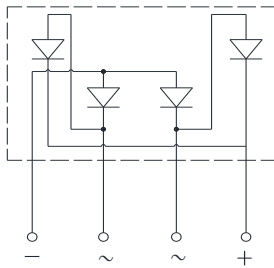
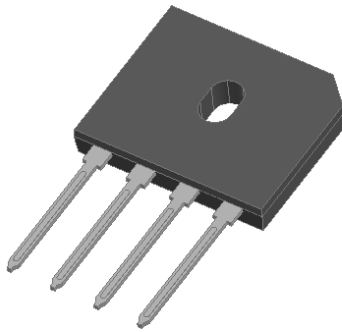


## Bridge Rectifiers



### Features

- UL recognition, file #E230084
- Glass passivated chip junction
- 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 (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER                                                                    |                              | SYMBOL | UNIT  | GBU3016A   |
|------------------------------------------------------------------------------|------------------------------|--------|-------|------------|
| Device marking code                                                          |                              |        |       | GBU3016A   |
| Maximum Repetitive Peak Reverse Voltage                                      |                              | VRRM   | V     | 1600       |
| Maximum RMS Voltage                                                          |                              | VRMS   | V     | 1120       |
| Maximum DC blocking Voltage                                                  |                              | VDC    | V     | 1600       |
| Average rectified output current @60Hz sine wave, R-load                     | With heatsink<br>Tc =120°C   | IO     | A     | 30.0       |
|                                                                              | Without heatsink<br>Ta =25°C |        |       | 3.5        |
| Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25°C |                              | IFSM   | A     | 400        |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C   |                              |        |       | 800        |
| Current squared time @1ms≤t≤8.3ms Tj=25°C, Rating of per diode               |                              | I²t    | A²S   | 664        |
| Storage temperature                                                          |                              | Tstg   | °C    | -55 ~ +150 |
| Junction temperature                                                         |                              | Tj     | °C    | -55 ~ +150 |
| Dielectric strength @ Terminals to case, AC 1 minute                         |                              | Vdis   | KV    | 2.5        |
| Mounting torque @Recommend torque: 5kg.cm                                    |                              | Tor    | kg.cm | 8          |



## GBU3016A

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

| PARAMETER                                                         | SYMBOL         | UNIT | TEST CONDITIONS                                           | GBU3016A |
|-------------------------------------------------------------------|----------------|------|-----------------------------------------------------------|----------|
| Maximum instantaneous forward voltage drop per diode              | V <sub>F</sub> | V    | I <sub>FM</sub> =15A                                      | 1.05     |
| Maximum DC reverse current at rated DC blocking voltage per diode | I <sub>R</sub> | μA   | T <sub>j</sub> =25°C                                      | 5        |
|                                                                   |                |      | T <sub>j</sub> =125°C                                     | 200      |
| Typical junction capacitance                                      | C <sub>j</sub> | pF   | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 125      |

