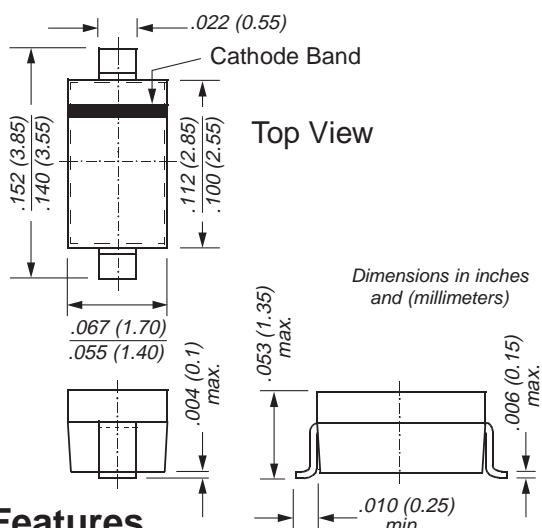




Small-Signal Diodes

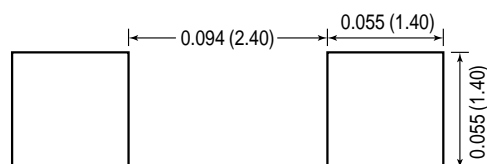
SOD-123



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.

Mounting Pad Layout



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_A = 25°C unless otherwise noted)

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

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

BAV19W thru BAV21W

Vishay Semiconductors
formerly General Semiconductor



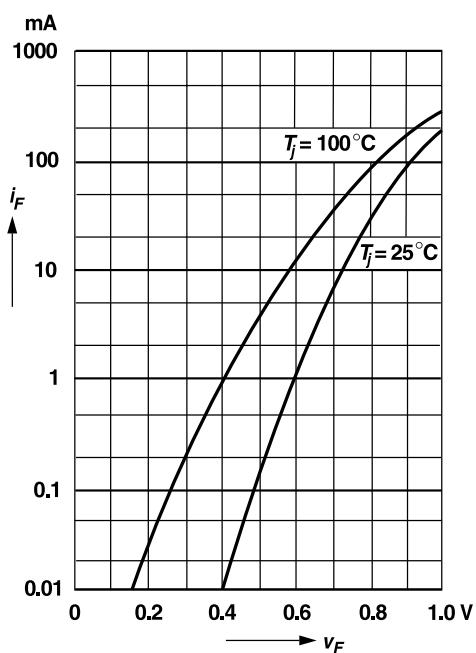
Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

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 μA nA μA nA μA
Dynamic Forward Resistance	r_f	$I_F = 10\text{mA}$	—	5	—	Ω
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

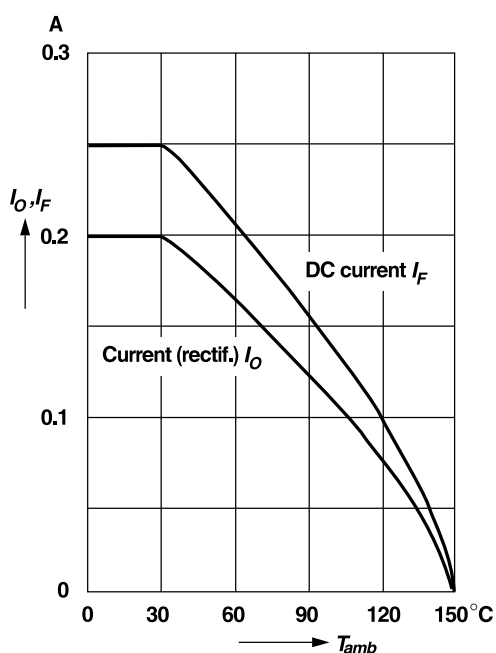
Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Forward characteristics



