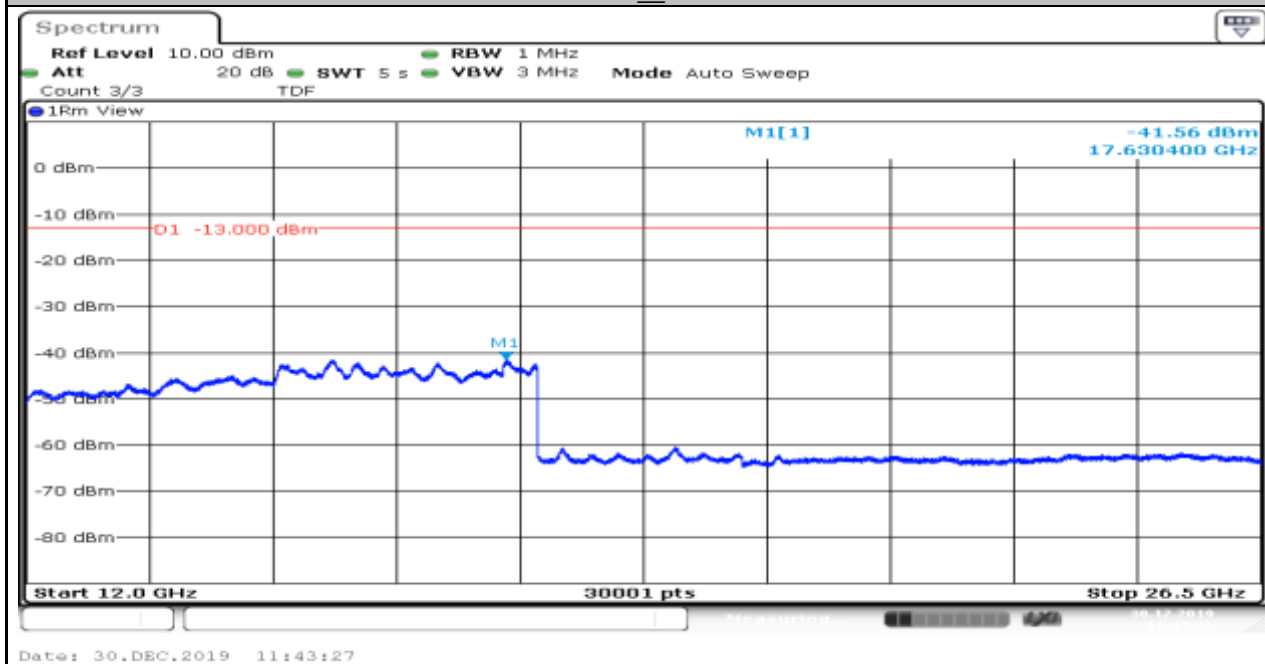


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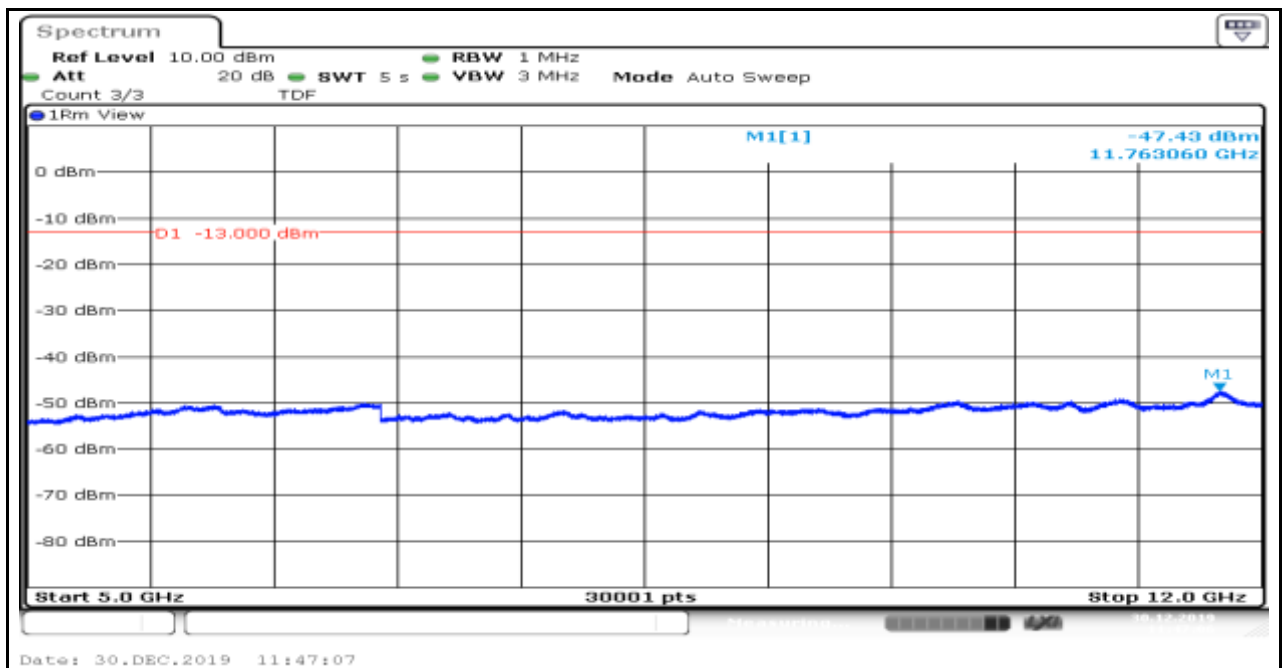
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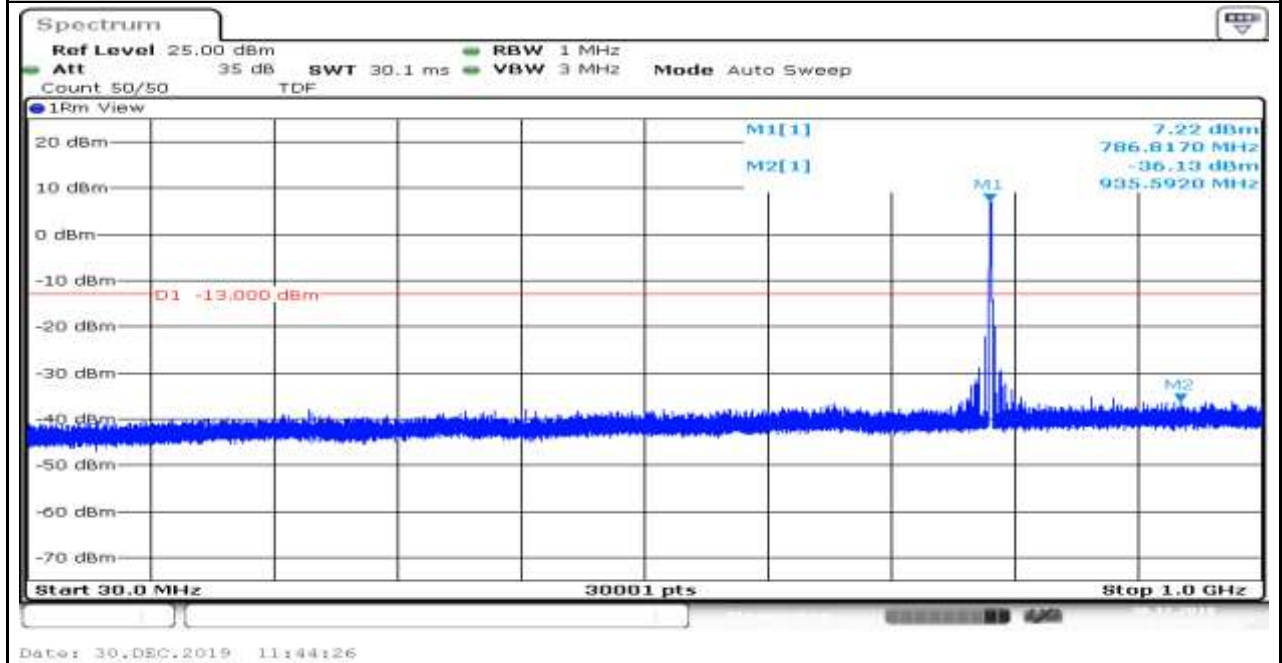
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S_



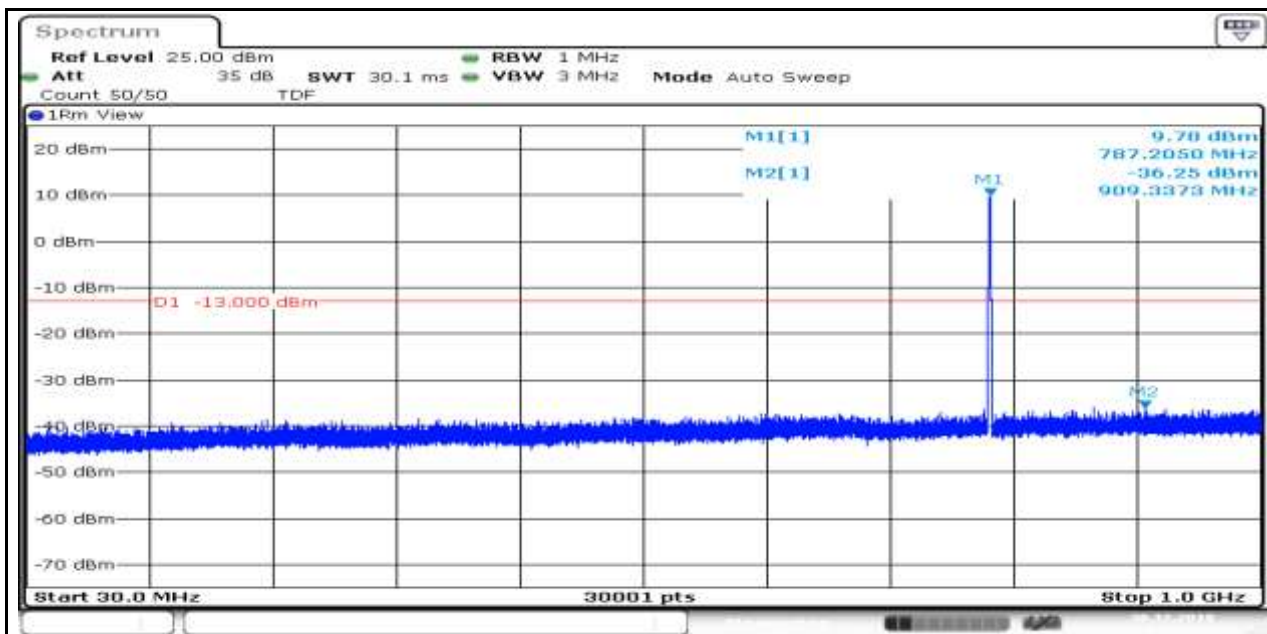
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Band13_Stand-Alone_NaN_QPSK_23279_1@0_3.75kHz_30_1000_30~1000MHz@-36.13dBm_-13_PASS_

