

Product Summary

V _{RRM} (V)	I _F (A)	V _F Max (V) @ I _F = 5A	I _R Max (μA) @ T _J = +25°C
600	10	0.9	10

Features

- Glass Passivation Die Construction
- Ideal for Printed Circuit Board
- High Surge Current Capability
- **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/>

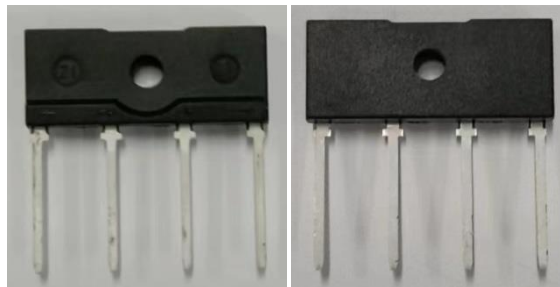
Mechanical Data

- 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)

Applications

- TV powers
- Game powers
- PC powers

KBJL

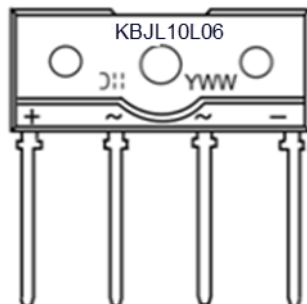


Ordering Information (Note 4)

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



⑆ = Manufacturer's Marking
 KBJL10L06 = Product Type Marking Code
 YWW = Date Code Marking
 Y = Year (ex: 4 = 2024)
 WW = Week (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
Maximum DC Blocking Voltage	V _{DC}	600	V
Average Rectified Output Current	I _{F(AV)}	10	A
		2.9	
Peak Forward Surge Current 8.3ms Single Half Sine Wave, T _J = +25°C	I _{FSM}	180	A
Peak Forward Surge Current 1.0ms Single Half Sine Wave, T _J = +25°C	I _{FSM}	360	A
I ² t Rating for Fusing (t = 8.3ms)	I ² t	135	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
Maximum Forward Voltage	I _F = 5A, T _J = +25°C	V _F	—	0.86	0.9	V
Maximum Leakage Current	V _R at 600V T _J = +25°C T _J = +125°C	I _R	—	—	10 500	μA
Typical Junction Capacitance (Note 5)		C _T	95			pF

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance (Without Heatsink)	R _{θJC}	7.5	°C/W
	R _{θJL}	10.5	
	R _{θJA}	37.5	
Typical Thermal Resistance (Note 6)	R _{θJC}	2.5	°C/W
	R _{θJL}	3	
	R _{θJA}	9.5	

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.

