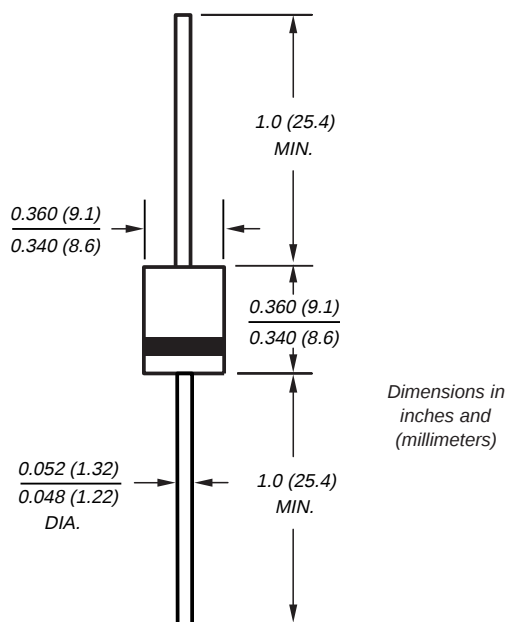




General Purpose Plastic Rectifier

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 2026High 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 gMaximum 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_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
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)	$I_{F(AV)}$	6.0 22							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	400							A
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$ $R_{\theta JL}$	20 4.0							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-50 to +150							°C

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

Maximum instantaneous forward voltage at: 6.0A 100A	V_F	0.90 1.30	1.0 1.4	V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	5.0 1.0		μA mA
Typical reverse recovery time at $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$	t_{rr}	2.5		μs
Typical junction capacitance at 4.0V, 1MHz	C_J	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

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

Fig. 1 — Maximum Forward Current Derating Current

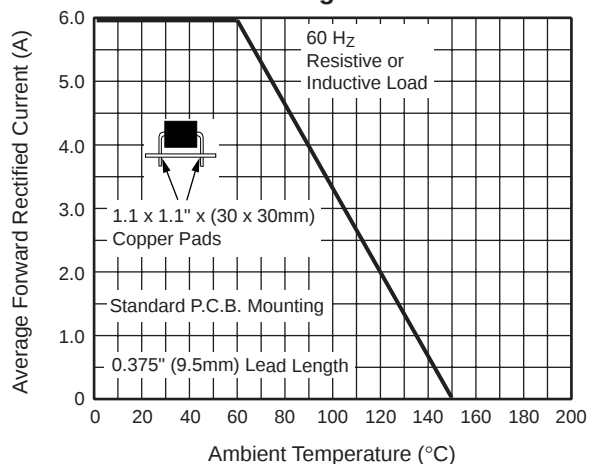


Fig. 2 — Maximum Forward Current Derating Curve

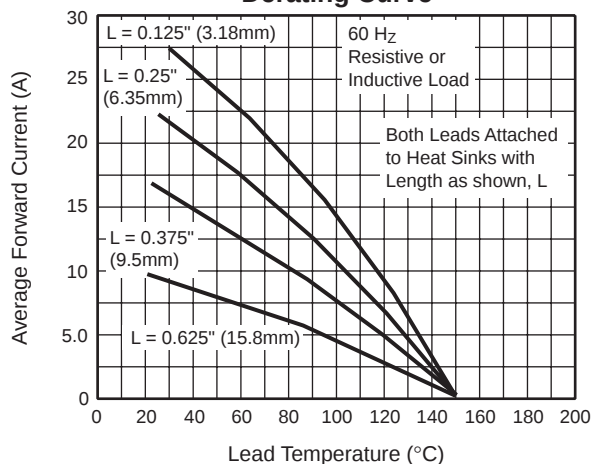


Fig. 3 — Typical Instantaneous Forward Characteristics

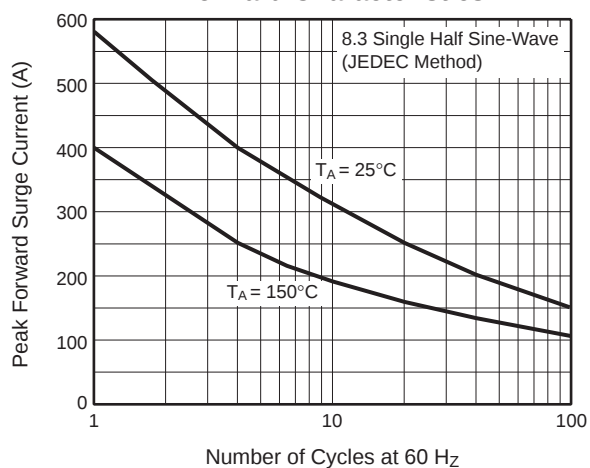


Fig. 4 — Typical Instantaneous Forward Characteristics

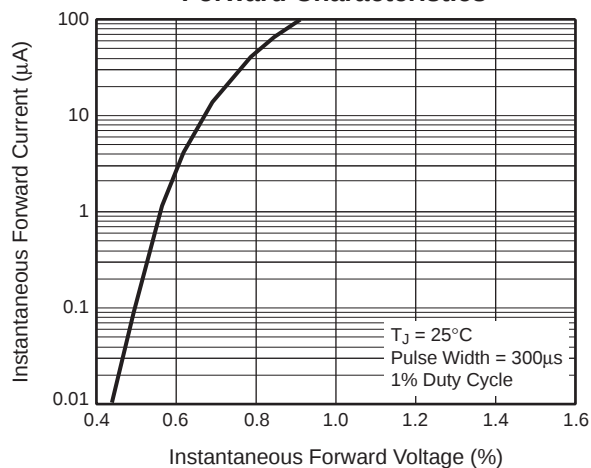


Fig. 5 — Typical Reverse Characteristics

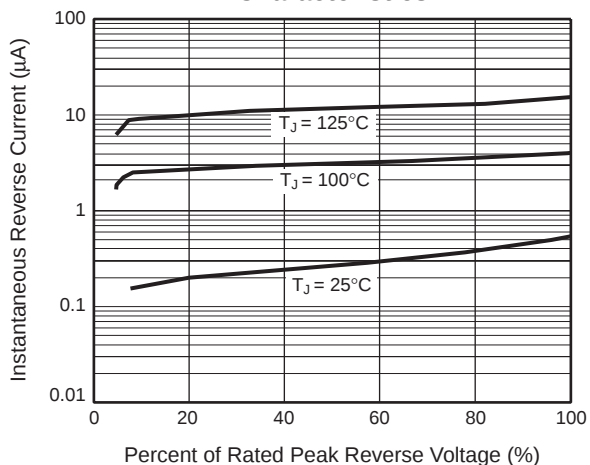


Fig. 6 — Typical Transient Thermal Impedance

