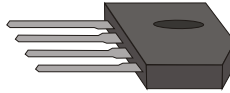


FEATURES

- * Ideal for printed circuit board
- * Low forward voltage
- * Low leakage current
- * Polarity: marked on body
- * Mounting position: Any

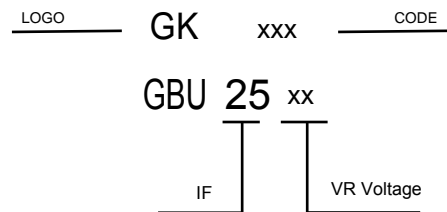
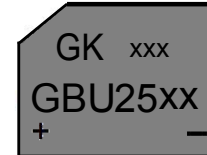


VOLTAGE RANGE

50 to 1000 Volts

CURRENT

25.0 Amperes



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| TYPE NUMBER | GBU25005 | GBU2501 | GBU2502 | GBU2504 | GBU2506 | GBU2508 | GBU2510 | UNITS | |
|--|----------|---------|---------|---------|---------|---------|---------|------------|------|
| Maximum Recurrent Peak Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Maximum RMS Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V | |
| Maximum DC Blocking Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Maximum Average Forward (with heatsink Note 2) | | | | | | | | 25.0 | A |
| .375"(9.5mm) Lead Length at Tc=100°C (Without heatsink) | | | | | | | | 4.2 | A |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | | | | | | | | 300 | A |
| Maximum Forward Voltage Drop per Bridge Element at 12.5A D.C. | | | | | | | | 1.05 | V |
| Maximum DC Reverse Current Ta=25°C | | | | | | | | 10 | μA |
| at Rated DC Blocking Voltage Ta=125°C | | | | | | | | 500 | μA |
| Typical Junction Capacitance (Note 1) | | | | | | | | 85 | PF |
| Typical Thermal Resistance R _{jc} (Note 2) | | | | | | | | 2.2 | °C/W |
| Operating Temperature Range, T _j | | | | | | | | -55 — +150 | °C |
| Storage Temperature Range, T _{stg} | | | | | | | | -55 — +150 | °C |

NOTES:

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. Thermal Resistance from Junction to Case with device mounted on 300mm x 300mm x 1.6mm Cu Plate Heatsink.

