



ACE40561RT

1A Single Li-ion Battery Charge

Description

The ACE40561RT is a complete constant-current/ constant voltage linear charger for single cell Lithium-Ion batteries. No external sense resistor is needed, and no blocking diode is required due to the internal MOSFET architecture. The charge voltage is fixed at 4.2V, 4.35V, 4.4V and 4.45V. The charge current can be programmed from 100mA to 1A by an externally single resistor. The ACE40561RT automatically terminates the charge cycle when the charge current drops to 1/10 the programmed value after the final float voltage is reached. When the input supply (wall adapter or USB supply) is removed, the ACE40561RT automatically enters a low current state, dropping the battery drain current to less than 0.1uA.

The ACE40561RT is available in ESOP-8 and DFN2x2-8 packages. Standard product is Pb-Free & Halogen- Free.

Features

- Programmable Charge Current Up to 1A
- Under Voltage Lockout Protection
- Automatic Recharge
- Charge Status Output Indication
- Standby Status Output Indication
- Enable Control Function
- Support NTC Battery Temperature Detection
- 2.9V(Typ.) Trickle Charge Threshold
- Input OVP Protection
- Protection for Battery Reverse Connection

Application

- Feature Phone
- MP3/MP4 Players
- Electric Toy
- Bluetooth, wireless handsets
- Others portable electronic device



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Absolute Maximum Ratings (Note)

Symbol	Item	Value	Unit	
V _{CC}	Input Voltage	-0.3 ~ 9	V	
V _{BAT}	BAT Voltage	-7 ~ 7	V	
All other pins	Input Voltage	-0.3 ~ V _{CC} +0.3	V	
P _D	Maximum Power Dissipation	ESOP-8	1.8	W
		DFN2x2-8	1.0	W
R _{θJA}	Junction to Ambient Thermal Resistance	ESOP-8	55	°C /W
		DFN2x2-8	100	°C /W
T _J	Junction Temperature	-40~125	°C	
T _{STG}	Storage Temperature	-55 to 150	°C	
T _{SOLDER}	Package Lead Soldering Temperature	260°C, 10s		
V _{ESD}	Human Body Mode	±5	KV	

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

Recommended Operating

Symbol	Description	Min	Nom	Max	Unit
V _{CC}	Input operating voltage range	4.0	5	6.0	V
I _{BAT}	Battery charge current range	100	500	1000	mA
T _J	Junction temperature	0		125	°C
R _{PROG}	CC mode charge current programming resistor	1	2	10	KΩ

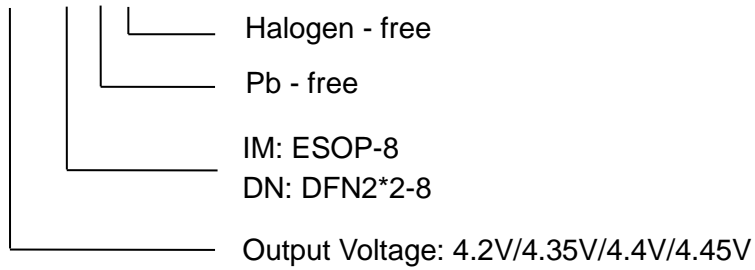


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Ordering Information

ACE4018RT XXX 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.

ACE Technology Co., LTD.
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