

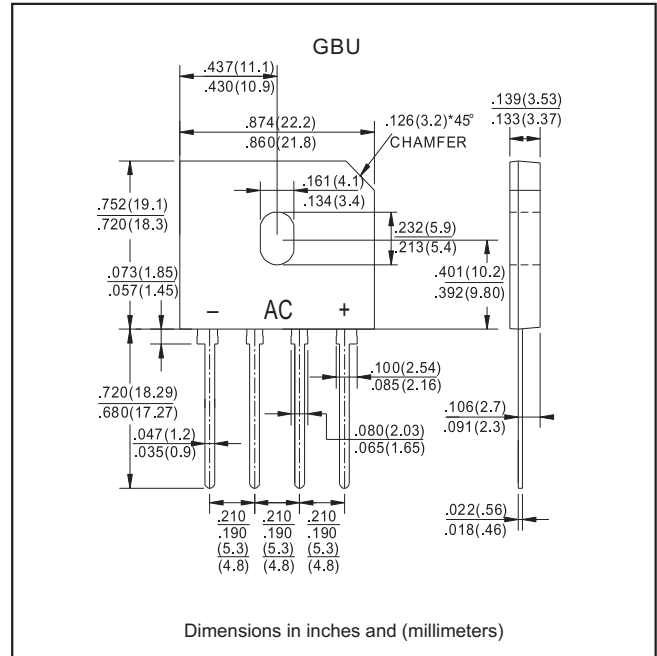
Features

- Recommended for non-automatic applications.
- Ideal for & save space on printed circuit board.
- Applicable for automatic insertion.
- Reliable low cost construction utilizing molded plastic technology results in inexpensive product.
- Glass passivated chip junctions.
- Lead-free parts meet RoHS requirements.
- Suffix "-H" indicates Halogen free parts.

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, GBU
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : marked on body
- Mounting Position : Any

