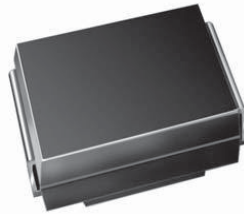


# High Current Density Surface Mount Schottky Rectifier



DO-214AA (SMB)

## FEATURES

- Guardring for overvoltage protection
- Low profile package
- Ideal for automated placement
- Low power loss, high efficiency
- Very 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)


**RoHS**  
COMPLIANT

## TYPICAL APPLICATIONS

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

## MECHANICAL DATA

**Case:** DO-214AA

Molding compound meets UL 94V-0 flammability rating  
Base P/N-E3 - RoHS-compliant, commercial grade

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

E3 suffix meets JESD 201 class 1A whisker test

**Polarity:** Color band denotes cathode end

| PRIMARY CHARACTERISTICS |        |
|-------------------------|--------|
| $I_{F(AV)}$             | 3.0 A  |
| $V_{RRM}$               | 40 V   |
| $I_{FSM}$               | 100 A  |
| $V_F$ at $I_F = 3.0 A$  | 0.34 V |
| $T_J$ max.              | 150 °C |

| MAXIMUM RATINGS ( $T_A = 25\text{ °C}$ unless otherwise noted)                     |                |               |            |
|--|----------------|---------------|------------|
| PARAMETER  | SYMBOL         | B340LB        | UNIT       |
| Device marking code  |                | B34           |            |
| Maximum repetitive peak reverse voltage  | $V_{RRM}$      | 40            | V          |
| Maximum RMS voltage  | $V_{RMS}$      | 28            |            |
| Maximum DC blocking voltage  | $V_{DC}$       | 40            |            |
| Maximum average forward rectified current at $T_L$ (Fig.1)                         | $I_{F(AV)}$    | 3.0           | A          |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | $I_{FSM}$      | 100           |            |
| Voltage rate of change (rated $V_R$ )  | dV/dt          | 10 000        | V/ $\mu$ s |
| Operating junction and storage temperature range                                   | $T_J, T_{STG}$ | - 65 to + 150 | °C         |

| <b>ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted) |             |                 |                                   |      |      |    |
|--|-------------|-----------------|-----------------------------------|------|------|----|
| PARAMETER  | SYMBOL      | TEST CONDITIONS | TYP.                              | MAX. | UNIT |    |
| Maximum instantaneous forward voltage  | $V_F^{(1)}$ | 3.0 A           | $T_J = 25\text{ }^\circ\text{C}$  | 0.43 | 0.45 | V  |
|  |             |                 | $T_J = 125\text{ }^\circ\text{C}$ | 0.34 | 0.38 |    |
| Maximum reverse current at   | $I_R^{(2)}$ | Rated $V_R$     | $T_J = 25\text{ }^\circ\text{C}$  | -    | 0.4  | mA |
|  |             |                 | $T_J = 125\text{ }^\circ\text{C}$ | 26   | 40   |    |

**Note**

 (1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle

 (2) Pulse test: Pulse width  $\leq 40\text{ ms}$ 

| <b>THERMAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted) |                 |        |                    |
|---|-----------------|--------|--------------------|
| PARAMETER   | SYMBOL          | B340LB | UNIT               |
| Typical thermal resistance  | $R_{\theta JA}$ | 70     | $^\circ\text{C/W}$ |
|   | $R_{\theta JL}$ | 25     |                    |

| <b>ORDERING INFORMATION</b> (Example) |               |                 |              |               |                            |
|---------------------------------------|---------------|-----------------|--------------|---------------|----------------------------|
| PACKAGE                               | PREFERRED P/N | UNIT WEIGHT (g) | PACKAGE CODE | BASE QUANTITY | DELIVERY MODE              |
| DO-214AA (SMB)                        | B340LB-E3/52T | 0.096           | 52T          | 750           | 7" diameter tape and reel  |
| DO-214AA (SMB)                        | B340LB-E3/5BT | 0.096           | 5BT          | 3200          | 13" diameter tape and reel |

**RATINGS AND CHARACTERISTICS CURVES**

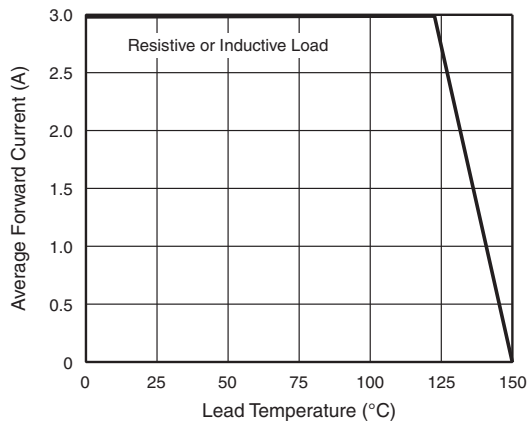
 ( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)


