

GLASS PASSIVATED BRIDGE RECTIFIERS

REVERSE VOLTAGE - **50 to 1000** Volts
FORWARD CURRENT - **4.0** Amperes

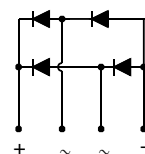
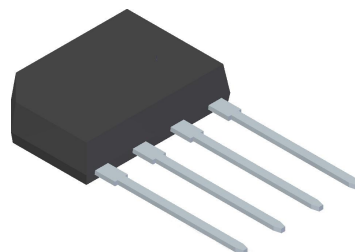
FEATURES

- 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 4005G	KBP 401G	KBP 402G	KBP 404G	KBP 406G	KBP 408G	KBP 410G	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)	$I_{(AV)}$	4.0 2.0							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}	120 100							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							μA
$I^2 t$ Rating for fusing ($3\text{ms} \leq t \leq 8.3\text{ms}$)	$I^2 t$	59.76							A^2S
Typical Junction Capacitance per element (Note 1)	C_J	40							pF
Typical thermal resistance (Unit mounted on 75mmx75mmx1.6mm Copper plate heatsink.)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$	6 8 15							$^{\circ}\text{C/W}$
Typical thermal resistance (without heatsink)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$	14 20 40							$^{\circ}\text{C/W}$
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

