

■ **FEATURES**

- UL recognition, file #E230084
- Glass passivated chip junction
- Ideal for printed circuit boards
- High surge current capability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

■ **TYPICAL APPLICATIONS**

General purpose use in AC/DC bridge full wave rectification for monitor, TV, printer, power supply, switching mode power supply, adapter, audio equipment, and home appliances applications.

■ **MECHANICAL DATA**

- **Package:** D3K  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

■ **MAXIMUM RATINGS** ( $T_a=25^{\circ}\text{C}$  Unless otherwise specified)

| PARAMETER   | SYMBOL   | UNIT             | D2UB05A    | D2UB10A | D2UB20A | D2UB40A | D2UB60A | D2UB80A | D2UB100A |
|---|--|------------------|------------|---------|---------|---------|---------|---------|----------|
| Device marking code   |  |                  | D2UB05A    | D2UB10A | D2UB20A | D2UB40A | D2UB60A | D2UB80A | D2UB100A |
| Maximum Repetitive Peak Reverse Voltage   | VRRM   | V                | 50         | 100     | 200     | 400     | 600     | 800     | 1000     |
| Maximum RMS Voltage   | VRMS   | V                | 35         | 70      | 140     | 280     | 420     | 560     | 700      |
| Maximum DC blocking Voltage   | VDC  | V                | 50         | 100     | 200     | 400     | 600     | 800     | 1000     |
| Average rectified output current<br>@60Hz sine wave, R-load   | With heatsink<br>$T_c = 140^{\circ}\text{C}$   | I <sub>O</sub>   | A          | 2.0     |         |         |         |         |          |
|   | Without heatsink<br>$T_a = 25^{\circ}\text{C}$ |                  |            | 1.2     |         |         |         |         |          |
| Forward Surge Current (Non-repetitive)<br>@60Hz Half-sine wave, 1 cycle, $T_j = 25^{\circ}\text{C}$ | IFSM   | A                | 90         |         |         |         |         |         |          |
| Forward Surge Current (Non-repetitive)<br>@1ms, square wave, 1 cycle, $T_j = 25^{\circ}\text{C}$    |  |                  | 180        |         |         |         |         |         |          |
| Current squared time<br>@1ms ≤ t ≤ 8.3ms $T_j = 25^{\circ}\text{C}$ , Rating of per diode           | I <sup>2</sup> t                               | A <sup>2</sup> s | 33         |         |         |         |         |         |          |
| Storage temperature   | T <sub>stg</sub>                               | °C               | -55 ~ +150 |         |         |         |         |         |          |
| Junction temperature  | T <sub>j</sub>                                 | °C               | -55 ~ +150 |         |         |         |         |         |          |
| Dielectric strength<br>@ Terminals to case, AC 1 minute   | V <sub>dis</sub>                               | KV               | 2          |         |         |         |         |         |          |
| Mounting torque<br>@Recommend torque: 5kg·cm  | Tor  | kg·cm            | 8          |         |         |         |         |         |          |

■ **ELECTRICAL CHARACTERISTICS** ( $T_a=25^{\circ}\text{C}$  Unless otherwise specified)

| PARAMETER   | SYMBOL | UNIT    | TEST CONDITIONS   | D2UB05A | D2UB10A | D2UB20A | D2UB40A | D2UB60A | D2UB80A | D2UB100A |  |
|---|--------|---------|---|---------|---------|---------|---------|---------|---------|----------|--|
| Maximum instantaneous forward voltage drop per diode              | $V_F$  | V       | $I_{FM}=1.0A$   |         |         |         |         |         |         | 1.0      |  |
| Maximum DC reverse current at rated DC blocking voltage per diode | $I_R$  | $\mu A$ | $T_j=25^{\circ}\text{C}$                                  |         |         |         |         |         |         | 5        |  |
|   |        |         | $T_j=125^{\circ}\text{C}$                                 |         |         |         |         |         |         | 100      |  |
| Typical junction capacitance                                      | $C_j$  | pF      | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C |         |         |         |         |         |         | 25       |  |

■ **THERMAL CHARACTERISTICS** ( $T_a=25^{\circ}\text{C}$  Unless otherwise specified)

