

FOC Test Report: demo_adaptive_load_step

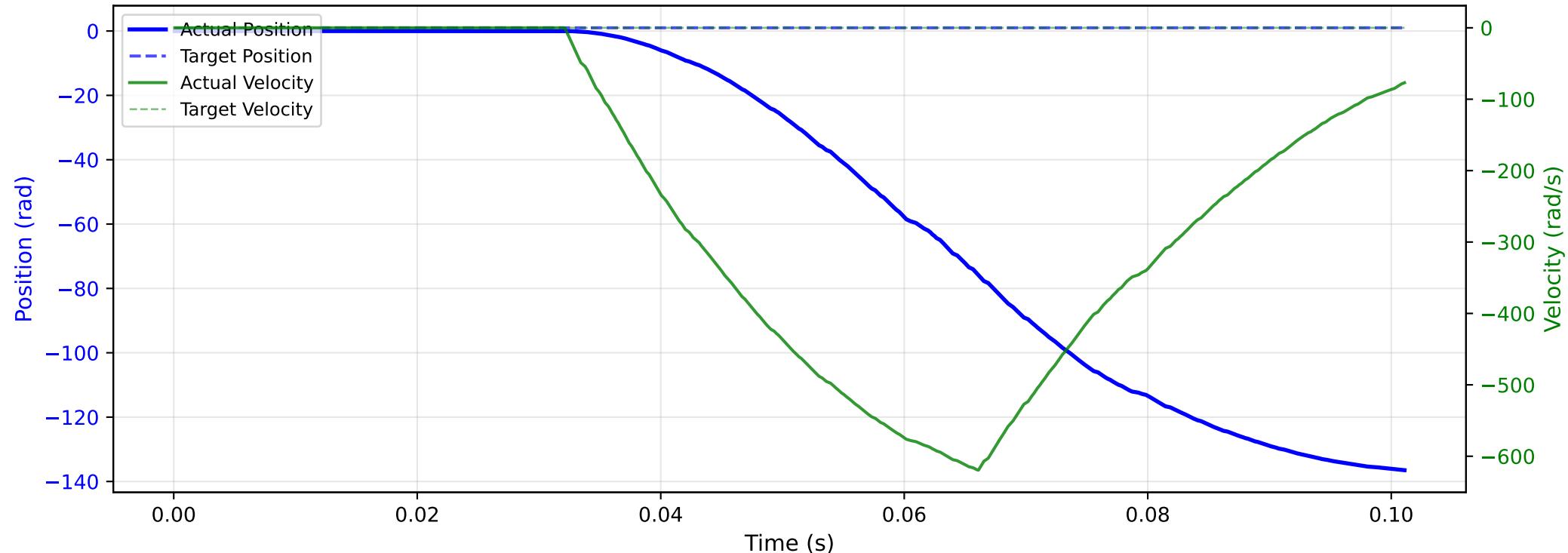
Test Name: demo_adaptive_load_step
Platform: Remode STM32G431CB
Firmware: iRPC v2.0
Start Time: 2025-10-10 22:00:27

