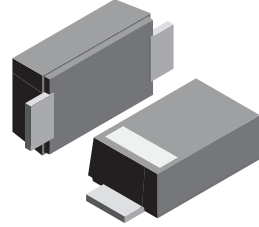


# BAV300-BAV303

## SURFACE MOUNT FAST SWITCHING DIODE

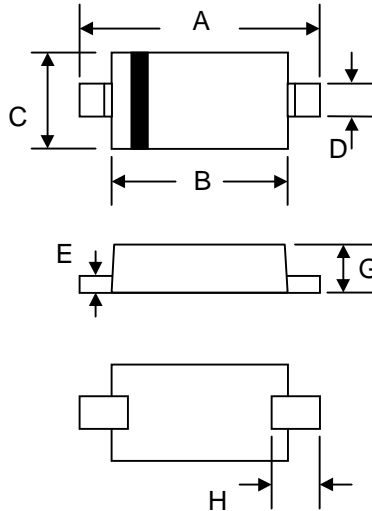


### Features

- Silicon Epitaxial Planar Diodes
- Saving space
- Hermetic sealed parts

### Mechanical Data

- Case: SOD-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.004 grams (approx.)
- Marking: A3



SOD-323		
Dim	Min	Max
A	2.30	2.70
B	1.75	1.95
C	1.15	1.35
D	0.25	0.35
E	0.05	0.15
G	0.70	0.95
H	0.30	—
All Dimensions in mm		

### Maximum Ratings and Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Test condition	Part	Symbol	Value	Unit		
Peak reverse voltage		BAV300	$V_{RRM}$	60	V		
		BAV301	$V_{RRM}$	120	V		
		BAV302	$V_{RRM}$	200	V		
		BAV303	$V_{RRM}$	250	V		
Reverse voltage		BAV300	$V_R$	50	V		
		BAV301	$V_R$	100	V		
		BAV302	$V_R$	150	V		
		BAV303	$V_R$	200	V		
Forward continuous current			$I_F$	250	mA		
Peak forward surge current	$t_p = 1 \text{ s}, T_j = 25^\circ\text{C}$		$I_{FSM}$	1	A		
Forward peak current	$f = 50 \text{ Hz}$		$I_{FM}$	625	mA		
Parameter	Test condition	Part	Symbol	Min	Typ.	Max	Unit
Forward voltage	$I_F = 100 \text{ mA}$		$V_F$			1000	mV
Reverse current	$V_R = 50 \text{ V}$	BAV300	$I_R$			100	nA
	$V_R = 100 \text{ V}$	BAV301	$I_R$			100	nA
	$V_R = 150 \text{ V}$	BAV302	$I_R$			100	nA
	$V_R = 200 \text{ V}$	BAV303	$I_R$			100	nA
	$T_j = 100^\circ\text{C}, V_R = 50 \text{ V}$	BAV300	$I_R$			15	$\mu\text{A}$
	$T_j = 100^\circ\text{C}, V_R = 100 \text{ V}$	BAV301	$I_R$			15	$\mu\text{A}$
	$T_j = 100^\circ\text{C}, V_R = 150 \text{ V}$	BAV302	$I_R$			15	$\mu\text{A}$
	$T_j = 100^\circ\text{C}, V_R = 200 \text{ V}$	BAV303	$I_R$			15	$\mu\text{A}$
Breakdown voltage	$I_R = 100 \mu\text{A}, t_p/T = 0.01, p = 0.3 \text{ ms}$	BAV300	$V_{(BR)}$	60			V
	$I_R = 100 \mu\text{A}, t_p/T = 0.01, p = 0.3 \text{ ms}$	BAV301	$V_{(BR)}$	120			V
		BAV302	$V_{(BR)}$	200			V
		BAV303	$V_{(BR)}$	250			V
Diode capacitance	$V_R = 0, f = 1 \text{ MHz}$		$C_D$		1.5		pF
Differential forward resistance	$I_F = 10 \text{ mA}$		$r_f$		5		$\Omega$
Reverse recovery time	$I_F = I_R = 30 \text{ mA}, i_R = 3 \text{ mA}, R_L = 100 \Omega$		$t_{rr}$			50	ns

**Typical Characteristics**  $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

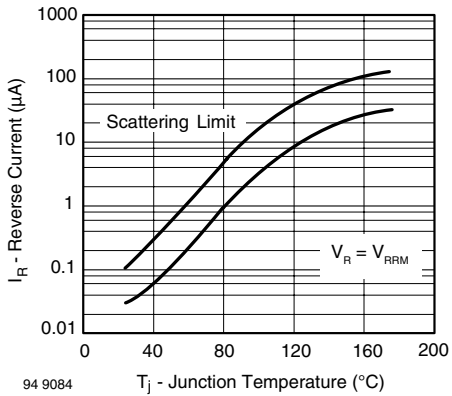


Figure 1. Reverse Current vs. Junction Temperature

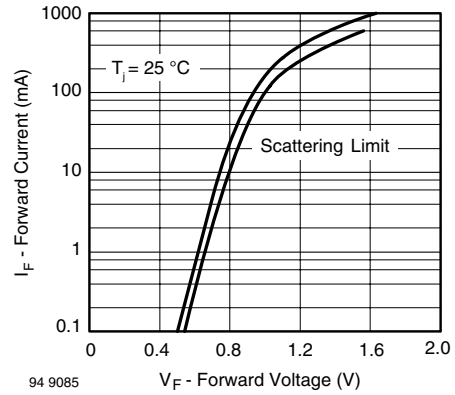


Figure 2. Forward Current vs. Forward Voltage

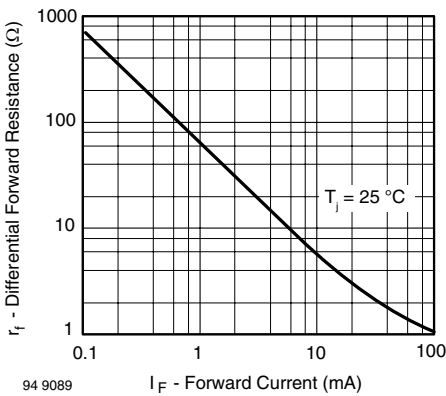


Figure 3. Differential Forward Resistance vs. Forward Current

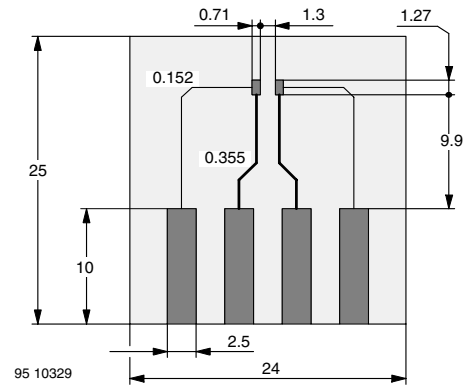


Figure 4. Board for  $R_{thJA}$  definition (in mm)