

## Glass Passivated Bridge Rectifiers

### FEATURES

- Ideal for printed circuit board
- High case dielectric strength
- High surge current capability
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition


**D3K**


### MECHANICAL DATA

**Case:** D3K

Molding compound, UL flammability classification rating 94V-0

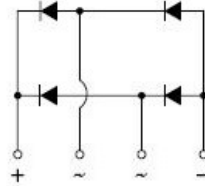
Base P/N with suffix "G" on packing code - halogen-free

**Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

**Weight:** 1.24 g (approximately)

**Mounting Torque:** 0.8 N.M max.



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

| PARAMETER   | SYMBOL   | UR3KB<br>60  | UR3KB<br>80 | UR3KB<br>100       | UNIT             |
|---|--|--|-------------|--------------------|------------------|
| Maximum repetitive peak reverse voltage   | V <sub>RRM</sub>   | 600  | 800         | 1000               | V                |
| Maximum RMS voltage   | V <sub>RMS</sub>   | 420  | 560         | 700                | V                |
| Maximum DC blocking voltage   | V <sub>DC</sub>  | 600  | 800         | 1000               | V                |
| Maximum average forward current<br>60Hz sine wave resistance load                   | I <sub>F(AV)</sub>                                       | Without heat sink T <sub>A</sub> =29°C<br>With heat sink T <sub>C</sub> =140°C |             | 1.2<br>3.0         | A                |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load | I <sub>FSM</sub>   |  |             | 90                 | A                |
| Rating of fusing ( t < 8.3ms)   | I <sup>2</sup> t   |  |             | 35                 | A <sup>2</sup> s |
| Maximum instantaneous forward voltage (Note 1)<br>I <sub>F</sub> = 1.5 A            | V <sub>F</sub>   |  |             | 1.0                | V                |
| Maximum DC reverse current at rated DC blocking voltage                             | I <sub>R</sub>   |  |             | 10                 | μA               |
| Dielectric Strength (Terminal to Case, AC 1minute)                                  | V <sub>dis</sub>   |  |             | 2                  | KV               |
| Typical Thermal Resistance  | R <sub>θJC</sub><br>R <sub>θJL</sub><br>R <sub>θJA</sub> |  |             | 5.2<br>5.5<br>13.7 | °C/W             |
| Operating junction temperature range  | T <sub>J</sub>   |  |             | - 55 to +150       | °C               |
| Storage temperature range   | T <sub>STG</sub>   |  |             | - 55 to +150       | °C               |

Note 1: Pulse Test with PW=300μs, 1% Duty Cycle

| ORDERING INFORMATION |              |                     |         |             |
|----------------------|--------------|---------------------|---------|-------------|
| PART NO.             | PACKING CODE | GREEN COMPOUND CODE | PACKAGE | PACKING     |
| UR3KBx0 (Note 1)     | C2           | Suffix "G"          | D3K     | 1,500 / BOX |

Note 1: "x" defines voltage from 600V (UR3KB60) to 1000V (UR3KB100)

| EXAMPLE       |          |              |                     |                |
|---------------|----------|--------------|---------------------|----------------|
| PREFERRED P/N | PART NO. | PACKING CODE | GREEN COMPOUND CODE | DESCRIPTION    |
| UR3KB60 C2    | UR3KB60  | C2           |                     |                |
| UR3KB60 C2G   | UR3KB60  | C2           | G                   | Green compound |

**RATINGS AND CHARACTERISTICS CURVES**

(TA=25°C unless otherwise noted)

