SS1 Series
Controlled Avalanche Power Diodes

Features:
• For surface mounted application.
• Metal to silicon rectifier, majority carrier conduction.
• Low forward voltage drop.
• Easy pick and place.
• High surge current capability.
• Epitaxial construction.
• High temperature soldering: 250°C/10 seconds at terminals.

Mechanical Data:
Cases : Moulded plastic.
Terminals : Solder plated.
Polarity : Indicated by cathode band.

Dimensions : Inches (Millimetres)
Maximum Ratings and Electrical Characteristics
Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

<table>
<thead>
<tr>
<th>Type Number</th>
<th>SS14</th>
<th>SS16</th>
<th>SS110</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum recurrent peak reverse voltage</td>
<td>40</td>
<td>60</td>
<td>100</td>
<td>V</td>
</tr>
<tr>
<td>Maximum RMS voltage</td>
<td>28</td>
<td>42</td>
<td>70</td>
<td>A</td>
</tr>
<tr>
<td>Maximum DC blocking voltage</td>
<td>40</td>
<td>60</td>
<td>100</td>
<td>V</td>
</tr>
<tr>
<td>Maximum average forward rectified current at T_L (See Figure 1)</td>
<td>1.0</td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)</td>
<td>30</td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Maximum Instantaneous forward voltage (Note) at 1.0A</td>
<td>0.5</td>
<td>0.75</td>
<td>0.80</td>
<td>V</td>
</tr>
<tr>
<td>Maximum DC reverse current at T_A = 25°C</td>
<td>0.5</td>
<td>0.05</td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td>at rated DC blocking voltage at T_A = 100°C</td>
<td>10</td>
<td>5.0</td>
<td>0.5</td>
<td>mA</td>
</tr>
<tr>
<td>Typical thermal resistance (Note 2) R_θ_JL</td>
<td>28</td>
<td></td>
<td></td>
<td>°C/W</td>
</tr>
<tr>
<td>R_θ_JA</td>
<td>88</td>
<td></td>
<td></td>
<td>°C/W</td>
</tr>
<tr>
<td>Operating temperature range T_J</td>
<td>-65 to +125</td>
<td>-65 to +150</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Storage temperature range T_STG</td>
<td>-65 to +150</td>
<td></td>
<td>°C</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. Pulse test with PW = 300μsec, 1% duty cycle.
2. Measured on PC Board with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas.

Ratings and Characteristic Curves

Figure 1 Maximum Forward Current Derating Curve

Figure 2 Maximum Non-Repetitive Forward Surge Current

AT Rated T_L
0.2ms Single Half Sine Wave
JEDEC Method
### Specifications

<table>
<thead>
<tr>
<th>$I_F$ (AV) (A)</th>
<th>$T_C$ (°C)</th>
<th>$V_{RRM}$ (V)</th>
<th>$V_{FM}$ maximum (V)</th>
<th>$I_{RM}$ maximum (mA)</th>
<th>Package</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>105</td>
<td>40</td>
<td>0.5</td>
<td>0.5</td>
<td>DO-214AC (SMA)</td>
<td>SS14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60</td>
<td>0.75</td>
<td>0.05</td>
<td></td>
<td>SS16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>0.8</td>
<td>0.05</td>
<td></td>
<td>SS110</td>
</tr>
</tbody>
</table>
SS1 Series
Controlled Avalanche Power Diodes

Notes:

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