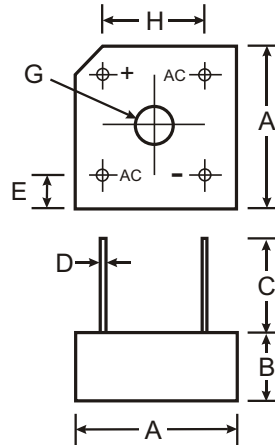


Features

- 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 Last Page
- 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 | Typical |
| E | 1.70 | 3.20 |
| G | Hole for #6 screw | |
| | 3.60 | 4.00 |
| H | 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 601 | PBPC 602 | PBPC 603 | PBPC 604 | PBPC 605 | PBPC 606 | PBPC 607 | Unit | |
|---|---------------------------------|----------|----------|----------|----------|-------------|----------|----------|------|------------------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V | |
| Average Rectified Output Current (Note 1) @ T _C = 50 C (Note 2) @ T _C = 50 C | I_o | | | | | 6.0 4.0 | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | | | | | 125 | | | | A |
| Forward Voltage (per element) @ I _F = 3.0A | V_{FM} | | | | | 1.1 | | | | V |
| Peak Reverse Current @ T _C = 25 C at Rated DC Blocking Voltage (per element) @ T _C = 100 C | I_R | | | | | 10 1.0 | | | | A mA |
| I ² t Rating for Fusing (t < 8.3ms) (Note 3) | I^2t | | | | | 64 | | | | A ² s |
| Typical Total Capacitance (Note 4) | C_T | | | | | 55 | | | | pF |
| Typical Thermal Resistance Junction to Case (per element) | R_{JC} | | | | | 12.5 | | | | C/W |
| Operating and Storage Temperature Range | T_j, T_{STG} | | | | | -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 f = 1.0MHz and applied reverse voltage of V_R = 4.0V DC.

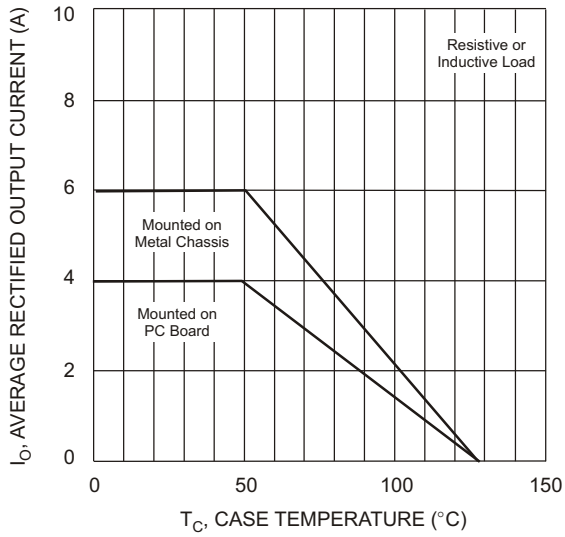


Fig. 1 Forward Current Derating Curve

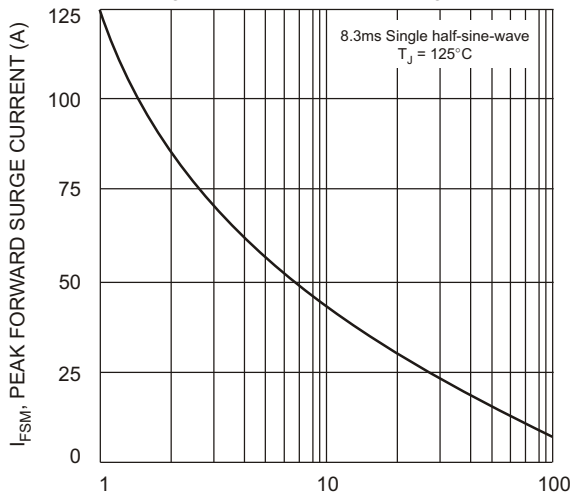


Fig. 3 Peak Forward Surge Current

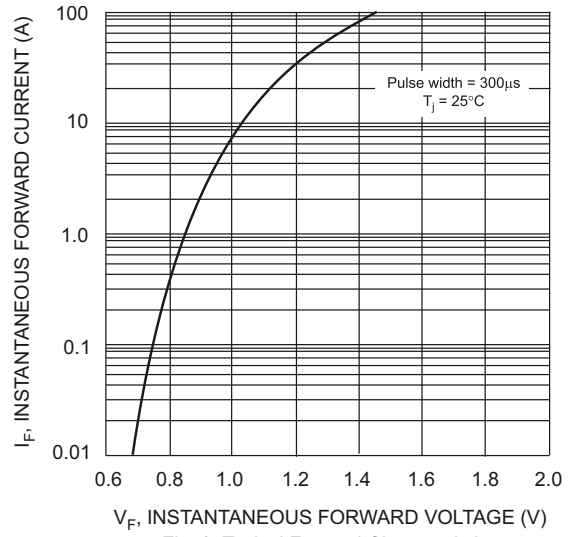


Fig. 2 Typical Forward Characteristics

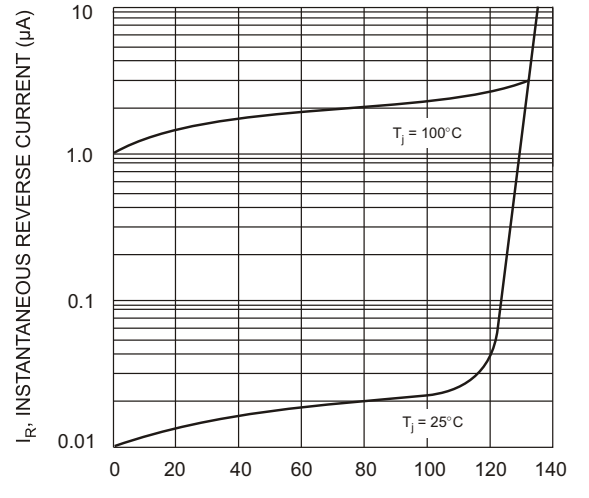


Fig. 4 Typical Reverse Characteristics

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 |

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

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