

# BAT54W-AU SERIES

## SURFACE MOUNT SCHOTTKY DIODES

**Voltage** 30 V **Current** 0.2 A

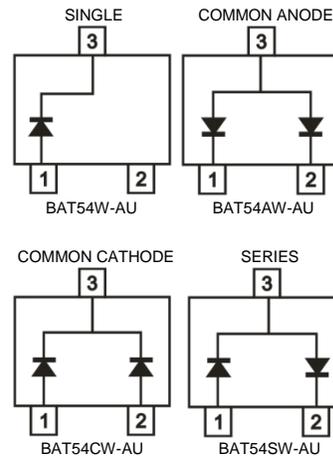
### Features

- Low turn-on voltage
- Fast switching
- PN Junction Guard Ring for Transient and ESD Protection
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- AEC-Q101 qualified

### Mechanical Data

- Case: SOT-323 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0002 ounces, 0.005 grams

### SOT-323



### 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>	30	V
Maximum Rms Voltage	V <sub>RMS</sub>	21	V
Maximum Dc Blocking Voltage	V <sub>DC</sub>	30	V
Maximum Average Forward Current	I <sub>F(AV)</sub>	0.2	A
Peak Forward Surge Current : 1 s Single Half Sine-Wave Superimposed On Rated Load	I <sub>FSM</sub>	0.6	A
Typical Junction Capacitance Measured at 1 MHZ And Applied V <sub>R</sub> = 1 V	C <sub>J</sub>	10	pF
Typical Thermal Resistance	R <sub>θJA</sub> <sup>(1)</sup>	540	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55~125	°C
Storage Temperature Range	T <sub>STG</sub>	-55~125	°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	$V_F$	$I_F = 1 \text{ mA}, T_J = 25^\circ\text{C}$	-	-	0.32	V
		$I_F = 100 \text{ mA}, T_J = 25^\circ\text{C}$	-	-	0.60	
		$I_F = 1 \text{ mA}, T_J = 125^\circ\text{C}$	-	0.14	-	
		$I_F = 100 \text{ mA}, T_J = 125^\circ\text{C}$	-	0.47	-	
Reverse Current	$I_R^{(2)}$	$V_R = 24 \text{ V}, T_J = 25^\circ\text{C}$	-	0.1	-	uA
		$V_R = 30 \text{ V}, T_J = 25^\circ\text{C}$	-	-	2	
		$V_R = 30 \text{ V}, T_J = 125^\circ\text{C}$	-	90	-	

