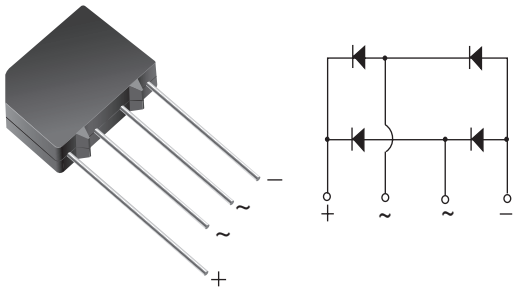
# Glass Passivated Single-Phase Bridge Rectifier

## Major Ratings and Characteristics

| | |
|---|---|
| $I_{F(AV)}$ | 3 A |
| $V_{RRM}$ | 50 V to 800 V |
| $I_{FSM}$ | 80 A |
| $I_R$ | 5 µA |
| $V_F$ | 1.05 V |
| $T_j$ max. | 150 °C |

**Case Style KBPM**




## Features

- UL Recognition file number E54214
- Ideal for printed circuit board
- High surge current capability
- High case dielectric strength
- Meets MSL level 1, per J-STD-020C

## Mechanical Data

**Case:** KBPM

Epoxy meets UL-94V-0 Flammability rating

**Terminals:** Silver plated (E4 Suffix) leads, solderable per J-STD-002B and MIL-STD-750, Method 2026

**Polarity:** As marked on body

## Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for Switching Power Supply, Home Appliances, Office Equipment, and Telecommunication applications

New Product

## Maximum Ratings

Ratings at 25 °C ambient temperature unless otherwise specified.

| Parameter | Symbols | 3KBP 005M | 3KBP 01M | 3KBP 02M | 3KBP 04M | 3KBP 06M | 3KBP 08M | Units |
|---|---|---|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | V |
| Maximum RMS voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | V |
| Maximum DC blocking voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | V |
| Maximum average forward output rectified current at $T_A$ = 55 °C (Fig. 1) | $I_{F(AV)}$ | 3.0 | | | | | | A |
| Peak forward surge current 50 Hz single half sine-wave superimposed on rated load | $I_{FSM}$ | 80 | | | | | | A |
| Rating for fusing (t < 10 ms) | $I^2t$ | 32 | | | | | | $A^2sec$ |
| Operating junction and storage temperature range | $T_J$, $T_{STG}$ | - 55 to + 150 | | | | | | °C |

## Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

| Parameter | Test condition | Symbols | 3KBP 005M | 3KBP 01M | 3KBP 02M | 3KBP 04M | 3KBP 06M | 3KBP 08M | Units |
|---|---|---|---|---|---|---|---|---|---|
| Maximum instantaneous forward voltage drop per leg | at 3.0 A | $V_F$ | 1.05 | | | | | | V |
| Maximum DC reverse current at rated DC blocking voltage per leg | $T_A$ = 25 °C<br>$T_A$ = 125 °C | $I_R$ | 5.0<br>500 | | | | | | µA |
| Typical junction capacitance per leg | at 4.0 V, 1 MHz | $C_J$ | 25 | | | | | | pF |

## Thermal Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

| Parameter | Symbols | 3KBP 005M | 3KBP 01M | 3KBP 02M | 3KBP 04M | 3KBP 06M | 3KBP 08M | Units |
|---|---|---|---|---|---|---|---|---|
| Typical thermal resistance per leg (1) | $R_{\theta JA}$<br>$R_{\theta JL}$ | 30<br>11 | | | | | | °C/W |

Notes:

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with, 0.47 x 0.47" (12 x12 mm) copper pads.

## Ratings and Characteristics Curves

($T_A$ = 25 °C unless otherwise noted)

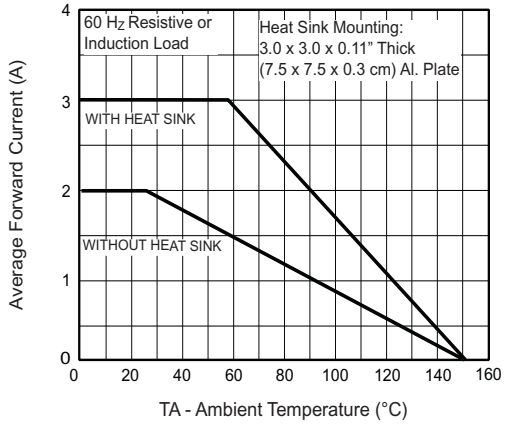



Figure 1. Forward Current Derating Curve

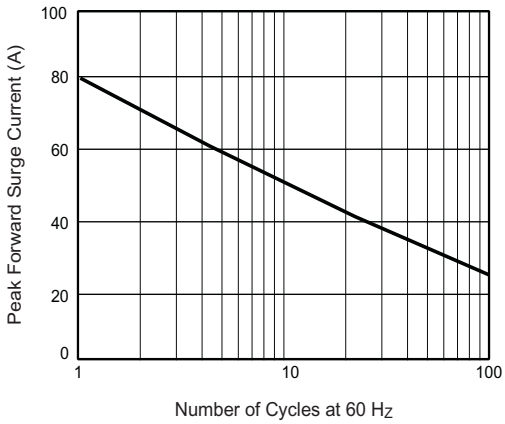



Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

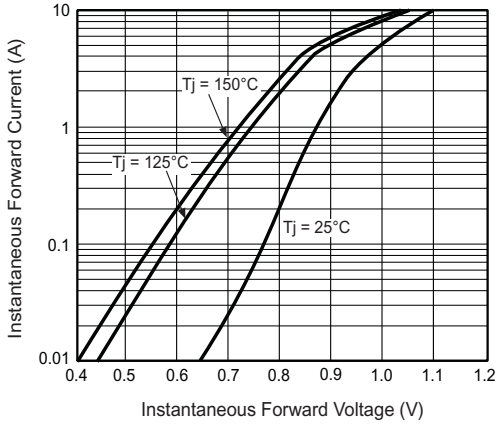



Figure 3. Typical Forward Characteristics Per Leg

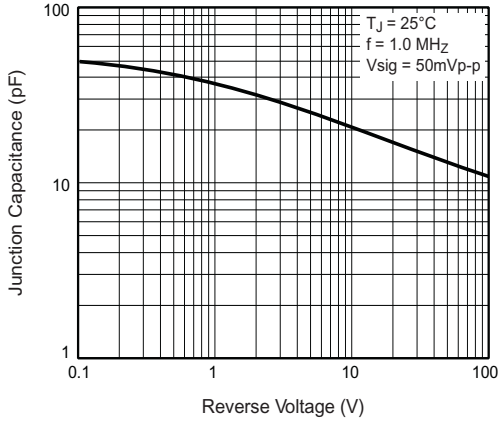



Figure 5. Typical Junction Capacitance Per Leg

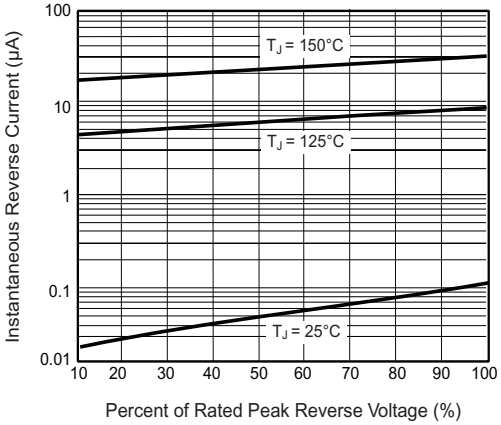



Figure 4. Typical Reverse Leakage Characteristics Per Leg

## Package outline dimensions in inches (millimeters)

