



## One-Channel High Power LED Controller

### General Description

The OCP8109A is a high power LED driver, non-synchronous boost controller. The OCP8109A can use for the LED backlight in LCD panels. It is designed for current mode control power converters that require a single drive output, such as boost LED driver and SEPIC topologies.

The OCP8109A is suitable for topologies which require a ground source N-channel FET including boost, SEPIC and various LED driver applications.

The device features include power MOSFET over-current protection (OCP), over-voltage protection (OVP), under-voltage lock-out (UVLO), output to ground short-circuit protection (SCP) and Over Temperature protection (OTP). A soft-start feature is provided to minimize in-rush current during start-up.

The OCP8109A is available in SOP-8L package, and it is RoHS compliant. Operating temperature range of the OCP8109A is from -40°C to 85°C.

### Features

- Wide Supply Voltage Range: 10V ~ 25V
- For Boost, SEPIC, LED Driver Applications
- Number of LEDs in series limited by external MOSFETs rating
- External Enable Control
- EN/PWM Filter Dimming Control
- 105KHz Fixed Operation Frequency
- Over-voltage Protection (Open-LED Protection)
- Output to Ground Short-circuit Protection
- Boost Diode Open Protection
- Power MOSFET Current Limited
- Low in-rush Current Soft-start Function
- Under-voltage Lock-out
- Thermal Shutdown
- Low Standby Current
- T<sub>A</sub>= -40 ~ 85 °C
- Available in SOP-8L Package

### Applications

- LCD White LED Backlighting
- LCD TVs
- Automotive and Infotainment Displays
- Battery Powered Systems
- Industrial Control Svstems

### Pin Configuration

SOP-8L (Top View)

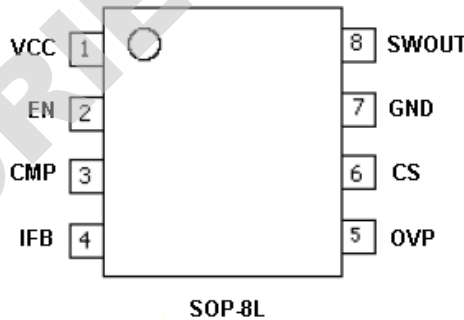


Figure 1, Pin Assignments of OCP8109A

Pin Name	Pin No. SOP-8L	I/O	Pin Function
VCC	1	P	Input Power for controller and internal MOSFET driver
EN	2	I	ON/OFF control for the controller
CMP	3	I/O	Output of the error amplifier
IFB	4	I	LED Current Sense Input
OVP	5	I	Output over-voltage protection sense
CS	6	I	Current/Voltage sense pin
GND	7	P	Ground
SWOUT	8	O	Boost Power MOSFET Drive Output



