1. Scope
   The present specifications shall apply to an RU4Z.

2. Outline

<table>
<thead>
<tr>
<th>Type</th>
<th>Silicon Diode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure</td>
<td>Resin Molded</td>
</tr>
<tr>
<td>Applications</td>
<td>High Frequency Rectification</td>
</tr>
</tbody>
</table>

3. Flammability
   UL94V-0(Equivalent)
### Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Symbol</th>
<th>Unit</th>
<th>Rating</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Transient Peak Reverse Voltage</td>
<td>$V_{RSM}$</td>
<td>V</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Peak Reverse Voltage</td>
<td>$V_{RM}$</td>
<td>V</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Average Forward Current</td>
<td>$I_{F(AN)}$</td>
<td>A</td>
<td>3.5</td>
<td>Refer to Derating of 7</td>
</tr>
<tr>
<td>4</td>
<td>Peak Surge Forward Current</td>
<td>$I_{FSM}$</td>
<td>A</td>
<td>70</td>
<td>10msec. Half sinewave, one shot</td>
</tr>
<tr>
<td>5</td>
<td>$\text{I}^2\text{t}$ Limiting Value</td>
<td>$\text{I}^2\text{t}$</td>
<td>$\text{A}^2\text{s}$</td>
<td>24.5</td>
<td>1msec$\leq$t$\leq$10msec</td>
</tr>
<tr>
<td>6</td>
<td>Junction Temperature</td>
<td>$T_{j}$</td>
<td>°C</td>
<td>-40~+150</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Storage Temperature</td>
<td>$T_{stg}$</td>
<td>°C</td>
<td>-40~+150</td>
<td></td>
</tr>
</tbody>
</table>

### Electrical Characteristics (Ta=25°C, unless otherwise specified)

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Symbol</th>
<th>Unit</th>
<th>Value</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Forward Voltage Drop</td>
<td>$V_F$</td>
<td>V</td>
<td>1.3 max.</td>
<td>$I_F=3.5\text{A}$</td>
</tr>
<tr>
<td>2</td>
<td>Reverse Leakage Current</td>
<td>$I_R$</td>
<td>uA</td>
<td>10 max.</td>
<td>$V_R=V_{RM}$</td>
</tr>
<tr>
<td>3</td>
<td>Reverse Leakage Current Under High Temperature</td>
<td>$H\cdot I_R$</td>
<td>uA</td>
<td>300 max.</td>
<td>$V_R=V_{RM}$, $T_j=100^\circ\text{C}$</td>
</tr>
<tr>
<td>4</td>
<td>Reverse Leakage Current Under High Temperature</td>
<td>$\text{trr-1}$</td>
<td>ns</td>
<td>400 max.</td>
<td>$I_F=I_{RP}=10\text{mA}$ 90% Recovery point, $T_j=25^\circ\text{C}$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$\text{trr-2}$</td>
<td>ns</td>
<td>180 max.</td>
<td>$I_F=10\text{mA},I_{RP}=20\text{mA}$ 75% Recovery point, $T_j=25^\circ\text{C}$</td>
</tr>
<tr>
<td>5</td>
<td>Thermal Resistance</td>
<td>$R_{th(j-l)}$</td>
<td>°C/W</td>
<td>8 max.</td>
<td>Between Junction and Lead</td>
</tr>
</tbody>
</table>

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SANKEN ELECTRIC CO., LTD.  
RU4Z
6. Characteristics

$I_{F(AV)} - P_F$

$P_F (W)$
Forward Power Dissipation (W)

$I_{F(AV)} (A)$
Average Forward Current (A)

$V_R - P_R$

$P_R (W)$
Reverse Power Dissipation (W)

$V_R (V)$
Reverse Voltage (V)

$t/T=1/6$
$t/T=1/3$, sinewave
$t/T=1/2$

$T_j=150°C$

$0.00$
$1.00$
$2.00$
$3.00$
$4.00$
$5.00$

$0.0$
$0.5$
$1.0$
$1.5$
$2.0$
$2.5$
$3.0$
$3.5$

$0.00$
$100$
$200$
7. Derating

**Graph 1:**
- **Tl - IF(AV)**
- **Ta - IF(AV)**
- **VR = 200(V)**
- **IF(AV) (A)**
- **Average Forward Current (A)**
- **Lead Temperature (°C)**
- **Ambient Temperature (°C)**
- **t/T = 1/6**
- **t/T = 1/3**
- **t/T = 1/2**
- **DC**
- **Sinewave**
- **Tj = 150°C**
- **P.C.B. Mounted (10mm x 10mm Land)**
8. Package information

8-1 Package type, physical dimensions and material

*1 The allowance position of Body against the center of whole lead wire is 0.5mm(max.)
*2 The centric allowance of lead wire against center of physical body is 0.3mm(max.)
*3 The burr may exit up to 2mm from the body of lead

Dimensions in ㎜:

50.0 ±1.0
8.0 ±0.2
φ6.5 ±0.2
φ1.4 ±0.1

8-2 Appearance

The body shall be clean and shall not bear any stain, rust or flaw.

8-3 Marking

① Type number  RU4Z

② Lot number 1
  First digit: Last digit of Year
  Second digit: Month
  From 1 to 9 for Jan. to Sep.

③ Lot number 2 (ten days)
  * : Top of the month
  ** : Middle of month
  *** : End of month

Cathode Band