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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_a = 25°C unless otherwise noted

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

 $[\]hbox{^{\bigstar}} These \ ratings \ are \ limiting \ values \ above \ which \ the \ service ability \ of \ any \ semiconductor \ device \ may \ be \ impaired.$

Thermal Characteristics

Symbol	Parameter	Value	Units
P_{D}	Power Dissipation	5.0	W
$R_{\scriptscriptstyle{\theta JA}}$	Thermal Resistance, Junction to Ambient	25	°C/W

Electrical Characteristics T_A = 25°C unless otherwise noted

Symbol	Parameter		Device						
•			530	540	550	560	580	5100	
V_{F}	Forward Voltage @ 5.0 A	0.55		0.67		0.67 0.85		V	
I _R	Reverse Current @ rated V _R T _A = 25°C	0.5			mA				
	T _A = 100°C		50			2	25		mA
C _T	Total Capacitance	500		500 380			pF		
	$V_R = 4.0 \text{ V}, f = 1.0 \text{ MHz}$				550				

Schottky Rectifiers

(continued)

Typical Characteristics

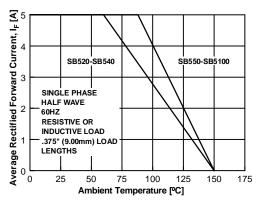


Figure 1. Forward Current Derating Curve

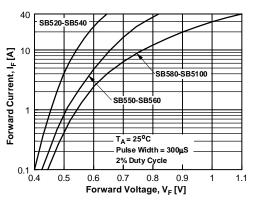


Figure 3. Forward Voltage Characteristics

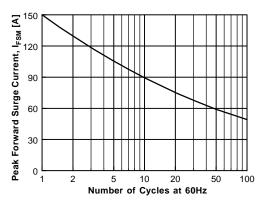


Figure 2. Non-Repetitive Surge Current

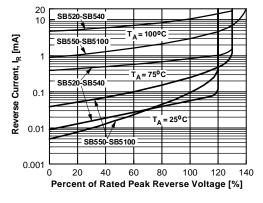


Figure 4. Reverse Current vs Reverse Voltage

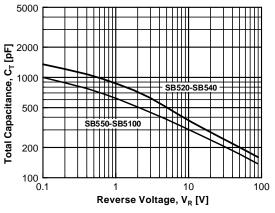


Figure 5. Total Capacitance

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Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

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