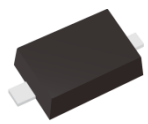
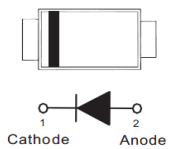
BAS100CS-AU

SURFACE MOUNT SCHOTTKY DIODES

Voltage	100 V	Current	0.5 A

SOD-323





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-323 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0001 ounces, 0.004 grams

Maximum Ratings and Thermal Characteristics ($T_A = 25^oC$ 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) $R_{\theta JC}$ (1)	650 230	$^oC/W$
Operating Junction Temperature Range	T_J	-55~150	^oC
Storage Temperature Range	T_{STG}	-55~150	^oC

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Electrical Characteristics ($T_A = 25^oC$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	$I_F = 0.1$ A, $T_J = 25\,^oC$	-	0.59	-	V
		$I_F = 0.25$ A, $T_J = 25\,^oC$	-	0.7	-	
		$I_F = 0.5$ A, $T_J = 25\,^oC$	-	-	0.85	
		$I_F = 0.1$ A, $T_J = 125\,^oC$	-	0.48	-	
		$I_F = 0.25$ A, $T_J = 125\,^oC$	-	0.57	-	
		$I_F = 0.5$ A, $T_J = 125\,^oC$	-	0.64	-	
Reverse Current	I_R (3)	$V_R = 50$ V, $T_J = 25\,^oC$	-	5	-	nA
		$V_R = 80$ V, $T_J = 25\,^oC$	-	15	-	
		$V_R = 100$ V, $T_J = 25\,^oC$	-	-	1	uA
		$V_R = 100$ V, $T_J = 125\,^oC$	-	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

