

# GBJ25005A THRU GBJ2510A

GBJ 25.0 AMP Plastic-Encapsulate Bridge Rectifier

## GBJ Plastic-Encapsulate Bridge Rectifier

### Features

- Ideal for printed circuit board
- Small size, simple installation
- High surge current capability
- Reliable low cost construction utilizing molded plastic technique
- High temperature soldering guaranteed: 260/10 seconds at 5lbs., (2.3kg) tension

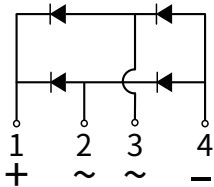
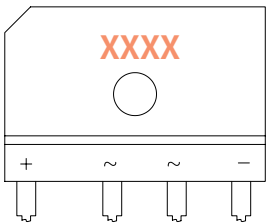
### Applications

General purpose 1 phase Bridgerectifier applications

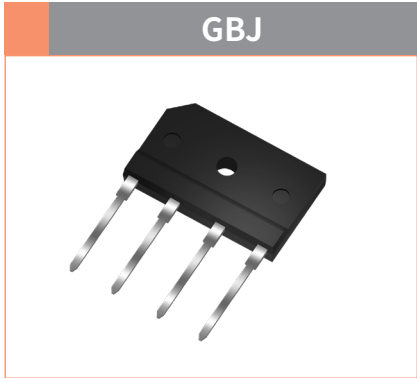
### Mechanical Data

- Case: GBJ  
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity: Cathode line denotes the cathode end

### Function Diagram



Reverse Voltage  
50-1000 V  
Forward Current  
25 Ampere



### Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER                                                                            | SYMBOL           | UNIT             | GBJ25005A  | GBJ2501A | GBJ2502A | GBJ2504A | GBJ2506A | GBJ2508A | GBJ2510A |
|--------------------------------------------------------------------------------------|------------------|------------------|------------|----------|----------|----------|----------|----------|----------|
| Device marking code                                                                  |                  |                  | GBJ25005A  | GBJ2501A | GBJ2502A | GBJ2504A | GBJ2506A | GBJ2508A | GBJ2510A |
| Maximum Repetitive Peak Reverse Voltage                                              | $V_{RRM}$        | V                | 50         | 100      | 200      | 400      | 600      | 800      | 1000     |
| Maximum RMS Voltage                                                                  | $V_{RMS}$        | V                | 35         | 70       | 140      | 280      | 420      | 560      | 700      |
| Maximum DC blocking Voltage                                                          | $V_{DC}$         | V                | 50         | 100      | 200      | 400      | 600      | 800      | 1000     |
| Maximum Average Forward Rectified Current @60Hz sinewave, Resistance load,TL (Fig.1) | $I_{F(AV)}$      | A                | 25         |          |          |          |          |          |          |
| Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave                   | $I_{FSM}$        | A                | 350        |          |          |          |          |          |          |
| Rating for fusing (t=8.3ms, Ta=25 °C )                                               | $I^2t$           | A <sup>2</sup> S | 508.37     |          |          |          |          |          |          |
| Storage temperature                                                                  | $T_{stg}$        | °C               | -55 ~ +150 |          |          |          |          |          |          |
| Junction temperature                                                                 | $T_j$            | °C               | -55 ~ +150 |          |          |          |          |          |          |
| Typical Thermal Resistance                                                           | $R_{\theta J-A}$ | °C /W            | 22         |          |          |          |          |          |          |
|                                                                                      | $R_{\theta J-C}$ | °C /W            | 1.0        |          |          |          |          |          |          |

