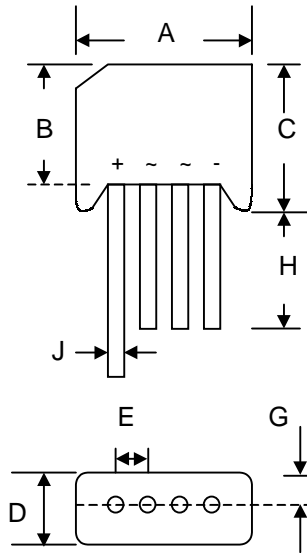


### Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards



| KBL                  |        |        |
|----------------------|--------|--------|
| Dim                  | Min    | Max    |
| A                    | 18.50  | 19.50  |
| B                    | 13.70  | 14.70  |
| C                    | 15.20  | 16.30  |
| D                    | 4.0    | 6.00   |
| E                    | 4.60   | 5.60   |
| G                    | —      | 2.10   |
| H                    | 16.00  | —      |
| J                    | 0.90 Ø | 1.30 Ø |
| All Dimensions in mm |        |        |

### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Weight: 5.6 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version**

### Maximum Ratings and Electrical Characteristics @<sub>T<sub>A</sub></sub>=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Characteristic  | Symbol                            | KBL 6005    | KBL 601 | KBL 602 | KBL 604 | KBL 606 | KBL 608 | KBL 610 | Unit     |
|---|-----------------------------------|-------------|---------|---------|---------|---------|---------|---------|----------|
| Peak Repetitive Reverse Voltage   | V <sub>RRM</sub>                  |             |         |         |         |         |         |         | V        |
| Working Peak Reverse Voltage  | V <sub>RWM</sub>                  | 50          | 100     | 200     | 400     | 600     | 800     | 1000    |          |
| DC Blocking Voltage   | V <sub>R</sub>                    |             |         |         |         |         |         |         |          |
| RMS Reverse Voltage   | V <sub>R(RMS)</sub>               | 35          | 70      | 140     | 280     | 420     | 560     | 700     | V        |
| Average Rectified Output Current @ <sub>T<sub>C</sub></sub> = 75°C  | I <sub>O</sub>                    | 6.0         |         |         |         |         |         |         | A        |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)        | I <sub>FSM</sub>                  | 120         |         |         |         |         |         |         | A        |
| Forward Voltage (per element) @ <sub>I<sub>F</sub></sub> = 3.0A   | V <sub>FM</sub>                   | 1.0         |         |         |         |         |         |         | V        |
| Peak Reverse Current @ <sub>T<sub>C</sub></sub> = 25°C<br>At Rated DC Blocking Voltage @ <sub>T<sub>C</sub></sub> = 100°C | I <sub>R</sub>                    | 2.0<br>1.0  |         |         |         |         |         |         | μA<br>mA |
| Typical Thermal Resistance (Note 1)   | R <sub>θJC</sub>                  | 16          |         |         |         |         |         |         | K/W      |
| Operating and Storage Temperature Range   | T <sub>j</sub> , T <sub>STG</sub> | -55 to +150 |         |         |         |         |         |         | °C       |

Note: 1. Thermal resistance junction to case per element mounted on PC board with 13.0x13.0x0.03mm thick land areas.

