

FOC Test Report: demo_adaptive_load_step

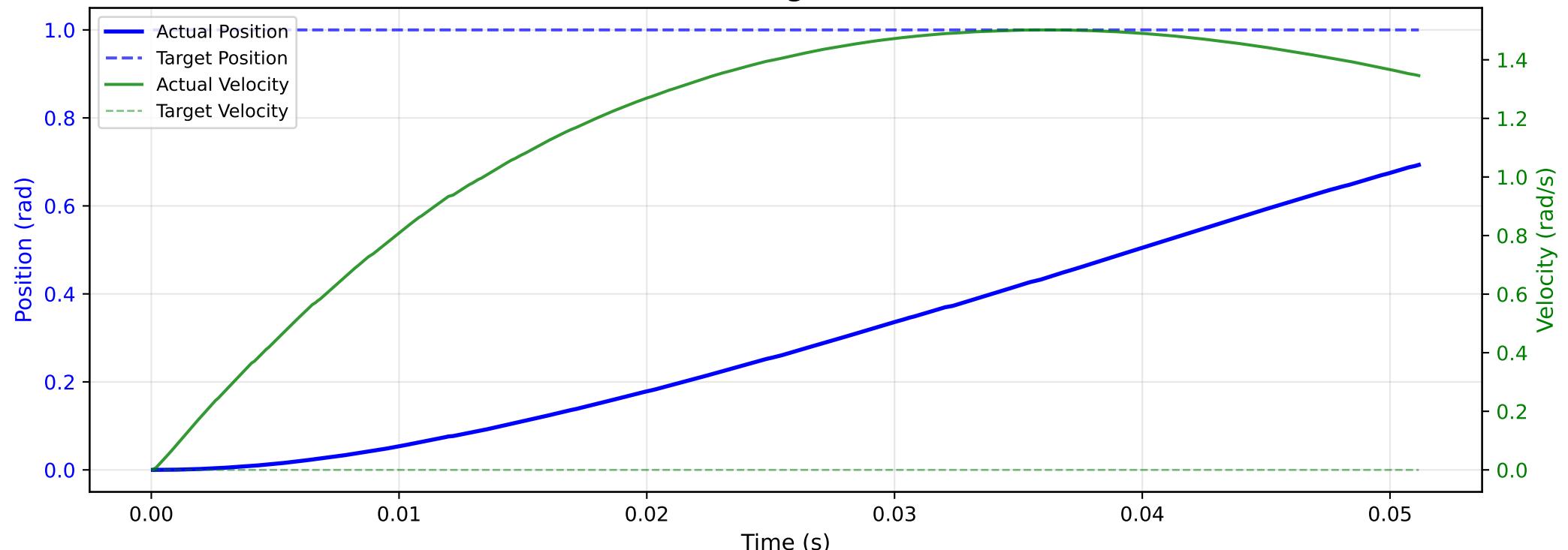
Test Name: demo_adaptive_load_step
Platform: Remode STM32G431CB
Firmware: iRPC v2.0
Start Time: 2025-10-09 17:37:17

