



# BAV19 thru BAV21

Small-Signal Diode  
Fast Switching Diodes

## Features

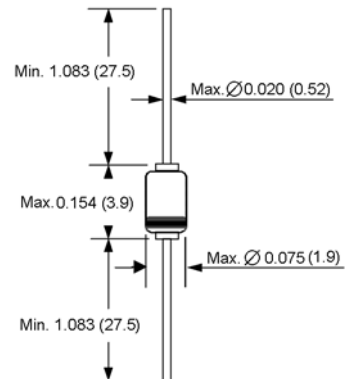
- ◆ Silicon Epitaxial Planar Diode
- ◆ For general purpose
- ◆ This diode is also available in other case styles including: the MiniMELF case with the type designation BAV101 to BAV103.



DO-204AH (DO-35 Glass)

## Mechanical Data

- ◆ Case: DO-35 Glass Case
- ◆ Weight: approx. 0.13g



Dimensions in inches and (millimeters)

## Maximum Ratings and Thermal Characteristics

( $T_A=25^\circ\text{C}$  unless otherwise noted.)

Parameter	Symbol	Limit	Unit	
Continuous reverse voltage	BAV19 BAV20 BAV21	$V_R$	100 150 200	Volts
Repetitive peak reverse voltage	BAV19 BAV20 BAV21	$V_{RRM}$	120 200 250	Volts
Forward DC current at $T_{amb}=25^\circ\text{C}$ <sup>(1)</sup>		$I_F$	250	mA
Rectified current (Average) half wave rectification with resist. load at $T_{amb}=25^\circ\text{C}$ <sup>(1)</sup>		$I_{F(AV)}$	200	mA
Repetitive peak forward current at $f=50\text{Hz}$ , $\theta=180^\circ$ , $T_{amb}=25^\circ\text{C}$ <sup>(1)</sup>		$I_{FRM}$	625	mA
Surge forward current at $t<1\text{s}$ and $T_J=25^\circ\text{C}$		$I_{FSM}$	1.0	Amp
Power dissipation at $T_{amb}=25^\circ\text{C}$ <sup>(1)</sup>		$P_{tot}$	500	mW
Thermal resistance junction to ambient air <sup>(1)</sup>		$R_{\theta JA}$	430	$^\circ\text{C}/\text{W}$
Junction temperature <sup>(1)</sup>		$T_J$	175	$^\circ\text{C}$
Storage temperature range <sup>(1)</sup>		$T_S$	-65 to +175	$^\circ\text{C}$

**Notes:** 1. Valid provided that leads are kept at ambient temperature at a distance of 8mm from case

## Electrical Characteristics

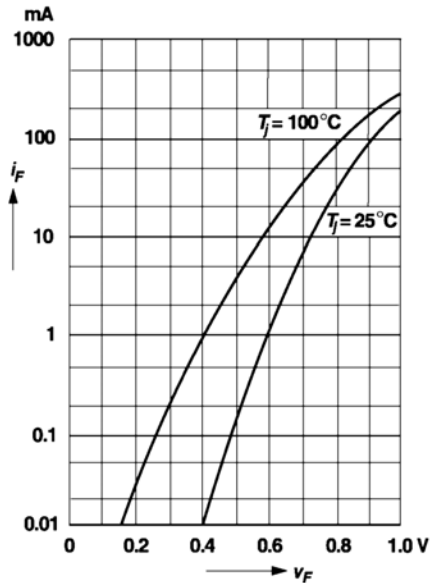
( $T_J=25^\circ\text{C}$  unless otherwise noted.)

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	Volts
Leakage current	$I_R$	$V_R=100\text{V}$	-	-	100	nA
		$V_R=100\text{V}, T_J=100^\circ\text{C}$	-	-	15	$\mu\text{A}$
		$V_R=150\text{V}$	-	-	100	nA
		$V_R=150\text{V}, T_J=100^\circ\text{C}$	-	-	15	$\mu\text{A}$
		$V_R=200\text{V}$	-	-	100	nA
		$V_R=200\text{V}, T_J=100^\circ\text{C}$	-	-	15	$\mu\text{A}$
Dynamic forward resistance	$r_f$	$I_F=10\text{mA}$	-	5	-	$\Omega$
Capacitance	$C_{\text{tot}}$	$V_R=0\text{V}, f=1\text{MHz}$	-	1.5	-	pF
Reverse recovery time	$t_{\text{tr}}$	$I_F=30\text{mA}, I_R=30\text{mA}$ $I_R=3\text{mA}, R_L=100\Omega$	-	-	50	ns

## RATINGS AND CHARACTERISTIC CURVES

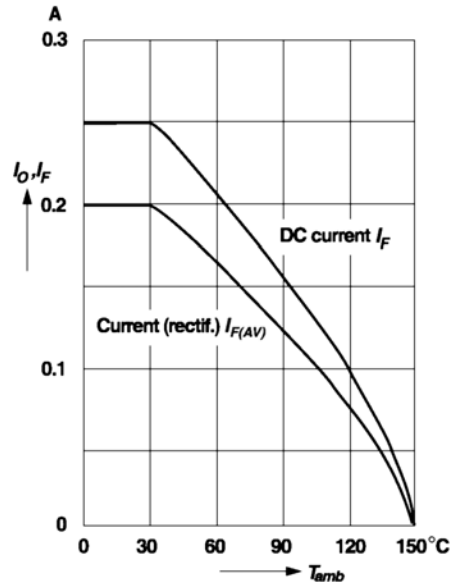
( $T_A = 25^\circ\text{C}$  unless otherwise noted.)

### Forward characteristics



### Admissible forward current versus ambient temperature

Valid provided that electrodes are kept at ambient temperature

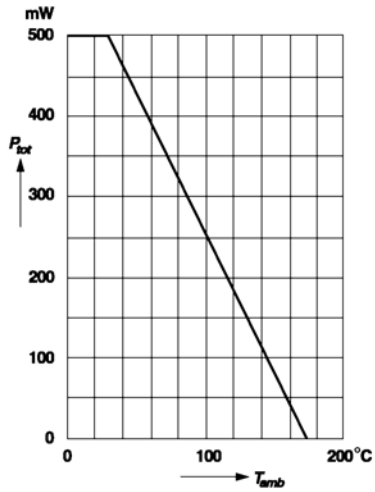


# RATINGS AND CHARACTERISTIC CURVES

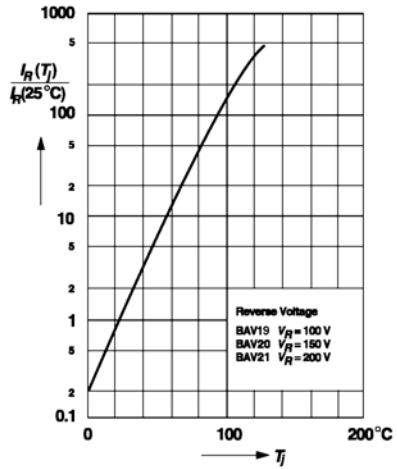
( $T_A = 25^\circ\text{C}$  unless otherwise noted.)

**Admissible power dissipation versus ambient temperature**

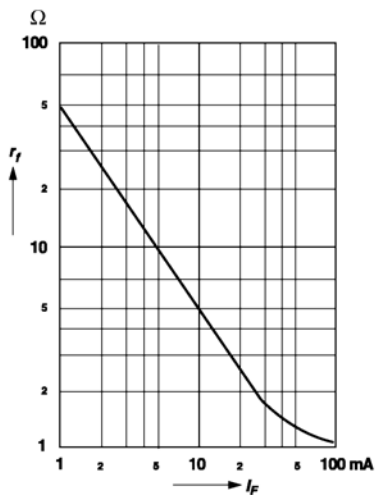
Valid provided that electrodes are kept at ambient temperature



**Leakage current versus junction temperature**



**Dynamic forward resistance versus forward current**



**Capacitance versus reverse voltage**

