

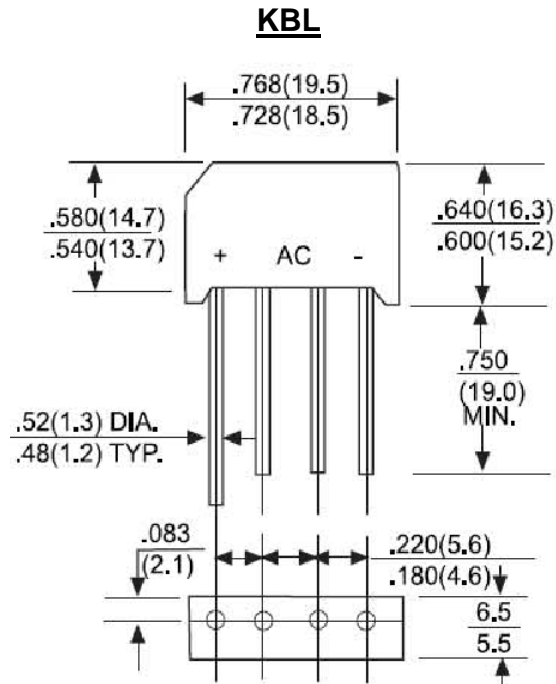

**RoHS  
COMPLIANCE**


### 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.,(2.3kg) tension
- ✧ Leads solderable per MIL-STD-202,  
Method 208
- ✧ Green compound with suffix "G" on packing  
code & prefix "G" on datecode

### Mechanical Data

- ✧ Case: Molded plastic body
- ✧ Terminals: Leads solderable  
per MIL-STD-750, Method 2026
- ✧ Weight: 5.61 grams



### Dimensions in inches and (millimeters)



### Marking Diagram

- |         |   |                      |
|---------|---|----------------------|
| KBL40XG | = | Specific Device Code |
| G       | = | Green Compound       |
| Y       | = | Year                 |
| WW      | = | Work Week            |

### 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 | 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<br>@ $T_A=50^\circ\text{C}$  | $I_{F(AV)}$                        | 4             |             |             |             |             |             |             | A                  |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)               | $I_{FSM}$                          | 150           |             |             |             |             |             |             | A                  |
| Maximum Instantaneous Forward Voltage (Note 1)<br>@ 2 A<br>@ 4 A   | $V_F$                              | 1.0<br>1.1    |             |             |             |             |             |             | V                  |
| Maximum DC Reverse Current<br>at Rated DC Block Voltage<br>@ $T_A=25^\circ\text{C}$<br>@ $T_A=125^\circ\text{C}$ | $I_R$                              | 10<br>500     |             |             |             |             |             |             | $\mu\text{A}$      |
| Typical Thermal Resistance (Note 2)  | $R_{\theta JA}$<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 1 : Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2 : Unit mount on P.C.B. 0.6" x 0.6" (16mmx16mm) Copper pads

## RATINGS AND CHARACTERISTIC CURVES (KBL401G THRU KBL407G)

FIG. 1 FORWARD CURRENT DERATING CURVE

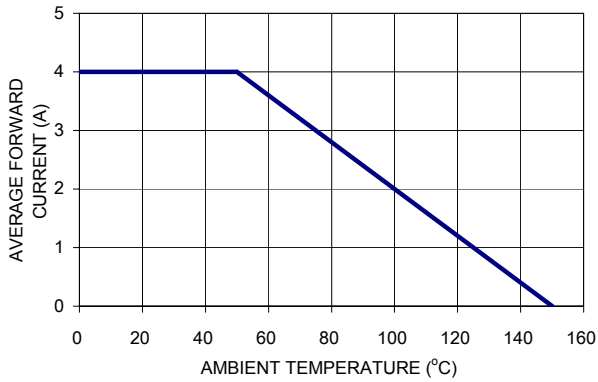


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

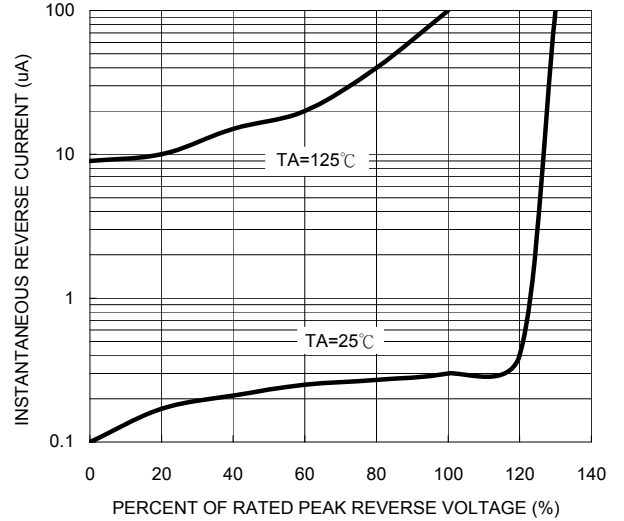


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

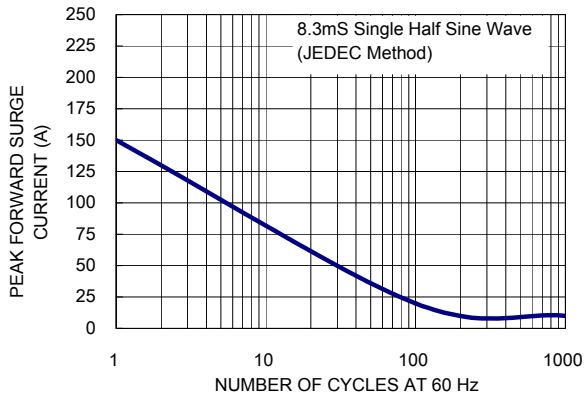


FIG. 4 TYPICAL JUNCTION CAPACITANCE

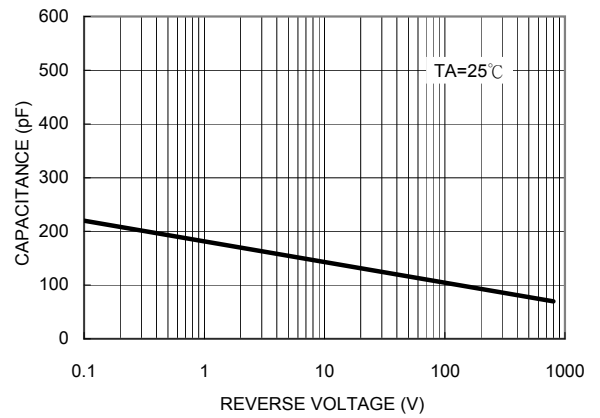


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

