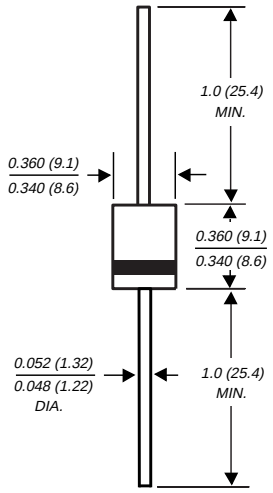
SRP600A THRU SRP600K

FAST SWITCHING PLASTIC RECTIFIER

***Reverse Voltage** - 50 to 800 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 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 package 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	*SRP 600A*	*SRP 600B*	*SRP 600D*	*SRP 600G*	*SRP 600J*	*SRP 600K*	*UNITS*
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at T_A=55°C	$I_{(AV)}$	6.0						Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	300.0						Amps
Maximum instantaneous forward voltage at 6.0A	V_F	1.3						Volts
Maximum DC reverse current T_A=25°C at rated DC blocking voltage T_A=100°C	I_R	10.0 1.0						µA mA
Maximum reverse recovery time (NOTE 1)	t_{rr}	100	100	150	150	200	200	ns
Typical junction capacitance (NOTE 2)	C_J	300.0						pF
Typical thermal resistance (NOTE 3)	$R_{\Theta JA}$	10.0						°C/W
Operating junction temperature range	T_J	-50 to +125						°C
Storage temperature range	T_{STG}	-50 to +150						°C

NOTES:
(1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
(3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, with both leads equally to heat sink

GENERAL SEMICONDUCTOR®

FIG. 1 - FORWARD CURRENT DERATING CURVE

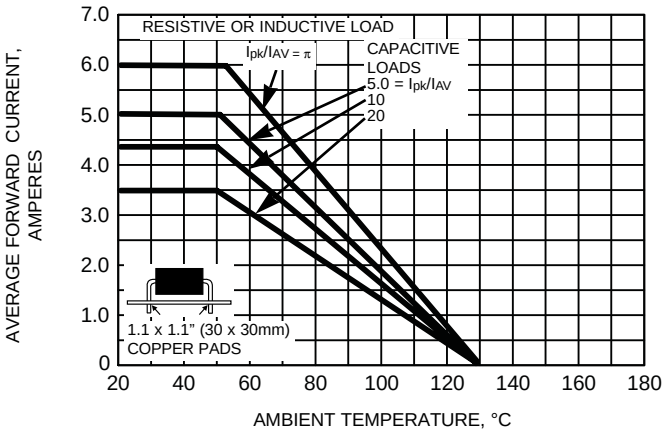


FIG. 2 - FORWARD CURRENT DERATING CURVE

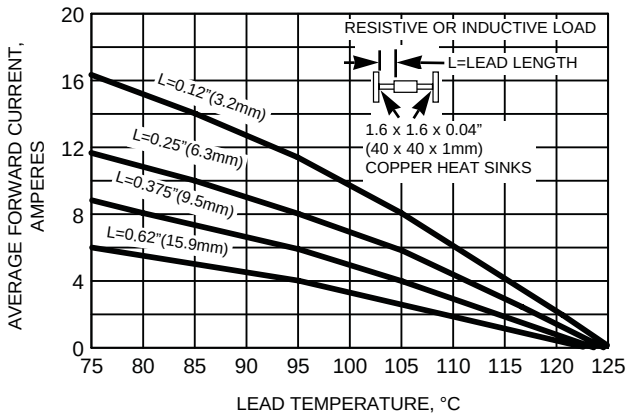


FIG. 3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

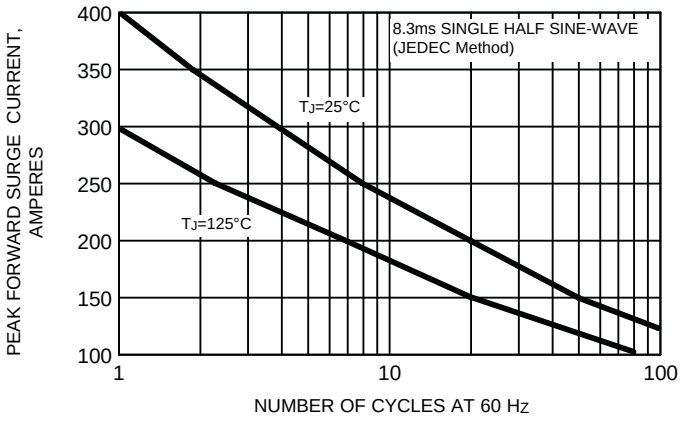


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

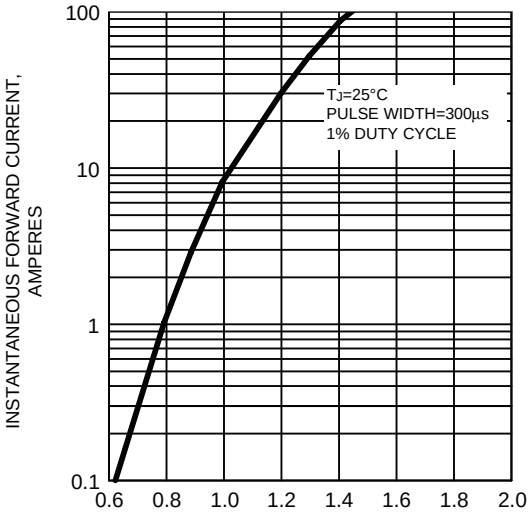


FIG. 5 - TYPICAL REVERSE CHARACTERISTICS

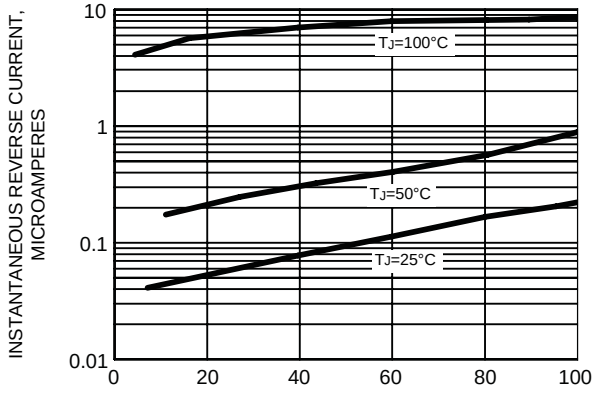


FIG. 6 - TYPICAL THERMAL RESISTANCE

