GLF74130

Ultra-low Power, 4.5 A Power Mux Switch with Auto & Manual Input Selection

Product Specification

DESCRIPTION

The GLF74130 I_QSmart™ is an advanced technology fully integrated power path load switch with the ability to automatically select between two input sources depending on the input voltage level of each source.

The power path switch is targeted for the data storage and mobile markets. The chip scale package is as small as 1.27 mm x 1.67 mm x 0.55 mm to deliver the highest performance and lowest cost power path switch solution in the industry.

The GLF74130 has a built-in reverse current blocking protection. When both switches are at the off mode, the GLF74130 prevents the reverse current from a higher output voltage to the input side.

The EN pin can be used along with the SEL pin to control the switches of the GLF74130. By the combination of these two pins, one of input source selection modes is set among the automatic, VIN1, or VIN2 selection.

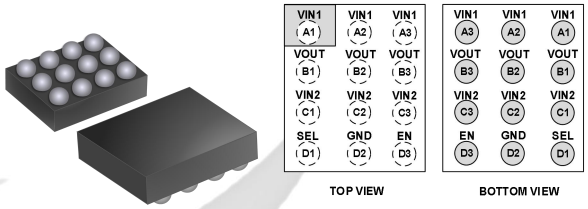
FEATURES

- Two-Input and Single-Output Power Multiplexer Switch
- Automatic and Manual Input Selection Modes
- Supply Voltage Range: 1.5 V to 5.5 V
- R_{ON}: 20 mΩ Typ at 5.5 V_{IN1} or V_{IN2}
- 4.5 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}: 50 nA Typ at 5.5 V_{IN}
- Reverse Current Blocking when Disabled
- Smart Control Pins
  I_{EN} and I_{SEL}: 10 nA Typ at V_{EN} or V_{SEL} > V_{IH}
  R_{EN} and R_{SEL}: 500 kΩ Typ
- Ambient Operating Temperature Range: -40 °C to 85 °C
- HBM: 6 kV, CDM: 2 kV

APPLICATIONS

- Smart Devices
- Subsystem with Backup Power
- IoT Tracking System
- Communication / Network System

PACKAGE

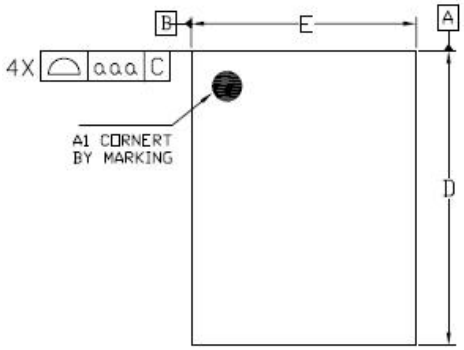


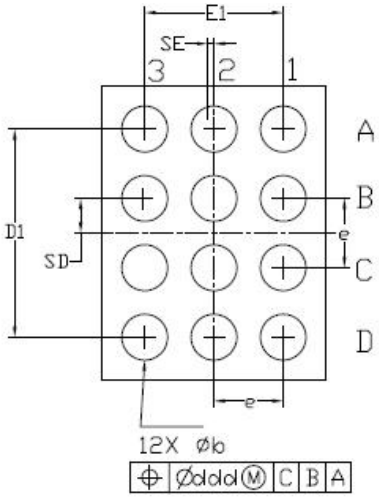
1.27 mm x 1.67 mm x 0.55 mm, 0.4 mm pitch

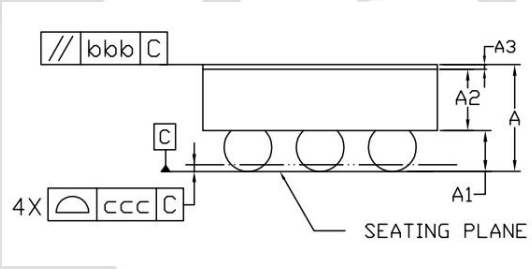
DEVICE ORDERING INFORMATION

Part Number	Top Mark	R_{ON} at 5.5 V_{IN}	Output Current, I_{OUT}	Ultra-low I_Q at 5.5 V_{IN}	Output Discharge	Status
GLF74130	BH	20 mΩ	4.5 A	4 μA	NA	Released
GLF74131	*TBD*	*20 mΩ*	*4.5 A*	*4 μA*	*70 Ω*	*On request*