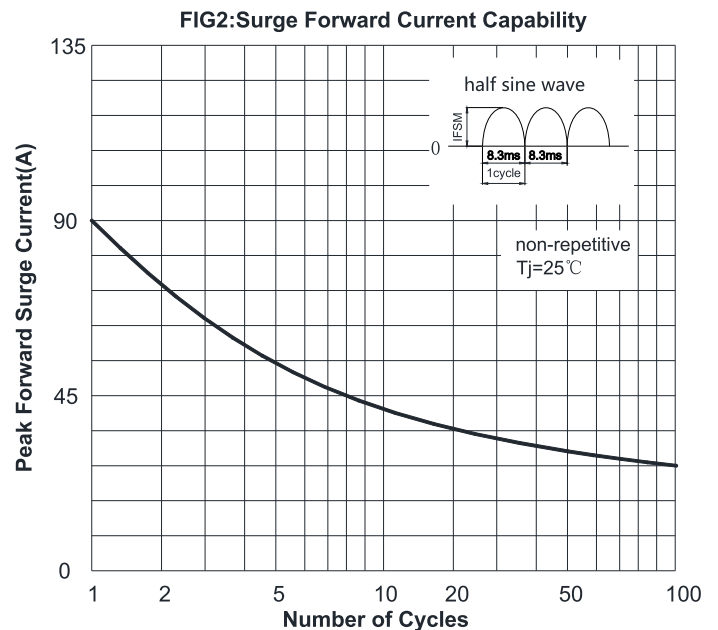
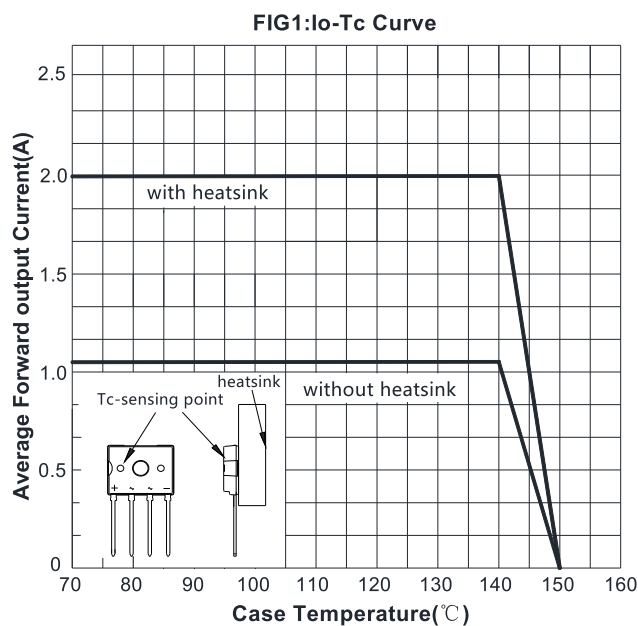
| PARAMETER          |  | SYMBOL           | UNIT                 | D2UB05A | D2UB10A | D2UB20A | D2UB40A | D2UB60A | D2UB80A | D2UB100A |  |
|--------------------|--|------------------|----------------------|---------|---------|---------|---------|---------|---------|----------|--|
| Thermal resistance | Between junction and ambient, Without heatsink | $R_{\theta J-A}$ | $^{\circ}\text{C/W}$ |         |         |         |         |         |         | 55.0     |  |
|                    | Between junction and case, With heatsink       | $R_{\theta J-C}$ |                      |         |         |         |         |         |         | 1.5      |  |

