

Appendix I: Test Results of Band 66 for eMTC operation

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Appendix I.1: RF Power Output and Effective (Isotropic) Radiated Power Output Data for M1

Test Result

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NBIndex	Result (dBm)	EIRP		Limit (watts)	Verdict
								dBm	Watts		
Band66	1.4MHz	QPSK	131979	1	0	Low	21.44	23.58	0.228	1	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	21.5	23.64	0.231	1	PASS
Band66	1.4MHz	QPSK	132665	1	5	Low	21.99	24.13	0.259	1	PASS
Band66	1.4MHz	QPSK	131979	6	0	Low	19.15	21.29	0.135	1	PASS
Band66	1.4MHz	QPSK	132322	6	0	Low	19.24	21.38	0.137	1	PASS
Band66	1.4MHz	QPSK	132665	6	0	Low	19.44	21.58	0.144	1	PASS
Band66	1.4MHz	16QAM	131979	1	0	Low	20.23	22.37	0.173	1	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	20.34	22.48	0.177	1	PASS
Band66	1.4MHz	16QAM	132665	1	5	Low	20.25	22.39	0.173	1	PASS
Band66	1.4MHz	16QAM	131979	6	0	Low	19.54	21.68	0.147	1	PASS
Band66	1.4MHz	16QAM	132322	6	0	Low	19.07	21.21	0.132	1	PASS
Band66	1.4MHz	16QAM	132665	6	0	Low	20.12	22.26	0.168	1	PASS
Band66	3MHz	QPSK	131987	1	0	Low	21.25	23.39	0.218	1	PASS
Band66	3MHz	QPSK	132322	1	0	Low	21.34	23.48	0.223	1	PASS
Band66	3MHz	QPSK	132657	1	5	High	21.92	24.06	0.255	1	PASS
Band66	3MHz	QPSK	131987	6	0	Low	19.24	21.38	0.137	1	PASS
Band66	3MHz	QPSK	132322	6	0	Low	18.98	21.12	0.129	1	PASS
Band66	3MHz	QPSK	132657	6	0	High	19.41	21.55	0.143	1	PASS
Band66	3MHz	16QAM	131987	1	0	Low	20.7	22.84	0.192	1	PASS
Band66	3MHz	16QAM	132322	1	0	Low	20.53	22.67	0.185	1	PASS
Band66	3MHz	16QAM	132657	1	5	High	20.82	22.96	0.198	1	PASS
Band66	3MHz	16QAM	131987	6	0	Low	19.24	21.38	0.137	1	PASS
Band66	3MHz	16QAM	132322	6	0	Low	18.97	21.11	0.129	1	PASS
Band66	3MHz	16QAM	132657	6	0	High	19.46	21.6	0.145	1	PASS
Band66	5MHz	QPSK	131997	1	0	Low	21.4	23.54	0.226	1	PASS
Band66	5MHz	QPSK	132322	1	0	Low	21.42	23.56	0.227	1	PASS
Band66	5MHz	QPSK	132647	1	5	High	21.56	23.7	0.234	1	PASS
Band66	5MHz	QPSK	132647	3	3	High	21.49	23.63	0.231	1	PASS
Band66	5MHz	QPSK	131997	6	0	Low	20.34	22.48	0.177	1	PASS
Band66	5MHz	QPSK	132322	6	0	Low	20.16	22.3	0.170	1	PASS
Band66	5MHz	16QAM	131997	1	0	Low	21.11	23.25	0.211	1	PASS
Band66	5MHz	16QAM	132322	1	0	Low	21.2	23.34	0.216	1	PASS
Band66	5MHz	16QAM	132647	1	5	High	21.01	23.15	0.207	1	PASS
Band66	5MHz	16QAM	132647	3	3	High	21.47	23.61	0.230	1	PASS
Band66	5MHz	16QAM	131997	6	0	Low	20.34	22.48	0.177	1	PASS
Band66	5MHz	16QAM	132322	6	0	Low	20.35	22.49	0.177	1	PASS
Band66	10MHz	QPSK	132022	1	0	Low	21.43	23.57	0.228	1	PASS
Band66	10MHz	QPSK	132322	1	0	Low	21.38	23.52	0.225	1	PASS
Band66	10MHz	QPSK	132622	1	5	High	21.68	23.82	0.241	1	PASS
Band66	10MHz	QPSK	132022	5	0	Low	21.11	23.25	0.211	1	PASS
Band66	10MHz	QPSK	132322	5	0	Low	21.25	23.39	0.218	1	PASS
Band66	10MHz	QPSK	132622	5	1	High	21.58	23.72	0.236	1	PASS
Band66	10MHz	16QAM	132022	1	0	Low	21.08	23.22	0.210	1	PASS
Band66	10MHz	16QAM	132322	1	0	Low	20.96	23.1	0.204	1	PASS
Band66	10MHz	16QAM	132622	1	5	High	21.2	23.34	0.216	1	PASS
Band66	10MHz	16QAM	132022	5	0	Low	21.09	23.23	0.210	1	PASS
Band66	10MHz	16QAM	132322	5	0	Low	21.05	23.19	0.208	1	PASS
Band66	10MHz	16QAM	132622	5	1	High	21.58	23.72	0.236	1	PASS
Band66	15MHz	QPSK	132047	1	0	Low	21.51	23.65	0.232	1	PASS
Band66	15MHz	QPSK	132322	1	0	Low	21.36	23.5	0.224	1	PASS
Band66	15MHz	QPSK	132597	1	5	High	21.65	23.79	0.239	1	PASS

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Band66	15MHz	QPSK	132047	6	0	Low	21.25	23.39	0.218	1	PASS
Band66	15MHz	QPSK	132322	6	0	Low	21.19	23.33	0.215	1	PASS
Band66	15MHz	QPSK	132597	6	0	High	21.69	23.83	0.242	1	PASS
Band66	15MHz	16QAM	132047	1	0	Low	21.03	23.17	0.207	1	PASS
Band66	15MHz	16QAM	132322	1	0	Low	21.16	23.3	0.214	1	PASS
Band66	15MHz	16QAM	132597	1	5	High	21.22	23.36	0.217	1	PASS
Band66	15MHz	16QAM	132047	6	0	Low	21.25	23.39	0.218	1	PASS
Band66	15MHz	16QAM	132322	6	0	Low	21.21	23.35	0.216	1	PASS
Band66	15MHz	16QAM	132597	6	0	High	21.76	23.9	0.245	1	PASS
Band66	20MHz	QPSK	132072	1	0	Low	21.48	23.62	0.230	1	PASS
Band66	20MHz	QPSK	132322	1	0	Low	21.42	23.56	0.227	1	PASS
Band66	20MHz	QPSK	132572	1	5	High	21.57	23.71	0.235	1	PASS
Band66	20MHz	QPSK	132072	6	0	Low	21.34	23.48	0.223	1	PASS
Band66	20MHz	QPSK	132322	6	0	Low	21.26	23.4	0.219	1	PASS
Band66	20MHz	QPSK	132572	6	0	High	21.69	23.83	0.242	1	PASS
Band66	20MHz	16QAM	132072	1	0	Low	21.06	23.2	0.209	1	PASS
Band66	20MHz	16QAM	132322	1	0	Low	21.1	23.24	0.211	1	PASS
Band66	20MHz	16QAM	132572	1	5	High	20.92	23.06	0.202	1	PASS
Band66	20MHz	16QAM	132072	6	0	Low	21.34	23.48	0.223	1	PASS
Band66	20MHz	16QAM	132322	6	0	Low	21.26	23.4	0.219	1	PASS
Band66	20MHz	16QAM	132572	6	0	High	21.91	24.05	0.254	1	PASS

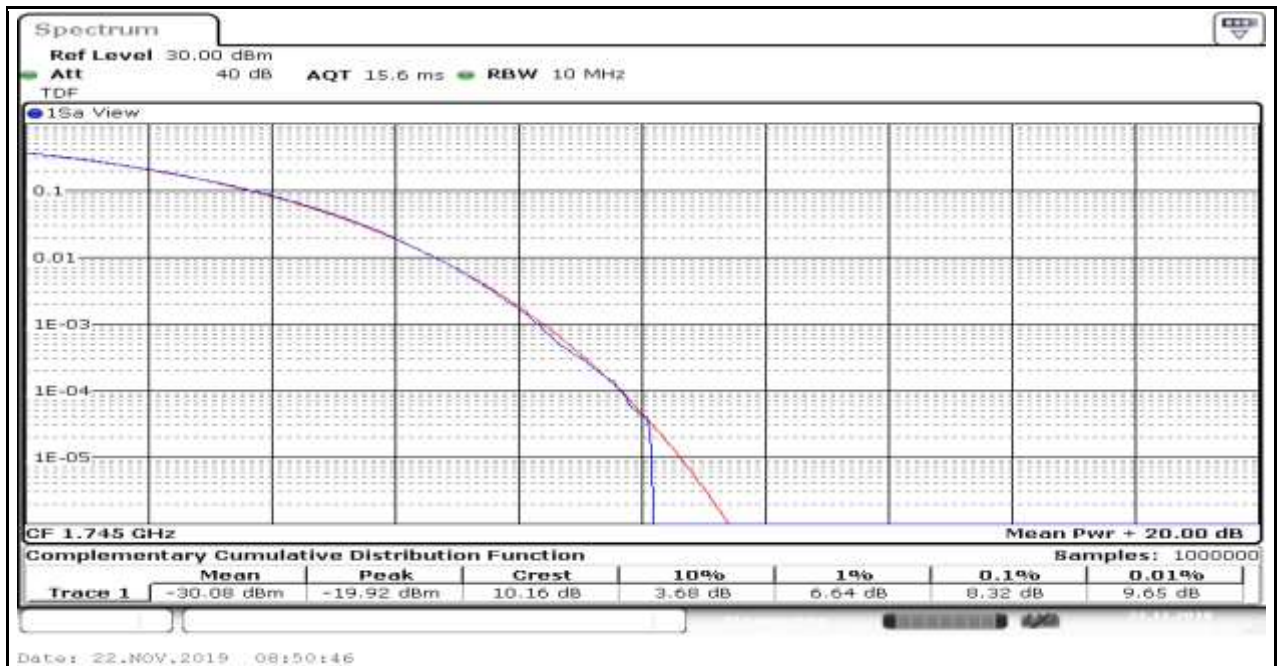
Appendix I.2: Peak-to-Average Ratio (CCDF) for M1

Test Result

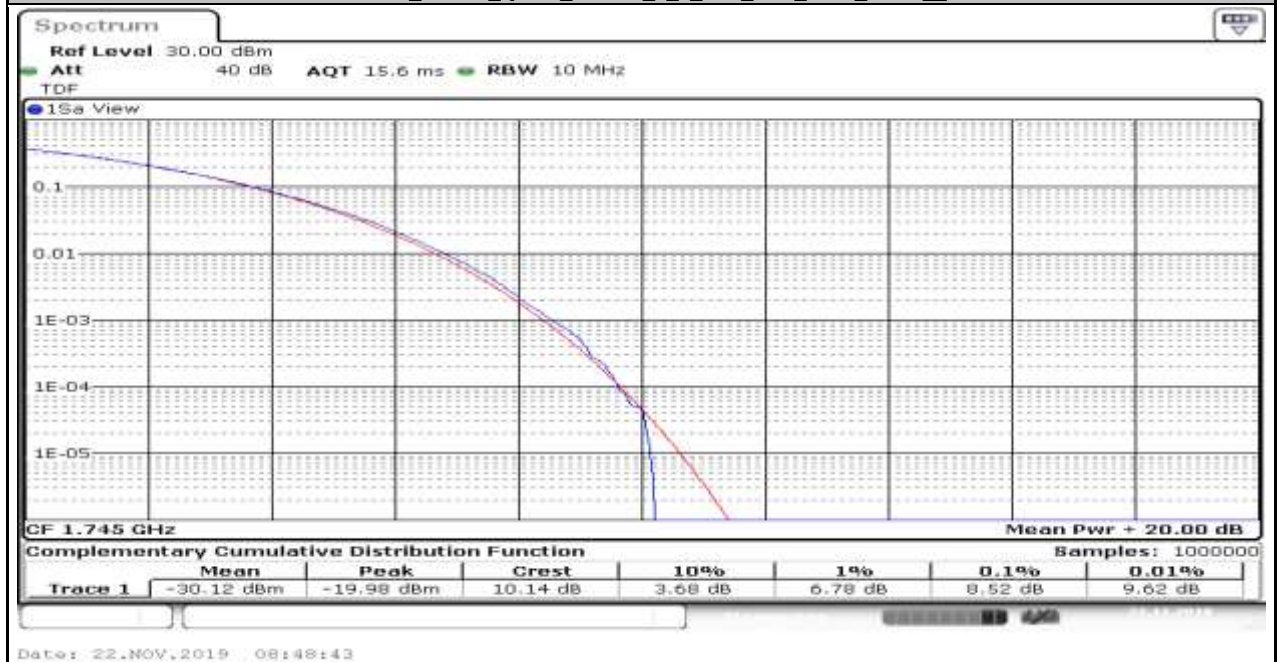
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band66	20MHz	QPSK	132322	6	0	Low	8.61	<=13	PASS
Band66	15MHz	QPSK	132322	6	0	Low	8.32	<=13	PASS
Band66	10MHz	QPSK	132322	6	0	Low	8.52	<=13	PASS
Band66	5MHz	QPSK	132322	6	0	Low	8.41	<=13	PASS
Band66	3MHz	QPSK	132322	6	0	Low	5.77	<=13	PASS
Band66	1.4MHz	QPSK	132322	6	0	Low	8.61	<=13	PASS
Band66	20MHz	16QAM	132322	6	0	Low	8.43	<=13	PASS
Band66	15MHz	16QAM	132322	6	0	Low	8.93	<=13	PASS
Band66	10MHz	16QAM	132322	6	0	Low	8.78	<=13	PASS
Band66	5MHz	16QAM	132322	6	0	Low	11.59	<=13	PASS
Band66	3MHz	16QAM	132322	6	0	Low	9.45	<=13	PASS
Band66	1.4MHz	16QAM	132322	6	0	Low	10.26	<=13	PASS

Test Graphs

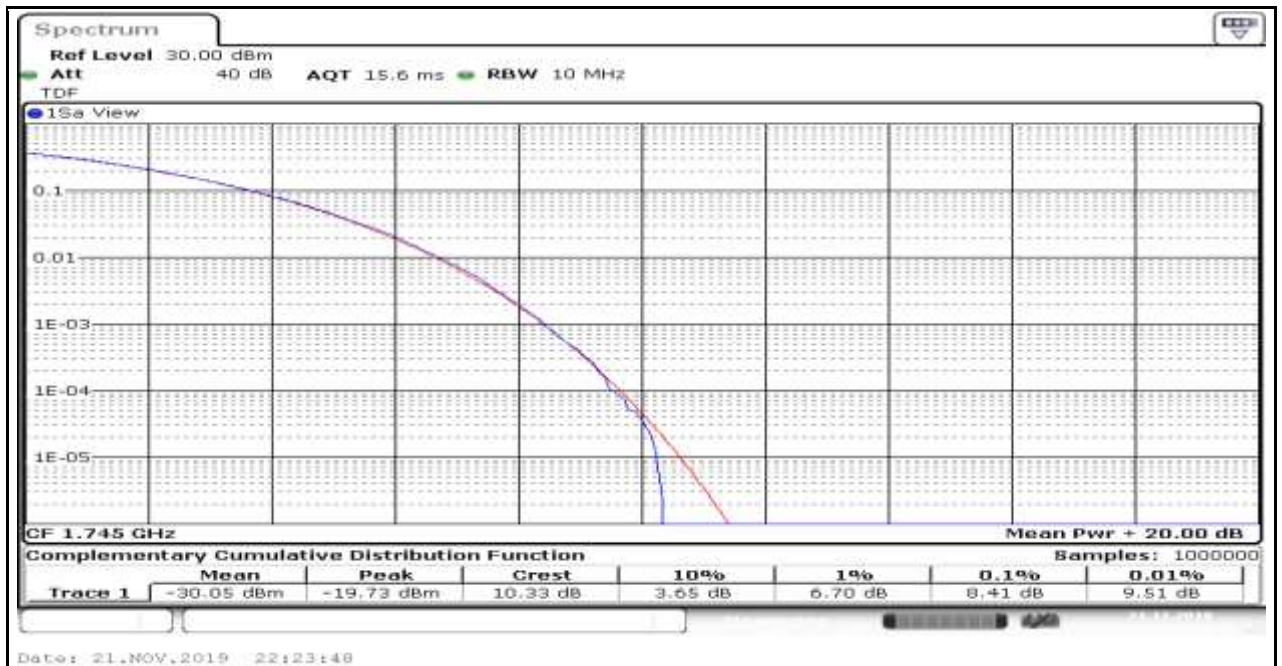




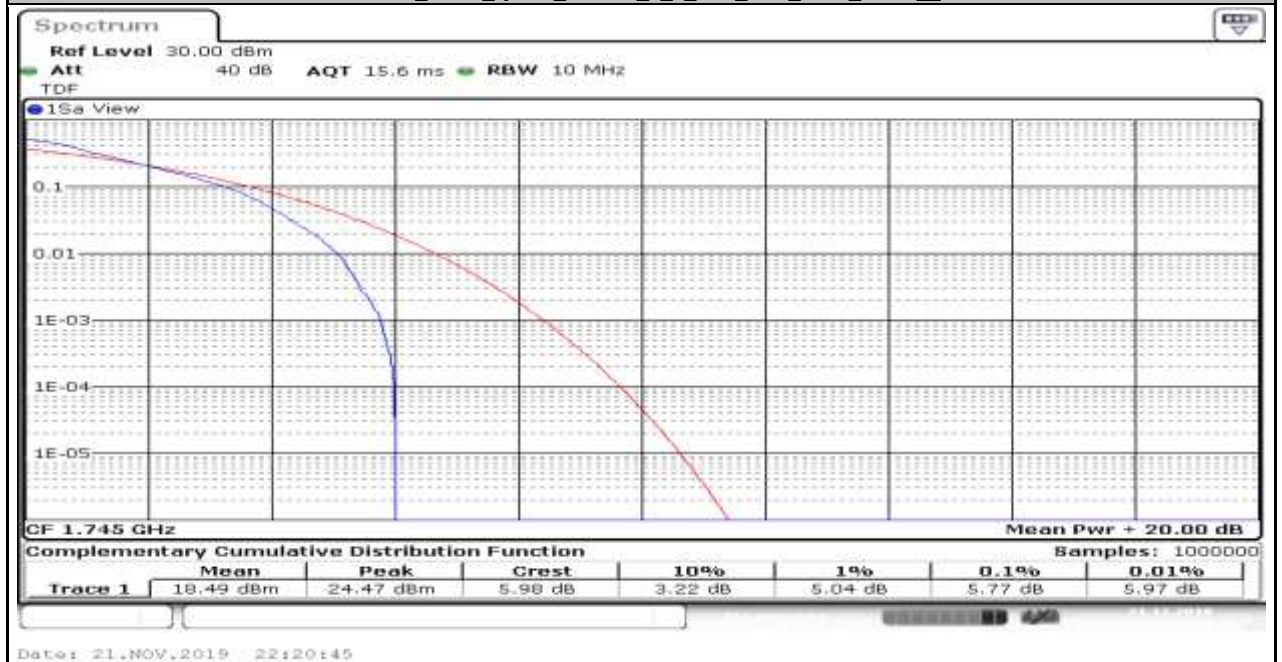
Band66_10MHz_QPSK_132322_6_0_Low_8.52_<=13_PASS



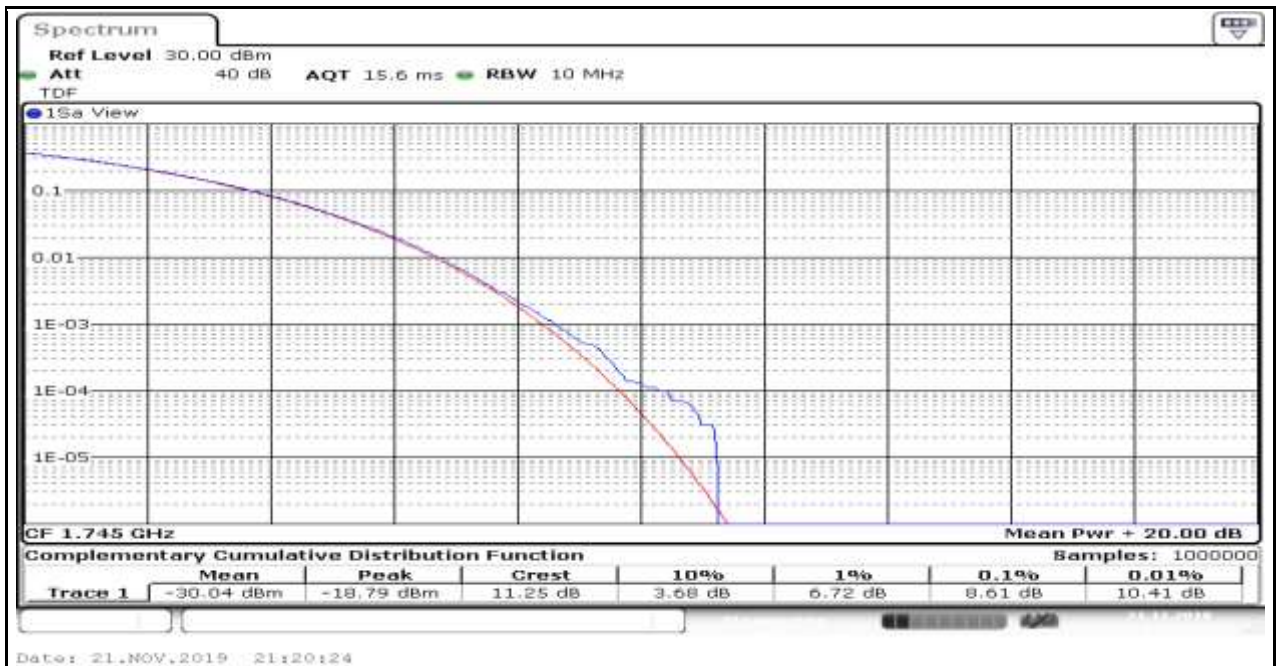
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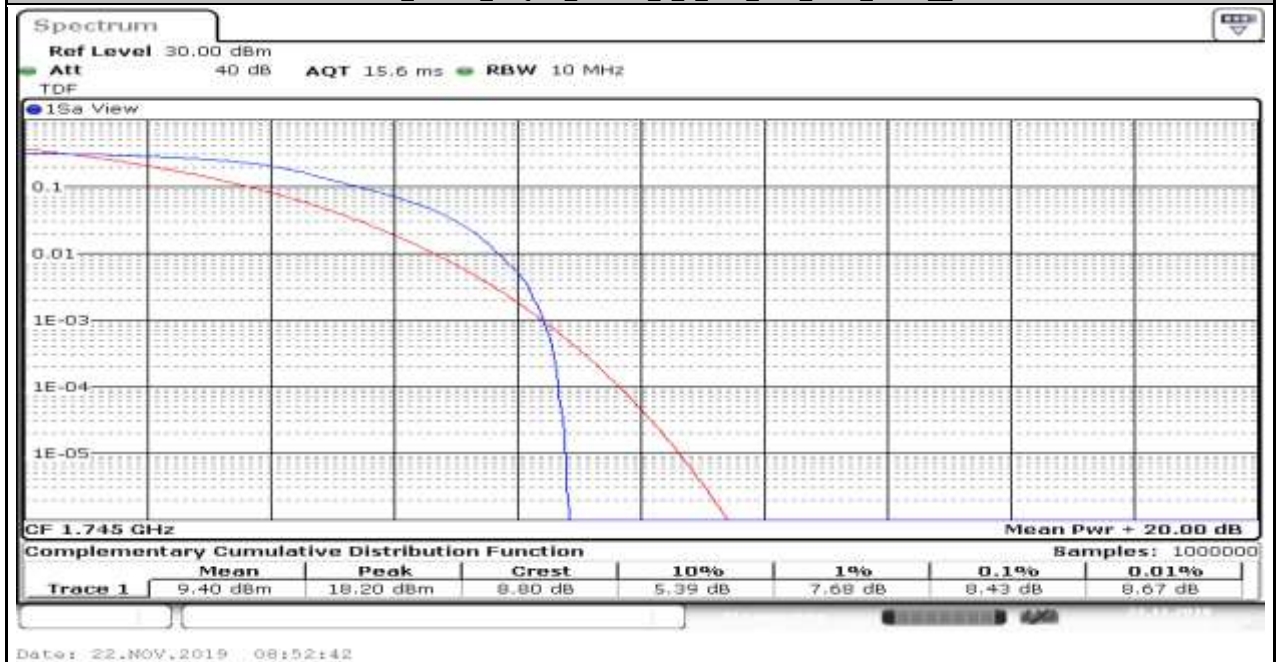
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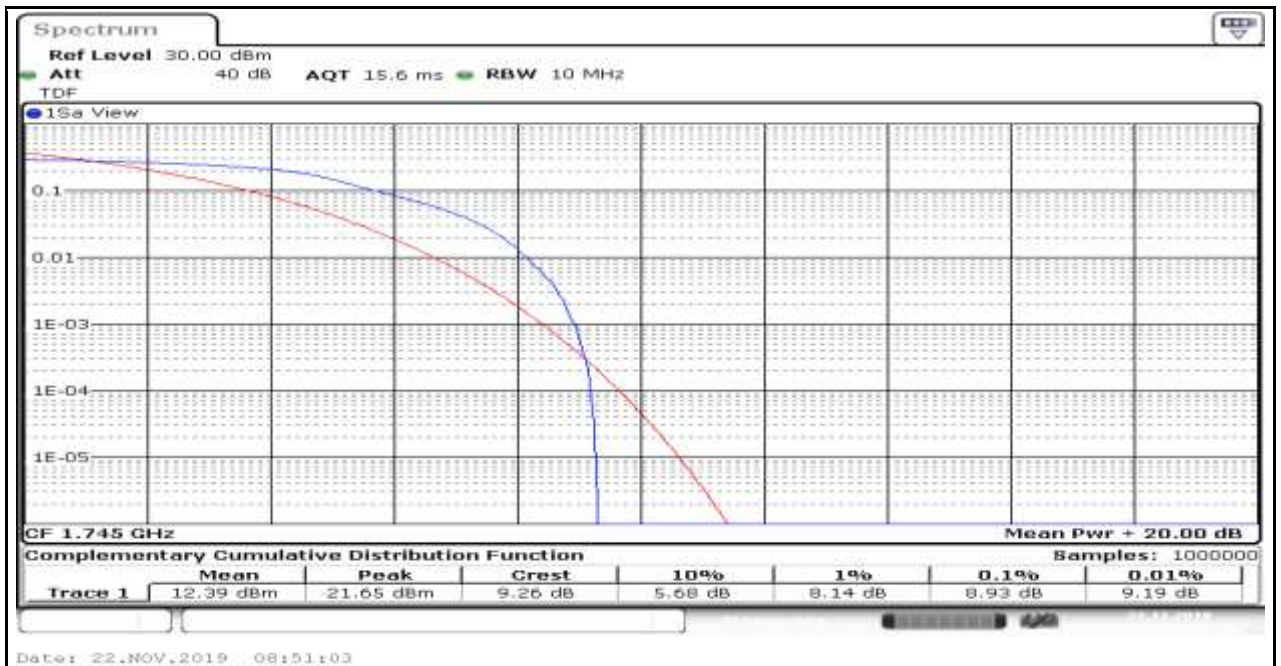
Band66_1.4MHz_QPSK_132322_6_0_Low_8.61_<=13_PASS_



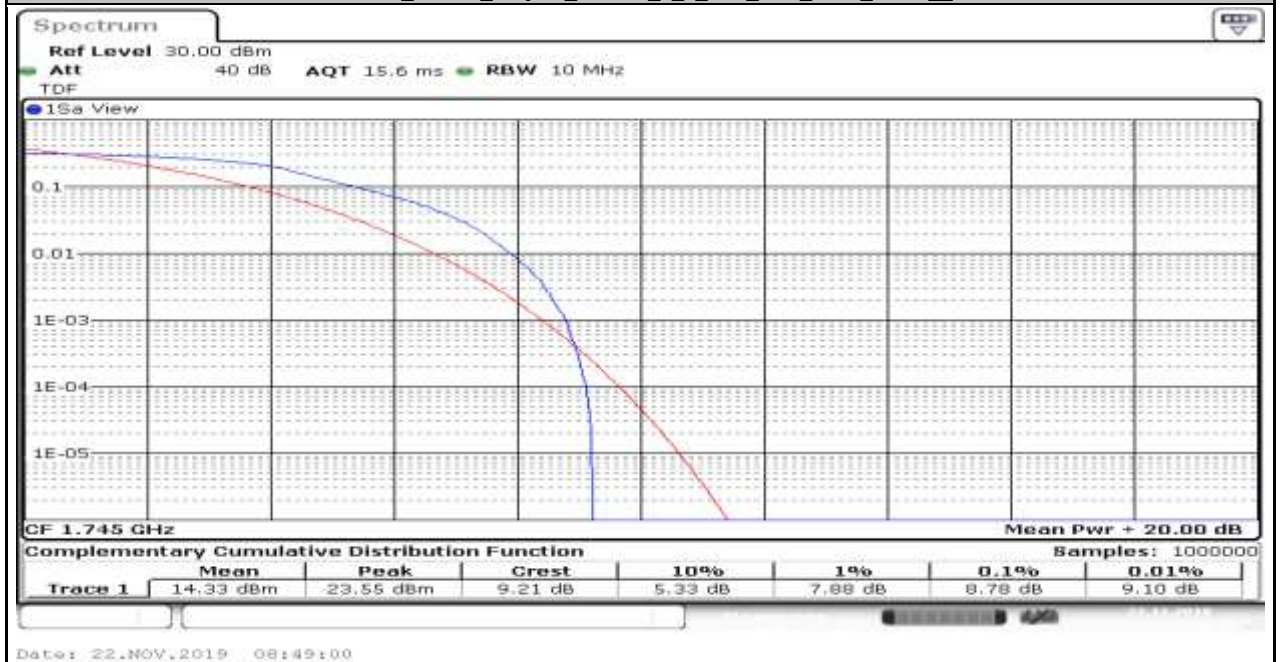
Band66_20MHz_16QAM_132322_6_0_Low_8.43_<=13_PASS_



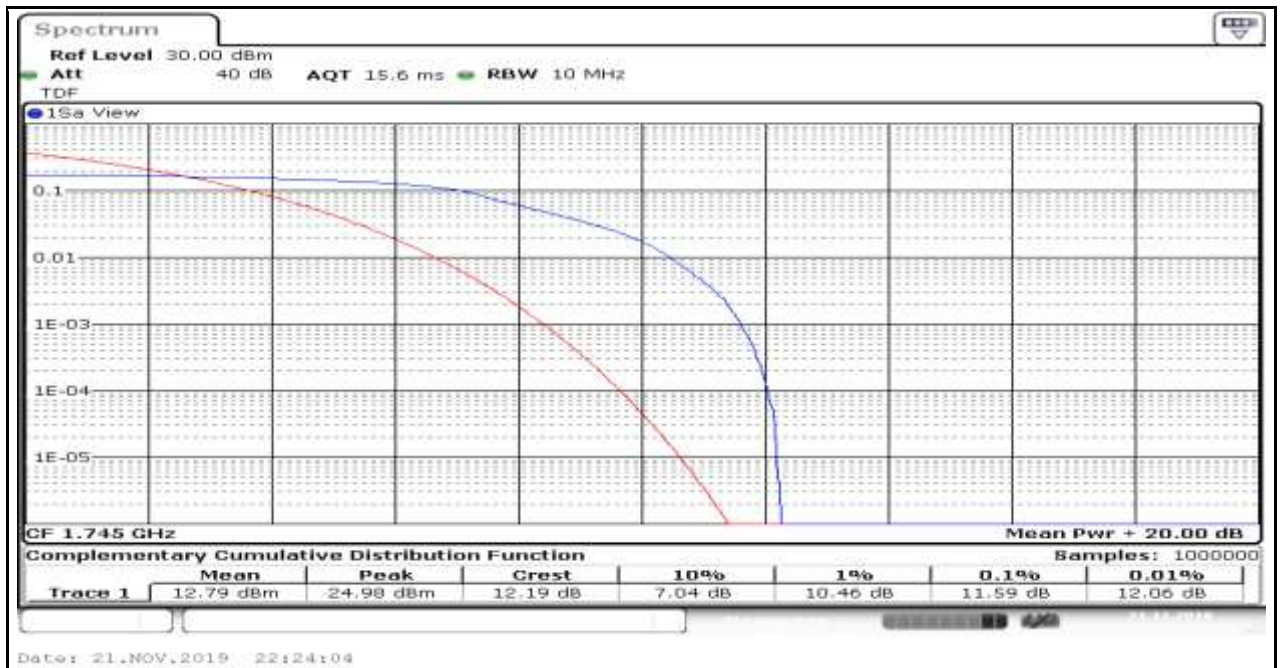
Band66_15MHz_16QAM_132322_6_0_Low_8.93_<=13_PASS_



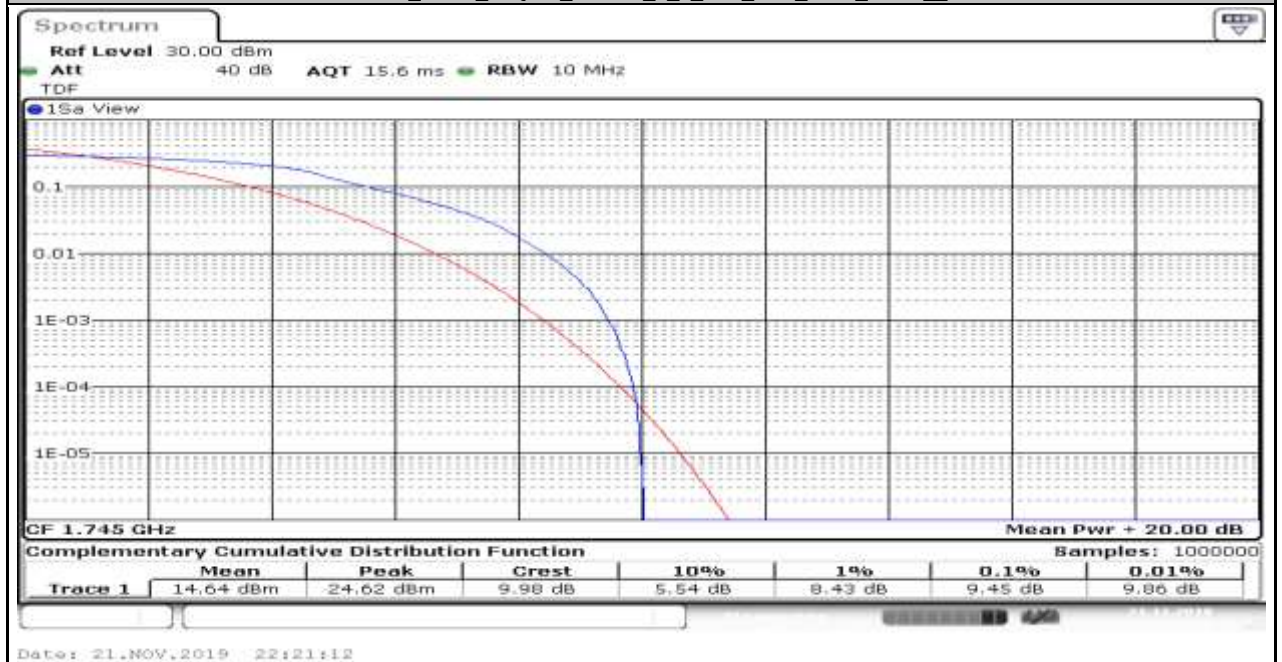
Band66_10MHz_16QAM_132322_6_0_Low_8.78_<=13_PASS_



Band66_5MHz_16QAM_132322_6_0_Low_11.59_<=13_PASS_



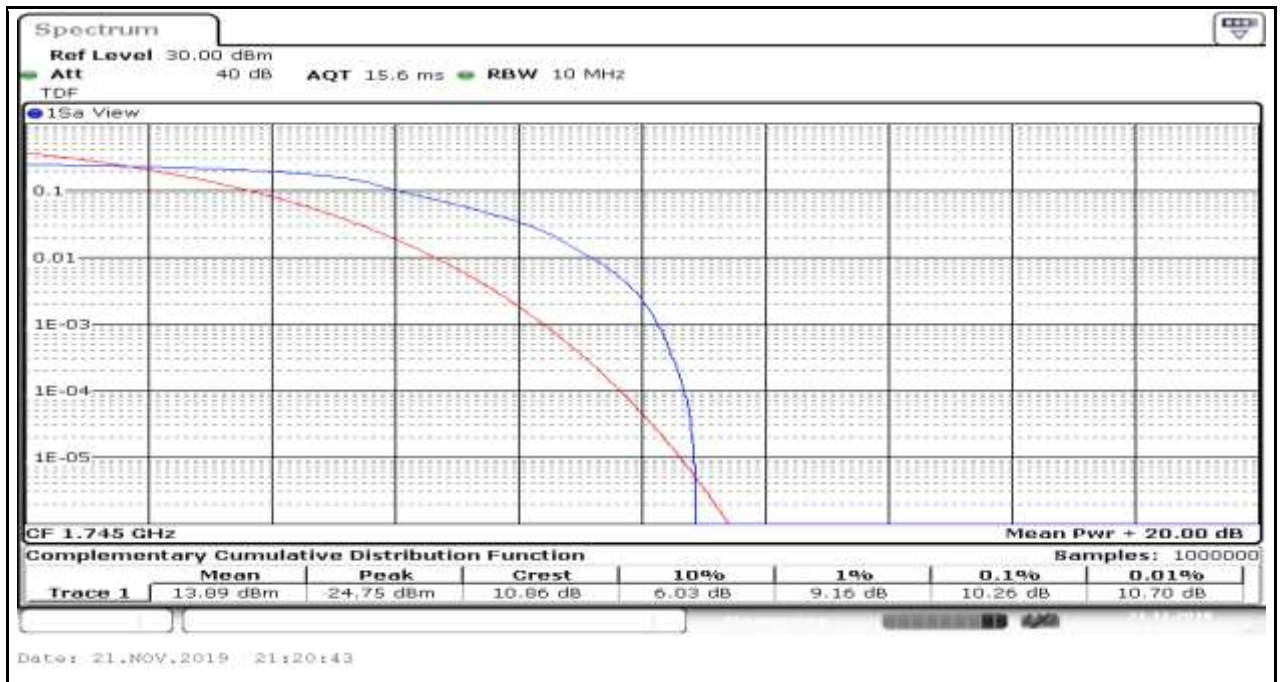
Band66_3MHz_16QAM_132322_6_0_Low_9.45_<=13_PASS_



Band66_1.4MHz_16QAM_132322_6_0_Low_10.26_<=13_PASS_

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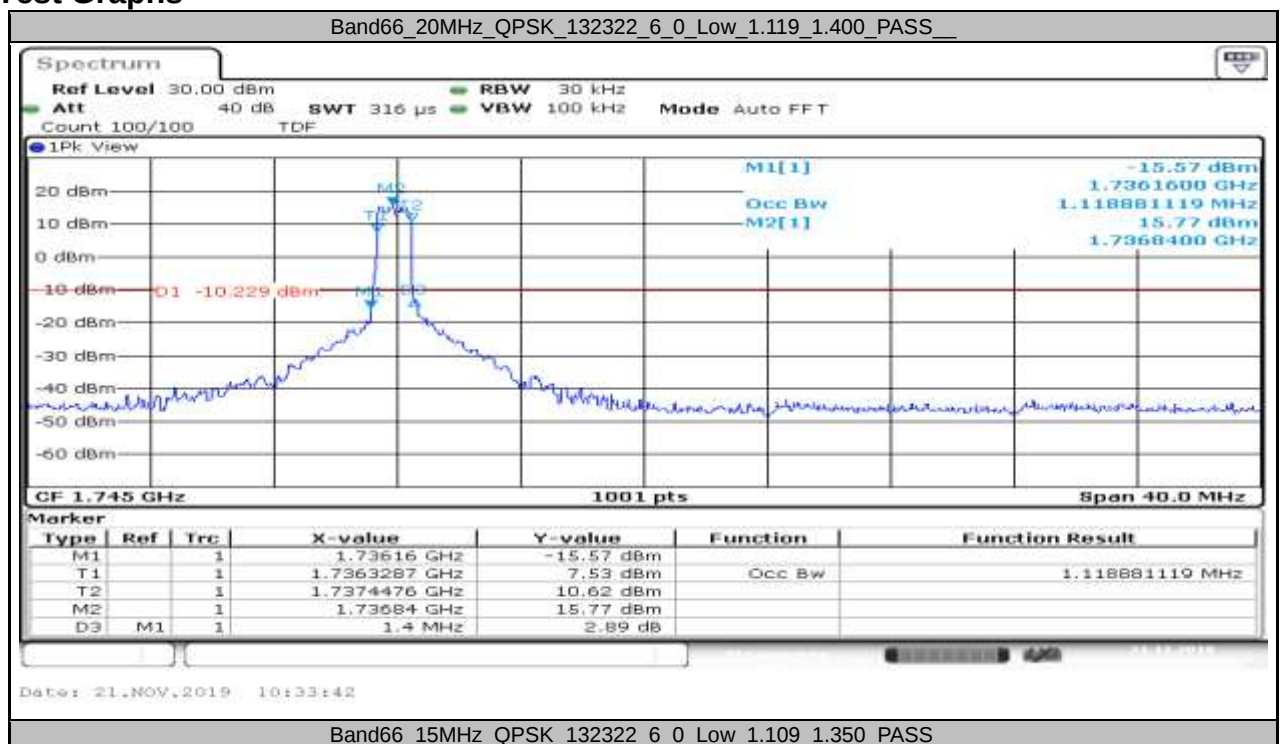


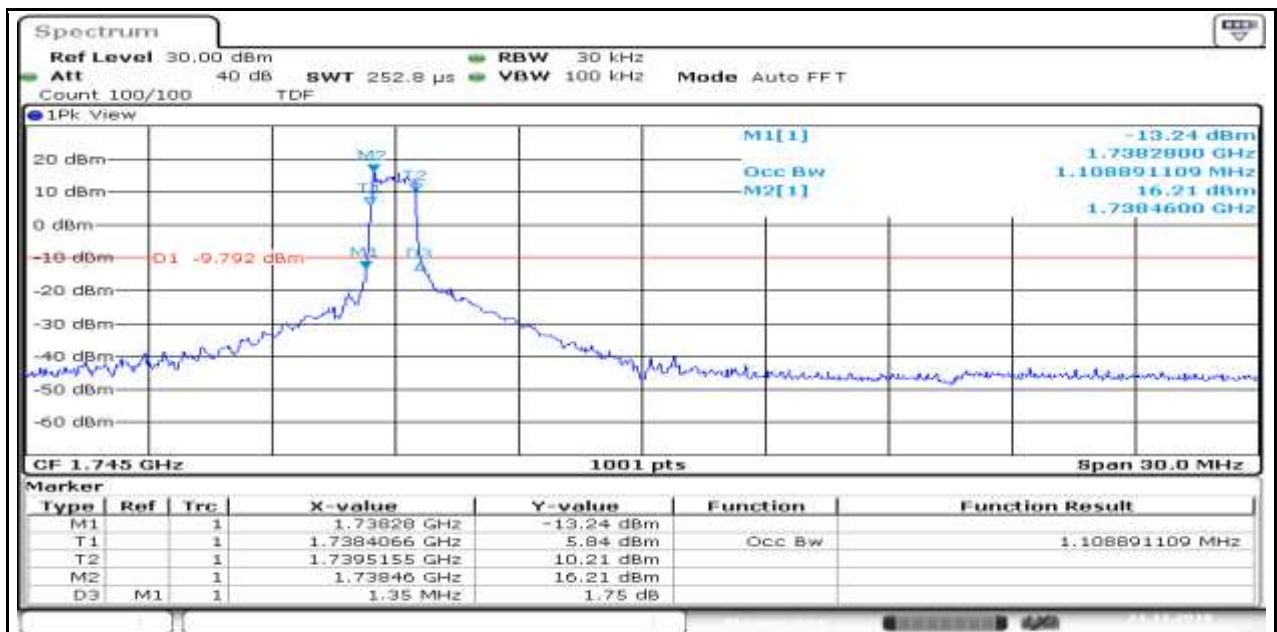
Appendix I.3: 26dB Bandwidth and Occupied Bandwidth for M1

Test Result

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band66	20MHz	QPSK	132322	6	0	Low	1.119	1.400	PASS
Band66	15MHz	QPSK	132322	6	0	Low	1.109	1.350	PASS
Band66	10MHz	QPSK	132322	6	0	Low	1.099	1.300	PASS
Band66	5MHz	QPSK	132322	6	0	Low	1.089	1.290	PASS
Band66	3MHz	QPSK	132322	6	0	Low	1.097	1.284	PASS
Band66	1.4MHz	QPSK	132322	6	0	Low	1.094	1.281	PASS
Band66	20MHz	16QAM	132322	6	0	Low	1.119	1.400	PASS
Band66	15MHz	16QAM	132322	6	0	Low	1.109	1.350	PASS
Band66	10MHz	16QAM	132322	6	0	Low	1.099	1.320	PASS
Band66	5MHz	16QAM	132322	6	0	Low	1.099	1.330	PASS
Band66	3MHz	16QAM	132322	6	0	Low	1.103	1.314	PASS
Band66	1.4MHz	16QAM	132322	6	0	Low	1.1	1.308	PASS

