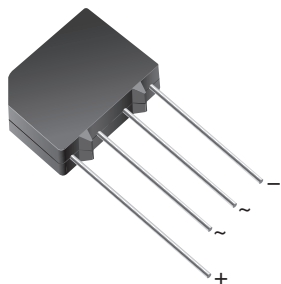
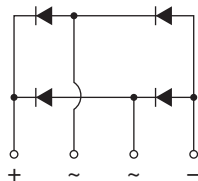


## Glass Passivated Single-Phase Bridge Rectifier



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
$I_{F(AV)}$	2.0 A
$V_{RRM}$	50 V to 1000 V
$I_{FSM}$	60 A
$I_R$	5 $\mu$ A
$V_F$ at $I_F = 3.14$ A	1.1 V
$T_J$ max.	165 °C
Diode variations	In-Line

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

PARAMETER	SYMBOL	2KBP005M	2KBP01M	2KBP02M	2KBP04M	2KBP06M	2KBP08M	2KBP10M	UNIT
		3N253	3N254	3N255	3N256	3N257	3N258	3N259	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward output rectified current at $T_A = 55$ °C	$I_{F(AV)}$	2.0							A
Peak forward surge current single half sine-wave superimposed on rated load	$I_{FSM}$	60							A
Rating for fusing ( $t < 8.3$ ms)	$I^2t$	15							A <sup>2</sup> s
Operating junction and storage temperature range	$T_J, T_{STG}$	- 55 to + 165							°C

### ELECTRICAL CHARACTERISTICS ( $T_A = 25$ °C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITIONS	2KBP005M	2KBP01M	2KBP02M	2KBP04M	2KBP06M	2KBP08M	2KBP10M	UNIT
			3N253	3N254	3N255	3N256	3N257	3N258	3N259	
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	3.14 A	1.1							V
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>R</sub>	T <sub>A</sub> = 25 °C	5.0							μA
		T <sub>A</sub> = 125 °C	500							
Typical junction capacitance per diode	T <sub>J</sub>	4.0 V, 1 MHz	25							pF

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

PARAMETER	SYMBOL	2KBP005M	2KBP01M	2KBP02M	2KBP04M	2KBP06M	2KBP08M	2KBP10M	UNIT
		3N253	3N254	3N255	3N256	3N257	3N258	3N259	
Typical thermal resistance	R <sub>θJA</sub> <sup>(1)</sup>	30							°C/W
	R <sub>θJL</sub> <sup>(1)</sup>	11							

**Note**

(1) 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
2KBP06M-E4/51	1.895	51	600	Anti-static PVC tray
3N257-E4/51	1.895	51	600	Anti-static PVC tray

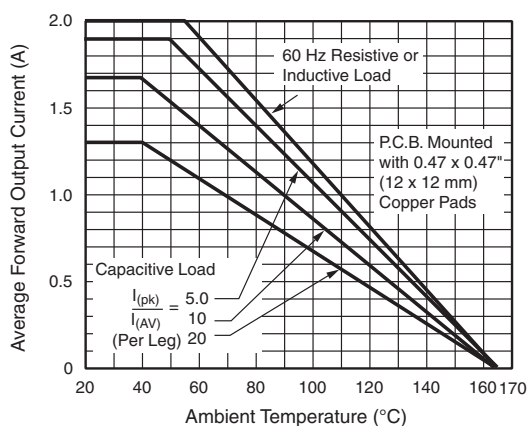
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

