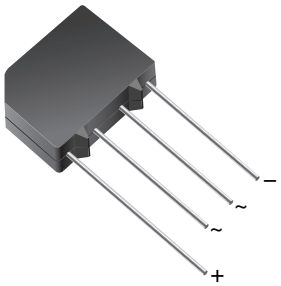
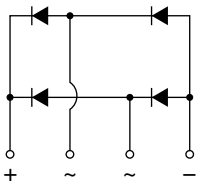
3KBP005M, 3KBP01M, 3KBP02M, 3KBP04M, 3KBP06M, 3KBP08M

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
$I_{F(AV)}$	3.0 A
V_{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V
I_{FSM}	80 A
I_R	5 µA
V_F at I_F = 3.0 A	1.05 V
T_J max.	150 °C
Diode variations	In-Line

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

PARAMETER	SYMBOL	3KBP005M	3KBP01M	3KBP02M	3KBP04M	3KBP06M	3KBP08M	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	V
Maximum average forward output rectified current at T_A = 55 °C (Fig. 1)	$I_{F(AV)}$	3.0						A
Peak forward surge current 50 Hz single half sine-wave superimposed on rated load	I_{FSM}	80						A
Rating for fusing (t < 10 ms)	I^2t	32						A^2s
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150						°C

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

PARAMETER	TEST CONDITIONS	SYMBOL	3KBP005M	3KBP01M	3KBP02M	3KBP04M	3KBP06M	3KBP08M	UNIT
Maximum instantaneous forward voltage drop per diode	3.0 A	V_F	1.05						V
Maximum DC reverse current at rated DC blocking voltage per diode	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	25						pF

THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)								
PARAMETER	SYMBOL	3KBP005M	3KBP01M	3KBP02M	3KBP04M	3KBP06M	3KBP08M	UNIT
Typical thermal resistance (1)	$R_{\theta JA}$	30						°C/W
	$R_{\theta JL}$	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
3KBP06M-E4/51	1.912	51	600	Anti-static PVC tray

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

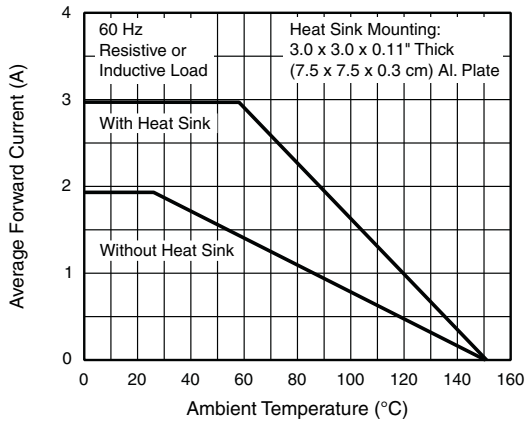


Fig. 1 - Forward Current Derating Curve

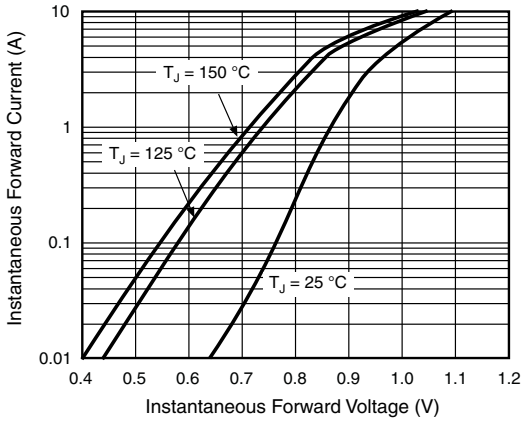


Fig. 3 - Typical Forward Characteristics Per Diode

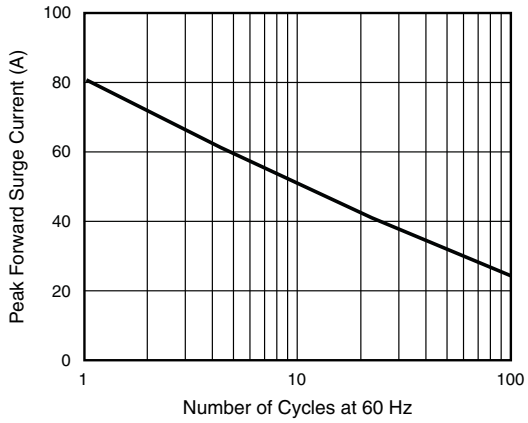


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

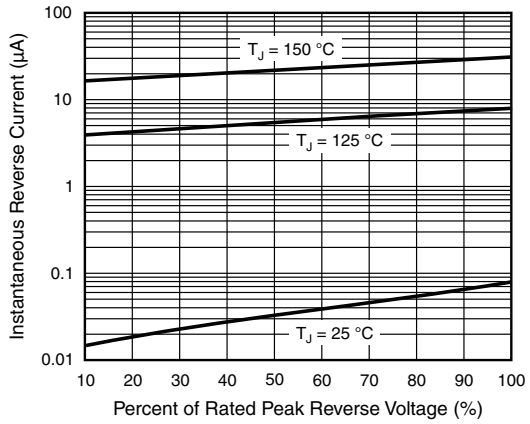


Fig. 4 - Typical Forward Characteristics Per Diode

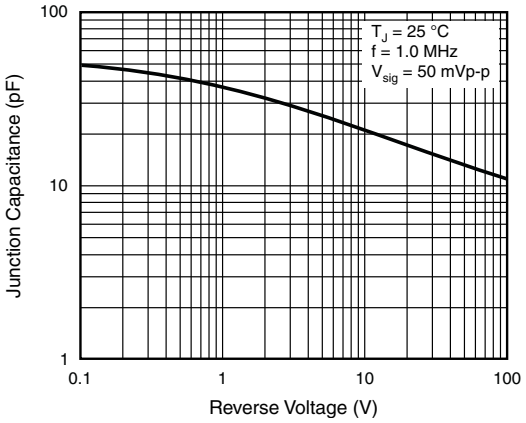
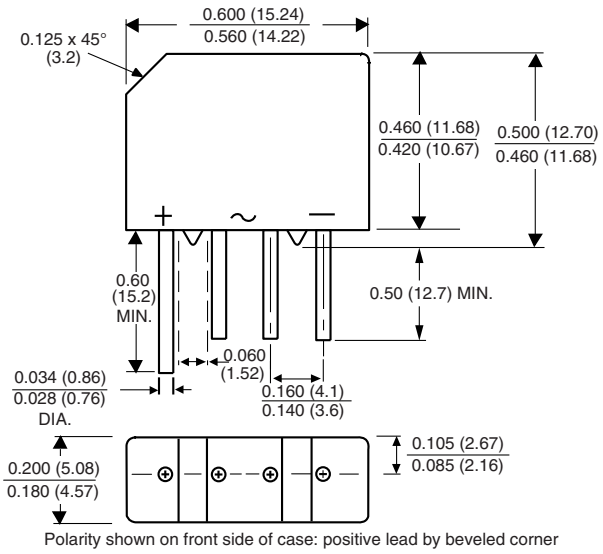


Fig. 5 - Typical Junction Capacitance Per Diode

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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