

**/ Descriptions**

50~1000V 10.0A GBU

Glass Passivated Bridge Rectifiers, Reverse Voltage:50~1000V,Forward Current:10.0A,GBU package.

**/ Features**

PCB

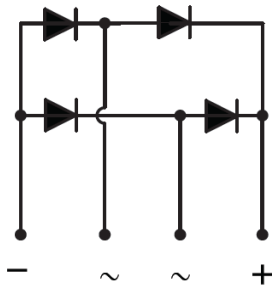
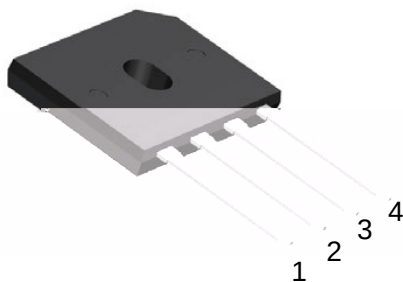
UL

94V-0

Ideal for printed circuit board, Case material molded plastic, The plastic material has U/L flammability classification 94V-0. Halogen free product.

**/ Applications**

General purpose.

**/ Equivalent Circuit****/ Pinning**

PIN1 DC- PIN2 AC PIN 3 AC PIN 4 DC+

**/ h<sub>FE</sub> Classifications & Marking**

See Marking Instructions

## / Absolute Maximum Ratings(Ta=25 )

| Parameter                                                                                         | Symbol           | Rating      |          |          |          |          |          |          | Unit             |
|---------------------------------------------------------------------------------------------------|------------------|-------------|----------|----------|----------|----------|----------|----------|------------------|
|                                                                                                   |                  | GBU 10005   | GBU 1001 | GBU 1002 | GBU 1004 | GBU 1006 | GBU 1008 | GBU 1010 |                  |
| Maximum Recurrent Peak Reverse Voltage                                                            | $V_{RRM}$        | 50          | 100      | 200      | 400      | 600      | 800      | 1000     | V                |
| Maximum RMS Voltage                                                                               | $V_{RMS}$        | 35          | 70       | 140      | 280      | 420      | 560      | 700      | V                |
| Maximum DC Blocking Voltage                                                                       | $V_{DC}$         | 50          | 100      | 200      | 400      | 600      | 800      | 1000     | V                |
| Maximum Average Forward Rectified Current(with heatsink Note 2)                                   | $I_{F(AV)}$      | 10.0        |          |          |          |          |          |          | A                |
| Maximum Average Forward Rectified Current @T <sub>C</sub> =100 (without heatsink)                 |                  | 3.0         |          |          |          |          |          |          | A                |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method) | $I_{FSM}$        | 220         |          |          |          |          |          |          | A                |
| I <sup>2</sup> t Rating for Fusing (t<8.3ms)                                                      | $I^2t$           | 200         |          |          |          |          |          |          | A <sup>2</sup> s |
| Typical Junction Capacitance Per Element (Note1)                                                  | CJ               | 86          |          |          |          |          |          |          | pF               |
| Typical Thermal Resistance (Note2)                                                                | R <sub>θJc</sub> | 2.0         |          |          |          |          |          |          | /W               |
| Operating Temperature Range                                                                       | T <sub>j</sub>   | -55 to +150 |          |          |          |          |          |          |                  |
| Storage Temperature Range                                                                         | T <sub>stg</sub> | -55 to +150 |          |          |          |          |          |          |                  |

NOTE:

1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2.Device mounted on 150mm\*150mm\*1.6mm Cu Plate Heatsink.

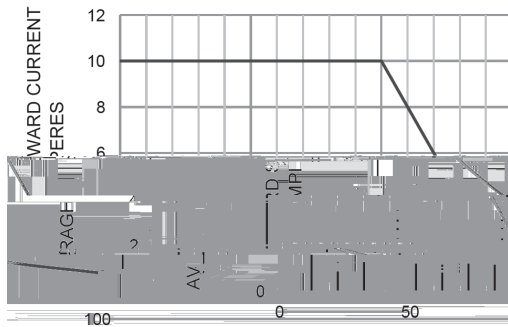
## / Electrical Characteristics(Ta=25 )

| Parameter                                               | Symbol | Test Conditions     | Rating | Unit |
|---------------------------------------------------------|--------|---------------------|--------|------|
| Maximum Forward Voltage                                 | $V_F$  | $I_F=5.0A$          | 1.0    | V    |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | $I_R$  | T <sub>a</sub> =25  | 5.0    | μA   |
|                                                         |        | T <sub>a</sub> =125 | 500    |      |



