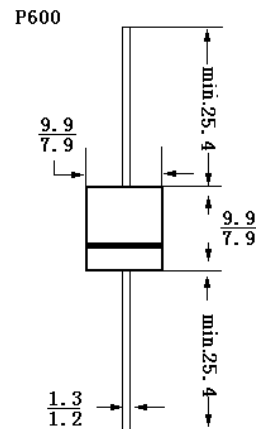


P600A...P600M

PLASTIC SILICON RECTIFIERS

Features

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



VOLTAGE RANGE
50 to 1000 Volts
CURRENT
6.0 Amperes

Dimensions in mm

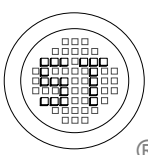
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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, $T_A = 60^\circ\text{C}$ (Fig.1) 0.125" (3.18 mm) Lead Length, $T_L = 60^\circ\text{C}$ (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 at Rated DC Blocking Voltage $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	I_R	5.0 1.0							μA mA
Typical Reverse Recovery Time At $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$	t_{rr}	2.5							μs
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							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_S	-50 to +150							$^\circ\text{C}$

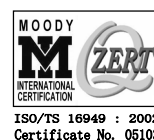
Notes:

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.



SEMTECH ELECTRONICS LTD.

(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001
Certificate No. 7116



ISO 9001 : 2000
Certificate No. 558-199-002-04

Dated : 01/04/2005 H

P600A...P600M

Fig.1-Maximum Forward Current Derating Current

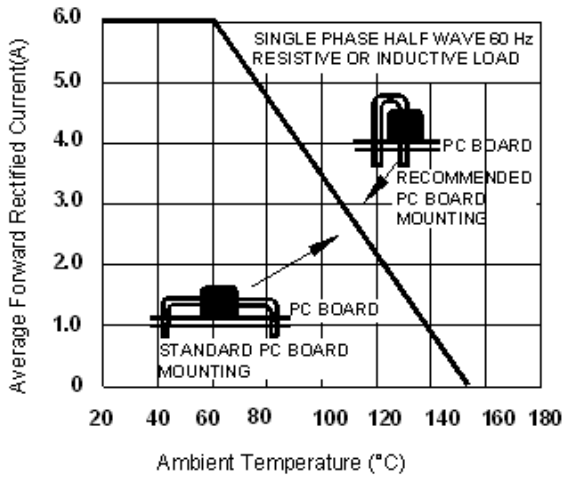


Fig. 2 — Maximum Forward Current Derating Curve

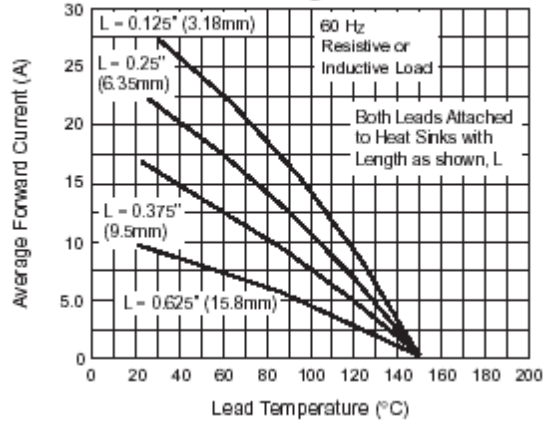


Fig. 3 — Typical Instantaneous Forward Characteristics

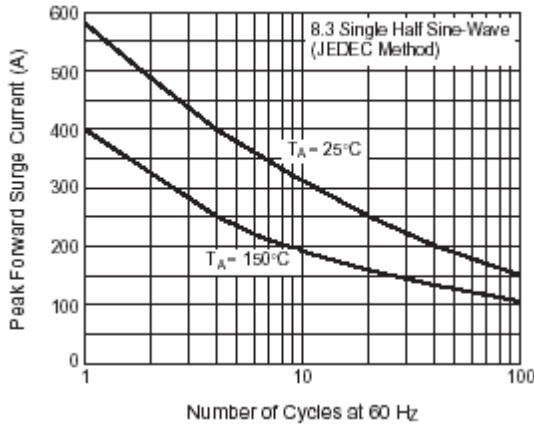


Fig. 4 — Typical Instantaneous Forward Characteristics

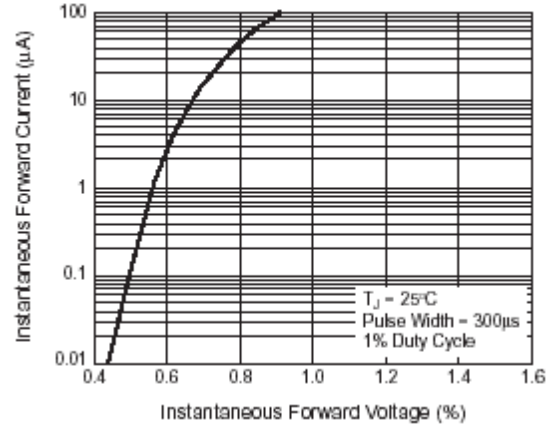


Fig. 5 — Typical Reverse Characteristics

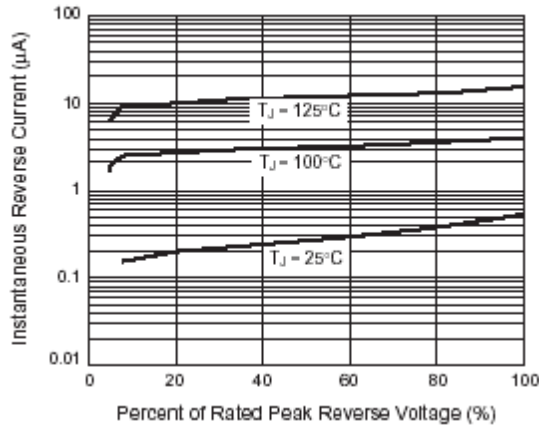
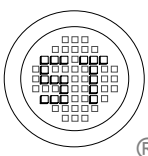
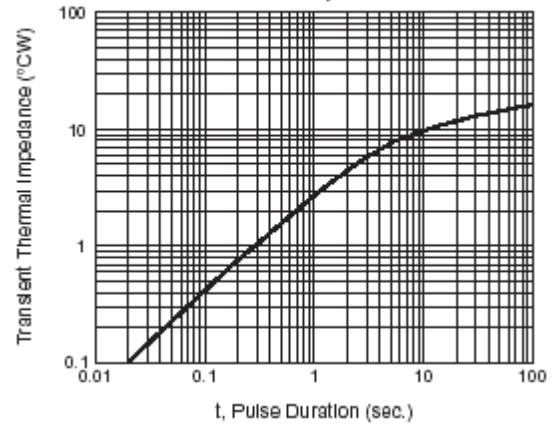
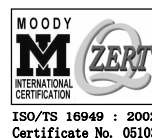


Fig. 6 — Typical Transient Thermal Impedance



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Dated : 01/04/2005 H