



# BR36-AU

## MINI SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Voltage

60 V

Current

3 A

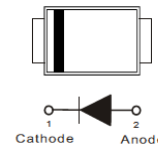
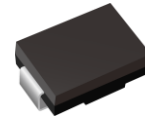
### Features

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

### Mechanical Data

- Case: JEDEC DO-214AA molded plastic
- Polarity: Color Band denotes cathode end
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0032 ounces, 0.092 grams

SMB



### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

| PARAMETER  | SYMBOL                          | LIMIT       | UNITS |
|--|---------------------------------|-------------|-------|
| Maximum Recurrent Peak Reverse Voltage   | V <sub>RRM</sub>                | 60          | V     |
| Maximum RMS Voltage  | V <sub>RMS</sub>                | 42          | V     |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>                 | 60          | V     |
| Maximum Average Forward Rectified Current  | I <sub>F(AV)</sub>              | 3           | A     |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load per diode | I <sub>FSM</sub>                | 80          | A     |
| Typical Junction Capacitance<br>Measured at 1 MHz And Applied V <sub>R</sub> = 4V            | C <sub>J</sub>                  | 125         | pF    |
| Typical Thermal Resistance per diode   | R <sub>θJA</sub> <sup>(1)</sup> | 135         | °C/W  |
|  | R <sub>θJC</sub> <sup>(2)</sup> | 18          |       |
|  | R <sub>θJL</sub> <sup>(2)</sup> | 23          |       |
| Operating Junction Temperature Range   | T <sub>J</sub>                  | -65 to +175 | °C    |
| Storage Temperature Range  | T <sub>STG</sub>                | -65 to +175 | °C    |



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### Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

| PARAMETER                     | SYMBOL      | TEST CONDITION                               | MIN. | TYP. | MAX. | UNITS |
|-------------------------------|-------------|--|------|------|------|-------|
| Instantaneous forward voltage | $V_F$       | $I_F = 1\text{ A}, T_J = 25^\circ\text{C}$   | -    | 0.47 | -    | V     |
|                               |             | $I_F = 3\text{ A}, T_J = 25^\circ\text{C}$   | -    | -    | 0.74 |       |
|                               |             | $I_F = 1\text{ A}, T_J = 125^\circ\text{C}$  | -    | 0.4  | -    |       |
|                               |             | $I_F = 3\text{ A}, T_J = 125^\circ\text{C}$  | -    | 0.57 | -    |       |
| Reverse current               | $I_R^{(3)}$ | $V_R = 48\text{ V}, T_J = 25^\circ\text{C}$  | -    | 1.5  | -    | uA    |
|                               |             | $V_R = 60\text{ V}, T_J = 25^\circ\text{C}$  | -    | -    | 50   |       |
|                               |             | $V_R = 60\text{ V}, T_J = 125^\circ\text{C}$ | -    | -    | 20   | mA    |

**NOTES:**

1. Mounted on a FR4 PCB, single-sided copper, mini pad
2. Mounted on a FR4 PCB, single-sided copper, with  $100\text{ cm}^2$  copper pad area
3. Short duration pulse test used to minimize self-heating effect



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## TYPICAL CHARACTERISTIC CURVES

