

# 10A05 ~10A10

## 10.0Amp Silicon Rectifiers



### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Open-Junction chip ,silastic passivated
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 250°C/10 seconds at terminals

### Mechanical Data

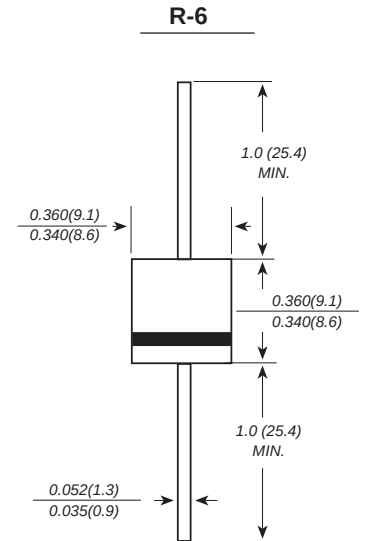
**Case:** JEDEC R-6 molded plastic body

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

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight :** 0.072 ounce, 2.05 grams



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%.

|                                                                                                           | SYMBOLS        | 10A05         | 10A1 | 10A2 | 10A3 | 10A4 | 10A6 | 10A8 | 10A10 | UNITS              |
|-----------------------------------------------------------------------------------------------------------|----------------|---------------|------|------|------|------|------|------|-------|--------------------|
| Maximum repetitive peak reverse voltage                                                                   | $V_{RRM}$      | 50            | 100  | 200  | 300  | 400  | 600  | 800  | 1000  | VOLTS              |
| Maximum RMS voltage                                                                                       | $V_{RMS}$      | 35            | 70   | 140  | 210  | 280  | 420  | 560  | 700   | VOLTS              |
| Maximum DC blocking voltage                                                                               | $V_{DC}$       | 50            | 100  | 200  | 300  | 400  | 600  | 800  | 1000  | VOLTS              |
| Maximum average forward rectified current at $T_L=60^\circ\text{C}$                                       | $I_{(AV)}$     | 10.0          |      |      |      |      |      |      |       | Amp                |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on rated load (JEDEC Method)       | $I_{FSM}$      | 400           |      |      |      |      |      |      |       | Amps               |
| Maximum instantaneous forward voltage at 10.0A                                                            | $V_F$          | 1.0           |      |      |      |      |      |      |       | Volts              |
| 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>100.0 |      |      |      |      |      |      |       | $\mu\text{A}$      |
| Typical junction capacitance (Note 2)                                                                     | $C_J$          | 150           |      |      |      |      |      |      |       | pF                 |
| Typical thermal resistance (Note 3)                                                                       | $R_{qJA}$      | 10            |      |      |      |      |      |      |       | $^\circ\text{C/W}$ |
| Operating junction                                                                                        | $T_J, T_{STG}$ | -55 to +125   |      |      |      |      |      |      |       | $^\circ\text{C}$   |
| Storage temperature range                                                                                 | $T_J, T_{STG}$ | -55 to +150   |      |      |      |      |      |      |       | $^\circ\text{C}$   |

**Note:** 1.Reverse recovery time test condition:  $I_F=0.5\text{A}$   $I_R=1.0\text{A}$   $I_{rr}=0.25\text{A}$

2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

# Ratings And Characteristic Curves

## 10A05 THRU 10A10

FIG. 1- FORWARD CURRENT DERATING CURVE

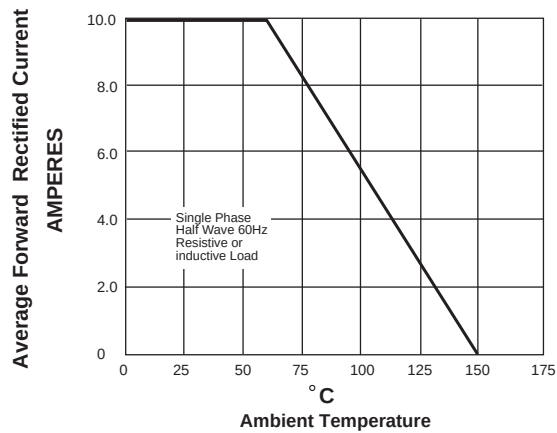


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

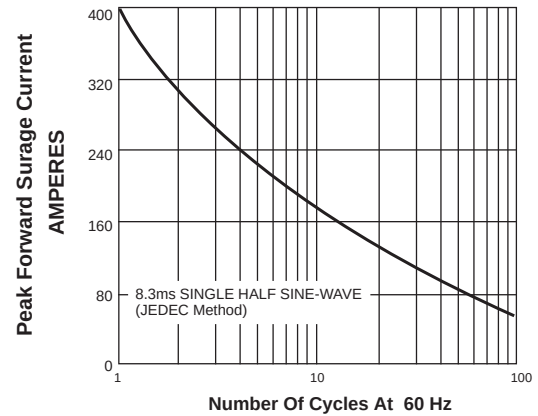


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

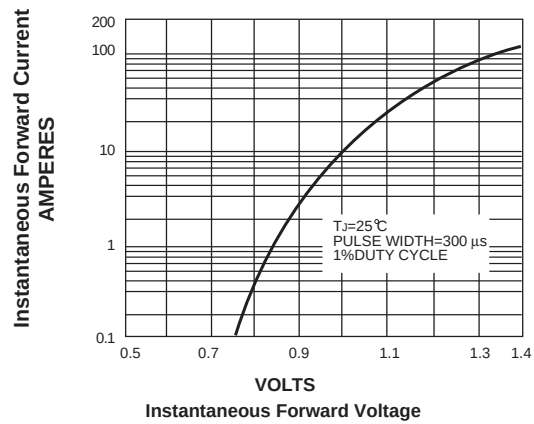


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

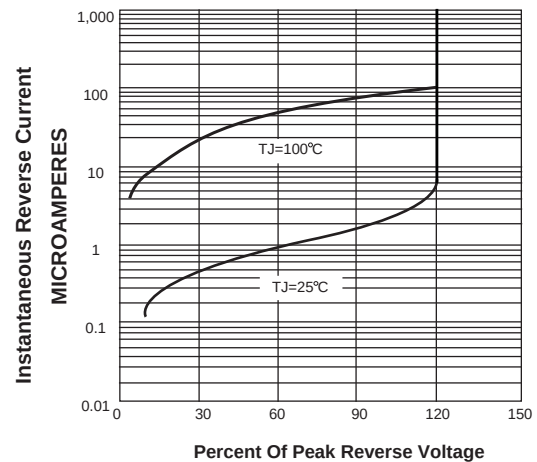


FIG. 5-TYPICAL JUNCTION CAPACITANCE

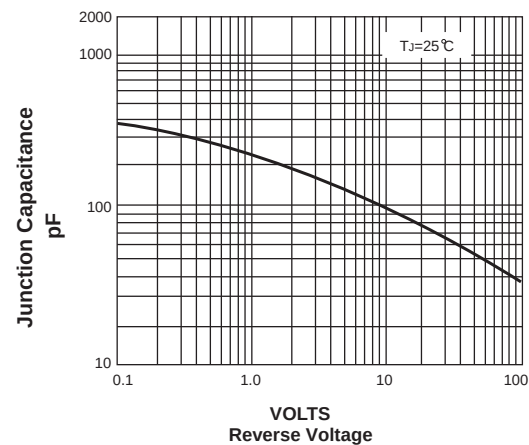


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

