GLF72120
4 A, Slew Rate Controlled I$_Q$Smart^{TM} Load Switch with True Reverse Current Blocking

Product Specification

DESCRIPTION

The GLF72120 is an advanced technology fully integrated I$_Q$Smart^{TM} load switch device with True Reverse Current Blocking (TRCB) technology and the slew rate control of the output voltage.

The GLF72120 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 GLF72120 has industry leading efficiency. It features a R$_{ON}$ as low as 14 mΩ typical at 5.5 V, reducing power loss during conduction. The device also features ultra-low shutdown current (I$_{SD}$) to reduce power loss and battery drain in the off state. When EN is pulled low, and the output is grounded, the GLF72120 can achieve an I$_{SD}$ as low as 40 nA typical at 5.5 V.

The GLF72120 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 GLF72120 load switch device is small utilizing a chip scale package with 6 bumps in a 0.97 mm x 1.47 mm x 0.55 mm die size and a 0.5 mm pitch.
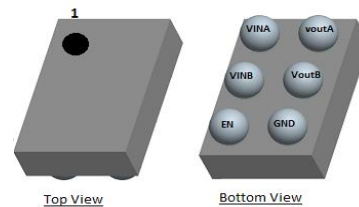
FEATURES

- True Reverse Current Blocking
- Low R$_{ON}$: 14 mΩ Typ @ 5.5 V$_{IN}$
- Ultra-Low I$_Q$: 1.3uA Typ @ 5.5 V$_{IN}$
- Ultra-Low I$_{SD}$: 40nA @ 5.5 VIN
- I$_{OUT}$ Max : 4 A
- Supply Voltage Range : 1.5 V to 5.5 V
                        6 Vabs max
- Controlled Rise Time : 730 us at 3.3 V$_{IN}$
- Internal EN Pull-Down Resistor
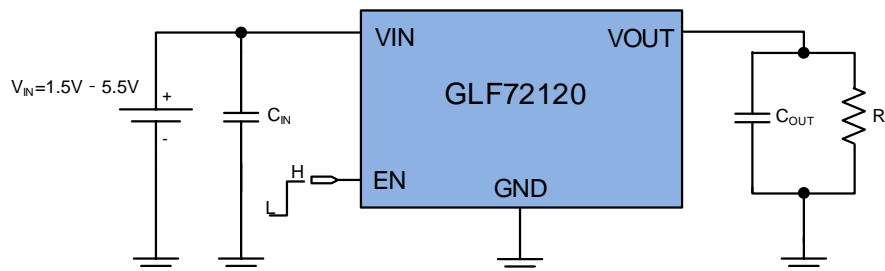- 0.97 mm x 1.47 mm x 0.55 mm Wafer Level Chip Scale Package

APPLICATIONS

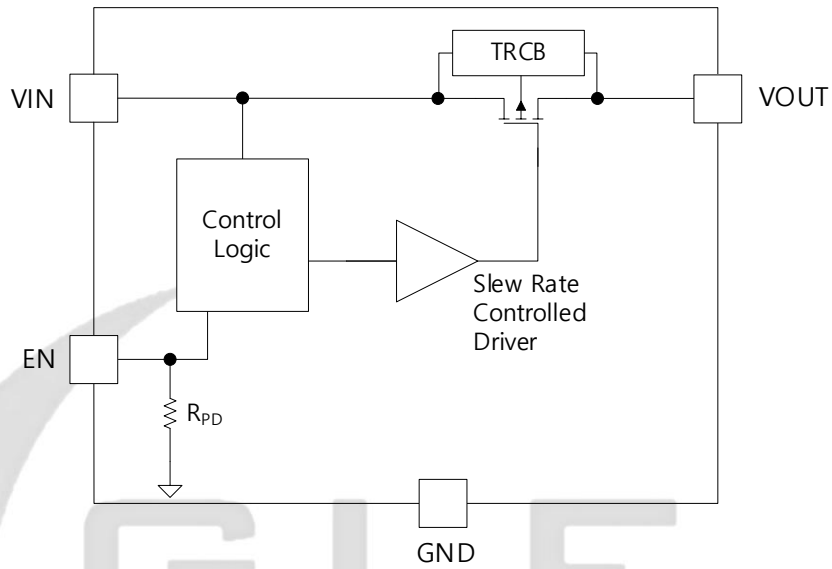- Mobile Devices
- Wearables
- Low Power Subsystems

PACKAGE

Top View   Bottom View

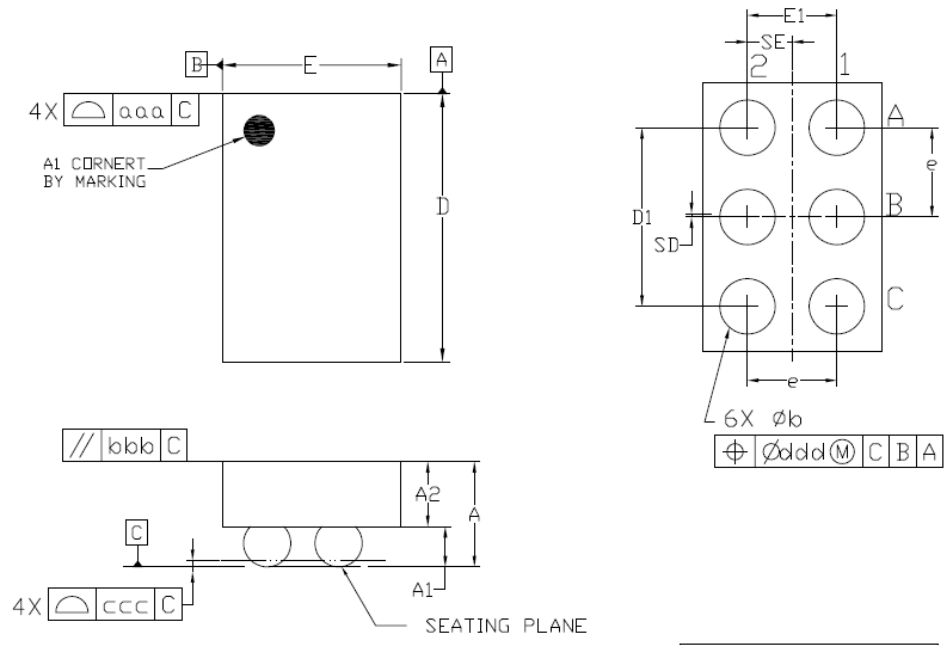0.97 mm x 1.47 mm x 0.55 mm WLCSP

APPLICATION DIAGRAM

FUNCTIONAL BLOCK DIAGRAM

Figure 1. Functional Block Diagram

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	1.460	1.470	1.485
E	0.960	0.970	0.985
D1	0.950	1.000	1.050
E1	0.450	0.500	0.550
b	0.260	0.310	0.360
e	0.500 BSC		
SD	0.000 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.