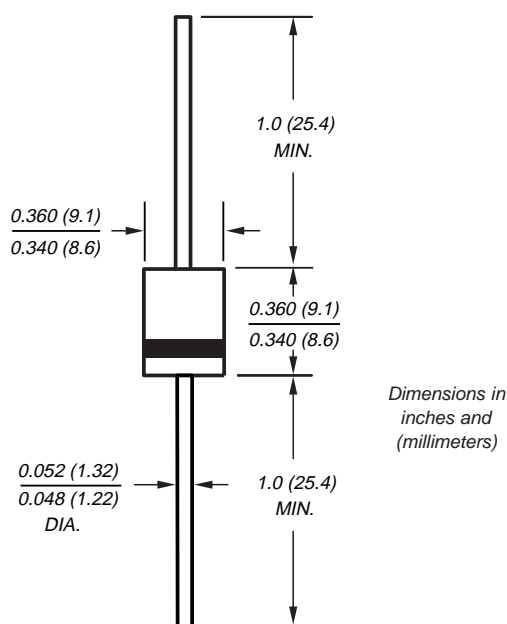




## General Purpose Plastic Rectifier

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 <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 T <sub>A</sub> =60°C, 0.375" (9.5mm) lead length (Fig. 1) T <sub>L</sub> =60°C, 0.125" (3.18mm) lead length (Fig. 2)	I <sub>F(AV)</sub>	6.0 22							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	400							A
Typical thermal resistance <sup>(1)</sup>	R <sub>θJA</sub> R <sub>θJL</sub>	20 4.0							°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-50 to +150							°C

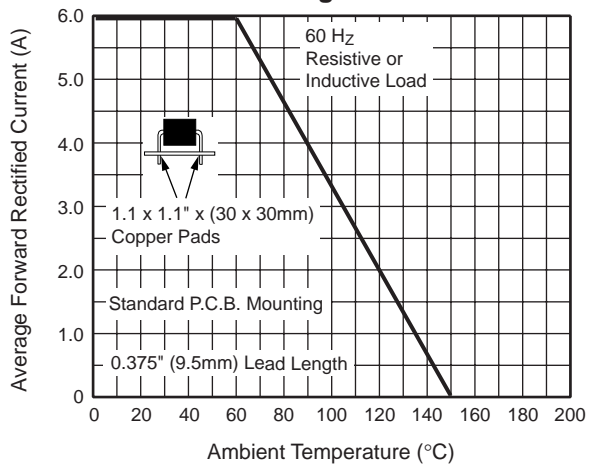
Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at: 6.0A 100A	V <sub>F</sub>	0.90 1.30	1.0 1.4	V
Maximum DC reverse current at rated DC blocking voltage T <sub>A</sub> = 25°C T <sub>A</sub> =100°C	I <sub>R</sub>	5.0 1.0		μA mA
Typical reverse recovery time at 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

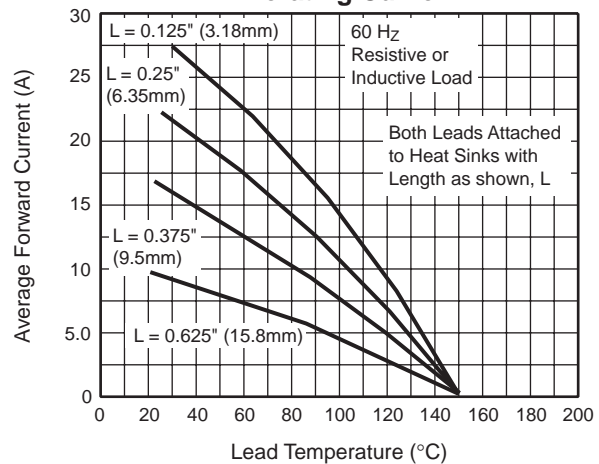
**Note:** (1) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length,  
P.C.B. mounted with 1.1" x 1.1" (30 x 30mm) copper pads

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

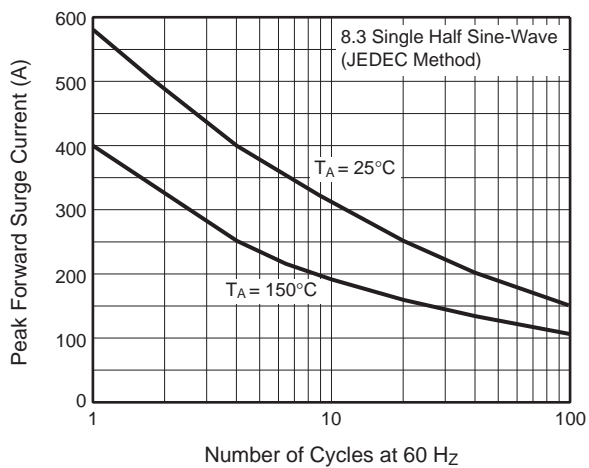
**Fig. 1 — Maximum Forward Current Derating Current**



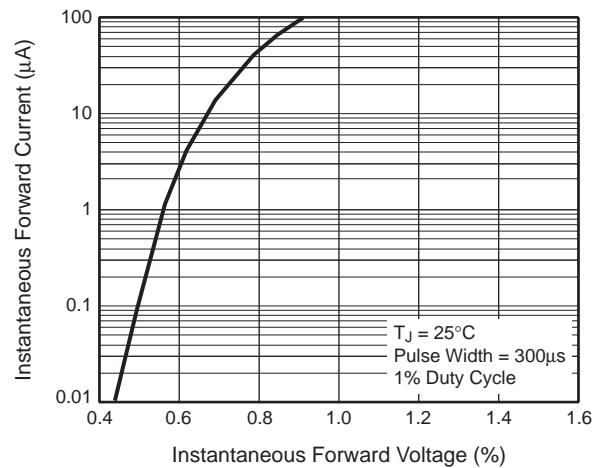
**Fig. 2 — Maximum Forward Current Derating Curve**



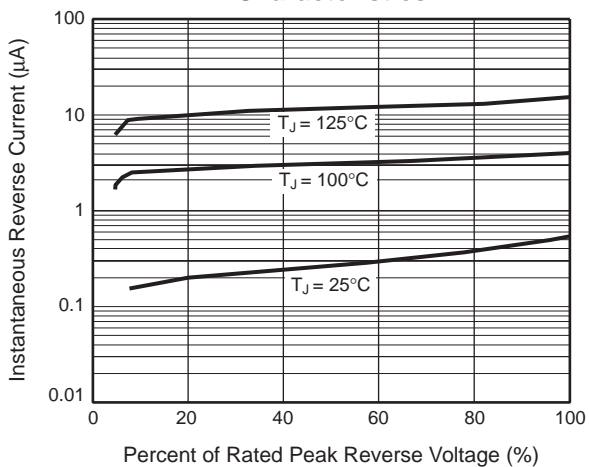
**Fig. 3 — Typical Instantaneous Forward Characteristics**



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



**Fig. 5 — Typical Reverse Characteristics**



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

