
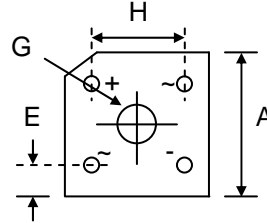


### Features

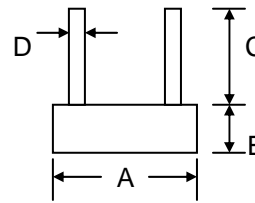
- Diffused Junction
- High Current Capability
- High Case Dielectric Strength
- High Surge Current Capability
- Ideal for Printed Circuit Board Application
- Plastic Material has UL Flammability 94V-0
-  Recognized File # E157705



KBPC-6		
Dim	Min	Max
A	14.70	15.75
B	5.80	6.90
C	15.00	—
D	1.00 Ø Typical	
E	1.70	2.72
G	Hole for #6 screw	
	3.60 Ø	4.00 Ø
H	10.30	11.30
All Dimensions in mm		

### Mechanical Data

- Case: KBPC-6, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Marked on Body
- Weight: 3.8 grams (approx.)
- Mounting Position: Through Hole for #6 Screw
- Mounting Torque: 0.8 N.m Max.
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**



### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	PB 1000S	PB 1001S	PB 1002S	PB 1004S	PB 1006S	PB 1008S	PB 1010S	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$								
Working Peak Reverse Voltage	$V_{RWM}$	50	100	200	400	600	800	1000	V
DC Blocking Voltage	$V_R$								
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @ $T_C = 50^\circ\text{C}$	$I_O$	10							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	175							A
Forward Voltage per leg @ $I_F = 5.0\text{A}$	$V_{FM}$	1.1							V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	$I_{RM}$	10 500							$\mu\text{A}$
$I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	166							$\text{A}^2\text{s}$
Typical Junction Capacitance (Note 2)	$C_J$	211				94			pF
Thermal Resistance Junction to Ambient (Note 3)	$R_{JA}$	22							$^\circ\text{C}/\text{W}$
Thermal Resistance Junction to Case (Note 1)	$R_{JC}$	6.5							
RMS Isolation Voltage Terminals to Case, $t = 1\text{min}$	$V_{ISO}$	1500							V
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

Note: 1. Mounted on 175 x 175 x 3.0mm thick Al. heatsink.  
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
 3. Mounted on PCB with 12 x 12mm copper pads and measured at lead length 9.5mm from case.

