

## ■ General Description

The AME5291 is a synchronous buck converter with internal power MOSFETs. It achieves 2A continuous output current with a fixed frequency of 1MHz with excellent load and line regulation. The device operates from an input voltage of 3V to 5.5V and provides an output voltage from 0.8V to  $V_{IN}$ , making the AME5291 ideal for on-board post regulation applications.

Internal soft-start minimizes the inrush supply current at startup. The circuit protection includes cycle-by-cycle current limiting, output short circuit frequency protection and thermal shutdown these protect functions improve design reliability.

This device is available in SOP-8/PP package with exposed pad for low thermal resistance.

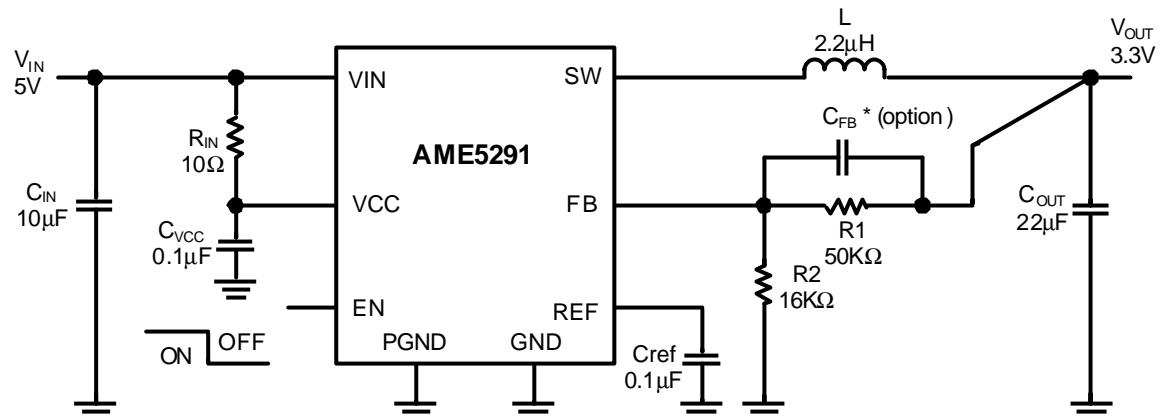
## ■ Features

- Input Voltage Operate from 3V to 5.5V
- 2A Output Current
- 100mΩ Internal Power MOSFET Switch
- Stable with Low ESR Output Ceramic Capacitors
- Up to 95% Efficiency
- Thermal Shutdown
- Output Adjustable from 0.8V to  $V_{IN}$
- Short Circuit Frequency Protection
- Over Temperature Protection
- Available in SOP-8/PP Package
- Green Products Meet RoHS Standards

## ■ Applications

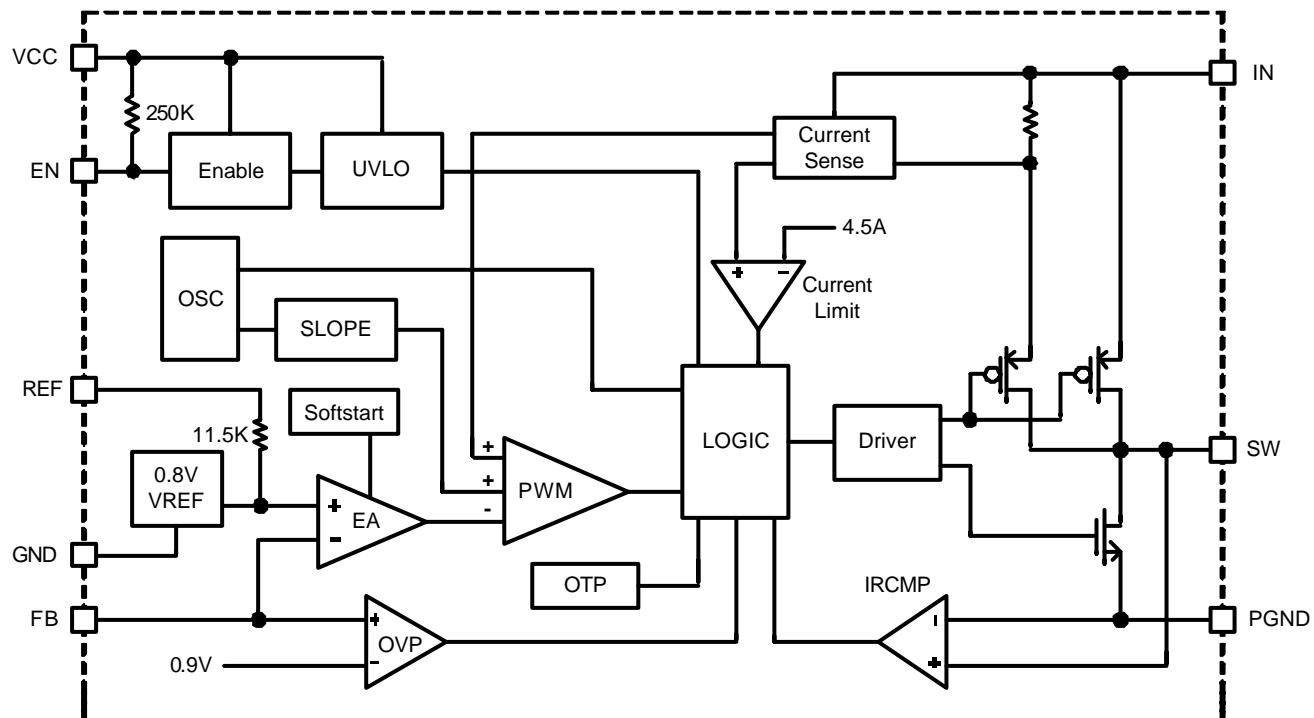
- TV
- Distributed Power Systems
- Pre-Regulator for Linear Regulators

## ■ Typical Operating Circuit



$$V_{OUT} = 0.8V \times \left(1 + \frac{R_1}{R_2}\right)$$

## ■ Functional Block Diagram





**www.ame.com.tw**  
**E-Mail: sales@ame.com.tw**

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These products of AME, Inc. are not authorized for use as critical components in life-support devices or systems, without the express written approval of the president of AME, Inc.

AME, Inc. reserves the right to make changes in the circuitry and specifications of its devices and advises its customers to obtain the latest version of relevant information.

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**Corporate Headquarter  
AME, Inc.**

8F-1, 12 WenHu St., Nei-Hu District  
Taipei 114, Taiwan.  
Tel: 886 2 2627-8687  
Fax: 886 2 2659-2989