FEATURES

- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High forward surge current capability
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Moisture Sensitivity Level 1

MECHANICAL DATA

- Case: Molded plastic, SOD-123S
- Polarity: Shown above
- Terminals: Plated terminals, solderable per MIL-STD-750, Method 2026
- Epoxy: UL94-V0 rated flame retardant

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**SOD-123S PACKAGE**

Marking: Please See Table

Ex: SS14S

### ELECTRICAL CHARACTERISTICS

Maximum Ratings and Electrical Characteristics @TA=25℃ unless otherwise specified

**Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%**

#### RATING SYMBOL SS14S SS16S SS110S SS115S SS115S L SS120S UNITS

- **Max. Reverse Breakdown Voltage**
  - V_{RM} 40 60 100 150 150 200 Volts
- **Maximum RMS Volts**
  - V_{RMS} 28 42 70 105 105 140 Volts
- **Maximum DC Blocking Voltage**
  - V_{DC} 40 60 100 150 150 200 Volts
- **Maximum Average forward output rectified current**
  - I_{AV} 1.0 Amps
- **Peak forward surge current 8.3ms single sine-wave superimposed on rated load (JEDEC Method)**
  - I_{FSM} 30 Amps
- **Typical junction capacitance (NOTE 1)**
  - C_{J} 110 80 pF
- **Typical Thermal resistance**
  - R_{J-A} 45 °C/W
  - R_{J-SO} 200 °C
- **Operating Storage Temperature Range**
  - T_{j} -55 ~ +125 -55 ~ +150 °C
- **Storage Temperature Range**
  - T_{SO} -55 ~ +150 °C

**ELECTRICAL CHARACTERISTICS (All TA = 25℃ unless otherwise noted)**

#### CHARACTERISTICS SYMBOL SS14S SS16S SS110S SS115S SS115S L SS120S UNITS

- **Max. Forward Voltage(Condition:IF=1A)**
  - V_{F} 0.55 0.7 0.85 0.9 0.92 0.95 Volts
- **Max. Forward Voltage(Condition: IF=0.5A)**
  - V_{F} 0.45 0.55 0.75 0.82 0.85 0.87 Volts
- **Max. DC Reverse Current**
  - @T_{A} = 25℃ I_{R} 0.2 0.05 mAmols
  - @T_{A} = 100℃ 10 5 2 mAmols

**Note:** Measured at 1MHz and applied reverse voltage of 4.0V D.C.
FIG. 1- FORWARD CURRENT DERATING CURVE

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

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

FIG. 5-TYPICAL JUNCTION CAPACITANCE

2017.11 www.willas.com.tw Rev.HT08
Outline Drawing

SOD-123S

Dimensions in inches and (millimeters)

Rev.F
<table>
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<tr>
<th>Suggested Soldering Pad Layout</th>
<th>SOD-123S</th>
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<tbody>
<tr>
<td>.091 (2.31)</td>
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<tr>
<td>.054 (1.38)</td>
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<tr>
<td>.038 (0.97)</td>
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Dimensions in inches and (millimeters)
Ordering Information:

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<th>Device PN</th>
<th>Packing</th>
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</thead>
<tbody>
<tr>
<td>Part Number -T(1)H(2)-WS</td>
<td>Tape&amp;Reel: 3 Kpcs/Reel</td>
</tr>
</tbody>
</table>

Note: (1) Packing code, Tape & Reel Packing

(2) Halogen free product for packing code suffix “H”

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