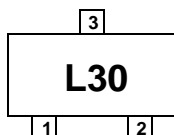
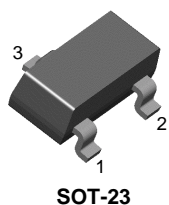
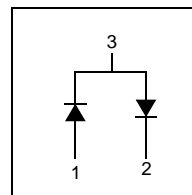


BAV23S

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 microsecond Pulse Width = 100 microsecond	9.0	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	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

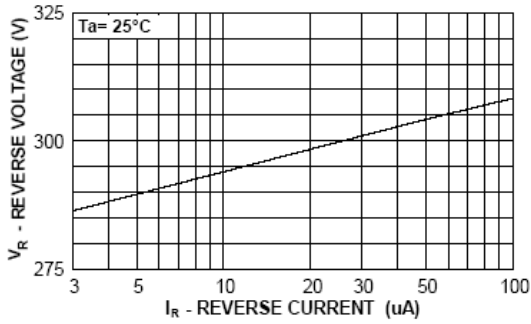
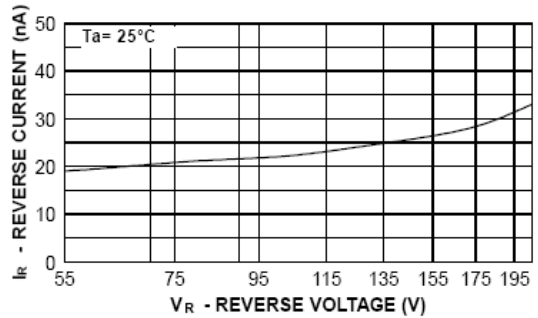
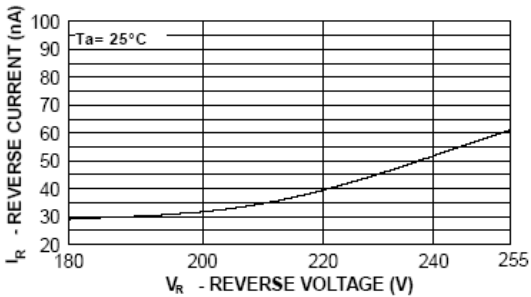


Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100 μ A



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

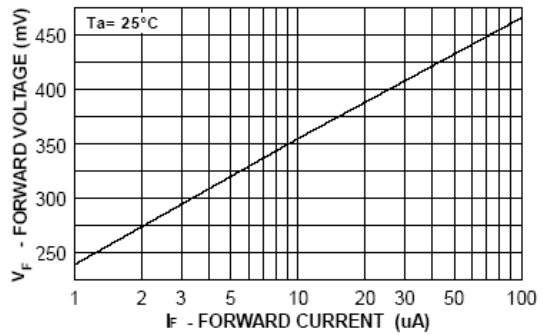


Figure 4. Forward Voltage vs Forward Current
VF - 1.0 to 100 μ A

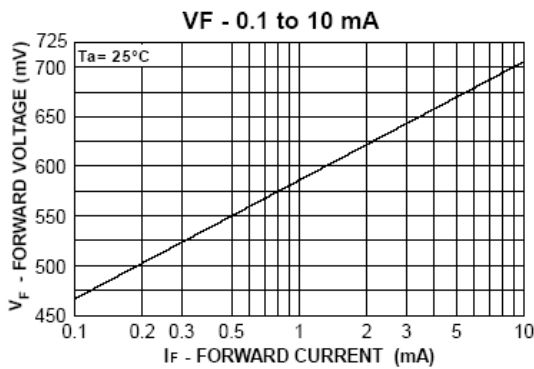


Figure 5. Forward Voltage vs Forward Current
VF - 0.1 to 10mA

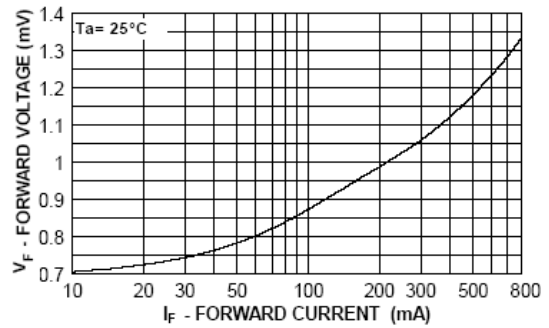


Figure 6. Forward Voltage vs Forward Current
VF - 10 to 800mA

Typical Performance Characteristics (Continued)

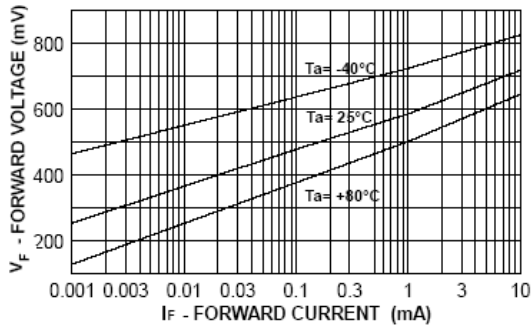


Figure 7. Forward Voltage vs Ambient Temperature
VF - 1.0μA - 10mA (- 40 to +80°C)

