

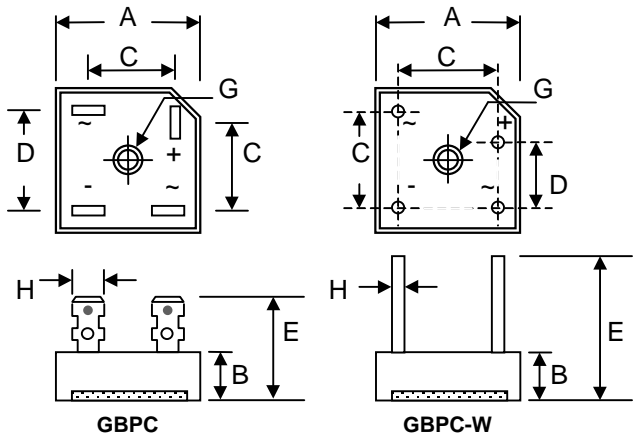
50A GLASS PASSIVATED HIGH CURRENT SINGLE-PHASE BRIDGE RECTIFIER

Features

- Glass Passivated Die Construction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Epoxy Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 2500V

Mechanical Data

- Case: Molded Plastic with Heatsink, Available in Both Low Profile and Standard Case
- Terminals: Plated Faston Lugs or Wire Leads, Add "W" Suffix to Indicate Wire Leads
- Polarity: As Marked on Case
- Mounting: Through Hole with #10 Screw
- Mounting Torque: 23 cm·kg (20 in·lbs) Max.
- Weight: 21 grams (GBPC); 18 grams (GBPC-W)
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version**



Dim	GBPC Low Profile / Standard		GBPC-W Low Profile / Standard	
	Min	Max	Min	Max
A	28.40	28.70	28.40	28.70
B	7.50 / 10.97	8.50 / 11.23	7.50 / 10.97	8.50 / 11.23
C	15.70	16.70	17.10	19.10
D	17.50	18.50	10.90	11.90
E	19.08 / 22.86	21.58 / 25.40	30.50	—
G	Hole for #10 screw, 5.08Ø Nominal			
H	6.35 Typical		0.97Ø	1.07Ø

All Dimension in mm

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

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

Characteristic	Symbol	GBPC50										Unit	
		00	01	02	04	06	08	10	12	14	16		
Peak Repetitive Reverse Voltage	V_{RRM}												V
Working Peak Reverse Voltage	V_{RWM}	50	100	200	400	600	800	1000	1200	1400	1600		V
DC Blocking Voltage	V_R												V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	840	980	1120		V
Average Rectified Output Current @ $T_C = 50^\circ\text{C}$	I_O	50										A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	450										A	
Forward Voltage per leg @ $I_F = 25\text{A}$	V_{FM}	1.1										V	
Peak Reverse Current @ $T_C = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_C = 125^\circ\text{C}$	I_{RM}	5.0 500										μA	
I^2t Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	800										A^2s	
Typical Junction Capacitance (Note 1)	C_j	400										pF	
Typical Thermal Resistance per leg (Note 2)	$R_{\theta JC}$	1.0										$^\circ\text{C}/\text{W}$	
RMS Isolation Voltage from Case to Leads	V_{ISO}	2500										V	
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150										$^\circ\text{C}$	

