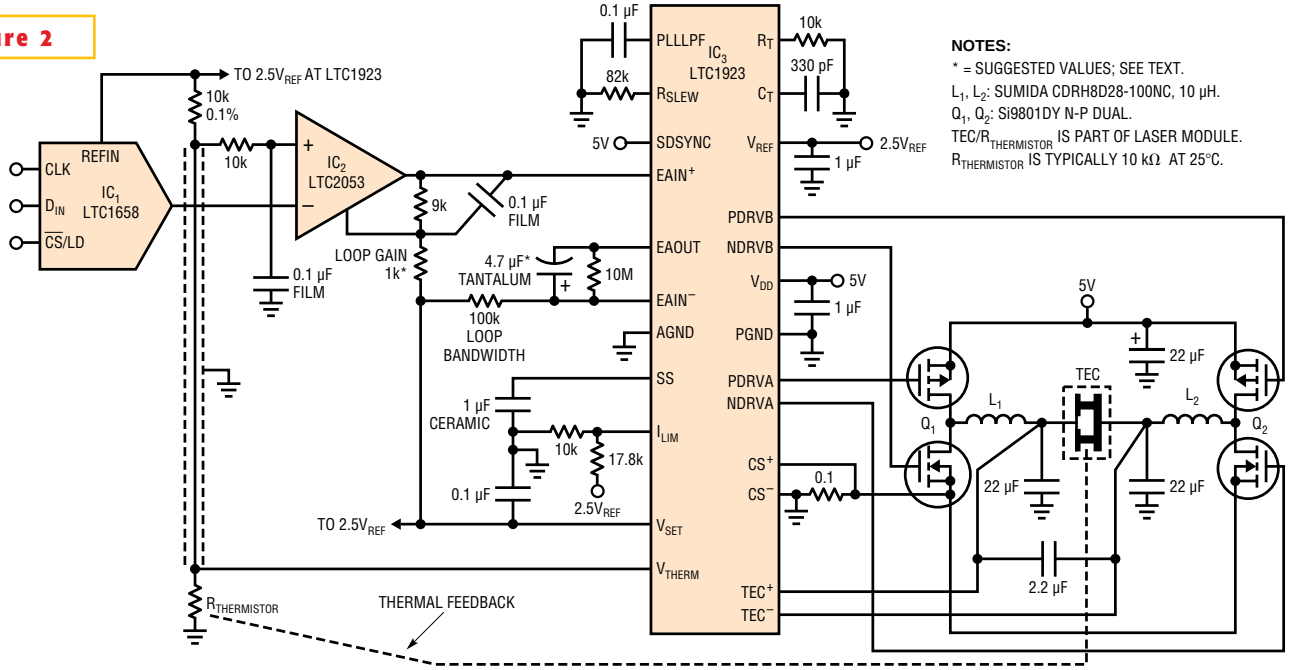
Figure 2



A TEC temperature controller includes a DAC, IC_1; a thermistor-bridge amplifier, IC_2; a switched-mode controller, IC_3; and a power output H-bridge. The DAC establishes the temperature setpoint, and you use a gain adjustment and compensation capacitor to optimize loop-gain bandwidth.