

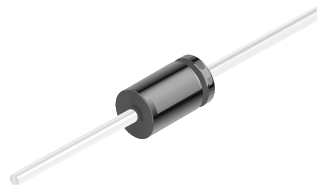


SB520 - SB5100

SB520-SB5100

Features

- Metal to silicon rectifier, majority carrier conduction.
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.
- Low power loss, high efficiency.
- High current capability, low V_F .
- High surge capacity.



DO-201AD
COLOR BAND DENOTES CATHODE

Schottky Rectifiers

Absolute Maximum Ratings* T_A = 25°C unless otherwise noted

| Symbol | Parameter | Value | | | | | | | Units |
|--------------------|--|-------------|-----|-----|-----|-----|-----|------|-------|
| | | 520 | 530 | 540 | 550 | 560 | 580 | 5100 | |
| V _{RRM} | Maximum Repetitive Reverse Voltage | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| I _{F(AV)} | Average Rectified Forward Current .375" lead length @ T _A = 75°C | 5.0 | | | | | | | A |
| I _{FSM} | Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave | 150 | | | | | | | A |
| T _{stg} | Storage Temperature Range | -50 to +150 | | | | | | | °C |
| T _J | Operating Junction Temperature | -50 to +150 | | | | | | | °C |

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

| Symbol | Parameter | Value | Units |
|------------------|---|-------|-------|
| P _D | Power Dissipation | 5.0 | W |
| R _{θJA} | Thermal Resistance, Junction to Ambient | 25 | °C/W |

Electrical Characteristics T_A = 25°C unless otherwise noted

| Symbol | Parameter | Device | | | | | | | Units |
|----------------|--|--------|-----|------|-----|------|-----|------|-------|
| | | 520 | 530 | 540 | 550 | 560 | 580 | 5100 | |
| V _F | Forward Voltage @ 5.0 A | 0.55 | | 0.67 | | 0.85 | | V | |
| I _R | Reverse Current @ rated V _R T _A = 25°C | 0.5 | | | | | | | mA |
| | T _A = 100°C | 50 | | 25 | | | | mA | |
| C _T | Total Capacitance V _R = 4.0 V, f = 1.0 MHz | 500 | | 380 | | | | pF | |

Typical Characteristics

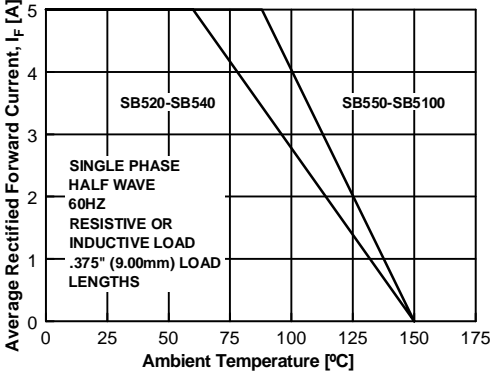


Figure 1. Forward Current Derating Curve

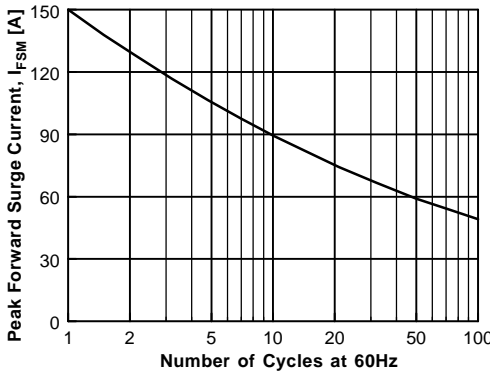


Figure 2. Non-Repetitive Surge Current

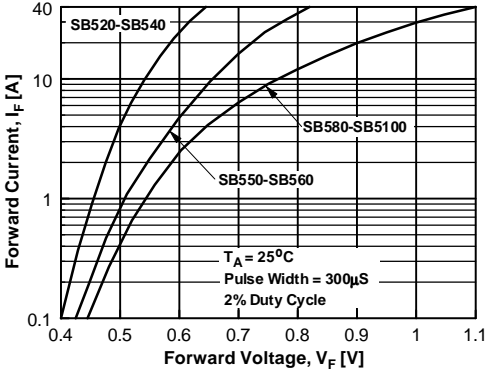


Figure 3. Forward Voltage Characteristics

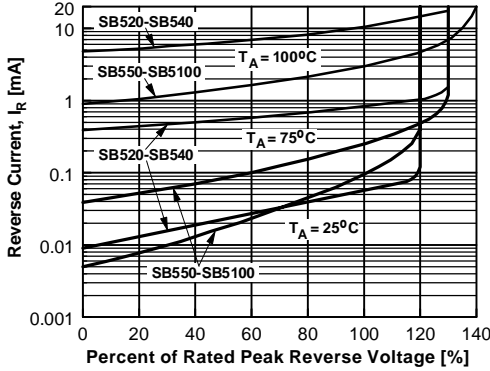


Figure 4. Reverse Current vs Reverse Voltage

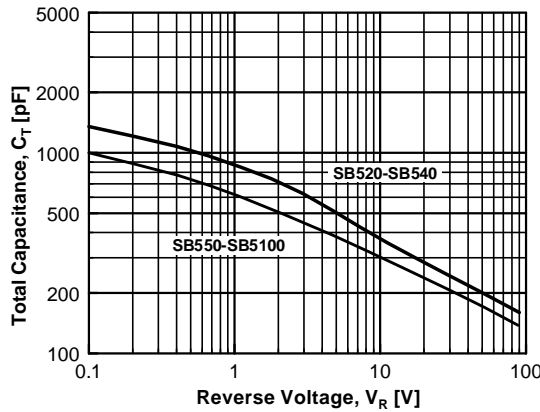


Figure 5. Total Capacitance

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|--------------------------|------------------------|---|
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