# / Electrical Characteristic Curve

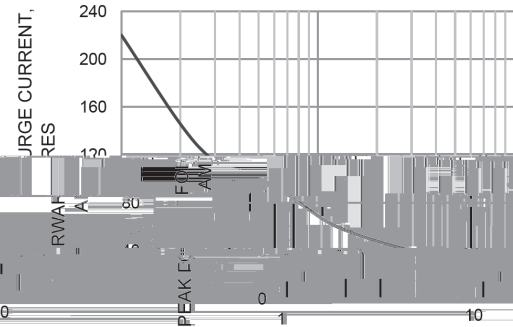
FIG.1-FORWARD CURRENT DERATING CURVE



30Hz

CASE TEMPERATURE, °C

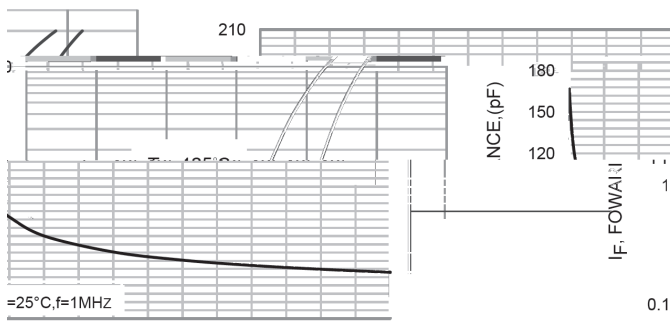
FIG.2-MAXIMUM FORWARD SURGE CURRENT



NUMBER OF CYCLES AT 60Hz

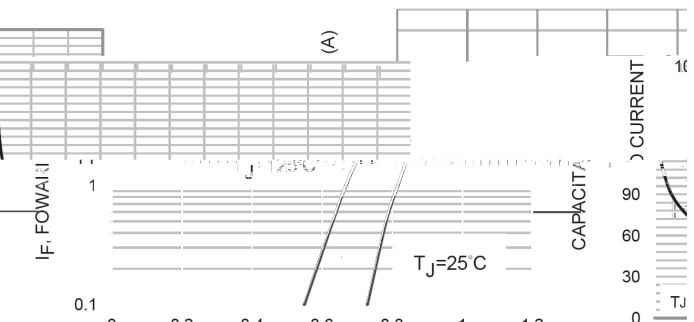
CHARACTERISTICS

FIG.3-TYPICAL JUNCTION CAPACITANCE



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

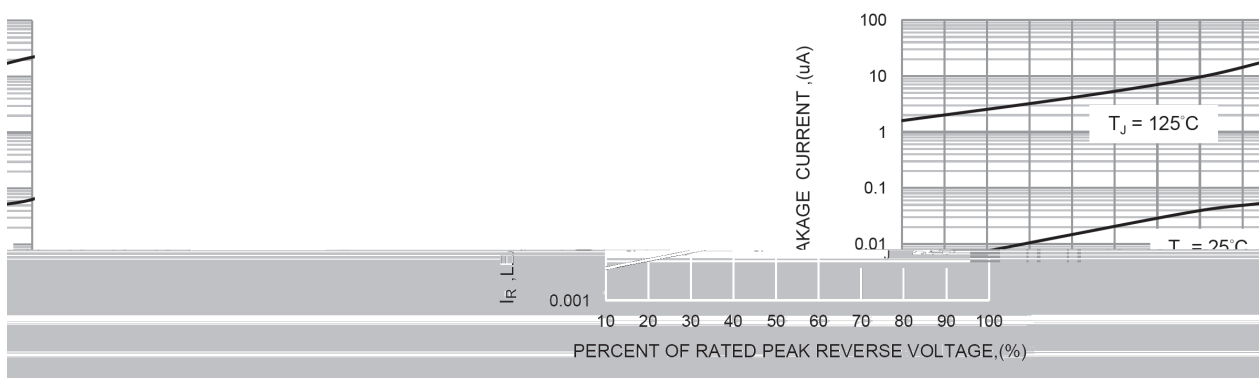
FIG.4-TYPICAL FORWARD CHARACTERISTICS



REVERSE VOLTAGE,(VOLTS)

