



# 6A05 THRU 6A10

## 6.0 AMP SILICON RECTIFIERS



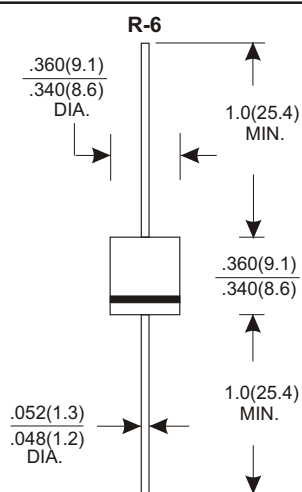
### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability

### MECHANICAL DATA

- \* Case: Molded plastic
- \* 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
- \* Weight: 1.65 grams

**VOLTAGE RANGE**  
50 TO 1000 Volts  
**CURRENT**  
6.0 Amperes



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| TYPE NUMBER                                                                                           | 6A05       | 6A1 | 6A2 | 6A4 | 6A6 | 6A8 | 6A10 | UNITS |
|-------------------------------------------------------------------------------------------------------|------------|-----|-----|-----|-----|-----|------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 50         | 100 | 200 | 400 | 600 | 800 | 1000 | V     |
| Maximum RMS Voltage                                                                                   | 35         | 70  | 140 | 280 | 420 | 560 | 700  | V     |
| Maximum DC Blocking Voltage                                                                           | 50         | 100 | 200 | 400 | 600 | 800 | 1000 | V     |
| Maximum Average Forward Rectified Current<br>.375"(9.5mm) Lead Length at Ta=60°C                      | 6.0        |     |     |     |     |     |      | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 200        |     |     |     |     |     |      | A     |
| Maximum Instantaneous Forward Voltage at 6.0A                                                         | 0.95       |     |     |     |     |     |      | V     |
| Maximum DC Reverse Current<br>Ta=25°C                                                                 | 10.0       |     |     |     |     |     |      | μA    |
| at Rated DC Blocking Voltage<br>Ta=100°C                                                              | 400        |     |     |     |     |     |      | μA    |
| Typical Junction Capacitance (Note 1)                                                                 | 150        |     |     |     |     |     |      | pF    |
| Typical Thermal Resistance R JA (Note 2)                                                              | 10         |     |     |     |     |     |      | °C/W  |
| Operating and Storage Temperature Range Tj, Tstg                                                      | -65 — +175 |     |     |     |     |     |      | °C    |

#### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance from Junction to Ambient .375" (9.5mm) lead length.

## RATING AND CHARACTERISTIC CURVES (6A05 THRU 6A10)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

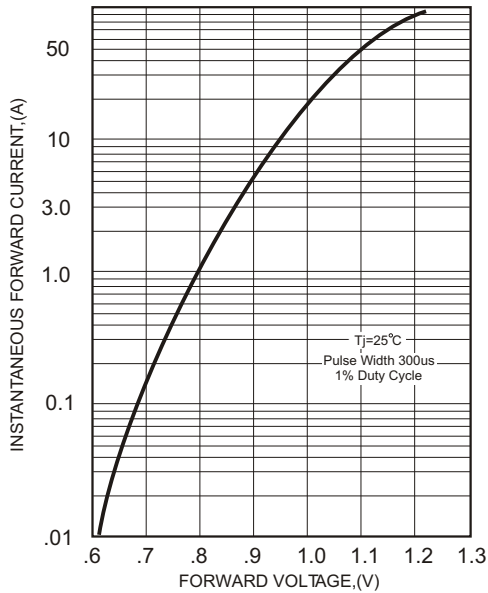


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

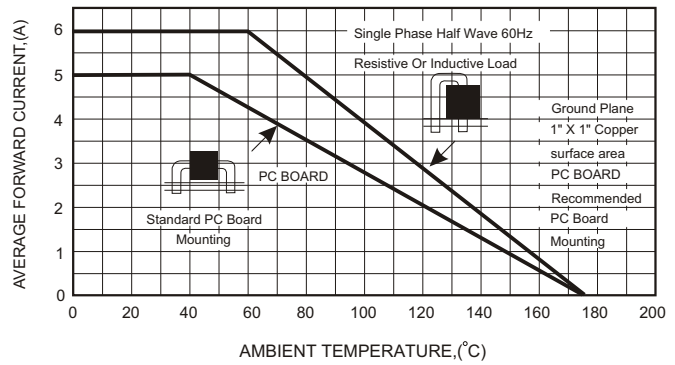


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

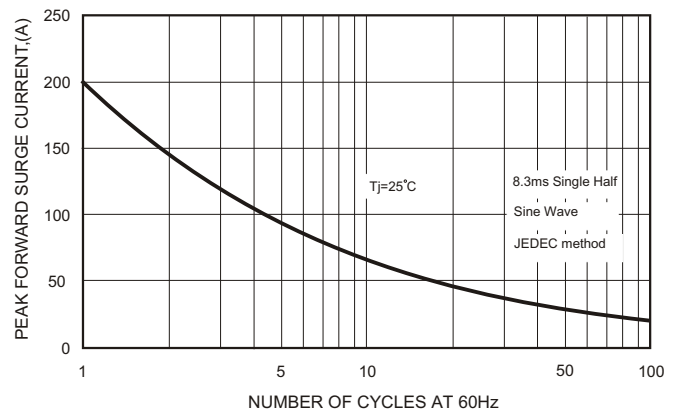


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

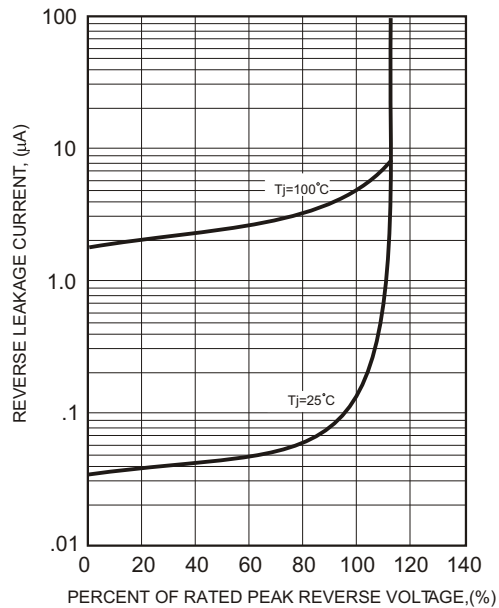


FIG.5 - TYPICAL THERMAL RESISTANCE VS. LEAD LENGTH

