

GLF76121

Nano Current Consumed Integrated Load Switch with Reset Timer

Product Brief

DESCRIPTION

The GLF76121 is an ultra-efficient I_{QSmart}^{TM} load switch with an integrated reset timer for wearables and IoT devices.

The /SRO pin offers a true reset function enabling the load switch to completely disconnect the load from the input battery after a reasonable long delay time. After the reset period, the main switch of the GLF76121 reconnect the output load to the input battery for normal operation. The GLF76121 offers 6 second delay time before the 750 ms reset duration.

The ultra-low I_Q enables direct interface to lower voltage chipset without any external circuit and maintains lower power consumption. The OFF input pin allows the GLF76121 to achieve complete shutdown with total downstream standby current of 7 nA typical. With the switch placed between a battery and system, this switch can help to significantly extend system battery life in mobile devices during shipping or periods of extended off time.

The GLF76121 help to reduce power consumption with the best in class R_{ON} and a breakthrough on state I_Q of only 7nA typical when the switch is on.

The GLF76121 integrated 1ms slew rate control can also enhance system reliability by mitigating bus voltage swings during switching events. Where uncontrolled switching can generate high inrush current that results in voltage droop and/or bus reset events, the GLF slew rate control specifically limits inrush current during turn-on to minimize voltage droop. The output discharge function makes output voltage off quickly during the reset period.

The GLF76121 is available in 0.97 mm x 1.47 mm x 0.55mm wafer level chip scale package (WLCSP).

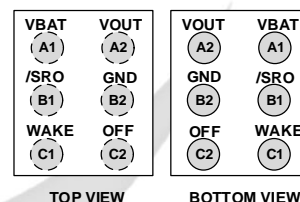
FEATURES

- Ultra-Low I_{SD} : 7 nA Typ @ 3.6 VBAT
- Ultra-Low I_Q : 7 nA Typ @ 3.6 VBAT
- Low R_{ON} : 34 m Ω Typ @ 3.6 VBAT
- I_{OUT} Max: 2 A
- Supply Voltage Range: 2.5 V to 5.5 V
6 Vabs max
- Reset Delay Time (/SRO Hold Time): 6 s
- Reset Pulse Period: 750 ms
- Turn-Off Delay Time: 6 s
- Controlled Output Rise Time: 1 ms at 3.6 VBAT
- Integrated Output Discharge Switch When Disabled
- Operating Temperature Range: -40 to 85 °C
- HBM: 6 kV, CDM: 2 kV
- Ultra-Small: 0.97 mm x 1.47 mm WLCSP

APPLICATIONS

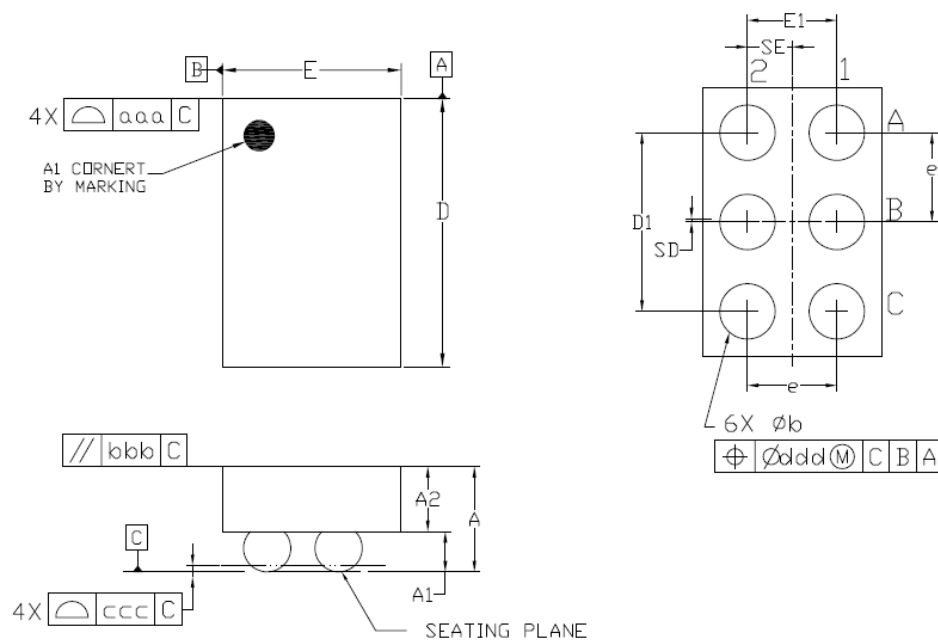
- Wearables
- IoT Devices
- Medical Devices

