ACE51770X

LDO 7V 300mA 75dB High PSRR

Description

ACE51770X is a low dropout, positive linear regulator with very low quiescent current. It can supply 600mA output current with a input range from 1.7V to 7V, which makes it suitable for all kinds of applications. ACE51770X uses advanced CMOS technology to achieve very low dropout voltage (300mV @300mA). Fast structural design achieves 75dB PSRR at 1kHz while still maintaining a small 50uA quiescent current. Trimming technique is used to guarantee output voltage accuracy within ±1%.

ACE51770X provides full fault protection including current limit, short circuit protection and thermal shut down. Only 1uF ceramic capacitor is required to maintain stability and fast response. 4000V HBM ESD is guaranteed by design. ACE51770X is available in TSOT-23-3, SOT-23-5, DFN1*1-4 packages which are lead free.

Features

- 1.7V to 7V wide input range
- 300mA maximum output current
- Very low dropout voltage: 300mV @300mA (Vout=3.3V)
- 75dB PSRR @1kHz
- 50uA low quiescent current
- ±1% output accuracy
- Support Fixed Output Voltage:
  0.7V,1.0V,1.2V,1.5V,1.8V,2.5V,2.8V,3.0V,3.3V, Other output can be customized
- 0.02%/V Line regulation
- Auto discharge function
- -40°C ~125°C wide operating temperature
- Foldback short circuit protection.
- 150°C thermal protection
- 4000V HBM ESD

Application

- Battery powered portable devices
- Smart phone, tablet
- Hi resolution camera sensor power
- Wireless modules
- RF, PLL, VCO clock power

Absolute Maximum Ratings

Parameter		Value
Max Input Voltage		10V
Max Operating Junction Temperature(T_j)		150°C
Ambient Temperature(T_a)		-40°C to 125°C
Package Thermal Resistance	TSOT-23-3	280°C /W
	SOT-23-5	220°C /W
	DFN1*1-4	250°C /W
Storage Temperature(T_s)		-40°C to 150°C
Lead Temperature & Time		260°C,10S

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

Ordering information

ACE51770X XX XX + H

- Halogen - free
- Pb - free
- BMS：TSOT-23-3
  BN ：SOT-23-5
  I N ：DFN1*1-4
- Output Voltage: 0.7V/1.0V/1.2V/1.5V/1.8V/2.5V/2.8V/3.0V/3.3V

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.