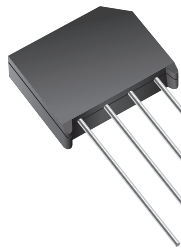


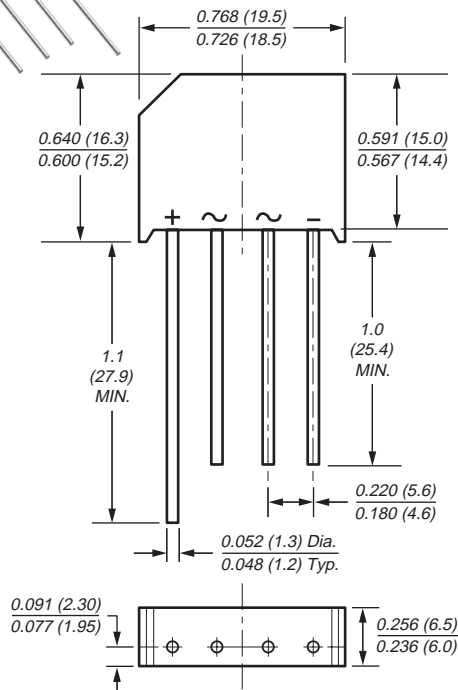


**Single-Phase Bridge Rectifier**

Reverse Voltage 50 and 1000 V  
Forward Current 4.0 A



Case Style KBL



Dimensions in inches and (millimeters)

**Features**

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- This series is UL listed under the Recognized Component Index, file number E54214
- High case dielectric strength of 1500 V<sub>RMS</sub>
- Ideal for printed circuit boards
- High forward surge current capability
- High surge current capability

**Mechanical Data**

**Case:** Molded plastic body

**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026.

High temperature soldering guaranteed:  
260°C/10 seconds, 0.375 (9.5mm) lead length, 5lbs. (2.3kg) tension

**Mounting Position:** Any

**Weight:** 0.2 oz., 5.6 g

**Packaging codes/options:**  
1/300 EA. per Bulk Tray Stack

**Maximum Ratings & Thermal Characteristics** Ratings at 25°C ambient temperature unless otherwise specified.

|   | Symbols                           | KBL 005     | KBL 01 | KBL 02 | KBL 04 | KBL 06 | KBL 08 | KBL 10 | Units |
|---|-----------------------------------|-------------|--------|--------|--------|--------|--------|--------|-------|
| Maximum repetitive peak reverse voltage   | V <sub>RRM</sub>                  | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | V     |
| Maximum RMS voltage   | V <sub>RMS</sub>                  | 35          | 70     | 140    | 280    | 420    | 560    | 700    | V     |
| Maximum DC blocking voltage   | V <sub>DC</sub>                   | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | V     |
| Maximum average forward output current at T <sub>A</sub> =50°C  | I <sub>F(AV)</sub>                | 4.0         |        |        |        |        |        |        | A     |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) T <sub>J</sub> =150°C | I <sub>FSM</sub>                  | 200         |        |        |        |        |        |        | A     |
| Typical thermal resistance per leg (NOTE 1) (NOTE 2)  | R <sub>θJA</sub>                  | 19          |        |        |        |        |        |        | °C/W  |
|   | R <sub>θJL</sub>                  | 2.4         |        |        |        |        |        |        |       |
| Operating junction storage and temperature range  | T <sub>J</sub> , T <sub>STG</sub> | -50 to +150 |        |        |        |        |        |        | °C    |

**Electrical Characteristics** Ratings at 25°C ambient temperature unless otherwise specified.

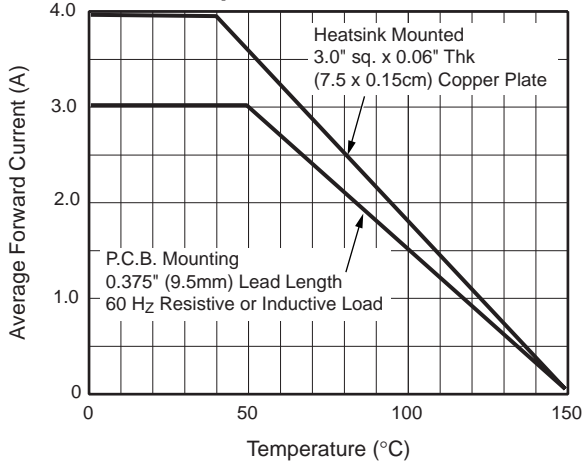
|   |                |     |  |  |  |  |  |  |    |
|---|----------------|-----|--|--|--|--|--|--|----|
| Maximum instantaneous forward drop per leg at 4.0 A             | V <sub>F</sub> | 1.1 |  |  |  |  |  |  | V  |
| Maximum DC reverse current at rated DC blocking voltage per leg | I <sub>R</sub> | 5.0 |  |  |  |  |  |  | μA |
|   |                | 1.0 |  |  |  |  |  |  |    |

