
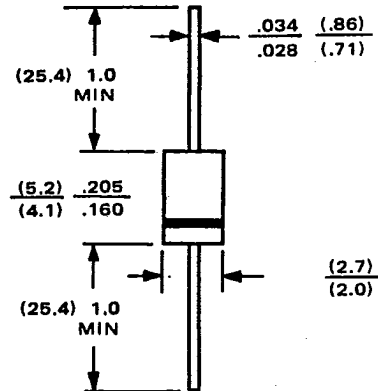


# Silicon Rectifier

## 1 Amp Glass Passivated

|  |   |
|--|---|
|  <p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• Low cost</li> <li>• Diffused junction</li> <li>• Low leakage</li> <li>• Low forward voltage drop</li> <li>• High current capability and high reliability</li> <li>• Easily cleaned with Freon, alcohol, Chloroethene and similar solvents</li> <li>• The plastic material carries U/L recognition 94V-0</li> </ul> <p><b>MECHANICAL DATA</b></p> <p>Case: JEDEC DO-41, molded Plastic<br/>         Terminals: Plated axial leads, solderable per MIL-STD-202 Method 208<br/>         Polarity: Color band denotes cathode end<br/>         Weight: 0.012 ounce, 0.3 gram<br/>         Mounting position: Any</p> | <p><b>VOLTAGE RANGE</b><br/>50 to 1000 Volts</p> <p><b>CURRENT</b><br/>1.0 Ampere</p> <p style="text-align: center;"><b>DO-41</b></p>  <p style="text-align: center;">All dimensions in inches and (millimeters)</p> |
|--|---|

### 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, derate current by 20%.

|  | 1N4001<br>GP | 1N4002<br>GP | 1N4003<br>GP | 1N4004<br>GP | 1N4005<br>GP | 1N4006<br>GP | 1N4007<br>GP | UNITS    |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------|
| *Maximum recurrent Peak Reverse Voltage  | 50           | 100          | 200          | 400          | 600          | 800          | 1000         | V        |
| *Maximum RMS Voltage   | 35           | 70           | 140          | 280          | 420          | 560          | 700          | V        |
| *Maximum DC Blocking Voltage   | 50           | 100          | 200          | 400          | 600          | 800          | 1000         | V        |
| *Maximum Average Forward Rectified Current<br>3/8" Lead Length at T <sub>A</sub> = 75°C                  | 1.0          |              |              |              |              |              |              | A        |
| *Peak Forward Surge Current<br>8.3 ms single half sine-wave superimposed on<br>rated load (JEDEC method) | 50           |              |              |              |              |              |              | A        |
| *Maximum Forward Voltage at 1.0A DC  | 1.0          |              |              |              |              |              |              | V        |
| *Maximum DC Reverse Current<br>at Rated DC Blocking Voltage  | 5.0<br>50.0  |              |              |              |              |              |              | μA<br>μA |
| Typical Junction Capacitance (Note 1)  | 20           |              |              |              |              |              |              | pF       |
| Typical Thermal Resistance (Note 2)  | 50           |              |              |              |              |              |              | °C/W     |
| Operating Temperature Range  | -65 to +175  |              |              |              |              |              |              | °C       |
| Storage Temperature Range  | -65 to +175  |              |              |              |              |              |              | °C       |

**NOTES:** 1. As measured on a Boonton Capacitance Bridge, Model 75A-S8 at 1.0 MHz and applied reverse voltage of 4.0V DC.  
 2. Thermal Resistance Junction to Ambient.  
 \* JEDEC registered values.

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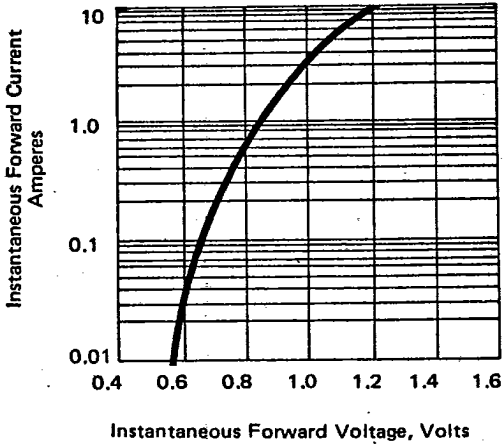
CSD67 • June 1985

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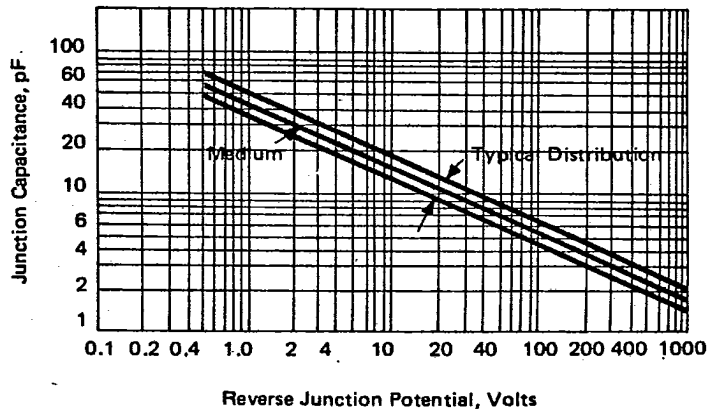
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**RATING AND CHARACTERISTIC CURVES**  
1N4001 thru 1N4007

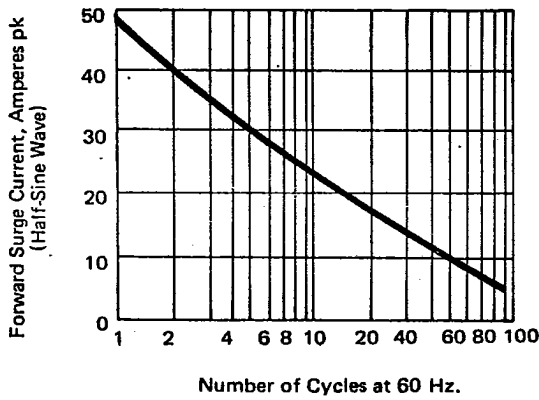
**Fig. 1 – TYPICAL FORWARD CHARACTERISTICS.**



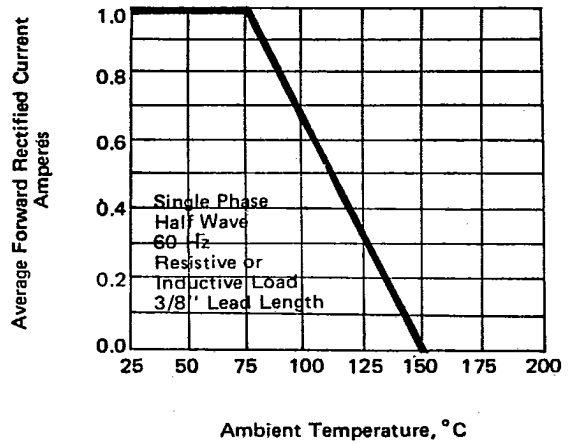
**Fig. 2 – JUNCTION CAPACITANCE (See Application Note 1).**



**Fig. 3 – MAXIMUM OVERLOAD SURGE-CURRENT**



**Fig. 4 – FORWARD DERATING CURVE**



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