



5A, 1MHz Synchronous Step-Down Converter

DESCRIPTION

The EUP3425 is a 1MHz fixed frequency synchronous, current-mode, step-down dc-dc converter capable of providing up to 5A output current. The EUP3425 operates from an input range of 2.7V to 5.5V and provides a regulated output voltage from 0.8V to 5V. The internal synchronous power switch increases efficiency and eliminates the need for an external Schottky diode. The EUP3425 can be externally set for either forced PWM continuous mode or pulse skipping mode. Forced PWM operation provides very low output ripple voltage for noise sensitive applications while pulse skipping operation improves light load efficiency by reducing switching loss.

The EUP3425 features short circuit and thermal protection circuits to increase system reliability. Externally adjustable soft-start SS pin allows for proper power on sequencing with respect to other power supplies and avoids input inrush current during startup. The EUP3425 is available in a low profile 14pin 3mm × 4mm TDFN package .

FEATURES

- 2.7V to 5.5V Input Voltage Range
- High Efficiency up to 96%
- 5A Available Load Current
- 35mΩ Integrated FET Switches
- 1MHz Switching Frequency
- 100% Duty Cycle Low Dropout Operation
- Short Circuit and Thermal Protection
- Integrated UVLO and Power Good
- Excellent Line and Load Transient Response
- Adjustable Soft-start with An External Capacitor
- Adjustable Output Voltage Down to 0.8V
- Available in 14pin 3mm × 4mm TDFN Package
- RoHS Compliant and 100% Lead(Pb)-Free Halogen-Free

APPLICATIONS

- Distributed 3.3V and 5V Power Supplies
- High Performance DSPs, FPGAs, ASICs and Microprocessors
- Base Station, Telecom, and Networking Equipment Power Supplies
- EPC and NetPCs

Typical Application Circuit

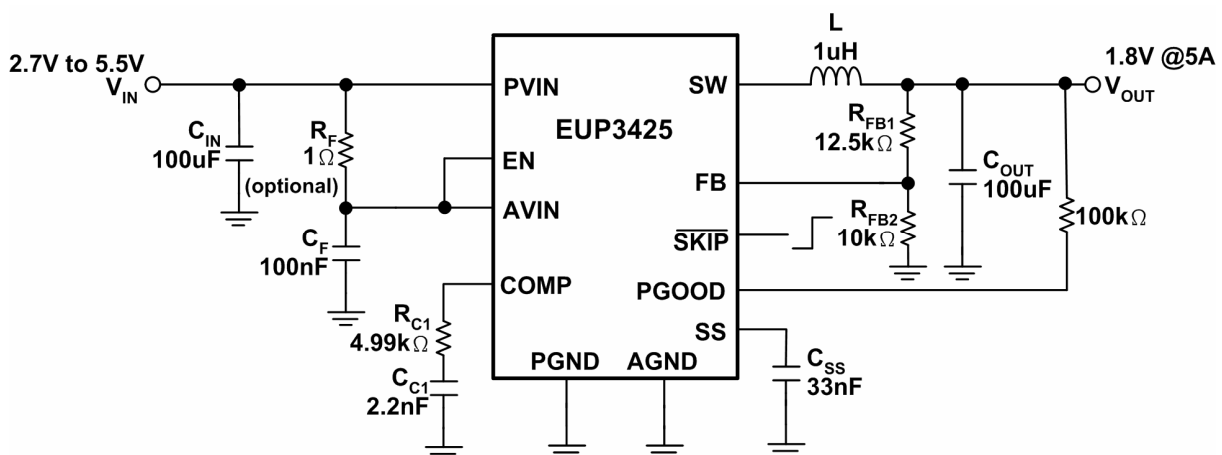


Figure1. Adjustable Output Regulator

Typical Application Circuit (continued)