PACKAGE



0.97 mm x 1.47 mm x 0.55 mm WLCSP

PACKAGE OUTLINE



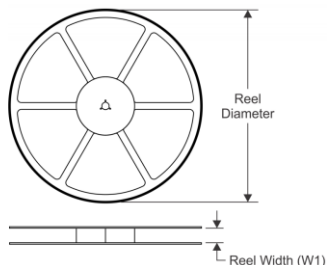
Dimensional Ref.			
REF.	Min.	Nom.	Max.
A	0.500	0.550	0.600
A1	0.225	0.250	0.275
A2	0.275	0.300	0.325
D	1.460	1.470	1.485
E	0.960	0.970	0.985
D1	0.950	1.000	1.050
E1	0.450	0.500	0.550
b	0.260	0.310	0.360
e	0.500 BSC		
SD	0.000 BSC		
SE	0.250 BSC		
Tol. of Form&Position			
aaa	0.10		
bbb	0.10		
ccc	0.05		
ddd	0.05		

Notes

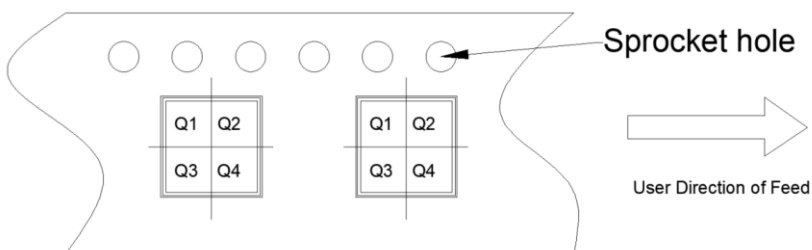
1. ALL DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1994.

TAPE AND REEL INFORMATION

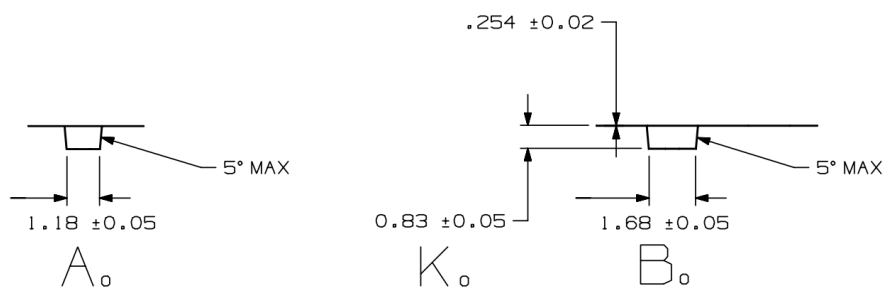
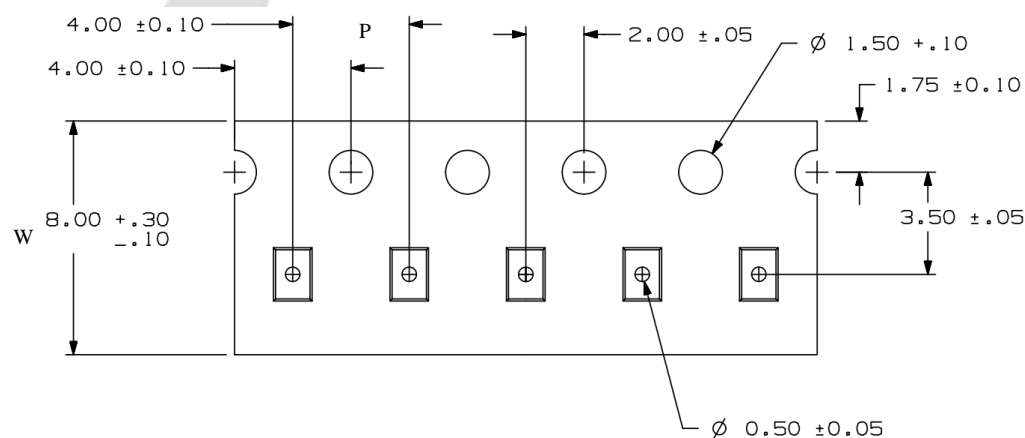
REEL DIMENSIONS



QUADRANT ASSIGNMENTS PIN 1 ORIENTATION TAPE



TAPE DIMENSIONS



Device	Package	Pins	SPQ	Reel Diameter(mm)	Reel Width W1	A0	B0	K0	P	W	Pin1
GLF76121	WLCSP	6	3000	180	9	1.18	1.68	0.83	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