

Product Summary

V _{RRM} (V)	I _F (A)	V _F Max (V) @ I _F = 15A	I _R Max (μA)
600 800 1000	30	1.05	10

Mechanical Data

- Package: KBJ
- Package Material: Molded Plastic, "Green" Molding Compound
UL Flammability Classification Rating 94V-0
- Terminals: Finish – Matte Tin Plated Leads, Solderable per
MIL-STD-202, Method 208 (e3)
- Weight: 4.6 grams (Approximate)
- Mounting Position: Any

Features

- Glass Passivated Die Construction
- Ideal for Printed Circuit Board
- Reliable Low Cost Construction Utilizing Molded Plastic Technique
- UL Recognized File # E94661
- Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- Halogen and Antimony Free. "Green" Device (Note 3)**
- 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](https://www.diodes.com/quality/product-definitions/) or your local Diodes representative.**

Applications

- TV power
- Game power
- PC power

KBJ

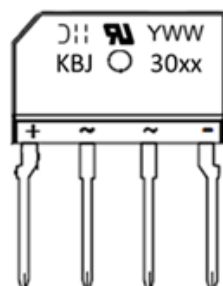


Ordering Information (Note 4)

Part Number	Package	Packing	
		Qty.	Carrier
KBJ3006	KBJ	20pcs	Tube
KBJ3008	KBJ	20pcs	Tube
KBJ3010	KBJ	20pcs	Tube

- Notes:
- EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
 - 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.
 - Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 - For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information



KBJ30xx = Product Type Marking Code
 DII = Manufacturer's Code Marking
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 3 = 2023)
 WW = Week Code (01 to 53)

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic			Symbol	KBJ3006	KBJ3008	KBJ3010	Unit
Maximum Repetitive Peak Reverse Voltage			V _{RRM}	600	800	1000	V
Average Rectified Output Current	With Heatsink	T _C = +120°C	I _{F(AV)}	30			A
	Without Heatsink	T _C = +125°C		3.2			
Peak Forward Surge Current 8.3ms Single Half Sine Wave	T _J = +25°C		I _{FSM}	350			A
	T _J = +125°C			300			
I ² t Rating for Fusing (t = 8.3ms)			I ² t	508			A ² s
Operating Temperature Range			T _J	-55 to +150			°C
Storage Temperature Range			T _{STG}	-55 to +150			°C

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

Characteristic	Test Condition		Symbol	Value	Unit
Maximum Forward Voltage	I _F = 15.0A	T _J = +25°C	V _F	1.05	V
Maximum Leakage Current	V _R at Rated	T _J = +25°C T _J = +125°C	I _R	10.0 500	μA
Typical Junction Capacitance (Note 5)			C _T	119	pF

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance (Without Heatsink)	R _{θJC}	6.6	°C/W
	R _{θJL}	7.8	
	R _{θJA}	30.3	
Typical Thermal Resistance (Note 6)	R _{θJC}	0.6	°C/W
	R _{θJL}	1.6	
	R _{θJA}	2.5	

Notes: 5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
6. Thermal resistance junction to case and lead. Unit mounted on cooler -13°C rated current.

