

Product Summary

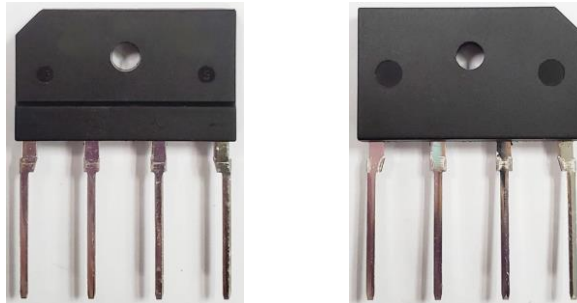
V _{RRM} (V)	I _F (A)	V _F Max (V) @ I _F = 5.0A	I _R Max (μA)
600, 800, 1000	10	1.1	5

Mechanical Data

- Package: KBJ
- Package Material: Plastic Material, UL Flammability Classification 94V-0
- Terminals: Finish – Matte Tin Plated Leads, Solderable Per MIL-STD-202, Method 208 Ⓔ3
- Polarity Indicator: As Marked on The Body
- Weight: 4.6 grams (Approximate)
- Mounting Position: Any

Features

- Glass Passivated Die Construction
- Rating to 1000V PRV
- 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-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](mailto:contact@diodes.com) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

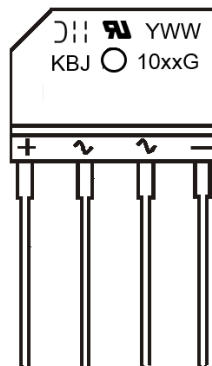


Ordering Information (Note 4)

Part Number	Qualification	Package	Packing	
			Qty.	Carrier
KBJ1006G-TU	Commercial	KBJ	20	Tube
KBJ1008G-TU	Commercial	KBJ	20	Tube
KBJ1010G-TU	Commercial	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. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information



KBJ10xxG = Product Type Marking Code
 J11 = Manufacturer's Code Marking
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 1 = 2021)
 WW = Week Code (01 to 53)

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

Characteristic	Symbol	KBJ1006G	KBJ1008G	KBJ1010G	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	600	800	1000	V
Average Rectified Output Current @ $T_C = +110^\circ\text{C}$	$I_{F(AV)}$	With Heatsink: 10 Without Heatsink: 3.0			A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave $T_J = +25^\circ\text{C}$	I_{FSM}	170			A
I^2t Rating for Fusing ($t = 8.3\text{ms}$)	I^2t	120			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	$I_F = 5.0\text{A}$ $T_J = +25^\circ\text{C}$	V_F	1.1	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_J	45	pF

Thermal Characteristics

Characteristic	Symbol	Typ.	Unit
Typical Thermal Resistance (Note 6)	$R_{\theta JC}$	2.0	$^\circ\text{C/W}$

Notes: 5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 6. Unit mounted on 150mm * 150mm * 1.6mm cu plate heatsink.

