

GLASS PASSIVATED BRIDGE RECTIFIERS

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

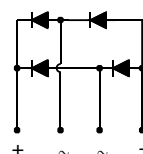
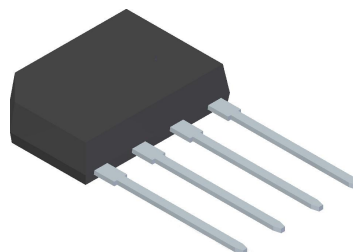
FEATURES

- 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 4005	KBP 401	KBP 402	KBP 404	KBP 406	KBP 408	KBP 410	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 8.3ms single half sine-wave @ $T_j = 25^{\circ}\text{C}$	I_{FSM}	80							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 ($3\text{ms} \leq t \leq 8.3\text{ms}$)	$I^2 t$	26.56							A^2S
Typical Junction Capacitance per element (Note 1)	C_J	50							pF
Typical thermal resistance (Unit mounted on 75mmx75mmx1.6mm Copper plate heatsink.)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$	10 12 30							$^{\circ}\text{C/W}$
Typical thermal resistance (without heatsink)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$	12 18 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

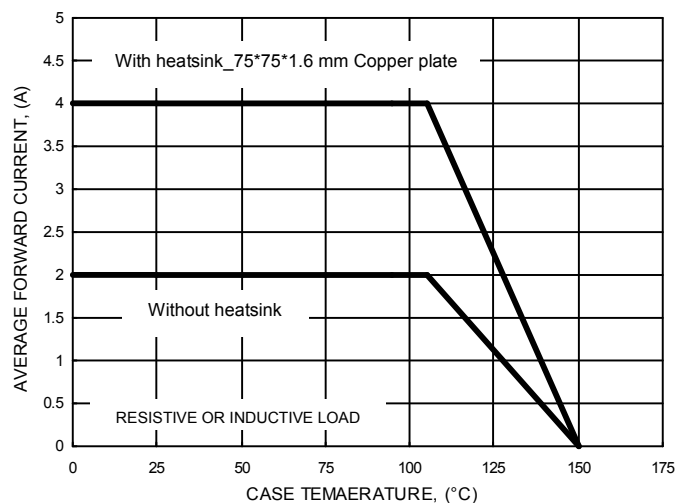


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

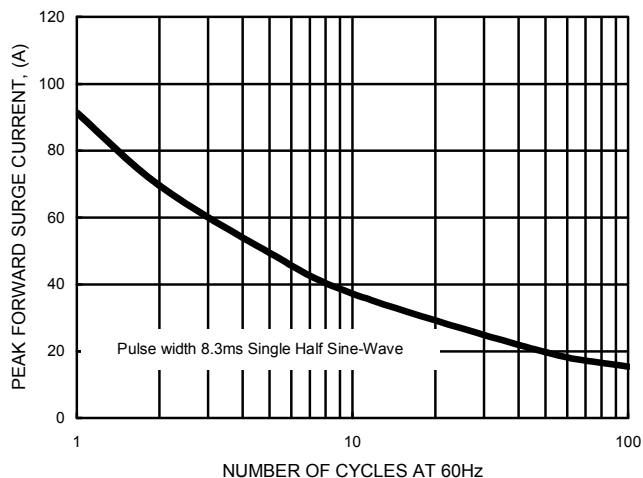


FIG.3- TYPICAL JUNCTION CAPACITANCE

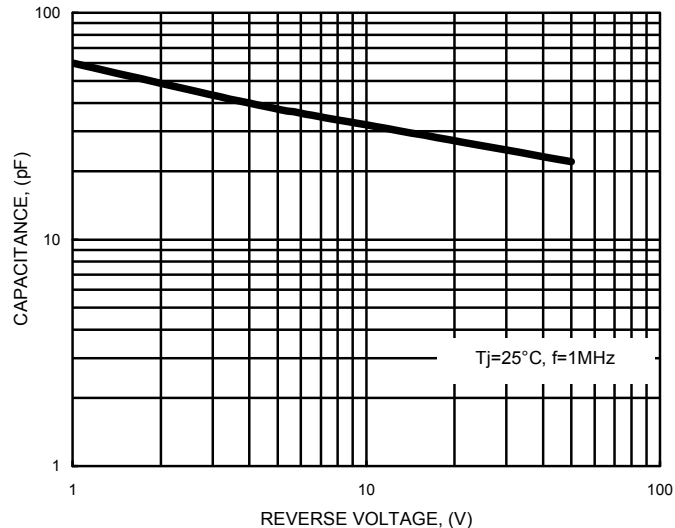


FIG.4- TYPICAL FORWARD CHARACTERISTICS

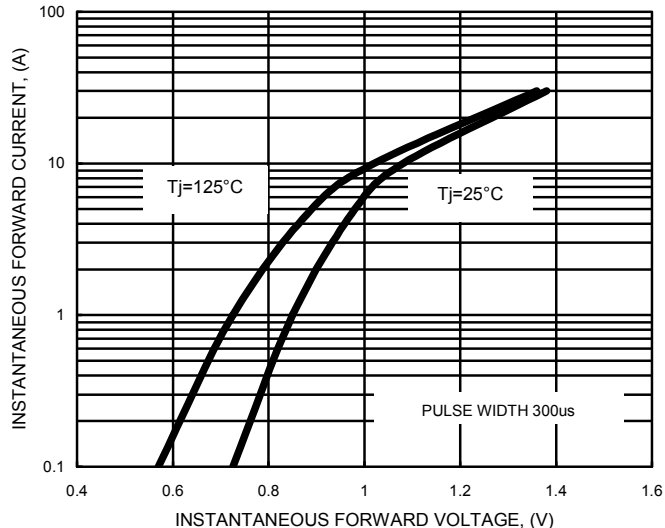
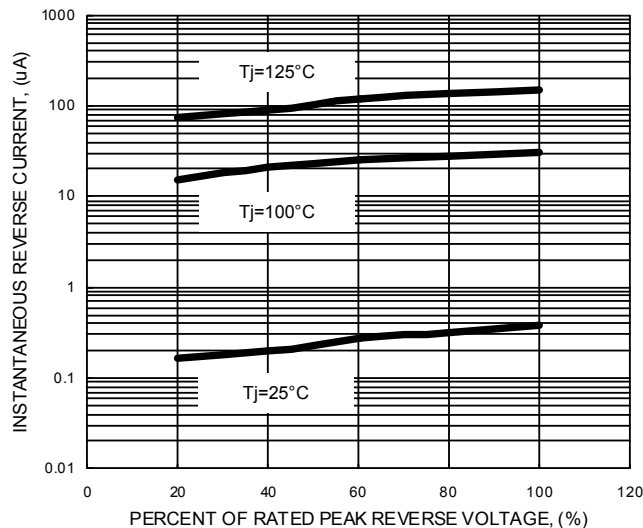
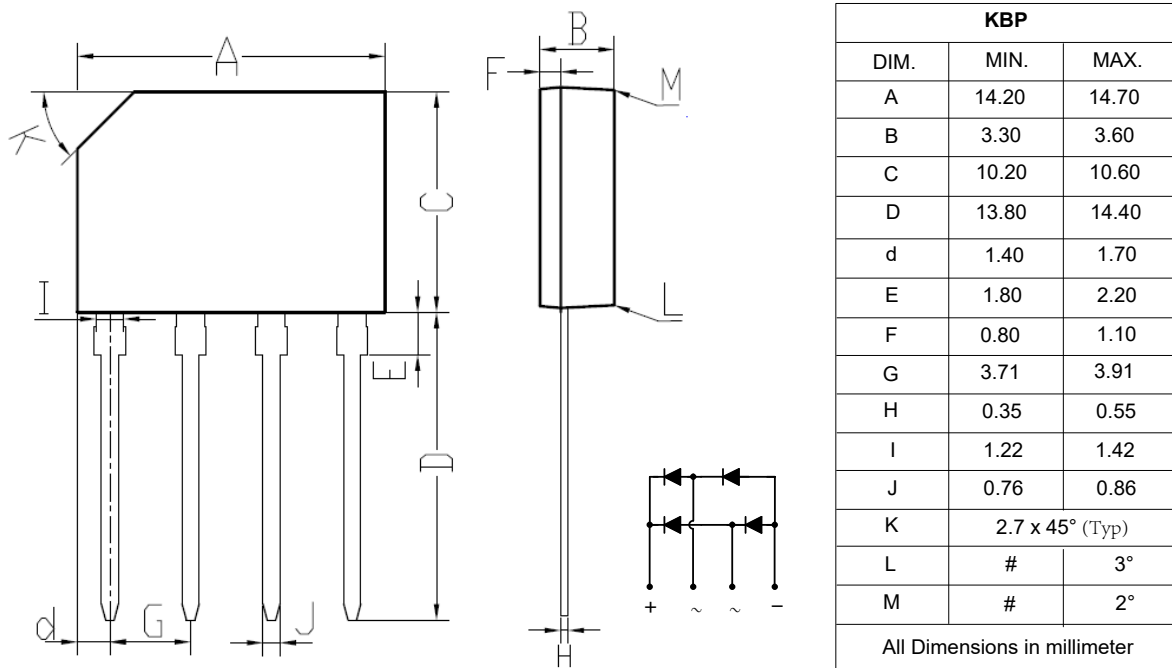


FIG.5- TYPICAL REVERSE CHARACTERISTICS



KBP Package Outline Dimensions



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