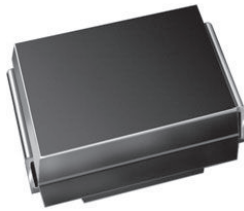


Surface-Mount Schottky Rectifier


SMB (DO-214AA)

Cathode Anode

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


RoHS
COMPLIANT

LINKS TO ADDITIONAL RESOURCES



PRIMARY CHARACTERISTICS

| | |
|------------------------|----------------|
| $I_{F(AV)}$ | 3.0 A |
| V_{RRM} | 50 V, 60 V |
| I_{FSM} | 60 A |
| V_F at $I_F = 3.0$ A | 0.51 V |
| T_J max. | 150 °C |
| Package | SMB (DO-214AA) |
| Circuit configurations | Single |

TYPICAL APPLICATIONS

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

MECHANICAL DATA

Case: SMB (DO-214AA)

Molding compound meets UL 94 V-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 2 whisker test

Polarity: color band denotes the cathode end

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

| PARAMETER | SYMBOL | B350B | B360B | UNIT |
|--|----------------|-------------|-------|------|
| Device marking code | | B35 | B36 | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 60 | V |
| 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} | 60 | | A |
| Operating junction and storage 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 | $I_F = 3.0$ A | $T_J = 25$ °C | V_F ⁽¹⁾ | 0.58 | 0.66 | V |
| | | $T_J = 125$ °C | | 0.51 | 0.59 | |
| Maximum reverse current | Rated V_R | $T_J = 25$ °C | I_R ⁽²⁾ | - | 100 | µA |
| | | $T_J = 125$ °C | | 3 | 10 | mA |

Notes

⁽¹⁾ Pulse test: 300 µs pulse width, 1 % duty cycle

⁽²⁾ Pulse test: Pulse width ≤ 40 ms



| THERMAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted) | | | | |
|--|---------------------|-------|-------|--------------------|
| PARAMETER | SYMBOL | B350B | B360B | UNIT |
| Typical thermal resistance | $R_{\theta JA}$ (1) | 70 | | $^\circ\text{C/W}$ |
| | $R_{\theta JM}$ (1) | 15 | | |

Note

(1) PCB mounted with 0.4" x 0.4" (10 mm x 10 mm) copper pad areas, thermal resistance $R_{\theta JA}$ - junction to ambient, $R_{\theta JM}$ - junction to mount

| ORDERING INFORMATION (Example) | | | | |
|--------------------------------|-----------------|------------------------|---------------|------------------------------------|
| PREFERRED P/N | UNIT WEIGHT (g) | PREFERRED PACKAGE CODE | BASE QUANTITY | DELIVERY MODE |
| B360B-E3/52T | 0.096 | 52T | 750 | 7" diameter plastic tape and reel |
| B360B-E3/5BT | 0.096 | 5BT | 3200 | 13" diameter plastic tape and reel |

