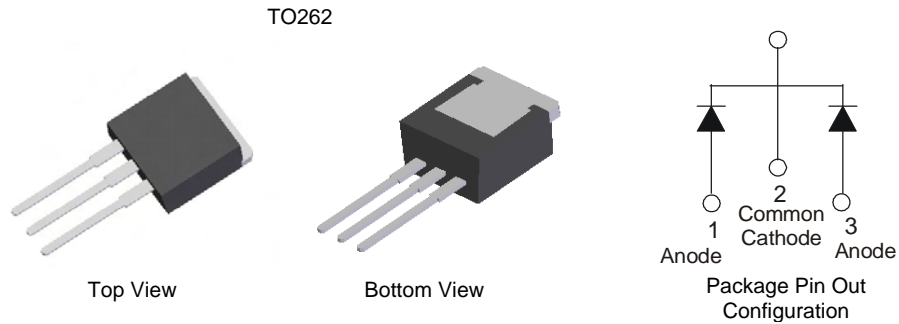


## Features

- Low Forward Voltage Drop
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 150°C Operating Junction Temperature
- **Lead Free, RoHS Compliant (Note 1)**

## Mechanical Data

- Case: TO262
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 <sup>(3)</sup>
- Weight: 1.355 grams (approximate)

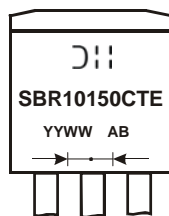


## Ordering Information (Note 2)

| Part Number | Case  | Packaging      |
|-------------|-------|----------------|
| SBR10150CTE | TO262 | 50 pieces/tube |

- Notes:
1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes.
  2. For packaging details, go to our website at <http://www.diodes.com>.

## Marking Information



SBR10150CTE = Product Type Marking Code  
 AB = Foundry and Assembly Code  
 YYWW = Date Code Marking  
 YY = Last two digits of year (ex: 08 = 2008)  
 WW = Week (01 - 53)

**Maximum Ratings** @ $T_A = 25^\circ\text{C}$  unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitance load, derate current by 20%.

| Characteristic  | Symbol       | Value | Unit |
|---|--------------|-------|------|
| Peak Repetitive Reverse Voltage   | $V_{RRM}$    | 150   | V    |
| Working Peak Reverse Voltage  | $V_{RWM}$    |       |      |
| DC Blocking Voltage   | $V_{RM}$     |       |      |
| RMS Reverse Voltage   | $V_{R(RMS)}$ | 106   | V    |
| Average Rectified Output Current  | $I_O$        | 10    | A    |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single Half Sine-Wave Superimposed on Rated Load | $I_{FSM}$    | 100   | A    |

**Thermal Characteristics** @ $T_A = 25^\circ\text{C}$  unless otherwise specified

| Characteristic                               | Symbol          | Value       | Unit                      |
|--|-----------------|-------------|---------------------------|
| Maximum Thermal Resistance (per leg)         | $R_{\theta JC}$ | 2.2         | $^\circ\text{C}/\text{W}$ |
| Thermal Resistance Junction to case (Note 3) |                 |             |                           |
| Operating and Storage Temperature Range      | $T_J, T_{STG}$  | -55 to +150 | $^\circ\text{C}$          |

**Electrical Characteristics** @ $T_A = 25^\circ\text{C}$  unless otherwise specified

| Characteristic                     | Symbol      | Min | Typ  | Max          | Unit     | Test Condition  |
|------------------------------------|-------------|-----|------|--------------|----------|---|
| Reverse Breakdown Voltage (Note 4) | $V_{(BR)R}$ | 150 | -    | -            | V        | $I_R = 0.25\text{mA}$   |
| Forward Voltage Drop (per leg)     | $V_F$       | -   | 0.69 | 0.92<br>0.79 | V        | $I_F = 5\text{A}, T_J = 25^\circ\text{C}$<br>$I_F = 5\text{A}, T_J = 125^\circ\text{C}$     |
| Leakage Current (Note 4)           | $I_R$       | -   | -    | 0.25<br>25   | mA<br>mA | $V_R = 150\text{V}, T_J = 25^\circ\text{C}$<br>$V_R = 150\text{V}, T_J = 125^\circ\text{C}$ |

Notes: 3. Using heatsink (by Black Aluminum, 45mm x 20mm x 12mm)  
4. Short duration pulse test used to minimize self-heating effect.

