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# 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 $V_R$ $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	0.5							mA
		50			25				mA
$C_T$	Total Capacitance $V_R = 4.0\text{ V}$ , $f = 1.0\text{ MHz}$	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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