Surface Mount Schottky Rectifier

Reverse Voltage 20 to 60V
Forward Current 3.0A

Maximum Ratings and Thermal Characteristics (TA = 25°C unless otherwise noted)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>SS32</th>
<th>SS33</th>
<th>SS34</th>
<th>SS35</th>
<th>SS36</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device marking code</td>
<td></td>
<td>S2</td>
<td>S3</td>
<td>S4</td>
<td>S5</td>
<td>S6</td>
<td></td>
</tr>
<tr>
<td>Maximum repetitive peak reverse voltage</td>
<td>V_{RRM}</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>V</td>
</tr>
<tr>
<td>Maximum RMS voltage</td>
<td>V_{RMS}</td>
<td>14</td>
<td>21</td>
<td>28</td>
<td>35</td>
<td>42</td>
<td>V</td>
</tr>
<tr>
<td>Maximum DC blocking voltage</td>
<td>V_{DC}</td>
<td>20</td>
<td>30</td>
<td>50</td>
<td>60</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Maximum average forward rectified current at TL (See Fig. 1)</td>
<td>I_{F(AV)}</td>
<td>3.0</td>
<td></td>
<td></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>I_{FSM}</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Typical thermal resistance$^{(2)}$</td>
<td>R_{ΘJA}</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C/W</td>
</tr>
<tr>
<td></td>
<td>R_{ΘJL}</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C/W</td>
</tr>
<tr>
<td>Operating junction temperature range</td>
<td>T_{J}</td>
<td>−55 to +125</td>
<td></td>
<td>−55 to +150</td>
<td></td>
<td></td>
<td>°C</td>
</tr>
<tr>
<td>Storage temperature range</td>
<td>T_{STG}</td>
<td>−55 to +150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C</td>
</tr>
</tbody>
</table>

Electrical Characteristics (TA = 25°C unless otherwise noted)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
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<th>SS33</th>
<th>SS34</th>
<th>SS35</th>
<th>SS36</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum instantaneous forward voltage at 3.0A$^{(1)}$</td>
<td>V_{F}</td>
<td>0.50</td>
<td>0.75</td>
<td></td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Maximum DC reverse current at rated DC blocking voltage$^{(1)}$</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>TA=25°C</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td></td>
<td>TA=100°C</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mA</td>
</tr>
</tbody>
</table>

Notes:
1. Pulse test: 300µs pulse width, 1% duty cycle
2. P.C.B. mounted 0.55 x 0.55" (14 x 14mm) copper pad areas

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low profile surface mount package
- Built-in strain relief
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Guardring for overvoltage protection
- High temperature soldering guaranteed: 250°C/10 seconds at terminals

Mechanical Data

Case: JEDEC DO-214AB molded plastic body
Terminals: Solder plated, solderable per MIL-STD750, Method 2026
Polarity: Color band denotes cathode end
Weight: 0.007 oz., 0.25 g

Dimensions in inches and (millimeters)

Cathode Band

0.126 (3.20)
0.114 (2.90)

0.280 (7.11)
0.260 (6.60)

0.245 (6.22)
0.220 (5.59)

0.046 (1.17)
0.039 (0.99)

0.012 (0.305)
0.006 (0.152)

0.320 (8.13)
0.305 (7.75)

0.126 (3.20)
0.114 (2.90)

0.060 (1.52)
0.040 (1.02)

0.008 (0.203)
0.004 (0.102)

0.320 REF
0.280 (7.11)

0.185 MAX.
(4.69 MAX.)

0.121 MIN.
(3.07 MIN.)

0.060 MIN.
(1.52 MIN.)

0.320 REF

Mounting Pad Layout

Document Number 88751 www.vishay.com
1-Jul-02
SS32 thru SS36

Vishay Semiconductors
formerly General Semiconductor

Ratings and
Characteristic Curves (T_A = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

![Forward Current Derating Curve](image)

Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

At rated T_L
8.3ms single half sine-wave (JEDEC Method)

![Maximum Non-repetitive Peak Forward Surge Current](image)

Fig. 3 - Typical Instantaneous Forward Characteristics

T_J = 125°C
T_J = 150°C
T_J = 25°C
Pulse width = 300μs
1% Duty Cycle

![Typical Instantaneous Forward Characteristics](image)

Fig. 4 - Typical Reverse Current Characteristics

T_A = 125°C
T_A = 75°C
T_A = 25°C

![Typical Reverse Current Characteristics](image)

Fig. 5 - Typical Junction Capacitance

T_J = 25°C
f = 1.0 MHz
Vsig = 50mVp-p

![Typical Junction Capacitance](image)

Fig. 6 - Maximum Non-repetitive Peak Forward Surge Current

![Maximum Non-repetitive Peak Forward Surge Current](image)