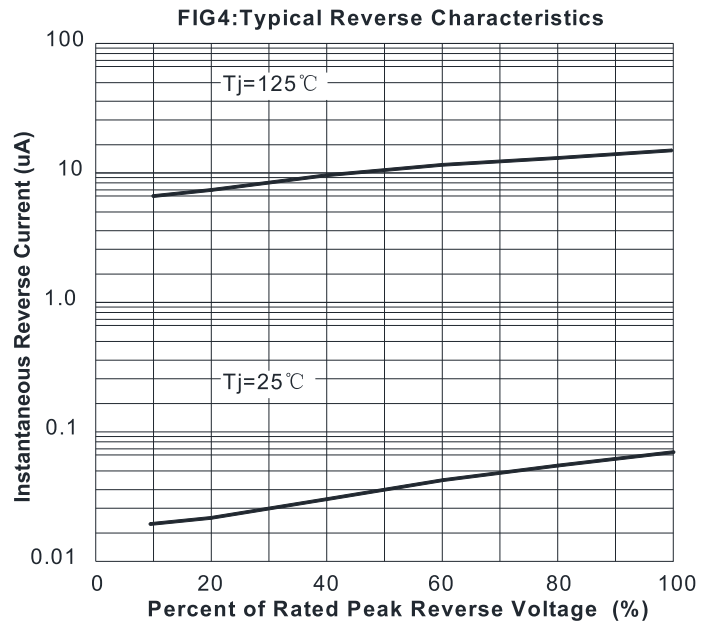
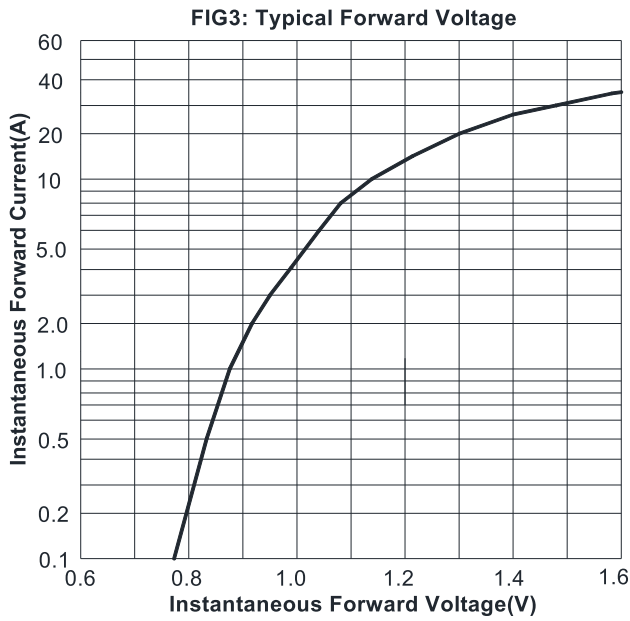
Note: Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

■ **PACKAGING INFORMATION**

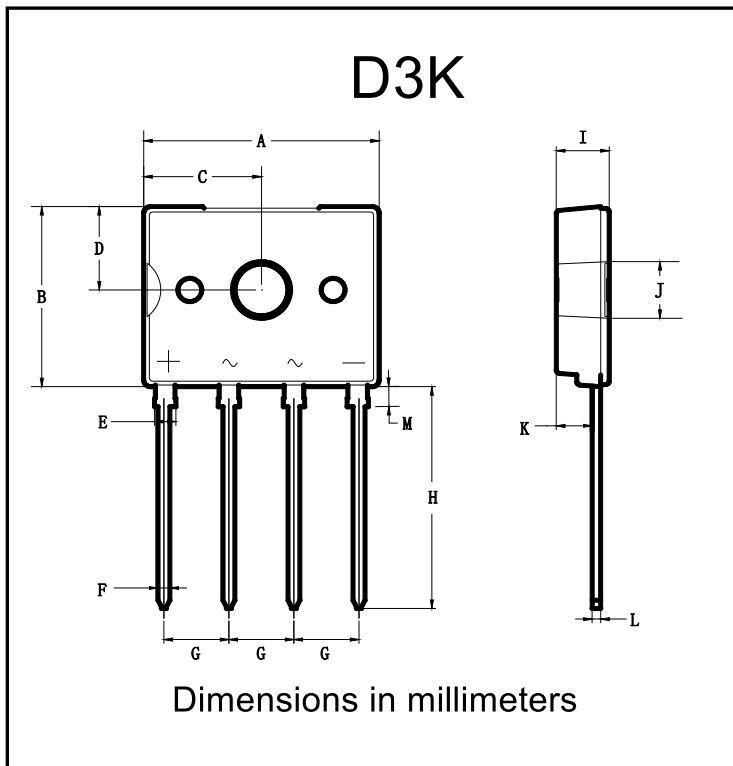
| PREFERRED P/N      | PACKING CODE | UNIT WEIGHT(g)    | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|--------------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| D2UB05A - D2UB100A | B1           | Approximate 1.358 | 25                   | 1500                    | 6000                       | TUBE          |

■ **CHARACTERISTICS (TYPICAL)**





■ **OUTLINE DIMENSIONS**



| D3K |       |       |
|-----|-------|-------|
| Dim | Min   | Max   |
| A   | 13.30 | 14.30 |
| B   | 10.30 | 11.30 |
| C   | 6.40  | 7.40  |
| D   | 4.50  | 5.50  |
| E   | 1.05  | 1.45  |
| F   | 0.60  | 0.85  |
| G   | 3.70  | 3.90  |
| H   | 13.10 | 13.50 |
| I   | 2.60  | 3.60  |
| J   | 3.10  | 3.40  |
| K   | 2.00  | 2.20  |
| L   | 0.40  | 0.60  |
| M   | 0.90  | 1.50  |