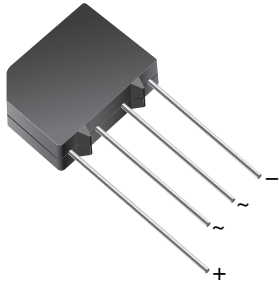
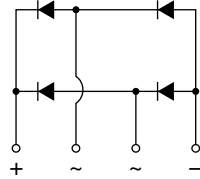




# Glass Passivated Single-Phase Bridge Rectifier



Case Style KBPM



## FEATURES

- UL recognition file number E54214
- Ideal for printed circuit board
- High surge current capability
- High case dielectric strength
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



RoHS COMPLIANT

## TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for switching power supply, home appliances, office equipment, and telecommunication applications.

## MECHANICAL DATA

Case: KBPM

Molding compound meets UL 94 V-0 flammability rating Base P/N-E4 - RoHS-compliant, commercial grade

Terminals: Silver plated leads, solderable per J-STD-002 and JESD22-B102

Polarity: As marked on body

PRIMARY CHARACTERISTICS	
Package	KBPM
$I_{F(AV)}$	3.0 A
$V_{RRM}$	50 V, 100 V, 200 V, 400 V, 600 V, 800 V
$I_{FSM}$	80 A
$I_R$	5 $\mu$ A
$V_F$ at $I_F = 3.0$ A	1.05 V
$T_J$ max.	150 °C
Diode variations	In-Line

MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)								
PARAMETER	SYMBOL	3KBP005M	3KBP01M	3KBP02M	3KBP04M	3KBP06M	3KBP08M	UNIT
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 <sup>2</sup> s
Operating junction and storage temperature range	$T_J, T_{STG}$	- 55 to + 150						°C

ELECTRICAL CHARACTERISTICS ( $T_A = 25$ °C unless otherwise noted)									
PARAMETER	TEST CONDITIONS	SYMBOL	3KBP005M	3KBP01M	3KBP02M	3KBP04M	3KBP06M	3KBP08M	UNIT
Maximum instantaneous forward voltage drop per diode	3.0 A	$V_F$	1.05						V
Maximum DC reverse current at rated DC blocking voltage per diode	$T_J = 25$ °C	$I_R$	5.0						$\mu$ A
	$T_J = 125$ °C		500						
Typical junction capacitance per diode	4.0 V, 1 MHz	$C_J$	25						pF



THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)								
PARAMETER	SYMBOL	3KBP005M	3KBP01M	3KBP02M	3KBP04M	3KBP06M	3KBP08M	UNIT
Typical thermal resistance <sup>(1)</sup>	R <sub>θJA</sub>			30				°C/W
	R <sub>θJL</sub>			11				

**Note**

<sup>(1)</sup> Thermal resistance from junction to ambient and from junction to lead mounted on PCB with, 0.47" x 0.47" (12 mm x 12 mm) copper pads

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
3KBP06M-E4/51	1.912	51	600	Anti-static PVC tray

