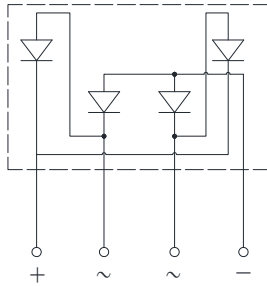
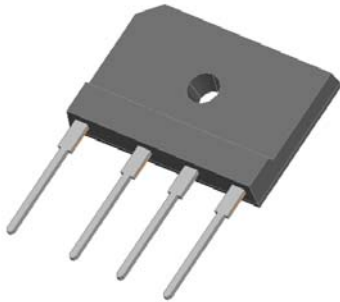


## Bridge Rectifiers



### Features

- UL recognition, file #E230084
- Thin single in-line package
- Glass passivated chip junction
- 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:** 6KBJ  
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<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL                                   | UNIT             | GBJ3510D   |      |
|---|--|------------------|------------|------|
| Device marking code   |  |                  | GBJ3510D   |      |
| Maximum Repetitive Peak Reverse Voltage   | VRRM                                     | V                | 1600       |      |
| Maximum RMS Voltage   | VRMS                                     | V                | 1120       |      |
| Maximum DC blocking Voltage   | VDC                                      | V                | 1600       |      |
| Average rectified output current<br>@60Hz sine wave, R-load                                   | With heatsink<br>T <sub>c</sub> =80°C    | IO               | A          | 35.0 |
|   | Without heatsink<br>T <sub>a</sub> =25°C |                  |            | 3.5  |
| Forward Surge Current (Non-repetitive)<br>@60Hz Half-sine wave, 1 cycle, T <sub>j</sub> =25°C | IFSM                                     | A                | 350        |      |
| Forward Surge Current (Non-repetitive)<br>@1ms, square wave, 1 cycle, T <sub>j</sub> =25°C    |  |                  | 700        |      |
| 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 | 508.4      |      |
| Reverse Surge@20ms, T <sub>j</sub> =25°C  | SI                                       | mA               | 9.9        |      |
| 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               | 2.5        |      |
| Mounting torque<br>@Recommend torque: 5kg·cm  | Tor                                      | kg·cm            | 8          |      |



# GBJ3510D

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

| PARAMETER   | SYMBOL         | UNIT | TEST CONDITIONS   | GBJ3510D |
|---|----------------|------|---|----------|
| Maximum instantaneous forward voltage drop per diode              | V <sub>F</sub> | V    | I <sub>FM</sub> =17.5A                                    | 1.1      |
| 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                                     | 500      |
| Typical junction capacitance                                      | C <sub>j</sub> | pF   | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 95       |

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

| PARAMETER          |  | SYMBOL            | UNIT | GBJ3510D |
|--------------------|--|-------------------|------|----------|
| Thermal Resistance | Between junction and ambient, Without heatsink | R <sub>θJ-A</sub> | °C/W | 18.0     |
|                    | Between junction and case, With heatsink       | R <sub>θJ-C</sub> |      | 1.0      |

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

## ■ Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g)  | MINIIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-----------------|-----------------------|-------------------------|----------------------------|---------------|
| GBJ3510D      | B1           | Approximate 6.5 | 15                    | 750                     | 1500                       | TUBE          |

## ■ Characteristics(Typical)

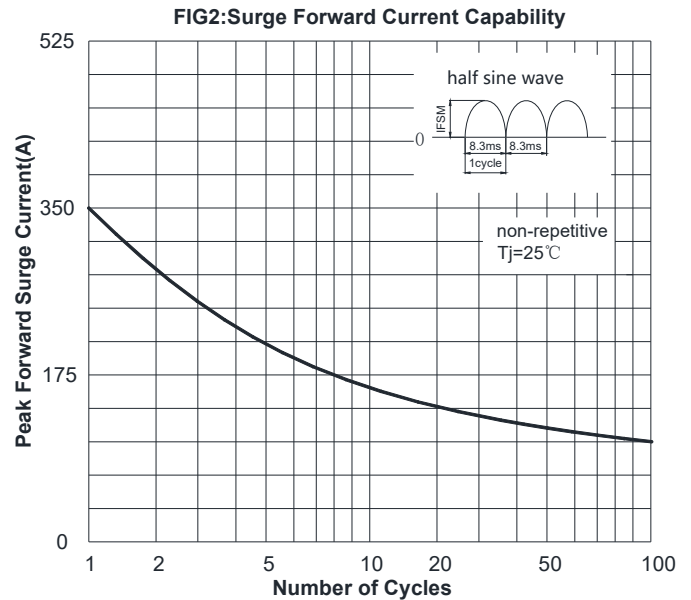
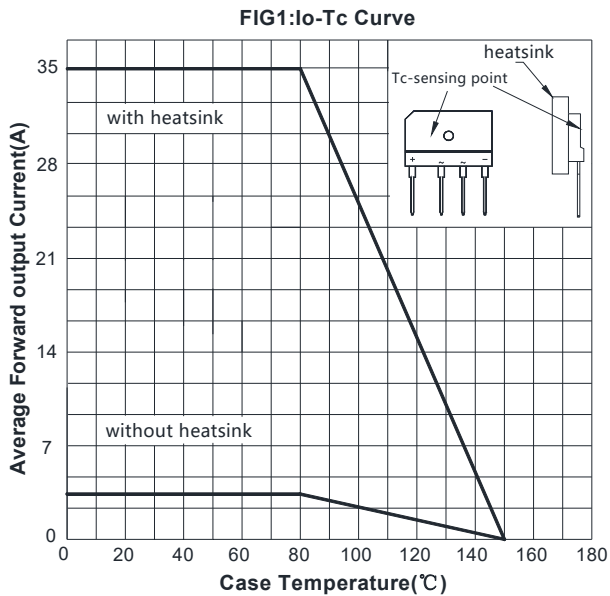