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

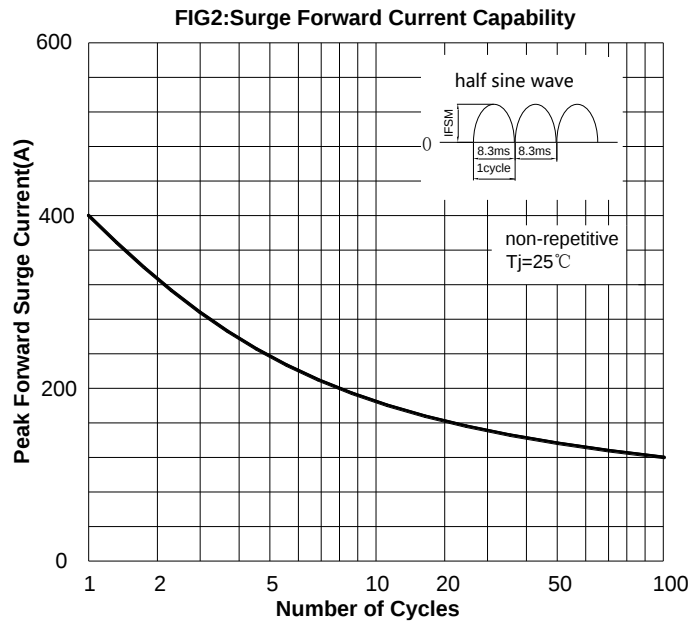
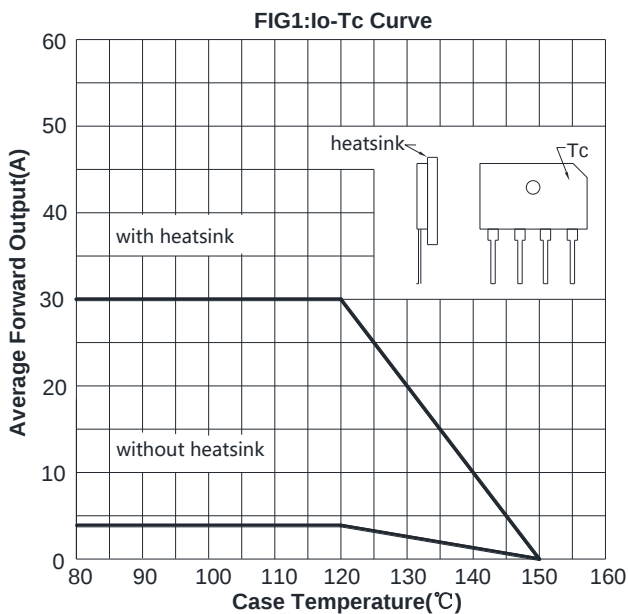
| PARAMETER          |                                                | SYMBOL            | UNIT | GBU3016A |
|--------------------|------------------------------------------------|-------------------|------|----------|
| Thermal Resistance | Between junction and ambient, Without heatsink | R <sub>θJ-A</sub> | °C/W | 22       |
|                    | Between junction and case, With heatsink       | R <sub>θJ-C</sub> |      | 0.5      |

Note: Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

### ■Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g)   | MINIIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|------------------|-----------------------|-------------------------|----------------------------|---------------|
| GBU3016A      | B1           | Approximate 3.95 | 20                    | 1000                    | 2000                       | TUBE          |