Test Graphs

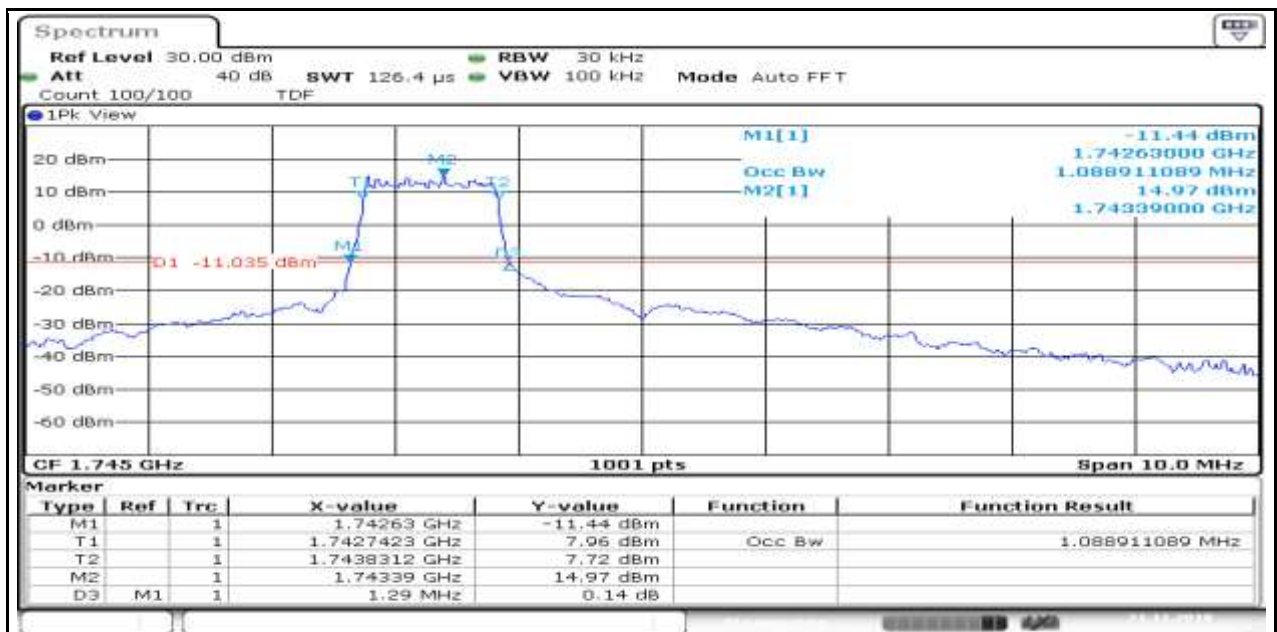




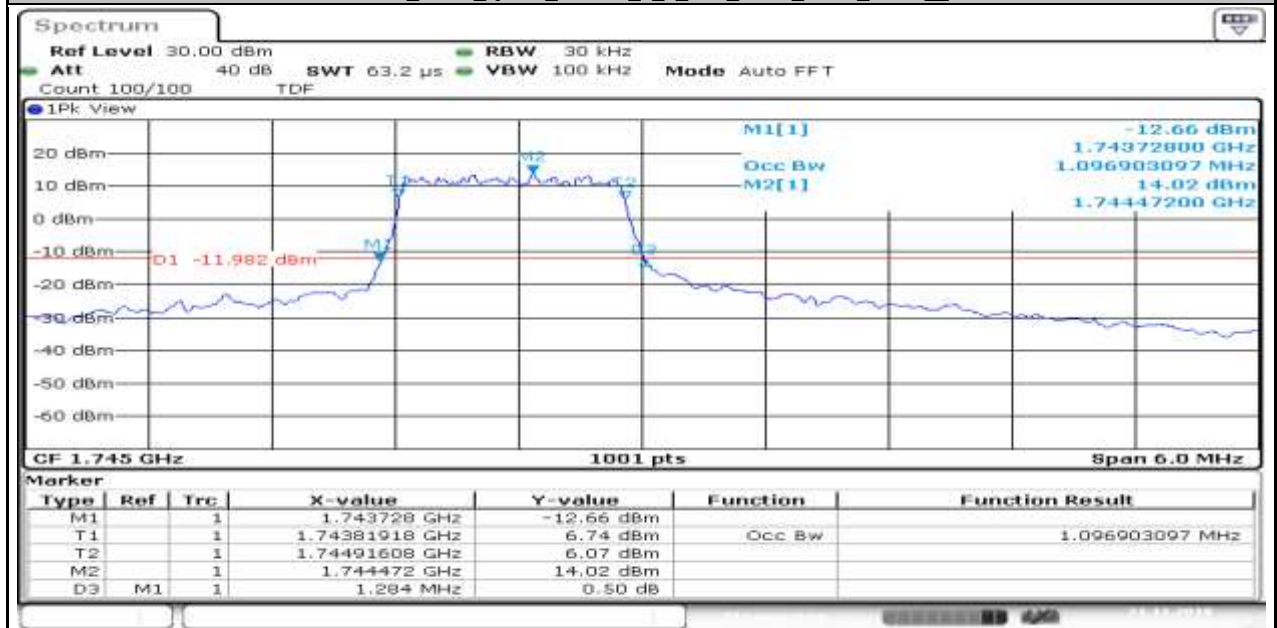
Band66_10MHz_QPSK_132322_6_0_Low_1.099_1.300_PASS_



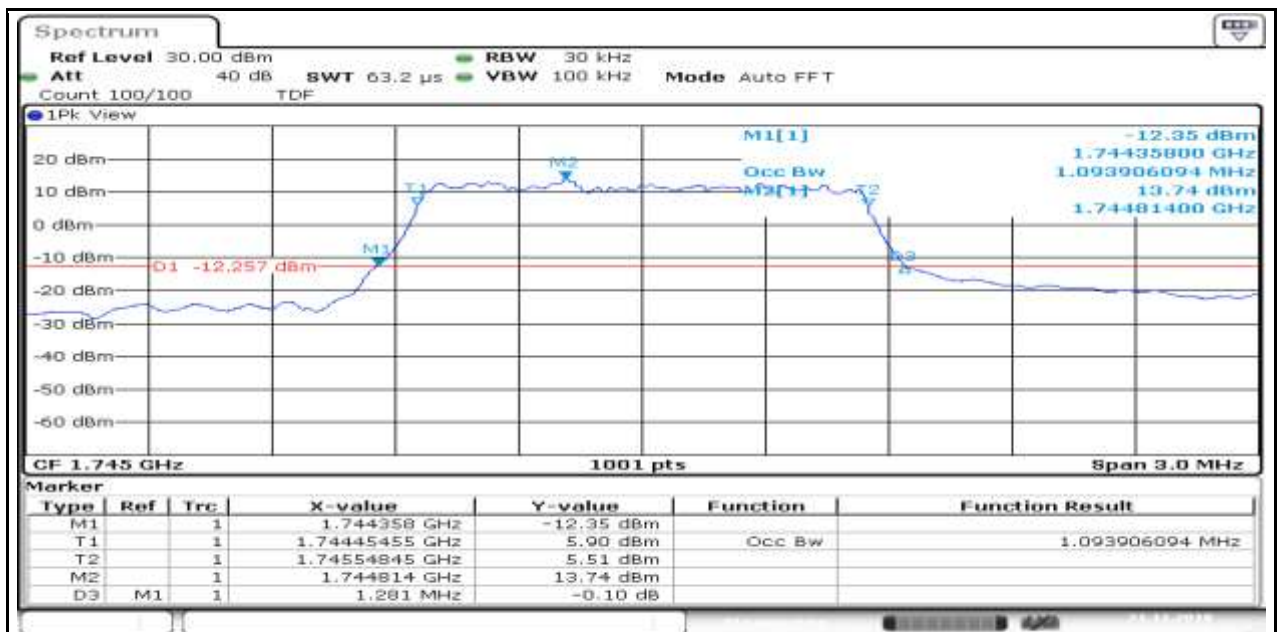
Band66_5MHz_QPSK_132322_6_0_Low_1.089_1.290_PASS_



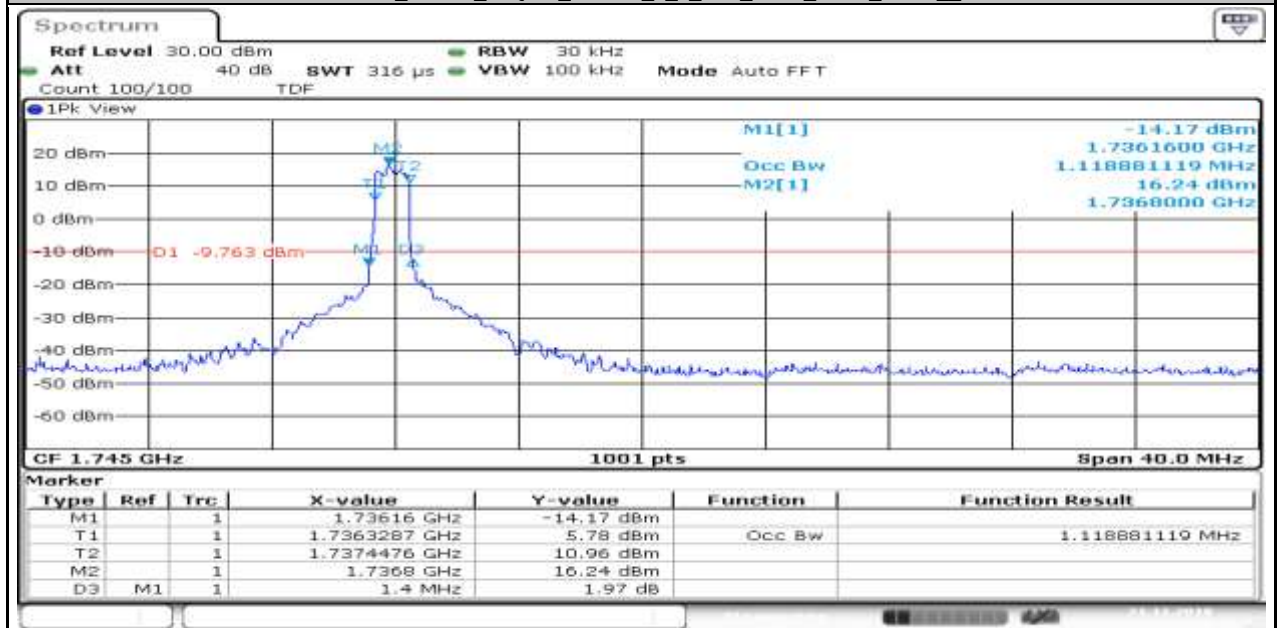
Band66_3MHz_QPSK_132322_6_0_Low_1.097_1.284_PASS_



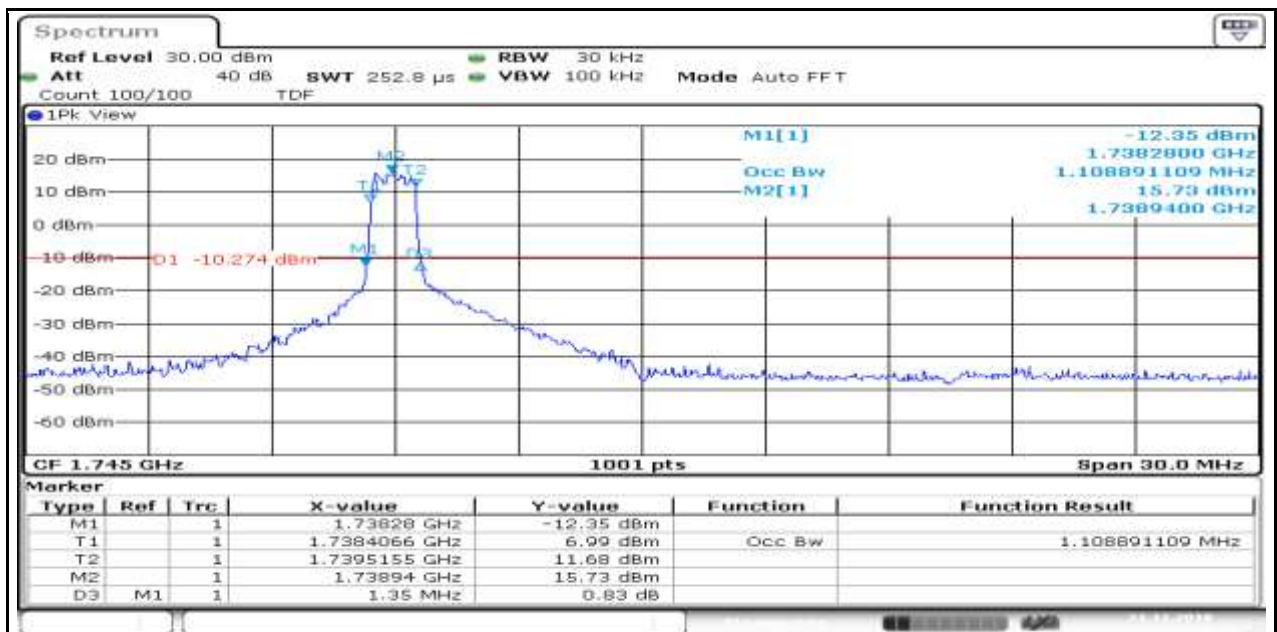
Band66_1.4MHz_QPSK_132322_6_0_Low_1.094_1.281_PASS_



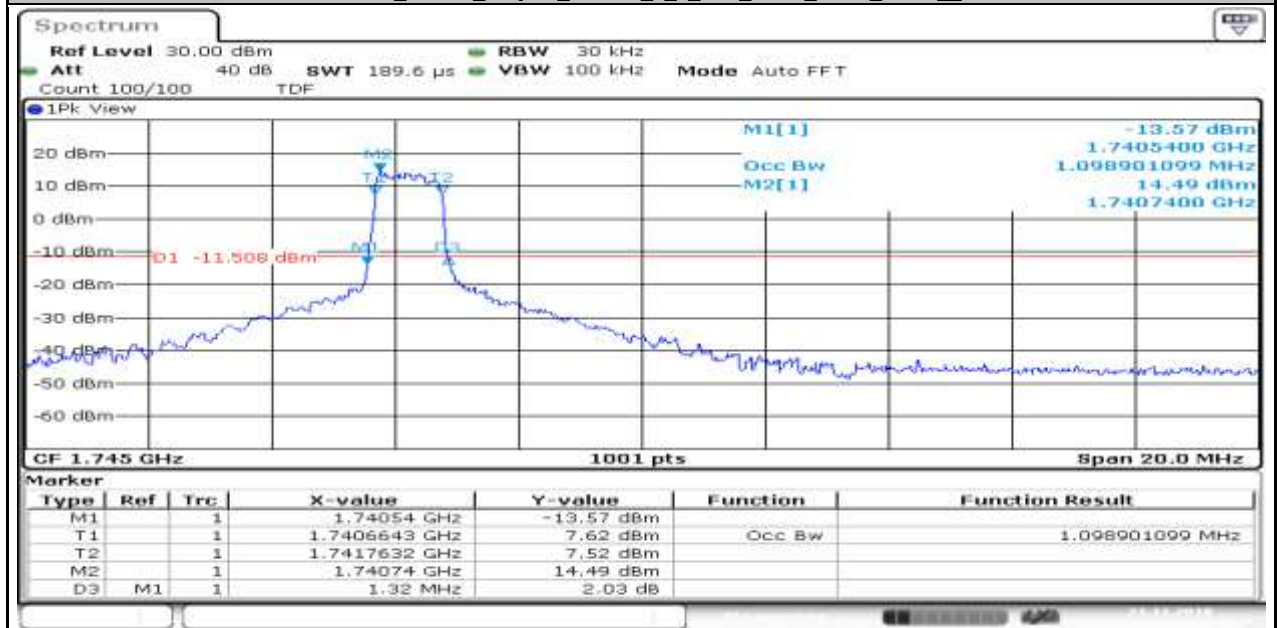
Band66_20MHz_16QAM_132322_6_0_Low_1.119_1.400_PASS



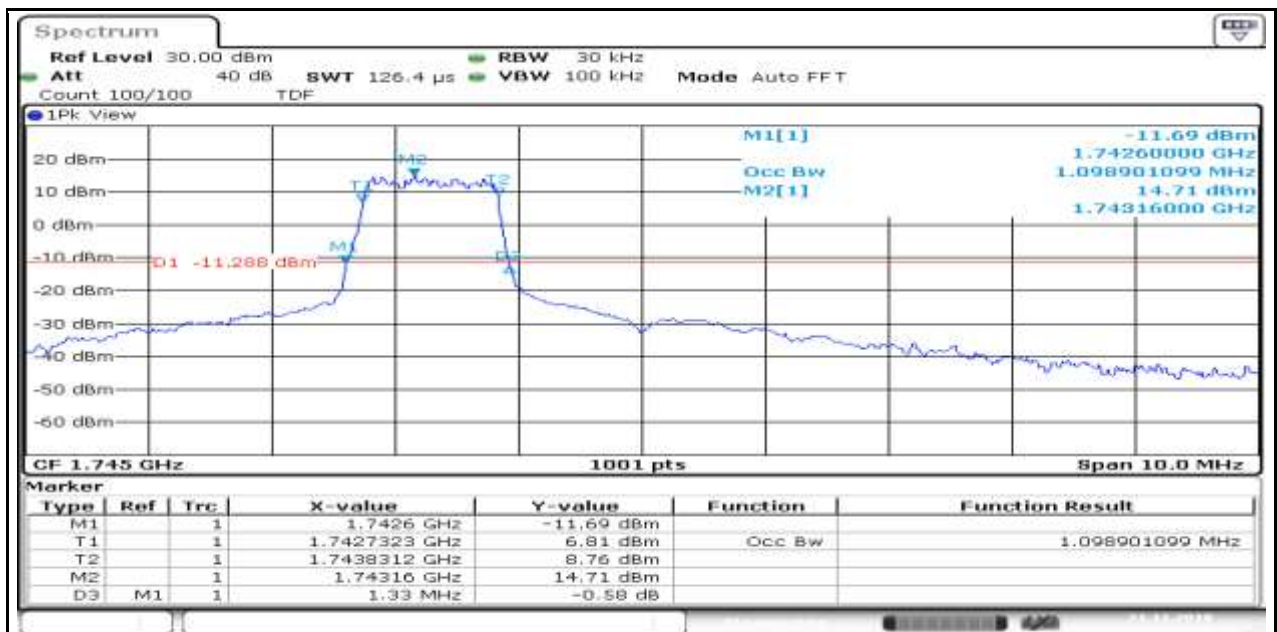
Band66_15MHz_16QAM_132322_6_0_Low_1.109_1.350_PASS



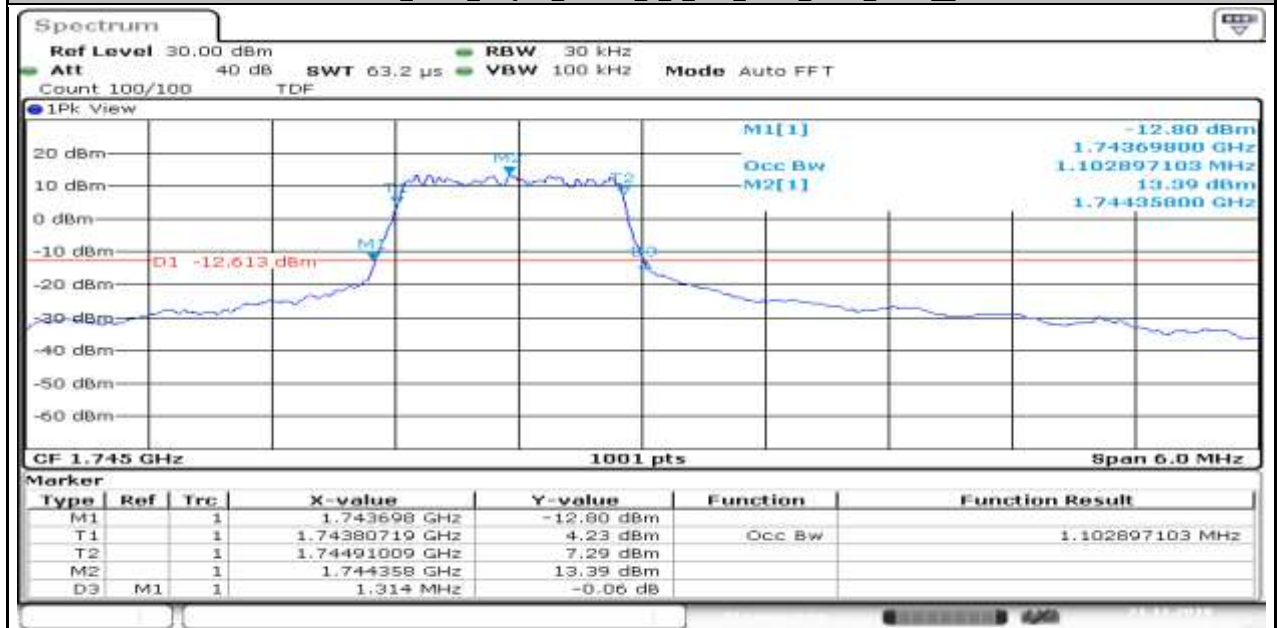
Band66_10MHz_16QAM_132322_6_0_Low_1.099_1.320_PASS_



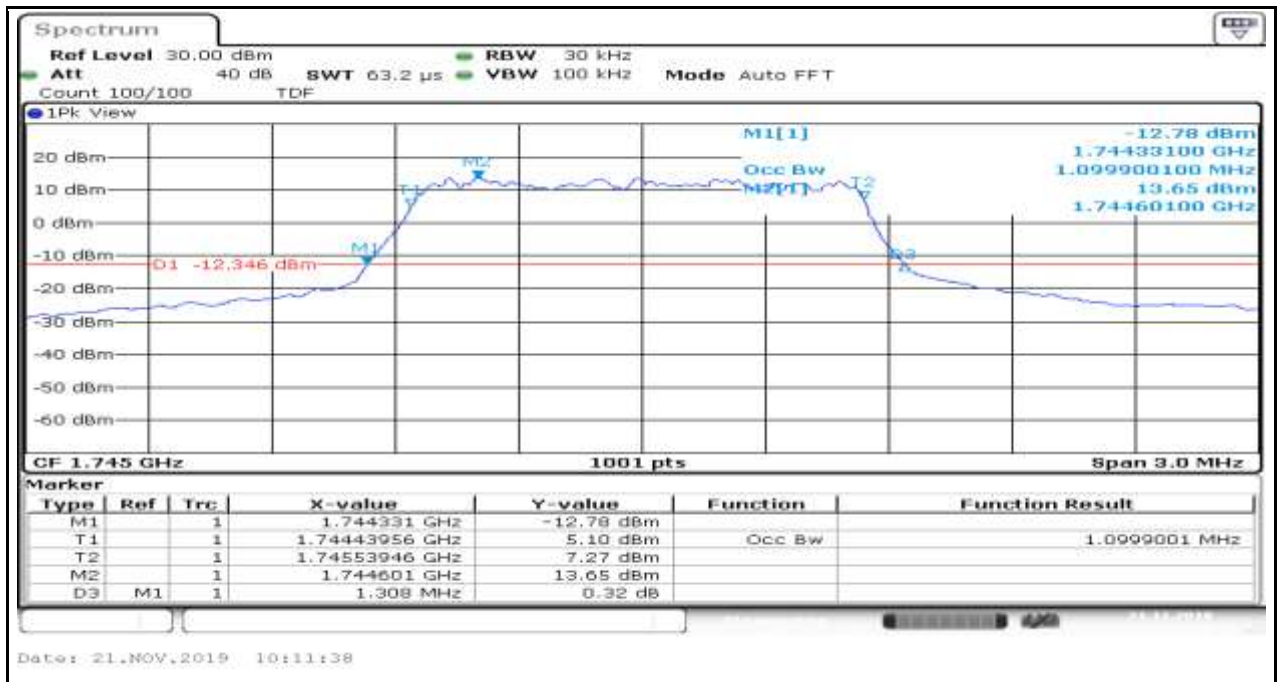
Band66_5MHz_16QAM_132322_6_0_Low_1.099_1.330_PASS_



Band66_3MHz_16QAM_132322_6_0_Low_1.103_1.314_PASS_



Band66_1.4MHz_16QAM_132322_6_0_Low_1.1_1.308_PASS_

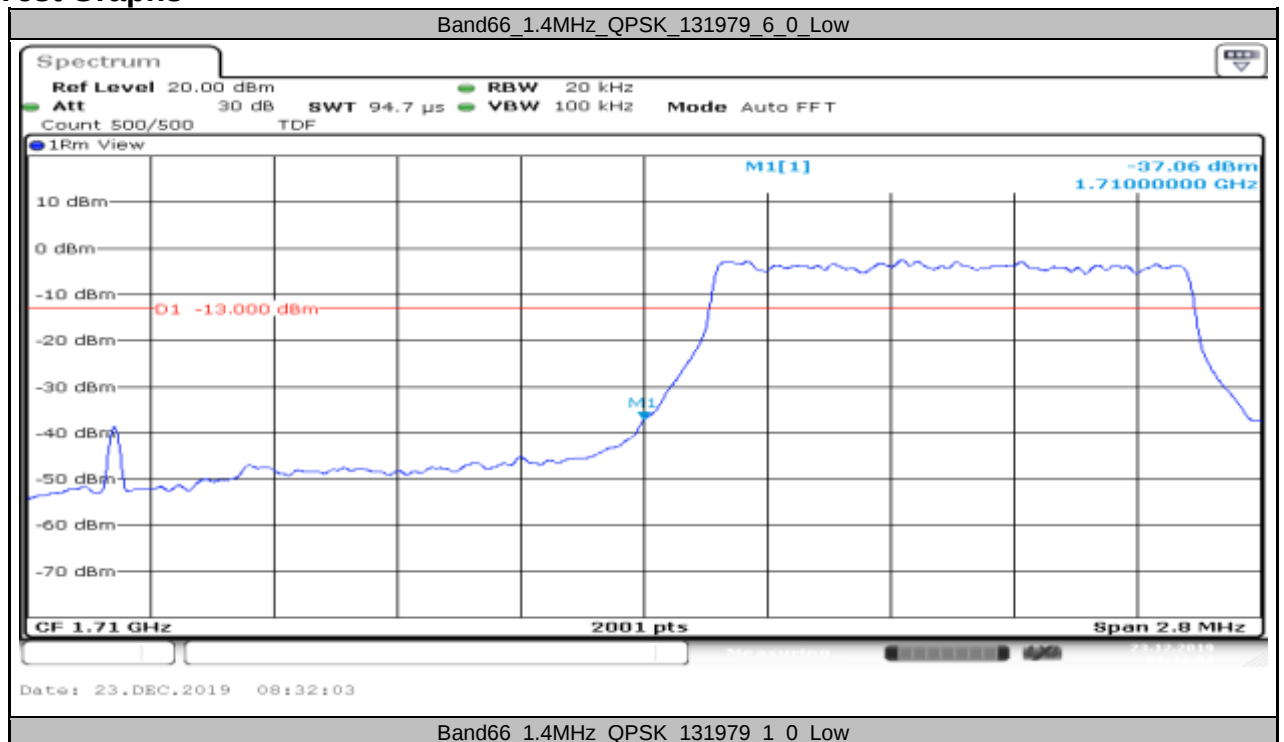


Appendix I.4: Band Edge for M1

Test Result

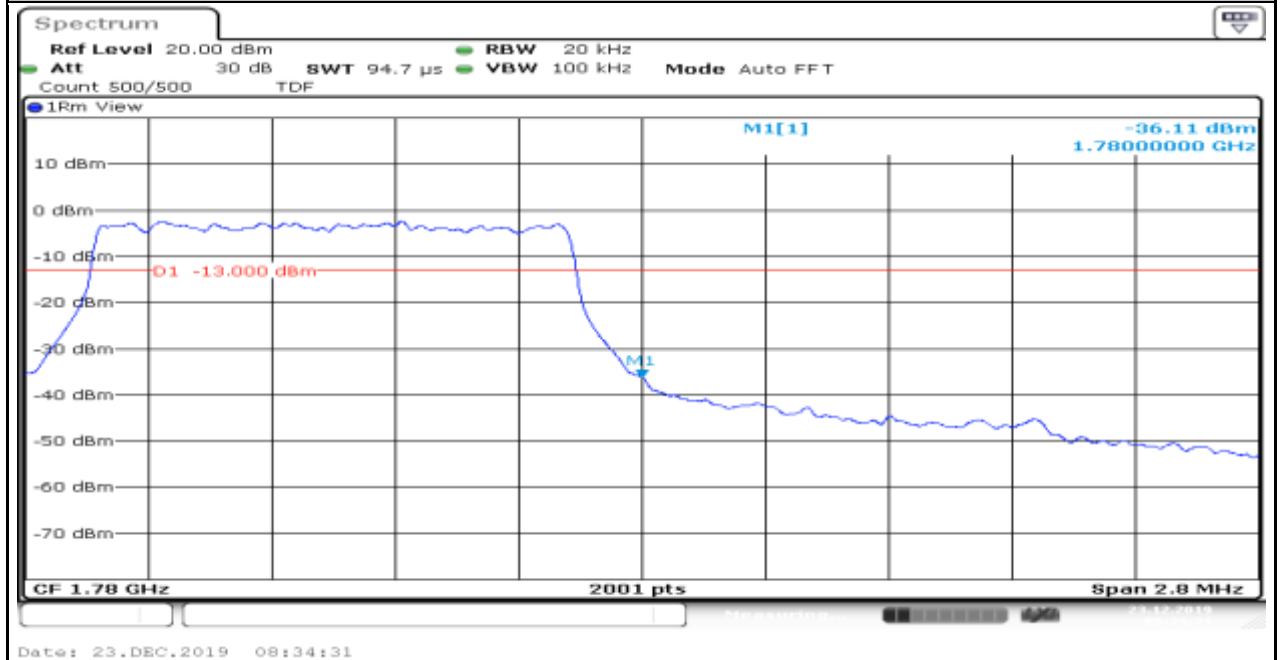
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Result (dBm)	Verdict
Band66	1.4MHz	QPSK	131979	6	0	Low	-37.06	PASS
Band66	1.4MHz	QPSK	131979	1	0	Low	-30.67	PASS
Band66	1.4MHz	QPSK	132665	6	0	Low	-36.11	PASS
Band66	1.4MHz	QPSK	132665	1	5	Low	-42.36	PASS
Band66	1.4MHz	16QAM	131979	6	0	Low	-36.98	PASS
Band66	1.4MHz	16QAM	131979	1	0	Low	-32.12	PASS
Band66	1.4MHz	16QAM	132665	6	0	Low	-37.05	PASS
Band66	1.4MHz	16QAM	132665	1	5	Low	-43.11	PASS

Test Graphs

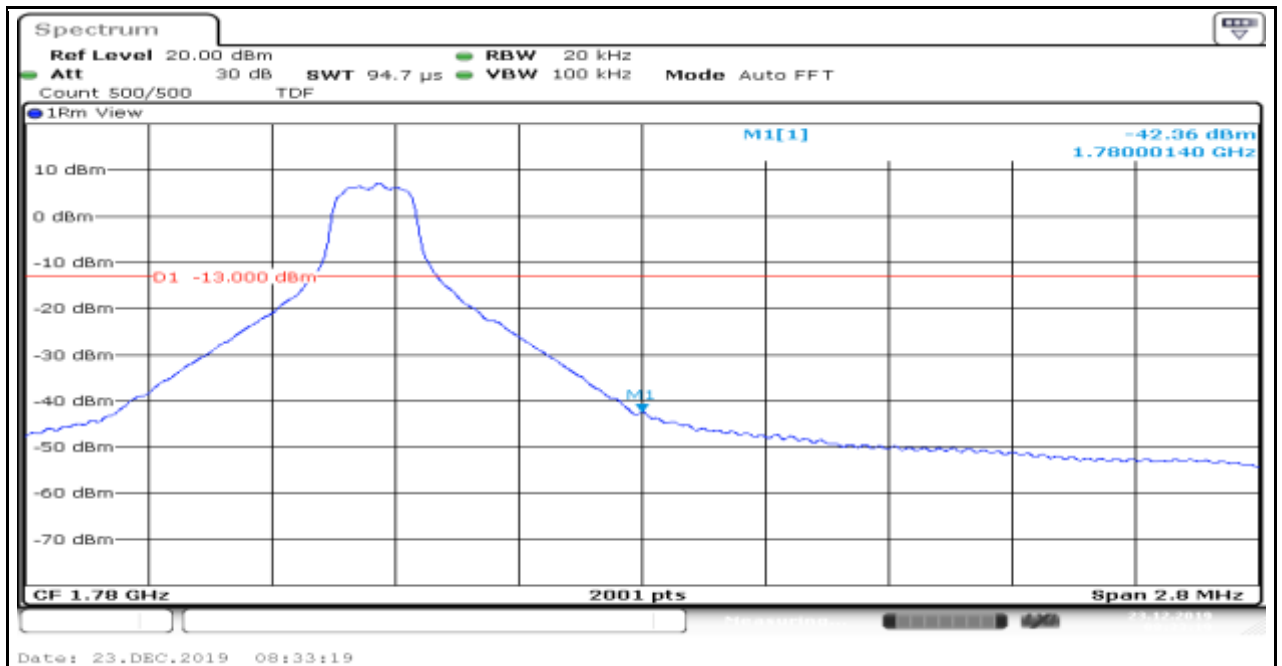




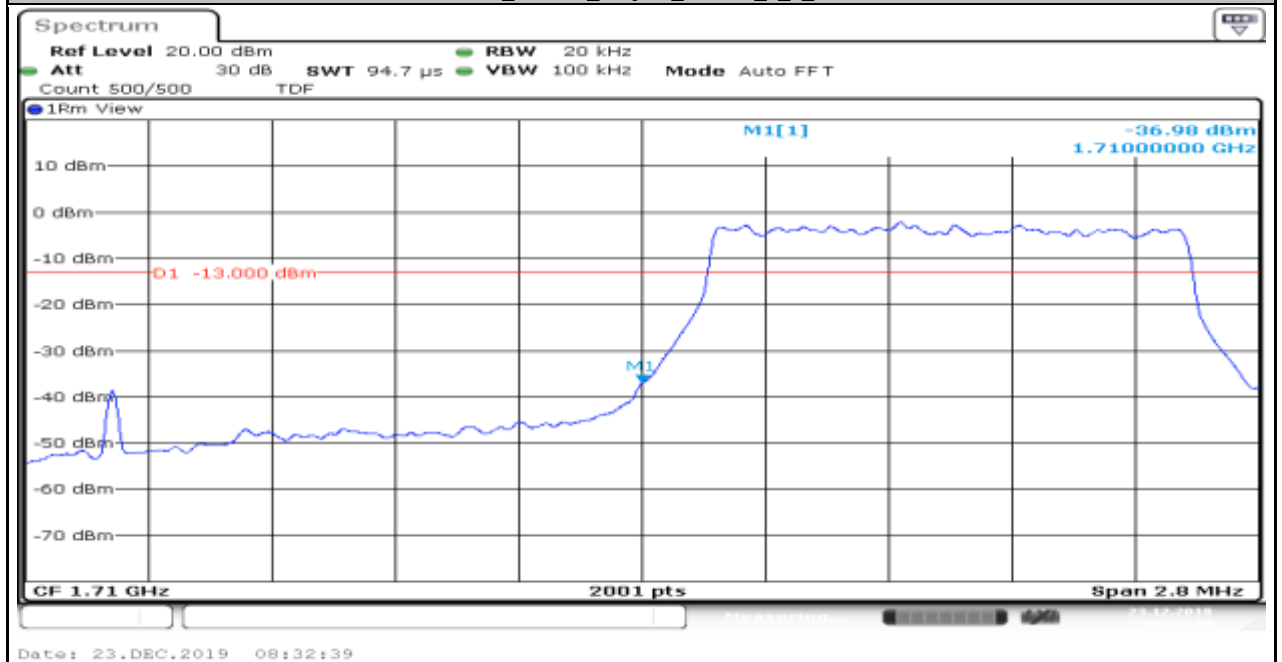
Band66_1.4MHz_QPSK_132665_6_0_Low



Band66_1.4MHz_QPSK_132665_1_5_Low



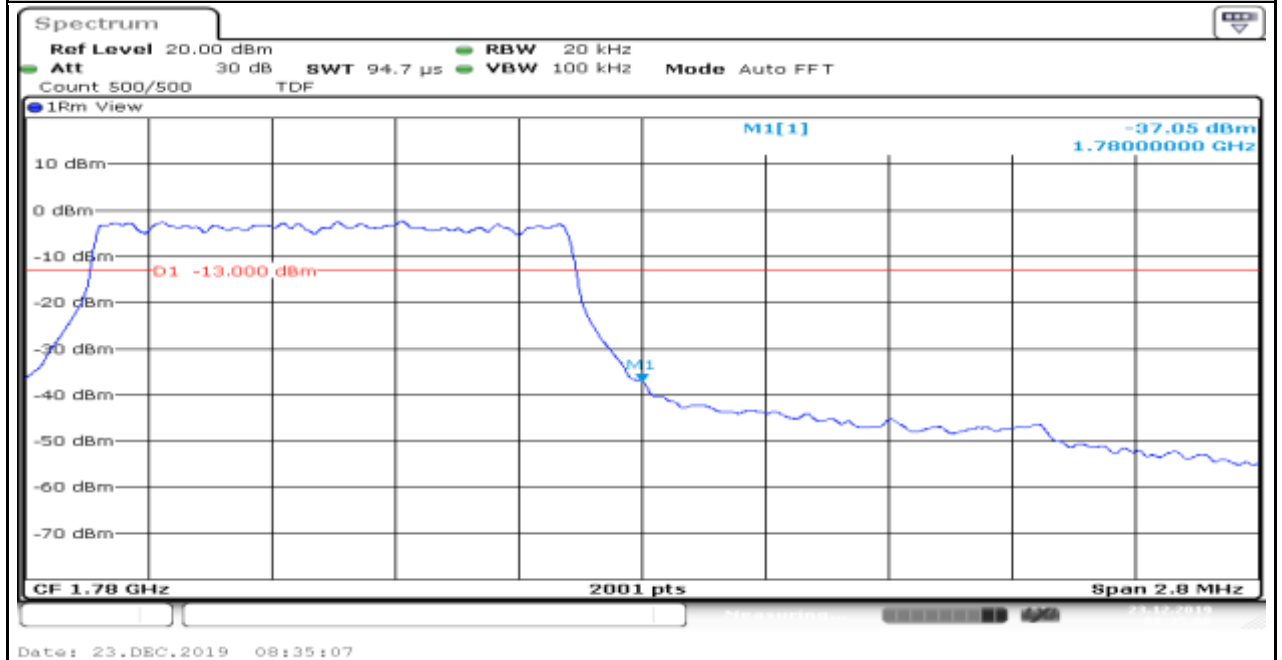
Band66_1.4MHz_16QAM_131979_6_0_Low



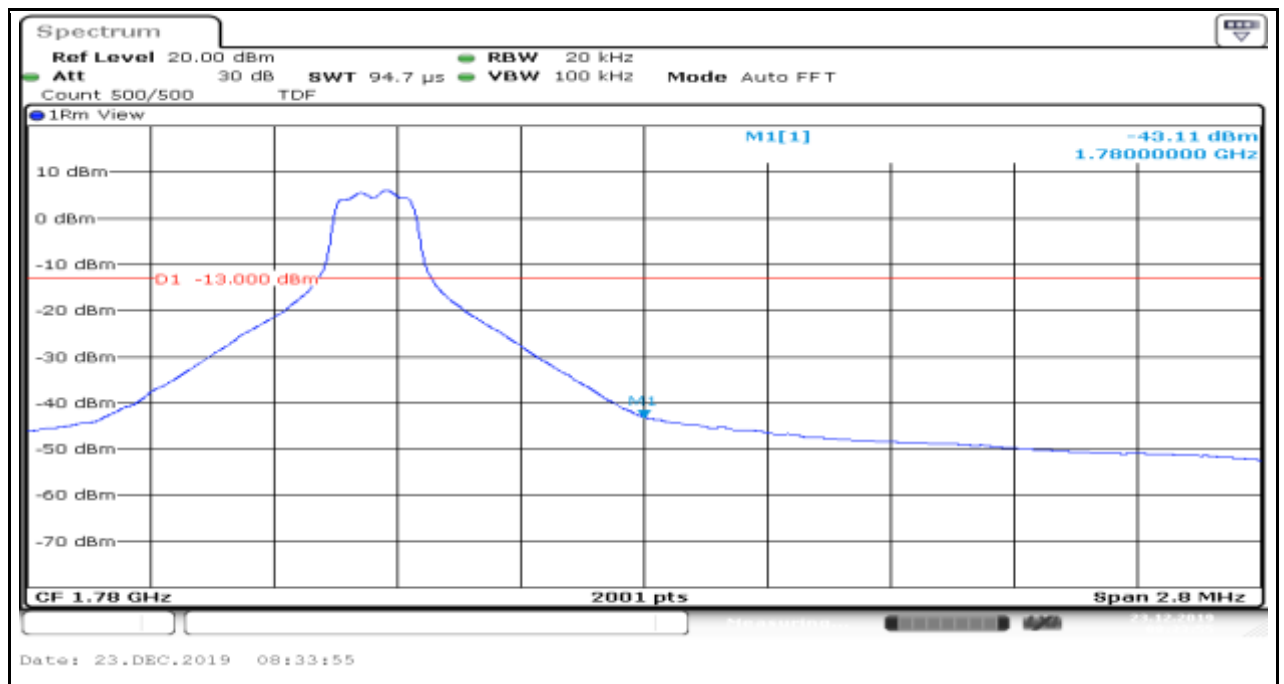
Band66_1.4MHz_16QAM_131979_1_0_Low



Band66_1.4MHz_16QAM_132665_6_0_Low



Band66_1.4MHz_16QAM_132665_1_5_Low



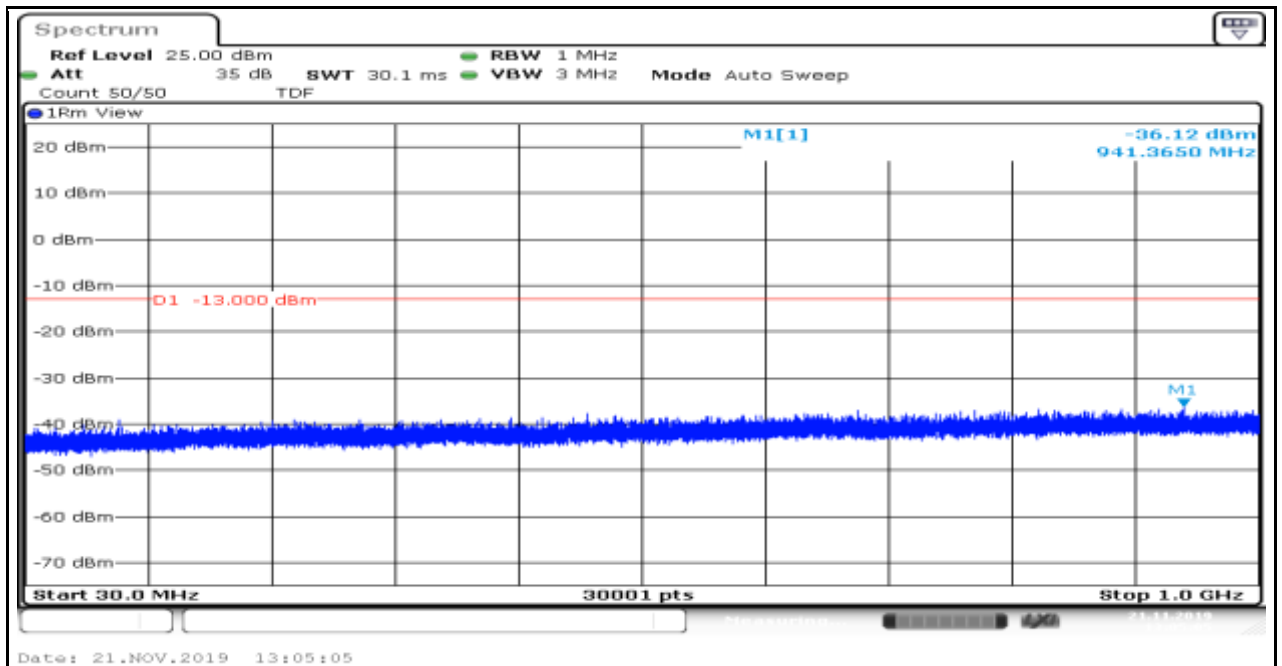
Appendix I.5: Conducted Spurious Emission for M1

