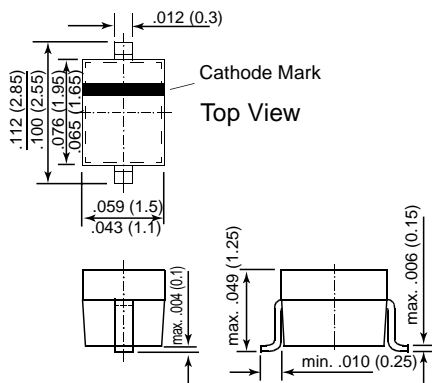


**BAV19WS THRU BAV21WS****SMALL SIGNAL DIODES****SOD-323**

Dimensions are in inches and (millimeters)

**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 Mini-MELF case with the type designations BAV100 to BAV103, the SOT-23 case with the type designation BAS19 - BAS21 and the SOD-123 case with the type designation BAV19W-BAV21W.

**MECHANICAL DATA**

**Case:** SOD-323 Plastic Case

**Weight:** approx. 0.004 g

**Marking Code:** BAV19WS=A8

BAV20WS=A81

BAV21WS=A82

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

		<i>SYMBOLS</i>	<i>VALUE</i>	<i>UNITS</i>
Continuous Reverse Voltage	<b>BAV19WS</b>	$V_R$	100	Volts
	<b>BAV20WS</b>	$V_R$	150	Volts
	<b>BAV21WS</b>	$V_R$	200	Volts
Repetitive Peak Reverse Voltage	<b>BAV19WS</b>	$V_{RRM}$	120	Volts
	<b>BAV20WS</b>	$V_{RRM}$	200	Volts
	<b>BAV21WS</b>	$V_{RRM}$	250	Volts
Forward DC Current at $T_{amb} = 25\text{ }^\circ\text{C}$		$I_F$	250 <sup>(1)</sup>	mA
Rectified Current (Average) Half Wave Rectification with Resist. Load at $T_{amb} = 25\text{ }^\circ\text{C}$ and $f \geq 50\text{ Hz}$		$I_o$	200 <sup>(1)</sup>	mA
Repetitive Peak Forward Current at $f \geq 50\text{ Hz}$ , $\theta = 180\text{ }^\circ$ , $T_{amb} = 25\text{ }^\circ\text{C}$		$I_{FRM}$	625 <sup>(1)</sup>	mA
Surge Forward Current at $t < 1\text{ s}$ , $T_j = 25\text{ }^\circ\text{C}$		$I_{FSM}$	1	Amps
Power Dissipation at $T_{amb} = 25\text{ }^\circ\text{C}$		$P_{tot}$	200 <sup>(1)</sup>	mW
Junction Temperature		$T_j$	150 <sup>(1)</sup>	$^\circ\text{C}$
Storage Temperature Range		$T_s$	-65 to + 150 <sup>(1)</sup>	$^\circ\text{C}$

**NOTES:**

(1) Valid provided that electrodes are kept at ambient temperature

# BAV19WS THRU BAV21WS

## ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

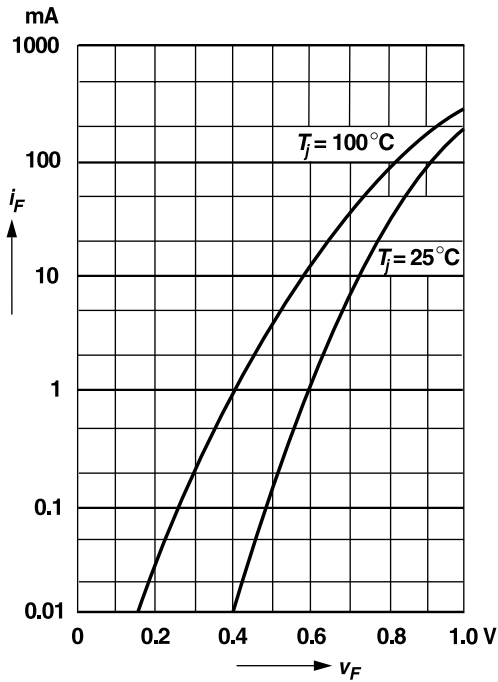
	<i>SYMBOL</i>	<i>MIN.</i>	<i>TYP.</i>	<i>MAX.</i>	<i>UNIT</i>
Forward voltage at $I_F = 100 \text{ mA}$ at $I_F = 200 \text{ mA}$	$V_F$ $V_F$	– –	– –	1.00 1.25	Volts Volts
Leakage Current at $V_R = 100 \text{ V}$ at $V_R = 100 \text{ V}, T_j = 100 \text{ }^\circ\text{C}$ at $V_R = 150 \text{ V}$ at $V_R = 150 \text{ V}, T_j = 100 \text{ }^\circ\text{C}$ at $V_R = 200 \text{ V}$ at $V_R = 200 \text{ V}, T_j = 100 \text{ }^\circ\text{C}$	<b>BAV19WS</b> <b>BAV19WS</b> <b>BAV20WS</b> <b>BAV20WS</b> <b>BAV21WS</b> <b>BAV21WS</b>	– – – – – –	– – – – – –	100 15.0 100 15.0 100 15.0	nA $\mu\text{A}$ nA $\mu\text{A}$ nA $\mu\text{A}$
Dynamic Forward Resistance at $I_F = 10 \text{ mA}$	$r_f$	–	5	–	$\Omega$
Capacitance at $V_R = 0, f = 1 \text{ MHz}$	$C_{\text{tot}}$	–	1.5	–	pF
Reverse Recovery Time from $I_F = 30 \text{ mA}$ through $I_R = 30 \text{ mA}$ to $I_R = 3 \text{ mA}; R_L = 100\Omega$	$t_{rr}$	–	–	50	ns
Thermal Resistance Junction to Ambient Air	$R_{\text{thJA}}$	–	–	650 <sup>1)</sup>	K/W

