GLF72525, GLF72525T

Ultra-Low Current Consumption N-channel Power Load Switch with Low Input Voltage Range and Reverse Current Blocking

Product Specification

DESCRIPTION

The GLF72525 and GLF72525T Load Switch are fully integrated 4 A NMOS load switches with I_QSmart™ advanced technology. The device is targeted for the mobile computing and data storage markets as a high-performance solution for load switch applications.

The GLF72525 and GLF72525T have a constant low on-resistance of 9.0 mΩ at the full input voltage range. The fixed rise time helps prevent undesirable inrush current when turned on and the internal EN pin pulldown resistor ensures the device remains in the shutdown mode when disabled. In shutdown mode the GLF72525 and GLF72525T draw only 14 nA typical at 3.6 V input supply voltage.

The GLF72525 and GLF72525T feature a reverse current blocking protection, when GLF72525 and GLF72525T are disabled. This function can prevent reverse current flowing from the output to the input source.

The GLF72525 is available in a wafer level chip scale package (WLCSP). The GLF72525T is in a thin WLCSP in a 0.35 mm typical thickness. It allows the user to save board space and increase cost savings.

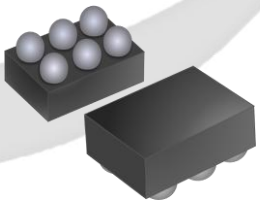
FEATURES

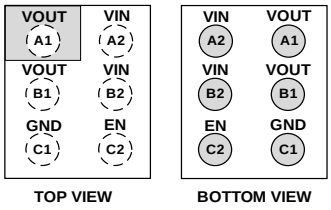
- Supply Voltage Range: 0.7 V to 3.6 V
- Low R_{ON}: 9.0 mΩ Typ
- I_{OUT} Max: 4 A
- Ultra-Low I_Q:
  - 5.6 μA Typ at 0.7 V_{IN}
  - 3.8 μA Typ at 0.8 V_{IN}
  - 8.8 μA Typ at 3.6 V_{IN}
- Ultra-Low I_{SD}: 14 nA Typ @ 3.6 V_{IN}
- Controlled V_{OUT} Turn-on Time
  - 111 μs at 0.7 V_{IN}
  - 113 μs at 0.8 V_{IN}
  - 87 μs at 3.6 V_{IN}
- Internal EN Pull-Down Resistor
- Integrated Output Discharge Switch
- Reverse Current Blocking Protection When Disabled
- Operating Temperature Range: - 40 °C to 105 °C
- HBM: 8 kV, CDM: 2 kV

APPLICATIONS

- Data Storage, SSD
- Wearables
- Low Power Subsystems

PACKAGE

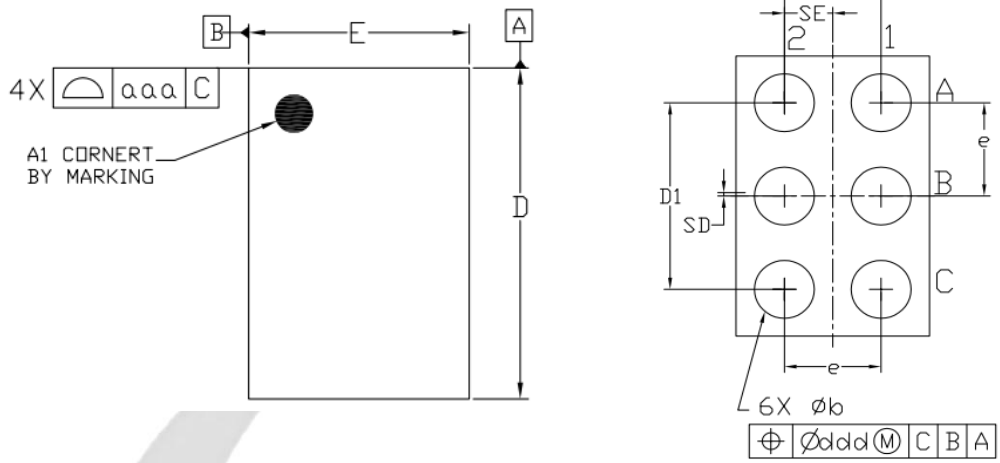


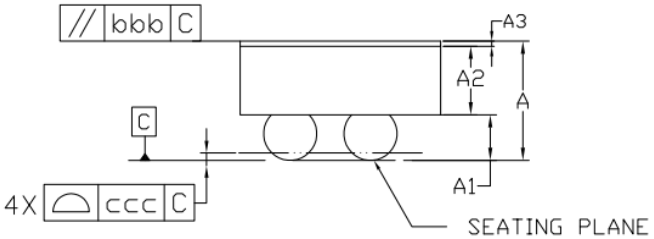


0.97 mm x 1.47 mm WLCSP

PACKAGE OUTLINE

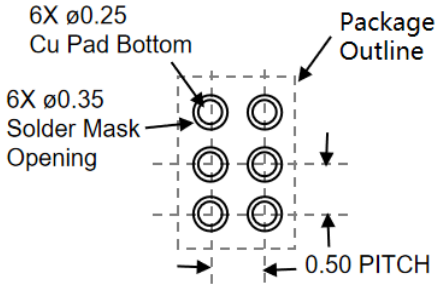
GLF72525





Dimensional Ref.			
REF.	Min.	Nom.	Max.
A	0.500	0.550	0.600
A1	0.225	0.250	0.275
A2	0.250	0.275	0.300
A3	0.020	0.025	0.030
D	1.460	1.470	1.485
E	0.960	0.970	0.985
D1	0.950	1.000	1.050
E1	0.450	0.500	0.550
b	0.260	0.310	0.360
e	0.500 BSC		
SD	0.000 BSC		
SE	0.250 BSC		
Tol. of Form&Position			
aaa	0.10		
bbb	0.10		
ccc	0.05		
ddd	0.05		

