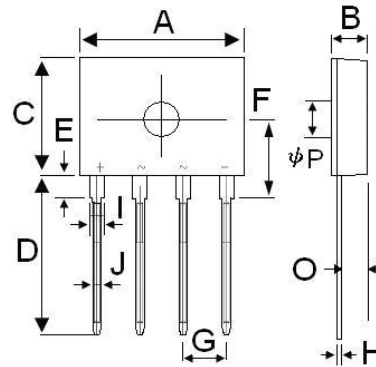


#### D3K

#### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Idea for printed circuit board
- Glass passivated Junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed  
250°C/10 seconds at terminals



| D3K                          |      |      |
|------------------------------|------|------|
| Dim.                         | Min. | Max. |
| A                            | 14.2 | 14.7 |
| B                            | 3.30 | 3.60 |
| C                            | 10.2 | 10.6 |
| D                            | 13.8 | 14.4 |
| E                            | 1.8  | 2.2  |
| F                            | 6.65 | 7.25 |
| G                            | 3.71 | 3.91 |
| H                            | 0.35 | 0.55 |
| I                            | 1.22 | 1.42 |
| J                            | 0.76 | 0.86 |
| O                            | 1.8  | 2.4  |
| P                            | 2.9Φ | 3.2Φ |
| All Dimensions in millimeter |      |      |

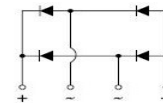
#### Mechanical Data

**Case :** Molded plastic body

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

**Polarity :** Polarity symbol marking on body

**Mounting Position :** Any



#### 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        | UG3K<br>B05G | UG3K<br>B10G | UG3K<br>B20G | UG3K<br>B40G | UG3K<br>B60G | UG3K<br>B80G | UG3KB<br>100G | UNITS        |
|---------------------------------------------------------------------------------------------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|
| 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 rectified current with heatsink                                           | $I_{(AV)}$     | 3.0          |              |              |              |              |              |               | A            |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load                | $I_{FSM}$      | 80.0         |              |              |              |              |              |               | A            |
| Rating for fusing ( $t=8.3ms$ , $T_a=25^\circ C$ )                                                | $I_t^2$        | 26.56        |              |              |              |              |              |               | $A^2s$       |
| Maximum instantaneous forward voltage at 3.0A                                                     | $V_F$          | 1.10         |              |              |              |              |              |               | V            |
| Maximum DC reverse current $T_A = 25^\circ C$<br>at rated DC blocking voltage $T_A = 125^\circ C$ | $I_R$          | 5.0<br>500   |              |              |              |              |              |               | $\mu A$      |
| Typical junction capacitance (Note 1)                                                             | $C_J$          | 32.0         |              |              |              |              |              |               | pF           |
| Typical thermal resistance                                                                        | $R_{qJA}$      | 55.0         |              |              |              |              |              |               | $^\circ C/W$ |
| Operating junction and storage temperature range                                                  | $T_J, T_{STG}$ | -55 to +150  |              |              |              |              |              |               | $^\circ C$   |

