GLF78131

3-Channel IQSmartTM LoadSwitch

Product Brief

DESCRIPTION

The GLF78131 is an ultra-efficienct, I_QSmart™ LoadSwitch with three independent and identical load switches integrated. Each load switch features an ultra-efficient I_QSmart™ technology that supports some of the lowest quiescent current (I_Q) and shutdown current (I_{SD}) in the industry. Low I_Q and I_{SD} solutions help designers to reduce parasitic leakage current, improve system efficiency, and increase battery lifetime.

The GLF78131 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 GLF78131 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 GLF78131 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.

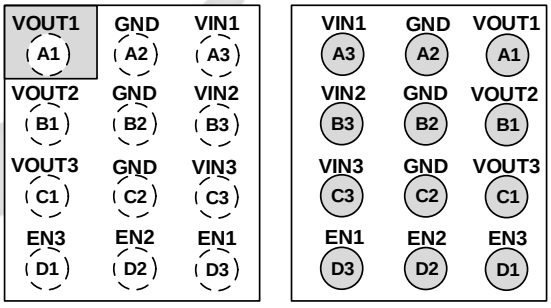
FEATURES

- Each Channel is identical
- Ultra-Low I_Q: 6 nA Typ @ 5.5 V_{IN}
- Ultra-Low I_{SD}: 23 nA Typ @ 5.5 V_{IN}
- Low R_{ON} = 60 mΩ Typ @ 5.5 V_{IN}
- I_{OUT} 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_{IN}
- 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

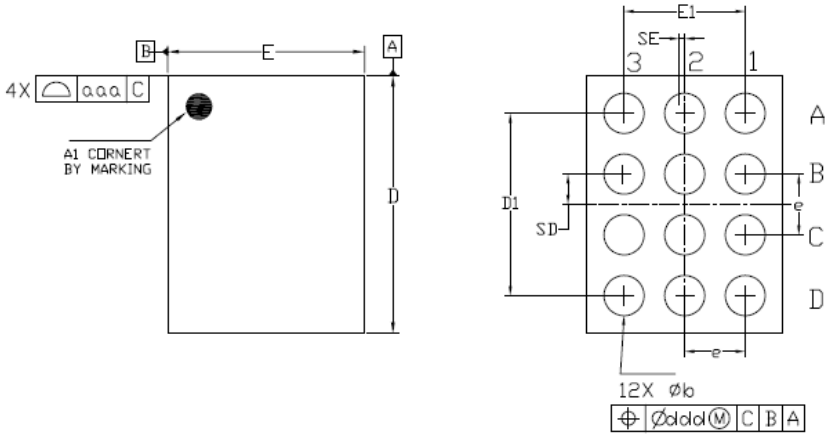
PACKAGE

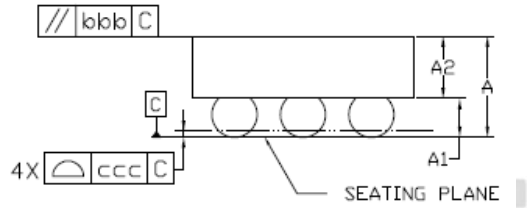


TOP VIEW **BOTTOM VIEW**

GLF78131 : 1.27 mm x 1.67 mm x 0.55 mm

PACKAGE OUTLINE





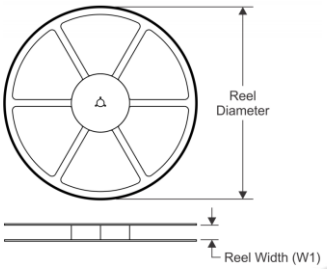
Dimensional Ref.			
REF.	Min.	Nom.	Max.
A	0.500	0.550	0.600
A1	0.175	0.200	0.225
A2	0.325	0.350	0.375
D	1.655	1.670	1.685
E	1.255	1.270	1.285
D1	1.150	1.200	1.250
E1	0.750	0.800	0.850
b	0.215	0.265	0.315
e	0.400 BSC		
SD	0.200 BSC		
SE	0.000 BSC		
Tol. of Form&Position			
aaa	0.10		
bbb	0.10		
ccc	0.05		
ddd	0.05		

Notes

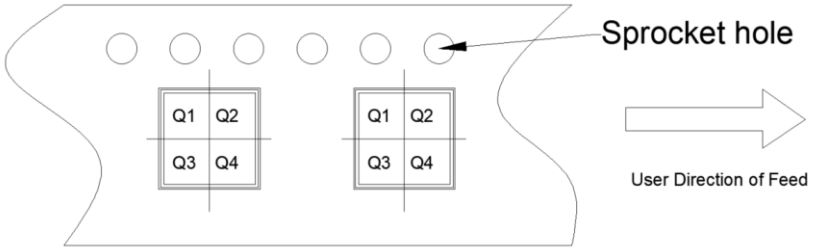
1. All DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1994.

TAPE AND REEL INFORMATION

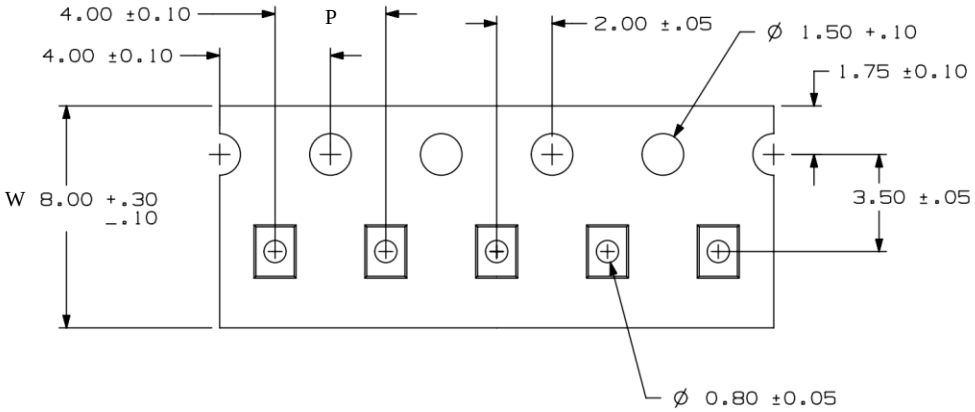
REEL DIMENSIONS

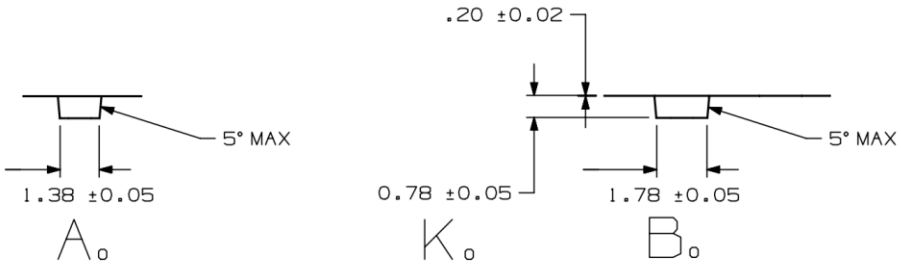


QUADRANT ASSIGNMENTS PIN 1 ORIENTATION TAPE



TAPE DIMENSIONS





Device	Package	Pins	SPQ	Reel Diameter(mm)	Reel Width W1	A0	B0	K0	P	W	Pin1
GLF78131	WLCSP	12	3000	180	9	1.38	1.78	0.78	4	8	Q1

Remark:

A0: Dimension designed to accommodate the component width

B0: Dimension designed to accommodate the component length

C0: Dimension designed to accommodate the component thickness

W: Overall width of the carrier tape

P: Pitch between successive cavity centers