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

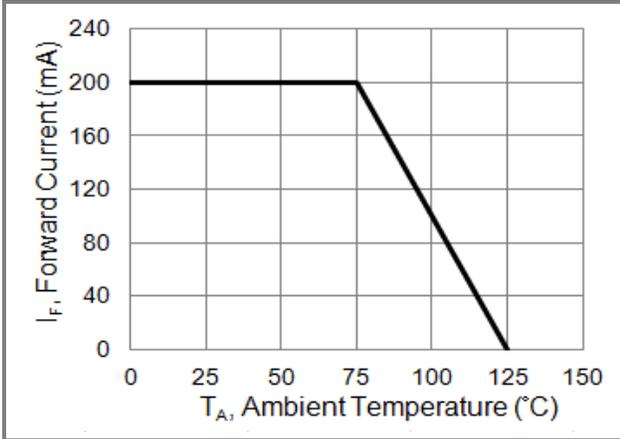


Fig.1 Forward Current Derating Curve

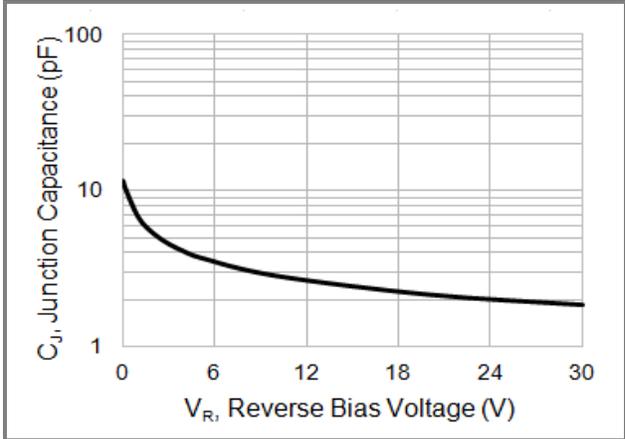


Fig.2 Typical Junction Capacitance

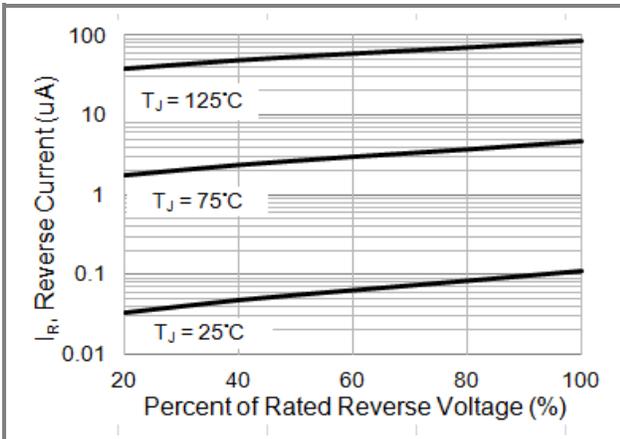


Fig.3 Typical Reverse Characteristics

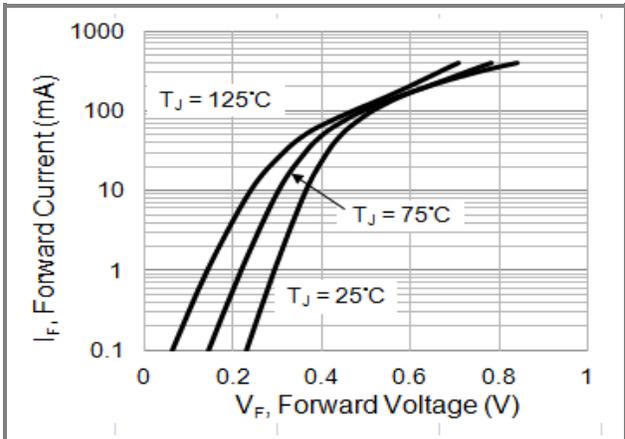


Fig.4 Typical Forward Characteristics

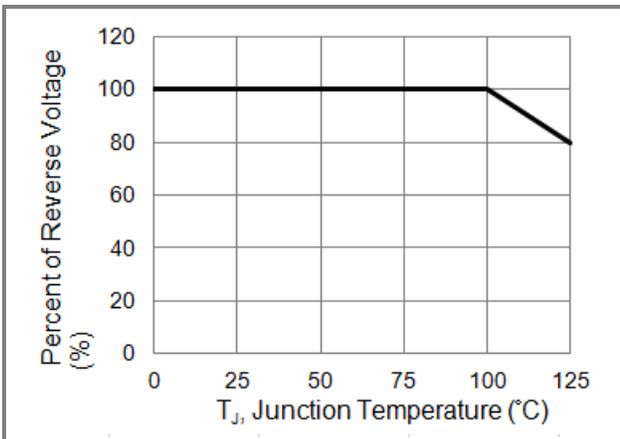


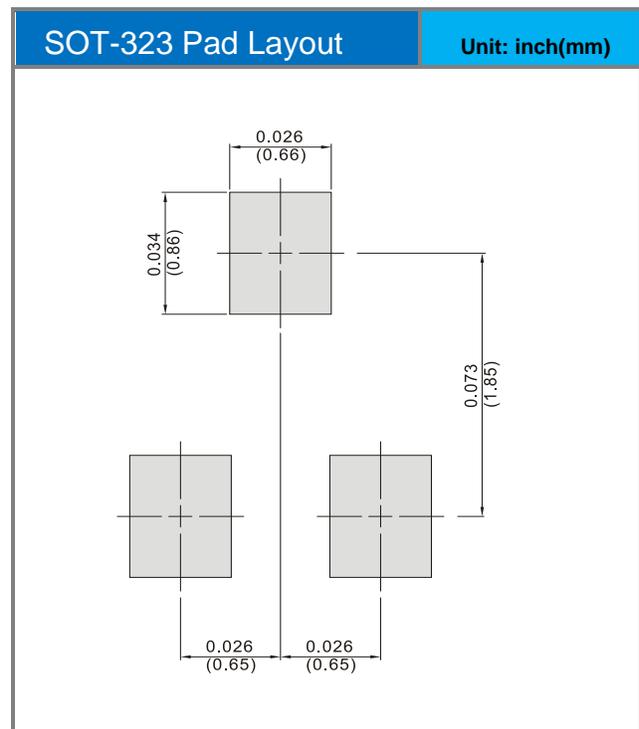
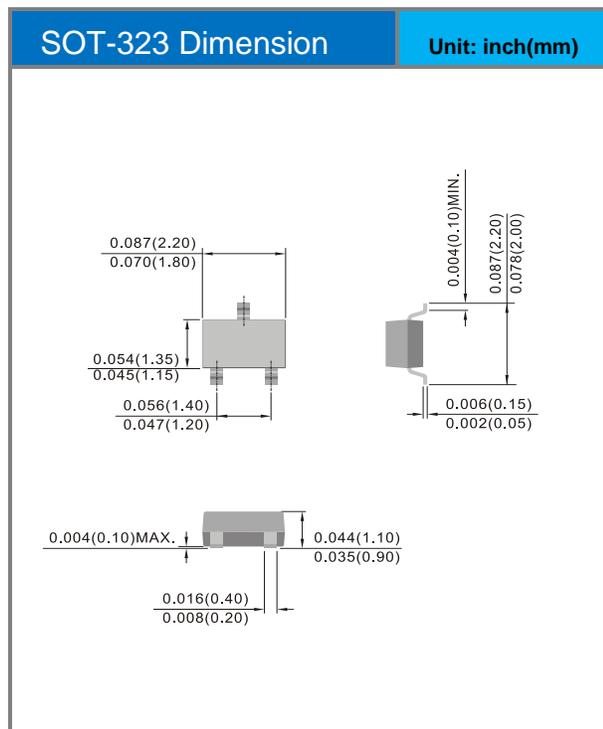
Fig.5 Operating Temperature Derating Curve

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## Product and Packing Information

Part No.	Package Type	Packing Type	Marking
BAT54W-AU	SOT-323	3K / 7" Reel	L4
BAT54AW-AU	SOT-323	3K / 7" Reel	L42
BAT54CW-AU	SOT-323	3K / 7" Reel	L43
BAT54SW-AU	SOT-323	3K / 7" Reel	L44

## Packaging Information & Mounting Pad Layout



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