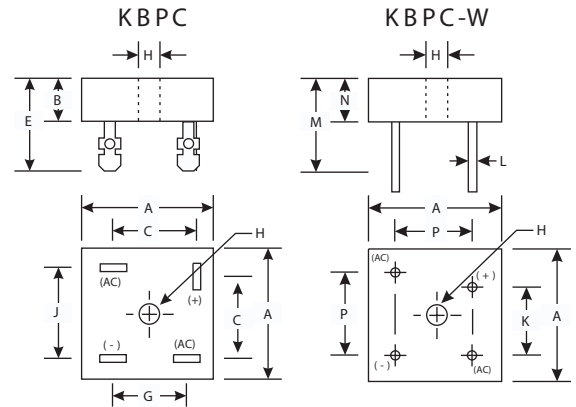


### Features

- Diffused Junction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Surge Overload Rating to 400A Peak
- Electrically Isolated Metal Case for Maximum Heat Dissipation
- High Case Dielectric Strength of 1500V<sub>RMS</sub>

### Mechanical Data

- Case : High Conductivity Metal
- Terminals : Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity : Symbols Marked on Case
- Mounting : Through Hole for #10 Screw
- Mounting Torque : 8.0 Inch-pounds Maximum
- Weight : KBPC 31.6 grams (approx.)  
KBPC-W 28.5 grams (approx.)
- Mounting Position : Any
- Marking : Type Number



| KBPC / KBPC-W |                    |             |     |             |             |
|---------------|--------------------|-------------|-----|-------------|-------------|
| Dim           | Min                | Max         | Dim | Min         | Max         |
| A             | 28.40              | 28.70       | J   | 17.10       | 19.10       |
| B             | 10.97              | 11.23       | K   | 10.40       | 12.40       |
| C             | 15.50              | 17.60       | L   | 0.97 $\phi$ | 1.07 $\phi$ |
| E             | 22.86              | 25.40       | M   | 30.50       | —           |
| G             | 13.30              | 15.30       | N   | 10.97       | 11.23       |
| H             | Hole for #10 screw |             | P   | 17.10       | 19.10       |
|               | 4.85 $\phi$        | 5.59 $\phi$ |     |             |             |

All Dimensions in mm  
"W" Suffix Designates Wire Leads  
No Suffix Designates Fast-on Terminals

### Maximum Ratings And Electrical Characteristics

(Ratings at 25 °C ambient temperature unless otherwise specified, Single phase, half wave 60Hz, resistive or inductive load. For capacitive load, derate by 20%)

|  | Symbols  | KBPC35005/W | KBPC3501/W | KBPC3502/W | KBPC3504/W | KBPC3506/W | KBPC3508/W | KBPC3510/W | Units            |
|--|--|-------------|------------|------------|------------|------------|------------|------------|------------------|
| Peak Repetitive Reverse voltage<br>Working Peak Reverse voltage<br>DC Blocking voltage                           | V <sub>RMM</sub><br>V <sub>RRM</sub><br>V <sub>R</sub> | 50          | 100        | 200        | 400        | 600        | 800        | 1000       | Volts            |
| RMS Reverse voltage  | V <sub>R(RMS)</sub>                                    | 35          | 70         | 140        | 280        | 420        | 560        | 700        | Volts            |
| Average Rectified Output Current @ T <sub>c</sub> =55 °C   | I <sub>o</sub>   | 35          |            |            |            |            |            |            | Amps             |
| Non-Repetitive Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                                       | 400         |            |            |            |            |            |            | Amps             |
| Forward voltage (per element) @ I <sub>F</sub> =17.5 A   | V <sub>FM</sub>  | 1.2         |            |            |            |            |            |            | Volts            |
| Peak Reverse Current at Rated DC Blocking voltage  | @ T <sub>c</sub> =25 °C                                | 10          |            |            |            |            |            |            | $\mu$ A          |
|  | @ T <sub>c</sub> =125 °C                               | 1.0         |            |            |            |            |            |            | mA               |
| I <sup>2</sup> t Rating for Fusing (t<8.3ms) (Note 2)  | I <sup>2</sup> t                                       | 664         |            |            |            |            |            |            | A <sup>2</sup> s |
| Typical Junction Capacitance (Note 3)  | C <sub>j</sub>   | 300         |            |            |            |            |            |            | pF               |
| Typical Thermal Resistance Junction to Case  | R $\theta$ JA  | 2.7         |            |            |            |            |            |            | °C/W             |
| Operating and Storage Temperature Range  | T <sub>j</sub><br>T <sub>STG</sub>                     | -65 to +150 |            |            |            |            |            |            | °C               |

