6A Power Diodes
P600 Series

Features

- High surge current capability
- Void-free plastic in a P600 package
- High current operation 6 Amperes at T_A = 55°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 g

Max. Ratings and Electrical Characteristics

At T_A = 25°C unless otherwise specified. Single phase, half-wave, 60Hz, resistive or inductive load
All values except maximum RMS voltage are registered JEDEC parameters

Characteristics	P600A+	P600D+	P600G+	P600K+	P600M+	Units
Max. Recurrent Peak Reverse Voltage	50	200	400	800	1,000	V
Max. RMS Voltage	35	140	280	560	700	
Max. DC Blocking Voltage	50	200	400	800	1,000	
Max. Average Forward Rectified Current T_A = 55°C	6					A
Max. Overload Surge Current at 1 Cycle (Note 1)	400					
Max. Forward Voltage at 6A DC	1					V
Max. DC Reverse Current at T_A = 25°C	10					µA
Rated DC Blocking Voltage at T_A = 100°C	1					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 4					°C / W
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 (30mm × 30mm) copper pads
3. Measured at 1 MHz and applied reverse voltage of 4 volts

Rating and Characteristic Curves

Fig. 1-Typical Reverse Characteristics

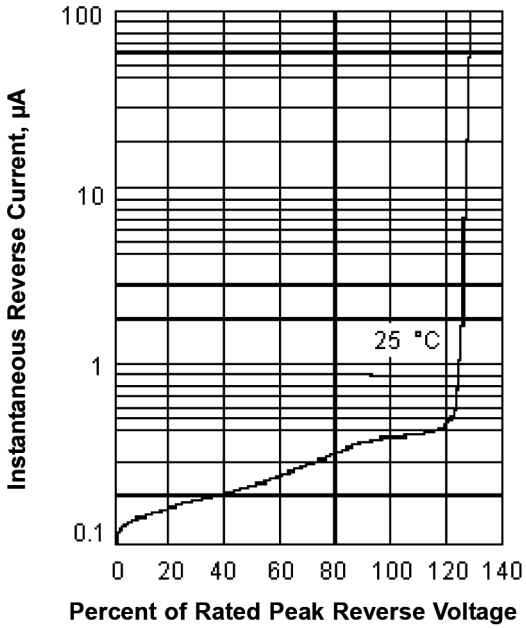


Fig. 2-Forward Derating Curve

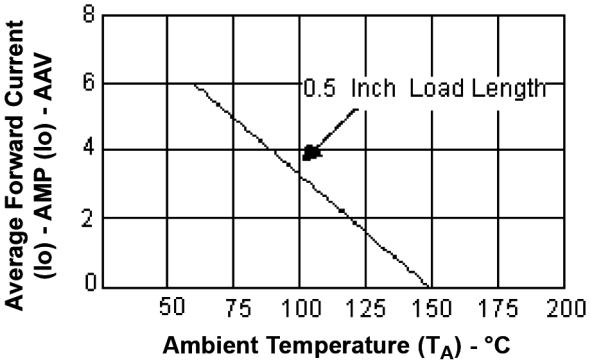


Fig. 3-Typical Transient Thermal Impedance

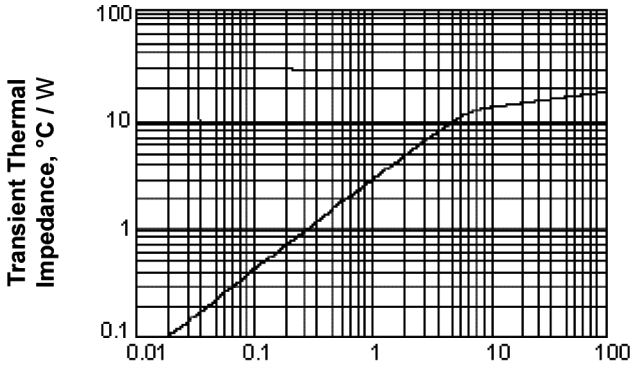


Fig. 4-Typical Instantaneous Forward Characteristics

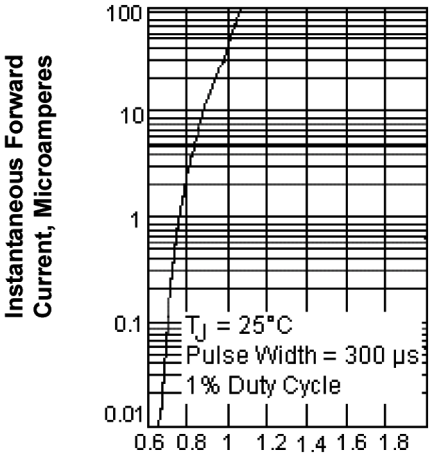
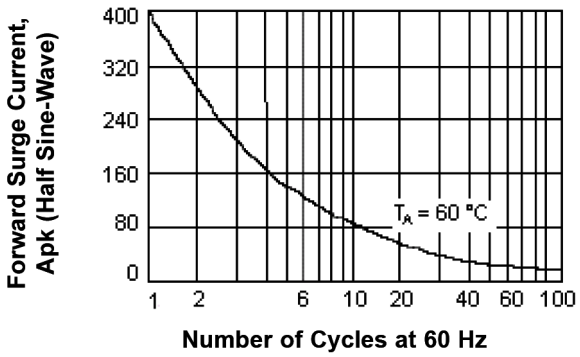
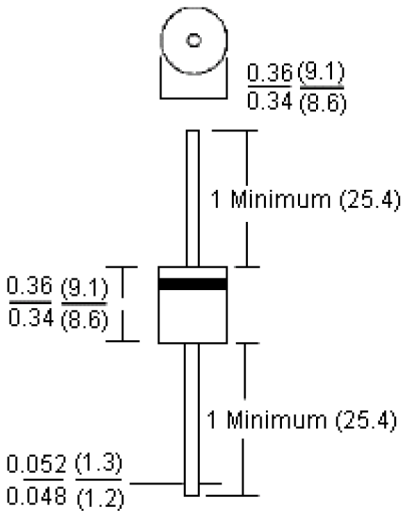


Fig. 5-Maximum Overload Surge Current



Dimensions

P600



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Standard Recovery Diode, 50V, 6 A, Single, 1V, 400 A	P600A+
Standard Recovery Diode, 200V, 6 A, Single, 1V, 400 A	P600D+
Standard Recovery Diode, 400V, 6 A, Single, 1V, 400 A	P600G+
Standard Power Diode, 800V, 6 A, Single, 1.35 V, 400 A	P600K+
Standard Recovery Diode, 1kV, 6 A, Single, 1 V, 400 A	P600M+