

AS1320

200mA Step-Up DC-DC Converter

1 General Description

The AS1320 is a high-efficiency step-up DC-DC converter designed to generate a fixed voltage of +3.3V.

The AS1320 achieves an efficiency of up to 90%. The minimum input voltage is 1.5V, the output voltage is fixed at 3.3V, and output current is up to 200mA (@ 2V).

In order to save power the AS1320 features a shutdown mode, where it draws less than 1 μ A. In shutdown mode the battery is connected directly to the output enabling the supply of real-time-clocks.

The AS1320 provides a power-on reset output that goes high-impedance when the output reaches 90% of its regulation point.

The SHDNN trip threshold of the AS1320 can be used as an input voltage detector that disables the device when the battery voltage falls to a predetermined level.

An internal synchronous rectifier is included, thus an external transistor or Schottky diode is not required.

The AS1320 is available in a 6-pin SOT23 package.

2 Key Features

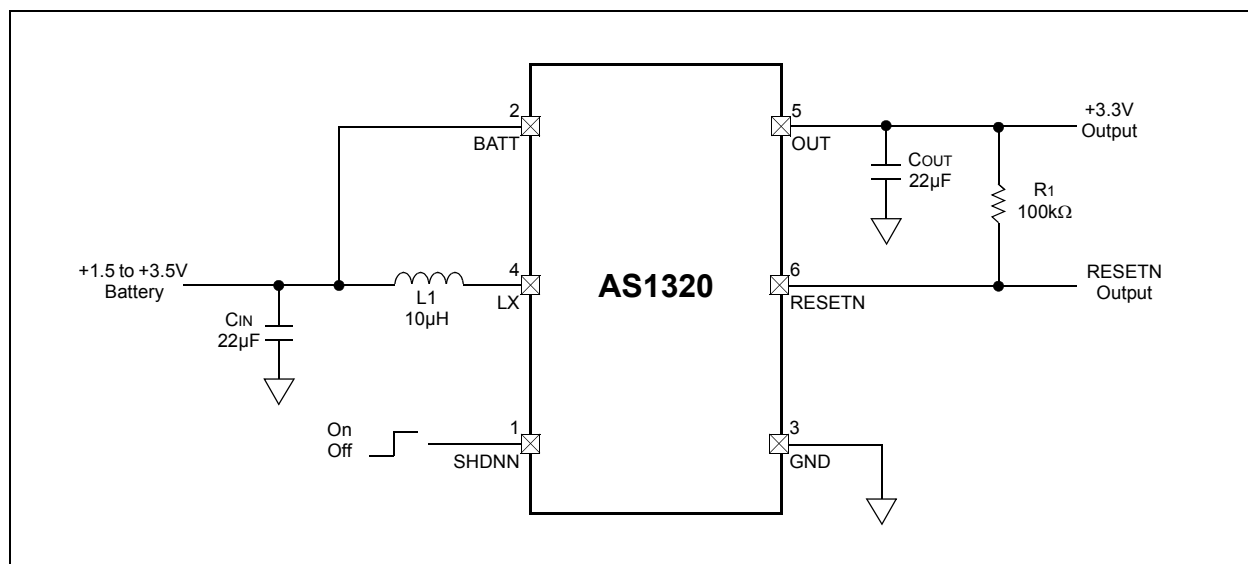
- Fixed Output Voltage: 3.3V
- Output Current: Up to 200mA (@ 2V)
- Internal Synchronous Rectifier
- Requires No External Schottky Diode or FETs
- Shutdown Mode Supply Current: Less Than 1 μ A
- Efficiency: Up to 90%
- Minimum Input Voltage: +1.5V
- Accurate Shutdown Low-Battery Cutoff Threshold
- Battery Input Connected to Pin OUT in Shutdown Mode for Backup Power
- 6-pin SOT23 Package

3 Applications

The AS1320 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, cordless phones, and PC cards.

The device is also perfect as a local 3.3V supply or as a battery backup.

Figure 1. Application Diagram



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