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

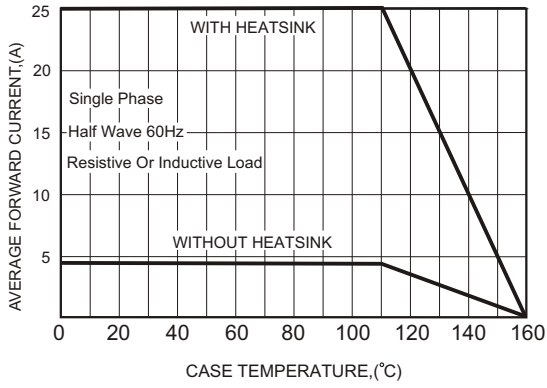


FIG.2-TYPICAL FORWARD CHARACTERISTICS

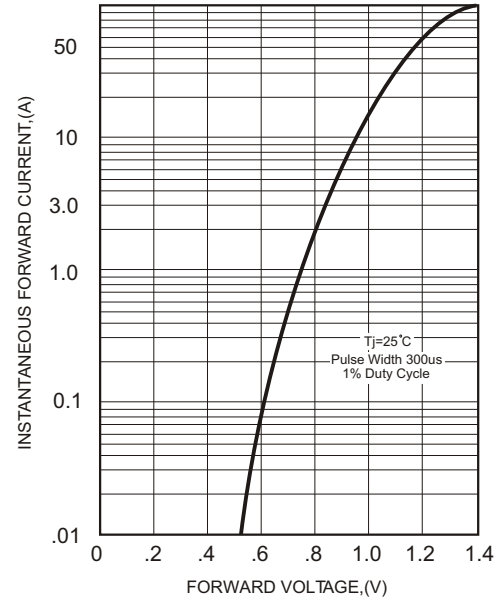


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

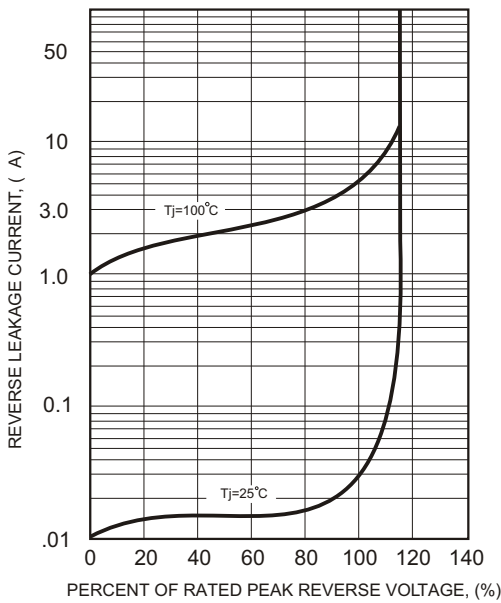
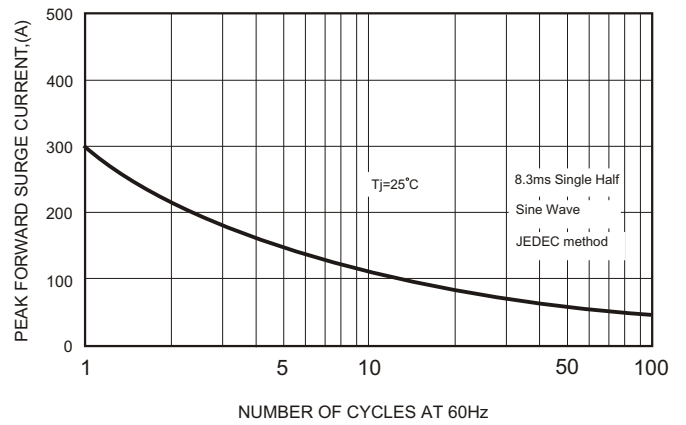


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

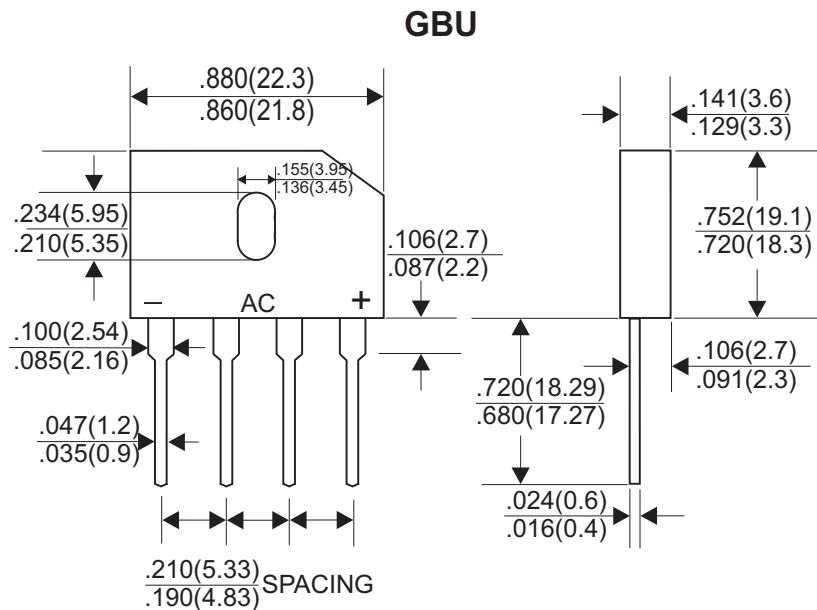


Soldering parameters

| Reflow Condition | | Pb-Free assembly (see as below) |
|---|------------------------------------|------------------------------------|
| Pre Heat | -Temperature Min ($T_{s(min)}$) | +150 °C |
| | -Temperature Max ($T_{s(max)}$) | +200 °C |
| | -Time (Min to Max) (ts) | 60-180 secs. |
| Average ramp up rate (Liquid us Temp (T_L) to peak) | | 3 °C/sec. Max |
| $T_{s(max)}$ to T_L - Ramp-up Rate | | 3 °C/sec. Max |
| Reflow | -Temperature (T_L) (Liquid us) | +217 °C |
| | -Temperature (t_L) | 60-150 secs. |
| Peak Temp (T_P) | | +260(+0/-5) °C |
| Time within 5 °C of actual Peak Temp (t_p) | | 30 secs. Max |
| Ramp-down Rate | | 6 °C/sec. Max |
| Time 25 °C to Peak Temp (T_P) | | 8 min. Max |
| Do not exceed | | +260 °C |



Package Dimensions & Suggested Pad Layout



Dimensions in inches and (millimeters)