



6A05 - 6A100

6.0 AMPS. Silicon Rectifiers **R-6**

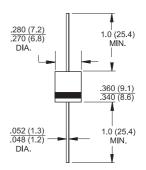
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Features

- ♦ High efficiency, Low VF
- High current capability
- ♦ High reliability
- High surge current capability
- ♦ Low power loss

Mechanical Data

- ♦ Cases: Molded plastic
- ♦ Epoxy: UL 94V-0 rate flame retardant
- Lead: Pure tin plated, lead free. solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode
- High temperature soldering guaranteed: 260°C/10 seconds/.375",(9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ♦ Weight: 1.65 grams



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating 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%

Maximum Recurrent Peak Reverse Voltage V _{RRM} 50 100 200 400 600 800 1000 Maximum RMS Voltage V _{RMS} 35 70 140 280 420 560 700 Maximum DC Blocking Voltage V _{DC} 50 100 200 400 600 800 1000 Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length I _(AV) 6.0 6.0	Units	6A100	6A80	6A60	6A40	6A20	6A10	6A05	Symbol	Type Number
Maximum RMS Voltage V _{RMS} 35 70 140 280 420 560 700 Maximum DC Blocking Voltage V _{DC} 50 100 200 400 600 800 1000 Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @T _A = 60 °C I(AV) 6.0 6.0 Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) I _{FSM} 250 250 Maximum Instantaneous Forward Voltage @ 6.0A V _F 0.95 10 400 Maximum DC Reverse Current @ T _A =25 °C at Rated DC Blocking Voltage @ T _A =125 °C I _R 10 400 Maximum Full Load Reverse Current, Full Cycle Average .375"(9.5mm) Lead Length @T _A =75 °C HT _{IR} 50 50 Typical Junction Capacitance (Note 1) Cj 90 90 Typical Thermal Resistance (Note 2) R θ JA 35	V	1000	800	600	400	200	100	50	V_{RRM}	Maximum Recurrent Peak Reverse Voltage
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	V	700	560	420	280	140	70	35		Maximum RMS Voltage
$ \begin{array}{c} \text{Current .375 (9.5\text{mm}) Lead Length} \\ @T_{\text{A}} = 60^{\circ}\text{C} \\ \end{array} $	V	1000	800	600	400	200	100	50	V_{DC}	Maximum DC Blocking Voltage
Half Sine-wave Superimposed on Rated Load (JEDEC method) Maximum Instantaneous Forward Voltage @ 6.0A Maximum DC Reverse Current @ $T_A=25^{\circ}\text{C}$ IR at Rated DC Blocking Voltage @ $T_A=125^{\circ}\text{C}$ IR Maximum Full Load Reverse Current, Full Cycle Average .375"(9.5mm) Lead Length @ $T_A=75^{\circ}\text{C}$ Typical Junction Capacitance (Note 1) Typical Thermal Resistance (Note 2) R θ JA	А				6.0				I _(AV)	Current .375 (9.5mm) Lead Length
	А				250				I _{FSM}	Half Sine-wave Superimposed on Rated
at Rated DC Blocking Voltage @ T_A =125 °C	V				0.95				V _F	3
Cycle Average .375"(9.5mm) Lead Length HT_{IR} 50 $@T_A=75$ °C Typical Junction Capacitance (Note 1) Cj 90 Typical Thermal Resistance (Note 2) $R \theta$ JA 35	uA uA								I _R	9 ::
Typical Thermal Resistance (Note 2) R θ JA 35	uA				50				HT _{IR}	Cycle Average .375"(9.5mm) Lead Length
	pF				90				Cj	Typical Junction Capacitance (Note 1)
Operating Temperature Range T _J -65 to +150	°C/W		•	•	35				$R \theta JA$	Typical Thermal Resistance (Note 2)
	°C		<u> </u>	50	5 to +1	-6			TJ	Operating Temperature Range
Storage Temperature Range T _{STG} -65 to +150	°C			50	5 to +1	-6			T _{STG}	Storage Temperature Range

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

2. Mount on Cu-Pad Size 16mm x 16mm on P.C.B.

Version: A06



RATINGS AND CHARACTERISTIC CURVES (6A05 THRU 6A100)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURE AVERAGE FORWARD CURRENT AMPERES Single PhaseHalf Wave 60Hz Resistive of Inductive Load Ground plane 16mm x 16mm Copper surface area PC BOARD Recommanded Mounting Standard PC Board Mounting 20 80 100 120 180 AMBIENT TEMPERATURE. (°C)

