ACE7127Z

High Efficiency Boost Converter with 30V Internal FET Switch

Description

The ACE7127Z switching regulators is a current mode boost converter operating at a fixed frequency of 1MHz. The use if SOT-23-6 package made possible by the minimal power loss of the internal 2.5A switch and use of small external components while still providing best efficiencies. The 30V internal switch makes these solutions perfect for boosting the voltage. The parts have a EN pin that can be used to reduce quiescent current. The ACE7127Z has an internal OVP protection at 38V to prevent the chip from damages, for maximum output protection.

Features

- Efficiency: Up to 90%
- Integrated 2.5A 30V current limit MOSFET
- Input Voltage Range of 2.7V~30V
- 38V Output Over-Voltage Protection
- 1MHz Switching frequency
- Feedback Voltage: 600mV
- Thermal shutdown
- Available in SOT-23-6 Package

Application

- 4G Module
- Wireless Charger
- Tablet and Smartphone
- For High voltage and high current generation applications

Absolute Maximum Ratings(1)

Parameter		Value
IN, SW Voltage		–0.3V to 30V
All Other PIN Voltages		–0.3V to 6.5V
SW to ground current		Internally limited
Thermal Resistance(2)	θ_{JA}	100 °C/W
	θ_{JC}	50 °C/W
ESD	HBM (Human Body Model)	2 KV
	CDM (Charged Device Model)	1 KV
Storage Temperature Range		–55°C to 150°C

Note:

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

(2). Measured on 1oz two-layer ACE evaluation board, Ta=25°C; the top is the position where θ_{JC} is measured.

Recommended Operating Conditions(1)

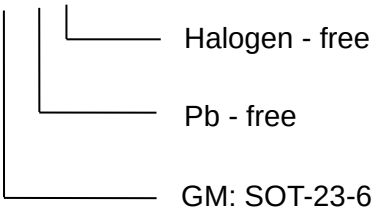
Parameter	Value
Ambient Temperature Range	–40°C to 85°C
Junction Temperature Range	–40°C to 150°C

Note:

(1) The device is not guaranteed to function outside its operating conditions.

Ordering Information

ACE7127Z XX + H



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 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.