

# GLF7132X

## 4 A, Low RON I<sub>Q</sub>Smart™ Power Load Switch with Slew Rate Control

### DESCRIPTION

The GLF7132x is an ultra-efficiency, 4 A rated, integrated load switch with integrated slew rate control.

The GLF7132x features an ultra-efficient I<sub>Q</sub>Smart™ technology that supports the lowest R<sub>ON</sub>, quiescent current (I<sub>Q</sub>) and shutdown current (I<sub>SD</sub>) in the industry. Low R<sub>ON</sub> reduces conduction losses, while low I<sub>Q</sub> and I<sub>SD</sub> solutions help designers to reduce parasitic leakage current, improve system efficiency, and increase battery lifetime.

The GLF7132x integrated slew rate control greatly enhances system reliability by mitigating bus voltage swings during switching events. Where uncontrolled switches can generate high inrush currents that result in voltage droop and/or bus reset events, the GLF7132x slew rate control specifically limits inrush current during turn-on to minimize voltage droop.

GLF7132x 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.

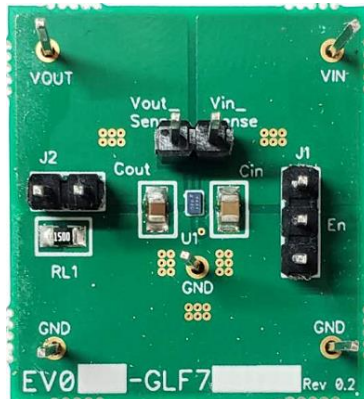
### FEATURES

- Low R<sub>ON</sub> : 15 mΩ Typ 5.5 V<sub>IN</sub>
- Ultra-Low I<sub>Q</sub>:  
3 nA Typ at 5.5 V<sub>IN</sub> GLFL71320, GLF71321  
570 nA Typ at 5.5 V<sub>IN</sub> GLFL71322, GLF71323
- Ultra-Low I<sub>SD</sub>: 50 nA Typ at 5.5 V<sub>IN</sub>
- I<sub>OUT</sub> Max: 4 A
- Wide Input Range: 1.1 V to 5.5 V  
6 Vabs max
- Controlled Rise Time: 400 μs at 3.3 V<sub>IN</sub>
- Internal EN Pull-Down or Pull-Up Resistor
- Integrated Output Discharge Switch  
GLF71321 and GLF71323
- Wide Operating Temperature Range:  
-40 °C ~ 85 °C
- HBM: 6 kV, CDM: 2 kV
- Ultra-Small: 0.97 mm x 1.47 mm WLCSP

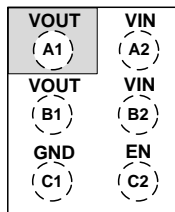
### PRODUCT TABLE

Eval Board Ordering Info	Part Number	Top Mark	R <sub>ON</sub> (Typ.) at 5.5 V <sub>IN</sub>	Output Discharge
EV001-GLF71320	GLF71320	AA	15 mΩ	NA
EV001-GLF71321	GLF71321	BB	15 mΩ	80 Ω
EV001-GLF71322	GLF71322	CC	15 mΩ	NA
EV001-GLF71323	GLF71323	DD	15 mΩ	80 Ω

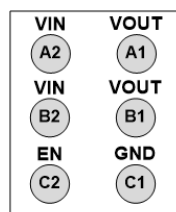
## EVALUATION BOARD & DEVICE PACKAGE



## PIN CONFIGURATION and DEFINITION



TOP VIEW



BOTTOM VIEW

Pin #	Name	Description
A1, B1	VOUT	Switch Output
A2, B2	VIN	Switch Input. Supply Voltage for IC
C1	GND	Ground
C2	EN	Enable to control the switch

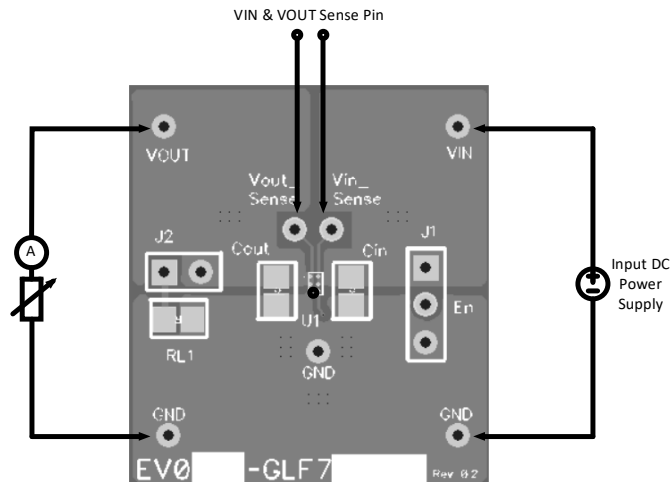
## QUICK START GUIDE

The evaluation board EV001 is easy to set up to evaluate the performance of GLF71320 / GLF71321 / GLF71322 / GLF71323.

