

Surface Mount Schottky Barrier Rectifier



DO-214AC (SMA)

FEATURES

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- Low forward voltage drop
- High surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Solder dip 260 °C, 40 s
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC


RoHS
 COMPLIANT

PRIMARY CHARACTERISTICS

| | |
|------------------------|--------------|
| $I_{F(AV)}$ | 2.0 A |
| V_{RRM} | 20 V to 60 V |
| I_{FSM} | 40 A |
| V_F at $I_F = 2.0$ A | 0.53 V |
| T_J max. | 150 °C |

TYPICAL APPLICATIONS

For use in low voltage, high frequency inverters, freewheeling, dc-to-dc converters, and polarity protection applications.

MECHANICAL DATA

Case: DO-214AC (SMA)

Epoxy meets UL 94 V-0 flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 suffix for commercial grade, meets JESD 201 class 1A whisker test, HE3 suffix for high reliability grade (AEC-Q101 qualified), meets JESD 201 class 2 whisker test

Polarity: Color band denotes the cathode end

MAXIMUM RATINGS ($T_A = 25$ °C unless otherwise noted)

| PARAMETER | SYMBOL | SS25S | SS26S | UNIT |
|--|----------------|---------------|-------|------|
| Device marking code | | 25S | 26S | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 60 | V |
| Maximum average forward rectified current (Fig. 1) | $I_{F(AV)}$ | 2.0 | | A |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | I_{FSM} | 40 | | A |
| Operating junction temperature range | T_J, T_{STG} | - 55 to + 150 | | °C |

SS25S & SS26S



Vishay General Semiconductor

| ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted) | | | | | | |
|--|------------------------|---|----------------|----------|-----------|----------|
| PARAMETER | TEST CONDITIONS | | SYMBOL | TYP. | MAX. | UNIT |
| Maximum instantaneous forward voltage ⁽¹⁾ | I _F = 1.0 A | T _A = 25 °C | V _F | 0.51 | - | V |
| | I _F = 2.0 A | | | 0.60 | 0.75 | |
| | I _F = 1.0 A | T _A = 125 °C | | 0.43 | - | |
| | I _F = 2.0 A | | | 0.53 | 0.62 | |
| Maximum reverse current ⁽²⁾ | Rated V _R | T _A = 25 °C T _A = 125 °C | I _R | - 1.5 | 200 10 | μA mA |

Notes:

- (1) Pulse test: 300 μs pulse width, 1 % duty cycle
- (2) Pulse test: Pulse width ≤ 40 ms

| THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted) | | | | |
|---|--------------------------------------|-------|-----------|------|
| PARAMETER | SYMBOL | SS25S | SS26S | UNIT |
| Typical thermal resistance ⁽¹⁾ | R _{θJA} R _{θJL} | | 100 28 | °C/W |

Note:

- (1) P.C.B. mounted with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

| ORDERING INFORMATION (Example) | | | | |
|--------------------------------|-----------------|------------------------|---------------|------------------------------------|
| PREFERRED P/N | UNIT WEIGHT (g) | PREFERRED PACKAGE CODE | BASE QUANTITY | DELIVERY MODE |
| SS26S-E3/61T | 0.064 | 61T | 1800 | 7" diameter plastic tape and reel |
| SS26S-E3/5AT | 0.064 | 5AT | 7500 | 13" diameter plastic tape and reel |
| SS26SHE3/61T ⁽¹⁾ | 0.064 | 61T | 1800 | 7" diameter plastic tape and reel |
| SS26SHE3/5AT ⁽¹⁾ | 0.064 | 5AT | 7500 | 13" diameter plastic tape and reel |

Note:

