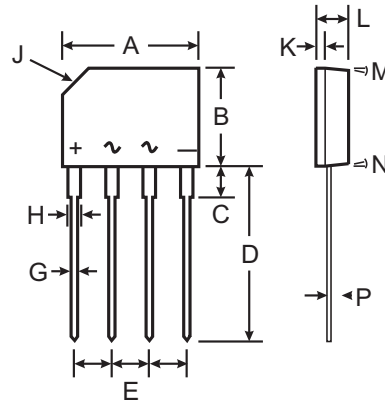


### Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of 1500V<sub>RMS</sub>
- Low Reverse Leakage Current
- Surge Overload Rating to 65A Peak
- Ideal for Printed Circuit Board Applications
- UL Listed Under Recognized Component Index, File Number E94661
- **Lead Free Finish, RoHS Compliant (Note 3)**

### Mechanical Data

- Case: KBP
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish - Tin. Plated Leads, Solderable per MIL-STD-202, Method 208 (Ⓜ3)
- Polarity: Marked on Body
- Ordering Information: See Last Page
- Marking: Type Number
- Weight: 1.52 grams (approximate)



| KBP                         |                   |       |
|-----------------------------|-------------------|-------|
| Dim                         | Min               | Max   |
| A                           | 14.25             | 14.75 |
| B                           | 10.20             | 10.60 |
| C                           | 2.29 Typical      |       |
| D                           | 14.25             | 14.73 |
| E                           | 3.56              | 4.06  |
| G                           | 0.76              | 0.86  |
| H                           | 1.17              | 1.42  |
| J                           | 2.8 X 45° Chamfer |       |
| K                           | 0.80              | 1.10  |
| L                           | 3.35              | 3.65  |
| M                           | 3° Nominal        |       |
| N                           | 2° Nominal        |       |
| P                           | 0.30              | 0.64  |
| <b>All Dimensions in mm</b> |                   |       |

### Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

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

| Characteristic  | Symbol   | KBP 2005G   | KBP 201G | KBP 202G | KBP 204G | KBP 206G | KBP 208G | KBP 210G | Unit |
|---|--|-------------|----------|----------|----------|----------|----------|----------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 50          | 100      | 200      | 400      | 600      | 800      | 1000     | V    |
| RMS Reverse Voltage   | V <sub>R(RMS)</sub>                                    | 35          | 70       | 140      | 280      | 420      | 560      | 700      | V    |
| Average Rectified Output Current @ T <sub>C</sub> = 105°C   | I <sub>O</sub>   | 2.0         |          |          |          |          |          |          | A    |
| Non-Repetitive Peak Forward Surge Current, 8.3 ms single half-sine-wave superimposed on rated load    | I <sub>FSM</sub>                                       | 65          |          |          |          |          |          |          | A    |
| Forward Voltage per element @ I <sub>F</sub> = 2.0A   | V <sub>FM</sub>  | 1.1         |          |          |          |          |          |          | V    |
| Peak Reverse Current @ T <sub>C</sub> = 25°C<br>at Rated DC Blocking Voltage @ T <sub>C</sub> = 125°C | I <sub>RM</sub>  | 5.0<br>500  |          |          |          |          |          |          | μA   |
| Typical Total Capacitance per Element (Note 2)  | C <sub>T</sub>   | 25          |          |          |          |          |          |          | pF   |
| Typical Thermal Resistance (Note 1)   | R <sub>θJC</sub>                                       | 14          |          |          |          |          |          |          | °C/W |
| Operating and Storage Temperature Range   | T <sub>j</sub> , T <sub>STG</sub>                      | -65 to +150 |          |          |          |          |          |          | °C   |

- Notes: 1. Thermal resistance from junction to case per element. Unit mounted on 75 x 75 x 1.6mm aluminum plate heat sink.  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.  
3. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.

