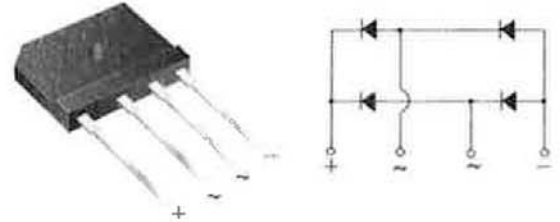


## Features

- ◆ Thin Single In-Line package
- ◆ Ideal for printed circuit boards
- ◆ Glass passivated chip junction
- ◆ High surge current capability
- ◆ High case dielectric strength of 2500 V<sub>RMS</sub>
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0

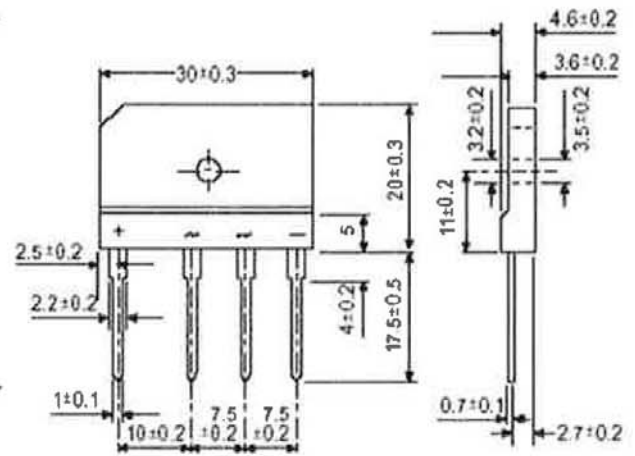


## Mechanical Data

- ◆ Case: GBJ(5S)  
Epoxy meets UL-94V-0 Flammability rating
- ◆ Terminals: Plated leads solderable per MIL-STD-750, Method 2026
- ◆ High temperature soldering guaranteed:  
260°C/10 seconds, 0.375 (9.5mm) lead length, 5lbs.(2.3kg) tension
- ◆ Polarity: As marked on body
- ◆ Mounting Torque: 10 cm-kg (8.8 inches-lbs) max.
- ◆ Recommended Torque: 5.7cm-kg (5 inches-lbs)

## Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for Switching Power Supply, Home Appliances, Office Equipment, Industrial Automation applications



Package outline dimensions in millimeters

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	GBJ6A	GBJ6B	GBJ6D	GBJ6G	GBJ6J	GBJ6K	GBJ6M	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified output current at $T_c=100^\circ\text{C}$ $T_A=25^\circ\text{C}$	$I_{F(AV)}$					6.0 <sup>(1)</sup>			Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$					150.0			Amps
Rating for fusing ( $t < 8.3\text{ms}$ )	$I^2t$					93			A <sup>2</sup> sec
Maximum instantaneous forward voltage drop per leg at 3.0A	$V_F$					1.0			Volt
Maximum DC reverse current at rated DC blocking voltage per leg $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	$I_R$					5			$\mu\text{A}$
Typical thermal resistance per leg	$R_{\theta JA}$					22 <sup>(2)</sup>			°C/W
	$R_{\theta JC}$					3.4 <sup>(1)</sup>			
Dielectric strength (Terminals to case, AC 1 minute)	$V_{BO}$					2500			Volts
Operating junction and storage temperature range	$T_J, T_{STG}$					-55 to +150			°C

- Notes:**
1. Unit case mounted on 9.5x9.5x0.15cm thick Al plate heatsink
  2. Units mounted on P.C.B. with 0.5 x 0.5" (13 x 13 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 screw

