

High Speed Low Dropout Middle Current Voltage Regulators

■ General Description

The PN6300 series are highly precise, low noise, positive voltage LDO regulators manufactured using CMOS processes. The series achieves high ripple rejection and low dropout and consists of a standard voltage source, an error correction, current limiter and a phase compensation circuit plus a driver transistor. Output voltage is selectable in 100mV increments within a range of 1.5V ~ 5.0V. The series is also compatible with low ESR ceramic capacitors which give added output stability. This stability can be maintained even during load fluctuations due to the excellent transient response of the series.

The current limiter's feedback circuit also operates as a short protect for the output current limiter and the output pin. The CE function enables the output to be turned off, resulting in greatly reduced power consumption.

■ Features

- Output Voltage Range: 1.0V to 5.0V (selectable in 100mV steps)
- Highly Accurate: $\pm 2\%$
- Dropout Voltage: 300mV @ 100mA (3.0V type)

■ Ordering Information

PN6300 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)		C	SOT-343
	D	Active 'Low' (no pull-up resistor built in)	D	DFNWB1.8×2-6L	
②③	10-60	Output Voltage: e.g. 20 = 2.0V 30 = 3.0V etc.	⑥		Device Orientation :
④	2	Output Voltage : 100mV increments e.g. ②=3, ③=8, ④=2 \Rightarrow 3.8V		R	Embossed Tape : Standard Feed
	A	Output Voltage : 50mV increments e.g. ②=3, ③=8, ④=A \Rightarrow 3.85V		L	Embossed Tape : Reverse Feed

- High Ripple Rejection: 70dB (10 kHz)
- Low Power Consumption: 70 μ A (TYP.)
- Maximum Output Current : 300mA
- Standby Current : less than 2 μ A
- Internal protector: current limiter and short protector

■ Applications

- Mobile phones
- Cordless phones
- Cameras, Video cameras
- Portable games
- Portable AV equipment
- Reference voltage
- Battery powered equipment

■ Package

- SOT-23-5L
- DFNWB1.8×2-6L
- SOT-353/SC70-5
- SOT-343