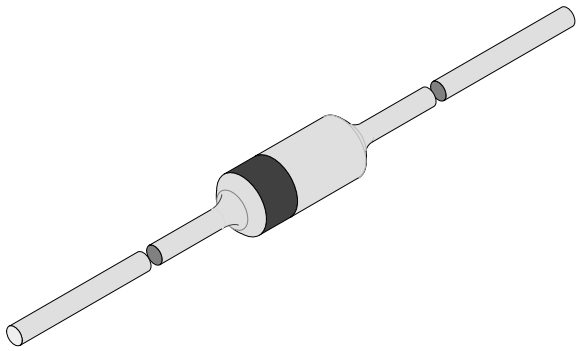
Switching Diode

Features

- Silicon Epitaxial Planar Diodes



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Applications

General purposes

Order Instruction

Type	Type Differentiation	Ordering Code	Remarks
BAV17	V_{RRM} = 25 V	BAV17–TAP	Ammopack
		BAV17–TR	Tape and Reel
BAV18	V_{RRM} = 60 V	BAV18–TAP	Ammopack
		BAV18–TR	Tape and Reel
BAV19	V_{RRM} = 120 V	BAV19–TAP	Ammopack
		BAV19–TR	Tape and Reel
BAV20	V_{RRM} = 200 V	BAV20–TAP	Ammopack
		BAV20–TR	Tape and Reel
BAV21	V_{RRM} = 250 V	BAV21–TAP	Ammopack
		BAV21–TR	Tape and Reel

Absolute Maximum Ratings

T_j = 25°C

Parameter	Test Conditions	Type	Symbol	Value	Unit
Peak reverse voltage		BAV17	V_{RRM}	25	V
		BAV18		60	V
		BAV19		120	V
		BAV20		200	V
		BAV21		250	V
Reverse voltage		BAV17	V_R	20	V
		BAV18		50	V
		BAV19		100	V
		BAV20		150	V
		BAV21		200	V
Forward current			I_F	250	mA
Peak forward surge current	t_p=1s, T_j=25° C		I_{FSM}	1	A
Forward peak current	f=50Hz		I_{FM}	625	mA
Junction temperature			T_j	175	°C
Storage temperature range			T_{stg}	–65...+175	°C

Maximum Thermal Resistance

T_j = 25°C

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	l=4 mm, T_L=constant	R_{thJA}	350	K/W

Electrical Characteristics

T_j = 25°C

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I_F=100mA		V_F			1	V
Reverse current	V_R=20 V	BAV17	I_R			100	nA
	V_R=50 V	BAV18	I_R			100	nA
	V_R=100 V	BAV19	I_R			100	nA
	V_R=150 V	BAV20	I_R			100	nA
	V_R=200 V	BAV21	I_R			100	nA
	T_j=100 °C, V_R= 20 V	BAV17	I_R			15	µA
	T_j=100 °C, V_R= 50 V	BAV18	I_R			15	µA
	T_j=100 °C, V_R=100 V	BAV19	I_R			15	µA
	T_j=100 °C, V_R=150 V	BAV20	I_R			15	µA
	T_j=100 °C, V_R=200 V	BAV21	I_R			15	µA
Breakdown voltage	I_R=100µA, t_p/T=0.01, t_p=0.3ms	BAV17	$V_{(BR)}$	25			V
		BAV18	$V_{(BR)}$	60			V
		BAV19	$V_{(BR)}$	120			V
		BAV20	$V_{(BR)}$	200			V
		BAV21	$V_{(BR)}$	250			V
Diode capacitance	V_R=0, f=1MHz		C_D		1.5		pF
Differential forward resistance	I_F=10mA		r_f		5		Ω
Reverse recovery time	I_F=I_R=30mA, i_R=3mA, R_L=100Ω		t_{rr}			50	ns

Characteristics (T_j = 25°C unless otherwise specified)

