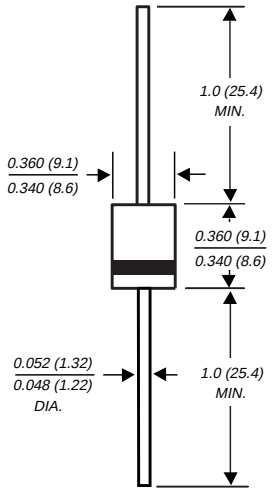
P600A THRU P600M

GENERAL PURPOSE PLASTIC RECTIFIER

Reverse Voltage - *50 to 1000 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 forward current capability
- Construction utilizes void-free molded plastic technique
- High surge current capability
- 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 ounce, 2.1 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	P600A	P600B	P600D	P600G	P600J	P600K	P600M	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current at T_A=60°C, 0.375" (9.5mm) lead length (FIG 1) T_L=60°C, 0.125" (3.18mm) lead length (FIG 2)	$I_{(AV)}$	6.0 22.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	400.0							Amps
Maximum instantaneous forward voltage at: 6.0A 100A	V_F	0.90 1.30						1.0 1.4	Volts
Maximum DC reverse current T_A= 25°C at rated DC blocking voltage T_A=100°C	I_R	5.0 1.0							µA mA
Typical junction capacitance (NOTE 1)	C_J	150.0							pF
Typical reverse recovery time (NOTE 2)	t_{rr}	2.5							µS
Typical thermal resistance (NOTE 3)	$R_{\Theta JA}$ $R_{\Theta JL}$	20.0 4.0							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-50 to +150							°C

NOTES:
(1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
(2) Reverse recovery time conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
(3) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted with 1.1 x 1.1 (30 x 30mm) copper pads

