

FOC Test Report: demo_trapezoidal_profile

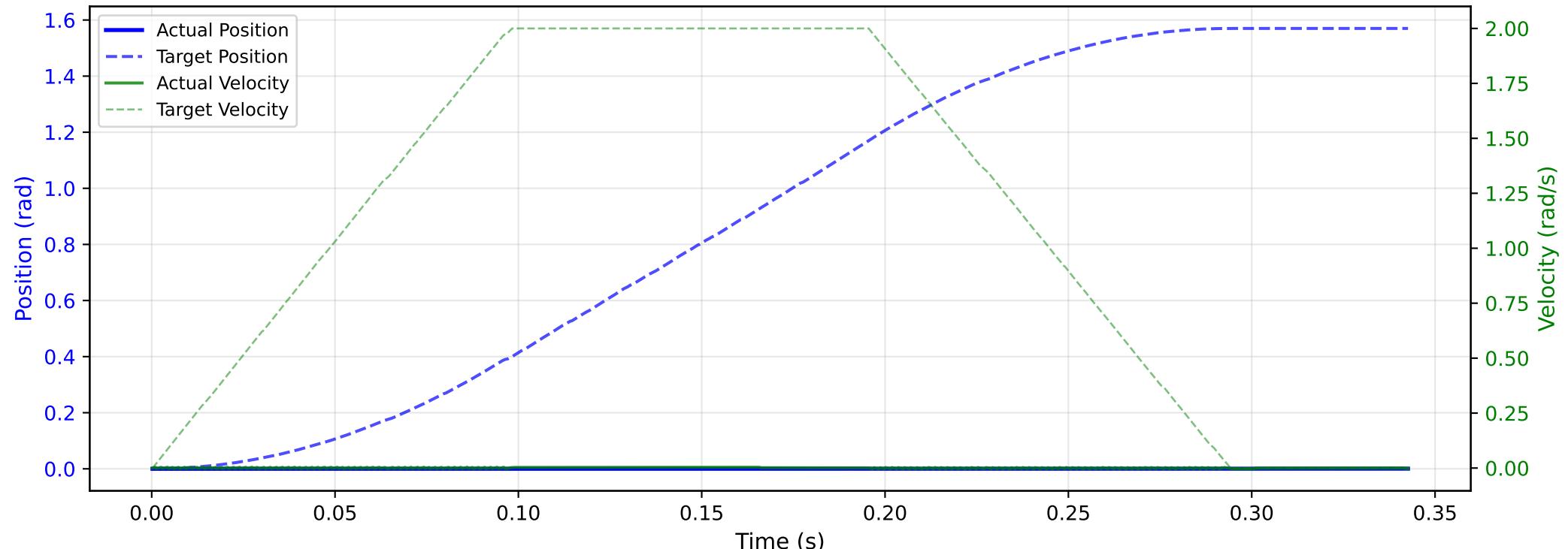
Test Name: demo_trapezoidal_profile
Platform: Remode STM32G431CB
Firmware: iRPC v2.0
Start Time: 2025-10-10 20:28:55

Samples Collected: 1385
Test Duration: 0.343 s

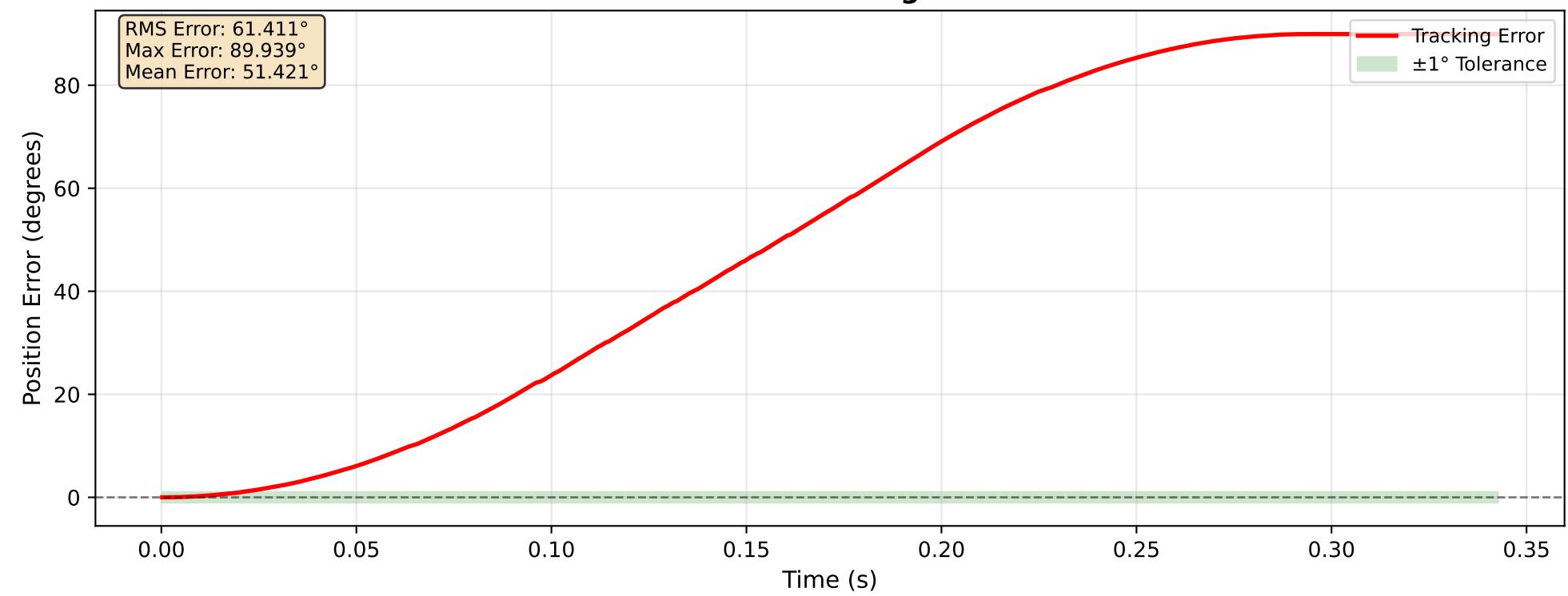
Performance Summary:

Position Range: [-0.000, 0.001] rad
Position Std Dev: 0.000 rad
Max Velocity: 0.003 rad/s
Peak Current (I_q): 0.03 A
Mean Current (I_q): 0.00 A

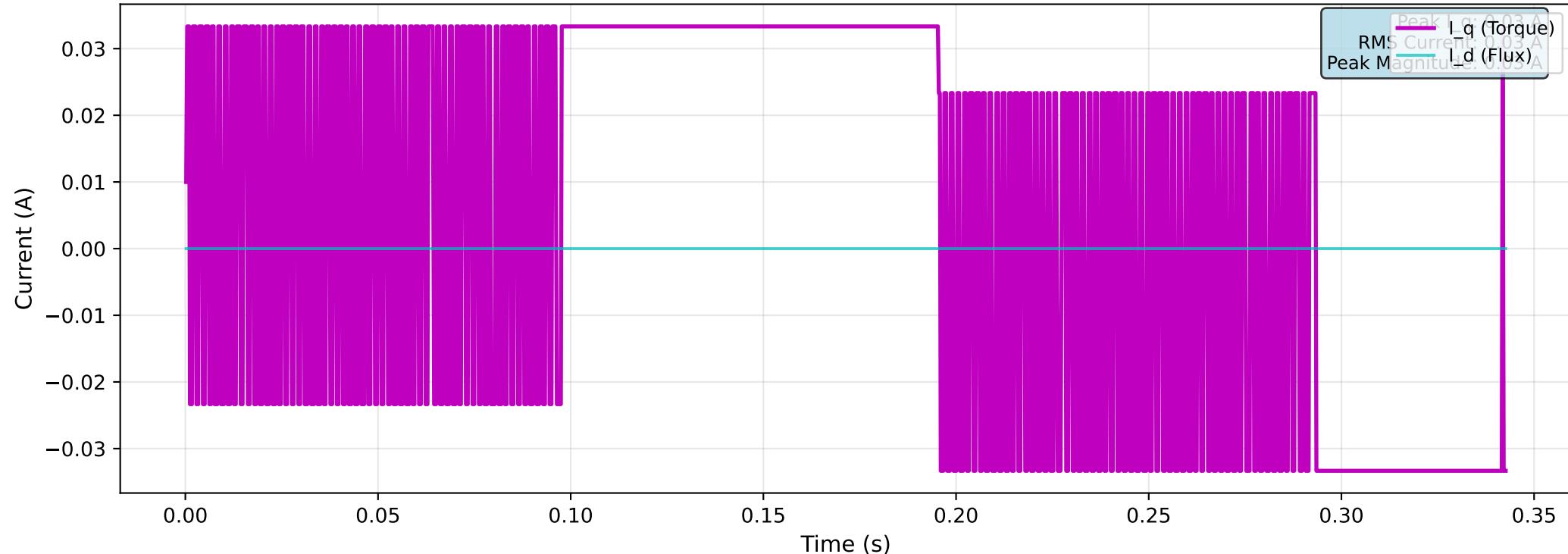
Motion Tracking Performance



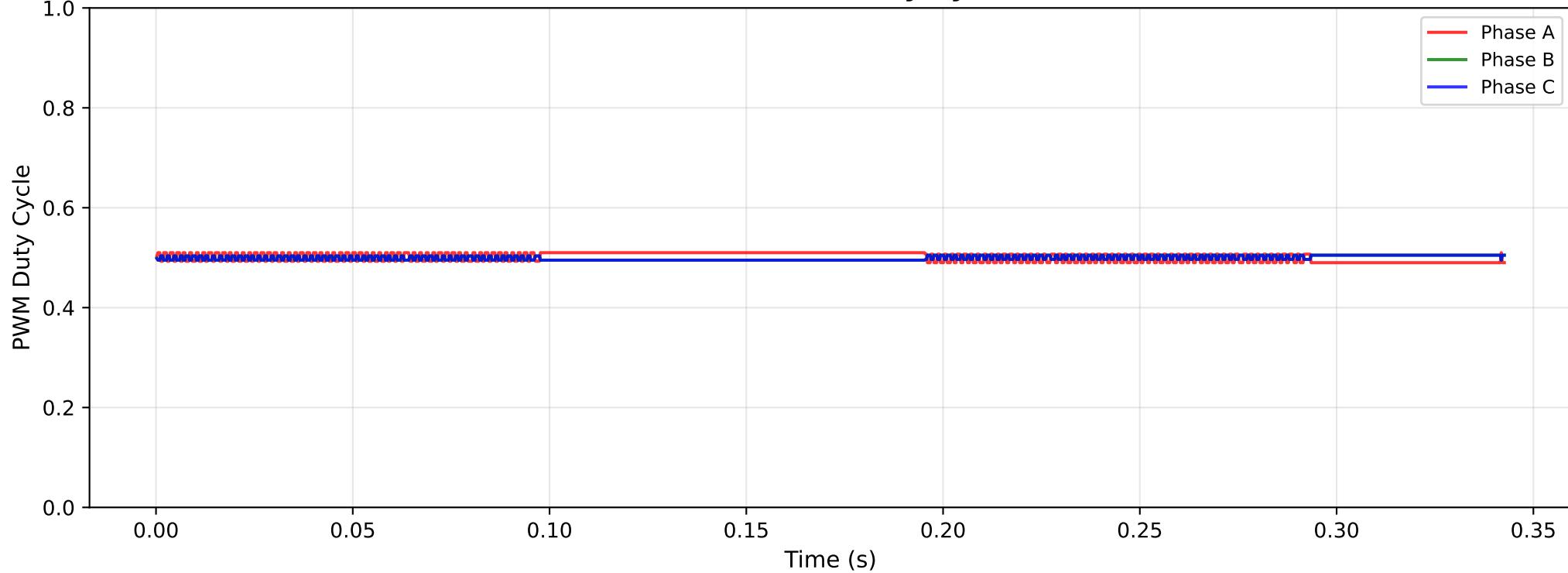
Position Tracking Error



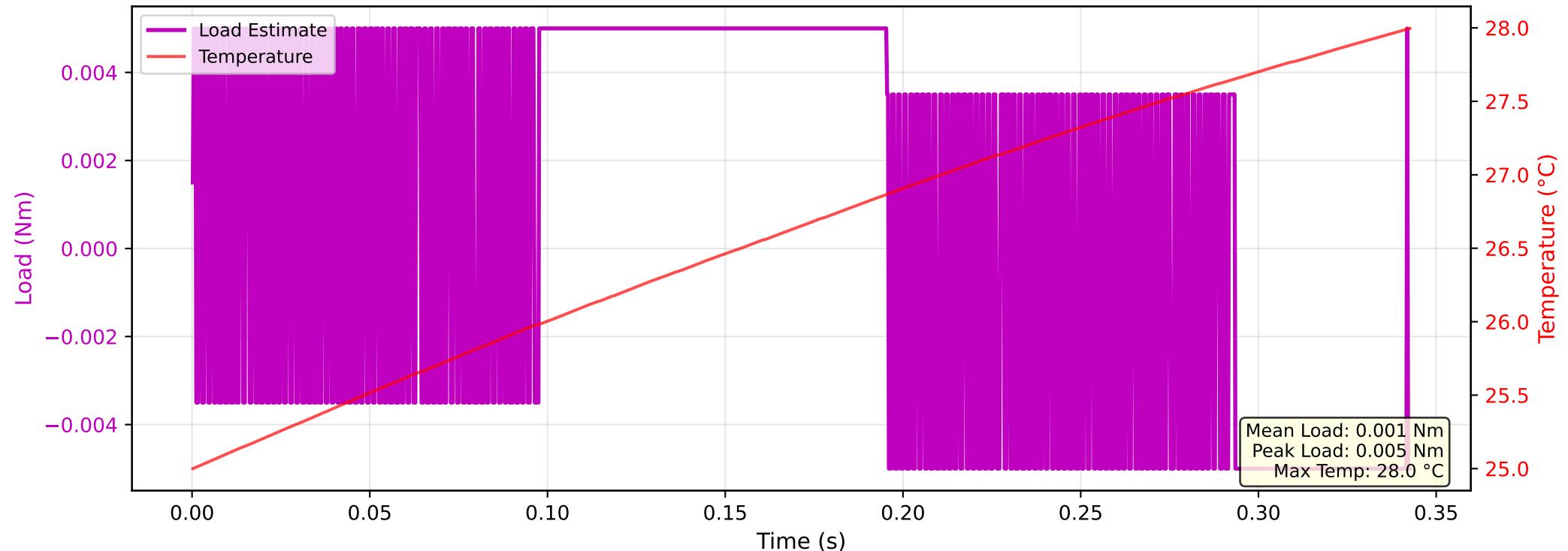
