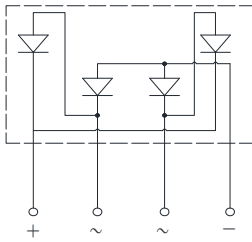
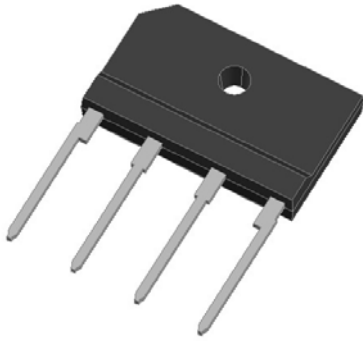


## Bridge Rectifiers



### Features

- UL recognition, file #E230084
- Glass passivated chip junction
- Thin single in-line package
- 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:** 4KBJ  
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             | KBJ25A     | KBJ25B | KBJ25D | KBJ25G | KBJ25J | KBJ25K | KBJ25M |
|---|--|------------------|------------|--------|--------|--------|--------|--------|--------|
| Device marking code   |  |                  | KBJ25A     | KBJ25B | KBJ25D | KBJ25G | KBJ25J | KBJ25K | KBJ25M |
| 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>$T_c=110^\circ\text{C}$   | IO               | A          | 25     |        |        |        |        |        |
|   | Without heatsink<br>$T_a=25^\circ\text{C}$ |                  |            | 2.6    |        |        |        |        |        |
| Forward Surge Current (Non-repetitive)<br>@60Hz Half-sine wave, 1 cycle, $T_j=25^\circ\text{C}$ | IFSM                                       | A                | 300        |        |        |        |        |        |        |
| Current squared time<br>@1ms $\leq t \leq 8.3$ ms $T_j=25^\circ\text{C}$ , rating of per diode  | $I^2t$                                     | A <sup>2</sup> S | 374        |        |        |        |        |        |        |
| Storage temperature   | $T_{stg}$                                  | °C               | -55 ~ +150 |        |        |        |        |        |        |
| Junction temperature  | $T_j$                                      | °C               | -55 ~ +150 |        |        |        |        |        |        |
| Dielectric strength<br>@ Terminals to case, AC 1 minute   | Vdis                                       | 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   | KBJ25A | KBJ25B | KBJ25D | KBJ25G | KBJ25J | KBJ25K | KBJ25M |
|---|----------------|------|---|--------|--------|--------|--------|--------|--------|--------|
| Maximum instantaneous forward voltage drop per diode              | V <sub>F</sub> | V    | IFM=12.5A   | 1.0    |        |        |        |        |        |        |
| Maximum DC reverse current at rated DC blocking voltage per diode | I <sub>R</sub> | μA   | $T_j=25^\circ\text{C}$                                    | 5      |        |        |        |        |        |        |
|   |                |      | $T_j=125^\circ\text{C}$                                   | 100    |        |        |        |        |        |        |
| Typical junction capacitance                                      | C <sub>j</sub> | pF   | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 92     |        |        |        |        |        |        |



# KBJ25A THRU KBJ25M

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

| PARAMETER          |  | SYMBOL            | UNIT | KBJ25A | KBJ25B | KBJ25D | KBJ25G | KBJ25J | KBJ25K | KBJ25M |
|--------------------|--|-------------------|------|--------|--------|--------|--------|--------|--------|--------|
| Thermal Resistance | Between junction and ambient, Without heatsink | R <sub>θJ-A</sub> | °C/W | 18     |        |        |        |        |        |        |
|                    | Between junction and case, With heatsink       | R <sub>θJ-C</sub> |      | 0.8    |        |        |        |        |        |        |

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 |
|-----------------|--------------|------------------|----------------------|-------------------------|----------------------------|---------------|
| KBJ25A ~ KBJ25M | B1           | Approximate 4.27 | 20                   | 1000                    | 2000                       | Tube          |

