

## Product Summary

V <sub>RRM</sub> (V)	I <sub>F</sub> (A)	V <sub>F</sub> Max (V) @ I <sub>F</sub> = 5A	I <sub>R</sub> Max (µA) @ T <sub>J</sub> = +25°C
600	10	0.9	10

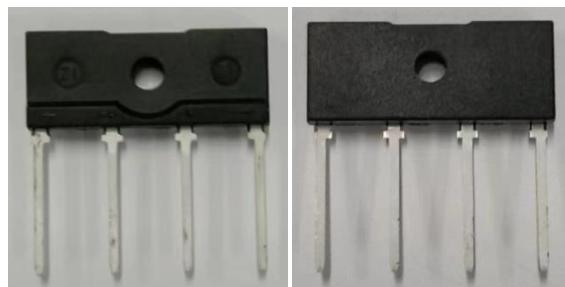
## Features

- Glass Passivation Die Construction
- Ideal for Printed Circuit Board
- High Surge Current Capability
- 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](#) or your local Diodes representative.  
<https://www.diodes.com/quality/product-definitions/>

## Mechanical Data

- Package: KBJL
- 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: 2.4 grams (Approximate)

KBJL



## Applications

- TV powers
- Game powers
- PC powers

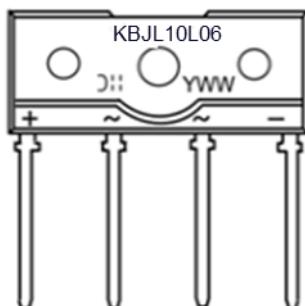
## Ordering Information (Note 4)

Orderable Part Number	Package	Packing	
		Qty.	Carrier
KBJL10L06	KBJL	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 Marking

KBJL10L06 = Product Type Marking Code

YWW = Date Code Marking

Y = Year (ex: 5 = 2025)

WW = Week (01 to 53)

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

Characteristic	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	600	V
Maximum DC Blocking Voltage	$V_{DC}$	600	V
Average Rectified Output Current	$I_{F(AV)}$	10 2.9	A
Peak Forward Surge Current 8.3ms Single Half Sine Wave, $T_J = +25^\circ\text{C}$	$I_{FSM}$	180	A
Peak Forward Surge Current 1.0ms Single Half Sine Wave, $T_J = +25^\circ\text{C}$	$I_{FSM}$	360	A
$I^2t$ Rating for Fusing ( $t = 8.3\text{ms}$ )	$I^2t$	135	$\text{A}^2\text{s}$
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	Min	Typ	Max	Unit
Breakdown Voltage	$I_R = 10\mu\text{A}$ , $T_J = +25^\circ\text{C}$	$V_B$	600	—	—	V
Maximum Forward Voltage	$I_F = 5\text{A}$ , $T_J = +25^\circ\text{C}$	$V_F$	—	0.86	0.9	V
Maximum Leakage Current	$V_R$ at 600V $T_J = +25^\circ\text{C}$ $T_J = +125^\circ\text{C}$	$I_R$	—	—	10 500	$\mu\text{A}$
Typical Junction Capacitance (Note 5)		$C_T$		95		pF

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance (Without Heatsink)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$	7.5 10.5 37.5	$^\circ\text{C}/\text{W}$
Typical Thermal Resistance (Note 6)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$	2.5 3 9.5	$^\circ\text{C}/\text{W}$

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.  
 Device mounted on 100mm x 100mm x 5mm AL heatsink.

