

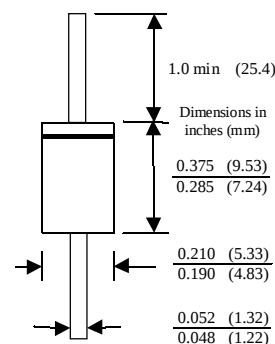
# 1N5400 - 1N5408

## Features

- 3.0 ampere operation at  $T_A = 75^\circ\text{C}$  with no thermal runaway.
- High current capability.
- Low leakage.



**DO-201AD**  
 COLOR BAND DENOTES CATHODE



## 3.0 Ampere General Purpose Rectifiers

### Absolute Maximum Ratings\*

$T_A = 25^\circ\text{C}$  unless otherwise noted

| Symbol                | Parameter                                                                                               | Value       | Units                     |
|-----------------------|---------------------------------------------------------------------------------------------------------|-------------|---------------------------|
| $I_O$                 | Average Rectified Current<br>.375 " lead length @ $T_A = 75^\circ\text{C}$                              | 3.0         | A                         |
| $I_{f(\text{surge})}$ | Peak Forward Surge Current<br>8.3 ms single half-sine-wave<br>Superimposed on rated load (JEDEC method) | 200         | A                         |
| $P_D$                 | Total Device Dissipation<br>Derate above $25^\circ\text{C}$                                             | 6.25<br>50  | W<br>mW/ $^\circ\text{C}$ |
| $R_{\theta JA}$       | Thermal Resistance, Junction to Ambient                                                                 | 20          | $^\circ\text{C/W}$        |
| $T_{stg}$             | Storage Temperature Range                                                                               | -55 to +150 | $^\circ\text{C}$          |
| $T_J$                 | Operating Junction Temperature                                                                          | -55 to +150 | $^\circ\text{C}$          |

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

### Electrical Characteristics

$T_A = 25^\circ\text{C}$  unless otherwise noted

| Parameter                                                               | Device |      |      |      |      |      |      |      |      | Units |
|-------------------------------------------------------------------------|--------|------|------|------|------|------|------|------|------|-------|
|                                                                         | 5400   | 5401 | 5402 | 5403 | 5404 | 5405 | 5406 | 5407 | 5408 |       |
| Peak Repetitive Reverse Voltage                                         | 50     | 100  | 200  | 300  | 400  | 500  | 600  | 800  | 1000 | V     |
| Maximum RMS Voltage                                                     | 35     | 70   | 140  | 210  | 280  | 350  | 420  | 560  | 700  | V     |
| DC Reverse Voltage (Rated V <sub>R</sub> )                              | 50     | 100  | 200  | 300  | 400  | 500  | 600  | 800  | 1000 | V     |
| Maximum Reverse Current<br>@ rated V <sub>R</sub> T <sub>A</sub> = 25°C | 5.0    |      |      |      |      |      |      |      |      | μA    |
| T <sub>A</sub> = 100°C                                                  | 500    |      |      |      |      |      |      |      |      | μA    |
| Maximum Forward Voltage @ 3.0 A                                         | 1.2    |      |      |      |      |      |      |      |      | V     |
| Maximum Full Load Reverse<br>Current, Full Cycle T <sub>A</sub> = 105°C | 0.5    |      |      |      |      |      |      |      |      | mA    |
| Typical Junction Capacitance<br>V <sub>R</sub> = 4.0 V. f = 1.0 MHz     | 30     |      |      |      |      |      |      |      |      | pF    |

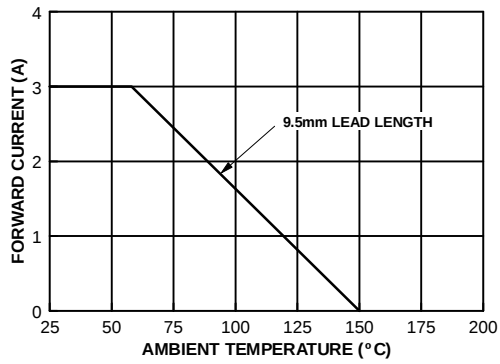
# General Purpose Rectifiers

(continued)

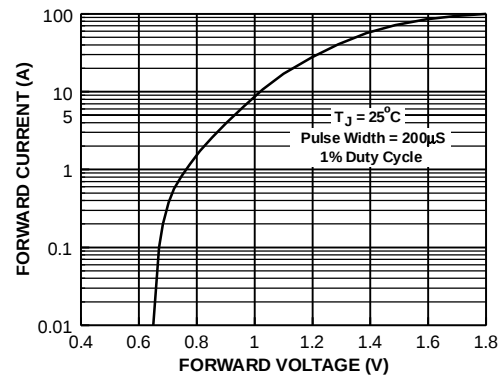
1N5400-1N5408

## Typical Characteristics

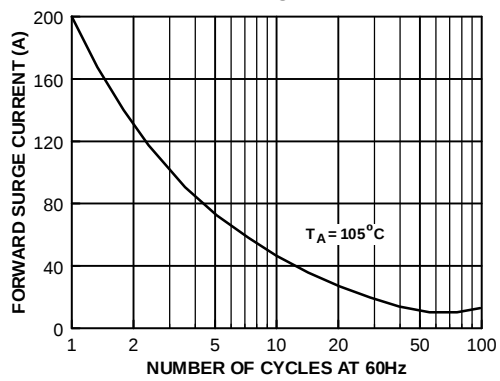
### Forward Current Derating Curve



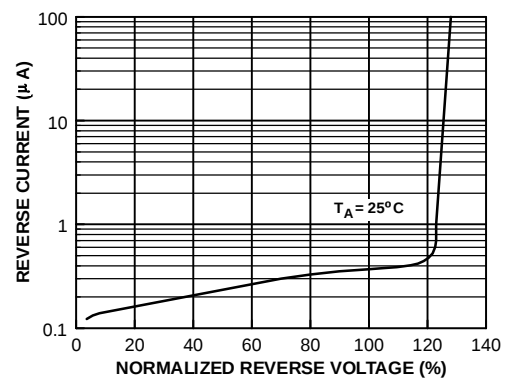
### Forward Characteristics



### Overload Surge Current



### Reverse Characteristics



### Junction Capacitance

