



KBP005M thru KBP10M

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

Features

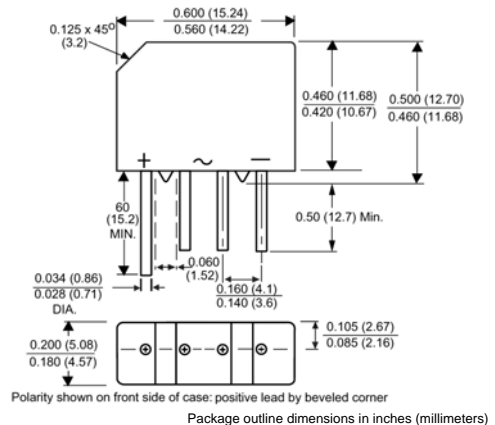
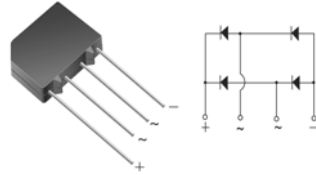
- ◆ Ideal for printed circuit board
- ◆ High surge current capability
- ◆ High case dielectric strength
- ◆ Solder Dip 260 °C, 40 seconds

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							A^2sec
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							μA
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							$^\circ\text{C/W}$
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)

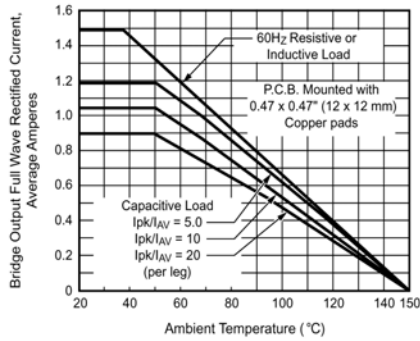


Figure 1. Derating Curve Output Rectified Current

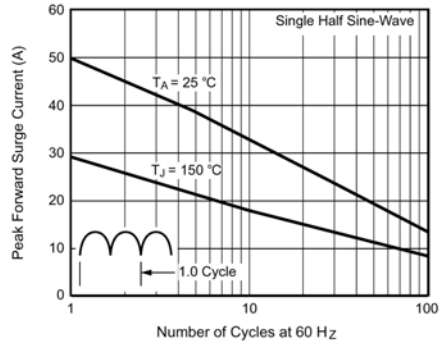


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

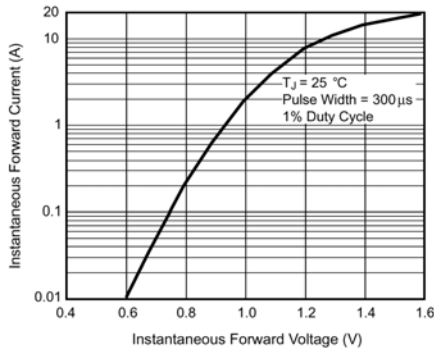


Figure 3. Typical Forward Characteristics Per Leg

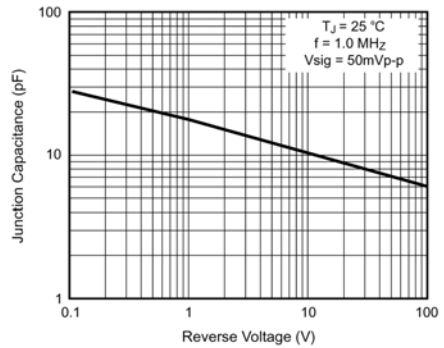


Figure 5. Typical Junction Capacitance Per Leg

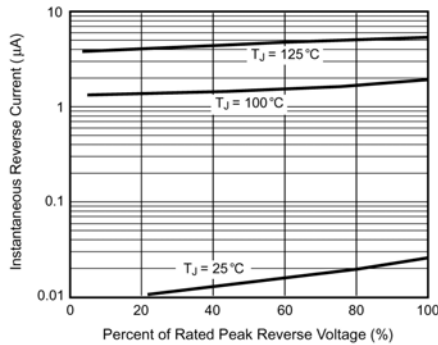


Figure 4. Typical Reverse Leakage Characteristics Per Leg