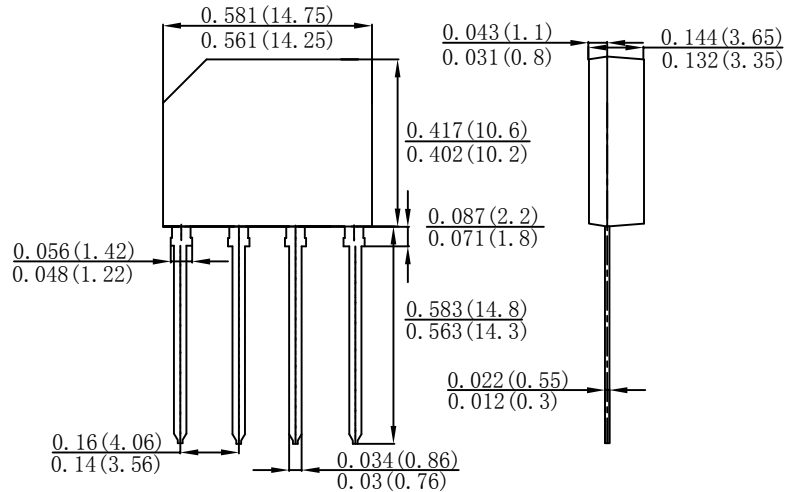




### Features

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

GBP

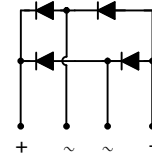


### Mechanical Data

- 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 4005   | KBP 401 | KBP 402 | KBP 404 | KBP 406 | KBP 408 | KBP 410 | UNITS            |
|---|----------------------------------|------------|---------|---------|---------|---------|---------|---------|------------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | V <sub>RRM</sub>                 |            |         |         |         |         |         |         | V                |
|   | V <sub>RWM</sub>                 | 50         | 100     | 200     | 400     | 600     | 800     | 1000    |                  |
|   | 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

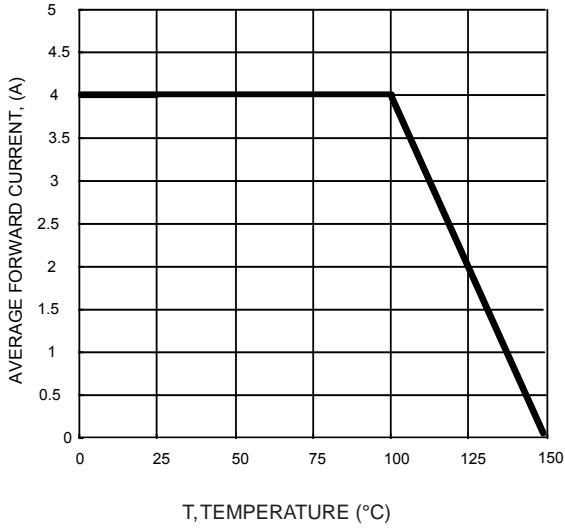


Fig. 2 Typical Fwd Characteristics

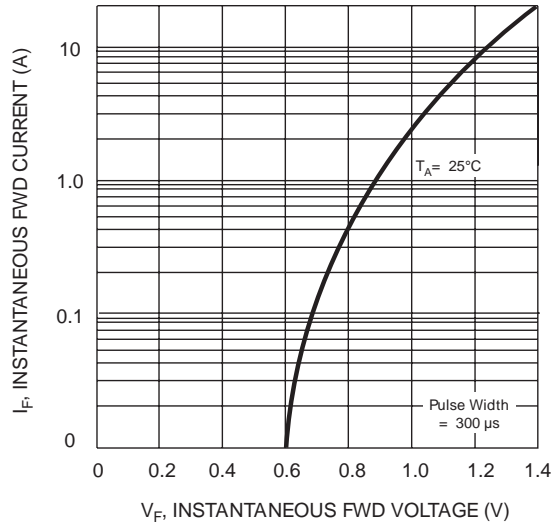


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

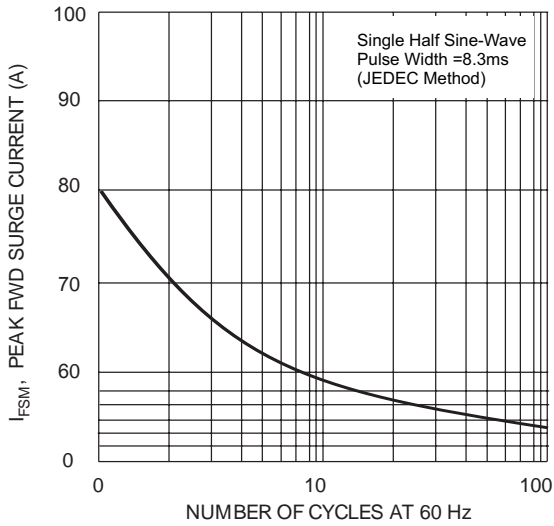


Fig. 4 Typical Junction Capacitance

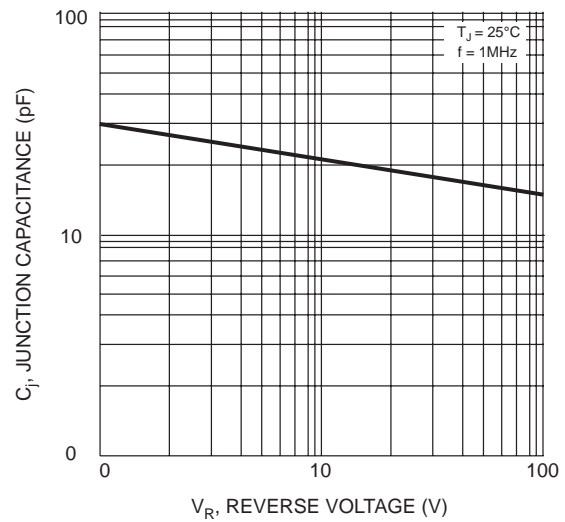


Fig. 5 T typical Reverse Characteristics (per element)

