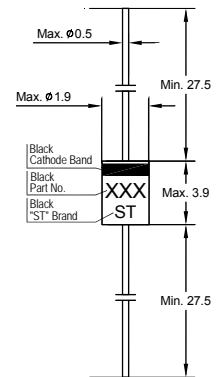


# BAV19, BAV20, BAV21

## SILICON EPITAXIAL PLANAR DIODES

High Voltage General Purpose Diodes

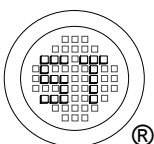


Glass Case DO-35  
Dimensions in mm

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	BAV19	120
		BAV20	200
		BAV21	250
Reverse Voltage	$V_R$	BAV19	100
		BAV20	150
		BAV21	200
Continuous Forward Current	$I_F$	250	mA
Repetitive Peak Forward Current	$I_{FRM}$	625	mA
Non-repetitive Peak Forward Surge Current	$I_{FSM}$	at $t = 1 \mu\text{s}$	9
		at $t = 100 \mu\text{s}$	3
		at $t = 1 \text{ s}$	1
Total Power Dissipation	$P_{tot}$	500	mW
Thermal Resistance, Junction to Ambient <sup>1)</sup>	$R_{\theta JA}$	375	K/W
Thermal Resistance, Junction to Tie-point <sup>1)</sup>	$R_{\theta JTP}$	240	K/W
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_s$	- 65 to + 175	$^\circ\text{C}$

<sup>1)</sup> Lead length 10 mm



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Certificate No. 71116



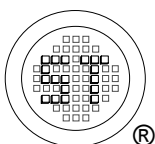
ISO 9001:2000  
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Dated : 20/06/2007

# BAV19, BAV20, BAV21

## Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	BAV19 BAV20 BAV21 $V_{(BR)R}$	120 200 250	- - -	V
Reverse Current at $V_R = 100\text{V}$ at $V_R = 150\text{V}$ at $V_R = 200\text{V}$ at $V_R = 100\text{V}$ , $T_A = 150\text{ }^\circ\text{C}$ at $V_R = 150\text{V}$ , $T_A = 150\text{ }^\circ\text{C}$ at $V_R = 200\text{V}$ , $T_A = 150\text{ }^\circ\text{C}$	BAV19 BAV20 BAV21 BAV19 BAV20 BAV21 $I_R$	- - - - - -	100 100 100 100 100 100	nA nA nA $\mu\text{A}$ $\mu\text{A}$ $\mu\text{A}$
Forward Voltage at $I_F = 100\text{ mA}$ at $I_F = 200\text{ mA}$	$V_F$	- -	1 1.25	V
Diode Capacitance at $f = 1\text{ MHz}$	$C_d$	-	5	pF
Reverse Recovery Time at $I_F = I_R = 30\text{ mA}$ , $I_{rr} = 3\text{ mA}$ , $R_L = 100\text{ }\Omega$	$t_{rr}$	-	50	ns



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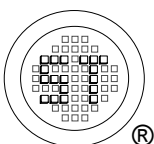
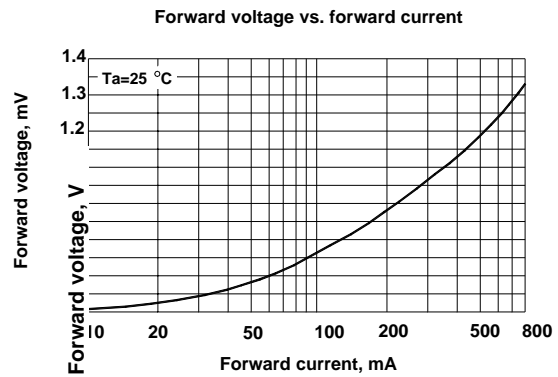
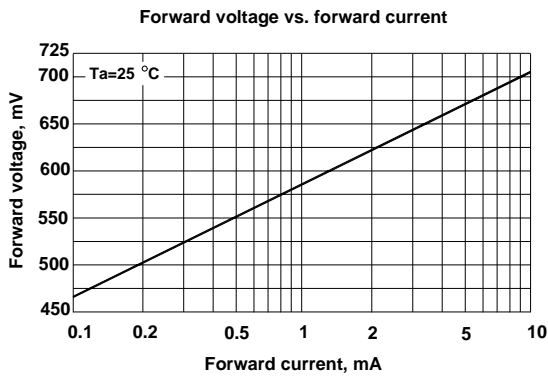
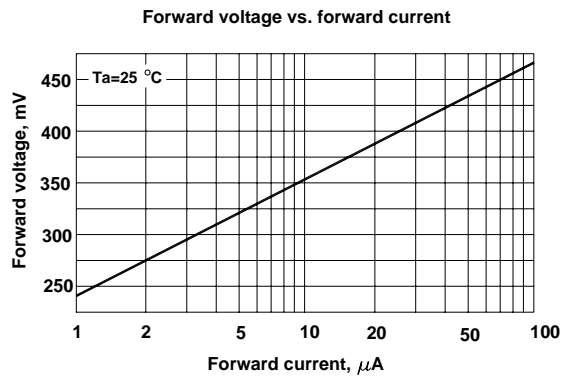
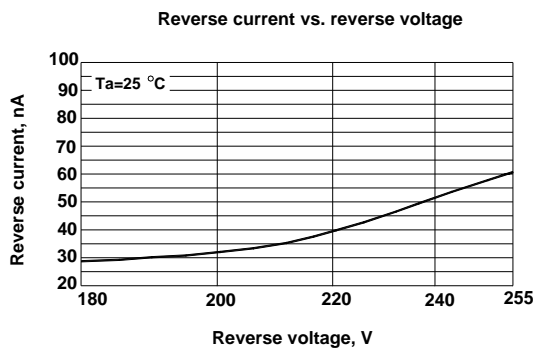
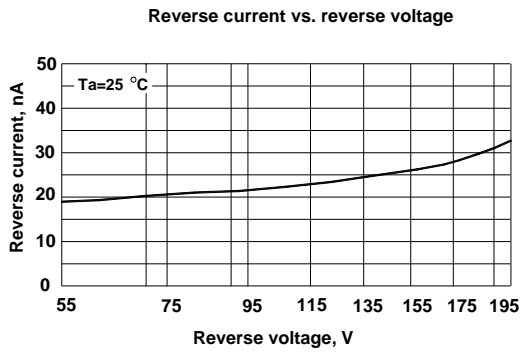
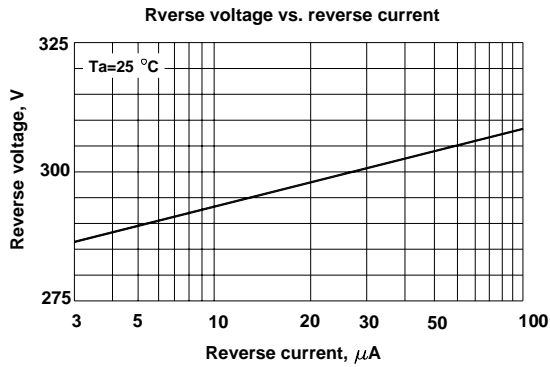
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# BAV19, BAV20, BAV21



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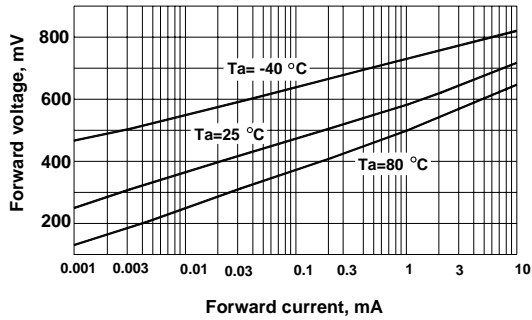
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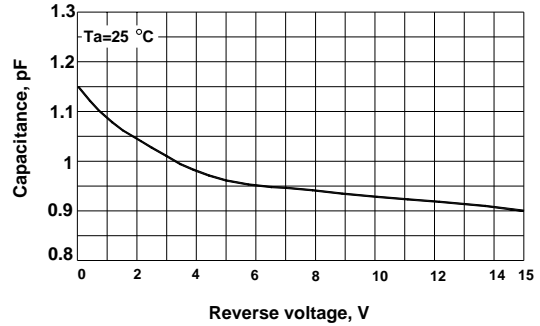
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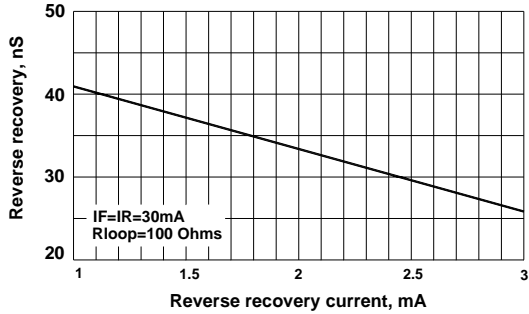
Forward voltage vs. ambient temperature



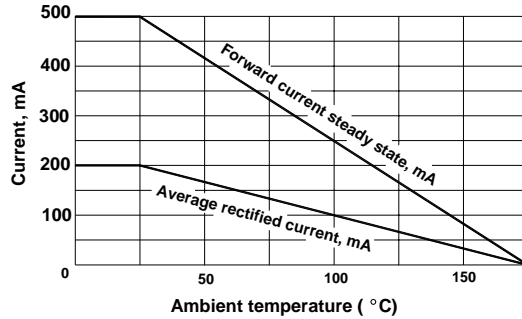
Capacitance vs. reverse voltage



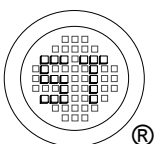
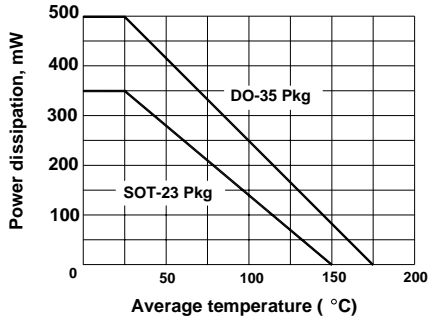
Reverse recovery time vs. reverse recovery current



Average rectified current & forward current vs. ambient temperature



Power derating curve



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