GBPC25005/W - GBPC2510/W

25A GLASS PASSIVATED BRIDGE RECTIFIER

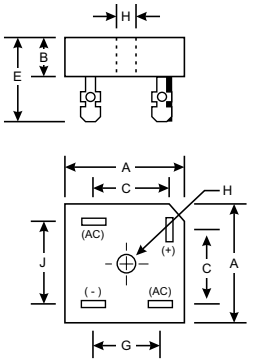
Features

- Glass Passivated Die Construction
- Diffused Junction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Surge Overload Rating to 300A Peak
- Electrically Isolated Metal Base for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 1500V
- UL Listed Under Recognized Component Index, File Number E94661

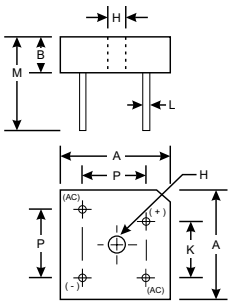
Mechanical Data

- Case: Molded Plastic with Heatsink Internally Mounted in the Bridge Encapsulation
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Mounting: Through Hole for #10 Screw
- Mounting Torque: 8.0 Inch-pounds Maximum
- GBPC Weight: 20 grams (approx.)
- GBPC-W Weight: 14 grams (approx.)
- Mounting Position: Any

GBPC



GBPC-W



GBPC / GBPC-W		
Dim	**Min**	**Max**
A	28.30	28.80
B	7.40	8.25
C	16.10	17.10
E	18.80	21.30
G	13.80	14.80
H	Hole for #10 screw	
	5.08∅	5.59∅
J	17.60	18.60
K	10.90	11.90
L	0.97∅	1.07∅
M	31.80	—
P	17.60	18.60
All Dimensions in mm		

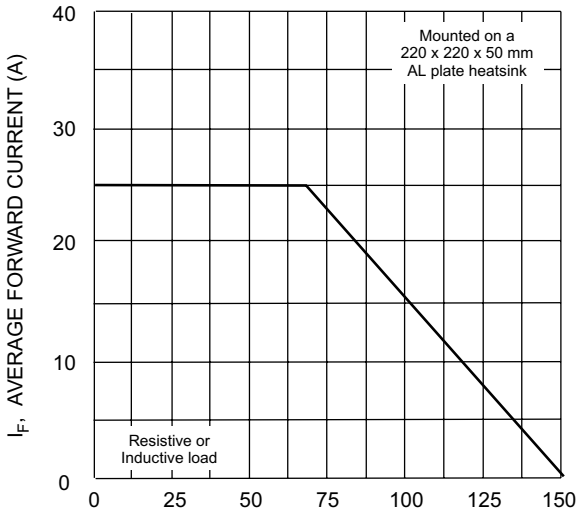
"W" Suffix Designates Wire Leads
No Suffix Designates Faston Terminals

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%.

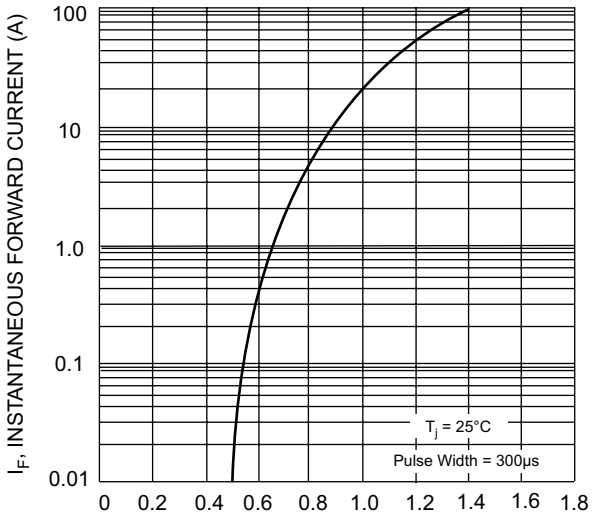
Characteristic	Symbol	GBPC25 005/W	GBPC25 01/W	GBPC25 02/W	GBPC25 04/W	GBPC25 06/W	GBPC25 08/W	GBPC25 10/W	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ T_C = 60°C	I_O	25							A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	300							A
Forward Voltage (per element) @ I_F = 12.5A	V_{FM}	1.1							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 1)	I^2t	374							A^2s
Typical Junction Capacitance (Note 2)	C_j	300							pF
Typical Thermal Resistance per leg (Note 3)	$R_{\theta JC}$	1.3							°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150							°C

Notes: 1. Non-repetitive, for t > 1.0ms and t < 8.3ms.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance junction to case mounted on heatsink.



