ACE72233Z

1MHz, 3A Synchronous Buck DC DC Converter

Description

The ACE72233Z is a high-efficiency, DC-to-DC step-down switching regulator, capable of delivering up to 3A of output current. The devices operate from an input voltage range of 2.4V to 6.5V and provide output voltages from 0.6V to VIN, making the ACE72233Z ideal for low voltage power conversions. Running at a fixed frequency of 1MHz allows the use of small inductance value and low DCR inductors, thereby achieving higher efficiencies. 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.

Features

- 1MHz Frequency
- Up to 3A Max Output Current
- Up to 96% Efficiency
- Wide Input Voltage Range: 2.4V to 6.5V
- Standby Current 42uA (Vout=1.2V, Iout=0A)
- Light Load operation
- Internal Compensation
- Available SOT-23-5 Package

Applications

- IP Camera
- Telecom Devces
- Set Top Boxes

Absolute Maximum Ratings

Parameter		Value
IN, SW, FB, EN Voltage		-0.3V to 7V
SW to GND Current		Internally Limited
Max Power Dissipation		400mW
Operating Temperature Range		-40°C to 85°C
Storage Temperature Range		-55°C to 150°C
ESD	HBM	2KV
	MM	200V

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

Ordering information

ACE72233Z XX + H

- Halogen - free
- Pb - free
- BN：SOT-23-5

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.