

Low Noise, Regulated Charge Pump DC/DC Converter

Description

The KF9902B is a low noise, constant frequency (1.2MHz) switched capacitor voltage doubler. It produce a regulated output voltage from a 1.8V to 5V input with up to 100mA of output current. Low external parts count (one flying capacitor and two small bypass capacitors at VIN and VOUT) make the KF9902B ideally suited for small, battery-powered applications.

The KF9902B have thermal shutdown capability and can survive a continuous short circuit from VOUT to GND. Built-in soft-start circuitry prevents excessive inrush current during start-up.

High switching frequency enables the use of small ceramic capacitors. A low current shutdown feature disconnects the load from VIN and reduces quiescent current to <1uA.

The KF9902B is available in the 6-pin SOT23-6.

Features

- Fixed 3.3V \pm 4% Output
- VIN Range: 1.8V to 5V
- Output Current: 100mA
- Constant Frequency Operation at All Loads
- Low Noise Constant Frequency (1.2MHz) Operation
- Automatic Soft-Start Reduces Inrush Current
- Shutdown Current <1uA
- Short-Circuit Protection
- No Inductors
- Available in Low Profile 6-Lead SOT23 Package

Applications

- 2 AA Cell to 3.3V
- USB On-The-Go Devices
- White LED Drivers
- Handheld Devices

Typical Applications

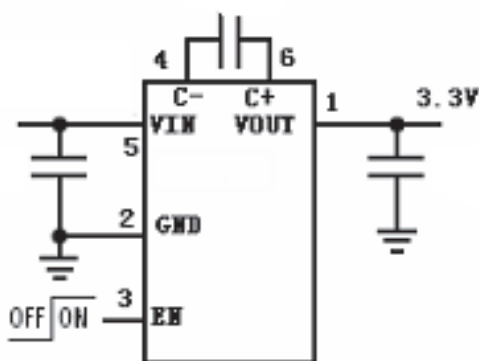
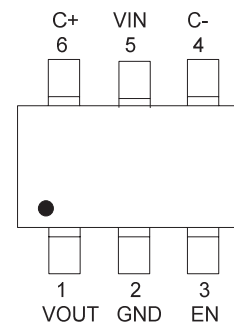


Figure 1: Regulated 3.3V Output

Pin Description



| PIN NUMBER SOT-23-6 | PIN NAME |
|------------------------|----------|
| 1 | VOUT |
| 2 | GND |
| 3 | EN |
| 4 | C- |
| 5 | VIN |
| 6 | C+ |