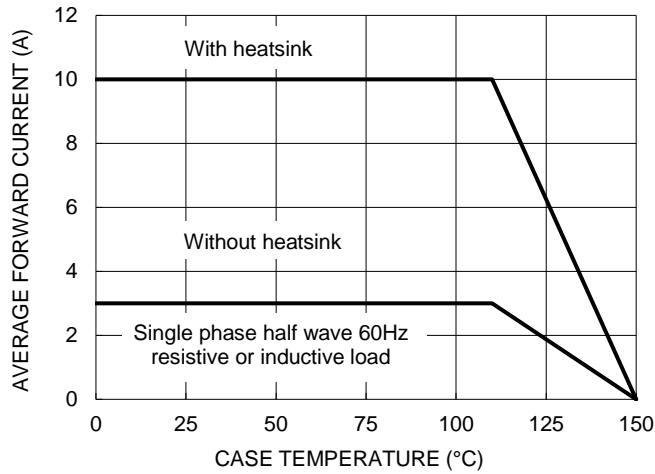


Figure 1. Forward Current Derating Curve

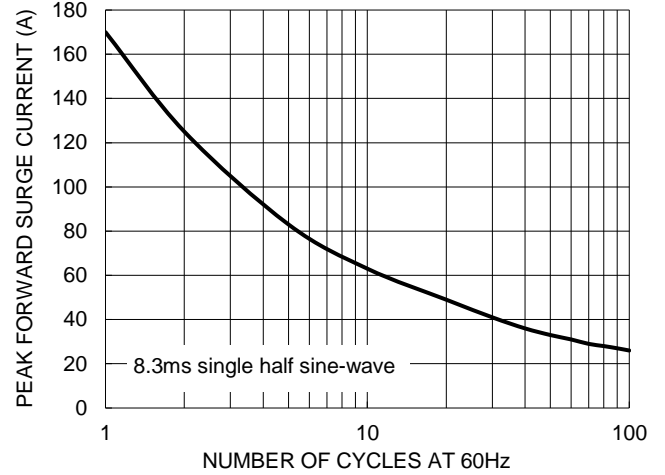


Figure 2. Maximum Non-Repetitive Surge Current

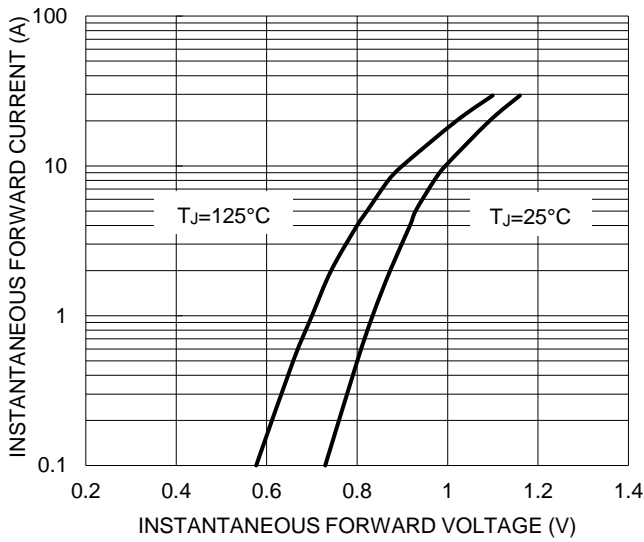


Figure 3. Typical Forward Characteristics

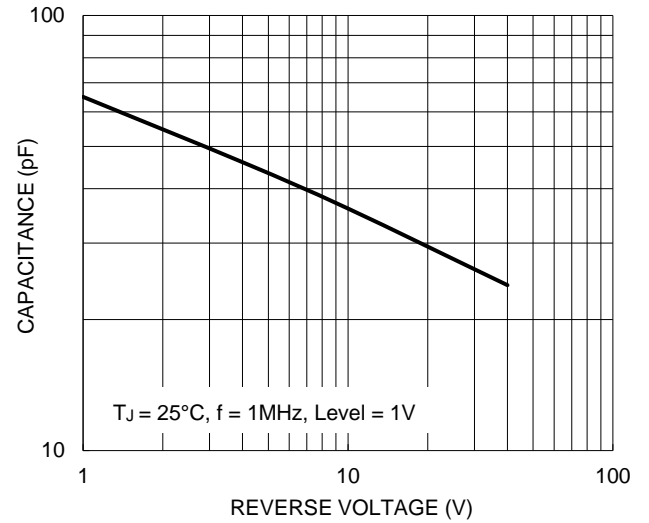


Figure 4. Typical Junction Capacitance

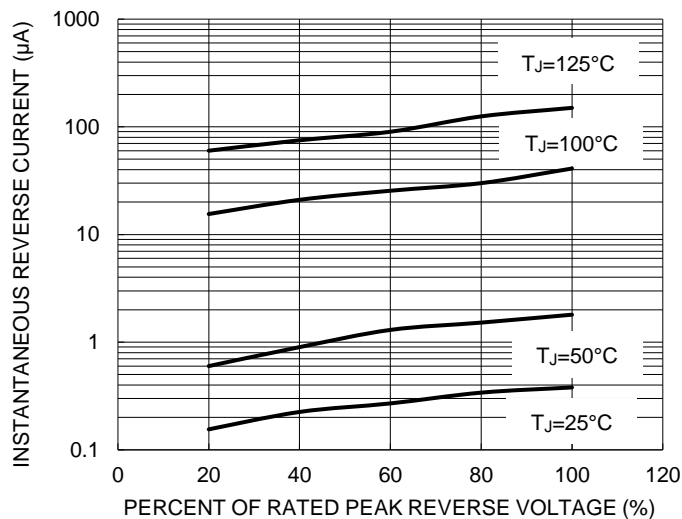
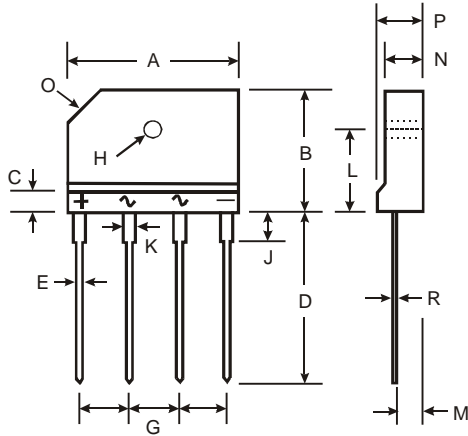


Figure 5. Typical Reverse Characteristics

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		