



BAT54TB-AU~BAT54STB-AU

SCHOTTKY BARRIER RECTIFIER

Voltage 30 V **Current** 0.2 A

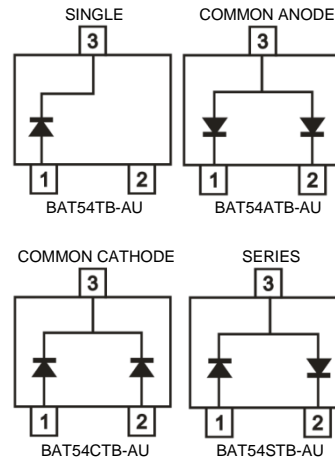
Features

- 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_A = 25°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 s Single Half Sine-Wave Superimposed On Rated Load	I _{FSM}	0.6	A
Typical Junction Capacitance Measured at 1 MHz And Applied V _R = 4 V	C _J	4	pF
Typical Thermal Resistance	R _{θJA} ⁽¹⁾	630	°C/W
Operating Junction Temperature Range	T _J	-55~125	°C
Storage Temperature Range	T _{STG}	-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

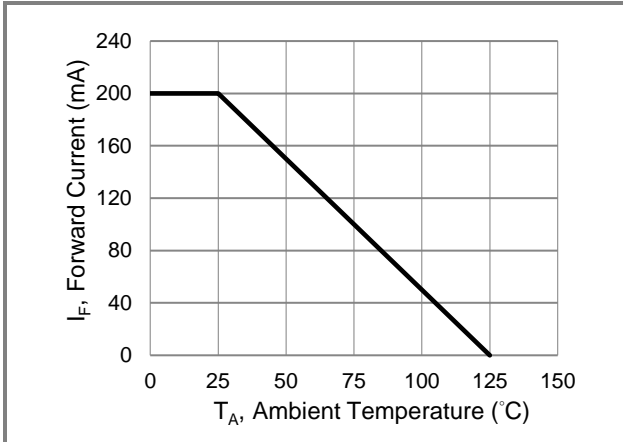


