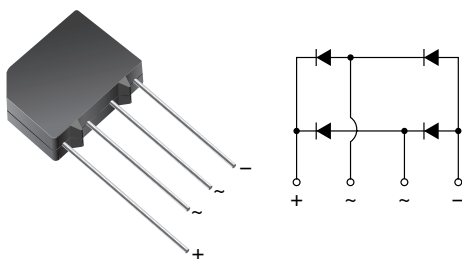




## Glass Passivated Single-Phase Bridge Rectifier



Case Style KBPM

### FEATURES

- UL recognition file number E54214
- Ideal for printed circuit board
- High surge current capability
- High case dielectric strength
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

RoHS  
COMPLIANT

### TYPICAL APPLICATIONS

General purpose use in ac-to-dc bridge full wave rectification for switching power supply, home appliances, office equipment, and telecommunication applications.

### MECHANICAL DATA

**Case:** KBPM

Epoxy meets UL 94V-0 flammability rating

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

E4 suffix for consumer grade

**Polarity:** As marked on body

### PRIMARY CHARACTERISTICS

$I_{F(AV)}$	3 A
$V_{RRM}$	50 V to 800 V
$I_{FSM}$	80 A
$I_R$	5 $\mu$ A
$V_F$	1.05 V
$T_J$ max.	150 °C

### MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)

PARAMETER	SYMBOL	3KBP 005M	3KBP 01M	3KBP 02M	3KBP 04M	3KBP 06M	3KBP 08M	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** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	3KBP 005M	3KBP 01M	3KBP 02M	3KBP 04M	3KBP 06M	3KBP 08M	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	$T_A = 25\text{ }^{\circ}\text{C}$ $T_A = 125\text{ }^{\circ}\text{C}$	$I_R$	5.0 500						$\mu\text{A}$
Typical junction capacitance per diode	4.0 V, 1 MHz	$C_J$	25						pF

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

PARAMETER	SYMBOL	3KBP 005M	3KBP 01M	3KBP 02M	3KBP 04M	3KBP 06M	3KBP 08M	UNIT
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$ $R_{\theta JL}$	30 11						$^{\circ}\text{C/W}$

**Note:**

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

**ORDERING INFORMATION** (Example)

PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
3KBP06M-E4/45	1.912	45	30	Tube
3KBP06M-E4/51	1.912	51	600	Anti-static PVC tray