Test Result

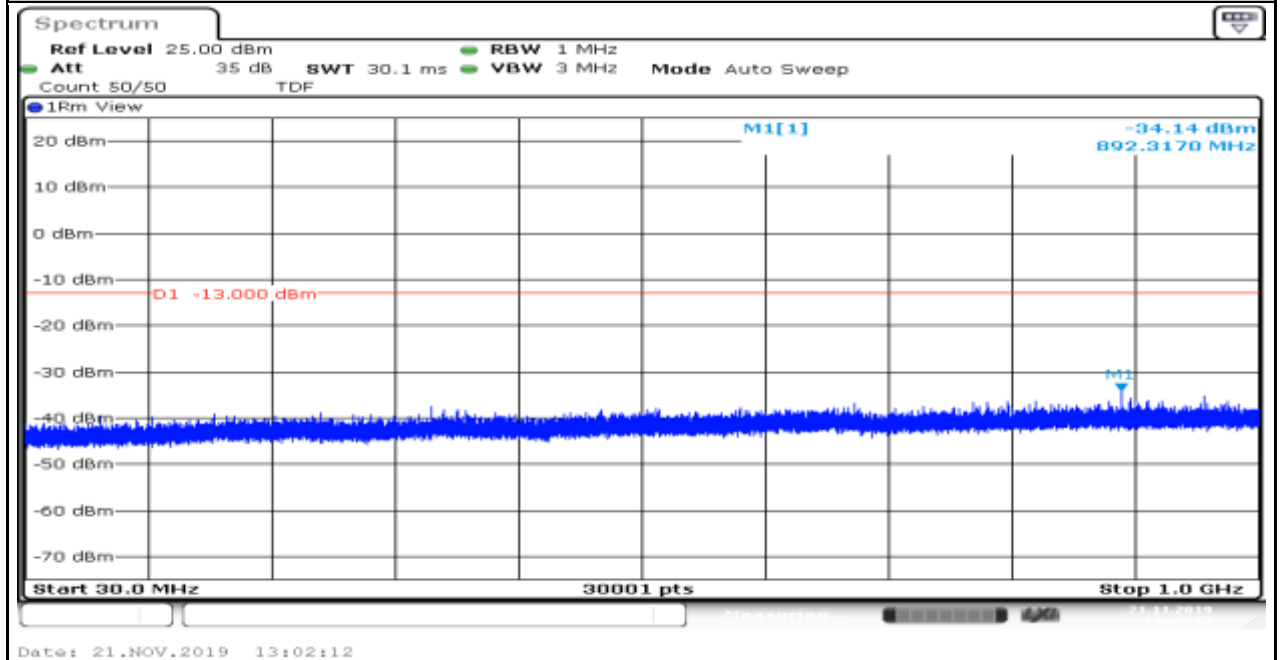
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Start Freq	Stop Freq	Result (dBm)	Verdict
Band66	1.4MHz	QPSK	131979	6	0	Low	30	1000	-36.12	PASS
Band66	1.4MHz	QPSK	131979	1	0	Low	30	1000	-34.14	PASS
Band66	1.4MHz	QPSK	131979	6	0	Low	12000	26500	-41.88	PASS
Band66	1.4MHz	QPSK	131979	6	0	Low	5000	12000	-47.78	PASS
Band66	1.4MHz	QPSK	131979	6	0	Low	1000	5000	-38.48	PASS
Band66	1.4MHz	QPSK	131979	1	0	Low	12000	26500	-41.85	PASS
Band66	1.4MHz	QPSK	131979	1	0	Low	1000	5000	-37.07	PASS
Band66	1.4MHz	QPSK	131979	1	0	Low	5000	12000	-44.03	PASS
Band66	1.4MHz	QPSK	132322	6	0	Low	12000	26500	-41.72	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	1000	5000	-34.92	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	5000	12000	-44.38	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	12000	26500	-41.71	PASS
Band66	1.4MHz	QPSK	132322	6	0	Low	1000	5000	-38.45	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	30	1000	-35.98	PASS
Band66	1.4MHz	QPSK	132322	6	0	Low	5000	12000	-47.76	PASS
Band66	1.4MHz	QPSK	132322	6	0	Low	30	1000	-35.96	PASS
Band66	1.4MHz	QPSK	132665	1	5	Low	12000	26500	-41.55	PASS
Band66	1.4MHz	QPSK	132665	6	0	Low	12000	26500	-41.78	PASS
Band66	1.4MHz	QPSK	132665	6	0	Low	5000	12000	-47.8	PASS
Band66	1.4MHz	QPSK	132665	6	0	Low	30	1000	-35.37	PASS
Band66	1.4MHz	QPSK	132665	1	5	Low	1000	5000	-35.17	PASS
Band66	1.4MHz	QPSK	132665	1	5	Low	5000	12000	-43.89	PASS
Band66	1.4MHz	QPSK	132665	1	5	Low	30	1000	-35.32	PASS
Band66	1.4MHz	QPSK	132665	6	0	Low	1000	5000	-38.07	PASS
Band66	1.4MHz	16QAM	131979	1	0	Low	1000	5000	-38.23	PASS
Band66	1.4MHz	16QAM	131979	1	0	Low	5000	12000	-45.77	PASS
Band66	1.4MHz	16QAM	131979	1	0	Low	12000	26500	-41.9	PASS
Band66	1.4MHz	16QAM	131979	6	0	Low	12000	26500	-41.69	PASS
Band66	1.4MHz	16QAM	131979	6	0	Low	5000	12000	-47.67	PASS
Band66	1.4MHz	16QAM	131979	6	0	Low	30	1000	-35.94	PASS
Band66	1.4MHz	16QAM	131979	1	0	Low	30	1000	-35.41	PASS
Band66	1.4MHz	16QAM	131979	6	0	Low	1000	5000	-38.42	PASS
Band66	1.4MHz	16QAM	132322	6	0	Low	12000	26500	-41.74	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	1000	5000	-36.42	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	12000	26500	-41.64	PASS
Band66	1.4MHz	16QAM	132322	6	0	Low	30	1000	-35.99	PASS
Band66	1.4MHz	16QAM	132322	6	0	Low	1000	5000	-38.39	PASS
Band66	1.4MHz	16QAM	132322	6	0	Low	5000	12000	-47.92	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	30	1000	-35.69	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	5000	12000	-47.15	PASS
Band66	1.4MHz	16QAM	132665	6	0	Low	5000	12000	-47.84	PASS
Band66	1.4MHz	16QAM	132665	6	0	Low	1000	5000	-38.51	PASS
Band66	1.4MHz	16QAM	132665	6	0	Low	30	1000	-35.62	PASS
Band66	1.4MHz	16QAM	132665	1	5	Low	12000	26500	-41.77	PASS
Band66	1.4MHz	16QAM	132665	1	5	Low	5000	12000	-44.9	PASS
Band66	1.4MHz	16QAM	132665	1	5	Low	30	1000	-35.57	PASS
Band66	1.4MHz	16QAM	132665	6	0	Low	12000	26500	-41.85	PASS
Band66	1.4MHz	16QAM	132665	1	5	Low	1000	5000	-36.73	PASS

Test Graphs

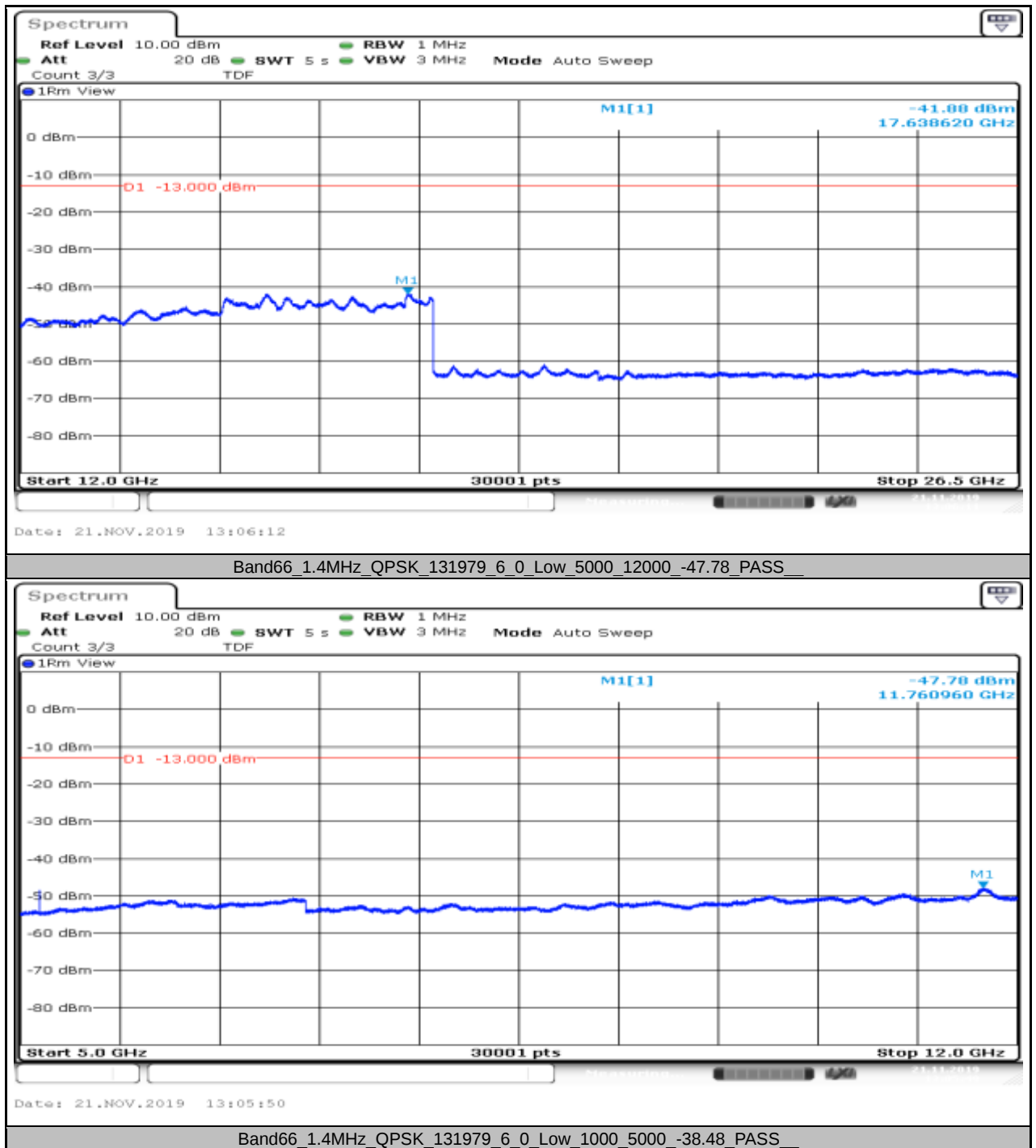
Band66_1.4MHz_QPSK_131979_6_0_Low_30_1000_-36.12_PASS

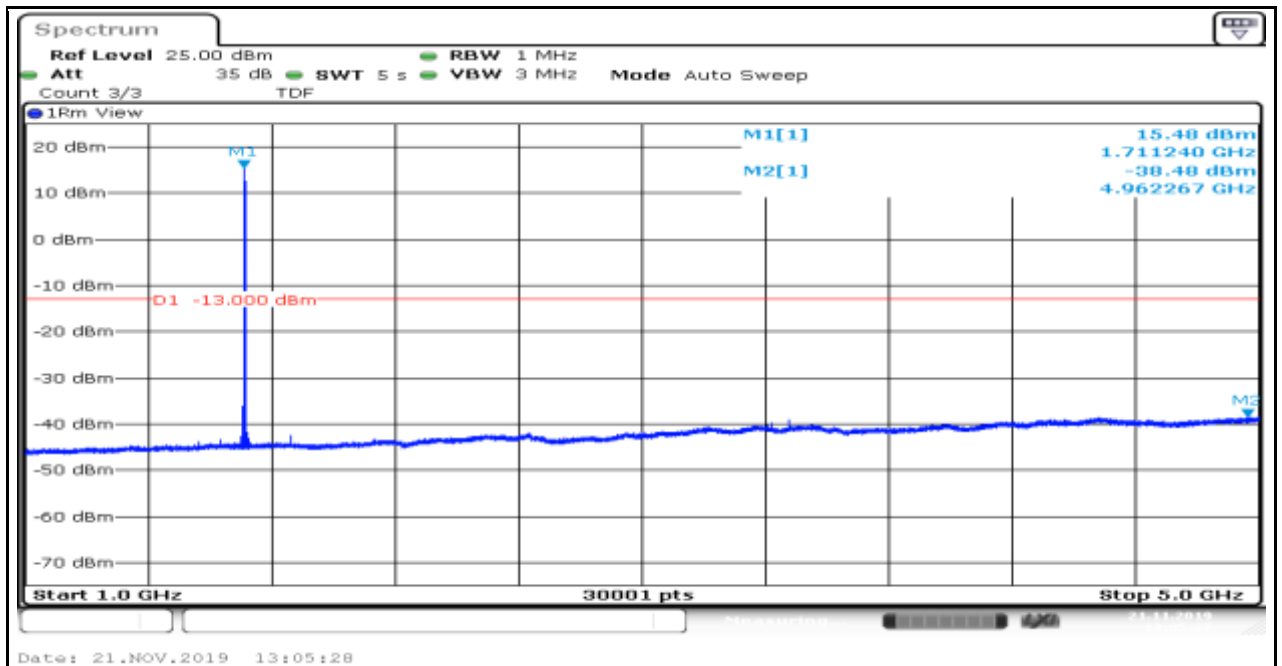


Band66_1.4MHz_QPSK_131979_1_0_Low_30_1000_-34.14_PASS_

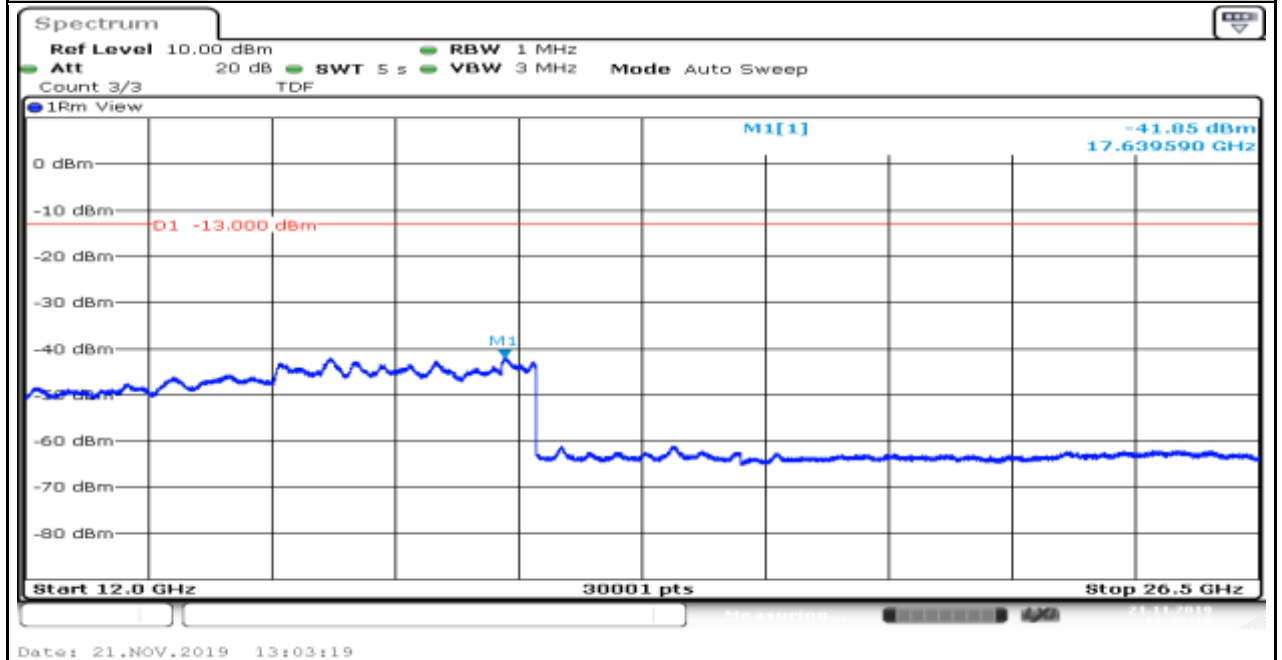


Band66_1.4MHz_QPSK_131979_6_0_Low_12000_26500_-41.88_PASS_

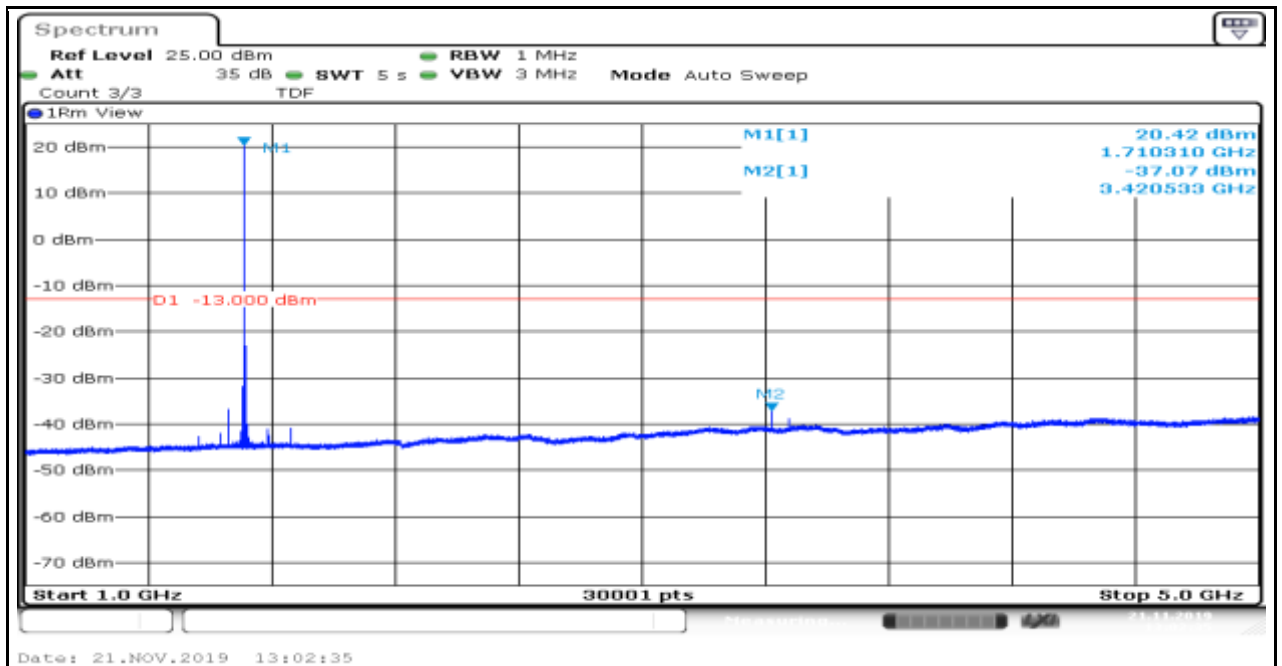




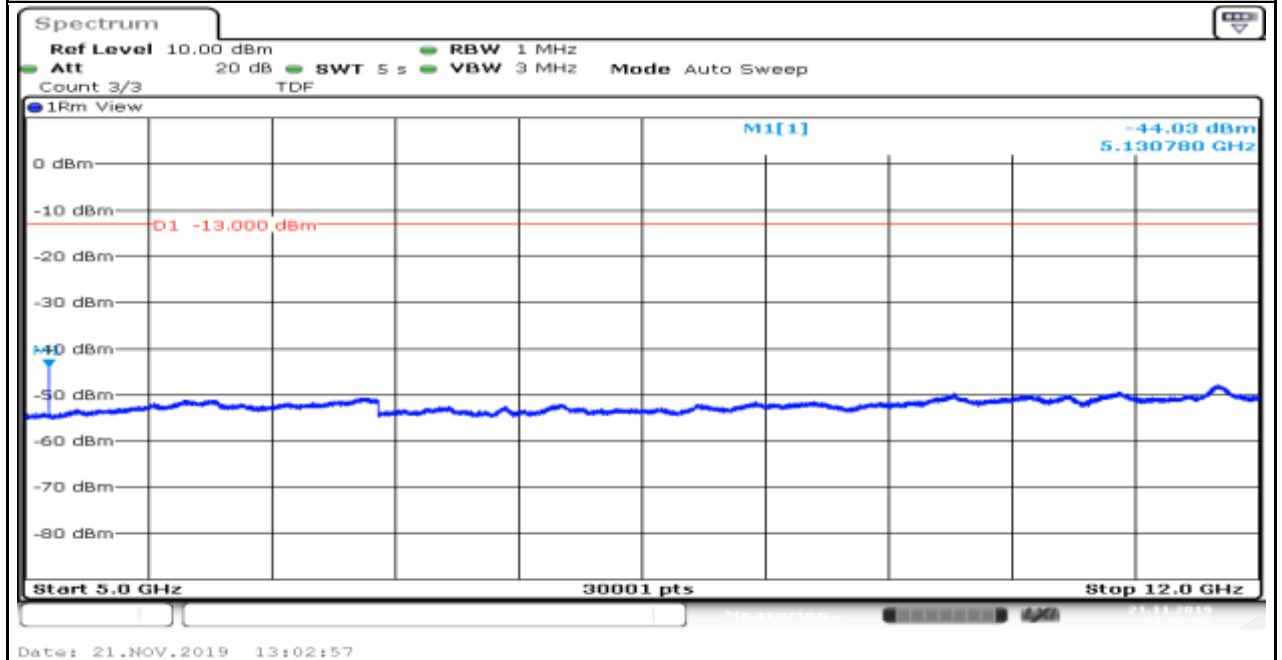
Band66_1.4MHz_QPSK_131979_1_0_Low_12000_26500_-41.85_PASS_



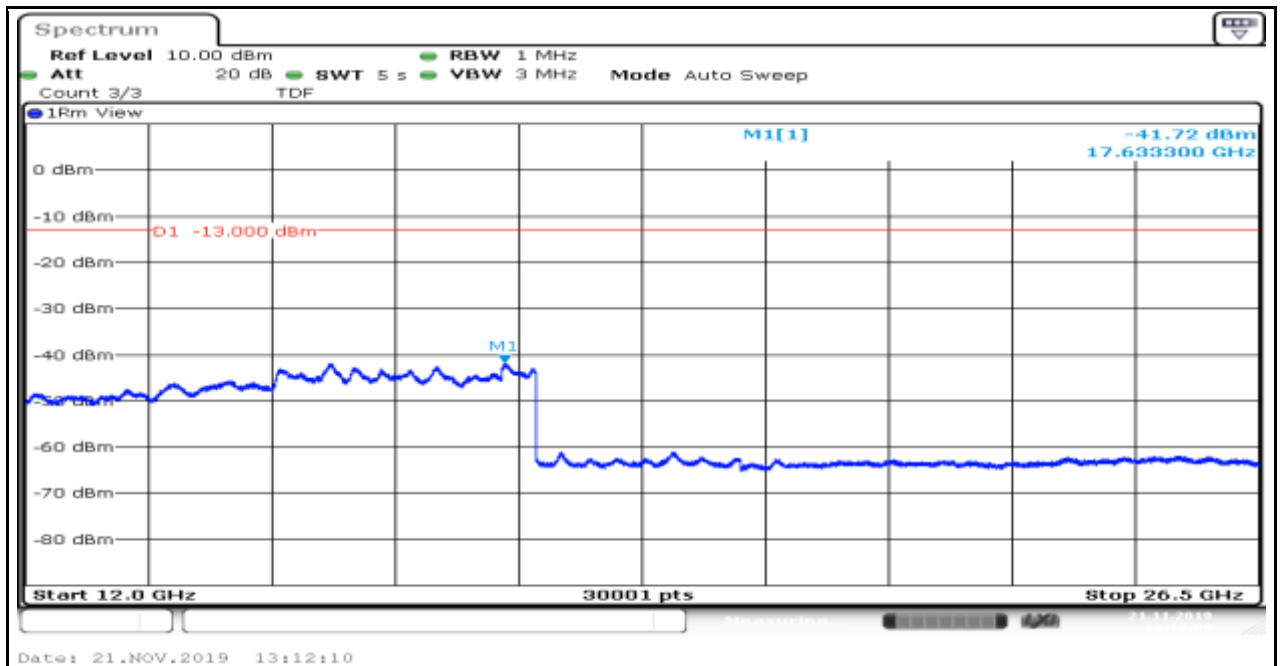
Band66_1.4MHz_QPSK_131979_1_0_Low_1000_5000_-37.07_PASS_



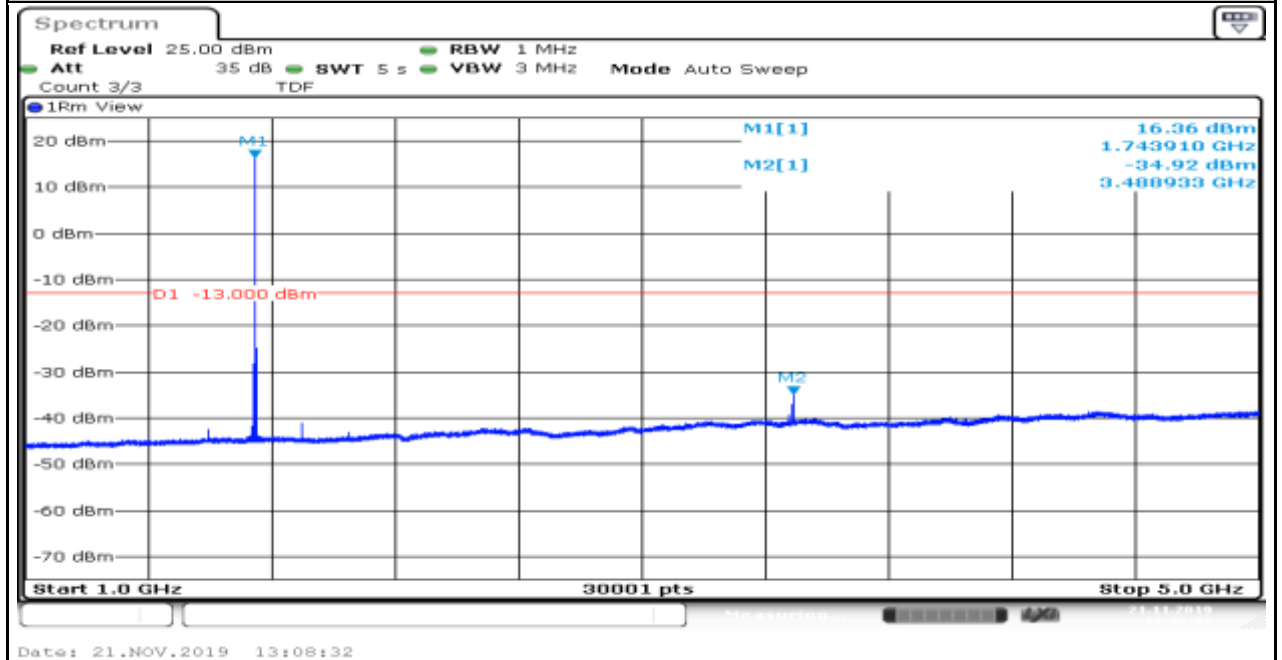
Band66_1.4MHz_QPSK_131979_1_0_Low_5000_12000_-44.03_PASS_



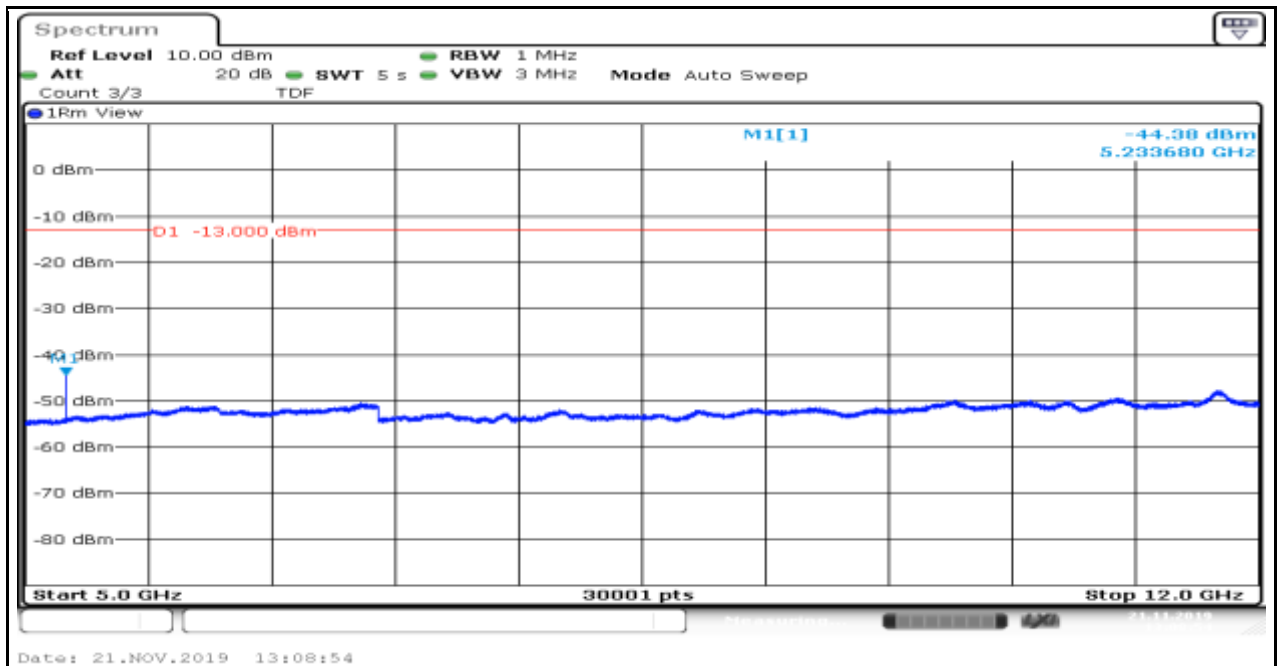
Band66_1.4MHz_QPSK_132322_6_0_Low_12000_26500_-41.72_PASS_



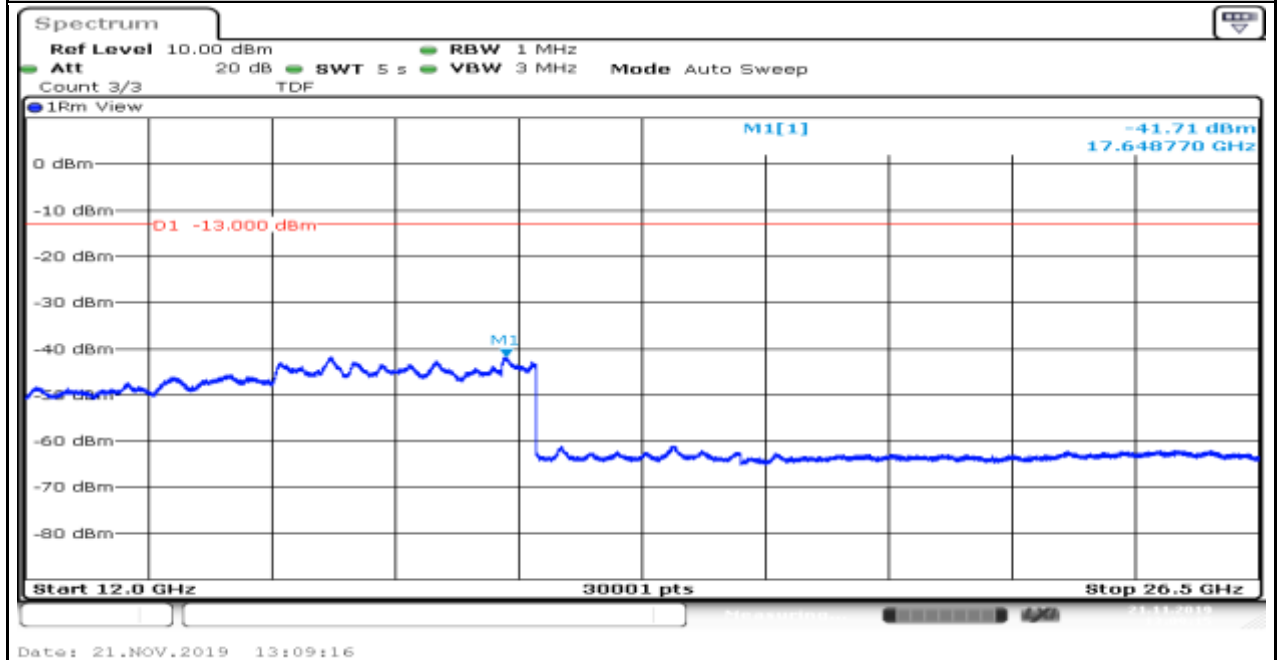
Band66_1.4MHz_QPSK_132322_1_0_Low_1000_5000_-34.92_PASS_



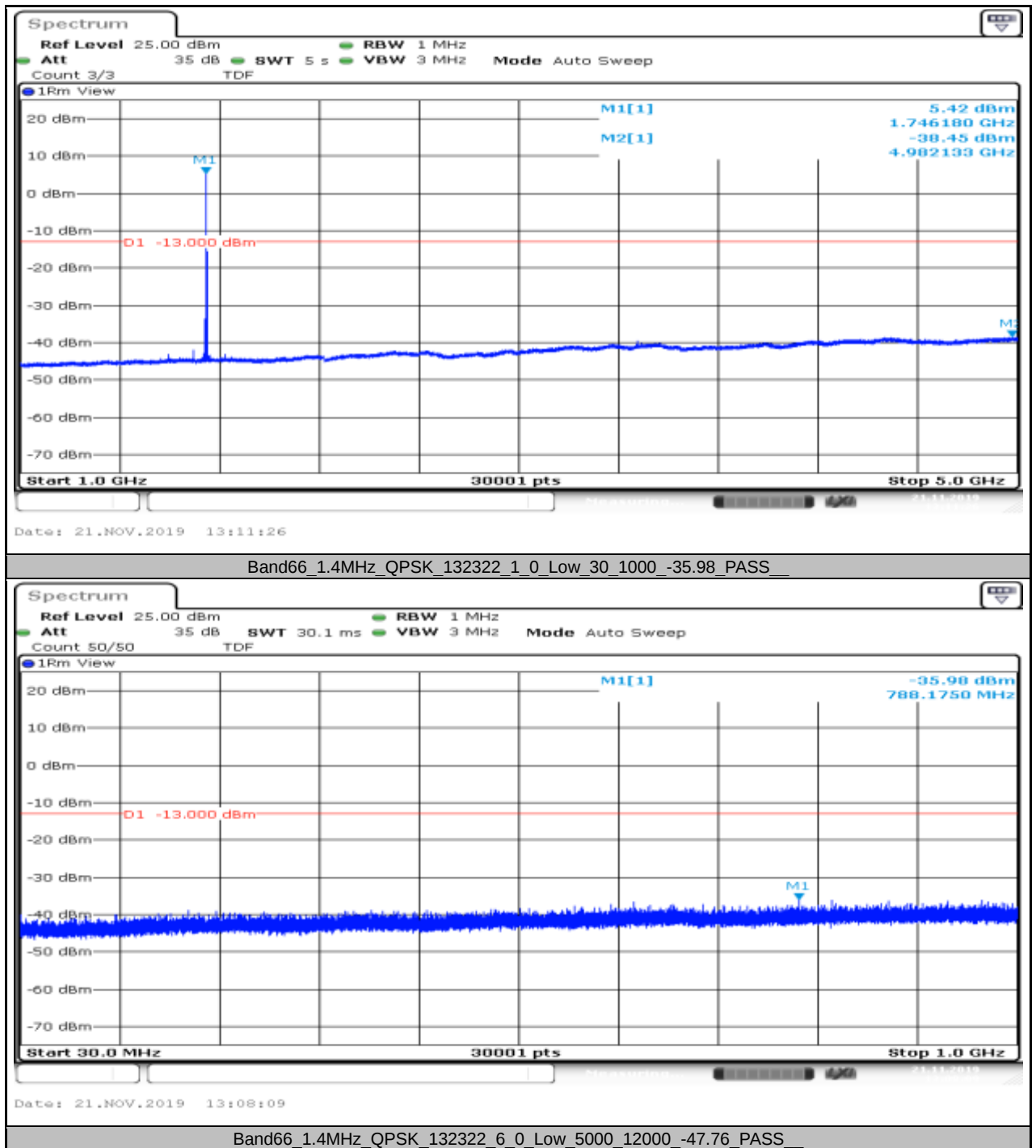
Band66_1.4MHz_QPSK_132322_1_0_Low_5000_12000_-44.38_PASS_

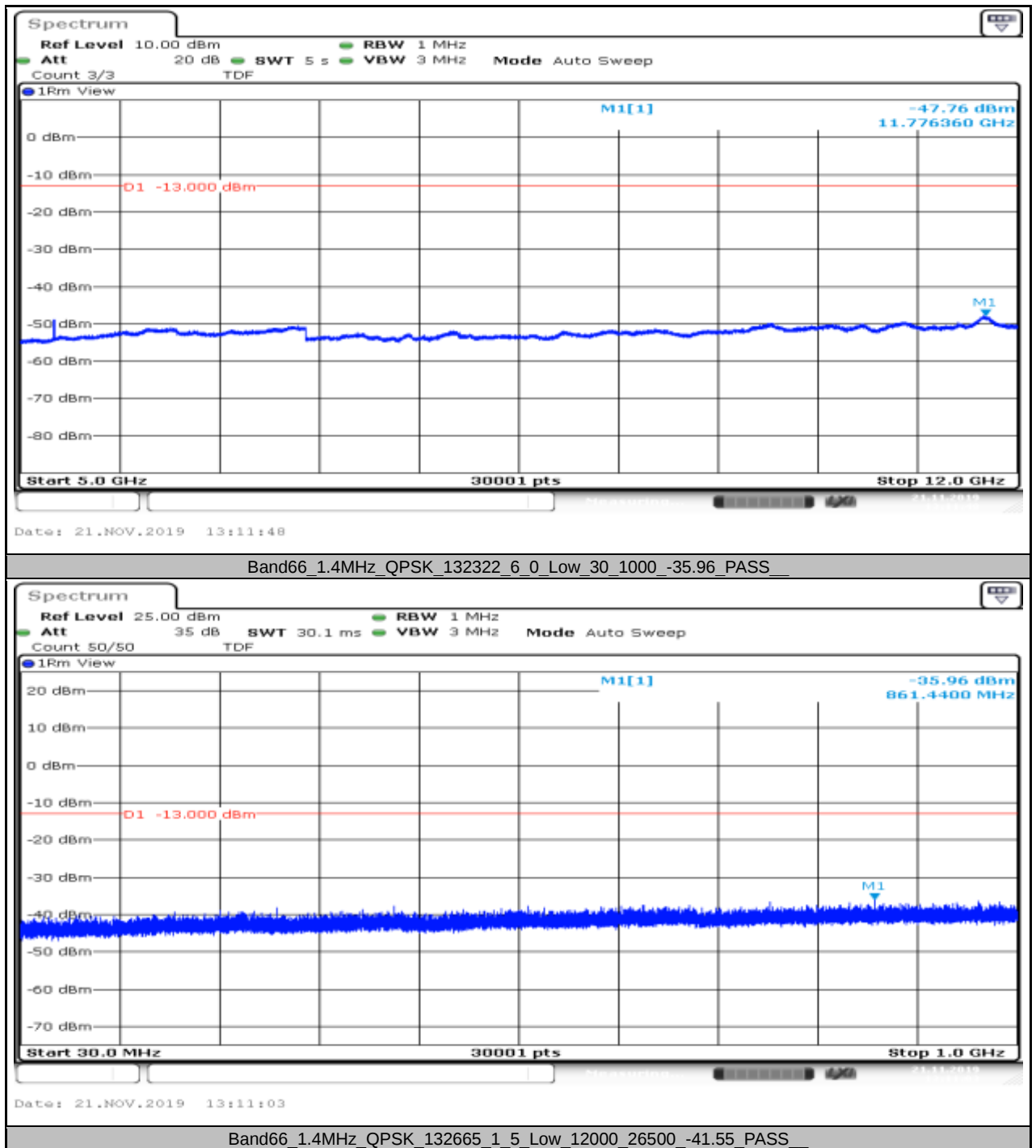


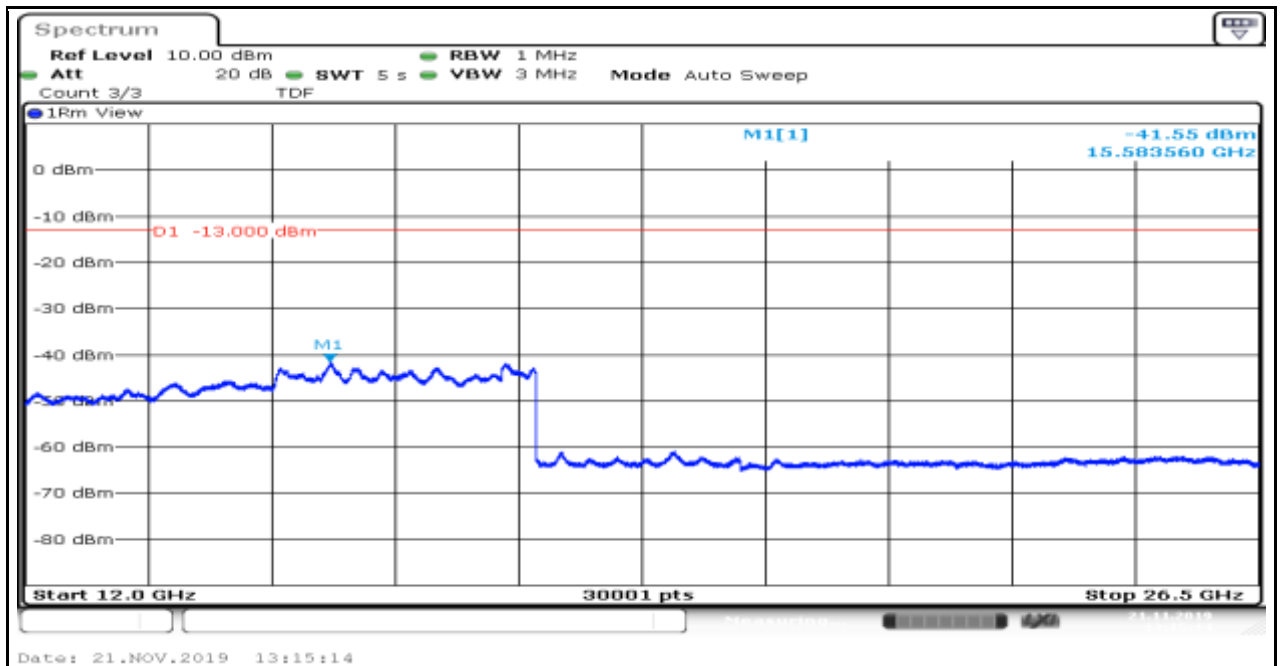
Band66_1.4MHz_QPSK_132322_1_0_Low_12000_26500_-41.71_PASS_



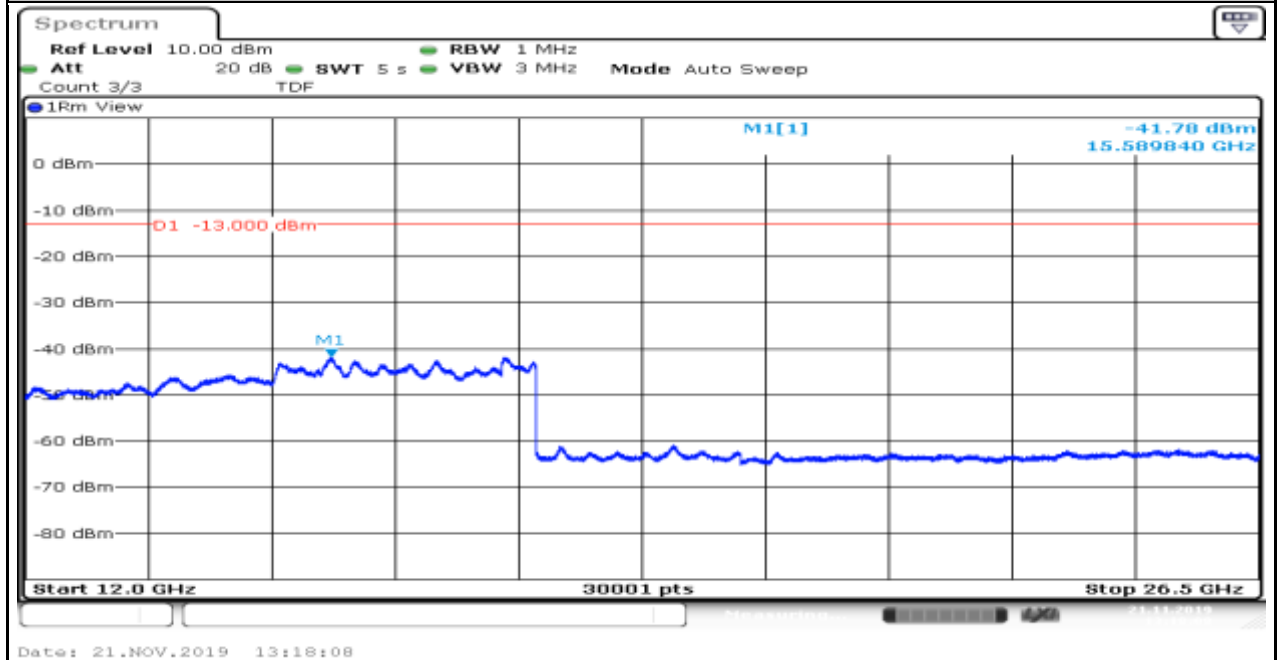
Band66_1.4MHz_QPSK_132322_6_0_Low_1000_5000_-38.45_PASS_



