



# THE DATASHEET OF KBL10





# KBL005 - KBL10

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## Features

- Ideal for printed circuit board .
- Reliable low cost construction.
- High surge current capability.
- UL certified, UL #E96005.



## Bridge Rectifiers

### Absolute Maximum Ratings\* T<sub>A</sub> = 25°C unless otherwise noted

| Symbol             | Parameter   | Value       |     |     |     |     |     |      | Units |
|--------------------|---|-------------|-----|-----|-----|-----|-----|------|-------|
|                    |   | 005         | 01  | 02  | 04  | 06  | 08  | 10   |       |
| V <sub>RRM</sub>   | Maximum Repetitive Reverse Voltage  | 50          | 100 | 200 | 400 | 600 | 800 | 1000 | V     |
| V <sub>RMS</sub>   | Maximum RMS Bridge Input Voltage  | 35          | 70  | 140 | 280 | 420 | 560 | 700  | V     |
| V <sub>R</sub>     | DC Reverse Voltage (Rated V <sub>R</sub> )                                | 50          | 100 | 200 | 400 | 600 | 800 | 1000 | V     |
| I <sub>F(AV)</sub> | Average Rectified Forward Current, @ T <sub>A</sub> = 50°C                | 4.0         |     |     |     |     |     |      | A     |
| I <sub>FSM</sub>   | Non-repetitive Peak Forward Surge Current<br>8.3 ms Single Half-Sine-Wave | 200         |     |     |     |     |     |      | A     |
| T <sub>stg</sub>   | Storage Temperature Range   | -55 to +150 |     |     |     |     |     |      | °C    |
| T <sub>J</sub>     | Operating Junction Temperature  | -55 to +150 |     |     |     |     |     |      | °C    |

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

## Thermal Characteristics

| Symbol           | Parameter   | Value | Units |
|------------------|---|-------|-------|
| P <sub>D</sub>   | Power Dissipation                                 | 6.58  | W     |
| R <sub>θJA</sub> | Thermal Resistance, Junction to Ambient,* per leg | 19    | °C/W  |
| R <sub>θJL</sub> | Thermal Resistance, Junction to Lead,* per leg    | 2.4   | °C/W  |

\*Device mounted on PCB with 0.375" (9.5 mm) lead length and 0.5 x 0.5" (13 x 13 mm) copper pads.

## Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise noted

| Symbol         | Parameter   | Device     | Units    |
|----------------|---|------------|----------|
| V <sub>F</sub> | Forward Voltage, per bridge @ 4.0 A   | 1.1        | V        |
| I <sub>R</sub> | Reverse Current, total bridge @ rated V <sub>R</sub><br>T <sub>A</sub> = 25°C<br>T <sub>A</sub> = 100°C | 5.0<br>500 | μA<br>μA |

Typical Characteristics

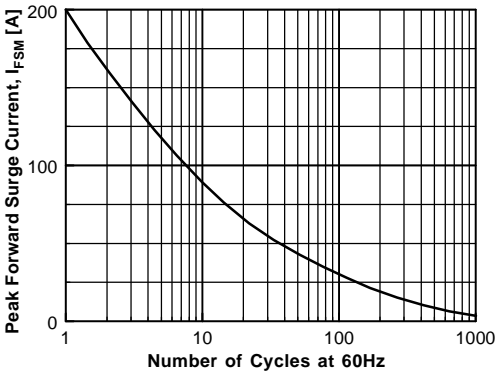


Figure 1. Non-Repetitive Surge Current

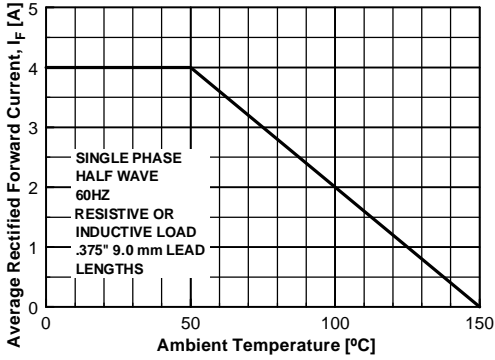


Figure 2. Forward Current Derating Curve

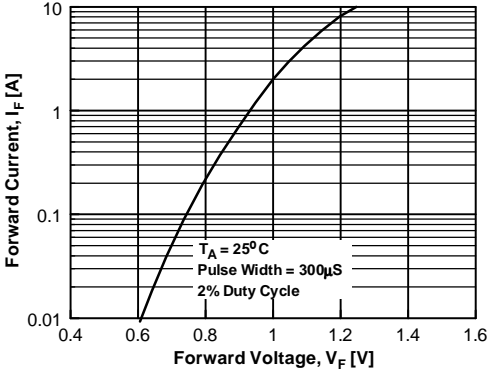


Figure 3. Forward Voltage Characteristics

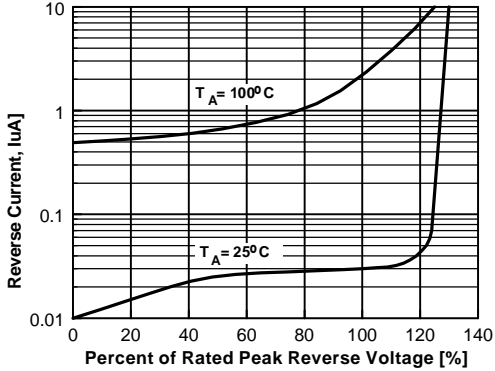


Figure 4. Reverse Current vs Reverse Voltage

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