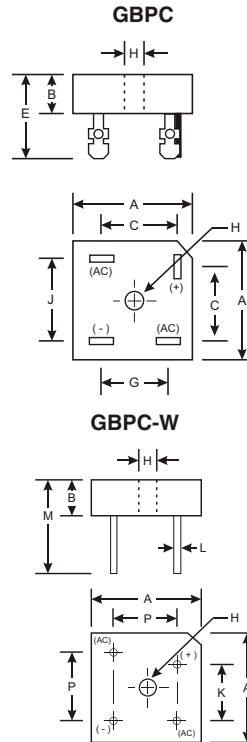


### Features

- Glass Passivated Die Construction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Surge Overload Rating to 300A Peak
- Metal Base for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 1500V
- UL Listed Under Recognized Component Index, File Number E94661
- Lead Free Finish, RoHS Compliant (Note 4)**

### Mechanical Data

- Case: GBPC / GBPC-W
- Case Material: Molded Plastic with Heatsink Internally Mounted in the Bridge Encapsulation. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish Silver. Plated Leads Solderable per MIL-STD-202, Method 208 **(E3)**
- Polarity: As Marked on Case
- Mounting: Through Hole for #10 Screw
- Mounting Torque: 8.0 Inch-pounds Maximum
- Ordering Information: See Last Page
- Marking: Type Number
- GBPC Weight: 20 grams (approximate)
- GBPC-W Weight: 14 grams (approximate)



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
<b>All Dimensions in mm</b>		

“W” Suffix Designates Wire Leads  
No Suffix Designates Faston Terminals

### Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 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 <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectified Output Current @ T <sub>C</sub> = 60 C	I <sub>O</sub>	25							A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated	I <sub>FSM</sub>	300							A
Forward Voltage (per element) @ I <sub>F</sub> = 12.5A	V <sub>FM</sub>	1.1							V
Peak Reverse Current @ T <sub>C</sub> = 25 C at Rated DC Blocking Voltage @ T <sub>C</sub> = 125 C	I <sub>R</sub>	5.0 500							A
I <sup>2</sup> t Rating for Fusing (Note 1)	I <sup>2</sup> t	374							A <sup>2</sup> s
Typical Total Capacitance (Note 2)	C <sub>T</sub>	300							pF
Typical Thermal Resistance per leg (Note 3)	R <sub>JC</sub>	1.3							°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150							C

- Notes:
- Non-repetitive, for t > 1.0ms and t < 8.3ms.
  - Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
  - Thermal resistance junction to case mounted on heatsink.
  - RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.

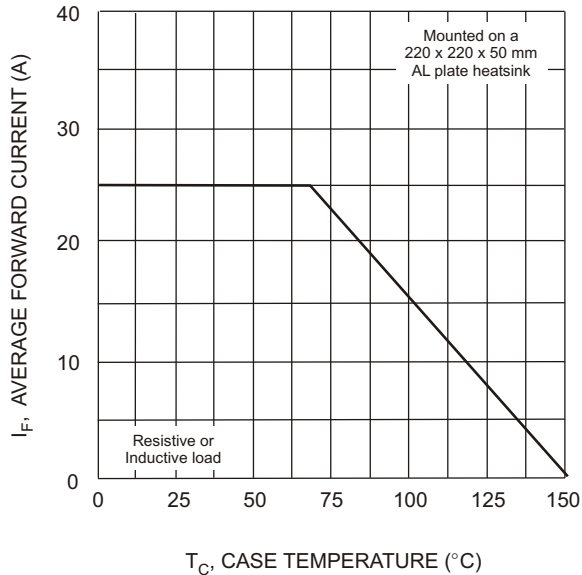


Fig. 1 Forward Current Derating Curve

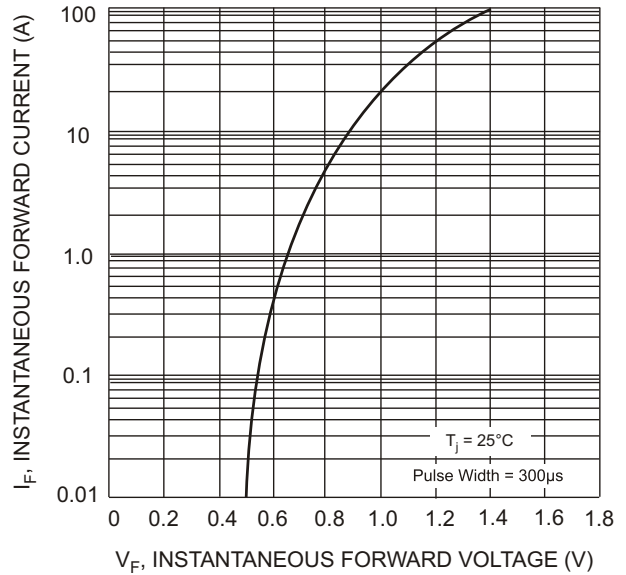


Fig. 2 Typical Forward Characteristics (per element)

