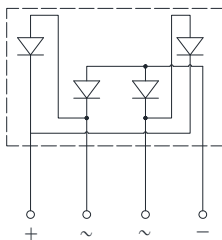
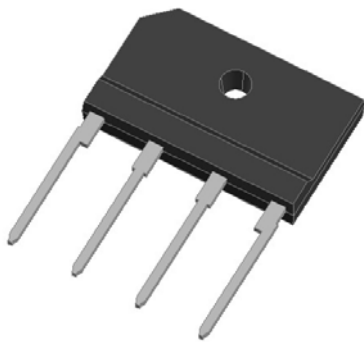


## Bridge Rectifiers



### 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, -
- **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             | KBJ15005   | KBJ1501 | KBJ1502 | KBJ1504 | KBJ1506 | KBJ1508 | KBJ1510 |
|----------------------------------------------------------------------------------------------|------------------------------------------|------------------|------------------|------------|---------|---------|---------|---------|---------|---------|
| Device marking code                                                                          |                                          |                  |                  | KBJ15005   | KBJ1501 | KBJ1502 | KBJ1504 | KBJ1506 | KBJ1508 | KBJ1510 |
| 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 <sub>c</sub> =105°C   | IO               | A                | 15.0       |         |         |         |         |         |         |
|                                                                                              | Without heatsink<br>T <sub>a</sub> =25°C |                  |                  | 3.6        |         |         |         |         |         |         |
| Forward Surge Current (Non-repetitive)<br>@60Hz Half-sine wave,1 cycle, T <sub>j</sub> =25°C |                                          | IFSM             | A                | 220        |         |         |         |         |         |         |
| Forward Surge Current (Non-repetitive)<br>@1ms, square wave, 1 cycle, T <sub>j</sub> =25°C   |                                          |                  |                  | 440        |         |         |         |         |         |         |
| 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 | 201        |         |         |         |         |         |         |
| 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                                           | KBJ15005 | KBJ1501 | KBJ1502 | KBJ1504 | KBJ1506 | KBJ1508 | KBJ1510 |
|-------------------------------------------------------------------|----------------|------|-----------------------------------------------------------|----------|---------|---------|---------|---------|---------|---------|
| Maximum instantaneous forward voltage drop per diode              | V <sub>F</sub> | V    | I <sub>FM</sub> =7.5A                                     | 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 | 70       |         |         |         |         |         |         |

# KBJ15005 THRU KBJ1510

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

| PARAMETER          |                                                | SYMBOL            | UNIT | KBJ15005 | KBJ1501 | KBJ1502 | KBJ1504 | KBJ1506 | KBJ1508 | KBJ1510 |
|--------------------|------------------------------------------------|-------------------|------|----------|---------|---------|---------|---------|---------|---------|
| Thermal Resistance | Between junction and ambient, Without heatsink | R <sub>θJ-A</sub> | °C/W | 20       |         |         |         |         |         |         |
|                    | 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)

| PREFERRED P/N      | PACKAGE CODE | UNIT WEIGHT(g)   | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|--------------------|--------------|------------------|----------------------|-------------------------|----------------------------|---------------|
| KBJ15005 ~ KBJ1510 | B1           | Approximate 4.27 | 20                   | 1000                    | 2000                       | Tube          |

