

#### DESCRIPTION

The GLF78131T is an ultra-efficient, I<sub>Q</sub>Smart™ LoadSwitch with three independent and identical load switches integrated. Each load switch features an ultra-efficient I<sub>Q</sub>Smart™ technology that supports some of the lowest quiescent current (I<sub>Q</sub>) and shutdown current (I<sub>SD</sub>) in the industry. 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 GLF78131T integrated slew rate control can also enhance system reliability by mitigating bus voltage swings during switching events. Where uncontrolled switches can generate high inrush current that result in voltage droop and/or bus reset events, the slew rate control specifically limits inrush current during turn-on to minimize voltage droop.

The GLF78131T 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 GLF78131T is utilizing a wafer level chip scale package with 12 bumps in a 1.27 mm x 1.67 mm die size and a 0.4 mm bump pitch. The GLF78131T is ultra-thin. Its thickness is 0.35 mm Typ, 0.4 mm Max.

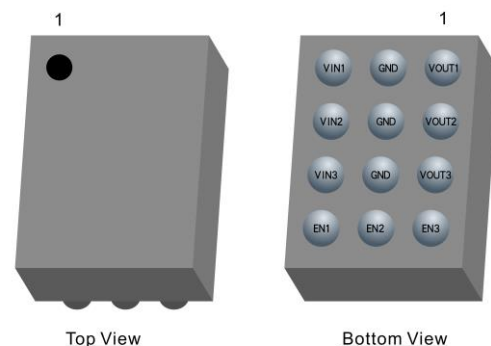
#### FEATURES

- Each Channel is identical
- Ultra-Low I<sub>Q</sub>: 6 nA Typ @ 5.5 V<sub>IN</sub>
- Ultra-Low I<sub>SD</sub>: 23 nA Typ @ 5.5 V<sub>IN</sub>
- Low R<sub>ON</sub> = 60 mΩ Typ @ 5.5 V<sub>IN</sub>
- I<sub>OUT</sub> Max = 1.5 A
- Supply Voltage Range: 1.1 V to 5.5 V  
6 V abs max
- Controlled Rise Time: 500 μs at 3.3 V<sub>IN</sub>
- Internal EN Pull-Down Resistor
- Integrated Output Discharge Switch
- Temperature Range: -40 to 85 °C
- HBM: 6 kV, CDM: 2 kV

#### APPLICATIONS

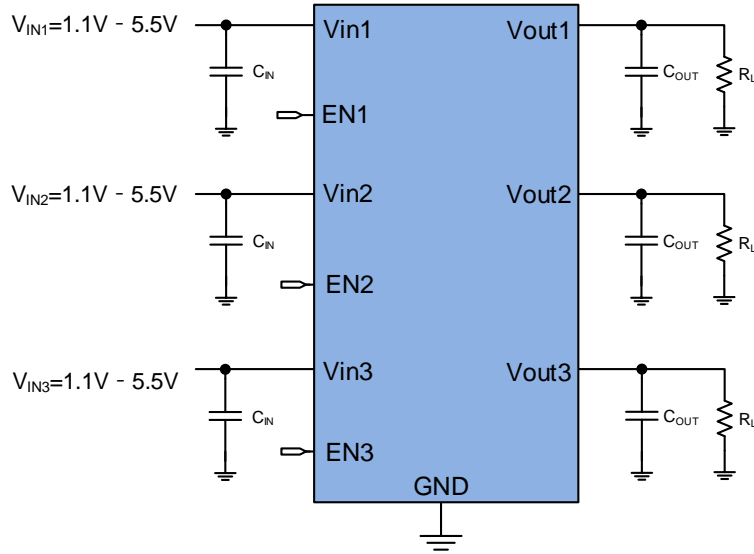
- Low Power Subsystems
- Thin Mobile Devices & Wearables
- IoT Devices