BAS100CS-AU

TYPICAL CHARACTERISTIC CURVES

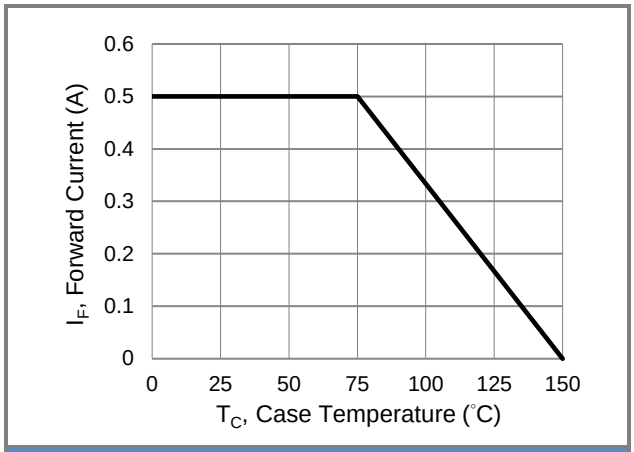


Fig.1 Forward Current Derating Curve

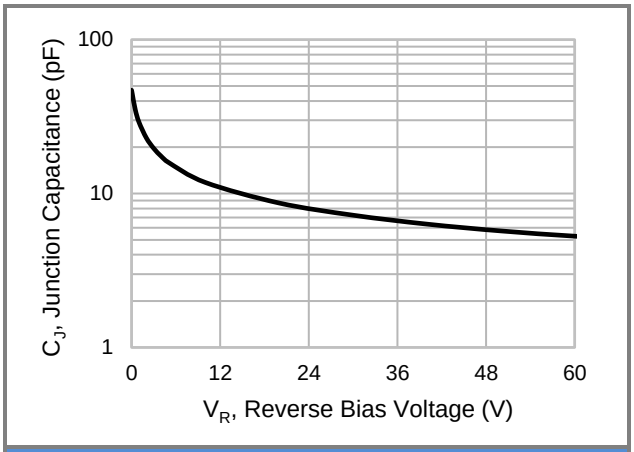


Fig.2 Typical Junction Capacitance

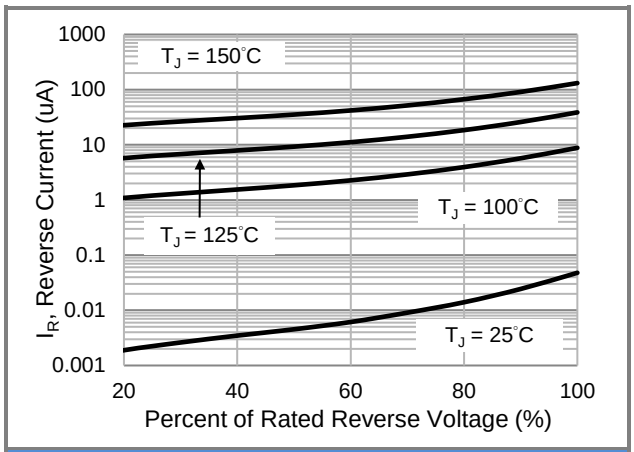


Fig.3 Typical Reverse Characteristics

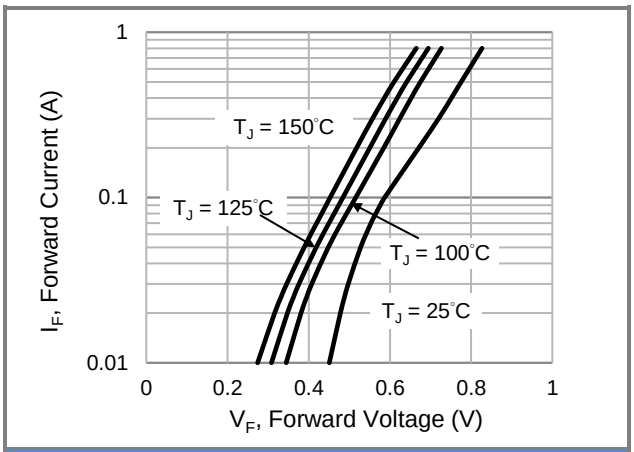


Fig.4 Typical Forward Characteristics

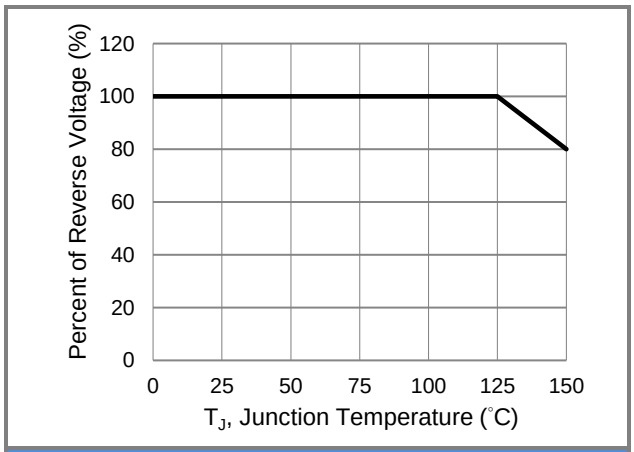


Fig.5 Operating Temperature Derating Curve

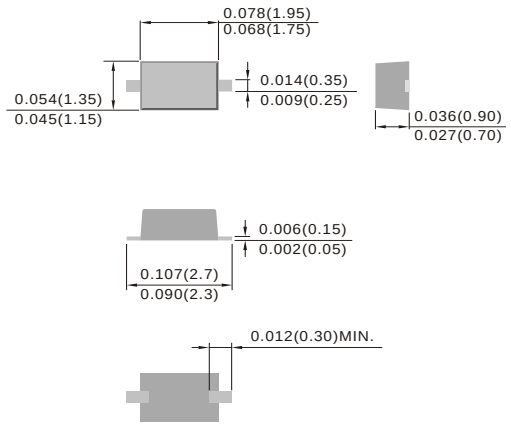
BAS100CS-AU

Product and Packing Information

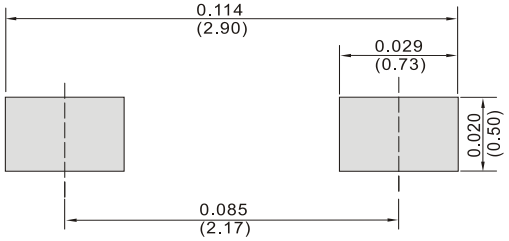
Part No.	Package Type	Packing Type	Marking
BAS100CS-AU	SOD-323	5K / 7" Reel	0CS

Packaging Information & Mounting Pad Layout

SOD-323 Dimension — Unit: inch(mm)



SOD-323 Pad Layout — Unit: inch(mm)



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