



# ACE52555T

## Low Dropout, 500mA/1A, High PSRR CMOS LDO

### Description

The ACE52555T series are ultra-low dropout, fast transient response, high current delivery, high PSRR CMOS LDO. The quiescent current consumed by the ACE52555T is typically 120uA over the entire input voltage range, making it attractive for consumer, networking applications that demand high output current. The ACE52555T series are available in wide output voltage range from 1.2V to 3.3V. The ACE52555T series offer thermal shutdown protection (OTP) and current limit functions, to maintain the stability of chip and power system at abnormal conditions. ACE52555T uses trimming technique to guarantee output voltage accuracy within  $\pm 2\%$ .

The ACE52555T series can choose the output current limit to be 500mA (minimum) or 1A (minimum) by alternating the LCON pin between “L” or “H”. The ACE52555T regulators are available in DFN1.2\*1.6-8 packages. Standard products are Pb-free and Halogen-free.

### Features

- Input voltage: 2.5V~5.5V
- Output range: 1.2V~3.3V (Customized by every 0.1V step)
- Output current: 500mA/1A
- Dropout voltage: 65mV @  $V_{OUT}=2.8V$ ,  $I_{OUT}=500mA$
- Quiescent current: 120 $\mu$ A Typ.
- PSRR: 80dB @  $f=1KHz$
- Reverse current protection

### Applications

- Portables
- Set Top Box
- Computer, Graphic card
- Network communication equipment
- Others portable electronics devices



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## Absolute Maximum Ratings

Symbol	Items	Value	Unit
$V_{IN}$	Input Voltage	-0.3~6.5	V
$V_{CE}$	CE voltage range	-0.3~ $V_{IN}$	V
$V_{LCON}$	LCON voltage range	-0.3~ $V_{IN}$	V
$V_{OUT}$	Output Voltage	-0.3~ $V_{IN}$	V
$P_{DMAX}$	Power Dissipation	0.7	W
$R_{\theta JA}$	Thermal resistance	165	$^{\circ}C/W$
$T_J$	Junction Temperature	-40~150	$^{\circ}C$
$T_A$	Ambient Temperature	-40~85	$^{\circ}C$
$T_{STG}$	Storage Temperature	-55~150	$^{\circ}C$
$T_{SOLDER}$	Package Lead Soldering Temperature	260 $^{\circ}C$ , 10s	
ESD Ratings	HBM	$\pm 8$	KV

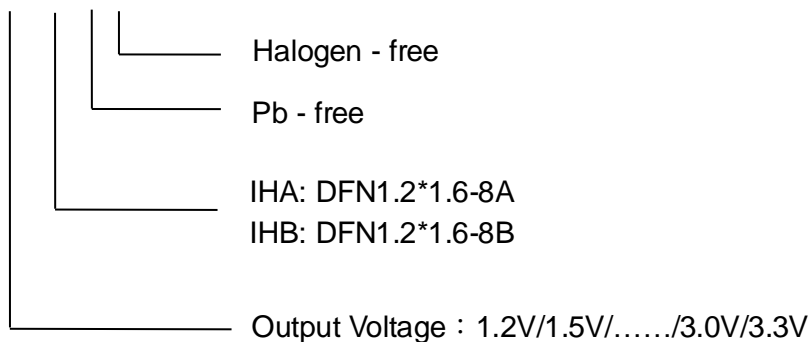
Note: Exceed these limits could damage the device. Exposure to absolute maximum rating conditions may affect device reliability.

## Recommended Operating Range

Symbol	Items	Value	Unit
$V_{IN}$	$V_{IN}$ Supply Voltage	2.5~5.5	V

## Ordering information

ACE5255T 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 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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