

# PBPC601 - PBPC607

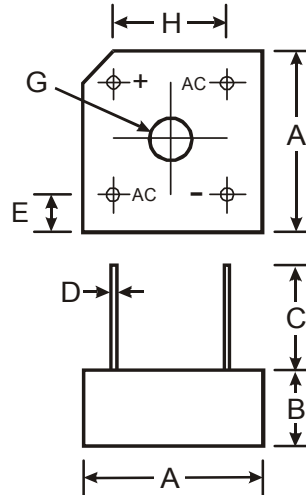
6.0A BRIDGE RECTIFIER

## Features

- High Current Capability
- Surge Overload Rating to 125A Peak
- High Case Dielectric Strength of 1500V
- Ideal for Printed Circuit Board Application
- UL Listed: Recognized Component Index, File Number E94661

## Mechanical Data

- Case: PBPC-6
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Marked on Body
- Mounting: Through Hole for #6 Screw
- Mounting Torque: 5.0 Inch-pounds Maximum
- Ordering Information: See Page 3
- Marking: Type Number
- Weight: 3.8 grams (approximate)



PBPC-6		
Dim	Min	Max
A	14.73	15.75
B	5.84	6.86
C	19.00	—
D	1.01 $\varnothing$	Typical
E	1.70	3.20
G	Hole for #6 screw	
	3.60 $\varnothing$	4.00 $\varnothing$
H	10.30	11.30
<b>All Dimensions in mm</b>		

## Maximum Ratings and Electrical Characteristics

(@T<sub>A</sub> = +25°C, unless otherwise specified.)

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

Characteristic	Symbol	PBPC 601	PBPC 602	PBPC 603	PBPC 604	PBPC 605	PBPC 606	PBPC 607	Unit	
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>									
Working Peak Reverse Voltage	V <sub>RWM</sub>	50	100	200	400	600	800	1000	V	
DC Blocking Voltage	V <sub>R</sub>									
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V	
Average Rectified Output Current (Note 1) @ T <sub>C</sub> = 50°C	I <sub>O</sub>					6.0				A
(Note 2) @ T <sub>C</sub> = 50°C						4.0				
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>					125				A
Forward Voltage (per element) @ I <sub>F</sub> = 3.0A	V <sub>FM</sub>					1.1				V
Peak Reverse Current @ T <sub>C</sub> = 25°C	I <sub>R</sub>					10				$\mu$ A
at Rated DC Blocking Voltage (per element) @ T <sub>C</sub> = 100°C						1.0				
I <sup>2</sup> t Rating for Fusing (t < 8.3ms) (Note 3)	I <sup>2</sup> t					64				A <sup>2</sup> s
Typical Total Capacitance (Note 4)	C <sub>T</sub>					55				pF
Typical Thermal Resistance Junction to Case (per element)	R <sub><math>\theta</math>JC</sub>					12.5				°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>					-65 to +125				°C

- Notes:
1. Mounted on metal chassis.
  2. Mounted on PC board FR-4 material.
  3. Non-repetitive, for t > 1.0ms and < 8.3ms.
  4. Per element, measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

