

## 2A/3APWM Control LED Driver with internal Switch

### ❖ GENERAL DESCRIPTION

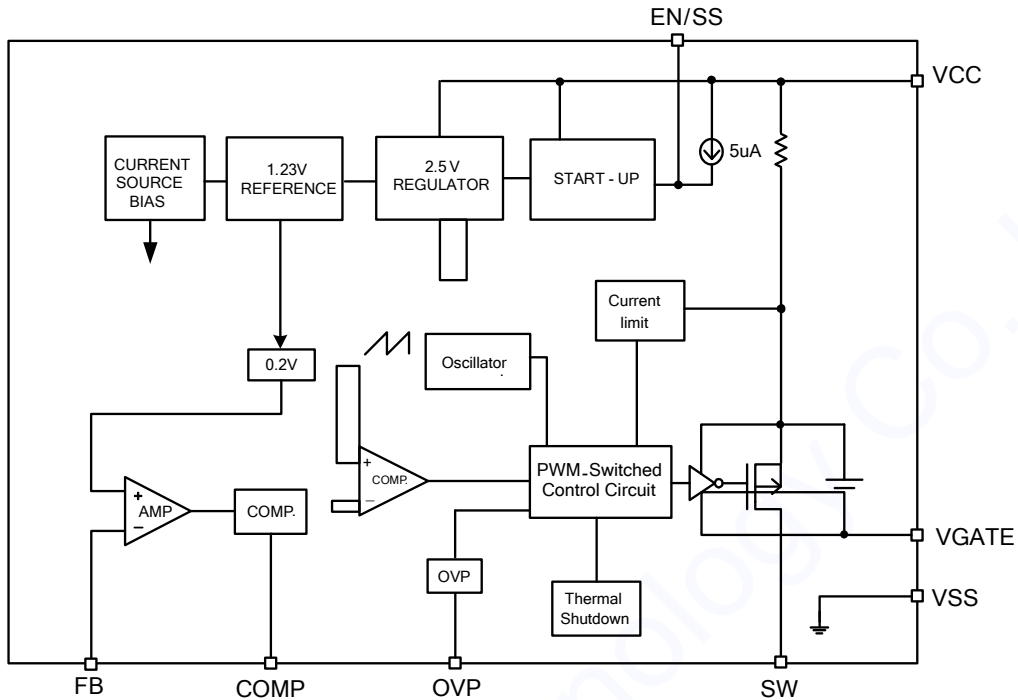
The AX2005/A is a high voltage step-down converter designed for driving up to 10 series white LEDs from a 40V system input. The total LED driving current up to 2A (AX2005) / 3A(AX2005A), which is measured through an external current sense resistor. Its low 200mV feedback voltage reduces power loss and improves efficiency. The OVP pin monitors the output voltage and turns off the converter if an over-voltage condition is present due to an open circuit condition. The AX2005 includes current limit, short circuit protection and thermal shutdown protection preventing damage.

AX2005/A provides high power, high efficiency, and excellent transient characteristics. The PWM control circuit is able to the duty ratio linearly from 0 up to 100%. Since this converter can accommodate an input voltage up to 40V, it is also suitable for the operation via an AC adapter.

### ❖ FEATURES

- Input voltage : 8V to 40V
- Output voltage is up to 38V
- LED Backlight and High Power LED Application
- Duty ratio : 0% to 100% PWM control
- LED driving current :
  - AX2005: Output current up to 2A
  - AX2005A: Output current up to 3A
- Enable/Disable function with soft start time control.
- Current Limit (CL), Thermal Shutdown and Short Circuit Protections (SCP).
- Over Voltage Protection (OVP)
- Built-in internal SW P-channel MOS.
- SOP-8L-EP Pb-Free package.

❖ BLOCK DIAGRAM



❖ PIN ASSIGNMENT

The package of AX2005/A is SOP-8L-EP; the pin assignment is given by:

Name	Description
EN/SS	ON/OFF Shutdown and Soft-start pin
VSS	GND pin
VGATE	Driver GATE clamping pin. The pin must connect a 1uF capacitor to VCC
VCC	IC power supply pin
SW	Switch pin. Connect external inductor and diode here.
FB	Feedback pin
COMP	Compensation pin
OVP	Over-Voltage Sense Input Pin. Over Voltage is set by out side Resistance

( Top View )	
EN/SS 1	8 COMP
VSS 2	7 FB
VGATE 3	6 OVP
VCC 4	5 SW

SOP8L-EP