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Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

FAIRCHILD SEMICONDUCTOR®

October 2010

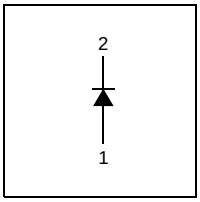
BAS16SL
Small Signal Diodes

Features

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

SOD-923F
Marking: AB

Connection Diagram



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

Symbol	Parameter	Value	Unit
V_{RRM}	Maximum Repetitive Reverse Voltage	85	V
$I_{F(AV)}$	Average Rectified Forward Current	150	mA
I_{FSM}	Forward Surge Current (8.3mS Single Half Sine-Wave)	500	mA
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
P_D	Power Dissipation	227	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient *	520	°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 = 100µA	85		V
V_F	Forward Voltage	I_F = 1mA I_F = 10mA I_F = 50mA I_F = 150mA		715 855 1.0 1.25	mV mV V V
I_R	Reverse Leakage	V_R = 75V V_R = 25V@150°C V_R = 75V@150°C		1.0 30 50	µA µA 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		2.0	pF

Typical Performance Characteristics

Figure 1. Forward Current Characteristics

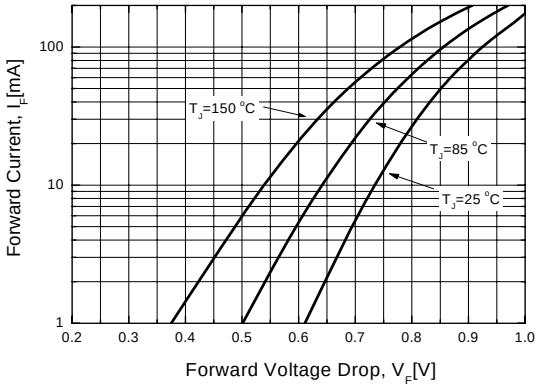


Figure 2. Reverse Leakage Current

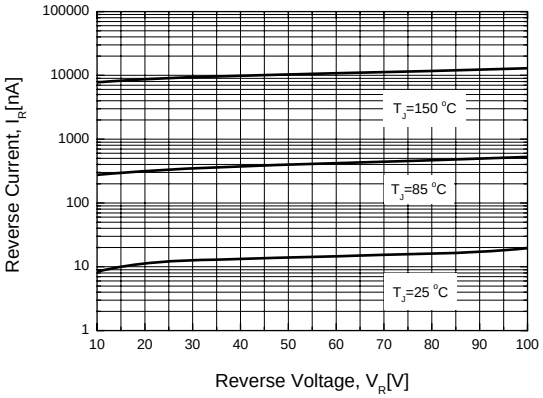


Figure 3. Junction Capacitance

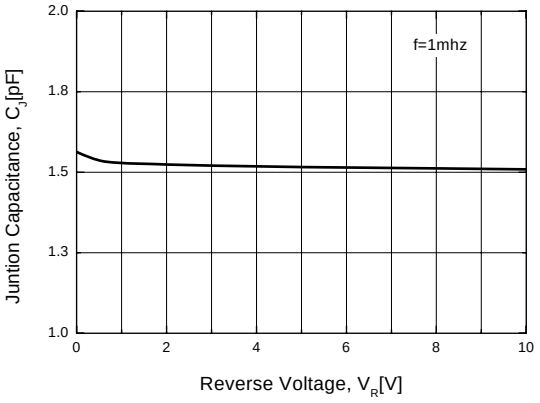
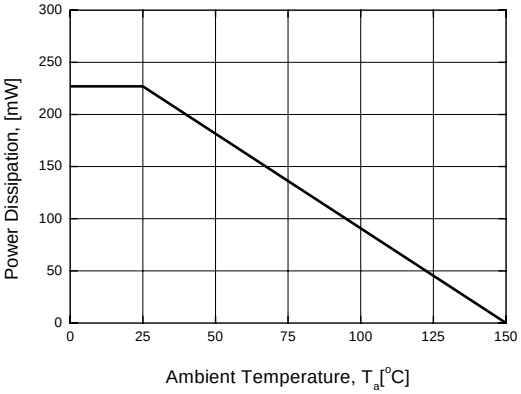
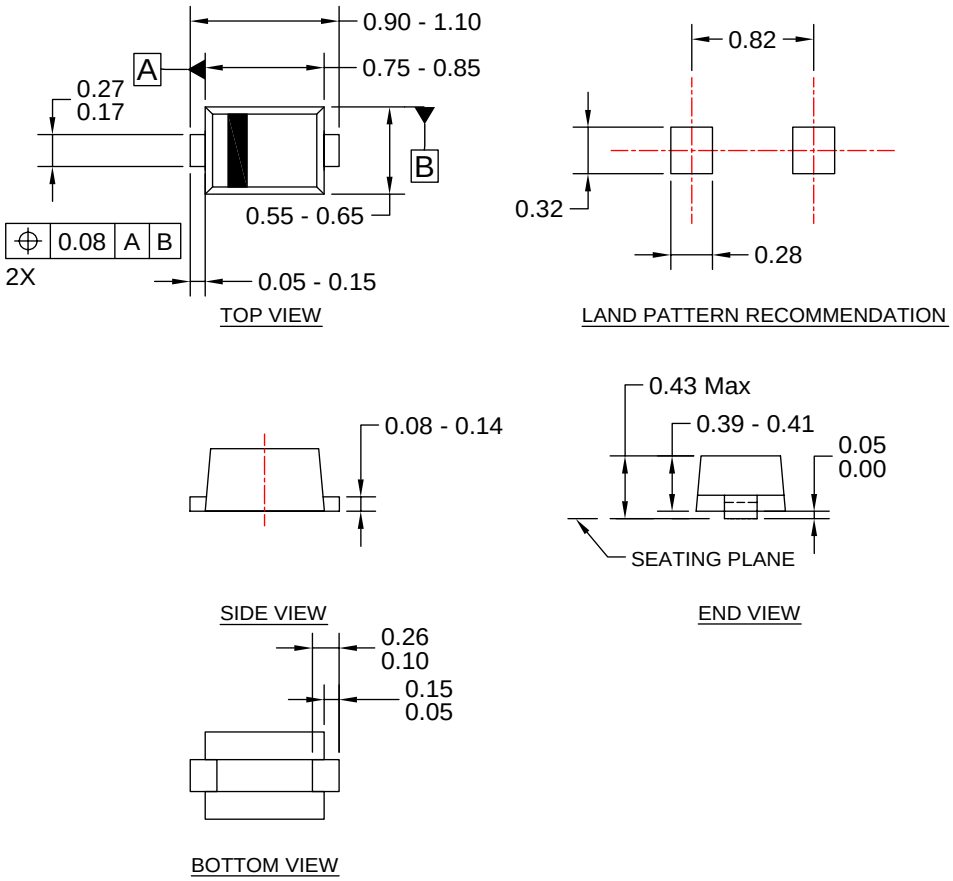


Figure 4. Power Derating



Physical Dimensions

SOD-923F



NOTES:

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B) ALL DIMENSIONS ARE IN MILLIMETERS.
C) BODY DIMENSIONS ARE INCLUSIVE OF BURRS, AND MOLD FLASH.
D) DIMENSIONS AND TOLERANCES PER ASME Y14.5M, 1994
E) LANDPATTERN BASED ON NOMINAL PACKAGE DIMENSIONS.
F) DRAWING FILE NAME : SOD923F1REV2

Dimensions in Millimeters

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Datasheet Identification	Product Status	Definition
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Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
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Rev. I50

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