Features
- Low Current Leakage
- Metalurgically Bonded Construction
- Low Cost

Maximum Ratings
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance: 20°C/W Junction To Lead

<table>
<thead>
<tr>
<th>MCC Catalog Number</th>
<th>Device Marking</th>
<th>Maximum Recurrent Peak Reverse Voltage</th>
<th>Maximum RMS Voltage</th>
<th>Maximum DC Blocking Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1N4001</td>
<td>---</td>
<td>50V</td>
<td>35V</td>
<td>50V</td>
</tr>
<tr>
<td>1N4002</td>
<td>---</td>
<td>100V</td>
<td>70V</td>
<td>100V</td>
</tr>
<tr>
<td>1N4003</td>
<td>---</td>
<td>200V</td>
<td>140V</td>
<td>200V</td>
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<td>1N4004</td>
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<td>400V</td>
<td>280V</td>
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<tr>
<td>1N4005</td>
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<td>600V</td>
<td>420V</td>
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<td>1N4006</td>
<td>---</td>
<td>800V</td>
<td>560V</td>
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<tr>
<td>1N4007</td>
<td>---</td>
<td>1000V</td>
<td>700V</td>
<td>1000V</td>
</tr>
</tbody>
</table>

Electrical Characteristics @ 25°C Unless Otherwise Specified
- Average Forward Current: $I_{F(AV)} = 1.0A$, $T_A = 75°C$
- Peak Forward Surge Current: $I_{FSM} = 30A$, 8.3ms, half sine
- Maximum Instantaneous Forward Voltage: $V_F = 1.1V$, $I_{FM} = 1.0A$; $T_J = 25°C$
- Maximum DC Reverse Current At Rated DC Blocking Voltage: $I_R = 5.0µA$ at $T_J = 25°C$; $50µA$ at $T_J = 125°C$
- Typical Junction Capacitance: $C_J = 15pF$, Measured at 1.0MHz, $V_R=4.0V$

*Pulse test: Pulse width 300 µsec, Duty cycle 2%
1N4001 thru 1N4007

Figure 1
Typical Forward Characteristics

Instantaneous Forward Current - Ampere versus Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve

Average Forward Rectified Current - Ampere versus Ambient Temperature - °C

Single Phase, Half Wave 60Hz Resistive or Inductive Load

Figure 3
Junction Capacitance

Junction Capacitance - pF versus Reverse Voltage - Volts

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Figure 4
Typical Reverse Characteristics

Instantaneous Reverse Leakage Current - MicroAmperes
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current

Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles