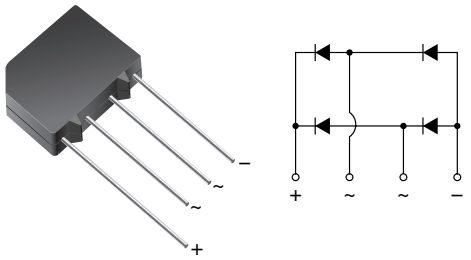
Glass Passivated Single-Phase Bridge Rectifier



Case Style KBPM

FEATURES

- UL recognition file number E54214
- Ideal for printed circuit board
- High surge current capability
- High case dielectric strength
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

RoHS COMPLIANT

TYPICAL APPLICATIONS

General purpose use in ac-to-dc bridge full wave rectification for switching power supply, home appliances, office equipment, and telecommunication applications.

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	1.5 A
V_{RRM}	50 V to 1000 V
I_{FSM}	60 A
I_R	5 µA
V_F	1.0 V
T_J max.	150 °C

MECHANICAL DATA

Case: KBPM

Epoxy meets UL 94V-0 flammability rating

Terminals: Silver plated leads, solderable per J-STD-002 and JESD22-B102

E4 suffix for consumer grade

Polarity: As marked on body

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

PARAMETER	SYMBOL	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 (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 / T_J = 150 °C	I_{FSM}	60 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

Note:

(1) JEDEC registered values

ELECTRICAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)										
PARAMETER	**TEST CONDITIONS**	**SYMBOL**	**KBP 005M**	**KBP 01M**	**KBP 02M**	**KBP 04M**	**KBP 06M**	**KBP 08M**	**KBP 10M**	**UNIT**
			3N246	**3N247**	**3N248**	**3N249**	**3N250**	**3N251**	**3N252**	
Maximum instantaneous forward voltage drop per diode (1)	1.0 A 1.57 A	V_F	1.0 1.3							V
Maximum DC reverse current at rated DC blocking voltage per diode (1)	T_A = 25 °C T_A = 125 °C	I_R	5.0 500							µA
Typical junction capacitance per diode	4.0 V, 1 MHz	C_J	15							pF

Note:
(1) JEDEC registered values

THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)									
PARAMETER	**SYMBOL**	**KBP 005M**	**KBP 01M**	**KBP 02M**	**KBP 04M**	**KBP 06M**	**KBP 08M**	**KBP 10M**	**UNIT**
		3N246	**3N247**	**3N248**	**3N249**	**3N250**	**3N251**	**3N252**	
Typical thermal resistance (1)	$R_{\theta JA}$ $R_{\theta JL}$	40 13							°C/W

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 12 mm) copper pads

ORDERING INFORMATION (Example)				
PREFERRED P/N	**UNIT WEIGHT (g)**	**PREFERRED PACKAGE CODE**	**BASE QUANTITY**	**DELIVERY MODE**
KBP06M-E4/45	1.895	45	30	Tube
KBP06M-E4/51	1.895	51	600	Anti-static PVC tray
3N250-E4/45	1.895	45	30	Tube
3N250-E4/51	1.895	51	600	Anti-static PVC tray

