

# GLF72111 3A, Ultra-low Power I<sub>Q</sub>Smart<sup>™</sup> Load Switch with True Reverse Current Blocking

**Product Specification** 

#### **DESCRIPTION**

The GLF72111 is an advanced technology fully integrated  $I_QSmart^{TM}$  load switch device with True Reverse Current Blocking (TRCB) technology and slew rate control of the output voltage.

The GLF72111 offers industry leading True Reverse Current Blocking (TRCB) performance, featuring an ultra-low threshold voltage. It minimizes reverse current flow in the event that the VOUT pin voltage exceeds the VIN voltage.

The GLF72111 has industry leading efficiency. It features a  $R_{\text{ON}}$  as low as 29  $m\Omega$  typical at 5.5 V, reducing power loss during conduction. The device also features ultra-low shutdown current ( $I_{\text{SD}}$ ) to reduce power loss and battery drain in the off state. When EN is pulled low, and the output is grounded, the GLF72111 can achieve an  $I_{\text{SD}}$  as low as 24 nA typical at 5.5 V.

The GLF72111 load switch device supports an industry leading wide input voltage range and helps to improve operating life and system robustness. Furthermore, one device can be used in multiple voltage rail applications which helps to simplify inventory management and reduces operating cost.

The GLF72111 load switch device is small, utilizing a chip scale package with 4 bumps in a 0.97 mm x 0.97 mm x 0.55 mm die size and a 0.5 mm pitch.

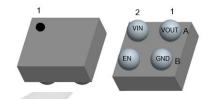
#### **FEATURES**

- True Reverse Current Blocking
- Ultra-Low I<sub>Q</sub>: 1.4 uA Typ @ 5.5 V<sub>IN</sub>
- Ultra-Low I<sub>SD</sub>: 24 nA Typ @ 5.5 V<sub>IN</sub>
- Low  $R_{ON}$ : 29 m $\Omega$  Typ @ 5.5 $V_{IN}$
- I<sub>OUT</sub> Max: 3 A
- Wide Input Range: 1.5 V to 5.5 V
  - 6 Vabs max
- Controlled Rise Time: 1.2 ms at 3.3 V<sub>IN</sub>
- Internal EN Pull-Down Resistor
- Integrated Output Discharge Switch
- 0.97 mm x 0.97 mm x 0.55 mm Wafer Level Chip Scale Package

#### **APPLICATIONS**

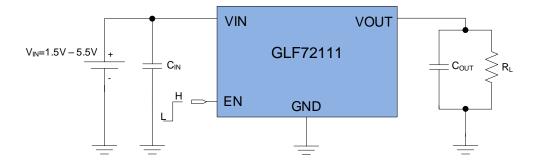
- Mobile Devices
- Wearables
- Low Power Subsystems

#### **PACKAGE**



0.97 mm x 0.97 mm x 0.55 mm WLCSP

#### **APPLICATION DIAGRAM**





## **FUNCTIONAL BLOCK DIAGRAM**

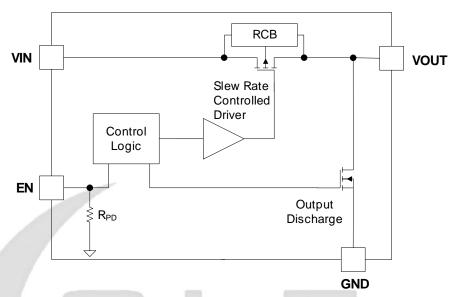
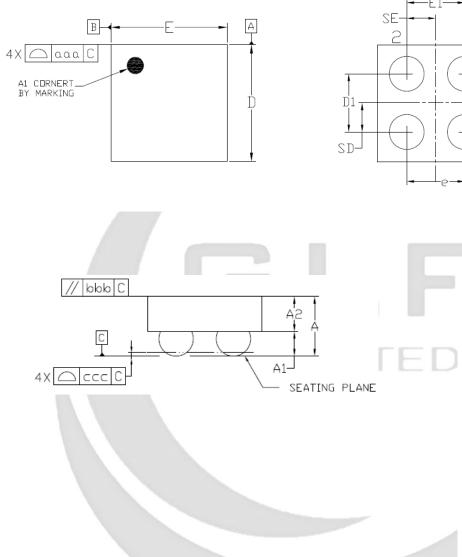


Figure 1. Functional Block Diagram



## 3A, Ultra-low Power IoSmart™ Load Switch with TRCB

### **PACKAGE OUTLINE**



EF.	Min.	Nom.	Max.
А	0.500	0.550	0.600
Α1	0.225	0.250	0.275
42	0.275	0.300	0.325
D	0.955	0.970	0.985
Ε	0.955	0.970	0.985
D1	0.450	0.500	0.550
E1	0.450	0.500	0.550
Ь	0.260	0.310	0.360
е	0.500 BSC		
SD	0.250 BSC		
SE	0.250 BSC		
Tol. of Form&Position			
133	0.10		
ьь	0.10		
CC	0.05		
	A A1 A2 D E D1 E D1 E D D E D D E D D E D D D E D D D D	A 0.500 A1 0.225 A2 0.275 D 0.955 E 0.955 D1 0.450 b 0.260 e 0 SD 0 Tol. of Formal	A 0.500 0.550 A1 0.225 0.250 A2 0.275 0.300 D 0.955 0.970 E 0.955 0.970 D1 0.450 0.500 b 0.260 0.310 e 0.500 BS SD 0.250 BS Tol. of Form&Portal aa 0.10 bb 0.10

0.05

ddd

Dimensional Ref.

4X Øb

◆ ØdddM C B A

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

Notes