

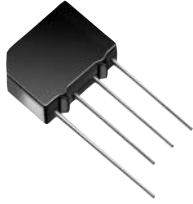


# KBP005M thru KBP10M, 3N246 thru 3N252

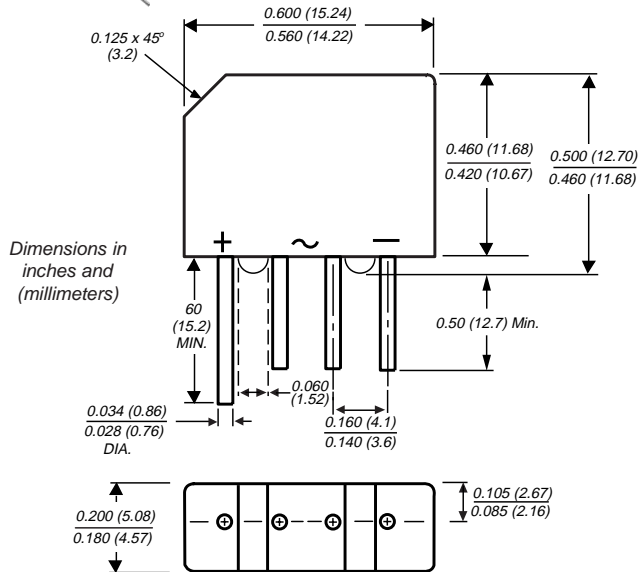
Vishay Semiconductors  
formerly General Semiconductor

## Glass Passivated Single-Phase Bridge Rectifiers

Rev. Voltage 50 to 1000V  
Forward Current 1.5A



Case Style KBPM



Polarity shown on front side of case: positive lead by beveled corner

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- This series is UL listed under Recognized Component Index, file number E54214
- Glass passivated chip junctions
- High surge current capability
- Ideal for printed circuit boards
- High temperature soldering guaranteed: 260°C/10 seconds at 5 lbs. (2.3kg) tension

### Mechanical Data

- Case:** Molded plastic body over passivated junctions  
**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026  
**Polarity:** Polarity symbols marked on case  
**Mounting Position:** Any  
**Weight:** 0.06 oz., 1.7 g  
**Packaging codes/options:**  
 1/600 EA. per Bulk Tray Stack

## Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symb.	KBP 005M	KBP 01M	KBP 02M	KBP 04M	KBP 06M	KBP 08M	KBP 10M	Unit
		3N246	3N247	3N248	3N249	3N250	3N251	3N252	
* Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
* Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
* Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Max. average forward output rectified current at T <sub>A</sub> = 40°C	I <sub>F(AV)</sub>	1.5							A
* Peak forward surge current single half sine-wave superimposed on rated load (JEDEC Method) T <sub>J</sub> = 150°C	I <sub>FSM</sub>	50 30							A
Rating for fusing (t < 8.3ms)	I <sup>2</sup> t	10							A <sup>2</sup> sec
Typical thermal resistance per leg <sup>(1)</sup>	R <sub>θJA</sub>	40							°C/W
	R <sub>θJL</sub>	13							
* Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C

## Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

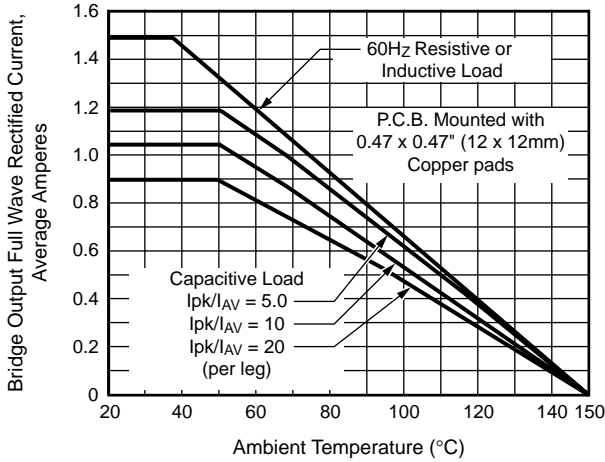
* Max. instantaneous at forward voltage drop at	1.0A per leg 1.57A per leg	V <sub>F</sub>	1.0 1.3	V
* Maximum DC reverse current at rated DC blocking voltage per leg	T <sub>A</sub> = 25°C T <sub>A</sub> = 125°C	I <sub>R</sub>	5.0 500	μA
Typical junction capacitance per leg at 4.0V, 1MHz		C <sub>J</sub>	15	pF

**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 12mm) copper pads  
\* JEDEC registered values

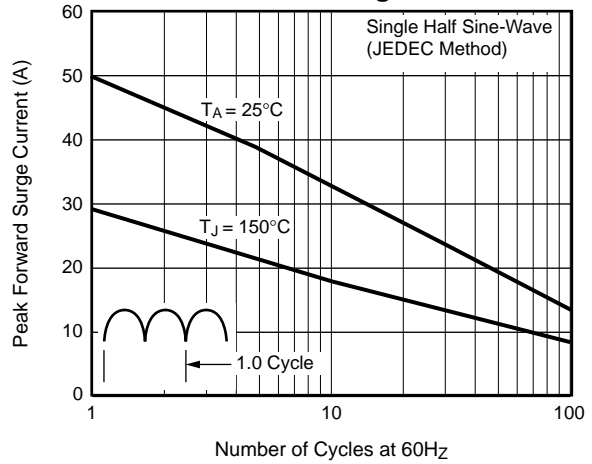
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## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

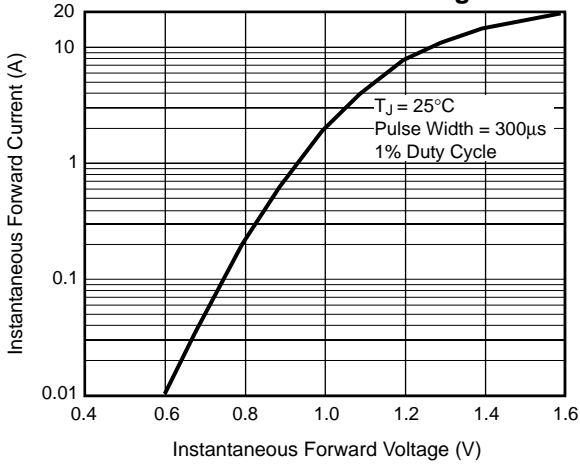
**Fig. 1 – Derating Curve Output Rectified Current**



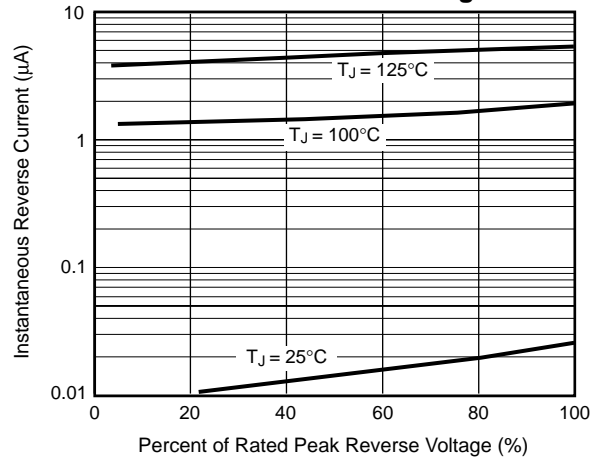
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



**Fig. 3 – Typical Forward Characteristics Per Leg**



**Fig. 4 – Typical Reverse Leakage Characteristics Per Leg**



**Fig. 5 – Typical Junction Capacitance Per Leg**

