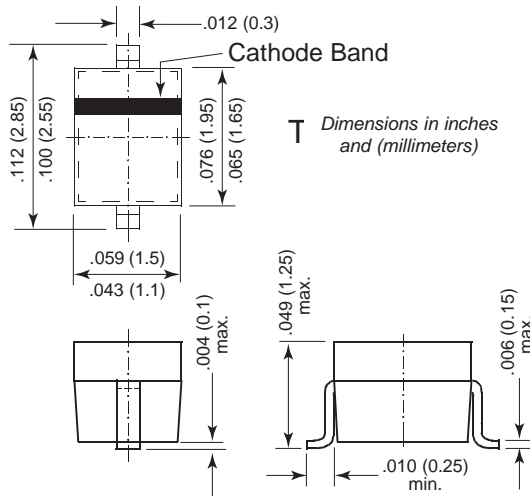


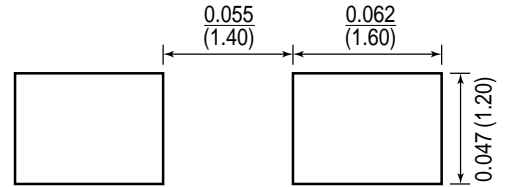


## Small-Signal Diodes

SOD-323



### Mounting Pad Layout



## Mechanical Data

**Case:** SOD-323 Plastic Case

**Weight:** approx. 0.004g

**Marking** BAV19WS = A8

**Code:** BAV20WS = A9

BAV21WS = AA

**Packaging Codes/Options:**

D5/10K per 13" reel (8mm tape), 30K/box

D6/3K per 7" reel (8mm tape), 30K/box

## 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 designation BAV19 - BAV21, the MiniMELF case with the type designation BAV100 - BAV103, the SOT-23 case with the type designation BAS19 - BAS21 and the SOD-123 case with the type designation BAV19W - BAV21W

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

Parameter		Symbol	Value	Unit
Continuous Reverse Voltage	BAV19WS BAV20WS BAV21WS	V <sub>R</sub>	100 150 200	V
Repetitive Peak Reverse Voltage	BAV19WS BAV20WS BAV21WS	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>F</sub> RM	625 <sup>(1)</sup>	mA
Surge Forward Current at t < 1s, T <sub>j</sub> = 25°C		I <sub>F</sub> SM	1	A
Power Dissipation at T <sub>amb</sub> = 25°C		P <sub>tot</sub>	200 <sup>(1)</sup>	mW
Thermal Resistance Junction to Ambient Air		R <sub>θJA</sub>	650 <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 +175 <sup>(1)</sup>	°C

**Note:**

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

# BAV19WS thru BAV21WS

Vishay Semiconductors  
formerly General Semiconductor

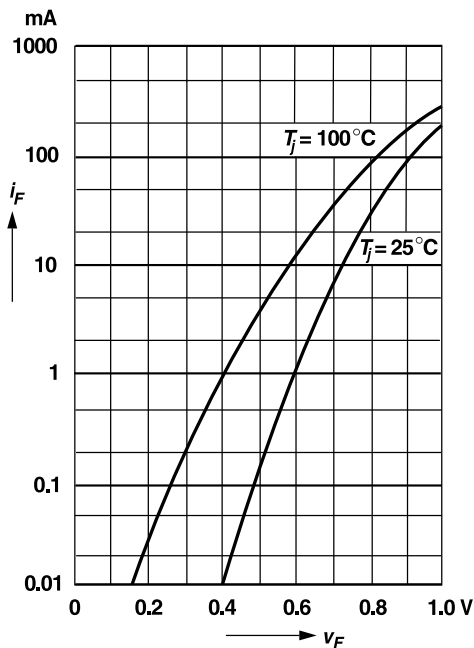


## Electrical Characteristics (T<sub>J</sub> = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 100 mA I <sub>F</sub> = 200 mA	—	—	1.00 1.25	V
Leakage Current	I <sub>R</sub>	V <sub>R</sub> = 100V V <sub>R</sub> = 150V V <sub>R</sub> = 150V, T <sub>j</sub> = 100 °C V <sub>R</sub> = 200V V <sub>R</sub> = 200V, T <sub>j</sub> = 100 °C	—	—	100 15 100 15 100 15	nA μA nA μA nA μA
Dynamic Forward Resistance	r <sub>f</sub>	I <sub>F</sub> = 10 mA	—	5	—	Ω
Capacitance	C <sub>tot</sub>	V <sub>R</sub> = 0, f = 1 MHz	—	—	1.5	pF
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> = 30 mA, I <sub>R</sub> = 30 mA I <sub>rr</sub> = 3 mA, R <sub>L</sub> = 100 Ω	—	—	50	ns

