

# BAT54TB-AU~BAT54STB-AU

## SCHOTTKY BARRIER RECTIFIER

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

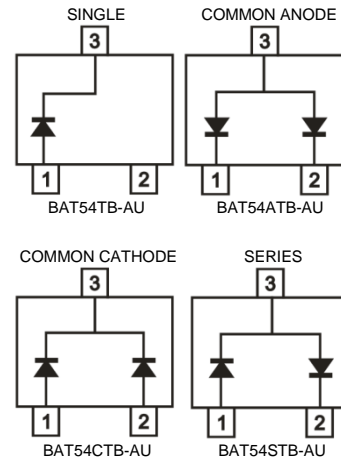
### Features

- Low forward voltage drop
- Deal for automated placement
- Low power loss, high efficiency
- High surge current capability
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### Mechanical Data

- Case : SOT-523 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.002 grams

### SOT-523



## 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> = 4 V	C <sub>J</sub>	4	pF
Typical Thermal Resistance	R <sub>θJA</sub> <sup>(1)</sup>	630	°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
		$I_F = 100\text{ mA}, T_J = 25^\circ\text{C}$	-	-	0.6	
		$I_F = 1\text{ mA}, T_J = 100^\circ\text{C}$	-	0.17	-	
		$I_F = 100\text{ mA}, T_J = 100^\circ\text{C}$	-	0.48	-	
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	
		$V_R = 30\text{ V}, T_J = 100^\circ\text{C}$	-	27	-	

