# GLF4000, GLF4001

## Ultra-Low Current Consumption Power Multiplexer Switch with Auto & Manual Input Selection in SOT23-6L

**Product Specification**

## DESCRIPTION

The GLF4000 and GLF4001 are integrated power multiplexer switch with dual independent power switches connected to a single output pin to enable seamless transition between two input sources.

The GLF4000 and GLF4001 provide an automatic selection mode as well as a manual selection mode by the combination of the logic input pins of S1 and S2. The S1 input pin is used along with the S2 input pin to select the automatic switching function, select VIN1 only, select VIN2 only, or turn both switches off. In the automatic selection mode, the GLF4000 and GLF4001 automatically select the higher input voltage source out of two input DC power supplies.

The GLF4000 and GLF4001 feature an ultra-efficient $I_Q$Smart™ technology that offers quiescent current ($I_Q$) and shutdown current ($I_{SD}$) in the industry. Low $R_{ON}$ reduces conduction losses while low $I_Q$ and $I_{SD}$ solutions help designers to reduce parasitic leakage current, improve system efficiency, and increase battery lifetime.

The GLF4000 and GLF4001 block any cross-conduction current between two input power sources. When the switch is disabled, the GLF4000 and GLF4001 prevent the reverse current to the input source from the output at any higher Vout than Vin condition.

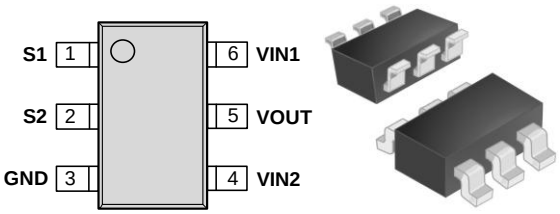
## FEATURES

- Two-Input and Single-Output Power Multiplexer Switch
- Automatic and Manual Input Selection Mode
- Supply Voltage Range: 1.5 V to 5.5 V
  6 Vabs Max
- $R_{ON}$: 68 mΩ Typ. at 5.5 $V_{IN1}$ or $V_{IN2}$
  77 mΩ Typ. at 3.3 $V_{IN1}$ or $V_{IN2}$
- 2 A Continuous Output Current Capability Per Channel
- Ultra-Low Supply Current at Operation
  $I_Q$: 4 μA Typ at 5.5 $V_{IN}$
- Ultra-Low Stand-by Current
  $I_{SD}$: 20 nA Typ at 5.5 $V_{IN}$
- Smart Control Pins
  $I_{S1}$ and $I_{S2}$: 3 nA Typ at $V_{S1}$ or $V_{S2}$ > $V_{IH}$
  $R_{S1}$ and $R_{S2}$: 500 kΩ Typ
- Integrated Output Discharge Switch: GLF4000
- No Cross Conduction Between Two Inputs
- Reverse Current Blocking when Disabled
- Operating Temperature Range: -40 °C to 85 °C
- HBM: ±6 kV, CDM: ±2 kV

## APPLICATIONS

- Smart IoT Devices
- Wearables / Portable Devices
- Headset and Audio System
- Backup Power System

