P600A THRU P600M

6.0 AMPS Silicon Rectifiers

Voltage Range
50 to 1000 Volts
Current
6.0 Amperes

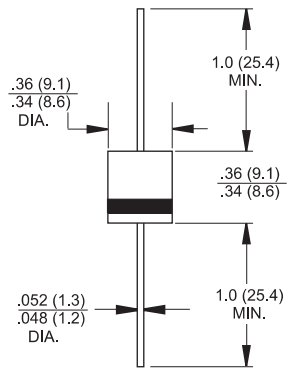
Features

- ✧ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ✧ High forward current capability
- ✧ High surge current capability
- ✧ High temperature soldering guaranteed: 260°C/10 seconds, 0.375"(9.5mm) lead length, 5lbs. (2.3kg) tension

Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Lead: 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

P-600



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number	Symbol	P600A	P600B	P600D	P600G	P600J	P600K	P600M	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T_A=60°C, 0.375"(9.5mm) Lead Length (Fig 1) T_L=60℃, 0.125"(3.1mm) Lead Length (Fig 2)	$I_{(AV)}$	6.0 22.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	400.0							A
Maximum Instantaneous Forward Voltage @6.0A @100A	V_F	1.0 1.3						1.4	V
Maximum DC Reverse Current @ T_A=25℃ at Rated DC Blocking Voltage @ T_A=100℃	I_R	5.0 1.0							uA mA
Typical Junction Capacitance (Note 1)	Cj	150.0							pF
Typical Reverse Recovery Time (Note 2)	Trr	2.5							uS
Typical Thermal Resistance (Note 3)	$R\theta JA$ $R\theta JL$	20.0 4.0							℃/W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-50 to + 150							℃

Notes: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.
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

REV.1 Oct.-2003

RATINGS AND CHARACTERISTIC CURVES (P600A THRU P600M)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

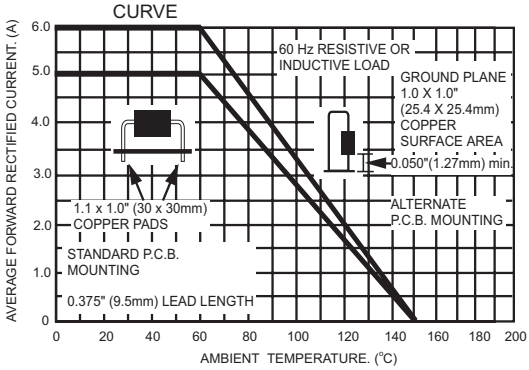


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

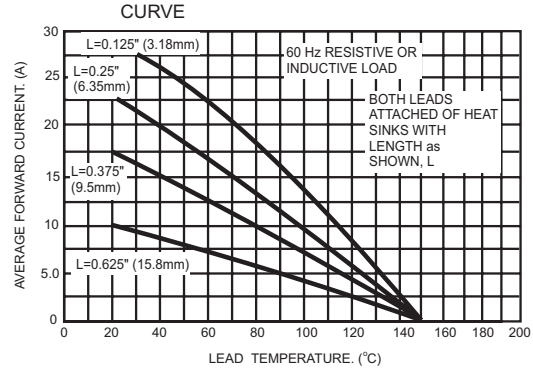


FIG.3- TYPICAL REVERSE CHARACTERISTICS

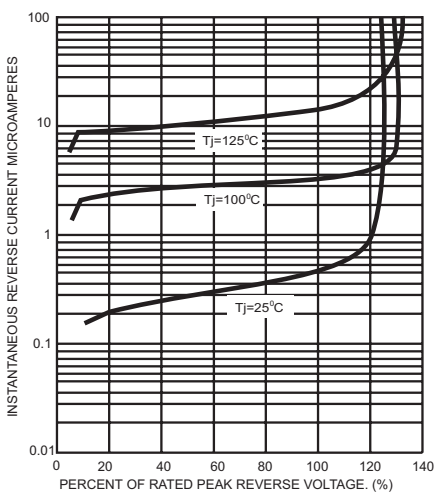


FIG.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

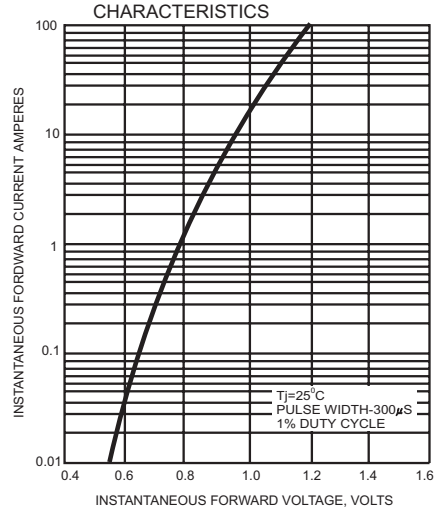


FIG.5- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

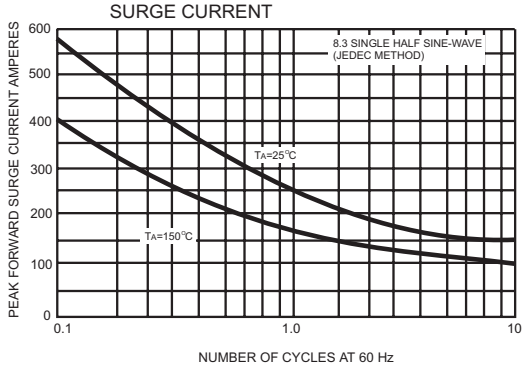


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE