



# P600A THRU P600M

## GENERAL PURPOSE PLASTIC RECTIFIER

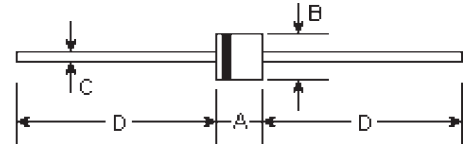
Reverse Voltage - 50 to 1000 Volts

Forward Current - 6.0 Amperes

### 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

**R-6**



### 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:** 0.074 ounce, 2.1 grams

DIM	DIMENSIONS				Note
	inches		mm		
	Min.	Max.	Min.	Max.	
A	0.339	0.358	8.6	9.1	
B	0.339	0.358	8.6	9.1	φ
C	0.047	0.052	1.2	1.3	φ
D	1.000	-	25.40	-	

### 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) $T_C=60^\circ\text{C}$ , 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 (MIL-STD-750D 4066 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							$\mu\text{A}$ mA
Typical reverse recovery time (Note 1)	$T_{rr}$	2.5							$\mu\text{S}$
Typical junction capacitance (Note 2)	$C_J$	150.0							$\mu\text{F}$
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							$^\circ\text{C}$

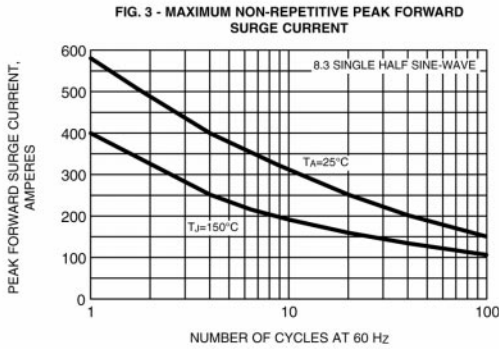
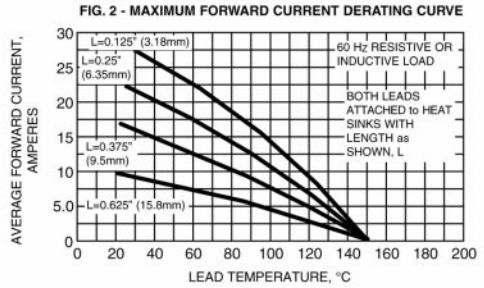
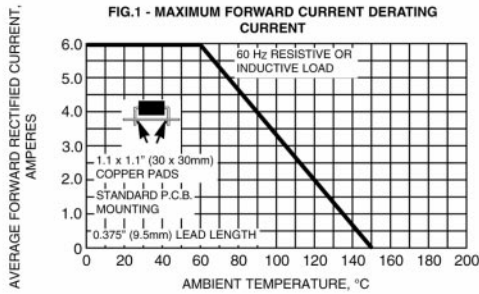
Notes:

(1) Reverse recovery test conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$

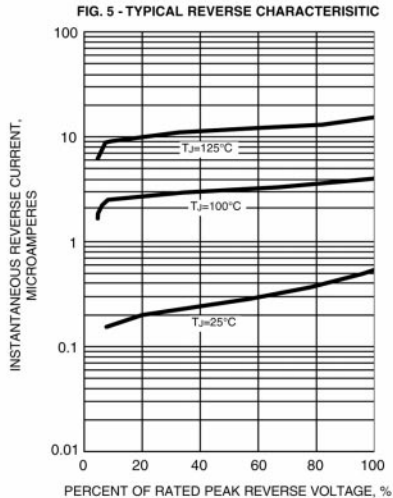
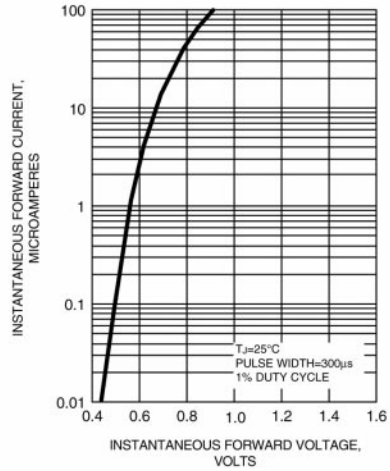
(2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts

(3) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted with 1.1X1.1" (30X30mm) copper pads

# RATINGS AND CHARACTERISTIC CURVES



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



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

