MECHANICAL DATA
Case: SOD123HE
Molding compound, UL flammability classification rating 94V-0
Packing code with suffix "G" means green compound (halogen-free)
Moisture sensitivity level: level 1, per J-STD-020
Terminal: Matte tin plated leads, solderable per JESD22-B102
Meet JESD 201 class 2 whisker test
Polarity: Indicated by cathode band
Weight: 0.022g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_{A}=25^\circ C unless otherwise noted)

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>SYMBOL</th>
<th>S1JLS</th>
<th>S1KLS</th>
<th>S1MLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marking code</td>
<td></td>
<td>1JLS</td>
<td>1KLS</td>
<td>1MLS</td>
</tr>
<tr>
<td>Maximum repetitive peak reverse voltage</td>
<td>V_{RRM}</td>
<td>600</td>
<td>800</td>
<td>1000</td>
</tr>
<tr>
<td>Maximum RMS voltage</td>
<td>V_{RMS}</td>
<td>420</td>
<td>560</td>
<td>700</td>
</tr>
<tr>
<td>Maximum DC blocking voltage</td>
<td>V_{DC}</td>
<td>600</td>
<td>800</td>
<td>1000</td>
</tr>
<tr>
<td>Maximum average forward rectified current</td>
<td>I_{F(AV)}</td>
<td>1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load</td>
<td>I_{FSM}</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum instantaneous forward voltage (Note 1) @ 1.2 A</td>
<td>V_{F}</td>
<td>1.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum reverse current @ rated VR T_{J}=25 \degree C</td>
<td>I_{R}</td>
<td>5</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>T_{J}=125 \degree C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typical thermal resistance</td>
<td>R_{JC}</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R_{JJA}</td>
<td>74</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Operating junction temperature range</td>
<td>T_{J}</td>
<td>-55 to +150</td>
<td></td>
<td></td>
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<tr>
<td>Storage temperature range</td>
<td>T_{STG}</td>
<td>-55 to +150</td>
<td></td>
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</tr>
</tbody>
</table>

Note 1: Pulse test with PW=300μs, 1% duty cycle
RATINGS AND CHARACTERISTICS CURVES

(T\_j=25°C unless otherwise noted)

**FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE**

- AVERAGE FORWARD CURRENT (A)
- CASE TEMPERATURE (°C)
- RESISTIVE OR INDUCTIVE LOAD

**FIG. 2- TYPICAL REVERSE CHARACTERISTICS**

- INSTANTANEOUS REVERSE CURRENT (μA)
- PERCENT OF RATED PEAK REVERSE VOLTAGE (%)
- T\_j=25°C
- T\_j=125°C

**FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

- PEAK FORWARD SURGE CURRENT (A)
- NUMBER OF CYCLES AT 60 Hz
- 8.3ms Single Half Sine Wave.

**FIG. 4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**

- INSTANTANEOUS FORWARD CURRENT (A)
- FORWARD VOLTAGE (V)

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PACKAGE OUTLINE DIMENSIONS

SOD123HE

<table>
<thead>
<tr>
<th>DIM.</th>
<th>Unit (mm)</th>
<th>Unit (inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1.65</td>
<td>0.065</td>
</tr>
<tr>
<td>B</td>
<td>2.60</td>
<td>0.102</td>
</tr>
<tr>
<td>C</td>
<td>0.85</td>
<td>0.033</td>
</tr>
<tr>
<td>D</td>
<td>0.75</td>
<td>0.030</td>
</tr>
<tr>
<td>E</td>
<td>0.10</td>
<td>0.004</td>
</tr>
<tr>
<td>F</td>
<td>0.55</td>
<td>0.022</td>
</tr>
<tr>
<td>G</td>
<td>0.35</td>
<td>0.014</td>
</tr>
<tr>
<td>H</td>
<td>1.90</td>
<td>0.075</td>
</tr>
<tr>
<td>I</td>
<td>1.35</td>
<td>0.053</td>
</tr>
<tr>
<td>J</td>
<td>0.95</td>
<td>0.037</td>
</tr>
<tr>
<td>K</td>
<td>3.50</td>
<td>0.138</td>
</tr>
<tr>
<td>L</td>
<td>0.35</td>
<td>0.014</td>
</tr>
</tbody>
</table>

SUGGESTED PAD LAYOUT

MARKING DIAGRAM

P / N = Marking Code
YW = Date Code
F = Factory Code

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