GENERAL SEMICONDUCTOR®

10/12/98

RATINGS AND CHARACTERISTIC CURVES P600A THRU P600M

FIG.1 - MAXIMUM FORWARD CURRENT DERATING CURRENT

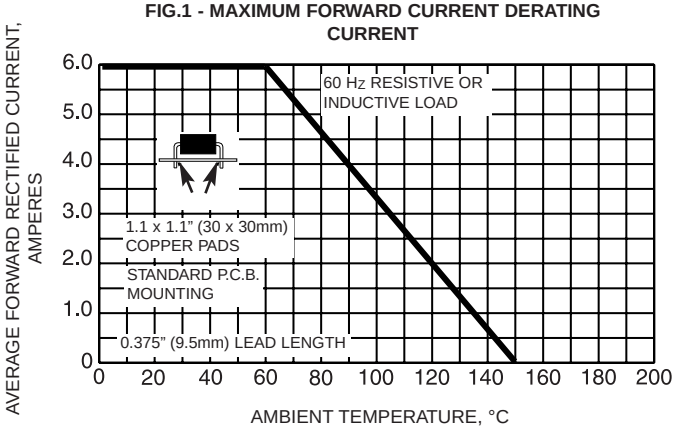


FIG. 2 - MAXIMUM FORWARD CURRENT DERATING CURVE

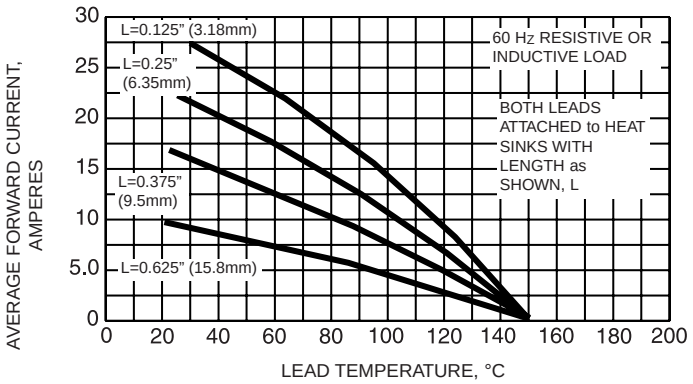


FIG. 3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

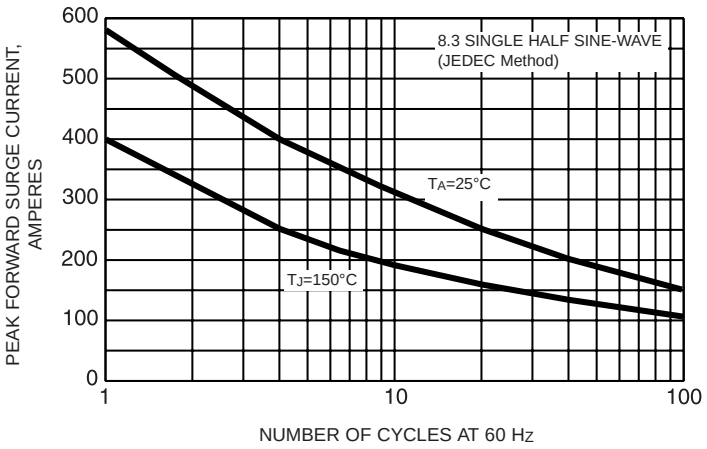


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

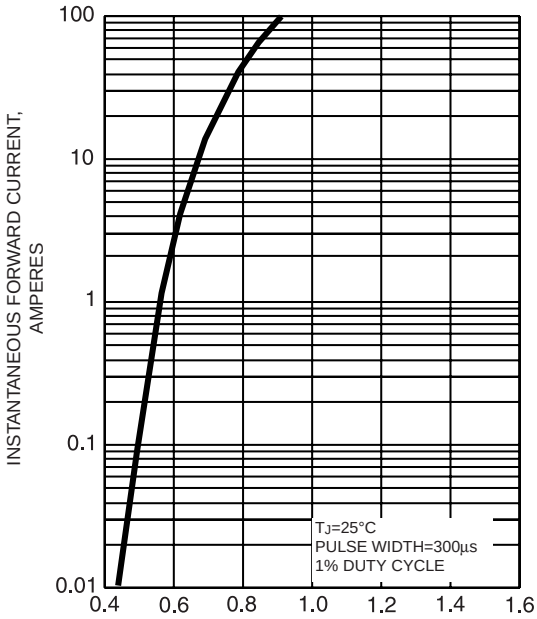


FIG. 5 - TYPICAL REVERSE CHARACTERISTIC

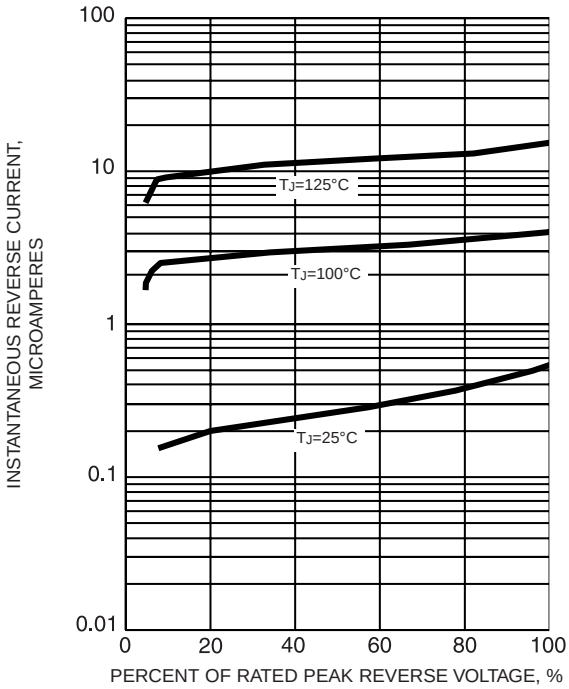
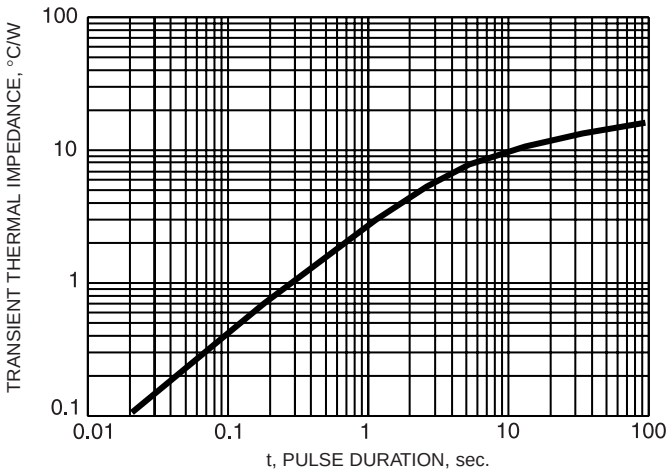


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE



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