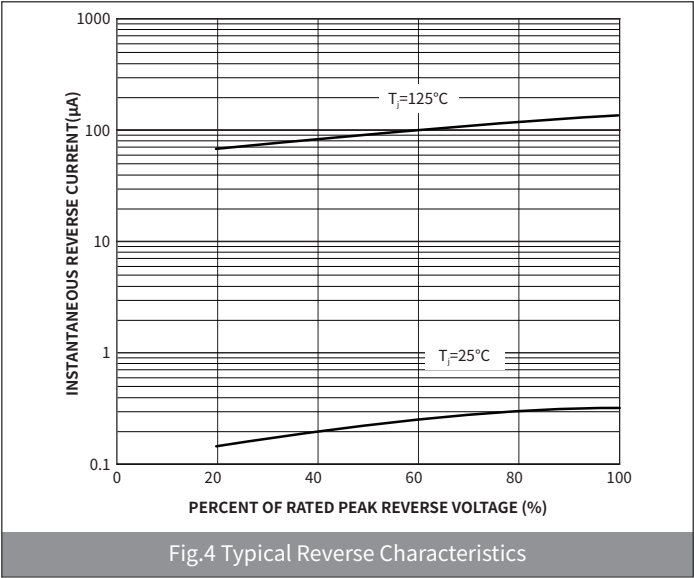
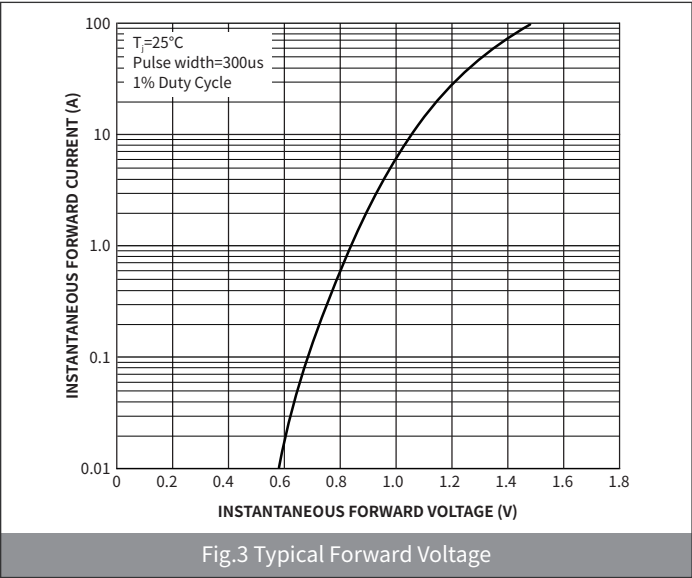
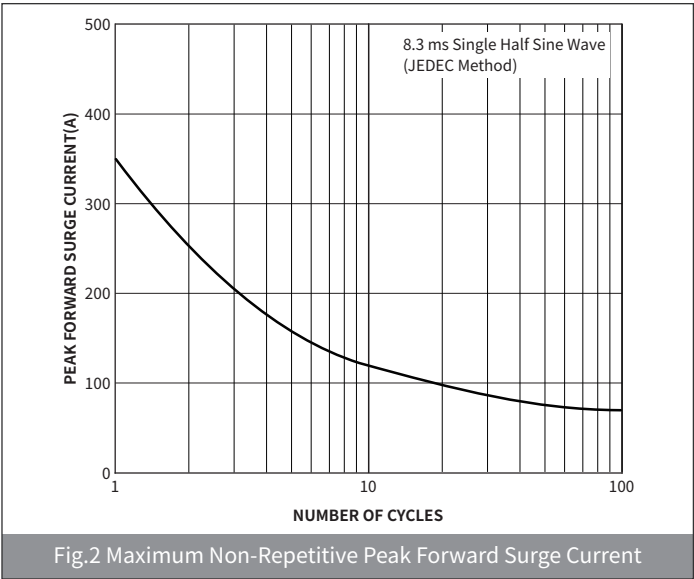
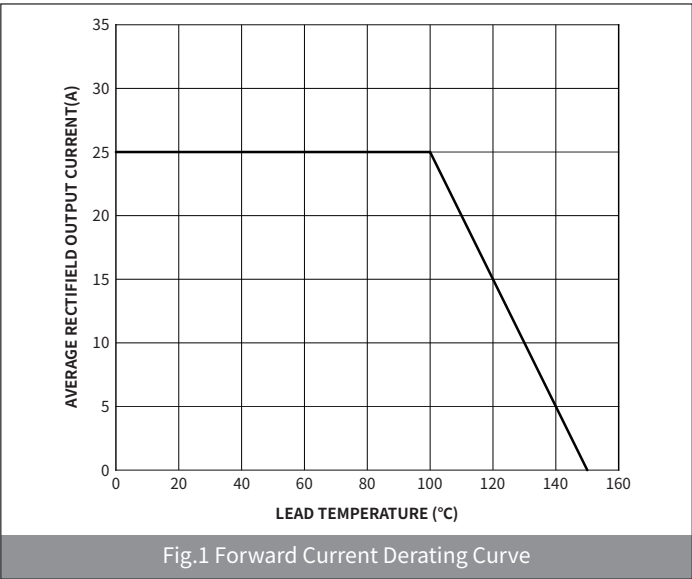
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GBJ 25.0 AMP Plastic-Encapsulate Bridge Rectifier

