
MPC Simulation results for healthy and faulty operation

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1 One Module

1.1 Healthy Operation

This section contains informations.

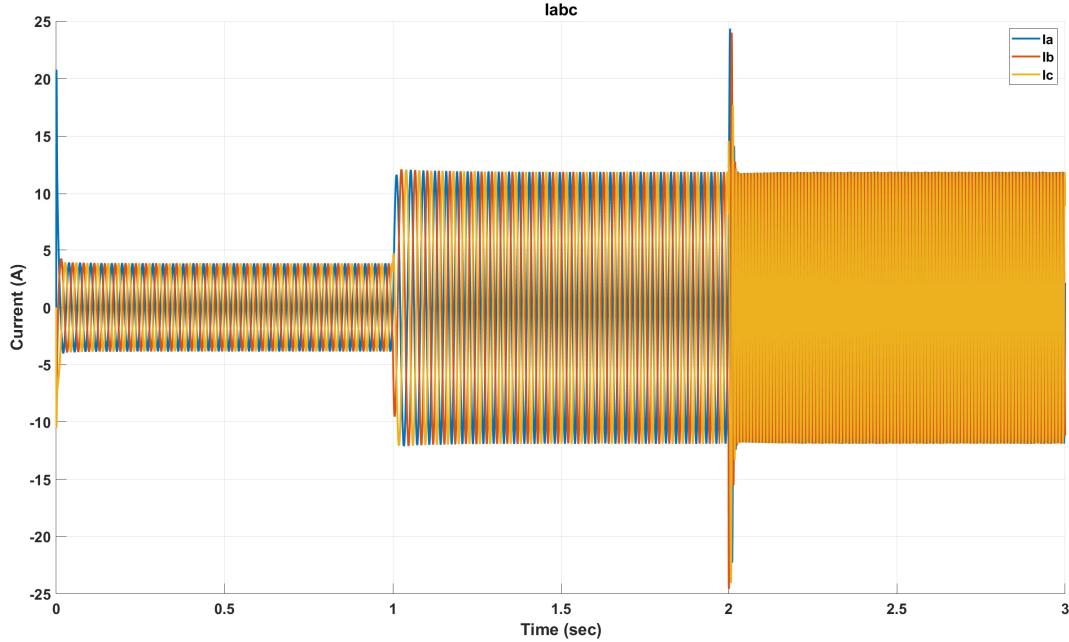


Figure 1: abc Phase Currents for Healthy One Module Operation

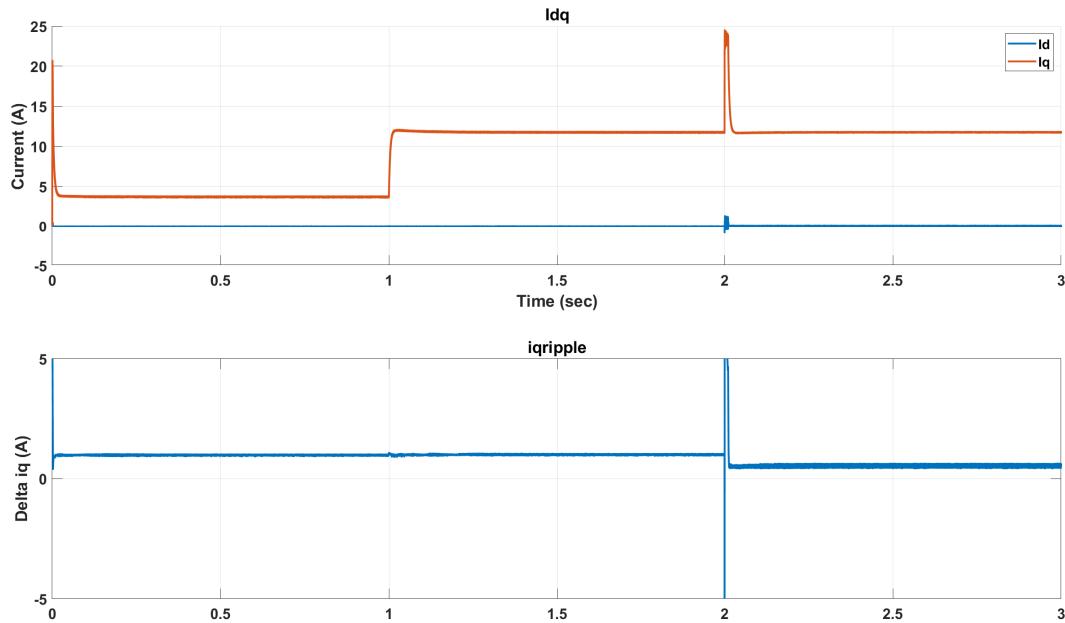


Figure 2: dq Phase Currents and Iq Ripple Estimation for Healthy One Module Operation

