



**THE DATASHEET OF
KBP01G**

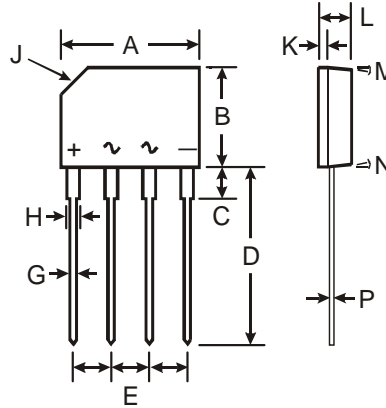


Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of 1500V_{RMS}
- Low Reverse Leakage Current
- Surge Overload Rating to 40A Peak
- Ideal for Printed Circuit Board Applications
- UL Listed Under Recognized Component Index, File Number E94661
- **Lead Free Finish, RoHS Compliant (Note 2)**

Mechanical Data

- Case: KBP
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Finish – Matte Tin. Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- 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 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics

@T_A = 25°C unless otherwise specified

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

| Characteristic | Symbol | KBP 005G | KBP 01G | KBP 02G | KBP 04G | KBP 06G | KBP 08G | KBP 10G | Unit |
|--|-----------------------------------|-------------|---------|---------|---------|---------|---------|---------|------|
| Peak Repetitive Reverse Voltage | V _{RRM} | | | | | | | | V |
| Working Peak Reverse Voltage | V _{RWM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | |
| DC Blocking Voltage | V _R | | | | | | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current @ T _C = 105°C | I _O | 1.5 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load | I _{FSM} | 40 | | | | | | | A |
| Forward Voltage per element @ I _F = 1.5A | V _{FM} | 1.1 | | | | | | | V |
| Peak Reverse Current @ T _C = 25°C at Rated DC Blocking Voltage @ T _C = 125°C | I _{RM} | 5.0 500 | | | | | | | μA |
| Typical Total Capacitance per (Note 1) | C _T | 20 | | | | | | | pF |
| Typical Thermal Resistance, Junction to Case | R _{θJC} | 18 | | | | | | | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +150 | | | | | | | °C |

- Notes:
1. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
 2. RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, see EU Directive Annex Notes 5 and 7.
 3. Unit mounted on 300 x 300 x 1.6mm aluminum plate heat sink.

