

## Surface-Mount Schottky Barrier Rectifier


**SMA (DO-214AC)**

 Cathode  Anode

**RoHS**  
 COMPLIANT  
 HALOGEN  
**FREE**

### 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
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

### TYPICAL APPLICATIONS

For use in low voltage, high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

### MECHANICAL DATA

**Case:** SMA (DO-214AC)

Molding compound meets UL 94 V-0 flammability rating  
 Base P/N-M3 - halogen-free, RoHS compliant, and commercial grade

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

M3 suffix meets JESD 201 class 2 whisker test

**Polarity:** color band denotes the cathode end

### LINKS TO ADDITIONAL RESOURCES


[3D Models](#)

| PRIMARY CHARACTERISTICS |                |
|-------------------------|----------------|
| $I_{F(AV)}$             | 2.0 A          |
| $V_{RRM}$               | 50 V, 60 V     |
| $I_{FSM}$               | 40 A           |
| $V_F$ at $I_F = 2.0$ A  | 0.53 V         |
| $T_J$ max.              | 150 °C         |
| Package                 | SMA (DO-214AC) |
| Circuit configuration   | Single         |

| MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)                            |                |             |          |      |
|--|----------------|-------------|----------|------|
| PARAMETER  | SYMBOL         | SS25S-M3    | SS26S-M3 | 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   |

| ELECTRICAL CHARACTERISTICS ( $T_A = 25$ °C unless otherwise noted) |                 |             |                |      |         |               |
|--|-----------------|-------------|----------------|------|---------|---------------|
| PARAMETER  | TEST CONDITIONS | SYMBOL      | TYP.           | MAX. | UNIT    |               |
| Maximum instantaneous forward voltage                              | $I_F = 1.0$ A   | $V_F^{(1)}$ | 0.51           | -    | V       |               |
|  |                 |             |                |      |         | $T_A = 25$ °C |
|  | $I_F = 2.0$ A   |             | $T_A = 125$ °C | 0.43 |         |               |
|  |                 |             |                |      |         | $I_F = 2.0$ A |
| Maximum reverse current  | Rated $V_R$     | $I_R^{(2)}$ | -              | 200  | $\mu$ A |               |
|  |                 |             | $T_A = 125$ °C | 1.5  | 10      | mA            |

### Notes

- (1) Pulse test: 300  $\mu$ s pulse width, 1 % duty cycle  
 (2) Pulse test: Pulse width  $\leq$  40 ms

| <b>THERMAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted) |                                |       |       |                    |
|---|--------------------------------|-------|-------|--------------------|
| PARAMETER   | SYMBOL                         | SS25S | SS26S | UNIT               |
| Typical thermal resistance  | $R_{\theta JA}$ <sup>(1)</sup> | 100   |       | $^\circ\text{C/W}$ |
|   | $R_{\theta JL}$ <sup>(1)</sup> | 28    |       |                    |

**Note**

<sup>(1)</sup> PCB mounted with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

| <b>ORDERING INFORMATION</b> (Example) |                 |                        |               |                                    |
|---------------------------------------|-----------------|------------------------|---------------|------------------------------------|
| PREFERRED P/N                         | UNIT WEIGHT (g) | PREFERRED PACKAGE CODE | BASE QUANTITY | DELIVERY MODE                      |
| SS26S-M3/61T                          | 0.064           | 61T                    | 1800          | 7" diameter plastic tape and reel  |
| SS26S-M3/5AT                          | 0.064           | 5AT                    | 7500          | 13" diameter plastic tape and reel |

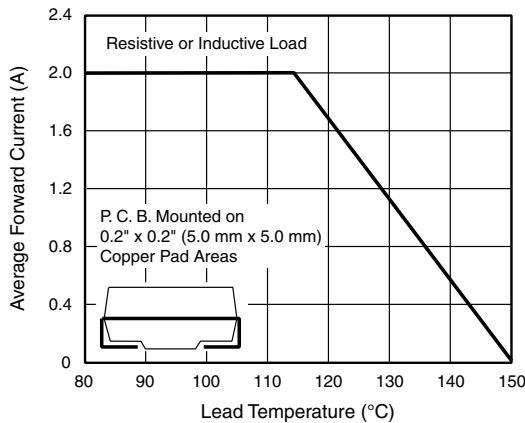
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)


