### Absolute Maximum Ratings (Ta = 25 °C)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Repetitive Reverse Voltage</td>
<td>V_RRM</td>
<td>100</td>
<td>V</td>
</tr>
<tr>
<td>Average Rectified Current</td>
<td>I_(F(AV))</td>
<td>200</td>
<td>mA</td>
</tr>
<tr>
<td>Peak Forward Surge Current</td>
<td>I_(FSM)</td>
<td>1</td>
<td>A</td>
</tr>
<tr>
<td>at t = 1 s</td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>at t = 1 µs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Power Dissipation</td>
<td>P_tot</td>
<td>500</td>
<td>mW</td>
</tr>
<tr>
<td>Junction Temperature</td>
<td>T_j</td>
<td>175</td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>T_stg</td>
<td>65 to 200</td>
<td>°C</td>
</tr>
</tbody>
</table>

### Characteristics at Ta = 25 °C

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min.</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse Breakdown Voltage</td>
<td>V_(BR)</td>
<td>100</td>
<td>-</td>
<td>V</td>
</tr>
<tr>
<td>at I_R = 100 µA</td>
<td></td>
<td>75</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>at I_R = 5 µA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reverse Current</td>
<td>I_R</td>
<td>-</td>
<td>25</td>
<td>nA</td>
</tr>
<tr>
<td>at V_R = 20 V</td>
<td></td>
<td>-</td>
<td>5</td>
<td>µA</td>
</tr>
<tr>
<td>at V_R = 75 V</td>
<td></td>
<td></td>
<td>50</td>
<td>µA</td>
</tr>
<tr>
<td>at V_R = 20 V, T_j = 150 °C</td>
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<td></td>
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</tr>
<tr>
<td>Forward Voltage</td>
<td>V_F</td>
<td>0.63</td>
<td>0.73</td>
<td>V</td>
</tr>
<tr>
<td>at I_F = 5 mA</td>
<td>1N916B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>at I_F = 10 mA</td>
<td>1N916</td>
<td></td>
<td>1</td>
<td>V</td>
</tr>
<tr>
<td>at I_F = 20 mA</td>
<td>1N916A</td>
<td></td>
<td>1</td>
<td>V</td>
</tr>
<tr>
<td>at I_F = 30 mA</td>
<td>1N916B</td>
<td></td>
<td>1</td>
<td>V</td>
</tr>
<tr>
<td>Total Capacitance</td>
<td>C_T</td>
<td>-</td>
<td>2</td>
<td>pF</td>
</tr>
<tr>
<td>at V_R = 0, f = 1 MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reverse Recovery Time</td>
<td>t_rr</td>
<td>-</td>
<td>4</td>
<td>ns</td>
</tr>
<tr>
<td>at I_F = 10 mA, V_R = 6 V (60 mA), I_RR = 1 mA, R_L = 100 Ω</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1N916, 1N916A, 1N916B

**GENERAL RULE:** The Reverse Current of a diode will approximately double for every ten (10) Degree C increase in Temperature.

**FORWARD VOLTAGE vs FORWARD CURRENT**
- **Vf-10 to 100 mA**
- **Vf-0.1 to 100 mA**
- **Vf-1 to 100 uA**
- **Vf-0.01 - 20 mA (-40 to+65 Deg C)**

**REVERSE VOLTAGE vs REVERSE CURRENT**
- **VR=0.0 to 15 V**
- **VR=1.0 to 100 μA**
- **VR=0.1 to 100 mA**
- **VR=1.0 mA-IRR=1.0mA-Rlosp=100 Ohms**

**CAPACITANCE vs REVERSE VOLTAGE**
- **VR=0.0 to 15 V**

**REVERSE RECOVERY TIME vs REVERSE CURRENT**
- **Ta=25°C**

**FORWARD VOLTAGE vs AMBIENT TEMPERATURE**
- **Vf-0.01 - 20 mA (-40 to+65 Deg C)**

**SEMTECH ELECTRONICS LTD.**
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