

# PBPC1003 Datasheet



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DiGi Electronics Part Number	PBPC1003-DG
Manufacturer	<a href="#">Diodes Incorporated</a>
Manufacturer Product Number	PBPC1003
Description	BRIDGE RECT 1P 200V 8A PBPC-8
Detailed Description	Bridge Rectifier Single Phase Standard 200 V Through Hole PBPC-8



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

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## Purchase and inquiry

Manufacturer Product Number:

PBPC1003

Series:

-

Diode Type:

Single Phase

Voltage - Peak Reverse (Max):

200 V

Voltage - Forward (Vf) (Max) @ If:

1.1 V @ 5 A

Operating Temperature:

-65°C ~ 125°C (TJ)

Package / Case:

4-Square, PBPC-8

Manufacturer:

Diodes Incorporated

Product Status:

Obsolete

Technology:

Standard

Current - Average Rectified (Io):

8 A

Current - Reverse Leakage @ Vr:

10 µA @ 200 V

Mounting Type:

Through Hole

Supplier Device Package:

PBPC-8

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Affected

HTSUS:

8541.10.0080

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99



**NOT RECOMMENDED  
FOR NEW DESIGN**

# PBPC1001 - PBPC1007

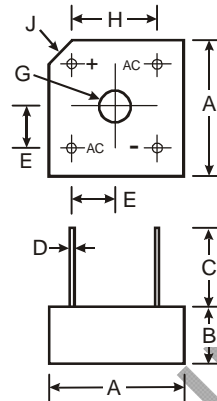
## 10A BRIDGE RECTIFIER

### Features

- High Current Capability
- Surge Overload Rating to 150A Peak
- High Case Dielectric Strength of 1500V
- Ideal for Printed Circuit Board Application
- UL Listed Under Recognized Component Index, File Number E94661

### Mechanical Data

- Case: PBPC-8
- 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 2
- Marking: Type Number
- Weight: 3.8 grams (approximate)



PBPC-8		
Dim	Min	Max
A	18.54	19.56
B	6.35	7.60
C	22.20	—
D	1.27 $\varnothing$ Typical	
E	5.33	7.37
G	3.60 $\varnothing$	4.00 $\varnothing$
H	12.70 Typical	
J	2.38 X 45° Typical	
All Dimensions in mm		

### 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	PBPC 1001	PBPC 1002	PBPC 1003	PBPC 1004	PBPC 1005	PBPC 1006	PBPC 1007	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
(Note 2) @ $T_C = 50^\circ\text{C}$						8.0				
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$					150				A
Forward Voltage (per element) @ $I_F = 5.0\text{A}$	$V_{FM}$					1.1				V
Peak Reverse Current @ $T_C = 25^\circ\text{C}$	$I_R$					10				$\mu\text{A}$
at Rated DC Blocking Voltage (per element) @ $T_C = 100^\circ\text{C}$						1.0				mA
$I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ ) (Note 3)	$I^2t$					64				$\text{A}^2\text{s}$
Typical Total Capacitance, per element (Note 4)	$C_T$					110				pF
Typical Thermal Resistance Junction to Case (per element)	$R_{\theta JC}$					7.5				$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$					-65 to +125				$^\circ\text{C}$

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



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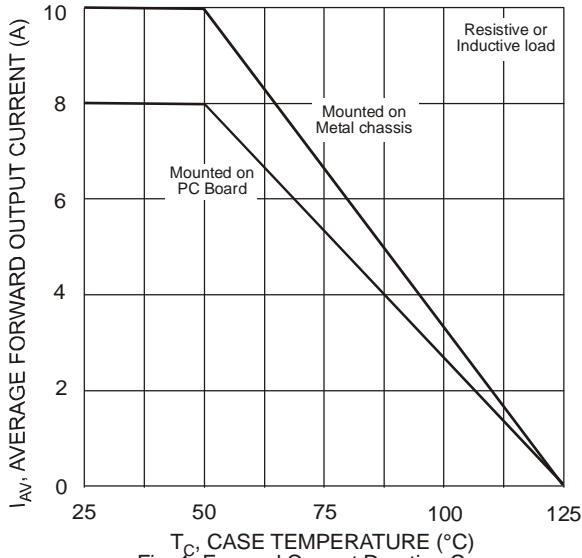