## Characteristics(Typical)

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

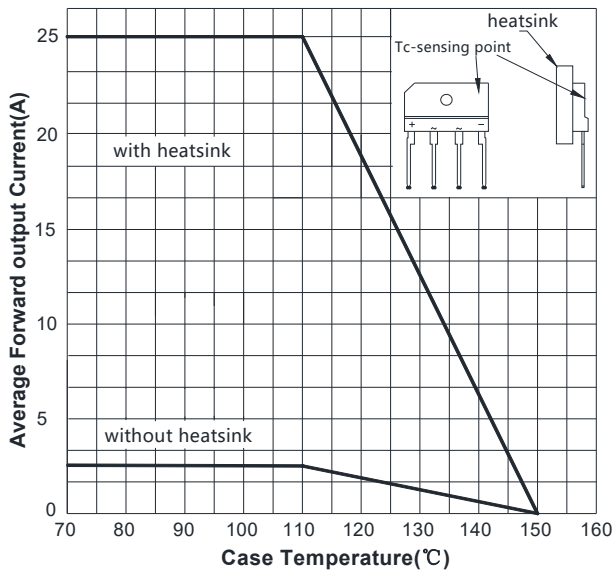


FIG2: Surge Forward Current Capability

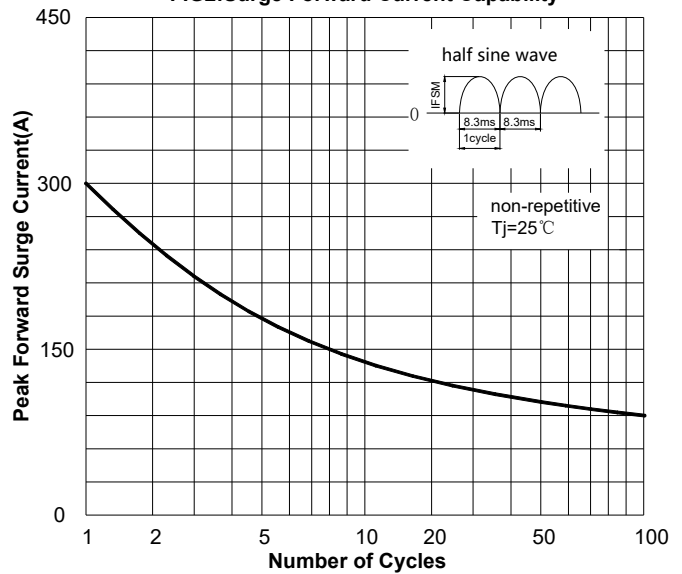


FIG3: Typical Forward Voltage

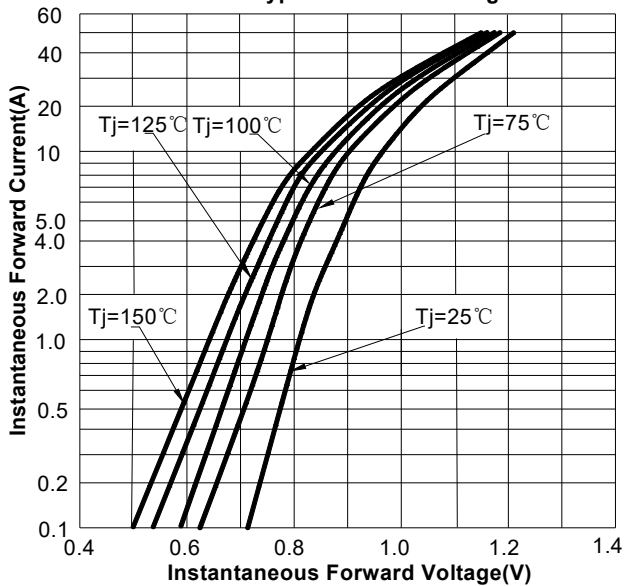
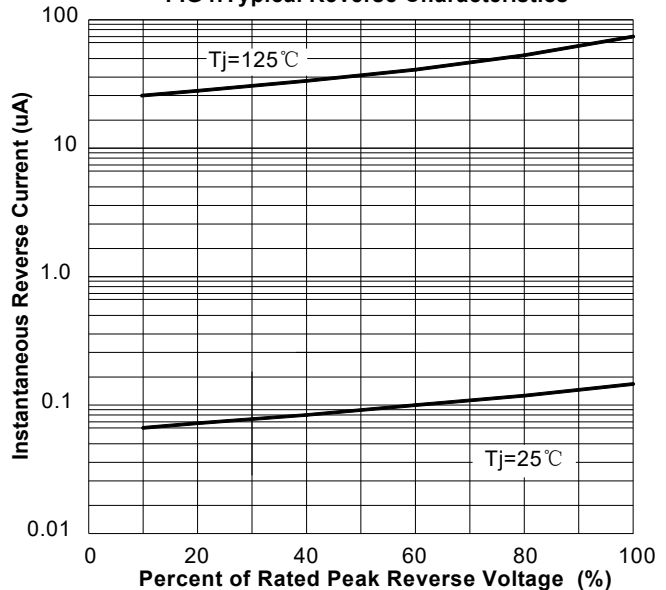


