



ACE74642Z

35V/3A Synchronous Step-Down Converter

Description

The ACE74642Z is a high-efficiency DC-to-DC step-down switching regulator that is capable of delivering up to 3A of output current. The device operates with wide input voltage range from 4.6V to 35V, making it ideal for high voltage USB charging applications.

The ACE74642Z uses a constant current mode architecture. It includes constant current (CC)/ constant voltage (CV) output regulation and output cord compensation, making it a perfect solution for car charger application.

Features

- Wide Input Voltage Range: 4.6V-35V
- 38V Input Standoff Voltage
- High Efficiency PFM Mode at Light Load
- Capable of Delivering 3A Output Current
- 100% Duty Cycle
- Support CC/CV Output
- Cord Compensation Function
- Current Mode Control
- Thermal Shutdown and UVLO

Application

- Car Chargers
- Industrial Applications
- Automotive Applications

Absolute Maximum Rating

Parameter		Value
IN Voltage		-0.3V to 38V
SW Voltage		-0.3V to VIN+0.3
BST Voltage		-0.3V to SW+6V
FB, VLDO Voltage		-0.3V to 6V
SW to ground current		Internally limited
Operating Temperature Range		-40°C to 85°C
Storage Temperature Range		-55°C to 150°C
Thermal Resistance	θ_{JA}	55 °C/W
	θ_{JC}	110 °C/W
Lead Temperature (Soldering, 10sec)		260°C

(Note: Exceeding these limits may damage the device. Exposure to absolute maximum rating conditions for long periods may affect device reliability.)

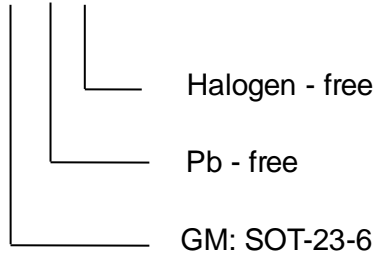


ACE74642Z

35V/3A Synchronous Step-Down Converter

Ordering information

ACE74642Z XX + H





ACE74642Z

35V/3A Synchronous Step-Down Converter

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 Technology Co., LTD. As used 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 whose 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.

ACE Technology Co., LTD.
<http://www.ace-ele.com/>