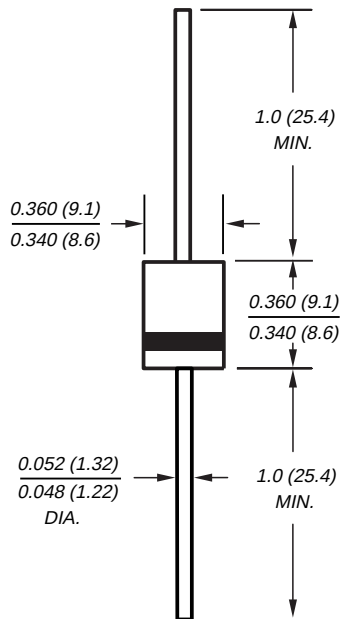




Fast Switching Fast Rectifier

Reverse Voltage 50 to 800V
Forward Current 6.0A

Case Style P600



Dimensions in inches and (millimeters)

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High surge current capability
- Construction utilizes void-free molded plastic technique
- Fast switching for high efficiency
- 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 oz., 2.1 g**Packaging codes/options:**

1/750 EA. per Bulk Box

4/800 EA. per 13" Reel (52mm Tape)

23/300 EA. per Ammo box (52mm Tape)

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	SRP 600A	SRP 600B	SRP 600D	SRP 600G	SRP 600J	SRP 600K	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T _A =55°C	I _{F(AV)}	6.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	300						A
Typical thermal resistance ⁽¹⁾	R _{θJA}	10						°C/W
Operating junction temperature range	T _J	-50 to +125						°C
Storage temperature range	T _{STG}	-50 to +150						°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at 6.0A	V _F	1.3						V
Maximum DC reverse current at rated DC blocking voltage T _A =25°C T _A =100°C	I _R	10 1.0						μA
Maximum reverse recovery time at I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	t _{rr}	100	100	150	150	200	200	ns
Typical junction capacitance at 4.0V, 1MHz	C _J	300						pF

Notes:

(1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length with both leads equally heat sink

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Forward Current Derating Curves

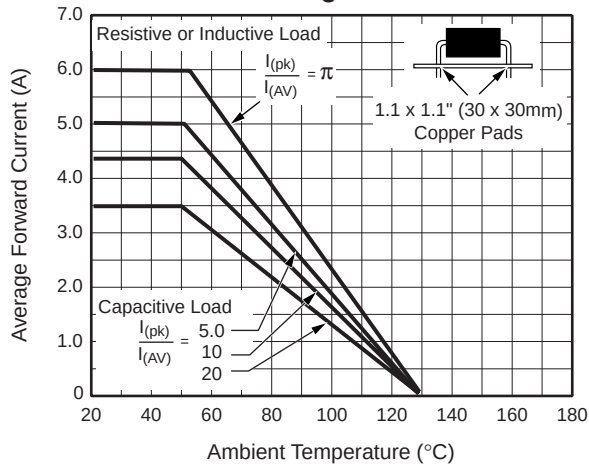


Fig. 2 – Forward Current Derating Curve

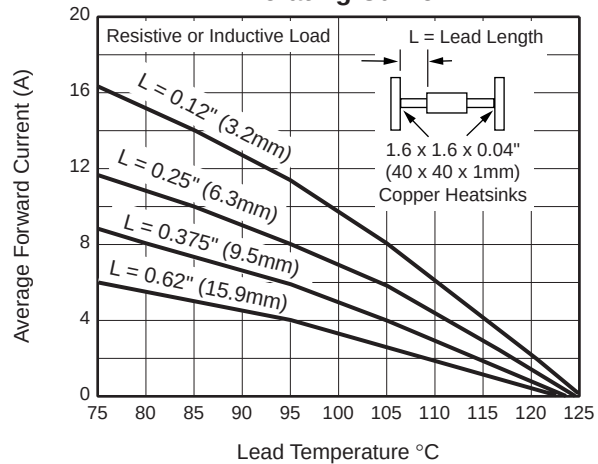


Fig. 3 – Maximum Non-Repetitive Peak Forward Surge Current

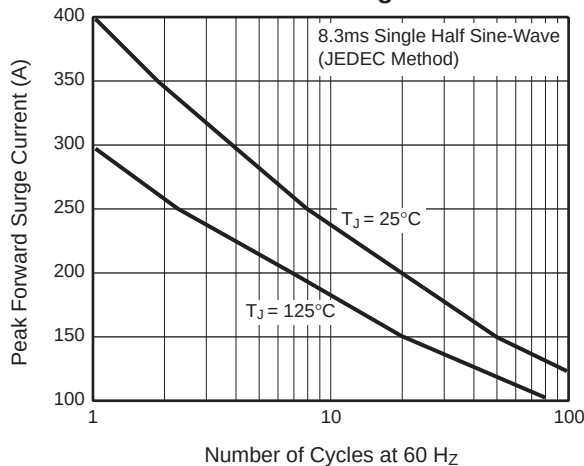


Fig. 4 – Typical Instantaneous Forward Characteristics

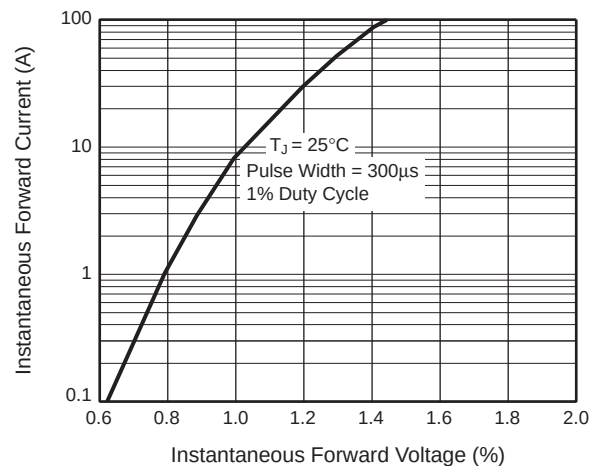


Fig. 5 – Typical Reverse Characteristics

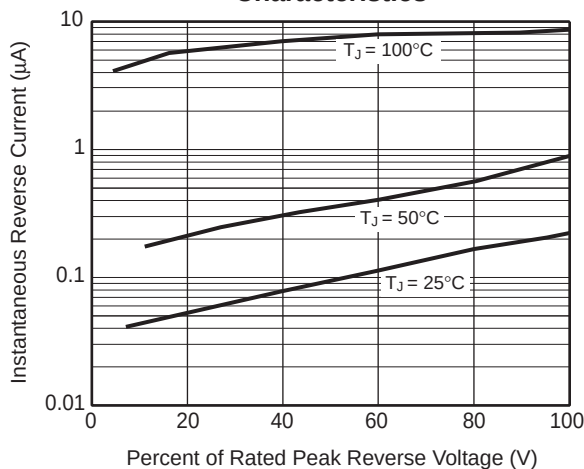


Fig. 6 – Typical Thermal Resistance

