

DESCRIPTION

The GLF4031 is an integrated power multiplexer IC featuring dual independent power switches connected to a single output, enabling seamless transitions between two input power sources. The device supports a manual selection mode, configurable via the logic input pins S1 and S2. These pins allow system designers to manually select VIN1 only or VIN2 or and disable both switches.

The GLF4031 features low conduction resistance, enabling robust 4 A continuous current handling capability per channel. The device incorporates advanced cross-conduction protection that actively prevents current flow between input sources, maintaining isolation regardless of which power supply is active. The GLF4031 is ideally suited for power systems requiring an internal backup power supply.

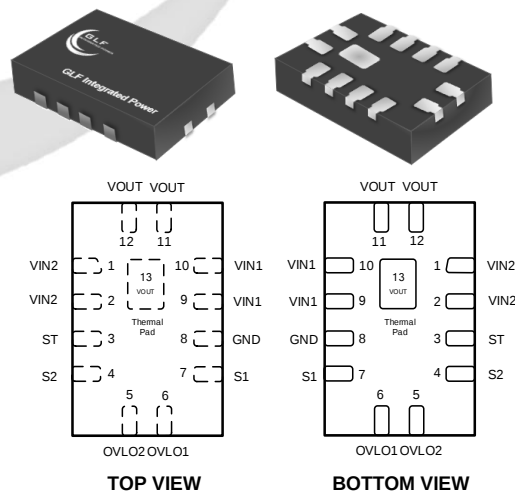
FEATURES

- Two-Input and Single-Output Power Multiplexer IC
- Manual Input Selection Mode
- Wide Input Range
 - VIN1 = 2.8 V to 13 V
 - VIN2 = 2.8 V to 6 V
- I_{OUT} Max: 4 A Per Channel, VIN1 and VIN2
- Low R_{ON}: 24 mΩ Typ
- Low Quiescent Current, I_Q
 - 36 μA Typ at V_{IN1} & V_{IN2} = 2.8 V
 - 53 μA Typ at V_{IN1} & V_{IN2} = 6 V
 - 69 μA Typ at V_{IN1} = 12 V
- Low Stand-by Current, I_{SD}
 - 10 μA Typ at V_{IN1} & V_{IN2} = 2.8 V
 - 13 μA Typ at V_{IN1} & V_{IN2} = 6 V
 - 17 μA Typ at V_{IN1} = 12 V
- No Cross Conduction Between Two Input Sources
- Programmable Over-Voltage Protection
- Thermal Shutdown Protection
- State Indication Function
- Operating Temperature Range
 - - 40 °C to 85 °C

APPLICATIONS

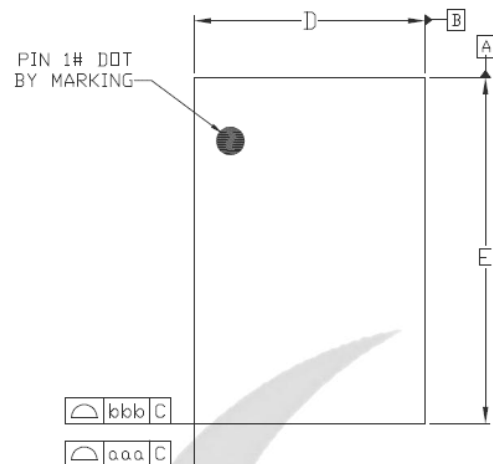
- Power System with Backup Power
- Communication / Network System
- Security and Tracking System

PACKAGE

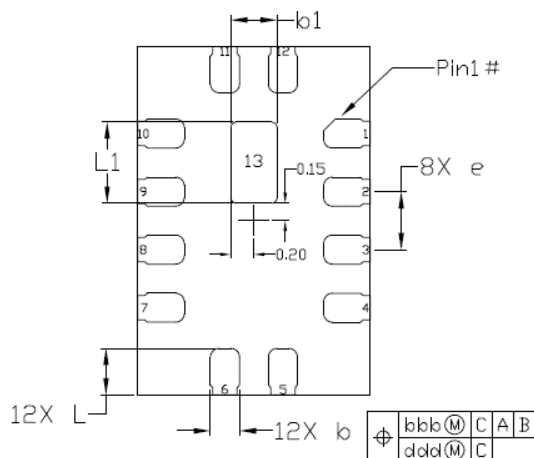


2 mm x 3 mm, QFN-13L

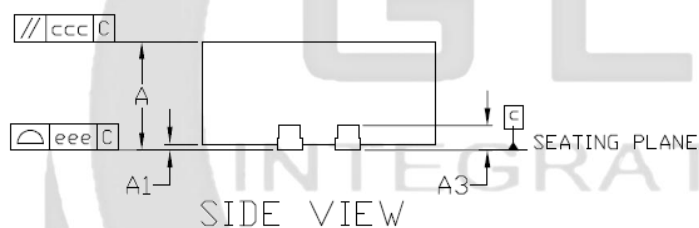
PACKAGE OUTLINE



TOP VIEW



BOTTOM VIEW

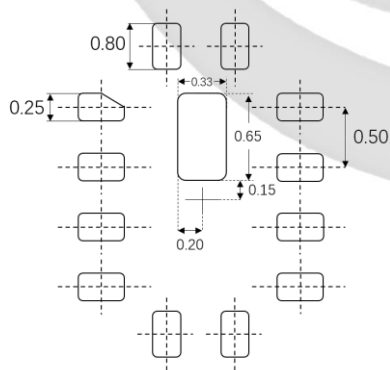


SIDE VIEW

Notes:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-2018.
2. NX IS THE TOTAL NUMBER OF TERMINALS

Recommended Footprint



REF.	Dimensions Ref.		
	Min.	Nom.	Max.
A	0.500	0.550	0.600
A1	0.000	---	0.050
A3	0.152 Ref.		
D	1.950	2.000	2.050
E	2.950	3.000	3.050
b	0.200	0.250	0.300
b1	0.350	0.400	0.450
e	0.500 BSC		
L	0.350	0.400	0.450
L1	0.650	0.700	0.750
Tol. of Form & Position			
aaa	0.10		
bbb	0.10		
ccc	0.10		
ddd	0.05		
eee	0.08		

PACKAGING INFORMATION

Part Number	Package	Pins	Pitch	Top Mark	Moisture Sensitivity Level	Environmental Information
GLF4031-Q47	2mmx3mm QFN -13L	13	0.50mm	DQ	MSL1	ROHS+HF

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