

# BAS316WS-BL-AH

## Silicon Epitaxial Planar Switching Diode

### Features

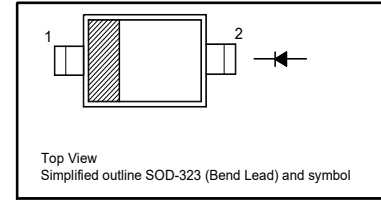
- AEC-Q101 Qualified
- Halogen and Antimony Free(HAF), RoHS compliant

### Applications

- High-speed switching

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



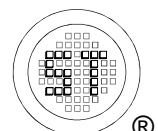
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Reverse Voltage	$V_R$	100	V
Continuous Forward Current	$I_F$	250	mA
Repetitive Peak Forward Current	$I_{FRM}$	500	mA
Non-Repetitive Peak Forward Current	$I_{FSM}$	$t = 1 \mu\text{s}$	4
		$t = 1 \text{ms}$	1
		$t = 1 \text{s}$	0.5
Total Power Dissipation	$P_{tot}$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$

### Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient <sup>1)</sup>	$R_{\theta JA}$	625	$^\circ\text{C/W}$

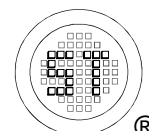
<sup>1)</sup> Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



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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 Current at $V_R = 25 \text{ V}$ at $V_R = 75 \text{ V}$ at $V_R = 25 \text{ V}, T_J = 150^\circ\text{C}$ at $V_R = 75 \text{ V}, T_J = 150^\circ\text{C}$	$I_R$	- - - -	30 1 30 50	nA $\mu\text{A}$ $\mu\text{A}$ $\mu\text{A}$
Diode Capacitance at $V_R = 0 \text{ V}, f = 1 \text{ MHz}$	$C_{\text{tot}}$	-	1.5	pF
Reverse Recovery Time at $I_F = 10 \text{ mA}, V_R = 6 \text{ V}, I_{\text{rr}} = 0.1 \times I_R, R_L = 100 \Omega$	$t_{\text{rr}}$	-	4	ns



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## Electrical Characteristics Curves

