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## Glass Passivated Bridge Rectifier

**Voltage** 1000 V **Current** 50A

### Features



- Ideal for printed circuit boards
- UL recognition file number E526209
- Lead free in compliance with EU RoHS 2.0
- Halogen-free according to IEC 61249 standard

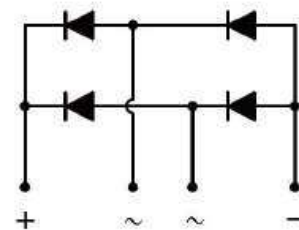
### Mechanical Data

- Case : GBJ-2 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 6.6972 grams

### Application

- Computing Power,
- Server Power/IND/EV
- Air Conditioner out door power board
- High Power/High Efficiency Power
- Home Appliances Power Board
- TV Power

## GBJ-2



| Key Parameters |       |
|----------------|-------|
| Parameter      | Value |
| $V_{RRM}$      | 1000V |
| $I_F(AV)$      | 50A   |
| $I_{FSM}$      | 500A  |
| $I_R$          | 5uA   |
| Package        | GBJ-2 |

**Maximum Ratings and Thermal Characteristics** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

| PARAMETER                                                                                  |                             | SYMBOL          | LIMIT   | UNITS                |
|--------------------------------------------------------------------------------------------|-----------------------------|-----------------|---------|----------------------|
| Maximum Repetitive Peak Reverse Voltage                                                    |                             | $V_{RRM}$       | 1000    | V                    |
| Maximum RMS Voltage                                                                        |                             | $V_{RMS}$       | 700     | V                    |
| Maximum DC Blocking Voltage                                                                |                             | $V_{DC}$        | 1000    | V                    |
| Maximum Average Forward Current                                                            | With heatsink               | $I_{F(AV)}$     | 50      | A                    |
|                                                                                            | Without heatsink            |                 | 4.2     |                      |
| Peak Forward Surge Current : 8.3 ms<br>Single Half Sine-Wave<br>Superimposed On Rated Load | @ $T_A = 25^\circ\text{C}$  | $I_{FSM}$       | 500     | A                    |
|                                                                                            | @ $T_A = 125^\circ\text{C}$ |                 | 400     |                      |
| Peak Forward Surge Current : 1.0 ms<br>Single Half Sine-Wave<br>Superimposed On Rated Load | @ $T_A = 25^\circ\text{C}$  | $I_{FSM}$       | 1000    | A                    |
|                                                                                            | @ $T_A = 125^\circ\text{C}$ |                 | 800     |                      |
| $I^2 t$ rating for fusing ( $t = 8.3\text{ms}$ )                                           |                             | $I^2 t$         | 1037.5  | $\text{A}^2\text{S}$ |
| Typical Junction Capacitance<br>Measured at 1 MHZ And Applied $V_R = 4\text{ V}$           |                             | $C_J$           | 200     | pF                   |
| Typical Thermal Resistance (Note 1)                                                        |                             | $R_{\theta JA}$ | 8       | $^\circ\text{C/W}$   |
|                                                                                            |                             | $R_{\theta JL}$ | 2       |                      |
|                                                                                            |                             | $R_{\theta JC}$ | 2       |                      |
| Operating junction and storage temperature range                                           |                             | $T_J, T_{STG}$  | -55~150 | $^\circ\text{C}$     |
| Mounting torque @ Recommend torque:5Kg.cm                                                  |                             | Tor             | 8       | Kg.cm                |

**Electrical Characteristics** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

| PARAMETER       | SYMBOL | TEST CONDITION                                 | MIN. | TYP. | MAX. | UNITS         |
|-----------------|--------|------------------------------------------------|------|------|------|---------------|
| Forward Voltage | $V_F$  | $I_F = 25\text{ A}, T_J = 25^\circ\text{C}$    | -    | -    | 1.1  | V             |
| Reverse Current | $I_R$  | $V_R = 1000\text{ V}, T_J = 25^\circ\text{C}$  | -    | -    | 5    | $\mu\text{A}$ |
|                 |        | $V_R = 1000\text{ V}, T_J = 125^\circ\text{C}$ | -    | -    | 100  |               |

