

Product Summary

V_{RRM} (V)	I_F (A)	V_F Max (V) @ $I_F = 2.0A$	I_R Max (μ A)
50/100/200/400/600 /800/1000	4.0	1.0	5.0

Mechanical Data

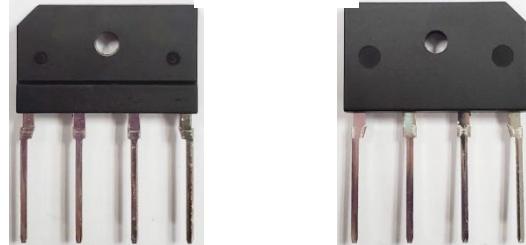
- Package: KBJ
- Package Material: Molded Plastic. UL Flammability Classification 94V-0
- Terminals: Finish – Tin. Plated Leads, Solderable per MIL-STD-202, Method 208 (E3)
- Polarity: Molded on Body
- Mounting: Through Hole for #6 Screw
- Mounting Torque: 5.0 in-lbs Maximum
- Marking: Type Number
- Weight: 4.6 grams (Approximate)

Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of 1500V RMS
- Low Reverse Leakage Current
- Surge Overload Rating to 120A 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/>

KBJ



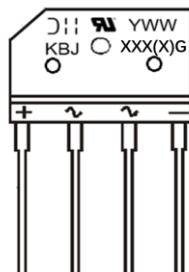
Ordering Information (Note 3)

Orderable Part Number	Package	Packing	
		Qty.	Carrier
KBJ4005G	KBJ	20	Tube
KBJ401G	KBJ	20	Tube
KBJ402G	KBJ	20	Tube
KBJ404G	KBJ	20	Tube
KBJ406G	KBJ	20	Tube
KBJ408G	KBJ	20	Tube
KBJ410G	KBJ	20	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



KBJXXXG = Product Type Marking Code, ex: KBJ401G, KBJ402G, KBJ404G, KBJ406G, KBJ408G, KBJ410G

KBJXXX(X)G = Product Type Marking Code, ex: KBJ4005G

DII = Manufacturer's Code Marking

YWW = Date Code Marking

Y = Last Digit of Year (ex: 5 = 2025)

WW = Week Code (01 to 53)

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

Characteristic	Symbol	KBJ4 005G	KBJ4 01G	KBJ4 02G	KBJ4 04G	KBJ4 06	KBJ4 08G	KBJ4 10G	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Average Rectified Output Current $T_J = +150^\circ\text{C}$ (Note 4)	$I_{F(AV)}$				4.0				A
Peak Forward Surge Current 8.3ms Single Half Sine Wave $T_J = +25^\circ\text{C}$	I_{FSM}				120				A
I^2t Rating for Fusing ($t = 8.3\text{ms}$)	I^2t				60				A^2s
Operating Temperature Range	T_J				-55 to +150				$^\circ\text{C}$
Storage Temperature Range	T_{STG}				-55 to +150				$^\circ\text{C}$

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

Characteristic	Test Condition	Symbol	Max	Unit
Forward Voltage	$I_F = 2.0\text{A}$ $T_J = +25^\circ\text{C}$	V_F	1.0	V
Leakage Current	V_R at Rated $T_J = +25^\circ\text{C}$ $T_J = +125^\circ\text{C}$	I_R	5.0 500	μA
Typical Junction Capacitance (Note 5)		C_T	40	pF

Thermal Characteristics

Characteristic	Symbol	Typ	Unit
Typical Thermal Resistance (Note 4)	$R_{\theta JC}$	5.5	$^\circ\text{C}/\text{W}$

Notes: 4. Thermal resistance from junction to case per element. Unit mounted on 75mm x 75mm x 1.6mm aluminum plate heatsink.
5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