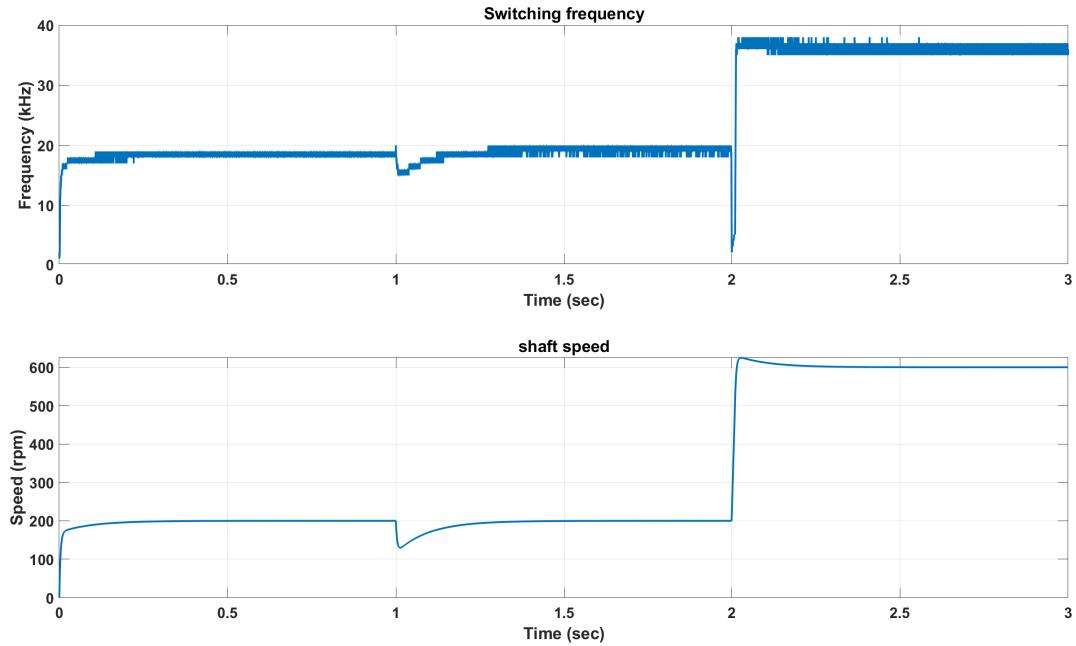


Figure 3: Shaft Speed and Switching Frequency for Healthy One Module Operation

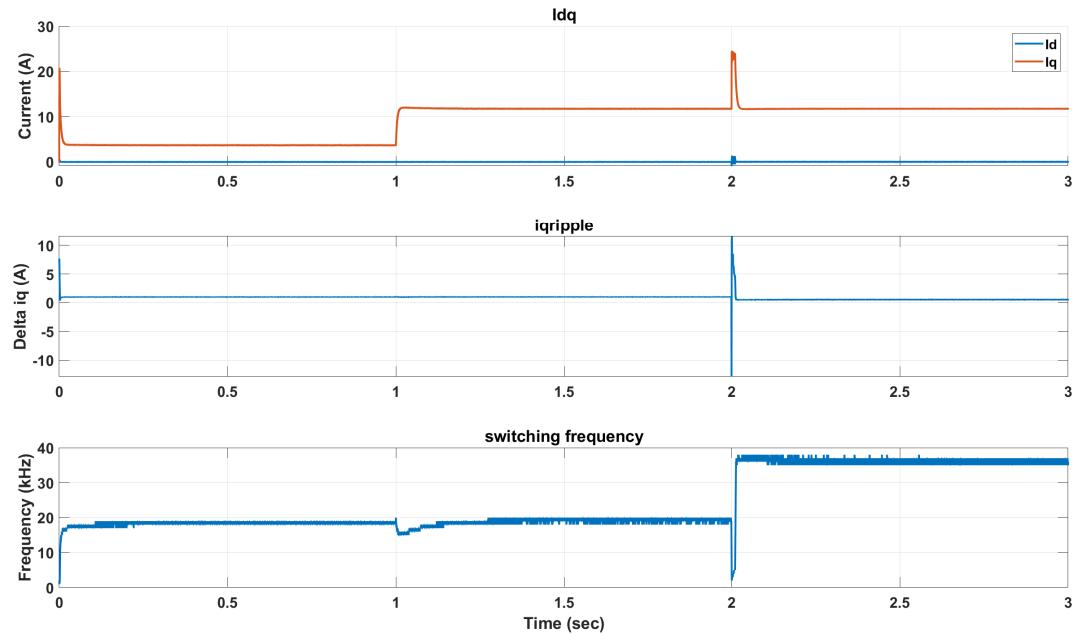


Figure 4: Torque, Iq Ripple and Switching Frequency for Healthy One Module Operation

2 Two Modules

2.1 Healthy Operation

This section contains informations.

