



# KBP005M thru KBP10M

Glass Passivated Single-Phase Bridge Rectifiers  
Reverse Voltage 50 to 1000 Volts Forward Current 1.5 Amperes

## Features

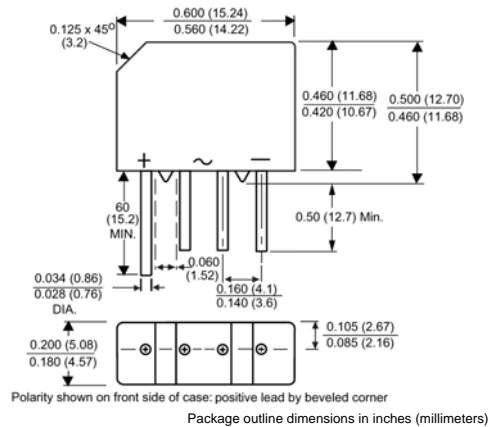
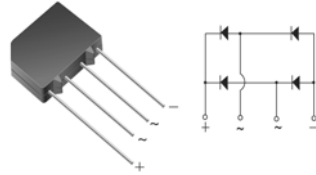
- ◆ Ideal for printed circuit board
- ◆ High surge current capability
- ◆ High case dielectric strength
- ◆ Solder Dip 260 °C, 40 seconds

## Mechanical Data

- ◆ Case: KBPM  
Epoxy meets UL-94V-0 Flammability rating
- ◆ Terminals: Silver plated (E4 Suffix) leads, solderable per J-STD-002B and JESD22-B102D
- ◆ 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



## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	KBP005M	KBP01M	KBP02M	KBP04M	KBP06M	KBP08M	KBP10M	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified output current at $T_A=40^\circ\text{C}$	$I_{F(AV)}$	1.5							Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	50.0 30.0							Amps
Rating for fusing ( $t < 8.3\text{ms}$ )	$I^2t$	10							$\text{A}^2\text{sec}$
Max. instantaneous forward voltage drop per element	$V_F$	1.0 (at 1.0A) 1.3 (at 1.57A)							Volts
Maximum DC reverse current at rated DC blocking voltage per element $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	$I_R$	5.0 500							$\mu\text{A}$
Typical junction capacitance per element at 4.0V, 1MHz	$C_j$	15							pF
Typical thermal resistance per leg (Note 1)	$R_{\theta JA}$ $R_{\theta BL}$	40 13							$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

**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.

\* JEDEC registered values

# RATINGS AND CHARACTERISTIC CURVES

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

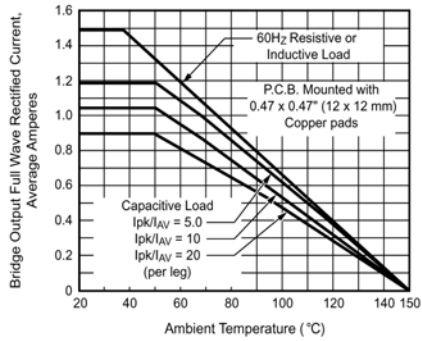


Figure 1. Derating Curve Output Rectified Current

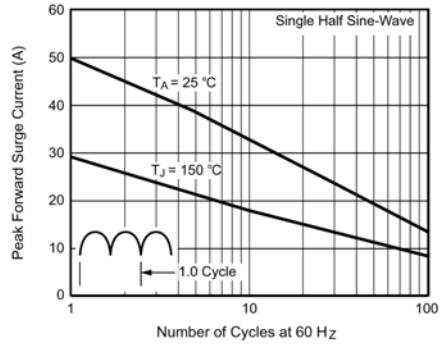


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

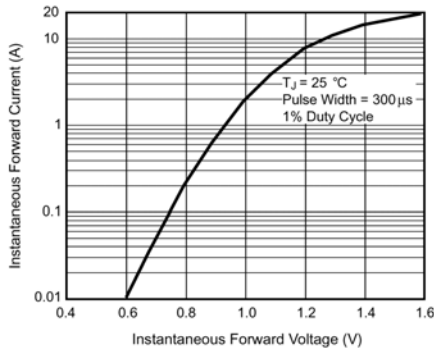


Figure 3. Typical Forward Characteristics Per Leg

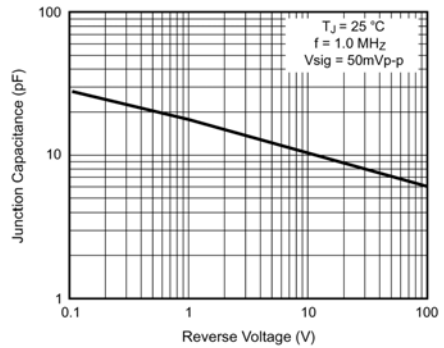


Figure 5. Typical Junction Capacitance Per Leg

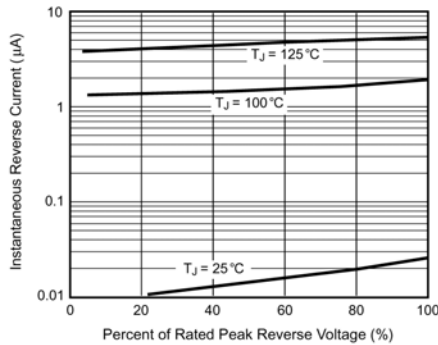


Figure 4. Typical Reverse Leakage Characteristics Per Leg