



# ACE501

## 250mA CMOS Low Dropout Voltage Low Consumption Regulator

### Description

ACE501 series is a group of positive voltage output, low power consumption, low dropout voltage, three terminal regulator. It can provide 250mA output current when input / output voltage differential drops to 400mV ( $V_{in}=4.0V$ ,  $V_{out}=3.0V$ ). The very low power consumption of ACE501 can greatly improve natural life of batteries.

ACE501 can provide output value in the range of 1.2V~6.0V in 0.1V steps. It also can be customized on command.

ACE501 includes high accuracy voltage reference, error amplifier, current limit circuit and output driver module.

ACE501 has well load transient response and good temperature characteristic, which can assure the stability of chip and power system, and it uses trimming technique to guarantee output voltage accuracy within  $\pm 2\%$ .

### Features

- Low Power Consumption: 1.0uA (Min.)
- Maximum Output Current: 250mA
- Small Dropout Voltage 170mV@100mA ( $V_{out}=3.0V$ ) / 400mV@250mA ( $V_{out}=3.0V$ )
- Input Voltage Range: 1.5V~10V
- Output Voltage Range: 1.2V~6.0V (customized on command in 0.1V steps)
- High Accurate:  $\pm 2\%$  ( $\pm 1\%$  customized)
- Output Current Limit

### Application

- Battery Powered equipment
- Power Management of MP3. PDA. DSC. Mouse. PS2 Games
- Reference Voltage Source
- Regulation after Switching Power



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### Absolute Maximum Ratings

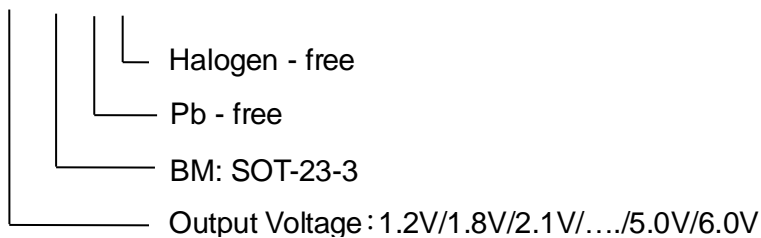
Parameter	Value
Max Input Voltage	10V
Junction Temperature (T <sub>J</sub> )	125°C
Ambient Temperature (T <sub>A</sub> )	- 40°C ~85°C
Power Dissipation	0.15W
Storage Temperature (T <sub>S</sub> )	- 45°C ~150°C
Lead Temperature and Time	260°C,10S

### Recommended Work Conditions

Item	Min	Max	Unit
Input Voltage Range		8	V
Ambient Temperature	-40	125	°C

### Ordering information

ACE501 XX 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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