### ■ Characteristics (Typical)





## GBU3016A

FIG3: Typical Forward Voltage

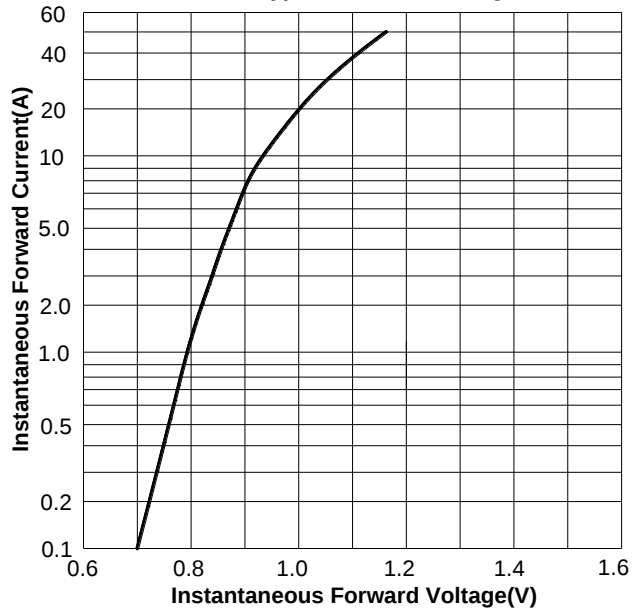
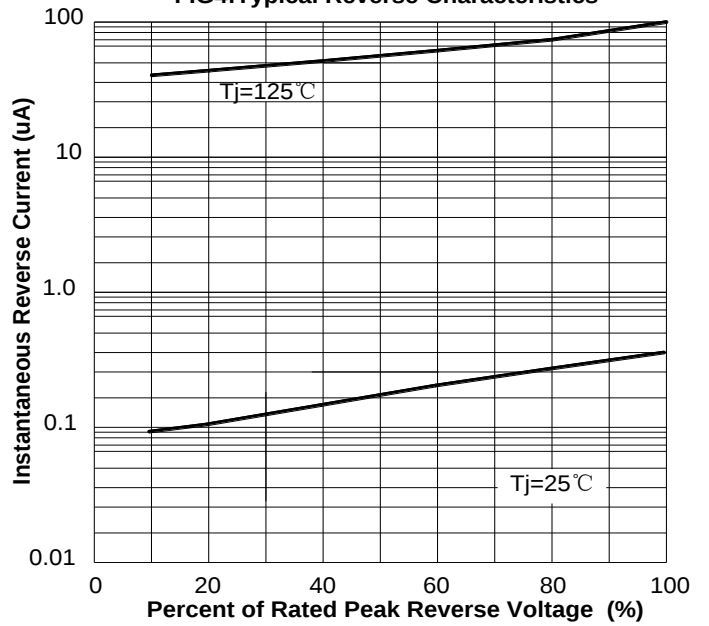
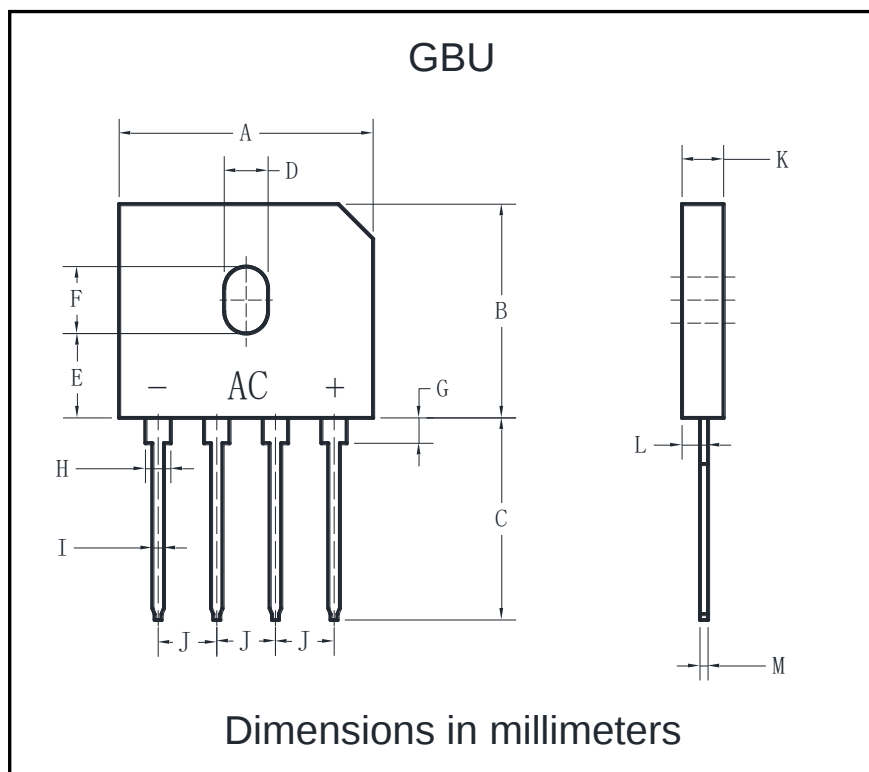


FIG4: Typical Reverse Characteristics



### ■ Outline Dimensions



| GBU |       |       |
|-----|-------|-------|
| Dim | Min   | Max   |
| A   | 21.80 | 22.30 |
| B   | 18.30 | 18.80 |
| C   | 17.50 | 18.00 |
| D   | 3.30  | 3.90  |
| E   | 7.10  | 7.50  |
| F   | 5.50  | 5.90  |
| G   | 1.91  | 2.54  |
| H   | 2.06  | 2.54  |
| I   | 1.02  | 1.27  |
| J   | 4.83  | 5.33  |
| K   | 3.30  | 3.56  |
| L   | 2.40  | 2.66  |
| M   | 0.46  | 0.56  |



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