

## 4GBJ Plastic-Encapsulate Bridge Rectifier

### Features

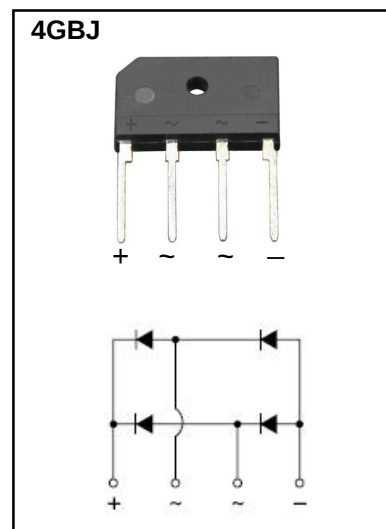
- $I_O$  8.0A
- $V_{RRM}$  50V-1000V
- High surge current capability

### Applications

- General purpose 1 phase Bridge rectifier applications

### Marking

- KBJ8XX
- XX : From 005 To 10



### Limiting Values (Absolute Maximum Rating)

| Item                                 | Symbol    | Unit                 | Conditions                                                                        | KBJ 8                                      |     |     |     |     |     |      |
|--------------------------------------|-----------|----------------------|-----------------------------------------------------------------------------------|--------------------------------------------|-----|-----|-----|-----|-----|------|
|                                      |           |                      |                                                                                   | 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 $T_c = 100^\circ\text{C}$ |     |     |     |     |     |      |
| Surge(Non-repetitive)Forward Current | $I_{FSM}$ | A                    | 60Hz sine wave, 1 cycle, $T_j = 25^\circ\text{C}$                                 | 200                                        |     |     |     |     |     |      |
| 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 | 166                                        |     |     |     |     |     |      |
| Storage Temperature                  | $T_{stg}$ | $^\circ\text{C}$     |                                                                                   | $-55 \sim +150$                            |     |     |     |     |     |      |
| Junction Temperature                 | $T_j$     | $^\circ\text{C}$     |                                                                                   | $-55 \sim +150$                            |     |     |     |     |     |      |

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

| Item                 | Symbol           | Unit               | Test Condition                                                |                           | Max |
|----------------------|------------------|--------------------|---------------------------------------------------------------|---------------------------|-----|
| Peak Forward Voltage | $V_{FM}$         | V                  | $I_{FM} = 4\text{A}$ , Pulse measurement, Rating of per diode |                           | 1.1 |
| Peak Reverse Current | $I_{RRM1}$       | $\mu\text{A}$      | $V_{RM} = V_{RRM}$                                            | $T_a = 25^\circ\text{C}$  | 10  |
|                      | $I_{RRM2}$       |                    |                                                               | $T_a = 125^\circ\text{C}$ | 500 |
| Thermal Resistance   | $R_{\theta J-A}$ | $^\circ\text{C/W}$ | Between junction and ambient, Without heatsink                |                           | 26  |
|                      | $R_{\theta J-C}$ |                    | Between junction and case, With heatsink                      |                           | 3.4 |

