AT805

600mA Ultra Low Dropout Regulator

Immense Advance Tech.

FEATURES

- Typically 250mV dropout @600mA
- 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 ±2%
- Supply current typically 0.4mA
- Built-In Over Shoot Protection Circuit
- Ultra Fast Transient Response

APPLICATION

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

DESCRIPTION

The AT805 is a high performance positive voltage regulator designed for use in applications requiring very low input voltage and very low dropout voltage at 600mA amps. It operates with a V_{IN} as low as 1.8V, with output voltage programmable as low as 0.8V. The AT805 features ultra low dropout, ideal for applications where V_{OUT} is very close to V_{IN}. Additionally, the AT805 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 AT805 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 AT805 are available in the SOP-8, PSOP-8, SOT-25 and SOT-89-5L packages. The optimum thermal condition has to consider the layout placement and application to achieve its satisfied high output current requirement.

TYPICAL APPLICATION CIRCUITS

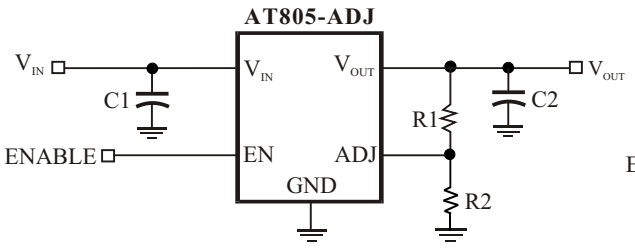

Figure 1. Adjustable Voltage Regulator

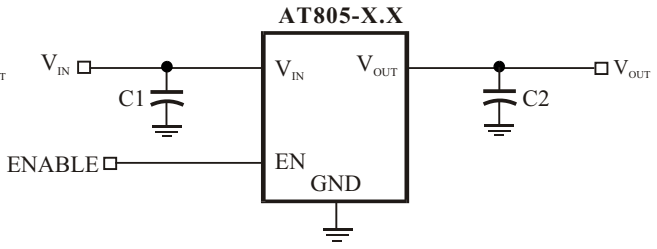

Figure 2. Fix Voltage Regulator

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