

# **PBPC301 - PBPC307**

#### 3.0A BRIDGE RECTIFIER

#### **Features**

- High Current Capability
- Surge Overload Rating to 50A Peak
- High Case Dielectric Strength of 1500V
- Ideal for Printed Circuit Board Application
- Plastic Material UL Flammability Classification 94V-0
- UL Listed Under Recognized Component Index, File Number E94661

### **Mechanical Data**

Case: Molded Plastic

 Terminals: Plated Leads Solderable per MIL-STD-202, Method 208

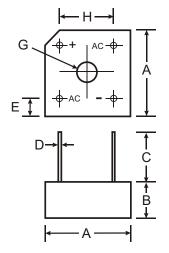
 Also Available in Lead Free Plating (Matte Tin Finish). Please see Ordering Information, Note 5, on Page 3

Polarity: Marked on Body

• Mounting: Through Hole for Screw

Mounting Torque: 5.0 Inch-pounds Maximum

Weight: 3.8 grams (approx)Marking: Type Number



PBPC-3						
Dim	Min Max					
Α	14.73	15.75				
В	5.84	6.86				
С	19.00	_				
D	0.76 Ø Typical					
E	1.70	3.20				
G	Hole for screw					
	3.60	4.00				
Н	10.30 11.30					
All Dimensions in mm						

# **Maximum Ratings and Electrical Characteristics**

@  $T_A = 25$ °C unless otherwise specified

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

Characteristic	Symbol	PBPC 301	PBPC 302	PBPC 303	PBPC 304	PBPC 305	PBPC 306	PBPC 307	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	٧
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @ $T_C = 50^{\circ}$ (Note 2) @ $T_C = 50^{\circ}$	S lo	3.0 2.0				•	Α		
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>				50				А
Forward Voltage (per element) @ I <sub>F</sub> = 1.5.	A V <sub>FM</sub>				1.2				V
Peak Reverse Current		10 1.0					μA mA		
I <sup>2</sup> t Rating for Fusing (t<8.3ms) (Note 3)		10					A <sup>2</sup> s		
Typical Total Capacitance (Note 4)		55					pF		
Typical Thermal Resistance Junction to Case (per element)		25					°C/W		
Operating and Storage Temperature Range		-65 to +125					°C		

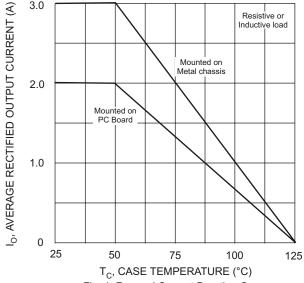
Notes: 1. Mounted on metal chassis.

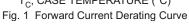
2. Mounted on PC board FR-4 material.

3. Non-repetitive, for t > 1ms and < 8.3ms.

4. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.







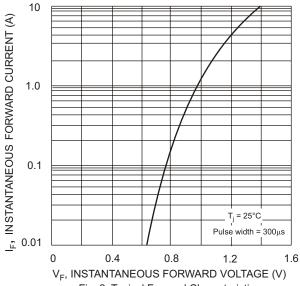
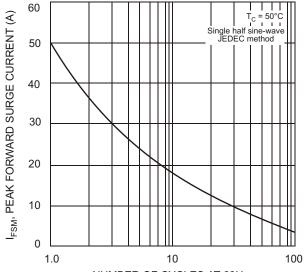
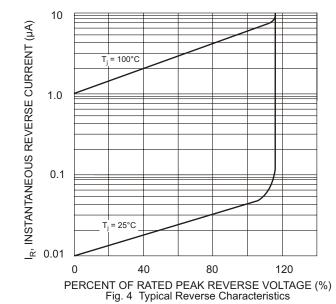


Fig. 2 Typical Forward Characteristics



NUMBER OF CYCLES AT 60Hz Fig. 3 Peak Forward Surge Current



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## Ordering Information (Notes 4 & 5)

Device*	Packaging	Shipping
PBPC30x	PBPC-3	200 pieces per Tray

<sup>\*</sup> x = Device type, e.g. PBPC301 or PBPC302, etc.

Notes:

- 4. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.
- 5. For lead free terminal plating part number, please add "-F" suffix to part number above. Example: PBPC304-F.

## **Marking Information**



→ Manufacturers' code marking
→ UL Recognized Component Mark
XXX = Product type marking code, ex: PBPC307
YWW = Date code marking
Y = Last digit of year ex: 2 for 2002
WW = Week code 01 to 52