

Product Summary

V _{RRM} (V)	I _F (A)	V _F Max (V)	I _R Max (μA)
1000	4	1.3	5

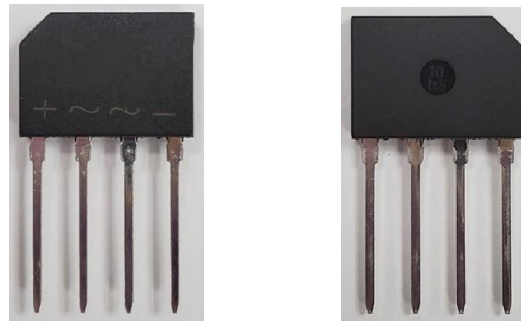
Mechanical Data

- Package: KBP
- Package Material: Plastic Material, UL Flammability Classification 94V-0
- Terminals: Finish – Matte Tin Plated Leads, Solderable per MIL-STD-202, Method 208
- Polarity Indicator: As Marked on the Body
- Weight: 1.52 grams (Approximate)
- Mounting Position: Any

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](https://www.diodes.com/quality/product-definitions/) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

KBP

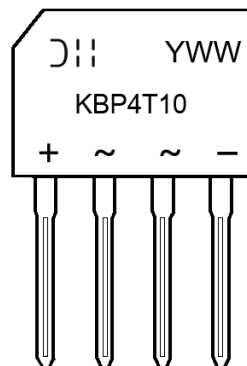


Ordering Information (Note 4)

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
 DII = Manufacturer's Code Marking
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 2 = 2022)
 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}	1000	V
Maximum DC Blocking Voltage	V _{DC}	1000	V
Average Rectified Output Current	I _{F(AV)}	With Heatsink, T _C = +125°C	4
		Without Heatsink, T _C = +125°C	1.9
Peak Forward Surge Current 8.3ms Single Half Sine-Wave	I _{FSM}	100	A
I ² t Rating for Fusing (t = 8.3ms)	I ² t	41.5	A ² s
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 _{θJC}	3	°C/W
	R _{θJL}	4	
	R _{θJA}	20	

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).