Fig.1 Forward Current Derating Curve

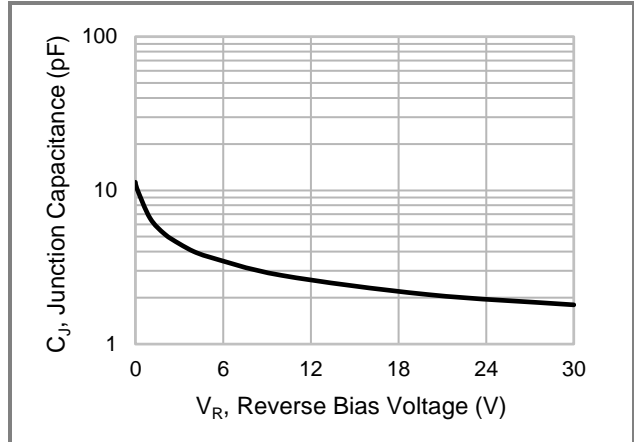


Fig.2 Typical Junction Capacitance

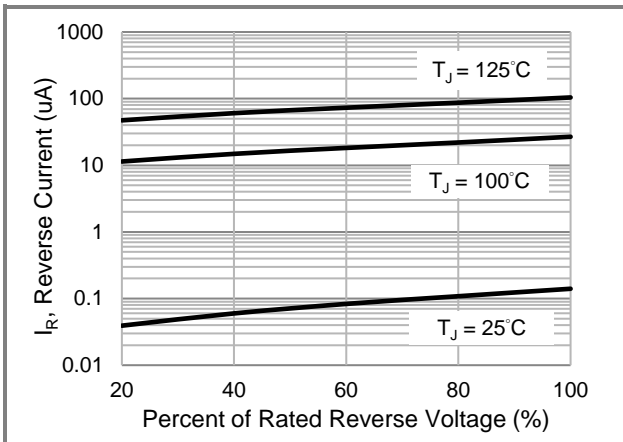


Fig.3 Typical Reverse Characteristics

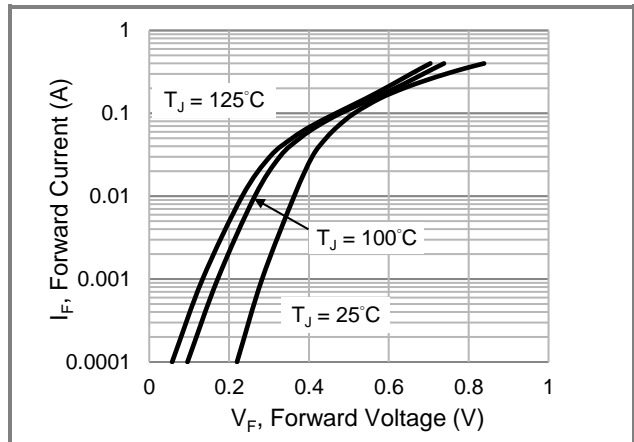


Fig.4 Typical Forward Characteristics

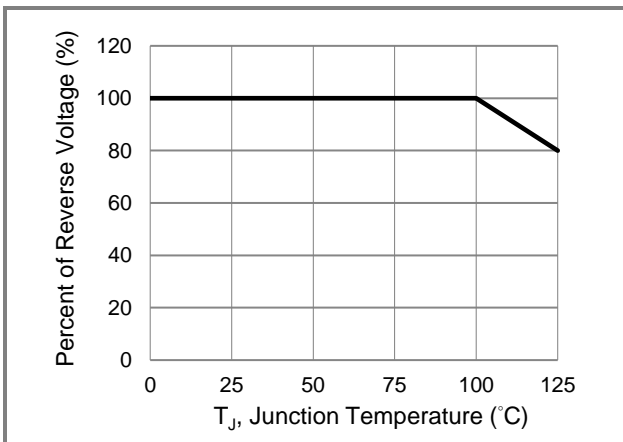


Fig.5 Operating Temperature Derating Curve

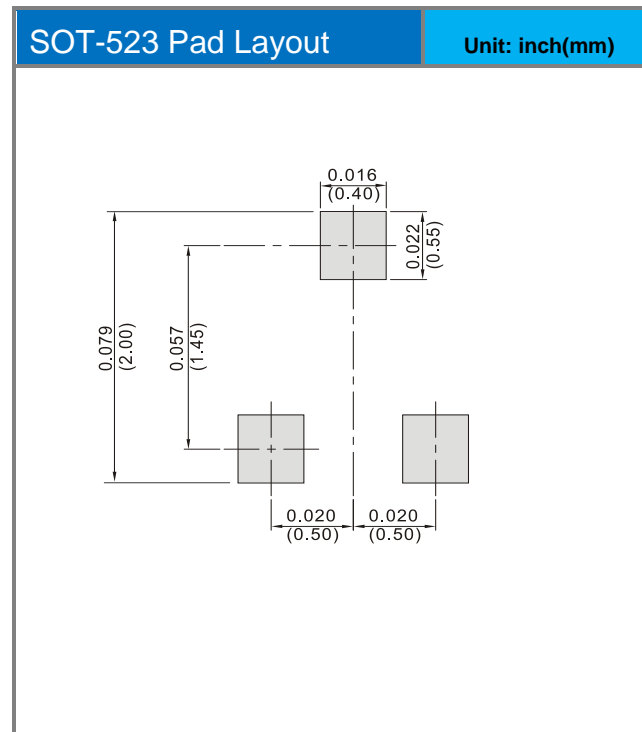
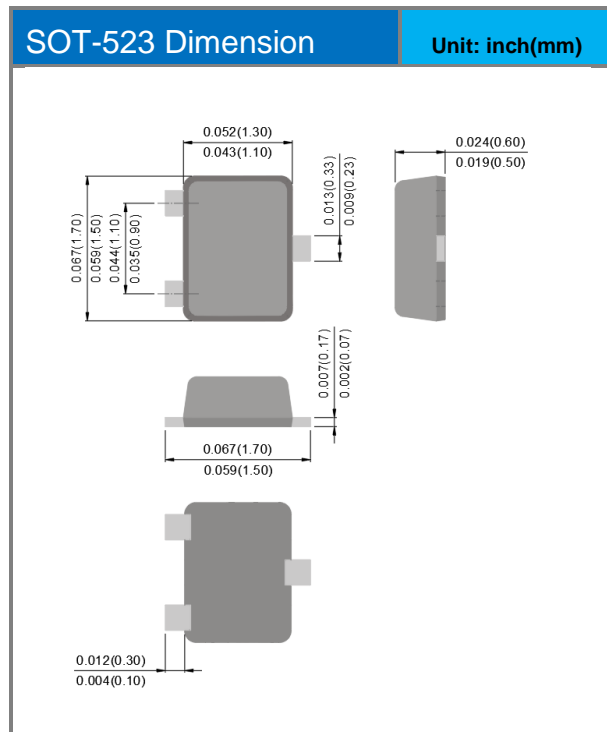


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Part No. Packing Code Version

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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