

## A 1 $\mu$ A, TDFN22 Precision Current-Sense Amplifier

### FEATURES

- ◆ Improved Electrical Performance over the MAX9938 and the MAX9634
- ◆ Ultra-Low Supply Current: 1 $\mu$ A
- ◆ Wide Input Common Mode Range: +1.6V to +25V
- ◆ Low Input Offset Voltage: 50 $\mu$ V (max)
- ◆ Low Gain Error: <0.5% (max)
- ◆ Voltage Output
- ◆ Four Gain Options Available:
  - TS1100-25: Gain = 25V/V
  - TS1100-50: Gain = 50V/V
  - TS1100-100: Gain = 100V/V
  - TS1100-200: Gain = 200V/V
- ◆ 5-Pin SOT23 Packaging

### APPLICATIONS

Notebook Computers  
 Power Management Systems  
 Portable/Battery-Powered Systems  
 PDAs  
 Smart Phones  
 Smart Chargers

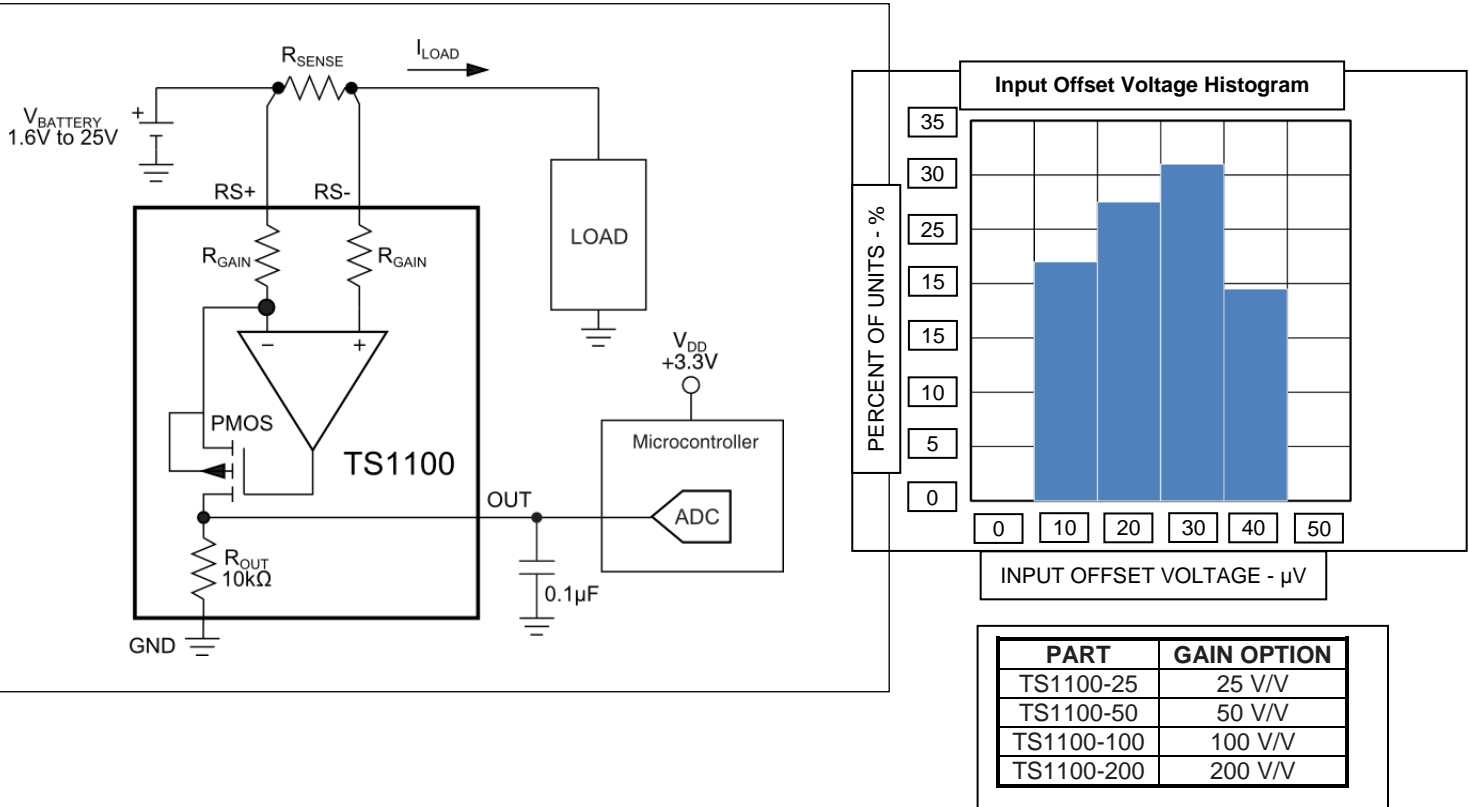
### DESCRIPTION

The voltage-output TS1100 current-sense amplifiers are form-factor identical and electrical improvements to the MAX9938 and the MAX9634 current-sense amplifiers. Consuming a very low 1 $\mu$ A supply current, the TS1100 high-side current-sense amplifiers exhibit a 50- $\mu$ V (max)  $V_{OS}$  and a 0.5% (max) gain error, both specifications optimized for any precision current measurement. For all high-side current-sensing applications, the TS1100 features a wide input common-mode voltage range from 1.6V to 25V.

The SOT23 package makes the TS1100 an ideal choice for pcb-area-critical, low-current, high-accuracy current-sense applications in all battery-powered, remote or hand-held portable instruments.

All TS1100s are specified for operation over the -40 $^{\circ}$ C to +105 $^{\circ}$ C extended temperature range.

### TYPICAL APPLICATION CIRCUIT

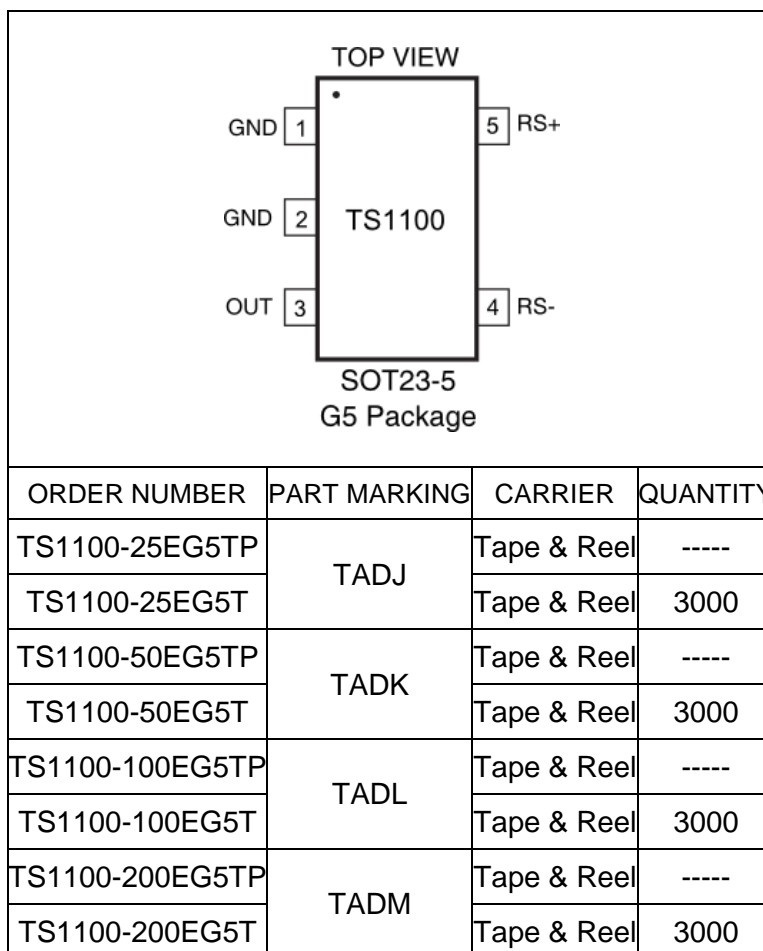


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# TS1100 Product Brief



## PACKAGE/ORDERING INFORMATION



**Lead-free Program:** Touchstone Semiconductor supplies only lead-free packaging.

Consult Touchstone Semiconductor for products specified with wider operating temperature ranges.

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