500mA, Ultra-Low Noise, Ultra-Fast CMOS LDO Regulator

General Description

The TP2187 is designed for portable RF and wireless applications with demanding performance and space requirements. The TP2187 performance is optimized for battery-powered systems to deliver ultra low noise and low quiescent current. A noise bypass pin is available for further reduction of output noise. Regulator ground current increases only slightly in dropout, further prolonging the battery life. The TP2187 also works with low-ESR ceramic capacitors, reducing the amount of board space necessary for power applications, critical in hand-held wireless devices. The TP2187 consumes less than 0.01μA in shutdown mode and has fast turn-on time less than 50μs. The other features include ultra low dropout voltage, high output accuracy, current limiting protection, and high ripple rejection ratio. Available in the SOT-23-5 packages.

Ordering Information

TP2187-□□□□

- F : Pb Free
- Package Type
  B : SOT-23-5
- Output Voltage
  12 : 1.2V
  15 : 1.5V
  18 : 1.8V
  :
  44 : 4.4V
  45 : 4.5V

Marking Information

For marking information, contact our sales representative directly or through a TPmicro distributor located in your area.

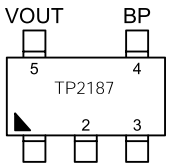
Features

- **Ultra Low Noise for RF Application**
- **Ultra Fast Response in Line/Load Transient**
- **Quick Start-Up (Typically 50us)**
- **<0.01μA Standby Current When Shutdown**
- **Low Dropout : 460mV @ 500mA**
- **Wide Operating Voltage Ranges : 2.5V to 8.0V**
- **500mA Output Current , 550mA Peak Current**
- **Low Temperature Coefficient**
- **Current Limiting Protection**
- **Thermal Shutdown Protection**
- **Only 1μF Output Capacitor Required for Stability**
- **High Power Supply Rejection Ratio**
- **TTL-Logic-Controlled Shutdown Input**
- **RoHS Compliant and 100% Lead (Pb)-Free**

Applications

- CDMA/GSM Cellular Handsets
- Battery-Powered Equipment
- Laptop, Palmtops, Notebook Computers
- Hand-Held Instruments

Pin Configurations



SOT-23-5

Typical Application Circuit