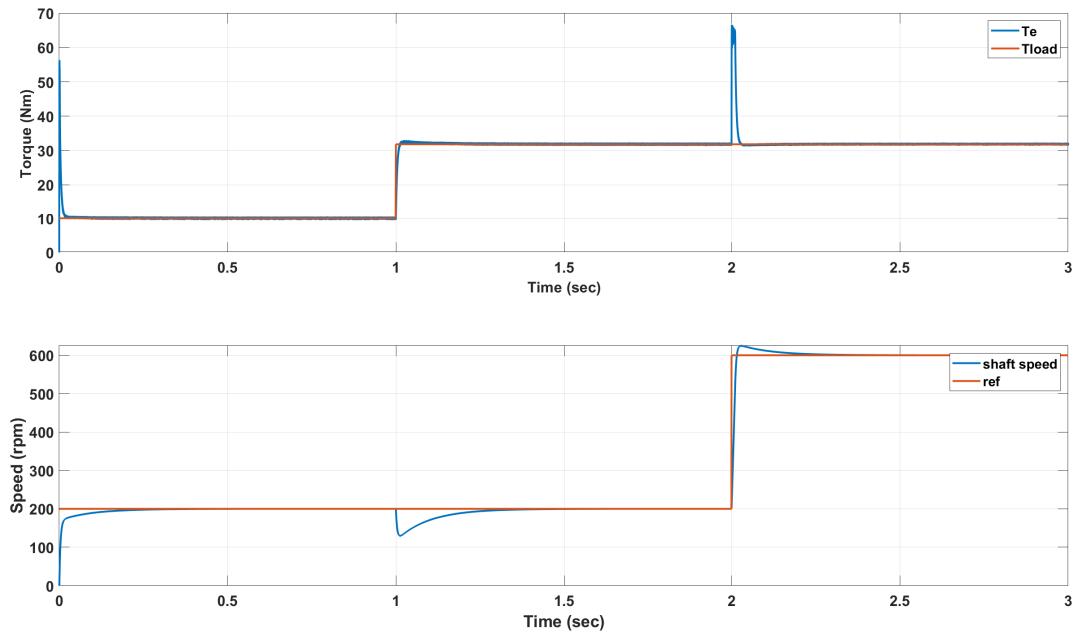


Figure 5: Torque and Shaft Speed for Healthy One Module Operation

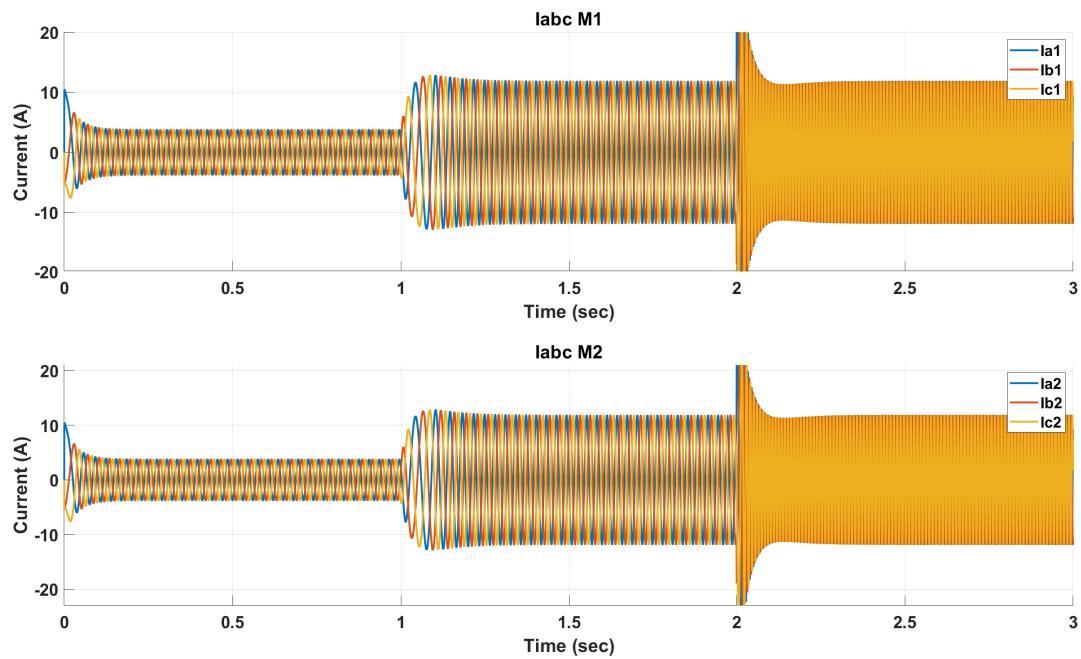


Figure 6: abc Phase Currents for Healthy Two Modules Operation

2.2 Faulty Operation

2.3 Faulty Operation Equal Torque Shared

References

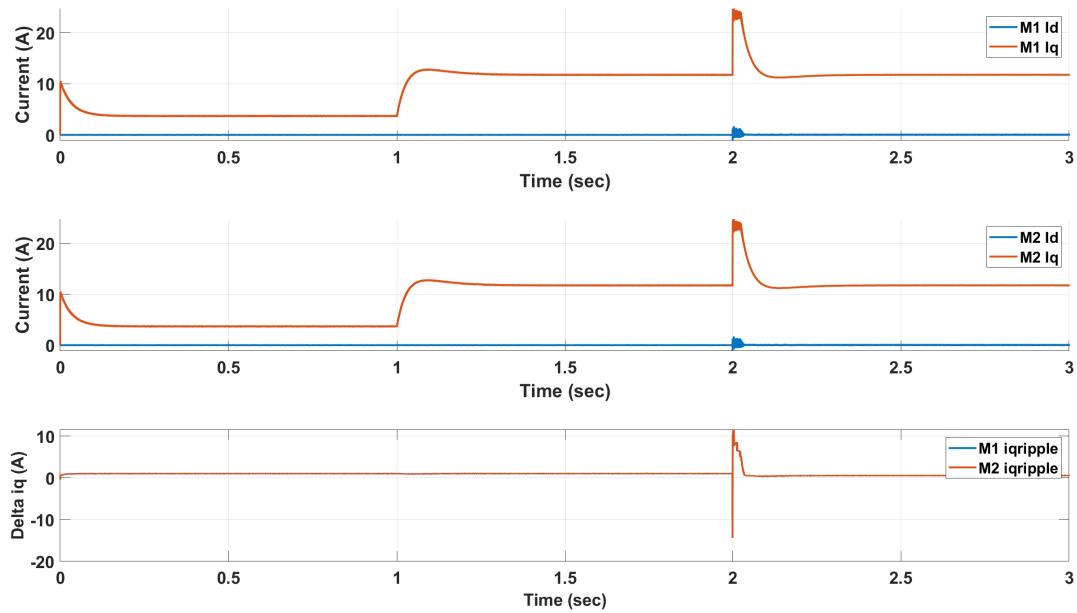