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

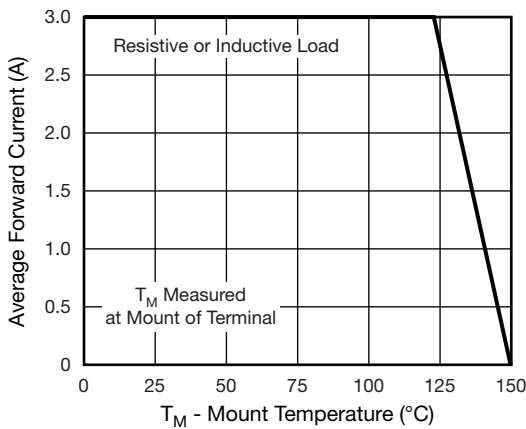


Fig. 1 - Maximum Forward Current Derating Curve

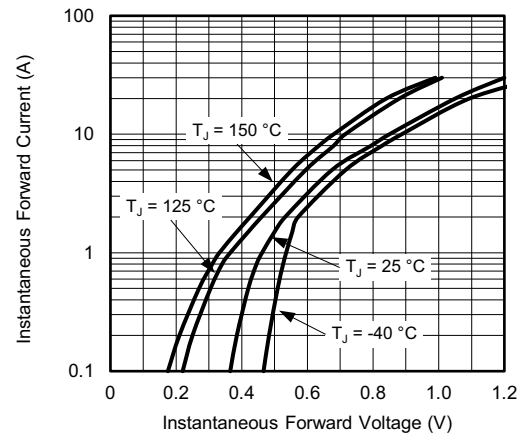


Fig. 3 - Typical Instantaneous Forward Characteristics

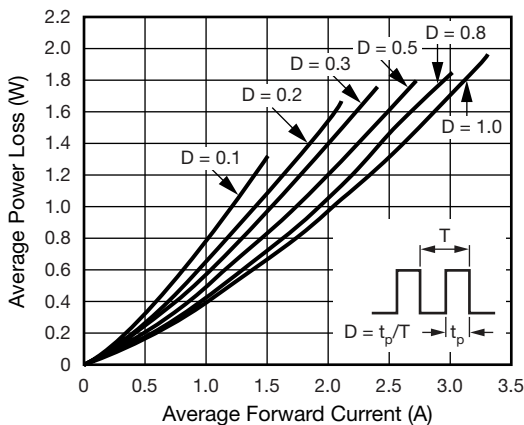


Fig. 2 - Forward Power Loss Characteristics

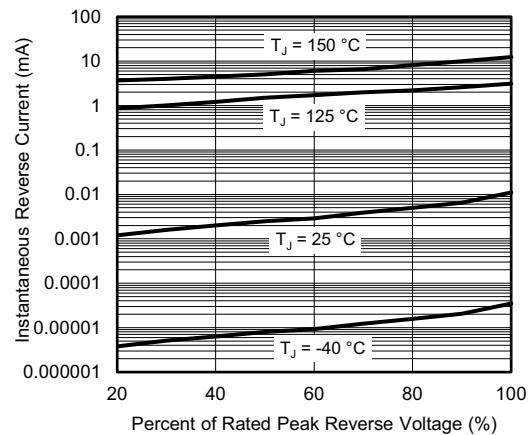


Fig. 4 - Typical Reverse Leakage Characteristics

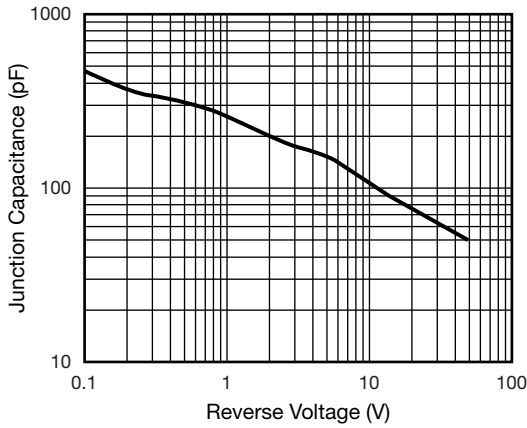
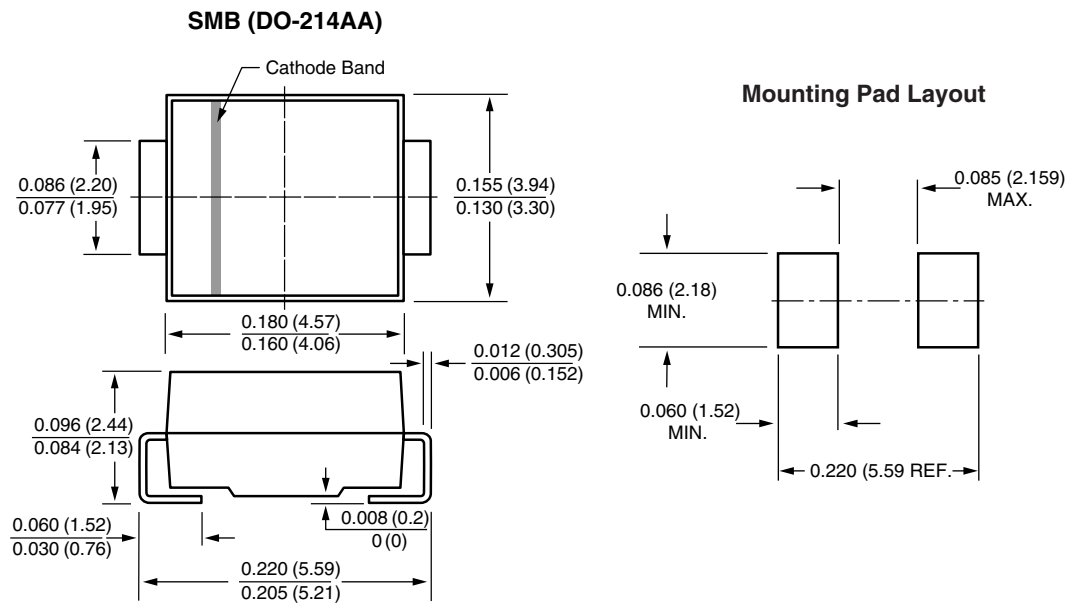


Fig. 5 - Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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