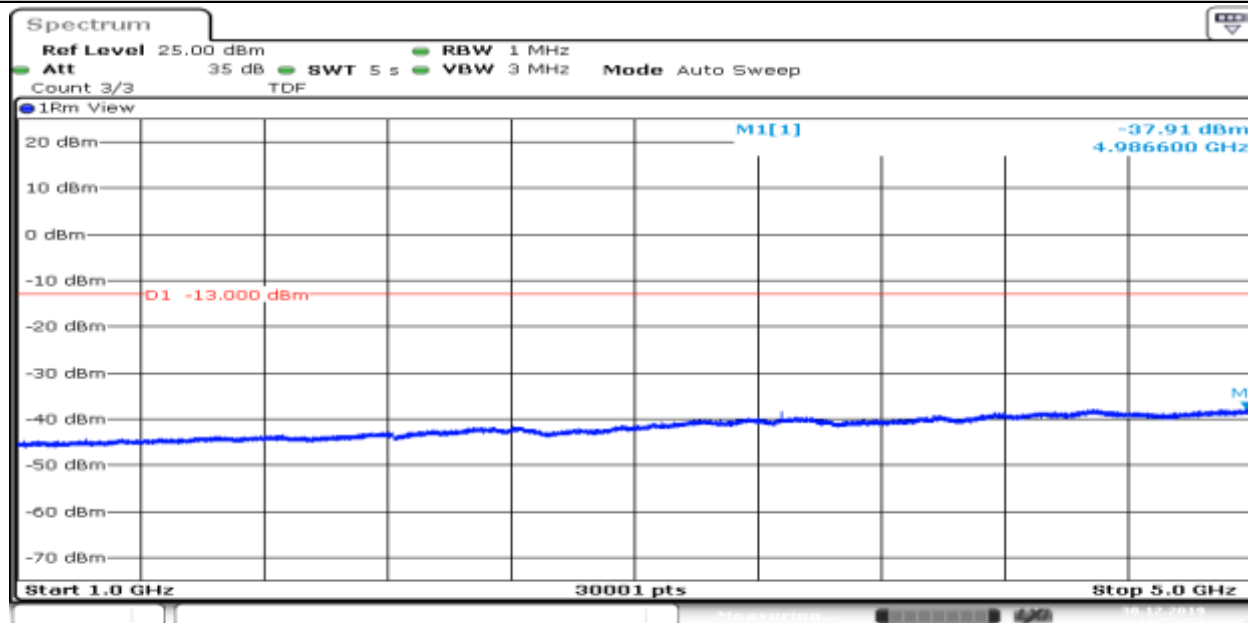


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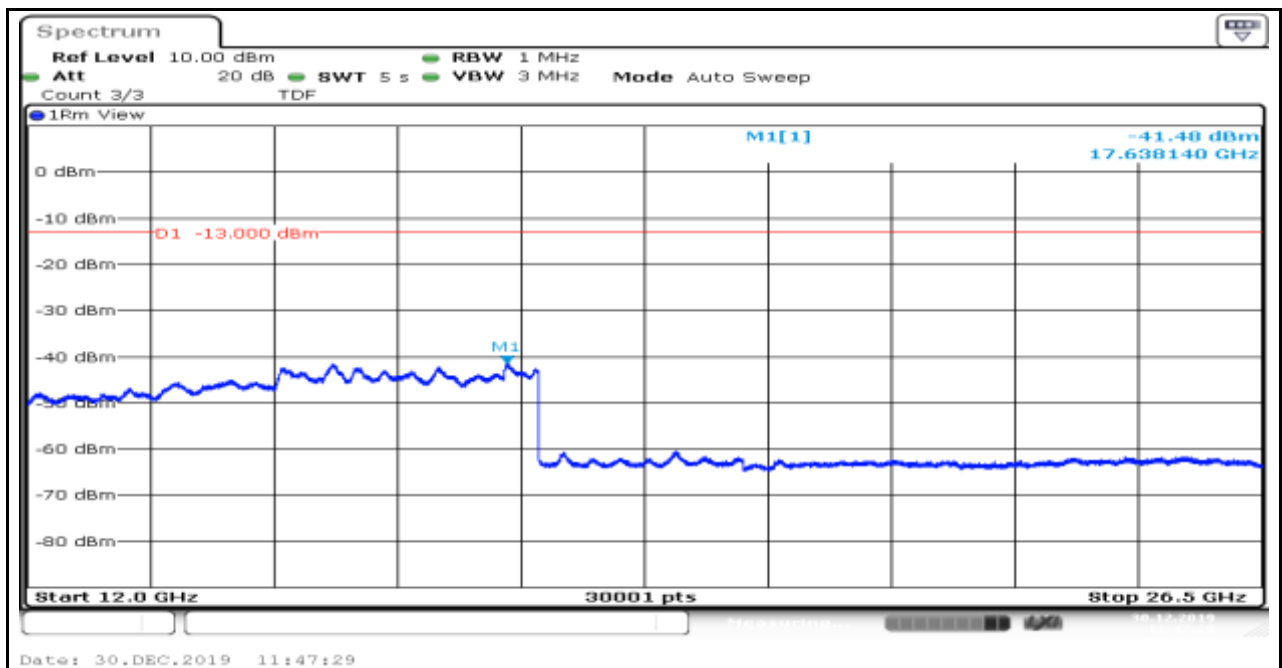
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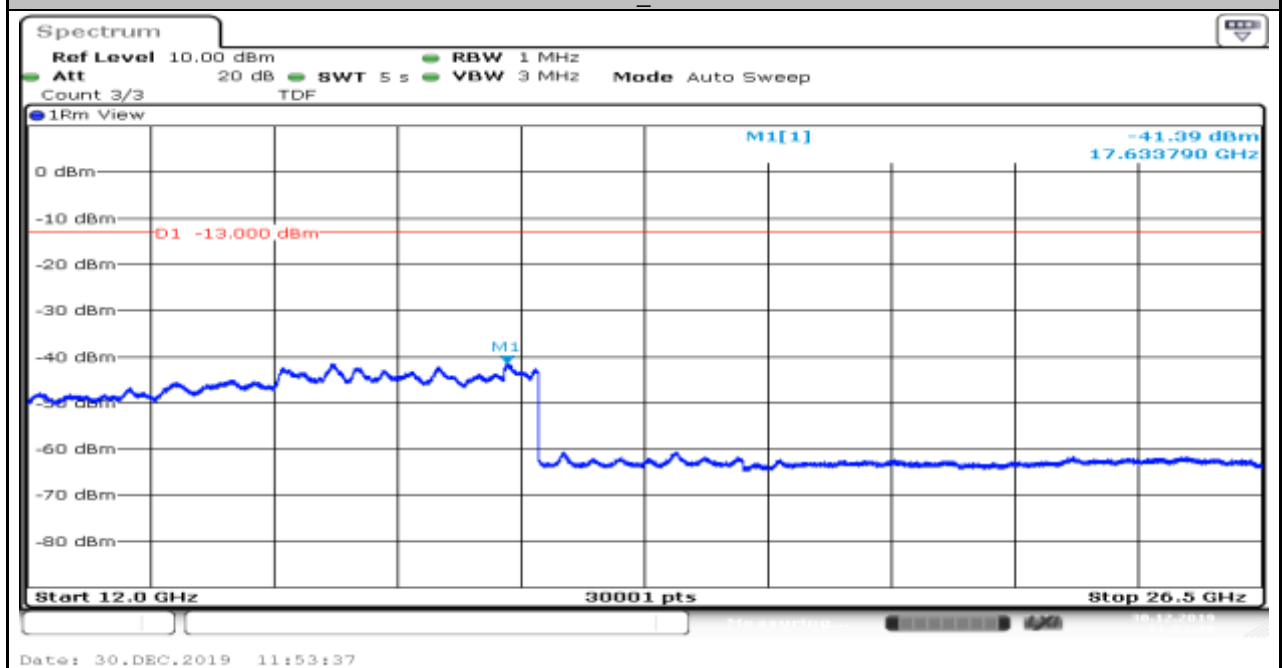
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S_

