

## ■ General Description

AME5911 is a high-efficiency, DC-to-DC step-down switching regulator, capable of delivering up to 2A of output current. The device operates from an input voltage range of 2.7V to 5.5V and provides output voltages from 0.6V to  $V_{IN}$ , making the AME5911 ideal for low voltage power conversions. AME5911 adopts an adaptive COT control scheme that enables very fast transient response and provides a very smooth transition when the output varies from light load to heavy load. The adaptive COT control also maintains a constant switching frequency across line and load. Running at a fixed frequency of 2MHz allows the use of small inductance value and low DCR inductors, thereby achieving higher efficiency. Other external components, such as ceramic input and output caps, can also be small due to higher switching frequency, while maintaining exceptional low-noise output voltages. Internal soft-start control circuitry reduces inrush current. Short-circuit and thermal-overload protection improves design reliability. AME5911 is available in a tiny SOT-563.

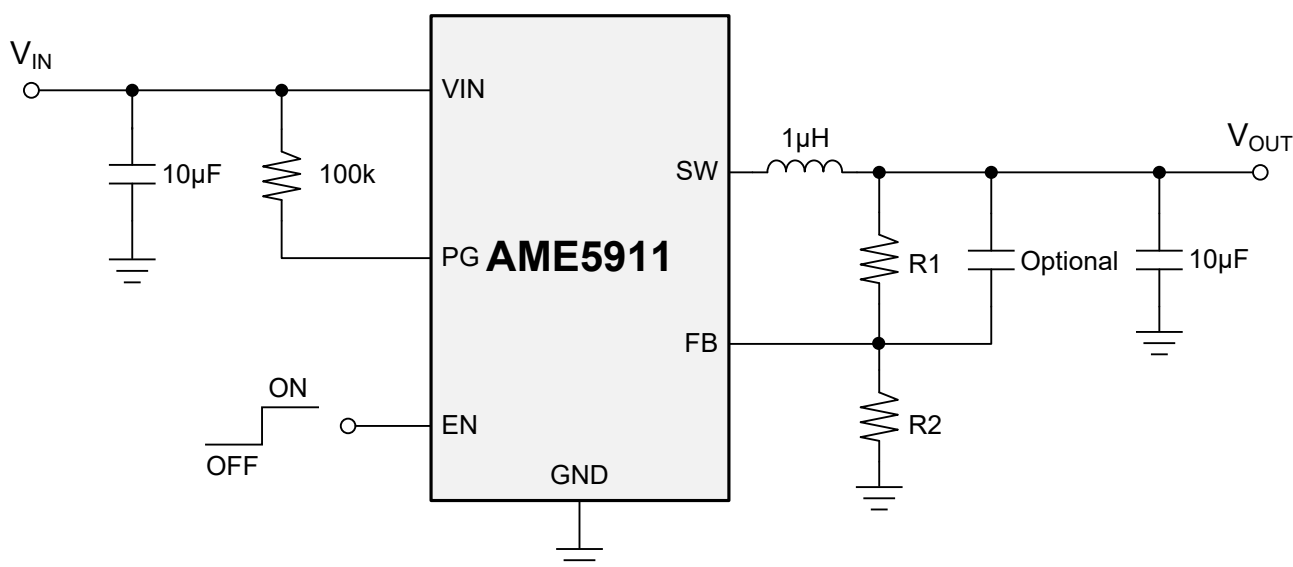
## ■ Features

- Up to 96% Efficiency
- Up to 2A Max Output Current
- Adaptive COT Control
- Forced PWM Mode
- Ultra-Fast Load Transient Response
- 2MHz Switching Frequency
- 1% Feedback Accuracy
- Cycle-by-Cycle Over Current Protection
- Short Circuit Protection with Hiccup Mode
- Stable with Low-ESR Output Ceramic Capacitors
- RoHS, Halogen Free and TSCA Compliance

## ■ Application

- Set Top Box
- IP Camera
- SSD

## ■ Typical Application Schematic





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Document: C013-DS5911-A.01

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