Samples Collected: 600
Test Duration: 0.101 s

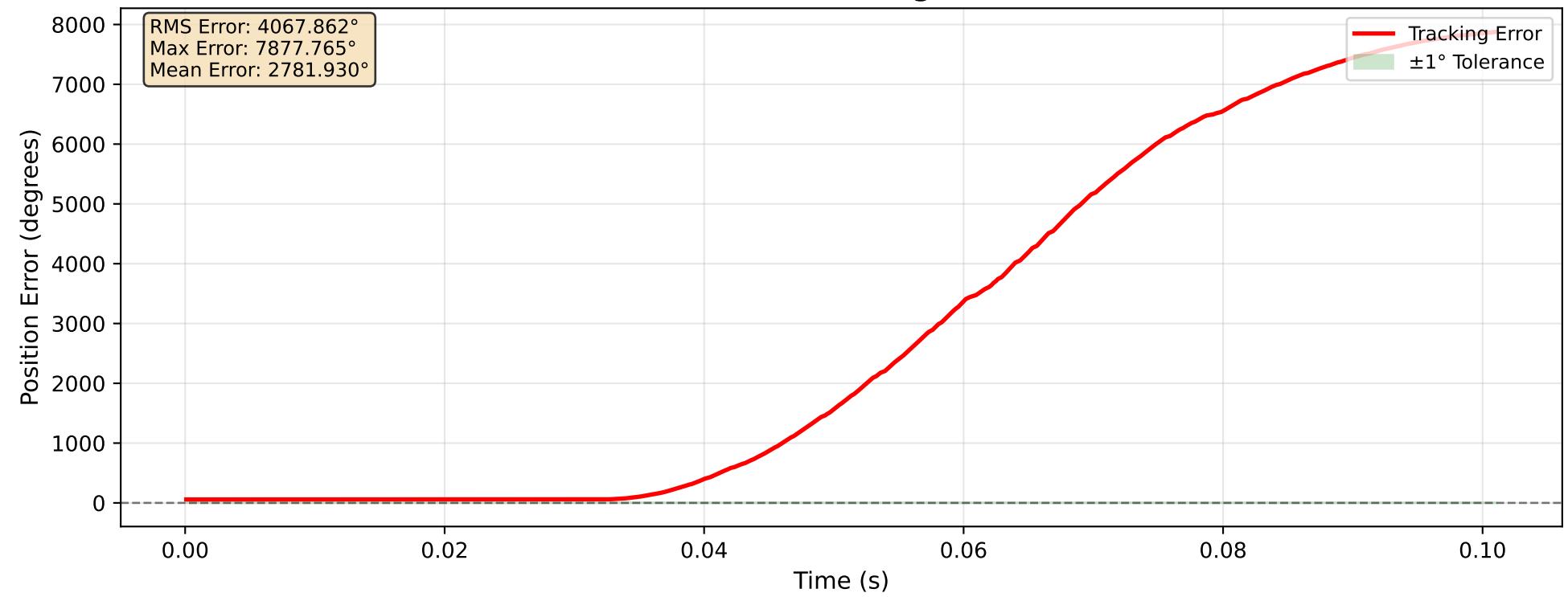
Performance Summary:

Position Range: [-136.493, 0.000] rad
Position Std Dev: 51.799 rad
Max Velocity: 0.006 rad/s
Peak Current (I_q): 0.40 A
Mean Current (I_q): 0.18 A

