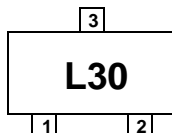
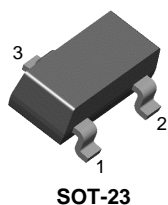
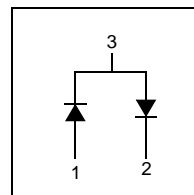


BAV23S

Small Signal Diode



Connection Diagram



Absolute Maximum Ratings * $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Unit
V_{RRM}	Maximum Repetitive Reverse Voltage	250	V
$I_{F(AV)}$	Average Rectified Forward Current	200	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current	9.0	A
	Pulse Width = 1.0 microsecond	3.0	A
T_{STG}	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature	150	$^\circ\text{C}$

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

Symbol	Parameter	Value	Unit
P_D	Power Dissipation	350	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient*	357	$^\circ\text{C/W}$

Electrical Characteristics $T_C = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Conditions	Min.	Max	Units
V_R	Breakdown Voltage	$I_R = 100\mu\text{A}$	250		V
V_F	Forward Voltage	$I_F = 100\text{mA}$		1.0	V
		$I_F = 200\text{mA}$		1.25	V
I_R	Reverse Leakage	$V_R = 250\text{V}$		100	nA
		$V_R = 250\text{V}, T_A = 150^\circ\text{C}$		100	μA
t_{rr}	Reverse Recovery Time	$I_F = I_R = 30\text{mA}, I_{RR} = 3.0\text{mA}, R_L = 100\Omega$		50	ns

Typical Performance Characteristics

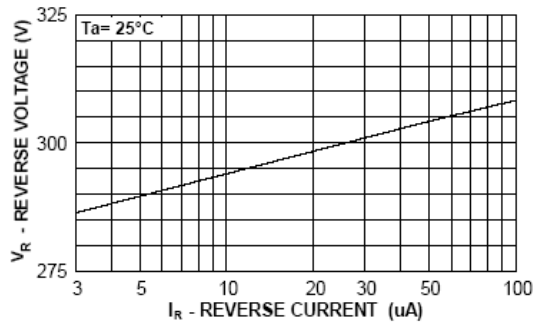
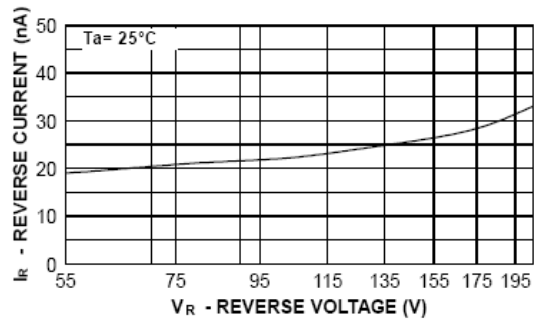
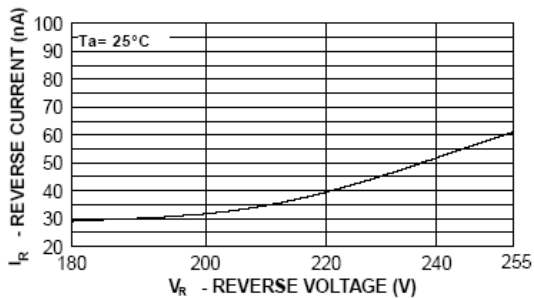


Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100 μ A



GENERAL RULE: The Reverse Current of a diode will approximately double for every ten (10) Degree C increase in Temperature

Figure 2. Reverse Current vs Reverse Voltage
IR - 55 to 205V



GENERAL RULE: The Reverse Current of a diode will approximately double for every ten Degree C increase in Temperature

