

#### DESCRIPTION

The GLF76311 is an ultra-thin, ultra-efficient  $I_{QSmart}^{TM}$  load switch with an integrated on and off delay timer for Smart bracelet and Mobile handheld devices.

When the VBAT pin is connected to the battery, the main switch of GLF76311 is turned on, that is the default state. During the normal operation mode, pulling the SW pin to a low level for 6 seconds turns off the GLF76311 and the entire system enters the ultra-deep sleep energy-saving mode.

When the GLF76311 is off, pulling the SW pin to a low level for 3 seconds activates the GLF76311 again and the entire system enters the normal working mode.

The GLF76311 helps to reduce power consumption with the best in class  $R_{ON}$ , a breakthrough on state  $I_Q$  of only 6 nA when the switch is on and ultra-low  $I_{SD}$  of only 7 nA when switch is off. This switch can help significantly extend the system battery life in mobile devices during shipping or in extended shutdown times.

An integrated 1 ms slew rate control can also enhance system reliability by mitigating bus voltage swings during switching events, where uncontrolled switching can generate high inrush currents that result in voltage droop and/or bus reset events. The GLF slew rate control specifically limits inrush currents during turn-on to minimize voltage droop. The output discharge function makes the output voltage shut off safely.

The GLF76311 is available in 0.97 mm x 0.97 mm x 0.55 mm wafer level chip scale package (WLCSP).

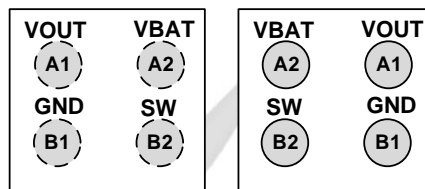
#### FEATURES

- Ultra-Low  $I_{SD}$ : 7 nA Typ @ 3.6 VBAT
- Ultra-Low  $I_Q$ : 6 nA Typ @ 3.6 VBAT
- Low  $R_{ON}$ : 34 m $\Omega$  Typ @ 3.6 VBAT
- $I_{OUT Max}$ : 2 A
- Wide Input Range: 2.5 V to 5.5 V  
6 Vabs Max.
- Turn-On Delay Time, 3 s Typ.
- Turn-Off Delay Time, 6 s Typ.
- Controlled  $V_{OUT}$  Rise Time: 1 ms at 3.6 VBAT
- Integrated Output Discharge Switch When Disabled
- Operating Temperature Range: - 40 to 85 °C
- HBM: 8 kV, CDM: 2 kV
- Ultra-Small: 0.97 mm x 0.97 mm x 0.55 mm WLCSP

#### APPLICATIONS

- Smart Devcies
- Mobile handheld device

#### PACKAGE



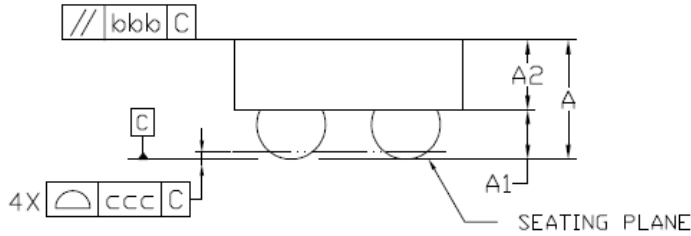
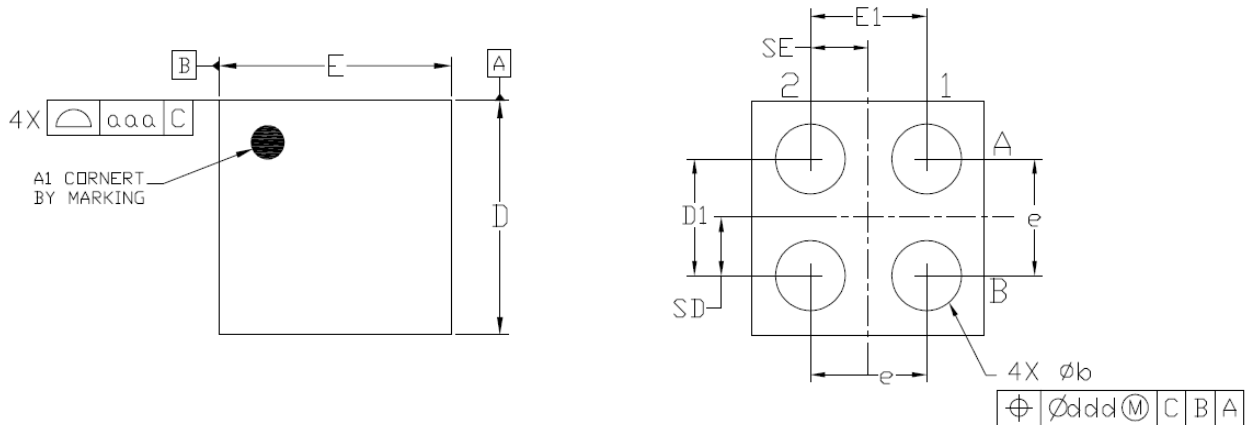
TOP VIEW