Fig. 1 - Derating Curve Output Rectified Current

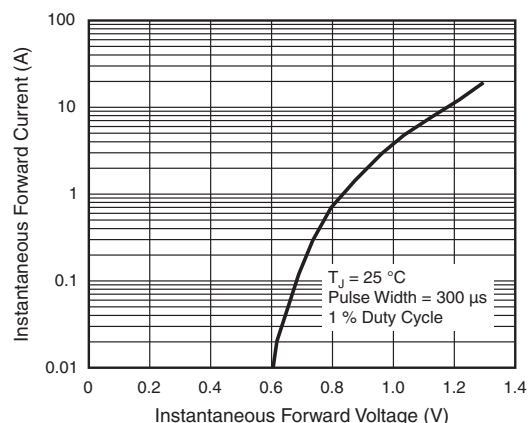


Fig. 3 - Typical Forward Characteristics Per Diode

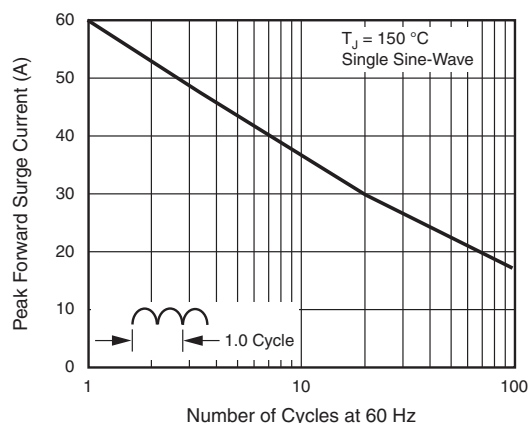


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

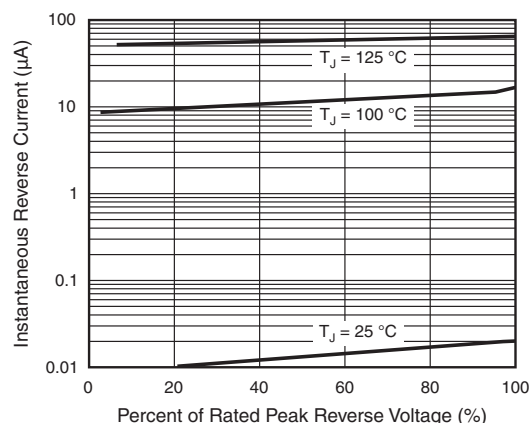


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

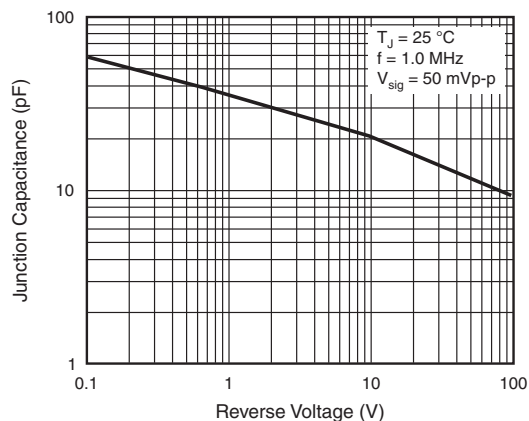
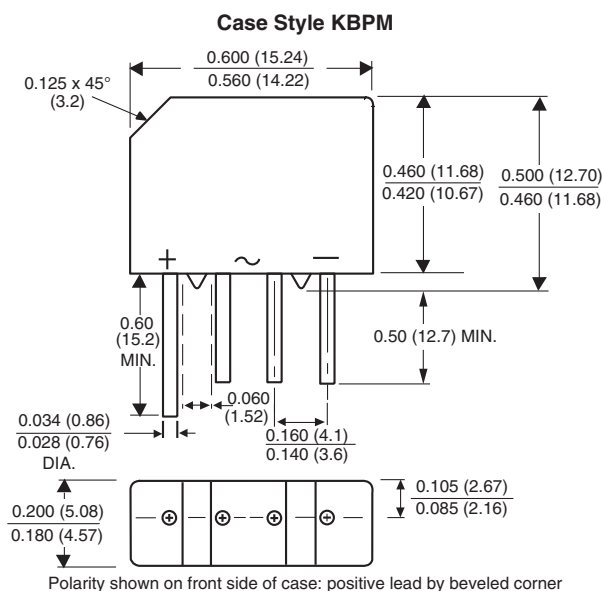


Fig. 5 - Typical Junction Capacitance Per Diode

### PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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