ACE52570T

Low Power Consumption, High PSRR CMOS LDO

Description

The ACE52570T is a high accuracy, low quiescent current, low noise, high speed, low dropout CMOS Linear regulator with high ripple rejection and fast load transient response function. The device offers a new level of cost-effective performance in portable, Battery powered equipment. ACE52570T can provide product selections of output value in the range of 1.2V~3.3V by every 0.1V step. The current limiter fold-back circuit also operates as a short circuit protection and an output current limit at the output pin.

Features

- Input voltage: 2.5V~5.5V
- Output range: 1.2V~3.3V (Customized by every 0.1V step)
- Maximum output current: 300mA @ V_{IN}- V_{OUT}=1V
- PSRR: 75dB @1KHz
- Dropout voltage: 55mV @ I_{OUT}=50mA when V_{OUT}=3.3V
- Quiescent current: 3.5μA Typ.
- Shut-down current: < 0.5μA
- Recommend capacitor: 1μF

Applications

- Portable, Battery powered equipment
- Ultra-low power microcontrollers
- Bluetooth and wireless handsets
- Notebook computer

Absolute Maximum Ratings (Note)

Symbol	Items		Value	Unit
V_{IN}	Input Voltage		-0.3~7	V
I_{OUT}	Continues Output Current		300	mA
P_{DMAX}	Power Dissipation	TSOT-23-3	0.25	W
		SOT-23-5	0.3	
		DFN1*1-4	0.6	
T_J	Junction Temperature		-40~125	℃
T_A	Ambient Temperature		-40~85	℃
T_{STG}	Storage Temperature		-55 to 150	℃
T_{SOLDER}	Package Lead Soldering Temperature		260℃, 10s	

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

P_{DMAX}= (V_{IN}-V_{OUT}) *I_{OUTMAX}

Recommended Operating Range

Symbol	Items	Value	Unit
V_{IN}	Supply Voltage	2.5 to 5.5	V
I_{OUT}	Output Current	<250	mA
T_{OPT}	Operating Temperature	-40 to +85	℃

Ordering information

ACE52570T XX XX + H

- Halogen - free
- Pb - free
- BMS：TSOT-23-3
  BN：SOT-23-5
  IN ：DFN1*1-4
- Output Voltage：1.2V/1.5V/……/3.3V

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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 shoes 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.