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

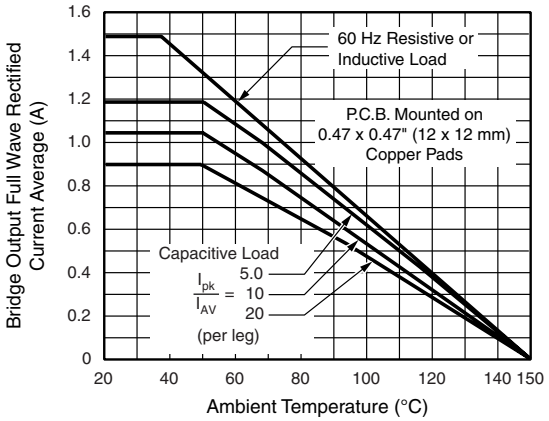


Figure 1. Derating Curve Output Rectified Current

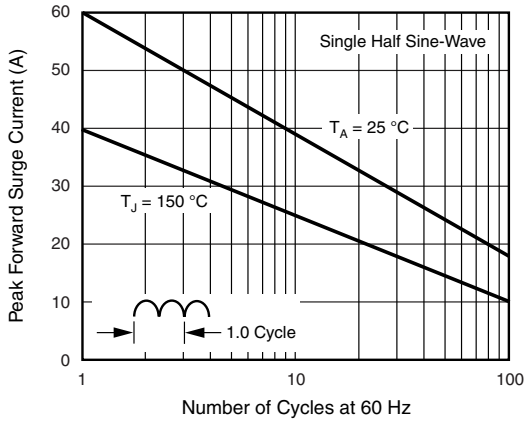


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

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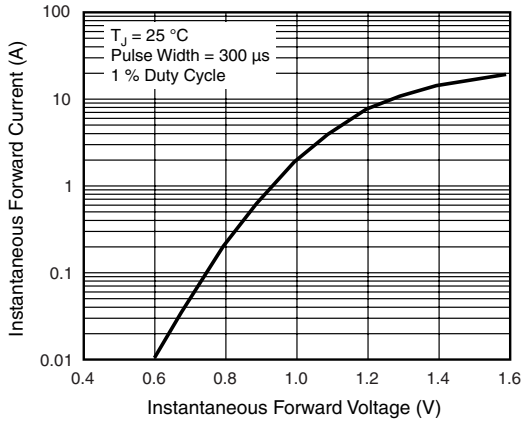


Figure 3. Typical Forward Characteristics Per Diode

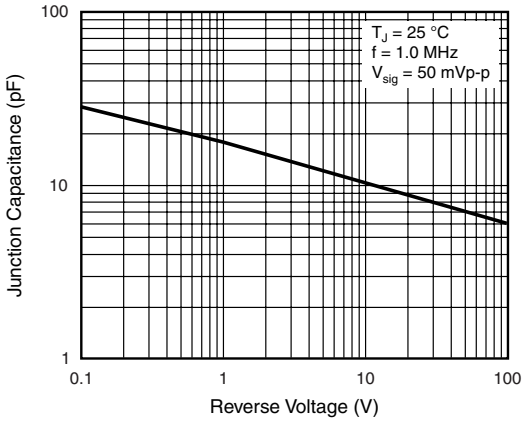


Figure 5. Typical Junction Capacitance Per Diode

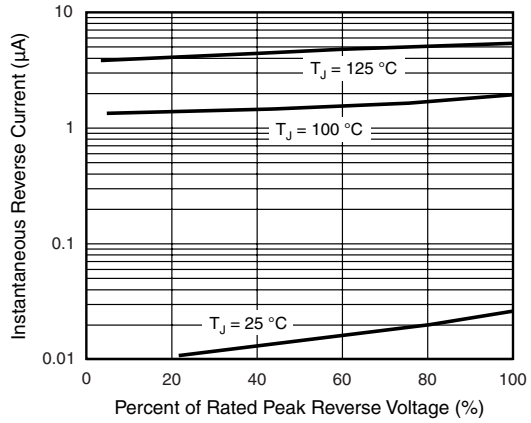
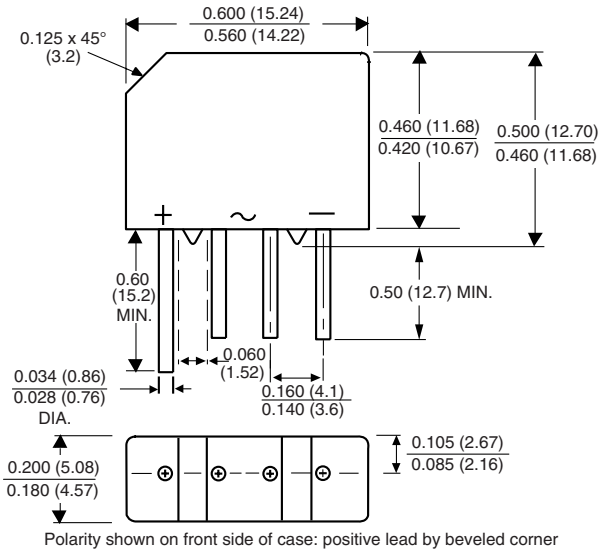


Figure 4. Typical Reverse Leakage Characteristics Per Diode

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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