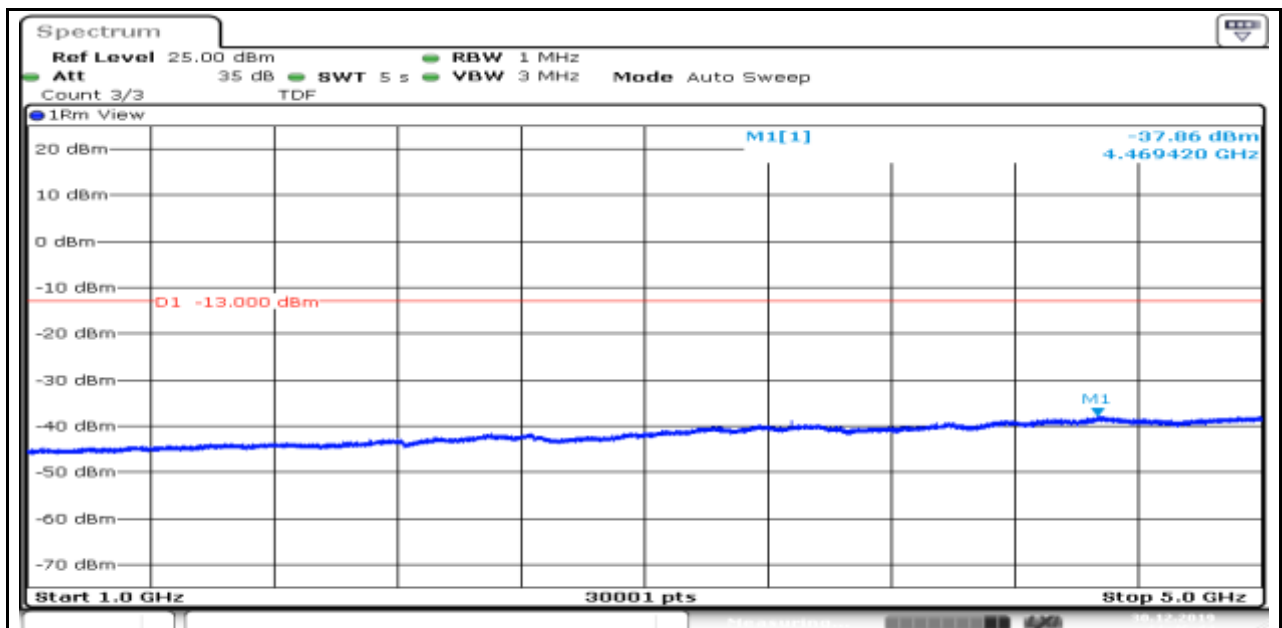
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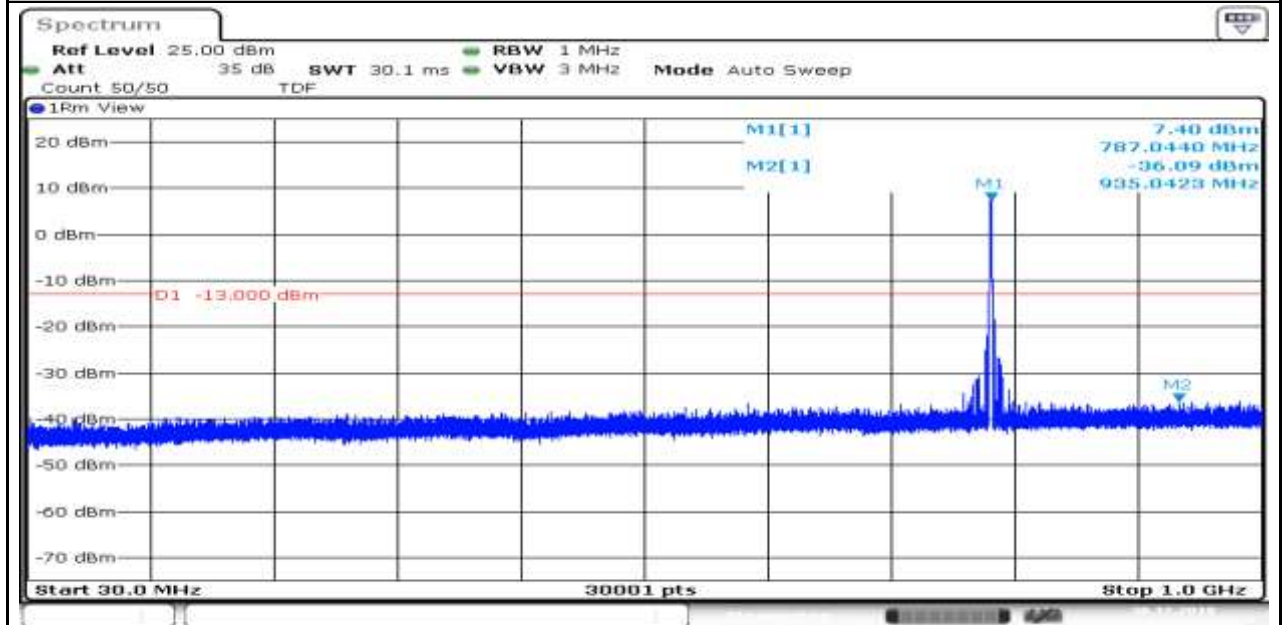
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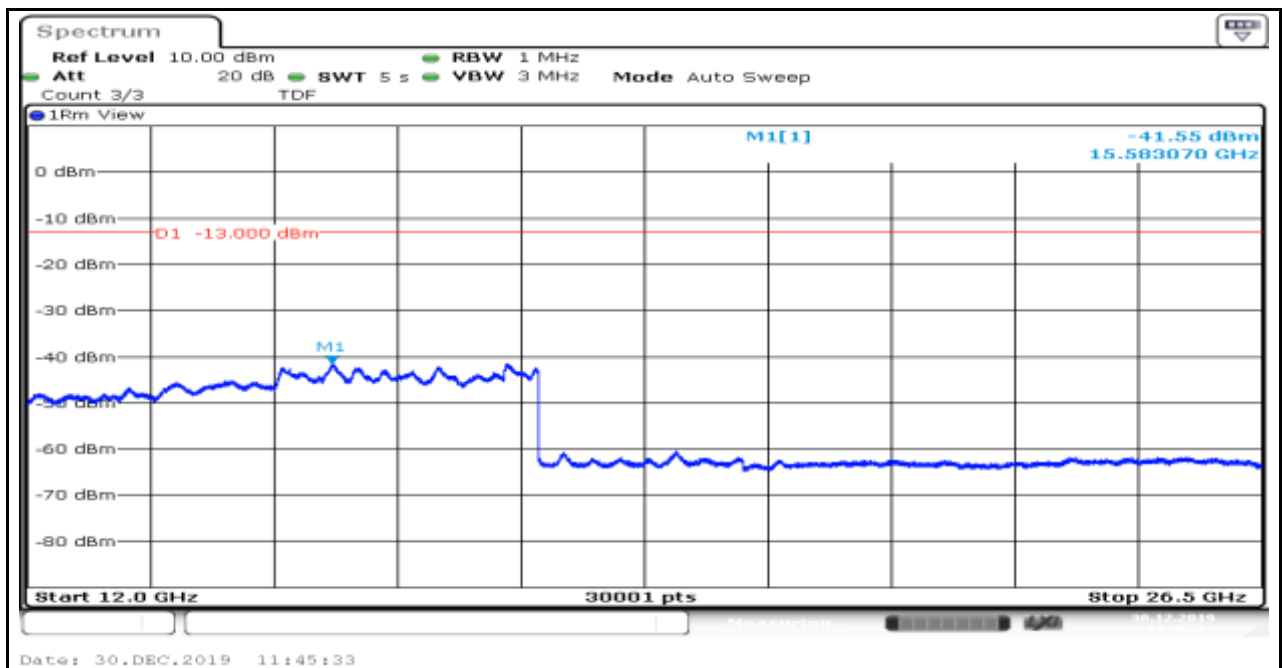
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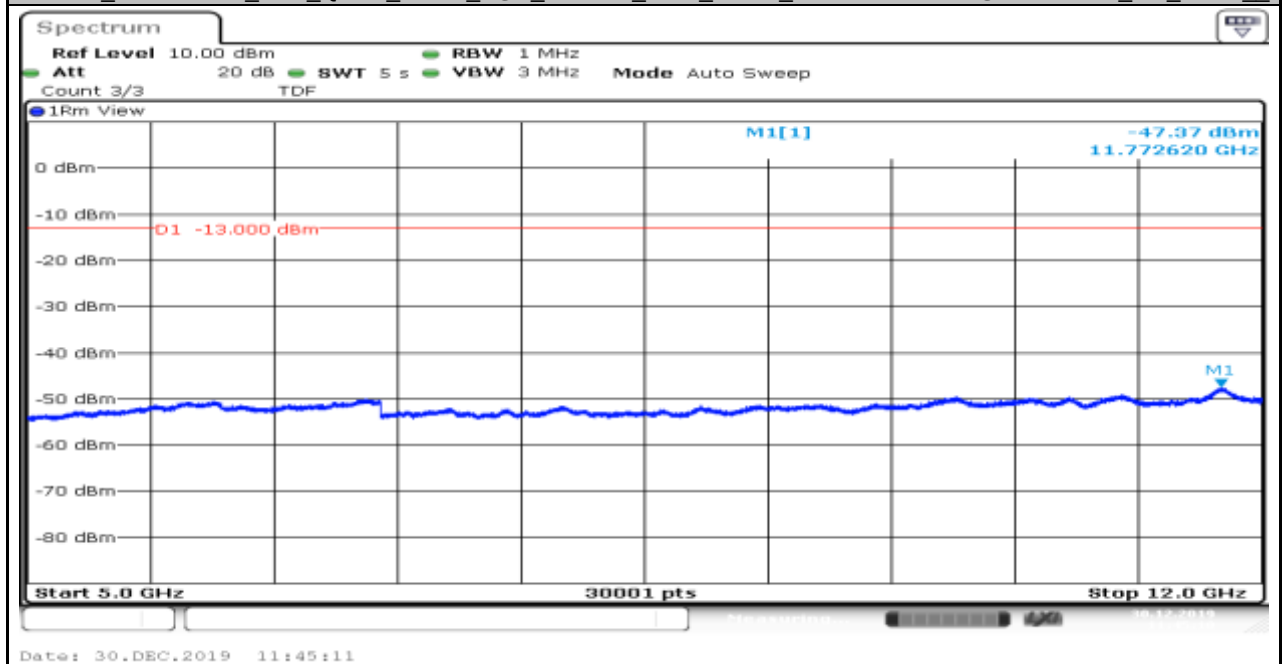
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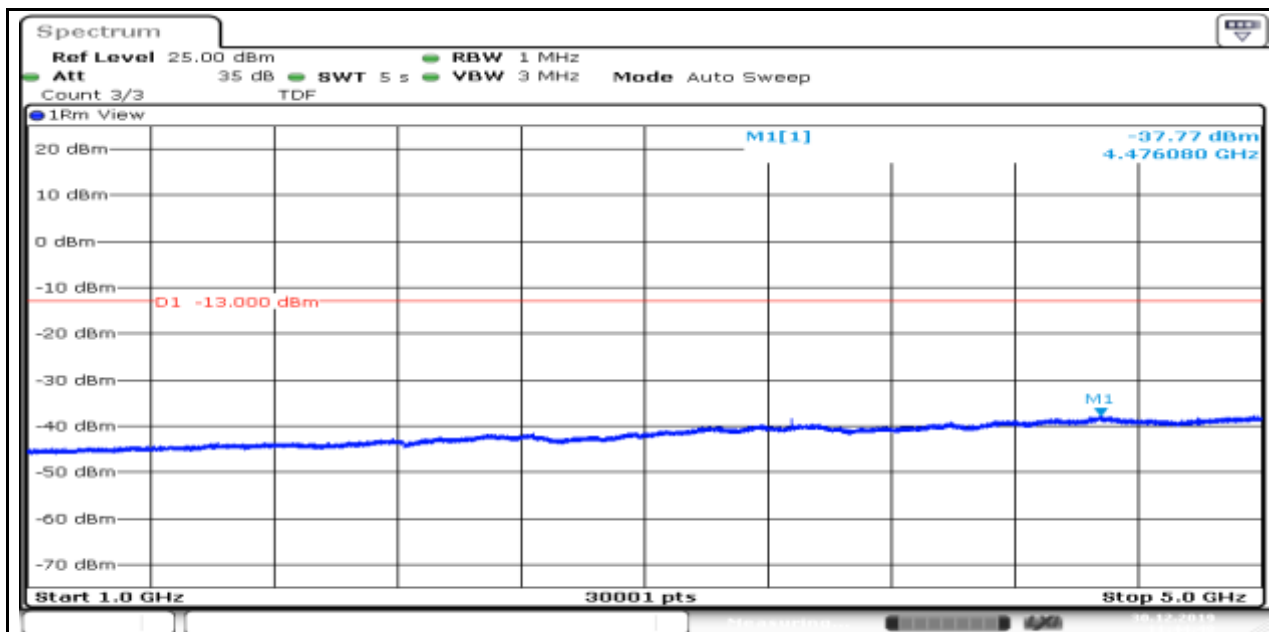
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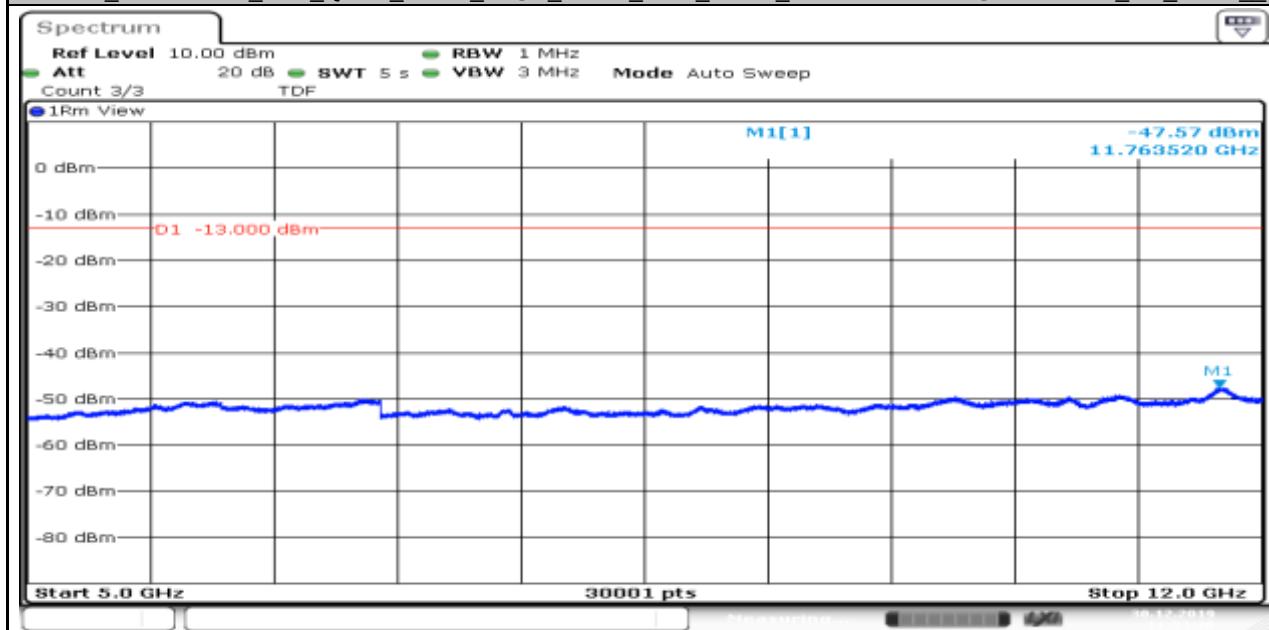
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Band13_Stand-Alone_NaN_QPSK_23279_1@0_3.75kHz_1000_5000_1000~5000MHz@-37.77dBm_-13_PASS

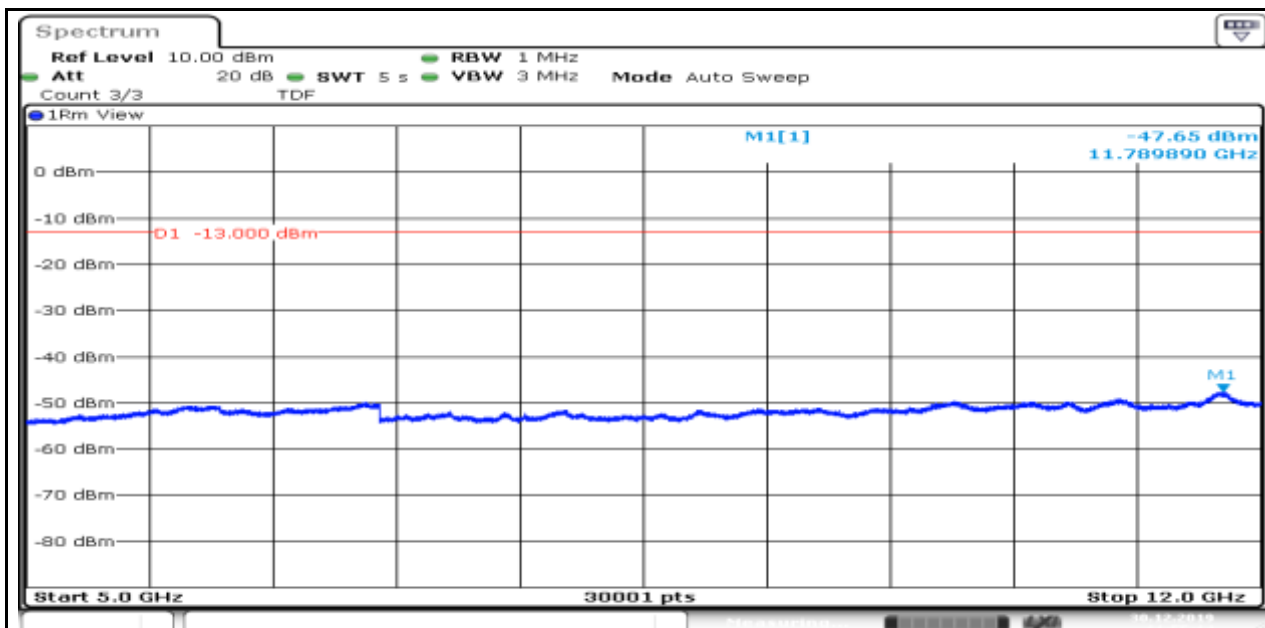


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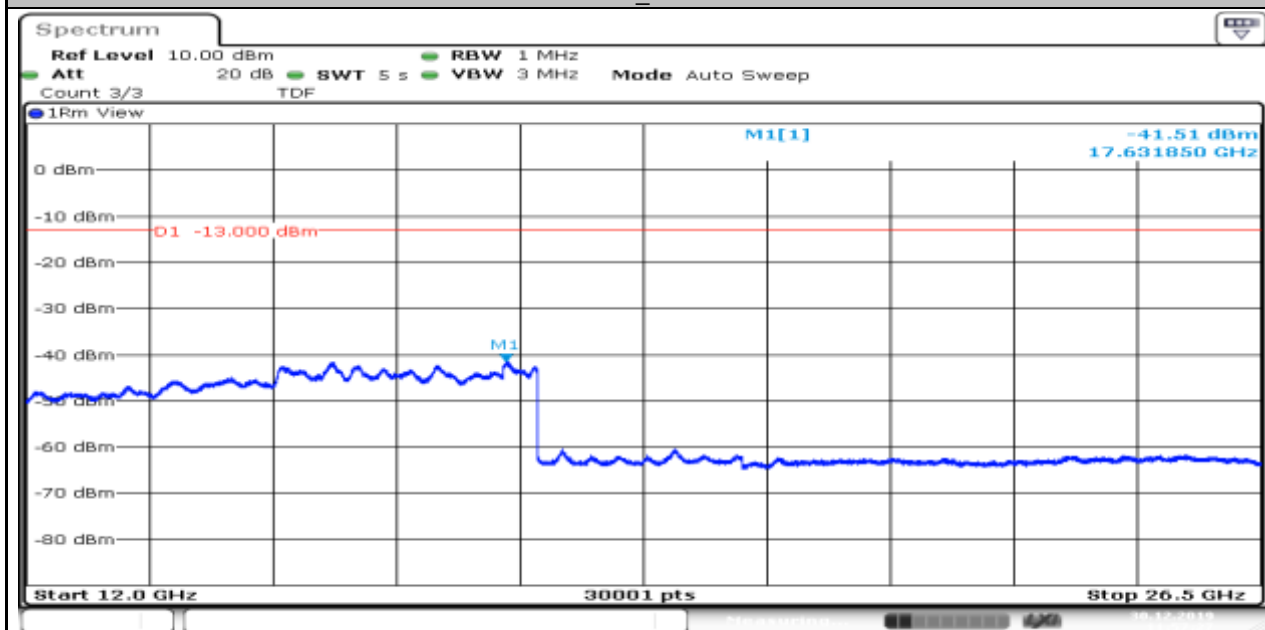


