

AS1329

Product Brief

Low Voltage, Micropower, DC-DC Step-Up Converters

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1 General Description

The AS1329A, AS1329B and the AS1329C are synchronous, fixed frequency, very high-efficiency DC-DC boost converters capable of supplying 3.3V at 160mA from a single AA-supply. Compact size and minimum external parts requirements make these devices perfect for modern portable devices.

High-speed switching frequency (1.2MHz) and internally compensated PWM current mode design provide highly-reliable DC-DC conversion, especially when driving white LEDs.

The converters are available as the standard products listed in [Table 1](#).

Table 1. Standard Products

Model	Light Load Switching
AS1329A	Medium Load Automatic Powersave Operation
AS1329B	Light Load Automatic Powersave Operation
AS1329C	Continuous Switching

The devices contain two internal MOSFET switches: one NMOS switch and one PMOS synchronous rectifier.

Anti-ringing control circuitry reduces EMI by damping the inductor in discontinuous mode, and the devices exhibit extremely low quiescent current (< 1µA) in shutdown.

In shutdown mode the battery is connected directly to the output enabling the supply of real-time-clocks.

The AS1329 is available in a 6-pin TSOT-23 package.

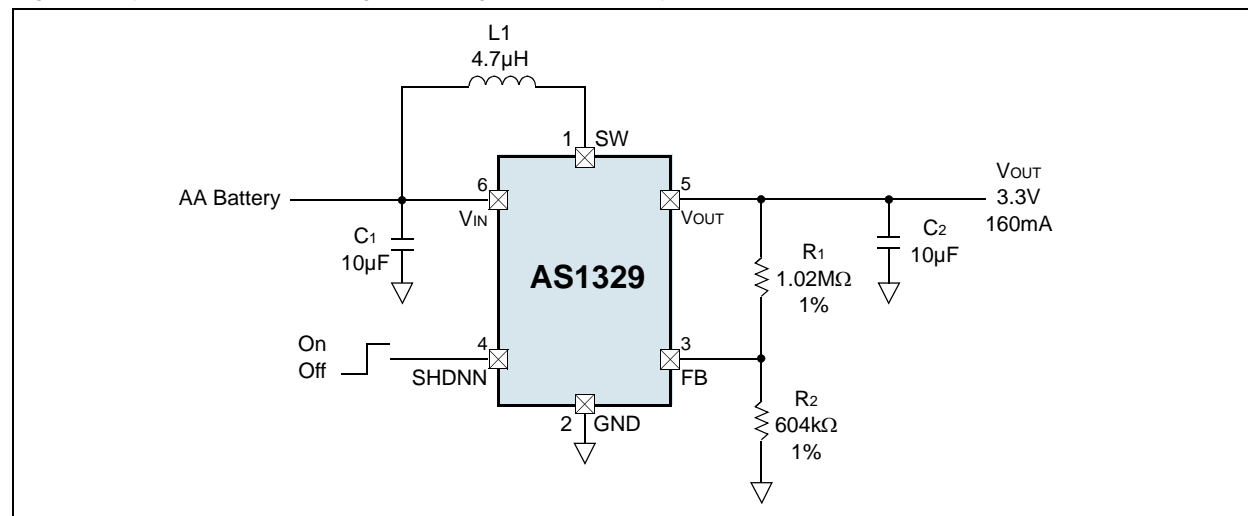
2 Key Features

- 95% Efficiency
- Single-Cell Operation
- Delivers 160mA @ 3.3V (from Single AA Cell)
- Delivers 220mA @ 5.0V (from Two AA Cells)
- Delivers 570mA @ 3.3V (from Two AA Cells)
- Low Start-Up Voltage: 0.85V
- High-Speed Fixed-Frequency: 1.2MHz
- Internal PMOS Synchronous Rectifier
- Automatic Powersave Operation (AS1329A&B)
- Continuous Switching at Light Loads (AS1329C)
- Anti-Ringing Control Minimizes EMI
- Logic Controlled Shutdown (< 1µA)
- Output Range: 2.5 to 5.0V
- 6-pin TSOT-23 Package

3 Applications

The AS1329 is ideal for low-power applications where ultra-small size is critical as in medical diagnostic equipment, hand-held instruments, pagers, digital cameras, remote wireless transmitters, MP3 players, LCD bias supplies, cordless phones, GPS receivers, and PC cards.

Figure 1. Typical Application Diagram – Single Cell to 3.3V Synchronous Boost Converter



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