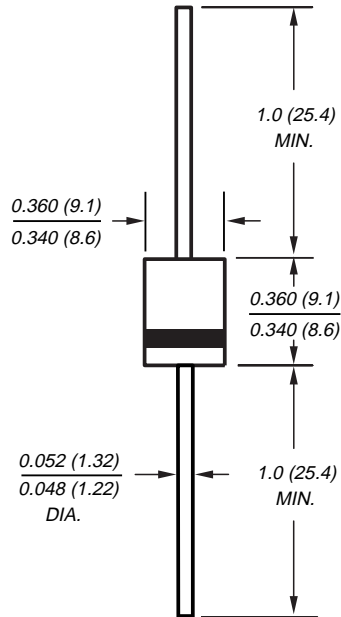




## Fast Switching Fast Rectifier

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 <sub>RRM</sub>	50	100	200	400	600	800	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T <sub>A</sub> =55°C	I <sub>F(AV)</sub>	6.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	300						A
Typical thermal resistance <sup>(1)</sup>	R <sub>θJA</sub>	10						°C/W
Operating junction temperature range	T <sub>J</sub>	-50 to +125						°C
Storage temperature range	T <sub>STG</sub>	-50 to +150						°C

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

Maximum instantaneous forward voltage at 6.0A	V <sub>F</sub>	1.3						V
Maximum DC reverse current at rated DC blocking voltage T <sub>A</sub> =25°C T <sub>A</sub> =100°C	I <sub>R</sub>	10 1.0						μA
Maximum reverse recovery time at I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	t <sub>rr</sub>	100	100	150	150	200	200	ns
Typical junction capacitance at 4.0V, 1MHz	C <sub>J</sub>	300						pF

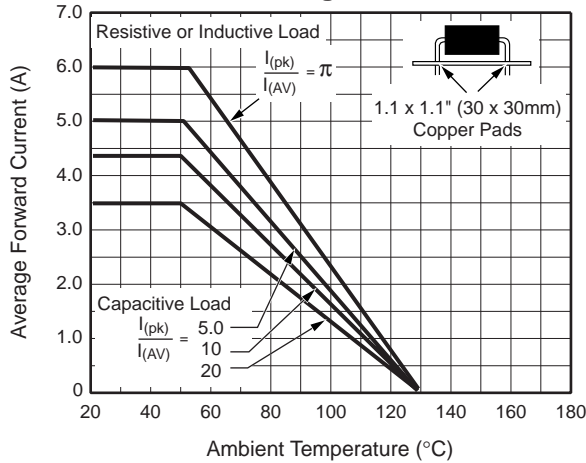
### Notes:

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

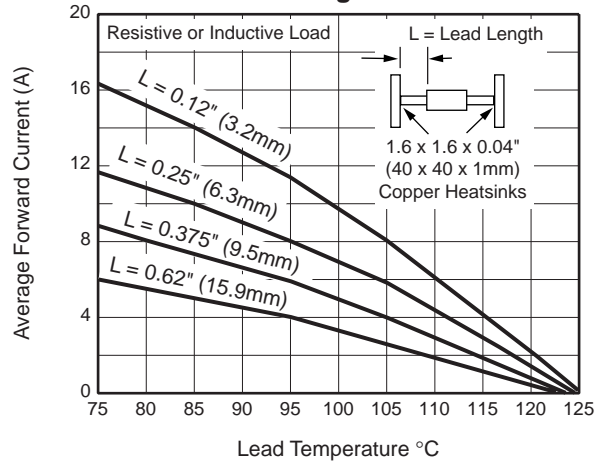
Vishay Semiconductors  
formerly General Semiconductor

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

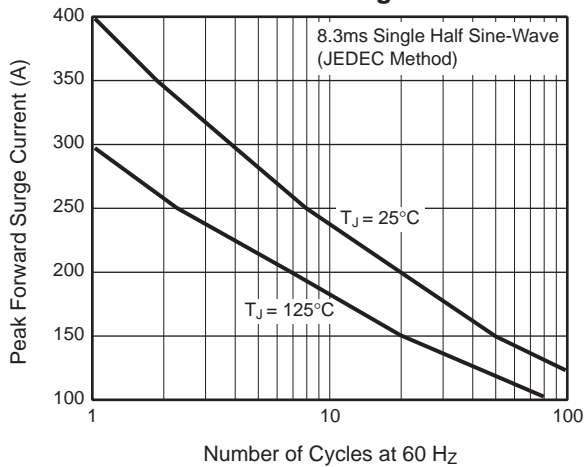
**Fig. 1 – Forward Current Derating Curves**



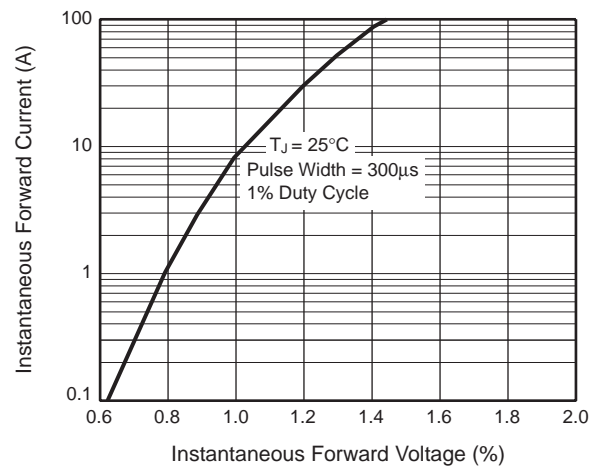
**Fig. 2 – Forward Current Derating Curve**



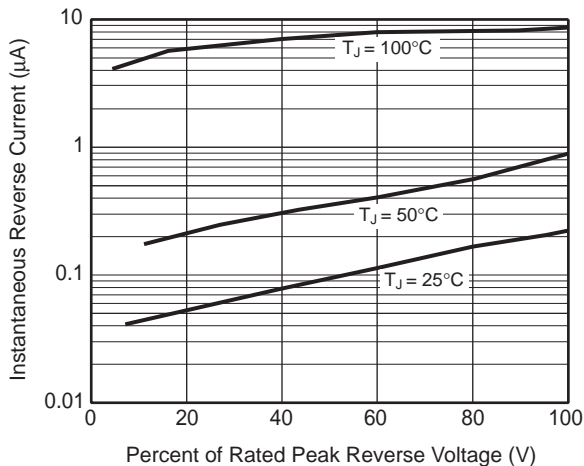
**Fig. 3 – Maximum Non-Repetitive Peak Forward Surge Current**



**Fig. 4 – Typical Instantaneous Forward Characteristics**



**Fig. 5 – Typical Reverse Characteristics**



**Fig. 6 – Typical Thermal Resistance**

