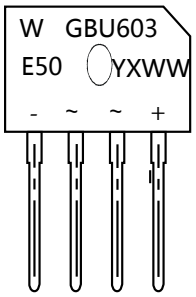
# GBU603E50
# GBU606E50

23-MAR-2021

World Internation (China) Limited

## 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℃/10sec

### Applications

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

### Maximum Ratings and Electrical characteristics

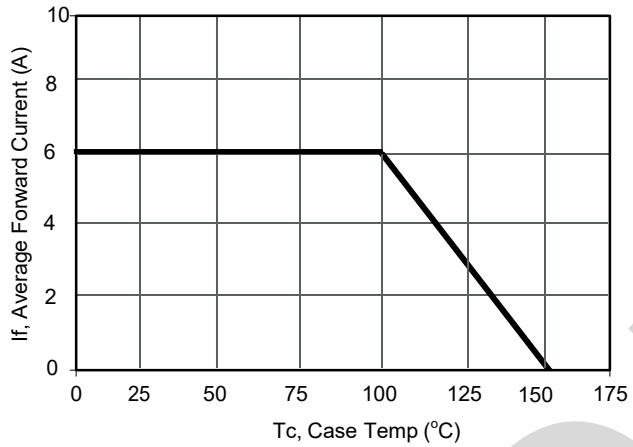
Ratings at 25 °C ambient temperature unless otherwise specified.Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter | Symbol | GBU603E50 | GBU606E50 | Unit |
|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 300 | 600 | V |
| Maximum RMS voltage | $V_{RMS}$ | 210 | 420 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 300 | 600 | V |
| Average Rectified Output Current | $I_O$ | 6.0 | | A |
| Reverse Recovery Time.IF=0.5A,IR=1A,IRR=0.25A | Trr | 50 | | ns |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load(JEDEC Method) | $I_{FSM}$ | 150 | | A |
| $I^2t$ rating for fusing ( 1ms< t < 8.3ms) | $I^2t$ | 93.3 | | $A^2S$ |
| Dielectric Strength：Terminals to Case, AC 1 minute | Vdis | 2.5 | | KV |
| Mounting torque | TOR | Recommended torque:0.5 | | N.m |
| Maximum Forward Voltage at 3.0 A | $V_F$ | 0.95 | 1.28 | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | $I_R$ | 10<br>500 | | μA |
| Junction to ambient , without heatsink @$T_A$=25 °C<br>Junction to case, with heatsink @$T_A$=125 °C | $R_{\theta JA}$<br>$R_{\theta JC}$ | 22<br>3 | | ℃/W |
| Operating and Storage Temperature Range | $T_j$, $T_{stg}$ | -55 ~ +150 | | °C |

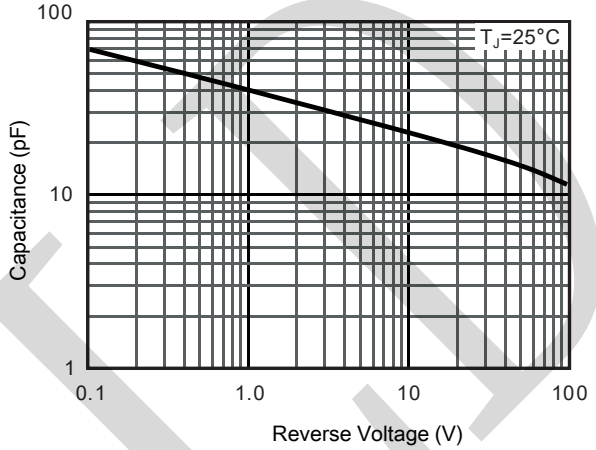
Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.

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

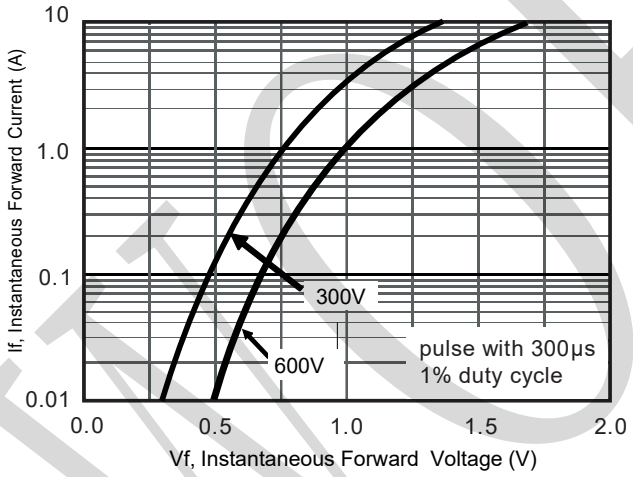
## RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)