**Note:** 1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

### Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

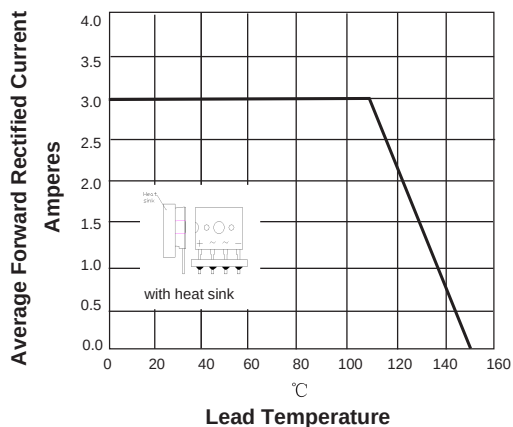


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

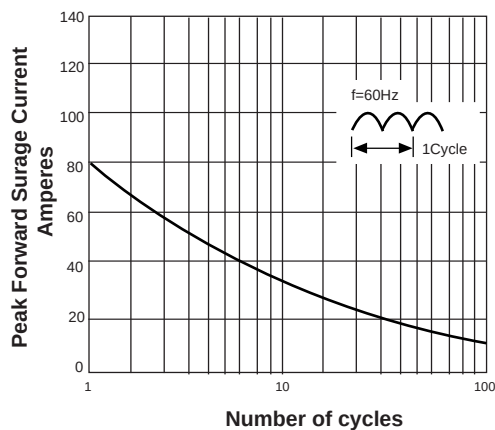


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

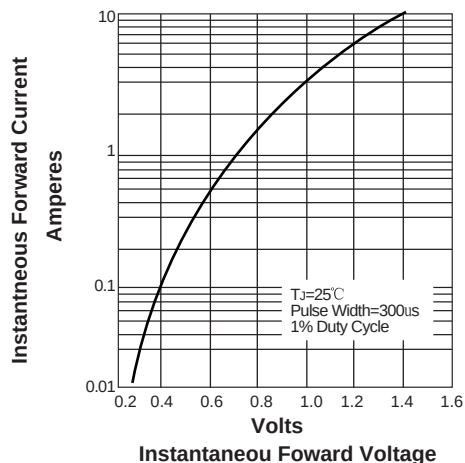
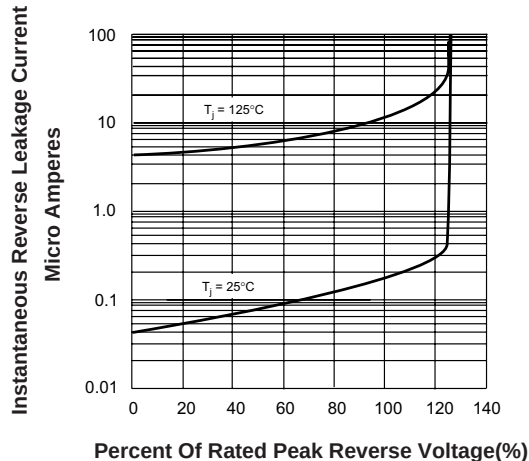
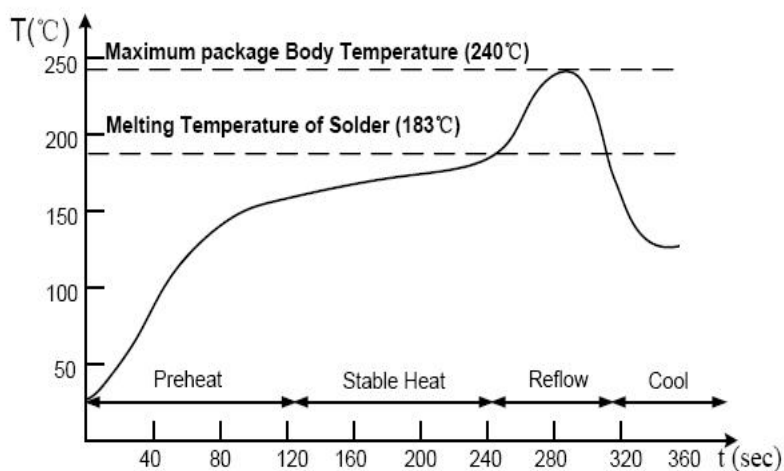


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



#### Suggested Soldering Temperature Profile



#### Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

#### Package Information

##### Tube Package

| Package | Tube (mm)    | Q'TY/Tube (Kpcs) | Box Size (mm) | QTY/Box (Kpcs) | Carton Size (mm) | Q'TY/Carton (Kpcs) |
|---------|--------------|------------------|---------------|----------------|------------------|--------------------|
| D3K     | 445*30.7*5.6 | 0.03             | 495*130*70    | 1.2            | 520*370*155      | 6                  |