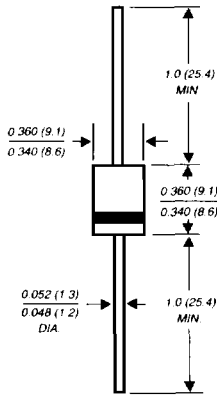


# P600A THRU P600M

## GENERAL PURPOSE PLASTIC RECTIFIER

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

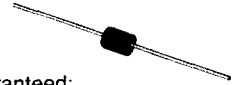
### Case Style P600



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 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>(AV)</sub>	6.0 22.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	400.0							Amps
Maximum instantaneous forward voltage at: 6.0A 100A	V <sub>F</sub>	0.90 1.30					1.0 1.4		Volts
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 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> R <sub>θJL</sub>	20.0 4.0					°C/W		
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-50 to +150							°C

#### NOTES:

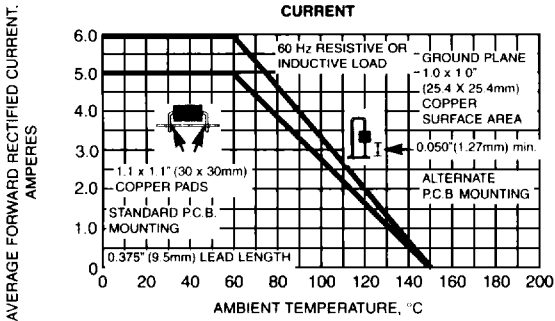
(1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

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

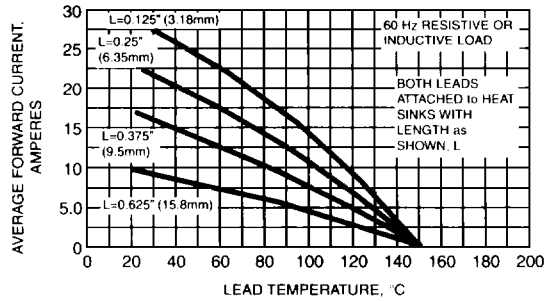
(3) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted with 1.1 x 1.1 (30 x 30mm) copper pads

# RATINGS AND CHARACTERISTIC CURVES P600A THRU P600M

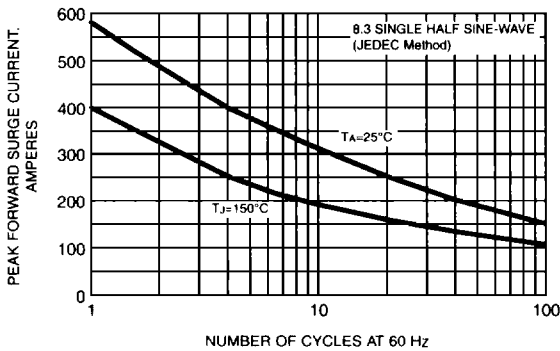
**FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURRENT**



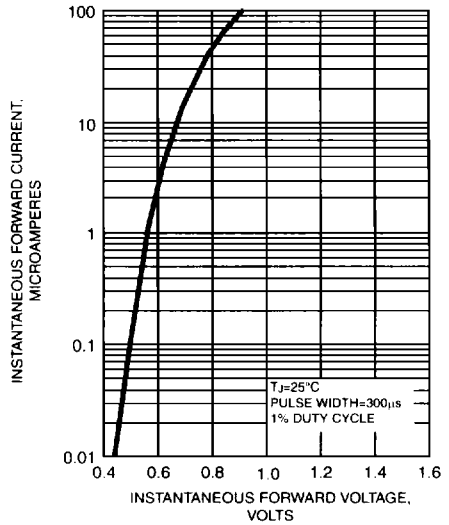
**FIG. 2 - MAXIMUM FORWARD CURRENT DERATING CURVE**



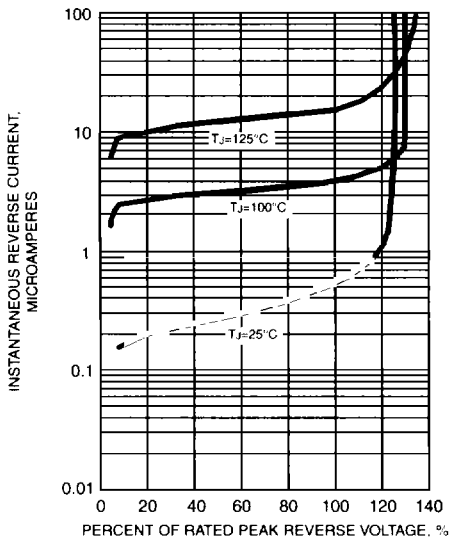
**FIG. 3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



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



**FIG. 5 - TYPICAL REVERSE CHARACTERISTICS**



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

