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# DC COMPONENTS CO., LTD.

### RECTIFIER SPECIALISTS

GBJ10A THRU GBJ10M

# TECHNICAL SPECIFICATIONS OF GLASS PASSIVATED BRIDGE RECTIFIER VOLTAGE RANGE - 50 to 1000 Volts CURRENT - 10 Amperes

#### **FEATURES**

- \* Ideal for printed circuit board
- \* Surge overload rating: 220 Amperes peak
- \* Glass passivated junction

#### MECHANICAL DATA

\* Case: Molded plastic

\* Epoxy: UL 94V-0 rate flame retardant

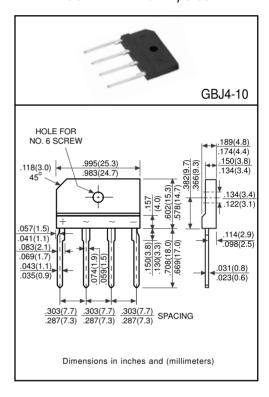
\* Terminals: MIL-STD-202E, Method 208 guaranteed

\* Polarity: Symbols molded or marked on body

\* Mounting position: Any \* Weight: 4.6 grams

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.



|   |             | SYMBOL          | GBJ10A      | GBJ10B | GBJ10D | GBJ10G | GBJ10J | GBJ10K | GBJ10M            | UNITS |
|---|-------------|-----------------|-------------|--------|--------|--------|--------|--------|-------------------|-------|
| Maximum Recurrent Peak Reverse Voltage  |             | VRRM            | 50          | 100    | 200    | 400    | 600    | 800    | 1000              | Volts |
| Maximum RMS Bridge Input Voltage  |             | VRMS            | 35          | 70     | 140    | 280    | 420    | 560    | 700               | Volts |
| Maximum DC Blocking Voltage   |             | VDC             | 50          | 100    | 200    | 400    | 600    | 800    | 1000              | Volts |
| Maximum Average Forward Output Current at Tc = 100°C with heatsink                                |             | lo              | 10          |        |        |        |        |        |                   | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) |             | IFSM            | 220         |        |        |        |        |        | Amps              |       |
| Maximum Forward Voltage Drop per element at 2.0A DC   |             | VF              | 1.1         |        |        |        |        |        | Volts             |       |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element                               | @Ta = 25°C  | lr              | 10          |        |        |        |        |        | Amps              |       |
|   | @Ta = 100°C |                 | 500         |        |        |        |        |        |                   |       |
| l²t Rating for Fusing (t≦8.3ms)   |             | l <sup>2t</sup> | 120         |        |        |        |        |        | A <sup>2Sec</sup> |       |
| Typical Junction Capacitance (Note 1)   |             | CJ              | 55          |        |        |        |        |        | pF                |       |
| Typical Thermal Resistance (Note 2)   |             | R JA            | 1.4         |        |        |        |        |        |                   | ₀C/W  |
| Operating Temperature Range   |             | TJ              | -55 to +150 |        |        |        |        |        |                   | ٥C    |
| Storage Temperature Range   |             | Тѕтс            | -55 to +150 |        |        |        |        |        |                   | ٥C    |

NOTES: 1.Measured at 1 MHz and applied reverse voltage of 4.0 volts.

<sup>2.</sup>Thermal Resistance from Junction to Case per element Unit mounted on 300x300x1.6mm Aluminum plate heat-sink.

## **RATING AND CHARACTERISTIC CURVES (GBJ10A THRU GBJ10M)**

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PEAK FORWARD SURGE CURRENT, (A) 250 8.3ms Single Half Sine-Wave (JEDEC Mathod) 200 150 100 50 0 2 5 50 100 10 NUMBER OF CYCLES AT 60Hz

FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

(V)

100

-Pulse Width=300ms
1% Duty Cycle

110

-Pulse Width=300ms
1% Duty Cycle

INSTANTANEOUS FORWARD VOLTAGE, (V)

