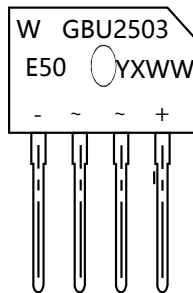


## Special For DC-AC Rectifier Bridge



### PINNING

| PIN | DESCRIPTION          |
|-----|----------------------|
| 1   | Input Pin ( ~ )      |
| 2   | Input Pin ( ~ )      |
| 3   | Output Anode ( + )   |
| 4   | Output Cathode ( - ) |

### Features

- Compliant with RoHS Provisions
- Low forward voltage, high forward current
- High forward surge current capability
- High heat-conducting performance
- Thermal welding performance: 260 °C/10sec

### Applications

- Switching Power Supply
- Home Appliances, Office Devices
- Industrial Auto-equipments

### 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 current derate by 20 %.

| Parameter  | Symbol                             | GBU2503E50             | Unit             |
|--|------------------------------------|------------------------|------------------|
| Maximum repetitive peak reverse voltage  | $V_{RRM}$                          | 300                    | V                |
| Maximum RMS voltage  | $V_{RMS}$                          | 210                    | V                |
| Maximum DC Blocking Voltage  | $V_{DC}$                           | 300                    | V                |
| Average Rectified Output Current   | $I_o$                              | 25.0                   | A                |
| Reverse Recovery Time. $I_F=0.5A, I_R=1A, I_{RR}=0.25A$  | $T_{rr}$                           | 50                     | ns               |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)                                | $I_{FSM}$                          | 300                    | A                |
| $I^2 t$ rating for fusing ( 1ms < t < 8.3ms)   | $I^2 t$                            | 373                    | A <sup>2</sup> S |
| Dielectric Strength: Terminals to Case, AC 1 minute  | $V_{dis}$                          | 2.5                    | KV               |
| Mounting torque  | TOR                                | Recommended torque:0.5 | N.m              |
| Maximum Forward Voltage at 12.5 A  | $V_F$                              | 1.15                   | V                |
| Maximum DC Reverse Current at Rated DC Blocking Voltage  | $I_R$                              | 10<br>500              | $\mu A$          |
| Junction to ambient , without heatsink @ $T_A=25\text{ }^\circ C$<br>Junction to case, with heatsink @ $T_A=125\text{ }^\circ C$ | $R_{\theta JA}$<br>$R_{\theta JC}$ | 22<br>3                | $^\circ C/W$     |
| Operating and Storage Temperature Range  | $T_j, T_{stg}$                     | -55 ~ +150             | $^\circ C$       |

Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.

