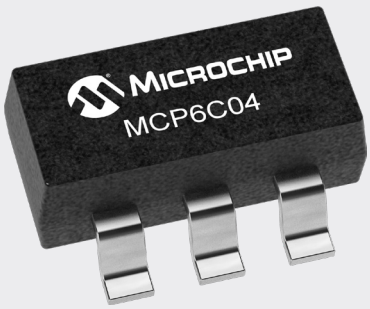
ANALOG SPOTLIGHT

MCP6C04

Zero-Drift, 52V High-Side Current Sense Amplifier

General Information

The MCP6C04 high-side current sense amplifier provides input offset voltage correction for very-low offset and offset drift. The need to accurately measure a dynamic current is critical in a wide variety of applications, such as monitoring or charging batteries, creating a current controlled feedback loop for a power supply or motor, to simply monitoring current levels for safety reasons. This device is offered with preset gains of 20, 50 and 100 V/V. The input common-mode range extends from 3V to 52V, and the power supply operating voltage is from 2V to 5.5V. This device is specified from –40°C to +125°C (E-Temp) and is provided in the SOT-23 package.



Features

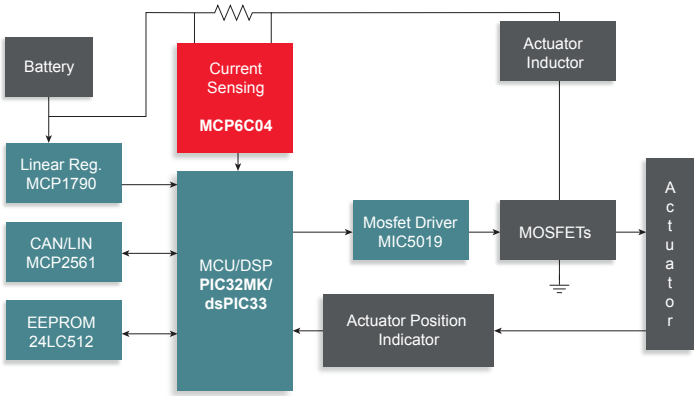
- Zero-drift architecture
- Bidirectional or unidirectional operation
- Maximum offset less than 30 µV
- Maximum offset drift less than 180 nV/ºC
- Specified input common-mode range: 3V to 52V
- Fixed gain options: 20, 50, 100 V/V
- Bandwidth of 500 kHz (typical)
- Enhanced EMI rejection
- Specified from –40 to +125ºC
- Small 6-pin SOT-23 package

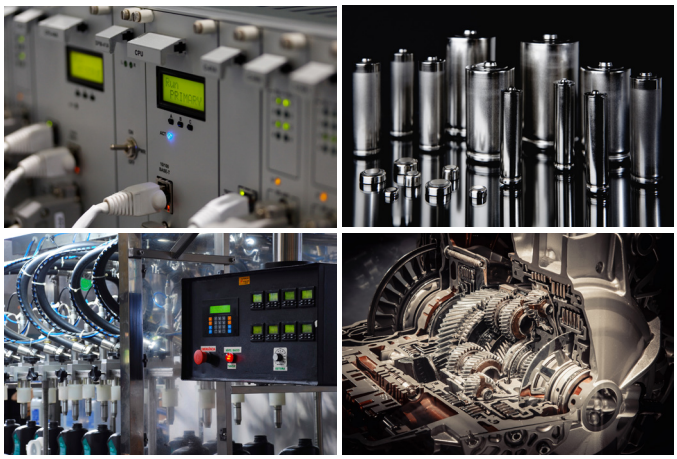
Applications

- Actuator controls
- Industrial control and automation
- Power management systems
- Motor control
- Battery monitoring/control

Benefits

- The zero-drift architecture allows the use of smaller shunt resistors (lowering power dissipation and increasing efficiency) without sacrificing resolution
- An integrated, on-chip filter reduces high frequency Electromagnetic Interference (EMI), which makes the device ideal for harsh and noisy environments





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