

FOC Test Report: demo_adaptive_load_step

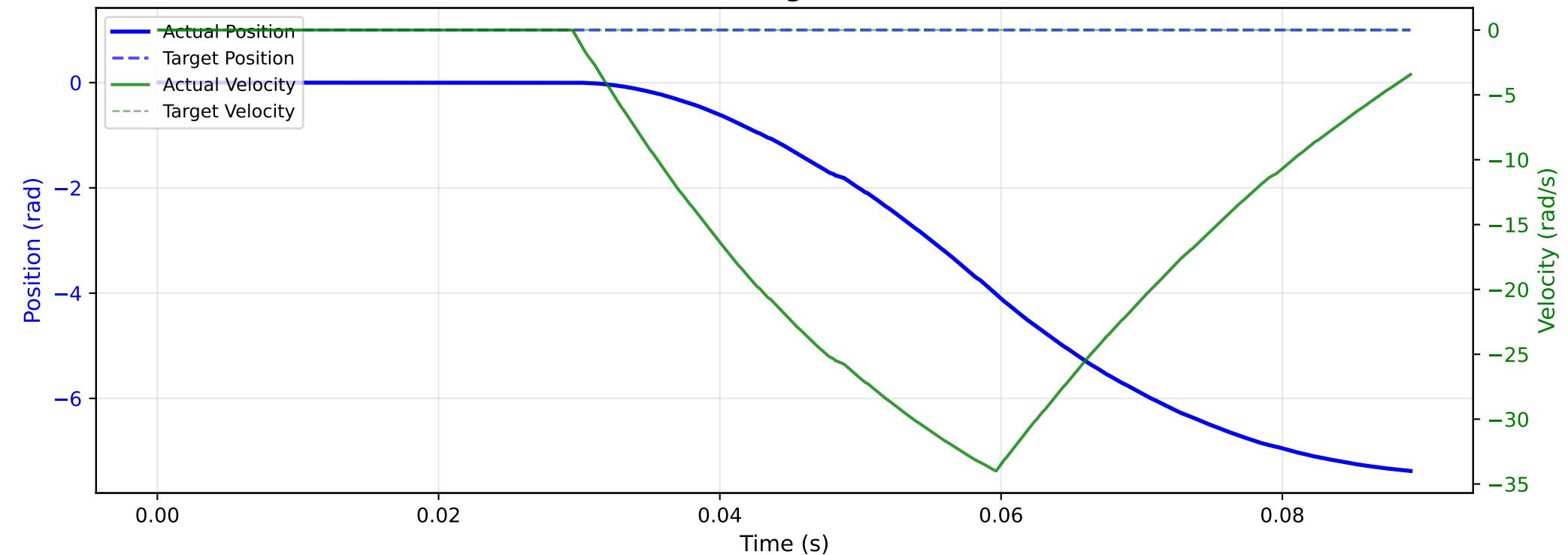
Test Name: demo_adaptive_load_step
Platform: Remode STM32G431CB
Firmware: iRPC v2.0
Start Time: 2025-10-10 20:28:56