**RATINGS AND CHARACTERISTICS CURVES (T<sub>A</sub> = 25 °C unless otherwise noted)**

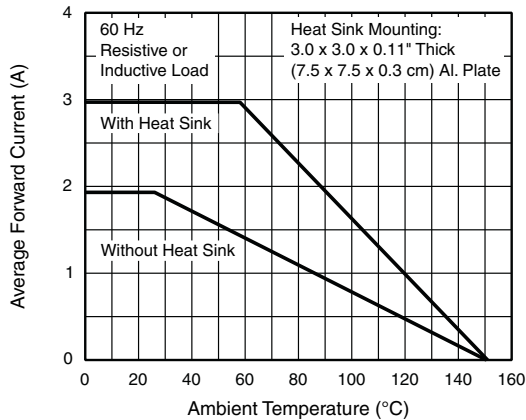


Fig. 1 - Forward Current Derating Curve

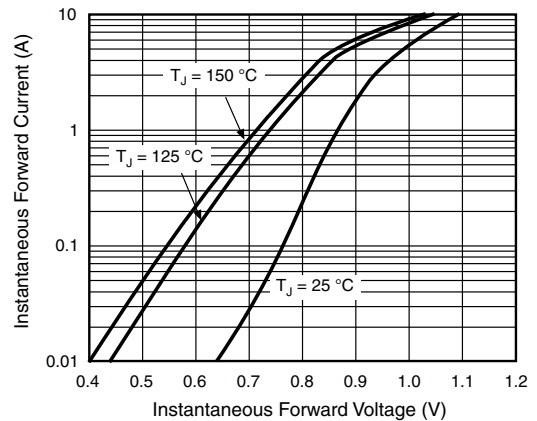


Fig. 3 - Typical Forward Characteristics Per Diode

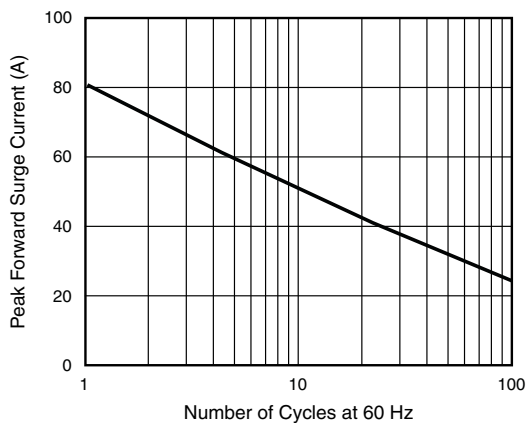


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

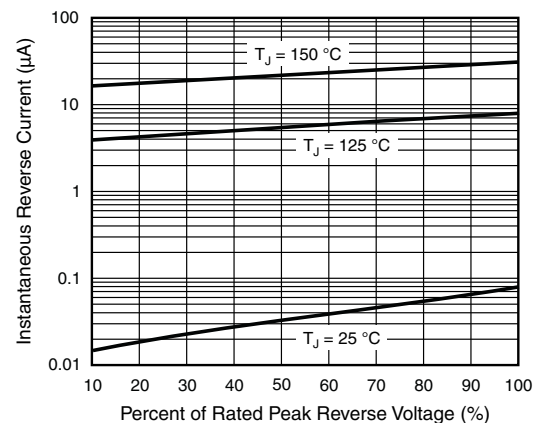


Fig. 4 - Typical Forward Characteristics Per Diode

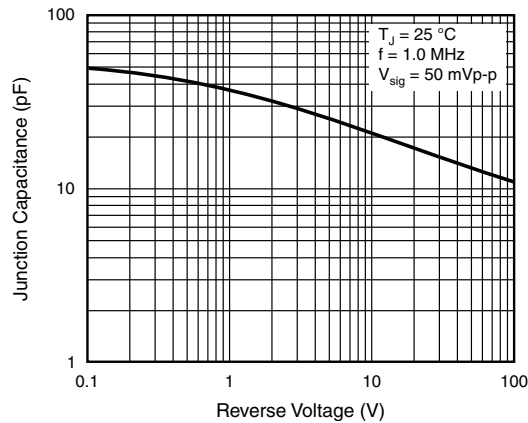
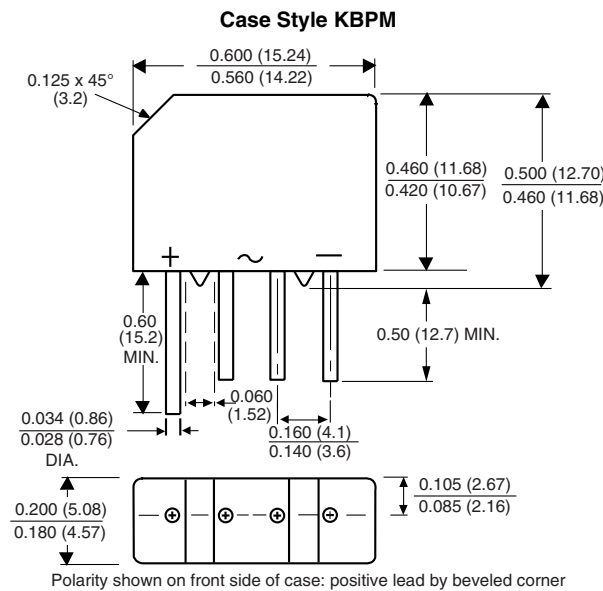


Fig. 5 - Typical Junction Capacitance Per Diode

**PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)





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