



BAV19 thru BAV21

Small-Signal Diode
Fast Switching Diodes

Features

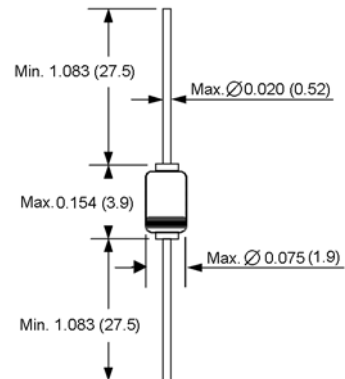
- ◆ Silicon Epitaxial Planar Diode
- ◆ For general purpose
- ◆ This diode is also available in other case styles including: the MiniMELF case with the type designation BAV101 to BAV103.



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 $T_{amb}=25^\circ\text{C}$ ⁽¹⁾		I_F	250	mA
Rectified current (Average) half wave rectification with resist. load at $T_{amb}=25^\circ\text{C}$ ⁽¹⁾		$I_{F(AV)}$	200	mA
Repetitive peak forward current at $f=50\text{Hz}$, $\theta=180^\circ$, $T_{amb}=25^\circ\text{C}$ ⁽¹⁾		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 $T_{amb}=25^\circ\text{C}$ ⁽¹⁾		P_{tot}	500	mW
Thermal resistance junction to ambient air ⁽¹⁾		$R_{\theta JA}$	430	$^\circ\text{C}/\text{W}$
Junction temperature ⁽¹⁾		T_J	175	$^\circ\text{C}$
Storage temperature range ⁽¹⁾		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

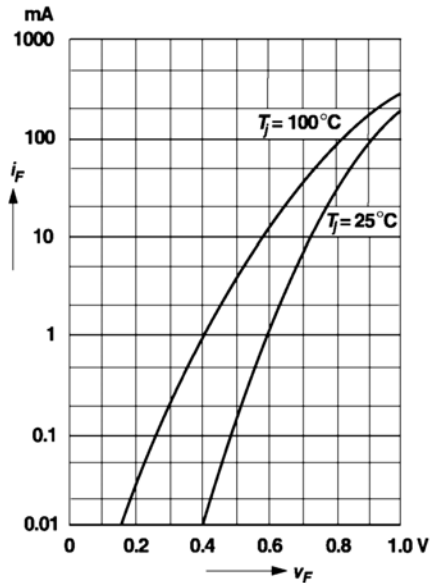
($T_J=25^\circ\text{C}$ unless otherwise noted.)

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	μA
		$V_R=150\text{V}$	-	-	100	nA
		$V_R=150\text{V}, T_J=100^\circ\text{C}$	-	-	15	μA
		$V_R=200\text{V}$	-	-	100	nA
		$V_R=200\text{V}, T_J=100^\circ\text{C}$	-	-	15	μA
Dynamic forward resistance	r_f	$I_F=10\text{mA}$	-	5	-	Ω
Capacitance	C_{tot}	$V_R=0\text{V}, f=1\text{MHz}$	-	1.5	-	pF
Reverse recovery time	t_{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

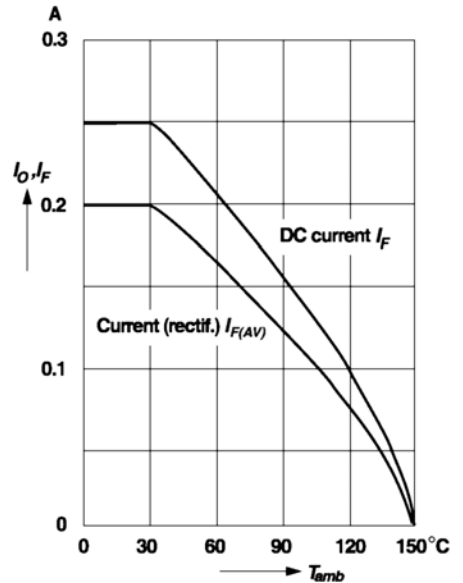
($T_A = 25^\circ\text{C}$ unless otherwise noted.)

Forward characteristics



Admissible forward current versus ambient temperature

Valid provided that electrodes are kept at ambient temperature

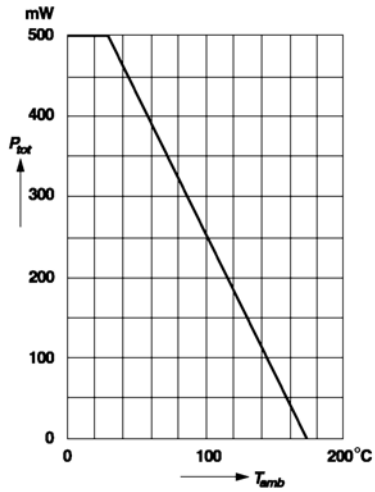


RATINGS AND CHARACTERISTIC CURVES

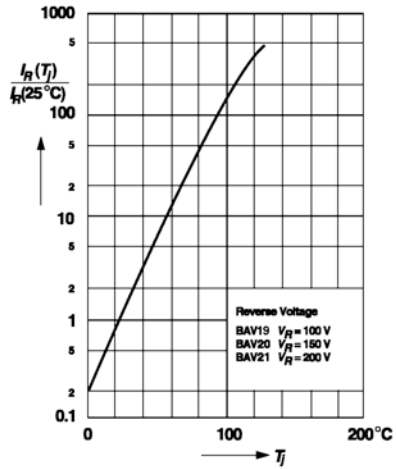
($T_A = 25^\circ\text{C}$ unless otherwise noted.)

Admissible power dissipation versus ambient temperature

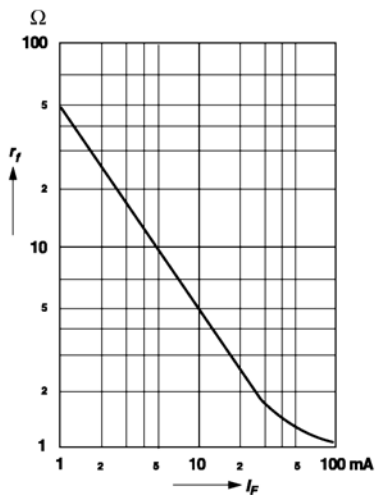
Valid provided that electrodes are kept at ambient temperature



Leakage current versus junction temperature



Dynamic forward resistance versus forward current



Capacitance versus reverse voltage

