

GBJ50005 THRU GBJ5010

GBJ 50.0 AMP Plastic-Encapsulate Bridge Rectifier

GBJ 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

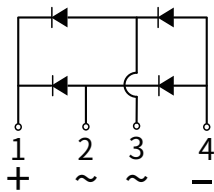
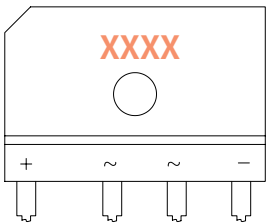
Applications

General purpose 1 phase Bridgerectifier applications

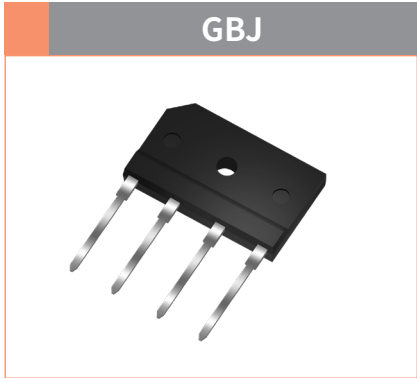
Mechanical Data

- Case: GBJ
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



Reverse Voltage
50-1000 V
Forward Current
50 Ampere



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

PARAMETER	SYMBOL	UNIT	GBJ50005	GBJ5001	GBJ5002	GBJ5004	GBJ5006	GBJ5008	GBJ5010
Device marking code			GBJ50005	GBJ5001	GBJ5002	GBJ5004	GBJ5006	GBJ5008	GBJ5010
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	50						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	500						
Rating for fusing (t=8.3ms, Ta=25 °C)	I^2t	A ² S	1037.5						
Storage temperature	T_{stg}	°C	-55 ~ +150						
Junction temperature	T_j	°C	-55 ~ +150						
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	22						
	$R_{\theta J-C}$	°C /W	1.5						