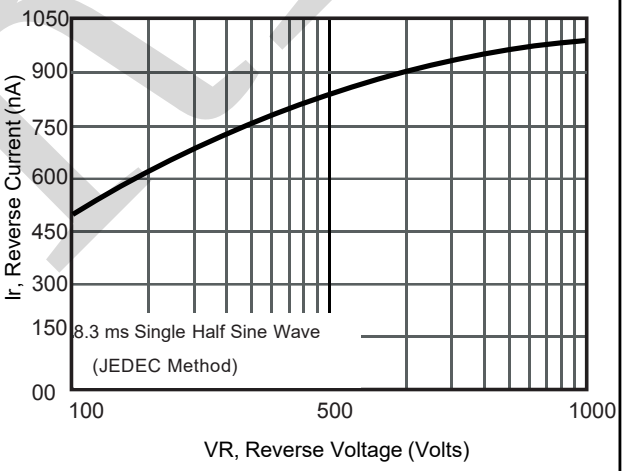

Current Derating, Case




Typical Junction Capacitance



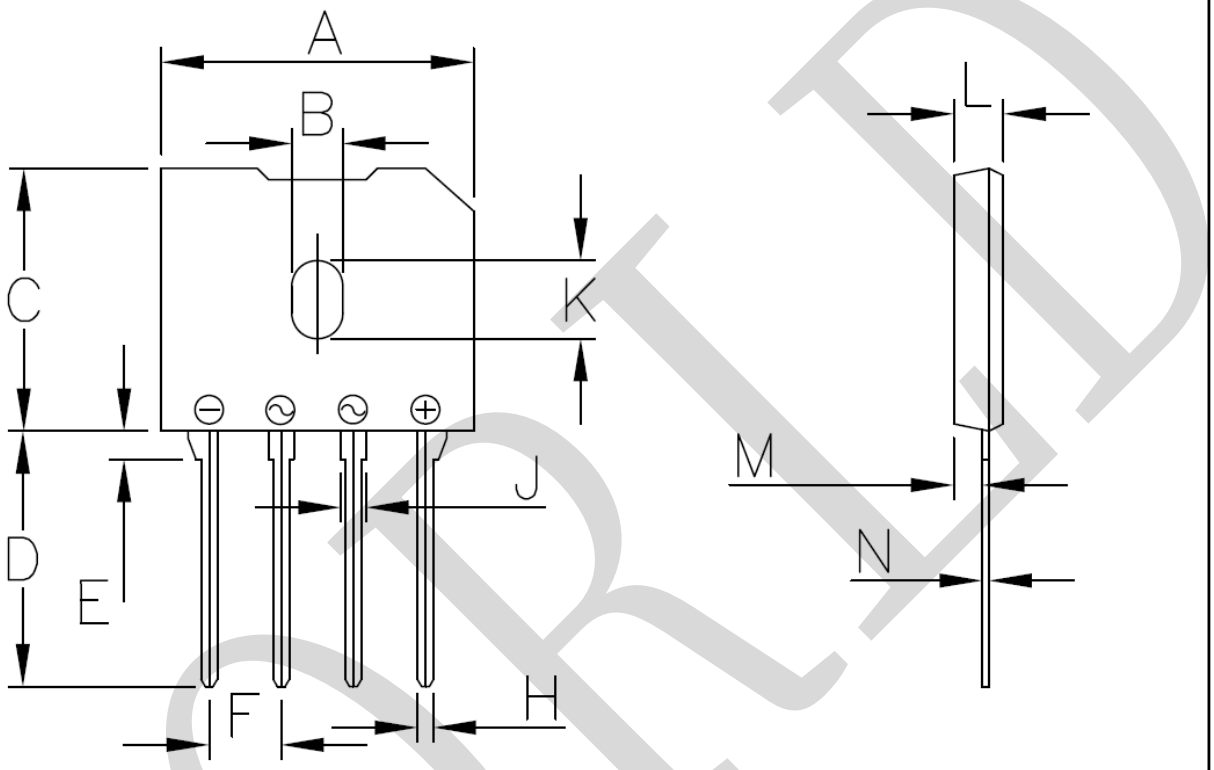

Typical Forward Voltage




Typical Reverse Current

## 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 |