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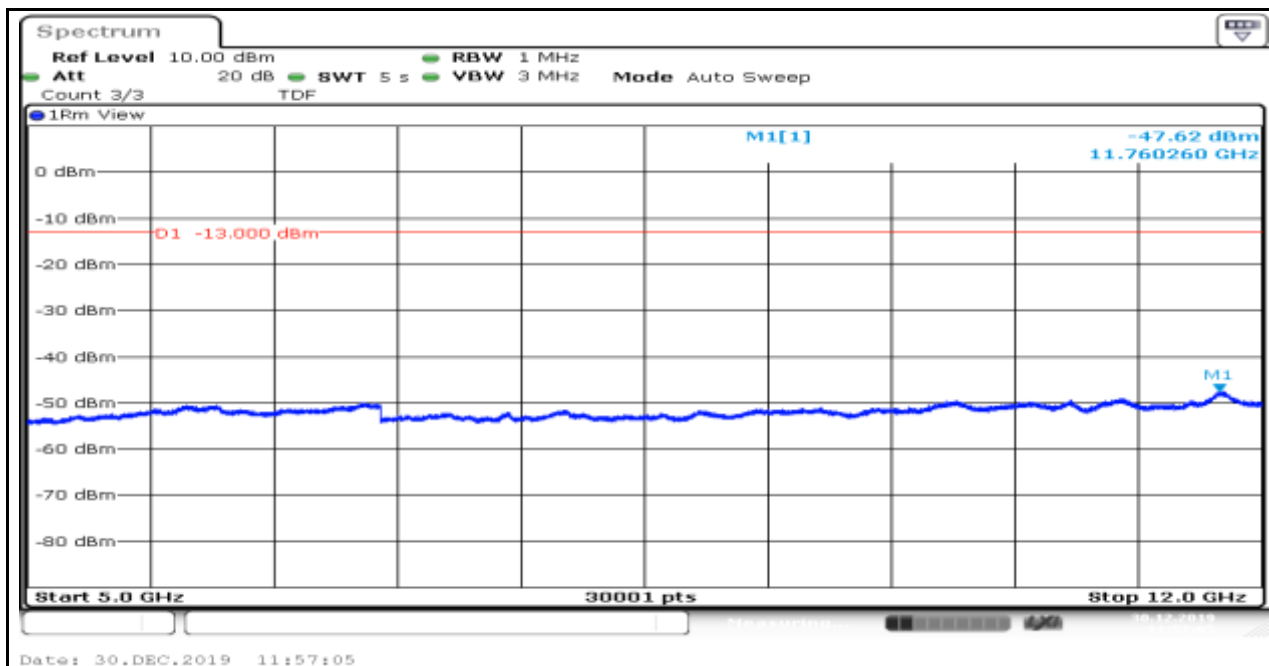
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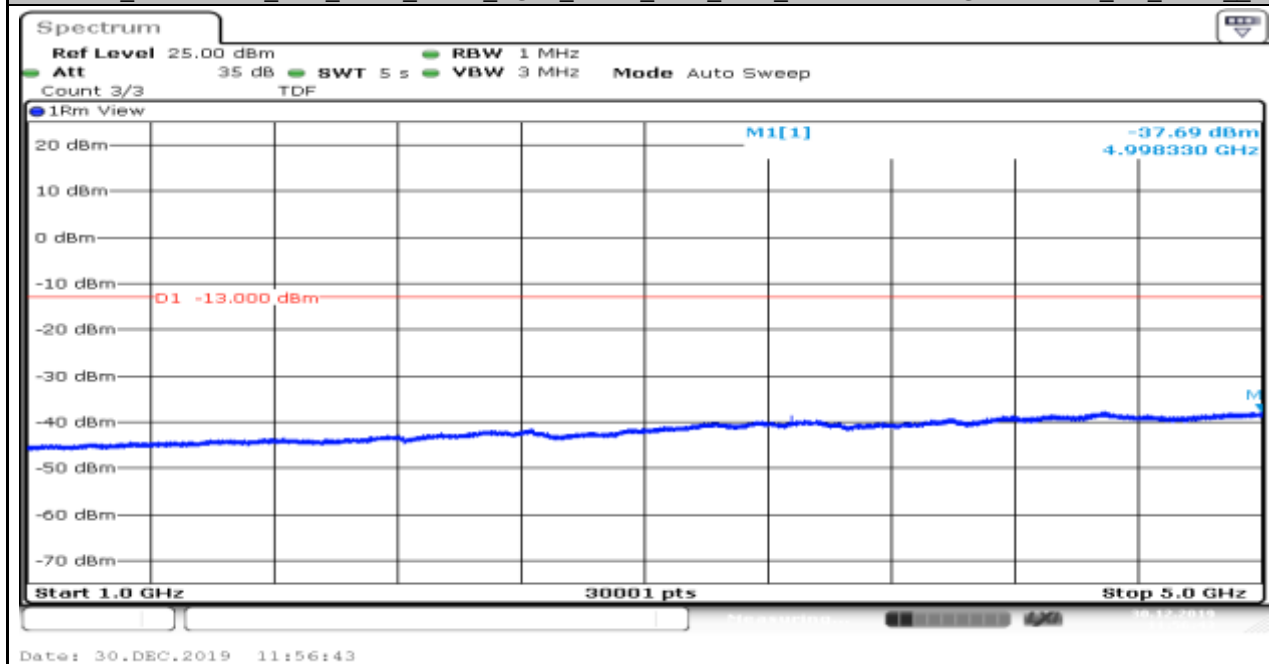
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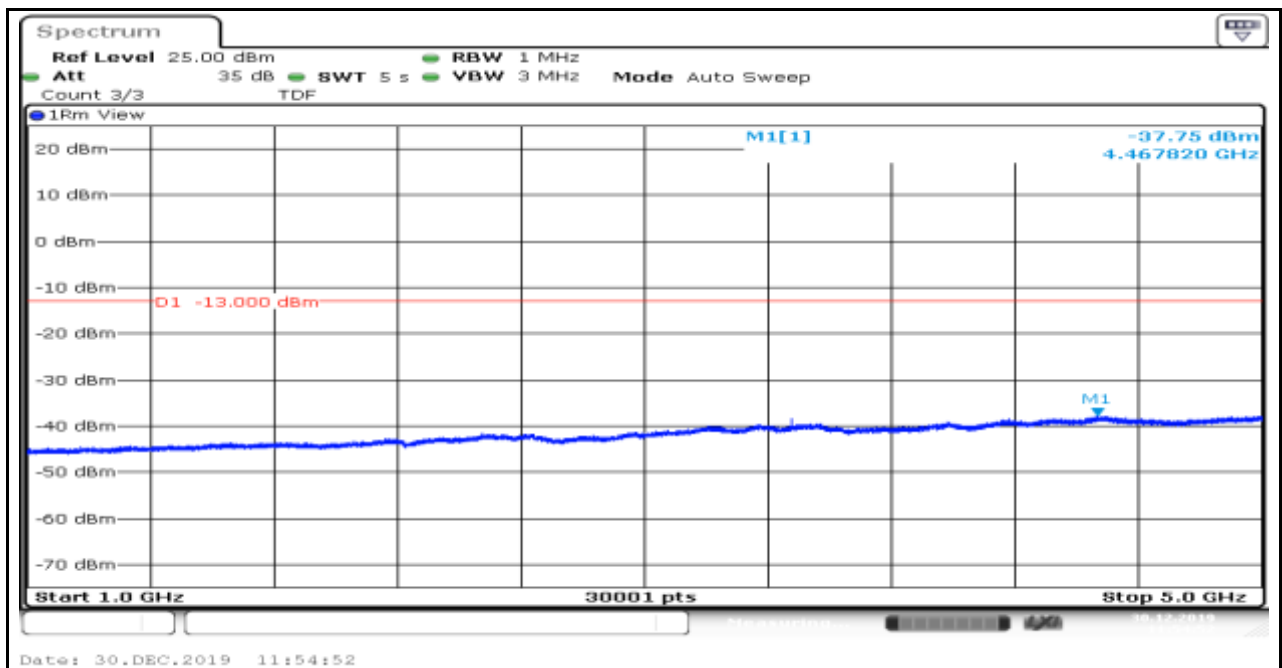
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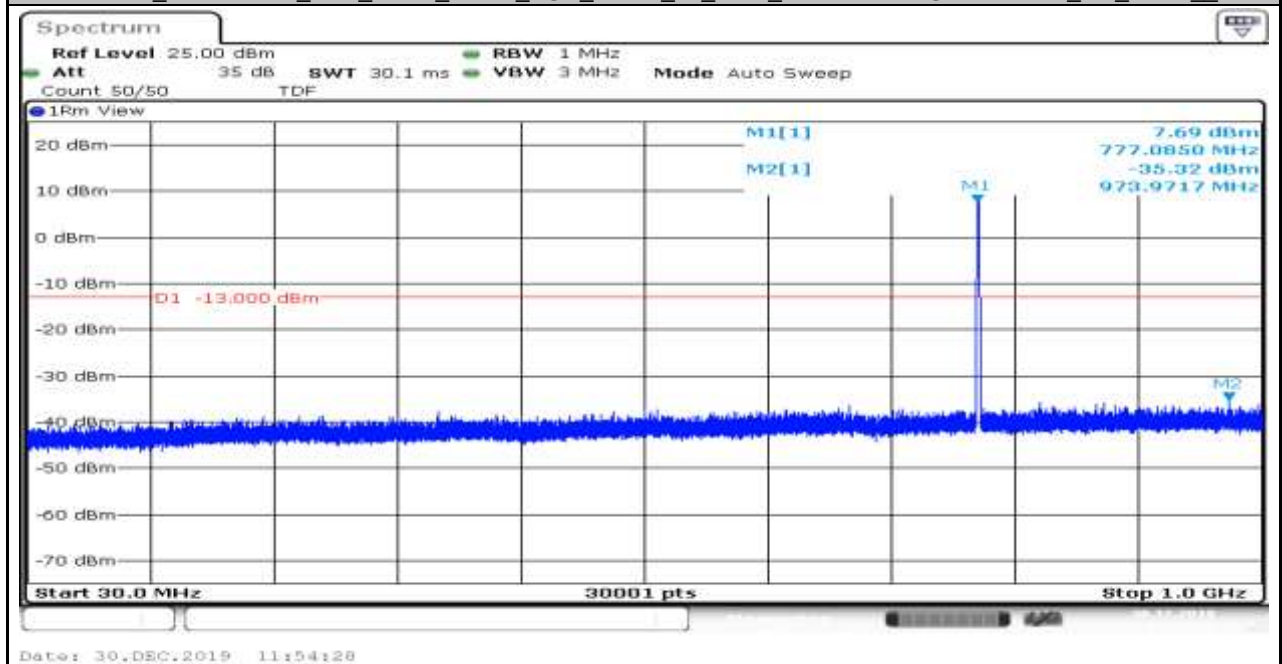
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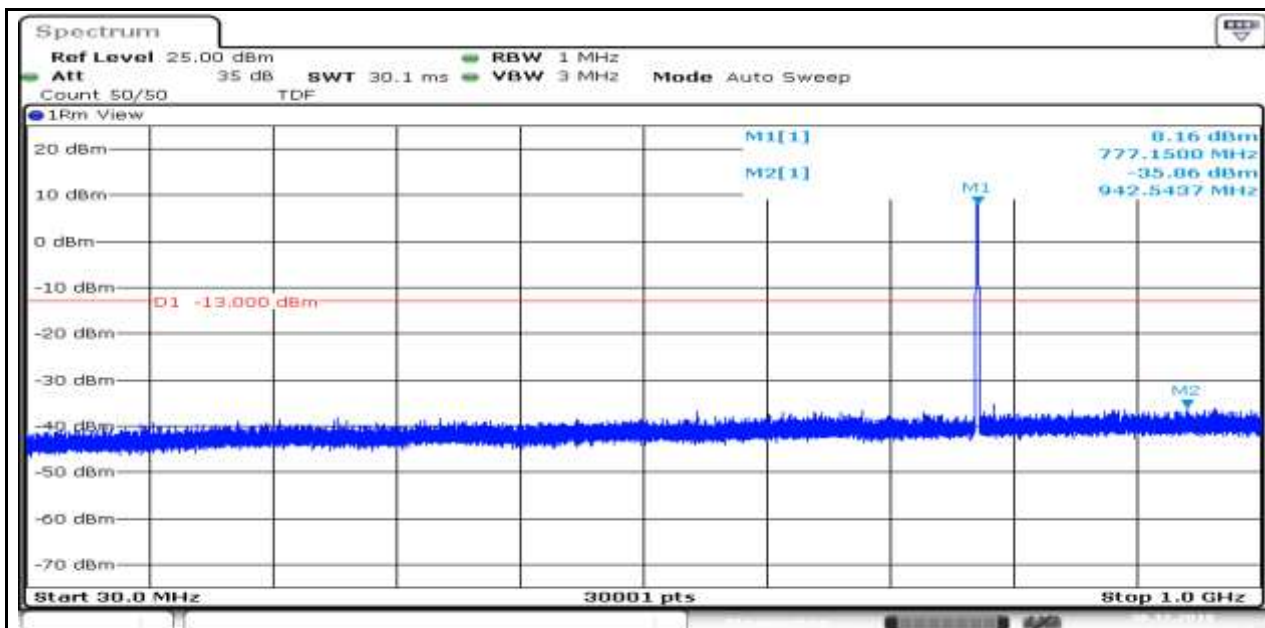
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Band13_Stand-Alone_NaN_BPSK_23181_1@0_15kHz_30_1000_30~1000MHz@-35.32dBm_-13_PASS

