

GENERAL DESCRIPTION

The TCS6281 is a complete constant-current/ constant voltage linear charger for single Lithium-Ion battery with high input voltage rating and large current. The largest input voltage is up to 28V and charge current is up to 1A. The input over voltage protection thread is 6.8V and the lowest input voltage is 3.75V, which can meet the requirement of voltage-adjustment to reduce charging power consumption and improve overall efficiency.

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 4.0V/4.1V/4.15V/4.2V/4.35V/4.4V/4.45V, and the charge current can be programmed externally with a single resistor.

The TCS6281 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 voltage (supplied by AC adapter or USB power supply) is removed, the TCS6281 automatically enters a low current state, decreasing the battery leakage current to less than 1 μ A.

Other features of TCS6281 include over temperature protection, under voltage lockout, automatic recharge and charging state indication (two LED pins to show charge state and charge-ending state).

FEATURES

- Maximum Input Voltage Rating up to 28V
- Minimum Input Voltage: 3.75V (Typ.)
- Input Over Voltage Protection : 6.8V (Typ.)
- Maximum BAT withstand voltage up to 20V
- Battery reverse connection protection
- Programmable Charge Current up to 1A
- 1% Charge Voltage Accuracy
- 1/10C Termination Charge Current
- Float Charge Voltage : 4.0V, 4.1V, 4.15V, 4.2V, 4.35V, 4.4V, 4.45V
- Thermal Regulation to Maximize Charge Rate Without Risk of Overheating.
- Charging status and fault status indication
- Battery Temperature Monitoring.
- Chip Enable Input
- Trickle charge threshold: 2.9V (Typ., Float Voltage: 4.2V)
- Soft-start and surge current limit
- Available ESOP8, DFN2x2-8L, DFN3x3-8L, DFN3x2-10L, DFN3x3-10L Packages

APPLICATIONS

- Standby power supply/ portable power source
- mobile phone、PDA、GPS
- MP3、MP4 player
- Digital camera, electronic dictionary
- Portable devices、Various charg

TYPICAL APPLICATION CIRCUIT

