

6A05 THRU 6A10

GENERAL PURPOSE PLASTIC SILICON RECTIFIERS

Reverse Voltage – 50 to 1000 V

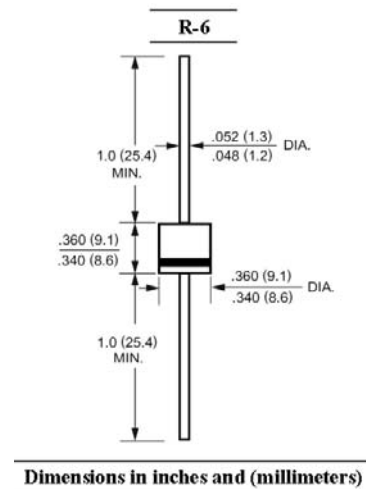
Forward Current – 6 A

Features

- High surge current capability

Mechanical Data

- Case: Molded plastic, R-6
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any



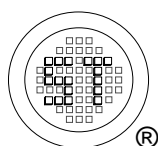
Maximum Ratings and Electrical Characteristics

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%.

Parameter	Symbols	6A05	6A1	6A2	6A4	6A6	6A8	6A10	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 0.375" (9.5 mm) Lead Length at $T_A = 60\text{ }^\circ\text{C}$	$I_{F(AV)}$	6							A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	400							A
Maximum Forward Voltage at 6 A	V_F	1.1							V
Maximum Reverse Current at Rated DC Blocking Voltage	I_R	10 1000							μA
Typical Junction Capacitance ¹⁾	C_J	150							pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	10							$^\circ\text{C/W}$
Operating Junction Temperature Range	T_j	- 55 to + 150							$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150							$^\circ\text{C}$

¹⁾ Measured at 1 MHz and applied reverse voltage of 4 V D.C.

²⁾ Thermal resistance from junction to ambient 0.375"(9.5 mm) lead length P.C.B mounted with 1.1 X 1.1"(30 X 30 mm) copper pads.



SEMTECH ELECTRONICS LTD.

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



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Dated : 15/01/2007 H

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FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

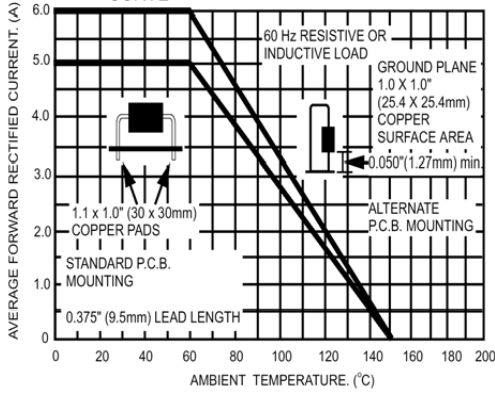


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

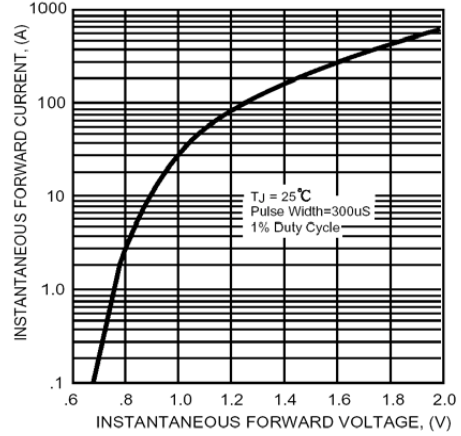


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

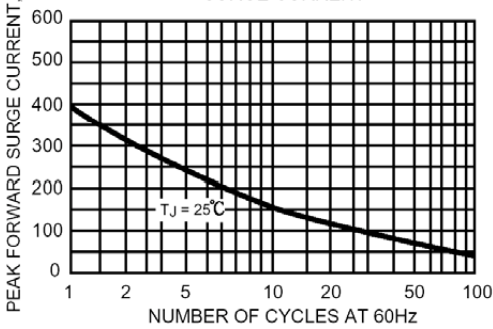


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

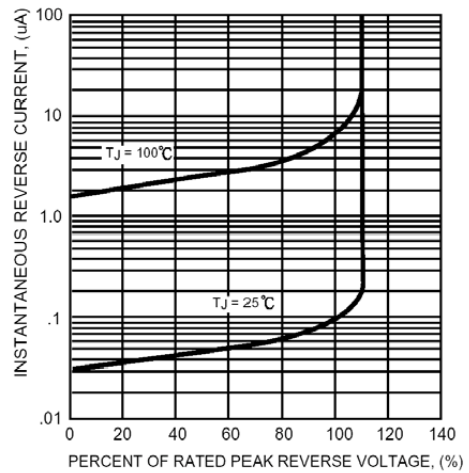
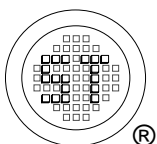
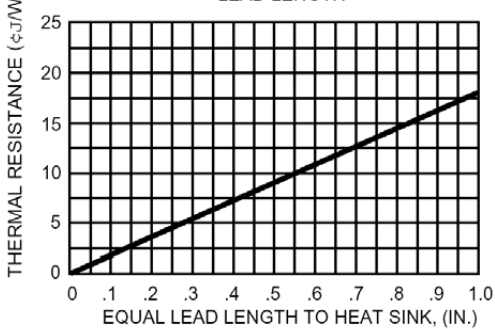


FIG. 5 - TYPICAL THERMAL RESISTANCE VS LEAD LENGTH



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