



December 2007

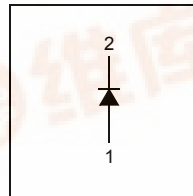
BAS16SL

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 0.6 mm

Connection Diagram



Absolute Maximum Ratings * $T_A = 25^\circ\text{C}$ 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
P_D	Power Dissipation	227	mW
T_J, T_{STG}	Operating Junction & Storage Temperature Range	-55 to +150	$^\circ\text{C}$

* 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 *	520	$^\circ\text{C/W}$

* Minimum land pad.

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

Symbol	Parameter	Test Conditions	Min.	Max.	Unit
V_R	Breakdown Voltage	$I_R = 100\mu\text{A}$	85		V
V_F	Forward Voltage	$I_F = 1\text{mA}$		715	mV
		$I_F = 10\text{mA}$		855	mV
		$I_F = 50\text{mA}$		1.0	V
		$I_F = 150\text{mA}$		1.25	V
I_R	Reverse Leakage	$V_R = 75\text{V}$ $V_R = 25\text{V}@150\text{C}$ $V_R = 75\text{V}@150\text{C}$		0.2	μA
t_{rr}	Reverse Recovery Time	$I_F = I_R = 10\text{mA}$, $i_{rr} = 0.1I_R$		8.0	nS
C_j	Junction Capacitance	$V_R = 0$, $f = 1.0\text{MHz}$		2.0	pF

Typical Performance Characteristics

Figure 1. Forward Current Characteristics

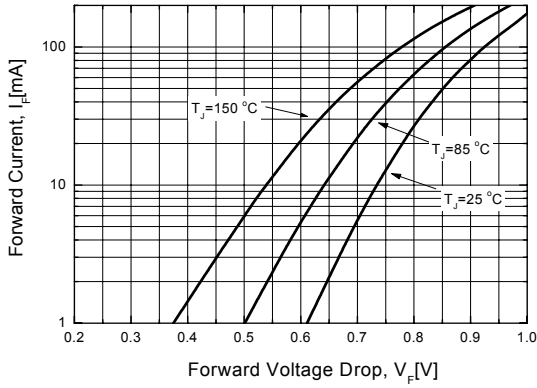


Figure 2. Reverse Leakage Current

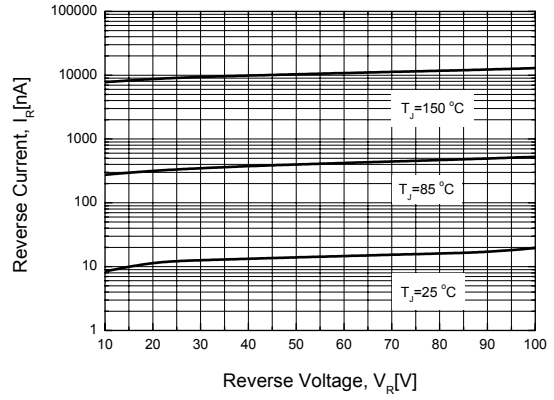


Figure 3. Junction Capacitance

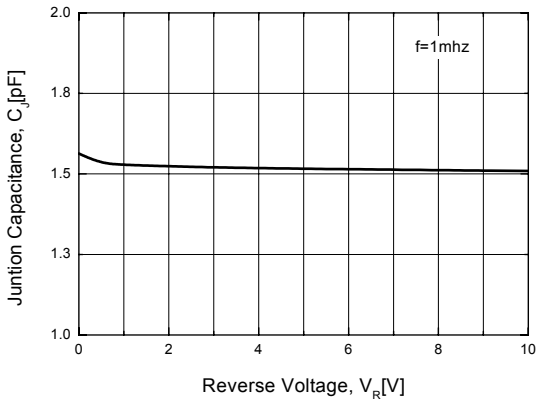
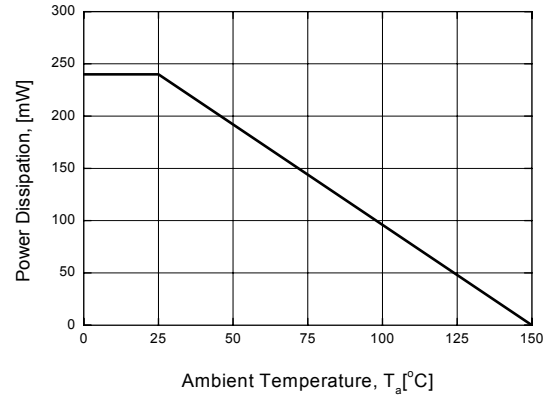
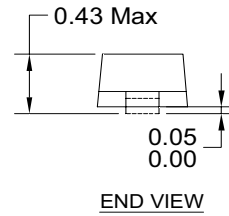
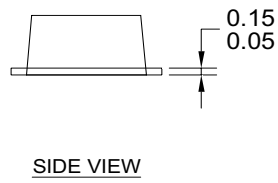
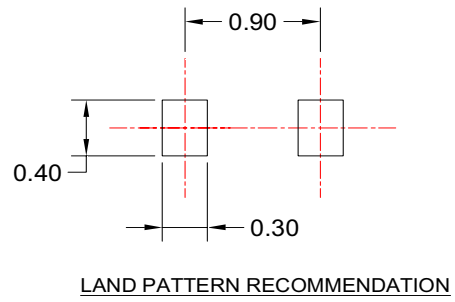
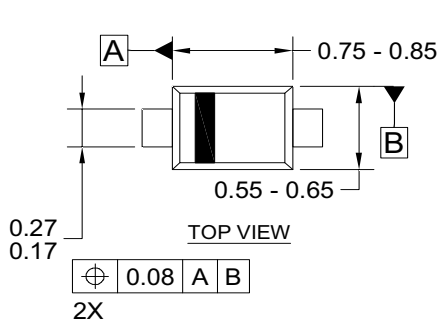


Figure 4. Power Derating






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 - B) ALL DIMENSIONS ARE IN MILLIMETERS.
 - C) DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR EXTRUSIONS.
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