

600mA, High PSRR, Fast Response LDO Regulators

FEATURES

- 2.5V to 5.5V Input Voltage Range
- Up to 600mA output current (Typical)
with $V_{IN}-V_{OUT} \leq 1.8V @ T_A = 25^\circ C$
- 600mV @600mA Dropout Voltage
- Excellent Transient Response
- Stable with 1 μ F Ceramic Output Capacitor
- 60dB PSRR at 1kHz
- Low 75 μ A Quiescent Current
- Low Shutdown Current: <1 μ A
- Output Accuracy: $\pm 2\%$
- Adjustable Output Voltage: 0.8V~5V
- Current Limit Protection
- Thermal Shutdown
- Output Auto-Discharge in Shutdown
- RoHS Compliant and 100% Lead (Pb)-Free Halogen-Free

GENERAL DESCRIPTION

The TMI6050 is a 600mA, 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 TMI6050 is designed to work with low-ESR ceramic capacitors, reducing the amount of the PCB area necessary for power applications. Only a 1 μ F ceramic output capacitor can make the device stable over the whole load range current (0mA to 600mA).

The output voltage of TMI6050 output adjustable version can be set by an external resistor divider. When the FB pin is connected to an external resistor divider, its output can be adjusted from 0.8V to 5V. Other key features include over-current protection and thermal shutdown. The TMI6050 is packaged in SOT23-5 packages.

APPLICATIONS

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

TYPICAL APPLICATION

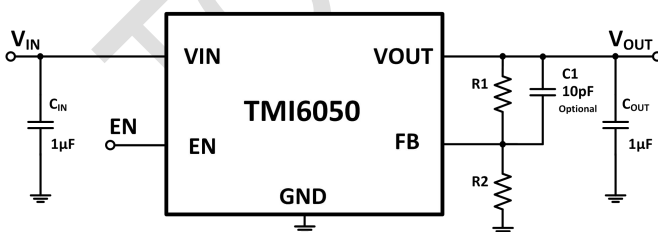


Figure 1. TMI6050 adjustable output Circuit

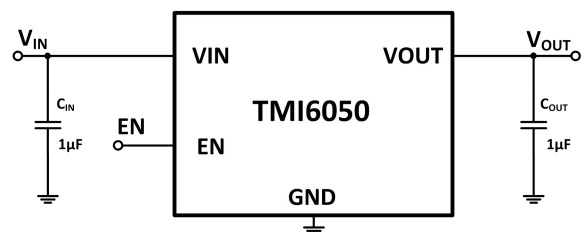


Figure 2. TMI6050 fixed output Circuit