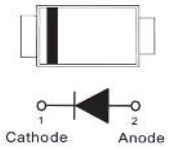
BAS100AS

SURFACE MOUNT SCHOTTKY DIODES

Voltage	100 V	Current	0.5 A

SOD-123



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

Maximum Ratings and Thermal Characteristics ($T_A = 25^{\circ}C$ 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 $V_R = 4$ V	C_J	21	pF
Typical Thermal Resistance	$R_{\theta JA}$ (1) $R_{\theta JC}$ (2)	510 100	°C/W
Operating Junction Temperature Range	T_J	-55~150	°C
Storage Temperature Range	T_{STG}	-55~150	°C

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Electrical Characteristics (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	I_F = 0.1 A, T_J = 25 °C	-	0.59	-	V
		I_F = 0.25 A, T_J = 25 °C	-	0.70	-	
		I_F = 0.5 A, T_J = 25 °C	-	-	0.85	
		I_F = 0.1 A, T_J = 125 °C	-	0.48	-	
		I_F = 0.25 A, T_J = 125 °C	-	0.57	-	
		I_F = 0.5 A, T_J = 125 °C	-	0.64	-	
Reverse Current	I_R (3)	V_R = 50 V, T_J = 25 °C	-	5	-	nA
		V_R = 80 V, T_J = 25 °C	-	15	-	
		V_R = 100 V, T_J = 25 °C	-	-	1	uA
		V_R = 100 V, T_J = 125 °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^2 copper pad area
3. Short duration pulse test used to minimize self-heating effect

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TYPICAL CHARACTERISTIC CURVES

