# KBP3005G THRU KBP310G

**SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIER**

Voltage: 50 to 1000V Current:3.0A

GULF SEMI

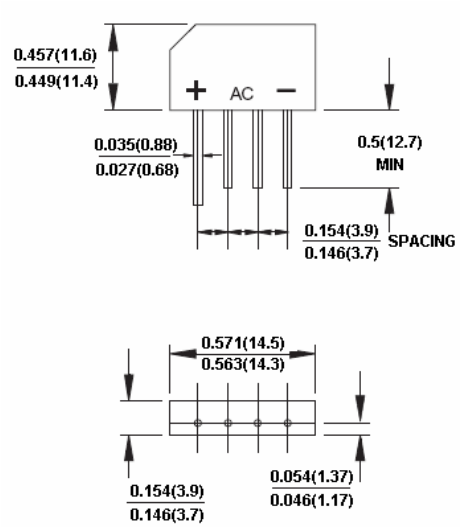
## Features

Glass passivated chip junction
High case dielectric strength
High surge current capability
Ideal for printed circuit board

## Mechanical Data

Terminal: Plated leads solderable per MIL-STD 202E, Method 208C
Case: UL-94 Class V-0 recognized Flame Retardant Epoxy
Polarity: As marked on body

**KBP**




Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half -wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated, for capacitive load, derate current by 20%)

| | Symbol | KBP3 005G | KBP 301G | KBP 302G | KBP 304G | KBP3 06G | KBP3 08G | KBP 310G | units |
|---|---|---|---|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | Vrrm | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | Vrms | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | Vdc | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified output current Ta =55℃ | If(av) | 3.0 | | | | | | | A |
| Peak forward surge current 50 Hz single half sine-wave superimposed on rated load | Ifsm | 80 | | | | | | | A |
| Maximum instantaneous forward voltage drop per diode at 3.0A | Vf | 1.05 | | | | | | | V |
| Rating for fusing (t < 10ms) | $I^2t$ | 32 | | | | | | | $A^2Sec$ |
| Maximum DC reverse current at Ta = 25℃<br>rated DC blocking voltage per leg Ta = 125℃ | Ir | 5.0<br>500 | | | | | | | μA |
| Maximum thermal resistance per leg (Note1) | Rth(ja)<br>Rth(jc) | 30<br>11 | | | | | | | ℃/W |
| Typical junction capacitance per leg at 4.0V,1MHz | Cj | 25 | | | | | | | pF |
| Operating junction and storage temperature range | Tj, Tstg | -55 to +150 | | | | | | | ℃ |

Note:
1. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.47 x 047" (12 x 12mm) copper pads

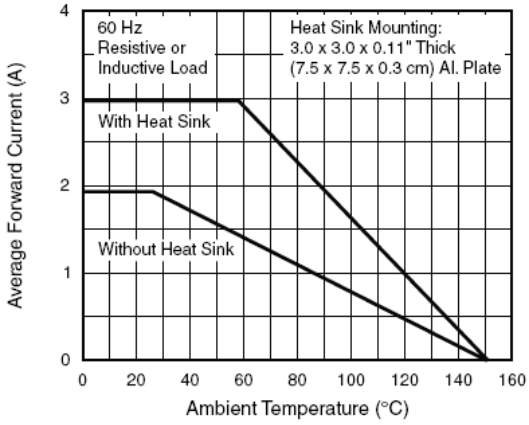



Figure 1. Forward Current Derating Curve

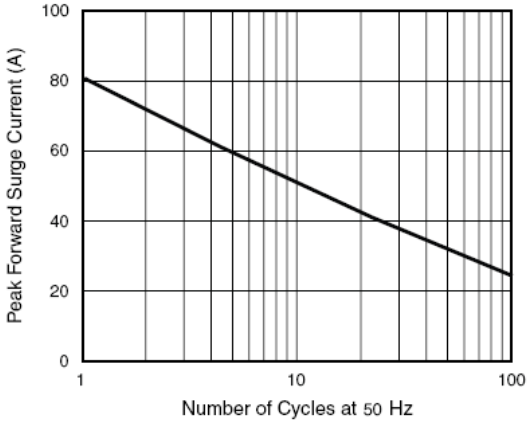



Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

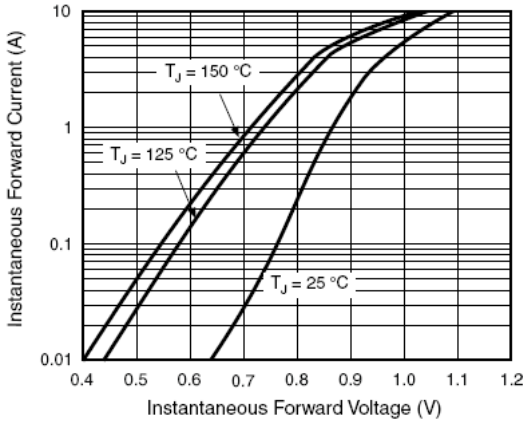



Figure 3. Typical Forward Characteristics Per Diode

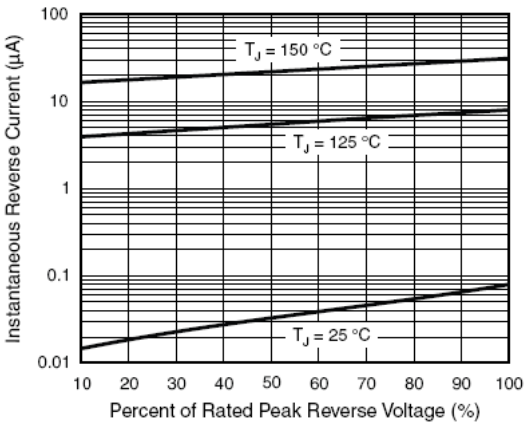



Figure 4. Typical Reverse Leakage Characteristics Per Diode

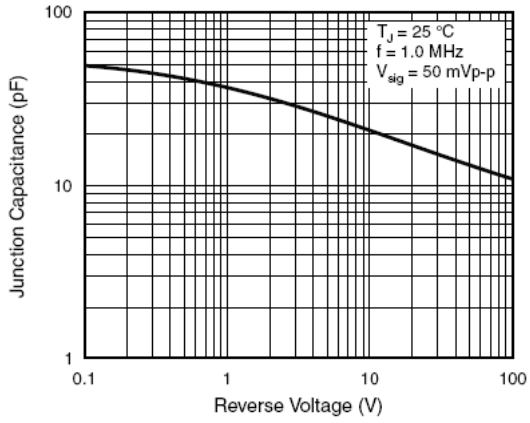



Figure 5. Typical Junction Capacitance Per Diode