TS1100 Product Brief

A 1µA, TDFN22 Precision Current-Sense Amplifier

FEATURES

- ♦ Improved Electrical Performance over the MAX9938 and the MAX9634
- ♦ Ultra-Low Supply Current: 1µA
- ♦ Wide Input Common Mode Range: +1.6V to +25V
- ♦ Low Input Offset Voltage: 50µV (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

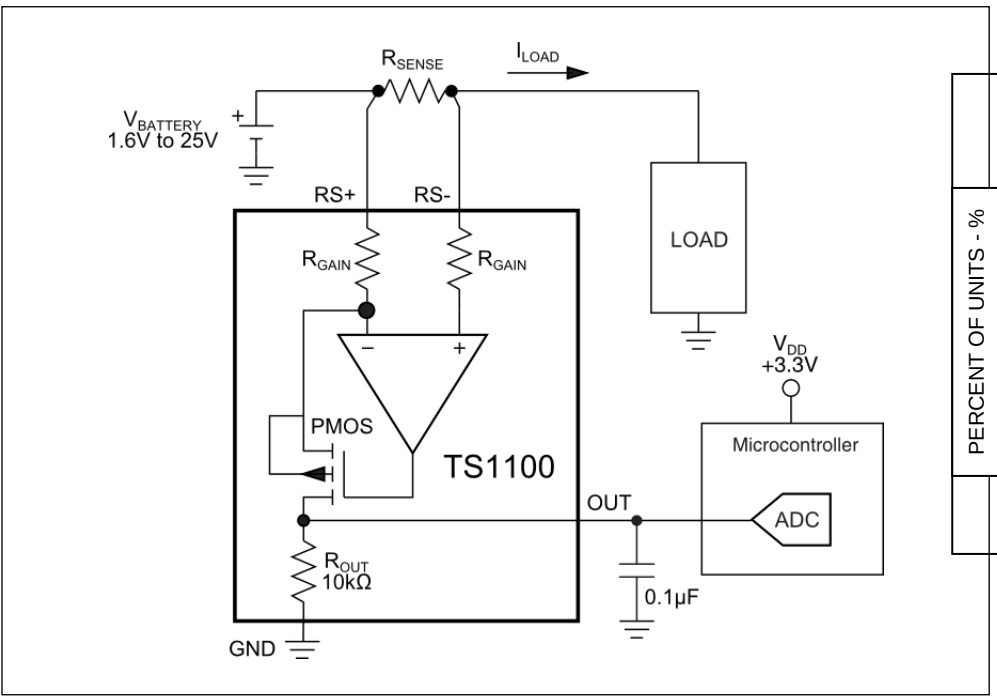
DESCRIPTION

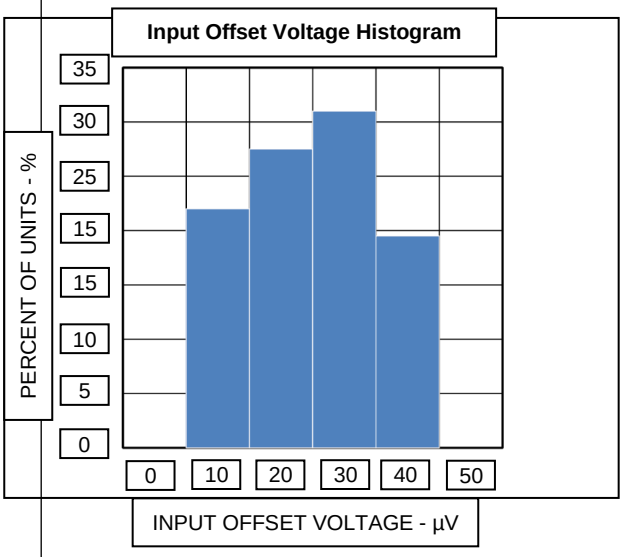
The voltage-output TS1100 current-sense amplifiers are form-factor identical and electrical improvements to the MAX9938 and the MAX9634 current-sense amplifiers. Consuming a very low 1µA supply current, the TS1100 high-side current-sense amplifiers exhibit a 50-µV (max) V_{OS} and a 0.5% (max) gain error, 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°C to +105°C extended temperature range.

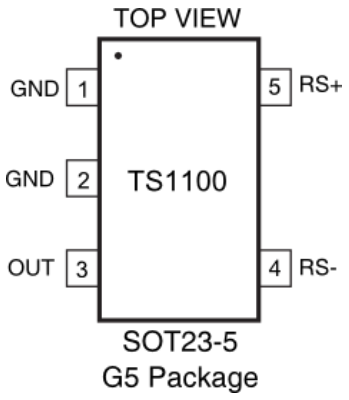
TYPICAL APPLICATION CIRCUIT





PART	GAIN OPTION
TS1100-25	25 V/V
TS1100-50	50 V/V
TS1100-100	100 V/V
TS1100-200	200 V/V

PACKAGE/ORDERING INFORMATION



ORDER NUMBER	PART MARKING	CARRIER	QUANTITY
TS1100-25EG5TP	TADJ	Tape & Reel	-----
TS1100-25EG5T		Tape & Reel	3000
TS1100-50EG5TP	TADK	Tape & Reel	-----
TS1100-50EG5T		Tape & Reel	3000
TS1100-100EG5TP	TADL	Tape & Reel	-----
TS1100-100EG5T		Tape & Reel	3000
TS1100-200EG5TP	TADM	Tape & Reel	-----
TS1100-200EG5T		Tape & Reel	3000

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

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