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Kind regards,

Team Nexperia
FEATURES
- Low forward voltage
- Low diode capacitance
- Leadless ultra small plastic package
  (1.0 mm × 0.6 mm × 0.5 mm)
- Boardspace 1.17 mm² (approx. 10% of SOT23)
- Power dissipation comparable to SOT23.

APPLICATIONS
- UHF mixers
- Sampling circuits
- Modulators
- Phase detectors
- Mobile communication, digital (still) cameras, PDA’s and
  PCMCIA cards.

DESCRIPTION
An epitaxial Schottky barrier diode encapsulated in a
SOD882 leadless ultra small plastic package.
ESD sensitive device, observe handling precautions.

LIMITING VALUES
In accordance with the Absolute Maximum Rating System (IEC 60134).

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>PARAMETER</th>
<th>MIN.</th>
<th>MAX.</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_R$</td>
<td>continuous reverse voltage</td>
<td>–</td>
<td>15</td>
<td>V</td>
</tr>
<tr>
<td>$I_F$</td>
<td>continuous forward current</td>
<td>–</td>
<td>30</td>
<td>mA</td>
</tr>
<tr>
<td>$T_{stg}$</td>
<td>storage temperature</td>
<td>–65</td>
<td>+150</td>
<td>°C</td>
</tr>
<tr>
<td>$T_J$</td>
<td>junction temperature</td>
<td>–</td>
<td>150</td>
<td>°C</td>
</tr>
</tbody>
</table>

Marking code: S5.
The marking bar indicates the cathode.

Fig.1 Simplified outline (SOD882), pin configuration and symbol.
Schottky barrier diode 1PS10SB82

ELECTRICAL CHARACTERISTICS

$T_{\text{amb}} = 25$ °C unless otherwise specified.

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>PARAMETER</th>
<th>CONDITIONS</th>
<th>TYP.</th>
<th>MAX.</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_F$</td>
<td>forward voltage</td>
<td>see Fig.2</td>
<td>–</td>
<td>340</td>
<td>mV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$I_F = 1$ mA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$I_F = 30$ mA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$r_D$</td>
<td>differential diode forward resistance</td>
<td>$f = 1$ MHz; $I_F = 5$ mA; see Fig.5</td>
<td>12</td>
<td>–</td>
<td>Ω</td>
</tr>
<tr>
<td>$I_R$</td>
<td>continuous reverse current</td>
<td>$V_R = 1$ V; see Fig.3; note 1</td>
<td>–</td>
<td>0.2</td>
<td>μA</td>
</tr>
<tr>
<td>$C_d$</td>
<td>diode capacitance</td>
<td>$V_R = 0$ V; $f = 1$ MHz; see Fig.4</td>
<td>1</td>
<td>–</td>
<td>pF</td>
</tr>
</tbody>
</table>

Note

1. Pulse test: $t_p = 300$ μs; $\delta = 0.02$.

THERMAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>PARAMETER</th>
<th>CONDITIONS</th>
<th>VALUE</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>$R_{th,j-a}$</td>
<td>thermal resistance from junction to ambient</td>
<td>note 1</td>
<td>500</td>
<td>K/W</td>
</tr>
</tbody>
</table>

Note

1. Refer to SOD882 standard mounting conditions (footprint), FR4 with 60 μm copper strip line.

Soldering

Reflow soldering is the only recommended soldering method.
Fig. 2  Forward current as a function of forward voltage; typical values.

(1) $T_{\text{amb}} = 125^\circ \text{C}$.
(2) $T_{\text{amb}} = 85^\circ \text{C}$.
(3) $T_{\text{amb}} = 25^\circ \text{C}$.

Fig. 3  Reverse current as a function of reverse voltage; typical values.

(1) $T_{\text{amb}} = 125^\circ \text{C}$.
(2) $T_{\text{amb}} = 85^\circ \text{C}$.
(3) $T_{\text{amb}} = 25^\circ \text{C}$.

Fig. 4  Diode capacitance as a function of reverse voltage; typical values.

$f = 1 \text{ MHz}; T_{\text{amb}} = 25^\circ \text{C}$.

Fig. 5  Differential diode forward resistance as a function of forward current; typical values.

$f = 1 \text{ MHz}; T_{\text{amb}} = 25^\circ \text{C}$. 
PACKAGE OUTLINE

Leadless ultra small plastic package; 2 terminals; body 1.0 x 0.6 x 0.5 mm

DIMENSIONS (mm are the original dimensions)

<table>
<thead>
<tr>
<th>UNIT</th>
<th>A&lt;sup&gt;(1)&lt;/sup&gt;</th>
<th>A&lt;sub&gt;1&lt;/sub&gt; max.</th>
<th>b</th>
<th>D</th>
<th>E</th>
<th>e&lt;sub&gt;1&lt;/sub&gt;</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm</td>
<td>0.50</td>
<td>0.03</td>
<td>0.55</td>
<td>0.55</td>
<td>1.02</td>
<td>0.65</td>
<td>0.30</td>
</tr>
<tr>
<td></td>
<td>0.46</td>
<td>0.47</td>
<td></td>
<td>0.55</td>
<td>0.95</td>
<td></td>
<td>0.22</td>
</tr>
</tbody>
</table>

Notes
1. Including plating thickness
2. The marking bar indicates the cathode

OUTLINE VERSION
<table>
<thead>
<tr>
<th>IEC</th>
<th>JEDEC</th>
<th>JEITA</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOD882</td>
<td></td>
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</table>

REFERENCES

EUROPEAN PROJECTION

ISSUE DATE

03-04-15
03-04-17
DATA SHEET STATUS

<table>
<thead>
<tr>
<th>DOCUMENT STATUS(1)</th>
<th>PRODUCT STATUS(2)</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective data sheet</td>
<td>Development</td>
<td>This document contains data from the objective specification for product development.</td>
</tr>
<tr>
<td>Preliminary data sheet</td>
<td>Qualification</td>
<td>This document contains data from the preliminary specification.</td>
</tr>
<tr>
<td>Product data sheet</td>
<td>Production</td>
<td>This document contains the product specification.</td>
</tr>
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Notes

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Contact information

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