ACE7220E

2MHz DC/DC Step-Down Converter

Description

The ACE7220E devices operate from an input voltage range of 2.5V to 5.5V and provide output voltages from 0.6V to VIN, making the ACE7220E ideal for low voltage power conversions. The ACE7220E is a high-efficiency, DC-to-DC step-down switching regulator, capable of delivering up to 2A of output current. Running at a fixed frequency of 2MHz 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. Built-in EMI reduction circuitry makes this converter ideal power supply for RF applications. Internal soft-start control circuitry reduces inrush current. Short-circuit and thermal-overload protection improves design reliability.

Features

- 2MHz Switching Frequency
- Input Voltage Range: 2.5V-5.5V
- Up to 2A Max Output Current
- Up to 94% Efficiency
- Light Load operation
- Internal Compensation

Application

- Telecom Devices
- LCD TV / Set Top Box
- IP CAM

Absolute Maximum Ratings

Parameter		Value
IN, EN, SW Voltage		-0.3V to 7.5V
FB Voltage		-0.3V to 6V
Thermal Resistance (1)	θ_{JA}	106°C/W
	θ_{JC}	57°C/W
Junction Temperature		150°C
Storage Temperature Range		-55°C to 150°C
Lead Temperature (Soldering 10sec)		260°C
ESD HBM (Human Body Mode)		300V

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

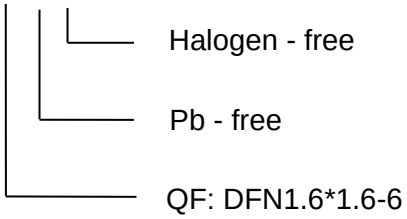
Recommended Operating Conditions

Parameter	Value
Ambient Temperature Range	-40°C to 85°C
Junction Temperature Range	-40°C to 125°C

Note: The device is not guaranteed to function outside its operating conditions.

Ordering Information

ACE7220E 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.

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