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Vishay General Semiconductor

Surface-Mount Schottky Barrier Rectifier



SMA (DO-214AC)

Cathode O Anode

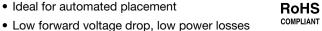
LINKS TO ADDITIONAL RESOURCES



| PRIMARY CHARACTERISTICS | | | | |
|--|----------------|--|--|--|
| I _{F(AV)} | 3.0 A | | | |
| V_{RRM} | 50 V, 60 V | | | |
| I _{FSM} | 50 A | | | |
| V _F at I _F = 3.0 A | 0.55 V | | | |
| T _J max. | 150 °C | | | |
| Package | SMA (DO-214AC) | | | |
| Circuit configurations | Single | | | |

FEATURES

- Low profile package
- · Ideal for automated placement



- High efficiency
- · 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

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

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 | B350A | B360A | UNIT | |
| Device marking code | | B35 | B36 | | |
| Maximum repetitive peak reverse voltage | V _{RRM} 50 | | 60 | V | |
| Maximum average forward rectified current (fig. 1) | I _{F(AV)} | 3.0 | | Α | |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 50 | | А | |
| Voltage rate of change (rated V _R) | dV/dt | 10 000 | | V/µs | |
| 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 CO | TEST CONDITIONS | | TYP. | MAX. | UNIT |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | 0.64 | 0.72 | V | | | |
| | I _F = 3.0 A | T _A = 125 °C | V F ('') | 0.55 | 0.62 | V |
| Maximum reverse current | Rated V _R | T _A = 25 °C | I _R ⁽²⁾ | - | 200 | μA |
| | nateu v _R | T _A = 125 °C | | 2.9 | 10 | mA |
| Typical junction capacitance | 4.0 V, 1 MH | 4.0 V, 1 MHz | | 145 | - | pF |

Notes

 $^{(1)}$ Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms



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| THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted) | | | | | |
|---|----------------------|-------------|--|------|--|
| PARAMETER | SYMBOL | B350A B360A | | UNIT | |
| Typical thermal resistance | R _{0JA} (1) | 72 | | °C/W | |
| | R _{eJL} (1) | 12 | | | |

Note

 $^{^{(1)}}$ PCB. mounted with 0.32" x 0.32" (8 mm x 8 mm) copper pad areas. T_L measured at lead terminal mount.

| ORDERING INFORMATION (Example) | | | | | | |
|--------------------------------|-----------------|------------------------|---------------|------------------------------------|--|--|
| PREFERRED P/N | UNIT WEIGHT (g) | PREFERRED PACKAGE CODE | BASE QUANTITY | DELIVERY MODE | | |
| B360A-E3/61T | 0.064 | 61T | 1800 | 7" diameter plastic tape and reel | | |
| B360A-E3/5AT | 0.064 | 5AT | 7500 | 13" diameter plastic tape and reel | | |

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

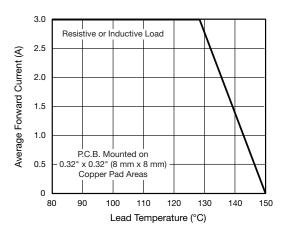


Fig. 1 - Forward Current Derating Curve

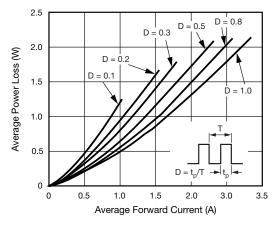


Fig. 2 - Forward Power Loss Characteristics

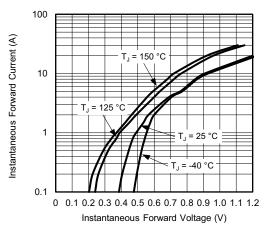


Fig. 3 - Typical Instantaneous Forward Characteristics

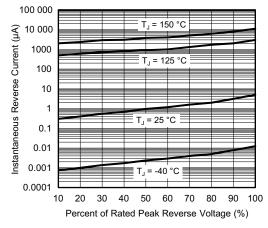


Fig. 4 - Typical Reverse Characteristics



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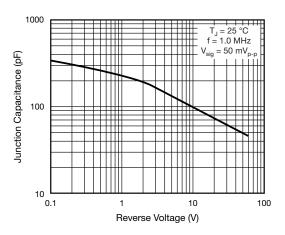
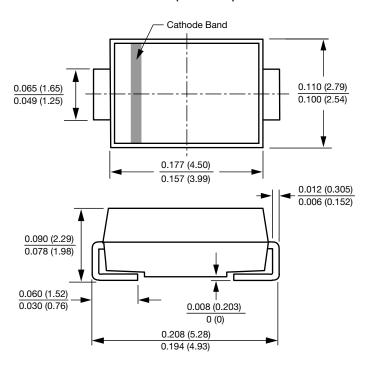
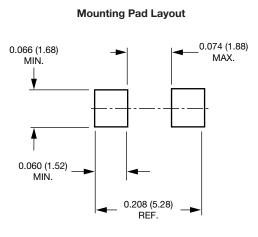


Fig. 5 - Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

SMA (DO-214AC)







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