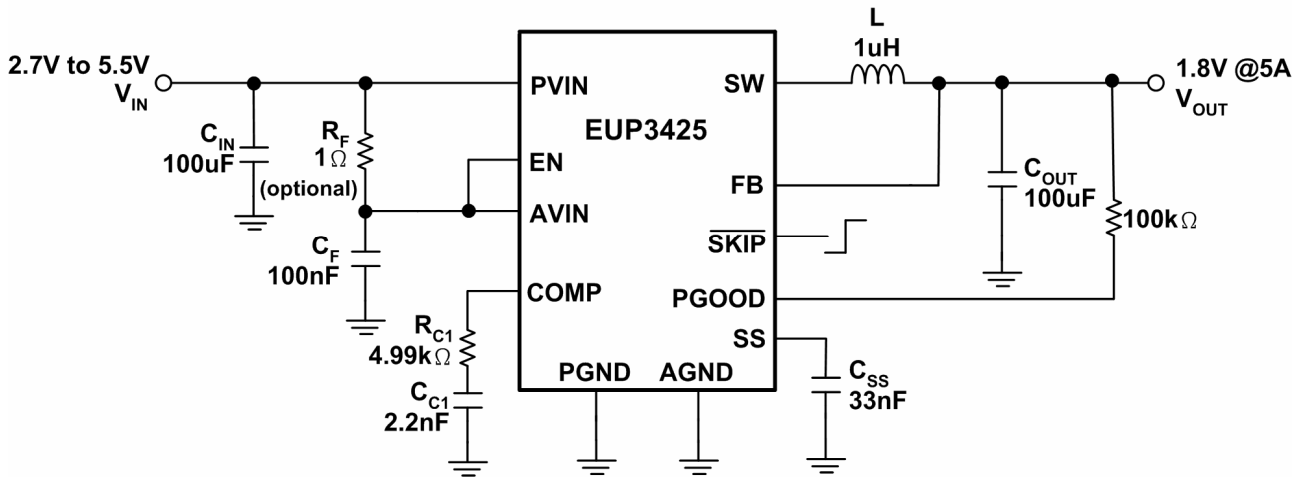


Figure2. Fixed Output Regulator

Block Diagram

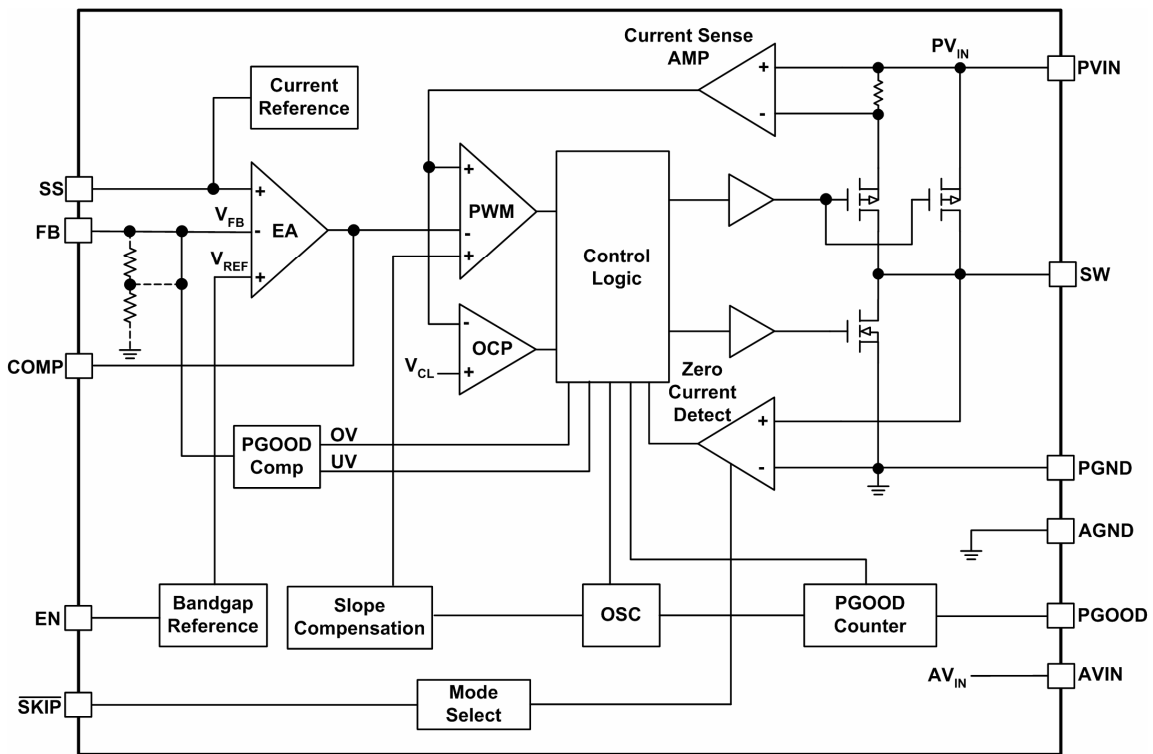


Figure3. Block Diagram