

## SILICON RECTIFIER

**VOLTAGE RANGE 50 to 1000 Volts CURRENT 10 Amperes**

### FEATURES

- \* Low cost
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High surge current capability

### MECHANICAL DATA

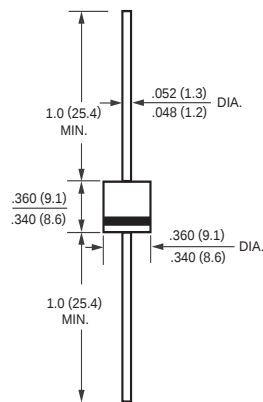
- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 2.08 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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



**R-6**



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS (At Ta = 25°C unless otherwise noted)

| RATINGS                                                                                           | SYMBOL   | 10A05        | 10A1 | 10A2 | 10A4 | 10A6 | 10A8 | 10A10 | UNITS |
|---------------------------------------------------------------------------------------------------|----------|--------------|------|------|------|------|------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                            | VRRM     | 50           | 100  | 200  | 400  | 600  | 800  | 1000  | Volts |
| Maximum RMS Voltage                                                                               | VRMS     | 35           | 70   | 140  | 280  | 420  | 560  | 700   | Volts |
| Maximum DC Blocking Voltage                                                                       | VDC      | 50           | 100  | 200  | 400  | 600  | 800  | 1000  | Volts |
| Maximum Average Forward Rectified Current at Ta = 50°C                                            | IO       | 10           |      |      |      |      |      |       | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM     | 400          |      |      |      |      |      |       | Amps  |
| Typical Junction Capacitance (Note)                                                               | CJ       | 125          |      |      |      |      |      |       | pF    |
| Typical Thermal Resistance                                                                        | R θJA    | 8            |      |      |      |      |      |       | °C/W  |
| Operating and Storage Temperature Range                                                           | TJ, TSTG | -65 to + 150 |      |      |      |      |      |       | °C    |

### ELECTRICAL CHARACTERISTICS (At Ta = 25°C unless otherwise noted)

| CHARACTERISTICS                                                                                            |                          | SYMBOL         | 10A05 | 10A1 | 10A2 | 10A4 | 10A6 | 10A8 | 10A10 | UNITS |
|------------------------------------------------------------------------------------------------------------|--------------------------|----------------|-------|------|------|------|------|------|-------|-------|
| Maximum Instantaneous Forward Voltage at 10A DC                                                            |                          | V <sub>F</sub> | 1.1   |      |      |      |      |      |       | Volts |
| Maximum DC Reverse Current                                                                                 | @ T <sub>A</sub> = 25°C  | I <sub>R</sub> | 10    |      |      |      |      |      |       | uAmps |
| at Rated DC Blocking Voltage                                                                               | @ T <sub>A</sub> = 100°C |                | 100   |      |      |      |      |      |       |       |
| Maximum Full Load Reverse Current Average Full Cycle<br>.375" (9.5mm) lead length at T <sub>L</sub> = 75°C |                          |                | 50    |      |      |      |      |      |       | uAmps |

NOTES : Measured at 1 MHz and applied reverse voltage of 4.0 volts

2002-3

# RATING AND CHARACTERISTIC CURVES ( 10A05 THRU 10A10 )

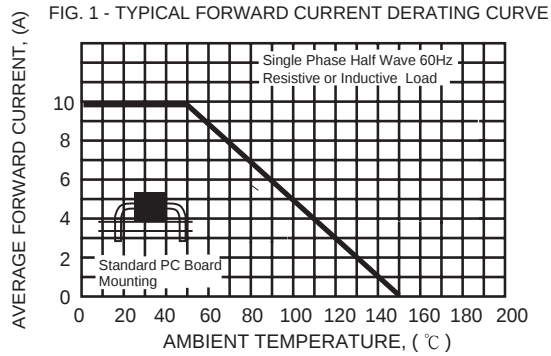


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

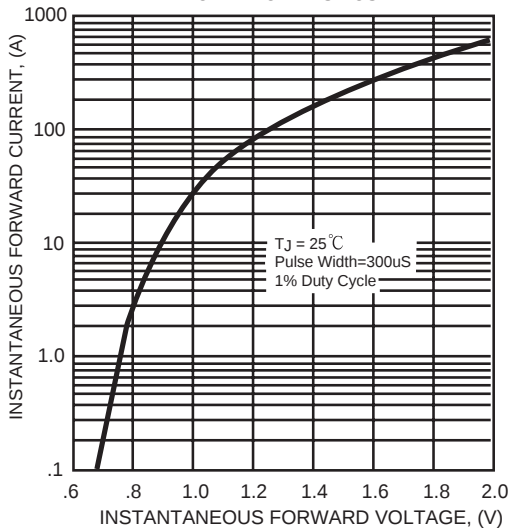


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

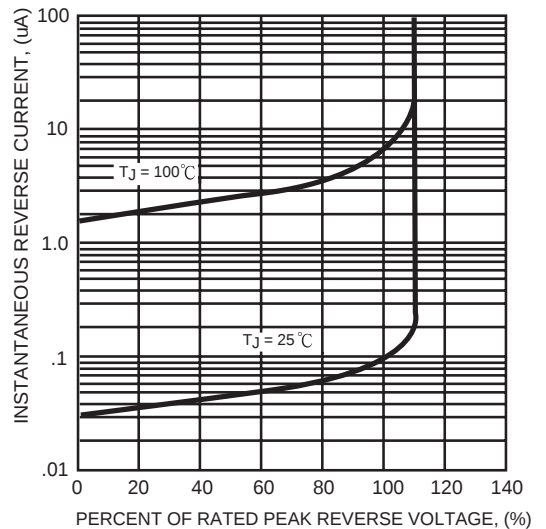


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

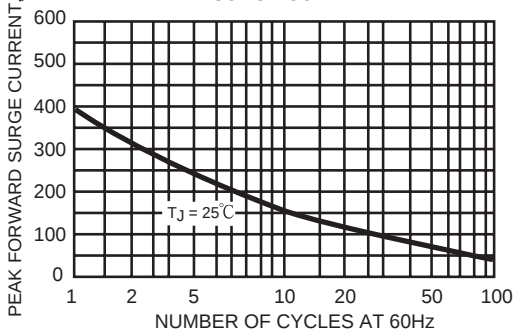


FIG. 5 - TYPICAL THERMAL RESISTANCE VS LEAD LENGTH

