KBJL406-KBJL410

4A STANDARD RECOVERY BRIDGE RECTIFIER

Product Summary

V_{RRM} (V)	I_F (A)	V_F Max (V) @ I_F = 2A	I_R Max (μA)
600, 800, 1000	4	1.0	10

Features

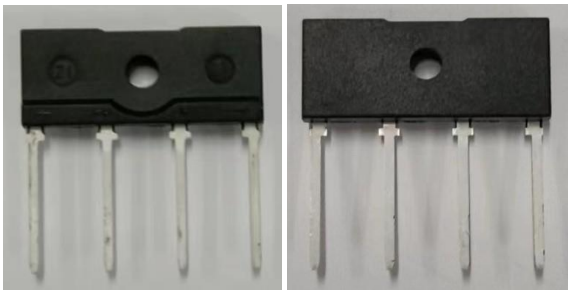
- Glass Passivation Die Construction
- Ideal for Printed Circuit Board
- High Surge Current Capability
- UL Certification Is Under Applying
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **For automotive applications requiring specific 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)

Applications

- TV powers
- Game powers
- PC powers

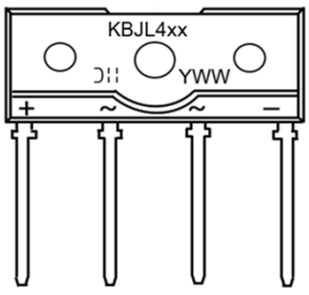


Ordering Information (Note 4)

Part Number	Package	Packing	
		Qty.	Carrier
KBJL406-TU	KBJL	20pcs	Tube
KBJL408-TU	KBJL	20pcs	Tube
KBJL410-TU	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



KBJL4xx = Product Type Marking Code
= 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	KBJL406	KBJL408	KBJL410	Unit
Maximum Repetitive Peak Reverse Voltage			V_{RRM}	600	800	1000	V
Maximum DC Blocking Voltage			V_{DC}	600	800	1000	V
Average Rectified Output Current	With Heatsink	@T_C = +125°C	$I_{F(AV)}$	4			A
	Without Heatsink	@T_C = +125°C		2.7			
Peak Forward Surge Current 8.3ms Single Half Sine Wave		T_J = +25°C	I_{FSM}	120			A
		T_J = +125°C (Note 5)		96			
Peak Forward Surge Current 1.0ms Single Half Sine Wave		T_J = +25°C	I_{FSM}	240			A
		T_J = +125°C (Note 5)		192			
I^2t Rating for Fusing (t = 8.3ms)			I^2t	60			A^2s
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 = 2A	T_J = +25°C	V_F	1.0	V
Maximum Leakage Current	V_R at Rated	T_J = +25°C	I_R	10	μA
		T_J = +125°C		500	
Typical Junction Capacitance (Note 6)			C_T	40	pF

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance (Without Heatsink)	$R_{\theta JC}$	7	°C/W
	$R_{\theta JL}$	11	
	$R_{\theta JA}$	24	
Typical Thermal Resistance (Note 7)	$R_{\theta JC}$	4	°C/W
	$R_{\theta JL}$	7	
	$R_{\theta JA}$	11	

Notes: 5. Perform static test after the temperature of oven is steady 20 minutes.
6. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
7. Thermal resistance junction to case, lead and ambient in accordance with JESD-51. Unit mounted on 35mm * 35mm *1.7mm Cu heatsink.

