FEATURES
- Low power loss, high efficiency
- Ideal for automated placement
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

MECHANICAL DATA
Case: SOD-123W
Molding compound: UL flammability classification rating 94V-0
Moisture sensitivity level: level 1, per J-STD-020
Part no. with suffix "H" means AEC-Q101 qualified
Packing code with suffix "G" means green compound (halogen-free)
Terminal: Matte tin plated leads, solderable per J-STD-002
Meet JESD 201 class 2 whisker test
Polarity: Indicated by cathode band
Weight: 16 mg (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>SYMBOL</th>
<th>SS1H4LW</th>
<th>SS1H6LW</th>
<th>SS1H10LW</th>
<th>SS1H15LW</th>
<th>SS1H20LW</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marking Code</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum repetitive peak reverse voltage</td>
<td>V_{RPM}</td>
<td>40</td>
<td>60</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>V</td>
</tr>
<tr>
<td>Maximum RMS voltage</td>
<td>V_{RMS}</td>
<td>28</td>
<td>42</td>
<td>70</td>
<td>105</td>
<td>140</td>
<td>V</td>
</tr>
<tr>
<td>Maximum DC blocking voltage</td>
<td>V_{DC}</td>
<td>40</td>
<td>60</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>V</td>
</tr>
<tr>
<td>Maximum average forward rectified current</td>
<td>I_{(AV)}</td>
<td>1</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</td>
<td>I_{FSM}</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Maximum instantaneous forward voltage (Note 1) @ 1 A</td>
<td>V_{F}</td>
<td>0.65</td>
<td>0.70</td>
<td>0.80</td>
<td>0.85</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Maximum reverse current @ rated V_{R} T_J=25°C</td>
<td>I_{R}</td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.3</td>
<td>0.2</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum reverse current @ rated V_{R} T_J=125°C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typical thermal resistance</td>
<td>R_{JL}</td>
<td>25</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td>°C/W</td>
</tr>
<tr>
<td></td>
<td>R_{JUA}</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating junction temperature range</td>
<td>T_{J}</td>
<td>-55 to +175</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C</td>
</tr>
<tr>
<td>Storage temperature range</td>
<td>T_{STG}</td>
<td>-55 to +175</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C</td>
</tr>
</tbody>
</table>

Note 1: Pulse test with PW=300μs, 1% duty cycle

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ORDERING INFORMATION

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>PART NO. SUFFIX</th>
<th>PACKING CODE</th>
<th>PACKING CODE SUFFIX</th>
<th>PACKAGE</th>
<th>PACKING</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS1HxLW (Note 1, 2)</td>
<td>H</td>
<td>RV</td>
<td>G</td>
<td>SOD-123W</td>
<td>3,000 / 7” Plastic reel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10,000 / 13” Paper reel</td>
</tr>
</tbody>
</table>

Note 1: “x” defines voltage from 40V (SS1H4LW) to 200V (SS1H20LW)
Note 2: Whole series with green compound (halogen-free)

EXAMPLE

<table>
<thead>
<tr>
<th>EXAMPLE P/N</th>
<th>PART NO.</th>
<th>PART NO. SUFFIX</th>
<th>PACKING CODE</th>
<th>PACKING CODE SUFFIX</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS1H4LWHRVG</td>
<td>SS1H4LW</td>
<td>H</td>
<td>RV</td>
<td>G</td>
<td>AEC-Q101 qualified Green compound</td>
</tr>
</tbody>
</table>

RATINGS AND CHARACTERISTICS CURVES (T_A=25°C unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

FIG. 2 TYPICAL FORWARD CHARACTERISTICS

FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

FIG. 4 TYPICAL REVERSE CHARACTERISTICS

Resistive or inductive load

Pulse width=300μs 1% duty cycle

SS1H15LW
SS1H20LW
SS1H10LW
SS1H4LW
SS1H6LW

8.3ms single half sine wave

T_J=125°C
T_J=25°C

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FIG. 5 TYPICAL JUNCTION CAPACITANCE

<table>
<thead>
<tr>
<th>DIM.</th>
<th>Unit (mm)</th>
<th>Unit (inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>1.70</td>
<td>0.67</td>
</tr>
<tr>
<td>C</td>
<td>2.60</td>
<td>0.10</td>
</tr>
<tr>
<td>D</td>
<td>0.10</td>
<td>0.00</td>
</tr>
<tr>
<td>E</td>
<td>0.90</td>
<td>0.04</td>
</tr>
<tr>
<td>F</td>
<td>0.90</td>
<td>0.035</td>
</tr>
<tr>
<td>G</td>
<td>3.60</td>
<td>0.142</td>
</tr>
<tr>
<td>H</td>
<td>0.50</td>
<td>0.020</td>
</tr>
<tr>
<td>I</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

PACKAGE OUTLINE DIMENSIONS

SUGGESTED PAD LAYOUT

MARKING DIAGRAM

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

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