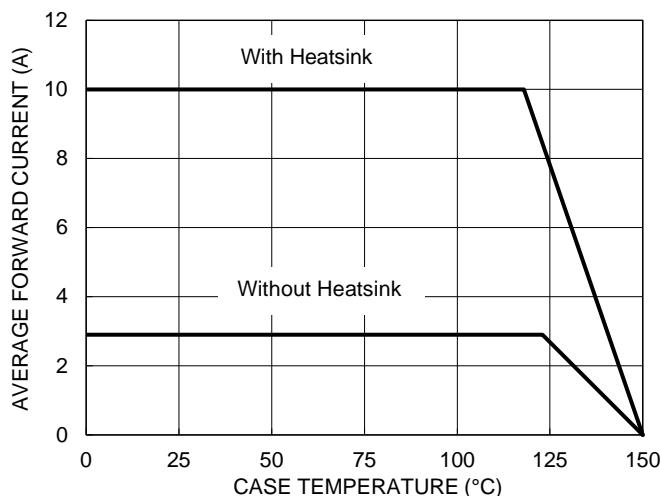


Figure 1. Forward Current Derating Curve

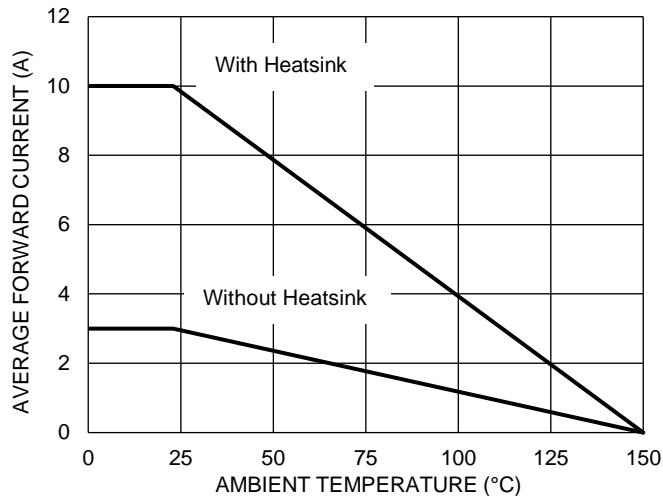


Figure 2. Forward Current Derating Curve

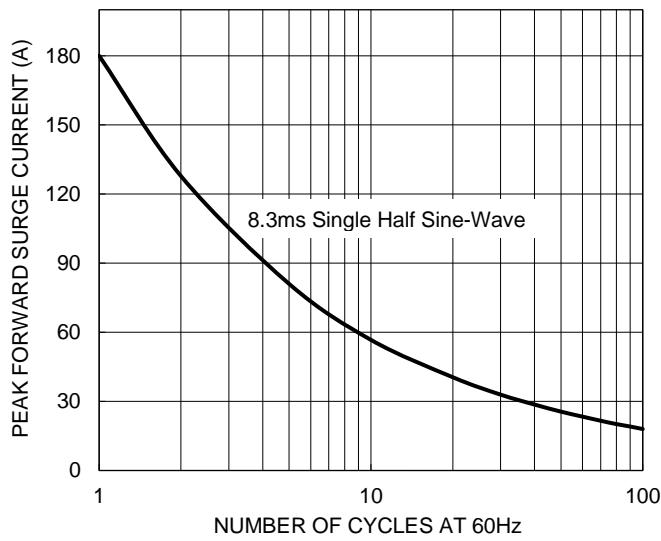


Figure 3. Maximum Non-Repetitive Surge Current

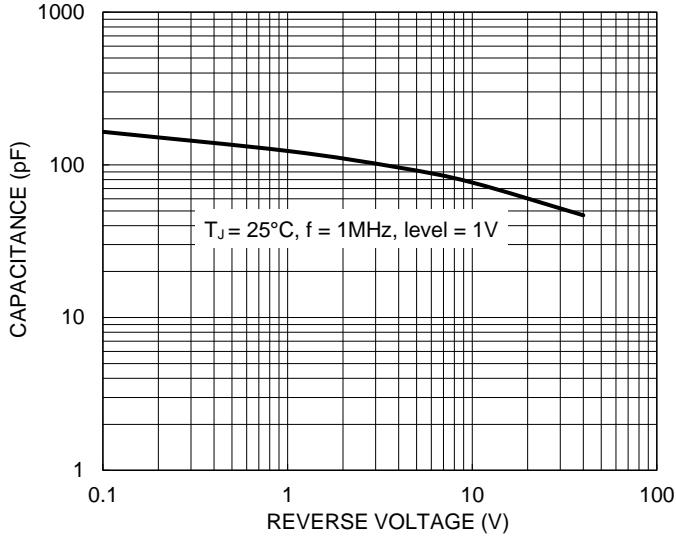


Figure 4. Typical Junction Capacitance

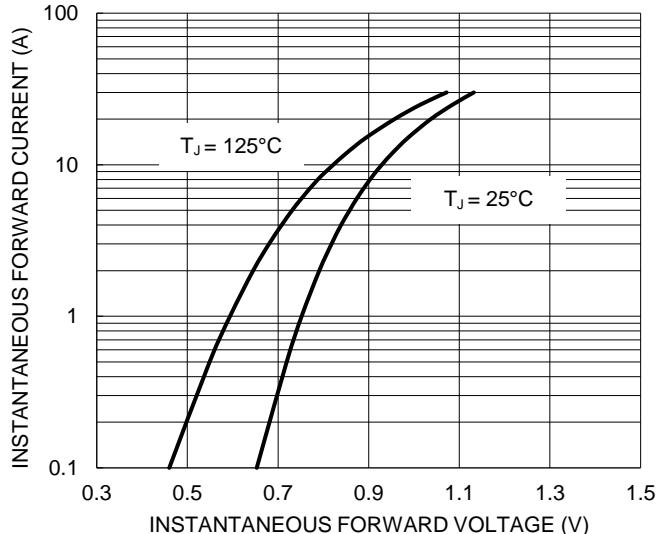


Figure 5. Typical Forward Characteristics

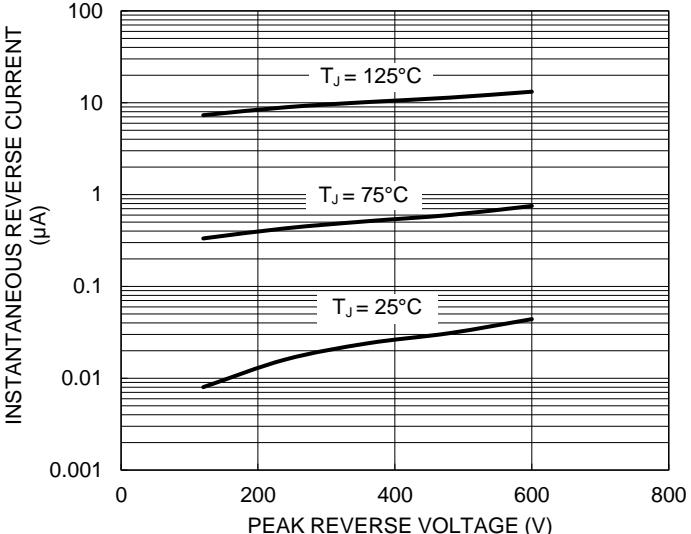
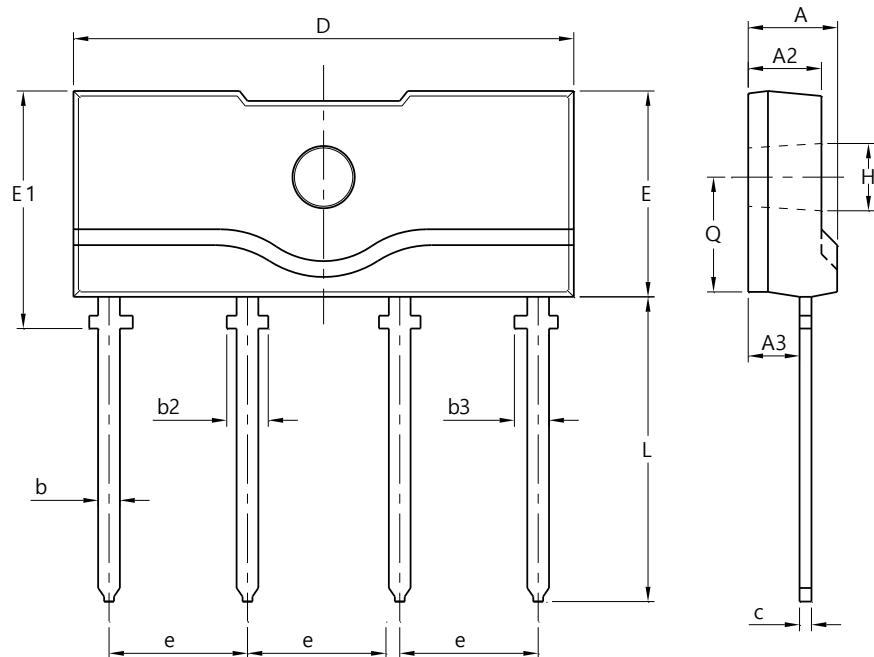


Figure 6. Typical Reverse Characteristics

## Package Outline Dimensions

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

**KBJL**



KBJL		
Dim	Min	Max
<b>A</b>	3.90	4.50
<b>A2</b>	2.90	3.90
<b>A3</b>	2.0	2.60
<b>b</b>	0.90	1.10
<b>b2</b>	2.10	2.30
<b>b3</b>	--	1.75
<b>c</b>	0.40	0.60
<b>D</b>	24.70	25.30
<b>E</b>	10.0	10.60
<b>E1</b>	11.40	12.00
<b>e</b>	7.30	7.70
<b>H</b>	3.10	3.40
<b>L</b>	14.60	15.20
<b>Q</b>	5.40	6.00
All Dimensions in mm		

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