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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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