



# BAT54-AU SERIES

## SURFACE MOUNT SCHOTTKY DIODES

|                |             |                |              |
|----------------|-------------|----------------|--------------|
| <b>Voltage</b> | <b>30 V</b> | <b>Current</b> | <b>0.2 A</b> |
|----------------|-------------|----------------|--------------|

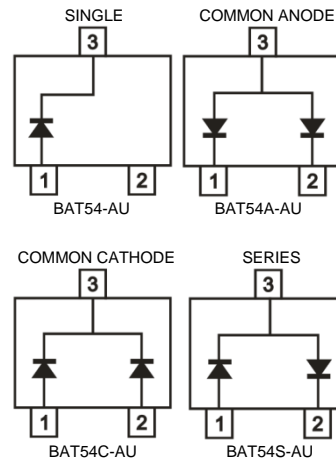
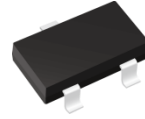
### Features

- 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<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<br>Measured at 1 MHZ And Applied V <sub>R</sub> = 0 V | C <sub>J</sub>                  | 10      | pF    |
| Typical Thermal Resistance   | R <sub>θJA</sub> <sup>(1)</sup> | 350     | °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  |       |
|                 |             | $I_F = 1\text{ mA}, T_J = 125^\circ\text{C}$   | -    | 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

