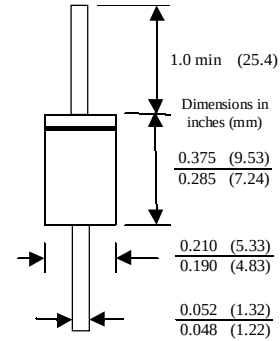
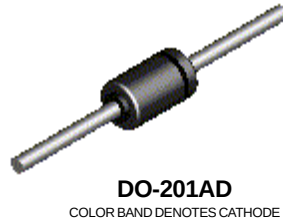


SB520 - SB5100

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.



5.0 Ampere High Current Schottky Barrier Rectifiers

Absolute Maximum Ratings*

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

Symbol	Parameter	Value	Units
I_O	Average Rectified Current .375 " lead length @ $T_A = 75^\circ\text{C}$	5.0	A
$I_{f(\text{surge})}$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	150	A
P_D	Total Device Dissipation Derate above 25°C	5.0 40	W mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	25	$^\circ\text{C}/\text{W}$
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.

Electrical Characteristics

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

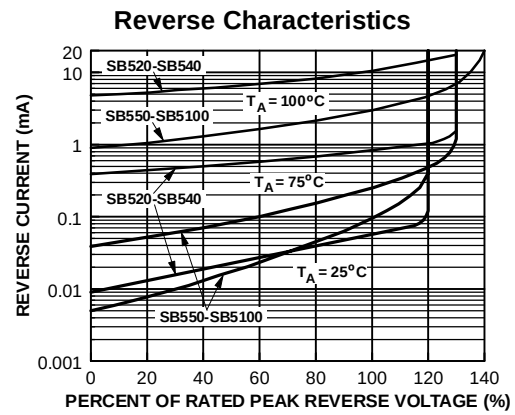
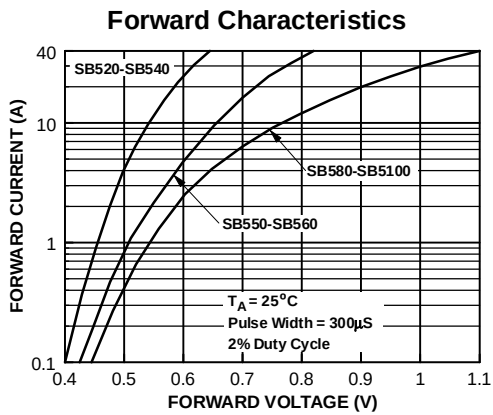
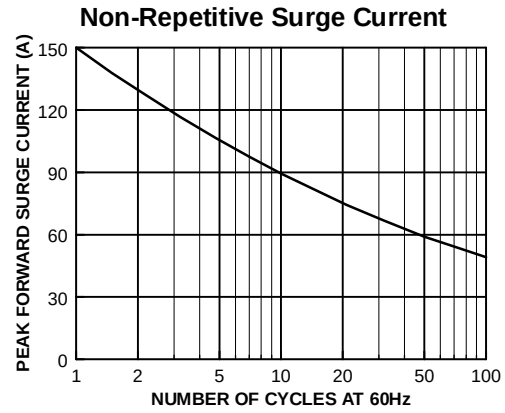
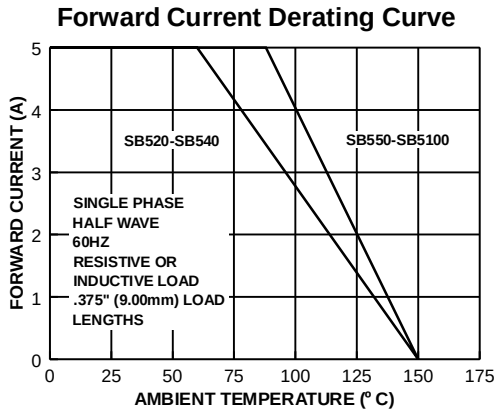
Parameter	Device							Units
	520	530	540	550	560	580	5100	
Peak Repetitive Reverse Voltage	20	30	40	50	60	80	100	V
Maximum RMS Voltage	14	21	28	35	42	56	70	V
DC Reverse Voltage (Rated V_R)	20	30	40	50	60	80	100	V
Maximum Reverse Current $T_A = 25^\circ\text{C}$	0.5							mA
@ rated V_R $T_A = 100^\circ\text{C}$	50			25				mA
Maximum Forward Voltage @ 5.0 A	0.55			0.67		0.85		V
Typical Junction Capacitance $V_R = 4.0\text{ V}$, $f = 1.0\text{ MHz}$	500			380				pF

High Current Schottky Barrier Rectifiers

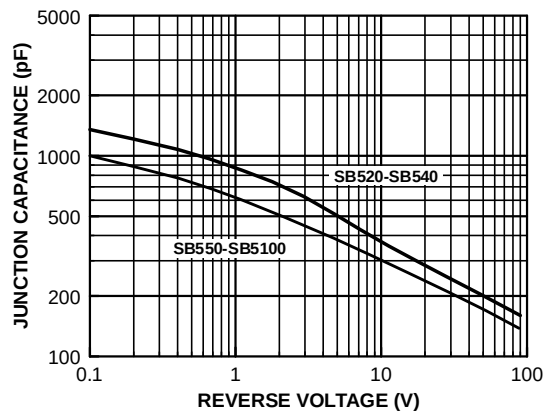
(continued)

SB520-SB5100

Typical Characteristics



Typical Junction Capacitance



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FACT™	QS™
FACT Quiet Series™	Quiet Series™
FAST®	SuperSOT™-3
FASTr™	SuperSOT™-6
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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.
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