FOC d-q Axis Currents



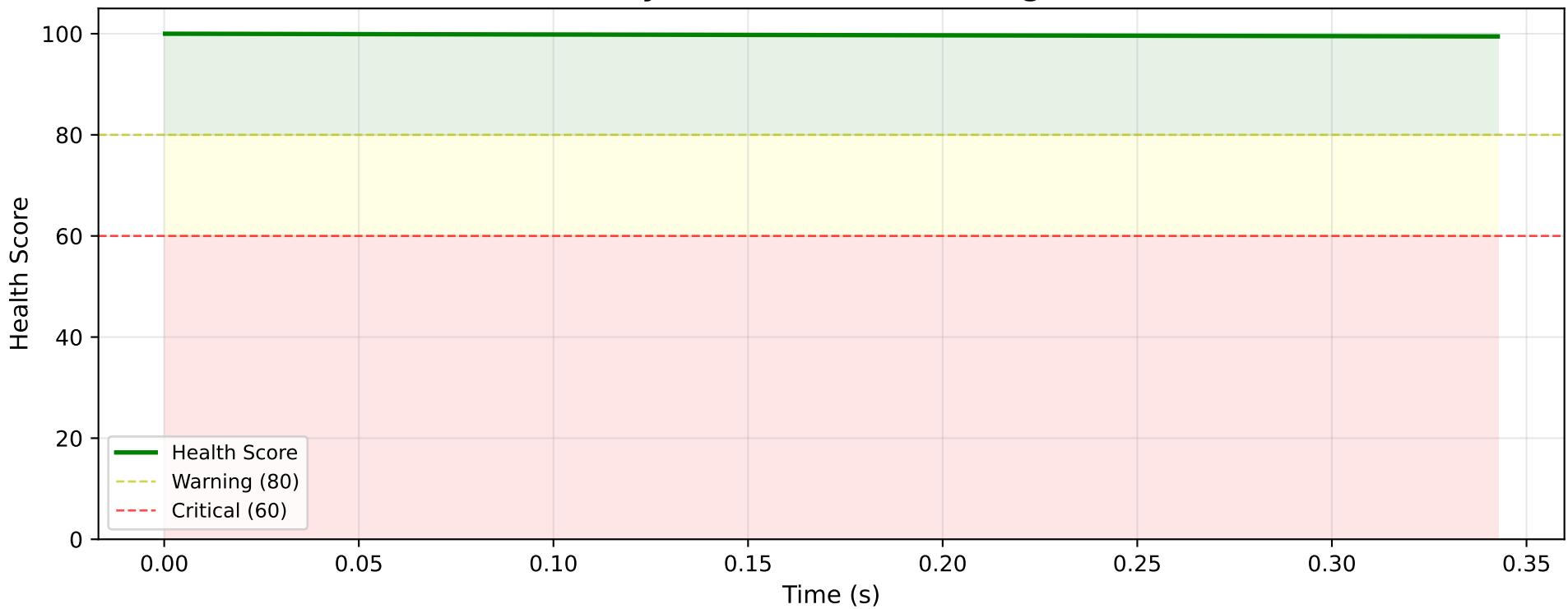
3-Phase PWM Duty Cycles



Load Estimation & Temperature



System Health Monitoring



Phase Diagram (Position-Velocity)

