



# 6A05 THRU 6A100

## GENERAL PURPOSE SILICON RECTIFIER

Reverse Voltage - 50 to 1000 Volts      Forward Current - 6.0 Ampere

### 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

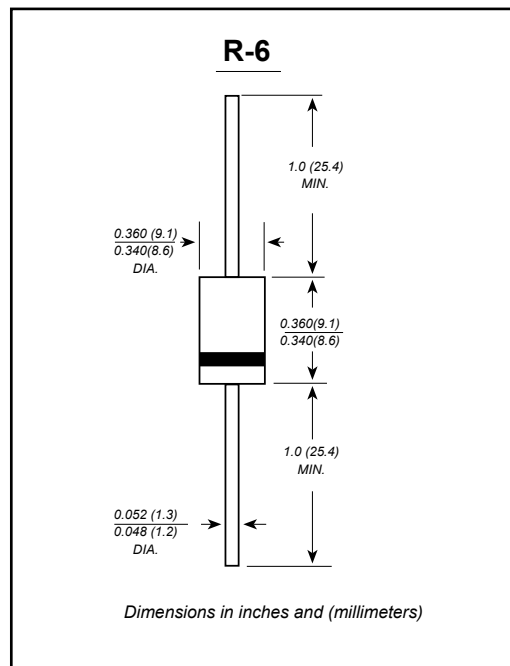
**Case:** R-6 molded plastic body

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.072 ounce, 2.05 grams



### 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%.

| Characteristic                                                                                            | SYMBOLS         | 6A05        | 6A10 | 6A20 | 6A40 | 6A60 | 6A80 | 6A100 | UNITS              |
|-----------------------------------------------------------------------------------------------------------|-----------------|-------------|------|------|------|------|------|-------|--------------------|
| 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 on<br>rated load (JEDEC Method)    | $I_{FSM}$       | 400         |      |      |      |      |      |       | A                  |
| Maximum instantaneous forward voltage at 6.0A                                                             | $V_F$           | 1.0         |      |      |      |      |      |       | V                  |
| Maximum DC reverse current $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage $T_A=100^\circ\text{C}$ | $I_R$           | 10.0<br>400 |      |      |      |      |      |       | $\mu\text{A}$      |
| 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                                                          | $T_J, T_{STG}$  | -65 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



# 6A05 THRU 6A100

## RATINGS AND CHARACTERISTIC CURVES

