

# AT802/AT802G

## 300mA Ultra Low Dropout Regulator



Immense Advance Tech.

### FEATURES

- Typically 250mV dropout @300mA
- Input voltage range: 1.8V to 5.5V
- Enable Function
- Over current and over temperature protection
- 5μA quiescent current in shutdown
- P-CH design to reduce the operation current
- Full industrial temperature range
- Adjustable output voltage range 0.8V to 5V
- Output voltage accuracy  $\pm 2.0\%$
- Supply current typically 0.4mA
- Power Good function (AT802G version only)
- Built-In Over Shoot Protection Circuit
- Ultra Fast Transient Response

### APPLICATION

- Notebook computers
- Battery powered systems
- Motherboards/Peripheral cards
- Telecom/Networking cards
- Industrial Applications
- Portable Application
- Handheld Application
- Medical equipment

### DESCRIPTION

The AT802/AT802G is a high performance positive voltage regulator designed for use in applications requiring very low input voltage and very low dropout voltage at 300mA amps. It operates with a  $V_{IN}$  as low as 1.8V, with output voltage programmable as low as 0.8V. The AT802/AT802G features ultra low dropout, ideal for applications where  $V_{OUT}$  is very close to  $V_{IN}$ . Additionally, the AT802/AT802G has an enable pin to further reduce power dissipation while shut down. The enable pin may be tied to  $V_{IN}$  if it is not required for ON/OFF control. The AT802/AT802G provides excellent regulation over variations in line, load and temperature.

The adjustable output version that can be programmed from 0.8V to 5V with two external resistors.

The AT802G has Power Good function monitors the output voltage and indicates when an error occurs in the system. In the event of an output fault such as over current, thermal shutdown, the Power Good output is pulled low.

The optimum thermal condition has to consider the layout placement and application to achieve its satisfied high output current requirement.

### TYPICAL APPLICATION CIRCUITS

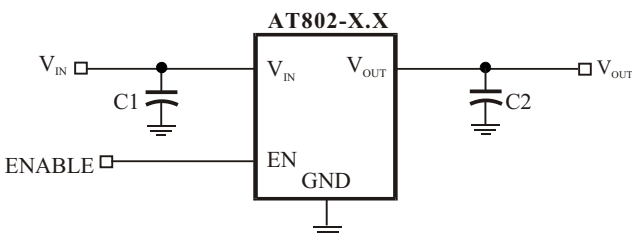


Figure 1. Fix Voltage Regulator

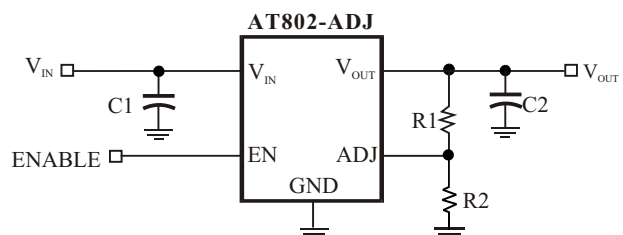


Figure 2. Adjustable Voltage Regulator

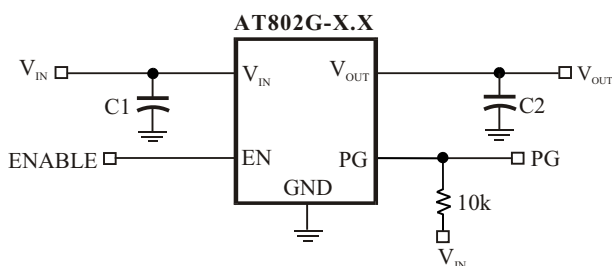


Figure 3. AT802G Fix Voltage Regulator with Power Good Function

$$V_{OUT} = \frac{0.8V(R1+R2)}{R2} \text{ Volts}$$