Fig 1. Power Derating Curve

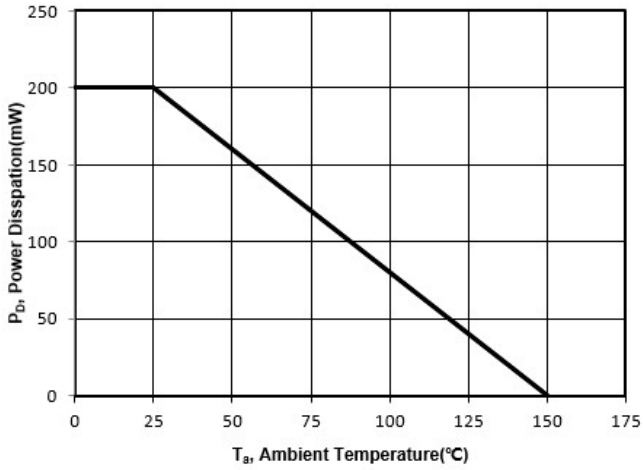


Fig 2. Capacitance Characteristics

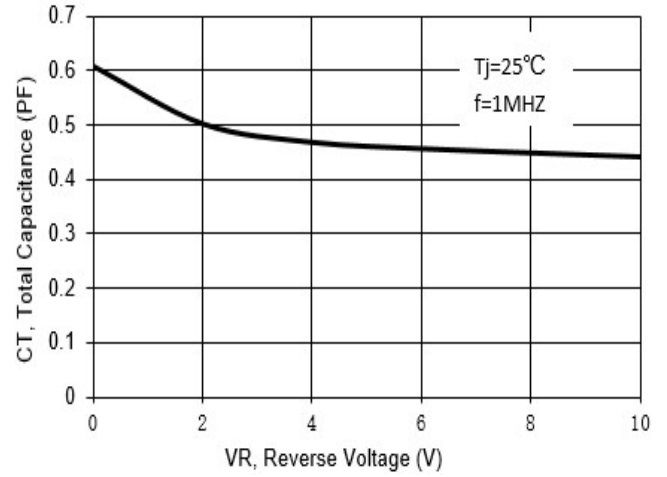


Fig 3. Reverse Characteristics

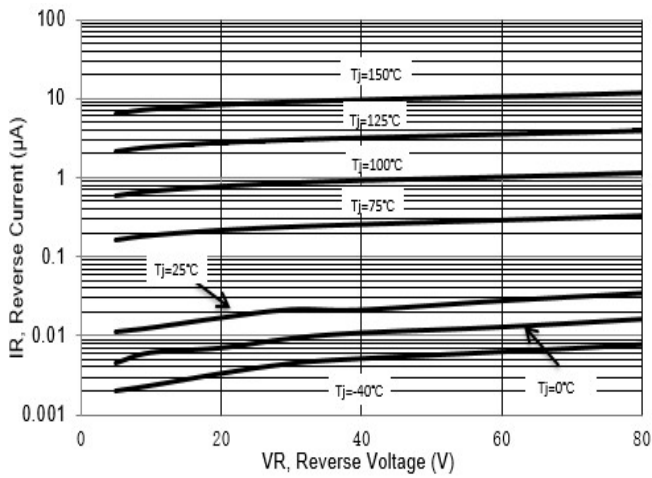
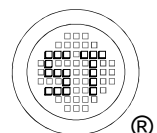
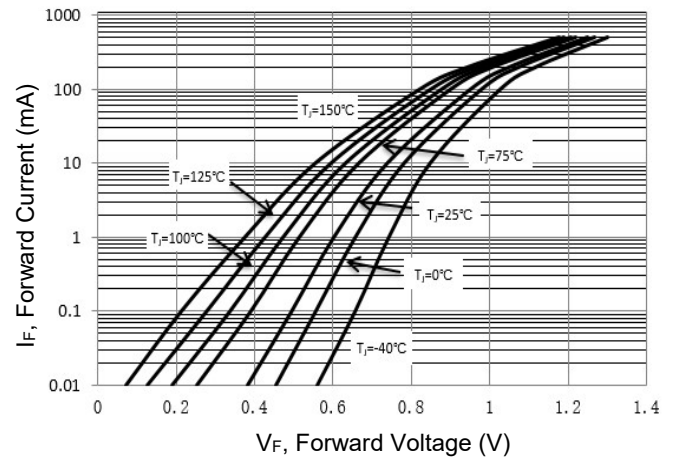


Fig 4. Forward Characteristics

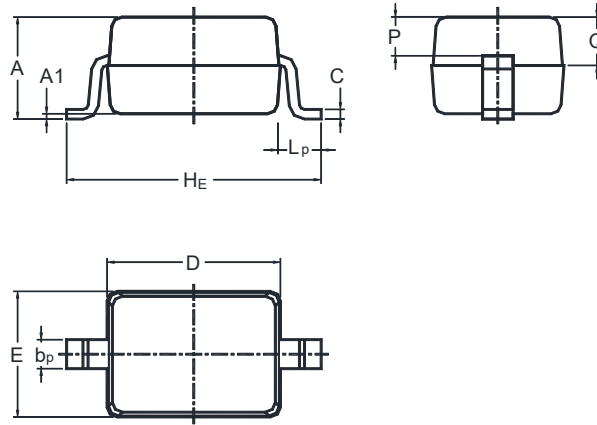


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## PACKAGE OUTLINE

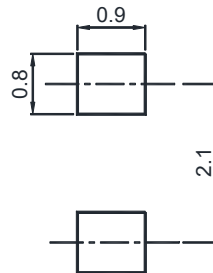
Plastic surface mounted package; 2 leads

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

