

## Switching Diode

### Features

- Silicon Epitaxial Planar Diodes

### Applications

General purposes

### Mechanical Data

**Case:** MiniMELF Glass Case (SOD-80)

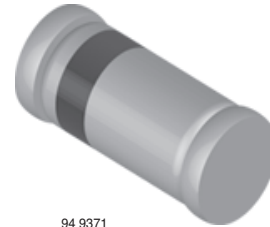
**Weight:** approx. 30 mg

**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



94 9371

### Parts Table

Part	Type differentiation	Ordering code	Remarks
BAV100	$V_{RRM} = 60\text{ V}$	BAV100-GS18 or BAV100-GS08	Tape and Reel
BAV101	$V_{RRM} = 120\text{ V}$	BAV101-GS18 or BAV101-GS08	Tape and Reel
BAV102	$V_{RRM} = 200\text{ V}$	BAV102-GS18 or BAV102-GS08	Tape and Reel
BAV103	$V_{RRM} = 250\text{ V}$	BAV103-GS18 or BAV103-GS08	Tape and Reel

### Absolute Maximum Ratings

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

Parameter	Test condition	Part	Symbol	Value	Unit
Repetitive peak reverse voltage		BAV100	$V_{RRM}$	60	V
		BAV101	$V_{RRM}$	120	V
		BAV102	$V_{RRM}$	200	V
		BAV103	$V_{RRM}$	250	V
Reverse voltage		BAV100	$V_R$	50	V
		BAV101	$V_R$	100	V
		BAV102	$V_R$	150	V
		BAV103	$V_R$	200	V
Peak forward surge current	$t_p = 1\text{ s}$		$I_{FSM}$	1	A
Repetitive peak forward current			$I_{FRM}$	625	mA
Forward current			$I_F$	250	mA
Power dissipation			$P_V$	500	mW

### Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Junction lead		$R_{thJL}$	350	K/W
Junction ambient	on PC board 50 mm x 50 mm x 1.6 mm	$R_{thJA}$	500	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	Part	Symbol	Min	Typ.	Max	Unit
Forward voltage	$I_F = 100\text{ mA}$		$V_F$			1	V
Reverse current	$V_R = 50\text{ V}$	BAV100	$I_R$			100	nA
	$V_R = 100\text{ V}$	BAV101	$I_R$			100	nA
	$V_R = 150\text{ V}$	BAV102	$I_R$			100	nA
	$V_R = 200\text{ V}$	BAV103	$I_R$			100	nA
	$T_j = 100\text{ }^{\circ}\text{C}$ , $V_R = 50\text{ V}$	BAV100	$I_R$			15	$\mu\text{A}$
	$T_j = 100\text{ }^{\circ}\text{C}$ , $V_R = 100\text{ V}$	BAV101	$I_R$			15	$\mu\text{A}$
	$T_j = 100\text{ }^{\circ}\text{C}$ , $V_R = 150\text{ V}$	BAV102	$I_R$			15	$\mu\text{A}$
Breakdown voltage	$I_R = 100\text{ }\mu\text{A}$ , $t_p/T = 0.01$ , $t_p = 0.3\text{ ms}$	BAV100	$V_{(BR)}$	60			V
	$I_R = 100\text{ }\mu\text{A}$ , $t_p/T = 0.01$ , $t_p = 0.3\text{ ms}$	BAV101	$V_{(BR)}$	120			V
	$I_R = 100\text{ }\mu\text{A}$ , $t_p/T = 0.01$ , $t_p = 0.3\text{ ms}$	BAV102	$V_{(BR)}$	200			V
		BAV103	$V_{(BR)}$	250			V
Diode capacitance	$V_R = 0$ , $f = 1\text{ MHz}$		$C_D$		1.5		pF
Differential forward resistance	$I_F = 10\text{ mA}$		$r_f$		5		$\Omega$
Reverse recovery time	$I_F = I_R = 30\text{ mA}$ , $i_R = 3\text{ mA}$ , $R_L = 100\text{ }\Omega$		$t_{rr}$			50	ns

