

BAT54TB6-AU

SCHOTTKY BARRIER RECTIFIER

Voltage

30 V

Current

0.2 A

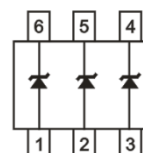
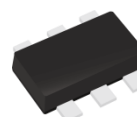
Features

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

Mechanical Data

- Case: SOT-563 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0001 ounces, 0.003 grams

SOT-563



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 s Single Half Sine-Wave Superimposed On Rated Load	I_{FSM}	0.6	A
Typical Junction Capacitance Measured at 1 MHz And Applied $V_R = 4\text{ V}$	C_J	4	pF
Typical Thermal Resistance	$R_{\theta JA}^{(1)}$	630	$^{\circ}\text{C/W}$
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	$I_F = 1\text{ mA}, T_J = 25^\circ\text{C}$	-	-	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	-	μA
		$V_R = 30\text{ V}, T_J = 25^\circ\text{C}$	-	-	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.

BAT54TB6-AU

TYPICAL CHARACTERISTIC CURVES

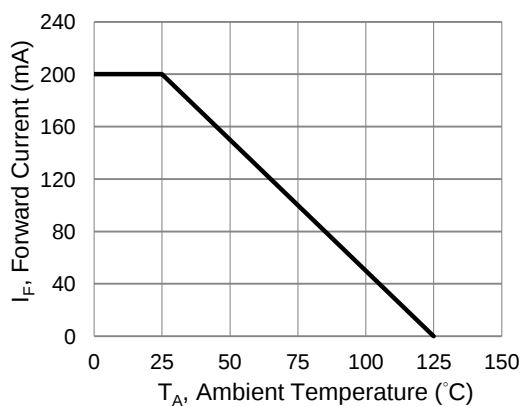


Fig.1 Forward Current Derating Curve

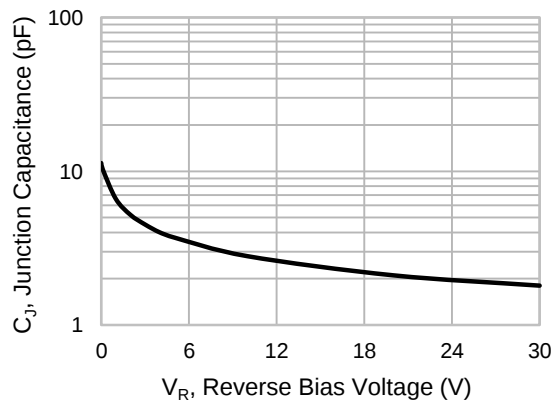


Fig.2 Typical Junction Capacitance

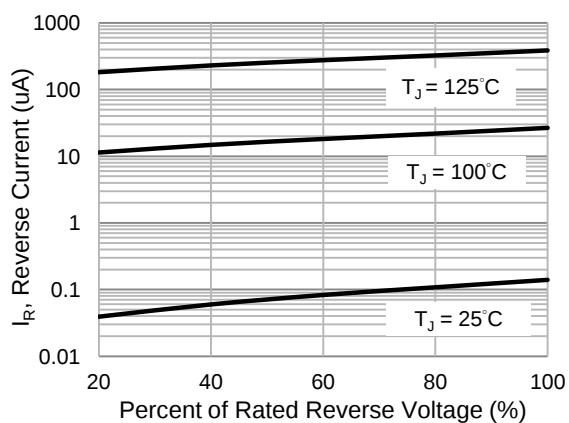


Fig.3 Typical Reverse Characteristics

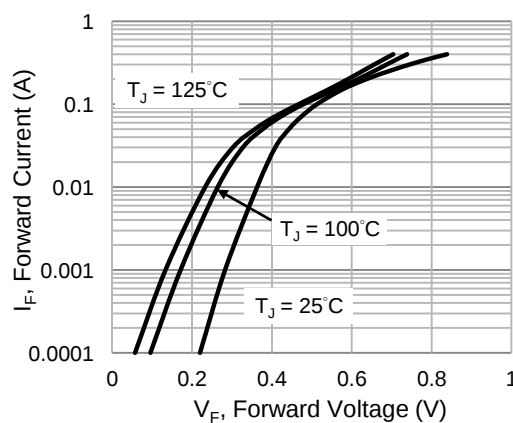


Fig.4 Typical Forward Characteristics

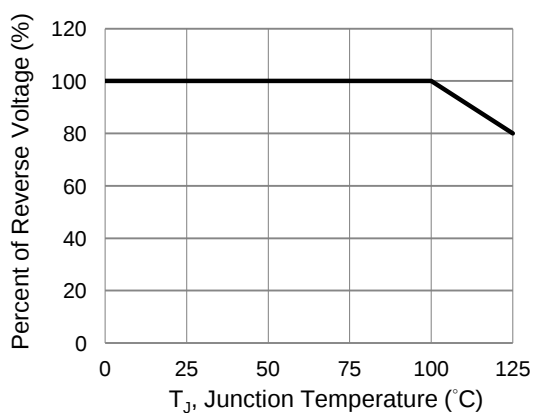


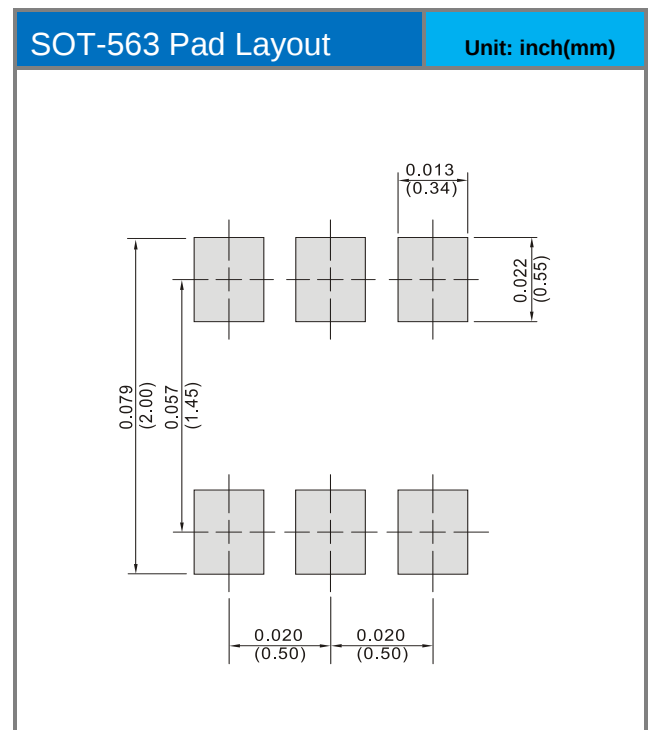
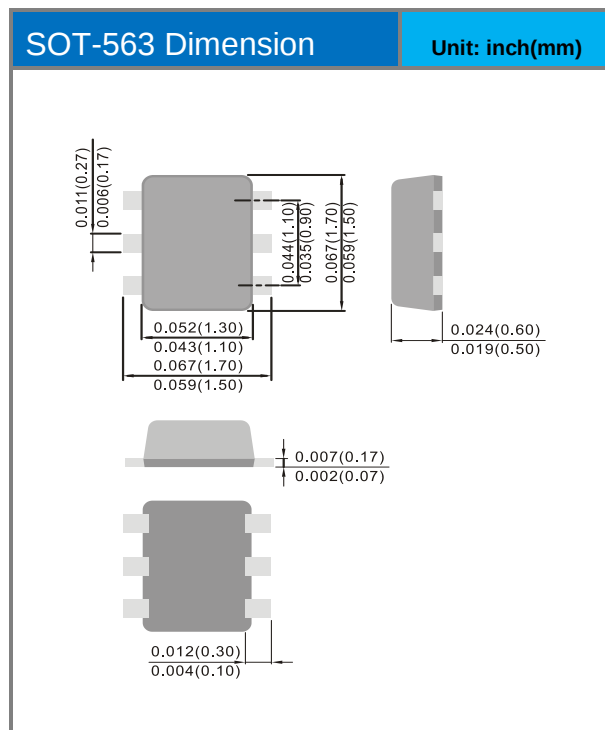
Fig.5 Operating Temperature Derating Curve

BAT54TB6-AU

Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
BAT54TB6-AU_R1_000A1	SOT-563	4K / 7" Reel	TH	Halogen free

Packaging Information & Mounting Pad Layout





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