## Typical Characteristics

FIG.1-FORWARD CURRENT DERATING CURVE

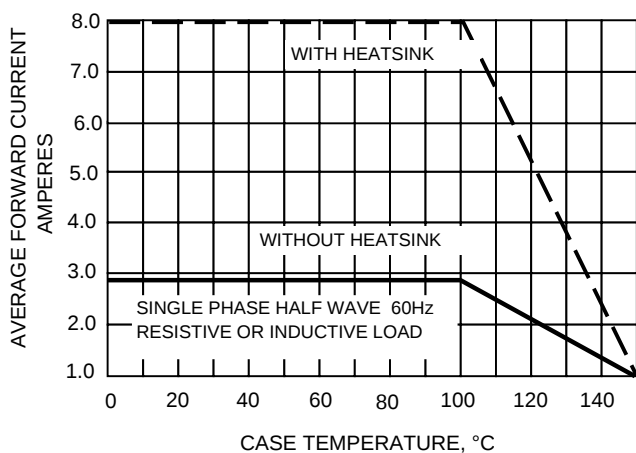


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

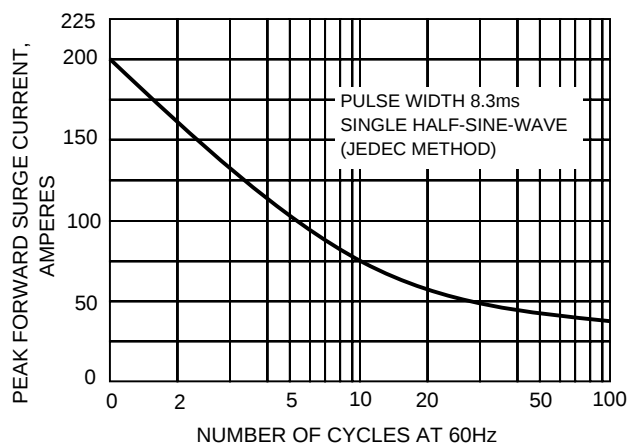


FIG.3-TYPICAL JUNCTION CAPACITANCE

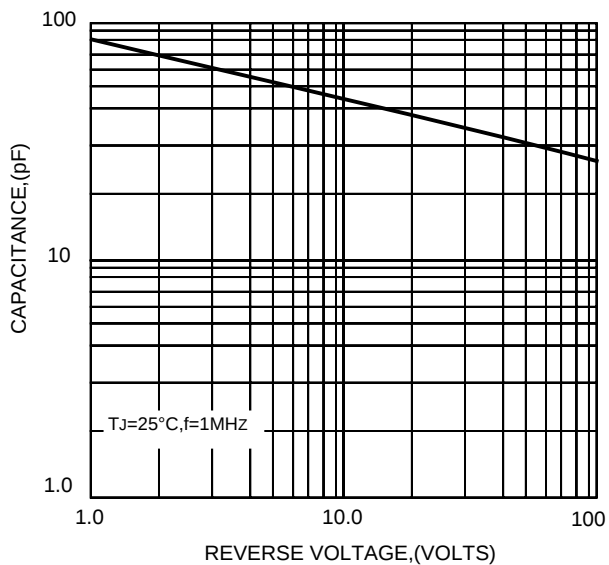


FIG.4-TYPICAL FORWARD CHARACTERISTICS

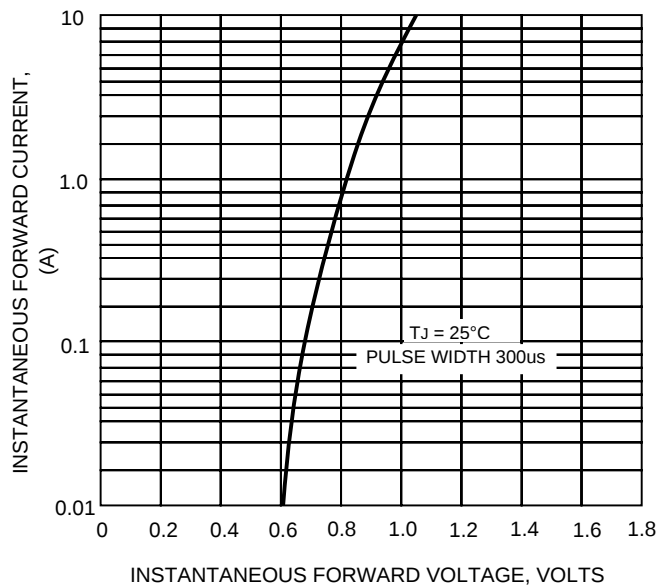
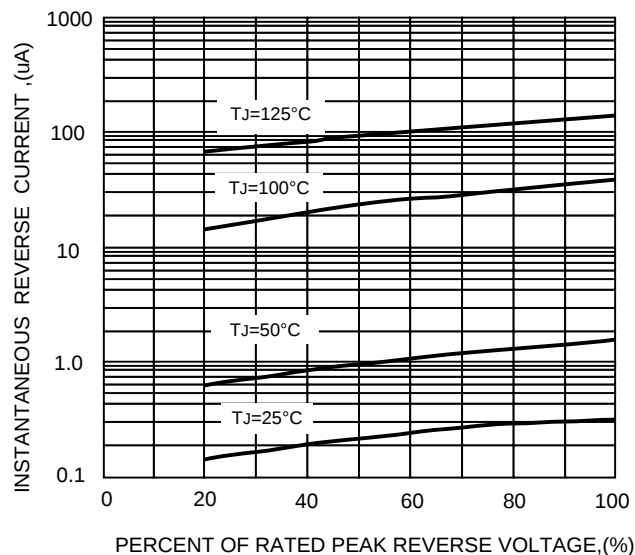
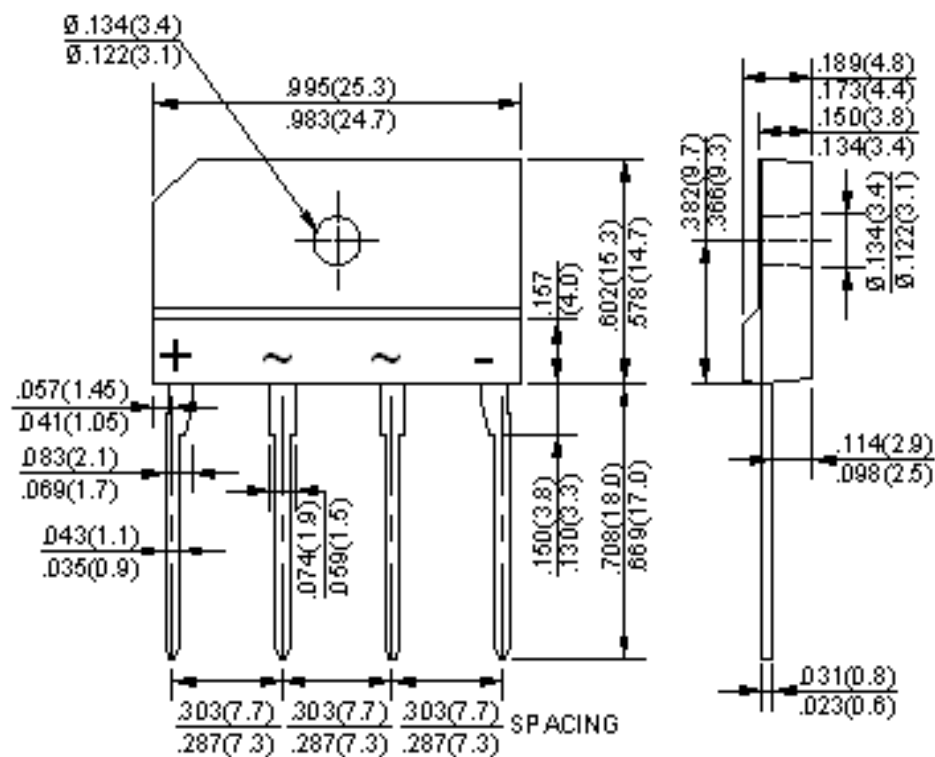


FIG.5-TYPICAL REVERSE CHARACTERISTICS





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