



ACE5018T

Ultra Low Current Consumption 500mA CMOS Voltage Regulator

Description

The ACE5018T series are a group of positive voltage regulators manufactured by CMOS technologies with ultra low power consumption and low dropout voltage, which provide large output currents even when the difference of the input-output voltage is small. The ACE5018T series can deliver 500mA output current and allow an input voltage as high as 8V. 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: 0.8 μ A
- Operating Voltage Range: 1.8V~8V
- Output Current: 500mA
- Low Dropout Voltage: 110mV@100mA ($V_{OUT}=3.3V$)
- Output Voltage: 1.2~5.0V
- High Accuracy: $\pm 2\%/\pm 1\%$ (Typ.)
- High Power Supply Rejection Ratio: 50dB@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

- Portable consumer equipments
- Radio control systems
- Laptop, Palmtops and PDAs
- Wireless Communication Equipments
- Portable Audio Video Equipments
- Ultra Low Power Microcontroller



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Absolute Maximum Ratings ⁽¹⁾ Unless otherwise specified, T_A=25°C

Parameter		Symbol	Max	Unit
Input Voltage ⁽²⁾		V _{IN}	-0.3~9	V
Output Voltage ⁽²⁾		V _{OUT}	-0.3~V _{IN} +0.3	V
Output Current		I _{OUT}	600	mA
Power Dissipation	SOT-23-3	P _D	0.4	W
	SOT-23-5		0.4	
	DFN1*1-4		0.4	
	SOT-89-3		0.6	
	SOT-89-5		0.6	
Operating Temperature		T _J	- 40 to 125	°C
Storage Temperature		T _{stg}	- 40 to 125	°C
Soldering Temperature & Time		T _{solder}	260°C,10s	

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.

Recommended Operating Conditions

Parameter	MIN.	MAX.	Units
Supply voltage at V _{IN}	1.8	8	V
Operating junction temperature range, T _J	-40	125	°C
Operating free air temperature range, T _A	-40	85	°C

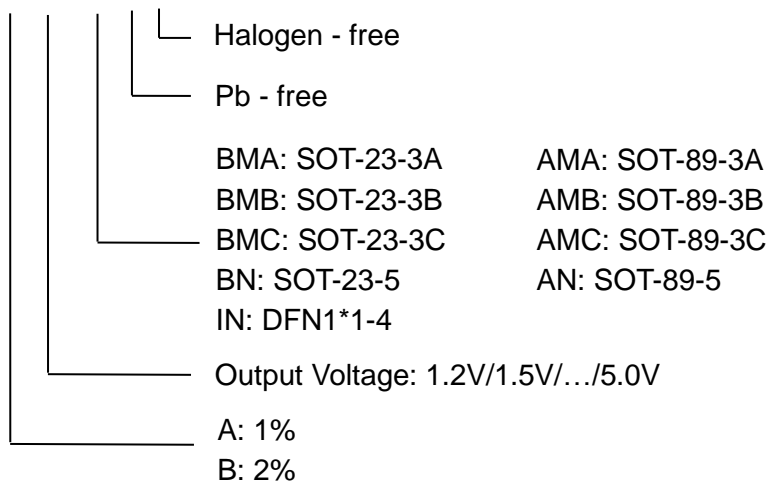


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Ordering information

ACE5018T X 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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