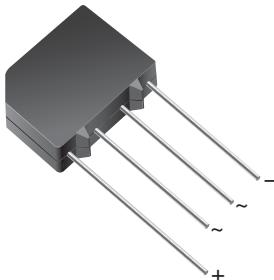
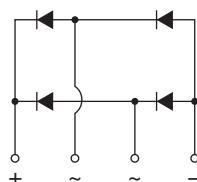


Glass Passivated Single-Phase Bridge Rectifier


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


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
$I_{F(AV)}$	1.5 A
V_{RRM}	50 V to 1000 V
I_{FSM}	60 A
I_R	5 μ A
V_F	1.0 V
T_J max.	150 °C
Diode variations	In-line

MAXIMUM RATINGS ($T_A = 25$ °C unless otherwise noted)									
PARAMETER	SYMBOL	KBP005M	KBP01M	KBP02M	KBP04M	KBP06M	KBP08M	KBP10M	UNIT
		3N246	3N247	3N248	3N249	3N250	3N251	3N252	
Maximum repetitive peak reverse voltage ⁽¹⁾	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage ⁽¹⁾	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage ⁽¹⁾	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward output rectified current at $T_A = 40$ °C	$I_{F(AV)}$				1.5				A
Peak forward surge current $T_A = 25$ °C single half sine-wave ⁽¹⁾	I_{FSM}			60					A
$T_A = 150$ °C				40					
Rating for fusing ($t < 8.3$ ms)	I^2t			10					A ² s
Operating junction and storage temperature range ⁽¹⁾	T_J, T_{STG}			55 to +150					°C

Note

⁽¹⁾ JEDEC® registered values

ELECTRICAL CHARACTERISTICS ($T_A = 25$ °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	KBP005M	KBP01M	KBP02M	KBP04M	KBP06M	KBP08M	KBP10M	UNIT
			3N246	3N247	3N248	3N249	3N250	3N251	3N252	
Maximum instantaneous forward voltage drop per diode ⁽¹⁾	1.0 A	V_F			1.0					V
	1.57 A				1.3					
Maximum DC reverse current at rated DC blocking voltage per diode ⁽¹⁾	$T_J = 25$ °C	I_R			5.0					μ A
	$T_J = 125$ °C				500					
Typical junction capacitance per diode	4.0 V, 1 MHz	C_J			15					pF

Note

⁽¹⁾ JEDEC® registered values

THERMAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)									
PARAMETER	SYMBOL	KBP005M	KBP01M	KBP02M	KBP04M	KBP06M	KBP08M	KBP10M	UNIT
		3N246	3N247	3N248	3N249	3N250	3N251	3N252	
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$				40				°C/W
	$R_{\theta JL}$				13				

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
KBP06M-M4/51	1.895	51	600	Anti-static PVC tray
3N250-M4/51	1.895	51	600	Anti-static PVC tray

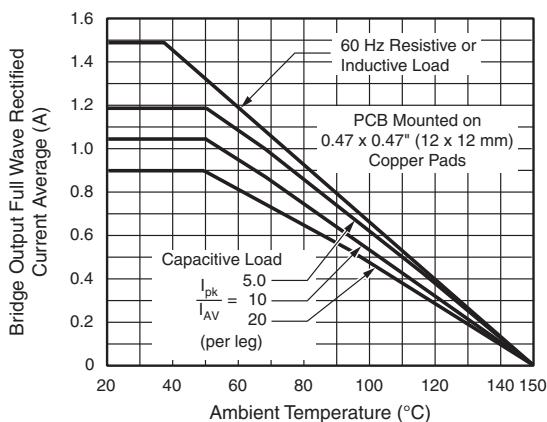
RATINGS AND CHARACTERISTICS CURVES ($T_A = 25^\circ\text{C}$ unless otherwise noted)


