Diodes

Diodes

Shottky barrier diode

RB715F

● Application
Low current rectification

● Features
1) Small mold type. (UMD3)
2) Low Vf
3) High reliability.

● Construction
Silicon epitaxial planer

● External dimensions (Unit : mm)

● Lead size figure (Unit : mm)

● Taping dimensions (Unit : mm)

● Absolute maximum ratings (Ta=25°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>VRM</td>
<td>40</td>
<td>V</td>
</tr>
<tr>
<td>Reverse voltage (DC)</td>
<td>VR</td>
<td>40</td>
<td>V</td>
</tr>
<tr>
<td>Average rectified forward current</td>
<td>Io</td>
<td>30</td>
<td>mA</td>
</tr>
<tr>
<td>Forward current surge peak (60Hz - 1cyc) (*1)</td>
<td>IFSM</td>
<td>200</td>
<td>mA</td>
</tr>
<tr>
<td>Junction temperature</td>
<td>Tj</td>
<td>125</td>
<td>°C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>Tstg</td>
<td>-40 to +125</td>
<td>°C</td>
</tr>
</tbody>
</table>

(*1)Rating of per diode

● Electrical characteristics (Ta=25°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>Vf</td>
<td>-</td>
<td>-</td>
<td>0.37</td>
<td>V</td>
<td>IF=1mA</td>
</tr>
<tr>
<td>Reverse current</td>
<td>Ir</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>µA</td>
<td>VR=10V</td>
</tr>
<tr>
<td>Capacitance between terminals</td>
<td>Ct</td>
<td>-</td>
<td>2.0</td>
<td>-</td>
<td>pF</td>
<td>VR=1V f=1MHz</td>
</tr>
</tbody>
</table>
Electrical characteristic curves \((Ta=25°C)\)

- **Forward Voltage** \((VF(mV))\)
- **Forward Current** \((IF(mA))\)
- **Reverse Current** \((IR(uA))\)
- **Reverse Voltage** \((VR(V))\)
- **Capacitance Between Terminals** \((Ct(pF))\)
- **Reverse Voltage** \((VR(V))\)
- **Peak Surge Forward Current** \((IFSM(A))\)
- **Time** \((t(ms))\)
- **Thermal Impedance** \((Rth(℃/W))\)
- **Average Rectified Forward Current** \((Io(A))\)
- **Reverse Power Dissipation** \((PR(W))\)

**Graphs and Diagrams:**
- **VF Dispersion Map**
- **IR Dispersion Map**
- **Ct Dispersion Map**
- **IFSM Dispersion Map**
- **Number of Cycles** \((IFSM-CYCLE CHARACTERISTICS)\)
- **Rth-t CHARACTERISTICS**
- **AVE:7.30A**
- **AVE:0.083nA**
- **AVE:1.97pF**
- **AVE:267.4mV**
- **AVE:0.001**
- **AVE:26.74mV**
- **AVE:0.01**
- **AVE:0.1**
- **AVE:1**
- **AVE:10**
- **AVE:100**
- **AVE:1000**

**Settings:**
- Ta=125℃
- Ta=75℃
- Ta=25℃
- Ta=-25℃
AMBIENT TEMPERATURE $T_a(°C)$
Derating Curve $I_o - T_a$

AVERAGE RECTIFIED FORWARD CURRENT $I_o(A)$

CASE TEMPERATURE $T_c(°C)$
Derating Curve $I_o - T_c$

$\sin \theta = 180°$

$D = \frac{1}{2}$

$DC$

$T_j = 125{°}C$

$D = \frac{t}{T_t}$

$VR = 20V$

$0A$

$0V$
The products listed in this document are designed to be used with ordinary electronic equipment or devices (such as audio visual equipment, office-automation equipment, communications devices, electrical appliances and electronic toys). Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

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