

GLASS PASSIVATED BRIDGE RECTIFIERS

**REVERSE VOLTAGE – 400 to 1000 Volts
FORWARD CURRENT – 3.0 Ampere**

FEATURES

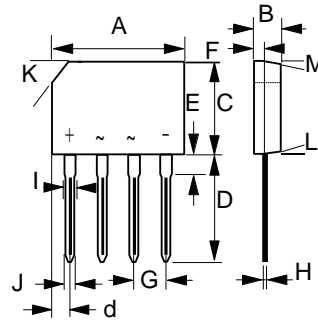
- Rating to 1000V PRV
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique

MECHANICAL DATA

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

- Mounting position : Any

KBP



| GBP | | |
|------------------------------|-----------------|-------|
| DIM. | MIN. | MAX. |
| A | 14.25 | 14.75 |
| B | 3.35 | 3.65 |
| C | 10.20 | 10.60 |
| D | 14.25 | 14.73 |
| d | 1.40 | 1.70 |
| E | 1.80 | 2.20 |
| F | 0.80 | 1.10 |
| G | 3.56 | 4.06 |
| H | 0.35 | 0.55 |
| I | 1.22 | 1.42 |
| J | 0.76 | 0.86 |
| K | 2.7 x 45 (Typ.) | |
| L | - | 3 |
| M | - | 2 |
| All Dimensions in millimeter | | |

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| CHARACTERISTICS | SYMBOL | KBP304G | KBP306G | KBP308G | KBP310G | UNIT |
|--|-----------------|-------------|---------|---------|---------|----------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current @ $T_C=105^\circ\text{C}$ | $I_{(AV)}$ | 3.0 1.9 | | | | A |
| Peak Forward Surge Current @ $T_J = 25^\circ\text{C}$ | I_{FSM} | 90 | | | | A |
| 8.3ms single half sine-wave @ $T_J = 125^\circ\text{C}$ | | 80 | | | | |
| Peak Forward Surge Current @ $T_J = 25^\circ\text{C}$ | I_{FSM} | 180 | | | | A |
| 1.0ms single half sine-wave @ $T_J = 125^\circ\text{C}$ | | 160 | | | | |
| Maximum Forward Voltage at 3.0A 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^2t Rating for fusing ($3\text{ms} \leq t \leq 8.3\text{ms}$) | I^2t | 26.5 | | | | A^2S |
| Typical Junction Capacitance per element (Note 1) | C_J | 50 | | | | pF |
| Typical thermal resistance (Unit mounted on 30mmx30mmx1mm Copper plate heatsink.) | $R_{\theta JC}$ | 10 | | | | $^\circ\text{C/W}$ |
| | $R_{\theta JL}$ | 12 | | | | |
| | $R_{\theta JA}$ | 30 | | | | |
| Typical thermal resistance (without heatsink) | $R_{\theta JC}$ | 12 | | | | $^\circ\text{C/W}$ |
| | $R_{\theta JL}$ | 18 | | | | |
| | $R_{\theta JA}$ | 40 | | | | |
| Operation Temperature Range | T_J | -55 to +150 | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -55 to +150 | | | | $^\circ\text{C}$ |