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

| PARAMETER                                               | TEST CONDITIONS                | SYMBOL   | UNIT    | GBJ25005A | GBJ2501A | GBJ2502A | GBJ2504A | GBJ2506A | GBJ2508A | GBJ2510A |
|---------------------------------------------------------|--------------------------------|----------|---------|-----------|----------|----------|----------|----------|----------|----------|
| Maximum instantaneous forward voltage                   | $I_F=12.5A$                    | $V_F$    | V       | 1.1       |          |          |          |          |          |          |
| Maximum DC reverse current at rated DC blocking voltage | $V_R=V_{DC}, T_A=25^{\circ}C$  | $I_{R1}$ | $\mu A$ | 10        |          |          |          |          |          |          |
|                                                         | $V_R=V_{DC}, T_A=100^{\circ}C$ | $I_{R2}$ |         | 500       |          |          |          |          |          |          |
| Typical junction capacitance                            | 4.0V DC, 1MHz                  | $C_J$    | pF      | 60        |          |          |          |          |          |          |

## Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



# GBJ25005A THRU GBJ2510A

GBJ 25.0 AMP Plastic-Encapsulate Bridge Rectifier

## Ordering Information

| PACKAGE | UNIT WEIGHT(g) | BOX(pcs) | CARTON(pcs) |
|---------|----------------|----------|-------------|
| GBJ     | 6.38           | 250      | 2000        |

## Package Outline Dimensions (GBJ)

| Symbol | Dimensions  |       |        |        |
|--------|-------------|-------|--------|--------|
|        | Millimeters |       | Inches |        |
|        | Min.        | Max.  | Min.   | Max.   |
| A      | 29.70       | 30.30 | 1.170  | 1.190  |
| B      | 19.70       | 20.30 | 0.780  | 0.800  |
| C      | 17.00       | 18.00 | 0.670  | 0.710  |
| D      | 4.80        | 6.10  | 0.190  | 0.240  |
| E      | 3.80        | 4.20  | 0.150  | 0.165  |
| F      | 7.30        | 7.70  | 2.87   | 0.303  |
| G      | 9.80        | 10.20 | 0.386  | 0.402  |
| H      | 0.90        | 1.10  | 0.035  | 0.043  |
| I      | 1.95        | 2.4   | 0.077  | 0.094  |
| J      | 2.30        | 2.70  | 0.090  | 0.106  |
| K      | 3.40        | 3.80  | 0.134  | 0.150  |
| L      | 4.40        | 4.80  | 0.173  | 1.89   |
| M      | 10.80       | 11.20 | 0.425  | 0.441  |
| N      | 3.10        | 3.70  | 0.122  | 0.145  |
| O      | 3.10        | 3.40  | 0.122  | 0.134  |
| P      | 0.55        | 0.80  | 0.022  | 0.0315 |