Samples Collected: 600
Test Duration: 0.089 s

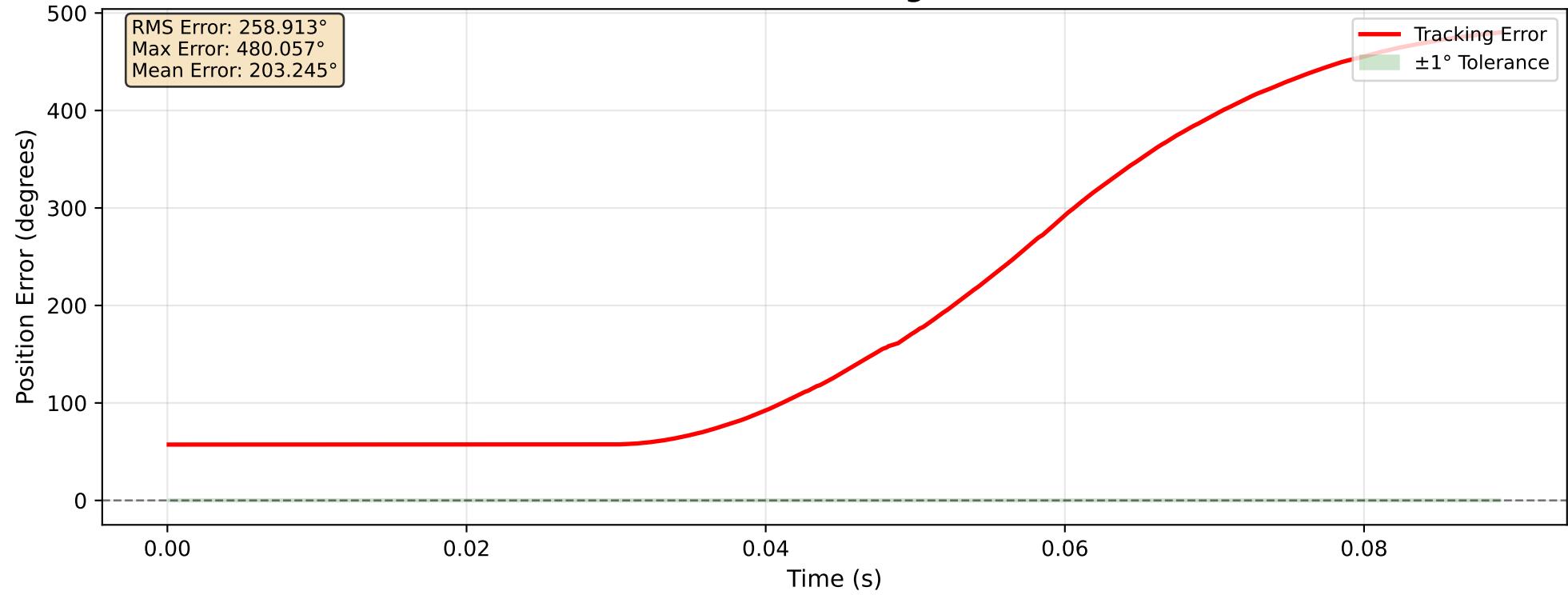
Performance Summary:

Position Range: [-7.379, 0.000] rad
Position Std Dev: 2.799 rad
Max Velocity: 0.004 rad/s
Peak Current (I_q): 0.94 A
Mean Current (I_q): 0.43 A

