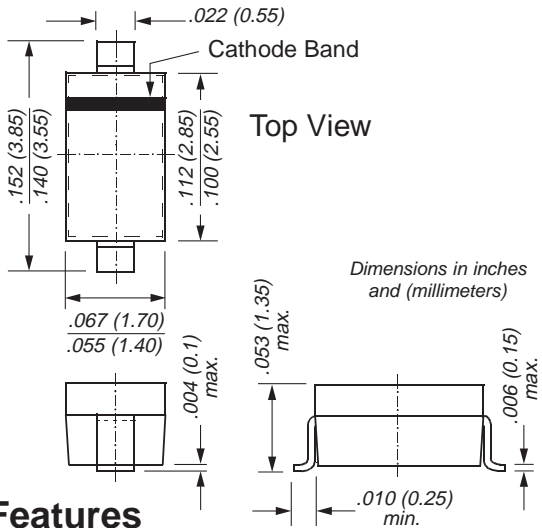


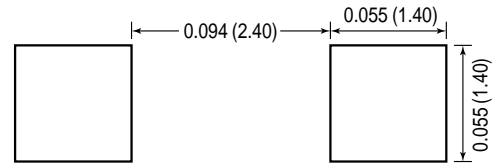


## Small-Signal Diodes

SOD-123



### Mounting Pad Layout



### Features

- Silicon Epitaxial Planar Diodes
- For general purpose
- These diodes are also available in other case styles including: the DO-35 case with the type designations BAV19 to BAV21, the MiniMELF case with the type designations BAV100 to BAV103, the SOT-23 case with the type designations BAS19 to BAS21, and the SOD-323 case with type designations BAV19WS to BAV21WS.

### Mechanical Data

**Case:** DO-35 Glass Case

**Weight:** approx. 0.01g

**Marking** BAV19W = A8

**Code:** BAV20W = A9

BAV21W = AA

**Packaging Codes/Options:**

D3/10K per 13" reel (8mm tape), 30K/box

D4/3K per 7" reel (8mm tape), 30K/box

### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit	
Continuous Reverse Voltage	BAV19W BAV20W BAV21W	V <sub>R</sub>	100 150 200	V
Repetitive Peak Reverse Voltage	BAV19W BAV20W BAV21W	V <sub>R</sub> RM	120 200 250	V
Forward DC Current at T <sub>amb</sub> = 25°C		I <sub>F</sub>	250 <sup>(1)</sup>	mA
Rectified Current (Average) Half Wave Rectification with Resist. Load at T <sub>amb</sub> = 25°C and f ≥ 50Hz		I <sub>F(AV)</sub>	200 <sup>(1)</sup>	mA
Repetitive Peak Forward Current at f ≥ 50Hz, Θ = 180°, T <sub>amb</sub> = 25°C		I <sub>FRM</sub>	625 <sup>(1)</sup>	mA
Surge Forward Current at t < 1s, T <sub>j</sub> = 25°C		I <sub>FSM</sub>	1	A
Power Dissipation at T <sub>amb</sub> = 25°C		P <sub>tot</sub>	410 <sup>(1)</sup>	mW
Thermal Resistance Junction to Ambient Air		R <sub>θJA</sub>	375 <sup>(1)</sup>	°C/W
Junction Temperature		T <sub>j</sub>	150 <sup>(1)</sup>	°C
Storage Temperature Range		T <sub>S</sub>	-65 to +150 <sup>(1)</sup>	°C

**Note:** (1) Valid provided that leads are kept at ambient temperature.

# BAV19W thru BAV21W



Vishay Semiconductors  
formerly General Semiconductor

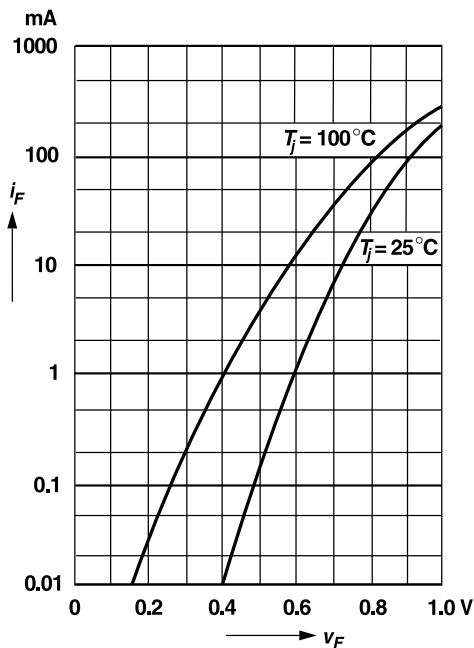
## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

### Electrical Characteristics ( $T_J = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Forward Voltage	$V_F$	$I_F = 100\text{mA}$ $I_F = 200\text{mA}$	— —	— —	1.00 1.25	V
Leakage Current	$I_R$	$V_R = 100\text{V}$ $V_R = 100\text{V}, T_j = 100^\circ\text{C}$ $V_R = 150\text{V}$ $V_R = 150\text{V}, T_j = 100^\circ\text{C}$ $V_R = 200\text{V}$ $V_R = 200\text{V}, T_j = 100^\circ\text{C}$	— — — — — —	— — — — — —	100 15 100 15 100 15	nA $\mu\text{A}$ nA $\mu\text{A}$ nA $\mu\text{A}$
Dynamic Forward Resistance	$r_f$	$I_F = 10\text{mA}$	—	5	—	$\Omega$
Capacitance	$C_{tot}$	$V_R = 0, f = 1\text{MHz}$	—	1.5	—	pF
Reverse Recovery Time	$t_{rr}$	$I_F = 30\text{mA}, I_R = 30\text{mA}$ $I_{rr} = 3\text{mA}, R_L = 100\Omega$	—	—	50	ns

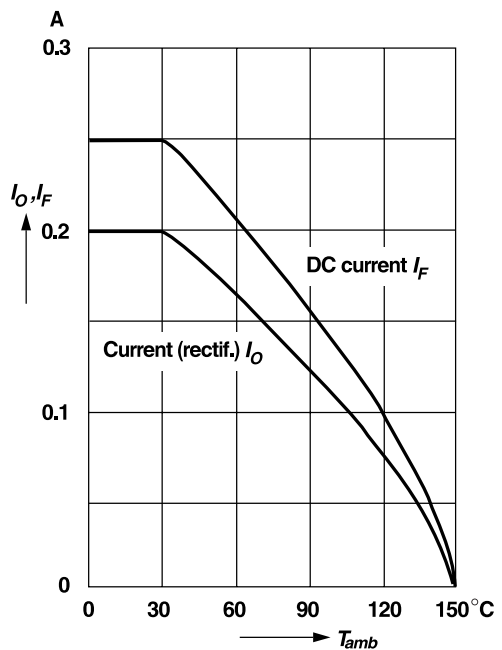
## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Forward characteristics



Admissible forward current versus ambient temperature

Valid provided that electrodes are kept at ambient temperature

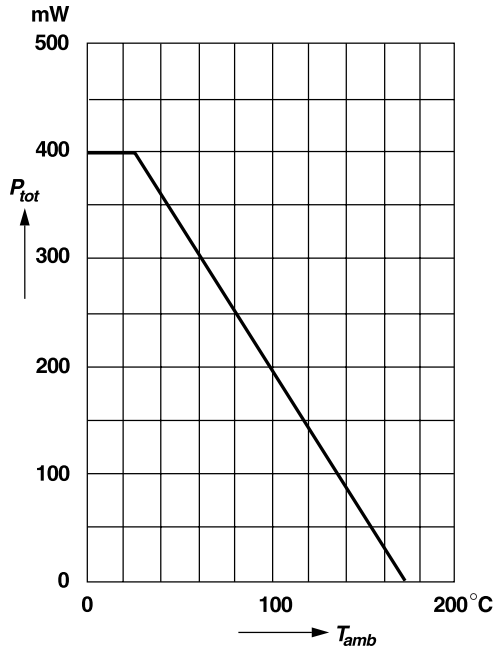




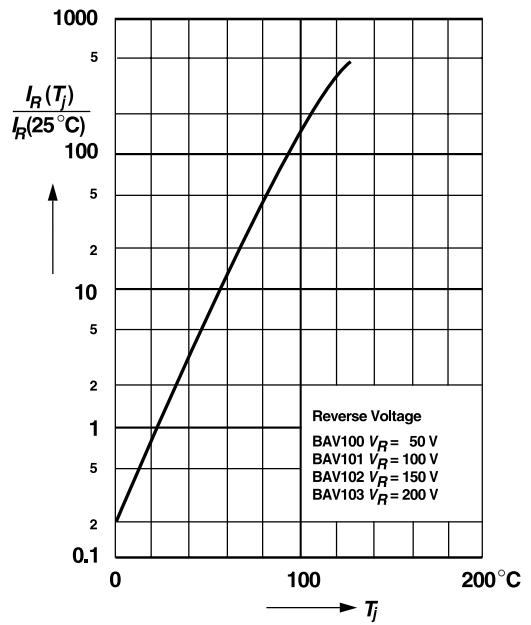
**Ratings and Characteristic Curves** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

**Admissible power dissipation versus ambient temperature**

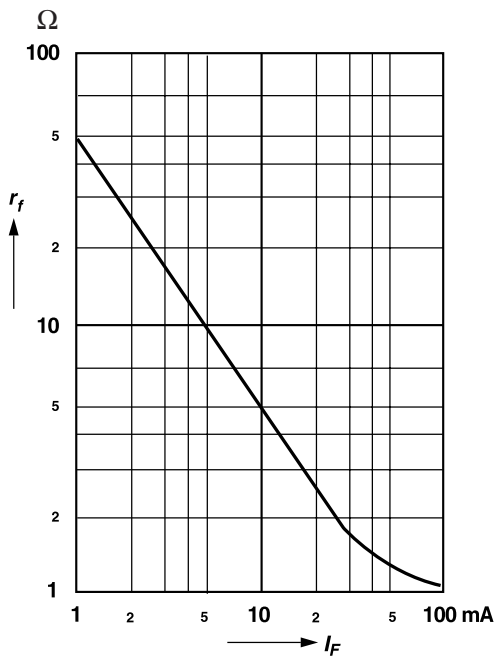
Valid provided that electrodes are kept at ambient temperature



**Leakage current versus junction temperature**



**Dynamic forward resistance versus forward current**



**Capacitance versus reverse voltage**

