

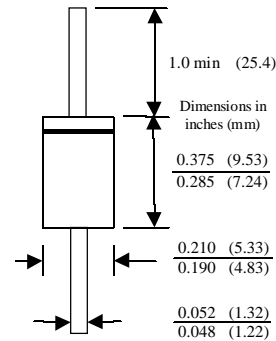
1N5820 - 1N5822

Features

- 3.0 ampere operation at $T_A = 95^\circ\text{C}$ with no thermal runaway.
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.



DO-201AD
COLOR BAND DENOTES CATHODE



3.0 Ampere Schottky Barrier Rectifiers

Absolute Maximum Ratings* $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
I_O	Average Rectified Current 3/8 " lead length @ $T_A = 95^\circ\text{C}$	3.0	A
$i_{f(\text{surge})}$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	80	A
P_D	Total Device Dissipation Derate above 25°C	3.6 36	W mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	28	$^\circ\text{C}/\text{W}$
T_{stg}	Storage Temperature Range	-65 to +125	$^\circ\text{C}$
T_J	Operating Junction Temperature	-65 to +125	$^\circ\text{C}$

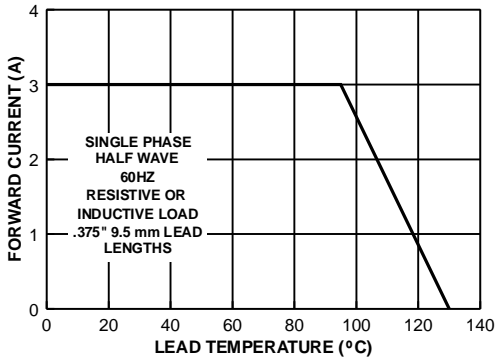
*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

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

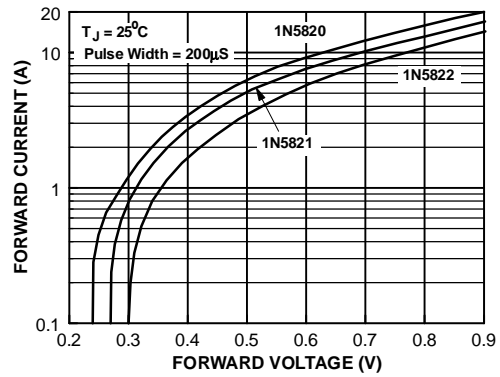
Parameter	Device			Units
	1N5820	1N5821	1N5822	
Peak Repetitive Reverse Voltage	20	30	40	V
Maximum RMS Voltage	14	21	28	V
DC Reverse Voltage (Rated V_R)	20	30	40	V
Maximum Reverse Current @ rated V_R	$T_A = 25^\circ\text{C}$	0.5		mA
	$T_A = 100^\circ\text{C}$	20		mA
Maximum Forward Voltage @ 3.0 A @ 9.4 A	475	500	525	mV
	850	900	950	mV
Typical Junction Capacitance $V_R = 4.0\text{ V}$, $f = 1.0\text{ MHz}$	190			pF

Typical Characteristics

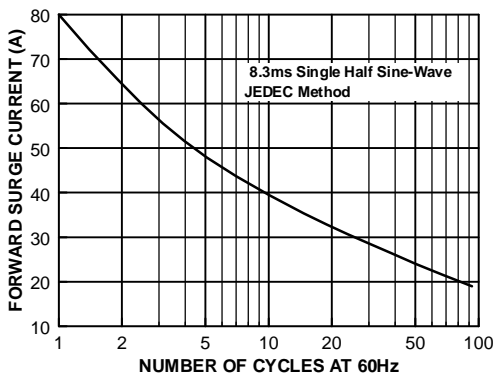
Forward Current Derating Curve



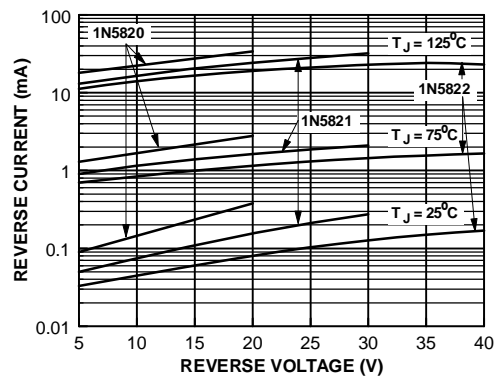
Forward Characteristics



Non-Repetitive Surge Current



Reverse Characteristics



Junction Capacitance