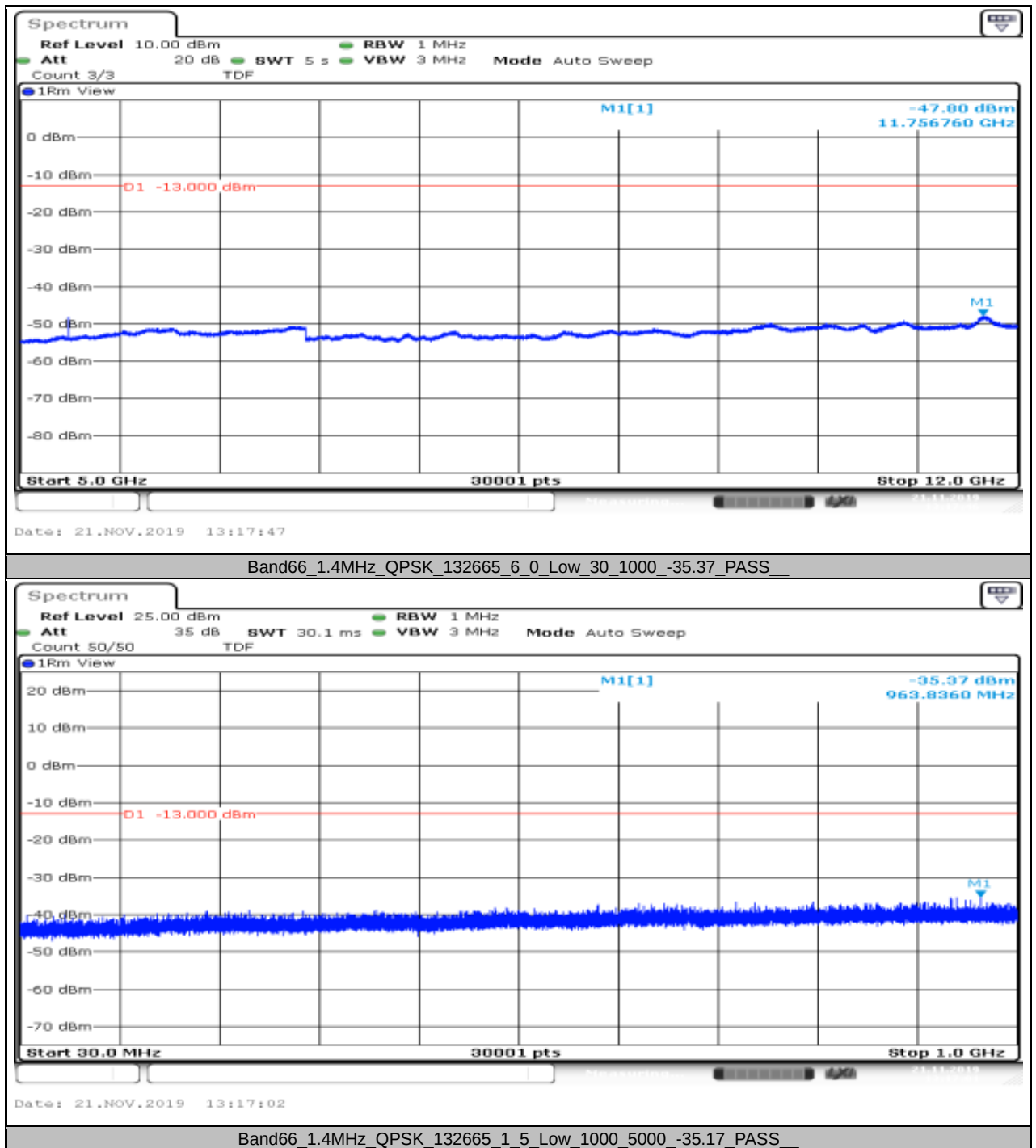


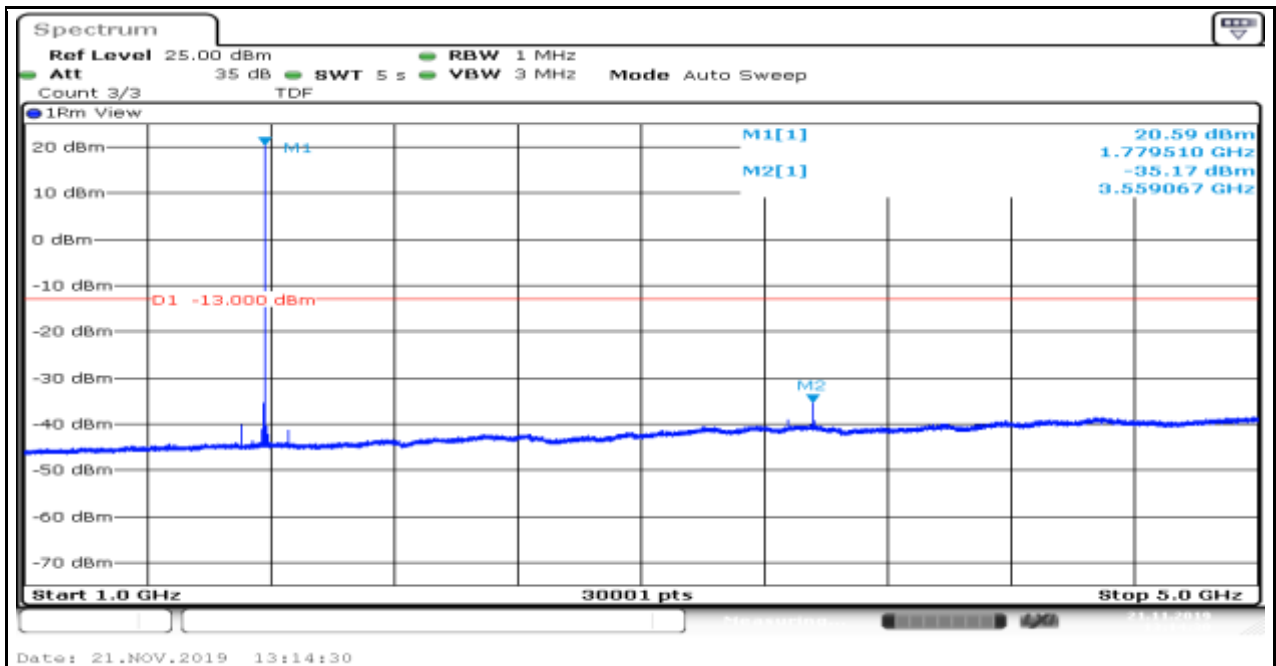


Band66_1.4MHz_QPSK_132665_6_0_Low_12000_26500_-41.78_PASS_

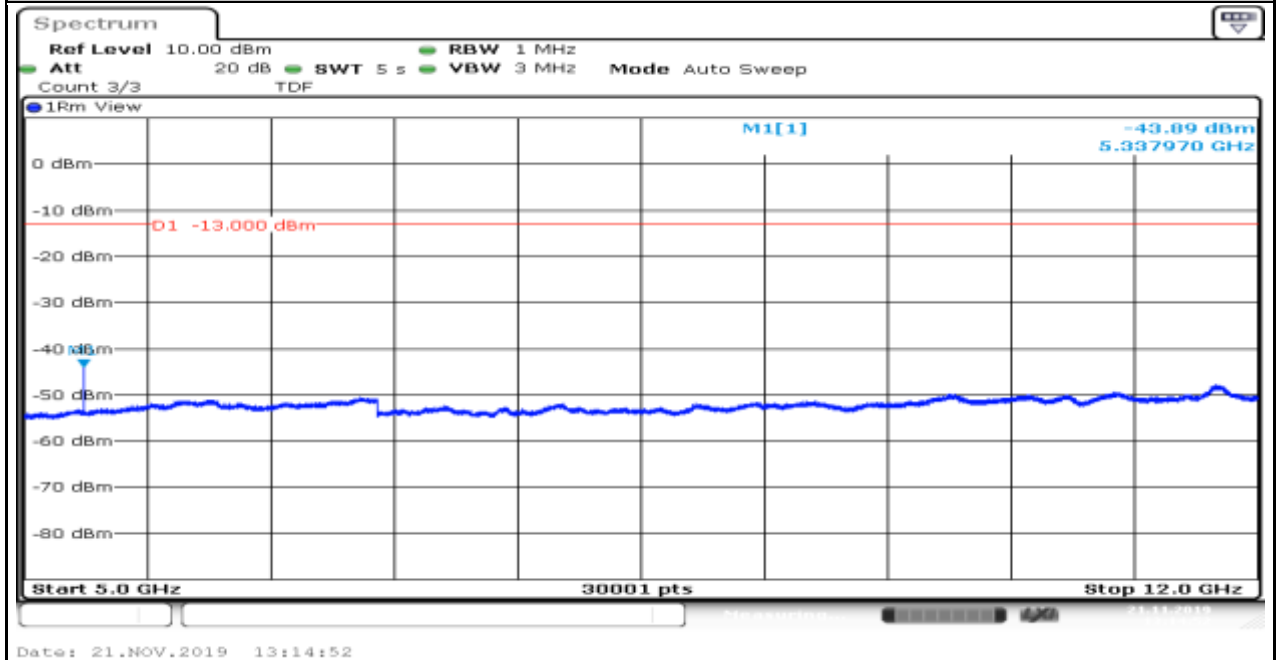


Band66_1.4MHz_QPSK_132665_6_0_Low_5000_12000_-47.8_PASS_

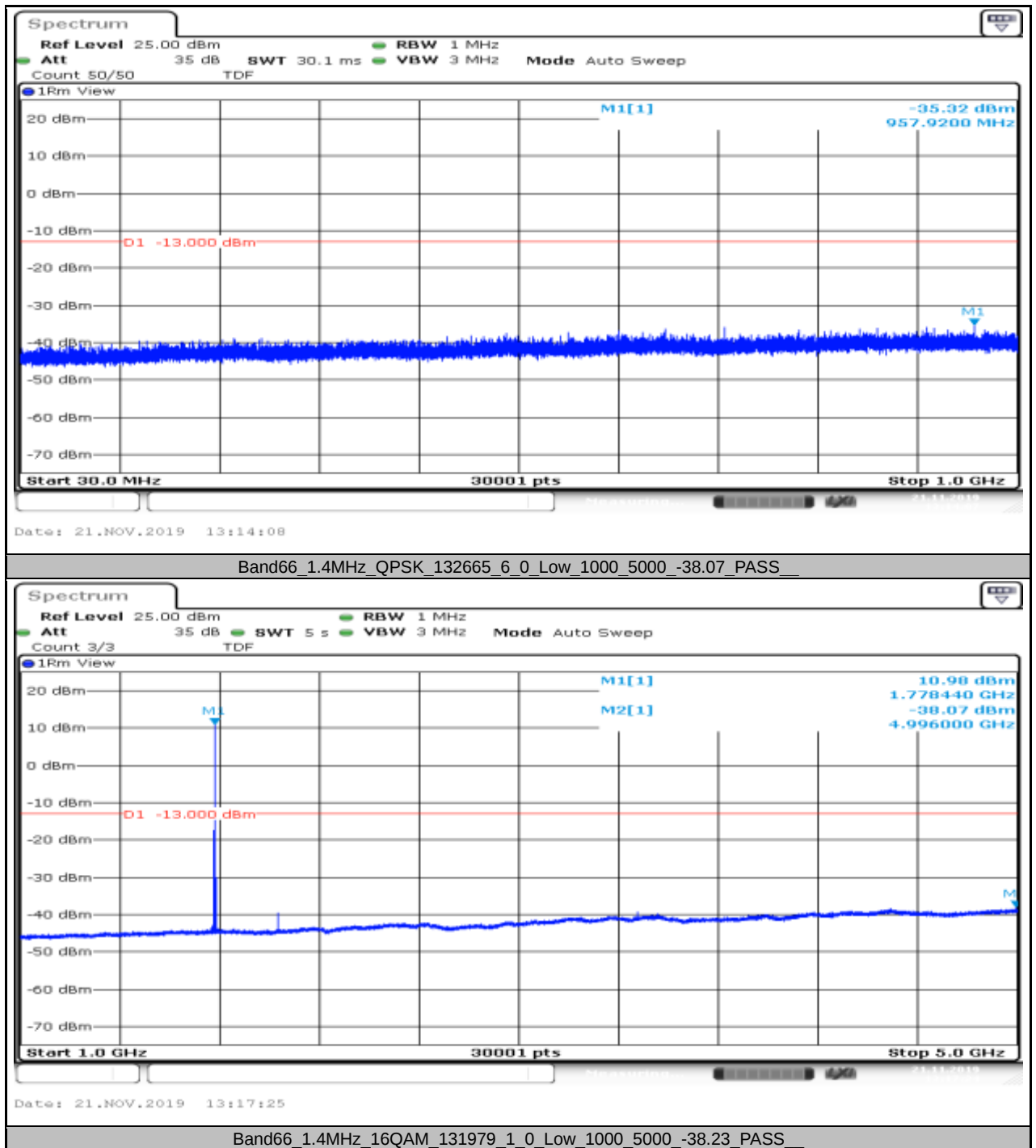


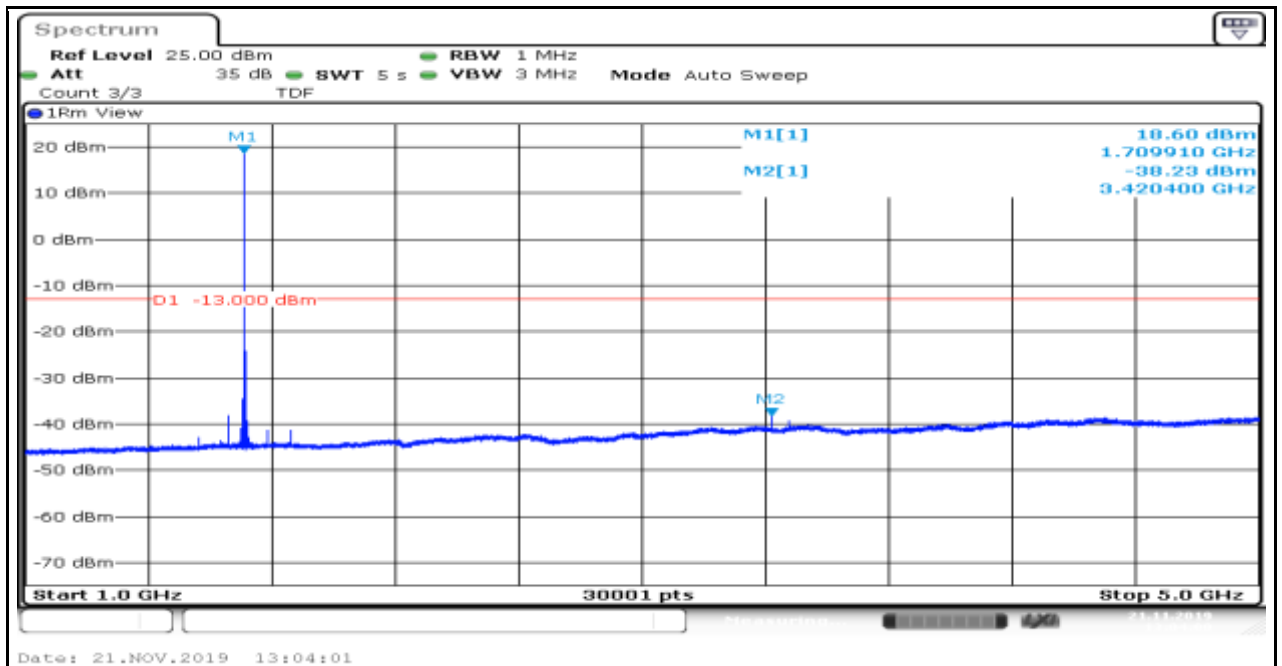


Band66_1.4MHz_QPSK_132665_1_5_Low_5000_12000_-43.89_PASS_

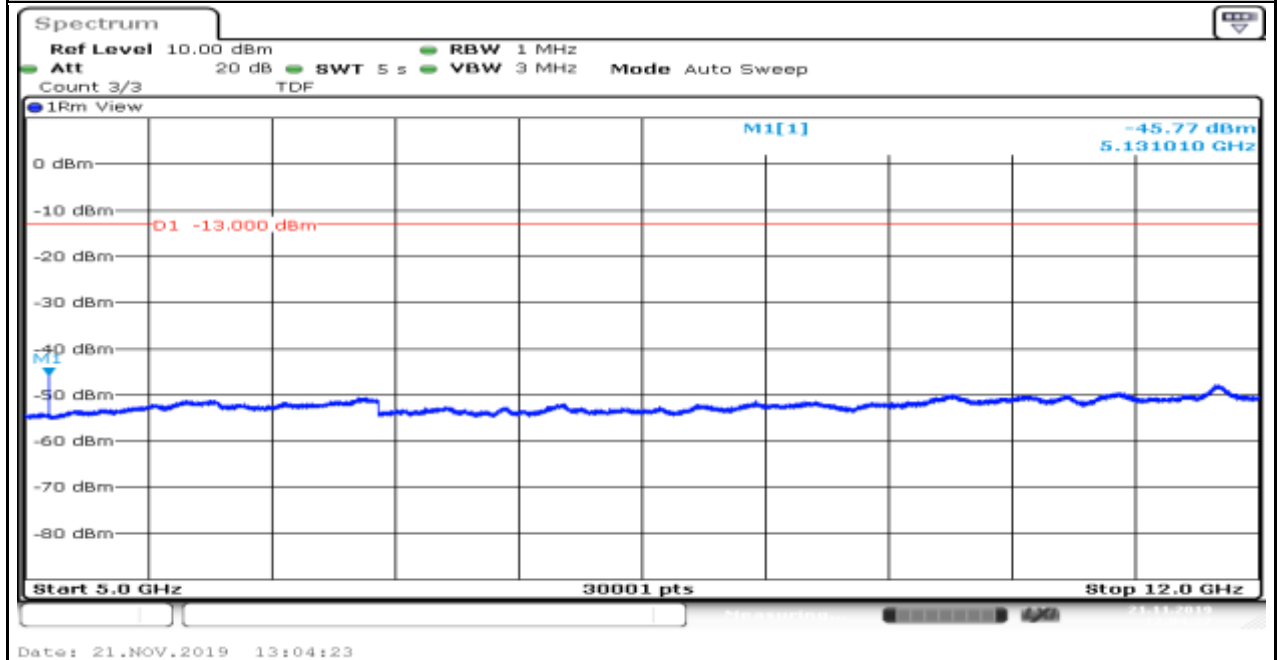


Band66_1.4MHz_QPSK_132665_1_5_Low_30_1000_-35.32_PASS_

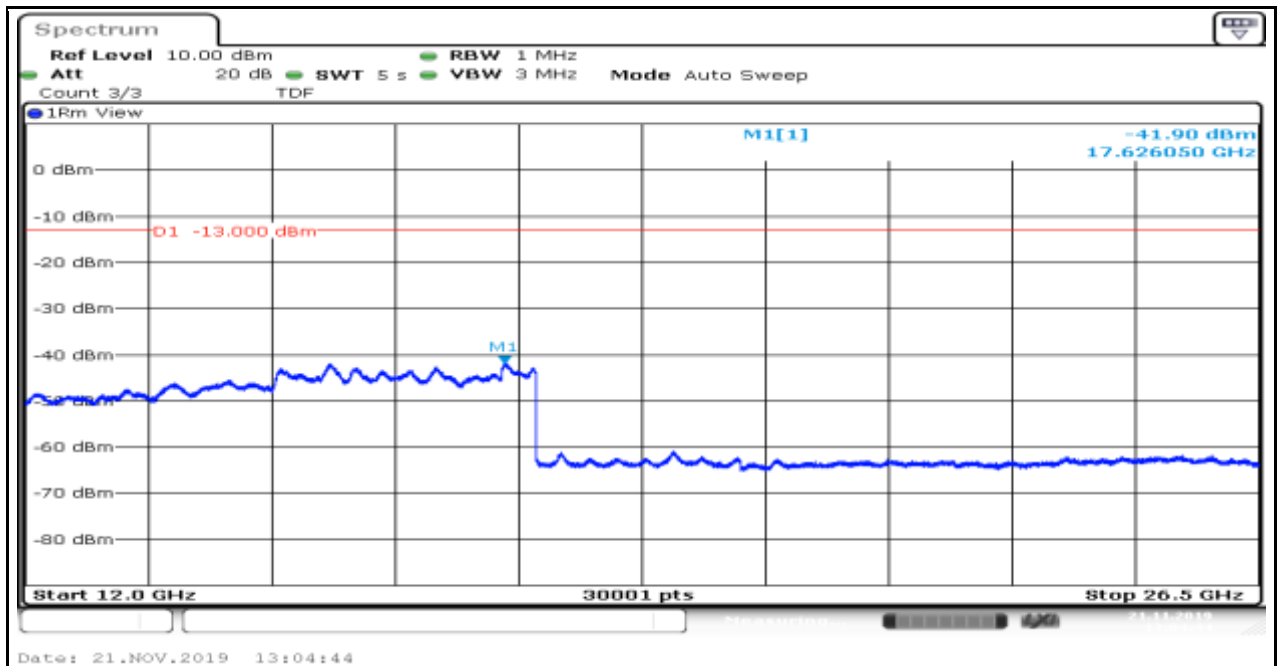




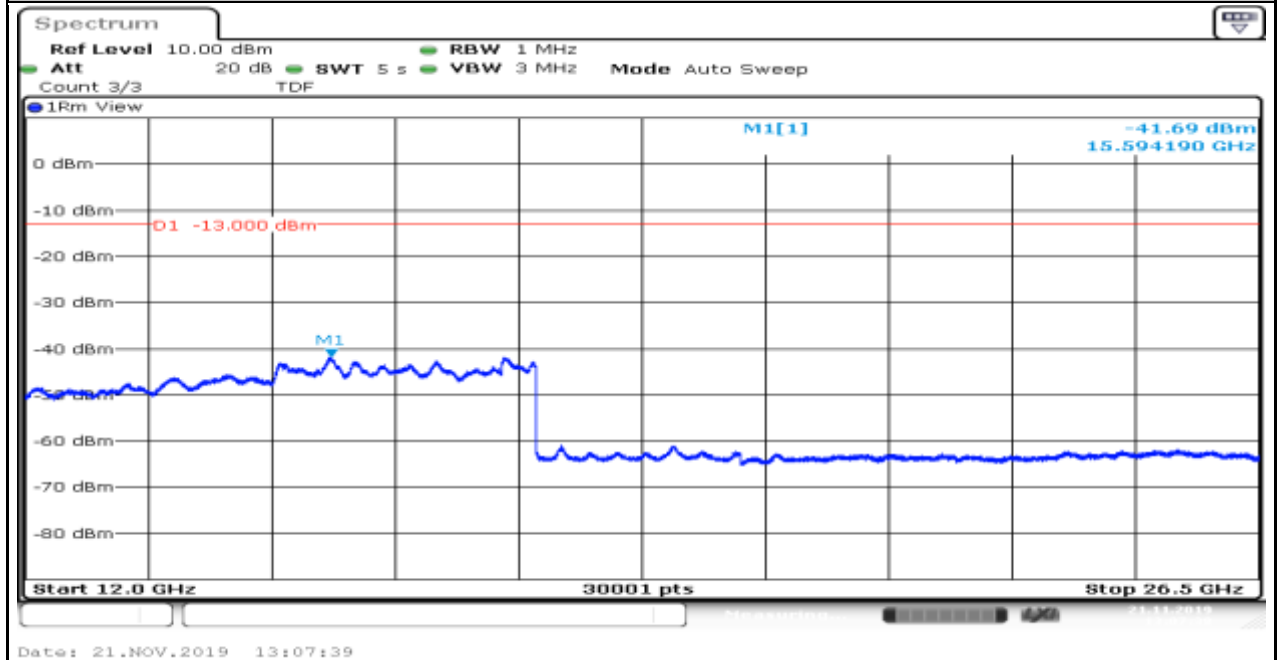
Band66_1.4MHz_16QAM_131979_1_0_Low_5000_12000_-45.77_PASS_



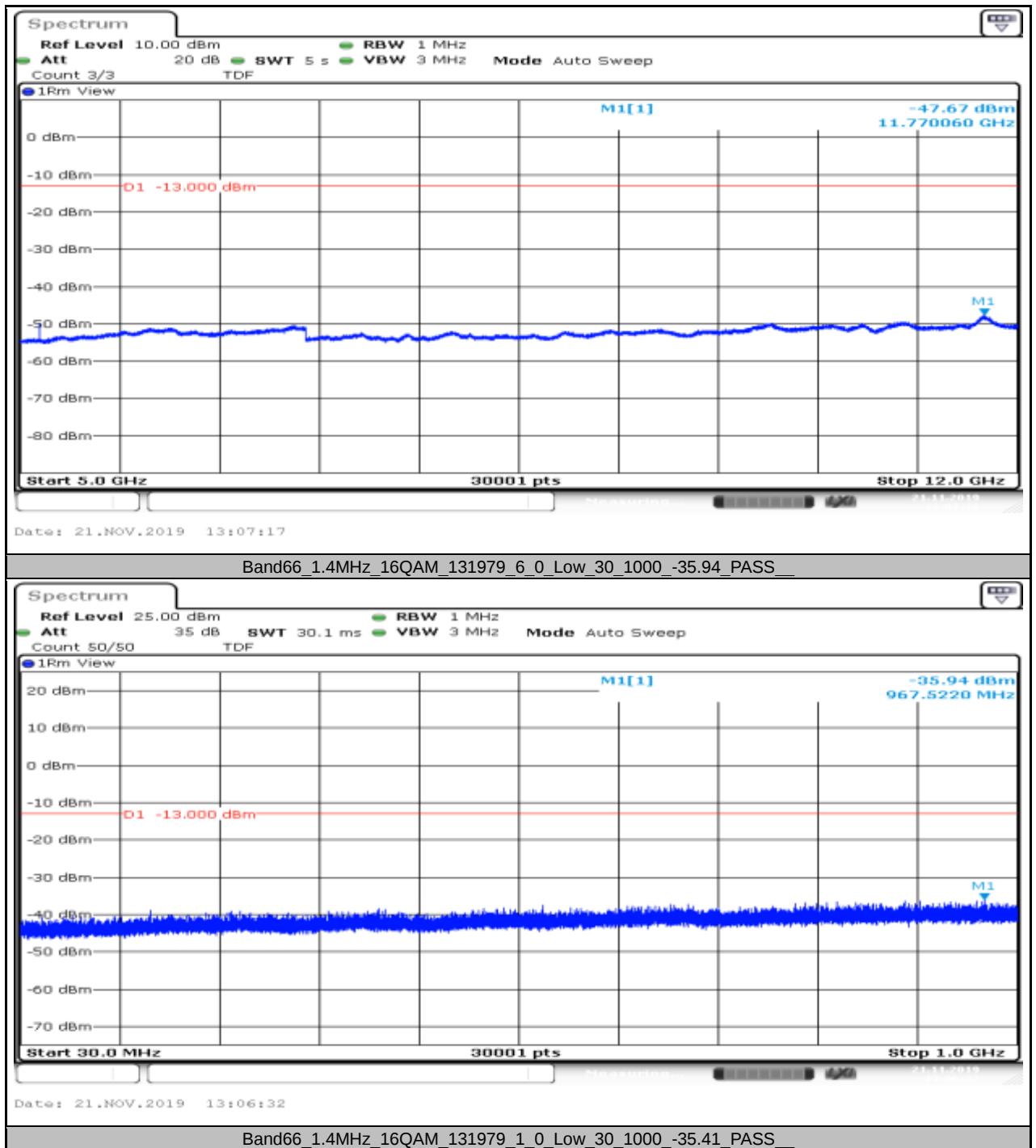
Band66_1.4MHz_16QAM_131979_1_0_Low_12000_26500_-41.9_PASS_

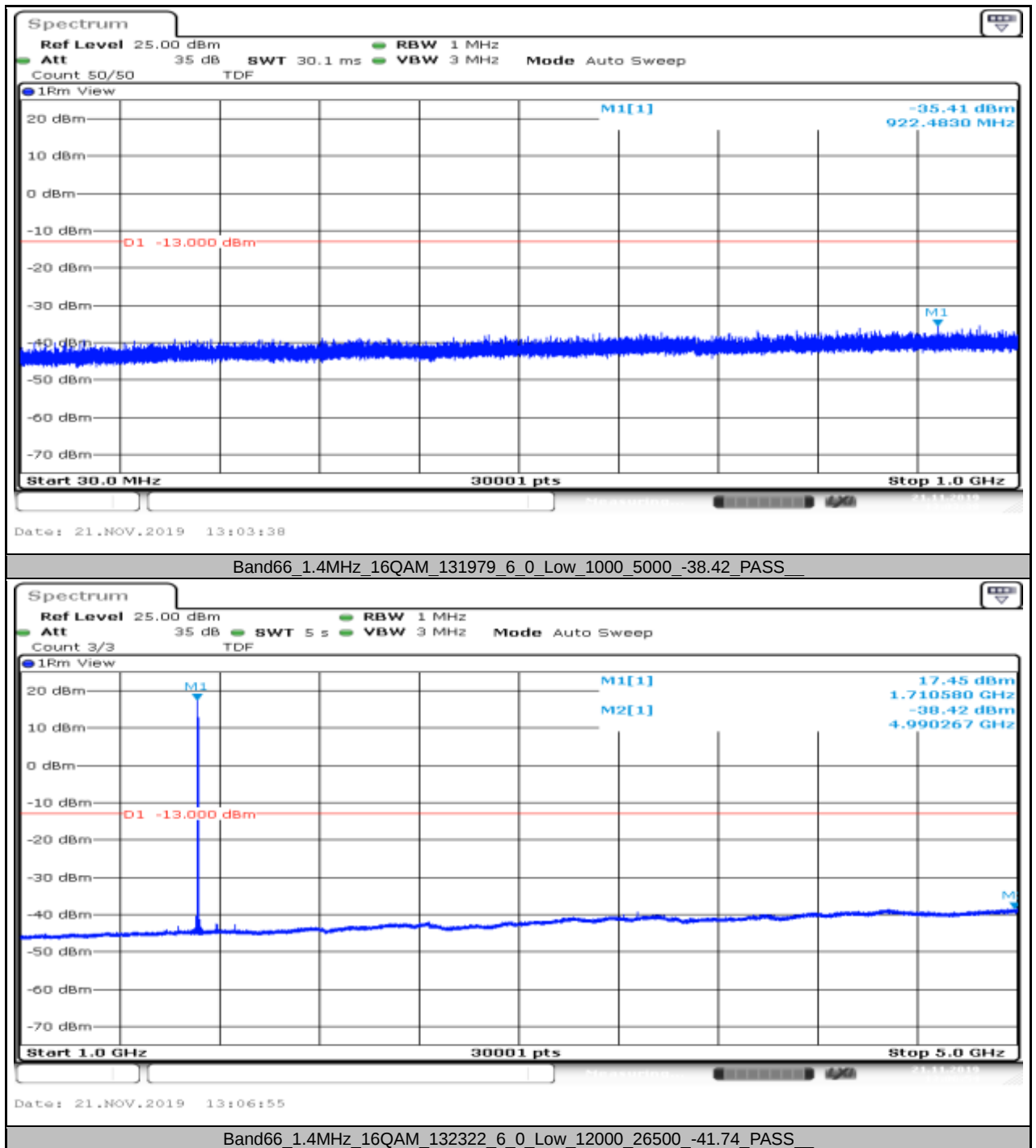


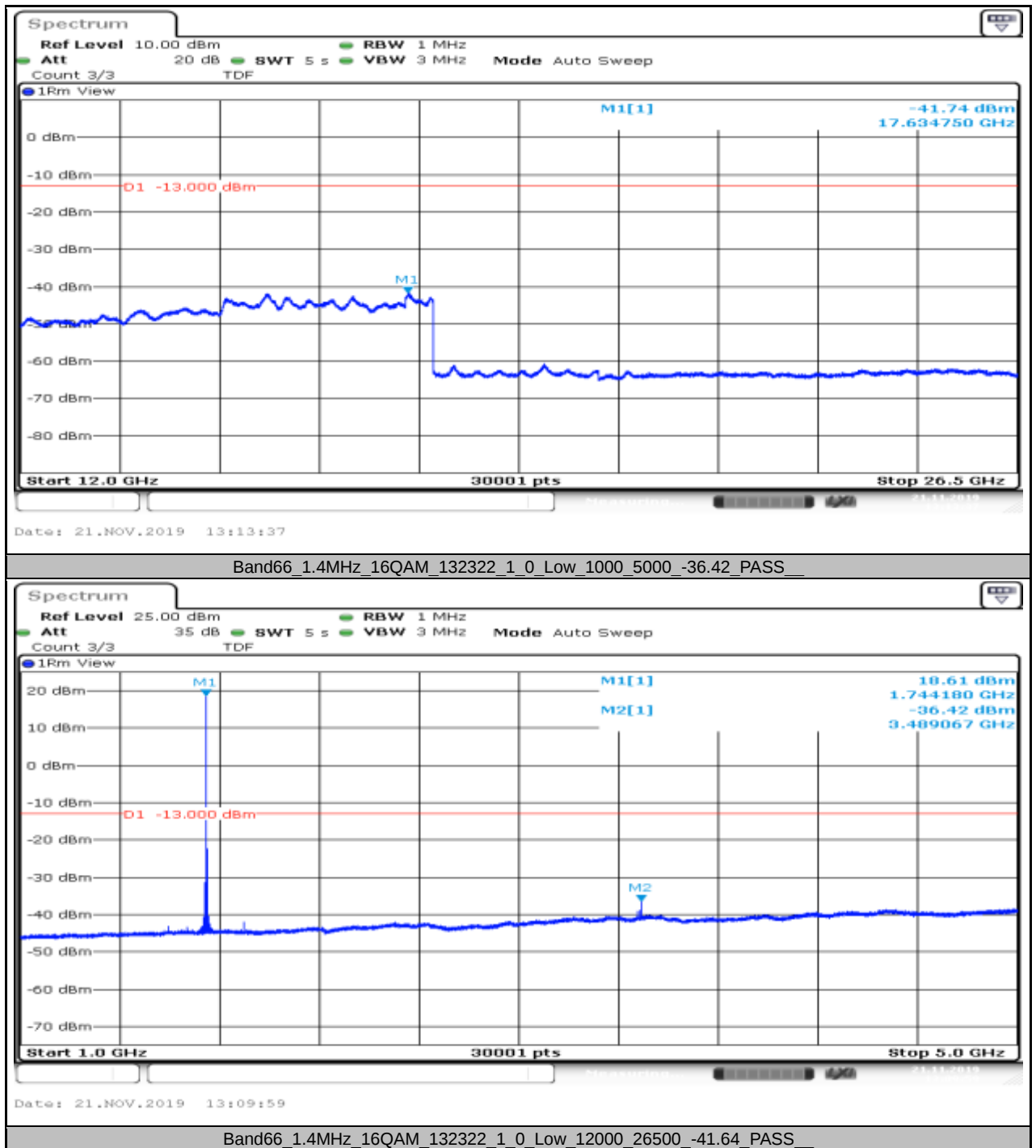
Band66_1.4MHz_16QAM_131979_6_0_Low_12000_26500_-41.69_PASS_

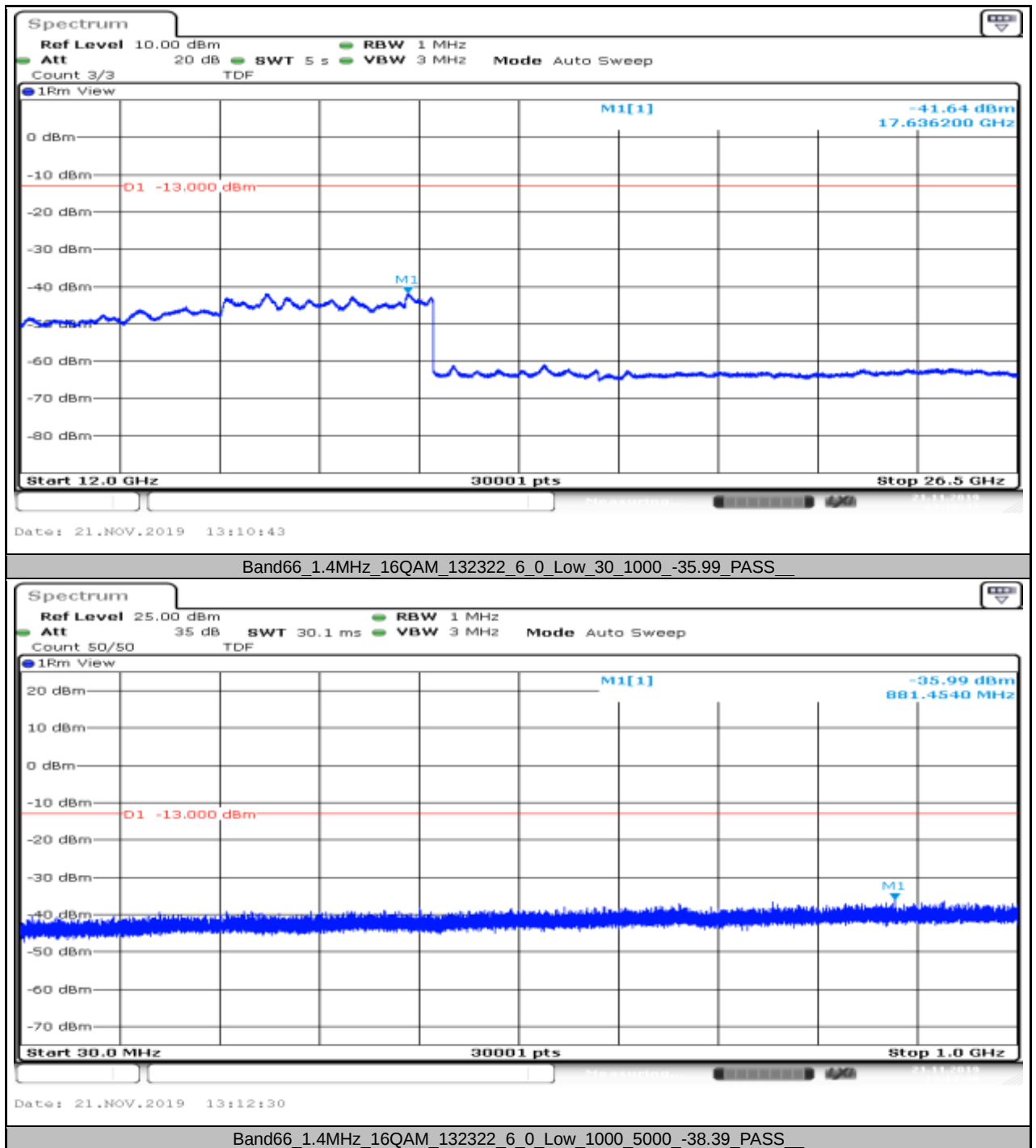


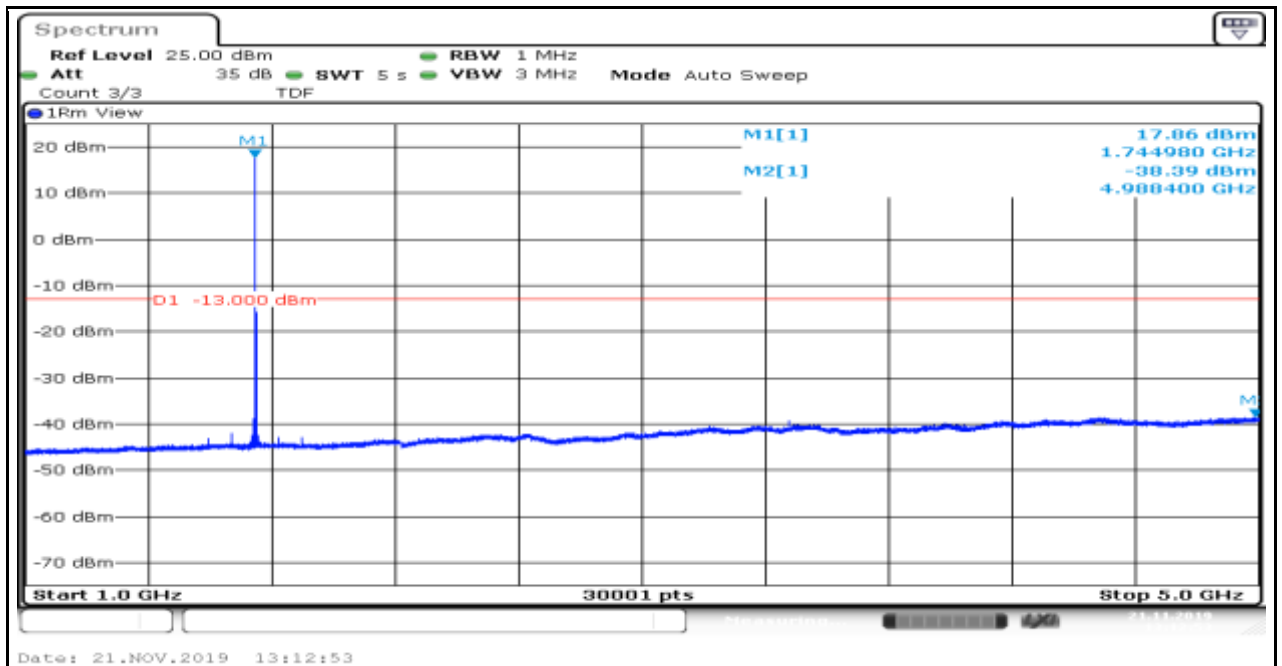
Band66_1.4MHz_16QAM_131979_6_0_Low_5000_12000_-47.67_PASS_



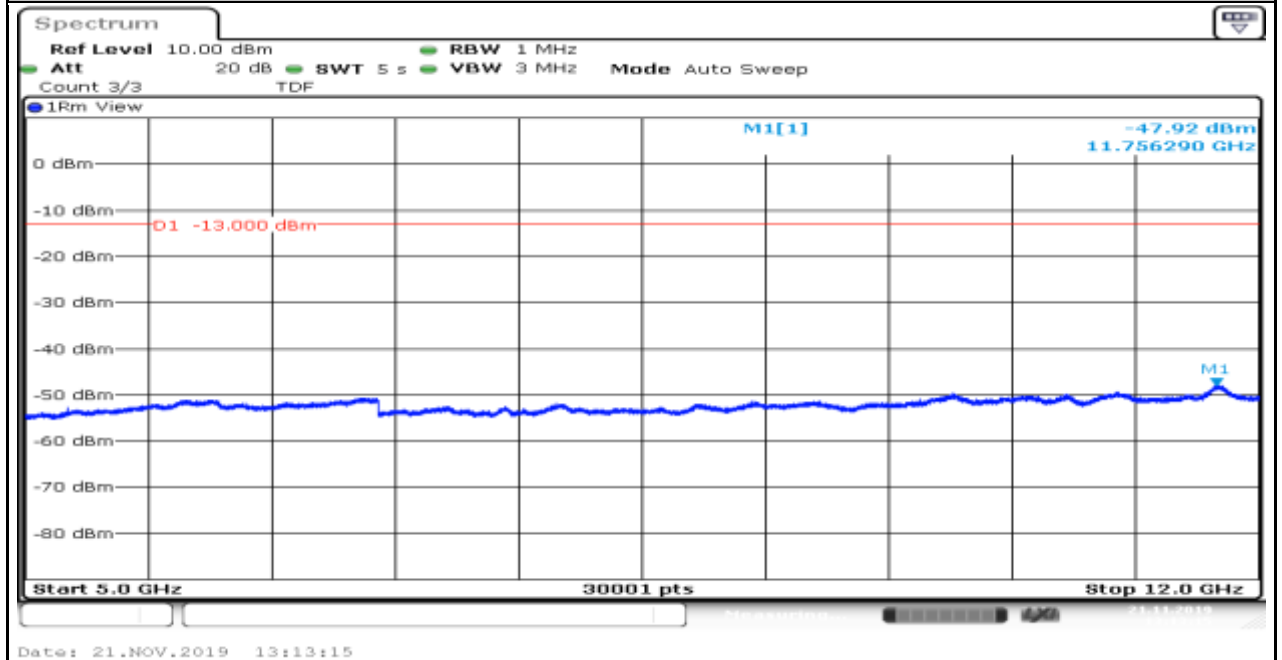




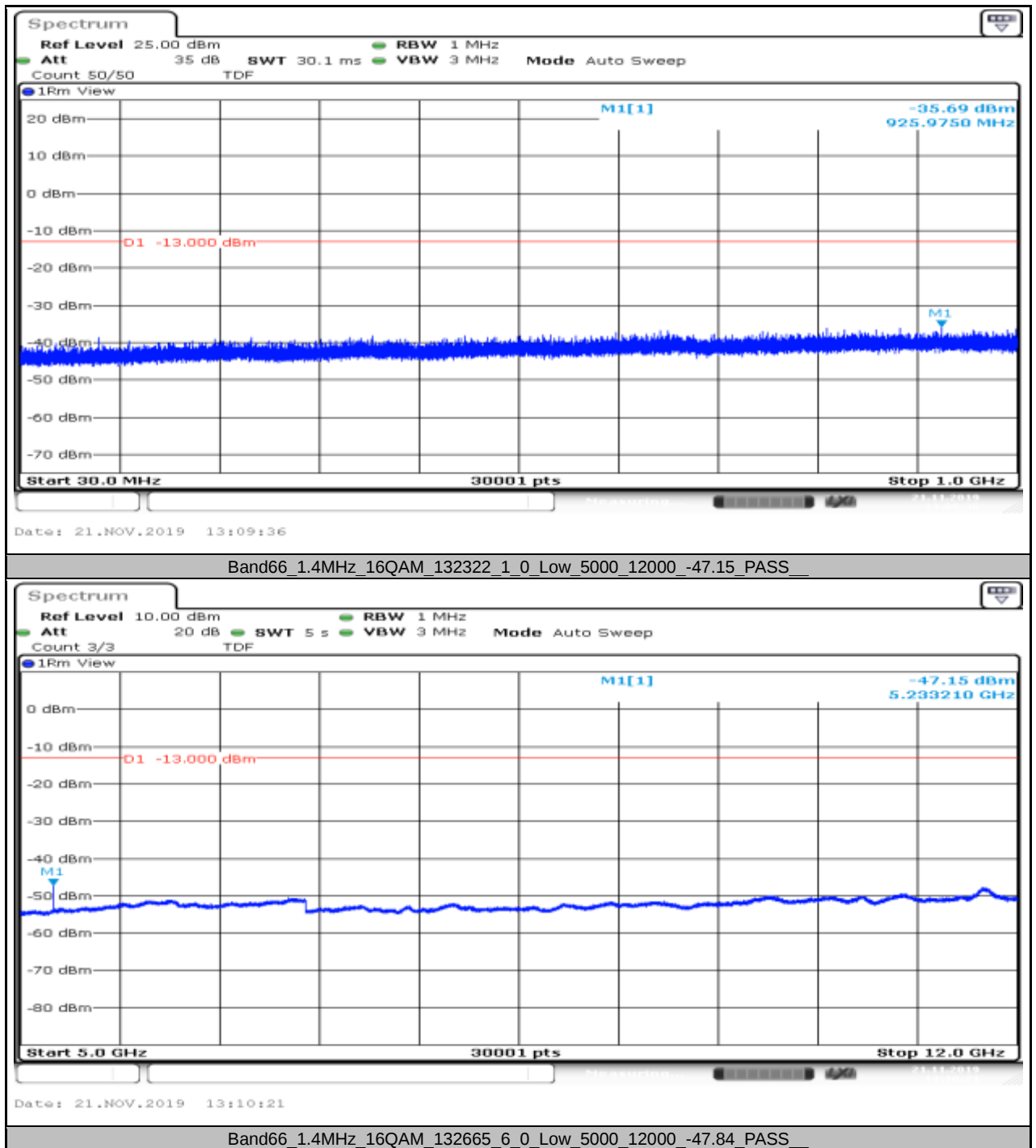


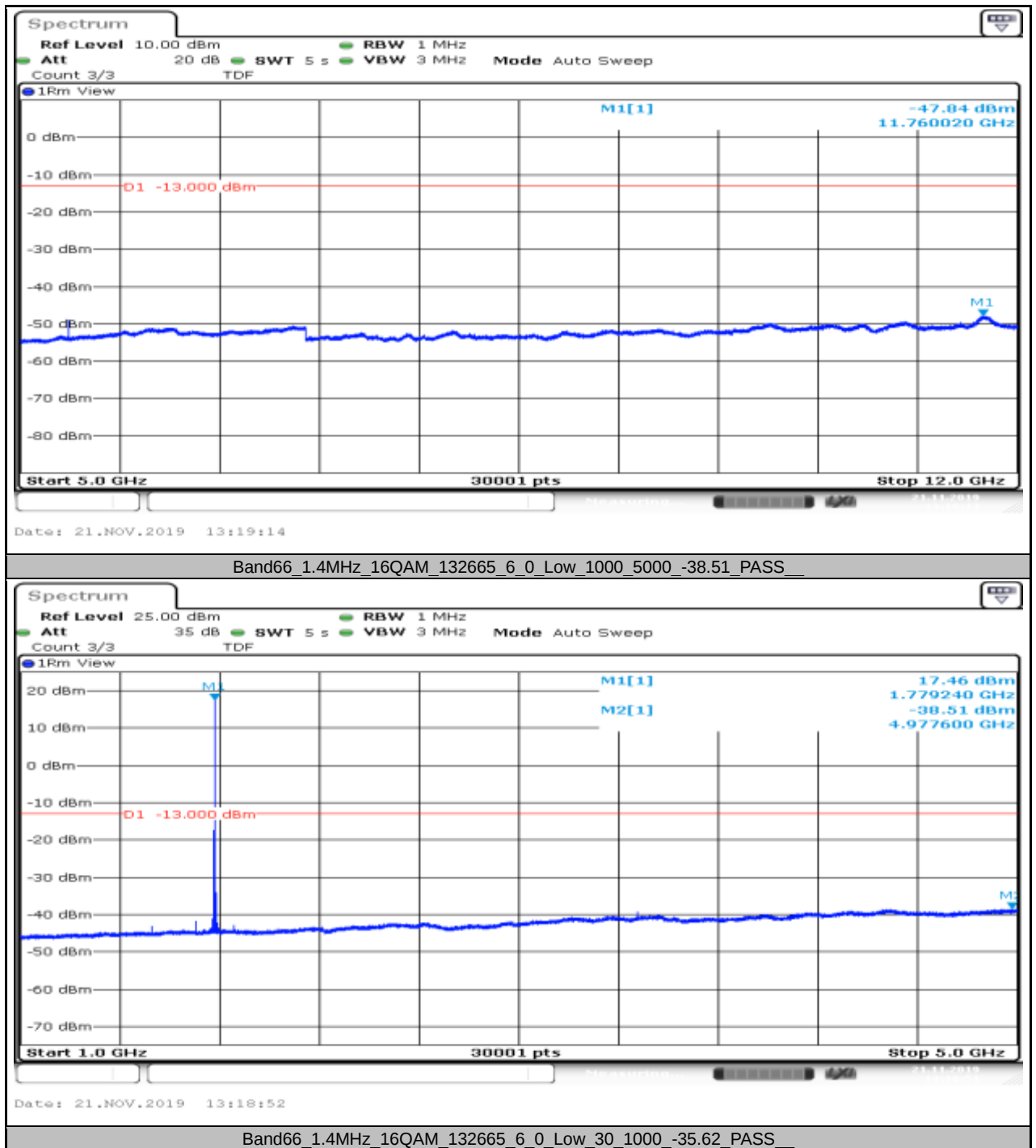


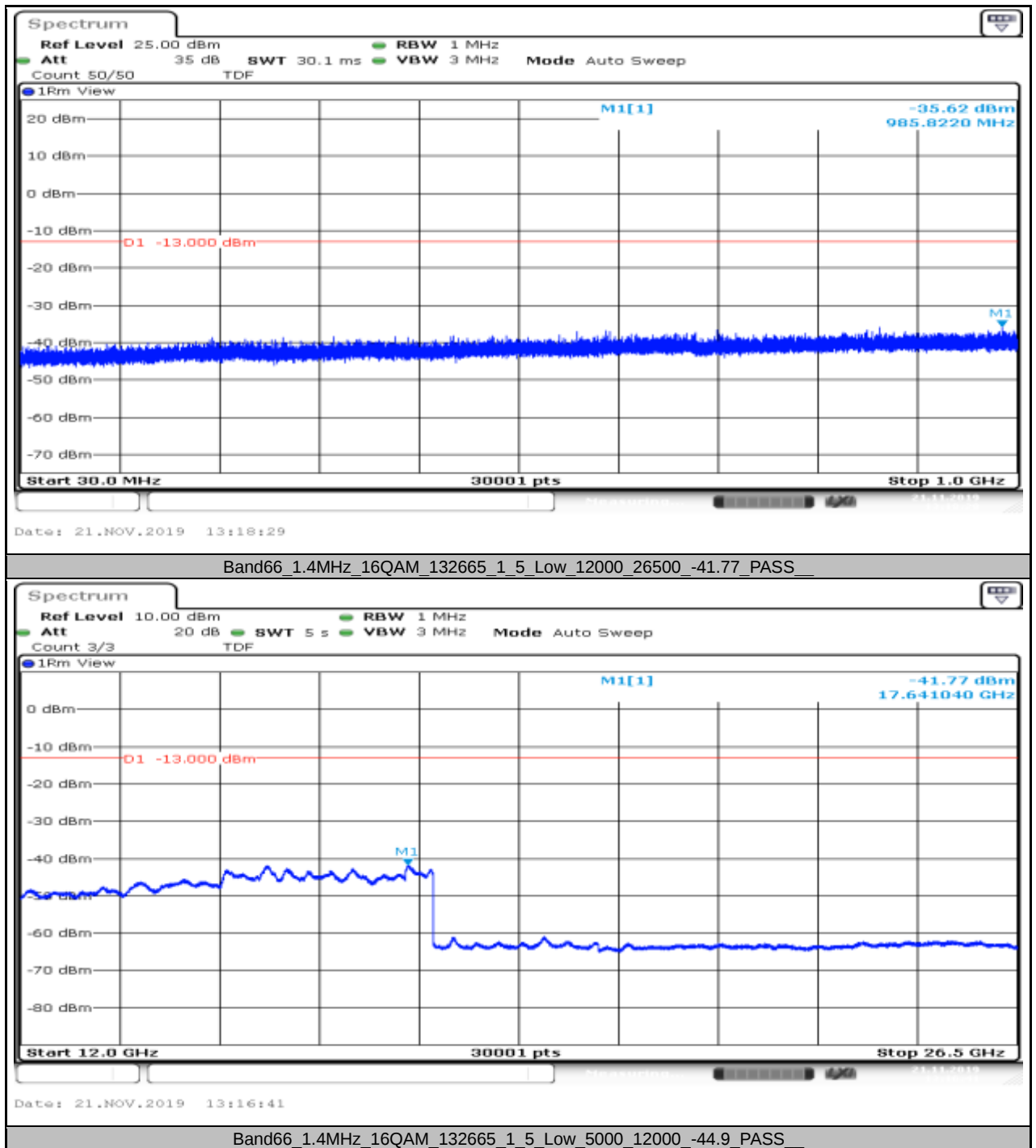
Band66_1.4MHz_16QAM_132322_6_0_Low_5000_12000_-47.92_PASS_

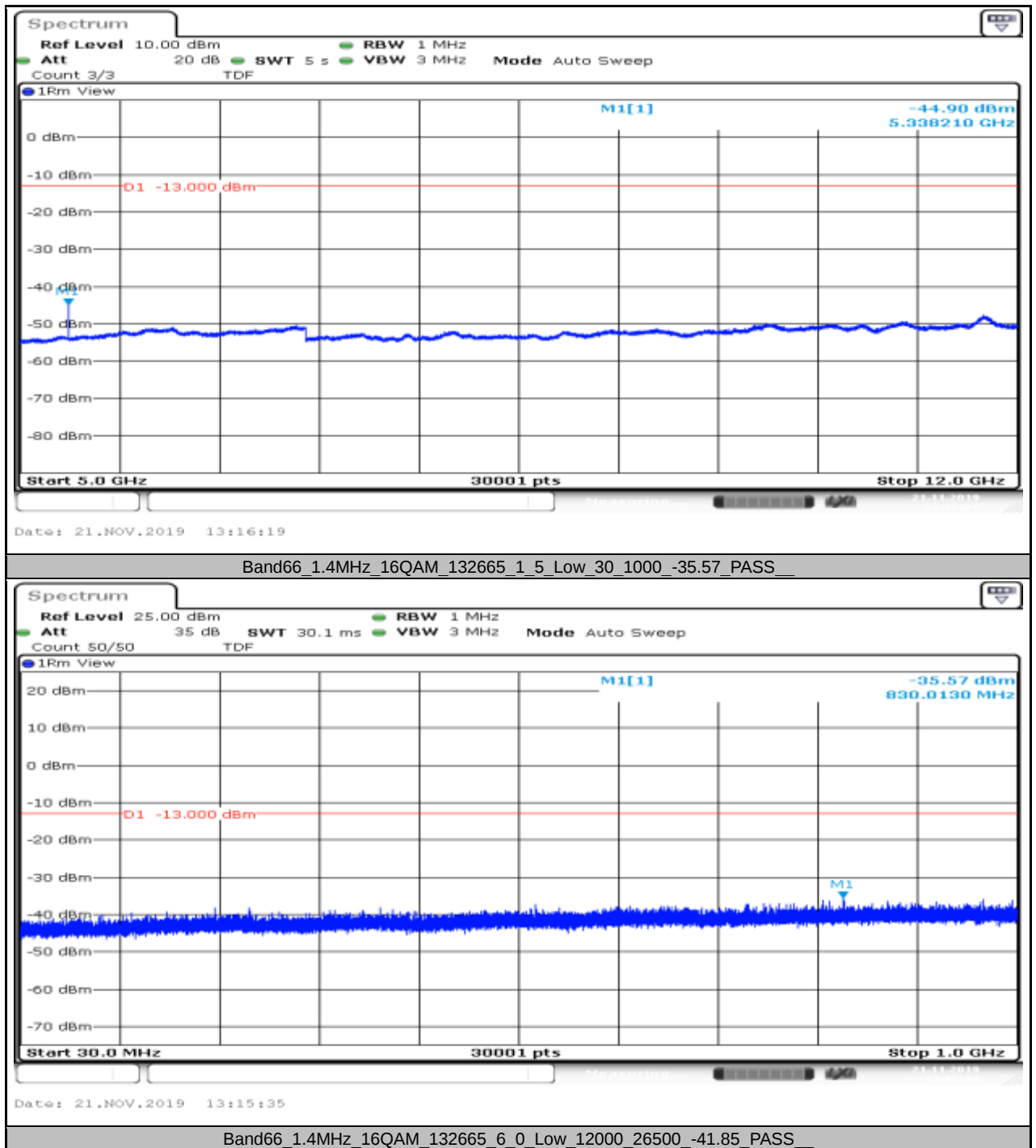


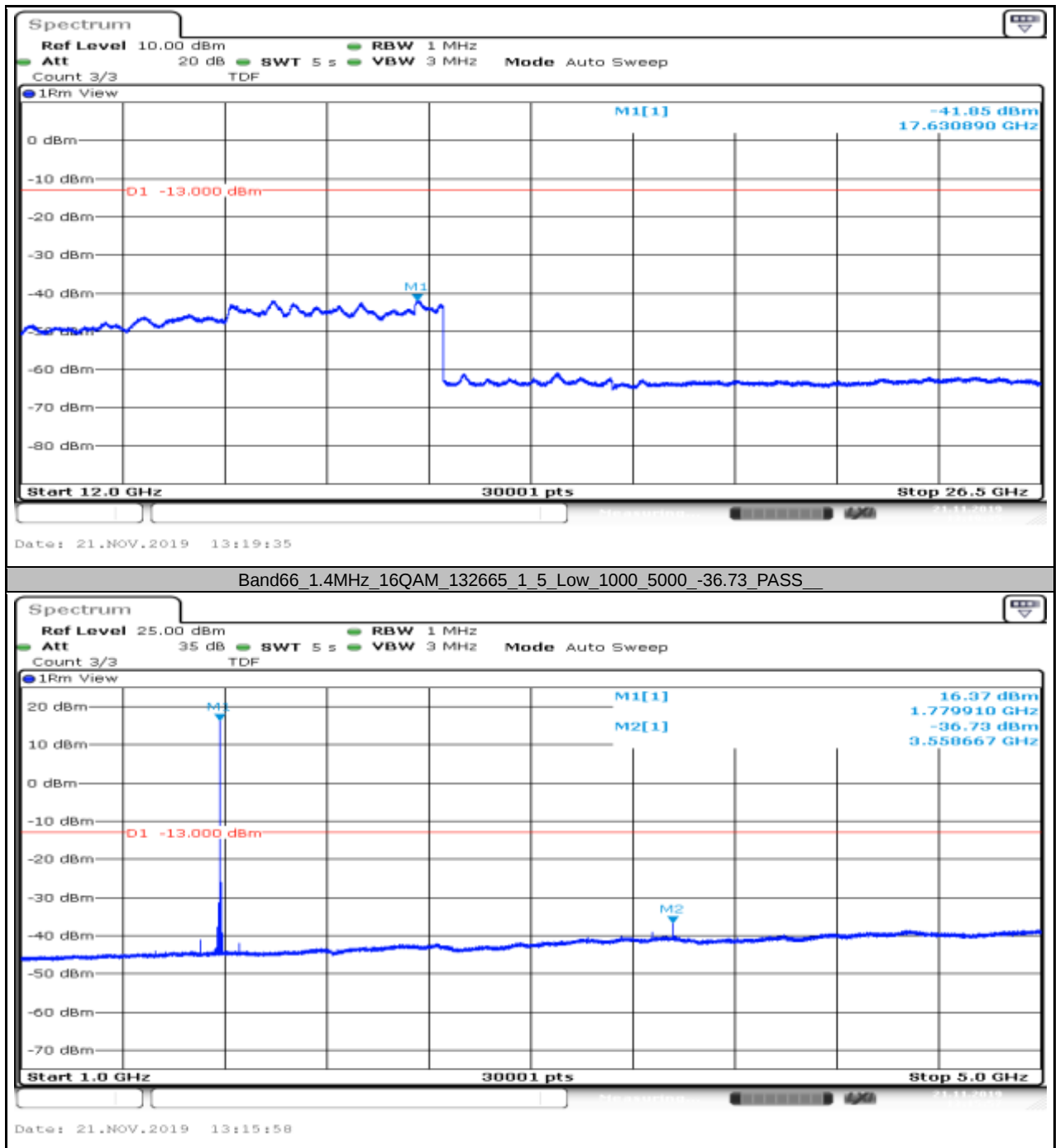
Band66_1.4MHz_16QAM_132322_1_0_Low_30_1000_-35.69_PASS_











Appendix I.6: Frequency Stability for M1

Test Result

Voltage												
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band66	1.4MHz	QPSK	132322	1	0	Low	NV	NT	-8.73	-0.005	±2.5	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	LV	NT	-7.58	-0.00434	±2.5	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	HV	NT	-9.6	-0.0055	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	HV	NT	85.64	0.049077	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	LV	NT	85.24	0.048848	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	NV	NT	83.99	0.048132	±2.5	PASS

Temperature												
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band66	1.4MHz	QPSK	132322	1	0	Low	NV	50	-8.34	-0.00478	±2.5	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	NV	80	-9.61	-0.00551	±2.5	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	NV	-30	-8.45	-0.00484	±2.5	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	NV	60	-8.04	-0.00461	±2.5	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	NV	70	-5.06	-0.0029	±2.5	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	NV	-40	-9.44	-0.00541	±2.5	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	NV	85	-3.52	-0.00202	±2.5	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	NV	0	-9.73	-0.00558	±2.5	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	NV	10	-7.32	-0.0042	±2.5	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	NV	20	-7.67	-0.0044	±2.5	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	NV	30	-8.43	-0.00483	±2.5	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	NV	40	-6.49	-0.00372	±2.5	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	NV	-10	-10	-0.00573	±2.5	PASS
Band66	1.4MHz	QPSK	132322	1	0	Low	NV	-20	-9.37	-0.00537	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	NV	-30	83.77	0.048006	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	NV	50	83.97	0.04812	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	NV	60	82.55	0.047307	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	NV	70	82.33	0.047181	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	NV	80	88.16	0.050521	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	NV	85	82.6	0.047335	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	NV	30	84.74	0.048562	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	NV	20	82.47	0.047261	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	NV	10	85.69	0.049106	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	NV	0	84.24	0.048275	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	NV	-20	83.71	0.047971	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	NV	-40	86.53	0.049587	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	NV	40	85.13	0.048785	±2.5	PASS
Band66	1.4MHz	16QAM	132322	1	0	Low	NV	-10	84.53	0.048441	±2.5	PASS

Appendix J: Test Results of Band 85 for eMTC operation

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Appendix J.1: RF Power Output and Effective (Isotropic) Radiated Power Output Data for M1

Test Result

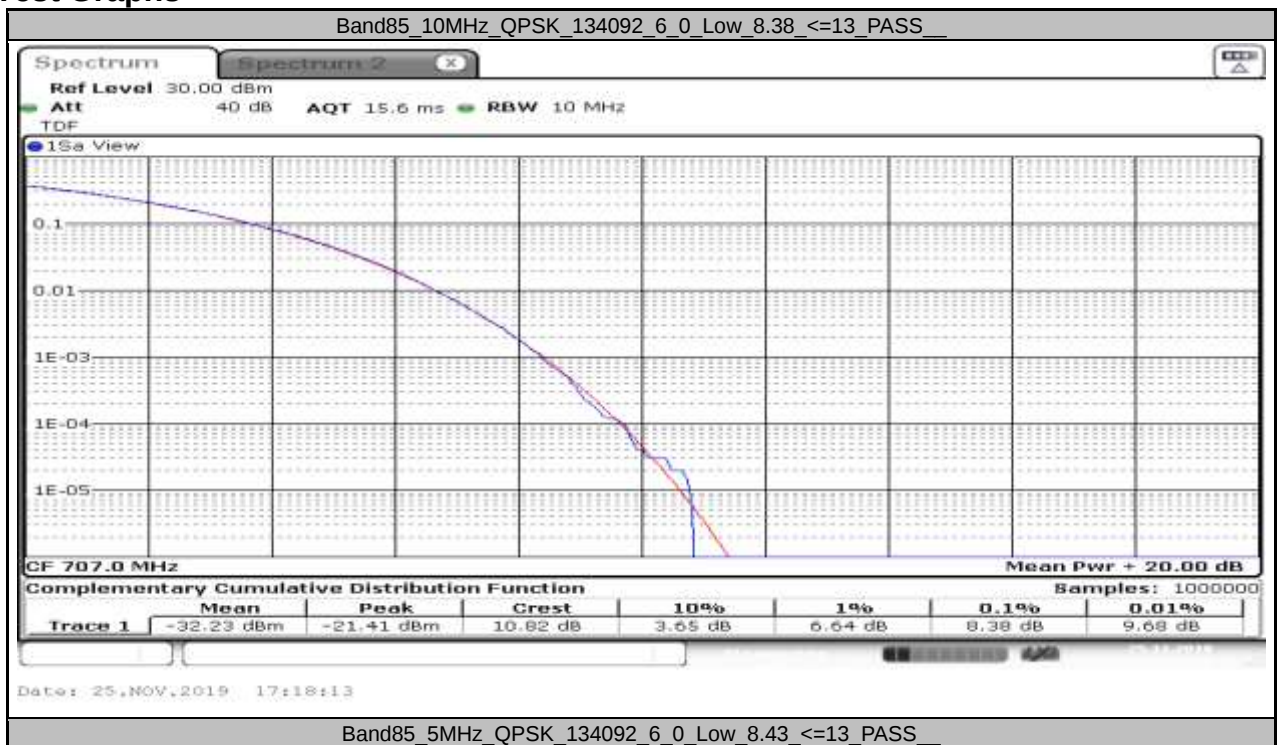
Band	Bandwidth	Modulation	Channel	RB Size	RB	NBIndex	Result (dBm)	ERP		Limit (watts)	Verdict
					Start			dBm	Watts		
Band85	5MHz	QPSK	134027	1	0	Low	21.58	21.57	0.144	3	PASS
Band85	5MHz	QPSK	134092	1	0	Low	21.76	21.75	0.150	3	PASS
Band85	5MHz	QPSK	134157	1	5	High	21.69	21.68	0.147	3	PASS
Band85	5MHz	QPSK	134157	3	3	High	21.76	21.75	0.150	3	PASS
Band85	5MHz	QPSK	134027	6	0	Low	20.71	20.7	0.117	3	PASS
Band85	5MHz	QPSK	134092	6	0	Low	20.54	20.53	0.113	3	PASS
Band85	5MHz	16QAM	134027	1	0	Low	21.12	21.11	0.129	3	PASS
Band85	5MHz	16QAM	134092	1	0	Low	21.26	21.25	0.133	3	PASS
Band85	5MHz	16QAM	134157	1	5	High	21.41	21.4	0.138	3	PASS
Band85	5MHz	16QAM	134157	3	3	High	21.63	21.62	0.145	3	PASS
Band85	5MHz	16QAM	134027	6	0	Low	20.54	20.53	0.113	3	PASS
Band85	5MHz	16QAM	134092	6	0	Low	20.57	20.56	0.114	3	PASS
Band85	10MHz	QPSK	134092	1	0	Low	21.65	21.64	0.146	3	PASS
Band85	10MHz	QPSK	134092	1	5	High	21.55	21.54	0.143	3	PASS
Band85	10MHz	QPSK	134092	5	0	Low	21.64	21.63	0.146	3	PASS
Band85	10MHz	QPSK	134092	5	1	High	21.71	21.7	0.148	3	PASS
Band85	10MHz	16QAM	134092	1	0	Low	21.07	21.06	0.128	3	PASS
Band85	10MHz	16QAM	134092	1	5	High	21.11	21.1	0.129	3	PASS
Band85	10MHz	16QAM	134092	5	0	Low	21.44	21.43	0.139	3	PASS
Band85	10MHz	16QAM	134092	5	1	High	21.58	21.57	0.144	3	PASS

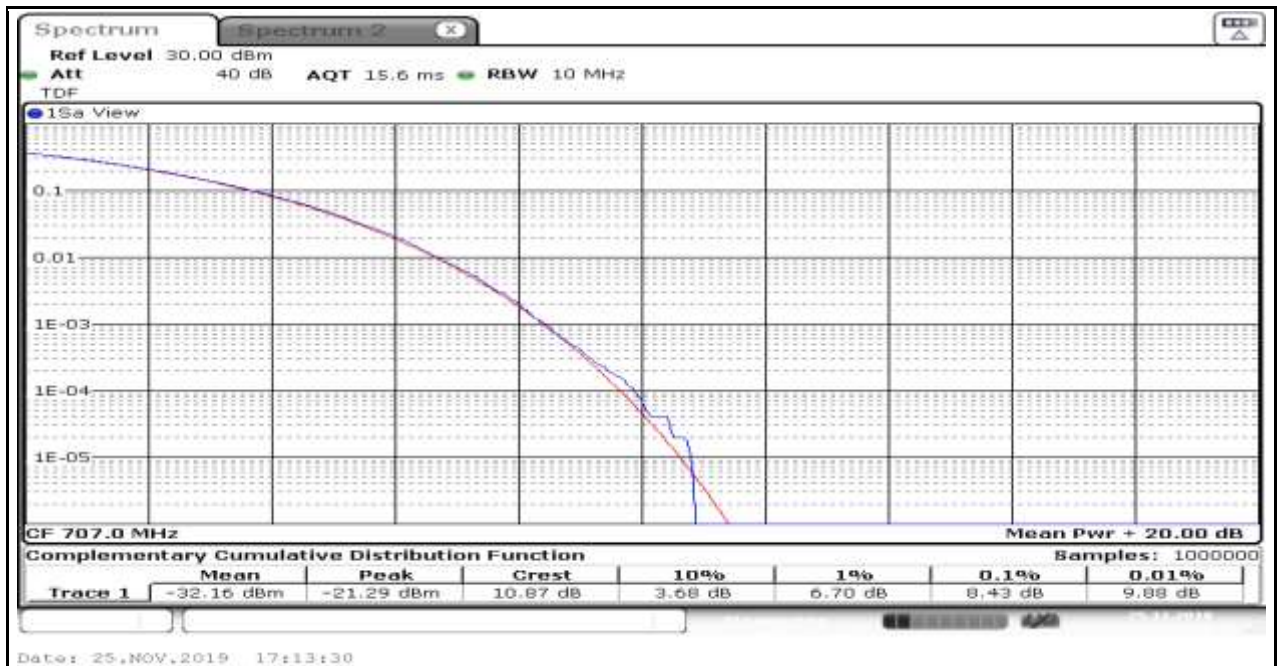
Appendix J.2: Peak-to-Average Ratio (CCDF) for M1

Test Result

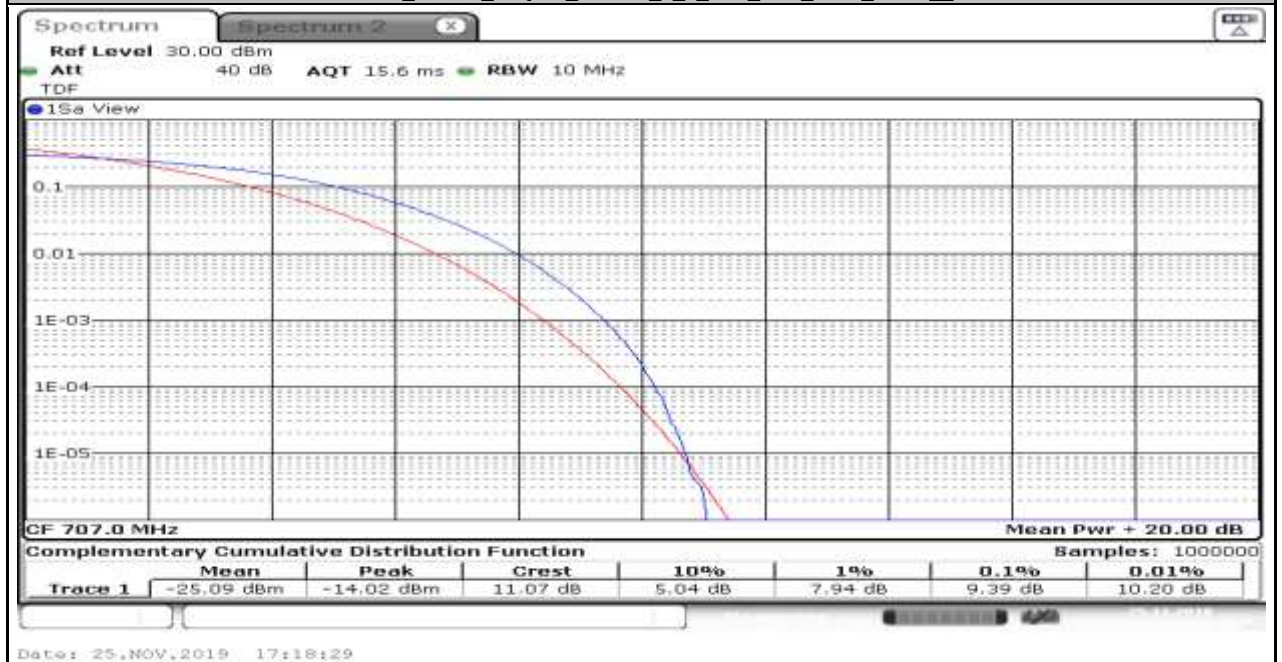
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band85	10MHz	QPSK	134092	6	0	Low	8.38	<=13	PASS
Band85	5MHz	QPSK	134092	6	0	Low	8.43	<=13	PASS
Band85	10MHz	16QAM	134092	6	0	Low	9.39	<=13	PASS
Band85	5MHz	16QAM	134092	6	0	Low	9.33	<=13	PASS

Test Graphs



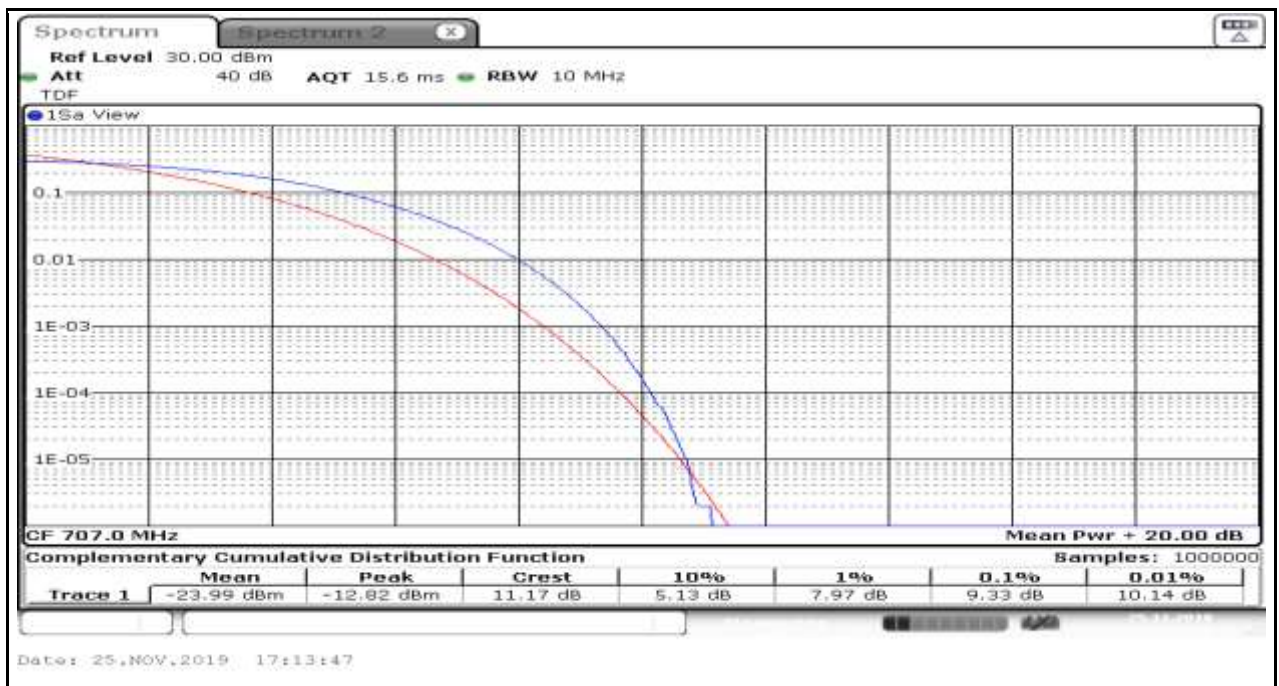


Band85_10MHz_16QAM_134092_6_0_Low_9.39_<=13_PASS



Band85_5MHz_16QAM_134092_6_0_Low_9.33_<=13_PASS

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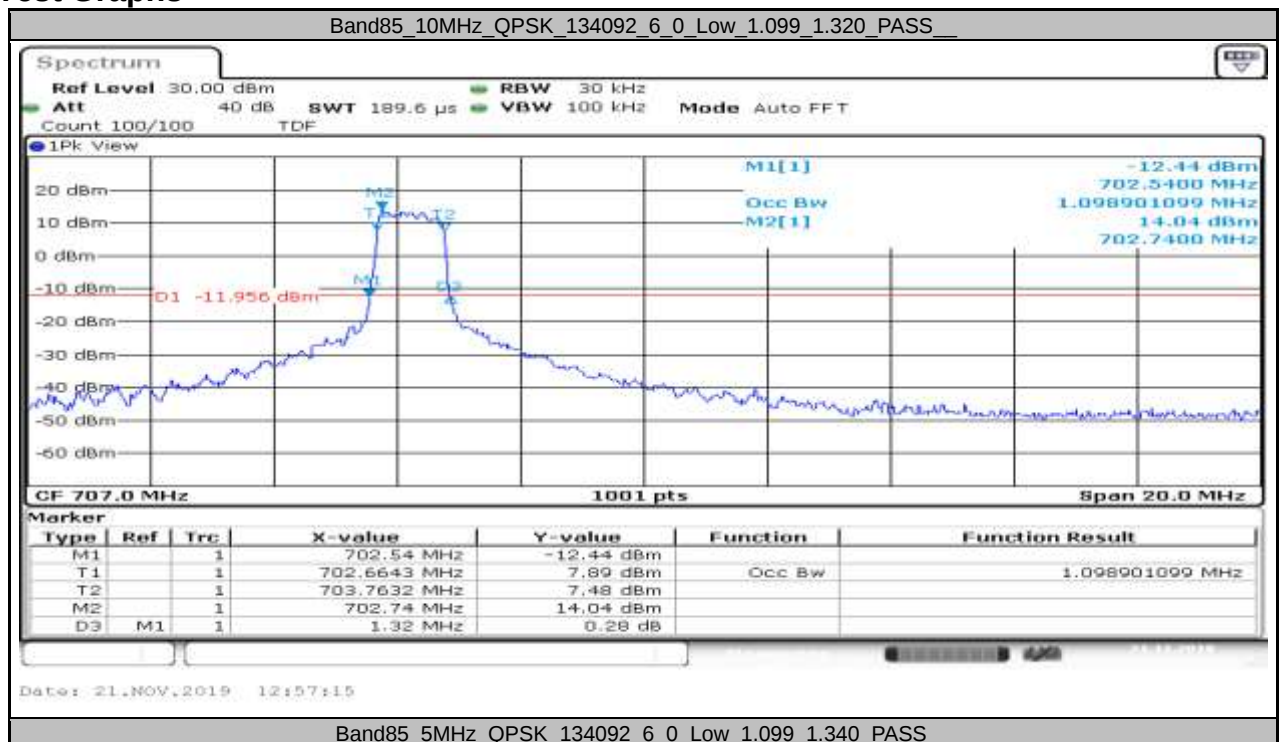


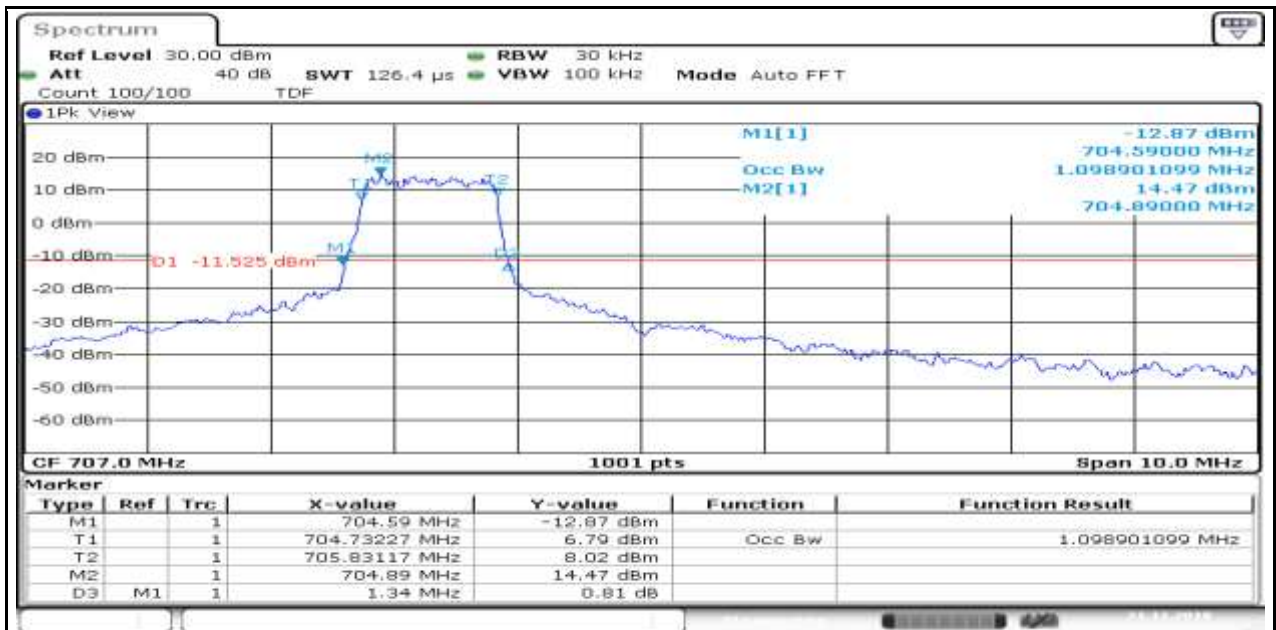
Appendix J.3: 26dB Bandwidth and Occupied Bandwidth for M1

Test Result

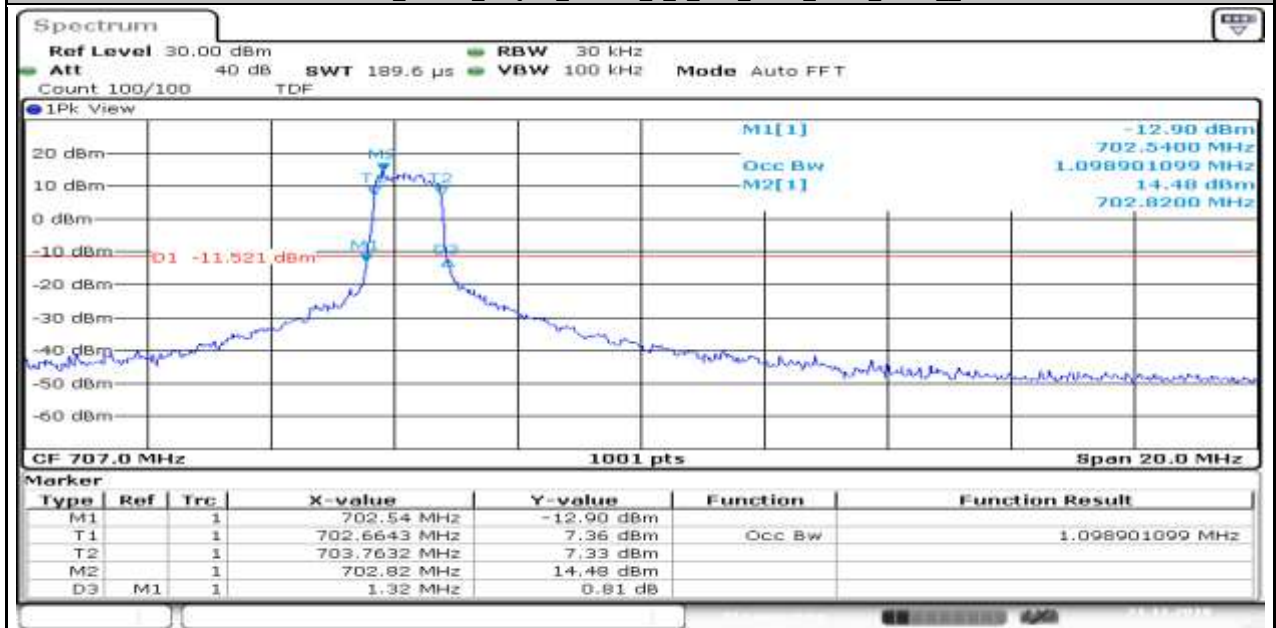
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band85	10MHz	QPSK	134092	6	0	Low	1.099	1.320	PASS
Band85	5MHz	QPSK	134092	6	0	Low	1.099	1.340	PASS
Band85	10MHz	16QAM	134092	6	0	Low	1.099	1.320	PASS
Band85	5MHz	16QAM	134092	6	0	Low	1.099	1.340	PASS

