

# BAS100AS

## SURFACE MOUNT SCHOTTKY DIODES

**Voltage** 100 V **Current** 0.5 A

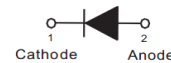
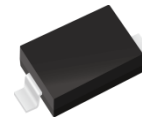
### Features

- 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

### 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<sub>A</sub> = 25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	100	V
Maximum Rms Voltage	V <sub>RMS</sub>	70	V
Maximum Dc Blocking Voltage	V <sub>DC</sub>	100	V
Maximum Average Forward Current	I <sub>F(AV)</sub>	0.5	A
Peak Forward Surge Current: 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I <sub>FSM</sub>	5.5	A
Typical Junction Capacitance Measured at 1 MHz And Applied V <sub>R</sub> = 4 V	C <sub>J</sub>	21	pF
Typical Thermal Resistance	R <sub>θJA</sub> <sup>(1)</sup>	510	°C/W
	R <sub>θJC</sub> <sup>(2)</sup>	100	
Operating Junction Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C

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

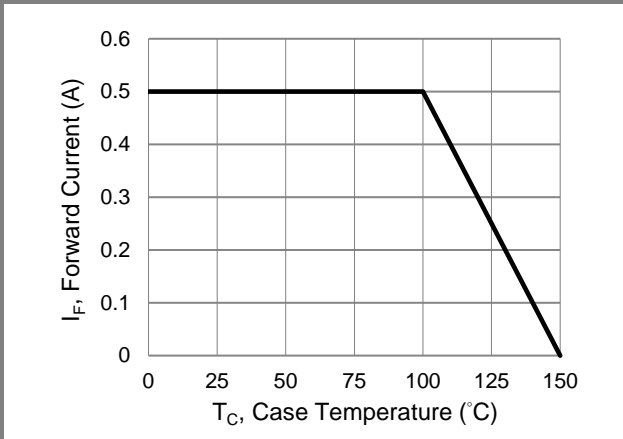
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	$V_F$	$I_F = 0.1 \text{ A}, T_J = 25^\circ\text{C}$	-	0.59	-	V
		$I_F = 0.25 \text{ A}, T_J = 25^\circ\text{C}$	-	0.70	-	
		$I_F = 0.5 \text{ A}, T_J = 25^\circ\text{C}$	-	-	0.85	
		$I_F = 0.1 \text{ A}, T_J = 125^\circ\text{C}$	-	0.48	-	
		$I_F = 0.25 \text{ A}, T_J = 125^\circ\text{C}$	-	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	-	uA
		$V_R = 100 \text{ V}, T_J = 25^\circ\text{C}$	-	-	1	
		$V_R = 100 \text{ V}, T_J = 125^\circ\text{C}$	-	40	-	

**NOTES:**

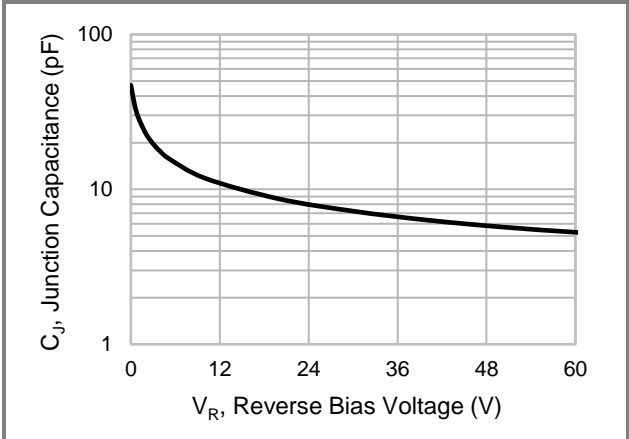
1. Mounted on a FR4 PCB, single-sided copper, mini pad
2. Mounted on a FR4 PCB, single-sided copper, with 100 cm<sup>2</sup> copper pad area
3. Short duration pulse test used to minimize self-heating effect

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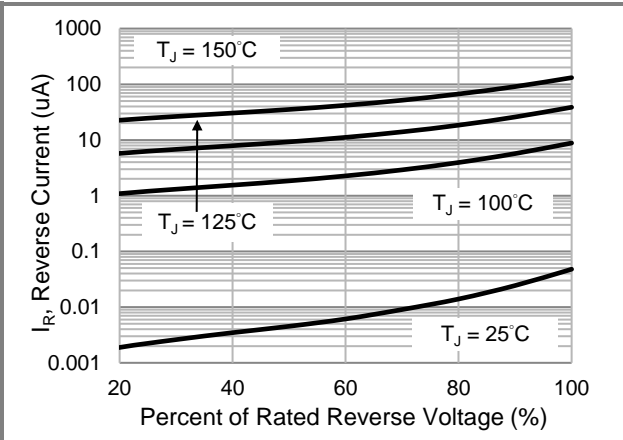
## TYPICAL CHARACTERISTIC CURVES