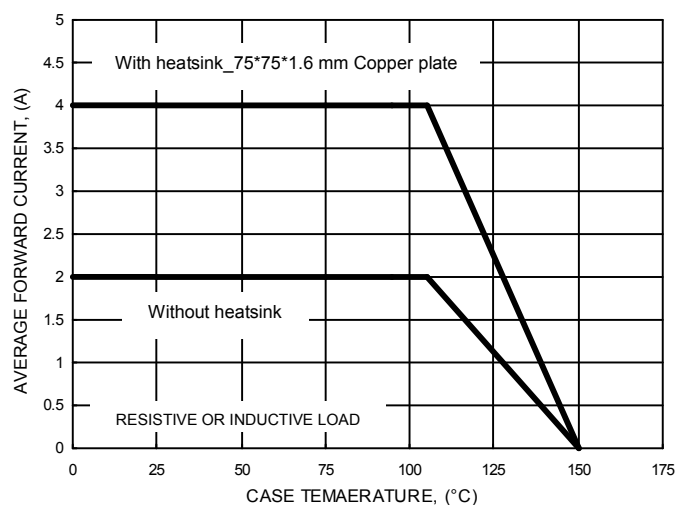


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

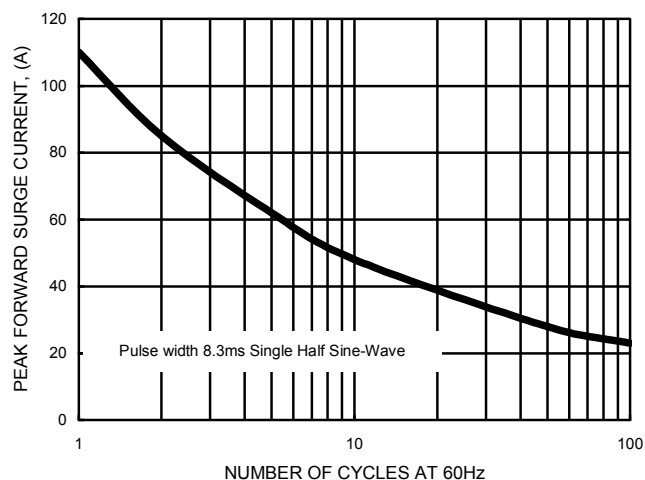


FIG.3- TYPICAL JUNCTION CAPACITANCE

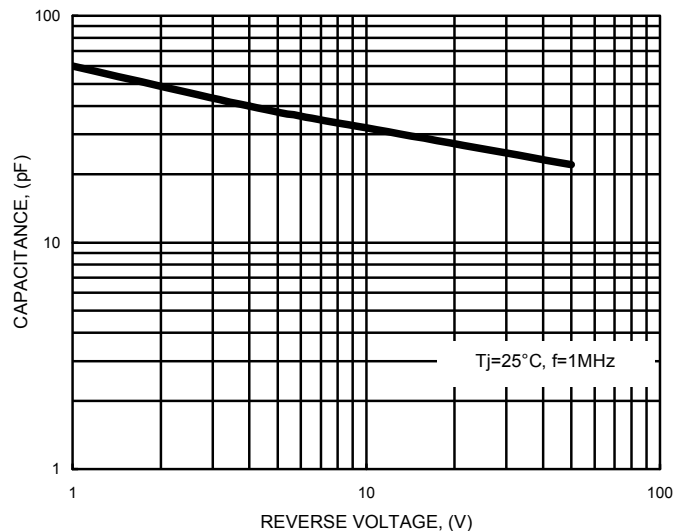


FIG.4- TYPICAL FORWARD CHARACTERISTICS

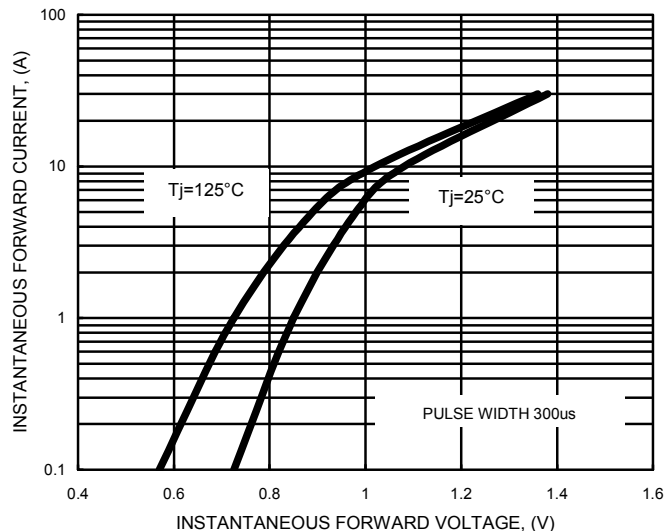
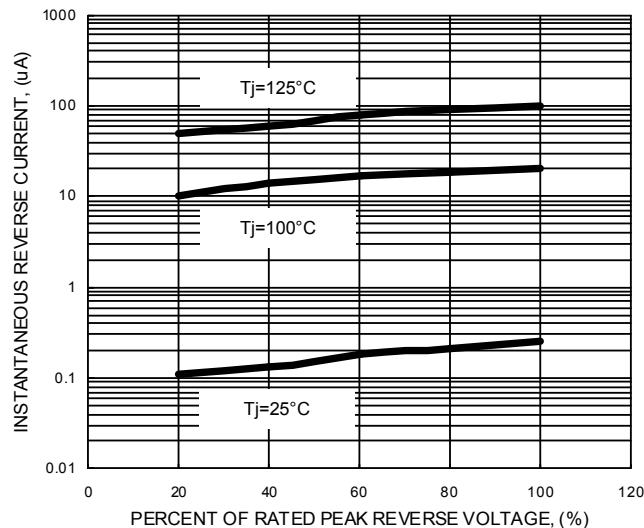
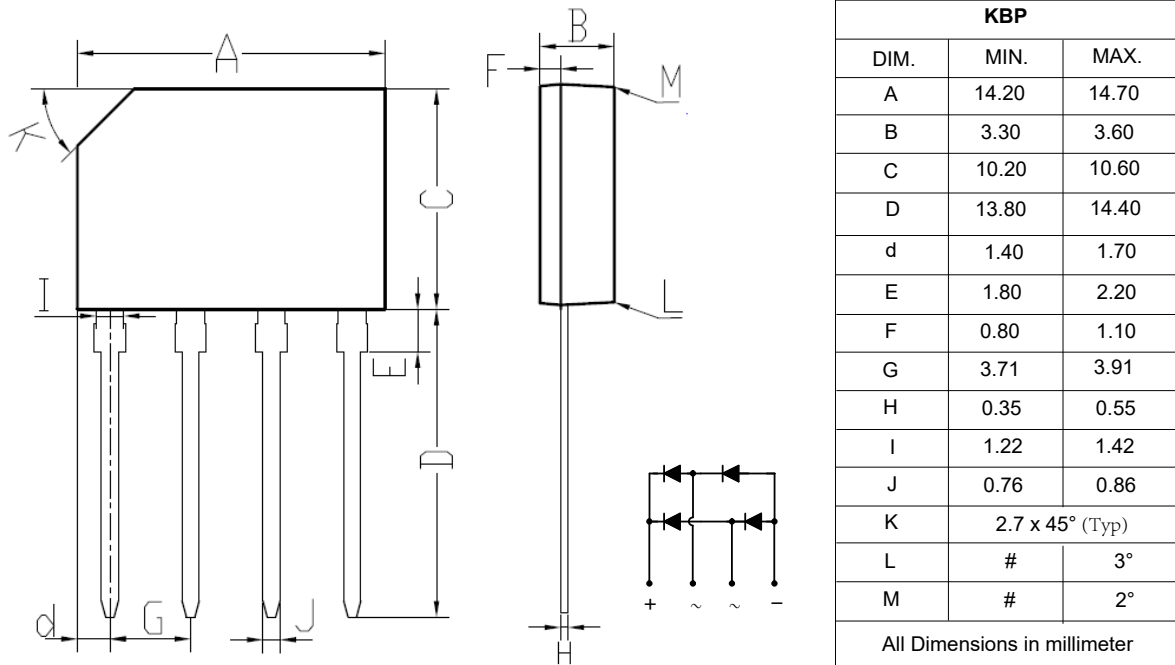


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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.