**NOTES:**

(1) Valid provided that electrodes are kept at ambient temperature

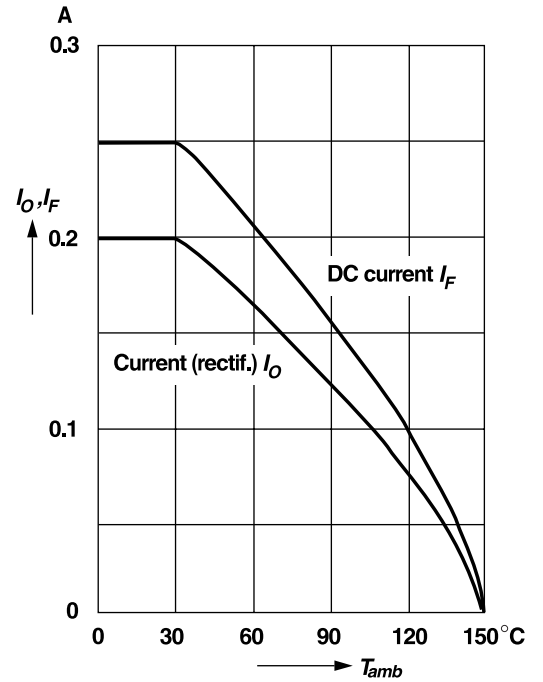
# RATINGS AND CHARACTERISTIC CURVES BAV19WS THRU BAV21WS

Forward characteristics



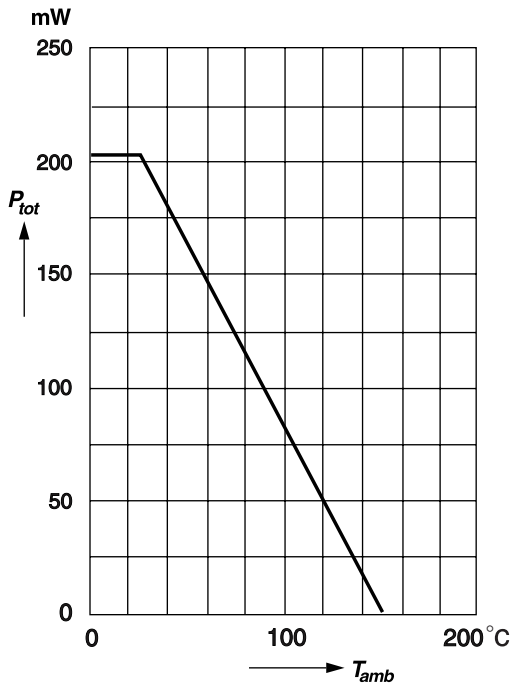
Admissible forward current versus ambient temperature

Valid provided that electrodes are kept at ambient temperature

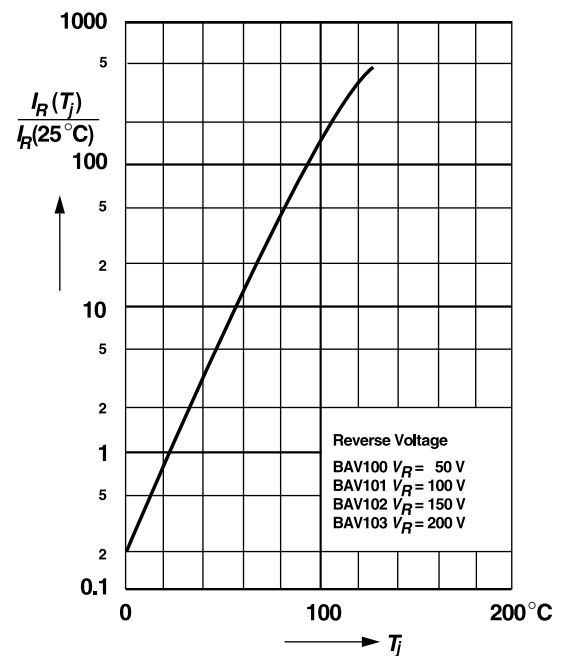


Admissible power dissipation versus ambient temperature

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

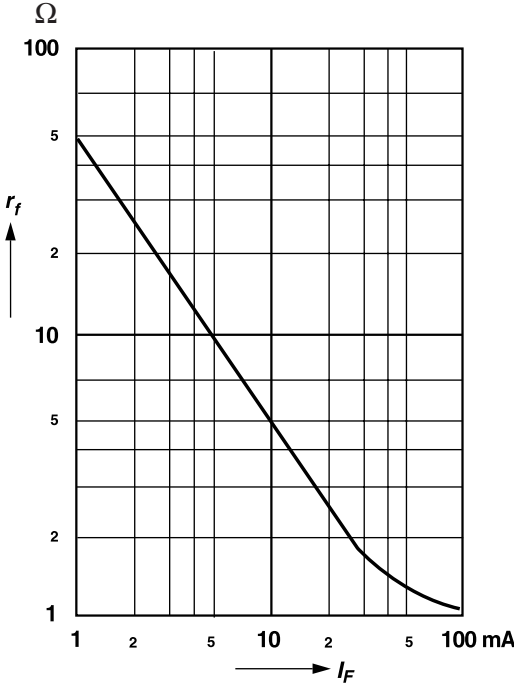


Leakage current versus junction temperature



# RATINGS AND CHARACTERISTIC CURVES BAV19WS THRU BAV21WS

Dynamic forward resistance versus forward current



Capacitance versus reverse voltage

