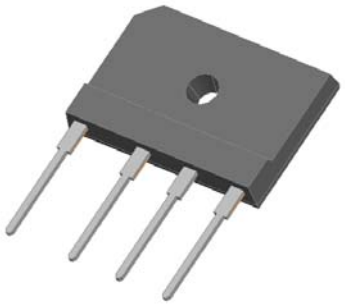
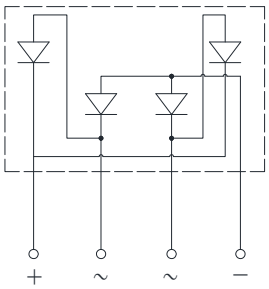
# Bridge Rectifiers






## Features

- 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 ($T_a$=25℃ Unless otherwise specified）

| PARAMETER | | SYMBOL | UNIT | GBJ2516A |
|---|---|---|---|---|
| Device marking code | | | | GBJ2516A |
| Maximum Repetitive Peak Reverse Voltage | | $V_{RRM}$ | V | 1600 |
| Maximum RMS Voltage | | $V_{RMS}$ | V | 1120 |
| Maximum DC blocking Voltage | | $V_{DC}$ | V | 1600 |
| Average rectified output current @60Hz sine wave, R-load, | With heatsink Tc =95℃ | $I_O$ | A | 25.0 |
| | Without heatsink Ta =25℃ | | | 3.5 |
| Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃ | | $I_{FSM}$ | A | 350 |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃ | | | | 700 |
| Current squared time @1ms≤t≤8.3ms Tj=25℃, Rating of per diode | | $I^2t$ | $A^2s$ | 508 |
| Storage temperature | | $T_{stg}$ | ℃ | -55 ~ +150 |
| Junction temperature | | $T_j$ | ℃ | -55 ~ +150 |
| Dielectric strength @ Terminals to case, AC 1 minute | | Vdis | KV | 2.5 |
| Mounting torque @Recommend torque：5kg·cm | | Tor | kg·cm | 8 |

## ■Electrical Characteristics（$T_a$=25℃ Unless otherwise specified）

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | GBJ2516A |
|---|---|---|---|---|
| Maximum instantaneous forward voltage drop per diode | VF | V | $I_{FM}$=12.5A | 1.1 |
| Maximum DC reverse current at rated DC blocking voltage per diode | IR | μA | $T_j$=25℃ | 5 |
| | | | $T_j$=125℃ | 500 |
| Typical junction capacitance | Cj | pF | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 95 |

## ■Thermal Characteristics （$T_a$=25℃ Unless otherwise specified）

| PARAMETER | | SYMBOL | UNIT | GBJ2516A |
|---|---|---|---|---|
| Thermal Resistance | Between junction and ambient, Without heatsink | RθJ-A | ℃/W | 18.0 |
| | Between junction and case, With heatsink | RθJ-C | | 1.0 |

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 |
|---|---|---|---|---|---|---|
| GBJ2516A | B1 | Approximate 6.5 | 15 | 750 | 1500 | TUBE |