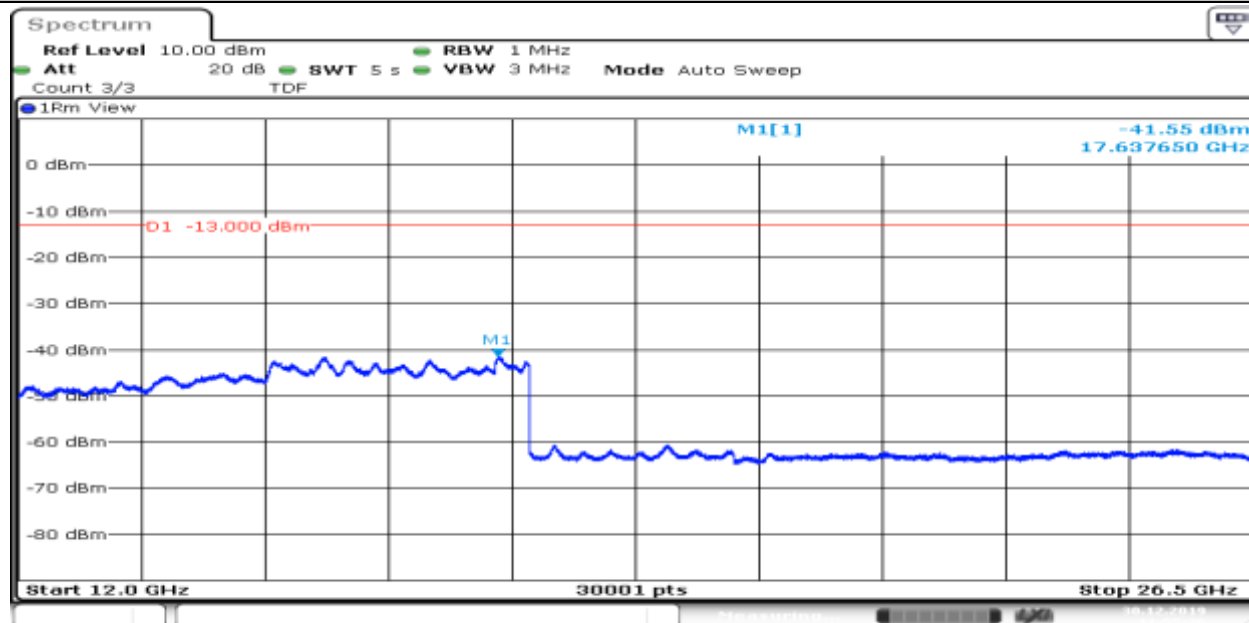


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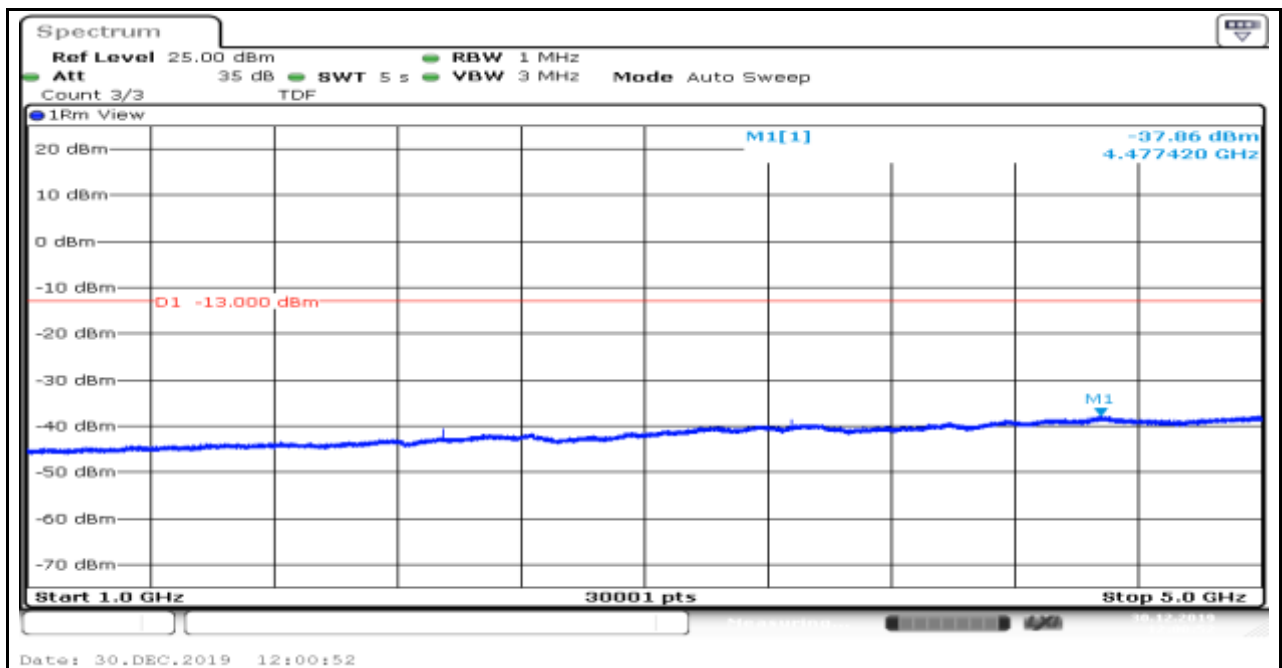
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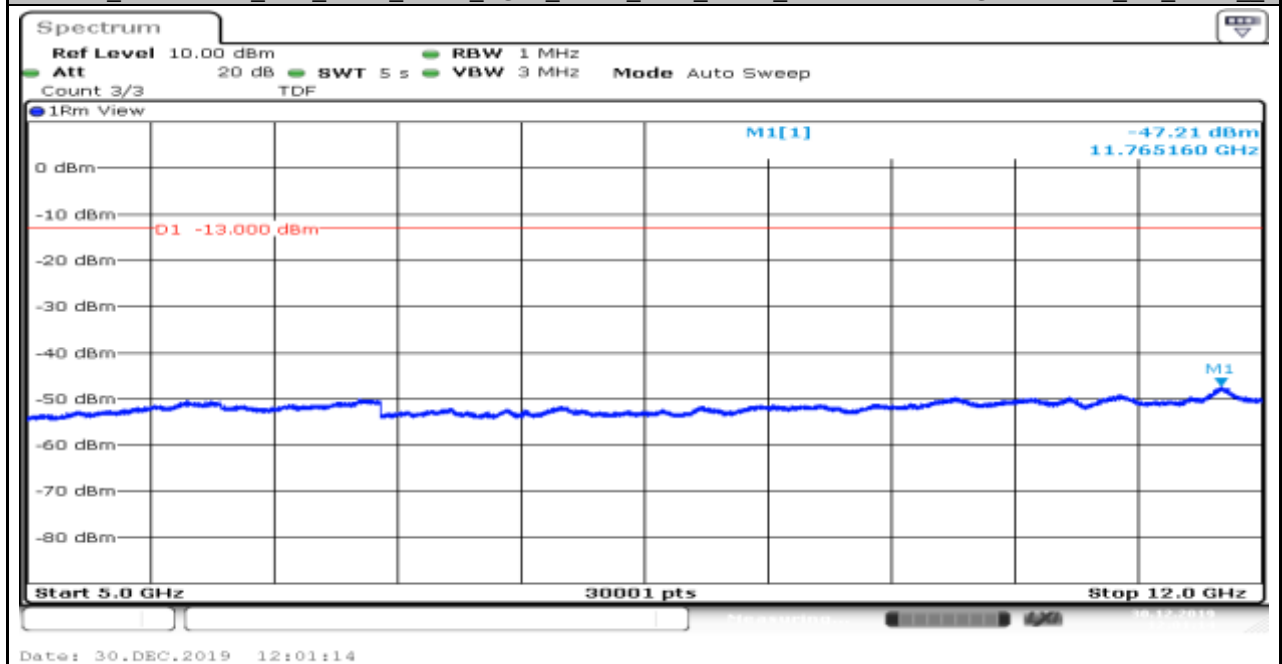


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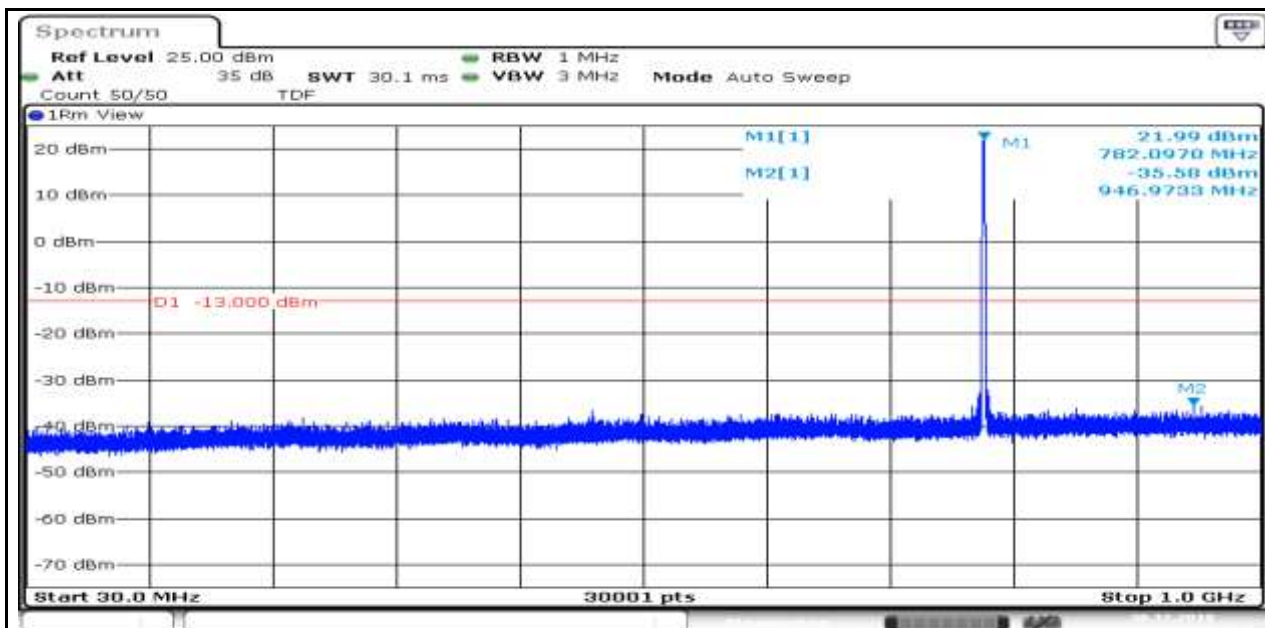
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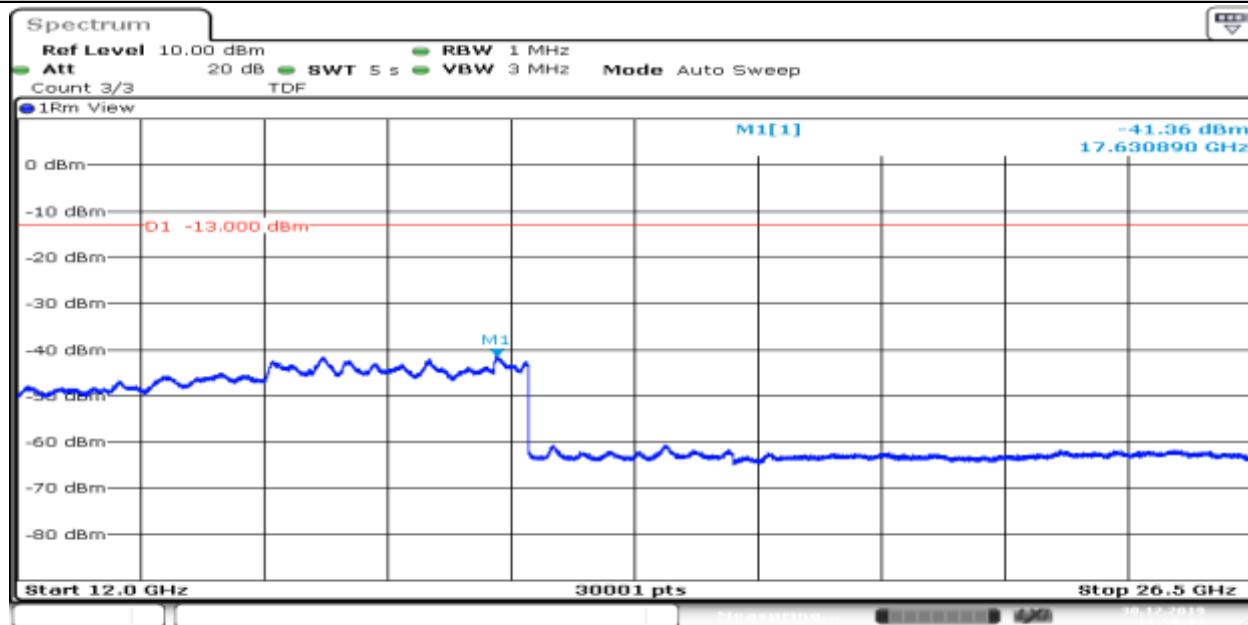


