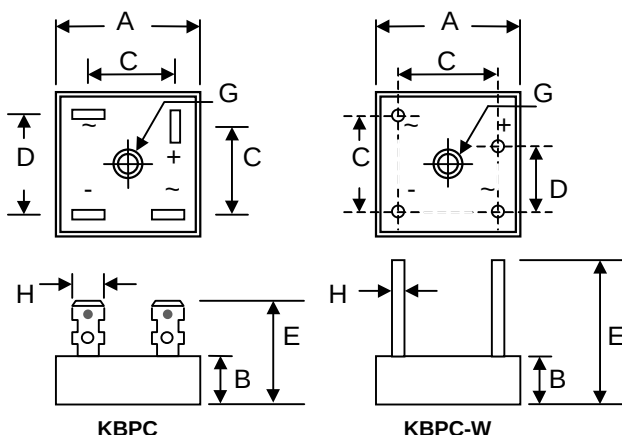


## Features

- Diffused Junction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Metal Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 2500V

## Mechanical Data

- Case: KBPC (Metal Case with Faston Lugs) or KBPC-W (Metal Case with Wire Leads)
- Terminals: Plated Faston Lugs or Wire Leads, Add "W" Suffix to Indicate Wire Leads
- Polarity: As Marked on Case
- Mounting: Through Hole with #10 Screw
- Mounting Torque: 23 cm·kg (20 in·lbs) Max.
- Weight: 30 grams (KBPC); 28 grams (KBPC-W)
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version,**



|                     | KBPC                              |       | KBPC-W |       |
|---------------------|-----------------------------------|-------|--------|-------|
| Dim                 | Min                               | Max   | Min    | Max   |
| A                   | 27.94                             | 28.96 | 27.94  | 28.96 |
| B                   | 10.97                             | 11.23 | 10.97  | 11.23 |
| C                   | 15.50                             | 17.60 | 17.10  | 19.10 |
| D                   | 17.50                             | 18.50 | 10.90  | 11.90 |
| E                   | 22.86                             | 25.40 | 30.50  | —     |
| G                   | Hole for #10 screw, 5.08Ø Nominal |       |        |       |
| H                   | 6.35 Typical                      |       | 0.97Ø  | 1.07Ø |
| All Dimension in mm |                                   |       |        |       |

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

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

| Characteristic                                                                                                        | Symbol                            | KBPC35      |     |     |     |     |     |      |      |      |      | Unit             |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------|-----|-----|-----|-----|-----|------|------|------|------|------------------|
|                                                                                                                       |                                   | 005         | 01  | 02  | 04  | 06  | 08  | 10   | 12   | 14   | 16   |                  |
| Peak Repetitive Reverse Voltage                                                                                       | V <sub>RRM</sub>                  | 50          | 100 | 200 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | V                |
| Working Peak Reverse Voltage                                                                                          | V <sub>RWM</sub>                  |             |     |     |     |     |     |      |      |      |      |                  |
| DC Blocking Voltage                                                                                                   | V <sub>R</sub>                    |             |     |     |     |     |     |      |      |      |      |                  |
| RMS Reverse Voltage                                                                                                   | V <sub>R(RMS)</sub>               | 35          | 70  | 140 | 280 | 420 | 560 | 700  | 840  | 980  | 1120 | V                |
| Average Rectified Output Current @T <sub>A</sub> = 60°C                                                               | I <sub>O</sub>                    | 35          |     |     |     |     |     |      |      |      |      | A                |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed<br>on rated load (JEDEC Method) | I <sub>FSM</sub>                  | 400         |     |     |     |     |     |      |      |      |      | A                |
| Forward Voltage per leg @I <sub>F</sub> = 17.5A                                                                       | V <sub>FM</sub>                   | 1.2         |     |     |     |     |     |      |      |      |      | V                |
| Peak Reverse Current @T <sub>C</sub> = 25°C                                                                           | I <sub>RM</sub>                   | 10          |     |     |     |     |     |      |      |      |      | μA               |
| At Rated DC Blocking Voltage @T <sub>C</sub> = 125°C                                                                  |                                   | 1.0         |     |     |     |     |     |      |      |      |      | mA               |
| I <sup>2</sup> t Rating for Fusing (t < 8.3ms)                                                                        | I <sup>2</sup> t                  | 664         |     |     |     |     |     |      |      |      |      | A <sup>2</sup> s |
| Typical Junction Capacitance (Note 1)                                                                                 | C <sub>j</sub>                    | 300         |     |     |     |     |     |      |      |      |      | pF               |
| Typical Thermal Resistance per leg (Note 2)                                                                           | R <sub>θJC</sub>                  | 2.1         |     |     |     |     |     |      |      |      |      | °C/W             |
| RMS Isolation Voltage from Case to Leads                                                                              | V <sub>ISO</sub>                  | 2500        |     |     |     |     |     |      |      |      |      | V                |
| Operating and Storage Temperature Range                                                                               | T <sub>J</sub> , T <sub>STG</sub> | -65 to +150 |     |     |     |     |     |      |      |      |      | °C               |

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance junction to case, mounted on heatsink.

