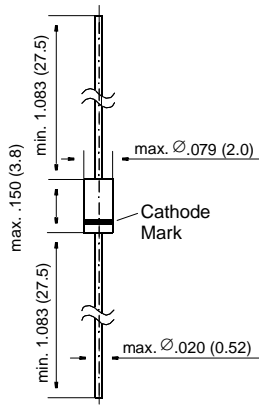


# BAV19 THRU BAV21

## Small Signal Diodes

### DO-35



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Silicon Epitaxial Planar Diodes
- ◆ For general purpose
- ◆ These diodes are also available in other case styles including: the SOD-123 case with the type designation BAV19W - BAV21W, the MiniMELF case with the type designation BAV101 - BAV103, and the SOT-23 case with the type designation BAS19 - BAS21.



### MECHANICAL DATA

**Case:** DO-35 Glass Case

**Weight:** approx. 0.13 g

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Value	Unit
Reverse Voltage <b>BAV19</b> <b>BAV20</b> <b>BAV21</b>	$V_R$ $V_R$ $V_R$	120 200 250	V V V
Forward DC Current at $T_{amb} = 25\text{ °C}$	$I_F$	250 <sup>1)</sup>	mA
Rectified Current (Average) Half Wave Rectification with Resist. Load at $T_{amb} = 25\text{ °C}$ and $f \geq 50\text{ Hz}$	$I_0$	200 <sup>1)</sup>	mA
Repetitive Peak Forward Current at $f \geq 50\text{ Hz}$ , $\theta = 180\text{ °}$ , $T_{amb} = 25\text{ °C}$	$I_{FRM}$	625 <sup>1)</sup>	mA
Surge Forward Current at $t < 1\text{ s}$ , $T_j = 25\text{ °C}$	$I_{FSM}$	1	A
Power Dissipation at $T_{amb} = 25\text{ °C}$	$P_{tot}$	500 <sup>1)</sup>	mW
Junction Temperature	$T_j$	175 <sup>1)</sup>	°C
Storage Temperature Range	$T_S$	-65 to +175 <sup>1)</sup>	°C

<sup>1)</sup> Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case

# BAV19 THRU BAV21

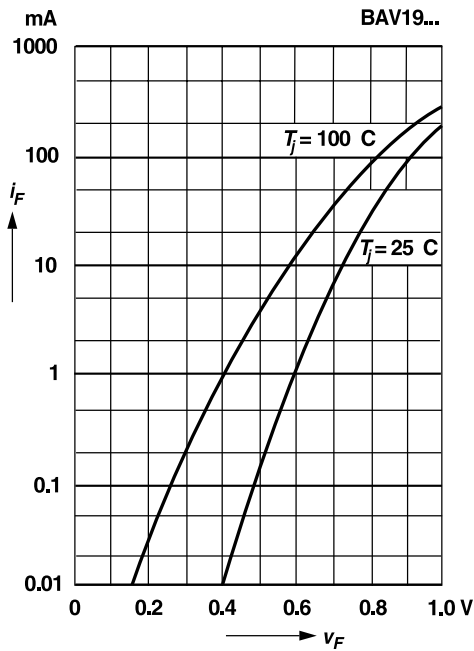
## ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Min.	Typ.	Max.	Unit
Forward voltage at $I_F = 100 \text{ mA}$	$V_F$	—	—	1	V
Leakage Current at $V_R = 100 \text{ V}$	$I_R$	—	—	100	nA
at $V_R = 100 \text{ V}, T_j = 100 \text{ °C}$	$I_R$	—	—	15	μA
at $V_R = 150 \text{ V}$	$I_R$	—	—	100	nA
at $V_R = 150 \text{ V}, T_j = 100 \text{ °C}$	$I_R$	—	—	15	μA
at $V_R = 200 \text{ V}$	$I_R$	—	—	100	nA
at $V_R = 200 \text{ V}, T_j = 100 \text{ °C}$	$I_R$	—	—	15	μA
Dynamic Forward Resistance at $I_F = 10 \text{ mA}$	$r_f$	—	5	—	Ω
Capacitance at $V_R = 0, f = 1 \text{ MHz}$	$C_{tot}$	—	1.5	—	pF
Reverse Recovery Time from $I_F = 30 \text{ mA}$ through $I_R = 30 \text{ mA}$ to $I_R = 3 \text{ mA}; R_L = 100 \text{ Ω}$	$t_{rr}$	—	—	50	ns
Thermal Resistance Junction to Ambient Air	$R_{thJA}$	—	—	375 <sup>1) 2)</sup>	K/W
<sup>1)</sup> Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case					

