SS32D THRU SS3AD

SCHOTTKY BARRIER RECTIFIERS
Reverse Voltage - 20 to 100 V
Forward Current - 3 A

Features
• Plastic package has Underwriters Laboratories
  Flammability Classification 94V-0
• Metal silicon junction, majority carrier conduction
• For surface mount applications
• Low power loss, high efficiency
• High current capability, low forward voltage drop.
• Low profile package
• Built-in strain relief, ideal for automated placement
• For use in low voltage, high frequency inverters,
  free wheeling, and polarity protection applications

Mechanical Data
• Case: SMB (DO-214AA), molded plastic body
• Terminals: Solder plated, solderable per
  MIL-STD-750, method 2026
• Polarity: Color band denotes cathode end

Absolute Maximum Ratings and Characteristics
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, resistive or inductive
load. For capacitive load, derate by 20 %.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbols</th>
<th>SS32D</th>
<th>SS33D</th>
<th>SS34D</th>
<th>SS35D</th>
<th>SS36D</th>
<th>SS38D</th>
<th>SS3AD</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Repetitive Peak Reverse Voltage</td>
<td>V_{RRM}</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>V</td>
</tr>
<tr>
<td>Maximum RMS Voltage</td>
<td>V_{RMS}</td>
<td>14</td>
<td>21</td>
<td>28</td>
<td>35</td>
<td>42</td>
<td>57</td>
<td>71</td>
<td>V</td>
</tr>
<tr>
<td>Maximum DC Blocking Voltage</td>
<td>V_{DC}</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>V</td>
</tr>
<tr>
<td>Maximum Average Forward Rectified Current at 0.375&quot;(9.5 mm) Lead Length</td>
<td>I_{F(AV)}</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)</td>
<td>I_{FSM}</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Maximum Instantaneous Forward Voltage at 3 A</td>
<td>V_{F}</td>
<td>0.55</td>
<td>0.75</td>
<td>0.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Maximum Reverse Current at Rated DC Blocking at Voltage at T_{a} = 25 °C at T_{a} = 100 °C</td>
<td>I_{R}</td>
<td></td>
<td></td>
<td></td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td>Typical Junction Capacitance 1)</td>
<td>C_{j}</td>
<td>250</td>
<td>160</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>pF</td>
</tr>
<tr>
<td>Typical Thermal Resistance 2)</td>
<td>R_{JJA}</td>
<td>55</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C/W</td>
</tr>
<tr>
<td>Operating Junction Temperature Range</td>
<td>T_{J}</td>
<td>- 65 to + 125</td>
<td></td>
<td>- 65 to + 150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>T_{slip}</td>
<td>- 65 to + 150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C</td>
</tr>
</tbody>
</table>

1) Measured at 1 MHz and reverse voltage of 4 V
2) P.C.B. mounted 0.55 X 0.55" (14 X 14 mm) copper pad areas.
FIG. 1 - FORWARD CURRENT DERATING CURVE

FIG. 2 - MAXIMUM NON-REPEATED PEAK FORWARD SURGE CURRENT

FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

FIG. 5 - TYPICAL JUNCTION CAPACITANCE

FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE