

Appendix Test Data for LTE band 40(2350-2360) (Conducted Measurement)

Product Name: 4G Poc Radio

Trade Mark: N/A

Test Model: N180

FCC ID: 2BQXTP360N

Environmental Conditions

Temperature:	23.5℃
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Max Zhang
NOTE	N/A

Appendix A: RF output power

Test Result

Band	Bandwidth h (MHz)	UL Frequency (MHz)	Modulation n	RB Size	RB Offset	Average Power (dBm)	Peak Power (dBm)	PAR (dB)	Limi t (dB)	AntGai n (dBi)	EIRP (dBm)	Limit (dBm)	Conclusio n
40(2350-2360)	5	2352.5	QPSK	25	LOW	20.68	27.11	6.4 3	13	0.87	21.5 5	33	Pass
40(2350-2360)	5	2352.5	QPSK	12	LOW	20.65	27	6.3 5	13	0.87	21.5 2	33	Pass
40(2350-2360)	5	2352.5	QPSK	12	MID	20.69	27.18	6.4 9	13	0.87	21.5 6	33	Pass
40(2350-2360)	5	2352.5	QPSK	12	HIGH	20.66	27.28	6.6 2	13	0.87	21.5 3	33	Pass
40(2350-2360)	5	2352.5	QPSK	1	LOW	21.82	27.43	5.6 1	13	0.87	22.6 9	33	Pass
40(2350-2360)	5	2352.5	QPSK	1	MID	21.79	27.37	5.5 8	13	0.87	22.6 6	33	Pass
40(2350-2360)	5	2352.5	QPSK	1	HIGH	21.79	27.4	5.6 1	13	0.87	22.6 6	33	Pass
40(2350-2360)	5	2352.5	16QAM	25	LOW	19.67	27.33	7.6 6	13	0.87	20.5 4	33	Pass
40(2350-2360)	5	2352.5	16QAM	12	LOW	19.67	27.18	7.5 1	13	0.87	20.5 4	33	Pass
40(2350-2360)	5	2352.5	16QAM	12	MID	19.67	27.11	7.4 4	13	0.87	20.5 4	33	Pass





Band	Bandwidth h (MHz)	UL Frequency (MHz)	Modulation n	RB Size	RB Offset	Average Power (dBm)	Peak Power (dBm)	PAR (dB)	Limi t (dB)	AntGai n (dBi)	EIRP (dBm)	Limit (dBm)	Conclusio n
40(2350-2360)	5	2352.5	16QAM	12	HIGH	19.65	27.15	7.5	13	0.87	20.5 2	33	Pass
40(2350-2360)	5	2352.5	16QAM	1	LOW	20.86	27.44	6.5 8	13	0.87	21.7 3	33	Pass
40(2350-2360)	5	2352.5	16QAM	1	MID	20.82	27.38	6.5 6	13	0.87	21.6 9	33	Pass
40(2350-2360)	5	2352.5	16QAM	1	HIGH	20.89	27.48	6.5 9	13	0.87	21.7 6	33	Pass
40(2350-2360)	5	2355	QPSK	25	LOW	20.75	27.15	6.4 0	13	0.87	21.6 2	33	Pass
40(2350-2360)	5	2355	QPSK	12	LOW	20.62	27.38	6.7 6	13	0.87	21.4 9	33	Pass
40(2350-2360)	5	2355	QPSK	12	MID	20.62	27.38	6.7 6	13	0.87	21.4 9	33	Pass
40(2350-2360)	5	2355	QPSK	12	HIGH	20.71	27.46	6.7 5	13	0.87	21.5 8	33	Pass
40(2350-2360)	5	2355	QPSK	1	LOW	21.81	27.15	5.3 4	13	0.87	22.6 8	33	Pass
40(2350-2360)	5	2355	QPSK	1	MID	21.78	27.1	5.3 2	13	0.87	22.6 5	33	Pass
40(2350-2360)	5	2355	QPSK	1	HIGH	21.84	27.19	5.3 5	13	0.87	22.7 1	33	Pass
40(2350-2360)	5	2355	16QAM	25	LOW	19.75	27.32	7.5 7	13	0.87	20.6 2	33	Pass
40(2350-2360)	5	2355	16QAM	12	LOW	19.65	27.21	7.5 6	13	0.87	20.5 2	33	Pass
40(2350-2360)	5	2355	16QAM	12	MID	19.65	27.23	7.5 8	13	0.87	20.5 2	33	Pass
40(2350-2360)	5	2355	16QAM	12	HIGH	19.74	27.29	7.5 5	13	0.87	20.6 1	33	Pass
40(2350-2360)	5	2355	16QAM	1	LOW	20.97	26.65	5.6 8	13	0.87	21.8 4	33	Pass
40(2350-2360)	5	2355	16QAM	1	MID	20.94	26.64	5.7 0	13	0.87	21.8 1	33	Pass
40(2350-2360)	5	2355	16QAM	1	HIGH	20.94	26.66	5.7 2	13	0.87	21.8 1	33	Pass
40(2350-2360)	5	2357.5	QPSK	25	LOW	20.72	27.17	6.4 5	13	0.87	21.5 9	33	Pass
40(2350-2360)	5	2357.5	QPSK	12	LOW	20.71	28.23	7.5 2	13	0.87	21.5 8	33	Pass





Band	Bandwidth h (MHz)	UL Frequency (MHz)	Modulatio n	RB Size	RB Offset	Average Power (dBm)	Peak Power (dBm)	PAR (dB)	Limi t (dB)	AntGai n (dBi)	EIRP (dBm)	Limit (dBm)	Conclusio n
40(2350-2360)	5	2357.5	QPSK	12	MID	20.71	28.23	7.5 2	13	0.87	21.5 8	33	Pass
40(2350-2360)	5	2357.5	QPSK	12	HIGH	20.69	28.19	7.5	13	0.87	21.5 6	33	Pass
40(2350-2360)	5	2357.5	QPSK	1	LOW	21.79	27.06	5.2 7	13	0.87	22.6 6	33	Pass
40(2350-2360)	5	2357.5	QPSK	1	MID	21.76	27	5.2 4	13	0.87	22.6 3	33	Pass
40(2350-2360)	5	2357.5	QPSK	1	HIGH	21.83	27.08	5.2 5	13	0.87	22.7	33	Pass
40(2350-2360)	5	2357.5	16QAM	25	LOW	19.66	26.93	7.2 7	13	0.87	20.5 3	33	Pass
40(2350-2360)	5	2357.5	16QAM	12	LOW	19.76	27.09	7.3 3	13	0.87	20.6 3	33	Pass
40(2350-2360)	5	2357.5	16QAM	12	MID	19.76	27.09	7.3 3	13	0.87	20.6 3	33	Pass
40(2350-2360)	5	2357.5	16QAM	12	HIGH	19.75	27.05	7.3 0	13	0.87	20.6 2	33	Pass
40(2350-2360)	5	2357.5	16QAM	1	LOW	21.14	27.13	5.9 9	13	0.87	22.0 1	33	Pass
40(2350-2360)	5	2357.5	16QAM	1	MID	21.11	27.08	5.9 7	13	0.87	21.9 8	33	Pass
40(2350-2360)	5	2357.5	16QAM	1	HIGH	21.13	27.14	6.0 1	13	0.87	22	33	Pass
40(2350-2360)	10	2355	QPSK	50	LOW	20.8	28.03	7.2 3	13	0.87	21.6 7	33	Pass
40(2350-2360)	10	2355	QPSK	25	LOW	20.69	27.18	6.4 9	13	0.87	21.5 6	33	Pass
40(2350-2360)	10	2355	QPSK	25	MID	20.68	27.39	6.7 1	13	0.87	21.5 5	33	Pass
40(2350-2360)	10	2355	QPSK	25	HIGH	20.74	27.42	6.6 8	13	0.87	21.6 1	33	Pass
40(2350-2360)	10	2355	QPSK	1	LOW	21.93	28.37	6.4 4	13	0.87	22.8	33	Pass
40(2350-2360)	10	2355	QPSK	1	MID	21.89	28.28	6.3 9	13	0.87	22.7 6	33	Pass
40(2350-2360)	10	2355	QPSK	1	HIGH	21.95	28.37	6.4 2	13	0.87	22.8 2	33	Pass
40(2350-2360)	10	2355	16QAM	25	LOW	19.66	28.01	8.3 5	13	0.87	20.5 3	33	Pass





Band	Bandwidth h (MHz)	UL Frequency (MHz)	Modulation n	RB Size	RB Offset	Average Power (dBm)	Peak Power (dBm)	PAR (dB)	Limi t (dB)	AntGai n (dBi)	EIRP (dBm)	Limit (dBm)	Conclusio n
40(2350-2360)	10	2355	16QAM	25	MID	19.67	28.08	8.4 1	13	0.87	20.5 4	33	Pass
40(2350-2360)	10	2355	16QAM	25	HIGH	19.73	28.17	8.4 4	13	0.87	20.6	33	Pass
40(2350-2360)	10	2355	16QAM	1	LOW	21.19	27.41	6.2 2	13	0.87	22.0 6	33	Pass
40(2350-2360)	10	2355	16QAM	1	MID	21.22	27.38	6.1 6	13	0.87	22.0 9	33	Pass
40(2350-2360)	10	2355	16QAM	1	HIGH	21.16	27.42	6.2 6	13	0.87	22.0 3	33	Pass





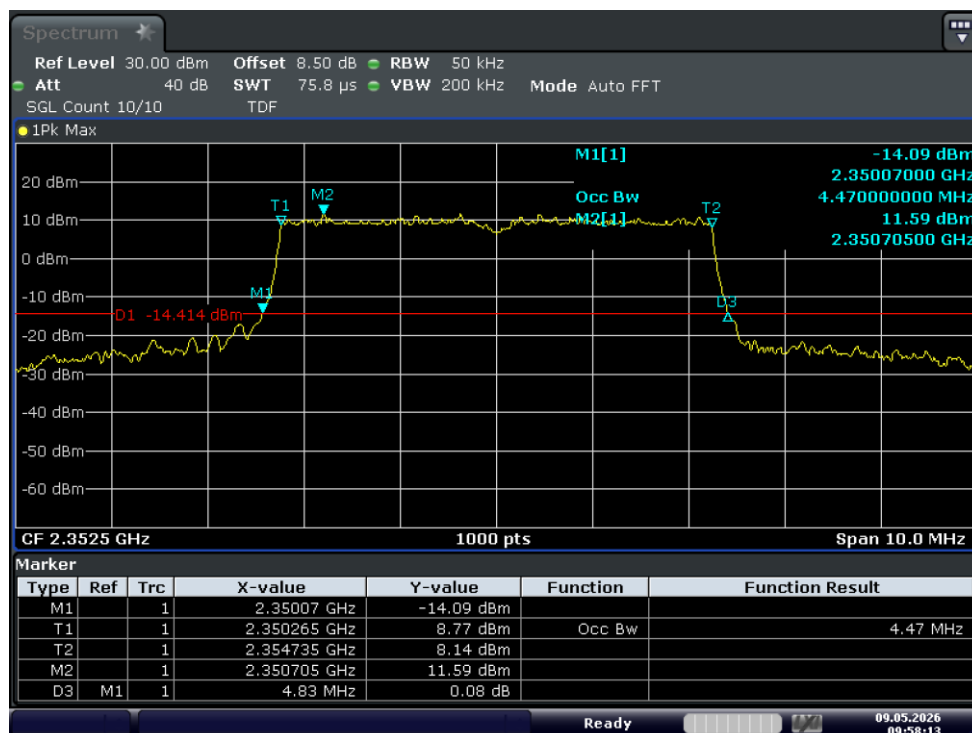
Appendix B: Occupied bandwidth

Test Result

Band	Bandwidth (MHz)	UL Frequency (MHz)	Modulation	RB Size	RB Offset	Occupied Bandwidth (MHz)	Emission Bandwidth (MHz)	Limit
40(2350-2360)	5	2352.5	QPSK	25	LOW	4.47	4.91	No limit
40(2350-2360)	5	2352.5	16QAM	25	LOW	4.47	4.83	No limit
40(2350-2360)	5	2355	QPSK	25	LOW	4.48	4.8	No limit
40(2350-2360)	5	2355	16QAM	25	LOW	4.47	4.85	No limit
40(2350-2360)	5	2357.5	QPSK	25	LOW	4.47	4.78	No limit
40(2350-2360)	5	2357.5	16QAM	25	LOW	4.48	4.91	No limit
40(2350-2360)	10	2355	QPSK	50	LOW	8.94	9.56	No limit



Test Graphs

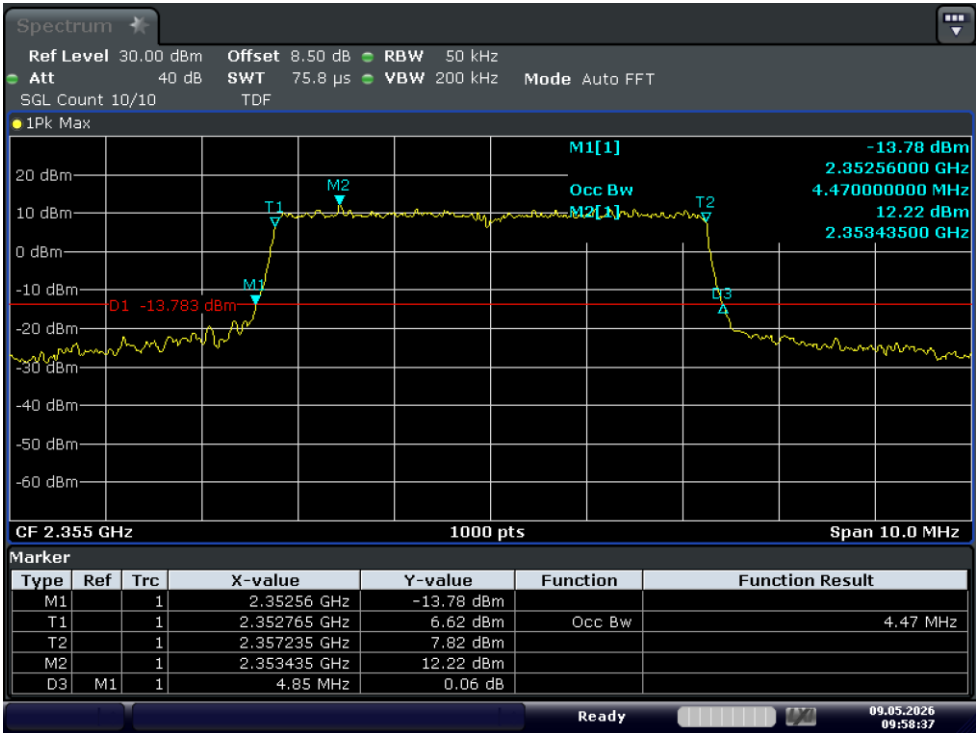


Test_Graph_band40(2350-2360)_2352.5MHz_5M_16QAM_25RB#LOW_OBW&EBW

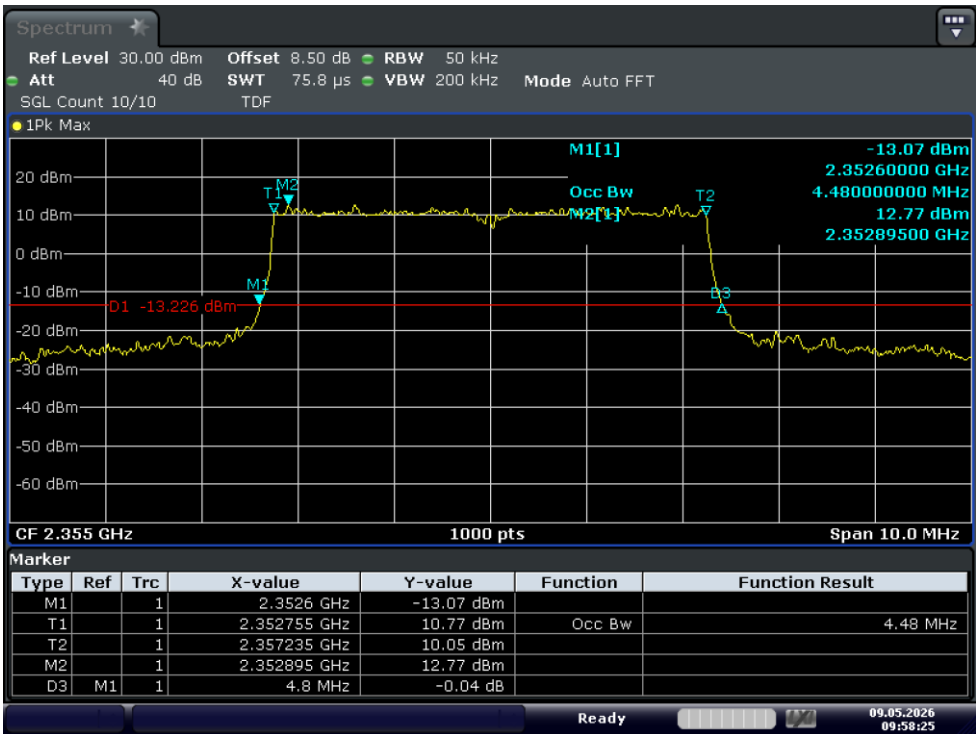


Test_Graph_band40(2350-2360)_2352.5MHz_5M_QPSK_25RB#LOW_OBW&EBW

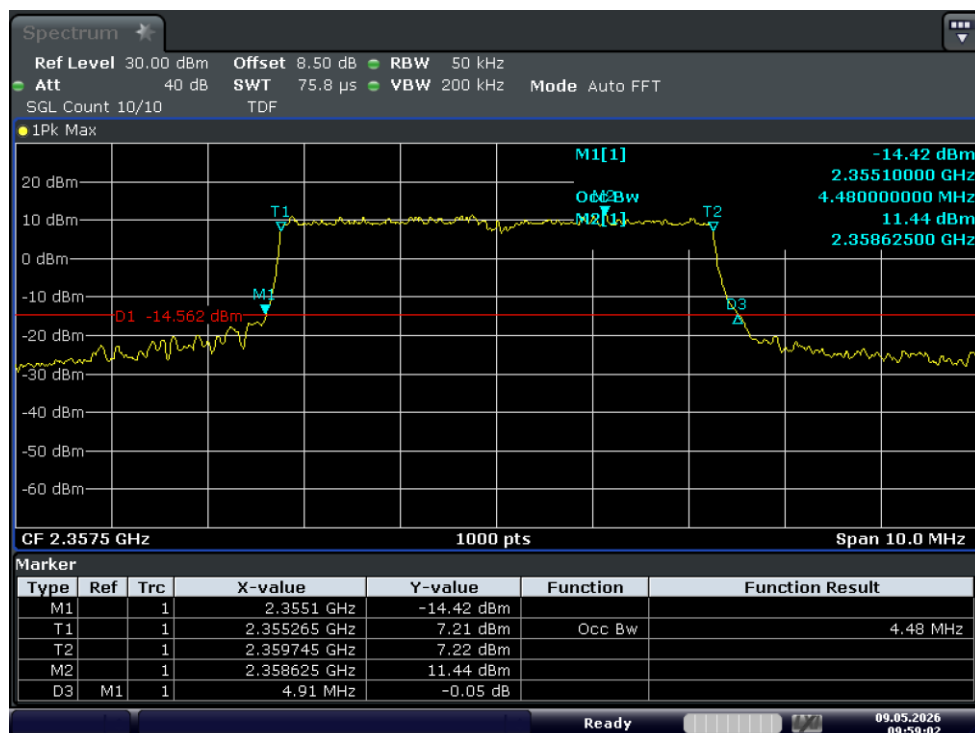




Test_Graph_band40(2350-2360)_2355MHz_5M_16QAM_25RB#LOW_OBW&EBW



Test_Graph_band40(2350-2360)_2355MHz_5M_QPSK_25RB#LOW_OBW&EBW

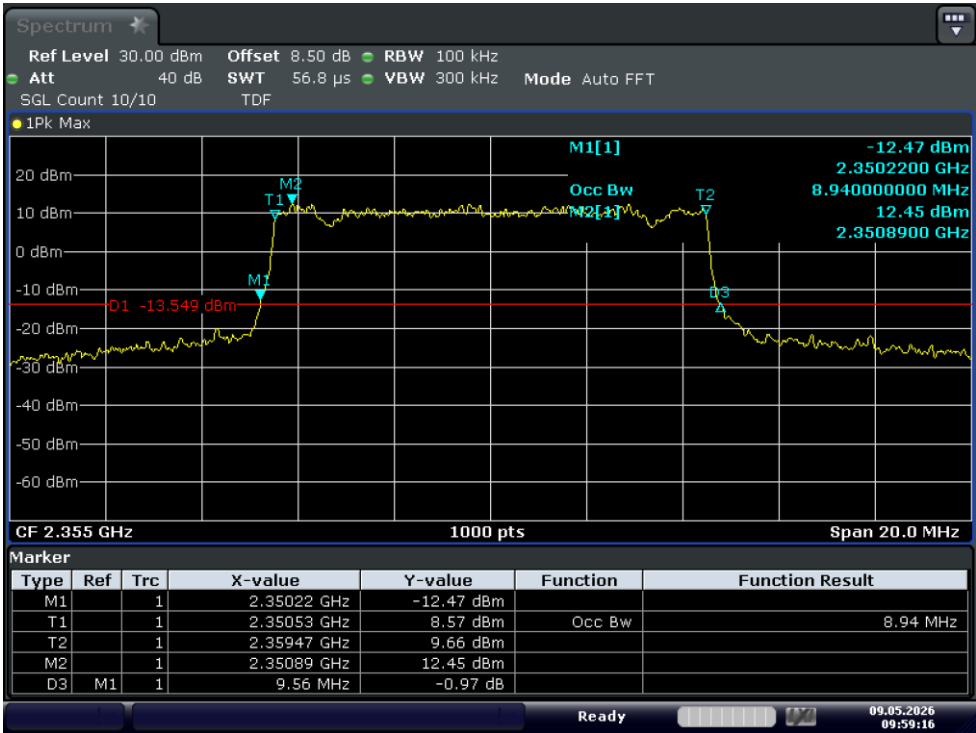


Test_Graph_band40(2350-2360)_2357.5MHz_5M_16QAM_25RB#LOW_OBW&EBW



Test_Graph_band40(2350-2360)_2357.5MHz_5M_QPSK_25RB#LOW_OBW&EBW





Test_Graph_band40(2350-2360)_2355MHz_10M_QPSK_50RB#LOW_OBW&EBW





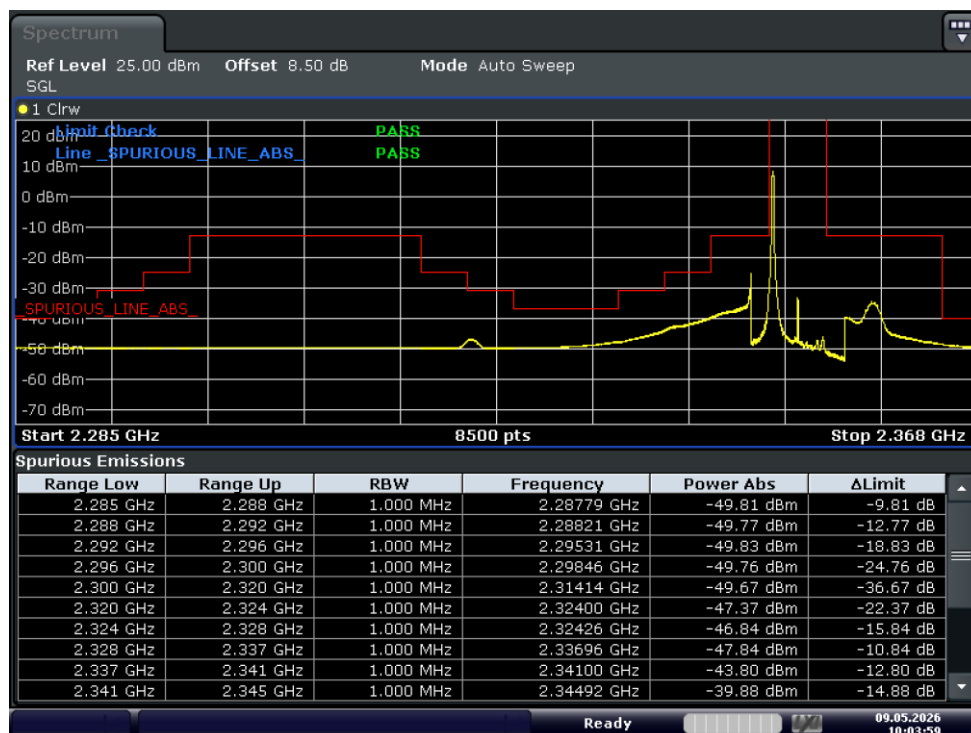
Appendix C: Band edge emissions

Test Result

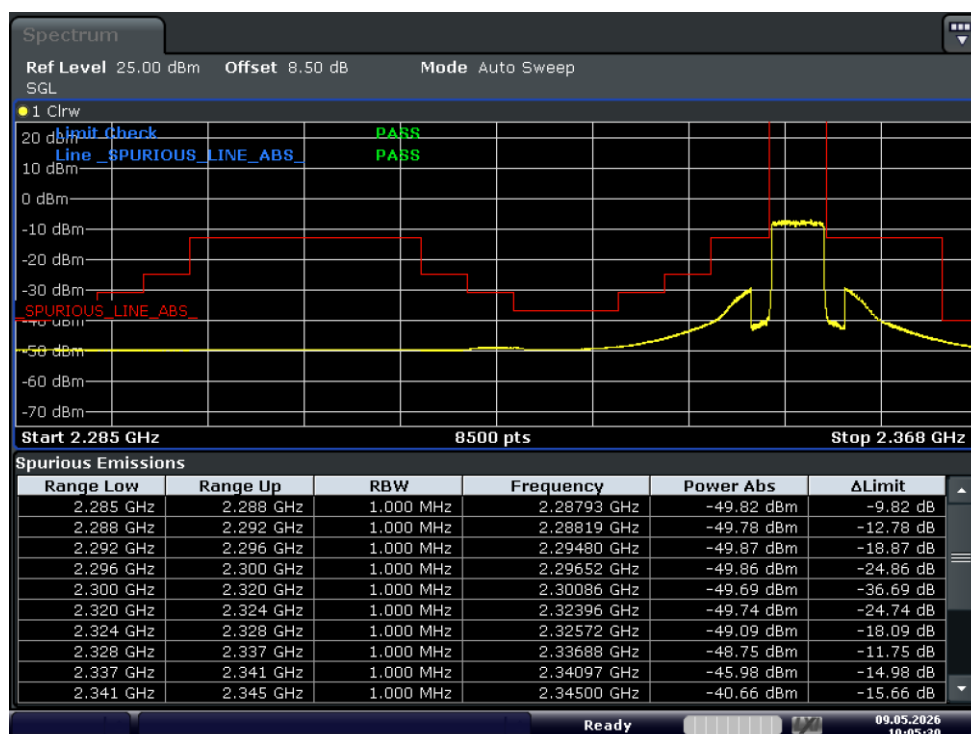
Band	Bandwidth (MHz)	UL Frequency (MHz)	Modulation	RB Size	RB Offset	Conclusion
40(2350-2360)	5	2352.5	QPSK	1	LOW	Pass
40(2350-2360)	5	2352.5	QPSK	25	LOW	Pass
40(2350-2360)	5	2352.5	16QAM	1	LOW	Pass
40(2350-2360)	5	2352.5	16QAM	25	LOW	Pass
40(2350-2360)	5	2357.5	QPSK	1	HIGH	Pass
40(2350-2360)	5	2357.5	QPSK	25	LOW	Pass
40(2350-2360)	5	2357.5	16QAM	1	HIGH	Pass
40(2350-2360)	5	2357.5	16QAM	25	LOW	Pass
40(2350-2360)	10	2355	QPSK	1	LOW	Pass
40(2350-2360)	10	2355	QPSK	50	LOW	Pass
40(2350-2360)	10	2355	16QAM	1	LOW	Pass



Test Graphs

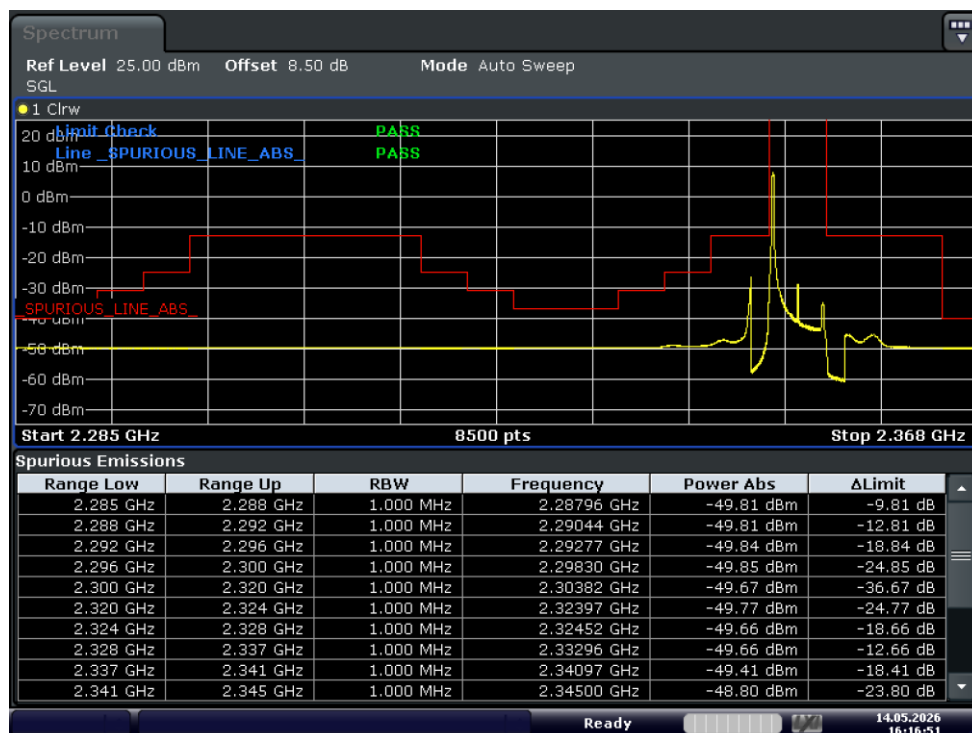


Test_Graph_band40(2350-2360)_2352.5MHz_5M_16QAM_1RB#LOW_Band edge

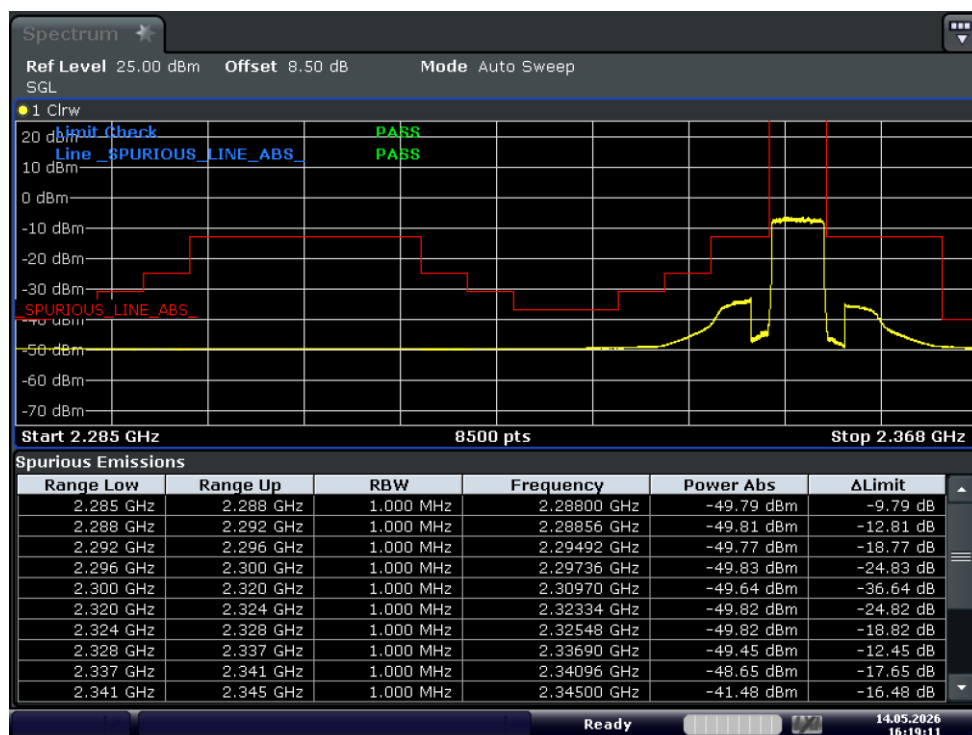


Test_Graph_band40(2350-2360)_2352.5MHz_5M_16QAM_25RB#LOW_Band edge



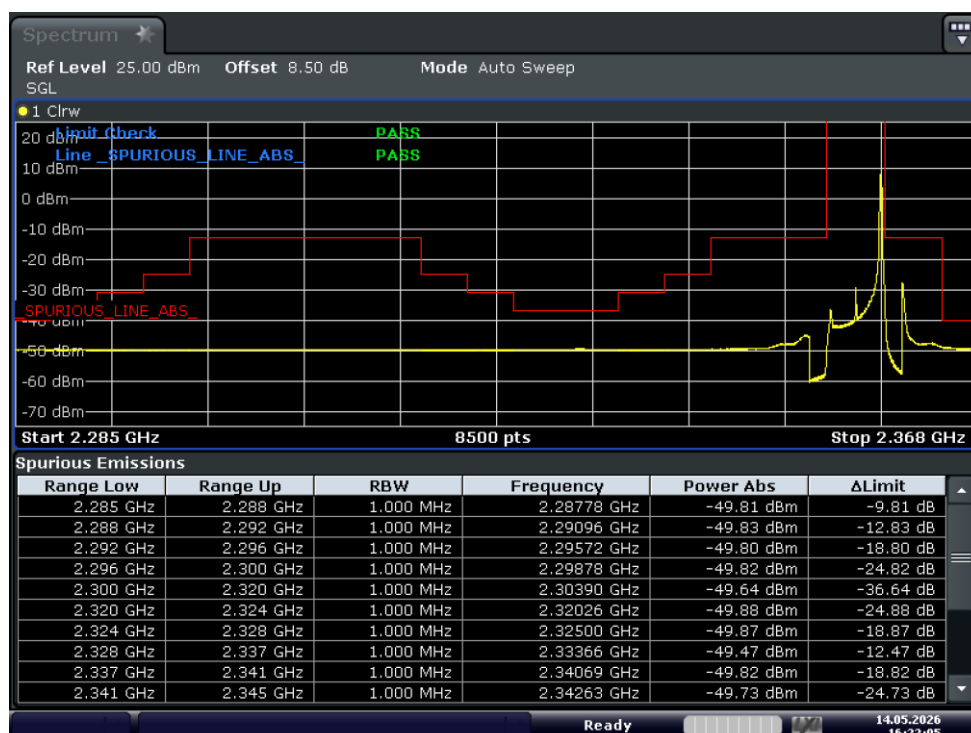


Test_Graph_band40(2350-2360)_2352.5MHz_5M_QPSK_1RB#LOW_Band edge

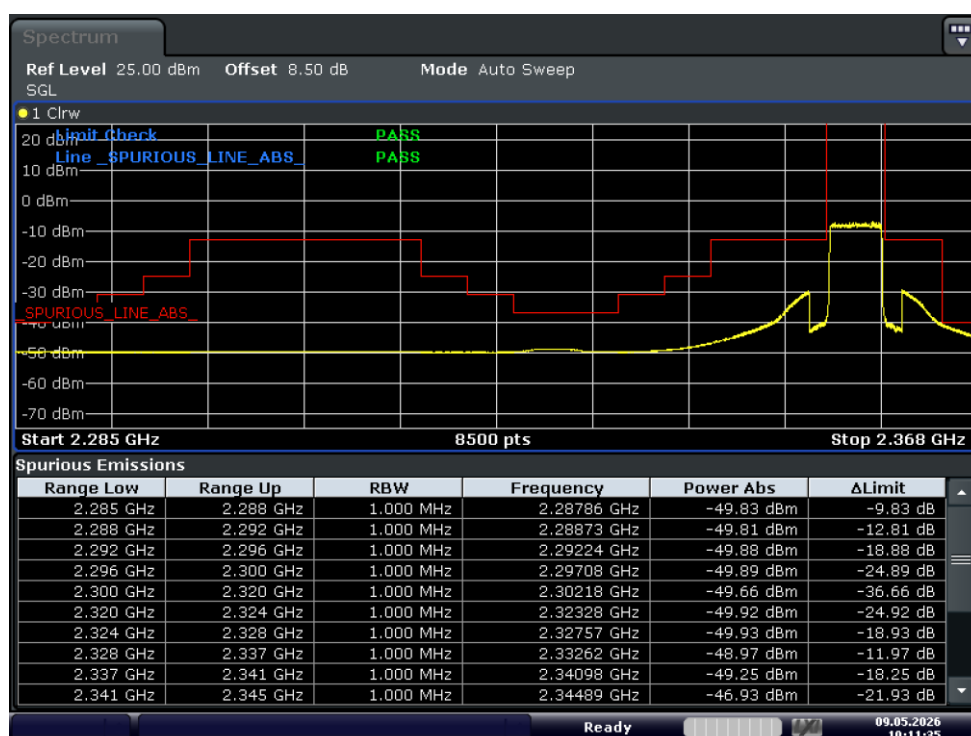


Test_Graph_band40(2350-2360)_2352.5MHz_5M_QPSK_25RB#LOW_Band edge



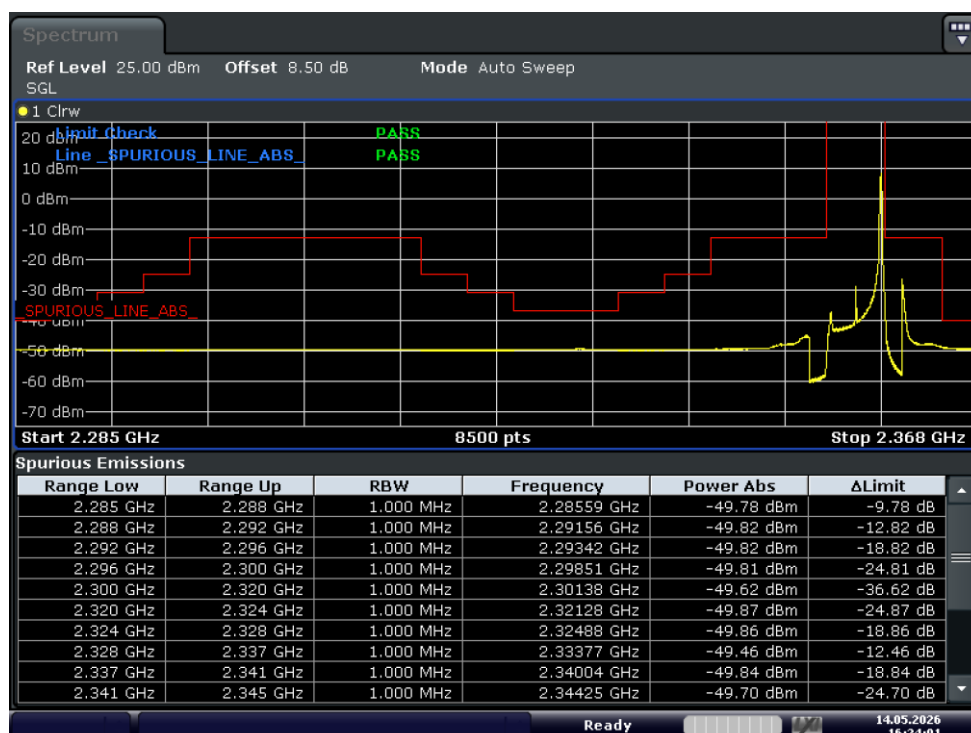


Test_Graph_band40(2350-2360)_2357.5MHz_5M_16QAM_1RB#HIGH_Band edge

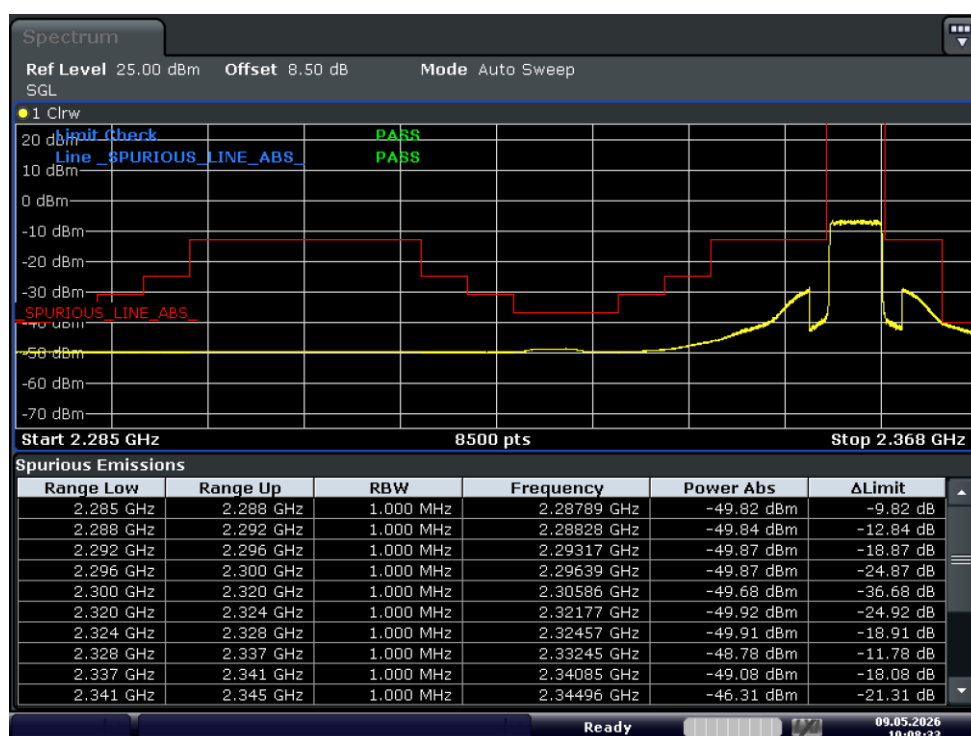


Test_Graph_band40(2350-2360)_2357.5MHz_5M_16QAM_25RB#LOW_Band edge



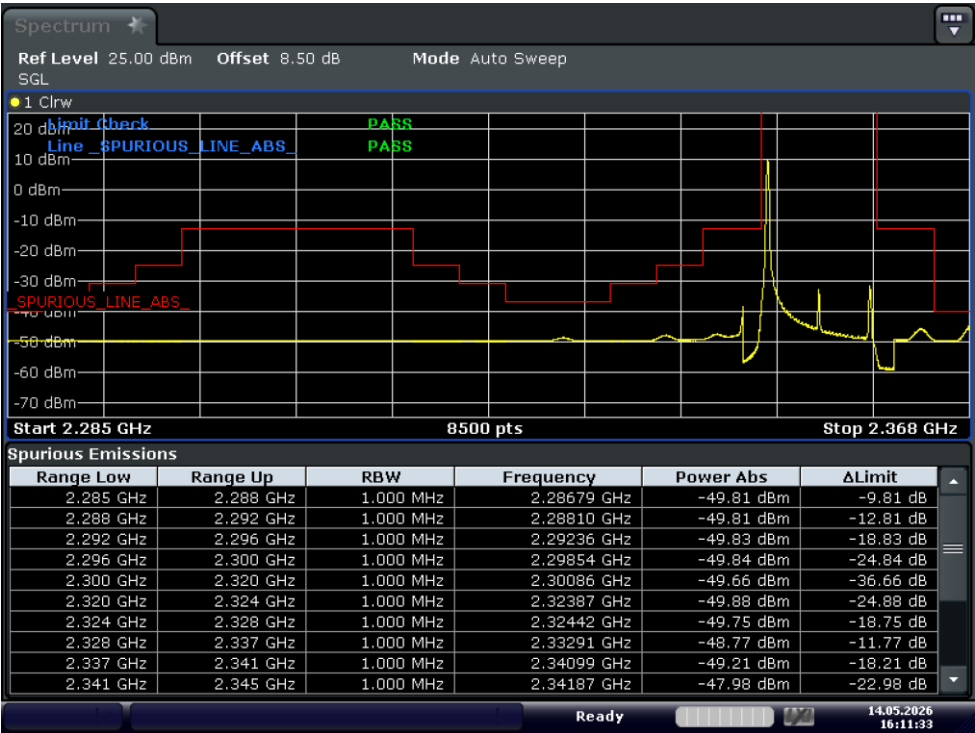


Test_Graph_band40(2350-2360)_2357.5MHz_5M_QPSK_1RB#HIGH_Band edge

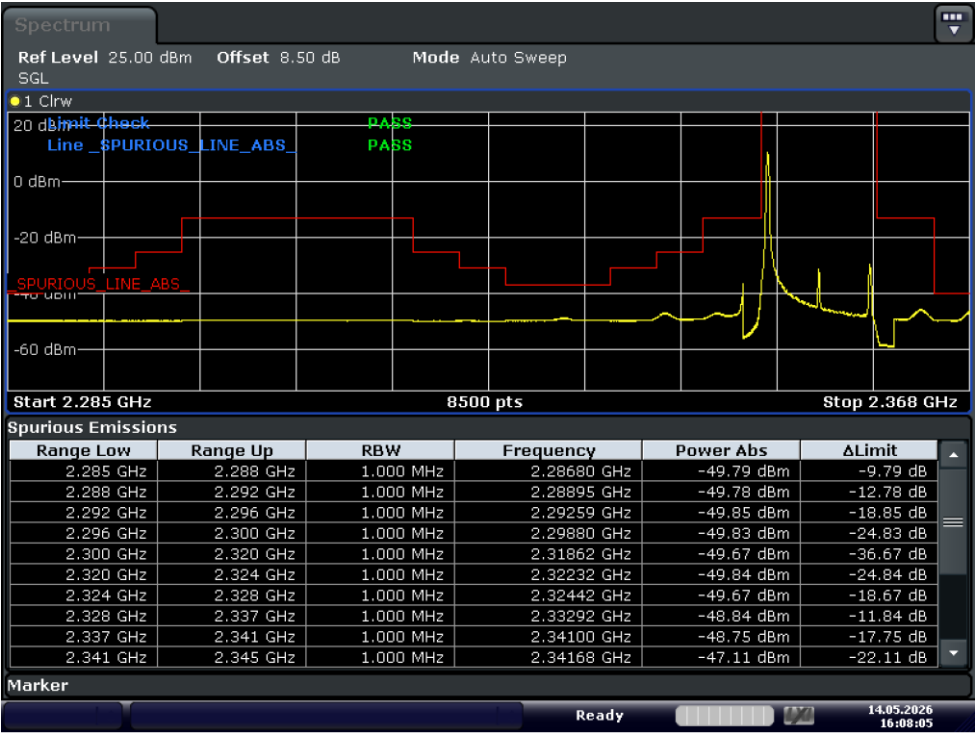


Test_Graph_band40(2350-2360)_2357.5MHz_5M_QPSK_25RB#LOW_Band edge

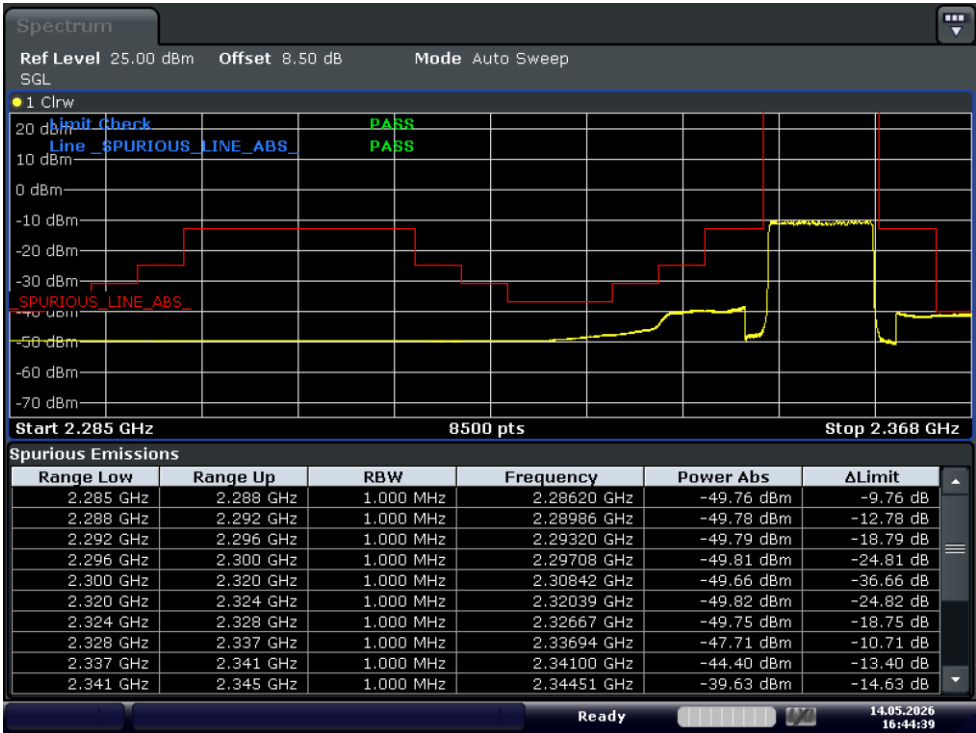




Test_Graph_band40(2350-2360)_2355MHz_10M_16QAM_1RB#LOW_Band edge



Test_Graph_band40(2350-2360)_2355MHz_10M_QPSK_1RB#LOW_Band edge



Test_Graph_band40(2350-2360)_2355MHz_10M_QPSK_50RB#LOW_Band edge



Appendix D: Unwanted spurious emissions at antenna terminals

Test Result

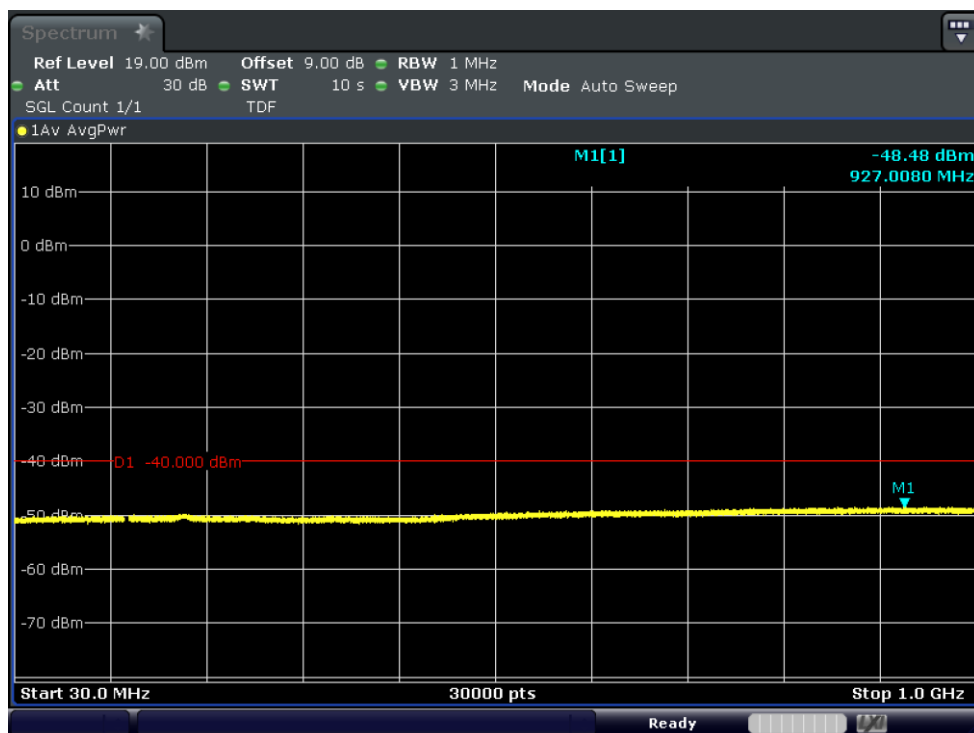
Band	Bandwidth (MHz)	UL Frequency (MHz)	Modulation	RB Size	RB Offset	Conclusion
40(2350-2360)	5	2352.5	QPSK	25	LOW	Pass
40(2350-2360)	5	2355	QPSK	25	LOW	Pass
40(2350-2360)	5	2357.5	QPSK	25	LOW	Pass
40(2350-2360)	10	2355	QPSK	50	LOW	Pass

Note: Both QPSK and 16QAM modulation modes were tested. Since the QPSK mode produced the worst-case results, only the corresponding QPSK test results are included in this report.

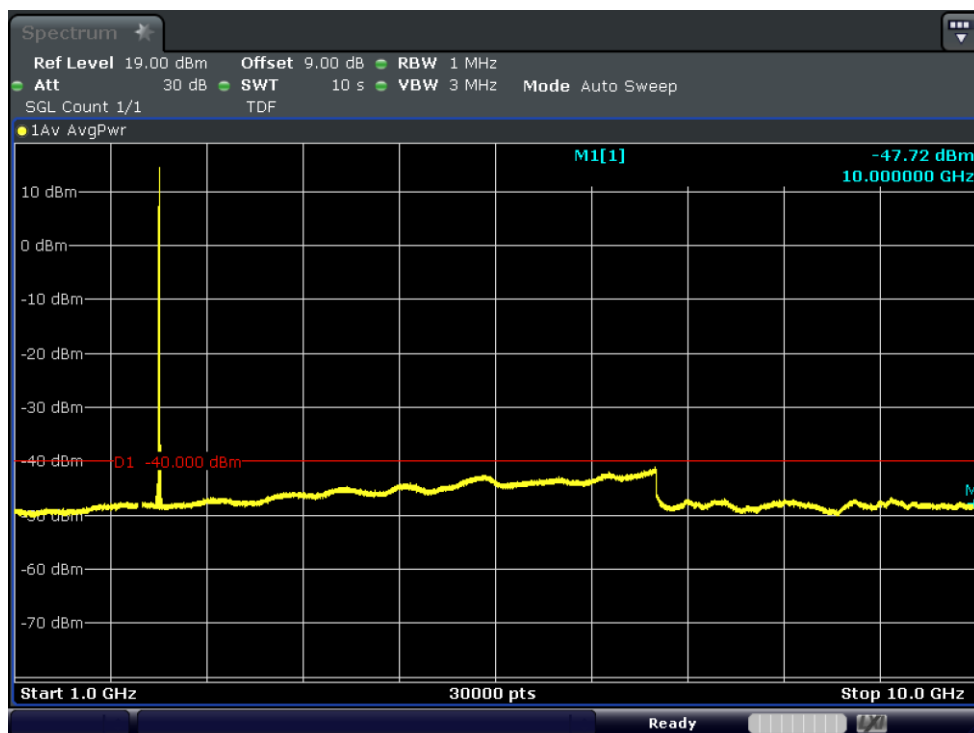




Test Graphs

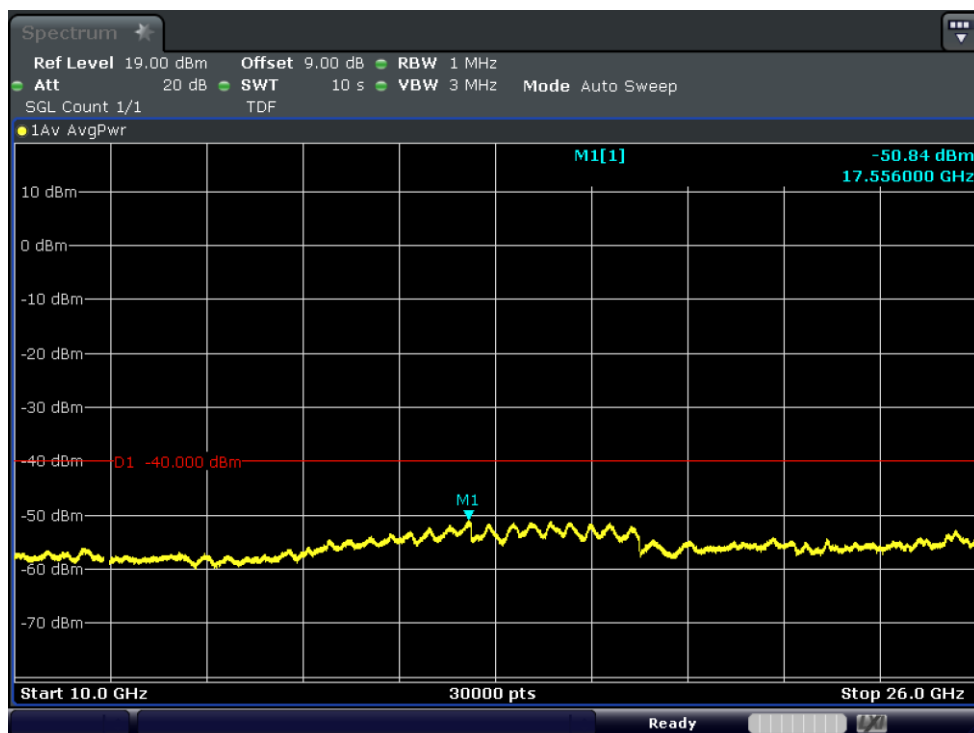


Test_Graph_band40(2350-
2360)_2352.5MHz_5M_QPSK_25RB#LOW_30M_1G_TX

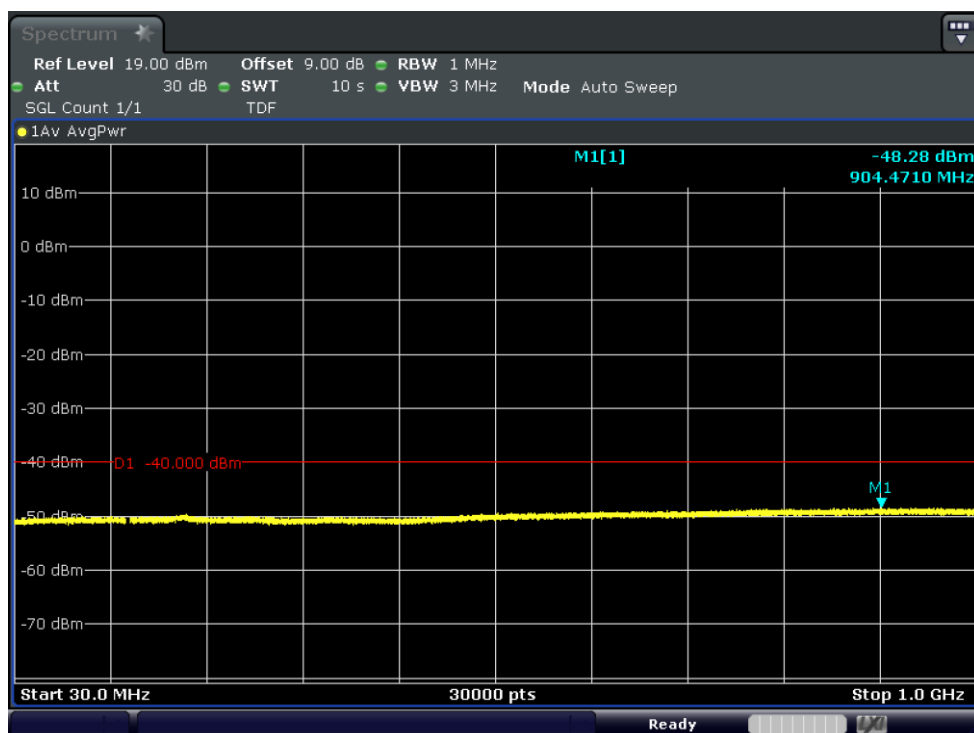


Test_Graph_band40(2350-
2360)_2352.5MHz_5M_QPSK_25RB#LOW_1G_10G_TX



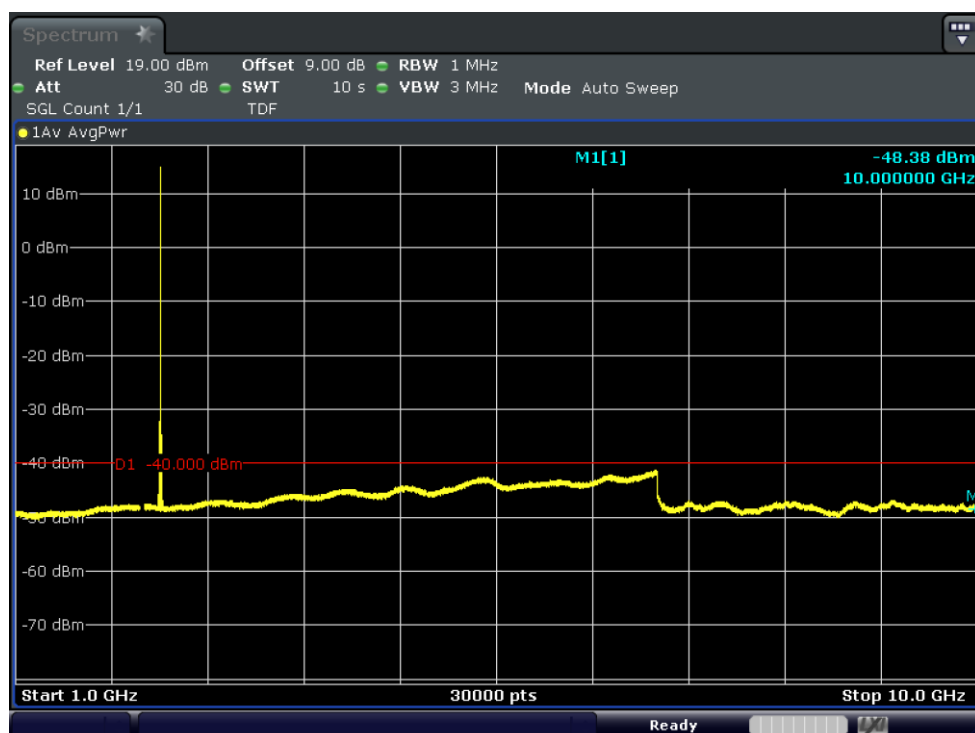


Test_Graph_band40(2350-2360)_2352.5MHz_5M_QPSK_25RB#LOW_10G_26.0G_TX

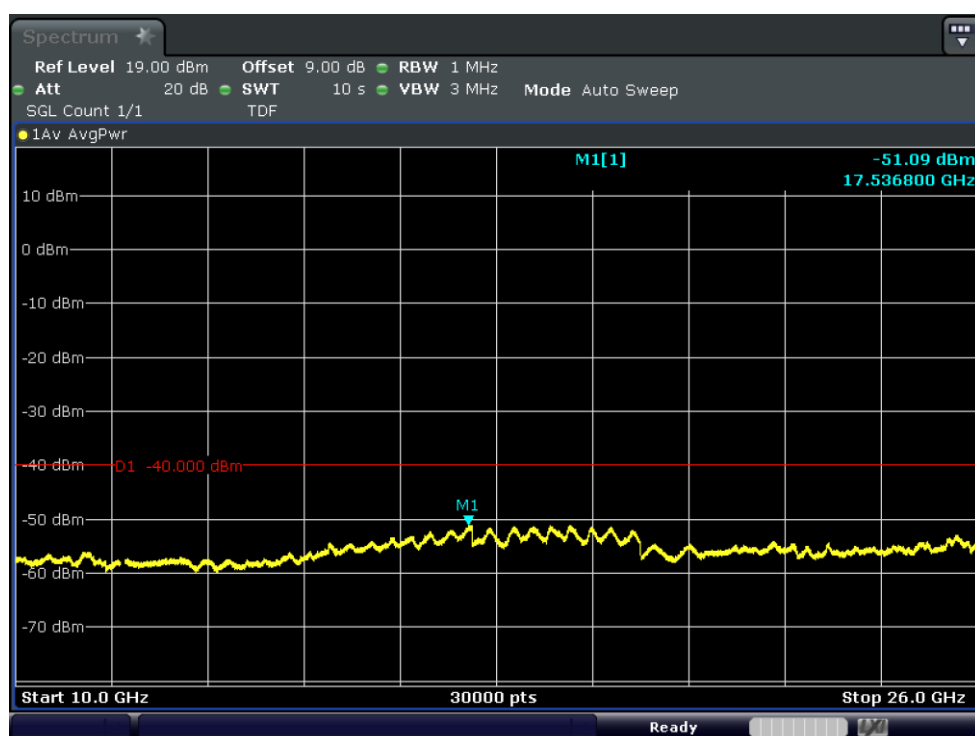


Test_Graph_band40(2350-2360)_2355MHz_5M_QPSK_25RB#LOW_30M_1G_TX



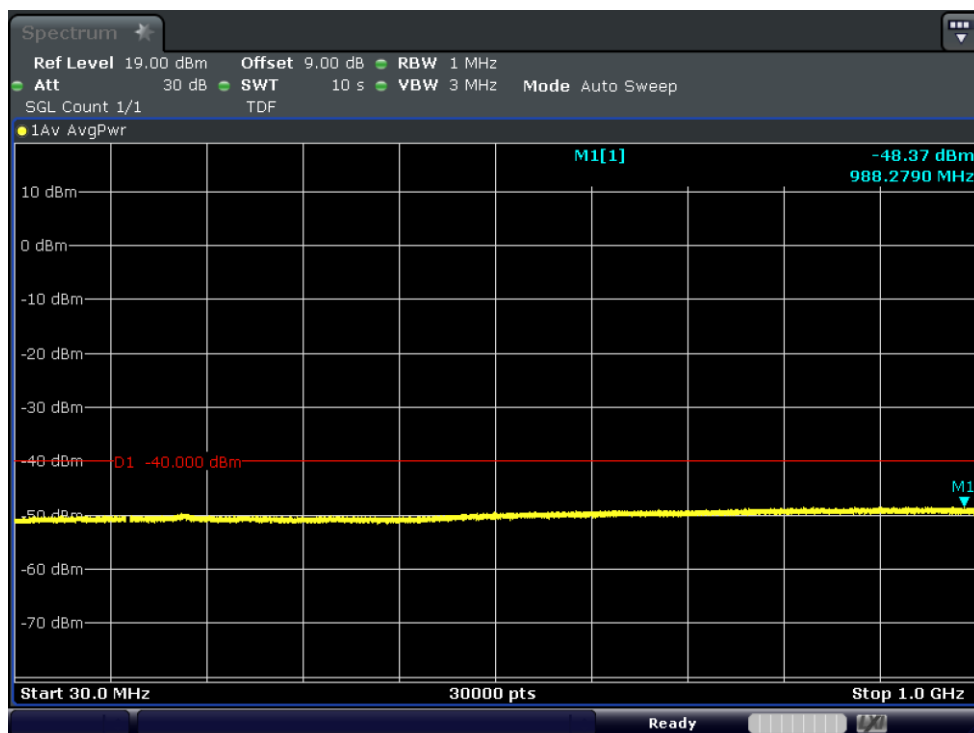


Test_Graph_band40(2350-2360)_2355MHz_5M_QPSK_25RB#LOW_1G_10G_TX

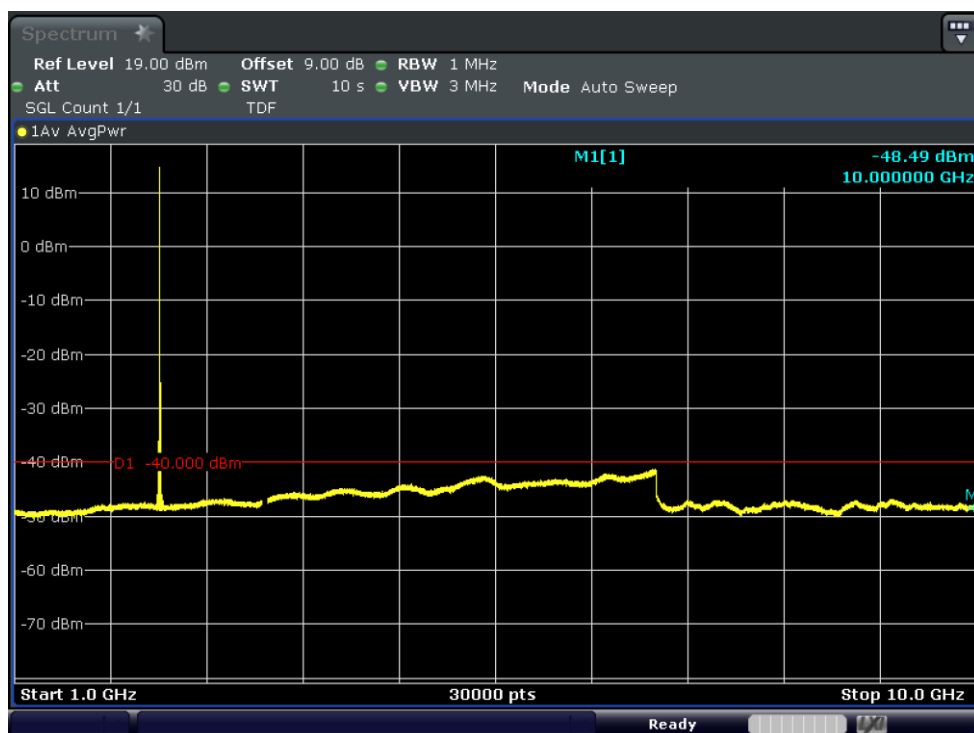


Test_Graph_band40(2350-2360)_2355MHz_5M_QPSK_25RB#LOW_10G_26.0G_TX

