

LL4150

Vishay Semiconductors

Small Signal Fast Switching Diode

Features

- Silicon epitaxial planar diodes
- Low forward voltage drop
- High forward current capability
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

Applications

• High speed switch and general purpose use in computer and industrial applications



Case: MiniMELF SOD-80

Weight: approx. 31 mg

Cathode band color: black

Packaging codes/options:

GS18/10 k per 13" reel (8 mm tape), 10 k/box GS08/2.5 k per 7" reel (8 mm tape), 12.5 k/box

Parts Table

Part	Ordering code	Type Marking	Remarks	
LL4150	LL4150GS18 or LL4150GS08	-	Tape and Reel	

ROHS COMPLIANT

Absolute Maximum Ratings

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit	
Repetitive peak reverse voltage		V _{RRM}	50	V	
Reverse voltage		V _R	50	V	
Peak forward surge current	t _p = 1 μs	I _{FSM}	4	A	
Forward continuous current		١ _F	600	mA	
Average forward current	V _R = 0	I _{FAV}	300	mA	
Power dissipation		P _{tot}	500	mW	

Thermal Characteristics

 T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air	On PC board 50 mm x 50 mm x 1.6 mm	R _{thJA}	300	K/W
Junction temperature		Тj	175	°C
Storage temperature range		T _{stg}	- 65 to + 175	°C



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Electrical Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Min.	Тур.	Max.	Unit
Forward voltage	I _F = 1 mA	V _F	540		620	mV
	I _F = 10 mA	V _F	660		740	mV
	I _F = 50 mA	V _F	760		860	mV
	I _F = 100 mA	V _F	820		920	mV
	I _F = 200 mA	V _F	870		1000	mV
Reverse current	V _R = 50 V	۱ _R			100	nA
	V _R = 50 V, T _j = 150 °C	۱ _R			100	μA
Diode capacitance	V _R = 0, f = 1 MHz, V _{HF} = 50 mV	CD			2.5	pF
Reverse recovery time	$I_{\rm F} = I_{\rm R} = 10 \text{ to } 100 \text{ mA},$ $I_{\rm R} = 0.1 \text{ x } I_{\rm R}, \text{ R}_{\rm L} = 100 \Omega$	t _{rr}			4	ns

Typical Characteristics

 $T_{amb} = 25 \text{ °C}$, unless otherwise specified

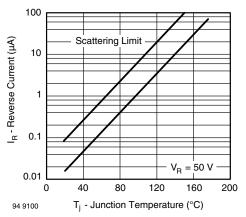


Figure 1. Reverse Current vs. Junction Temperature

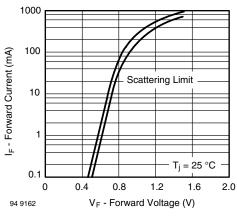
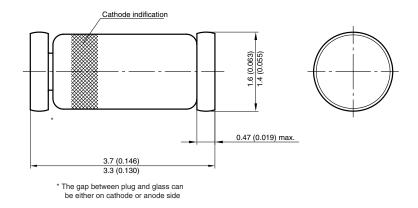


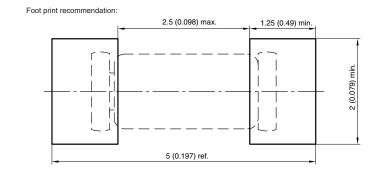
Figure 2. Forward Current vs. Forward Voltage



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Package Dimensions in millimeters (inches): MiniMELF SOD-80





Document no.:6.560-5005.01-4 Rev. 8 - Date: 07.June.2006 96 12070



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