ACE4222R

Double Cell Lithium-Ion Battery Linear Charger

Description

ACE4222R is a complete constant-current/constant voltage linear charger for double cell lithium-ion batteries. With a thermally enhanced ESOP-8 package on the bottom and low external component count make the ACE4222R ideally suited for portable applications. Furthermore the ACE4222R is specifically designed to work within USB power specifications. ACE4222R can achieve high precision charging current by detecting resistance with external current. The internal thermal feedback circuit can control the chip temperature during the charging process. The charge voltage is fixed at 8.4V, and the charge current can be programmed externally with a single resistor.

The ACE4222R automatically terminates the charge cycle when the charge current drops to 1.5/10th the programmed value after the final float voltage is reached. When the input supply (wall adapter or USB supply) is removed the ACE4222R automatically enters a low current state dropping the battery drain current to less than 5μA. Other features include Battery temperature monitor, under-voltage lockout, automatic recharge and two status pins to indicate charge and charge termination.

Features

- Input voltage range：8.9V~15V
- Input maximum voltage:18V
- Input removed, BAT current:< 5uA
- Preset 8.4V charge voltage with ±1% accuracy
- Charge termination current detection
- Battery temperature detection
- Charging status indicator function
- Automatic Recharge
- When the power supply is disconnected, it automatically goes into sleep mode
- When the battery is low, it automatically enters the trickle-flow charging mode

Applications

- Mobile power supply
- Hand-held electronic device
- Portable charging equipment

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Input supply voltage	V_{CC}	-0.3~18	V
PROG pin voltage		-0.3~VCC+0.3	V
BAT pin voltage		-0.3~18	V
STDBY pin voltage		-0.3~18	V
CHRG pin voltage		-0.3~18	V
BAT pin current		1000	mA
Maximum junction temperature		-40 to 145	°C
Operating ambient temperature	T_{OPA}	-40 to 85	°C
Storage temperature	T_{STR}	-55 to 150	°C
Soldering temperature and time		260 (Recommended 10s)	°C
Package thermal impedance	θ_{JA}	63	°C/W
Maximum Power Dissipation	P_D	1.98	W

Note: The absolute maximum ratings are rated values exceeding which the product could suffer physical damage. These values must therefore not be exceeded under any conditions.

Ordering Information

ACE4222R XX + H

- Halogen - free
- Pb - free
- IM: ESOP-8

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.

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