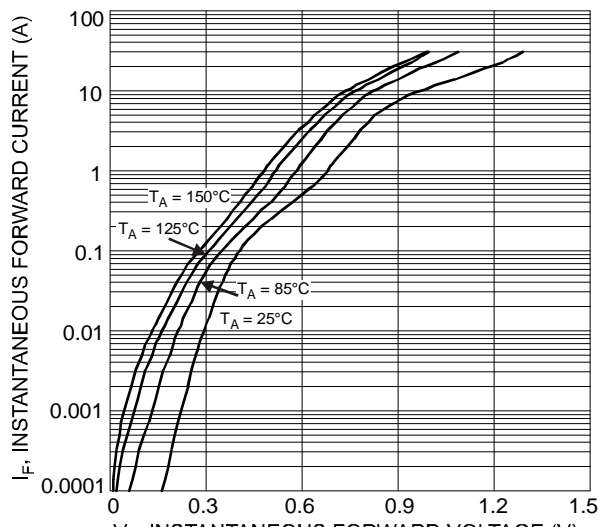


Fig. 1 Typical Forward Characteristics

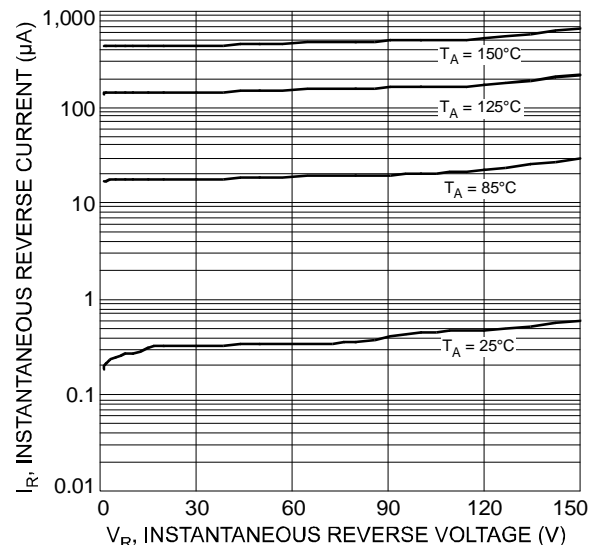
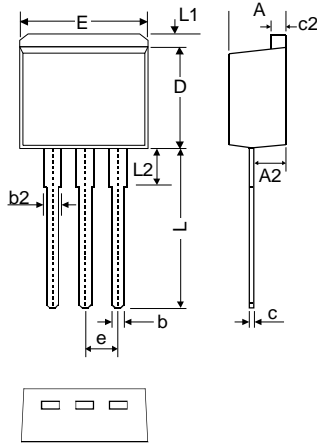


Fig. 2 Typical Reverse Characteristics

**Package Outline Dimensions**



| T0262                       |          |       |       |
|-----------------------------|----------|-------|-------|
| Dim                         | Min      | Max   | Typ   |
| A                           | 4.06     | 4.83  | 4.57  |
| A2                          | 2.03     | 2.79  | 2.67  |
| b                           | 0.64     | 0.99  | -     |
| b2                          | 1.14     | 1.40  | 1.24  |
| c                           | 0.35     | 0.74  | -     |
| c2                          | 1.14     | 1.40  | 1.27  |
| D                           | 8.64     | 9.65  | 8.70  |
| E                           | 9.65     | 10.29 | 10.11 |
| e                           | 2.54 Typ |       |       |
| L                           | 12.70    | 14.73 | 13.60 |
| L1                          | -        | 1.67  | -     |
| L2                          | -        | 4.00  | -     |
| <b>All Dimensions in mm</b> |          |       |       |

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