

**GENERAL PURPOSE SILICON RECTIFIER****Features**

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

**Mechanical Data**

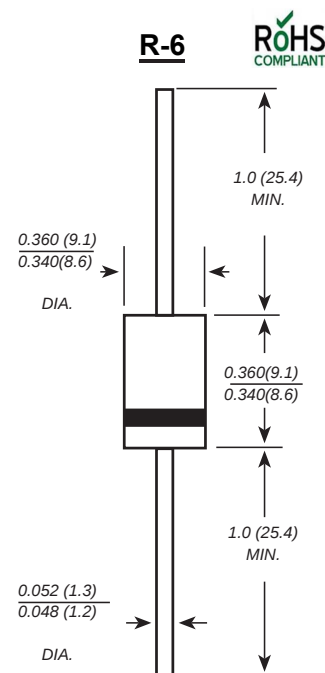
**Case** : JEDEC R-6 Molded plastic body

**Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity** : Polarity symbol marking on body

**Mounting Position** : Any

**Weight** : 0.07ounce, 2.1grams



Dimensions in inches and (millimeters)

**Maximum Ratings And Electrical Characteristics**

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Parameter                                                                                                       | SYMBOLS         | MDD<br>6A05 | MDD<br>6A1 | MDD<br>6A2 | MDD<br>6A4 | MDD<br>6A6 | MDD<br>6A8 | MDD<br>6A10 | UNITS              |
|-----------------------------------------------------------------------------------------------------------------|-----------------|-------------|------------|------------|------------|------------|------------|-------------|--------------------|
| Marking Code                                                                                                    |                 |             |            |            |            |            |            |             |                    |
| Maximum repetitive 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>0.375" (9.5mm) lead length at $T_A=60^\circ\text{C}$               | $I_{(AV)}$      | 6.0         |            |            |            |            |            |             | A                  |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed<br>on rated load (JEDEC Method)          | $I_{FSM}$       | 200         |            |            |            |            |            |             | A                  |
| Maximum instantaneous forward voltage at 6.0A                                                                   | $V_F$           | 1.0         |            |            |            |            |            |             | V                  |
| Maximum DC reverse current<br>$T_A=25^\circ\text{C}$<br>at rated DC blocking voltage<br>$T_A=100^\circ\text{C}$ | $I_R$           | 10.0<br>100 |            |            |            |            |            |             | $\mu\text{A}$      |
| Typical junction capacitance (NOTE 1)                                                                           | $C_J$           | 150         |            |            |            |            |            |             | pF                 |
| Typical thermal resistance (NOTE 2)                                                                             | $R_{\theta JA}$ | 10.0        |            |            |            |            |            |             | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range                                                                | $T_J, T_{STG}$  | -55 to +150 |            |            |            |            |            |             | $^\circ\text{C}$   |

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

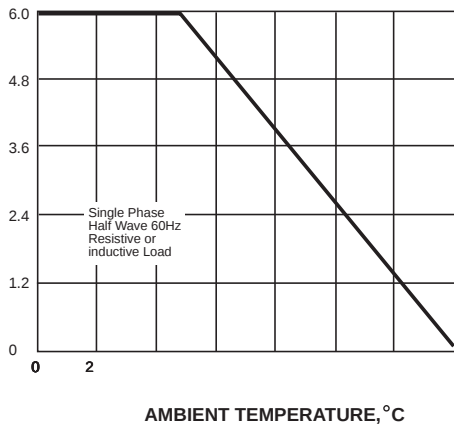
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted



## Ratings And Characteristic Curves

AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

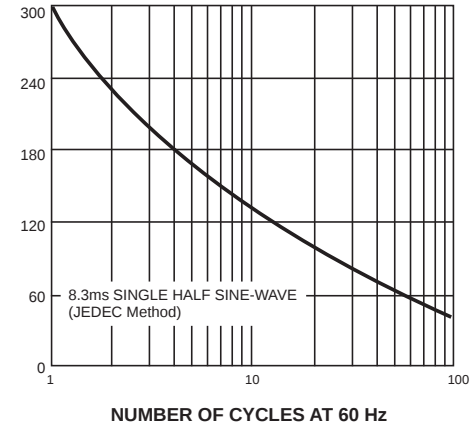
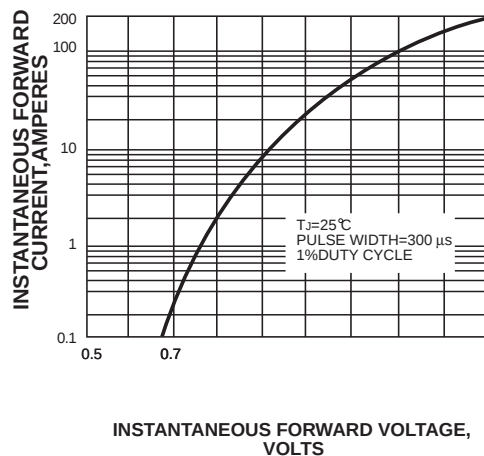


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

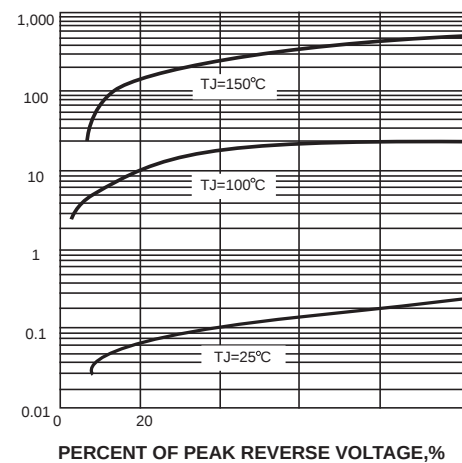
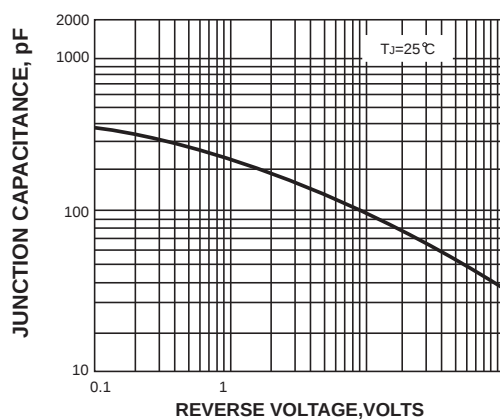


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