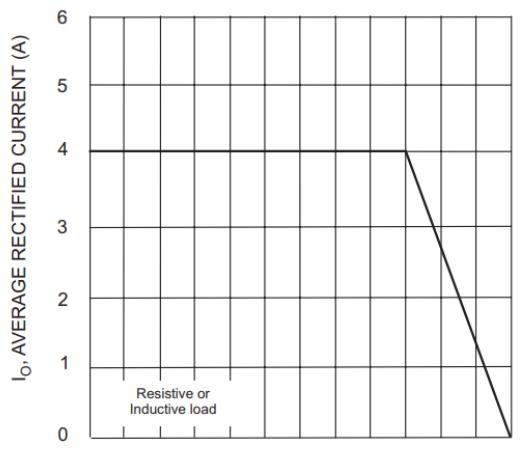


Fig. 1 Forward Current Derating Curve

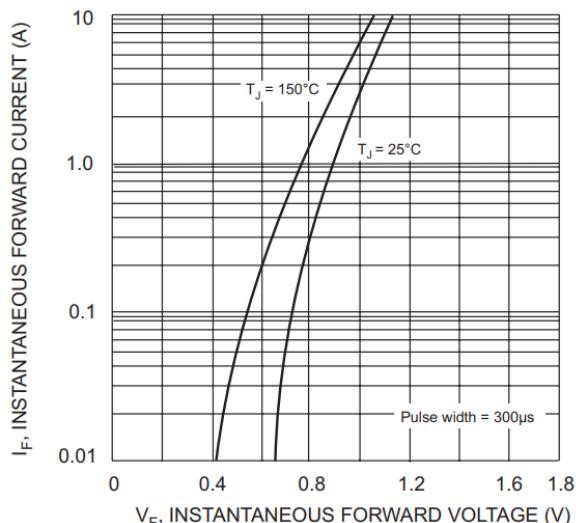


Fig. 2 Typical Forward Characteristics

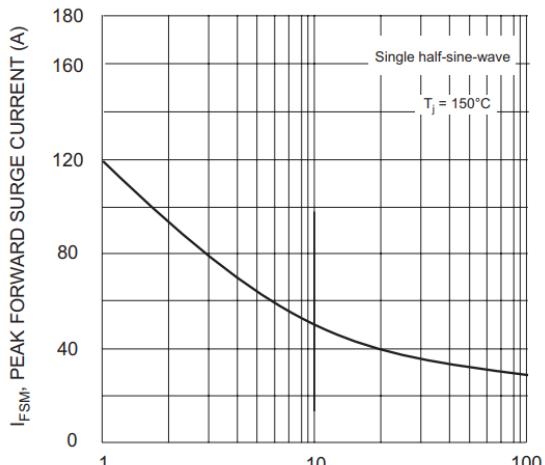


Fig. 3 Max Non-Repetitive Surge Current

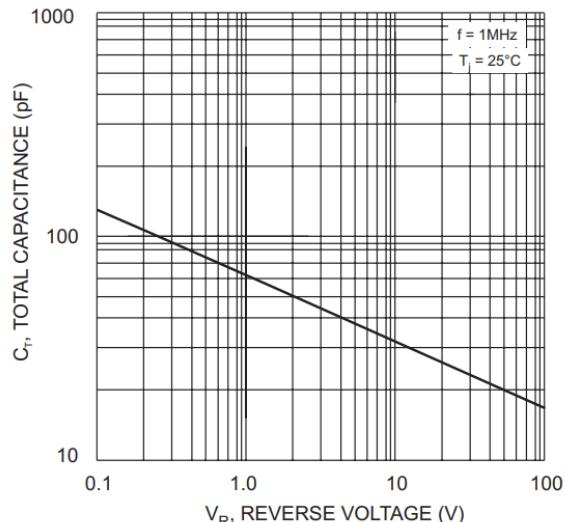


Fig. 4 Typical Total Capacitance, Per Element

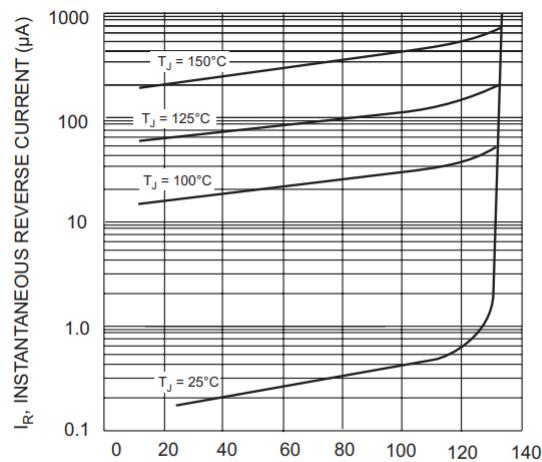


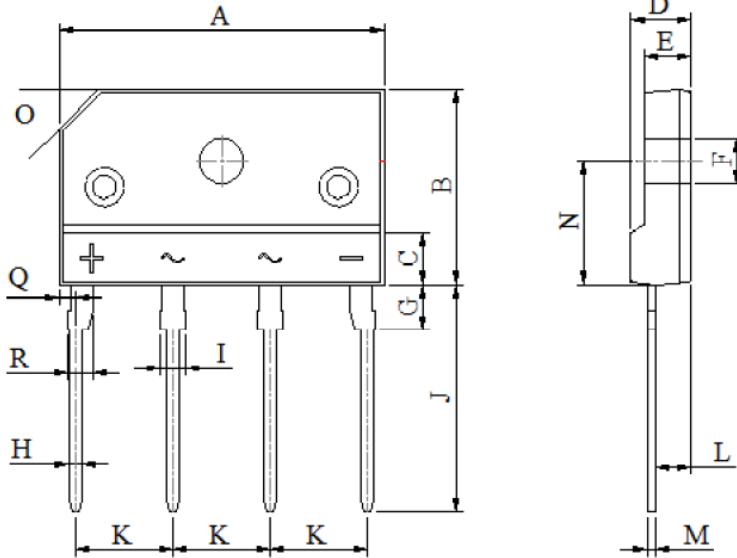
Fig. 5 Typical Reverse Characteristics

Package Outline Dimensions

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

KBJ

Unit: mm



KBJ		
DIM.	MIN.	MAX.
A	24.80	25.20
B	14.70	15.30
C	3.90	4.10
D	4.40	4.80
E	3.40	3.80
F	3.10Ø	3.40Ø
G	3.30	3.70
H	0.90	1.10
I	1.50	1.90
J	17.20	17.80
K	7.30	7.70
L	2.50	2.90
M	0.60	0.80
N	9.30	9.70
O	3.0x45°	
Q	1.05	1.45
R	1.70	2.10

All Dimensions in millimeter

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