



# ACE803N/ACE809N/ACE810N

## Ultra Low Power Microprocessor Reset IC

### Description

The ACE803N/ACE809N/ACE810N series are micro-processor ( $\mu\text{P}$ ) supervisory circuits used to monitor the power supplies in  $\mu\text{P}$  and digital systems. They provide excellent circuit reliability and low cost by eliminating external components.

These circuits perform a single function: they assert a reset signal whenever the  $V_{\text{CC}}$  supply voltage declines below a preset threshold, keeping it asserted for at least 140ms after  $V_{\text{CC}}$  has risen above the reset threshold.

The ACE809N/810N have CMOS outputs, The ACE803N has open drain output. The ACE803N/809N have an active-low RESET output, while the ACE810N has an active-high RESET output. The reset comparator is designed to ignore fast transients on  $V_{\text{CC}}$ , and the outputs are guaranteed to be in the correct logic state for  $V_{\text{CC}}$  down to 1.15V over the temperature range.

### Features

- Precise Reset Threshold:  $\pm 2.5\%$
- CMOS Output(ACE809N/810N) and Open Drain Output(ACE803N)
- 140ms min Reset Pulse Width
- 3.2 $\mu\text{A}$  Supply Current @ $V_{\text{CC}}=3\text{V}$
- Guaranteed Reset Valid to  $V_{\text{CC}} = +1.15\text{V}$
- Power Supply Transient Immunity
- Operating Temperature Range:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

### Application

- Computers
- Portable/Battery-Powered Equipment
- Intelligent Instruments
- Controllers

### Absolute Maximum Ratings

Parameter	Symbol	Max	Unit
Terminal Voltage (With respect to GND)	$V_{\text{CC}}$	-0.3~6	V
	$\overline{\text{RESET}}, \text{RESET}$		
Input / Output Current	$V_{\text{CC}}$	20	mA
	$\overline{\text{RESET}}, \text{RESET}$		
Thermal resistance	$\theta_{\text{JA}}$	300	$^{\circ}\text{C}/\text{W}$
Operating Temperature	$T_{\text{A}}$	-40~85	$^{\circ}\text{C}$
ESD Rating (HBM)		4	KV
Storage Temperature	$T_{\text{S}}$	-60 to 150	$^{\circ}\text{C}$

Note: Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions 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.

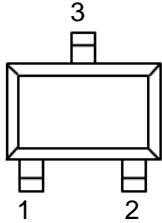


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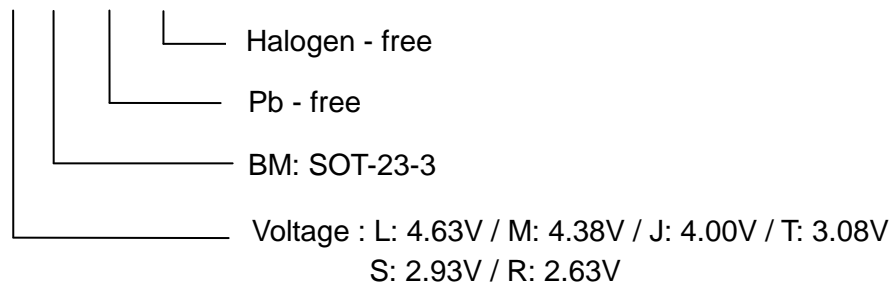
## Packaging Type

SOT-23-3



## Ordering information

ACE803N/809N/810N 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 Electronics 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 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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