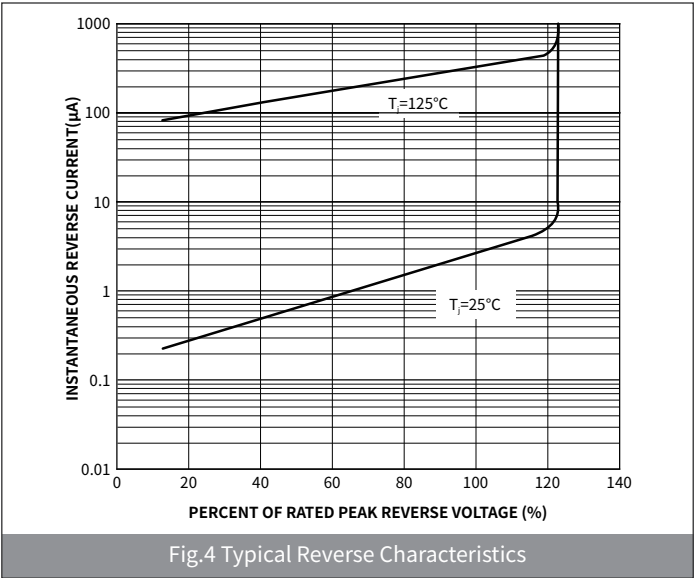
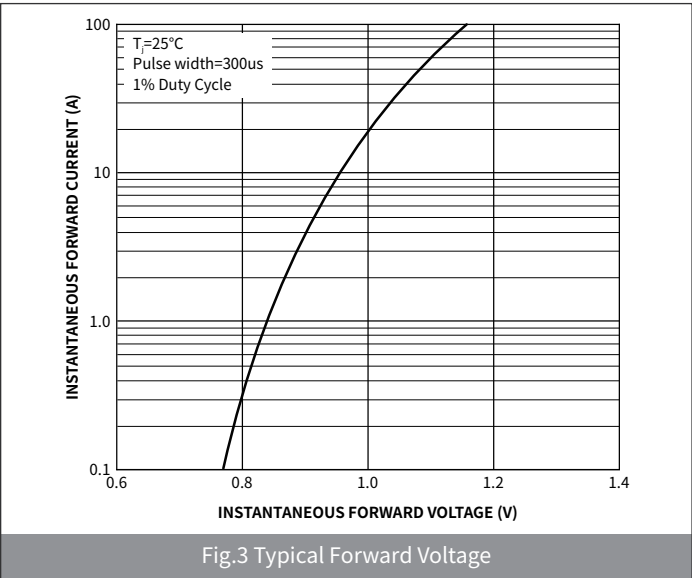
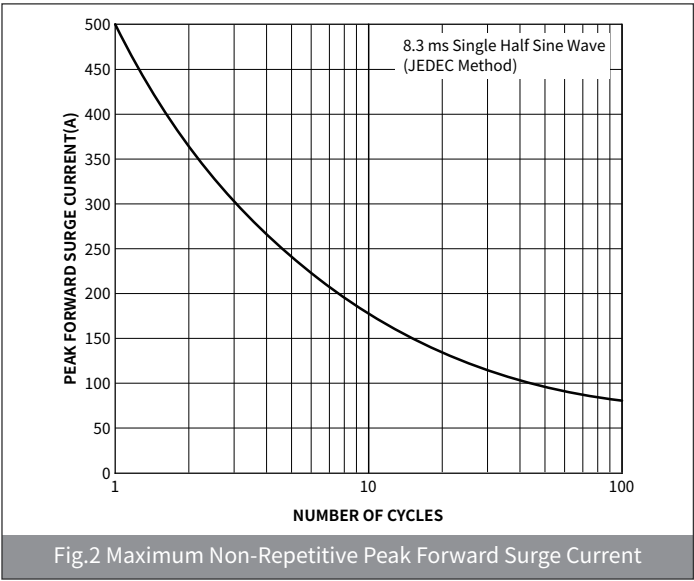
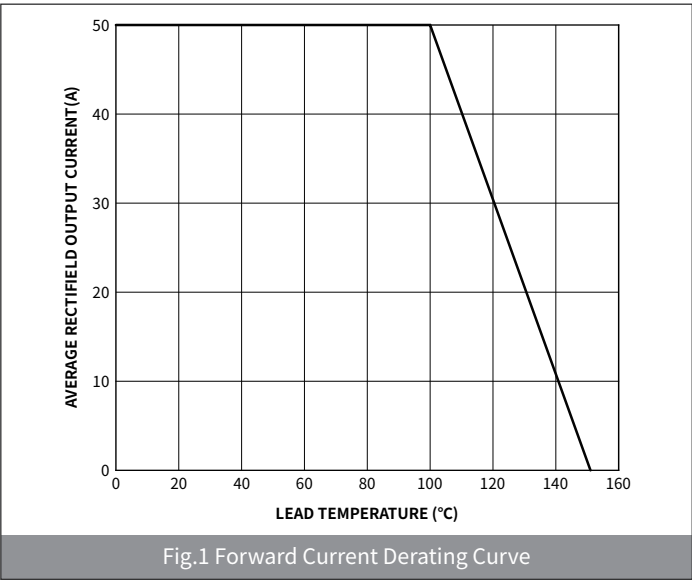
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Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	GBJ50005	GBJ5001	GBJ5002	GBJ5004	GBJ5006	GBJ5008	GBJ5010
Maximum instantaneous forward voltage	$I_F=25A$	V_F	V	1.1						
Maximum DC reverse current at rated DC blocking voltage	$V_R=V_{DC}, T_A=25^{\circ}C$	I_{R1}	μA	10						
	$V_R=V_{DC}, T_A=100^{\circ}C$	I_{R2}		500						
Typical junction capacitance	4.0V DC, 1MHz	C_J	pF	75						

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



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Ordering Information

PACKAGE	UNIT WEIGHT(g)	BOX(pcs)	CARTON(pcs)
GBJ	6.38	250	2000

Package Outline Dimensions (GBJ)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	29.70	30.30	1.170	1.190
B	19.70	20.30	0.780	0.800
C	17.00	18.00	0.670	0.710
D	4.80	6.10	0.190	0.240
E	3.80	4.20	0.150	0.165
F	7.30	7.70	2.87	0.303
G	9.80	10.20	0.386	0.402
H	0.90	1.10	0.035	0.043
I	1.95	2.4	0.077	0.094
J	2.30	2.70	0.090	0.106
K	3.40	3.80	0.134	0.150
L	4.40	4.80	0.173	1.89
M	10.80	11.20	0.425	0.441
N	3.10	3.70	0.122	0.145
O	3.10	3.40	0.122	0.134
P	0.55	0.80	0.022	0.0315