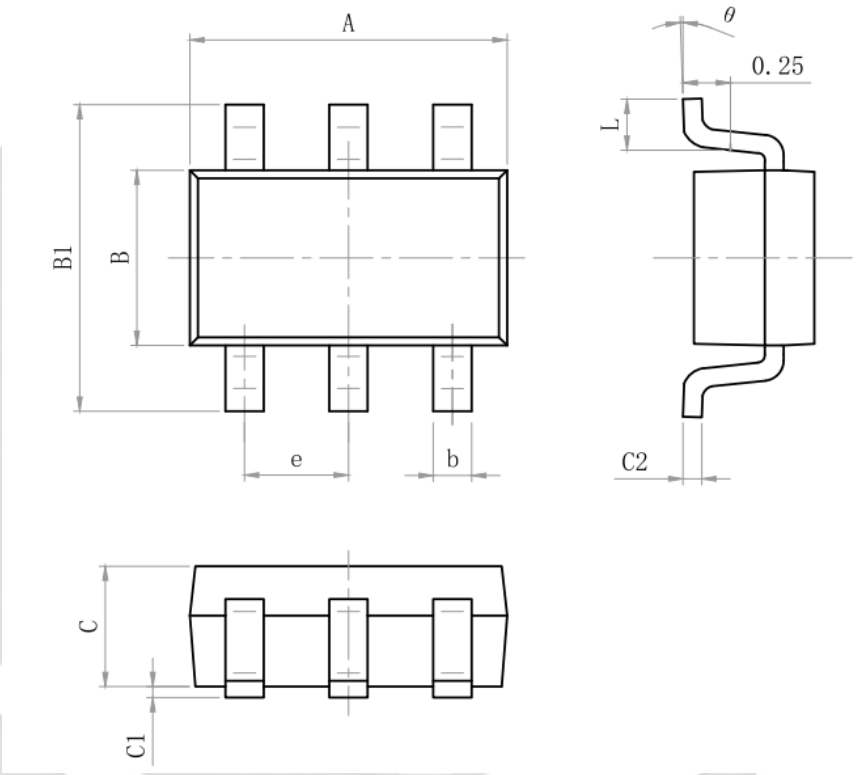
## PACKAGE



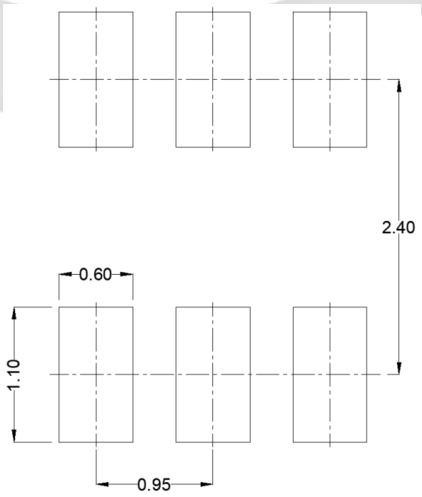

SOT23-6L

## PACKAGE OUTLINE

| Size / Mark | Min(mm) | Max(mm) | Size / Mark | Min(mm) | Max(mm) |
|---|---|---|---|---|---|
| A | 2.82 | 3.02 | C | 1.05 | 1.15 |
| e | 0.95 (BSC) | | C1 | 0.03 | 0.15 |
| b | 0.28 | 0.45 | C2 | 0.12 | 0.23 |
| B | 1.50 | 1.70 | L | 0.35 | 0.55 |
| B1 | 2.60 | 3.00 | θ | 0° | 8° |

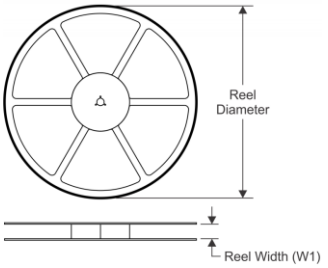



**Recommended Footprint**

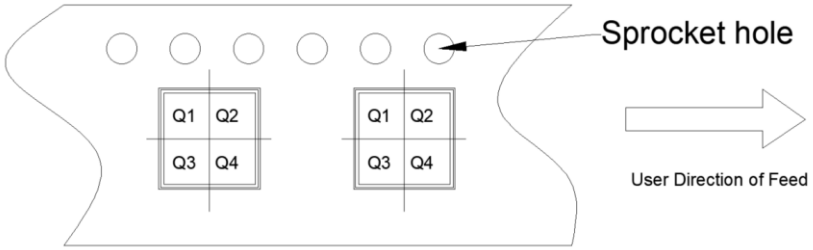


## TAPE AND REEL INFORMATION

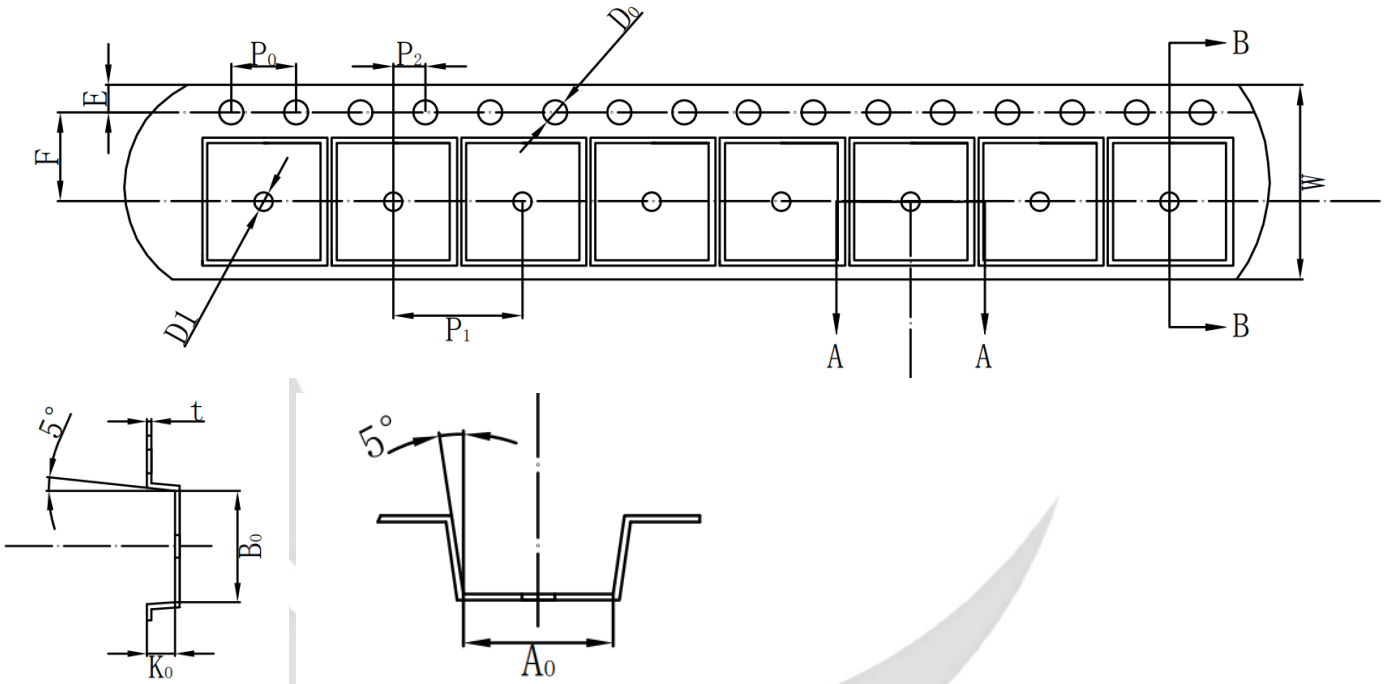
**REEL DIMENSIONS**




**QUADRANT ASSIGNMENTS PIN 1 ORIENTATION TAPE**




**TAPE DIMENSIONS**




| Device | Package | Pins | SPQ | Reel Diameter(mm) | Reel Width W1 | A0 | B0 | K0 | P1 | W | Pin1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GLF4000-T2G7 | SOT23-6 | 6 | 3000 | 178 | 9 | 3.25 | 3.30 | 1.38 | 4 | 8 | Q3 |
| GLF4001-T2G7 | SOT23-6 | 6 | 3000 | 178 | 9 | 3.25 | 3.30 | 1.38 | 4 | 8 | Q3 |

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