



# 1N5400 THRU 1N5408

## 3.0 AMPS. Silicon Rectifiers



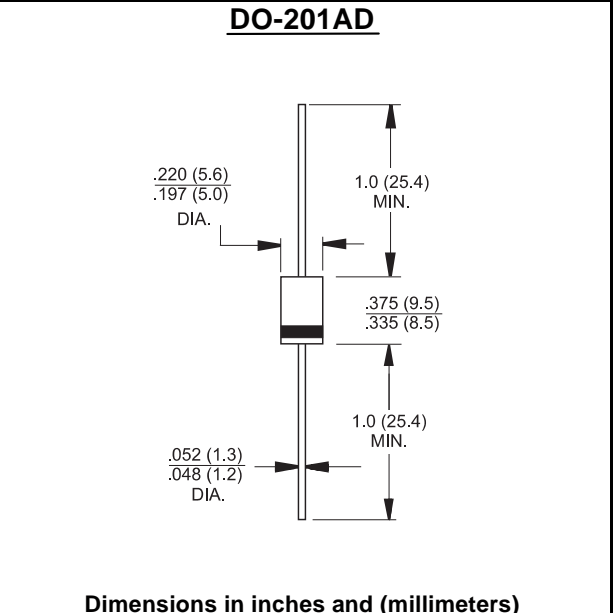
Voltage Range  
50 to 1000 Volts  
Current  
3.0Amperes

### Features

- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability

### Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-O rate flame retardant
- ✧ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 1.2 grams



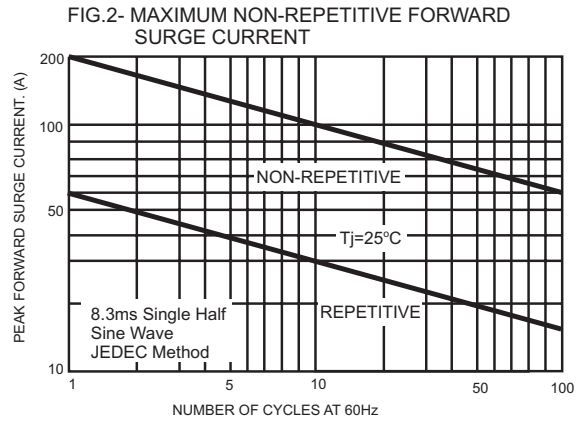
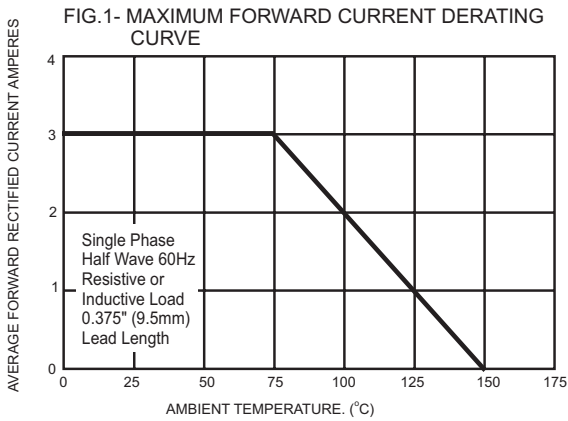
### Maximum Ratings and Electrical Characteristics

Rating 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%

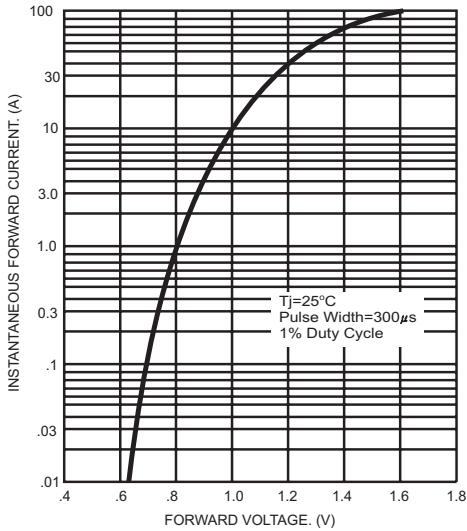
| Type Number                                                                                         | Symbol          | 1N 5400     | 1N 5401 | 1N 5402 | 1N 5404 | 1N 5406 | 1N 5407 | 1N 5408 | Units    |
|-----------------------------------------------------------------------------------------------------|-----------------|-------------|---------|---------|---------|---------|---------|---------|----------|
| Maximum Recurrent 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 .375 (9.5mm) Lead Length @ $T_A = 75^\circ C$             | $I_{(AV)}$      | 3.0         |         |         |         |         |         |         | A        |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method ) | $I_{FSM}$       | 200         |         |         |         |         |         |         | A        |
| Maximum Instantaneous Forward Voltage @ 3.0A                                                        | $V_F$           | 1.0         |         |         |         |         |         |         | V        |
| Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=100^\circ C$      | $I_R$           | 5.0<br>100  |         |         |         |         |         |         | uA<br>uA |
| Maximum Full Load Reverse Current, Full Cycle Average .375"(9.5mm) Lead Length @ $T_L=75^\circ C$   | $HT_{IR}$       | 30          |         |         |         |         |         |         | uA       |
| Typical Junction Capacitance ( Note 1 )                                                             | $C_j$           | 50          |         |         |         |         |         |         | pF       |
| Typical Thermal Resistance ( Note 2 )                                                               | $R_{\theta JA}$ | 40          |         |         |         |         |         |         | °C/W     |
| Operating Temperature Range                                                                         | $T_J$           | -65 to +150 |         |         |         |         |         |         | °C       |
| Storage Temperature Range                                                                           | $T_{STG}$       | -65 to +150 |         |         |         |         |         |         | °C       |

Notes: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.  
2. Mount on Cu-Pad Size 16mm x 16mm on P.C.B.

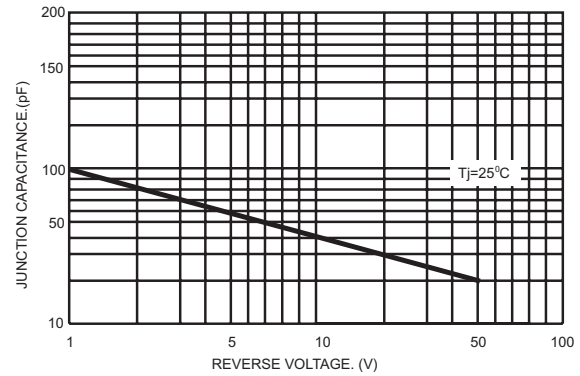
## RATINGS AND CHARACTERISTIC CURVES (1N5400 THRU 1N5408)



**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**