Figure 7: dq Phase Currents for Healthy Two Modules Operation

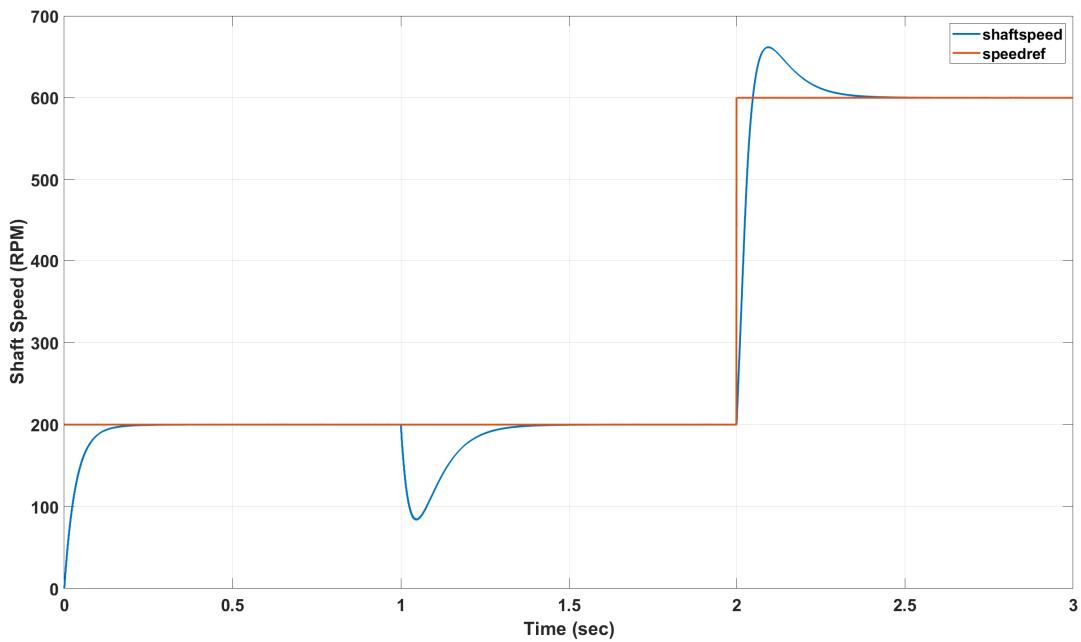


Figure 8: Shaft Speed for Healthy Two Modules Operation

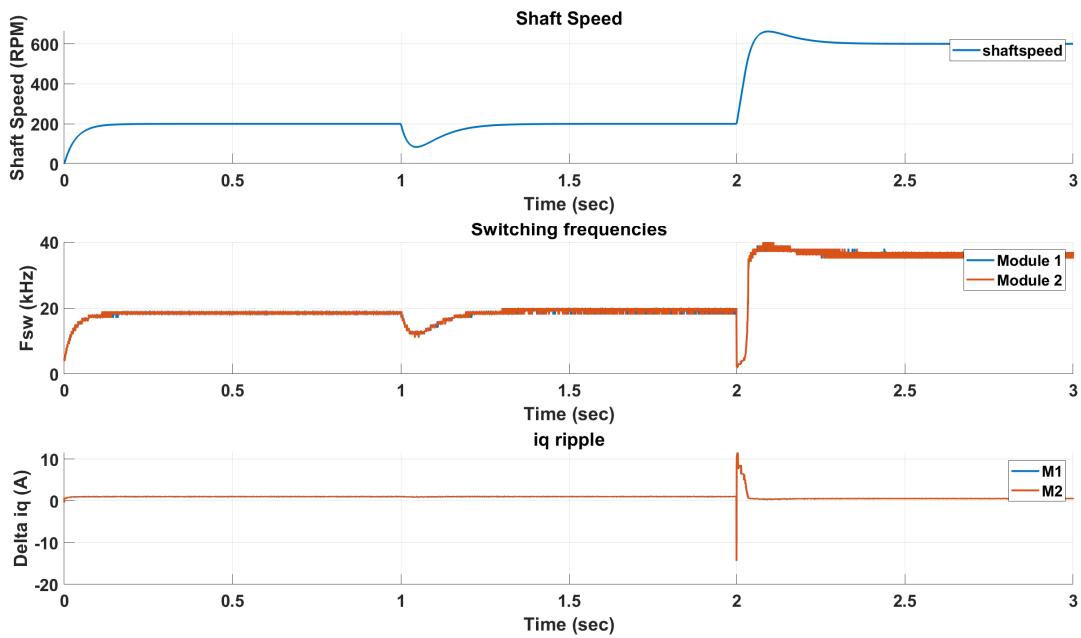


Figure 9: Shaft Speed and Switching Frequency for Healthy Two Modules Operation

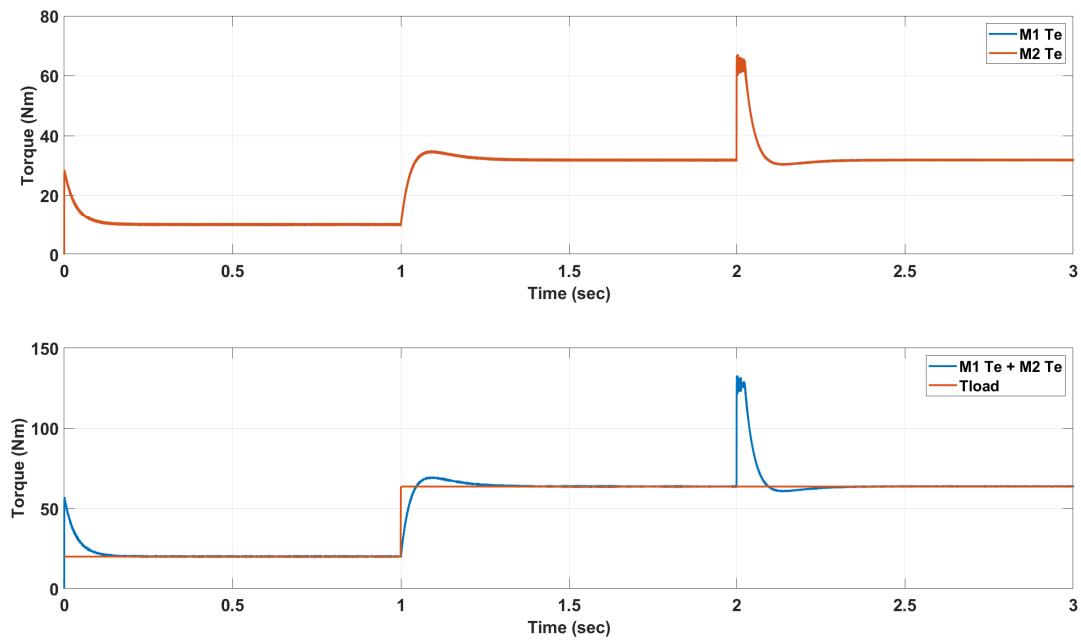


Figure 10: Torque Waveform for Healthy Two Modules Operation