## ■ Characteristics(Typical)

FIG1:Io-Tc Curve

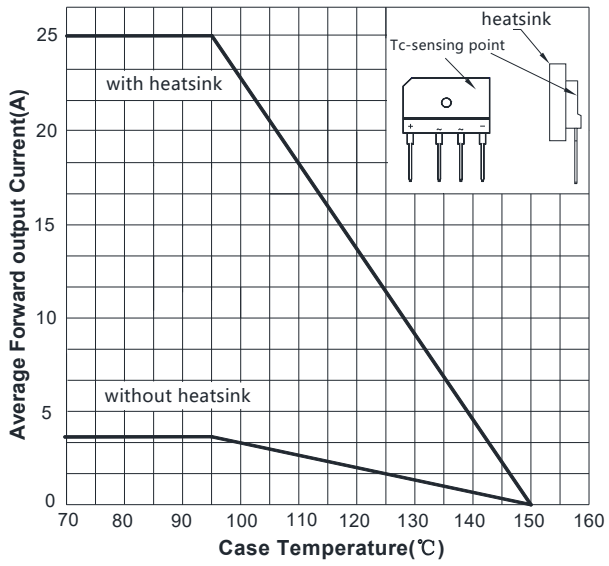



FIG2:Surge Forward Current Capability

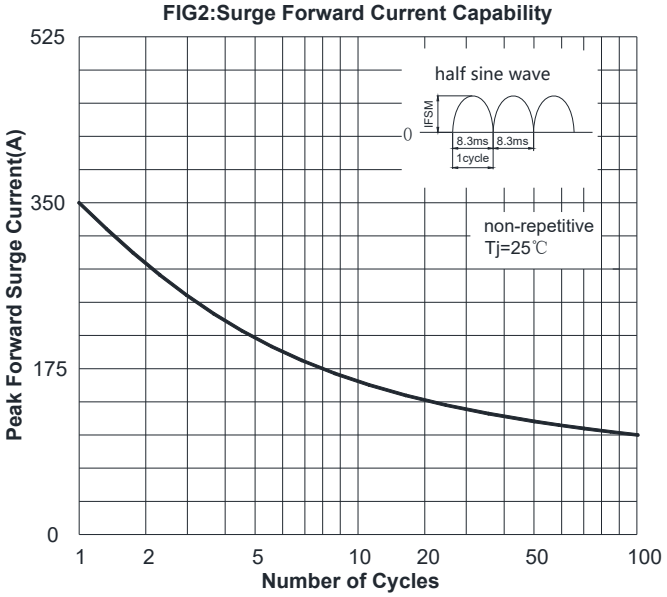



FIG3: Typical Forward Voltage

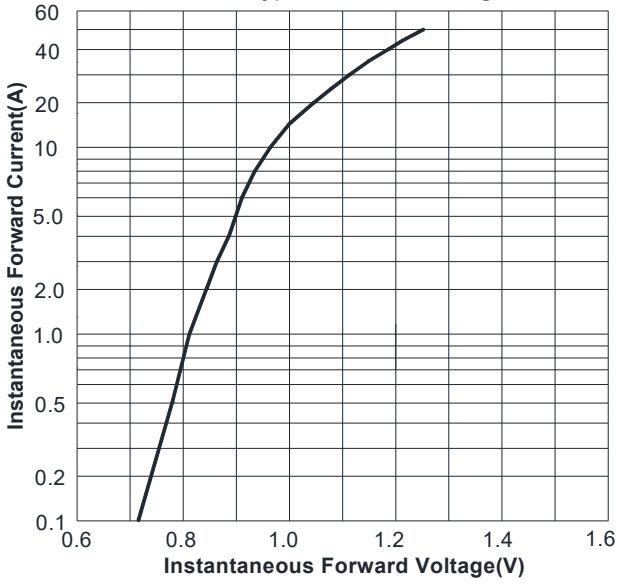
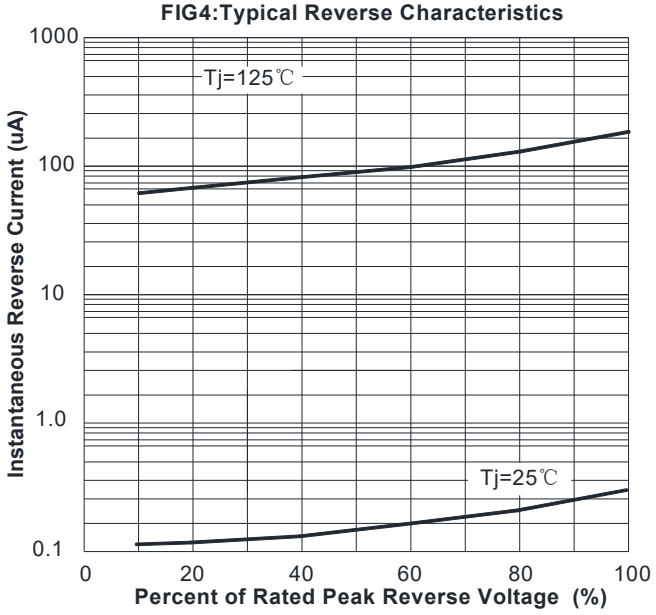
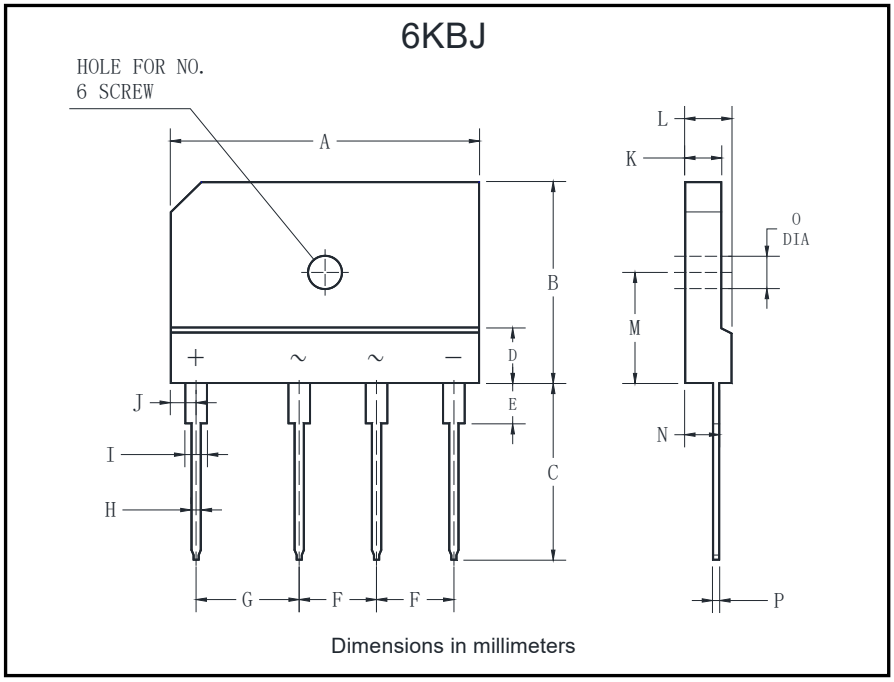



FIG4:Typical Reverse Characteristics



## ■ 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 |

## Notice

All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise. Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in STARSEA's terms and conditions of sale for such products, STARSEA assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of STARSEA products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.