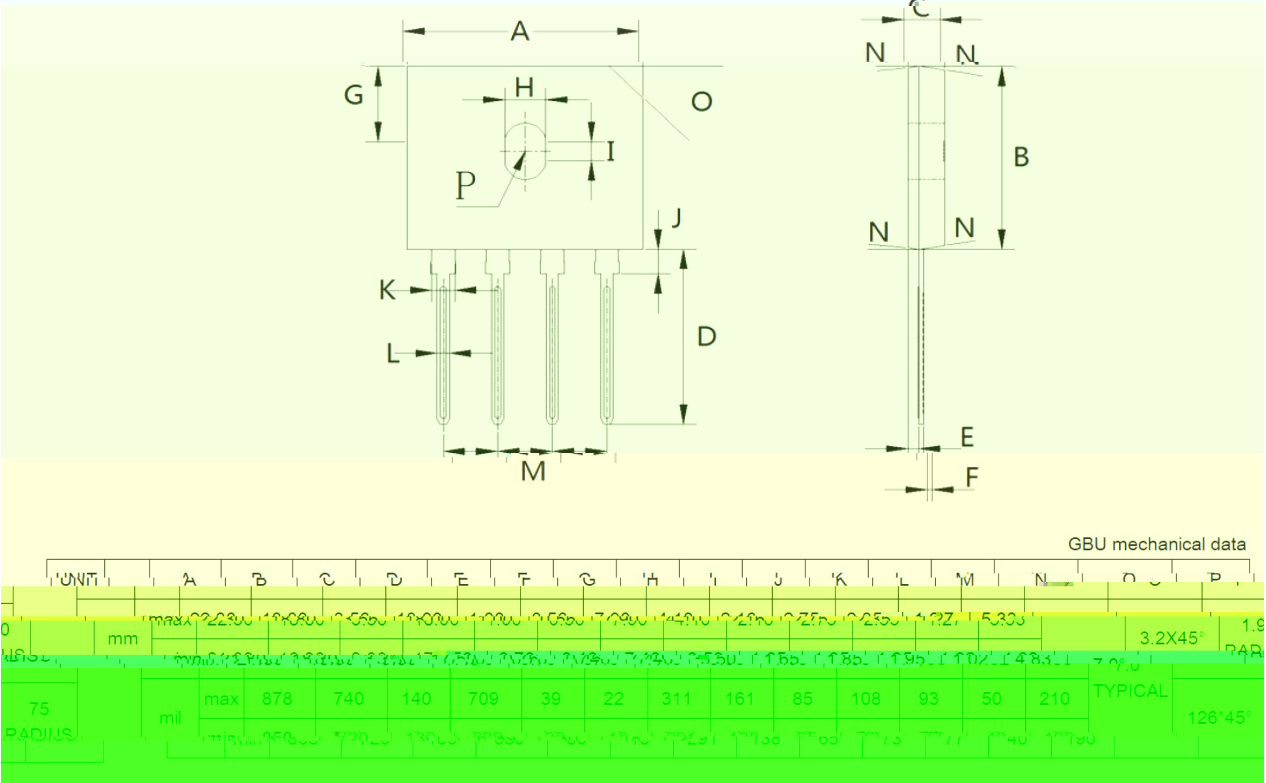
TICS

FIG.5-TYPICAL REVERSE CHARACTERISTICS

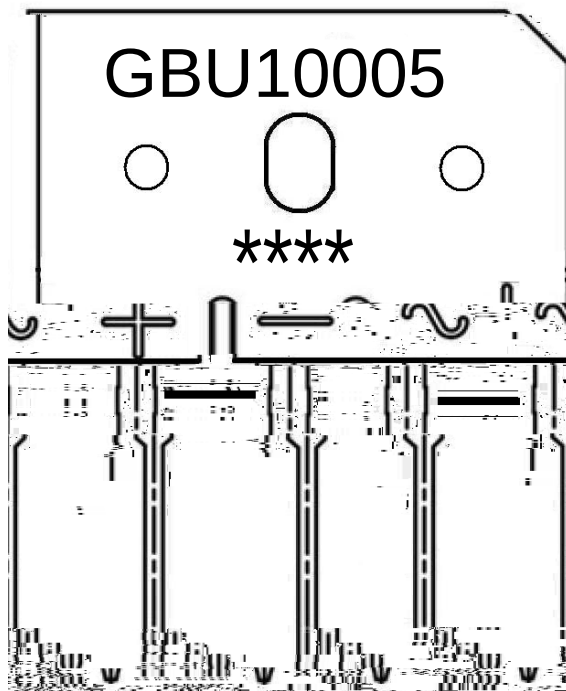


/ Package Dimensions

GBU Package Outline Dimensions



/ Marking Instructions



GBU10005

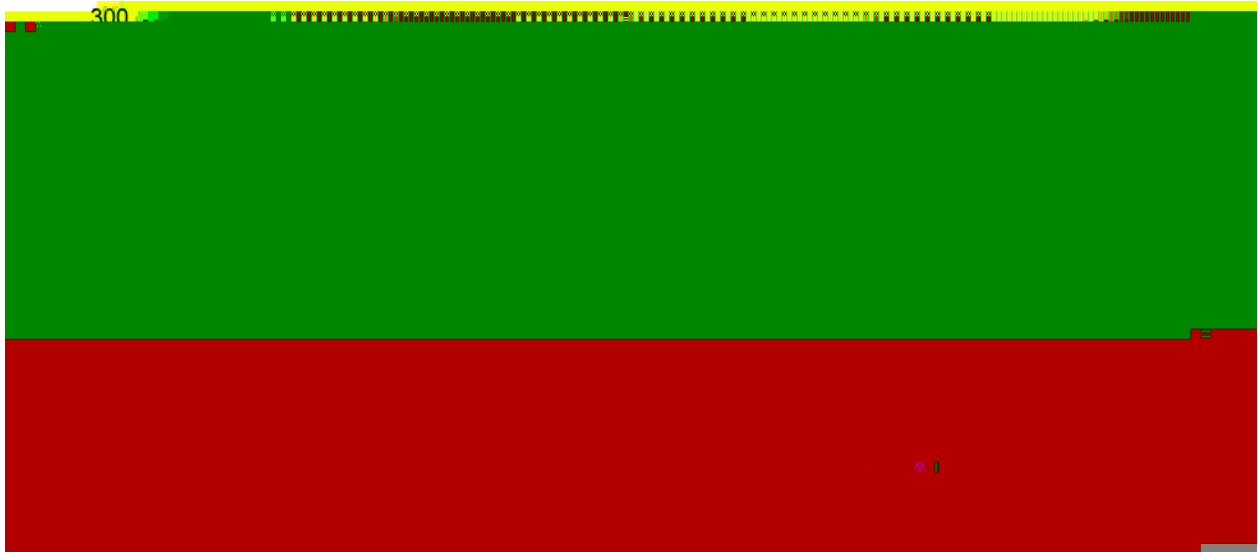
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Note:

GBU10005: Product Type.

\*\*\*\*: Lot No. Code, code change with Lot No.

## ( ) / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- 1 25 150 60 90sec;
- 2 255±5 5±0.5sec;
- 3 2 10 /sec.

- 1.Preheating:25~150 , Time:60~90sec.
- 2.Peak Temp.:255±5 , Duration:5±0.5sec.
3. Cooling Speed: 2~10 /sec.

## / Resistance to Soldering Heat Test Conditions

270±5 10±1 sec. Temp.:270±5 Time:10±1 sec

## / Packaging SPEC.

/ BULK

| Package Type | Units          |                     |                      |                            |                      | Dimension (unit cm <sup>3</sup> ) |            |             |
|--------------|----------------|---------------------|----------------------|----------------------------|----------------------|-----------------------------------|------------|-------------|
|              | Units/Bag<br>/ | Bags/Inner Box<br>/ | Units/Inner Box<br>/ | Inner Boxes/Outer Box<br>/ | Units/Outer Box<br>/ | Bag                               | Inner Box  | Outer Box   |
| GBU          | -              | -                   | 350                  | 10                         | 3500                 | -                                 | 314×106×39 | 330×242×237 |

## / Notices