Small Signal Fast Switching Diodes

FEATURES
- Fast switching speed
- High reliability
- High conductance
- For general purpose switching applications
- AEC-Q101 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

MECHANICAL DATA

Case: DO-35 (DO-204AH)
Weight: approx. 125 mg
Cathode band color: black
Packaging codes / options:
TR/10K per 13” reel (52 mm tape), 50K/box
TAP/10K per ammopack (52 mm tape), 50K/box

PARTS TABLE

<table>
<thead>
<tr>
<th>PART</th>
<th>ORDERING CODE</th>
<th>TYPE MARKING</th>
<th>CIRCUIT CONFIGURATION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1N914</td>
<td>1N914TR or 1N914TAP</td>
<td>1N914</td>
<td>Single</td>
<td>Tape and reel / ammopack</td>
</tr>
</tbody>
</table>

ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °C, unless otherwise specified)

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>TEST CONDITION</th>
<th>SYMBOL</th>
<th>VALUE</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repetitive peak reverse voltage</td>
<td>V_{RRM}</td>
<td>100</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Working peak reverse voltage</td>
<td>V_{RWM}</td>
<td>75</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>DC blocking voltage</td>
<td>V_{R}</td>
<td>75</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>RMS Reverse voltage</td>
<td>V_{RMS}</td>
<td>53</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Forward continuous current</td>
<td>I_{F}</td>
<td>300</td>
<td>mA</td>
<td></td>
</tr>
<tr>
<td>Average rectified current</td>
<td>I_{F(AV)}</td>
<td>200</td>
<td>mA</td>
<td></td>
</tr>
<tr>
<td>Non repetitive peak forward surge current</td>
<td>I_{FSM}</td>
<td>1</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>t = 1 s</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>t = 1 μs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power dissipation</td>
<td>P_{tot}</td>
<td>500</td>
<td>mW</td>
<td></td>
</tr>
<tr>
<td>I = 4 mm, T_{L} = 25 °C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

THERMAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>TEST CONDITION</th>
<th>SYMBOL</th>
<th>VALUE</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal resistance junction to ambient air</td>
<td>I = 4 mm, T_{L} = constant</td>
<td>R_{thJA}</td>
<td>300</td>
<td>K/W</td>
</tr>
<tr>
<td>Junction temperature</td>
<td>T_{J}</td>
<td>175</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Storage temperature range</td>
<td>T_{stg}</td>
<td>-65 to +175</td>
<td>°C</td>
<td></td>
</tr>
</tbody>
</table>
**ELECTRICAL CHARACTERISTICS**  \( (T_{\text{amb}} = 25 \, ^\circ\text{C}, \text{unless otherwise specified}) \)

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>TEST CONDITION</th>
<th>SYMBOL</th>
<th>MIN.</th>
<th>TYP.</th>
<th>MAX.</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward voltage</td>
<td>( I_F = 10 , \text{mA} )</td>
<td>( V_F )</td>
<td>1</td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Breakdown voltage</td>
<td>( I_R = 100 , \mu\text{A} )</td>
<td>( V_{(BR)} )</td>
<td>100</td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Peak reverse current</td>
<td>( V_R = 75 , \text{V} )</td>
<td>( I_R )</td>
<td>5</td>
<td></td>
<td></td>
<td>\mu\text{A}</td>
</tr>
<tr>
<td></td>
<td>( V_R = 20 , \text{V}, , T_J = 150 ^\circ\text{C} )</td>
<td>( I_R )</td>
<td>50</td>
<td></td>
<td></td>
<td>\mu\text{A}</td>
</tr>
<tr>
<td></td>
<td>( V_R = 20 , \text{V} )</td>
<td>( I_R )</td>
<td>25</td>
<td></td>
<td></td>
<td>nA</td>
</tr>
<tr>
<td>Diode capacitance</td>
<td>( V_R = 0, , f = 1 , \text{MHz} )</td>
<td>( C_D )</td>
<td>4</td>
<td></td>
<td></td>
<td>pF</td>
</tr>
<tr>
<td>Reverse recovery time</td>
<td>( I_F = 10 , \text{mA}, , I_R = 1 , \text{mA}, , V_R = 6 , \text{V}, , R_L = 100 , \Omega )</td>
<td>( t_{rr} )</td>
<td>4</td>
<td></td>
<td></td>
<td>ns</td>
</tr>
</tbody>
</table>

**TYPICAL CHARACTERISTICS**  \( (T_{\text{amb}} = 25 \, ^\circ\text{C}, \text{unless otherwise specified}) \)

**PACKAGE DIMENSIONS** in millimeters (inches): **DO-35 (DO-204AH)**
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