**Features**
- Halogen free available upon request by adding suffix "-HF"
- Low Current Leakage and Low Cost
- Lead Free Finish/RoHS Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

**Maximum Ratings**
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Typical Thermal Resistance: 35°C/W Junction to Case

<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>1N4001</td>
<td>50V</td>
<td>35V</td>
<td>50V</td>
</tr>
<tr>
<td>1N4002</td>
<td>1N4002</td>
<td>100V</td>
<td>70V</td>
<td>100V</td>
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<tr>
<td>1N4003</td>
<td>1N4003</td>
<td>200V</td>
<td>140V</td>
<td>200V</td>
</tr>
<tr>
<td>1N4004</td>
<td>1N4004</td>
<td>300V</td>
<td>280V</td>
<td>400V</td>
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<td>1N4006</td>
<td>1N4006</td>
<td>800V</td>
<td>560V</td>
<td>800V</td>
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<tr>
<td>1N4007</td>
<td>1N4007</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 $V_F = 1.0V$ $I_{IFM} = 1.0A$; $T_J = 25°C^*$
- Maximum DC Reverse Current At Rated DC Blocking Voltage $I_R = 5.0μA$ 50μA
- Typical Junction Capacitance $C_J = 15pF$ Measured at 1.0MHz, $V_R=4.0V$
- Typical Reverse Recovery Time $T_{rr} = 2.0μs$ $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$
- Rating for fusing $P^2t = 3.7A^2s$ $t<8.3ms$

*Pulse test: Pulse width 300 μsec, Duty cycle 2%

Figure 1
Typical Forward Characteristics

Instantaneous Forward Current - Ampere versus
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve

Single Phase, Half Wave
60Hz Resistive or Inductive Load

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

Figure 3
Junction Capacitance

Junction Capacitance - pF versus
Reverse Voltage - Volts
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
### Ordering Information:

<table>
<thead>
<tr>
<th>Device</th>
<th>Packing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number-TP</td>
<td>Tape&amp;Reel: 5Kpcs/Reel</td>
</tr>
<tr>
<td>Part Number-AP</td>
<td>Ammo Packing: 5Kpcs/Ammo Box</td>
</tr>
<tr>
<td>Part Number-BP</td>
<td>Bulk: 50Kpcs/Carton</td>
</tr>
</tbody>
</table>

Note: Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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