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

RATING AND CHARACTERISTIC CURVES
KBP304G thru KBP310G

FIG.1- FORWARD CURRENT DERATING CURVE

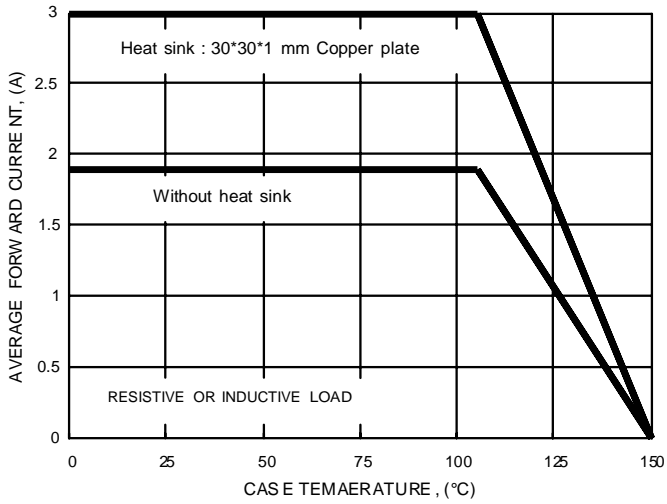


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

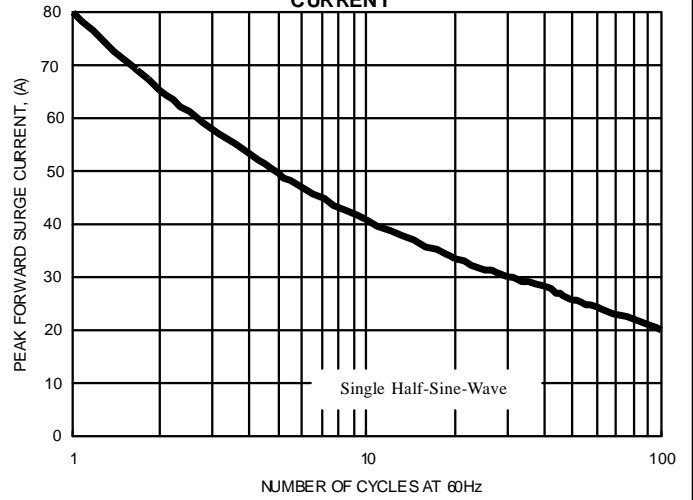


FIG.3- TYPICAL JUNCTION CAPACITANCE

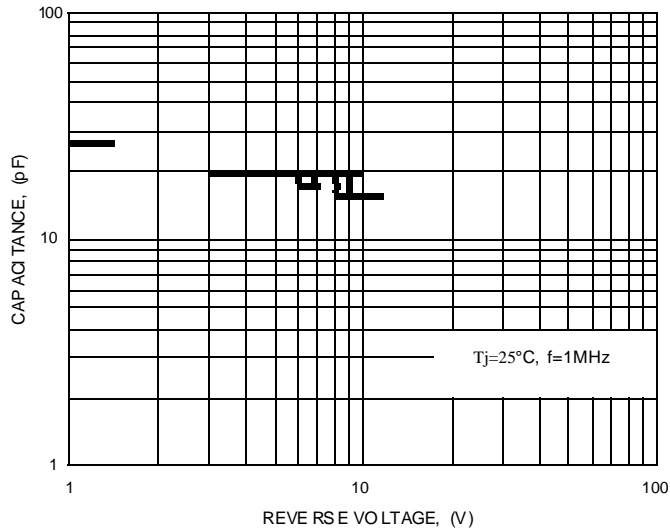


FIG.4- TYPICAL FORWARD CHARACTERISTICS

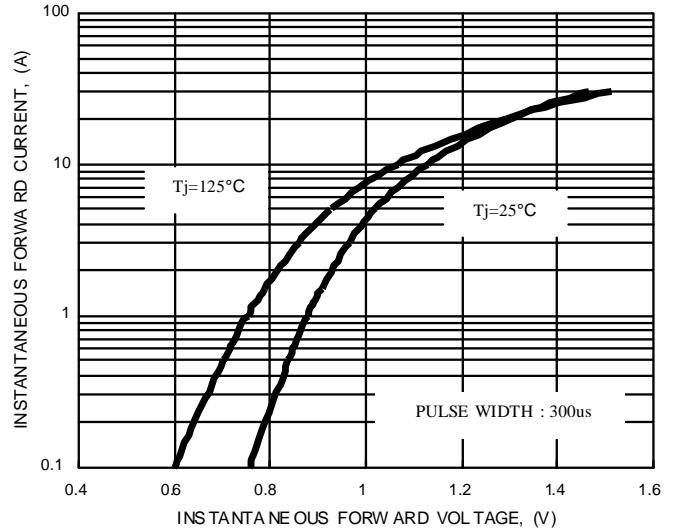


FIG.5- TYPICAL REVERSE CHARACTERISTICS

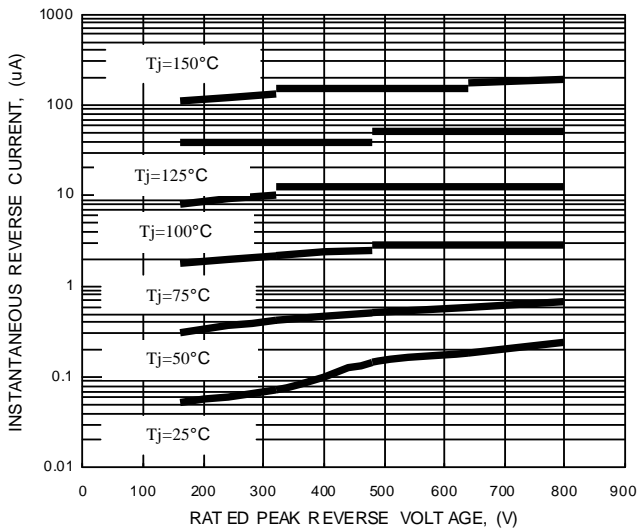


FIG.6- NON-REPETITIVE SURGE CURRENT

