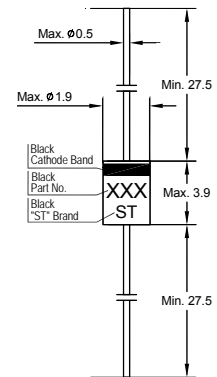


BAV19, BAV20, BAV21

SILICON EPITAXIAL PLANAR DIODES

High Voltage General Purpose Diodes

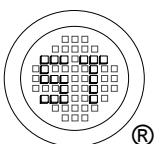


Glass Case DO-35
Dimensions in mm

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 ¹⁾	$R_{\theta JA}$	375	K/W
Thermal Resistance, Junction to Tie-point ¹⁾	$R_{\theta JTP}$	240	K/W
Junction Temperature	T_j	175	$^\circ\text{C}$
Storage Temperature Range	T_s	- 65 to + 175	$^\circ\text{C}$

¹⁾ Lead length 10 mm



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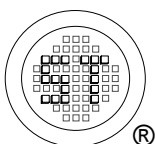
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BAV19, BAV20, BAV21

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 μA μA μA
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



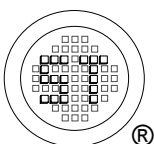
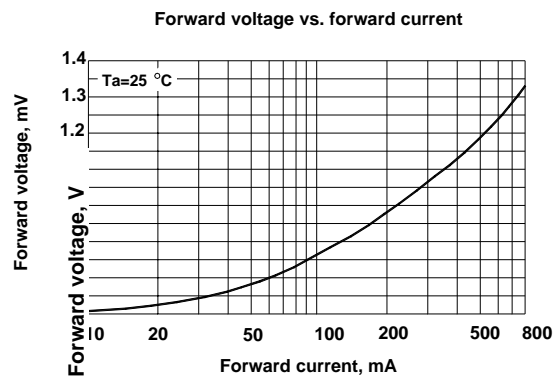
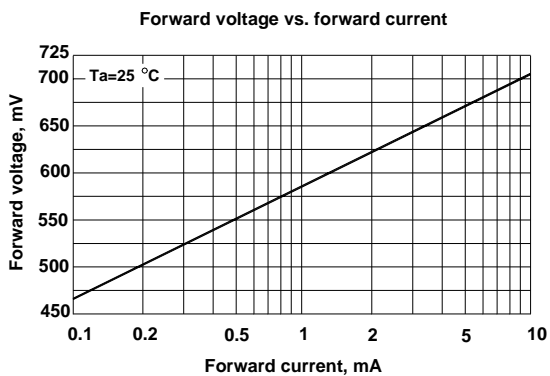
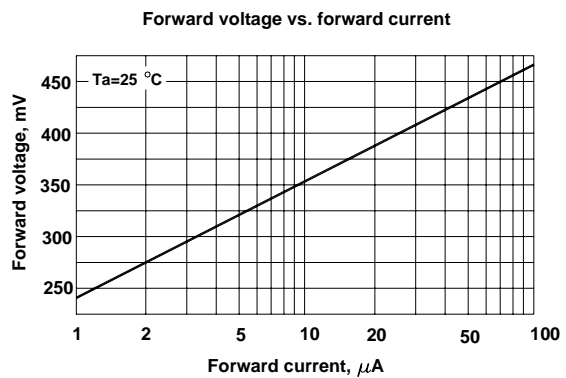
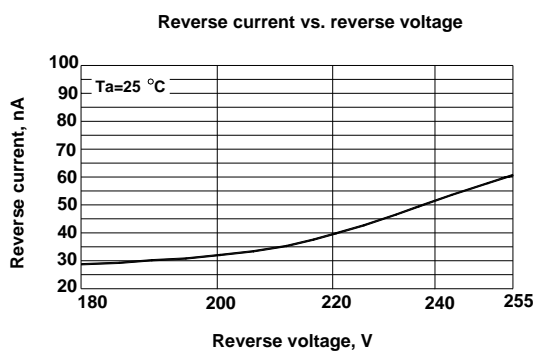
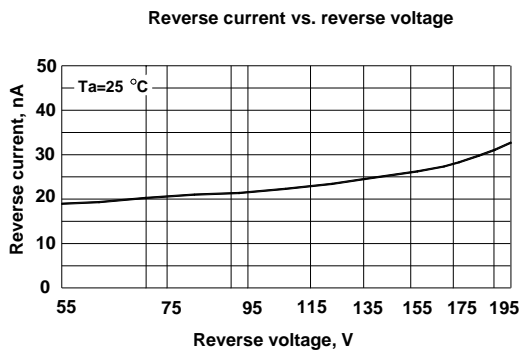
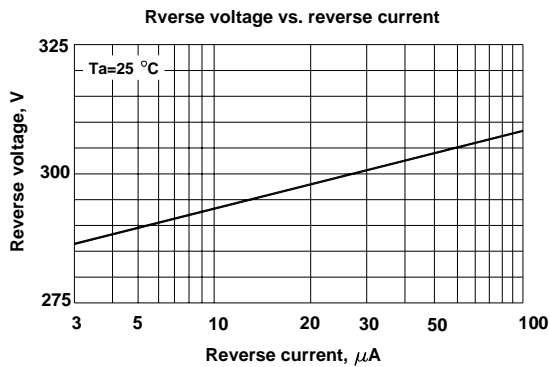
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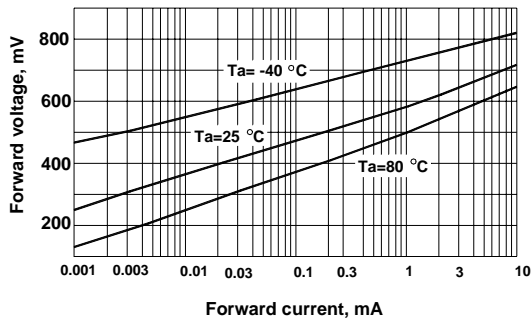


