

## GLASS PASSIVATED BRIDGE RECTIFIERS

REVERSE VOLTAGE - 50 to 1000 Volts  
FORWARD CURRENT - 5.0 Amperes

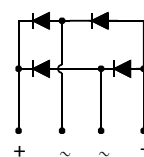
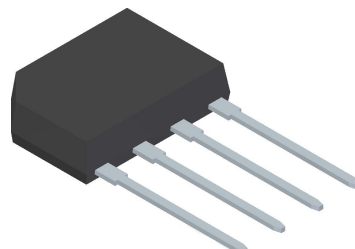
### FEATURES

- Rating to 1000V PRV
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- The plastic material has UL flammability classification 94V#0

### MECHANICAL DATA

- Polarity : As marked on body
- Weight : 0.05 ounces, 1.52 grams
- Mounting position : Any

### KBP



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	KBP 5005G	KBP 501G	KBP 502G	KBP 504G	KBP 506G	KBP 508G	KBP 510G	UNIT
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
Maximum Average Forward Rectified Current @ $T_C=105^{\circ}\text{C}$ (With heatsink) (Without heatsink)	$I_{(AV)}$	5.0 2.5							A
Peak Forward Surge Current @ $T_J = 25^{\circ}\text{C}$ 8.3ms single half sine-wave @ $T_J = 125^{\circ}\text{C}$	$I_{FSM}$	150 120							A
Maximum Forward Voltage at 4.0A DC	$V_F$	1.1							V
Maximum DC Reverse Current at rated Blocking Voltage @ $T_J=25^{\circ}\text{C}$ @ $T_J=125^{\circ}\text{C}$	$I_R$	5.0 500							$\mu\text{A}$
$I^2 t$ Rating for fusing ( $3\text{ms} \leq t \leq 8.3\text{ms}$ )	$I^2 t$	59.76							$\text{A}^2 \text{S}$
Typical Junction Capacitance per element (Note 1)	$C_J$	46							pF
Typical thermal resistance (Unit mounted on 75mmx75mmx1.6mm Copper plate heatsink.)	$R_{\theta JC}$	3.0							$^{\circ}\text{C/W}$
Typical thermal resistance (without heatsink)	$R_{\theta JC}$	8.0							$^{\circ}\text{C/W}$
Operation and Storage Temperature Range	$T_J, T_{STG}$	-55 to 150							$^{\circ}\text{C}$

