

GBU6A-GBU6M

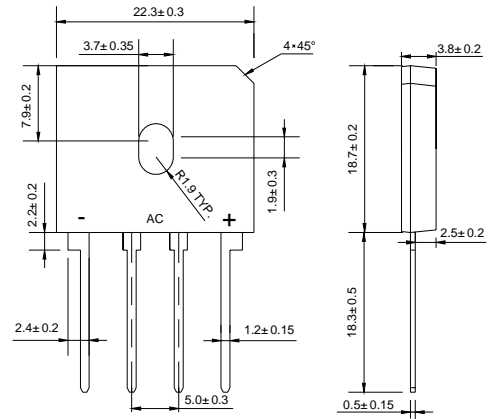
Silicon Bridge Rectifiers

VOLTAGE RANGE: 50 --- 1000 V

CURRENT: 6.0 A



GBU



Dimensions in millimeters

Features

- ◇ Ideal for printed circuit board
- ◇ Reliable low cost construction utilizing molded plastic technique
- ◇ Plastic material has U/L flammability classification 94V-O
- ◇ Mounting position: Any
- ◇ Glass passivated chip junctions

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

| | | GBU 6A | GBU 6B | GBU 6D | GBU 6G | GBU 6J | GBU 6K | GBU 6M | UNITS |
|--|------------------------------------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|---------------------------|
| Maximum recurrent 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 |
| Maximum average forward output current @ $T_c=100^\circ\text{C}$ | $I_{F(AV)}$ | 6.0 | | | | | | | A |
| Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load | I_{FSM} | 175.0 | | | | | | | A |
| Maximum instantaneous forward voltage at 3.0 A | V_F | 1.0 | | | | | | | V |
| Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$ | I_R | 5.0 500.0 | | | | | | | μA mA |
| Typical junction capacitance per leg (note 3) | C_J | 211 | | | | 94 | | | pF |
| Typical thermal resistance per leg (note 2) (note 1) | $R_{\theta JA}$ $R_{\theta JC}$ | 7.4 2.2 | | | | | | | $^\circ\text{C}/\text{W}$ |
| Operating junction temperature range | T_J | - 55 ---- + 150 | | | | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | - 55 ---- + 150 | | | | | | | $^\circ\text{C}$ |

NOTE: 1. Unit case mounted on 2.6x1.4x0.06" thick (6.5x3.5x0.15cm) Al. Plate.

2. Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screws

3. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts.