## ■ Characteristics(Typical)

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

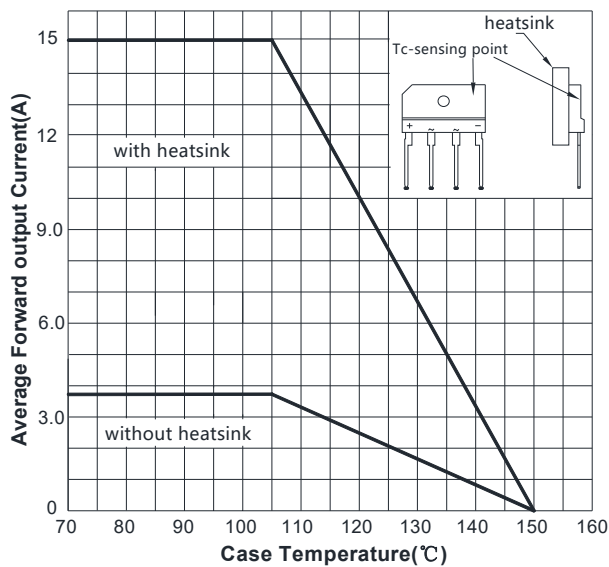


FIG2:Surge Forward Current Capability

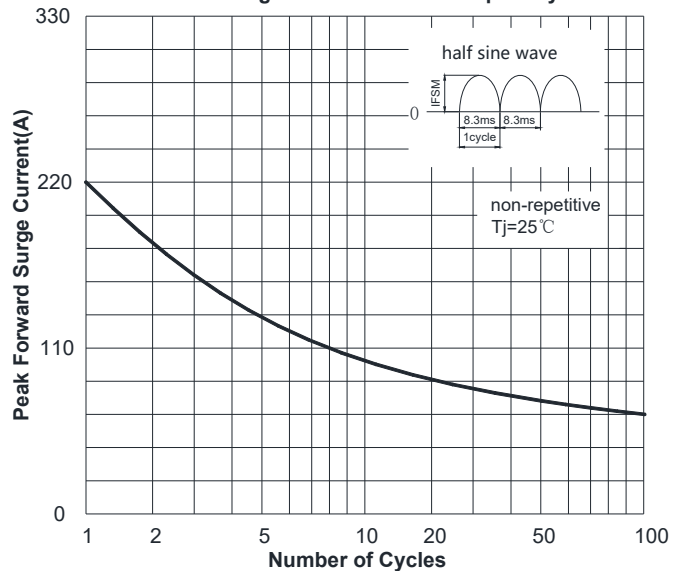


FIG3: Typical Forward Voltage

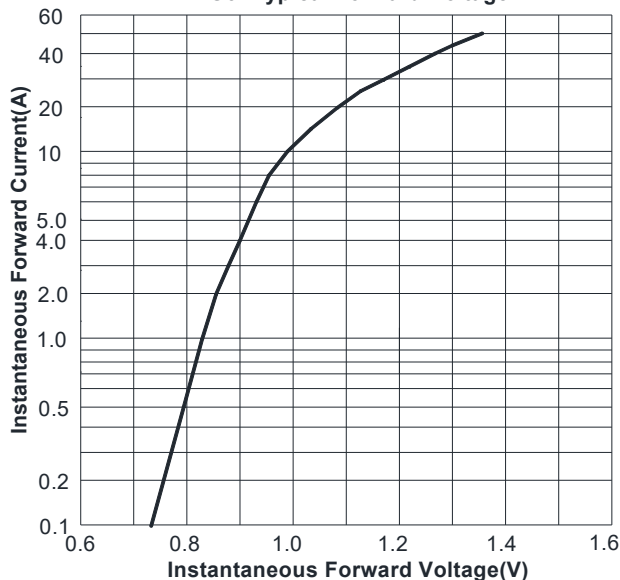
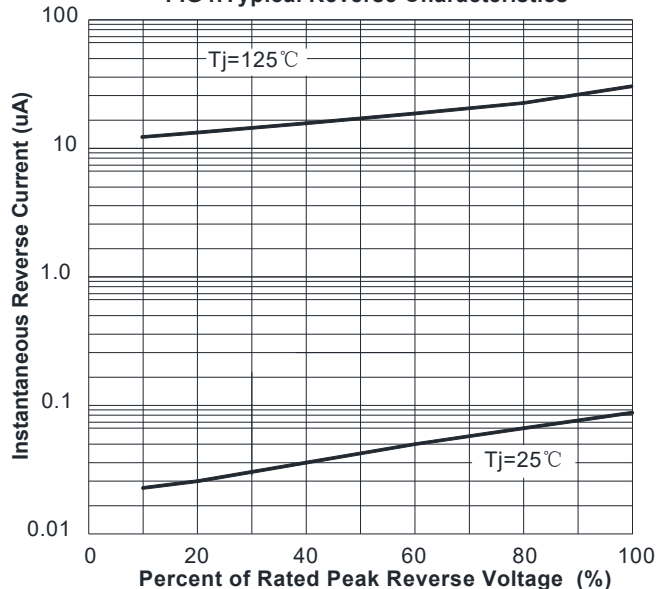
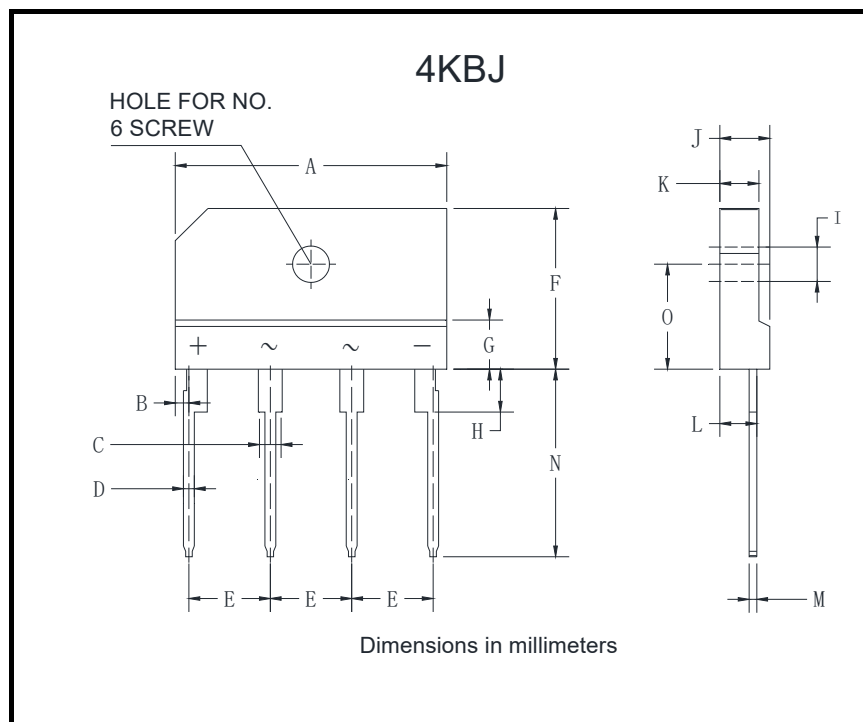


FIG4:Typical Reverse Characteristics



■ Outline Dimensions



| 4KBJ |      |      |
|------|------|------|
| 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    | 3.2  | 3.4  |
| M    | 0.6  | 0.8  |
| N    | 17.0 | 18.0 |
| O    | 9.5  | 10.1 |

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