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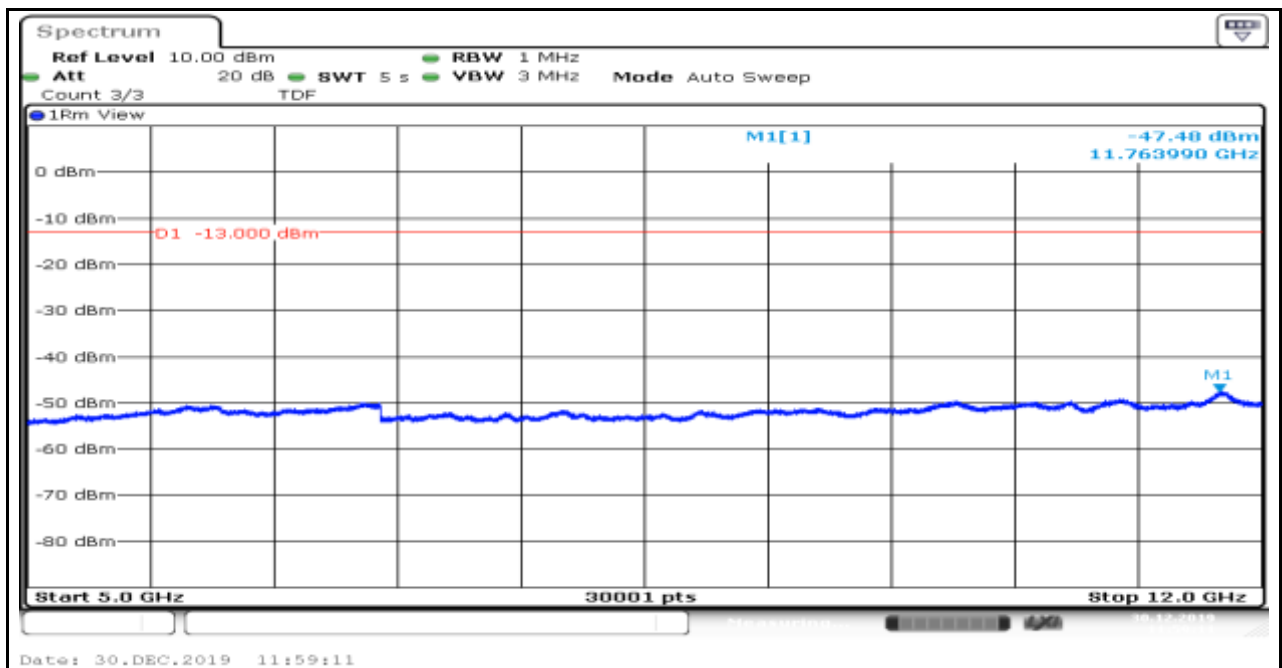
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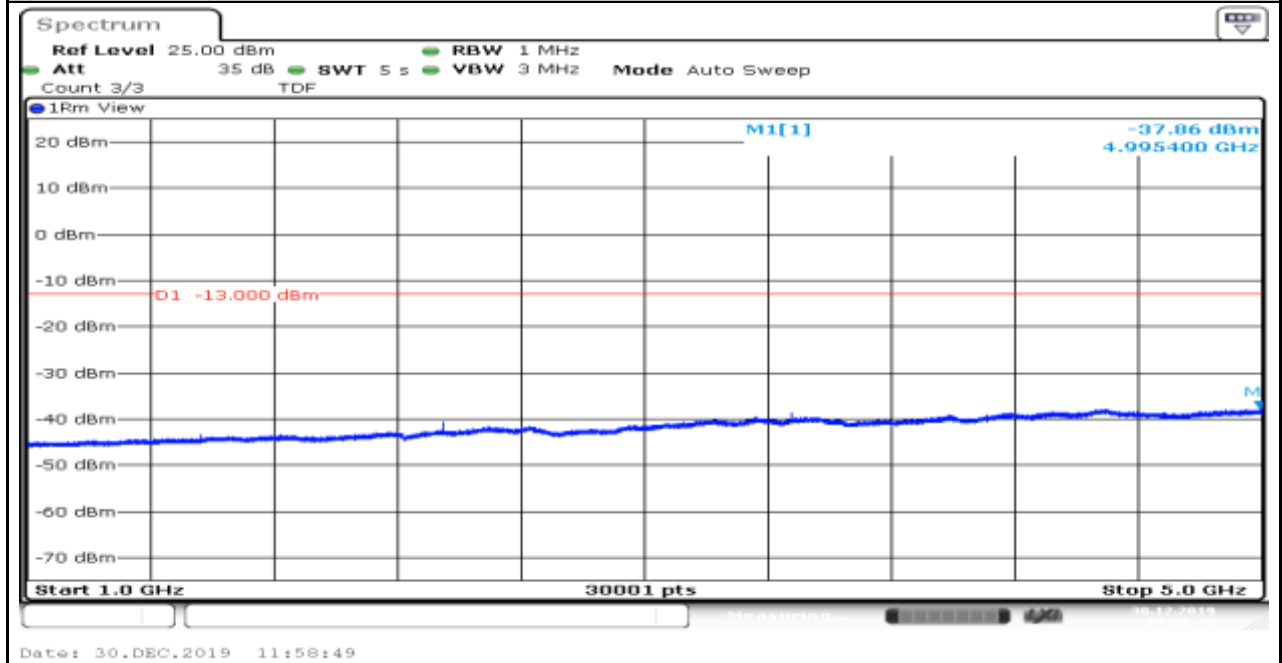


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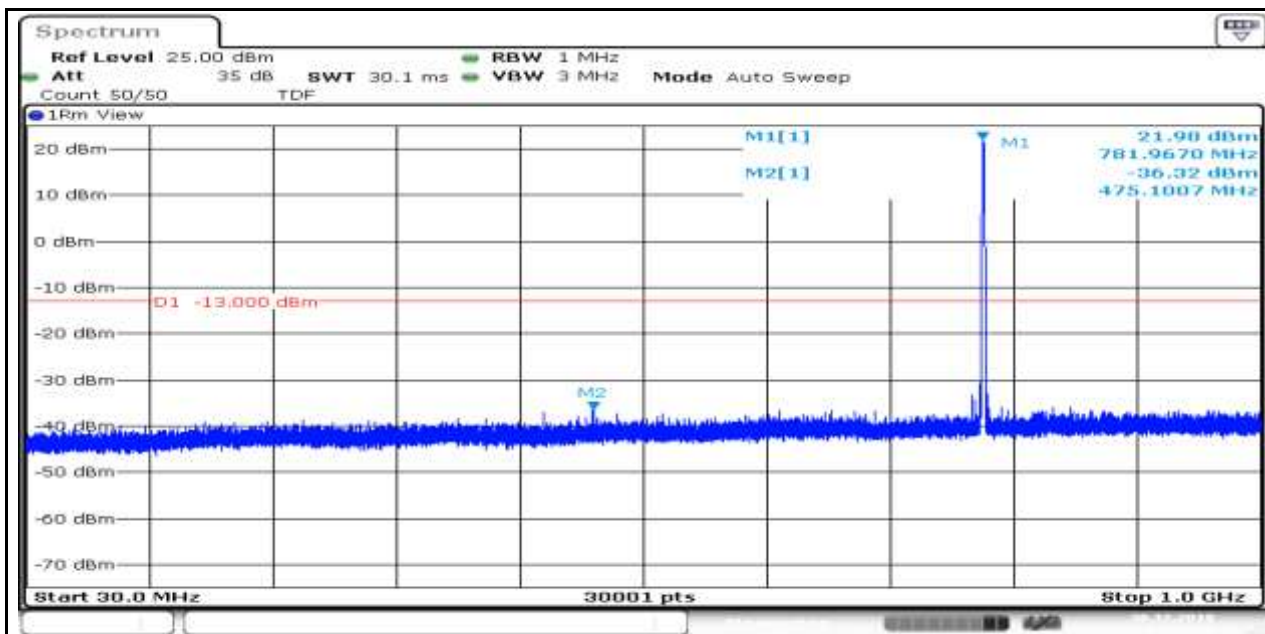
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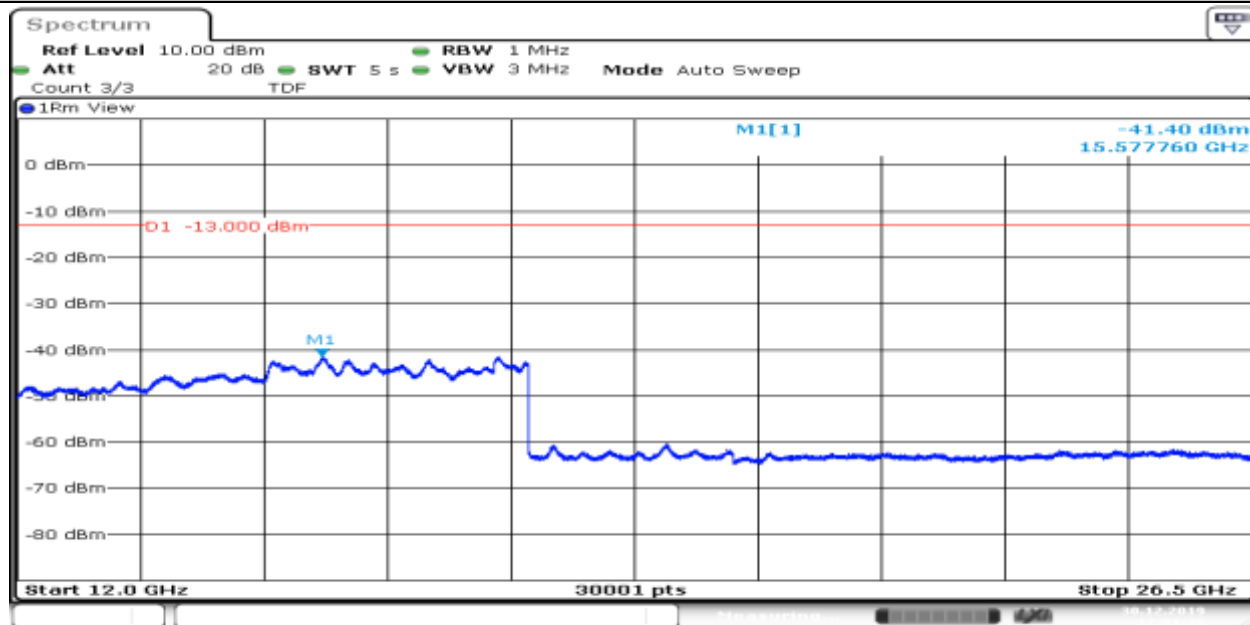


