

## Small Signal Fast Switching Diode

### Features

- Silicon epitaxial planar diodes
- Low forward voltage drop
- High forward current capability
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



94 9371

### Applications

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

### Mechanical Data

**Case:** MiniMELF glass case (SOD80)

**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	LL4150-GS18 or LL4150-GS08	-	Tape and Reel

### Absolute Maximum Ratings

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , 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	$t_p = 1\text{ }\mu\text{s}$	$I_{FSM}$	4	A
Forward continuous current		$I_F$	600	mA
Average forward current	$V_R = 0$	$I_{FAV}$	300	mA
Power dissipation		$P_{tot}$	500	mW

### Thermal Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , 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		$T_j$	175	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	- 65 to + 175	$^{\circ}\text{C}$

### Electrical Characteristics

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

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	$I_F = 1\text{ mA}$	$V_F$	540		620	mV
	$I_F = 10\text{ mA}$	$V_F$	660		740	mV
	$I_F = 50\text{ mA}$	$V_F$	760		860	mV
	$I_F = 100\text{ mA}$	$V_F$	820		920	mV
	$I_F = 200\text{ mA}$	$V_F$	870		1000	mV
Reverse current	$V_R = 50\text{ V}$	$I_R$			100	nA
	$V_R = 50\text{ V}, T_j = 150\text{ }^{\circ}\text{C}$	$I_R$			100	$\mu\text{A}$
Diode capacitance	$V_R = 0, f = 1\text{ MHz}, V_{HF} = 50\text{ mV}$	$C_D$			2.5	pF
Reverse recovery time	$I_F = I_R = 10\text{ to }100\text{ mA},$ $i_R = 0.1 \times I_R, R_L = 100\text{ }\Omega$	$t_{rr}$			4	ns

### Typical Characteristics

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

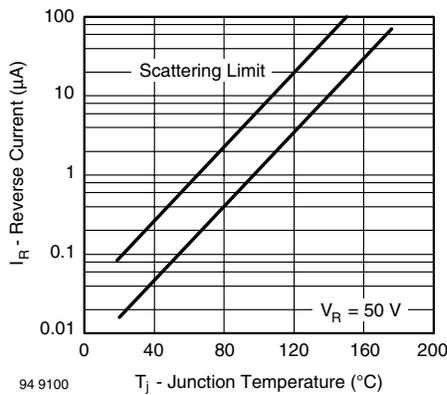


Figure 1. Reverse Current vs. Junction Temperature

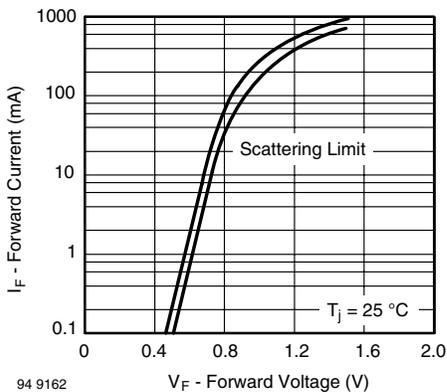
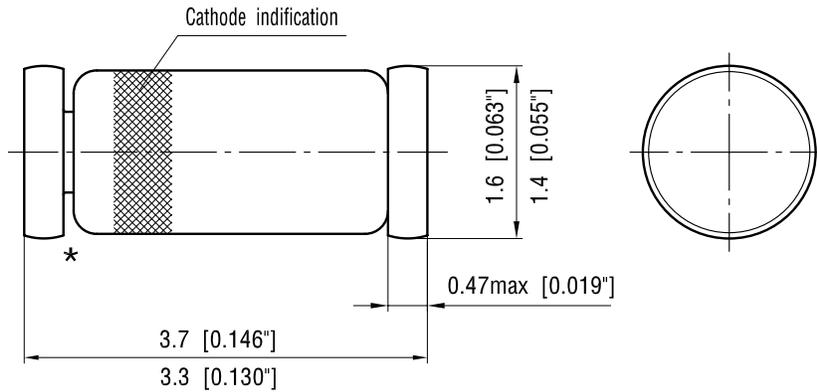


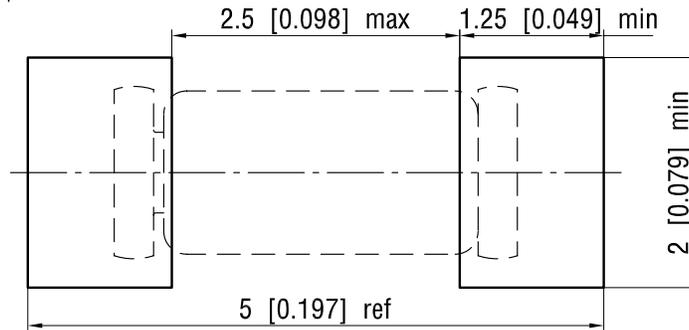
Figure 2. Forward Current vs. Forward Voltage

## Package Dimensions in millimeters (inches): SOD80



\* The gap between plug and glass can be either on cathode or anode side

foot print recommendation:



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 96 12070

### Ozone Depleting Substances Policy Statement

It is the policy of Vishay Semiconductor GmbH to

1. Meet all present and future national and international statutory requirements.
2. Regularly and continuously improve the performance of our products, processes, distribution and operating systems with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It is particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montreal Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use within the next ten years. Various national and international initiatives are pressing for an earlier ban on these substances.

Vishay Semiconductor GmbH has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents.

1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively.
2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA.
3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

Vishay Semiconductor GmbH can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances.

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