Samples Collected: 600
Test Duration: 0.051 s

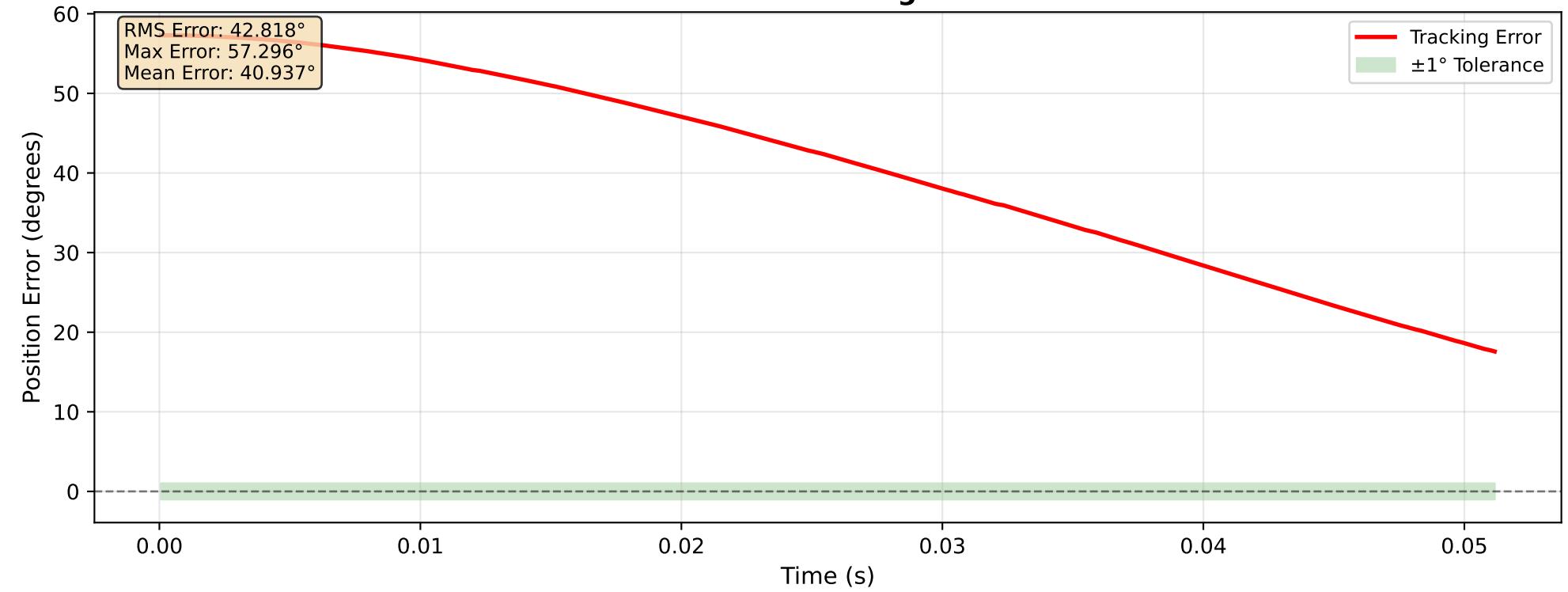
Performance Summary:

Position Range: [0.000, 0.693] rad
Position Std Dev: 0.219 rad
Max Velocity: 1.502 rad/s
Peak Current (I_q): 2.41 A
Mean Current (I_q): 0.94 A

