



## SB320 - SB3100

### Features

- 3.0 ampere operation at  $T_A = 75^\circ\text{C}$  with no thermal runaway.
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.



### Schottky Rectifiers

#### Absolute Maximum Ratings\*

$T_A = 25^\circ\text{C}$  unless otherwise noted

Symbol	Parameter	Value							Units
		320	330	340	350	360	380	3100	
$V_{RRM}$	Maximum Repetitive Reverse Voltage	20	30	40	50	60	80	100	V
$I_{F(AV)}$	Average Rectified Forward Current .375 " lead length @ $T_A = 75^\circ\text{C}$				3.0				A
$I_{FSM}$	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave				80				A
$T_{stg}$	Storage Temperature Range				-65 to +125				$^\circ\text{C}$
$T_J$	Operating Junction Temperature				-65 to +125				$^\circ\text{C}$

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

### Thermal Characteristics

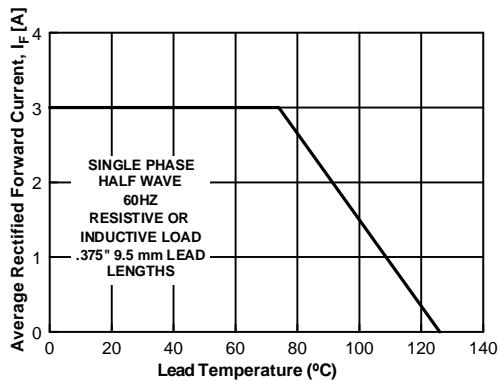
Symbol	Parameter	Value							Units
$P_D$	Power Dissipation	3.6							W
$R_{\text{JA}}$	Thermal Resistance, Junction to Ambient	40							$^\circ\text{C/W}$

### Electrical Characteristics

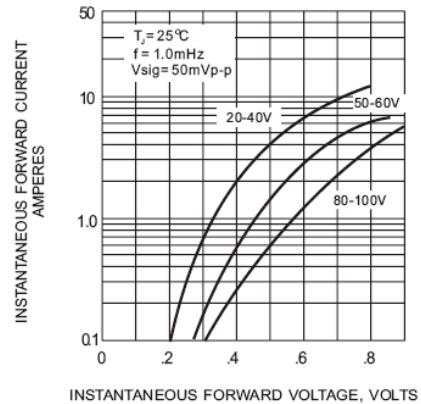
$T_A = 25^\circ\text{C}$  unless otherwise noted

Symbol	Parameter	Device							Units
		320	330	340	350	360	380	3100	
$V_F$	Forward Voltage @ 3.0 A	500		740		850			mV
$I_R$	Reverse Current @ rated $V_R$ $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$			0.5					mA
		20		10		10			mA
$I_{rr}$	Maximum Full Load Reverse Current, Full Cycle $T_A = 100^\circ\text{C}$			30					mA
$C_T$	Total Capacitance $V_R = 4.0 \text{ V}, f = 1.0 \text{ MHz}$			180					pF

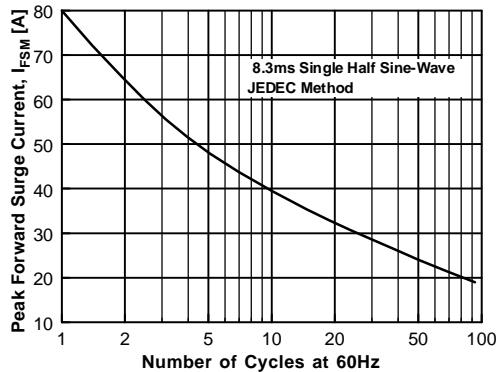
### Typical Characteristics



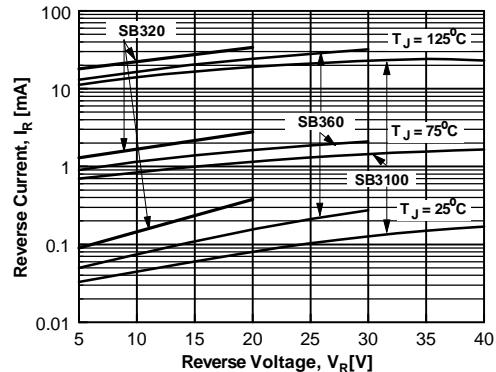
**Figure 1. Forward Current Derating Curve**



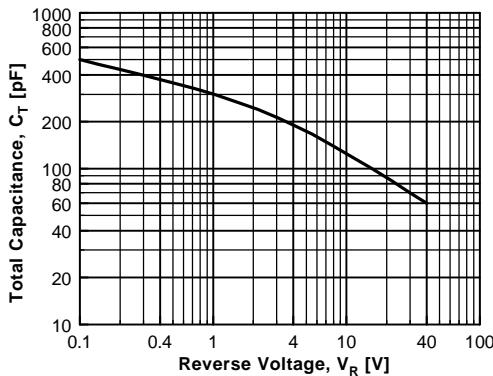
**Figure 2. Forward Voltage Characteristics**



**Figure 3. Non-Repetitive Surge Current**



**Figure 4. Reverse Current vs Reverse Voltage**



**Figure 5. Total Capacitance**

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