



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.
- Glass passivated



DO-201AD

COLOR BAND DENOTES CATHODE

Schottky Rectifiers

Absolute Maximum Ratings*

$T_A = 25^\circ\text{C}$ 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 @ $T_A = 75^\circ\text{C}$ | 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 | | | | | | | $^\circ\text{C}$ |
| T_J | Operating Junction Temperature | -50 to +150 | | | | | | | $^\circ\text{C}$ |

* 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 |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 25 | $^\circ\text{C}/\text{W}$ |

Electrical Characteristics

$T_A = 25^\circ\text{C}$ 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 |
| | | | | | | | | | |

Typical Characteristics

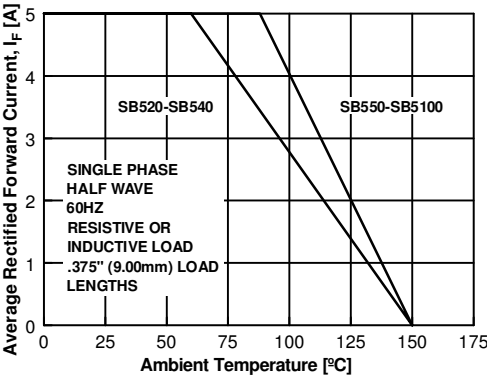


Figure 1. Forward Current Derating Curve

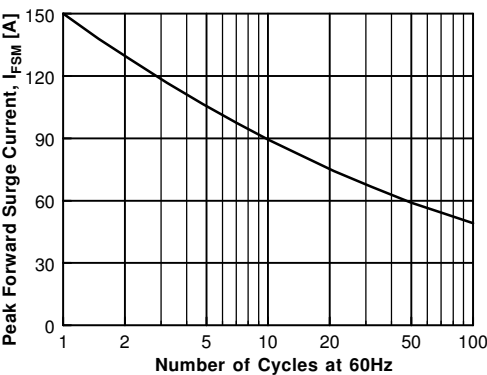


Figure 2. Non-Repetitive Surge Current

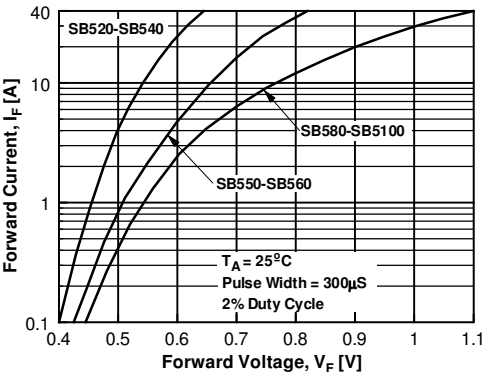


Figure 3. Forward Voltage Characteristics

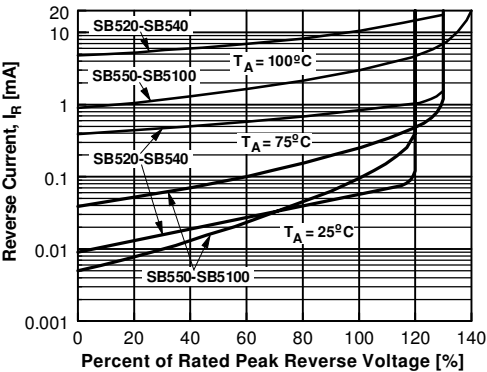


Figure 4. Reverse Current vs Reverse Voltage

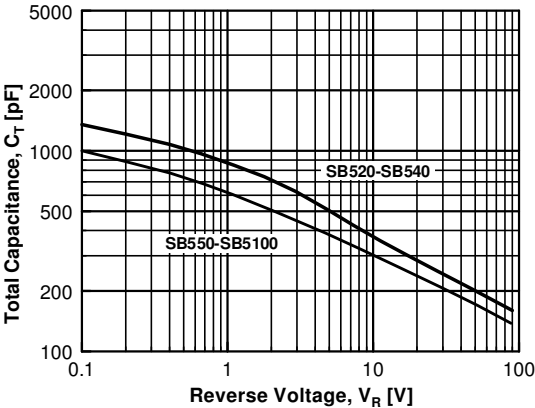


Figure 5. Total Capacitance

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