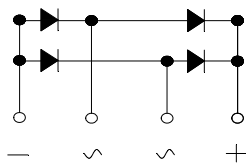
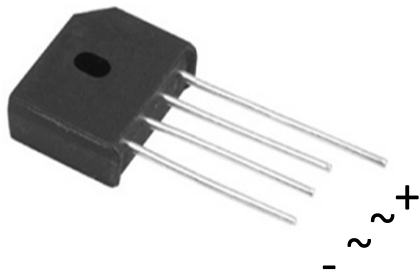


## Bridge Rectifiers



### 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 switching power supply, home appliances, office equipment, industrial automation applications.

### Mechanical Data

- **Package:** KBU  
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  | KBU6005    | KBU601 | KBU602 | KBU604 | KBU606 | KBU608 | KBU610 |
|---|------------------------------|--------|-------|------------|--------|--------|--------|--------|--------|--------|
| Device marking code   |                              |        |       | KBU6005    | KBU601 | KBU602 | KBU604 | KBU606 | KBU608 | KBU610 |
| 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>Tc =120°C   | IO     | A     | 6.0        |        |        |        |        |        |        |
|   | Without heatsink<br>Ta =25°C |        |       | 2.5        |        |        |        |        |        |        |
| Forward Surge Current (Non-repetitive)<br>@8.3ms, Half-sine wave,1 cycle, Tj=25°C |                              | IFSM   | A     | 135        |        |        |        |        |        |        |
| Forward Surge Current (Non-repetitive)<br>@1ms, square wave, 1 cycle, Tj=25°C     |                              |        |       | 270        |        |        |        |        |        |        |
| Current Squared Time @1ms≤t≤8.3ms<br>Tj=25°C,Rating of per diode                  |                              | I²t    | A²S   | 75.6       |        |        |        |        |        |        |
| Mounting torque<br>@Recommend torque: 5kg·cm                                      |                              | Tor    | kg·cm | 8          |        |        |        |        |        |        |
| Storage temperature   |                              | Tstg   | °C    | -55 ~ +150 |        |        |        |        |        |        |
| Junction temperature  |                              | Tj     | °C    | -55 ~ +150 |        |        |        |        |        |        |

# KBU6005 THRU KBU610

## ■Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL         | UNIT | TEST CONDITIONS   | KBU6005 | KBU601 | KBU602 | KBU604 | KBU606 | KBU608 | KBU610 |
|---|----------------|------|---|---------|--------|--------|--------|--------|--------|--------|
| Maximum instantaneous forward voltage drop per diode              | V <sub>F</sub> | V    | IFM=3.0A  | 1.0     |        |        |        |        |        |        |
| 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 | 40      |        |        |        |        |        |        |

## ■Thermal Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER                  |  | SYMBOL            | UNIT | KBU6005 | KBU601 | KBU602 | KBU604 | KBU606 | KBU608 | KBU610 |
|----------------------------|--|-------------------|------|---------|--------|--------|--------|--------|--------|--------|
| Typical 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> |      | 2.2     |        |        |        |        |        |        |

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

## ■Ordering Information (Example)

| PREFERRED P/N    | PACKAGE CODE | UNIT WEIGHT(g)  | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|------------------|--------------|-----------------|----------------------|-------------------------|----------------------------|---------------|
| KBU6005 ~ KBU610 | A1           | Approximate 7.2 | 400                  | 400                     | 2400                       | Paper Box     |

## ■ Characteristics(Typical)

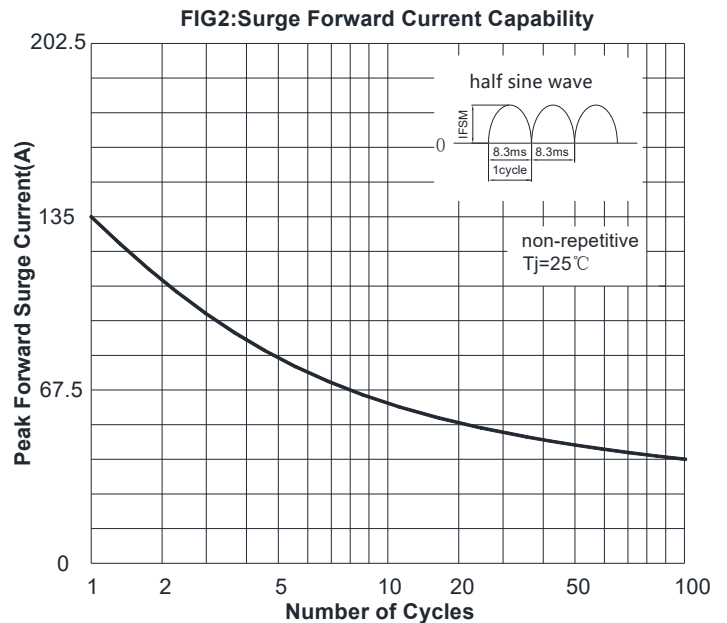
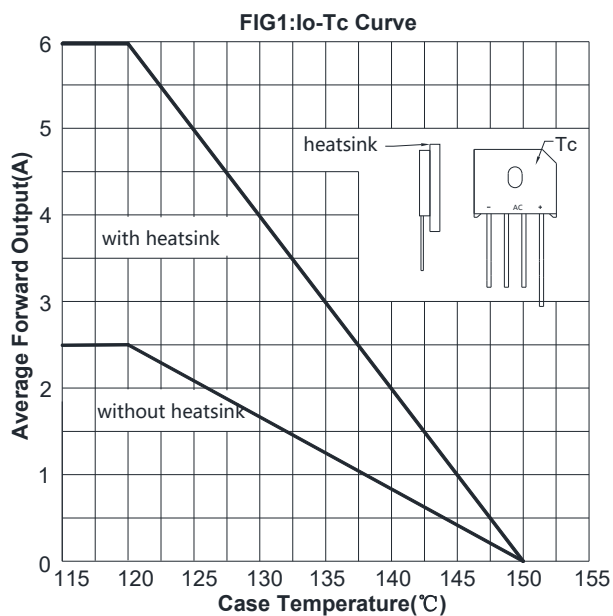


