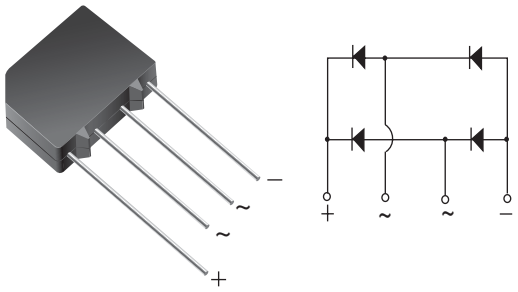
Glass Passivated Single-Phase Bridge Rectifier

Major Ratings and Characteristics

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

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 seconds

Mechanical Data

Case: KBPM

Epoxy meets UL-94V-0 Flammability rating

Terminals: Silver plated (E4 Suffix) leads, solderable per J-STD-002B and JESD22-B102D

Polarity: As marked on body

Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for Switching Power Supply, Home Appliances, Office Equipment, and Telecommunication applications

Maximum Ratings

Ratings at 25 °C ambient temperature unless otherwise specified.

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	V_{RRM}	50	100	200	400	600	800	1000	V
* Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
* Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Max. average forward output rectified current at T_A = 40 °C	$I_{F(AV)}$	1.5							A
* Peak forward surge current single half sine-wave superimposed on rated load	I_{FSM}	50 30							A
Rating for fusing (t < 8.3 ms)	I^2t	10							A^2sec
* Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150							°C

Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Test condition	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 leg	at 1.0 A at 1.57 A	V_F	1.0 1.3							V
* Maximum DC reverse current at rated DC blocking voltage per leg	T_A = 25 °C T_A = 125 °C	I_R	5.0 500							µA
Typical junction capacitance per leg	at 4.0 V, 1 MHz	C_J	15							pF

Thermal Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

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 per leg(1)	$R_{\theta JA}$ $R_{\theta JL}$	40 13							°C/W

Notes:

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with, 0.47 x 0.47" (12 x12 mm) copper pads.

* JEDEC registered values

Ratings and Characteristics Curves

(T_A = 25 °C unless otherwise noted)

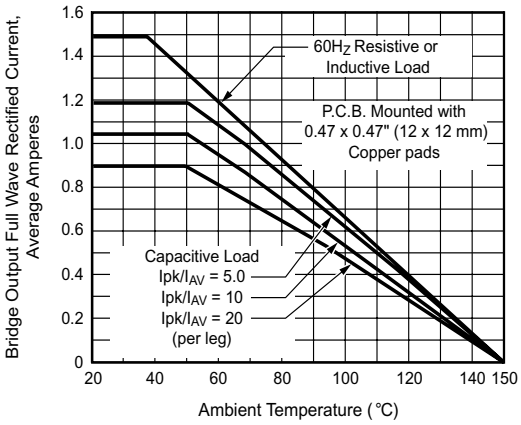


Figure 1. Derating Curve Output Rectified Current

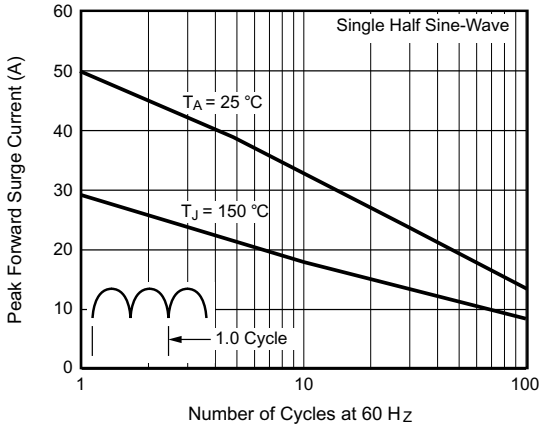


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

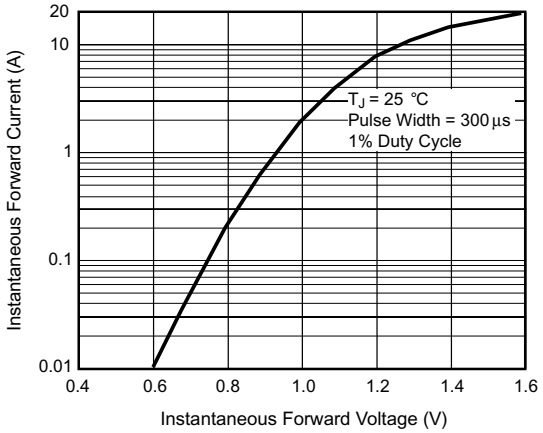


Figure 3. Typical Forward Characteristics Per Leg

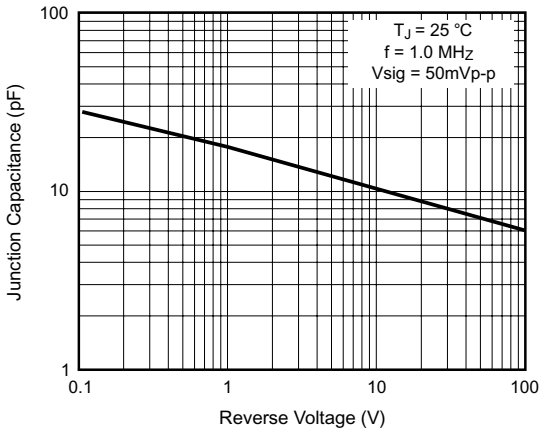


Figure 5. Typical Junction Capacitance Per Leg

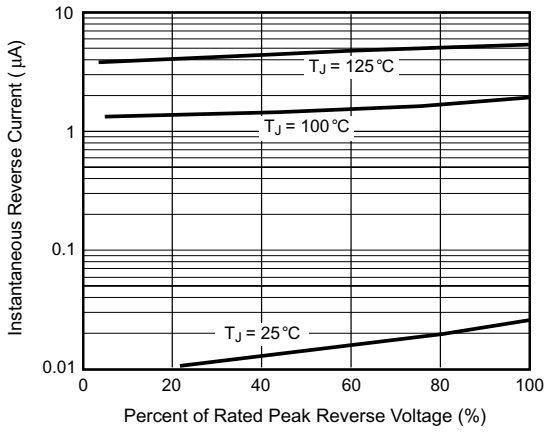
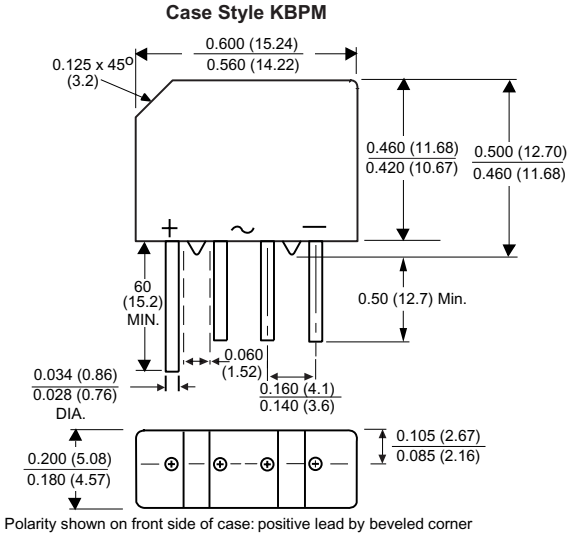


Figure 4. Typical Reverse Leakage Characteristics Per Leg

Package outline dimensions in inches (millimeters)



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