

## 3A Synchronous Rectified Step-Down Converter

### Features

- 3A continuous (4A peak) output current
- Wide input voltage range: 4.5V to 26V
- Wide output voltage range: 0.923V to 23V
- High, >90%, efficiency ( $V_{IN} = 5V, 0.15A < I_L < 3A$ ) enabled by integrated 100 mΩ MOSFET switches
- Operates at fixed 340 kHz frequency for small filter size
- 3 μA (MAX) shut-down supply current
- Programmable soft-start, cycle-by-cycle over-current protection and input under-voltage lockout
- Industrial temperature range: -40 °C to +85 °C

### Description

The POL3A is a monolithic synchronous buck regulator featuring integrated 100 mΩ MOSFETs that provide continuous 3A output load current. It operates over a wide 4.5V to 26V input voltage range and provides output voltage from 0.923V to 23V at up to 95% efficiency. Its current mode control circuitry provides fast transient response and cycle-by-cycle current limit.

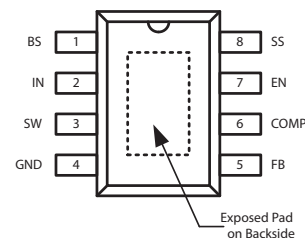
The POL3A operates at fixed 340 kHz switching frequency. It features programmable soft-start which prevents inrush current at turn-on. In shut-down mode it draws only 3 μA (MAX).

The POL3A is offered in a thermally enhanced 8-pin SOIC package. It operates over an extended -40 °C to +85 °C temperature range.

### Applications

- High-Density Point-of-Load Regulators
- Distributed Power Systems
- Satellite Systems
- Launch Vehicles

### Pin Diagram



Top View

### Typical Application

