



# 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



## 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	
$V_F$	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

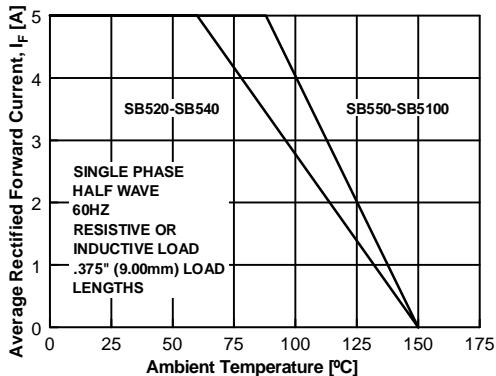


Figure 1. Forward Current Derating Curve

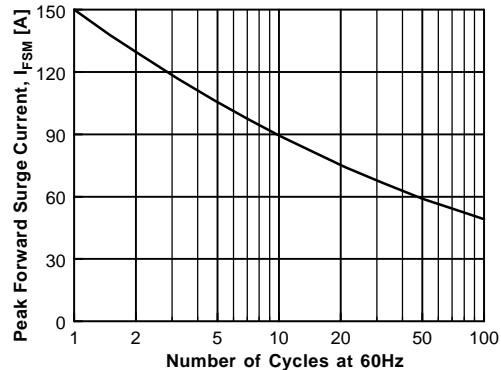


Figure 2. Non-Repetitive Surge Current

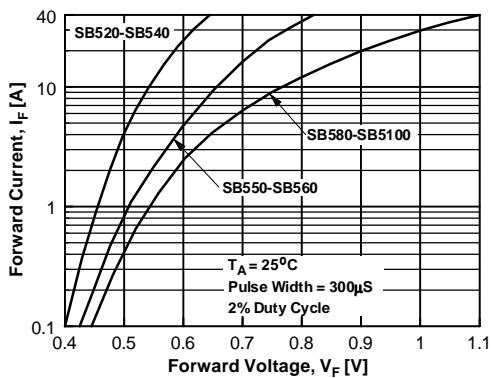


Figure 3. Forward Voltage Characteristics

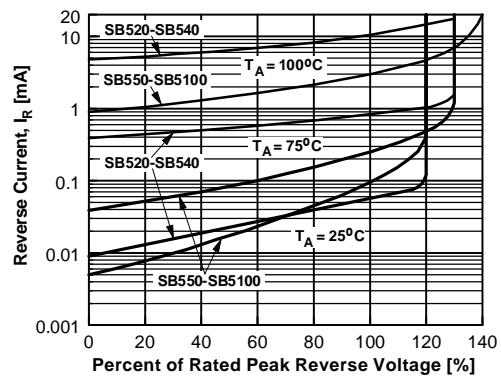


Figure 4. Reverse Current vs Reverse Voltage

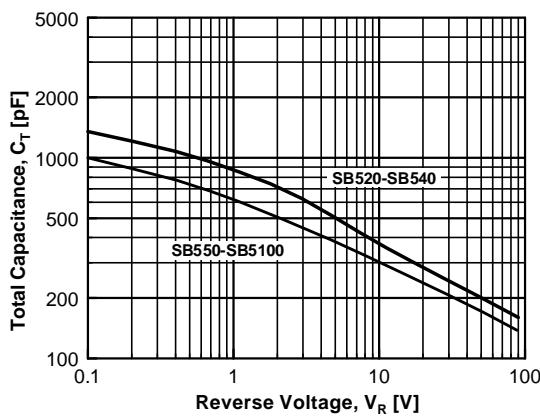


Figure 5. Total Capacitance

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