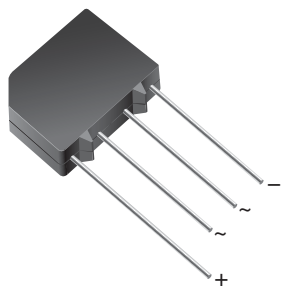
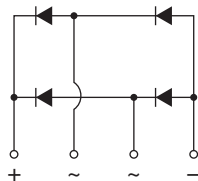


## Glass Passivated Single-Phase Bridge Rectifier



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  
HALOGEN  
**FREE**

### 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-M4 - halogen-free, RoHS-compliant, and commercial grade

**Terminals:** Silver plated leads, solderable per J-STD-002 and JESD 22-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** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	2KBP0 05M	2KBP0 1M	2KBP0 2M	2KBP0 4M	2KBP0 6M	2KBP0 8M	2KBP 10M	UNIT
			3N253	3N254	3N255	3N256	3N257	3N258	3N259	
Maximum instantaneous forward voltage drop per diode	3.14 A	V <sub>F</sub>	1.1							V
Maximum DC reverse current at rated DC blocking voltage per diode	T <sub>J</sub> = 25 °C	I <sub>R</sub>	5.0							μA
	T <sub>J</sub> = 125 °C		500							
Typical junction capacitance per diode	4.0 V, 1 MHz	C <sub>J</sub>	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 <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
2KBP06M-M4/51	1.895	51	600	Anti-static PVC tray
3N257-M4/51	1.895	51	600	Anti-static PVC tray

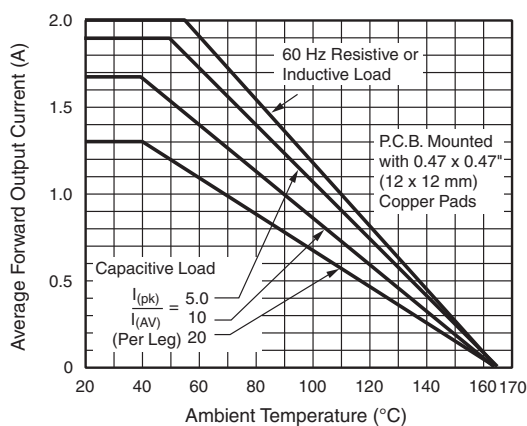
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

Fig. 1 - Derating Curve Output Rectified Current

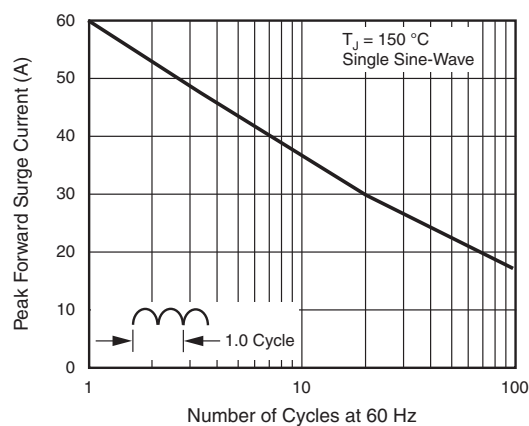


Fig. 2 - Derating Curve Output Rectified Current

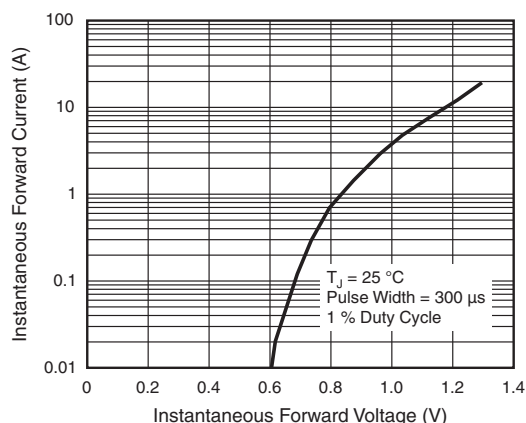


Fig. 3 - Typical Forward Characteristics Per Diode

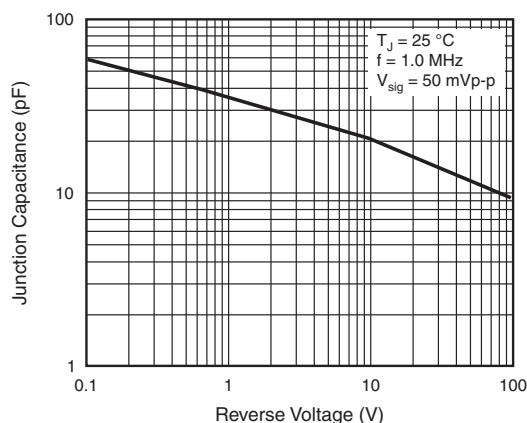


Fig. 5 - Typical Junction Capacitance Per Diode

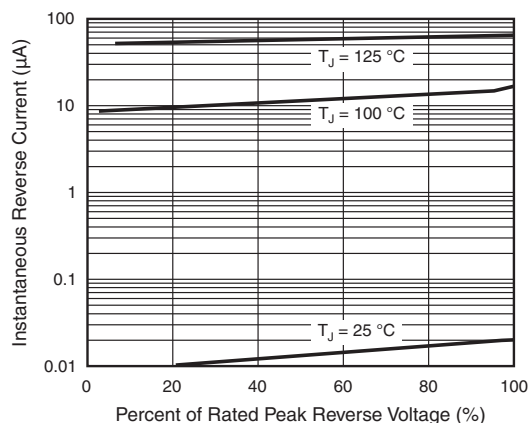
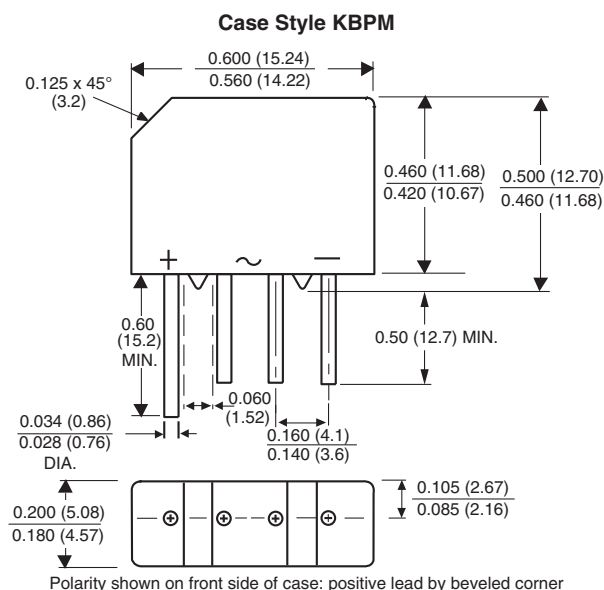


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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