



ACE507RT

300mA, CMOS LDO

Description

The ACE507RT series are low dropout linear regulators and optimized to provide a high performance solution for battery power system to deliver low quiescent current. The devices offer a new level of cost effective performance in cellular phones, laptop and notebook computers, and other portable devices.

The ACE507RT series are designed to make use of low cost ceramic capacitors which ensure the stability of the output current, and enhance the efficiency in order to prolong the battery life of those portable devices. ACE507RT can provide product selections of output value in the range of 1.2V~3.6V by every 0.1V step. The ACE507RT regulators are available in SOT-23-3 and SOT-23-5 packages. Standard products are Pb-free and Halogen free products.

Features

- Input voltage: 2.5V~6.5V
- Output range: 1.2V~3.6V (customized by every 0.1V step)
- Output current: 300mA @ $V_{OUT} > 2V$, $0.5V \leq V_{IN} - V_{OUT} \leq 1V$
- Dropout voltage: 110mV @ $I_{OUT} = 100mA$ (SOT-23-5)
- Quiescent current: 0.9 μ A Typ.
- Shut-down current: < 0.1 μ A
- Recommend capacitor: 1 μ F

Application

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



ACE507RT

300mA, CMOS LDO

Absolute Maximum Ratings ^(Note1)

Item	Symbol	Min	Max	Unit
Input Voltage	V_{IN}	-0.3	8	V
Output Current ^(Note2)	I_{OUT}	500		mA
Power Dissipation	SOT-23-3	0.40		W
	SOT-23-5	0.45		
Thermal Resistance	SOT-23-3	300		°C/W
	SOT-23-5	270		
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:

(1). Exceed these limits to damage to the device. Exposure to absolute maximum rating conditions may affect device reliability.

(2). $V_o=3.3V$, $V_{in}=4.3V$.

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

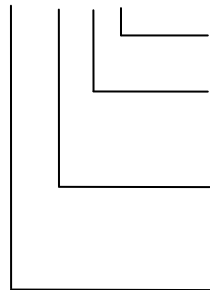


ACE507RT

300mA, CMOS LDO

Ordering Information

ACE507RT XX XX + H



Halogen - free

Pb - free

BM: SOT-23-3

BN: SOT-23-5

Output Voltage:

1.2V/1.5V/1.8V/2.5V/2.8V/3.0V/3.3V/3.6V



ACE507RT

300mA, CMOS LDO

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/>