

## SILICON BRIDGE RECTIFIERS

### Features

- ◆ Glass passivated die construction
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ High surge current capability
- ◆ Designed for surface mount application
- ◆ Plastic material-UL flammability 94V-O

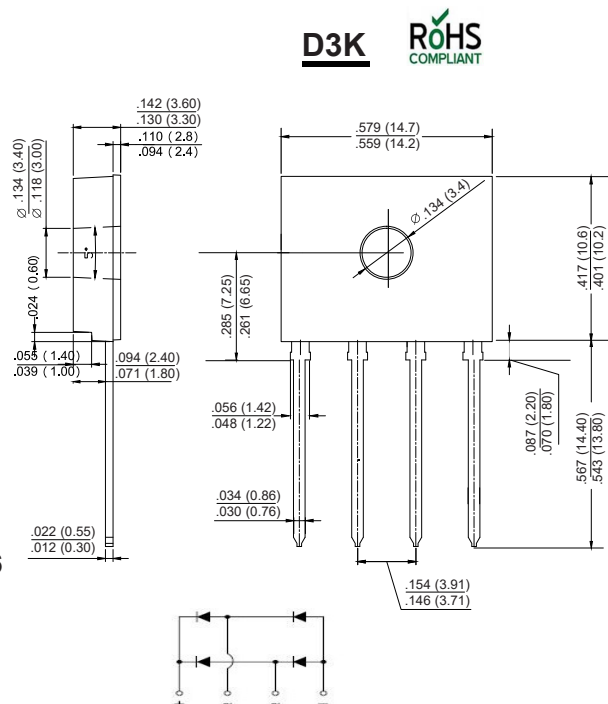
### Mechanical Data

**Case :** D3K Molded plastic body

**Terminals :** Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity :** Polarity symbol marking on body

**Mounting Position :** Any



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         | MDD                     | MDD     | MDD     | MDD     | MDD     | MDD     | MDD      | UNITS              |
|--|-----------------|-------------------------|---------|---------|---------|---------|---------|----------|--------------------|
|  |                 | UG4KB05                 | UG4KB10 | UG4KB20 | UG4KB40 | UG4KB60 | UG4KB80 | UG4KB100 |                    |
| 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 $T_A=40^\circ\text{C}$                             | $I_{(AV)}$      | 4.0                     |         |         |         |         |         |          | A                  |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed<br>on rated load (JEDEC Method) | $I_{FSM}$       | 80.0                    |         |         |         |         |         |          | A                  |
| Maximum instantaneous forward voltage drop<br>per bridge element at 3.0A                               | $V_F$           | 1.1                     |         |         |         |         |         |          | V                  |
| Maximum DC reverse current<br>at rated DC blocking voltage   | $I_R$           | $T_A=25^\circ\text{C}$  |         |         |         |         |         |          | $\mu\text{A}$      |
|  |                 | $T_A=100^\circ\text{C}$ |         |         |         |         |         |          | $\text{mA}$        |
| Typical Junction Capacitance   | $C_J$           | 21                      |         |         |         |         |         |          | $\text{pF}$        |
| Typical Thermal Resistance   | $R_{\theta JA}$ | 55                      |         |         |         |         |         |          | $^\circ\text{C/W}$ |
|  | $R_{\theta JL}$ | 15                      |         |         |         |         |         |          |                    |
| Operating junction temperature range   | $T_J$           | -55 to +150             |         |         |         |         |         |          | $^\circ\text{C}$   |
| storage temperature range  | $T_{STG}$       | -55 to +150             |         |         |         |         |         |          | $^\circ\text{C}$   |

Note:1. Mounted on glass epoxy PC board with  $1.3\text{mm}^2$  solder pad.

2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

## Ratings And Characteristic Curves

Fig. 1 Output Current Derating Curve

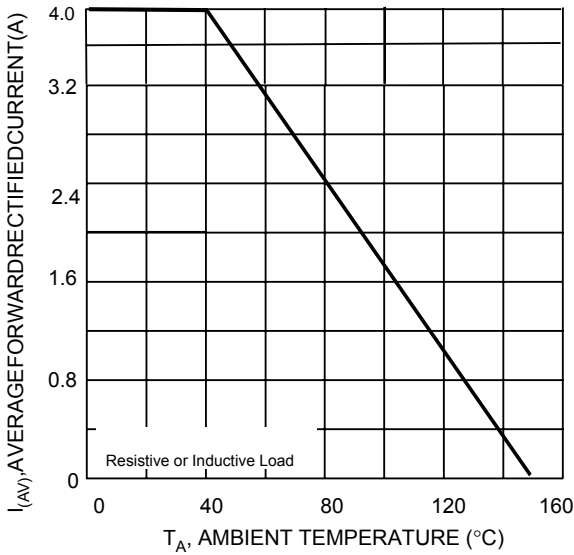


Fig. 2 Typical I Forward Characteristics (per leg)

