GBPC35005/W - GBPC3510/W

35A GLASS PASSIVATED BRIDGE RECTIFIER

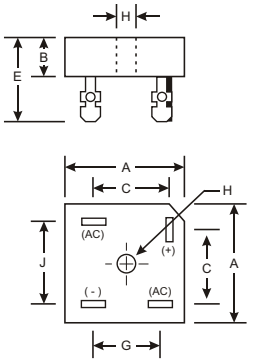
Features

- Glass Passivated Die Construction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Surge Overload Rating to 400A 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)**

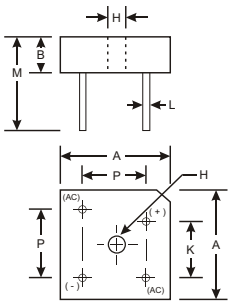
Mechanical Data

- 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



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

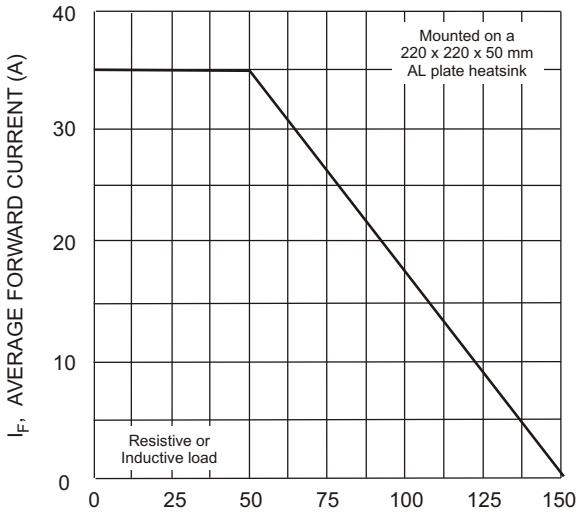
Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	GBPC35 005/W	GBPC35 01/W	GBPC35 02/W	GBPC35 04/W	GBPC35 06/W	GBPC35 08/W	GBPC35 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 = 50°C	I_O	35							A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	400							A
Forward Voltage (per element) @ I_F = 17.5A	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	660							A^2s
Typical Total Capacitance (Note 2)	C_T	300							pF
Typical Thermal Resistance per leg (Note 3)	$R_{\theta JC}$	1.2							°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150							°C

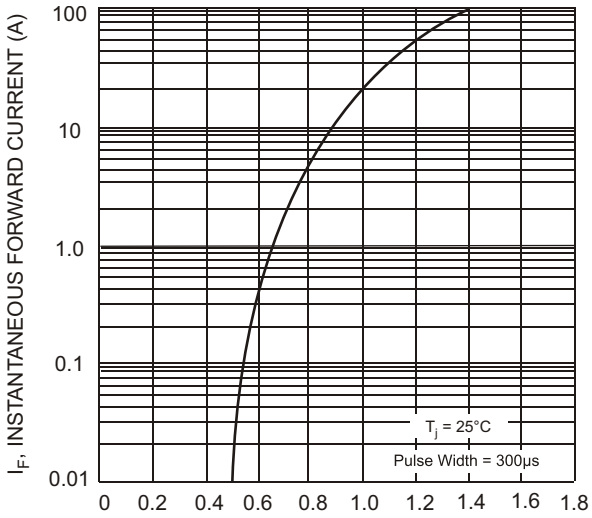
Notes:
1. Non-repetitive, for t > 1.0ms and t < 8.3ms.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance junction to case mounted on heatsink.
4. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see

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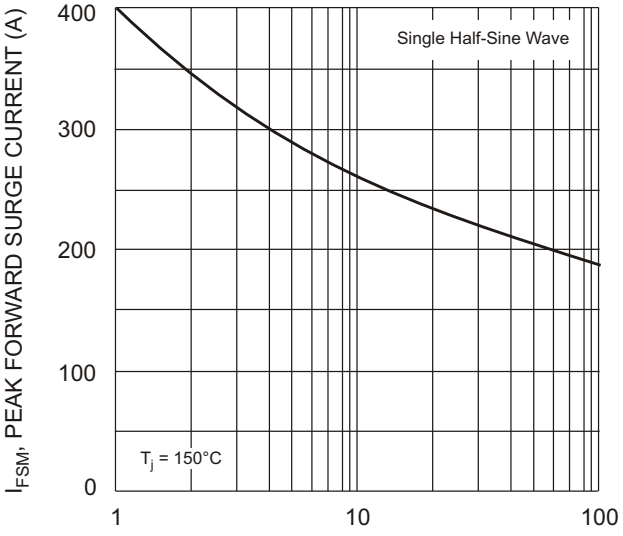
T_C, CASE TEMPERATURE (°C)

Fig. 1 Forward Current Derating Curve



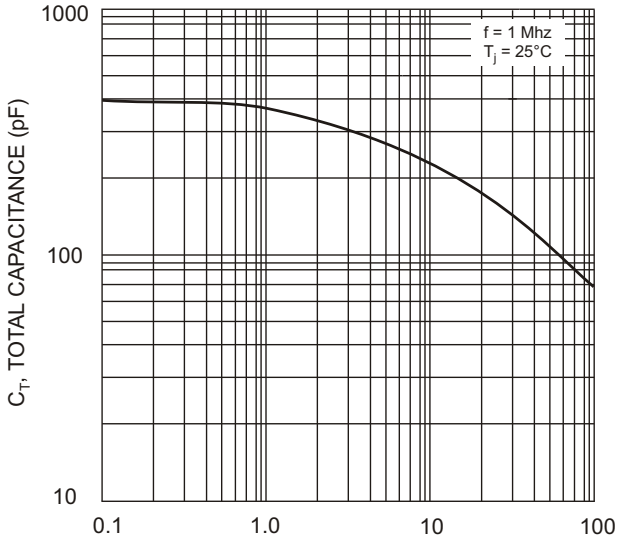
V_F, INSTANTANEOUS FORWARD VOLTAGE (V)

Fig. 2 Typical Forward Characteristics (per element)



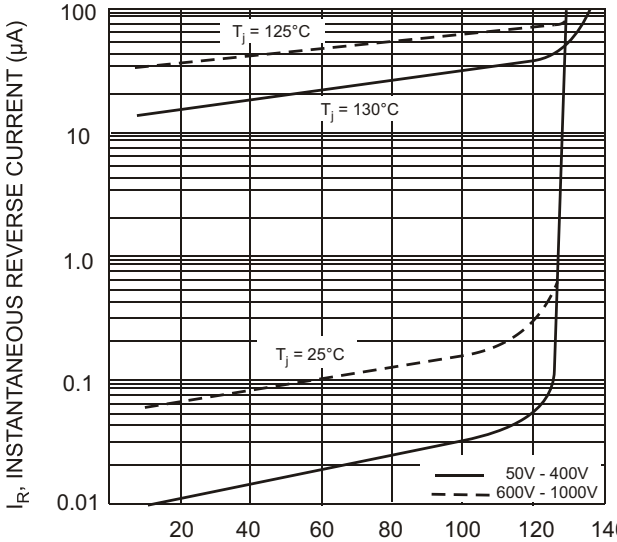
NUMBER OF CYCLES AT 60 Hz

Fig. 3 Max Non-Repetitive Surge Current



V_R, REVERSE VOLTAGE (V)

Fig. 4 Typical Total Capacitance (per element)



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)

Fig. 5 Typical Reverse Characteristics (per element)

Ordering Information (Note 5)

Device	Packaging	Shipping
GBPC35005	GBPC	100/Tray
GBPC3501	GBPC	100/Tray
GBPC3502	GBPC	100/Tray
GBPC3504	GBPC	100/Tray
GBPC3506	GBPC	100/Tray
GBPC3508	GBPC	100/Tray
GBPC3510	GBPC	100/Tray
GBPC35005W	GBPC-W	100/Tray
GBPC3501W	GBPC-W	100/Tray
GBPC3502W	GBPC-W	100/Tray
GBPC3504W	GBPC-W	100/Tray
GBPC3506W	GBPC-W	100/Tray
GBPC3508W	GBPC-W	100/Tray
GBPC3510W	GBPC-W	100/Tray

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

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