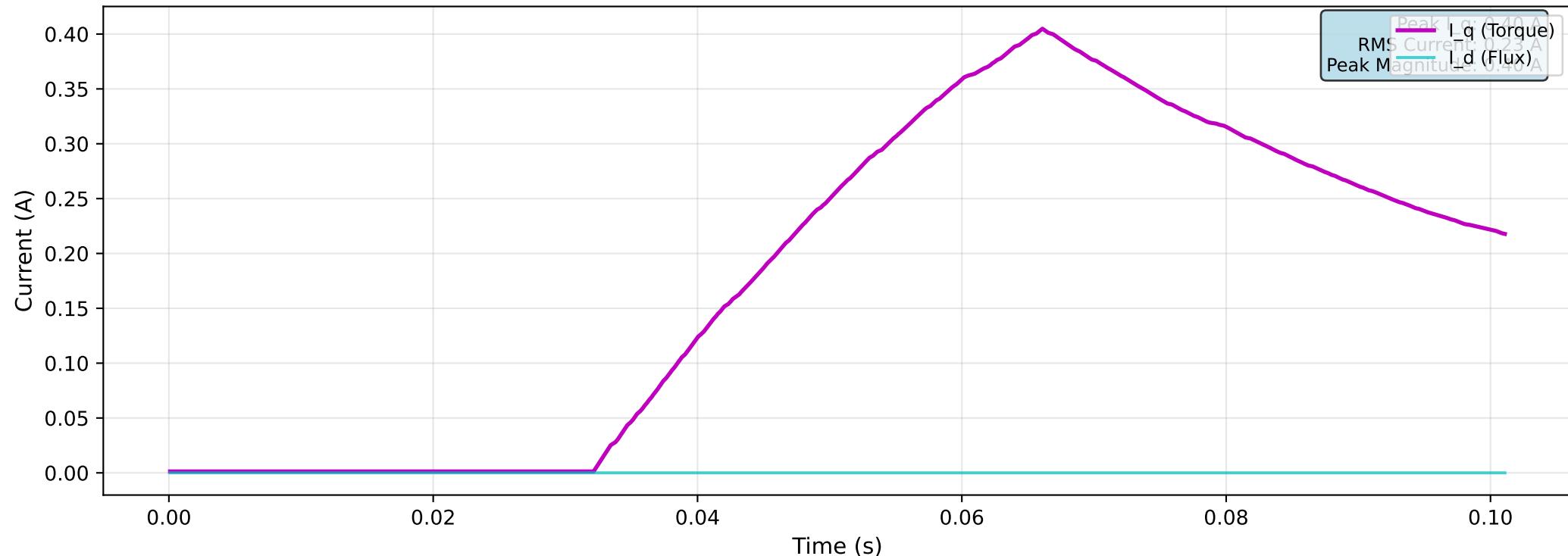
Motion Tracking Performance



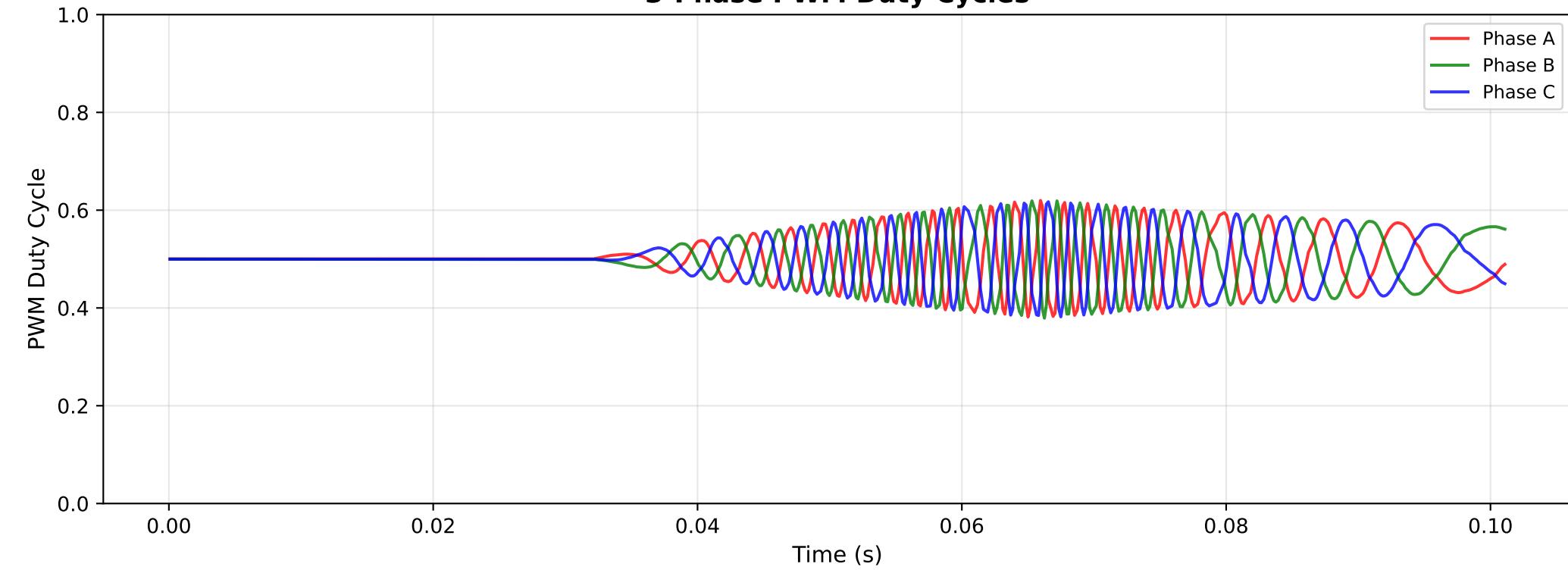
Position Tracking Error



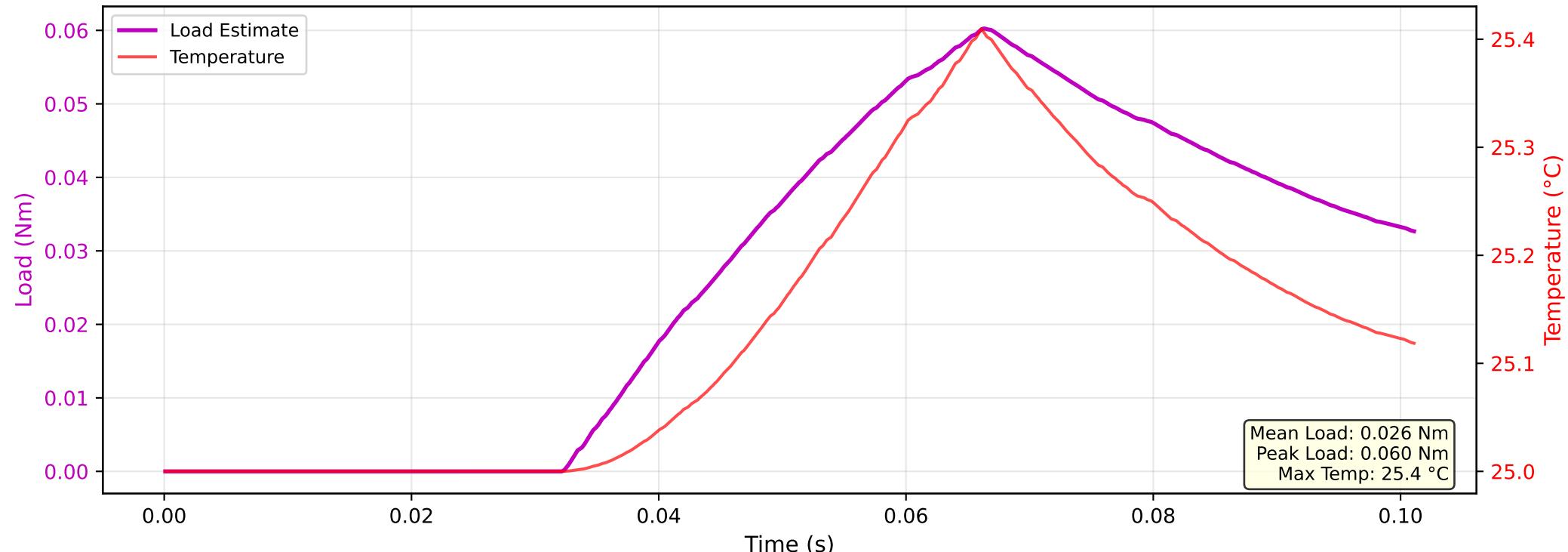
