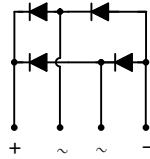
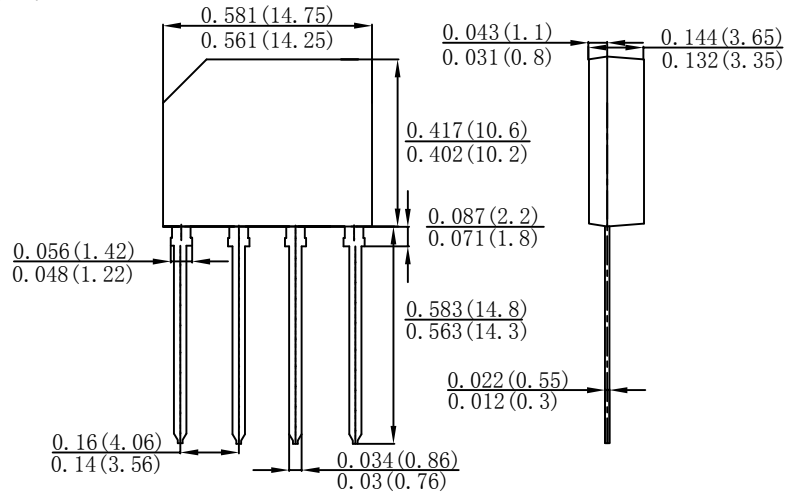


### Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-0



KBP



Dimensions in inches and (millimeters )

### Mechanical Data

- Case: KBP, molded plastic
- Terminals: plated leads solderable per MIL-STD-202, Method 208
- Polarity: as marked on case
- Mounting position: Any
- Marking: type number
- Lead Free: For RoHS / Lead Free Version

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| TYPE NUMBER                                                                                                           | SYMBOL                           | KBP<br>4005 | KBP<br>401 | KBP<br>402 | KBP<br>404 | KBP<br>406 | KBP<br>408 | KBP<br>410 | UNITS            |
|-----------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------|------------|------------|------------|------------|------------|------------|------------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | V <sub>RRM</sub>                 | 50          | 100        | 200        | 400        | 600        | 800        | 1000       | V                |
|                                                                                                                       | V <sub>RWM</sub>                 |             |            |            |            |            |            |            |                  |
|                                                                                                                       | V <sub>DC</sub>                  |             |            |            |            |            |            |            |                  |
| RMS Reverse Voltage                                                                                                   | V <sub>RMS</sub>                 | 35          | 70         | 140        | 280        | 420        | 560        | 700        | V                |
| Average Rectified Output Current (Note 1)<br>@T <sub>c</sub> =100°C                                                   | I <sub>F(AV)</sub>               | 4.0         |            |            |            |            |            |            | A                |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single half sine-wave superimposed on rated load<br>(JEDEC Method) | I <sub>FSM</sub>                 | 80          |            |            |            |            |            |            | A                |
| I <sup>2</sup> t Rating for Fusing (t < 8.3ms)                                                                        | I <sup>2</sup> t                 | 26.56       |            |            |            |            |            |            | A <sup>2</sup> s |
| Forward Voltage per element @I <sub>F</sub> =4.0A                                                                     | V <sub>FM</sub>                  | 1.1         |            |            |            |            |            |            | V                |
| Peak Reverse Current @T <sub>A</sub> =25°C<br>At Rated DC Blocking Voltage @T <sub>A</sub> =125°C                     | I <sub>R</sub>                   | 5.0<br>500  |            |            |            |            |            |            | uA               |
| Typical Thermal Resistance per leg (Note 2)                                                                           | R <sub>θJA</sub>                 | 40          |            |            |            |            |            |            | °C/W             |
|                                                                                                                       | R <sub>θJL</sub>                 | 20          |            |            |            |            |            |            |                  |
| Operating and Storage Temperature Range                                                                               | T <sub>J</sub> ,T <sub>STG</sub> | -55to+150   |            |            |            |            |            |            | °C               |

Note:1. Mounted on glass epoxy PC board with 1.3mm<sup>2</sup> solder pad.

2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C..

