

Product Summary

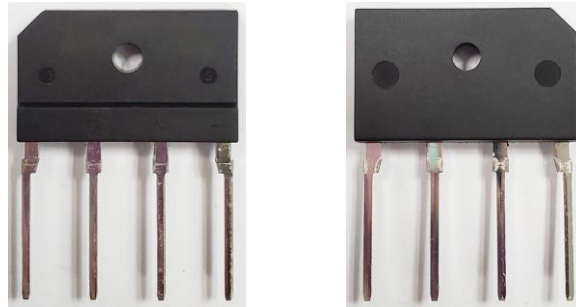
V _{RRM} (V)	I _F (A)	V _F Max (V) @ I _F = 10A	I _R Max (μA)
600	20	0.9	10

Mechanical Data

- Package: KBJ
- Package Material: Plastic Material
- Terminals: Finish – Matte Tin Plated Leads, Solderable per MIL STD-202, Method 208 Ⓢ
- Polarity Indicator: As Marked on The Body
- Weight: 4.6 grams (Approximate)
- Mounting Position: Any

Features

- Glass Passivated Die Construction
- Low-Forward Voltage Drop
- Ideal for Printed Circuit Board
- Reliable Low-Cost Construction Utilizing Molded Plastic Technique
- UL Recognized, File # E95060
- **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](mailto:contact@diodes.com) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

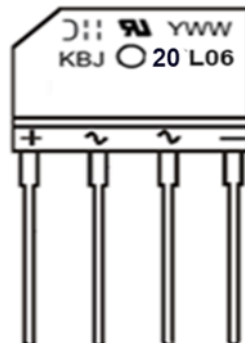
KBJ


Ordering Information (Note 4)

Orderable Part Number	Package	Packing	
		Qty.	Carrier
KBJ20L06	KBJ	20pcs	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



DII = Manufacturer's Code Marking
 KBJ20L06 = Product Type Marking Code
 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.)

Characteristic	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	600	V
Average Rectified Output Current @T _J = +150°C	I _{F(AV)}	20	A
With Heatsink Without Heatsink		4.3	
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed On Rated Load	I _{FSM}	200	A
Peak Forward Surge Current 1.0ms Single Half Sine Wave Superimposed On Rated Load		400	A
I ² t Rating for Fusing (t = 8.3ms)	I ² t	166	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	Min	Typ	Max	Unit
Breakdown Voltage	I _R = 10μA, T _J = +25°C	V _B	600	—	—	V
Forward Voltage	I _F = 10A, T _J = +25°C	V _F	—	0.86	0.9	V
Leakage Current	V _R = 600V T _J = +25°C T _J = +125°C	I _R	—	—	10 500	μA
Typical Junction Capacitance (Note 5)		C _T	180			pF

Thermal Characteristics

Characteristic	Symbol	Typ	Unit
Typical Thermal Resistance (Without Heat Sink)	R _{θJC}	6	°C/W
	R _{θJL}	9	
	R _{θJA}	28	
Typical Thermal Resistance (Notes 6 & 7)	R _{θJC}	1.5	°C/W
	R _{θJL}	2.5	
	R _{θJA}	6	

- Notes:
5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 6. Thermal resistance junction to case, lead and ambient in accordance with JESD-51.
 7. Device mounted on 200mm x 200mm x 5mm Al plate heatsink.