- (1) AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

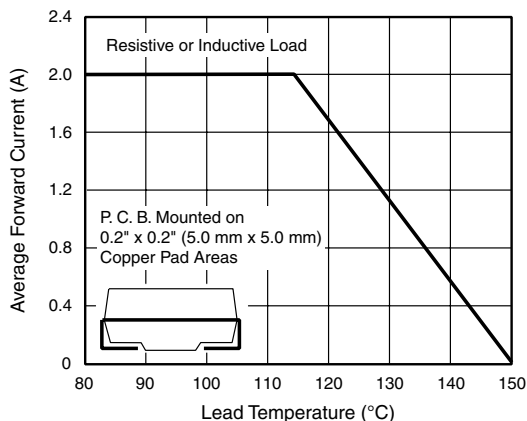


Figure 1. Forward Current Derating Curve

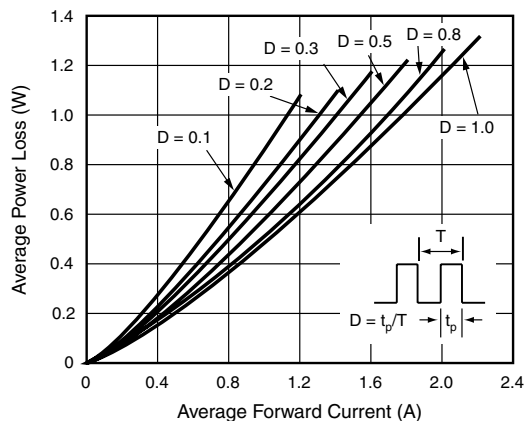


Figure 2. Forward Power Loss Characteristics

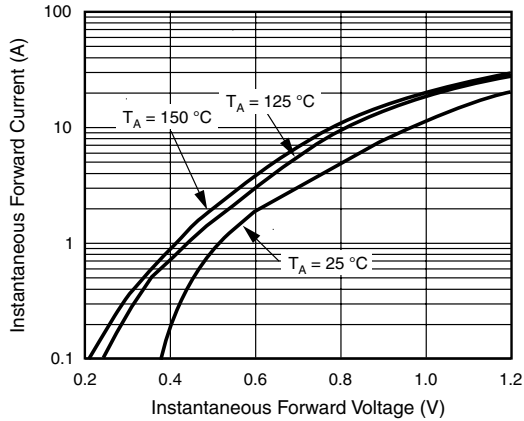


Figure 3. Typical Instantaneous Forward Characteristics

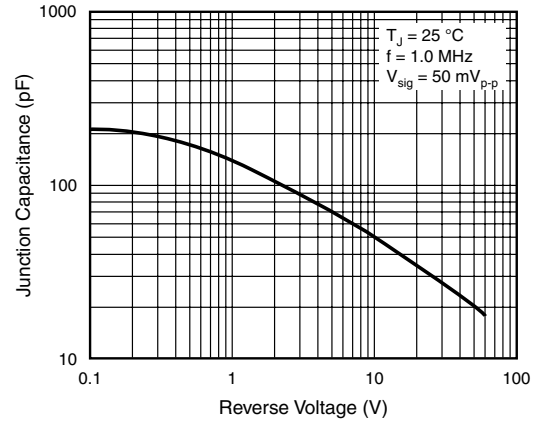


Figure 5. Typical Junction Capacitance

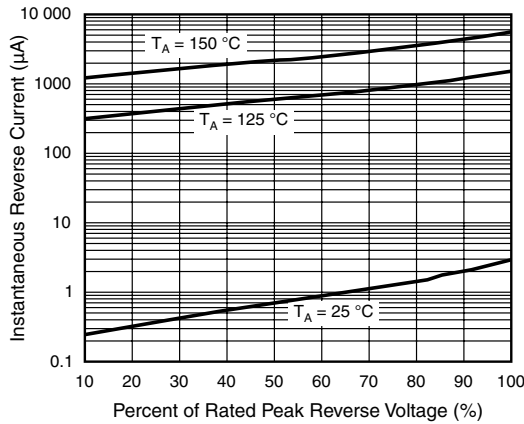
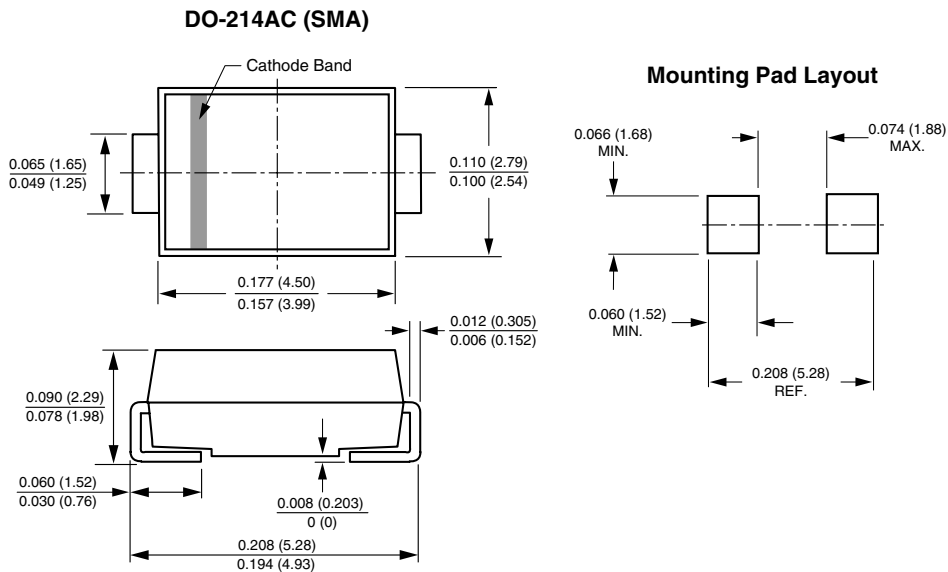


Figure 4. Typical Reverse Characteristics

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.