

## 300mA Ultra-low Noise Ultra-Fast CMOS LDO Regulators

### General Description

The PN6303 is designed for portable RF and wireless applications with demanding performance and space requirements. The PN6303 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 PN6303 also works with low-ESR ceramic capacitors, reducing the amount of board space necessary for power applications, critical in hand-held wireless devices. The PN6303 consumes less than 0.01A in shutdown mode and has fast turn-on time less than 50s. The other features include ultra low dropout voltage, high output accuracy, current limiting protection, short-load protection, and high ripple rejection ratio.

### Features

- Ultra-Low-Noise for RF Application
- Ultra-Fast Response in Line/Load Transient
- Quick Start-Up (Typically 50µs)
- < 0.01µA Standby Current When Shutdown
- Low Dropout : 300mV @ 100mA

### Ordering Information

**PN6303** ①②③④⑤⑥

Designator	Symbol	Description	Designator	Symbol	Description
①		CE Pin Logic :	⑤		Package Type :
	A	Active 'High' (pull-down resistor built in)		M	SOT-23-5L
	B	Active 'High' (no pull-down resistor built in)		K	SOT-353/SC70-5
	C	Active 'Low' (pull-up resistor built in)		D	DFN2×2-6L
D	Active 'Low' (no pull-up resistor built in)				
②③	10-60	Output Voltage: e.g. ②=3, ③=0 ⇒ 3.0V	⑥		Device Orientation :
④	2	Output Voltage : 100mV increments e.g. ②=3, ③=8, ④=2 ⇒ 3.8V		R	Embossed Tape : Standard Feed
	A	Output Voltage : 50mV increments e.g. ②=3, ③=8, ④=A ⇒ 3.85V		L	Embossed Tape : Reverse Feed

- Output Voltage Range :1.0V to 5.0V (selectable in100mV steps)
- TTL-Logic-Controlled Shutdown Input
- Low Temperature Coefficient
- Current Limiting Protection
- Thermal Shutdown Protection
- Only 1µF Output Capacitor Required for Stability
- High Power Supply Rejection Ratio: 70dB (1 kHz)
- Custom Voltage Available

### Applications

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

### Package

- SOT-23-5L
- SOT-353/ SC-70-5
- DFN2×2-6L