

5.5V, 2.5A Continuous / 3.0A(Peak) 2MHz Synchronous Step-Down Converter

■ General Description

AME5913/5913A is a high efficiency 2MHz synchronous step-down DC/DC regulator capable of delivering up to 3A (Peak) output current. It's employs an adaptive COT control providing a fast transient response. It can operate over a wide input voltage range from 2.5V to 5.5V.

AME5913/5913A also provides UVLO, Input OVP, OCP, OTP protection functions. It's available in the SOT-563 package.

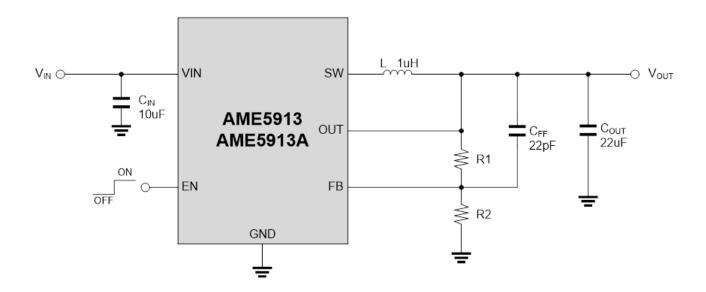
■ Application

- · Networking Systems
- · Personal Video Recorders
- · Flat Panel Monitors
- Table PC

■ Features

- Input Voltage Range: 2.5V to 5.5V
- ±1%, 0.6V Feedback Voltage Accuracy
- 2.5A Continuous / 3.0A Peak Load Current Capability
- 2MHz Switching Frequency
- 50μA Quiescent Current
- Adaptive COT Control
- High Efficiency PFM Mode at Light Load(AME5913)
- Forced PWM Mode(AME5913A)
- Low R_{DSON} Internal Switches(High/Low Side): 100mΩ / 60mΩ
- Internal 0.8ms Soft-Start Time
- Hiccup Mode at Short Circuit Protection
- Internal Over Temperature Protection
- Internal Over Current Protection
- Internal Input Under-Voltage Lockout Protection
- Internal Input Over Voltage Protection
- RoHS, TSCA & HF Compliance

■ Typical Application



REV.C.01



www.ame.com.tw E-mail: sales@ame.com.tw

Life Support Policy:

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.

© AME, Inc., June 2025

Document: C002-DS5913/5913A-C.01

Corporate Headquarter AME, Inc.

8F-1, 12, WenHu St., Nei-Hu Dist.,

Taipei 114, Taiwan..

Tel: 886 2 2627-8687

Fax: 886 2 2659-2989