1N4933 - 1N4937
1.0A FAST RECOVERY RECTIFIER

Features

- Diffused Junction
- Fast Switching for High Efficiency
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 30A Peak
- Low Reverse Leakage Current
- Lead Free Finish, RoHS Compliant (Notes 1 & 2)

Mechanical Data

- Case: DO-41
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - Bright Tin. Plated Leads Solderable per MIL-STD-202, Method 208 (3)
- Polarity: Cathode Band
- Mounting Position: Any
- Marking: Type Number
- 0.35 grams (Approximate)

Ordering Information (Note 3)

<table>
<thead>
<tr>
<th>Device</th>
<th>Packaging</th>
<th>Shipping</th>
</tr>
</thead>
<tbody>
<tr>
<td>1N4933-T</td>
<td>DO-41</td>
<td>5K/Tape &amp; Reel, 13-inch</td>
</tr>
<tr>
<td>1N4934-T</td>
<td>DO-41</td>
<td>5K/Tape &amp; Reel, 13-inch</td>
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<td>1N4935-T</td>
<td>DO-41</td>
<td>5K/Tape &amp; Reel, 13-inch</td>
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<td>1N4936-T</td>
<td>DO-41</td>
<td>5K/Tape &amp; Reel, 13-inch</td>
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<td>1N4937-T</td>
<td>DO-41</td>
<td>5K/Tape &amp; Reel, 13-inch</td>
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</table>

Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated’s definitions of Halogen- and Antimony-free, “Green” and Lead-free.
3. For packaging details, go to our website at https://www.diodes.com/design/support/packaging/diodes-packaging/.

Maximum Ratings and Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Symbol</th>
<th>1N4933</th>
<th>1N4934</th>
<th>1N4935</th>
<th>1N4936</th>
<th>1N4937</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Peak Repetitive Reverse Voltage</td>
<td>V_{RRM}</td>
<td>50</td>
<td>100</td>
<td>200</td>
<td>400</td>
<td>600</td>
<td>V</td>
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<tr>
<td>Working Peak Reverse Voltage</td>
<td>V_{RWM}</td>
<td>35</td>
<td>70</td>
<td>140</td>
<td>280</td>
<td>420</td>
<td>V</td>
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<tr>
<td>DC Blocking Voltage (Note 7)</td>
<td>V_R</td>
<td>1.0</td>
<td>1.2</td>
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<td>RMS Reverse Voltage</td>
<td>V_{RMS}</td>
<td>30</td>
<td>100</td>
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<td>Average Rectified Output Current (Note 4) @ T_A = +75°C</td>
<td>I_O</td>
<td>1.0</td>
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<td>Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load</td>
<td>I_{FSM}</td>
<td>30</td>
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<td>Forward Voltage Drop @ I_F = 1.0A</td>
<td>V_{FM}</td>
<td>5.0</td>
<td>100</td>
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<tr>
<td>Peak Reverse Current @ T_A = +25°C at Rated DC Blocking Voltage (Note 7) @ T_A = +100°C</td>
<td>I_{RM}</td>
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<td>Reverse Recovery Time (Note 6)</td>
<td>t_{RR}</td>
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<td>Typical Total Capacitance (Note 5)</td>
<td>C_T</td>
<td>15</td>
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<td>Typical Thermal Resistance Junction to Ambient</td>
<td>R_{JJA}</td>
<td>100</td>
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<td>Operating and Storage Temperature Range</td>
<td>T_J, T_STG</td>
<td>-65 to +150</td>
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</table>

Notes:
4. Leads maintained at ambient temperature at a distance of 9.5mm from the case.
5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
6. Measured with I_F = 0.5A, I_R = 1A, I_{RM} = 0.25A.
7. Short duration pulse test used to minimize self-heating effect.
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NOT RECOMMENDED FOR NEW DESIGN
USE RS1A - RS1J Series

Fig. 1  Forward Current Derating Curve

Fig. 2  Typical Forward Characteristics

Fig. 3  Max Non-Repetitive Peak Forward Surge Current

Fig. 4  Typical Total Capacitance

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