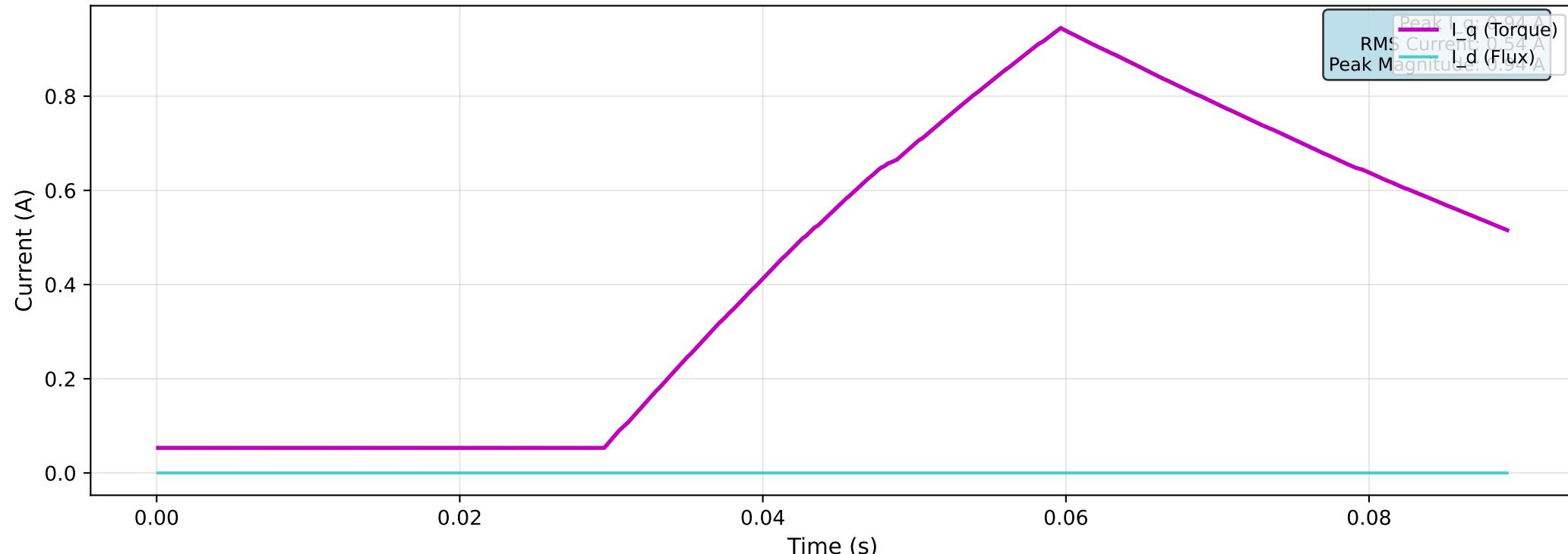
Motion Tracking Performance



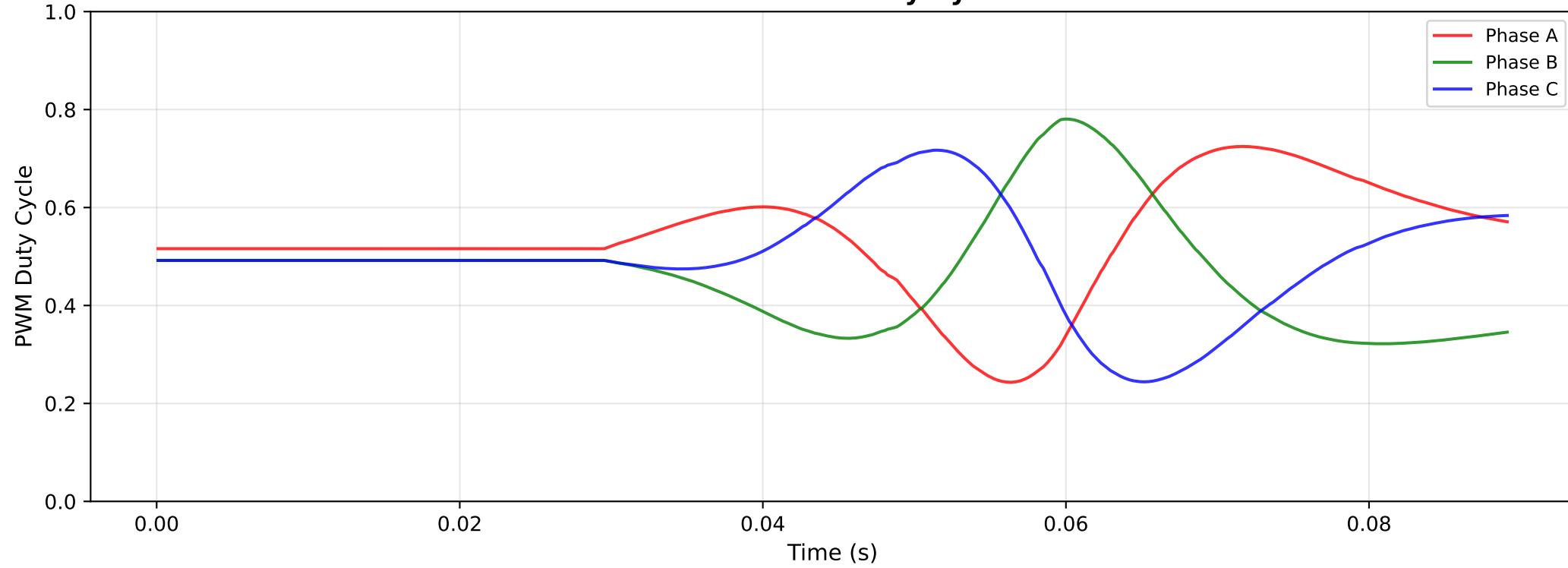
Position Tracking Error



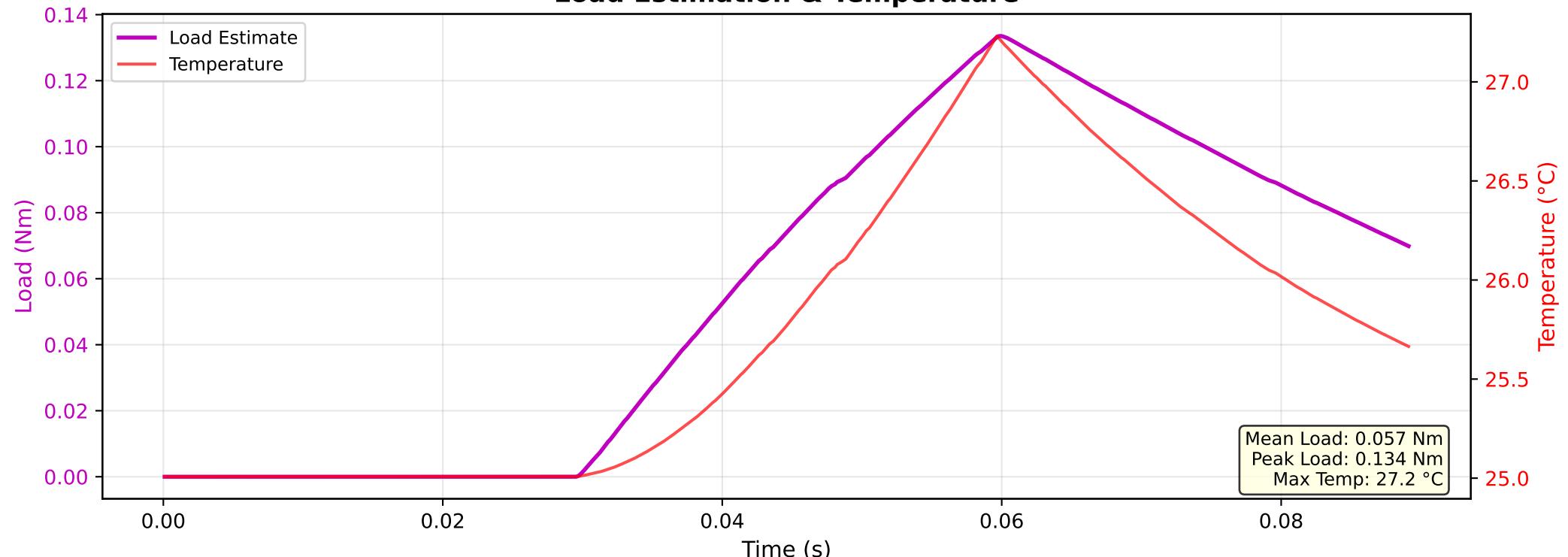