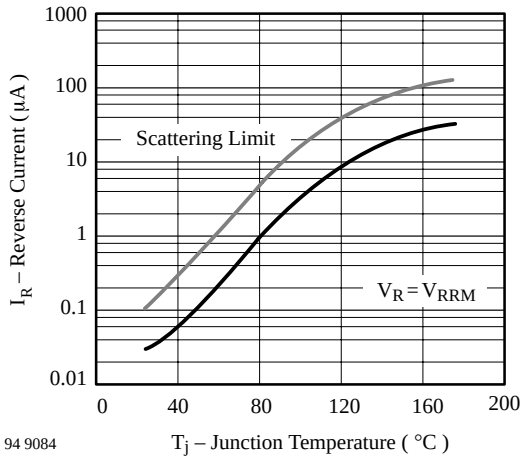

Figure 1. Reverse Current vs. Junction Temperature

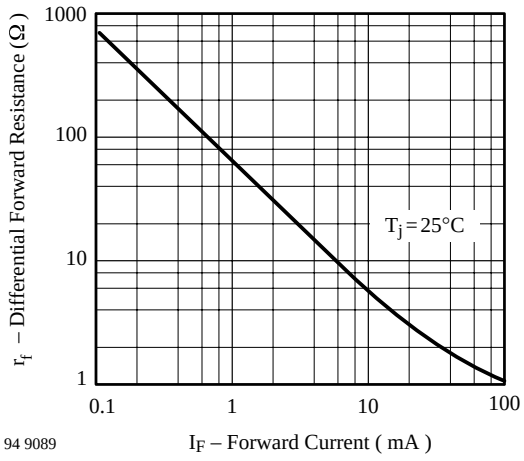

Figure 3. Differential Forward Resistance vs. Forward Current

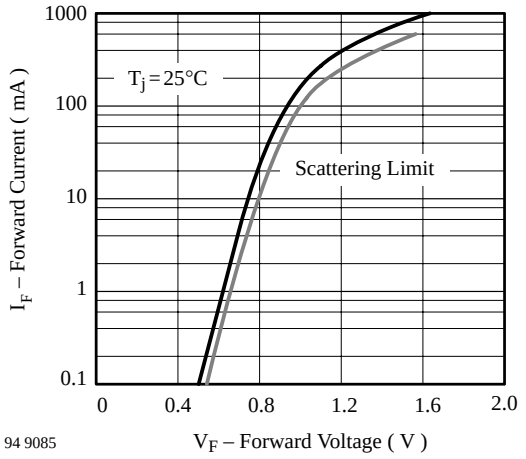

Figure 2. Forward Current vs. Forward Voltage

Dimensions in mm

technical drawings
according to DIN
specifications

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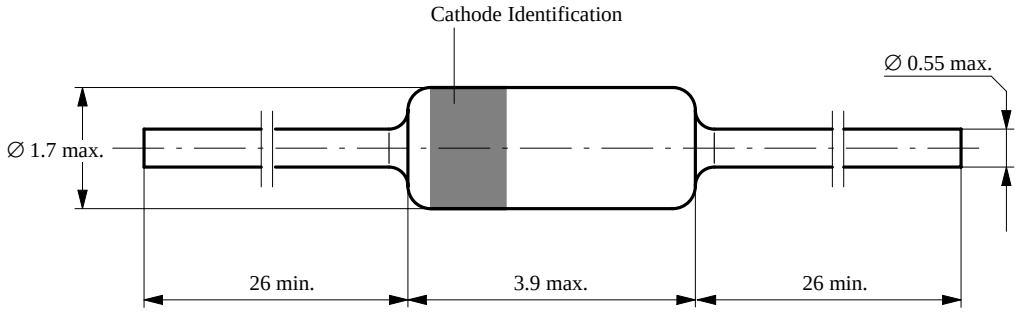

Standard Glass Case
54 A 2 DIN 41880
JEDEC DO 35
Weight max. 0.3 g

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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