

# **Bridge Rectifier**

#### **Features**

- UL recognition, file #E230084
- Ideal for printed circuit boards
- High surge current capability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

#### **Typical Applications**

General purpose use in AC/DC bridge full wave rectification for monitor, TV, printer, power supply, switching mode power supply, adapter, audio equipment, and home appliances applications.

#### **Mechanical Data**

• Package: GBU

Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant

• Terminals: Tin plated leads, solderable per

J-STD-002 and JESD22-B102
• Polarity: As marked on body

■Maximum Ratings (Ta=25°C Unless otherwise specified)

| - maximum ratings (1) as a small small speciment                              |                                       |                  |                  |           |          |          |          |          |          |          |  |
|---|---------------------------------------|------------------|------------------|-----------|----------|----------|----------|----------|----------|----------|--|
| PARAMETER   |                                       | SYMBOL           | UNIT             | GBU10005A | GBU1001A | GBU1002A | GBU1004A | GBU1006A | GBU1008A | GBU1010A |  |
| Device marking code   |                                       |                  |                  | GBU10005A | GBU1001A | GBU1002A | GBU1004A | GBU1006A | GBU1008A | GBU1010A |  |
| Repetitive peak reverse voltage   |                                       | VRRM             | V                | 50        | 100      | 200      | 400      | 600      | 800      | 1000     |  |
| Average rectified output current @60Hz half sine                              |                                       | - 10             | _                | 10        |          |          |          |          |          |          |  |
| wave, R-load  | Without heatsink T <sub>a</sub> =25°C | 10               | Α                | 3.6       |          |          |          |          |          |          |  |
| Surge(non-repetitive)forward current<br>@60Hz half sine wave, 1 cycle, Tj=25℃ |                                       | IFSM             | Α                | 200       |          |          |          |          |          |          |  |
| Current squared time<br>@1ms≤t≤8.3ms Tj=25℃, Rating of per diode              |                                       | l <sup>2</sup> t | A <sup>2</sup> s | 166       |          |          |          |          |          |          |  |
| Storage temperature   |                                       | T <sub>stg</sub> | $^{\circ}$       | -55 ~+150 |          |          |          |          |          |          |  |
| Junction temperature  |                                       | Tj               | $^{\circ}$       | -55 ~+150 |          |          |          |          |          |          |  |
| Dielectric strength @ terminals to case, AC 1 minute                          |                                       | Vdis             | KV               | 2         |          |          |          |          |          |          |  |
| Mounting torque @recommend torque: 5kg • cm                                   |                                       | Tor              | kg • cm          | 8         |          |          |          |          |          |          |  |

**■Electrical Characteristics** (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL           | UNIT | TEST<br>CONDITIONS                | GBU10005A | GBU1001A | GBU1002A | GBU1004A | GBU1006A | GBU1008A | GBU1010A |
|---|------------------|------|-----------------------------------|-----------|----------|----------|----------|----------|----------|----------|
| Maximum instantaneous forward voltage drop per diode              | VF               | V    | IFM=5A                            |           |          |          | 1.1      |          |          |          |
| Maximum DC reverse current at rated DC blocking voltage per diode | I <sub>RRM</sub> | μΑ   | V <sub>RM</sub> =V <sub>RRM</sub> | 10        |          |          |          |          |          |          |

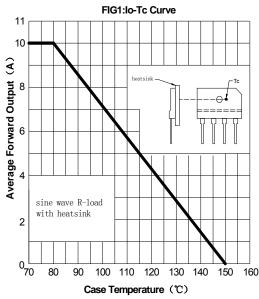
**■Thermal Characteristics** (T<sub>a</sub>=25°C Unless otherwise specified)

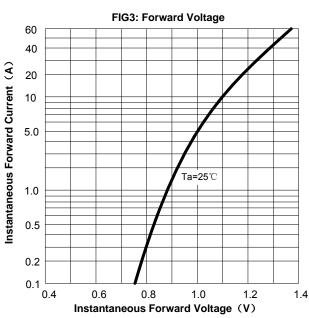
| PARAMETER  |  | SYMBOL             | UNIT | GBU10005A | GBU1001A | GBU1002A | GBU1004A | GBU1006A | GBU1008A | GBU1010A |
|------------|--|--------------------|------|-----------|----------|----------|----------|----------|----------|----------|
| Thermal    | Between junction and ambient, Without heatsink | R <sub>0</sub> J-A | °C/W | 25        |          |          |          |          |          |          |
| Resistance | Between junction<br>and case, With<br>heatsink | RθJ-C              | CIVV | 2.3       |          |          |          |          |          |          |

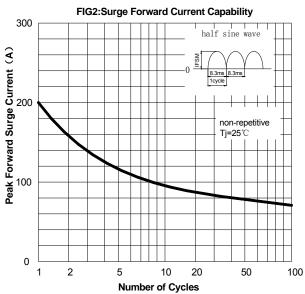
**■**Ordering Information (Example)

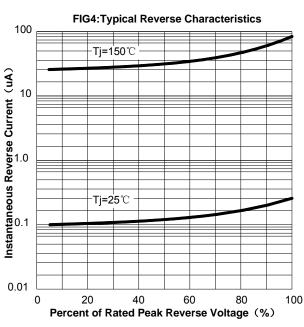
| PREFERED P/N            | PACKING<br>CODE | UNIT WEIGHT(g)   | MINIIMUM<br>PACKAGE(pcs) | _    | OUTER CARTON<br>QUANTITY(pcs) |      |
|-------------------------|-----------------|------------------|--------------------------|------|-------------------------------|------|
| GBU10005A THRU GBU1010A | B1              | Approximate 3.96 | 20                       | 1000 | 2000                          | TUBE |
| GBU10005A THRU GBU1010A | A1              | Approximate 3.96 | 250                      | 250  | 4000                          | BOX  |

#### **■** Characteristics (Typical)



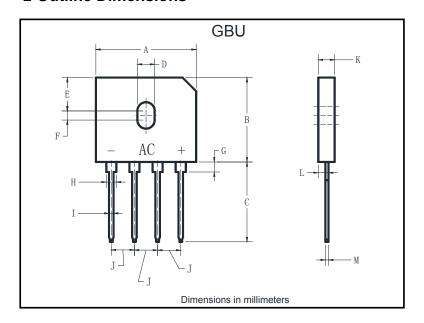








### **■ Outline Dimensions**



| GBU |       |       |  |  |  |  |
|-----|-------|-------|--|--|--|--|
| Dim | Min   | Max   |  |  |  |  |
| Α   | 21.80 | 22.30 |  |  |  |  |
| В   | 18.30 | 18.80 |  |  |  |  |
| С   | 17.50 | 18.00 |  |  |  |  |
| D   | 3.50  | 4.10  |  |  |  |  |
| Е   | 7.40  | 7.90  |  |  |  |  |
| F   | 1.65  | 2.16  |  |  |  |  |
| G   | 1.91  | 2.54  |  |  |  |  |
| Н   | 2.06  | 2.54  |  |  |  |  |
| I   | 1.02  | 1.27  |  |  |  |  |
| J   | 4.83  | 5.33  |  |  |  |  |
| K   | 3.30  | 3.56  |  |  |  |  |
| L   | 2.40  | 2.66  |  |  |  |  |
| М   | 0.46  | 0.56  |  |  |  |  |



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