



# BAT42WS-AU

## SURFACE MOUNT SCHOTTKY DIODES

**Voltage**

**30 V**

**Current**

**0.2 A**

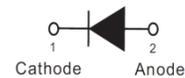
### Features

- 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
- 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

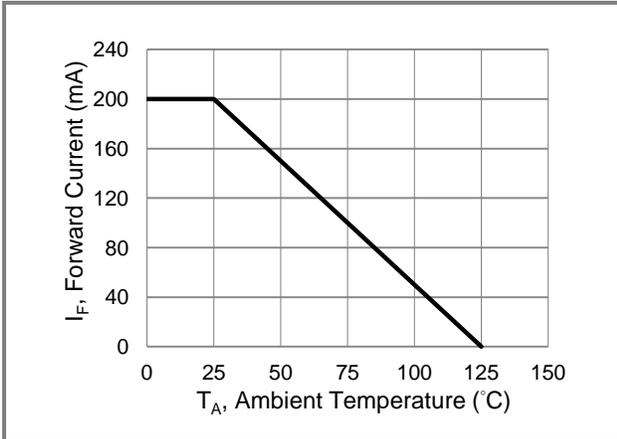


Fig.1 Forward Current Derating Curve

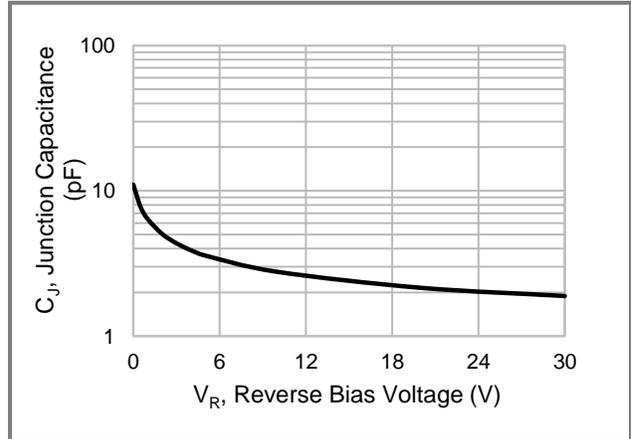


Fig.2 Typical Junction Capacitance

