

# BAS16WS-BL-HAF

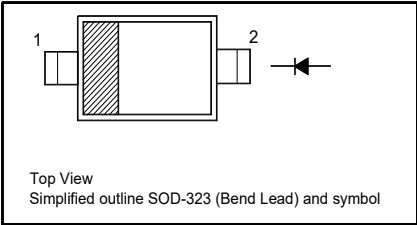
## Silicon Epitaxial Planar Switching Diode

### Features

- Fast switching diode
- Halogen and Antimony Free(HAF), RoHS compliant

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



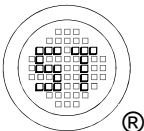
### Absolute Maximum Ratings (T<sub>a</sub> = 25°C)

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V <sub>RM</sub>	100	V
Reverse Voltage	V <sub>R</sub>	100	V
Forward Current (Continuous)	I <sub>F</sub>	300	mA
Non-repetitive Peak Forward Surge Current	I <sub>FSM</sub>	0.5 1 2	A
Power Dissipation	P <sub>tot</sub>	200	mW
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	- 65 to + 150	°C

### Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient <sup>1)</sup>	R <sub>θJA</sub>	625	°C/W

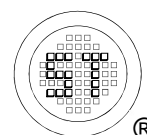
<sup>1)</sup> Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



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## Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100\ \mu\text{A}$	$V_{(BR)R}$	100	-	V
Forward Voltage at $I_F = 1\ \text{mA}$ at $I_F = 10\ \text{mA}$ at $I_F = 50\ \text{mA}$ at $I_F = 150\ \text{mA}$	$V_F$	- - - -	0.715 0.855 1 1.25	V
Reverse Leakage Current at $V_R = 100\ \text{V}$ at $V_R = 25\ \text{V}$ , $T_J = 150^\circ\text{C}$ at $V_R = 75\ \text{V}$ , $T_J = 150^\circ\text{C}$	$I_R$	- - -	1 30 50	$\mu\text{A}$
Diode Capacitance at $V_R = 0\ \text{V}$ , $f = 1\ \text{MHz}$	$C_{\text{tot}}$	-	1.5	pF
Reverse Recovery Time at $I_{rr} = 0.1 \times I_R$ , $I_F = 10\ \text{mA}$ , $V_R = 6\ \text{V}$ , $R_L = 100\ \Omega$	$t_{rr}$	-	4	ns



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## Electrical Characteristics Curves