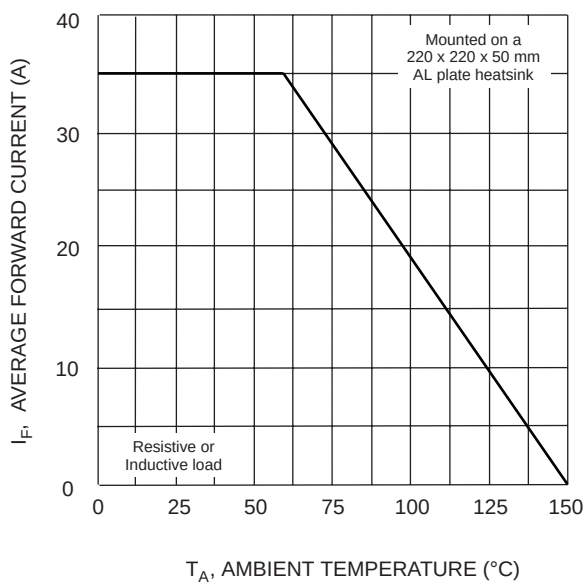


Fig. 1 Forward Current Derating Curve

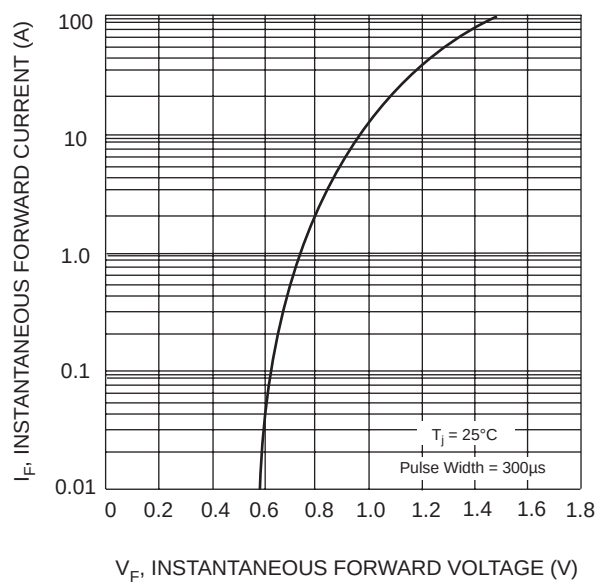


Fig. 2 Typical Forward Characteristics (per element)

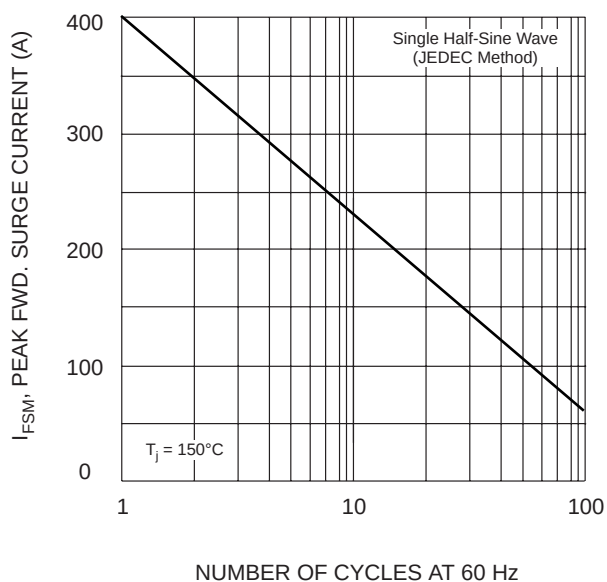


Fig. 3 Max Non-Repetitive Surge Current

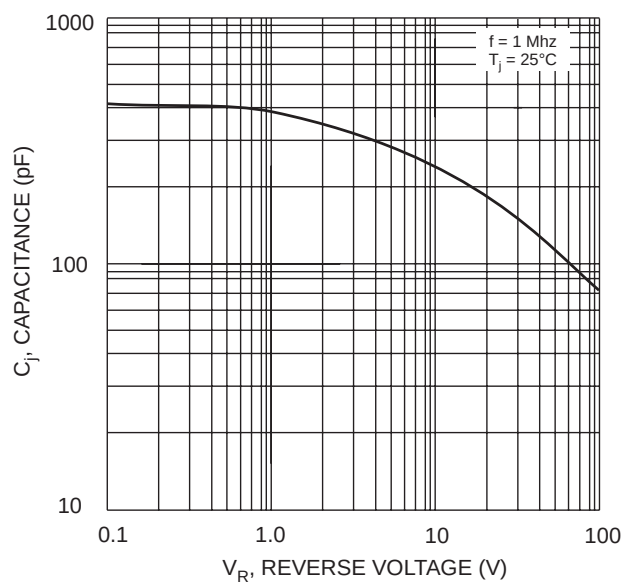


Fig. 4 Typical Junction Capacitance (per element)

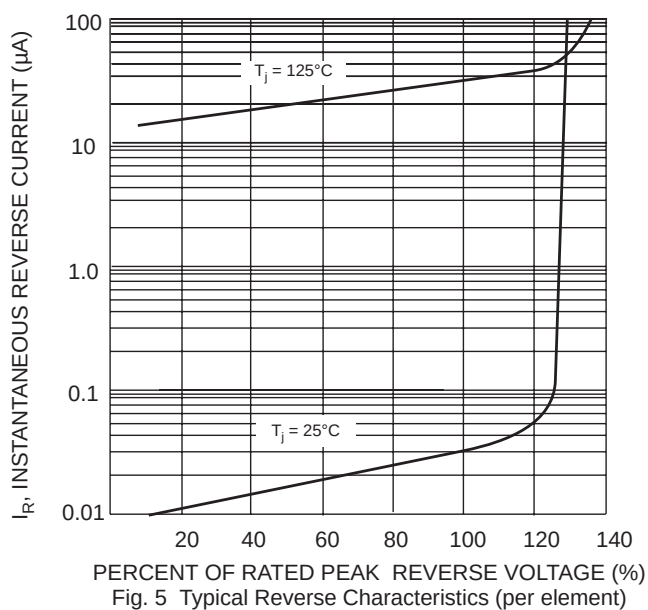


Fig. 5 Typical Reverse Characteristics (per element)