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KBP4T10

4A FAST RECOVERY BRIDGE RECTIFIER

Product Summary

V_{RRM} (V)	I_F (A)	V_F Max (V)	I_R Max (µA)
1000	4	1.3	5

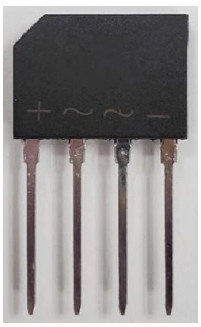
Features

- Glass Passivated Die Construction
- Rating to 1000V PRV
- Ideal for Printed Circuit Board
- Reliable Low Cost Construction Utilizing Molded Plastic Technique
- **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: KBP
- Package Material: Plastic Material, UL Flammability Classification 94V-0
- Terminals: Finish – Matte Tin Plated Leads, Solderable per MIL-STD-202, Method 208 e3
- Polarity Indicator: As Marked on the Body
- Weight: 1.52 grams (Approximate)
- Mounting Position: Any

KBP



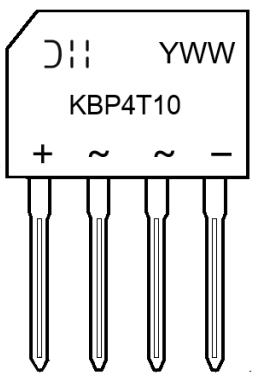


Ordering Information (Note 4)

Part Number	Package	Packing	
		Qty.	Carrier
KBP4T10	KBP	35pcs	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



KBP4T10 = Product Type Marking Code
= Manufacturer's Code Marking
YWW = Date Code Marking
Y = Last Digit of Year (ex: 2 = 2022)
WW = Week Code (01 to 53)

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Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic		Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	1000	V
Maximum DC Blocking Voltage		V_{DC}	1000	V
Average Rectified Output Current	With Heatsink, T_C = +125°C Without Heatsink, T_C = +125°C	$I_{F(AV)}$	4 1.9	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave	T_J = +25°C	I_{FSM}	100	A
I^2t Rating for Fusing (t = 8.3ms)		I^2t	41.5	A^2s
Storage Temperature Range		T_{STG}	-55 to +150	°C
Operating Temperature Range		T_J	-55 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Test Condition		Symbol	Typ	Max	Unit
Forward Voltage	I_F = 4A	T_J = +25°C	V_F	—	1.3	V
Leakage Current	V_R Rated	T_J = +25°C T_J = +125°C	I_R	—	5.0 500	µA
Reverse Recovery Time	I_F = 0.5A, I_{rr} = 0.25A, I_R = 1.0A		t_{rr}	—	500	ns
Typical Total Junction Capacitance (Note 5)			C_T	40	—	pF

Thermal Characteristics

Characteristic	Symbol	Typ	Unit
Typical Thermal Resistance (Note 6)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$	3 4 20	°C/W

Notes: 5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
6. Unit mounted on fin-type heatsink (45mm x 30mm x 23mm).

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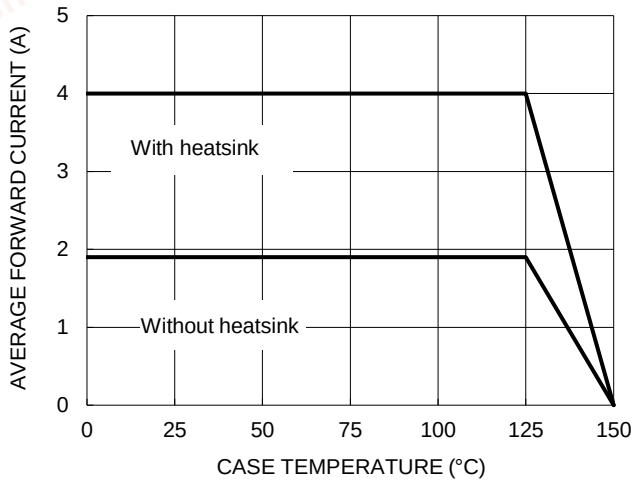