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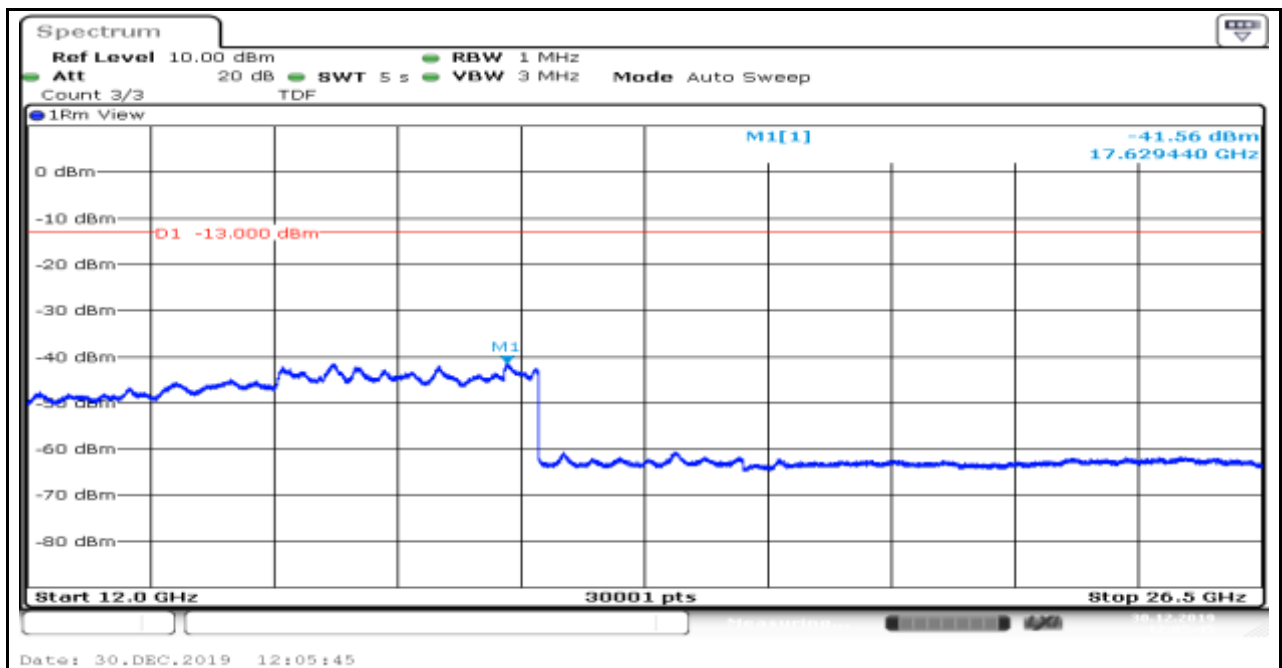
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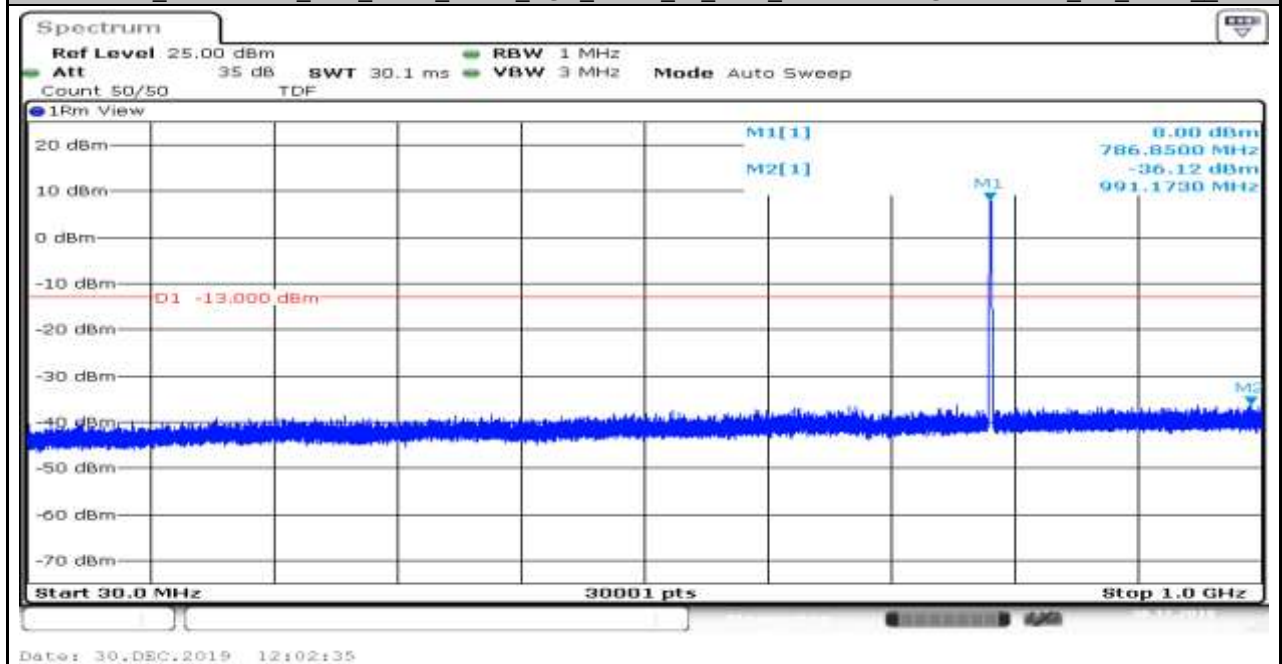


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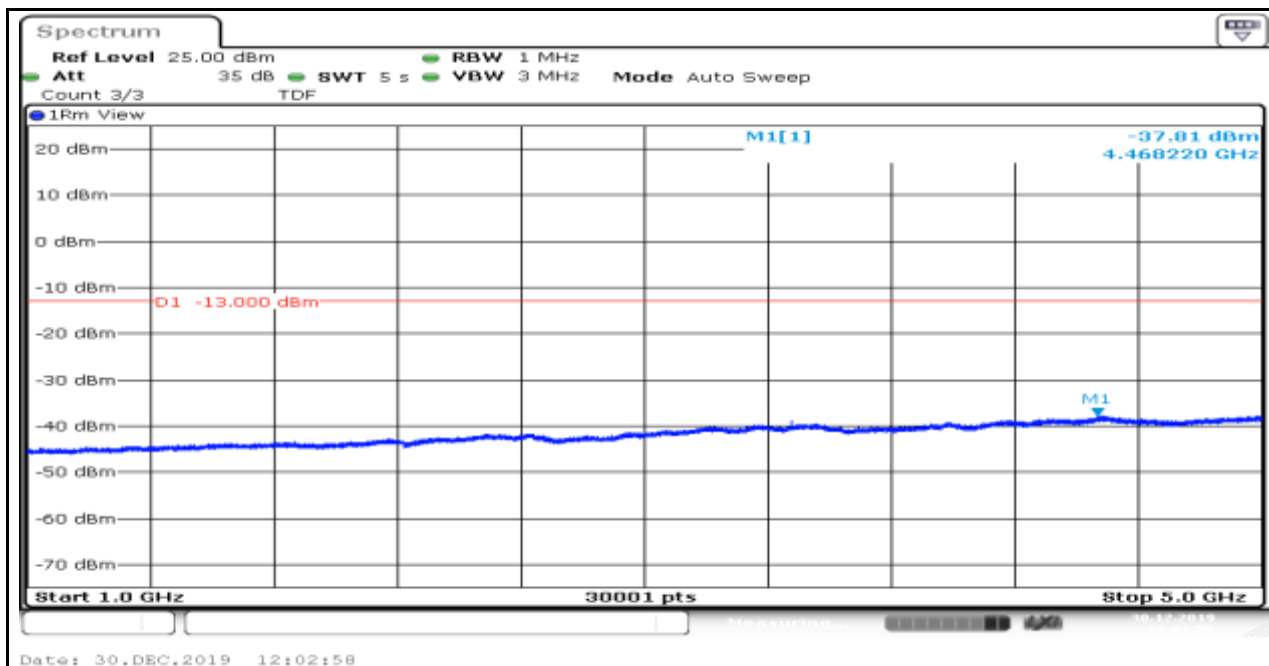
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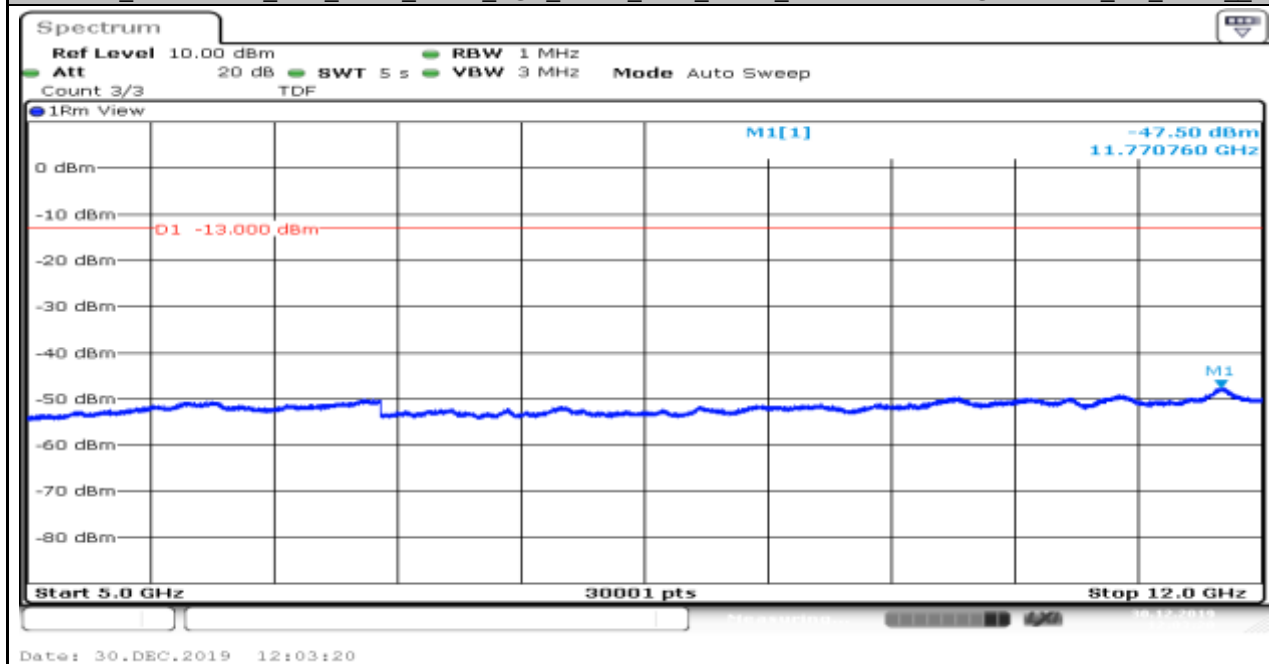
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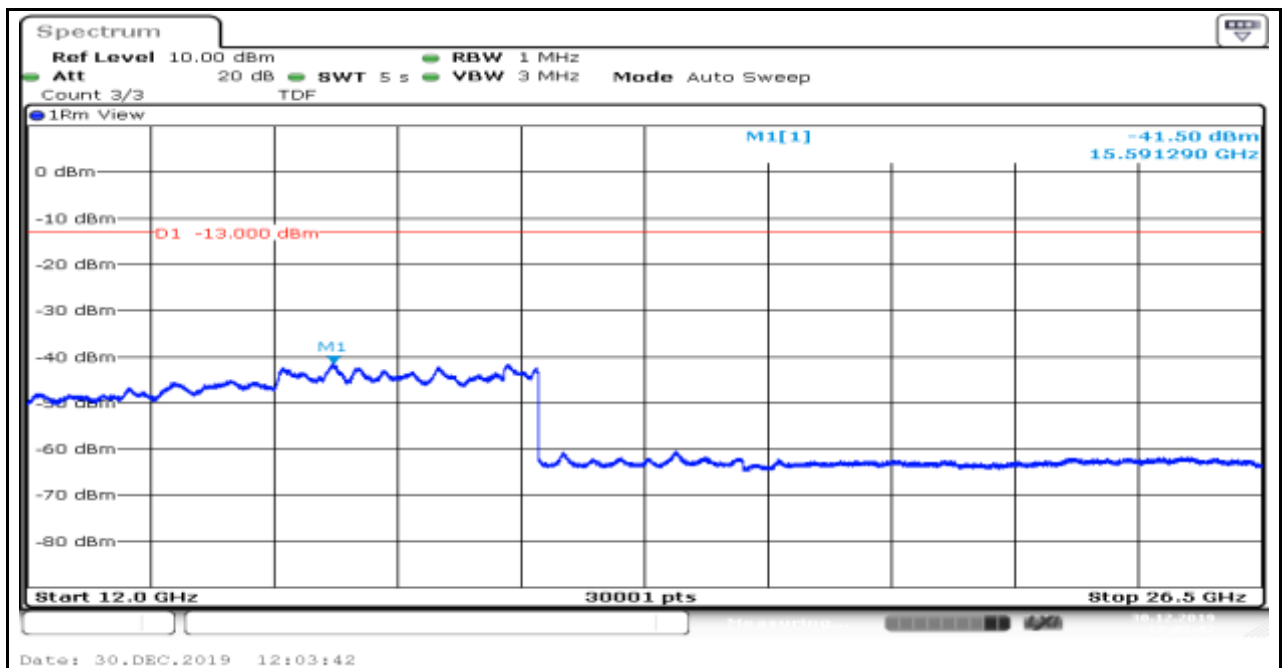
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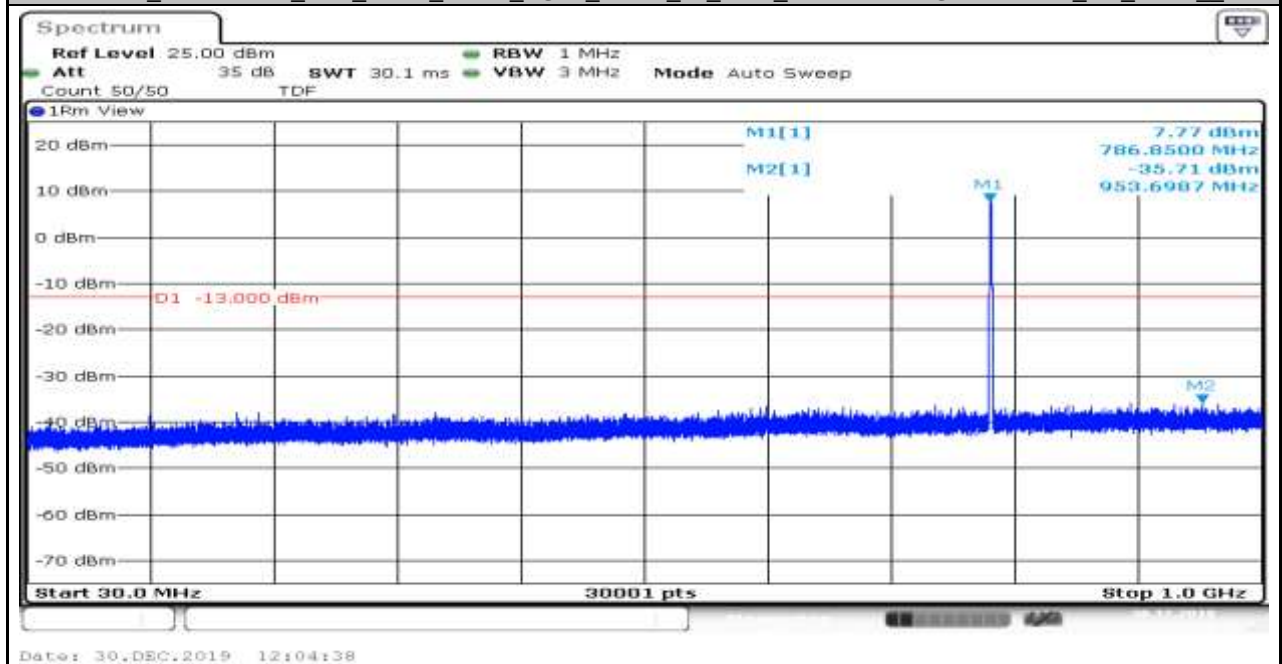
Band13_Stand-Alone_NaN_BPSK_23279_1@0_15kHz_5000_12000_5000~12000MHz@-47.5dBm_-13_PASS