Fig. 1 - Forward Current Derating Curve

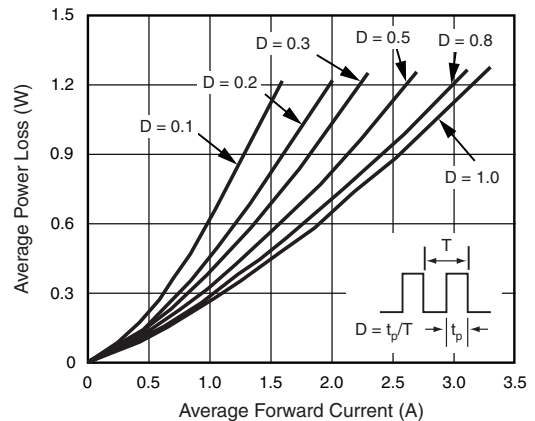


Fig. 2 - Forward Power Loss Characteristics

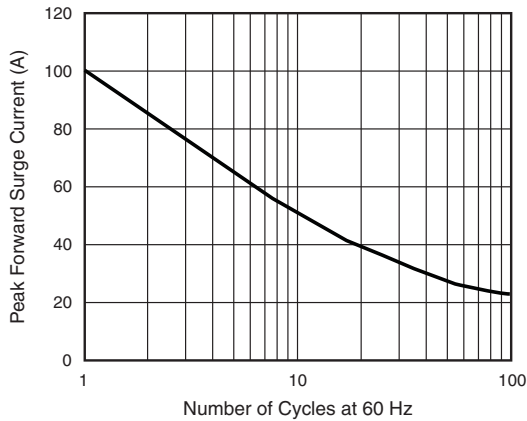


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current

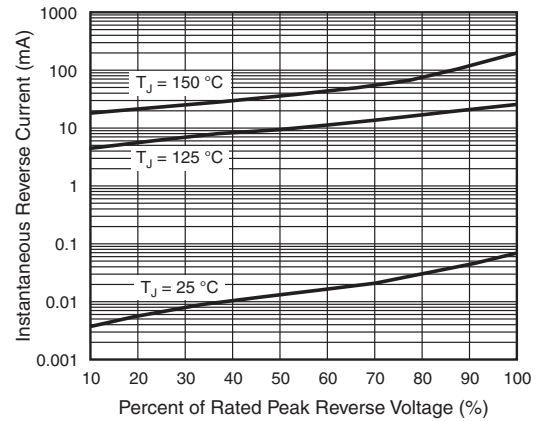


Fig. 5 - Typical Reverse Characteristics

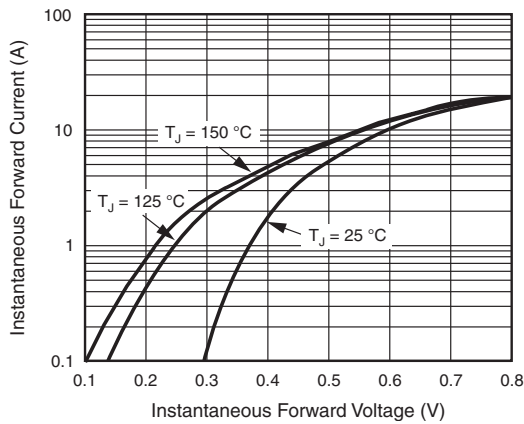


Fig. 4 - Typical Instantaneous Forward Characteristics

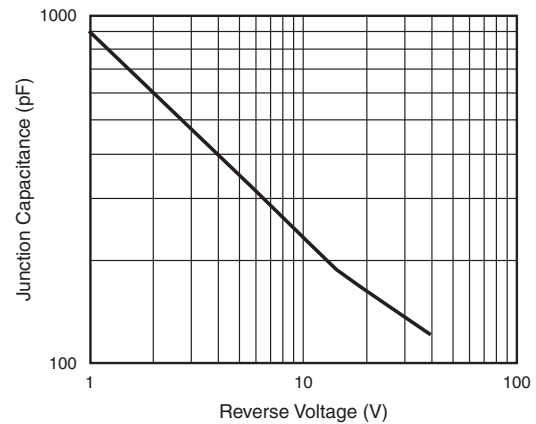
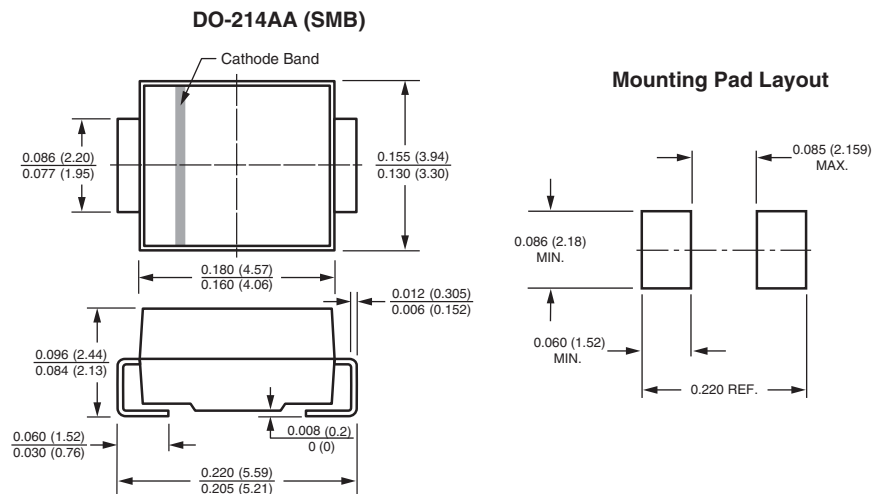


Fig. 6 - Typical Junction Capacitance

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





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- Техническая поддержка проекта;
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