

# GLF74139

## Ultra-low Power, 4.5 A Power Mux Switch with True Reverse Current Blocking

### Product Specification

#### DESCRIPTION

The GLF74139 is a fully integrated power path switch with the automatic and manual selection function. The GLF74139 offers an industry leading true reverse current blocking (TRCB) function to protect input sources when the VOUT increase higher than VIN abnormally.

The EN pin can be used along with the SEL pin to control two integrated main FETs of the GLF74139. By the combination of these two pins, one of input source selection modes is set to provide power to downstream system seamlessly.

The automatic selection mode chooses a higher input voltage source between two inputs. In the manual selection mode, one of input sources is connected to downstream system.

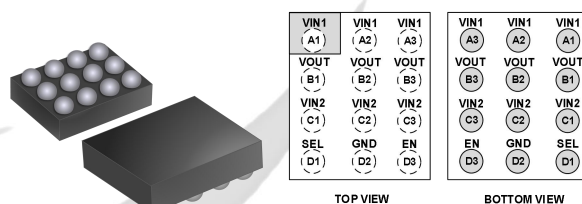
#### APPLICATIONS

- Smart Devices
- Subsystem with Backup Power
- IoT Tracking System

#### FEATURES

- Two-Input and Single-Output Power Multiplexer Switch
- Automatic and Manual Input Selection Modes
- True Reverse Current Blocking on Each Channel
- Supply Voltage Range: 2.0 V to 5.5 V
- $R_{ON} = 20 \text{ m}\Omega$  Typ at 5.5 V<sub>IN1</sub> or V<sub>IN2</sub>
- 4.5 A Continuous Output Current Capability Per Channel
- Ultra-Low Supply Current at Operation  
I<sub>Q</sub>: 4  $\mu$ A Typ at 5.5 V<sub>IN</sub>
- Ultra-Low Stand-by Current  
I<sub>SD</sub>: 30 nA Typ at 5.5 V<sub>IN</sub>
- Smart Control Pins  
I<sub>EN</sub> and I<sub>SEL</sub> : 10 nA Typ at V<sub>EN</sub> or V<sub>SEL</sub> > V<sub>IH</sub>  
R<sub>EN</sub> and R<sub>SEL</sub> : 500 k $\Omega$  Typ
- HBM: 6 kV, CDM: 2 kV

#### PACKAGE

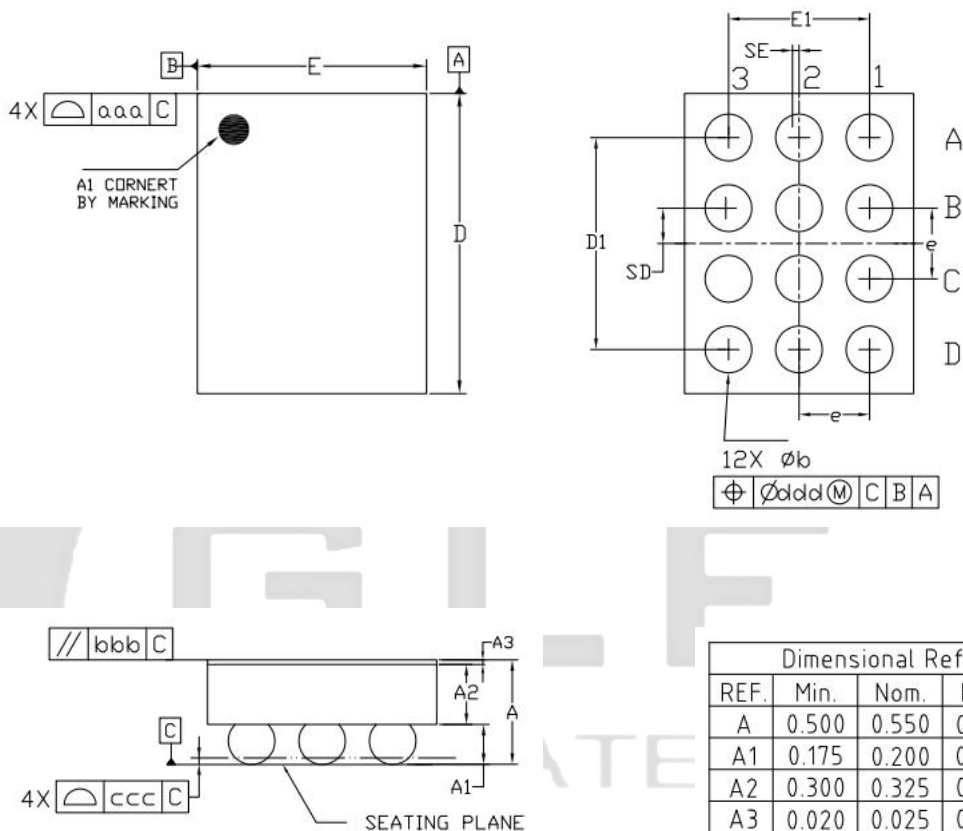


1.27 mm x 1.67 mm x 0.55 mm, WLCSP  
0.4 mm pitch

#### DEVICE INFORMATION

Part Number	Top Mark	R <sub>ON</sub> at 5.5 V <sub>IN</sub>	Output Current, I <sub>OUT</sub> Per Channel	Ultra-low I <sub>Q</sub> at 5.5 V <sub>IN</sub>
GLF74139	EJ	20 m $\Omega$	4.5 A	4 $\mu$ A

## PACKAGE OUTLINE



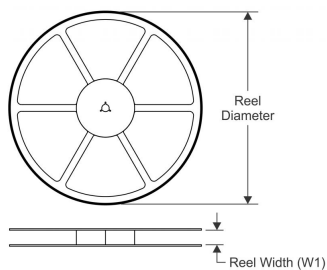
Dimensional Ref.			
REF.	Min.	Nom.	Max.
A	0.500	0.550	0.600
A1	0.175	0.200	0.225
A2	0.300	0.325	0.350
A3	0.020	0.025	0.030
D	1.655	1.670	1.685
E	1.255	1.270	1.285
D1	1.150	1.200	1.250
E1	0.750	0.800	0.850
b	0.215	0.265	0.315
e	0.400 BSC		
SD	0.200 BSC		
SE	0.000 BSC		
Tol. of Form&Position			
aaa	0.10		
bbb	0.10		
ccc	0.05		
ddd	0.05		

### Notes

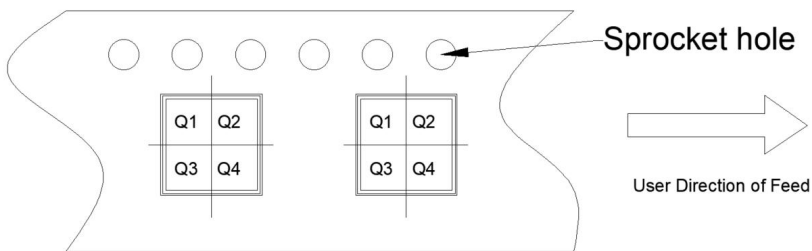
1. ALL DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1994.

## TAPE AND REEL INFORMATION

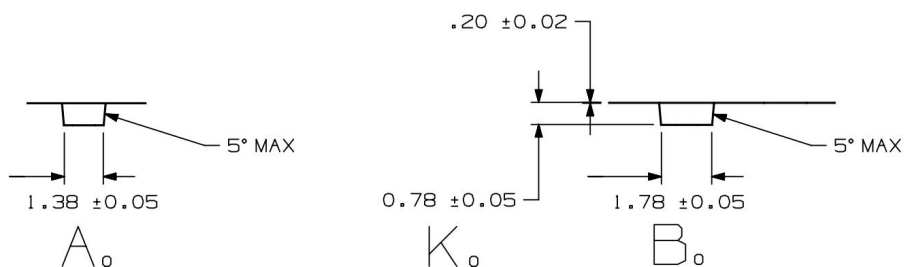
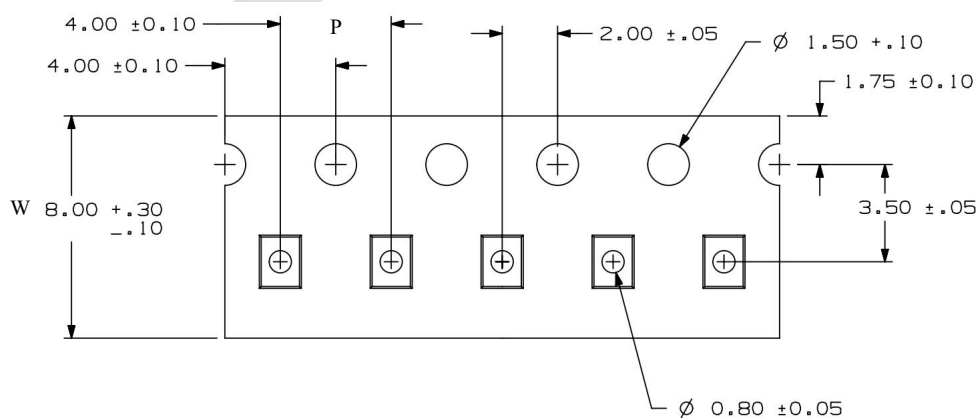
### REEL DIMENSIONS



### QUADRANT ASSIGNMENTS PIN 1 ORIENTATION TAPE



### TAPE DIMENSIONS



Device	Package	Pins	SPQ	Reel Diameter (mm)	Reel Width W1	A0	B0	K0	P	W	Pin1
GLF74139	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