Fig. 1 - Forward Current Derating Curve

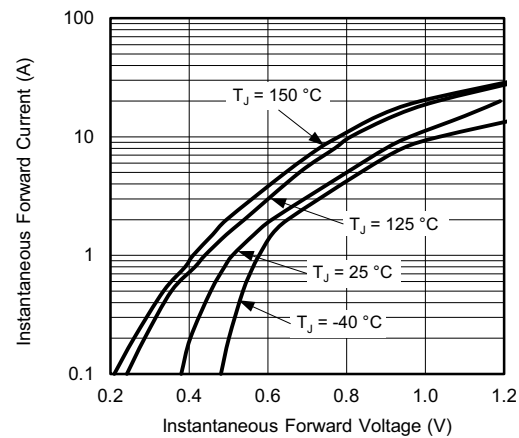


Fig. 3 - Typical Instantaneous Forward Characteristics

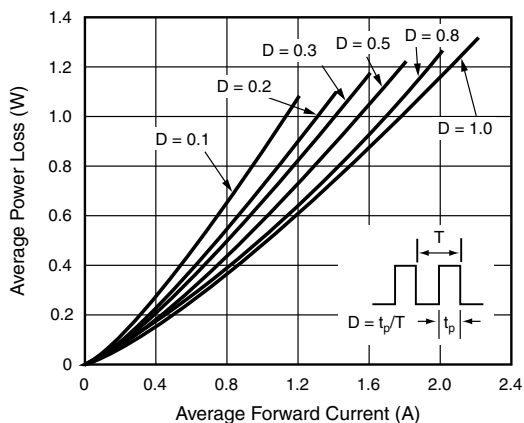


Fig. 2 - Forward Power Loss Characteristics

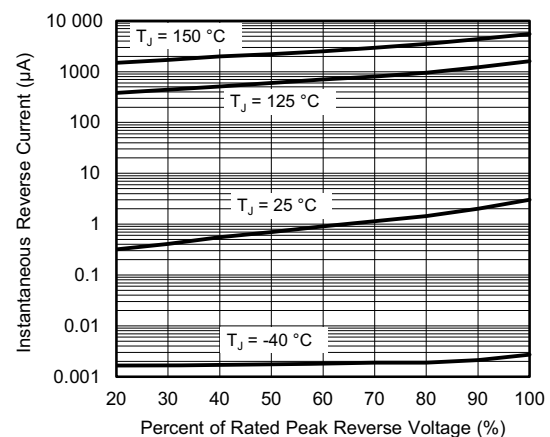


Fig. 4 - Typical Reverse Characteristics

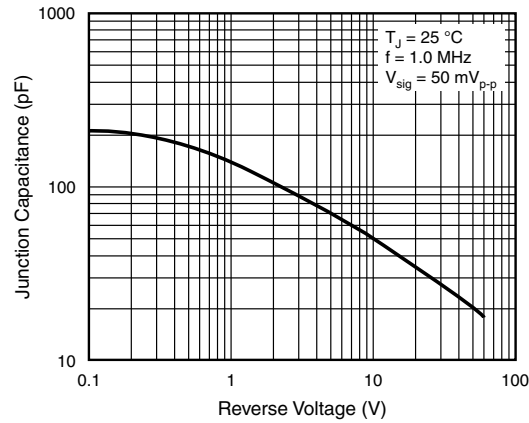
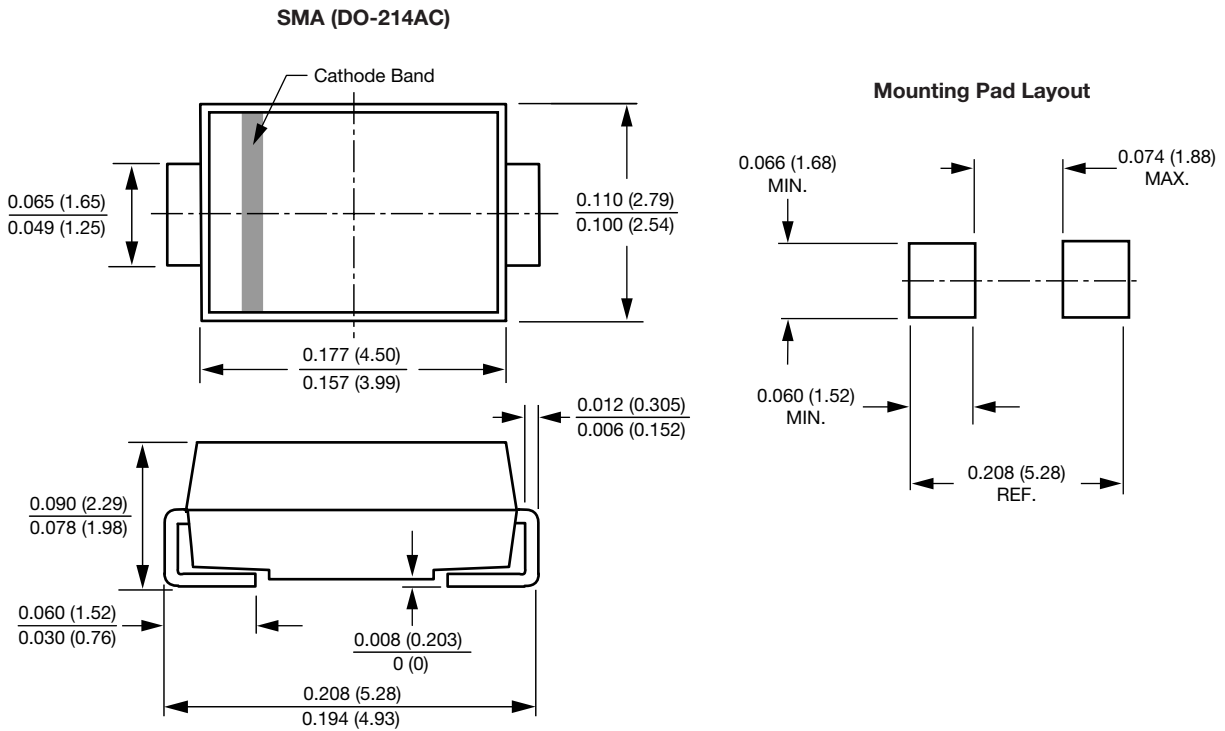


Fig. 5 - Typical Junction Capacitance

**PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)





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