NOTES :

1. Device mounted on 10 cm \* 9.4 cm \* 2.6 cm Fin type heat sink.

TYPICAL CHARACTERISTIC CURVES

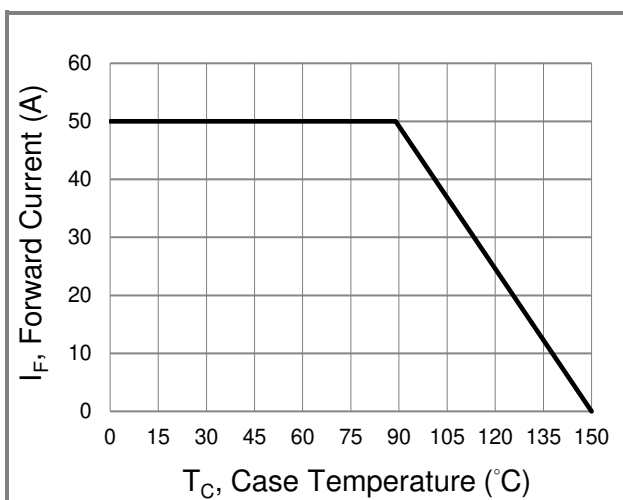


Fig.1 Forward Current Derating Curve

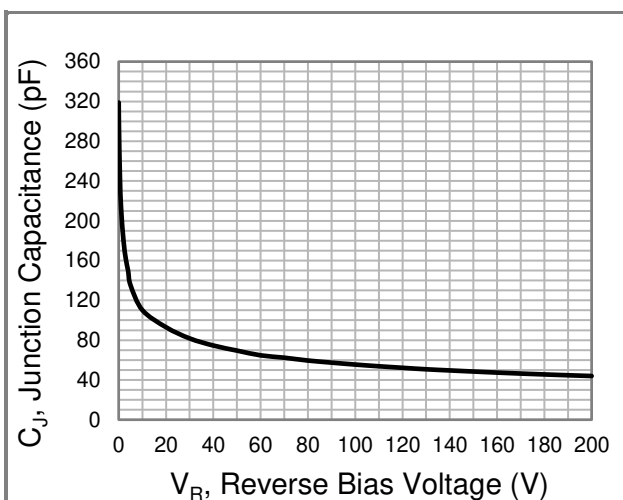


Fig.2 Typical Junction Capacitance

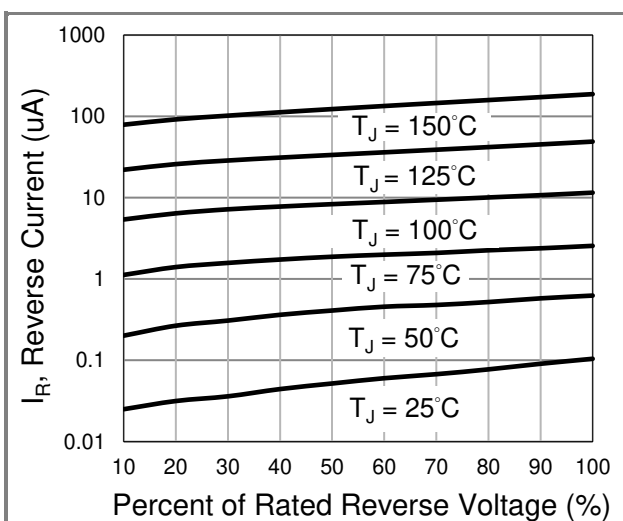


Fig.3 Typical Reverse Characteristics

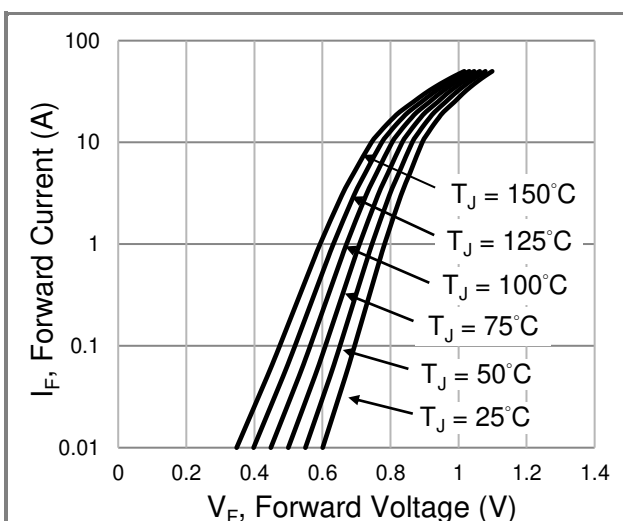