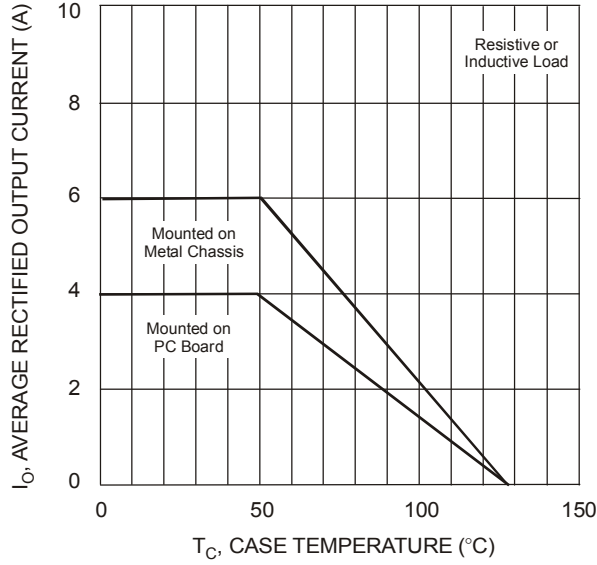


Fig. 1 Forward Current Derating Curve

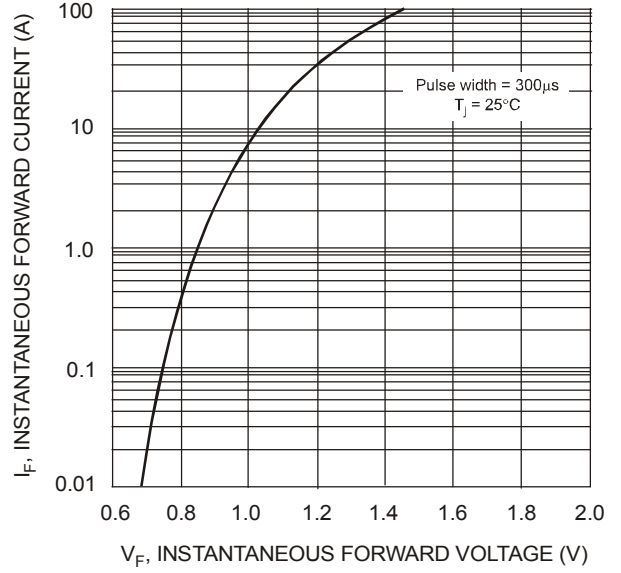


Fig. 2 Typical Forward Characteristics

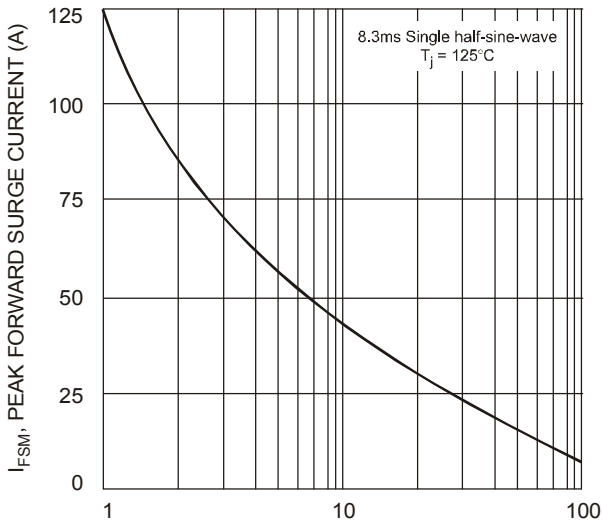


Fig. 3 Peak Forward Surge Current

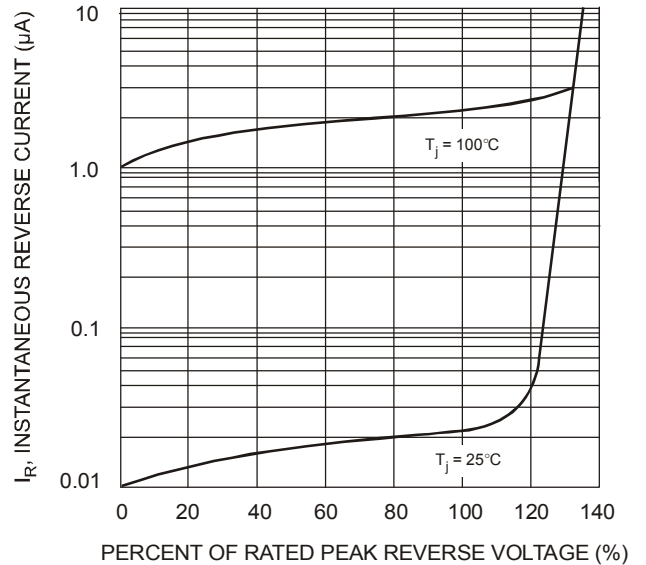


Fig. 4 Typical Reverse Characteristics



## Ordering Information (Note 5)

Device	Packaging	Shipping
PBPC601	PBPC-6	200/Box
PBPC602	PBPC-6	200/Box
PBPC603	PBPC-6	200/Box
PBPC604	PBPC-6	200/Box
PBPC605	PBPC-6	200/Box
PBPC606	PBPC-6	200/Box
PBPC607	PBPC-6	200/Box

Note: 5. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>.

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