Kingtronics®

# GBU10005 THRU GB1010

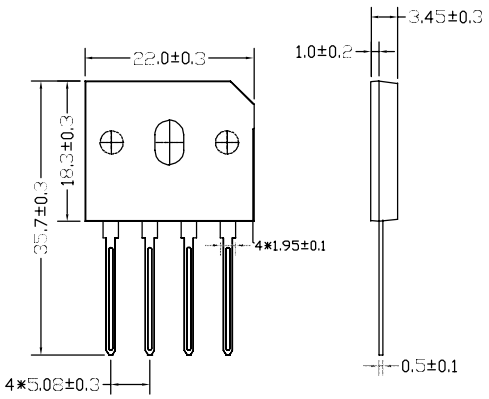
SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIERS

**REVERSE VOLTAGE** 50 to 1000 Volts **FORWARD CURRENT** 10 Ampere

## FEATURES

Plastic package has Underwriters Laboratory
Flammability Classification 94V-0
Ideal for printed circuit boards
Glass passivated chip junction
High forward surge capability

## GBU




**Dimensions in inches and (millimeters)**

## MECHANICAL DATA

Case: GBU Molded plastic body
Terminals: Plated leads solderable per MIL-STD-750, Method 2026
High temperature soldering guaranteed: 260℃/10 seconds
Mounting Position: Any

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

**Ratings at TA = 25°C unless otherwise specified**

| PARAMETER | SYMBOL | GBU 10005 | GBU 1001 | GBU 1002 | GBU 1004 | GBU 1006 | GBU 1008 | GBU 1010 | UNIT |
|---|---|---|---|---|---|---|---|---|---|
| Maximum repetitive 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 |
| Average forward rectified output current: $T_C$ = 80 °C With heatsink / $T_A$ = 25 °C Without heatsink | $I_{F(AV)}$ | 10.0 / 3.2 | | | | | | | A |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 175 | | | | | | | A |
| Rating for fusig (t<8.3ms) | $I^2t$ | 127 | | | | | | | $A^2sec$ |
| Maximum instantaneous forward voltage dropper leg at 5A | VF | 1.0 | | | | | | | V |
| Maximum DC reverse current at $T_j$= 25℃ / rated DC blocking voltage per leg $T_j$ = 125℃ | IR | 5.0 / 500 | | | | | | | uA |

## THERMAL CHARACTERISTICS

| | | | |
|---|---|---|---|
| Typical thermal resistance per leg (Note 1) | $R_{\theta JA}$ (2) | 25 | ℃/W |
| | $R_{\theta JL}$(1)(3) | 2.3 | |
| Operating junction temperature range | $T_J$ | -55 to +150 | ℃ |
| Storage temperature range | $T_{STG}$ | -55 to +150 | ℃ |

Note

1. Unit case mounted on aluminum plate heatsink
2. Units mounted on P.C.B. with 0.5 x 0.5" (12 x 12 mm) copper pads and 0.375" (9.5 mm) lead length
3. Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screws

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## Ratings and Characteristic Curves ($T_A$=25°C unless otherwise noted)

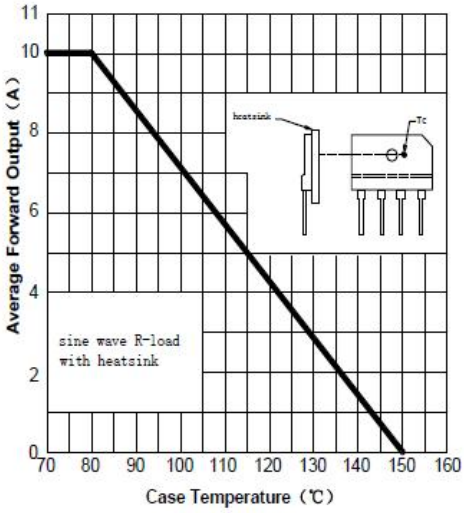


Fig.1-Forward Current Derating Curve

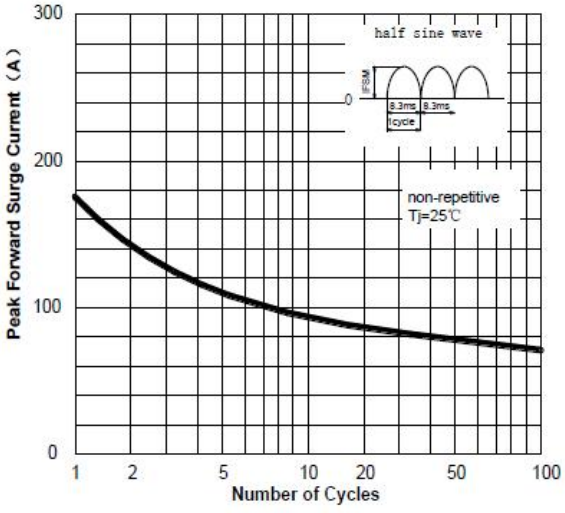


FIG2:Surge Forward Current Capability

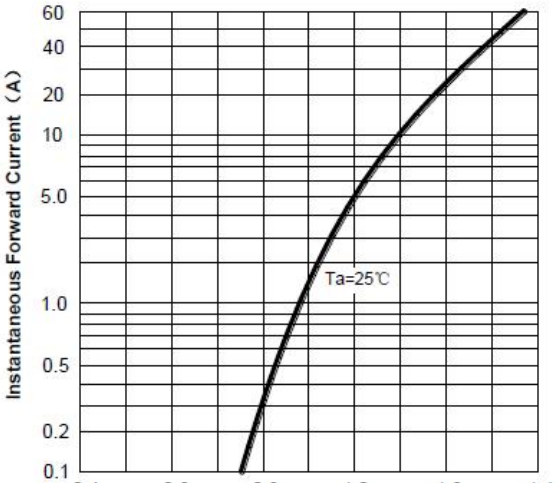


Fig.3- Typical Forward Voltage Characteristic

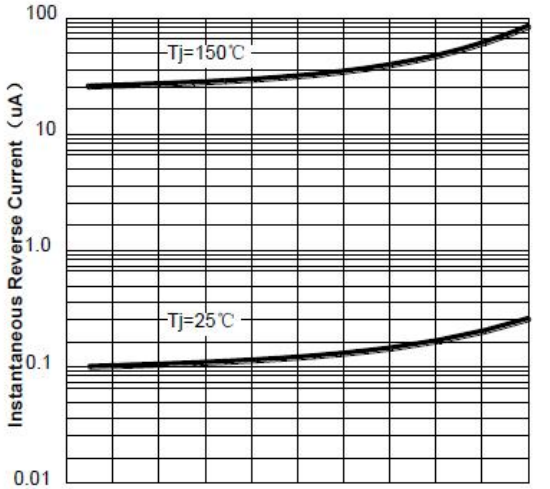


FIG4:Typical Reverse Characteristics

Note: Specifications are subject to change without notice.