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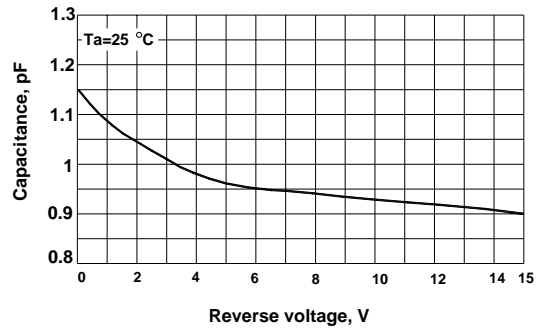
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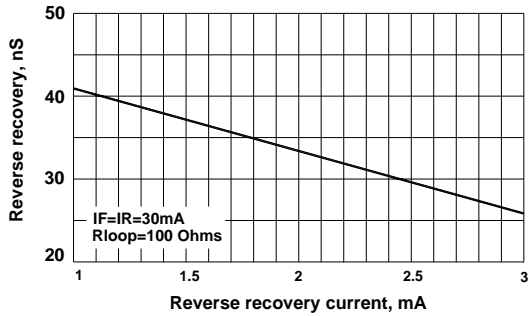
Forward voltage vs. ambient temperature



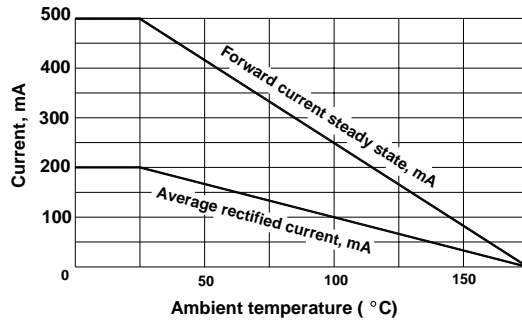
Capacitance vs. reverse voltage



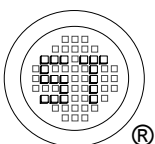
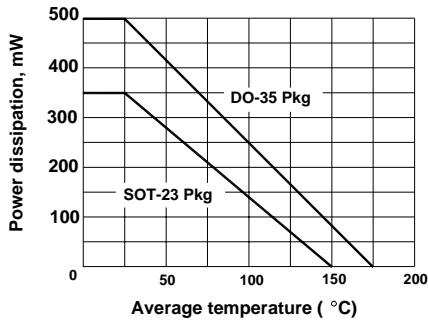
Reverse recovery time vs. reverse recovery current



Average rectified current & forward current vs. ambient temperature



Power derating curve



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