



ACE345N

5.5V, 2A Low Loss Power Distribution Switch

Description

ACE345N is ultra-low $R_{DS(ON)}$ switch with programmable current limit to protect the power source from over current and short circuit conditions. They incorporate over temperature protection and reverse blocking functions. ACE345N automatically discharges the output capacitors during shutdown.

Features

- Input voltage: 2.4V to 5.5V
- 2A load current capability
- Programmable current limit
- Enable polarity: active high
- Over temperature protection
- Reverse blocking (no body diode)
- OUT can be forced higher than IN at shutdown
- Output discharge function
ACE345N: Auto output discharge function
- Compact SOT23-5 package minimizes the board space

Applications

- USB 3G Data card
- USB Dongle
- Mini PCI Accessories

Absolute Maximum Ratings (Note1)

Parameter	Value
All pins	-0.3V to 6V
Power Dissipation, PD@ $T_A=25^{\circ}\text{C}$	0.6W
Package Thermal Resistance (Note 2)	θ_{JA} 200°C/W
	θ_{JC} 130°C/W
Junction Temperature Range	150°C
Lead Temperature (Soldering, 10sec.)	260°C
Storage Temperature Range	-65°C to 150°C
ESD Susceptibility (Note 2)	
HBM (Human Body Mode)	2kV
MM (Machine Mode)	200V

Note 1: Stresses beyond the “Absolute Maximum Ratings” may cause permanent damage to the device. These are stress ratings only. Functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.



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Note 2: θ_{JA} is measured in the natural convection at $T_A = 25^\circ\text{C}$ on a low effective single layer thermal conductivity test board of JEDEC 51-3 thermal measurement standard. Pin 2 of SOT23-5 packages is the case position for θ_{JC} measurement.

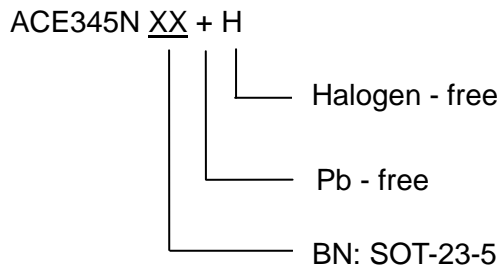
Note 3: The device is not guaranteed to function outside its operating conditions.

Recommended Operating Conditions (Note 3)

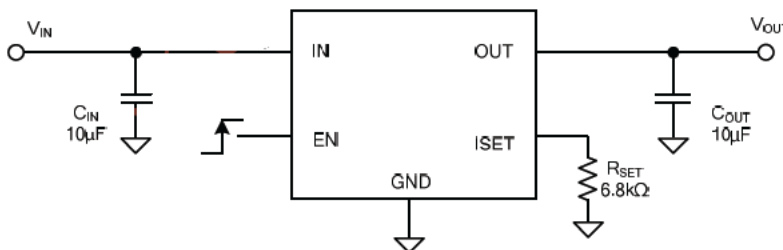
Parameter	Value
IN	2.4V to 5.5V
All other pins	0V to 5.5V
Junction Temperature Range	-40°C to 125°C
Ambient Temperature Range	-40°C to 85°C

Note 3: The device is not guaranteed to function outside its operating conditions

Ordering information



Typical Applications





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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 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.

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