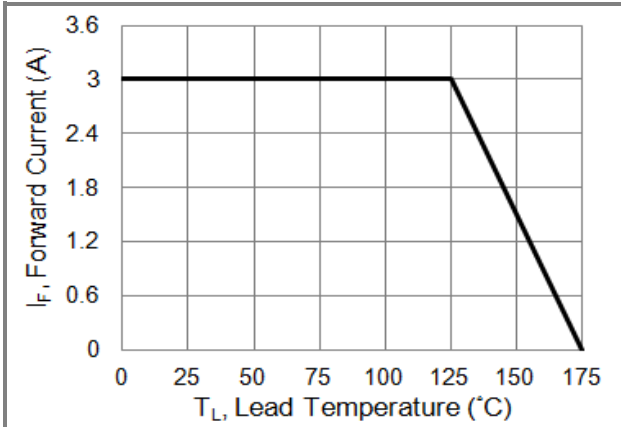


Fig.1 Forward Current Derating Curve

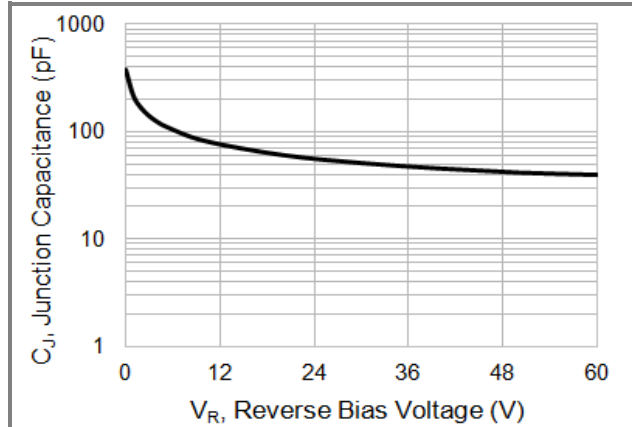


Fig.2 Typical Junction Capacitance

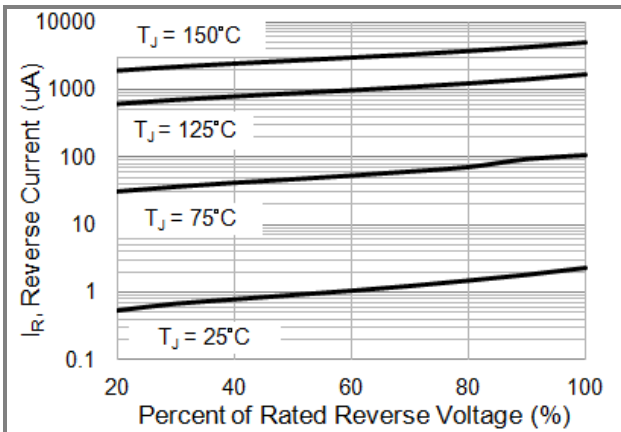


Fig.3 Typical Reverse Characteristics

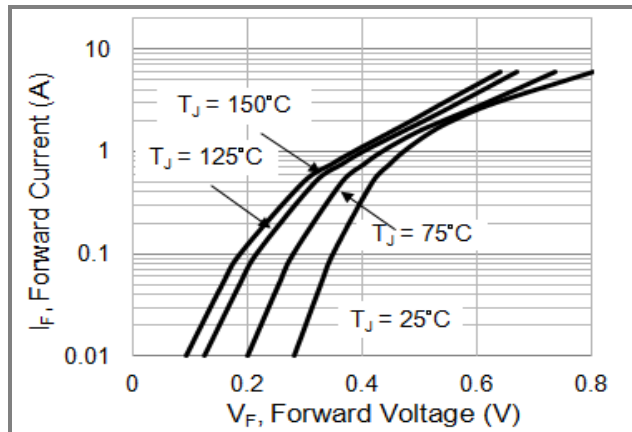


Fig.4 Typical Forward Characteristics

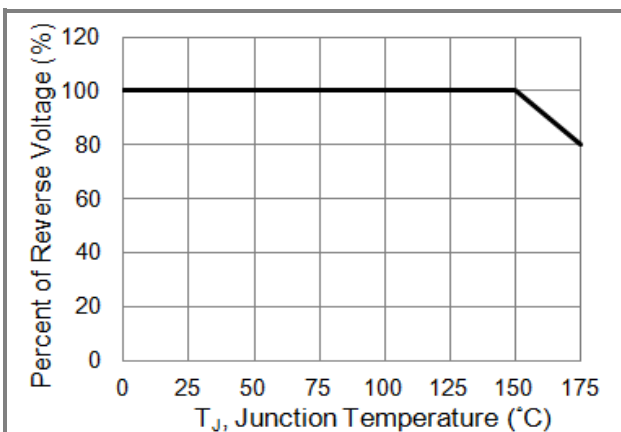


Fig.5 Operating Temperature Derating Curve

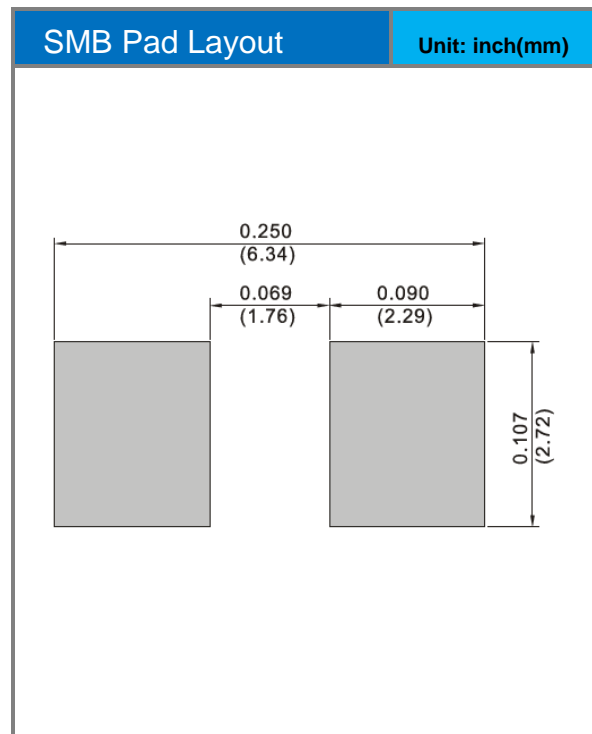
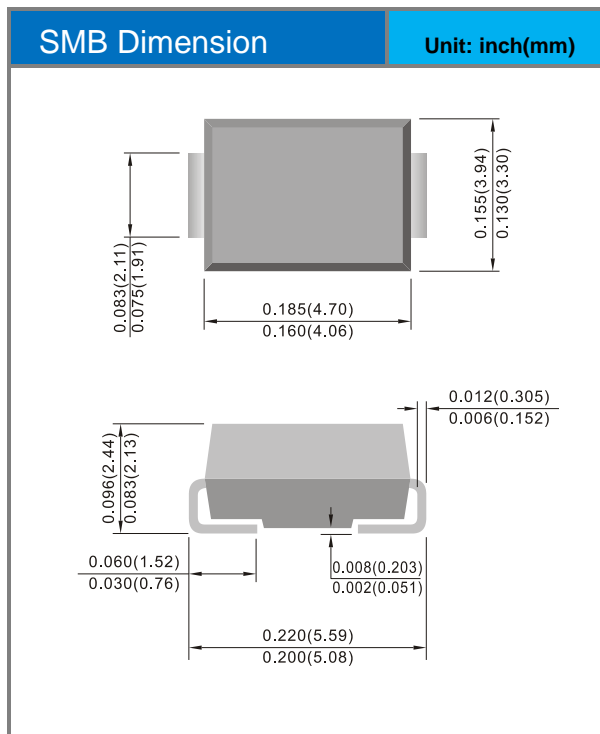


# BR36-AU

## Part No Packing Code Version

| Part No Packing Code | Package Type | Packing Type      | Marking | Version      |
|----------------------|--------------|-------------------|---------|--------------|
| BR36-AU_R1_000A1     | SMB          | 800 pcs / 7" reel | BR36    | Halogen free |

## Packaging Information & Mounting Pad Layout





## BR36-AU

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