## Typical Characteristics ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

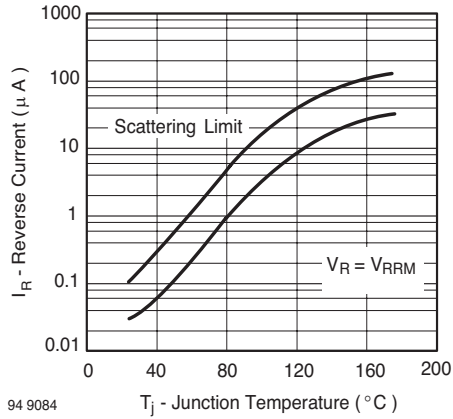


Fig. 1 Reverse Current vs. Junction Temperature

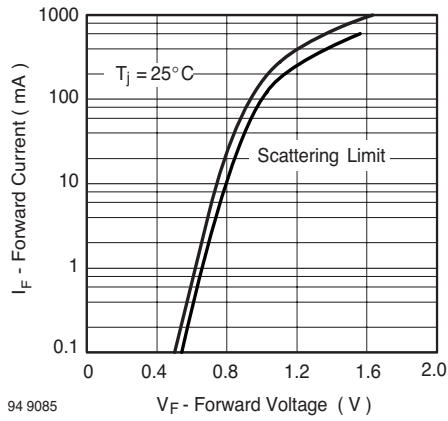


Fig. 2 Forward Current vs. Forward Voltage

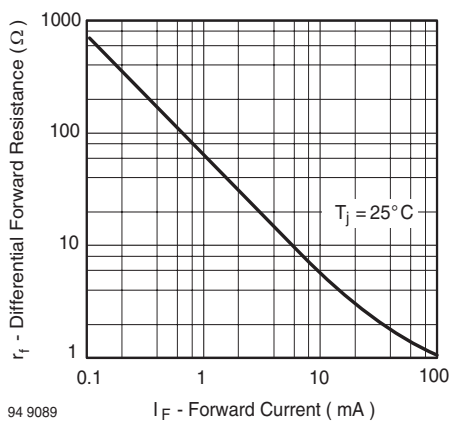


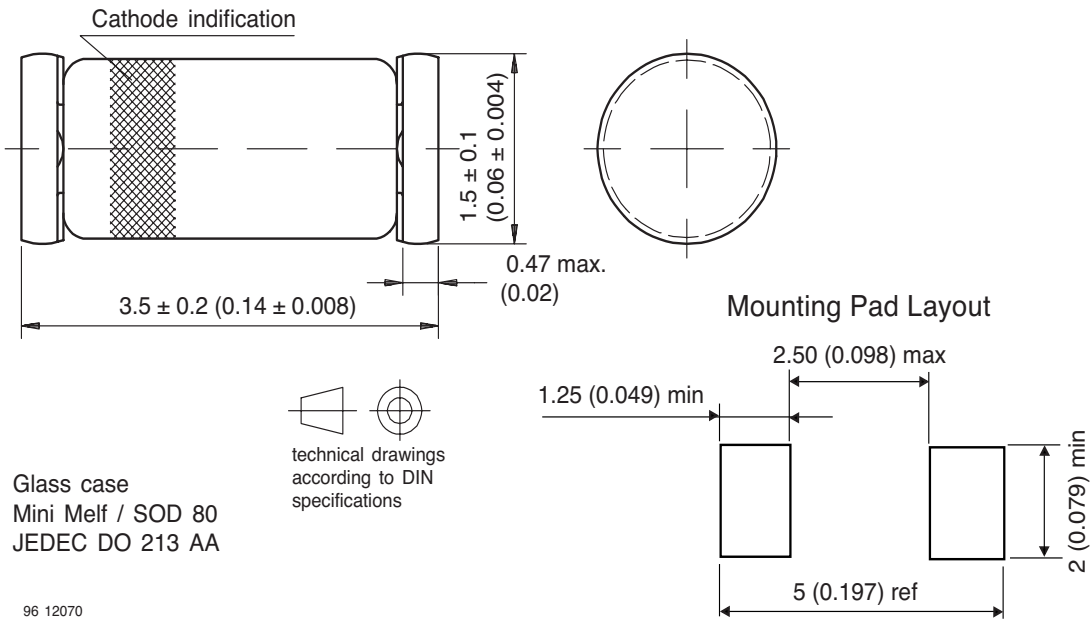
Fig. 3 Differential Forward Resistance vs. Forward Current

# BAV100 / 101 / 102 / 103



Vishay Semiconductors

## Package Dimensions in mm (Inches)





## **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.

**We reserve the right to make changes to improve technical design  
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