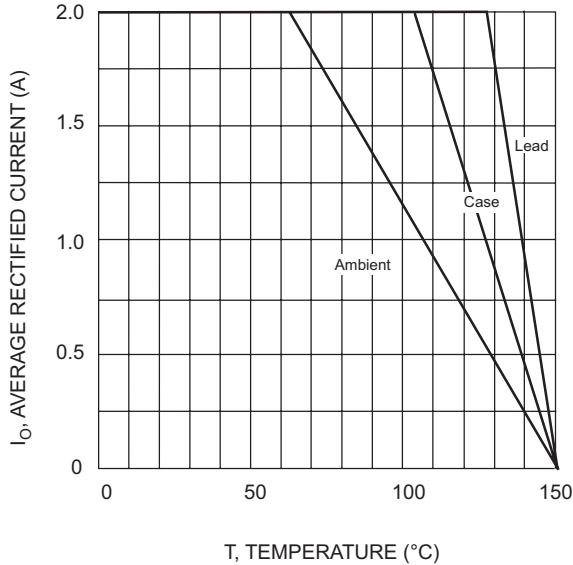


Fig. 1 Forward Current Derating Curve

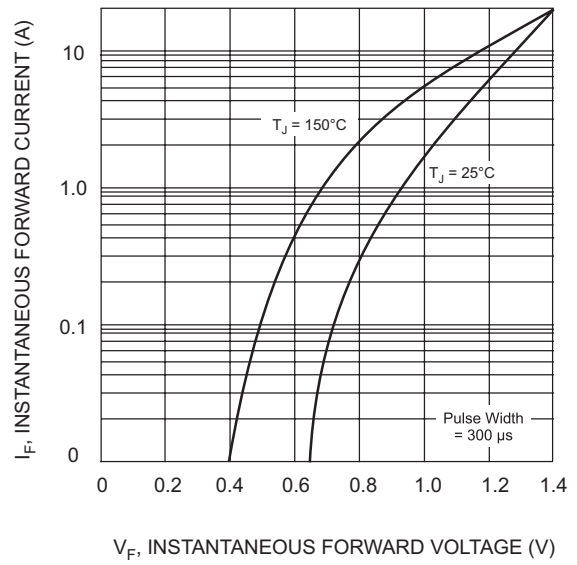


Fig. 2 Typical Forward Characteristics

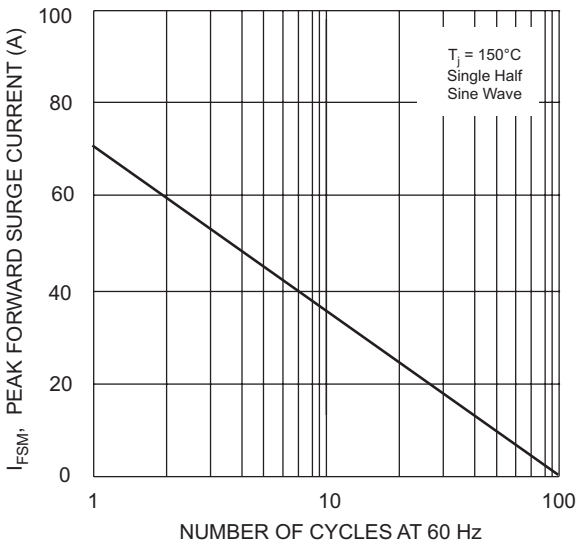


Fig. 3 Max Non-Repetitive Peak Forward Surge Current

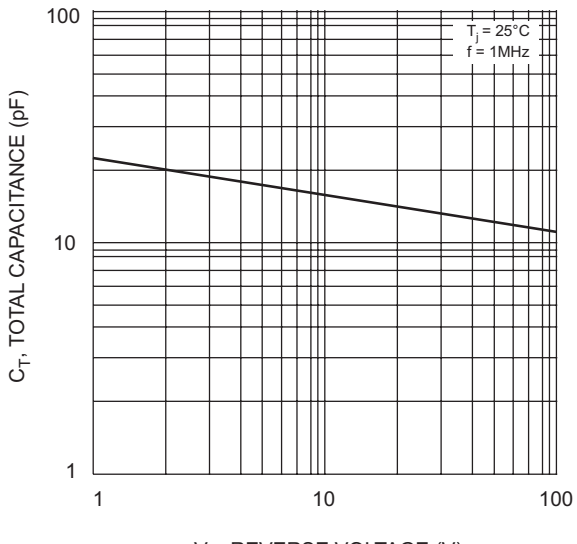


Fig. 4 Typical Total Capacitance, Per Element

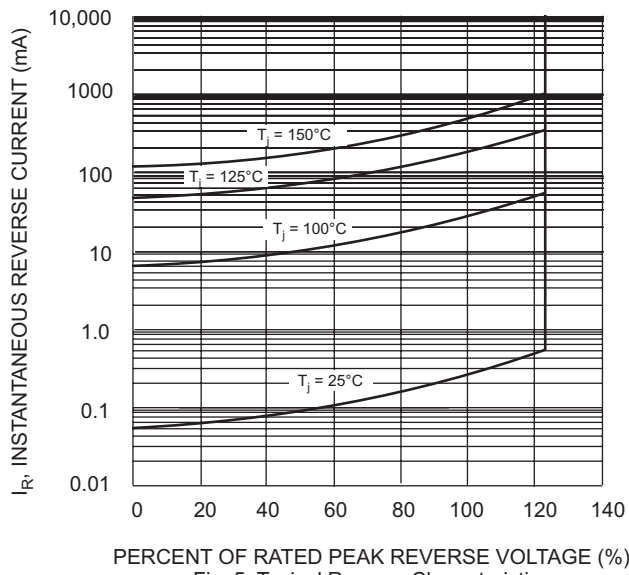


Fig. 5 Typical Reverse Characteristics

**Ordering Information** (Note 4)

| Device   | Packaging | Shipping           |
|----------|-----------|--------------------|
| KBP2005G | KBP       | 35 pieces per Tube |
| KBP201G  | KBP       | 35 pieces per Tube |
| KBP202G  | KBP       | 35 pieces per Tube |
| KBP204G  | KBP       | 35 pieces per Tube |
| KBP206G  | KBP       | 35 pieces per Tube |
| KBP208G  | KBP       | 35 pieces per Tube |
| KBP210G  | KBP       | 35 pieces per Tube |

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02008.pdf>.

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