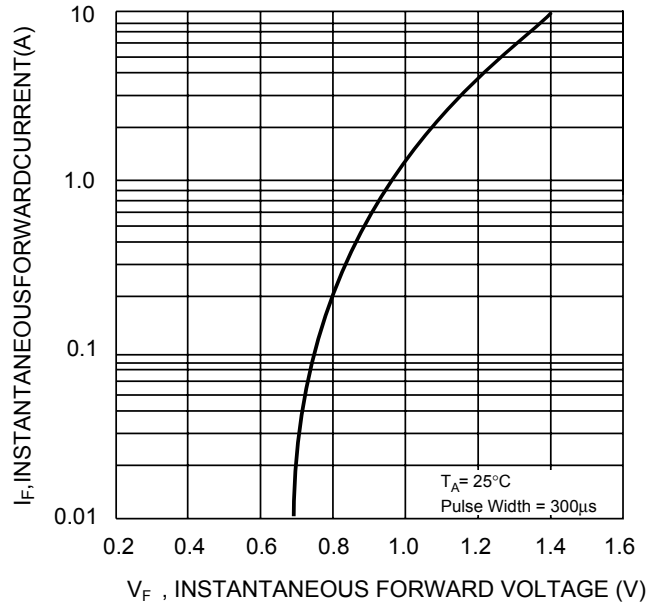


Fig. 3 Maximum Peak Forward Surge Current (per leg)

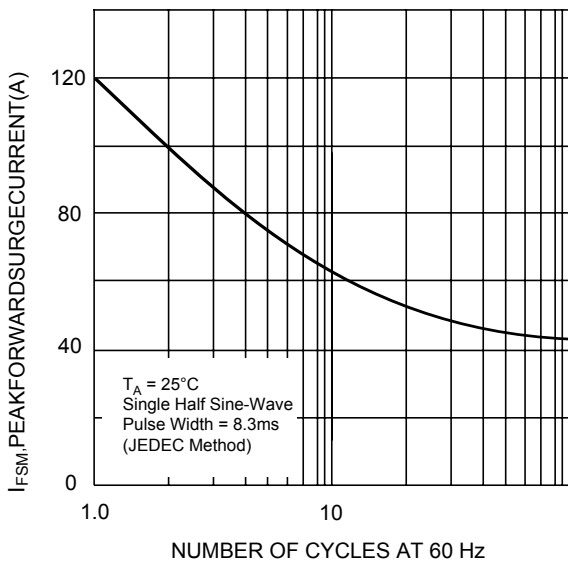
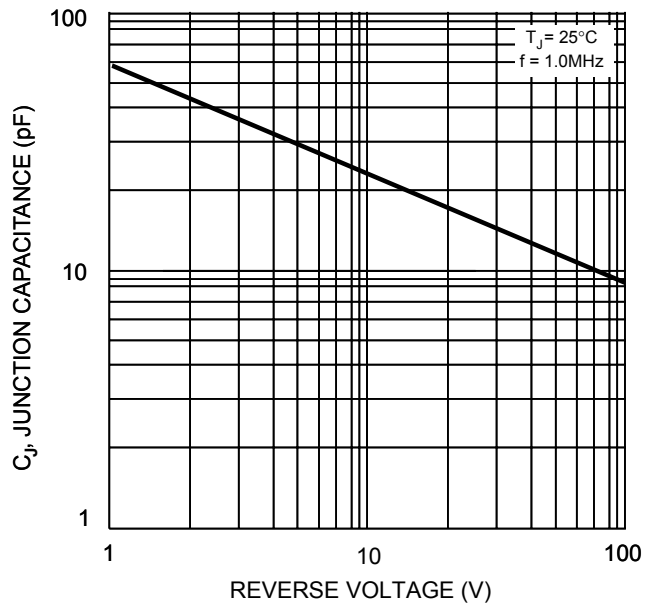


Fig.4 Typical Junction Capacitance Per Diode



The curve above is for reference only.