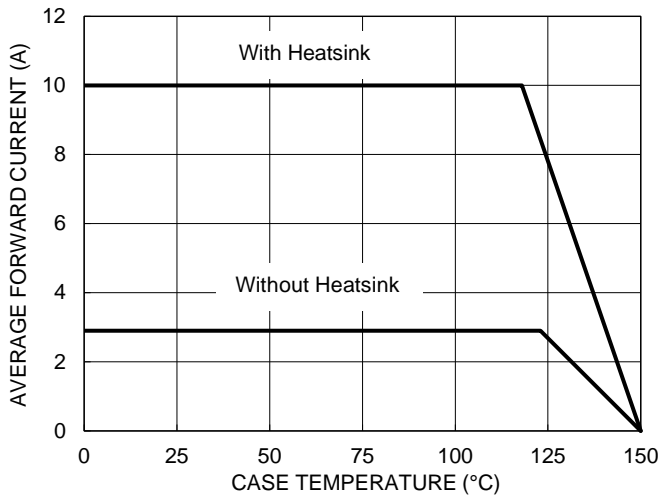


Figure 1. Forward Current Derating Curve

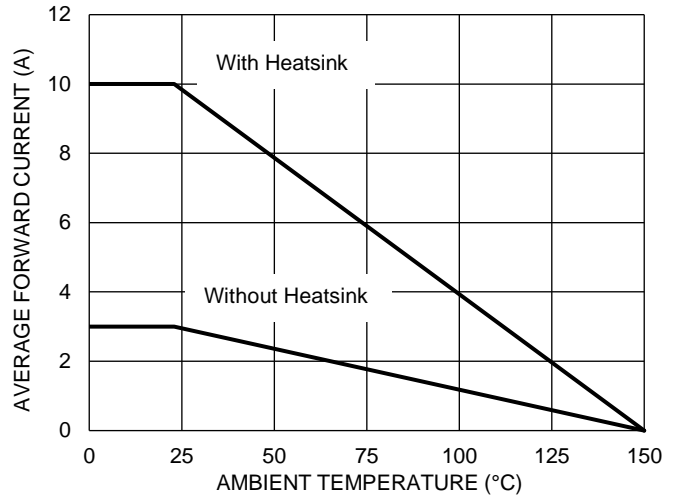


Figure 2. Forward Current Derating Curve

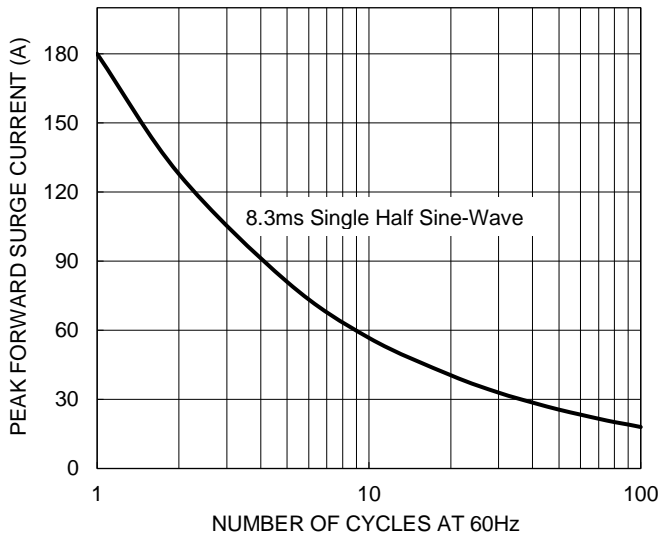


Figure 3. Maximum Non-Repetitive Surge Current

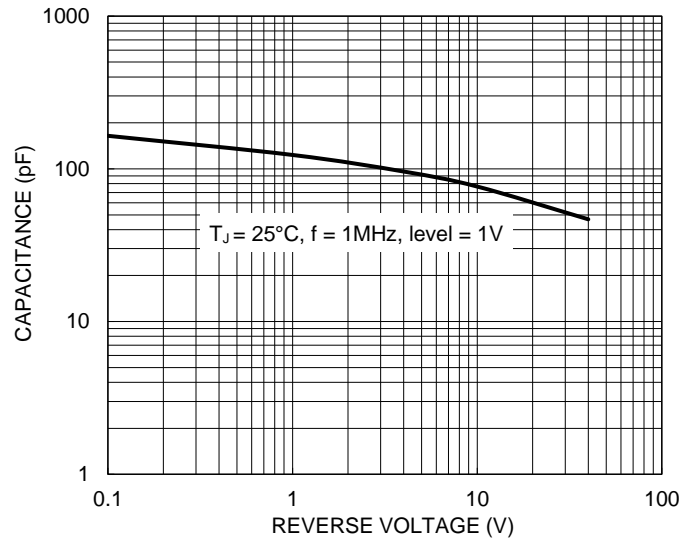


Figure 4. Typical Junction Capacitance

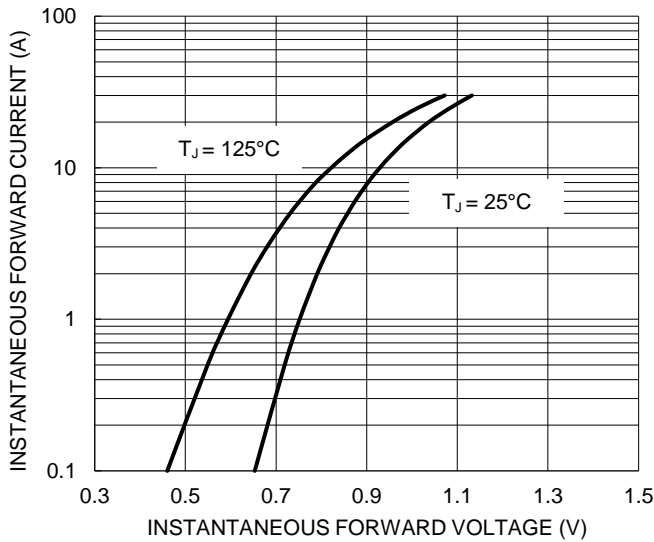


Figure 5. Typical Forward Characteristics

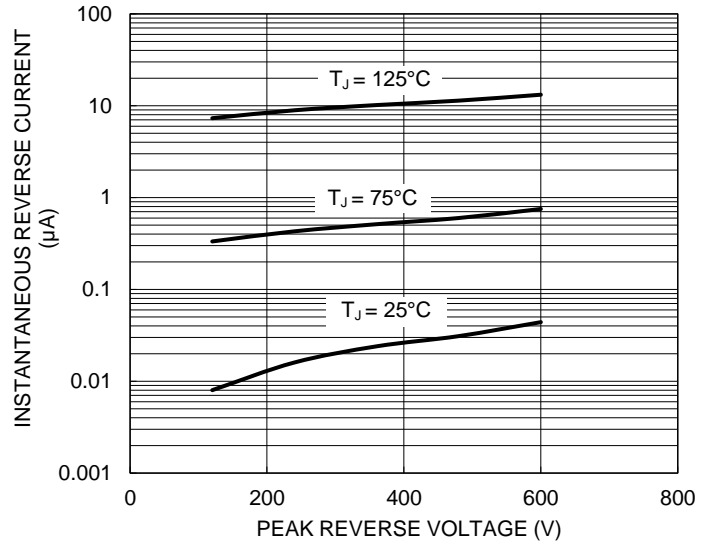
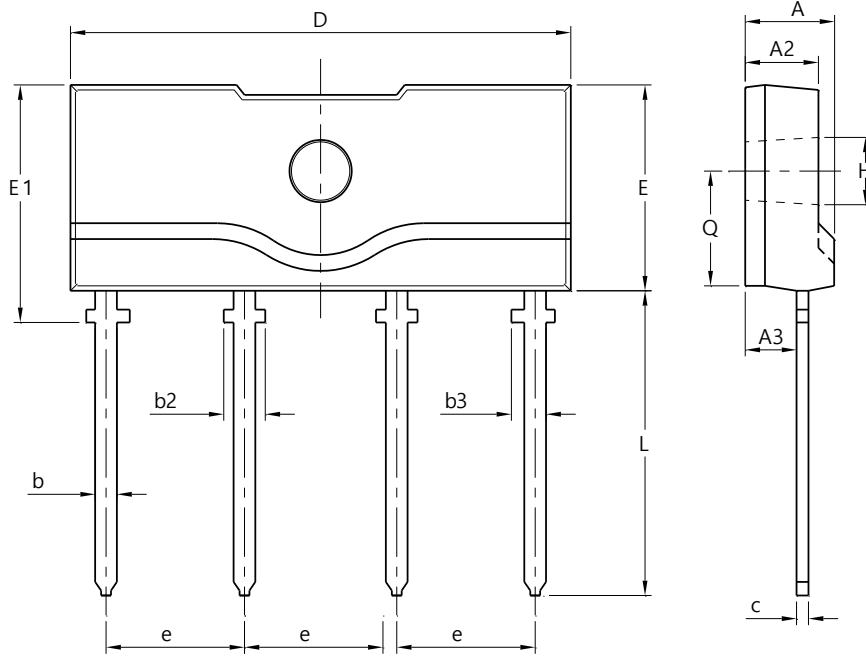


Figure 6. Typical Reverse Characteristics

Package Outline Dimensions

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

KBJL



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

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