Switching Diodes

MA6X121 (MA121)

Silicon epitaxial planar type

- **Features**
  - Three-element contained in one package, allowing high-density mounting
  - Short reverse recovery time \( t_{rr} \)
  - Small terminal capacitance, \( C_t \)

### Absolute Maximum Ratings \( T_a = 25\, ^\circ C \)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Rating</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse voltage (DC)</td>
<td>( V_R )</td>
<td>80</td>
<td>V</td>
</tr>
<tr>
<td>Peak reverse voltage</td>
<td>( V_{RM} )</td>
<td>80</td>
<td>V</td>
</tr>
<tr>
<td>Forward current (DC)(^1)</td>
<td>( I_F )</td>
<td>100</td>
<td>mA</td>
</tr>
<tr>
<td>Peak forward current(^1)</td>
<td>( I_{FM} )</td>
<td>225</td>
<td>mA</td>
</tr>
<tr>
<td>Non-repetitive peak forward surge current(^1,2)</td>
<td>( I_{FSM} )</td>
<td>500</td>
<td>mA</td>
</tr>
<tr>
<td>Junction temperature</td>
<td>( T_J )</td>
<td>150</td>
<td>(^\circ C)</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>( T_{stg} )</td>
<td>−55 to +150</td>
<td>(^\circ C)</td>
</tr>
</tbody>
</table>

*Note*  
*1: Value for single diode  
*2: \( t = 1 \, s \)

### Electrical Characteristics \( T_a = 25\, ^\circ C \)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Conditions</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse current (DC)</td>
<td>( I_R )</td>
<td>( V_R = 75 , V )</td>
<td>100</td>
<td>nA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forward voltage (DC)</td>
<td>( V_F )</td>
<td>( I_R = 100 , mA )</td>
<td>1.2</td>
<td>V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reverse voltage (DC)</td>
<td>( V_R )</td>
<td>( I_R = 100 , \mu A )</td>
<td>80</td>
<td>V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terminal capacitance</td>
<td>( C_t )</td>
<td>( V_R = 0 , V, , f = 1 , MHz )</td>
<td>2</td>
<td>pF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reverse recovery time*</td>
<td>( t_{rr} )</td>
<td>( I_R = 10 , mA, , V_R = 6 , V )</td>
<td>3</td>
<td>ns</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note*  
1. Rated input/output frequency: 100 MHz  
2. *: \( t_{rr} \) measuring circuit

Bias Application Unit N-50BU

Pulse Generator (PG-10N)  
\( R_s = 50 \, \Omega \)

W.F. Analyzer (SAS-8130)  
\( R_c = 50 \, \Omega \)

Input Pulse

Output Pulse

Note: The part number in the parenthesis shows conventional part number.
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