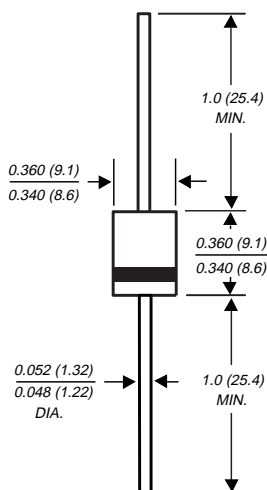


# P600A THRU P600M

## GENERAL PURPOSE PLASTIC RECTIFIER

Reverse Voltage - 50 to 1000 Volts      Forward Current - 6.0 Amperes

### Case Style P600



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ High forward current capability
- ◆ Construction utilizes void-free molded plastic technique
- ◆ High surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension



### MECHANICAL DATA

**Case:** Void-free molded plastic body

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.07 ounce, 2.1 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

|   | SYMBOLS                              | P600A        | P600B | P600D | P600G | P600J | P600K | P600M      | UNITS |
|---|--------------------------------------|--------------|-------|-------|-------|-------|-------|------------|-------|
| Maximum repetitive peak reverse voltage   | V <sub>RRM</sub>                     | 50           | 100   | 200   | 400   | 600   | 800   | 1000       | Volts |
| Maximum RMS voltage   | V <sub>RMS</sub>                     | 35           | 70    | 140   | 280   | 420   | 560   | 700        | Volts |
| Maximum DC blocking voltage   | V <sub>DC</sub>                      | 50           | 100   | 200   | 400   | 600   | 800   | 1000       | Volts |
| 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>(AV)</sub>                    | 6.0<br>22.0  |       |       |       |       |       | Amps       |       |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)  | I <sub>FSM</sub>                     | 400.0        |       |       |       |       |       | Amps       |       |
| Maximum instantaneous forward voltage at: 6.0A<br>100A  | V <sub>F</sub>                       | 0.90<br>1.30 |       |       |       |       |       | 1.0<br>1.4 | Volts |
| 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 junction capacitance (NOTE 1)   | C <sub>J</sub>                       | 150.0        |       |       |       |       |       | pF         |       |
| Typical reverse recovery time (NOTE 2)  | t <sub>rr</sub>                      | 2.5          |       |       |       |       |       | μS         |       |
| Typical thermal resistance (NOTE 3)   | R <sub>θJA</sub><br>R <sub>θJL</sub> | 20.0<br>4.0  |       |       |       |       |       | °C/W       |       |
| Operating junction and storage temperature range  | T <sub>J</sub> , T <sub>STG</sub>    | -50 to +150  |       |       |       |       |       | °C         |       |

### NOTES:

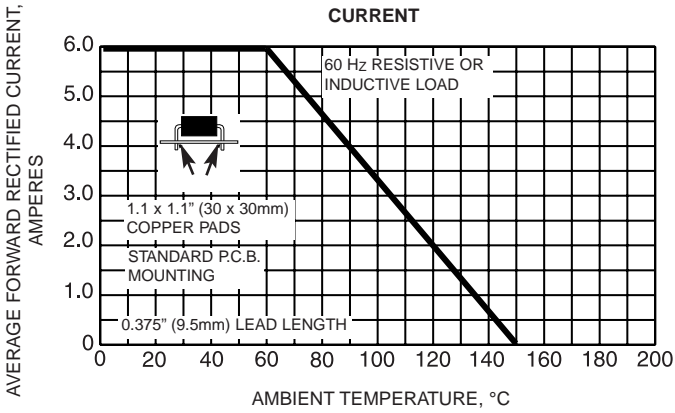
(1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(2) Reverse recovery time conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A

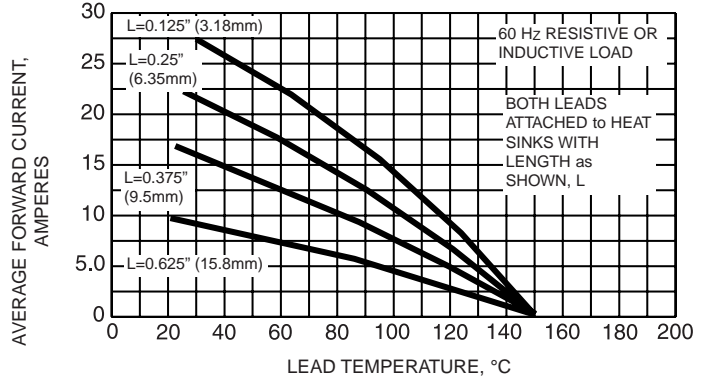
(3) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted with 1.1 x 1.1 (30 x 30mm) copper pads

# RATINGS AND CHARACTERISTIC CURVES P600A THRU P600M

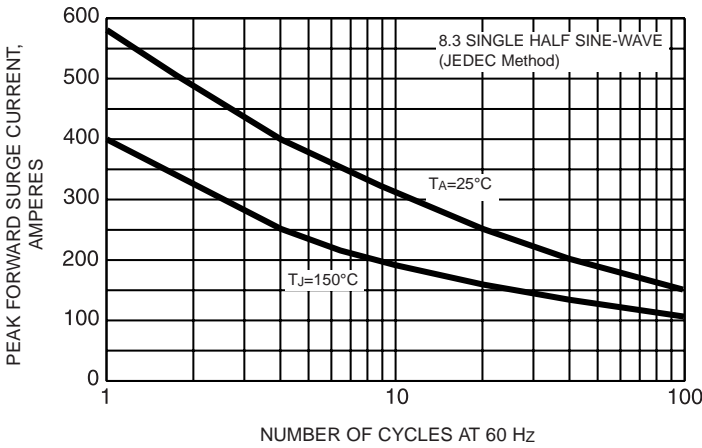
**FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURRENT**



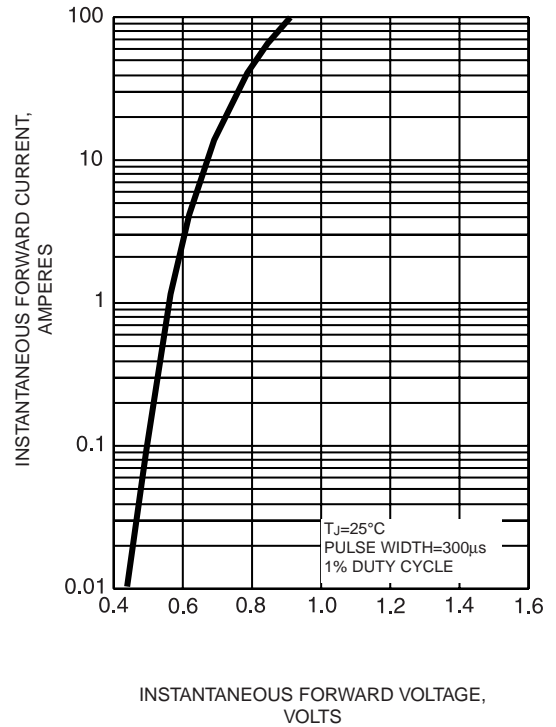
**FIG. 2 - MAXIMUM FORWARD CURRENT DERATING CURVE**



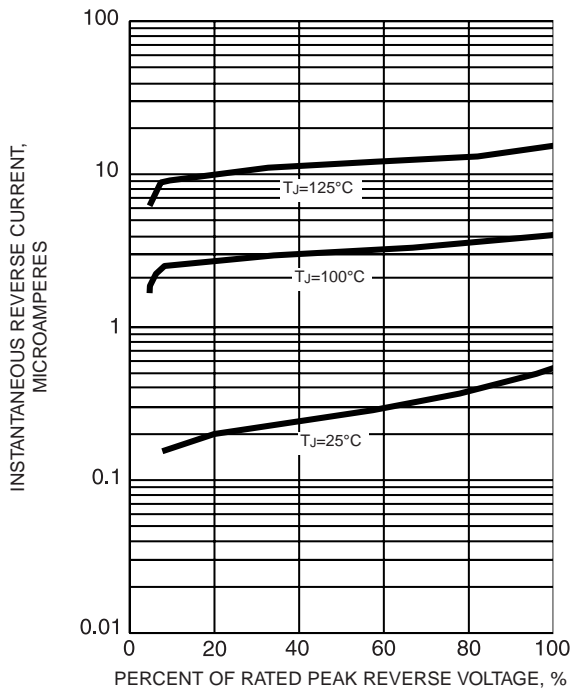
**FIG. 3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 5 - TYPICAL REVERSE CHARACTERISTIC**



**FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE**

