



# KBL6005 THRU KBL610

## BRIDGE RECTIFIERS

### FEATURES

- UL Recognized File # E469616
- Reliable low cost construction utilizing molded plastic technique
- Ideal for printed circuit board
- Low forward voltage drop
- Low reverse leakage current
- High surge current capability

### MECHANICAL DATA

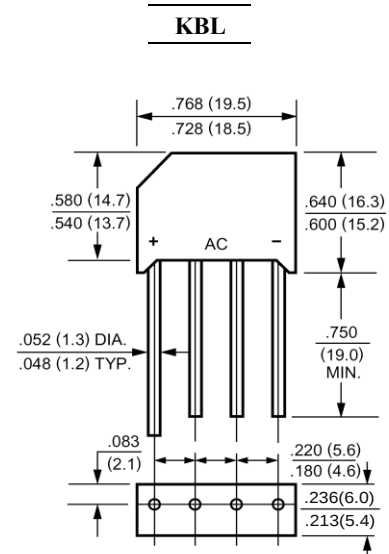
Case: Molded plastic, KBL

Epoxy: UL 94V-O rate flame retardant

Terminals: Leads solderable per MIL-STD-202, method 208 guaranteed

Mounting position: Any

Weight: 0.2ounce, 5.6gram



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

|                                                                                                         | Symbols         | KBL6005     | KBL601 | KBL602 | KBL604 | KBL606 | KBL608 | KBL610 | Units |
|---------------------------------------------------------------------------------------------------------|-----------------|-------------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                  | $V_{RRM}$       | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | Volts |
| Maximum RMS Voltage                                                                                     | $V_{RMS}$       | 35          | 70     | 140    | 280    | 420    | 560    | 700    | Volts |
| Maximum DC Blocking Voltage                                                                             | $V_{DC}$        | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | Volts |
| Maximum Average Forward Rectified Current<br>5" (12.7mm) Lead Length at $T_A=50$                        | $I_{(AV)}$      | 6.0         |        |        |        |        |        |        | Amp   |
| Peak Forward Surge Current,<br>8.3ms single half-sine-wave<br>superimposed on rated load (JEDEC method) | $I_{FSM}$       | 125         |        |        |        |        |        |        | Amp   |
| Maximum Forward Voltage<br>at 6.0A DC and 25 °C                                                         | $V_F$           | 1.1         |        |        |        |        |        |        | Volts |
| Maximum Reverse Current at $T_A=25$<br>at Rated DC Blocking Voltage $T_A=100$                           | $I_R$           | 10.0<br>500 |        |        |        |        |        |        | uAmp  |
| Typical Junction Capacitance (Note 1)                                                                   | $C_J$           | 40          |        |        |        |        |        |        | pF    |
| Typical Thermal Resistance (Note 2)                                                                     | $R_{\theta JA}$ | 19          |        |        |        |        |        |        | /W    |
| Typical Thermal Resistance (Note 3)                                                                     | $R_{\theta JL}$ | 2.4         |        |        |        |        |        |        | /W    |
| Operating and Storage Temperature Range                                                                 | $T_J, T_{stg}$  | -55 to +125 |        |        |        |        |        |        |       |

### NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- 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

3- 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





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

FIG.1-MAXIMUM FORWARD SURGE CURRENT

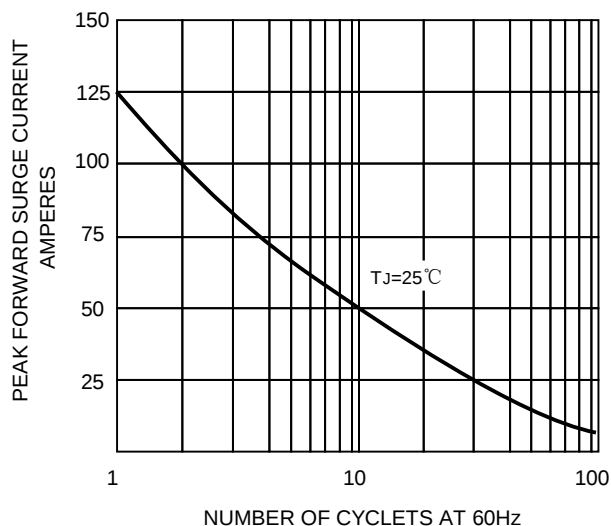


FIG.1-DERATING CURVE  
OUTPUT RECTIFIED CURRENT

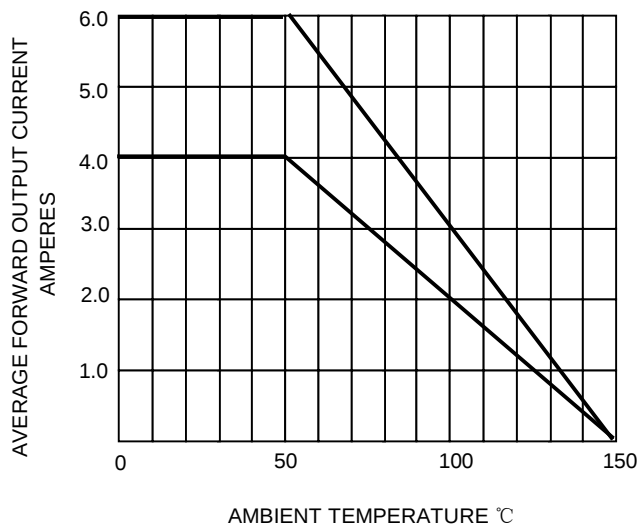


FIG.4-TYPICAL FORWARD  
CHARACTERISTICS

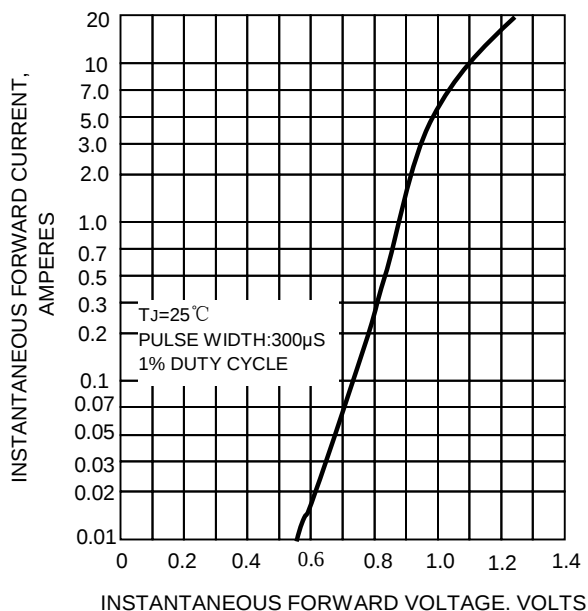


FIG.4-TYPICAL REVERSE  
CHARACTERISTICS