Test Graphs

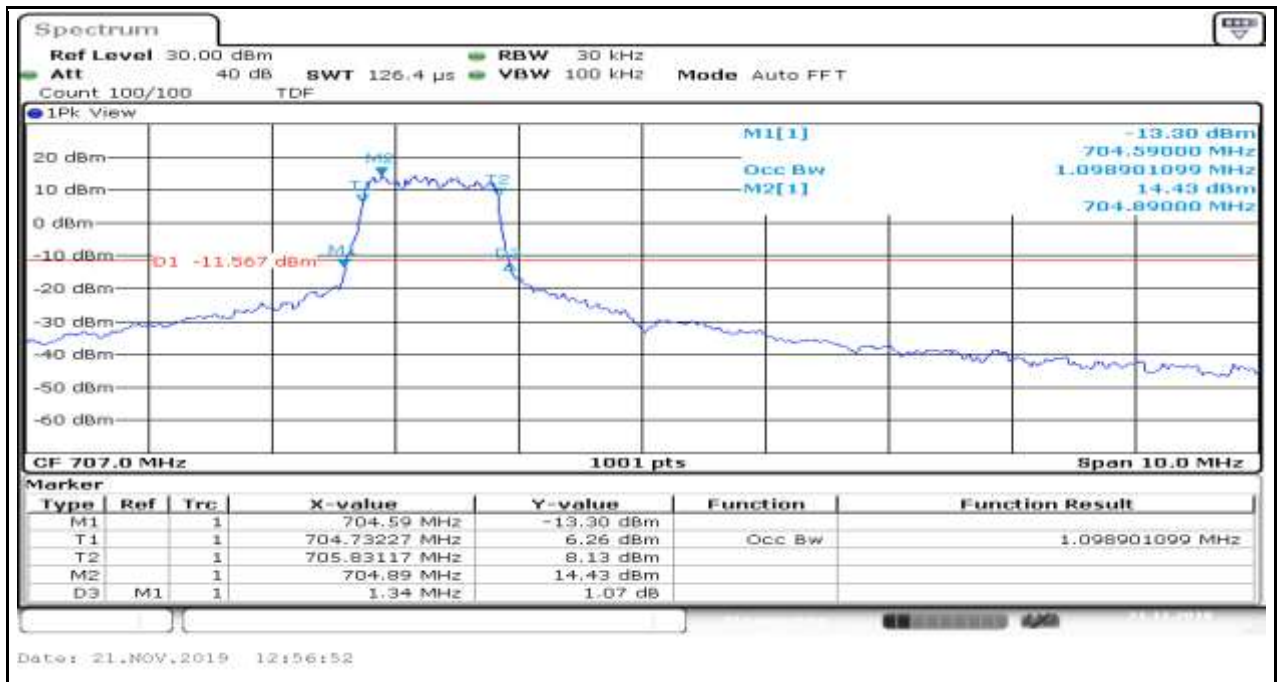




Band85_10MHz_16QAM_134092_6_0_Low_1.099_1.320_PASS_



Band85_5MHz_16QAM_134092_6_0_Low_1.099_1.340_PASS_

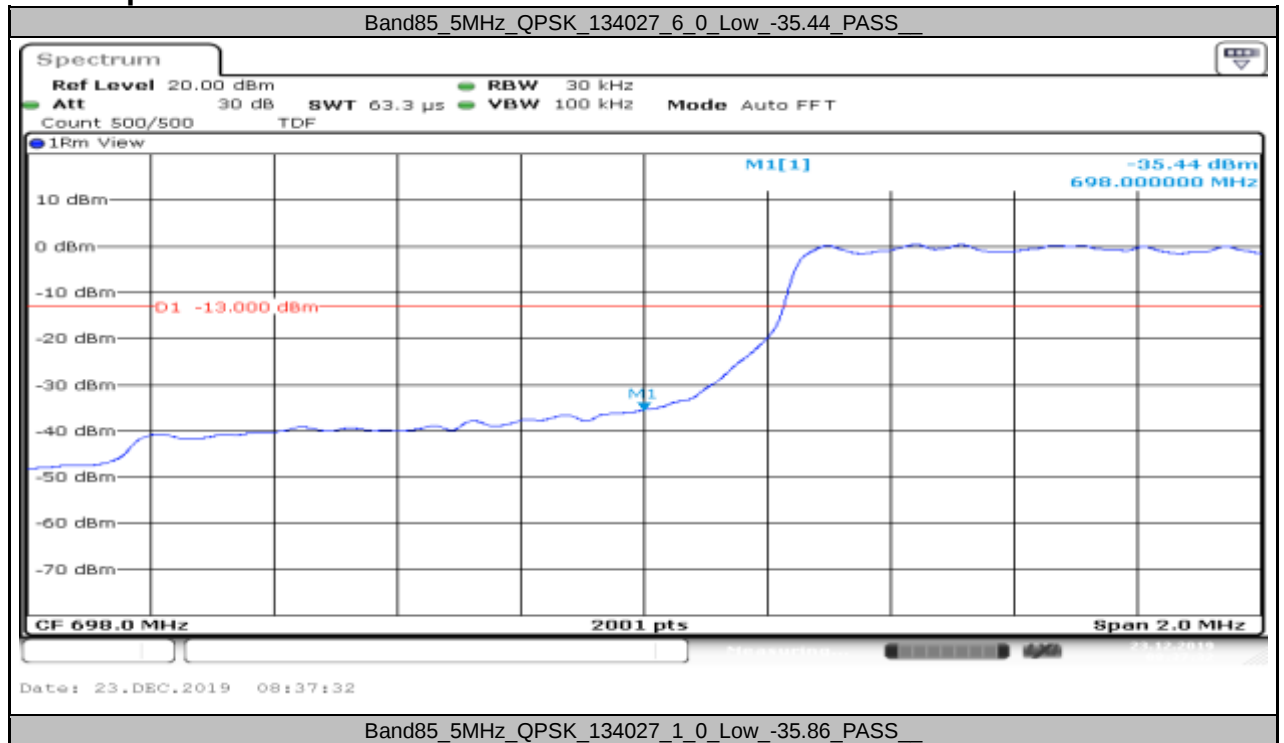


Appendix J.4: Band Edge for M1

Test Result

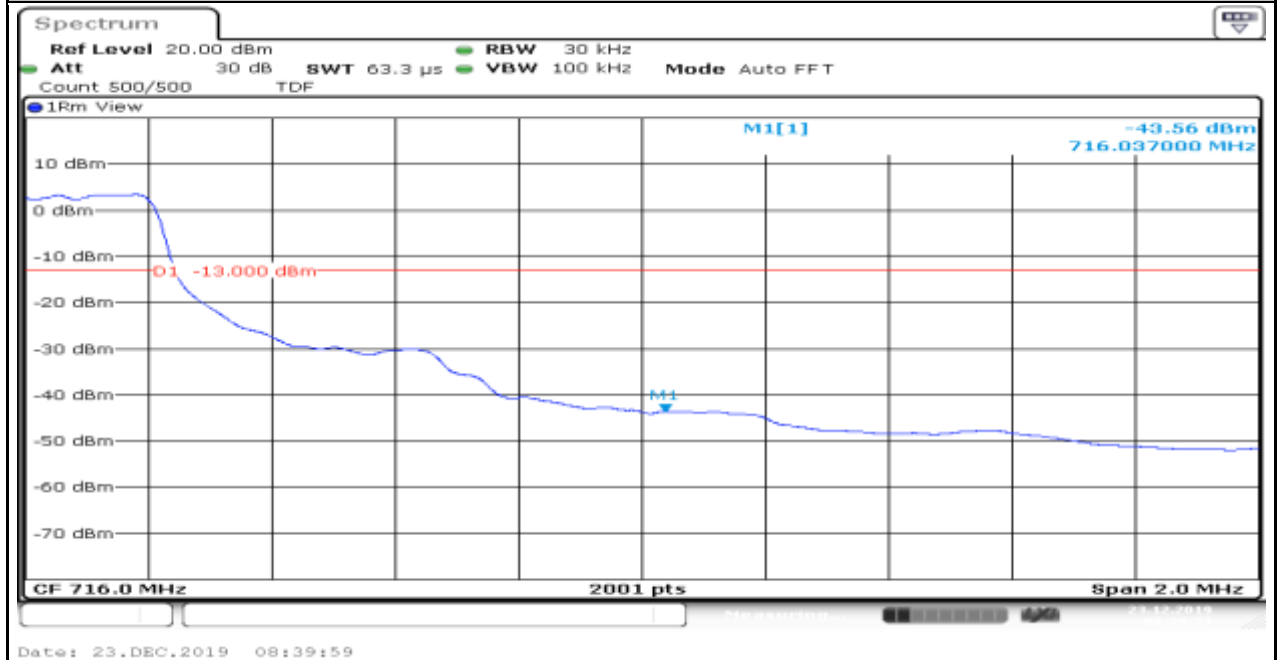
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Result (dBm)	Verdict
Band85	5MHz	QPSK	134027	6	0	Low	-35.44	PASS
Band85	5MHz	QPSK	134027	1	0	Low	-35.86	PASS
Band85	5MHz	QPSK	134157	3	3	High	-43.56	PASS
Band85	5MHz	QPSK	134157	1	5	High	-51.93	PASS
Band85	5MHz	16QAM	134027	6	0	Low	-35.09	PASS
Band85	5MHz	16QAM	134027	1	0	Low	-38.49	PASS
Band85	5MHz	16QAM	134157	3	3	High	-45.98	PASS
Band85	5MHz	16QAM	134157	1	5	High	-44.89	PASS

Test Graphs

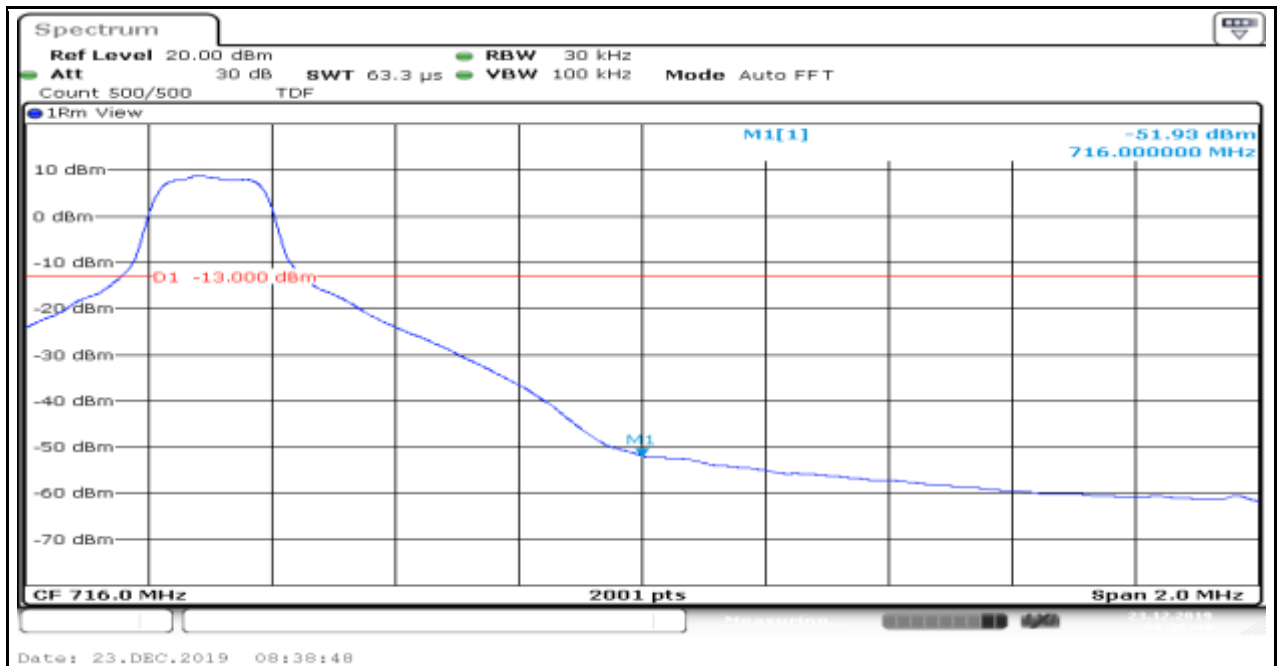




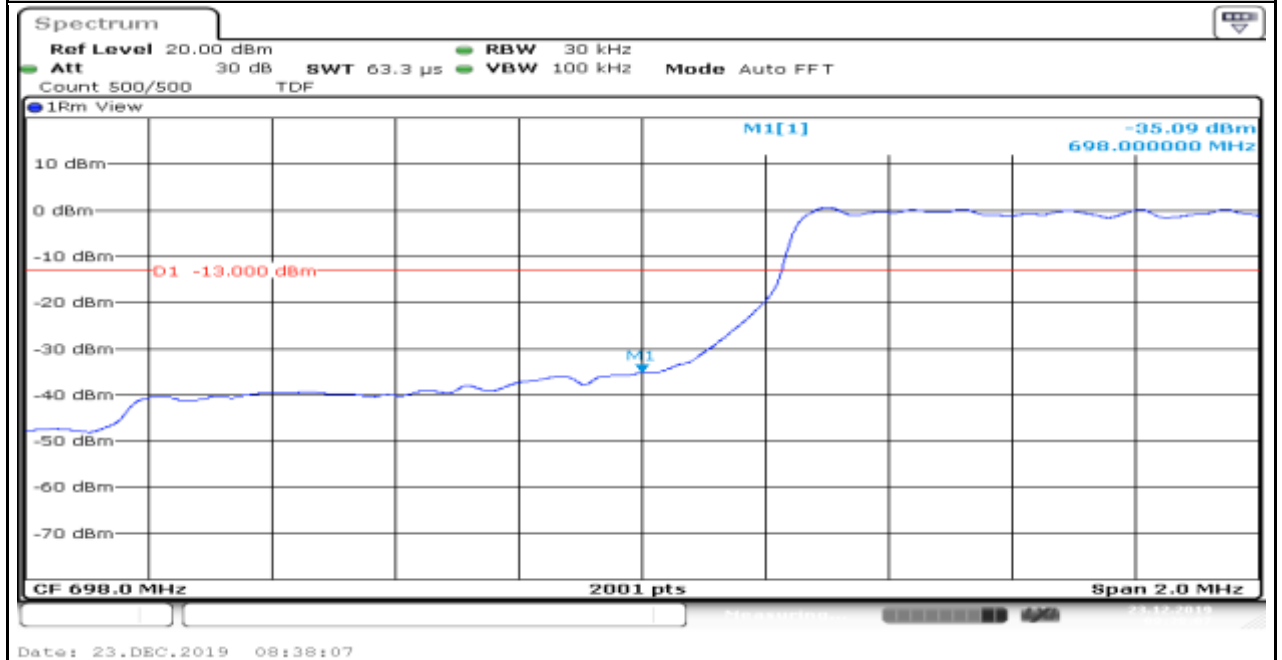
Band85_5MHz_QPSK_134157_3_3_High_-43.56_PASS_



Band85_5MHz_QPSK_134157_1_5_High_-51.93_PASS_



Band85_5MHz_16QAM_134027_6_0_Low_-35.09_PASS_



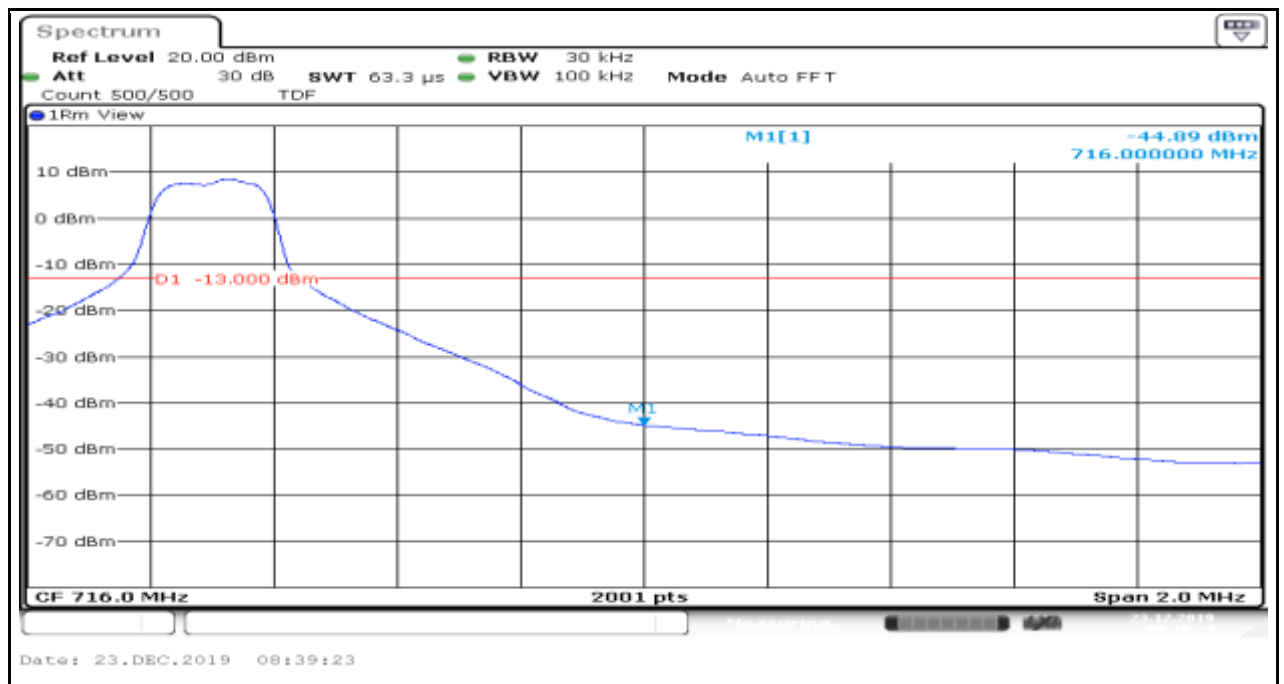
Band85_5MHz_16QAM_134027_1_0_Low_-38.49_PASS_



Band85_5MHz_16QAM_134157_3_3_High_-45.98_PASS_



Band85_5MHz_16QAM_134157_1_5_High_-44.89_PASS_

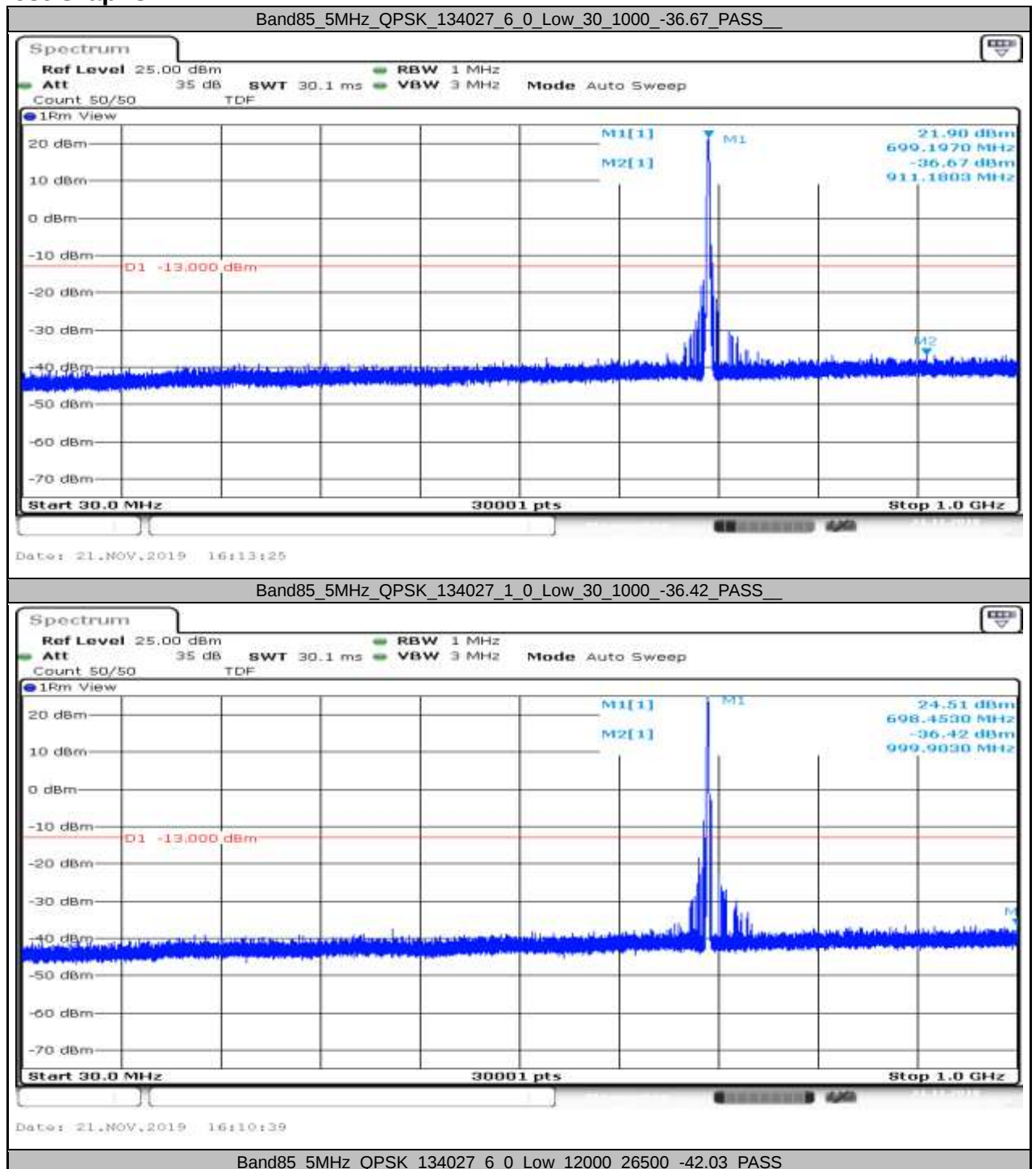


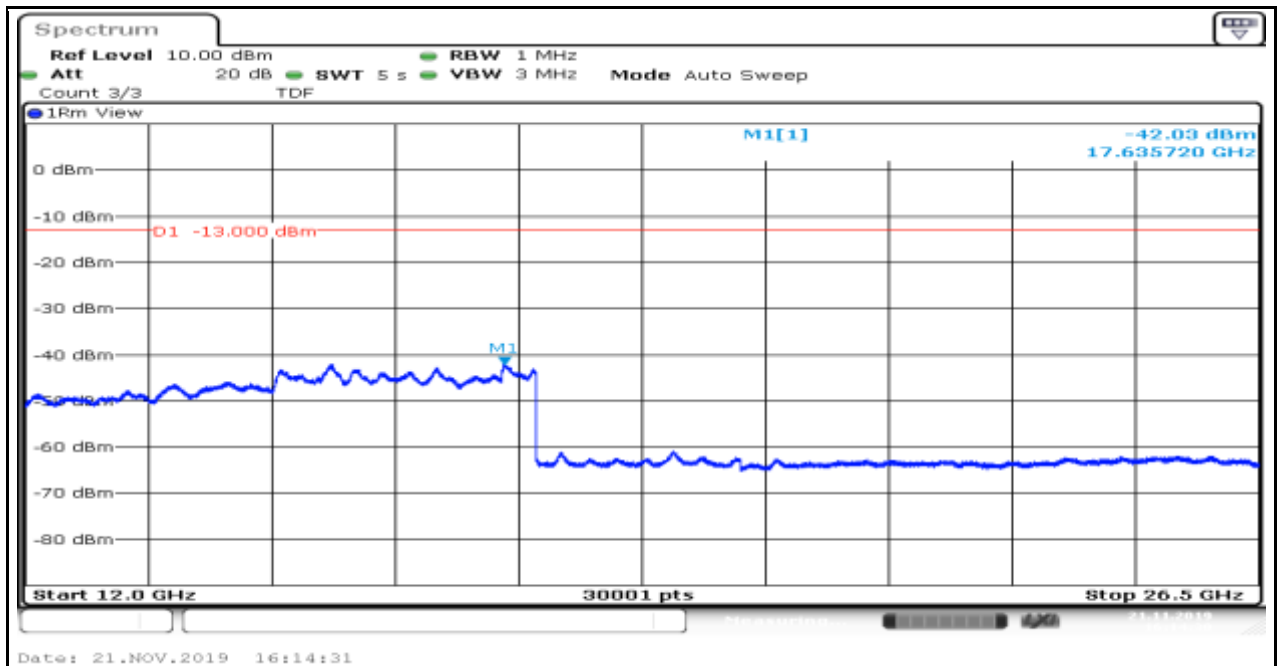
Appendix J.5: Conducted Spurious Emission for M1

Test Result

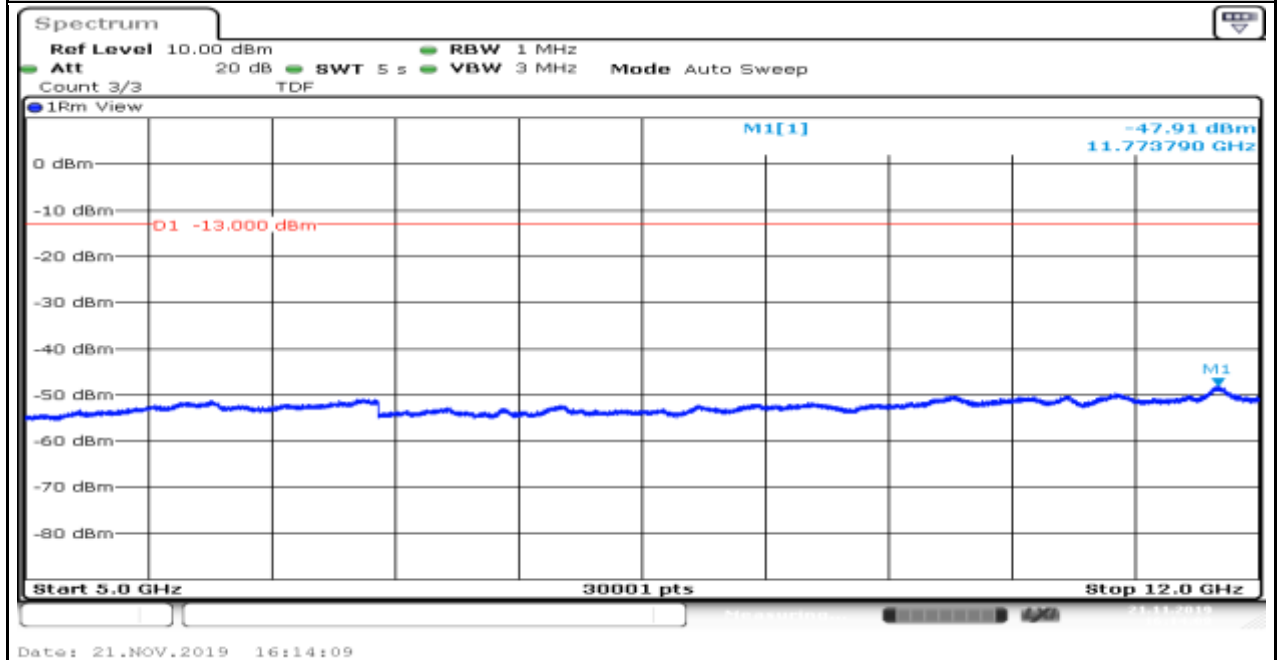
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Start Freq	Stop Freq	Result (dBm)	Verdict
Band85	5MHz	QPSK	134027	6	0	Low	30	1000	-36.67	PASS
Band85	5MHz	QPSK	134027	1	0	Low	30	1000	-36.42	PASS
Band85	5MHz	QPSK	134027	6	0	Low	12000	26500	-42.03	PASS
Band85	5MHz	QPSK	134027	6	0	Low	5000	12000	-47.91	PASS
Band85	5MHz	QPSK	134027	6	0	Low	1000	5000	-38.78	PASS
Band85	5MHz	QPSK	134027	1	0	Low	12000	26500	-42.14	PASS
Band85	5MHz	QPSK	134027	1	0	Low	1000	5000	-38.69	PASS
Band85	5MHz	QPSK	134027	1	0	Low	5000	12000	-48	PASS
Band85	5MHz	QPSK	134092	6	0	Low	12000	26500	-42.04	PASS
Band85	5MHz	QPSK	134092	1	0	Low	1000	5000	-38.62	PASS
Band85	5MHz	QPSK	134092	1	0	Low	5000	12000	-48.12	PASS
Band85	5MHz	QPSK	134092	1	0	Low	12000	26500	-42.11	PASS
Band85	5MHz	QPSK	134092	6	0	Low	1000	5000	-38.71	PASS
Band85	5MHz	QPSK	134092	1	0	Low	30	1000	-36.23	PASS
Band85	5MHz	QPSK	134092	6	0	Low	5000	12000	-48.21	PASS
Band85	5MHz	QPSK	134092	6	0	Low	30	1000	-36.34	PASS
Band85	5MHz	QPSK	134157	1	5	High	12000	26500	-42	PASS
Band85	5MHz	QPSK	134157	3	3	High	12000	26500	-42.12	PASS
Band85	5MHz	QPSK	134157	3	3	High	5000	12000	-48.17	PASS
Band85	5MHz	QPSK	134157	3	3	High	30	1000	-35.78	PASS
Band85	5MHz	QPSK	134157	1	5	High	1000	5000	-38.79	PASS
Band85	5MHz	QPSK	134157	1	5	High	5000	12000	-48.16	PASS
Band85	5MHz	QPSK	134157	1	5	High	30	1000	-36.19	PASS
Band85	5MHz	QPSK	134157	3	3	High	1000	5000	-38.75	PASS
Band85	5MHz	16QAM	134027	1	0	Low	1000	5000	-38.78	PASS
Band85	5MHz	16QAM	134027	1	0	Low	5000	12000	-48.02	PASS
Band85	5MHz	16QAM	134027	1	0	Low	12000	26500	-41.88	PASS
Band85	5MHz	16QAM	134027	6	0	Low	12000	26500	-42.02	PASS
Band85	5MHz	16QAM	134027	6	0	Low	5000	12000	-48.28	PASS
Band85	5MHz	16QAM	134027	6	0	Low	30	1000	-37.09	PASS
Band85	5MHz	16QAM	134027	1	0	Low	30	1000	-36.02	PASS
Band85	5MHz	16QAM	134027	6	0	Low	1000	5000	-38.84	PASS
Band85	5MHz	16QAM	134092	6	0	Low	12000	26500	-42.12	PASS
Band85	5MHz	16QAM	134092	1	0	Low	1000	5000	-38.82	PASS
Band85	5MHz	16QAM	134092	1	0	Low	12000	26500	-42.13	PASS
Band85	5MHz	16QAM	134092	6	0	Low	30	1000	-35.99	PASS
Band85	5MHz	16QAM	134092	6	0	Low	1000	5000	-38.69	PASS
Band85	5MHz	16QAM	134092	6	0	Low	5000	12000	-48.17	PASS
Band85	5MHz	16QAM	134092	1	0	Low	30	1000	-36.67	PASS
Band85	5MHz	16QAM	134092	1	0	Low	5000	12000	-48.2	PASS
Band85	5MHz	16QAM	134157	3	3	High	5000	12000	-48.09	PASS
Band85	5MHz	16QAM	134157	3	3	High	1000	5000	-38.83	PASS
Band85	5MHz	16QAM	134157	3	3	High	30	1000	-36.71	PASS
Band85	5MHz	16QAM	134157	1	5	High	12000	26500	-41.9	PASS
Band85	5MHz	16QAM	134157	1	5	High	5000	12000	-48.12	PASS
Band85	5MHz	16QAM	134157	1	5	High	30	1000	-35.93	PASS
Band85	5MHz	16QAM	134157	3	3	High	12000	26500	-42.12	PASS
Band85	5MHz	16QAM	134157	1	5	High	1000	5000	-38.74	PASS

Test Graphs

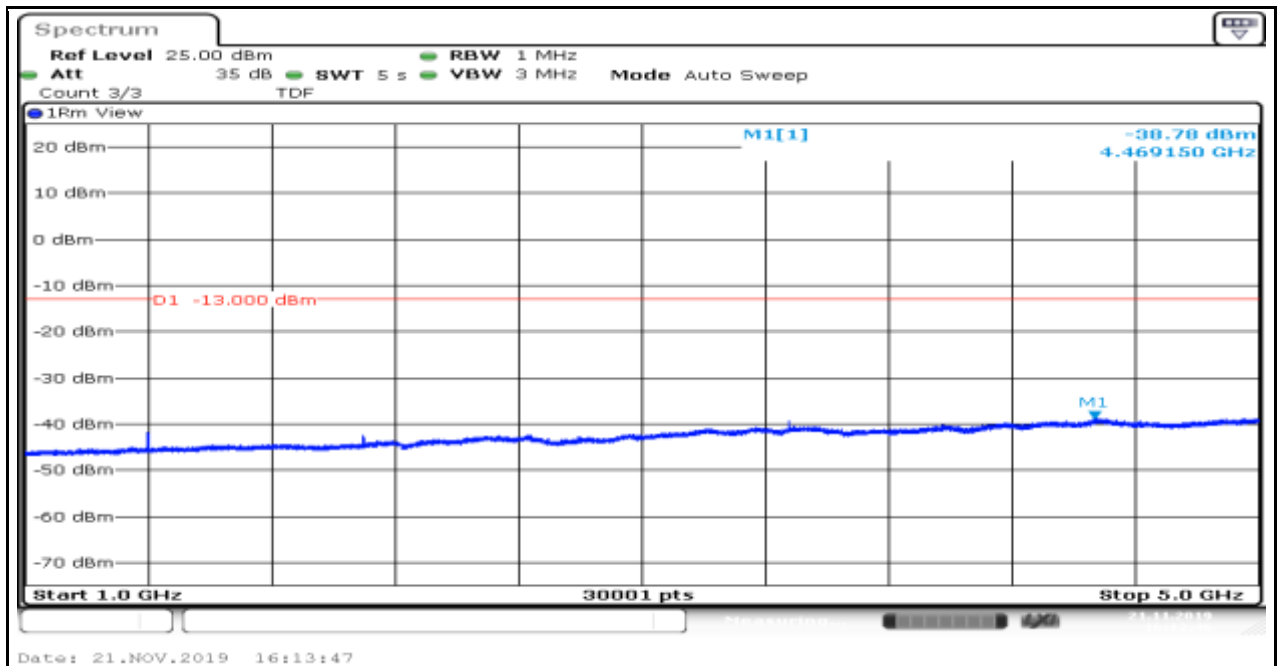




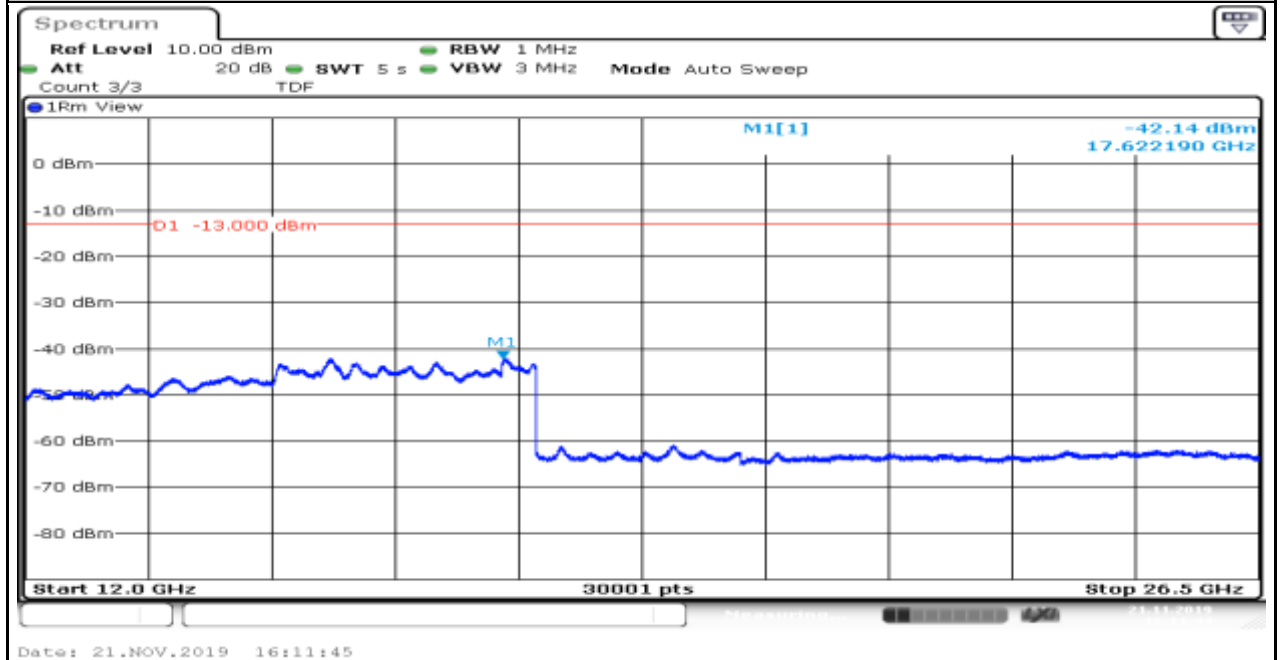
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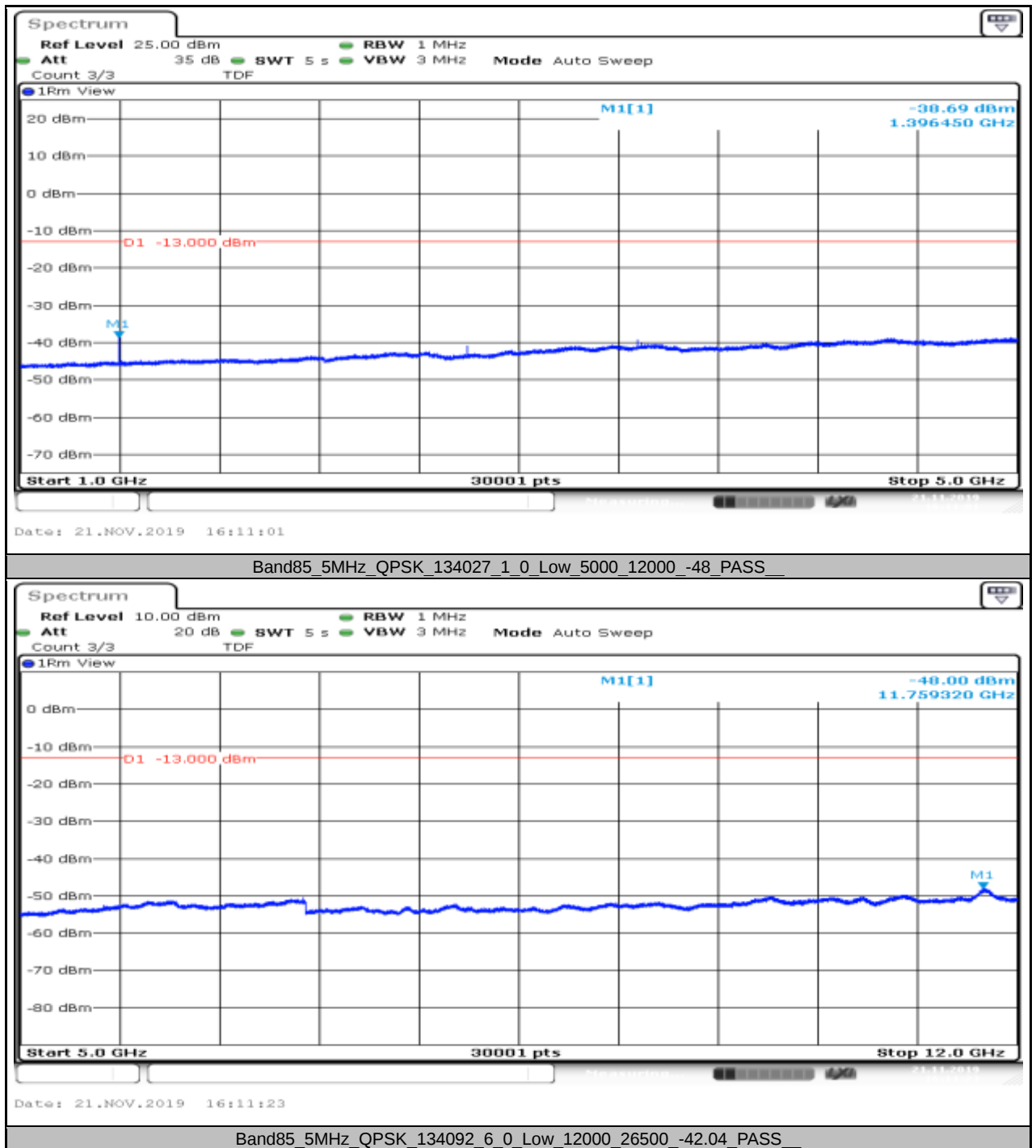
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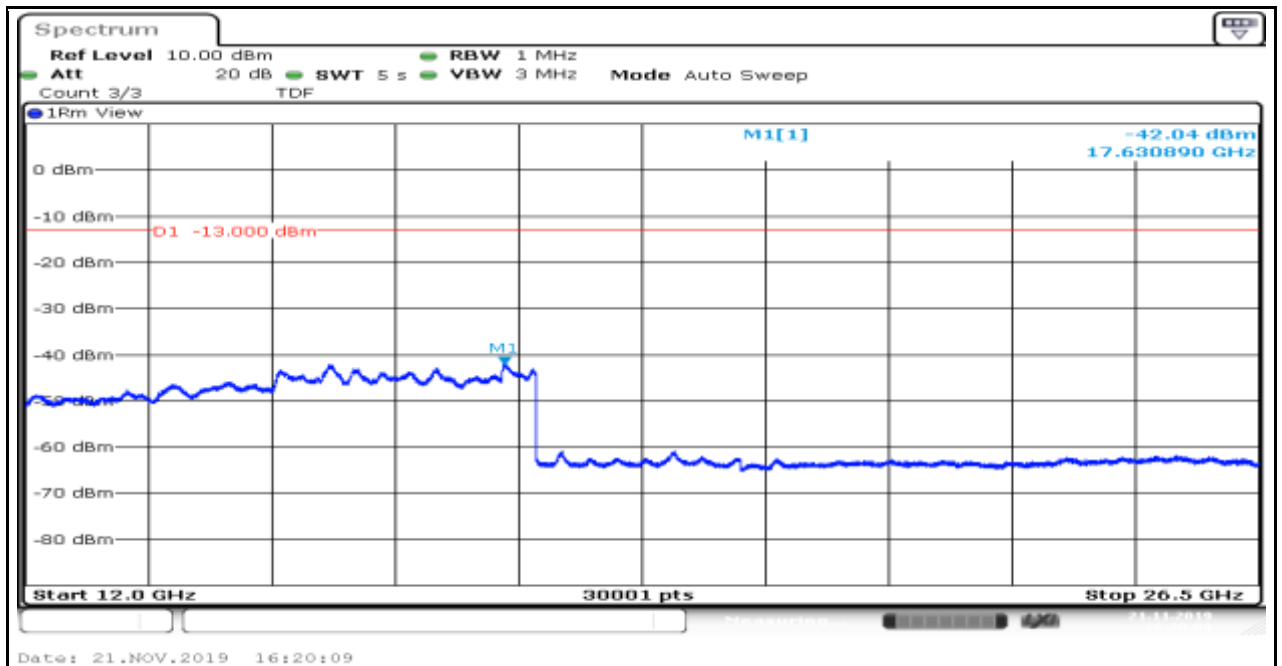


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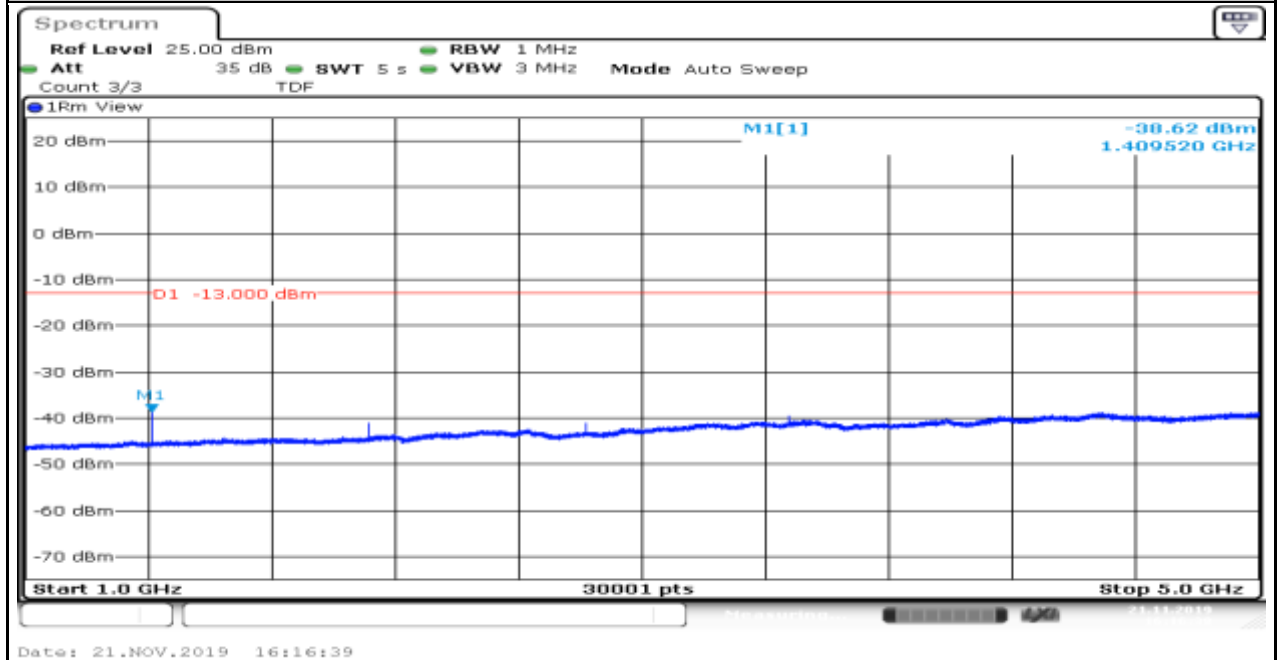


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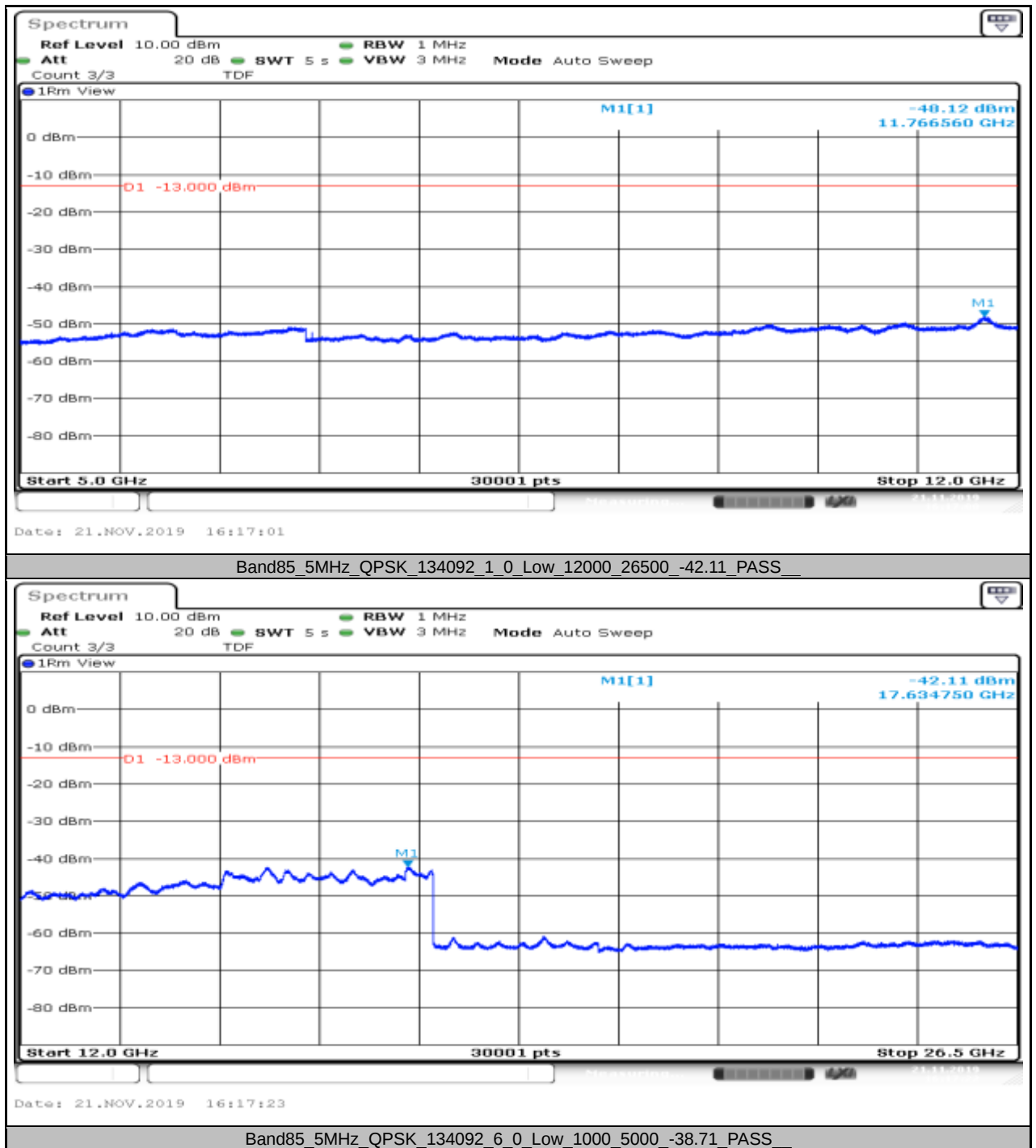


