

# P600A THRU P600M

## HIGH CURRENT PLASTIC SILICON RECTIFIER VOLTAGE - 50 to 1000 Volts CURRENT - 6.0 Amperes

### FEATURES

- High surge current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O Utilizing Flame Retardant Epoxy Molding Compound
- Void-free plastic in a P600 package
- High current operation 6.0 Amperes @  $T_A=55\text{ }^{\circ}\text{C}$
- Exceeds environmental standards of MIL-S-19500/228

### MECHANICAL DATA

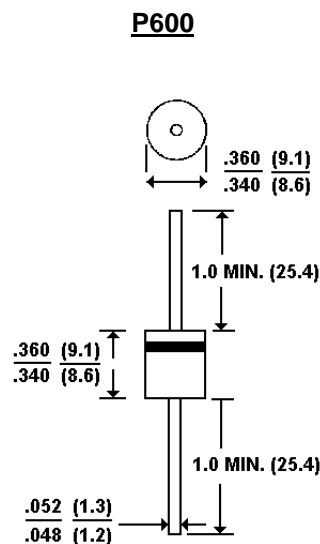
Case: Molded plastic, P600

Terminals: axial leads, solderable per MIL-STD-202, Method 208

Polarity: Color band denotes cathode

Mounting Position: Any

Weight: 0.07 ounce, 2.1 gram



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

\*@  $T_A=25\text{ }^{\circ}\text{C}$  unless otherwise specified. Single phase, half-wave, 60 Hz, resistive or inductive load.

\*\*All values except Maximum RMS Voltage are registered JEDEC parameters.

	P600A	P600B	P600D	P600G	P600J	P600K	P600M	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current $T_A=55\text{ }^{\circ}\text{C}$	6.0							$I_{\text{C}}^{\text{A}}$ A
Maximum Overload Surge Current at 1 cycle (NOTE 1)	400							A
Maximum Forward Voltage at 6.0 ADC	1.0							V
Maximum DC Reverse Current @ $T_A=25\text{ }^{\circ}\text{C}$	10							$I_{\text{g}}^{\text{A}}$
Rated DC Blocking Voltage @ $T_A=100\text{ }^{\circ}\text{C}$	1.0							$m^{\text{ADC}}$
Typical Junction capacitance (Note 3) CJ	150							$p^{\text{F}}$
Typical Thermal Resistance (Note 2) R $\theta^{\text{KJA}}$	20.0							$^{\circ}\text{C}/\text{W}$
Typical Thermal Resistance (Note 2) R $\theta^{\text{KJL}}$	4.0							$^{\circ}\text{C}/\text{W}$
Operating Temperature Range	-55 to +150							$^{\circ}\text{C}$
Storage Temperature Range	-55 to +150							$^{\circ}\text{C}$

### NOTES:

1. Peak forward surge current, per 8.3ms single half-sine-wave superimposed on rated load(JECED method)
2. Thermal resistance from junction to ambient and from junction to lead at 0.375"(9.5mm) lead length P.C.B. mounted with 1.1x1.1"(30x30mm) copper pads
3. Measured at 1 MHZ and applied reverse voltage of 4.0 volts

# RATING AND CHARACTERISTIC CURVES

## P600A THRU P600M

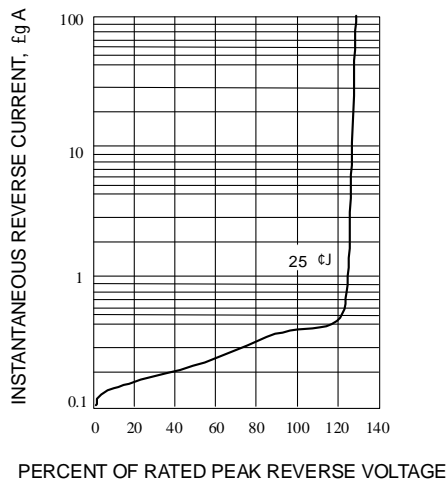


Fig. 1-TYPICAL REVERSE CHARACTERISTICS

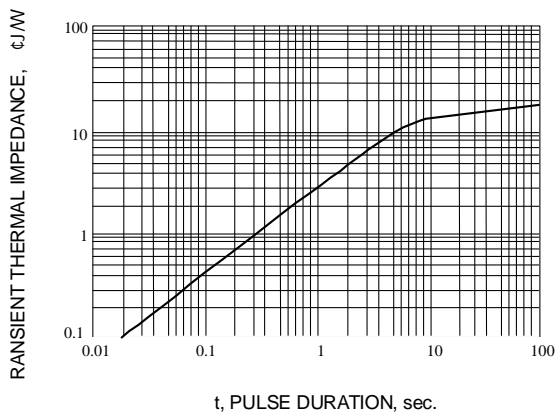


Fig. 3-TYPICAL TRANSIENT THERMAL IMPEDANCE

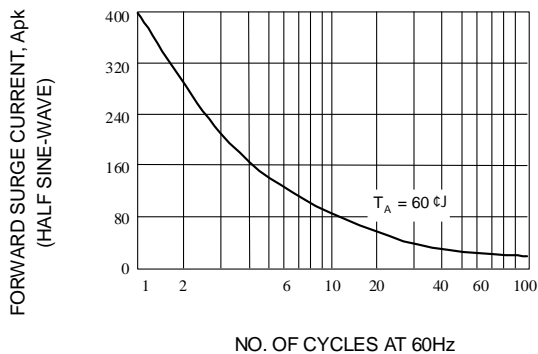


Fig. 5-MAXIMUM OVERLOAD SURGE CURRENT

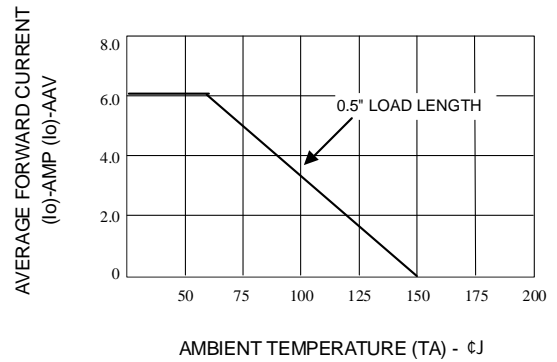


Fig. 2-FORWARD DERATING CURVE

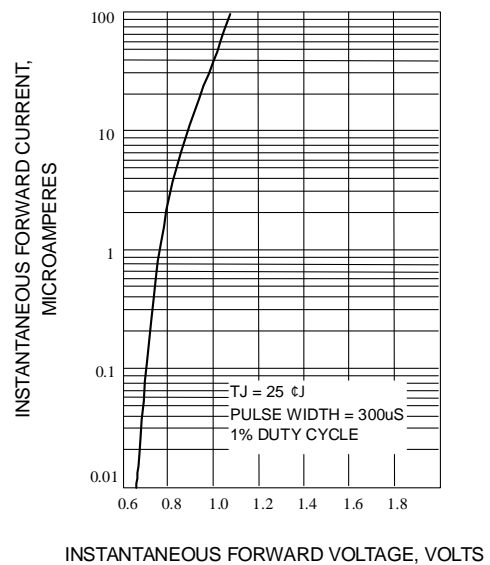


Fig. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS