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# 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<sub>A</sub> = 25°C unless otherwise noted

Symbol	Parameter	Value							Units
		520	530	540	550	560	580	5100	
V <sub>RRM</sub>	Maximum Repetitive Reverse Voltage	20	30	40	50	60	80	100	V
I <sub>F(AV)</sub>	Average Rectified Forward Current .375" lead length @ T <sub>A</sub> = 75°C	5.0							A
I <sub>FSM</sub>	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave	150							A
T <sub>stg</sub>	Storage Temperature Range	-50 to +150							°C
T <sub>J</sub>	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 <sub>D</sub>	Power Dissipation	5.0	W
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient	25	°C/W

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

Symbol	Parameter	Device						Units
		520	530	540	550	560	580	
V <sub>F</sub>	Forward Voltage @ 5.0 A	0.55		0.67		0.85		V
I <sub>R</sub>	Reverse Current @ rated V <sub>R</sub> T <sub>A</sub> = 25°C	0.5						mA
	T <sub>A</sub> = 100°C	50		25				mA
C <sub>T</sub>	Total Capacitance V <sub>R</sub> = 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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