Package outline

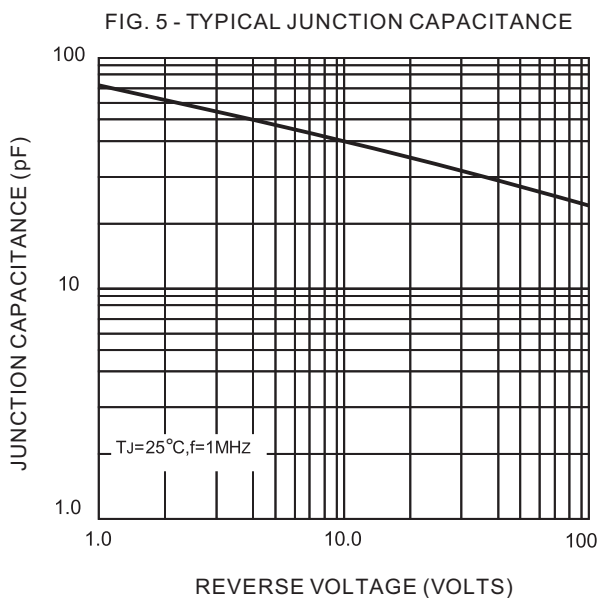
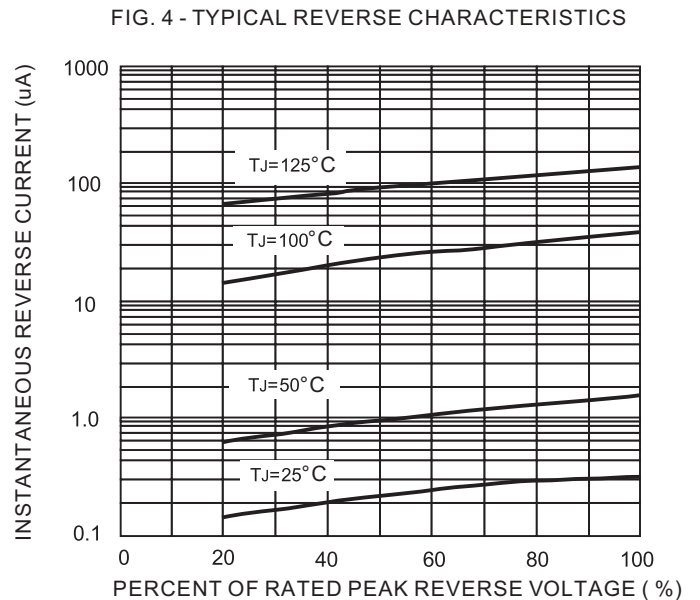
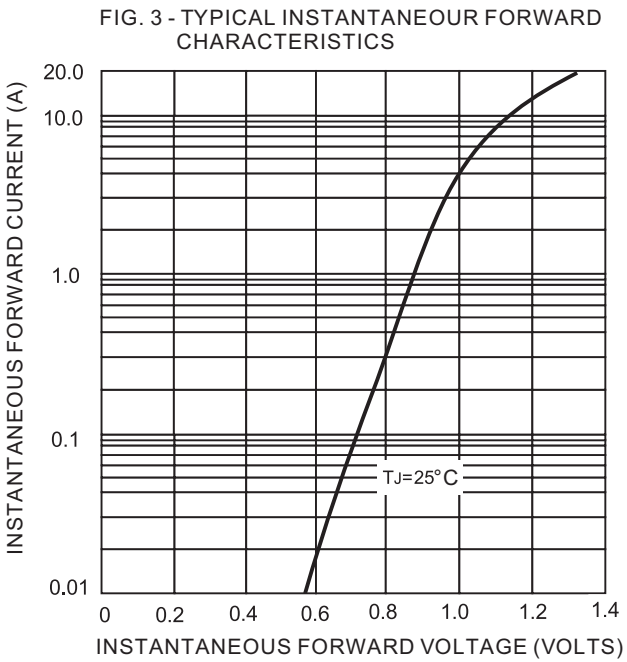
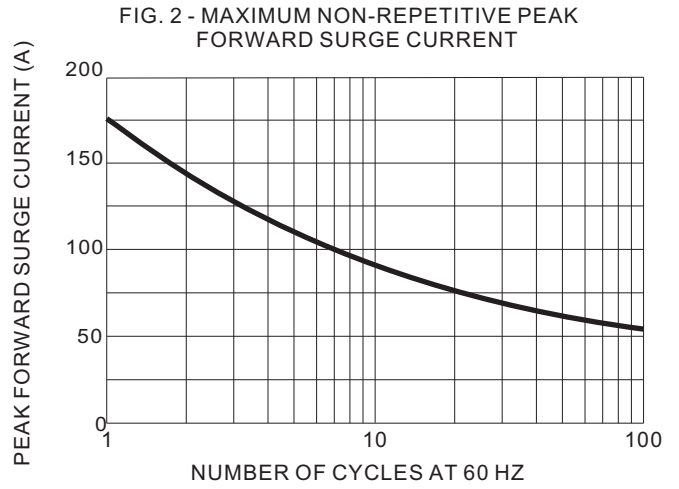
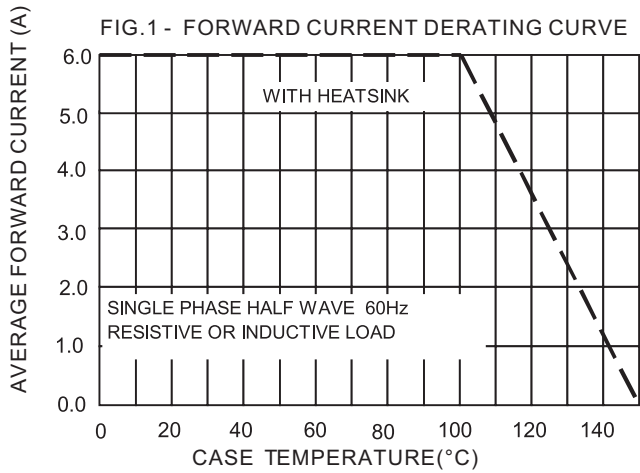


Maximum ratings and Electrical Characteristics (AT T_A=25°C unless otherwise noted)

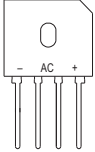
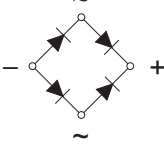
| TYPE NUMBER | SYMBOL | GBU 6005 | GBU 601 | GBU 602 | GBU 604 | GBU 606 | GBU 608 | GBU 610 | UNITS |
|---|-----------------------------------|-------------|---------|---------|---------|---------|---------|---------|------------------|
| Peak Repetitive Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Working Peak Reverse Voltage | V _{RWM} | | | | | | | | |
| DC Blocking Voltage | V _{DC} | | | | | | | | |
| RMS Reverse Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current (Note 1)@T _C =90°C | I _{F(AV)} | 6.0 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 175 | | | | | | | A |
| Forward Voltage per element @I _F =3.0A @I _F =6.0A | V _{FM} | 1.0 1.1 | | | | | | | V |
| Peak Reverse Current At Rated DC Blocking Voltage @T _J =25°C T _J =125°C | I _R | 5.0 200 | | | | | | | uA |
| I ² t Rating for fusing (t <8.3ms) | I ² t | 127 | | | | | | | A ² s |
| Dielectric Strength | V _{ids} | 2500 | | | | | | | V |
| The proposed installation torque Max torque | Tor | 5.0 8.0 | | | | | | | Kgf.cm |
| Typical Junction Capacitance (Note 2) | C _J | 45 | | | | | | | pF |
| Typical Thermal Resistance | R _{θJA} | 22 | | | | | | | °C/W |
| | R _{θJC} | 4.0 | | | | | | | |
| | R _{θJL} | 5.0 | | | | | | | |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to +150 | | | | | | | °C |