Figure 1. Forward Current Derating Curve

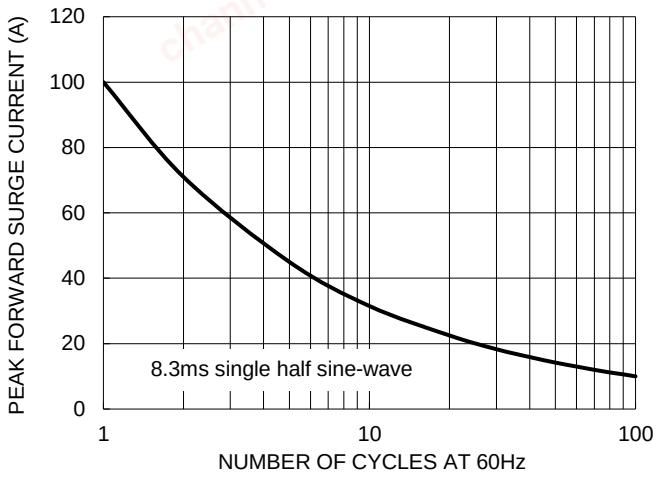


Figure 2. Maximum Non-Repetitive Surge Current

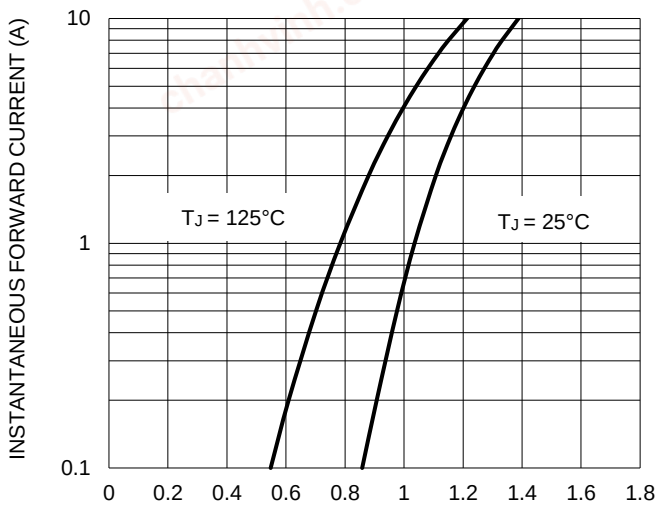


Figure 3. Typical Forward Characteristics

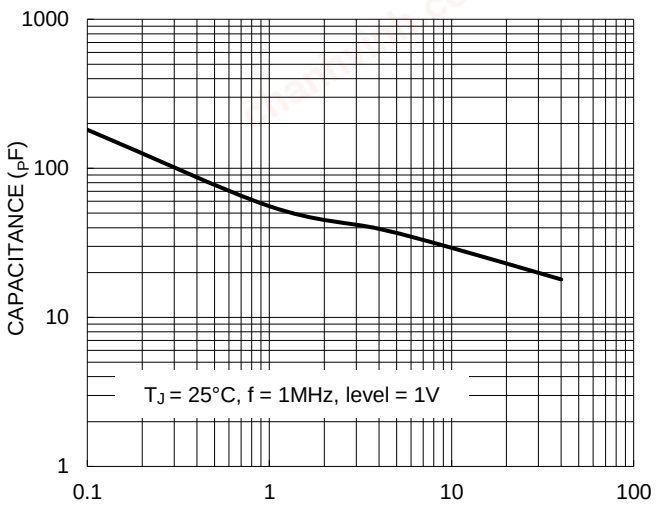


Figure 4. Typical Junction Capacitance

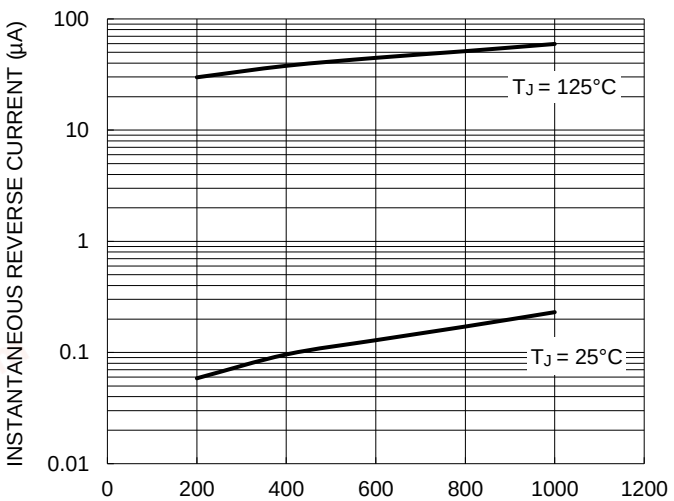


Figure 5. Typical Reverse Characteristics

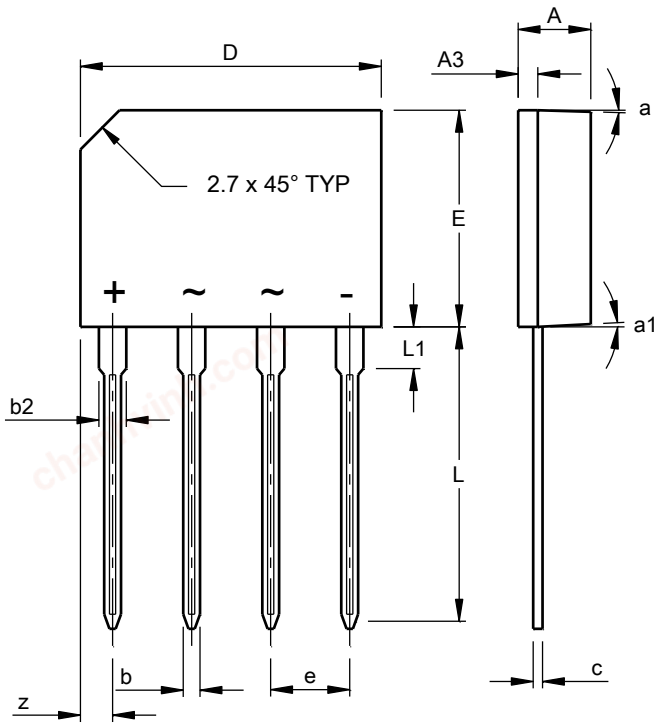
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Package Outline Dimensions

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

KBP



KBP			
Dim	**Min**	**Max**	**Typ.**
A	3.35	3.65	-
A3	0.80	1.10	-
b	0.76	0.86	-
b2	1.22	1.42	-
c	0.35	0.55	-
D	14.25	14.75	-
E	10.20	10.60	-
e	3.56	4.06	-
L	14.25	14.73	-
L1	1.80	2.20	-
z	1.40	1.70	-
a	-	-	3°
a1	-	-	2°
All Dimensions in mm			

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