LITE-ON SEMICONDUCTOR

# KBP005G thru KBP10G

**GLASS PASSIVATED BRIDGE RECTIFIERS**

REVERSE VOLTAGE **- 50** to **1000** Volts
FORWARD CURRENT **- 1.5** Amperes

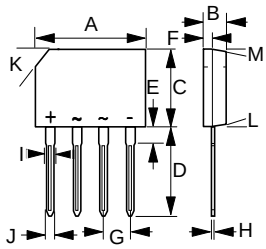
## FEATURES

- 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
- UL recognized file # E95060

## MECHANICAL DATA

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

**KBP**




| KBP | | |
|---|---|---|
| DIM. | MIN. | MAX. |
| A | 14.25 | 14.75 |
| B | 3.35 | 3.65 |
| C | 10.20 | 10.60 |
| D | 14.25 | 14.73 |
| E | 2.10 | 2.50 |
| F | 0.80 | 1.10 |
| G | 3.56 | 4.06 |
| H | 0.30 | 0.64 |
| I | 1.17 | 1.42 |
| J | 0.76 | 0.86 |
| K | 2.8 x 45° | |
| L | - | 3° |
| M | - | 2° |
| All Dimensions in millimeter | | |

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

| CHARACTERISTICS | SYMBOL | KBP 005G | KBP 01G | KBP 02G | KBP 04G | KBP 06G | KBP 08G | KBP 10G | UNIT |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent 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 @TC =105°C, @TA =75°C | $I_{(AV)}$ | 1.5 | | | | | | | A |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD) | $I_{FSM}$ | 40 | | | | | | | A |
| Maximum forward Voltage at 1.5A DC | $V_F$ | 1.1 | | | | | | | V |
| Maximum DC Reverse Current @TJ =25°C<br>at Rated DC Blocking Voltage @TJ =125°C | $I_R$ | 5.0<br>500 | | | | | | | uA |
| Typical Junction Capacitance per element (Note 1) | $C_J$ | 20 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | $R_{\theta JC}$ | 18 | | | | | | | °C/W |
| Operating Temperature Range | $T_J$ | -55 to +150 | | | | | | | °C |
| Storage Temperature Range | $T_{STG}$ | -55 to +150 | | | | | | | °C |

NOTES : 1.Measured at 1.0MHz and applied reverse voltage of 4.0VDC.
2.Unit Mounted on 75mm x 75mm x 1.6mm Cu Plate Heatsink.

REV. 2, 01-Dec-2000, KBDE01

FIG.1 - FORWARD CURRENT DERATING CURVE

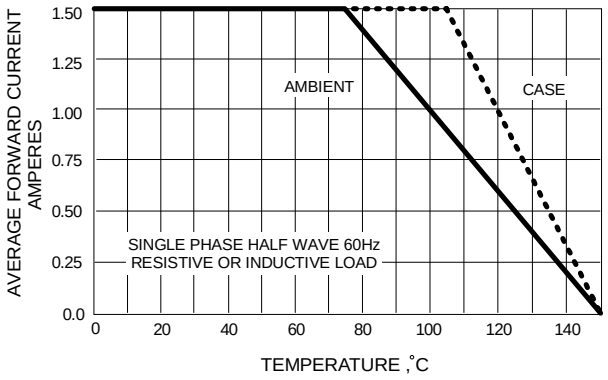



FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

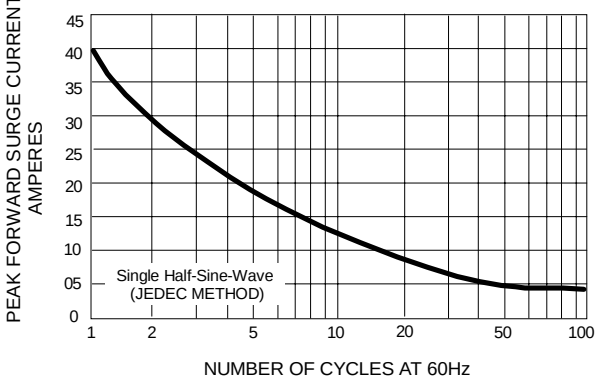



FIG.3 - TYPICAL JUNCTION CAPACITANCE

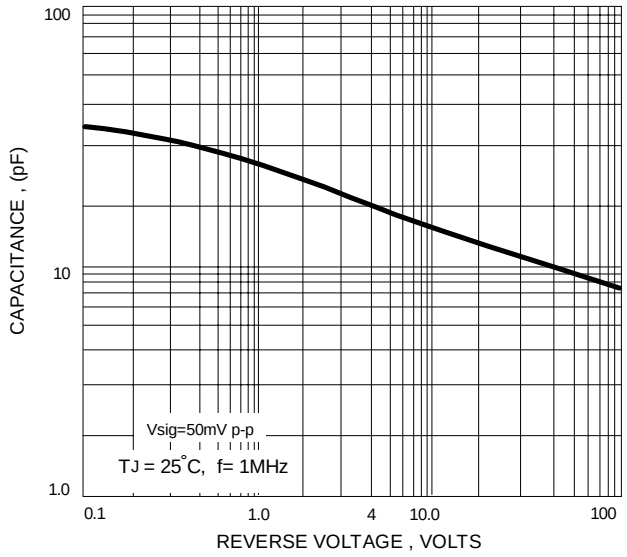



FIG.4 - TYPICAL FORWARD CHARACTERISTICS

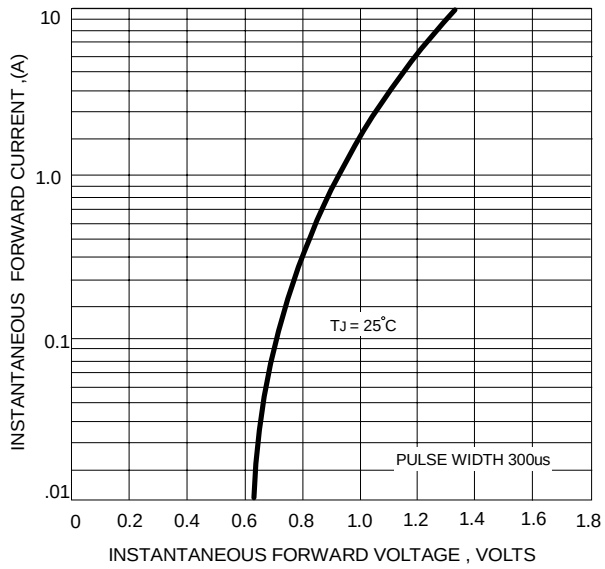



FIG.5 - TYPICAL REVERSE CHARACTERISTICS