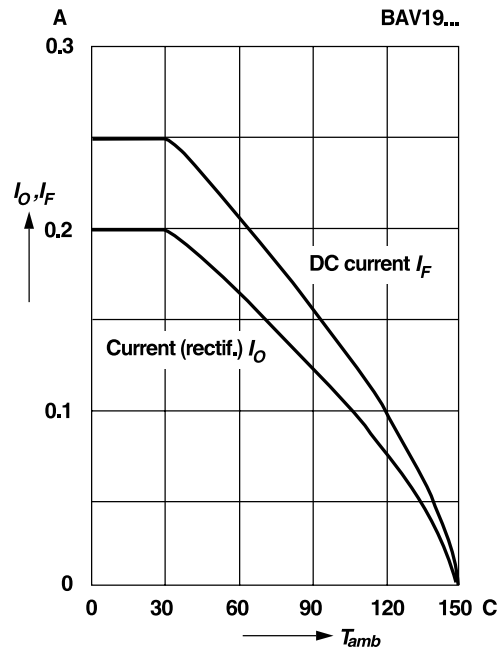
# RATINGS AND CHARACTERISTIC CURVES BAV19 THRU BAV21

Forward characteristics



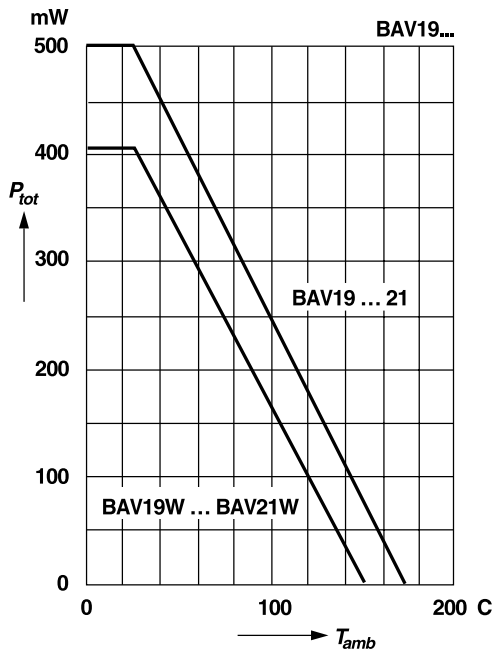
Admissible forward current versus ambient temperature

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

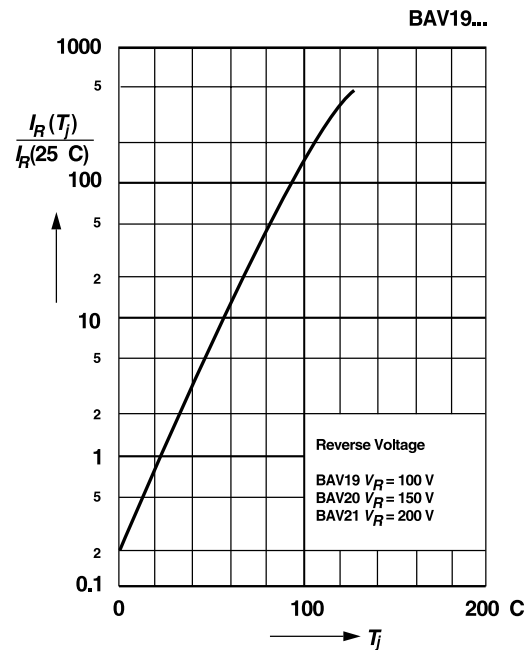


Admissible power dissipation versus ambient temperature

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

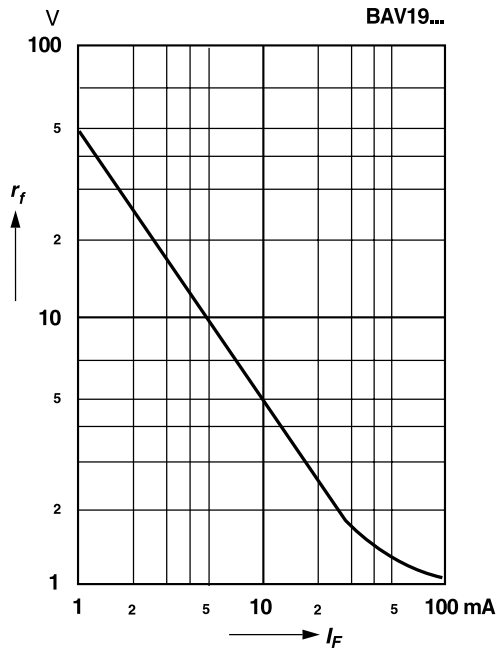


Leakage current versus junction temperature



## RATINGS AND CHARACTERISTIC CURVES BAV19 THRU BAV21

Dynamic forward resistance  
versus forward current



Capacitance  
versus reverse voltage

