



BAT54-AU SERIES

SURFACE MOUNT SCHOTTKY DIODES

| | | | |
|----------------|-------------|----------------|--------------|
| Voltage | 30 V | Current | 0.2 A |
|----------------|-------------|----------------|--------------|

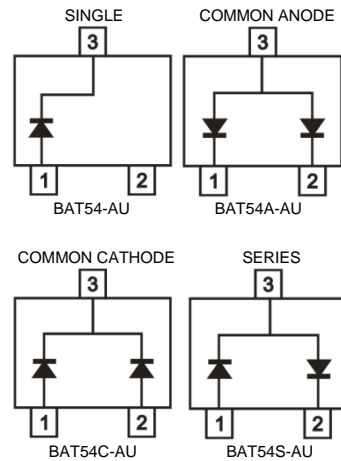
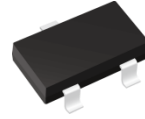
Features

- Fast switching speed
- Surface mount package ideally suited for automatic insertion electrical identical standard JEDEC
- High conductor
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- AEC-Q101 qualified

Mechanical Data

- Case: SOT-23 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0003 ounces, 0.0084 grams

SOT-23



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 = 0 V | C _J | 10 | pF |
| Typical Thermal Resistance | R _{θJA} ⁽¹⁾ | 350 | °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 | |
| | | $I_F = 1\text{ mA}, T_J = 125^\circ\text{C}$ | - | 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

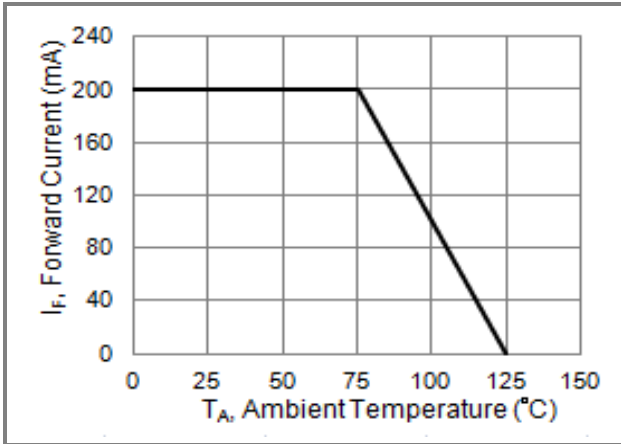


Fig.1 Forward Current Derating Curve

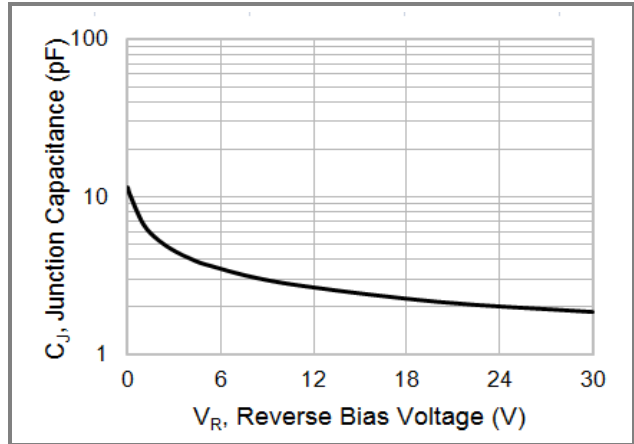


Fig.2 Typical Junction Capacitance

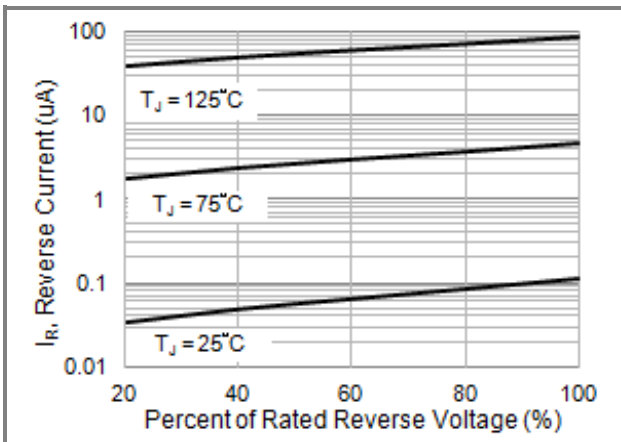


Fig.3 Typical Reverse Characteristics

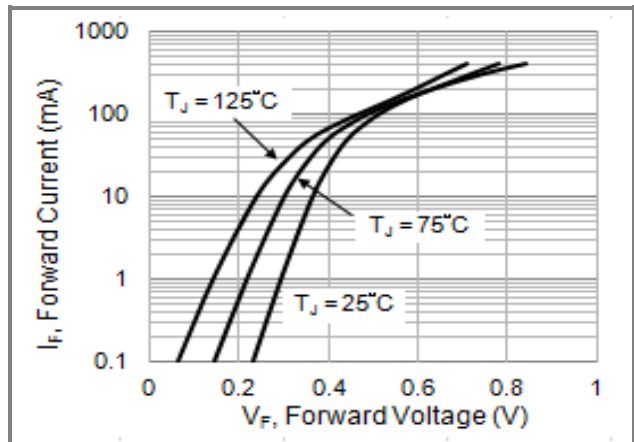


Fig.4 Typical Forward Characteristics

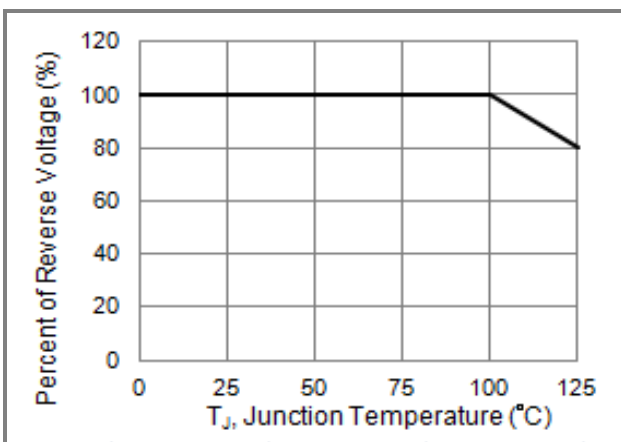


Fig.5 Operating Temperature Derating Curve



BAT54-AU SERIES

Part No Packing Code Version

| Part No Packing Code | Package Type | Packing Type | Marking | Version |
|----------------------|--------------|--------------|---------|--------------|
| BAT54-AU_R1_000A1 | SOT-23 | 3K / 7" Reel | L4 | Halogen free |
| BAT54A-AU_R1_000A1 | SOT-23 | 3K / 7" Reel | L42 | Halogen free |
| BAT54C-AU_R1_000A1 | SOT-23 | 3K / 7" Reel | L43 | Halogen free |
| BAT54S-AU_R1_000A1 | SOT-23 | 3K / 7" Reel | L44 | Halogen free |

Packaging Information & Mounting Pad Layout

