

300mA, Low I_Q, High PSRR LDO Regulators

FEATURES

- 2.5V to 5.5V Input Voltage Range
- 320mV @300mA typical Dropout Voltage
- Excellent Transient Response
- Stable with 1μF Ceramic Output Capacitor
- 70dB PSRR at 1kHz
- Low Quiescent Current: 50μA typical.
- Low Shutdown Current: <1μA
- Output Accuracy: ±2%
- Fixed Output Voltage: 1.2V~3.3V
- Current Limit Protection
- Thermal Shutdown
- Output Auto-Discharge in Shutdown
- RoHS Compliant and 100% Lead (Pb)-Free Halogen-Free

APPLICATIONS

- Cellular Phones
- Bluetooth portable radios and Accessories
- Battery-Powered Equipment
- Laptop, Palmtops, Notebook Computer
- PDAs
- Digital still Camera and Video Recorders

GENERAL DESCRIPTION

The TMI6030 is a 300mA, low-dropout (LDO) linear regulator with fast transient response and high PSRR. It offers high output accuracy, low dropout voltage and low quiescent current as well as fast start-up time. This regulator is based on a CMOS process.

The TMI6030 is designed to work with low-ESR ceramic capacitors, reducing the amount of the PCB area necessary for power applications. Only a 1μF ceramic output capacitor can make the device stable over the whole load range current (0mA to 300mA).

The output voltage of TMI6030 can be set by an external resistors divider. When the FB pin is connected to an external resistors divider, its output can be adjusted from 1.2V to 5V. As to fixed output voltage version, a ceramic capacitor on BP pin could be used to improve output noise performance and PSRR performance. Other key features include over-current protection and thermal shutdown. The TMI6030 is packaged in DFN4L 1×1 and SOT23-5 packages.

TYPICAL APPLICATION

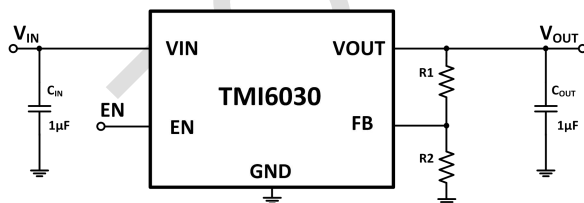


Figure 1. TMI6030 adjustable output Circuit

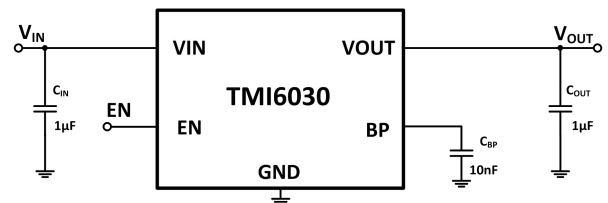


Figure 2. TMI6030 fixed output Circuit