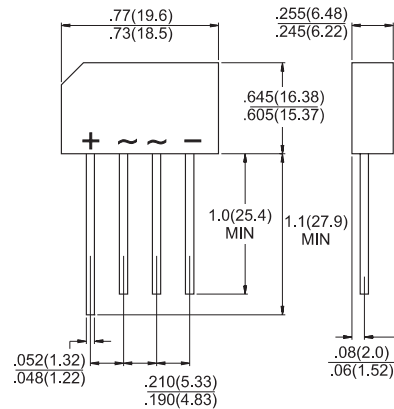




### KBL



## Features

- ✧ Glass passivated junction
- ✧ Ideal for printed circuit board
- ✧ Reliable low cost construction
- ✧ High surge current capability
- ✧ High temperature soldering guaranteed:  
260 °C / 10 seconds / 0.375" ( 9.5mm )  
lead length at 5 lbs. ( 2.3 Kg ) tension

Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| Type Number   | Symbol                             | KBL<br>401G | KBL<br>402G | KBL<br>403G | KBL<br>404G | KBL<br>405G | KBL<br>406G | KBL<br>407G | Units                          |
|---|------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------------|
| 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<br>@ $T_A = 50\text{ }^\circ\text{C}$   | $I_{(AV)}$                         | 4.0         |             |             |             |             |             |             | A                              |
| Peak Forward Surge Current, 8.3 ms Single<br>Half Sine-wave Superimposed on Rated<br>Load (JEDEC method )                     | $I_{FSM}$                          | 150         |             |             |             |             |             |             | A                              |
| Maximum Instantaneous Forward Voltage<br>@ 2.0A<br>@ 4.0A   | $V_F$                              | 1.0<br>1.1  |             |             |             |             |             |             | V                              |
| Maximum DC Reverse Current @ $T_A=25\text{ }^\circ\text{C}$<br>at Rated DC Blocking Voltage @ $T_A=125\text{ }^\circ\text{C}$ | $I_R$                              | 10<br>500   |             |             |             |             |             |             | $\mu\text{A}$<br>$\mu\text{A}$ |
| Typical Thermal Resistance (Note)   | $R_{\theta JA}$<br>$R_{\theta JL}$ | 19<br>2.4   |             |             |             |             |             |             | $^\circ\text{C/W}$             |
| Operating Temperature Range   | $T_J$                              | -55 to +150 |             |             |             |             |             |             | $^\circ\text{C}$               |
| Storage Temperature Range   | $T_{STG}$                          | -55 to +150 |             |             |             |             |             |             | $^\circ\text{C}$               |

Note: Thermal Resistance from Junction to Ambient and from Junction to Lead Mounted on P.C.B.  
With 0.6" x 0.6" (16mm x 16mm) Copper Pads.

### RATINGS AND CHARACTERISTIC CURVES (KBL401G THRU KBL407G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

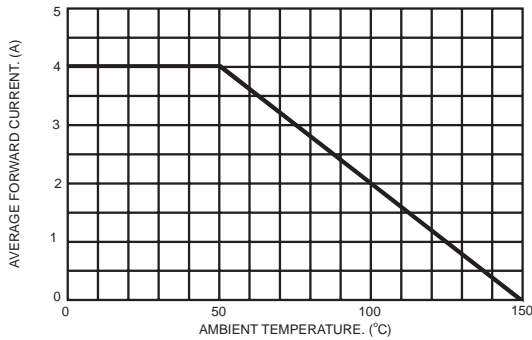


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

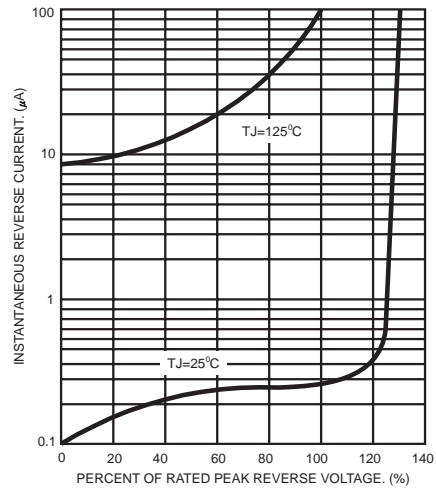


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

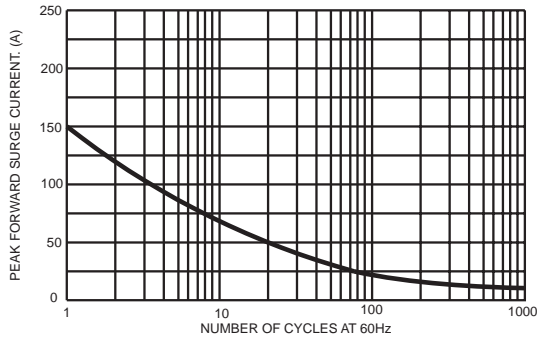


FIG.4- TYPICAL JUNCTION CAPACITANCE

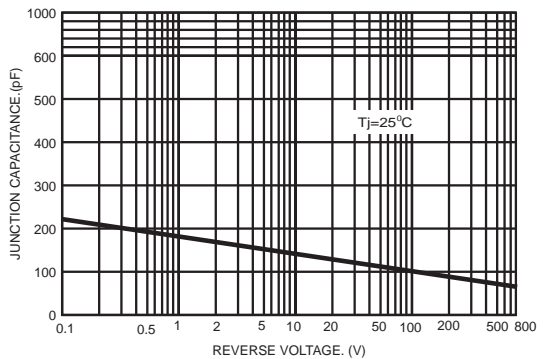


FIG.5- TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

