

3A,40V,200KHz Step-Down Converter

DESCRIPTION

The EUP3490 is current mode, step-down switching regulator capable of driving 3A continuous load with excellent line and load regulation. The EUP3490 operates with an input voltage range from 4.75V to 40V and the output voltage is externally set from 0.92V to 15V with a resistor divider. The output current threshold is programmed by an external resistor. The EUP3490 enters into the CC (constant current) mode when output reaches over current threshold. The OV (over voltage) threshold is programmed by an external resistor divider. The EUP3490 stops switching when output reaches over voltage threshold. At heavy load, the EUP3490 operates at a fixed frequency Pulse-Width Modulation mode. At light load, the EUP3490 operates at a Pulse-Skipping Mode to improve efficiency.

Fault condition protection includes secondary cycle-by-cycle current limit and thermal shutdown. In shutdown mode the regulator draws 3 μ A of supply current. Internal soft-start minimizes the inrush supply current and the output overshoot at initial startup.

The EUP3490 require a minimum number of external components.

FEATURES

- 4.75V to 40V Wide Input Operating Range
- Output Adjustable from 0.92V to 15V
- Up to 3A Output Current
- Automatic Pulse Skipping Mode at Light Load
- Programmable Output Current Threshold
- Programmable Output Over Voltage Threshold
- 3 μ A Low Shutdown Current
- 0.1 Ω Internal DMOS Output Switch
- Up to 95% Efficiency
- Fixed 200kHz Switching Frequency
- Internal Soft Start
- Secondary Cycle-by-Cycle Current Limit
- Thermal Shutdown
- Input Supply Undervoltage Lockout
- Available SOP-8 (EP) Package
- RoHS Compliant and 100% Lead(Pb)-Free Halogen-Free

APPLICATIONS

- Car Charger/Adaptor
- Rechargeable Portable Devices
- Distributive Power Systems
- Pre-regulator for Linear Regulators

Typical Application Circuit

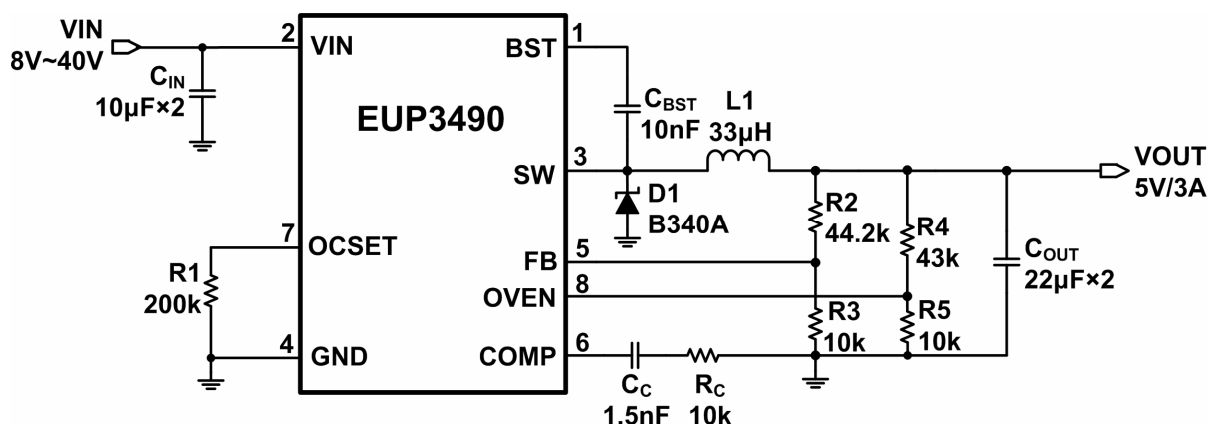


Figure 1. 5V Application Circuit