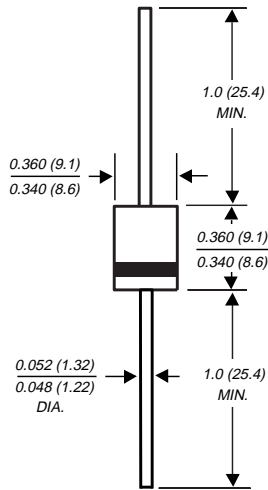


P600A THRU P600M

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_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum average forward rectified current at $T_A=60^\circ\text{C}$, 0.375" (9.5mm) lead length (FIG 1) $T_L=60^\circ\text{C}$, 0.125" (3.18mm) lead length (FIG 2) | $I_{(AV)}$ | 6.0 22.0 | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 400.0 | | | | | | | Amps |
| Maximum instantaneous forward voltage at: 6.0A 100A | V_F | 0.90 1.30 | | | | | | 1.0 1.4 | Volts |
| Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$ | I_R | 5.0 1.0 | | | | | | | μA mA |
| Typical junction capacitance (NOTE 1) | C_J | 150.0 | | | | | | | pF |
| Typical reverse recovery time (NOTE 2) | t_{rr} | 2.5 | | | | | | | μS |
| Typical thermal resistance (NOTE 3) | $R_{\theta JA}$ $R_{\theta JL}$ | 20.0 4.0 | | | | | | | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range | T_J, T_{STG} | -50 to +150 | | | | | | | $^\circ\text{C}$ |

NOTES:

- (1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (2) Reverse recovery time conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$
- (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

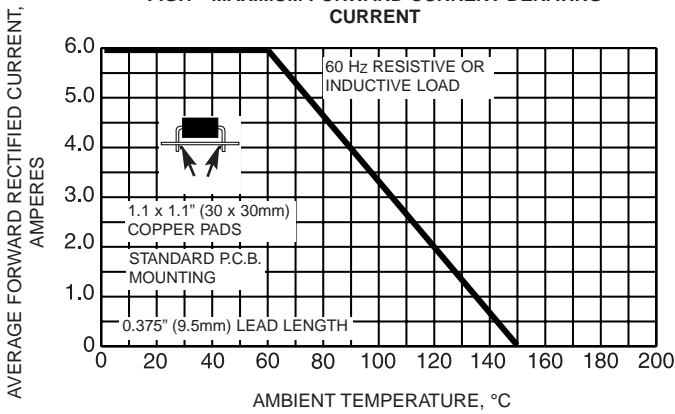


FIG. 2 - MAXIMUM FORWARD CURRENT DERATING CURVE

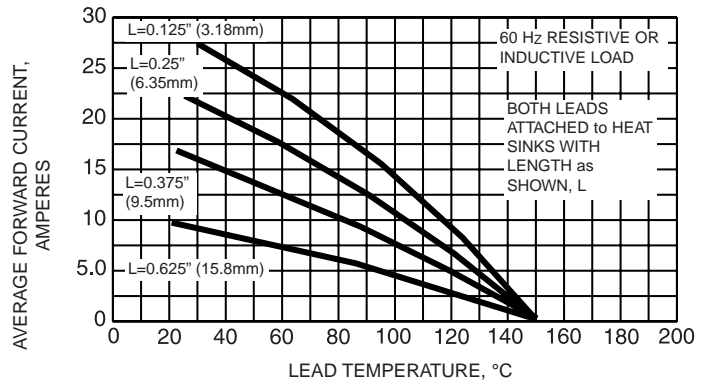


FIG. 3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

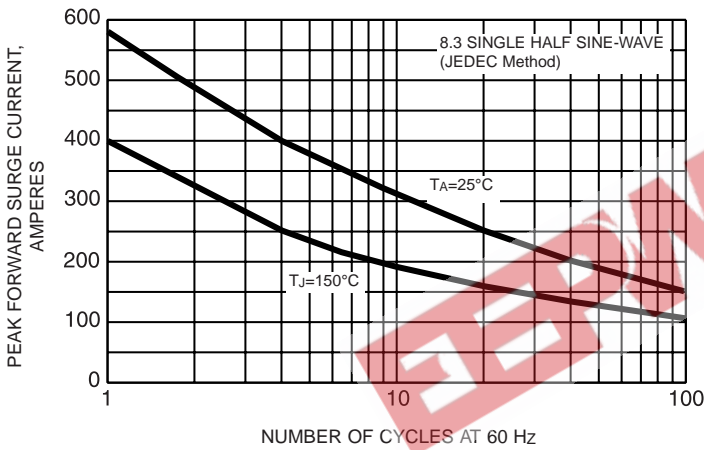


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

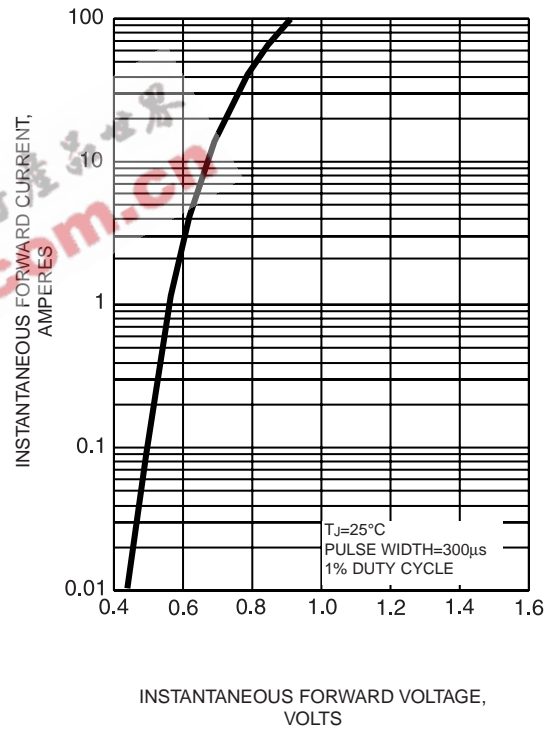


FIG. 5 - TYPICAL REVERSE CHARACTERISTIC

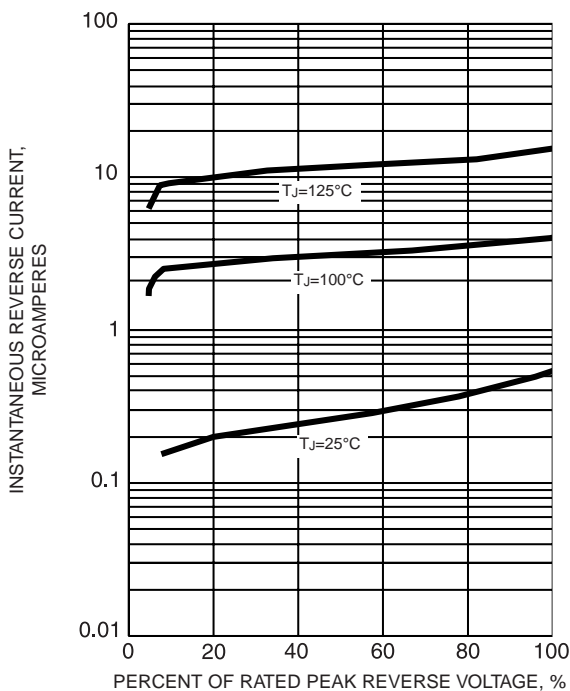


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