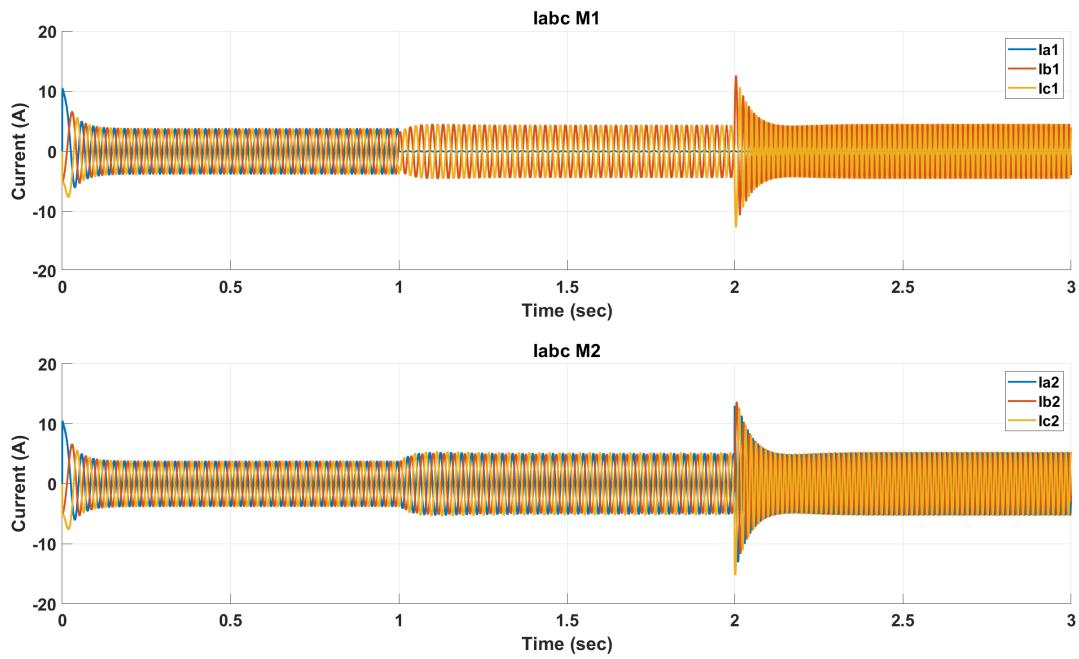


Figure 11: abc Phase Currents for Faulty Two Modules Operation

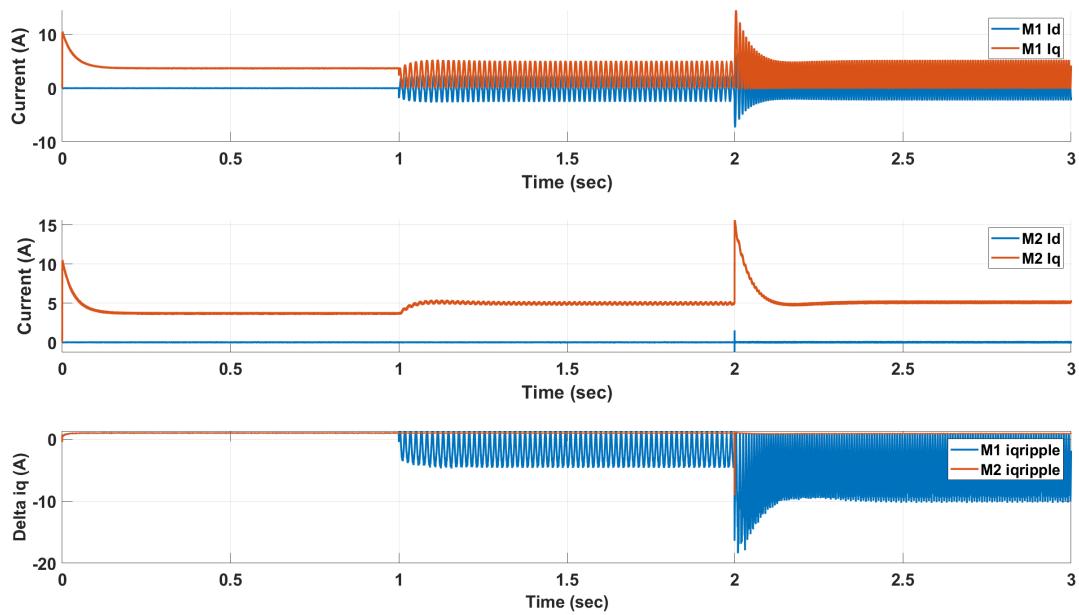


Figure 12: dq Phase Currents for Faulty Two Modules Operation

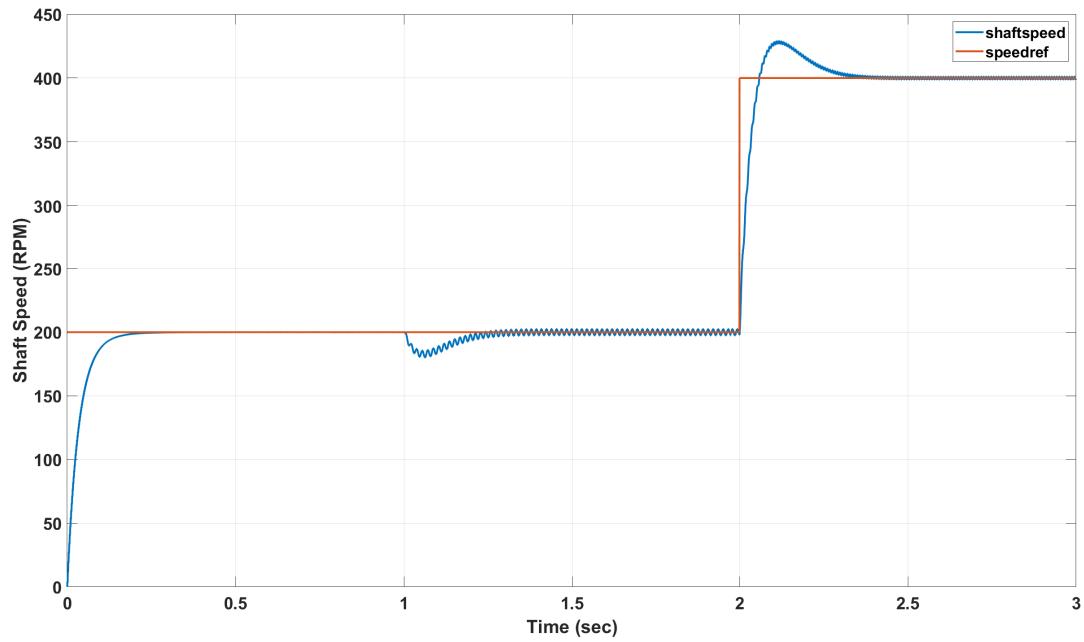


Figure 13: Shaft Speed for Faulty Two Modules Operation