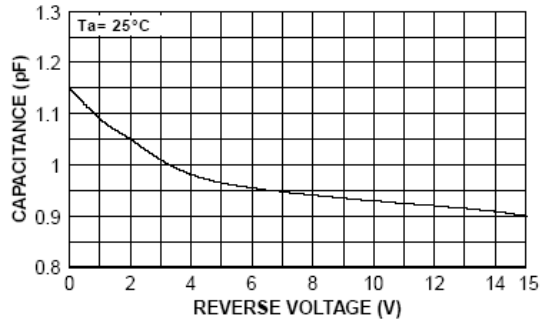


Figure 8. Capacitance vs Reverse Voltage
VR - 0 to 5V

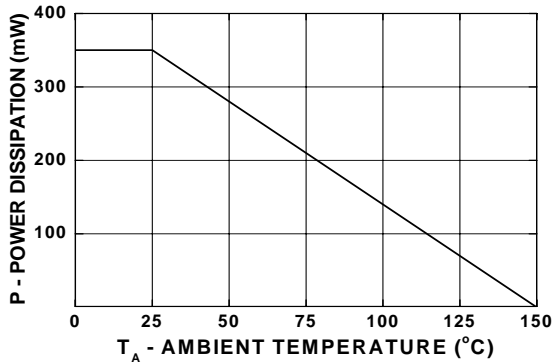


Figure 9. Power Derating Curve

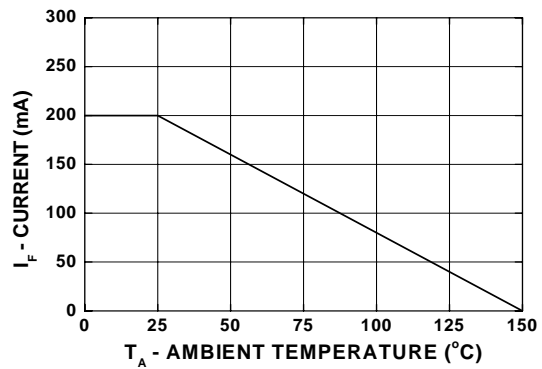


Figure 10. Average Rectified Current(I_O) vs Ambient Temperature(T_A)

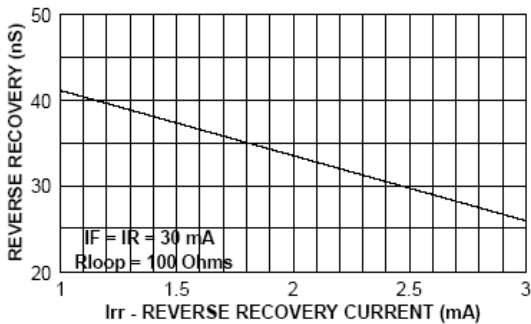
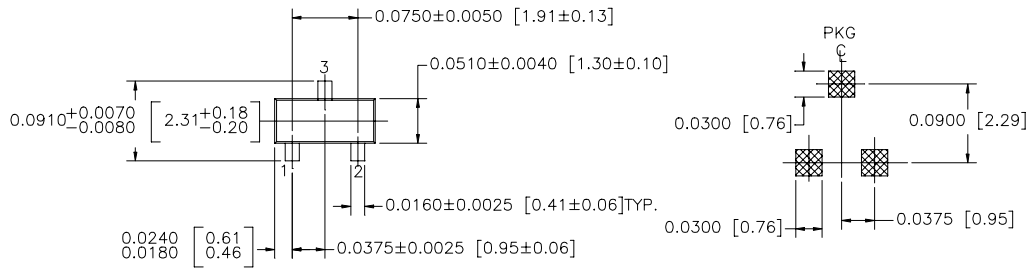


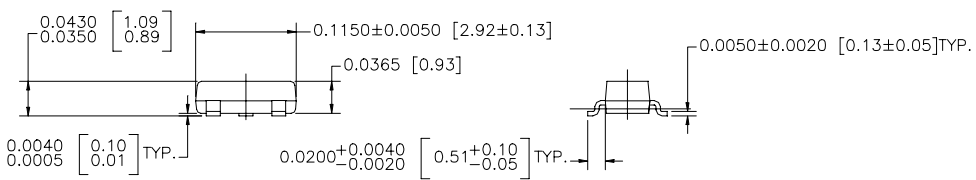
Figure 11. Reverse Recovery Time vs Reverse Recovery Current (I_{rr})

Mechanical Dimensions

SOT-23



LAND PATTERN RECOMMENDATION



CONTROLLING DIMENSION IS INCH
 VALUES IN [] ARE MILLIMETERS

SOT 23, 3 LEADS LOW PROFILE

- NOTE : UNLESS OTHERWISE SPECIFIED
- STANDARD LEAD FINISH 150 MICROINCHES / 3.81 MICROMETERS
 MINIMUM TIN / LEAD (SOLDER) ON ALLOY 42
 - REFERENCE JEDEC REGISTRATION TO-236, VARIATION AB, ISSUE G, DATED JUL 1993

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CROSSVOLT™	i-Lo™	POPT™	SuperSOT™-3	
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EnSigna™	LittleFET™	PowerTrench®	TCM™	
FACT™	MICROCOUPLER™	QFET®	TinyBoost™	
FAST®	MicroFET™	QS™	TinyBuck™	
FASTr™	MicroPak™	QT Optoelectronics™	TinyPWM™	
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FRFET™	MSX™	RapidConfigure™	TinyLogic®	
	MSXPro™	RapidConnect™	TINYOPTO™	
Across the board. Around the world.™		μSerDes™	TruTranslation™	
The Power Franchise®		ScalarPump™	UHC™	
Programmable Active Droop™				

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- A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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