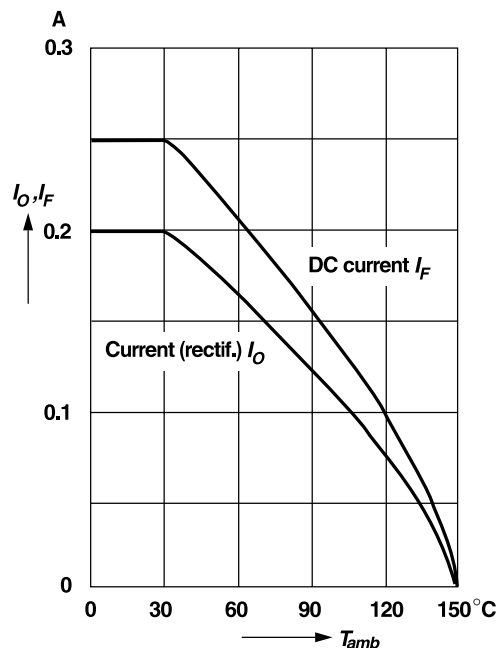
## Ratings and Characteristic Curves (T<sub>A</sub> = 25°C unless otherwise noted)

Forward characteristics



Admissible forward current versus ambient temperature

Valid provided that electrodes are kept at ambient temperature

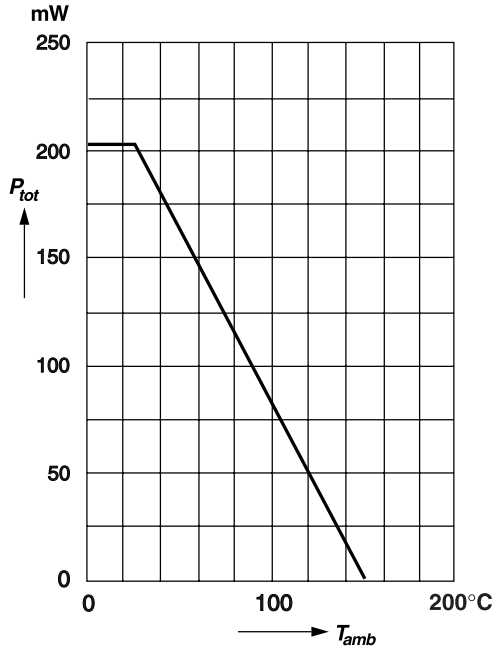




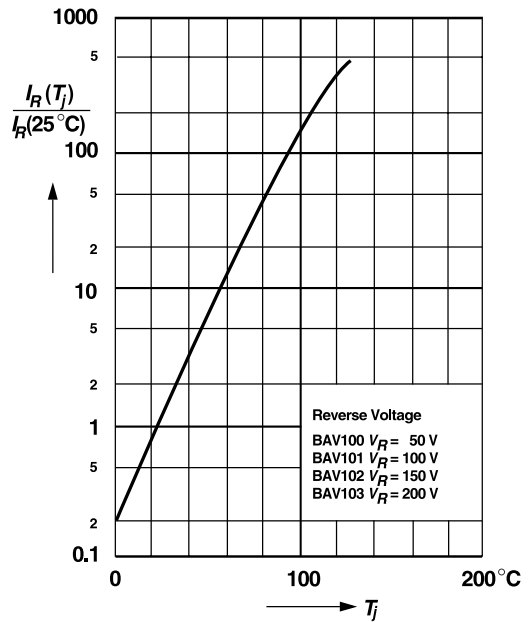
# Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

**Admissible power dissipation versus ambient temperature**

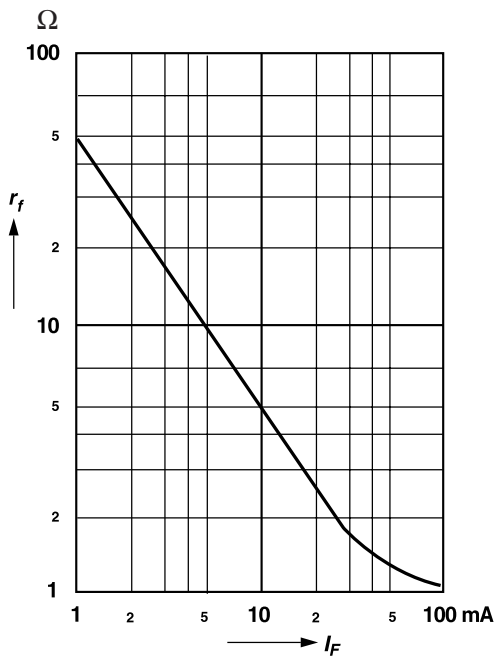
For conditions, see footnote in table "Absolute Maximum Ratings"



**Leakage current versus junction temperature**



**Dynamic forward resistance versus forward current**



**Capacitance versus reverse voltage**

