

# Surface-Mount Schottky Barrier Rectifier



SMA (DO-214AC)

Cathode  Anode

## LINKS TO ADDITIONAL RESOURCES



| 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 configurations  | Single         |

## 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
- AEC-Q101 qualified available
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT

## 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-E3 - RoHS-compliant, commercial grade  
Base P/NHE3\_X - RoHS-compliant and AEC-Q101 qualified ("X" denotes revision code e.g. A, B, ....)

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

E3 suffix meets JESD 201 class 2 whisker test, HE3 suffix 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   |

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

| PARAMETER                                            | TEST CONDITIONS      | SYMBOL | TYP. | MAX. | UNIT          |
|------------------------------------------------------|----------------------|--------|------|------|---------------|
| Maximum instantaneous forward voltage <sup>(1)</sup> | $I_F = 1.0\text{ A}$ | $V_F$  | 0.51 | -    | V             |
|                                                      | $I_F = 2.0\text{ A}$ |        | 0.60 | 0.75 |               |
|                                                      | $I_F = 1.0\text{ A}$ |        | 0.43 | -    |               |
|                                                      | $I_F = 2.0\text{ A}$ |        | 0.53 | 0.62 |               |
| Maximum reverse current <sup>(2)</sup>               | Rated $V_R$          | $I_R$  | -    | 200  | $\mu\text{A}$ |
|                                                      |                      |        | 1.5  | 10   | mA            |

**Notes**<sup>(1)</sup> Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle<sup>(2)</sup> Pulse test: Pulse width  $\leq 40\text{ ms}$ **THERMAL CHARACTERISTICS** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

| PARAMETER                                 | SYMBOL           | SS25S | SS26S | UNIT |
|-------------------------------------------|------------------|-------|-------|------|
| Typical thermal resistance <sup>(1)</sup> | R <sub>θJA</sub> | 100   |       | °C/W |
|                                           | R <sub>θJL</sub> | 28    |       |      |

**Note**<sup>(1)</sup> PCB 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_B/H <sup>(1)</sup> | 0.064           | H                      | 1800          | 7" diameter plastic tape and reel  |
| SS26SHE3_B/I <sup>(1)</sup> | 0.064           | I                      | 7500          | 13" diameter plastic tape and reel |

**Note**<sup>(1)</sup> AEC-Q101 qualified

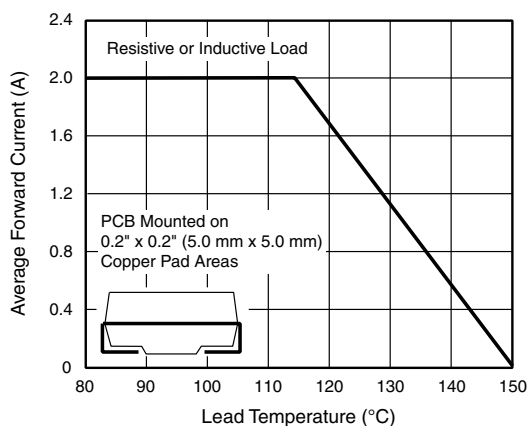
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)


