

Switching Diode

Features

- Silicon Epitaxial Planar Diodes

Applications

General purposes

Mechanical Data

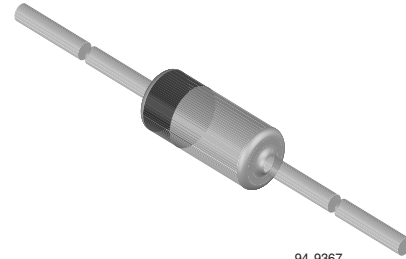
Case: DO-35 Glass Case

Weight: approx. 300 mg

Packaging Codes/Options:

D7/10 K per 13" reel (52 mm tape), 20 K/box

D8/10 K per Ammo tape (52 mm tape), 20 K/box



94 9367

Parts Table

Part	Type differentiation	Ordering code	Remarks
BAV17	$V_{RRM} = 25$ V, Single Diodes	BAV17-TAP / BAV17-TR	Ammopack / Tape and Reel
BAV18	$V_{RRM} = 60$ V, Single Diodes	BAV18-TAP / BAV18-TR	Ammopack / Tape and Reel
BAV19	$V_{RRM} = 120$ V, Single Diodes	BAV19-TAP / BAV19-TR	Ammopack / Tape and Reel
BAV20	$V_{RRM} = 200$ V, Single Diodes	BAV20-TAP / BAV20-TR	Ammopack / Tape and Reel
BAV21	$V_{RRM} = 250$ V, Single Diodes	BAV21-TAP / BAV21-TR	Ammopack / Tape and Reel

Absolute Maximum Ratings

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

Parameter	Test condition	Part	Symbol	Value	Unit
Peak reverse voltage		BAV17	V_{RRM}	25	V
		BAV18	V_{RRM}	60	V
		BAV19	V_{RRM}	120	V
		BAV20	V_{RRM}	200	V
		BAV21	V_{RRM}	250	V
Reverse voltage		BAV17	V_R	20	V
		BAV18	V_R	50	V
		BAV19	V_R	100	V
		BAV20	V_R	150	V
		BAV21	V_R	200	V
Forward current			I_F	250	mA
Peak forward surge current	$t_p = 1$ s, $T_j = 25$ °C		I_{FSM}	1	A
Forward peak current	$f = 50$ Hz		I_{FM}	625	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 ambient	$l = 4\text{ mm}$, $T_L = \text{constant}$	R_{thJA}	350	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	$V_R = 20\text{ V}$	BAV17-TR	I_R			100	nA
	$V_R = 50\text{ V}$	BAV18-TR	I_R			100	nA
	$V_R = 100\text{ V}$	BAV19-TR	I_R			100	nA
	$V_R = 150\text{ V}$	BAV20-TR	I_R			100	nA
	$V_R = 200\text{ V}$	BAV21-TR	I_R			100	nA
	$T_j = 100\text{ }^{\circ}\text{C}$, $V_R = 20\text{ V}$	BAV17-TR	I_R			15	μA
	$T_j = 100\text{ }^{\circ}\text{C}$, $V_R = 50\text{ V}$	BAV18-TR	I_R			15	μA
	$T_j = 100\text{ }^{\circ}\text{C}$, $V_R = 100\text{ V}$	BAV19-TR	I_R			15	μA
	$T_j = 100\text{ }^{\circ}\text{C}$, $V_R = 150\text{ V}$	BAV20-TR	I_R			15	μA
	$T_j = 100\text{ }^{\circ}\text{C}$, $V_R = 200\text{ V}$	BAV21-TR	I_R			15	μA
Breakdown voltage	$I_R = 100\text{ }\mu\text{A}$, $t_p/T = 0.01$, $t_p = 0.3\text{ ms}$	BAV17-TR	$V_{(BR)}$	25			V
		BAV18-TR	$V_{(BR)}$	60			V
		BAV19-TR	$V_{(BR)}$	120			V
		BAV20-TR	$V_{(BR)}$	200			V
		BAV21-TR	$V_{(BR)}$	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		Ω
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)

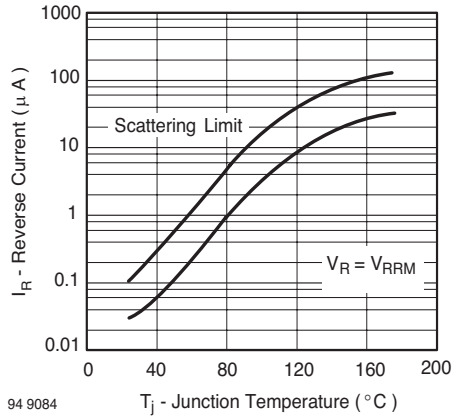


Figure 1. Reverse Current vs. Junction Temperature

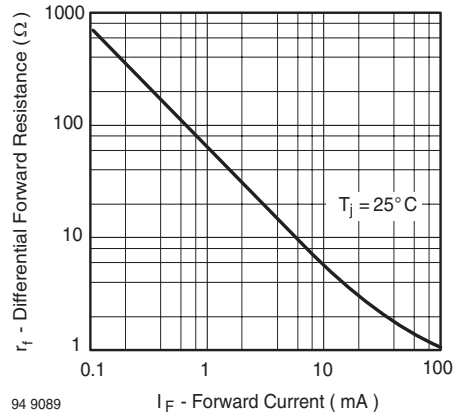


Figure 3. Differential Forward Resistance vs. Forward Current

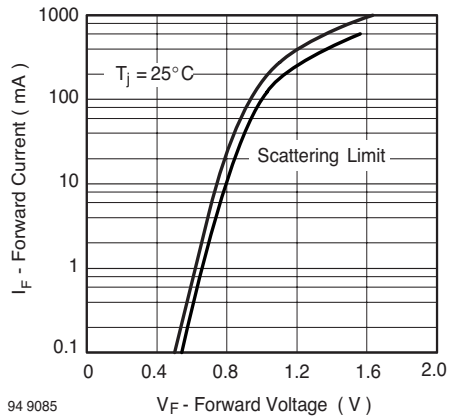
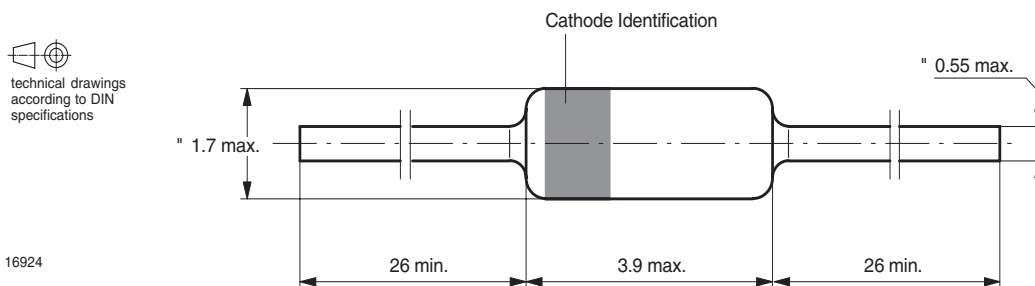


Figure 2. Forward Current vs. Forward Voltage

Package Dimensions in mm



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
and may do so without further notice.**

Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer. Should the buyer use Vishay Semiconductors products for any unintended or unauthorized application, the buyer shall indemnify Vishay Semiconductors against all claims, costs, damages, and expenses, arising out of, directly or indirectly, any claim of personal damage, injury or death associated with such unintended or unauthorized use.

Vishay Semiconductor GmbH, P.O.B. 3535, D-74025 Heilbronn, Germany
Telephone: 49 (0)7131 67 2831, Fax number: 49 (0)7131 67 2423