

#### DESCRIPTION

The GLF7210x is an advanced technology fully integrated I<sub>Q</sub>Smart™ load switch device with True Reverse Current Blocking (TRCB) technology and the slew rate control of the output voltage.

The GLF7210x offers industry leading True Reverse Current Blocking (TRCB) performance, featuring an ultra-low threshold voltage. It minimizes reverse current flow in the event that the V<sub>OUT</sub> pin voltage exceeds the V<sub>IN</sub> voltage.

The GLF7210x has industry leading efficiency. It features a R<sub>ON</sub> as low as 37 mΩ typical at 5.5 V, reducing power loss during conduction. The device also features ultra-low shutdown current (I<sub>SD</sub>) to reduce power loss and battery drain in the off state. When EN is pulled low, and the output is grounded, the GLF7210x can achieve an I<sub>SD</sub> as low as 20 nA typical at 5.5 V.

The GLF7210x 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 GLF7210x load switch device is small utilizing a chip scale package with 6 bumps in a 0.77 mm x 0.77 mm x 0.46 mm die size and a 0.4 mm pitch.

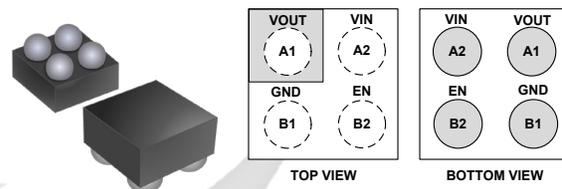
#### FEATURES

- Wide Input Range: 1.5 V to 5.5 V  
6 V<sub>abs</sub> max
- True Reverse Current Blocking
- Ultra-Low I<sub>Q</sub>: 0.45 uA Typ @ 5.5 V<sub>IN</sub>
- Ultra-Low I<sub>SD</sub>: 20 nA Typ @ 5.5 V<sub>IN</sub>
- Low R<sub>ON</sub>: 37 mΩ Typ @ 5.5 V<sub>IN</sub>
- I<sub>OUT</sub> Max: 2 A
- Controlled V<sub>OUT</sub> Rise Time
- Internal EN Pull-up/down Resistor on EN Pin
- Integrated Output Discharge Switch: GLF72101, GLF72103, GLF72105

#### APPLICATIONS

- Mobile Devices
- Wearables
- Low Power Subsystems

#### PACKAGE



0.77 mm x 0.77 mm x 0.46 mm WLCSP

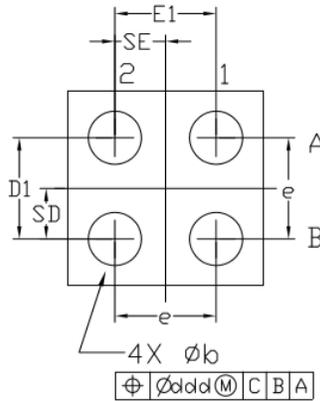
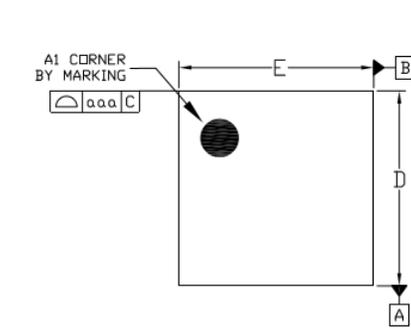
#### ALTERNATE DEVICE OPTIONS

Part Number	Top Mark	R <sub>ON</sub> (Typ) at 5.5 V	TRCB	Output Discharge	V <sub>OUT</sub> Rise Time t <sub>r</sub> (Typ) at 3.3 V	EN Activity	Package
GLF72100	J	37 mΩ	Yes	NA	570 μs	High	WLCSP
GLF72101	F			85 Ω		High	WLCSP
GLF72102 *	K			NA		Low	WLCSP
GLF72103	M			85 Ω	48 μs	High	WLCSP with Backside Laminate
GLF72105	N			85 Ω	890 μs	Low	WLCSP with Backside Laminate

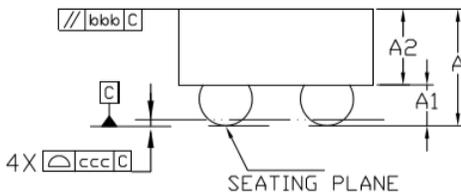
Note) GLF72102 is upon request

**PACKAGE OUTLINE**

**GLF72100 and GLF72101**



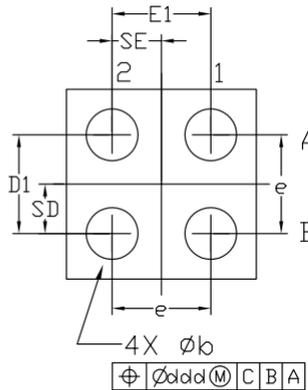
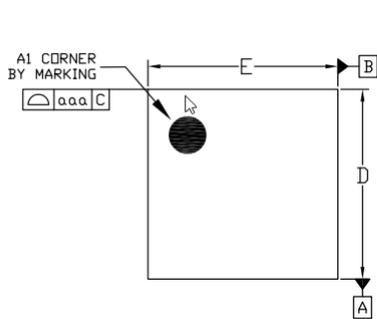
Dimensional Ref.			
REF.	Min.	Nom.	Max.
A	0.410	0.460	0.510
A1	0.135	0.160	0.185
A2	0.275	0.300	0.325
D	0.755	0.770	0.785
E	0.755	0.770	0.785
D1	0.350	0.400	0.450
E1	0.350	0.400	0.450
b	0.170	0.210	0.250
e	0.400 BSC		
SD	0.200 BSC		
SE	0.200 BSC		
Tol. of Form&Position			
aaa	0.10		
bbb	0.10		
ccc	0.05		
ddd	0.05		