### Typical Application Circuit

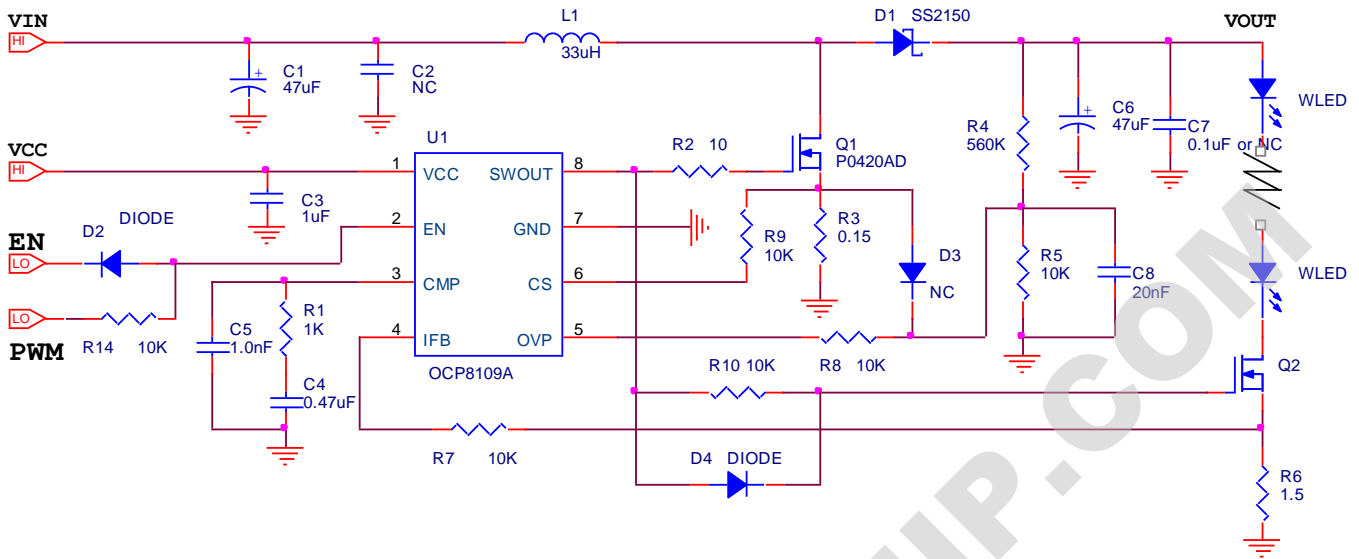


Figure 2A, EN PWM Dimming Typical Application Circuit of OCP8109A

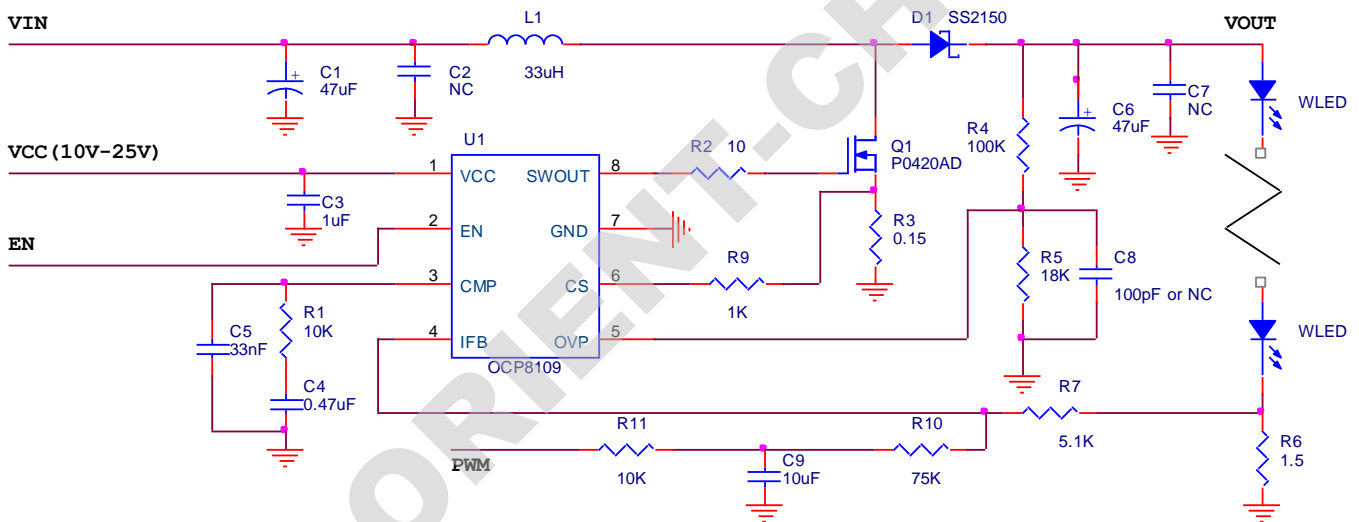


Figure 2B, PWM Filter Dimming Typical Application Circuit of OCP8109A

### Ordering Information

OCP8109A XXX

Package:  
S: SOP-8L

Packing:  
Blank: Tube or Bulk or Box  
A: Tape & Reel

Temperature Grade:  
D: -40~85°C

Part Number	Package Type	Package Qty	Temperature	Eco Plan	Lead
OCP8109ASAD	SOP-8L	13-in reel 2500pcs/reel	-40~85°C	Green	Cu
OCP8109ASD	SOP-8L	100pcs/Tube	-40~85°C	Green	Cu

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