

DESCRIPTION

The GLF73510 is an I_Q Smart™ ultra-efficiency, 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 (I_{SD}) to save the battery. The GLF73510 remains in the off state until a higher voltage is applied to V_{OUT} pin. Note that the GLF73510 is enabled only by V_{OUT} voltage with a charger output.

With the higher V_{OUT} voltage from a charger applied, the GLF73510 is fully turned on and monitors V_{BAT} voltage. When the V_{OUT} 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 V_{OUT} applied, the GLF73510 continues to stay at the sleep mode, consuming an ultra-low leakage current (I_{SD}) to save the battery, during shipping or storage.

The GLF73510 is available in 0.97mm x 0.97mm x 0.55mm wafer level chip scale package (WLCSP).

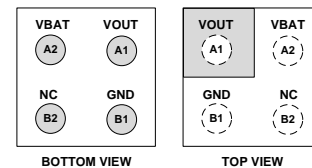
FEATURES

- Off Threshold Voltage to Protect Battery Discharge
 $V_{TH_OFF} : V_{BAT}=3.1V$
Contact GLF for a different V_{TH} level
- Switch is activated only by the V_{OUT} voltage of a charger output
- Ultra-Low I_Q : 0.5uA Typ @ $V_{BAT}=3.6V$
- Ultra-Low I_{SD} : 2nA Typ @ $V_{BAT} =1.1V$
6nA Typ @ $V_{BAT} =3.6V$
- Low R_{ON} : 30m Ω Typ @ $V_{BAT}=3.6V$
28m Ω Typ @ $V_{BAT}=4.2V$
- I_{OUT} Max : 2A
- Temperature Range: -40 to 85°C
- HBM: 6kV, CDM: 2kV
- Ultra-Small : 0.97mm x 0.97mm WLCSP

APPLICATIONS

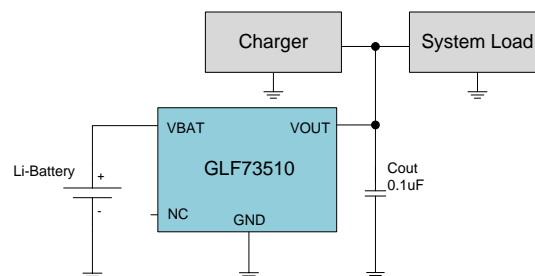
- Battery protection
- Wearables / IoT Devices
- Mobile Devices
- Mobile Medical

PACKAGE



0.97mm x 0.97mm x 0.55mm WLCSP

APPLICATION DIAGRAM



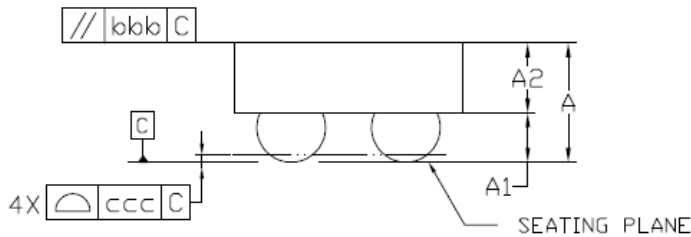
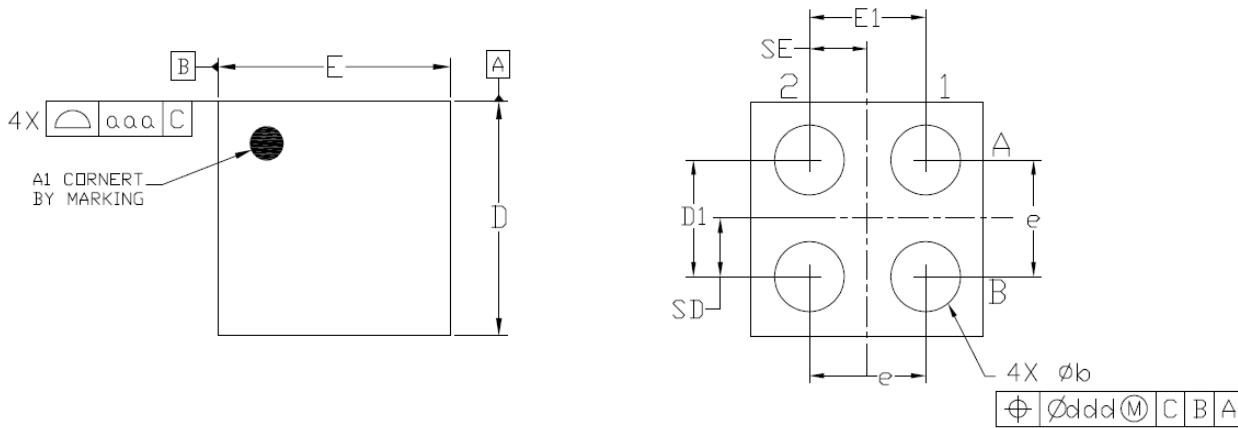
Note: 1) The GLF73510 can be activated by applying a voltage above V_{ON} to the V_{OUT} pin.
2) When the GLF73510 is at the off state, the battery can be charged through the body diode of the main switch.

DEVICE INFORMATION

Part Number	Top Mark	R _{ON} (Typ) V _{BAT} =3.6V	Threshold V _{TH_OFF}
GLF73510	DB	30mΩ	3.1V

Contact GLF for a different V_{TH_OFF} level or tolerance.

PACKAGE OUTLINE



Dimensional Ref.			
REF.	Min.	Nom.	Max.
A	0.500	0.550	0.600
A1	0.225	0.250	0.275
A2	0.275	0.300	0.325
D	0.960	0.970	0.985
E	0.960	0.970	0.985
D1	0.450	0.500	0.550
E1	0.450	0.500	0.550
b	0.260	0.310	0.360
e	0.500 BSC		
SD	0.250 BSC		
SE	0.250 BSC		
Tol. of Form&Position			
aaa	0.10		
bbb	0.10		
ccc	0.05		
ddd	0.05		

Notes

1. ALL DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1994.

PLEASE SEND EMAIL TO INFO@GLFIPOWER.COM FOR OBTAINING FULL DATASHEET.