

## 6.0 Amp Silicon Rectifiers

**(Pb)** Lead(Pb)-Free

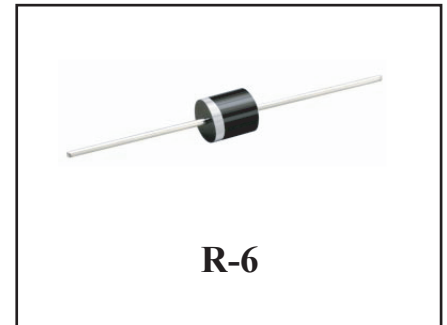
### Features:

- \* 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

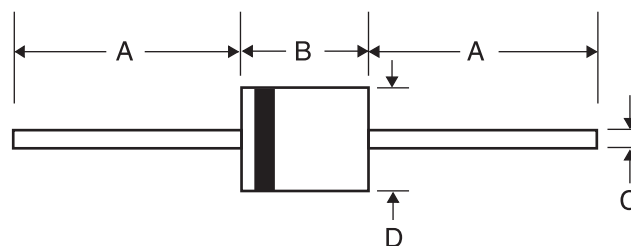
**REVERSE VOLTAGE**  
50 TO 1000 VOLTS  
**FORWARD CURRENT**  
6.0 AMPERES



## R-6 Outline Dimensions

Unit:mm

### Axial Device (Through-Hole)



| A    |     | B   |     | C   |     | D   |     |
|------|-----|-----|-----|-----|-----|-----|-----|
| Min  | Max | Min | Max | Min | Max | Min | Max |
| 25.4 | -   | 8.6 | 9.1 | 1.2 | 1.3 | 8.6 | 9.1 |

### 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%.

| Characteristics                                                                                          | Symbol          | P600A       | P600B | P600D | P600G | P600J | P600K | P600M | Unit         |
|----------------------------------------------------------------------------------------------------------|-----------------|-------------|-------|-------|-------|-------|-------|-------|--------------|
| 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<br>.375"(9.5mm) Lead length at $T_A=60^\circ C$                | $I_{F(AV)}$     | 6.0         |       |       |       |       |       |       | A            |
| Peak Forward Surge Current,<br>8.3 ms Single Half Sine-Wave<br>Superimposed on Rated Load (JEDEC Method) | $I_{FSM}$       | 400         |       |       |       |       |       |       | A            |
| Maximum Instantaneous at 6.0A DC                                                                         | $V_F$           | 0.95        |       |       |       |       |       |       | V            |
| Maximum DC Reverse Current @ $T_j=25^\circ C$<br>At Rated DC Blocking Voltage @ $T_j=100^\circ C$        | $I_R$           | 10.0<br>400 |       |       |       |       |       |       | $\mu A$      |
| Typical Junction Capacitance (Note 1)                                                                    | $C_J$           | 100         |       |       |       |       |       |       | pF           |
| Typical Thermal Resistance (Note 2)                                                                      | $R_{\theta JA}$ | 10          |       |       |       |       |       |       | $^\circ C/W$ |
| Operating Temperature Range                                                                              | $T_J$           | -65 to +175 |       |       |       |       |       |       | $^\circ C$   |
| Storage Temperature Range                                                                                | $T_{STG}$       | -65 to +175 |       |       |       |       |       |       | $^\circ C$   |

NOTES: 1. Measured at 1.0MHz applied reverse voltage of 4.0V D.C.