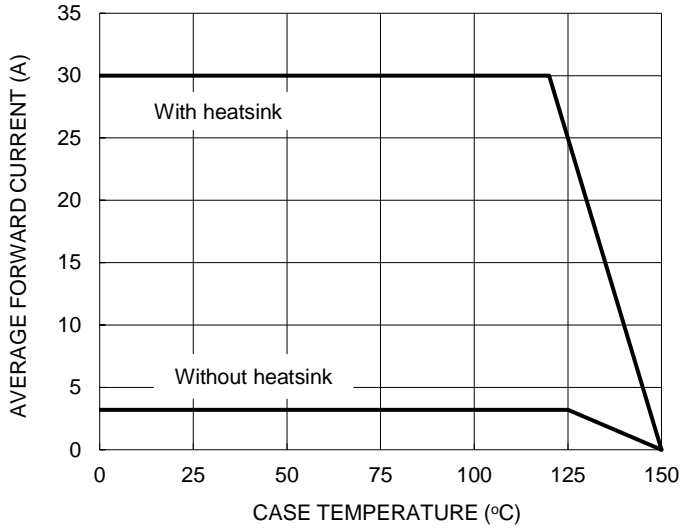


Figure 1. Forward Current Derating Curve

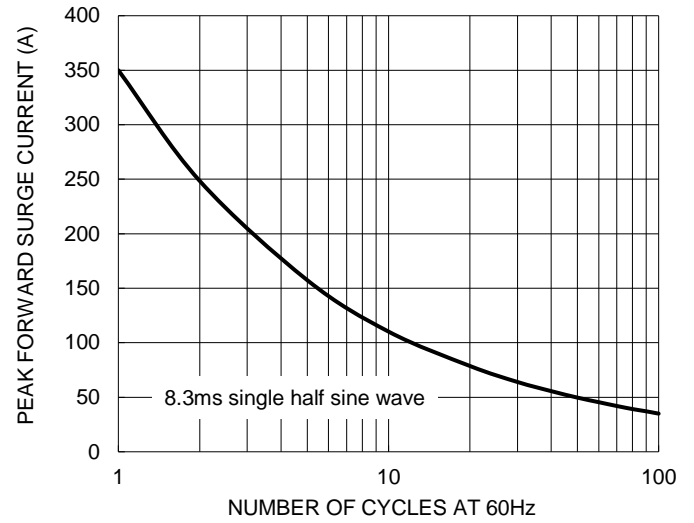


Figure 2. Maximum Non-Repetitive Surge Current

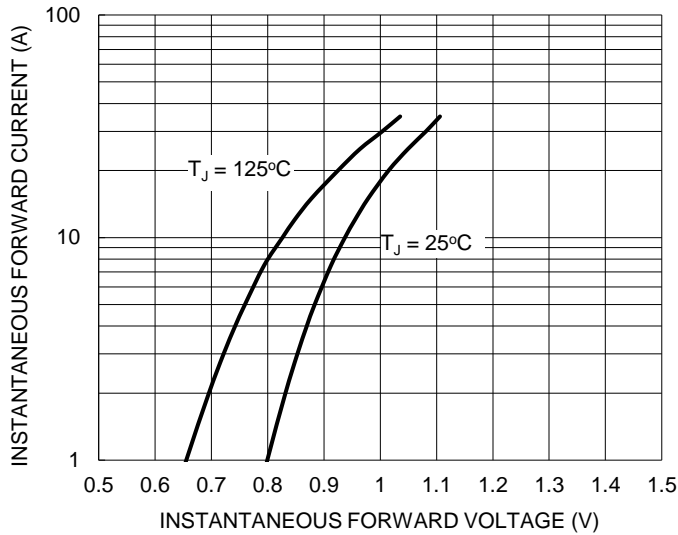


Figure 3. Typical Forward Characteristics

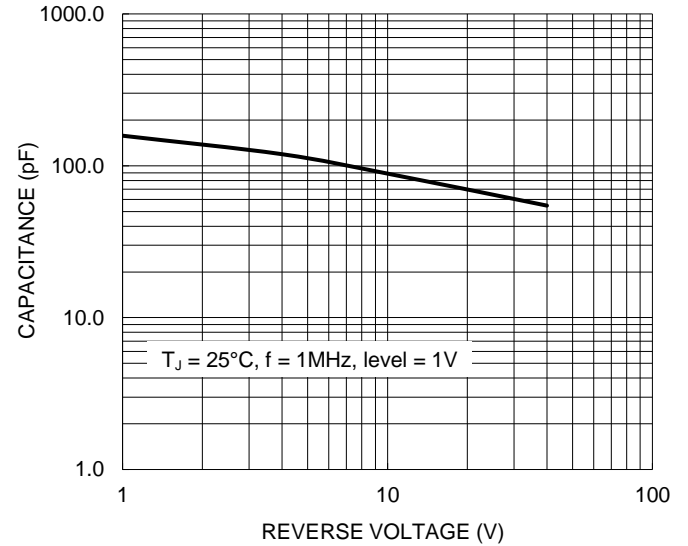


Figure 4. Typical Junction Capacitance

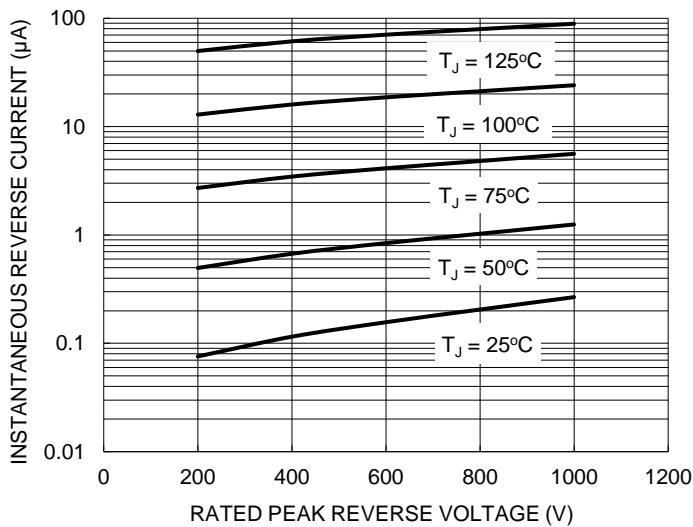
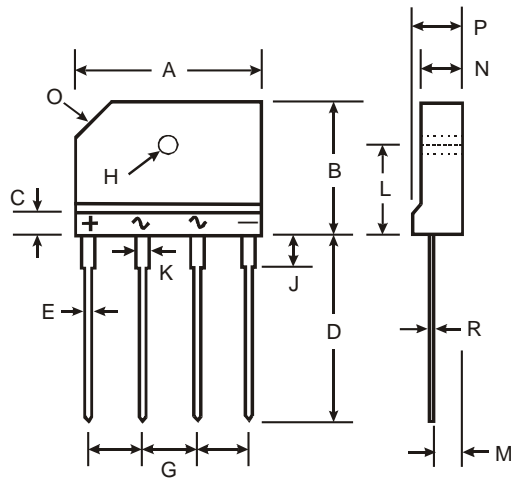


Figure 5. Typical Reverse Characteristics

Package Outline Dimensions

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

KBJ



KBJ		
Dim	Min	Max
A	24.80	25.20
B	14.70	15.30
C	3.90	4.10
D	17.20	17.80
E	0.90	1.10
G	7.30	7.70
H	3.10 \varnothing	3.40 \varnothing
J	3.30	3.70
K	1.50	1.90
L	9.30	9.70
M	2.50	2.90
N	3.40	3.80
O	3.0 x 45°	
P	4.40	4.80
R	0.60	0.80
All Dimensions in mm		

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