Ratings AND Characteristic Curves

FIG.1 – DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

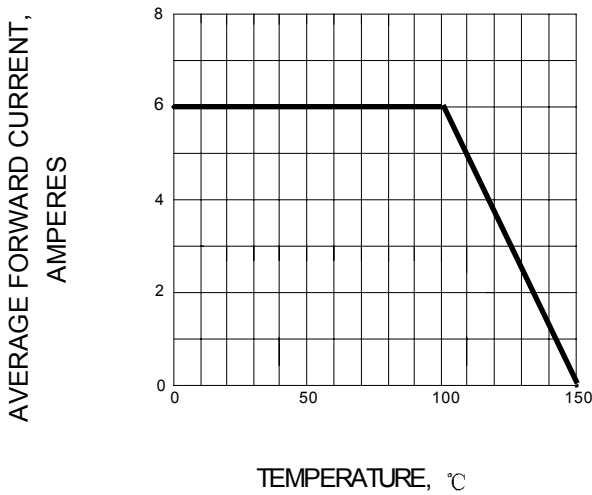


FIG.2 – TYPICAL FORWARD CHARACTERISTIC

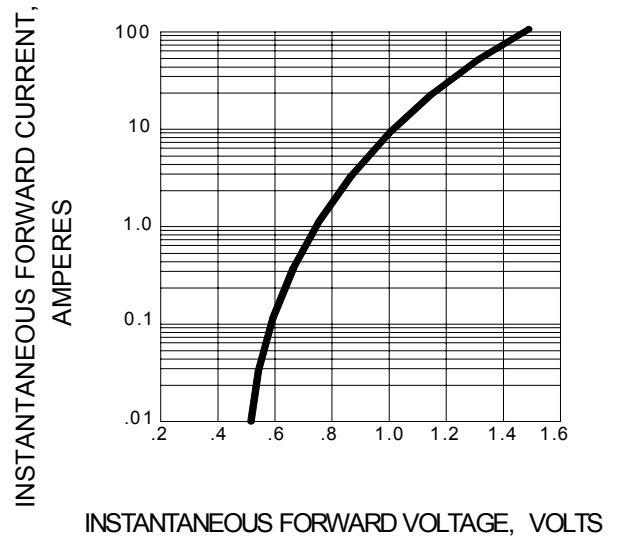


FIG.3 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

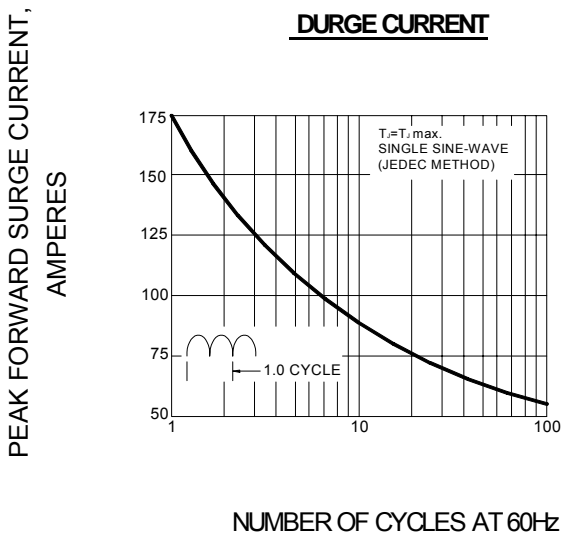


FIG.4 – TYPICAL REVERSE CHARACTERISTIC

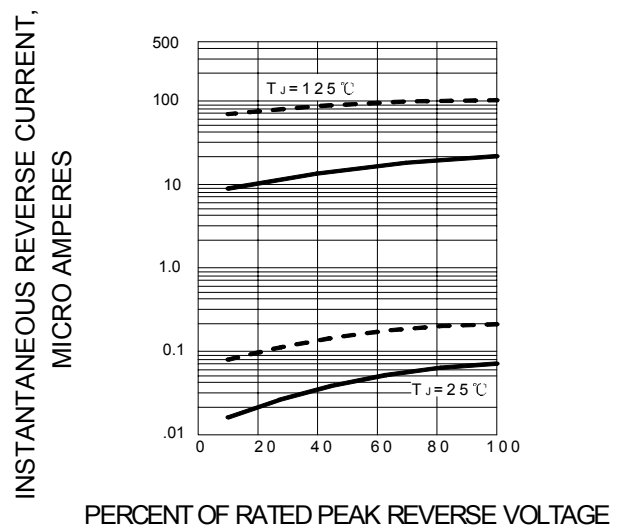


FIG.5 – TYPICAL JUNCTION CAPACITANCE PER LEG

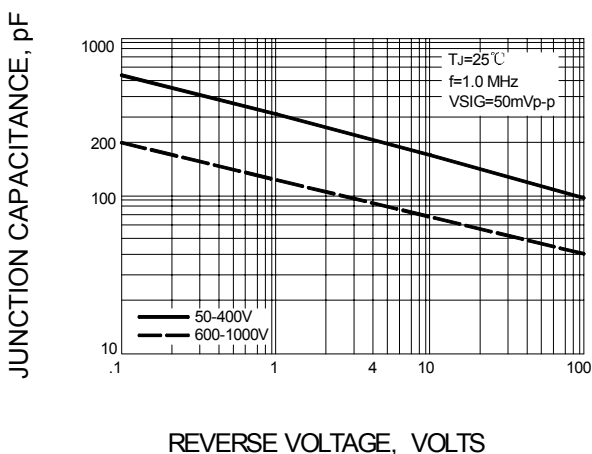


FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE

