



# ACE32604RT

## Maximum 1A Current, Overvoltage Protection Switch

### Description

The ACE32604RT is a front-end over voltage and over current protection device. It achieves wide input voltage range from 2.8V to 36V. The over voltage threshold is set to internal default setting. The low resistance of integrated power path nFET switch ensures better performance for battery charging system applications. It can deliver up to 1A current to satisfy the battery supply system. It integrates the over-temperature protection shutdown and auto- recovery circuit with hysteresis. Also, it integrates over current protection function and recovery automatically.

### Features

- Absolute maximum input voltage: 36V
- Maximum load current: 1A
- Low power path resistance:
  - CSP-4: 305mΩ (Typ.)
  - DFN2\*2-8: 330mΩ (Typ.)
  - TSOT-23-3: 350mΩ (Typ.)
  - SOT-23-6: 340mΩ (Typ.)
- Fixed Internal OVP threshold: 6.1 (Typ.)
- OVP response time: 50ns
- Internal 15-ms Start-Up or OVP Recovery Delay
- Programmable over voltage threshold: 4V to 11V
- Thermal shutdown protection & Auto recovery
- Output short-circuit protection
- RoHS compliant and Halogen free
- Compact package: CSP-4, DFN2\*2-8, TSOT-23-3, SOT-23-6

### Application

- Battery Supplied System
- Smart Device
- Wearable Device



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### Absolute Maximum Ratings <sup>(Note)</sup>

Item	Symbol	Min	Max	Unit
Input Voltage	$V_{IN}$	-0.3	36	V
Output Voltage	$V_{OUT}$	-0.3	11	V
OVLO Voltage	$V_{OVLO}$	-0.3	20	V
Maximum Output Continues Load Current	$I_{OMAX}$	1		A
Power Dissipation	CSP-4	$P_{DMAX}$	0.62	W
	DFN2*2-8		1	W
	TSOT-23-3		0.4	W
	SOT-23-6		0.6	W
Thermal Resistance	CSP-4	$R_{\theta JA}$	200	°C/W
	DFN2*2-8		125	°C/W
	TSOT-23-3		300	°C/W
	SOT-23-6		210	°C/W
Junction Temperature	$T_J$	-40	150	°C
Storage Temperature	$T_{stg}$	-55	150	°C
Package Lead Soldering Temperature (10s)	$T_{solder}$	260		°C
ESD Susceptibility, Human Body Model	HBM	8		KV

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

### Recommended Operating

Item	Symbol	Min	Max	Unit
Input Supply Voltage	$V_{IN}$	5	30	V
Output Voltage	$V_{OUT}$	≤10		V
Continue Output Current	$I_{OUT}$	≤1		A
Peak Output Current		<2.5		A
OVLO Voltage	$V_{OVLO}$	0	12	V
Operating Temperature	$T_{OPR}$	0	85	°C

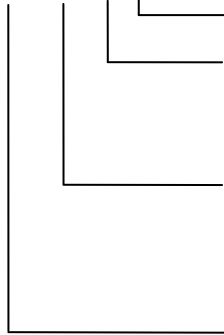


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## Ordering Information

ACE32604RT XX XXX + H



Halogen - free

Pb - free

CP4 : CSP-4

DN : DFN2\*2-8

BMS : TSOT-23-3

GM : SOT-23-6

Output Voltage:

61: 6.1V

Default: Adjustment



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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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