

Features

- Supply Voltage Range from 2.7 V to 24 V
- Wide Common-Mode Input Range: -0.3V to 24V
- Rail-to-rail Input and Output Capability
- Low Offset Voltage: $\pm 150\mu\text{V}$ (Max)
- Accuracy:
 - 0.5 $\mu\text{V}/^\circ\text{C}$ Offset Drift (typ)
 - $\pm 1.5\%$ Gain Error (Max)
 - 7ppm/ $^\circ\text{C}$ Gain Drift (typ)
- CHOICE OF GAINS:
 - 50V/V
 - 75V/V
 - 100V/V
 - 200V/V
- Low Current Consumption (65 μA_{typ})
- Packages: SOT-363(SC70-6)
- Green Product (RoHS, Lead-Free, Halogen-Free Compliant)

Applications

- Current Sensing (High-Side/Low-Side)
- Notebook Computers
- Battery Charge
- Power Management
- Telecom
- Automotive

General Description

The GS5103 is a small, low cost, rail-to-rail, precision current-sensing amplifier. It can measure voltage across shunt at common mode voltage from -0.3V to 24V, independent of supply voltage. It is capable of operating on a single power supply of 2.7V to 24V and draws a typical of 65 μA of supply current.

It incorporates the gain setting resistors, reducing the number of ancillary components. It is available in four fixed-gain models: 50V/V, 75V/V, 100V/V, 200V/V. With a low offset voltage of 150 μV and a low offset voltage drift of 0.5 $\mu\text{V}/^\circ\text{C}$, the GS5103 provides equivalent accuracy at a full-scale range of 10mV.

The GS5103 is specified over the extended operating temperature range from -40 $^\circ\text{C}$ to +125 $^\circ\text{C}$, and offered in SOT-363(SC70-6) package.