

GLF2201

Power Switch with Over Voltage Protection

DESCRIPTION

The GLF2201 is an integrated over voltage protection (OVP) power switch. It has under voltage lockout, output short circuit and over temperature protection functions. The device has an internal fixed OVP threshold, and also has a programmable OVP threshold that can be programmed by an external resistor divider on OVLO pin. When the input voltage is higher than the OVP threshold, the internal main FET is turned off immediately to isolate the downstream loads from input power supply. The GLF2201 restore on after the input voltage lower than the OVP threshold. The device has an internal 8 ms recovery time before the device fully restore on.

The GLF2201 is available in the 2 mm x 2mm DFN package with 6 leads.

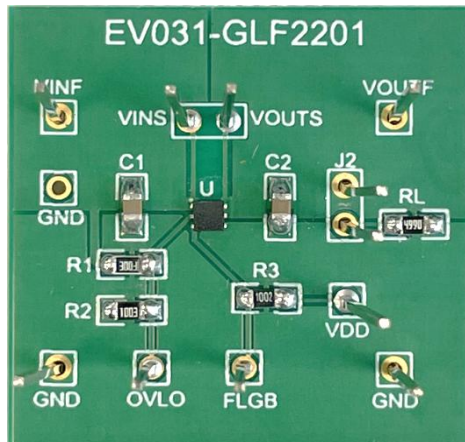
FEATURES

- Supply Voltage Range: 3 V to 9 V
12 V_{ABS}
- Integrated Over Voltage Protection Threshold
 - Internal Fixed 6.8 V Typ.
 - Programmable OVP from 4 V to 7 V
- I_{OUT} Max: 3 A Output Current Capability
- Low R_{ON}: 42 mΩ Typ at 5 V_{IN}
- Low I_Q: 77 μA at 5 V_{IN}
- Under Voltage Lockout
- Short Circuit Protection
- Active Low FLAGB Indication
- Thermal Shutdown Protection
- Internal 8 ms Recovery Delay after Protection

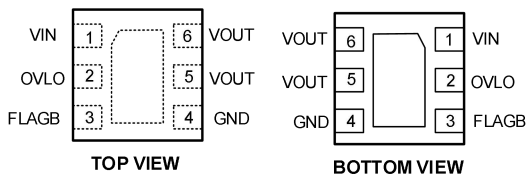
PRODUCT TABLE

Eval Board Ordering Info	Part Number	Top Mark	R _{ON} (Typ.) at 5.0 V _{IN}	Package
EV031-GLF2201	GLF2201-D2G7	FM	42 mΩ	2 mm x 2 mm DFN-6L

EVALUATION BOARD FROM TOP VIEW



PIN CONFIGURATION AND DEFINITION



2 mm x 2 mm DFN-6L

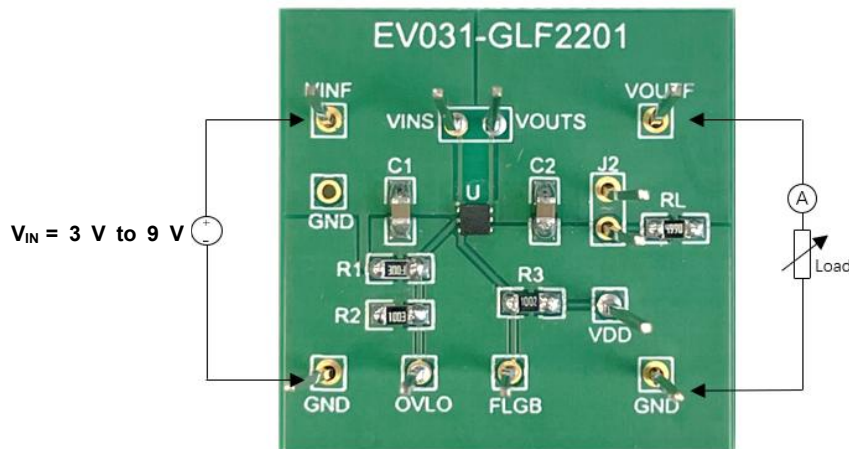
Pin #	Name	Description
1	VIN	Switch Input. Supply Voltage for IC
2	OVLO	External OVP programmable pin by the resistor divider. Tie the OVLO pin to GND to use the internal fixed OVP threshold.
3	FLAGB	Open-drain output. Power good and fault flag pin.
4	GND	Ground
5, 6	VOUT	Output of main power switch
	Thermal Pad	Connect this pad to GND

