



# ACE30505U.30511U.30512U

## 4-Pin $\mu$ P Voltage Monitors with Manual Reset Input

### Description

The ACE30505U.30511U.30512U are low-power microprocessor ( $\mu$ P) supervisory circuits used to monitor power supplies in  $\mu$ P and digital systems. They provide excellent circuit reliability and low cost by eliminating external components and adjustments when used with 5V-powered or 3V-powered circuits. The ACE30505U.30511U.30512U also provide a debounced manual reset input.

These devices perform a single function: They assert a reset signal whenever the VCC supply voltage falls below a preset threshold, keeping it asserted for at least 140ms after VCC has risen above the reset threshold. Reset thresholds are available for operation with a variety of supply voltages.

The ACE30505U has an open-drain output stage, while the ACE30511U.30512U have push-pull outputs. The ACE30505U's open-drain  $\overline{\text{RESET}}$  output requires a pull-up resistor that can be connected to a voltage higher than VCC. The ACE30505U.30511U have an active-low  $\overline{\text{RESET}}$  output, while the ACE30512U has an active-high RESET output. The reset comparator is designed to ignore fast transients on VCC, and the outputs are guaranteed to be in the correct logic state for VCC down to 1V.

Low supply current makes the ACE30505U.30511U.30512U ideal for use in portable equipment.

### Features

- No External Components
- VCC Transient Immunity
- Correct Logic Output Guaranteed to VCC=1.0V
- Precision VCC Monitoring of 3.0V, 3.3V and 5.0V Supplies
- 2 $\mu$ A Supply Current
- 140ms Minimum Power-On Reset Pulse Width
- Guaranteed Over Temperature
- Available in 3 Output Configurations:
- 4-Pin SOT143 Package

### Application

- Computers
- Controllers
- Portable/Battery-Powered Equipments
- Intelligent Instruments
- Critical  $\mu$ P and  $\mu$ C Power Monitoring



# ACE30505U.30511U.30512U

## 4-Pin $\mu$ P Voltage Monitors with Manual Reset Input

### Absolute Maximum Ratings (Note)

Parameter	Symbol	Value	Unit
Supply Voltage	$V_{CC}$	-0.3 to 6.0	V
RESET, RESET (Push-Pull)		-0.3 to ( $V_{CC}+0.3$ )	
RESET (Open-Drain)		-0.3 to 6.0	
Input Current, $V_{CC}$ , MR	$I_{CC}$	20	mA
Output Current, RESET, RESET	$I_O$	20	mA
Continuous Power Dissipation (Derate 4mW/°C above 70°C)	$P_D$	320	mW
Operating Temperature Range	$T_A$	-40 to 105	°C
Storage Temperature Range	$T_{STG}$	-65 to 160	°C
Lead Temperature (Soldering, 10s)		300	°C

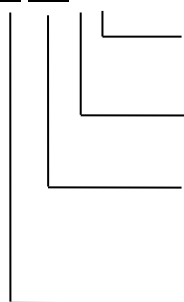
Note: Stresses beyond those listed under “Absolute maximum Ratings” may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications are not implied.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

### Selection Table

Part Number	Output Type
ACE30505U(L/M/J/T/S/R/Z)	Open-Drain Active-Low RESET Output
ACE30511U(L/M/J/T/S/R/Z)	Push-Pull Active-Low RESET Output
ACE30512U(L/M/J/T/S/R/Z)	Push-Pull Active-High RESET Output

### Ordering information

ACE30505U.30511U.30512U X XX+ H



Halogen - free

Pb - free

ID: SOT-143

L:4.63V/M:4.38V/J:4.0V/T:3.08V

S:2.93V/R:2.63V/Z:2.32V



# **ACE30505U.30511U.30512U**

## **4-Pin $\mu$ P Voltage Monitors with Manual Reset Input**

### 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.

ACE Technology Co., LTD.  
<http://www.ace-ele.com/>