



Micro Commercial Components

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# BAV300 THRU BAV303

## Switching Diodes

### Features

- Saving Space
- Silicon Epitaxial Planar Diodes
- Hermetic Sealed Parts
- Fits onto SOD-323/SOT-23 footprints
- Electrical data identical with the devices BAV100...BAV103

### Maximum Ratings

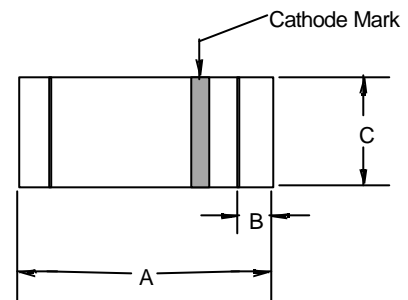
Continuous Reverse Voltage	BAV300 BAV301 BAV302 BAV303	$V_R$	50V 100V 150V 200V	$T_A=25^\circ\text{C}$
Repetitive Peak Reverse Voltage	BAV300 BAV301 BAV302 BAV303	$V_{RRM}$	60V 120V 200V 250V	$T_A=25^\circ\text{C}$
Forward DC Current		$I_F$	250mA	$T_A=25^\circ\text{C}$
Repetitive Peak Forward Current		$I_{FRM}$	625mA	$f=50\text{Hz}, T_A=25^\circ\text{C}$
Surge Forward Current		$I_{FSM}$	1.0A	$T_P=1\text{s}, T_J=25^\circ\text{C}$
Thermal Resistance Junction to Ambient		$R_{thJA}$	500K/W	Note (1)
Junction temperature		$T_j$	175°C	
Storage temperature Range		$T_{stg}$	-65 to + 175°C	

Note: (1) mounted on epoxy-glass hard tissue, Fig.4 35  $\mu\text{m}$  copper clad, 0.9  $\text{mm}^2$  copper area per electrode

### Electrical Characteristics @ 25°C Unless Otherwise Specified

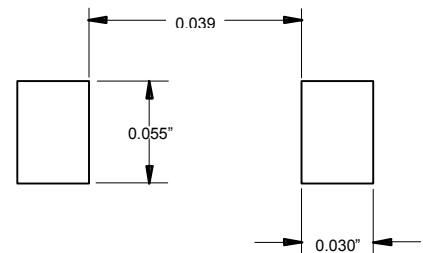
Maximum Forward Voltage	$V_F$	1.00V	$I_F = 100\text{mA}, T_A=25^\circ\text{C}$
Maximum Leakage current	BAV300 BAV301 BAV302 BAV303	100nA 15 $\mu\text{A}$ 100nA 15 $\mu\text{A}$ 100nA 15 $\mu\text{A}$ 100nA 15 $\mu\text{A}$	$V_R=50\text{V}, T_j=100^\circ\text{C}$ $V_R=100\text{V}, T_j=100^\circ\text{C}$ $V_R=150\text{V}, T_j=100^\circ\text{C}$ $V_R=200\text{V}, T_j=100^\circ\text{C}$
Maximum Leakage current	BAV300 BAV301 BAV302 BAV303	60V 120V 200V 250V	$I_R=100\mu\text{A}, t_P/T=0.01,$ $t_P=0.3\text{ms}$
Diode Capacitance	$C_D$	1.5pF	$V_R=0\text{V}, f=1.0\text{MHz}$
Maximum Reverse recovery time	$t_{rr}$	50ns	$I_F=10\text{mA}, I_R=30\text{mA}$ $I_{rr}=3.0\text{mA}, R_L=100\Omega$
Differential Forward Resistance	$r_F$	5.0 $\Omega$	$I_F=10\text{mA}$

### MICROMELF



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.071	.079	1.8	2.0	
B	.004	.008	.10	.20	
C	.047	.051	1.20	1.30	Ø

### SUGGESTED SOLDER PAD LAYOUT



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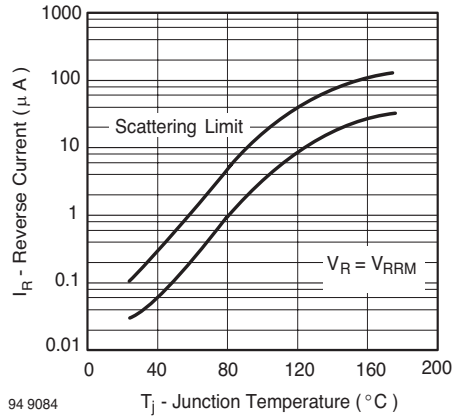


Fig. 1 Reverse Current vs. Junction Temperature

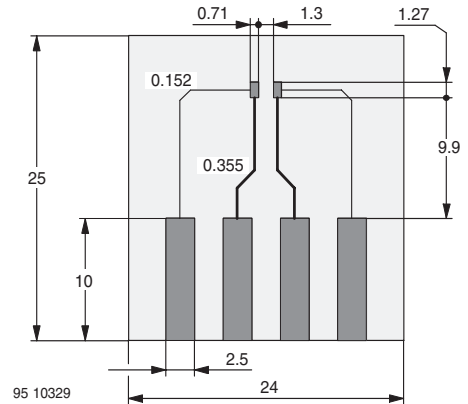


Fig. 4 Board for  $R_{thJA}$  definition (in mm)

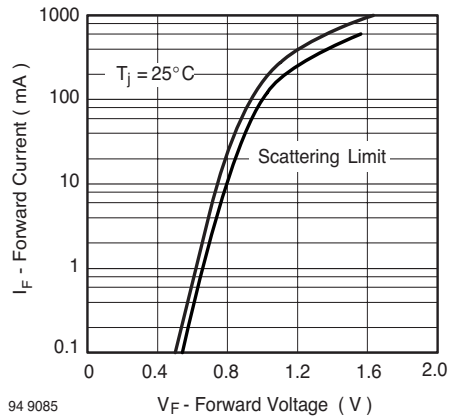


Fig. 2 Forward Current vs. Forward Voltage

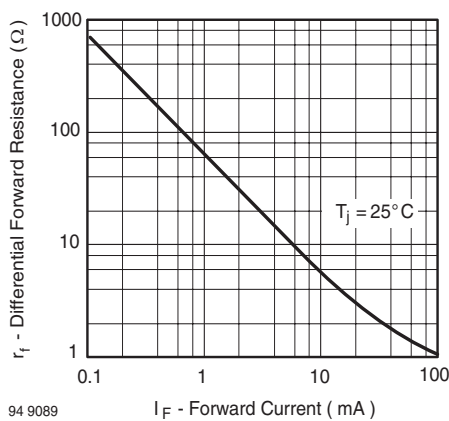


Fig. 3 Differential Forward Resistance vs. Forward Current



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