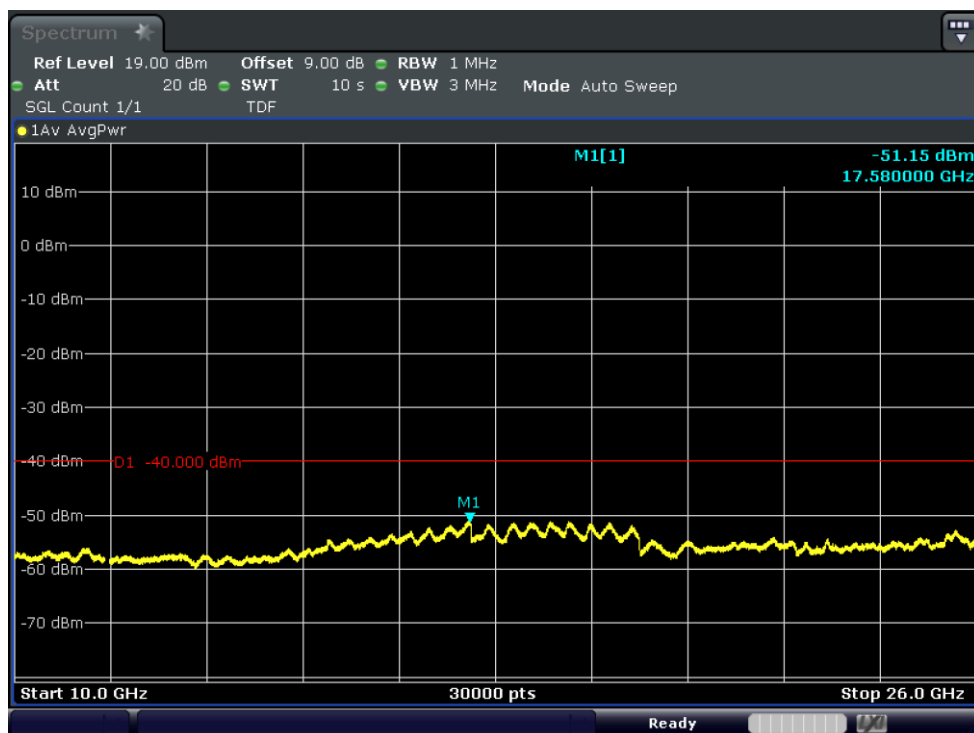




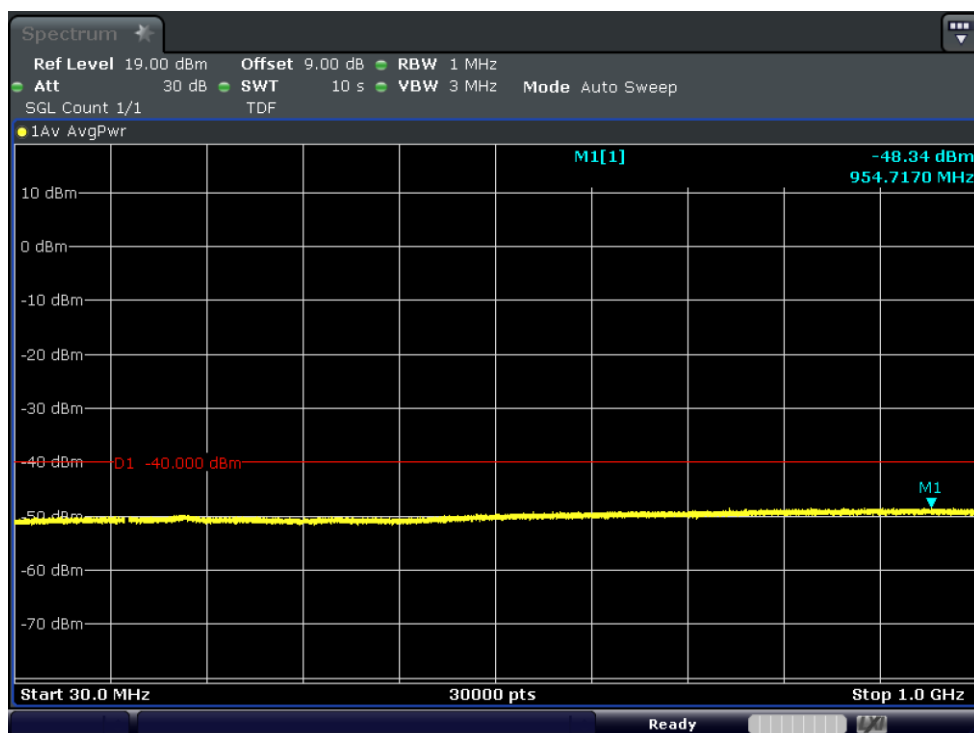
Test_Graph_band40(2350-2360)_2357.5MHz_5M_QPSK_25RB#LOW_30M_1G_TX



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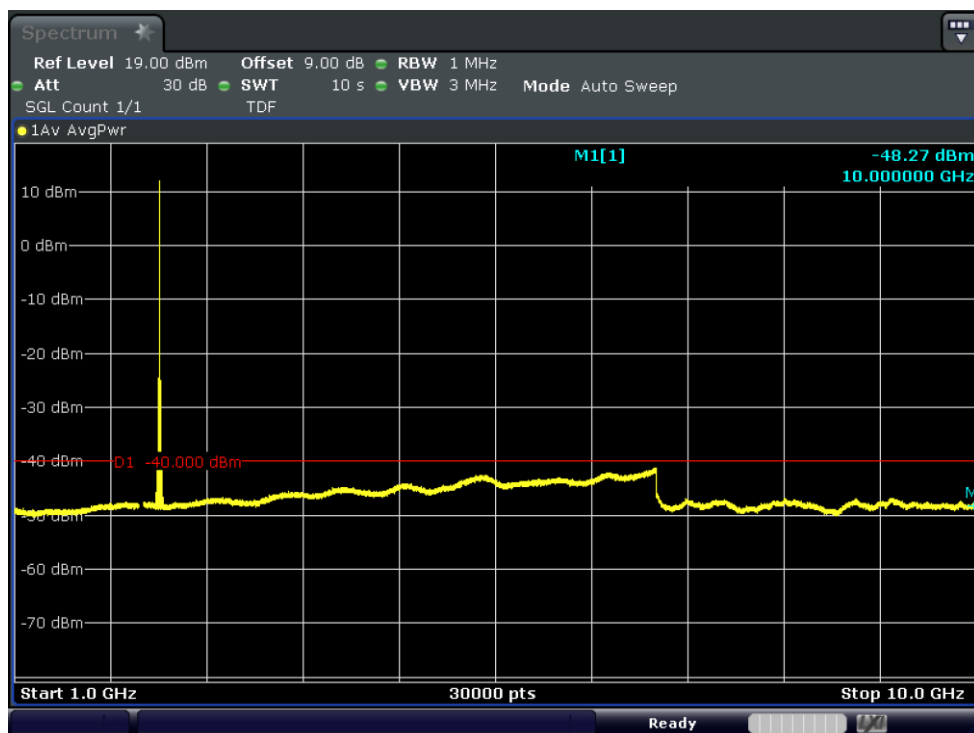


Test_Graph_band40(2350-2360)_2357.5MHz_5M_QPSK_25RB#LOW_10G_26.0G_TX

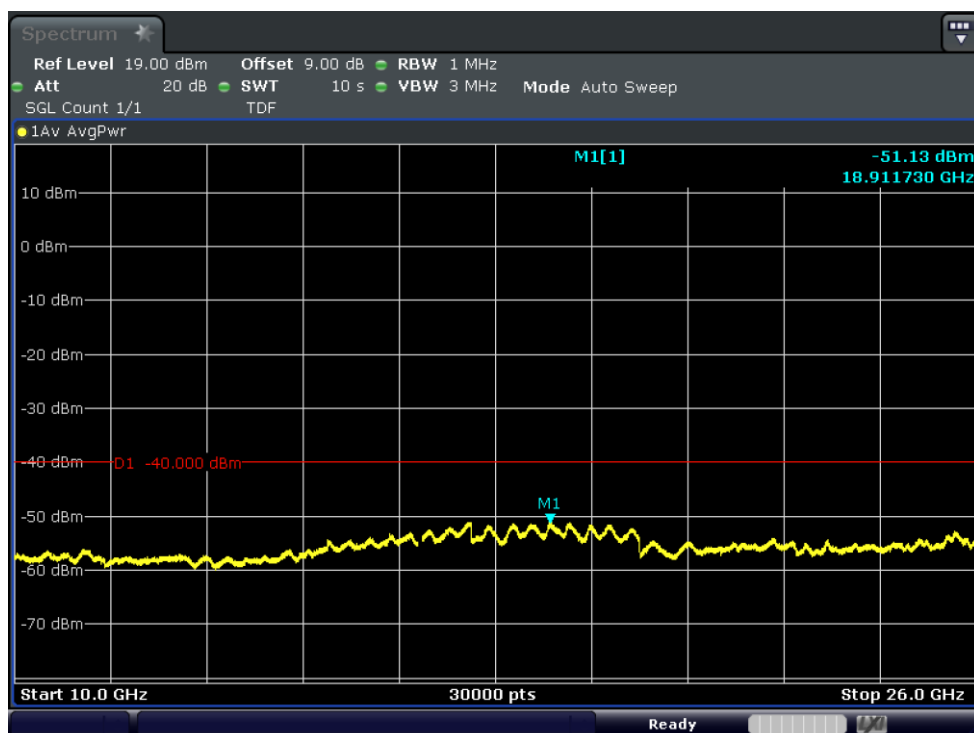


Test_Graph_band40(2350-2360)_2355MHz_10M_QPSK_50RB#LOW_30M_1G_TX





Test_Graph_band40(2350-
2360)_2355MHz_10M_QPSK_50RB#LOW_1G_10G_TX



Test_Graph_band40(2350-
2360)_2355MHz_10M_QPSK_50RB#LOW_10G_26.0G_TX





Appendix E: Frequency stability

Test Result

Test Conditions (LTE Band 40(2350-2360)(QPSK) /BW 10MHz)		Frequency Range		Frequency Error	Verdict
Temperature (°C)	Voltage (Volt)	>2350 Freq Reading @ Low End (MHz)	<2360 Freq Reading @ High End (MHz)	Middle Channel ≤2.5ppm	
50	Normal Voltage	2350.5541	2359.4331	0.0062	PASS
40	Normal Voltage	2350.5542	2359.4333	0.0069	
30	Normal Voltage	2350.5543	2359.4332	0.0060	
20(Ref.)	Normal Voltage	2350.5542	2359.4333	0.0060	
10	Normal Voltage	2350.5542	2359.4331	0.0068	
0	Normal Voltage	2350.5542	2359.4331	0.0062	
-10	Normal Voltage	2350.5542	2359.4332	0.0067	
-20	Normal Voltage	2350.5541	2359.4331	0.0063	
-30	Normal Voltage	2350.5543	2359.4332	0.0060	
20	+15%	2350.5541	2359.4332	0.0060	
20	-15%	2350.5543	2359.4332	0.0062	
20	Battery End Point	2350.5541	2359.4333	0.0070	