FIG.1 MAXIMUM DERATING CURVE FOR OUTPUT CURRENT

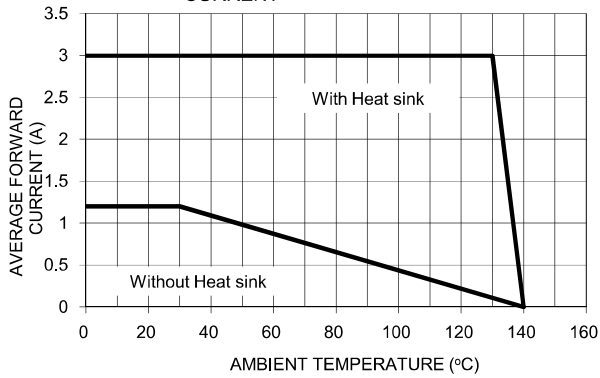


FIG.2 MAXIMUM FORWARD SURGE CURRENT

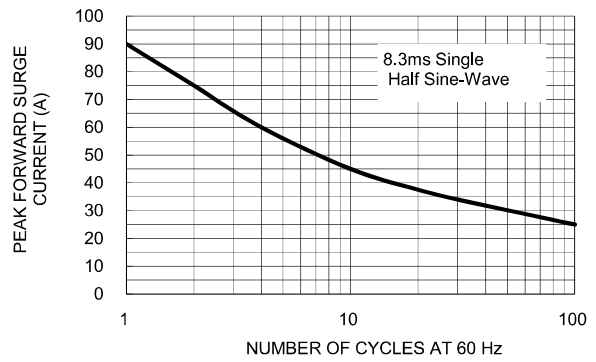


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

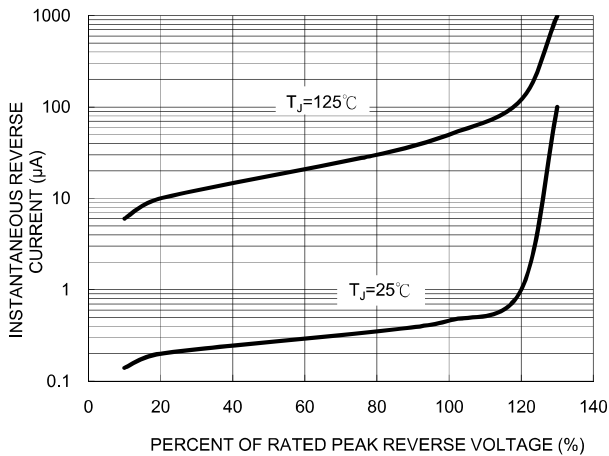


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

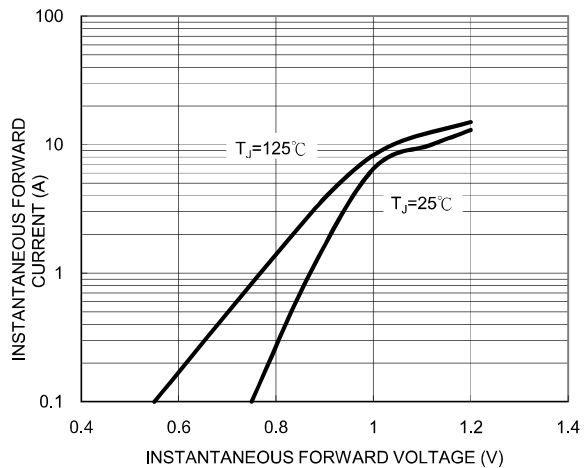
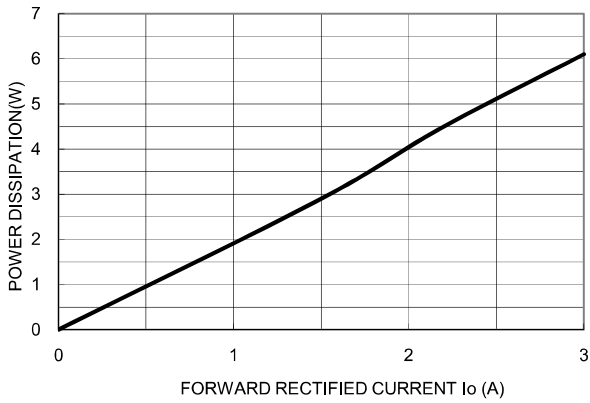
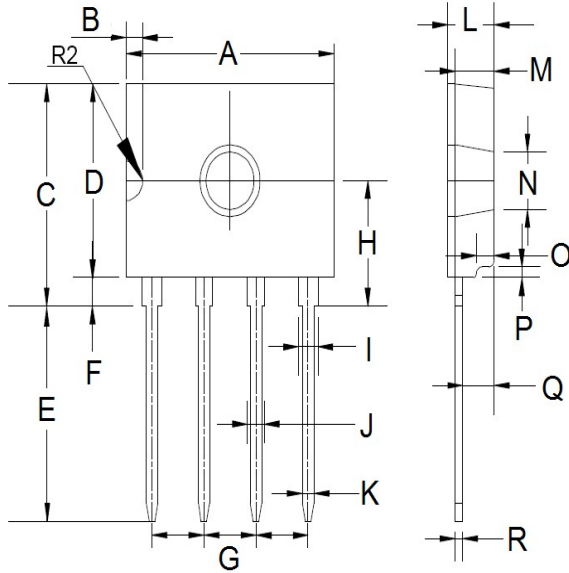


FIG. 5 FORWARD POWER DISSIPATION

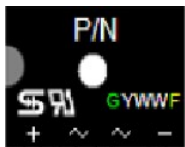


**PACKAGE OUTLINE DIMENSIONS**



| DIM. | Unit(mm) |       | Unit(inch) |       |
|------|----------|-------|------------|-------|
|      | Min      | Max   | Min        | Max   |
| A    | 13.50    | 14.10 | 0.531      | 0.555 |
| B    | 0.70     | 1.40  | 0.028      | 0.055 |
| C    | 11.70    | 12.30 | 0.461      | 0.484 |
| D    | 10.50    | 11.10 | 0.413      | 0.437 |
| E    | 11.70    | 12.30 | 0.461      | 0.484 |
| F    | 1.10     | 1.40  | 0.043      | 0.055 |
| G    | 3.51     | 4.11  | 0.138      | 0.162 |
| H    | 6.70     | 7.30  | 0.264      | 0.287 |
| I    | 1.10     | 1.50  | 0.043      | 0.059 |
| J    | 1.05     | 1.25  | 0.041      | 0.049 |
| K    | 0.66     | 0.86  | 0.026      | 0.034 |
| L    | 2.90     | 3.30  | 0.114      | 0.130 |
| M    | 2.40     | 2.80  | 0.094      | 0.110 |
| N    | 3.10     | 3.40  | 0.122      | 0.134 |
| O    | 1.00     | 1.40  | 0.039      | 0.055 |
| P    | 0.40     | 0.80  | 0.016      | 0.031 |
| Q    | 1.80     | 2.40  | 0.071      | 0.094 |
| R    | 0.40     | 0.60  | 0.016      | 0.024 |

**MARKING DIAGRAM**



- P/N = Specific Device Code
- G = Green Compound
- YWW = Date Code
- F = Factory Code

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