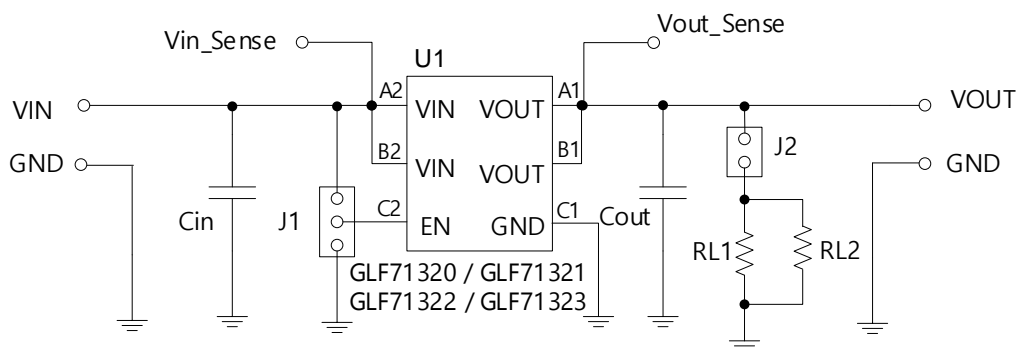
1. Preset the input power supply to the desired voltage between 1.1 V to 5.5 V.
2. The load resistor, RL1=499 Ω, has been populated on the top of the PC board. To increase the output current, connect an electronic load to VOUT and GND. The output current for the GLF71320 / GLF71321 / GLF71322 / GLF71323 is rated for 4 A maximum output continuous current. Please ensure this absolute maximum is not exceeded.
3. Connect the positive and negative terminals of the input power supply to VIN and GND terminals respectively. VIN\_Sense and VOUT\_Sense can be used for measurement points.
4. Turn on the input power supply.
5. Configure the J1, EN jumpers as required. Note - The GLF71320 / GLF71321 series has an internal EN pull-down resistor and the GLF71322 / GLF71323 series has an internal EN pull-up resistor to ensure that the device is in a defined state.

Part	EN activity
GLF71320 / GLF71321	High
GLF71322 / GLF71323	Low

## TEST SETUP



## SCHEMATIC



## BILL OF MATERIALS

Qty	Reference	Value	Part Description	Manufacturer / Part Number
1	U1	GLF71320 / GLF71321 / GLF71322 / GLF71323	GLF71320 / GLF71321 / GLF71322 / GLF71323	GLF Integrated Power
1	Cin	10 $\mu$ F	Cap., X5R, 25 V, 10% 0805	YAGEO CC0805KKX5R8BB106
1	Cout	0.1 $\mu$ F	Cap., X7R, 50 V, 10% 0805	YAGEO CC0805KRX7R9BB104
1	RL1	499 $\Omega$	Output Resistor	YAGEO RC0805FR-07499RL
	RL2	-	Output Resistor	Not populated on the bottom
2	J1-2	Jumper	Jumper	

## PRINTED CIRCUIT BOARD LAYOUT

Fig 1. Top Layer

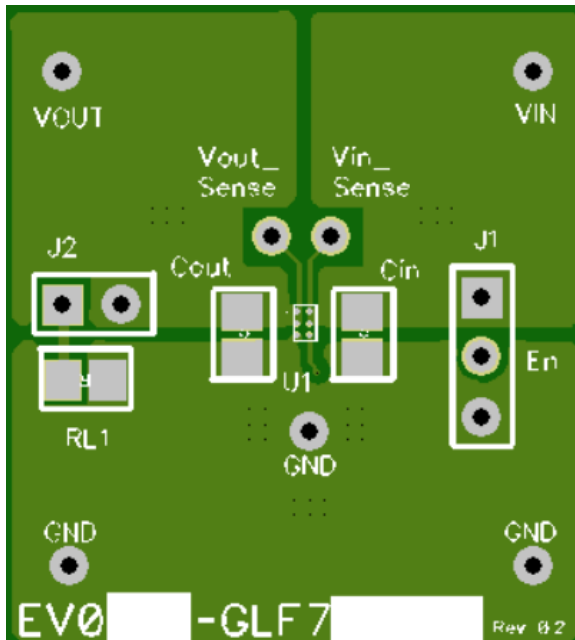
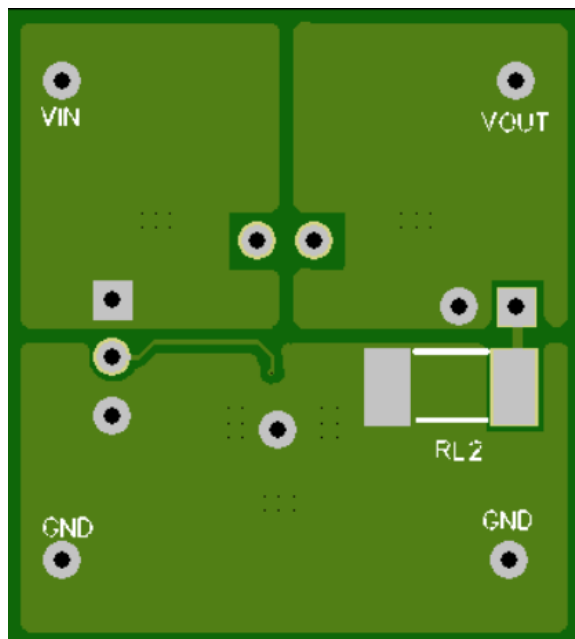


Fig 2. Bottom Layer



NOTICE: The evaluation board provided by GLF Integrated Power is intended for use for ENGINEERING DEVELOPMENT, OR EVALUATION PURPOSES ONLY and is not for any commercial use. The user assumes all responsibility and liability for proper and safe handling of the goods.