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February 2015

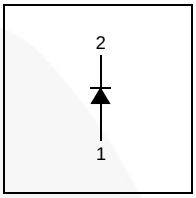
BAS40SL
Schottky Barrier Diode

Features

- Low Forward Voltage Drop
- Fast Switching
- Very Small and Thin SMD package
- Profile Height, 0.43 mm Maximum
- Footprint, 1.0 mm x 0.6 mm

SOD-923F
Marking: AA

Connection Diagram



Ordering Information

Part Number	Top Mark	Package	Packing Method
BAS40SL	AA	SOD-923F 2L	Tape and Reel

Absolute Maximum Ratings(1), (2)

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at 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 (8.3 ms Single Half-Sine-Wave)	600	mA
T_J, T_{STG}	Operating Junction and Storage Temperature Range	-55 to +150	°C

Notes:

1. These ratings are based on a maximum junction temperature of 150°C.
2. These are steady-state limits. Fairchild Semiconductor should be consulted on applications involving pulsed or low-duty-cycle operations.

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Thermal Characteristics

Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Value	Unit
P_D	Power Dissipation	227	mW
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient(3)	550	°C/W

Note:

3. Minimum land pad.

Electrical Characteristics

Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Conditions	Min.	Max.	Unit
V_R	Breakdown Voltage	I_R = 10 μA	40		V
V_F	Forward Voltage	I_F = 1 mA		380	mV
		I_F = 40 mA		1000	mV
I_R	Reverse Leakage	V_R = 30 V		0.2	μA
t_{rr}	Reverse Recovery Time	$I_F = I_R$ = 10 mA, $i_{rr} = 0.1I_R$		8.0	nS
C_J	Junction Capacitance	V_R = 0, f = 1.0 MHz		5.0	pF

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TTypical Performance Characteristics

