

GENERAL DESCRIPTION

The TCS9042B Series product is a high integration solution for lithium-ion/polymer battery protection. TCS9042B Series contains advanced power MOSFET, high-accuracy voltage detection circuits and delay circuits. TCS9042B Series is put into an DFN1X1x0.37-4 package and external MCU, GPIO signal to high level to enable the chip to enter shipping mode makes it an ideal solution in limited space of battery pack.

TCS9042B Series 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.

FEATURES

- Protection of Battery Cell Reverse Connection with external load

- Control MOS of integrated shipping mode
- Support all pin rosin joint
- Integrate Advanced Power MOSFET with Equivalent of $52\text{m}\Omega R_{\text{SS(ON)}}$
- DFN 1x1x0.37-4 Package
- Reverse connection of charger is supported
- Overdischarge Current 1 Protection 0.15A
- Charger Detection Function
- 0V Battery Charging Function
- Delay Times are generated inside
- High-accuracy Voltage Detection
- Low Current Consumption
 - Operation Mode: $0.5\mu\text{A}$ typ.
 - Power-down Mode: 1nA typ.
- RoHS Compliant and Lead (Pb) Free
- Be suitable for 100% shipping mode

APPLICATIONS

One-Cell Lithium-ion Battery Pack
 Lithium-Polymer Battery Pack
 Wearable Device
 Bluetooth Earphone

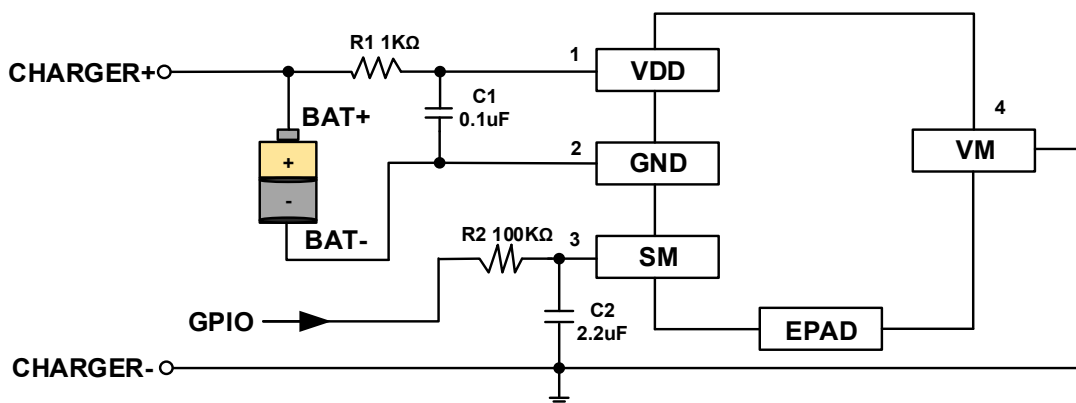


Figure 1. Typical Application Circuit