

General Description

The TCS9086B is a high integration solution for lithium-ion/polymer battery protection. TCS9086B contains internal power MOSFET, high-accuracy voltage detection circuits and delay circuits. TCS9086B has all the protection functions required in the battery application including overcharging, over discharging, overcurrent and load short circuiting protection etc. The accurate overcharging detection voltage ensures safe and full utilization charging. The low standby current drains little current from the cell while in storage. The device is not only targeted for digital cellular phones, but also for any other Li-Ion and Li-Poly battery-powered information appliances requiring long-term battery life.

The TCS9086B requires a minimal number of readily available, external components and is available in a space saving ESOP8 package.

Features

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|---|--|
| Protection of Charger Reverse Connection | 5.5mΩ Low $R_{SS(ON)}$ Internal Power MOSFET |
| Protection of Battery Cell Reverse Connection | Delay Times are generated inside |
| Over-temperature Protection | High-accuracy Voltage Detection |
| Overcharge Current Protection | Low Current Consumption |
| Two-step Overcurrent Detection: | Operation Mode: 2.5μA typ. |
| Over Discharge Current | Power-down Mode: 1.5μA typ. |
| Load Short Circuiting | Only One External Capacitor Required |
| Charger Detection Function | Available in ESOP8 Package |
| 0V Battery Charging Function | -40°C to +85°C Temperature Range |
| RoHS Compliant and Lead (Pb) Free | |

Applications

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|------------------------------|-------------------------------|
| One-Cell Li-ion Battery Pack | One-Cell Li-poly Battery Pack |
| Power Bank | IOT Sensor/Electronic Toys |

Typical Application Circuit

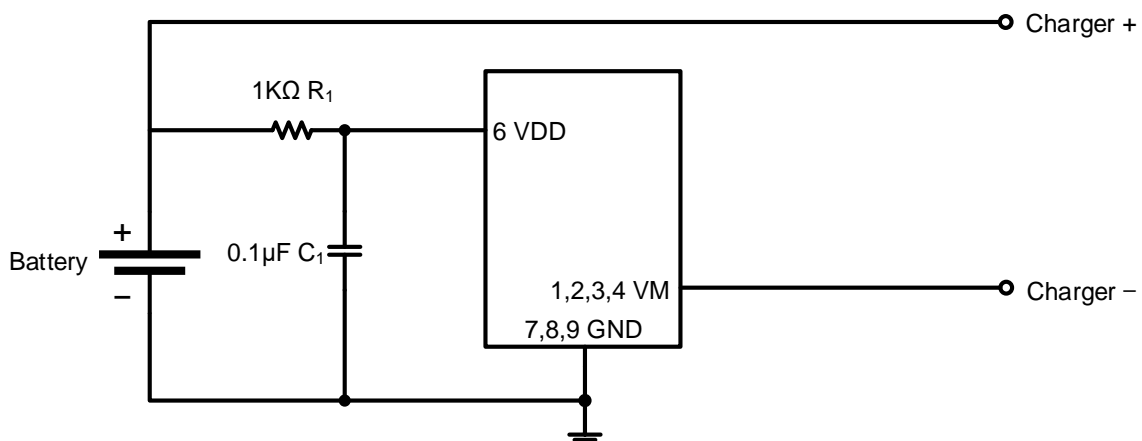


Figure 1. Typical Application Circuit