



# 6A05-6A10

# SILICON RECTIFIER

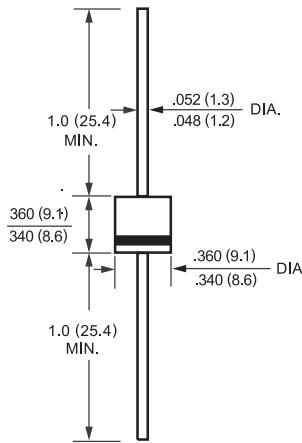
**VOLTAGE RANGE - 50 to 1000 Volts CURRENT - 6.0 Amperes**

### MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 2.08 grams

### FEATURES

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



Dimensions in inches and (millimeters)

R-6



### 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	SYMBOL	P600A 6A05	P600B 6A1	P600D 6A2	P600G 6A4	P600J 6A6	P600K 6A8	P600M 6A10	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at $T_A = 60^\circ\text{C}$	$I_O$	6.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$	400							Amps
Maximum Instantaneous Forward Voltage at 6.0A DC	$V_F$	1.1							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ $T_A = 25^\circ\text{C}$	10							uAmps
	@ $T_A = 100^\circ\text{C}$	500							
Maximum Full Load Reverse Current Average, Full Cycle .375*(9.5mm) lead length at $T_L = 75^\circ\text{C}$	$I_R$	50							uAmps
Typical Junction Capacitance ( Note )	$C_J$	150							pF
Typical Thermal Resistance	$ROJA$	10							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +175							$^\circ\text{C}$

NOTES : Measured at 1 MHz and applied reverse voltage of 4.0 volts



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## RATING AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

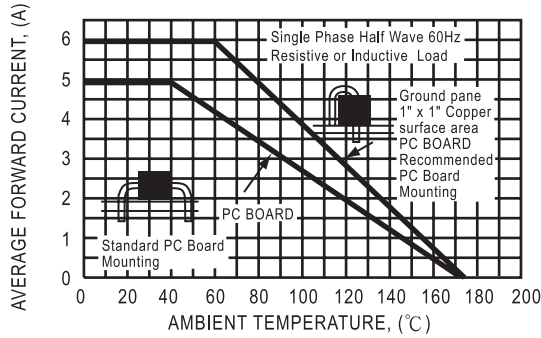


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

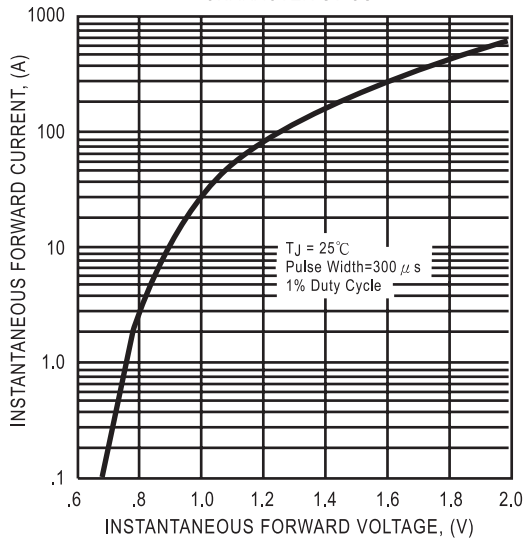


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

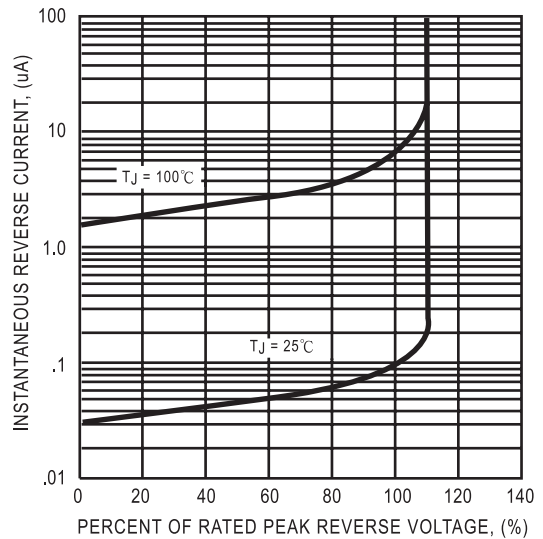


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

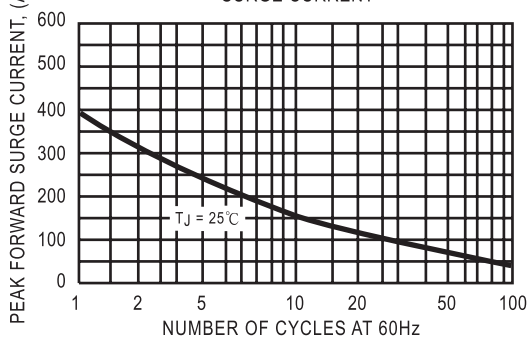


FIG. 5 - TYPICAL THERMAL RESISTANCE VS LEAD LENGTH

