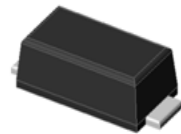


Schottky Barrier Rectifier in SOD-123FL

Features

- Schottky barrier diodes
- Low forward voltage drop
- High Junction Temperature
- Moisture sensitivity: level 1, per J-STD-020
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21 definition



Applications

For use of fast switching in RF module, lighting, cellular phone, portable device, power supplies and other consumer applications.

| Absolute Maximum Ratings | | | | |
|--|----------------|---------------|---------|------|
| Ratings at 25 °C, ambient temperature unless otherwise specified | | | | |
| Parameter | Symbol | SS215FL | SS220FL | Unit |
| Maximum repetitive peak reverse voltage | V_{RRM} | 150 | 200 | V |
| Maximum RMS voltage | V_{RMS} | 105 | 140 | V |
| Maximum DC blocking voltage | V_{DC} | 150 | 200 | V |
| Maximum average forward rectified current | $I_{F(AV)}$ | 2.0 | | A |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | I_{FSM} | 40 | | A |
| Operating junction and storage temperature range | T_J, T_{STG} | - 55 to + 150 | | °C |

| Electrical Characteristics | | | | | |
|---|----------------------------|--------|---------|---------|------|
| $(T_A = 25\text{ °C unless otherwise specified})$ | | | | | |
| Parameter | Test Conditions | Symbol | SS215FL | SS220FL | Unit |
| Maximum instantaneous forward voltage | $I_F=2A, T_A=25\text{ °C}$ | V_F | 0.85 | 0.95 | V |
| Maximum DC reverse current at rated DC blocking voltage | $T_A=25\text{ °C}$ | I_R | 0.1 | | mA |
| | $T_A=100\text{ °C}$ | | 2.0 | | |
| Typical junction capacitance | 4.0 V, 1 MHz | C_J | 80 | | pF |

| Thermal Characteristics | | | | |
|---|-----------------|---------|---------|------|
| Parameter | Symbol | SS215FL | SS220FL | Unit |
| Typical thermal resistance ⁽¹⁾ | $R_{\theta JA}$ | 95 | | °C/W |
| | $R_{\theta JC}$ | 45 | | |
| | $R_{\theta JI}$ | 20 | | |

Note1: Thermal resistance from junction to lead, mounted on PCB with 5.0×5.0mm copper pads

Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

Figure 1. Forward Current Derating Curve

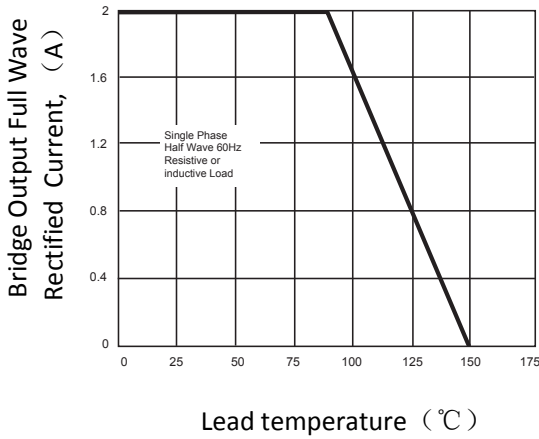


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

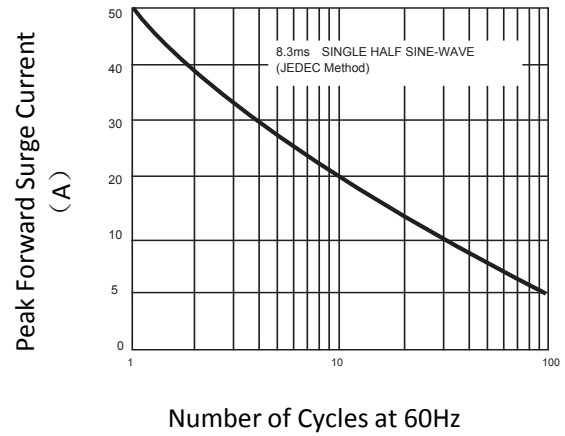


Figure 3. Typical Instantaneous Forward Characteristics

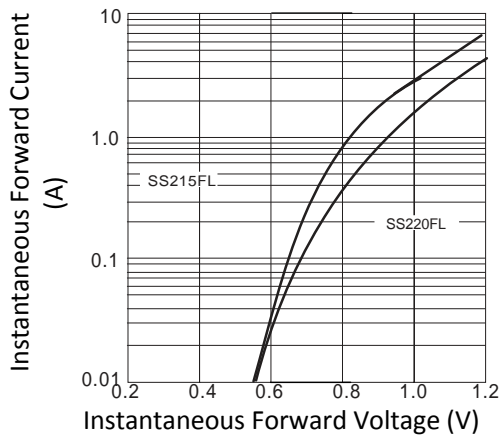


Figure 4. Typical Reverse Characteristics

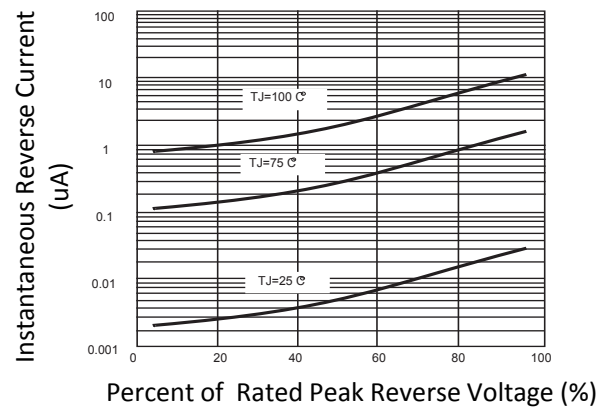
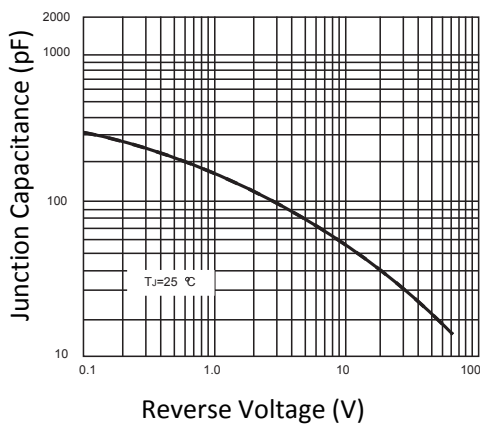
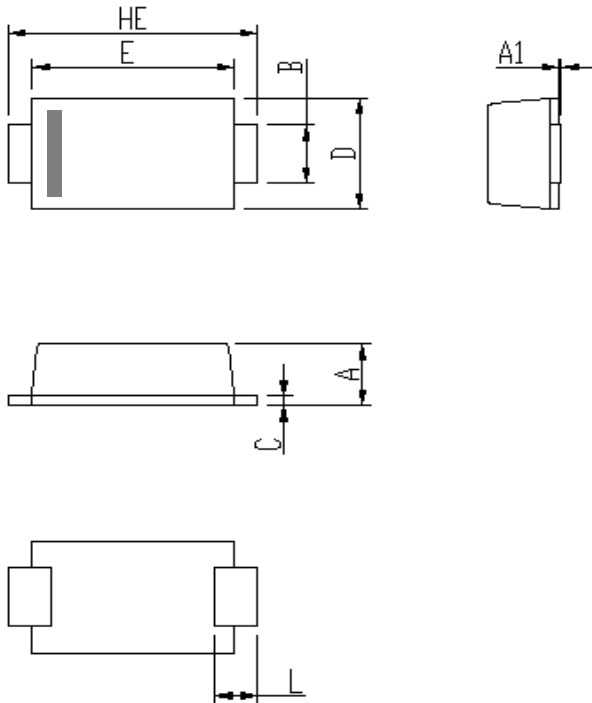


Figure 5. Typical Junction Capacitance

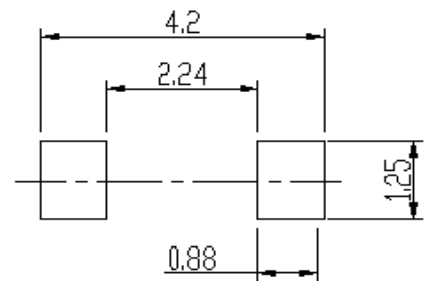


Package Dimensions



| DIM | Unit: mm | | Unit: inch | |
|-----|----------|------|------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.9 | 1.08 | 0.035 | 0.043 |
| A1 | 0 | 0.1 | 0.000 | 0.004 |
| B | 0.85 | 1.05 | 0.033 | 0.041 |
| C | 0.1 | 0.25 | 0.004 | 0.010 |
| D | 1.7 | 2 | 0.067 | 0.079 |
| E | 2.9 | 3.1 | 0.114 | 0.122 |
| L | 0.43 | 0.83 | 0.017 | 0.033 |
| HE | 3.5 | 3.9 | 0.138 | 0.154 |

Soldering footprint



Ordering information

| Order code | Package | Packaging option | Base quantity | Packaging specification |
|------------|-----------|------------------|----------------|-------------------------|
| SS2xxFL | SOD-123FL | Tape and reel | 3000pcs / reel | EIA STD RS-481 |

Revision history

| Date | Revision | Changes |
|-------------|----------|-----------------|
| 23-May-2020 | 1.0 | Initial release |

CAUTION / WARNING

Information in this document is believed to be accurate and reliable. However, RDSEMI does not give any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and shall have no liability for the consequences of use of such information.

Users should independently evaluate the suitability of and test each product selected for their own applications, and RDSEMI assumes no liability what's ever relating to the choice, selection or use of the RDSEMI products and services described herein.

RDSEMI reserves the right to change or update, without notice, any information contained in this publication; to change, without notice, the design, construction, processing, or specification of any product; and to discontinue or limit production or distribution of any product.

Information in this document supersedes and replaces all information previously supplied.

Products are not designed, authorized or warranted to be suitable for use in medical, military, aircraft, space or life support equipment, nor in applications where failure or malfunction of an RDSEMI product can reasonably be expected to result in personal injury, death or severe property or environmental damage. RDSEMI accepts no liability for inclusion and/or use of RDSEMI products in such equipment or applications and therefore such inclusion and/or use is at the customer's own risk.

This document as well as the item(s) described herein may be subject to export control regulations. Export might require a prior authorization from national authorities.

Resale of RDSEMI products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by RDSEMI for the RDSEMI product or service described herein and shall not create or extend in any manner whatsoever, any liability of RDSEMI.

RDSEMI expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. RDSEMI only obligations are those in the RDSEMI Standard Terms and Conditions of Sale and in no case will RDSEMI be liable for any incidental, indirect, or consequential damages arising from the sale, resale, use, or misuse of its products.

Specifications are subject to change without notice
© Copyright 2020, DaJing Semiconductor
All rights reserved