Note : (1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

FIG.1- FORWARD CURRENT DERATING CURVE

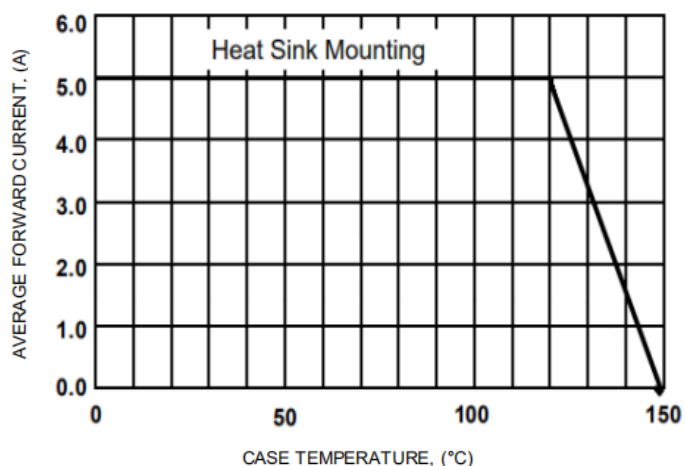


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

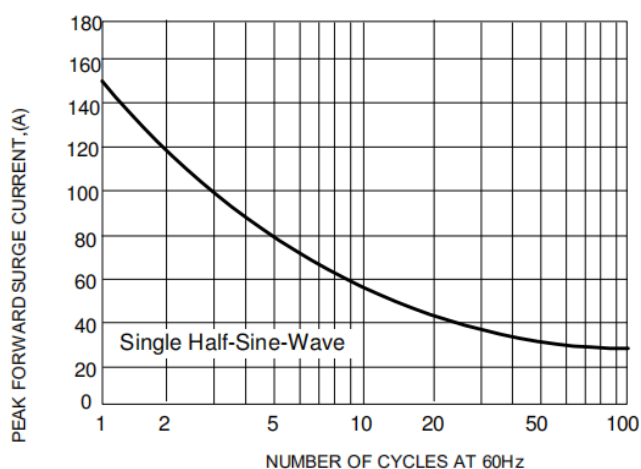


FIG.3- TYPICAL FORWARD CHARACTERISTICS

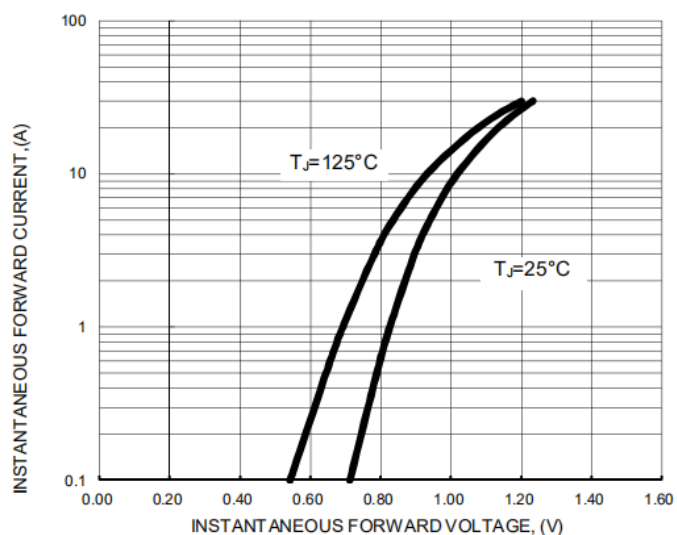


FIG.4- TYPICAL JUNCTION CAPACITANCE

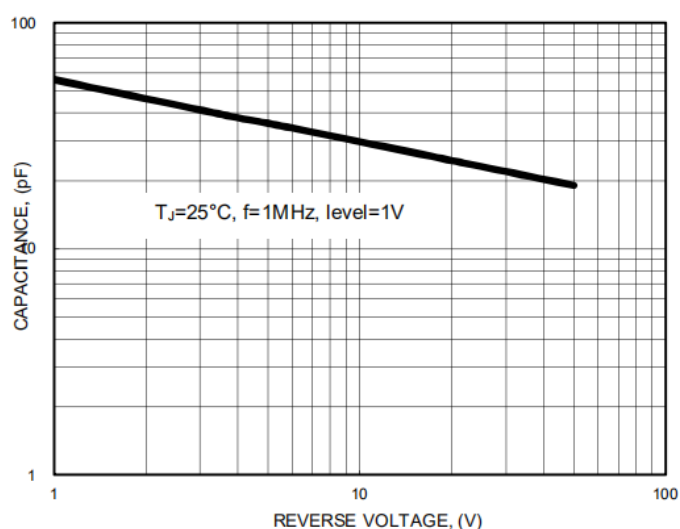
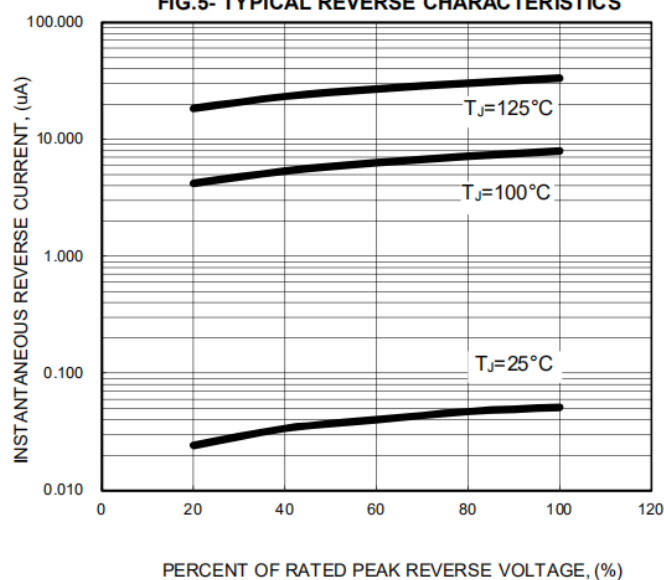
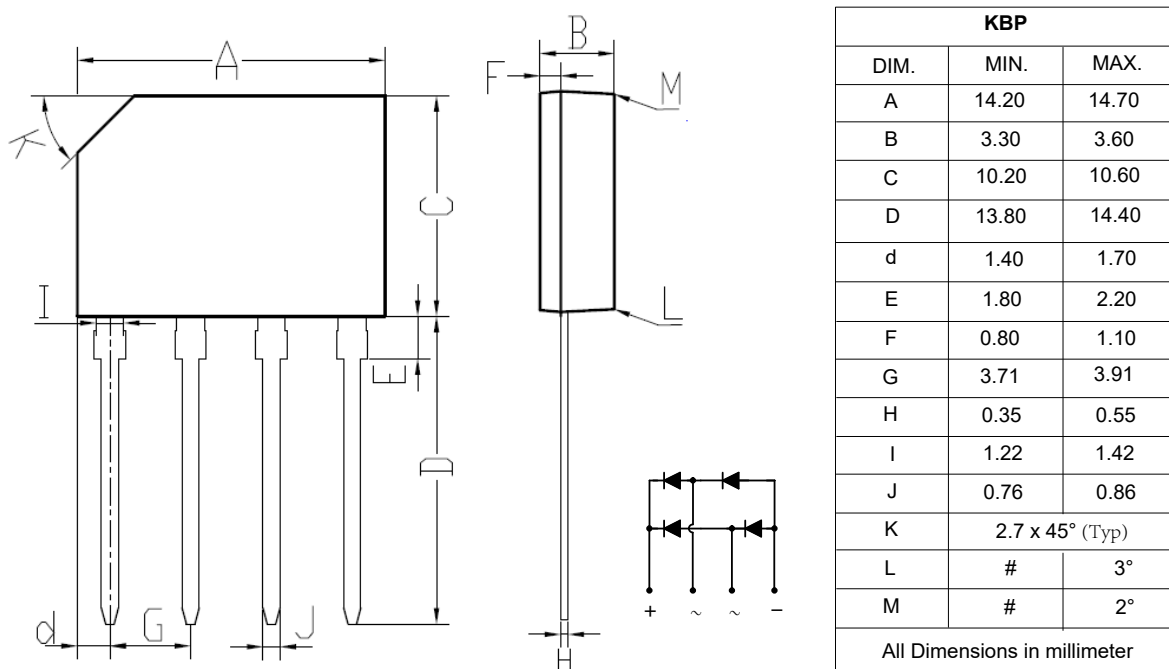


FIG.5- TYPICAL REVERSE CHARACTERISTICS



## KBP Package Outline Dimensions



## Important Notice and Disclaimer

PowSemi reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

PowSemi makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does PowSemi assume any liability for application assistance or customer product design. PowSemi does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of PowSemi.

PowSemi products are not authorized for use as critical components in life support devices or systems without express written approval of PowSemi.