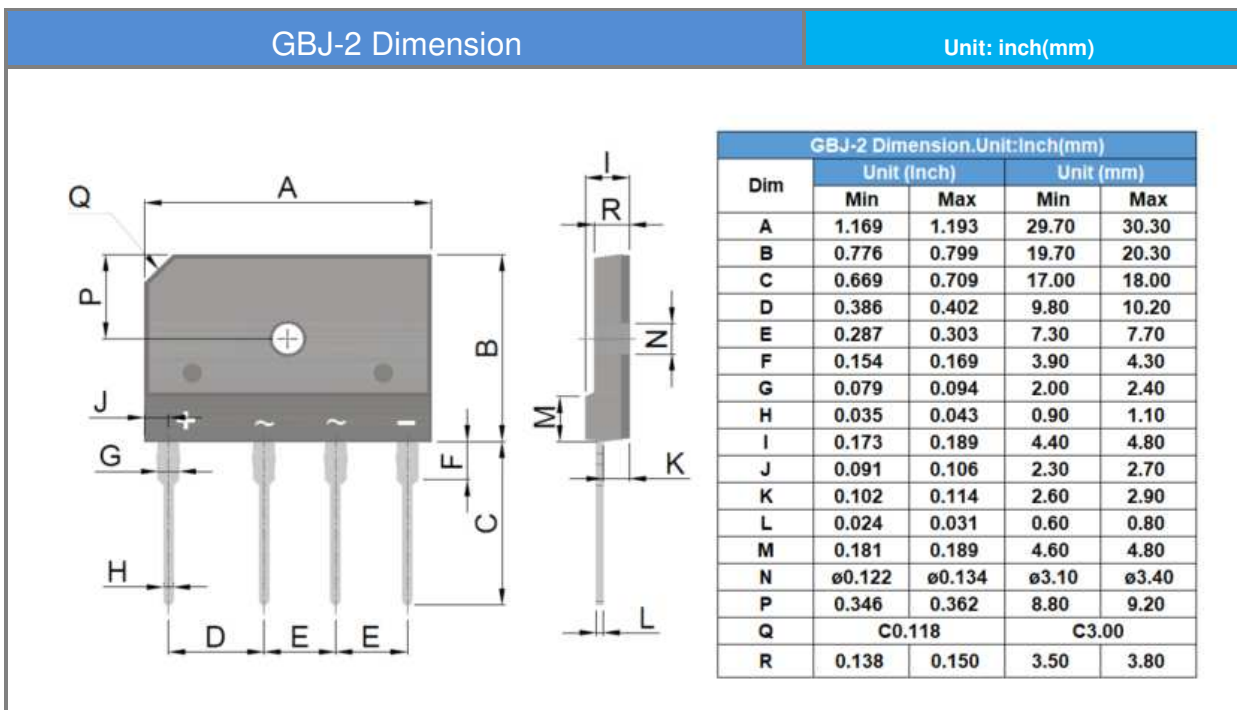


Fig.4 Typical Forward Characteristics

## Part No. Marking Code Version

| Approved Part No. | Package Type | Packing Type  | Marking |
|-------------------|--------------|---------------|---------|
| GBJ5010           | GBJ-2        | 15 pcs / tube | GBJ5010 |

## Packaging Information



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