Figure 3. Reverse Current vs Reverse Voltage
IR - 180 to 255V

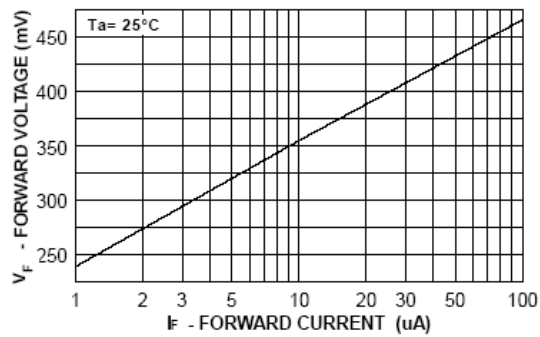


Figure 4. Forward Voltage vs Forward Current
VF - 1.0 to 100 μ A

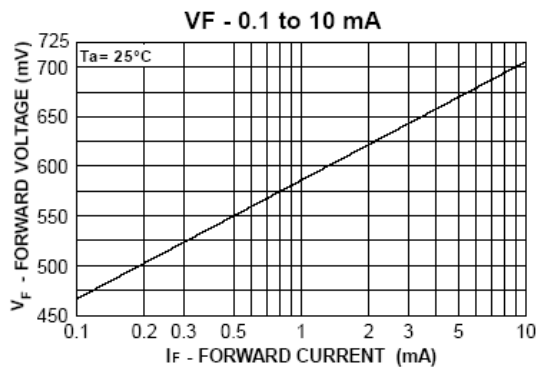


Figure 5. Forward Voltage vs Forward Current
VF - 0.1 to 10mA

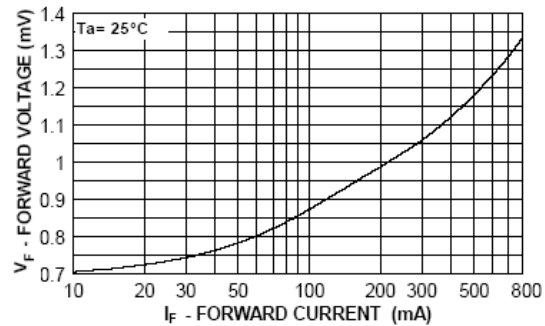


Figure 6. Forward Voltage vs Forward Current
VF - 10 to 800mA

Typical Performance Characteristics (Continued)

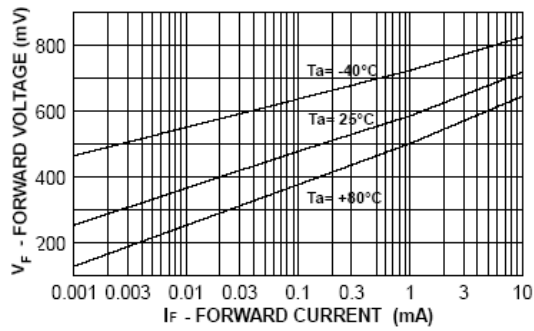


Figure 7. Forward Voltage vs Ambient Temperature
VF - 1.0 μ A - 10mA (- 40 to +80°C)

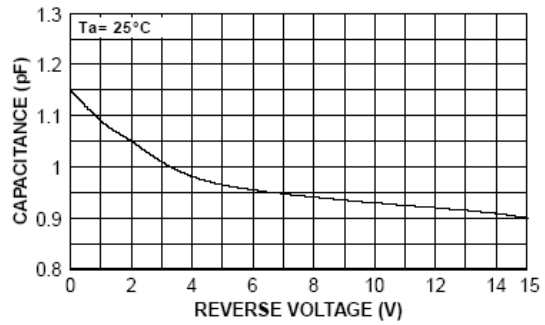


Figure 8. Capacitance vs Reverse Voltage
VR - 0 to 5V

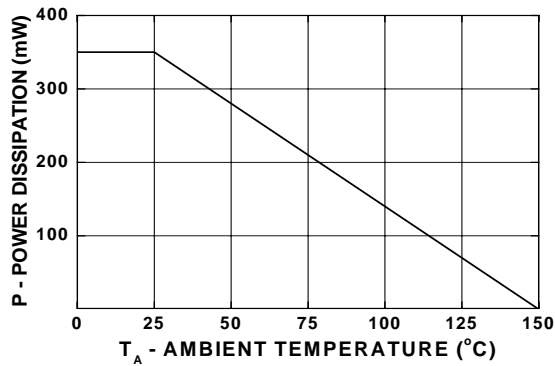


Figure 9. Power Derating Curve

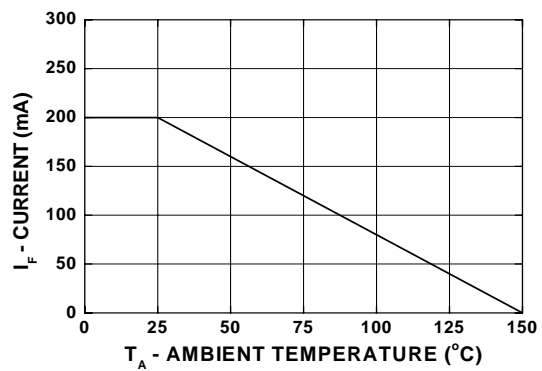


Figure 10. Average Rectified Current(I_O)
vs Ambient Temperature(T_A)

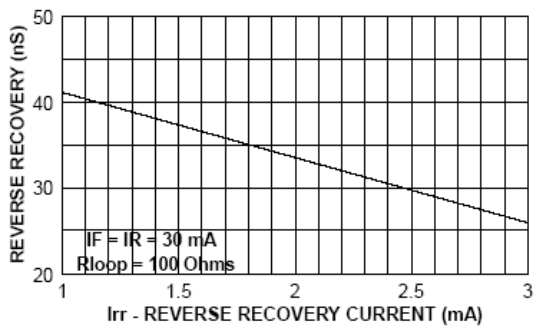
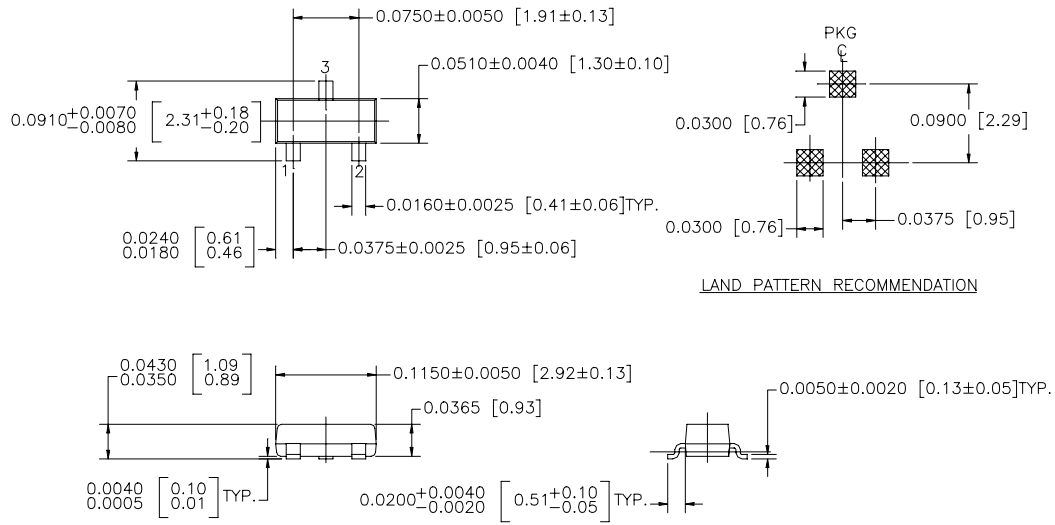


Figure 11. Reverse Recovery Time vs
Reverse Recovery Current (I_{rr})

Mechanical Dimensions

SOT-23



CONTROLLING DIMENSION IS INCH
VALUES IN [] ARE MILLIMETERS

SOT 23, 3 LEADS LOW PROFILE

NOTE : UNLESS OTHERWISE SPECIFIED

1. STANDARD LEAD FINISH 150 MICROINCHES / 3.81 MICROMETERS
MINIMUM TIN / LEAD (SOLDER) ON ALLOY 42
2. REFERENCE JEDEC REGISTRATION TO-236, VARIATION AB, ISSUE G, DATED JUL 1993

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