AT39100/39101/39102

1A Low-Voltage Low-Dropout Regulator

Immense Advance Tech.

FEATURES

- Fixed and adjustable output voltages to 1.24V
- 410mV Typical Dropout at 1A
  - **Ideal for 3.0V to 2.5V conversion**
  - **Ideal for 2.5V to 1.8V conversion**
- 1A Minimum Guaranteed Output Current
- 1.5% Initial Accuracy
- Low Ground Current
- Current Limiting And Thermal Shutdown
- Reversed-Battery Protection
- Reversed-Leakage Protection
- Fast Transient Response
- Low-Profile SOT-223,PSOP8 Package

DESCRIPTION

The AT39100, AT39101 and AT39102 are 1A low-dropout linear voltage regulator that provide low-voltage, high-current output from an extremely small package. Using process with a PNP pass element, the AT39100/1/2 offers extremely low dropout (typically 410mV at 1A) and low ground current (typically 12mA at 1A).

The AT39100 is a fixed output regulator offered in the SOT-223 package. The AT39101 and AT39102 are fixed and adjustable regulators, respectively, in a thermally enhanced PSOP8 package.

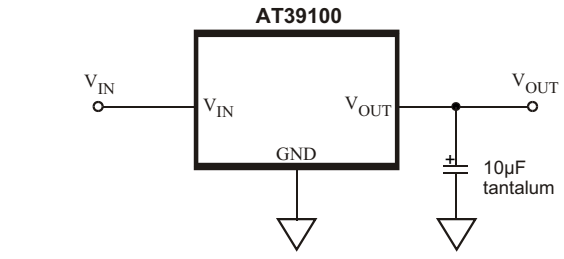
The AT39100/1/2 is ideal for PC add-in cards that need to convert from standard 5V to 3.3V, 3.3V to 2.5V or 2.5V to 1.8V. A guaranteed maximum dropout voltage of 630mV over all operating conditions allows the AT39100/1/2 to provide 2.5V from a supply as low as 3.13V and 1.8V from a supply as low as 2.43V.

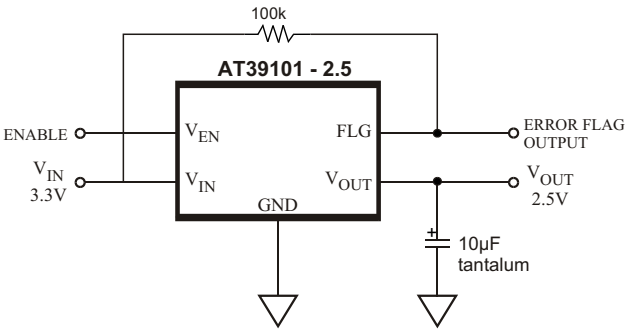
The AT39100/1/2 is fully protected with over current limiting, thermal shutdown, and reversed-battery protection. Fixed voltages of 5.0V, 3.3V, 2.5V, and 1.8V are available on AT39100/1 with adjustable output voltages to 1.24V on AT39102.

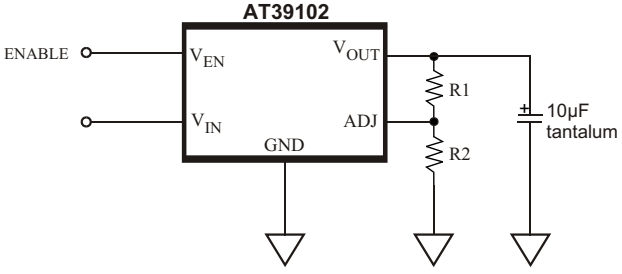
APPLICATION

- LDO Linear Regulator For PC Add-In Cards
- PowerPC™ Power Supplies
- High-Efficiency Linear Power Supplies
- SMPS Post Regulator
- Multimedia And PC Processor Supplies
- Battery Chargers
- Low-Voltage Microcontrollers And Digital logic

TYPICAL APPLICATION CIRCUIT







$$V_{OUT} = 1.24 \times [1 + \frac{R1}{R2}]$$