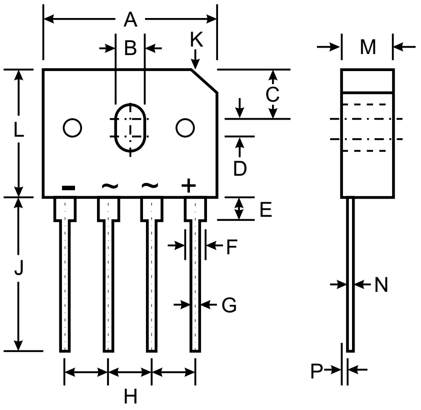
GBU10005 - GBU1010

SILICON BRIDGE RECTIFIERS

10.0A GLASS PASSIVATED BRIDGE RECTIFIER

Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of 1500VRMS
- Low Reverse Leakage Current
- Surge Overload Rating to 220A Peak
- Ideal for Printed Circuit Board Applications
- Plastic Material: UL Flammability Classification Rating 94V-0



GBU		
Dim	**Min**	**Max**
A	21.8	22.3
B	3.5	4.1
C	7.4	7.9
D	1.65	2.16
E	2.25	2.75
G	1.02	1.27
H	4.83	5.33
J	17.5	18.0
K	3.2 X 45°	
L	18.3	18.8
M	3.30	3.56
N	0.46	0.56
P	0.76	1.0
All Dimensions in mm		

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Marked on Body
- Mounting: Through Hole for #6 Screw
- Mounting Torque: 5.0 Inch-pounds Maximum
- Marking: Date Code and Type Number
- Weight: 6.6 grams (approx.)

Maximum Ratings and Electrical Characteristics

@ T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	GBU 10005	GBU 1001	GBU 1002	GBU 1004	GBU 1006	GBU 1008	GBU 1010	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @ T_C = 100°C	I_O	10							A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	220							A
Forward Voltage (per element) @ I_F = 5.0A	V_{FM}	1.0							V
Peak Reverse Current @ T_C = 25°C at Rated DC Blocking Voltage @ T_C = 125°C	I_R	5.0 500							µA
I^2t Rating for Fusing (Note 2)	I^2t	200							A^2s
Typical Junction Capacitance per Element (Note 3)	C_J	60							pF
Typical Thermal Resistance Junction to Case (Note 1)	$R_{\theta JC}$	2.2							°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150							°C

Notes:
1. United mounted on 100 x 100 x 1.6mm copper plate heatsink.
2. Non-repetitive, for t > 1.0ms and < 8.3ms.
3. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