FIG3: Typical Forward Voltage

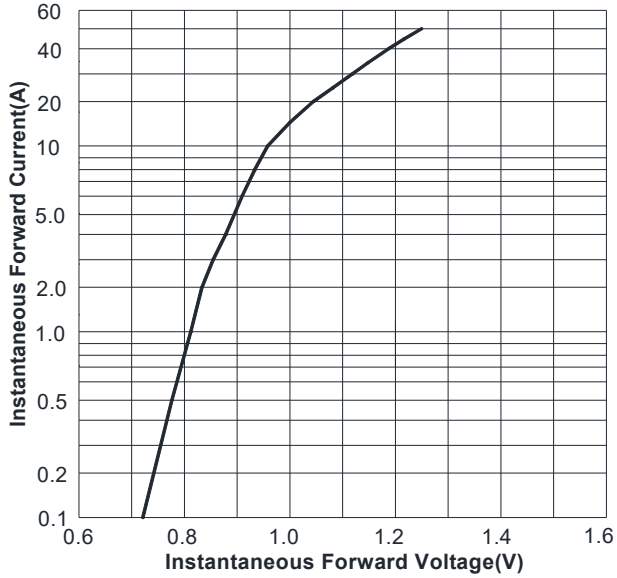
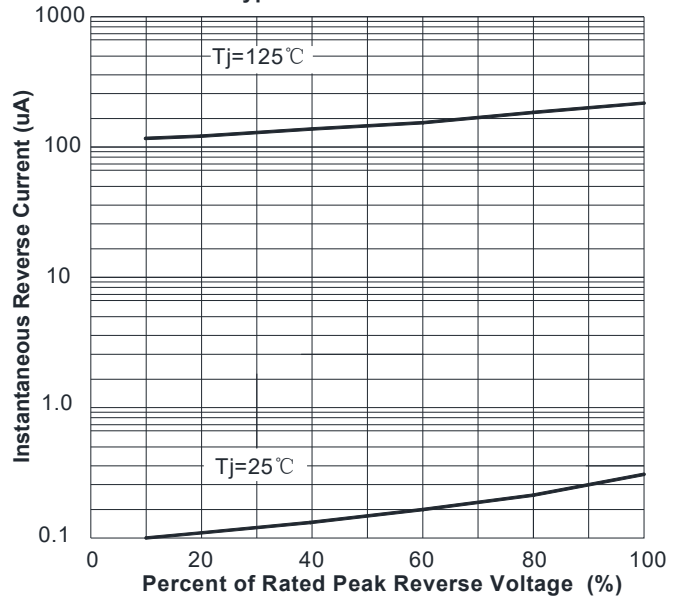
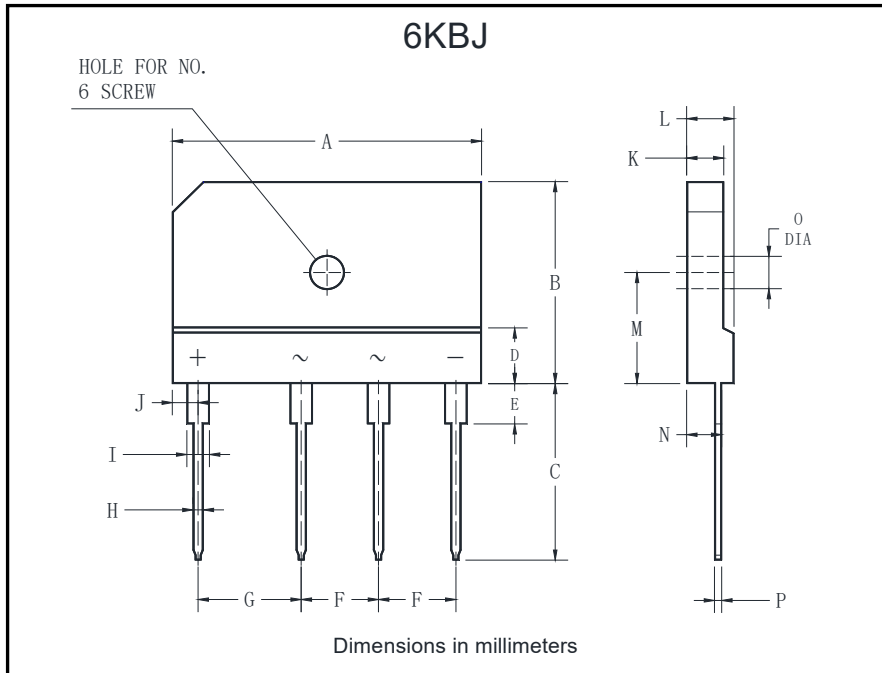


FIG4: Typical Reverse Characteristics



## ■ Outline Dimensions



| 6KBJ |      |      |
|------|------|------|
| Dim  | Min  | Max  |
| A    | 29.7 | 30.3 |
| B    | 19.7 | 20.3 |
| C    | 17.0 | 18.0 |
| D    | 4.8  | 5.8  |
| E    | 3.8  | 4.2  |
| F    | 7.3  | 7.7  |
| G    | 9.8  | 10.2 |
| H    | 0.9  | 1.1  |
| I    | 2.0  | 2.4  |
| J    | 2.3  | 2.7  |
| K    | 3.4  | 3.8  |
| L    | 4.4  | 4.8  |
| M    | 10.8 | 11.2 |
| N    | 3.1  | 3.7  |
| O    | 3.1  | 3.4  |
| P    | 0.6  | 0.8  |



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