



GBJ6AU thru GBJ6MU

Glass Passivated Single-Phase Bridge Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 6.0 Amperes

Features

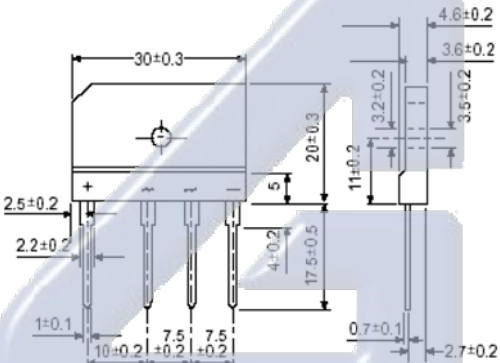
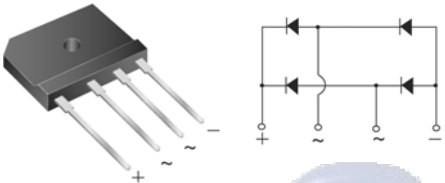
- ◆ Thin Single In-Line package
- ◆ Ideal for printed circuit boards
- ◆ Glass passivated chip junction
- ◆ High surge current capability
- ◆ High case dielectric strength of 2500 V_{RMS}
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0

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	GBJ6AU	GBJ6BU	GBJ6DU	GBJ6GU	GBJ6JU	GBJ6KU	GBJ6MU	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 $T_C=100^{\circ}C$ $T_A=25^{\circ}C$	$I_{F(AV)}$	6.0 ⁽¹⁾ 2.8 ⁽²⁾							Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	180							Amps
Rating for fusing (t<8.3ms)	I^2t	120							A ² 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 $T_A=25^{\circ}C$ $T_A=125^{\circ}C$	I_R	5 250							uA
Typical thermal resistance per leg	R_{JA} R_{JC}	22 ⁽²⁾ 3.4 ⁽¹⁾							°C/W
Dielectric strength (Terminals to case, AC 1 minute)	V_{ISO}	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)

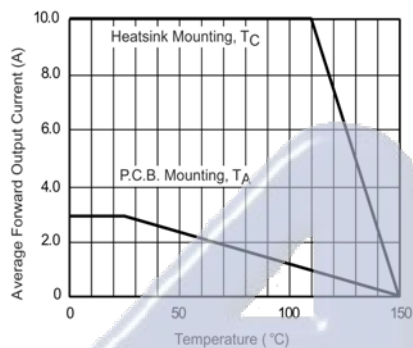


Figure 1. Derating Curve Output Rectified Current

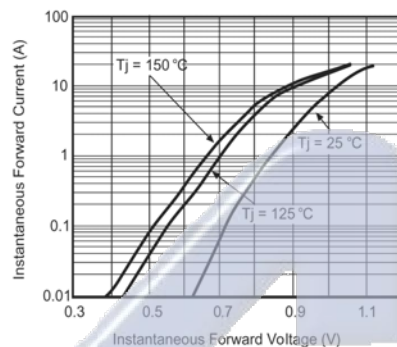


Figure 3. Typical Forward Characteristics Per Leg

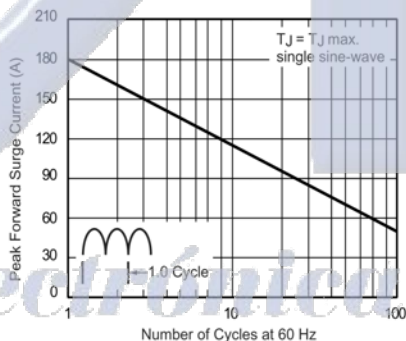


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

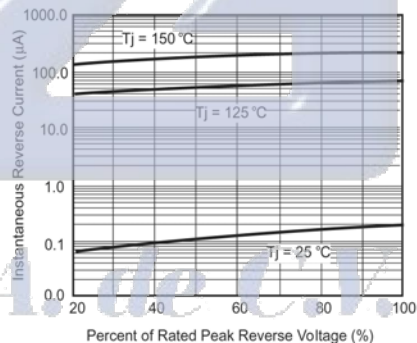


Figure 4. Typical Reverse Characteristics Per Leg

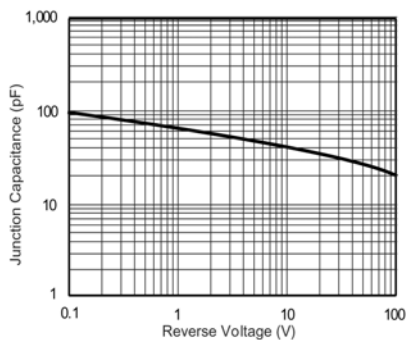


Figure 5. Typical Junction Capacitance Per Leg

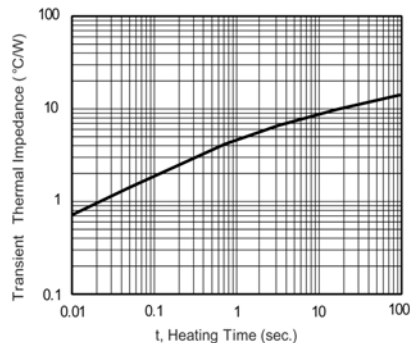


Figure 6. Typical Transient Thermal Impedance