

# 300mA 3-Pin, Ultra-Low Noise, Ultra-Fast

# CMOS LDO Regulator

## General Description

The TP2083 is designed for portable RF and wireless applications with demanding performance and space requirements. The TP2083 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 TP2083 also works with low-ESR ceramic capacitors, reducing the amount of board space necessary for power applications, critical in hand-held wireless devices. The TP2083 consumes less than 0.01 $\mu$ A in shutdown mode and has fast turn-on time less than 50 $\mu$ s. The other features include ultra low dropout voltage, high output accuracy, current limiting protection, and high ripple rejection ratio . Available in the SOT-23 , SOT-89 packages.

## Ordering Information

TP2083-	□	□	□	□
	F	:	Pb Free	
			Package Type	
	B	:	SOT-23	
	X	:	SOT-89	
			Output Voltage	
	15	:	1.5V	
	18	:	1.8V	
	25	:	2.5V	
	28	:	2.8V	
	30	:	3.3V	
	:	:		
	50	:	5.0V	

## Marking Information

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

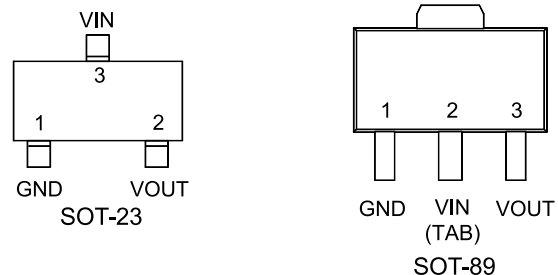
## Features

- Ultra Low Noise for RF Application
- Ultra Fast Response in Line/Load Transient
- Quick Start-Up (Typically 50 $\mu$ s)
- <0.01 $\mu$ A Standby Current When Shutdown
- Low Dropout : 200mV @ 300mA
- Wide Operating Voltage Ranges : 2.0V to 6.0V
- TTL-Logic-Controlled Shutdown Input
- Low Temperature Coefficient
- Current Limiting Protection
- Thermal Shutdown Protection
- Only 1 $\mu$ F Output Capacitor Required for Stability
- High Power Supply Rejection Ratio
- Custom Voltage Available
- RoHS Compliant and 100% Lead (Pb)-Free

## Applications

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

## Pin Configurations



## Typical Application Circuit