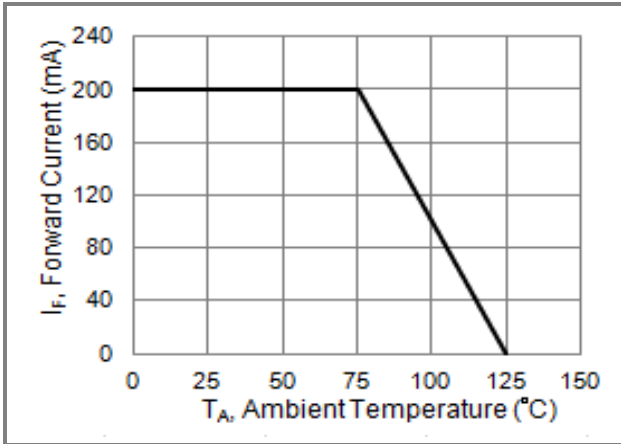


Fig.1 Forward Current Derating Curve

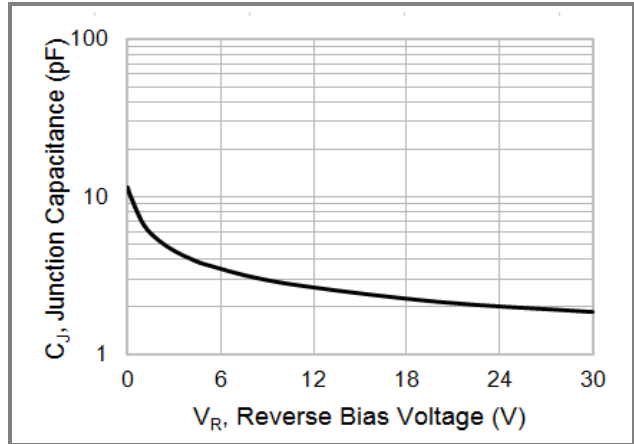


Fig.2 Typical Junction Capacitance

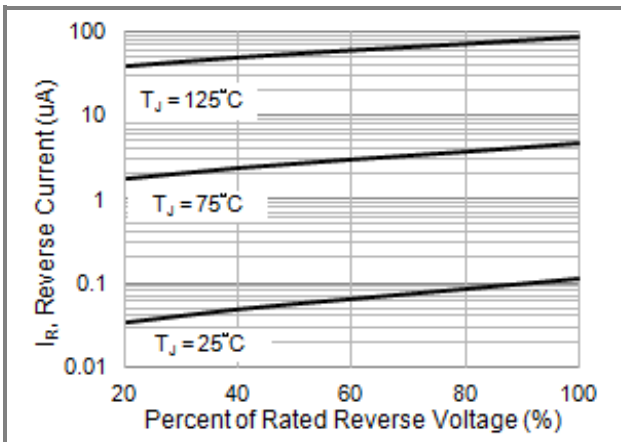


Fig.3 Typical Reverse Characteristics

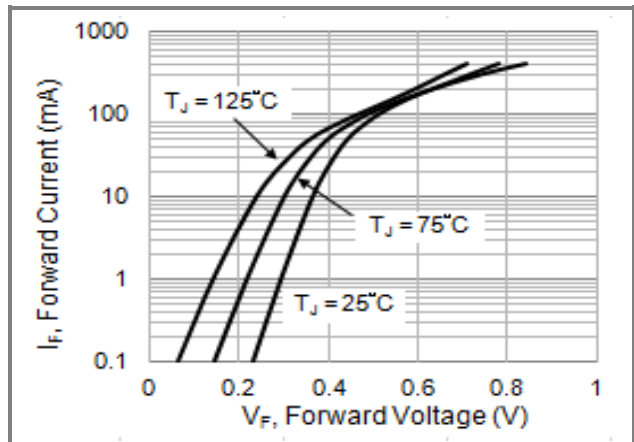


Fig.4 Typical Forward Characteristics

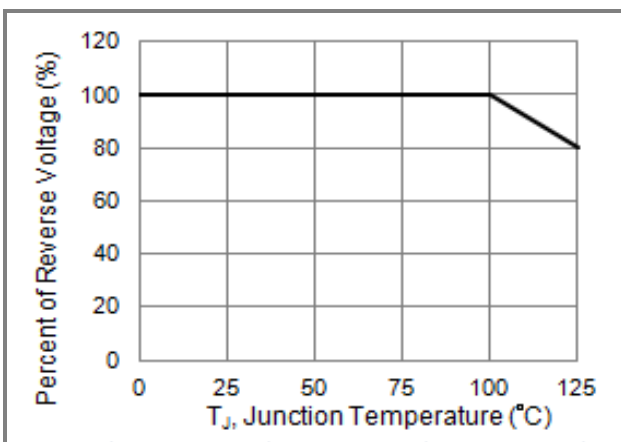


Fig.5 Operating Temperature Derating Curve

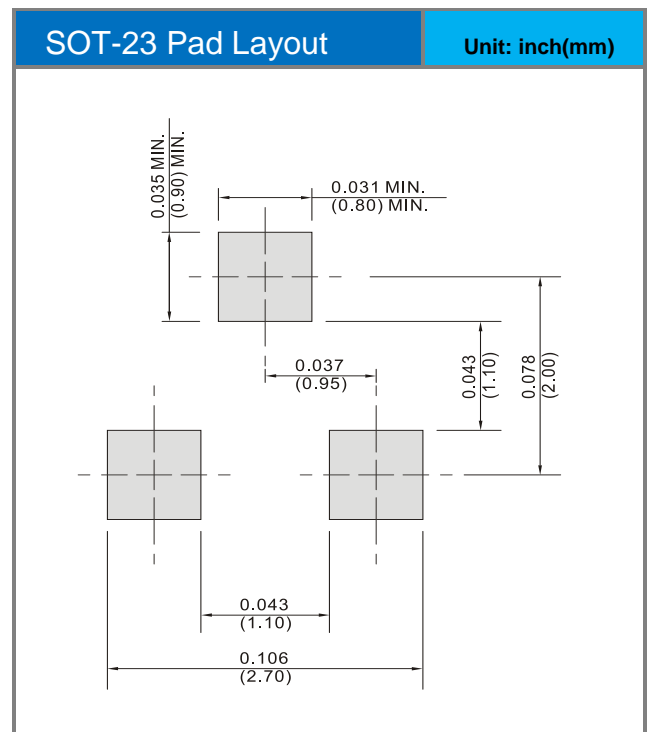
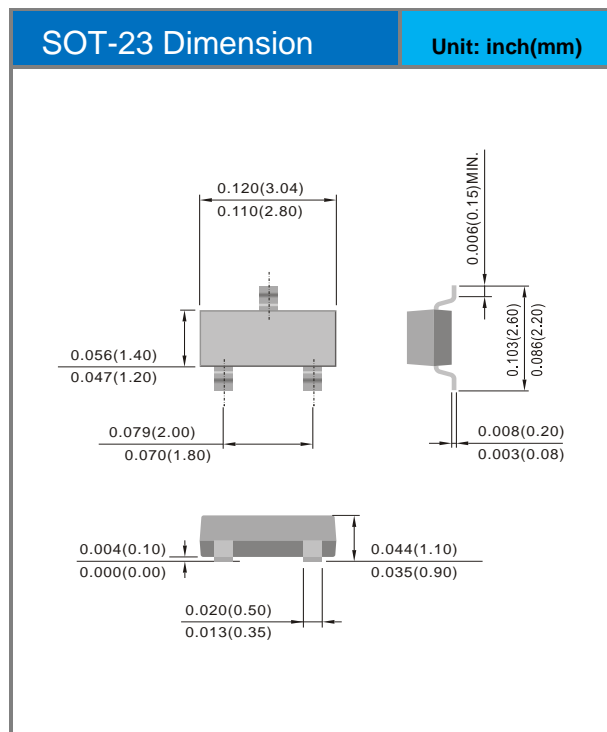


# BAT54-AU SERIES

## 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





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