



ACE5019A

18V Low Current Consumption 350mA CMOS Voltage Regulator

Description

The ACE5019A series are a group of positive voltage regulators manufactured by CMOS technologies with low power consumption and low dropout voltage, which provide large output currents even when the difference of the input-output voltage is small. The ACE5019A series can deliver 300mA output current and allow an input voltage as high as 18V. The series are very suitable for the battery-powered equipments, such as RF applications and other systems requiring a quiet voltage source.

Features

- Low Quiescent Current: 2 μ A
- Operating Voltage Range: 2.5V~18V
- Output Current: 350mA
- Low Dropout Voltage: 160mV@100mA($V_{OUT}=3.3V$)
- Output Voltage: 1.2~5.0V
- High Accuracy: $\pm 2\%$ / $\pm 1\%$ (Typ.)
- High Power Supply Rejection Ratio: 65dB@1kHz
- Low Output Noise:
- $27 \times V_{OUT} \mu V_{RMS}$ (10Hz~100kHz)
- Excellent Line and Load Transient Response
- Built-in Current Limiter, Short-Circuit Protection

Application

- Cordless Phones
- Radio control systems
- Laptop, Palmtops and PDAs
- Single-lens reflex DSC
- PC peripherals with memory
- Wireless Communication Equipments
- Portable Audio Video Equipments
- Car Navigation Systems
- LAN Cards
- Ultra Low Power Microcontroller



ACE5019A

18V Low Current Consumption 350mA CMOS Voltage Regulator

Absolute Maximum Ratings ⁽¹⁾ Unless otherwise specified, $T_A=25^{\circ}\text{C}$

Parameter		Symbol	Max	Unit
Input Voltage ⁽²⁾		V_{IN}	-0.3~24	V
Output Voltage ⁽²⁾		V_{OUT}	-0.3~10	V
CE PIN Voltage		V_{CE}	-0.3~24	V
Output Current		I_{OUT}	600	mA
Power Dissipation	SOT-23-3	Pd	0.4	W
	SOT-23-5		0.4	
	SOT-89-3		0.6	
Operating Junction Temperature Range ⁽³⁾		T_{opr}	- 40~125	$^{\circ}\text{C}$
Storage Temperature		T_{stg}	- 40~125	$^{\circ}\text{C}$
Lead Temperature(Soldering, 10 sec)		T_{solder}	260	$^{\circ}\text{C}$
ESD rating ⁽⁴⁾		Human Body Model -(HBM)	8	kV
		Machine Model- (MM)	400	V

Note:

- (1) 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 under recommended operating conditions is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.
- (2) All voltages are with respect to network ground terminal.
- (3) The ACE5019A includes over temperature protection that is intended to protect the device during momentary overload. Junction temperature will exceed 125°C when over temperature protection is active. Continuous operation above the specified maximum operating junction temperature may impair device reliability.
- (4) ESD testing is performed according to the respective JESD22 JEDEC standard.
The human body model is a 100 pF capacitor discharged through a 1.5k Ω resistor into each pin. The machine model is a 200pF capacitor discharged directly into each pin.

Recommended Operating Conditions

Parameter	MIN.	MAX.	Units
Supply voltage at V_{IN}	2.5	18	V
Operating junction temperature range, T_j	-40	125	$^{\circ}\text{C}$
Operating free air temperature range, T_A	-40	85	$^{\circ}\text{C}$

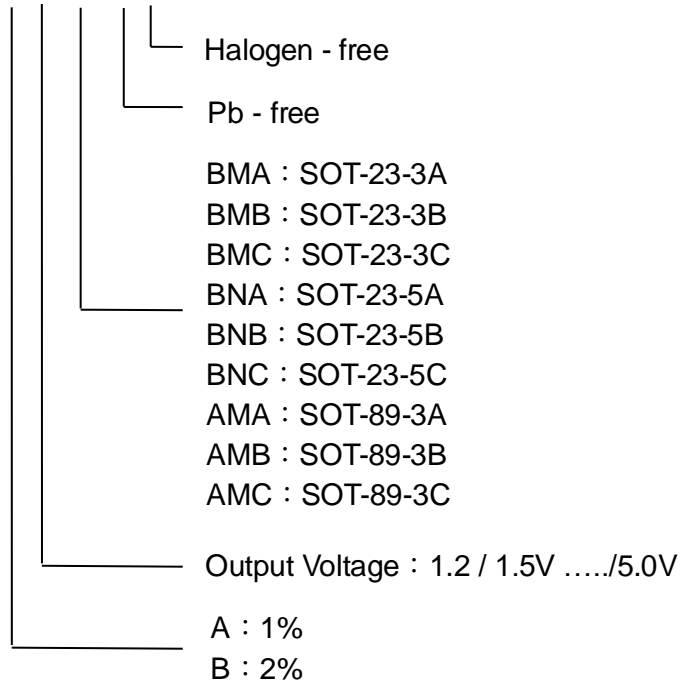


ACE5019A

18V Low Current Consumption 350mA CMOS Voltage Regulator

Ordering information

ACE5019A X XX XX + H





ACE5019A

18V Low Current Consumption 350mA CMOS Voltage Regulator

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/>