



BAT42WS-AU

SURFACE MOUNT SCHOTTKY DIODES

Voltage	30 V	Current	0.2 A
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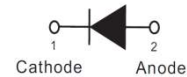
Features

- 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-323 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Approx. Weight: 0.00014 ounces, 0.0041 grams

SOD-323



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}	30	V
Maximum Rms Voltage	V_{RMS}	21	V
Maximum Dc Blocking Voltage	V_{DC}	30	V
Maximum Average Forward Current	$I_{F(AV)}$	0.2	A
Peak Forward Surge Current : 1 ms Single Half Sine-Wave Superimposed On Rated Load	I_{FSM}	4	A
Typical Junction Capacitance Measured at 1 MHZ And Applied $V_R = 0$ V	C_J	4	pF
Typical Thermal Resistance	$R_{\theta JA}^{(1)}$	650	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-55~125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55~125	$^\circ\text{C}$



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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	$I_F = 10\text{ mA}, T_J = 25^\circ\text{C}$	-	-	0.4	V
		$I_F = 200\text{ mA}, T_J = 25^\circ\text{C}$	-	-	1	
		$I_F = 10\text{ mA}, T_J = 100^\circ\text{C}$	-	0.24	-	
		$I_F = 200\text{ mA}, T_J = 100^\circ\text{C}$	-	0.61	-	
Reverse Current	$I_R^{(2)}$	$V_R = 24\text{ V}, T_J = 25^\circ\text{C}$	-	0.1	-	uA
		$V_R = 30\text{ V}, T_J = 25^\circ\text{C}$	-	-	0.5	
		$V_R = 30\text{ V}, T_J = 100^\circ\text{C}$	-	20	-	

NOTES:

1. Mounted on a FR4 PCB, single-sided copper, mini pad.
2. Short duration pulse test used to minimize self-heating effect



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TYPICAL CHARACTERISTIC CURVES

