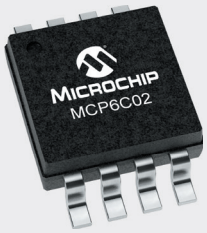
ANALOG SPOTLIGHT

MCP6C02

Zero-Drift, 65V High-Side Current Sense Amplifier

General Information

MCP6C02 is a single high-side current sense amplifier designed specifically to sense the current through a shunt resistor and convert this measurement to a proportional output voltage. The input pins can support voltages up to 65V. The output voltage range will be determined by a separate supply pin, which spans 2V to 5.5V to make it easy to interface to an ADC or MCU that is operating at 2.5V, 3.3V and 5V.



Features

- Input (common mode) voltages:
  - +3.0V to +65V, specified
  - +2.8V to +68V, operating
  - –0.3V to +70V, survival
- Power supply: +2.0V to +5.5V
- Max input offset:
  - ±16 µV at gain = 20
  - ±14 µV at gain = 50
  - ±12 µV at gain = 100
- Bandwidth: 500 kHz (G=20/50), 350 kHz (G=100)
- On-chip EMI filtering
- Package: 6-pin SOT-23
- Extended temperature: –40°C to +125 °C

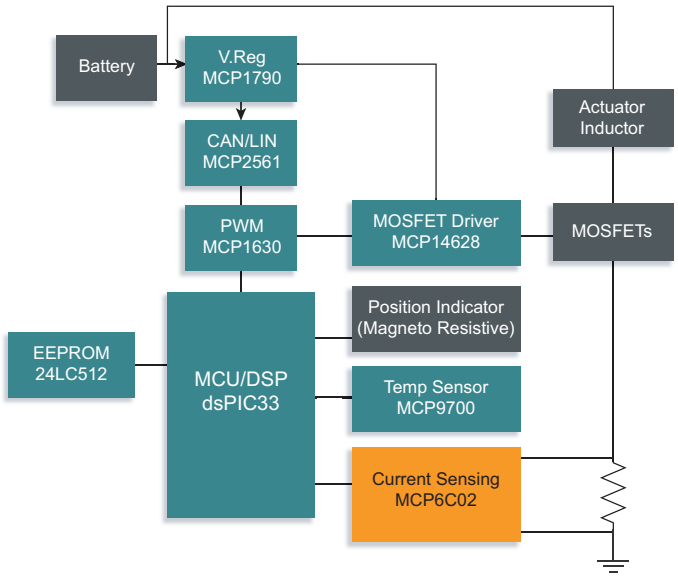
Applications

- Motor control
- Analog level shifter
- Industrial computing
- Battery monitor

Benefits

- Zero-drift architecture supports very low input errors and low power dissipation
- Provides an amplified output voltage proportional to the measure current
- Reference pin allows for both unidirectional or bidirectional current measurement

Turbo Charger with Actuator Controller



DS20006148A