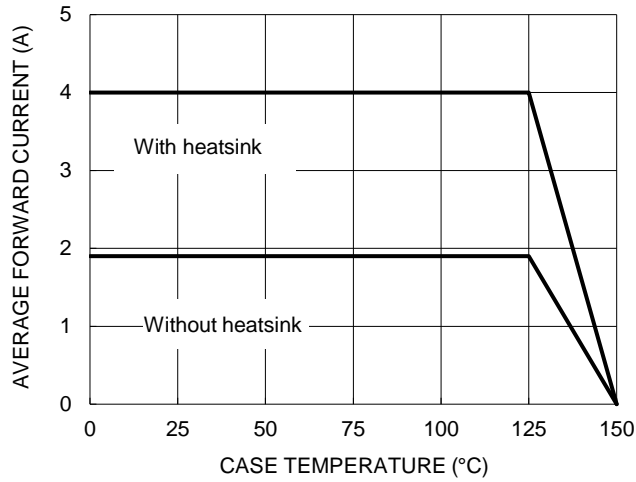


Figure 1. Forward Current Derating Curve

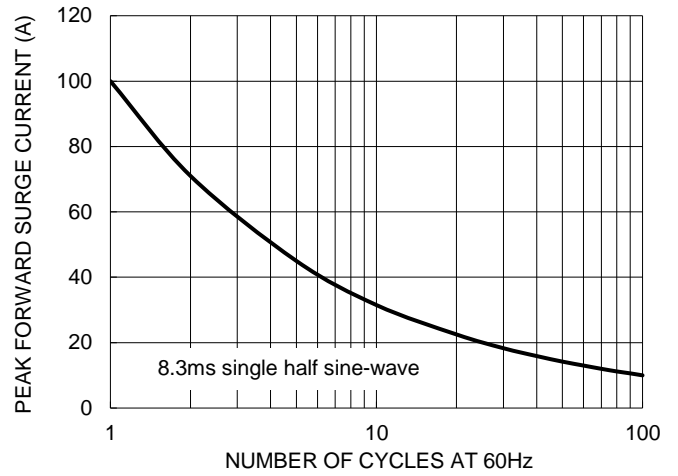


Figure 2. Maximum Non-Repetitive Surge Current

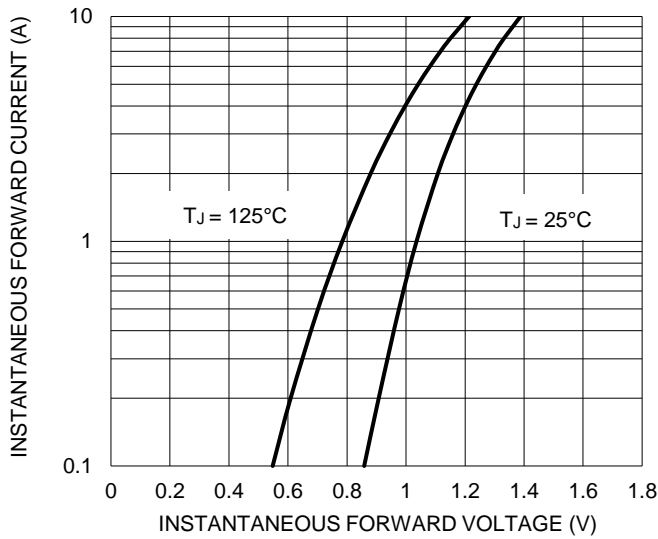


Figure 3. Typical Forward Characteristics

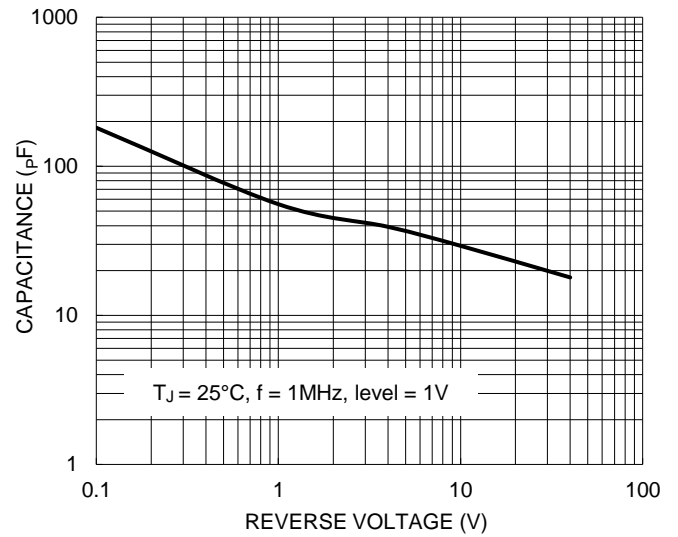


Figure 4. Typical Junction Capacitance

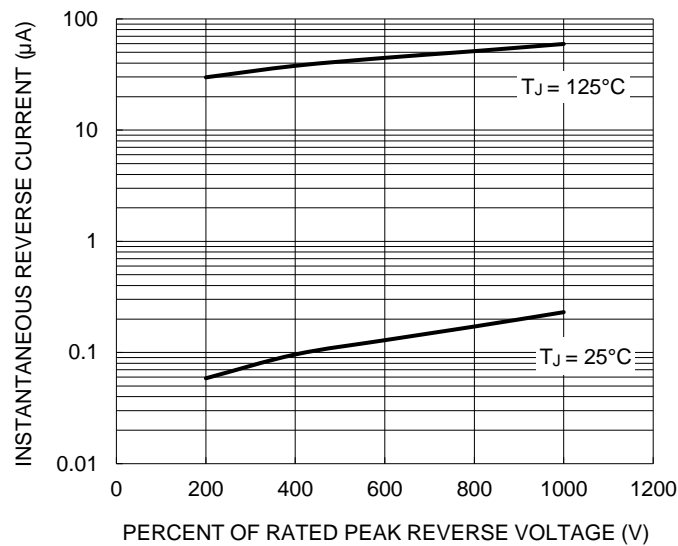
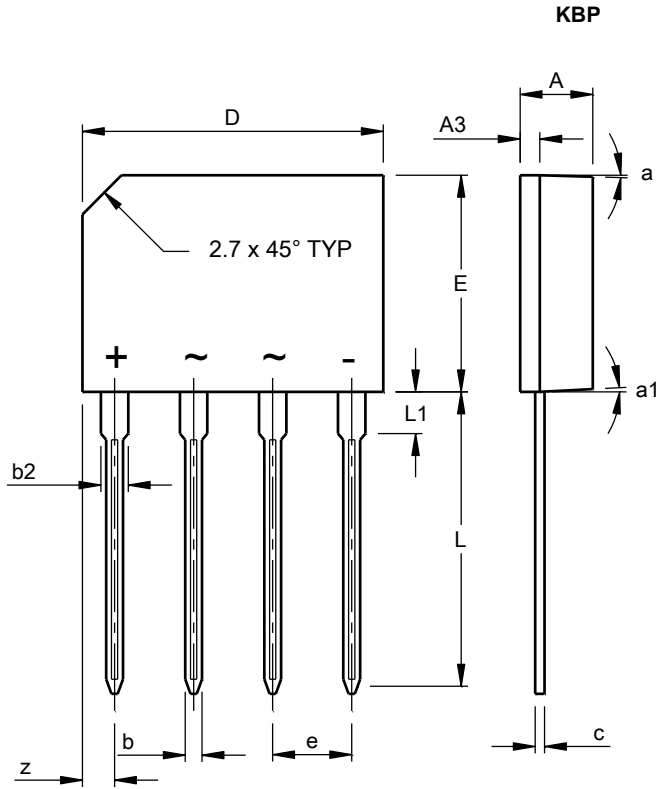


Figure 5. Typical Reverse Characteristics

Package Outline Dimensions

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



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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