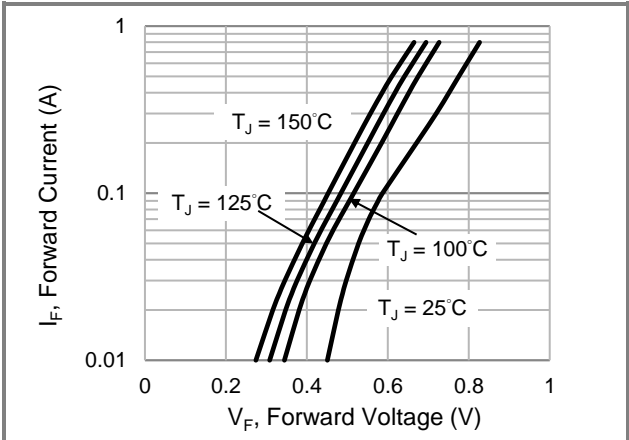
**Fig.1 Forward Current Derating Curve**



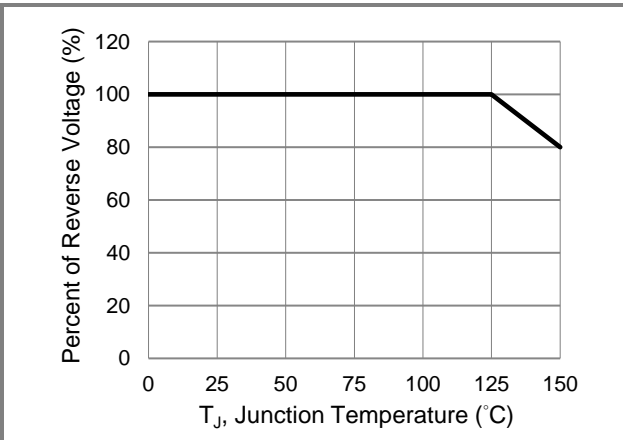
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**



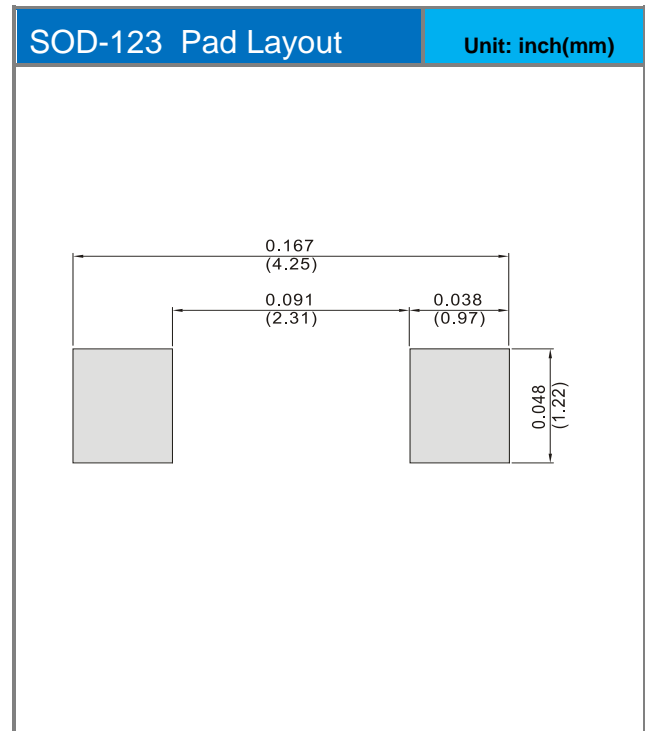
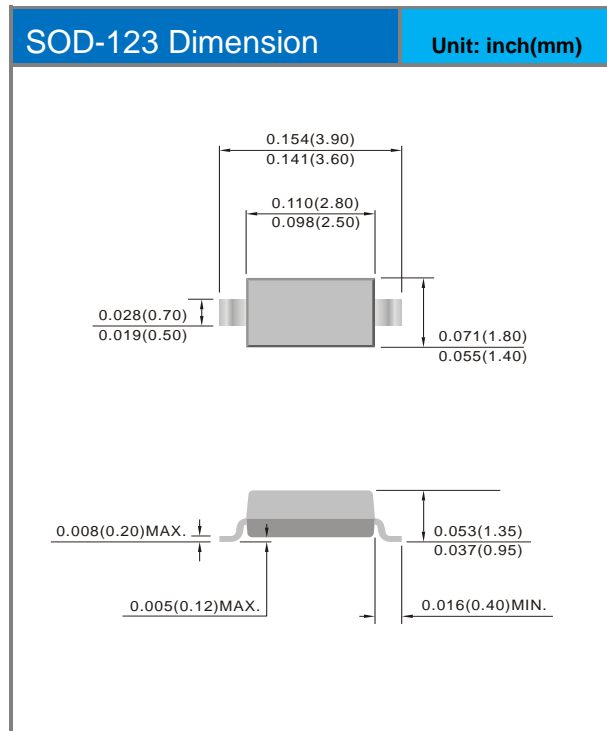
**Fig.5 Operating Temperature Derating Curve**

# BAS100AS

## Product and Packing Information

Part No.	Package Type	Packing Type	Marking
BAS100AS	SOD-123	3K / 7" Reel	0AS

## Packaging Information & Mounting Pad Layout



## **BAS100AS**

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