

## 6GBJ Plastic-Encapsulate Bridge Rectifier

### Features

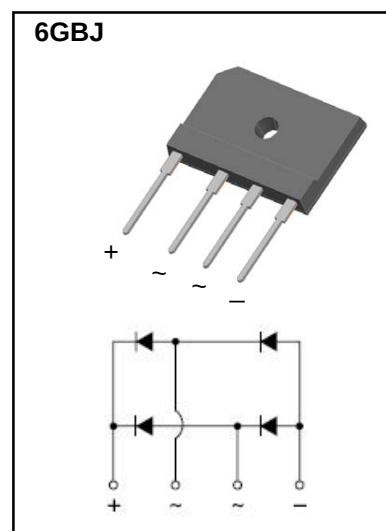
- $I_O$  25A
- $V_{RRM}$  50V-1000V
- High surge current capability
- Polarity: Color band denotes cathode

### Applications

- General purpose 1 phase Bridge rectifier applications

### Marking

- GBJ25XX
- XX : From 005 To 10



### Limiting Values (Absolute Maximum Rating)

| Item                                 | Symbol    | Unit                        | Conditions                                                                        | GBJ25                                     |     |     |     |     |     |      |
|--------------------------------------|-----------|-----------------------------|-----------------------------------------------------------------------------------|-------------------------------------------|-----|-----|-----|-----|-----|------|
|                                      |           |                             |                                                                                   | 005                                       | 01  | 02  | 04  | 06  | 08  | 10   |
| Repetitive Peak Reverse Voltage      | $V_{RRM}$ | V                           |                                                                                   | 50                                        | 100 | 200 | 400 | 600 | 800 | 1000 |
| Average Rectified Output Current     | $I_O$     | A                           | 60Hz sine wave, R-load                                                            | With heatsink $T_c = 100^\circ\text{C}$   |     |     |     |     |     |      |
|                                      |           |                             |                                                                                   | Without heatsink $T_a = 25^\circ\text{C}$ |     |     |     |     |     |      |
| Surge(Non-repetitive)Forward Current | $I_{FSM}$ | A                           | 60Hz sine wave, 1 cycle, $T_j = 25^\circ\text{C}$                                 | 350                                       |     |     |     |     |     |      |
| Current Squared Time                 | $I^2t$    | $\text{A}^2\text{S}$        | $1\text{ms} \leq t < 8.3\text{ms}$ $T_j = 25^\circ\text{C}$ , Rating of per diode | 508                                       |     |     |     |     |     |      |
| Storage Temperature                  | $T_{stg}$ | $^\circ\text{C}$            |                                                                                   | -55 ~ +150                                |     |     |     |     |     |      |
| Junction Temperature                 | $T_j$     | $^\circ\text{C}$            |                                                                                   | -55 ~ +150                                |     |     |     |     |     |      |
| Dielectric Strength                  | $V_{dis}$ | KV                          | Terminals to case, AC 1 minute                                                    | 2.5                                       |     |     |     |     |     |      |
| Mounting Torque                      | Tor       | $\text{kg} \cdot \text{cm}$ | Recommend torque: $5\text{kg} \cdot \text{cm}$                                    | 8                                         |     |     |     |     |     |      |

### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ Unless otherwise specified)

| Item                 | Symbol           | Unit               | Test Condition                                                   | Max |
|----------------------|------------------|--------------------|------------------------------------------------------------------|-----|
| Peak Forward Voltage | $V_{FM}$         | V                  | $I_{FM} = 12.5\text{A}$ , Pulse measurement, Rating of per diode | 1.0 |
| Peak Reverse Current | $I_{RRM}$        | $\mu\text{A}$      | $V_{RM} = V_{RRM}$ , Pulse measurement, Rating of per diode      | 10  |
| Thermal Resistance   | $R_{\theta J-A}$ | $^\circ\text{C/W}$ | Between junction and ambient, Without heatsink                   | 22  |
|                      | $R_{\theta J-C}$ |                    | Between junction and case, With heatsink                         | 0.6 |

