Fast recovery diodes

RF1601T2D

● Applications
General rectification

● Features
1) Cathode common type. (TO-220)
2) Ultra Low $V_F$
3) Very fast recovery
4) Low switching loss

● Construction
Silicon epitaxial planar

● Dimensions (Unit : mm)

![Diode Dimensions Diagram]

ROHM : TO220FN

Manufacture Date

1.2 1.3 0.8

(1) (2) (3)

● Absolute maximum ratings ($Ta=25^\circ C$)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Limits</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse voltage (repetitive peak)</td>
<td>$V_{RM}$</td>
<td>200</td>
<td>V</td>
</tr>
<tr>
<td>Reverse voltage (DC)</td>
<td>$V_R$</td>
<td>200</td>
<td>V</td>
</tr>
<tr>
<td>Average rectified forward current (*1)</td>
<td>$I_0$</td>
<td>16</td>
<td>A</td>
</tr>
<tr>
<td>Forward current surge peak (60Hz/1cyc)</td>
<td>$I_{FSM}$</td>
<td>80</td>
<td>A</td>
</tr>
<tr>
<td>Junction temperature</td>
<td>$T_j$</td>
<td>150</td>
<td>°C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>$T_{stg}$</td>
<td>–55 to +150</td>
<td>°C</td>
</tr>
</tbody>
</table>

(*1) Business frequency, Rating of R-load, $T_c=120^\circ C$. 1/2 $I_0$ per diode

● Electrical characteristic ($Ta=25^\circ C$)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Unit</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward voltage</td>
<td>$V_F$</td>
<td>-</td>
<td>-</td>
<td>0.93</td>
<td>V</td>
<td>$I_L=8A$</td>
</tr>
<tr>
<td>Reverse current</td>
<td>$I_R$</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>μA</td>
<td>$V_R=200V$</td>
</tr>
<tr>
<td>Reverse recovery time</td>
<td>$tr_r$</td>
<td>-</td>
<td>-</td>
<td>30</td>
<td>ns</td>
<td>$I_L=0.5A, I_R=1A, tr_r=0.25*I_R$</td>
</tr>
</tbody>
</table>
Electrical characteristics curves

- Forward Voltage-VF (mV)
- Reverse Voltage-VR (V)
- Forward Current-IF (A)
- Reverse Current-IR (nA)
- Capacitance Between Terminals-Ct (pF)
- Reverse Voltage-VR (V)
- Peak Surge Forward Current-IFSM (A)
- Time: t (ms)
- Average Rectified Forward Current-Io (A)
- Transient Thermal Impedance-Rth (°C/W)
- Forward Power Dissipation-Pf (W)
- Average Rectified Reverse Current-Irr (nA)
- Number of Cycles-Irr-Cycle Characteristics

Values and conditions:
- Ta=25°C
- IF=8A
- VR=200V
- n=30pcs
- f=1MHz
- L=4A
- n=0.25% 
- n=10pcs
- Trm=3mm
- 3mm
- D=1/2
Notes

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