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

2. Mounted on 229 x 152 x 127mm Al. finned plate.

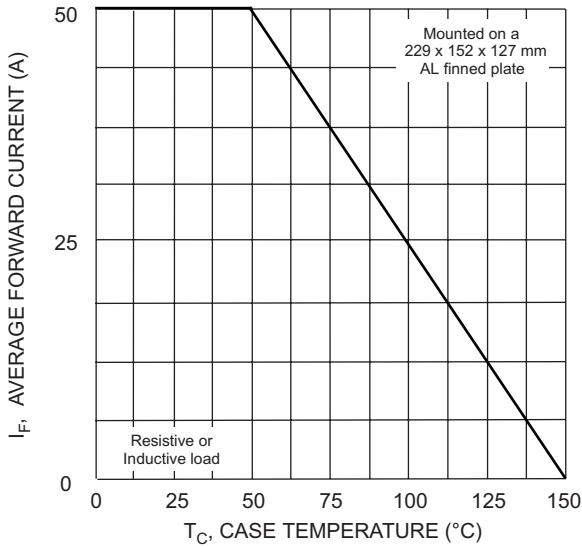


Fig. 1 Forward Current Derating Curve

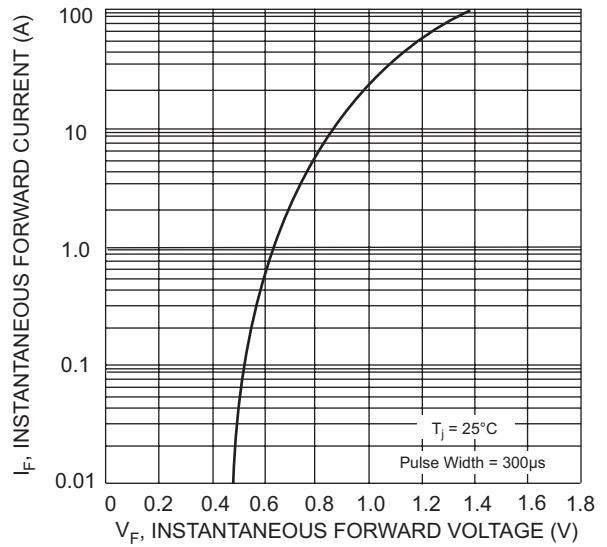


Fig. 2 Typical Forward Characteristics (per element)

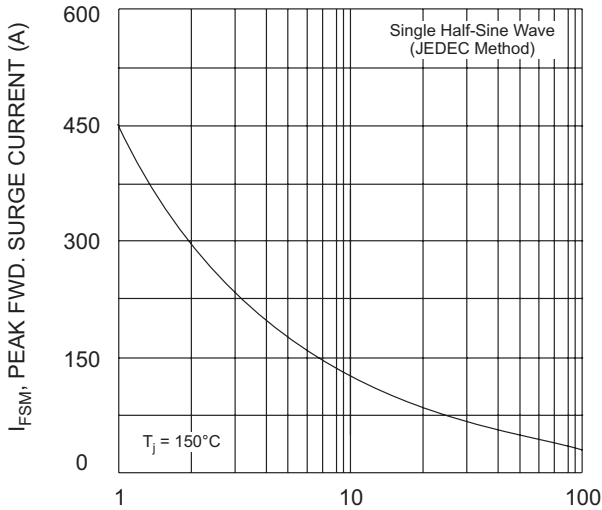


Fig. 3 Max Non-Repetitive Surge Current

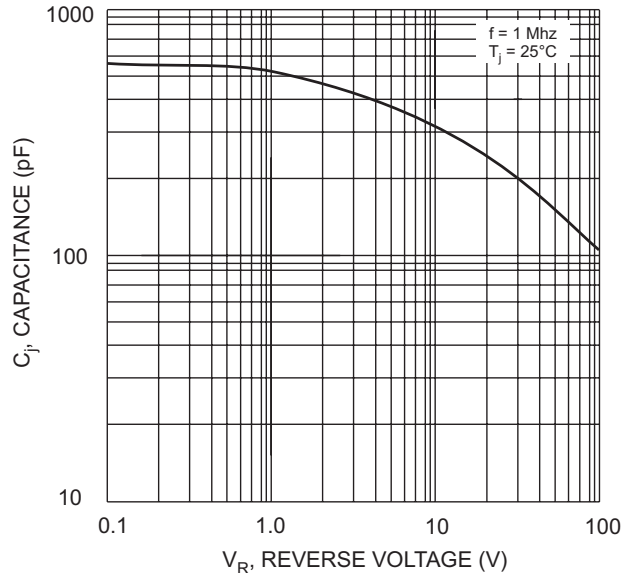


Fig. 4 Typical Junction Capacitance (per element)

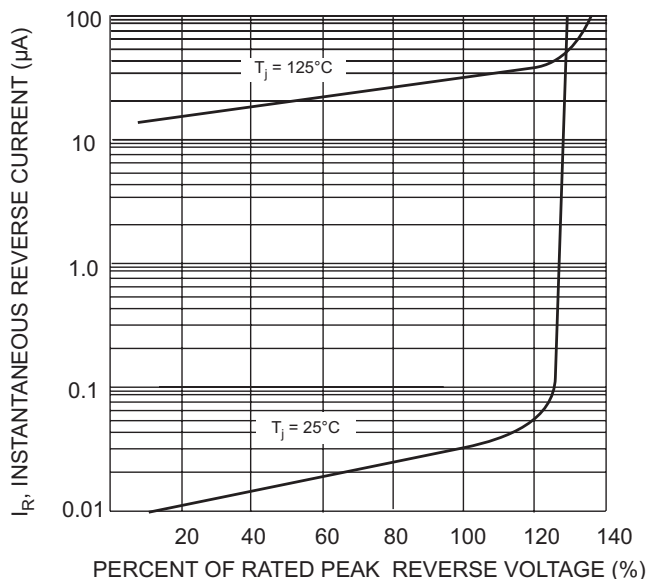


Fig. 5 Typical Reverse Characteristics (per element)