



# ACE5316P

## 16V, Low Power Consumption LDO

### Description

The ACE5316P series is a set of three-terminal, low power, high voltage regulators implemented in CMOS technology. The series features extremely low quiescent current which is typically 2.0 $\mu$ A. They allow input voltages as high as 16V. The device provides large current with a significantly small dropout voltage.

The ACE5316P consists of a high-precision voltage reference, an error correction circuit, an over temperature protection circuit, and a current limited output driver. They are available with several fixed output voltages ranging from 2.5V to 5.0V. CMOS technology ensures low dropout voltage and low current consumption.

The ACE5316P regulators are available in standard SOT89-3 and SOT23-3 packages. Standard products are Pb- free and Halogen-free.

### Features

- Input voltage: 3V~16V
- Output range: 2.5V~5.0V
- Output current: 500mA (Within Max Power Dissipation)
- Dropout voltage: 200mV @  $V_{OUT}=3.3V$ ,  $I_{OUT}=100mA$
- Quiescent current: 2 $\mu$ A Typ.
- Good line regulation: 0.01%/V
- Good load regulation: 5mV@ $1mA \leq I_o \leq 50mA$
- Low temperature coefficient: 0.07mV/ $^{\circ}C$
- Soft start

### Application

- Battery powered equipment
- Voltage regulator for microprocessor
- Voltage regulator for LAN cards
- Wireless communication equipment
- Audio/Video equipment



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### Absolute Maximum Ratings <sup>(Note)</sup>

Symbol	Items	Value	Unit
$V_{IN}$	Input Voltage	-0.3~17	V
$V_{EN}$	Enable Pin	-0.3~ $V_{IN}$	V
$P_{DMAX}$	Power Dissipation	OTP Limited	W
$T_J$	Junction Temperature	-40~125	°C
$T_{stg}$	Storage Temperature	-55 to 150	°C
$T_{solder}$	Package Lead Soldering Temperature	260°C, 10s	

**Note:** Exceed these limits to damage to the device. Exposure to absolute maximum rating conditions may affect device reliability.

### Recommended Operation Range

Symbol	Items	Value	Unit	
$V_{IN}$	VIN Supply Voltage	3 to 16	V	
$R_{\theta JA}$	Thermal Resistance on PCB	SOT-89-3	75	°C/W
		SOT-23-3	220	
$T_{OPT}$	Operating Temperature	-40 to 85	°C	

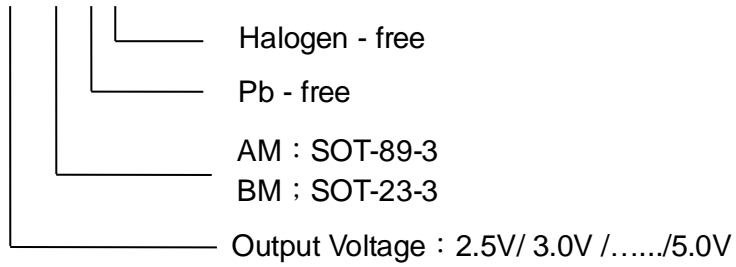


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## Ordering information

ACE5316PXX 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 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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