1SV233

PIN Diode
Single PIN Diode for VHF, UHF and AGC
50V, 50mA, $r_s=$typ 5Ω, CP

Features
- Very small-sized package facilitates high-density mounting and permits 1SV233-applied equipment to be made smaller
- Small interterminal capacitance ($C=0.23\text{pF}$ typ)
- Small forward series resistance ($r_s=5\Omega$ typ)

Specifications

### Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Conditions</th>
<th>Ratings</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse Voltage</td>
<td>$V_R$</td>
<td></td>
<td>50</td>
<td>V</td>
</tr>
<tr>
<td>Forward Current</td>
<td>$I_F$</td>
<td></td>
<td>50</td>
<td>mA</td>
</tr>
<tr>
<td>Allowable Power Dissipation</td>
<td>$P$</td>
<td></td>
<td>150</td>
<td>mW</td>
</tr>
<tr>
<td>Junction Temperature</td>
<td>$T_j$</td>
<td></td>
<td>125</td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>$T_{stg}$</td>
<td></td>
<td>−55 to +125</td>
<td>°C</td>
</tr>
</tbody>
</table>

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

### Package Dimensions

unit : mm (typ)
7013A-004

### Electrical Connection

1 : Anode
2 : No Contact
3 : Cathode

### Product & Package Information

- Package : CP
- JEITA, JEDEC : SC-59, TO-236, SOT-23, TO-236AB
- Minimum Packing Quantity : 3,000 pcs./reel

### Packing Type: TB

### Marking

BV

- Electrical Connection

1SV233-TB-E
## Electrical Characteristics at Ta=25°C

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Conditions</th>
<th>Ratings</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse Voltage</td>
<td>VR</td>
<td>IR=10μA</td>
<td>50</td>
<td>V</td>
</tr>
<tr>
<td>Reverse Current</td>
<td>IR</td>
<td>VR=50V</td>
<td>0.1</td>
<td>μA</td>
</tr>
<tr>
<td>Forward Voltage</td>
<td>VF</td>
<td>IF=50mA</td>
<td>0.95</td>
<td>V</td>
</tr>
<tr>
<td>Interterminal Capacitance</td>
<td>C</td>
<td>VR=50V, f=1MHz</td>
<td>0.23</td>
<td>pF</td>
</tr>
<tr>
<td>Series Resistance</td>
<td>rs</td>
<td>IF=10mA, f=100MHz</td>
<td>5</td>
<td>Ω</td>
</tr>
</tbody>
</table>

## Ordering Information

<table>
<thead>
<tr>
<th>Device</th>
<th>Package</th>
<th>Shipping</th>
<th>memo</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SV233-TB-E</td>
<td>CP</td>
<td>3,000pcs./reel</td>
<td>Pb Free</td>
</tr>
</tbody>
</table>
Embosed Taping Specification

1SV233-TB-E

1. Packing Format

<table>
<thead>
<tr>
<th>Package Name</th>
<th>Carrier Tape Type</th>
<th>Maximum Number of Devices (Combined Total)</th>
<th>Packing Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP</td>
<td>CP</td>
<td>3,000</td>
<td>Inners BOX (C-1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15,000</td>
<td>Outer BOX (A-7)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>90,000</td>
<td></td>
</tr>
</tbody>
</table>

Packing method

- Reel label, Inner box label
- Outer box label
  - It is a label at the time of factory shipments. The form of a label may change in physical distribution process.

Reel label

- Type No.
- LOT No.
- Quantity
- Origin

2. Taping Configuration

2-1. Carrier tape size (unit:mm)

- When a device is mounted

2-2. Device placement direction

Device mounting recess square hole

Those with one electrode terminal on the feed hole side: TB
Outline Drawing
1SV233-TB-E

Mass (g)  Unit
0.013     mm

Unit: mm

Land Pattern Example