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

DESCRIPTION

The EUP3453 is current mode, step-down switching regulator capable of driving 3A continuous load with excellent line and load regulation. The EUP3453 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 EUP3453 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 EUP3453 stops switching when output reaches over voltage threshold.

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

The EUP3453 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
- Programmable Output Current Threshold
- Programmable Output Over Voltage Threshold
- 3μA Low Shutdown Current
- 0.1Ω 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

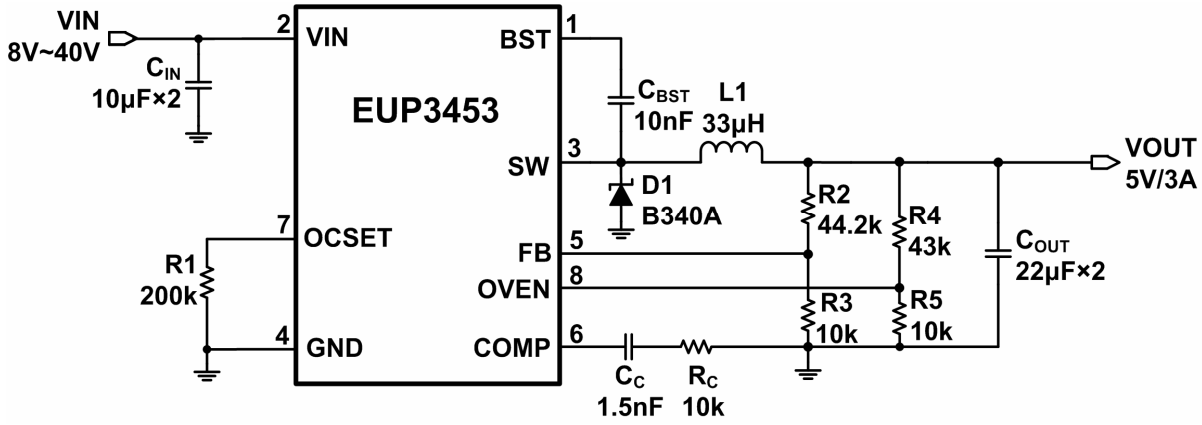


Figure 1. 5V Application Circuit