

Product Summary

V_{RRM} (V)	I_F (A)	V_F Max (V) @ I_F = 5A	I_R Max (μA)
50/100/200/ 400/600/800/1000	10	1.05	10

Mechanical Data

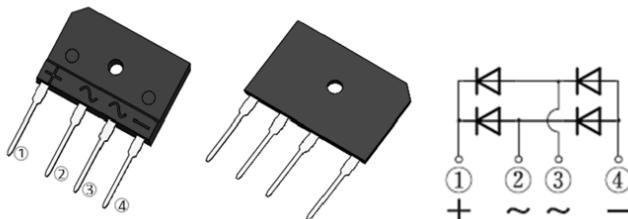
- Package: GBJ
- Package Material: Plastic Material, UL Flammability Classification 94V-0
- Terminals: Finish – Bright Tin Plated Leads, Solderable per MIL-STD-202, Method 208 (e3)
- Polarity: Molded on Body
- Mounting: Through Hole for #6 Screw
- Mounting Torque: 5.0 in-lbs Maximum
- Weight: 6.6 grams (Approximate)

Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of 1500V_{RMS}
- Low Reverse Leakage Current
- Surge Overload Rating to 170A Peak
- Ideal for Printed Circuit Board Applications
- UL Listed Under Recognized Component Index, File Number E95060
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](#) or your local Diodes representative.**

<https://www.diodes.com/quality/product-definitions/>

GBJ



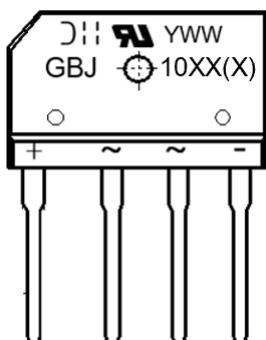
Ordering Information (Note 3)

Orderable Part Number	Package	Packing	
		Qty.	Carrier
GBJ10005-F	GBJ	15	Tube
GBJ1001-F	GBJ	15	Tube
GBJ1002-F	GBJ	15	Tube
GBJ1004-F	GBJ	15	Tube
GBJ1006-F	GBJ	15	Tube
GBJ1008-F	GBJ	15	Tube
GBJ1010-F	GBJ	15	Tube

Notes:

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information



GBJ10XX = Product Type Marking Code, ex: GBJ1001, GBJ1002, GBJ1004, GBJ1006, GBJ1008, GBJ1010
 GBJ10XXX = Product Type Marking Code, ex: GBJ10005
 DII = Manufacturer's Code Marking
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 6 = 2026)
 WW = Week Code (01 to 53)

Maximum Ratings (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Characteristic	Symbol	GBJ10005	GBJ1001	GBJ1002	GBJ1004	GBJ1006	GBJ1008	GBJ1010	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	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 Forward Rectified Output Current @ $T_c = +110^\circ\text{C}$	I_o				10				A
Non-Repetitive Peak Forward Surge Current, 8.3ms Single Half-Sine Wave Superimposed on Rated Load	I_{FSM}				170				A
I^2t Rating for Fusing ($t = 8.3\text{ms}$)	I^2t			120					A^2s
Operating and Storage Temperature Range	T_J, T_{STG}				-55 to +150				$^\circ\text{C}$

Electrical Characteristics (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Characteristic	Test Conditions		Symbol	Min	Typ	Max	Unit
Breakdown Voltage	$I_R = 10\mu\text{A}$	$T_A = +25^\circ\text{C}$	V_B	50/100/200/400 /600/800/1000	—	—	V
Forward Voltage	$I_F = 5.0\text{A}$	$T_A = +25^\circ\text{C}$	V_F	—	—	1.05	V
Leakage Current	V_R at Rated	$T_c = +25^\circ\text{C}$	I_R	—	—	10 500	μA
Typical Total Capacitance per Element (Note 4)			C_T	55			pF

Thermal Characteristics

Characteristic	Symbol	Typ	Unit
Typical Thermal Resistance (Note 5)	$R_{\theta JC}$	1.4	$^\circ\text{C/W}$

