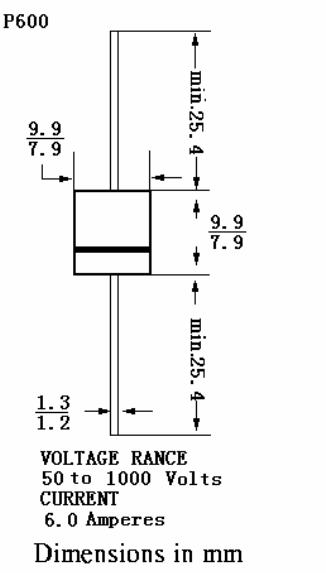
P600A...P600M

PLASTIC SILICON RECTIFIERS

Features

* Low forward voltage
* High current capability
* Low leakage current
* High surge capability
* Low cost



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	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 0.375" (9.5 mm) Lead Length, T_A = 60℃ (Fig.1) 0.125"(3.18 mm) Lead Length, T_L = 60℃ (Fig.2)	$I_{F(AV)}$	6.0 22							A
Peak Forward Surge Current 8.3ms single half sine-wave	I_{FSM}	400							A
Maximum Instantaneous Forward Voltage at 6.0A 100A	V_F	0.90 1.30						1.0 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 Reverse Recovery Time At I_F=0.5A, I_R=1.0A, I_{rr}=0.25A	t_{rr}	2.5							uS
Typical Junction Capacitance at 4.0V, 1MHz	C_J	150							pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	20 4.0							℃/W
Operating and Storage Temperature Range	T_J, T_S	-50 to +150							℃

Notes:

1. 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" (30x30mm) copper pads.

Fig.1-Maximum Forward Current Derating Current

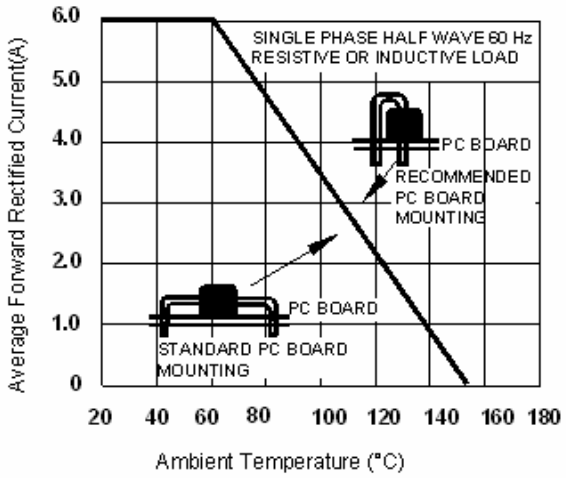


Fig. 2 — Maximum Forward Current Derating Curve

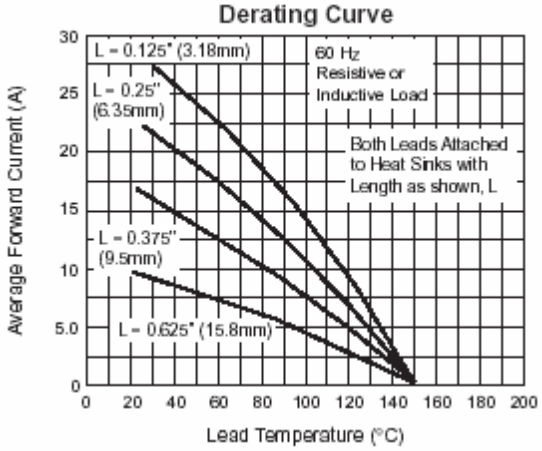


Fig. 3 — Typical Instantaneous Forward Characteristics

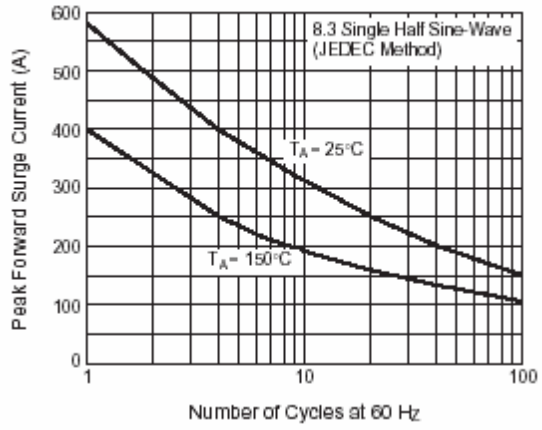


Fig. 4 — Typical Instantaneous Forward Characteristics

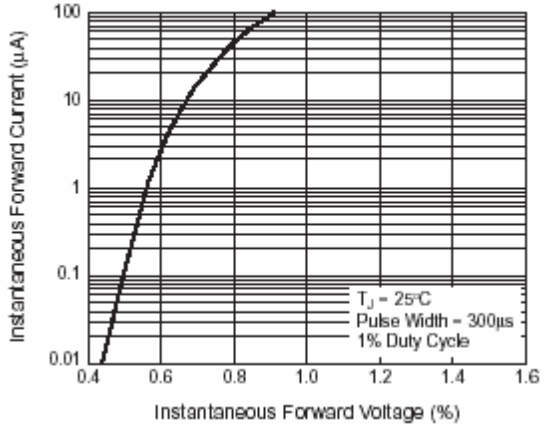


Fig. 5 — Typical Reverse Characteristics

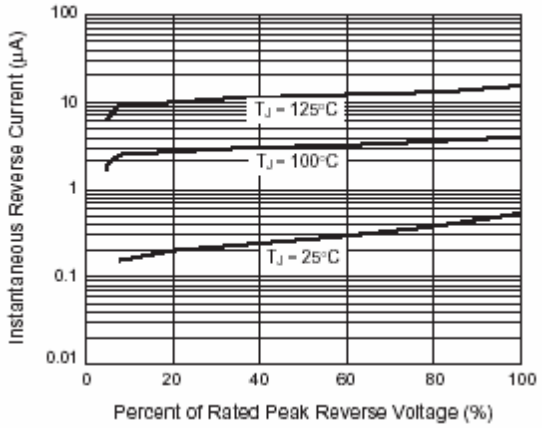


Fig. 6 — Typical Transient Thermal Impedance