

# BAS100AS-AU

## SURFACE MOUNT SCHOTTKY DIODES

<b>Voltage</b>	<b>100 V</b>	<b>Current</b>	<b>0.5 A</b>
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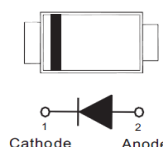
### Features

- Low forward voltage drop
- Deal for automated placement
- Low power loss, high efficiency
- High surge current capability
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- AEC-Q101 qualified

### Mechanical Data

- Case: SOD-123 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0004 ounces, 0.001 grams

### SOD-123



## Maximum Ratings and Thermal Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Maximum Rms Voltage	$V_{RMS}$	70	V
Maximum Dc Blocking Voltage	$V_{DC}$	100	V
Maximum Average Forward Current	$I_{F(AV)}$	0.5	A
Peak Forward Surge Current: 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	$I_{FSM}$	5.5	A
Typical Junction Capacitance Measured at 1 MHZ And Applied $V_R = 4\text{ V}$	$C_J$	21	pF
Typical Thermal Resistance	$R_{\theta JA}^{(1)}$	510	$^\circ\text{C/W}$
	$R_{\theta JC}^{(2)}$	100	
Operating Junction Temperature Range	$T_J$	-55~150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55~150	$^\circ\text{C}$



## BAS100AS-AU

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	$V_F$	$I_F = 0.1\text{ A}, T_J = 25^\circ\text{C}$	-	0.59	-	V
		$I_F = 0.25\text{ A}, T_J = 25^\circ\text{C}$	-	0.70	-	
		$I_F = 0.5\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.85	
		$I_F = 0.1\text{ A}, T_J = 125^\circ\text{C}$	-	0.48	-	
		$I_F = 0.25\text{ A}, T_J = 125^\circ\text{C}$	-	0.57	-	
		$I_F = 0.5\text{ A}, T_J = 125^\circ\text{C}$	-	0.64	-	
Reverse Current	$I_R^{(3)}$	$V_R = 50\text{ V}, T_J = 25^\circ\text{C}$	-	5	-	nA
		$V_R = 80\text{ V}, T_J = 25^\circ\text{C}$	-	15	-	
		$V_R = 100\text{ V}, T_J = 25^\circ\text{C}$	-	-	1	uA
		$V_R = 100\text{ V}, T_J = 125^\circ\text{C}$	-	40	-	

#### NOTES:

1. Mounted on a FR4 PCB, single-sided copper, mini pad
2. Mounted on a FR4 PCB, single-sided copper, with  $100\text{ cm}^2$  copper pad area
3. Short duration pulse test used to minimize self-heating effect



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## TYPICAL CHARACTERISTIC CURVES