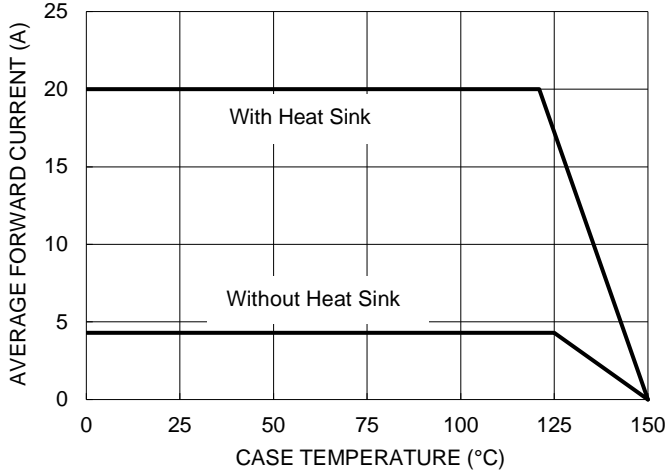


Figure 1. Forward Current Derating Curve

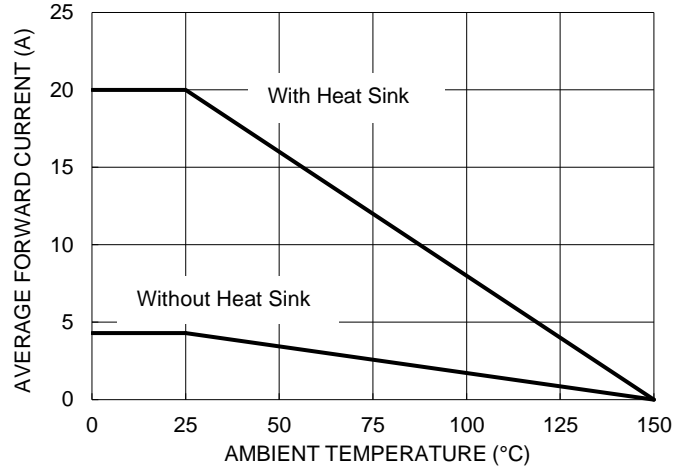


Figure 2. Forward Current Derating Curve

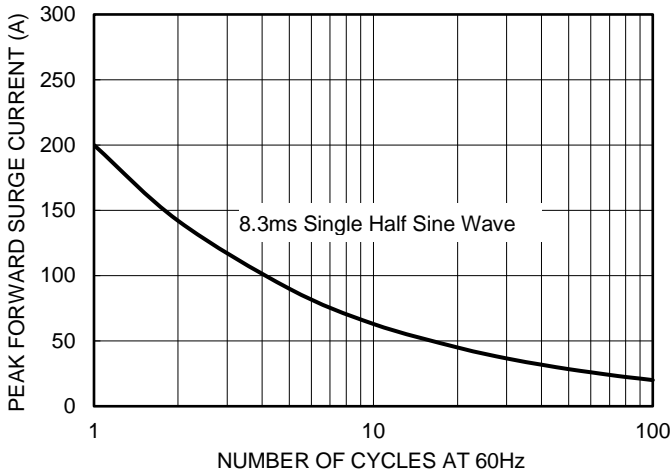


Figure 3. Maximum Non-Repetitive Surge Current

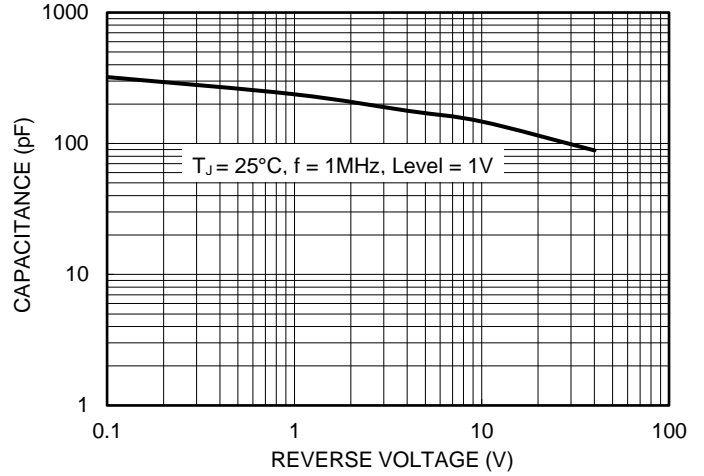


Figure 4. Typical Junction Capacitance

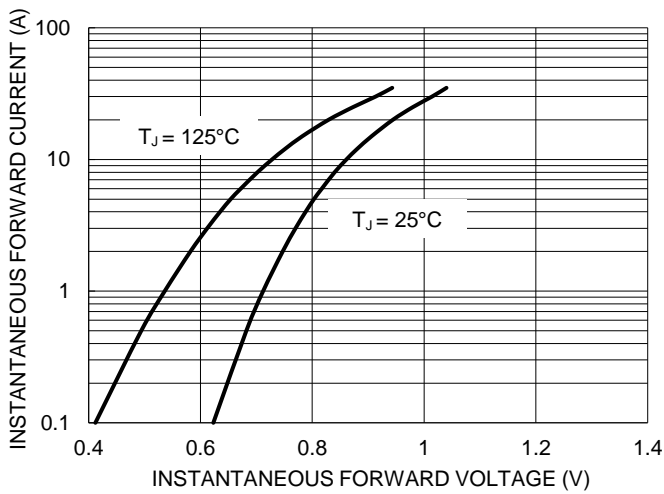


Figure 5. Typical Forward Characteristics

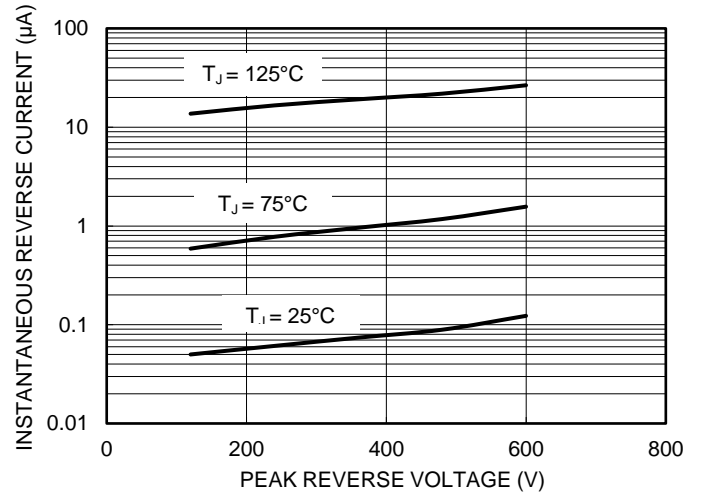


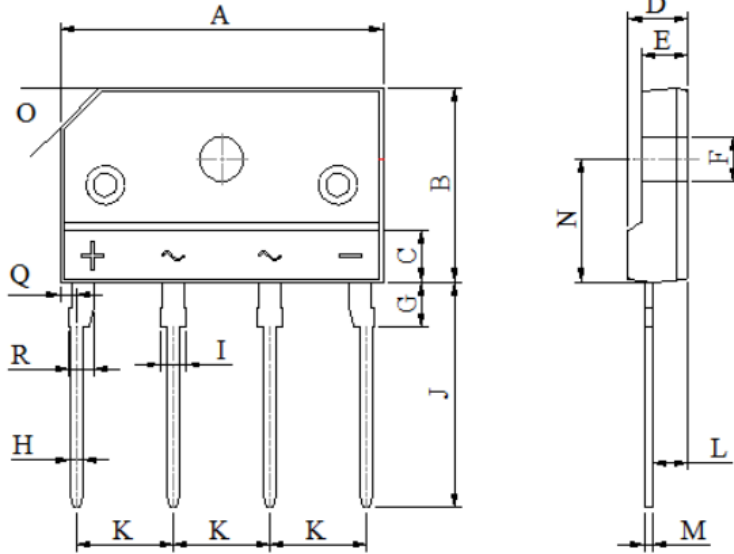
Figure 6. Typical Reverse Characteristics

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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