

# 6A Power Diodes

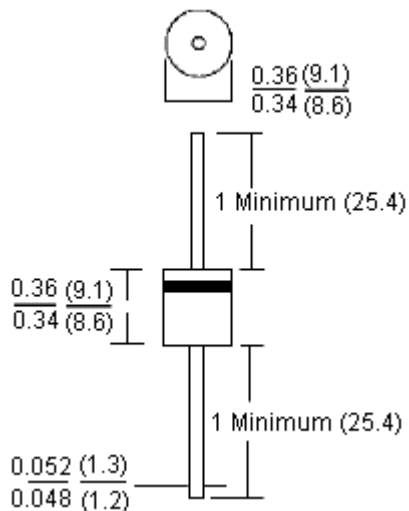
## P600 Series



### Standard Axial Rectifiers



**P600**



Dimensions : Inches (Millimetres)

### Mechanical Data

Case	: Moulded plastic, P600
Terminals	: Axial leads, solderable per MIL-STD-202, Method 208
Polarity	: Colour band denotes cathode
Mounting Position	: Any
Weight	: 2.1 g

### Features:

- High surge current capability
- Void-free plastic in a P600 package
- High current operation 6 Amperes at  $T_A = 55^\circ\text{C}$
- Exceeds environmental standards of MIL-S-19500/228

### Maximum Ratings and Electrical Characteristics

At  $T_A = 25^\circ\text{C}$  unless otherwise specified. Single phase, half-wave, 60 Hz, resistive or inductive load

All values except maximum RMS voltage are registered JEDEC parameters

	P600A	P600D	P600G	P600K	P600M	Units
Maximum Recurrent Peak Reverse Voltage	50	200	400	800	1,000	V
Maximum RMS Voltage	35	140	280	560	700	
Maximum dc Blocking Voltage	50	200	400	800	1,000	
Maximum Average Forward Rectified Current T <sub>A</sub> = 55°C	6					A
Maximum Overload Surge Current at 1 Cycle (Note 1)	400					
Maximum Forward Voltage at 6 A dc	1					V
Maximum dc Reverse Current at T <sub>A</sub> = 25°C	10					μA
Rated dc Blocking Voltage at T <sub>A</sub> = 100°C	1					mA dc
Typical Junction Capacitance (Note 3) C <sub>J</sub>	150					pF
Typical Thermal Resistance (Note 2) R <sub>θJA</sub>	20					°C / W
Typical Thermal Resistance (Note 2) R <sub>θJL</sub>	4					
Operating Temperature Range	-55 to 150					°C
Storage Temperature Range						

### Notes

1. Peak forward surge current, per 8.3 ms single half-sine-wave superimposed on rated load (JEDEC method)
2. Thermal resistance from junction to ambient and from junction to lead at 0.375 inches (9.5 mm) lead length PCB mounted with 1.1 × 1.1 inches (30 × 30 mm) copper pads
3. Measured at 1 MHz and applied reverse voltage of 4 volts

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### Rating and Characteristic Curves

Fig. 1-Typical Reverse Characteristics

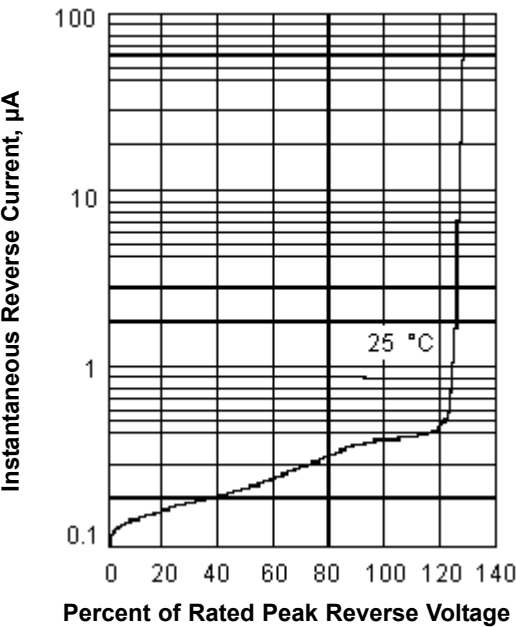


Fig. 2-Forward Derating Curve

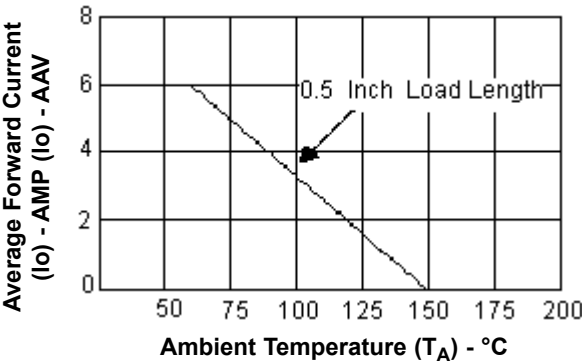


Fig. 4-Typical Instantaneous Forward Characteristics

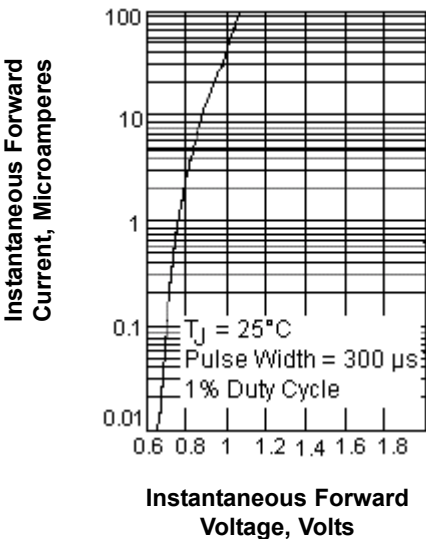


Fig. 3-Typical Transient Thermal Impedance

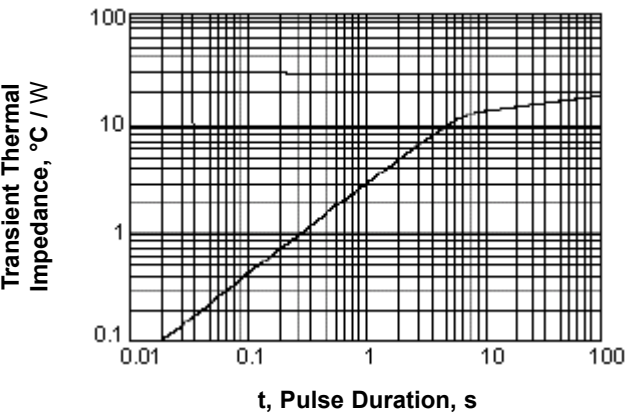
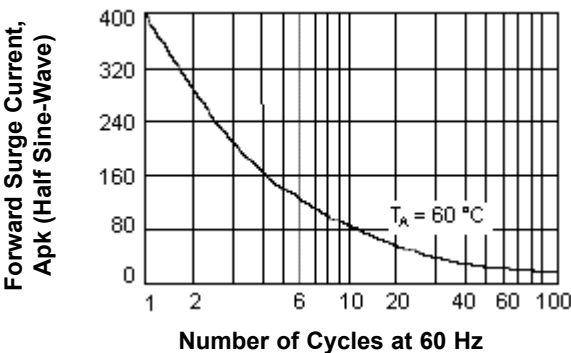


Fig. 5-Maximum Overload Surge Current



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Specification Table

$V_{RRM}$ Maximum (V)	$I_f$ Average (A)	$I_{fsm}$ (A)	Plastic Package	Part Number
1,000	6	400	P600	P600M
400				P600G
800				P600K
50				P600A
200				P600D

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