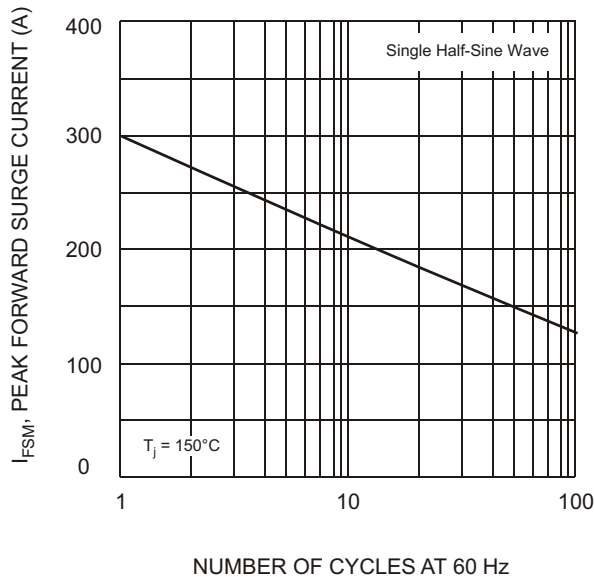


Fig. 3 Max Non-Repetitive Surge Current

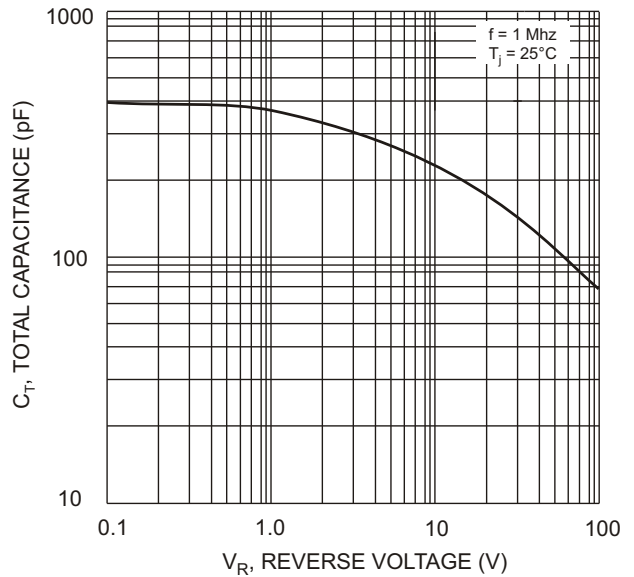


Fig. 4 Typical Total Capacitance (per element)

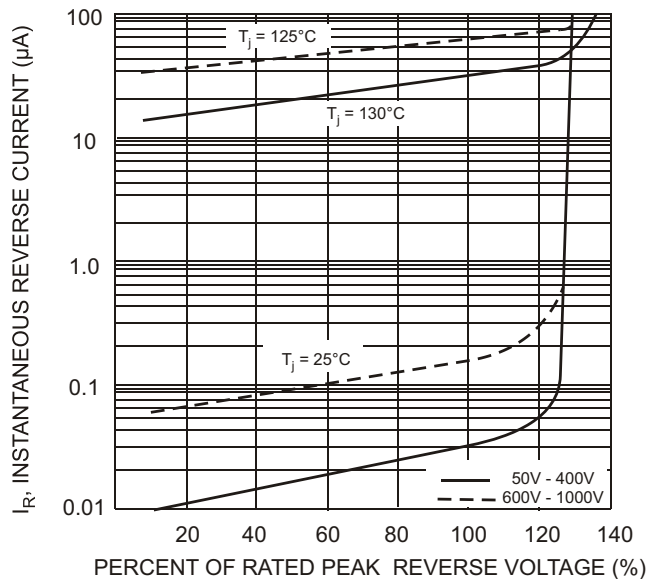


Fig. 5 Typical Reverse Characteristics (per element)

**Ordering Information** (Note 5)

Device	Packaging	Shipping
GBPC25005	GBPC	100/Tray
GBPC2501	GBPC	100/Tray
GBPC2502	GBPC	100/Tray
GBPC2504	GBPC	100/Tray
GBPC2506	GBPC	100/Tray
GBPC2508	GBPC	100/Tray
GBPC2510	GBPC	100/Tray
GBPC25005W	GBPC-W	100/Tray
GBPC2501W	GBPC-W	100/Tray
GBPC2502W	GBPC-W	100/Tray
GBPC2504W	GBPC-W	100/Tray
GBPC2506W	GBPC-W	100/Tray
GBPC2508W	GBPC-W	100/Tray
GBPC2510W	GBPC-W	100/Tray

Notes: 5. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap2008.pdf>.

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