

GLF73910-BD01 Ultra-Efficient I_QSmart™ Battery Protection IC

DESCRIPTION

The EV011 -GLF73910-BD01 evaluation board features the GLF73910-BD01 that is an I_QSmart™ ultra-efficient, full battery protection IC with the accurate over charging voltage, over discharging voltage, and short circuit protections for lithium battery safety.

When the battery is charged past the over voltage detection level, the GLF73910-BD01 switch opens in a preset delay time. As the battery voltage decreases below the over discharge detection voltage level, the GLF73910-BD01 is turned off immediately, consuming an ultra -low leakage current (I_{SD}) to save the battery. In addition, at load short conditions, the GLF73910-BD01 is latched off and remain the off state in a preset delay time.

The GLF73910-BD01 is activated by applying V_{ON} to the VOUT pin from a charger or a DC power supplier.

FEATURES

- V_{OC}, Over Charge Detection: 4.50 V_{BAT}
 - Detection Delay, t_{OC} = 530 ms
- V_{OD}, Over Discharge Detection: 2.80 V_{BAT}
- Load Short Circuit Protection with Delay Time to avoid a false trigger
- 1.5 A Continuous Charging Current Capability from VOUT to VBAT Pin
- 0.4 V Battery Minimum Voltage for Charging
- Main Switch is Activated by Applying V_{ON} the VOUT Pin from Charger
- Low R_{ON} : 36 mΩ Typ. @ 3.6 V_{BAT}
- I_Q = 720 nA Typ @ 4.2 V_{BAT}
- I_{SD} = 70 nA Typ @ V_{BAT} < V_{OD}
- Latch-off at Over Discharge Detection and Short Circuit Protection. Apply V_{ON} to VOUT pin to turn on again
- 0.97 mm x 0.97 mm x 0.55 mm Chip Scale Package 4 Bumps, 0.5 mm Pitch

PRODUCT TABLE

| Eval Board Ordering Info | Part Number | Top Mark | R _{ON} (Typ) V _{BAT} =3.6 V | Over Charge Voltage V _{OC} | Over Discharge voltage V _{OD} |
|-----------------------------|---------------|-------------|--|---|--|
| EV011-GLF73910-BD01 | GLF73910-BD01 | CG | 36 mΩ | 4.35 V | 2.80 V |