GBP Plastic-Encapsulate Bridge Rectifier

Features

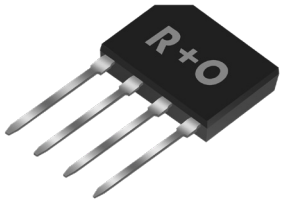
- Ideal for printed circuit board
- Small size, simple installation
- High surge current capability
- Reliable low cost construction utilizing molded plastic technique
- High temperature soldering guaranteed: 260/10 seconds at 5lbs., (2.3kg) tension

Reverse Voltage
50-1000 V
Forward Current
3.0 Ampere

Applications

General purpose 1 phase Bridgerectifier applications

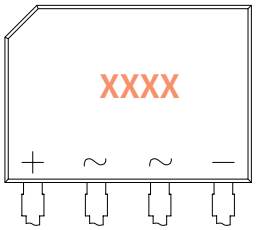
GBP

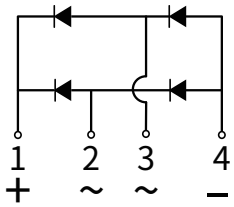


Mechanical Data

- Case: GBP
  Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity: Cathode line denotes the cathode end

Function Diagram





Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GBP3005	GBP301	GBP302	GBP304	GBP306	GBP308	GBP310
Device marking code			GBP3005	GBP301	GBP302	GBP304	GBP306	GBP308	GBP310
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
Maximum Average Forward Rectified Current @60Hz sinewave, Resistance load,TL (Fig.1)	$I_{F(AV)}$	A	3.0						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	90						
Rating for fusing (t=8.3ms, Ta=25 °C)	I^2t	A^2S	33.62						
Storage temperature	T_{stg}	°C	-55 ~ +150						
Junction temperature	T_j	°C	-55 ~ +150						
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	55						
	$R_{\theta J-L}$	°C /W	5						

Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	GBP3005	GBP301	GBP302	GBP304	GBP306	GBP308	GBP310
Maximum instantaneous forward voltage	I_F=3.0A	V_F	V	1.1						
Maximum DC reverse currentat rated DC blocking voltage	V_R=V_{DC}, T_A=25°C	I_{R1}	μA	10						
	V_R=V_{DC}, T_A=100°C	I_{R2}		1000						
Typical junction capacitance	4.0V DC,1MHz	C_J	pF	27						

Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

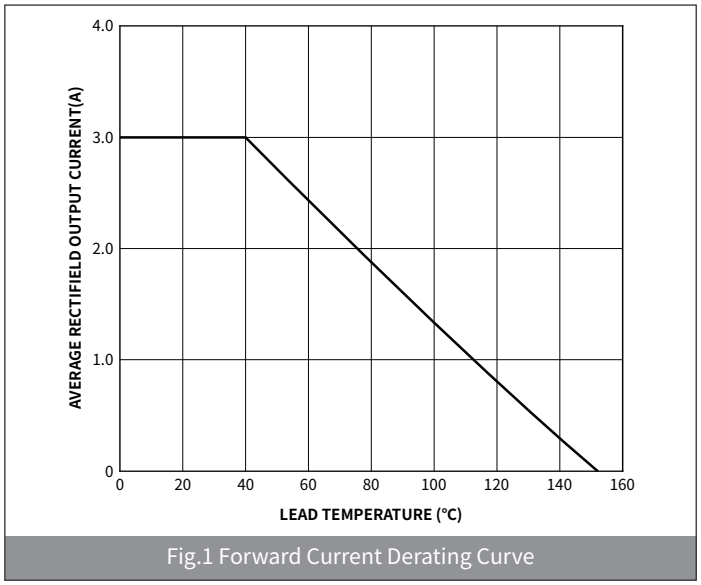


Fig.1 Forward Current Derating Curve

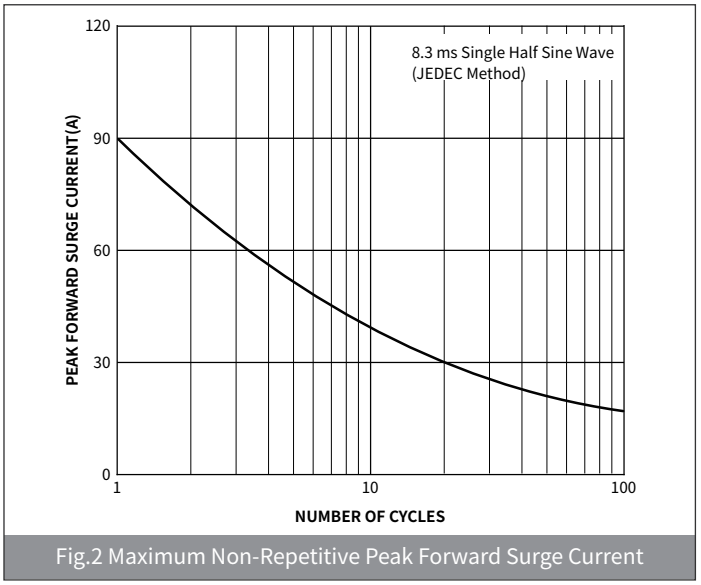


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

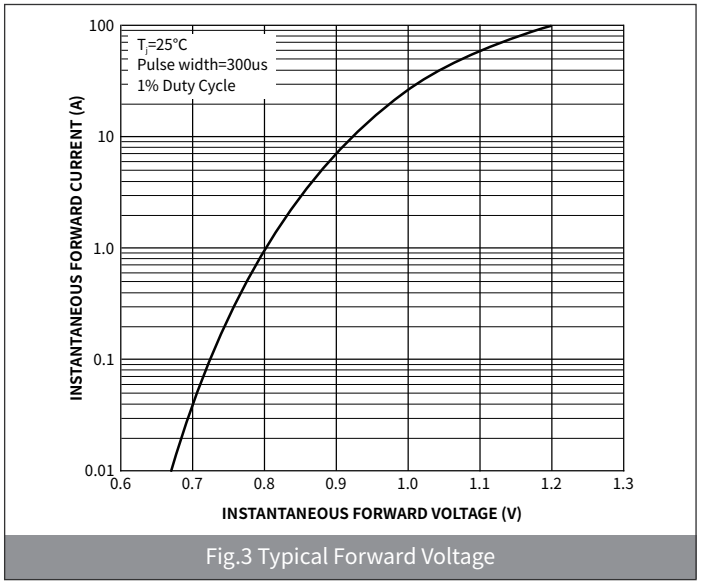


Fig.3 Typical Forward Voltage

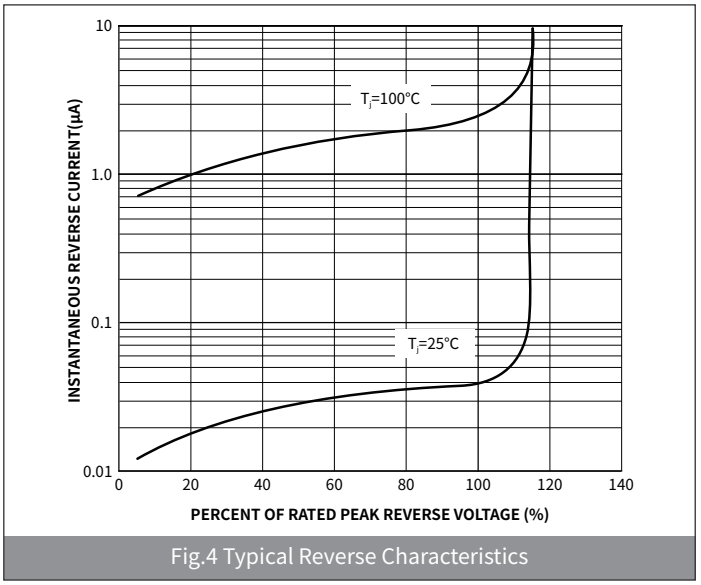
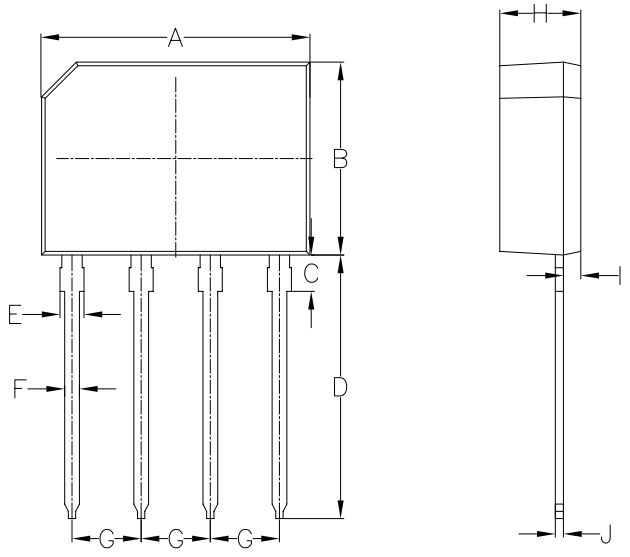


Fig.4 Typical Reverse Characteristics

Ordering Information

PACKAGE	UNIT WEIGHT(g)	BOX(pcs)	CARTON(pcs)
GBP	1.25	500	5000

Package Outline Dimensions (GBP)



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	13.80	14.20	0.543	0.560
B	10.10	10.50	0.397	0.413
C	1.80	2.20	0.071	0.086
D	14.25	14.73	0.561	0.580
E	1.22	1.42	0.048	0.056
F	0.76	0.86	0.030	0.340
G	3.70	3.90	0.145	0.153
H	3.35	3.65	0.132	0.144
I	0.80	1.10	0.031	0.043
J	0.35	0.55	0.014	0.022