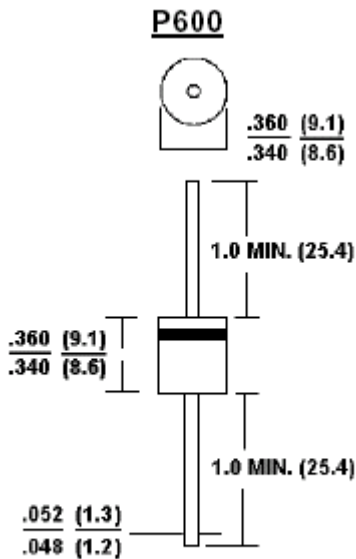


# P600 Series

## 6A Power Diodes



### Standard Axial Rectifiers



Dimensions in inches and (Millimetres)

### Features:

- High surge current capability.
- Void-free plastic in a P600 package.
- High current operation 6.0 Amperes at  $T_A = 55^\circ\text{C}$ .
- Exceeds environmental standards of MIL-S-19500/228.

### 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 grams.



# P600 Series

## 6A Power Diodes



### Maximum Ratings and Electrical Characteristics:

At  $T_A = 25^\circ\text{C}$  unless otherwise specified. Single phase, half-wave, 60Hz, 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	1000	V
Maximum RMS voltage	35	140	280	560	700	
Maximum DC blocking voltage	50	200	400	800	1000	
Maximum average forward rectified current $T_A = 55^\circ\text{C}$	6.0					A
Maximum overload surge current at 1 cycle (Note 1)	400					
Maximum forward voltage at 6.0A dc	1.0					V
Maximum DC reverse current at $T_A = 25^\circ\text{C}$	10					$\mu\text{A}$
Rated DC blocking voltage at $T_A = 100^\circ\text{C}$	1.0					mA dc
Typical junction capacitance (Note 3) $C_J$	150					pF
Typical thermal resistance (Note 2) $R_{\theta JA}$ Typical thermal resistance (Note 2) $R_{\theta JL}$	20.0 4.0					$^\circ\text{C}/\text{W}$
Operating temperature range	-55 to +150					$^\circ\text{C}$
Storage temperature range						

### NOTES:

1. Peak forward surge current, per 8.3ms 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" (9.5mm) lead length PCB mounted with 1.1 × 1.1" (30 × 30mm) copper pads.
3. Measured at 1MHz and applied reverse voltage of 4.0 volts.

### Rating and Characteristic Curves

Figure 1 - TYPICAL REVERSE CHARACTERISTICS

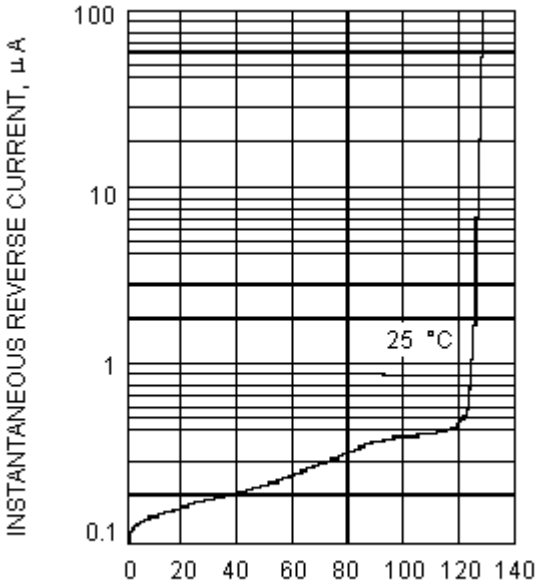


Figure 2 - FORWARD DERATING CURVE

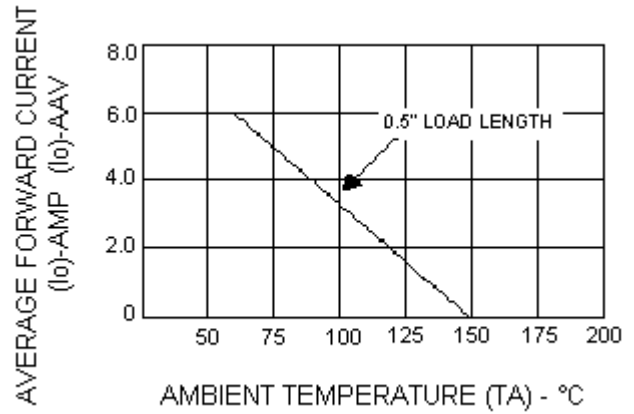


Figure 3 - TYPICAL TRANSIENT THERMAL IMPEDANCE

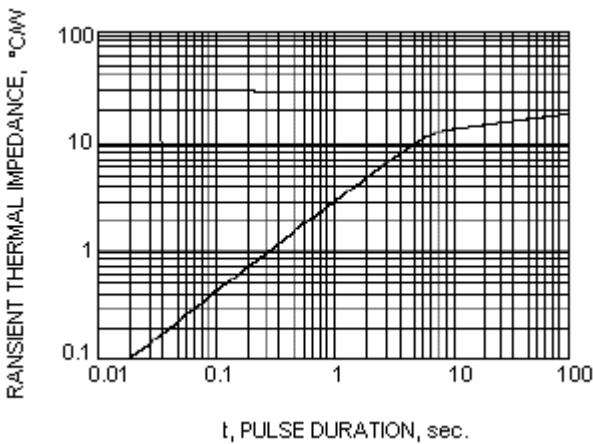
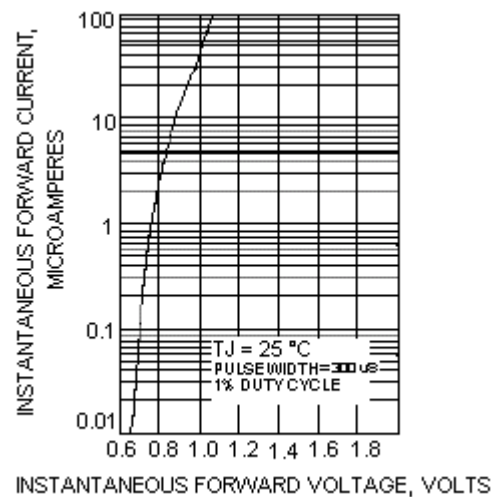


Figure 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

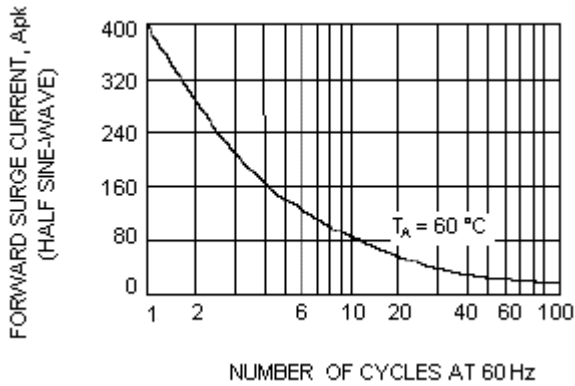


# P600 Series

## 6A Power Diodes



Figure 5 - MAXIMUM OVERLOAD SURGE CURRENT



### Specifications

$V_{RRM}$ Maximum (V)	$I_f$ Average (A)	$I_{fsm}$ (A)	Plastic Package	Part Number
1000	6	400	P600	P600M
400				P600G
800				P600K
50				P600A
200				P600D

# P600 Series

## 6A Power Diodes



### Notes:

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