Fig. 1 Forward Current Derating Curve

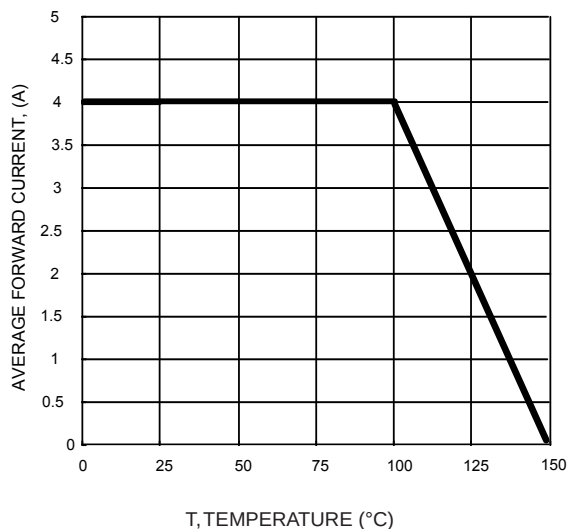


Fig. 2 Typical Fwd Characteristics

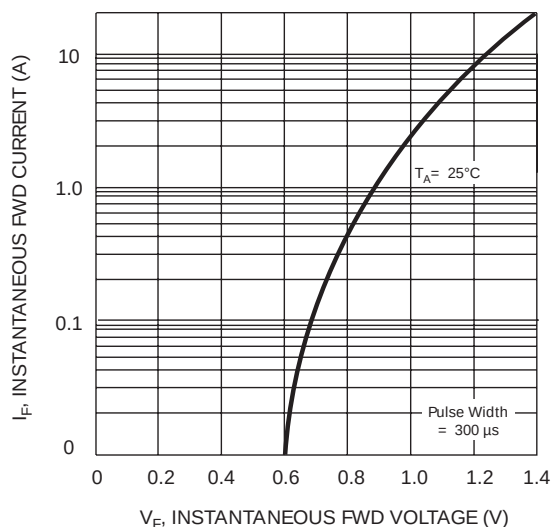


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

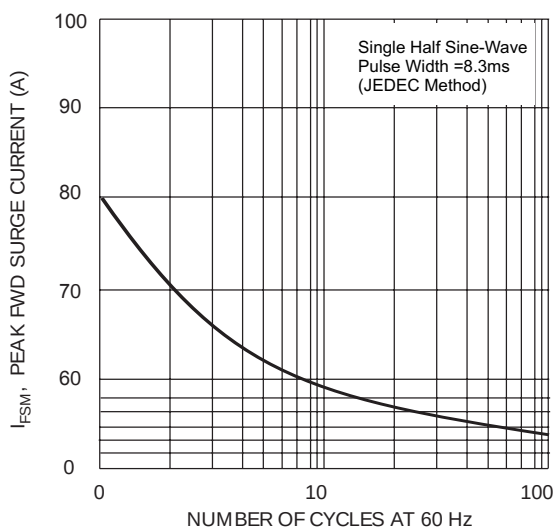


Fig. 4 Typical Junction Capacitance

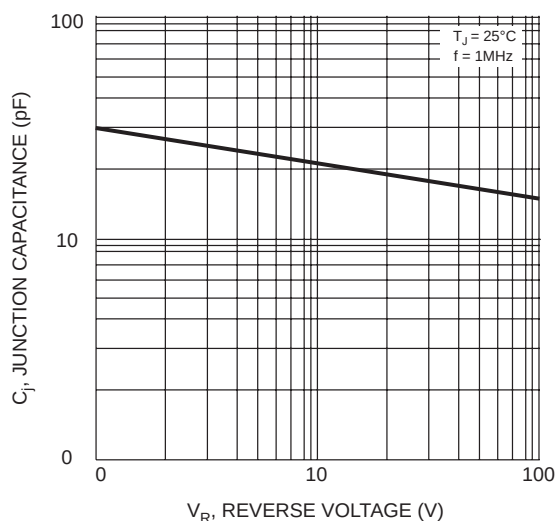


Fig. 5 Typical Reverse Characteristics (per element)