## Typical Characteristics

FIG.1-FORWARD CURRENT DERATING CURVE

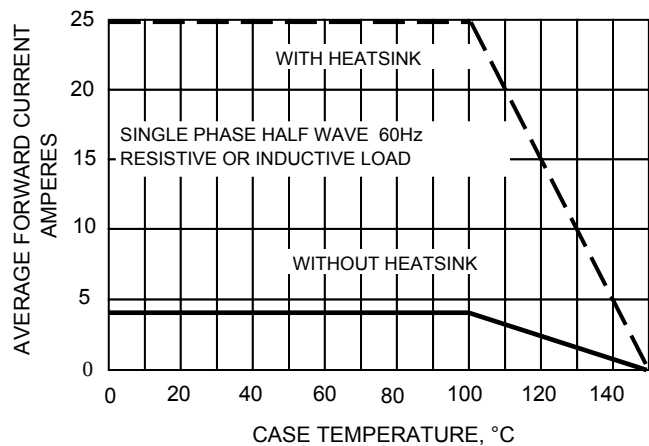


FIG.2-MAXMUN NON-REPETITIVE  
SURGE CURRENT

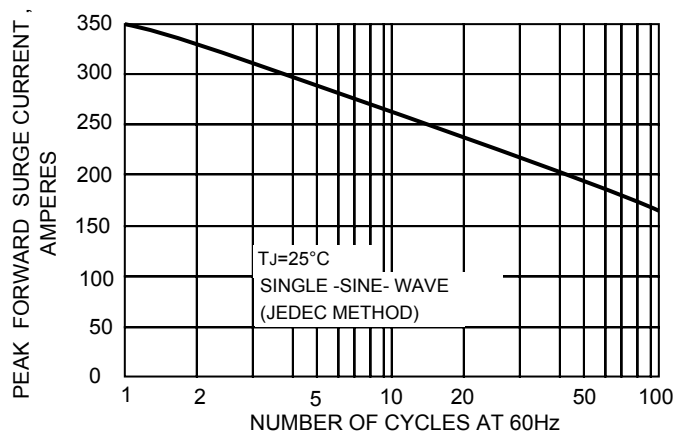


FIG.3-TYPICAL JUNCTION CAPACITANCE

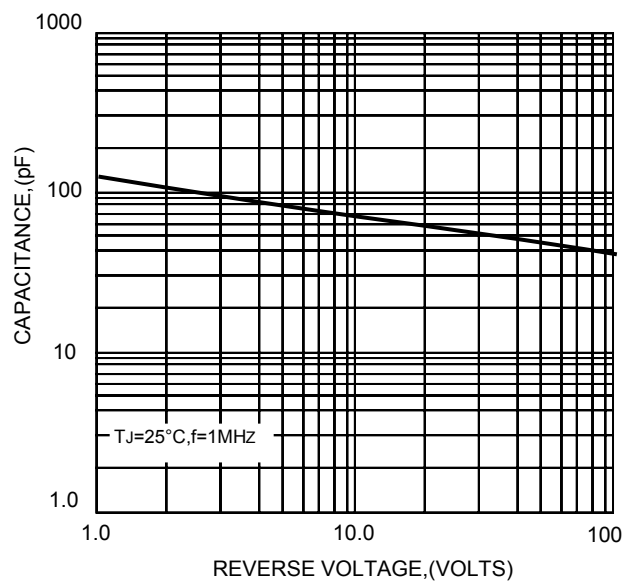


FIG.4-TYPICAL FORWARD CHARACTERISTICS