#### PACKAGE



1.27 mm x 1.67 mm x 0.35 mm

#### APPLICATION DIAGRAM



### FUNCTIONAL BLOCK DIAGRAM (Each Channel is identical)

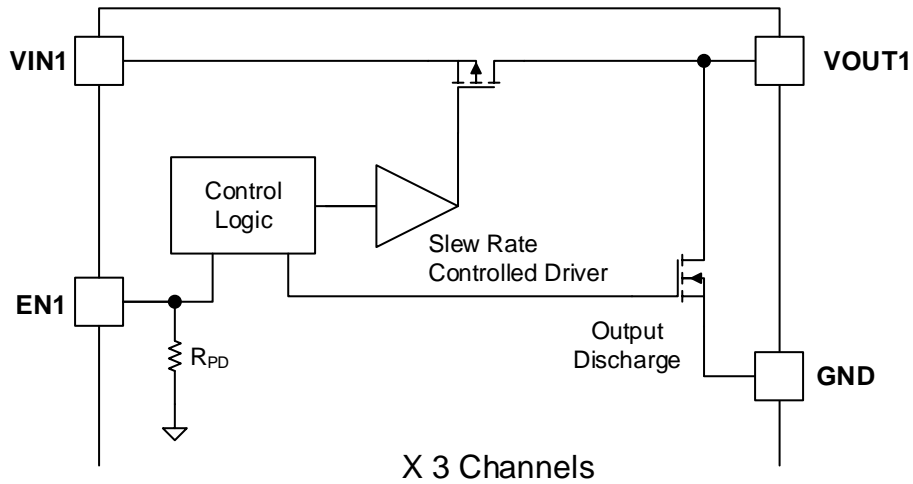
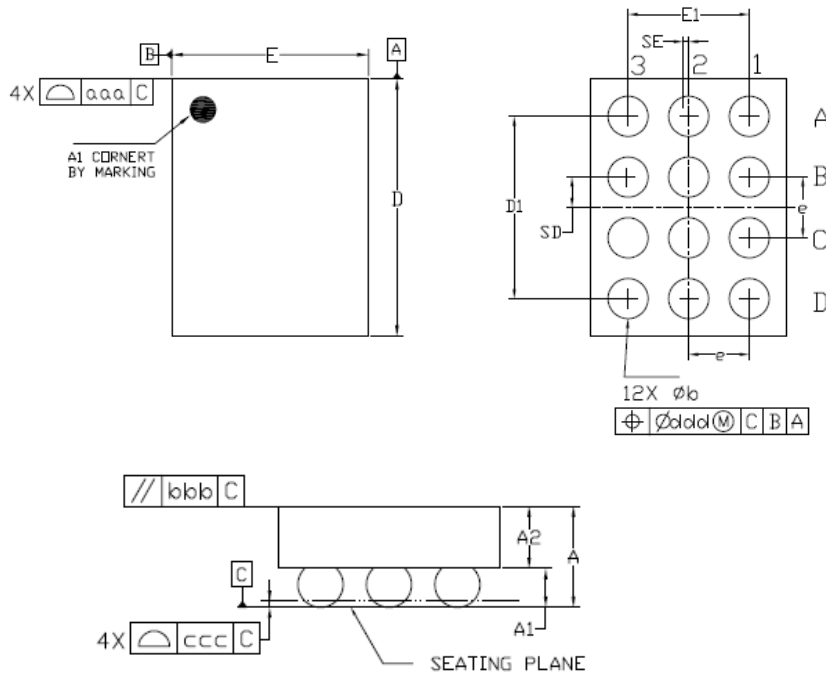


Figure 1. Functional Block Diagram of Single Channel

**PACKAGE OUTLINE**



Dimensional Ref.			
REF.	Min.	Nom.	Max.
A	0.300	0.350	0.400
A1	0.075	0.100	0.125
A2	0.225	0.250	0.275
D	1.655	1.670	1.685
E	1.255	1.270	1.285
D1	1.150	1.200	1.250
E1	0.750	0.800	0.850
b	0.200	0.230	0.260
e	0.400 BSC		
SD	0.200 BSC		
SE	0.000 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.