

700 mA Low Dropout CMOS Voltage Regulators

■ General Description

The PN6700 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 CE function enables the output to be turned off, resulting in greatly reduced power consumption.

■ Features

- Output voltage range : 1.5V to 5.0V (selectable in 100mV steps)
- Highly accurate : $\pm 2\%$
- Dropout voltage : 50mV @ 100mA (3.0V type)

■ Ordering Information

PN6700 ①②③④⑤⑥

Designator	Symbol	Description
①		CE Pin Logic :
	A	Active 'High' (pull-down resistor built in)
	B	Active 'High' (no pull-down resistor built in)
	C	Active 'Low' (pull-up resistor built in)
②③	D	Active 'Low' (no pull-up resistor built in)
	18-60	Output Voltage:e.g. ②=3, ③=0 \Rightarrow 3.0V
④	2	Output Voltage : 100mV increments e.g. ②=3, ③=8, ④=2 \Rightarrow 3.8V
	A	Output Voltage : 50mV increments e.g. ②=3, ③=8, ④=A \Rightarrow 3.85V
⑤		Package Type :
	M	SOT-23-5L
	P	SOT-89-5L
⑥	D	DFNWB1.8 \times 2-6L
		Device Orientation :
	R	Embossed Tape : Standard Feed
	L	Embossed Tape : Reverse Feed

- High ripple rejection : 60dB (1 kHz)
- Low power consumption : 30 μ A (TYP.)
- Maximum output current : 700mA ($V_{IN} \geq V_{OUT} + 1V$)
- Standby current : less than 0.1 μ A
- Internal protector : current limiter

■ Applications

- CD-ROMs, CD-R/RW drive
- DVD drive
- HDD drive
- Cameras, Video cameras
- Portable AV equipment
- Battery powered equipment

■ Package

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- DFNWB1.8 \times 2-6L
- SOT-89-5L