



New Product

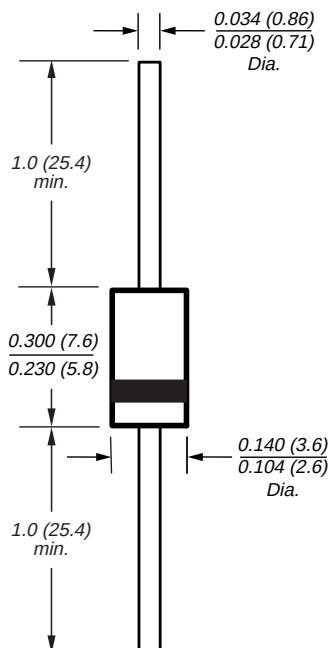
SB320S thru SB360S

Vishay Semiconductors  
formerly General Semiconductor

## Schottky Barrier Rectifier

Reverse Voltage 20 to 60V  
Forward Current 3.0A

DO-204AC (DO-15)



Dimensions in inches and (millimeters)

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Guardring for overvoltage protection
- 3 Amp Schottky rectifier in smaller DO-204AC (DO-15) package

### Mechanical Data

**Case:** JEDEC DO-204AC molded plastic body

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

High temperature soldering guaranteed:  
250°C/10 seconds 0.375" (9.5mm) lead length,  
5lbs. (2.3kg) tension

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.04oz., 1.12g

### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

| Parameter                                                                                        | Symbol                               | SB320S      | SB330S | SB340S | SB350S      | SB360S | Unit |
|--------------------------------------------------------------------------------------------------|--------------------------------------|-------------|--------|--------|-------------|--------|------|
| Maximum repetitive peak reverse voltage                                                          | V <sub>RRM</sub>                     | 20          | 30     | 40     | 50          | 60     | V    |
| Maximum RMS voltage                                                                              | V <sub>RMS</sub>                     | 14          | 21     | 28     | 35          | 42     | V    |
| Maximum DC blocking voltage                                                                      | V <sub>DC</sub>                      | 20          | 30     | 40     | 50          | 60     | V    |
| Maximum average forward rectified current at 0.375 (9.5mm) lead length (See Fig.1)               | I <sub>F(AV)</sub>                   | 3.0         |        |        |             |        | A    |
| Peak forward surge current 8.3μs single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>                     | 100         |        |        |             |        | A    |
| Typical thermal resistance <sup>(2)</sup>                                                        | R <sub>θJA</sub><br>R <sub>θJL</sub> | 40<br>12    |        |        |             |        | °C/W |
| Operating junction temperature range                                                             | T <sub>J</sub>                       | −65 to +125 |        |        | −65 to +150 |        | °C   |
| Storage temperature range                                                                        | T <sub>STG</sub>                     | −65 to +150 |        |        |             |        | °C   |

### Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

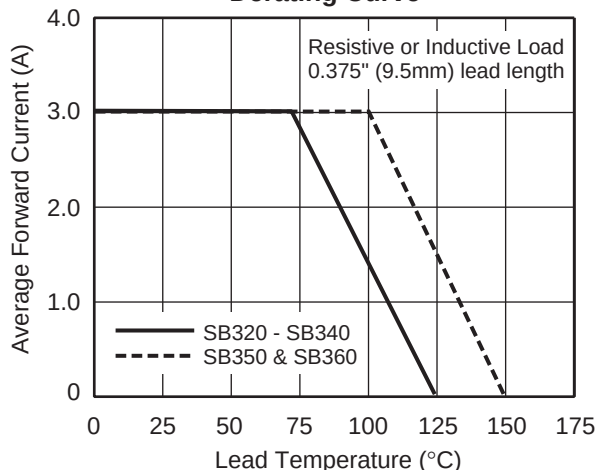
| Parameter                                                                                                                            | Symbol         | SB320S | SB330S | SB340S | SB350S | SB360S | Unit |
|--------------------------------------------------------------------------------------------------------------------------------------|----------------|--------|--------|--------|--------|--------|------|
| Maximum instantaneous forward voltage at 3.0A <sup>(1)</sup>                                                                         | V <sub>F</sub> | 0.50   |        |        | 0.74   |        | V    |
| Maximum instantaneous reverse current at rated DC blocking voltage <sup>(1)</sup><br>T <sub>A</sub> = 25°C<br>T <sub>A</sub> = 100°C | I <sub>R</sub> | 0.5    |        |        |        |        | mA   |
|                                                                                                                                      |                | 20     |        |        | 10     |        |      |

