

GLF73510

Ultra-Efficient IQSmart™ Battery Protection IC

DESCRIPTION

The EV011 -GLF73510 evaluation board features the GLF73510 that is an IQSmart™ ultra-efficient, 2A rated switch with the accurate turn-off threshold to prevent a battery from being discharged deeply.

When the voltage of a battery decreases to the off threshold voltage level, the GLF73510 is turned off, consuming an ultra-low leakage current (ISD) to save the battery. The GLF73510 remains in the off state until a higher voltage is applied to VOUT pin. Note that the GLF73510 is enabled only by VOUT voltage with a charger output.

With the higher VOUT voltage from a charger applied, the GLF73510 is fully turned on and monitors VBAT voltage. When the VOUT voltage of a charger is less than the on threshold voltage, a battery can be charged through the body diode of the main switch.

In case that a charged battery is assembled without a higher VOUT applied, the GLF73510 continues to stay at the sleep mode, consuming an ultra-low leakage current (ISD) to save the battery, during shipping or storage.

FEATURES

- Off Threshold Voltage to Protect Battery Discharge
- VTH_OFF: VBAT=3.1V
- Contact GLF for a different VTH level
- Switch is activated only by the VOUT voltage of a charger output
- Ultra-Low IQ: 0.5uA Typ @ VBAT=3.6V
- Ultra-Low ISD: 2nA Typ @ VBAT =1.1V
- 6nA Typ @ VBAT =3.6V
- Low RON: 30mΩ Typ @ VBAT=3.6V
28mΩ Typ @ VBAT=4.2V
- IOUT Max: 2A
- Temperature Range: -40 to 85° C
- HBM: 6kV, CDM: 2kV
- Ultra-Small: 0.97mm x 0.97mm WLCSP

PRODUCT TABLE

| Eval Board Ordering Info | Part Number | Top Mark | RON (Typ) VBAT=3.6 V | Threshold VTH_OFF |
|-----------------------------|-------------|-------------|-------------------------|----------------------|
| EV011-GLF73510 | GLF73510 | UA | 30 mΩ | 3.1V |