



# ACE525C

## 300mA High PSRR, Linear Regulator

### Description

ACE525C series are a group of positive voltage output, low power consumption, low dropout voltage regulators.

ACE525C can provide output value in the range of 1.0V~4.5V every 0.1V step. It also can be customized on command. ACE525C can also work under a wide input voltage ranging from 1.5V to 6V.

ACE525C includes high accuracy voltage reference, error amplifier, current limit circuit and output driver module.

ACE525C has excellent load and line transient response and good temperature characteristics, which can assure the stability of chip and power system. And it uses trimming technique to guarantee output voltage accuracy within  $\pm 2\%$ .

### Features

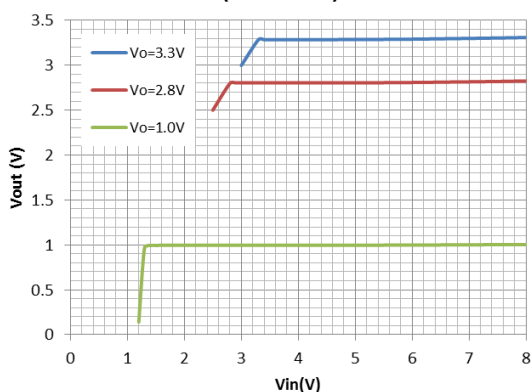
- Input voltage range: 1.5~6V
- Output voltage range: 1.0V~4.5V (customized on command every 0.1V step)
- Low power consumption: 35uA (Typ.)
- Low output noise (47uVRMS)
- Shutdown mode: 0.1uA
- Low dropout voltage: 300mV@300mA (Typ.)
- High ripple rejection: 70dB@1KHz (Typ.)
- Low temperature coefficient:  $\pm 100\text{ppm}/^\circ\text{C}$
- Excellent line regulation: 0.05%/V
- Build-in chip enable circuit
- Highly accurate:  $\pm 2\%$
- Output current limit
- Fold-back output short circuit protection

### Application

- Power source for cellular phones and various kind of PCSs
- Battery Powered equipment
- Power Management of MP3, PDA, DSC, Mouse, PS2 Games
- Voltage Reference
- Regulation after Switching Power

### Typical Performance Characteristic:

**Line Regulation**  
( $I_{out}=0\text{mA}$ )





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## Absolute Maximum Ratings

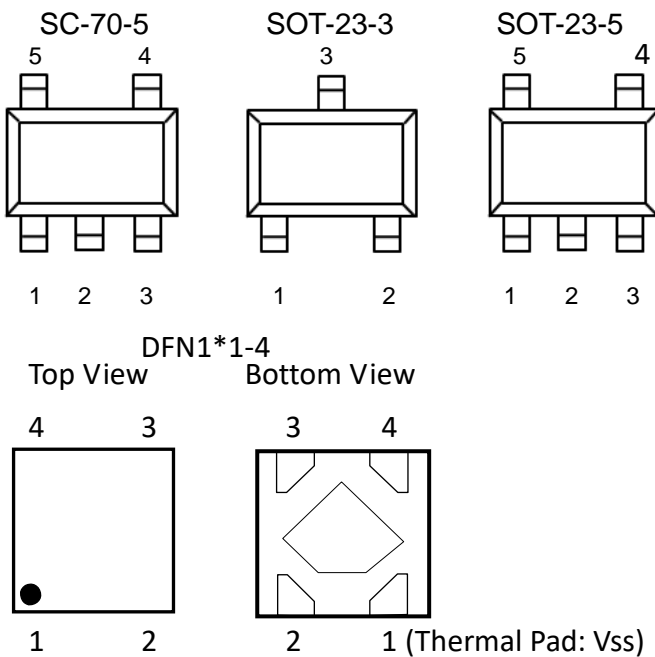
Parameter	Symbol	Max	Unit
Max Input voltage	$V_{IN}$	8	V
Power Dissipation			
SC-70-5		250	mW
SOT-23-3L		250	
SOT-23-5		250	
DFN1*1-4		600	
Junction temperature	$T_J$	125	°C
Storage temperature	$T_S$	- 45 to 150	°C
Output Current		300	mA
Ambient Temperature	$T_A$	-40 to 85	°C

Note: Heat Sink Area of PCB for DFN1x1-4 is recommended at least 2.5mmx4mm.

Exceed these limits to damage to the device.

Exposure to absolute maximum rating conditions may affect device reliability.

## Packaging Type



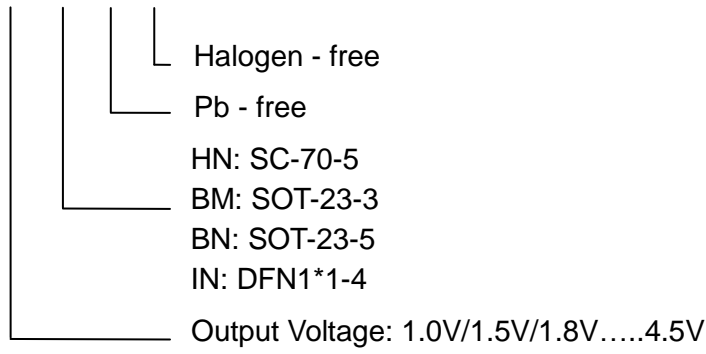


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## Ordering information

ACE525C 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 Electronics 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 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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