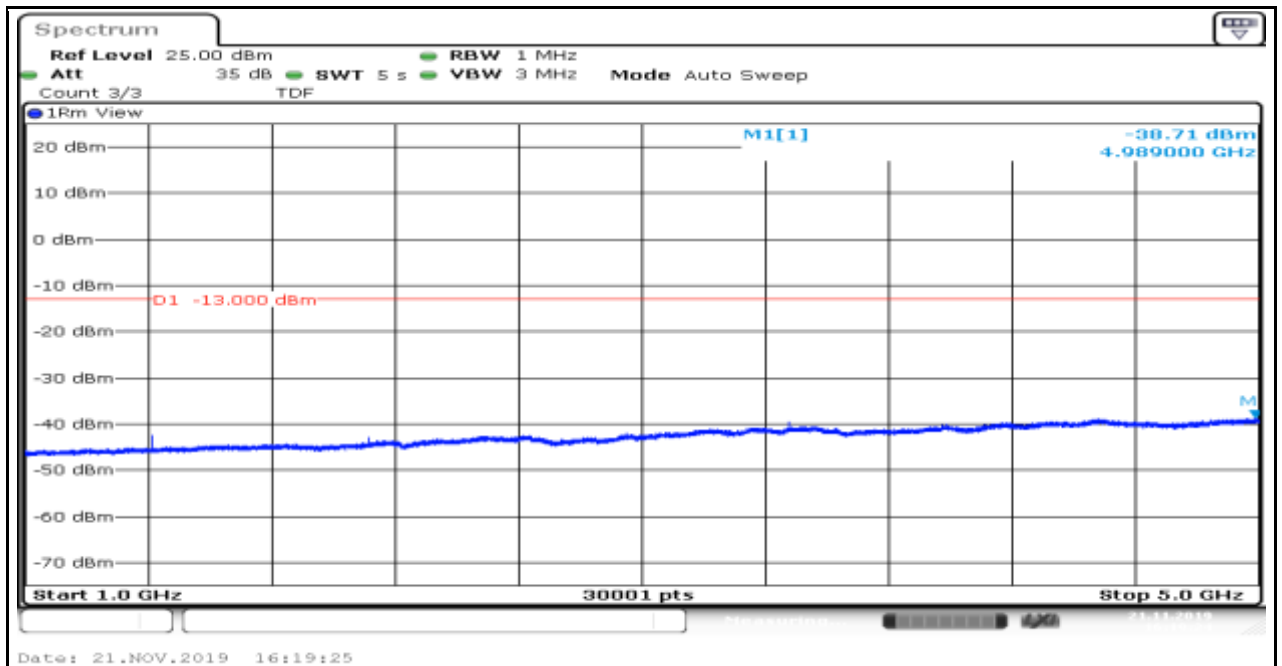


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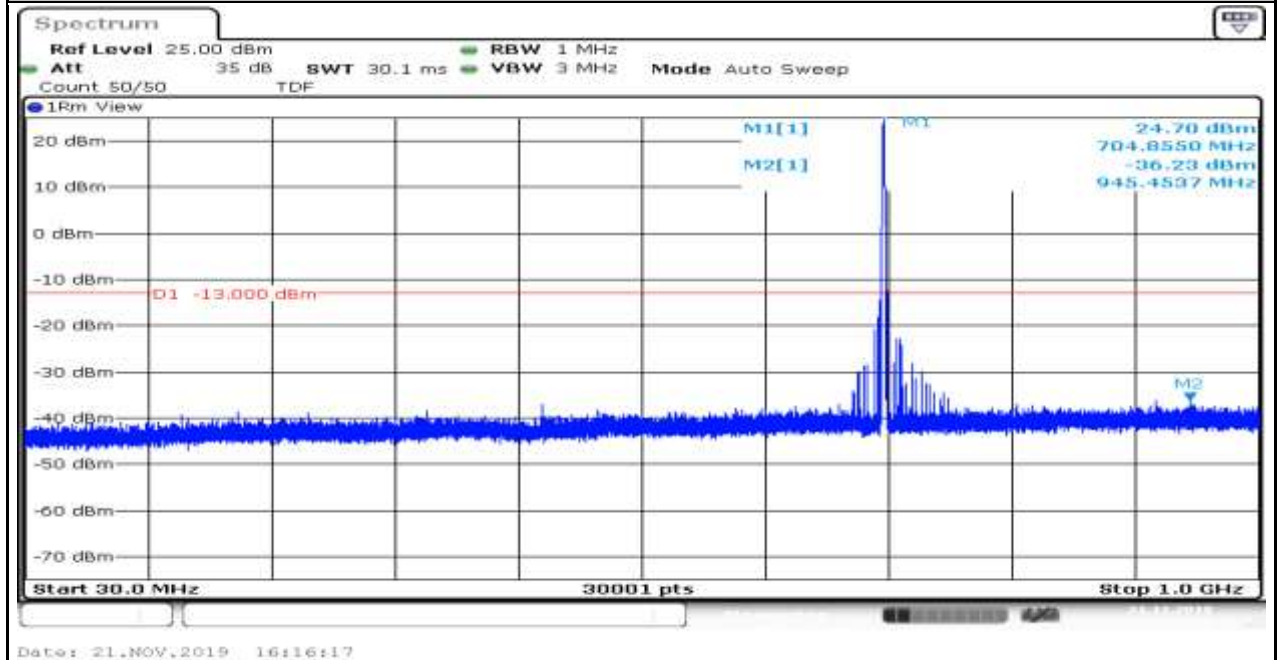


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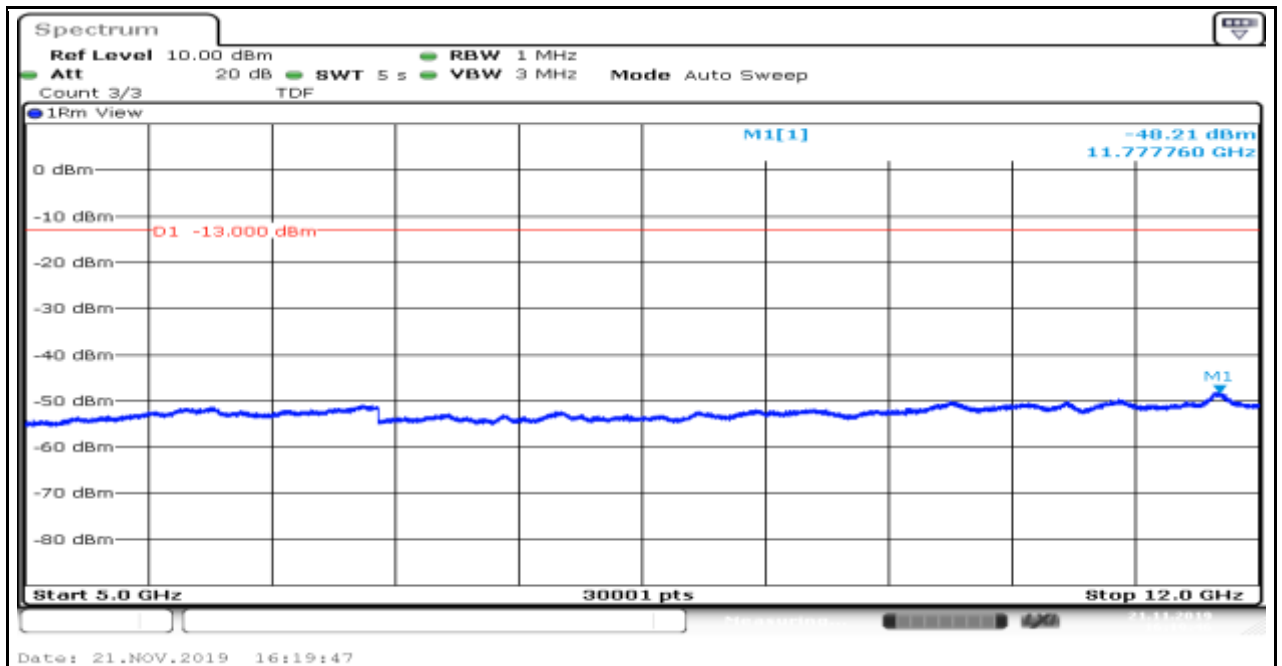




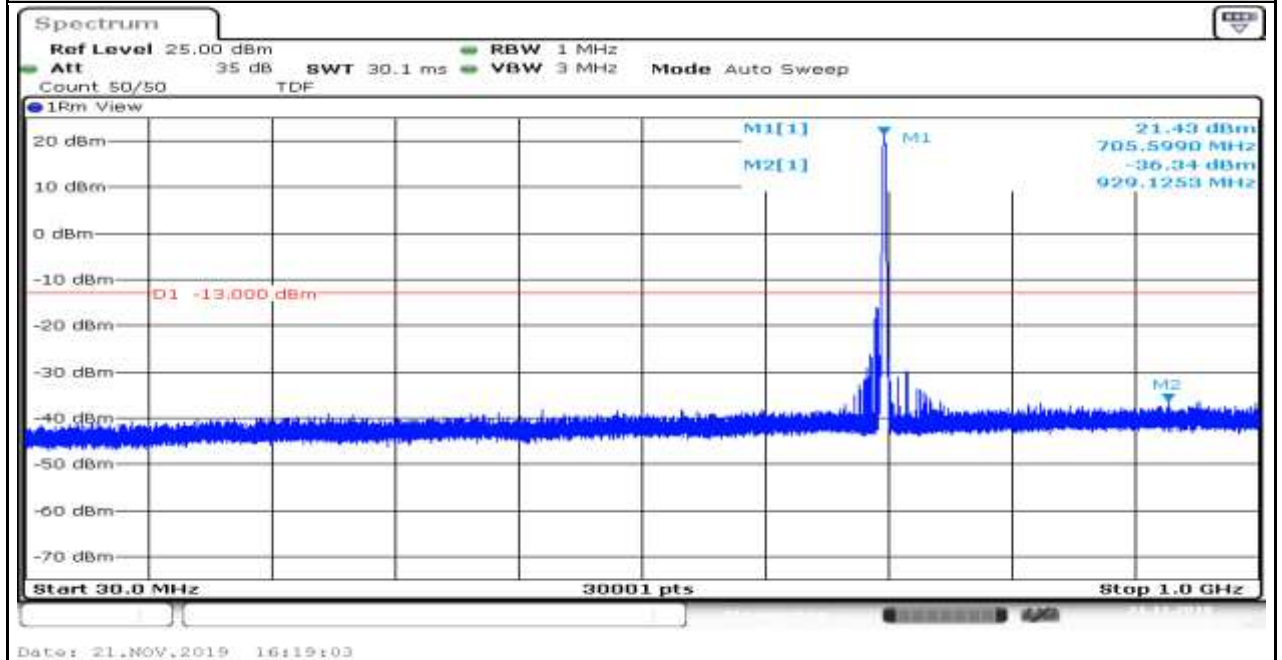
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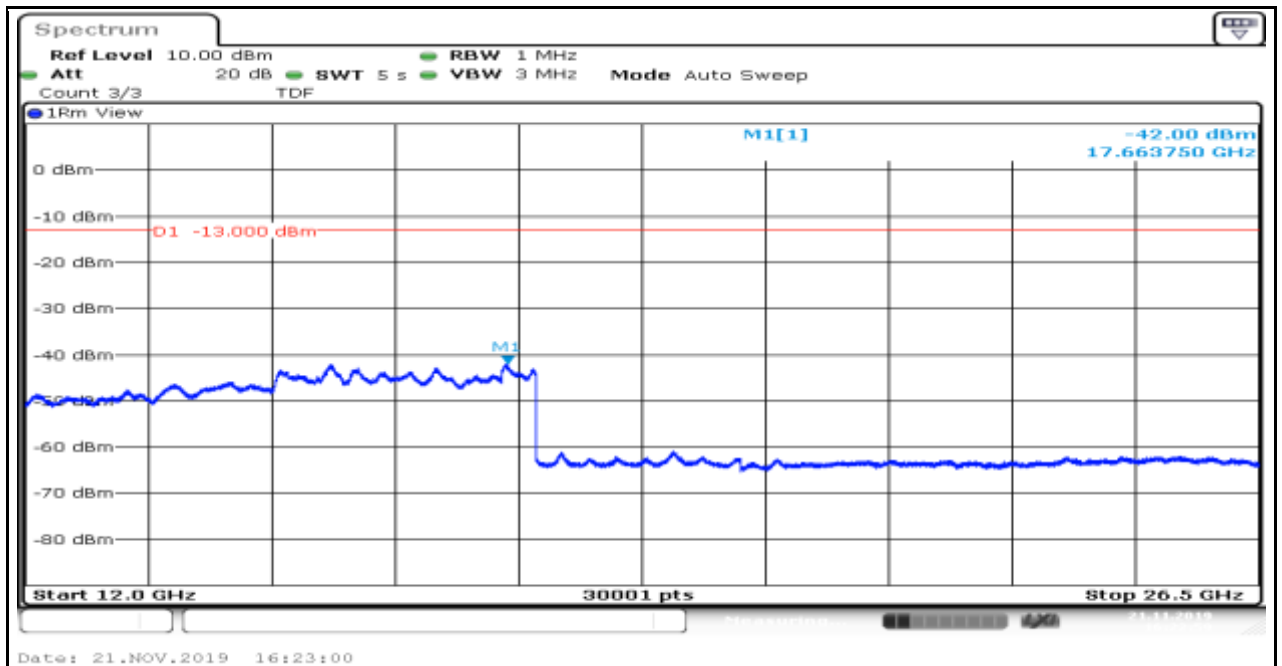
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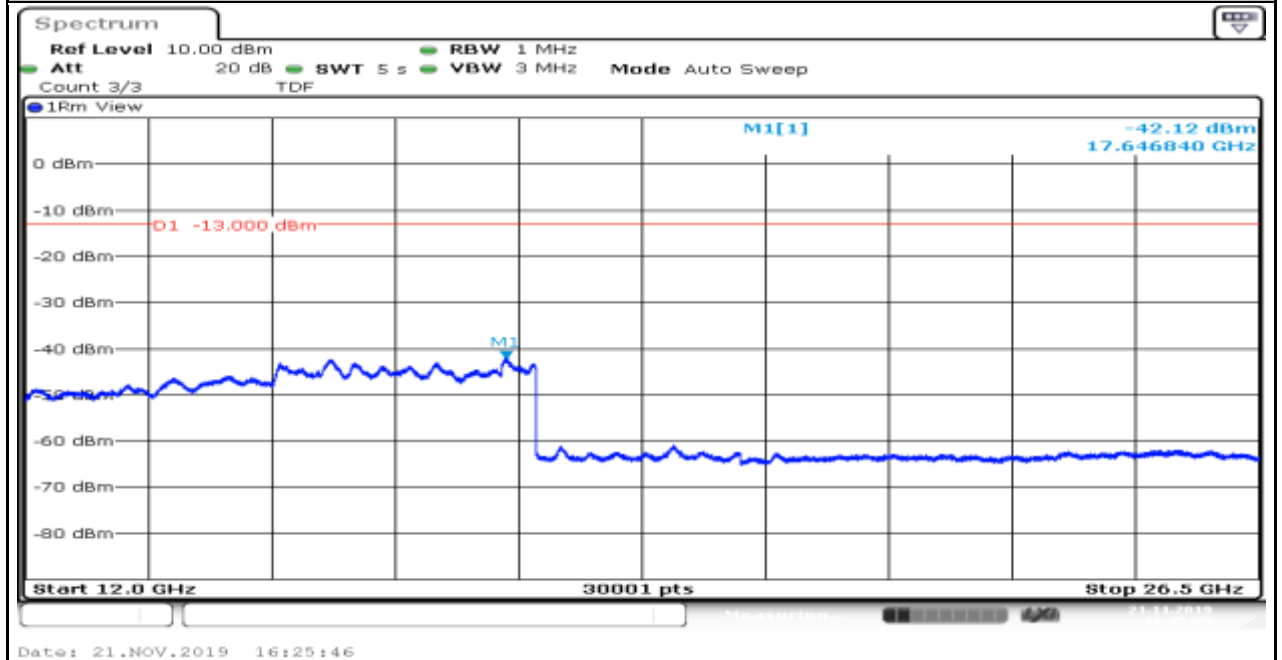
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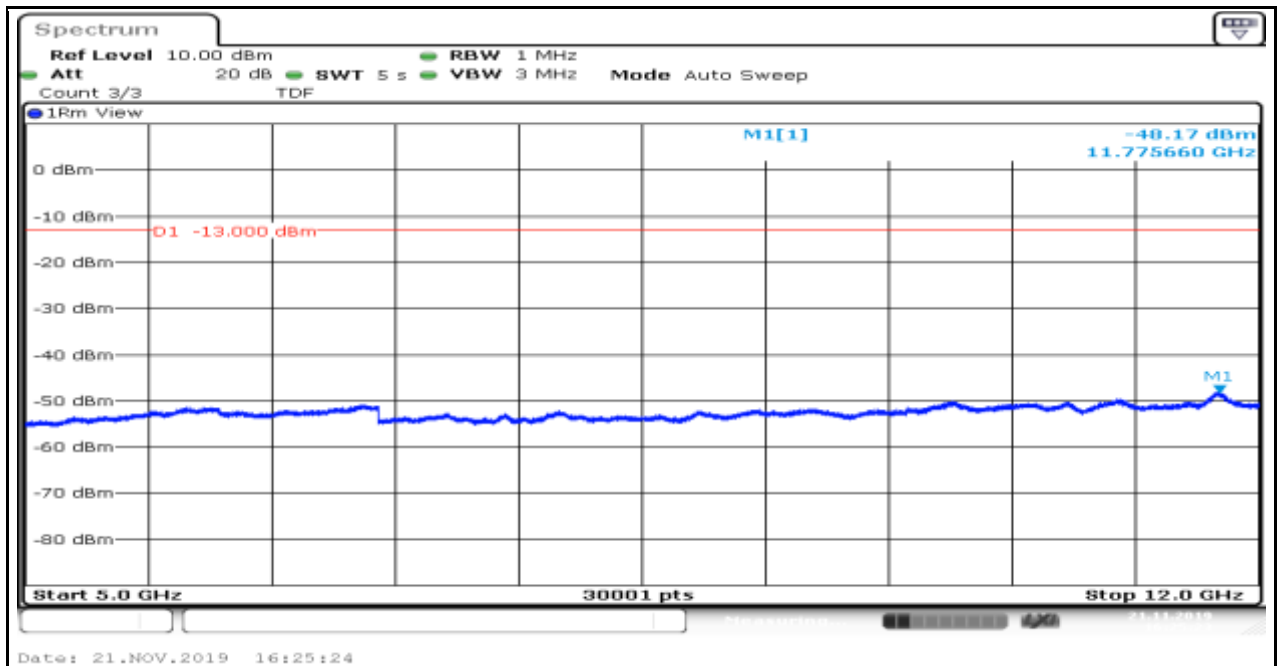
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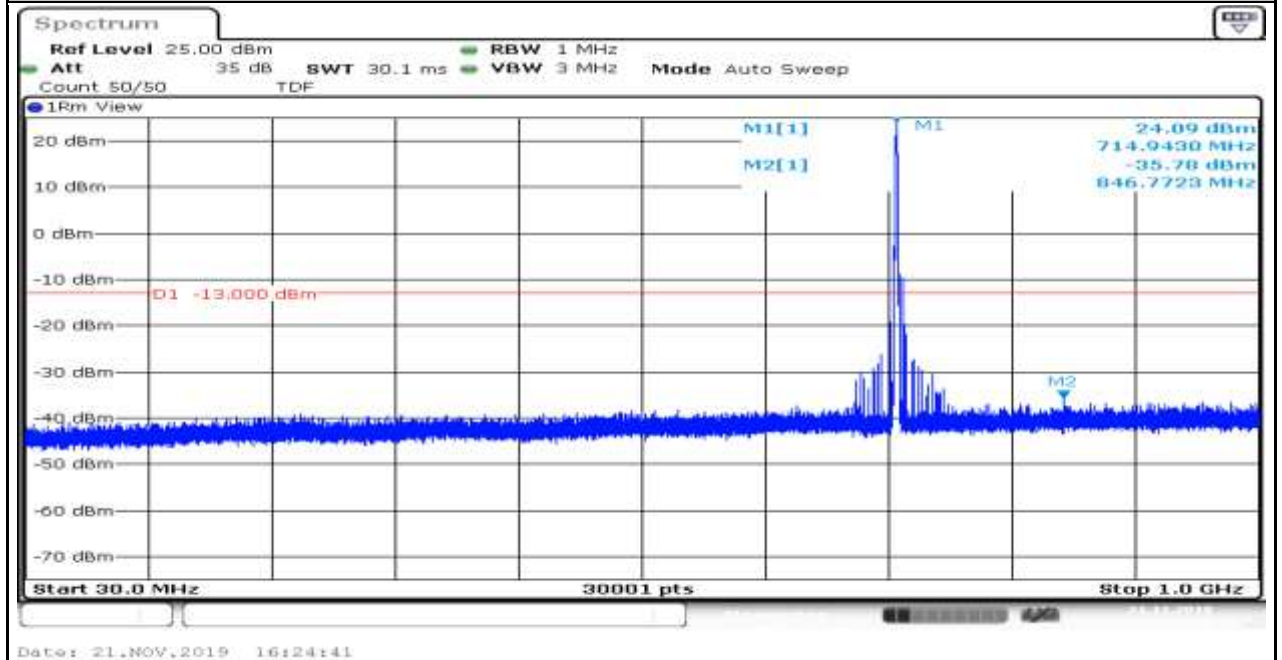
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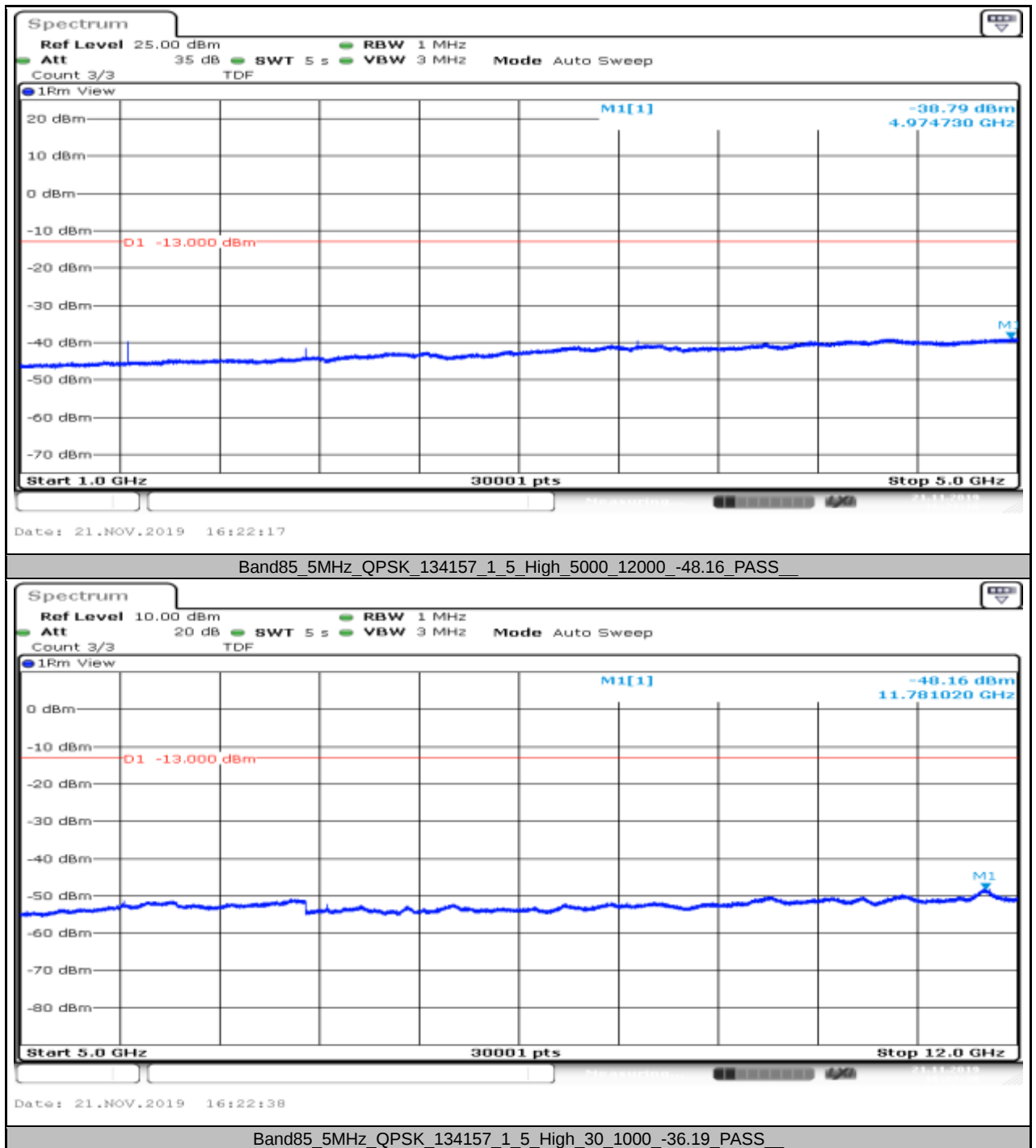
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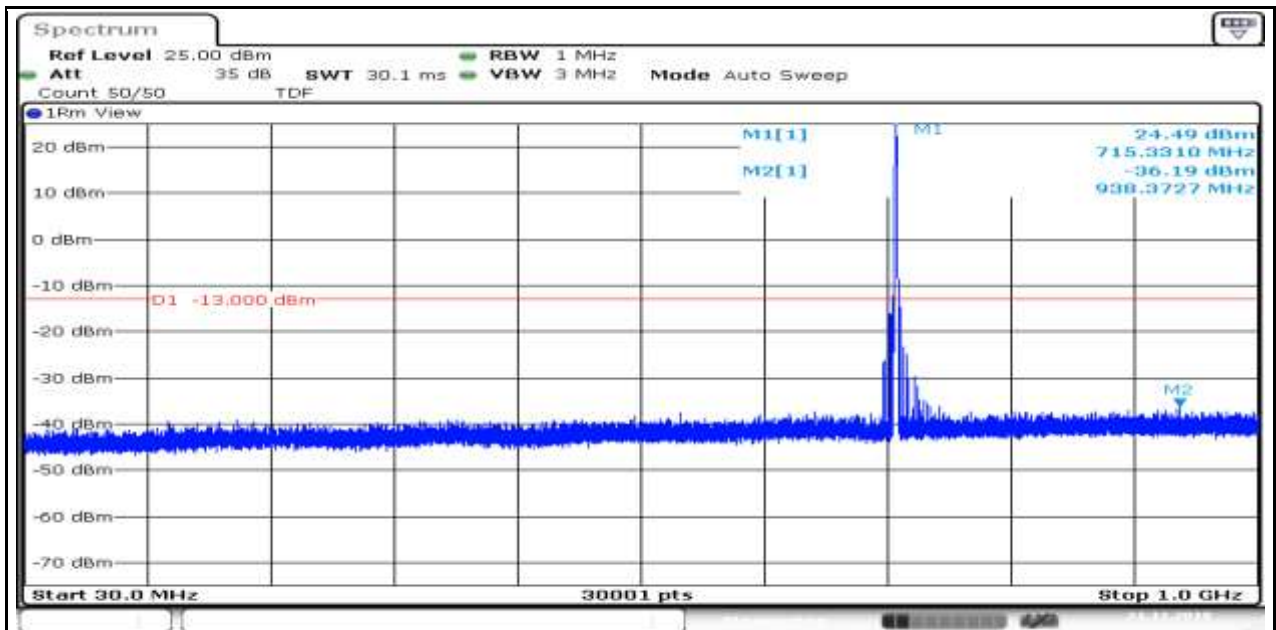


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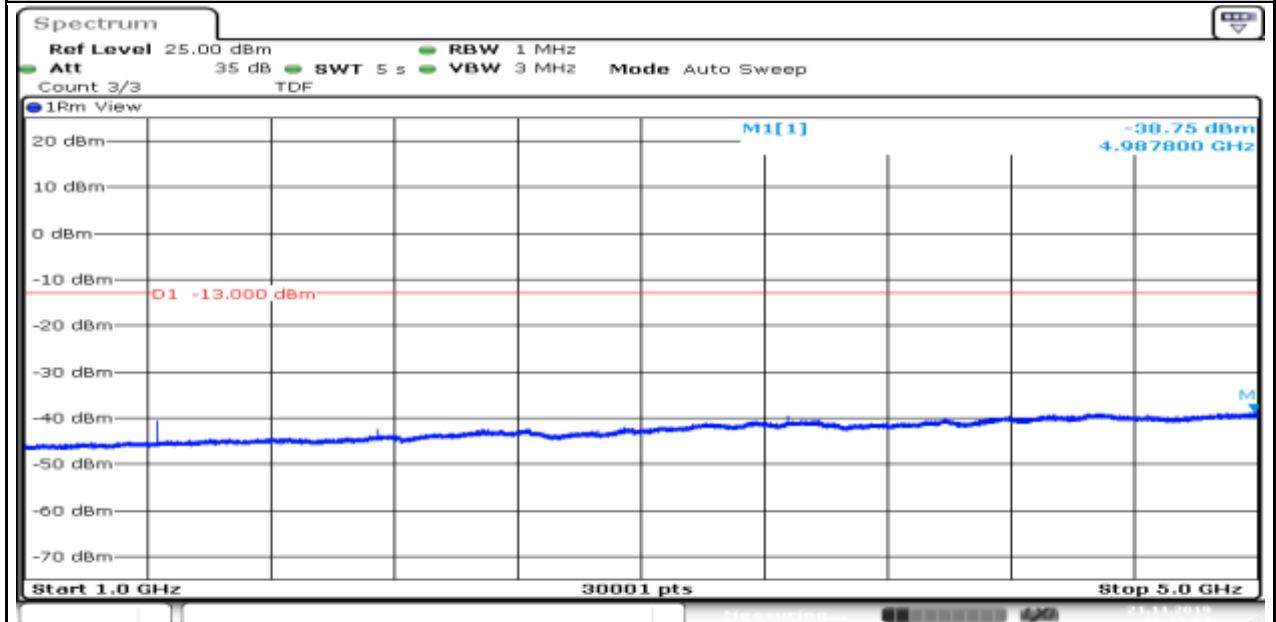
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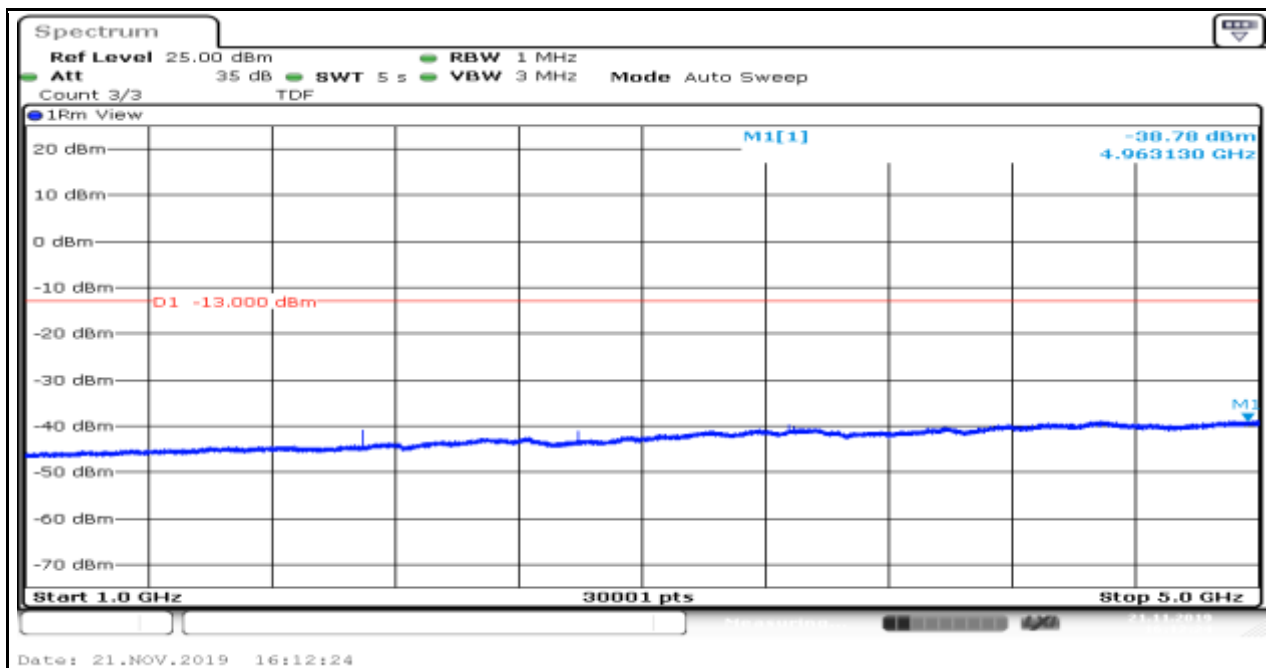
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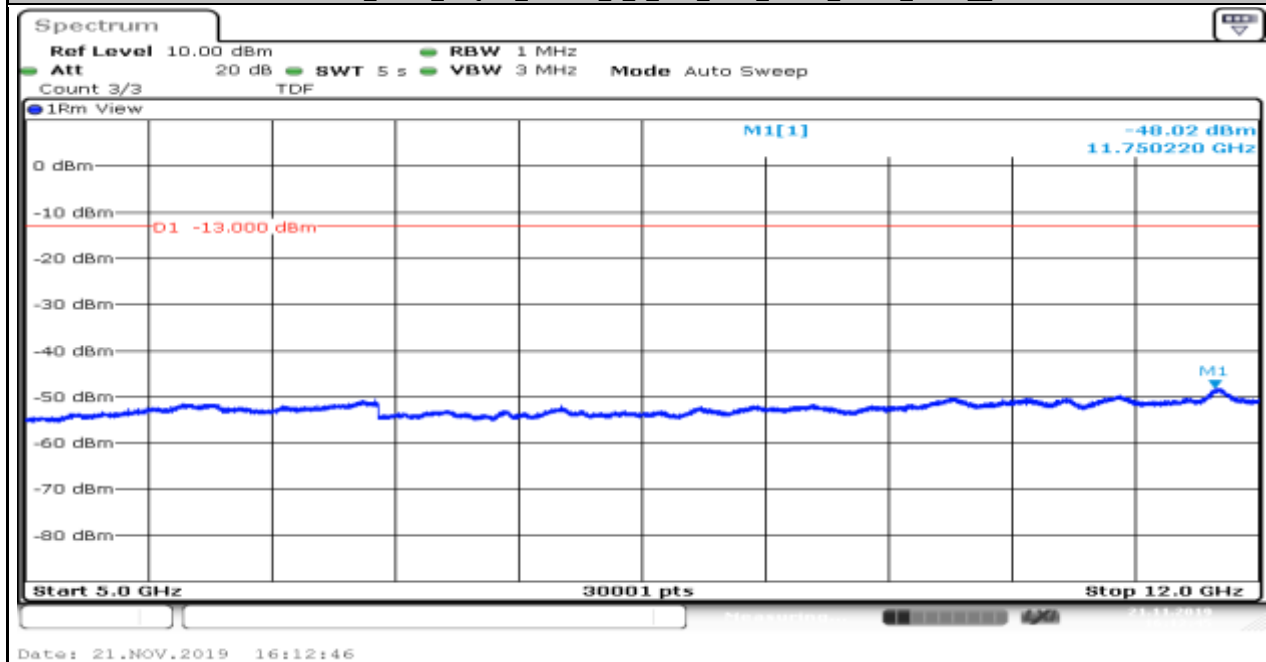
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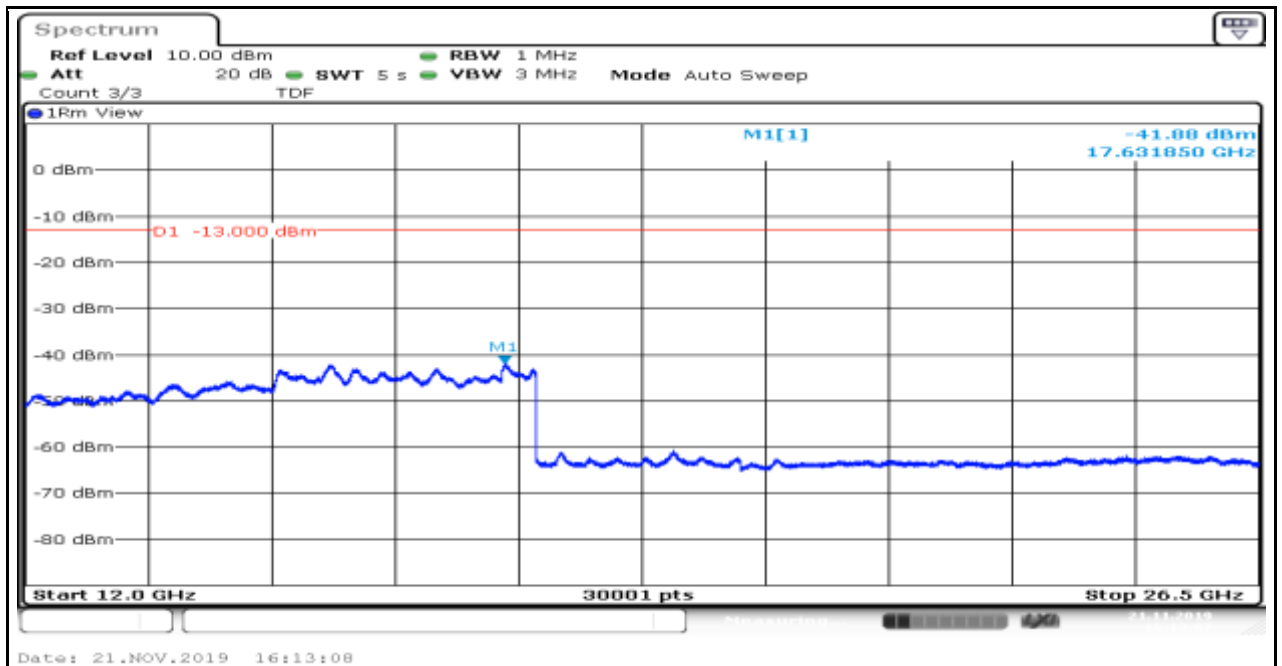
Produkte
Products



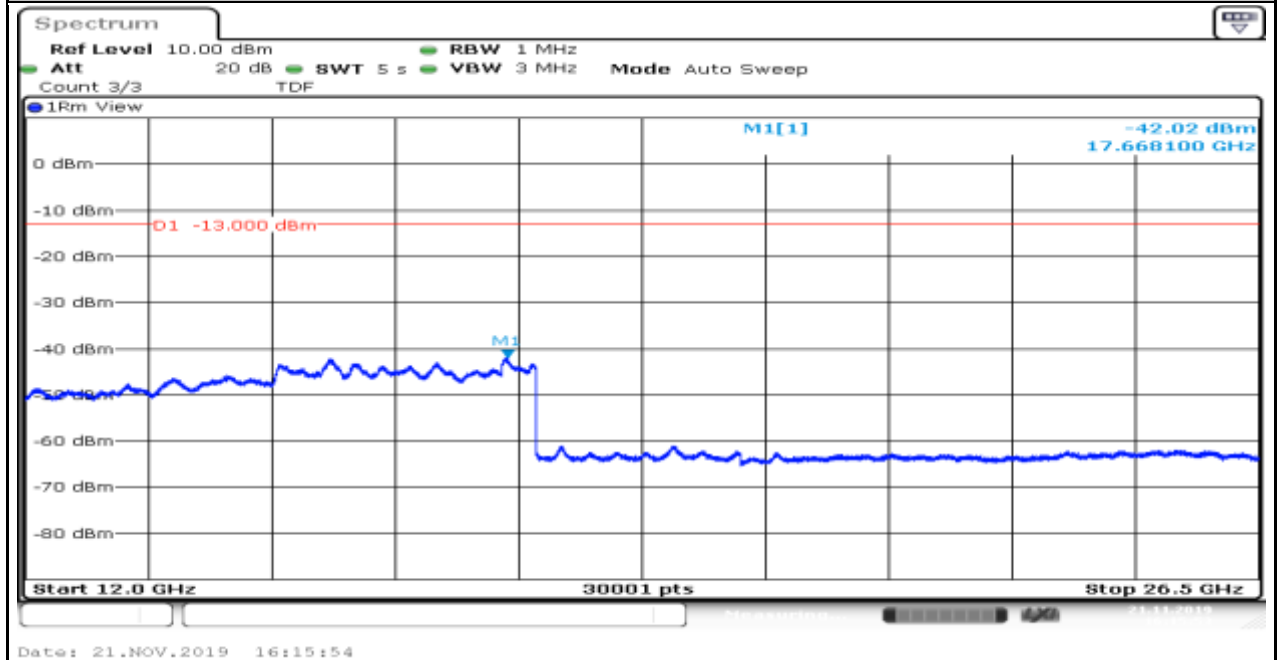
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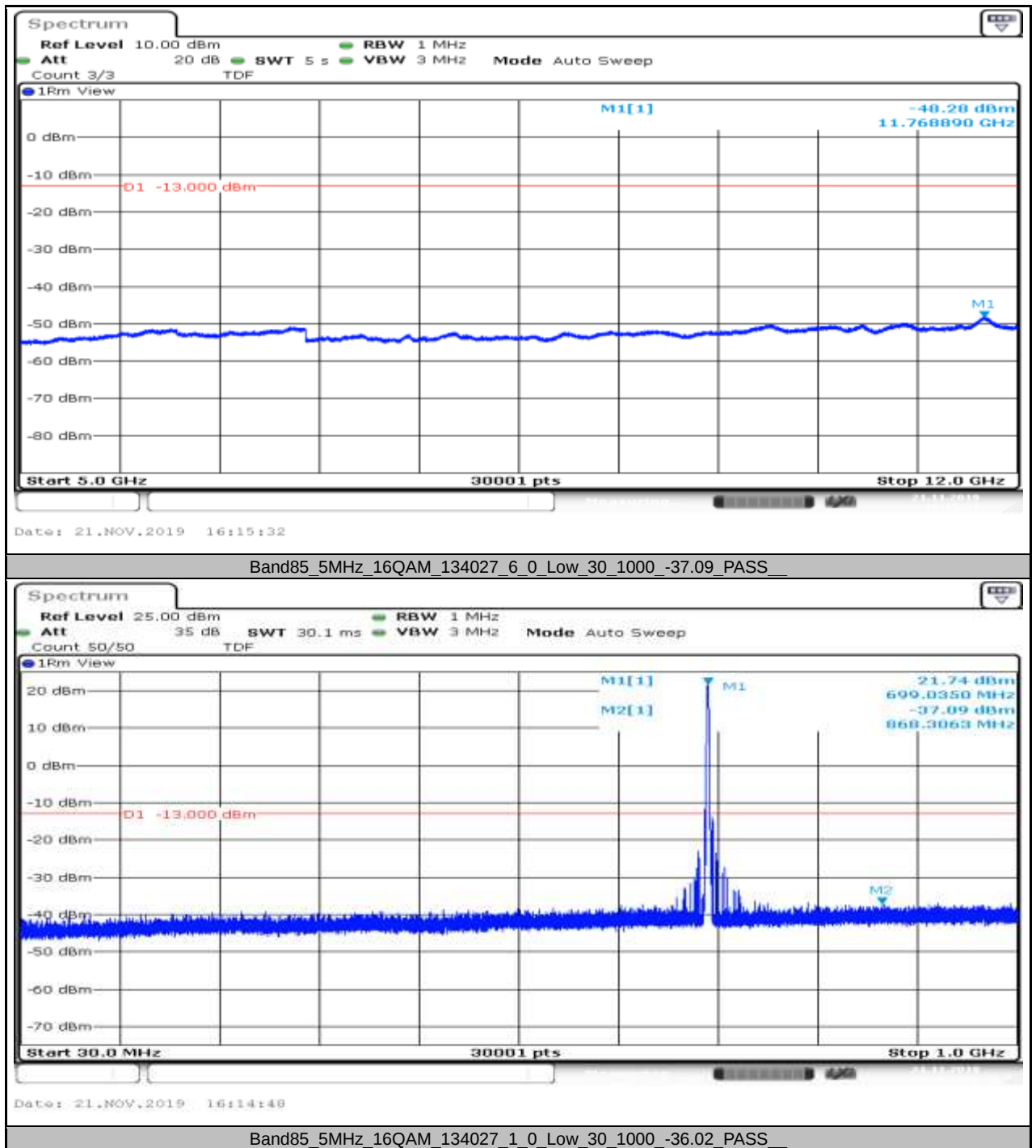
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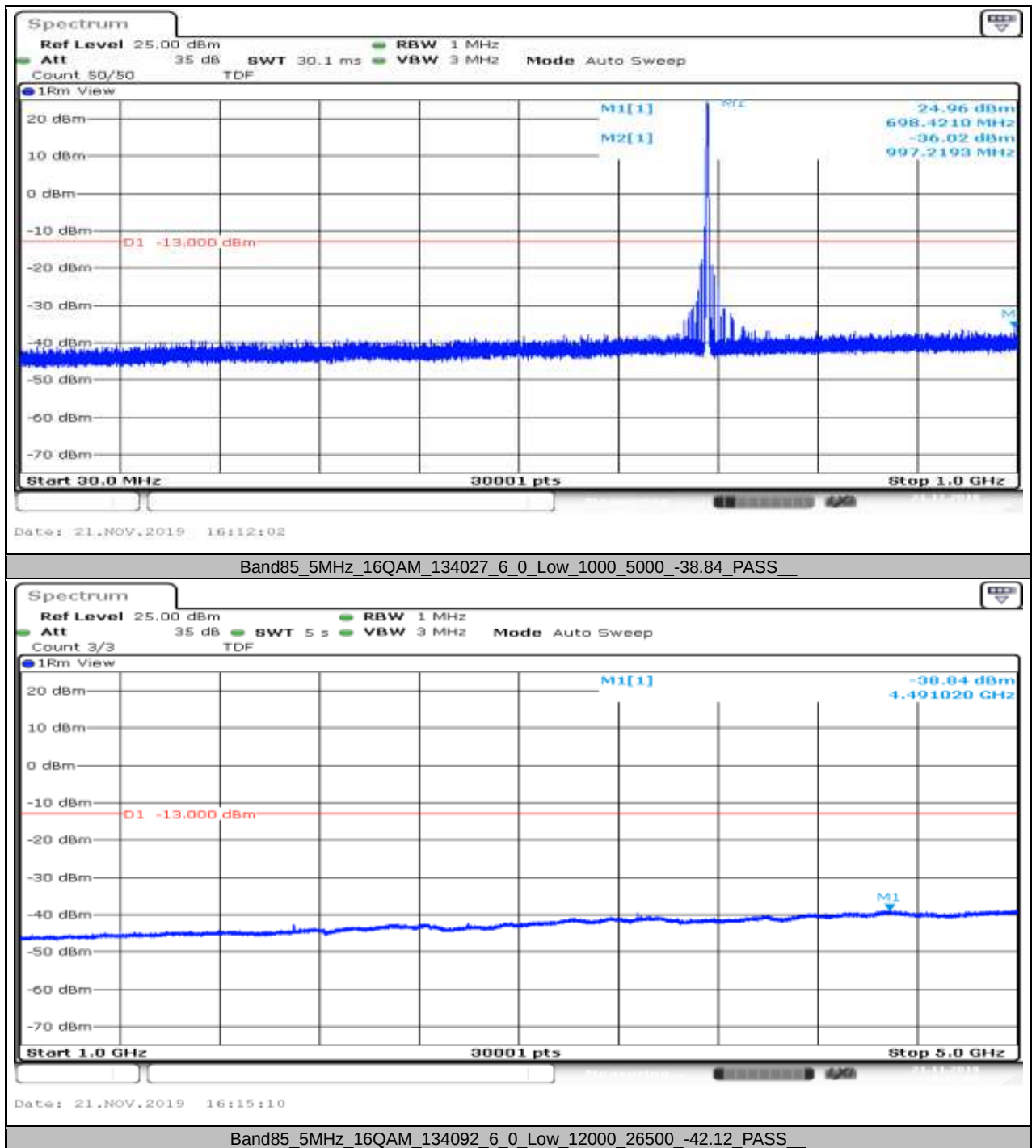