FOC d-q Axis Currents



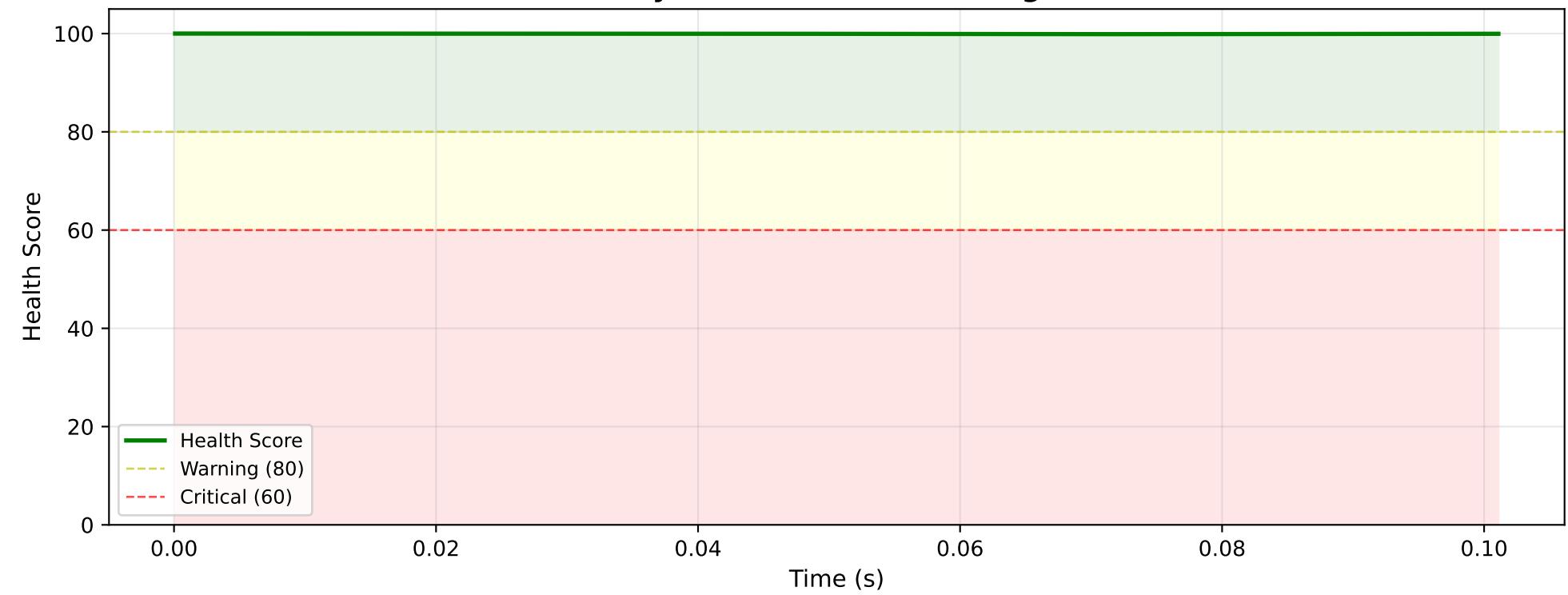
3-Phase PWM Duty Cycles



Load Estimation & Temperature



System Health Monitoring



Phase Diagram (Position-Velocity)

