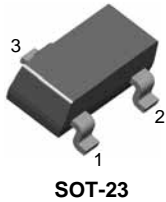
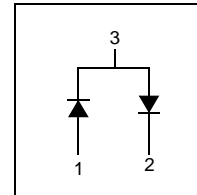


# BAV23S

## 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 Pulse Width = 1.0 second Pulse Width = 1.0 microsecond	0.9	A
		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.

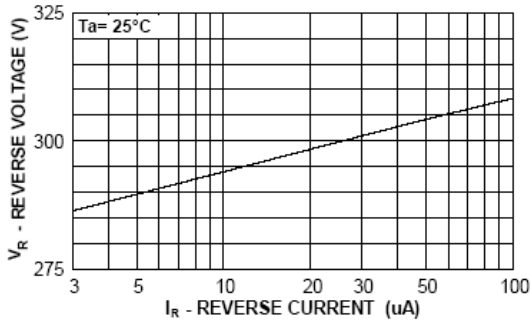
### Thermal Characteristics

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

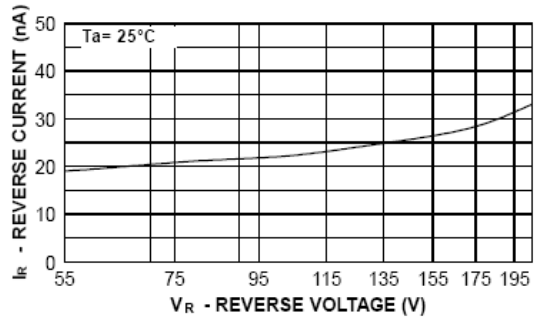
### Electrical Characteristics $T_C = 25^\circ\text{C}$ unless otherwise noted

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	$\mu\text{A}$
		$V_R = 250\text{V}, T_A = 150^\circ\text{C}$		100	$\mu\text{A}$
$t_{rr}$	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

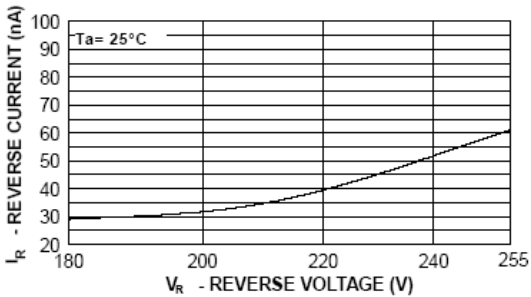


**Figure 1. Reverse Voltage vs Reverse Current**  
BV - 1.0 to 100 $\mu$ A



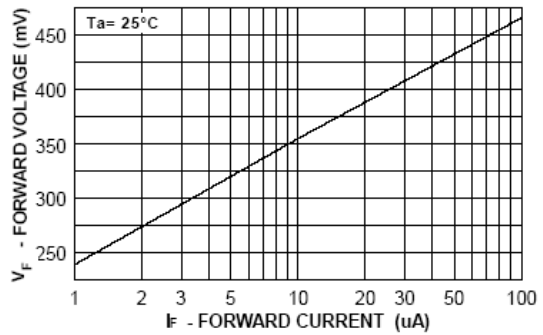
GENERAL RULE: The Reverse Current of a diode will approximately double for every ten (10) Degree C increase in Temperature

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

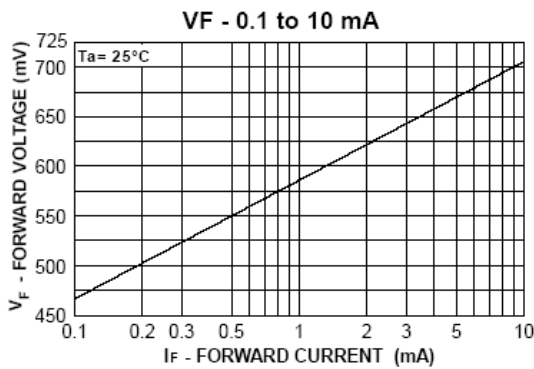


GENERAL RULE: The Reverse Current of a diode will approximately double for every ten Degree C increase in Temperature