#### Notes:

- (1) Thermal resistance junction to case mounted on heat sink.
- (2) Measured at non-repetitive, for t > 1.0ms and < 8.3ms.
- (3) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

## RATINGS AND CHARACTERISTIC CURVES KBPC35005/W THRU KBPC3510/W

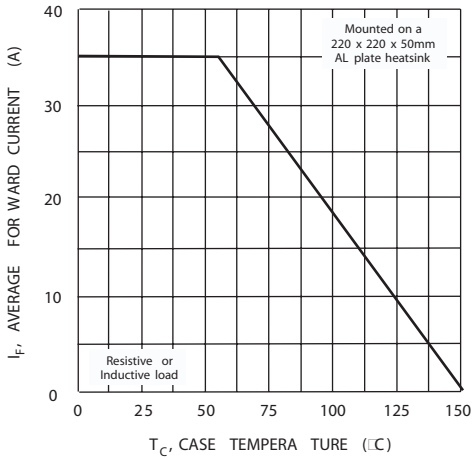


Fig. 1 Forward Current Derating Curve.

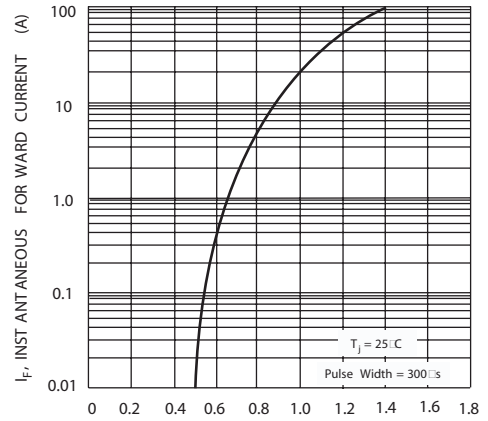


Fig. 2 Typical Forward Characteristics (per element)

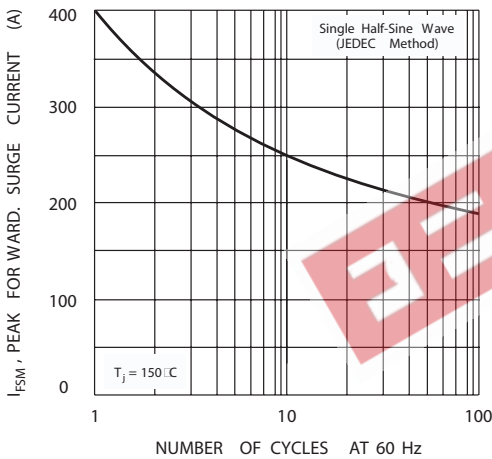


Fig. 3 Maximum Non-Repetitive Surge Current

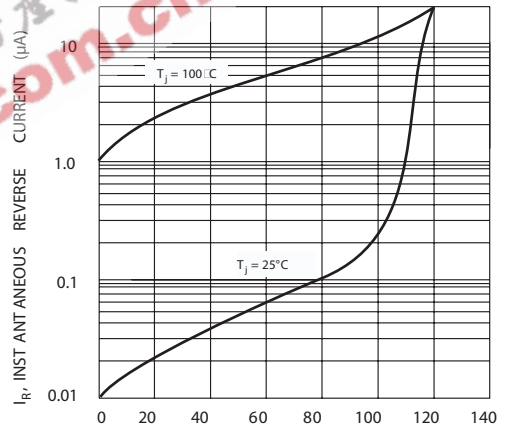


Fig. 4 Typical Reverse Characteristics (per element)