**Notes:**

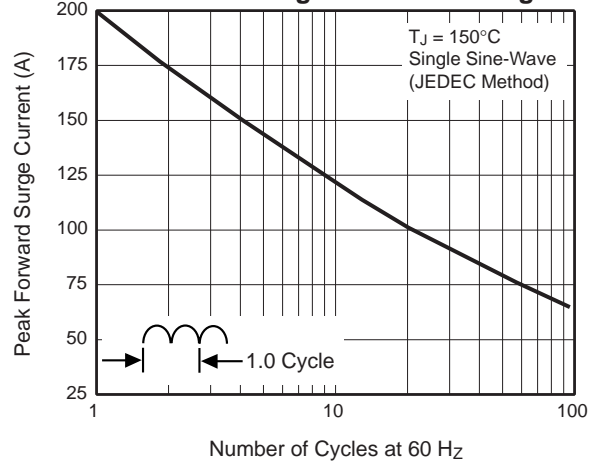
- (1) Thermal resistance from junction to ambient with units mounted on 3.0 x 3.0 x 0.11" thick (7.5 x 7.5 x 0.3cm) Al. plate
- (2) Thermal resistance from junction to lead with units mounted on P.C.B. at 0.375" (9.5mm) lead length and 0.5 x 0.5" (12 x 12mm) copper pads

## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

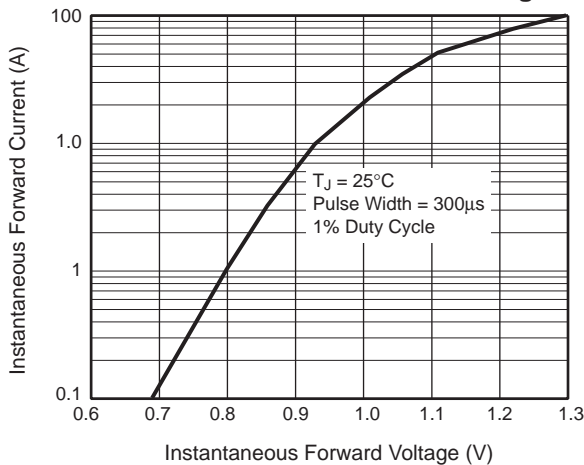
**Fig. 1 – Derating Curve  
Output Rectified Current**



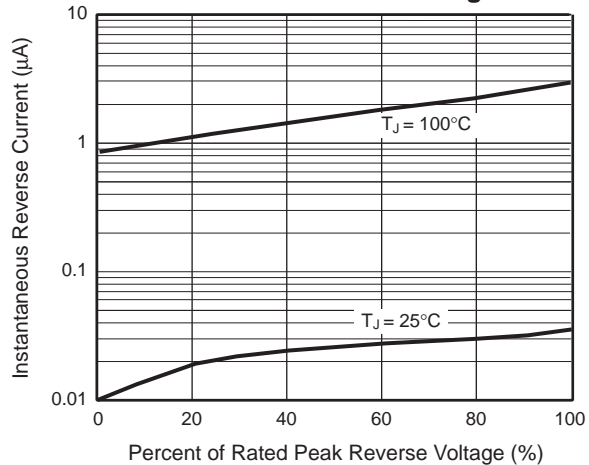
**Fig. 2 – Maximum Non-Repetitive Peak  
Forward Surge Current Per Leg**



**Fig. 3 – Typical Instantaneous  
Forward Characteristics Per Leg**



**Fig. 4 – Typical Reverse Leakage  
Characteristics Per Leg**



**Fig. 5 – Typical Junction  
Capacitance Per Leg**