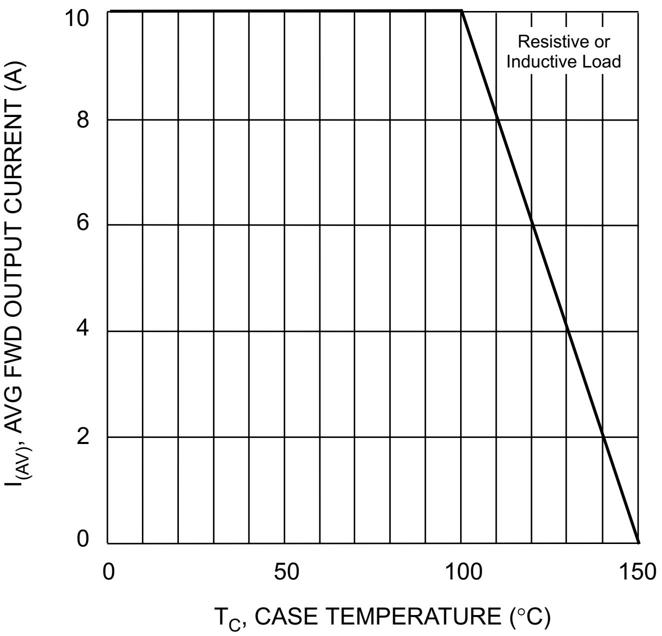


Fig. 1 Forward Current Derating Curve

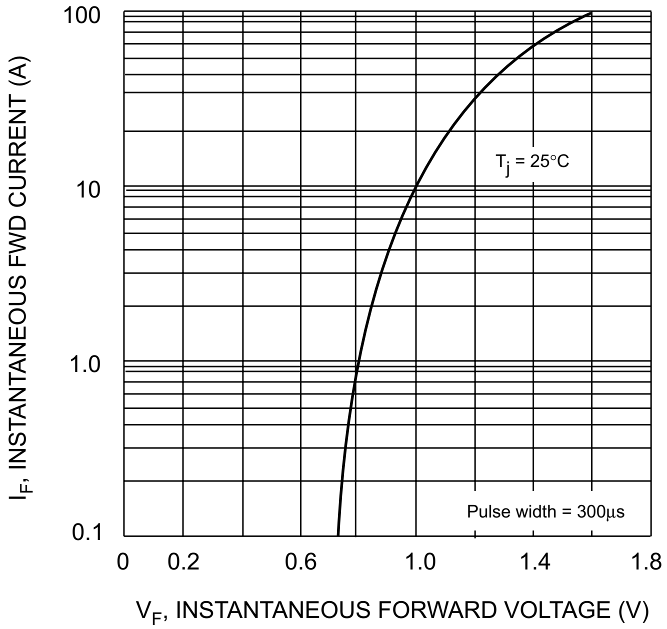


Fig. 2 Typical Forward Characteristics

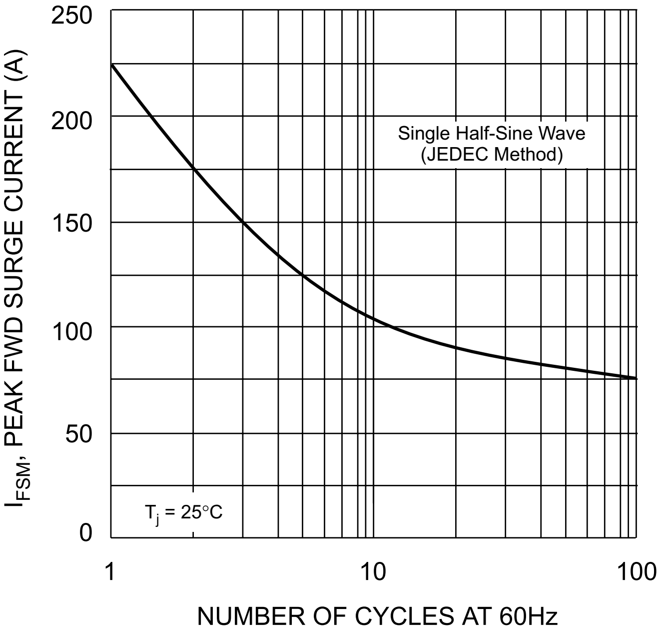


Fig. 3 Maximum Non-Repetitive Surge Current

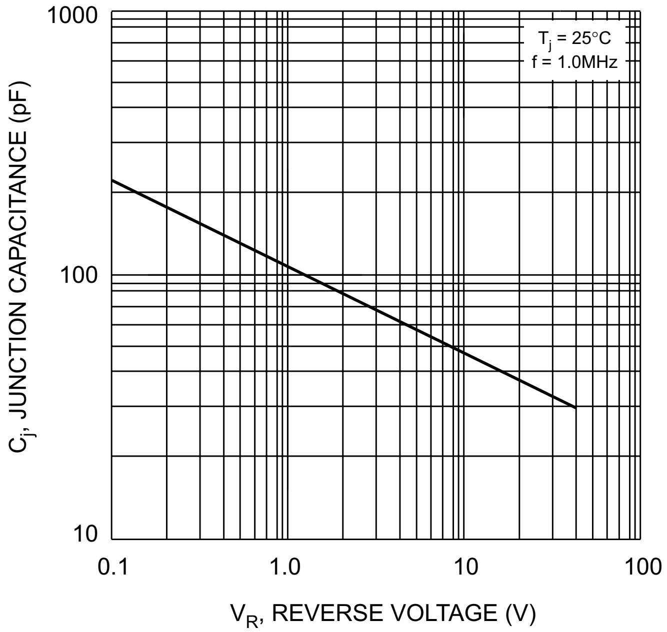


Fig. 4 Typical Junction Capacitance