**RATINGS AND CHARACTERISTICS CURVES**

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

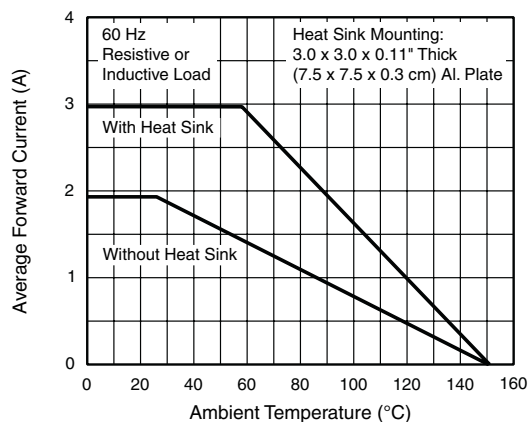


Figure 1. Forward Current Derating Curve

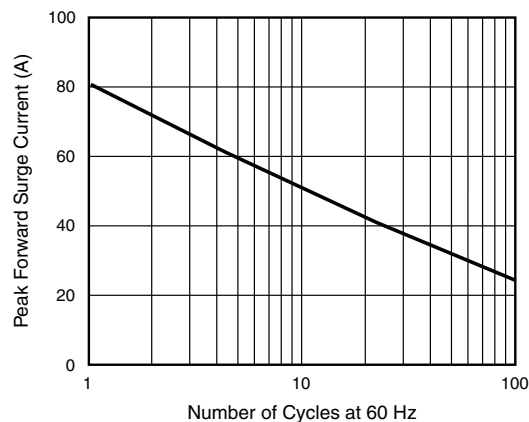


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

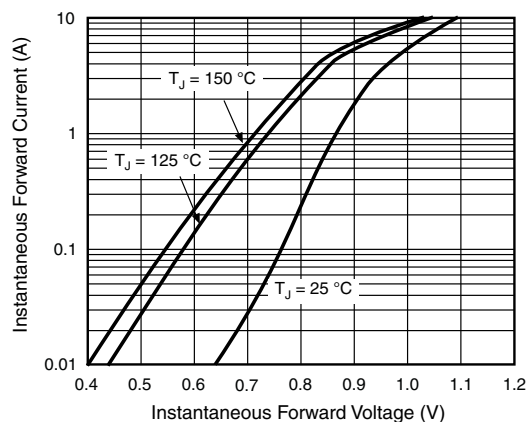


Figure 3. Typical Forward Characteristics Per Diode

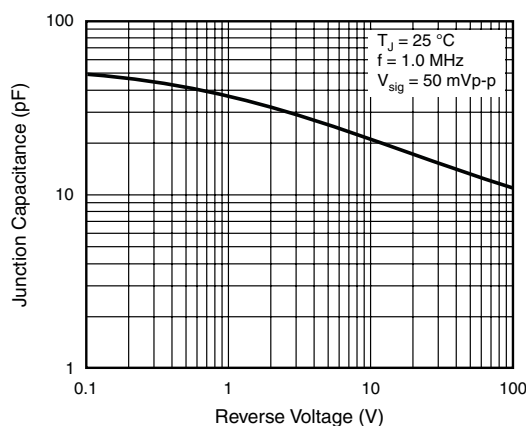


Figure 5. Typical Junction Capacitance Per Diode

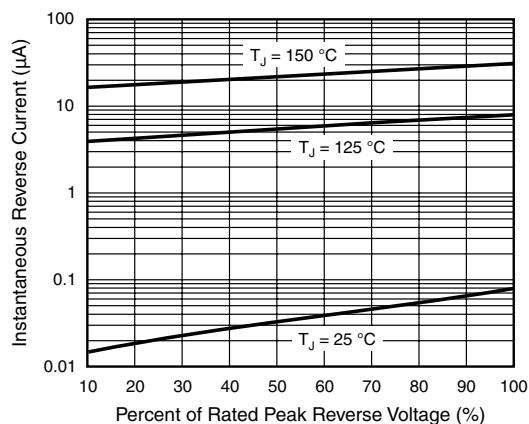
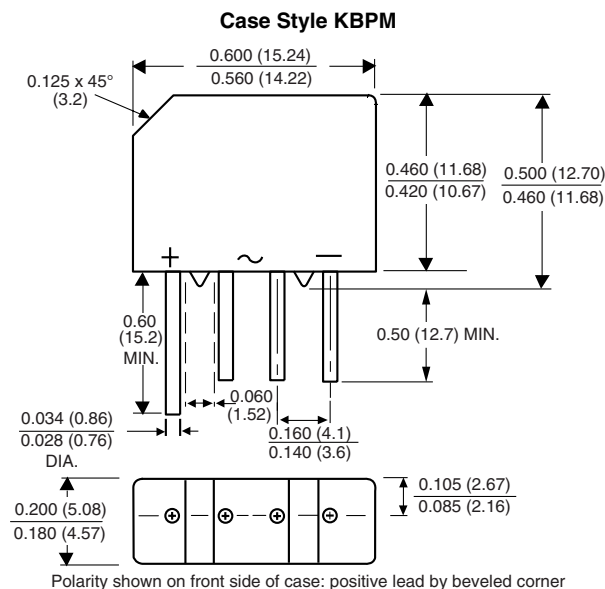


Figure 4. Typical Reverse Leakage Characteristics Per Diode

## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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