

AS13985

Micropower 150mA Low-Noise LDO

Product Brief

1 General Description

The AS13985 is a high-performance low-dropout 150mA voltage regulator designed for use with very-low ESR output capacitors. The device can deliver superior performance in all specifications critical to battery-powered designs, and is perfectly suited for mobile phones, PDAs, MP3 players, and other battery powered devices.

Stability is guaranteed with a ceramic output capacitor of from 1 to 22 μ F. The low equivalent series resistance (5 Ω) of these capacitors ensures low output impedance at high frequencies.

Automatic sleep mode requires less than 1 μ A quiescent current when pin EN is pulled low.

Regulation performance is excellent even under low dropout conditions, when the power transistor has to operate in linear mode.

A 10nF bypass capacitor can be added to reduce output noise to 30 μ V. The low-noise performance allows direct connection of noise sensitive circuits without additional filtering networks.

Multiple output voltage options are available as standard products. Contact austriamicrosystems, AG for details.

The AS13985 is available in a 5-bump WLP package and a 5-pin SOT23 package.

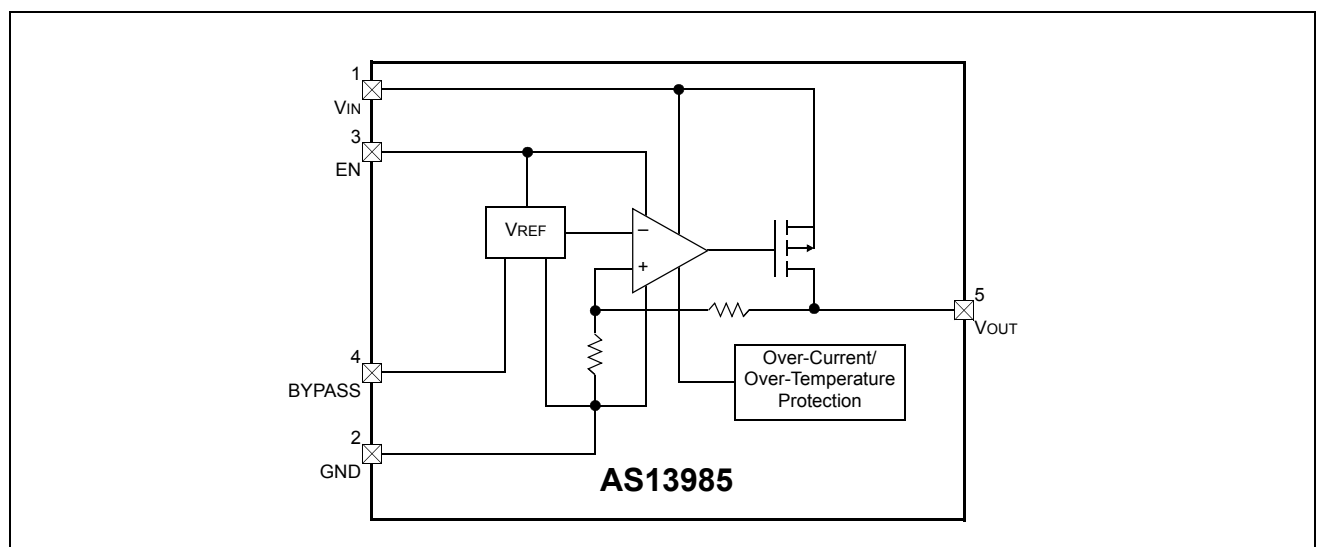
2 Key Features

- Ultra-Low Dropout Voltage: (typically 45mV @ 150mA, 0.3mV @ 1mA)
- Supply Range: 2.5 to 5.5V
- Output Voltage Range: 1.2 to 5.0V (in 25mV Steps)
- Output Current: 150mA (Guaranteed)
- Stable with Low-ESR Output Capacitor
- Integrated Over-Temperature/Over-Current Protection
- Low GND Pin Current (only 95 μ A)
- Output Voltage Accuracy: 1%
- Minimal External Components Required
- High Peak-Current Capability
- Low Shutdown Current: \leq 1 μ A
- Operating Temperature Junction Range: -40 to +125 $^{\circ}$ C
- Smallest Available Packages:
 - 5-bump WLP
 - 5-pin SOT23

3 Applications

The AS13985 is ideal for powering cordless and mobile phones, MP3 players, CD and DVD players, PDAs, hand-held computers, digital cameras, and any other hand-held battery-powered device.

Figure 1. Block Diagram



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