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

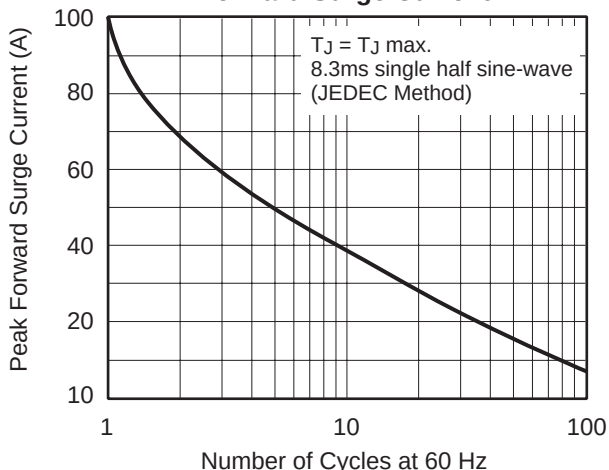
(2) Thermal resistance from junction to lead vertical P.C.B. mounting, 0.500" (12.7mm) lead length with 2.5 x 2.5" (63.5 x 63.5mm) copper pad

## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

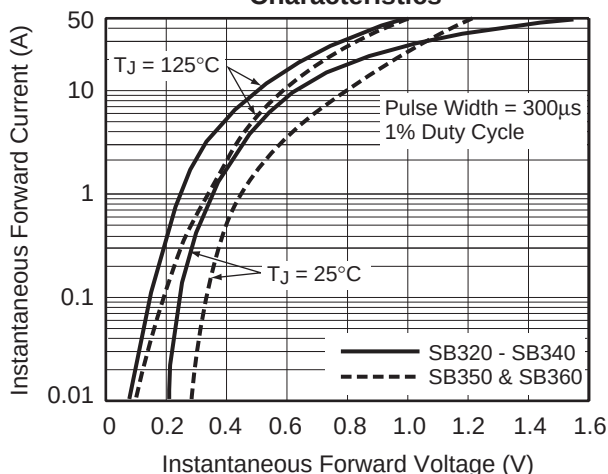
**Fig. 1 - Forward Current Derating Curve**



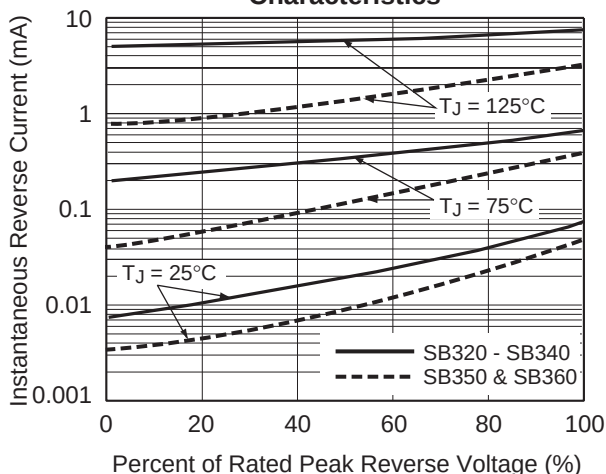
**Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current**



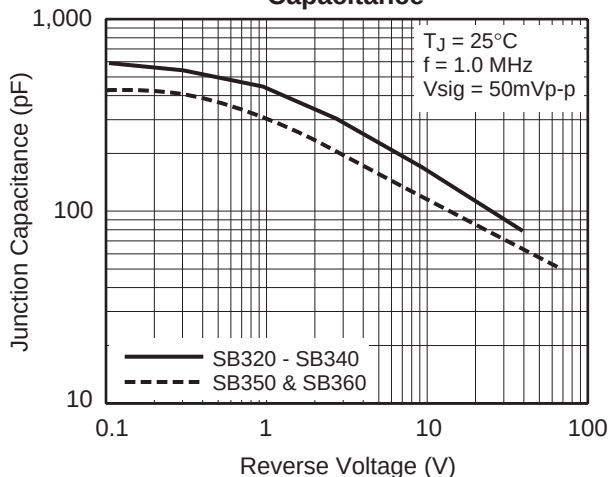
**Fig. 3 - Typical Instantaneous Forward Characteristics**



**Fig. 4 - Typical Reverse Characteristics**



**Fig. 5 - Typical Junction Capacitance**



**Fig. 6 - Typical Transient Thermal Impedance**

