

# 1N5400 - 1N5408

**PRV : 50 - 1000 Volts**

**Io : 3.0 Amperes**

## FEATURES :

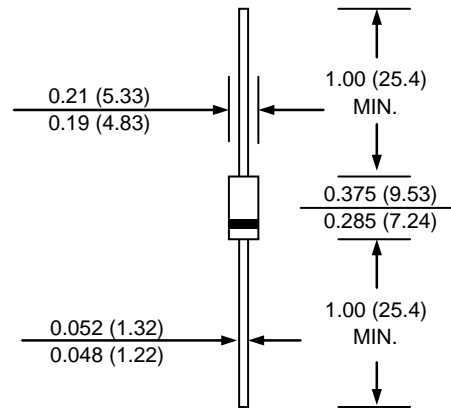
- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* **Pb / RoHS Free**

## MECHANICAL DATA :

- \* Case : DO-201AD Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.929 grams

## SILICON RECTIFIER DIODES

### DO - 201AD



Dimensions in inches and ( millimeters )

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

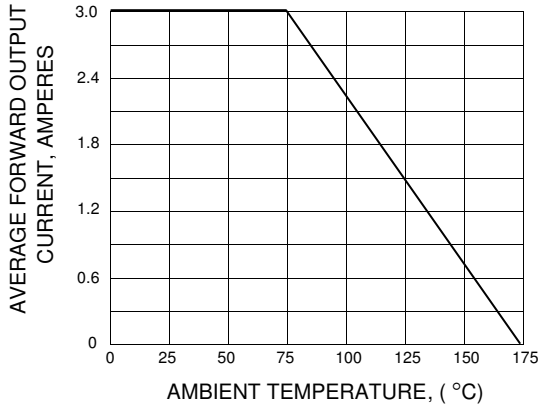
| RATING  | SYMBOL          | 1N 5400       | 1N 5401 | 1N 5402 | 1N 5403 | 1N 5404 | 1N 5405 | 1N 5406 | 1N 5407 | 1N 5408 | UNIT               |
|---|-----------------|---------------|---------|---------|---------|---------|---------|---------|---------|---------|--------------------|
| Maximum Repetitive 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 Current<br>0.375"(9.5mm) Lead Length $T_a = 75\text{ }^\circ\text{C}$       | $I_F$           | 3.0           |         |         |         |         |         |         |         |         | A                  |
| Peak Forward Surge Current<br>8.3ms Single half sine wave Superimposed on rated load (JEDEC Method) | $I_{FSM}$       | 200           |         |         |         |         |         |         |         |         | A                  |
| Maximum Forward Voltage at $I_F = 3.0$ Amps.  | $V_F$           | 1.0           |         |         |         |         |         |         |         |         | V                  |
| Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$   | $I_R$           | 5.0           |         |         |         |         |         |         |         |         | $\mu\text{A}$      |
| at rated DC Blocking Voltage $T_a = 100\text{ }^\circ\text{C}$                                      | $I_{R(H)}$      | 50            |         |         |         |         |         |         |         |         | $\mu\text{A}$      |
| Typical Junction Capacitance (Note1)  | $C_J$           | 28            |         |         |         |         |         |         |         |         | pF                 |
| Typical Thermal Resistance (Note2)  | $R_{\theta JA}$ | 15            |         |         |         |         |         |         |         |         | $^\circ\text{C/W}$ |
| Junction Temperature Range  | $T_J$           | - 65 to + 175 |         |         |         |         |         |         |         |         | $^\circ\text{C}$   |
| Storage Temperature Range   | $T_{STG}$       | - 65 to + 175 |         |         |         |         |         |         |         |         | $^\circ\text{C}$   |

### Notes :

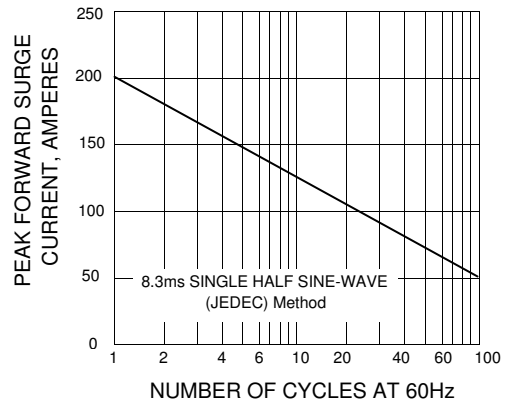
- (1) Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
- (2) Thermal resistance from Junction to Ambient at 0.375" (9.5mm) Lead Lengths, P.C. Board Mounted.

**RATING AND CHARACTERISTIC CURVES ( 1N5400 - 1N5408 )**

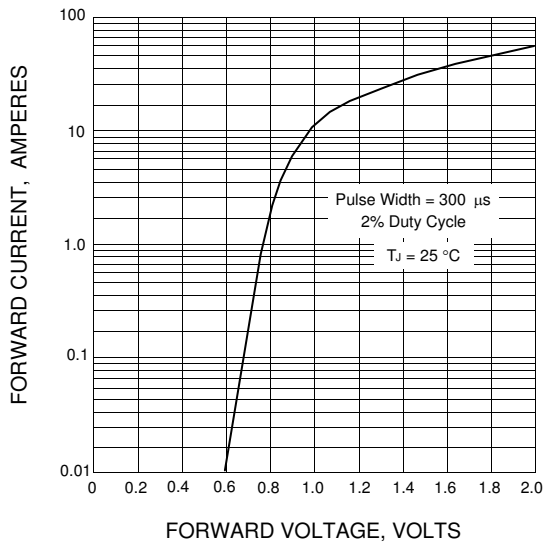
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



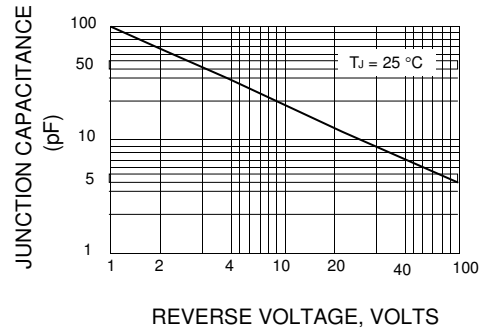
**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL JUNCTION CAPACITANCE**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