FOC d-q Axis Currents



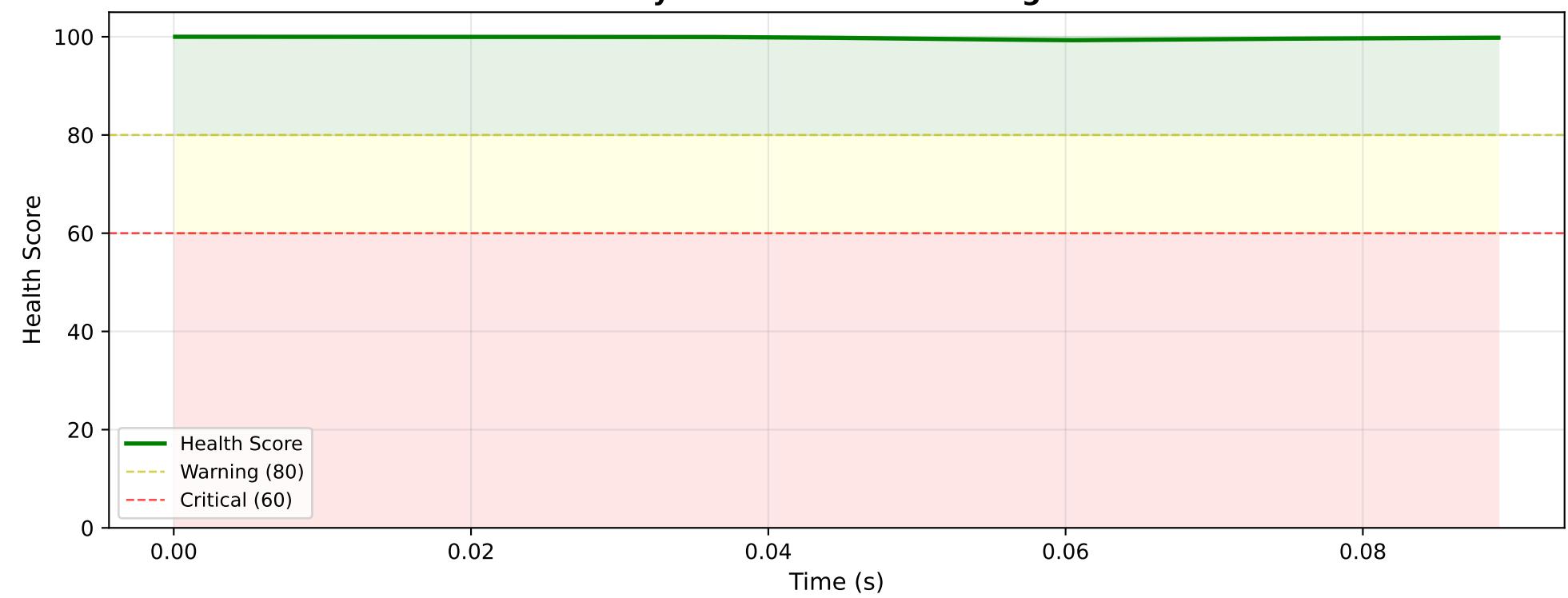
3-Phase PWM Duty Cycles



Load Estimation & Temperature



System Health Monitoring



Phase Diagram (Position-Velocity)