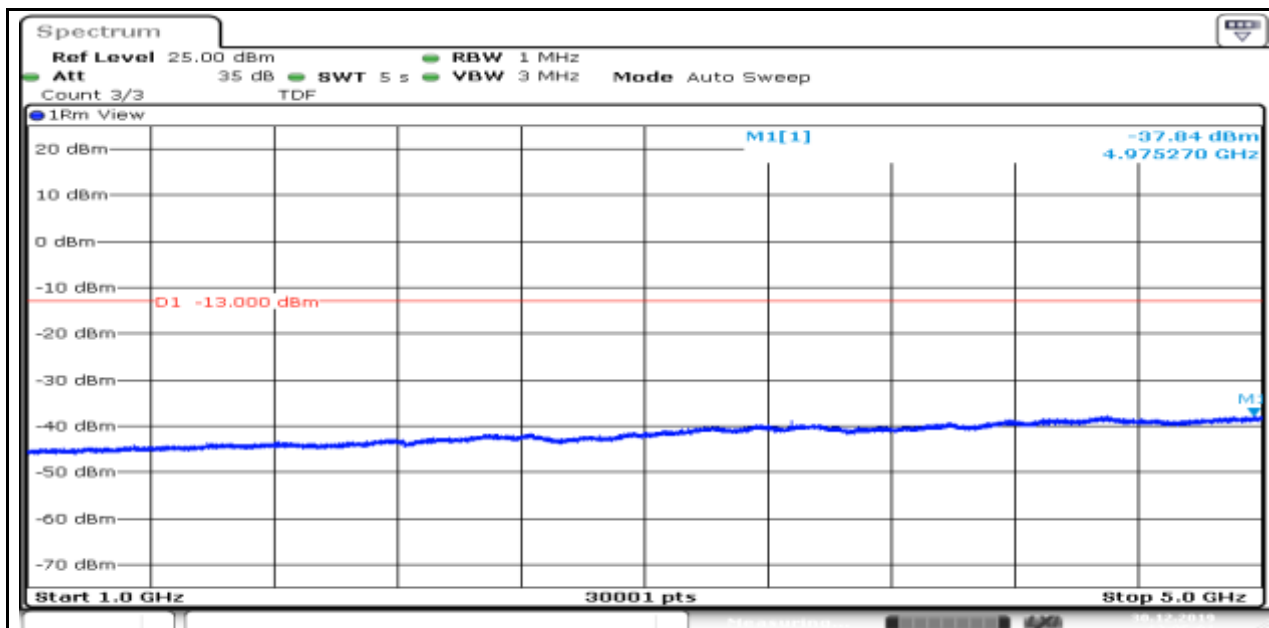
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Band13_Stand-Alone_NaN_BPSK_23279_1@11_15kHz_30_1000_30~1000MHz@-35.71dBm_-13_PASS_

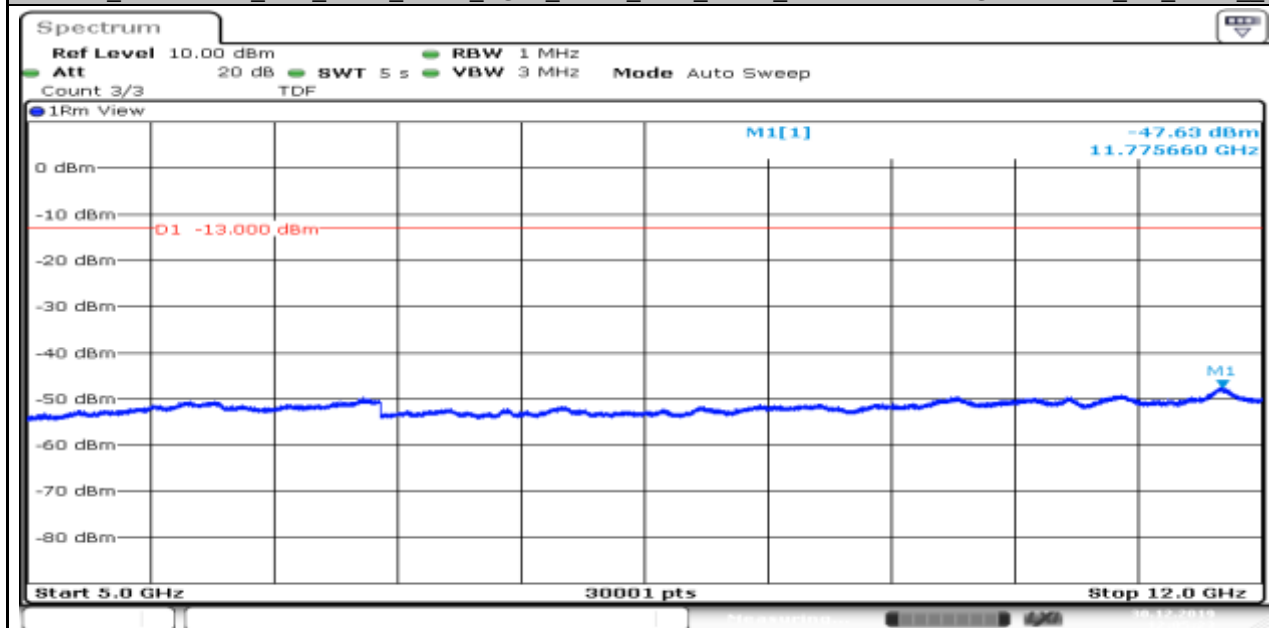


Band13_Stand-Alone_NaN_BPSK_23279_1@11_15kHz_1000_5000_1000~5000MHz@-37.84dBm_-13_PASS_



Date: 30.DEC.2019 12:05:01

Band13_Stand-Alone_NaN_BPSK_23279_1@11_15kHz_5000_12000_5000~12000MHz@-47.63dBm_-13_PASS



Date: 30.DEC.2019 12:05:23

Appendix E.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
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	HV	NT	-9.04	-0.011560	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	HV	NT	-11.07	-0.014156	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	LV	NT	-9.76	-0.012481	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	NV	NT	-10.63	-0.013593	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	HV	NT	-12.09	-0.015460	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	NV	NT	-11.52	-0.014731	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	NV	NT	-14.32	-0.018312	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	LV	NT	-11.00	-0.014066	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	NV	NT	-12.99	-0.016611	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	HV	NT	-7.90	-0.010102	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	LV	NT	-10.69	-0.013670	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	LV	NT	-14.33	-0.018325	±2.5	PASS

Temperature												
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	NV	80	-11.99	-0.015332	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	NV	30	-12.45	-0.015921	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	NV	70	-11.17	-0.014284	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	NV	60	-13.46	-0.017212	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	NV	50	-13.80	-0.017647	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	NV	40	-10.59	-0.013542	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	NV	20	-12.85	-0.016432	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	NV	10	-13.88	-0.017749	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	NV	0	-12.43	-0.015895	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	NV	-10	-10.89	-0.013926	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	NV	-40	-7.45	-0.009527	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	NV	85	-12.87	-0.016458	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	NV	-20	-11.29	-0.014437	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	NV	-40	-13.13	-0.016790	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	NV	-30	-11.53	-0.014744	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	NV	-20	-13.50	-0.017263	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	NV	-10	-12.99	-0.016611	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	NV	0	-12.52	-0.016010	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	NV	10	-10.17	-0.013005	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	NV	20	-14.62	-0.018696	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	NV	30	-13.68	-0.017494	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	NV	40	-12.99	-0.016611	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	NV	50	-9.58	-0.012251	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	NV	60	-9.97	-0.012749	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	NV	70	-13.53	-0.017302	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	NV	85	-12.17	-0.015563	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	NV	85	-7.25	-0.009271	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@11	15kHz	NV	80	-13.18	-0.016854	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	NV	30	-6.92	-0.008849	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	NV	-30	-14.15	-0.018095	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	15kHz	NV	-40	-13.66	-0.017468	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	NV	-30	-7.93	-0.010141	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	NV	-20	-8.63	-0.011036	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	NV	-10	-7.40	-0.009463	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	NV	0	-7.05	-0.009015	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	NV	20	-5.85	-0.007481	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	NV	40	-7.22	-0.009233	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	NV	50	-7.15	-0.009143	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	NV	60	-7.04	-0.009003	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	NV	70	-8.25	-0.010550	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	NV	80	-6.32	-0.008082	±2.5	PASS

Appendix E
50315831 001
Page 59 of 59



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Products

Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	NV	85	-6.41	-0.008197	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	NV	70	-5.99	-0.007660	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@0	3.75kHz	NV	10	-6.25	-0.007992	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	NV	80	-5.54	-0.007084	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	NV	-40	-7.65	-0.009783	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	NV	60	-5.46	-0.006982	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	NV	50	-7.37	-0.009425	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	NV	40	-7.60	-0.009719	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	NV	30	-6.48	-0.008286	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	NV	20	-5.82	-0.007442	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	NV	10	-6.72	-0.008593	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	NV	0	-5.97	-0.007634	±2.5	PASS
Band13	Stand-Alone	NaN	QPSK	23230	1@47	3.75kHz	NV	-10	-8.44	-0.010793	±2.5	PASS