GBU6A-GBU6K

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

VOLTAGE RANGE: 50 - 800V
CURRENT: 6.0 A

GBU

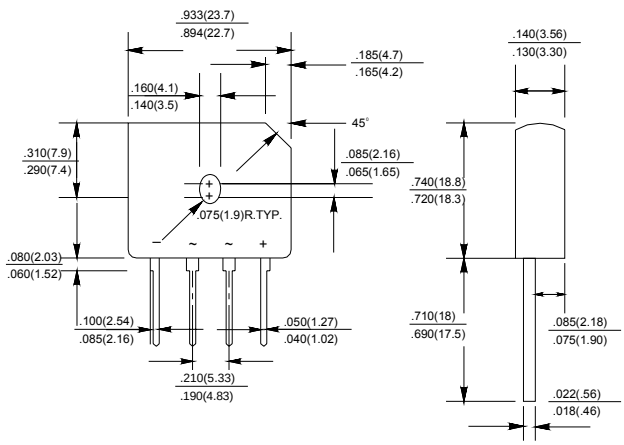
Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Weight: 4.0 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

RoHS COMPLIANT



Maximum Ratings and Electrical Characteristics

T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	GBU6A	GBU6B	GBU6D	GBU6G	GBU6J	GBU6K	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	V
Average Rectified Output Current @T_C = 100°C	I_O	6.0						A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	175						A
I^2t Rating for Fusing (t < 8.35ms)	I^2t	127						A^2s
Forward Voltage (per element) @I_F = 6.0A	V_{FM}	1.0						V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_C = 100°C	I_R	5.0 500						μA
Typical Thermal Resistance (per leg) (Note 1)	$R_{\theta JA}$	8.6						K/W
Typical Thermal Resistance (per leg) (Note 2)	$R_{\theta JC}$	3.1						K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150						°C

Note: 1. Thermal resistance junction to ambient, mounted on PCB at 9.5mm lead length with 12mm² copper pads.
2. Thermal resistance junction to case, mounted on 6.5 x 3.5 x 0.15cm thick AL plate.

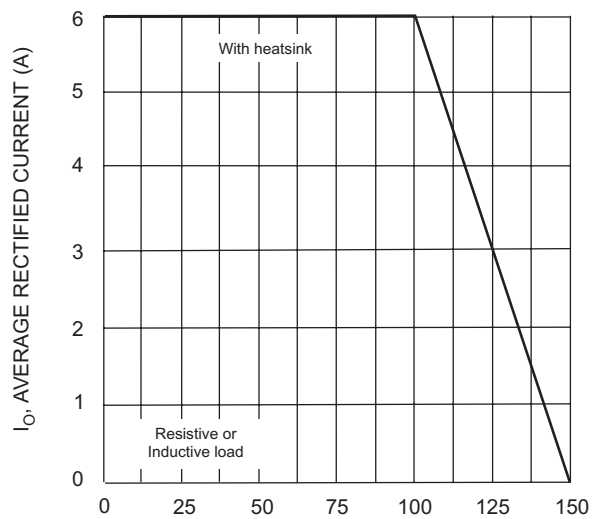


Fig. 1 Forward Current Derating Curve

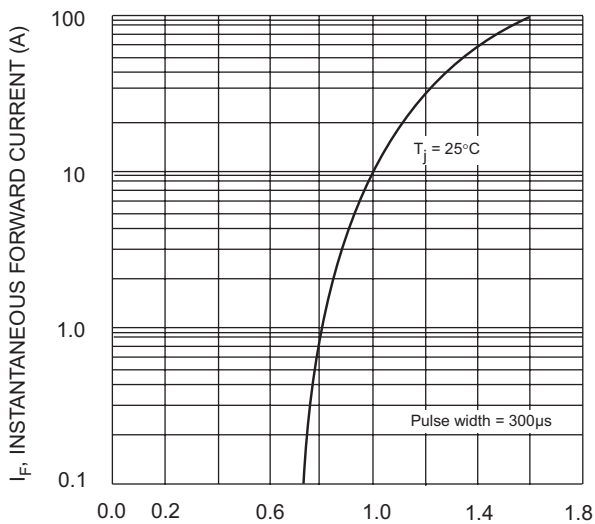


Fig. 2 Typical Forward Characteristics, per element

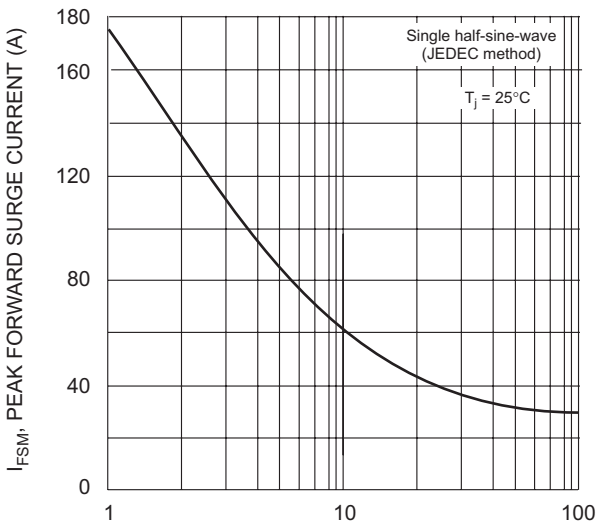


Fig. 3 Maximum Non-Repetitive Surge Current

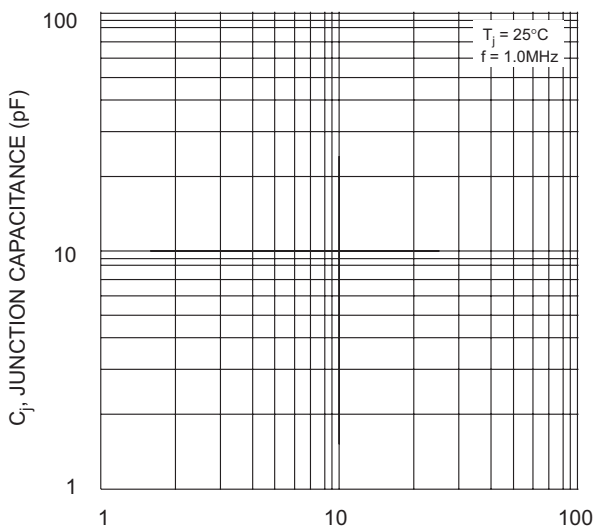


Fig. 4 Typical Junction Capacitance