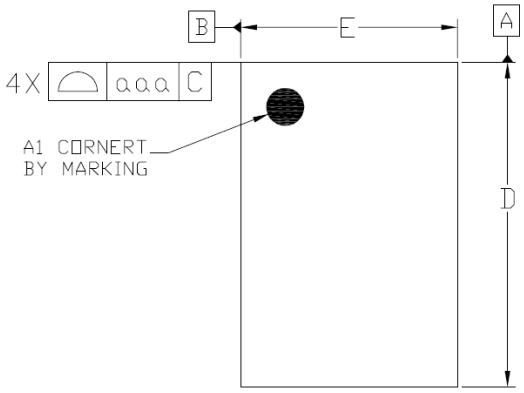
Recommended Footprint

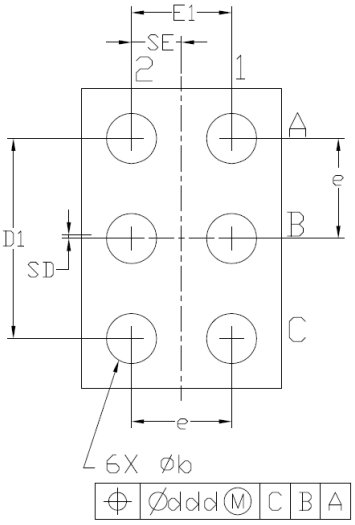


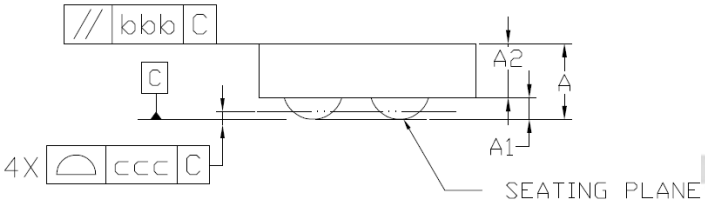
Notes

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

GLF72525T

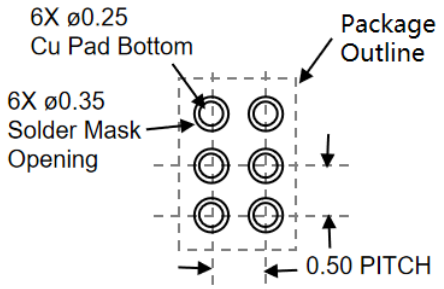






Dimensional Ref.			
REF.	Min.	Nom.	Max.
A	0.300	0.350	0.400
A1	0.075	0.100	0.125
A2	0.225	0.250	0.275
D	1.460	1.470	1.485
E	0.960	0.970	0.985
D1	0.950	1.000	1.050
E1	0.450	0.500	0.550
b	0.210	0.250	0.290
e	0.500 BSC		
SD	0.000 BSC		
SE	0.250 BSC		
Tol. of Form&Position			
aaa	0.10		
bbb	0.10		
ccc	0.05		
ddd	0.05		

Recommended Footprint



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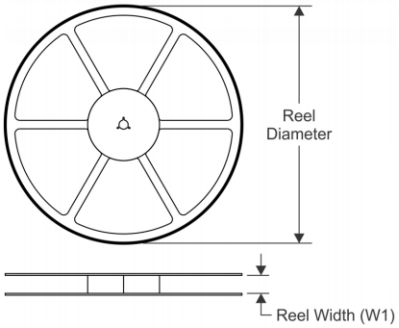
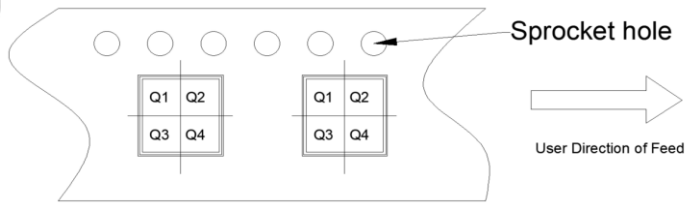
TAPE AND REEL INFORMATION

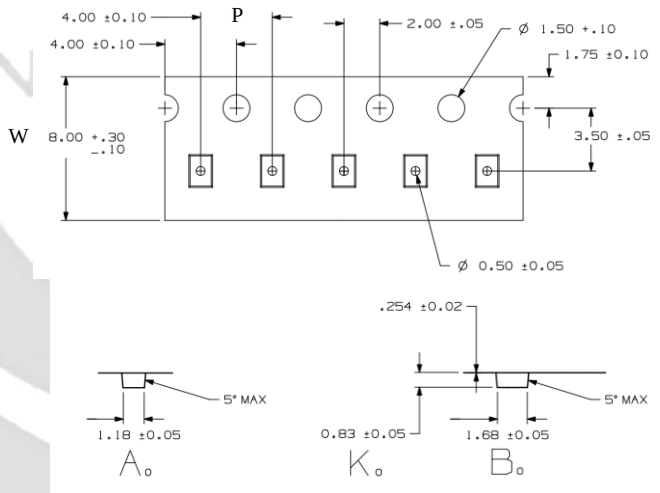
REEL DIMENSIONS



QUADRANT ASSIGNMENTS PIN 1 ORIENTATION TAPE



TAPE DIMENSIONS



Device	Package	Pins	SPQ	Reel Diameter (mm)	Reel Width W1	A0	B0	K0	P	W	Pin1
GLF72525	WLCSP	6	3000	180	9	1.18	1.68	0.83	4	8	Q1
GLF72525T	WLCSP	6	3000	180	9	1.18	1.68	0.83	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