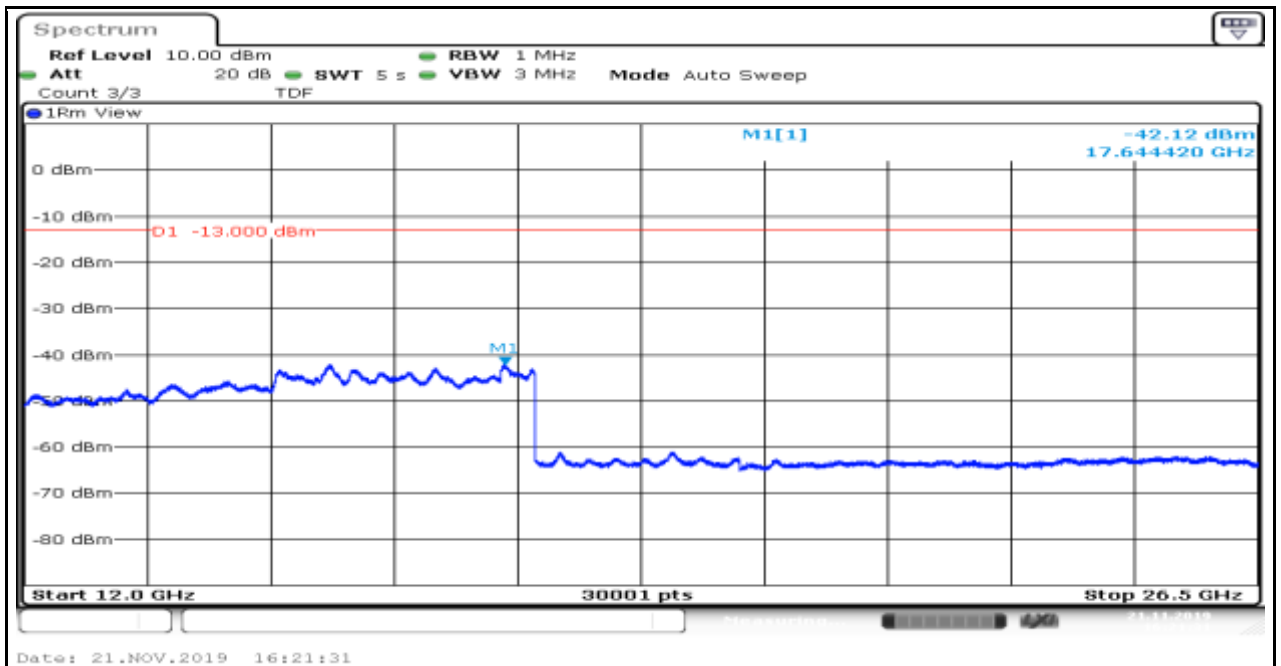
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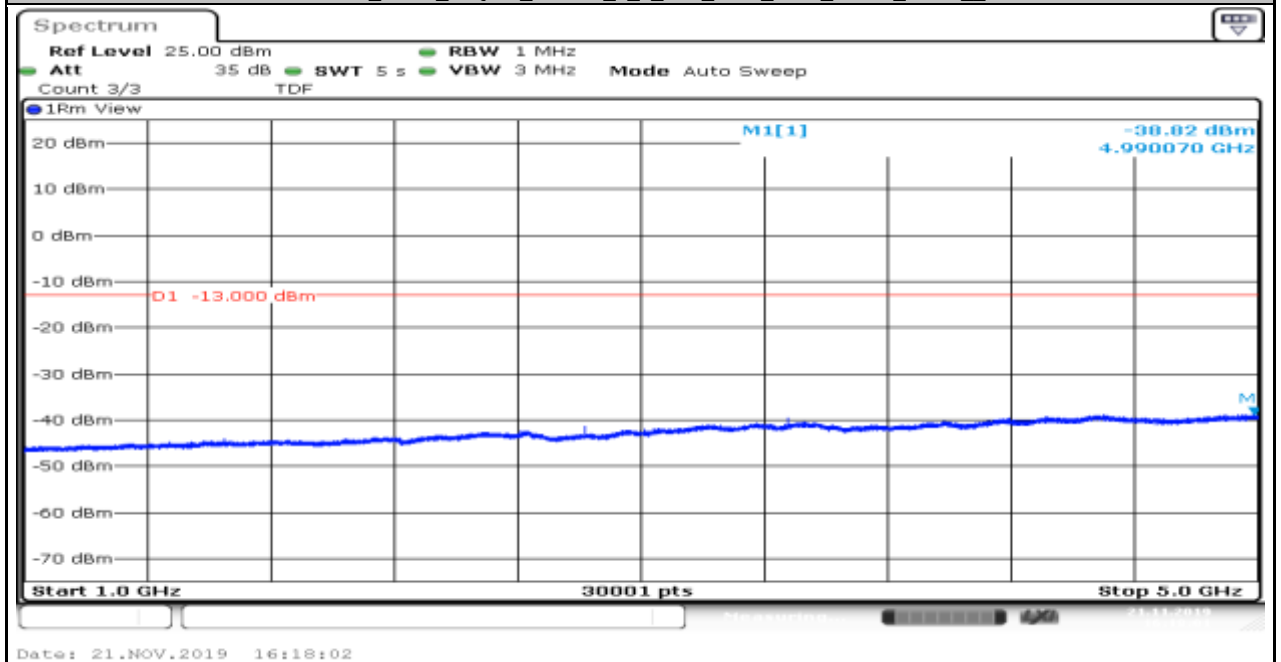
Band85_5MHz_16QAM_134027_6_0_Low_5000_12000_-48.28_PASS_



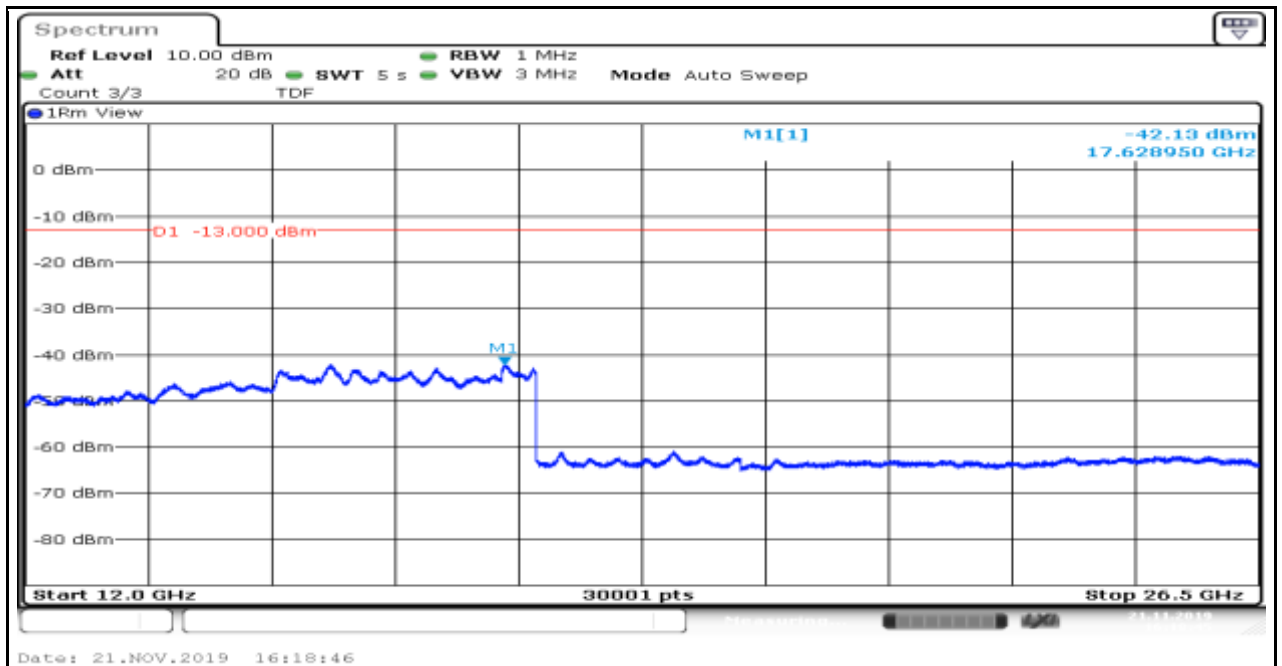




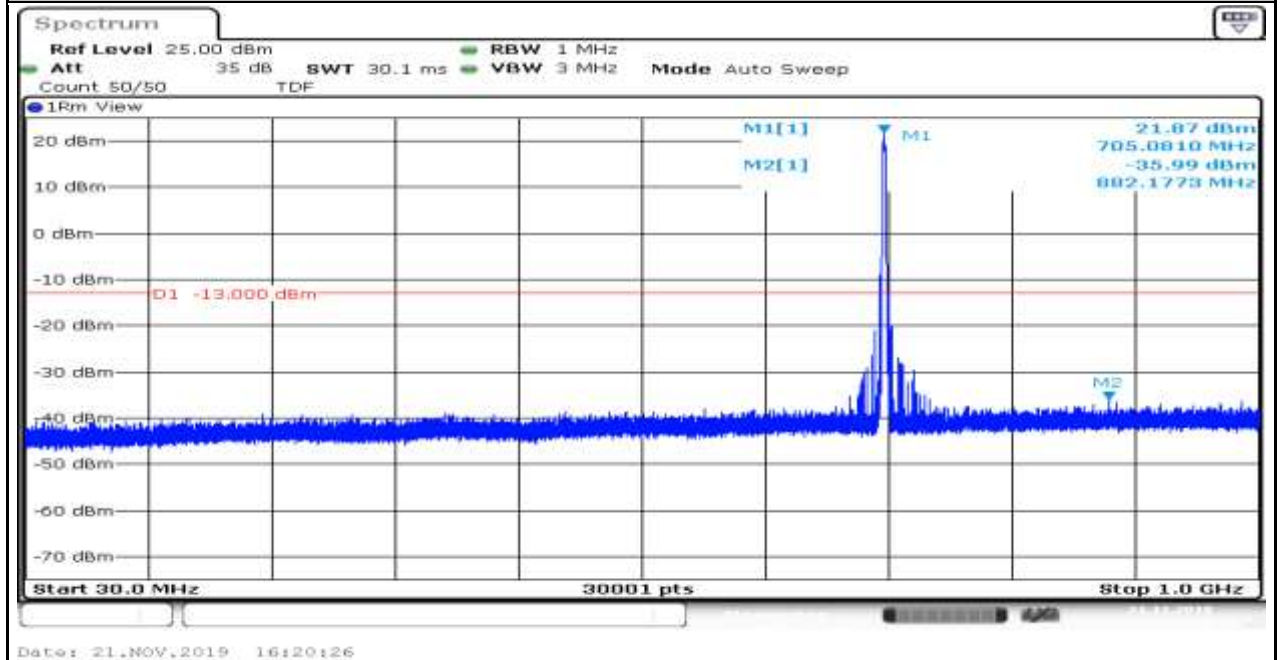
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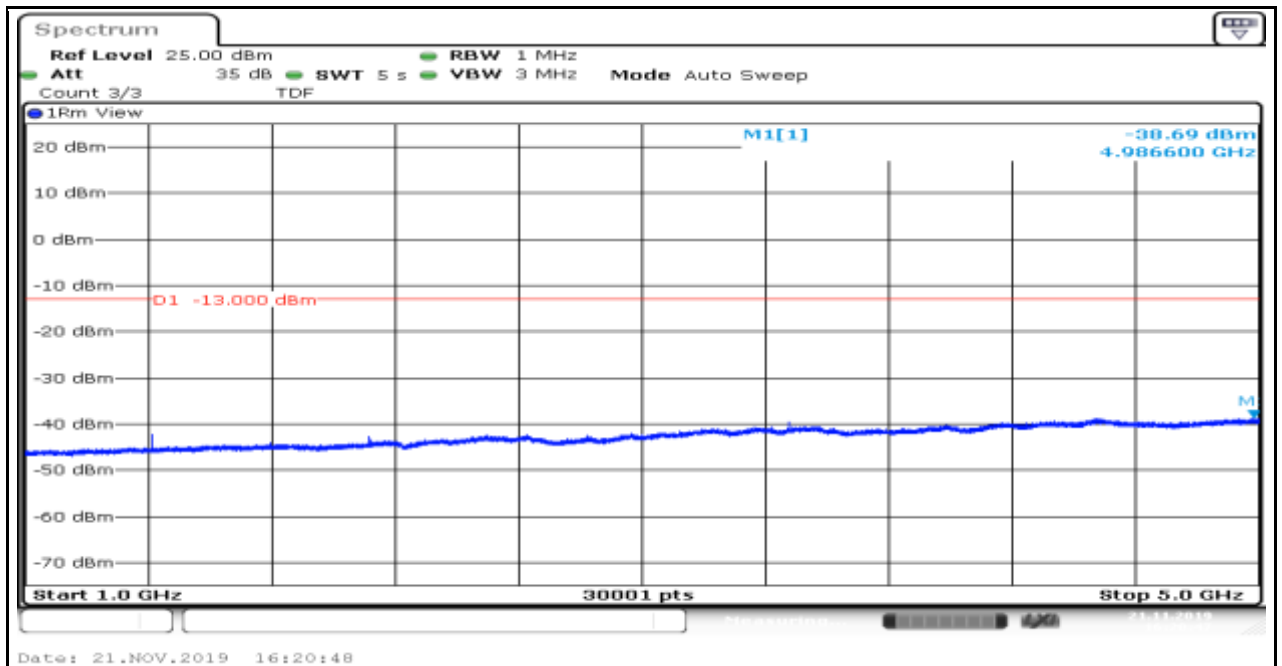
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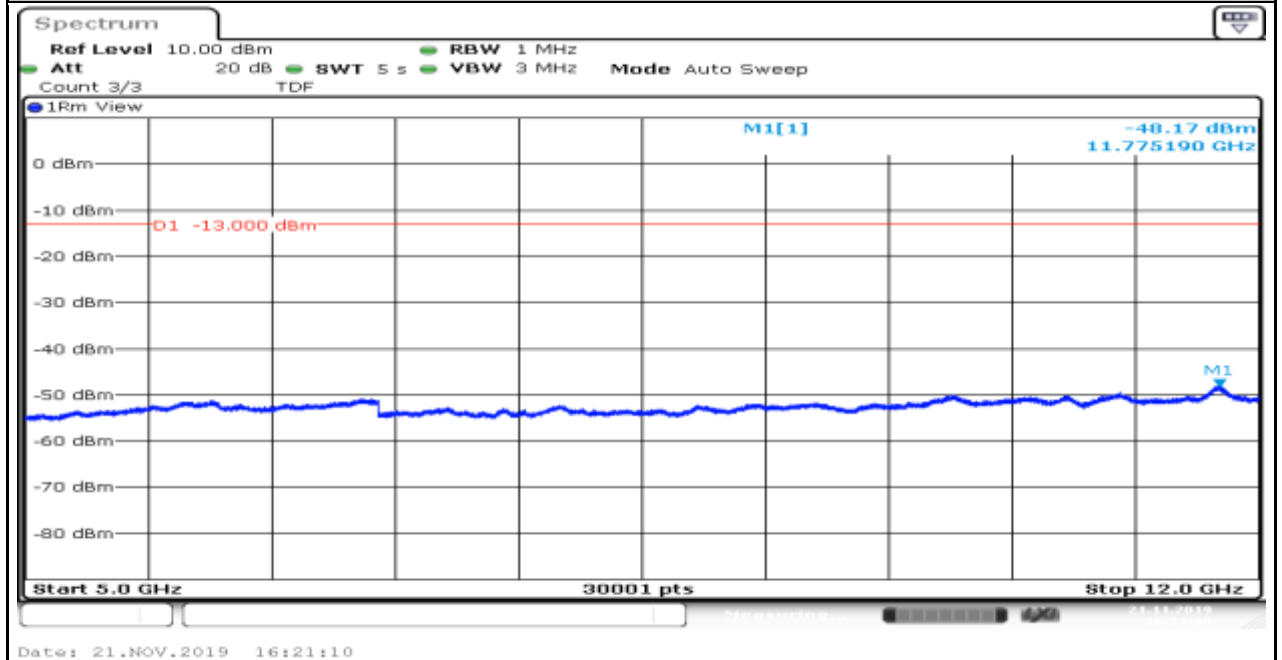
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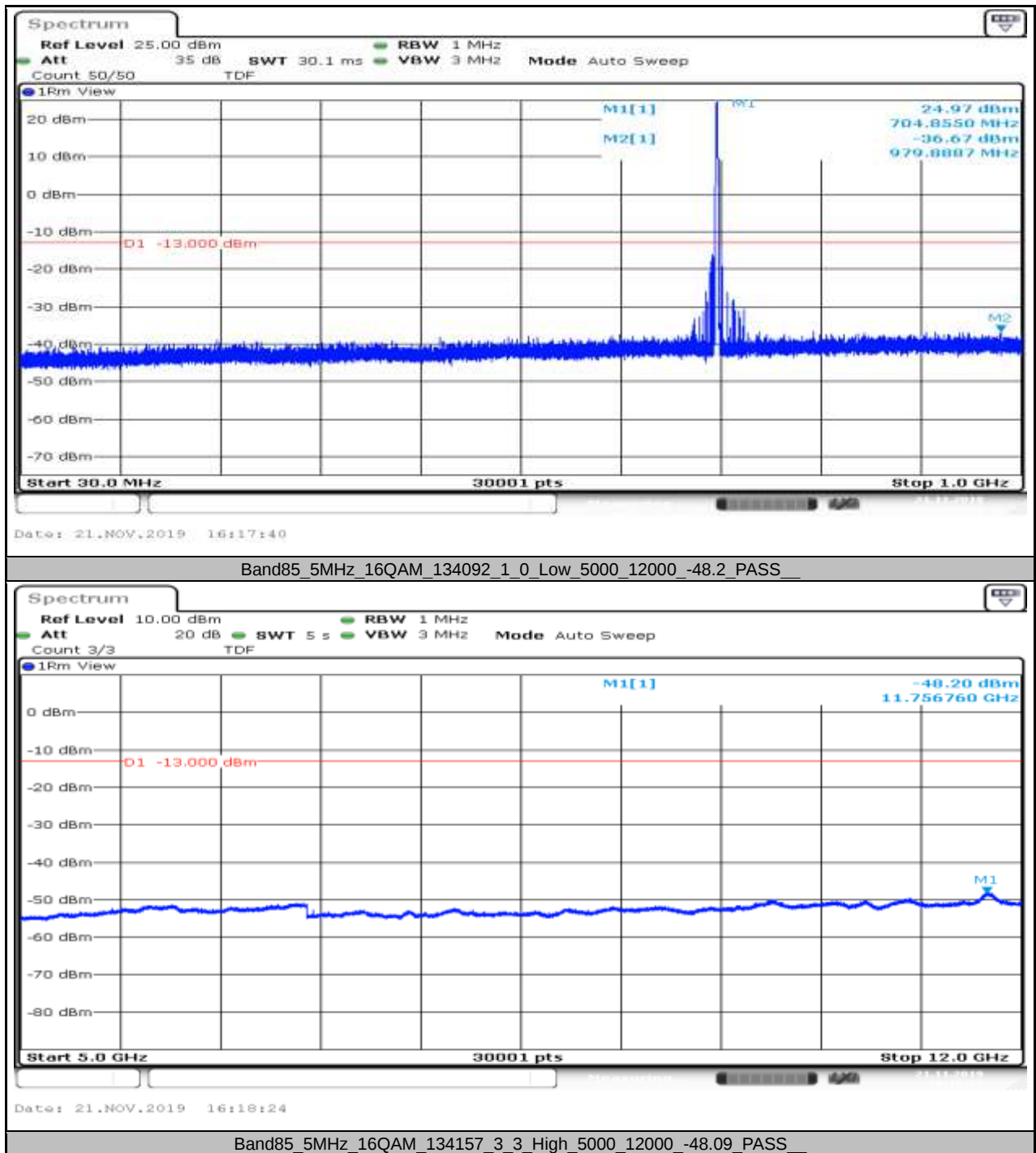
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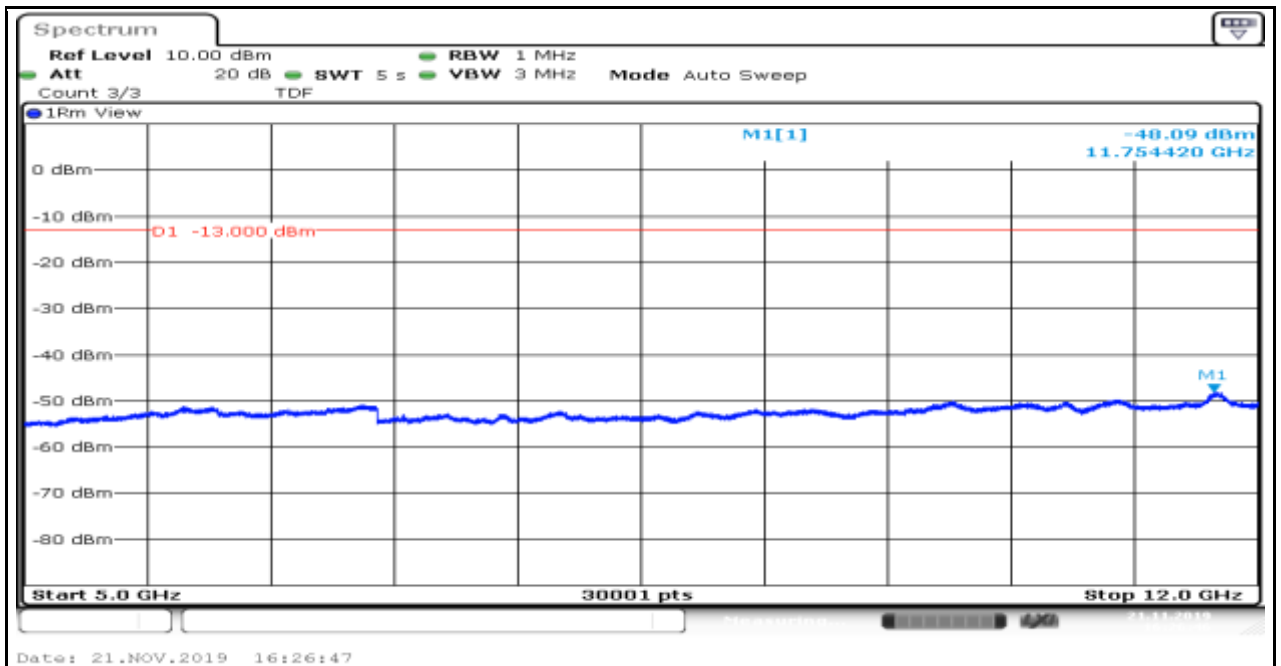


Band85_5MHz_16QAM_134092_6_0_Low_5000_12000_-48.17_PASS_

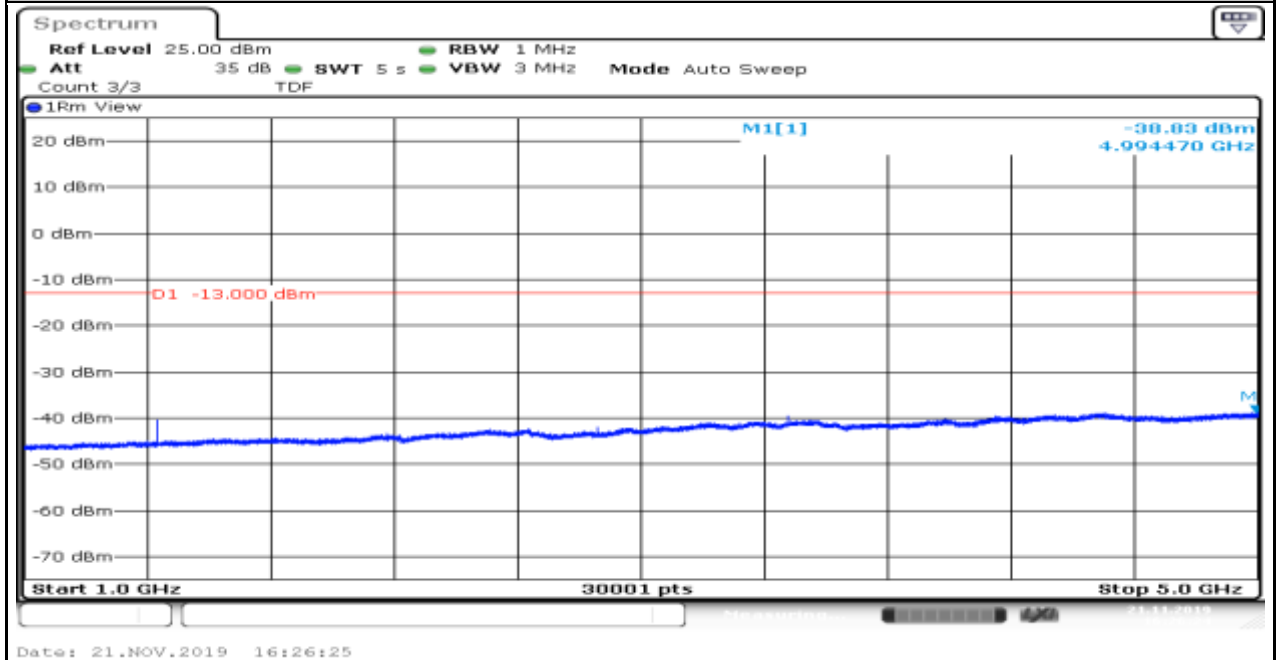


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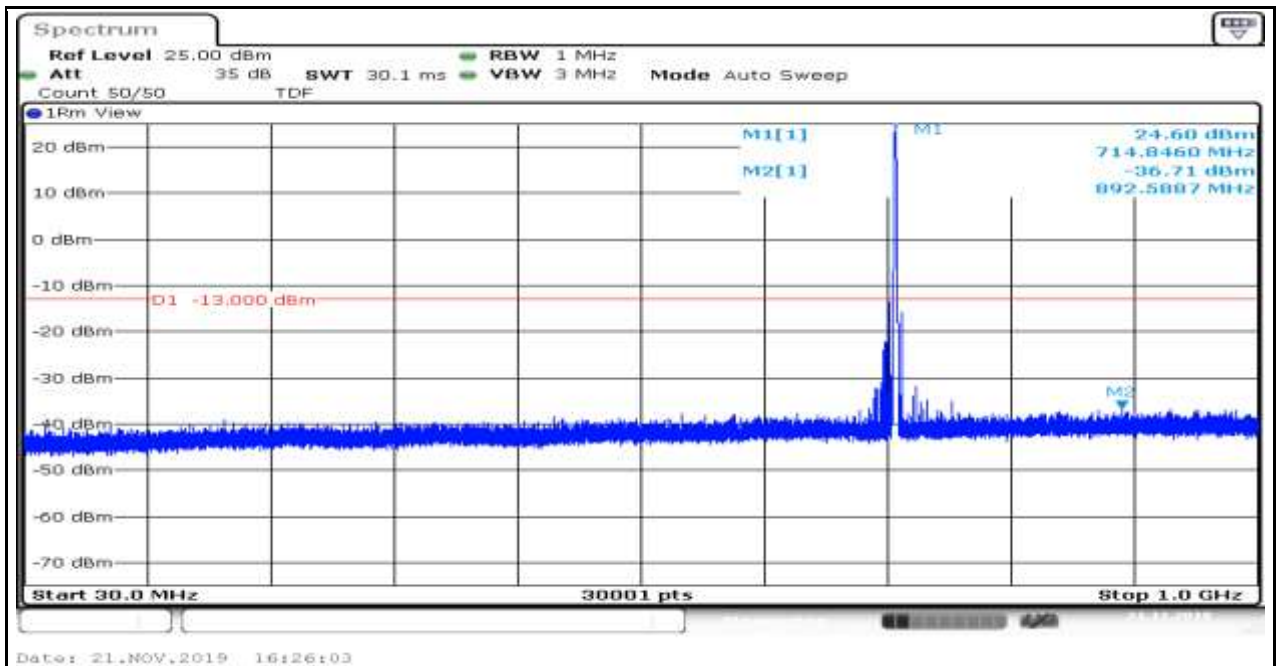




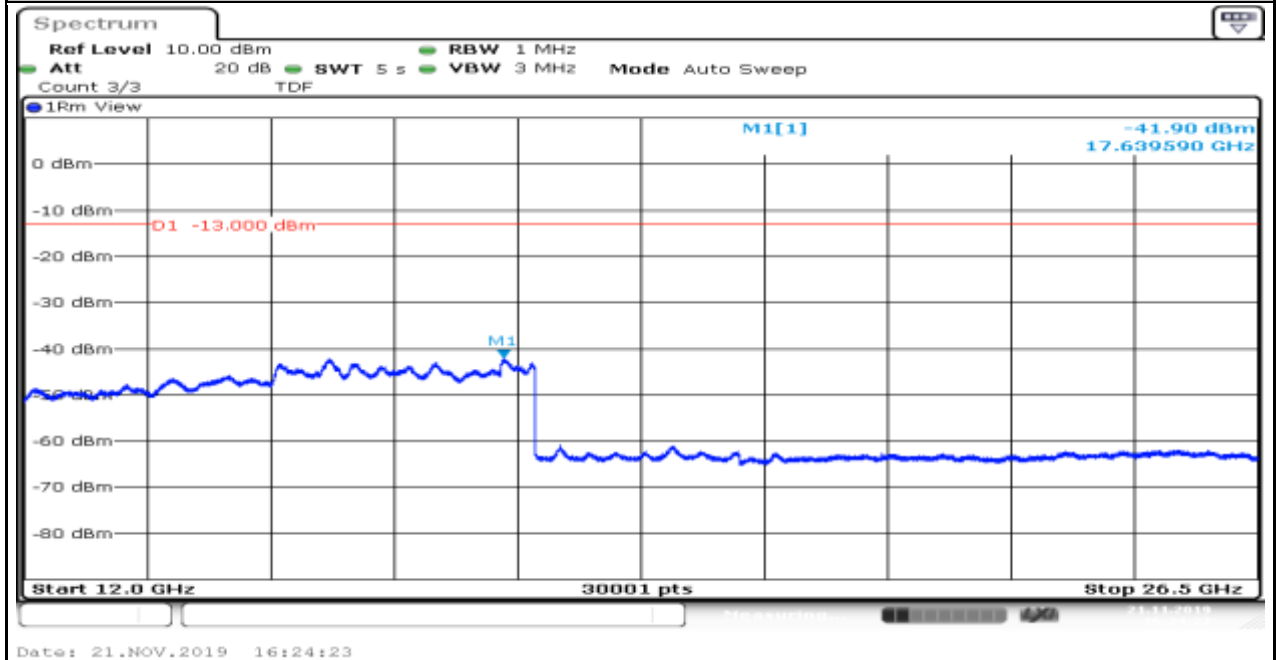
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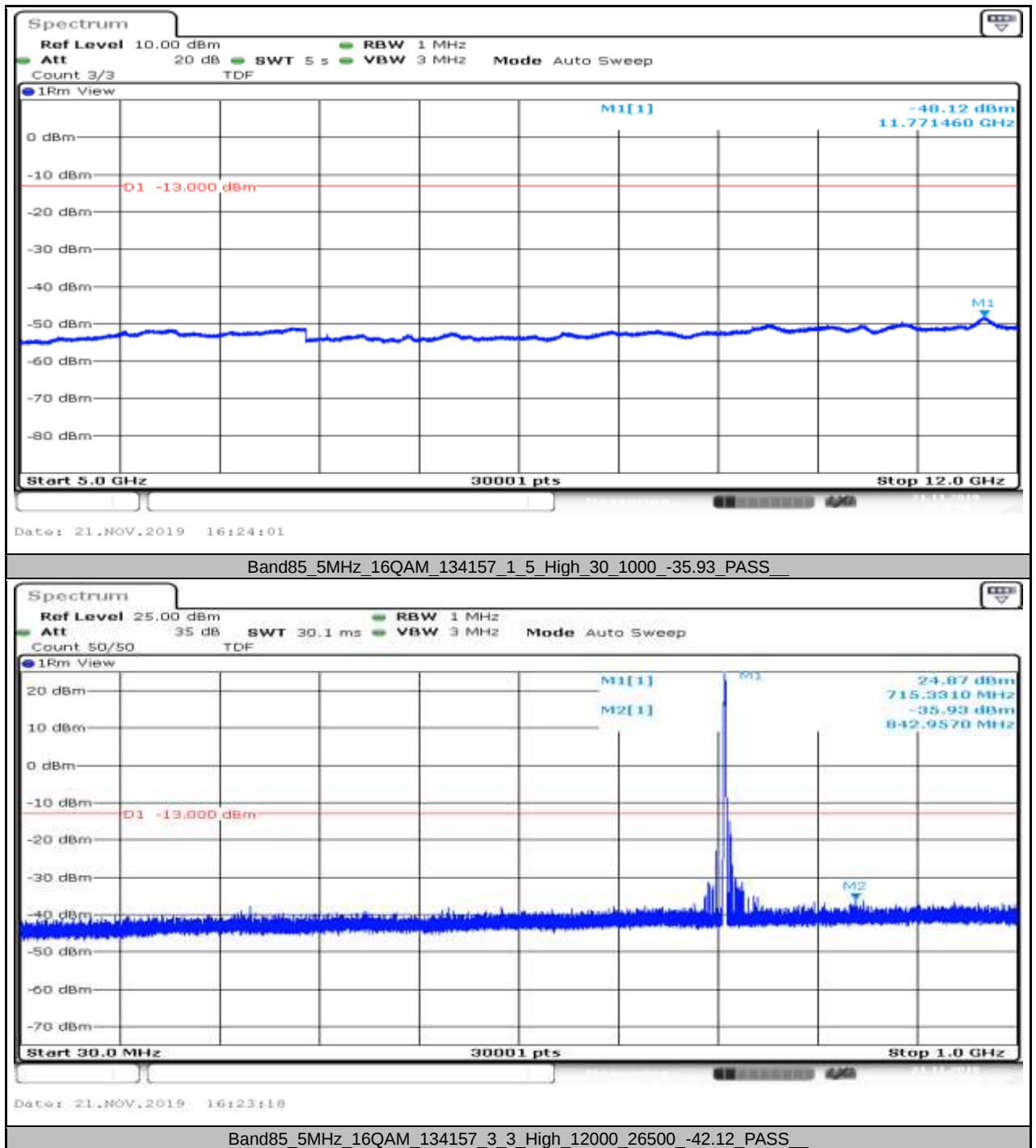
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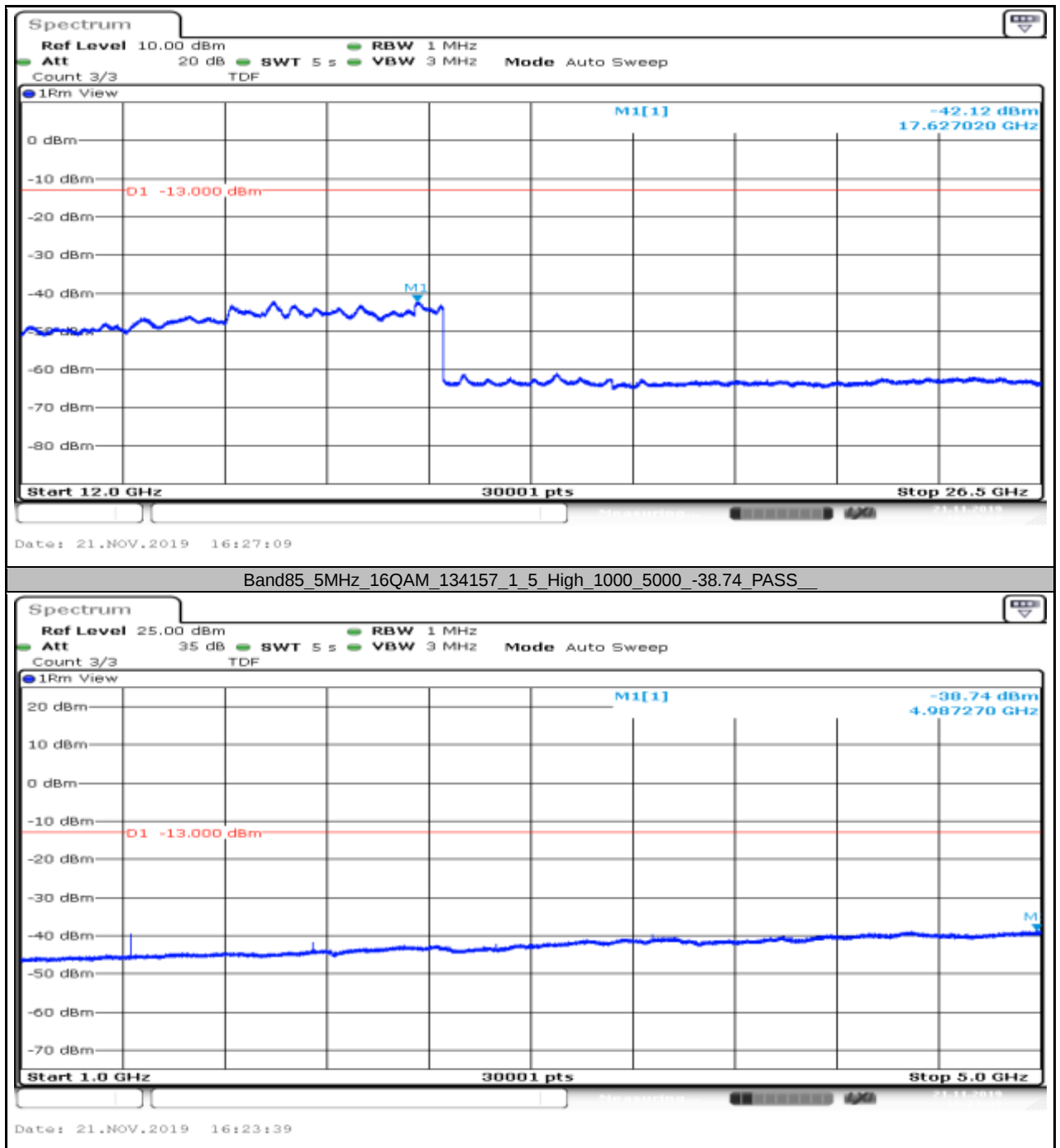


Band85_5MHz_16QAM_134157_1_5_High_12000_26500_-41.9_PASS_



Band85_5MHz_16QAM_134157_1_5_High_5000_12000_-48.12_PASS_





Appendix J.6: Frequency Stability for M1

Test Result

Voltage												
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band85	5MHz	QPSK	134092	1	0	Low	NV	NT	5.26	0.00744	±2.5	PASS
Band85	5MHz	QPSK	134092	1	0	Low	LV	NT	6.55	0.009264	±2.5	PASS
Band85	5MHz	QPSK	134092	1	0	Low	HV	NT	5.71	0.008076	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	HV	NT	71.64	0.10133	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	NV	NT	69.62	0.098472	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	LV	NT	68.92	0.097482	±2.5	PASS

Temperature												
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band85	5MHz	QPSK	134092	1	0	Low	NV	40	5.42	0.007666	±2.5	PASS
Band85	5MHz	QPSK	134092	1	0	Low	NV	-40	7.21	0.010198	±2.5	PASS
Band85	5MHz	QPSK	134092	1	0	Low	NV	-30	5.05	0.007143	±2.5	PASS
Band85	5MHz	QPSK	134092	1	0	Low	NV	-20	7.24	0.01024	±2.5	PASS
Band85	5MHz	QPSK	134092	1	0	Low	NV	-10	6.38	0.009024	±2.5	PASS
Band85	5MHz	QPSK	134092	1	0	Low	NV	0	6.84	0.009675	±2.5	PASS
Band85	5MHz	QPSK	134092	1	0	Low	NV	10	4.89	0.006917	±2.5	PASS
Band85	5MHz	QPSK	134092	1	0	Low	NV	85	6.67	0.009434	±2.5	PASS
Band85	5MHz	QPSK	134092	1	0	Low	NV	30	5.92	0.008373	±2.5	PASS
Band85	5MHz	QPSK	134092	1	0	Low	NV	50	3.16	0.00447	±2.5	PASS
Band85	5MHz	QPSK	134092	1	0	Low	NV	60	6.52	0.009222	±2.5	PASS
Band85	5MHz	QPSK	134092	1	0	Low	NV	70	5.95	0.008416	±2.5	PASS
Band85	5MHz	QPSK	134092	1	0	Low	NV	80	6.67	0.009434	±2.5	PASS
Band85	5MHz	QPSK	134092	1	0	Low	NV	20	4.63	0.006549	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	NV	20	71.85	0.101627	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	NV	85	68.91	0.097468	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	NV	80	72.77	0.102928	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	NV	70	70.91	0.100297	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	NV	60	71.17	0.100665	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	NV	50	68.61	0.097044	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	NV	30	71.24	0.100764	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	NV	10	71.81	0.10157	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	NV	0	70.68	0.099972	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	NV	-10	70.34	0.099491	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	NV	-20	69.42	0.09819	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	NV	-30	71.94	0.101754	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	NV	-40	70.88	0.100255	±2.5	PASS
Band85	5MHz	16QAM	134092	1	0	Low	NV	40	69.75	0.098656	±2.5	PASS