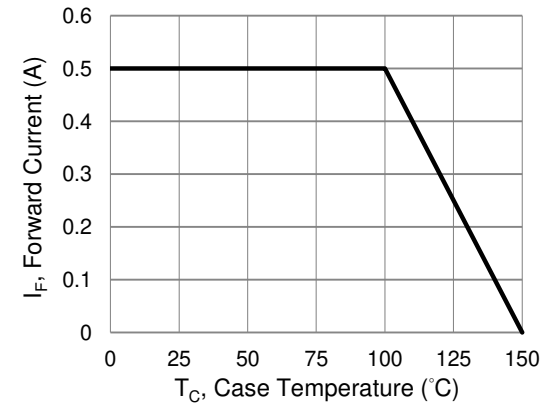

Fig.1 Forward Current Derating Curve

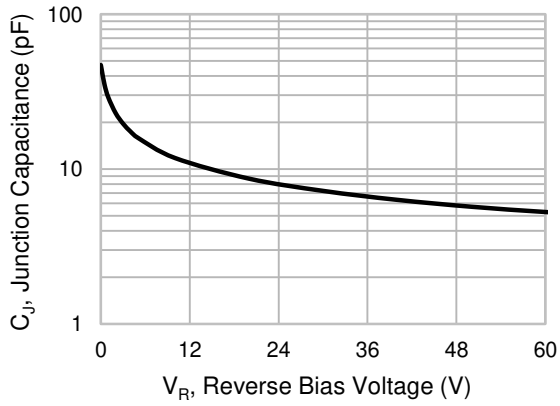

Fig.2 Typical Junction Capacitance

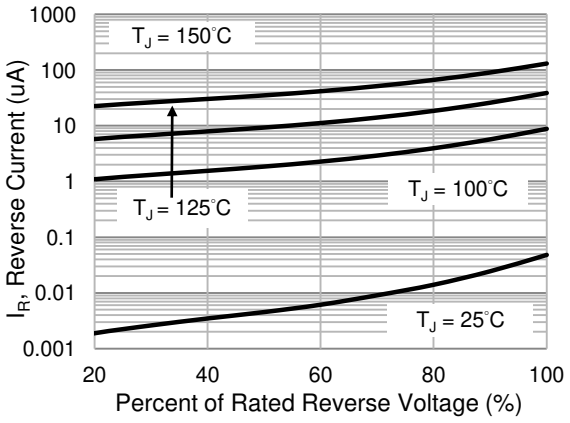

Fig.3 Typical Reverse Characteristics

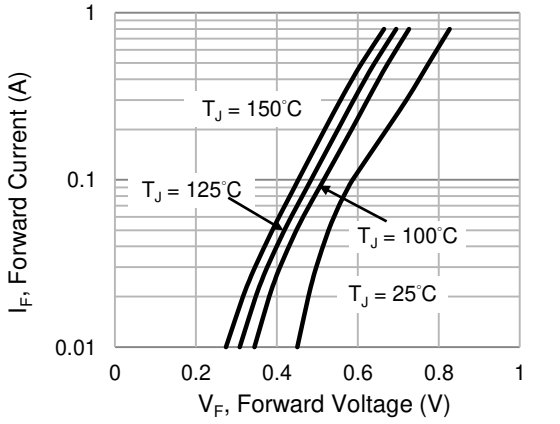

Fig.4 Typical Forward Characteristics

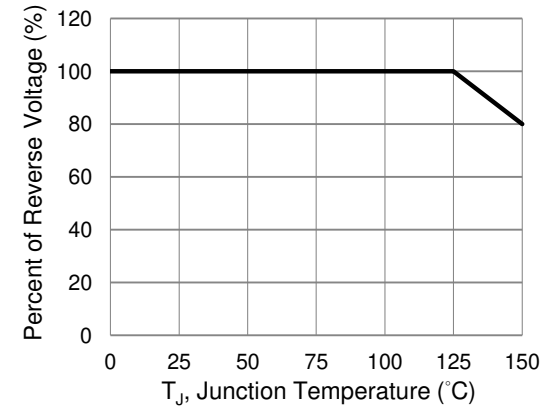

Fig.5 Operating Temperature Derating Curve

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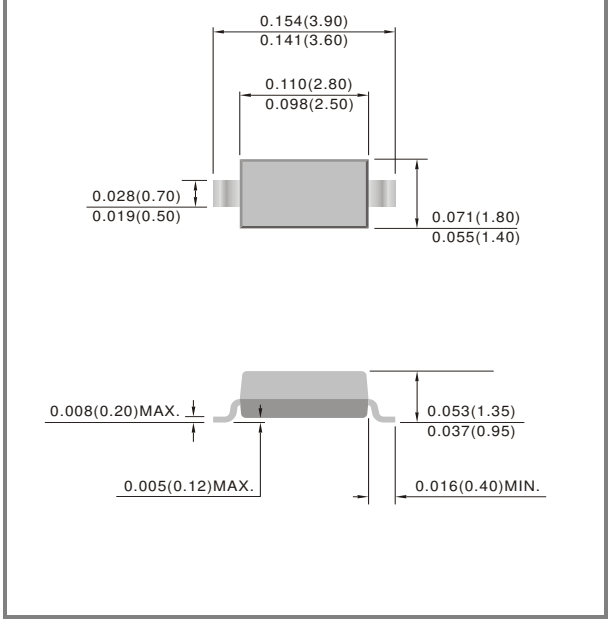
Part No Packing Code Version

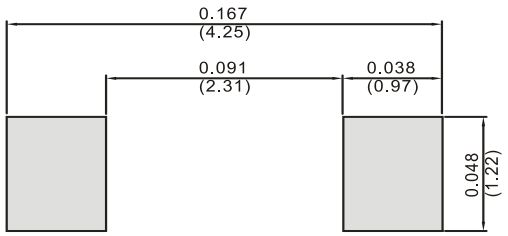
Part No Packing Code	Package Type	Packing Type	Marking	Version
BAS100AS_R1_00001	SOD-123	3K / 7" Reel	0AS	Halogen free

Packaging Information & Mounting Pad Layout

SOD-123 Dimension — Unit: inch(mm)



SOD-123 Pad Layout — Unit: inch(mm)



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