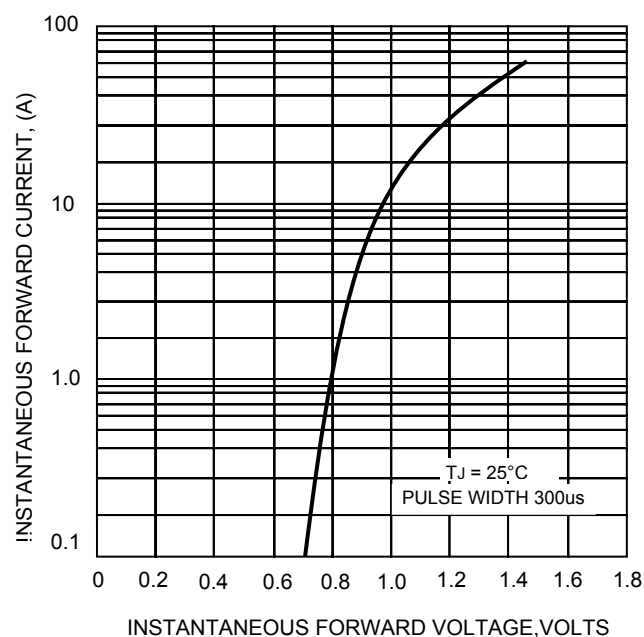
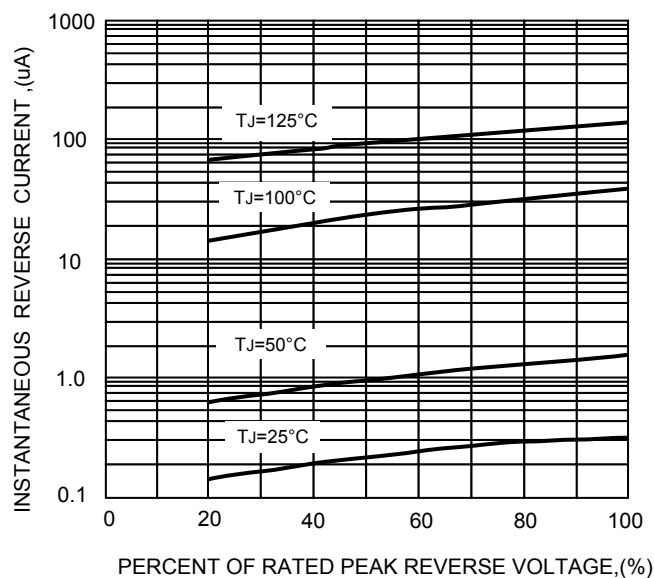
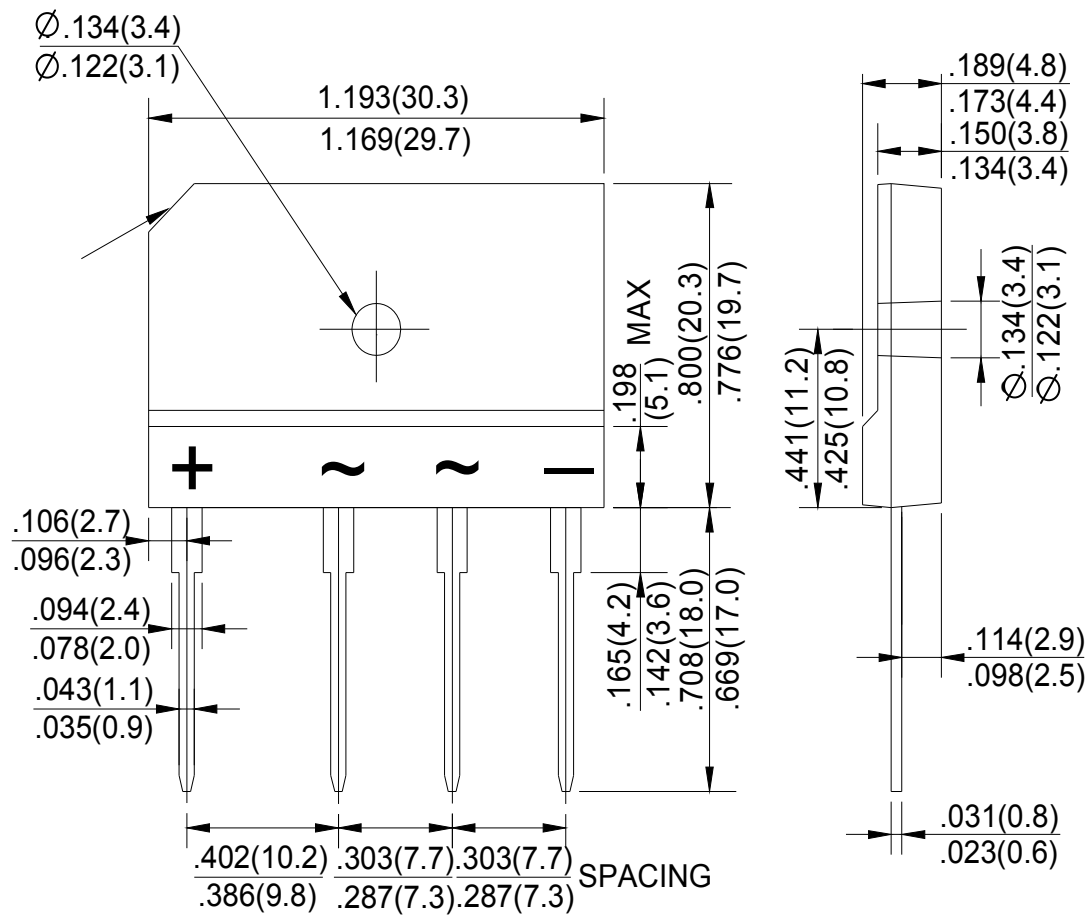


FIG.5-TYPICAL REVERSE CHARACTERISTICS



## 6GBJ Package Outline Dimensions



Dimensions in inches and (millimeters)

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