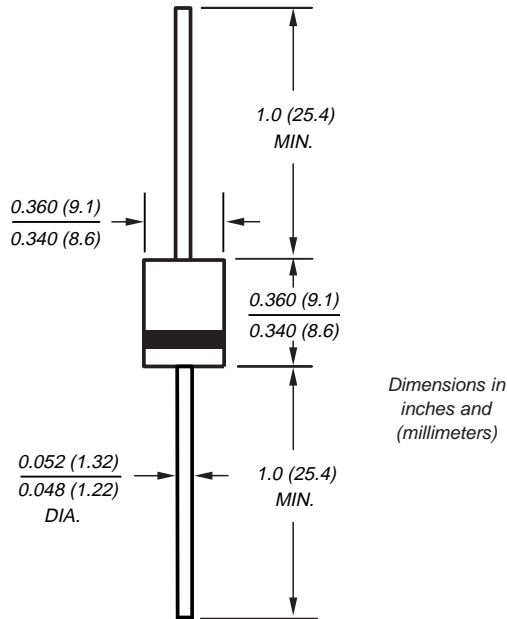




**General Purpose Plastic Rectifier**

Case Style P600

**Reverse Voltage** 50 to 1000V  
**Forward Current** 6.0A



**Features**

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High forward current capability
- Construction utilizes void-free molded plastic technique
- High surge current capability

**Mechanical Data**

**Case:** Void-free molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
 High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.07 oz., 2.1 g

**Maximum Ratings & Thermal Characteristics** Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter   | Symbol                               | P600A       | P600B | P600D | P600G | P600J | P600K | P600M | Unit |
|---|--------------------------------------|-------------|-------|-------|-------|-------|-------|-------|------|
| Maximum repetitive peak reverse voltage   | V <sub>RRM</sub>                     | 50          | 100   | 200   | 400   | 600   | 800   | 1000  | V    |
| Maximum RMS voltage   | V <sub>RMS</sub>                     | 35          | 70    | 140   | 280   | 420   | 560   | 700   | V    |
| Maximum DC blocking voltage   | V <sub>DC</sub>                      | 50          | 100   | 200   | 400   | 600   | 800   | 1000  | V    |
| Maximum average forward rectified current at<br>T <sub>A</sub> =60°C, 0.375" (9.5mm) lead length (Fig. 1)<br>T <sub>L</sub> =60°C, 0.125" (3.18mm) lead length (Fig. 2) | I <sub>F(AV)</sub>                   | 6.0<br>22   |       |       |       |       |       |       | A    |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)  | I <sub>FSM</sub>                     | 400         |       |       |       |       |       |       | A    |
| Typical thermal resistance <sup>(1)</sup>   | R <sub>θJA</sub><br>R <sub>θJL</sub> | 20<br>4.0   |       |       |       |       |       |       | °C/W |
| Operating junction and storage temperature range  | T <sub>J</sub> , T <sub>STG</sub>    | -50 to +150 |       |       |       |       |       |       | °C   |

**Electrical Characteristics** Ratings at 25°C ambient temperature unless otherwise specified.

|  |                 |              |  |  |  |  |            |          |
|--|-----------------|--------------|--|--|--|--|------------|----------|
| Maximum instantaneous forward voltage at:<br>6.0A<br>100A  | V <sub>F</sub>  | 0.90<br>1.30 |  |  |  |  | 1.0<br>1.4 | V        |
| Maximum DC reverse current<br>at rated DC blocking voltage<br>T <sub>A</sub> = 25°C<br>T <sub>A</sub> =100°C | I <sub>R</sub>  | 5.0<br>1.0   |  |  |  |  |            | μA<br>mA |
| Typical reverse recovery time at<br>I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A       | t <sub>rr</sub> | 2.5          |  |  |  |  |            | μs       |
| Typical junction capacitance at 4.0V, 1MHz   | C <sub>J</sub>  | 150          |  |  |  |  |            | pF       |