Fig. 1 - Forward Current Derating Curve

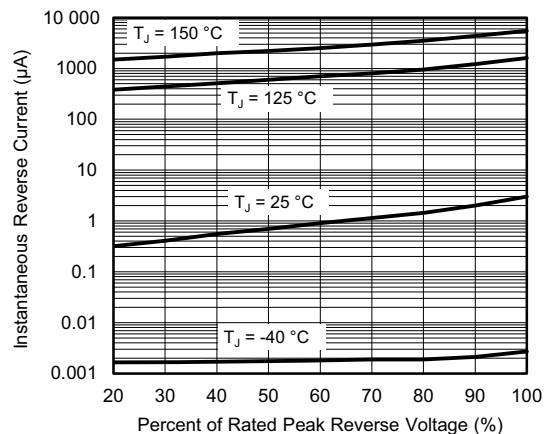


Fig. 4 - Typical Reverse Characteristics

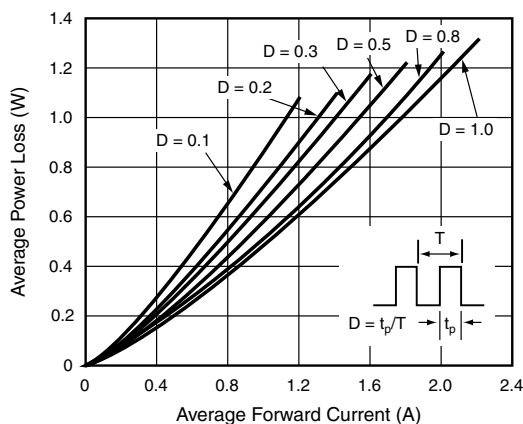


Fig. 2 - Forward Power Loss Characteristics

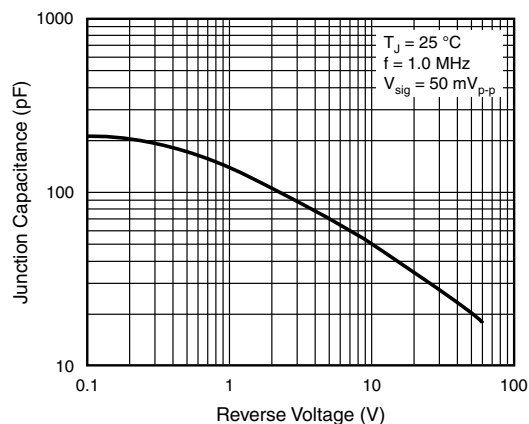


Fig. 5 - Typical Junction Capacitance

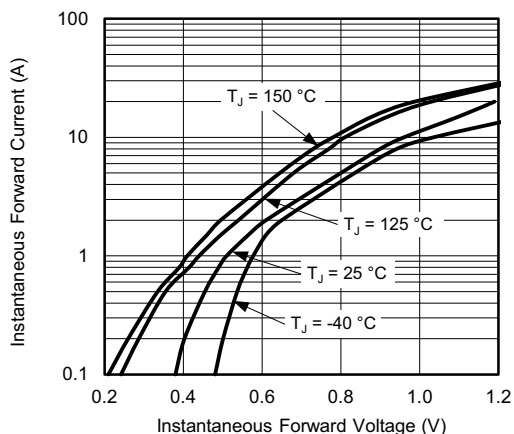
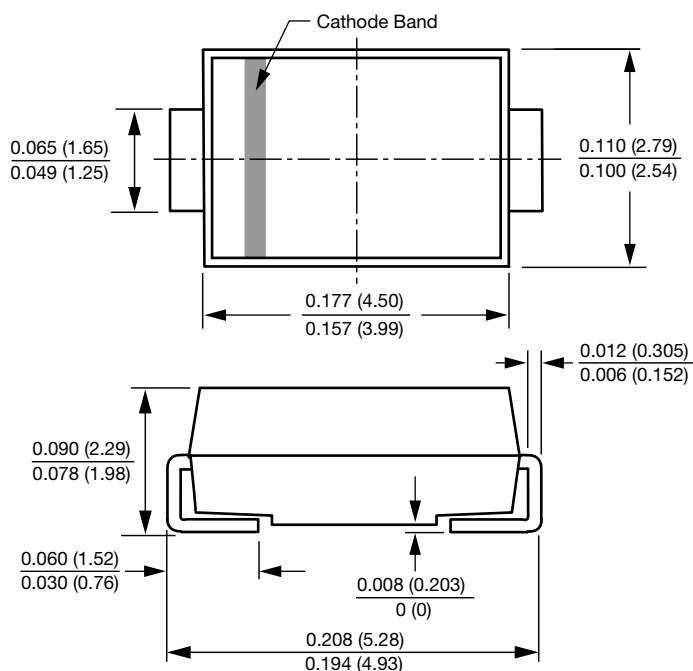


Fig. 3 - Typical Instantaneous Forward Characteristics

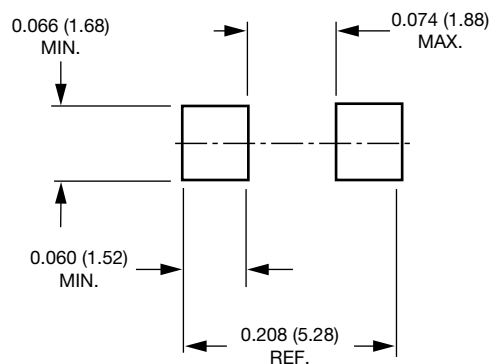


**PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)

**SMA (DO-214AC)**



**Mounting Pad Layout**





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