



ACE4018RT

1000mA, Standalone Linear Li-Ion Battery Charger

Description

The ACE4018RT is a complete constant-current & constant-voltage linear charger for single cell lithium-ion batteries. Its ESOP-8 package and low external component count make the ACE4018RT ideally suited for portable applications. Further more, the ACE4018RT can work within USB and wall adapter. No blocking diode is required due to the internal PMOSFET architecture and have prevent to negative Charge Current Circuit. Thermal feedback regulates the charge current to limit the die temperature during high power operation or high ambient temperature. The charge voltage is fixed at 4.2V or 4.35V, and the charge current can be programmed externally with a single resistor. The ACE4018RT automatically terminates the charge cycle when the charge current drops to 1/10th the programmed value after the final float voltage is reached. ACE4018RT Other features include current monitor, under voltage lockout, automatic recharge and two status pin to indicate charge termination and the presence of an input voltage.

Features

- Programmable Charge Current Up to 1000mA
- Maximum Power Point Tracking (MPPT)
- No MOSFET, Sense Resistor or Blocking Diode Required
- V_{in} integrated for surge protection to 10V
- Complete Linear Charger in SOP-8 Package for Single Cell Lithium-Ion Batteries
- Constant-Current/Constant-Voltage
- Charges Single Cell Li-Ion Batteries Directly from USB Port
- Preset 4.2V or 4.35V Charge Voltage with 1.5% Accuracy
- Automatic Recharge
- Two Charge Status Output Pins
- C/10 Charge Termination
- 2.9V Trickle Charge Threshold
- Soft-Start Limits Inrush Current
- The Radiator need connect GND or impending
- Available Radiator in ESOP-8, SOT-23-6, DFN2*2-6L Package

Application

- Cellular Telephones, PDAs, GPS
- Charging Docks and Cradles
- USB Bus-Powered Chargers, Chargers
- Digital Still Cameras, Portable Devices



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Absolute Maximum Ratings

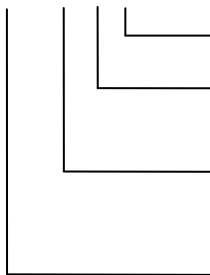
| Item | Symbol | Value | Unit |
|--------------------------------------|-----------------------|-------|-------------|
| Input Supply Voltage | V_{IN} | 10 | V |
| BAT Voltage | V_{BAT+} | 7 | V |
| TEMP/CE | V_{TEMP} | 7 | V |
| $\overline{CHRG} / \overline{STDBY}$ | $V_{\overline{CHRG}}$ | 7 | V |
| BAT Pin Current | I_{BAT} | 1500 | mA |
| PROG Pin Current | I_{PROG} | 1500 | μA |
| Maximum Junction Temperature | | 150 | $^{\circ}C$ |

Recommended Operating

| Item | Min | Max | Unit |
|--------------------------------------|-------------|-----|-------------|
| Junction Temperature | -20 | 85 | $^{\circ}C$ |
| Storage Temperature | -40 | 125 | $^{\circ}C$ |
| Lead Temperature (Soldering, 10 sec) | 260 \pm 5 | | $^{\circ}C$ |

Ordering Information

ACE4018RT XXX XX + H



Halogen - free

Pb - free

I M: ESOP-8

GM: SOT-23-6

MN: DFN2*2-6L

Output Voltage: 4.2V/4.35V



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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 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.

ACE Technology Co., LTD.
<http://www.ace-ele.com/>