2. Mounted on glass epoxy PC board with 4×1.5"×1.5" ( 3.81×3.81 cm ) copper pad.

## RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)

Fig.1: Current Derating Curve

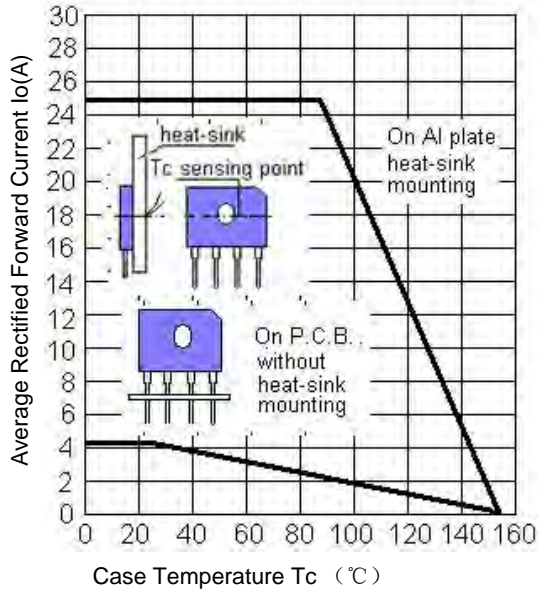


Fig.2 Typical Reverse Characteristics

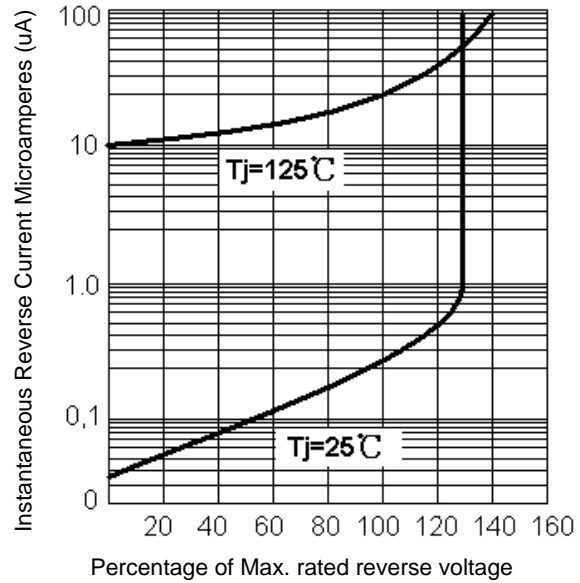


Fig.3: Max. Surge Current

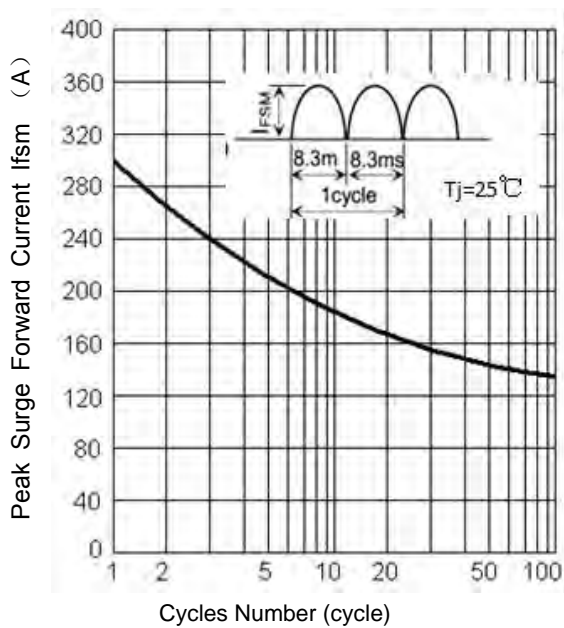
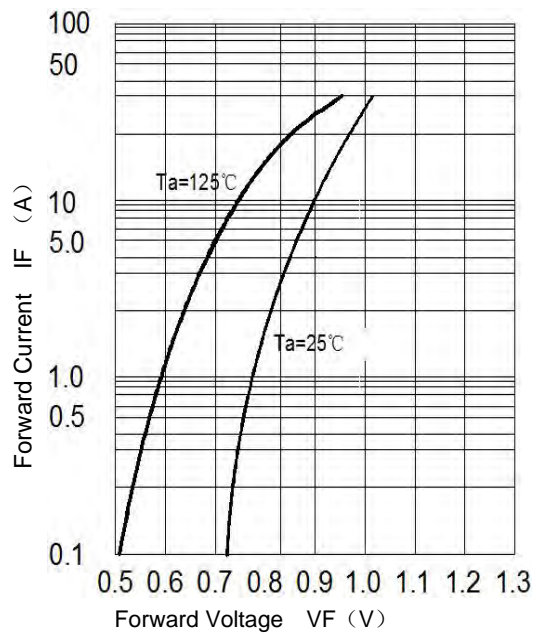
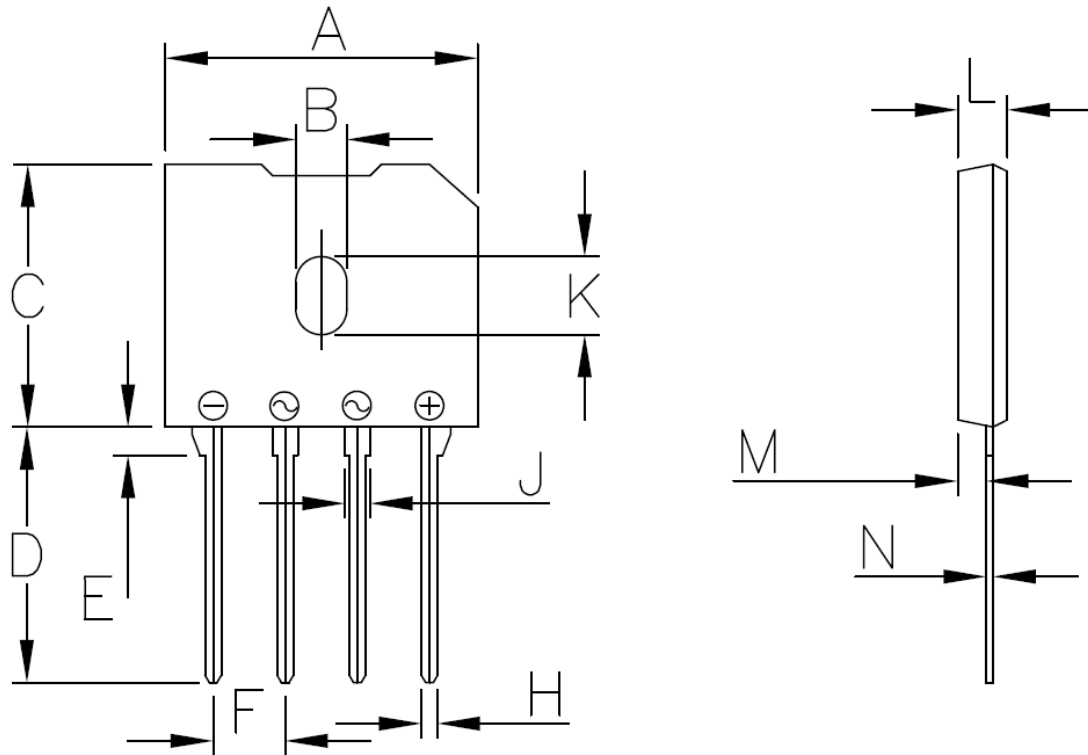


Fig.4: Rated Forward Features



## PACKAGE OUTLINE DIMENSIONS

Note:unit mm(inch)



GBU mechanical data: unit mm(inch)

| Unit |     | A    | B    | C    | D    | E    | F    | H     | J    | K    | L    | M    | N     |
|------|-----|------|------|------|------|------|------|-------|------|------|------|------|-------|
| mm   | max | 22.3 | 4.1  | 18.8 | 18.5 | 2.1  | 5.43 | 1.15  | 2.24 | 5.6  | 3.6  | 2.3  | 0.6   |
|      | min | 21.7 | 3.5  | 18.2 | 17.5 | 1.5  | 4.73 | 0.85  | 1.64 | 5.1  | 3.2  | 1.8  | 0.4   |
| inch | max | 0.88 | 0.17 | 0.74 | 0.73 | 0.09 | 0.22 | 0.045 | 0.09 | 0.22 | 0.15 | 0.09 | 0.03  |
|      | min | 0.85 | 0.13 | 0.71 | 0.68 | 0.06 | 0.18 | 0.033 | 0.06 | 0.20 | 0.12 | 0.07 | 0.015 |