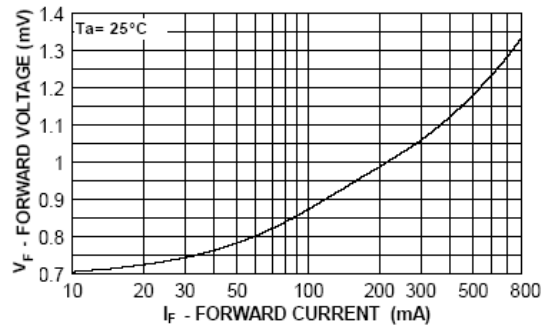
**Figure 3. Reverse Current vs Reverse Voltage**  
IR - 180 to 255V



**Figure 4. Forward Voltage vs Forward Current**  
VF - 1.0 to 100 $\mu$ A

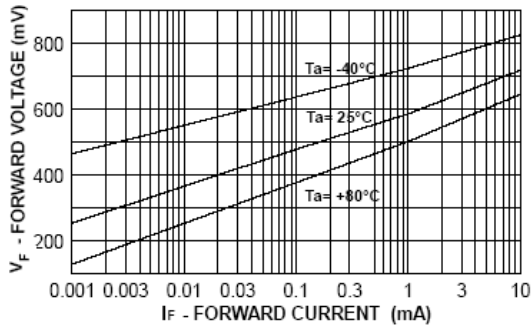


**Figure 5. Forward Voltage vs Forward Current**  
VF - 0.1 to 10mA

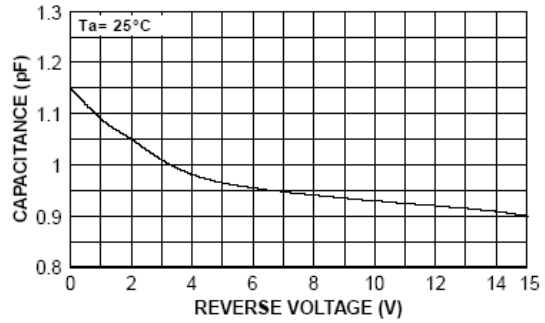


**Figure 6. Forward Voltage vs Forward Current**  
VF - 10 to 800mA

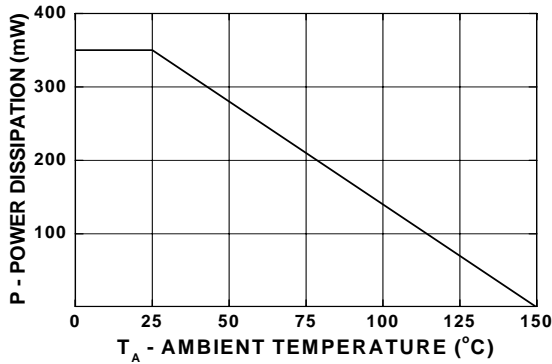
**Typical Performance Characteristics** (Continued)



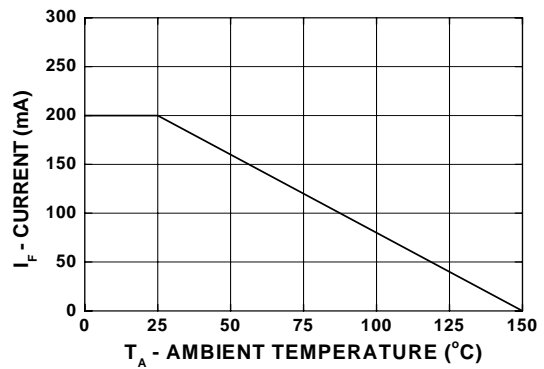
**Figure 7. Forward Voltage vs Ambient Temperature**  
VF - 1.0 $\mu$ A - 10mA (- 40 to +80°C)



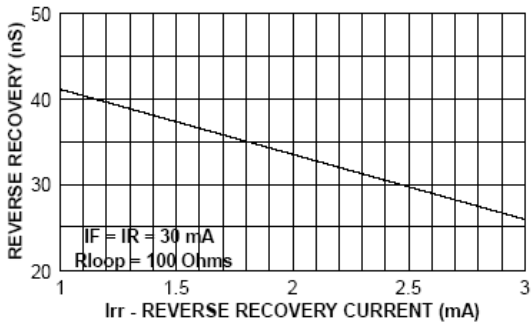
**Figure 8. Capacitance vs Reverse Voltage**  
VR - 0 to 5V



**Figure 9. Power Derating Curve**



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



**Figure 10. Reverse Recovery Time vs Reverse Recovery Current ( $I_{rr}$ )**

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EcoSPARK™	I <sup>2</sup> C™	MSXPro™	RapidConnect™	UHC™
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