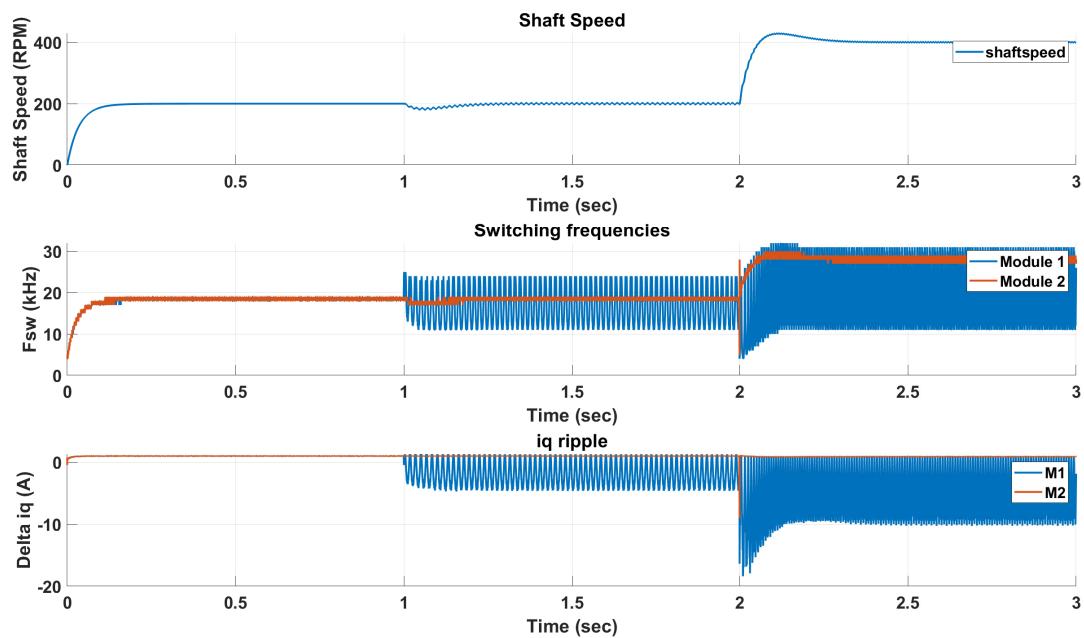


Figure 14: Shaft Speed and Switching Frequency for Faulty Two Modules Operation

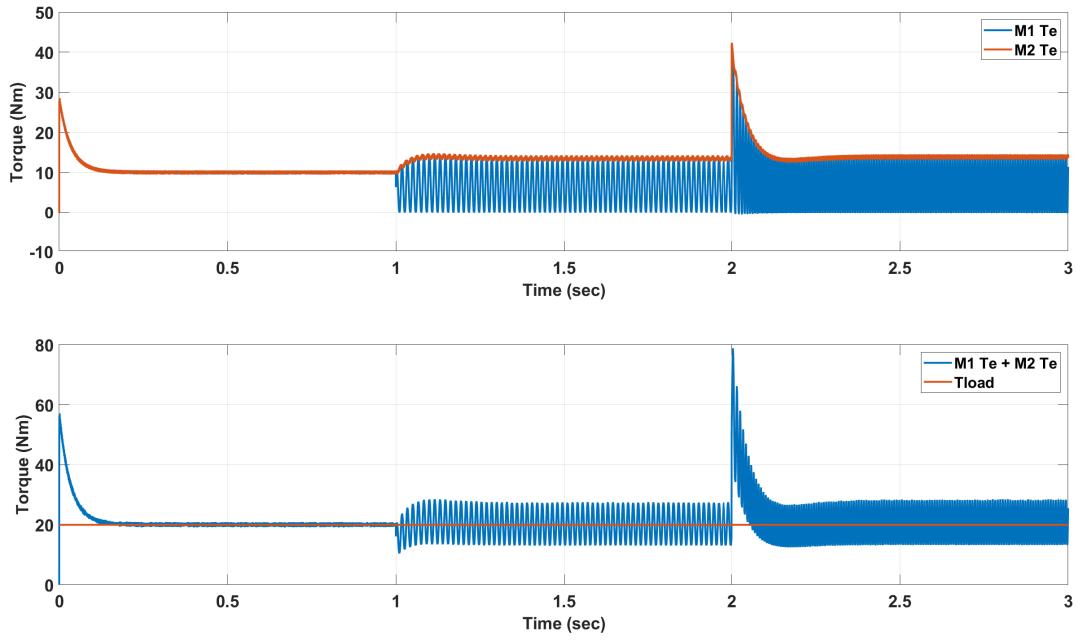


Figure 15: Torque Waveform for Faulty Two Modules Operation

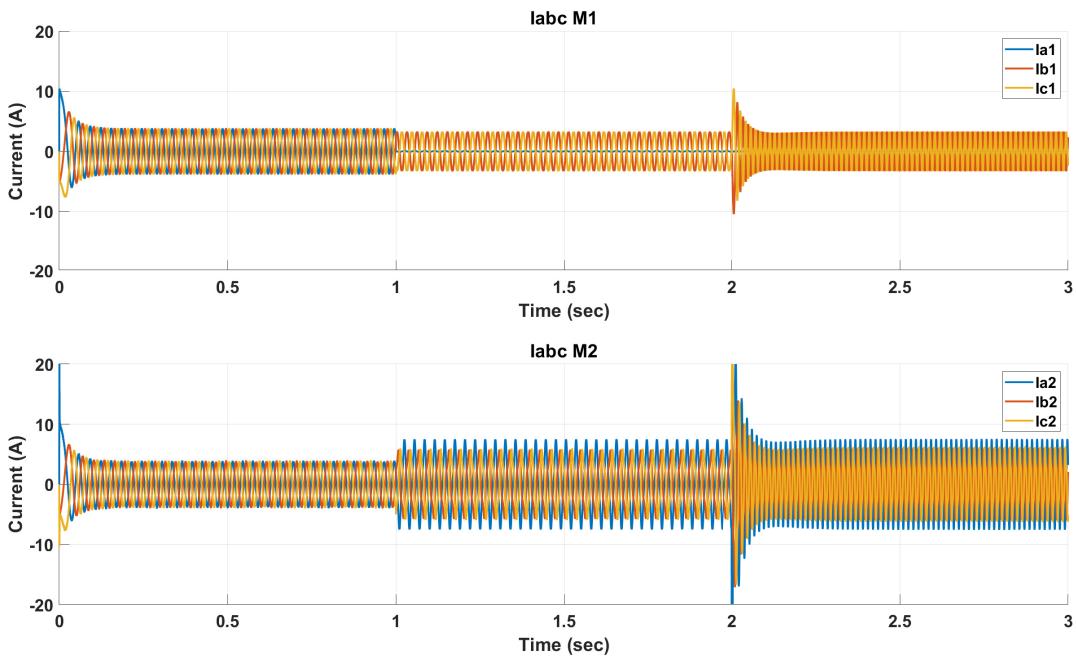


Figure 16: abc Phase Currents for Faulty (equal torque shared) Two Modules Operation

