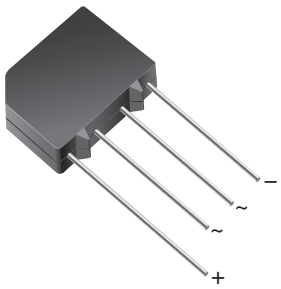
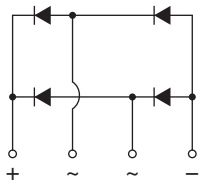
Glass Passivated Single-Phase Bridge Rectifier





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

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

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

PARAMETER	SYMBOL	KBP005M 3N246	KBP01M 3N247	KBP02M 3N248	KBP04M 3N249	KBP06M 3N250	KBP08M 3N251	KBP10M 3N252	UNIT
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 single half sine-wave (1) T_A = 25 °C	I_{FSM}	60							A
Peak forward surge current single half sine-wave (1) T_A = 150 °C	I_{FSM}	40							A
Rating for fusing (t < 8.3 ms)	I^2t	10							A^2s
Operating junction and storage temperature range (1)	T_J, T_{STG}	-55 to +150							°C

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

PARAMETER	TEST CONDITIONS	SYMBOL	KBP005M	KBP01M	KBP02M	KBP04M	KBP06M	KBP08M	KBP10M	UNIT
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							µA
	T_J = 125 °C		500							
Typical junction capacitance per diode	4.0 V, 1 MHz	C_J	15							pF

Note

(1) JEDEC® registered values

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THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	KBP005M 3N246	KBP01M 3N247	KBP02M 3N248	KBP04M 3N249	KBP06M 3N250	KBP08M 3N251	KBP10M 3N252	UNIT
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-E4/51	1.895	51	600	Anti-static PVC tray
3N250-E4/51	1.895	51	600	Anti-static PVC tray

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

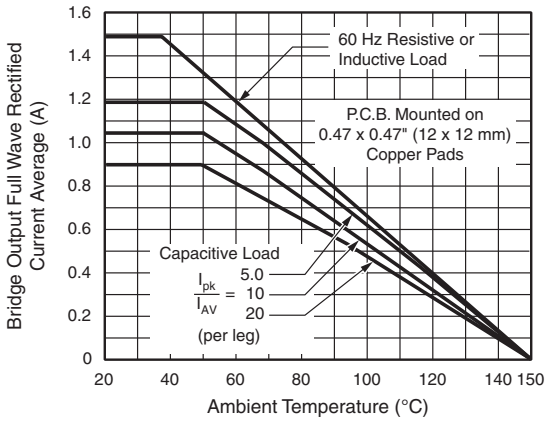

Fig. 1 - Derating Curve Output Rectified Current

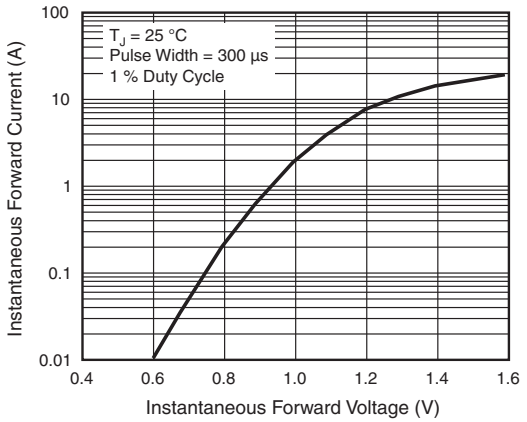

Fig. 3 - Typical Forward Characteristics Per Diode

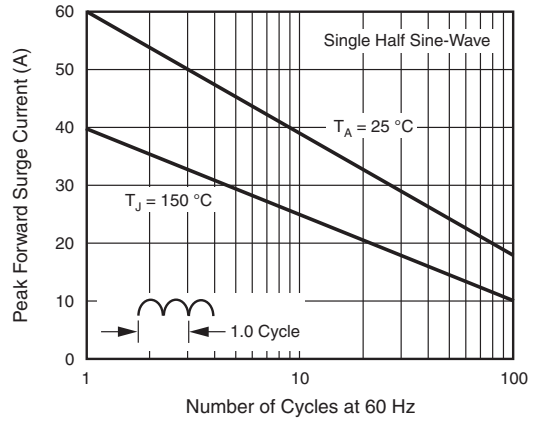

Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

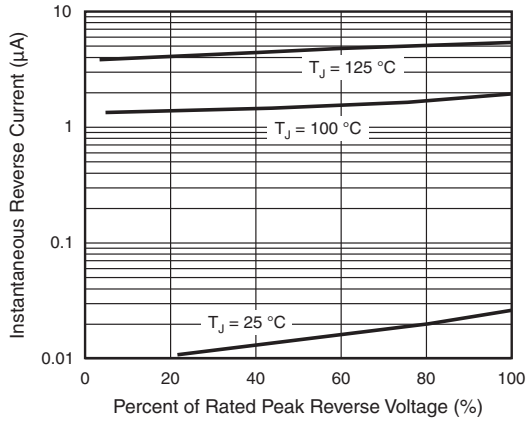

Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

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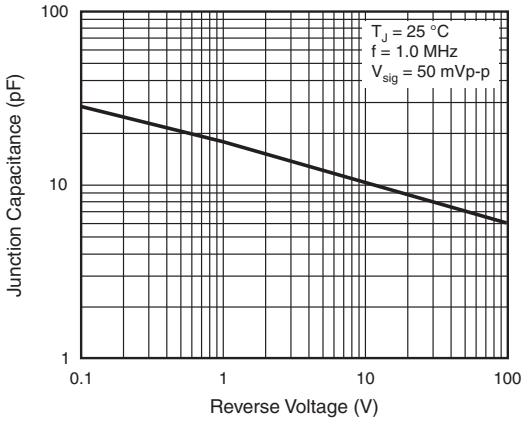
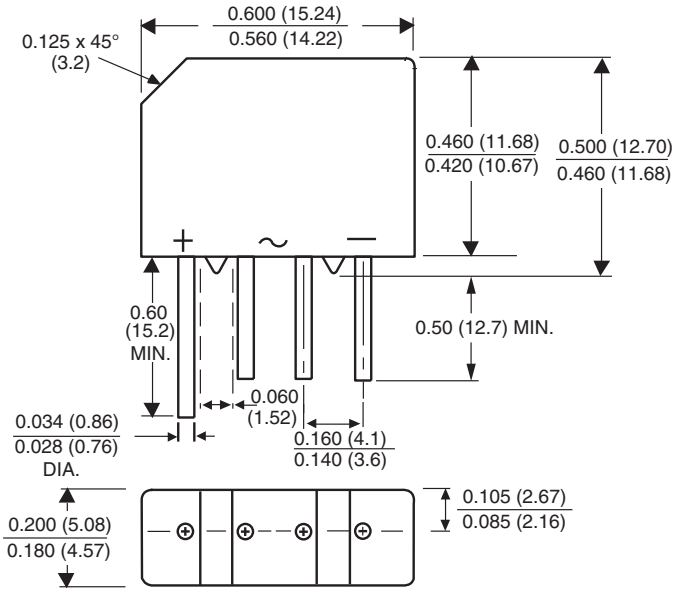


Fig. 5 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

Case Style KBPM



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

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