Notes: 4. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

5. Thermal resistance from junction to case per element. Unit mounted on 150mm x 150mm x 1.6mm copper plate heatsink.

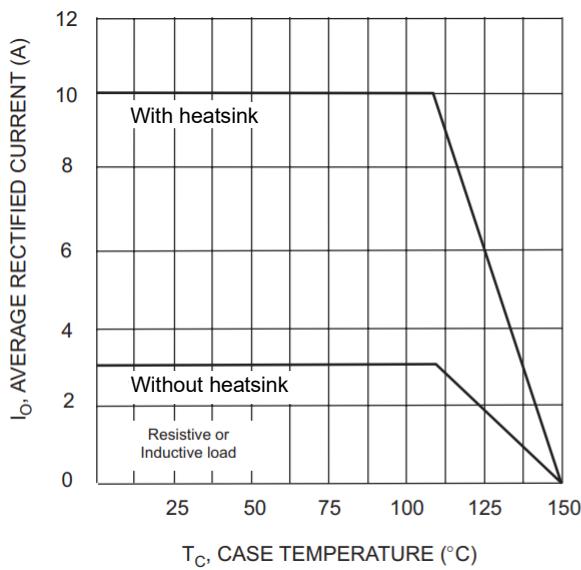


Fig. 1 Forward Current Derating Curve

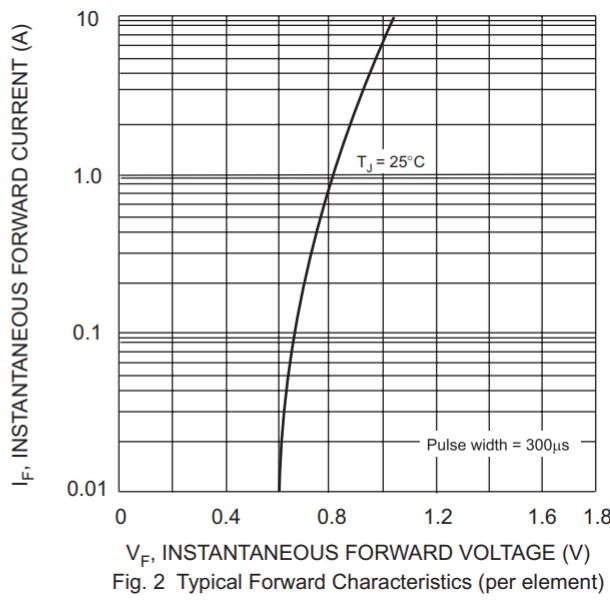


Fig. 2 Typical Forward Characteristics (per element)

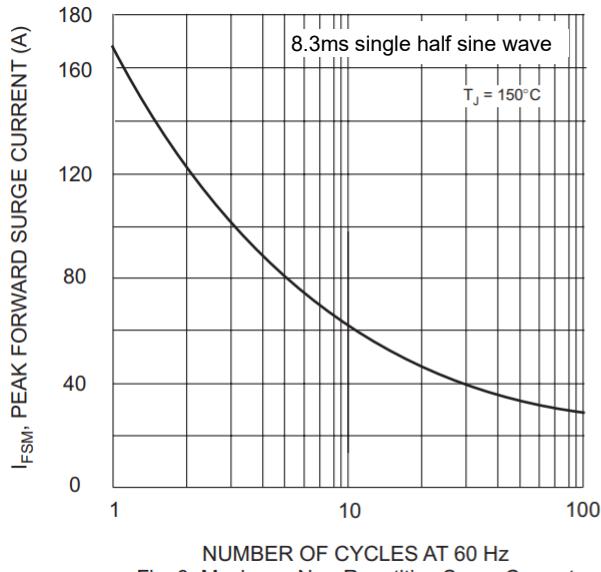


Fig. 3 Maximum Non-Repetitive Surge Current

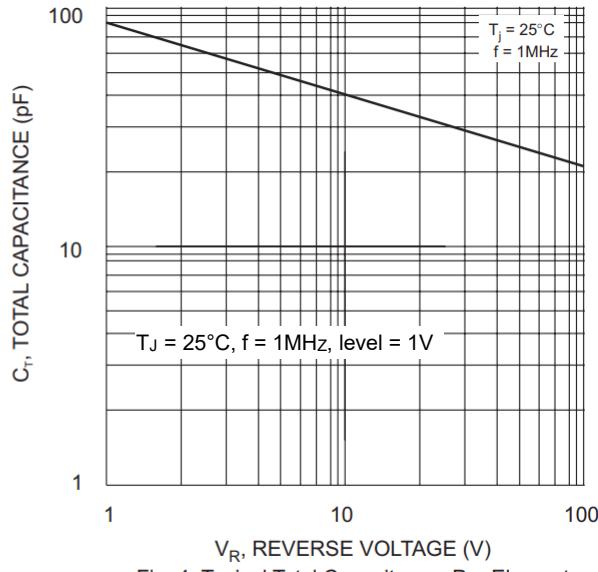


Fig. 4 Typical Total Capacitance, Per Element

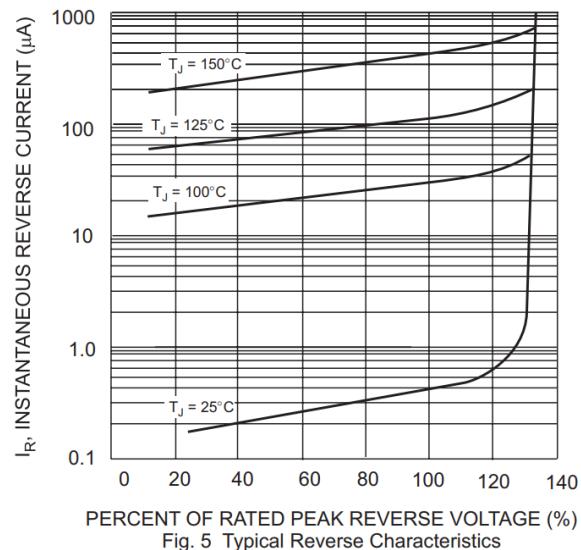
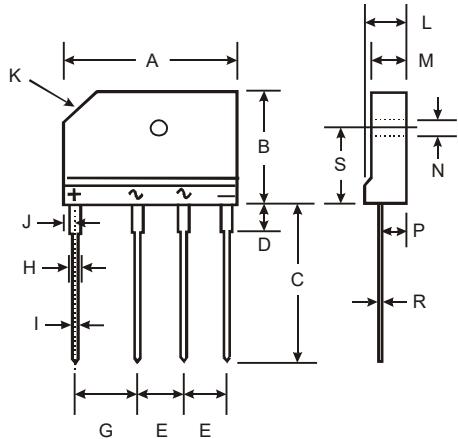


Fig. 5 Typical Reverse Characteristics

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

GBJ



GBJ		
Dim	Min	Max
A	29.70	30.30
B	19.70	20.30
C	17.00	18.00
D	3.80	4.20
E	7.30	7.70
G	9.80	10.20
H	2.00	2.40
I	0.90	1.10
J	2.30	2.70
K	3.0 X 45°	
L	4.40	4.80
M	3.40	3.80
N	3.10	3.40
P	2.50	2.90
R	0.60	0.80
S	10.80	11.20

All Dimensions in mm

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