QUICK START GUIDE

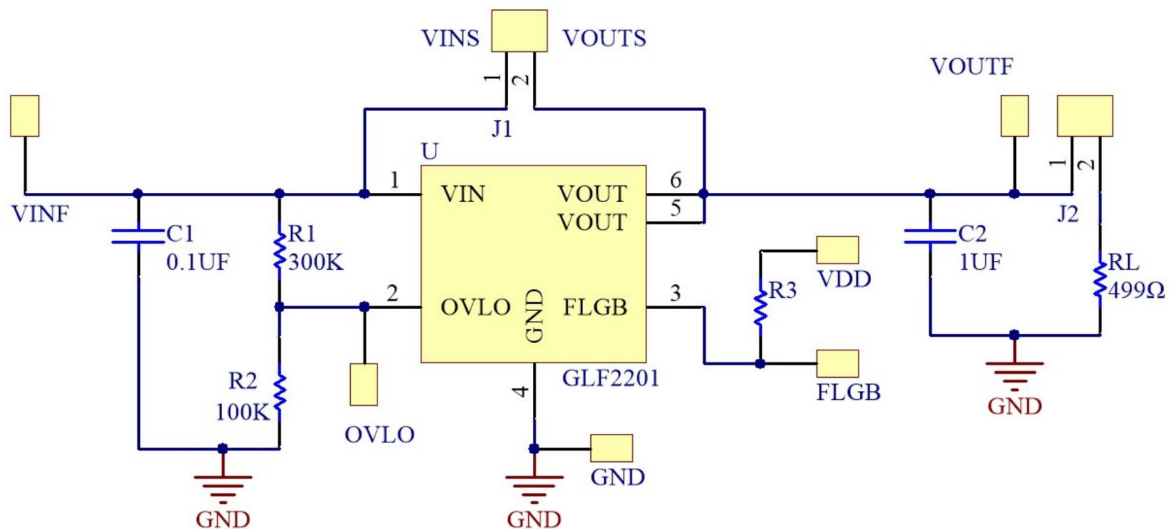
The evaluation board EV031 is easy to set up to evaluate the performance of GLF2201.

1. Preset the input power supply to the desired operating voltage before applying to the VIN and GND Pin. Connect the positive and negative terminals of the input power supply to VIN and GND respectively.
2. On the EVB, the external OVP has been set to about 5.5 V with R1 and R2 divider resistors. If the OVLO pin is short to GND, Fixed OVP (Typ.= 6.8 V) will be used.
3. The load resistor, $R_L=499 \Omega$, has been populated on the top of the PCB board. Short the J2 to use the R_L . To increase the output current, connect an electronic load or resistor to VOUTF and GND. The GLF2201 is rated for 3 A maximum continuous output current. Please ensure the absolute maximum is not exceeded.
4. Turn on the input power supply.
5. VINS and VOUTS can be used for measurement points, and OVLO and FLGB are used to observe the Over-voltage point and FLGB signal.

TEST SETUP



SCHEMATIC



BILL OF MATERIALS

Qty	Reference	Value	Part Description	Manufacturer/Part Number
1	U1	GLF2201	GLF2201, DFN2x2-6L	GLF Integrated Power
1	C1	0.1 µF	Cap., X7R, 50V, 10% 0805	YAGEO CC0805KRX7R9BB104
1	C2	1 µF	Cap., X7R, 16V, 5% 0805	YAGEO CC0805JKX7R7BB105
1	R1	300 K	Res. 300K, 1%, 0805	YAGEO RT0805FRE-07300KL
1	R2	100 K	Res. 100K, 1%, 0805	YAGEO RC0805FR-07100KL
1	R3	10 K	Res. 10K, 1%, 0805	YAGEO RC0805FR-0710KL
1	RL	499 Ω	Res. 499Ω, 1%, 0805	YAGEO RC0805FR-07499RL
2	J1, J2	Jumper	Jumper	

PRINTED CIRCUIT BOARD LAYOUT

Fig 1. Top Layer

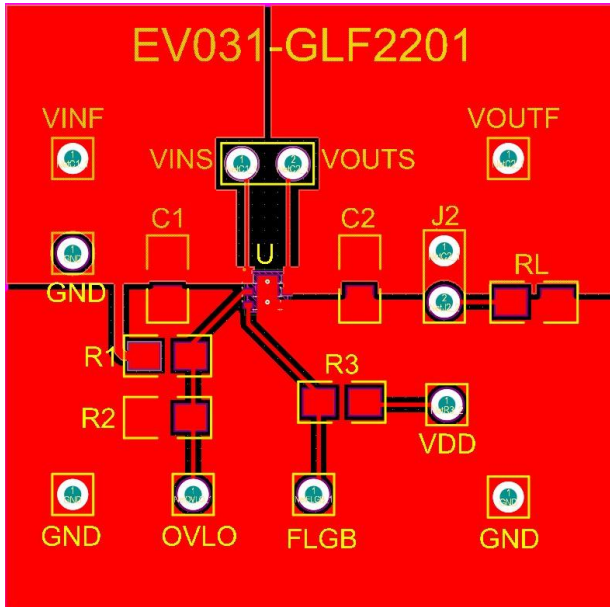
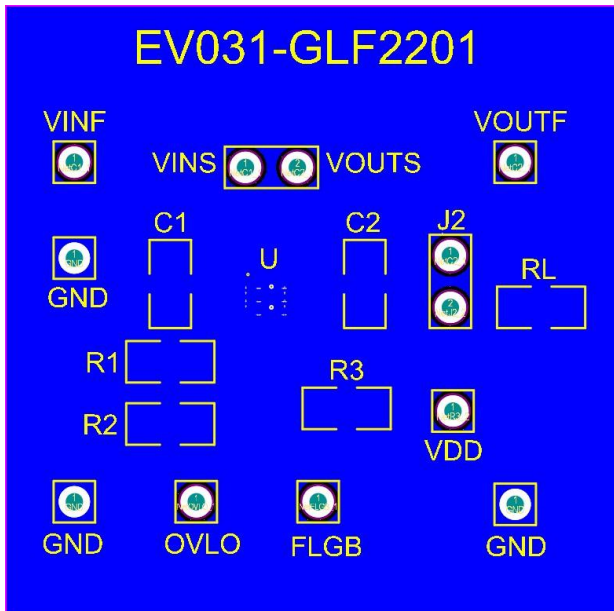


Fig 2. Bottom Layer



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.