

# Silicon Diode

## **P600B**

100V / 6A

# DATASHEET

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OEM – General Semiconductor

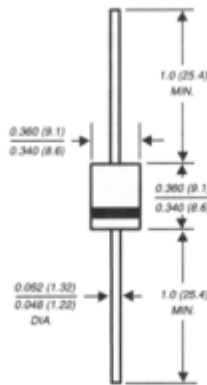
Source: General Semiconductor Databook 1998

# 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	1.0		Volts	
						1.30	1.4			
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			µA	
						1.0			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			°C/W	
						4.0				
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>rr</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**