2. Thermal Resistance from Junction to Ambient .375"(9.5mm) lead length.

RATING AND CHARACTERISTIC CURVES

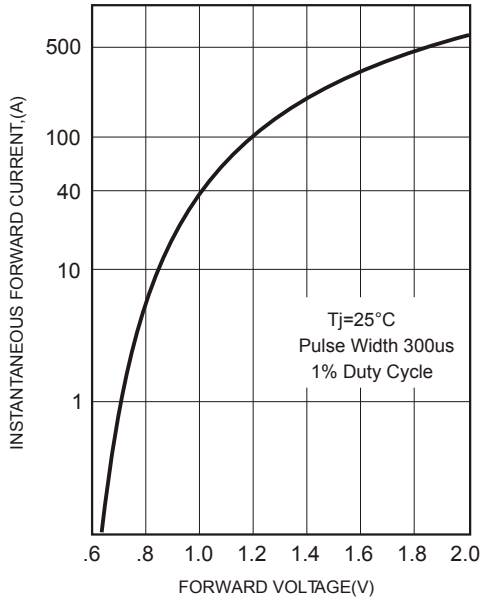


FIG.1-TYPICAL FORWARD CHARACTERISTICS

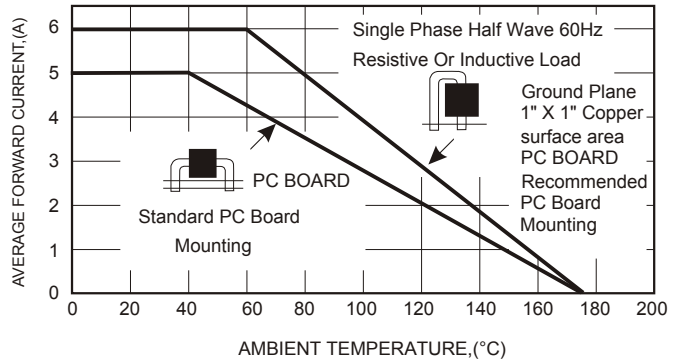


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

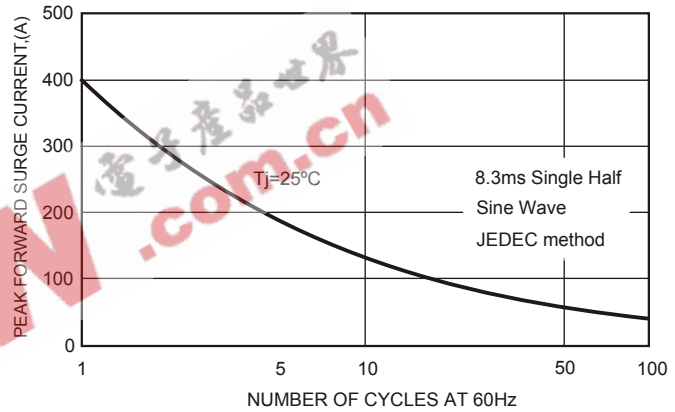


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

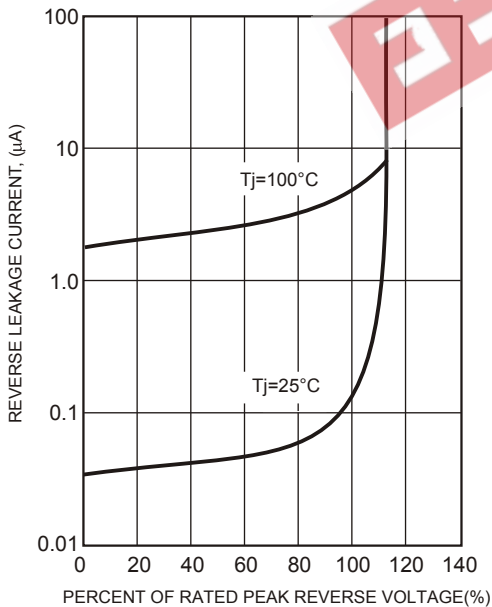


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

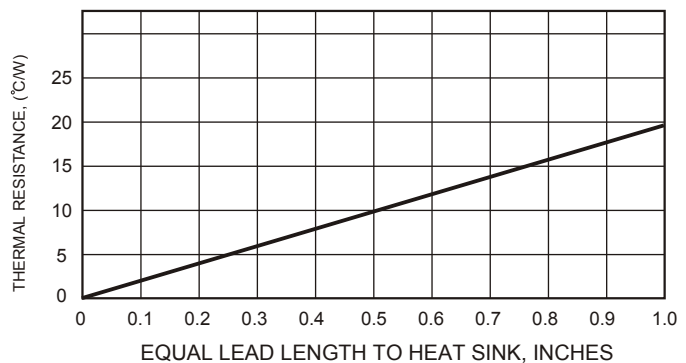


FIG.5 - TYPICAL THERMAL RESISTANCE VS. LEAD LENGTH