FAIRCHILD SEMICONDUCTOR®

December 2007

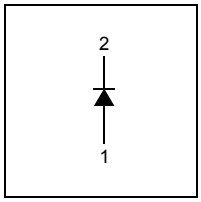
BAS40SL
Schottky Barrier Diodes

Features

- Low Forward Voltage Drop
- Fast switching
- Very Small and Thin SMD package
- Profile height, 0.43mm max
- Footprint, 1.0 x 0.6 mm

SOD-923
Marking: AA

Connection Diagram



Absolute Maximum Ratings * T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Unit
V_{RRM}	Maximum Repetitive Reverse Voltage	40	V
$I_{F(AV)}$	Average Rectified Forward Current	100	mA
I_{FSM}	Forward Surge Current (8.3mS Single Half Sine-Wave)	600	mA
P_D	Power Dissipation	227	mW
T_J, T_{STG}	Operating Junction & Storage Temperature Range	-55 to +150	°C

* These ratings are limiting values above which the serviceability of the diode may be impaired.
The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

Symbol	Parameter	Value	Unit
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient *	550	°C/W

* Minimum land pad.

Electrical Characteristics T_A=25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Max.	Unit
V_R	Breakdown Voltage	I_R = 10μA	40		V
V_F	Forward Voltage	I_F = 1mA I_F = 40mA		380 1000	mV mV
I_R	Reverse Leakage	V_R = 30V		0.2	μA
trr	Reverse Recovery Time	I_F = I_R= 10mA, irr= 0.1I_R		8.0	nS
C_j	Junction Capacitance	V_R = 0, f = 1.0MHz		5.0	pF

Typical Performance Characteristics

Figure 1. Forward Current Characteristics

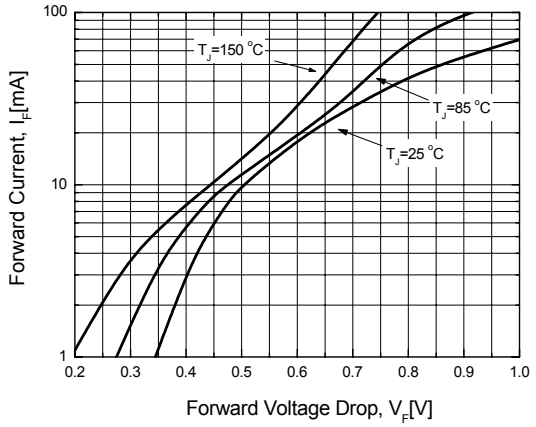


Figure 2. Reverse Leakage Current

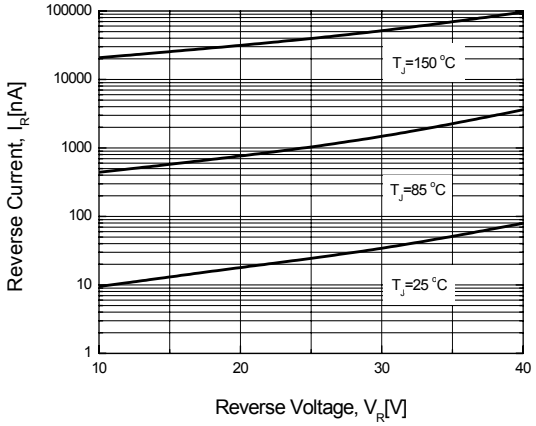


Figure 3. Junction Capacitance

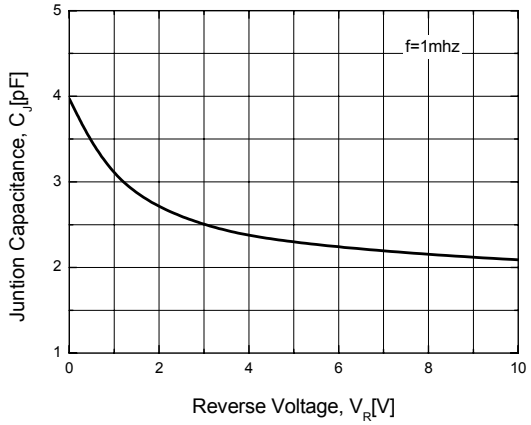
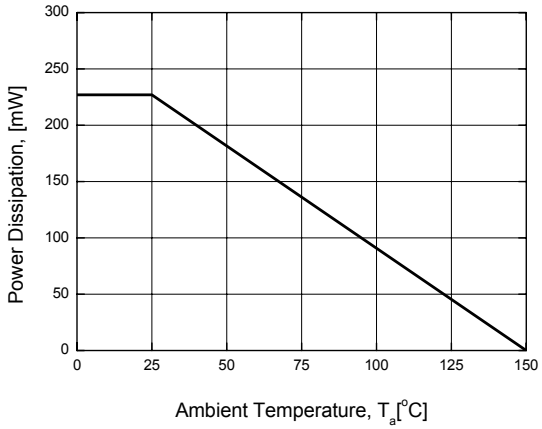
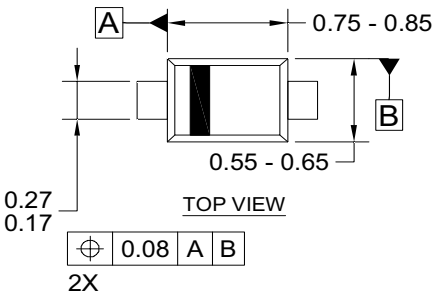
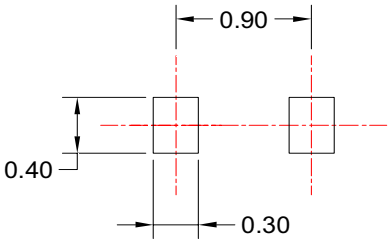


Figure 4. Power Derating

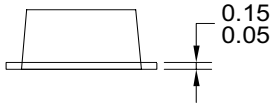




TOP VIEW



LAND PATTERN RECOMMENDATION



SIDE VIEW

END VIEW

NOTES:
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C) DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR EXTRUSIONS.
D) DIMENSIONS AND TOLERANCES PER ASME Y14.5M, 1994
E) DRAWING FILE NAME : SOD923F02REV1

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