ACE7262C

500KHz, 18V, 2.5A Synchronous Step-Down Converter

Description

The ACE7262C is a fully integrated, high-efficiency 2.5A synchronous rectified step-down converter. The ACE7262C operates at high efficiency over a wide output current load range.

This device offers two operation modes, PWM control and PFM Mode switching control, which allows a high efficiency over the wider range of the load.

The ACE7262C requires a minimum number of readily available standard external components and is available in a 6-pin SOT23 ROHS compliant package.

Features

- High Efficiency: Up to 96%
- 500KHz Frequency Operation
- 2.5A Output Current
- No Schottky Diode Required
- 4.5V to 18V Input Voltage Range
- 0.8V Reference
- Slope Compensated Current Mode Control for Excellent Line and Load Transient Response
- Integrated internal compensation
- Stable with Low ESR Ceramic Output Capacitors
- Over Current Protection with Hiccup-Mode
- Thermal Shutdown
- Inrush Current Limit and Soft Start
- Available in SOT-23-6
- -40°C to +85°C Temperature Range

Application

- Distributed Power Systems
- Digital Set Top Boxes
- Flat Panel Television and Monitors
- Wireless and DSL Modems
- Notebook Computer

Absolute Maximum Ratings

Parameter	Value
Supply Voltage V_{IN}	-0.3V to 18V
Switch Node Voltage V_{SW}	-0.3V to (V_{IN}+0.5V)
Boost Voltage V_{BST}	V_{SW}-0.3V to V_{SW}+5V
Enable Voltage V_{EN}	-0.3V to 18V
All Other Pins	-0.3V to 6V
Operating Temperature Range	-40°C to 85°C
Storage Temperature Range	-55°C to 150°C
Lead Temperature (Soldering, 10s)	300°C

Notes

ACE does not assume any responsibility for use as critical components in life support devices or systems without the express written approval of the president and general counsel of ACE Electronics Co., LTD. As sued herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and shoes failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.