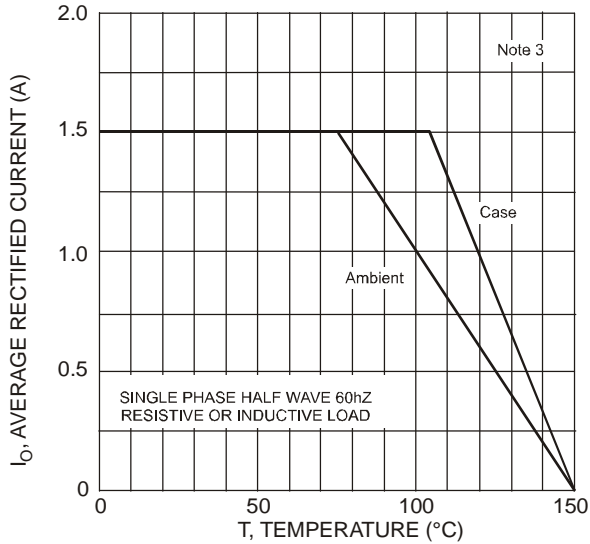


Fig. 1 Forward Current Derating Curve

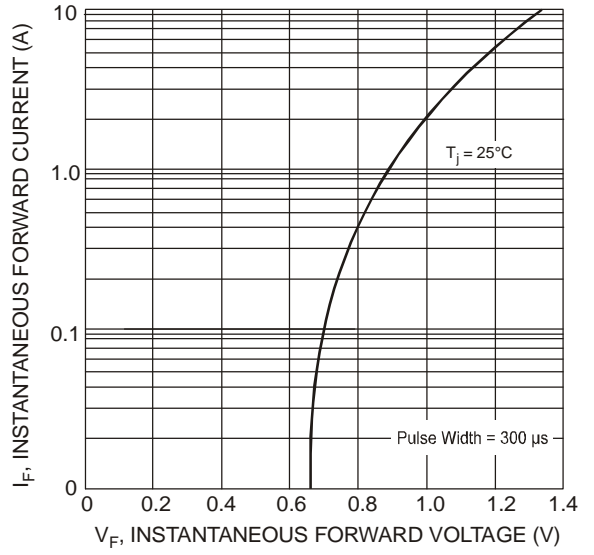


Fig. 2 Typical Forward Characteristics

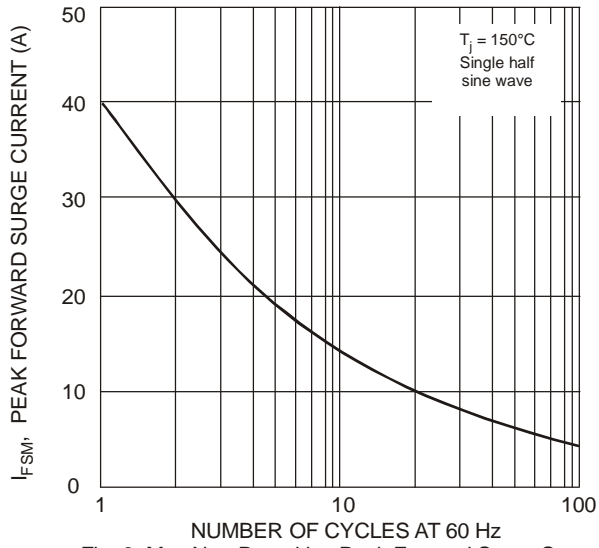


Fig. 3 Max Non-Repetitive Peak Forward Surge Current

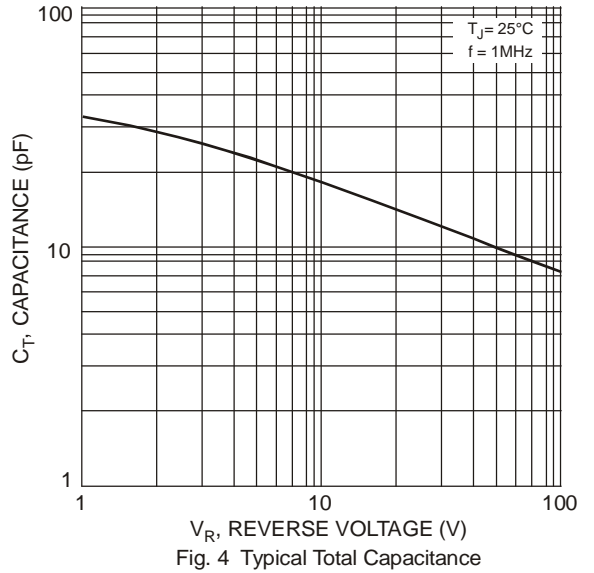


Fig. 4 Typical Total Capacitance

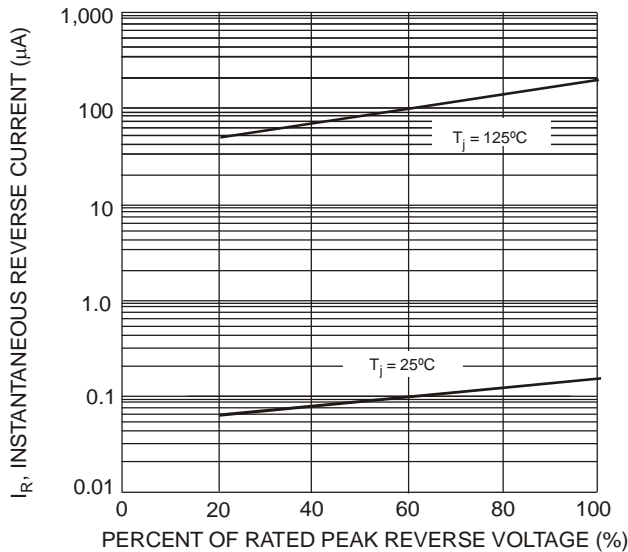


Fig. 5 Typical Reverse Characteristics

Ordering Information (Note 4)

| Device | Packaging | Shipping |
|---------|-----------|--------------------|
| KBP005G | KBP | 35 pieces per Tube |
| KBP01G | KBP | 35 pieces per Tube |
| KBP02G | KBP | 35 pieces per Tube |
| KBP04G | KBP | 35 pieces per Tube |
| KBP06G | KBP | 35 pieces per Tube |
| KBP08G | KBP | 35 pieces per Tube |
| KBP10G | KBP | 35 pieces per Tube |

Notes: 4. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

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