FIG3: Typical Forward Voltage

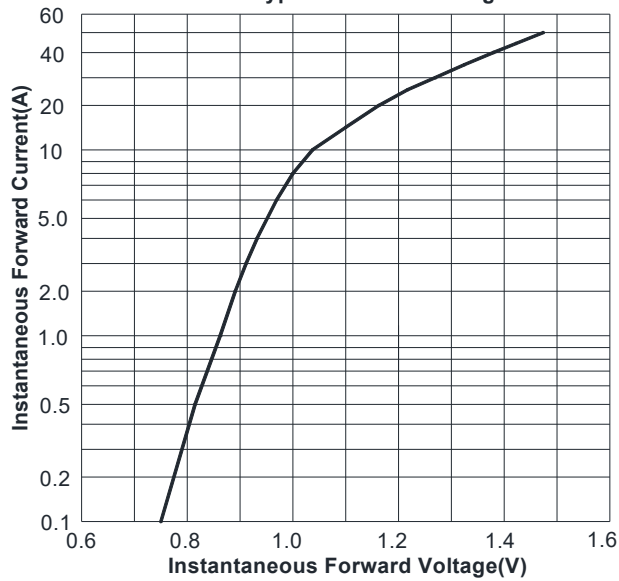
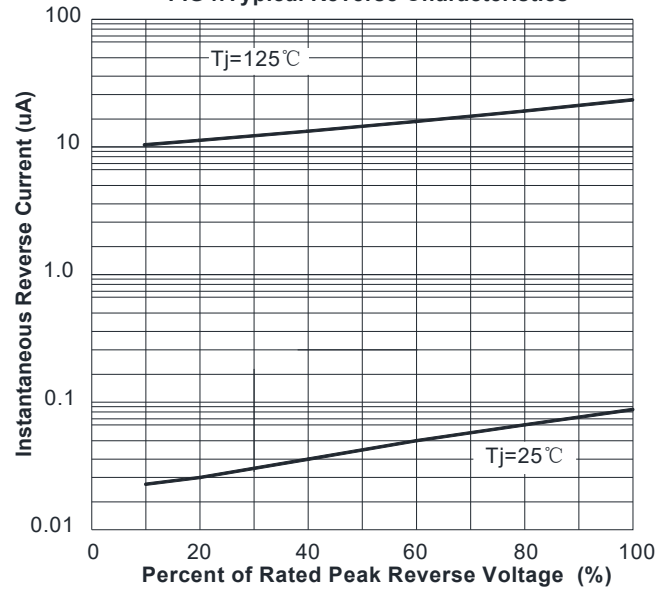
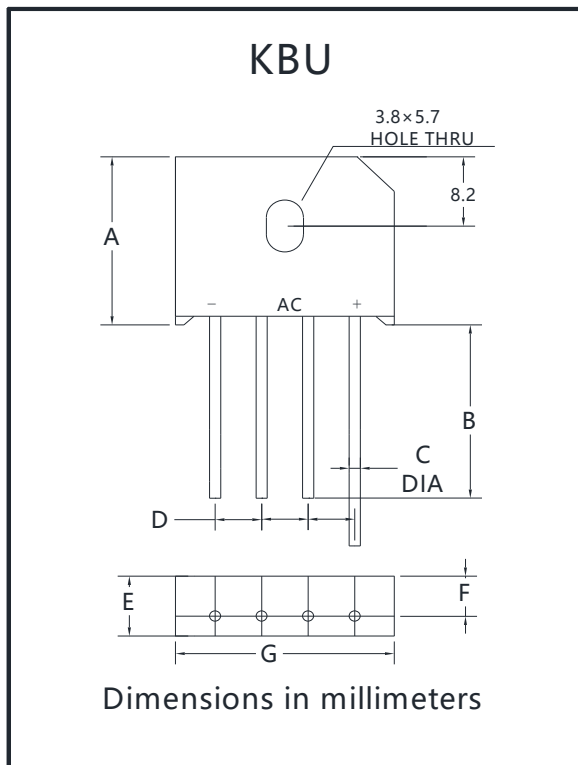


FIG4: Typical Reverse Characteristics



## ■ Outline Dimensions



| KBU |      |      |
|-----|------|------|
| Dim | Min  | Max  |
| A   | 18.8 | 19.8 |
| B   | 20.0 | /    |
| C   | 1.2  | 1.3  |
| D   | 4.6  | 5.6  |
| E   | 6.8  | 7.1  |
| F   | 4.6  | 5.0  |
| G   | 22.7 | 23.7 |

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