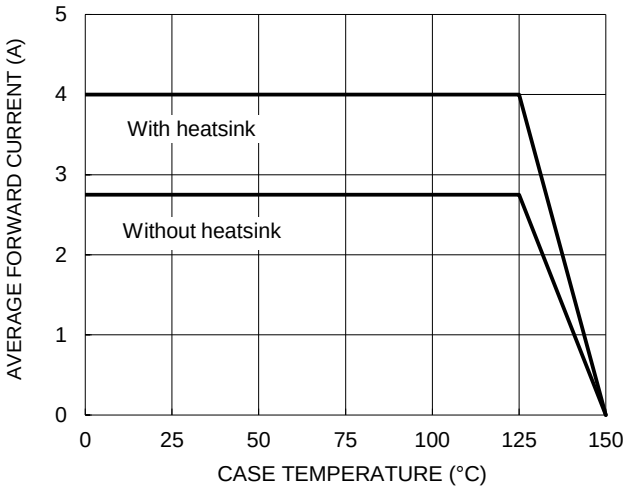


Figure 1. Forward Current Derating Curve

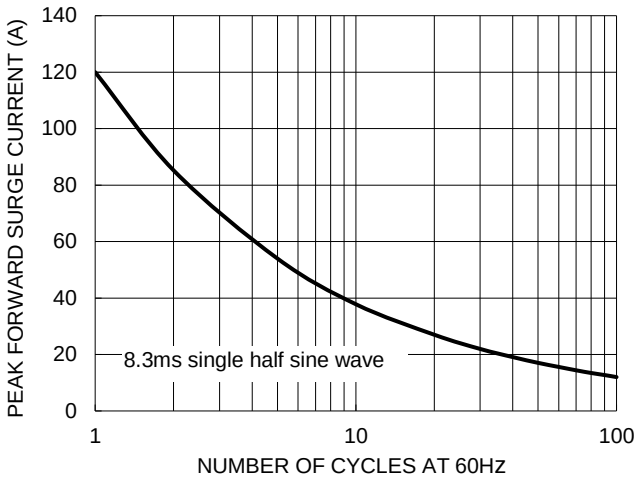


Figure 2. Maximum Non-Repetitive Surge Current

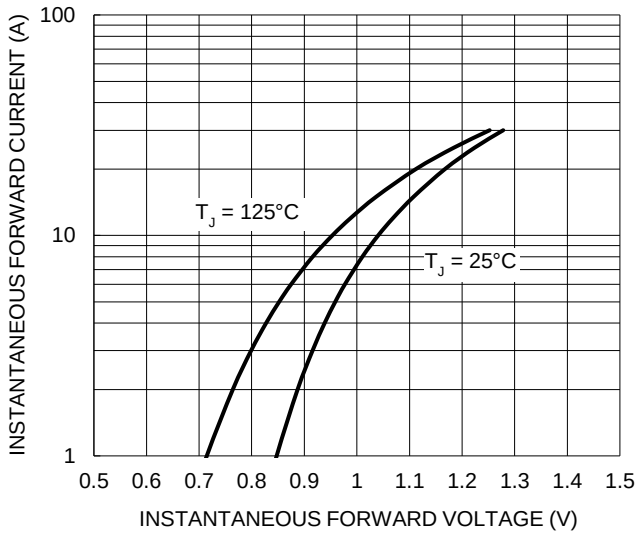


Figure 3. Typical Forward Characteristics

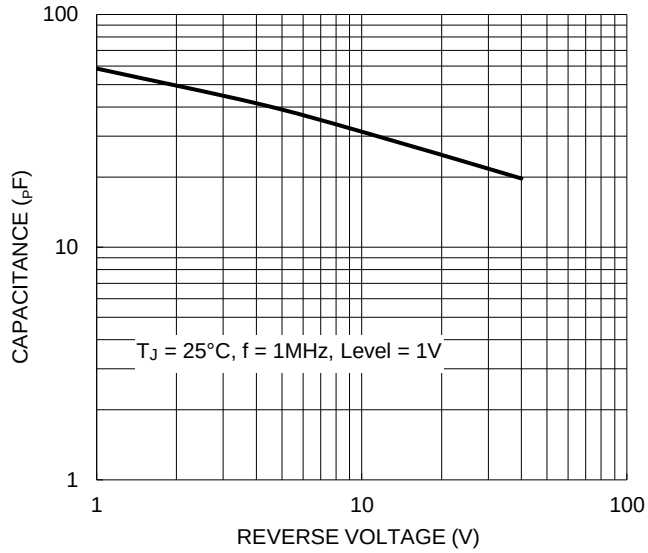


Figure 4. Typical Junction Capacitance

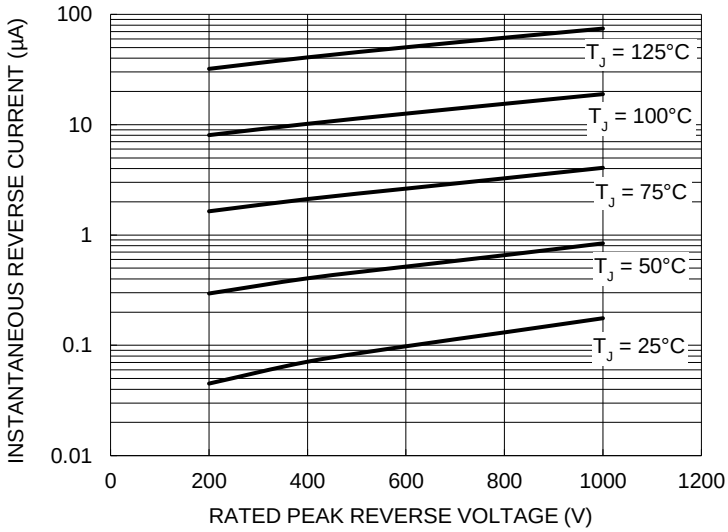
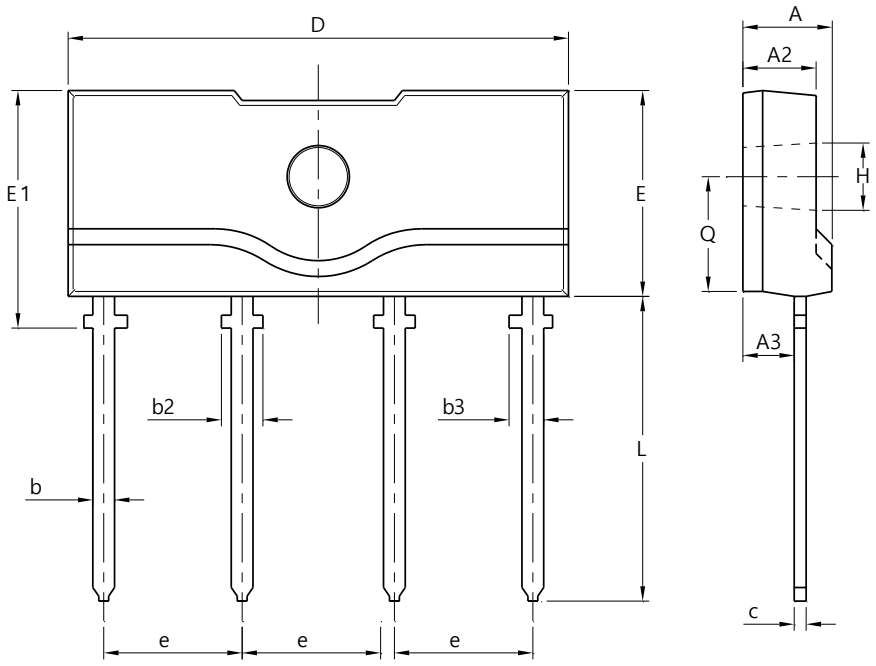


Figure 5. Typical Reverse Characteristics

Package Outline Dimensions

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

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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