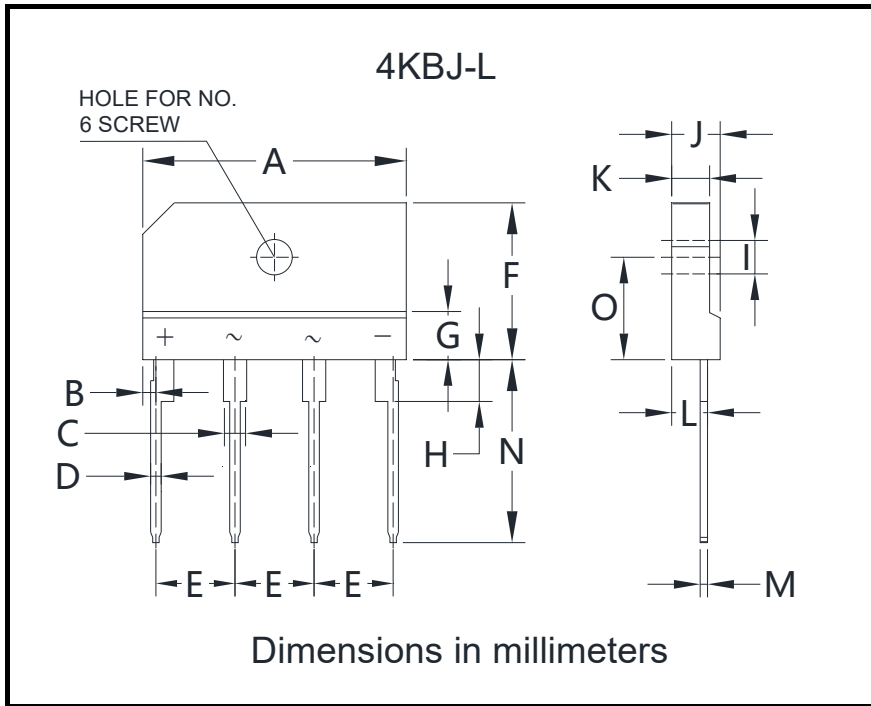
FIG4: Typical Reverse Characteristics





# KBJ25A THRU KBJ25M

## ■ Outline Dimensions



| 4KBJ-L |      |      |
|--------|------|------|
| Dim    | Min  | Max  |
| A      | 24.7 | 25.3 |
| B      | 1.05 | 1.45 |
| C      | 1.7  | 2.1  |
| D      | 0.9  | 1.1  |
| E      | 7.3  | 7.7  |
| F      | 14.7 | 15.3 |
| G      | 3.8  | 4.2  |
| H      | 3.3  | 3.7  |
| I      | 3.1  | 3.4  |
| J      | 4.4  | 4.8  |
| K      | 3.4  | 3.8  |
| L      | 2.95 | 3.25 |
| M      | 0.35 | 0.65 |
| N      | 17.0 | 18.0 |
| O      | 9.5  | 10.1 |



## KBJ25A THRU KBJ25M

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