## RATINGS AND CHARACTERISTIC CURVES

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

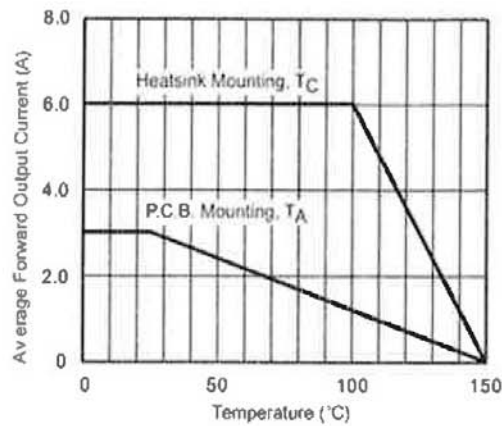


Figure 1. Derating Curve Output Rectified Current

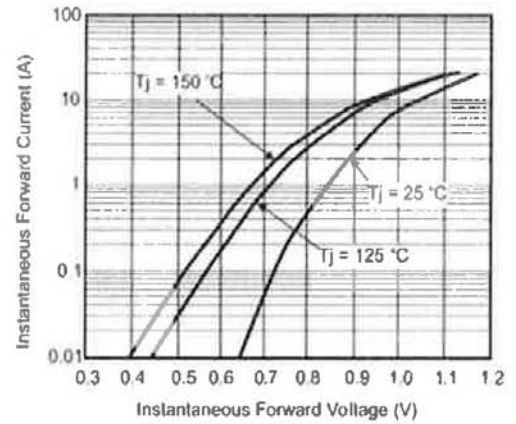


Figure 3. Typical Forward Characteristics Per Leg

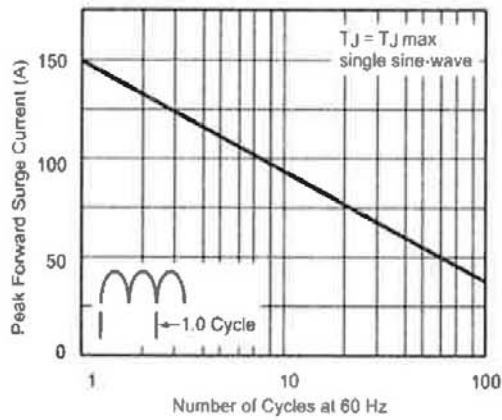


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

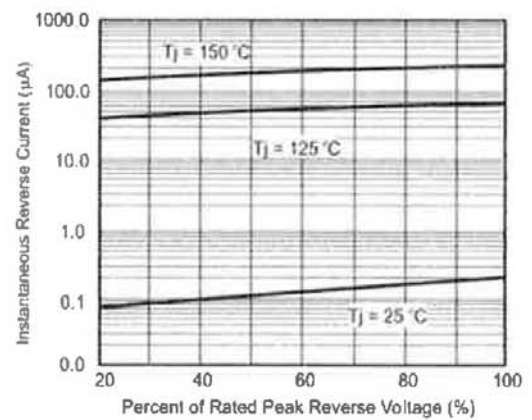


Figure 4. Typical Reverse Characteristics Per Leg

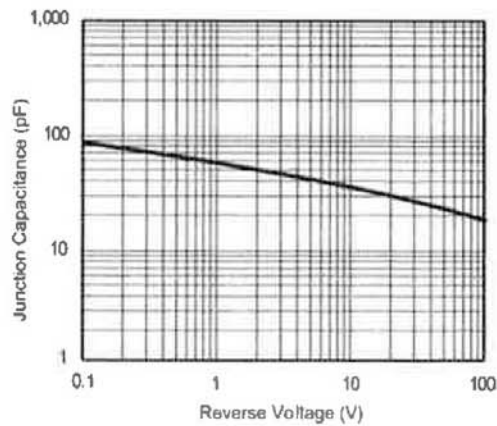


Figure 5. Typical Junction Capacitance Per Leg

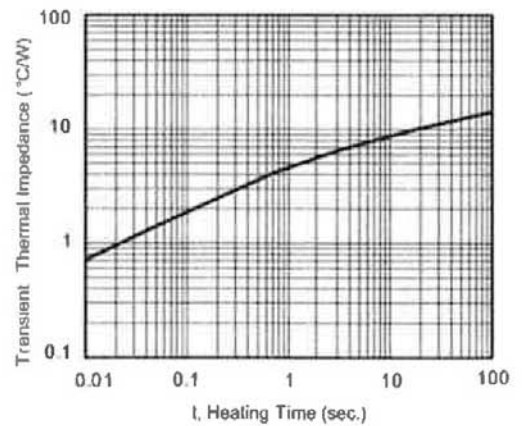


Figure 6. Typical Transient Thermal Impedance