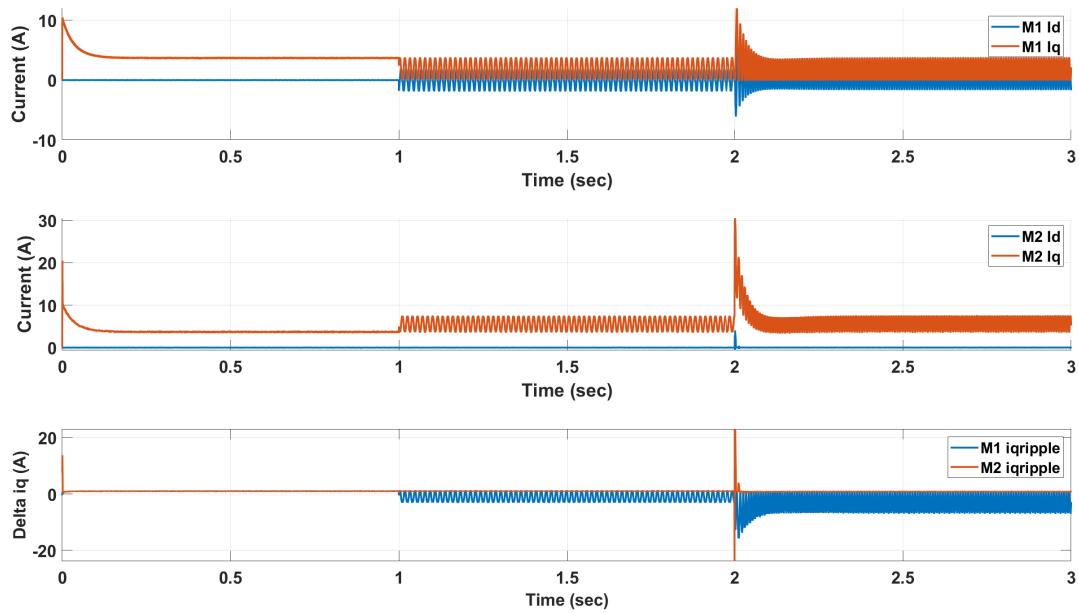


Figure 17: dq Phase Currents for Faulty (equal torque shared) Two Modules Operation

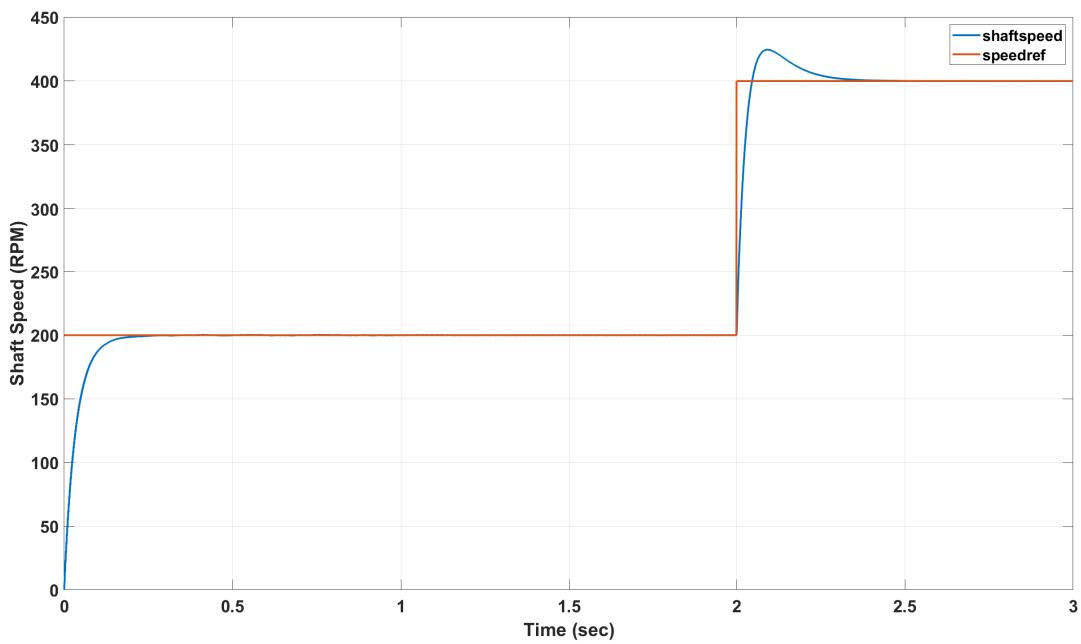


Figure 18: Shaft Speed for Faulty (equal torque shared) Two Modules Operation

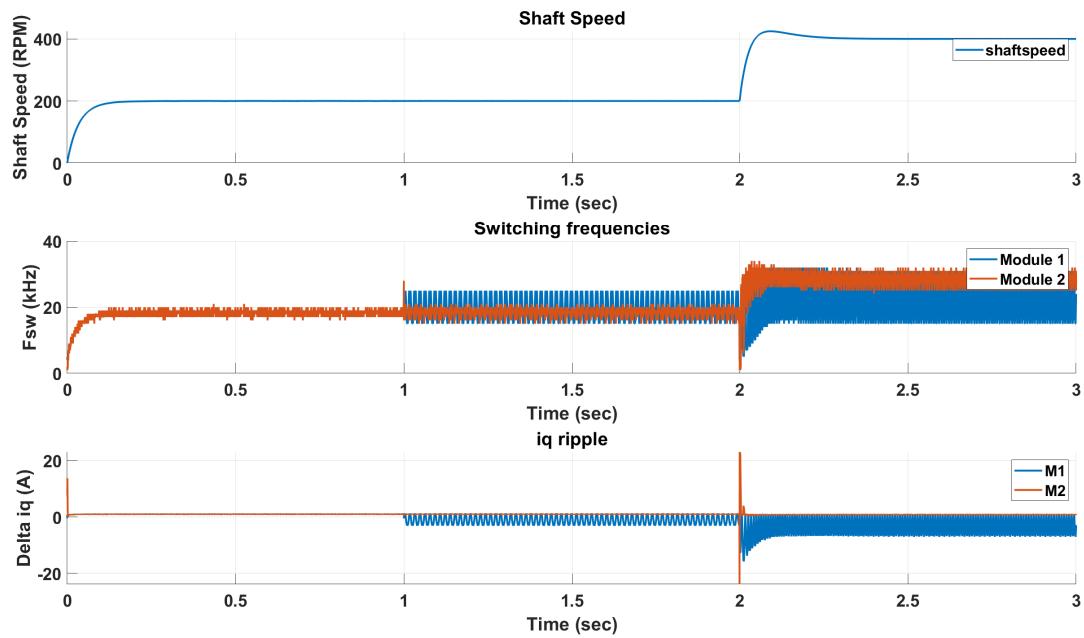


Figure 19: Shaft Speed and Switching Frequency for Faulty (equal torque shared) Two Modules Operation