Fig. 1 - Derating Curve Output Rectified Current

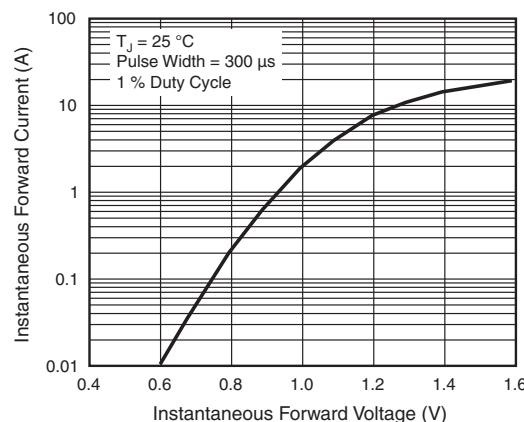


Fig. 3 - Typical Forward Characteristics Per Diode

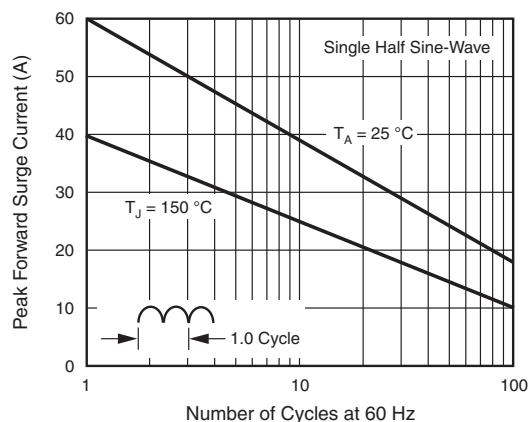


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

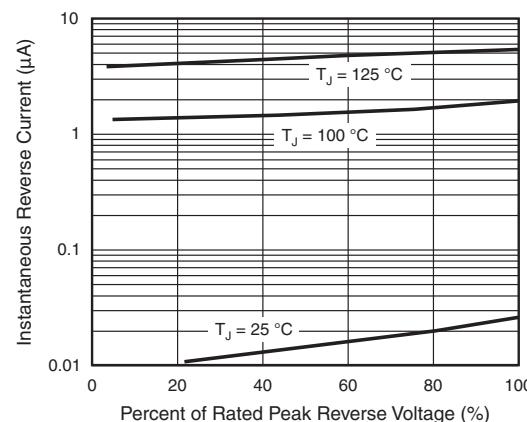


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

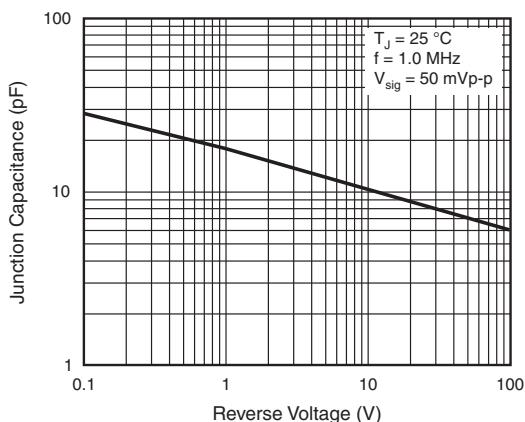
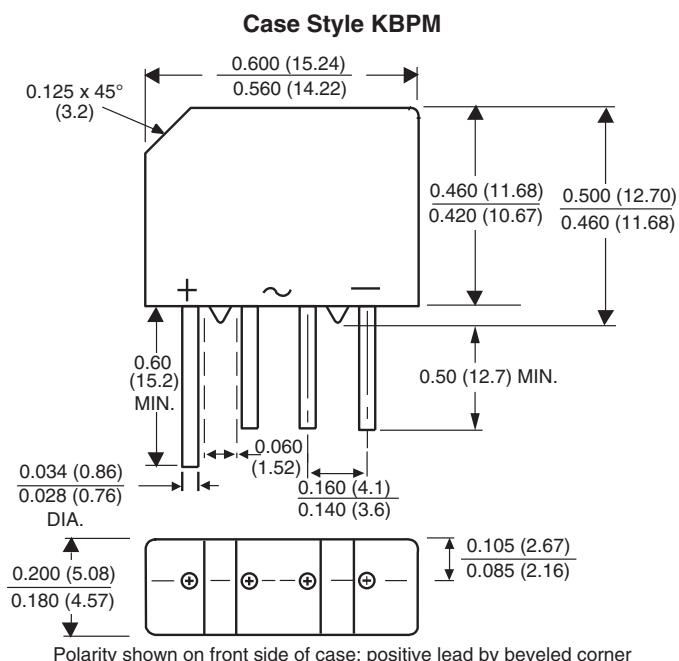


Fig. 5 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



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