



ACE3456N

Programmable Current Limit Switch

Description

ACE3456N is a programmable current limit switch with input voltage range selection and output voltage clamping. Extremely low $R_{DS(ON)}$ of the integrated protection N-channel FET helps to reduce power loss during the normal operation. Programmable soft-start time controls the slew rate of the output voltage during the start-up time. Independent enable control allows the complicated system sequencing control. It integrates the over-temperature protection shutdown and auto-recovery with hysteresis. This IC along with small DFN3X3-10 footprint provides small PCB area application.

Features

- Wide Input Voltage Range from 2.5V to 15V with surge up to 30V
- Extremely Low $R_{DS(ON)}$ for the Integrated Protection Switch: 40 m Ω
- Programmable Soft-Start Time
- Programmable Current Limit
- Short-circuit Protection
- Selectable Input Range and Clamping Output Voltage Threshold.
- Enable Interface Pin
- Thermal Shutdown Protection & Auto Recovery
- RoHS Compliant and Halogen Free
- Compact package: DFN3X3-10

Applications

- Notebook PC
- pad Mini
- Server
- Service PC



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Absolute Maximum Ratings (Note1)

Parameter	Value
Supply Input Voltage	30V
EN pin, VCP pin	30V
Power Dissipation, $P_D @ T_A = 25^\circ\text{C}$ DFN3X3-10	2.6W
Package Thermal Resistance (Note 2)	θ_{JA} 38°C/W
	θ_{JC} 8°C/W
Junction Temperature Range	125°C
Lead Temperature (Soldering, 10sec.)	260°C
Storage Temperature Range	-65°C to 150°C

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.

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} JC measurement.

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

Recommended Operating Conditions (Note 3)

Parameter	Value
Supply Input Voltage	2.5V to 15V
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.

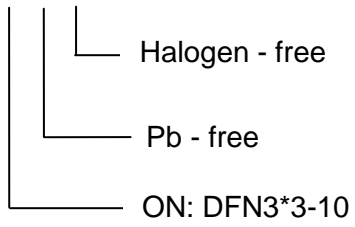


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Ordering information

ACE3456N XX + H





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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.