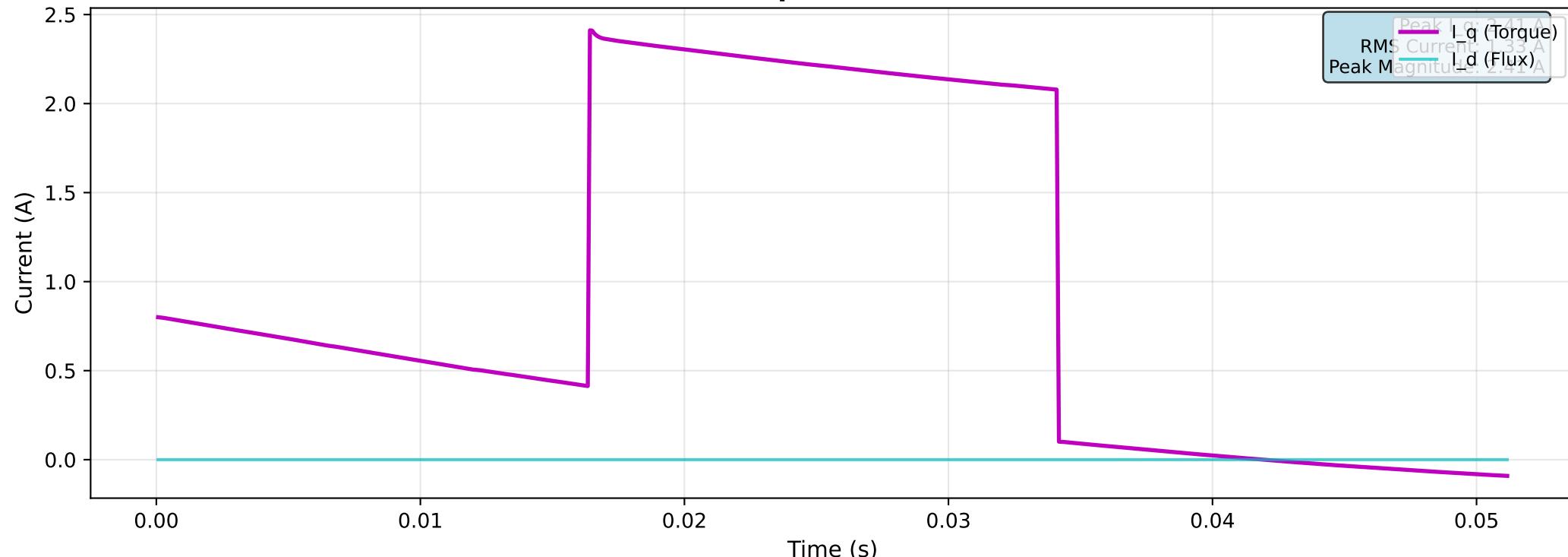
Motion Tracking Performance



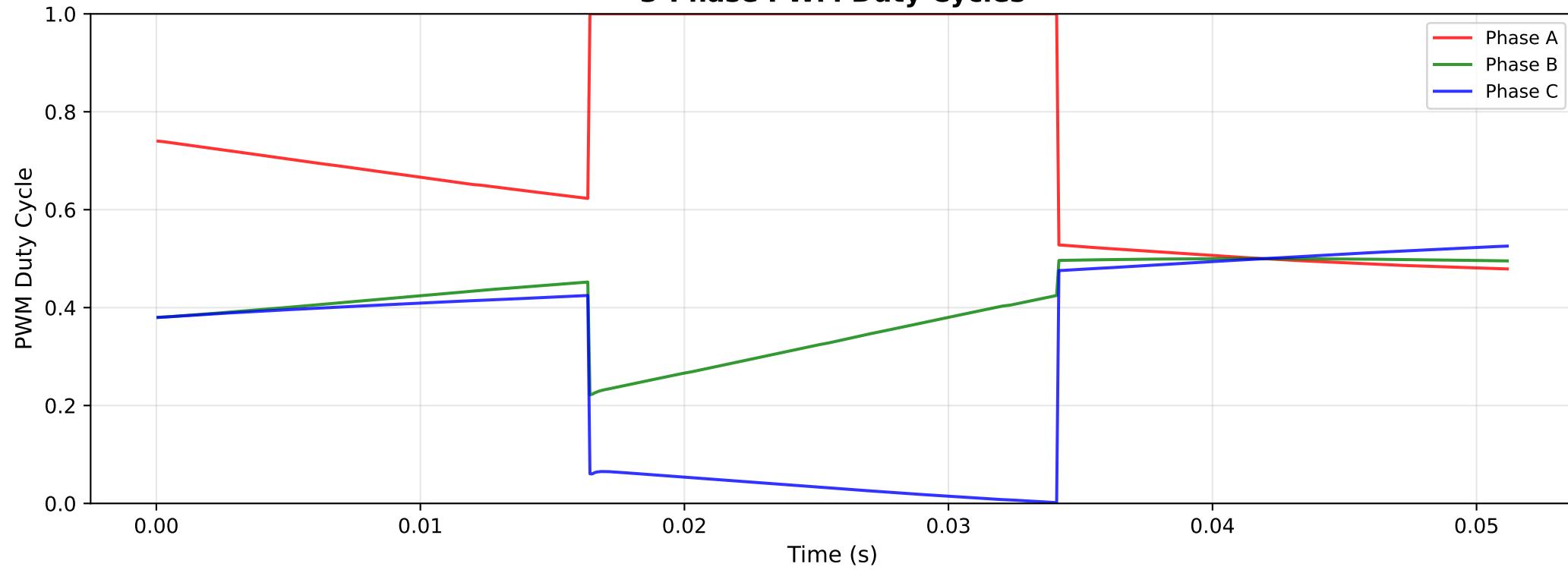
Position Tracking Error



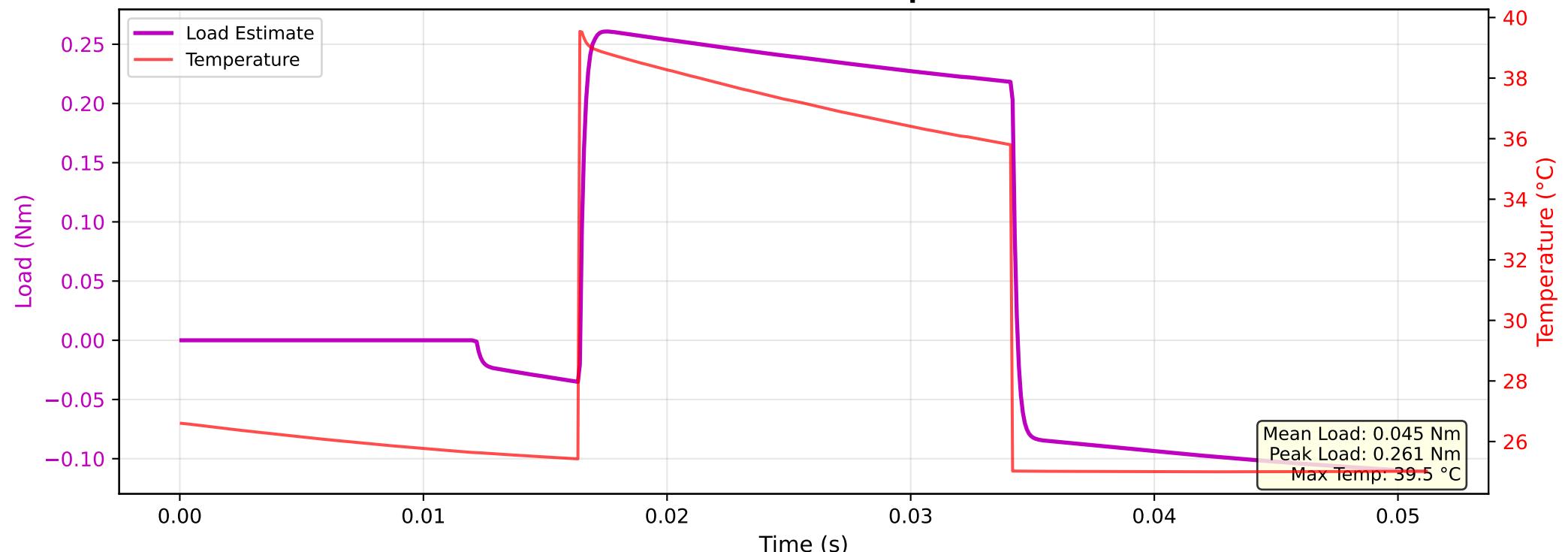
