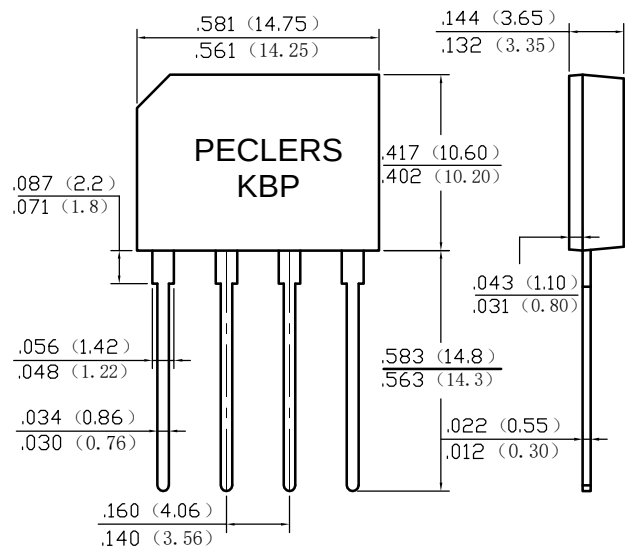


#### Features

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

#### 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



Dimensions in inches and (millimeters)

#### 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>                  | 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     |
| Maximum Average Forward Rectified Current<br>.375"(9.5mm) Lead Length at T <sub>A</sub> =50°C                         | I <sub>O</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>                  | 120        |         |         |         |         |         |         | A     |
| Forward Voltage per element @IF=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 Junction Capacitance (Note 1)                                                                                 | C <sub>J</sub>                    | 25         |         |         |         |         |         |         | pF    |
| 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    |

#### NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance Junction to Ambient and form junction to lead at 0.375"(9.5mm) lead length P.C.B. Mounted.

Fig. 1 Forward Current Derating Curve

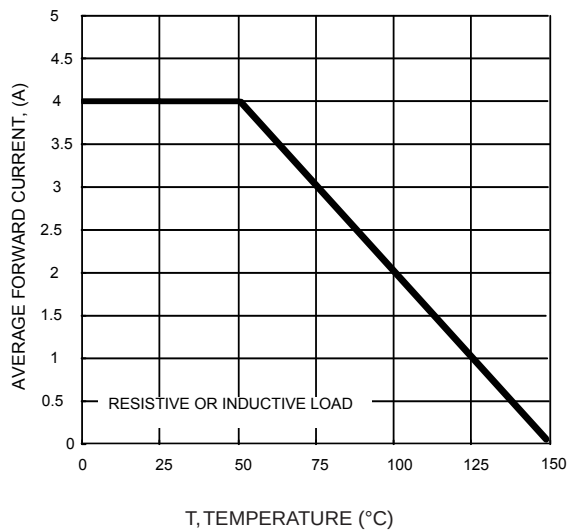


Fig. 2 Typical Fwd Characteristics

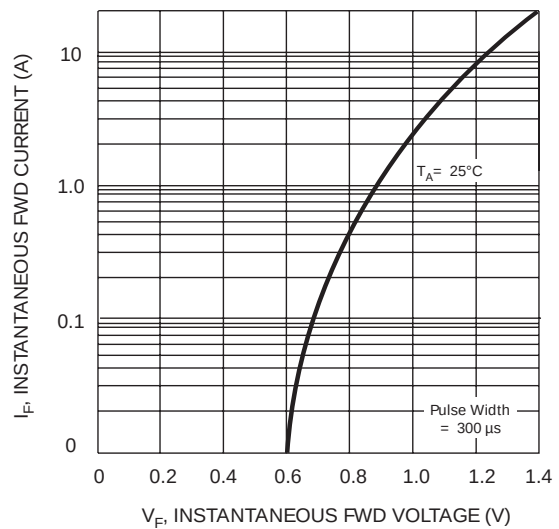


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

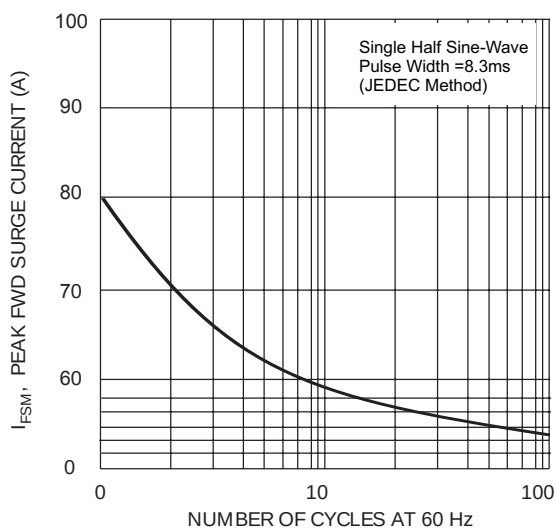


Fig. 4 Typical Junction Capacitance

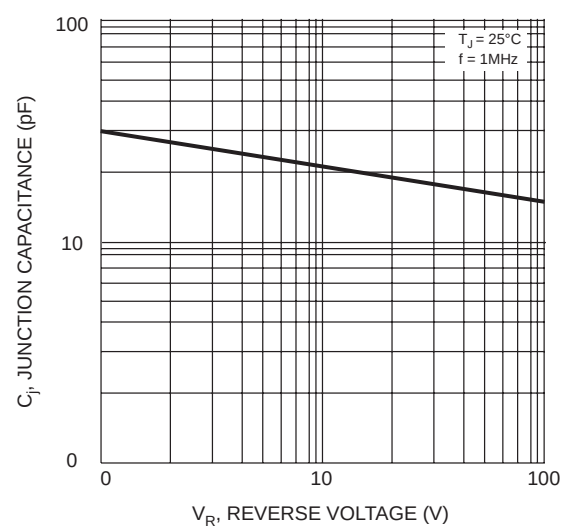


Fig. 5 Typical Reverse Characteristics (per element)