Fig. 1 Forward Current Derating Curve

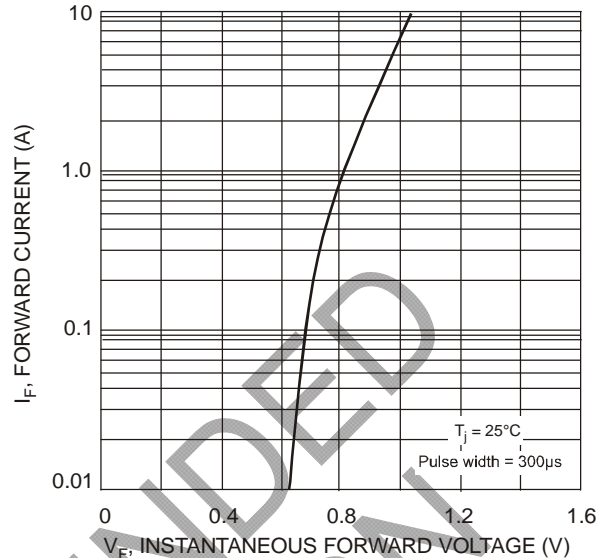


Fig. 2 Typical Forward Characteristics, per element

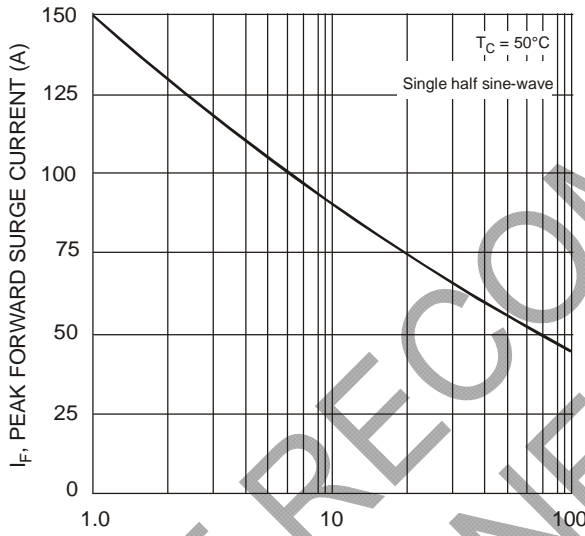


Fig. 3 Typical Reverse Characteristics

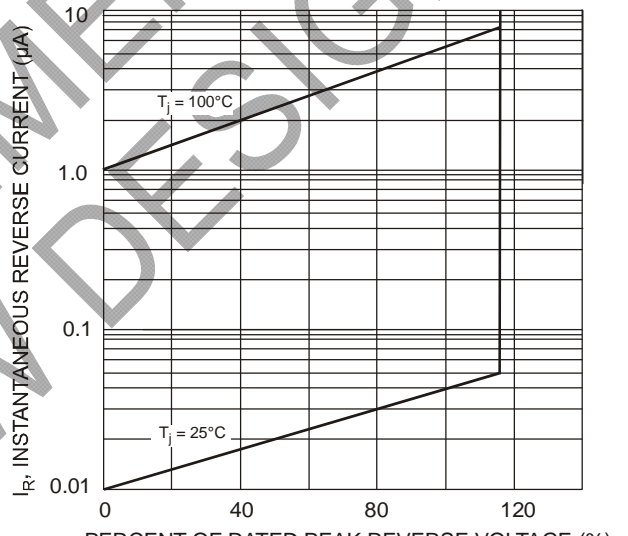


Fig. 4 Typical Reverse Characteristics, per element

**Ordering Information** (Note 5)

Device	Packaging	Shipping
PBPC1001	PBPC-8	150/Box
PBPC1002	PBPC-8	150/Box
PBPC1003	PBPC-8	150/Box
PBPC1004	PBPC-8	150/Box
PBPC1005	PBPC-8	150/Box
PBPC1006	PBPC-8	150/Box
PBPC1007	PBPC-8	150/Box

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



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