FOC d-q Axis Currents



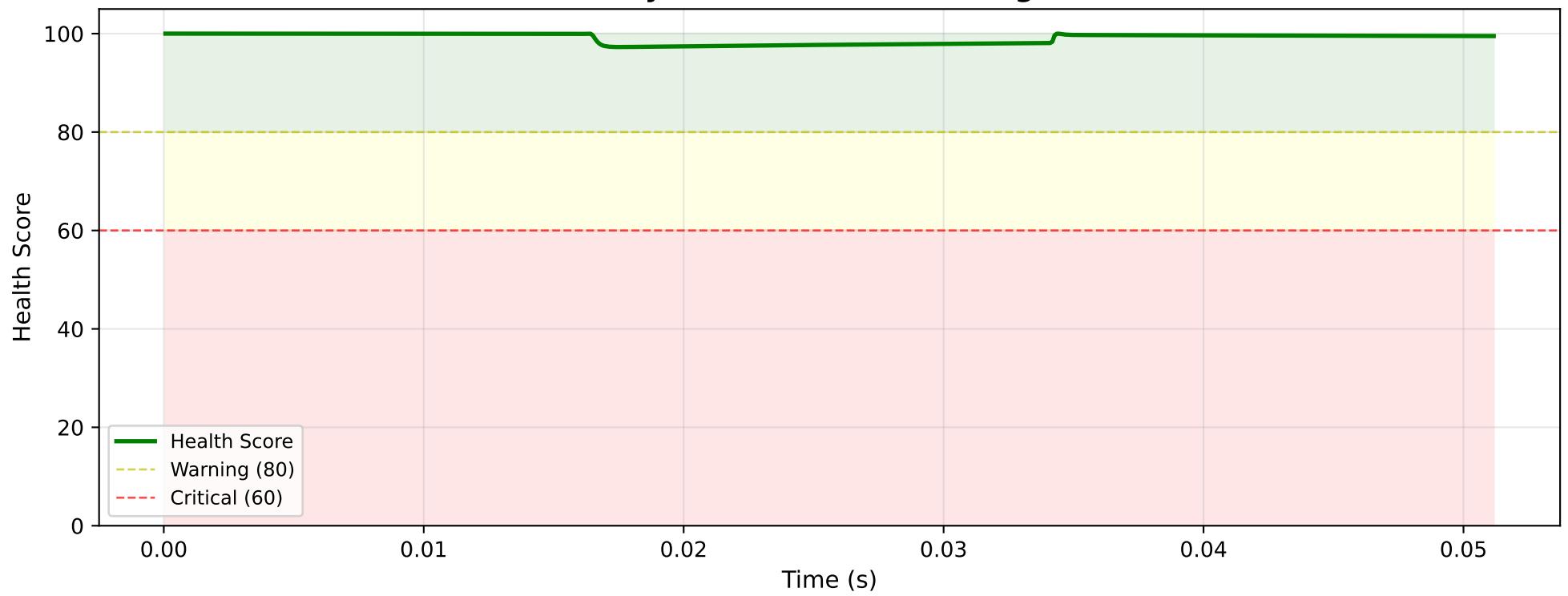
3-Phase PWM Duty Cycles



Load Estimation & Temperature



System Health Monitoring



Phase Diagram (Position-Velocity)