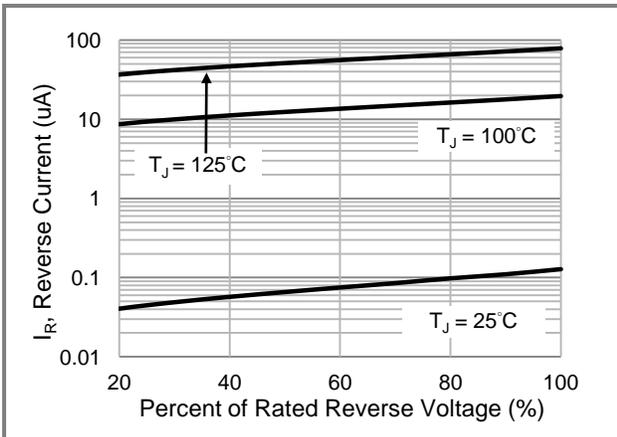


Fig.3 Typical Reverse Characteristics

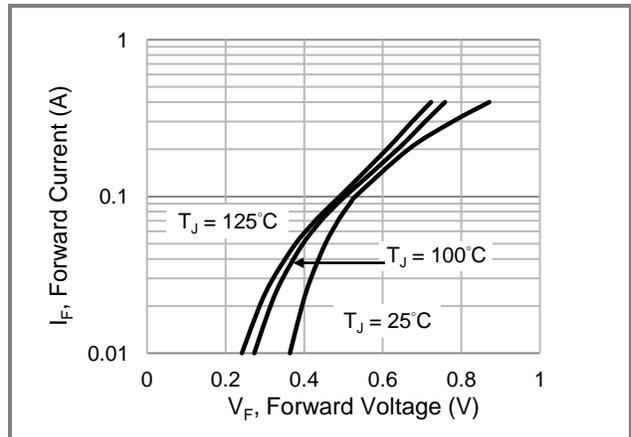


Fig.4 Typical Forward Characteristics

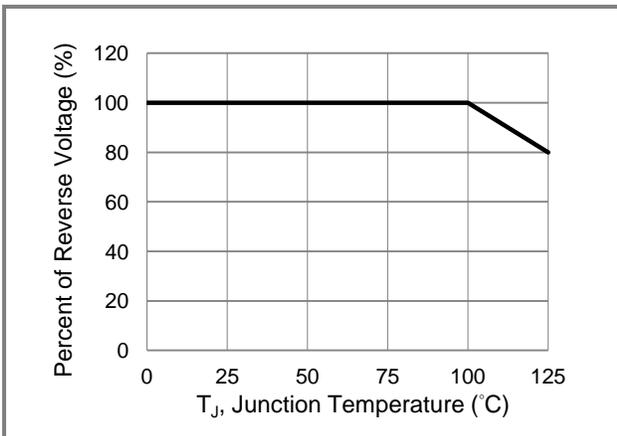


Fig.5 Operating Temperature Derating Curve

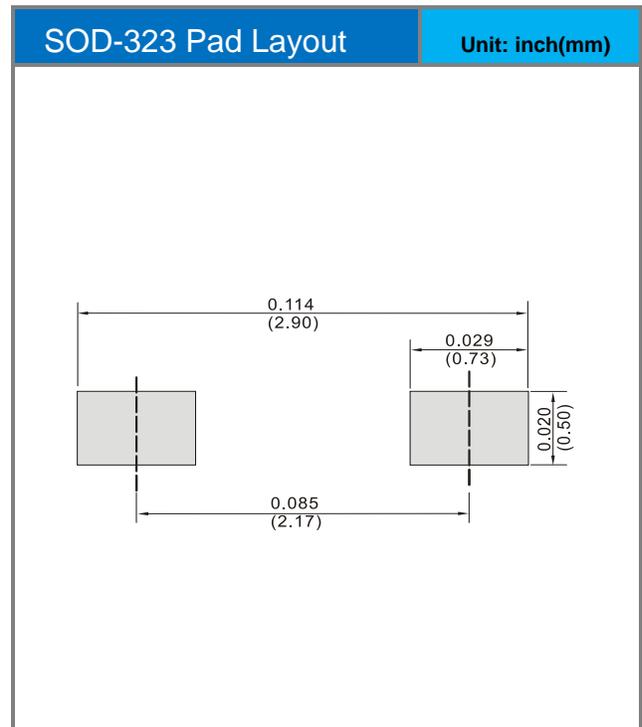
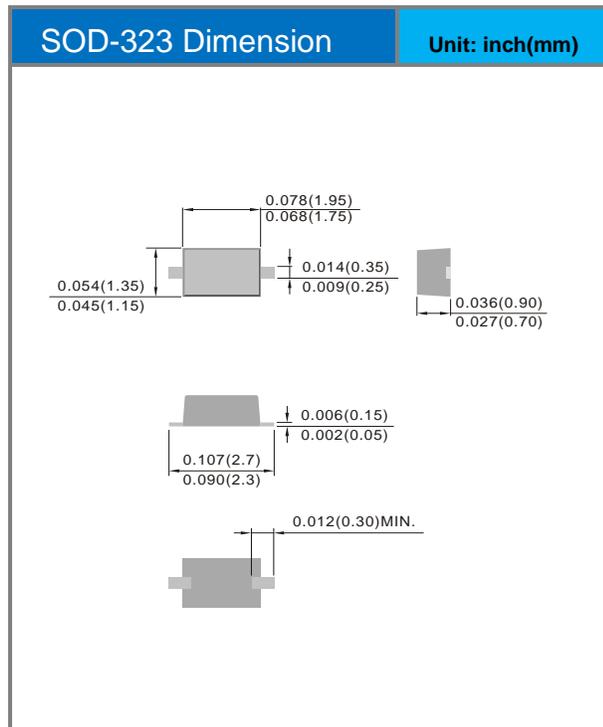


# BAT42WS-AU

## 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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