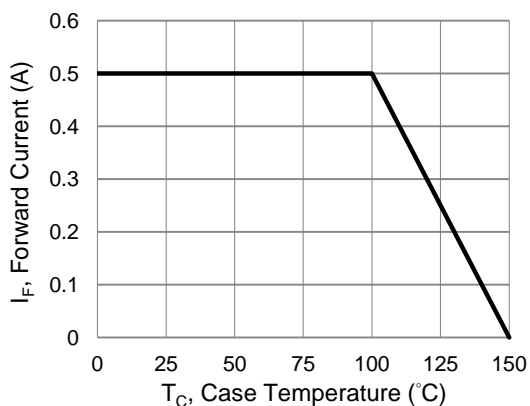


Fig.1 Forward Current Derating Curve

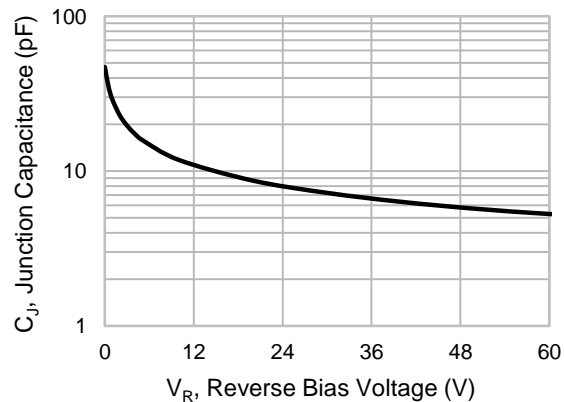


Fig.2 Typical Junction Capacitance

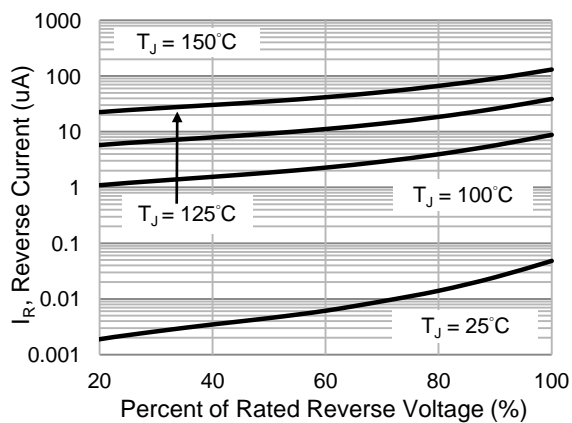


Fig.3 Typical Reverse Characteristics

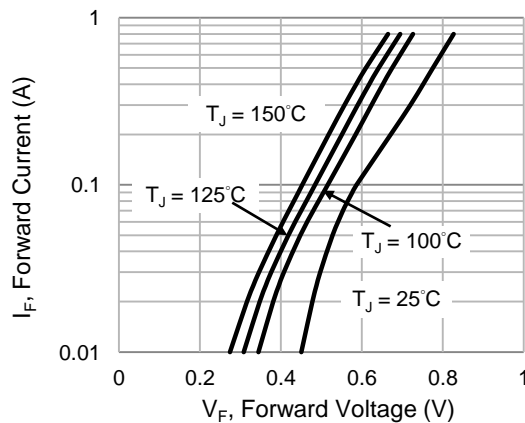


Fig.4 Typical Forward Characteristics

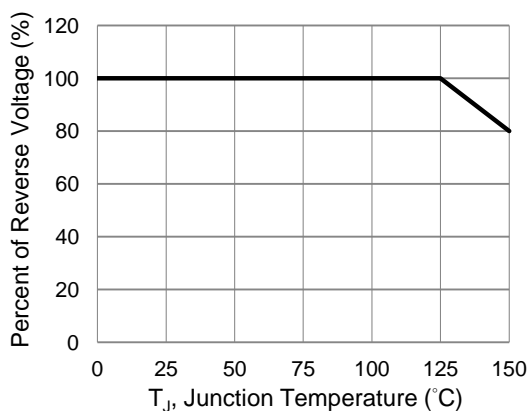


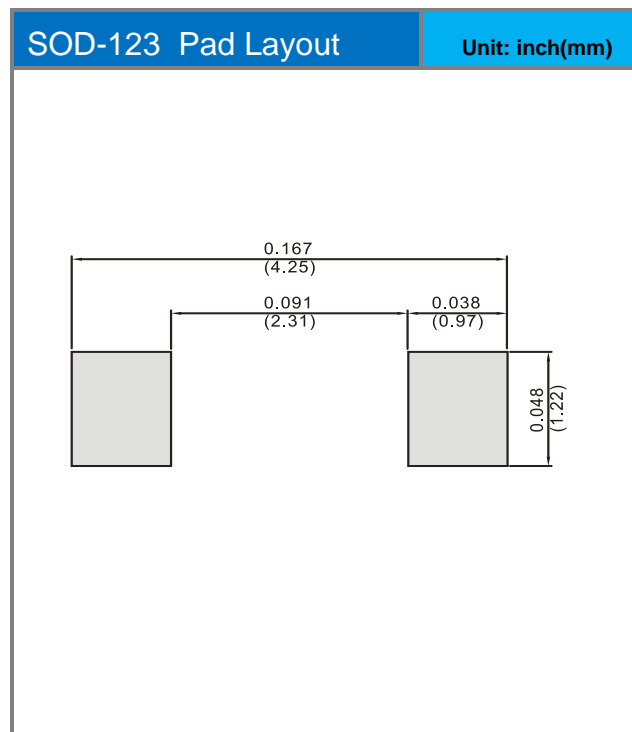
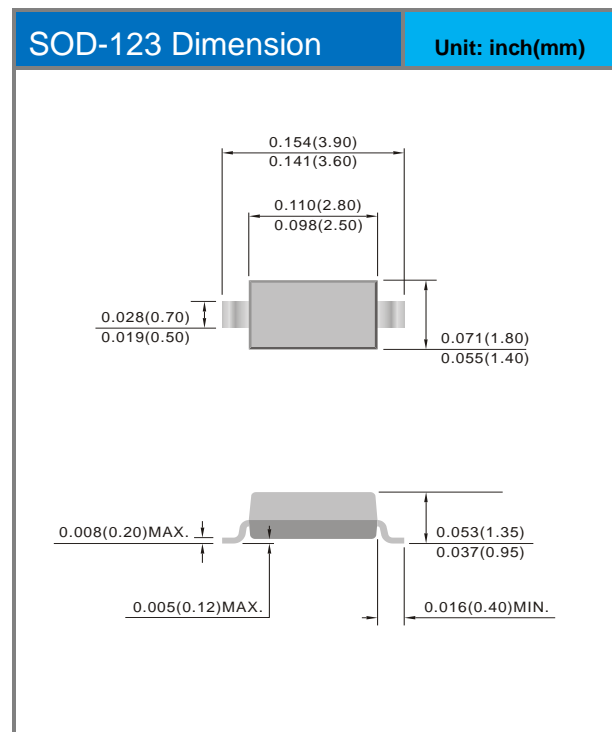
Fig.5 Operating Temperature Derating Curve

# BAS100AS-AU

## Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
BAS100AS-AU_R1_000A1	SOD-123	3K / 7" Reel	0AS	Halogen free

## Packaging Information & Mounting Pad Layout





## **BAS100AS-AU**

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