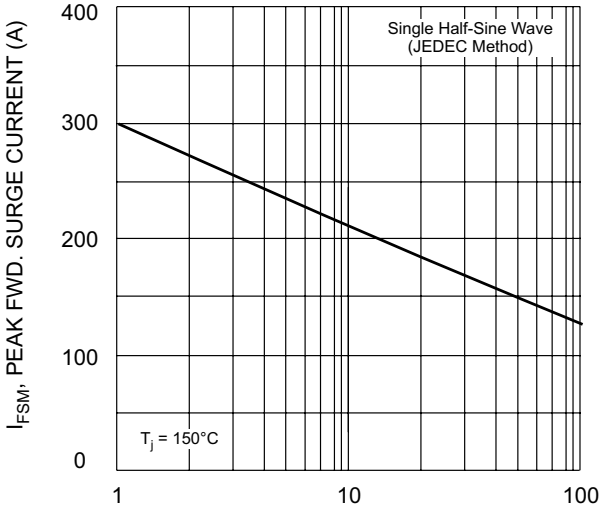
T_C, CASE TEMPERATURE (°C)

Fig. 1 Forward. Current Derating Curve



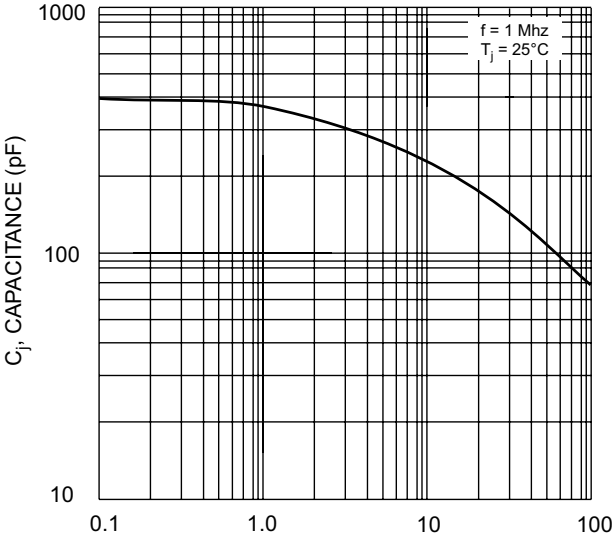
V_F, INSTANTANEOUS FORWARD VOLTAGE (V)

Fig. 2 Typical Forward Characteristics (per element)



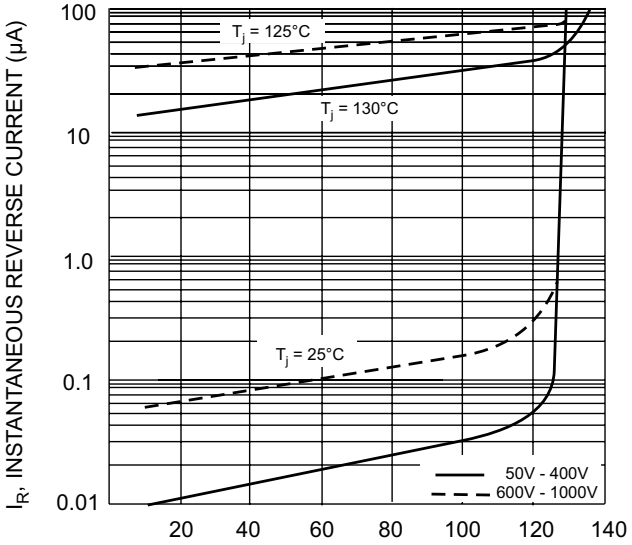
NUMBER OF CYCLES AT 60 Hz

Fig. 3 Max Non-Repetitive Surge Current



V_R, REVERSE VOLTAGE (V)

Fig. 4 Typical Junction Capacitance (per element)



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)

Fig. 5 Typical Reverse Characteristics (per element)