KBJ6005G - KBJ610G

6.0A STANDARD RECOVERY BRIDGE RECTIFIER

Product Summary

V_{RRM} (V)	I_O (A)	V_F Max (V) @ I_F = 3A	I_R Max (μA)
50/100/200/ 400/600/800/ 1000	6.0	1.0	5.0

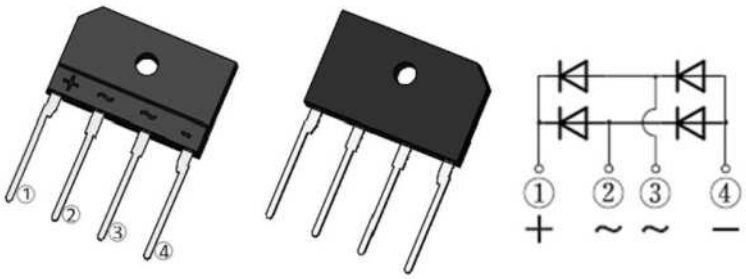
Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of 2500V_{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/**

Mechanical Data

- Package: KBJ
- Package: Material: Molded Plastic. UL Flammability Classification Rating 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: 4.3 grams (Approximate)

KBJ



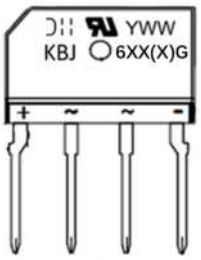
Ordering Information (Note 3)

Orderable Part Number	Package	Packing	
		Qty.	Carrier
KBJ6005G	KBJ	20	Tube
KBJ601G	KBJ	20	Tube
KBJ602G	KBJ	20	Tube
KBJ604G	KBJ	20	Tube
KBJ606G	KBJ	20	Tube
KBJ608G	KBJ	20	Tube
KBJ610G	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/.

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Marking Information



KBJ6XXG = Product Type Marking Code, ex: KBJ601G, KBJ602G, KBJ604G, KBJ606G, KBJ608G, KBJ610G
KBJ6XXXG= Product Type Marking Code, ex: KBJ6005G
= 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°C, unless otherwise specified.

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

Characteristic	Symbol	KBJ 6005G	KBJ 601G	KBJ 602G	KBJ 604G	KBJ 606G	KBJ 608G	KBJ 610G	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} 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 Rectified Output Current @ T_C = +110°C	I_O	6.0							A
Non-Repetitive Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	170							A
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

Electrical Characteristics @T_A = +25°C, unless otherwise specified.

Characteristic		Symbol	Value	Unit
Forward Voltage Per Element	@ I_F = 3.0A	V_F	1.0	V
Peak Reverse Current at Rated DC Blocking Voltage	@ T_C = +25°C @ T_C = +125°C	I_R	5.0 500	μA
I^2t Rating for Fusing (t < 8.3ms) (Note 4)		I^2t	120	A^2s
Typical Total Capacitance Per Element (Note 5)		C_T	80	pF

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance (Note 6)	$R_{\theta JC}$	1.5	°C/W

Notes: 4. Non-repetitive, for t > 1ms and < 8.3ms.
5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
6. Thermal resistance from junction to case per element. Unit mounted on 75mm x 75mm x 1.6mm aluminum plate heatsink.

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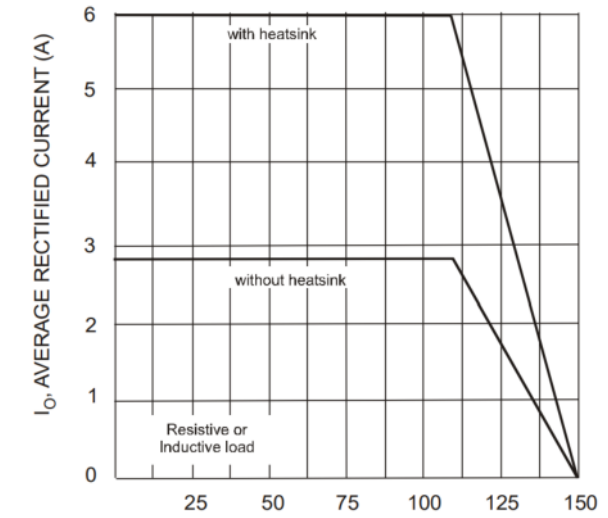


Fig. 1 Forward Current Derating Curve

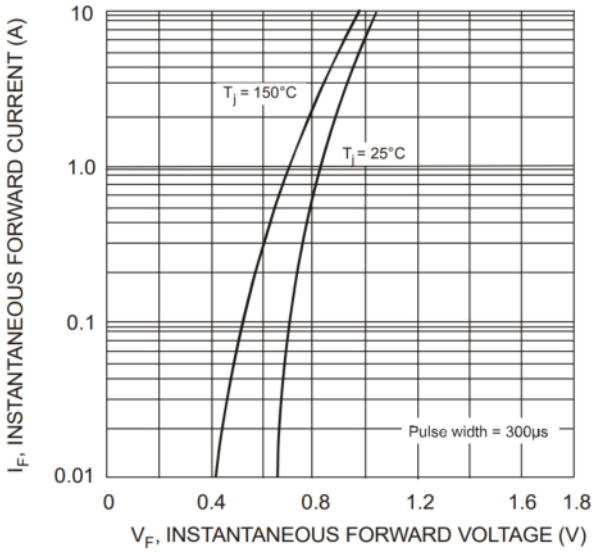


Fig. 2 Typical Forward Characteristics

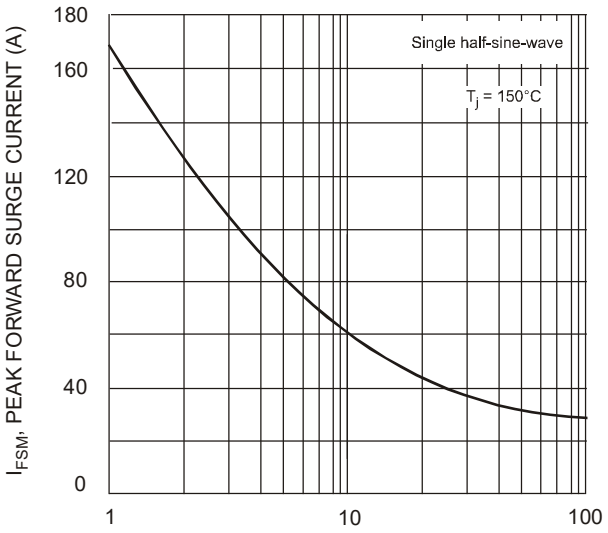


Fig. 3 Max Non-Repetitive Surge Current

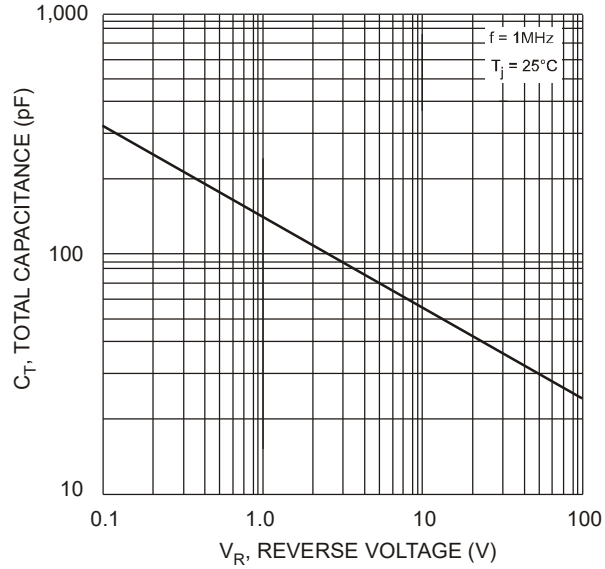


Fig. 4 Typical Total Capacitance, Per Element

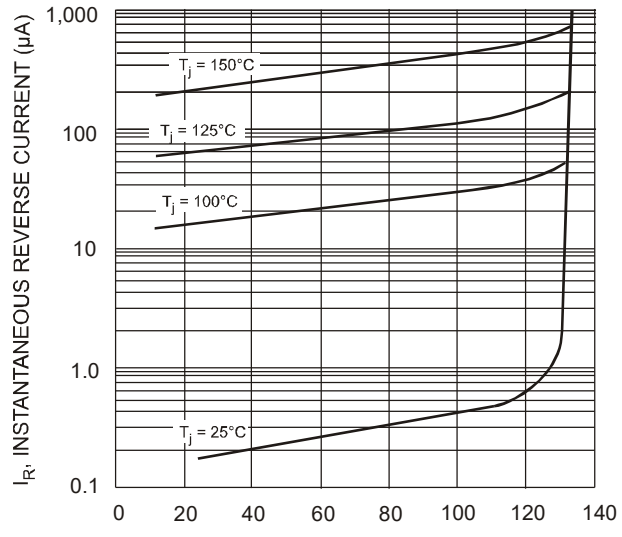


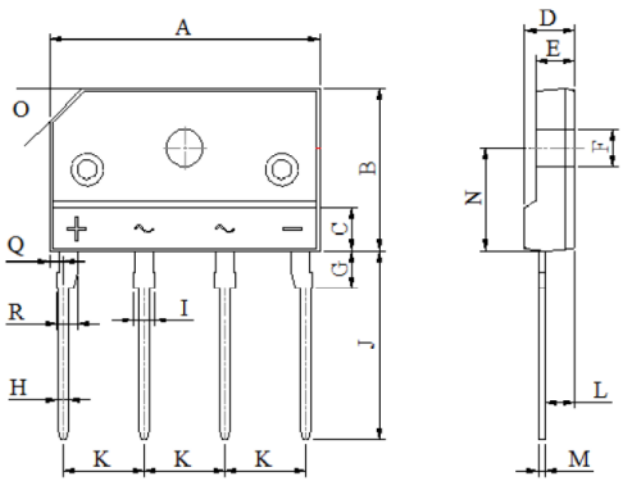
Fig. 5 Typical Reverse Characteristics

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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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