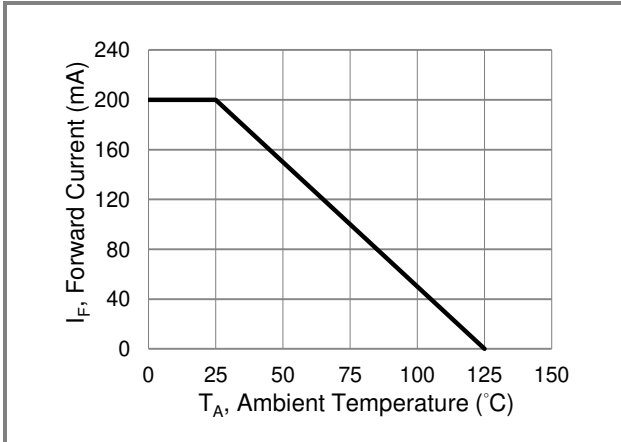


Fig.1 Forward Current Derating Curve

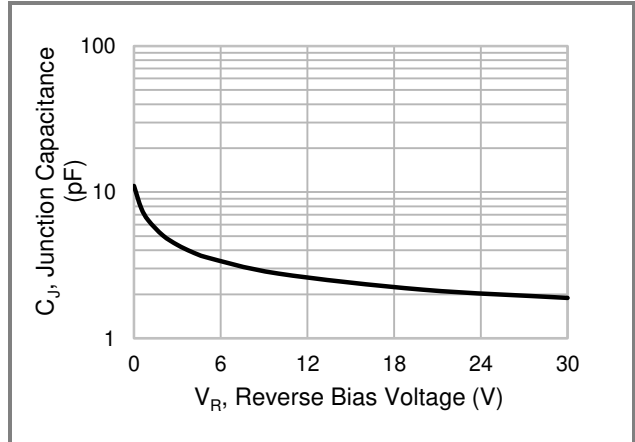


Fig.2 Typical Junction Capacitance

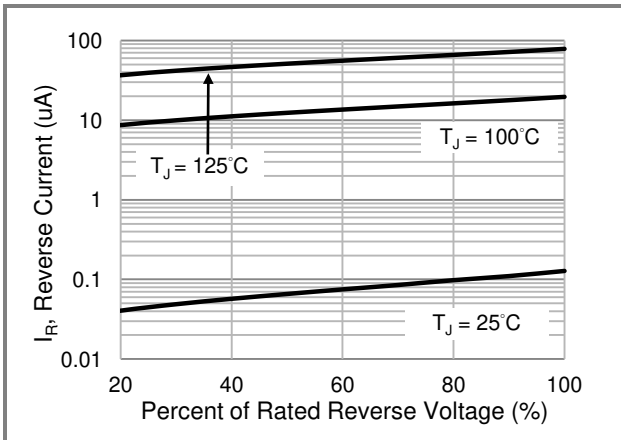


Fig.3 Typical Reverse Characteristics

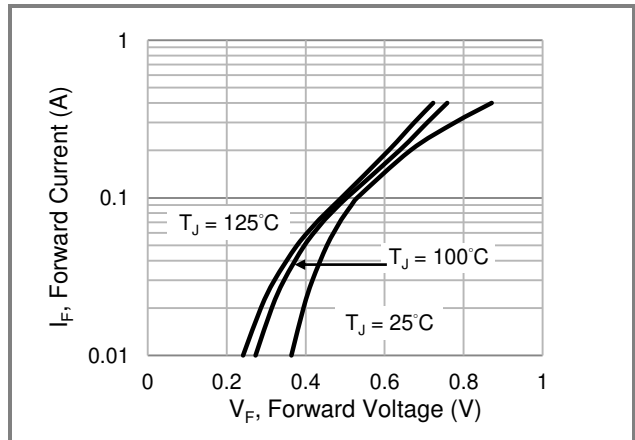


Fig.4 Typical Forward Characteristics

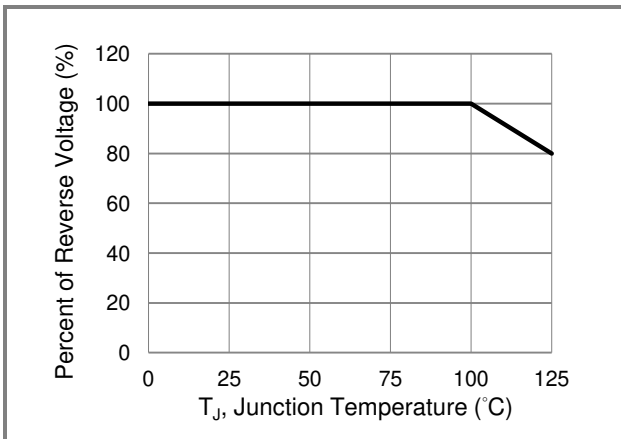


Fig.5 Operating Temperature Derating Curve

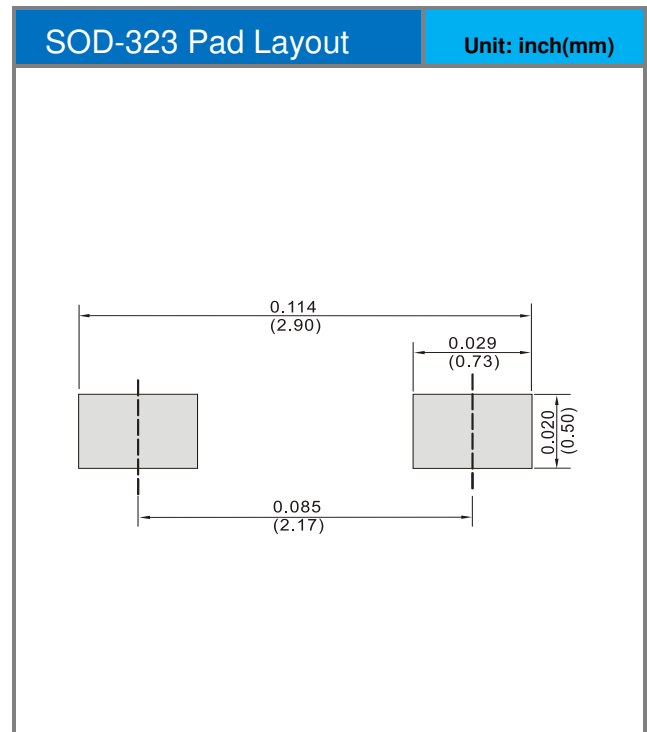
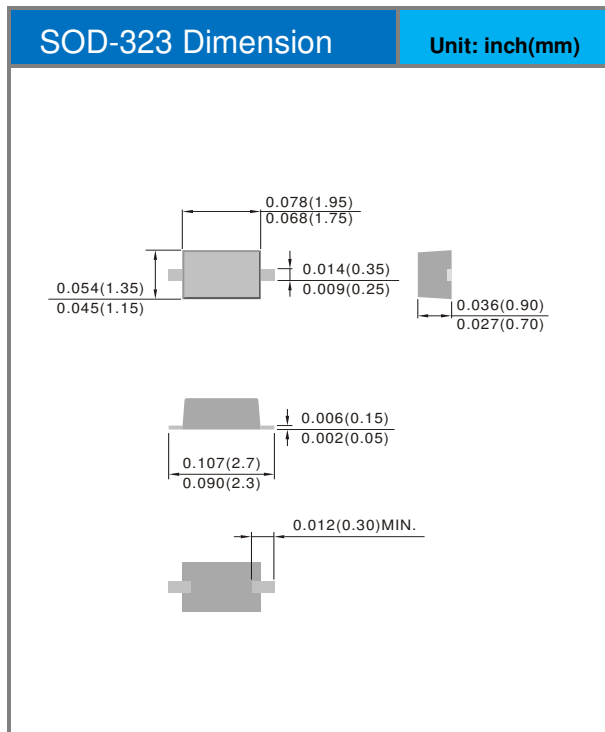


BAT42WS-AU

Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
BAT42WS-AU_R1_000A1	SOD-323	5K / 7" Reel	L2	Halogen free

Packaging Information & Mounting Pad Layout





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