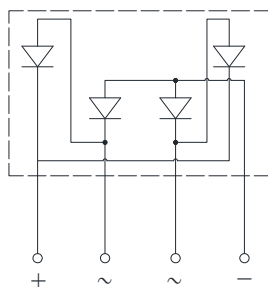


## Bridge Rectifiers



### 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, -
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

### ■Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER                                                                                     | SYMBOL           | UNIT                                     | D6UB05A    | D6UB10A | D6UB20A | D6UB40A | D6UB60A | D6UB80A | D6UB100A |
|-----------------------------------------------------------------------------------------------|------------------|------------------------------------------|------------|---------|---------|---------|---------|---------|----------|
| Device marking code                                                                           |                  |                                          | D6UB05A    | D6UB10A | D6UB20A | D6UB40A | D6UB60A | D6UB80A | D6UB100A |
| 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 @60Hz sine wave, R-load                                      | IO               | With heatsink<br>T <sub>c</sub> =132°C   | 6.0        |         |         |         |         |         |          |
|                                                                                               |                  | Without heatsink<br>T <sub>a</sub> =25°C | 1.5        |         |         |         |         |         |          |
| Forward Surge Current (Non-repetitive)<br>@60Hz Half-sine wave, 1 cycle, T <sub>j</sub> =25°C | IFSM             | A                                        | 170        |         |         |         |         |         |          |
| Forward Surge Current (Non-repetitive)<br>@1ms, square wave, 1 cycle, T <sub>j</sub> =25°C    |                  |                                          | 320        |         |         |         |         |         |          |
| Current squared time<br>@1ms≤t≤8.3ms T <sub>j</sub> =25°C, Rating of per diode                | I <sup>2</sup> t | A <sup>2</sup> s                         | 102.4      |         |         |         |         |         |          |
| 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<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER                                                         | SYMBOL         | UNIT | TEST CONDITIONS                                           | D6UB05A | D6UB10A | D6UB20A | D6UB40A | D6UB60A | D6UB80A | D6UB100A |
|-------------------------------------------------------------------|----------------|------|-----------------------------------------------------------|---------|---------|---------|---------|---------|---------|----------|
| Maximum instantaneous forward voltage drop per diode              | V <sub>F</sub> | V    | I <sub>FM</sub> =3.0A                                     | 1.00    |         |         |         |         |         |          |
| Maximum DC reverse current at rated DC blocking voltage per diode | I <sub>R</sub> | μA   | T <sub>j</sub> =25°C                                      | 5       |         |         |         |         |         |          |
|                                                                   |                |      | T <sub>j</sub> =125°C                                     | 100     |         |         |         |         |         |          |
| Typical junction capacitance                                      | C <sub>j</sub> | pF   | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 53      |         |         |         |         |         |          |

## ■Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER          |                                                | SYMBOL            | UNIT | D6UB05A | D6UB10A | D6UB20A | D6UB40A | D6UB60A | D6UB80A | D6UB100A |
|--------------------|------------------------------------------------|-------------------|------|---------|---------|---------|---------|---------|---------|----------|
| Thermal resistance | Between junction and ambient, Without heatsink | R <sub>θJ-A</sub> | °C/W | 25.0    |         |         |         |         |         |          |
|                    | Between junction and case, With heatsink       | R <sub>θJ-C</sub> |      | 1.5     |         |         |         |         |         |          |

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

## ■Ordering Information (Example)

| PREFERED P/N       | PACKING CODE | UNIT WEIGHT(g)    | MINIIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|--------------------|--------------|-------------------|-----------------------|-------------------------|----------------------------|---------------|
| D6UB05A - D6UB100A | B1           | Approximate 1.269 | 25                    | 1500                    | 6000                       | TUBE          |