PACKAGE OUTLINE

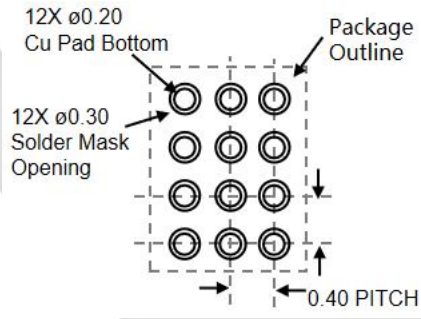






Dimensional Ref.			
REF.	Min.	Nom.	Max.
A	0.500	0.550	0.600
A1	0.175	0.200	0.225
A2	0.300	0.325	0.350
A3	0.020	0.025	0.030
D	1.655	1.670	1.685
E	1.255	1.270	1.285
D1	1.150	1.200	1.250
E1	0.750	0.800	0.850
b	0.215	0.265	0.315
e	0.400 BSC		
SD	0.200 BSC		
SE	0.000 BSC		
Tol. of Form&Position			
aaa	0.10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

Recommended Footprint

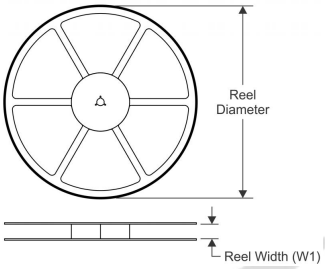


Notes

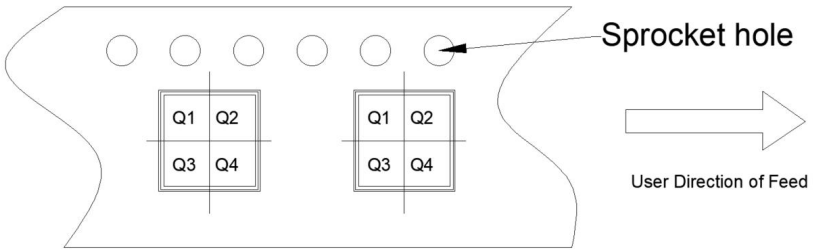
1. ALL DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGRESS)
2. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1994.
3. A3: BACKSIDE LAMINATION

TAPE AND REEL INFORMATION

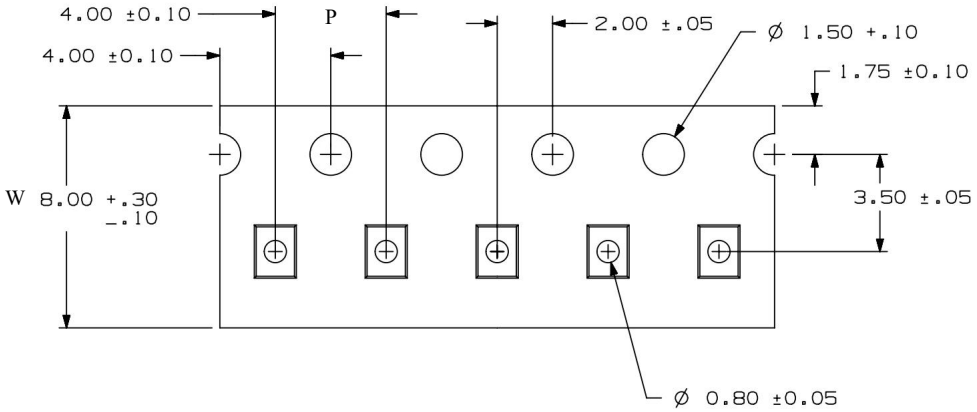
REEL DIMENSIONS

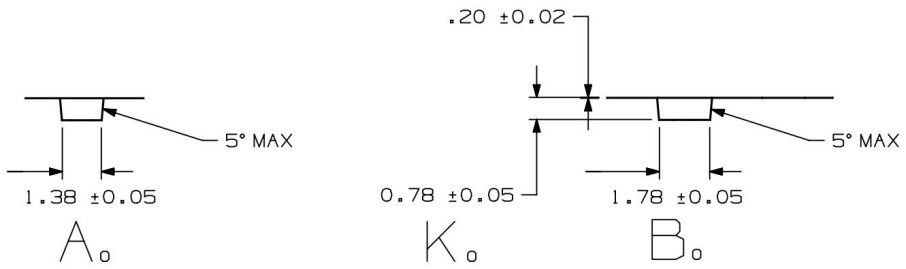


QUADRANT ASSIGNMENTS PIN 1 ORIENTATION TAPE



TAPE DIMENSIONS





Device	Package	Pins	SPQ	Reel Diameter (mm)	Reel Width W1	A0	B0	K0	P	W	Pin1
GLF74130	WLCSP	12	3000	180	9	1.38	1.78	0.78	4	8	Q1
GLF74131	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