

# AT803

## 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

### APPLICATION

- Notebook computers
- Battery powered systems
- Motherboards/Peripheral cards
- Telecom/Networking cards
- Industrial Applications
- Set top boxes
- Wireless infrastructure
- Medical equipment
- Handheld application

### DESCRIPTION

The AT803 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 AT803 features ultra low dropout, ideal for applications where  $V_{OUT}$  is very close to  $V_{IN}$ . Additionally, the AT803 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 AT803 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 AT803 is available in the SOT-25 package. The optimum thermal condition has to consider the layout placement and application to achieve its satisfied high output current requirement.

### TYPICAL APPLICATION CIRCUITS

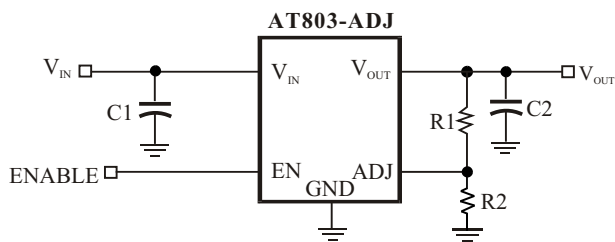


Figure 1. Adjustable Output Version

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

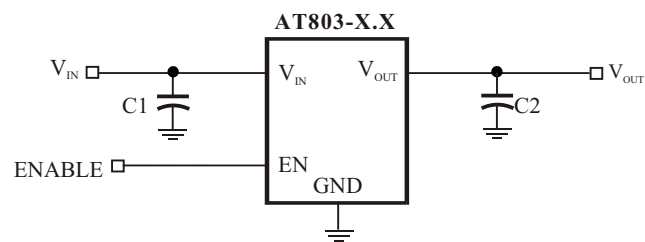


Figure 2. Fixed Output Version