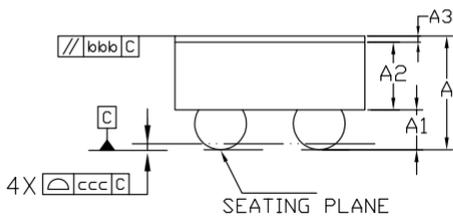
Notes

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

**GLF72103 and GLF72105**



Dimensional Ref.			
REF.	Min.	Nom.	Max.
A	0.410	0.460	0.510
A1	0.135	0.160	0.185
A2	0.250	0.275	0.300
A3	0.020	0.025	0.030
D	0.755	0.770	0.785
E	0.755	0.770	0.785
D1	0.350	0.400	0.450
E1	0.350	0.400	0.450
b	0.170	0.210	0.250
e	0.400 BSC		
SD	0.200 BSC		
SE	0.200 BSC		
Tol. of Form&Position			
aaa	0.10		
bbb	0.10		
ccc	0.05		
ddd	0.05		

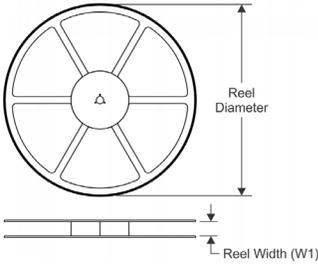


Notes

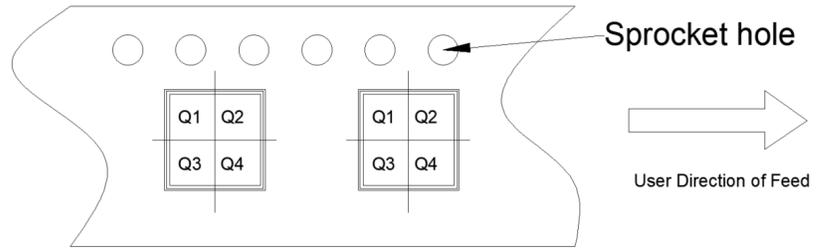
1. ALL DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES)
2. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1994.
3. A3: BACKSIDE LAMINATION

**TAPE AND REEL INFORMATION**

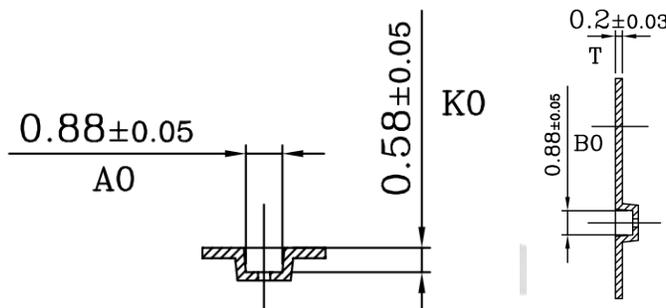
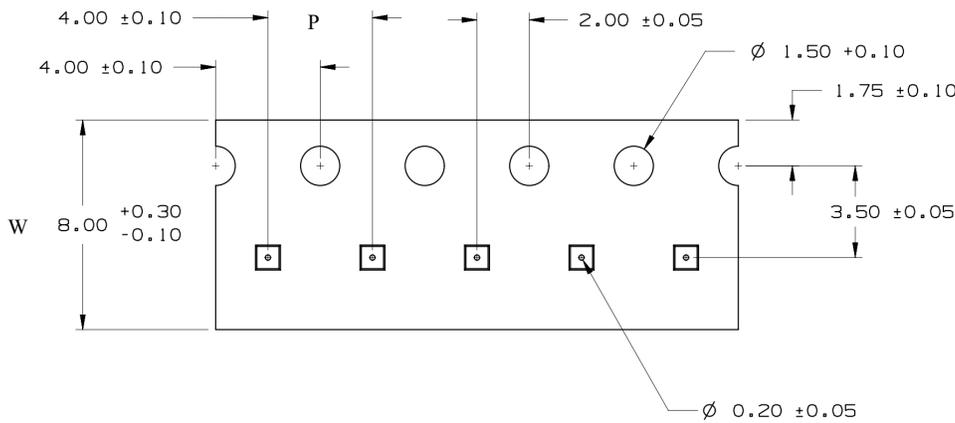
**Reel Dimensions**



**Quadrant Assignments PIN1 Orientation Tape**



**Tape Dimensions**



Device	Package	Pins	SPQ	Reel Diameter(mm)	Reel Width W1	A0	B0	K0	P	W	Pin1
GLF72100	WLCSP	4	4000	179	9	0.88	0.88	0.58	4	8	Q1
GLF72101	WLCSP	4	4000	179	9	0.88	0.88	0.58	4	8	Q1
GLF72102	WLCSP	4	4000	179	9	0.88	0.88	0.58	4	8	Q1
GLF72103	WLCSP	4	4000	179	9	0.88	0.88	0.58	4	8	Q1
GLF72105	WLCSP	4	4000	179	9	0.88	0.88	0.58	4	8	Q1

**Notes:**

- 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