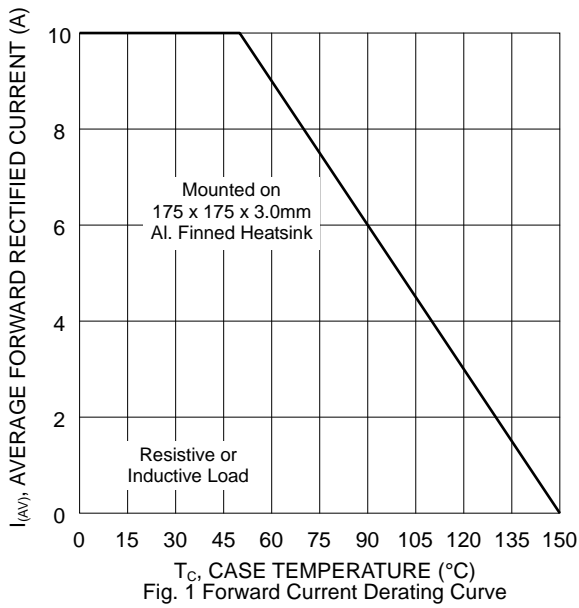


Fig. 1 Forward Current Derating Curve

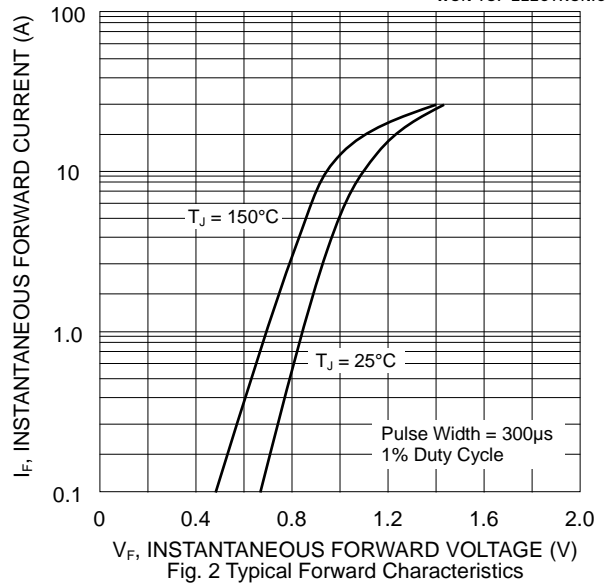


Fig. 2 Typical Forward Characteristics

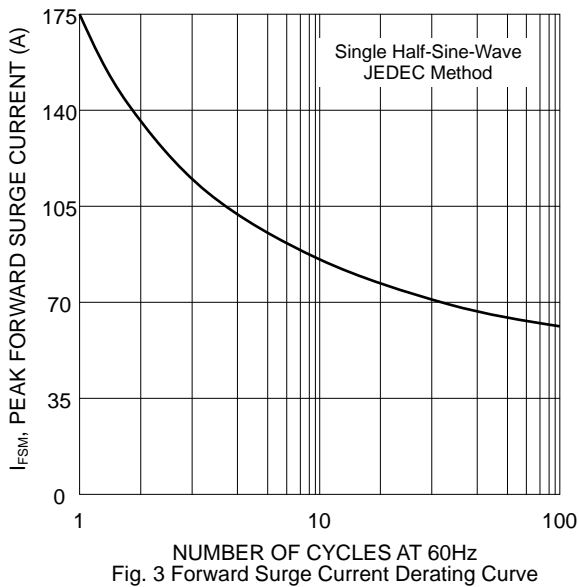


Fig. 3 Forward Surge Current Derating Curve

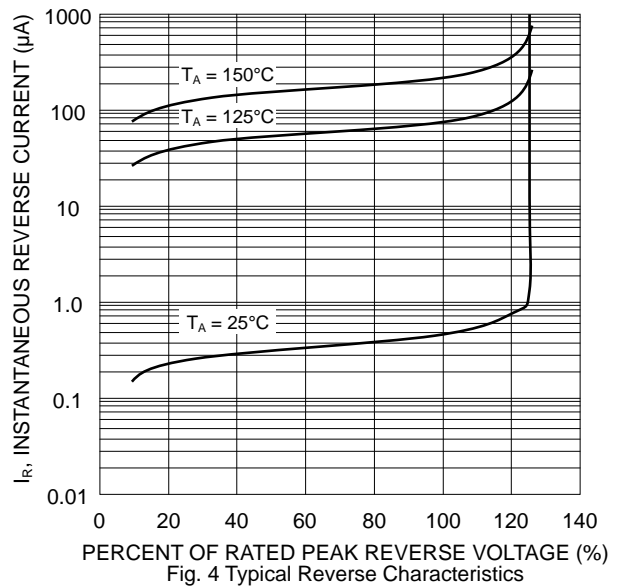


Fig. 4 Typical Reverse Characteristics

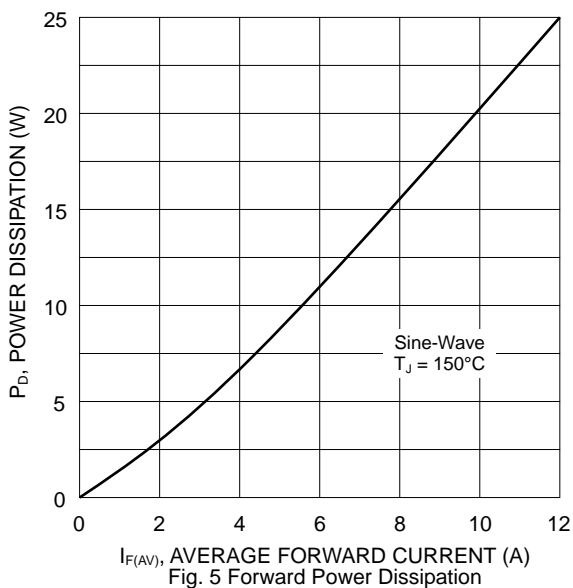


Fig. 5 Forward Power Dissipation

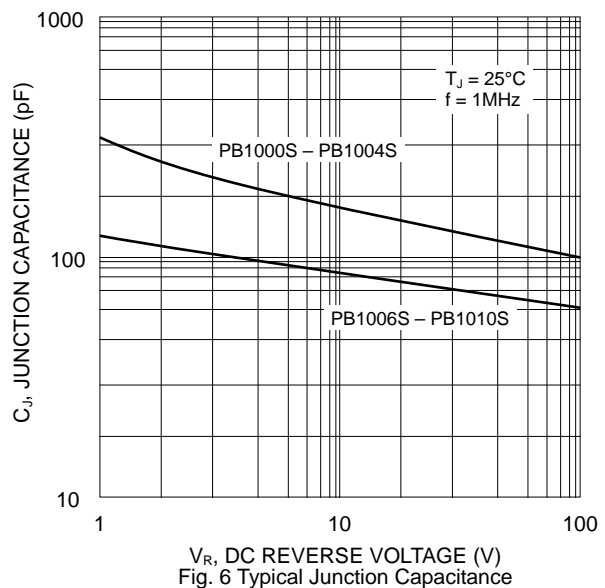
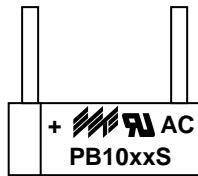


Fig. 6 Typical Junction Capacitance

## MARKING INFORMATION



PB10xxS = Device Number  
 xx = 00, 01, 02, 04, 06, 08 or 10  
 Polarity = As Marked on Body

## PACKAGING INFORMATION

### BULK

Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
198 x 198 x 50	200	425 x 215 x 280	2,000	8.0

**Note:** 1. Paper box, white or brown color.

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
PB1000S	Square Bridge	200 Units/Box
PB1001S	Square Bridge	200 Units/Box
PB1002S	Square Bridge	200 Units/Box
PB1004S	Square Bridge	200 Units/Box
PB1006S	Square Bridge	200 Units/Box
PB1008S	Square Bridge	200 Units/Box
PB1010S	Square Bridge	200 Units/Box

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, PB1000S-LF.**

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**WARNING:** DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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*We power your everyday.*