#### 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

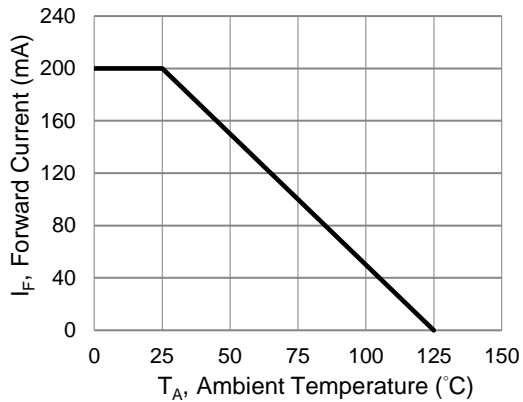


Fig.1 Forward Current Derating Curve

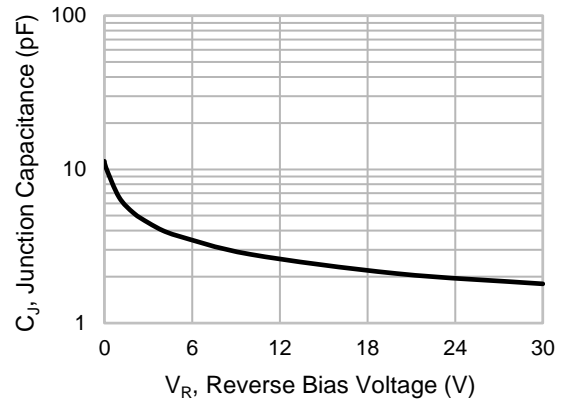


Fig.2 Typical Junction Capacitance

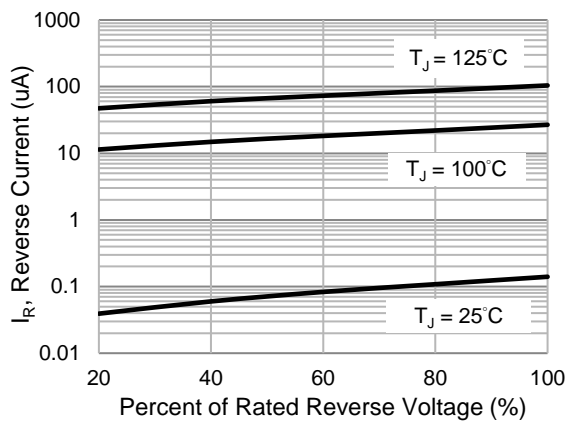


Fig.3 Typical Reverse Characteristics

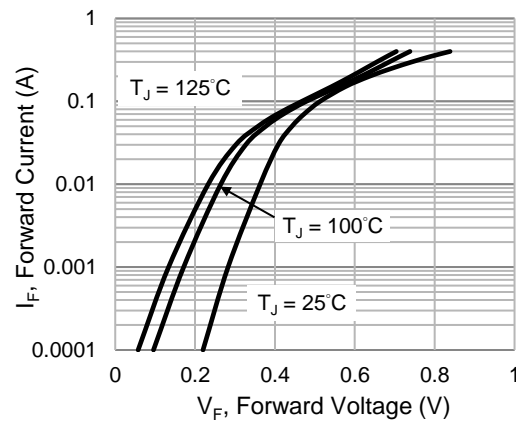


Fig.4 Typical Forward Characteristics

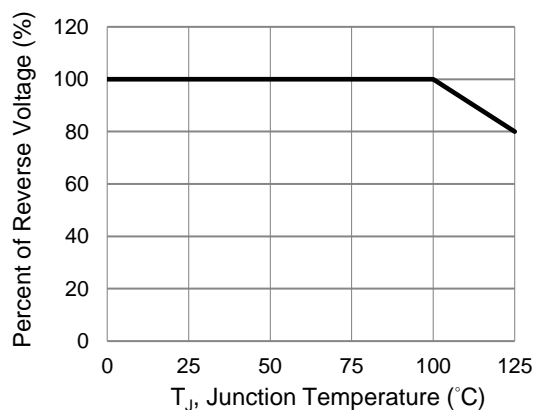


Fig.5 Operating Temperature Derating Curve

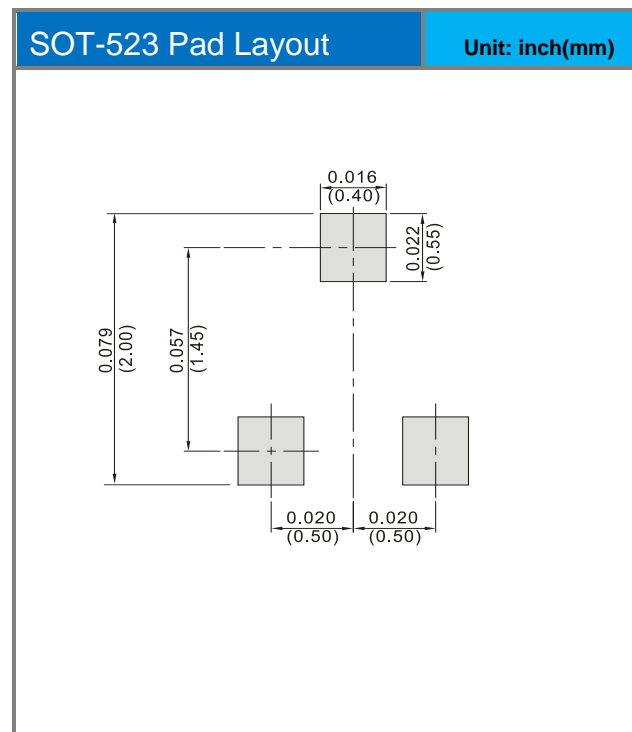
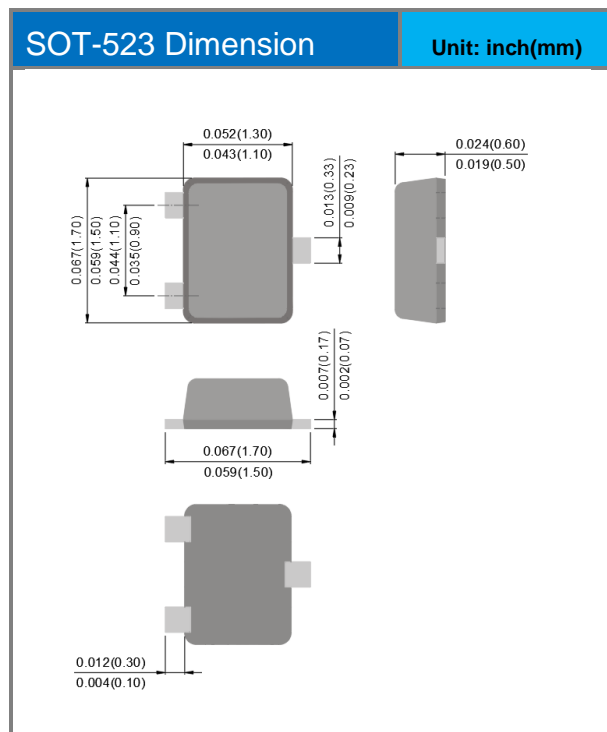


## BAT54TB-AU~BAT54STB-AU

### Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
BAT54TB-AU_R1_000A1	SOT-523	4K / 7" Reel	LV	Halogen free RoHS compliant
BAT54ATB-AU_R1_000A1	SOT-523	4K / 7" Reel	LW	Halogen free RoHS compliant
BAT54CTB-AU_R1_000A1	SOT-523	4K / 7" Reel	LX	Halogen free RoHS compliant
BAT54STB-AU_R1_000A1	SOT-523	4K / 7" Reel	LY	Halogen free RoHS compliant

### Packaging Information & Mounting Pad Layout





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