

AS1353, AS1356

Linear Low-Dropout 150mA Voltage Regulators

Product Brief

1 General Description

The AS1353/AS1356 are high-performance, fixed-voltage linear LDOs designed for use with capacitors of 1 to 10 μ F. The devices can deliver superior performance even under low dropout conditions when the power transistor operates in linear mode.

The integrated P-channel MOSFET output allows the devices to maintain a low supply-current at loads of up to 150mA. A shutdown mode includes logic-controlled circuitry which reduces shutdown current to less than 1 μ A (max).

Integrated over-temperature and over-current protection circuitry switches the devices off in case of thermal overload or output short-circuit conditions.

The AS1353/AS1356 are optimized for low equivalent-series resistance (ESR) output capacitors. Additionally, all devices contain reversed battery protection which disconnects the internal circuitry and parasitic diodes if the battery is connected incorrectly.

The AS1356 also features power-OK circuitry which can be used to monitor output regulation.

All devices also feature an integrated error amplifier and built-in 1.25V reference, and output current is limited (380mA typ) via the on-chip current limiting circuitry.

Multiple output voltages are available as standard products: 3.6, 3.3, 3.0, 2.7, 2.5, or 1.5V. All devices are available in a 5-pin SOT23 package.

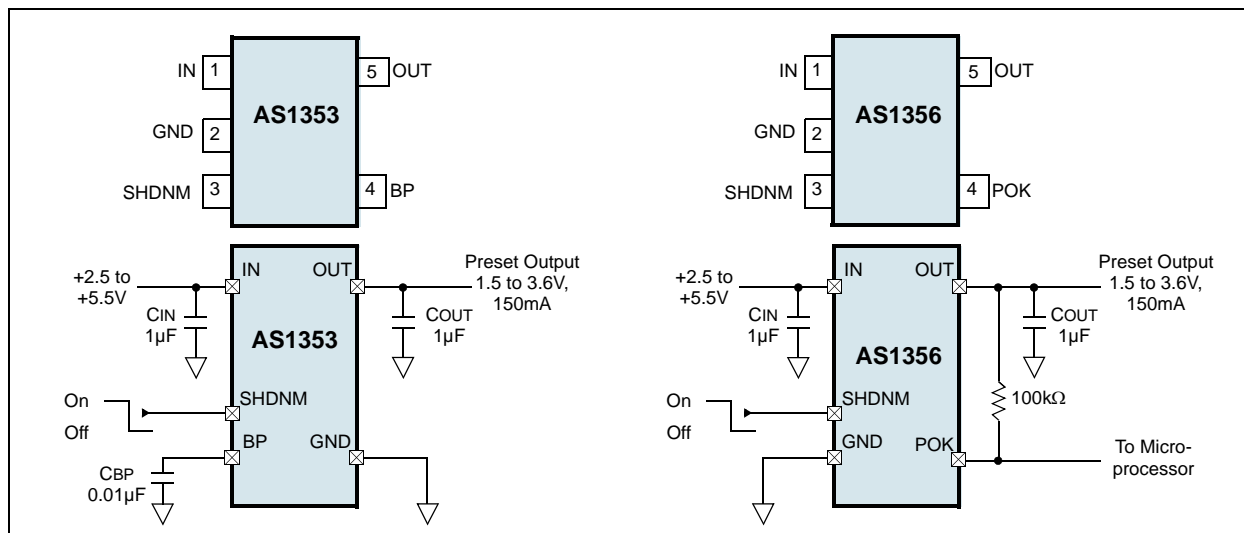
2 Key Features

- Ultra-Low Dropout Voltage: 40mV @ 100mA load
- Output Voltage Range: +1.5 to +3.6V (100mV steps)
- Max Output Current: 150mA
- Output Voltage Accuracy: $\pm 1\%$
- Low Shutdown Current: 1 μ A
- High PSRR: 60dB at 100Hz
- Integrated Overtemperature/Overcurrent Protection
- Reverse-Battery Protection (AS1353/AS1356)
- Power-OK Output (AS1356)
- Minimal External Components Required
- Operating Temperature Range: -40 to +85 $^{\circ}$ C
- 5-pin SOT23 Package

3 Applications

The devices are ideal for powering cordless and mobile phones, MP3 players, CD and DVD players, PDAs, handheld computers, digital cameras, and any other hand-held and/or battery-powered device.

Figure 1. Pinout and Application Diagrams



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