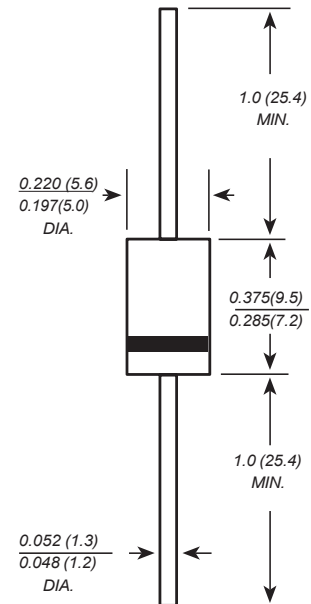


## GENERAL PURPOSE SILICON RECTIFIER

### 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

### DO-201AD



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%.

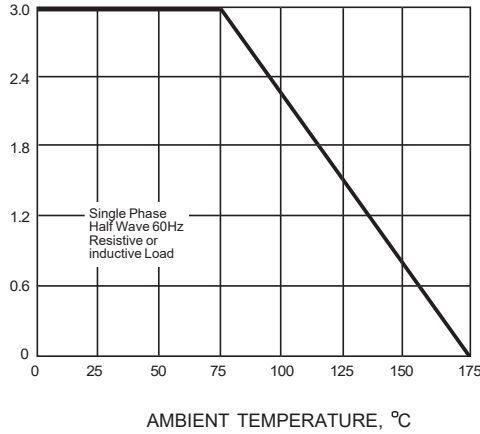
| Parameter                                                                                              | SYMBOLS         | 1N5400       | 1N5401 | 1N5402 | 1N5403 | 1N5404 | 1N5405 | 1N5406 | 1N5407 | 1N5408 | UNITS         |
|--------------------------------------------------------------------------------------------------------|-----------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|---------------|
| Marking Code                                                                                           |                 |              |        |        |        |        |        |        |        |        |               |
| Maximum repetitive peak reverse voltage                                                                | $V_{RRM}$       | 50           | 100    | 200    | 300    | 400    | 500    | 600    | 800    | 1000   | V             |
| Maximum RMS voltage                                                                                    | $V_{RMS}$       | 35           | 70     | 140    | 210    | 280    | 350    | 420    | 560    | 700    | V             |
| Maximum DC blocking voltage                                                                            | $V_{DC}$        | 50           | 100    | 200    | 300    | 400    | 500    | 600    | 800    | 1000   | V             |
| Maximum average forward rectified current<br>0.375" (9.5mm) lead length at $T_A=75^{\circ}C$           | $I_{(AV)}$      | 3.0          |        |        |        |        |        |        |        |        | A             |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed<br>on rated load (JEDEC Method) | $I_{FSM}$       | 150.0        |        |        |        |        |        |        |        |        | A             |
| Maximum instantaneous forward voltage at 3.0A                                                          | $V_F$           | 1.0          |        |        |        |        |        |        |        |        | V             |
| Maximum DC reverse current<br>at rated DC blocking voltage                                             | $I_R$           | 5.0<br>100.0 |        |        |        |        |        |        |        |        | $\mu A$       |
| Typical junction capacitance (NOTE 1)                                                                  | $C_J$           | 30.0         |        |        |        |        |        |        |        |        | pF            |
| Typical thermal resistance (NOTE 2)                                                                    | $R_{\theta JA}$ | 20.0         |        |        |        |        |        |        |        |        | $^{\circ}C/W$ |
| Operating junction and storage temperature range                                                       | $T_J, T_{STG}$  | -65 to +175  |        |        |        |        |        |        |        |        | $^{\circ}C$   |

**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

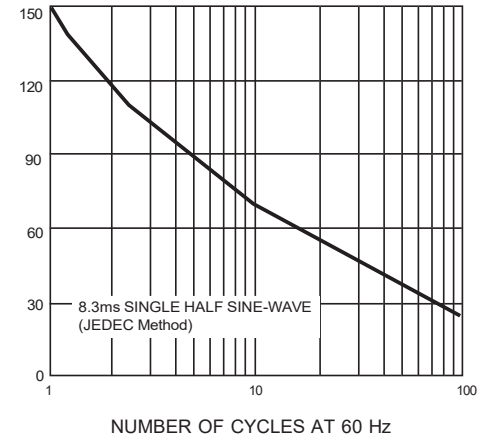
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



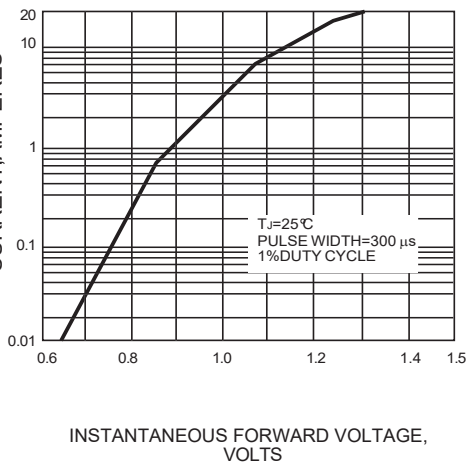
PEAK FORWARD SURGE CURRENT,  
AMPERES

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



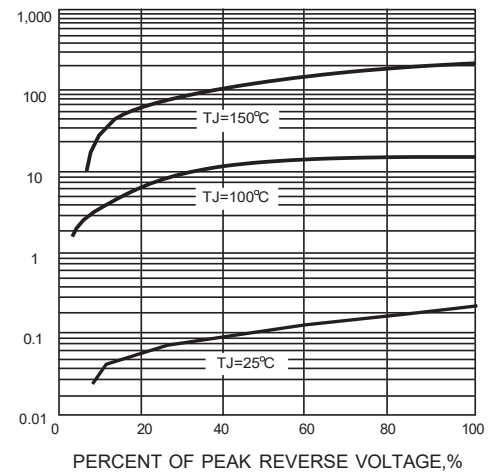
INSTANTANEOUS FORWARD  
CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



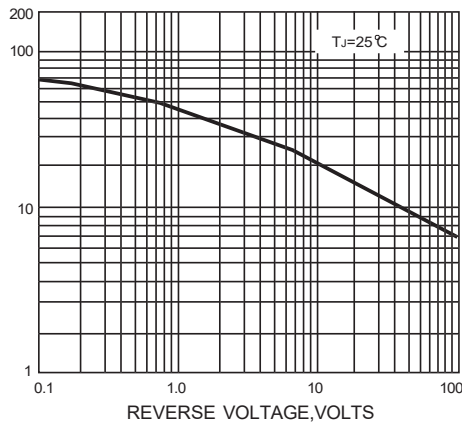
INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



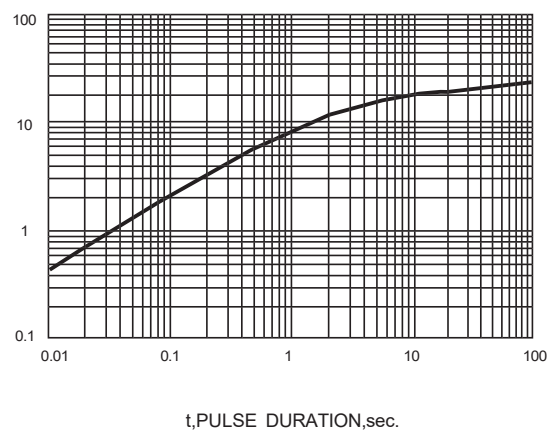
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.