## ■ Characteristics (Typical)

FIG1:I<sub>o</sub>-T<sub>c</sub> Curve

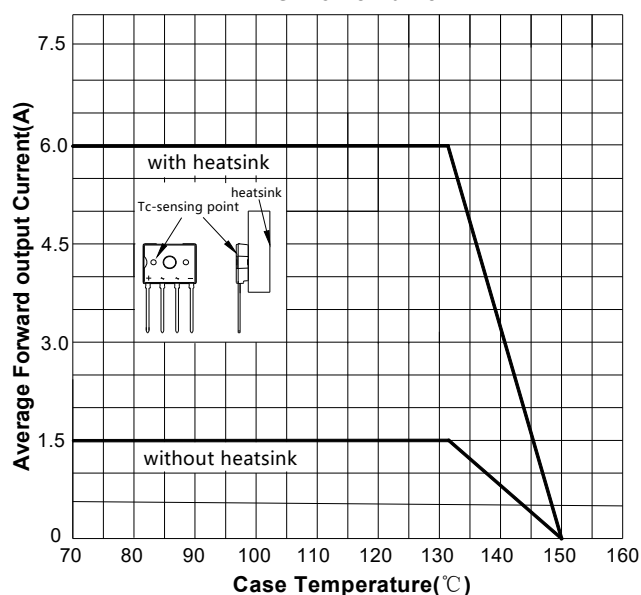
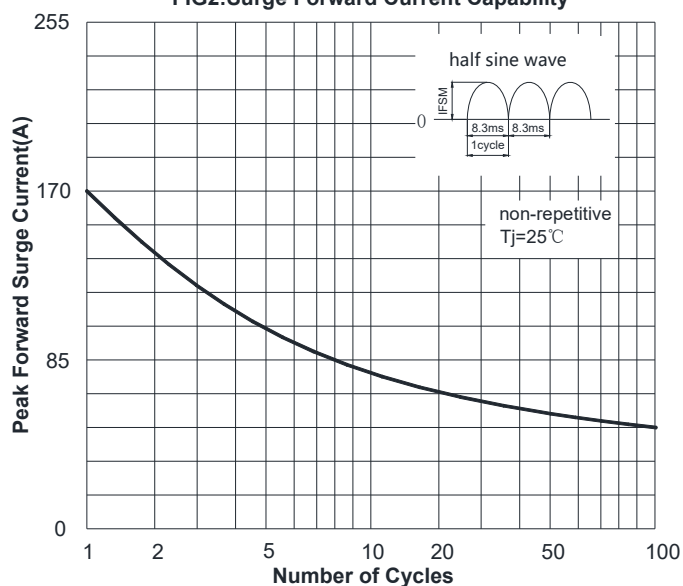
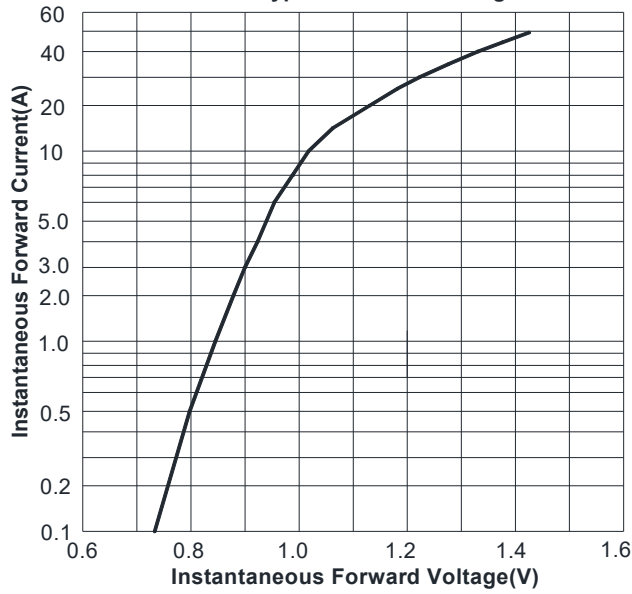


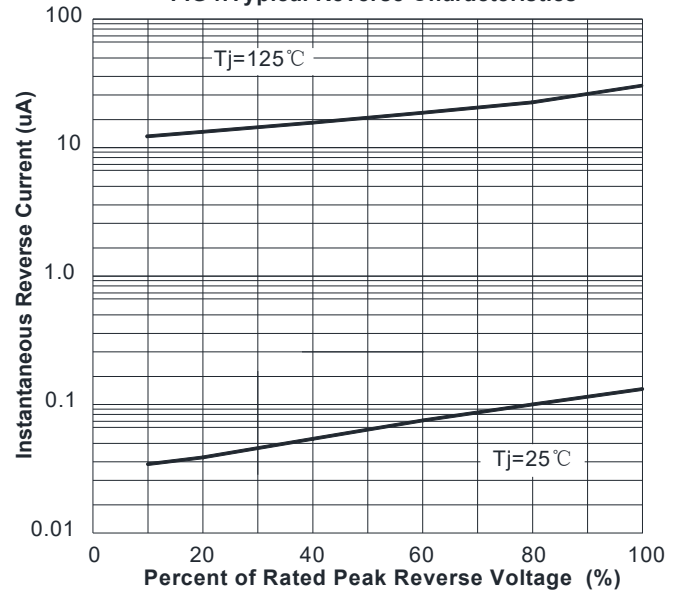
FIG2:Surge Forward Current Capability



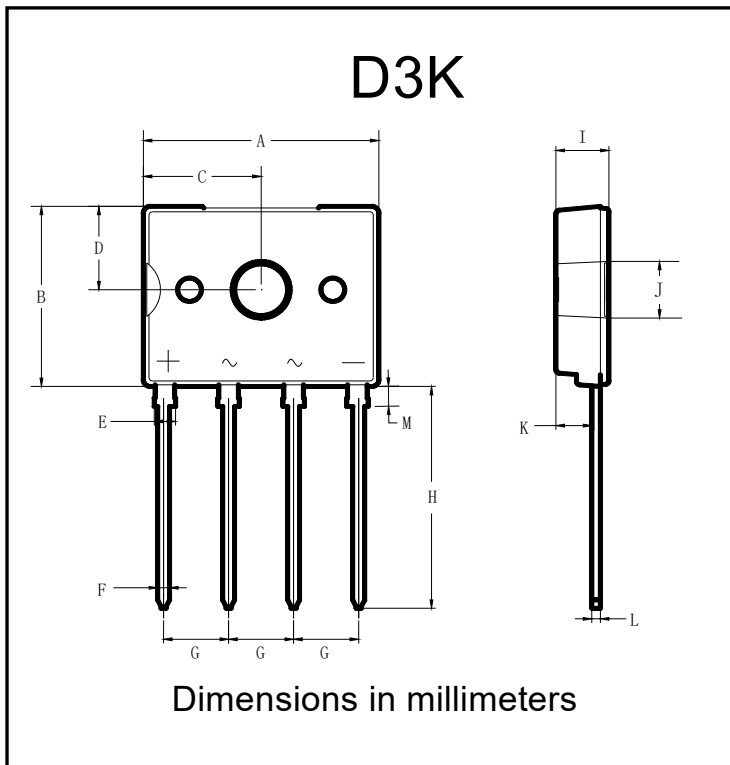
**FIG3: Typical Forward Voltage**



**FIG4: Typical Reverse Characteristics**



## ■ 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  |

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