BOTTOM VIEW

0.97 mm x 0.97 mm x 0.55mm

0.5mm pitch WLCSP

**PACKAGE OUTLINE**



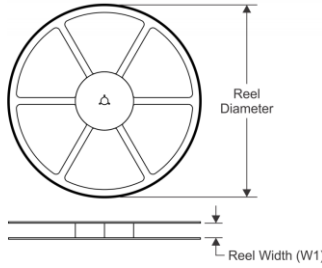
Dimensional Ref.			
REF.	Min.	Nom.	Max.
A	0.500	0.550	0.600
A1	0.225	0.250	0.275
A2	0.275	0.300	0.325
D	0.955	0.970	0.985
E	0.955	0.970	0.985
D1	0.450	0.500	0.550
E1	0.450	0.500	0.550
b	0.260	0.310	0.360
e	0.500 BSC		
SD	0.250 BSC		
SE	0.250 BSC		
Tol. of Form&Position			
aaa	0.10		
bbb	0.10		
ccc	0.05		
ddd	0.05		

Notes

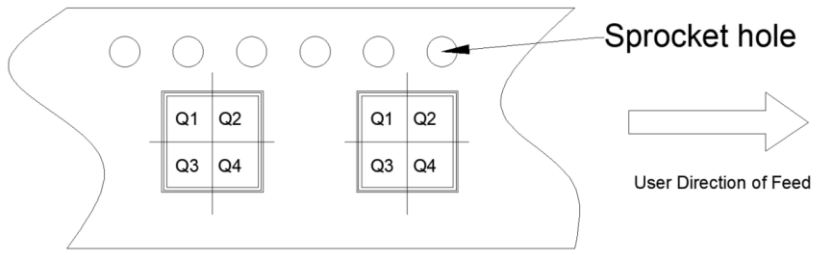
1. ALL DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1994.

**TAPE AND REEL INFORMATION**

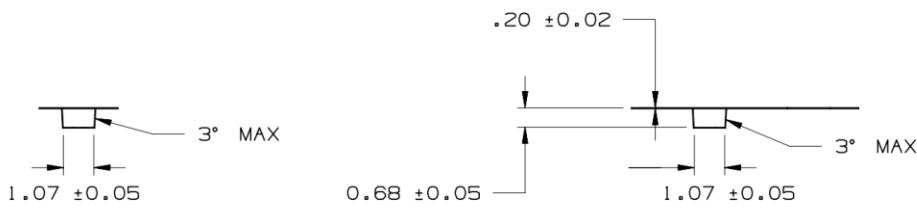
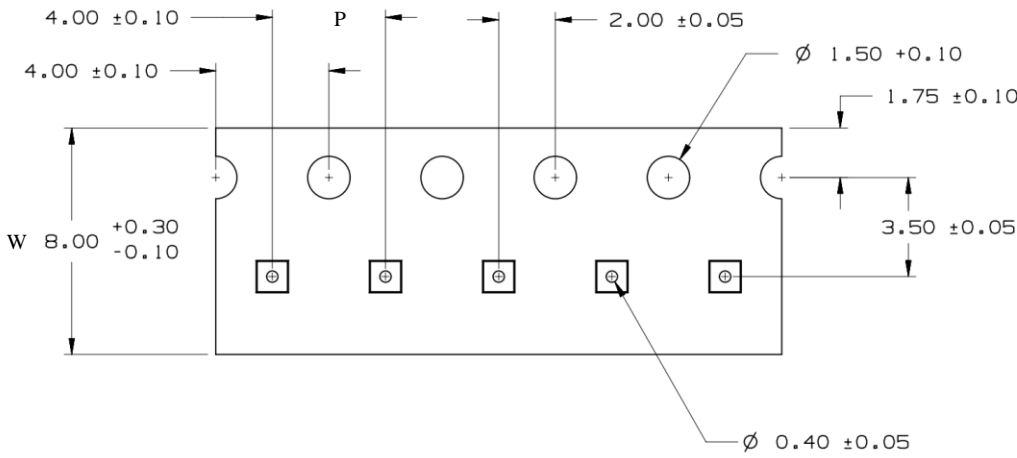
**REEL DIMENSIONS**



**QUADRANT ASSIGNMENTS PIN 1 ORIENTATION TAPE**



**TAPE DIMENSIONS**



Device	Package	Pins	SPQ	Reel Diameter(mm)	Reel Width W1	A0	B0	K0	P	W	Pin1
GLF76311	WLCSP	4	3000	180	9	1.07	1.07	0.68	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