Admissible forward current
versus ambient temperature

Valid provided that electrodes are kept at ambient temperature

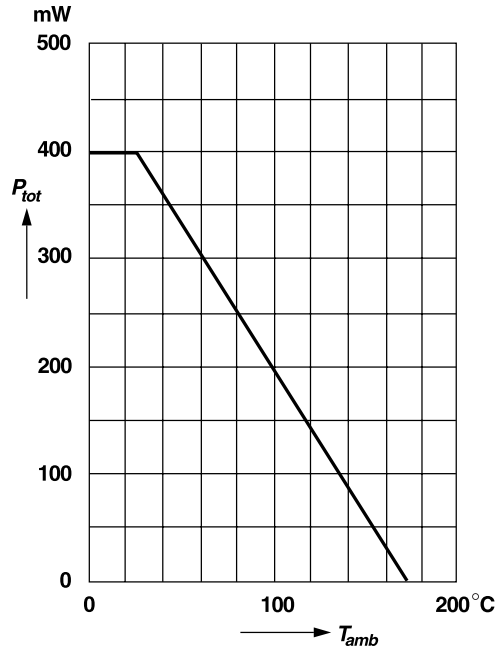




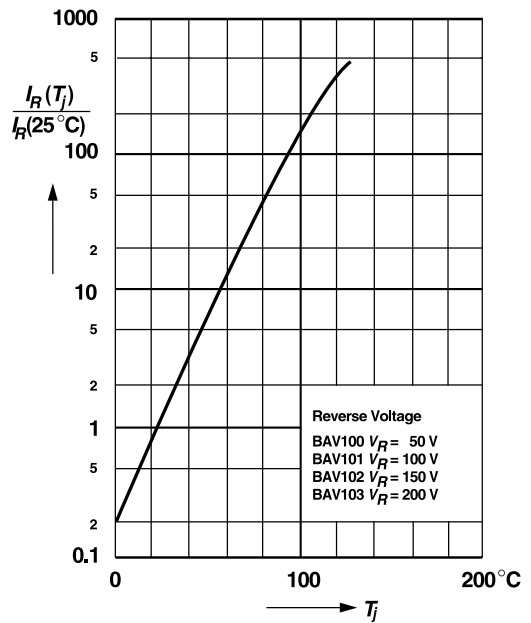
Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Admissible power dissipation versus ambient temperature

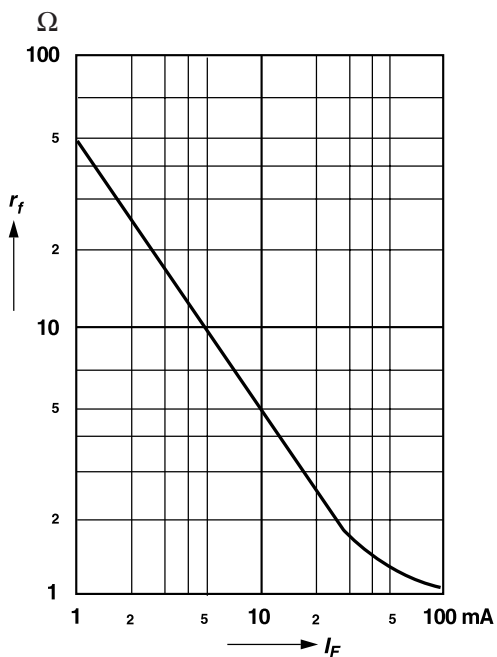
Valid provided that electrodes are kept at ambient temperature



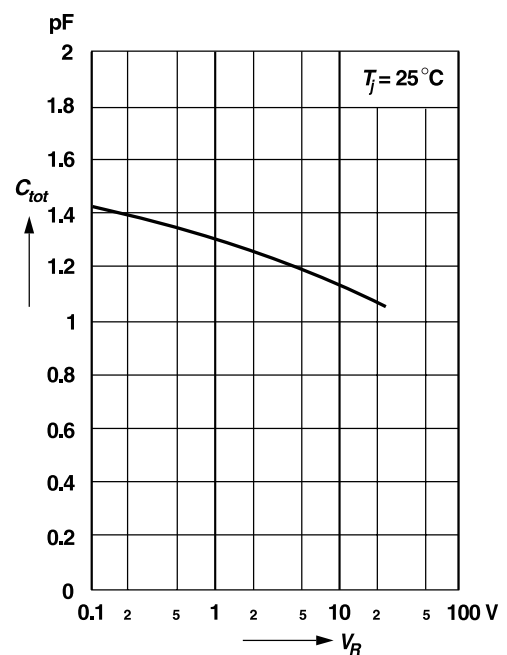
Leakage current versus junction temperature



Dynamic forward resistance versus forward current



Capacitance versus reverse voltage





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