**Note:** (1) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted with 1.1" x 1.1" (30 x 30mm) copper pads

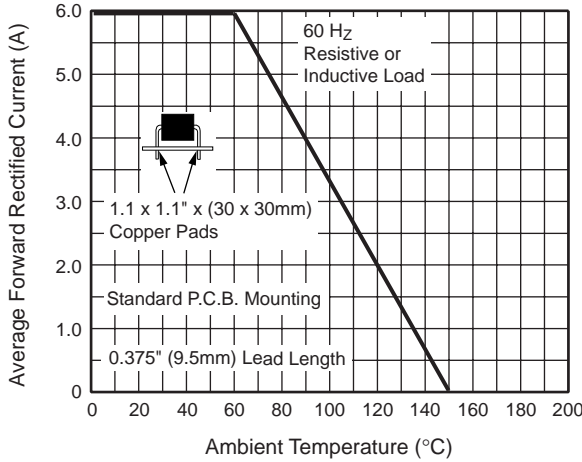
# P600A thru P600M

Vishay Semiconductors  
formerly General Semiconductor

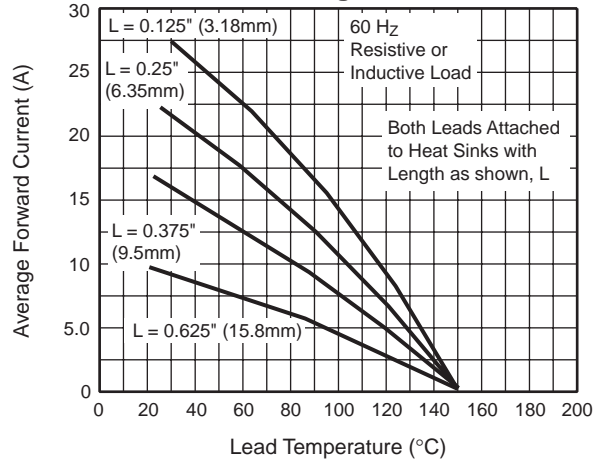


## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

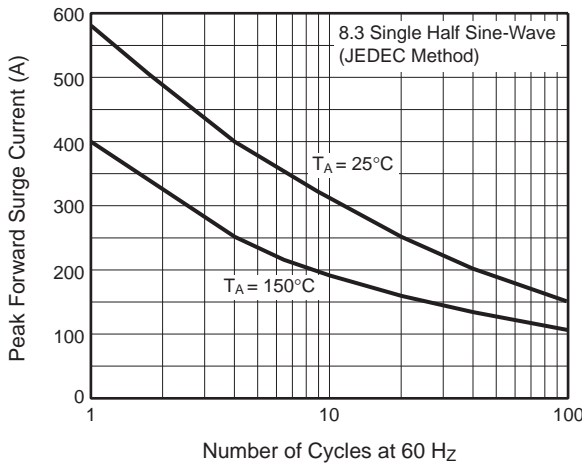
**Fig. 1 — Maximum Forward Current Derating Current**



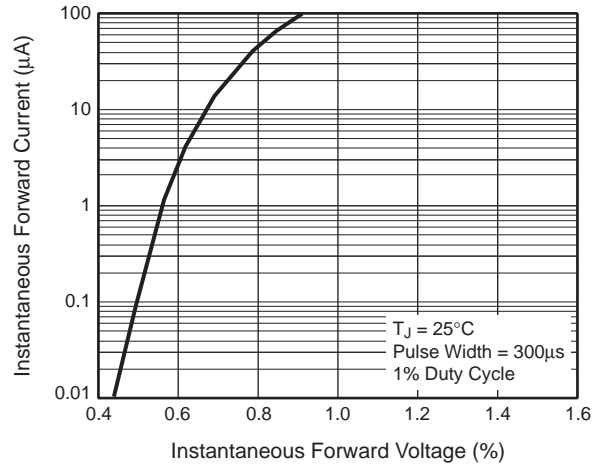
**Fig. 2 — Maximum Forward Current Derating Curve**



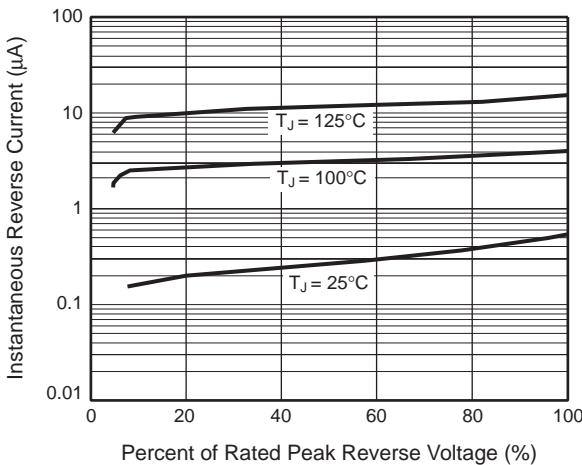
**Fig. 3 — Typical Instantaneous Forward Characteristics**



**Fig. 4 — Typical Instantaneous Forward Characteristics**



**Fig. 5 — Typical Reverse Characteristics**



**Fig. 6 — Typical Transient Thermal Impedance**