Fig 1. Power Dissipation vs. Temperature

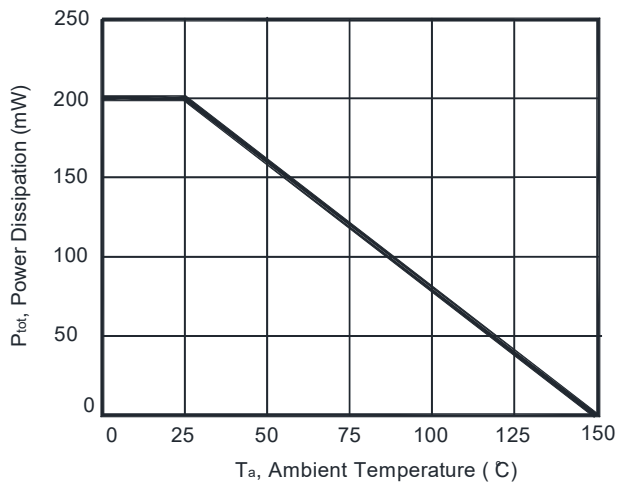


Fig 2. Total Capacitance vs. Reverse Voltage

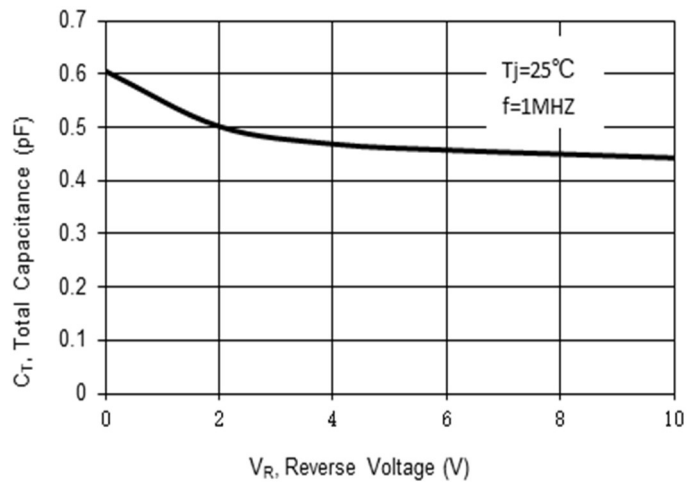


Fig 3. Reverse Current vs. Reverse Voltage

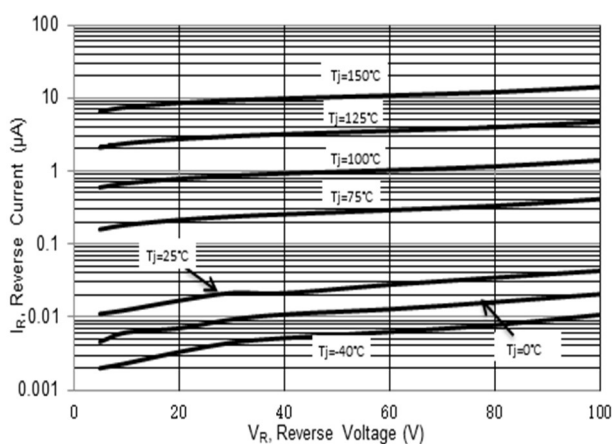
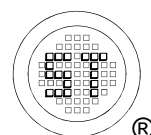
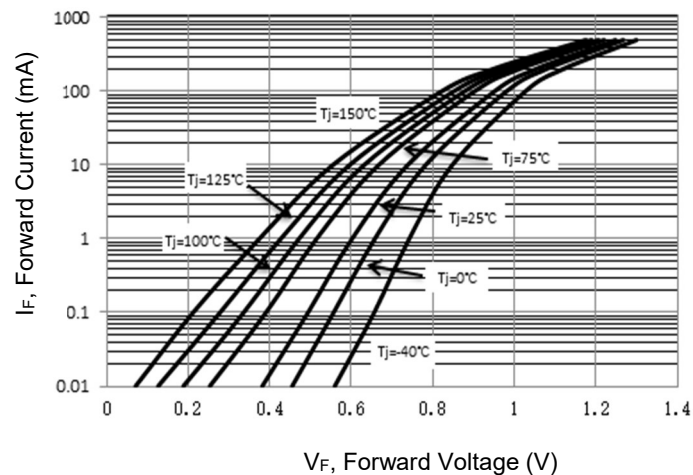


Fig 4. Forward Characteristics

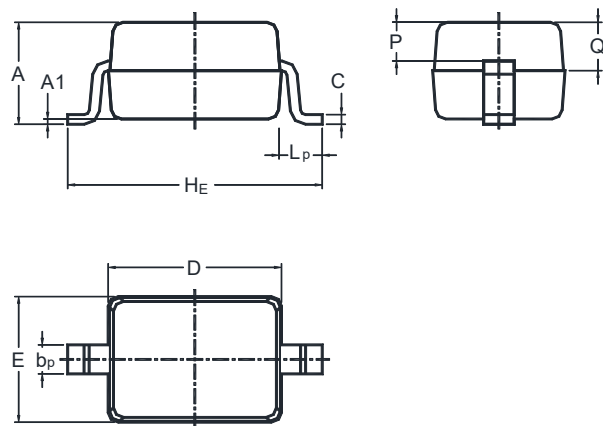


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## PACKAGE OUTLINE

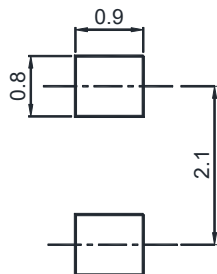
Plastic surface mounted package

SOD-323BL



UNIT	A	A <sub>1</sub>	b <sub>p</sub>	C	D	E	H <sub>E</sub>	L <sub>p</sub>	Q	P
mm	1.1 0.8	0.1 0	0.4 0.25	0.18 0.09	1.8 1.6	1.35 1.15	2.8 2.3	0.5 0.1	0.5 0.3	0.4 0.3

## Recommended Soldering Footprint



## Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-323BL	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

## Marking information

" W2 " = Part No.  
" III " = Cathode line  
" • " = HAF (Halogen and Antimony Free)  
Font type: Arial



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