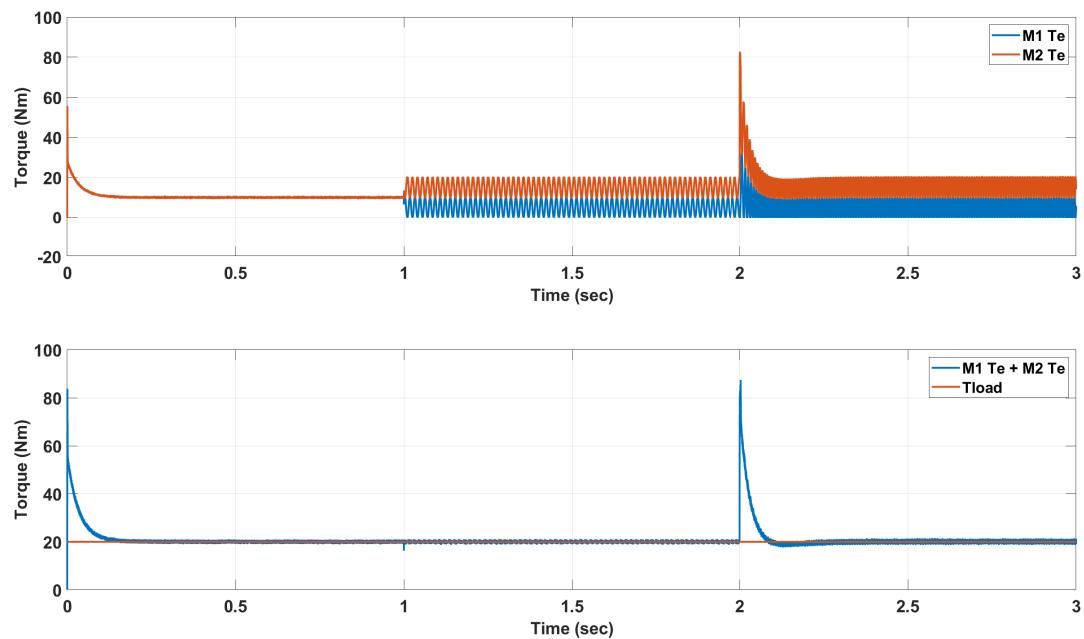


Figure 20: Torque Waveform for Faulty (equal torque shared) Two Modules Operation

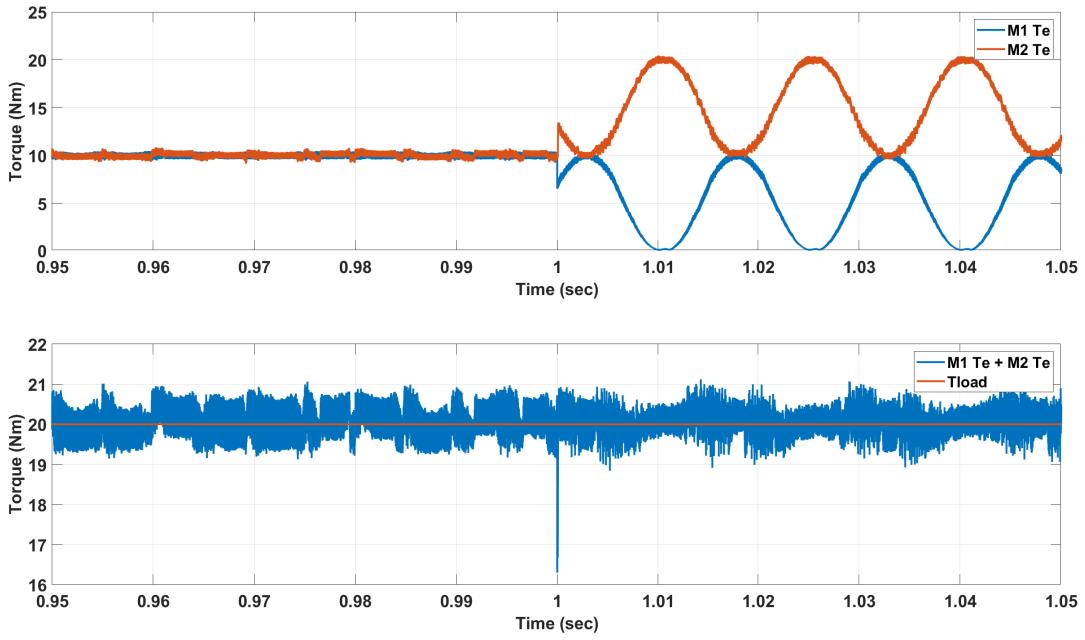


Figure 21: Torque Waveform for Faulty (equal torque shared) Two Modules Operation (fault moment)

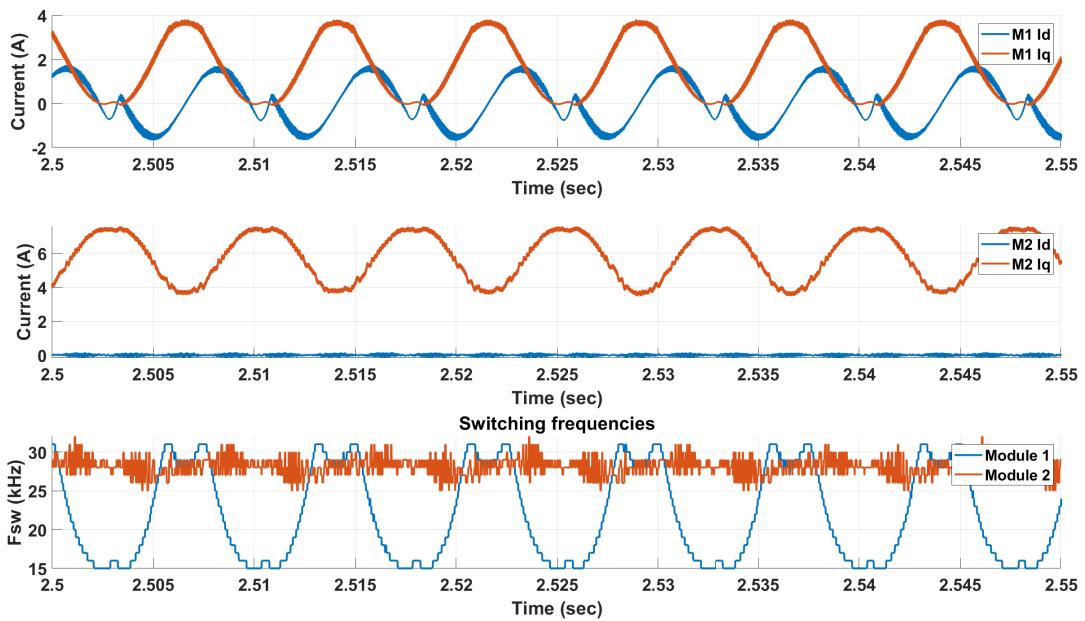


Figure 22: dq Phase Currents for Faulty (equal torque shared) Two Modules Operation (closer)