



ACE32755Y

5.5V, 2.5A Low Loss Power Switch

Description

The ACE32755Y power distribution switch is intended for applications where precision current limiting is required or heavy capacitive loads and short circuits are encountered. The power switch rising and falling times are controlled to minimize current surges during turning on/off. The ACE32755Y device limits the output current under a safe level by using a constant current mode when the output load exceeds the current limit threshold. The ACE32755Y is available in the SOT-23-5 packages. It is rated over the -40°C to 85°C temperature range.

Features

- Input voltage: 2.7V to 5.5V
- Typical 70mΩ on-resistance
- 2.5A load current capability
- Programmable current limit
- Enable polarity:
ACE32755YA: Active high
ACE32755YB: Active Low
- Over current protection, short circuit protection and over temperature protection
- Reverse blocking (no body diode)
- No reverse current when power ON or power OFF
- Compact SOT-23-5 package minimizes the board space

Application

- USB Ports/Hubs
- VOIP Phones
- Set-Top Boxes



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Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
All Pins		-0.3 ~ 6	V
Power Dissipation	(P_D @ $T_A=25^\circ\text{C}$)	0.6	W
Package Thermal Resistance	θ_{JA}	250	$^\circ\text{C/W}$
	θ_{JC}	130	$^\circ\text{C/W}$
Junction Temperature Range		150	$^\circ\text{C}$
Lead Temperature (Soldering, 10 sec.)		260	$^\circ\text{C}$
Storage Temperature Range	(T_{STG})	-65 to 150	$^\circ\text{C}$
ESD Susceptibility	HBM (Human Body Mode)	6	kV
	CDM (Charged Device Mode)	2	kV

Note:

Stresses beyond those listed under “Absolute Maximum Rating” may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other condition beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability. Input and output negative ratings may be exceeded if input and output diode current ratings are observed

Recommended Operating Conditions

Parameter	Rating	Unit
IN	2.7 ~ 5.5	V
All Other Pins	0 ~ 5.5	V
Junction Temperature Range	-40 to 125	$^\circ\text{C}$
Ambient Temperature Range	-40 to 85	$^\circ\text{C}$

Note:

The Recommended Operating Conditions table defines the conditions for actual device operation to ensure optimal performance to the datasheet specifications. ACE does not recommend exceeding them or designing to Absolute Maximum Ratings.

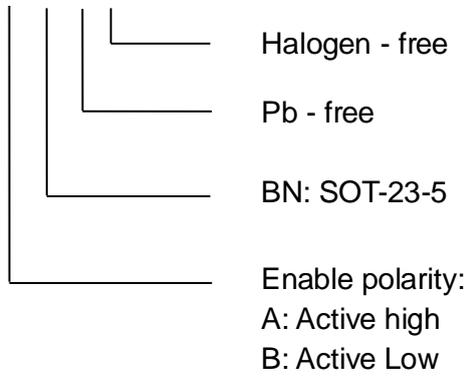


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Ordering Information

ACE32755Y X 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 Technology 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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