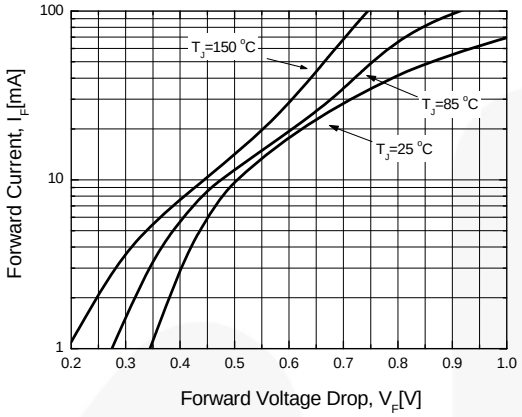

Figure 1. Forward Current Characteristics

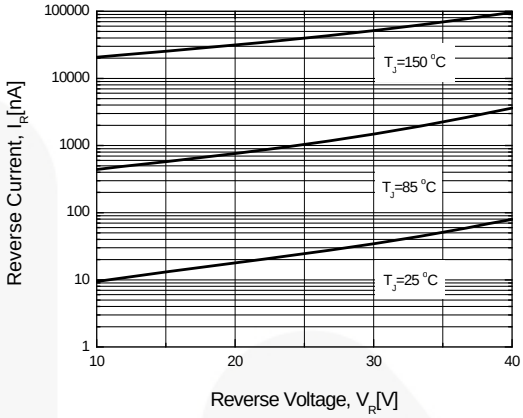

Figure 2. Reverse Leakage Current

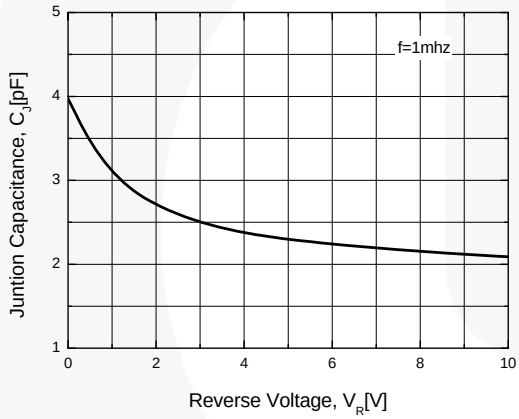

Figure 3. Junction Capacitance

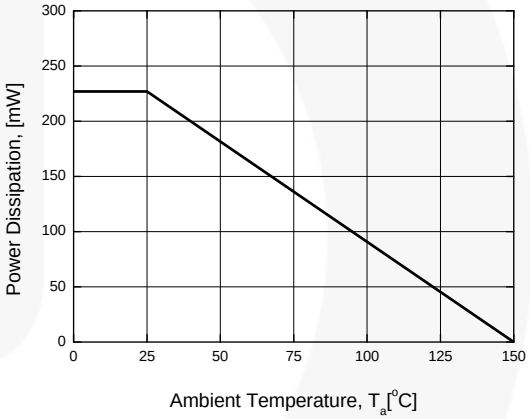

Figure 4. Power Derating

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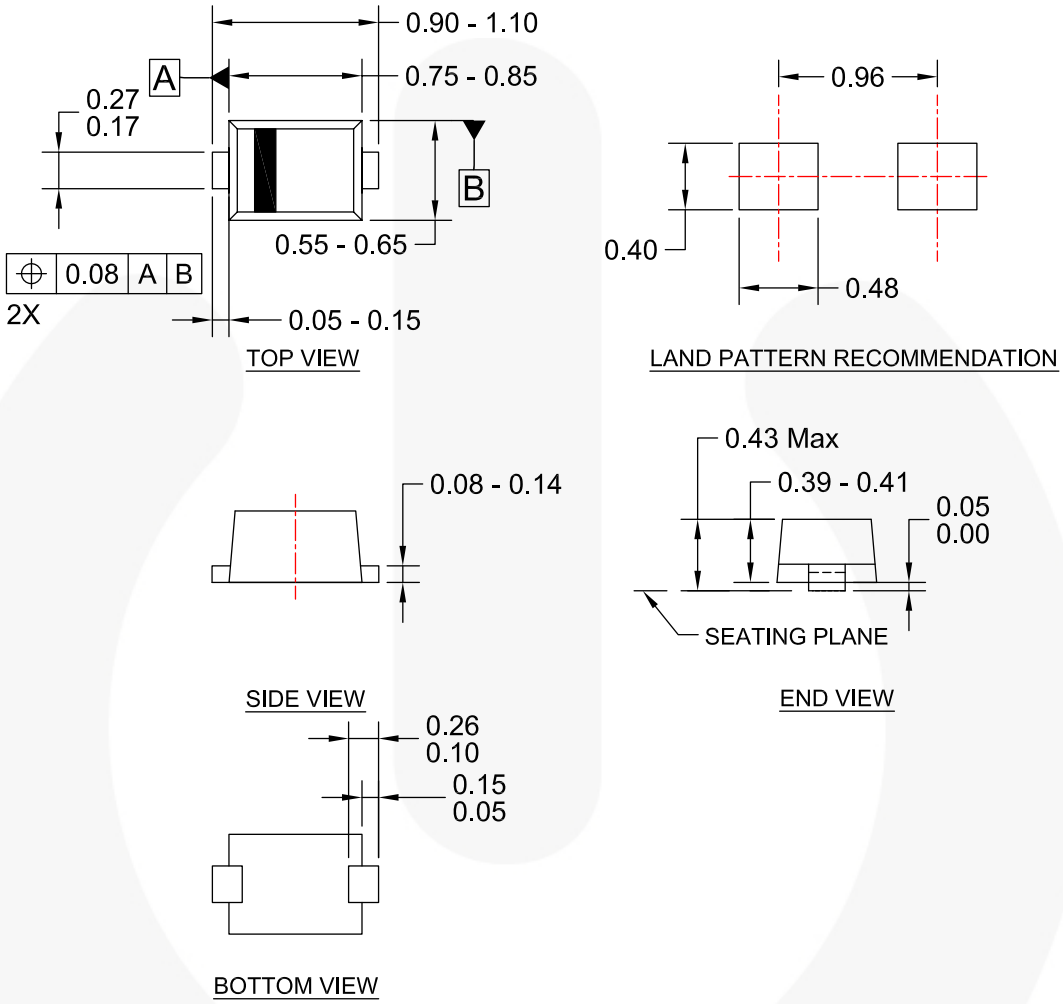
Physical Dimensions



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TO ANY CURRENT PACKAGING STANDARD.
B) ALL DIMENSIONS ARE IN MILLIMETERS.
C) BODY DIMENSIONS ARE INCLUSIVE OF BURRS, AND MOLD FLASH.
D) DIMENSIONS AND TOLERANCES PER ASME Y14.5M, 2009
E) LANDPATTERN BASED ON ADJUSTED IPC GUIDELINES
F) DRAWING FILE NAME : SOD923F1REV3

Figure 5. 2-LEAD, SOD923F, 0.4 mm TALL, FLAT TERMINAL

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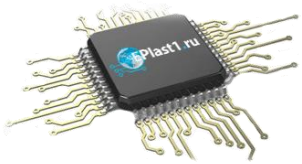

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