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# ON Semiconductor®

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

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

### **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<sub>A</sub> = 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 <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			2	25		mA
C <sub>T</sub>	Total Capacitance	500		500 380				pF	
	$V_R = 4.0 \text{ V}, f = 1.0 \text{ MHz}$				550			Рі	

### **Schottky Rectifiers**

(continued)

### **Typical Characteristics**

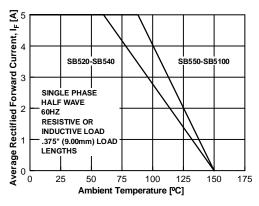


Figure 1. Forward Current Derating Curve

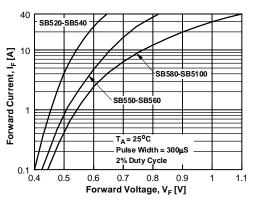


Figure 3. Forward Voltage Characteristics

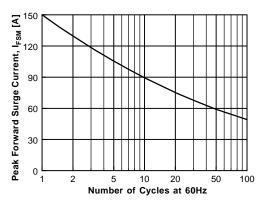


Figure 2. Non-Repetitive Surge Current

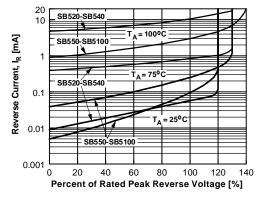


Figure 4. Reverse Current vs Reverse Voltage

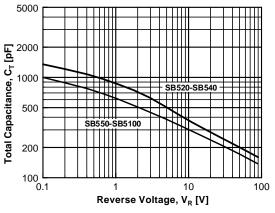


Figure 5. Total Capacitance

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Datasheet Identification	Product Status	Definition
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