

# 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

## Schottky Rectifiers

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

Symbol	Parameter	Value			Units
		1N5820	1N5821	1N5822	
$V_{RRM}$	Maximum Repetitive Reverse Voltage	20	30	40	V
$I_{F(AV)}$	Average Rectified Forward Current 3/8 " lead length @ $T_A = 95^\circ\text{C}$	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
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	28	$^\circ\text{C}/\text{W}$

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

Symbol	Parameter	Device			Units
		1N5820	1N5821	1N5822	
$V_F$	Forward Voltage @ 3.0 A @ 9.4 A	475	500	525	mV
		850	900	950	mV
$I_R$	Reverse Current @ rated $V_R$ $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	0.5 20			mA mA
$C_T$	Total Capacitance $V_R = 4.0\text{ V}$ , $f = 1.0\text{ MHz}$	190			pF

Typical Characteristics

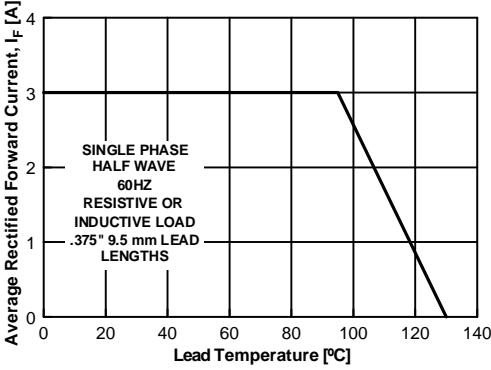


Figure 1. Forward Current Derating Curve

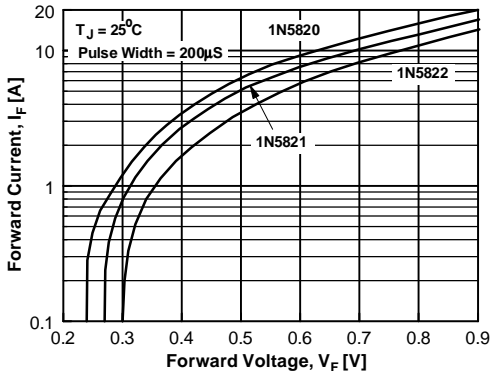


Figure 2. Forward Voltage Characteristics

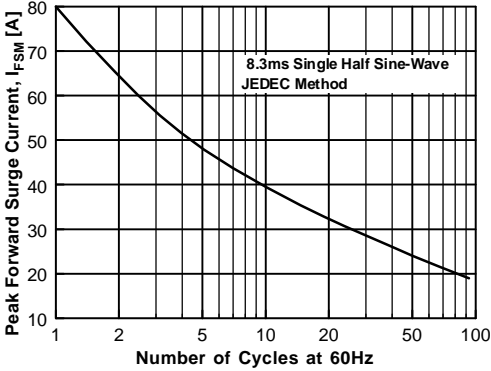


Figure 3. Non-Repetitive Surge Current

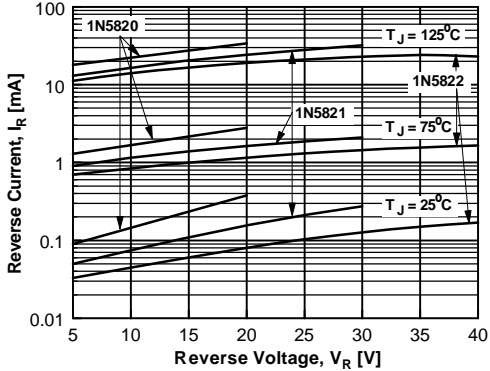


Figure 4. Reverse Current vs Reverse Voltage

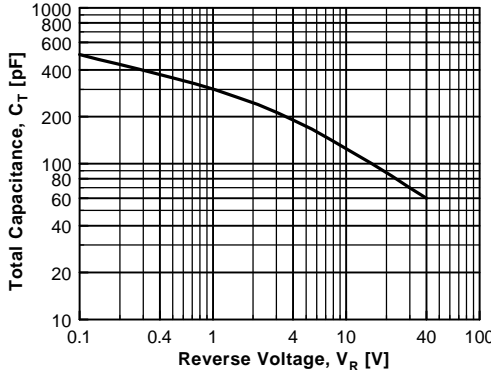


Figure 5. Total Capacitance