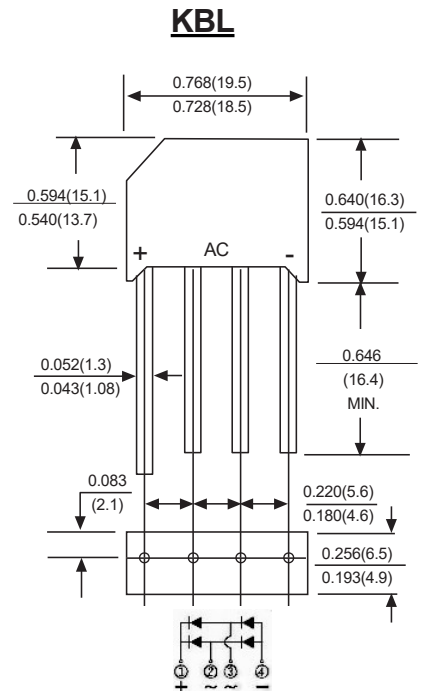


## SILICON BRIDGE RECTIFIERS

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ideal for printed circuit boards
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 260°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension



Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

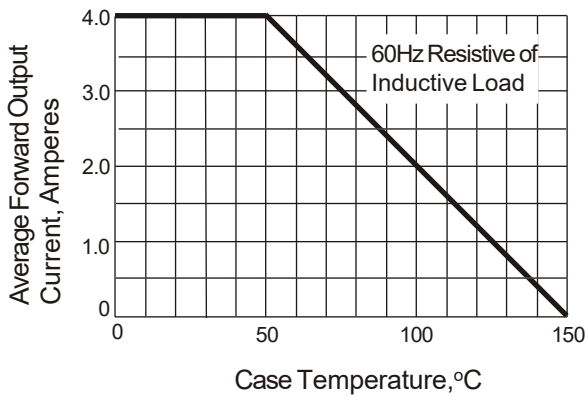
Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

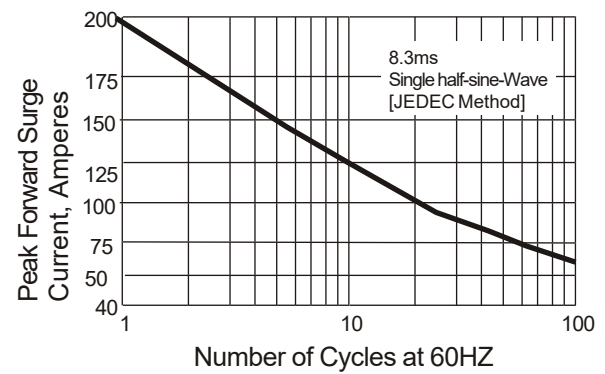
| Parameter                                                                                              | SYMBOLS         | KBL4005     | KBL401 | KBL402 | KBL404 | KBL406 | KBL408 | KBL410 | UNITS                |
|--------------------------------------------------------------------------------------------------------|-----------------|-------------|--------|--------|--------|--------|--------|--------|----------------------|
| Marking Code                                                                                           |                 |             |        |        |        |        |        |        |                      |
| 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 output rectified current at $T_A=50^\circ\text{C}$                             | $I_{AV}$        | 4.0         |        |        |        |        |        |        | A                    |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)       | $I_{FSM}$       | 200         |        |        |        |        |        |        | A                    |
| Rating for Fusing ( $t < 8.3\text{ms}$ )                                                               | $I^2t$          | 166         |        |        |        |        |        |        | $\text{A}^2\text{s}$ |
| Maximum instantaneous forward voltage drop per bridge element at 4.0A                                  | $V_F$           | 1.1         |        |        |        |        |        |        | V                    |
| Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$ | $I_R$           | 10          |        |        |        |        |        |        | $\mu\text{A}$        |
|                                                                                                        |                 | 1.0         |        |        |        |        |        |        | mA                   |
| Typical Junction Capacitance                                                                           | $C_J$           | 105         |        |        |        |        |        |        | pF                   |
| Typical Thermal Resistance (Note 1)                                                                    | $R_{\theta JA}$ | 10          |        |        |        |        |        |        | $^\circ\text{C/W}$   |
| Operating junction temperature range                                                                   | $T_J$           | -55 to +150 |        |        |        |        |        |        | $^\circ\text{C}$     |
| storage temperature range                                                                              | $T_{STG}$       | -55 to +150 |        |        |        |        |        |        | $^\circ\text{C}$     |

## Ratings And Characteristic Curves

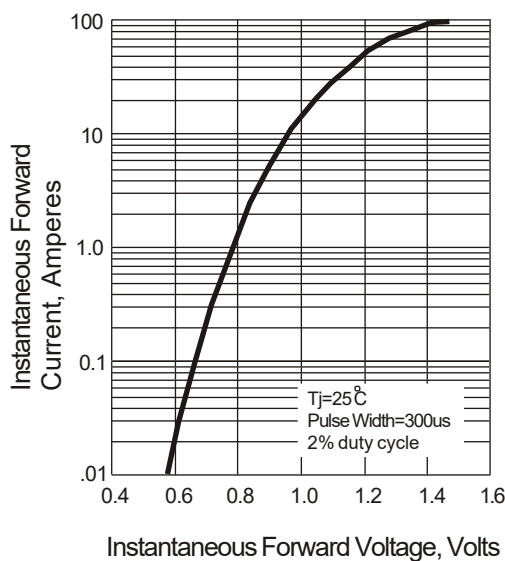
**Fig. 1 Derating Curve for Output Rectified Current**



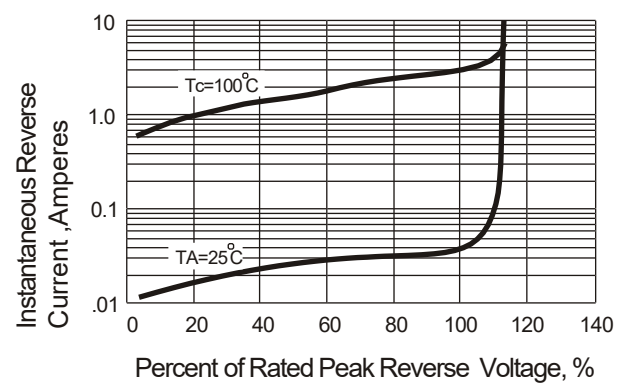
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



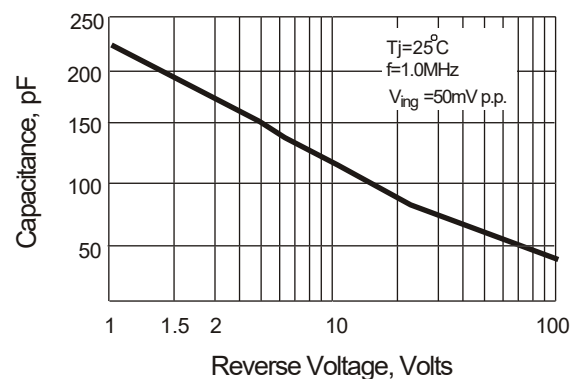
**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 4 Typical Reverse Characteristics at  $T_J = 25^\circ\text{C}$**



**Fig. 5 Typical Junction Capacitance**



The curve above is for reference only.