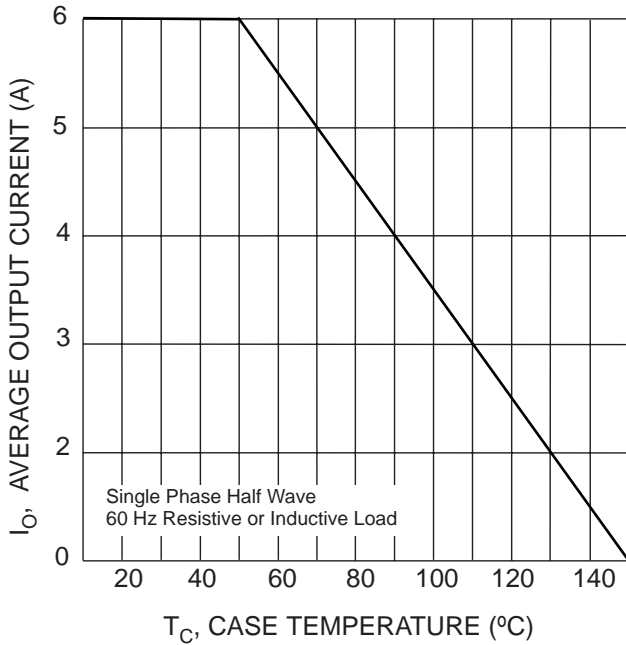


Fig. 1 Forward Current Derating Curve

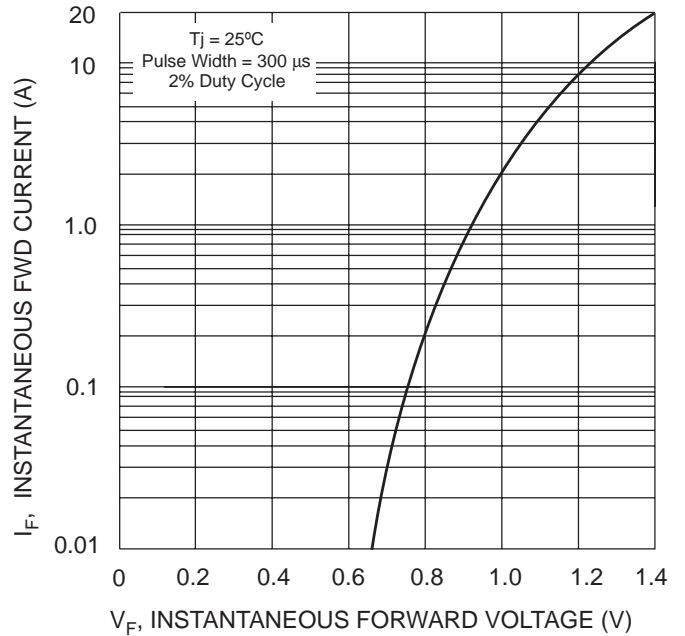


Fig. 2 Typical Forward Characteristics, per element

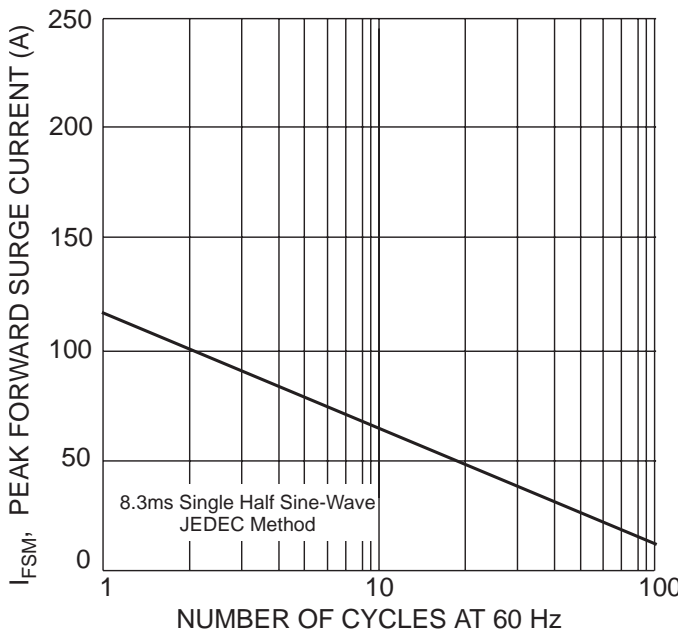


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

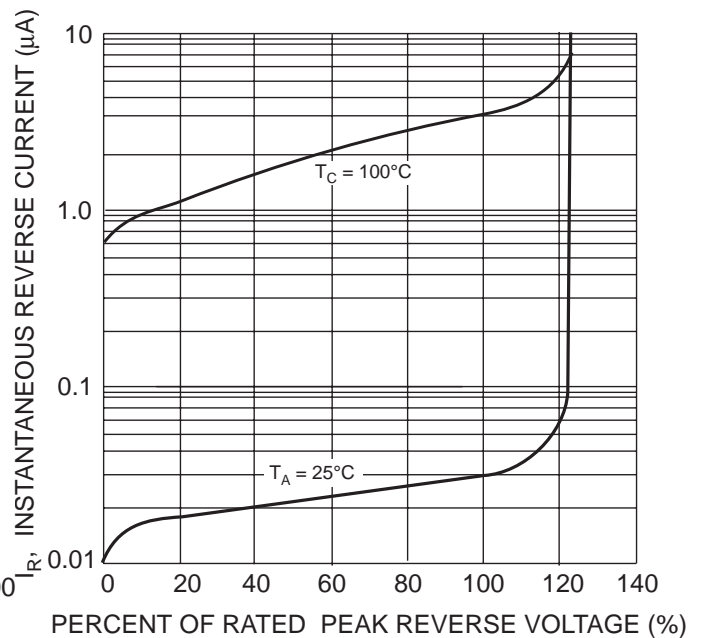


Fig. 4 Typical Reverse Characteristics, per element