



ACE51236RT

High PSRR, High Speed, Low Noise, CMOS LDO

Description

The ACE51236RT is a high accuracy, low noise, high speed, low dropout CMOS Linear regulator with high ripple rejection and fast discharge function. ACE51236RT can provide product selections of output value in the range of 1.2V~3.6V by every 0.1V step. The current limiter's fold-back circuit also operates as a short circuit protection and an output current limiter at the output pin. The device offers a new level of cost effective performance in cellular phones, surveillance system, Bluetooth, wireless and other portable electronic devices. The ACE51236RT regulators are available in standard SOT-23-5 and DFN1*1-4 packages. Standard products are Pb-free and Halogen-free.

Features

- Input voltage: 2.5V~6.5V
- Output range: 1.2V~3.6V (customized by every 0.1V step)
- Maximum output current: 300mA
- PSRR: 75dB @1KHz
- Dropout voltage: 220mV @ $I_{OUT}=200mA$
- Quiescent current: 50 μA Typ.
- Shut-down current: <1 μA
- Recommend capacitor: 1 μF
- Ultra-low output noise: 100 $\mu VRMS$

Application

- Bluetooth and wireless handsets
- Cellphones
- Other portable electronic devices



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Absolute Maximum Ratings ^(Note)

Item	Symbol	Min	Max	Unit	
Input Voltage	V_{IN}	-0.3	8	V	
Output Current	I_{OUT}	550		mA	
Power Dissipation	SOT-23-5	$P_{D_{MAX}}$	0.45		W
	DFN1*1-4		0.55		
Thermal Resistance	SOT-23-5	$R_{\theta JA}$	270		°C/W
	DFN1*1-4		220		
Junction Temperature	T_J	-40	125	°C	
Ambient Temperature	T_A	-40	85	°C	
Storage Temperature	T_{STG}	-55	150	°C	
Package Lead Soldering Temperature	T_{SOLDER}	260°C, 10s			

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

Recommended Operating

Item	Symbol	Min	Max	Unit
Supply Voltage	V_{IN}	2.5	6.5	V
Output Current	I_{OUT}	<300		mA
Operating Temperature	T_{OPT}	-40	85	°C
Input Capacitor	C_{IN}	1μF ~10μF, 1μF is recommended		μF
Output Capacitor	C_{OUT}			μF

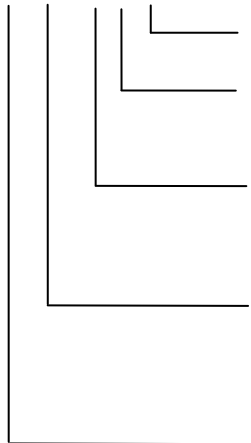


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Ordering Information

ACE51236RT X XX XX+ H



Halogen - free

Pb - free

BN: SOT-23-5

I N: DFN1*1-4

Output Voltage:

1.2V/1.3V/1.5V/1.8V/2.2V/2.5V/2.6V/2.7V/2.8V/2.9V/
3.0V/3.3V/3.6V

Default: No Fast Discharge

D: Fast Discharge



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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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