

# BAS316WS

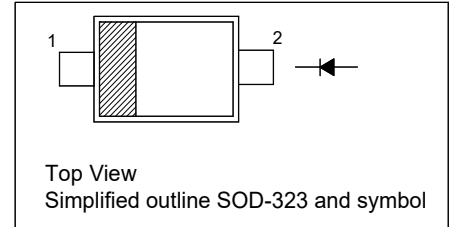
## Silicon Epitaxial Planar Switching Diode

### Features

- Fast switching speed
- Ultra-small surface mount package
- For general purpose switching applications

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



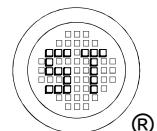
### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

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	$I_{FSM}$	4 1 0.5	A
		$t = 1\ \mu\text{s}$	
		$t = 1\ \text{ms}$	
		$t = 1\ \text{s}$	
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	$^\circ\text{C/W}$

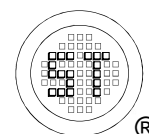
<sup>1)</sup> Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



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

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



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## Electrical Characteristics Curves

Fig 1. Power Derating Curve

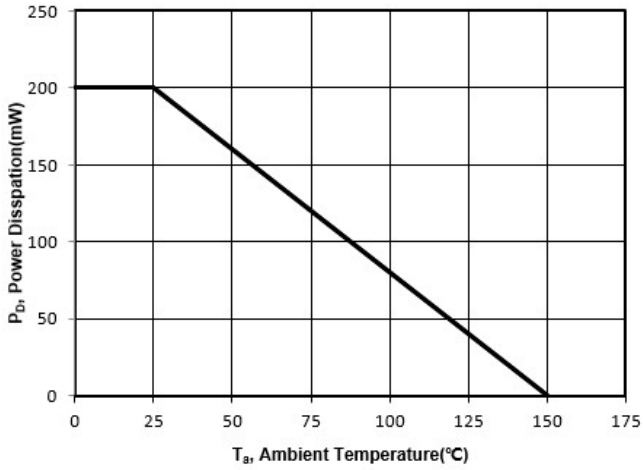


Fig 2. Capacitance Characteristics

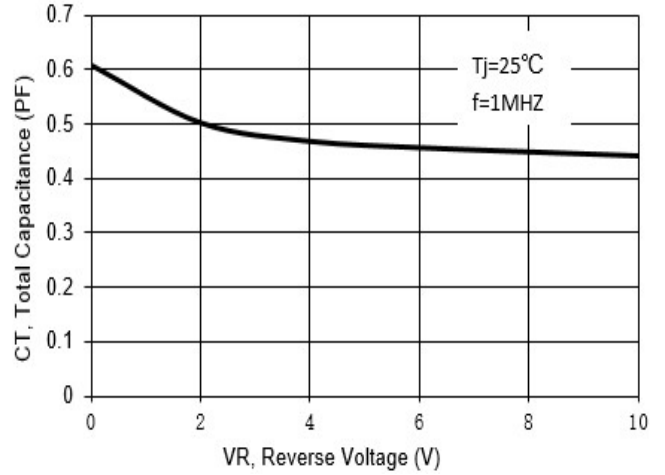


Fig 3. Reverse Characteristics

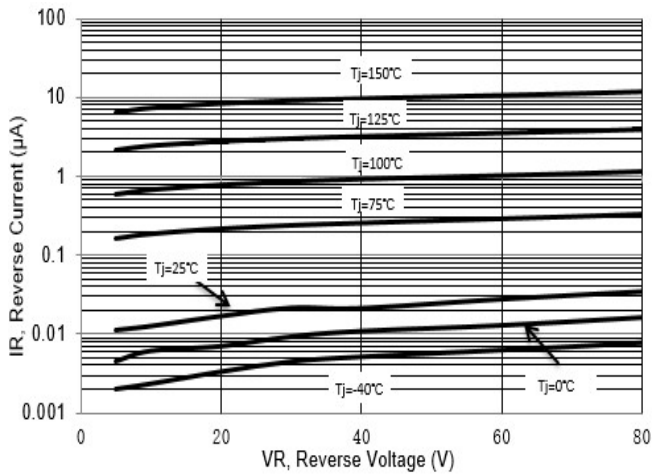
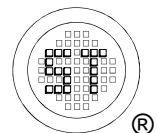
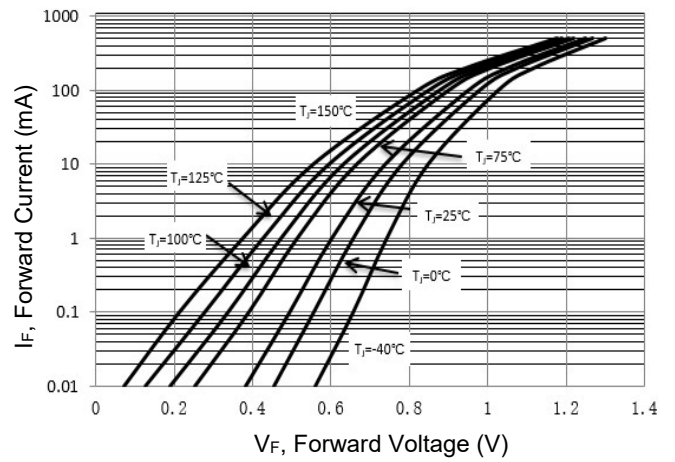


Fig 4. Forward Characteristics

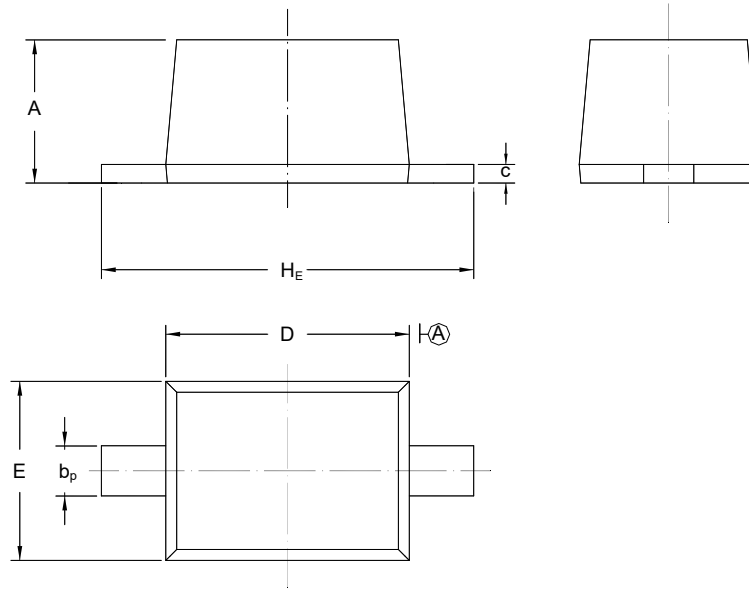


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## PACKAGE OUTLINE

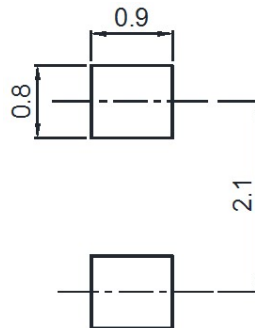
Plastic surface mounted package; 2 leads

SOD-323



UNIT	A	b <sub>p</sub>	C	D	E	H <sub>E</sub>
mm	1.10 0.80	0.40 0.25	0.15 0.10	1.80 1.60	1.35 1.15	2.80 2.30

## Recommended Soldering Footprint



## Packing information

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

## Marking information

" W2 " = Part No.

" III " = Cathode line

Font type: Arial