Note:1. Mounted on glass epoxy PC board with 1.3mm² solder pad.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

Rating and characteristic curves



Pinning information

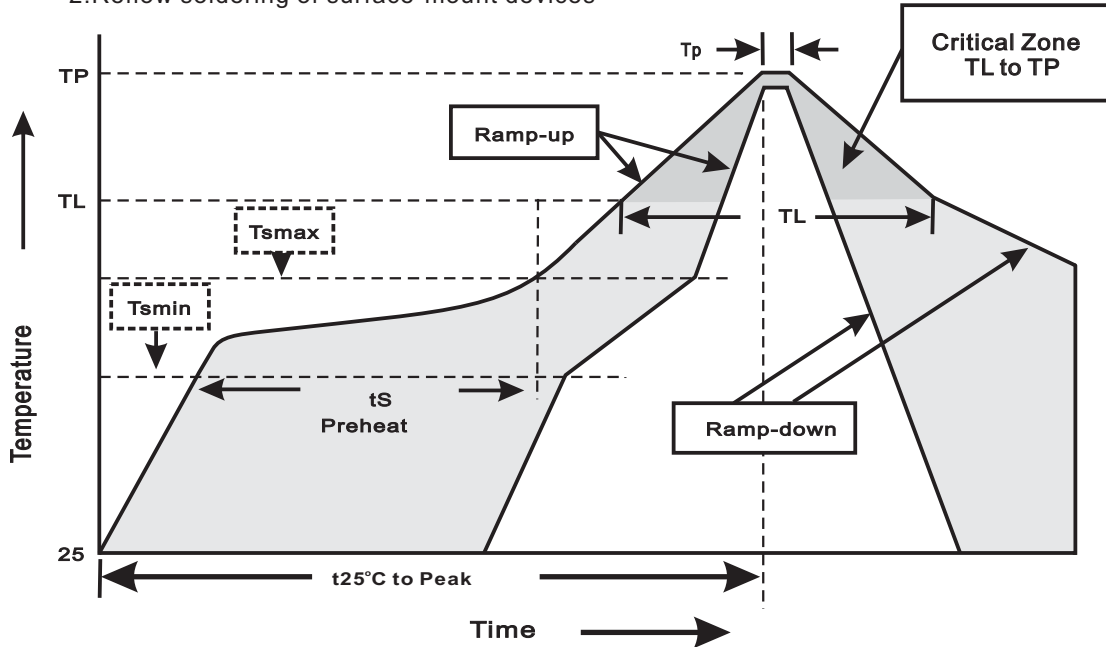
| Simplified outline | Symbol |
|---|---|
|  |  |

Marking

| Type number | Marking code |
|-------------|--------------|
| GBU6005 | GBU6005 |
| GBU601 | GBU601 |
| GBU602 | GBU602 |
| GBU604 | GBU604 |
| GBU606 | GBU606 |
| GBU608 | GBU608 |
| GBU610 | GBU610 |

Suggested thermal profiles for soldering processes

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

| Profile Feature | Soldering Condition |
|---|-----------------------------|
| Average ramp-up rate(T _L to T _P) | <3°C/sec |
| Preheat -Temperature Min(T _{smmin}) -Temperature Max(T _{smmax}) -Time(min to max)(t _s) | 150°C 200°C 60~120sec |
| T _{smmax} to T _L -Ramp-upRate | <3°C/sec |
| Time maintained above: -Temperature(T _L) -Time(t _L) | 217°C 60~260sec |
| Peak Temperature(T _P) | 255°C-0/+5°C |
| Time within 5°C of actual Peak Temperature(t _P) | 10~30sec |
| Ramp-down Rate | <6°C/sec |
| Time 25°C to Peak Temperature | <6minutes |